Addendum I

From data-month September 2002 onwards, the printed ISC Bulletins have been generated directly from the ISC Relational Database.

From data-month October 2002, a new location program ISCloc has been used in operations. Also, the IASPEI standard seismic phase list has now been adopted by the ISC, please see the last pages of this Bulletin for details.

From data-month January 2003 onwards, an updated regionalisation scheme has been adopted (Young,J.B., B.W.Presgrave, H.Aichele, D.A.Wiens, E.A.Flinn The Flinn-Engdahl Regionalisation Scheme: the 1995 Revision, Physics of the Earth and Planetary Interiors 96 (1996), 223-297)

These developments have prompted the need to review and revise the format of the Bulletin.

The following example illustrates the changes :-

September 2002

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       NEIC 01 18:45:41.7±1.7,21°.70S×179°.55W,h600km,mb4.6/6,
               Error ellipse: s-maj=75.5km s-min=25.7km az=151.0
        IDC 01 18:45:46.3±2.6,21°.76S×179°.70W,h627km±37km,mb3.5/4,
               mb1 3.7/4,mb1mx3.2/14,Error ellipse: s-maj=83.2km
               s-min=20.6km az=159.0
        ISC 01 18:45:41.7±1.4,22°.1S±0°.2×179°.3W±0°.2,h600km,n22,
               σ1ˢ.55/24,mb4.4/9,1C,South of Fiji Islands
Code  Station Name        Δ°   AZ°    Phase ID            Time     Res
                                   Op        ISC        h  m  s    ISC
HBZ   Hicks Bay         15.60 187  eP        P         18 48 53.1  -2.1
URZ   Urewera           16.41 190   P        P         18 49 01.5  -1.1
MRZ   Mangatainoka R    19.02 192  eP        P         18 49 26.7  +0.3
DIW   D'Urville Isla    19.52 195  eP        P         18 49 27.3  -3.6
CAW   Cannon Point      19.55 193  eP        P         18 49 31.7  +0.5
OTW   Orongorongo Tu    19.73 193  eP        P         18 49 33.0  +0.2
MOW   Moikau            19.82 192  eP        P         18 49 35.5  +1.9
THZ   Tophouse          20.68 197  eP        P         18 49 42.0  +0.5
KHZ   Kahutara          21.14 195   P        P         18 49 46.2  +0.8
ARMA  Armidale          27.28 246  eP        P         18 50 42.4  +2.3
      4.9nm,0.5s
CTA   Charters Tower    32.13 267⇑iP        P         18 51 22.3  +0.5
      13nm,0.5s
STKA  Stephens Creek    36.00 246  eP        P         18 51 55.3  +1.5
      3.1nm,0.4s
ASAR  Alice Springs     42.97 259   P        P         18 52 50.1  +0.4
      9.8nm,0.5s,baz=92,slow=8.2,SNR=47
ASAR                                S        S         18 58 31.3  -1.6
      1.0nm,0.8s,baz=95,slow=15,SNR=5.7
ASPA  Alice Springs     42.97 259  eP        P         18 52 50.1  +0.4
WRA   Warramunga Arr    43.18 264   P        P         18 52 51.0  -0.4
      1.8nm,0.3s,baz=96,slow=7.8,SNR=93
WRA                                 S        S         18 58 33.0  -2.9
      0.3nm,0.9s,baz=99,slow=14,SNR=3.0
KAKA  Kakadu            46.79 273  eP        P         18 53 18.2  -0.7
      14nm,0.4s
FITZ  Fitzroy Crossi    51.61 264  eP        P         18 53 54.3  +0.1
      12nm,0.3s
MBWA  Marble Bar        56.31 259  eP        P         18 54 27.1  -0.1
      11nm,0.6s
CMAR  Chiang Mai Arr    89.48 290   P        P         18 57 38.1  +1.7
      1.3nm,0.8s,baz=135,slow=3.1,SNR=8.1
ARCES ARCESS Array B   130.23 349  PKP       PKiKP     19 03 43.7  -1.2
      0.7nm,0.6s,baz=282,slow=4.2,SNR=3.5
FINES FINESS Array B   136.91 342  PKP       PKiKP     19 03 57.3  -1.3
      3.7nm,1.1s,baz=158,slow=3.2,SNR=3.4
MLR   Muntele Rosu     148.83 325  PKPbc     PKiKP     19 04 22.7  -1.0
      0.2nm,0.7s,baz=1.2,slow=23,SNR=2.3
```

Epicentral Estimates

Origin times - The superscripts have been removed and a simpler format adopted.
Magnitudes - All magnitudes that were reported to the ISC are now shown. Only two per agency were allowed in the past.
Error Ellipses - The keywords have been shortened.

Observational Data

The station code, station name, epicentral distance and azimuth are all shown in **bold** for Initial phases. For Secondary phases, only the station code (in normal font) is repeated.

Phase ID's - The Operator's identification is shown in normal font. The Operator's residual is no longer printed. When the arrival time of an initial or secondary phase has contributed to the location - the ISC's identification, the arrival time and the ISC's travel-time residual are all shown in **bold** .

Phase Parameters - The following parameters are included on supplementary lines where appropriate :-

Component, amplitude and period (or logA/T) - reported by the Operator.
Station magnitude estimate - computed by the ISC.
Slowness, Back-Azimuth, Signal-to-Noise ratio - measured by the Operator.

Addendum II

From data-month January 2006 the ISC hypocentres are computed using the AK135 earth velocity model (*Kennett, B.L.N. Engdahl, E.R. & Buland R., 1995. Constraints on seismic velocities in the Earth from travel times, Geophys J Int, 122, 108-124; B.L.N. Kennett, 2005. Seismological tables: ak135. Research School of Earth Sciences, the Australian National University, Canberra*) and then reviewed by the ISC seismologists. The ISC still produces the hypocentre solutions based on Jeffreys-Bullen travel time tables (agency code ISCJB), yet these solutions are no longer reviewed.

The ISC is planning to re-compute the entire ISC dataset using AK135 once new location procedures are designed, tested, discussed and approved by the ISC Governing Council. Until that time the automatic ISCJB locations will continue to be produced alongside the AK135 solutions to observe the long-time continuity of the ISC Bulletin.

Addendum III

From data month January 2009 the ISC hypocentres are computed using the new ISC location algorithm and all reported IASPEI seismic phases, for which ak135 predictions are available. This algorithm is described in: *Bondár, I. and D.A. Storchak (2011), Improved location procedures at the International Seismological Centre, Geophys. J. Int., 186, 1220-1244, doi:10.1111/j.1365-246X.2011.05107.x*

The alternative locations based on JB-tables are still produced with the original location algorithm for consistency with the past data. It is still the plan that by the middle of calendar year 2014 all ISC locations (1960-2008) are going to be re-computed with the new locatin algorithm and ak135 as part of the ISC Bulletin Re-Build project, sponsored by the US NSF and several agencies from Japan, China and India.

*NEIC **01** 00:08:41.9±2.0, 6°.94S±0°.06×148°.03E±0°.06, h10^{km}±1^{km}, mb4.6/18, Error ellipse: s-maj=10.9km s-min=8.0km az=41.0*

*IDC **01** 00:08:47.8±1.8, 6°.93S×147°.96E, h63^{km}±15^{km}, mb3.9/15, mbtmp4.2/18, MS3.4/15, Error ellipse: s-maj=22.1km s-min=9.5km az=100.0*

ISC 01 00:08:47.2±0.5**, 6°.96S**±0°.05×**148°.00E**±0°.08**, h54^{km}, n81, σ1^{s}.15**/78**, mb4.3**/24**, MS3.4**/12**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.57	199		Pn	00 09 25.9	-0.6
PMG				Sn	Sn	00 09 56.1	-0.4
PMG	Port Moresby	2.57	199	P	Pn	00 09 26.8	+0.3
	286nm,0.5s,baz=31,slow=6.5,SNR=56						
PMG				S	Sn	00 09 58.4	+1.8
	584nm,0.5s,baz=18,slow=20,SNR=3.8						
PMG				LR	LR	00 10 52.8	
	comp=Z,1µm,18.2s,baz=45,slow=48						
PMG	Port Moresby	2.57	199	P	Pn	00 09 28.0	+1.6
PMG	Port Moresby	2.57	199	P	Pn	00 09 28.0	+1.6
RABL	Rabaul	4.97	57	Pn	Pn	00 09 59.1	-0.3
COEN	Coen	8.42	214	Pn	Pn	00 10 46.2	-0.4
COEN	Coen	8.42	214	P	Pn	00 10 45.6	-1.0
JAY	Jayapura	8.50	301	P	Pn	00 10 48.6	+0.8
	8.0nm,0.7s,baz=128,slow=9.9,SNR=4.2						
JAY				LR	LR	00 15 06.2	
	comp=Z,285nm,19.4s,baz=291,slow=45						
TV1H	Townsville Har	12.29	185	P	Pn	00 11 41.2	+1.7
CTAO	Charters Tower	13.16	187	Pn	Pn	00 11 51.8	+0.3
CTAO	Charters Tower	13.16	187	P	Pn	00 11 53.2	+1.7
QIS	Mount Isa	15.78	210	P	Pn	00 12 26.4	+0.4
FAKI	Fak Fak	16.19	284		P	00 12 32.5	-1.2
FAKI				IAmb	IAmb	00 12 59.8	
	comp=Z,52nm,1.3s						
KDU	Kakadu	16.32	248	P	P	00 12 34.0	-1.0
MTN	Manton Dam	17.61	249		Pn	00 12 48.9	0.0
MTN				IAmb	IAmb	00 13 02.1	
	comp=Z,89nm,1.5s						
MTN	Manton Dam	17.61	249	P	P	00 12 50.5	+1.2
WRA	Warramunga Arr	18.50	224	P	P	00 12 59.0	-0.2
	comp=Z,9.6nm,0.4s,baz=50,slow=11,SNR=18						
WRA				S	Sn	00 16 15.0	-11
	comp=Z,0.7nm,0.5s,baz=49,slow=24,SNR=1.9						
WRA				PcP	PcP	00 17 28.2	+0.7
	comp=Z,1.2nm,0.9s,baz=36,slow=2.1,SNR=0.8						
WRA				LR	LR	00 21 00.3	
	comp=Z,136nm,18.5s,baz=352,slow=40						
EIDS	Eidsvold	18.55	171	P	P	00 12 59.1	-0.4
QLP	Quilpie	19.84	190	P	P	00 13 14.6	+0.8
GUMO	Guam	20.65	351	LR	LR	00 21 36.8	
	comp=Z,34nm,19.6s,baz=157,slow=37						
KNRA	Kununurra	20.74	244	P	P	00 13 22.5	-1.1
KNRA				IAmb	IAmb	00 13 39.3	
	comp=Z,20nm,0.8s						
AS01	Alice Springs	21.40	218	P	P	00 13 30.9	+0.2
AS31	Alice Springs	21.43	218		P	00 13 30.9	0.0
AS31				IAmb	IAmb	00 13 34.7	
	comp=Z,6.4nm,0.4s						
ASAR	Alice Springs	21.43	218		P	00 13 31.2	+0.3
ASAR	Alice Springs	21.43	218	P	P	00 13 31.0	0.0
	comp=Z,6.5nm,0.5s,baz=53,slow=9.4,SNR=79						
ASAR				S	S	00 17 25.0	-1.0
	comp=Z,6.0nm,0.8s,baz=33,slow=21,SNR=14						
ASAR				LR	LR	00 22 30.6	
	comp=Z,141nm,18.1s,baz=65,slow=38						
	comp=Z,6.5nm,0.5s						
DZM	Mont Dzumac	23.29	132	LR	LR	00 22 09.8	
	comp=Z,155nm,18.8s,baz=358,slow=34						
ARMA	Armidale	23.59	172	P	P	00 13 52.0	-1.4
ARMA				IAmb	IAmb	00 14 00.8	
	comp=Z,29nm,1.3s						
ARMA	Armidale	23.59	172	P	P	00 13 56.2	+2.9
FITZ	Fitzroy Crossi	24.44	241		P	00 14 00.7	-0.4
FITZ	Fitzroy Crossi	24.44	241	LR	LR	00 24 40.1	
	comp=Z,103nm,20.3s,baz=7.5,slow=39						
CMSA	Cobar Meteorol	24.55	185	P	P	00 14 03.0	+1.0
STKA	Stephens Creek	25.50	193	P	P	00 14 11.2	+0.6
	comp=Z,3.8nm,0.3s,baz=23,slow=8.5,SNR=21						
	comp=Z,3.8nm,0.3s						
STKA	Stephens Creek	25.50	193	P	P	00 14 11.4	+0.8
WRKA	Warakurna	26.04	224	P	P	00 14 14.9	-0.8
BBOO	Buckleboo	28.02	202	P	P	00 14 32.9	-0.3
BBOO				IAmb	IAmb	00 14 47.3	
	comp=Z,22nm,1.4s						
BBOO	Buckleboo	28.02	202	P	P	00 14 34.2	+0.9
FORT	Forrest	30.18	216		P	00 14 51.3	-1.2
FORT				IAmb	IAmb	00 15 10.7	
	comp=Z,13nm,0.8s						
FORT	Forrest	30.18	216	P	P	00 14 52.2	-0.3
PSA00	Pilbara Seismi	30.83	239	P	P	00 14 57.5	-0.9
PSA00	Pilbara Seismi	30.83	239	P	P	00 14 58.1	-0.2
JCJ	Chichijima	34.31	351	LR	LR	00 27 46.0	
	comp=Z,34nm,21.5s,baz=158,slow=33						
NWAO	Narrogin (SRO)	38.51	224	P	P	00 16 03.7	-0.8
NWAO	Narrogin (SRO)	38.51	224	LR	LR	00 30 59.3	
	comp=Z,54nm,22.0s,baz=79,slow=35						
RPZ	Rata Peaks	41.83	155	LR	LR	00 31 01.2	
	comp=Z,118nm,21.1s,baz=320,slow=32						
MJAR	Matsushiro Arr	44.23	349	P	P	00 16 49.5	-1.8
	comp=Z,2.1nm,0.5s,baz=170,slow=8.3,SNR=8.3						
MJAR				LR	LR	00 33 46.3	
	comp=Z,28nm,20.5s,baz=182,slow=34						
	comp=Z,2.1nm,0.5s						
NJ2	Nanjing	47.72	326	eP	P	00 17 21.7	+2.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSRS	Korea Array	48.00	338	P	P	00 17 18.6	-2.2
	comp=Z,1.3nm,0.7s,baz=161,slow=8.9,SNR=5.0						
KSRS				LR	LR	00 35 03.6	
	comp=Z,38nm,20.7s,baz=160,slow=33						
	comp=Z,1.3nm,0.7s						
USRK	Ussuriysk Ar.	52.93	346	P	P	00 17 57.2	-0.8
	comp=Z,1.6nm,0.5s,baz=154,slow=7.3,SNR=6.3						
USRK				LR	LR	00 37 47.7	
	comp=Z,39nm,21.7s,baz=64,slow=33						
	comp=Z,1.6nm,0.5s						
CMAR	Chiang Mai Arr	54.57	298	P	P	00 18 11.4	+1.0
	comp=Z,1.2nm,0.3s,baz=110,slow=7.2,SNR=6.9						
	comp=Z,1.2nm,0.3s						
PZH	PanZhiHua	55.83	309	P	P	00 18 21.7	+2.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.7s						
HHC	Hu-ho-hao-te	58.16	328	eP	P	00 18 38.8	+3.0
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,38nm,3.6s						
PETK	Petropavlovsk-	60.40	7	P	P	00 18 51.2	+0.4
	comp=Z,1.1nm,0.7s,baz=188,slow=7.0,SNR=5.1						
	comp=Z,1.1nm,0.7s						
SONM	Songino Array	65.72	331	P	P	00 19 26.8	+0.4
	comp=Z,0.3nm,0.3s,baz=160,slow=4.6,SNR=2.0						
	comp=Z,0.3nm,0.3s						
EVN	Everest	68.46	304		P	00 19 45.2	+0.3
VNDA	Vanda	70.91	177	P	P	00 19 58.4	+0.2
VNDA				IAmb	IAmb	00 20 15.4	
	comp=Z,3.0nm,0.8s						
VNDA	Vanda	70.91	177	P	P	00 19 58.4	+0.2
	comp=Z,1.6nm,0.5s,baz=333,slow=6.6,SNR=9.2						
	comp=Z,1.6nm,0.5s						
MKAR	Makanchi Array	78.86	320	P	P	00 20 44.0	-0.7
MKAR	Makanchi Array	78.86	320	P	P	00 20 44.0	-0.7
	comp=Z,1.3nm,0.6s,baz=100,slow=8.0,SNR=14						
	comp=Z,1.3nm,0.6s						
MAKZ	Makanchi	79.06	320	P	P	00 20 45.4	-0.5
MAKZ				IAmb	IAmb	00 20 48.8	
	comp=Z,2.5nm,0.6s						
M16K	Timber Creek	79.31	23	P	P	00 20 47.1	+0.3
ZALV	Zalesovo Beam	80.34	328	P	P	00 20 52.1	-0.5
ZALV	Zalesovo Beam	80.34	328	P	P	00 20 51.0	-1.6
	comp=Z,1.1nm,0.4s,baz=80,slow=3.1,SNR=5.3						
	comp=Z,1.1nm,0.4s						
L18K	Granite Mounta	80.89	23	P	P	00 20 55.0	-0.3
L18K				IAmb	IAmb	00 21 22.8	
	comp=Z,12nm,1.5s						
MAW	Mawson	81.75	203	LR	LR	00 58 04.5	
	comp=Z,32nm,18.1s,baz=46,slow=36						
KURK	Kurchatov	82.56	323	P	P	00 21 04.8	+0.5
KURBB	Kurchatov Arra	82.58	323	P	P	00 21 03.8	-0.6
	comp=Z,0.4nm,0.6s,baz=111,slow=4.8,SNR=5.4						
	comp=Z,0.4nm,0.6s						
QSPA	South Pole Qui	83.02	180	P	P	00 21 06.5	-0.2
QSPA	South Pole Qui	83.02	180	P	P	00 21 06.4	-0.2
	comp=Z,6.7nm,0.6s,baz=292,slow=0.7,SNR=55						
	comp=Z,6.7nm,0.6s						
IL31		85.97	23	P	P	00 21 19.6	-1.6
ILAR	Eielson Array	85.97	23	P	P	00 21 19.4	-1.9
ILAR	Eielson Array	85.97	23	P	P	00 21 18.9	-2.4
	comp=Z,1.1nm,0.7s,baz=248,slow=4.6,SNR=13						
ILAR				LR	LR	00 55 09.3	
	comp=Z,20nm,21.4s,baz=174,slow=32						
	comp=Z,1.1nm,0.7s						
BCAR	Beaver Creek A	87.37	25	P	P	00 21 28.1	-0.2
BVAR	Borovoye Array	88.12	324	P	P	00 21 30.4	-1.6
	comp=Z,1.0nm,0.6s,baz=106,slow=6.8,SNR=7.2						
	comp=Z,1.0nm,0.6s						
ABKAR	Akbulak array	93.94	319	P	P	00 21 57.5	-1.7
PDAR	Pinedale Array	103.83	48	Pdiff	Pdif	00 22 43.4	-0.7
	comp=Z,0.3nm,0.5s,baz=282,slow=4.1,SNR=3.6						
GERES	GERESS Array B	123.25	326	PKP	PKPdf	00 27 37.8	-0.5
	comp=Z,0.6nm,0.6s,baz=52,slow=2.2,SNR=7.8						
SCHQ	Schefferville	124.72	24	PKP	PKPdf	00 27 39.7	-1.1
	comp=Z,3.4nm,1.1s,baz=331,slow=8.6,SNR=2.0						
EKA	Eskdalemuir Ar	126.56	340	PKP	PKPdf	00 27 44.1	-0.2
	comp=Z,0.9nm,0.6s,baz=32,slow=3.4,SNR=4.0						
TORD	Torodi Ar. Bea	146.28	283	PKPbc	PKPbc	00 28 22.6	-0.3
	comp=Z,74nm,0.4s,baz=69,slow=3.3,SNR=1.9						
BDFB	Brasilia	152.51	145	PKPbc	PKPbc	00 28 38.4	-0.4
	comp=Z,4.5nm,0.5s,baz=162,slow=3.3,SNR=8.5						
DBIC	Dimbokro	153.04	271	PKPbc	PKPbc	00 28 39.1	-0.7
	comp=Z,3.5nm,0.7s,baz=146,slow=3.6,SNR=1.4						

VAO 01 00:09:15.1±1.3**, 10°.22S**×**74°.23W, h134**^{km}±9^{km}**, mb4.1, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CZSB	Cruzeiro do Su	2.90	31	eP	Pn	00 10 00.5	-0.1
TBTG	Tabatinga, AM	7.37	36	eP	Pn	00 11 01.1	+0.9
LPAZ	La Paz	8.46	136	eP	Pn	00 11 14.2	-1.1
SAML	Samuel	10.96	84	eP	Pn	00 11 46.9	-1.4
TEFE	Tefe	11.62	56	eP	Pn	00 11 58.1	+1.1
VILB	Vilhena	14.01	103	eP	Pn	00 12 28.7	+0.8
BBSD	Serra de San D	14.92	119	eP	Pn	00 12 39.8	+0.3
MACA	Manacapuru-AM	15.16	63	eP	Pn	00 12 41.8	-0.6
PTLB	Pontes e Lacer	15.60	111	eP	Pn	00 12 48.3	+0.5
PDRB	Porto dos Gac	17.23	96	eP	P	00 13 07.3	0.0
NPGB	Novo Progresso	18.92	82	eP	P	00 13 24.7	-1.0
ITTB	Itaituba	19.23	74	eP	P	00 13 28.8	-0.4

*CATAC **01** 00:18:28.4±0.4, 13°N±2°×8°9W±°, h26^{km}±2^{km}, M4.3/32, MLv4.3/32, Error ellipse: s-maj=5.3km s-min=2.9km az=23.6, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-2.45; $M_{\theta\theta}$-0.36; $M_{\phi\phi}$2.82; $M_{r\theta}$2.93; $M_{\theta\phi}$5.16; $M_{\phi r}$-1.44; Fault plane solution: $M_0$6.65605×10^{14} NP1: ϕ_s357.98959°, δ61.21556°, λ-154.17692°. NP2: ϕ_s254.87297°, δ67.55660°, λ-31.39773°. Principal axes: T 6.6649, Plg4.0444°, Azm307.6389°; N -0.0177, Plg52.0846°, Azm42.8471°; P -6.6472, Plg37.6210°, Azm214.5151°; Moment Tensor Solution. Moment tensor: Scale 10^{14} Nm; M_{rr}-1.52; $M_{\theta\theta}$-0.18; $M_{\phi\phi}$1.70; $M_{r\theta}$1.98; $M_{\theta\phi}$4.31; $M_{\phi r}$-1.73; Fault plane solution: $M_0$5.29883×10^{14} NP1:ϕ_s359.14064°, δ67.50483°, λ-153.82461°. NP2:ϕ_s258.48993°, δ65.94858°, λ-24.77030°. Principal axes: T 5.1715, Plg1.0109°, Azm128.5377°; N 0.2460, Plg56.0128°, Azm37.0379°; P -5.4175, Plg33.9679°, Azm219.2188°; Moment Tensor Solution. Moment tensor: Scale 10^{15} Nm; M_{rr}1.30; $M_{\theta\theta}$0.58; $M_{\phi\phi}$-1.88; $M_{r\theta}$-0.66; $M_{\theta\phi}$1.27; $M_{\phi r}$-0.36; Fault plane solution: $M_0$2.23160×10^{15} NP1:ϕ_s190.49341°, δ59.08673°, λ140.72547°. NP2:ϕ_s303.28118°, δ57.10430°, λ37.72284°. Principal axes: T 1.9654, Plg48.3576°, Azm155.9587°; N 0.4606, Plg41.6175°, Azm338.3548°; P -2.4259, Plg1.1900°, Azm247.2974°; confirmed*

*SNET **01** 00:18:29.4±1.1, 13°.15N×89°.44W, h41^{km}, ML4.2*

ISC 01 00:18:29.5±1.2**, 13°.13N**±0°.04×**89°.44W**±0°.03**, h32**^{km}±10^{km}**, n110, σ0^{s}.88**/137**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.38	18	eP	Pn	00 18 38.7	0.0
LALI				eS	Sn	00 18 45.9	+0.9
LALI	Alcalda de L	0.38	18	eP	Pn	00 18 38.7	0.0
LALI				iS	Sn	00 18 46.3	+1.4
LALI				IAML		00 18 47.4	
	comp=N,3µm,0.3s						
LALI	Alcalda de L	0.38	18	eP	Pn	00 18 38.7	0.0
LALI				iS	Sn	00 18 46.3	+1.4
LALI				IAML		00 18 47.4	
	comp=N,3µm,0.3s						
LALI	Alcalda de L	0.38	18	eP	Pn	00 18 38.7	0.0
LALI				iS	Sn	00 18 46.3	+1.4
LALI				IAML		00 18 47.4	
	comp=N,3µm,0.3s						
LALI	Alcalda de L	0.38	18	P	Pn	00 18 38.7	0.0
JAYA	Jayaque - finc	0.52	359	eP	Pn	00 18 40.3	-0.6
JAYA				eS	Sn	00 18 49.2	+0.4
JAYA	Jayaque - finc	0.52	359	eP	Pn	00 18 40.3	-0.6
JAYA				eS	Sn	00 18 49.2	+0.4
JAYA	Jayaque - finc	0.52	359	eP	Pn	00 18 40.3	-0.6
JAYA				eS	Sn	00 18 49.2	+0.4
JAYA	Jayaque - finc	0.52	359	P	Pn	00 18 40.4	-0.6
JAYA	Jayaque - finc	0.52	359	S	Sn	00 18 48.9	+0.1
PANCS	Alcalda de	0.54	28	P	Pb	00 18 40.8	-0.1
PANCS	Alcalda de	0.54	28	S	Sn	00 18 49.7	+0.6
ITCA	Escuela Especi	0.56	16	eP	Pb	00 18 41.0	-0.2
ITCA	Escuela Especi	0.56	16	P	Pb	00 18 41.1	-0.1
ITCA	Escuela Especi	0.56	16	S	Sn	00 18 50.1	+0.3
LOMA	Loma Larga	0.58	27	eP	Pb	00 18 41.4	-0.1
LOMA				eS	Sn	00 18 51.7	+1.7
LOMA	Loma Larga	0.58	27	P	Pb	00 18 41.5	0.0
LOMA	Loma Larga	0.58	27	S	Sn	00 18 50.6	+0.5
PMON	Piamonte	0.59	12	eP	Pb	00 18 41.3	-0.3
PMON	Piamonte	0.59	12	P	Pb	00 18 41.4	-0.3
PMON	Piamonte	0.59	12	S	Sn	00 18 50.8	+0.4
SEMO	Seminario San	0.61	20	P	Pb	00 18 41.9	0.0
SEMO	Seminario San	0.61	20	S	Sn	00 18 51.4	+0.6
UTEC	Universidad Te	0.61	22	P	Pb	00 18 41.9	-0.1
UTEC	Universidad Te	0.61	22	S	Sn	00 18 51.5	+0.6
LFRS	El Faro	0.61	37	iP	Pb	00 18 42.0	-0.1
UEES	Universidad Ev	0.62	19	eP	Pb	00 18 41.7	-0.3
UEES	Universidad Ev	0.62	19	P	Pb	00 18 41.9	-0.2
UEES	Universidad Ev	0.62	19	S	Sn	00 18 51.4	+0.4
BOQS	Boqueron	0.62	15	eP	Pb	00 18 42.0	-0.3
PIC2	El Picacho	0.64	16	eP	Pb	00 18 42.4	-0.1
IGN	Direccin Gen	0.64	24	P	Pb	00 18 42.2	-0.2
IGN	Direccin Gen	0.64	24	S	Sb	00 18 51.9	+0.7
UDBS	Universidad Do	0.65	26	S	Sb	00 18 52.2	+0.8
CEDA	San Andres	0.67	4	eP	Pb	00 18 42.4	-0.6
CEDA				eS	Sb	00 18 53.1	+1.1
CEDA	San Andres	0.67	4	S	Sb	00 18 52.4	+0.3
CEDA	San Andres	0.67	4	P	Pb	00 18 42.5	-0.5
LFU	La Fuente	0.69	27	eP	Pb	00 18 43.1	-0.2
CEVE	Cerro Verde	0.72	346	eP	Pb	00 18 43.0	-0.8
CEVE				eS	Sb	00 18 54.4	+0.9
CEVE	Cerro Verde	0.72	346	P	Pb	00 18 43.1	-0.8
CEVE	Cerro Verde	0.72	346	S	Sb	00 18 53.8	+0.3
LBRS	Las Brisas	0.72	33	eP	Pb	00 18 43.7	0.0
SBLS	San Blas	0.73	346	iP	Pn	00 18 43.1	-0.7
SBLS				eP	Pn	00 18 43.1	-0.7
COEG	Centro de Oper	0.73	48	eP	Pn	00 18 43.3	-0.4
COEG				eS	Sb	00 18 54.9	+1.1
COEG	Centro de Oper	0.73	48	P	Pn	00 18 43.3	-0.4
COEG	Centro de Oper	0.73	48	S	Sb	00 18 55.0	+1.2
SNVI	San Vicente	0.76	51	eP	Pb	00 18 43.8	-0.7
PAVA	Las Pavas	0.76	40	eP	Pb	00 18 44.2	-0.3
PAVA	Las Pavas	0.76	40	P	Pb	00 18 44.2	-0.3
PAVA	Las Pavas	0.76	40	S	Sb	00 18 55.9	+1.3
TECO	Alcaldia de Te	0.76	58	eP	Pn	00 18 43.4	-0.7
TECO	Alcaldia de Te	0.76	58	P	Pb	00 18 44.0	-0.5
TECO	Alcaldia de Te	0.76	58	S	Sb	00 18 55.5	+1.0
UESV	Universidad de	0.81	52	P	Pn	00 18 44.5	-0.3
NUBE	Las Nubes	0.83	337	eP	Pn	00 18 44.0	-1.2
NUBE	Las Nubes	0.83	337	iP	Pn	00 18 44.0	-1.2
NUBE				iS	Sb	00 18 56.1	-0.7
NUBE	Las Nubes	0.83	337	iP	Pn	00 18 44.0	-1.2
NUBE				iS	Sb	00 18 56.1	-0.7
NUBE	Las Nubes	0.83	337	iP	Pn	00 18 44.0	-1.2
NUBE				iS	Sb	00 18 56.1	-0.7
NUBE	Las Nubes	0.83	337	P	Pn	00 18 44.0	-1.2
UNIC	Universidad Ca	0.85	353	P	Pb	00 18 45.1	-0.9
ALJI	Alcalda de J	0.87	77	eP	Pn	00 18 45.0	-0.6
ALJI				eS	Sb	00 18 57.3	-0.3
ALJI	Alcalda de J	0.87	77	P	Pn	00 18 45.0	-0.6
SCLA	Alcaldia de Sa	0.90	51	P	Pn	00 18 45.3	-0.7
SCLA	Alcaldia de Sa	0.90	51	S	Sb	00 18 58.9	+0.5
FAME	Alcaldia de Sa	0.90	322	P	Pn	00 18 45.0	-1.0
LOAL	Lomas de Alarc	0.92	339	P	Pn	00 18 45.9	-0.5
LOAL	Lomas de Alarc	0.92	339	S	Sb	00 18 58.1	-1.0
SLOZ	Alcaldia de Sa	0.95	340	eP	Pn	00 18 45.7	-1.0
SLOZ	Alcaldia de Sa	0.95	340	P	Pn	00 18 46.0	-0.7
SLOZ	Alcaldia de Sa	0.95	340	S	Sb	00 18 59.0	-0.9
TECA	Tecapa	0.98	68	eP	Pn	00 18 46.6	-0.7
TECA				eP	Pb	00 18 46.9	-1.4
PQSS	Presa 15 de Se	0.99	60	P	Pn	00 18 46.9	-0.2
PQSS	Presa 15 de Se	0.99	60	S	Sb	00 19 00.6	-0.3
PACA	Pacayal	1.14	73	P	Pn	00 18 49.4	0.0
LCY	Lacayo	1.16	75	iP	Pn	00 18 49.3	-0.2
RANC	El Ranchito	1.16	75	S	Sn	00 19 04.8	+0.2
RANC	El Ranchito	1.16	75	P	Pn	00 18 49.7	0.0
BLLM	Bellamira	1.21	75	eP	Pn	00 18 50.0	-0.3
MTO3	Montecristo	1.26	4	iP	Pn	00 18 50.8	-0.4
MTO3				eS	Sb	00 19 07.8	-1.3
MTO3	Montecristo	1.26	4	iP	Pn	00 18 50.8	-0.4
MTO3				iS	Sb	00 19 08.1	-1.0
MTO3				IAML		00 19 08.6	
	comp=Z,667nm,0.4s						
MTO3	Montecristo	1.26	4	iP	Pn	00 18 50.8	-0.4
MTO3				iS	Sb	00 19 08.1	-1.0
MTO3				IAML		00 19 08.6	
	comp=Z,667nm,0.4s						
MTO3	Montecristo	1.26	4	iP	Pn	00 18 50.8	-0.4
MTO3				iS	Sb	00 19 08.1	-1.0
MTO3				IAML		00 19 08.6	
	comp=Z,667nm,0.4s						
MTO3	Montecristo	1.26	4	P	Pn	00 18 50.8	-0.4
CNRM	Centro Naciona	1.28	74	P	Pn	00 18 51.1	-0.1
CAHU	Cacacuatique	1.36	62	eP	Pn	00 18 52.1	-0.3
ESQI	Esquipulas	1.43	4	iP	Pn	00 18 53.3	0.0
ESQI	Esquipulas	1.43	4	P	Pn	00 18 53.3	0.0
ESQI	Esquipulas	1.43	4	S	Sb	00 19 11.5	-2.0
LCND	La Caada	1.52	83	S	Sb	00 19 14.6	-1.6
LCND	La Caada	1.52	83	P	Pn	00 18 54.1	-0.4
FG16	Alotenango, Sa	1.54	318	iP	Pb	00 18 58.6	+1.0
FG16				IAML		00 19 28.8	
	comp=N,4µm,0.2s						
FG16	Alotenango, Sa	1.54	318	iP	Pb	00 18 58.6	+1.0
FG16				IAML		00 19 28.8	
	comp=N,4µm,0.2s						
FG8	Yepocapa, Chim	1.56	316	iP	Pb	00 18 58.8	+0.8
FG8				iS	Sb	00 19 20.5	+3.1
FG8	Yepocapa, Chim	1.56	316	iP	Pb	00 18 58.8	+0.8
FG8				iS	Sb	00 19 20.5	+3.1
CNCH	Conchagua	1.57	84	eP	Pn	00 18 54.8	-0.5
CNCH	Conchagua	1.57	84	S	Sb	00 19 16.0	-1.8
CNCH	Conchagua	1.57	84	P	Pn	00 18 55.3	0.0
CSGN	Cosiguina Volc	1.84	95	P	Pn	00 18 58.5	-0.5
CSGN				S	Sn	00 19 22.6	+1.3
POTN	Potosi Cosigui	1.89	94	P	Pn	00 18 58.8	-0.7
POTN				S	Sn	00 19 23.9	+1.6
CHOHN	Orocuina	2.25	81	P	Pn	00 19 04.0	-0.6
STG8	El Palmar, Qui	2.27	306	iP	Pb	00 19 08.4	-1.7
STG8				iS	Sb	00 19 38.5	+0.7
STG8				IAML		00 19 49.4	
	comp=E,862nm,0.8s						
STG8	El Palmar, Qui	2.27	306	iP	Pb	00 19 08.4	-1.7
STG8				iS	Sb	00 19 38.5	+0.7
STG8				IAML		00 19 49.4	
	comp=E,862nm,0.8s						
TGUH	Tegucigalpa,Un	2.30	66	P	Pn	00 19 05.1	-0.3
CRIN	San Cristobal	2.37	100	P	Pn	00 19 06.1	-0.2
CRIN	San Cristobal	2.37	100	S	Sn	00 19 36.6	+2.3
RTAL	Retalhuleu	2.59	303	P	Pn	00 19 08.6	-0.6
HERN	Volcan Telica	2.60	101	P	Pn	00 19 09.1	-0.3
CNGN	Cerro Negro	2.75	103	P	Pn	00 19 11.1	-0.4
LIMN	Finca el Limon	3.00	91	P	Pn	00 19 14.4	-0.5
RCVN	Varillal2	3.19	82	P	Pn	00 19 17.2	-0.5

*NIED **01** 00:43:43.5, 38°.46N×144°.56E, h31^{km}, MW3.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.96; $M_{\theta\theta}$0.13; $M_{\phi\phi}$0.83; $M_{r\theta}$-0.46; $M_{\theta\phi}$-0.27; $M_{\phi r}$0.98; Fault plane solution: $M_0$1.43000×10^{14} NP1: ϕ_s345.00000°, δ21.00000°, λ-82.00000°. NP2: ϕ_s157.00000°, δ69.00000°, λ-93.00000°.*

JMA 01 00:43:43.5±0.3**, 38°N**±1°×**14°5E**±°**, h31**^{km}**, MV4.0**/28**, FAR E OFF NORTH HONSHU, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.34	286	P	Pn	00 44 21.1	+1.3
OFUJ				S	Sn	00 44 49.0	+1.5
JIKH	Ishinomakikobu	2.43	267	P	Pn	00 44 22.6	+1.5
JIKH				S	Sn	00 44 52.0	+2.2
JKMT	Kesennumamotoy	2.44	279	P	Pn	00 44 22.8	+1.7
JKMT				S	Sn	00 44 51.4	+1.5
JMK	Ichinoseki	2.66	282	P	Pn	00 44 26.0	+1.9
JMK				S	Sn	00 44 58.0	+2.8
JOM	Ohasama	2.74	293	P	Pn	00 44 26.9	+1.6
JOM				eS	Sn	00 45 00.2	+2.9
JANG	Nango	3.03	310	eP	Pn	00 44 32.0	+2.7
JYK	Kaneyama	3.31	279	eP	Pn	00 44 36.1	+2.9
JYK				eS	Sn	00 45 15.4	+3.9
JOTO	OTAMA OYAMA	3.45	256	S	Sn	00 45 18.1	+3.1
BSO1	Boso 1	4.77	218	eS	Sn	00 45 49.0	+2.3
JRY	Ryogami san	5.13	243	eP	Pn	00 45 00.0	+1.8
JRY				S	Sn	00 45 57.0	+0.6
JOD2	Odawara 2	5.42	236	eS	Sn	00 46 03.3	-0.3
JTKR	Abashiri--Toko	5.52	355	eP	Pn	00 45 01.4	-2.1
JTKR				eS	Sn	00 46 00.8	-5.2

*NIED **01** 00:52:58.3, 44°.32N×149°.69E, h30^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.98; $M_{\theta\theta}$0.52; $M_{\phi\phi}$-1.50; $M_{r\theta}$0.67; $M_{\theta\phi}$-0.76; $M_{\phi r}$0.06; Fault plane solution: $M_0$1.65000×10^{15} NP1: ϕ_s165.00000°, δ52.00000°, λ37.00000°. NP2:ϕ_s51.00000°, δ62.00000°, λ136.00000°.*

*JMA **01** 00:52:58.3±0.9, 44°N±4°×15°0E±°, h30^{km}, MV4.0/11, SE OFF ETOROFU*

*MOS **01** 00:53:04.0±1.0, 44°.16N×149°.16E, h38^{km}, mb4.7/20, Error ellipse: s-maj=10.4km s-min=7.0km az=121.8*

*IDC **01** 00:53:06.5±0.7, 44°.22N×149°.17E, h40^{km}±3^{km}, mb3.8/23, mbtmp4.0/30, ML3.2/6, MS3.4/17, Error ellipse: s-maj=17.9km s-min=13.0km az=173.0*

*SKHL **01** 00:53:07.8±0.0, 44°.00N×148°.80E, h64^{km}±1^{km}, mb4.4/3*

ISC 01 00:53:03.7±0.6**, 44°.05N**±0°.05×**149°.06E**±0°.05**, h25**^{km}±2^{km}**, h25^{km}:pP-P, n129, σ1^{s}.61**/153**, mb4.3**/55**, MS3.5**/18**, 10C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.46	325	ePN	Pb	00 53 29.3	-0.9
KUR				S	Sn	00 53 45.7	-1.1
KUR				pmax	pmax		
	comp=Z,224nm,0.9s						
KUR				smax	smax		
	comp=E,709nm,0.5s						
KUR				smax	smax		
	comp=N,402nm,0.4s						
KUR	Kuril'sk	1.46	325	eP	Pb	00 53 29.9	-0.3
KUR				AMB	AMB	00 53 35.8	
	comp=N,220nm,0.4s						
KUR				eS	Sn	00 53 46.5	-0.3
KUR				A	A	00 53 57.8	
	comp=N,1µm,0.5s						
KUR				A	A	00 53 57.8	
	comp=N,1µm,0.5s						
SHO	Shikotan	1.62	264	ePN	Pn	00 53 31.5	+0.8
SHO				iS	Sn	00 53 49.6	-1.2
SHO				pmax	pmax		
	comp=N,16nm,0.5s						
SHO				pmax	pmax		
	comp=Z,37nm,0.5s						
SHO				pmax	pmax		
	comp=E,21nm,0.4s						
SHO				smax	smax		
	comp=E,189nm,0.6s						
SHO				smax	smax		

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         comp=N,92nm,0.3s
SHO   Shikotan          1.62 264  eP     Pn      00 53 31.3 +0.6
SHO                                AMB   AMB     00 53 32.0
         comp=N,70nm,0.5s
SHO                               eS     Sn      00 53 48.9 -1.9
SHO                                A     A       00 53 54.0
         comp=N,370nm,0.5s
SHO                                A     A       00 53 54.0
         comp=N,340nm,0.5s
YUK   Yuzh-Kuril'sk     2.31 271  eP     Pn      00 53 40.7 +0.6
YUK                                AMB   AMB     00 53 41.9
         comp=N,110nm,0.4s
YUK                               eS     Sn      00 54 03.6 -4.1
YUK                                A     A       00 54 06.7
         comp=N,280nm,0.6s
YUK                                A     A       00 54 06.7
         comp=N,390nm,0.6s
NEM2  Nemuro 2          2.50 255  eP     Pn      00 53 42.9 +0.1
NEM2                              eS     Sb      00 54 16.8 -1.5
NMR   Nemuro--Hokkai    2.51 255  ePN    Pn      00 53 42.9  0.0
NMR   Nemuro--Hokkai    2.51 255  eP     Pn      00 53 43.1 +0.2
NMR                               eS     Sn      00 54 08.8 -3.9
JNK   Nakash            3.18 263  eP     Pn      00 53 53.4 +1.3
AKK   Akkeshi           3.24 253  eP     Pn      00 53 53.4 +0.5
JAK   Akkeshi           3.35 253  eP     Pn      00 53 55.4 +1.0
JAK                               eS     Sn      00 54 34.8 +1.5
JTKR  Abashiri--Toko    3.72 271  eP     Pn      00 54 01.7 +2.1
JAR   Ashorobuto        3.91 261   P     Pn      00 54 03.9 +1.7
JCH   Churui            4.40 253  eP     Pn      00 54 10.3 +1.5
JCH                               eS     Sn      00 55 02.9 +3.6
JKA   Kamikawa-asahi    4.66 273  eP     Pn      00 54 15.8 +3.4
ASAJ  Asahikawa         4.66 273   Pn    Pn      00 54 15.8 +3.4
         comp=N,1.0nm,0.3s,baz=97,slow=16,SNR=1.4
         comp=N,4.9nm,0.3s
ERM   Erimo             4.78 247cePN     Pn      00 54 15.7 +1.6
ERM                                pmax  pmax
         comp=Z,33nm,0.5s
JNBK  Urakawa-nobuka    4.94 251  eP     Pn      00 54 17.8 +1.4
JNBK                              eS     Sn      00 55 17.1 +4.4
YSS   Yuzhno-Sakhali    5.30 305  ePN    Pn      00 54 24.6 +3.4
YSS                               eS     Sn      00 55 25.6 +4.1
YSS                                pmax  pmax
         comp=Z,10.0nm,0.6s
YSS                                smax  smax
         comp=N,20nm,0.8s
YSS                                smax  smax
         comp=E,20nm,0.6s
YSS                                MLR   MLR
         comp=Z,300nm,15.0s
YSS   Yuzhno-Sakhali    5.30 305  eP     Pn      00 54 23.8 +2.6
JANG  Nango             6.70 239  eP     Pn      00 54 39.5 -1.0
JANG                               S     Sn      00 55 51.3 -4.7
PETK  Petropavlovsk-   10.71  29   Pn    Pn      00 55 33.3 -2.1
         comp=Z,0.2nm,0.3s,baz=201,slow=14,SNR=6.6
         comp=Z,2.3nm,0.7s
MJAR  Matsushiro Arr   11.17 232   Pn    Pn      00 55 40.8 -1.0
         comp=Z,0.1nm,0.3s,baz=33,slow=14,SNR=1.3
USRK  Ussuriysk Ar.    12.28 277   Pn    Pn      00 55 58.0 +1.2
         comp=Z,0.1nm,0.3s,baz=72,slow=14,SNR=5.0
USRK                               LR    LR      01 01 15.3
         comp=Z,123nm,18.1s,baz=56,slow=40
         comp=Z,2.4nm,0.6s
KLR   Kul'dur          12.97 300   Pn    Pn      00 56 08.6 +2.4
         comp=Z,0.2nm,0.3s,baz=116,slow=16,SNR=6.8
KLR                                LR    LR      01 01 53.4
         comp=Z,152nm,18.5s,baz=118,slow=41
         comp=Z,0.4nm,0.4s
BNX   BinXian          15.44 284  ⥣P     Pn      00 56 40.6 +0.9
BNX                                pmax  pmax
         comp=Z,6.0nm,0.9s
MA2   Magadan          15.59   3   LR    LR      01 03 40.1
         comp=Z,98nm,18.7s,baz=173,slow=41
HEH   HeiHe            15.96 300  eP     Pn      00 56 40.3 -6.0
HEH                                LR    LR
         comp=N,64nm,16.6s
HEH                                LR    LR
         comp=E,190nm,17.5s
HEH                                LR    LR
         comp=Z,260nm,18.2s
KSRS  Korea Array      17.30 255   Pn    P       00 57 06.5 +1.8
         comp=Z,0.2nm,0.3s,baz=60,slow=10.0,SNR=2.3
         comp=Z,0.8nm,0.6s
SHEM  Shemya Is, Ala   18.68  53   P     Pn      00 57 20.2 -0.1
         comp=Z,30nm,0.7s,baz=314,slow=15,SNR=6.0
SEY   Seymchan         19.02   5   P     P       00 57 22.5 -0.9
         comp=Z,0.2nm,0.3s,baz=156,slow=12,SNR=4.1
         comp=Z,1.0nm,0.3s
SEY   Seymchan         19.02   5ceP      P       00 57 22.3 -1.1
SEY                                pmax  pmax
         comp=Z,3.0nm,1.0s
YAK   Yakutsk          21.30 334   P     P       00 57 46.4 -1.7
         comp=Z,16nm,0.4s,baz=177,slow=1.4,SNR=2.0
YAK                                LR    LR      01 07 10.2
         comp=Z,110nm,18.8s,baz=130,slow=40
         comp=Z,16nm,0.4s
YAK   Yakutsk          21.30 334  eP     P       00 57 46.4 -1.7
YAK                                pmax  pmax
         comp=Z,11nm,1.0s
YAK                                pmax  pmax
         comp=N,3.0nm,1.2s
YAK                                pmax  pmax
         comp=E,5.0nm,1.1s
XLT   XiLinHaoTe       23.65 281  eP     P       00 58 13.4 +0.3
XLT                                pP    pP      00 58 14.7 -4.2
XLT                                PcP   PcP     01 01 57.5 +0.5
XLT                                pmax  pmax
         comp=Z,13nm,0.5s
XLT                                pmax  pmax
         comp=Z,87nm,6.1s
XLT                                LR    LR
         comp=Z,120nm,16.3s
BILL  Bilibino         25.70  15  i P    P       00 58 31.4 -0.1
H11N2 WAKE ISLAND Hy   28.46 143   T     T       01 30 08.1
         baz=334,slow=75,SNR=17
H11N1 WAKE ISLAND Hy   28.47 143   T     T       01 30 03.2
         baz=334,slow=75,SNR=12
H11N3 WAKE ISLAND Hy   28.48 143   T     T       01 30 09.5
         baz=334,slow=75,SNR=14
TIXI  Tiksi            29.36 347   LR    LR      01 10 56.2
         comp=Z,23nm,18.7s,baz=210,slow=37
TIXI  Tiksi            29.36 347  i P    P       00 59 01.0 -3.2
TIXI                               pmax  pmax
         comp=Z,1.0nm,0.9s
H11S1 WAKE ISLAND Hy   29.46 144   T     T       01 31 20.6
         baz=334,slow=75,SNR=10
H11S3 WAKE ISLAND Hy   29.47 144   T     T       01 31 29.5
         baz=334,slow=75,SNR=6.5
H11S2 WAKE ISLAND Hy   29.48 144   T     T       01 31 25.2
         baz=334,slow=75,SNR=6.0
SONM  Songino Array    29.63 293   P     P       00 59 08.0 +1.0
         comp=Z,3.0nm,0.6s,baz=80,slow=8.0,SNR=20
SONM                               LR    LR      01 12 52.1
         comp=Z,73nm,19.4s,baz=86,slow=40
         comp=Z,3.0nm,0.6s
GTA   Gaotai           36.61 280  eP     P       01 00 09.5 +1.6
GTA                                pP    pwP     01 00 21.6 +1.7
GTA                                pmax  pmax
         comp=Z,5.0nm,1.3s
NRIK  Noril'sk         39.66 331ceP      P       01 00 31.9 -1.2
NRIK                               pmax  pmax
         comp=Z,2.0nm,1.1s
ILAR  Eielson Array    40.43  36   P     P       01 00 38.8 -0.7
         comp=Z,0.4nm,0.6s,baz=272,slow=7.8,SNR=5.2
         comp=Z,0.4nm,0.6s
ZALV  Zalesovo Beam    41.92 307   P     P       01 00 51.4 -0.5
         comp=Z,0.7nm,0.4s,baz=70,slow=9.6,SNR=4.5
ZALV                               PcP   PcP     01 02 45.9 -1.1
         comp=Z,0.6nm,0.7s,baz=48,slow=2.1,SNR=1.7
ZALV                               LR    LR      01 18 44.5
         comp=Z,23nm,18.1s,baz=90,slow=37
         comp=Z,0.7nm,0.4s
ZALV  Zalesovo Beam    41.92 307  i P    P       01 00 52.2 +0.3
ZALV                               pmax  pmax
         comp=Z,1.0nm,0.4s
MK31  Makanchi Array   45.67 298ceP      P       01 01 23.2 +1.0
MKAR  Makanchi Array   45.67 298   P     P       01 01 23.4 +1.2
         comp=Z,5.5nm,0.7s,baz=77,slow=8.4,SNR=63
MKAR                               LR    LR      01 22 02.6
         comp=Z,55nm,21.3s,baz=45,slow=38
         comp=Z,5.5nm,0.7s
MKAR  Makanchi Array   45.67 298  i P    P       01 01 23.2 +1.0
MKAR                               pmax  pmax
         comp=Z,6.0nm,0.6s
MKAR  Makanchi Array   45.67 298  eP     P       01 01 23.2 +1.0
KURK  Kurchatov        46.51 304ceP      P       01 01 29.4 +0.7
KURK                               pmax  pmax
         comp=Z,7.0nm,1.7s
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KURK  Kurchatov        46.51 304  eP     P       01 01 29.4 +0.7
KURBB Kurchatov Arra   46.59 304   P     P       01 01 29.4 +0.1
         comp=Z,3.0nm,0.5s,baz=72,slow=8.7,SNR=22
KURBB                              PcP   PcP     01 03 03.1 +0.1
         comp=Z,0.1nm,0.5s,baz=85,slow=2.3,SNR=1.5
         comp=Z,3.0nm,0.5s
BVAR  Borovoye Array   50.38 310   P     P       01 01 59.7 +1.2
         comp=Z,0.6nm,0.4s,baz=79,slow=10,SNR=5.0
         comp=Z,0.6nm,0.4s
AAK   Ala-Archa        52.47 296ceP      P       01 02 16.0 +1.5
AAK                                pmax  pmax
         comp=Z,3.0nm,1.3s
AAK   Ala-Archa        52.47 296  eP     P       01 02 16.0 +1.5
KSH   Kashi            53.03 292   P     P       01 02 23.8 +5.1
KSH                                pmax  pmax
         comp=Z,3.0nm,0.7s
RES   Resolute Bay     54.28  17   LR    LR      01 28 51.0
         comp=Z,39nm,18.1s,baz=26,slow=40
YKA   Yellowknife Ar   54.78  34   P     P       01 02 30.8 -0.1
         comp=Z,0.7nm,0.7s,baz=302,slow=7.4,SNR=5.8
         comp=Z,0.7nm,0.7s
ARTI  Arti             55.18 317   LR    LR      01 28 45.7
         comp=Z,56nm,19.2s,baz=54,slow=39
ARTI  Arti             55.18 317c iP     P       01 02 33.9 +0.1
ARTI                                             01 03 34.7
ARTI                               S     S       01 10 17.0 +1.8
ARTI                               SS    SS      01 13 57.9 -0.9
ARTI                               pmax  pmax
         comp=Z,3.0nm,0.7s
KIRV  Kirov            58.20 323   LR    LR      01 30 42.7
         comp=Z,56nm,18.3s,baz=50,slow=39
AKTO  Aktyubinsk       58.38 311   LR    LR      01 28 23.1
         comp=Z,18nm,19.3s,baz=226,slow=36
ARCES ARCESS Array B   59.44 340   P     P       01 03 03.9 +0.1
         comp=Z,1.9nm,0.8s,baz=40,slow=7.4,SNR=1.3
         comp=Z,1.9nm,0.8s
KLMR  Klimovskoe       60.92 328  eP     P       01 03 12.6 -1.4
KLMR                               pmax  pmax
         comp=Z,10.0nm,0.9s
SUMG  Summit           63.56   3  i P    P       01 03 32.4 +0.5
WRA   Warramunga Arr   65.09 195   P     P       01 03 44.4 +2.3
         comp=Z,1.0nm,0.5s,baz=12,slow=6.6,SNR=3.8
         comp=Z,1.0nm,0.5s
FINES FINESS Array B   65.23 334   P     P       01 03 42.6 +0.1
         comp=Z,6.3nm,0.6s,baz=36,slow=7.6,SNR=50
FINES                              pP    pwP     01 03 54.4 -0.9
         comp=Z,5.8nm,0.6s,baz=38,slow=8.8,SNR=9.7
         comp=Z,6.3nm,0.6s
OBN   Obninsk          65.89 324  eP     P       01 03 44.0 -2.9
OBN                                pmax  pmax
         comp=Z,5.0nm,0.5s
OBN                                MLR   MLR
         comp=Z,32nm,15.0s
OBN   Obninsk          65.89 324  eP     P       01 03 44.0 -2.9
VRH   Novokhopyorsk    66.21 319  eP     P       01 03 48.4 -0.7
VRH                               e*SP   sP      01 03 59.0 +1.2
VRH                                pmax  pmax
         comp=Z,8.0nm,0.8s
NVAR  Mina Array Bea   66.24  59   P     P       01 03 50.4 +0.6
         comp=Z,0.1nm,0.3s,baz=314,slow=5.0,SNR=2.9
         comp=Z,0.1nm,0.3s
LPSR  Galich'ya Gora   66.57 321  eP     P       01 03 50.7 -0.6
LPSR                              e*SP   pwP     01 04 01.8 -1.9
LPSR                               pmax  pmax
         comp=Z,10.0nm,0.9s
MSVF  Nonsavu          66.96 150   LR    LR      01 27 42.5
         comp=Z,36nm,19.9s,baz=193,slow=31
ICESG Greenland Ices   67.00   3  i P    P       01 03 54.5 +0.2
VORR  Voronezh         67.07 321  eP     P       01 03 53.6 -0.9
VORR                              e*SP   pwP     01 04 05.3 -1.6
VORR                               pmax  pmax
         comp=Z,10.0nm,0.8s
VSR   Storozhevoye     67.40 320  eP     P       01 03 55.8 -0.8
VSR                               e*SP   pwP     01 04 07.5 -1.5
VSR                                pmax  pmax
         comp=Z,5.0nm,1.0s
VORD  Divnogorie       67.51 320  eP     P       01 03 57.1 -0.2
VORD                              e*SP   pwP     01 04 08.0 -1.7
VORD                               pmax  pmax
         comp=Z,6.0nm,1.0s
PDAR  Pinedale Array   68.65  51   P     P       01 04 04.7 -0.3
         comp=Z,0.2nm,0.3s,baz=283,slow=4.2,SNR=2.1
PDAR                               sP    pwP     01 04 21.5 +3.7
         comp=Z,1.1nm,0.9s,baz=291,slow=4.4,SNR=3.4
         comp=Z,0.2nm,0.3s
ASAR  Alice Springs    68.80 195   P     P       01 04 07.2 +1.5
         comp=Z,0.8nm,0.7s,baz=14,slow=6.7,SNR=5.5
         comp=Z,0.8nm,0.7s
NB2   NORSAR Subarra   69.81 340   P     P       01 04 11.6  0.0
         comp=Z,0.9nm,0.5s,baz=30,slow=6.5
NOA   NORSAR Array B   69.81 340   P     P       01 04 11.6  0.0
         comp=Z,2.5nm,0.8s,baz=31,slow=6.6,SNR=12
NOA                                pP    pwP     01 04 23.8 -0.6
         comp=Z,3.3nm,0.8s,baz=35,slow=6.4,SNR=9.3
         comp=Z,2.5nm,0.8s
MNK   Minsk            69.82 328  i P    P       01 04 11.4 -0.3
         comp=E,5.0nm,0.9s
MNK                               i P    P       01 04 11.4 -0.3
         comp=N,7.0nm,0.8s
MNK                               i P    P       01 04 11.4 -0.3
         comp=Z,8.0nm,0.9s,baz=41
MNK                               i PcP  pwP     01 04 23.9 -0.6
MNK                               i PP   PP      01 06 45.1 -0.5
MNK                               i PPP  PPP     01 08 27.1
MNK                               i S    S       01 13 18.6 -0.7
MNK                               i SS   SS      01 17 12.9  -34
MNK                               i SSS  SSS     01 20 41.1
MNK                               i LR   LR      01 34 36.1
MNK                               i LRM  MLR     01 37 14.1
         comp=E,22nm,12.7s
MNK                               i LRM  MLR     01 37 29.5
         comp=N,15nm,12.3s
MNK                               i LRM  MLR     01 37 46.1
         comp=Z,42nm,17.4s
MNK   Minsk            69.82 328  i P    P       01 04 11.3 -0.3
MNK                               i                01 04 23.8
MNK                               i                01 06 45.1
MNK                               i PPP  PPP     01 08 27.1
MNK                               i S    S       01 13 18.5 -0.7
MNK                                pmax  pmax
         comp=E,5.0nm,0.9s
MNK                                pmax  pmax
         comp=N,7.0nm,0.8s
MNK                                pmax  pmax
         comp=Z,8.0nm,0.9s
MNK                                MLR   MLR
         comp=E,22nm,13.0s
MNK                                MLR   MLR
         comp=N,15nm,12.0s
MNK                                MLR   MLR
         comp=Z,42nm,17.0s
HFS   Hagfors          69.94 338   P     P       01 04 12.2 -0.1
         comp=Z,2.6nm,0.5s,baz=46,slow=4.3,SNR=21
HFS                                pP    pwP     01 04 24.2 -0.9
         comp=Z,3.9nm,0.5s,baz=40,slow=5.8,SNR=5.7
HFS                                LR    LR      01 38 49.6
         comp=Z,29nm,19.2s,baz=42,slow=39
         comp=Z,2.6nm,0.5s
NORES NORESS Array B   69.99 339   P     P       01 04 12.5 -0.1
KIV   Kislovodsk       70.59 313  eP     P       01 04 17.5 +0.8
KIV                                pmax  pmax
         comp=Z,7.0nm,1.1s
KIV                                MLR   MLR
         comp=Z,72nm,18.0s
KIV   Kislovodsk       70.59 313  eP     P       01 04 17.5 +0.8
KBZ   Khabaz           70.63 312   P     P       01 04 18.1 +1.3
         comp=Z,4.5nm,0.8s,baz=50,slow=3.2,SNR=17
KBZ                                pP    pwP     01 04 29.8 +0.6
         comp=Z,4.0nm,0.7s,baz=51,slow=6.7,SNR=8.8
         comp=Z,4.5nm,0.8s
KBZ   Khabaz           70.63 312ceP      P       01 04 18.3 +1.5
KBZ                                pmax  pmax
         comp=Z,5.0nm,0.9s
KBZ   Khabaz           70.63 312  eP     P       01 04 18.3 +1.5
GNI   Garni            72.05 309   LR    LR      01 40 06.8
         comp=Z,31nm,18.1s,baz=74,slow=39
AKASG Malin Array Be   72.15 325   P     P       01 04 25.9  0.0
         comp=Z,1.3nm,0.5s,baz=39,slow=5.9,SNR=13
AKASG                              pP    pwP     01 04 37.9 -0.8
         comp=Z,2.2nm,0.6s,baz=37,slow=6.0,SNR=5.0
         comp=Z,1.3nm,0.5s
AKBB  Malin Array Si   72.15 325  i P    P       01 04 26.0 +0.1
AKBB                               pmax  pmax
         comp=Z,2.0nm,0.9s
STHS  Stebnicka Huta   76.35 328  eP     P       01 04 52.3 +1.8
STHS  Stebnicka Huta   76.35 328  eP     P       01 04 52.3 +1.8
MORC  Moravsky Berou   77.43 330  eP     P       01 04 54.8 -1.7
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KRLC  Kraliky          77.45 331  eP     P       01 04 57.4 +0.7
KRLC  Kraliky          77.45 331  eP     P       01 04 57.4 +0.7
CLL   Collm            77.68 334  i P    P       01 04 57.7 -0.1
CLL                               e*SP   pP      01 05 03.0 -1.2
CLL                                pmax  pmax
         comp=Z,4.0nm,0.7s
CLL   Collm            77.68 334  i P    P       01 04 57.7 -0.1
         comp=Z,4.0nm,0.7s
CLL                               esP    pP      01 05 03.0 -1.2
CLL                               ePcP   PcP     01 05 08.0 +0.1
VRAC  Vranov           78.16 330   LR    LR      01 41 31.6
         comp=Z,22nm,18.6s,baz=30,slow=37
VRAC  Vranov           78.16 330  eP     P       01 05 00.4 -0.2
EKA   Eskdalemuir Ar   78.22 344   P     P       01 05 00.9 +0.2
         comp=Z,0.7nm,0.6s,baz=23,slow=6.2,SNR=1.7
EKA                                pP    pwP     01 05 12.5 -1.1
         comp=Z,1.6nm,0.7s,baz=38,slow=5.6,SNR=2.7
         comp=Z,0.7nm,0.6s
BRTR  Keskin Array B   78.33 315   P     P       01 05 02.5 +0.6
         comp=Z,0.5nm,0.6s,baz=47,slow=7.3,SNR=5.1
BRTR                               pP    pwP     01 05 14.7  0.0
         comp=Z,0.6nm,0.7s,baz=72,slow=5.3,SNR=3.5
         comp=Z,0.5nm,0.6s
BRTR  Keskin Array B   78.33 315  i P    P       01 05 03.4 +1.5
BRTR                               pmax  pmax
         comp=Z,1.0nm,0.8s
KRUC  Moravsky         78.44 330  eP     P       01 05 01.6 -0.5
KHC   Kasperske Hory   79.36 332  eP     P       01 05 08.1 +0.9
KHC                               ex     x       01 05 18.3
KHC   Kasperske Hory   79.36 332ceP      P       01 05 07.6 +0.4
KHC                                pmax  pmax
         comp=Z,8.0nm,1.3s
GERES GERESS Array B   79.56 332   P     P       01 05 08.7 +0.3
         comp=Z,0.6nm,0.6s,baz=34,slow=6.3,SNR=7.2
GERES                              pP    pwP     01 05 20.8 -0.5
         comp=Z,1.0nm,0.6s,baz=34,slow=5.9,SNR=7.2
         comp=Z,0.6nm,0.6s
CONA  Conrad Observa   79.59 330  i P    P       01 05 08.3 -0.3
         comp=Z,4.0nm,1.0s
RONA  Rosalia, Austr   79.62 330  i P    P       01 05 07.2 -1.4
         comp=Z,1.8nm,0.6s
MOA   Molln            80.22 331  epP    P       01 05 13.0 +1.1
         comp=Z,5.0nm,1.6s
BIOA  Bad Ischl, Aus   80.57 331  epP    P       01 05 14.3 +0.5
         comp=Z,5.4nm,1.5s
SOKA  Soboth           80.95 330  i pP   P       01 05 16.9 +1.1
         comp=Z,3.8nm,1.1s
LESA  Schwarzleotal    81.13 332  epP    P       01 05 17.3 +0.4
         comp=Z,3.9nm,0.9s
KBA   Koelnbreinsper   81.20 331  epP    P       01 05 18.1 +0.8
         comp=Z,1.5nm,0.6s
TXAR  Lajitas Array    81.33  58   P     P       01 05 17.5 -0.7
         comp=Z,0.4nm,0.7s,baz=284,slow=3.8,SNR=7.9
TXAR                               sP    pwP     01 05 35.2 +3.8
         comp=Z,1.0nm,0.8s,baz=304,slow=2.9,SNR=7.8
         comp=Z,0.4nm,0.7s
WATA  Walderalm        81.58 332  i pP   P       01 05 20.4 +1.1
         comp=Z,1.5nm,0.6s
WTTA  Wattenberg       81.62 332  i pP   P       01 05 20.1 +0.6
         comp=Z,2.8nm,1.1s
MOTA  Moosalm          81.73 333  i pP   P       01 05 21.2 +1.1
         comp=Z,2.8nm,0.7s
SQTA  Sankt Quirin     81.81 332  i pP   P       01 05 21.6 +1.2
         comp=Z,5.2nm,1.2s
DAVA  Damuels          82.19 333  i pP   P       01 05 23.8 +1.3
         comp=Z,1.6nm,0.5s
MMAI  Mount Meron Ar   82.38 309   P     P       01 05 25.1 +1.4
         comp=Z,1.5nm,0.7s,baz=64,slow=4.0,SNR=1.8
         comp=Z,1.5nm,0.7s
EIL   Elat             85.13 307   LR    LR      01 50 19.8
         comp=Z,21nm,18.6s,baz=250,slow=40
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*TEH **01** 01:03:42.9, 30°.28N×51°.86E, h6^{km}±72^{km}*

*OMAN **01** 01:03:49.3±1.6, 29°.75N×52°.00E, h10^{km}, mb4.4/5, ml3.2/3, Error ellipse: s-maj=15.1km s-min=7.7km az=8.0*

*DSN **01** 01:03:50.9±0.9, 29°.45N×51°.73E, h10^{km}, ML3.4/6, Error ellipse: s-maj=13.8km s-min=5.2km az=12.0*

ISC 01 01:03:43.2±0.8**, 30°.21N**±0°.04×**51°.93E**±0°.05**, h8^{km}, n63, σ2^s.60**/84**, Northern and central Iran**

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Code  Station Name      Δ°   AZ°    Phase ID         Time      Res
                                   Op     ISC       h  m  s    ISC
KAZ2  Kazeron-Fars-I    0.64 202   Pg     Pg       01 03 57.3 +1.8
SHI   Shiraz            0.76 138   Pg     Pb       01 03 59.7 +1.0
SHI                                Sg     Sn       01 04 13.9 +1.8
KLNJ  Kolanjah          0.85 340   Pg     Pg       01 03 59.1 -0.4
IRAM  Ramesheh          1.64  13   Pg     Pn       01 04 13.7 +1.2
IBRJ  Brojen            1.79 341   Pg     Pn       01 04 16.2 +1.6
DSBU  Dashti - Bushe    1.94 198   Pn     Pn       01 04 19.8 +3.4
QIR1  Qir               1.98 150   Pn     Pb       01 04 20.4 +0.9
ZNGN  Zangian           2.11 334   Pn     Pn       01 04 21.6 +2.5
IGAR  Gharneh           2.19   2   Pn     Pn       01 04 22.6 +2.6
JHBN  Jahan bin         2.29 332   Pn     Pn       01 04 23.7 +2.2
IMEH  Mehriz            2.59  62   Pn     Pb       01 04 29.4 -0.6
IPIR  Pirpir            2.62 340   Pn     Pn       01 04 28.3 +2.2
IZEF  Zefreh            2.70   7   Pn     Pn       01 04 29.3 +2.2
ICHK  Chekchek          2.93  46   Pn     Pn       01 04 33.5 +3.2
IKLH  Kolahrood         3.11 355   Pn     Pn       01 04 35.5 +2.7
IBAF  Bafgh             3.41  65   Pn     Pn       01 04 40.2 +3.4
QAMS  Qamsar            3.54 353   Pn     Pn       01 04 41.4 +2.7
KRSH  Karshahi          3.75   3   Pn     Pn       01 04 43.9 +2.4
KBD   Kabd              3.83 255   Sn     Sn       01 05 29.3 +1.7
KHGB  Koh Gabri         3.93  86   Pn     Pn       01 04 48.2 +4.2
ISFB  Sefidab           4.14   4   Pn     Pn       01 04 48.8 +2.1
NGRK  Negar Kerman      4.20  97   Pn     Pn       01 04 51.6 +3.7
SAKB  Bahrain           4.39 197   Pn     Pn       01 04 53.9 +3.7
SAKB                               Sn     Sn       01 05 42.9 +1.4
SHMA  Al-Shehemyia      4.42 191   Pn     Pn       01 04 54.0 +3.4
         SNR=20
SHMA                               Sn     Sn       01 05 36.0 -6.3
KRM1  Kerman Provinc    4.62  85   Pn     Pn       01 04 57.2 +3.7
IVRN  Varamin           4.77 358   Pn     Pn       01 04 57.6 +2.2
CHMN  Cheshme madani    4.87  93   Pn     Pn       01 05 00.8 +3.7
HSAM  Samen             4.89 326   Pn     Pn       01 04 59.3 +2.1
TPRV  Parvadeh(Tabas    4.93  54   Pn     Pn       01 05 01.1 +3.4
JRN   Qarnain Island    5.31 171   Pn     Pn       01 05 02.6 -0.2
TNSJ  Nastanj           5.45  45   Pn     Pn       01 05 08.3 +3.5
TRNA  Turayna           5.49 187   Pn     Pn       01 05 08.0 +2.7
         SNR=15
SMRA  Abu-Samra         5.53 191   Pn     Pn       01 05 08.6 +2.8
SHME  Shamm             5.57 137   Sn     Sn       01 06 06.6 -3.9
BANOM Banah             5.75 137   Pn     Pn       01 05 10.8 +1.9
BANOM                              Sn     Sn       01 06 15.8 +0.6
BANOM Banah             5.75 137   P      Pn       01 05 10.5 +1.6
MASF  Masafi            6.10 141   Pn     Pn       01 05 16.1 +2.4
         SNR=14
MASF                               Sn     Sn       01 06 24.6 +0.8
MSFE  Esma-Masafi       6.11 141   P      Pn       01 05 15.6 +1.8
SLWR  Sila              6.12 182   Pn     Pn       01 05 16.0 +2.1
SLWR                               Sn     Sn       01 06 25.6 +1.4
MDH   Madha             6.24 141   Pn     Pn       01 05 17.6 +2.0
MDH                                Sn     Sn       01 06 22.3 -4.7
MDH   Madha             6.24 141   P      Pn       01 05 16.9 +1.4
ASUD  Al Ashush, Dub    6.33 151   Pn     Pn       01 05 17.1 +0.3
ASUD                               Sn     Sn       01 06 24.7 -4.6
FAQ   Al Faqa, Dubai    6.34 148   Pn     Pn       01 05 18.9 +1.9
UOSS  Minazif           6.47 143   Pn     Pn       01 05 20.3 +1.6
UOSS                               Sn     Sn       01 06 28.8 -4.0
UOSS  Minazif           6.47 143   P      Pn       01 05 20.3 +1.6
HATD  Hatta, Dubai      6.53 144   Pn     Pn       01 05 20.9 +1.3
HATD                               Sn     Sn       01 06 30.0 -4.3
HATD  Hatta, Dubai      6.53 144   P      Pn       01 05 20.0 +0.4
ASHO  Ashiyiah          6.61 145   Pn     Pn       01 05 23.1 +2.4
         SNR=11
ASHO                               Sn     Sn       01 06 35.4 -0.9
ASHO  Ashiyiah          6.61 145   P      Pn       01 05 22.4 +1.7
ASHO                               S      Sn       01 06 32.8 -3.6
SOHO  SOHO              7.31 145   Pn     Pn       01 05 31.5 +1.3
SOHO                               Sn     Sn       01 06 51.8 -1.6
SOHO  SOHO              7.31 145   P      Pn       01 05 30.1 -0.1
ARQ   Araqi             7.98 148   Pn     Pn       01 05 40.4 +0.9
ARQ                                Sn     Sn       01 07 07.8 -2.2
HOQ   Hoqain            8.16 143   Pn     Pn       01 05 42.4 +0.4
HOQ                                Sn     Sn       01 07 11.0 -3.4
RAYN  Ar Rayn           8.79 222   Pn     Pn       01 05 50.7  0.0
RAYN                               Sn     Sn       01 07 26.9 -3.2
RAYN  Ar Rayn           8.79 222   P      Pn       01 05 49.0 -1.7
BSY   Bisya             8.80 146   Pn     Pn       01 05 51.2 +0.4
BSY                                Sn     Sn       01 07 26.2 -4.1
SMDO  Samad             8.98 141   Pn     Pn       01 05 55.3 +2.0
SMDO                               Sn     Sn       01 07 30.9 -3.8
WSAR  Wadi Sarin        9.17 138   Pn     Pn       01 05 56.9 +1.2
```

WSAR				Sn	Sn	01 07 35.2	-4.0
NGCH	**Negor - Chabah**	**9.47**	**118**	Pn	**Pn**	**01 06 01.1**	**+1.2**
NGCH				Sn	**Sn**	**01 07 44.5**	**-2.1**
MHTO	**MHTO**	**10.68**	**148**	Pn	**Pn**	**01 06 17.0**	**+0.5**
MHTO				Sn	**Sn**	**01 08 10.8**	**-5.4**
DOK	**Doka**	**11.71**	**170**	Pn	**Pn**	**01 06 31.1**	**+0.4**
WHFO	**Wadi Hawf**	**12.35**	**172**	Pn	**Pn**	**01 06 39.5**	**0.0**
WHFO				Sn	Sn	01 08 48.6	-8.8
ABTO	**Aybut**	**12.86**	**174**	Pn	**Pn**	**01 06 46.6**	**+0.2**

MOS ***01*** *01:38:41.9±1.0, 48.°19N×154.°35E, h63^{km}, mb4.0/1, Error ellipse: s-maj=17.9km s-min=4.8km az=70.3*

KRSC ***01*** *01:38:43.2±2.7, 48.°08N×156.°28E, h20^{km}±32^{km}, Ml4.4*

SKHL ***01*** *01:38:45.6±0.7, 48.°50N×154.°20E, h87^{km}±6^{km}, mb4.7/3, msha5.5/4*

IDC ***01*** *01:38:46.8±2.2, 48.°32N×154.°27E, h93^{km}±18^{km}, mb3.6/14, mbtmp4.0/18, MS2.9/12, Error ellipse: s-maj=24.9km s-min=12.4km az=126.0*

ISC 01 01:38:41.8±0.7**, 48.°14N**±0.°09×**154.°56E**±0.°09**, h50**^{km}**, n85, σ2^{s}31**/83**, mb4.0**/14**, MS3.0**/7**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.75**	**21**	*e*PN	**Pn**	**01 39 25.3**	**+2.0**
SKR				*e*S	**Sn**	**01 39 55.8**	**+0.6**
SKR				smax	smax		
	comp=E,235nm,0.6s						
SKR				smax	smax		
	comp=N,415nm,0.6s						
SKR	**Severo-Kuril's**	**2.75**	**21**	*e*P	**Pn**	**01 39 25.1**	**+1.8**
SKR				*e*S	**Sn**	**01 39 55.8**	**+0.6**
SKR	**Severo-Kuril's**	**2.75**	**21**	*e*P	**Pn**	**01 39 24.5**	**+1.2**
SKR				AMB	AMB	01 39 30.6	
	comp=N,80nm,0.7s						
SKR				*e*S	**Sn**	**01 39 54.2**	**-1.0**
SKR				A	A	01 40 01.9	
	comp=N,400nm,0.2s						
SKR				A	A	01 40 01.9	
	comp=N,340nm,0.2s						
PAU	**Pauzhetka**	**3.64**	**23**	PN	**Pn**	**01 39 39.1**	**+3.6**
PAU	**Pauzhetka**	**3.64**	**23**	*e*P	**Pn**	**01 39 39.2**	**+3.6**
PAU	**Pauzhetka**	**3.64**	**23**	*e*P	**Pn**	**01 39 38.5**	**+2.9**
PAU				AMB	AMB	01 39 40.2	
	comp=N,30nm,0.2s						
PAU				*e*S	**Sn**	**01 40 17.6**	**+0.4**
PAU				A	A	01 40 23.7	
	comp=N,330nm,0.3s						
PAU				A	A	01 40 23.7	
	comp=N,240nm,0.3s						
MIPR	**Malaya Ipel'ka**	**4.38**	**18**	PN	**Pn**	**01 39 48.3**	**+2.6**
MIPR	**Malaya Ipel'ka**	**4.38**	**18**	*e*P	**Pn**	**01 39 48.3**	**+2.6**
ASAK	**Asacha**	**4.76**	**25**	PN	**Pn**	**01 39 53.2**	**+2.2**
ASAK	**Asacha**	**4.76**	**25**	*e*P	**Pn**	**01 39 53.3**	**+2.2**
MTVR	**Mutnovka**	**4.93**	**27**	PN	**Pn**	**01 39 54.9**	**+1.5**
MTVR				S	**Sn**	**01 40 50.0**	**+0.8**
MTVR	**Mutnovka**	**4.93**	**27**	*e*P	**Pn**	**01 39 54.9**	**+1.5**
MTVR				*e*S	**Sn**	**01 40 50.1**	**+0.8**
GRL	**Gorelyy**	**4.96**	**26**	PN	**Pn**	**01 39 56.0**	**+2.2**
GRL	**Gorelyy**	**4.96**	**26**	*e*P	**Pn**	**01 39 56.0**	**+2.2**
RUS	**Russkaya**	**4.99**	**29**	PN	**Pn**	**01 39 54.5**	**+0.4**
RUS	**Russkaya**	**4.99**	**29**	*e*P	**Pn**	**01 39 54.6**	**+0.4**
RUS				*e*S	**Sn**	**01 40 49.5**	**-0.9**
PETK	**Petropavlovsk-**	**5.36**	**21**	P	**Pn**	**01 40 01.3**	**+2.1**
	comp=N,3.2nm,0.4s,baz=207,slow=13,SNR=8.0						
PETK				S	**Sn**	**01 41 04.0**	**+4.3**
	comp=N,1.9nm,0.5s,baz=196,slow=24,SNR=1.3						
PETK				LR	LR	01 42 23.1	
	comp=N,56nm,20.5s,baz=178,slow=41						
KUR	**Kuril'sk**	**5.44**	**240**	*e*PN	**Pn**	**01 40 03.7**	**+3.4**
KUR				*e*S	**Sn**	**01 41 02.4**	**+0.9**
KUR				pmax	pmax		
	comp=Z,58nm,0.6s						
KUR				smax	smax		
	comp=N,73nm,0.8s						
KUR	**Kuril'sk**	**5.44**	**240**	*e*P	**Pn**	**01 40 03.7**	**+3.4**
KUR				AMB	AMB	01 40 12.2	
	comp=N,60nm,0.6s						
KUR				*e*S	**Sn**	**01 41 02.5**	**+0.9**
KUR				A	A	01 41 08.9	
	comp=N,70nm,0.8s						
KUR				A	A	01 41 08.9	
	comp=N,70nm,0.8s						
PET	**Petropavlovsk**	**5.54**	**27**	*e*PN	**Pn**	**01 40 03.2**	**+1.5**
PET				*e*S	**Sn**	**01 41 05.8**	**+1.8**
PET				smax	smax		
	comp=E,36nm,0.6s						
PET				smax	smax		
	comp=N,83nm,0.9s						
PET	**Petropavlovsk**	**5.54**	**27**	*e*P	**Pn**	**01 40 03.2**	**+1.5**
PET				*e*S	**Sn**	**01 41 05.8**	**+1.8**
PET				A	A	01 41 16.9	
	comp=N,80nm,0.7s						
PET				A	A	01 41 16.9	
	comp=N,40nm,0.7s						
DALK	**Dalny**	**5.58**	**27**	PN	**Pn**	**01 40 04.5**	**+2.4**
DALK				S	**Sn**	**01 41 06.4**	**+1.5**
DALK	**Dalny**	**5.58**	**27**	*e*P	**Pn**	**01 40 04.5**	**+2.4**
DALK				*e*S	**Sn**	**01 41 06.4**	**+1.5**
UGLR	**Uglovaya**	**5.76**	**26**	PN	**Pn**	**01 40 07.3**	**+2.6**
UGLR	**Uglovaya**	**5.76**	**26**	*e*P	**Pn**	**01 40 07.3**	**+2.6**
KOK	**Koryaka**	**5.78**	**25**	PN	**Pn**	**01 40 07.7**	**+2.8**
KOK	**Koryaka**	**5.78**	**25**	*e*P	**Pn**	**01 40 07.8**	**+2.8**
AVH	**Avacha**	**5.78**	**26**	PN	**Pn**	**01 40 08.1**	**+3.1**
AVH	**Avacha**	**5.78**	**26**	*e*P	**Pn**	**01 40 08.1**	**+3.1**
SMAR	**Somma**	**5.80**	**26**	PN	**Pn**	**01 40 08.8**	**+3.5**
SMAR	**Somma**	**5.80**	**26**	*e*P	**Pn**	**01 40 08.9**	**+3.5**
KRER	**Koryakskii**	**5.82**	**26**	PN	**Pn**	**01 40 09.1**	**+3.5**
KRER	**Koryakskii**	**5.82**	**26**	*e*P	**Pn**	**01 40 09.2**	**+3.5**
SDLR	**Sedlovina**	**5.83**	**26**	PN	**Pn**	**01 40 07.7**	**+2.0**
SDLR	**Sedlovina**	**5.83**	**26**	*e*P	**Pn**	**01 40 07.8**	**+2.0**
KRX	**Arik**	**5.84**	**25**	PN	**Pn**	**01 40 09.9**	**+4.1**
KRX	**Arik**	**5.84**	**25**	*e*P	**Pn**	**01 40 09.9**	**+4.1**
NLC	**Nalytchevo**	**5.89**	**29**	*e*S	**Sn**	**01 41 08.9**	**-3.5**
GNL	**Ganaly**	**5.96**	**20**	PN	**Pn**	**01 40 12.1**	**+4.6**
GNL	**Ganaly**	**5.96**	**20**	*e*P	**Pn**	**01 40 12.1**	**+4.6**
SPN	**Mys Shipunski**	**6.06**	**33**	PN	**Pn**	**01 40 10.9**	**+2.1**
SPN	**Mys Shipunski**	**6.06**	**33**	*e*P	**Pn**	**01 40 10.9**	**+2.1**
SHO	**Shikotan**	**6.87**	**234**	PN	**Pn**	**01 40 19.0**	**-0.8**
NMR	**Nemuro--Hokkai**	**7.80**	**236**	*e*P	**Pn**	**01 40 37.0**	**+4.4**
NMR				*e*S	**Sn**	**01 42 01.7**	**+2.3**
MKZ	**Mys Kozlova**	**7.84**	**32**	PN	**Pn**	**01 40 33.4**	**+0.4**
MKZ	**Mys Kozlova**	**7.84**	**32**	*e*P	**Pn**	**01 40 33.5**	**+0.4**
MKZ	**Mys Kozlova**	**7.84**	**32**	*e*P	**Pn**	**01 40 33.4**	**+0.4**
YSS	**Yuzhno-Sakhali**	**8.07**	**266**	*e*PN	**Pn**	**01 40 38.0**	**+1.6**
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS	**Yuzhno-Sakhali**	**8.07**	**266**	*e*P	**Pn**	**01 40 38.0**	**+1.6**
YSS				*e*S	**Sn**	**01 42 02.9**	**-3.3**
JKA	**Kamikawa-asahi**	**9.22**	**249**	*e*P	Pn	01 40 57.4	+5.3
ASAJ	**Asahikawa**	**9.23**	**249**	P	Pn	01 40 57.4	+5.2
	comp=Z,14nm,0.6s,baz=87,slow=13,SNR=7.2						
MA2	**Magadan**	**11.68**	**350**	P	**Pn**	**01 41 26.8**	**+1.3**
	comp=Z,4.4nm,0.2s,baz=156,slow=18,SNR=6.9						
MA2				LR	LR	01 46 02.0	
	comp=Z,39nm,18.2s,baz=146,slow=38						
SHEM	**Shemya Is, Ala**	**13.27**	**62**	LR	LR	01 47 46.7	
	comp=Z,21nm,19.2s,baz=276,slow=40						
KLR	**Kul'dur**	**15.10**	**283**	LR	LR	01 47 55.0	
	comp=Z,48nm,18.4s,baz=98,slow=37						
MJAR	**Matsushiro Arr**	**16.70**	**232**	P	**P**	**01 42 33.7**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=23,slow=10,SNR=4.9						
YAK	**Yakutsk**	**19.73**	**324**	LR	LR	01 50 13.8	
	comp=Z,29nm,20.0s,baz=122,slow=35						
KSRS	**Korea Array**	**22.16**	**251**	P	**P**	**01 43 33.2**	**-0.1**
	comp=Z,3.0nm,0.8s,baz=43,slow=10,SNR=9.7						
KSRS				LR	LR	01 51 44.7	
	comp=Z,17nm,20.2s,baz=105,slow=35						
	comp=Z,3.0nm,0.8s						
TIXI	**Tiksi**	**26.43**	**342**	LR	LR	01 56 41.0	
	comp=Z,22nm,18.5s,baz=176,slow=41						
H11N2	**WAKE ISLAND Hy**	**30.05**	**156**	T	T	02 16 33.8	
	baz=343						
H11N1	**WAKE ISLAND Hy**	**30.06**	**156**	T	T	02 16 25.7	
	baz=343,slow=74						
H11N3	**WAKE ISLAND Hy**	**30.06**	**156**	T	T	02 16 34.6	
	baz=343,slow=74						
H11S1	**WAKE ISLAND Hy**	**31.16**	**157**	T	T	02 17 53.1	
	baz=344,slow=76,SNR=1366						
H11S3	**WAKE ISLAND Hy**	**31.17**	**157**	T	T	02 17 56.8	
	baz=344,slow=76,SNR=15						
H11S2	**WAKE ISLAND Hy**	**31.18**	**157**	T	T	02 17 52.3	
	baz=344,slow=76,SNR=9.3						
ILAR	**Eielson Array**	**34.85**	**40**	P	**P**	**01 45 28.5**	**+0.8**
	comp=Z,0.4nm,1.0s,baz=273,slow=8.4,SNR=3.2						
	comp=Z,0.4nm,1.0s						
ZALV	**Zalesovo Beam**	**42.61**	**305**	LR	LR	02 04 34.2	
	comp=Z,20nm,19.7s,baz=76,slow=36						
MKAR	**Makanchi Array**	**47.18**	**297**	P	**P**	**01 47 08.2**	**-1.0**
	comp=Z,0.2nm,0.4s,baz=65,slow=6.8,SNR=2.1						
MKAR				LR	LR	02 08 23.6	
	comp=Z,22nm,19.5s,baz=42,slow=38						
	comp=Z,0.2nm,0.4s						
YKA	**Yellowknife Ar**	**49.23**	**38**	P	**P**	**01 47 25.1**	**+0.5**
	comp=Z,0.9nm,0.9s,baz=302,slow=8.1,SNR=5.3						
	comp=Z,0.9nm,0.9s						
BVAR	**Borovoye Array**	**50.74**	**309**	P	**P**	**01 47 34.4**	**-2.0**
	comp=Z,0.9nm,0.3s,baz=55,slow=8.5,SNR=9.8						
BVAR				PcP	**PcP**	**01 48 51.9**	**-0.8**
	comp=Z,0.5nm,0.4s,baz=21,slow=3.7,SNR=3.0						
	comp=Z,0.9nm,0.3s						
CMAR	**Chiang Mai Arr**	**53.65**	**257**	P	**P**	**01 47 58.1**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=24,slow=7.9,SNR=4.1						
	comp=Z,0.8nm,0.3s						
AAK	**Ala-Archa**	**54.10**	**296**	LR	LR	02 10 59.3	
	comp=Z,16nm,19.6s,baz=89,slow=36						
FINES	**FINESS Array B**	**63.20**	**335**	P	**P**	**01 49 02.2**	**-2.1**
	comp=Z,1.5nm,0.9s,baz=46,slow=8.2,SNR=4.9						
	comp=Z,1.5nm,0.9s						
NOA	**NORSAR Array B**	**67.23**	**342**	LR	LR	02 22 42.1	
	comp=Z,6.1nm,18.9s,baz=260,slow=39						
HFS	**Hagfors**	**67.50**	**340**	P	**P**	**01 49 31.3**	**-0.8**
	comp=Z,1.0nm,0.6s,baz=67,slow=3.9,SNR=6.2						
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**70.15**	**200**	P	**P**	**01 49 49.2**	**+0.3**
	comp=Z,1.9nm,0.8s,baz=12,slow=6.4,SNR=4.9						
	comp=Z,1.9nm,0.8s						
SCHQ	**Schefferville**	**71.65**	**24**	P	**P**	**01 49 56.5**	**-1.3**
	comp=Z,1.6nm,0.7s,baz=12,slow=14,SNR=1.7						
	comp=Z,1.6nm,0.7s						
ASAR	**Alice Springs**	**73.84**	**200**	P	**P**	**01 50 12.4**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=12,slow=5.3,SNR=6.8						
	comp=Z,0.5nm,0.6s						
EKA	**Eskdalemuir Ar**	**75.22**	**347**	P	**P**	**01 50 18.2**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=16,slow=5.0,SNR=4.3						
	comp=Z,0.6nm,0.5s						
MMAI	**Mount Meron Ar**	**82.62**	**312**	P	**P**	**01 50 58.3**	**-1.5**
	comp=Z,1.2nm,0.7s,baz=32,slow=5.8,SNR=1.7						
	comp=Z,1.2nm,0.7s						
EIL	**Elat**	**85.55**	**311**	LR	LR	02 32 54.1	
	comp=Z,16nm,18.4s,baz=245,slow=38						
IDI	**Anoyia**	**85.57**	**321**	P	**P**	**01 51 12.9**	**-1.7**
	comp=Z,5.5nm,0.8s,baz=16,slow=7.4,SNR=3.5						
	comp=Z,5.5nm,0.8s						
H03N2	**Juan Fernandez**	**137.77**	**90**	T	T	04 31 15.7	
	baz=310,slow=77,SNR=25						
H03N1	**Juan Fernandez**	**137.79**	**90**	T	T	04 31 17.0	
	baz=310,slow=77,SNR=30						
H03N3	**Juan Fernandez**	**137.79**	**90**	T	T	04 31 20.0	
	baz=310,slow=77,SNR=24						
QSPA	**South Pole Qui**	**137.87**	**180**	PKP	**PKPdf**	**01 57 59.7**	**+0.4**
	comp=Z,1.7nm,1.1s,baz=101,slow=5.2,SNR=2.1						

CATAC ***01*** *01:44:16.2±0.4, 13˚N±2˚×8˚9W±˚, h28^{km}±2^{km}, M5.0/31, MLv5.0/31, Error ellipse: s-maj=5.1km s-min=2.4km az=27.1, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$2.97; M$_{\theta\theta}$-1.56; M$_{\phi\phi}$-1.40; M$_{r\theta}$-0.96; M$_{\theta\phi}$0.59; M$_{\phi r}$0.00; Fault plane solution: M$_0$2.80523×10^{15} NP1: φ$_s$136.42278°, δ37.16235°, λ103.38102°. NP2: φ$_s$299.80235°, δ54.00770°, λ80.05029°. Principal axes: T 3.1633, Plg78.2548°, Azm172.9181°; N -0.9780, Plg8.0362°, Azm305.6883°; P -2.1853, Plg8.5089°, Azm36.8986°; Moment Tensor Solution. Moment tensor: Scale 10^{15} Nm; M$_{rr}$2.32; M$_{\theta\theta}$-1.30; M$_{\phi\phi}$-1.02; M$_{r\theta}$-0.84; M$_{\theta\phi}$0.32; M$_{\phi r}$-0.01; Fault plane solution: M$_0$2.20551×10^{15} NP1: φ$_s$125.45039°, δ34.86572°, λ101.75976°. NP2: φ$_s$291.21357°, δ55.96796°, λ81.91817°. Principal axes: T 2.5063, Plg77.3992°, Azm174.1047°; N -0.8621, Plg6.6906°, Azm295.7573°; P -1.6443, Plg10.6285°, Azm27.0187°; confirmed*

IDC ***01*** *01:44:17.2±1.7, 13.°39N×89.°03W, h56^{km}±14^{km}, mb3.9/13, mbtmp4.3/15, MS3.2/34 Error ellipse: s-maj=28.2km s-min=12.1km az=47.0*

SNET ***01*** *01:44:17.6±2.5, 13.°05N×89.°30W, h22^{km}, ML4.9*

NEIC ***01*** *01:44:17.8±2.4, 13.°05N±0.°06×89.°34W±0.°07, h57^{km}±8^{km}, mb4.5/173, Error ellipse: s-maj=11.5km s-min=7.6km az=53.0*

GCG ***01*** *01:44:18.1±2.0, 13.°09N×89.°58W, h27^{km}±9^{km}, MD4.5, ML4.5*

UCR ***01*** *01:44:24.8±2.1, 12.°93N×88.°85W, h78^{km}±135^{km}, MB4.5(NEIC)*

ISC 01 01:44:17.4±0.7**, 13.°12N**±0.°05×**89.°34W**±0.°03**, h64**^{km}±5^{km}**, n364, σ1^{s}51**/295**, mb4.5**/82**, 17C-11D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.37**	**3**	*i*P	**Pn**	**01 44 27.6**	**-0.9**
LALI				*e*S	**Sn**	**01 44 35.1**	**-1.5**
LALI	**Alcalda de L**	**0.37**	**3**	*i*P	**Pn**	**01 44 27.6**	**-0.9**
LALI				*e*S	**Sn**	**01 44 35.0**	**-1.5**
LALI				IAML		01 44 37.0	
	comp=N,26µm,0.5s						
LALI	**Alcalda de L**	**0.37**	**3**	⇑P	**Pn**	**01 44 27.6**	**-0.9**
PANCS	**Alcalda de**	**0.51**	**18**	*e*P	**Pn**	**01 44 29.4**	**-0.6**
PANCS	**Alcalda de**	**0.51**	**18**	S	**Sn**	**01 44 38.9**	**-0.1**
PANCS	**Alcalda de**	**0.51**	**18**	⇑P	**Pn**	**01 44 29.4**	**-0.6**
JAYA	**Jayaque - finc**	**0.54**	**349**	*i*P	**Pn**	**01 44 29.4**	**-1.0**
JAYA				*e*S	**Sn**	**01 44 38.6**	**-1.1**
JAYA	**Jayaque - finc**	**0.54**	**349**	*i*P	**Pn**	**01 44 29.4**	**-1.0**
JAYA				*i*S	**Sn**	**01 44 38.7**	**-1.1**
JAYA	**Jayaque - finc**	**0.54**	**349**	⇑P	**Pn**	**01 44 29.4**	**-1.0**
LOMA	**Loma Larga**	**0.55**	**18**	*e*P	**Pn**	**01 44 30.1**	**-0.3**
LOMA	**Loma Larga**	**0.55**	**18**	S	**Sn**	**01 44 40.4**	**+0.6**
LOMA	**Loma Larga**	**0.55**	**18**	⇑P	**Pn**	**01 44 30.1**	**-0.3**
ITCA	**Escuela Especi**	**0.55**	**6**	*e*P	**Pn**	**01 44 29.9**	**-0.5**
ITCA	**Escuela Especi**	**0.55**	**6**	S	**Sn**	**01 44 39.9**	**0.0**
ITCA	**Escuela Especi**	**0.55**	**6**	⇑P	**Pn**	**01 44 29.9**	**-0.5**
PMON	**Piamonte**	**0.59**	**2**	*e*P	**Pn**	**01 44 30.3**	**-0.5**
PMON	**Piamonte**	**0.59**	**2**	S	**Sn**	**01 44 41.3**	**+0.7**
PMON	**Piamonte**	**0.59**	**2**	⇑P	**Pn**	**01 44 30.4**	**-0.5**
SEMO	**Seminario San**	**0.59**	**11**	*e*P	**Pn**	**01 44 30.4**	**-0.4**
SEMO	**Seminario San**	**0.59**	**11**	P	**Pn**	**01 44 30.6**	**-0.2**
SEMO	**Seminario San**	**0.59**	**11**	S	**Sn**	**01 44 41.1**	**+0.5**
UTEC	**Universidad Te**	**0.59**	**13**	*e*P	**Pn**	**01 44 30.6**	**-0.2**
UTEC	**Universidad Te**	**0.59**	**13**	P	**Pn**	**01 44 30.6**	**-0.2**
UTEC	**Universidad Te**	**0.59**	**13**	S	**Sn**	**01 44 41.3**	**+0.7**
UEES	**Universidad Ev**	**0.60**	**9**	*e*P	**Pn**	**01 44 30.6**	**-0.3**
UEES	**Universidad Ev**	**0.60**	**9**	S	**Sn**	**01 44 40.9**	**+0.2**
UEES	**Universidad Ev**	**0.60**	**9**	⇑P	**Pn**	**01 44 30.7**	**-0.3**
UESS	**Universidad de**	**0.61**	**13**	*e*P	**Pn**	**01 44 30.9**	**-0.1**
IGN	**Direccin Gen**	**0.61**	**16**	*e*P	**Pn**	**01 44 31.1**	**0.0**
IGN	**Direccin Gen**	**0.61**	**16**	P	**Pn**	**01 44 31.0**	**0.0**
IGN	**Direccin Gen**	**0.61**	**16**	S	**Sn**	**01 44 42.0**	**+1.0**
BOQS	**Boqueron**	**0.61**	**6**	*i*P	**Pn**	**01 44 31.0**	**-0.2**
UDBS	**Universidad Do**	**0.62**	**17**	S	**Sn**	**01 44 41.6**	**+0.5**
PIC2	**El Picacho**	**0.62**	**8**	*e*P	**Pn**	**01 44 31.1**	**-0.2**
LFU	**La Fuente**	**0.66**	**19**	*i*P	**Pn**	**01 44 31.8**	**+0.2**
COEG	**Centro de Oper**	**0.67**	**42**	*i*P	**Pn**	**01 44 31.7**	**+0.1**
COEG				*e*S	**Sn**	**01 44 42.8**	**+0.7**
COEG	**Centro de Oper**	**0.67**	**42**	P	**Pn**	**01 44 31.8**	**+0.1**
COEG	**Centro de Oper**	**0.67**	**42**	S	**Sn**	**01 44 43.0**	**+0.9**
LBRS	**Las Brisas**	**0.68**	**25**	*i*P	**Pn**	**01 44 32.4**	**+0.6**
CEDA	**San Andres**	**0.68**	**356**	*e*P	**Pn**	**01 44 31.3**	**-0.5**
CEDA	**San Andres**	**0.68**	**356**	S	**Sn**	**01 44 43.3**	**+1.0**
CEDA	**San Andres**	**0.68**	**356**	⇑P	**Pn**	**01 44 31.4**	**-0.4**
TECO	**Alcaldia de Te**	**0.68**	**53**	*e*P	**Pn**	**01 44 31.8**	**-0.1**
TECO	**Alcaldia de Te**	**0.68**	**53**	P	**Pn**	**01 44 31.7**	**-0.1**
TECO	**Alcaldia de Te**	**0.68**	**53**	S	**Sn**	**01 44 42.7**	**+0.4**
SNVI	**San Vicente**	**0.69**	**45**	*e*P	**Pn**	**01 44 32.1**	**+0.1**
PAVA	**Las Pavas**	**0.71**	**34**	*e*P	**Pn**	**01 44 32.6**	**+0.4**
PAVA	**Las Pavas**	**0.71**	**34**	P	**Pn**	**01 44 32.6**	**+0.4**
PAVA	**Las Pavas**	**0.71**	**34**	S	**Sn**	**01 44 44.6**	**+1.6**
UESV	**Universidad de**	**0.74**	**46**	*e*P	**Pn**	**01 44 32.6**	**+0.2**
UESV	**Universidad de**	**0.74**	**46**	P	**Pn**	**01 44 32.8**	**+0.3**
UESV	**Universidad de**	**0.74**	**46**	S	**Sn**	**01 44 44.7**	**+1.1**
CEVE	**Cerro Verde**	**0.76**	**339**	*e*P	**Pn**	**01 44 32.2**	**-0.6**
CEVE	**Cerro Verde**	**0.76**	**339**	⇑P	**Pn**	**01 44 32.3**	**-0.6**
SBLS	**San Blas**	**0.77**	**339**	*e*P	**Pn**	**01 44 32.2**	**-0.8**
SBLS				*e*P		01 44 32.4	
ALJI	**Alcalda de J**	**0.78**	**75**	*i*P	**Pn**	**01 44 32.7**	**-0.1**
ALJI				*e*S	**Sn**	**01 44 45.0**	**+0.8**
ALJI	**Alcalda de J**	**0.78**	**75**	⇓P	**Pn**	**01 44 32.8**	**-0.1**
SNJE	**San Jose**	**0.79**	**341**	*i*P	**Pn**	**01 44 32.6**	**-0.6**
SNJE				*i*P		01 44 32.6	
SCLA	**Alcaldia de Sa**	**0.83**	**46**	S	**Sn**	**01 44 47.3**	**+1.9**
SCLA	**Alcaldia de Sa**	**0.83**	**46**	⇑P	**Pn**	**01 44 34.2**	**+0.7**
UNIC	**Universidad Ca**	**0.88**	**347**	*e*P	**Pn**	**01 44 34.2**	**0.0**
UNIC	**Universidad Ca**	**0.88**	**347**	S	**Sn**	**01 44 47.3**	**+0.8**
UNIC	**Universidad Ca**	**0.88**	**347**	⇓P	**Pn**	**01 44 34.2**	**0.0**
NUBE	**Las Nubes**	**0.89**	**331**	*i*P	**Pn**	**01 44 33.4**	**-1.0**
NUBE	**Las Nubes**	**0.89**	**331**	*i*P	**Pn**	**01 44 33.4**	**-1.0**
NUBE				*i*S	**Sn**	**01 44 46.0**	**-0.8**
NUBE	**Las Nubes**	**0.89**	**331**	⇑P	**Pn**	**01 44 33.4**	**-1.0**
TECA	**Tecapa**	**0.90**	**65**	*e*P	**Pn**	**01 44 34.6**	**+0.1**
PQSS	**Presa 15 de Se**	**0.91**	**57**	*e*P	**Pn**	**01 44 35.3**	**+0.8**
PQSS				*e*S	**Sn**	**01 44 48.5**	**+1.4**
PQSS	**Presa 15 de Se**	**0.91**	**57**	P	**Pn**	**01 44 35.1**	**+0.6**
LOAL	**Lomas de Alarc**	**0.97**	**334**	*e*P	**Pn**	**01 44 35.0**	**-0.3**
LOAL	**Lomas de Alarc**	**0.97**	**334**	S	**Sn**	**01 44 49.5**	**+0.9**
LOAL	**Lomas de Alarc**	**0.97**	**334**	⇑P	**Pn**	**01 44 35.0**	**-0.3**
SLOZ	**Alcaldia de Sa**	**1.00**	**334**	*e*P	**Pn**	**01 44 35.3**	**-0.4**
SLOZ	**Alcaldia de Sa**	**1.00**	**334**	S	**Sn**	**01 44 50.6**	**+1.4**
SLOZ	**Alcaldia de Sa**	**1.00**	**334**	⇑P	**Pn**	**01 44 35.3**	**-0.4**
PACA	**Pacayal**	**1.05**	**71**	*e*S	**Sn**	**01 44 51.9**	**+1.4**
PACA	**Pacayal**	**1.05**	**71**	S	**Sn**	**01 44 52.5**	**+2.0**
PACA	**Pacayal**	**1.05**	**71**	⇓P	**Pn**	**01 44 37.1**	**+0.7**
LCY	**Lacayo**	**1.06**	**73**	*i*P	**Pn**	**01 44 37.0**	**+0.4**
RANC	**El Ranchito**	**1.07**	**73**	*e*P	**Pn**	**01 44 35.5**	**-1.2**
RANC				*e*S	**Sn**	**01 44 50.8**	**-0.2**
RANC				*e*S		01 44 51.3	
RANC	**El Ranchito**	**1.07**	**73**	P	**Pn**	**01 44 35.8**	**-0.9**
VSM	**San Miguel**	**1.08**	**73**	*i*P	**Pn**	**01 44 37.6**	**+0.6**
BLLM	**Bellamira**	**1.12**	**73**	*e*P	**Pn**	**01 44 37.9**	**+0.6**
CNRM	**Centro Naciona**	**1.19**	**73**	*e*P	**Pn**	**01 44 39.1**	**+1.0**
CNRM	**Centro Naciona**	**1.19**	**73**	P	**Pn**	**01 44 39.1**	**+1.0**
CNRM	**Centro Naciona**	**1.19**	**73**	S	**Sn**	**01 44 56.5**	**+2.9**
ESSJ	**San Jos, E**	**1.21**	**291**	*i*P	Pn	01 44 43.3	+5.0
MTO3	**Montecristo**	**1.27**	**359**		**Pn**	**01 44 39.9**	**+0.6**
MTO3				Sn	**Sn**	**01 44 57.4**	**+1.6**
MTO3	**Montecristo**	**1.27**	**359**	*i*P	**Pn**	**01 44 40.0**	**+0.6**
MTO3	**Montecristo**	**1.27**	**359**	*i*P	**Pn**	**01 44 40.0**	**+0.6**
MTO3				IAML		01 44 40.9	
	comp=Z,2µm,0.5s						
MTO3	**Montecristo**	**1.27**	**359**	⇑P	**Pn**	**01 44 40.0**	**+0.6**
CAHU	**Cacacuatique**	**1.27**	**59**	*e*P	**Pn**	**01 44 40.3**	**+0.9**
LCND	**La Caada**	**1.43**	**82**	*e*P	**Pn**	**01 44 41.9**	**+0.7**
LCND	**La Caada**	**1.43**	**82**	S	**Sn**	**01 45 01.4**	**+2.3**
LCND	**La Caada**	**1.43**	**82**	⇓P	**Pn**	**01 44 41.9**	**+0.7**
ESQI	**Esquipulas**	**1.43**	**360**		**Pn**	**01 44 42.4**	**+1.0**
ESQI	**Esquipulas**	**1.43**	**360**	*i*P	**Pn**	**01 44 42.5**	**+1.0**
ESQI	**Esquipulas**	**1.43**	**360**	S	**Sn**	**01 45 02.0**	**+2.6**
ESQI	**Esquipulas**	**1.43**	**360**	⇑P	**Pn**	**01 44 42.4**	**+1.0**
CNCH	**Conchagua**	**1.48**	**84**	*e*P	**Pn**	**01 44 40.2**	**-1.8**
CNCH				*e*P		01 44 42.5	
CNCH	**Conchagua**	**1.48**	**84**	S	**Sn**	**01 45 02.0**	**+1.5**
CNCH	**Conchagua**	**1.48**	**84**	⇓P	**Pn**	**01 44 42.5**	**+0.5**
FG16	**Alotenango, Sa**	**1.61**	**315**	*i*P	**Pn**	**01 44 48.0**	**+4.0**
FG16				IAML		01 45 16.7	
	comp=E,17µm,0.2s						
FG8	**Yepocapa, Chim**	**1.64**	**314**	*i*P	**Pn**	**01 44 48.3**	**+4.1**
FG8				*i*S	**Sn**	**01 45 11.9**	**+7.5**
CSGN	**Cosiguina Volc**	**1.74**	**95**	P	**Pn**	**01 44 45.3**	**-0.2**
CSGN				S	**Sn**	**01 45 07.3**	**+0.5**
POTN	**Potosi Cosigui**	**1.79**	**94**	⇓P	**Pn**	**01 44 46.0**	**-0.1**
POTN				S	**Sn**	**01 45 09.3**	**+1.4**
GCG4	**OSOP**	**1.86**	**322**	*i*P	**Pn**	**01 44 47.1**	**-0.1**
GCG4				IAML		01 45 13.1	
	comp=E,3µm,0.5s						
ESSG	**Sabana Grande**	**1.92**	**311**	*i*P	**Pn**	**01 44 46.9**	**-1.0**
ESSG				*e*S	**Sn**	**01 45 08.0**	**-3.1**
ESSG				IAML		01 45 16.4	
	comp=N,3µm,0.2s						
CHOHN	**Orocuina**	**2.15**	**80**	⇓P	**Pn**	**01 44 51.7**	**+0.5**
TGUH	**Tegucigalpa,Un**	**2.21**	**65**		**Pn**	**01 44 53.0**	**+1.1**
TGUH	**Tegucigalpa,Un**	**2.21**	**65**	⇑P	**Pn**	**01 44 53.1**	**+1.1**
CRIN	**San Cristobal**	**2.27**	**100**		**Pn**	**01 44 53.0**	**+0.3**
CRIN	**San Cristobal**	**2.27**	**100**	S	**Sn**	**01 45 21.6**	**+1.9**
CRIN	**San Cristobal**	**2.27**	**100**	⇓P	**Pn**	**01 44 53.0**	**+0.3**
STG8	**El Palmar, Qui**	**2.36**	**304**	*e*P	**Pn**	**01 44 58.0**	**+4.0**
STG8				*i*S	**Sn**	**01 45 28.7**	**+6.7**
STG8				IAML		01 45 33.0	
	comp=E,3µm,0.2s						
HERN	**Volcan Telica**	**2.50**	**101**		**Pn**	**01 44 55.2**	**-0.5**
HERN	**Volcan Telica**	**2.50**	**101**	S	**Sn**	**01 45 26.1**	**+0.9**
HERN	**Volcan Telica**	**2.50**	**101**	⇓P	**Pn**	**01 44 55.3**	**-0.5**
HOYN	**Al Sur del Vol**	**2.50**	**102**	⇓P	**Pn**	**01 44 55.4**	**-0.4**
HOYN				S	**Sn**	**01 45 25.4**	**0.0**
POLN	**Al Sur del Vol**	**2.51**	**100**	⇓P	**Pn**	**01 44 55.6**	**-0.3**
POLN				S	**Sn**	**01 45 25.9**	**+0.5**
YUSH	**Yuscaran**	**2.57**	**71**	S	**Sn**	**01 45 28.6**	**+1.6**
YUSH	**Yuscaran**	**2.57**	**71**	⇑P	**Pn**	**01 44 57.8**	**+1.1**
SOKI	**Kika Raxquin**	**2.62**	**310**	IAML		01 45 41.8	
	comp=N,2µm,0.6s						
CNGN	**Cerro Negro**	**2.65**	**103**		**Pn**	**01 44 57.1**	**-0.8**
RTAL	**Retalhuleu**	**2.68**	**302**		**Pn**	**01 44 59.1**	**+0.9**
HUEH	**Huehuetenango**	**3.03**	**316**		**Pn**	**01 45 05.1**	**+1.9**
MGAN	**Managua**	**3.17**	**107**		**Pn**	**01 45 04.7**	**-0.2**
MASN	**Masaya**	**3.31**	**110**	*e*P	**Pn**	**01 45 09.9**	**+3.0**
THIG		**3.35**	**302**	*e*P	**Pn**	**01 45 07.3**	**0.0**
THIG				*i*S	**Sn**	**01 45 45.2**	**-0.7**
THIG				IAML		01 45 56.8	
	comp=N,2µm,0.8s						
BOAB	**BOACO BROADBAN**	**3.65**	**100**		**Pn**	**01 45 11.1**	**-0.3**
PETF	**Flores**	**3.81**	**352**		**Pn**	**01 45 15.9**	**+2.3**
PETF	**Flores**	**3.81**	**352**	*i*P	**Pn**	**01 45 15.9**	**+2.3**
PETF				IAML		01 46 30.6	
	comp=E,624nm,0.7s						
JAPN	**Al SSO del Vol**	**3.91**	**113**	*e*P	**Pn**	**01 45 16.2**	**+1.1**
CCIG	**Comitan**	**4.15**	**320**		**Pn**	**01 45 20.2**	**+1.8**
LCRUZ	**La Cruz**	**4.16**	**119**	*e*P	**Pn**	**01 45 18.6**	**+0.2**
LCRUZ				*e*S	**Sn**	**01 46 03.5**	**-2.3**
CARN	**Rivas**	**4.20**	**117**	*e*P	**Pn**	**01 45 18.6**	**-0.4**
ACON	**Acoyapa**	**4.23**	**105**		**Pn**	**01 45 18.8**	**-0.5**
ACON	**Acoyapa**	**4.23**	**105**	*e*P	Pn	01 45 25.3	+5.9
ELI1	**Hacienda Flor**	**4.45**	**123**	*e*P	**Pn**	**01 45 24.8**	**+2.4**
LAPC	**Finca la Perla**	**4.48**	**121**	*e*P	**Pn**	**01 45 23.2**	**+0.4**
ALIBA	**Liberia Airpor**	**4.49**	**124**	*e*P	**Pn**	**01 45 24.0**	**+1.1**
BUAI	**Buenos Aires**	**4.51**	**119**	*e*P	**Pn**	**01 45 23.3**	**0.0**
VRLE	**La Escondida,**	**4.53**	**120**	*e*P	**Pn**	**01 45 23.7**	**+0.1**
VORI	**VORI**	**4.53**	**120**	*e*P	**Pn**	**01 45 24.4**	**+0.8**
GPS3	**Bodega del ICE**	**4.55**	**121**	*e*P	Pn	01 45 28.7	+5.0
GPS1	**Guardaparques**	**4.55**	**120**	*e*P	**Pn**	**01 45 26.1**	**+2.3**
GPS2	**Hotel Rincn d**	**4.56**	**121**	*e*P	**Pn**	**01 45 25.4**	**+1.4**
MESS	**Mesas**	**4.70**	**120**	*e*P	**Pn**	**01 45 26.3**	**+0.4**
HORNC	**Hornillas**	**4.72**	**120**	*e*P	**Pn**	**01 45 26.3**	**0.0**
COLC	**Colonia**	**4.73**	**121**	*e*P	**Pn**	**01 45 27.8**	**+1.5**
VMAR	**Armenia, Volca**	**4.73**	**119**	*e*P	**Pn**	**01 45 27.8**	**+1.5**
CUI	**Cuipilapa**	**4.76**	**120**	*e*P	Pn	01 45 33.6	+6.9
PLVR	**Palo Verde**	**4.78**	**125**	*e*P	**Pn**	**01 45 28.1**	**+1.0**
MOTZ	**Rio Naranjo**	**4.83**	**120**	*e*P	**Pn**	**01 45 27.8**	**+0.2**
NICO	**Nicoya**	**4.83**	**127**	*e*P	**Pn**	**01 45 28.1**	**+0.5**
TENO	**El Achiote**	**4.90**	**119**	*e*P	**Pn**	**01 45 28.5**	**-0.1**
CMARA	**Lajas Hojancha**	**4.92**	**128**	*e*P	**Pn**	**01 45 29.3**	**+0.4**
TIMP	**Tierras Morena**	**4.93**	**120**	*e*P	**Pn**	**01 45 29.8**	**+0.8**
INVE	**Universidad In**	**4.94**	**122**	*e*P	**Pn**	**01 45 31.6**	**+2.4**
ESPN	**Las Esperanzas**	**5.00**	**100**		**Pn**	**01 45 28.9**	**-1.0**
ESPN	**Las Esperanzas**	**5.00**	**100**	*e*P	**Pn**	**01 45 29.0**	**-1.0**
QUEB	**Quebradon, Cot**	**5.01**	**119**	*e*P	**Pn**	**01 45 30.2**	**+0.1**
NYURE	**Nandayure**	**5.07**	**127**	*e*P	**Pn**	**01 45 31.4**	**+0.5**
JTS	**Las Juntas de**	**5.14**	**123**		**Pn**	**01 45 32.5**	**+0.6**
JTS	**Las Juntas de**	**5.14**	**123**	P	**Pn**	**01 45 32.1**	**+0.2**
	comp=E,34nm,0.4s,baz=293,slow=14,SNR=39						
JTS				S	**Sn**	**01 46 28.3**	**-1.5**
	comp=E,34nm,0.5s,baz=263,slow=22,SNR=6.4						
JTS	**Las Juntas de**	**5.14**	**123**	*e*P	**Pn**	**01 45 32.8**	**+0.9**
TGIG		**5.16**	**315**	*i*P	**Pn**	**01 45 32.8**	**+0.7**
TABAC	**Tabacon**	**5.18**	**120**	*e*P	**Pn**	**01 45 34.3**	**+1.8**
MTEVE	**Monteverde**	**5.22**	**122**	*e*P	**Pn**	**01 45 34.8**	**+1.7**
ARE1	**Arenal 1**	**5.24**	**120**	*e*P	**Pn**	**01 45 34.6**	**+1.4**
CEDE	**Laguna Cedeo**	**5.24**	**119**	*e*P	**Pn**	**01 45 34.6**	**+1.3**
VARE2	**V. Arenal**	**5.24**	**120**	*e*P	**Pn**	**01 45 34.6**	**+1.3**
CASO	**Castillo**	**5.24**	**120**	*e*P	**Pn**	**01 45 34.7**	**+1.4**
JCR1	**Jicaral**	**5.27**	**128**	*e*P	**Pn**	**01 45 34.8**	**+1.2**
JCR1				*e*S	**Sn**	**01 46 28.1**	**-5.0**
VACR	**Volcan Arenal**	**5.27**	**119**	*e*P	**Pn**	**01 45 35.7**	**+2.0**
FORC	**Fortuna**	**5.28**	**119**	*e*P	**Pn**	**01 45 36.0**	**+2.2**
SOCE	**Pocosol**	**5.37**	**120**		**Pn**	**01 45 36.0**	**+1.0**
SOCE	**Pocosol**	**5.37**	**120**	*e*P	**Pn**	**01 45 36.6**	**+1.7**
VPL2	**V. Platanar**	**5.60**	**119**	*e*P	**Pn**	**01 45 40.2**	**+1.8**
TCS1	**Tacares**	**5.81**	**121**	*e*P	**Pn**	**01 45 43.2**	**+2.1**
VBV1	**V. Barva**	**5.94**	**120**	*e*P	**Pn**	**01 45 44.6**	**+1.5**
HDC	**Heredia**	**5.99**	**121**		**Pn**	**01 45 44.8**	**+1.2**
PAR1A	**Puntarenas Pro**	**6.09**	**125**	*e*P	**Pn**	**01 45 47.5**	**+2.6**

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PICV  PH. Pirrs         6.12 124 eP    Pn      01 45 48.0 +2.6
ABE2  San Pablo         6.20 123 eP    Pn      01 45 48.4 +1.9
LCR2  La Lucha 2        6.21 122       Pn      01 45 48.7 +1.9
LCR2  La Lucha 2        6.21 122 eP    Pn      01 45 48.7 +1.9
RAFA  San Farael, Vo    6.26 120 eP    Pn      01 45 50.1 +2.6
VTLA  Turrialba Volc    6.27 119 eP    Pn      01 45 48.8 +1.2
CVTR  Volcan Turrial    6.28 119 eP    Pn      01 45 49.9 +2.1
CVTQ  Turrialba Volc    6.28 119 eP    Pn      01 45 49.1 +1.3
REPA  Paraso            6.28 121 eP    Pn      01 45 51.2 +3.5
LLNJ  Naranjito         6.29 125 eP    Pn      01 45 50.1 +2.5
CVTV  Tajo              6.29 119 eP    Pn      01 45 51.2 +3.2
ABRB  Las Abras (San    6.32 119 eP    Pn      01 45 49.4 +1.1
VTCV  VTCV, Calle Va    6.32 119 eP    Pn      01 45 49.7 +1.5
RESJ  San Isidro (Tu    6.37 118 eP    Pn      01 45 50.1 +1.3
CMIG  Matias Romero     6.65 307 P     Pn      01 45 53.1 +0.6
      comp=E,27nm,0.7s,baz=101,slow=10,SNR=32
CMIG                             S     Sn      01 47 06.2 -0.8
      comp=E,12nm,0.3s,baz=64,slow=21,SNR=6.2
CMIG                             LR    LR      01 47 50.3
      comp=E,38nm,19.7s,baz=134,slow=32
VERH  Veragua Rainfo    6.81 117 eP    Pn      01 45 55.6 +0.9
SAJE  San Jernim        6.84 123 eP    Pn      01 45 57.6 +2.3
EDPE  Pejibaye, P       6.89 124 eP    Pn      01 45 58.5 +2.5
DRK0  Durika            7.10 122 eP    Pn      01 46 00.7 +1.8
TEIG  Tepich            7.14   8       Pn      01 46 01.6 +2.4
PIRO  Carate, Puerto    7.53 128 eP    Pn      01 46 06.8 +2.2
ALCO  Alturas Coton,    7.61 122 eP    Pn      01 46 07.8 +1.9
BRU2  Volcan            7.82 123       Pn      01 46 10.1 +1.4
LMNES Limones           8.09 127 eP    Pn      01 46 15.1 +2.8
RBALA Bur               8.22 120 eP    Pn      01 46 14.9 +0.9
TLIG  Tlapa             9.93 298       Pn      01 46 39.7 +2.2
SOR   Soroa            11.35  31       Pn      01 47 00.2 +3.5
NMDO  Nuevo Mundo      15.60  60       sP      01 48 14.3 -3.8
ZAIG  Zacatecas        15.81 309       P       01 48 01.4 +2.3
ROSC  El Rosal         16.95 118 LR    LR      01 55 00.2
      comp=E,66nm,21.6s,baz=240,slow=38
FLOC  Florencia        17.75 129 P     P       01 48 20.4  0.0
HNDO  Hondo            18.75 332 IAmb  IAmb    01 48 34.6
      comp=Z,20nm,0.7s
SDV   Santo Domingo    18.84 101 LR    LR      01 56 18.8
      comp=Z,43nm,21.1s,baz=266,slow=39
TIGA  Tifton           18.98  15 P     Pn      01 48 36.0 +1.0
435B  Jarrell          19.15 338 IAmb  IAmb    01 48 48.0
      comp=Z,23nm,0.6s
NATX  Nacogdoches      19.18 346       Pn      01 48 37.3 -0.1
DRIO  Del Rio          19.30 329       P       01 48 38.2 +0.9
JCT   Junction City    19.80 332 P     P       01 48 43.3 +0.7
JCT                              IAmb  IAmb    01 48 47.7
      comp=Z,15nm,0.8s
152A  Waverly Hall     19.91  12 P     Pn      01 48 45.8 -0.2
152A                             IAmb  IAmb    01 48 58.7
      comp=Z,9.1nm,0.5s
LRAL  Lakeview Retre   19.94   6 P     Pn      01 48 45.4 -0.9
BRDY  Brady            20.15 335 IAmb  IAmb    01 48 48.2
      comp=Z,27nm,0.7s
FW13  Cleburne         20.53 340 IAmb  IAmb    01 49 06.6
      comp=Z,21nm,0.7s
OZNA  Ozona            20.79 330 IAmb  IAmb    01 48 56.8
      comp=Z,13nm,0.7s
Y49A  Blount Mountai   20.82   7       Pn      01 48 55.1 -1.5
CCAR  Cane Creek       20.82 354 IAmb  IAmb    01 48 59.8
      comp=Z,29nm,0.7s
TXAR  Lajitas Array    20.91 323 P     P       01 48 56.5 +1.7
      comp=Z,3.2nm,0.4s,baz=141,slow=10,SNR=79
TXAR                             PcP   PcP     01 53 02.1 +1.4
      comp=Z,0.2nm,0.5s,baz=114,slow=1.5,SNR=4.0
TXAR                             ScP   ScP     01 56 35.0 +2.9
      comp=Z,0.5nm,0.9s,baz=120,slow=2.8,SNR=5.2
      comp=Z,3.2nm,0.4s
TX31  Lajitas Ar. Si   20.91 323 P     P       01 48 56.1 +1.3
FW07  Weatherford      20.97 340 IAmb  IAmb    01 49 00.0
      comp=Z,22nm,0.6s
Y52A  Lilburn          21.20  12 IAmb  IAmb    01 49 17.7
      comp=Z,9.9nm,0.6s
PLPT  Palo Pinto       21.25 339       P       01 48 58.1 -0.2
PLPT                             IAmb  IAmb    01 49 00.5
      comp=Z,20nm,0.7s
BAUV  El Baul          21.31  99 P     P       01 48 59.4 +0.3
BAUV                             IAmb  IAmb    01 49 21.4
      comp=Z,16nm,0.9s
X48A  Hartselle        21.34   5       P       01 48 59.6 +0.5
FW03  Perrin-Whitt E   21.37 340 IAmb  IAmb    01 49 29.9
      comp=Z,19nm,0.8s
ABTX  Abilene, Hawle   21.58 336 IAmb  IAmb    01 49 04.2
      comp=Z,15nm,0.7s
MIAR  Mount Ida        21.67 350 IAmb  IAmb    01 49 06.5
      comp=Z,17nm,0.7s
UALR  University of    21.73 353 IAmb  IAmb    01 49 07.3
      comp=Z,18nm,0.7s
PLAL  Pickwick Lake    21.80   3 P     P       01 49 05.2 +1.1
MNHN  Monahans         21.94 328 IAmb  IAmb    01 49 09.9
      comp=Z,12nm,0.7s
WTFS  Witchita Falls   22.17 340       P       01 49 07.2 -0.9
WTFS                             IAmb  IAmb    01 49 08.8
      comp=Z,18nm,0.7s
SN05  Snyder 5         22.32 334 IAmb  IAmb    01 49 11.5
      comp=Z,17nm,0.8s
APMT  Aspermont        22.39 336 P     P       01 49 09.8 -0.8
APMT                             IAmb  IAmb    01 49 11.2
      comp=Z,13nm,0.7s
ODSA  Odessa           22.46 330 IAmb  IAmb    01 49 12.3
      comp=Z,9.8nm,0.7s
SN07  Snyder 07        22.50 334 IAmb  IAmb    01 49 13.3
      comp=Z,11nm,0.6s
LPIG  La Paz           22.64 302 LR    LR      01 56 54.4
      comp=Z,61nm,20.1s,baz=190,slow=33
X34A  Smith Ranch, M   22.73 342 IAmb  IAmb    01 49 17.1
      comp=Z,30nm,1.0s
POST  Post             22.75 333 IAmb  IAmb    01 49 16.7
      comp=Z,18nm,0.7s
FCAR  Ozark Folk Cen   22.81 354 IAmb  IAmb    01 49 17.2
      comp=Z,9.7nm,0.7s
SJG   San Juan         22.87  75 LR    LR      01 59 25.8
      comp=Z,64nm,18.1s,baz=252,slow=40
ATAH  Atahualpa        22.87 151 LR    LR      01 57 10.8
      comp=Z,60nm,18.6s,baz=312,slow=34
LCAR  Lake Charles     22.91 356 IAmb  IAmb    01 49 17.4
      comp=Z,9.8nm,0.7s
TKL   Tuckaleechee C   23.00  12 IAmb  IAmb    01 49 33.4
      comp=Z,13nm,1.1s
TKL   Tuckaleechee C   23.00  12 LR    LR      01 58 44.4
      comp=Z,124nm,19.1s,baz=193,slow=38
KMSC  Kings Mountain   23.09  17 IAmb  IAmb    01 49 40.6
      comp=Z,12nm,0.9s
V53A  Saluda           23.21  14 IAmb  IAmb    01 49 50.7
      comp=Z,14nm,1.0s
U49A  Red Boiling Sp   23.51   7 IAmb  IAmb    01 49 24.8
      comp=Z,10.0nm,0.8s
OK029 Liberty Lake     23.73 343 IAmb  IAmb    01 49 26.0
      comp=Z,14nm,0.6s
T47A  Sharon Grove     23.85   4 IAmb  IAmb    01 49 48.1
      comp=Z,16nm,0.8s
T42A  Van Buren        23.86 357 IAmb  IAmb    01 49 26.8
      comp=Z,13nm,0.7s
CGM3  Cape Girardeau   24.08 359 IAmb  IAmb    01 49 43.0
      comp=Z,9.9nm,0.8s
MSTX  Muleshoe         24.08 332 IAmb  IAmb    01 49 28.8
      comp=Z,9.9nm,0.8s
PCRV  Puerto La Cruz   24.37  94 LR    LR      02 01 16.6
      comp=Z,30nm,18.2s,slow=42
V58A  Windy Hill, Pi   24.39  20 IAmb  IAmb    01 49 47.6
      comp=Z,26nm,1.0s
S44A  Carbondale       24.47   0 IAmb  IAmb    01 49 34.6
      comp=Z,14nm,0.8s
SIUC  Southern Illin   24.49   0 IAmb  IAmb    01 49 53.6
      comp=Z,17nm,0.8s
CROK  Carrier          24.55 343 IAmb  IAmb    01 49 33.0
      comp=Z,13nm,0.7s
OK038 West end E0370   24.74 342 IAmb  IAmb    01 49 34.4
      comp=Z,17nm,0.7s
FVM   French Village   24.78 358 IAmb  IAmb    01 49 34.8
      comp=Z,7.6nm,0.6s
CCM   Cathedral Cave   24.89 356 P     P       01 49 34.4 +0.1
CCM                              IAmb  IAmb    01 49 36.7
      comp=Z,10nm,0.7s
KAN05 Bluff City Nor   25.08 344 IAmb  IAmb    01 49 37.4
      comp=Z,14nm,0.7s
WCI   Wyandotte Cave   25.15   6 P     P       01 49 36.3 -0.3
WCI                                    pP      01 49 56.0 +3.8
WCI                              IAmb  IAmb    01 49 56.7
      comp=Z,14nm,0.9s
BLA   Blacksburg       25.28  17       sP      01 49 56.5 -4.6
Q44A  Meyer Farm, Va   25.68   1 IAmb  IAmb    01 49 46.7
      comp=Z,14nm,0.8s
RTBA  Rita Blanca      26.15 335 IAmb  IAmb    01 49 49.4
      comp=Z,8.1nm,0.6s
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LENM  Lemitar          26.37 326 P     P       01 49 49.3 +1.4
P40A  Paris            26.41 355 IAmb  IAmb    01 49 48.2
      comp=Z,6.9nm,0.7s
DUN6  Lazy B Ranch     26.47 320 IAmb  IAmb    01 49 54.5
      comp=Z,13nm,0.8s
P38A  Dawn             26.66 353 IAmb  IAmb    01 49 52.4
      comp=Z,7.1nm,0.6s
ANMO  Albuquerque      26.68 327 LR    LR      02 02 40.7
      comp=Z,42nm,18.7s,baz=256,slow=41
Q54A  Coxs Mills       26.84  15 IAmb  IAmb    01 49 52.5
      comp=Z,8.1nm,0.7s
TUC   Tucson           27.40 318 P     P       01 50 01.7 +4.6
T25A  Trinidad         27.46 333 IAmb  IAmb    01 50 00.6
      comp=Z,8.7nm,0.8s
L40A  Anamosa          28.88 357 IAmb  IAmb    01 50 11.9
      comp=Z,12nm,0.8s
PV17  East Wray Mesa   30.53 329 IAmb  IAmb    01 50 27.9
      comp=Z,7.5nm,0.7s
PV04  Paradox Valley   30.59 329 IAmb  IAmb    01 50 28.1
      comp=Z,5.6nm,0.7s
PV10  Paradox Valley   30.64 329 IAmb  IAmb    01 50 28.3
      comp=Z,6.7nm,0.7s
PV23  Carpenter Ridg   30.69 329 IAmb  IAmb    01 50 29.7
      comp=Z,7.8nm,0.8s
I37A  Lemond, Waseca   30.98 354 IAmb  IAmb    01 50 28.8
      comp=Z,9.9nm,0.7s
O20A  White River Ci   31.63 332 IAmb  IAmb    01 50 38.3
      comp=Z,8.2nm,0.9s
PFO   Pinyon Flats O   32.02 314 LR    LR      02 05 42.4
      comp=Z,37nm,21.9s,baz=192,slow=40
SADO  Sadowa           32.72  13 LR    LR      02 03 50.7
      comp=Z,7.5nm,20.5s,baz=162,slow=36
K22A  Casper           32.97 336 IAmb  IAmb    01 50 47.8
      comp=Z,4.7nm,0.9s
F33A  5 Mile Ranch,    33.14 351 IAmb  IAmb    01 50 47.9
      comp=Z,6.8nm,0.6s
BUKO  Buck Lake        33.30  13 IAmb  IAmb    01 50 48.9
      comp=Z,6.1nm,0.6s
RSSD  Black Hills      33.37 341 P     P       01 50 50.0 +0.3
RSSD                             IAmb  IAmb    01 50 52.4
      comp=Z,4.9nm,0.6s
CCAC  Calif City Air   33.93 315 P     P       01 50 56.7 +2.1
SAML  Samuel           33.99 129 P     P       01 50 55.8 +0.6
SAML                             IAmb  IAmb    01 51 19.1
      comp=Z,7.0nm,1.4s
PDAR  Pinedale Array   34.33 333 P     P       01 50 57.2 -0.9
PDAR  Pinedale Array   34.33 333 P     P       01 50 58.4 +0.2
      comp=Z,1.0nm,0.4s,baz=124,slow=9.2,SNR=14
PDAR                             PcP   PcP     01 53 32.5 -0.5
      comp=Z,0.8nm,0.6s,baz=126,slow=2.0,SNR=5.8
PDAR                             ScP   ScP     01 57 13.8 +1.1
      comp=Z,0.6nm,0.8s,baz=138,slow=4.6,SNR=5.2
PDAR                             LR    LR      02 07 40.8
      comp=Z,21nm,18.4s,baz=128,slow=41
      comp=Z,1.0nm,0.4s
AHID  Auburn Hatcher   35.02 332 P     P       01 51 05.4 +1.3
HVU   Hansel Valley    35.09 329 IAmb  IAmb    01 51 08.8
      comp=Z,3.4nm,0.7s
ELK   Elko             35.66 325 LR    LR      02 07 22.6
      comp=Z,27nm,19.5s,baz=155,slow=39
FXWY  Fox Creek        35.67 333 IAmb  IAmb    01 51 13.2
      comp=Z,2.6nm,0.5s
LPAZ  La Paz           35.97 144 LR    LR      02 05 33.0
      comp=Z,59nm,19.5s,baz=304,slow=35
NVAR  Mina Array Bea   35.99 320 P     P       01 51 14.9 +2.4
NVAR  Mina Array Bea   35.99 320 P     P       01 51 14.4 +1.9
      comp=Z,1.0nm,0.6s,baz=132,slow=7.9,SNR=7.3
NVAR                             PcP   PcP     01 53 39.2 +1.3
      comp=Z,1.0nm,0.7s,baz=140,slow=1.5,SNR=5.2
NVAR                             ScP   ScP     01 57 21.2 +2.5
      comp=Z,0.9nm,0.8s,baz=112,slow=3.2,SNR=4.9
NVAR                             LR    LR      02 06 54.8
      comp=Z,58nm,18.5s,baz=162,slow=38
      comp=Z,1.0nm,0.6s
RLMT  Red Lodge        36.12 336 IAmb  IAmb    01 51 15.0
      comp=Z,3.9nm,0.7s
YMP   Mirror Lake Pl   36.17 335 IAmb  IAmb    01 51 26.6
      comp=Z,5.7nm,0.8s
YNE   Yellowstone No   36.33 335 IAmb  IAmb    01 51 18.3
      comp=Z,5.4nm,0.7s
EPLO  Experimental L   36.63 355 IAmb  IAmb    01 51 16.8
      comp=Z,7.4nm,0.7s
YHL   Hebgen Lake      36.70 334 IAmb  IAmb    01 51 22.5
      comp=Z,4.3nm,0.6s
MDP   Montagnes des    37.06  99 LR    LR      02 08 08.5
      comp=Z,25nm,19.8s,baz=270,slow=39
ULM   Lac du Bonnet    37.41 353 IAmb  IAmb    01 51 23.7
      comp=Z,7.8nm,0.8s
ULM   Lac du Bonnet    37.41 353 P     P       01 51 22.4 -1.6
      comp=Z,6.6nm,0.6s,baz=170,slow=7.1,SNR=11
ULM                              LR    LR      02 08 41.3
      comp=Z,69nm,20.3s,baz=152,slow=39
      comp=Z,6.6nm,0.6s
BOZ   Bozeman (W)      37.48 334 IAmb  IAmb    01 51 27.2
      comp=Z,3.3nm,0.7s
DLMT  Dillon           37.72 333 IAmb  IAmb    01 51 30.8
      comp=Z,4.3nm,0.7s
SIV   San Ignacio      40.23 135 LR    LR      02 07 08.6
      comp=Z,47nm,19.6s,baz=291,slow=34
FFC   Flin Flon        42.68 349 P     P       01 52 07.0 -0.6
FFC                              IAmb  IAmb    01 52 09.3
      comp=Z,5.4nm,0.7s
SCHQ  Schefferville    45.20  18 P     P       01 52 25.9 -1.9
      comp=Z,6.1nm,0.6s,baz=209,slow=7.4,SNR=14
SCHQ                             PcP   PcP     01 54 05.7 -1.4
      comp=Z,2.0nm,0.5s,baz=279,slow=4.3,SNR=2.3
SCHQ                             LR    LR      02 12 44.4
      comp=Z,16nm,19.5s,baz=135,slow=38
      comp=Z,6.1nm,0.6s
FCC   Fort Churchill   45.69 357 P     P       01 52 30.8 -0.9
H03N2 Juan Fernandez   47.35 168 T     T       02 43 11.3
      baz=347,slow=77,SNR=8.5
H03N1 Juan Fernandez   47.36 168 T     T       02 43 15.0
      baz=347,slow=77,SNR=9.8
H03N3 Juan Fernandez   47.37 168 T     T       02 43 14.1
      baz=347,slow=77,SNR=12
BLKN  Baker Lake       51.34 356       P       01 53 14.4 -0.6
BLKN                             IAmb  IAmb    01 53 15.0
      comp=Z,5.5nm,1.0s
YKAW1 Yellowknife Wh   52.45 346 P     P       01 53 22.6 -0.7
YKAW1                            IAmb  IAmb    01 53 23.4
      comp=Z,7.0nm,0.8s
YKA   Yellowknife Ar   52.49 346 P     P       01 53 21.9 -1.7
      comp=Z,5.1nm,0.8s,baz=146,slow=7.2,SNR=40
YKA                              LR    LR      02 19 03.2
      comp=Z,36nm,19.1s,baz=350,slow=40
      comp=Z,5.1nm,0.8s
YKAW3 Yellowknife Wh   52.55 346       P       01 53 23.3 -0.7
YKAW3                            IAmb  IAmb    01 53 24.6
      comp=Z,9.0nm,0.8s
PLCA  Paso Flores      56.34 163 P     P       01 53 52.5 +0.6
      comp=Z,1.7nm,0.8s,baz=323,slow=10,SNR=3.1
      comp=Z,1.7nm,0.8s
ILON  Igloolik, Nuna   56.41   3 P     P       01 53 50.6 -1.2
SFJD  Kangerlussuaq    59.59  17 LR    LR      02 21 06.1
      comp=Z,32nm,20.5s,baz=216,slow=37
POIN  Pond Inlet       59.94   4 P     P       01 54 15.4 -1.0
POIN                             IAmb  IAmb    01 54 37.6
      comp=Z,4.4nm,1.2s
RES   Resolute Bay     61.63 358 P     P       01 54 26.4 -1.5
RES                              IAmb  IAmb    01 54 27.2
      comp=Z,3.6nm,0.7s
RES   Resolute Bay     61.63 358 LR    LR      02 22 25.4
      comp=Z,33nm,19.8s,baz=24,slow=37
I29M  Ogilvie Camp,    61.78 339 P     P       01 54 29.1  0.0
INK   Inuvik           62.02 343 LR    LR      02 25 31.0
      comp=Z,41nm,18.0s,baz=258,slow=40
F30M  Barrier River    62.26 342 P     P       01 54 31.9 -0.3
ILAR  Eielson Array    64.67 336 P     P       01 54 47.1 -1.1
      comp=Z,0.5nm,0.6s,baz=164,slow=4.2,SNR=16
ILAR                             LR    LR      02 25 46.5
      comp=Z,36nm,19.3s,baz=112,slow=39
      comp=Z,0.5nm,0.6s
KDAK  Kodiak Island    64.82 328 LR    LR      02 23 32.5
      comp=Z,18nm,20.8s,baz=108,slow=36
BPAW  Bear Paw Mtn.    66.06 335 P     P       01 54 56.3 -1.0
BPAW                             IAmb  IAmb    01 54 58.8
      comp=Z,3.2nm,0.9s
MLY   Manley           66.28 336 P     P       01 54 57.6 -1.1
MLY                              IAmb  IAmb    01 55 00.6
      comp=Z,3.2nm,1.0s
F21K  Alatna River     68.09 338 P     P       01 55 10.2 +0.2
F21K                             IAmb  IAmb    01 55 11.2
      comp=Z,9.0nm,1.4s
BORG  Borgarnes        68.89  25 LR    LR      02 24 30.8
      comp=Z,19nm,18.4s,baz=314,slow=35
ESDC  Sonseca Array    78.23  52 P     P       01 56 09.5 -0.9
      comp=Z,0.8nm,0.7s,baz=283,slow=5.1,SNR=10
```

```
ESDC                             LR    LR      02 25 08.3
      comp=Z,19nm,19.4s,baz=168,slow=32
      comp=Z,0.8nm,0.7s
SPITS Spitsbergen Ar   80.43  12 P     P       01 56 20.7 -1.0
      comp=Z,17nm,1.2s,baz=209,slow=1.5,SNR=4.5
      comp=Z,17nm,1.2s
NOA   NORSAR Array B   83.67  29 P     P       01 56 37.6 -1.4
      comp=Z,0.3nm,0.5s,baz=285,slow=5.2,SNR=3.2
NOA                              LR    LR      02 33 26.5
      comp=Z,9.4nm,19.2s,baz=285,slow=35
      comp=Z,0.3nm,0.5s
HFS   Hagfors          85.11  29 P     P       01 56 44.0 -2.2
      comp=Z,2.6nm,0.9s,baz=242,slow=12,SNR=2.8
HFS                              LR    LR      02 29 56.5
      comp=Z,14nm,22.0s,baz=308,slow=32
      comp=Z,2.6nm,0.9s
ARCES ARCESS Array B   86.15  19 P     P       01 56 50.1 -1.1
      comp=Z,2.9nm,0.9s,baz=306,slow=4.5,SNR=7.1
      comp=Z,2.9nm,0.9s
TORD  Torodi Ar. Bea   88.06  77 P     P       01 56 58.3 -3.2
      comp=Z,31nm,0.3s,baz=290,slow=6.2,SNR=1.2
FINES FINESS Array B   90.18  26 LR    LR      02 35 05.0
      comp=Z,13nm,21.3s,baz=316,slow=34
TIXI  Tiksi            91.64 349 LR    LR      02 42 58.5
      comp=Z,18nm,19.3s,baz=12,slow=38
MA2   Magadan          93.03 334 LR    LR      02 45 57.7
      comp=Z,18nm,18.6s,baz=140,slow=40
NRIK  Noril'sk         97.72   1 LR    LR      02 43 48.7
      comp=Z,34nm,20.5s,baz=4.0,slow=37
YAK   Yakutsk          99.09 343 LR    LR      02 50 38.3
      comp=Z,12nm,18.6s,baz=88,slow=40
BOSA  Boshof          117.64 116 PKP   PKiKP   02 02 57.9 +0.9
      comp=Z,1.3nm,0.6s,baz=34,slow=7.3,SNR=3.8
SONM  Songino Array   117.72 348 PKP   PKPdf   02 02 55.1 -1.5
      comp=Z,0.5nm,0.6s,baz=4.5,slow=1.0,SNR=2.4
WRA   Warramunga Arr  137.67 255 PKhKP PKPpre  02 03 29.0
      comp=Z,0.3nm,0.4s,baz=92,slow=3.4,SNR=5.8
WRA                              PKP   PKPdf   02 03 35.2 +0.1
      comp=Z,1.3nm,0.6s,baz=92,slow=2.2,SNR=7.2
ASAR  Alice Springs   137.79 249 PKhKP PKPpre  02 03 29.9
      comp=Z,0.2nm,0.3s,baz=72,slow=2.1,SNR=2.0
PZH   PanZhiHua       139.17 345 PKP   PKPdf   02 03 37.3 -0.6
FITZ  Fitzroy Crossi  145.98 257 PKPab PKPbc   02 03 51.9 +1.1
CM31  Chiang Mai Arr  147.58 345 PKPbc PKPbc   02 03 54.6 -0.7
CMAR  Chiang Mai Arr  147.58 345 PKPbc PKPdf   02 03 53.7 +1.1
CMAR  Chiang Mai Arr  147.58 345 PKPbc PKPbc   02 03 54.4 -0.9
      comp=Z,2.1nm,0.4s,baz=27,slow=1.8,SNR=7.7
```

ATH ***01*** *02:00:06.9, 41°.23N×25°.77E, h15km±3km, ML1.9/5, Manual Solution by N.Liadopoulou First location: 2019/06/01 02:01:22, This location: 2019/06/03 06:01:05 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 5 km; Longitude uncertainty: 3 km*

AFAD ***01*** *02:00:06.7, 41°.32N×25°.94E, h7km±3km, ML2.0*

ISK 01 02:00:05.5, 41°.27N×25°.82E, h6km, ML1.8/15, Greece-Bulgaria border region

```
Code  Station Name       Δ°   AZ°    Phase ID          Time       Res
                                 Op     ISC         h  m  s     ISC
RDO   Rodhopi           0.24 239  Pg     Pg         02 00 11.0 +0.7
RDO                               Sg     Sg         02 00 14.7 +1.2
RDO   Rodhopi           0.24 239  P      Pg         02 00 11.0 +0.7
RDO                               S      Sg         02 00 14.6 +1.0
ALN   Alexandroupoli    0.41 155  Pg     Pg         02 00 14.3 +0.8
ALN                               Sg     Sg         02 00 19.9 +1.0
ALEX  Alexandroupoli    0.42 171  P      Pb         02 00 14.8 -0.5
KDZ   Kurdzhali         0.51 315  Pg     Pg         02 00 15.9 +0.6
TRGA  Dikaia            0.56  40  P      Pn         02 00 19.1 -0.9
ENEZ  Enez              0.59 154  Pg     Pb         02 00 17.8 -0.4
ENEZ                              Sg     Sb         02 00 26.3 -0.6
UKOP  Uzunkopru-Edir    0.63 103  Pg     Pg         02 00 18.2 +0.5
CAVK  Edirne/Enez-Ca    0.64 155  P      Pb         02 00 19.1 +0.1
CAVK                              S      Sg         02 00 26.4 +0.3
CAVK                            i IAML              02 00 29.0
      comp=E,99nm,0.8s
CAVK                            i IAML              02 00 33.0
      comp=N,72nm,1.2s
XANC  Avdira            0.71 246  P      Pb         02 00 20.1 -0.2
KESN  Edirne-Kesan      0.79 124  P      Pb         02 00 22.0 +0.2
KESN                              S      Sg         02 00 31.9 +0.9
KESN                            i IAML              02 00 34.0
      comp=N,64nm,0.3s
KESN                            i IAML              02 00 34.0
      comp=E,63nm,0.2s
ERIK  Erikli-Kesan      0.80 138  Pg     Pg         02 00 21.2 +0.3
SMTH  Samothraki Isl    0.83 195  P      Pb         02 00 22.0 -0.3
EDRB  Edirne            0.90  50  Pg     Pg         02 00 23.1 +0.3
GELI  Tayfur-Gelibol    1.01 150  Pg     Pb         02 00 25.2 -0.1
KAVA  Kavala            1.02 255  P      Pb         02 00 25.5  0.0
THAS  Thassos island    1.06 232  P      Pn         02 00 26.9 +0.1
GADA  Gvkgeada          1.08 177  Pn     Pb         02 00 26.5 -0.1
KIRK  Kırklareli        1.09  62  P      Pg         02 00 25.3 -1.1
KIRK                              S      Sg         02 00 39.3 -1.3
LPK   Lapseki           1.15 141  Pn     Pn         02 00 28.0 -0.1
PLD   Plovdiv           1.18 318  Pn     Pg         02 00 27.9 -0.3
RKY   Sarkoy-Tekirda    1.19 119  Pn     Pn         02 00 28.6  0.0
COMU  Canakkale         1.27 157  Pn     Pg         02 00 30.1 +0.2
ARMN  Kirklareli, Me    1.35  63  P      Pn         02 00 30.3 -0.5
ARMN                              S      Sb         02 00 47.8 -0.8
KOKK  Kokkinochori,     1.45 252  P      Pn         02 00 31.7 -0.4
VIZE  Kirklareli, Vi    1.55  78  P      Pb         02 00 34.4 -0.2
VIZE                              S      Sn         02 00 53.1 -1.0
OUR   Ouranopolis       1.68 237  Pn     Pn         02 00 35.9 +0.6
OUR   Ouranopolis       1.68 237  P      Pn         02 00 35.7 +0.4
SRS   Serrai            1.68 265  P      Pn         02 00 35.4 -0.1
KNT   Kendrikon         2.20 268  Pn     Pn         02 00 43.2 +0.6
```

TAP 01 02:35:59.0, 24°.59N×121°.85E, h8km, ML1.4, D, Taiwan

```
Code  Station Name       Δ°   AZ°    Phase ID          Time       Res
                                 Op     ISC         h  m  s     ISC
ESAO  Su ao             0.02 204 i P    Pg          02 36 00.8 +0.4
ESAO                             i S    Sg          02 36 01.8 +0.5
TWC   Suao              0.02 355   P    Pg          02 36 01.0 +0.6
TWC                              i S    Sg          02 36 02.1 +0.7
NDS   Dongshan          0.13 289  eP    Pg          02 36 02.7 +0.9
TWE   Neicheng          0.21 308  eP    Pg          02 36 04.2 +0.9
ENTT  Nioudou           0.26 281  eP    Pb          02 36 05.5 -0.6
FUSB  Fushanzhiwuyua    0.29 305   P    Pb          02 36 06.0 -0.7
TIPB  Shuangxi          0.38 357  eP    Pb          02 36 07.7 -0.5
TWB1  Santiao Chiao     0.43  17  eP    Pb          02 36 08.3 -0.7
YHNB  Yeheng            0.44 280  eP    Pb          02 36 08.5 -0.7
```

TAP 01 02:36:01.2, 24°.37N×121°.81E, h10km, ML2.2, A, Taiwan

```
Code  Station Name       Δ°   AZ°    Phase ID          Time       Res
                                 Op     ISC         h  m  s     ISC
EAHA  Aohua             0.07 237   P    Pg          02 36 04.2 +0.7
EAHA                               S    Sg          02 36 06.2 +1.1
EWUT  Wuta              0.08 342  eP    Pg          02 36 04.1 +0.5
EWUT                              eS    Sg          02 36 05.8 +0.5
EHP   Heping Village    0.08 225  eP    Pg          02 36 04.1 +0.4
ENA   Nanau             0.08 315   P    Pg          02 36 04.0 +0.4
ENA                               eS    Sg          02 36 06.0 +0.6
ENA   Nanau             0.08 315   P    Pg          02 36 04.3 +0.7
ENA                               eS    Sg          02 36 05.9 +0.6
ESAO  Su ao             0.21  10  eP    Pg          02 36 06.2 +0.6
ESAO                              eS    Sg          02 36 08.5 -0.1
TWC   Suao              0.24   9  eP    Pg          02 36 06.5 +0.3
TWC                               eS    Sg          02 36 09.9 +0.3
ETL   Fush Village      0.27 219  eP    Pb          02 36 07.6 -0.5
ETL                               eS    Sb          02 36 12.3 -0.5
NACB  Ninganchiao       0.27 225   P    Pb          02 36 07.6 -0.6
NACB                              eS    Sb          02 36 12.3 -0.6
NDS   Dongshan          0.28 343  eP    Pg          02 36 06.8  0.0
NDS                               eS    Sg          02 36 11.6 +1.0
LATG  Datong            0.30 303   P    Pb          02 36 08.8 -0.1
LATG                               S    Sb          02 36 13.1 -0.8
ETLH  Xiulin Townshi    0.34 241  eP    Pb          02 36 09.1 -0.3
ETLH                               S    Sb          02 36 14.5 -0.3
TWD   Chiawan           0.35 214  eP    Pg          02 36 08.7 +0.6
TWD                               eS    Sb          02 36 14.0 -0.9
ENTT  Nioudou           0.35 321  eP    Pb          02 36 09.2 -0.4
ENTT                              eS    Sb          02 36 14.3 -0.7
TWE   Neicheng          0.37 340  eP    Pb          02 36 09.5 -0.5
TWE                               eS    Sb          02 36 15.6 -0.2
NNSB  Datong            0.39 279   P    Pb          02 36 10.2 -0.1
NNSB                              eS    Sb          02 36 15.9 -0.5
NNSH  Datong            0.39 279  eP    Pb          02 36 10.3  0.0
```

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS2	EOS2	0.39	83	*e*P	Pg	02 36 09.3	+0.4
NNS	Nan Shan	0.40	280	*e*P	Pb	02 36 10.7	+0.2
NNS				*e*S	Sb	02 36 16.1	-0.6
FUSB	Fushanzhiwuyua	0.44	333	P	Pb	02 36 11.2	+0.1
FUSB				*e*S	Sb	02 36 17.9	+0.2
EOS3	EOS3	0.47	100	*e*P	Pb	02 36 11.6	+0.1
EOS3				*e*S	Sb	02 36 18.0	-0.5
ETM	Tongmen	0.49	216	*e*P	Pg	02 36 11.1	+0.3
ETM				*e*S	Sb	02 36 18.9	-0.3
YHNB	Yeheng	0.49	307	*e*P	Pb	02 36 12.1	0.0
YHNB				*e*S	Sb	02 36 19.0	-0.3
LXIB	Xiulin Townshi	0.50	226	P	Pb	02 36 11.7	-0.5
LXIB				S	Sb	02 36 19.3	-0.3
FUSS	Fushou	0.53	257	*e*P	Pb	02 36 12.9	+0.2
FUSS				*e*S	Sb	02 36 21.0	+0.5
EOS4	EOS4	0.53	118	*e*P	Pg	02 36 11.6	+0.2
WHF	Hehuan Shan	0.54	246	*e*P	Pb	02 36 12.8	-0.2
WHF				*e*S	Sb	02 36 20.9	-0.2
TWT	Tachien	0.59	259	*e*P	Pb	02 36 13.7	0.0
TIPB	Shuangxi	0.60	2	*e*P	Pb	02 36 13.8	-0.1
TIPB				*e*S	Sb	02 36 22.0	-0.4
SHUL	Shoufeng	0.62	201	*e*P	Pn	02 36 15.7	-0.4
TWB1	Santiao Chiao	0.66	15	*e*P	Pb	02 36 14.8	0.0
KSHI	Guanxi Townshi	0.70	305	*e*P	Pb	02 36 15.9	+0.4
OWD	Renai	0.71	234	*e*P	Pb	02 36 15.9	+0.2
OWD				*e*S	Sb	02 36 25.8	+0.2
SXI1	Grass Mountain	0.72	5	*e*P	Pb	02 36 16.2	+0.2
SXI1				*e*S	Sb	02 36 26.1	+0.1
WUSB	Renai	0.73	239	*e*P	Pb	02 36 16.4	+0.3
WUSB				*e*S	Sb	02 36 26.8	+0.5
WARBT	Fenglin Townsh	0.75	211	*e*P	Pb	02 36 16.2	-0.3

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*GCG **01** 02:59:54.3±1.1, 14°.61N×92°.40W, h68^{km}±8^{km}, MD3.6, ML3.2*

*MEX **01** 02:59:54.0±0.8, 14°.65N×92°.42W, h84^{km}±12^{km}, MD3.9*

ISC 01 02:59:49.6±1.8**, 14°.34N**±0°.10×**92°.44W**±0°.07**, h83**^{km}±12^{km}**, n16, σ2^{s}.31**/30**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.59	17	*e*P	Pn	03 00 04.8	+0.4
THIG				*e*S	Sn	03 00 14.3	-1.1
THIG		0.59	17	*i* P	Pn	03 00 04.8	+0.4
THIG				*i* S	Sn	03 00 14.1	-1.2
THIG				IAML		03 00 14.4	
	comp=N,663nm,0.2s						
RTAL	Retalhuleu	0.74	76	*e*P	Pn	03 00 08.8	+2.9
RTAL				*e*S	Sn	03 00 20.8	+2.6
PATR	El Naranjo	0.79	15	*e*P	Pn	03 00 06.5	-0.3
PATR				*e*S	Sn	03 00 16.6	-2.9
PAVE	Pavencul	0.88	17	*e*P	Pn	03 00 07.7	0.0
PAVE				*e*S	Sn	03 00 18.8	-2.4
QUEO	Labor Ovalle	1.04	60	*i* P	Pn	03 00 12.2	+2.6
QUEO				*i* S	Sn	03 00 27.1	+2.5
QUEO				IAML		03 00 30.5	
	comp=E,690nm,0.2s						
STG8	El Palmar, Qui	1.06	84	*e*P	Pn	03 00 10.0	+0.2
STG8				*e*S	Sn	03 00 23.0	-1.9
STG8				IAML		03 00 24.6	
	comp=N,975nm,0.1s						
HUEH	Huehuetenango	1.33	43	*e*P	Pn	03 00 11.2	-1.9
HUEH				*e*S	Sn	03 00 32.4	+1.7
PCIG		1.55	331	*e*P	Pn	03 00 16.0	+0.3
PCIG				*e*S	Sn	03 00 32.6	-2.7
FG8	Yepocapa, Chim	1.82	92	*e*P	Pn	03 00 18.6	-0.7
FG8				*i* S	Sn	03 00 37.9	-4.1
FG16	Alotenango, Sa	1.87	92	*e*P	Pn	03 00 20.2	+0.1
CCIG	Comitan	1.95	9	*e*P	Pn	03 00 23.2	+2.1
CCIG				*e*S	Sn	03 00 44.4	-0.7
CCIG	Comitan	1.95	9	*e*P	Pn	03 00 22.8	+1.7
CCIG				IAML		03 00 47.8	
	comp=N,71nm,0.3s						
TGIG		2.51	345	*e*P	Pn	03 00 31.9	+3.4
TGIG				*e*S	Sn	03 00 54.9	-3.3
CMIG	Matias Romero	3.60	320	*e*P	Pn	03 00 45.6	+2.4
CMIG				*e*S	Sn	03 01 23.6	-1.1
NEUV	Arroyo Zacate	4.65	316	*e*P	Pn	03 01 00.3	+2.8
NEUV				*e*S	Sn	03 01 46.8	-3.5

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*SJA **01** 03:18:05.4±2.2, 25°.89S×71°.00W, h44^{km}±66^{km}, ML3.3, MW3.7*

*GUC **01** 03:18:06.7±0.8, 25°.88S×70°.91W, h35^{km}±3^{km}, ML3.7*

ISC 01 03:18:05.8±1.9**, 25°.87S**±0°.04×**71°.06W**±0°.08**, h24**^{km}±14^{km}**, n21, σ1^{s}.09**/30**, 1C, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AC01	Pan de Azucar	0.50	124	⇑*i*P	Pb	03 18 16.2	+0.2
AC01				*i* S	Sb	03 18 22.0	-0.9
PB14	IPOC Station P	1.37	26	*e*P	Pn	03 18 30.2	+0.4
PB14				*i* S	Sn	03 18 46.8	-0.5
PB14	IPOC Station P	1.37	26	*e*P	Pn	03 18 29.9	+0.2
PB14				*e*S	Sn	03 18 47.0	-0.3
PB14				IAML		03 18 49.5	
	comp=Z,651nm,0.3s						
GO02	Mina Guanaco	1.50	62	*e*P	Pn	03 18 31.8	+0.3
GO02				*i* S	Sn	03 18 50.4	-0.1
GO02				IAML		03 18 52.3	
	comp=E,1µm,0.2s						
GO02	Mina Guanaco	1.50	62	*e*P	Pn	03 18 31.9	+0.3
GO02				*e*S	Sn	03 18 50.4	-0.1
GO02				IAML		03 18 54.0	
	comp=Z,1µm,0.9s						
AC06	Mina Casimiro	1.61	157	*e*P	Pn	03 18 32.9	+0.2
AC06				*e*S	Sn	03 18 51.5	-1.3
GO03	Copiapo	1.87	157	*e*P	Pn	03 18 37.0	+0.7
GO03				*i* S	Sn	03 18 58.3	-1.0
GO03	Copiapo	1.87	157	*e*P	Pn	03 18 37.2	+0.8
GO03				*e*S	Sn	03 18 57.3	-2.0
GO03				IAML		03 19 03.6	
	comp=Z,367nm,0.3s						
AC02	Maricunga	1.98	119	*e*P	Pn	03 18 38.8	+0.5
AC02				*i* S	Sn	03 19 01.5	-1.1
AC02				IAML		03 19 03.9	
	comp=E,2µm,0.1s						
AC02	Maricunga	1.98	119	*e*P	Pn	03 18 39.4	+1.2
AC02				*e*S	Sn	03 19 01.4	-1.1
AC02				IAML		03 19 02.4	
	comp=Z,1µm,0.2s						
PB10	IPOC Station P	2.39	11	*e*P	Pn	03 18 34.1	-9.3
PB10				IAML		03 19 45.5	
	comp=Z,48nm,0.4s						
AC05	El Transito	3.04	167	*e*P	Pn	03 18 53.5	+1.0
AC05				IAML		03 19 44.1	
	comp=E,149nm,0.4s						
AC05	El Transito	3.04	167	*e*P	Pn	03 18 54.2	+1.8
AC05				*e*P		03 18 54.6	
AC05				*e*S	Sn	03 19 29.0	+0.9
AC05				*e*S		03 19 32.2	
AC05				IAML		03 19 46.5	
	comp=Z,93nm,0.5s						
LCO	Las Campanas	3.15	174	*e*P	Pn	03 18 55.3	+1.2
LCO	Las Campanas	3.15	174	*e*P	Pn	03 18 54.2	+0.1
LCO				IAML		03 20 11.7	
	comp=Z,101nm,0.4s						
VCA	Vinchina	3.82	139	*e*P	Pn	03 19 06.4	+3.1
VCA				IAML		03 20 35.1	
	comp=Z,33nm,1.6s						
CO01	Juntas del Tor	4.18	168	*e*P	Pn	03 19 07.9	-0.4
CO01				IAML		03 20 36.5	
	comp=Z,16nm,1.4s						
AGUA	GUANDACOL	4.26	148	*e*P	Pn	03 19 14.0	+4.7
AGUA				IAML		03 21 03.1	
	comp=Z,23nm,2.8s						
GO04	Tololo Observa	4.29	177	*e*P	Pn	03 19 10.5	+0.7
GO04				IAML		03 20 43.1	
	comp=Z,47nm,0.3s						
CO03	El Pedregal	4.96	176	*e*P	Pn	03 19 18.9	0.0
CO03				IAML		03 21 01.8	
	comp=Z,20nm,0.7s						
ACLC	CERRO LA CRUZ	5.08	135	*e*P	Pn	03 19 21.3	+0.7
ACLC				IAML		03 21 03.4	
	comp=Z,7.2nm,1.4s						

IDC 01 03:26:14.4±999.0**, 47°.06N**×**49°.46E, h0**^{km}**, Error ellipse: s-maj=672.2km s-min=185.7km az=135.0, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	12.25	327	I	I	04 36 20.0	
	baz=136,slow=325,SNR=1.8						
I26DE	FREYUNG INFRAS	23.87	288	I	I	05 51 30.0	
	baz=79,slow=325,SNR=1.7						
I37NO	I37NO	26.88	336	I	I	06 13 10.0	
	baz=128,slow=326,SNR=0.9						

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*CATAC **01** 03:27:44.6±0.6, 13°N±4°×8°9W±°, h29^{km}±4^{km}, M3.4/15, MLv3.4/15, Error ellipse: s-maj=8.6km s-min=6.0km az=10.3, confirmed*

*SNET **01** 03:27:45.2±0.7, 13°.10N×89°.48W, h43^{km}±17^{km}, ML3.2*

*GCG **01** 03:27:45.7±0.5, 13°.13N×89°.57W, h43^{km}±12^{km}, MD3.9*

ISC 01 03:27:44.8±2.5**, 13°.0N**±0°.1×**89°.51W**±0°.07**, h43**^{km}**, n66, σ0^{s}.35**/67**, 9C, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.48	23	*i* P	Pn	03 27 55.5	0.0
LALI	Alcalda de L	0.48	23	S	Sn	03 28 03.7	+0.7
LALI	Alcalda de L	0.48	23	⇑P	Pn	03 27 55.5	0.0
JAYA	Jayaque - finc	0.61	6	*e*P	Pn	03 27 57.0	-0.3
JAYA				IAML		03 28 07.7	
	comp=Z,2µm,0.1s						
JAYA	Jayaque - finc	0.61	6	*i* P	Pn	03 27 57.1	-0.3
JAYA	Jayaque - finc	0.61	6	S	Sn	03 28 06.5	+0.3
JAYA	Jayaque - finc	0.61	6	⇑P	Pn	03 27 57.0	-0.3
PANCS	Alcalda de	0.65	30	S	Sn	03 28 06.7	-0.3
PANCS	Alcalda de	0.65	30	P	Pn	03 27 57.8	0.0
ITCA	Escuela Especi	0.67	20	P	Pn	03 27 57.6	-0.3
ITCA	Escuela Especi	0.67	20	S	Sn	03 28 06.8	-0.7
LOMA	Loma Larga	0.69	29	*e*P	Pn	03 27 58.0	-0.3
LOMA	Loma Larga	0.69	29	S	Sn	03 28 08.1	+0.2
LOMA	Loma Larga	0.69	29	⇑P	Pn	03 27 58.1	-0.2
PMON	Piamonte	0.69	16	*e*P	Pn	03 27 58.1	-0.3
PMON	Piamonte	0.69	16	S	Sn	03 28 08.7	+0.7
PMON	Piamonte	0.69	16	⇑P	Pn	03 27 58.0	-0.3
SEMO	Seminario San	0.71	23	P	Pn	03 27 58.2	-0.4
SEMO	Seminario San	0.71	23	S	Sn	03 28 08.8	+0.2
UEES	Universidad Ev	0.72	22	S	Sn	03 28 09.3	+0.6
UEES	Universidad Ev	0.72	22	⇑P	Pn	03 27 58.5	-0.2
UTEC	Universidad Te	0.72	25	P	Pn	03 27 58.4	-0.3
UTEC	Universidad Te	0.72	25	S	Sn	03 28 08.2	-0.5
BOQS	Boqueron	0.72	18	*e*P	Pn	03 27 58.8	-0.1
LFRS	El Faro	0.73	37	*e*P	Pn	03 27 58.6	-0.2
UESS	Universidad de	0.74	24	*e*P	Pn	03 27 58.8	-0.1
IGN	Direccin Gen	0.75	27	S	Sn	03 28 09.2	0.0
IGN	Direccin Gen	0.75	27	P	Pn	03 27 59.0	0.0
UDBS	Universidad Do	0.75	28	S	Sn	03 28 09.7	+0.2
CEDA	San Andres	0.76	9	S	Sn	03 28 09.6	-0.1
CEDA	San Andres	0.76	9	P	Pn	03 27 58.4	-0.8
CEVE	Cerro Verde	0.79	352	P	Pn	03 27 59.5	-0.2
CEVE	Cerro Verde	0.79	352	S	Sn	03 28 10.5	0.0
SBLS	San Blas	0.80	352	*e*P	Pn	03 27 59.8	-0.1
SBLS				*i* P		03 27 60.0	
SNJE	San Jose	0.82	354	*e*P	Pn	03 28 00.2	-0.1
COEG	Centro de Oper	0.84	47	*e*P	Pn	03 27 59.9	-0.5
COEG				IAML		03 28 14.7	
	comp=Z,594nm,0.3s						
COEG	Centro de Oper	0.84	47	S	Sn	03 28 11.5	-0.1
COEG	Centro de Oper	0.84	47	⇑P	Pn	03 27 59.8	-0.5
TECO	Alcaldia de Te	0.87	55	*e*P	Pn	03 27 59.8	-0.7
TECO	Alcaldia de Te	0.87	55	S	Sn	03 28 11.6	-0.5
TECO	Alcaldia de Te	0.87	55	⇑P	Pn	03 27 59.9	-0.7
PAVA	Las Pavas	0.87	40	*e*P	Pn	03 28 00.7	0.0
PAVA				*e*S	Sn	03 28 12.5	+0.2
PAVA	Las Pavas	0.87	40	S	Sn	03 28 13.1	+0.7
PAVA	Las Pavas	0.87	40	⇑P	Pn	03 28 00.7	0.0
NUBE	Las Nubes	0.89	343	*i* P	Pn	03 28 00.9	-0.2
NUBE	Las Nubes	0.89	343	*i* P	Pn	03 28 00.9	-0.2
NUBE				*e*S	Sn	03 28 12.8	-0.1
NUBE	Las Nubes	0.89	343	⇑P	Pn	03 28 00.8	-0.2
UESV	Universidad de	0.92	50	S	Sn	03 28 13.2	-0.2
UESV	Universidad de	0.92	50	P	Pn	03 28 01.0	-0.4
UNIC	Universidad Ca	0.93	358	S	Sn	03 28 14.0	+0.2
UNIC	Universidad Ca	0.93	358	P	Pn	03 28 01.6	+0.1
ALJI	Alcalda de J	0.96	73	*e*P	Pn	03 28 01.5	-0.3
SCLA	Alcaldia de Sa	1.01	49	*e*P	Pn	03 28 02.6	+0.1
SCLA	Alcaldia de Sa	1.01	49	P	Pn	03 28 02.4	-0.1
SCLA	Alcaldia de Sa	1.01	49	S	Sn	03 28 16.3	+0.8
SLOZ	Alcaldia de Sa	1.01	345	*e*P	Pn	03 28 02.7	+0.1
PACA	Pacayal	1.23	70	*e*P	Pn	03 28 05.9	+0.2
LCY	Lacayo	1.25	72	*e*P	Pn	03 28 05.9	0.0
VSM	San Miguel	1.27	72	*e*P	Pn	03 28 06.2	-0.1
BLLM	Bellamira	1.30	72	*e*P	Pn	03 28 06.9	+0.3
MTO3	Montecristo	1.36	6	*i* P	Pn	03 28 07.5	+0.1
MTO3	Montecristo	1.36	6	*i* P	Pn	03 28 07.6	+0.1
ESQI	Esquipulas	1.52	6	*e*P	Pn	03 28 09.7	+0.1
LCND	La Caada	1.60	80	*i* P	Pn	03 28 10.9	+0.2
LCND				IAML		03 28 11.3	
	comp=Z,270nm,0.3s						
CNCH	Conchagua	1.65	82	*e*P	Pn	03 28 11.3	-0.2
STG8	El Palmar, Qui	2.27	308	*e*P	Pn	03 28 25.4	+5.4

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*IDC **01** 03:59:01.1±0.9, 14°.93S×173°.81W, h0^{km}, mb3.8/7, mbtmp3.8/7, MS3.7/16, Error ellipse: s-maj=46.6km s-min=22.3km az=144.0*

ISC 01 03:59:10.8±0.9**, 14°.9S**±0°.3×**173°.9W**±0°.2**, h73**^{km}**, n29, σ0^{s}.76**/9**, mb3.7**/7**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.24	249	LR	LR	04 03 41.1	
	comp=Z,320nm,19.3s,baz=43,slow=34						
RAO	Raoul Island	14.77	194	LR	LR	04 06 41.2	
	comp=Z,201nm,20.9s,baz=320,slow=31						
RAR	Rarotonga	14.82	117	LR	LR	04 06 43.4	
	comp=Z,264nm,18.1s,baz=286,slow=31						
PPT	Papeete	23.49	100	LR	LR	04 12 17.9	
	comp=Z,53nm,18.1s,baz=278,slow=34						
HNR	Honiara	26.13	279	LR	LR	04 13 10.8	
	comp=Z,130nm,21.0s,baz=84,slow=32						
H11S2	WAKE ISLAND Hy	38.29	329	T	T	04 47 19.8	
	baz=149,slow=76,SNR=20						
H11S3	WAKE ISLAND Hy	38.30	329	T	T	04 47 25.5	
	baz=149,slow=76,SNR=20						
H11S1	WAKE ISLAND Hy	38.31	329	T	T	04 47 18.5	
	baz=149,slow=76,SNR=16						
H11N3	WAKE ISLAND Hy	39.24	331	T	T	04 48 43.8	
	baz=150,slow=76,SNR=25						
H11N1	WAKE ISLAND Hy	39.25	331	T	T	04 48 43.0	
	baz=150,slow=76,SNR=20						
H11N2	WAKE ISLAND Hy	39.26	331	T	T	04 48 56.8	
	baz=150,slow=76,SNR=18						
STKA	Stephens Creek	43.88	239	LR	LR	04 24 58.0	
	comp=Z,76nm,18.1s,baz=44,slow=35						
WRA	Warramunga Arr	49.50	256	P	P	04 07 53.7	-0.6
	0.6nm,0.6s,baz=92,slow=6.7,SNR=7.3						
	0.6nm,0.6s						
GUMO	Guam	49.67	303	LR	LR	04 26 44.2	
	comp=Z,55nm,19.1s,baz=90,slow=33						
ASAR	Alice Springs	49.82	252	P	P	04 07 56.4	-0.4
	4.8nm,0.7s,baz=86,slow=8.1,SNR=47						
ASAR				LR	LR	04 27 26.8	
	comp=Z,77nm,18.6s,baz=94,slow=34						
	4.8nm,0.7s						
JCJ	Chichijima	59.67	314	LR	LR	04 29 54.0	
	comp=Z,74nm,20.4s,baz=154,slow=31						
VNDA	Vanda	63.83	186	LR	LR	04 31 56.5	
	comp=Z,51nm,21.6s,baz=314,slow=31						
DAV	Davao City (W)	63.84	286	LR	LR	04 35 57.0	
	comp=Z,78nm,18.3s,baz=180,slow=35						
SHEM	Shemya Is, Ala	68.14	352	LR	LR	04 33 19.2	
	comp=Z,66nm,21.2s,baz=280,slow=30						
MJAR	Matsushiro Arr	68.25	320	LR	LR	04 34 05.4	
	comp=Z,97nm,22.0s,baz=130,slow=31						
JNU	Nakatsue	71.11	313	LR	LR	04 34 14.4	
	comp=Z,65nm,21.8s,baz=143,slow=30						
NVAR	Mina Array Bea	74.27	42	P	P	04 10 40.6	+0.1
	0.8nm,0.8s,baz=244,slow=7.0,SNR=5.7						
	0.8nm,0.8s						
QSPA	South Pole Qui	75.14	180	P	P	04 10 45.6	+0.6
	1.6nm,0.9s,baz=49,slow=2.9,SNR=4.3						
QSPA				LR	LR	04 42 04.8	
	comp=Z,49nm,18.1s,baz=350,slow=34						
	1.6nm,0.9s						
TXAR	Lajitas Array	80.73	56	P	P	04 11 15.8	-0.8
	0.8nm,1.1s,baz=268,slow=6.8,SNR=5.1						
	0.8nm,1.1s						
ILAR	Eielson Array	82.05	11	P	P	04 11 23.6	+0.9
	0.2nm,0.5s,baz=222,slow=5.1,SNR=5.4						
	0.2nm,0.5s						
PDAR	Pinedale Array	82.21	42	P	P	04 11 23.4	-0.9
	0.2nm,0.5s,baz=274,slow=7.8,SNR=1.5						
	0.2nm,0.5s						
PMSA	Palmer Station	84.83	156	LR	LR	04 40 06.9	
	comp=Z,64nm,20.5s,baz=260,slow=29						
BRTR	Keskin Array B	145.47	321	PKPbc	PKPab	04 18 41.9	+0.5
	1.0nm,0.8s,baz=130,slow=2.6,SNR=6.2						
GERES	GERESS Array B	145.57	351	PKPbc	PKPab	04 18 41.6	+0.2
	1.4nm,0.9s,baz=34,slow=5.6,SNR=6.2						

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*NEIC **01** 04:13:43.2±0.8, 9°.17S±0°.03×107°.60E±0°.06, h10^{km}±1^{km}, mb4.6/11, Error ellipse: s-maj=10.6km s-min=5.5km az=95.0*

*DJA **01** 04:13:43.3±0.4, 9°S±4°×10°8E±°, h10^{km}, M4.2/16, mB4.8/1, mb4.3/3, MLv4.2/16, Mw(mB)4.0/1*

*IDC **01** 04:13:51.2±2.9, 9°.07S×107°.90E, h75^{km}±23^{km}, mb3.7/13, mbtmp4.0/15, Error ellipse: s-maj=40.2km s-min=12.6km az=55.0*

ISC 01 04:13:44.6±0.5**, 9°.24S**±0°.05×**107°.66E**±0°.05**, h21**^{km}**, n67, σ1^{s}.22**/64**, mb4.5**/25**, 1C, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMJI	Cimerak	1.65	28	P	Pn	04 14 11.6	-0.7
BBJI	Bungbulang	1.77	360	P	Pn	04 14 13.7	-0.4
CNJI	Cibinong	1.99	345	P	Pn	04 14 16.5	-0.6
XMI	Christmas Isla	2.28	238	P	Pn	04 14 20.8	-0.3
XMIS	Christmas Isla	2.33	238		Pn	04 14 21.3	-0.5
XMIS	Christmas Isla	2.33	238	P	Pn	04 14 21.1	-0.7
LEM	Lembang	2.40	359	P	Pb	04 14 25.1	-2.2
	133nm,0.3s,baz=313,slow=21,SNR=25						
LEM				S	Sb	04 14 54.3	-2.1
	535nm,0.8s,baz=338,slow=19,SNR=11						
LEM	Lembang	2.40	359	P	Pb	04 14 24.6	-2.6
SKJI	Sukabumi	2.48	334	P	Pn	04 14 23.5	-0.3
UGM	Wanagama	3.12	65		Pn	04 14 32.6	-0.1
UGM	Wanagama	3.12	65	P	Pn	04 14 33.3	+0.6
UGM	Wanagama	3.12	65	P	Pn	04 14 32.7	-0.1
CGJI	Cibinong	3.26	323	P	Pn	04 14 34.8	+0.3
SMRI	Semarang	3.51	52	Pn	Pn	04 14 39.1	+1.0
SMRI	Semarang	3.51	52	P	Pn	04 14 39.9	+1.9
SMRI	Semarang	3.51	52	P	Pn	04 14 38.9	+0.9
WOJI	Wonogiri, Jawa	3.52	67	P	Pn	04 14 38.4	+0.3
PCJI	Pacitan	3.63	74	P	Pn	04 14 40.5	+0.9
NGJI	Ngawi	4.20	64	P	Pn	04 14 47.5	0.0
GMJI	Gumukmas	5.80	81	P	Pn	04 15 10.8	+1.3
	0.2nm31nm,2.0s						
MDSI	Maura Dua	5.85	324	P	Pn	04 15 10.0	-0.2
	0.1nm678nm12nm,0.7s						
JAGI	Jajag, Banyuwa	6.46	84		Pn	04 15 18.7	+0.1
JAGI	Jajag, Banyuwa	6.46	84	P	Pn	04 15 19.6	+1.0
JAGI	Jajag, Banyuwa	6.46	84	P	Pn	04 15 18.9	+0.3
MNAI	Manna	6.73	316	Pn	Pn	04 15 20.9	-1.4
MNAI	Manna	6.73	316	P	Pn	04 15 22.9	+0.6
PLAI	Plampang	10.00	88	P	Pn	04 16 07.7	+0.5
GIRL	Giralia	14.74	155	Pn	Pn	04 17 08.8	-3.2
MBWA	Marble Bar	16.60	137	Pn	Pn	04 17 34.7	-1.6
MBWA				IAmb	IAmb	04 17 48.4	
	comp=Z,27nm,1.1s						
FITZ	Fitzroy Crossi	19.55	119	P	P	04 18 12.2	+1.0
	comp=Z,2.6nm,0.8s,baz=292,slow=11,SNR=1.4						
FITZ				S	S	04 21 35.2	-16
	comp=Z,5.9nm,0.9s,baz=227,slow=4.3,SNR=3.2						
KNRA	Kununurra	21.57	109	P	P	04 18 32.2	-0.8
KNRA				IAmb	IAmb	04 19 02.4	
	comp=Z,42nm,1.4s						
WRA	Warramunga Arr	27.88	115	P	P	04 19 32.6	-0.7
	comp=Z,0.6nm,0.7s,baz=290,slow=8.9,SNR=2.8						
	comp=Z,0.6nm,0.7s						
ASAR	Alice Springs	28.89	123	P	P	04 19 42.5	+0.2
	comp=Z,0.4nm,0.6s,baz=302,slow=7.8,SNR=4.3						
	comp=Z,0.4nm,0.6s						
H08S2	Diego Garcia H	34.81	270	T	T	04 57 19.3	
	baz=87						
H08S3	Diego Garcia H	34.82	270	T	T	04 57 24.4	
	baz=87,slow=74						
H08S1	Diego Carcia H	34.83	270	T	T	04 57 31.3	
	baz=87,slow=74						
BBOO	Buckleboo	35.18	136	P	P	04 20 37.5	+0.2
BBOO				IAmb	IAmb	04 21 20.4	
	comp=Z,17nm,1.5s						
PZH	PanZhiHua	35.99	351	P	P	04 20 47.8	+3.4
PZH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,4.3s						
STKA	Stephens Creek	38.68	131	P	P	04 21 07.6	+0.5
STKA	Stephens Creek	38.68	131	P	P	04 21 07.7	+0.6
	comp=Z,0.9nm,0.3s,baz=311,slow=9.9,SNR=4.5						
	comp=Z,0.9nm,0.3s						
EVN	Everest	42.12	332		P	04 21 36.3	0.0
NJ2	Nanjing	42.43	14	*e*P	P	04 21 39.7	+1.7
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
XAN	Xi'an	43.06	2	⇑P	P	04 21 42.6	-0.5
XAN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
RABL	Rabaul	44.46	87	P	P	04 21 48.9	-5.8
GTA	Gaotai	48.95	352	*e*P	P	04 22 30.7	+1.1
GTA				pP	pP	04 22 33.9	-1.6
GTA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
HHC	Hu-ho-hao-te	49.97	4	*e*P	P	04 22 40.0	+2.7
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC				pmax	pmax		
	comp=Z,41nm,4.6s						
KSRS	Korea Array	50.18	21	P	P	04 22 36.7	-2.1
	comp=Z,0.5nm,0.4s,baz=202,slow=7.9,SNR=2.1						
	comp=Z,0.5nm,0.4s						
CN2	Changchun	55.21	16	P	P	04 23 16.5	+0.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WMQ	Urumqi	55.84	343	*e*P	P	04 23 22.7	+2.1
WMQ				LR	LR		
	comp=N,550nm,19.5s						
WMQ				LR	LR		
	comp=E,470nm,18.3s						
WMQ				LR	LR		
	comp=Z,320nm,21.7s						
SONM	Songino Array	56.83	359	P	P	04 23 26.9	-0.7
SONM	Songino Array	56.83	359	P	P	04 23 27.1	-0.6
	comp=Z,1.2nm,0.6s,baz=172,slow=8.3,SNR=7.7						
	comp=Z,1.2nm,0.6s						
MKAR	Makanchi Array	60.20	340		P	04 23 50.5	-0.5
MKAR	Makanchi Array	60.20	340	P	P	04 23 50.7	-0.4
	comp=Z,4.3nm,0.6s,baz=142,slow=7.8,SNR=63						
	comp=Z,4.3nm,0.6s						
KURBB	Kurchatov Arra	64.77	340	P	P	04 24 21.1	-0.4
	comp=Z,3.0nm,0.8s,baz=157,slow=5.5,SNR=18						
	comp=Z,3.0nm,0.8s						
KURK	Kurchatov	64.81	340		P	04 24 20.9	-0.8
KURK				IAmb	IAmb	04 24 23.3	
	comp=Z,4.8nm,0.9s						
ZALV	Zalesovo Beam	65.85	345	P	P	04 24 26.3	-2.1
	comp=Z,0.8nm,0.4s,baz=193,slow=5.8,SNR=2.0						
	comp=Z,0.8nm,0.4s						
BVAR	Borovoye Array	69.67	337	P	P	04 24 52.3	-0.2
	comp=Z,2.7nm,0.6s,baz=142,slow=8.9,SNR=13						
	comp=Z,2.7nm,0.6s						
AB31	Akbulak array	71.66	329		P	04 25 03.8	-1.0
AB31				IAmb	IAmb	04 25 08.2	
	comp=Z,4.9nm,0.8s						
ABKAR	Akbulak array	71.66	329		P	04 25 04.2	-0.5
ABKAR	Akbulak array	71.66	329	P	P	04 25 04.2	-0.5
ABKAR				IAmb	IAmb	04 25 08.2	
	comp=Z,4.9nm,0.8s						
KBZ	Khabaz	78.74	318	P	P	04 25 46.3	+0.7
	comp=Z,1.0nm,0.7s,baz=157,slow=3.8,SNR=4.2						
	comp=Z,1.0nm,0.7s						
MMAI	Mount Meron Ar	80.43	306	P	P	04 25 56.6	+1.4
	comp=Z,2.0nm,0.7s,baz=107,slow=5.0,SNR=2.7						
	comp=Z,2.0nm,0.7s						
QSPA	South Pole Qui	80.76	180	P	P	04 25 57.1	+0.7
QSPA	South Pole Qui	80.76	180	P	P	04 25 57.0	+0.6
	comp=Z,0.5nm,0.7s,baz=269,slow=1.1,SNR=1.3						
	comp=Z,0.5nm,0.7s						
TIXI	Tiksi	81.94	7		P	04 26 01.3	-1.0
TIXI				IAmb	IAmb	04 26 01.6	
	comp=Z,2.5nm,0.7s						
BRTR	Keskin Array B	83.80	312	P	P	04 26 13.1	+0.2
	comp=Z,0.8nm,0.8s,baz=121,slow=5.9,SNR=6.7						
	comp=Z,0.8nm,0.8s						

TXAR	**Lajitas Array**	144.50	51	PKP	PKPdf	04 33 20.6	+0.3
	comp=Z,0.4nm,0.5s,baz=225,slow=1.7,SNR=9.3						

BJI ***01*** *04:26:13.0, 40°.37N×20°.20E, h10^{km}, mB5.1/45, mb4.8/65, Ms5.0/60, Ms7 4.6/60*

IDC ***01*** *04:26:17.2±0.4, 40°.47N×20°.83E, h0^{km}, mb4.6/33, mbtmp4.6/48, ML4.4/12, MS4.4/66, Error ellipse: s-maj=8.4km s-min=7.7km az=18.0*

TIR ***01*** *04:26:17.4, 40°.47N×20°.71E, h14^{km}±1^{km}, Ml5.3/10*

ATH ***01*** *04:26:17.8, 40°.52N×20°.78E, h2^{km}, Mw5.1, Moment Tensor Solution. s12 Moment tensor: M$_{rr}$-5.22; M$_{\theta\theta}$2.40; M$_{\phi\phi}$2.82; M$_{r\theta}$2.19; M$_{\theta\phi}$2.90; M$_{\phi r}$0.77; Fault plane solution: NP1:ϕ$_s$32.00000°, δ36.00000°, λ-108.00000°. NP2:ϕ$_s$234.00000°, δ56.00000°, λ-78.00000°.*

MOS ***01*** *04:26:17.9±0.9, 40°.43N×20°.65E, h18^{km}, mb5.0/43, MS4.6/12 Error ellipse: s-maj=3.4km s-min=2.3km az=84.4*

PDG ***01*** *04:26:18.8±0.8, 40°.46N×20°.75E, h10^{km}±1^{km}, MD5.0/11, ML4.9/12, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*

NAO ***01*** *04:26:18.9, 40°.53N×20°.80E, h10^{km}, mb4.5*

MED_RC ***01*** *04:26:18.0±0.1, 40°.42N×20°.70E, h11^{km}, MW5.2/56, Moment Tensor Solution. Body waves: s8,c9; Mantle waves: s56,c96; Duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.79±.02; M$_{\theta\theta}$0.21±.02; M$_{\phi\phi}$0.58±.02; M$_{r\theta}$-0.06±.06; M$_{\theta\phi}$0.46±.01; M$_{\phi r}$-0.14±.06; Best double couple: M$_0$0.85000×10^{17} NP1:ϕ$_s$216.00000°, δ40.00000°, λ-87.00000°. NP2:ϕ$_s$32.00000°, δ50.00000°, λ-93.00000°. Principal axes: T 0.9000, Plg5.0000°, Azm124.0000°; N -0.1000, Plg2.0000°, Azm34.0000°; P -0.8100, Plg85.0000°, Azm281.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=40s.*

GCMT ***01*** *04:26:18.6±0.1, 40°.40N±0°.01×20°.74E±0°.01, h12^{km}, MW5.3/157, Moment Tensor Solution. s117,c179; s157,c318; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.95±.02; M$_{\theta\theta}$0.27±.01; M$_{\phi\phi}$0.68±.01; M$_{r\theta}$0.03±.03; M$_{\theta\phi}$0.45±.01; M$_{\phi r}$-0.08±.03; Best double couple: M$_0$0.96600×10^{17} NP1:ϕ$_s$217.00000°, δ44.00000°, λ-84.00000°. NP2:ϕ$_s$29.00000°, δ47.00000°, λ-96.00000°. Principal axes: T 0.9730, Plg2.0000°, Azm123.0000°; N -0.0130, Plg4.0000°, Azm33.0000°; P -0.9590, Plg86.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***01*** *04:26:19.6, 40°.50N×20°.72E, h10^{km}*

THE ***01*** *04:26:19.2, 40°N±2°×2°1E±°, h3^{km}±1^{km}, M4.8/76, MLh4.8/76*

NEIC ***01*** *04:26:19.6±2.5, 40°.53N±0°.04×20°.70E±0°.06, h10^{km}±1^{km}, mb5.1/459, Mwb5.2/20, Mww5.2/89, Error ellipse: s-maj=8.4km s-min=5.7km az=236.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-9.01; M$_{\theta\theta}$3.42; M$_{\phi\phi}$5.58; M$_{r\theta}$2.15; M$_{\theta\phi}$3.23; M$_{\phi r}$1.07; Fault plane solution: M$_0$8.84000×10^{16} NP1:ϕ$_s$222.18000°, δ52.39000°, λ-82.58000°. NP2:ϕ$_s$30.14000°, δ38.23000°, λ-99.52000°. Principal axes: T 8.1720, Plg7.0000°, Azm307.0000°; N 1.2148, Plg6.0000°, Azm38.0000°; P -9.3868, Plg81.0000°, Azm167.0000°;*

NEIC ***01*** *04:26:19.5, 40°.50N×20°.72E, h12^{km}*

NEIC ***01*** *04:26:19.5, 40°.50N×20°.72E, h12^{km}, Moment Tensor Solution. Duration: 2^{s}1 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-8.21; M$_{\theta\theta}$2.41; M$_{\phi\phi}$5.80; M$_{r\theta}$1.25; M$_{\theta\phi}$3.65; M$_{\phi r}$-0.86; Fault plane solution: M$_0$8.30000×10^{16} NP1: ϕ$_s$222.44000°, δ45.69000°, λ-75.88000°. NP2:ϕ$_s$22.64000°, δ46.06000°, λ-104.03000°. Principal axes: T 8.1329, Plg0.0000°, Azm123.0000°; N 0.3426, Plg10.0000°, Azm32.0000°; P -8.4755, Plg80.0000°, Azm214.0000°;*

ROM ***01*** *04:26:19.7, 40°.49N×20°.69E, h10^{km}, mb4.9/67, Mwp5.5/34, Mwpd5.6/24 Error ellipse: s-maj=2.6km s-min=1.9km az=237.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.36; M$_{\theta\theta}$1.08; M$_{\phi\phi}$3.27; M$_{r\theta}$1.17; M$_{\theta\phi}$1.63; M$_{\phi r}$0.66; Fault plane solution: M$_0$4.45283×10^{16} NP1:ϕ$_s$217.00000°, δ53.00000°, λ-80.00000°. NP2:ϕ$_s$20.00000°, δ38.00000°, λ-103.00000°.*

MCSM ***01*** *04:26:20.0±0.3, 40°N±2°×2°1E±°, h11^{km}±2^{km}, mB5.3, mb4.9, MLv5.5, Mw(mB)4.7*

SKO ***01*** *04:26:20.7, 40°.43N×20°.95E, h13^{km}, ML5.0*

AFAD ***01*** *04:26:21.6, 40°.65N×21°.39E, h4^{km}±2^{km}, MW5.1*

GII ***01*** *04:26:22.3±0.0, 40°.47N×20°.80E, h10^{km}, confirmed*

SOF ***01*** *04:26:37, 41°.4N±0°.1×21°.8E±0°.1, h28^{km}±8^{km}, MD4.6/9*

ISC 01 04:26:18.9±0.5**, 40°.46N**±0°.01×**20°.77E**±0°.02**, h10**^{km}±2^{km}**, n1499, σ1^{s}65**/1453**, mb5.1**/293**, MS4.6**/87**, 153C-50D,**
Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	**Korca**	0.17	5	Pg	Pg	04 26 21.5	-1.1
KBN				Sg	Sg	04 26 24.0	-1.2
KBN				AML	AML	04 26 26.0	
	3µm,0.4s						
KBN				AML	AML	04 26 27.0	
	4µm,0.5s						
NEST	**Nestorio**	0.22	101	Pg	Pg	04 26 22.7	-0.7
NEST				Sg	Sg	04 26 27.6	+1.0
NEST				AML	AML	04 26 28.5	
	1µm,0.6s						
NEST	**Nestorio**	0.22	101	P	Pg	04 26 23.0	-0.4
NEST				S	Sg	04 26 26.4	-0.2
NEST	**Nestorio**	0.22	101	P	Pg	04 26 23.0	-0.4
LSK	**Leskovik**	0.33	203	Pg	Pg	04 26 24.0	-1.5
LSK				Sg	Sg	04 26 29.8	-0.2
LSK				AML	AML	04 26 39.9	
	2µm,0.6s						
LSK				AML	AML	04 26 44.5	
	2µm,0.7s						
PENT	**Pentalofos**	0.38	132	P	Pg	04 26 25.2	-1.3
PENT				S	Sg	04 26 30.6	-1.0
PENT	**Pentalofos**	0.38	132	P	Pg	04 26 25.6	-0.9
PENT				S	Sg	04 26 32.5	+0.9
OHR	**Ohrid**	0.66	2	P	Pg	04 26 30.7	-0.9
OHR				S	Sg	04 26 40.1	-0.1
OHR	**Ohrid**	0.66	2	*i* Pg	Pg	04 26 31.6	+0.1
OHR				*e*Lg	Lg	04 26 43.0	
	comp=E,113µm,0.6s						
OHR				*i* Sg	Sb	04 26 43.1	+1.4
OHR				*e*Lg	Lg	04 26 43.3	
	comp=N,41µm,0.6s						
OHR	**Ohrid**	0.66	2	P	Pg	04 26 30.7	-0.9
KPRO	**Kipourio**	0.68	138	P	Pg	04 26 30.2	-1.8
KPRO				S	Sg	04 26 40.1	-0.7
KPRO	**Kipourio**	0.68	138	P	Pg	04 26 30.4	-1.5
KPRO				S	Sg	04 26 41.5	+0.7
MSVA	**Metsovo**	0.76	155	P	Pg	04 26 31.7	-1.7
MSVA				S	Sb	04 26 44.8	+0.3
KZN	**Kozani**	0.78	101	P	Pg	04 26 33.8	-0.1
KZN				S	Sb	04 26 45.1	-0.1
KZN	**Kozani**	0.78	101	P	Pg	04 26 34.0	+0.1
KZN	**Kozani**	0.78	101	P	Pg	04 26 34.1	+0.1
KZN				S	Sb	04 26 45.3	+0.1
JAN	**Janina**	0.80	175	P	Pg	04 26 32.4	-1.9
JAN				S	Sb	04 26 46.6	+0.9
SRN	**Sarande**	0.82	226	Pg	Pg	04 26 33.3	-1.4
SRN				Sg	Sb	04 26 46.4	+0.1
SRN				AML	AML	04 26 49.5	
	comp=N,86nm,1.1s						
IGT	**Igoumenitsa**	0.98	200	Pg	Pg	04 26 36.5	-1.2
IGT				Sg	Sn	04 26 53.7	+1.0
IGT				AML	AML	04 26 56.0	
	comp=N,104nm,1.5s						
IGT	**Igoumenitsa**	0.98	200	P	Pg	04 26 36.2	-1.5
IGT				S	Sn	04 26 53.6	+1.0
IGT	**Igoumenitsa**	0.98	200	*e*Pg	Pg	04 26 36.4	-1.4
IGT				*e*Sg	Sn	04 26 56.2	+3.6
IGT	**Igoumenitsa**	0.98	200	P	Pg	04 26 35.0	-2.7
IGT	**Igoumenitsa**	0.98	200	P	Pg	04 26 36.2	-1.5
IGT				S	Sn	04 26 52.0	-0.6
NASA	**Naoussa**	1.00	80	P	Pg	04 26 37.1	-1.1
KTI	**Kastanea**	1.03	93	P	Pg	04 26 37.7	-1.0
KEK	**Kerkira**	1.05	225		Pg	04 26 38.5	-0.5
KEK	**Kerkira**	1.05	225	P	Pb	04 26 39.2	+0.1
KEK				S	Sn	04 26 56.5	+2.1
KEK	**Kerkira**	1.05	225	⇑P	Pg	04 26 38.8	-0.3
KEK	**Kerkira**	1.05	225	P	Pg	04 26 38.9	-0.1
TIR	**Tirane**	1.12	323		Pb	04 26 39.4	-1.0
TIR	**Tirane**	1.12	323	Pg	Pb	04 26 38.5	-1.9
TIR				Sg	Sn	04 26 57.8	+1.6
TIR				AML	AML	04 27 09.9	
	comp=N,97nm,0.7s						
TIR	**Tirane**	1.12	323	⇑P	Pb	04 26 39.7	-0.7
TIR	**Tirane**	1.12	323	*e*Pg	Pb	04 26 40.0	-0.4
TIR				*i* Sg	Sn	04 27 03.7	+7.5
TIR	**Tirane**	1.12	323	P	Pb	04 26 39.7	-0.7
TIR	**Tirane**	1.12	323	⇑P	Pb	04 26 37.8	-2.5
TIR	**Tirane**	1.12	323	P	Pb	04 26 38.6	-1.9
LFKM	**Lefkimmi**	1.15	209	P	Pb	04 26 40.3	-0.4
LFKM				S	Sn	04 27 01.2	+4.6
TETR	**Tetrakomo, Epi**	1.18	161	P	Pb	04 26 39.0	-2.3
TETR				S	Sn	04 26 57.6	0.0
TRKA	**Trikala**	1.18	139	P	Pb	04 26 41.2	-0.2
PRGA	**Parga**	1.20	194	P	Pn	04 26 41.7	0.0
PHP	**Peshkopia**	1.25	349	Pg	Pn	04 26 41.1	-1.4
PHP				Sg	Sb	04 26 58.2	-0.6
PHP				AML	AML	04 27 11.2	
	comp=N,161nm,0.9s						
ARTB	**Arta**	1.31	173	P	Pn	04 26 42.4	-0.7
THL	**Klokotos Trika**	1.31	133	P	Pn	04 26 41.5	-1.6
THL				S	Sg	04 27 01.9	+1.0
THL	**Klokotos Trika**	1.31	133	P	Pn	04 26 41.5	-1.6
THL				S	Sb	04 27 00.4	+0.1
GRG	**Griva**	1.34	68	P	Pn	04 26 43.1	-0.5
TYRN	**Tyrnavos**	1.35	123	P	Pn	04 26 42.0	-1.7
TYRN				S	Sb	04 27 01.6	+0.2
TYRN	**Tyrnavos**	1.35	123	P	Pn	04 26 42.5	-1.2
TYRN				S	Sn	04 27 02.1	+0.5
GINA	**Giannouli**	1.47	122	P	Pn	04 26 45.5	+0.1
LRSO	**Larissa Observ**	1.47	122	P	Pn	04 26 45.5	+0.1
LRSO				S	Sg	04 27 07.9	+1.7
LRSO	**Larissa Observ**	1.47	122	P	Pn	04 26 45.3	-0.1
SOFA	**Sofades**	1.51	137	P	Pn	04 26 45.5	-0.4
AMPL	**Ampelaki**	1.57	167	P	Pn	04 26 47.5	+0.7
AMPL				S	Sb	04 27 08.1	+0.3
SKO	**Skopje**	1.60	18	*e*Pg	Pb	04 26 48.2	-0.3
SKO				*i* Sg	Sg	04 27 12.8	+2.6
VAY	**Valandovo**	1.62	57	⇓*i*Pg	Pn	04 26 47.9	+0.5
VAY				*i* Sg	Sg	04 27 12.4	+1.5
VAY				*e*Lg	Lg	04 27 17.7	
	comp=N,260µm,3.5s						
VAY				*e*Lg	Lg	04 27 19.2	
	comp=E,12µm,0.6s						
TSLK	**Tsoukalades, L**	1.63	183	P	Pn	04 26 48.4	+0.7
TSLK				S	Sg	04 27 13.8	+2.5
TSLK	**Tsoukalades, L**	1.63	183	P	Pb	04 26 48.5	-0.5
MMAA	**Thessaloniki**	1.67	83	P	Pn	04 26 47.4	-0.7
LKD2	**Lefkada island**	1.67	183	Pn	Pb	04 26 49.2	-0.4
LKD2				Sn	Sg	04 27 13.9	+1.4
LKD2				AML	AML	04 27 17.8	
	comp=E,71nm,0.7s						
LKD2	**Lefkada island**	1.67	183	P	Pb	04 26 49.3	-0.4
LKD2	**Lefkada island**	1.67	183	P	Pb	04 26 49.1	-0.6
THE	**Thessaloniki**	1.68	83	Pn	Pn	04 26 47.6	-0.6
THE	**Thessaloniki**	1.68	83	P	Pn	04 26 47.8	-0.5
THE				S	Sn	04 27 09.3	-0.6
THE	**Thessaloniki**	1.68	83	*i* Pn	Pn	04 26 47.7	-0.6
THE				*i* Sg	Sb	04 27 11.6	+0.5
THE	**Thessaloniki**	1.68	83	P	Pn	04 26 47.0	-1.3
THE	**Thessaloniki**	1.68	83	P	Pn	04 26 47.6	-0.6
PUK	**Puka**	1.72	338		Pn	04 26 49.6	+0.7
PUK	**Puka**	1.72	338	Pg	Pn	04 26 49.3	+0.4
PUK				Sg	Sb	04 27 12.5	+0.3
PUK				AML	AML	04 27 20.1	
	comp=E,234nm,0.8s						
PUK				AML	AML	04 27 25.6	
	comp=E,104nm,0.8s						
EVR	**Evrytania**	1.73	152	P	Pb	04 26 50.2	-0.6
EVR	**Evrytania**	1.73	152	P	Pn	04 26 49.9	+0.8
NYDR	**Nydri-Lefkada**	1.74	182	P	Pn	04 26 49.9	+0.8
NYDR	**Nydri-Lefkada**	1.74	182	P	Pn	04 26 49.9	+0.8
KNT	**Kendrikon**	1.76	66	P	Pn	04 26 49.2	-0.2
KNT	**Kendrikon**	1.76	66	*i* Pg	Pn	04 26 49.7	+0.2
KNT				*i* Sg	Sg	04 27 17.8	+2.2
KNT	**Kendrikon**	1.76	66	P	Pn	04 26 49.0	-0.5
KNT	**Kendrikon**	1.76	66	P	Pn	04 26 49.5	0.0
DRAG	**Dragano-Lefkad**	1.78	185	P	Pb	04 26 50.7	-0.8
HORT	**Hortiatis**	1.78	85	P	Pn	04 26 49.1	-0.7
HORT	**Hortiatis**	1.78	85	P	Pn	04 26 48.9	-0.8
HORT				S	Sn	04 27 12.5	0.0
MAKR	**Makrakomi, Fth**	1.78	143	P	Pn	04 26 49.9	+0.2
MAKR	**Makrakomi, Fth**	1.78	143	P	Pn	04 26 50.2	+0.5
EVGI	**Lefkada island**	1.83	183	P	Pb	04 26 52.3	-0.2
EVGI	**Lefkada island**	1.83	183	P	Pn	04 26 51.3	+0.9
AGG	**Agios Georgios**	1.87	139	P	Pn	04 26 50.8	-0.1
AGG	**Agios Georgios**	1.87	139	⇑P	Pn	04 26 50.8	-0.1
AGG	**Agios Georgios**	1.87	139	P	Pn	04 26 51.0	0.0
AGG				S	Sb	04 27 16.1	-0.4
ULC	**Ulcinj**	1.90	323	Pn	Pn	04 26 52.1	+0.9
ULC	**Ulcinj**	1.90	323	*i* Pn	Pb	04 26 52.7	-0.9
ULC	**Ulcinj**	1.90	323	⇓*i*Pn	Pn	04 26 52.3	+1.0
ULC				*i* Sn	Sb	04 27 17.5	+0.2
PVO	**Paravola**	1.93	162	P	Pb	04 26 53.2	-0.8
PVO	**Paravola**	1.93	162	P	Pn	04 26 51.6	0.0
STCV	**Stivos**	1.94	83	P	Pn	04 26 51.2	-0.7
STEV	**Stivos**	1.94	84	P	Pn	04 26 51.6	-0.3
BCI	**Bajram Curri**	1.98	345	Pg	Pn	04 26 53.5	+1.1
BCI				Sg	Sg	04 27 22.8	+0.3
BCI				AML	AML	04 27 34.0	
	comp=E,111nm,0.8s						
FSK	**Fiskardo**	2.00	185	P	Pn	04 26 53.7	+1.0
FSK	**Fiskardo**	2.00	185	P	Pn	04 26 53.0	+0.3
SOH	**Sokhos**	2.00	79	P	Pn	04 26 52.9	+0.1
SOH	**Sokhos**	2.00	79	P	Pn	04 26 53.0	+0.3
SOH	**Sokhos**	2.00	79	P	Pn	04 26 52.9	+0.1
PLG	**Polygyros**	2.04	91	P	Pn	04 26 53.2	-0.1
PLG	**Polygyros**	2.04	91	P	Pn	04 26 53.5	+0.2
PLG	**Polygyros**	2.04	91	P	Pn	04 26 53.3	-0.1
PLG				S	Sn	04 27 18.3	-0.6
ANX	**Ano Chora**	2.06	154	P	Pb	04 26 55.3	-1.1
ANX	**Ano Chora**	2.06	154	P	Pb	04 26 55.4	-1.1
DRME	**Dracevica, Mon**	2.10	326	⇑*i*Pn	Pn	04 26 54.8	+0.7
DRME	**Dracevica, Mon**	2.10	326	⇑*i*Pn	Pn	04 26 55.3	+1.2
DRME				*i* Sn	Sb	04 27 23.2	0.0
MSL1	**Messolongi**	2.14	166	P	Pn	04 26 55.9	+1.3
PLN1	**Chaniotis**	2.19	101	P	Pn	04 26 55.1	-0.3
SMHA	**Samh**	2.20	182	P	Pn	04 26 55.4	-0.1
EFP	**Efpalio**	2.21	156	P	Pb	04 26 57.8	-1.1
EFP	**Efpalio**	2.21	156	P	Pn	04 26 57.1	+1.6
NEO	**Neokhori**	2.21	120	P	Pn	04 26 55.3	-0.3
NEO	**Neokhori**	2.21	120	P	Pn	04 26 55.4	-0.2
PVY	**Plav**	2.22	344	⇑*i*Pn	Pb	04 26 58.2	-1.0
PVY				*i* Sn	Sb	04 27 25.5	-1.3
MESG	**Mesagne**	2.23	274	P	Pn	04 26 55.1	-0.7
AXAR	**Agios Charalam**	2.23	139	P	Pn	04 26 56.3	+0.4
AXAR	**Agios Charalam**	2.23	139	P	Pn	04 26 55.9	0.0
DMLN	**Damoulianata-K**	2.23	188	P	Pn	04 26 56.6	+0.7
DMLN	**Damoulianata-K**	2.23	188	P	Pn	04 26 56.8	+0.9
SRS	**Serrai**	2.24	72	P	Pn	04 26 56.0	-0.1
SRS	**Serrai**	2.24	72	*i* Pn	Pn	04 26 56.2	+0.1
SRS	**Serrai**	2.24	72	P	Pn	04 26 56.1	+0.1
SRS	**Serrai**	2.24	72	P	Pn	04 26 55.9	-0.1
SRS				S	Sn	04 27 22.4	-1.3
KKB	**Krupnik**	2.26	51	*i* P	Pn	04 26 57.7	+1.5
KKB	**Krupnik**	2.26	51	*i* Pn	Pn	04 26 56.6	+0.4
SERG	**Sergoula**	2.27	154	P	Pb	04 26 58.4	-1.5
SERG	**Sergoula**	2.27	154	P	Pn	04 26 57.1	+0.6
PDG	**Podgorica**	2.28	331		Pn	04 26 57.3	+0.8
PDG	**Podgorica**	2.28	331	⇑*i*Pn	Pn	04 26 57.6	+1.1
PDG	**Podgorica**	2.28	331	⇑P	Pn	04 26 57.5	+1.1
PDG	**Podgorica**	2.28	331	⇑P	Pn	04 26 57.5	+0.9
PDG	**Podgorica**	2.28	331	⇑*i*Pn	Pn	04 26 57.4	+0.9
PDG				*i* Sn	Sb	04 27 26.7	-1.5
VLS	**Valsamata**	2.28	184	P	Pn	04 26 57.0	+0.4
VLS	**Valsamata**	2.28	184	P	Pn	04 26 56.7	+0.1
PAIG	**Paliouri**	2.29	102	P	Pn	04 26 56.0	-0.6
PAIG	**Paliouri**	2.29	102	P	Pn	04 26 56.1	-0.6
PAIG	**Paliouri**	2.29	102	P	Pn	04 26 56.2	-0.4
AXS	**Araxos**	2.31	168	P	Pn	04 26 58.6	+1.8
AXS	**Araxos**	2.31	168	P	Pn	04 26 58.1	+1.2
UPR	**University Cam**	2.31	160	P	Pn	04 26 57.9	+1.0
UPR	**University Cam**	2.31	160	P	Pn	04 26 57.6	+0.7
KALE	**Kalithea**	2.32	152	P	Pn	04 26 58.6	+1.4
KALE	**Kalithea**	2.32	152	P	Pn	04 26 58.6	+1.4
BUM	**Brajici-Budva**	2.32	323	⇓*i*Pn	Pn	04 26 58.0	+0.8
BUM				*i* Sn	Sb	04 27 28.1	-1.5
PSDA	**Pessada-Kefalo**	2.34	184	P	Pn	04 26 58.0	+0.6
PSDA	**Pessada-Kefalo**	2.34	184	P	Pn	04 26 58.1	+0.6
RTZL	**Ratzakli, Kefa**	2.38	180	P	Pn	04 26 58.9	+1.1
AIDA	**Aidipsos**	2.38	132	P	Pn	04 26 57.4	-0.5
DLFA	**Delphi**	2.38	145	P	Pn	04 26 58.8	+0.8
YRMI	**Loutra Irminis**	2.39	169	P	Pn	04 26 59.0	+0.9
RLS	**Riolos of Patr**	2.46	167	P	Pb	04 27 01.4	-1.7
RLS	**Riolos of Patr**	2.46	167	P	Pn	04 27 00.5	+1.6
OUR	**Ouranopolis**	2.46	92	P	Pn	04 26 58.6	-0.4
OUR	**Ouranopolis**	2.46	92	P	Pn	04 26 59.3	+0.4
OUR	**Ouranopolis**	2.46	92	P	Pn	04 26 58.6	-0.4
OUR				S	Sn	04 27 29.0	0.0
KOKK	**Kokkinochori,**	2.48	81	P	Pn	04 26 59.0	-0.3
KOKK	**Kokkinochori,**	2.48	81	P	Pn	04 26 59.3	0.0
BARS	**Barje**	2.49	18	*i* Pn	Pn	04 26 59.9	+0.6
LKR	**Lokris**	2.50	136	P	Pn	04 26 59.7	+0.2
LKR	**Lokris**	2.50	136	P	Pn	04 26 59.7	+0.2
ANDM	**Andravida**	2.50	171	P	Pn	04 27 01.4	+1.9
BEY	**Berane**	2.50	345	*e*Pn	Pb	04 27 04.0	+0.1
IVA	**Berane**	2.50	345	⇓*i*Pn	Pn	04 27 01.7	+2.0
IVA				*i* Sn	Sn	04 27 32.2	+1.9
MMB	**Musomishta**	2.50	63	*i* P	Pb	04 27 03.6	-0.4
MMB	**Musomishta**	2.50	63	P	Pn	04 27 00.3	+0.6
MMB	**Musomishta**	2.50	63	*i* Pn	Pn	04 27 00.4	+0.7
MMB				*i* Sg	Sn	04 27 31.6	+1.3
MMB	**Musomishta**	2.50	63	P	Pn	04 27 00.3	+0.6
CEME	**Cevo**	2.51	327	⇑*i*Pn	Pn	04 27 00.3	+0.5
CEME				*i* Sn	Sb	04 27 33.0	-2.0
KOME	**Kolasin**	2.57	339	⇑*i*Pn	Pn	04 27 02.8	+2.2
KOME				*i* Sn	Sn	04 27 34.1	+2.1
CLEM	**Kyllini,Ilia,G**	2.58	174	P	Pn	04 27 01.9	+1.3
ORTH	**Orthonies,Zaky**	2.60	181	P	Pn	04 27 01.9	+0.9
HCY	**Herceg Novi**	2.62	320	⇑*i*Pn	Pn	04 27 01.4	+0.1
HCY	**Herceg Novi**	2.62	320	⇓*i*Pn	Pn	04 27 01.3	0.0
HCY				*i* Sn	Sn	04 27 35.0	+1.8
KYPS	**Kipseli, Zakin**	2.63	179	P	Pn	04 27 01.9	+0.5
KLV	**Kalavryta, Ach**	2.64	156	P	Pn	04 27 03.8	+2.3
KLV	**Kalavryta, Ach**	2.64	156	P	Pn	04 27 02.2	+0.7
AOS	**Alonnisos**	2.72	117	P	Pn	04 27 02.5	-0.1
LTHK	**Lithakia**	2.74	179	P	Pn	04 27 03.6	+0.7
LTHK	**Lithakia**	2.74	179	P	Pn	04 27 04.4	+1.5
TRAN	**Tran**	2.76	30	*i* P	Pn	04 27 04.5	+1.3
KVLA	**Kavala**	2.79	79	P	Pn	04 27 03.5	-0.1
PLNA	**Plana**	2.84	44	*i* P	Pn	04 27 05.1	+0.8
KTLO	**Katakolo**	2.84	171	P	Pn	04 27 05.2	+1.0
VTS	**Vitosha**	2.84	40	*i* P	Pn	04 27 05.4	+0.9
VTS	**Vitosha**	2.84	40	P	Pn	04 27 04.6	+0.1
SJES	**Sjenica**	2.87	348	⇑*i*Pn	Pn	04 27 05.3	+0.6
KAVA	**Kavala**	2.90	78	P	Pn	04 27 04.4	-0.5
KAVA	**Kavala**	2.90	78	P	Pn	04 27 04.5	-0.5
TREB	**Trebinje**	2.90	322	⇑*i*Pn	Pn	04 27 05.1	+0.1
KRES	**Krestena**	2.94	167	P	Pn	04 27 06.7	+1.1
SOF	**Sofia**	2.95	40	P	Pb	04 27 11.1	-0.5
BRY	**Bratogost**	2.96	326	*e*Pn	Pn	04 27 06.6	+0.6
BRY	**Bratogost**	2.96	326	⇓*i*Pn	Pn	04 27 06.7	+0.7
BRY				*i* Sn	Sn	04 27 43.7	+2.0
VIL2	**Platees**	2.96	138	P	Pn	04 27 07.0	+1.1
LTK	**Loutraki**	2.97	144	P	Pn	04 27 06.6	+0.5
LTK	**Loutraki**	2.97	144	P	Pn	04 27 06.8	+0.7
LOUT	**Loutraki**	3.00	144	P	Pn	04 27 07.0	+0.6
AMT	**Artemida-Makis**	3.01	166	P	Pn	04 27 07.0	+0.4
LTRZ	**Laterza**	3.01	274	P	Pn	04 27 05.7	-1.0
THAS	**Thassos island**	3.01	86	P	Pn	04 27 05.4	-1.3
THAS	**Thassos island**	3.01	86	P	Pn	04 27 05.5	-1.1
VILL	**Villia**	3.02	138	P	Pn	04 27 07.0	+0.2
PLE	**Pljevlja**	3.05	341	⇓*i*Pn	Pn	04 27 09.7	+2.4
PLE				*i* Sn	Sn	04 27 46.2	+2.3
UPM	**Unac-Piva**	3.08	334	*e*Pn	Pn	04 27 09.9	+2.2
UPM	**Unac-Piva**	3.08	334	⇑*i*Pn	Pn	04 27 09.4	+1.7
UPM				*i* Sn	Sn	04 27 46.0	+1.4
MATE	**Matera**	3.10	275	⇑P	Pn	04 27 06.9	-0.9
MATE	**Matera**	3.10	275	⇑P	Pn	04 27 06.3	-1.5
KYMI	**Kymi, Euboea I**	3.15	124	P	Pn	04 27 07.7	-0.9
KYMI	**Kymi, Euboea I**	3.15	124	P	Pn	04 27 08.9	+0.4
RZN	**Rozhen**	3.25	66	*i* P	Pb	04 27 13.8	-2.9
RZN	**Rozhen**	3.25	66	P	Pn	04 27 11.6	+1.6
RZN				S	Sn	04 27 49.4	+0.6
BOVS	**Bovan**	3.25	12	⇓P	Pn	04 27 10.3	+0.4
PGB	**Panagyurishte**	3.28	50	*i* P	Pn	04 27 12.9	+2.6
SKY	**Skiros Island**	3.32	117	P	Pn	04 27 10.8	0.0
SKY	**Skiros Island**	3.32	117	P	Pn	04 27 10.4	-0.3
RUDO	**Rudo**	3.33	342	*e*Pn	Pn	04 27 11.5	+0.5
VLX	**Vlachokerasia**	3.33	157	P	Pn	04 27 14.4	+3.4
STON	**Ston**	3.33	317	⇑*i*Pn	Pn	04 27 10.2	-0.8
TIP	**Timpagrande**	3.34	249		Pn	04 27 10.3	-1.0
TIP	**Timpagrande**	3.34	249	⇑P	Pn	04 27 09.6	-1.6
TIP	**Timpagrande**	3.34	249	⇑P	Pn	04 27 10.2	-1.0
ATH	**Athens Observa**	3.38	136	P	Pn	04 27 12.1	+0.6
ATH	**Athens Observa**	3.38	136	P	Pn	04 27 12.0	+0.4
NOAC	**Athens-Thissio**	3.38	136	P	Pn	04 27 12.1	+0.5
ITM	**Ithomi**	3.39	164		Pn	04 27 14.3	+2.4
ITM	**Ithomi**	3.39	164	P	Pn	04 27 13.9	+2.1
ITM	**Ithomi**	3.39	164	⇑P	Pn	04 27 14.1	+2.2
ITM	**Ithomi**	3.39	164	P	Pn	04 27 13.8	+1.9
PTL	**Penteli**	3.40	134	P	Pn	04 27 12.2	+0.3
PTL	**Penteli**	3.40	134	P	Pn	04 27 12.1	+0.1
ATHU	**Athens Univers**	3.42	136	P	Pn	04 27 12.5	+0.3
ATHU	**Athens Univers**	3.42	136	P	Pn	04 27 12.8	+0.7
DION	**Dionisos Attik**	3.42	133	P	Pn	04 27 12.6	+0.4
PLD	**Plovdiv**	3.44	59	P	Pn	04 27 11.7	-0.7
PLD	**Plovdiv**	3.44	59	P	Pn	04 27 13.7	+1.2
PLD				S	Sn	04 27 54.3	+1.0
MET5	**Makryloggos,Me**	3.47	144	P	Pn	04 27 12.5	-0.4
MET4	**Agioi Theodoro**	3.49	143	P	Pn	04 27 13.6	+0.4
VLY	**Voula,Athens**	3.50	137	P	Pn	04 27 10.1	-3.3
BBLS	**Lazi&#263i**	3.56	344	⇑*i*Pn	Pn	04 27 15.1	+1.0
KRND	**KRANIDI**	3.59	148	P	Pn	04 27 15.4	+0.9
SMTH	**Samothraki Isl**	3.63	88	P	Pn	04 27 14.0	-1.1
SMTH	**Samothraki Isl**	3.63	88	P	Pn	04 27 14.5	-0.7
PYL	**PYLOS**	3.64	168	P	Pn	04 27 16.3	+1.1
MPEP	**Malo Peshtene**	3.65	36	*i* P	Pn	04 27 17.2	+1.8
KDZ	**Kurdzhali**	3.65	70	*i* P	Pn	04 27 19.5	+4.1
KDZ	**Kurdzhali**	3.65	70	P	Pn	04 27 15.7	+0.3
KDZ	**Kurdzhali**	3.65	70	P	Pn	04 27 16.4	+1.0
KDZ				S	Sn	04 28 00.4	+1.9
RDO	**Rodhopi**	3.69	78		Pn	04 27 15.5	-0.3
RDO	**Rodhopi**	3.69	78	P	Pn	04 27 15.3	-0.5
RDO	**Rodhopi**	3.69	78	⇑P	Pn	04 27 15.5	-0.3
KARY	**Karystos**	3.74	129	P	Pn	04 27 17.0	+0.4
VALD	**Valchedram**	3.79	31	*i* P	Pn	04 27 18.4	+1.1
CUC	**Castrocucco**	3.82	265		Pn	04 27 18.2	+0.4
CUC	**Castrocucco**	3.82	265	⇑P	Pn	04 27 17.3	-0.5
GOAD	**anakkale-G¶**	3.94	93	P	Pn	04 27 19.2	-0.2
DIM	**Dimitrovgrad**	3.96	65	P	Pn	04 27 20.7	+1.1
DIM				S	Sn	04 28 06.6	+0.6
SGRT	**San Giovanni R**	4.01	290		Pn	04 27 19.8	-0.7
ALN	**Alexandroupoli**	4.04	82		Pn	04 27 20.7	0.0
ALN	**Alexandroupoli**	4.04	82	P	Pn	04 27 20.3	-0.4
ALN	**Alexandroupoli**	4.04	82	P	Pn	04 27 20.7	0.0
ALN	**Alexandroupoli**	4.04	82	⇑P	Pn	04 27 20.4	-0.3
BOZC	**Bozcaada**	4.10	97	P	Pn	04 27 21.1	-0.4
BOZC				S	Sn	04 28 07.0	-2.5
VLI	**Veliai**	4.10	155	P	Pn	04 27 22.9	+1.3
SIGR	**SIGRI**	4.11	106	P	Pn	04 27 20.7	-0.9
CAVK	**Edirne/Enez-Ca**	4.12	85	⇑P	Pn	04 27 23.4	+1.6
PUNG	**Punghina**	4.14	22	⇑P	Pn	04 27 23.0	+0.9
ECEA	**Canakkale, Ece**	4.16	94	P	Pn	04 27 25.2	+2.9
TEKS	**Tekeris**	4.19	348	⇑*i*Pn	Pn	04 27 23.7	+0.9
KOCA	**Canakkale, Ayv**	4.23	101	P	Pn	04 27 23.9	+0.5
KOCA				S	Sn	04 28 11.7	-1.2
EZN	**Ezine**	4.30	97	P	Pn	04 27 23.8	-0.6
EZN	**Ezine**	4.30	97	⇑P	Pn	04 27 25.3	+1.0
EZN	**Ezine**	4.30	97	P	Pn	04 27 25.3	+1.0
CNKL	**anakkale-Mer**	4.32	93	P	Pn	04 27 25.1	+0.6
CNKL				S	Sn	04 28 11.8	-3.1
BEO	**Beograd**	4.36	357	P	Pn	04 27 26.1	+1.0
CEL	**Celeste**	4.37	241		Pn	04 27 24.9	-0.4
CEL	**Celeste**	4.37	241	⇑P	Pn	04 27 23.5	-1.8
MDVR	**Moldovita**	4.38	9	⇓P	Pn	04 27 26.0	+0.5
PRK	**Paraskevi**	4.40	104	P	Pn	04 27 26.6	+0.8
GMB	**Gambarie**	4.46	241	P	Pn	04 27 26.7	+0.1
BAYC	**CANAKKALE_Bayr**	4.49	97	P	Pn	04 27 27.7	+0.8
BAYC				S	Sn	04 28 16.4	-2.7
KESN	**Edirne-Kesan**	4.51	83	P	Pn	04 27 27.4	-0.2
KESN				S	Sn	04 28 16.9	-3.3
KTHA	**Kythira Island**	4.56	156	P	Pn	04 27 30.5	+2.5
SRE	**Strehaia**	4.57	22	⇑P	Pn	04 27 29.0	+0.9
SRE	**Strehaia**	4.57	22	P	Pn	04 27 28.9	+0.9
AYVA	**Ayvalik**	4.70	102	P	Pn	04 27 30.5	+0.7

AYVA				S	Sn	04 28 21.3	-3.0
DOB	Doboj	4.71	336	*e*Pn	Pn	04 27 29.6	-0.3
PAOL	Paolisi	4.75	279		Pn	04 27 31.1	+0.6
FRGS	Fruska Gora	4.75	352	*e*Pn	Pn	04 27 30.0	-0.5
JMB	Yambol	4.78	63	P	Pn	04 27 31.6	+0.7
JMB				S	Sn	04 28 27.9	+1.6
BUHA	Balikesir, Bur	4.94	99	P	Pn	04 27 34.2	+1.1
BUHA				S	Sn	04 28 28.4	-1.9
COPA	Copaceanca	4.94	40	⇑P	Pn	04 27 34.9	+1.9
ZEYE	Izmir, Urla-Ze	4.96	115	P	Pn	04 27 35.0	+1.6
IZMD	zmir-Dikili-	4.97	105	P	Pn	04 27 34.3	+0.7
ANKY	Antikythira Is	5.00	156	P	Pn	04 27 37.0	+3.1
APE	Apeiranthos	5.03	131	P	Pn	04 27 34.6	+0.3
APE	Apeiranthos	5.03	131	⇓P	Pn	04 27 35.2	+0.8
APE	Apeiranthos	5.03	131	*i* P	Pn	04 27 35.4	+1.0
APE	Apeiranthos	5.03	131	⇑P	Pn	04 27 34.6	+0.3
BLY	Banja Luka	5.04	330	⇑*i*Pn	Pn	04 27 34.7	+0.2
BLY	Banja Luka	5.04	330	⇑P	Pn	04 27 34.6	+0.2
SLATY	Slatina	5.06	331	*e*Pn	Pn	04 27 34.9	+0.1
ZEDA	zmir-Bergama	5.09	105	P	Pn	04 27 36.6	+1.5
ZEDA				S	Sn	04 28 24.1	-10
A050A	Klekovaca	5.10	323	⇑*i*Pn	Pn	04 27 35.8	+0.4
GZR	Gura Zlata	5.15	16	⇓P	Pn	04 27 36.6	+0.6
GZR	Gura Zlata	5.15	16	P	Pn	04 27 36.6	+0.6
BZS	Buzias	5.20	7	⇑P	Pn	04 27 35.8	-0.8
BLCB	Balcova	5.28	111	P	Pn	04 27 38.2	+0.5
BALY	Balya	5.30	96	P	Pn	04 27 39.6	+1.5
BALY				S	Sn	04 28 38.6	-0.7
A051A	Mrakovica	5.37	329	⇑*i*Pn	Pn	04 27 39.3	+0.3
SURR	Surduc	5.39	10	⇑P	Pn	04 27 41.3	+2.1
INTR	Introdacqua	5.40	289		Pn	04 27 39.8	+0.3
HAGA	Augusta	5.41	236	⇑P	Pn	04 27 37.2	-2.3
PRIJ	Prijedor	5.42	328	*e*Pn	Pn	04 27 40.0	+0.4
STEP	BALIKESIR_Sava	5.45	99	P	Pn	04 27 41.7	+1.6
LOT	Lotru	5.45	23	⇑P	Pn	04 27 41.0	+0.8
VIZE	Kirklareli, Vi	5.46	76	P	Pn	04 27 40.2	-0.1
BKES	Balkesir-Mer	5.54	95	P	Pn	04 27 41.6	+0.3
BKES				S	Sn	04 28 40.3	-4.8
IMMV	Iera Moni Meta	5.59	152	P	Pn	04 27 42.6	+0.5
BAND	Balkesir-Ban	5.60	89	⇑P	Pn	04 27 44.4	+2.3
DEV	Deva	5.64	15	⇑P	Pn	04 27 45.3	+2.5
DEV	Deva	5.64	15	P	Pn	04 27 45.2	+2.5
PRD	Provadia	5.65	59	P	Pn	04 27 45.3	+2.5
ARR	Arges	5.67	29	⇑P	Pn	04 27 45.2	+2.1
MTUR	Matau	5.72	32	⇑P	Pn	04 27 45.7	+1.8
MTUR	Matau	5.72	32	P	Pn	04 27 45.6	+1.8
VAE	Valguarnera	5.78	241	Pn	Pn	04 27 45.9	+1.3
	comp=E,23nm,0.6s,baz=338,slow=0.7,SNR=11						
VAE				Sn	Sn	04 28 51.7	+0.7
	comp=E,4.4nm,0.3s,baz=26,slow=19,SNR=3.3						
CTYL	Yalikoy Yolu	5.78	77	⇓P	Pn	04 27 46.5	+1.8
GIB	Gibilmanna	5.79	247	⇑P	Pn	04 27 44.4	-0.4
TNR	Turnu Rosu	5.79	25	⇑P	Pn	04 27 46.8	+1.9
TNR	Turnu Rosu	5.79	25	P	Pn	04 27 46.7	+1.9
AQU	L'Aquila	5.86	291	P	Pn	04 27 46.1	+0.4
AQU				pmax	pmax		
	comp=Z,629nm,1.4s						
AQU	L'Aquila	5.86	291	Pn	Pn	04 27 45.9	+0.2
	comp=Z,2.3nmcomp=Z,5µmcomp=Z,629nm,1.4s						
AQU	L'Aquila	5.86	291	⇑P	Pn	04 27 45.7	-0.1
VOIR		5.89	31	⇓P	Pn	04 27 48.6	+2.4
VOIR		5.89	31	P	Pn	04 27 48.5	+2.4
VOIR		5.89	31	Pn	Pn	04 27 47.6	+1.4
	comp=Z,0.9nmcomp=Z,2µmcomp=Z,52nm,0.6s						
CAMP	Campotosto	5.90	293		Pn	04 27 46.9	+0.4
CICN	Ciocanesti	5.96	49	⇑P	Pn	04 27 48.9	+1.9
KOVH	Kovagotottos	5.96	342	⇑P	Pn	04 27 46.6	-0.4
MORH	Mrgy, Hungar	5.96	346	⇓P	Pn	04 27 47.6	+0.5
MORH	Mrgy, Hungar	5.96	346	Pn	Pn	04 27 47.6	+0.5
	comp=Z,1.8nmcomp=Z,3µmcomp=Z,145nm,1.1s						
IDI	Anoyia	6.10	146		Pn	04 27 51.7	+2.5
IDI	Anoyia	6.10	146	Pn	Pn	04 27 50.0	+0.9
	comp=Z,25nm,0.6s,baz=313,slow=16,SNR=24						
IDI	Anoyia	6.10	146	⇑P	Pn	04 27 50.8	+1.7
GUMA	Gualdo di Mace	6.14	298		Pn	04 27 49.0	-0.6
NRCA	Norcia	6.21	295		Pn	04 27 50.4	-0.2
FDMO	Fiordimonte	6.30	297		Pn	04 27 51.3	-0.4
MLR	Muntele Rosu	6.30	35		Pn	04 27 54.0	+2.0
MLR	Muntele Rosu	6.30	35	Pn	Pn	04 27 53.1	+1.2
	comp=Z,10.0nm,0.3s,baz=284,slow=5.9,SNR=80						
MLR				Sn	Sn	04 29 04.1	+0.1
	comp=Z,7.9nm,0.3s,baz=195,slow=13,SNR=3.5						
MLR				LR	LR	04 30 54.3	
	comp=Z,3µm,18.5s,baz=198,slow=44						
	comp=Z,37nm,0.5s						
MLR	Muntele Rosu	6.30	35	⇑P	Pn	04 27 55.0	+3.1
MLR	Muntele Rosu	6.30	35	P	Pn	04 27 55.0	+3.1
MLR	Muntele Rosu	6.30	35	Pn	Pn	04 27 55.1	+3.1
	comp=Z,2.2nmcomp=Z,2µmcomp=Z,120nm,0.7s						
ISR	Istrita	6.30	40	⇑P	Pn	04 27 54.5	+2.6
ISR	Istrita	6.30	40	P	Pn	04 27 54.5	+2.6
ISR	Istrita	6.30	40	Pn	Pn	04 27 54.3	+2.4
	comp=Z,4.8nmcomp=Z,4µmcomp=Z,294nm,1.0s						
KLYT	Kilyos	6.32	80	⇓P	Pn	04 27 54.5	+2.5
KLYT	Kilyos	6.32	80	Pn	Pn	04 27 54.9	+2.8
	comp=Z,2.2nmcomp=Z,3µmcomp=Z,272nm,1.2s						
MANT	Manisa	6.34	106		Pn	04 27 54.0	+1.4
PSN	Preselentsi	6.34	57	P	Pn	04 27 56.5	+4.2
ICOR	Ion Corvin	6.37	53	⇓P	Pn	04 27 55.2	+2.6
AMRR	Amara	6.38	47	⇓P	Pn	04 27 54.5	+1.6
AMRR	Amara	6.38	47	P	Pn	04 27 54.5	+1.6
ZAG	Zagreb	6.41	329	P	Pn	04 27 53.3	+0.1
ZAG				pmax	pmax		
	comp=Z,587nm,0.7s						
NEHR	Nehoiu	6.41	37	⇑P	Pn	04 27 56.2	+2.9
MARR	Marisel-Cluj	6.45	15	⇑P	Pn	04 27 55.8	+1.9
DOPR	Dopca	6.46	30	⇑P	Pn	04 27 56.0	+2.0
BOJS	Bojanci	6.47	323	*e*Pn	Pn	04 27 53.2	-0.8
BOJS	Bojanci	6.47	323	*i* Pn	Pn	04 27 53.6	-0.4
BOJS				*i*		04 27 58.9	
BOJS				*i*		04 28 10.8	
BOJS				*i* Pg	Pg	04 28 20.5	-2.2
BOJS				*e*Sn	Sn	04 29 07.4	-0.4
BOJS				*e*		04 29 28.5	
BOJS				*e*Sg	Sg	04 29 55.7	+9.3
BOJS				IAML		04 30 18.2	
	comp=Z,27µm,6.5s						
PTJ	Puntijarka	6.48	329	P	Pn	04 27 53.8	-0.5
DRGR		6.49	12	⇑P	Pn	04 27 55.4	+0.9
DRGR		6.49	12	P	Pn	04 27 55.3	+0.9
CLTB	Caltabellotta	6.54	246	⇑P	Pn	04 27 58.1	+2.9
YLV	Yalova	6.56	86	Pn	Pn	04 27 56.6	+1.2
	comp=Z,1.3nmcomp=Z,1µmcomp=Z,68nm,0.9s						
CRES	Cresnjevec Ost	6.62	326	⇑*i*Pn	Pn	04 27 55.7	-0.5
BOSR	Bodos	6.65	31	⇓P	Pn	04 27 59.0	+2.3
BEHE	Becsehely	6.68	336		Pn	04 27 57.5	+0.6
COVR	Voineasa-Covas	6.69	35	⇑P	Pn	04 27 59.4	+2.2
BISRR	Bisoca	6.70	39	⇓P	Pn	04 28 00.4	+3.1
BISRR	Bisoca	6.70	39	Pn	Pn	04 28 00.2	+2.9
	comp=Z,7.1nmcomp=Z,502nm,0.8s						
OZUR		6.72	31	⇓P	Pn	04 27 59.6	+2.0
WDD	Wied Dalam	6.74	229		Pn	04 27 56.9	-0.9
TLBR	Topalu	6.75	50	⇓P	Pn	04 28 01.1	+3.1
SILT	Sile	6.77	81	⇑P	Pn	04 27 59.8	+1.6
HARR	Harsova	6.77	49	⇑P	Pn	04 28 00.0	+1.8
HARR	Harsova	6.77	49	P	Pn	04 28 00.0	+1.8
TURR	Turia	6.78	33	⇑P	Pn	04 28 01.1	+2.7
PLOR	Plostina	6.90	37	⇓P	Pn	04 28 02.9	+2.8
PLOR	Plostina	6.90	37	P	Pn	04 28 02.8	+2.8
TIRR	Tirgusor	6.92	52		Pn	04 28 01.8	+1.5
TIRR	Tirgusor	6.92	52	⇑P	Pn	04 28 02.7	+2.4
TIRR	Tirgusor	6.92	52	P	Pn	04 28 02.7	+2.4
TIRR	Tirgusor	6.92	52	Pn	Pn	04 28 03.6	+3.3
	comp=Z,2.9nmcomp=Z,2µmcomp=Z,96nm,1.2s						
TIRR	Tirgusor	6.92	52	⇑P	Pn	04 28 02.2	+1.9
MGAB	Montegabbione	6.93	294	⇑P	Pn	04 27 59.2	-1.2
VRI	Vrincioaia	6.94	37	⇑P	Pn	04 28 02.7	+2.0
VRI	Vrincioaia	6.94	37	P	Pn	04 28 02.6	+2.0
VRI	Vrincioaia	6.94	37	Pn	Pn	04 28 02.3	+1.7
	comp=Z,1.7nmcomp=Z,2µmcomp=Z,273nm,0.7s						
CEY	Cerknica	7.03	321	⇑*i*Pn	Pn	04 28 00.6	-1.2
KARP	Karpathos	7.03	132		Pn	04 28 04.4	+2.5
KARP	Karpathos	7.03	132	⇑P	Pn	04 28 04.5	+2.6
SKDS	Skadanscina	7.10	318	*i* Pn	Pn	04 28 01.4	-1.4
MPLH	Magyarpolny	7.11	342	Pn	Pn	04 28 04.1	+1.3
	comp=Z,5.1nmcomp=Z,7µmcomp=Z,735nm,1.0s						
BUD	Budapest	7.14	350	P	Pn	04 28 05.5	+2.3
BUD				pmax	pmax		
	comp=Z,150nm,0.7s						
TPGR	Topolog	7.15	50	⇑P	Pn	04 28 05.6	+2.1
ONER	Baraj Valea Uz	7.16	33	⇑P	Pn	04 28 06.5	+2.9
ARG	Arkhangelos	7.17	124		Pn	04 28 07.0	+3.4
ARG	Arkhangelos	7.17	124	P	Pn	04 28 07.0	+3.4
CFR	Carcaliu	7.18	47	⇑P	Pn	04 28 05.5	+1.6
CFR	Carcaliu	7.18	47	P	Pn	04 28 05.4	+1.6
LJU	Ljubljana	7.21	323	P	Pn	04 28 03.4	-0.8
LJU				pmax	pmax		
	comp=Z,2µm,0.8s						
LJU	Ljubljana	7.21	323	*i* Pn	Pn	04 28 03.5	-0.8
LJU				*i* Sn	Sn	04 29 27.9	+1.9
LJU				IAML		04 30 33.8	
	comp=Z,10µm,3.1s						
TESR	Tescani	7.41	33	⇑P	Pn	04 28 09.0	+2.0
TESR	Tescani	7.41	33	Pn	Pn	04 28 09.2	+2.2
	comp=Z,0.7nmcomp=Z,1µmcomp=Z,46nm,0.6s						
SCTR	Scanteiesti	7.43	43	⇓P	Pn	04 28 10.4	+3.2
BORA	Eskisehir	7.44	91		Pn	04 28 08.5	+1.0
SOKA	Soboth	7.48	328	*e*Pn	Pn	04 28 07.4	-0.7
	comp=Z,99nm,0.6s,SNR=78						
SOKA				*e*Sn	Sn	04 29 31.8	-1.2
	comp=Z,126nm,1.1s						
PSZ	Piszkesteto	7.49	355		Pn	04 28 08.4	+0.3
PSZ	Piszkesteto	7.49	355	⇑P	Pn	04 28 08.5	+0.4
PSZ	Piszkesteto	7.49	355	P	Pn	04 28 08.5	+0.4
PSZ	Piszkesteto	7.49	355	⇑P	Pn	04 28 08.3	+0.2
VARL	Varlezi	7.51	41	⇓P	Pn	04 28 10.8	+2.5
OBKA	Obir	7.55	325	⇑*i*Pn	Pn	04 28 07.6	-1.4
OBKA	Obir	7.55	325	*e*Pn	Pn	04 28 08.3	-0.7
	comp=Z,132nm,0.8s,SNR=52						
OBKA				*e*Sn	Sn	04 29 35.4	+0.7
	comp=Z,302nm,0.9s						
SRO	Srobarova	7.56	347	*e*P	Pn	04 28 13.0	+3.9
SRO				*e*		04 29 37.7	
SRO	Srobarova	7.56	347	*e*PN	Pn	04 28 13.0	+3.9
SRO				*e*SN	Sn	04 29 37.7	+2.9
TLCR		7.57	49	⇓P	Pn	04 28 11.8	+2.6
TLCR		7.57	49	P	Pn	04 28 11.7	+2.6
VLDR	Vladesti	7.59	42	⇑P	Pn	04 28 12.2	+2.8
ARSA	Arzberg	7.78	333	*i* Pn	Pn	04 28 12.1	+0.1
	comp=Z,38nm,0.4s,SNR=51						
ARSA				*e*Sn	Sn	04 29 38.9	-1.2
	comp=Z,57nm,0.9s						
ARSA	Arzberg	7.78	333	⇑P	Pn	04 28 11.8	-0.3
SOP	Sopron	7.83	339	P	Pn	04 28 13.9	+1.1
SOP				pmax	pmax		
	comp=Z,124nm,1.3s						
BURAR	Bucovina Array	7.84	23		Pn	04 28 14.6	+1.6
BURAR	Bucovina Array	7.84	23	⇓P	Pn	04 28 14.9	+1.9
BURAR	Bucovina Array	7.84	23	P	Pn	04 28 14.8	+1.9
BUR08	Bucovina Ar. S	7.86	22		Pn	04 28 14.9	+1.6
BERU	Beregovo	7.89	9	Pn	Pn	04 28 16.2	+2.6
RONA	Rosalia, Austr	7.92	338	*i* Pn	Pn	04 28 14.6	+0.5
	comp=Z,8.6nm,0.4s,SNR=36						
RONA				*e*Sn	Sn	04 29 44.4	+0.6
	comp=Z,33nm,0.6s						
ISP	Isparta	8.02	106	*i* P	Pn	04 28 17.2	+1.7
ISP	Isparta	8.02	106	⇑P	Pn	04 28 18.4	+2.9
PTCC	Patocco-Chiusa	8.03	320	⇑P	Pn	04 28 14.2	-1.3
KECS	Kecovo	8.03	359	*e*P	Pn	04 28 16.7	+1.2
KECS				*e*		04 29 47.5	
KECS	Kecovo	8.03	359	*e*PN	Pn	04 28 16.7	+1.2
KECS				*e*SN	Sn	04 29 47.5	+1.2
MYKA	Terra Mystica	8.05	322	*i* Pn	Pn	04 28 14.5	-1.4
	comp=Z,32nm,0.5s,SNR=21						
MYKA				*i* Sn	Sn	04 29 45.5	-1.5
	comp=Z,57nm,0.6s						
MUKU	Mukachevo	8.11	9	Pn	Pn	04 28 19.5	+2.9
HOLU	Holmets	8.15	8	Pn	Pn	04 28 18.4	+1.3
VYHS	Vyhne	8.15	351	*e*P	Pn	04 28 19.8	+2.6
VYHS				*e*		04 29 48.3	
VYHS	Vyhne	8.15	351	*e*PN	Pn	04 28 19.8	+2.6
VYHS				*e*SN	Sn	04 29 48.3	-1.1
CONA	Conrad Observa	8.26	336	*i* Pn	Pn	04 28 19.2	+0.4
	comp=Z,26nm,0.7s,SNR=25						
CONA				*i* Sn	Sn	04 29 54.2	+2.1
	comp=Z,58nm,0.8s						
MODS	Modra-Piesok	8.30	344	*e*P	Pn	04 28 21.2	+2.0
MODS				MLR	MLR		
	comp=Z,59µm,8.8s						
MODS	Modra-Piesok	8.30	344	*e*PN	Pn	04 28 21.2	+2.0
MODS				*e*LG	Lg	04 32 24.6	
KBA	Koelnbreinsper	8.52	323	P	Pn	04 28 22.2	-0.2
KBA				pmax	pmax		
	comp=Z,177nm,0.7s						
KBA	Koelnbreinsper	8.52	323	*e*Pn	Pn	04 28 21.8	-0.7
	comp=Z,91nm,0.8s,SNR=85						
KBA				*e*Sn	Sn	04 29 56.1	-2.6
	comp=Z,43nm,0.6s						
KBA	Koelnbreinsper	8.52	323	⇑P	Pn	04 28 21.7	-0.7
VLC	Villacollemand	8.54	299	⇑P	Pn	04 28 22.9	+0.4
KOLS	Kolonicke sedl	8.54	7	*e*P	Pn	04 28 24.1	+1.5
KOLS	Kolonicke sedl	8.54	7	*e*PN	Pn	04 28 24.1	+1.5
ABTA	Abfaltersbach	8.68	319	*i* Pn	Pn	04 28 23.3	-1.2
	comp=Z,199nm,0.7s,SNR=145						
ABTA				*i* Sn	Sn	04 30 01.6	-0.9
	comp=Z,261nm,0.9s						
JAVC	Velka Javorina	8.69	346	*e*PN	Pn	04 28 26.7	+2.1
MILM	Milestii Mici	8.70	39	*e*P	Pn	04 28 27.0	+2.4
	comp=Z,60nm,1.1s						
MILM				*e*S	Sn	04 30 07.0	+4.3
MILM				*e*Li		04 30 47.0	
MILM				*e*Lq	LQ	04 31 10.0	
	comp=Z,6µm,11.4s						
MILM				LRM	MLR	04 33 04.0	
	comp=Z,4µm,9.0s						
MILM	Milestii Mici	8.70	39	⇑P	Pn	04 28 27.7	+3.1
MILM	Milestii Mici	8.70	39	P	Pn	04 28 27.7	+3.1
MOA	Molln	8.74	330	*e*Pn	Pn	04 28 25.6	+0.3
	comp=Z,24nm,0.4s,SNR=39						
MOA				*e*Sn	Sn	04 30 05.6	+1.7
	comp=Z,60nm,0.6s						
LANS	Liptovska Anna	8.74	354	*e*P	Pn	04 28 29.5	+4.1
LANS				*e*		04 30 09.7	
LANS	Liptovska Anna	8.74	354	*e*PN	Pn	04 28 29.4	+4.1
LANS				*e*SN	Sn	04 30 09.7	+5.8
KIS	Kishinev	8.76	39	*e*P	Pn	04 28 28.0	+2.6
KIS				*e*S	Sn	04 30 09.0	+4.9
KIS				*e*Li		04 30 42.0	
KIS				*e*Lq	LQ	04 32 04.0	
	comp=Z,3µm,11.3s						
KIS				LRM	MLR	04 33 00.0	
	comp=Z,2µm,9.3s						
KIS	Kishinev	8.76	39	*e*P	Pn	04 28 28.0	+2.6
KIS				*e*S	Sn	04 30 09.0	+4.9
KIS				MLR	MLR		
	comp=Z,2µm,9.3s						
VSL	Villasalto	8.80	267	⇑P	Pn	04 28 25.3	-0.8
BIOA	Bad Ischl, Aus	8.87	327	*e*Pn	Pn	04 28 26.9	-0.1
	comp=Z,37nm,0.4s,SNR=55						
BIOA				*e*Sn	Sn	04 30 07.9	+1.0
	comp=Z,138nm,0.9s						
STHS	Stebnicka Huta	8.97	2	*e*P	Pn	04 28 32.2	+3.8
STHS				MLR	MLR		
	comp=Z,200nm,2.0s						
STHS	Stebnicka Huta	8.97	2	*e*PN	Pn	04 28 32.2	+3.8
STHS				*e*LG	Lg	04 32 06.6	
NIE	Niedzica	8.97	358	*e*P	Pn	04 28 32.9	+4.5
NIE				*e*S	Sg	04 30 59.8	-6.7
NIE	Niedzica	8.97	358	P	Pn	04 28 31.2	+2.8
NIE				pmax	pmax		
	comp=Z,48nm,1.7s						
NIE	Niedzica	8.97	358	Pn	Pn	04 28 30.9	+2.5
	comp=Z,661nmcomp=Z,48nm,1.7s						
PGF	Pioggiola	9.08	287	P	Pn	04 28 30.4	+0.4
PGF				pmax	pmax		
	comp=Z,91nm,1.1s						
PGF	Pioggiola	9.08	287	⇑P	Pn	04 28 29.9	-0.1
LESA	Schwarzleotal	9.08	323	*i* Pn	Pn	04 28 29.3	-0.8
	comp=Z,52nm,0.5s,SNR=74						
LESA				*e*Sn	Sn	04 30 12.5	+0.2
	comp=Z,144nm,0.7s						
KRUC	Moravsky	9.15	342	*e*PN	Pn	04 28 32.6	+1.8
KRUC	Moravsky	9.15	342	P	Pn	04 28 32.3	+1.5
KRUC				pmax	pmax		
	comp=Z,21nm,0.9s						
MAUC	Maruska	9.15	348	*e*PN	Pn	04 28 33.4	+2.5
ANTO	Ankara	9.23	90		Pn	04 28 36.8	+4.8
ANTO	Ankara	9.23	90	P	Pn	04 28 36.8	+4.8
RJOB	Jochberg	9.26	324	*e*P	Pn	04 28 32.9	+0.4
	baz=140						
KWP	Kalwaria Pacla	9.28	8	*e*P	Pn	04 28 41.0	+8.4
KWP				*e*S		04 31 36.0	
VRAC	Vranov	9.33	343	Pn	Pn	04 28 34.1	+0.7
	comp=Z,1.6nm,0.3s,baz=172,slow=13,SNR=26						
	comp=Z,16nm,0.8s						
VRAC	Vranov	9.33	343	*e*PN	Pn	04 28 34.2	+0.8
VRAC	Vranov	9.33	343	⇑P	Pn	04 28 34.7	+1.3
VRAC	Vranov	9.33	343	P	Pn	04 28 34.7	+1.3
SORM	Soroca	9.40	33	⇓P	Pn	04 28 36.0	+1.7
SORM	Soroca	9.40	33	P	Pn	04 28 36.0	+1.7
SORM	Soroca	9.40	33	Pn	Pn	04 28 35.9	+1.6
	comp=Z,554nmcomp=Z,22nm,1.0s						
WTTA	Wattenberg	9.47	319	P	Pn	04 28 35.6	+0.2
WTTA				pmax	pmax		
	comp=Z,280nm,0.8s						
WTTA	Wattenberg	9.47	319	*e*Pn	Pn	04 28 34.5	-1.0
	comp=Z,200nm,1.0s,SNR=73						
WTTA				*e*Sn	Sn	04 30 19.8	-2.2
	comp=Z,271nm,1.1s						
CKRC	Cesky Krumlov	9.54	333	*e*PN	Pn	04 28 36.8	+0.6
CKRC				AMS	AMS	04 32 50.0	
	comp=Z,13µm,12.0s						
CKRC	Cesky Krumlov	9.54	333	*e*P	Pn	04 28 36.8	+0.6
CKRC				MLR	MLR		
	comp=Z,13µm,12.0s						
WATA	Walderalm	9.55	319	*i* Pn	Pn	04 28 36.3	-0.2
	comp=Z,282nm,0.6s,SNR=153						
WATA				*e*Sn	Sn	04 30 22.7	-1.2
	comp=Z,293nm,1.3s						
OKC	Ostrava-Krasne	9.56	350	*e*PN	Pn	04 28 39.5	+3.0
OKC	Ostrava-Krasne	9.56	350	*e*P	Pn	04 28 39.5	+3.0
MORC	Moravsky Berou	9.60	347	*e*PN	Pn	04 28 38.8	+1.8
MORC				*e*SN	Sn	04 30 24.7	-0.1
MORC	Moravsky Berou	9.60	347	⇑P	Pn	04 28 38.5	+1.5
MORC	Moravsky Berou	9.60	347	P	Pn	04 28 38.5	+1.5
MORC	Moravsky Berou	9.60	347	⇑P	Pn	04 28 39.5	+2.5
TREC	Trest	9.60	339	*e*PN	Pn	04 28 38.6	+1.6
TREC	Trest	9.60	339	*e*P	Pn	04 28 38.6	+1.6
SQTA	Sankt Quirin	9.66	318	*i* Pn	Pn	04 28 37.8	-0.2
	comp=Z,127nm,0.6s,SNR=119						
SQTA				*e*Sn	Sn	04 30 26.0	-0.6
	comp=Z,155nm,0.6s						
STEB	Steborice	9.71	348	*e*PN	Pn	04 28 40.6	+2.1
GEC2	GERESS Array S	9.78	331	P	Pn	04 28 40.0	+0.4
GEC2				pmax	pmax		
	comp=Z,50nm,0.9s						
GEC2	GERESS Array S	9.78	331	*e*P	Pn	04 28 41.1	+1.6
	baz=140						
GERES	GERESS Array B	9.78	331		Pn	04 28 39.5	-0.1
GERES	GERESS Array B	9.78	331	Pn	Pn	04 28 39.2	-0.3
	comp=Z,0.4nm,0.3s,baz=155,slow=14,SNR=65						
GERES				Sn	Sn	04 30 29.1	-0.3
	comp=Z,0.2nm,0.3s,baz=155,slow=24,SNR=1.7						
GERES				LR	LR	04 33 28.6	
	comp=Z,4µm,18.4s,baz=142,slow=44						
	comp=Z,16nm,0.6s						
GERES	GERESS Array B	9.78	331	P	Pn	04 28 39.5	-0.1
FETA	Feichten	9.79	315	*i* Pn	Pn	04 28 39.2	-0.5
	comp=Z,135nm,0.7s,SNR=131						
FETA				*e*Sn	Sn	04 30 29.2	-0.4
	comp=Z,96nm,0.9s						
OJC	Ojcow	9.79	356	*e*P	Pn	04 28 43.7	+4.1
OJC				*e*S		04 31 51.3	
OJC	Ojcow	9.79	356	P	Pn	04 28 42.4	+2.8
OJC				pmax	pmax		
	comp=Z,36nm,0.8s						
MOTA	Moosalm	9.80	318	*i* Pn	Pn	04 28 39.6	-0.3
	comp=Z,470nm,0.8s,SNR=217						
MOTA				*e*Sn	Sn	04 30 30.0	+0.1
	comp=Z,235nm,0.9s						
BR105	Keskin Array S	9.88	90	Pn	Pn	04 28 41.8	+0.8
	comp=Z,124nmcomp=Z,16nm,0.8s						
BR131	Keskin Array S	9.89	90	*i* P	Pn	04 28 42.7	+1.5
BRTR	Keskin Array B	9.89	90		Pn	04 28 42.4	+1.2
BRTR	Keskin Array B	9.89	90	Pn	Pn	04 28 41.9	+0.7
	comp=Z,0.5nm,0.3s,baz=269,slow=12,SNR=16						
BRTR				Sn	Sn	04 30 30.1	-2.3
	comp=Z,0.5nm,0.3s,baz=282,slow=22,SNR=5.4						
	comp=Z,2.9nm,0.7s						
BRTR	Keskin Array B	9.89	90	*i* P	Pn	04 28 43.2	+2.0
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
BR104	Keskin Array S	9.90	90	Pn	Pn	04 28 42.0	+0.8
KRLC	Kraliky	10.02	345	*e*PN	Pn	04 28 44.7	+1.9
KRLC				*e*SN	Sn	04 30 39.8	+4.6
KRLC				AMS	AMS	04 33 20.0	
	comp=Z,13µm,11.7s						
KRLC	Kraliky	10.02	345	*e*P	Pn	04 28 44.7	+1.9
KRLC				*e*		04 30 39.8	
KRLC				MLR	MLR		
	comp=Z,13µm,11.7s						
KHC	Kasperske Hory	10.06	332	*e*PN	Pn	04 28 45.1	+1.7
KHC				*e*SN	Sn	04 30 39.4	+3.1
KHC				AMS	AMS	04 33 10.0	
	comp=Z,16µm,11.6s						
KHC	Kasperske Hory	10.06	332	*ce*P	Pn	04 28 44.1	+0.7
KHC				pmax	pmax		
	comp=Z,48nm,0.7s						
KHC	Kasperske Hory	10.06	332	Pn	Pn	04 28 44.7	+1.3
	comp=Z,701nmcomp=Z,61nm,0.9s						
KHC	Kasperske Hory	10.06	332	⇑P	Pn	04 28 43.3	-0.1
RETA	Reutte	10.06	318	*i* Pn	Pn	04 28 42.9	-0.6
	comp=Z,25nm,0.4s,SNR=16						
RETA				*e*Sn	Sn	04 30 35.6	-0.8
	comp=Z,110nm,0.7s						
BZK	Bozkurt	10.09	77		Pn	04 28 45.3	+1.6
DAVOX	Davos/Dischmat	10.11	312	Pn	Pn	04 28 44.3	+0.1
	comp=Z,8.2nm,0.3s,baz=126,slow=13,SNR=110						
DAVOX				Sn	Sn	04 30 35.8	-1.9
	comp=Z,5.5nm,0.3s,baz=317,slow=10,SNR=4.8						
	comp=Z,38nm,0.4s						
ZVC	Zvikov	10.12	335	*e*PN	Pn	04 28 45.1	+1.0
KEST	Kesra	10.16	246	Pn	Pn	04 28 47.0	+2.2
	comp=Z,0.9nm,0.3s,baz=338,slow=2.7,SNR=14						
KEST				LR	LR	04 32 48.2	
	comp=Z,1µm,20.0s,baz=49,slow=38						
	comp=Z,34nm,0.9s						
KIRS	Kirsehir-Merke	10.21	93	⇓P	Pn	04 28 47.6	+2.1
TUE	Stuetta	10.25	310		Pn	04 28 45.5	-0.6
TUE	Stuetta	10.25	310	Pn	Pn	04 28 46.0	-0.1
	comp=Z,7µmcomp=Z,855nm,0.7s						
TUE	Stuetta	10.25	310	⇑P	Pn	04 28 45.5	-0.6
FUR	Furstenfeldbru	10.27	322	P	Pn	04 28 45.6	-0.7
FUR				pmax	pmax		
	comp=Z,184nm,0.8s						
WET	Wettzell	10.33	330	P	Pn	04 28 46.5	-0.6
WET				pmax	pmax		
	comp=Z,58nm,1.0s						
WET	Wettzell	10.33	330	*e*P	Pn	04 28 46.9	-0.1
	baz=140						
GOPC	GO Pecny, Ondr	10.35	338	*e*PN	Pn	04 28 48.7	+1.4
GOPC				AMS	AMS	04 33 10.0	
	comp=Z,20µm,9.6s						
GOPC	GO Pecny, Ondr	10.35	338	*e*P	Pn	04 28 48.7	+1.4
GOPC				MLR	MLR		
	comp=Z,20µm,9.6s						
DPC	Dobruska-Polom	10.37	344	*e*PN	Pn	04 28 49.0	+1.3
DPC				AMS	AMS	04 33 20.0	
	comp=Z,21µm,9.6s						
DPC	Dobruska-Polom	10.37	344	*e*P	Pn	04 28 49.0	+1.3
DPC				MLR	MLR		
	comp=Z,21µm,9.6s						
DPC	Dobruska-Polom	10.37	344	Pn	Pn	04 28 48.9	+1.3
	comp=Z,18nm,0.8s						
DAVA	Damuels	10.41	315	*e*Pn	Pn	04 28 49.0	+0.7
	comp=Z,188nm,0.7s,SNR=90						
DAVA				*e*Sn	Sn	04 30 42.5	-2.4
	comp=Z,115nm,0.7s						
DAVA	Damuels	10.41	315	⇑P	Pn	04 28 47.8	-0.4
PRU	Pruhonice	10.49	337	*e*PN	Pn	04 28 49.8	+0.6
PRU				AMS	AMS	04 33 10.0	
	comp=Z,20µm,9.5s						
PRU	Pruhonice	10.49	337	*e*P	Pn	04 28 49.8	+0.6
PRU				MLR	MLR		
	comp=Z,20µm,9.5s						
MONC	Moncucco Torin	10.51	300	⇑P	Pn	04 28 49.4	-0.1
UBR	Ueberruh	10.53	317	*e*P	Pn	04 28 48.8	-1.1
	baz=140						
UPC	Upice	10.59	343	*e*PN	Pn	04 28 52.1	+1.5
UPC				AMS	AMS	04 33 20.0	
	comp=Z,22µm,9.5s						
UPC	Upice	10.59	343	*e*P	Pn	04 28 52.1	+1.5
UPC				MLR	MLR		
	comp=Z,22µm,9.5s						
OSTC	Ostas	10.59	344	*e*PN	Pn	04 28 52.8	+2.2
OSTC				AMS	AMS	04 33 30.0	
	comp=Z,21µm,9.4s						
OSTC	Ostas	10.59	344	*e*P	Pn	04 28 52.8	+2.2
OSTC				MLR	MLR		
	comp=Z,21µm,9.4s						
PRA	Prague	10.60	337	*e*PN	Pn	04 28 58.9	+8.3

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PRA                                 AMS     AMS     04 33 20.0
       comp=Z,20µm,9.4s
PRA    Prague             10.60 337 eP      Pn      04 28 58.9 +8.3
PRA                                 MLR     MLR
       comp=Z,20µm,9.4s
CHVC   Chvalec            10.66 344 ePN     Pn      04 28 53.6 +2.1
CHVC                                AMS     AMS     04 33 30.0
       comp=Z,19µm,9.9s
CHVC   Chvalec            10.66 344 eP      Pn      04 28 53.6 +2.1
CHVC                                MLR     MLR
       comp=Z,19µm,9.9s
LUBAR  Lubar, Ukraine     10.67  25 Pn      Pn      04 28 54.4 +2.8
SIM    Simferopol'        10.80  61 eP      Pn      04 28 53.6 +0.2
SIM                                 eS      Sn      04 30 53.0 -1.3
SIM                                 pmax    pmax
       comp=Z,27nm,0.7s
SIM                                 MLR     MLR
       comp=Z,900nm,16.0s
ISO    Isola              10.82 295 P       Pn      04 28 55.8 +2.0
ISO                                 pmax    pmax
       comp=Z,20nm,0.8s
KSP    Ksiaz              10.85 345 eP      Pn      04 28 48.5 -5.6
KSP                                 eS              04 32 17.8
KSP    Ksiaz              10.85 345 P       Pn      04 28 55.6 +1.5
KSP                                 pmax    pmax
       comp=Z,14nm,0.9s
KSP    Ksiaz              10.85 345 Pn      Pn      04 28 55.3 +1.2
       comp=Z,549nmcomp=Z,14nm,0.9s
KSP    Ksiaz              10.85 345 ⇑P      Pn      04 28 55.0 +1.0
PVCC   Panska Ves         10.97 339 ePN     Pn      04 28 56.1 +0.4
PVCC                                AMS     AMS     04 33 40.0
       comp=Z,17µm,9.3s
PVCC   Panska Ves         10.97 339 eP      Pn      04 28 56.1 +0.4
PVCC                                MLR     MLR
       comp=Z,17µm,9.3s
ROTZ   Rotzenmuhle        11.10 330 eP      Pn      04 28 57.3 -0.2
       baz=140
CMAH   Djebel Manchou     11.13 254 P       Pn      04 29 04.7 +6.6
MANZ   Manzenberg         11.31 330 eP      Pn      04 29 00.3 -0.2
       baz=140
BNI    Bardonecchia       11.33 299         Pn      04 28 59.0 -1.8
BNI    Bardonecchia       11.33 299 P       Pn      04 28 59.0 -1.8
BNI    Bardonecchia       11.33 299 ⇑P      Pn      04 29 00.2 -0.7
RNPP5  Staryi Chortor     11.35  17 Pn      Pn      04 29 03.7 +2.8
CSS    Mathiatis          11.36 115         Pn      04 29 04.4 +3.2
CSS    Mathiatis          11.36 115 Pn      Pn      04 29 04.7 +3.6
       comp=Z,1µmcomp=Z,55nm,0.9s
HSKC   Hora Svate Kat     11.37 336 ePN     Pn      04 29 02.7 +1.4
HSKC                                AMS     AMS     04 33 50.0
       comp=Z,17µm,9.6s
NKC    Novy Kostel        11.39 332 ePN     Pn      04 29 02.9 +1.4
NKC                                 AMS     AMS     04 34 00.0
       comp=Z,15µm,9.6s
NKC    Novy Kostel        11.39 332 eP      Pn      04 29 02.9 +1.4
NKC                                 MLR     MLR
       comp=Z,15µm,9.6s
GRA1   Grafenberg Arr     11.43 327         Pn      04 29 00.1 -2.0
GRF    Grafenberg Arr     11.43 327 P       Pn      04 29 00.1 -2.0
GRF    Grafenberg Arr     11.43 327 eP      Pn      04 29 00.8 -1.3
       comp=Z,27nm,0.8s,baz=140
GRF                                 eL      L       04 34 04.3
       comp=Z,6µm,20.6s
GRFO   Grafenberg         11.43 327         Pn      04 29 00.8 -1.2
GRFO   Grafenberg         11.43 327 P       Pn      04 29 00.9 -1.2
SLE    Schleitheim        11.45 314 P       Pn      04 29 01.3 -1.0
SLE                                 pmax    pmax
       comp=Z,96nm,0.9s
BRG    Berggiesshubel     11.45 338 P       Pn      04 29 03.1 +0.7
BRG                                 pmax    pmax
       comp=Z,22nm,1.1s
BRG    Berggiesshubel     11.45 338 eP      Pn      04 29 02.9 +0.5
       baz=140
BRG    Berggiesshubel     11.45 338 ⇓iP     Pn      04 29 03.0 +0.7
BRG                                 Amp             04 29 03.8
       comp=Z,7.6nm,0.9s
BRG    Berggiesshubel     11.45 338 P       Pn      04 29 11.1 +8.7
BRG                                 Amp             04 29 12.0
       comp=Z,19nm,0.9s
BRG    Berggiesshubel     11.45 338 S       Sn      04 31 09.0 -1.3
CAEH   'Ain El Ouahch     11.49 256 P       Pn      04 29 05.3 +2.3
MI28   Mi28,Pidlybu       11.53  22 Pn      Pn      04 29 07.2 +3.8
TANN   Tannenbergstha     11.53 332 eP      Pn      04 29 04.9 +1.4
       baz=140
STU    Stuttgart          11.70 319 P       Pn      04 29 04.4 -1.4
STU                                 pmax    pmax
       comp=Z,285nm,0.9s
STU    Stuttgart          11.70 319 ⇑P      Pn      04 29 04.0 -1.7
STU    Stuttgart          11.70 319 eP      Pn      04 29 03.7 -2.1
       baz=140
AK06   Malin Array Si     11.72  27 Pn      Pn      04 29 09.1 +3.1
AK14   Malin Array Si     11.72  27 Pn      Pn      04 29 09.0 +2.9
BNN    Bunyan             11.73  93         Pn      04 29 11.8 +5.4
R9F13  Warsaw-Wawer       11.77   1 eP      Pn      04 29 06.0 -0.7
R9F13                               eS      Sn      04 31 09.2 -8.8
KIEV   Kiev               11.81  27         Pn      04 29 10.9 +3.6
KIEV   Kiev               11.81  27 P       Pn      04 29 10.9 +3.6
KIEV   Kiev               11.81  27 Pn      Pn      04 29 10.4 +3.1
       comp=Z,4µmcomp=Z,139nm,1.5s
AK22   Malin Array Si     11.82  27 Pn      Pn      04 29 09.8 +2.4
AKASG  Malin Array Be     11.82  27         Pn      04 29 10.5 +3.0
AKASG  Malin Array Be     11.82  27 Pn      Pn      04 29 09.3 +1.8
       comp=Z,0.7nm,0.3s,baz=210,slow=12,SNR=30
AKASG  Malin Array Be     11.82  27 i P     Pn      04 29 10.3 +2.9
AKASG                               pmax    pmax
       comp=Z,6.0nm,0.7s
AKBB   Malin Array Si     11.82  27         Pn      04 29 10.7 +3.3
AKBB   Malin Array Si     11.82  27 ceP     Pn      04 29 10.6 +3.2
AKBB   Malin Array Si     11.82  27 Pn      Pn      04 29 10.3 +2.9
AK21   Malin Array Si     11.83  26 Pn      Pn      04 29 10.2 +2.8
ORIF   Oris-en-Rattie     11.83 297 P       Pn      04 29 07.5 -0.1
ORIF                                pmax    pmax
       comp=Z,36nm,0.7s
ORIF   Oris-en-Rattie     11.83 297 ⇑P      Pn      04 29 07.0 -0.6
BFO    Black Forest       11.87 316         Pn      04 29 05.8 -2.3
BFO    Black Forest       11.87 316 P       Pn      04 29 05.6 -2.5
BFO                                 pmax    pmax
       comp=Z,182nm,0.8s
BFO    Black Forest       11.87 316 ⇑P      Pn      04 29 05.6 -2.5
BFO    Black Forest       11.87 316 eP      Pn      04 29 05.6 -2.5
       baz=140
MOX    Moxa               12.03 331 P       Pn      04 29 11.2 +0.9
MOX                                 pmax    pmax
       comp=Z,42nm,0.9s
MOX    Moxa               12.03 331 eP      Pn      04 29 10.9 +0.6
       comp=Z,16nm,0.9s,baz=140
MOX                                 eL      L       04 35 08.8
       comp=Z,4µm,19.3s
CLL    Collm              12.12 336         Pn      04 29 11.3 -0.2
CLL    Collm              12.12 336 P       Pn      04 29 11.3 -0.2
CLL    Collm              12.12 336 Pn      Pn      04 29 12.0 +0.6
       comp=Z,502nmcomp=Z,34nm,1.0s
CLL    Collm              12.12 336 eP      Pn      04 29 10.0 -1.4
       comp=Z,24nm,1.5s
CLL                                 ePP     PnPn    04 29 18.0 -1.2
CLL                                 esPPP           04 29 29.0
CLL                                 ex      x       04 30 05.0
CLL                                 ex      x       04 31 17.0
CLL                                 eSS     Sn      04 31 42.0  +15
CLL                                 AMS     AMS     04 33 00.0
       comp=N,6µm,18.9s
CLL                                 AMS     AMS     04 33 00.0
       comp=E,12µm,18.4s
CLL                                 AMS     AMS     04 34 00.0
DFRA   Djebel Bou Aff     12.30 256 P       Pn      04 29 16.6 +2.4
ECH    Echery             12.44 313 ⇑P      Pn      04 29 14.2 -1.7
MAHO   Mahon              12.64 273         Pn      04 29 19.0 +0.4
SSB    Saint Sauveur      12.84 297 P       Pn      04 29 22.0 +0.6
SSB                                 pmax    pmax
       comp=Z,18nm,0.9s
SSB    Saint Sauveur      12.84 297 ⇑P      Pn      04 29 19.6 -1.7
ANN    Anapa              13.01  65 eP      Pn      04 29 24.8 +1.1
ANN                                 pmax    pmax
       comp=Z,46nm,1.9s
TNS    Taunus Mts         13.04 323 eP      Pn      04 29 23.2 -0.9
       baz=140
SUW    Suwalki            13.66   6 eP      Pn      04 29 32.6 +0.2
SUW    Suwalki            13.66   6         Pn      04 29 34.2 +1.7
SUW    Suwalki            13.66   6 P       Pn      04 29 34.2 +1.7
KASTN  Kahler Asten       13.75 326 eP      Pn      04 29 34.2 +0.5
       baz=140
ETOS   Mallorca           13.76 273 ⇑P      Pn      04 29 34.1 +0.1
WLF    Walferdange        13.82 317 dP      Pn      04 29 34.0 -0.6
WLF    Walferdange        13.82 317 ⇑P      Pn      04 29 35.0 +0.4
WLF    Walferdange        13.82 317 eP      Pn      04 29 34.4 -0.2
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       baz=140
OFRI   `Ofer              13.84 120 P       Pn      04 29 38.7 +3.7
MMA0B  Mount Meron ar     13.88 118 P       Pn      04 29 39.5 +3.8
MMAI   Mount Meron Ar     13.88 118 Pn      Pn      04 29 35.3 -0.4
       comp=Z,2.4nm,0.3s,baz=304,slow=12,SNR=14
       comp=Z,3.8nm,0.5s
BLGI   Bet Lehem HaGe     13.90 119 P       Pn      04 29 39.3 +3.4
GEM    Giv'at Ha'Em       13.94 117 ⇑P      Pn      04 29 39.1 +2.7
GEM    Giv'at Ha'Em       13.94 117 P       Pn      04 29 39.9 +3.5
LOR    Lormes             13.96 305 P       Pn      04 29 34.1 -2.5
LOR                                 pmax    pmax
       comp=Z,35nm,0.7s
LOR    Lormes             13.96 305 ⇑P      Pn      04 29 33.5 -3.1
NATI   Neve Ativ          13.96 116 P       Pn      04 29 40.2 +3.5
SLTI   Sal'it             14.11 121 P       Pn      04 29 41.9 +3.1
MTLF   Montolieu          14.12 288 ⇑P      Pn      04 29 40.1 +1.3
KSHT   Keshet             14.17 117 P       Pn      04 29 43.2 +3.6
MMLI   Mount Malkishu     14.24 120 P       Pn      04 29 44.2 +3.6
BHOU   Houvegnez          14.31 319 dP      Pn      04 29 41.5 +0.1
BHOU                                dS      Sn      04 32 13.1 -7.0
SALP   Salfit             14.32 121 ⇑P      Pn      04 29 44.6 +3.0
BTNL   Ternell            14.39 320 dP      Pn      04 29 41.2 -1.4
HMDT   Nahal Hemdat       14.42 120 P       Pn      04 29 46.5 +3.5
SOC    Sochi              14.43  71 eP      Pn      04 29 43.4 +0.4
SOC                                 e               04 32 26.2
SOC                                 pmax    pmax
       comp=Z,5.0nm,0.5s
SOC                                 MLR     MLR
       comp=Z,699nm,15.0s
MEM    Membach            14.47 319 dP      Pn      04 29 43.3 -0.2
AMAZ   Amatzia            14.49 123 ⇑P      Pn      04 29 46.0 +2.0
AMAZ   Amatzia            14.49 123 P       Pn      04 29 47.3 +3.3
VSLR   Vesyoloye          14.64  72 i P     Pn      04 29 47.4 +1.4
BSTI   Sart Tilman        14.67 319 dP      Pn      04 29 46.9 +0.5
BCLA   Clavier            14.71 318 dP      Pn      04 29 45.5 -1.3
BCLA                                dS      Sn      04 32 29.1 -0.6
DSI    Dead Sea           14.76 122 P       Pn      04 29 50.7 +3.1
BGES   Gesves             14.80 317 dP      Pn      04 29 47.8 -0.3
       comp=Z,27nm,0.9s
BGES                                dS      Sn      04 32 24.3 -7.6
MNK    Minsk              14.84  16 i P     P       04 29 52.1 -2.4
       comp=E,26nm,0.8s
MNK                                 i P     P       04 29 52.1 -2.4
       comp=N,7.0nm,0.7s
MNK                                 i P     P       04 29 52.1 -2.4
       comp=Z,40nm,0.8s,baz=202
MNK                                 i PP    PnPn    04 30 00.0 +3.5
MNK                                 i PPP   PPP     04 30 09.2
MNK                                 i S     Sn      04 32 39.9 +7.0
MNK                                 i SS    SnSn    04 32 46.8 +1.3
MNK                                 i LQ    LQ      04 34 18.9
MNK                                 i LR    LR      04 35 07.9
MNK                                 i LRM   MLR     04 35 46.0
       comp=N,1µm,13.8s
MNK                                 i LRM   MLR     04 35 54.0
       comp=E,1µm,13.5s
MNK                                 i LRM   MLR     04 35 56.5
       comp=Z,2µm,13.8s
MNK    Minsk              14.84  16 i P     P       04 29 52.0 -2.4
MNK                                 i S     Sn      04 32 39.9 +7.0
MNK                                 pmax    pmax
       comp=Z,40nm,0.8s
MNK                                 pmax    pmax
       comp=N,7.0nm,0.7s
MNK                                 pmax    pmax
       comp=E,26nm,0.8s
MNK                                 MLR     MLR
       comp=N,1µm,14.0s
MNK                                 MLR     MLR
       comp=E,1µm,13.0s
MNK                                 MLR     MLR
       comp=Z,2µm,14.0s
DOU    Dourbes            14.89 316 dP      Pn      04 29 48.4 -0.9
DOU                                 dS      Sn      04 32 25.3 -8.8
BMRD   Maredsous          14.91 317 dP      Pn      04 29 49.5 -0.1
MSBI   Mazada             14.92 123 ⇑P      Pn      04 29 50.4 +0.7
MSBI   Mazada             14.92 123 P       Pn      04 29 52.2 +2.4
NACGM  Naroch             15.00  14 ⇑iP     P       04 29 56.1 -0.1
GHAJ   Ghor Haditha       15.06 123         Pn      04 29 54.2 +2.6
GHAJ   Ghor Haditha       15.06 123 P       P       04 29 54.5 -2.4
KOPT   Kop Dagi           15.08  85         P       04 29 57.1 -0.4
KOPT                                IAmb    IAmb    04 29 59.0
       comp=Z,26nm,0.3s
BSD    Bornholm Skovb     15.18 347 P       P       04 29 56.3 -1.9
BSD                                 pmax    pmax
       comp=Z,22nm,0.9s
BSD    Bornholm Skovb     15.18 347 eP      P       04 29 56.6 -1.5
BSD    Bornholm Skovb     15.18 347 i P     P       04 29 56.1 -2.1
BSD                                 IAmb    IAmb    04 29 58.3
       comp=Z,7.3nm,0.8s
PABE   Paberze            15.21   7 eP      P       04 29 56.5 -2.0
CLF    Chambon-Foret      15.25 306 IAmb    IAmb    04 29 59.5
       comp=Z,59nm,1.0s
CLF    Chambon-Foret      15.25 306 ⇑P      Pn      04 29 53.8 -0.3
ZFRI   Zfri               15.32 126 P       Pn      04 29 57.2 +2.1
KRMI   Paran Flat         15.35 128 P       P       04 29 58.2 -2.1
PRNI   Paran              15.36 127 P       P       04 29 58.2 -2.2
IDID   Didziasalis        15.39  13 eP      Pn      04 29 58.0 +2.1
ASF    Jabal al Asfar     15.39 117 Pn      Pn      04 29 57.3 +1.2
       comp=Z,0.4nm,0.3s,baz=334,slow=5.6,SNR=8.1
ASF                                 LR      LR      04 36 48.7
       comp=Z,2µm,21.0s,baz=352,slow=41
       comp=Z,1.6nm,0.5s
UCC    Uccle              15.42 318 dP      Pn      04 29 55.8 -0.4
ISAL   Salakas            15.54  11 eP      P       04 30 00.1 -2.0
HRFI   Mount Harif        15.60 127 P       P       04 30 01.4 -1.6
VSVD   Vaisvydziai        15.68   7 eP      P       04 30 02.9 -0.8
EIL    Elat               15.81 128 Pn      Pn      04 29 59.2 -2.3
       comp=Z,1.4nm,0.3s,baz=338,slow=7.4,SNR=11
EIL                                 Sn      Sn      04 32 47.7 -9.0
       comp=Z,1.3nm,0.3s,baz=132,slow=20,SNR=4.4
EIL                                 LR      LR      04 38 57.4
       comp=Z,870nm,18.6s,baz=305,slow=48
       comp=Z,6.5nm,0.6s
EIL    Elat               15.81 128 ⇑P      Pn      04 30 01.8 +0.3
EIL    Elat               15.81 128 P       P       04 30 04.7 -0.7
LUNU   Lund               15.94 345 i P     P       04 30 08.0 +1.4
BLEU   Blekinge           16.19 350 i P     Pn      04 30 07.4 +1.2
SHA1   Shidzhatmaz        16.57  71 i P     Pn      04 30 12.6 +1.2
KIV    Kislovodsk         16.60  71 eP      Pn      04 30 13.0 +1.3
KIV                                 eS      Sn      04 33 18.5 +2.5
KIV                                 pmax    pmax
       comp=Z,21nm,1.1s
KIV                                 MLR     MLR
       comp=Z,393nm,14.0s
VORD   Divnogorie         16.62  45 eP      Pn      04 30 11.2 -0.5
VORD                                pmax    pmax
       comp=Z,50nm,0.8s
VORD                                MLR     MLR
       comp=Z,640nm,7.0s
DEL    Delary             16.65 347 i P     P       04 30 15.0 +0.5
DEL                                 IAmb    IAmb    04 30 17.2
       comp=Z,15nm,0.8s
VSR    Storozhevoye       16.69  44 eP      Pn      04 30 11.9 -0.7
VSR                                 pmax    pmax
       comp=Z,110nm,1.9s
VSR                                 MLR     MLR
       comp=Z,2µm,11.0s
KBZ    Khabaz             16.74  71 Pn      Pn      04 30 12.3 -1.0
       comp=Z,0.3nm,0.3s,baz=282,slow=12,SNR=16
KBZ                                 PcP     PcP     04 35 02.0 +0.2
       comp=Z,5.0nm,0.9s,baz=138,slow=7.2,SNR=4.4
KBZ    Khabaz             16.74  71 i P     P       04 30 14.8 -0.8
KBZ                                 pmax    pmax
       comp=Z,18nm,1.2s
KBZ                                 MLR     MLR
       comp=Z,786nm,13.0s
VORR   Voronezh           16.96  42 eP      P       04 30 18.1 +0.1
VORR                                pmax    pmax
       comp=Z,50nm,0.4s
VORR                                MLR     MLR
       comp=Z,1µm,8.0s
GOF    Gofitskoye         16.98  67 ceP     P       04 30 17.9 -0.3
NCK    Nalchik            17.23  72 i P     P       04 30 21.0 -0.1
NCK                                 pmax    pmax
       comp=Z,204nm,3.0s
LPSR   Galich'ya Gora     17.36  40 eP      P       04 30 23.0 +0.6
LPSR                                eS      Sn      04 33 38.2 +4.0
LPSR                                pmax    pmax
       comp=Z,85nm,1.7s
FABU   Falkenberg         17.37 345 i P     P       04 30 22.2 -0.2
BORU   Boraas             17.95 346 i P     Pn      04 30 28.5 +0.2
OBN    Obninsk            18.04  30 P       Pn      04 30 26.4 -3.0
OBN                                 IAmb    IAmb    04 30 39.6
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       comp=Z,165nm,1.2s
OBN    Obninsk            18.04  30 P       P       04 30 30.3 +0.5
       comp=Z,7.7nm,0.3s,baz=333,slow=14,SNR=6.6
OBN                                 LR      LR      04 38 26.4
       comp=Z,998nm,20.7s,baz=163,slow=40
       comp=Z,26nm,0.5s
OBN    Obninsk            18.04  30 eP      Pn      04 30 29.2 -0.2
OBN                                 i S     Sn      04 33 39.2  -11
OBN                                 pmax    pmax
       comp=Z,72nm,1.5s
OBN                                 MLR     MLR
       comp=Z,995nm,8.0s
VRH    Novokhopyorsk      18.06  47 eP      Pn      04 30 29.9 +0.2
VRH                                 eS      S       04 33 58.9 +1.8
VRH                                 pmax    pmax
       comp=Z,154nm,2.0s
GNI    Garni              18.28  83 P       P       04 30 35.7 +2.8
GNI    Garni              18.28  83 P       P       04 30 33.0 +0.2
       comp=Z,1.0nm,0.3s,baz=336,slow=6.8,SNR=10.0
       comp=Z,13nm,0.6s
GNI    Garni              18.28  83 d iP    P       04 30 33.0 +0.2
GNI                                 pmax    pmax
       comp=Z,51nm,1.8s
GNI    Garni              18.28  83 P       P       04 30 36.5 +3.7
       comp=Z,4µmcomp=Z,56nm,2.4s
GNI    Garni              18.28  83 ⇑P      P       04 30 35.1 +2.3
MTSE   Matsula            18.38   5 eP      Pn      04 30 33.2 -0.3
JSA    Saint Aubin        18.41 306 ⇑P      Pn      04 30 34.0  0.0
VSU    Vasula             18.42  10 ceP     Pn      04 30 34.2 +0.1
VSU                                 pmax    pmax
       comp=Z,64nm,0.8s
VSU    Vasula             18.42  10 eP      P       04 30 34.0  0.0
VSU    Vasula             18.42  10 ⇑P      P       04 30 33.1 -0.9
ROSF   Rostrenen          18.85 303 ⇑P      Pn      04 30 39.5 +0.2
MOS    Moscow             18.91  30 eP      P       04 30 38.2 -1.2
MOS                                 eS      Sn      04 34 11.5 +0.1
MOS                                 pmax    pmax
       comp=Z,249nm,1.6s
MOS                                 MLR     MLR
       comp=Z,1µm,17.0s
ESDC   Sonseca Array      18.93 276 P       Pn      04 30 40.5 -0.1
ESDC   Sonseca Array      18.93 276 P       Pn      04 30 40.5 -0.1
       comp=Z,0.5nm,0.3s,baz=74,slow=11,SNR=65
ESDC                                LR      LR      04 37 50.8
       comp=Z,1µm,18.8s,baz=84,slow=36
       comp=Z,7.2nm,0.7s
PAB    San Pablo          19.25 275 P       Pn      04 30 44.0 -0.3
PAB                                 IAmb    IAmb    04 30 50.8
       comp=Z,170nm,1.9s
PAB    San Pablo          19.25 275 P       Pn      04 30 44.1 -0.3
PAB                                 pmax    pmax
       comp=Z,170nm,1.9s
PAB    San Pablo          19.25 275 ⇑P      P       04 30 43.2 -0.2
STRU   Stroemstad         19.56 345 eP      P       04 30 47.1 +0.6
EGOR   Sierra Gorda,      19.66 268 ⇑P      Pn      04 30 48.9 -0.5
SNART  Snartemo           19.89 339 eP      Pn      04 30 55.2 +3.5
SNART                               IAmb    IAmb    04 31 01.7
       comp=Z,84nm,1.0s
SNART  Snartemo           19.89 339 i               Pn      04 30 54.8 +3.1
MEF    Metsahovi          19.91   5 eP      P       04 30 50.7 +0.4
MCH1   Michaelchurch      19.99 313 ⇑P      P       04 30 52.0 +0.8
MAK    Makhachkala        20.09  74 eP      P       04 30 51.7 -0.7
MAK                                 eS      S       04 34 38.3 +0.3
MAK                                 pmax    pmax
       comp=Z,348nm,1.8s
MAK                                 MLR     MLR
       comp=Z,2µm,11.0s
HFS    Hagfors            20.19 350 P       P       04 30 53.0 -0.4
       comp=Z,21nm,0.5s,baz=152,slow=10,SNR=44
       comp=Z,21nm,0.5s
PUL    Pulkovo            20.25  14 i P     P       04 30 54.8 +0.8
PUL                                 pmax    pmax
       comp=Z,34nm,0.8s
AKT    Akhty              20.36  78 eP      Pn      04 30 56.8 -0.8
AKT                                 ePP     PnPn    04 31 12.3  0.0
AKT                                 eS      Sn      04 34 46.4 -0.5
AKT                                 pmax    pmax
       comp=Z,76nm,0.9s
KONO   Kongsberg          20.45 344 P       P       04 30 55.9 -0.3
KONO   Kongsberg          20.45 344 i P     P       04 30 57.0 +0.7
KONO                                pmax    pmax
       comp=Z,20nm,0.9s
KONO   Kongsberg          20.45 344 eP      P       04 30 57.2 +1.0
OSL    Oslo               20.49 345 eP      Pn      04 30 58.1 -0.7
OSL                                 IAmb    IAmb    04 31 09.8
       comp=Z,58nm,0.8s
RAF    Rauma              20.60   1 eP      P       04 30 57.2 -0.7
PBRG   Braganca           20.74 283 eP      P       04 30 59.7 +0.2
PBRG                                i Amb           04 31 09.4
       comp=Z,36nm,1.3s
PBRG                                eS      Sn      04 35 02.9 +7.1
BLS5   Blasjo             21.02 339 eP      P       04 31 04.1 +1.7
BLS5                                IAmb    IAmb    04 31 10.5
       comp=Z,219nm,1.7s
MVO    Moncorvo           21.02 281 eP      P       04 31 03.7 +1.0
MVO                                 i Amb           04 31 09.9
       comp=Z,45nm,1.0s
MVO                                 eS      Sn      04 35 03.5 +0.7
MVO                                 i AMs_20        04 41 56.0
       comp=Z,1µm,18.0s
NC602  NORSAR Array S     21.09 347 P       P       04 31 02.0 -1.1
NC602                               IAmb    IAmb    04 31 09.6
       comp=Z,45nm,0.7s
NC602  NORSAR Array S     21.09 347 eP      P       04 31 02.4 -0.7
NORES  NORESS Array B     21.09 347 P       P       04 31 02.8 -0.3
NORES                               pmax    pmax
       comp=Z,3.0nm,0.6s
FINES  FINESS Array B     21.27   7 P       P       04 31 03.8 -1.2
FINES  FINESS Array B     21.27   7 P       P       04 31 03.7 -1.3
       comp=Z,13nm,0.5s,baz=162,slow=13,SNR=53
FINES                               PcP     PcP     04 35 08.9 -0.5
       comp=Z,4.1nm,0.6s,baz=135,slow=1.5,SNR=5.1
FINES                               LR      LR      04 40 28.5
       comp=Z,730nm,18.9s,baz=192,slow=40
       comp=Z,13nm,0.5s
FINES  FINESS Array B     21.27   7 P       P       04 31 03.8 -1.2
FIA1   FINESS Array S     21.27   7 P       P       04 31 03.6 -1.4
FIA1                                IAmb    IAmb    04 31 09.5
       comp=Z,95nm,1.0s
NC405  NORSAR Array S     21.42 348 IAmb    IAmb    04 31 12.3
       comp=Z,75nm,0.8s
NB201  NORSAR Array S     21.43 347 IAmb    IAmb    04 31 18.1
       comp=Z,69nm,0.9s
NB2    NORSAR Subarra     21.43 347 P       P       04 31 06.0 -0.9
       comp=Z,17nm,0.6s,baz=160,slow=11
NB2    NORSAR Subarra     21.43 347 P       P       04 31 06.0 -0.9
       baz=160,slow=11
NOA    NORSAR Array B     21.43 347 P       P       04 31 05.8 -1.0
       comp=Z,8.5nm,0.7s,baz=167,slow=10,SNR=41
NOA                                 PcP     PcP     04 35 09.6 -0.2
       comp=Z,2.5nm,0.9s,baz=137,slow=2.4,SNR=3.8
NOA                                 LR      LR      04 39 53.5
       comp=Z,962nm,21.2s,baz=165,slow=38
       comp=Z,8.5nm,0.7s
MTE    Manteigas          21.52 279 P       P       04 31 07.1 -0.9
MTE                                 IAmb    IAmb    04 31 15.3
       comp=Z,219nm,1.8s
MTE    Manteigas          21.52 279 eP      P       04 31 08.0 +0.1
MTE                                 i Amb           04 31 15.4
       comp=Z,100nm,1.1s
MTE                                 eS      Sn      04 35 12.7 -2.1
MTE                                 i AMs_20        04 40 45.6
       comp=Z,1µm,18.0s
MTE    Manteigas          21.52 279 eP      P       04 31 08.2 +0.2
MTE    Manteigas          21.52 279 ⇑P      P       04 31 08.1 +0.1
PVRL   Vila Real          21.52 282 eP      P       04 31 09.1 +1.1
PVRL                                i Amb           04 31 18.5
       comp=Z,45nm,1.5s
PCBR   Castelo Branco     21.57 278 eP      P       04 31 08.3 -0.1
PCBR                                i Amb           04 31 17.6
       comp=Z,54nm,1.4s
POLO   Lamas de Olo       21.57 282 eP      P       04 31 09.5 +0.9
POLO                                i Amb           04 31 37.1
       comp=Z,17nm,1.5s
POLO                                eS      Sn      04 35 15.2 -0.8
NC303  NORSAR Array S     21.58 348 IAmb    IAmb    04 31 16.7
       comp=Z,75nm,0.9s
PMRV   Marv??o            21.58 276 eP      P       04 31 08.1 -0.5
PMRV                                i Amb           04 31 17.0
       comp=Z,69nm,1.5s
PMRV                                eS      S       04 35 08.6 +0.8
PMRV                                i AMs_20        04 39 43.5
       comp=Z,776nm,20.0s
PBAR   Barrancos          21.60 273 eP      P       04 31 09.2 +0.4
PBAR                                i Amb           04 31 18.0
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	comp=Z,52nm,1.4s						
PBAR				*e*S	S	04 35 06.5	-1.6
SKAR	Skarslia	21.67	343	*e*P	P	04 31 10.8	+1.3
SKAR				IAmb	IAmb	04 31 15.1	
	comp=Z,30nm,1.0s						
MDT	Midelt	21.70	257	P	P	04 31 10.2	+0.2
	comp=Z,13nm,0.8s,baz=74,slow=13,SNR=21						
	comp=Z,13nm,0.8s						
PCAB	Cabril	21.70	283	*e*P	P	04 31 10.9	+1.0
PCAB				*i* Amb		04 31 19.2	
	comp=Z,75nm,1.2s						
PCAB				*e*S	Sn	04 35 17.8	-1.3
EKA	Eskdalemuir Ar	21.73	321	P	P	04 31 09.7	-0.3
	comp=Z,6.3nm,0.5s,baz=115,slow=11,SNR=28						
EKA				PcP	PcP	04 35 11.3	+0.9
	comp=Z,1.9nm,0.8s,baz=102,slow=3.0,SNR=3.2						
	comp=Z,6.3nm,0.5s						
PVIS	Viseu	21.73	280	*e*P	P	04 31 09.5	-0.8
PVIS				*e*S	Sn	04 35 19.3	-0.6
ESK	Eskdalemuir	21.74	321	P	P	04 31 09.5	-0.6
ESK				IAmb	IAmb	04 31 17.0	
	comp=Z,47nm,0.8s						
ESK	Eskdalemuir	21.74	321	P	P	04 31 09.5	-0.6
ESK				pmax	pmax		
	comp=Z,47nm,0.8s						
ESK	Eskdalemuir	21.74	321	⇑P	P	04 31 10.3	+0.1
TAM	Tamanrasset	21.82	221	P	P	04 31 13.2	+1.8
TAM	Tamanrasset	21.82	221	P	P	04 31 13.2	+1.8
TAM				pmax	pmax		
	comp=Z,40nm,0.9s						
TAM	Tamanrasset	21.82	221	⇑P	P	04 31 13.6	+2.2
PESTR	Estremoz	21.86	275	P	P	04 31 12.6	+1.1
PESTR	Estremoz	21.86	275	*e*P	P	04 31 13.1	+1.5
PESTR				*i* Amb		04 31 29.9	
	comp=Z,42nm,1.8s						
PGAV	Gavieira, Arco	21.86	284	*e*P	P	04 31 13.0	+1.4
PGAV				*i* Amb		04 31 20.6	
	comp=Z,97nm,1.2s						
PGAV				*e*S	Sn	04 35 22.4	-0.5
PGAV				*i* AMs_20		04 42 46.8	
	comp=Z,2µm,18.0s						
KEF	Keuruu	21.88	5	*e*P	P	04 31 11.2	-0.4
BELG	Belogornoye	21.89	48	P	P	04 31 11.1	-0.6
	comp=Z,55nm,1.0s,baz=58,slow=12,SNR=12						
	comp=Z,55nm,1.0s						
BELG	Belogornoye	21.89	48	*i* P	P	04 31 11.8	+0.1
BELG				pmax	pmax		
	comp=Z,16nm,0.9s						
PSARD	Sardoal	22.13	277	*e*P	P	04 31 13.5	-1.0
PSARD				*i* Amb		04 31 26.8	
	comp=Z,58nm,1.3s						
PSARD				*e*S	S	04 35 21.4	+3.0
PTO	Porto	22.20	281	*e*P	P	04 31 17.1	+1.9
COI	Coimbra	22.21	279	P	P	04 31 14.2	-1.1
COI	Coimbra	22.21	279	*e*P	P	04 31 14.9	-0.4
COI				*i* Amb		04 31 39.6	
	comp=Z,48nm,2.4s						
COI				*e*S	Sn	04 35 26.9	-4.2
COI	Coimbra	22.21	279	P	P	04 31 14.2	-1.1
COI				pmax	pmax		
	comp=Z,30nm,0.7s						
ASK	Askoy	22.25	339	*e*P	P	04 31 18.2	+2.6
EVO	Evora	22.26	274	*e*P	P	04 31 15.5	-0.4
EVO				*i* Amb		04 31 36.8	
	comp=Z,35nm,1.7s						
EVO				*e*S	S	04 35 23.9	+3.2
IWEX	Carrickbyrne,	22.27	312	P	P	04 31 18.6	+2.7
PBEJ	Beja	22.27	273	*e*P	P	04 31 17.2	+1.2
PBEJ				*i* Amb		04 31 41.4	
	comp=Z,51nm,1.6s						
PBEJ				*e*S	S	04 35 24.9	+3.9
PMTG	Montargil	22.29	276	*e*P	P	04 31 14.6	-1.6
PMTG				*i* Amb		04 31 23.2	
	comp=Z,57nm,1.2s						
PMTG				*e*S	S	04 35 24.4	+3.0
PCAS	Casmilo, Conde	22.30	279	*e*P	P	04 31 18.6	+2.3
PCAS				*i* Amb		04 31 24.1	
	comp=Z,48nm,1.5s						
PCAS				*e*S	S	04 35 25.9	+4.4
PVAQ	Vaqueiros	22.33	271	*e*P	P	04 31 16.9	+0.2
PVAQ				*i* Amb		04 31 23.2	
	comp=Z,120nm,1.5s						
DSB	Dublin	22.38	314	P	P	04 31 18.9	+1.8
PCVE	Castro Verde	22.51	272	*e*P	P	04 31 18.1	-0.5
PCVE				*e*S	S	04 35 24.9	-0.5
PBDV	Barranco-do-Ve	22.54	271	*e*P	P	04 31 20.0	+1.1
PBDV				*e*S	S	04 35 25.9	-0.1
HYA	Hoyanger	22.59	341	*e*P	P	04 31 20.1	+0.9
HYA				IAmb	IAmb	04 31 24.5	
	comp=Z,50nm,1.0s						
MESJ	Messejana	22.59	273	*e*P	P	04 31 17.7	-1.8
MESJ				*e*S	S	04 35 26.3	-0.7
MESJ				IAMs_20	IAMs_20	04 46 28.0	
	comp=Z,2µm,8.6s						
MESJ	Messejana	22.59	273	*e*P	P	04 31 23.2	+3.8
MESJ				*i* Amb		04 31 36.3	
	comp=Z,60nm,1.5s						
MESJ				*e*S	S	04 35 29.5	+2.6
MESJ	Messejana	22.59	273	*e*P	P	04 31 17.7	-1.8
MESJ				*e*S	S	04 35 26.3	-0.7
PSBE	So Bento	22.63	277	*e*P	P	04 31 19.8	-0.1
PSBE				*i* Amb		04 31 34.9	
	comp=Z,78nm,1.5s						
PSBE				*e*S	S	04 35 33.1	+5.4
VAF	Ylistaro	22.65	2	P	P	04 31 20.9	+1.1
VAF				pmax	pmax		
	comp=Z,136nm,0.9s						
VAF	Ylistaro	22.65	2	*e*P	P	04 31 19.5	-0.3
ILTH	Belurgan, Co L	22.69	316	P	P	04 31 23.3	+3.0
DOMB	Dombas	22.75	346	*e*P	P	04 31 22.1	+1.1
DOMB				IAmb	IAmb	04 31 33.0	
	comp=Z,115nm,1.2s						
PTEO	Sao Teotonio	23.06	272	*e*P	P	04 31 25.2	+0.9
PTEO				*i* Amb		04 31 39.9	
	comp=Z,137nm,1.8s						
PTEO				*e*S	S	04 35 37.2	+2.0
MORF	Marmelete	23.07	272	*e*P	P	04 31 22.4	-2.1
MORF				*e*S	S	04 35 34.4	-1.1
MORF				IAMs_20	IAMs_20	04 46 29.6	
	comp=Z,2µm,12.4s						
MORF	Marmelete	23.07	272	*e*S	S	04 35 35.6	+0.1
MORF	Marmelete	23.07	272	*e*P	P	04 31 22.4	-2.1
MORF				*e*S	S	04 35 34.4	-1.1
LIS	Lisbon	23.08	275	*e*P	P	04 31 22.6	-2.0
LIS				*e*S	S	04 35 34.4	-1.0
LIS				IAMs_20	IAMs_20	04 41 49.6	
	comp=E,3µm,12.8s						
LIS	Lisbon	23.08	275	*e*S	S	04 35 39.7	+4.3
LIS	Lisbon	23.08	275	*e*P	P	04 31 22.5	-2.0
LIS				*e*S	S	04 35 34.4	-1.0
PFVI	Vila Bisbo	23.25	271	*e*S	S	04 35 41.8	+3.3
AKN	Aaknes	23.29	344	*e*P	P	04 31 27.3	+0.8
KLMR	Klimovskoe	23.46	23	*e*P	P	04 31 26.1	-2.1
KLMR				S	S	04 35 40.5	-0.9
KLMR				pmax	pmax		
	comp=Z,160nm,1.5s						
KLMR				MLR	MLR		
	comp=Z,1µm,10.0s						
MOL	Molde	23.53	345	*e*P	P	04 31 29.3	+0.5
IDGL	Inch Island, C	23.76	317	P	P	04 31 29.7	-1.5
LRW	Lerwick	23.97	333	⇑P	P	04 31 32.8	-0.3
IGLA	Glengowla, Co	24.11	313	P	P	04 31 37.1	+2.6
VAL	Valentia	24.16	309	P	P	04 31 37.8	+2.9
NSS	Namsos	24.65	351	*e*P	P	04 31 38.9	-0.4
OUL	Oulu	24.85	5	P	P	04 31 40.5	-0.6
OUL				pmax	pmax		
	comp=Z,35nm,1.4s						
KIRV	Kirov	25.67	35	LR	LR	04 43 13.9	
	comp=Z,996nm,20.9s,baz=236,slow=40						
KIRV	Kirov	25.67	35	*ce*P	P	04 31 48.6	+0.1
LEIR	Leirfjorden	26.07	353	*e*P	P	04 31 55.4	+3.3
RAYN	Ar Rayn	26.79	122	P	P	04 32 00.8	+1.6
RAYN	Ar Rayn	26.79	122	P	P	04 32 00.8	+1.6
RAYN				pmax	pmax		
	comp=Z,15nm,1.2s						
RAYN	Ar Rayn	26.79	122	⇑P	P	04 32 01.2	+2.1
AKTO	Aktyubinsk	27.71	56	LR	LR	04 44 29.9	
	comp=Z,916nm,21.7s,baz=243,slow=40						
KTK1	Kautokeino	28.65	2	*e*P	P	04 32 14.7	-0.6
ABKAR	Akbulak array	28.85	59	P	P	04 32 16.4	-0.9
ABKAR	Akbulak array	28.85	59	⇑P	P	04 32 16.5	-0.9
ARTI	Arti	29.15	44	P	P	04 32 18.4	-1.4
ARTI	Arti	29.15	44	LR	LR	04 44 17.7	
	comp=Z,424nm,20.3s,baz=250,slow=37						
ARTI	Arti	29.15	44	*d* *i*P	P	04 32 19.0	-0.9
ARTI						04 33 08.9	
ARTI				S	S	04 37 12.4	+0.6
ARTI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ARTI				MLR	MLR		
	comp=Z,1µm,12.0s						
ARTI	Arti	29.15	44	⇑P	P	04 32 19.1	-0.8
ARA0	ARCESS Array S	29.25	3	*e*P	P	04 32 19.7	-0.9
ARCES	ARCESS Array B	29.25	3	P	P	04 32 19.6	-1.0
ARCES	ARCESS Array B	29.25	3	P	P	04 32 19.4	-1.2
	comp=Z,6.0nm,0.6s,baz=185,slow=11,SNR=55						
ARCES				PcP	PcP	04 35 26.3	-0.9
	comp=Z,5.2nm,0.9s,baz=158,slow=2.6,SNR=2.6						
ARCES				LR	LR	04 43 58.8	
	comp=Z,1µm,18.1s,baz=186,slow=36						
	comp=Z,6.0nm,0.6s						
ARCES	ARCESS Array B	29.25	3	P	P	04 32 19.6	-1.0
ARCES				pmax	pmax		
	comp=Z,113nm,2.0s						
TRO	Tromso	29.26	359	*e*P	P	04 32 20.1	-0.5
TRO				IAmb	IAmb	04 32 27.7	
	comp=Z,110nm,1.6s						
KEV	Kevo	29.55	4	⇑P	P	04 32 22.5	-0.7
VADS	Vadso	30.07	6	*e*P	P	04 32 27.5	-0.3
HAMF	Hammerfest	30.29	2	*e*P	P	04 32 32.9	+3.1
SVE	Sverdlovsk	30.47	44	*e*P	P	04 32 31.3	-0.2
SVE				*e*S	S	04 37 39.6	+7.2
SVE				pmax	pmax		
	comp=Z,20nm,1.1s						
SVE				pmax	pmax		
	comp=Z,2µm,12.0s						
TORD	Torodi Ar. Bea	31.94	217	P	P	04 32 45.3	+0.5
TORD				IAmb	IAmb	04 32 50.6	
	comp=Z,28nm,1.2s						
TORD	Torodi Ar. Bea	31.94	217	P	P	04 32 45.4	+0.5
	comp=Z,30nm,0.3s,baz=30,slow=9.7,SNR=1.4						
HRA	Herat	33.26	87	P	P	04 32 57.2	+0.6
JMIC	Jan Mayen	34.03	343	LR	LR	04 46 38.6	
	comp=Z,212nm,18.8s,baz=30,slow=36						
BORG	Borgarnes	34.24	329	LR	LR	04 47 31.8	
	comp=Z,1µm,21.7s,baz=124,slow=37						
BRVK	Borovoye	35.48	52	P	P	04 33 15.0	-0.3
BRVK	Borovoye	35.48	52	*ce*P	P	04 33 15.6	+0.3
BRVK				pmax	pmax		
	comp=Z,13nm,0.8s						
BRVK	Borovoye	35.48	52	⇑P	P	04 33 15.4	+0.1
BVAR	Borovoye Array	35.54	52	P	P	04 33 15.7	-0.1
	comp=Z,6.5nm,0.8s,baz=262,slow=5.5,SNR=27						
BVAR				PcP	PcP	04 35 44.8	0.0
	comp=Z,2.0nm,0.7s,baz=306,slow=3.2,SNR=2.1						
	comp=Z,6.5nm,0.8s						
WSAR	Wadi Sarin	36.13	107	P	P	04 33 20.3	-0.9
	comp=Z,0.1nm,0.7s,baz=309,slow=24,SNR=5.0						
KKAR	Karatay Array	36.75	69	P	P	04 33 25.3	-1.1
KKAR	Karatay Array	36.75	69	P	P	04 33 25.3	-1.1
KKAR	Karatay Array	36.75	69	⇑P	P	04 33 26.5	+0.1
SIMJ	Simiganj	36.87	77	P	P	04 33 28.1	+0.6
SCO	Scoresbysund	37.14	338	IAmb	IAmb	04 33 39.9	
	comp=Z,25nm,1.0s						
SCO	Scoresbysund	37.14	338	⇑P	P	04 33 30.2	+0.9
SCO	Scoresbysund	37.14	338	*i* P	P	04 33 29.2	0.0
GAR	Garm	37.73	76	IAmb	IAmb	04 33 43.7	
	comp=Z,52nm,1.2s						
SPITS	Spitsbergen Ar	37.88	359	P	P	04 33 35.3	-0.1
	comp=Z,1.2nm,0.3s,baz=154,slow=12,SNR=18						
SPITS				PcP	PcP	04 35 51.5	+0.2
	comp=Z,11nm,0.7s,baz=139,slow=5.4,SNR=9.8						
SPITS				LR	LR	04 51 05.4	
	comp=Z,836nm,18.4s,baz=140,slow=39						
	comp=Z,1.2nm,0.3s						
KBL	Kabul	38.37	83	P	P	04 33 40.5	+0.1
KBL	Kabul	38.37	83	P	P	04 33 40.5	+0.1
KBL				pmax	pmax		
	comp=Z,13nm,1.1s						
KBS	Kingsbay	38.75	357	⇑P	P	04 33 44.6	+1.9
KBS	Kingsbay	38.75	357	*e*	P	04 33 43.1	+0.4
DBG	Daneborg	38.86	343	*e*P	P	04 33 44.6	+0.9
LODK	Lodwar	39.15	157	P	P	04 33 48.5	+1.7
LODK				IAmb	IAmb	04 33 54.6	
	comp=Z,66nm,1.5s						
AAK	Ala-Archa	39.70	69	*i* P	P	04 33 52.2	+0.8
AAK				pmax	pmax		
	comp=Z,13nm,1.8s						
DAG	Danmarks Havn	40.12	347	P	P	04 33 57.0	+2.8
DAG				pmax	pmax		
	comp=Z,12nm,0.8s						
DAG	Danmarks Havn	40.12	347	⇑P	P	04 33 54.2	0.0
DAG	Danmarks Havn	40.12	347	*i* P	P	04 33 53.0	-1.2
DAG				IAmb	IAmb	04 33 59.5	
	comp=Z,6.4nm,0.8s						
DBIC	Dimbokro	40.71	221	P	P	04 33 59.5	-0.3
	comp=Z,12nm,0.7s,baz=38,slow=9.6,SNR=7.4						
DBIC				LR	LR	04 53 16.8	
	comp=Z,597nm,18.5s,baz=33,slow=40						
	comp=Z,12nm,0.7s						
DBIC	Dimbokro	40.71	221	⇑P	P	04 34 00.3	+0.5
KURBB	Kurchatov Arra	40.75	56	P	P	04 33 59.5	-0.2
	comp=Z,2.1nm,0.7s,baz=284,slow=9.3,SNR=13						
KURBB				PcP	PcP	04 36 00.9	0.0
	comp=Z,3.4nm,0.7s,baz=274,slow=4.0,SNR=7.0						
	comp=Z,2.1nm,0.7s						
KURK	Kurchatov	40.80	55	P	P	04 33 59.7	-0.4
KURK	Kurchatov	40.80	55	*ce*P	P	04 33 59.3	-0.8
KURK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KURK	Kurchatov	40.80	55	⇑P	P	04 34 00.2	+0.1
BBTS	Babate	41.41	242	LR	LR	04 53 34.1	
	comp=Z,698nm,20.4s,baz=284,slow=40						
KSH	Kashi	41.72	73	P	P	04 34 08.8	+0.8
KSH				PP	PP	04 35 46.7	+2.4
KSH				S	S	04 40 25.8	+0.8
KSH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KSH				LR	LR		
	comp=Z,1µm,17.9s						
KSH				LR	LR		
	comp=Z,420nm,17.2s						
KSH				LR	LR		
	comp=Z,570nm,16.5s						
MBAR	Mbarara	41.86	165	P	P	04 34 10.1	+0.7
MBAR				IAmb	IAmb	04 34 17.2	
	comp=Z,43nm,1.4s						
MBAR	Mbarara	41.86	165	P	P	04 34 10.1	+0.7
MBAR				pmax	pmax		
	comp=Z,43nm,1.5s						
MBAR	Mbarara	41.86	165	⇑P	P	04 34 10.7	+1.3
NIL	Nilore	41.92	82	P	P	04 34 10.6	+1.0
NIL				IAmb	IAmb	04 34 33.2	
	comp=Z,42nm,1.1s						
NIL	Nilore	41.92	82	P	P	04 34 10.6	+1.0
NIL				pmax	pmax		
	comp=Z,42nm,1.2s						
ICESG	Greenland Ices	42.40	332	⇑P	P	04 34 14.2	+0.8
ICESG	Greenland Ices	42.40	332	*i* P	P	04 34 13.6	+0.1
SUMG	Summit	42.78	338	P	P	04 34 16.9	+0.3
SUMG				IAmb	IAmb	04 34 21.5	
	comp=Z,27nm,1.0s						
SUMG	Summit	42.78	338	P	P	04 34 16.9	+0.3
SUMG				pmax	pmax		
	comp=Z,27nm,1.0s						
SUMG	Summit	42.78	338	⇑P	P	04 34 16.9	+0.3
SUMG	Summit	42.78	338	*i* P	P	04 34 16.2	-0.3
SUMG				IAmb	IAmb	04 34 21.1	
	comp=Z,18nm,1.0s						
NOR	Nord	43.25	353	*e*P	P	04 34 17.8	-2.0
MAKZ	Makanchi	43.77	60	P	P	04 34 23.5	-0.9
MAKZ	Makanchi	43.77	60	P	P	04 34 23.5	-0.9
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MAKZ	Makanchi	43.77	60	⇑P	P	04 34 23.6	-0.8
MK31	Makanchi Array	43.98	60	*ce*P	P	04 34 25.3	-0.8
MKAR	Makanchi Array	43.98	60	P	P	04 34 25.1	-1.0
MKAR	Makanchi Array	43.98	60	P	P	04 34 25.2	-0.9
	comp=Z,11nm,0.7s,baz=281,slow=6.4,SNR=87						
MKAR				PcP	PcP	04 36 11.3	-0.4
	comp=Z,3.8nm,0.8s,baz=269,slow=3.7,SNR=3.2						
	comp=Z,11nm,0.7s						
KMBO	Kilima Mbogo	44.03	156	P	P	04 34 28.6	+1.5
KMBO				IAmb	IAmb	04 34 35.1	
	comp=Z,42nm,1.4s						
KMBO	Kilima Mbogo	44.03	156	P	P	04 34 28.6	+1.5
KMBO				pmax	pmax		
	comp=Z,42nm,1.5s						
ZALV	Zalesovo Beam	44.05	50	P	P	04 34 25.9	-0.7
ZALV	Zalesovo Beam	44.05	50	P	P	04 34 25.7	-0.9
	comp=Z,8.0nm,0.6s,baz=281,slow=8.4,SNR=22						
ZALV				PcP	PcP	04 36 11.1	-0.7
	comp=Z,4.3nm,0.7s,baz=273,slow=5.2,SNR=2.0						
	comp=Z,8.0nm,0.6s						
ZALV	Zalesovo Beam	44.05	50	P	P	04 34 25.9	-0.7
NRIK	Noril'sk	44.68	28	P	P	04 34 31.2	-0.2
NRIK				IAmb	IAmb	04 34 36.1	
	comp=Z,8.4nm,0.5s						
NRIK	Noril'sk	44.68	28	P	P	04 34 31.6	+0.2
	comp=Z,6.8nm,0.4s,baz=258,slow=12,SNR=12						
NRIK				LR	LR	04 53 52.7	
	comp=Z,580nm,21.4s,baz=264,slow=37						
	comp=Z,6.8nm,0.4s						
NRIK	Noril'sk	44.68	28	*ce*P	P	04 34 31.6	+0.2
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KIBK	Kibwezi	45.43	155	P	P	04 34 39.6	+1.6
SFJD	Kangerlussuaq	46.37	329	LR	LR	04 55 31.9	
	comp=Z,1µm,18.3s,baz=86,slow=38						
NEEM	North Greenlan	46.94	343	*i* P	P	04 34 49.0	-0.5
NEEM				IAmb	IAmb	04 34 54.2	
	comp=Z,8.8nm,0.6s						
KULLO	Kullorsuaq	48.30	339	*i* P	P	04 34 57.9	-1.8
WMQ	Urumqi	48.52	63	*e*P	P	04 35 04.0	+2.1
WMQ				LR	LR		
	comp=Z,770nm,16.5s						
WMQ				LR	LR		
	comp=Z,660nm,13.5s						
WMQ				LR	LR		
	comp=Z,230nm,22.9s						
FRB	Frobisher Bay	54.34	327	LR	LR	04 59 15.6	
	comp=Z,1µm,20.4s,baz=70,slow=36						
HYB	Hyderabad	54.50	97	*e*P	P	04 35 48.1	+1.1
HYB				*e*sP	sP	04 35 52.4	+0.3
HYB				*e*PcP	PcP	04 36 51.0	+0.6
HYB				*e*PP	PP	04 37 50.1	+1.0
HYB				*e*ScP	ScP	04 40 49.3	+0.6
HYB				*e*S	S	04 43 28.0	+1.9
LSZ	Lusaka	55.87	171	P	P	04 35 57.5	+0.8
LSZ	Lusaka	55.87	171	LR	LR	05 02 39.7	
	comp=Z,454nm,19.1s,baz=354,slow=39						
LSZ	Lusaka	55.87	171	P	P	04 35 57.6	+0.8
LSZ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GOMU	GeErMu	56.65	69	P	P	04 36 02.5	-0.2
GOMU				S	S	04 43 53.9	-1.3
GOMU				SS	SS	04 47 42.2	-0.2
GOMU				pmax	pmax		
	comp=Z,260nm,4.1s						
SCHQ	Schefferville	56.93	316	P	P	04 36 03.6	-0.3
	comp=Z,16nm,0.7s,baz=87,slow=6.0,SNR=15						
SCHQ				LR	LR	04 59 51.4	
	comp=Z,797nm,19.0s,baz=50,slow=35						
	comp=Z,16nm,0.7s						
ILON	Igloolik, Nuna	56.95	336	P	P	04 36 03.3	-0.5
ILON				IAmb	IAmb	04 36 08.0	
	comp=Z,17nm,1.2s						
LSA	Lhasa	57.21	77	P	P	04 35 57.7	-9.1
LSA				S	S	04 43 58.5	-4.4
LSA				LR	LR		
	comp=N,260nm,22.6s						
LSA				LR	LR		
	comp=Z,370nm,20.8s						
TIXI	Tiksi	57.45	21	LR	LR	05 04 20.6	
	comp=Z,718nm,18.4s,baz=324,slow=40						
TIXI	Tiksi	57.45	21	*i* P	P	04 36 05.8	-1.5
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.4s						
RES	Resolute Bay	57.64	344	P	P	04 36 08.5	-0.1
RES	Resolute Bay	57.64	344	LR	LR	05 02 13.3	
	comp=Z,525nm,18.3s,baz=46,slow=37						
RES	Resolute Bay	57.64	344	P	P	04 36 08.5	-0.1
RES				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GTA	Gaotai	58.60	63	*e*P	P	04 36 16.6	+0.6
GTA				pP	pP	04 36 19.8	0.0
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,140nm,5.6s						
GTA				LR	LR		
	comp=Z,520nm,13.8s						
GTA				LR	LR		
	comp=Z,230nm,16.4s						
GTA				LR	LR		
	comp=Z,550nm,20.0s						
XAUDM	Khaudum	58.69	179	IAmb	IAmb	04 36 18.2	
	comp=Z,18nm,1.1s						
SONM	Songino Array	58.88	52	P	P	04 36 17.3	-0.6
SONM				IAmb	IAmb	04 36 28.8	
	comp=Z,20nm,1.7s						
SONM	Songino Array	58.88	52	P	P	04 36 17.0	-0.9
	comp=Z,1.7nm,0.8s,baz=281,slow=7.9,SNR=9.9						
SONM				PcP	PcP	04 37 07.6	+0.4
	comp=Z,3.8nm,0.9s,baz=302,slow=3.9,SNR=4.8						
	comp=Z,1.7nm,0.8s						
SONM	Songino Array	58.88	52	P	P	04 36 17.3	-0.6
SONM				pmax	pmax		
	comp=Z,20nm,1.7s						
TSUM	Tsumeb	59.42	183	P	P	04 36 21.4	-0.4
TSUM				IAmb	IAmb	04 36 23.2	
	comp=Z,36nm,1.6s						
TSUM	Tsumeb	59.42	183	LR	LR	05 04 57.8	
	comp=Z,829nm,18.1s,baz=7.0,slow=39						
HAL	Halifax	59.59	305	P	P	04 36 22.5	-0.2
HAL	Halifax	59.59	305	P	P	04 36 22.5	-0.2
HAL				pmax	pmax		
	comp=Z,94nm,1.8s						
QNGWA	Qangwa	59.68	180	IAmb	IAmb	04 36 30.2	
	comp=Z,40nm,1.9s						
QNGWA	Qangwa	59.68	180	*i* P	P	04 36 24.1	+0.6
BATG	Bathurst New B	59.86	308	P	P	04 36 22.9	-1.6
BATG				IAmb	IAmb	04 36 28.4	
	comp=Z,22nm,1.0s						
PHDHD	Phuduhudu	60.44	176	P	P	04 36 29.5	+0.8
PHDHD				IAmb	IAmb	04 36 35.3	
	comp=Z,13nm,0.6s						
MATP	Matopo	60.99	172	LR	LR	05 05 46.4	
	comp=Z,166nm,18.6s,baz=40,slow=39						
GRTLG	Ghanzi	61.50	180	IAmb	IAmb	04 36 38.1	
	comp=Z,16nm,0.8s						
GRTLG	Ghanzi	61.50	180	*i* P	P	04 36 36.9	+1.0
D62A	Allapoint, All	61.74	309	P	P	04 36 36.6	-0.6
D62A				IAmb	IAmb	04 36 41.7	
	comp=Z,9.1nm,0.7s						
E62A	Clayton Lake	62.25	309	IAmb	IAmb	04 36 50.4	
	comp=Z,21nm,1.3s						
LDAQ	Lac Daran	62.58	311	IAmb	IAmb	04 36 47.2	
	comp=Z,12nm,0.9s						
PALK	Pallekele	62.58	105	LR	LR	05 06 52.3	
	comp=Z,505nm,18.6s,baz=306,slow=39						
KGCAE	Kacgae	63.00	179	*i* P	P	04 36 47.0	+1.0
MREMI	Moremi	63.01	173	*i* P	P	04 36 47.0	+1.0
LZH	Lanzhou	63.03	64	*e*P	P	04 36 44.7	-1.6
LZH				pP	pP	04 36 50.7	+0.7
LZH				pmax	pmax		
	comp=Z,13nm,1.2s						
LZH				pmax	pmax		
	comp=Z,140nm,4.8s						
LZH				LR	LR		
	comp=Z,520nm,17.2s						
LZH				LR	LR		
	comp=Z,390nm,17.5s						
LZH				LR	LR		
	comp=Z,500nm,16.5s						
YAK	Yakutsk	63.04	30	LR	LR	05 07 35.5	
	comp=Z,281nm,18.1s,baz=304,slow=39						
YAK	Yakutsk	63.04	30	*e*P	P	04 36 45.3	-0.4
YAK				*e*		04 39 04.1	
YAK				*e*S	S	04 45 17.2	+1.4
YAK				*e*SS	SS	04 49 24.2	+3.6
YAK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.6s						
YAK				pmax	pmax		
	comp=Z,19nm,0.7s						
YAK				smax	smax		
	comp=E,98nm,3.3s						
YAK				MLR	MLR		
	comp=Z,385nm,14.0s						
YAK				MLR	MLR		
	comp=N,134nm,11.0s						
YAK				MLR	MLR		
	comp=E,276nm,12.0s						

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KOOLE Kule              63.12 181 i P     P      04 36 47.6 +0.8
OPO   Ambohidratompo    63.66 152   LR    LR     05 05 59.4
      comp=E,217nm,21.9s,baz=181,slow=37
LPHEP Lephephe          63.67 175 i P     P      04 36 51.3 +1.0
SKOMA Sekoma            64.70 177 i P     P      04 36 57.8 +0.7
TNCH  TengChong         65.24  77   P     P      04 36 57.4 -3.6
TNCH                                sP    sP     04 37 06.6 +0.4
TNCH                                PP    PP     04 39 26.0 +1.7
TNCH                                S     S      04 45 44.6  0.0
TNCH                                pmax  pmax
      comp=E,230nm,3.3s
TNCH                                LR    LR
      comp=E,1µm,19.0s
TNCH                                LR    LR
      comp=E,1µm,21.3s
TNCH                                LR    LR
      comp=E,270nm,21.3s
LBTB  Lobatse           65.29 175   P     P      04 37 02.4 +1.5
LBTB                                IAmb  IAmb   04 37 03.6
      comp=Z,16nm,0.9s
LBTB  Lobatse           65.29 175   LR    LR     05 09 05.2
      comp=Z,383nm,18.8s,baz=357,slow=39
LBTB  Lobatse           65.29 175   P     P      04 37 02.4 +1.5
LBTB                                pmax  pmax
      comp=Z,16nm,0.9s
A36M  Sachs Harbour     65.33 349   P     P      04 37 00.3 -0.2
      baz=28
TRQ   Mont Tremblant    65.42 311   IAmb  IAmb   04 37 06.1
      comp=Z,8.3nm,0.8s
HHC   Hu-ho-hao-te      65.60  56  eP     P      04 37 02.8 -0.2
HHC                                 S     S      04 45 45.7 -2.8
HHC                                 ScS   SKSac  04 46 56.3 -2.4
HHC                                 pmax  pmax
      comp=Z,11nm,0.7s
HHC                                 pmax  pmax
      comp=Z,190nm,5.2s
HHC                                 LR    LR
      comp=Z,420nm,12.6s
HHC                                 LR    LR
      comp=Z,390nm,13.1s
HHC                                 LR    LR
      comp=Z,380nm,16.5s
PHPEN Phepeng           65.62 178 i P     P      04 37 03.7 +0.6
VLDQ  Val d'Or          66.01 313   IAmb  IAmb   04 37 10.6
      comp=Z,6.9nm,0.7s
MAKGR Makgori           66.03 176 i P     P      04 37 06.2 +0.5
ACCN  Adirondack Com    66.46 308   IAmb  IAmb   04 37 14.0
      comp=Z,9.1nm,0.8s
XLT   XiLinHaoTe        66.70  52  eP     P      04 37 09.4 -0.6
XLT                                 sP    sP     04 37 15.6 +0.4
XLT                                 PcP   PcP    04 37 32.1 -6.9
XLT                                 pmax  pmax
      comp=Z,7.0nm,1.1s
XLT                                 pmax  pmax
      comp=Z,120nm,5.2s
XLT                                 LR    LR
      comp=Z,57nm,19.6s
XLT                                 LR    LR
      comp=Z,450nm,19.8s
XLT                                 LR    LR
      comp=Z,560nm,16.6s
PZH   PanZhiHua         66.79  74  ⇑P     P      04 37 09.9 -0.9
PZH                                 S     S      04 46 02.3 -1.0
PZH                                 pmax  pmax
      comp=Z,10.0nm,1.0s
PZH                                 pmax  pmax
      comp=Z,120nm,6.3s
PZH                                 LR    LR
      comp=Z,230nm,21.2s
PZH                                 LR    LR
      comp=Z,260nm,18.8s
PZH                                 LR    LR
      comp=Z,220nm,18.7s
ZEA   Zeya              66.96  38  eP     P      04 37 12.3 +0.9
FCC   Fort Churchill    67.39 329   IAmb  IAmb   04 37 18.8
      comp=Z,10nm,0.9s
XAN   Xi'an             67.63  64  ⇓P     P      04 37 15.5 -0.5
XAN                                 sP    pP     04 37 20.5 +0.7
XAN                                 PcP   PcP    04 37 41.3 -1.7
XAN                                 S     S      04 46 10.5 -2.6
XAN                                 pmax  pmax
      comp=Z,24nm,0.7s
XAN                                 pmax  pmax
      comp=Z,280nm,5.7s
XAN                                 LR    LR
      comp=Z,550nm,21.3s
XAN                                 LR    LR
      comp=Z,500nm,16.5s
XAN                                 LR    LR
      comp=Z,470nm,21.3s
J57A  Williamstown      67.85 309   IAmb  IAmb   04 37 22.1
      comp=Z,7.9nm,0.8s
TIY   Taiyuan           67.91  59   P     P      04 37 17.5 -0.2
TIY                                 S     S      04 46 14.9 -1.5
TIY                                 pmax  pmax
      comp=Z,140nm,6.1s
TIY                                 LR    LR
      comp=Z,330nm,20.6s
TIY                                 LR    LR
      comp=Z,330nm,17.2s
TIY                                 LR    LR
      comp=Z,260nm,15.1s
KMI   Kunming           68.31  75   P     P      04 37 24.8 +4.2
KMI                                 S     S      04 46 25.3 +3.4
KMI                                 pmax  pmax
      comp=Z,7.0nm,0.5s
KMI                                 LR    LR
      comp=Z,170nm,18.0s
KMI                                 LR    LR
      comp=Z,200nm,17.3s
KMI                                 LR    LR
      comp=Z,250nm,19.8s
A21K  Barrow            68.51 359   P     P      04 37 19.7 -1.1
      baz=2.2
BUKO  Buck Lake         68.64 312   IAmb  IAmb   04 38 05.3
      comp=Z,17nm,1.4s
BILL  Bilibino          68.76  13   P     P      04 37 22.0 -0.5
BILL  Bilibino          68.76  13ceP      P      04 37 22.3 -0.1
BILL                                pmax  pmax
      comp=Z,8.0nm,1.0s
BILL                                MLR   MLR
      comp=Z,300nm,25.0s
A22K  Sinclair Lake     68.81 359   P     P      04 37 21.3 -1.3
      baz=3.5
BOSA  Boshof            68.84 176   P     P      04 37 23.6 +0.1
      comp=Z,17nm,0.8s,baz=2.1,slow=6.6,SNR=39
BOSA                                LR    LR     05 08 46.6
      comp=Z,340nm,21.9s,baz=1.5,slow=37
      comp=Z,17nm,0.8s
SADO  Sadowa            68.89 311   LR    LR     05 08 00.6
      comp=Z,41nm,18.1s,baz=108,slow=36
HEH   HeiHe             69.19  41  eP     P      04 37 24.7 -0.7
HEH                                 sP    sP     04 37 31.0 +0.4
HEH                                 S     S      04 46 30.7 -0.3
HEH                                 pmax  pmax
      comp=Z,11nm,0.8s
HEH                                 pmax  pmax
      comp=Z,200nm,5.4s
HEH                                 LR    LR
      comp=Z,1µm,21.8s
HEH                                 LR    LR
      comp=Z,760nm,21.6s
HEH                                 LR    LR
      comp=Z,340nm,21.4s
CMAR  Chiang Mai Arr    69.40  83   P     P      04 37 26.0 -1.2
      comp=Z,1.5nm,0.3s,baz=306,slow=7.5,SNR=9.5
CMAR                                LR    LR     05 13 01.1
      comp=Z,76nm,19.3s,baz=290,slow=40
      comp=Z,1.5nm,0.3s
B22K  Teshekpuk Lake    69.44 358   P     P      04 37 25.9 -0.7
      baz=4.8
C26K  Camden Bay        69.44 355   P     P      04 37 25.0 -1.6
      baz=12
D28M  Stokes Point      69.49 352   P     P      04 37 24.8 -2.1
      baz=17
L56A  Greenwood         69.52 308   IAmb  IAmb   04 37 32.7
      comp=Z,13nm,1.0s
HNS   HongShan          69.56  58  ⇓P     P      04 37 32.4 +4.5
HNS                                 S     S      04 46 40.1 +4.2
HNS                                 pmax  pmax
      comp=Z,10.0nm,0.9s
HNS                                 LR    LR
      comp=Z,450nm,17.1s
HNS                                 LR    LR
      comp=Z,280nm,17.1s
HNS                                 LR    LR
      comp=Z,290nm,17.6s
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C27K  Jago River        69.64 354   P     P      04 37 26.9 -1.0
      baz=13
M57A  Sunshine Farm,    69.74 307   IAmb  IAmb   04 37 34.1
      comp=Z,13nm,0.8s
LYN   LuoYang           69.74  62   P     P      04 37 30.3 +1.2
LYN                                 pP    sP     04 37 34.3  0.0
LYN                                 sP    pP     04 37 37.5 +4.6
LYN                                 S     S      04 46 39.4 +1.3
LYN                                 sS    sS     04 46 44.9 +0.6
LYN                                 pmax  pmax
      comp=Z,13nm,0.7s
LYN                                 LR    LR
      comp=Z,520nm,15.1s
LYN                                 LR    LR
      comp=Z,550nm,18.5s
LYN                                 LR    LR
      comp=Z,600nm,13.7s
D27M  Malcolm River     69.78 353   P     P      04 37 27.7 -1.2
      baz=15
B20K  Meade River       69.84 359   P     P      04 37 28.4 -0.7
      baz=1.7
C23K  Itkillik River    69.84 357   P     P      04 37 28.6 -0.5
      baz=7.0
INK   Inuvik            69.86 350   LR    LR     05 11 26.5
      comp=Z,291nm,18.6s,baz=28,slow=39
INK   Inuvik            69.86 350   P     P      04 37 28.1 -1.0
      baz=21
C24K  Franklin Bluff    69.87 356   P     P      04 37 28.4 -0.8
      baz=8.6
SEY   Seymchan          69.94  21   LR    LR     05 11 47.6
      comp=Z,371nm,19.3s,baz=339,slow=39
SEY   Seymchan          69.94  21ceP      P      04 37 29.7 -0.1
SEY                                 pmax  pmax
      comp=Z,10.0nm,1.7s
WVNY  West Valley, N    69.99 309   IAmb  IAmb   04 37 35.5
      comp=Z,14nm,0.7s
D25K  Kavik River       70.13 355   P     P      04 37 30.1 -0.8
      baz=10
B21K  Ikpikpuk River    70.19 358   P     P      04 37 31.1  0.0
      baz=3.8
E28M  Babbage River     70.27 352   P     P      04 37 30.8 -1.0
      baz=16
E29M  Blow River        70.30 352   IAmb  IAmb   04 37 38.0
      comp=Z,14nm,0.7s
E29M  Blow River        70.30 352   P     P      04 37 31.4 -0.5
      baz=17
GYA   Guiyang           70.40  72  ⇓P     P      04 37 37.4 +4.0
GYA                                 S     S      04 46 43.7 -2.6
GYA                                 pmax  pmax
      comp=Z,20nm,0.8s
GYA                                 pmax  pmax
      comp=Z,170nm,5.3s
GYA                                 LR    LR
      comp=Z,290nm,27.7s
GYA                                 LR    LR
      comp=Z,220nm,35.1s
GYA                                 LR    LR
      comp=Z,190nm,21.7s
D24K  Happy Valley      70.44 356   P     P      04 37 32.4 -0.4
      baz=8.4
B18K  Kokolik River     70.48   1   P     P      04 37 32.7 -0.4
      baz=358
SSPA  Standing Stone    70.62 307   P     P      04 37 34.1 -0.3
SSPA                                IAmb  IAmb   04 37 39.4
      comp=Z,11nm,0.8s
C21K  Knifeblade Rid    70.66 358   P     P      04 37 34.0 -0.1
      baz=3.6
F31M  Tsiigehtchic      70.70 350   P     P      04 37 34.0 -0.4
      baz=20
D23K  Nanushuk River    70.71 357   IAmb  IAmb   04 37 47.3
      comp=Z,18nm,0.8s
D23K  Nanushuk River    70.71 357   P     P      04 37 34.2 -0.3
      baz=6.9
C19K  Lookout Ridge     70.76   0   P     P      04 37 34.0 -0.8
      baz=360
F30M  Barrier River     70.80 351   P     P      04 37 34.6 -0.4
      baz=19
E27K  Coleen River      70.87 353   P     P      04 37 34.8 -0.7
      baz=14
D22K  Ayikyak River     70.88 357   P     P      04 37 34.6 -0.9
      baz=5.3
ERPA  Erie              70.98 309   IAmb  IAmb   04 37 41.4
      comp=Z,13nm,0.8s
TOLK  Toolik Lake Re    70.98 356   P     P      04 37 35.8 -0.4
      baz=7.8
D20K  Etivluk River     71.13 359   IAmb  IAmb   04 37 51.2
      comp=Z,11nm,0.9s
D20K  Etivluk River     71.13 359   P     P      04 37 36.8 -0.2
      baz=2.1
C18K  Utukok River      71.21   1   IAmb  IAmb   04 37 44.0
      comp=Z,14nm,0.8s
C18K  Utukok River      71.21   1   P     P      04 37 37.1 -0.5
      baz=358
E25K  Arctic Village    71.26 355   P     P      04 37 37.5 -0.3
      baz=11
G31M  Satah River       71.26 350   P     P      04 37 37.6 -0.2
      baz=20
YKAW3 Yellowknife Wh    71.26 340   IAmb  IAmb   04 37 42.8
      comp=Z,20nm,1.3s
YKAW1 Yellowknife Wh    71.30 340   IAmb  IAmb   04 37 43.0
      comp=Z,18nm,1.6s
YKA   Yellowknife Ar    71.32 340   P     P      04 37 37.6 -0.6
YKA   Yellowknife Ar    71.32 340   P     P      04 37 38.2  0.0
      comp=Z,3.4nm,0.8s,baz=32,slow=5.6,SNR=23
YKA                                 LR    LR     05 09 06.4
      comp=Z,301nm,19.7s,baz=38,slow=36
      comp=Z,3.4nm,0.8s
C17K  DeLong Mountai    71.35   2   P     P      04 37 37.1 -1.2
      baz=357
E21K  Killik River      71.35 358   P     P      04 37 38.1 -0.3
      baz=4.3
D19K  Kuna River        71.37 360   IAmb  IAmb   04 37 47.2
      comp=Z,17nm,1.0s
D19K  Kuna River        71.37 360   P     P      04 37 38.0 -0.4
      baz=0.9
G30M  tAoh Zraii Nji    71.45 351   P     P      04 37 38.4 -0.6
      baz=18
E24K  Your Creek        71.49 356   P     P      04 37 39.3  0.0
      baz=8.7
C16K  Lisburne Hills    71.50   2   P     P      04 37 38.7 -0.5
      baz=355
E23K  Chandalar         71.57 356   IAmb  IAmb   04 37 57.8
      comp=Z,11nm,0.8s
E23K  Chandalar         71.57 356   P     P      04 37 39.1 -0.7
      baz=7.8
F26K  Sheenjek River    71.57 354   P     P      04 37 38.7 -1.0
      baz=12
E20K  Nigu River        71.58 359   P     P      04 37 39.5 -0.4
      baz=2.5
E22K  Anaktuvuk Pass    71.59 357   IAmb  IAmb   04 38 16.7
      comp=Z,21nm,1.4s
E22K  Anaktuvuk Pass    71.59 357   P     P      04 37 39.0 -0.8
      baz=6.0
G29M  Pine Creek        71.74 351   IAmb  IAmb   04 37 45.6
      comp=Z,21nm,1.1s
G29M  Pine Creek        71.74 351   P     P      04 37 39.1 -1.6
      baz=17
RDOG  Red Dog Mine      71.78   1   P     P      04 37 39.2 -1.8
      baz=357
F25K  Christian Rive    71.78 355   P     P      04 37 39.9 -1.2
      baz=11
TIA   Tai'an            71.83  58   P     P      04 37 40.5 -1.3
TIA                                 pmax  pmax
      comp=Z,8.0nm,0.7s
TIA                                 pmax  pmax
      comp=Z,130nm,4.8s
BMAR  Burnt Mountain    71.86 354   P     P      04 37 42.9 +1.4
TBO   Thunder Bay       71.99 319   IAmb  IAmb   04 37 50.2
      comp=Z,25nm,1.4s
KLR   Kul'dur           72.00  40   LR    LR     05 12 13.9
      comp=Z,258nm,19.6s,baz=318,slow=38
KLR   Kul'dur           72.00  40ceP      P      04 37 42.2 -0.4
KLR                                 pmax  pmax
      comp=Z,16nm,1.7s
F24K  Squaw Lake        72.01 355   IAmb  IAmb   04 38 03.4
      comp=Z,17nm,1.2s
F24K  Squaw Lake        72.01 355   P     P      04 37 41.4 -0.9
      baz=9.1
BNX   BinXian           72.04  45  ⇑P     P      04 37 42.7 -0.1
BNX                                 sP    sP     04 37 47.7 -0.4
BNX                                 PP    PP     04 40 21.2 -1.1
BNX                                 S     S      04 47 01.4 -3.0
BNX                                 pmax  pmax
      comp=Z,8.0nm,0.7s
BNX                                 pmax  pmax
      comp=Z,140nm,5.2s
BNX                                 LR    LR
      comp=Z,480nm,16.3s
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BNX                                 LR    LR
      comp=Z,590nm,14.6s
BNX                                 LR    LR
      comp=Z,240nm,17.3s
EPYK  Eagle Plains      72.10 351   P     P      04 37 41.9 -1.1
      baz=18
D17K  Noatak River      72.13   2   P     P      04 37 42.3 -0.7
      baz=357,SNR=9.2
M52A  Chesterland       72.14 310   IAmb  IAmb   04 37 48.4
      comp=Z,15nm,0.8s
CN2   Changchun         72.19  47   P     P      04 37 42.5 -1.3
CN2                                 pP    pP     04 37 47.2 -0.4
CN2                                 sP    sP     04 37 49.5 +0.5
CN2                                 S     S      04 47 01.8 -4.5
CN2                                 pmax  pmax
      comp=Z,10.0nm,0.6s
CN2                                 pmax  pmax
      comp=Z,100nm,5.0s
CN2                                 LR    LR
      comp=Z,300nm,13.0s
CN2                                 LR    LR
      comp=Z,500nm,13.0s
CN2                                 LR    LR
      comp=Z,400nm,12.0s
G27K  Doyon Strip       72.22 353   P     P      04 37 43.2 -0.4
      baz=14
R58B  Mineral           72.23 305   IAmb  IAmb   04 37 48.8
      comp=Z,11nm,0.8s
F22K  John River        72.23 357   P     P      04 37 42.9 -0.8
      baz=5.7
G26K  Porcupine Rive    72.27 354   P     P      04 37 43.1 -0.8
      baz=12
N53A  Lisbon            72.29 309   IAmb  IAmb   04 37 46.6
      comp=Z,18nm,1.2s
H31M  Peel River        72.33 350   IAmb  IAmb   04 38 48.3
      comp=Z,15nm,1.2s
H31M  Peel River        72.33 350   P     P      04 37 43.0 -1.3
      baz=20
SNY   Shenyang          72.36  50  ⇑P     P      04 37 40.5 -4.3
SNY                                 S     S      04 47 01.5 -6.7
SNY                                 pmax  pmax
      comp=Z,8.0nm,0.5s
SNY                                 pmax  pmax
      comp=Z,150nm,6.7s
SNY                                 LR    LR
      comp=Z,200nm,12.9s
SNY                                 LR    LR
      comp=Z,500nm,13.7s
SNY                                 LR    LR
      comp=Z,550nm,16.3s
MCWV  Mont Chateau      72.40 307   IAmb  IAmb   04 37 50.2
      comp=Z,16nm,0.8s
E19K  Redstone River    72.40 359   IAmb  IAmb   04 37 51.0
      comp=Z,19nm,0.8s
E19K  Redstone River    72.40 359   P     P      04 37 43.8 -0.9
      baz=1.6,SNR=18
COLD  Coldfoot          72.42 356   P     P      04 37 44.0 -0.8
      baz=7.2
H29M  Whitestone        72.44 351   IAmb  IAmb   04 37 49.8
      comp=Z,16nm,1.2s
H29M  Whitestone        72.44 351   P     P      04 37 44.6 -0.3
      baz=17
E18K  Tukpahlearik C    72.44   1   IAmb  IAmb   04 37 51.1
      comp=Z,18nm,0.8s
E18K  Tukpahlearik C    72.44   1   P     P      04 37 44.4 -0.5
      baz=359,SNR=15
SUR   Sutherland        72.47 180   P     P      04 37 46.3 +0.7
F21K  Alatna River      72.56 358   IAmb  IAmb   04 37 58.3
      comp=Z,11nm,0.8s
F21K  Alatna River      72.56 358   P     P      04 37 44.8 -0.8
      baz=4.6
G25K  Bearman Lake      72.63 355   P     P      04 37 45.1 -1.0
      baz=10
H27K  Steamboat Moun    72.77 353   IAmb  IAmb   04 38 04.0
      comp=Z,18nm,1.3s
H27K  Steamboat Moun    72.77 353   P     P      04 37 45.6 -1.3
      baz=14
E17K  Hotham Inlet      72.77   1   P     P      04 37 46.1 -0.7
      baz=358
G22K  Bettles           72.79 357   P     P      04 37 46.4 -0.5
      baz=6.2
WRGLY Wrigley           72.79 344   IAmb  IAmb   04 37 52.5
      comp=Z,32nm,1.3s
WRGLY Wrigley           72.79 344   P     P      04 37 46.2 -0.8
      baz=28
F20K  Avaraart Lake     72.79 359   P     P      04 37 46.0 -0.9
      baz=2.8
G24K  Hadweenzic Riv    72.79 355   IAmb  IAmb   04 38 11.8
      comp=Z,18nm,1.5s
G24K  Hadweenzic Riv    72.79 355   P     P      04 37 46.0 -1.0
      baz=9.4
O53A  New Philadelph    72.86 308   IAmb  IAmb   04 37 53.3
      comp=Z,17nm,1.1s
G23K  Bananza Creek     72.93 356   P     P      04 37 46.9 -0.9
      baz=7.4
DL2   Dalian            73.02  53   P     P      04 37 47.3 -1.5
DL2                                 S     S      04 47 14.0 -1.8
DL2                                 pmax  pmax
      comp=Z,18nm,0.8s
DL2                                 pmax  pmax
      comp=Z,170nm,8.1s
DL2                                 LR    LR
      comp=Z,780nm,19.1s
DL2                                 LR    LR
      comp=Z,670nm,17.2s
DL2                                 LR    LR
      comp=Z,790nm,24.1s
F19K  Shaleruckik Mo    73.03 359   IAmb  IAmb   04 37 54.1
      comp=Z,11nm,0.8s
F19K  Shaleruckik Mo    73.03 359   P     P      04 37 47.9 -0.5
      baz=1.2,SNR=10
H25L  Birch Creek       73.11 354   P     P      04 37 48.2 -0.6
      baz=11
I30M  Mount Dempster    73.15 350   IAmb  IAmb   04 38 05.3
      comp=Z,13nm,0.9s
I30M  Mount Dempster    73.15 350   P     P      04 37 48.4 -1.0
      baz=18,SNR=12
I29M  Ogilvie Camp,     73.26 351   IAmb  IAmb   04 38 16.8
      comp=Z,12nm,0.9s
I29M  Ogilvie Camp,     73.26 351   P     P      04 37 49.0 -0.8
      baz=16
G21K  Allakaket         73.27 358   P     P      04 37 48.9 -0.9
      baz=4.6
F18K  Selawik           73.27   0   P     P      04 37 49.2 -0.6
      baz=360,SNR=11
O52A  Adamsville        73.31 309   IAmb  IAmb   04 37 55.2
      comp=Z,12nm,0.8s
FFC   Flin Flon         73.32 329   P     P      04 37 50.4 +0.1
FFC   Flin Flon         73.32 329   P     P      04 37 50.4 +0.1
FFC                                 pmax  pmax
      comp=Z,11nm,1.3s
I28M  Miner Creek       73.36 352   P     P      04 37 49.6 -0.9
      baz=15,SNR=7.5
I27K  Kandik River      73.39 352   P     P      04 37 50.0 -0.7
      baz=14
EPLO  Experimental L    73.39 322   IAmb  IAmb   04 37 56.5
      comp=Z,11nm,0.8s
R55A  Marlinton         73.42 306   IAmb  IAmb   04 37 56.2
      comp=Z,12nm,0.9s
F17K  Baldwin Pennin    73.42   1   P     P      04 37 50.4 -0.3
      baz=358
P53A  Whipple           73.44 308   IAmb  IAmb   04 37 56.4
      comp=Z,14nm,0.8s
COWI  Conover           73.53 317   IAmb  IAmb   04 37 57.7
      comp=Z,12nm,0.8s
H24K  Noodor Dome       73.67 355   P     P      04 37 51.0 -1.3
      baz=9.0
G19K  Purcell Mounta    73.72 359   P     P      04 37 51.1 -1.3
      baz=1.7
J30M  Hart River        73.77 350   IAmb  IAmb   04 38 09.6
      comp=Z,24nm,1.2s
J30M  Hart River        73.77 350   P     P      04 37 51.7 -1.2
      baz=18,SNR=19
H23K  Yukon River       73.79 356   P     P      04 37 52.0 -0.9
      baz=7.7
P52A  Corning           73.80 308   IAmb  IAmb   04 37 55.0
      comp=Z,15nm,1.1s
H22K  Ishtalitna Cre    73.81 357   P     P      04 37 52.3 -0.7
      baz=6.3
PRP   Porcupine Dome    73.82 354   P     P      04 37 52.1 -1.2
      baz=11
I26K  Coal Creek Min    73.83 353   P     P      04 37 52.5 -0.7
      baz=13
CNSH  ChangSha          73.84  67   P     P      04 37 52.8 -1.0
CNSH                                S     S      04 47 24.9 -0.6
CNSH                                pmax  pmax
      comp=Z,16nm,0.9s
CNSH                                LR    LR
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      comp=Z,200nm,21.4s
CNSH                                LR     LR
      comp=Z,200nm,19.2s
CNSH                                LR     LR
      comp=Z,240nm,18.2s
G18K  Tagagawik          73.98 360  IAmb   IAmb   04 38 00.3
      comp=Z,12nm,0.9s
G18K  Tagagawik          73.98 360  P      P      04 37 52.9 -1.1
      baz=0.5
ULM   Lac du Bonnet      73.99 323  IAmb   IAmb   04 37 59.8
      comp=Z,18nm,0.9s
ULM   Lac du Bonnet      73.99 323  P      P      04 37 54.4 +0.1
      comp=Z,12nm,0.7s,baz=42,slow=5.2,SNR=19
ULM                                 LR     LR     05 10 36.8
      comp=Z,730nm,20.7s,baz=42,slow=36
      comp=Z,12nm,0.7s
ULM   Lac du Bonnet      73.99 323 i P     P      04 37 54.0 -0.3
F15K  North Star Dit     74.09   2  P      P      04 37 54.1 -0.6
      baz=356
MDP   Montagnes des      74.09 263  LR     LR     05 08 24.0
      comp=Z,146nm,20.2s,baz=36,slow=34
TNA   Tin City           74.10   4  P      P      04 37 54.2 -0.5
      baz=353
H21K  Melozitna Rive     74.10 357  IAmb   IAmb   04 38 10.1
      comp=Z,14nm,0.8s
H21K  Melozitna Rive     74.10 357  P      P      04 37 54.2 -0.6
      baz=5.1,SNR=20
J29N  Klondike Camp      74.12 351  P      P      04 37 54.1 -0.9
      baz=16
N49A  Columbus Grove     74.18 310  IAmb   IAmb   04 37 59.9
      comp=Z,12nm,0.7s
F14K  Arctic Creek       74.26   3  P      P      04 37 55.1 -0.5
      baz=354
Q52A  Bidwell            74.30 308  IAmb   IAmb   04 38 03.1
      comp=Z,17nm,1.1s
H19K  Roundabout Mou     74.33 359  P      P      04 37 55.3 -0.7
      baz=2.2
H20K  Anotleneega Mo     74.33 358  P      P      04 37 55.4 -0.7
      baz=3.5
POKR  Poker Plat Res     74.36 355  P      P      04 37 55.7 -0.6
      baz=9.3
G17K  Kiwalik Mounta     74.37   1  P      P      04 37 55.2 -1.1
      baz=359
I23K  Minto, Yukon-K     74.45 356  P      P      04 37 56.0 -0.7
      baz=7.8
G16K  Koyuk River        74.46   1  IAmb   IAmb   04 38 03.1
      comp=Z,14nm,0.8s
G16K  Koyuk River        74.46   1  P      P      04 37 56.6 -0.2
      baz=358
I21K  Tanana             74.55 357  IAmb   IAmb   04 38 14.6
      comp=Z,19nm,1.1s
I21K  Tanana             74.55 357  P      P      04 37 57.0 -0.3
      baz=5.8
K29M  Barlow Dome        74.62 350  P      P      04 37 57.4 -0.5
      baz=17
DAWY  Dawson             74.64 351  IAmb   IAmb   04 38 03.4
      comp=Z,25nm,1.3s
DAWY  Dawson             74.64 351  P      P      04 37 57.1 -0.9
      baz=16,SNR=14
MLY   Manley             74.64 356  IAmb   IAmb   04 38 03.9
      comp=Z,34nm,1.6s
MLY   Manley             74.64 356  P      P      04 37 56.9 -1.1
      baz=6.7,SNR=10
J26L  Joseph Creek       74.66 353  P      P      04 37 57.6 -0.5
      baz=12,SNR=14
ILAR  Eielson Array      74.66 355  P      P      04 37 58.4 +0.4
ILAR  Eielson Array      74.66 355  P      P      04 37 58.2 +0.1
      comp=Z,1.1nm,0.7s,baz=0.6,slow=3.8,SNR=20
ILAR                                LR     LR     05 12 52.0
      comp=Z,139nm,19.5s,baz=13,slow=37
      comp=Z,1.1nm,0.7s
ILAR  Eielson Array      74.66 355  P      P      04 37 58.4 +0.4
J25K  Salcha River,      74.70 354  P      P      04 37 58.8 +0.5
J25K  Salcha River,      74.70 354  P      P      04 37 57.8 -0.5
      baz=11
H18K  Honhosa River      74.73 360  IAmb   IAmb   04 38 04.9
      comp=Z,13nm,0.8s
H18K  Honhosa River      74.73 360  P      P      04 37 57.6 -0.8
      baz=0.7
O49A  Covington          74.75 310  IAmb   IAmb   04 38 03.0
      comp=Z,21nm,0.8s
G15K  Niukluk            74.82   2  P      P      04 37 58.8 -0.1
      baz=356
MMPY  Sheldon Lake,      74.84 347  IAmb   IAmb   04 38 05.6
      comp=Z,26nm,1.4s
MMPY  Sheldon Lake,      74.84 347  P      P      04 37 58.8 -0.3
      baz=22,SNR=5.9
Q51A  Peebles            74.91 309  IAmb   IAmb   04 38 11.6
      comp=Z,12nm,0.7s
H17K  Granite Mounta     74.94   0  P      P      04 37 59.3 -0.3
      baz=360
K27K  Chicken            74.97 352  IAmb   IAmb   04 38 05.8
      comp=Z,24nm,1.3s
K27K  Chicken            74.97 352  P      P      04 37 59.2 -0.6
      baz=14
NEA2  Nenana             74.98 355  P      P      04 37 59.1 -0.8
      baz=8.0
I20K  Naaghedeneel       75.02 358  P      P      04 37 59.5 -0.5
      baz=3.8
HDA   Harding Lake       75.03 355  IAmb   IAmb   04 38 14.3
      comp=Z,13nm,0.8s
HDA   Harding Lake       75.03 355  P      P      04 37 59.7 -0.5
      baz=9.7,SNR=10
N47A  Urbana             75.08 311  IAmb   IAmb   04 38 04.8
      comp=Z,11nm,0.7s
GCSA  Galena City Sc     75.12 359  P      P      04 37 59.9 -0.7
      baz=1.9
O48B  Farmland           75.18 310  IAmb   IAmb   04 38 05.3
      comp=Z,9.7nm,0.7s
ANM   Nome               75.21   3  P      P      04 38 00.3 -0.9
      baz=355
SCRK  Sand Creek         75.21 353  P      P      04 38 00.5 -0.8
      baz=12
H16K  Elim               75.22   1  P      P      04 38 00.8 -0.4
      baz=358
TGTN  Hyland Airport     75.30 345  P      P      04 38 01.3 -0.6
      baz=24
L29M  L29M               75.41 350  P      P      04 38 02.0 -0.4
      baz=16
USRK  Ussuriysk Ar.      75.50  44  P      P      04 38 02.7 -0.5
      comp=Z,4.3nm,0.8s,baz=276,slow=5.2,SNR=7.2
      comp=Z,4.3nm,0.8s
NJ2   Nanjing            75.51  60 eP      P      04 38 01.8 -1.6
NJ2                                 pmax   pmax
      comp=Z,13nm,0.5s
RIDG  Independent Ri     75.52 353  IAmb   IAmb   04 38 08.7
      comp=Z,21nm,1.2s
RIDG  Independent Ri     75.52 353  P      P      04 38 02.2 -0.9
      baz=11,SNR=7.7
K24K  Donnelly Dome      75.53 354  IAmb   IAmb   04 38 19.9
      comp=Z,17nm,1.1s
K24K  Donnelly Dome      75.53 354  P      P      04 38 02.2 -0.9
      baz=11
DOT   Dot Lake           75.54 353  IAmb   IAmb   04 38 08.9
      comp=Z,23nm,1.4s
FARO  Faro, Yukon        75.55 348  P      P      04 38 02.6 -0.6
      baz=20,SNR=9.2
BPAW  Bear Paw Mtn.      75.58 356  P      P      04 38 02.9 -0.4
      baz=6.5
J20K  Nowinta River      75.63 358  P      P      04 38 03.2 -0.3
      baz=4.0
GAMB  Gambell            75.64   6  P      P      04 38 03.1 -0.5
      baz=350
KOTAN Kotaneelee Air     75.68 343  P      P      04 38 02.9 -1.1
      baz=27
M31M  Drury Creek, Y     75.74 348  IAmb   IAmb   04 38 11.0
      comp=Z,13nm,1.1s
M31M  Drury Creek, Y     75.74 348  P      P      04 38 03.2 -1.1
      baz=19
MCK   McKinley           75.83 355  IAmb   IAmb   04 38 19.1
      comp=Z,14nm,1.0s
MCK   McKinley           75.83 355  P      P      04 38 03.5 -1.3
      baz=8.1
J19K  Poorman            75.85 358  P      P      04 38 04.3 -0.6
      baz=2.9,SNR=5.0
P48A  Milroy             75.86 310  IAmb   IAmb   04 38 09.0
      comp=Z,8.6nm,0.7s
CHUM  Lake Minchumin     75.86 357  P      P      04 38 04.3 -0.6
      baz=5.5
BEAVL Fort Liard         75.86 343  P      P      04 38 04.4 -0.6
      baz=26
BCAR  Beaver Creek A     75.88 352  P      P      04 38 06.1 +1.0
L27K  Beaver Creek,      75.89 352  IAmb   IAmb   04 38 11.2
      comp=Z,17nm,1.2s
L27K  Beaver Creek,      75.89 352  P      P      04 38 03.7 -1.4
      baz=14,SNR=13
I17K  Unalakleet         75.99   1  P      P      04 38 04.4 -1.2
      baz=359
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M29M  Somme Creek        76.09 350  IAmb   IAmb   04 38 09.1
      comp=Z,14nm,0.8s
M29M  Somme Creek        76.09 350  P      P      04 38 05.0 -1.4
      baz=16,SNR=15
SJG   San Juan           76.19 282  LR     LR     05 05 16.2
      comp=Z,99nm,21.8s,baz=44,slow=31
TRF   Thorofare Moun     76.19 356  IAmb   IAmb   04 39 01.1
      comp=Z,34nm,1.8s
TRF   Thorofare Moun     76.19 356  P      P      04 38 05.8 -1.2
      baz=7.0
CAST  Castle Rocks       76.31 357  P      P      04 38 06.5 -1.1
      baz=5.6,SNR=9.2
PAX   Paxson             76.33 354  P      P      04 38 06.1 -1.6
      baz=11
DHY   Denali Highway     76.38 354  IAmb   IAmb   04 38 22.6
      comp=Z,17nm,0.9s
DHY   Denali Highway     76.38 354  P      P      04 38 06.6 -1.5
      baz=9.3,SNR=13
J18K  Innoko River       76.40 359  IAmb   IAmb   04 38 25.1
      comp=Z,18nm,1.1s
J18K  Innoko River       76.40 359  P      P      04 38 07.1 -0.9
      baz=2.0,SNR=6.2
BVCY  Beaver Creek       76.41 351  P      P      04 38 06.8 -1.3
      baz=14,SNR=10
K20K  Telida             76.45 358  IAmb   IAmb   04 38 14.6
      comp=Z,12nm,0.9s
K20K  Telida             76.45 358  P      P      04 38 07.1 -1.2
      baz=4.1
J17K  VABM Dome          76.49 360  IAmb   IAmb   04 38 25.5
      comp=Z,17nm,1.0s
J17K  VABM Dome          76.49 360  P      P      04 38 07.4 -1.1
      baz=0.2
N32M  Quiet Lake         76.52 347  P      P      04 38 07.7 -1.1
      baz=20
L42A  Oliver, Polo       76.57 314  IAmb   IAmb   04 40 53.1
      comp=Z,25nm,1.4s
M27K  Edge Creek, AK     76.58 352  IAmb   IAmb   04 38 23.7
      comp=Z,15nm,1.1s
M27K  Edge Creek, AK     76.58 352  P      P      04 38 07.4 -1.8
      baz=14
J16K  Anvik River        76.60   1  P      P      04 38 09.9 +0.8
J16K                                IAmb   IAmb   04 38 15.3
      comp=Z,12nm,0.8s
J16K  Anvik River        76.60   1  P      P      04 38 08.5 -0.6
      baz=359
N31M  Braeburn, Yuko     76.64 349  IAmb   IAmb   04 38 14.6
      comp=Z,26nm,1.1s
N31M  Braeburn, Yuko     76.64 349  P      P      04 38 08.3 -1.1
      baz=18
M26K  Nabesna, AK        76.66 352  IAmb   IAmb   04 38 15.4
      comp=Z,22nm,1.3s
M26K  Nabesna, AK        76.66 352  P      P      04 38 08.0 -1.6
      baz=13
BLO   Bloomington        76.69 310  IAmb   IAmb   04 38 14.3
      comp=Z,16nm,0.7s
WAT1  Susitna Watana     76.70 355  P      P      04 38 08.9 -0.9
      baz=8.4
LIRD  Liard River Hi     76.78 343  P      P      04 38 09.3 -1.0
      baz=25
PPLA  Purkeypile         76.84 357  IAmb   IAmb   04 38 23.8
      comp=Z,11nm,0.6s
PPLA  Purkeypile         76.84 357  P      P      04 38 09.6 -1.1
      baz=5.5
N30M  Aishikik Lake      76.85 349  IAmb   IAmb   04 38 16.3
      comp=Z,24nm,1.6s
N30M  Aishikik Lake      76.85 349  P      P      04 38 09.0 -1.7
      baz=17
HARP  HAARP              76.87 353  P      P      04 38 09.0 -1.6
      baz=11
WAT6  Susitna Watana     76.89 355  P      P      04 38 10.4 -0.6
      baz=9.0
TTA   Tatalina           76.93 358  IAmb   IAmb   04 38 17.7
      comp=Z,35nm,2.0s
TTA   Tatalina           76.93 358  P      P      04 38 09.7 -1.3
      baz=2.5
YUK3  Moose Creek        76.99 351  P      P      04 38 10.1 -1.6
      baz=15,SNR=10.0
J14K  Nanvaranak Lak     77.08   2  P      P      04 38 10.7 -1.1
      baz=357
TOAD  Toad River Com     77.10 343  P      P      04 38 11.2 -0.9
      baz=26
K17K  Iditarod           77.17 360  IAmb   IAmb   04 38 29.8
      comp=Z,15nm,0.8s
K17K  Iditarod           77.17 360  P      P      04 38 11.3 -1.0
      baz=0.8
WCI   Wyandotte Cave     77.17 309  P      P      04 38 12.7 -0.1
WCI                                 IAmb   IAmb   04 38 17.2
      comp=Z,16nm,0.8s
WCI   Wyandotte Cave     77.17 309  P      P      04 38 12.7 -0.1
WCI                                 pmax   pmax
      comp=Z,16nm,0.8s
YUK4  Talbot Arm         77.17 350  P      P      04 38 11.0 -1.7
      baz=16
QIZ   Qiongzhong         77.22  76  P      P      04 38 13.2 -0.2
QIZ                                 S      S      04 48 02.5 -0.7
QIZ                                 pmax   pmax
      comp=Z,190nm,6.7s
QIZ                                 LR     LR
      comp=Z,200nm,19.1s
QIZ                                 LR     LR
      comp=Z,210nm,18.6s
M24K  Tolsona, Glenn     77.24 354  P      P      04 38 11.2 -1.7
      baz=10
WHY   Whitehorse         77.28 348  P      P      04 38 11.6 -1.5
      baz=19
L20K  Farewell, AK       77.32 357  P      P      04 38 11.6 -1.6
      baz=4.2
TKL   Tuckaleechee C     77.35 306  LR     LR     05 14 04.9
      comp=Z,573nm,18.3s,baz=54,slow=37
P33M  Teslin, Yukon      77.36 347  P      P      04 38 12.2 -1.4
      baz=20
O30N  Mendenhall         77.36 349  P      P      04 38 12.8 -0.7
      baz=18
L40A  Anamosa            77.37 315  IAmb   IAmb   04 38 19.2
      comp=Z,16nm,0.9s
YUK8  Steele Glacier     77.38 351  P      P      04 38 11.2 -2.6
      baz=15
HYT   Haines Junctio     77.52 349  IAmb   IAmb   04 38 32.0
      comp=Z,15nm,1.1s
HYT   Haines Junctio     77.52 349  P      P      04 38 11.9 -2.6
      baz=17
YUK6  Outpost Mounta     77.53 350  P      P      04 38 12.6 -2.0
      baz=16
K15K  Wolf Creek Mou     77.58   1  P      P      04 38 13.2 -1.5
      baz=358
N25K  Chitina, Valde     77.60 353  P      P      04 38 13.9 -1.0
N25K                                IAmb   IAmb   04 38 31.1
      comp=Z,30nm,1.4s
N25K  Chitina, Valde     77.60 353  P      P      04 38 13.7 -1.2
      baz=11
SCM   Sheep Creek Mo     77.61 354  IAmb   IAmb   04 38 20.6
      comp=Z,27nm,1.2s
SCM   Sheep Creek Mo     77.61 354  P      P      04 38 13.2 -1.7
      baz=9.3
L19K  White Mountain     77.65 358  IAmb   IAmb   04 38 26.9
      comp=Z,18nm,0.9s
L19K  White Mountain     77.65 358  P      P      04 38 13.9 -1.2
      baz=3.5,SNR=16
L18K  Granite Mounta     77.65 359  IAmb   IAmb   04 38 21.6
      comp=Z,12nm,0.8s
L18K  Granite Mounta     77.65 359  P      P      04 38 14.2 -0.8
      baz=2.0
MCARA McCarthy VSAT      77.66 352  P      P      04 38 13.7 -1.4
      baz=13
SML   Sawmill            77.70 355  IAmb   IAmb   04 38 33.1
      comp=Z,12nm,0.9s
SML   Sawmill            77.70 355  P      P      04 38 13.5 -1.9
      baz=8.5
SKT   Skwentna           77.72 356  IAmb   IAmb   04 38 27.6
      comp=Z,9.2nm,0.8s
SKT   Skwentna           77.72 356  P      P      04 38 14.0 -1.5
      baz=6.0
KSAR  Wonju Array Be     77.73  51  P      P      04 38 15.0 -0.9
KSAR  Wonju Array Be     77.73  51  P      P      04 38 15.0 -0.9
KSRS  Korea Array        77.74  51  P      P      04 38 15.2 -0.8
      comp=Z,7.3nm,0.8s,baz=316,slow=5.0,SNR=28
      comp=Z,7.3nm,0.8s
L17K  Donlin             77.76 360  P      P      04 38 14.2 -1.4
      baz=0.8
GHO   Glory Hole Cre     77.78 355  IAmb   IAmb   04 38 30.7
      comp=Z,16nm,0.8s
R33M  Jennings River     77.79 346  IAmb   IAmb   04 38 19.4
      comp=Z,14nm,1.0s
R33M  Jennings River     77.79 346  P      P      04 38 14.6 -1.4
      baz=22
KLU   Klutina            77.83 354  IAmb   IAmb   04 38 32.0
      comp=Z,21nm,1.2s
KLU   Klutina            77.83 354  P      P      04 38 15.1 -1.0
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      baz=10
K13K  Kusilvak Mount     77.87   3  P      P      04 38 14.8 -1.4
      baz=356
M22K  Willow             77.87 356  P      P      04 38 15.5 -0.8
      baz=7.1
CTG   Chitna Glacier     77.88 351  P      P      04 38 15.1 -1.5
      baz=14
M20K  Styx River         77.89 357  P      P      04 38 15.2 -1.3
      baz=4.8
M19K  Big River Lodg     77.92 358  P      P      04 38 15.4 -1.2
      baz=3.8
O28M  Mount Upton        77.93 351  IAmb   IAmb   04 38 26.4
      comp=Z,13nm,0.9s
O28M  Mount Upton        77.93 351  P      P      04 38 15.1 -1.9
      baz=15
PMR   Palmer             77.97 355  IAmb   IAmb   04 38 27.8
      comp=Z,32nm,1.3s
PMR   Palmer             77.97 355  P      P      04 38 15.4 -1.4
      baz=7.9
LOGN  Logan Glacier      77.98 351  IAmb   IAmb   04 38 23.4
      comp=Z,15nm,0.9s
P32M  Atlin              78.10 347  P      P      04 38 16.3 -1.3
      baz=20
KNK   Knik Glacier       78.11 355  P      P      04 38 16.8 -0.8
      baz=8.4
P30M  Million Dollar     78.11 349  P      P      04 38 16.0 -1.7
      baz=17
GRNC  Granite Creek      78.16 351  IAmb   IAmb   04 38 22.8
      comp=Z,20nm,0.9s
O29M  Mount Kennedy      78.17 350  P      P      04 38 16.6 -1.6
      baz=16
L16K  Owhat River        78.18   0  P      P      04 38 16.5 -1.4
      baz=360
SUA   Susitna One        78.20 356  P      P      04 38 16.3 -2.0
      baz=6.6
L15K  Ungalak Mounta     78.20   1  P      P      04 38 16.7 -1.3
      baz=358
BMRM  Bremner River      78.22 353  IAmb   IAmb   04 38 23.7
      comp=Z,20nm,1.0s
BMRM  Bremner River      78.22 353  P      P      04 38 17.1 -1.2
      baz=11
CRQE  Cirque             78.28 352  P      P      04 38 17.3 -1.4
      baz=12
CRQM  Cirque             78.28 352  IAmb   IAmb   04 39 05.9
      comp=Z,15nm,0.8s
M18K  Stony River        78.37 358  P      P      04 38 17.7 -1.4
      baz=2.7
Q32M  Nakina River       78.44 346  IAmb   IAmb   04 38 26.6
      comp=Z,29nm,1.5s
Q32M  Nakina River       78.44 346  P      P      04 38 18.2 -1.5
      baz=21
M17K  Holitna River      78.48 359  IAmb   IAmb   04 38 26.6
      comp=Z,22nm,0.9s
M17K  Holitna River      78.48 359  P      P      04 38 18.8 -0.9
      baz=1.4
SKAG  Skagway            78.50 348  P      P      04 38 18.5 -1.2
      baz=18
DLBC  Dease Lake         78.50 345  LR     LR     05 12 53.8
      comp=Z,355nm,21.8s,baz=36,slow=36
DLBC  Dease Lake         78.50 345  P      P      04 38 18.5 -1.4
      baz=22
RC01  Rabbit Creek A     78.51 355  P      P      04 38 18.5 -1.4
      baz=7.4
L14K  Kuka Creek         78.52   2  P      P      04 38 18.4 -1.4
      baz=357
GLI   Glacier Island     78.53 354  P      P      04 38 19.1 -0.8
      baz=9.4
N20K  Mount Spurr        78.53 357  P      P      04 38 18.9 -1.1
      baz=5.5
SPCR  Spurr Chakacha     78.53 357  P      P      04 38 19.2 -0.9
      baz=5.5
W50A  Signal Mountai     78.59 307  IAmb   IAmb   04 38 25.5
      comp=Z,14nm,0.7s
PINM  Pinnacle           78.59 350  P      P      04 38 19.9 -0.5
      baz=15
PWL   Port Wells         78.65 355  IAmb   IAmb   04 38 32.3
      comp=Z,14nm,0.8s
PWL   Port Wells         78.65 355  P      P      04 38 20.2 -0.4
      baz=8.5
PLBC  Pleasant Camp      78.66 348  P      P      04 38 20.4 -0.2
      baz=18
Y52A  Lilburn            78.70 305  IAmb   IAmb   04 38 26.1
      comp=Z,14nm,0.7s
P29M  Windy Craggy       78.70 349  IAmb   IAmb   04 38 23.3
      comp=Z,23nm,0.9s
P29M  Windy Craggy       78.70 349  P      P      04 38 20.2 -0.8
      baz=17
MESA  MESA               78.72 351  P      P      04 38 19.9 -1.3
      baz=13
EYAK  Cordova Ski Ar     78.74 353  P      P      04 38 19.9 -1.2
      baz=10
YSS   Yuzhno-Sakhali     78.81  36  P      P      04 38 21.9 +0.1
YSS   Yuzhno-Sakhali     78.81  36 eP      P      04 38 22.5 +0.8
YSS                                e              04 38 31.7
YSS                                 pmax   pmax
      comp=Z,200nm,5.2s
YSS                                 pmax   pmax
      comp=Z,30nm,0.8s
M16K  Timber Creek       78.88 360  IAmb   IAmb   04 38 39.2
      comp=Z,18nm,1.0s
M16K  Timber Creek       78.88 360  P      P      04 38 21.4 -0.5
      baz=0.2
PNL   Peninsula          78.89 350  P      P      04 38 20.2 -1.8
      baz=15
CAPN  Captain Cook N     78.91 356  P      P      04 38 21.7 -0.3
      baz=6.3
DGMT  Dagmar             78.97 326  IAmb   IAmb   04 38 28.6
      comp=Z,31nm,1.4s
N19K  Bonanza Creek      79.01 358  P      P      04 38 21.8 -0.9
      baz=3.7
O22K  Cooper Landing     79.11 355  P      P      04 38 22.5 -0.7
      baz=7.4
M14K  Bethel             79.12   1  P      P      04 38 22.2 -1.0
      baz=358
PSI   Prapat             79.17  96  LR     LR     05 17 32.2
      comp=Z,128nm,18.1s,baz=297,slow=39
N18K  Kilae Creek        79.18 358  IAmb   IAmb   04 38 35.8
      comp=Z,42nm,1.8s
N18K  Kilae Creek        79.18 358  P      P      04 38 22.7 -0.8
      baz=2.6
M15K  Kasigluk River     79.20   1  P      P      04 38 22.6 -1.0
      baz=359
S34M  Telegraph Cree     79.21 345  P      P      04 38 23.9 +0.2
      baz=21
KAIM  Kayak Island       79.23 352  P      P      04 38 22.3 -1.5
      baz=12
N17K  Nushagak Hills     79.36 359  P      P      04 38 23.1 -1.4
      baz=1.6
N16K  Nishlik Lake       79.42 360  P      P      04 38 24.3 -0.6
      baz=0.4
M13K  Dall Lake          79.43   2  P      P      04 38 24.0 -0.8
      baz=357
P23K  Montague Islan     79.43 354  P      P      04 38 24.5 -0.4
      baz=9.2
SEW   Seward             79.47 355  P      P      04 38 24.6 -0.4
      baz=7.6
R32K  Eaglecrest         79.49 347  IAmb   IAmb   04 39 02.2
      comp=Z,46nm,1.8s
R32K  Eaglecrest         79.49 347  P      P      04 38 25.0 -0.3
      baz=19
WVT   Waverly            79.49 309  P      P      04 38 25.5 -0.2
WVT   Waverly            79.49 309  P      P      04 38 25.5 -0.2
WVT                                 pmax   pmax
      comp=Z,7.0nm,0.8s
R31K  City Hall, Gus     79.56 348  P      P      04 38 25.7 +0.1
      baz=18
O19K  Port Alsworth      79.62 358  P      P      04 38 25.6 -0.3
      baz=3.8
PETK  Petropavlovsk-     79.65  25  P      P      04 38 25.7 -0.6
      comp=Z,2.8nm,0.8s,baz=38,slow=7.5,SNR=4.3
PETK                                LR     LR     05 17 40.2
      comp=Z,298nm,19.4s,baz=329,slow=39
      comp=Z,2.8nm,0.8s
O20K  Slope Mountain     79.67 357  P      P      04 38 26.0 -0.3
      baz=5.2
T35M  Bob Quinn          79.90 344  P      P      04 38 26.5 -1.0
      baz=22
Q23K  Middleton Isla     79.90 353  P      P      04 38 26.5 -0.9
      baz=10.0
BRSE  Bradley Lake S     79.91 356  P      P      04 38 26.7 -0.8
      baz=6.6
N14K  Kuskokwak Cree     79.96   1  P      P      04 38 26.6 -1.1
      baz=358
O18K  Koktuh Hills       79.99 358  IAmb   IAmb   04 38 34.1
      comp=Z,16nm,0.7s
O18K  Koktuh Hills       79.99 358  P      P      04 38 27.4 -0.6
      baz=3.1
PCRV  Puerto La Cruz     80.00 275  LR     LR     05 09 43.8
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	comp=Z,74nm,21.5s,slow=33						
PET	**Petropavlovsk**	**80.03**	**24**	*e*P	P	04 38 33.6	+5.4
PET				*e*S	**S**	**04 48 33.8**	**+1.7**
PET				MLR	MLR		
	comp=Z,300nm,21.0s						
S31K	**Pelican**	**80.07**	**348**	P	**P**	**04 38 27.3**	**-1.0**
	baz=18						
O17K	**Koliganek Bris**	**80.11**	**359**	P	**P**	**04 38 28.1**	**-0.4**
	baz=1.7						
P19K	**Oil Pt**	**80.13**	**357**	P	**P**	**04 38 28.1**	**-0.6**
	baz=4.7						
X48A	**Hartselle**	**80.15**	**307**	IAmb	IAmb	04 38 33.6	
	comp=Z,14nm,0.8s						
CCM	**Cathedral Cave**	**80.16**	**312**	P	**P**	**04 38 28.0**	**-1.2**
CCM	**Cathedral Cave**	**80.16**	**312**	P	**P**	**04 38 28.0**	**-1.2**
CCM				pmax	pmax		
	comp=Z,10.0nm,0.8s						
S32K	**Killisnoo**	**80.26**	**347**	P	**P**	**04 38 28.8**	**-0.6**
	baz=19						
O16K	**Kokwok River B**	**80.30**	**359**	P	**P**	**04 38 28.8**	**-0.8**
	baz=0.9						
P38A	**Dawn**	**80.33**	**314**	IAmb	IAmb	04 38 34.9	
	comp=Z,12nm,0.6s						
P18K	**Big Mountain,**	**80.46**	**358**	P	**P**	**04 38 29.2**	**-1.3**
	baz=3.1						
O14K	**Tigyukauivet M**	**80.64**	**1**	P	**P**	**04 38 29.8**	**-1.6**
	baz=358						
P17K	**Kvichak River**	**80.68**	**359**	P	**P**	**04 38 30.8**	**-0.8**
	baz=2.2						
O15K	**Ungalikthiuk R**	**80.73**	**0**	P	**P**	**04 38 31.0**	**-0.9**
	baz=360						
SIT	**Sitka**	**80.78**	**347**	P	**P**	**04 38 31.4**	**-0.8**
	baz=18						
WRAK	**Wrangell Islan**	**80.84**	**345**	P	**P**	**04 38 31.8**	**-0.7**
	baz=20						
P16K	**Nushagak River**	**80.87**	**359**	P	**P**	**04 38 31.2**	**-1.4**
	baz=1.0						
Q19K	**Cape Douglas,**	**80.87**	**357**	P	**P**	**04 38 31.5**	**-1.2**
	baz=4.3						
LRAL	**Lakeview Retre**	**81.08**	**306**	IAmb	IAmb	04 38 38.8	
	comp=Z,16nm,0.6s						
Q20K	**Shuyak Island**	**81.13**	**356**	P	**P**	**04 38 32.7**	**-1.4**
	baz=5.3						
Q18K	**Katmai Hardscr**	**81.19**	**358**	P	**P**	**04 38 32.8**	**-1.8**
	baz=3.3						
U33K	**Whale Pass**	**81.28**	**346**	P	**P**	**04 38 33.8**	**-1.0**
	baz=20						
MGMO	**Mountain Grove**	**81.37**	**312**	IAmb	IAmb	04 38 41.3	
	comp=Z,21nm,1.4s						
Q17K	**Contact Creek**	**81.60**	**358**	P	**P**	**04 38 35.4**	**-1.3**
	baz=2.6						
V35K	**Ketchikan**	**81.72**	**344**	P	**P**	**04 38 36.1**	**-1.2**
	baz=21						
CRAG	**Craig**	**81.89**	**345**	P	**P**	**04 38 36.5**	**-1.6**
	baz=20						
KDAK	**Kodiak Island**	**81.97**	**356**	P	**P**	**04 38 37.4**	**-1.0**
	baz=5.1						
RSSD	**Black Hills**	**82.26**	**323**	P	**P**	**04 38 41.9**	**+1.3**
RSSD	**Black Hills**	**82.26**	**323**	P	**P**	**04 38 41.9**	**+1.3**
RSSD				pmax	pmax		
	comp=Z,9.0nm,0.9s						
R16K	**Pilot Point**	**82.33**	**359**	P	**P**	**04 38 39.9**	**-0.4**
	baz=1.3						
RUBB	**Prince Rupert**	**82.37**	**343**	IAmb	IAmb	04 38 43.3	
	comp=Z,16nm,1.0s						
OHAK	**Old Harbor**	**82.56**	**357**	P	**P**	**04 38 40.9**	**-0.7**
	baz=4.6						
P08K	**Saint George I**	**82.92**	**6**	P	**P**	**04 38 42.6**	**-0.9**
	baz=352						
U38A	**Gravette**	**83.07**	**313**	IAmb	IAmb	04 38 49.1	
	comp=Z,8.9nm,0.7s						
BAUV	**El Baul**	**83.37**	**276**	IAmb	IAmb	04 38 51.2	
	comp=Z,22nm,1.2s						
LLLB	**Lillooet**	**83.59**	**337**	IAmb	IAmb	04 38 55.3	
	comp=Z,20nm,1.3s						
BBB	**Bella Bella**	**83.85**	**341**	LR	LR	05 20 13.9	
	comp=Z,266nm,18.2s,baz=41,slow=39						
MIAR	**Mount Ida**	**83.96**	**311**	IAmb	IAmb	04 38 54.3	
	comp=Z,13nm,0.8s						
CHIR	**Chirikof Islan**	**84.04**	**358**	P	**P**	**04 38 48.0**	**-1.3**
	baz=2.8						
NEW	**Newport**	**84.11**	**333**	IAmb	IAmb	04 38 54.6	
	comp=Z,12nm,0.8s						
NEW	**Newport**	**84.11**	**333**	P	**P**	**04 38 49.7**	**-0.1**
	comp=Z,11nm,0.8s,baz=34,slow=4.7,SNR=17						
NEW				LR	LR	05 19 47.3	
	comp=Z,442nm,18.0s,baz=33,slow=38						
	comp=Z,11nm,0.8s						
MSO	**Missoula**	**84.19**	**331**	IAmb	IAmb	04 38 57.4	
	comp=Z,11nm,1.1s						
MJAR	**Matsushiro Arr**	**84.26**	**46**	P	**P**	**04 38 51.0**	**+0.2**
	comp=Z,8.1nm,0.9s,baz=316,slow=5.1,SNR=18						
	comp=Z,8.1nm,0.9s						
SHEM	**Shemya Is, Ala**	**84.35**	**16**	LR	LR	05 20 30.9	
	comp=Z,130nm,18.8s,baz=322,slow=39						
YMP	**Mirror Lake Pl**	**84.42**	**327**	IAmb	IAmb	04 39 07.9	
	comp=Z,14nm,0.8s						
SDPT	**Sand Point**	**84.56**	**1**	P	**P**	**04 38 50.6**	**-1.2**
	baz=359						
BDFB	**Brasilia**	**84.67**	**244**	IAmb	IAmb	04 38 58.8	
	comp=Z,12nm,0.9s						
BDFB	**Brasilia**	**84.67**	**244**	P	**P**	**04 38 54.2**	**+1.1**
	comp=Z,7.9nm,0.7s,baz=43,slow=6.7,SNR=13						
BDFB				LR	LR	05 16 22.5	
	comp=Z,219nm,21.0s,baz=51,slow=36						
	comp=Z,7.9nm,0.7s						
CHNA	**Chernabura Isl**	**85.08**	**0**	P	**P**	**04 38 53.4**	**-1.1**
	baz=360						
SDV	**Santo Domingo**	**85.37**	**278**	LR	LR	05 15 11.0	
	comp=Z,55nm,19.1s,baz=64,slow=34						
NOKA	**Waynoka**	**85.42**	**315**	IAmb	IAmb	04 39 01.6	
	comp=Z,13nm,0.8s						
MACA	**Manacapuru-AM**	**85.54**	**262**	P	**P**	**04 38 59.0**	**+1.5**
FXWY	**Fox Creek**	**85.69**	**327**	IAmb	IAmb	04 39 04.3	
	comp=Z,13nm,1.1s						
SNOW	**Snow King Moun**	**85.72**	**327**	IAmb	IAmb	04 39 05.5	
	comp=Z,13nm,1.4s						
TPAW	**Teton Pass**	**85.78**	**327**	IAmb	IAmb	04 39 04.7	
	comp=Z,8.7nm,0.8s						
BW06	**Boulder Array**	**85.78**	**326**	IAmb	IAmb	04 39 03.4	
	comp=Z,28nm,1.6s						
PD31	**Pinedale Array**	**85.78**	**326**	IAmb	IAmb	04 39 03.4	
	comp=Z,27nm,1.6s						
PDAR	**Pinedale Array**	**85.78**	**326**	P	**P**	**04 38 58.6**	**0.0**
	comp=Z,2.7nm,0.6s,baz=42,slow=2.4,SNR=14						
PDAR				LR	LR	05 19 53.2	
	comp=Z,431nm,18.0s,baz=20,slow=38						
	comp=Z,2.7nm,0.6s						
E08A	**Dider Farm, El**	**86.31**	**333**	IAmb	IAmb	04 39 05.9	
	comp=Z,18nm,0.9s						
X34A	**Smith Ranch, M**	**86.33**	**313**	IAmb	IAmb	04 39 06.7	
	comp=Z,15nm,0.9s						
ISCO	**Idaho Springs**	**86.37**	**322**	IAmb	IAmb	04 39 07.2	
	comp=Z,25nm,2.0s						
AHID	**Auburn Hatcher**	**86.43**	**327**	IAmb	IAmb	04 39 06.7	
	comp=Z,12nm,1.0s						
MXC	**Moxie City**	**86.64**	**334**	IAmb	IAmb	04 39 07.5	
	comp=Z,10nm,1.0s						
WMOK	**Wichita Mounta**	**86.75**	**314**	IAmb	IAmb	04 39 08.9	
	comp=Z,12nm,0.9s						
BMO	**Blue Mountains**	**87.11**	**332**	IAmb	IAmb	04 39 09.5	
	comp=Z,15nm,0.9s						
O20A	**White River Ci**	**87.32**	**323**	IAmb	IAmb	04 39 11.4	
	comp=Z,14nm,0.9s						
TCUT	**Toone Canyon**	**87.92**	**326**	IAmb	IAmb	04 39 13.9	
	comp=Z,10nm,0.8s						
HVU	**Hansel Valley**	**87.94**	**327**	IAmb	IAmb	04 39 11.1	
	comp=Z,9.4nm,1.0s						
BSUT	**Blindstream Ca**	**88.12**	**325**	IAmb	IAmb	04 39 15.6	
	comp=Z,14nm,1.0s						
JLU	**Jordanelle**	**88.36**	**326**	IAmb	IAmb	04 39 13.0	
	comp=Z,10nm,0.9s						
APMT	**Aspermont**	**88.54**	**314**	IAmb	IAmb	04 39 17.4	
	comp=Z,8.7nm,0.7s						
I07A	**Izee**	**88.56**	**333**	IAmb	IAmb	04 39 17.9	
	comp=Z,12nm,1.1s						
P18A	**Preston Nutter**	**88.63**	**324**	IAmb	IAmb	04 39 17.2	
	comp=Z,14nm,1.0s						
BGU	**Big Grassy Mou**	**88.76**	**327**	IAmb	IAmb	04 39 18.3	
	comp=Z,15nm,1.0s						
J08A	**Circle Bar Ran**	**88.82**	**332**	IAmb	IAmb	04 39 18.2	
	comp=Z,12nm,1.2s						
MPU	**Maple Canyon**	**88.92**	**325**	IAmb	IAmb	04 39 19.4	
	comp=Z,8.7nm,1.1s						
H04A	**Detroit Lake**	**88.94**	**335**	IAmb	IAmb	04 39 16.6	
	comp=Z,13nm,0.9s						
I05D	**Terrebonne, OR**	**88.97**	**334**	IAmb	IAmb	04 39 16.3	
	comp=Z,10nm,1.0s						
SN07	**Snyder 07**	**89.14**	**314**	IAmb	IAmb	04 39 19.4	
	comp=Z,8.9nm,0.6s						
SN05	**Snyder 5**	**89.30**	**314**	IAmb	IAmb	04 39 22.5	
	comp=Z,9.6nm,0.8s						
PINE	**Pine Mountain**	**89.31**	**333**	IAmb	IAmb	04 39 18.7	
	comp=Z,15nm,0.9s						
PV05	**Paradox Valley**	**89.37**	**323**	IAmb	IAmb	04 39 21.1	
	comp=Z,13nm,1.0s						
BRDY	**Brady**	**89.45**	**312**	IAmb	IAmb	04 39 23.8	
	comp=Z,9.5nm,0.9s						
Q16A	**Castle Valley**	**89.63**	**325**	IAmb	IAmb	04 39 22.4	
	comp=Z,10nm,1.0s						
WVOR	**Wild Horse Val**	**89.68**	**331**	IAmb	IAmb	04 39 22.6	
	comp=Z,10nm,1.0s						
MVCO	**Mesa Verde**	**89.79**	**322**	IAmb	IAmb	04 39 23.1	
	comp=Z,28nm,1.6s						
ELK	**Elko**	**89.82**	**328**	P	**P**	**04 39 18.4**	**+0.4**
	comp=Z,5.6nm,1.0s,baz=20,slow=1.7,SNR=13						
ELK				LR	LR	05 20 32.7	
	comp=Z,790nm,21.1s,baz=32,slow=36						
	comp=Z,5.6nm,1.0s						
MVU	**Marysvale**	**90.43**	**325**	IAmb	IAmb	04 39 26.4	
	comp=Z,8.8nm,0.9s						
JCT	**Junction City**	**90.51**	**312**	IAmb	IAmb	04 39 28.8	
	comp=Z,9.3nm,0.8s						
ANMO	**Albuquerque**	**90.61**	**319**	P	**P**	**04 39 23.2**	**+1.4**
ANMO	**Albuquerque**	**90.61**	**319**	P	**P**	**04 39 22.4**	**+0.6**
	comp=Z,1.9nm,0.7s,baz=169,slow=7.1,SNR=9.9						
ANMO				LR	LR	05 21 31.4	
	comp=Z,525nm,18.1s,baz=146,slow=37						
	comp=Z,1.9nm,0.7s						
ANMO	**Albuquerque**	**90.61**	**319**	P	**P**	**04 39 23.2**	**+1.4**
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BBOR	**Butler Butte**	**90.70**	**334**	IAmb	IAmb	04 39 26.5	
	comp=Z,14nm,0.9s						
ROSC	**El Rosal**	**90.76**	**277**	LR	LR	05 17 52.5	
	comp=Z,97nm,21.1s,baz=43,slow=34						
SPR3	**Spring Creek 3**	**90.92**	**327**	IAmb	IAmb	04 39 29.7	
	comp=Z,18nm,1.3s						
PSUT	**Pine Spring**	**91.11**	**326**	IAmb	IAmb	04 39 29.8	
	comp=Z,13nm,1.0s						
LEM	**Lembang**	**91.99**	**97**	LR	LR	05 24 09.2	
	comp=Z,142nm,19.0s,baz=334,slow=38						
PECS	**Pecos**	**92.07**	**315**	IAmb	IAmb	04 39 35.4	
	comp=Z,12nm,1.0s						
U15A	**North Rim**	**92.18**	**324**	IAmb	IAmb	04 39 34.1	
	comp=Z,12nm,1.1s						
SAND	**Sanderson**	**92.21**	**313**	IAmb	IAmb	04 39 34.6	
	comp=Z,8.0nm,0.7s						
PAHR	**Pah Rah Range**	**92.33**	**330**	IAmb	IAmb	04 39 35.4	
	comp=Z,10nm,1.1s						
PRN	**Pahroc Range**	**92.57**	**326**	IAmb	IAmb	04 39 41.0	
	comp=Z,7.5nm,1.1s						
MNTX	**Cornudas Mount**	**92.62**	**316**	IAmb	IAmb	04 39 35.8	
	comp=Z,12nm,1.4s						
NVAR	**Mina Array Bea**	**93.02**	**329**	P	**P**	**04 39 33.6**	**+0.7**
	comp=Z,1.5nm,0.9s,baz=30,slow=4.0,SNR=7.6						
NVAR				LR	LR	05 24 53.6	
	comp=Z,659nm,18.2s,baz=21,slow=38						
	comp=Z,1.5nm,0.9s						
VHRN	**Van Horn**	**93.12**	**316**	IAmb	IAmb	04 39 37.4	
	comp=Z,12nm,1.6s						
LHV	**Little Huntoon**	**93.25**	**329**	IAmb	IAmb	04 39 40.6	
	comp=Z,13nm,1.2s						
WAKR	**Walker**	**93.40**	**330**	IAmb	IAmb	04 39 37.4	
	comp=Z,5.6nm,0.9s						
X16A	**Lo Mia Camp, P**	**93.45**	**322**	IAmb	IAmb	04 39 40.8	
	comp=Z,13nm,1.4s						
TX31	**Lajitas Ar. Si**	**93.54**	**314**	IAmb	IAmb	04 39 40.3	
	comp=Z,7.8nm,0.8s						
TXAR	**Lajitas Array**	**93.54**	**314**	P	**P**	**04 39 35.8**	**+0.5**
	comp=Z,6.6nm,0.7s,baz=68,slow=3.2,SNR=31						
TXAR				LR	LR	05 21 59.8	
	comp=Z,211nm,20.9s,baz=42,slow=36						
	comp=Z,6.6nm,0.7s						
AFDM	**Forest Hills D**	**93.59**	**331**	IAmb	IAmb	04 39 37.0	
	comp=Z,9.4nm,1.3s						
DSP	**Deep Springs**	**93.80**	**328**	IAmb	IAmb	04 39 42.4	
	comp=Z,6.3nm,1.0s						
V12A	**Nelson**	**93.90**	**325**	IAmb	IAmb	04 39 42.6	
	comp=Z,8.7nm,1.1s						
SIV	**San Ignacio**	**94.17**	**253**	LR	LR	05 21 23.4	
	comp=Z,174nm,21.1s,baz=104,slow=35						
GWY	**Greenwater Val**	**94.29**	**327**	IAmb	IAmb	04 39 44.6	
	comp=Z,8.8nm,0.9s						
TUC	**Tucson**	**94.86**	**321**	P	**P**	**04 39 42.4**	**+1.1**
TUC	**Tucson**	**94.86**	**321**	P	**P**	**04 39 42.4**	**+1.1**
TUC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
JTS	**Las Juntas de**	**95.09**	**288**	LR	LR	05 22 48.7	
	comp=Z,83nm,18.0s,baz=32,slow=36						
ISA	**Isabella, Lake**	**95.48**	**328**	IAmb	IAmb	04 39 50.2	
	comp=Z,12nm,1.1s						
PFO	**Pinyon Flats O**	**96.39**	**325**	P	**P**	**04 39 49.5**	**+1.2**
PFO				IAmb	IAmb	04 39 54.0	
	comp=Z,7.0nm,1.0s						
PFO	**Pinyon Flats O**	**96.39**	**325**	P	**P**	**04 39 48.7**	**+0.4**
	comp=Z,5.8nm,1.0s,baz=40,slow=4.1,SNR=9.5						
PFO				LR	LR	05 26 38.2	
	comp=Z,411nm,18.7s,baz=32,slow=38						
	comp=Z,5.8nm,1.0s						
DAV	**Davao City (W)**	**96.58**	**75**	LR	LR	05 28 13.2	
	comp=Z,143nm,21.2s,baz=344,slow=38						
YUH	**Yuha Desert**	**96.97**	**324**	IAmb	IAmb	04 39 56.8	
	comp=Z,11nm,1.4s						
CMIG	**Matias Romero**	**97.31**	**300**	LR	LR	05 25 13.5	
	comp=Z,154nm,19.2s,baz=31,slow=36						
CPUP	**Villa Florida**	**98.27**	**243**	LR	LR	05 25 05.0	
	comp=Z,66nm,22.0s,baz=274,slow=36						
LPAZ	**La Paz**	**99.56**	**257**	LR	LR	05 26 38.0	
	comp=Z,130nm,18.4s,baz=57,slow=36						
SYO	**Syowa Base**	**110.04**	**173**	⇓*e*Pdiff	**Pdif**	**04 40 50.6**	**+2.8**
SYO	**Syowa Base**	**110.04**	**173**	⇓*e*pPdiff	pPdif	04 40 54.2	+2.6
PLCA	**Paso Flores**	**115.69**	**237**	PKP	**PKiKP**	**04 45 01.2**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=138,slow=5.9,SNR=3.9						
WRA	**Warramunga Arr**	**120.41**	**91**	PKP	**PKPdf**	**04 45 09.6**	**-1.2**
	comp=Z,3.3nm,0.9s,baz=299,slow=2.0,SNR=12						
ASAR	**Alice Springs**	**122.20**	**95**		**PKPdf**	**04 45 12.9**	**-1.2**
ASAR	**Alice Springs**	**122.20**	**95**	PKP	**PKPdf**	**04 45 13.1**	**-1.0**
	comp=Z,8.0nm,0.7s,baz=314,slow=1.5,SNR=63						
QSPA	**South Pole Qui**	**130.31**	**180**		**PKPdf**	**04 45 27.4**	**-0.9**
QSPA	**South Pole Qui**	**130.31**	**180**	PKP	**PKPdf**	**04 45 27.3**	**-1.0**
	comp=Z,5.8nm,1.1s,baz=123,slow=0.3,SNR=6.3						
STKA	**Stephens Creek**	**132.25**	**99**	PKP	**PKPdf**	**04 45 32.1**	**-0.9**
	comp=Z,5.4nm,0.7s,baz=336,slow=5.7,SNR=13						
DZM	**Mont Dzumac**	**145.69**	**68**	PKPbc	**PKPab**	**04 45 59.4**	**+0.9**
	comp=Z,9.1nm,0.8s,baz=195,slow=21,SNR=5.3						

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*SKO **01** 04:31:44.9, 40°.48N×20°.87E, h12^{km}, ML3.2*

*ATH **01** 04:31:44.5, 40°.44N×21°.00E, h7^{km}±1^{km}, ML3.2/6, Manual Solution by G.Panopoulou First location: 2019/06/01 04:33:11, This location: 2019/06/01 07:03:57 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

ISC 01 04:31:43.5±1.2, **40°.46N**±0°.02×**20°.89E**±0°.03, **h1**^{km}±13^{km}, **n35**, σ**1^{s}.18**/47, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEST	**Nestorio**	**0.13**	**110**	P	**Pg**	**04 31 46.6**	**+0.6**
NEST				S	**Sg**	**04 31 49.0**	**+1.2**
PENT	**Pentalofos**	**0.33**	**144**	P	**Pg**	**04 31 49.1**	**-0.6**
PENT				S	**Sg**	**04 31 53.8**	**-0.2**
KPRO	**Kipourio**	**0.62**	**144**	P	**Pg**	**04 31 54.7**	**-0.7**
KPRO				S	**Sg**	**04 32 02.1**	**-1.4**
AMYA	**Amyntaio**	**0.65**	**69**	P	**Pg**	**04 31 55.6**	**-0.2**
AMYA				S	**Sg**	**04 32 03.3**	**-0.9**
OHR	**Ohrid**	**0.65**	**354**	*e*Pg	**Pg**	**04 31 55.4**	**-0.7**
OHR				*e*Sg	**Sg**	**04 32 05.0**	**+0.5**
OHR				*e*Lg	Lg	04 32 06.1	
	comp=N,1µm,0.8s						
OHR				*e*Lg	Lg	04 32 06.2	
	comp=E,2µm,0.7s						
KZN	**Kozani**	**0.69**	**103**	P	**Pg**	**04 31 55.7**	**-1.1**
NASA	**Naoussa**	**0.92**	**79**	P	**Pg**	**04 32 00.6**	**-0.4**
IGT	**Igoumenitsa**	**1.02**	**205**	*e*Pg	**Pg**	**04 32 00.7**	**-2.3**
IGT				*e*Lg	Lg	04 32 04.3	
IGT				*i* Sg	**Sg**	**04 32 18.1**	**+1.9**
IGT	**Igoumenitsa**	**1.02**	**205**	P	**Pg**	**04 32 04.1**	**+1.1**
KEK	**Kerkira**	**1.12**	**229**	P	**Pb**	**04 32 06.5**	**+0.9**
TETR	**Tetrakomo, Epi**	**1.15**	**165**	P	**Pn**	**04 32 07.0**	**+0.1**
TETR				S	**Sg**	**04 32 20.6**	**0.0**
TIR	**Tirane**	**1.18**	**319**	*e*Pg	**Pb**	**04 32 05.2**	**-1.5**
TIR				*e*Sg	**Sn**	**04 32 25.2**	**+1.4**
TYRN	**Tyrnavos**	**1.27**	**126**	P	**Pn**	**04 32 07.1**	**-1.3**
VAY	**Valandovo**	**1.54**	**55**	*i* Pg	**Pn**	**04 32 11.6**	**-0.5**
VAY				*i* Sg	**Sg**	**04 32 36.2**	**+3.3**
VAY				*e*Lg	Lg	04 32 37.1	
	comp=N,332nm,0.9s						
VAY				*e*Lg	Lg	04 32 38.1	
	comp=E,136nm,0.6s						
SKO	**Skopje**	**1.57**	**15**	*e*Pg	**Pn**	**04 32 12.1**	**-0.4**
SKO				*i* Sg	**Sb**	**04 32 33.8**	**+0.2**
THE	**Thessaloniki**	**1.59**	**83**	*e*Pg	**Pn**	**04 32 12.7**	**-0.1**
THE				*i* Sg	**Sg**	**04 32 35.1**	**+0.4**
THE	**Thessaloniki**	**1.59**	**83**	P	**Pn**	**04 32 11.5**	**-1.3**
KNT	**Kendrikon**	**1.68**	**65**	*e*Pn	**Pn**	**04 32 13.7**	**-0.3**
KNT				*e*Sg	**Sg**	**04 32 40.8**	**+3.4**
KNT	**Kendrikon**	**1.68**	**65**	P	**Pn**	**04 32 13.5**	**-0.5**
LKD2	**Lefkada island**	**1.68**	**186**	P	**Pn**	**04 32 13.4**	**-0.7**
HORT	**Hortiatis**	**1.69**	**85**	P	**Pn**	**04 32 12.9**	**-1.4**
EVR	**Evrytania**	**1.70**	**155**	P	**Pn**	**04 32 14.1**	**-0.3**
NYDR	**Nydri-Lefkada**	**1.75**	**185**	P	**Pn**	**04 32 14.9**	**-0.1**
AGG	**Agios Georgios**	**1.82**	**142**	P	**Pn**	**04 32 15.5**	**-0.4**
EVGI	**Lefkada island**	**1.85**	**186**	P	**Pn**	**04 32 16.1**	**-0.2**
SOH	**Sokhos**	**1.91**	**78**	P	**Pn**	**04 32 15.9**	**-1.4**
ULC	**Ulcinj**	**1.95**	**321**	*e*Pn	**Pn**	**04 32 16.9**	**-0.9**
PLG	**Polygyros**	**1.96**	**92**	P	**Pn**	**04 32 16.1**	**-1.7**
FSK	**Fiskardo**	**2.02**	**187**	P	**Pn**	**04 32 18.9**	**+0.2**
ANX	**Ano Chora**	**2.03**	**156**	P	**Pn**	**04 32 18.9**	**0.0**
EFP	**Efpalio**	**2.18**	**158**	P	**Pn**	**04 32 21.1**	**+0.3**
KKB	**Krupnik**	**2.18**	**50**	*e*Pn	**Pn**	**04 32 21.9**	**+1.0**
SERG	**Sergoula**	**2.24**	**156**	P	**Pn**	**04 32 21.4**	**-0.3**
AXS	**Araxos**	**2.29**	**170**	P	**Pn**	**04 32 22.2**	**-0.2**
BARS	**Barje**	**2.45**	**16**	*e*Pn	**Pn**	**04 32 23.4**	**-1.3**

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*IDC **01** 04:32:42.7±1.9, 40°.35N×20°.96E, h0^{km}, mb3.6/4, mbtmp3.6/5, ML3.9/1, Error ellipse: s-maj=42.1km s-min=30.7km az=10.0*

*NEIC **01** 04:32:48.3±1.8, 40°.66N±0°.04×20°.60E±0°.05, h10^{km}±1^{km}, mb4.3/10, Error ellipse: s-maj=8.3km s-min=5.2km az=35.0*

ISC 01 04:32:46.8±0.7, **40°.64N**±0°.06×**20°.65E**±0°.08, **h7**^{km}, **n38**, σ**1^{s}.35**/37, **mb4.1**/7, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.92**	**320**		**Pn**	**04 33 06.8**	**+0.6**
KEK	**Kerkira**	**1.13**	**215**		**Pn**	**04 33 10.3**	**+1.2**
ITM	**Ithomi**	**3.59**	**164**	Pn	**Pn**	**04 33 44.2**	**+1.3**
SGRT	**San Giovanni R**	**3.87**	**288**		**Pn**	**04 33 46.7**	**0.0**
CEL	**Celeste**	**4.38**	**239**		**Pn**	**04 33 52.8**	**-1.0**
PAOL	**Paolisi**	**4.63**	**277**		**Pn**	**04 33 58.6**	**+1.4**
CAMP	**Campotosto**	**5.75**	**292**		**Pn**	**04 34 13.9**	**+1.2**
NRCA	**Norcia**	**6.05**	**294**	Pn	**Pn**	**04 34 17.2**	**+0.5**
FDMO	**Fiordimonte**	**6.13**	**295**	Pn	**Pn**	**04 34 18.1**	**+0.3**
MLR	**Muntele Rosu**	**6.21**	**37**	Pn	**Pn**	**04 34 21.0**	**+2.1**
MANT	**Manisa**	**6.48**	**107**	Pn	**Pn**	**04 34 24.2**	**+1.4**
MURB	**Monte Urbino**	**6.60**	**296**	Pn	**Pn**	**04 34 25.3**	**+1.0**
TIRR	**Tirgusor**	**6.89**	**54**	Pn	**Pn**	**04 34 28.2**	**+0.1**
TRI	**Trieste**	**7.14**	**317**	Pn	**Pn**	**04 34 32.3**	**+0.7**
KARP	**Karpathos**	**7.22**	**133**	Pn	**Pn**	**04 34 33.0**	**+0.2**
SABO	**M.te Sabotino**	**7.41**	**318**	Pn	**Pn**	**04 34 36.1**	**+0.8**
TEOL	**Teolo**	**8.10**	**309**		**Pn**	**04 34 45.4**	**+0.7**
CTI	**Castel Tesino**	**8.50**	**312**	Pn	**Pn**	**04 34 49.9**	**-0.4**
MSSA	**Maissana**	**9.01**	**298**	Pn	**Pn**	**04 34 57.6**	**+0.3**
SENIN	**Lac Senin/Sane**	**11.25**	**305**	Pn	**Pn**	**04 35 29.1**	**+0.9**
ESBB	**Sonseca Array**	**18.83**	**275**	P	**P**	**04 37 04.0**	**-3.0**
ESDC	**Sonseca Array**	**18.83**	**275**	P	**P**	**04 37 07.2**	**+0.1**
ESDC	**Sonseca Array**	**18.83**	**275**	P	**P**	**04 37 06.7**	**-0.4**
	0.1nm,0.3s,baz=76,slow=10,SNR=5.6						
	0.7nm,0.8s						
HFS	**Hagfors**	**19.99**	**350**	P	Pn	04 37 20.9	-0.5
	1.2nm,0.6s,baz=171,slow=10,SNR=4.3						
	1.2nm,0.6s						
NC602	**NORSAR Array S**	**20.89**	**347**	P	**P**	**04 37 28.8**	**-0.6**
NC602				IAmb	IAmb	04 37 32.1	
	comp=Z,5.9nm,1.1s						
FINES	**FINESS Array B**	**21.09**	**7**	P	**P**	**04 37 31.6**	**+0.1**
FINES	**FINESS Array B**	**21.09**	**7**	P	**P**	**04 37 30.3**	**-1.2**
	comp=Z,4.2nm,1.0s,baz=180,slow=9.1,SNR=3.8						
	comp=Z,4.2nm,1.0s						
EKA	**Eskdalemuir Ar**	**21.53**	**321**	P	**P**	**04 37 37.0**	**+0.8**
	comp=Z,1.4nm,0.7s,baz=110,slow=9.7,SNR=4.1						
	comp=Z,1.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**32.03**	**217**	P	**P**	**04 39 13.3**	**-0.7**
TORD				IAmb	IAmb	04 39 26.1	
	comp=Z,3.2nm,1.4s						
DBIC	**Dimbokro**	**40.79**	**221**	P	**P**	**04 40 29.6**	**+0.8**
MKAR	**Makanchi Array**	**43.97**	**61**	P	**P**	**04 40 55.9**	**+1.4**
MKAR	**Makanchi Array**	**43.97**	**61**	P	**P**	**04 40 51.1**	**-3.4**
	comp=Z,0.8nm,0.7s,baz=276,slow=6.2,SNR=4.1						
	comp=Z,0.8nm,0.7s						
DOT	**Dot Lake**	**75.34**	**353**	P	**P**	**04 44 31.7**	**+1.2**
DOT				IAmb	IAmb	04 44 32.9	
	comp=Z,1.9nm,0.9s						
USRK	**Ussuriysk Ar.**	**75.43**	**44**	P	**P**	**04 44 30.7**	**-0.5**
M29M	**Somme Creek**	**75.89**	**350**	P	**P**	**04 44 34.1**	**+0.4**
EGMT	**Eagleton**	**81.39**	**329**	P	**P**	**04 45 05.1**	**+0.9**
EGMT				IAmb	IAmb	04 45 05.8	
	comp=Z,4.1nm,0.8s						
YNE	**Yellowstone No**	**83.94**	**327**	P	**P**	**04 45 19.2**	**+1.4**
YNE				IAmb	IAmb	04 45 31.9	
	comp=Z,3.6nm,1.1s						
ASAR	**Alice Springs**	**122.31**	**95**	PKP	**PKPdf**	**04 51 39.2**	**-3.5**
	comp=Z,0.3nm,0.6s,baz=311,slow=1.5,SNR=4.9						

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*NEIC **01** 04:32:54.2±2.0, 17°.4S±0°.1×178°.7W±0°.1, h538^{km}±8^{km}, mb4.2/26, Error ellipse: s-maj=20.4km s-min=10.9km az=144.0*

*IDC **01** 04:32:55.3±3.3, 17°.38S×178°.84W, h550^{km}±36^{km}, mb3.3/11, mbtmp4.2/11, Error ellipse: s-maj=19.9km s-min=14.5km az=147.0*

ISC 01 04:32:54.0±0.5, **17°.32S**±0°.10×**178°.76W**±0°.10, **h539**^{km}, **n52**, σ**0^{s}.78**/53, **mb4.2**/23, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUTU	**Fugatoga**	**3.06**	**12**	P	**P**	**04 34 08.7**	**+0.1**
MSVF	**Nonsavu**	**3.07**	**262**	P	**P**	**04 34 10.7**	**+2.1**
NIUE	**Niue**	**8.58**	**103**	P	**P**	**04 34 55.9**	**-1.3**
FUNA	**Funafuti**	**8.96**	**347**	P	**P**	**04 34 59.6**	**-1.6**
ARMA	**Armidale**	**29.95**	**239**	P	**P**	**04 38 19.3**	**+0.5**
WHZ	**Wether Hill Ro**	**30.57**	**198**	P	**P**	**04 38 23.1**	**-0.6**
TOO	**Toolangi**	**37.28**	**230**	P	**P**	**04 39 20.9**	**+0.6**
STKA	**Stephens Creek**	**38.62**	**240**	P	**P**	**04 39 31.8**	**+0.6**
STKA	**Stephens Creek**	**38.62**	**240**	P	**P**	**04 39 31.4**	**+0.1**
	1.9nm,0.3s,baz=98,slow=10,SNR=6.9						
	1.9nm,0.3s						
BBOO	**Buckleboo**	**43.40**	**240**	P	**P**	**04 40 09.2**	**+0.1**
BBOO				IAmb	IAmb	04 40 10.2	
	comp=Z,6.2nm,0.8s						
WR8	**Warramunga Arr**	**44.26**	**259**	P	**P**	**04 40 15.4**	**-0.6**
WR8				IAmb	IAmb	04 40 29.1	
	comp=Z,14nm,1.5s						
WB0	**Warramunga Arr**	**44.37**	**259**	P	**P**	**04 40 16.5**	**-0.5**
WB0				IAmb	IAmb	04 40 36.2	
	comp=Z,9.9nm,1.1s						
WRA	**Warramunga Arr**	**44.41**	**259**	P	**P**	**04 40 16.6**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=97,slow=7.7,SNR=12						
WRA				PcP	**PcP**	**04 41 49.4**	**+0.1**
	comp=Z,1.2nm,0.9s,baz=98,slow=5.0,SNR=3.0						
	comp=Z,0.6nm,0.3s						
AS31	**Alice Springs**	**44.63**	**254**	P	**P**	**04 40 18.9**	**+0.1**
AS31				IAmb	IAmb	04 40 19.3	
	comp=Z,3.2nm,0.5s						
ASAR	**Alice Springs**	**44.63**	**254**	P	**P**	**04 40 18.4**	**-0.5**
ASAR	**Alice Springs**	**44.63**	**254**	P	**P**	**04 40 18.8**	**-0.1**
	comp=Z,7.3nm,0.3s,baz=89,slow=8.1,SNR=127						
ASAR				PcP	**PcP**	**04 41 50.2**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=99,slow=3.9,SNR=5.7						
ASAR				S	**S**	**04 46 14.7**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=91,slow=14,SNR=2.0						
	comp=Z,7.3nm,0.3s						
FORT	**Forrest**	**49.96**	**244**	P	**P**	**04 40 58.3**	**-0.5**
FORT				IAmb	IAmb	04 40 59.2	
	comp=Z,9.4nm,0.7s						
KNRA	**Kununurra**	**50.22**	**264**	P	**P**	**04 41 01.1**	**+0.3**
FITZ	**Fitzroy Crossi**	**52.79**	**260**	P	**P**	**04 41 20.1**	**+0.7**
PSA00	**Pilbara Seismi**	**57.73**	**255**	P	**P**	**04 41 53.1**	**-0.7**
PSA00				IAmb	IAmb	04 41 58.8	
	comp=Z,15nm,1.4s						
PSA00	**Pilbara Seismi**	**57.73**	**255**	P	**P**	**04 41 53.5**	**-0.4**
PSA00				IAmb	IAmb	04 41 56.6	

	comp=Z,39nm,1.4s						
MORW	**Morawa**	60.41	246	P	P	04 42 10.9	-0.8
MORW				IAmb	IAmb	04 42 17.6	
	comp=Z,15nm,1.2s						
SBA	**Scott Base**	60.98	183	P	P	04 42 16.2	+1.7
VNDA	**Vanda**	61.00	185	P	P	04 42 15.2	+0.6
VNDA	**Vanda**	61.00	185	P	P	04 42 15.0	+0.4
	comp=Z,1.0nm,0.8s,baz=349,slow=7.1,SNR=5.2						
	comp=Z,1.0nm,0.8s						
QSPA	**South Pole Qui**	72.73	180	P	P	04 43 27.3	+0.1
QSPA				IAmb	IAmb	04 43 28.1	
	comp=Z,6.4nm,0.9s						
QSPA	**South Pole Qui**	72.73	180	P	P	04 43 27.3	+0.1
	comp=Z,4.7nm,0.6s,baz=270,slow=0.4,SNR=41						
	comp=Z,4.7nm,0.6s						
NVAR	**Mina Array Bea**	79.24	44	P	P	04 44 04.2	+0.5
	comp=Z,0.4nm,0.6s,baz=260,slow=5.2,SNR=3.0						
	comp=Z,0.4nm,0.6s						
J05D	**Fort Rock, OR**	80.08	39	P	P	04 44 08.9	+0.9
J16K	**Anvik River**	81.59	8	P	P	04 44 16.4	+1.3
J16K				IAmb	IAmb	04 44 58.1	
	comp=Z,6.2nm,0.9s						
J18K	**Innoko River**	82.34	10	P	P	04 44 19.3	+0.4
BELA	**Belgrano 2**	82.79	173	P	P	04 44 20.4	-0.7
BELA				IAmb	IAmb	04 44 21.1	
	comp=Z,8.1nm,0.8s						
CAST	**Castle Rocks**	83.12	12	P	P	04 44 21.8	-1.1
CAST				IAmb	IAmb	04 45 04.8	
	comp=Z,5.1nm,0.8s						
TRF	**Thorofare Moun**	83.51	12	P	P	04 44 24.3	-0.7
TRF				IAmb	IAmb	04 45 04.0	
	comp=Z,5.1nm,0.9s						
MAW	**Mawson**	84.30	200	P	P	04 44 28.8	+0.1
	comp=Z,3.1nm,0.6s,baz=140,slow=9.2,SNR=10.0						
	comp=Z,3.1nm,0.6s						
ILAR	**Eielson Array**	85.39	13	P	P	04 44 33.7	-0.3
	comp=Z,0.3nm,0.4s,baz=224,slow=5.0,SNR=9.4						
	comp=Z,0.3nm,0.4s						
J26L	**Joseph Creek**	85.92	14	P	P	04 44 36.5	-0.1
J26L				IAmb	IAmb	04 44 55.5	
	comp=Z,6.1nm,0.8s						
TXAR	**Lajitas Array**	85.97	58	P	P	04 44 39.2	+1.5
	comp=Z,0.9nm,0.8s,baz=216,slow=6.4,SNR=8.2						
	comp=Z,0.9nm,0.8s						
PDAR	**Pinedale Array**	87.16	44	P	P	04 44 43.2	0.0
PDAR	**Pinedale Array**	87.16	44	P	P	04 44 43.5	+0.3
	comp=Z,0.5nm,0.6s,baz=209,slow=4.6,SNR=4.9						
	comp=Z,0.5nm,0.6s						
SNAA	**Sanae**	91.19	179	P	P	04 45 00.4	-0.8
SNAA				IAmb	IAmb	04 45 02.6	
	comp=Z,6.5nm,1.3s						
SNAA	**Sanae**	91.19	179	P	P	04 45 00.2	-1.1
	comp=Z,1.1nm,0.4s,baz=90,slow=1.0,SNR=9.6						
	comp=Z,1.1nm,0.4s						
BVAR	**Borovoye Array**	116.18	321	PKP	PKPdf	04 50 35.0	-0.8
	comp=Z,0.5nm,0.3s,baz=350,slow=1.8,SNR=3.9						
ILGA	**Ilgaz**	143.42	317	PKPdf	PKPdf	04 51 27.8	+0.1
BRTR	**Keskin Array B**	144.13	315	PKPbc	PKPbc	04 51 28.5	+0.1
BRTR	**Keskin Array B**	144.13	315	PKP	PKPbc	04 51 28.8	+0.3
	comp=Z,0.5nm,0.4s,baz=133,slow=3.6,SNR=7.0						
CLL	**Collm**	144.82	347	*i* PKPbc	PKPdf	04 51 30.0	+0.5
	comp=Z,4.0nm,0.8s						
MMAI	**Mount Meron Ar**	145.54	304	PKPbc	PKPdf	04 51 32.3	+0.9
	comp=Z,2.1nm,0.5s,baz=55,slow=7.6,SNR=4.4						
GERES	**GERESS Array B**	146.96	345	PKPbc	PKPbc	04 51 36.5	+0.2
	comp=Z,1.0nm,0.6s,baz=41,slow=4.3,SNR=8.0						
DAVOX	**Davos/Dischmat**	149.76	348	PKPbc	PKPbc	04 51 44.0	+0.6
	comp=Z,7.0nm,0.6s,baz=233,slow=5.1,SNR=13						
FUORN	**Ofenpass-Fuorn**	149.84	348		PKPbc	04 51 44.2	+0.5
TUE	**Stuetta**	150.16	349	PKPbc	PKPbc	04 51 44.8	+0.4

BJI ***01*** *04:33:01.3, 40°.33N×20°.42E, h10^{km}, mB4.8/14, mb4.6/39, Ms5.0/17, Ms7 4.7/17*

NAO ***01*** *04:33:01.8, 40°.36N×22°.75E, h10^{km}, mb4.3*

IDC ***01*** *04:33:05.0±0.4, 40°.46N×20°.85E, h0^{km}, mb4.5/31, mbtmp4.5/45, ML4.1/11, Error ellipse: s-maj=9.5km s-min=8.6km az=151.0*

GCMT ***01*** *04:33:05.9±0.2, 40°.51N±0°.02×20°.77E±0°.02, h18^{km}, MW5.0/122, Moment Tensor Solution. s36,c40; s122,c194; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.74±.19; $M_{\theta\theta}$1.20±.12; $M_{\phi\phi}$2.54±.11; $M_{r\theta}$0.59±.28; $M_{\theta\phi}$1.48±.06; $M_{\phi r}$-0.09±.22; Best double couple: $M_0$3.66100×10^{16} NP1:ϕ_s25.00000°,δ44.00000°, λ-101.00000°. NP2:ϕ_s220.00000°,δ47.00000°, λ-80.00000°. Principal axes: T 3.5030, Plg2.0000°, Azm303.0000°; N 0.3170, Plg8.0000°, Azm33.0000°; P -3.8200, Plg82.0000°, Azm199.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

TIR ***01*** *04:33:06.5, 40°.50N×20°.77E, h3^{km}±1^{km}, Ml4.9/9*

PRU ***01*** *04:33:06.3, 40°.07N×20°.40E, h10^{km}, M5.0*

MOS ***01*** *04:33:06.0±1.2, 40°.50N×20°.76E, h13^{km}, mb4.9/24, MS4.4/5, Error ellipse: s-maj=4.2km s-min=2.7km az=81.0*

MCSM ***01*** *04:33:07.8±0.3, 40°N±2°×2°1E±°, h10^{km}±2^{km}, mB5.8, mb4.8, MLv5.1, Mw(mB)5.3*

NEIC ***01*** *04:33:07.9±1.9, 40°.64N±0°.04×20°.77E±0°.06, h10^{km}±1^{km}, mb4.9/234, Mww4.9/48, Error ellipse: s-maj=7.8km s-min=6.5km az=80.0*

BEO ***01*** *04:33:07.5±0.5, 40°.46N×20°.94E, h12^{km}±2^{km}, ML4.6/11*

ATH ***01*** *04:33:07.5, 40°.56N×20°.91E, h5^{km}±1^{km}, ML4.7/32, Manual Solution by G.Panopoulou First location: 2019/06/01 04:34:41, This location: 2019/06/04 08:01:10 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

SKO ***01*** *04:33:08.8, 40°.53N×20°.94E, h1^{km}, ML4.8*

THE ***01*** *04:33:08.5, 41°N±1°×2°1E±°, h0^{km}±1^{km}, M4.5/18, MLh4.5/18*

NEIC ***01*** *04:33:08, 40°.43N×20°.79E, h16^{km}, Moment Tensor Solution. Duration: 1^{s}5 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.87; $M_{\theta\theta}$0.68; $M_{\phi\phi}$2.19; $M_{r\theta}$-0.92; $M_{\theta\phi}$1.10; $M_{\phi r}$-0.81; Fault plane solution: $M_0$3.08000×10^{16} NP1: ϕ_s200.47000°,δ34.43000°,λ-102.60000°. NP2: ϕ_s35.63000°,δ56.51000°,λ-81.50000°. Principal axes: T 2.9974, Plg11.0000°, Azm120.0000°; N 0.1565, Plg7.0000°, Azm211.0000°; P -3.1538, Plg77.0000°, Azm333.0000°;*

NEIC ***01*** *04:33:08, 40°.63N×20°.79E, h16^{km}*

PDG ***01*** *04:33:08.5±1.1, 40°.51N×20°.87E, h14^{km}±2^{km}, MD5.1/10, ML5.0/12, Error ellipse: s-maj=1.0km s-min=1.3km az=0.0*

MED_RC ***01*** *04:33:09.0±0.2, 40°.46N×20°.79E, h16^{km}, MW4.9/45, Moment Tensor Solution.Mantle waves: s45,c65; Duration: 1^{s}3 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.09±.16; $M_{\theta\theta}$0.88±.10; $M_{\phi\phi}$2.21±.09; $M_{r\theta}$-0.66±.31; $M_{\theta\phi}$1.36±.06; $M_{\phi r}$-0.87±.26; Best double couple: $M_0$3.26000×10^{16} NP1:ϕ_s210.00000°,δ35.00000°, λ-93.00000°. NP2:ϕ_s34.00000°,δ55.00000°,λ-88.00000°. Principal axes: T 3.2500, Plg10.0000°, Azm122.0000°; N 0.0400, Plg2.0000°, Azm213.0000°; P -3.2800, Plg80.0000°, Azm312.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=40s.*

AFAD ***01*** *04:33:09.3, 40°.65N×21°.40E, h8^{km}±4^{km}, MW5.1*

ISC 01 04:33:07.2±0.6, **40°.51N**±0°.01×**20°.83E**±0°.02, **h13**^{km}±3^{km}, **n977, σ1^{s}73**/1008, **mb4.8**/159, **MS4.7**/8, **61C-39D,**
Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	0.12	343	Pg	Pg	04 33 09.5	-0.9
KBN				Sg	Sg	04 33 11.0	-1.9
KBN				AML	AML	04 33 12.3	
	2µm,0.5s						
KBN				AML	AML	04 33 12.4	
	2µm,0.4s						
NEST	**Nestorio**	0.19	120	Pg	Pg	04 33 11.3	-0.2
NEST				Sg	Sg	04 33 15.5	+0.9
NEST				AML	AML	04 33 20.0	
	536nm,0.7s						
NEST				AML	AML	04 33 20.2	
	666nm,1.0s						
NEST	**Nestorio**	0.19	120	P	Pg	04 33 11.3	-0.2
NEST				S	Sg	04 33 14.9	+0.3
NEST	**Nestorio**	0.19	120	P	Pg	04 33 11.4	-0.2
PENT	**Pentalofos**	0.39	143	P	Pg	04 33 15.5	+0.4
PENT				S	Sb	04 33 21.6	-0.4
PENT	**Pentalofos**	0.39	143	P	Pg	04 33 14.8	-0.3
LSK	**Leskovik**	0.40	206	Pg	Pg	04 33 14.3	-1.0
LSK				Sg	Sg	04 33 20.1	-0.6
LSK				AML	AML	04 33 31.0	
	539nm,0.6s						
LSK				AML	AML	04 33 35.9	
	620nm,1.3s						
OHR	**Ohrid**	0.60	357	P	Pb	04 33 20.2	+0.6
OHR				S	Sg	04 33 27.7	+0.8
OHR	**Ohrid**	0.60	357	*i* Pg	Pb	04 33 20.0	+0.4
OHR				*i* Sg	Sb	04 33 28.1	0.0
OHR				*e*Lg	Lg	04 33 29.2	
	comp=N,24µm,0.6s						
OHR				*e*Lg	Lg	04 33 29.2	
	comp=E,74µm,0.6s						
OHR	**Ohrid**	0.60	357	P	Pb	04 33 20.2	+0.6
OHR	**Ohrid**	0.60	357	*e*Pg	Pb	04 33 20.1	+0.6
OHR				*e*Sg	Sb	04 33 28.5	+0.5
KPRO	**Kipourio**	0.69	144	P	Pg	04 33 19.8	-0.7
KPRO				S	Sb	04 33 30.7	+0.2
KPRO	**Kipourio**	0.69	144	P	Pg	04 33 20.5	-0.1
KPRO				S	Sb	04 33 30.6	0.0
KZN	**Kozani**	0.74	106	P	Pg	04 33 20.5	-1.2
KZN				S	Sg	04 33 29.7	-1.7
KZN	**Kozani**	0.74	106	P	Pg	04 33 21.9	+0.2
SRN	**Sarande**	0.90	226	Pg	Pg	04 33 23.5	-1.0
SRN				Sg	Sb	04 33 36.8	+0.4
SRN				AML	AML	04 33 38.4	
	comp=E,53nm,0.5s						
NASA	**Naoussa**	0.95	82	P	Pb	04 33 25.0	-0.5
KTI	**Kastanea**	0.99	96	P	Pb	04 33 24.9	-1.3
VLO	**Vlora**	1.02	268	Pn	Pb	04 33 25.9	-0.8
IGT	**Igoumenitsa**	1.05	202	Pn	Pb	04 33 25.8	-1.4
IGT				Sn	Sn	04 33 43.1	+1.0
IGT	**Igoumenitsa**	1.05	202	*i* Pg	Pb	04 33 26.5	-0.7
IGT				*i* Sg	Sn	04 33 43.2	+1.0
IGT	**Igoumenitsa**	1.05	202	P	Pn	04 33 28.9	+1.3
IGT				S	Sn	04 33 43.5	+1.3
TIR	**Tirane**	1.11	319	Pg	Pb	04 33 27.2	-1.1
TIR	**Tirane**	1.11	319	Pn	Pb	04 33 28.1	-0.2
TIR				Sn	Sn	04 33 44.6	+0.9
TIR				AML	AML	04 33 51.7	
	comp=E,62nm,0.7s						
TIR	**Tirane**	1.11	319	⇓P	Pg	04 33 28.6	0.0
TIR	**Tirane**	1.11	319	*i* Pg	Pb	04 33 28.0	-0.3
TIR				*i* Sg	Sn	04 33 48.9	+5.2
TIR	**Tirane**	1.11	319	P	Pg	04 33 28.6	0.0
TIR	**Tirane**	1.11	319	*e*Pg	Pb	04 33 28.1	-0.3
TIR				*e*Sg	Sn	04 33 47.4	+3.7
TIR	**Tirane**	1.11	319	Pg	Pb	04 33 28.0	-0.3
KEK	**Kerkira**	1.12	225	Pn	Pg	04 33 30.9	+2.0
KEK				Sn	Sn	04 33 47.2	+3.2
KEK	**Kerkira**	1.12	225	P	Pg	04 33 31.3	+2.4
KEK	**Kerkira**	1.12	225	P	Pg	04 33 31.2	+2.4
TETR	**Tetrakomo, Epi**	1.21	164	P	Pg	04 33 32.4	+1.8
TETR				S	Sg	04 33 48.5	+2.1
PRGA	**Parga**	1.27	195	P	Pg	04 33 32.5	+0.9
THL	**Klokotos Trika**	1.31	136	P	Pg	04 33 32.7	+0.3
TYRN	**Tyrnavos**	1.34	126	P	Pn	04 33 31.4	-0.1
TYRN	**Tyrnavos**	1.34	126	P	Pb	04 33 32.6	+0.5
GINA	**Giannouli**	1.46	125	P	Pg	04 33 35.1	-0.1
LRSO	**Larissa Observ**	1.46	125	P	Pn	04 33 33.1	-0.1
LRSO	**Larissa Observ**	1.46	125	P	Pb	04 33 34.6	+0.4
SKO	**Skopje**	1.53	17	*i* Pg	Pg	04 33 36.6	+0.1
SKO				*i* Sg	Sg	04 33 56.5	+0.1
VAY	**Valandovo**	1.54	58	⇓*i*Pg	Pb	04 33 35.8	+0.1
VAY				*i* Sg	Sg	04 33 58.9	+2.0
VAY				*e*Lg	Lg	04 34 05.8	
	comp=N,15µm,0.9s						
VAY				*e*Lg	Lg	04 34 06.9	
	comp=E,14µm,1.1s						
AMPL	**Ampelaki**	1.61	169	P	Pg	04 33 38.2	0.0
THE	**Thessaloniki**	1.63	85	Pn	Pn	04 33 36.0	+0.5
THE				AML	AML	04 34 06.8	
	comp=E,36nm,0.9s						
THE	**Thessaloniki**	1.63	85	P	Pn	04 33 35.8	+0.3
THE	**Thessaloniki**	1.63	85	*e*Pg	Pn	04 33 36.2	+0.7
THE				*i* Sg	Sg	04 34 04.1	+4.5
THE	**Thessaloniki**	1.63	85	P	Pn	04 33 36.1	+0.5
THE	**Thessaloniki**	1.63	85	P	Pn	04 33 35.9	+0.4
PUK	**Puka**	1.69	335	Pn	Pg	04 33 39.4	-0.1
PUK				Sn	Sg	04 34 03.1	+1.6
PUK				AML	AML	04 34 06.9	
	comp=E,157nm,0.9s						
PUK				AML	AML	04 34 10.3	
	comp=E,62nm,0.6s						
TSLK	**Tsoukalades, L**	1.69	185	P	Pg	04 33 39.0	-0.6
TSLK	**Tsoukalades, L**	1.69	185	P	Pg	04 33 38.9	-0.8
KNT	**Kendrikon**	1.70	67	P	Pn	04 33 37.5	+1.0
KNT	**Kendrikon**	1.70	67	*e*Pg	Pb	04 33 38.3	+0.1
KNT				*i* Sg	Sg	04 34 02.7	+0.9
KNT	**Kendrikon**	1.70	67	P	Pb	04 33 37.7	-0.5
KNT	**Kendrikon**	1.70	67	P	Pn	04 33 36.9	+0.4
LKD2	**Lefkada island**	1.73	185	Pn	Pg	04 33 40.5	+0.2
LKD2				Sn	Sg	04 34 04.9	+2.2
LKD2				AML	AML	04 34 12.0	
	comp=E,29nm,0.8s						
LKD2	**Lefkada island**	1.73	185	P	Pg	04 33 39.5	-0.8
LKD2	**Lefkada island**	1.73	185	P	Pg	04 33 39.8	-0.5
HORT	**Hortiatis**	1.73	86	P	Pn	04 33 37.3	+0.3
HORT	**Hortiatis**	1.73	86	P	Pn	04 33 37.4	+0.4
EVR	**Evrytania**	1.76	154	P	Pb	04 33 38.7	-0.8
EVR	**Evrytania**	1.76	154	P	Pb	04 33 38.6	-0.8
NYDR	**Nydri-Lefkada**	1.80	183	P	Pb	04 33 40.1	+0.2
MAKR	**Makrakomi, Fth**	1.80	146	P	Pb	04 33 39.9	-0.1
MAKR	**Makrakomi, Fth**	1.80	146	P	Pb	04 33 40.1	+0.1
AGG	**Agios Georgios**	1.88	142	P	Pn	04 33 39.9	+0.8
AGG	**Agios Georgios**	1.88	142	P	Pg	04 33 43.3	0.0
AGG	**Agios Georgios**	1.88	142	P	Pn	04 33 40.3	+1.2
ULC	**Ulcinj**	1.88	321	Pn	Pb	04 33 41.1	-0.3
ULC	**Ulcinj**	1.88	321	*i* Pg	Pb	04 33 41.3	-0.1
ULC	**Ulcinj**	1.88	321	⇓*i*Pn	Pn	04 33 40.0	+0.9
ULC				*i* Sn	Sb	04 34 05.9	+1.0
EVGI	**Lefkada island**	1.89	184	P	Pb	04 33 42.1	+0.5
BCI	**Bajram Curri**	1.94	343	Pn	Pg	04 33 43.8	-0.6
BCI				Sn	Sg	04 34 11.2	+1.6
BCI				AML	AML	04 34 16.4	
	comp=E,56nm,0.7s						
BCI				AML	AML	04 34 20.9	
	comp=E,66nm,1.0s						
SOH	**Sokhos**	1.94	80	P	Pn	04 33 40.3	+0.4
SOH	**Sokhos**	1.94	80	P	Pn	04 33 41.0	+1.1
SOH	**Sokhos**	1.94	80	P	Pn	04 33 40.6	+0.7
PVO	**Paravola**	1.97	164	P	Pb	04 33 42.5	-0.3
PLG	**Polygyros**	2.00	93	P	Pn	04 33 41.7	+1.0
PLG	**Polygyros**	2.00	93	P	Pn	04 33 41.9	+1.2
PLG	**Polygyros**	2.00	93	P	Pn	04 33 41.7	+1.0
FSK	**Fiskardo**	2.06	186	P	Pb	04 33 43.5	-0.9
DRME	**Dracevica, Mon**	2.08	324	Pn	Pb	04 33 45.5	+0.6
DRME	**Dracevica, Mon**	2.08	324	*e*Pn	Pb	04 33 44.0	-0.9
DRME	**Dracevica, Mon**	2.08	324	⇓*i*Pn	Pn	04 33 43.1	+1.3
DRME				*i* Sn	Sb	04 34 11.1	+0.4
ANX	**Ano Chora**	2.09	156	P	Pn	04 33 43.3	+1.3
SRS	**Serrai**	2.18	73	*i* Pn	Pn	04 33 43.9	+0.7
SRS				*i* Sg	Sb	04 34 13.9	+0.5
SRS	**Serrai**	2.18	73	P	Pn	04 33 44.2	+1.0
SRS	**Serrai**	2.18	73	P	Pn	04 33 44.0	+0.8
PVY	**Plav**	2.18	343	*e*Pn	Pn	04 33 45.0	+1.7
PVY				*i* Sn	Sb	04 34 13.5	-0.1
KKB	**Krupnik**	2.18	52	*i* Pn	Pb	04 33 45.3	-1.3
KKB				*i* Sg	Sb	04 34 15.1	+1.6
KKB	**Krupnik**	2.18	52	P	Pn	04 33 44.6	+1.4
NEO	**Neokhori**	2.20	122	P	Pb	04 33 45.5	-1.3
AXAR	**Agios Charalam**	2.24	140	P	Pn	04 33 45.5	+1.4
PDG	**Podgorica**	2.25	329	*e*Pn	Pb	04 33 46.2	-1.5
PDG	**Podgorica**	2.25	329	⇑P	Pb	04 33 46.4	-1.4
PDG	**Podgorica**	2.25	329	*e*Pn	Pb	04 33 46.5	-1.2
PDG				*e*Sn	Sb	04 34 16.8	+1.3
PDG	**Podgorica**	2.25	329	⇑*i*Pn	Pn	04 33 45.9	+1.7
PDG				*i* Sn	Sb	04 34 14.7	-0.8
DMLN	**Damoulianata-K**	2.30	189	P	Pb	04 33 47.1	-1.4
SERG	**Sergoula**	2.30	155	P	Pn	04 33 46.1	+1.2
BUM	**Brajici-Budva**	2.31	321	⇓*i*Pn	Pn	04 33 46.0	+1.0
BUM				*i* Sn	Sb	04 34 15.7	-1.5
BOSS	**Bosilegrad**	2.34	31	*e*Pn	Pn	04 33 46.2	+0.9
BOSS				*e*Sn	Sn	04 34 13.2	-0.7
VLS	**Valsamata**	2.34	185	P	Pn	04 33 47.1	+1.7
VLS	**Valsamata**	2.34	185	P	Pb	04 33 47.2	-2.0
KALE	**Kalithea**	2.35	154	P	Pn	04 33 47.4	+1.8
AXS	**Araxos**	2.35	170	P	Pb	04 33 47.4	-2.0
PSDA	**Pessada-Kefalo**	2.40	185	P	Pn	04 33 47.4	+1.2
OUR	**Ouranopolis**	2.41	93	P	Pn	04 33 47.1	+0.8
OUR	**Ouranopolis**	2.41	93	P	Pn	04 33 46.9	+0.6
BARS	**Barje**	2.42	17	*i* Pn	Pn	04 33 47.2	+0.7
BARS				*i* Sg	Sn	04 34 17.8	+1.9
BARS	**Barje**	2.42	17	*e*Pn	Pn	04 33 47.1	+0.7
BARS				*e*Sn	Sn	04 34 17.2	+1.3
KOKK	**Kokkinochori,**	2.43	82	P	Pn	04 33 46.6	+0.1
MMB	**Musomishta**	2.44	64	*i* Pn	Pn	04 33 48.9	+2.1
MMB				*i* Sg	Sn	04 34 18.5	+2.1
MMB	**Musomishta**	2.44	64	P	Pb	04 33 49.2	-1.7
YRMI	**Loutra Irminis**	2.44	170	P	Pb	04 33 49.2	-1.7
BEY	**Berane**	2.46	344	*i* Pn	Pg	04 33 53.1	-1.3
IVA	**Berane**	2.46	344	⇑*i*Pn	Pb	04 33 50.1	-1.2
IVA				*i* Sn	Sb	04 34 20.0	-1.6
CEME	**Cevo**	2.49	325	⇑*i*Pn	Pn	04 33 48.6	+1.1
CEME				*i* Sn	Sb	04 34 20.5	-1.9
RLS	**Riolos of Patr**	2.50	168	P	Pb	04 33 49.8	-2.1
KOME	**Kolasin**	2.54	338	⇑*i*Pn	Pb	04 33 50.8	-1.8
KOME				*i* Sn	Sb	04 34 21.8	-2.0
HCY	**Herceg Novi**	2.61	318	*e*Pn	Pn	04 33 48.7	-0.4
HCY	**Herceg Novi**	2.61	318	⇓*i*Pn	Pn	04 33 50.0	+0.9
HCY				*i* Sn	Sn	04 34 23.2	+2.5
CLEM	**Kyllini,Ilia,G**	2.63	175	P	Pb	04 33 52.4	-1.7
KLV	**Kalavryta, Ach**	2.67	157	P	Pn	04 33 51.4	+1.5
SELS	**Selova**	2.71	4	*e*Pn	Pb	04 33 53.8	-1.8
VTS	**Vitosha**	2.77	40	P	Pn	04 33 53.5	+2.1
VTS				S	Sn	04 34 26.8	+2.0
VTS	**Vitosha**	2.77	40	*e*Pn	Pn	04 33 52.6	+1.2
SJES	**Sjenica**	2.82	347	*e*Pn	Pn	04 33 54.5	+2.4
SJES	**Sjenica**	2.82	347	*e*Pn	Pn	04 33 54.7	+2.6
KAVA	**Kavala**	2.84	79	P	Pn	04 33 52.9	+0.7
TREB	**Trebinje**	2.88	321	*e*Pn	Pn	04 33 53.4	+0.6
BRY	**Bratogost**	2.94	325	*e*Pn	Pn	04 33 54.4	+0.6
BRY	**Bratogost**	2.94	325	⇓*i*Pn	Pn	04 33 55.5	+1.7
BRY				*i* Sn	Sn	04 34 31.1	+2.1
THAS	**Thassos island**	2.96	87	P	Pn	04 33 53.7	-0.2
PLE	**Pljevlja**	3.02	340	⇓*i*Pn	Pn	04 33 57.2	+2.4
PLE				*i* Sn	Sn	04 34 33.7	+2.9
GOCS	**Kraljevo Serbi**	3.05	1	*e*Pn	Pn	04 33 56.5	+1.3
GOCS				*e*Sn	Sn	04 34 35.1	+3.5
UPM	**Unac-Piva**	3.05	332	*e*Pn	Pn	04 33 57.5	+2.2
UPM	**Unac-Piva**	3.05	332	⇓*i*Pn	Pn	04 33 56.8	+1.5
UPM				*i* Sn	Sn	04 34 34.2	+2.4
ZAPS	**Zavoj**	3.07	25	*e*Pn	Pn	04 33 56.7	+1.3
ZAPS				*e*Sn	Sn	04 34 33.6	+1.6
IVAS	**Ivanjica**	3.10	351	*e*Pn	Pn	04 33 56.5	+0.6
MATE	**Matera**	3.15	274	⇑P	Pn	04 33 57.2	+0.8
BOVS	**Bovan**	3.19	11	⇑P	Pn	04 33 58.6	+1.6
BOVS	**Bovan**	3.19	11	*e*Pn	Pn	04 33 57.3	+0.3
BOVS				*e*Sn	Sn	04 34 35.1	+0.2
RUDO	**Rudo**	3.29	341	*e*Pn	Pn	04 33 58.2	-0.2
STON	**Ston**	3.33	316	*e*Pn	Pn	04 33 59.2	+0.3
STON	**Ston**	3.33	316	*e*Pn	Pn	04 33 59.8	+0.9
PLD	**Plovdiv**	3.37	60	P	Pn	04 34 00.8	+1.3
PLD				S	Sn	04 34 41.4	+2.0
GRUS	**Gruza**	3.38	359	*e*Pn	Pn	04 34 01.2	+1.6
BLKB	**Belogradchik**	3.40	23	*e*Sn	Sn	04 34 40.6	+0.5
TIP	**Timpagrande**	3.41	248	Pn	Pn	04 34 00.7	+0.6
TIP	**Timpagrande**	3.41	248	⇑P	Pn	04 34 00.7	+0.6
ITM	**Ithomi**	3.44	165	Pn	Pn	04 34 03.9	+3.5
ZAGS	**Zajecar**	3.46	17	*e*Pn	Pn	04 34 01.2	+0.5
ZAGS				*e*Sn	Sn	04 34 43.1	+1.6
BBLS	**Lazi&#263i**	3.52	343	*e*Pn	Pn	04 34 04.1	+2.5
KDZ	**Kurdzhali**	3.58	70	P	Pn	04 34 04.4	+1.9
RDO	**Rodhopi**	3.62	78	Pn	Pn	04 34 03.7	+0.7
DIVS	**Divibare**	3.64	350	*e*Pn	Pn	04 34 03.8	+0.5
DIVS				*e*Sn	Sn	04 34 47.1	+1.0
BORS2	**Bor- Borsko je**	3.68	13	*e*Pn	Pn	04 34 03.5	-0.3
TRUS	**Trudelj**	3.72	355	*e*Pn	Pn	04 34 04.9	+0.5
SVIS	**Svilajnac**	3.76	4	*e*Pn	Pn	04 34 07.1	+2.2
HAPS	**Han Pijesak,Bl**	3.83	339	*e*Pn	Pn	04 34 08.6	+2.6
HAPS				*e*Sn	Sn	04 34 53.3	+2.3
CUC	**Castrocucco**	3.88	264	Pn	Pn	04 34 07.6	+1.1
KUBS	**Kucevo**	3.95	9	*e*Pn	Pn	04 34 06.2	-1.3
KUBS				*e*Sn	Sn	04 34 52.1	-1.5
ALN	**Alexandroupoli**	3.98	83		Pn	04 34 08.5	+0.6
ALN	**Alexandroupoli**	3.98	83	P	Pn	04 34 08.5	+0.6
SGRT	**San Giovanni R**	4.04	290	Pn	Pn	04 34 08.0	-0.8
BOZC	**Bozcaada**	4.05	98	P	Pn	04 34 08.8	-0.1
BOZC				S	Sn	04 34 54.0	-2.2
CAVK	**Edirne/Enez-Ca**	4.07	86	⇑P	Pn	04 34 11.4	+2.4
PUNG	**Punghina**	4.07	22	⇑P	Pn	04 34 11.1	+2.0
TEKS	**Tekeris**	4.15	347	*e*Pn	Pn	04 34 11.6	+1.4
TEKS	**Tekeris**	4.15	347	*e*Pn	Pn	04 34 12.2	+2.0
AVAS	**Avala Beograd**	4.19	357	*e*Pn	Pn	04 34 11.1	+0.3
KOCA	**Canakkale, Ayv**	4.20	102	P	Pn	04 34 09.8	-1.1
KOCA				S	Sn	04 34 58.8	-1.0
EZN	**Ezine**	4.26	97	⇓P	Pn	04 34 13.8	+2.0
EZN	**Ezine**	4.26	97	P	Pn	04 34 13.7	+2.0
EZN	**Ezine**	4.26	97	Pn	Pn	04 34 12.7	+0.9
BEO	**Beograd**	4.30	357	P	Pn	04 34 15.2	+2.9
MDVR	**Moldovita**	4.32	8	⇓P	Pn	04 34 14.6	+2.0
MDVR	**Moldovita**	4.32	8	*e*Pn	Pn	04 34 13.1	+0.5
DJES	**Djerdap**	4.33	16	⇑P	Pn	04 34 15.2	+2.4
SOI	**Samo**	4.44	238	P	Pn	04 34 17.9	+3.7
CEL	**Celeste**	4.44	241	Pn	Pn	04 34 14.0	-0.3
CEL	**Celeste**	4.44	241	Pn	Pn	04 34 14.5	+0.2
BAYC	**CANAKKALE_Bayr**	4.45	98	P	Pn	04 34 15.8	+1.4
BAYC				S	Sn	04 35 04.0	-1.9
SRE	**Strehaia**	4.50	22	⇓P	Pn	04 34 16.9	+1.8
SRE	**Strehaia**	4.50	22	P	Pn	04 34 16.9	+1.8
HERR	**Herculane**	4.52	14	⇑P	Pn	04 34 18.1	+2.8
VRSS	**Vrsac**	4.62	4	*e*Pn	Pn	04 34 16.9	+0.2
AYVA	**Ayvalik**	4.66	103	P	Pn	04 34 18.0	+0.8
AYVA				S	Sn	04 35 15.3	+4.2
DOB	**Doboj**	4.68	335	*e*Pn	Pn	04 34 17.2	-0.2
KARB	**zmir-Karabur**	4.69	111	P	Pn	04 34 18.9	+1.2
FRGS	**Fruska Gora**	4.70	351	*e*Pn	Pn	04 34 17.6	-0.3
FRGS	**Fruska Gora**	4.70	351	*e*Pn	Pn	04 34 17.7	-0.2
FRGS				*e*Sn	Sn	04 35 12.9	+0.6
JMB	**Yambol**	4.71	63	P	Pn	04 34 19.4	+1.4
JMB				S	Sn	04 35 14.0	+1.5
PAOL	**Paolisi**	4.79	278	Pn	Pn	04 34 19.1	+0.1
COPA	**Copaceanca**	4.86	40	⇓P	Pn	04 34 22.7	+2.7
BANR	**Banloc**	4.87	3	⇑P	Pn	04 34 23.0	+2.8
BUHA	**Balikesir, Bur**	4.90	100	P	Pn	04 34 21.2	+0.7
BUHA				S	Sn	04 35 19.4	+2.3
ZEYE	**Izmir, Urla-Ze**	4.95	116	P	Pn	04 34 22.3	+1.2
URLA	**Izmir**	4.95	114	P	Pn	04 34 24.3	+3.0
BLY	**Banja Luka**	5.02	329	*e*Pn	Pn	04 34 23.1	+1.0
BLY	**Banja Luka**	5.02	329	*e*Pn	Pn	04 34 24.2	+2.1
BLY				*e*Sn	Sn	04 35 19.4	-0.6
APE	**Apeiranthos**	5.03	132	⇑P	Pn	04 34 25.0	+2.7
APE	**Apeiranthos**	5.03	132	P	Pn	04 34 25.0	+2.7
SLATY	**Slatina**	5.04	330	*e*Pn	Pn	04 34 23.4	+1.0
HUMR	**Humele**	5.05	36	⇑P	Pn	04 34 24.3	+1.7
GZR	**Gura Zlata**	5.08	16	⇑P	Pn	04 34 25.0	+1.9
GZR	**Gura Zlata**	5.08	16	P	Pn	04 34 25.0	+1.9
GZR	**Gura Zlata**	5.08	16	*e*Pn	Pn	04 34 24.4	+1.3
A050A	**Klekovaca**	5.08	323	*e*Pn	Pn	04 34 23.4	+0.3
BZS	**Buzias**	5.13	6	⇓P	Pn	04 34 25.9	+2.2
BZS	**Buzias**	5.13	6	P	Pn	04 34 25.9	+2.2
BZS	**Buzias**	5.13	6	*e*Pn	Pn	04 34 23.6	-0.2
TIM	**Timisoara**	5.23	3	⇑P	Pn	04 34 26.4	+1.4
TIM	**Timisoara**	5.23	3	P	Pn	04 34 26.4	+1.4
DGB	**zmir**	5.30	116	P	Pn	04 34 27.5	+1.5
SGRR	**Singureni**	5.32	44	⇓P	Pn	04 34 29.0	+2.8
SURR	**Surduc**	5.32	10	⇑P	Pn	04 34 28.1	+1.8
A051A	**Mrakovica**	5.35	329	*e*Pn	Pn	04 34 26.2	-0.5
LOT	**Lotru**	5.38	23	⇑P	Pn	04 34 28.9	+1.7
PRIJ	**Prijedor**	5.39	327	*e*Pn	Pn	04 34 28.0	+0.7
STEP	**BALIKESIR_Sava**	5.41	100	P	Pn	04 34 26.8	-0.8
STEP				S	Sn	04 35 32.2	+2.4
BAND	**Balkesir-Ban**	5.55	89	⇑P	Pn	04 34 32.1	+2.7
DEV	**Deva**	5.58	15	⇑P	Pn	04 34 31.9	+2.1
DEV	**Deva**	5.58	15	P	Pn	04 34 31.9	+2.1
ARR	**Arges**	5.60	29	⇑P	Pn	04 34 32.4	+2.3
MTUR	**Matau**	5.64	32	⇑P	Pn	04 34 33.4	+2.6
MTUR	**Matau**	5.64	32	P	Pn	04 34 33.4	+2.6
CTYL	**Yalikoy Yolu**	5.72	78	⇑P	Pn	04 34 34.0	+2.2
CTYL	**Yalikoy Yolu**	5.72	78	Pn	Pn	04 34 33.4	+1.6
	comp=E,0.9nmcomp=E,107nm,0.8s						
SULR		5.77	42	⇑P	Pn	04 34 35.3	+2.8
VOIR		5.81	31	⇓P	Pn	04 34 35.7	+2.5
VOIR		5.81	31	P	Pn	04 34 35.6	+2.5
VOIR		5.81	31	Pn	Pn	04 34 35.4	+2.3
	comp=E,0.4nmcomp=E,55nm,0.7s						
VAE	**Valguarnera**	5.85	241	Pn	Pn	04 34 33.6	0.0
	comp=E,19nm,0.7s,baz=24,slow=8.7,SNR=5.9						
VAE				Sn	Sn	04 35 38.0	-2.6
	comp=E,5.5nm,0.3s,baz=40,slow=23,SNR=3.0						

AQU	L'Aquila	5.88	291	S	Sn	04 35 42.4	+1.1
AQU				P	Pn	04 34 34.2	+0.1
AQU	L'Aquila	5.88	291	P	Pn	04 34 36.0	+1.9
AQU				pmax	pmax		
	comp=Z,672nm,0.9s						
AQU	L'Aquila	5.88	291	Pn	Pn	04 34 34.4	+0.3
	comp=Z,1.6nmcomp=Z,483nm,0.9s						
CICN	Ciocanesti	5.88	49	⇑P	Pn	04 34 36.4	+2.4
MORH	Mrgy, Hungar	5.92	345	Pn	Pn	04 34 37.7	+3.2
	comp=Z,0.6nmcomp=Z,138nm,0.9s						
CAMP	Campotosto	5.93	292	Pn	Pn	04 34 34.8	0.0
LEHL	Lehliu	5.94	46	⇑P	Pn	04 34 37.5	+2.8
IDI	Anoyia	6.12	147		Pn	04 34 43.2	+5.8
IDI	Anoyia	6.12	147	S	Sn	04 35 48.6	+1.3
IDI				P	Pn	04 34 38.2	+0.8
IDI	Anoyia	6.12	147	Pn	Pn	04 34 36.7	-0.7
	comp=Z,5.2nm,0.4s,baz=299,slow=13,SNR=8.5						
IDI				Sn	Sn	04 35 40.9	-6.4
	comp=Z,5.2nm,0.3s,baz=126,slow=12,SNR=3.8						
GUMA	Gualdo di Mace	6.16	297		Pn	04 34 37.2	-0.6
AYDN	Tasoluk	6.18	115	P	Pn	04 34 40.5	+2.4
BDRM	Kayabasi	6.21	122	P	Pn	04 34 40.9	+2.4
MLR	Muntele Rosu	6.23	35	Pn	Pn	04 34 40.5	+1.6
MLR	Muntele Rosu	6.23	35	Pn	Pn	04 34 41.2	+2.3
	comp=Z,5.2nm,0.3s,baz=156,slow=14,SNR=26						
MLR				Sn	Sn	04 35 49.3	-0.7
	comp=Z,2.3nm,0.3s,baz=186,slow=13,SNR=2.0						
	comp=Z,35nm,0.8s						
MLR	Muntele Rosu	6.23	35	⇑P	Pn	04 34 41.1	+2.3
MLR	Muntele Rosu	6.23	35	Pn	Pn	04 34 42.6	+3.7
	comp=Z,0.7nmcomp=Z,126nm,1.0s						
NRCA	Norcia	6.23	294	Pn	Pn	04 34 37.5	-1.4
ISR	Istrita	6.23	40	⇑P	Pn	04 34 41.9	+3.1
ISR	Istrita	6.23	40	P	Pn	04 34 41.9	+3.1
ISR	Istrita	6.23	40	Pn	Pn	04 34 41.3	+2.4
	comp=Z,1.8nmcomp=Z,134nm,0.9s						
ICOR	Ion Corvin	6.30	53	⇑P	Pn	04 34 43.1	+3.4
KIRA	zmir-Kiraz	6.30	109	P	Pn	04 34 41.5	+1.5
MANT	Manisa	6.30	106		Pn	04 34 42.4	+2.4
MANT	Manisa	6.30	106	P	Pn	04 34 42.3	+2.2
AMRR	Amara	6.31	47	⇓P	Pn	04 34 42.2	+2.3
AMRR	Amara	6.31	47	P	Pn	04 34 42.2	+2.3
FDMO	Fiordimonte	6.32	296	Pn	Pn	04 34 39.5	-0.5
NEHR	Nehoiu	6.34	37	⇑P	Pn	04 34 43.3	+3.0
MARR	Marisel-Cluj	6.38	14	⇑P	Pn	04 34 43.3	+2.4
DRGR		6.42	12	P	Pn	04 34 45.3	+3.8
DRGR		6.42	12	*e*Pn	Pn	04 34 42.8	+1.3
ESEN	Aydn-Nazilli	6.44	112	P	Pn	04 34 42.9	+1.2
BOJS	Bojanci	6.45	322	*e*Pn	Pn	04 34 41.4	-0.4
BOJS	Bojanci	6.45	322	*i* Pn	Pn	04 34 42.1	+0.3
BOJS				*e*Sn	Sn	04 35 54.1	-1.2
BOJS	Bojanci	6.45	322	*e*Pn	Pn	04 34 42.0	+0.2
BOJS				*e*Sn	Sn	04 35 53.3	-2.0
PTJ	Puntijarka	6.46	328	P	Pn	04 34 45.5	+3.5
CJR	Cluj-Napoca	6.51	17	⇑P	Pn	04 34 45.4	+2.6
CJR	Cluj-Napoca	6.51	17	P	Pn	04 34 45.3	+2.6
CESX	Cesi	6.54	291	Pn	Pn	04 34 43.0	0.0
BOSR	Bodos	6.58	31	⇑P	Pn	04 34 46.4	+2.7
CRES	Cresnjevec Ost	6.61	325	*e*Pn	Pn	04 34 43.6	-0.4
COVR	Voineasa-Covas	6.62	35	⇓P	Pn	04 34 47.0	+2.9
BISRR	Bisoca	6.62	39	⇑P	Pn	04 34 46.4	+2.2
GRER		6.63	41	⇑P	Pn	04 34 47.1	+2.8
BEHE	Becsehely	6.65	335	Pn	Pn	04 34 45.3	+0.8
OZUR		6.65	31	⇑P	Pn	04 34 47.3	+2.7
TLBR	Topalu	6.68	51	⇓P	Pn	04 34 47.9	+3.0
HARR	Harsova	6.70	49	⇑P	Pn	04 34 47.5	+2.3
HARR	Harsova	6.70	49	P	Pn	04 34 47.5	+2.3
RIY	Rijeka	6.70	318	*e*Pn	Pn	04 34 45.6	+0.4
RIY				*e*Sn	Sn	04 35 58.8	-2.5
TURR	Turia	6.71	33	⇑P	Pn	04 34 48.2	+2.8
SILT	Sile	6.71	82	⇑P	Pn	04 34 48.0	+2.6
WDD	Wied Dalam	6.82	229		Pn	04 34 49.4	+2.6
PLOR	Plostina	6.82	37	⇓P	Pn	04 34 50.0	+3.0
PLOR	Plostina	6.82	37	P	Pn	04 34 49.9	+3.0
TIRR	Tirgusor	6.85	52		Pn	04 34 48.9	+1.6
TIRR	Tirgusor	6.85	52	P	Pn	04 34 48.9	+1.6
TIRR	Tirgusor	6.85	52	Pn	Pn	04 34 50.8	+3.5
	comp=Z,0.7nmcomp=Z,44nm,0.8s						
VRI	Vrincioaia	6.87	37	⇑P	Pn	04 34 50.2	+2.6
VRI	Vrincioaia	6.87	37	P	Pn	04 34 50.1	+2.6
VRI	Vrincioaia	6.87	37	Pn	Pn	04 34 50.1	+2.6
	comp=Z,0.6nmcomp=Z,167nm,0.9s						
CEY	Cerknica	7.02	320	*e*Pn	Pn	04 34 48.6	-1.0
CEY	Cerknica	7.02	320	*e*Pn	Pn	04 34 50.2	+0.6
CEY				*e*Sn	Sn	04 36 08.5	-0.8
KARP	Karpathos	7.03	133		Pn	04 34 53.5	+3.6
MPLH	Magyarpolny	7.07	341	Pn	Pn	04 34 52.7	+2.4
	comp=Z,2.2nmcomp=Z,469nm,0.9s						
TPGR	Topolog	7.08	50	⇑P	Pn	04 34 53.5	+3.1
ONER	Baraj Valea Uz	7.09	33	⇑P	Pn	04 34 52.9	+2.3
CFR	Carcaliu	7.11	47	⇑P	Pn	04 34 53.8	+2.9
CFR	Carcaliu	7.11	47	P	Pn	04 34 53.7	+2.9
ARG	Arkhangelos	7.16	125	Pn	Pn	04 34 58.2	+6.7
ARG	Arkhangelos	7.16	125	P	Pn	04 34 58.2	+6.7
LJU	Ljubljana	7.19	322	P	Pn	04 34 52.9	+0.9
LJU				pmax	pmax		
	comp=Z,692nm,0.7s						
LJU	Ljubljana	7.19	322	*i* Pn	Pn	04 34 52.0	0.0
LJU				*e*Sn	Sn	04 36 12.6	-0.9
LJU	Ljubljana	7.19	322	*e*Pn	Pn	04 34 52.0	0.0
TRI	Trieste	7.33	317		Pn	04 34 52.9	-1.0
TRI	Trieste	7.33	317	P	Pn	04 34 52.9	-1.0
GHRR		7.33	39	Pn	Pn	04 34 57.8	+3.9
TESR	Tescani	7.33	33	⇑P	Pn	04 34 56.4	+2.4
TESR	Tescani	7.33	33	Pn	Pn	04 34 57.6	+3.6
	comp=Z,0.4nmcomp=Z,70nm,1.0s						
BORA	Eskisehir	7.39	92		Pn	04 34 56.5	+1.7
BMR	Baia Mare	7.41	14	⇑P	Pn	04 34 57.1	+2.1
BMR	Baia Mare	7.41	14	P	Pn	04 34 57.1	+2.1
PSZ	Piszkesteto	7.44	355		Pn	04 34 55.9	+0.5
PSZ	Piszkesteto	7.44	355	⇑P	Pn	04 34 58.1	+2.6
PSZ	Piszkesteto	7.44	355	P	Pn	04 34 58.0	+2.6
SOKA	Soboth	7.46	328	*e*Pn	Pn	04 34 56.0	+0.2
	comp=Z,56nm,0.8s,SNR=10						
SOKA				*e*Sn	Sn	04 36 17.9	-2.4
	comp=Z,62nm,0.7s						
TLCR		7.50	49	⇑P	Pn	04 34 58.4	+2.3
TLCR		7.50	49	P	Pn	04 34 58.4	+2.3
VLDR	Vladesti	7.51	42	⇑P	Pn	04 34 59.5	+3.1
SRO	Srobarova	7.52	347	*e*P	Pn	04 34 59.9	+3.4
SRO				*e*		04 36 22.7	
SRO				MLR	MLR		
	comp=Z,200nm,0.7s						
SRO	Srobarova	7.52	347	*e*PN	Pn	04 34 59.9	+3.4
SRO				*e*SN	Sn	04 36 22.6	+1.0
SRO				*e*LG	Lg	04 36 41.5	
OBKA	Obir	7.54	325	*e*Pn	Pn	04 34 57.1	+0.3
OBKA	Obir	7.54	325	*e*Pn	Pn	04 34 57.4	+0.6
	comp=Z,43nm,0.4s						
OBKA				*i* Sn	Sn	04 36 22.7	+0.6
	comp=Z,229nm,0.5s						
SABO	M.te Sabotino	7.60	318	Pn	Pn	04 34 57.1	-0.5
OSSC	Osservatorio P	7.75	296		Pn	04 34 58.8	-0.9
ARSA	Arzberg	7.75	332		Pn	04 35 00.0	+0.4
ARSA	Arzberg	7.75	332	*e*Pn	Pn	04 35 00.5	+0.8
	comp=Z,37nm,0.5s,SNR=7.4						
ARSA				*e*Sn	Sn	04 36 27.9	+0.6
	comp=Z,28nm,0.6s						
ARSA	Arzberg	7.75	332	*e*Pn	Pn	04 35 00.9	+1.2
ARSA				*e*Sn	Sn	04 36 25.4	-1.9
BURAR	Bucovina Array	7.77	22	⇑P	Pn	04 35 02.2	+2.1
BURAR	Bucovina Array	7.77	22	P	Pn	04 35 02.1	+2.1
BUR08	Bucovina Ar. S	7.79	22		Pn	04 35 01.7	+1.4
SOP	Sopron	7.80	338	P	Pn	04 35 03.8	+3.5
SOP				pmax	pmax		
	comp=Z,71nm,0.8s						
CASP	Castiglione de	7.80	290		Pn	04 35 00.2	-0.3
RONA	Rosalia, Austr	7.89	337	*i* Pn	Pn	04 35 02.7	+1.0
	comp=Z,11nm,0.5s						
RONA				*i* Sn	Sn	04 36 31.7	+0.9
	comp=Z,31nm,0.7s						
MDUB	Mudurnu	7.90	87		Pn	04 35 03.9	+2.0
PRED	Cave del Predi	7.94	321	Pn	Pn	04 35 01.9	-0.4
KECS	Kecovo	7.97	358	*e*SN	Sn	04 36 34.9	+2.2
KECS				*e*LG	Lg	04 36 41.2	
ISP	Isparta	7.99	107	Pn	Pn	04 35 06.3	+3.2
ISP	Isparta	7.99	107	*i* P	Pn	04 35 04.6	+1.5
ELL	Elmali	8.03	115		Pn	04 35 08.4	+4.7
ELL	Elmali	8.03	115	P	Pn	04 35 08.4	+4.7
MYKA	Terra Mystica	8.04	322	*e*Pn	Pn	04 35 03.5	-0.2
	comp=Z,17nm,0.3s						
MYKA				*e*Sn	Sn	04 36 33.5	-0.9
	comp=Z,70nm,0.7s						
HOLU	Holmets	8.09	7	Pn	Pn	04 35 07.0	+2.7
AKAS	Kas	8.11	119		Pn	04 35 10.0	+5.3
VYHS	Vyhne	8.11	351	*e*P	Pn	04 35 08.4	+3.8
VYHS				*e*		04 36 36.3	
VYHS	Vyhne	8.11	351	*e*PN	Pn	04 35 08.4	+3.8
VYHS				*e*SN	Sn	04 36 36.2	+0.2
CONA	Conrad Observa	8.23	336	*e*Pn	Pn	04 35 07.1	+0.9
	comp=Z,10nm,0.4s						
CONA				*e*Sn	Sn	04 36 40.7	+1.6
	comp=Z,27nm,0.6s						
ZCCA	Zocca	8.24	301	Pn	Pn	04 35 06.1	-0.3
MODS	Modra-Piesok	8.26	343	*e*P	Pn	04 35 09.0	+2.3
MODS				*e*		04 36 38.4	
MODS	Modra-Piesok	8.26	343	*e*PN	Pn	04 35 09.0	+2.3
MODS				*e*SN	Sn	04 36 38.4	-1.4
TEOL	Teolo	8.28	309	Pn	Pn	04 35 06.0	-1.0
KSV	Kosov	8.37	20	Pn	Pn	04 35 11.9	+3.8
KOLS	Kolonicke sedl	8.48	6	*e*P	Pn	04 35 12.8	+3.1
KOLS	Kolonicke sedl	8.48	6	*e*PN	Pn	04 35 12.8	+3.1
KBA	Koelnbreinsper	8.51	323	P	Pn	04 35 10.6	+0.4
KBA				pmax	pmax		
	comp=Z,131nm,0.9s						
KBA	Koelnbreinsper	8.51	323	*e*Pn	Pn	04 35 09.6	-0.6
	comp=Z,45nm,0.6s						
KBA				*e*Sn	Sn	04 36 45.1	-1.0
	comp=Z,77nm,0.7s						
VLC	Villacollemand	8.55	299	P	Pn	04 35 09.3	-1.4
VLC				S	Sn	04 36 45.2	-1.9
JAVC	Velka Javorina	8.64	346	*e*PN	Pn	04 35 14.8	+2.8
ABTA	Abfaltersbach	8.67	319	*i* Pn	Pn	04 35 11.9	-0.5
	comp=Z,57nm,0.5s						
ABTA				*e*Sn	Sn	04 36 48.2	-1.8
	comp=Z,181nm,0.7s						
CTI	Castel Tesino	8.69	313	Pn	Pn	04 35 11.2	-1.3
CTI	Castel Tesino	8.69	313	P	Pn	04 35 11.3	-1.3
LANS	Liptovska Anna	8.69	354	*e*P	Pn	04 35 16.0	+3.3
LANS				*e*		04 36 54.6	
LANS	Liptovska Anna	8.69	354	*e*PN	Pn	04 35 15.9	+3.3
LANS				*e*SN	Sn	04 36 54.6	+4.1
LANS				*e*LG	Lg	04 37 00.3	
MOA	Molln	8.72	329	*i* Pn	Pn	04 35 14.4	+1.4
	comp=Z,18nm,0.4s						
MOA				*i* Sn	Sn	04 36 51.4	+0.3
	comp=Z,55nm,0.7s						
MOA	Molln	8.72	329	*e*Pn	Pn	04 35 14.9	+1.9
PRMA	PARMA	8.84	302		Pn	04 35 13.5	-1.1
BIOA	Bad Ischl, Aus	8.85	327	*e*Pn	Pn	04 35 15.2	+0.5
	comp=Z,19nm,0.4s,SNR=6.5						
BIOA				*e*Sn	Sn	04 36 55.6	+1.4
	comp=Z,65nm,0.7s						
VSL	Villasalto	8.85	267		Pn	04 35 13.8	-1.0
STHS	Stebnicka Huta	8.91	2	*e*P	Pn	04 35 18.4	+2.8
STHS				*e*		04 37 01.3	
STHS	Stebnicka Huta	8.91	2	*e*PN	Pn	04 35 18.4	+2.8
STHS				*e*SN	Sn	04 37 01.3	+5.5
NIE	Niedzica	8.91	358	P	Pn	04 35 21.5	+5.9
NIE				pmax	pmax		
	comp=Z,33nm,1.0s						
NIE	Niedzica	8.91	358	Pn	Pn	04 35 19.0	+3.4
	comp=Z,34nm,1.0s						
LESA	Schwarzleotal	9.07	322	*i* Pn	Pn	04 35 18.7	+0.8
	comp=Z,51nm,0.7s,SNR=7.6						
LESA				*i* Sn	Sn	04 36 57.8	-2.0
	comp=Z,74nm,0.6s						
MAUC	Maruska	9.11	347	*e*SN	Sn	04 37 04.0	+3.4
PGF	Pioggiola	9.11	287	P	Pn	04 35 20.3	+1.9
PGF				pmax	pmax		
	comp=Z,39nm,0.8s						
KRUC	Moravsky	9.11	341	*e*PN	Pn	04 35 19.6	+1.3
KWP	Kalwaria Pacla	9.21	8	Pn	Pn	04 35 23.2	+3.5
	comp=Z,51nm,0.9s						
VRAC	Vranov	9.29	343	Pn	Pn	04 35 22.2	+1.4
	comp=Z,0.9nm,0.3s,baz=176,slow=12,SNR=6.2						
	comp=Z,9.0nm,0.7s						
VRAC	Vranov	9.29	343	*e*PN	Pn	04 35 22.2	+1.4
VRAC	Vranov	9.29	343	⇑P	Pn	04 35 22.8	+2.0
VRAC	Vranov	9.29	343	P	Pn	04 35 22.8	+2.0
SORM	Soroca	9.33	33	⇑P	Pn	04 35 23.3	+2.1
SORM	Soroca	9.33	33	P	Pn	04 35 23.3	+2.1
SORM	Soroca	9.33	33	Pn	Pn	04 35 25.1	+3.8
	comp=Z,8μmcomp=Z,25nm,2.5s						
WTTA	Wattenberg	9.46	319	P	Pn	04 35 24.6	+1.3
WTTA				pmax	pmax		
	comp=Z,109nm,0.7s						
WTTA	Wattenberg	9.46	319	*e*Pn	Pn	04 35 23.4	+0.1
	comp=Z,86nm,0.5s,SNR=12						
WTTA				*e*Sn	Sn	04 37 06.6	-3.0
	comp=Z,287nm,0.9s						
CKRC	Cesky Krumlov	9.51	333	*e*PN	Pn	04 35 24.8	+0.9
CKRC				AMS	AMS	04 39 40.0	
	comp=Z,3μm,11.6s						
CKRC	Cesky Krumlov	9.51	333	*e*P	Pn	04 35 24.8	+0.9
CKRC				MLR	MLR		
	comp=Z,3μm,11.6s						
WATA	Walderalm	9.54	319	*e*Pn	Pn	04 35 25.4	+1.0
	comp=Z,116nm,0.6s,SNR=12						
WATA				*i* Sn	Sn	04 37 09.5	-2.0
	comp=Z,328nm,0.9s						
NE56	Odesa	9.55	46	Pn	Pn	04 35 27.8	+3.5
MORC	Moravsky Berou	9.55	347	*e*PN	Pn	04 35 26.4	+2.0
MORC				*e*SN	Sn	04 37 14.1	+2.6
TREC	Trest	9.56	338	*e*SN	Sn	04 37 10.9	-0.9
SQTA	Sankt Quirin	9.65	317	*e*Pn	Pn	04 35 26.3	+0.5
	comp=Z,53nm,0.5s,SNR=7.1						
SQTA				*i* Sn	Sn	04 37 12.8	-1.3
	comp=Z,262nm,1.0s						
GEC2	GERESS Array S	9.75	331	Pn	Pn	04 35 27.4	+0.2
GERES	GERESS Array B	9.75	331	Pn	Pn	04 35 28.3	+1.1
	comp=Z,0.4nm,0.3s,baz=152,slow=14,SNR=28						
GERES				Sn	Sn	04 37 13.7	-2.9
	comp=Z,0.4nm,0.3s,baz=149,slow=23,SNR=5.9						
	comp=Z,28nm,0.8s						
GERES	GERESS Array B	9.75	331	*e*P	Pn	04 35 29.1	+1.9
FETA	Feichten	9.78	315	*e*Pn	Pn	04 35 27.5	-0.1
	comp=Z,48nm,0.6s						
FETA				*e*Sn	Sn	04 37 16.0	-1.3
	comp=Z,85nm,0.8s						
MOTA	Moosalm	9.79	317	*e*Pn	Pn	04 35 27.5	-0.3
	comp=Z,109nm,0.6s,SNR=16						
MOTA				*e*Sn	Sn	04 37 15.9	-1.7
	comp=Z,228nm,0.8s						
ILGA	Ilgaz	9.79	83		Pn	04 35 30.8	+3.0
BR106	Keskin Array S	9.82	90	Pn	Pn	04 35 30.8	+2.5
	comp=Z,6.7nm,0.8s						
BR105	Keskin Array S	9.83	90	Pn	Pn	04 35 30.7	+2.4
	comp=Z,7.1nm,0.9s						
BR131	Keskin Array S	9.84	90		Pn	04 35 30.1	+1.6
BR131	Keskin Array S	9.84	90	*i* P	Pn	04 35 29.2	+0.7
BRTR	Keskin Array B	9.84	90	Pn	Pn	04 35 29.2	+0.7
	comp=Z,0.7nm,0.3s,baz=264,slow=12,SNR=15						
BRTR				Sn	Sn	04 37 14.1	-4.8
	comp=Z,0.3nm,0.3s,baz=277,slow=21,SNR=5.2						
	comp=Z,3.9nm,0.7s						
BRTR	Keskin Array B	9.84	90	*e*P	Pn	04 35 30.3	+1.8
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BR104	Keskin Array S	9.85	91	Pn	Pn	04 35 30.5	+1.9
	comp=Z,5.8nm,0.7s						
KRLC	Kraliky	9.98	345	*e*PN	Pn	04 35 33.0	+2.8
KRLC	Kraliky	9.98	345	*e*P	Pn	04 35 33.0	+2.8
KHC	Kasperske Hory	10.04	332	*e*PN	Pn	04 35 31.9	+0.9
KHC				*e*SN	Sn	04 37 23.1	-0.3
KHC				AMS	AMS	04 41 20.0	
	comp=Z,3μm,9.0s						
KHC	Kasperske Hory	10.04	332	*i* P	Pn	04 35 31.7	+0.7
KHC	Kasperske Hory	10.04	332	Pn	Pn	04 35 32.9	+1.9
	comp=Z,45nm,0.9s						
RETA	Reutte	10.06	317	*e*Pn	Pn	04 35 32.3	+1.0
	comp=Z,24nm,0.5s						
RETA				*e*Sn	Sn	04 37 21.1	-2.9
	comp=Z,57nm,0.6s						
ZVC	Zvikov	10.09	334	*e*PN	Pn	04 35 33.6	+1.9
DAVOX	Davos/Dischmat	10.11	312	Pn	Pn	04 35 33.4	+1.2
	comp=Z,71nm,0.5s,baz=108,slow=13,SNR=27						
DAVOX				Sn	Sn	04 37 22.9	-2.6
	comp=Z,3.1nm,0.3s,baz=296,slow=22,SNR=6.8						
KIRS	Kirsehir-Merke	10.16	94	⇑P	Pn	04 35 35.8	+3.0
KEST	Kesra	10.23	246		Pn	04 35 34.8	+1.0
KEST	Kesra	10.23	246	Pn	Pn	04 35 33.5	-0.2
	comp=Z,1.1nm,0.3s,baz=343,slow=3.6,SNR=9.9						
	comp=Z,10nm,0.9s						
TUE	Stuetta	10.25	309	Pn	Pn	04 35 34.1	0.0
	comp=Z,409nm,0.6s						
DPC	Dobruska-Polom	10.33	344	*e*PN	Pn	04 35 37.6	+2.5
DPC				AMS	AMS	04 40 10.0	
	comp=Z,4μm,10.0s						
DPC	Dobruska-Polom	10.33	344	*e*P	Pn	04 35 37.6	+2.5
DPC				MLR	MLR		
	comp=Z,4μm,10.0s						
DAVA	Damuels	10.40	314	*e*Pn	Pn	04 35 37.4	+1.2
	comp=Z,100nm,0.6s,SNR=12						
DAVA				*e*Sn	Sn	04 37 30.4	-2.2
	comp=Z,146nm,1.0s						
PRU	Pruhonice	10.46	337	AMS	AMS	04 40 00.0	
	comp=Z,5μm,9.5s						
OSTC	Ostas	10.55	344	*e*PN	Pn	04 35 40.8	+2.7
OSTC	Ostas	10.55	344	*e*P	Pn	04 35 40.8	+2.7
LUBAR	Lubar, Ukraine	10.60	25	Pn	Pn	04 35 40.6	+2.0
SIM	Simferopol'	10.73	61	*e*P	Pn	04 35 40.4	-0.1
SIM				*e*S	Sn	04 37 39.0	-1.4
SIM				pmax	pmax		
	comp=Z,23nm,1.0s						
PVCC	Panska Ves	10.93	338	*e*PN	Pn	04 35 44.2	+1.0
PVCC	Panska Ves	10.93	338	*e*P	Pn	04 35 44.2	+1.0
BNI	Bardonecchia	11.35	298		Pn	04 35 46.8	-2.2
BNI	Bardonecchia	11.35	298	P	Pn	04 35 46.8	-2.2
BRG	Berggiesshubel	11.42	337	*e*P	Pn	04 35 50.5	+0.6
BRG				Amp		04 36 06.6	
	comp=Z,22nm,1.1s						
SLE	Schleitheim	11.45	313	P	Pn	04 35 50.2	-0.1
SLE				pmax	pmax		
	comp=Z,58nm,0.8s						
AK14	Malin Array Si	11.65	27	Pn	Pn	04 35 56.4	+3.3
AK17	Malin Array Si	11.68	27	Pn	Pn	04 35 56.1	+2.6
AK16	Malin Array Si	11.69	27	Pn	Pn	04 35 56.0	+2.5
STU	Stuttgart	11.69	319	P	Pn	04 35 55.4	+1.8
STU				pmax	pmax		
	comp=Z,197nm,0.9s						
STU	Stuttgart	11.69	319	*e*P	Pn	04 35 52.3	-1.3
KIEV	Kiev	11.74	27	Pn	Pn	04 35 56.8	+2.5
AKASG	Malin Array Be	11.75	27	Pn	Pn	04 35 54.4	-0.1
	comp=Z,0.4nm,0.3s,baz=213,slow=12,SNR=6.9						
	comp=Z,4.3nm,0.8s						
AKASG	Malin Array Be	11.75	27	*e*P	Pn	04 35 56.2	+1.8
AKBB	Malin Array Si	11.75	27	*i* P	Pn	04 35 55.8	+1.4
AKBB				pmax	pmax		
	comp=Z,9.0nm,1.1s						
AKBB	Malin Array Si	11.75	27	Pn	Pn	04 35 56.9	+2.5
BFO	Black Forest	11.86	315	P	Pn	04 35 56.1	+0.1
BFO				pmax	pmax		
	comp=Z,46nm,0.7s						
CLL	Collm	12.09	336	*e*P	Pn	04 35 59.0	0.0
CLL	Collm	12.09	336	*e*P	Pn	04 35 59.0	0.0
CLL				*e*(sPPP)		04 36 21.0	
CLL				*e*x	x	04 37 26.0	
CLL				*e*x	x	04 38 45.0	
CLL				AMS	AMS	04 40 00.0	
	comp=N,2μm,19.4s						
CLL				AMS	AMS	04 40 00.0	
	comp=E,3μm,19.4s						
CLL				AMS	AMS	04 41 00.0	
ECH	Echery	12.44	313		Pn	04 36 02.1	-1.7
ECH	Echery	12.44	313	P	Pn	04 36 02.2	-1.7
MAHO	Mahon	12.69	273	P	Pn	04 36 07.4	+0.2
SSB	Saint Sauveur	12.86	297		Pn	04 36 07.2	-2.4
SSB	Saint Sauveur	12.86	297	P	Pn	04 36 07.2	-2.4
EJON	La Jonquera	13.60	284	P	Pn	04 36 20.7	+1.0
ETOS	Mallorca	13.81	273	P	Pn	04 36 22.1	-0.5
WLF	Walferdange	13.81	316	P	Pn	04 36 22.4	-0.1
WLF	Walferdange	13.81	316	*d*P	Pn	04 36 22.7	+0.2
WLF				*d*S	Sn	04 38 51.6	-4.1
MMAI	Mount Meron Ar	13.86	118	Pn	Pn	04 36 22.1	-1.2
	comp=E,1.8nm,0.3s,baz=317,slow=12,SNR=7.4						
	comp=E,3.8nm,0.7s						
LOR	Lormes	13.97	305	P	Pn	04 36 25.5	+0.8
LOR				pmax	pmax		
	comp=Z,31nm,1.2s						
BHOU	Houvegnez	14.30	318	*d*P	Pn	04 36 29.2	-0.1
SOC	Sochi	14.36	71	*e*P	Pn	04 36 29.1	-1.0
SOC				*e*		04 39 10.3	
SOC				pmax	pmax		
	comp=Z,5.0nm,0.5s						
BTNL	Ternell	14.38	319	*d*P	Pn	04 36 29.3	-1.1
BTNL				*d*S	Sn	04 39 00.5	-9.1
MEM	Membach	14.46	319	*d*P	Pn	04 36 31.8	+0.5
MEM				*d*S	Sn	04 39 02.7	-8.7
VSLR	Vesyoloye	14.58	72	*i* P	Pn	04 36 34.1	+1.0
BSTI	Sart Tilman	14.66	318	*d*P	Pn	04 36 35.4	+1.2
BCLA	Clavier	14.70	318	*d*P	Pn	04 36 35.6	+1.0
BCLA				*d*S	Sn	04 39 08.1	-9.2
MNK	Minsk	14.77	16	*i* P	P	04 36 40.3	-1.3
	comp=E,34nm,0.8s						
MNK				*i* P	P	04 36 40.3	-1.3
	comp=N,7.0nm,0.8s						
MNK				*i* P	P	04 36 40.3	-1.3
	comp=Z,53nm,0.8s,baz=203						
MNK				*i* PP	PnPn	04 36 49.0	+5.4
MNK				*i* PPP	PPP	04 36 56.0	
MNK				*i* S	S	04 39 31.2	-6.4
MNK				*i* SS	SnSn	04 39 38.5	+6.9
MNK				*i* SSS	SSS	04 39 49.9	
MNK				*i* LR	LR	04 41 12.3	
MNK				*i* LRM	MLR	04 42 35.2	
	comp=E,536nm,13.9s						
MNK				*i* LRM	MLR	04 42 38.1	
	comp=Z,491nm,12.8s						
MNK				*i* LRM	MLR	04 43 26.3	
	comp=N,468nm,14.1s						
MNK	Minsk	14.77	16	*i* P	P	04 36 40.3	-1.3
MNK				*i* S	S	04 39 31.2	-6.4
MNK				pmax	pmax		
	comp=E,34nm,0.8s						
MNK				pmax	pmax		
	comp=N,7.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,53nm,0.8s						
MNK				MLR	MLR		
	comp=E,536nm,14.0s						
MNK				MLR	MLR		
	comp=Z,491nm,13.0s						
MNK				MLR	MLR		
	comp=N,468nm,14.0s						
BGES	Gesves	14.79	317	*d*P	Pn	04 36 34.9	-1.0
BGES				*d*PP	PbPb	04 37 24.5	+0.1
DOU	Dourbes	14.88	315	*d*P	Pn	04 36 36.2	-1.0
DOU				*d*S	Sn	04 39 13.8	-8.0
BMRD	Maredsous	14.91	316	*d*P	Pn	04 36 36.5	-1.0
BMRD				*d*S	Sn	04 39 18.6	-3.8
NACGM	Naroch	14.94	13	⇑*i*P	P	04 36 43.7	+0.3
	comp=Z,43nm,0.8s,baz=199						
PABE	Paberze	15.15	7		Pn	04 36 42.0	+1.3
PABE	Paberze	15.15	7	*e*P	P	04 36 45.2	-0.6
IDID	Didziasalis	15.32	13	*e*P	Pn	04 36 45.3	+2.3
ASF	Jabal al Asfar	15.37	118	Sn	Sn	04 39 30.2	-3.8
	comp=Z,0.5nm,0.3s,baz=225,slow=21,SNR=1.1						
UCC	Uccle	15.41	317	*d*P	Pn	04 36 45.7	+1.5
ISAL	Salakas	15.47	11	*e*P	P	04 36 50.2	+0.9
PBUR	Paburge	15.54	2	*e*P	P	04 36 51.1	+1.0
VSVD	Vaisvydziai	15.61	6	*e*P	P	04 36 51.6	+0.7
EIL	Elat	15.81	129	Pn	Pn	04 36 49.6	+0.2
	comp=Z,0.7nm,0.3s,baz=343,slow=9.7,SNR=5.2						
EIL				Sn	Sn	04 39 35.6	-8.9
	comp=Z,0.4nm,0.3s,baz=6.6,slow=12,SNR=2.5						
	comp=Z,12nm,0.8s						
BLEU	Blekinge	16.14	350	*i* P	P	04 36 55.6	-1.3
SHA1	Shidzhatmaz	16.50	72	*i* P	P	04 37 01.1	-0.1
KIV	Kislovodsk	16.54	71	*e*P	P	04 37 01.2	-0.2
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
VORD	Divnogorie	16.55	45	*e*P	P	04 37 00.6	-0.7
VORD				pmax	pmax		
	comp=Z,20nm,1.0s						
DEL	Delary	16.61	346	*i* P	P	04 37 01.8	-0.1
VSR	Storozhevoye	16.61	44	*e*P	Pn	04 37 00.7	+1.1
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KBZ	Khabaz	16.68	72	Pn	P	04 37 02.7	-0.1
	comp=Z,0.1nm,0.3s,baz=274,slow=6.6,SNR=6.0						
	comp=Z,6.1nm,0.9s						
KBZ	Khabaz	16.68	72	*e*P	P	04 37 03.2	+0.4
KBZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ECHE	Chera	16.72	274	P	P	04 37 03.1	-0.3
VORR	Voronezh	16.89	43	*e*P	P	04 37 07.8	+2.7
VORR				pmax	pmax		
	comp=Z,20nm,0.8s						
GOF	Gofitskoye	16.91	67	*ce*P	P	04 37 05.4	0.0
LPSR	Galich'ya Gora	17.29	40	*e*P	Pn	04 37 07.0	-1.1

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LPSR                                 pmax   pmax
      comp=Z,20nm,0.9s
OBN   Obninsk          17.96  30 eP     P      04 37 18.5 +1.6
OBN                                  pmax   pmax
      comp=Z,36nm,1.0s
GNI   Garni            18.22  83  P     Pn     04 37 20.0  0.0
      comp=Z,3.0nm,0.3s,baz=302,slow=10,SNR=5.9
      comp=Z,13nm,0.6s
GNI   Garni            18.22  83 i P    P      04 37 20.5 +0.3
GNI                                  pmax   pmax
      comp=Z,44nm,1.2s
UCM   Universidad Co   18.33 277  P     Pn     04 37 20.9 -0.2
VSU   Vasula           18.36  10 i P    Pn     04 37 20.0 -1.2
VSU                                  pmax   pmax
      comp=Z,55nm,1.0s
VSU   Vasula           18.36  10 eP     Pn     04 37 21.1 -0.2
MOS   Moscow           18.83  30 eP     P      04 37 25.5 -1.0
MOS                              eS     S      04 40 59.4 -0.9
MOS                                  pmax   pmax
      comp=Z,58nm,1.0s
ESDC  Sonseca Array    18.98 276        Pn     04 37 28.8 -0.2
ESDC  Sonseca Array    18.98 276  P     Pn     04 37 28.8 -0.2
      comp=Z,0.2nm,0.3s,baz=78,slow=10,SNR=22
      comp=Z,6.9nm,0.8s
PAB   San Pablo        19.30 275        Pn     04 37 32.4 -0.4
PAB   San Pablo        19.30 275  P     Pn     04 37 32.4 -0.4
PAB                                  pmax   pmax
      comp=Z,57nm,1.6s
MEF   Metsahovi        19.85   5 eP     P      04 37 37.7 +0.1
MAK   Makhachkala      20.03  74 eP     P      04 37 36.1 -3.6
MAK                              eS     S      04 41 20.4 -4.0
MAK                                  pmax   pmax
      comp=Z,128nm,1.0s
MAK                                  MLR    MLR
      comp=Z,886nm,13.0s
EMAL  Malaga-Limoner   20.06 267  P     P      04 37 38.8 -1.4
HFS   Hagfors          20.14 350  P     P      04 37 41.5 +0.7
      comp=Z,15nm,0.5s,baz=155,slow=11,SNR=20
      comp=Z,15nm,0.5s
PUL   Pulkovo          20.18  14 i P    P      04 37 41.4 +0.2
PUL                                  pmax   pmax
      comp=Z,49nm,0.7s
AKT   Akhty            20.30  78 eP     Pn     04 37 45.2 +0.4
AKT                              ePP    PnPn   04 38 01.5 +2.0
AKT                              eS     Sn     04 41 36.2 +2.9
AKT                                  pmax   pmax
      comp=Z,37nm,0.9s
RAF   Rauma            20.55   1 eP     P      04 37 45.6 +0.4
PBRG  Braganca         20.77 283 eP     P      04 37 48.1 +0.3
PBRG                             i Amb         04 38 01.1
      comp=Z,27nm,1.8s
NC602 NORSAR Array S   21.05 347  IAmb  IAmb   04 37 59.0
      comp=Z,114nm,1.6s
NORES NORESS Array B   21.05 347  P     P      04 37 50.9 +0.3
MVO   Moncorvo         21.06 281 eP     P      04 37 52.3 +1.3
MVO                              i Amb         04 38 11.4
      comp=Z,21nm,1.0s
FINES FINESS Array B   21.20   7        P      04 37 51.8 -0.5
FINES FINESS Array B   21.20   7  P     P      04 37 52.5 +0.2
      comp=Z,11nm,0.4s,baz=169,slow=10,SNR=24
FINES                             PcP   PcP    04 41 57.3 +0.2
      comp=Z,1.7nm,0.4s,baz=138,slow=2.8,SNR=9.1
      comp=Z,11nm,0.4s
FIA1  FINESS Array S   21.20   7        P      04 37 51.4 -0.9
FIA1                              IAmb  IAmb   04 37 55.5
      comp=Z,47nm,0.8s
NC405 NORSAR Array S   21.38 348  IAmb  IAmb   04 37 59.3
      comp=Z,40nm,0.7s
NB201 NORSAR Array S   21.39 347        P      04 37 53.8 -0.4
NB201                             IAmb  IAmb   04 38 00.9
      comp=Z,86nm,1.4s
NB2   NORSAR Subarra   21.39 347  P     P      04 37 54.3  0.0
      comp=Z,12nm,0.8s,baz=156,slow=11
NOA   NORSAR Array B   21.39 347  P     P      04 37 53.8 -0.5
      comp=Z,12nm,0.9s,baz=162,slow=10,SNR=20
      comp=Z,12nm,0.9s
CNIL  Conil            21.43 268  P     P      04 37 54.4 -0.5
NC303 NORSAR Array S   21.54 347  IAmb  IAmb   04 38 00.4
      comp=Z,33nm,0.8s
MTE   Manteigas        21.56 279        P      04 37 56.5 +0.2
MTE   Manteigas        21.56 279 eP     P      04 37 58.3 +2.0
MTE                              i Amb         04 38 12.1
      comp=Z,42nm,1.2s
MTE   Manteigas        21.56 279 eP     P      04 37 58.4 +2.0
PVRL  Vila Real        21.56 281 eP     P      04 37 59.3 +3.0
POLO  Lamas de Olo     21.61 282 eP     P      04 37 58.9 +2.1
POLO                             i Amb         04 38 11.4
      comp=Z,20nm,1.9s
PCBR  Castelo Branco   21.61 277 eP     P      04 37 60.0 +3.2
PCBR                             i Amb         04 38 23.9
      comp=Z,32nm,2.0s
PMRV  Marv??o          21.63 276 eP     P      04 37 58.3 +1.2
PMRV                             i Amb         04 38 21.8
      comp=Z,25nm,1.3s
PBAR  Barrancos        21.65 273 eP     P      04 37 57.6 +0.3
PBAR                             i Amb         04 38 24.8
      comp=Z,40nm,1.5s
NC204 NORSAR Array S   21.69 347        P      04 37 57.7 +0.1
NC204                             IAmb  IAmb   04 38 12.0
      comp=Z,50nm,1.1s
EKA   Eskdalemuir Ar   21.71 321  P     P      04 37 58.0 +0.3
      comp=Z,33nm,0.9s,baz=125,slow=9.5,SNR=25
      comp=Z,33nm,0.9s
ESK   Eskdalemuir      21.73 321        P      04 37 57.3 -0.6
ESK                               IAmb  IAmb   04 38 01.8
      comp=Z,51nm,0.9s
ESK   Eskdalemuir      21.73 321  P     P      04 37 57.3 -0.6
ESK                               pmax  pmax
      comp=Z,51nm,1.0s
PCAB  Cabril           21.74 283 eP     P      04 38 01.9 +3.7
MDT   Midelt           21.76 257  P     P      04 37 58.5  0.0
      comp=Z,16nm,0.9s,baz=102,slow=10,SNR=7.8
      comp=Z,16nm,0.9s
PVIS  Viseu            21.77 280 eP     P      04 37 59.5 +0.9
BELG  Belogornoye      21.81  48  P     P      04 37 59.4 +0.6
      comp=Z,28nm,0.7s,baz=276,slow=4.6,SNR=5.4
      comp=Z,28nm,0.7s
BELG  Belogornoye      21.81  48 i P    P      04 37 59.4 +0.6
BELG                              pmax  pmax
      comp=Z,8.0nm,0.9s
KEF   Keuruu           21.82   5 eP     P      04 37 59.2 +0.3
IFR   Ifrane           21.83 260  P     P      04 37 58.5 -0.9
PGAV  Gavieira, Arco   21.89 283 eP     P      04 38 02.4 +2.4
PGAV                             i Amb         04 38 09.8
      comp=Z,52nm,1.7s
TAM   Tamanrasset      21.90 221        P      04 38 02.5 +2.3
TAM                               IAmb  IAmb   04 38 08.7
      comp=Z,36nm,1.0s
TAM   Tamanrasset      21.90 221  P     P      04 38 02.5 +2.3
TAM                               pmax  pmax
      comp=Z,36nm,1.0s
PESTR Estremoz         21.90 275  P     P      04 37 58.2 -1.7
PESTR Estremoz         21.90 275 eP     P      04 38 00.7 +0.8
PSARD Sardoal          22.18 277 eP     P      04 38 02.1 -0.8
COI   Coimbra          22.25 279  IAmb  IAmb   04 38 12.9
      comp=Z,34nm,1.1s
COI   Coimbra          22.25 279 eP     P      04 38 05.2 +1.6
EVO   Evora            22.30 274  P     P      04 38 05.0 +0.7
EVO   Evora            22.30 274 eP     P      04 38 05.6 +1.3
PBEJ  Beja             22.32 273 eP     P      04 38 07.6 +3.2
PMTG  Montargil        22.34 276 eP     P      04 38 02.5 -2.1
PCAS  Casmilo, Conde   22.34 278 eP     P      04 38 06.7 +2.0
PVAQ  Vaqueiros        22.38 271  P     P      04 38 04.4 -0.7
PVAQ                              IAmb  IAmb   04 38 09.7
      comp=Z,37nm,1.1s
PVAQ  Vaqueiros        22.38 271 eP     P      04 38 08.6 +3.5
PVAQ                             i Amb         04 38 16.3
      comp=Z,67nm,1.8s
PCVE  Castro Verde     22.56 272 eP     P      04 38 09.0 +2.0
PBDV  Barranco-do-Ve   22.59 271 eP     P      04 38 08.2 +0.8
VAF   Ylistaro         22.59   2 eP     P      04 38 08.1 +1.0
MESJ  Messejana        22.64 273 eP     P      04 38 09.8 +1.9
MESJ                              IAmb  IAmb   04 38 11.8
      comp=Z,17nm,1.0s
MESJ  Messejana        22.64 273 eP     P      04 38 09.9 +2.1
MESJ  Messejana        22.64 273 eP     P      04 38 09.8 +1.9
PSBE  So Bento         22.67 277 eP     P      04 38 10.0 +1.7
PTEO  Sao Teotonio     23.10 272 eP     P      04 38 15.6 +2.8
KLMR  Klimovskoe       23.39  23 eP     P      04 38 14.5 -0.9
KLMR                             e             04 38 41.1
KLMR                              pmax  pmax
      comp=Z,59nm,1.5s
KIRV  Kirov            25.59  35 i P    P      04 38 36.1 +0.3
ARTI  Arti             29.08  44c iP    P      04 39 05.8 -1.3
ARTI                              S     S      04 43 59.1 +0.9
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ARTI                              SS    SnSn   04 45 22.8 +0.9
ARTI                              pmax  pmax
      comp=Z,8.0nm,0.9s
ARCES ARCESS Array B   29.19   3  P     P      04 39 07.2 -0.8
      comp=Z,2.5nm,0.4s,baz=190,slow=9.3,SNR=30
ARCES                             PcP   PcP    04 42 14.8  0.0
      comp=Z,4.2nm,1.0s,baz=135,slow=1.2,SNR=4.0
      comp=Z,2.5nm,0.4s
KEV   Kevo             29.49   4  P     P      04 39 10.1 -0.5
KEV   Kevo             29.49   4  P     P      04 39 10.1 -0.5
KEV                               pmax  pmax
      comp=Z,124nm,1.9s
SVE   Sverdlovsk       30.40  44 eP     P      04 39 18.7 -0.1
SVE                               pmax  pmax
      comp=Z,14nm,1.0s
TORD  Torodi Ar. Bea   32.02 217        P      04 39 33.6 +0.2
HRA   Herat            33.21  87        P      04 39 45.5 +1.4
HRA                               IAmb  IAmb   04 39 46.6
      comp=Z,24nm,1.0s
BRVK  Borovoye         35.40  52        P      04 40 02.4 -0.2
BRVK  Borovoye         35.40  52ceP     P      04 40 03.3 +0.8
BRVK                              pmax  pmax
      comp=Z,9.0nm,1.0s
BVAR  Borovoye Array   35.47  52  P     P      04 40 03.3 +0.2
      comp=Z,3.6nm,0.8s,baz=270,slow=6.8,SNR=8.5
      comp=Z,3.6nm,0.8s
SCO   Scoresbysund     37.11 338 i P    P      04 40 17.7 +0.8
GAR   Garm             37.67  76  P     P      04 40 22.7 +0.5
GAR                               IAmb  IAmb   04 40 53.0
      comp=Z,17nm,1.0s
SPITS Spitsbergen Ar   37.82 358  P     P      04 40 22.6 -0.3
      comp=Z,7.7nm,0.8s,baz=150,slow=12,SNR=6.5
SPITS                             PcP   PcP    04 42 39.1  0.0
      comp=Z,2.9nm,0.5s,baz=158,slow=4.2,SNR=10
      comp=Z,7.7nm,0.8s
DAG   Danmarks Havn    40.08 347 i P    P      04 40 40.0 -1.7
KURBB Kurchatov Arra   40.68  56  P     P      04 40 46.0 -1.1
      comp=Z,1.9nm,0.8s,baz=283,slow=9.4,SNR=5.6
KURBB                             PcP   PcP    04 42 48.3 -0.2
      comp=Z,0.9nm,0.2s,baz=279,slow=3.9,SNR=6.0
      comp=Z,1.9nm,0.8s
KURK  Kurchatov        40.72  56 i P    P      04 40 46.5 -0.9
KURK                              pmax  pmax
      comp=Z,3.0nm,1.0s
DBIC  Dimbokro         40.79 221  P     P      04 40 48.1 -0.2
      comp=Z,11nm,0.7s,baz=30,slow=9.3,SNR=12
      comp=Z,11nm,0.7s
KSH   Kashi            41.65  73  P     P      04 40 53.7 -1.7
KSH                               pmax  pmax
      comp=Z,5.0nm,0.8s
KSH                               LR    LR
      comp=Z,1μm,17.9s
KSH                               LR    LR
      comp=Z,420nm,17.5s
KSH                               LR    LR
      comp=Z,570nm,17.5s
ICESG Greenland Ices   42.37 332 i P    P      04 40 59.8 -1.3
SUMG  Summit           42.75 338        P      04 41 04.8 +0.6
SUMG  Summit           42.75 338  P     P      04 41 04.8 +0.6
SUMG                              pmax  pmax
      comp=Z,9.0nm,0.9s
SUMG  Summit           42.75 338 i P    P      04 41 04.0 -0.2
NOR   Nord             43.20 352 i P    P      04 41 03.4 -3.8
MAKZ  Makanchi         43.70  61        P      04 41 11.6 -0.1
MAKZ  Makanchi         43.70  61  P     P      04 41 11.6 -0.1
MAKZ                              pmax  pmax
      comp=Z,3.0nm,0.9s
MK31  Makanchi Array   43.91  60 i P    P      04 41 12.7 -0.8
MKAR  Makanchi Array   43.91  60        P      04 41 12.4 -1.0
MKAR  Makanchi Array   43.91  60  P     P      04 41 12.9 -0.6
      comp=Z,5.5nm,0.8s,baz=281,slow=6.6,SNR=18
MKAR                              PcP   PcP    04 42 59.2 -0.1
      comp=Z,2.6nm,0.8s,baz=289,slow=3.7,SNR=3.5
      comp=Z,5.5nm,0.8s
ZAA0  Zalesovo Array   43.98  50  P     P      04 41 13.1 -0.8
ZALV  Zalesovo Beam    43.98  50        P      04 41 13.6 -0.2
ZALV  Zalesovo Beam    43.98  50  P     P      04 41 13.3 -0.5
      comp=Z,3.0nm,0.7s,baz=280,slow=8.7,SNR=6.6
      comp=Z,3.0nm,0.7s
ZALV  Zalesovo Beam    43.98  50  P     P      04 41 13.6 -0.2
KMBO  Kilima Mbogo     44.06 156  P     P      04 41 21.9 +6.7
NRIK  Noril'sk         44.61  28        P      04 41 18.9 +0.2
NRIK  Noril'sk         44.61  28  P     P      04 41 18.8 +0.1
      comp=Z,3.9nm,0.4s,baz=231,slow=4.6,SNR=5.8
      comp=Z,3.9nm,0.4s
NRIK  Noril'sk         44.61  28 eP     P      04 41 19.3 +0.6
NRIK                              pmax  pmax
      comp=Z,5.0nm,0.9s
WMQ   Urumqi           48.45  63 eP     P      04 41 52.2 +2.9
WMQ                               LR    LR
      comp=Z,780nm,13.3s
WMQ                               LR    LR
      comp=Z,790nm,12.5s
WMQ                               LR    LR
      comp=Z,340nm,22.3s
EUNU  Eureka           53.28 348  P     P      04 42 25.4 +0.2
ILON  Igloolik, Nuna   56.92 336        P      04 42 51.0 -0.4
SCHQ  Schefferville    56.92 316  P     P      04 42 51.5 -0.2
      comp=Z,2.3nm,0.4s,baz=71,slow=7.3,SNR=3.3
      comp=Z,2.3nm,0.4s
TIXI  Tiksi            57.38  21 i P    P      04 42 54.5 -0.2
TIXI                              pmax  pmax
      comp=Z,3.0nm,1.3s
RES   Resolute Bay     57.60 344        P      04 42 57.8 +1.6
RES                               IAmb  IAmb   04 43 20.8
      comp=Z,16nm,1.9s
RES   Resolute Bay     57.60 344  P     P      04 42 57.8 +1.6
RES                               pmax  pmax
      comp=Z,16nm,1.9s
GTA   Gaotai           58.53  63 eP     P      04 43 02.4 -1.0
GTA                               pP    pP     04 43 08.2 +0.2
GTA                               pmax  pmax
      comp=Z,3.0nm,1.0s
SONM  Songino Array    58.81  52  P     P      04 43 04.9 -0.3
      comp=Z,0.9nm,0.6s,baz=282,slow=7.5,SNR=5.0
      comp=Z,0.9nm,0.6s
LMN   Caledonia Moun   59.78 306  P     P      04 43 12.0 +0.2
GRTLG Ghanzi           61.55 180        P      04 43 25.7 +1.6
GRTLG                             IAmb  IAmb   04 43 29.8
      comp=Z,10nm,1.1s
WIN   Windhoek         62.85 184  P     P      04 43 34.2 +1.3
WIN                               IAmb  IAmb   04 43 39.4
      comp=Z,13nm,1.1s
WIN   Windhoek         62.85 184  P     P      04 43 34.2 +1.3
WIN                               pmax  pmax
      comp=Z,13nm,1.1s
LZH   Lanzhou          62.96  65 eP     P      04 43 33.2 -0.5
LZH                               pP    sP     04 43 41.9 +2.0
LZH                               pmax  pmax
      comp=Z,17nm,1.4s
YAK   Yakutsk          62.97  30 eP     P      04 43 32.8 -0.2
YAK                              e*PP   pP     04 43 36.6 -1.0
YAK                              e             04 45 52.1
YAK                              eS     S      04 52 03.9 +1.4
YAK                               pmax  pmax
      comp=Z,15nm,0.9s
YAK                               pmax  pmax
      comp=N,3.0nm,0.9s
YAK                               pmax  pmax
      comp=E,3.0nm,1.1s
YAK                               pmax  pmax
      comp=Z,9.0nm,0.4s
YAK                               smax  smax
      comp=N,71nm,2.9s
YAK                               MLR   MLR
      comp=Z,353nm,14.0s
YAK                               MLR   MLR
      comp=N,221nm,16.0s
YAK                               MLR   MLR
      comp=E,168nm,13.0s
KOOLE Kule             63.18 181  P     P      04 43 36.2 +1.1
KOOLE                             IAmb  IAmb   04 43 42.2
      comp=Z,10.0nm,0.8s
A36M  Sachs Harbour    65.28 349  P     P      04 43 46.6 -1.5
      baz=28
LBTB  Lobatse          65.34 175  IAmb  IAmb   04 43 58.1
      comp=Z,15nm,1.4s
LBTB  Lobatse          65.34 175  P     P      04 43 53.1 +4.0
HHC   Hu-ho-hao-te     65.53  56 eP     P      04 43 50.6 +0.2
HHC                               pmax  pmax
      comp=Z,11nm,0.5s
HHC                               pmax  pmax
      comp=Z,45nm,5.3s
HHC                               LR    LR
      comp=Z,420nm,13.1s
HHC                               LR    LR
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      comp=Z,170nm,13.5s
HHC                               LR    LR
      comp=Z,410nm,18.0s
MAKGR Makgori          66.09 176  IAmb  IAmb   04 44 26.8
      comp=Z,14nm,1.4s
PZH   PanZhiHua        66.72  74  P     P      04 43 59.3 +1.0
PZH                               pmax  pmax
      comp=Z,6.0nm,0.7s
PZH                               pmax  pmax
      comp=Z,100nm,4.8s
ZEA   Zeya             66.89  38 eP     P      04 44 00.9 +2.1
XAN   Xi'an            67.56  64 ⇓P     P      04 44 02.4 -1.0
XAN                               pP    pP     04 44 06.8 -1.2
XAN                               pmax  pmax
      comp=Z,15nm,0.9s
XAN                               pmax  pmax
      comp=Z,100nm,7.0s
XAN                               LR    LR
      comp=Z,540nm,22.0s
XAN                               LR    LR
      comp=Z,400nm,15.8s
XAN                               LR    LR
      comp=Z,470nm,18.6s
A21K  Barrow           68.46 359  P     P      04 44 06.8 -1.5
      baz=2.1
BILL  Bilibino         68.69  13  P     P      04 44 09.7 -0.2
BILL                              IAmb  IAmb   04 44 37.7
      comp=Z,9.9nm,1.3s
BILL  Bilibino         68.69  13ceP     P      04 44 10.3 +0.4
BILL                              pmax  pmax
      comp=Z,7.0nm,1.3s
A22K  Sinclair Lake    68.75 359  P     P      04 44 09.3 -0.9
      baz=3.5
BOSA  Boshof           68.90 176  IAmb  IAmb   04 44 16.4
      comp=Z,6.8nm,0.8s
BOSA  Boshof           68.90 176  P     P      04 44 11.8 +0.1
      comp=Z,6.3nm,0.8s,baz=1.1,slow=6.5,SNR=9.9
      comp=Z,6.3nm,0.8s
HEH   HeiHe            69.11  41 eP     P      04 44 12.8  0.0
HEH                               pmax  pmax
      comp=Z,6.0nm,0.9s
HEH                               LR    LR
      comp=Z,630nm,14.5s
HEH                               LR    LR
      comp=Z,690nm,13.5s
HEH                               LR    LR
      comp=Z,760nm,12.8s
CMAR  Chiang Mai Arr   69.34  83  P     P      04 44 15.7 +1.0
      comp=Z,1.0nm,0.3s,baz=308,slow=4.7,SNR=1.6
      comp=Z,1.0nm,0.3s
B22K  Teshekpuk Lake   69.38 358  P     P      04 44 12.3 -1.8
      baz=4.7
C26K  Camden Bay       69.39 355  P     P      04 44 12.8 -1.4
      baz=12
D28M  Stokes Point     69.44 352  P     P      04 44 12.8 -1.6
      baz=16
C27K  Jago River       69.59 354  P     P      04 44 14.0 -1.4
      baz=12
B20K  Meade River      69.78 359  P     P      04 44 15.9 -0.7
      baz=1.7
C23K  Itkillik River   69.79 357  P     P      04 44 16.1 -0.5
      baz=7.0
INK   Inuvik           69.81 350  P     P      04 44 16.1 -0.6
      baz=21
SEY   Seymchan         69.88  21 i P    P      04 44 17.3  0.0
SEY                               pmax  pmax
      comp=Z,3.0nm,0.9s
D25K  Kavik River      70.08 355  P     P      04 44 17.0 -1.5
      baz=10
B21K  Ikpikpuk River   70.13 358  P     P      04 44 18.4 -0.3
      baz=3.7
E28M  Babbage River    70.22 352  P     P      04 44 18.5 -0.8
      baz=16
E29M  Blow River       70.25 352  IAmb  IAmb   04 44 28.8
      comp=Z,17nm,1.2s
E29M  Blow River       70.25 352  P     P      04 44 18.5 -1.0
      baz=17
B18K  Kokolik River    70.42   1  P     P      04 44 20.0 -0.5
      baz=358
C21K  Knifeblade Rid   70.60 358  P     P      04 44 20.8 -0.9
      baz=3.6
F31M  Tsiigehtchic     70.65 350  IAmb  IAmb   04 45 03.6
      comp=Z,12nm,1.1s
F31M  Tsiigehtchic     70.65 350  P     P      04 44 20.4 -1.5
      baz=20
D23K  Nanushuk River   70.66 357  P     P      04 44 21.4 -0.6
      baz=6.9
C19K  Lookout Ridge    70.70   0  P     P      04 44 21.1 -1.2
      baz=360
F30M  Barrier River    70.75 351  P     P      04 44 21.2 -1.4
      baz=19
D22K  Ayikyak River    70.82 358  P     P      04 44 21.8 -1.3
      baz=5.3
E27K  Coleen River     70.82 353  P     P      04 44 21.5 -1.5
      baz=14
TOLK  Toolik Lake Re   70.93 356  P     P      04 44 22.6 -1.1
      baz=7.8
D20K  Etivluk River    71.08 359  P     P      04 44 24.0 -0.6
      baz=2.1
C18K  Utukok River     71.15   1  P     P      04 44 24.0 -1.1
      baz=358
E25K  Arctic Village   71.21 355  P     P      04 44 23.8 -1.6
      baz=11
G31M  Satah River      71.21 350  P     P      04 44 24.2 -1.2
      baz=20
YKA   Yellowknife Ar   71.28 340  P     P      04 44 26.1 +0.2
      comp=Z,1.1nm,0.7s,baz=28,slow=6.3,SNR=19
      comp=Z,1.1nm,0.7s
C17K  DeLong Mountai   71.29   2  P     P      04 44 24.1 -1.8
      baz=357
E21K  Killik River     71.30 358  P     P      04 44 24.3 -1.6
      baz=4.2
D19K  Kuna River       71.31 360  P     P      04 44 25.0 -1.0
      baz=0.9
G30M  tAoh Zraii Nji   71.41 351  P     P      04 44 25.1 -1.5
      baz=18
E24K  Your Creek       71.44 356  P     P      04 44 25.1 -1.7
      baz=8.6
E23K  Chandalar        71.51 356  P     P      04 44 25.8 -1.5
      baz=7.7
F26K  Sheenjek River   71.52 354  P     P      04 44 26.1 -1.2
      baz=12
E20K  Nigu River       71.53 359  P     P      04 44 26.1 -1.3
      baz=2.4
E22K  Anaktuvuk Pass   71.54 357  P     P      04 44 26.2 -1.2
      baz=5.9
G29M  Pine Creek       71.69 351  P     P      04 44 27.2 -1.1
      baz=17
RDOG  Red Dog Mine     71.72   1  P     P      04 44 27.0 -1.5
      baz=357
F25K  Christian Rive   71.73 355  P     P      04 44 27.0 -1.6
      baz=11
TIA   Tai'an           71.76  58  P     P      04 44 28.1 -1.1
TIA                               pmax  pmax
      comp=Z,9.0nm,0.7s
KLR   Kul'dur          71.93  40 i P    P      04 44 29.1 -0.9
KLR                               pmax  pmax
      comp=Z,4.0nm,0.9s
F24K  Squaw Lake       71.95 355  P     P      04 44 30.4 +0.4
      baz=9.0
BNX   BinXian          71.96  45 ⇓P     P      04 44 29.0 -1.3
BNX                               pmax  pmax
      comp=Z,5.0nm,0.8s
TBO   Thunder Bay      71.98 319  IAmb  IAmb   04 44 32.1
      comp=Z,8.1nm,0.9s
EPYK  Eagle Plains     72.05 351  P     P      04 44 29.9 -0.6
      baz=18
D17K  Noatak River     72.07   2  P     P      04 44 30.1 -0.4
      baz=357
CN2   Changchun        72.12  47  P     P      04 44 30.8 -0.4
CN2                               pmax  pmax
      comp=Z,10.0nm,0.8s
G27K  Doyon Strip      72.17 353  P     P      04 44 30.6 -0.6
      baz=14
F22K  John River       72.18 357  P     P      04 44 30.2 -1.0
      baz=5.6
G26K  Porcupine Rive   72.22 354  P     P      04 44 30.7 -0.8
      baz=12
H31M  Peel River       72.28 350  P     P      04 44 31.0 -0.9
      baz=20
E19K  Redstone River   72.35 359  IAmb  IAmb   04 44 41.8
      comp=Z,12nm,0.7s
E19K  Redstone River   72.35 359  P     P      04 44 31.4 -0.8
      baz=1.6,SNR=5.3
COLD  Coldfoot         72.37 356  P     P      04 44 31.4 -0.9
      baz=7.2
E18K  Tukpahlearik C   72.39   1        P      04 44 33.6 +1.2
E18K                              IAmb  IAmb   04 44 42.0
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      comp=Z,12nm,0.7s
E18K  Tukpahlearik C    72.39   1 P       P       04 44 32.1 -0.3
      baz=359
H29M  Whitestone        72.39 351 IAmb    IAmb    04 45 38.5
      comp=Z,22nm,1.6s
H29M  Whitestone        72.39 351 P       P       04 44 31.9 -0.6
      baz=16
F21K  Alatna River      72.51 358 P       P       04 44 32.3 -0.9
      baz=4.6,SNR=6.4
G25K  Bearman Lake      72.58 355 P       P       04 44 33.8 +0.3
      baz=10
E17K  Hotham Inlet      72.72   1 P       P       04 44 33.7 -0.6
      baz=358
H27K  Steamboat Moun    72.72 353 P       P       04 44 33.9 -0.6
      baz=14
G22K  Bettles           72.73 357 P       P       04 44 33.8 -0.7
      baz=6.1
F20K  Avaraart Lake     72.74 359 P       P       04 44 33.2 -1.3
      baz=2.8
G24K  Hadweenzic Riv    72.74 355 P       P       04 44 33.5 -1.0
      baz=9.3
WRGLY Wrigley           72.75 344 P       P       04 44 33.4 -1.2
      baz=28
G23K  Bananza Creek     72.88 356 P       P       04 44 34.2 -1.3
      baz=7.3
F19K  Shaleruckik Mo    72.98 359 P       P       04 44 34.5 -1.4
      baz=1.1,SNR=5.3
H25L  Birch Creek       73.06 354 P       P       04 44 35.2 -1.2
      baz=11
I30M  Mount Dempster    73.11 350 P       P       04 44 35.3 -1.6
      baz=18,SNR=5.0
I29M  Ogilvie Camp,     73.21 351 IAmb    IAmb    04 44 39.3
      comp=Z,9.8nm,1.2s
I29M  Ogilvie Camp,     73.21 351 P       P       04 44 36.3 -1.1
      baz=16
G21K  Allakaket         73.22 358 IAmb    IAmb    04 44 46.6
      comp=Z,6.1nm,0.8s
G21K  Allakaket         73.22 358 P       P       04 44 36.6 -0.8
      baz=4.5
F18K  Selawik           73.22   0 P       P       04 44 36.6 -0.7
      baz=360
I28M  Miner Creek       73.31 352 P       P       04 44 36.9 -1.2
      baz=15
I27K  Kandik River      73.34 352 P       P       04 44 37.1 -1.1
      baz=14
F17K  Baldwin Pennin    73.36   1 P       P       04 44 37.0 -1.2
      baz=358
EPLO  Experimental L    73.38 322 IAmb    IAmb    04 44 39.8
      comp=Z,9.5nm,0.9s
H24K  Noodor Dome       73.62 355 P       P       04 44 38.8 -1.1
      baz=9.0
G19K  Purcell Mounta    73.67 359 P       P       04 44 39.0 -1.0
      baz=1.7
J30M  Hart River        73.72 350 IAmb    IAmb    04 44 50.6
      comp=Z,8.3nm,0.8s
J30M  Hart River        73.72 350 P       P       04 44 40.1 -0.4
      baz=18,SNR=9.0
H23K  Yukon River       73.73 356 P       P       04 44 39.2 -1.2
      baz=7.7
H22K  Ishtalitna Cre    73.76 357 P       P       04 44 39.6 -1.0
      baz=6.2
PRP   Porcupine Dome    73.77 354 P       P       04 44 39.4 -1.4
      baz=11
I26K  Coal Creek Min    73.78 353 P       P       04 44 39.3 -1.4
      baz=13
G18K  Tagagawik         73.93 360 IAmb    IAmb    04 44 58.7
      comp=Z,10nm,0.9s
G18K  Tagagawik         73.93 360 P       P       04 44 39.7 -1.9
      baz=0.4
ULM   Lac du Bonnet     73.97 323 IAmb    IAmb    04 44 43.1
      comp=Z,14nm,0.8s
ULM   Lac du Bonnet     73.97 323 P       P       04 44 41.8 -0.3
      comp=Z,10nm,0.7s,baz=48,slow=5.3,SNR=19
      comp=Z,10nm,0.7s
ULM   Lac du Bonnet     73.97 323 eP      P       04 44 40.8 -1.3
ULM                               pmax    pmax
      comp=Z,10.0nm,0.7s
F15K  North Star Dit    74.03   2 P       P       04 44 40.0 -2.1
      baz=356
TNA   Tin City          74.04   4 P       P       04 44 41.3 -0.9
      baz=353
H21K  Melozitna Rive    74.05 357 IAmb    IAmb    04 44 52.7
      comp=Z,9.2nm,0.9s
H21K  Melozitna Rive    74.05 357 P       P       04 44 40.9 -1.4
      baz=5.1,SNR=7.1
F14K  Arctic Creek      74.20   3 P       P       04 44 42.2 -1.0
      baz=354
H19K  Roundabout Mou    74.28 359 IAmb    IAmb    04 44 54.5
      comp=Z,9.8nm,1.1s
H19K  Roundabout Mou    74.28 359 P       P       04 44 43.3 -0.3
      baz=2.2
H20K  Anotleneega Mo    74.28 358 P       P       04 44 42.6 -1.0
      baz=3.4
POKR  Poker Plat Res    74.31 355 P       P       04 44 43.1 -0.7
      baz=9.3
G17K  Kiwalik Mounta    74.32   1 P       P       04 44 43.1 -0.8
      baz=359
I23K  Minto, Yukon-K    74.40 356 P       P       04 44 43.2 -1.1
      baz=7.8
G16K  Koyuk River       74.40   1 P       P       04 44 43.3 -1.0
      baz=358
I21K  Tanana            74.50 357 P       P       04 44 43.5 -1.4
      baz=5.7
K29M  Barlow Dome       74.58 350 P       P       04 44 43.8 -1.8
      baz=17
MLY   Manley            74.59 356 P       P       04 44 44.4 -1.1
      baz=6.7
DAWY  Dawson            74.59 351 IAmb    IAmb    04 44 55.6
      comp=Z,9.9nm,1.1s
DAWY  Dawson            74.59 351 P       P       04 44 44.6 -1.0
      baz=16,SNR=6.3
J26L  Joseph Creek      74.61 353 P       P       04 44 44.6 -1.0
      baz=12
ILAR  Eielson Array     74.61 355 P       P       04 44 46.3 +0.7
      comp=Z,0.8nm,0.6s,baz=354,slow=4.3,SNR=12
      comp=Z,0.8nm,0.6s
J25K  Salcha River,     74.65 354 P       P       04 44 44.7 -1.2
      baz=11
H18K  Honhosa River     74.67 360 P       P       04 44 44.6 -1.4
      baz=0.7
G15K  Niukluk           74.76   2 P       P       04 44 45.4 -1.0
      baz=356
H17K  Granite Mounta    74.89   0 P       P       04 44 46.6 -0.6
      baz=359
K27K  Chicken           74.92 352 IAmb    IAmb    04 44 58.0
      comp=Z,10nm,1.1s
K27K  Chicken           74.92 352 P       P       04 44 46.6 -0.8
      baz=13
NEA2  Nenana            74.93 356 P       P       04 44 46.4 -1.0
      baz=8.0
I20K  Naaghedeneel      74.97 358 P       P       04 44 46.0 -1.6
      baz=3.7
HDA   Harding Lake      74.97 355 IAmb    IAmb    04 44 55.4
      comp=Z,6.6nm,0.8s
HDA   Harding Lake      74.97 355 P       P       04 44 46.9 -0.8
      baz=9.6
WRH   Wood River Hil    74.99 355 IAmb    IAmb    04 44 57.4
      comp=Z,9.3nm,1.2s
GCSA  Galena City Sc    75.07 359 P       P       04 44 47.3 -0.8
      baz=1.8
SCRK  Sand Creek        75.16 353 IAmb    IAmb    04 44 51.5
      comp=Z,16nm,1.8s
SCRK  Sand Creek        75.16 353 P       P       04 44 48.4 -0.5
      baz=12
H16K  Elim              75.16   1 P       P       04 44 46.8 -1.9
      baz=358
AGMN  Agassiz Nation    75.35 322         P       04 44 50.2 +0.1
L29M  L29M              75.36 350 P       P       04 44 48.2 -1.8
      baz=16
USRK  Ussuriysk Ar.     75.42  44         P       04 44 49.5 -1.2
USRK  Ussuriysk Ar.     75.42  44 P       P       04 44 49.3 -1.3
      comp=Z,4.8nm,0.9s,baz=329,slow=2.6,SNR=5.6
      comp=Z,4.8nm,0.9s
USRK  Ussuriysk Ar.     75.42  44 eP      P       04 44 50.0 -0.6
USRK                              pmax    pmax
      comp=Z,5.0nm,0.9s
NJ2   Nanjing           75.44  60 eP      P       04 44 51.4 +0.5
NJ2                               pmax    pmax
      comp=Z,12nm,0.5s
RIDG  Independent Ri    75.47 353 IAmb    IAmb    04 45 00.9
      comp=Z,12nm,1.1s
RIDG  Independent Ri    75.47 353 P       P       04 44 49.1 -1.5
      baz=11
K24K  Donnelly Dome     75.48 354 P       P       04 44 48.7 -2.0
      baz=10
FARO  Faro, Yukon       75.51 348 IAmb    IAmb    04 45 08.7
      comp=Z,20nm,1.7s
FARO  Faro, Yukon       75.51 348 P       P       04 44 49.1 -1.8
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      baz=20
BPAW  Bear Paw Mtn.     75.53 356 P       P       04 44 48.9 -2.0
      baz=6.5
J20K  Nowinta River     75.58 358 P       P       04 44 49.7 -1.5
      baz=4.0
KOTAN Kotaneelee Air    75.64 343 P       P       04 44 49.9 -1.7
      baz=27
M31M  Drury Creek, Y    75.70 348 P       P       04 44 51.3 -0.6
      baz=19
MCK   McKinley          75.78 355 P       P       04 44 50.7 -1.7
      baz=8.0
J19K  Poorman           75.80 358 IAmb    IAmb    04 45 03.5
      comp=Z,7.4nm,0.9s
J19K  Poorman           75.80 358 P       P       04 44 50.9 -1.5
      baz=2.8
CHUM  Lake Minchumin    75.81 357 P       P       04 44 51.7 -0.8
      baz=5.4
BEAVL Fort Liard        75.82 343 P       P       04 44 52.2 -0.4
      baz=26
BCAR  Beaver Creek A    75.83 352 P       P       04 44 53.8 +1.1
L27K  Beaver Creek,     75.84 352 P       P       04 44 51.9 -0.9
      baz=14,SNR=5.7
I17K  Unalakleet        75.94   1 P       P       04 44 52.2 -1.0
      baz=359
L26K  Log Cabin Wild    76.03 353 P       P       04 44 53.2 -0.6
      baz=12
M29M  Somme Creek       76.05 350 IAmb    IAmb    04 45 04.5
      comp=Z,9.8nm,0.8s
M29M  Somme Creek       76.05 350 P       P       04 44 52.2 -1.8
      baz=16,SNR=7.1
TRF   Thorofare Moun    76.14 356 P       P       04 44 52.8 -1.8
      baz=7.0
CAST  Castle Rocks      76.26 357         P       04 44 55.6 +0.5
CAST  Castle Rocks      76.26 357 P       P       04 44 52.9 -2.2
      baz=5.6
PAX   Paxson            76.28 354 P       P       04 44 53.7 -1.6
      baz=11
DHY   Denali Highway    76.33 355 IAmb    IAmb    04 45 05.5
      comp=Z,13nm,1.0s
DHY   Denali Highway    76.33 355 P       P       04 44 54.0 -1.7
      baz=9.2,SNR=5.0
J18K  Innoko River      76.35 359 P       P       04 44 54.0 -1.6
      baz=1.9
BVCY  Beaver Creek      76.37 351 P       P       04 44 54.2 -1.5
      baz=14
K20K  Telida            76.40 358 IAmb    IAmb    04 45 06.0
      comp=Z,8.0nm,1.1s
K20K  Telida            76.40 358 P       P       04 44 54.0 -1.8
      baz=4.0
J17K  VABM Dome         76.44 360 IAmb    IAmb    04 45 06.5
      comp=Z,10nm,1.1s
J17K  VABM Dome         76.44 360 P       P       04 44 54.2 -1.8
      baz=0.1
M27K  Edge Creek, AK    76.53 352 P       P       04 44 55.4 -1.5
      baz=14
J16K  Anvik River       76.54   1 IAmb    IAmb    04 45 08.2
      comp=Z,6.8nm,0.8s
J16K  Anvik River       76.54   1 P       P       04 44 55.9 -0.8
      baz=359
N31M  Braeburn, Yuko    76.59 349 P       P       04 44 55.8 -1.2
      baz=18
M26K  Nabesna, AK       76.61 352 P       P       04 44 55.8 -1.3
      baz=13
WAT1  Susitna Watana    76.65 355 P       P       04 44 55.7 -1.7
      baz=8.3
LIRD  Liard River Hi    76.75 343 P       P       04 44 56.8 -1.1
      baz=25
PPLA  Purkeypile        76.79 357 IAmb    IAmb    04 45 53.5
      comp=Z,20nm,1.4s
PPLA  Purkeypile        76.79 357 P       P       04 44 56.8 -1.4
      baz=5.5
N30M  Aishikik Lake     76.81 349 P       P       04 44 56.8 -1.5
      baz=17
WAT6  Susitna Watana    76.84 355 P       P       04 44 57.6 -1.0
      baz=8.9
TTA   Tatalina          76.87 359 P       P       04 44 57.6 -1.0
      baz=2.5
YUK3  Moose Creek       76.94 351 P       P       04 44 57.5 -1.7
      baz=14
TOAD  Toad River Com    77.06 343 P       P       04 44 58.7 -1.0
      baz=26
K17K  Iditarod          77.12 360 P       P       04 44 58.7 -1.2
      baz=0.7
YUK4  Talbot Arm        77.13 350 P       P       04 44 58.5 -1.8
      baz=16
I37A  Lemond, Waseca    77.16 318 IAmb    IAmb    04 45 05.8
      comp=Z,11nm,0.9s
WCI   Wyandotte Cave    77.18 309 P       P       04 45 01.7 +1.0
WCI                               IAmb    IAmb    04 45 05.6
      comp=Z,6.9nm,0.8s
WCI   Wyandotte Cave    77.18 309 P       P       04 45 01.7 +1.0
WCI                               pmax    pmax
      comp=Z,7.0nm,0.8s
CUT   Chulitna          77.18 356 P       P       04 44 59.4 -0.9
      baz=7.0
M24K  Tolsona, Glenn    77.19 354 P       P       04 44 59.1 -1.3
      baz=10
WHY   Whitehorse        77.24 348 P       P       04 44 59.2 -1.5
      baz=19
L20K  Farewell, AK      77.27 357 P       P       04 44 59.6 -1.3
      baz=4.2
O30N  Mendenhall        77.32 349 P       P       04 44 59.9 -1.3
      baz=18
P33M  Teslin, Yukon     77.32 347 P       P       04 45 00.4 -0.8
      baz=20
YUK8  Steele Glacier    77.33 351 P       P       04 44 59.4 -2.1
      baz=15
HYT   Haines Junctio    77.47 349 P       P       04 45 00.6 -1.6
      baz=17
YUK6  Outpost Mounta    77.48 350 P       P       04 45 00.8 -1.5
      baz=16
K15K  Wolf Creek Mou    77.53   1 P       P       04 45 00.8 -1.3
      baz=358
N25K  Chitina, Valde    77.55 353 P       P       04 45 01.4 -1.0
      baz=11
SCM   Sheep Creek Mo    77.55 354 P       P       04 45 01.2 -1.2
      baz=9.2
L19K  White Mountain    77.60 358 IAmb    IAmb    04 45 12.9
      comp=Z,27nm,1.6s
L19K  White Mountain    77.60 358 P       P       04 45 00.8 -1.9
      baz=3.4
L18K  Granite Mounta    77.60 359 P       P       04 45 01.1 -1.5
      baz=2.0
MCARA McCarthy VSAT     77.61 352 P       P       04 45 01.1 -1.6
      baz=12
M23K  Glacier View      77.62 354 P       P       04 45 00.9 -1.9
      baz=8.9
SML   Sawmill           77.65 355 P       P       04 45 01.4 -1.6
      baz=8.4
KSAR  Wonju Array Be    77.66  51         P       04 45 02.5 -0.8
KSAR  Wonju Array Be    77.66  51 P       P       04 45 02.5 -0.8
KSRS  Korea Array       77.67  51 P       P       04 45 03.0 -0.4
      comp=Z,5.8nm,0.9s,baz=314,slow=4.6,SNR=12
      comp=Z,5.8nm,0.9s
KSRS  Korea Array       77.67  51 eP      P       04 45 03.0 -0.4
KSRS                              pmax    pmax
      comp=Z,7.0nm,0.9s
SKT   Skwentna          77.67 356 P       P       04 45 02.1 -1.0
SKT                               IAmb    IAmb    04 45 13.2
      comp=Z,22nm,1.4s
SKT   Skwentna          77.67 356 P       P       04 45 01.6 -1.5
      baz=6.0
L17K  Donlin            77.70 360 P       P       04 45 01.6 -1.6
      baz=0.7
R33M  Jennings River    77.75 346 IAmb    IAmb    04 45 06.5
      comp=Z,9.8nm,1.1s
R33M  Jennings River    77.75 346 P       P       04 45 01.9 -1.8
      baz=22
KLU   Klutina           77.78 354 P       P       04 45 02.3 -1.5
      baz=10
K13K  Kusilvak Mount    77.81   3 P       P       04 45 02.6 -1.2
      baz=356
CTG   Chitna Glacier    77.83 351 P       P       04 45 02.9 -1.2
      baz=14
M20K  Styx River        77.84 357 P       P       04 45 02.7 -1.4
      baz=4.7
M19K  Big River Lodg    77.86 358 P       P       04 45 03.3 -0.8
      baz=3.8
O28M  Mount Upton       77.88 351 P       P       04 45 03.4 -1.2
      baz=15
PMR   Palmer            77.92 355 P       P       04 45 03.4 -1.0
      baz=7.8
KNK   Knik Glacier      78.05 355 P       P       04 45 04.2 -1.0
      baz=8.3
P32M  Atlin             78.06 347 P       P       04 45 04.0 -1.3
      baz=20
P30M  Million Dollar    78.07 349 P       P       04 45 04.3 -1.0
      baz=17
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GRNC  Granite Creek     78.11 351 IAmb    IAmb    04 45 16.3
      comp=Z,14nm,1.0s
O29M  Mount Kennedy     78.12 350 P       P       04 45 04.9 -0.9
      baz=16
L16K  Owhat River       78.13   0 P       P       04 45 05.4 -0.1
      baz=360
L15K  Ungalak Mounta    78.14   1 P       P       04 45 05.3 -0.3
      baz=358
SUA   Susitna One       78.15 356 P       P       04 45 05.4 -0.4
      baz=6.6
BMRM  Bremner River     78.18 353 P       P       04 45 05.2 -0.8
      baz=11
CRQE  Cirque            78.23 352 P       P       04 45 05.6 -0.7
      baz=12
M18K  Stony River       78.31 358 P       P       04 45 05.7 -0.9
      baz=2.6
Q32M  Nakina River      78.40 346 P       P       04 45 06.8 -0.6
      baz=21
M17K  Holitna River     78.43 359 P       P       04 45 06.8 -0.5
      baz=1.4
SKAG  Skagway           78.45 348 P       P       04 45 06.8 -0.5
      baz=18
DLBC  Dease Lake        78.46 345 P       P       04 45 07.9 +0.3
      baz=22
RC01  Rabbit Creek A    78.46 355 P       P       04 45 07.1 -0.3
      baz=7.3
N20K  Mount Spurr       78.48 357 P       P       04 45 06.6 -1.0
      baz=5.4
T47A  Sharon Grove      78.48 309 IAmb    IAmb    04 45 15.7
      comp=Z,7.4nm,0.7s
PINM  Pinnacle          78.55 350 P       P       04 45 06.9 -1.1
      baz=15
PWL   Port Wells        78.59 355 P       P       04 45 07.2 -0.9
      baz=8.4
PLBC  Pleasant Camp     78.62 348 P       P       04 45 07.2 -1.1
      baz=18
P29M  Windy Craggy      78.66 349 P       P       04 45 07.4 -1.2
      baz=16
EYAK  Cordova Ski Ar    78.69 353 P       P       04 45 07.6 -1.1
      baz=10
YSS   Yuzhno-Sakhali    78.74  36         P       04 45 07.2 -2.0
YSS   Yuzhno-Sakhali    78.74  36 eP      P       04 45 10.2 +1.0
YSS                               eS      S       04 55 08.0 +1.8
YSS                               pmax    pmax
      comp=Z,30nm,0.9s
YSS                               MLR     MLR
      comp=Z,300nm,16.0s
M16K  Timber Creek      78.82 360 P       P       04 45 07.6 -1.8
      baz=0.2
PNL   Peninsula         78.85 350 P       P       04 45 08.6 -1.1
      baz=15
CAPN  Captain Cook N    78.86 356 P       P       04 45 08.4 -1.2
      baz=6.2
ECSD  EROS Data Cent    78.99 319         P       04 45 10.3 -0.4
M14K  Bethel            79.06   1 P       P       04 45 10.3 -0.4
      baz=358
N18K  Kilae Creek       79.13 358 P       P       04 45 09.3 -1.9
      baz=2.6
M15K  Kasigluk River    79.14   1 P       P       04 45 10.1 -1.0
      baz=359
S34M  Telegraph Cree    79.17 345 P       P       04 45 10.4 -0.9
      baz=21
M11K  Mekoryuk          79.29   4 P       P       04 45 10.7 -1.3
      baz=355
N17K  Nushagak Hills    79.30 359 P       P       04 45 10.8 -1.2
      baz=1.6
N16K  Nishlik Lake      79.37 360 P       P       04 45 11.8 -0.6
      baz=0.3
SEW   Seward            79.42 355 P       P       04 45 11.1 -1.6
      baz=7.5
R32K  Eaglecrest        79.44 347 P       P       04 45 11.4 -1.4
      baz=19
O18K  Koktuh Hills      79.94 358 P       P       04 45 14.7 -0.8
      baz=3.1
CCM   Cathedral Cave    80.16 312         P       04 45 16.3 -0.8
CCM   Cathedral Cave    80.16 312 P       P       04 45 16.3 -0.8
CCM                               pmax    pmax
      comp=Z,5.0nm,0.7s
T42A  Van Buren         80.78 311         P       04 45 21.9 +1.5
LRAL  Lakeview Retre    81.08 306         P       04 45 22.5 +0.4
RSSD  Black Hills       82.24 323         P       04 45 27.6 -0.8
RSSD  Black Hills       82.24 323 P       P       04 45 27.6 -0.8
RSSD                              pmax    pmax
      comp=Z,5.0nm,1.0s
RLMT  Red Lodge         83.72 327 IAmb    IAmb    04 45 40.8
      comp=Z,8.0nm,0.9s
MIAR  Mount Ida         83.96 311 IAmb    IAmb    04 45 43.2
      comp=Z,9.3nm,1.0s
NEW   Newport           84.08 333 IAmb    IAmb    04 45 39.4
      comp=Z,4.4nm,0.6s
NEW   Newport           84.08 333 P       P       04 45 37.7 +0.1
      comp=Z,3.4nm,0.5s,baz=59,slow=4.6,SNR=15
      comp=Z,3.4nm,0.5s
MSO   Missoula          84.16 331 IAmb    IAmb    04 45 41.8
      comp=Z,8.2nm,1.1s
MAJO  Matsushiro        84.19  46ceP      P       04 45 38.7 +0.4
MAJO                              pmax    pmax
      comp=Z,8.0nm,1.0s
MJAR  Matsushiro Arr    84.19  46 P       P       04 45 38.5 +0.2
      comp=Z,2.4nm,0.4s,baz=318,slow=5.5,SNR=12
      comp=Z,2.4nm,0.4s
MJA0  Matsu Arr-Jizo    84.21  46 eP      P       04 45 38.5 +0.1
MJA0                              pmax    pmax
      comp=Z,3.0nm,0.4s
BOZ   Bozeman (W)       84.30 329 IAmb    IAmb    04 45 41.9
      comp=Z,13nm,1.2s
YMP   Mirror Lake Pl    84.40 327 IAmb    IAmb    04 45 53.4
      comp=Z,13nm,1.1s
YNR   Norris Junctio    84.64 328 IAmb    IAmb    04 45 44.2
      comp=Z,7.0nm,0.8s
BDFB  Brasilia          84.74 244         P       04 45 43.6 +2.2
BDFB                              IAmb    IAmb    04 45 49.7
      comp=Z,6.9nm,0.8s
BDFB  Brasilia          84.74 244 P       P       04 45 41.3  0.0
      comp=Z,2.0nm,0.6s,baz=94,slow=3.9,SNR=8.8
      comp=Z,2.0nm,0.6s
BDFB  Brasilia          84.74 244 P       P       04 45 43.6 +2.2
BDFB                              pmax    pmax
      comp=Z,7.0nm,0.8s
NOKA  Waynoka           85.41 316 IAmb    IAmb    04 45 46.8
      comp=Z,13nm,1.1s
TPAW  Teton Pass        85.75 327 IAmb    IAmb    04 45 49.5
      comp=Z,4.8nm,0.8s
BW06  Boulder Array     85.76 326 IAmb    IAmb    04 45 48.9
      comp=Z,11nm,1.5s
PD31  Pinedale Array    85.76 326 IAmb    IAmb    04 45 48.9
      comp=Z,11nm,1.5s
PDAR  Pinedale Array    85.76 326         P       04 45 46.5 +0.2
PDAR  Pinedale Array    85.76 326 P       P       04 45 46.4  0.0
      comp=Z,1.4nm,0.6s,baz=46,slow=4.3,SNR=12
      comp=Z,1.4nm,0.6s
PLID  Pearl Lake        86.40 331 IAmb    IAmb    04 45 54.0
      comp=Z,14nm,1.6s
WMOK  Wichita Mounta    86.75 314 IAmb    IAmb    04 45 54.0
      comp=Z,6.0nm,0.9s
BMO   Blue Mountains    87.08 332 IAmb    IAmb    04 45 53.3
      comp=Z,6.2nm,0.9s
O20A  White River Ci    87.31 323 IAmb    IAmb    04 45 56.2
      comp=Z,7.7nm,0.9s
FW03  Perrin-Whitt E    87.61 313 IAmb    IAmb    04 46 01.2
      comp=Z,9.6nm,1.0s
T25A  Trinidad          87.86 319 IAmb    IAmb    04 45 57.9
      comp=Z,5.6nm,1.1s
SDCO  Great Sand Dun    87.92 320 IAmb    IAmb    04 45 59.5
      comp=Z,4.6nm,1.1s
HVU   Hansel Valley     87.92 327 IAmb    IAmb    04 45 58.2
      comp=Z,4.3nm,0.8s
BSUT  Blindstream Ca    88.10 325 IAmb    IAmb    04 46 00.5
      comp=Z,6.1nm,1.0s
JLU   Jordanelle        88.34 326 IAmb    IAmb    04 46 00.5
      comp=Z,5.8nm,0.7s
I07A  Izee              88.53 333 IAmb    IAmb    04 46 01.8
      comp=Z,8.0nm,1.3s
P18A  Preston Nutter    88.62 324 IAmb    IAmb    04 46 02.0
      comp=Z,8.7nm,1.0s
BGU   Big Grassy Mou    88.74 327 IAmb    IAmb    04 46 03.2
      comp=Z,7.9nm,1.0s
ABTX  Abilene, Hawle    88.80 313 IAmb    IAmb    04 46 04.4
      comp=Z,7.4nm,0.9s
PV07  Paradox Valley    88.86 323 IAmb    IAmb    04 46 02.4
      comp=Z,8.1nm,0.7s
MPU   Maple Canyon      88.91 325 IAmb    IAmb    04 46 03.7
      comp=Z,6.3nm,1.1s
PV21  Cone Mtn., Par    88.91 323 IAmb    IAmb    04 46 05.2
      comp=Z,9.2nm,1.0s
PV04  Paradox Valley    89.01 323 IAmb    IAmb    04 46 03.3
      comp=Z,7.9nm,0.9s
PV01  Paradox Valley    89.07 322 IAmb    IAmb    04 46 03.5
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	comp=Z,7.1nm,0.9s						
PV03	Paradox Valley	89.10	323	IAmb	IAmb	04 46 04.6	
	comp=Z,8.5nm,1.1s						
SN07	Snyder 07	89.14	314	IAmb	IAmb	04 46 07.7	
	comp=Z,3.9nm,0.7s						
PV13	Radium Mtn., P	89.16	323	IAmb	IAmb	04 46 04.9	
	comp=Z,9.1nm,1.0s						
TMUT	Trail Mountain	89.31	325	IAmb	IAmb	04 46 05.8	
	comp=Z,6.2nm,0.8s						
PV05	Paradox Valley	89.36	323	IAmb	IAmb	04 46 04.3	
	comp=Z,6.8nm,0.8s						
BRDY	Brady	89.45	312	IAmb	IAmb	04 46 10.2	
	comp=Z,4.7nm,0.8s						
Q16A	Castle Valley	89.61	325	IAmb	IAmb	04 46 05.7	
	comp=Z,6.3nm,0.9s						
MVCO	Mesa Verde	89.78	322	IAmb	IAmb	04 46 17.4	
	comp=Z,7.1nm,1.0s						
JCT	Junction City	90.50	312	IAmb	IAmb	04 46 15.1	
	comp=Z,4.6nm,0.8s						
ANMO	Albuquerque	90.60	319		P	04 46 10.8	+1.3
ANMO	Albuquerque	90.60	319	IAmb	IAmb	04 46 11.5	
	comp=Z,3.1nm,1.2s						
ANMO	Albuquerque	90.60	319	P	P	04 46 09.7	+0.1
	comp=Z,2.1nm,0.9s,baz=174,slow=4.0,SNR=6.1						
	comp=Z,2.1nm,0.9s						
ANMO	Albuquerque	90.60	319	P	P	04 46 10.9	+1.3
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BBOR	Butler Butte	90.67	334	IAmb	IAmb	04 46 10.8	
	comp=Z,7.9nm,0.9s						
SPR3	Spring Creek 3	90.90	327	IAmb	IAmb	04 46 15.1	
	comp=Z,4.8nm,0.9s						
PSUT	Pine Spring	91.09	326	IAmb	IAmb	04 46 14.6	
	comp=Z,7.0nm,1.1s						
MNHN	Monahans	91.49	315	IAmb	IAmb	04 46 16.0	
	comp=Z,5.5nm,1.1s						
U15A	North Rim	92.16	324	IAmb	IAmb	04 46 19.5	
	comp=Z,5.0nm,1.0s						
SAND	Sanderson	92.21	313	IAmb	IAmb	04 46 22.9	
	comp=Z,4.1nm,0.9s						
WUAZ	Wupatki	92.50	323	IAmb	IAmb	04 46 20.1	
	comp=Z,7.9nm,1.0s						
ALPN	Alpine	92.72	314	IAmb	IAmb	04 46 53.0	
	comp=Z,4.5nm,0.6s						
NVAR	Mina Array Bea	93.00	329	P	P	04 46 20.5	-0.2
	comp=Z,0.7nm,0.8s,baz=46,slow=4.3,SNR=4.3						
	comp=Z,0.7nm,0.8s						
X16A	Lo Mia Camp, P	93.44	322	IAmb	IAmb	04 46 25.2	
	comp=Z,4.4nm,1.0s						
TX31	Lajitas Ar. Si	93.54	314	IAmb	IAmb	04 46 28.5	
	comp=Z,4.7nm,0.9s						
TXAR	Lajitas Array	93.54	314		P	04 46 24.4	+1.3
TXAR	Lajitas Array	93.54	314	P	P	04 46 24.1	+1.0
	comp=Z,5.2nm,1.0s,baz=66,slow=4.3,SNR=20						
	comp=Z,5.2nm,1.0s						
TXAR	Lajitas Array	93.54	314	P	P	04 46 24.4	+1.3
V12A	Nelson	93.88	325	IAmb	IAmb	04 46 27.4	
	comp=Z,5.0nm,1.1s						
GWY	Greenwater Val	94.27	327	IAmb	IAmb	04 46 29.3	
	comp=Z,6.5nm,1.1s						
PFO	Pinyon Flats O	96.37	325	P	P	04 46 37.2	+1.2
	comp=Z,3.7nm,0.9s,baz=28,slow=4.6,SNR=5.2						
	comp=Z,3.7nm,0.9s						
PFO	Pinyon Flats O	96.37	325*ce*	P	P	04 46 38.1	+2.0
PLCA	Paso Flores	115.76	238	PKP	PKPdf	04 51 47.5	-1.6
	comp=Z,3.8nm,1.2s,baz=198,slow=3.2,SNR=2.9						
WRA	Warramunga Arr	120.36	91	PKP	PKPdf	04 51 57.3	-1.2
	comp=Z,1.4nm,0.7s,baz=317,slow=1.7,SNR=8.6						
ASAR	Alice Springs	122.16	95	PKP	PKPdf	04 52 01.0	-0.9
	comp=Z,4.8nm,0.7s,baz=308,slow=1.6,SNR=40						
QSPA	South Pole Qui	130.36	180	PKP	PKPdf	04 52 15.4	-0.9
	comp=Z,0.8nm,0.7s,baz=281,slow=3.2,SNR=7.2						
STKA	Stephens Creek	132.21	99	PKP	PKPdf	04 52 20.4	-0.4
	comp=Z,1.6nm,0.4s,baz=340,slow=3.6,SNR=6.2						
MSVF	Nonsavu	149.98	48*c*	*i* PKIKP	PKiKP	04 53 00.8	+2.1
MSVF				pmax	pmax		
	comp=Z,27nm,2.5s						

*IDC **01** 04:34:01.4±1.9,32°.31N×48°.71E,h0^{km},mb3.9/11, mbtmp4.0/13,ML3.8/2,Error ellipse: s-maj=40.9km s-min=19.1km az=164.0*

*NEIC **01** 04:34:02.9±2.4,32°.14N±0°.05×48°.92E±0°.09,h10^{km}±1^{km}, mb4.9/10,Error ellipse: s-maj=12.8km s-min=8.2km az=259.0*

*TEH **01** 04:34:04.7,32°.21N×48°.91E,h25^{km}±32^{km}*

*OMAN **01** 04:34:11.8±2.3,31°.55N×49°.34E,h10^{km},mb4.7/24, ms3.5/11,Error ellipse: s-maj=20.3km s-min=16.7km az=52.0*

*DSN **01** 04:34:11.6±1.6,31°.44N×49°.17E,h10^{km},ML3.8/6,Ms3.2/9, Error ellipse: s-maj=20.4km s-min=9.9km az=3.0*

ISC 01 04:34:02.6±0.5,**32°.06N**±0°.04×**48°.87E**±0°.05,**h20**^{km},**n116**, σ**2^{s}.53**/161,**mb4.2**/16,**Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AHWZ	Ahwaz	0.75	195	Pg	Pn	04 34 22.3	+4.3
JHBN	Jahan bin	1.54	83	Pg	Pn	04 34 30.9	+1.7
ZNGN	Zangian	1.69	88	Pg	Pb	04 34 34.1	+0.9
IKFM	Kafar-mosalman	1.69	330	Pg	Pn	04 34 33.4	+2.4
IBRJ	Brojen	2.04	94	Pn	Pn	04 34 39.0	+2.9
HSAM	Samen	2.16	354	Pn	Pn	04 34 39.1	+1.4
IBZA	Bozab	2.55	341	Pn	Pn	04 34 45.4	+2.4
KLNJ	Kolanjah	2.55	114	Pn	Pn	04 34 46.8	+3.6
IKLH	Kolahrood	2.61	61	Pn	Pn	04 34 46.0	+2.1
KCHF	Cheshme Sefid,	2.69	326	Pn	Pn	04 34 47.0	+2.1
QAMS	Qamsar	2.71	51	Pn	Pn	04 34 47.2	+1.9
IGAR	Gharneh	2.71	82	Pn	Pn	04 34 47.9	+2.6
ILBA	Ilam Banvizeh	2.73	306	Pn	Pn	04 34 47.3	+2.0
HAGD	Aghdareh	2.77	5	Pn	Pn	04 34 47.7	+1.7
IRAM	Ramesheh	3.00	94	Pn	Pn	04 34 52.1	+2.8
IZEF	Zefreh	3.04	73	Pn	Pn	04 34 52.1	+2.2
GLG1	Gilan-e-Gharb	3.22	310	Pn	Pn	04 34 54.7	+2.7
ILIN	Lien	3.26	331	Pn	Pn	04 34 54.8	+1.9
IQOM	Qom	3.33	33	Pn	Pn	04 34 55.3	+1.5
KRSH	Karshahi	3.34	54	Pn	Pn	04 34 56.1	+2.2
IDHR	Dehrash	3.35	322	Pn	Pn	04 34 56.3	+2.3
HGHA	Hamedan- Ghaye	3.42	360	Pn	Pn	04 34 56.6	+1.6
ISFB	Sefidab	3.64	50	Pn	Pn	04 34 59.2	+1.3
KGS1	Ghasr-e-Shirin	3.67	313	Pn	Pn	04 35 00.3	+2.0
QABG	Abgarm-Qazvin	3.69	9	Pn	Pn	04 35 00.0	+1.3
IVRN	Varamin	3.78	38	Pn	Pn	04 35 01.2	+1.4
SHI	Shiraz	3.96	127	Pn	Pn	04 35 06.3	+4.0
ISAD	Sadrabad	4.10	91	Pn	Pn	04 35 07.2	+2.8
DSBU	Dashti - Bushe	4.23	150	Pn	Pn	04 35 10.9	+5.0
ANAR	Anarak	4.26	73	Pn	Pn	04 35 08.5	+2.1
IDMV	Damavand	4.39	36	Pn	Pn	04 35 09.5	+1.2
IGZV	Ghazvin	4.46	14	Pn	Pn	04 35 10.2	+0.9
ICHK	Chekchek	4.71	86	Pn	Pn	04 35 14.9	+2.2
ILAS	Lasjerd	4.76	45	Pn	Pn	04 35 13.9	+0.5
KLST	Kelardasht - M	4.80	22	Pn	Pn	04 35 15.3	+1.3
IFIR	Firoozkooh	4.82	41	Pn	Pn	04 35 15.6	+1.3
MZPU	Pul - Mazandar	4.91	26	Pn	Pn	04 35 17.3	+1.8
IMEH	Mehriz	4.94	96	Pn	Pn	04 35 18.5	+2.6
IPRN	Peran	5.07	34	Pn	Pn	04 35 18.8	+1.3
IALA	Alasht	5.18	38	Pn	Pn	04 35 20.6	+1.4
IBAF	Bafgh	5.72	93	Pn	Pn	04 35 29.2	+2.6
SHMA	Al-Shehemyia	6.45	163	Pn	Pn	04 35 40.5	+4.1
	SNR=8.9						
SHMA				Sn	Sn	04 36 52.1	+2.7
TPRV	Parvadeh(Tabas	6.67	80	Pn	Pn	04 35 42.0	+2.4
TNSJ	Nastanj	6.78	72	Pn	Pn	04 35 42.8	+1.8
TKDS	Koohdasht(Taba	7.12	75	Pn	Pn	04 35 47.3	+1.5
TAPT	Tabas- Tapeh t	7.48	66	Pn	Pn	04 35 52.3	+1.6
SMRA	Abu-Samra	7.49	166	Pn	Pn	04 35 54.3	+3.6
SMRA				Sn	Sn	04 37 18.2	+3.2
TRNA	Turayna	7.58	164	Pn	Pn	04 35 56.1	+4.1
TRNA				Sn	Sn	04 37 19.9	+2.5
GEVA	Gevas	7.84	324	Pn	Pn	04 35 57.6	+1.9
JRN	Qarnain Island	7.91	153	Pn	Pn	04 35 57.0	+0.5
JRN				Pn	Pn	04 35 57.0	+0.5
JRN				Sn	Sn	04 37 26.5	+1.2
JRN				Sn	Sn	04 37 26.5	+1.2
SLWR	Sila	8.34	162	Pn	Pn	04 36 05.5	+3.1
SLWR				Pn	Pn	04 36 05.5	+3.1
SLWR				Sn	Sn	04 37 37.7	+1.6
SLWR				Sn	Sn	04 37 37.7	+1.6
MARD	Mardin	8.47	310	Pn	Pn	04 36 04.0	-0.3
BSRN	Basiran	8.71	88	Pn	Pn	04 36 10.1	+2.4
SHME	Shamm	8.74	131	Pn	Pn	04 36 09.5	+1.7
SHME				Sn	Sn	04 37 43.6	-2.3
SHME	Shamm	8.74	131	P	Pn	04 36 09.1	+1.3
BANOM	Banah	8.93	131	Pn	Pn	04 36 12.1	+1.6
BANOM				Sn	Sn	04 37 46.9	-3.6
RAYN	Ar Rayn	9.01	200		Pn	04 36 14.8	+3.1
RAYN	Ar Rayn	9.01	200	P	Pn	04 36 14.6	+3.0
NAZ	Nazwa, Dubai	9.24	138	Pn	Pn	04 36 16.7	+2.0
NAZ				Pn	Pn	04 36 16.7	+2.0
NAZ				Sn	Sn	04 37 56.9	-1.2
NAZ				Sn	Sn	04 37 56.9	-1.2
NAZ	Nazwa, Dubai	9.24	138	P	Pn	04 36 16.4	+1.7
MSFE	Esma-Masafi	9.25	134	P	Pn	04 36 15.6	+0.7
ASUD	Al Ashush, Dub	9.34	141	Pn	Pn	04 36 19.4	+3.3
	SNR=13						
ASUD				Pn	Pn	04 36 19.4	+3.3
	SNR=13						
ASUD				Sn	Sn	04 37 58.8	-1.8
ASUD				Sn	Sn	04 37 58.8	-1.8
ASUD	Al Ashush, Dub	9.34	141	P	Pn	04 36 18.8	+2.7
MDH	Madha	9.38	134	Pn	Pn	04 36 18.2	+1.5
MDH				Sn	Sn	04 37 58.2	-3.4
MDH	Madha	9.38	134	P	Pn	04 36 18.0	+1.4
MZWR	Madinat Zayed	9.38	151	Pn	Pn	04 36 20.5	+3.9
MZWR				Pn	Pn	04 36 20.5	+3.9
MZWR				Sn	Sn	04 38 00.7	-0.9
MZWR				Sn	Sn	04 38 00.7	-0.9
UOSS	Minazif	9.58	136	Pn	Pn	04 36 20.4	+1.0
UOSS	Minazif	9.58	136	P	Pn	04 36 21.3	+1.9
HATD	Hatta, Dubai	9.63	137	P	Pn	04 36 22.3	+2.1
ASHO	Ashiyiah	9.70	137	Pn	Pn	04 36 23.5	+2.4
ASHO				Sn	Sn	04 38 06.2	-3.2
ASHO	Ashiyiah	9.70	137	P	Pn	04 36 22.6	+1.5
ASHO				S	Sn	04 38 05.7	-3.8
MZR	Muzera	9.91	154	Pn	Pn	04 36 27.2	+3.3
MZR				Pn	Pn	04 36 27.2	+3.3
MZR				Sn	Sn	04 38 13.8	-0.7
MZR				Sn	Sn	04 38 13.8	-0.7
MZR	Muzera	9.91	154	P	Pn	04 36 26.8	+2.9
ALNE	Al Ain	10.03	141	Pn	Pn	04 36 28.4	+2.9
ALNE				Pn	Pn	04 36 28.4	+2.9
ALNE				Sn	Sn	04 38 16.5	-1.0
ALNE				Sn	Sn	04 38 16.5	-1.0
ALNE	Al Ain	10.03	141	P	Pn	04 36 27.5	+2.0
ASF	Jabal al Asfar	10.15	274	Pn	Pn	04 36 28.5	+1.2
	1.2nm,0.3s,baz=116,slow=13,SNR=14						
ASF				Sn	Sn	04 38 19.6	-1.0
	baz=249,slow=14						
	7.9nm,0.6s						
SOHO	SOHO	10.40	138	Pn	Pn	04 36 32.5	+1.9
SOHO				Sn	Sn	04 38 24.6	-1.9
SOHO	SOHO	10.40	138	P	Pn	04 36 31.9	+1.3
ARQ	Araqi	11.02	140	Pn	Pn	04 36 42.0	+2.8
	SNR=6.2						
ARQ				Pn	Pn	04 36 42.0	+2.8
	SNR=6.2						
ARQ				Sn	Sn	04 38 38.5	-3.4
ARQ				Sn	Sn	04 38 38.5	-3.4
HOQ	Hoqain	11.27	136	Pn	Pn	04 36 48.1	+5.5
HOQ				Pn	Pn	04 36 48.1	+5.5
HOQ				Sn	Sn	04 38 44.9	-3.1
HOQ				Sn	Sn	04 38 44.9	-3.1
BIDO	Bidbid	11.81	134	Pn	Pn	04 36 55.6	+5.7
BIDO				Sn	Sn	04 38 55.2	-5.9
BSY	Bisya	11.87	139	Pn	Pn	04 36 52.5	+1.8
BSY				Sn	Sn	04 39 00.0	-2.6
SMDO	Samad	12.11	136	Pn	Pn	04 36 56.0	+1.9
SMDO				Pn	Pn	04 36 56.0	+1.9
SMDO				Sn	Sn	04 39 04.8	-3.9
SMDO				Sn	Sn	04 39 04.8	-3.9
WSAR	Wadi Sarin	12.33	133	Pn	Pn	04 36 56.0	-1.0
	baz=342,slow=20,SNR=12						
WSAR				Sn	Sn	04 39 05.5	-8.4
	baz=180,slow=24,SNR=7.1						
WSAR	Wadi Sarin	12.33	133	Pn	Pn	04 36 56.3	-0.7
WSAR				Sn	Sn	04 39 07.1	-6.7
MHTO	MHTO	13.70	141	Pn	Pn	04 37 16.8	+1.0
MHTO				Sn	Sn	04 39 42.0	-5.5
DOK	Doka	14.20	159	Pn	Pn	04 37 23.2	+0.6
DOK				Sn	Sn	04 39 51.7	-8.0
DQM	DQM	14.37	145	Pn	Pn	04 37 26.4	+1.4
DQM				Sn	Sn	04 39 56.5	-7.3
BRTR	Keskin Array B	14.51	306	Pn	Pn	04 37 26.8	-0.1
	0.3nm,0.3s,baz=128,slow=12,SNR=3.1						
	2.1nm,0.8s						
WHFO	Wadi Hawf	14.76	161	Pn	Pn	04 37 29.4	-1.0
WHFO				Sn	Sn	04 40 05.9	-7.5
ABTO	Aybut	15.18	164	Pn	Pn	04 37 35.8	-0.1
ABTO				Pn	Pn	04 37 35.8	-0.1
ABTO				Sn	Sn	04 40 16.9	-6.7
ABTO				Sn	Sn	04 40 16.9	-6.7
DMTO	DMTO	15.30	158	Pn	Pn	04 37 38.0	+0.5
DMTO				Sn	Sn	04 40 19.1	-7.4
ALN	Alexandroupoli	20.32	302	P	P	04 38 37.4	+0.1
ALN				IAmb	IAmb	04 38 37.6	
	comp=Z,60nm,1.8s						
KKAR	Karatay Array	20.33	51		P	04 38 38.8	+1.2
KKAR	Karatay Array	20.33	51	Pn	P	04 38 39.1	+1.6
KKAR				IAmb	IAmb	04 38 46.9	
	comp=Z,19nm,1.9s						
ARSB	Arslanbob	21.38	58	P	P	04 38 49.8	+0.8
ARSB				IAmb	IAmb	04 38 51.3	
	comp=Z,33nm,1.0s						
KSH	Kashi	23.16	64	P	P	04 39 06.8	-1.1
KSH				pP	pP	04 39 10.6	-3.1
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AKASG	Malin Array Be	23.62	328	P	P	04 39 11.4	-0.8
	comp=Z,0.2nm,0.3s,baz=135,slow=9.2,SNR=2.1						
	comp=Z,0.2nm,0.3s						
BVAR	Borovoye Array	26.09	30	P	P	04 39 35.7	+0.9
	comp=Z,1.2nm,0.5s,baz=230,slow=6.8,SNR=5.4						
	comp=Z,1.2nm,0.5s						
TIP	Timpagrande	26.95	294	P	P	04 39 44.8	+2.0
TIP				IAmb	IAmb	04 39 53.8	
	comp=Z,51nm,1.7s						
KURBB	Kurchatov Arra	28.70	41	P	P	04 39 58.9	+0.8
	comp=Z,0.4nm,0.3s,baz=247,slow=8.2,SNR=4.1						
	comp=Z,0.4nm,0.3s						
MKAR	Makanchi Array	29.46	50	P	P	04 40 06.5	+1.5
	comp=Z,0.4nm,0.3s,baz=246,slow=9.6,SNR=3.2						
	comp=Z,0.4nm,0.3s						
VSL	Villasalto	32.68	294	P	P	04 40 35.5	+2.0
VSL				IAmb	IAmb	04 41 39.4	
	comp=Z,17nm,1.4s						
FINES	FINESS Array B	32.92	340	P	P	04 40 35.4	+0.1
FINES	FINESS Array B	32.92	340	P	P	04 40 35.1	-0.2
	comp=Z,1.2nm,0.4s,baz=140,slow=8.7,SNR=5.7						
	comp=Z,1.2nm,0.4s						
ZAA0	Zalesovo Array	33.66	39	P	P	04 40 42.3	+0.5
ZALV	Zalesovo Beam	33.66	39	P	P	04 40 41.6	-0.2
ZALV	Zalesovo Beam	33.66	39	P	P	04 40 42.3	+0.5
	comp=Z,2.0nm,0.4s,baz=249,slow=9.2,SNR=8.8						
	comp=Z,2.0nm,0.4s						
BNI	Bardonecchia	35.06	304	P	P	04 40 54.0	-0.3
BNI				IAmb	IAmb	04 41 11.3	
	comp=Z,25nm,1.6s						
HFS	Hagfors	36.42	331	P	P	04 41 05.2	-0.3
	comp=Z,3.0nm,0.6s,baz=132,slow=9.1,SNR=5.7						
	comp=Z,3.0nm,0.6s						
NOA	NORSAR Array B	37.94	331	P	P	04 41 17.6	-0.9
	comp=Z,0.8nm,0.7s,baz=122,slow=8.3,SNR=2.1						
	comp=Z,0.8nm,0.7s						
ARCES	ARCESS Array B	39.77	347	P	P	04 41 33.1	-0.5
	comp=Z,1.7nm,0.7s,baz=164,slow=9.1,SNR=1.2						
	comp=Z,1.7nm,0.7s						
ESDC	Sonseca Array	42.96	296	P	P	04 41 59.1	-1.2
	comp=Z,0.7nm,0.7s,baz=74,slow=8.6,SNR=4.4						
	comp=Z,0.7nm,0.7s						
SPB2	Spitsbergen Ar	48.35	351	P	P	04 42 40.0	-2.3
DBIC	Dimbokro	55.94	255	P	P	04 43 41.1	+1.5
DBIC				IAmb	IAmb	04 44 58.0	
	comp=Z,64nm,1.6s						
DBIC	Dimbokro	55.94	255	P	P	04 43 41.2	+1.5
	comp=Z,5.5nm,0.7s,baz=57,slow=8.8,SNR=4.3						
	comp=Z,5.5nm,0.7s						

*NAO **01** 04:43:14.6,38°.92N×21°.02E,h10^{km},mb3.2*

*IDC **01** 04:43:27.0±1.2,40°.30N×20°.74E,h0^{km},mb3.6/7, mbtmp3.6/12,ML3.4/4,Error ellipse: s-maj=23.0km s-min=14.8km az=48.0*

*PRU **01** 04:43:27.7,40°.05N×20°.83E,h10^{km}*

*ATH **01** 04:43:28.7,40°.45N×20°.78E,h15^{km}±1^{km},ML3.6/12, Manual Solution by N.Liadopoulou First location: 2019/06/03 08:31:08, This location: 2019/06/03 09:05:47 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

*TIR **01** 04:43:28.9,40°.44N×20°.77E,h3^{km}±1^{km},Ml3.7/8*

*THE **01** 04:43:29.1,40°N±2°×2°1E±°,h0^{km}±2^{km},M3.5/7,MLh3.5/7*

*SKO **01** 04:43:31.3,40°.46N×20°.92E,h7^{km},ML3.5*

ISC 01 04:43:29.3±0.8,**40°.44N**±0°.02×**20°.77E**±0°.02,**h10**^{km}±6^{km}, **n71**,σ**1^{s}.24**/111,**mb3.5**/6,**Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	Korca	0.18	3	Pg	Pg	04 43 32.5	-0.8
KBN				Sg	Sg	04 43 35.4	-0.6
KBN				AML	AML	04 43 36.8	
	115nm,0.4s						
NEST	Nestorio	0.21	98	Pg	Pg	04 43 33.4	-0.4
NEST				Sg	Sg	04 43 37.8	+1.0
NEST				AML	AML	04 43 38.5	
	64nm,0.5s						
NEST				AML	AML	04 43 42.5	
	72nm,0.5s						
NEST	Nestorio	0.21	98	P	Pg	04 43 34.0	+0.2
NEST				S	Sg	04 43 38.2	+1.3
NEST	Nestorio	0.21	98	P	Pg	04 43 33.8	0.0
NEST				S	Sg	04 43 37.6	+0.8
LSK	Leskovik	0.32	205	Pg	Pg	04 43 35.6	-0.2
LSK				Sg	Sg	04 43 41.1	+1.0
LSK				AML	AML	04 43 49.2	
	135nm,0.5s						
PENT	Pentalofos	0.37	131	P	Pg	04 43 36.8	+0.1
PENT				S	Sg	04 43 42.6	+1.0
PENT	Pentalofos	0.37	131	P	Pg	04 43 36.7	+0.1
PENT				S	Sg	04 43 41.9	+0.3
KPRO	Kipourio	0.67	137	P	Pg	04 43 41.9	-0.2
KPRO				S	Sb	04 43 52.3	0.0
KPRO	Kipourio	0.67	137	P	Pg	04 43 41.7	-0.4
OHR	Ohrid	0.67	2	*i* Pg	Pb	04 43 42.7	-0.3
OHR				*i* Sg	Sb	04 43 52.5	+0.1
OHR				*e*Lg	Lg	04 43 53.5	
	comp=E,3µm,0.7s						
OHR				*e*Lg	Lg	04 43 53.6	
	comp=N,1µm,0.6s						
KZN	Kozani	0.77	100	P	Pg	04 43 44.3	+0.1
JAN	Janina	0.79	176	P	Pg	04 43 44.0	-0.5
JAN				S	Sb	04 43 56.2	+0.4
JAN	Janina	0.79	176	P	Pb	04 43 44.7	-0.4
SRN	Sarande	0.82	227	Pg	Pg	04 43 45.1	+0.1
SRN				Sg	Sn	04 43 58.1	-0.8
SRN				AML	AML	04 44 01.1	
	comp=N,9.0nm,0.8s						
IGT	Igoumenitsa	0.97	201	Pn	Pn	04 43 48.5	-0.4
IGT				Sn	Sn	04 44 03.0	+0.2
IGT				AML	AML	04 44 07.4	
	comp=N,7.0nm,1.0s						
IGT	Igoumenitsa	0.97	201	P	Pb	04 43 48.1	0.0
IGT				S	Sg	04 44 00.0	-0.5
IGT	Igoumenitsa	0.97	201	*i* Pg	Pn	04 43 49.0	+0.1
IGT				*i* Sg	Sn	04 44 04.5	+1.8
IGT	Igoumenitsa	0.97	201	P	Pg	04 43 47.7	-0.3
NASA	Naoussa	1.00	79	P	Pg	04 43 47.9	-0.7
KTI	Kastanea	1.03	92	P	Pn	04 43 49.6	-0.2
KEK	Kerkira	1.04	226	P	Pg	04 43 48.6	-0.8
TIR	Tirane	1.14	323	Pn	Pb	04 43 50.3	-0.7
TIR				Sn	Sn	04 44 08.8	+2.0
TIR				AML	AML	04 44 16.4	
	comp=N,3.7nm,0.9s						
TIR				AML	AML	04 44 19.1	
	comp=N,4.5nm,0.7s						
TIR	Tirane	1.14	323	*i* Pg	Pb	04 43 50.2	-0.7
TIR				*i* Sg	Sn	04 44 12.3	+5.5
PRGA	Parga	1.19	194	P	Pb	04 43 51.7	-0.2
THL	Klokotos Trika	1.29	132	P	Pn	04 43 53.3	-0.1
THL				S	Sg	04 44 11.7	+0.7
THL	Klokotos Trika	1.29	132	P	Pn	04 43 52.9	-0.4
TYRN	Tyrnavos	1.34	123	P	Pg	04 43 54.8	-0.1
TYRN				S	Sg	04 44 14.2	+1.9
TYRN	Tyrnavos	1.34	123	P	Pn	04 43 53.1	-0.8
SKO	Skopje	1.61	18	*i* Pg	Pb	04 43 59.1	+0.1
SKO				*i* Sg	Sg	04 44 21.2	+0.2
VAY	Valandovo	1.62	57	*i* Pg	Pb	04 43 58.8	-0.4
VAY				*i* Sg	Sg	04 44 23.1	+1.7
VAY				*e*Lg	Lg	04 44 26.4	
	comp=N,659nm,0.8s						
VAY				*e*Lg	Lg	04 44 30.8	
	comp=E,675nm,0.8s						
LKD2	Lefkada island	1.66	183	Pn	Pg	04 44 03.7	+2.7
LKD2	Lefkada island	1.66	183	P	Pn	04 43 56.9	-1.4
THE	Thessaloniki	1.68	83	*i* Pg	Pn	04 43 58.7	0.0
THE				*i* Sg	Sg	04 44 26.0	+2.7
PUK	Puka	1.73	338	Pn	Pg	04 44 02.4	0.0
PUK				Sn	Sg	04 44 27.0	+2.1
PUK				AML	AML	04 44 31.6	
	comp=E,5.1nm,0.8s						
KNT	Kendrikon	1.77	65	*i* Pg	Pb	04 44 02.0	+0.3
KNT	Kendrikon	1.77	65	P	Pn	04 43 58.1	-1.8
HORT	Hortiatis	1.78	84	P	Pn	04 43 58.8	-1.3
AGG	Agios Georgios	1.86	139	P	Pn	04 44 00.2	-0.9
ULC	Ulcinj	1.91	323	Pn	Pb	04 44 04.1	-0.1
ULC	Ulcinj	1.91	323	*e*Pn	Pb	04 44 04.4	+0.2
BCI	Bajram Curri	1.99	345	Pn	Pg	04 44 07.1	-0.4
BCI				Sn	Sg	04 44 34.7	+1.3
BCI				AML	AML	04 44 48.6	
	comp=E,5.5nm,0.8s						
SOH	Sokhos	2.00	78	P	Pn	04 44 02.6	-0.5
SRS	Serrai	2.24	72	*e*Pn	Pb	04 44 08.3	-1.5
SRS				*e*Sg	Sn	04 44 34.4	+0.2
BARS	Barje	2.50	18	*e*Pn	Pn	04 44 10.6	+0.7
IDI	Anoyia	6.09	146	Pn	Pn	04 44 57.2	-2.2
	comp=E,3.2nm,0.5s,baz=318,slow=15,SNR=1.5						
IDI				Sn	Sn	04 46 08.2	-0.9
	comp=E,0.7nm,0.3s,baz=309,slow=21,SNR=1.7						
MLR	Muntele Rosu	6.31	35	Pn	Pn	04 45 05.9	+3.5
	comp=E,0.5nm,0.3s,baz=266,slow=8.4,SNR=3.6						
	comp=E,1.6nm,0.5s						
SOKA	Soboth	7.50	328	*i* Pn	Pn	04 45 19.3	+0.6
	comp=E,6.8nm,0.5s,SNR=6.4						
SOKA				*i* Sn	Sn	04 46 43.8	+0.1
	comp=E,4.6nm,0.6s						
OBKA	Obir	7.56	325	*i* Pn	Pn	04 45 21.0	+1.4
	comp=E,3.7nm,0.4s						
OBKA				*e*Sn	Sn	04 46 46.8	+1.4
	comp=E,21nm,0.8s						
ARSA	Arzberg	7.79	333	*e*Pn	Pn	04 45 24.3	+1.7
	comp=E,1.8nm,0.4s						
ARSA				*i* Sn	Sn	04 46 51.2	+0.4
	comp=E,1.7nm,0.4s						
KBA	Koelnbreinsper	8.53	323	*i* Pn	Pn	04 45 34.2	+1.2
	comp=E,1.6nm,0.4s						
KBA				*i* Sn	Sn	04 47 10.4	+1.1
	comp=E,4.3nm,0.5s						
MOA	Molln	8.76	330	*i* Pn	Pn	04 45 37.6	+1.7
	comp=E,2.0nm,0.4s						
MOA				*e*Sn	Sn	04 47 17.0	+2.5
	comp=E,2.5nm,0.5s						
LESA	Schwarzleotal	9.10	323	*i* Pn	Pn	04 45 40.9	+0.4
	comp=E,2.5nm,0.3s						
LESA				*i* Sn	Sn	04 47 22.1	-0.9
	comp=E,7.7nm,0.8s						
WTTA	Wattenberg	9.48	319	*i* Pn	Pn	04 45 47.3	+1.4
	comp=E,5.9nm,0.4s						
WTTA				*e*Sn	Sn	04 47 31.3	-1.4
	comp=E,19nm,0.9s						
WATA	Walderalm	9.56	319	*i* Pn	Pn	04 45 48.3	+1.2
	comp=E,11nm,0.5s						
WATA				*i* Sn	Sn	04 47 34.5	-0.1
	comp=E,7.5nm,0.5s						
SQTA	Sankt Quirin	9.67	318	*i* Pn	Pn	04 45 48.8	+0.3
	comp=E,6.3nm,0.5s						
SQTA				*i* Sn	Sn	04 47 36.7	-0.5
	comp=E,8.3nm,0.6s						
GERES	GERESS Array B	9.79	331	Pn	Pn	04 45 51.6	+1.5
	baz=161,slow=14,SNR=7.4						
GERES				Sn	Sn	04 47 42.0	+1.9
	baz=151,slow=25,SNR=3.5						
	comp=E,1.8nm,0.7s						
FETA	Feichten	9.80	315	*i* Pn	Pn	04 45 50.5	+0.3
	comp=E,5.1nm,0.6s						
FETA				*i* Sn	Sn	04 47 40.6	+0.3
	comp=E,4.9nm,0.7s						
MOTA	Moosalm	9.81	318	*i* Pn	Pn	04 45 51.1	+0.7
	comp=E,7.9nm,0.6s,SNR=6.8						
MOTA				*i* Sn	Sn	04 47 41.8	+1.2
	comp=E,19nm,0.9s						
KHC	Kasperske Hory	10.07	332	*e*PN	Pn	04 45 56.3	+2.4

KHC				eSN	Sn	04 47 47.9	+0.9
DAVOX	Davos/Dischmat	10.12	312	Pn	Pn	04 45 55.6	+0.9
	comp=E,0.9nm,0.3s,baz=129,slow=19,SNR=6.5						
DAVOX				Sn	Sn	04 47 45.2	-3.1
	comp=E,0.2nm,0.3s,baz=356,slow=21,SNR=3.9						
	comp=E,3.1nm,0.4s						
DAVA	Damuels	10.42	315	iPn	Pn	04 46 00.2	+1.4
	comp=E,5.5nm,0.5s,SNR=5.1						
DAVA				eSn	Sn	04 47 55.7	+0.2
	comp=E,2.8nm,0.3s						
ESDC	Sonseca Array	18.94	276	P	P	04 47 49.6	-0.7
	comp=E,0.1nm,0.3s,baz=86,slow=11,SNR=7.5						
	comp=E,1.3nm,0.9s						
HFS	Hagfors	20.20	350	P	P	04 48 03.9	0.0
	comp=E,1.0nm,0.5s,baz=153,slow=11,SNR=7.1						
	comp=E,1.0nm,0.5s						
FINES	FINESS Array B	21.28	7	P	P	04 48 15.5	0.0
	comp=E,0.6nm,0.4s,baz=185,slow=9.4,SNR=6.0						
	comp=E,0.6nm,0.4s						
NB2	NORSAR Subarra	21.45	347	P	P	04 48 18.1	+0.7
	comp=Z,0.5nm,0.5s,baz=160,slow=10						
NOA	NORSAR Array B	21.45	347	P	P	04 48 17.7	+0.3
	comp=Z,1.0nm,0.8s,baz=156,slow=10,SNR=5.9						
	comp=Z,1.0nm,0.8s						
EKA	Eskdalemuir Ar	21.74	321	P	P	04 48 19.9	-0.6
	comp=Z,2.0nm,0.9s,baz=114,slow=10,SNR=3.6						
	comp=Z,2.0nm,0.9s						
ARCES	ARCESS Array B	29.26	3	P	P	04 49 29.9	-1.2
	comp=Z,1.6nm,0.8s,baz=186,slow=8.3,SNR=1.6						
	comp=Z,1.6nm,0.8s						
MKAR	Makanchi Array	43.98	60	P	P	04 51 35.4	-1.1
	comp=Z,0.4nm,0.6s,baz=280,slow=6.9,SNR=4.5						
	comp=Z,0.4nm,0.6s						
TXAR	Lajitas Array	93.55	314	P	P	04 56 46.7	+1.0
	comp=Z,0.6nm,0.9s,baz=76,slow=5.3,SNR=4.6						
	comp=Z,0.6nm,0.9s						
ASAR	Alice Springs	122.19	95	PKP	PKPdf	05 02 24.0	-0.5
	comp=Z,0.2nm,0.5s,baz=301,slow=2.5,SNR=4.1						

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*NAO **01** 04:51:42.3, 39.°43N×23.°73E, h10^{km}, mb4.5*

*BEO **01** 04:51:56.9±0.5, 40.°35N×20.°92E, h2^{km}±2^{km}, ML4.3/12*

*IDC **01** 04:51:57.1±0.6, 40.°53N×20.°75E, h0^{km}, mb4.1/24, mbtmp4.1/40, ML3.9/13, MS3.8/28, Error ellipse: s-maj=9.7km s-min=8.7km az=38.0*

*TIR **01** 04:51:57.5, 40.°48N×20.°81E, h13^{km}±1^{km}, Ml4.7/9*

*GCMT **01** 04:51:57.5±0.3, 40.°45N±0.°03×20.°74E±0.°03, h12^{km}, MW4.7/100, Moment Tensor Solution. s18,c20; s100,c140; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.38±.04; M$_{\theta\theta}$0.39±.04; M$_{\phi\phi}$0.99±.04; M$_{r\theta}$0.34±.19; M$_{\theta\phi}$0.56±.03; M$_{\phi r}$0.04±.16; Best double couple: M$_0$1.39400×10^{16} NP1:φ$_s$21.00000°,δ41.00000°, λ-105.00000°. NP2:φ$_s$221.00000°,δ50.00000°, λ-77.00000°. Principal axes: T 1.3440, Plg4.0000°, Azm302.0000°; N 0.0980, Plg10.0000°, Azm33.0000°; P -1.4440, Plg79.0000°, Azm188.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*ATH **01** 04:51:58.7, 40.°53N×20.°89E, h7^{km}±2^{km}, ML4.3/34, Manual Solution by G.Panopoulou First location: 2019/06/01 04:52:55, This location: 2020/10/14 17:34:22 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*MED_RC **01** 04:51:58.0±0.2, 40.°45N×20.°83E, h11^{km}, MW4.7/48, Moment Tensor Solution.Mantle waves: s48,c72; Duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.13±.07; M$_{\theta\theta}$0.26±.05; M$_{\phi\phi}$0.87±.04; M$_{r\theta}$-0.28±.16; M$_{\theta\phi}$0.48±.04; M$_{\phi r}$-0.97±.11; Best double couple: M$_0$1.52000×10^{16} NP1:φ$_s$218.00000°,δ25.00000°, λ-74.00000°. NP2:φ$_s$20.00000°,δ66.00000°,λ-97.00000°. Principal axes: T 1.5100, Plg21.0000°, Azm116.0000°; N 0.0200, Plg7.0000°, Azm23.0000°; P -1.5300, Plg68.0000°, Azm277.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*MOS **01** 04:51:58.1±1.1, 40.°51N×20.°73E, h17^{km}, mb4.3/15 Error ellipse: s-maj=4.0km s-min=2.8km az=90.2*

*THE **01** 04:51:58.8, 41°N±2°×2°1E±°, h0^{km}±2^{km}, M4.2/43, MLh4.2/43*

*PDG **01** 04:51:58.4±0.9, 40.°52N×20.°76E, h8^{km}±1^{km}, MD4.5/11, ML4.4/12, Error ellipse: s-maj=0.8km s-min=1.1km az=0.0*

*MCSM **01** 04:51:59.1±0.2, 40°N±2°×2°1E±°, h10^{km}, mB4.8, mb4.6, MLv4.7, Mw(mB)4.0*

*NEIC **01** 04:51:59.5±2.2, 40.°47N±0.°05×20.°71E±0.°07, h10^{km}±1^{km}, mb4.8/115, Mww4.7/39, Error ellipse: s-maj=8.6km s-min=7.7km az=102.0*

*NEIC **01** 04:51:59.5, 40.°37N×20.°71E, h14^{km}, Moment Tensor Solution. Duration: 1^{s}1 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.19; M$_{\theta\theta}$0.31; M$_{\phi\phi}$0.88; M$_{r\theta}$-0.51; M$_{\theta\phi}$0.53; M$_{\phi r}$0.19; Fault plane solution: M$_0$1.30000×10^{16} NP1: φ$_s$191.34000°,δ46.23000°,λ-119.94000°. NP2: φ$_s$51.12000°,δ51.27000°,λ-62.48000°. Principal axes: T 1.2008, Plg3.0000°, Azm122.0000°; N 0.1981, Plg21.0000°, Azm213.0000°; P -1.3988, Plg69.0000°, Azm25.0000°;*

*PRU **01** 04:51:59.5, 40.°31N×20.°76E, h10^{km}, M4.4*

*SKO **01** 04:51:59.8, 40.°47N×20.°87E, h8^{km}, ML4.3*

*NEIC **01** 04:51:59.5, 40.°47N×20.°71E, h14^{km}*

*AFAD **01** 04:52:03.2, 39.°33N×21.°48E, h4^{km}±5^{km}, MW4.3*

*SOF **01** 04:52:06.8, 40.°87N±0.°07×21.°55E±0.°06, h10^{km}±8^{km}, MD3.9/7*

ISC 01 04:51:58.3±0.8**, 40.°48N**±0.°01×**20.°80E**±0.°02**, h7**^{km}±5^{km}**, n632, σ1^{s}53**/690**, mb4.7**/93**, MS3.8**/21**, 44C-31D,**

Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.14	356	Pg	Pg	04 52 01.1	-0.2
KBN				Sg	Sg	04 52 03.4	-0.1
KBN				AML	AML	04 52 05.0	
	553nm,0.2s						
KBN				AML	AML	04 52 05.4	
	673nm,0.6s						
NEST	Nestorio	0.20	109	Pg	Pg	04 52 02.4	0.0
NEST				Sg	Sg	04 52 05.8	+0.7
NEST				AML	AML	04 52 08.0	
	201nm,0.4s						
NEST	Nestorio	0.20	109	P	Pg	04 52 02.3	0.0
NEST				S	Sg	04 52 05.3	+0.2
NEST	Nestorio	0.20	109	P	Pg	04 52 02.4	0.0
NEST				S	Sg	04 52 05.3	+0.2
LSK	Leskovik	0.36	205	Pg	Pg	04 52 04.5	-1.0
LSK				Sg	Sg	04 52 10.5	+0.2
LSK				AML	AML	04 52 12.9	
	484nm,0.5s						
LSK				AML	AML	04 52 25.2	
	427nm,1.0s						
PENT	Pentalofos	0.39	138	P	Pg	04 52 05.2	-0.6
PENT				S	Sg	04 52 10.0	-0.9
PENT	Pentalofos	0.39	138	P	Pg	04 52 05.3	-0.6
PENT				S	Sg	04 52 11.6	+0.7
OHR	Ohrid	0.63	360	P	Pg	04 52 10.2	-0.3
OHR				S	Sg	04 52 16.6	-2.2
OHR	Ohrid	0.63	360	⇓iPg	Pg	04 52 11.0	+0.5
OHR				i Sg	Sb	04 52 21.2	+0.4
OHR				eLg	Lg	04 52 21.8	
	comp=E,25μm,0.7s						
OHR				eLg	Lg	04 52 22.3	
	comp=N,15μm,0.9s						
OHR	Ohrid	0.63	360	P	Pg	04 52 10.6	+0.1
OHR	Ohrid	0.63	360	ePg	Pg	04 52 10.5	+0.1
OHR				eSg	Sb	04 52 20.6	-0.2
KPRO	Kipourio	0.68	140	P	Pg	04 52 10.7	-0.7
KPRO				S	Sb	04 52 21.4	-0.8
KPRO	Kipourio	0.68	140	P	Pg	04 52 10.5	-0.9
KPRO				S	Sb	04 52 21.5	-0.7
KZN	Kozani	0.76	103	P	Pg	04 52 13.2	+0.2
KZN				S	Sb	04 52 24.2	-0.4
KZN	Kozani	0.76	103	P	Pb	04 52 14.0	0.0
KZN	Kozani	0.76	103	P	Pb	04 52 13.6	-0.3
KZN				S	Sg	04 52 22.8	-0.1
MSVA	Metsovo	0.77	157	P	Pg	04 52 13.5	+0.4
MSVA				S	Sb	04 52 25.1	+0.3
JAN	Janina	0.82	177	P	Pg	04 52 12.8	-1.4
JAN				S	Sb	04 52 26.2	-0.2
JAN	Janina	0.82	177	P	Pg	04 52 13.0	-1.2
SRN	Sarande	0.86	226	Pg	Pg	04 52 14.2	-0.6
SRN				Sg	Sb	04 52 27.6	+0.4
SRN				AML	AML	04 52 30.4	
	comp=N,86nm,1.2s						
SRN				AML	AML	04 52 31.4	
	comp=N,102nm,0.7s						
VLO	Vlora	0.99	270	Pg	Pg	04 52 17.0	-0.4
KTI	Kastanea	1.01	95	P	Pg	04 52 17.1	-0.7
IGT	Igoumenitsa	1.01	201	Pn	Pg	04 52 17.9	+0.2
IGT				Sn	Sn	04 52 32.7	-0.8
IGT	Igoumenitsa	1.01	201	P	Pg	04 52 17.3	-0.4
IGT				S	Sb	04 52 31.9	+0.2
IGT	Igoumenitsa	1.01	201	i Pg	Pg	04 52 17.5	-0.3
IGT				i Sg	Sn	04 52 33.9	+0.4
IGT	Igoumenitsa	1.01	201	P	Pg	04 52 17.3	-0.4
IGT	Igoumenitsa	1.01	201	P	Pg	04 52 17.4	-0.4
IGT				S	Sn	04 52 33.3	-0.2
KEK	Kerkira	1.08	225		Pn	04 52 19.8	-0.2
KEK	Kerkira	1.08	225	P	Pg	04 52 19.1	-0.1
KEK				S	Sn	04 52 34.9	-0.4
KEK	Kerkira	1.08	225	P	Pg	04 52 18.9	-0.2
KEK				S	Sn	04 52 37.2	+1.9
TIR	Tirane	1.12	321		Pb	04 52 18.8	-1.3
TIR	Tirane	1.12	321	Pn	Pb	04 52 18.7	-1.3
TIR				Sn	Sn	04 52 35.7	-0.4
TIR				AML	AML	04 52 43.4	
	comp=N,30nm,0.8s						
TIR	Tirane	1.12	321	⇑P	Pb	04 52 20.0	0.0
TIR	Tirane	1.12	321	i Pg	Pb	04 52 20.2	+0.2
TIR				i Sg	Sn	04 52 38.4	+2.3
TIR	Tirane	1.12	321	P	Pb	04 52 20.0	0.0
TIR	Tirane	1.12	321	ePg	Pb	04 52 18.5	-1.5
TIR				eSg	Sn	04 52 38.5	+2.4
TIR	Tirane	1.12	321	P	Pb	04 52 19.9	-0.1
TIR				S	Sn	04 52 36.0	-0.1
LFKM	Lefkimmi	1.18	209	P	Pg	04 52 21.3	+0.3
TETR	Tetrakomo, Epi	1.19	162	P	Pb	04 52 21.1	-0.2
PHP	Peshkopia	1.23	347	Pg	Pn	04 52 20.5	-1.5
GRG	Griva	1.31	68	P	Pn	04 52 23.1	0.0
THL	Klokotos Trika	1.31	134	P	Pn	04 52 22.1	-0.9
THL	Klokotos Trika	1.31	134	P	Pn	04 52 22.0	-1.0
THL				S	Sn	04 52 40.1	-0.6
TYRN	Tyrnavos	1.34	125	P	Pn	04 52 22.7	-0.8
TYRN	Tyrnavos	1.34	125	P	Pn	04 52 23.2	-0.3
TYRN				S	Sb	04 52 40.8	-0.4
LRSO	Larissa Observ	1.47	123	P	Pb	04 52 26.2	+0.3
LRSO	Larissa Observ	1.47	123	P	Pg	04 52 26.3	-0.1
SKO	Skopje	1.57	18	i Pg	Pg	04 52 28.6	+0.2
SKO				i Sg	Sg	04 52 49.5	+0.8
VAY	Valandovo	1.58	57	⇓iPg	Pn	04 52 26.7	-0.1
VAY				i Sg	Sg	04 52 51.2	+2.0
VAY				eLg	Lg	04 52 54.3	
	comp=N,6μm,1.4s						
VAY				eLg	Lg	04 52 55.1	
	comp=E,3μm,0.8s						
AMPL	Ampelaki	1.59	168	P	Pb	04 52 28.0	-0.1
THE	Thessaloniki	1.66	84	Pn	Pb	04 52 28.6	-0.6
THE	Thessaloniki	1.66	84	P	Pn	04 52 27.4	-0.4
THE	Thessaloniki	1.66	84	i Pg	Pn	04 52 27.6	-0.2
THE				i Sg	Sb	04 52 49.7	-0.5
THE	Thessaloniki	1.66	84	P	Pb	04 52 28.6	-0.6
THE	Thessaloniki	1.66	84	P	Pn	04 52 26.9	-0.9
TSLK	Tsoukalades, L	1.66	184	P	Pb	04 52 29.6	+0.4
TSLK	Tsoukalades, L	1.66	184	P	Pb	04 52 29.6	+0.4
LKD2	Lefkada island	1.69	184	Pn	Pg	04 52 30.7	-0.1
LKD2				Sn	Sg	04 52 56.3	+3.6
LKD2				AML	AML	04 53 01.8	
	comp=E,24nm,0.6s						
LKD2	Lefkada island	1.69	184	P	Pb	04 52 30.4	+0.5
LKD2	Lefkada island	1.69	184	P	Pb	04 52 30.1	+0.3
PUK	Puka	1.70	337		Pg	04 52 31.2	+0.2
PUK	Puka	1.70	337	Pn	Pb	04 52 30.3	+0.2
PUK				Sn	Sg	04 52 54.3	+1.2
PUK				AML	AML	04 53 00.2	
	comp=E,50nm,0.9s						
KNT	Kendrikon	1.73	66	P	Pn	04 52 28.9	0.0
KNT	Kendrikon	1.73	66	⇑iPg	Pn	04 52 29.1	+0.3
KNT				i Sg	Sg	04 52 55.1	+1.1
KNT	Kendrikon	1.73	66	P	Pn	04 52 29.2	+0.3
KNT	Kendrikon	1.73	66	P	Pn	04 52 28.6	-0.2
EVR	Evrytania	1.75	153	P	Pb	04 52 30.5	-0.3
EVR	Evrytania	1.75	153	P	Pb	04 52 30.5	-0.3
HORT	Hortiatis	1.76	85	P	Pn	04 52 28.7	-0.6
HORT	Hortiatis	1.76	85	P	Pn	04 52 28.7	-0.6
NYDR	Nydri-Lefkada	1.77	183	P	Pb	04 52 31.4	+0.3
NYDR	Nydri-Lefkada	1.77	183	P	Pb	04 52 30.7	-0.4
MAKR	Makrakomi, Fth	1.79	145	P	Pb	04 52 30.9	-0.6
MAKR	Makrakomi, Fth	1.79	145	P	Pb	04 52 30.6	-0.8
EVGI	Lefkada island	1.86	183	P	Pb	04 52 32.0	-0.6
EVGI	Lefkada island	1.86	183	P	Pb	04 52 31.7	-1.0
AGG	Agios Georgios	1.88	140	P	Pn	04 52 31.0	+0.1
AGG	Agios Georgios	1.88	140	P	Pb	04 52 32.0	-0.9
AGG	Agios Georgios	1.88	140	P	Pn	04 52 31.1	+0.3
ULC	Ulcinj	1.89	322	Pn	Pb	04 52 32.7	-0.4
ULC	Ulcinj	1.89	322	⇑iPg	Pb	04 52 33.0	-0.1
ULC	Ulcinj	1.89	322	⇓iPn	Pb	04 52 32.5	-0.7
ULC				i Sn	Sb	04 52 57.4	+0.4
PVO	Paravola	1.94	163	P	Pb	04 52 33.8	-0.3
PVO	Paravola	1.94	163	P	Pb	04 52 33.8	-0.3
BCI	Bajram Curri	1.96	344	Pn	Pb	04 52 34.2	-0.3
BCI				Sn	Sg	04 53 01.0	-0.4
BCI				AML	AML	04 53 06.0	
	comp=E,42nm,0.8s						
SOH	Sokhos	1.97	79	P	Pn	04 52 31.7	-0.6
SOH	Sokhos	1.97	79	P	Pn	04 52 33.0	+0.8
SOH	Sokhos	1.97	79	P	Pn	04 52 31.6	-0.6
PLG	Polygyros	2.02	92	P	Pn	04 52 32.6	-0.3
PLG	Polygyros	2.02	92	P	Pn	04 52 33.4	+0.5
PLG	Polygyros	2.02	92	P	Pn	04 52 32.6	-0.3
FSK	Fiskardo	2.03	185	P	Pn	04 52 34.1	+1.1
FSK	Fiskardo	2.03	185	P	Pn	04 52 34.0	+1.1
ANX	Ano Chora	2.08	155	P	Pb	04 52 35.8	-0.6
ANX	Ano Chora	2.08	155	P	Pb	04 52 35.5	-0.9
DRME	Dracevica, Mon	2.09	325	⇑iPn	Pn	04 52 35.1	+1.2
DRME	Dracevica, Mon	2.09	325	⇓iPn	Pn	04 52 34.7	+0.8
DRME				i Sn	Sb	04 53 03.0	+0.1
NEO	Neokhori	2.20	121	P	Pn	04 52 35.3	0.0
NEO	Neokhori	2.20	121	P	Pn	04 52 35.0	-0.4
PVY	Plav	2.20	344	⇑iPn	Pb	04 52 37.7	-0.9
PVY				i Sn	Sb	04 53 07.2	+1.0
SRS	Serrai	2.21	72	P	Pn	04 52 35.6	+0.1
SRS	Serrai	2.21	72	ePn	Pn	04 52 36.0	+0.4
SRS				i Sn	Sn	04 53 04.3	+1.2
SRS	Serrai	2.21	72	P	Pn	04 52 35.9	+0.4
SRS	Serrai	2.21	72	P	Pn	04 52 35.4	-0.1
EFP	Efpalio	2.22	157	P	Pb	04 52 37.4	-1.5
EFP	Efpalio	2.22	157	P	Pb	04 52 37.5	-1.3
KKB	Krupnik	2.22	52	i P	Pn	04 52 35.9	+0.3
KKB	Krupnik	2.22	52	ePn	Pn	04 52 36.2	+0.6
KKB				i Sn	Sn	04 53 04.0	+0.7
KKB	Krupnik	2.22	52	P	Pn	04 52 36.3	+0.6
KKB				S	Sb	04 53 05.9	-0.7
AXAR	Agios Charalam	2.23	139	P	Pn	04 52 36.8	+1.0
AXAR	Agios Charalam	2.23	139	P	Pn	04 52 36.0	+0.2
DMLN	Damoulianata-K	2.26	189	P	Pb	04 52 37.9	-1.7
DMLN	Damoulianata-K	2.26	189	P	Pn	04 52 37.4	+1.2
PDG	Podgorica	2.27	330		Pn	04 52 38.1	+1.8
PDG	Podgorica	2.27	330	⇑iPn	Pn	04 52 37.6	+1.4
PDG	Podgorica	2.27	330	⇑P	Pn	04 52 37.7	+1.4
PDG	Podgorica	2.27	330	ePn	Pn	04 52 38.1	+1.8
PDG				eSn	Sb	04 53 08.4	+0.6
PDG	Podgorica	2.27	330	⇑iPn	Pn	04 52 38.0	+1.8
PDG				i Sn	Sb	04 53 07.4	-0.4
PAIG	Paliouri	2.27	103	P	Pn	04 52 36.2	-0.1
PAIG	Paliouri	2.27	103	P	Pn	04 52 36.4	+0.1
SERG	Sergoula	2.28	154	P	Pb	04 52 38.3	-1.6
SERG	Sergoula	2.28	154	P	Pn	04 52 37.7	+1.2
VLS	Valsamata	2.31	184	P	Pn	04 52 37.7	+0.9
VLS	Valsamata	2.31	184	P	Pn	04 52 37.8	+1.0
BUM	Brajici-Budva	2.31	322	⇑iPn	Pn	04 52 37.0	0.0
BUM				i Sn	Sb	04 53 08.4	-0.9
UPR	University Cam	2.32	160	P	Pn	04 52 38.0	+1.1
AXS	Araxos	2.33	169	P	Pb	04 52 39.2	-1.4
AXS	Araxos	2.33	169	P	Pb	04 52 39.1	-1.5
KALE	Kalithea	2.33	153	P	Pb	04 52 39.0	-1.7
KALE	Kalithea	2.33	153	P	Pb	04 52 39.0	-1.7
PSDA	Pessada-Kefalo	2.37	184	P	Pn	04 52 38.4	+0.8
PSDA	Pessada-Kefalo	2.37	184	P	Pn	04 52 38.5	+0.8
BOSS	Bosilegrad	2.38	32	ePn	Pn	04 52 38.0	+0.2
BOSS				eSn	Sn	04 53 07.0	-0.2
RTZL	Ratzakli, Kefa	2.40	181	P	Pn	04 52 38.9	+0.8
YRMI	Loutra Irminis	2.41	170	P	Pn	04 52 39.9	+1.7
OUR	Ouranopolis	2.44	92	P	Pn	04 52 38.9	+0.4
OUR	Ouranopolis	2.44	92	P	Pn	04 52 40.3	+1.8
OUR	Ouranopolis	2.44	92	P	Pn	04 52 38.1	-0.4
BARS	Barje	2.46	18	⇓iPn	Pn	04 52 39.0	+0.2
BARS				i Sn	Sn	04 53 08.8	-0.3
BARS	Barje	2.46	18	ePn	Pn	04 52 39.1	+0.2
KOKK	Kokkinochori,	2.46	81	P	Pn	04 52 39.1	+0.2
KOKK	Kokkinochori,	2.46	81	P	Pn	04 52 38.3	-0.5
MMB	Musomishta	2.47	64	i P	Pn	04 52 39.6	+0.5
MMB	Musomishta	2.47	64	P	Pn	04 52 39.5	+0.4
MMB	Musomishta	2.47	64	ePn	Pn	04 52 39.6	+0.5
MMB				i Sn	Sn	04 53 10.4	+0.8
MMB	Musomishta	2.47	64	P	Pn	04 52 39.9	+0.8
MMB				S	Sn	04 53 10.0	+0.4
RLS	Riolos of Patr	2.48	168	P	Pb	04 52 41.2	-1.9
RLS	Riolos of Patr	2.48	168	P	Pn	04 52 40.3	+1.2
IVA	Berane	2.48	344	⇑iPn	Pb	04 52 42.3	-1.0
IVA				i Sn	Sb	04 53 14.9	+0.7
CEME	Cevo	2.50	326	⇓iPn	Pn	04 52 41.4	+1.9
CEME				i Sn	Sn	04 53 12.2	+1.9
KOME	Kolasin	2.56	338	⇑iPn	Pn	04 52 42.4	+2.1
KOME				i Sn	Sn	04 53 13.7	+2.0
CLEM	Kyllini,Ilia,G	2.60	174	P	Pn	04 52 41.5	+0.7
HCY	Herceg Novi	2.62	319	⇑iPn	Pn	04 52 41.0	-0.1
HCY				i Sn	Sn	04 53 15.2	+2.1
KLV	Kalavryta, Ach	2.65	156	P	Pn	04 52 42.3	+0.7
KYPS	Kipseli, Zakin	2.66	180	P	Pn	04 52 42.7	+1.1
TRAN	Tran	2.73	30	i P	Pn	04 52 44.4	+1.7
SELS	Selova	2.75	5	ePn	Pn	04 52 43.4	+0.5
PLNA	Plana	2.81	44	i P	Pn	04 52 44.4	+0.7
VTS	Vitosha	2.81	40	i P	Pn	04 52 43.9	0.0
VTS	Vitosha	2.81	40	P	Pn	04 52 44.7	+0.8
VTS	Vitosha	2.81	40	ePn	Pn	04 52 44.2	+0.3
VTS				eSn	Sn	04 53 18.6	+0.5
SJES	Sjenica	2.85	348	⇑iPn	Pn	04 52 45.7	+1.4
SJES	Sjenica	2.85	348	ePn	Pn	04 52 46.4	+2.1
KAVA	Kavala	2.87	78	P	Pn	04 52 43.8	-0.7
TREB	Trebinje	2.89	321	ePn	Pn	04 52 45.2	+0.4
BRY	Bratogost	2.95	326	⇑iPn	Pn	04 52 46.9	+1.1
BRY	Bratogost	2.95	326	⇑iPn	Pn	04 52 46.8	+1.0
BRY				i Sn	Sn	04 53 23.1	+1.6
VIL2	Platees	2.97	139	P	Pn	04 52 47.2	+1.3
THAS	Thassos island	2.99	86	P	Pn	04 52 45.0	-1.2
PLE	Pljevlja	3.04	340	ePn	Pn	04 52 47.6	+0.7
PLE				i Sn	Sn	04 53 25.0	+1.4
UPM	Unac-Piva	3.07	333	Pn	Pn	04 52 50.3	+2.9
UPM	Unac-Piva	3.07	333	⇓iPn	Pn	04 52 49.7	+2.3
UPM				i Sn	Sn	04 53 26.3	+1.9
GOCS	Kraljevo Serbi	3.08	1	ePn	Pn	04 52 47.9	+0.4
GOCS				eSn	Sb	04 53 29.3	-2.0
ZAPS	Zavoj	3.11	26	ePn	Pn	04 52 48.3	+0.5
MATE	Matera	3.12	274	⇓P	Pn	04 52 48.7	+0.8
IVAS	Ivanjica	3.13	351	ePn	Pn	04 52 48.1	-0.1
KYMI	Kymi, Euboea I	3.15	125	P	Pn	04 52 48.4	0.0
RZN	Rozhen	3.21	67	i P	Pn	04 52 49.7	+0.3
BOVS	Bovan	3.22	12	⇓P	Pn	04 52 49.4	0.0
BOVS	Bovan	3.22	12	ePn	Pn	04 52 49.3	0.0
PGB	Panagyurishte	3.25	50	i P	Pn	04 52 49.5	-0.2
SKY	Skiros Island	3.31	118	P	Pn	04 52 49.9	-0.7
RUDO	Rudo	3.31	342	ePn	Pn	04 52 51.9	+1.3
STON	Ston	3.33	317	⇑iPn	Pn	04 52 50.3	-0.5
STON	Ston	3.33	317	ePn	Pn	04 52 51.0	+0.2
STON				eSn	Sn	04 53 32.1	+1.5
VLX	Vlachokerasia	3.34	158	P	Pn	04 52 52.8	+1.7
TIP	Timpagrande	3.37	249		Pn	04 52 52.0	+0.5
TIP	Timpagrande	3.37	249	⇓P	Pn	04 52 53.2	+1.7
TIP	Timpagrande	3.37	249	P	Pn	04 52 52.2	+0.7
TIP				S	Sn	04 53 31.1	-0.7
GRUS	Gruza	3.41	359	ePn	Pn	04 52 52.7	+0.8
PLD	Plovdiv	3.41	59	i P	Pn	04 52 52.6	+0.7
PLD	Plovdiv	3.41	59	P	Pn	04 52 52.8	+0.9
ITM	Ithomi	3.41	165		Pn	04 52 54.5	+2.5
ITM	Ithomi	3.41	165	P	Pn	04 52 53.1	+1.1
ZAGS	Zajecar	3.50	17	ePn	Pn	04 52 53.3	+0.2
ZAGS				eSn	Sn	04 53 33.6	-1.1
BBLS	Lazi&#263i	3.54	343	⇑iPn	Pn	04 52 56.3	+2.5
BBLS	Lazi&#263i	3.54	343	ePn	Pn	04 52 55.6	+1.8
BBLS				eSn	Sn	04 53 38.7	+2.8
MPEP	Malo Peshtene	3.62	36	i P	Pn	04 52 56.2	+1.4
KDZ	Kurdzhali	3.62	70	i P	Pn	04 52 55.5	+0.7
KDZ	Kurdzhali	3.62	70	P	Pn	04 52 56.6	+1.8
RDO	Rodhopi	3.66	78		Pn	04 52 55.3	0.0
DIVS	Divibare	3.66	351	ePn	Pn	04 52 56.0	+0.5
DIVS				eSn	Sn	04 53 41.1	+2.1
BORS2	Bor- Borsko je	3.72	14	ePn	Pn	04 52 55.0	-1.2
TRUS	Trudelj	3.75	356	ePn	Pn	04 52 57.1	+0.5
CUC	Castrocucco	3.84	264		Pn	04 52 59.0	+1.0
HAPS	Han Pijesak,Bl	3.85	340	ePn	Pn	04 52 59.9	+1.7
HAPS				eSn	Sn	04 53 46.3	+2.5
ALN	Alexandroupoli	4.01	82		Pn	04 53 00.1	0.0
ALN	Alexandroupoli	4.01	82	P	Pn	04 53 00.2	0.0
SGRT	San Giovanni R	4.03	290		Pn	04 53 00.3	-0.2
TEKS	Tekeris	4.17	347	⇑iPn	Pn	04 53 03.6	+1.2
TEKS	Tekeris	4.17	347	ePn	Pn	04 53 03.6	+1.2
KOCA	Canakkale, Ayv	4.22	102	P	Pn	04 53 04.0	+1.0
AVAS	Avala Beograd	4.22	357	ePn	Pn	04 53 02.9	-0.2
EZN	Ezine	4.29	97	⇓P	Pn	04 53 04.8	+0.9
EZN	Ezine	4.29	97	P	Pn	04 53 04.8	+0.9
EZN	Ezine	4.29	97	P	Pn	04 53 04.6	+0.7
EZN				S	Sn	04 53 55.8	+1.6
MDVR	Moldovita	4.35	9	⇓P	Pn	04 53 05.0	0.0
MDVR	Moldovita	4.35	9	ePn	Pn	04 53 04.3	-0.6
SOI	Samo	4.40	238	P	Pn	04 53 05.7	+0.2
CEL	Celeste	4.40	241		Pn	04 53 04.7	-1.0
CEL	Celeste	4.40	241	P	Pn	04 53 05.0	-0.6
CEL				S	Sn	04 53 55.5	-1.7
BAYC	CANAKKALE_Bayr	4.47	98	P	Pn	04 53 07.6	+1.1
BAYC				S	Sn	04 53 55.3	-3.5
KESN	Edirne-Kesan	4.49	84	P	Pn	04 53 06.6	-0.5
KESN				S	Sn	04 53 56.6	-3.1
GMB	Gambarie	4.49	241	P	Pn	04 53 07.5	+0.5
HERR	Herculane	4.56	15	⇓P	Pn	04 53 08.5	+0.8
VRSS	Vrsac	4.66	5	ePn	Pn	04 53 08.6	-0.5
DOB	Doboj	4.69	336	ePn	Pn	04 53 12.3	+2.8
FRGS	Fruska Gora	4.73	351	⇑iPn	Pn	04 53 09.4	-0.7
FRGS	Fruska Gora	4.73	351	ePn	Pn	04 53 10.0	-0.1
JMB	Yambol	4.75	63	P	Pn	04 53 11.7	+1.4
PAOL	Paolisi	4.76	279		Pn	04 53 10.9	+0.3
BUHA	Balikesir, Bur	4.92	99	P	Pn	04 53 13.3	+0.6
BUHA				S	Sn	04 54 06.6	-3.3
KIRK	Kırklareli	4.93	73	P	Pn	04 53 12.3	-0.5
KIRK				S	Sg	04 54 34.2	-2.5
APE	Apeiranthos	5.03	131	⇑P	Pn	04 53 15.6	+1.4
APE	Apeiranthos	5.03	131	i P	Pn	04 53 15.4	+1.2
BLY	Banja Luka	5.03	329	⇑iPn	Pn	04 53 14.9	+0.7
BLY	Banja Luka	5.03	329	ePn	Pn	04 53 15.3	+1.1
BLY				eSn	Sn	04 54 13.6	+1.0
SLATY	Slatina	5.05	330	ePn	Pn	04 53 15.1	+0.6
A050A	Klekovaca	5.09	323	⇑iPn	Pn	04 53 15.9	+0.8
GZR	Gura Zlata	5.12	16	⇓P	Pn	04 53 16.4	+0.9
GZR	Gura Zlata	5.12	16	P	Pn	04 53 16.3	+0.9
BZS	Buzias	5.17	6	⇓P	Pn	04 53 18.2	+2.1
BZS	Buzias	5.17	6	P	Pn	04 53 18.1	+2.1
BZS	Buzias	5.17	6	ePn	Pn	04 53 15.4	-0.7
A051A	Mrakovica	5.36	329	⇑iPn	Pn	04 53 19.2	+0.4
SURR	Surduc	5.36	10	⇑P	Pn	04 53 20.4	+1.7
PRIJ	Prijedor	5.41	328	ePn	Pn	04 53 19.4	+0.1
INTR	Introdacqua	5.42	289		Pn	04 53 19.6	0.0
LOT	Lotru	5.42	23	⇑P	Pn	04 53 20.3	+0.6
BLKS	Balkesir-Sus	5.53	94	P	Pn	04 53 21.8	+0.7
BLKS				S	Sn	04 54 20.5	-4.3
ARR	Arges	5.64	29	⇓P	Pn	04 53 22.7	+0.1
VAE	Valguarnera	5.81	241	Pn	Pn	04 53 24.2	-0.7
	comp=E,5.8nm,0.4s,baz=181,slow=9.1,SNR=4.2						
VAE				Sn	Sn	04 54 31.7	-0.2
	comp=E,1.5nm,0.3s,baz=20,slow=22,SNR=2.0						
VOIR		5.85	31	⇓P	Pn	04 53 26.2	+0.6
VOIR		5.85	31	P	Pn	04 53 26.1	+0.6
VOIR		5.85	31	P	Pn	04 53 26.6	+1.0
	comp=E,0.2nmcomp=E,20nm,0.7s						
VOIR				S	Sn	04 54 34.9	+2.0
	comp=E,0.2nmcomp=E,20nm,0.7s						
AQU	L'Aquila	5.87	291	P	Pn	04 53 25.9	+0.1
AQU				S	Sn	04 54 33.2	-0.1
AQU	L'Aquila	5.87	291	P	Pn	04 53 26.3	+0.5
AQU				pmax	pmax		
	comp=Z,232nm,1.1s						
AQU	L'Aquila	5.87	291	P	Pn	04 53 25.6	-0.2

	comp=Z,1.3nmcomp=Z,2µmcomp=Z,232nm,1.1s						
AQU				S	Sn	04 54 32.9	-0.4
	comp=Z,1.3nmcomp=Z,2µmcomp=Z,232nm,1.1s						
CAMP	Campotosto	5.92	293		Pn	04 53 26.2	-0.2
MORH	Mrgy, Hungar	5.94	345	⇑P	Pn	04 53 27.3	+0.6
MORH	Mrgy, Hungar	5.94	345	P	Pn	04 53 27.4	+0.6
	comp=Z,0.3nmcomp=Z,806nmcomp=Z,87nm,1.0s						
MORH				S	Sn	04 54 36.0	+1.0
	comp=Z,0.3nmcomp=Z,806nmcomp=Z,87nm,1.0s						
IDI	Anoyia	6.11	147	S	Sn	04 54 36.9	-2.5
IDI				P	Pn	04 53 29.5	+0.4
IDI	Anoyia	6.11	147	Pn	Pn	04 53 30.4	+1.2
	comp=Z,8.1nm,0.8s,baz=269,slow=20,SNR=11						
IDI				Sn	Sn	04 54 38.6	-0.7
	comp=Z,5.3nm,0.3s,baz=308,slow=16,SNR=3.7						
NRCA	Norcia	6.22	295		Pn	04 53 30.4	-0.2
MLR	Muntele Rosu	6.27	35		Pn	04 53 33.7	+2.4
MLR	Muntele Rosu	6.27	35	Pn	Pn	04 53 32.0	+0.7
	comp=Z,2.1nm,0.3s,baz=347,slow=8.4,SNR=15						
MLR				Sn	Sn	04 54 43.4	+0.1
	comp=Z,0.8nm,0.3s,baz=351,slow=14,SNR=1.1						
MLR				LR	LR	04 56 03.2	
	comp=Z,490nm,18.1s,baz=154,slow=39						
	comp=Z,3.5nm,0.3s						
MLR	Muntele Rosu	6.27	35	⇓P	Pn	04 53 33.5	+2.2
MLR	Muntele Rosu	6.27	35	P	Pn	04 53 33.7	+2.4
MLR	Muntele Rosu	6.27	35	P	Pn	04 53 33.0	+1.7
	comp=Z,0.4nmcomp=Z,35nm,1.0s						
ISR	Istrita	6.27	40	⇑P	Pn	04 53 32.3	+1.0
ISR	Istrita	6.27	40	P	Pn	04 53 32.3	+1.0
ISR	Istrita	6.27	40	P	Pn	04 53 32.3	+1.0
	comp=Z,0.6nmcomp=Z,42nm,0.9s						
ISR				S	Sn	04 54 45.3	+2.1
	comp=Z,0.6nmcomp=Z,42nm,0.9s						
MANT	Manisa	6.32	106		Pn	04 53 35.0	+2.8
ICOR	Ion Corvin	6.33	53	⇑P	Pn	04 53 33.6	+1.5
MARR	Marisel-Cluj	6.42	14	⇓P	Pn	04 53 35.3	+2.0
DOPR	Dopca	6.43	30	⇑P	Pn	04 53 34.2	+0.8
DRGR		6.46	12	⇑P	Pn	04 53 35.5	+1.5
DRGR		6.46	12	P	Pn	04 53 35.4	+1.5
DRGR		6.46	12	ePn	Pn	04 53 34.9	+1.0
BOJS	Bojanci	6.46	323	⇑iPn	Pn	04 53 33.6	-0.2
BOJS	Bojanci	6.46	323	i Pn	Pn	04 53 33.6	-0.2
BOJS				ePg	Pg	04 53 59.7	-2.3
BOJS				i Sn	Sn	04 54 45.9	-1.9
BOJS				IAML		04 56 17.7	
	comp=Z,4µm,5.0s						
BOJS	Bojanci	6.46	323	ePn	Pn	04 53 33.9	+0.1
BOJS				eSn	Sn	04 54 45.7	-2.1
PTJ	Puntijarka	6.47	329	P	Pn	04 53 33.9	-0.2
CRES	Cresnjevec Ost	6.62	326	⇑iPn	Pn	04 53 35.5	-0.5
BISRR	Bisoca	6.66	39	P	Pn	04 53 38.8	+2.1
OZUR		6.69	31	⇑P	Pn	04 53 38.1	+1.1
RIY	Rijeka	6.70	318	ePn	Pn	04 53 37.2	+0.1
PLOR	Plostina	6.86	37	⇑P	Pn	04 53 41.2	+1.8
PLOR	Plostina	6.86	37	P	Pn	04 53 41.2	+1.8
TIRR	Tirgusor	6.89	52		Pn	04 53 42.1	+2.4
TIRR	Tirgusor	6.89	52	P	Pn	04 53 42.1	+2.4
VRI	Vrincioaia	6.91	37	⇑P	Pn	04 53 40.9	+0.9
VRI	Vrincioaia	6.91	37	P	Pn	04 53 40.9	+0.9
VRI	Vrincioaia	6.91	37	P	Pn	04 53 41.3	+1.3
	comp=Z,0.2nmcomp=Z,44nm,0.7s						
CEY	Cerknica	7.02	321	⇑iPn	Pn	04 53 41.2	-0.4
CEY	Cerknica	7.02	321	ePn	Pn	04 53 41.5	-0.1
CEY				eSn	Sn	04 55 00.8	-0.9
MPLH	Magyarpolny	7.09	342	P	Pn	04 53 43.6	+1.1
	comp=Z,0.8nmcomp=Z,2µmcomp=Z,194nm,0.8s						
SKDS	Skadanscina	7.09	318	i Pn	Pn	04 53 41.3	-1.3
BUD	Budapest	7.12	350	P	Pn	04 53 44.9	+2.1
BUD				pmax	pmax		
	comp=Z,43nm,0.5s						
TPGR	Topolog	7.12	50	⇑P	Pn	04 53 43.5	+0.7
CFR	Carcaliu	7.15	47	⇓P	Pn	04 53 44.5	+1.3
CFR	Carcaliu	7.15	47	P	Pn	04 53 44.5	+1.3
LJU	Ljubljana	7.20	323	P	Pn	04 53 44.2	+0.2
LJU				pmax	pmax		
	comp=Z,325nm,0.8s						
LJU	Ljubljana	7.20	323	i Pn	Pn	04 53 43.6	-0.4
LJU				eSn	Sn	04 55 04.4	-1.6
LJU	Ljubljana	7.20	323	ePn	Pn	04 53 43.8	-0.2
TRI	Trieste	7.33	318	P	Pn	04 53 44.8	-1.0
TESR	Tescani	7.38	33	P	Pn	04 53 47.4	+1.0
	comp=Z,0.1nmcomp=Z,12nm,1.2s						
PSZ	Piszkesteto	7.46	355		Pn	04 53 48.4	+0.7
PSZ	Piszkesteto	7.46	355	⇓P	Pn	04 53 48.1	+0.5
PSZ	Piszkesteto	7.46	355	P	Pn	04 53 48.4	+0.7
SOKA	Soboth	7.47	328	i Pn	Pn	04 53 48.1	+0.3
	comp=Z,15nm,0.4s,SNR=22						
SOKA				eSn	Sn	04 55 10.9	-2.0
	comp=Z,34nm,0.5s						
OBKA	Obir	7.54	325	⇑iPn	Pn	04 53 47.9	-0.9
OBKA	Obir	7.54	325	ePn	Pn	04 53 49.2	+0.4
	comp=Z,25nm,0.6s,SNR=13						
OBKA				i Sn	Sn	04 55 15.3	+0.6
	comp=Z,142nm,0.7s						
SRO	Srobarova	7.54	347	eP	Pn	04 53 52.6	+3.9
SRO				e		04 55 14.0	
SRO				MLR	MLR		
	comp=Z,100nm,0.6s						
SRO	Srobarova	7.54	347	ePN	Pn	04 53 52.6	+3.9
SRO				eSN	Sn	04 55 14.0	-0.4
SRO				eLG	Lg	04 55 21.2	
ARSA	Arzberg	7.76	332		Pn	04 53 52.5	+0.7
ARSA	Arzberg	7.76	332	ePn	Pn	04 53 52.3	+0.6
	comp=Z,12nm,0.4s,SNR=13						
ARSA				i Sn	Sn	04 55 17.2	-2.7
	comp=Z,18nm,0.5s						
ARSA	Arzberg	7.76	332	ePn	Pn	04 53 52.6	+0.8
BUR08	Bucovina Ar. S	7.83	22		Pn	04 53 55.4	+2.6
RONA	Rosalia, Austr	7.91	337	ePn	Pn	04 53 53.8	0.0
	comp=Z,5.8nm,0.5s,SNR=7.2						
RONA				eSn	Sn	04 55 22.5	-1.0
	comp=Z,12nm,0.4s						
KECS	Kecovo	8.00	359	eP	Pn	04 53 57.9	+2.9
KECS	Kecovo	8.00	359	ePN	Pn	04 53 57.9	+2.9
ISP	Isparta	8.01	106		Pn	04 53 58.1	+2.9
ISP	Isparta	8.01	106	P	Pn	04 53 58.1	+2.9
MYKA	Terra Mystica	8.05	322	i Pn	Pn	04 53 55.2	-0.5
	comp=Z,8.1nm,0.5s,SNR=8.1						
MYKA				eSn	Sn	04 55 25.9	-1.0
	comp=Z,28nm,0.5s						
VYHS	Vyhne	8.13	351	eP	Pn	04 53 59.8	+3.0
VYHS				e		04 55 26.9	
VYHS	Vyhne	8.13	351	ePN	Pn	04 53 59.8	+3.0
VYHS				eSN	Sn	04 55 26.9	-2.1
UZHM	Uzhgorod	8.22	7	P	Pn	04 53 58.7	+0.8
CONA	Conrad Observa	8.24	336	i Pn	Pn	04 53 58.3	-0.1
	comp=Z,3.4nm,0.6s						
CONA				eSn	Sn	04 55 31.7	-0.1
	comp=Z,26nm,1.0s						
MODS	Modra-Piesok	8.28	343	eP	Pn	04 54 01.0	+2.1
MODS				e		04 55 29.8	
MODS	Modra-Piesok	8.28	343	ePN	Pn	04 54 01.0	+2.1
MODS				eSN	Sn	04 55 29.8	-2.8
KSV	Kosov	8.40	20	P	Pn	04 54 05.9	+5.4
KBA	Koelnbreinsper	8.52	323	P	Pn	04 54 02.0	-0.2
KBA				pmax	pmax		
	comp=Z,39nm,1.1s						
KBA	Koelnbreinsper	8.52	323	ePn	Pn	04 54 01.9	-0.3
	comp=Z,16nm,1.0s,SNR=16						
KBA				eSn	Sn	04 55 37.2	-1.4
	comp=Z,38nm,0.6s						
KOLS	Kolonicke sedl	8.52	7	eP	Pn	04 54 07.6	+5.6
KOLS	Kolonicke sedl	8.52	7	ePN	Pn	04 54 07.6	+5.6
VLC	Villacollemand	8.54	299	P	Pn	04 53 59.5	-2.9
VLC				S	Sn	04 55 34.6	-4.5
JAVC	Velka Javorina	8.67	346	ePN	Pn	04 54 06.0	+1.8
ABTA	Abfaltersbach	8.68	319	ePn	Pn	04 54 03.6	-0.7
	comp=Z,19nm,0.5s,SNR=16						
ABTA				i Sn	Sn	04 55 39.9	-2.5
	comp=Z,110nm,0.7s						
LANS	Liptovska Anna	8.72	354	eP	Pn	04 54 10.2	+5.3
LANS				e		04 55 46.8	
LANS	Liptovska Anna	8.72	354	ePN	Pn	04 54 10.2	+5.3
LANS				eSN	Sn	04 55 46.8	+3.4
LANS				eLG	Lg	04 56 03.8	
MOA	Molln	8.73	330	ePn	Pn	04 54 05.9	+0.8
	comp=Z,9.4nm,0.4s,SNR=12						
MOA				eSn	Sn	04 55 43.3	-0.4
	comp=Z,36nm,0.6s						
MOA	Molln	8.73	330	ePn	Pn	04 54 06.4	+1.4
BIOA	Bad Ischl, Aus	8.86	327	ePn	Pn	04 54 06.6	-0.1
	comp=Z,10nm,0.4s,SNR=13						
BIOA				eSn	Sn	04 55 45.4	-1.3
	comp=Z,38nm,0.8s						
STHS	Stebnicka Huta	8.94	2	eP	Pn	04 54 15.8	+7.9
STHS				e		04 55 53.2	
STHS	Stebnicka Huta	8.94	2	ePN	Pn	04 54 15.8	+7.9
STHS				eSN	Sn	04 55 53.2	+4.4
STHS				eLG	Lg	04 56 06.0	
NIE	Niedzica	8.94	358	P	Pn	04 54 13.5	+5.6
NIE				pmax	pmax		
	comp=Z,11nm,1.4s						
LESA	Schwarzleotal	9.08	323	i Pn	Pn	04 54 09.7	-0.1
	comp=Z,12nm,0.5s,SNR=14						
LESA				eSn	Sn	04 55 50.3	-2.0
	comp=Z,72nm,0.7s						
KRUC	Moravsky	9.13	341	ePN	Pn	04 54 11.6	+1.1
KRUC				eSN	Sn	04 55 53.8	+0.3
KRUC	Moravsky	9.13	341	P	Pn	04 54 11.8	+1.3
KRUC				pmax	pmax		
	comp=Z,7.0nm,2.5s						
RJOB	Jochberg	9.26	324	eP	Pn	04 54 12.1	-0.1
	baz=140						
VRAC	Vranov	9.31	343	Pn	Pn	04 54 12.0	-1.0
	comp=Z,0.7nm,0.3s,baz=182,slow=12,SNR=6.0						
VRAC				Sn	Sn	04 55 55.5	-2.5
	comp=Z,0.3nm,0.3s,baz=141,slow=18,SNR=1.8						
VRAC				LR	LR	04 58 18.2	
	comp=Z,706nm,18.5s,baz=162,slow=41						
	comp=Z,2.2nm,0.5s						
VRAC	Vranov	9.31	343	ePN	Pn	04 54 13.6	+0.6
WTTA	Wattenberg	9.47	319	P	Pn	04 54 15.6	+0.3
WTTA				pmax	pmax		
	comp=Z,64nm,1.0s						
WTTA	Wattenberg	9.47	319	ePn	Pn	04 54 15.7	+0.5
	comp=Z,18nm,0.4s,SNR=19						
WTTA				i Sn	Sn	04 56 00.1	-1.9
	comp=Z,134nm,0.7s						
CKRC	Cesky Krumlov	9.53	333	ePN	Pn	04 54 17.3	+1.4
CKRC				AMS	AMS	04 58 30.0	
	comp=Z,2µm,12.6s						
CKRC	Cesky Krumlov	9.53	333	eP	Pn	04 54 17.3	+1.4
CKRC				MLR	MLR		
	comp=Z,2µm,12.6s						
WATA	Walderalm	9.55	319	ePn	Pn	04 54 17.1	+0.8
	comp=Z,46nm,0.5s,SNR=38						
WATA				eSn	Sn	04 56 01.9	-2.0
	comp=Z,88nm,0.7s						
MORC	Moravsky Berou	9.57	347	ePN	Pn	04 54 17.6	+1.0
MORC				eSN	Sn	04 56 05.6	+1.2
MORC	Moravsky Berou	9.57	347	P	Pn	04 54 20.5	+3.9
MORC				pmax	pmax		
	comp=Z,13nm,1.2s						
TREC	Trest	9.58	339	AMS	AMS	04 58 20.0	
	comp=Z,3µm,10.2s						
TREC	Trest	9.58	339	P	Pn	04 54 16.9	+0.2
TREC				pmax	pmax		
	comp=Z,11nm,1.2s						
SQTA	Sankt Quirin	9.66	317	ePn	Pn	04 54 18.1	+0.3
	comp=Z,17nm,0.5s,SNR=22						
SQTA				i Sn	Sn	04 56 05.2	-1.4
	comp=Z,80nm,0.7s						
GEC2	GERESS Array S	9.77	331	eP	Pn	04 54 20.4	+1.1
	baz=140						
GERES	GERESS Array B	9.77	331		Pn	04 54 19.1	-0.2
GERES	GERESS Array B	9.77	331	Pn	Pn	04 54 19.5	+0.2
	comp=Z,0.2nm,0.3s,baz=156,slow=14,SNR=26						
GERES				Sn	Sn	04 56 05.8	-3.4
	comp=Z,0.3nm,0.3s,baz=150,slow=23,SNR=8.2						
	comp=Z,5.4nm,0.5s						
FETA	Feichten	9.78	315	i Pn	Pn	04 54 19.1	-0.4
	comp=Z,35nm,0.8s,SNR=25						
FETA				i Sn	Sn	04 56 08.1	-1.6
	comp=Z,37nm,0.6s						
MOTA	Moosalm	9.79	318	i Pn	Pn	04 54 19.5	-0.2
	comp=Z,59nm,0.8s,SNR=38						
MOTA				eSn	Sn	04 56 08.4	-1.5
	comp=Z,56nm,0.8s						
BR131	Keskin Array S	9.87	90		Pn	04 54 23.1	+2.4
BR131	Keskin Array S	9.87	90	i P	Pn	04 54 22.3	+1.6
BRTR	Keskin Array B	9.87	90	Pn	Pn	04 54 23.0	+2.3
	comp=Z,0.2nm,0.3s,baz=271,slow=12,SNR=6.2						
	comp=Z,0.7nm,0.5s						
BR104	Keskin Array S	9.87	90	P	Pn	04 54 21.6	+0.8
	comp=Z,28nmcomp=Z,2.2nm,0.9s						
KRLC	Kraliky	10.00	345	ePN	Pn	04 54 24.3	+1.9
KRLC				AMS	AMS	04 58 50.0	
	comp=Z,2µm,9.5s						
KRLC	Kraliky	10.00	345	eP	Pn	04 54 24.3	+1.9
KRLC				MLR	MLR		
	comp=Z,2µm,9.5s						
KHC	Kasperske Hory	10.05	332	ePN	Pn	04 54 25.3	+2.2
KHC				eSN	Sn	04 56 14.2	-1.9
KHC				AMS	AMS	04 58 50.0	
	comp=Z,2µm,11.6s						
KHC	Kasperske Hory	10.05	332	eP	Pn	04 54 25.3	+2.2
KHC				e		04 56 14.2	
KHC				MLR	MLR		
	comp=Z,2µm,11.6s						
KHC	Kasperske Hory	10.05	332	P	Pn	04 54 23.5	+0.4
	comp=Z,17nm,0.9s						
BZK	Bozkurt	10.06	77	P	Pn	04 54 24.8	+1.6
	comp=Z,12nm,0.8s						
RETA	Reutte	10.06	317	ePn	Pn	04 54 25.3	+2.0
	comp=Z,7.5nm,0.3s						
RETA				i Sn	Sn	04 56 14.5	-1.9
	comp=Z,52nm,0.6s						
ZVC	Zvikov	10.10	335	ePN	Pn	04 54 24.7	+0.9
ZVC				AMS	AMS	04 58 50.0	
	comp=Z,2µm,10.9s						
DAVOX	Davos/Dischmat	10.11	312	Pn	Pn	04 54 24.3	+0.3
	comp=Z,5.2nm,0.3s,baz=106,slow=12,SNR=32						
DAVOX				Sn	Sn	04 56 15.3	-2.5
	comp=Z,3.0nm,0.3s,baz=321,slow=22,SNR=6.8						
DAVOX				LR	LR	04 59 37.4	
	comp=Z,709nm,18.3s,baz=114,slow=46						
	comp=Z,16nm,0.4s						
KEST	Kesra	10.19	246	Pn	Pn	04 54 25.9	+0.8
	comp=Z,0.4nm,0.3s,baz=38,slow=6.1,SNR=8.6						
KEST				LR	LR	04 58 28.6	
	comp=Z,344nm,19.1s,baz=15,slow=38						
	comp=Z,5.1nm,0.8s						
TUE	Stuetta	10.25	310		Pn	04 54 25.9	0.0
TUE	Stuetta	10.25	310	P	Pn	04 54 25.8	-0.2
	comp=Z,150nm,0.7s						
WET	Wettzell	10.32	330	P	Pn	04 54 26.1	-0.7
WET				pmax	pmax		
	comp=Z,10.0nm,1.2s						
WET	Wettzell	10.32	330	eP	Pn	04 54 27.3	+0.5
	baz=140						
GOPC	GO Pecny, Ondr	10.34	338	AMS	AMS	04 59 00.0	
	comp=Z,3µm,9.7s						
DPC	Dobruska-Polom	10.36	344	ePN	Pn	04 54 29.4	+2.1
DPC				AMS	AMS	04 59 10.0	
	comp=Z,3µm,9.4s						
DPC	Dobruska-Polom	10.36	344	eP	Pn	04 54 29.4	+2.1
DPC				MLR	MLR		
	comp=Z,3µm,9.4s						
DAVA	Damuels	10.40	314	ePn	Pn	04 54 29.0	+0.9
	comp=Z,27nm,0.5s,SNR=29						
DAVA				i Sn	Sn	04 56 22.7	-2.2
	comp=Z,66nm,0.7s						
PRU	Pruhonice	10.48	337	AMS	AMS	04 59 00.0	
	comp=Z,3µm,9.3s						
PRU	Pruhonice	10.48	337	P	Pn	04 54 29.6	+0.7
PRU				pmax	pmax		
	comp=Z,8.0nm,1.2s						
UBR	Ueberruh	10.53	317	eP	Pn	04 54 27.2	-2.4
	baz=140						
UPC	Upice	10.57	343	AMS	AMS	04 59 10.0	
	comp=Z,3µm,9.0s						
OSTC	Ostas	10.57	344	AMS	AMS	04 59 10.0	
	comp=Z,3µm,9.5s						
PRA	Prague	10.58	337	AMS	AMS	04 59 00.0	
	comp=Z,3µm,9.0s						
CHVC	Chvalec	10.64	343	AMS	AMS	04 59 10.0	
	comp=Z,3µm,9.1s						
ISO	Isola	10.83	294	P	Pn	04 54 37.9	+4.1
ISO				pmax	pmax		
	comp=Z,6.0nm,2.1s						
KSP	Ksiaz	10.83	345	P	Pn	04 54 34.5	+0.8
KSP				pmax	pmax		
	comp=Z,6.0nm,1.5s						
KSP	Ksiaz	10.83	345	P	Pn	04 54 34.4	+0.8
	comp=Z,6.4nm,1.5s						
PVCC	Panska Ves	10.95	339	P	Pn	04 54 36.2	+0.8
PVCC				pmax	pmax		
	comp=Z,9.0nm,1.3s						
RICC	Richard	11.10	337	AMS	AMS	04 59 20.0	
	comp=Z,2µm,9.0s						
BNI	Bardonecchia	11.34	298	P	Pn	04 54 42.6	+1.8
BNI				pmax	pmax		
	comp=Z,32nm,0.9s						
HSKC	Hora Svate Kat	11.36	335	AMS	AMS	04 59 30.0	
	comp=Z,3µm,9.3s						
NKC	Novy Kostel	11.38	332	AMS	AMS	04 59 30.0	
	comp=Z,2µm,9.2s						
GRF	Grafenberg Arr	11.42	327	P	Pn	04 54 41.0	-0.8
GRF				pmax	pmax		
	comp=Z,13nm,0.9s						
GRF	Grafenberg Arr	11.42	327	eP	Pn	04 54 41.6	-0.2
	baz=140						
GRF				eL	L	04 59 52.6	
	comp=Z,910nm,21.1s						
BRG	Berggiesshubel	11.44	338	P	Pn	04 54 42.4	+0.4
BRG				pmax	pmax		
	comp=Z,7.0nm,1.7s						
BRG	Berggiesshubel	11.44	338	eP	Pn	04 54 42.0	0.0
	baz=140						
BRG	Berggiesshubel	11.44	338	eP	Pn	04 54 42.2	+0.1
BRG				Amp		04 54 43.1	
	comp=Z,2.1nm,0.8s						
SLE	Schleitheim	11.45	314	P	Pn	04 54 41.0	-1.2
SLE				pmax	pmax		
	comp=Z,18nm,0.8s						
TANN	Tannenbergstha	11.52	332	eP	Pn	04 54 45.1	+1.8
	baz=140						
STU	Stuttgart	11.70	319	P	Pn	04 54 44.4	-1.2
STU				pmax	pmax		
	comp=Z,63nm,0.9s						
STU	Stuttgart	11.70	319	eP	Pn	04 54 43.7	-1.9
	baz=140						
KIEV	Kiev	11.78	27	P	Pn	04 54 47.9	+1.2
	comp=Z,27nm,1.2s						
AKASG	Malin Array Be	11.79	27	Pn	Pn	04 54 45.5	-1.3
	comp=Z,0.9nm,0.7s,baz=213,slow=13,SNR=5.1						
AKBB	Malin Array Si	11.79	27	ceP	Pn	04 54 47.3	+0.4
AKBB	Malin Array Si	11.79	27	P	Pn	04 54 47.8	+0.9
BFO	Black Forest	11.87	316		Pn	04 54 46.0	-1.9
BFO	Black Forest	11.87	316	P	Pn	04 54 46.0	-1.9
BFO	Black Forest	11.87	316	eP	Pn	04 54 45.2	-2.8
	baz=140						
MOX	Moxa	12.02	331	eP	Pn	04 54 50.2	+0.3
	baz=140						
MOX				eL	L	05 00 38.7	
	comp=Z,700nm,18.4s						
CLL	Collm	12.10	336	eP	Pn	04 54 51.0	-0.1
CLL				pmax	pmax		
	comp=Z,22nm,2.0s						
CLL	Collm	12.10	336	eP	Pn	04 54 51.0	-0.1
	comp=Z,22nm,2.0s						
CLL				i sPP		04 55 04.3	
CLL				ex	x	04 56 18.0	
CLL				eSx	Sx	04 57 08.0	
CLL				ex	x	04 57 30.0	
CLL				AMS	AMS	04 58 00.0	
	comp=N,800nm,18.5s						
CLL				AMS	AMS	04 58 00.0	
	comp=E,2µm,18.3s						
CLL				AMS	AMS	04 59 00.0	
ECH	Echery	12.44	313	P	Pn	04 54 54.1	-1.7
ECH				pmax	pmax		
	comp=Z,52nm,1.7s						
MAHO	Mahon	12.66	273	P	Pn	04 54 58.1	-0.7
TNS	Taunus Mts	13.03	322	P	Pn	04 55 04.1	+0.2
TNS				pmax	pmax		
	comp=Z,12nm,0.7s						
TNS	Taunus Mts	13.03	322	eP	Pn	04 55 04.5	+0.6
	baz=140						
ETOS	Mallorca	13.79	273	P	Pn	04 55 13.2	-1.0
WLF	Walferdange	13.81	317	P	Pn	04 55 18.2	+3.7
WLF				pmax	pmax		
	comp=Z,13nm,0.8s						
WLF	Walferdange	13.81	317	dP	Pn	04 55 14.7	+0.3
WLF				dPP	PnPn	04 55 20.6	-1.7
WLF				dS	Sn	04 57 43.6	-4.5
WLF	Walferdange	13.81	317	eP	Pn	04 55 15.5	+1.0
	baz=140						
MMAI	Mount Meron Ar	13.87	118	Pn	Pn	04 55 16.1	+0.7
	comp=Z,0.8nm,0.3s,baz=306,slow=14,SNR=4.8						
MMAI				LR	LR	05 01 19.0	
	comp=Z,492nm,20.7s,baz=328,slow=40						
	comp=Z,7.2nm,0.9s						
LOR	Lormes	13.96	305	P	Pn	04 55 16.1	-0.4
LOR				pmax	pmax		
	comp=Z,15nm,0.9s						
MTLF	Montolieu	14.13	288	P	Pn	04 55 20.3	+1.5
MTLF				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SOC	Sochi	14.40	71	eP	Pn	04 55 21.7	-0.8
SOC				e		04 58 03.1	
SOC				pmax	pmax		
	comp=Z,3.0nm,0.3s						
SOC				MLR	MLR		
	comp=Z,133nm,17.0s						
VSLR	Vesyoloye	14.61	72	i P	Pn	04 55 26.3	+0.8
BCLA	Clavier	14.70	318	dP	Pn	04 55 26.1	-0.5
BCLA				dS	Sn	04 58 01.2	-8.5
CEST	Esterri de Car	14.79	285		Pn	04 55 26.7	-1.3
BGES	Gesves	14.79	317	dP	Pn	04 55 27.4	-0.5
BGES				dS	Sn	04 58 08.5	-3.4
MNK	Minsk	14.81	16	i P	Pn	04 55 30.9	+2.9
	comp=E,5.0nm,0.6s						
MNK				i P	Pn	04 55 30.9	+2.9
	comp=N,3.0nm,0.7s						
MNK				i P	Pn	04 55 30.9	+2.9
	comp=Z,4.0nm,0.5s,baz=202						
MNK				i PP	PnPn	04 55 40.9	+4.9
MNK				i PPP	PPP	04 55 44.2	
MNK				i S	Sn	04 58 19.7	+7.4
MNK				i SS	S	04 58 31.2	+0.3
MNK				i SSS	SSS	04 58 44.8	
MNK				i LQ	LQ	05 00 03.6	
MNK				i LR	LR	05 00 52.1	
MNK				i LRM	MLR	05 01 24.8	
	comp=N,148nm,13.5s						
MNK				i LRM	MLR	05 01 29.1	
	comp=Z,172nm,13.3s						
MNK				i LRM	MLR	05 01 32.5	
	comp=E,150nm,13.1s						
MNK	Minsk	14.81	16	i P	Pn	04 55 30.9	+2.9
MNK				i S	Sn	04 58 19.7	+7.4
MNK				pmax	pmax		
	comp=N,3.0nm,0.7s						
MNK				pmax	pmax		
	comp=E,5.0nm,0.6s						
MNK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MNK				MLR	MLR		
	comp=N,148nm,14.0s						
MNK				MLR	MLR		
	comp=Z,172nm,13.0s						
MNK				MLR	MLR		
	comp=E,150nm,13.0s						
DOU	Dourbes	14.89	316	dP	Pn	04 55 28.0	-1.1
DOU				dS	Sn	04 58 05.9	-8.3
NACGM	Naroch	14.97	13	eP	P	04 55 33.7	-2.2
EIBI	Ibiza	15.04	271	P	Pn	04 55 26.7	-4.5
PABE	Paberze	15.18	7	P	P	04 55 36.7	-1.4
PABE				IAmb	IAmb	04 55 47.3	
	comp=Z,38nm,1.0s						
ASF	Jabal al Asfar	15.38	118	Pn	Pn	04 55 36.1	+0.2
	comp=Z,0.3nm,0.3s,baz=322,slow=17,SNR=1.6						
ASF				LR	LR	05 02 26.7	
	comp=Z,338nm,18.8s,baz=339,slow=41						
	comp=Z,1.1nm,0.4s						
EIL	Elat	15.81	129	Pn	Pn	04 55 43.0	+1.6
	comp=Z,0.3nm,0.3s,baz=335,slow=12,SNR=6.4						
EIL				LR	LR	05 04 35.4	
	comp=Z,223nm,18.3s,baz=252,slow=48						
	comp=Z,8.1nm,0.8s						
SHA1	Shidzhatmaz	16.54	71	i P	Pn	04 55 50.2	-0.7
KIV	Kislovodsk	16.57	71	eP	Pn	04 55 52.2	+1.0
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,118nm,14.0s						
VORD	Divnogorie	16.59	45	eP	Pn	04 55 49.0	-2.2
VORD				pmax	pmax		
	comp=Z,9.0nm,0.9s						
VSR	Storozhevoye	16.65	44	eP	Pn	04 55 48.5	-3.6
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ECHE	Chera	16.69	274	P	Pn	04 55 51.3	-1.4
KBZ	Khabaz	16.71	72	Pn	P	04 55 55.7	+0.6
	comp=Z,0.1nm,0.3s,baz=286,slow=14,SNR=7.4						

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      comp=Z,2.7nm,1.1s
KBZ   Khabaz           16.71  72 i P     P      04 55 54.0 -1.2
OBN   Obninsk          18.00  30   P     P      04 56 10.2 +0.8
      comp=Z,3.4nm,0.3s,baz=236,slow=18,SNR=1.9
      comp=Z,12nm,0.4s
OBN   Obninsk          18.00  30  eP     Pn     04 56 08.7 -0.2
OBN                                pmax  pmax
      comp=Z,7.0nm,0.9s
OBN                                MLR   MLR
      comp=Z,202nm,15.0s
GNI   Garni            18.25  83   P     P      04 56 13.7 +1.2
      comp=Z,0.8nm,0.3s,baz=205,slow=3.7,SNR=8.7
      comp=Z,5.1nm,0.6s
GNI   Garni            18.25  83 i P     P      04 56 13.1 +0.6
GNI                                pmax  pmax
      comp=Z,24nm,1.5s
UCM   Universidad Co   18.31 277   P     Pn     04 56 11.5 -1.3
VSU   Vasula           18.39  10ceP     Pn     04 56 15.4 +1.8
VSU                                pmax  pmax
      comp=Z,27nm,0.8s
ROSF  Rostrenen        18.85 303   P     Pn     04 56 24.3 +5.0
ROSF                               pmax  pmax
      comp=Z,18nm,2.1s
MOS   Moscow           18.87  30  eP     P      04 56 17.8 -1.2
MOS                               eS     Sn     04 59 49.8 -0.9
MOS                                pmax  pmax
      comp=Z,28nm,0.7s
ESBB  Sonseca Array    18.95 276   P     P      04 56 19.2 -0.8
ESDC  Sonseca Array    18.95 276   P     P      04 56 19.9 -0.1
      comp=Z,0.1nm,0.3s,baz=74,slow=10,SNR=30
ESDC                               LR    LR     05 03 28.7
      comp=Z,200nm,19.2s,baz=83,slow=37
      comp=Z,4.3nm,0.9s
PAB   San Pablo        19.27 275   P     P      04 56 23.2 -0.4
PAB   San Pablo        19.27 275   P     P      04 56 23.2 -0.4
PAB                                pmax  pmax
      comp=Z,20nm,1.4s
EMAL  Malaga-Limoner   20.04 267   P     P      04 56 25.5 -6.4
MAK   Makhachkala      20.06  74  eP     P      04 56 32.4 +0.4
MAK                               eS     Sn     05 00 20.0 +0.4
MAK                                pmax  pmax
      comp=Z,89nm,0.9s
MAK                                MLR   MLR
      comp=Z,186nm,15.0s
HFS   Hagfors          20.17 350   P     P      04 56 32.5 -0.5
      comp=Z,3.8nm,0.5s,baz=163,slow=12,SNR=16
HFS                                LR    LR     05 04 33.5
      comp=Z,155nm,20.6s,baz=172,slow=38
      comp=Z,3.8nm,0.5s
AKT   Akhty            20.33  78  eP     P      04 56 34.7 -0.5
AKT                               ePPP   PPP    04 56 58.0
AKT                               eS     S      05 00 23.5 +0.2
AKT                                pmax  pmax
      comp=Z,15nm,1.6s
PBRG  Braganca         20.75 283  eP     P      04 56 40.1 +0.5
MVO   Moncorvo         21.04 281  eP     P      04 56 43.0 +0.2
MVO                               i Amb         04 57 03.0
      comp=Z,16nm,1.6s
FINES FINESS Array B   21.24   7   P     P      04 56 43.4 -1.2
      comp=Z,1.4nm,0.3s,baz=167,slow=12,SNR=12
      comp=Z,1.4nm,0.3s
FINES FINESS Array B   21.24   7  eP     P      04 56 43.4 -1.2
FINES                              pmax  pmax
      comp=Z,2.0nm,0.3s
FIA1  FINESS Array S   21.24   7   P     P      04 56 43.1 -1.5
FIA1                               IAmb  IAmb   04 56 51.7
      comp=Z,63nm,1.1s
NAO01 NORSAR Array S   21.29 347   IAmb  IAmb   04 56 57.6
      comp=Z,49nm,1.5s
NC405 NORSAR Array S   21.40 348   P     P      04 56 45.3 -1.1
NC405                              IAmb  IAmb   04 56 55.4
      comp=Z,48nm,1.1s
NB201 NORSAR Array S   21.41 347   P     P      04 56 46.2 -0.4
NB201                              IAmb  IAmb   04 56 51.0
      comp=Z,40nm,1.2s
NB2   NORSAR Subarra   21.41 347   P     P      04 56 45.9 -0.7
      comp=Z,26nm,1.2s,baz=155,slow=10
NOA   NORSAR Array B   21.41 347   P     P      04 56 45.9 -0.7
      comp=Z,4.6nm,0.9s,baz=163,slow=10,SNR=14
NOA                                LR    LR     05 05 33.1
      comp=Z,175nm,18.9s,baz=150,slow=38
      comp=Z,4.6nm,0.9s
NOA   NORSAR Array B   21.41 347  eP     P      04 56 45.9 -0.7
NOA                                pmax  pmax
      comp=Z,3.0nm,0.6s
MTE   Manteigas        21.54 279   P     P      04 56 45.1 -3.0
MTE   Manteigas        21.54 279  eP     P      04 56 48.0 -0.1
MTE                               i Amb         04 57 02.3
      comp=Z,31nm,1.4s
NC303 NORSAR Array S   21.56 348   IAmb  IAmb   04 56 51.1
      comp=Z,37nm,1.1s
POLO  Lamas de Olo     21.59 282  eP     P      04 56 49.6 +0.9
PCBR  Castelo Branco   21.59 278  eP     P      04 56 48.0 -0.6
PMRV  Marv??o          21.60 276  eP     P      04 56 48.0 -0.8
PMRV                              i Amb         04 56 53.2
      comp=Z,24nm,1.4s
PBAR  Barrancos        21.62 273  eP     P      04 56 50.2 +1.2
NC204 NORSAR Array S   21.71 347   P     P      04 56 50.2 +0.4
NC204                              IAmb  IAmb   04 57 02.7
      comp=Z,48nm,1.3s
PCAB  Cabril           21.72 283  eP     P      04 56 50.3 +0.3
EKA   Eskdalemuir Ar   21.72 321   P     P      04 56 50.7 +0.8
      comp=Z,3.7nm,0.6s,baz=107,slow=9.3,SNR=18
      comp=Z,3.7nm,0.6s
MDT   Midelt           21.72 257   P     P      04 56 49.4 -0.8
      comp=Z,4.6nm,0.9s,baz=83,slow=13,SNR=4.6
      comp=Z,4.6nm,0.9s
PVIS  Viseu            21.75 280  eP     P      04 56 49.9 -0.6
IFR   Ifrane           21.80 260   P     P      04 56 49.5 -1.5
BELG  Belogornoye      21.85  48   P     P      04 56 51.1 -0.2
      comp=Z,12nm,0.9s,baz=35,slow=13,SNR=4.9
BELG                               LR    LR     05 05 43.2
      comp=Z,120nm,18.3s,baz=270,slow=38
      comp=Z,12nm,0.9s
BELG  Belogornoye      21.85  48 i P     P      04 56 51.5 +0.2
BELG                               pmax  pmax
      comp=Z,2.0nm,1.0s
TAM   Tamanrasset      21.86 221   P     P      04 56 51.4 -0.3
TAM   Tamanrasset      21.86 221   P     P      04 56 51.4 -0.3
TAM                                pmax  pmax
      comp=Z,14nm,1.0s
PGAV  Gavieira, Arco   21.87 283  eP     P      04 56 51.7 -0.1
PGAV                              i Amb         04 57 03.6
      comp=Z,42nm,1.6s
PSARD Sardoal          22.15 277  eP     P      04 56 54.4 -0.3
PMTG  Montargil        22.31 276  eP     P      04 56 55.1 -1.3
PCAS  Casmilo, Conde   22.32 278  eP     P      04 56 56.5  0.0
KLMR  Klimovskoe       23.43  23  eP     P      04 57 06.5 -1.3
KLMR                              e             04 57 32.8
KLMR                               pmax  pmax
      comp=Z,19nm,0.9s
AVE   Averroes         23.61 261   P     P      04 57 00.3  -10
TIO   Tiouine          24.61 256   P     P      04 57 14.6 -4.9
KIRV  Kirov            25.63  35   LR    LR     05 08 52.2
      comp=Z,190nm,20.4s,baz=227,slow=40
KIRV  Kirov            25.63  35 i P     P      04 57 27.8 -0.4
AKTO  Aktyubinsk       27.67  56   LR    LR     05 09 31.9
      comp=Z,259nm,18.5s,baz=295,slow=38
AB31  Akbulak array    28.82  59   P     P      04 57 57.3 +0.3
ABKAR Akbulak array    28.82  59   P     P      04 57 57.1 +0.1
ARTI  Arti             29.12  44c iP     P      04 57 58.6 -1.0
ARTI                                            04 58 50.5
ARTI                               S     S      05 02 52.2 +0.7
ARTI                               pmax  pmax
      comp=Z,11nm,2.6s
ARCES ARCESS Array B   29.22   3   P     P      04 57 59.2 -1.2
      comp=Z,0.9nm,0.5s,baz=185,slow=11,SNR=10
ARCES                              LR    LR     05 11 59.7
      comp=Z,89nm,21.8s,baz=164,slow=41
      comp=Z,0.9nm,0.5s
SVE   Sverdlovsk       30.44  44  eP     P      04 58 10.6 -0.6
TORD  Torodi Ar. Bea   31.98 217   P     P      04 58 25.2 +0.1
HRA   Herat            33.24  87   P     P      04 58 36.2 -0.1
HRA                                IAmb  IAmb   04 58 37.6
      comp=Z,19nm,1.1s
BORG  Borgarnes        34.23 329   LR    LR     05 12 46.7
      comp=Z,204nm,21.6s,baz=122,slow=37
BRVK  Borovoye         35.44  52   P     P      04 58 54.2 -0.8
BRVK  Borovoye         35.44  52ceP     P      04 58 54.7 -0.3
BRVK                               pmax  pmax
      comp=Z,4.0nm,1.3s
BVAR  Borovoye Array   35.51  52   P     P      04 58 55.4 -0.1
      comp=Z,1.0nm,0.7s,baz=262,slow=7.3,SNR=5.4
      comp=Z,1.0nm,0.7s
SPITS Spitsbergen Ar   37.85 359   P     P      04 59 13.5 -1.7
      comp=Z,5.4nm,0.9s,baz=164,slow=12,SNR=1.2
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SPITS                              LR    LR     05 16 53.1
      comp=Z,124nm,18.3s,baz=137,slow=40
      comp=Z,5.4nm,0.9s
DAG   Danmarks Havn    40.10 347 i P     P      04 59 36.0 +2.0
DAG                                IAmb  IAmb   04 59 37.0
      comp=Z,2.7nm,0.8s
KURBB Kurchatov Arra   40.72  56   P     P      04 59 38.6 -0.9
      comp=Z,0.6nm,0.8s,baz=280,slow=9.2,SNR=4.7
      comp=Z,0.6nm,0.8s
KURK  Kurchatov        40.76  55 i P     P      04 59 40.9 +1.1
KURK                               pmax  pmax
      comp=Z,2.0nm,1.2s
ICESG Greenland Ices   42.39 332 i P     P      04 59 52.6 -0.7
ICESG                              IAmb  IAmb   04 59 57.3
      comp=Z,6.5nm,0.7s
SUMG  Summit           42.77 338 i P     P      04 59 56.0 -0.4
SUMG                               IAmb  IAmb   04 59 57.6
      comp=Z,3.0nm,0.7s
NOR   Nord             43.23 352 i P     P      04 59 59.9 +0.3
MK31  Makanchi Array   43.95  60ceP     P      05 00 05.1 -0.8
MKAR  Makanchi Array   43.95  60   P     P      05 00 04.2 -1.6
MKAR  Makanchi Array   43.95  60   P     P      05 00 04.5 -1.4
      comp=Z,0.9nm,0.7s,baz=281,slow=7.8,SNR=11
      comp=Z,0.9nm,0.7s
ZALV  Zalesovo Beam    44.02  50   P     P      05 00 06.8 +0.5
ZALV  Zalesovo Beam    44.02  50   P     P      05 00 04.8 -1.5
      comp=Z,1.0nm,0.5s,baz=290,slow=8.8,SNR=6.5
      comp=Z,1.0nm,0.5s
ZALV  Zalesovo Beam    44.02  50  eP     P      05 00 08.7 +2.4
ZALV                               pmax  pmax
      comp=Z,2.0nm,0.4s
KMBO  Kilima Mbogo     44.05 156   P     P      05 00 10.2 +3.0
KMBO                               pmax  pmax
      comp=Z,6.0nm,1.1s
NRIK  Noril'sk         44.65  28 i P     P      05 00 10.7 -0.4
NRIK                               pmax  pmax
      comp=Z,1.0nm,0.8s
SFJD  Kangerlussuaq    46.36 329   LR    LR     05 21 11.1
      comp=Z,207nm,18.1s,baz=80,slow=38
NEEM  North Greenlan   46.92 343 i P     P      05 00 26.7 -2.7
WMQ   Urumqi           48.48  63  eP     P      05 00 40.6 -1.1
WMQ                                sP    sP     05 00 50.9 +5.6
WMQ                                PcP   PcP    05 02 13.2 +5.5
WMQ                                pmax  pmax
      comp=Z,34nm,0.7s
FRB   Frobisher Bay    54.33 327   LR    LR     05 24 53.9
      comp=Z,156nm,19.4s,baz=78,slow=36
EVN   Everest          54.84  81   P     P      05 01 28.6 -1.5
LSZ   Lusaka           55.89 171   LR    LR     05 29 32.9
      comp=Z,73nm,18.0s,baz=348,slow=40
SCHQ  Schefferville    56.93 316   P     P      05 01 41.5 -2.4
      comp=Z,2.4nm,0.7s,baz=75,slow=4.5,SNR=3.7
SCHQ                               LR    LR     05 25 30.6
      comp=Z,142nm,18.7s,baz=39,slow=35
      comp=Z,2.4nm,0.7s
TIXI  Tiksi            57.42  21 i P     P      05 01 46.0 -1.1
TIXI                               pmax  pmax
      comp=Z,2.0nm,1.5s
GTA   Gaotai           58.57  63  eP     P      05 01 54.3 -1.5
GTA                                pP    pP     05 01 58.2 -0.3
GTA                                pmax  pmax
      comp=Z,2.0nm,0.9s
SONM  Songino Array    58.85  52   P     P      05 01 56.4 -1.2
      comp=Z,0.6nm,0.5s,baz=258,slow=4.4,SNR=4.4
      comp=Z,0.6nm,0.5s
SONM  Songino Array    58.85  52  eP     P      05 01 59.3 +1.7
SONM                               pmax  pmax
      comp=Z,1.0nm,0.8s
PALK  Pallekele        62.56 105   LR    LR     05 32 29.9
      comp=Z,95nm,18.9s,baz=319,slow=39
KOOLE Kule             63.15 181   P     P      05 02 27.5 +0.6
OPO   Ambohidratompo   63.68 152   LR    LR     05 33 16.1
      comp=Z,56nm,18.0s,baz=178,slow=39
LPHEP Lephephe         63.69 175   P     P      05 02 31.2 +0.7
LBTB  Lobatse          65.31 175   LR    LR     05 34 37.0
      comp=Z,83nm,18.5s,baz=2.5,slow=39
HHC   Hu-ho-hao-te     65.57  56  eP     P      05 02 43.5 +0.7
HHC                                pmax  pmax
      comp=Z,5.0nm,0.5s
HHC                                pmax  pmax
      comp=Z,59nm,4.3s
MAKGR Makgori          66.06 176   IAmb  IAmb   05 02 47.1
      comp=Z,7.2nm,0.9s
PZH   PanZhiHua        66.76  74   P     P      05 02 52.4 +1.7
PZH                                pmax  pmax
      comp=Z,10.0nm,0.9s
PZH                                pmax  pmax
      comp=Z,100nm,5.1s
ZEA   Zeya             66.93  38 i P     P      05 02 51.5 +0.4
XAN   Xi'an            67.60  64 ⇓P     P      05 02 54.2 -1.6
XAN                                pmax  pmax
      comp=Z,12nm,1.2s
XAN                                pmax  pmax
      comp=Z,140nm,4.5s
BILL  Bilibino         68.73  13 i P     P      05 03 04.6 +2.4
BILL                               pmax  pmax
      comp=Z,2.0nm,1.3s
BOSA  Boshof           68.87 176   P     P      05 03 04.2 +0.6
BOSA                               IAmb  IAmb   05 03 04.6
      comp=Z,8.5nm,1.0s
BOSA  Boshof           68.87 176   P     P      05 03 03.9 +0.2
      comp=Z,6.0nm,0.9s,baz=6.2,slow=5.1,SNR=9.4
BOSA                               LR    LR     05 35 32.9
      comp=Z,113nm,18.9s,baz=20,slow=38
      comp=Z,6.0nm,0.9s
BOSA  Boshof           68.87 176   P     P      05 03 04.2 +0.6
BOSA                               pmax  pmax
      comp=Z,8.0nm,1.0s
SADO  Sadowa           68.89 311   LR    LR     05 34 45.3
      comp=Z,7.2nm,18.1s,baz=110,slow=37
HEH   HeiHe            69.16  41  eP     P      05 03 04.9 -0.3
YKA   Yellowknife Ar   71.30 340   P     P      05 03 16.8 -1.4
      comp=Z,0.7nm,0.9s,baz=29,slow=5.8,SNR=5.2
      comp=Z,0.7nm,0.9s
KLR   Kul'dur          71.97  40 i P     P      05 03 21.8 -0.6
KLR                                pmax  pmax
      comp=Z,2.0nm,1.0s
E19K  Redstone River   72.38 359   IAmb  IAmb   05 03 32.8
      comp=Z,14nm,1.4s
I29M  Ogilvie Camp,    73.24 351   IAmb  IAmb   05 03 46.6
      comp=Z,8.5nm,1.2s
G18K  Tagagawik        73.96 360         P      05 03 34.9 +1.0
G18K                               IAmb  IAmb   05 03 42.8
      comp=Z,8.4nm,1.1s
ULM   Lac du Bonnet    73.98 323   IAmb  IAmb   05 03 35.1
      comp=Z,7.1nm,0.9s
ULM   Lac du Bonnet    73.98 323   P     P      05 03 33.4 -0.8
      comp=Z,5.0nm,0.8s,baz=54,slow=5.2,SNR=7.9
ULM                                LR    LR     05 36 13.8
      comp=Z,121nm,19.7s,baz=54,slow=36
      comp=Z,5.0nm,0.8s
ULM   Lac du Bonnet    73.98 323  eP     P      05 03 34.4 +0.1
ULM                                pmax  pmax
      comp=Z,5.0nm,0.8s
H21K  Melozitna Rive   74.08 357   IAmb  IAmb   05 03 44.2
      comp=Z,8.2nm,1.1s
H19K  Roundabout Mou   74.31 359   IAmb  IAmb   05 03 44.5
      comp=Z,12nm,1.4s
MLY   Manley           74.62 356   P     P      05 03 41.9 +4.0
ILAR  Eielson Array    74.64 355   P     P      05 03 38.1 +0.2
      comp=Z,0.7nm,0.7s,baz=359,slow=6.2,SNR=12
      comp=Z,0.7nm,0.7s
K27K  Chicken          74.95 352   IAmb  IAmb   05 03 48.8
      comp=Z,9.9nm,1.2s
NJ2   Nanjing          75.48  60  eP     P      05 03 43.0 -0.3
NJ2                                pmax  pmax
      comp=Z,10.0nm,0.5s
BPAW  Bear Paw Mtn.    75.56 356   P     P      05 03 43.8 +0.6
BCAR  Beaver Creek A   75.86 352   P     P      05 03 46.5 +1.5
M29M  Somme Creek      76.07 350   IAmb  IAmb   05 03 55.4
      comp=Z,5.9nm,0.9s
CAST  Castle Rocks     76.29 357   IAmb  IAmb   05 03 54.0
      comp=Z,6.7nm,1.1s
DHY   Denali Highway   76.36 354   IAmb  IAmb   05 03 56.3
      comp=Z,5.6nm,0.8s
J18K  Innoko River     76.38 359   P     P      05 03 51.5 +3.6
J18K                               IAmb  IAmb   05 03 56.4
      comp=Z,8.3nm,1.4s
K20K  Telida           76.42 358   IAmb  IAmb   05 03 57.0
      comp=Z,7.6nm,1.1s
L19K  White Mountain   77.63 358   IAmb  IAmb   05 04 04.5
      comp=Z,8.2nm,1.1s
KSRS  Korea Array      77.71  51   P     P      05 03 54.6 -1.1
      comp=Z,1.1nm,0.8s,baz=320,slow=4.9,SNR=4.6
      comp=Z,1.1nm,0.8s
YSS   Yuzhno-Sakhali   78.78  36ceP     P      05 04 02.8 +1.2
YSS                                pmax  pmax
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      comp=Z,41nm,2.5s
RLMT  Red Lodge        83.74 327   IAmb  IAmb   05 04 31.2
      comp=Z,6.0nm,1.1s
CBKS  Cedar Bluff      84.21 317   P     P      05 04 28.4 -2.1
CBKS  Cedar Bluff      84.21 317   P     P      05 04 28.4 -2.1
CBKS                               pmax  pmax
      comp=Z,32nm,1.4s
MJAR  Matsushiro Arr   84.23  46   P     P      05 04 31.0 +0.4
      comp=Z,1.5nm,0.3s,baz=324,slow=5.1,SNR=8.3
      comp=Z,1.5nm,0.3s
MJA0  Matsu Arr-Jizo   84.25  46  eP     P      05 04 31.0 +0.2
MJA0                               pmax  pmax
      comp=Z,2.0nm,0.3s
BOZ   Bozeman (W)      84.31 329   IAmb  IAmb   05 04 33.0
      comp=Z,5.9nm,1.1s
KAN09 Caldwell North   84.34 315   P     P      05 04 31.9 +0.8
BDFB  Brasilia         84.70 244   P     P      05 04 33.9 +0.6
      comp=Z,6.0nm,1.2s,baz=147,slow=2.5,SNR=4.2
      comp=Z,6.0nm,1.2s
YHB   Horse Butte      84.83 328   IAmb  IAmb   05 04 36.1
      comp=Z,6.6nm,0.9s
H17A  Grant Village    84.87 327   IAmb  IAmb   05 04 38.3
      comp=Z,9.2nm,1.0s
PDAR  Pinedale Array   85.77 326   P     P      05 04 38.3 -0.2
PDAR  Pinedale Array   85.77 326   P     P      05 04 38.8 +0.2
      comp=Z,0.7nm,0.7s,baz=72,slow=4.8,SNR=8.7
PDAR                               LR    LR     05 44 48.0
      comp=Z,62nm,18.9s,baz=12,slow=37
      comp=Z,0.7nm,0.7s
WMOK  Wichita Mounta   86.75 314   P     P      05 04 43.1 -0.2
WMOK                               IAmb  IAmb   05 04 45.1
      comp=Z,5.8nm,1.2s
WMOK  Wichita Mounta   86.75 314   P     P      05 04 43.1 -0.2
WMOK                               pmax  pmax
      comp=Z,6.0nm,1.2s
HWUT  Hardware Ranch   87.57 326   IAmb  IAmb   05 04 48.1
      comp=Z,5.8nm,0.9s
MFID  Camas Ranch      87.77 330   IAmb  IAmb   05 04 49.7
      comp=Z,11nm,1.5s
SDCO  Great Sand Dun   87.92 320   IAmb  IAmb   05 04 50.5
      comp=Z,5.5nm,1.4s
BSUT  Blindstream Ca   88.11 325   IAmb  IAmb   05 04 51.5
      comp=Z,8.2nm,1.4s
JLU   Jordanelle       88.35 326   IAmb  IAmb   05 04 52.1
      comp=Z,5.6nm,1.1s
I07A  Izee             88.55 333   IAmb  IAmb   05 04 53.9
      comp=Z,7.8nm,1.3s
P18A  Preston Nutter   88.63 324   IAmb  IAmb   05 04 53.0
      comp=Z,5.4nm,1.1s
BGU   Big Grassy Mou   88.75 327   IAmb  IAmb   05 04 54.2
      comp=Z,6.7nm,1.1s
PV22  Blue Mesa, Par   88.85 323   IAmb  IAmb   05 04 54.3
      comp=Z,7.0nm,1.0s
PV21  Cone Mtn., Par   88.92 323   IAmb  IAmb   05 04 56.8
      comp=Z,6.5nm,1.1s
PV01  Paradox Valley   89.08 322   IAmb  IAmb   05 04 55.5
      comp=Z,4.8nm,1.1s
PV16  Nyswonger Mesa   89.09 323   IAmb  IAmb   05 04 55.6
      comp=Z,7.5nm,1.0s
PV03  Paradox Valley   89.11 323   IAmb  IAmb   05 04 55.6
      comp=Z,6.0nm,1.1s
PV13  Radium Mtn., P   89.17 323   IAmb  IAmb   05 04 55.9
      comp=Z,4.1nm,1.0s
SRU   San Rafael Swe   89.17 324   IAmb  IAmb   05 04 55.3
      comp=Z,5.5nm,0.9s
DUG   Dugway, Tooele   89.27 326   IAmb  IAmb   05 04 56.5
      comp=Z,4.1nm,0.9s
PV05  Paradox Valley   89.37 323   IAmb  IAmb   05 04 55.8
      comp=Z,4.0nm,1.0s
ELK   Elko             89.81 328   P     P      05 04 58.4 +0.3
      comp=Z,0.5nm,0.3s,baz=55,slow=3.8,SNR=4.0
      comp=Z,0.5nm,0.3s
J05D  Fort Rock, OR    89.85 333   IAmb  IAmb   05 05 00.1
      comp=Z,6.7nm,0.9s
SPR3  Spring Creek 3   90.91 327   IAmb  IAmb   05 05 05.6
      comp=Z,6.6nm,1.2s
OZNA  Ozona            90.92 313   IAmb  IAmb   05 05 05.7
      comp=Z,8.2nm,1.2s
MNHN  Monahans         91.50 314   IAmb  IAmb   05 05 07.7
      comp=Z,3.4nm,1.0s
U15A  North Rim        92.17 324   IAmb  IAmb   05 05 10.1
      comp=Z,6.7nm,1.3s
MNTX  Cornudas Mount   92.62 316   IAmb  IAmb   05 05 11.7
      comp=Z,4.0nm,1.4s
NVAR  Mina Array Bea   93.01 329   LR    LR     05 50 50.7
      comp=Z,98nm,18.4s,baz=10.0,slow=38
LHV   Little Huntoon   93.25 329   IAmb  IAmb   05 05 15.2
      comp=Z,6.0nm,1.2s
TX31  Lajitas Ar. Si   93.54 314   IAmb  IAmb   05 05 17.8
      comp=Z,6.9nm,1.4s
TXAR  Lajitas Array    93.54 314   P     P      05 05 14.6 -0.7
TXAR  Lajitas Array    93.54 314   P     P      05 05 16.0 +0.7
      comp=Z,1.1nm,0.8s,baz=62,slow=3.0,SNR=12
      comp=Z,1.1nm,0.8s
TXAR  Lajitas Array    93.54 314   P     P      05 05 16.0 +0.7
ASAR  Alice Springs   122.18  95   PKP   PKPdf  05 10 53.0 -1.1
      comp=Z,1.6nm,0.8s,baz=344,slow=2.6,SNR=11
ASAR  Alice Springs   122.18  95   PKIKP PKPdf  05 10 53.0 -1.1
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SNET **01** *04:55:39.9±0.7, 13°.05N×89°.44W, h44km±13km, ML3.4*
CATAC **01** *04:55:39.0±0.6, 13°N±3°×8°9W±°, h26km±3km, M3.3/19, MLv3.3/19, Error ellipse: s-maj=6.9km s-min=3.9km az=28.1, confirmed*
GCG **01** *04:55:41.1±0.6, 13°.12N×89°.54W, h35km±3km, MD3.8, ML3.0*
ISC 01 04:55:41.8±1.7**, 13°.10N**±0°.08×**89°.37W**±0°.05**, h43km, n73, σ1s06/77, 15C-7D, El Salvador**

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Code  Station Name      Δ°   AZ°   Phase ID           Time      Res
                                   Op    ISC         h  m  s    ISC
LALI  Alcalda de L      0.39   7  eP     Pn     04 55 50.5 -0.8
LALI  Alcalda de L      0.39   7 i P     Pn     04 55 50.5 -0.8
LALI                              eS     Sn     04 55 57.6 -0.4
LALI                               IAML         04 56 00.8
      comp=N,213nm,0.2s
LALI  Alcalda de L      0.39   7   S     Sn     04 55 58.3 +0.2
LALI  Alcalda de L      0.39   7 ⇑P     Pn     04 55 50.6 -0.8
PANCS Alcalda de        0.54  20   S     Sn     04 56 02.0 +0.5
PANCS Alcalda de        0.54  20 ⇑P     Pn     04 55 52.4 -0.9
JAYA  Jayaque - finc    0.56 352  eP     Pn     04 55 52.3 -1.3
JAYA                               IAML         04 56 03.5
      comp=Z,2µm,0.2s
JAYA  Jayaque - finc    0.56 352 i P     Pn     04 55 52.4 -1.3
JAYA  Jayaque - finc    0.56 352   S     Sn     04 56 01.9 -0.1
JAYA  Jayaque - finc    0.56 352 ⇑P     Pn     04 55 52.4 -1.3
LOMA  Loma Larga        0.58  19  eP     Pn     04 55 53.0 -0.8
LOMA  Loma Larga        0.58  19   S     Sn     04 56 03.7 +1.3
LOMA  Loma Larga        0.58  19 ⇑P     Pn     04 55 53.1 -0.8
ITCA  Escuela Especi    0.58   9  eP     Pn     04 55 52.9 -0.9
ITCA  Escuela Especi    0.58   9   S     Sn     04 56 03.1 +0.7
ITCA  Escuela Especi    0.58   9 ⇑P     Pn     04 55 52.9 -0.9
LFRS  El Faro           0.60  30  eP     Pn     04 55 53.4 -0.8
PMON  Piamonte          0.61   5 i P     Pn     04 55 53.3 -0.9
PMON  Piamonte          0.61   5   S     Sn     04 56 04.6 +1.4
PMON  Piamonte          0.61   5 ⇑P     Pn     04 55 53.3 -0.9
UTEC  Universidad Te    0.62  15   S     Sn     04 56 04.7 +1.4
UTEC  Universidad Te    0.62  15   P     Pn     04 55 53.3 -1.0
UEES  Universidad Ev    0.63  11  eP     Pn     04 55 53.5 -0.9
UEES  Universidad Ev    0.63  11   S     Sn     04 56 04.1 +0.7
UEES  Universidad Ev    0.63  11 ⇑P     Pn     04 55 53.6 -0.8
BOQS  Boqueron          0.64   8  eP     Pn     04 55 53.9 -0.8
IGN   Direccin Gen      0.64  17   S     Sn     04 56 05.1 +1.4
COEG  Centro de Oper    0.70  42  eP     Pn     04 55 54.5 -0.9
COEG  Centro de Oper    0.70  42   S     Sn     04 56 06.0 +0.8
COEG  Centro de Oper    0.70  42 ⇑P     Pn     04 55 54.5 -0.9
TECO  Alcaldia de Te    0.72  52  eP     Pn     04 55 54.5 -1.1
TECO  Alcaldia de Te    0.72  52   S     Sn     04 56 06.1 +0.6
TECO  Alcaldia de Te    0.72  52 ⇑P     Pn     04 55 54.5 -1.1
PAVA  Las Pavas         0.74  34  eP     Pn     04 55 55.5 -0.5
PAVA                              eS     Sn     04 56 07.6 +1.4
PAVA  Las Pavas         0.74  34 ⇑P     Pn     04 55 55.5 -0.5
UESV  Universidad de    0.78  46   S     Sn     04 56 08.1 +1.1
UESV  Universidad de    0.78  46 ⇑P     Pn     04 55 55.7 -0.7
SBLS  San Blas          0.78 341  eP     Pn     04 55 55.3 -1.3
SNJE  San Jose          0.80 343  eP     Pn     04 55 55.6 -1.3
ALJI  Alcalda de J      0.81  73  eP     Pn     04 55 55.8 -0.9
ALJI  Alcalda de J      0.81  73   S     Sn     04 56 08.2 +0.5
ALJI  Alcalda de J      0.81  73 ⇑P     Pn     04 55 55.9 -0.9
SCLA  Alcaldia de Sa    0.86  46  eP     Pn     04 55 57.7 +0.1
SCLA  Alcaldia de Sa    0.86  46   S     Sn     04 56 10.5 +1.4
SCLA  Alcaldia de Sa    0.86  46 ⇓P     Pn     04 55 57.3 -0.3
NUBE  Las Nubes         0.90 333 i P     Pn     04 55 56.4 -1.8
NUBE  Las Nubes         0.90 333 i P     Pn     04 55 56.3 -1.8
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NUBE				*e*S	**Sn**	**04 56 08.4**	**-1.6**
NUBE	**Las Nubes**	**0.90**	**333**	⇑P	**Pn**	**04 55 56.3**	**-1.8**
UNIC	**Universidad Ca**	**0.90**	**349**	S	**Sn**	**04 56 10.5**	**+0.6**
UNIC	**Universidad Ca**	**0.90**	**349**	⇓P	**Pn**	**04 55 57.2**	**-0.9**
SLOZ	**Alcaldia de Sa**	**1.01**	**336**	S	**Sn**	**04 56 13.2**	**+0.6**
SLOZ	**Alcaldia de Sa**	**1.01**	**336**	⇑P	**Pn**	**04 55 58.2**	**-1.3**
PACA	**Pacayal**	**1.08**	**70**	*e*P	**Pn**	**04 56 00.4**	**-0.2**
PACA	**Pacayal**	**1.08**	**70**	S	**Sn**	**04 56 15.5**	**+1.0**
PACA	**Pacayal**	**1.08**	**70**	⇓P	**Pn**	**04 56 00.1**	**-0.5**
LCY	**Lacayo**	**1.09**	**73**	*e*P	**Pn**	**04 56 00.4**	**-0.4**
RANC	**El Ranchito**	**1.10**	**72**	S	**Sn**	**04 56 14.3**	**-0.8**
RANC	**El Ranchito**	**1.10**	**72**	⇓P	**Pn**	**04 55 58.6**	**-2.4**
VSM	**San Miguel**	**1.11**	**73**	*e*P	**Pn**	**04 56 00.8**	**-0.4**
BLLM	**Bellamira**	**1.15**	**73**	*e*P	**Pn**	**04 56 01.3**	**-0.3**
MTO3	**Montecristo**	**1.29**	**0**	*i* P	**Pn**	**04 56 02.9**	**-0.7**
MTO3	**Montecristo**	**1.29**	**0**	*i* P	**Pn**	**04 56 02.9**	**-0.7**
MTO3	**Montecristo**	**1.29**	**0**	S	**Sn**	**04 56 20.6**	**+0.7**
MTO3	**Montecristo**	**1.29**	**0**	⇑P	**Pn**	**04 56 02.9**	**-0.7**
LCND	**La Caada**	**1.45**	**81**	*e*P	**Pn**	**04 56 04.9**	**-0.7**
LCND	**La Caada**	**1.45**	**81**	S	**Sn**	**04 56 24.1**	**+0.7**
LCND	**La Caada**	**1.45**	**81**	⇓P	**Pn**	**04 56 04.9**	**-0.7**
ESQI	**Esquipulas**	**1.45**	**1**	*e*P	**Pn**	**04 56 05.4**	**-0.4**
CNCH	**Conchagua**	**1.50**	**83**	*e*P	**Pn**	**04 56 05.6**	**-0.8**
CNCH	**Conchagua**	**1.50**	**83**	S	**Sn**	**04 56 26.0**	**+1.1**
CNCH	**Conchagua**	**1.50**	**83**	⇓P	**Pn**	**04 56 05.5**	**-0.9**
POTN	**Potosi Cosigui**	**1.82**	**93**	⇓P	**Pn**	**04 56 08.7**	**-1.9**
POTN				S	**Sn**	**04 56 33.4**	**+1.0**
STG8	**El Palmar, Qui**	**2.35**	**305**	*e*P	**Pn**	**04 56 21.0**	**+2.8**
STG8				IAML		04 56 56.0	
	comp=N,140nm,0.2s						

GCG 01 05:00:06.5±0.9**,15°.56N×91°.02W,h50^{km}**±239^{km}**,MD3.6,**
Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG8	**El Palmar, Qui**	**1.15**	**196**	*i* P	Pn	05 00 24.4	-2.0
PETF	**Flores**	**1.75**	**39**	*i* P	Pn	05 00 34.7	+0.3
PETF				*i* S	Sn	05 00 55.5	0.0

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*TIR **01** 05:08:54.1,40°.44N×20°.76E,h2^{km}±2^{km},Ml2.9/7*
*THE **01** 05:08:54.6,40°.4N±1°.0×2°1E±°,h0^{km}±1^{km},M2.5/14, MLh2.5/14*
*SKO **01** 05:08:56.2,40°.45N×20°.95E,h6^{km},ML2.5*
ISC 01 05:08:54.8±1.1**,40°.45N**±0°.01×**20°.79E**±0°.02**,h3^{km}**±10^{km}**,**
n42,σ**1^{s}.09**/70**,Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBN	**Korca**	**0.18**	**359**	Pg	**Pg**	**05 08 57.9**	**-0.4**
KBN				Sg	**Sg**	**05 09 00.7**	**0.0**
KBN				AML	AML	05 09 01.8	
	11nm,0.4s						
KBN				AML	AML	05 09 02.4	
	12nm,0.3s						
KBN	**Korca**	**0.18**	**359**	Pg	**Pg**	**05 08 58.0**	**-0.4**
KBN				Sg	**Sg**	**05 09 00.8**	**+0.1**
KBN				AML	AML	05 09 01.8	
	11nm,0.4s						
KBN				AML	AML	05 09 02.4	
	12nm,0.3s						
NEST	**Nestorio**	**0.20**	**99**	Pg	**Pg**	**05 08 58.9**	**+0.2**
NEST				Sg	**Sg**	**05 09 02.5**	**+1.3**
NEST				AML	AML	05 09 04.9	
	8.4nm,0.3s						
NEST				AML	AML	05 09 05.0	
	14nm,0.3s						
NEST	**Nestorio**	**0.20**	**99**	Pg	**Pg**	**05 08 58.9**	**+0.2**
NEST				Sg	**Sg**	**05 09 02.7**	**+1.4**
NEST				AML	AML	05 09 04.9	
	8.4nm,0.3s						
NEST	**Nestorio**	**0.20**	**99**	P	**Pg**	**05 08 58.9**	**+0.2**
NEST				S	**Sg**	**05 09 00.7**	**-0.6**
LSK	**Leskovik**	**0.33**	**207**	Pg	**Pg**	**05 09 01.2**	**+0.1**
LSK				Sg	**Sg**	**05 09 06.0**	**+0.5**
LSK				AML	AML	05 09 07.6	
	7.4nm,0.2s						
LSK	**Leskovik**	**0.33**	**207**	Pg	**Pg**	**05 09 00.5**	**-0.7**
LSK				Sg	**Sg**	**05 09 06.3**	**+0.8**
LSK				AML	AML	05 09 08.3	
	6.1nm,0.3s						
PENT	**Pentalofos**	**0.36**	**133**	P	**Pg**	**05 09 01.9**	**0.0**
PENT				S	**Sg**	**05 09 06.0**	**-0.5**
KPRO	**Kipourio**	**0.66**	**138**	P	**Pg**	**05 09 07.0**	**-0.4**
KPRO				S	**Sg**	**05 09 15.1**	**-0.8**
OHR	**Ohrid**	**0.67**	**0**	P	**Pg**	**05 09 07.7**	**+0.2**
OHR				S	**Sb**	**05 09 17.6**	**-1.2**
OHR	**Ohrid**	**0.67**	**0**	*i* Pg	**Pg**	**05 09 07.9**	**+0.3**
OHR				*i* Sg	**Sb**	**05 09 18.1**	**-0.8**
OHR				*e*Lg	Lg	05 09 18.7	
	comp=E,354nm,0.7s						
OHR				*e*Lg	Lg	05 09 19.0	
	comp=N,126nm,0.6s						
KZN	**Kozani**	**0.76**	**100**	P	**Pb**	**05 09 10.2**	**-0.5**
JAN	**Janina**	**0.79**	**177**	P	**Pg**	**05 09 09.9**	**0.0**
JAN				S	**Sg**	**05 09 19.2**	**-0.9**
SRN	**Sarande**	**0.83**	**227**	Pg	**Pg**	**05 09 10.4**	**-0.3**
SRN				Sg	**Sb**	**05 09 23.0**	**-0.4**
SRN				AML	AML	05 09 26.2	
	comp=N,0.6nm,0.6s						
SRN				AML	AML	05 09 30.9	
	comp=N,0.6nm,0.4s						
SRN	**Sarande**	**0.83**	**227**	Pg	**Pg**	**05 09 10.6**	**-0.1**
SRN				Sg	**Sb**	**05 09 22.9**	**-0.5**
SRN				AML	AML	05 09 26.1	
	comp=N,0.5nm,0.7s						
IGT	**Igoumenitsa**	**0.98**	**201**	Pg	**Pb**	**05 09 14.5**	**+0.1**
IGT				Sg	**Sb**	**05 09 28.1**	**+0.3**
IGT	**Igoumenitsa**	**0.98**	**201**	Pg	**Pb**	**05 09 13.9**	**-0.5**
IGT				Sg	**Sn**	**05 09 29.8**	**-0.1**
IGT	**Igoumenitsa**	**0.98**	**201**	P	**Pg**	**05 09 12.9**	**-0.6**
IGT				S	**Sg**	**05 09 25.3**	**-0.9**
IGT	**Igoumenitsa**	**0.98**	**201**	*i* Pg	**Pg**	**05 09 13.6**	**0.0**
IGT				*i* Sg	**Sn**	**05 09 29.8**	**-0.1**
KTI	**Kastanea**	**1.01**	**93**	P	**Pg**	**05 09 14.3**	**+0.1**
KEK	**Kerkira**	**1.06**	**227**	P	**Pg**	**05 09 14.4**	**-0.6**
KEK				S	**Sg**	**05 09 28.3**	**-0.5**
TIR	**Tirane**	**1.14**	**322**	*i* Pg	**Pn**	**05 09 17.4**	**-0.4**
TIR				*i* Sg	**Sn**	**05 09 36.1**	**+2.1**
PHP	**Peshkopia**	**1.27**	**348**	Pg	**Pg**	**05 09 19.0**	**-0.1**
PHP	**Peshkopia**	**1.27**	**348**	Pg	**Pb**	**05 09 19.2**	**-0.2**
PHP				Sg	**Sn**	**05 09 37.7**	**+0.6**
PHP				AML	AML	05 09 45.5	
	comp=N,0.4nm,0.4s						
THL	**Klokotos Trika**	**1.29**	**133**	P	**Pg**	**05 09 19.1**	**-0.4**
TYRN	**Tyrnavos**	**1.33**	**123**	P	**Pg**	**05 09 19.9**	**-0.3**
AMPL	**Ampelaki**	**1.56**	**168**	P	**Pg**	**05 09 24.1**	**-0.5**
SKO	**Skopje**	**1.60**	**18**	*i* Pg	**Pb**	**05 09 24.7**	**-0.3**
SKO				*i* Sg	**Sb**	**05 09 46.0**	**+0.3**
VAY	**Valandovo**	**1.61**	**56**	*i* Pg	**Pn**	**05 09 24.2**	**+0.1**
VAY				*i* Sg	**Sg**	**05 09 47.9**	**+1.4**
VAY				*e*Lg	Lg	05 09 49.4	
	comp=N,34nm,0.5s						
VAY				*e*Lg	Lg	05 09 53.2	
	comp=E,49nm,0.7s						
LKD2	**Lefkada island**	**1.66**	**184**	Pn	**Pg**	**05 09 26.4**	**-0.2**
LKD2				Sn	**Sg**	**05 09 54.4**	**+6.4**
LKD2				AML	AML	05 10 02.2	
	comp=E,0.4nm,0.5s						
EVR	**Evrytania**	**1.72**	**153**	P	**Pb**	**05 09 26.8**	**-0.3**
PUK	**Puka**	**1.73**	**337**	Pn	**Pb**	**05 09 27.4**	**0.0**
PUK				Sn	**Sg**	**05 09 52.7**	**+2.1**
PUK				AML	AML	05 09 56.1	
	comp=E,0.9nm,0.7s						
PUK	**Puka**	**1.73**	**337**	Pn	**Pg**	**05 09 27.7**	**-0.4**
PUK				Sn	**Sg**	**05 09 52.6**	**+2.1**
PUK				AML	AML	05 09 57.5	
	comp=E,0.5nm,0.4s						
KNT	**Kendrikon**	**1.75**	**65**	P	**Pn**	**05 09 25.8**	**-0.3**
KNT	**Kendrikon**	**1.75**	**65**	*e*Pn	**Pb**	**05 09 26.9**	**-0.7**
HORT	**Hortiatis**	**1.77**	**84**	P	**Pn**	**05 09 25.4**	**-1.0**
AGG	**Agios Georgios**	**1.85**	**140**	P	**Pn**	**05 09 27.7**	**+0.2**
ULC	**Ulcinj**	**1.92**	**323**	*e*Pn	**Pb**	**05 09 29.4**	**-1.1**
BCI	**Bajram Curri**	**2.00**	**344**	Pn	**Pg**	**05 09 32.4**	**-0.7**
BCI				Sn	**Sg**	**05 09 59.0**	**+0.1**
BCI				AML	AML	05 10 01.6	
	comp=E,0.4nm,0.9s						
BCI	**Bajram Curri**	**2.00**	**344**	Pn	**Pg**	**05 09 32.6**	**-0.5**
BCI				Sn	**Sg**	**05 10 00.6**	**+1.7**
BCI				AML	AML	05 10 04.0	
	comp=E,0.4nm,0.6s						
KKB	**Krupnik**	**2.25**	**51**	*i* Pn	**Pn**	**05 09 31.6**	**-1.4**
VLS	**Valsamata**	**2.27**	**184**	P	**Pn**	**05 09 33.9**	**+0.7**

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*IDC **01** 05:19:04.5±1.7,21°.61N×143°.16E,h283^{km}±15^{km}, mb3.5/17,mbtmp4.2/18,Error ellipse: s-maj=18.1km s-min=9.7km az=83.0*
*NEIC **01** 05:19:06.1±0.8,21°.54N±0°.08×143°.2E±0°.2,h297^{km}±8^{km}, mb4.1/29,Error ellipse: s-maj=21.9km s-min=10.9km az=85.0*
ISC 01 05:19:07.1±0.6**,21°.63N**±0°.07×**143°.1E**±0°.1**,h311^{km},n54,**
σ**1^{s}.02**/57**,mb4.0**/31**,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.51**	**351**		**Pn**	**05 20 29.4**	**-1.4**
JCJ	**Chichijima**	**5.51**	**351**	P	**Pn**	**05 20 27.9**	**-2.9**
	68nm,0.3s,baz=124,slow=15,SNR=19						
JCJ				S	**S**	**05 21 34.7**	**-3.7**
	130nm,0.4s,baz=278,slow=22,SNR=18						
JMN	**Monobe**	**14.56**	**328**	P	**P**	**05 22 19.4**	**+0.6**
JMM	**Marumori**	**16.31**	**353**	P	**Pn**	**05 22 42.6**	**+2.4**
KSRS	**Korea Array**	**20.54**	**323**	P	**P**	**05 23 23.5**	**+0.9**
	2.3nm,0.7s,baz=142,slow=9.1,SNR=11						
	2.3nm,0.7s						
KLR	**Kul'dur**	**28.99**	**345**	P	**P**	**05 24 39.1**	**+0.6**
	1.2nm,0.5s,baz=134,slow=5.0,SNR=4.5						
	1.2nm,0.5s						
SBUM	**Sibu**	**35.60**	**242**	P	**P**	**05 25 36.5**	**+0.4**
KNRA	**Kununurra**	**39.66**	**202**	P	**P**	**05 26 08.9**	**-0.9**
WB0	**Warramunga Arr**	**42.02**	**192**	P	**P**	**05 26 27.6**	**-1.4**
WB0				IAmb	IAmb	05 26 32.5	
	comp=Z,15nm,1.2s						
WRA	**Warramunga Arr**	**42.20**	**192**	P	**P**	**05 26 30.0**	**-0.4**
	comp=Z,4.8nm,0.7s,baz=14,slow=9.4,SNR=35						
	comp=Z,4.8nm,0.7s						
FITZ	**Fitzroy Crossi**	**43.04**	**205**	P	**P**	**05 26 35.9**	**-1.2**
AS31	**Alice Springs**	**45.91**	**192**	P	**P**	**05 26 58.6**	**-1.0**
ASAR	**Alice Springs**	**45.91**	**192**	P	**P**	**05 26 58.6**	**-1.0**
ASAR	**Alice Springs**	**45.91**	**192**	P	**P**	**05 26 58.9**	**-0.8**
	comp=Z,1.2nm,0.7s,baz=16,slow=10,SNR=18						
	comp=Z,1.2nm,0.7s						
EVN	**Everest**	**51.14**	**289**	P	**P**	**05 27 40.0**	**0.0**
STKA	**Stephens Creek**	**53.22**	**182**	P	**P**	**05 27 52.9**	**-1.3**
STKA	**Stephens Creek**	**53.22**	**182**	P	**P**	**05 27 53.8**	**-0.4**
	comp=Z,1.9nm,0.3s,baz=16,slow=6.8,SNR=9.2						
	comp=Z,1.9nm,0.3s						
ZALV	**Zalesovo Beam**	**54.23**	**322**	P	**P**	**05 28 00.9**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=46,slow=6.4,SNR=4.6						
ZALV				PcP	**PcP**	**05 29 00.9**	**-0.3**
	comp=Z,1.2nm,0.4s,baz=118,slow=4.8,SNR=5.8						
	comp=Z,0.7nm,0.5s						
MKAR	**Makanchi Array**	**54.71**	**313**	P	**P**	**05 28 05.8**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=99,slow=7.5,SNR=4.6						
MKAR				PcP	**PcP**	**05 29 03.6**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=81,slow=4.4,SNR=7.9						
	comp=Z,0.4nm,0.6s						
O15K	**Ungalikthiuk R**	**54.91**	**32**	P	**P**	**05 28 06.8**	**+0.7**
N15K	**Kwethluk River**	**55.09**	**31**	P	**P**	**05 28 07.8**	**+0.5**
N15K				IAmb	IAmb	05 28 40.4	
	comp=Z,20nm,1.4s						
O16K	**Kokwok River B**	**55.88**	**32**	P	**P**	**05 28 13.5**	**+0.6**
O16K				IAmb	IAmb	05 28 55.2	
	comp=Z,10nm,1.4s						
K17K	**Iditarod**	**56.71**	**28**	P	**P**	**05 28 19.8**	**+1.2**
K17K				IAmb	IAmb	05 29 01.9	
	comp=Z,7.9nm,1.2s						
N18K	**Kilae Creek**	**57.24**	**31**	P	**P**	**05 28 23.2**	**+0.9**
H18K	**Honhosa River**	**57.48**	**25**	P	**P**	**05 28 24.3**	**+0.3**
H18K				IAmb	IAmb	05 28 36.9	
	comp=Z,8.2nm,1.3s						
KURBB	**Kurchatov Arra**	**57.54**	**317**	P	**P**	**05 28 25.1**	**+0.5**
	comp=Z,1.5nm,0.5s,baz=94,slow=7.6,SNR=16						
	comp=Z,1.5nm,0.5s						
J19K	**Poorman**	**58.25**	**27**	P	**P**	**05 28 29.9**	**+0.7**
J19K				IAmb	IAmb	05 28 50.6	
	comp=Z,5.1nm,1.4s						
C19K	**Lookout Ridge**	**58.50**	**21**	P	**P**	**05 28 32.0**	**+1.0**
C19K				IAmb	IAmb	05 29 09.1	
	comp=Z,18nm,1.4s						
E19K	**Redstone River**	**58.70**	**23**	P	**P**	**05 28 32.8**	**+0.4**
E19K				IAmb	IAmb	05 28 59.4	
	comp=Z,3.8nm,1.1s						
CAST	**Castle Rocks**	**59.63**	**28**	P	**P**	**05 28 38.8**	**0.0**
CAST				IAmb	IAmb	05 28 40.6	
	comp=Z,4.1nm,1.2s						
H21K	**Melozitna Rive**	**59.85**	**26**	P	**P**	**05 28 41.4**	**+1.1**
H21K				IAmb	IAmb	05 28 43.9	
	comp=Z,3.8nm,1.2s						
TOLK	**Toolik Lake Re**	**61.80**	**23**	P	**P**	**05 28 54.2**	**+0.9**
TOLK				IAmb	IAmb	05 28 55.5	
	comp=Z,6.9nm,1.3s						
ILAR	**Eielson Array**	**62.12**	**27**	P	**P**	**05 28 54.8**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=268,slow=5.2,SNR=12						
	comp=Z,0.4nm,0.4s						
BVAR	**Borovoye Array**	**62.69**	**320**	P	**P**	**05 28 60.0**	**+0.6**
	comp=Z,3.2nm,0.3s,baz=97,slow=7.7,SNR=19						
	comp=Z,3.2nm,0.3s						
KK31	**Karatay Array**	**63.06**	**308**	P	**P**	**05 29 02.5**	**+0.6**
KKAR	**Karatay Array**	**63.06**	**308**	P	**P**	**05 29 02.5**	**+0.6**
SCRK	**Sand Creek**	**63.27**	**28**	P	**P**	**05 29 02.9**	**-0.2**
E27K	**Coleen River**	**64.64**	**24**	P	**P**	**05 29 12.2**	**+0.5**
E27K				IAmb	IAmb	05 29 15.2	
	comp=Z,12nm,1.4s						
L29M	**L29M**	**65.86**	**29**	P	**P**	**05 29 20.7**	**+1.1**
L29M				IAmb	IAmb	05 29 50.8	
	comp=Z,3.4nm,1.2s						
G31M	**Satah River**	**67.41**	**25**	P	**P**	**05 29 29.4**	**+0.1**
AB31	**Akbulak array**	**69.56**	**316**	P	**P**	**05 29 42.7**	**-0.1**
AB31				IAmb	IAmb	05 29 43.5	
	comp=Z,2.0nm,0.5s						
ABKAR	**Akbulak array**	**69.56**	**316**	P	**P**	**05 29 43.0**	**+0.2**
ABKAR				IAmb	IAmb	05 29 43.5	
	comp=Z,2.0nm,0.5s						
SPITS	**Spitsbergen Ar**	**75.89**	**350**	P	**P**	**05 30 19.9**	**+0.6**
	comp=Z,5.1nm,0.9s,baz=90,slow=3.7,SNR=5.3						
	comp=Z,5.1nm,0.9s						
YKA	**Yellowknife Ar**	**76.54**	**28**	P	**P**	**05 30 22.4**	**-0.7**
YKA	**Yellowknife Ar**	**76.54**	**28**	P	**P**	**05 30 23.6**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=261,slow=11,SNR=19						
	comp=Z,0.5nm,0.6s						
ARCES	**ARCESS Array B**	**78.97**	**341**	P	**P**	**05 30 36.8**	**+0.4**
ARCES	**ARCESS Array B**	**78.97**	**341**	P	**P**	**05 30 37.0**	**+0.6**
	comp=Z,1.4nm,0.5s,baz=76,slow=8.5,SNR=22						
	comp=Z,1.4nm,0.5s						
J05D	**Fort Rock, OR**	**79.42**	**48**	P	**P**	**05 30 39.8**	**+0.3**
KBZ	**Khabaz**	**82.38**	**314**	P	**P**	**05 30 55.5**	**+0.7**
	comp=Z,2.5nm,0.8s,baz=65,slow=6.4,SNR=6.4						
	comp=Z,2.5nm,0.8s						
FINES	**FINESS Array B**	**83.22**	**334**	P	**P**	**05 30 58.2**	**-0.5**
	comp=Z,1.5nm,0.3s,baz=72,slow=4.6,SNR=38						
	comp=Z,1.5nm,0.3s						
NVAR	**Mina Array Bea**	**83.22**	**51**	P	**P**	**05 31 00.4**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=278,slow=5.7,SNR=5.4						
	comp=Z,0.6nm,0.7s						
HFS	**Hagfors**	**88.77**	**337**	P	**P**	**05 31 24.5**	**-1.2**
	comp=Z,0.6nm,0.4s,baz=111,slow=3.7,SNR=6.7						
	comp=Z,0.6nm,0.4s						
PLCA	**Paso Flores**	**145.75**	**132**	PKPbc	**PKPab**	**05 38 10.9**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=241,slow=2.8,SNR=19						
LPAZ	**La Paz**	**149.99**	**85**	PKPbc	**PKiKP**	**05 38 23.4**	**+0.1**
	comp=Z,1.5nm,0.5s,baz=346,slow=2.3,SNR=16						

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*TIR **01** 05:30:31.4,40°.45N×20°.77E,h1^{km}±1^{km},Ml2.7/8*
*ATH **01** 05:30:32.4,40°.37N×20°.81E,h11^{km}±2^{km},ML2.4/13, Manual Solution by N.Liadopoulou First location: 2019/06/01 05:31:54, This location: 2019/06/03 09:14:30 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 3 km*
*SKO **01** 05:30:33.5,40°.44N×20°.94E,h8^{km},ML2.3*
ISC 01 05:30:32.1±0.9**,40°.44N**±0°.02×**20°.81E**±0°.03**,h10^{km}**±7^{km}**,**
n30,σ**1^{s}.10**/44**,Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEST	**Nestorio**	**0.18**	**97**	Pg	**Pg**	**05 30 36.3**	**+0.3**
NEST				Sg	**Sg**	**05 30 40.0**	**+1.3**
NEST				AML	AML	05 30 42.5	
	7.1nm,0.3s						
NEST	**Nestorio**	**0.18**	**97**	P	**Pg**	**05 30 36.2**	**+0.2**
NEST				S	**Sg**	**05 30 39.8**	**+1.2**
KBN	**Korca**	**0.19**	**354**	Pg	**Pg**	**05 30 35.1**	**-1.0**
KBN				Sg	**Sg**	**05 30 37.9**	**-1.0**
KBN				AML	AML	05 30 38.4	
	12nm,0.4s						
LSK	**Leskovik**	**0.33**	**210**	Pg	**Pg**	**05 30 38.0**	**-0.7**
LSK				Sg	**Sg**	**05 30 43.8**	**+0.7**
LSK				AML	AML	05 30 47.3	
	4.5nm,0.3s						
PENT	**Pentalofos**	**0.34**	**134**	P	**Pg**	**05 30 39.1**	**+0.1**
KPRO	**Kipourio**	**0.64**	**139**	P	**Pg**	**05 30 44.2**	**-0.3**
OHR	**Ohrid**	**0.67**	**359**	*i* Pg	**Pg**	**05 30 45.0**	**-0.2**
OHR				*i* Sg	**Sb**	**05 30 56.0**	**+0.6**
OHR				*e*Lg	Lg	05 30 56.3	
	comp=E,165nm,0.5s						
OHR				*e*Lg	Lg	05 30 56.6	
	comp=N,133nm,0.4s						
MSVA	**Metsovo**	**0.72**	**157**	P	**Pg**	**05 30 45.3**	**-0.7**
KZN	**Kozani**	**0.74**	**100**	P	**Pn**	**05 30 47.8**	**-0.9**
JAN	**Janina**	**0.78**	**178**	P	**Pg**	**05 30 45.9**	**-1.2**
SRN	**Sarande**	**0.83**	**229**	Pg	**Pb**	**05 30 48.3**	**-0.3**
SRN				Sg	**Sn**	**05 31 01.3**	**-0.9**
SRN				AML	AML	05 31 03.6	
	comp=N,0.3nm,0.6s						
IGT	**Igoumenitsa**	**0.98**	**202**	Pg	**Pn**	**05 30 51.2**	**-0.7**
IGT				Sg	**Sn**	**05 31 05.7**	**0.0**
IGT				AML	AML	05 31 14.3	
	comp=N,0.3nm,0.5s						
IGT	**Igoumenitsa**	**0.98**	**202**	*i* Pg	**Pn**	**05 30 51.1**	**-0.7**
IGT				*i* Sg	**Sn**	**05 31 06.7**	**+1.0**
IGT	**Igoumenitsa**	**0.98**	**202**	P	**Pb**	**05 30 49.9**	**-1.2**
KEK	**Kerkira**	**1.06**	**227**	P	**Pn**	**05 30 52.3**	**-0.7**
TETR	**Tetrakomo, Epi**	**1.15**	**162**	P	**Pb**	**05 30 53.5**	**-0.5**
TIR	**Tirane**	**1.16**	**322**	*i* Pg	**Pg**	**05 30 54.9**	**+0.5**
TIR				*i* Sg	**Sg**	**05 31 12.8**	**+3.4**
THL	**Klokotos Trika**	**1.27**	**133**	P	**Pn**	**05 30 54.7**	**-1.1**
PHP	**Peshkopia**	**1.28**	**347**	Pg	**Pn**	**05 30 55.1**	**-0.9**
PHP				Sg	**Sg**	**05 31 15.0**	**+1.7**
PHP				AML	AML	05 31 17.4	
	comp=N,0.4nm,0.6s						
TYRN	**Tyrnavos**	**1.31**	**123**	P	**Pb**	**05 30 56.2**	**-0.5**
VAY	**Valandovo**	**1.60**	**56**	*i* Pg	**Pb**	**05 31 00.8**	**-0.9**
VAY				*i* Sg	**Sg**	**05 31 24.3**	**+0.9**
VAY				*e*Lg	Lg	05 31 28.0	
	comp=N,43nm,0.8s						
VAY				*e*Lg	Lg	05 31 34.8	
	comp=E,42nm,0.8s						
LKD2	**Lefkada island**	**1.65**	**184**	Pn	**Pg**	**05 31 04.1**	**+0.4**
LKD2				Sn	**Sg**	**05 31 28.2**	**+3.1**
LKD2				AML	AML	05 31 40.0	
	comp=E,0.3nm,0.6s						
KNT	**Kendrikon**	**1.74**	**65**	*i* Pn	**Pb**	**05 31 03.5**	**-0.7**
KNT				*i* Sg	**Sb**	**05 31 26.0**	**0.0**
KNT	**Kendrikon**	**1.74**	**65**	P	**Pb**	**05 31 03.1**	**-1.0**
MAKR	**Makrakomi, Fth**	**1.75**	**144**	P	**Pn**	**05 31 02.7**	**+0.2**
PUK	**Puka**	**1.75**	**337**	Pn	**Pg**	**05 31 05.5**	**-0.1**
PUK				Sn	**Sg**	**05 31 30.0**	**+1.7**
PUK				AML	AML	05 31 34.7	
	comp=E,0.4nm,0.5s						
HORT	**Hortiatis**	**1.75**	**84**	P	**Pn**	**05 31 02.7**	**+0.2**
AGG	**Agios Georgios**	**1.83**	**140**	P	**Pn**	**05 31 03.3**	**-0.4**
ULC	**Ulcinj**	**1.93**	**323**	*i* Pn	**Pb**	**05 31 06.8**	**-0.6**
BCI	**Bajram Curri**	**2.01**	**344**	Pn	**Pg**	**05 31 10.4**	**-0.1**

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*CATAC **01** 06:00:59.5±0.7,12°N±4°×8°7W±°,h19^{km}±7^{km},M3.4/15, MLv3.4/15,Error ellipse: s-maj=10.5km s-min=4.6km az=39.3,confirmed*
*UCR **01** 06:01:00.0±0.9,10°.78N×87°.97W,h35^{km}±999^{km},MW3.7*
ISC 01 06:00:57.8±2.1**,11°.64N**±0°.05×**87°.45W**±0°.07**,h3^{km}**±13^{km}**,**
n38,σ**1^{s}.22**/47**,9C-7D,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**1.00**	**58**	⇑P	**Pn**	**06 01 18.6**	**-0.1**
QUEN	**Al S del Volca**	**1.11**	**32**	⇑P	**Pg**	**06 01 19.2**	**0.0**
CNGA	**Al SSO del Vol**	**1.12**	**41**	⇑P	**Pn**	**06 01 20.9**	**+0.5**
CNGA				S	**Sn**	**06 01 36.8**	**+0.5**
CRIN	**San Cristobal**	**1.12**	**21**	S	**Sn**	**06 01 37.7**	**+1.3**
CRIN	**San Cristobal**	**1.12**	**21**	⇑P	**Pn**	**06 01 21.0**	**+0.5**
CNGN	**Cerro Negro**	**1.13**	**41**	S	**Sn**	**06 01 36.4**	**-0.2**
CNGN	**Cerro Negro**	**1.13**	**41**	⇓P	**Pn**	**06 01 20.6**	**+0.1**
POLN	**Al Sur del Vol**	**1.18**	**32**	⇓P	**Pn**	**06 01 22.0**	**+0.8**
ILCN	**San Idelfonso**	**1.19**	**38**	⇑P	**Pn**	**06 01 21.7**	**+0.4**
APQ2	**Apoyeque**	**1.23**	**63**	P	**Pb**	**06 01 22.2**	**+0.4**
UNAN	**Cigeo UNAN**	**1.25**	**68**	P	**Pn**	**06 01 23.6**	**+1.4**
UNAN				S	**Sn**	**06 01 40.7**	**+1.2**
TISN	**Laguna Tiscapa**	**1.26**	**67**	⇓P	**Pg**	**06 01 20.5**	**-1.5**
MGAN	**Managua**	**1.28**	**67**	S	**Sn**	**06 01 41.2**	**+1.0**
MGAN	**Managua**	**1.28**	**67**	⇑P	**Pg**	**06 01 22.5**	**+0.1**
MAS3	**Al N del Volca**	**1.31**	**73**	⇑P	**Pn**	**06 01 23.6**	**+0.6**
MAS3				S	**Sn**	**06 01 41.3**	**+0.4**
CSGN	**Cosiguina Volc**	**1.33**	**356**	⇓P	**Pn**	**06 01 24.0**	**+0.7**
CSGN				S	**Sn**	**06 01 41.0**	**-0.6**
NANN	**Nandasmo**	**1.34**	**77**	S	**Sn**	**06 01 41.9**	**+0.2**
NANN	**Nandasmo**	**1.34**	**77**	⇓P	**Pb**	**06 01 24.1**	**+0.6**
POTN	**Potosi Cosigui**	**1.35**	**358**	⇓P	**Pn**	**06 01 24.1**	**+0.6**
POTN				S	**Sn**	**06 01 41.7**	**-0.2**
JAPN	**Al SSO del Vol**	**1.74**	**94**	⇓P	**Pn**	**06 01 29.7**	**+0.8**
CONN	**Concepcion**	**1.79**	**92**	S	**Sn**	**06 01 53.4**	**+0.5**
MATN	**Matagalpa**	**1.97**	**49**	S	**Sb**	**06 01 58.4**	**-0.9**
MATN	**Matagalpa**	**1.97**	**49**	⇑P	**Pn**	**06 01 31.4**	**-0.7**
RCVN	**Varillal2**	**2.29**	**32**	P	**Pn**	**06 01 37.4**	**+0.8**
RCVN	**Varillal2**	**2.29**	**32**	S	**Sn**	**06 02 05.6**	**+0.3**
YUSH	**Yuscaran**	**2.37**	**14**	S	**Sb**	**06 02 08.8**	**-2.2**
YUSH	**Yuscaran**	**2.37**	**14**	⇑P	**Pn**	**06 01 38.8**	**+1.0**
TGUH	**Tegucigalpa,Un**	**2.41**	**4**	P	**Pn**	**06 01 39.4**	**+1.2**
TGUH				S	**Sn**	**06 02 07.4**	**-0.8**
PALD	**Palmares**	**3.36**	**118**	*e*P	**Pn**	**06 01 54.0**	**+2.7**
ACOS	**Acosta**	**3.72**	**119**	*e*P	**Pn**	**06 01 57.5**	**+1.3**
ACOS				*e*S	**Sn**	**06 02 37.7**	**-2.9**
PAR1A	**Puntarenas Pro**	**3.75**	**123**	*e*P	**Pn**	**06 01 57.3**	**+0.8**
PAR1A				*e*S	**Sn**	**06 02 38.9**	**-2.2**
ABE2	**San Pablo**	**3.86**	**120**	*e*P	**Pn**	**06 01 59.3**	**+1.0**
LCR2	**La Lucha 2**	**3.88**	**119**	*e*P	**Pn**	**06 01 59.4**	**+0.9**
LCR2				*e*S	**Sn**	**06 02 43.3**	**-1.4**
REPA	**Paraso**	**3.96**	**117**	*e*P	**Pn**	**06 02 01.4**	**+1.8**
PIEC	**Cerro El Cedra**	**3.98**	**120**	*e*P	**Pn**	**06 02 00.1**	**+0.1**
RESJ	**San Isidro (Tu**	**4.07**	**113**	*e*P	**Pn**	**06 02 04.1**	**+3.0**
SAJE	**San Jernim**	**4.50**	**120**	*e*P	**Pn**	**06 02 08.0**	**+1.0**
DRK0	**Durika**	**4.77**	**119**	*e*P	**Pn**	**06 02 11.6**	**+0.9**

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*BEO **01** 06:09:09.4±0.6,40°.35N×20°.95E,h0^{km},ML2.5/11*
*SKO **01** 06:09:11.3,40°.45N×20°.86E,h2^{km},ML2.7*
*ATH **01** 06:09:11.4,40°.50N×20°.95E,h12^{km}±3^{km},ML2.7/14, Manual Solution by N.Liadopoulou First location: 2019/06/01 06:10:13, This location: 2019/06/03 10:01:03 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 3 km*
*THE **01** 06:09:11.5,40°N±5°×2°1E±°,h1^{km}±5^{km},M2.6/15, MLh2.6/15*
ISC 01 06:09:10.9±1.1**,40°.48N**±0°.02×**20°.85E**±0°.02**,h4^{km}**±10^{km}**,**
n65,σ**1^{s}.00**/88**,Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEST	**Nestorio**	**0.16**	**112**	P	**Pg**	**06 09 14.6**	**+0.4**
NEST				S	**Sg**	**06 09 17.0**	**+0.7**
NEST	**Nestorio**	**0.16**	**112**	P	**Pg**	**06 09 14.7**	**+0.5**
NEST				S	**Sg**	**06 09 17.9**	**+1.6**
PENT	**Pentalofos**	**0.36**	**142**	P	**Pg**	**06 09 17.2**	**-0.6**
PENT				S	**Sg**	**06 09 23.2**	**+0.7**
PENT	**Pentalofos**	**0.36**	**142**	P	**Pg**	**06 09 17.1**	**-0.6**
PENT				S	**Sg**	**06 09 23.2**	**+0.7**
OHR	**Ohrid**	**0.64**	**357**	P	**Pg**	**06 09 23.5**	**+0.3**
OHR				S	**Sg**	**06 09 31.5**	**+0.1**
OHR	**Ohrid**	**0.64**	**357**	*i* Pg	**Pg**	**06 09 23.4**	**+0.3**
OHR				*i* Sg	**Sb**	**06 09 33.5**	**-0.5**
OHR				*e*Lg	Lg	06 09 34.0	
	comp=E,500nm,0.6s						
OHR				*e*Lg	Lg	06 09 34.0	
	comp=N,172nm,0.5s						
OHR	**Ohrid**	**0.64**	**357**	*e*Pg	**Pg**	**06 09 23.3**	**+0.1**
OHR				*e*Sg	**Sb**	**06 09 33.5**	**-0.5**
KPRO	**Kipourio**	**0.65**	**143**	P	**Pg**	**06 09 22.3**	**-1.2**
KPRO				S	**Sg**	**06 09 32.7**	**+0.9**
KPRO	**Kipourio**	**0.65**	**143**	P	**Pg**	**06 09 22.2**	**-1.2**
KZN	**Kozani**	**0.72**	**103**	P	**Pb**	**06 09 26.1**	**-0.1**
KZN				S	**Sb**	**06 09 35.2**	**-1.3**
KZN	**Kozani**	**0.72**	**103**	P	**Pb**	**06 09 25.8**	**-0.4**

JAN	Janina	0.82	180	P	Pg	06 09 25.9	-0.7
KTI	Kastanea	0.97	94	P	Pg	06 09 29.5	0.0
IGT	Igoumenitsa	1.02	203	P	Pg	06 09 28.7	-1.8
IGT	Igoumenitsa	1.02	203	i Pg	Pg	06 09 28.8	-1.8
IGT				i Sg	Sg	06 09 44.2	+0.5
KEK	Kerkira	1.11	227	P	Pb	06 09 33.1	+0.4
KEK	Kerkira	1.11	227	P	Pn	06 09 33.8	+0.6
TIR	Tirane	1.15	320	i Pg	Pg	06 09 31.5	-1.4
TIR	Tirane	1.15	320	ePg	Pg	06 09 31.1	-1.8
TIR				eSg	Sn	06 09 51.0	+1.0
TETR	Tetrakomo, Epi	1.18	164	P	Pn	06 09 34.3	+0.1
THL	Klokotos Trika	1.28	135	P	Pg	06 09 34.2	-1.2
TYRN	Tyrnavos	1.31	125	P	Pn	06 09 35.5	-0.5
TYRN	Tyrnavos	1.31	125	P	Pn	06 09 34.8	-1.1
VAY	Valandovo	1.55	56	i Pg	Pn	06 09 38.3	-1.0
VAY				i Sg	Sg	06 10 03.3	+2.4
VAY				eLg	Lg	06 10 06.5	
	comp=E,67nm,0.8s						
VAY				eLg	Lg	06 10 06.7	
	comp=N,70nm,0.8s						
SKO	Skopje	1.56	16	ePg	Pn	06 09 39.5	0.0
THE	Thessaloniki	1.62	84	ePg	Pn	06 09 39.5	-0.8
TSLK	Tsoukalades, L	1.66	185	P	Pg	06 09 42.8	+0.2
TSLK	Tsoukalades, L	1.66	185	P	Pb	06 09 41.8	-0.2
LKD2	Lefkada island	1.69	185	P	Pb	06 09 42.4	-0.2
KNT	Kendrikon	1.70	66	i Pg	Pn	06 09 41.0	-0.4
KNT				i Sg	Sg	06 10 06.3	+0.8
KNT	Kendrikon	1.70	66	P	Pn	06 09 40.6	-0.8
HORT	Hortiatis	1.72	85	P	Pn	06 09 41.0	-0.8
HORT	Hortiatis	1.72	85	P	Pn	06 09 40.3	-1.4
EVR	Evrytania	1.72	154	P	Pn	06 09 42.2	+0.4
EVR	Evrytania	1.72	154	P	Pn	06 09 42.4	+0.6
MAKR	Makrakomi, Fth	1.76	146	P	Pn	06 09 42.8	+0.5
MAKR	Makrakomi, Fth	1.76	146	P	Pn	06 09 42.2	-0.1
NYDR	Nydri-Lefkada	1.76	184	P	Pb	06 09 43.4	-0.4
NYDR	Nydri-Lefkada	1.76	184	P	Pn	06 09 42.7	+0.5
AGG	Agios Georgios	1.85	141	P	Pn	06 09 42.7	-0.7
AGG	Agios Georgios	1.85	141	P	Pn	06 09 43.2	-0.2
EVGI	Lefkada island	1.86	185	P	Pn	06 09 43.9	+0.4
EVGI	Lefkada island	1.86	185	P	Pn	06 09 44.0	+0.5
ULC	Ulcinj	1.92	321	i Pg	Pn	06 09 44.6	+0.2
PVO	Paravola	1.93	164	P	Pn	06 09 45.3	+0.7
PLG	Polygyros	1.98	92	P	Pn	06 09 44.0	-1.4
SRS	Serrai	2.18	72	i Pn	Pn	06 09 48.8	+0.8
KKB	Krupnik	2.20	51	i Pn	Pn	06 09 48.6	+0.4
PDG	Podgorica	2.29	329	ePn	Pn	06 09 49.6	+0.1
PDG				eSn	Sb	06 10 22.5	+1.0
BOSS	Bosilegrad	2.36	31	ePn	Pn	06 09 50.8	+0.3
BOSS				eSn	Sn	06 10 20.5	+0.5
BARS	Barje	2.45	17	i Pn	Pn	06 09 51.2	-0.5
BARS	Barje	2.45	17	ePn	Pn	06 09 50.9	-0.8
BARS				eSn	Sb	06 10 24.1	-2.0
BEY	Berane	2.50	344	i Pn	Pb	06 09 55.4	-1.1
SELS	Selova	2.75	4	ePn	Pb	06 09 58.3	-2.4
SELS				eSn	Sn	06 10 30.8	+1.2
SJES	Sjenica	2.86	347	ePn	Pn	06 09 59.0	+1.5
SJES				eSn	Sn	06 10 34.4	+2.0
GOCS	Kraljevo Serbi	3.08	0	ePn	Pn	06 10 01.1	+0.6
GOCS				eSn	Sn	06 10 39.6	+1.7
ZAPS	Zavoj	3.10	25	ePn	Pn	06 10 01.7	+1.0
ZAPS				eSn	Sn	06 10 40.4	+2.2
IVAS	Ivanjica	3.14	351	ePn	Pn	06 10 02.9	+1.6
BOVS	Bovan	3.22	11	ePn	Pn	06 10 01.4	-0.9
BOVS				eSn	Sn	06 10 42.3	+1.2
GRUS	Gruza	3.41	358	ePn	Pn	06 10 03.8	-1.1
ZAGS	Zajecar	3.49	17	ePn	Pn	06 10 05.4	-0.6
ZAGS				eSn	Sn	06 10 47.5	-0.3
BBLS	Lazi&#263i	3.55	343	ePn	Pn	06 10 06.8	-0.2
DIVS	Divibare	3.68	350	ePn	Pn	06 10 10.1	+1.4
DIVS				eSn	Sn	06 10 52.8	+0.3
KUBS	Kucevo	3.98	9	ePn	Pn	06 10 13.1	+0.3
TEKS	Tekeris	4.19	347	ePn	Pn	06 10 15.9	+0.3

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*NAO **01** 06:20:41.2,39°.52N×19°.96E,h10km,mb3.3*
*BEO **01** 06:20:47.6±0.6,40°.35N×21°.03E,h2km±2km,ML3.6/14*
*IDC **01** 06:20:48.5±1.5,40°.46N×20°.70E,h0km,mb3.7/8, mbtmp3.7/13,ML3.5/4,MS2.9/9,Error ellipse: s-maj=20.4km s-min=15.7km az=19.0*
*TIR **01** 06:20:49.2,40°.46N×20°.78E,h3km±1km,Md3.1/7,Ml3.9/8*
*ATH **01** 06:20:50.0,40°.55N×20°.79E,h6km±2km,ML3.6/32, Manual Solution by G.Panopoulou First location: 2019/06/01 06:21:57, This location: 2020/10/14 17:41:22 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **01** 06:20:50.9,40°N±2°×2°1E±°,h0km±1km,M3.3/38, MLh3.3/38*
*PDG **01** 06:20:50.2±1.0,40°.55N×20°.84E,h10km±1km,ML3.8/11, Error ellipse: s-maj=0.9km s-min=1.5km az=0.0*
*SKO **01** 06:20:51.5,40°.48N×20°.84E,h10km,ML3.8*
*SOF **01** 06:20:53.9,40°.8N±0°.3×21°.2E±0°.4,h8km±20km,MD3.8/6*
ISC 01 06:20:50.0±0.8,**40°.48N**±0°.01×**20°.82E**±0°.02,**h9**km±6km, **n217,σ1§19**/287,**mb3.6**/7,**MS2.8**/3,**11C-11D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	Korca	0.14	351	P	Pg	06 20 52.4	-0.7
KBN				Sg	Sg	06 20 54.3	-1.0
KBN				AML	AML	06 20 57.4	
	216nm,1.0s						
KBN				AMd		06 22 04.3	
NEST	Nestorio	0.19	111	Pg	Pg	06 20 54.1	+0.1
NEST				S	Sg	06 20 57.7	+1.1
NEST				AML	AML	06 21 03.3	
	60nm,0.3s						
NEST				AMd		06 22 04.0	
NEST	Nestorio	0.19	111	P	Pg	06 20 54.2	+0.3
NEST				S	Sg	06 20 55.8	-0.9
NEST	Nestorio	0.19	111	P	Pg	06 20 54.2	+0.3
NEST				S	Sg	06 20 58.3	+1.6
LSK	Leskovik	0.37	206	Pg	Pg	06 20 56.4	-0.9
LSK				Sg	Sg	06 21 01.6	-0.6
LSK				AML	AML	06 21 17.5	
	46nm,1.0s						
LSK				AMd		06 22 06.6	
PENT	Pentalofos	0.38	139	P	Pg	06 20 57.2	-0.2
PENT				S	Sg	06 21 02.1	-0.4
PENT	Pentalofos	0.38	139	P	Pg	06 20 57.5	0.0
PENT				S	Sg	06 21 03.5	+1.1
OHR	Ohrid	0.63	359	P	Pg	06 21 02.4	+0.2
OHR				S	Sb	06 21 12.0	-0.2
OHR	Ohrid	0.63	359	⇑iPg	Pg	06 21 02.3	+0.2
OHR				i Sg	Sb	06 21 12.2	0.0
OHR				eLg	Lg	06 21 12.8	
	comp=E,6µm,0.6s						
OHR				eLg	Lg	06 21 12.9	
	comp=N,2µm,0.7s						
OHR	Ohrid	0.63	359	ePg	Pg	06 21 02.4	+0.2
OHR				eSg	Sb	06 21 12.3	+0.1
KPRO	Kipourio	0.67	141	P	Pg	06 21 02.4	-0.6
KPRO				S	Sg	06 21 11.6	-0.2
KPRO	Kipourio	0.67	141	P	Pg	06 21 02.5	-0.4
KPRO				S	Sb	06 21 14.4	+0.9
KZN	Kozani	0.75	103	P	Pb	06 21 05.5	+0.3
KZN				S	Sg	06 21 14.2	0.0
KZN	Kozani	0.75	103	P	Pb	06 21 05.6	+0.4
KZN				S	Sb	06 21 16.3	+0.6
MSVA	Metsovo	0.77	158	P	Pb	06 21 06.0	+0.5
JAN	Janina	0.83	178	P	Pg	06 21 04.8	-1.1
JAN	Janina	0.83	178	P	Pg	06 21 04.8	-1.1
SRN	Sarande	0.87	226	Pg	Pg	06 21 06.2	-0.4
SRN				Sg	Sg	06 21 19.0	+1.1
SRN				AML	AML	06 21 23.0	
	comp=N,5.9nm,0.7s						
NASA	Naoussa	0.96	81	P	Pg	06 21 08.2	-0.3
NASA				S	Sb	06 21 21.9	+0.1
KTI	Kastanea	1.00	95	P	Pg	06 21 09.0	-0.1
VLO	Vlora	1.01	270	Pg	Pg	06 21 08.8	-0.5
VLO				S	Sg	06 21 23.3	+0.9
VLO				AML	AML	06 21 29.9	
	comp=N,18nm,0.6s						
VLO				AMd		06 22 09.9	
IGT	Igoumenitsa	1.02	202	Pg	Pg	06 21 10.1	+0.5
IGT				Sg	Sg	06 21 23.3	+0.5
IGT				AMd		06 22 28.2	
IGT	Igoumenitsa	1.02	202	P	Pg	06 21 08.7	-0.9
IGT	Igoumenitsa	1.02	202	i Pg	Pg	06 21 09.2	-0.4
IGT				eSg	Sn	06 21 25.4	+0.4
IGT	Igoumenitsa	1.02	202	P	Pg	06 21 09.0	-0.5
IGT				S	Sn	06 21 25.6	+0.7
KEK	Kerkira	1.10	226	P	Pg	06 21 11.4	+0.4
KEK				S	Sn	06 21 29.5	+2.6
KEK	Kerkira	1.10	226	P	Pg	06 21 11.7	+0.7
TIR	Tirane	1.12	320	Pg	Pg	06 21 11.0	-0.6
TIR				Sg	Sg	06 21 26.6	+0.4
TIR				AML	AML	06 21 35.3	
	comp=N,5.1nm,0.8s						
TIR	Tirane	1.12	320	⇑P	Pn	06 21 14.5	+2.6
TIR	Tirane	1.12	320	i Pg	Pg	06 21 11.0	-0.6
TIR				i Sg	Sn	06 21 29.4	+1.8
TIR	Tirane	1.12	320	ePg	Pg	06 21 10.7	-0.9
TIR				eSg	Sn	06 21 30.5	+2.9
LFKM	Lefkimmi	1.19	210	P	Pn	06 21 14.1	+1.4
TETR	Tetrakomo, Epi	1.19	163	P	Pn	06 21 13.8	+0.9
TETR				S	Sn	06 21 30.0	+0.7
PHP	Peshkopia	1.23	347	Pg	Pg	06 21 12.6	-1.0
THL	Klokotos Trika	1.30	135	P	Pn	06 21 14.2	-0.1
THL	Klokotos Trika	1.30	135	P	Pn	06 21 14.3	0.0
THL				S	Sn	06 21 32.8	+1.0
TYRN	Tyrnavos	1.33	125	P	Pg	06 21 15.6	0.0
TYRN	Tyrnavos	1.33	125	P	Pn	06 21 15.2	+0.4
TYRN				S	Sb	06 21 32.2	-0.1
LRSO	Larissa Observ	1.46	123	P	Pb	06 21 17.3	0.0
SKO	Skopje	1.56	17	⇑iPg	Pg	06 21 19.8	-0.1
SKO				i Sg	Sg	06 21 40.2	+0.1
VAY	Valandovo	1.57	57	⇑iPg	Pn	06 21 18.5	+0.5
VAY				i Sg	Sg	06 21 42.4	+1.9
VAY				eLg	Lg	06 21 46.3	
	comp=N,1µm,0.7s						
VAY				eLg	Lg	06 21 46.7	
	comp=E,1µm,0.8s						
AMPL	Ampelaki	1.59	169	P	Pg	06 21 20.8	+0.4
AMPL	Ampelaki	1.59	169	P	Pb	06 21 19.8	+0.2
THE	Thessaloniki	1.64	84	P	Pn	06 21 18.8	-0.3
THE	Thessaloniki	1.64	84	i Pg	Pn	06 21 18.7	-0.3
THE				i Sg	Sg	06 21 44.3	+1.5
THE	Thessaloniki	1.64	84	P	Pn	06 21 18.9	-0.3
THE				S	Sn	06 21 40.8	+0.4
TSLK	Tsoukalades, L	1.66	184	P	Pb	06 21 20.9	+0.1
TSLK	Tsoukalades, L	1.66	184	P	Pb	06 21 20.8	+0.1
LKD2	Lefkada island	1.70	184	P	Pg	06 21 22.8	+0.3
LKD2	Lefkada island	1.70	184	P	Pb	06 21 21.3	0.0
PUK	Puka	1.71	336	Pn	Pb	06 21 22.3	+0.7
PUK				Sn	Sg	06 21 48.4	+3.5
PUK				AML	AML	06 21 52.0	
	comp=E,5.6nm,0.8s						
PUK				AMd		06 22 30.1	
KNT	Kendrikon	1.72	66	P	Pn	06 21 19.9	-0.3
KNT	Kendrikon	1.72	66	i Pn	Pn	06 21 20.6	+0.4
KNT				i Sg	Sg	06 21 47.0	+1.8
KNT	Kendrikon	1.72	66	P	Pn	06 21 20.5	+0.4
KNT				S	Sb	06 21 43.0	-0.6
EVR	Evrytania	1.74	154	P	Pb	06 21 22.9	+0.7
EVR	Evrytania	1.74	154	P	Pn	06 21 21.6	+1.1
HORT	Hortiatis	1.74	85	P	Pn	06 21 20.3	-0.2
HORT	Hortiatis	1.74	85	P	Pn	06 21 20.1	-0.4
HORT				S	Sb	06 21 43.7	-0.6
NYDR	Nydri-Lefkada	1.77	183	P	Pb	06 21 23.2	+0.7
NYDR	Nydri-Lefkada	1.77	183	P	Pb	06 21 22.5	-0.1
MAKR	Makrakomi, Fth	1.78	145	P	Pb	06 21 22.5	-0.4
SCTE	Santa Cesarea	1.84	258	P	Pn	06 21 21.4	-0.4
EVGI	Lefkada island	1.86	184	P	Pb	06 21 24.2	0.0
EVGI	Lefkada island	1.86	184	P	Pn	06 21 23.4	+1.3
AGG	Agios Georgios	1.87	141	P	Pn	06 21 23.2	+1.0
AGG	Agios Georgios	1.87	141	P	Pn	06 21 22.5	+0.3
ULC	Ulcinj	1.90	322	i Pn	Pn	06 21 24.0	+1.4
ULC	Ulcinj	1.90	322	⇓iPn	Pn	06 21 22.7	+0.1
ULC				i Sn	Sb	06 21 49.2	+0.6
PDO	Prodromos	1.90	171	P	Pn	06 21 24.2	+1.6
PVO	Paravola	1.94	163	P	Pb	06 21 26.4	+0.8
PVO	Paravola	1.94	163	P	Pb	06 21 25.0	-0.6
SOH	Sokhos	1.96	79	P	Pn	06 21 23.8	+0.3
SOH	Sokhos	1.96	79	P	Pn	06 21 24.1	+0.6
BCI	Bajram Curri	1.96	344	Pn	Pg	06 21 27.1	-0.6
BCI				Sn	Sg	06 21 55.2	+2.1
BCI				AML	AML	06 21 56.9	
	comp=E,6.6nm,0.7s						
BCI				AMd		06 22 33.6	
BCI	Bajram Curri	1.96	344	P	Pb	06 21 25.7	-0.2
PLG	Polygyros	2.01	92	P	Pn	06 21 24.7	+0.6
PLG	Polygyros	2.01	92	P	Pn	06 21 24.4	+0.3
FSK	Fiskardo	2.03	186	P	Pb	06 21 26.5	-0.5
FSK	Fiskardo	2.03	186	P	Pn	06 21 25.9	+1.6
ANX	Ano Chora	2.07	155	P	Pb	06 21 28.8	+0.9
ANX	Ano Chora	2.07	155	P	Pn	06 21 26.3	+1.2
DRME	Dracevica, Mon	2.10	325	ePn	Pn	06 21 26.6	+1.2
DRME	Dracevica, Mon	2.10	325	⇓iPn	Pn	06 21 26.2	+0.8
DRME				i Sn	Sb	06 21 54.0	-0.4
NEO	Neokhori	2.19	122	P	Pn	06 21 27.1	+0.4
NEO	Neokhori	2.19	122	P	Pn	06 21 26.9	+0.2
SRS	Serrai	2.20	72	P	Pn	06 21 26.5	-0.2
SRS	Serrai	2.20	72	i Pn	Pn	06 21 27.7	+1.0
SRS				i Sn	Sn	06 21 55.1	+1.0
SRS	Serrai	2.20	72	P	Pn	06 21 26.5	-0.2
KKB	Krupnik	2.21	51	i P	Pn	06 21 27.3	+0.4
KKB	Krupnik	2.21	51	i Pn	Pn	06 21 28.0	+1.1
EFP	Efpalio	2.22	157	P	Pn	06 21 28.5	+1.5
PAIG	Paliouri	2.26	103	P	Pn	06 21 27.6	+0.1
PDG	Podgorica	2.27	329	ePn	Pn	06 21 29.0	+1.3
PDG	Podgorica	2.27	329	⇓P	Pg	06 21 32.8	-0.7
PDG	Podgorica	2.27	329	ePn	Pn	06 21 29.0	+1.3
PDG				eSn	Sb	06 21 59.7	+0.3
PDG	Podgorica	2.27	329	⇑iPn	Pn	06 21 28.3	+0.6
PDG				i Sn	Sn	06 21 58.1	+2.3
SERG	Sergoula	2.28	155	P	Pn	06 21 29.5	+1.7
VLS	Valsamata	2.31	184	P	Pn	06 21 29.5	+1.2
VLS	Valsamata	2.31	184	P	Pn	06 21 29.1	+0.9
BUM	Brajici-Budva	2.32	322	ePn	Pn	06 21 29.2	+0.7
BUM				i Sn	Sn	06 21 59.5	+2.3
AXS	Araxos	2.33	169	P	Pb	06 21 30.9	-1.1
AXS	Araxos	2.33	169	P	Pn	06 21 29.4	+1.0
KALE	Kalithea	2.33	153	P	Pb	06 21 31.1	-1.1
KALE	Kalithea	2.33	153	P	Pn	06 21 29.0	+0.5
BOSS	Bosilegrad	2.37	31	ePn	Pn	06 21 28.4	-0.7
BOSS				eSn	Sn	06 21 59.0	+0.7
PSDA	Pessada-Kefalo	2.37	184	P	Pn	06 21 30.4	+1.3
PSDA	Pessada-Kefalo	2.37	184	P	Pn	06 21 29.3	+0.3
OUR	Ouranopolis	2.42	92	P	Pn	06 21 30.0	+0.3
OUR	Ouranopolis	2.42	92	P	Pn	06 21 30.2	+0.4
KOKK	Kokkinochori,	2.44	81	P	Pn	06 21 30.8	+0.6
KOKK	Kokkinochori,	2.44	81	P	Pn	06 21 30.7	+0.6
BARS	Barje	2.45	17	⇓iPn	Pn	06 21 30.4	+0.2
BARS				i Sn	Sn	06 22 01.5	+1.2
BARS	Barje	2.45	17	ePn	Pn	06 21 30.6	+0.4
BARS				eSn	Sn	06 22 00.6	+0.3
MMB	Musomishta	2.46	63	i P	Pn	06 21 31.2	+0.8
MMB	Musomishta	2.46	63	i Pn	Pn	06 21 31.0	+0.6
MMB				eSn	Sn	06 22 02.1	+1.5
BEY	Berane	2.48	344	⇓iPn	Pn	06 21 32.9	+2.2
IVA	Berane	2.48	344	⇓iPn	Pb	06 21 34.3	-0.6
IVA				i Sn	Sn	06 22 02.9	+1.6
CEME	Cevo	2.51	326	⇓iPn	Pn	06 21 31.5	+0.5
CEME				i Sn	Sn	06 22 03.7	+1.9
KOME	Kolasin	2.56	338	ePn	Pn	06 21 32.1	+0.3
KOME				i Sn	Sn	06 22 04.4	+1.3
HCY	Herceg Novi	2.63	319	ePn	Pn	06 21 32.5	-0.1
HCY	Herceg Novi	2.63	319	ePn	Pn	06 21 32.7	+0.1
HCY				i Sn	Sn	06 22 06.7	+2.1
KLV	Kalavryta, Ach	2.65	157	P	Pn	06 21 34.4	+1.5
SELS	Selova	2.74	5	ePn	Pn	06 21 34.7	+0.5
SELS				eSn	Sn	06 22 10.2	+2.6
PLNA	Plana	2.79	44	i P	Pn	06 21 35.7	+0.7
VTS	Vitosha	2.80	40	i P	Pn	06 21 35.4	+0.3
SJES	Sjenica	2.85	348	ePn	Pn	06 21 36.9	+1.2
SJES	Sjenica	2.85	348	ePn	Pn	06 21 35.9	+0.2
SJES				eSn	Sn	06 22 12.5	+2.3
KAVA	Kavala	2.86	78	P	Pn	06 21 35.6	-0.1
KAVA	Kavala	2.86	78	P	Pn	06 21 35.3	-0.4
TREB	Trebinje	2.90	321	ePn	Pn	06 21 36.0	-0.3
BRY	Bratogost	2.96	326	ePn	Pn	06 21 37.9	+0.6
BRY	Bratogost	2.96	326	ePn	Pn	06 21 37.9	+0.6
BRY				i Sn	Sn	06 22 14.3	+1.3
VIL2	Platees	2.96	139	P	Pn	06 21 38.4	+1.2
THAS	Thassos island	2.98	86	P	Pn	06 21 36.8	-0.6
PLE	Pljevlja	3.04	340	ePn	Pn	06 21 38.4	0.0
PLE				i Sn	Sn	06 22 16.1	+1.2
UPM	Unac-Piva	3.07	333	ePn	Pn	06 21 40.6	+1.7
UPM	Unac-Piva	3.07	333	ePn	Pn	06 21 39.2	+0.3
UPM				i Sn	Sn	06 22 16.9	+1.1
GOCS	Kraljevo Serbi	3.08	1	ePn	Pn	06 21 39.1	+0.2
GOCS				eSn	Sn	06 22 17.5	+1.6
ZAPS	Zavoj	3.10	25	ePn	Pn	06 21 38.6	-0.6
ZAPS				eSn	Sn	06 22 18.1	+1.7
IVAS	Ivanjica	3.13	351	ePn	Pn	06 21 38.5	-1.1
IVAS				eSn	Sn	06 22 19.0	+1.9
RZN	Rozhen	3.20	67	i P	Pg	06 21 50.9	-0.4
BOVS	Bovan	3.22	12	⇑P	Pn	06 21 40.8	+0.1
BOVS	Bovan	3.22	12	ePn	Pn	06 21 40.6	-0.1
BOVS				eSn	Sn	06 22 19.6	+0.4
RUDO	Rudo	3.31	342	ePn	Pn	06 21 43.0	+1.0
STON	Ston	3.34	317	ePn	Pn	06 21 42.4	+0.1
PLD	Plovdiv	3.40	59	i P	Pg	06 21 54.5	-0.5
GRUS	Gruza	3.40	359	ePn	Pn	06 21 43.5	+0.2
ZAGS	Zajecar	3.49	17	ePn	Pn	06 21 44.5	0.0
ZAGS				eSn	Sn	06 22 25.8	-0.1
BBLS	Lazi&#263i	3.54	343	ePn	Pn	06 21 48.4	+3.2
BBLS	Lazi&#263i	3.54	343	ePn	Pn	06 21 47.2	+2.0
MPEP	Malo Peshtene	3.61	36	i P	Pg	06 21 57.9	-1.1
DIVS	Divibare	3.66	351	ePn	Pn	06 21 46.3	-0.6
DIVS				eSn	Sn	06 22 33.0	+2.7
BORS2	Bor- Borsko je	3.71	13	ePn	Pn	06 21 46.3	-1.3
BORS2				eSn	Sn	06 22 30.6	-0.8
TRUS	Trudelj	3.75	355	ePn	Pn	06 21 48.9	+0.8
SVIS	Svilajnac	3.79	4	ePn	Pn	06 21 48.3	-0.3
KUBS	Kucevo	3.98	9	ePn	Pn	06 21 49.6	-1.6
ALN	Alexandroupoli	4.00	82	P	Pn	06 21 51.7	+0.3
TEKS	Tekeris	4.17	347	ePn	Pn	06 21 54.7	+0.8
TEKS	Tekeris	4.17	347	ePn	Pn	06 21 54.9	+1.0
AVAS	Avala Beograd	4.22	357	ePn	Pn	06 21 54.6	+0.1
MDVR	Moldovita	4.35	8	⇑P	Pn	06 21 56.1	-0.2
VRSS	Vrsac	4.65	4	ePn	Pn	06 21 59.4	-1.0
FRGS	Fruska Gora	4.73	351	ePn	Pn	06 22 01.4	-0.1
FRGS	Fruska Gora	4.73	351	ePn	Pn	06 22 00.9	-0.6
BLY	Banja Luka	5.04	329	ePn	Pn	06 22 09.4	+3.7
A050A	Klekovaca	5.10	323	ePn	Pn	06 22 07.4	+0.8
GZR	Gura Zlata	5.11	16	⇓P	Pn	06 22 08.1	+1.3
BZS	Buzias	5.17	6	⇑P	Pn	06 22 08.6	+1.2
SURR	Surduc	5.36	10	⇓P	Pn	06 22 12.1	+2.0
A051A	Mrakovica	5.36	329	ePn	Pn	06 22 10.5	+0.2
MORH	Mrgy, Hungar	5.94	345	⇓P	Pn	06 22 19.9	+1.8
IDI	Anoyia	6.11	147	Pn	Pn	06 22 22.6	+2.1
	comp=E,1.5nm,0.3s,baz=303,slow=12,SNR=1.6						
IDI				Sn	Sn	06 23 29.4	-1.1
	comp=E,0.2nm,0.3s,baz=237,slow=14,SNR=1.2						
MLR	Muntele Rosu	6.26	35	Pn	Pn	06 22 25.2	+2.6
	comp=E,1.4nm,0.3s,baz=240,slow=7.9,SNR=7.9						
MLR				Sn	Sn	06 23 33.6	-0.8
	comp=E,0.5nm,0.3s,baz=132,slow=22,SNR=1.5						
MLR				Lg	Lg	06 24 11.6	
	comp=E,0.1nm,0.3s,baz=51,slow=11,SNR=4.1						
MLR				LR	LR	06 25 20.7	
	comp=E,111nm,18.0s,baz=161,slow=43						
	comp=E,4.4nm,0.5s						
MLR	Muntele Rosu	6.26	35	⇓P	Pn	06 22 26.6	+4.0
ISR	Istrita	6.26	40	⇑P	Pn	06 22 24.5	+1.9
BOJS	Bojanci	6.47	323	ePn	Pn	06 22 24.9	-0.4
CRES	Cresnjevec Ost	6.62	326	ePn	Pn	06 22 26.8	-0.7
VRI	Vrincioaia	6.90	37	⇑P	Pn	06 22 32.9	+1.6
CEY	Cerknica	7.03	320	ePn	Pn	06 22 32.6	-0.5
TPGR	Topolog	7.11	50	⇑P	Pn	06 22 33.4	-0.8
SOKA	Soboth	7.48	328	i Pn	Pn	06 22 39.4	0.0
	comp=E,3.5nm,0.5s						
SOKA				i Sn	Sn	06 24 02.9	-1.4
	comp=E,2.8nm,0.5s						
OBKA	Obir	7.55	325	ePn	Pn	06 22 40.4	+0.1
OBKA	Obir	7.55	325	ePn	Pn	06 22 41.1	+0.8
	comp=E,2.4nm,0.3s						
OBKA				i Sn	Sn	06 24 05.7	-0.4
	comp=E,20nm,0.7s						
ARSA	Arzberg	7.77	332	i Pn	Pn	06 22 44.4	+1.1
	comp=E,3.5nm,0.5s						
KECS	Kecovo	8.00	358	ePN	Pn	06 22 49.5	+3.1
KECS				eSN	Sn	06 24 17.0	0.0
MYKA	Terra Mystica	8.05	322	i Sn	Sn	06 24 16.6	-1.8
	comp=E,4.3nm,0.6s						
VYHS	Vyhne	8.13	351	ePN	Pn	06 22 52.8	+4.6
VYHS				eSN	Sn	06 24 19.5	-0.8
KOLS	Kolonicke sedl	8.51	7	ePN	Pn	06 22 59.9	+6.5
KBA	Koelnbreinsper	8.52	323	ePn	Pn	06 22 53.6	-0.1
	comp=E,1.7nm,0.4s						
KBA				i Sn	Sn	06 24 28.3	-1.7
	comp=E,5.2nm,0.7s						
ABTA	Abfaltersbach	8.69	319	ePn	Pn	06 22 55.6	-0.2
	comp=E,5.3nm,0.6s						
ABTA				eSn	Sn	06 24 31.9	-2.1
	comp=E,16nm,0.7s						
MOA	Molln	8.74	330	ePn	Pn	06 22 58.0	+1.5
	comp=E,3.4nm,0.5s						
MOA				i Sn	Sn	06 24 35.3	+0.1
	comp=E,3.7nm,0.5s						
STHS	Stebnicka Huta	8.94	2	ePN	Pn	06 23 07.7	+8.4
LESA	Schwarzleotal	9.08	322	ePn	Pn	06 23 01.1	-0.2
	comp=E,2.9nm,0.4s						
LESA				eSn	Sn	06 24 43.3	-0.5
	comp=E,7.9nm,0.6s						
WTTA	Wattenberg	9.47	319	i Pn	Pn	06 23 06.9	+0.1
	comp=E,1.5nm,0.3s						
WTTA				eSn	Sn	06 24 50.6	-2.9
	comp=E,14nm,0.6s						
WATA	Walderalm	9.55	319	i Pn	Pn	06 23 08.7	+0.9
	comp=E,3.8nm,0.4s						
WATA				i Sn	Sn	06 24 53.1	-2.2
	comp=E,21nm,1.0s						
SQTA	Sankt Quirin	9.66	317	i Pn	Pn	06 23 09.5	+0.1
	comp=E,3.2nm,0.4s						
SQTA				i Sn	Sn	06 24 55.9	-2.2
	comp=E,10nm,0.5s						
GERES	GERESS Array B	9.77	331	Pn	Pn	06 23 12.2	+1.4
	baz=146,slow=14,SNR=6.3						
GERES				Sn	Sn	06 24 59.1	-1.6
	baz=162,slow=22,SNR=2.4						
	comp=E,0.7nm,0.5s						
FETA	Feichten	9.79	315	i Pn	Pn	06 23 11.5	+0.4
	comp=E,2.1nm,0.7s						
FETA				eSn	Sn	06 24 57.9	-3.3
	comp=E,4.9nm,0.6s						
MOTA	Moosalm	9.80	318	i Pn	Pn	06 23 11.2	0.0
	comp=E,6.4nm,0.6s						
MOTA				eSn	Sn	06 24 59.5	-2.0
	comp=E,23nm,1.0s						
DAVOX	Davos/Dischmat	10.12	312	Pn	Pn	06 23 15.5	-0.1
	comp=E,0.8nm,0.3s,baz=99,slow=13,SNR=9.1						
DAVOX				Sn	Sn	06 25 05.7	-3.6
	comp=E,0.3nm,0.3s,baz=345,slow=21,SNR=6.2						
DAVOX				LR	LR	06 27 47.9	
	comp=E,32nm,20.1s,baz=72,slow=42						
	comp=E,3.0nm,0.5s						
KEST	Kesra	10.21	246	LR	LR	06 27 53.4	
	comp=E,51nm,19.2s,baz=51,slow=42						
MMAI	Mount Meron Ar	13.86	118	LR	LR	06 30 29.5	
	comp=E,54nm,19.3s,baz=286,slow=42						
ASF	Jabal al Asfar	15.37	118	LR	LR	06 31 15.8	
	comp=E,22nm,18.1s,baz=307,slow=41						
EIL	Elat	15.80	129	LR	LR	06 32 21.5	
	comp=E,21nm,18.9s,baz=244,slow=44						
ESDC	Sonseca Array	18.97	276	P	P	06 25 11.3	-0.3
	baz=73,slow=12,SNR=5.3						
	comp=E,0.3nm,0.5s						
HFS	Hagfors	20.17	350	P	P	06 25 23.2	-1.3
	comp=E,2.7nm,0.9s,baz=172,slow=15,SNR=5.1						
	comp=E,2.7nm,0.9s						
FINES	FINESS Array B	21.23	7	P	P	06 25 34.8	-1.2
	comp=E,1.0nm,0.3s,baz=166,slow=11,SNR=10.0						
	comp=E,1.0nm,0.3s						
NB2	NORSAR Subarra	21.41	347	P	P	06 25 37.0	-1.0
	comp=Z,1.2nm,0.8s,baz=162,slow=11						
NOA	NORSAR Array B	21.41	347	P	P	06 25 36.5	-1.5
	comp=Z,0.7nm,0.8s,baz=160,slow=9.3,SNR=3.7						
	comp=Z,0.7nm,0.8s						
EKA	Eskdalemuir Ar	21.73	321	P	P	06 25 41.0	-0.4
	comp=Z,1.1nm,0.7s,baz=113,slow=9.4,SNR=4.7						
	comp=Z,1.1nm,0.7s						
BELG	Belogornoye	21.84	48	P	P	06 25 44.4	+1.9
	comp=Z,2.9nm,0.3s,baz=241,slow=19,SNR=2.0						
	comp=Z,2.9nm,0.3s						
AKTO	Aktyubinsk	27.66	56	LR	LR	06 39 11.1	
	comp=Z,25nm,18.2s,baz=232,slow=40						
ARTI	Arti	29.11	44	LR	LR	06 38 34.5	
	comp=Z,18nm,18.1s,baz=314,slow=36						
ARCES	ARCESS Array B	29.22	3	P	P	06 26 50.0	-1.6
	comp=Z,6.7nm,1.3s,baz=186,slow=11,SNR=4.8						
	comp=Z,6.7nm,1.3s						
MKAR	Makanchi Array	43.93	60	P	P	06 28 56.1	-1.0

	comp=Z,0.5nm,0.6s,baz=297,slow=6.7,SNR=2.8						
	comp=Z,0.5nm,0.6s						
YAK	Yakutsk	63.00	30	LR	LR	06 59 59.9	
	comp=Z,29nm,18.3s,baz=148,slow=37						
TXAR	Lajitas Array	93.55	314	P	P	06 34 05.8	-0.9
	comp=Z,0.3nm,0.6s,baz=64,slow=5.7,SNR=3.7						
	comp=Z,0.3nm,0.6s						

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*CATAC **01** 06:21:10.8±0.7, 13°N±4°×8°9W±°, h25^{km}±3^{km}, M2.9/12, MLv2.9/12, Error ellipse: s-maj=8.2km s-min=5.3km az=23.6, confirmed*

*GCG **01** 06:21:11.9±0.5, 13.°09N×89.°49W, h50^{km}±10^{km}, MD3.5*

*SNET **01** 06:21:12.6±1.0, 13.°17N×89.°37W, h57^{km}±16^{km}, ML2.9*

ISC 01 06:21:11.2±2.3**, 13.°0N**±0.°1×**89.°44W**±0.°07**, h43^{km}, n46,** σ**0^{s}50**/50**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.49	14	*i* P	Pn	06 21 22.2	+0.2
LALI	Alcalda de L	0.49	14	S	Sn	06 21 29.8	+0.2
JAYA	Jayaque - finc	0.64	360	*e*P	Pn	06 21 24.2	0.0
JAYA				IAML		06 21 34.3	
	comp=Z,316nm,0.2s						
JAYA	Jayaque - finc	0.64	360	*i* P	Pn	06 21 24.2	0.0
JAYA	Jayaque - finc	0.64	360	S	Sn	06 21 33.0	-0.4
JAYA	Jayaque - finc	0.64	360	P	Pn	06 21 24.0	-0.2
PANCS	Alcalda de	0.65	23	S	Sn	06 21 32.9	-0.6
ITCA	Escuela Especi	0.68	14	S	Sn	06 21 33.8	-0.4
ITCA	Escuela Especi	0.68	14	P	Pn	06 21 24.3	-0.3
LOMA	Loma Larga	0.69	23	*e*P	Pn	06 21 24.7	0.0
LOMA				*e*S	Sn	06 21 34.9	+0.5
LOMA	Loma Larga	0.69	23	S	Sn	06 21 35.1	+0.7
LOMA	Loma Larga	0.69	23	P	Pn	06 21 24.6	-0.1
PMON	Piamonte	0.71	10	*e*P	Pn	06 21 25.8	+0.7
PMON	Piamonte	0.71	10	P	Pn	06 21 24.9	-0.1
PMON	Piamonte	0.71	10	S	Sn	06 21 35.6	+0.7
UEES	Universidad Ev	0.73	16	S	Sn	06 21 35.7	+0.3
UEES	Universidad Ev	0.73	16	P	Pn	06 21 23.6	-1.7
COEG	Centro de Oper	0.82	42	*e*P	Pn	06 21 26.1	-0.4
COEG				*e*S	Sn	06 21 36.9	-0.6
COEG	Centro de Oper	0.82	42	P	Pn	06 21 26.1	-0.4
COEG	Centro de Oper	0.82	42	S	Sn	06 21 37.1	-0.4
TECO	Alcaldia de Te	0.83	51	*e*P	Pn	06 21 26.2	-0.4
PAVA	Las Pavas	0.86	35	S	Sn	06 21 39.0	+0.5
PAVA	Las Pavas	0.86	35	P	Pn	06 21 26.9	-0.1
UESV	Universidad de	0.89	46	S	Sn	06 21 38.6	-0.6
UESV	Universidad de	0.89	46	P	Pn	06 21 26.7	-0.7
ALJI	Alcalda de J	0.91	69	S	Sn	06 21 39.2	-0.3
ALJI	Alcalda de J	0.91	69	P	Pn	06 21 27.2	-0.4
NUBE	Las Nubes	0.95	340	*e*P	Pn	06 21 28.4	+0.1
NUBE				*e*S	Sn	06 21 39.6	-1.1
NUBE	Las Nubes	0.95	340	*i* P	Pn	06 21 28.2	0.0
NUBE				*e*S	Sn	06 21 41.0	+0.3
NUBE	Las Nubes	0.95	340	S	Sn	06 21 40.1	-0.6
NUBE	Las Nubes	0.95	340	P	Pn	06 21 28.3	0.0
SCLA	Alcaldia de Sa	0.98	45	S	Sn	06 21 41.7	+0.3
SCLA	Alcaldia de Sa	0.98	45	P	Pn	06 21 28.9	+0.2
PQSS	Presa 15 de Se	1.06	54	P	Pn	06 21 29.3	-0.3
PQSS	Presa 15 de Se	1.06	54	S	Sn	06 21 42.8	-0.3
PACA	Pacayal	1.18	67	*e*P	Pn	06 21 32.0	+0.6
PACA				IAML		06 21 48.8	
	comp=Z,2μm,0.1s						
PACA	Pacayal	1.18	67	S	Sn	06 21 47.2	+0.8
PACA	Pacayal	1.18	67	P	Pn	06 21 31.9	+0.4
MTO3	Montecristo	1.39	3	*i* P	Pn	06 21 34.7	+0.3
MTO3	Montecristo	1.39	3	*i* P	Pn	06 21 34.6	+0.3
MTO3	Montecristo	1.39	3	P	Pn	06 21 34.5	+0.2
MTO3	Montecristo	1.39	3	S	Sn	06 21 52.3	+0.7
LCND	La Caada	1.54	79	*e*P	Pn	06 21 36.3	0.0
LCND				IAML		06 21 37.0	
	comp=Z,40nm,0.1s						
LCND	La Caada	1.54	79	P	Pn	06 21 36.3	0.0
CNCH	Conchagua	1.59	80	P	Pn	06 21 36.8	-0.3
CNCH	Conchagua	1.59	80	S	Sn	06 21 56.8	+0.3

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*TIR **01** 06:24:53.0, 40.°48N×20.°76E, h10^{km}±1^{km}, Ml3.0/8*

*ATH **01** 06:24:53.7, 40.°45N×20.°82E, h10^{km}±1^{km}, ML2.6/12, Manual Solution by N.Liadopoulou First location: 2019/06/01 06:26:11, This location: 2020/06/11 09:31:41 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*SKO **01** 06:24:55.0, 40.°48N×20.°88E, h3^{km}, ML2.7*

*THE **01** 06:24:55.2, 40°N±2°×2°1E±°, h7^{km}±2^{km}, M2.5/11, MLh2.5/11*

ISC 01 06:24:53.9±1.0**, 40.°47N**±0.°02×**20.°81E**±0.°02**, h4**^{km}±9^{km}**, n54,** σ**0^{s}88**/76**, 1C, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	Korca	0.15	353	Pg	Pg	06 24 56.1	-0.8
KBN				Sg	Sg	06 24 58.4	-0.6
KBN				AML	AML	06 24 58.9	
	12nm,0.2s						
NEST	Nestorio	0.19	107	Pg	Pg	06 24 58.1	+0.5
NEST				Sg	Sg	06 25 01.7	+1.6
NEST				AML	AML	06 25 02.4	
	16nm,0.2s						
NEST				AML	AML	06 25 04.8	
	12nm,0.3s						
NEST	Nestorio	0.19	107	P	Pg	06 24 58.0	+0.5
NEST				S	Sg	06 25 00.3	+0.2
NEST	Nestorio	0.19	107	P	Pg	06 24 57.9	+0.3
NEST				S	Sg	06 25 01.3	+1.2
LSK	Leskovik	0.36	207	Pg	Pg	06 24 60.0	-0.8
LSK				Sg	Sg	06 25 05.9	+0.4
LSK				AML	AML	06 25 09.3	
	11nm,0.4s						
PENT	Pentalofos	0.37	138	P	Pg	06 25 01.2	+0.1
PENT				S	Sg	06 25 04.7	-1.2
PENT	Pentalofos	0.37	138	P	Pg	06 25 01.0	0.0
PENT				S	Sg	06 25 06.0	+0.1
OHR	Ohrid	0.64	359	⇑*i*Pg	Pg	06 25 06.0	-0.2
OHR				*i* Sg	Sg	06 25 15.4	+1.0
OHR				*e*Lg	Lg	06 25 16.2	
	comp=E,469nm,0.6s						
OHR				*e*Lg	Lg	06 25 16.3	
	comp=N,226nm,0.8s						
KPRO	Kipourio	0.67	141	P	Pg	06 25 06.4	-0.3
KPRO	Kipourio	0.67	141	P	Pg	06 25 06.4	-0.3
KZN	Kozani	0.75	102	P	Pg	06 25 08.6	+0.3
KZN	Kozani	0.75	102	P	Pg	06 25 08.5	+0.3
JAN	Janina	0.81	178	P	Pg	06 25 08.4	-1.1
JAN	Janina	0.81	178	P	Pg	06 25 08.7	-0.7
SRN	Sarande	0.86	227	Pg	Pg	06 25 10.0	-0.3
SRN				Sg	Sg	06 25 22.6	+1.2
SRN				AML	AML	06 25 32.3	
	comp=N,0.9nm,0.5s						
NASA	Naoussa	0.97	80	P	Pg	06 25 11.9	-0.5
KTI	Kastanea	1.00	94	P	Pg	06 25 12.6	-0.4
IGT	Igoumenitsa	1.01	202	Pn	Pg	06 25 12.9	-0.2
IGT				S	Sg	06 25 28.2	+2.0
IGT				AML	AML	06 25 38.5	
	comp=N,0.6nm,0.4s						
IGT	Igoumenitsa	1.01	202	P	Pg	06 25 12.4	-0.7
IGT	Igoumenitsa	1.01	202	*i* Pg	Pg	06 25 13.0	-0.2
IGT				*i* Sg	Sn	06 25 30.1	+0.6
IGT	Igoumenitsa	1.01	202	P	Pg	06 25 12.9	-0.2
KEK	Kerkira	1.08	226	P	Pb	06 25 15.6	+0.4
KEK	Kerkira	1.08	226	P	Pb	06 25 14.7	-0.5
TIR	Tirane	1.13	321	Pn	Pb	06 25 14.1	-1.9
TIR	Tirane	1.13	321	*i* Pg	Pb	06 25 14.0	-2.1
TIR				*i* Sg	Sn	06 25 33.8	+1.2
TETR	Tetrakomo, Epi	1.18	162	P	Pb	06 25 16.6	-0.3
PHP	Peshkopia	1.24	347	Pg	Pn	06 25 16.9	-1.2
PHP				Sg	Sb	06 25 33.7	-0.7
PHP				AML	AML	06 25 37.1	
	comp=N,0.4nm,0.5s						
THL	Klokotos Trika	1.29	134	P	Pn	06 25 17.6	-1.2
THL	Klokotos Trika	1.29	134	P	Pn	06 25 17.7	-1.1
TYRN	Tyrnavos	1.33	124	P	Pn	06 25 17.8	-1.5
TYRN	Tyrnavos	1.33	124	P	Pn	06 25 18.1	-1.1
SKO	Skopje	1.57	17	*e*Pg	Pn	06 25 23.1	+0.5
SKO				*i* Sg	Sg	06 25 45.3	+0.9
VAY	Valandovo	1.58	57	*i* Pg	Pn	06 25 22.4	-0.3
VAY				*i* Sg	Sg	06 25 46.0	+1.4
VAY				*e*Lg	Lg	06 25 50.1	
	comp=E,90nm,0.7s						
VAY				*e*Lg	Lg	06 25 50.1	
	comp=N,104nm,0.9s						
THE	Thessaloniki	1.65	84	*e*Pg	Pn	06 25 23.0	-0.6
THE				*i* Sg	Sb	06 25 45.2	-0.7
LKD2	Lefkada island	1.68	184	Pn	Pg	06 25 27.8	+1.7
PUK	Puka	1.72	336	Pn	Pb	06 25 26.7	+0.6
PUK				Sn	Sb	06 25 49.2	+1.2
PUK				AML	AML	06 25 58.1	
	comp=N,0.5nm,0.5s						
KNT	Kendrikon	1.73	66	P	Pn	06 25 24.3	-0.4
KNT	Kendrikon	1.73	66	*i* Pg	Pn	06 25 24.4	-0.4
KNT				*i* Sn	Sg	06 25 48.7	-0.7
KNT	Kendrikon	1.73	66	P	Pn	06 25 24.0	-0.7
HORT	Hortiatis	1.75	85	P	Pn	06 25 24.3	-0.8
HORT	Hortiatis	1.75	85	P	Pn	06 25 24.1	-0.9
MAKR	Makrakomi, Fth	1.78	145	P	Pn	06 25 24.9	-0.6
SCTE	Santa Cesarea	1.84	258	P	Pn	06 25 25.5	-0.7
EVGI	Lefkada island	1.85	184	P	Pn	06 25 26.1	-0.3
AGG	Agios Georgios	1.86	141	P	Pn	06 25 25.6	-0.9
ULC	Ulcinj	1.90	322	*i* Pg	Pn	06 25 27.9	+0.8
SOH	Sokhos	1.97	79	P	Pn	06 25 27.9	-0.1
BCI	Bajram Curri	1.98	344	Pn	Pb	06 25 31.5	+1.1
BCI				Sn	Sb	06 25 56.8	+1.4
BCI				AML	AML	06 25 59.5	
	comp=N,0.6nm,0.7s						
PLG	Polygyros	2.01	92	P	Pn	06 25 27.6	-1.0
SRS	Serrai	2.21	72	*i* Pn	Pn	06 25 31.3	-0.1
KKB	Krupnik	2.22	51	*i* Pn	Pn	06 25 31.3	-0.2
KKB				*i* Sn	Sn	06 25 59.3	-0.2
BARS	Barje	2.46	17	*i* Pn	Pn	06 25 34.3	-0.5
BARS				*i* Sn	Sn	06 26 05.0	-0.4
MMB	Musomishta	2.47	63	*i* Pn	Pn	06 25 35.8	+0.8
MMB				*i* Sn	Sn	06 26 05.8	+0.1
BEY	Berane	2.50	344	*i* Pn	Pb	06 25 38.4	-0.9

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*IDC **01** 06:30:34.0±1.2, 30.°75N×131.°93E, h0^{km}, mb3.7/7, mbtmp3.7/12, ML3.3/5, MS2.4/1, Error ellipse: s-maj=30.5km s-min=20.2km az=84.0*

*JMA **01** 06:30:37.4±0.2, 30.°8N±0.°4×132.°1E±0.°9, h55^{km}±2^{km}, MV3.4/39, E OFF TANEGASHIMA ISLAND*

ISC 01 06:30:36.8±1.9**, 30.°73N**±0.°05×**132.°05E**±0.°08**, h22**^{km}±13^{km}**, n26,** σ**0^{s}90**/36**, mb3.6**/7**, Southeast of Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTN	Tanegashima 3	0.92	266	*i* P	Pb	06 30 54.5	+0.4
JTN				*e*S	Sn	06 31 07.3	+0.3
JNAR	Kushima--Naru	1.04	320	P	Pb	06 30 56.0	-0.1
JNAR				*e*S	Sb	06 31 09.5	+0.2
JMTN	Minamitane	1.04	252	*i* P	Pb	06 30 56.4	+0.3
JMTN				*e*S	Sb	06 31 10.5	+1.2
JTSR	Tashiro 2	1.06	295	P	Pn	06 30 56.0	-0.3
JNKG	Nichinankitago	1.10	329	*e*P	Pn	06 30 56.6	-0.2
JNKG				*e*S	Sb	06 31 10.9	0.0
JYAK	Yakushimahirau	1.41	250	P	Pn	06 31 01.5	+0.3
JYAK				*e*S	Sb	06 31 19.4	-0.7
JTZ	Takazaki	1.43	325	P	Pn	06 31 01.3	-0.1
JTZ				*e*S	Sb	06 31 19.0	-1.6
JSU	Suzuyama	1.57	300	P	Pn	06 31 03.5	+0.2
JTSN	Tsuno	1.58	343	P	Pn	06 31 03.3	-0.2
JTSN				*e*S	Sn	06 31 22.3	-1.0
JKC	Kuchinoerabu	1.62	261	*e*P	Pn	06 31 04.4	+0.4
JNN	Nakanoshima	2.07	245	*e*P	Pn	06 31 10.8	+0.5
JIU3	Izumi3	2.10	330	*e*P	Pn	06 31 11.0	+0.4
JIU3				*e*S	Sn	06 31 35.9	-0.1
JSJ	Shimokoshiki	2.21	296	*e*P	Pn	06 31 11.3	-0.8
JTO	Tosashimizu	2.22	17	*e*P	Pn	06 31 11.2	-1.1
JNU	Nakatsue	2.59	338	Pn	Pn	06 31 17.9	+0.5
	5.5nm,0.3s,baz=192,slow=15,SNR=28						
JNU				Sn	Sn	06 31 47.6	-0.5
	13nm,0.3s,baz=127,slow=15,SNR=12						
	12nm,0.3s						
JOW	Kunigami	5.10	221	Pn	Pn	06 31 52.4	+0.6
	15nm,0.3s,baz=119,slow=26,SNR=87						
JOW				Sn	Sn	06 32 47.0	-3.0
	4.7nm,0.3s,baz=225,slow=19,SNR=9.9						
	31nm,0.2s						
KSRS	Korea Array	7.53	334	Pn	Pn	06 32 24.6	-0.6
	0.2nm,0.3s,baz=158,slow=15,SNR=5.6						
	0.9nm,0.4s						
MJAR	Matsushiro Arr	7.75	40	Pn	Pn	06 32 29.9	+1.7
	0.1nm,0.3s,baz=241,slow=15,SNR=1.8						
MJAR				LR	LR	06 35 44.3	
	comp=Z,24nm,19.6s,baz=165,slow=40						
	0.9nm,0.3s						
KLR	Kul'dur	18.48	359	P	Pn	06 34 51.0	-0.3
	0.1nm,0.3s,baz=162,slow=6.8,SNR=4.3						
	1.3nm,0.8s						
SONM	Songino Array	26.01	318	P	P	06 36 09.1	+0.9
	0.7nm,0.4s,baz=115,slow=10,SNR=2.5						
	0.7nm,0.4s						
MKAR	Makanchi Array	41.27	307	P	P	06 38 19.4	-0.9
	0.3nm,0.6s,baz=101,slow=7.5,SNR=2.9						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	44.10	313	P	P	06 38 42.4	-0.8
	0.6nm,0.7s,baz=98,slow=9.3,SNR=6.3						
	0.6nm,0.7s						
WRA	Warramunga Arr	50.42	177	P	P	06 39 33.3	+0.7
	0.4nm,0.8s,baz=353,slow=8.5,SNR=2.0						
	0.4nm,0.8s						
FINES	FINESS Array B	70.61	331	P	P	06 41 50.0	0.0
	2.4nm,1.1s,baz=97,slow=4.4,SNR=4.9						
	2.4nm,1.1s						
AKASG	Malin Array Be	74.29	320	P	P	06 42 12.2	+0.1
	0.2nm,0.3s,baz=56,slow=6.9,SNR=2.0						
	0.2nm,0.3s						
NVAR	Mina Array Bea	85.00	48	P	P	06 43 11.8	+1.0
	0.4nm,0.5s,baz=294,slow=5.8,SNR=4.2						
	0.4nm,0.5s						

GCG 01 06:37:01.5±1.1**, 14.°51N×91.°93W, h74**^{km}±9^{km}**, MD3.7, ML3.2, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMCA	Catarina	0.37	338	*e*P	Pn	06 37 13.4	-0.3
SMCA				*e*S	Sn	06 37 22.7	+0.1
SMCA				IAML		06 37 23.6	
	comp=N,1μm,0.2s						
THIG		0.51	321	*i* P	Pn	06 37 15.1	+0.3
THIG				*i* S	Sn	06 37 26.0	+1.4
THIG				IAML		06 37 27.0	
	comp=E,939nm,0.3s						
QUEO	Labor Ovalle	0.54	48	*i* P	Pn	06 37 16.3	+0.9
QUEO				*i* S	Sn	06 37 28.4	+2.8
QUEO				IAML		06 37 31.3	
	comp=E,357nm,0.1s						
STG8	El Palmar, Qui	0.56	96	*e*P	Pn	06 37 14.1	-1.4
STG8				*e*S	Sn	06 37 24.4	-1.5
STG8				IAML		06 37 27.0	
	comp=E,2μm,0.1s						

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*CATAC **01** 06:52:31.4±0.5, 13°N±3°×8°9W±°, h28^{km}±2^{km}, M3.1/20, MLv3.1/20, Error ellipse: s-maj=6.5km s-min=3.6km az=34.0, confirmed*

*SNET **01** 06:52:32.5±0.7, 13.°12N×89.°44W, h48^{km}±16^{km}, ML2.9*

*GCG **01** 06:52:32.8±0.7, 13.°13N×89.°52W, h49^{km}±10^{km}, MD3.5, ML2.8*

ISC 01 06:52:31.9±1.5**, 13.°05N**±0.°06×**89.°43W**±0.°04**, h26**^{km}±13^{km}**, n75,** σ**0^{s}69**/80**, 14C-9D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.45	13	*i* P	Pn	06 52 42.5	-0.2
LALI	Alcalda de L	0.45	13	S	Sn	06 52 50.9	+1.0
LALI	Alcalda de L	0.45	13	⇑P	Pn	06 52 42.5	-0.2
JAYA	Jayaque - finc	0.60	358	*e*P	Pn	06 52 44.3	-0.6
JAYA				IAML		06 52 54.9	
	comp=Z,754nm,0.2s						
JAYA	Jayaque - finc	0.60	358	*i* P	Pn	06 52 44.3	-0.6
JAYA				*i* S	Sn	06 52 53.3	-0.6
JAYA	Jayaque - finc	0.60	358	⇑P	Pn	06 52 44.3	-0.6
PANCS	Alcalda de	0.61	23	S	Sn	06 52 54.1	+0.2
PANCS	Alcalda de	0.61	23	⇑P	Pn	06 52 44.7	-0.3
LOMA	Loma Larga	0.64	23	*e*P	Pn	06 52 45.1	-0.3
LOMA	Loma Larga	0.64	23	S	Sn	06 52 55.9	+1.0
LOMA	Loma Larga	0.64	23	⇑P	Pn	06 52 45.1	-0.3
PMON	Piamonte	0.67	10	*e*P	Pn	06 52 45.3	-0.5
PMON	Piamonte	0.67	10	S	Sn	06 52 55.8	+0.3
PMON	Piamonte	0.67	10	⇑P	Pn	06 52 45.3	-0.5
UEES	Universidad Ev	0.69	16	*e*P	Pn	06 52 45.5	-0.5
UEES	Universidad Ev	0.69	16	S	Sn	06 52 55.9	-0.1
UEES	Universidad Ev	0.69	16	⇑P	Pn	06 52 45.7	-0.4
BOQS	Boqueron	0.69	12	*e*P	Pn	06 52 45.9	-0.4
CEDA	San Andres	0.75	2	P	Pn	06 52 46.6	-0.3
CEDA	San Andres	0.75	2	S	Sn	06 52 57.4	0.0
COEG	Centro de Oper	0.78	43	*e*P	Pb	06 52 46.9	+0.1
COEG				IAML		06 53 00.1	
	comp=Z,289nm,0.2s						
COEG	Centro de Oper	0.78	43	S	Sn	06 52 58.2	0.0
COEG	Centro de Oper	0.78	43	⇑P	Pb	06 52 46.8	+0.1
TECO	Alcaldia de Te	0.79	52	*e*P	Pb	06 52 46.9	-0.3
TECO	Alcaldia de Te	0.79	52	S	Sn	06 52 58.7	+0.1
TECO	Alcaldia de Te	0.79	52	⇑P	Pb	06 52 46.8	-0.3
CEVE	Cerro Verde	0.80	346	S	Sn	06 52 58.0	-0.9
CEVE	Cerro Verde	0.80	346	⇑P	Pn	06 52 47.1	-0.6
SBLS	San Blas	0.81	346	*e*P	Pb	06 52 47.2	-0.3
PAVA	Las Pavas	0.81	36	S	Sn	06 52 59.8	+0.7
PAVA	Las Pavas	0.81	36	⇑P	Pn	06 52 47.7	-0.1
SNJE	San Jose	0.83	348	*e*P	Pb	06 52 47.4	-0.4
UESV	Universidad de	0.85	47	*e*P	Pn	06 52 47.9	-0.4
UESV	Universidad de	0.85	47	S	Sn	06 53 00.1	+0.1
UESV	Universidad de	0.85	47	⇓P	Pn	06 52 47.9	-0.4
ALJI	Alcalda de J	0.88	72	*e*P	Pn	06 52 47.9	-0.7
NUBE	Las Nubes	0.91	338	*e*P	Pn	06 52 48.2	-1.1
NUBE	Las Nubes	0.91	338	*i* P	Pn	06 52 48.2	-1.1
NUBE				*i* S	Sb	06 53 00.5	-0.5
NUBE	Las Nubes	0.91	338	⇑P	Pn	06 52 48.1	-1.1
UNIC	Universidad Ca	0.93	353	P	Pn	06 52 48.6	-0.8
UNIC	Universidad Ca	0.93	353	S	Sn	06 53 01.9	-0.1
SCLA	Alcaldia de Sa	0.94	46	*e*P	Pn	06 52 49.4	-0.1
SCLA	Alcaldia de Sa	0.94	46	S	Sn	06 53 03.3	+1.2
SCLA	Alcaldia de Sa	0.94	46	⇓P	Pb	06 52 49.6	0.0
TECA	Tecapa	1.00	64	*e*P	Pb	06 52 51.2	+0.4
PQSS	Presa 15 de Se	1.02	56	*e*P	Pn	06 52 50.1	-0.4
PQSS	Presa 15 de Se	1.02	56	S	Sb	06 53 04.3	+0.5
PQSS	Presa 15 de Se	1.02	56	⇓P	Pn	06 52 50.1	-0.4
SLOZ	Alcaldia de Sa	1.03	340	*e*P	Pn	06 52 50.0	-0.7
SLOZ	Alcaldia de Sa	1.03	340	S	Sb	06 53 04.8	+0.6
SLOZ	Alcaldia de Sa	1.03	340	⇑P	Pn	06 52 50.0	-0.7
PACA	Pacayal	1.15	69	*e*P	Pb	06 52 52.9	-0.4
PACA	Pacayal	1.15	69	S	Sb	06 53 08.3	+0.5
PACA	Pacayal	1.15	69	⇓P	Pn	06 52 52.7	+0.2
LCY	Lacayo	1.16	71	*e*P	Pb	06 52 53.1	-0.3
RANC	El Ranchito	1.17	71	S	Sn	06 53 07.4	-0.6
RANC	El Ranchito	1.17	71	⇓P	Pn	06 52 51.3	-1.5
VSM	San Miguel	1.18	71	*e*P	Pb	06 52 53.4	-0.4
BLLM	Bellamira	1.22	71	*e*P	Pn	06 52 53.6	+0.2
MTO3	Montecristo	1.34	3	*i* P	Pn	06 52 54.6	-0.6
MTO3	Montecristo	1.34	3	*i* P	Pn	06 52 54.6	-0.6
MTO3	Montecristo	1.34	3	S	Sn	06 53 11.8	-0.6
MTO3	Montecristo	1.34	3	⇑P	Pn	06 52 54.6	-0.6
ESQI	Esquipulas	1.50	3	S	Sn	06 53 16.3	+0.2
ESQI	Esquipulas	1.50	3	⇑P	Pn	06 52 57.0	-0.3
LCND	La Caada	1.52	80	⇓P	Pn	06 52 57.8	+0.3
CNCH	Conchagua	1.57	82	*e*P	Pn	06 52 58.1	-0.2
CNCH	Conchagua	1.57	82	S	Sn	06 53 18.8	+1.0
CNCH	Conchagua	1.57	82	⇓P	Pn	06 52 58.0	-0.2
FG16	Alotenango, Sa	1.61	319	*i* P	Pb	06 53 02.8	+1.8
FG8	Yepocapa, Chim	1.63	318	*e*P	Pb	06 53 03.7	+2.3
CSGN	Cosiguina Volc	1.82	92	P	Pn	06 53 01.8	+0.1
CSGN				S	Sn	06 53 24.5	+0.4
POTN	Potosi Cosigui	1.87	91	⇓P	Pn	06 53 02.8	+0.5
POTN				S	Sn	06 53 26.2	+1.0
STG8	El Palmar, Qui	2.33	307	*i* P	Pb	06 53 12.9	-0.4
STG8				IAML		06 53 49.3	
	comp=E,76nm,0.2s						
POLN	Al Sur del Vol	2.58	99	⇓P	Pn	06 53 11.1	-1.0
POLN				S	Sn	06 53 41.1	-1.6

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*UPA **01** 06:53:28.7±2.0, 9.°57N×84.°69W, h1^{km}±11^{km}, MD4.0, MW4.6*

*UCR **01** 06:53:29.8±0.8, 9.°54N×84.°59W, h12^{km}±1^{km}, MW4.4, Fault plane solution: NP1:ϕ_s120.08000°, δ58.35000°, λ80.59000°.*

*CATAC **01** 06:53:30.7±0.4, 9°N±2°×8°5W±°, h12^{km}±2^{km}, M4.4/18, MLv4.4/18, Error ellipse: s-maj=6.0km s-min=2.7km az=37.1, confirmed*

ISC 01 06:53:29.9±0.9**, 9.°53N**±0.°03×**84.°60W**±0.°02**, h16**^{km}±6^{km}**, n187,** σ**1^{s}05**/209**, 54C-63D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BITO	Garabito Jaco	0.09	344	*e*P	Pg	06 53 33.2	0.0
BITO				*e*S	Sg	06 53 35.7	+0.3
RITA	Parrita	0.26	92	⇓*e*P	Pb	06 53 35.5	-0.8
RITA				*e*S	Sg	06 53 40.1	+0.6
PAR1A	Puntarenas Pro	0.34	79	⇓*e*P	Pb	06 53 37.0	-0.7
PAR1A				*e*S	Sb	06 53 42.6	-0.4
OROT	Orotina	0.39	10	*e*P	Pg	06 53 37.6	-0.3
OROT				*e*S	Sb	06 53 43.4	-0.9
PICV	PH. Pirrs	0.41	76	⇓*e*P	Pb	06 53 38.0	-0.8
PICV				*e*S	Sb	06 53 44.6	-0.3
PURI	Puriscal	0.42	42	⇓*e*P	Pb	06 53 38.3	-0.9
SVQ2	Quepos	0.43	103	⇑*e*P	Pb	06 53 38.4	-0.8
SVQ2				*e*S	Sb	06 53 44.8	-0.8
QUEP	Quepos	0.44	103	*e*P	Pg	06 53 38.4	-0.4
QUEP				*e*S	Sb	06 53 44.8	-0.8
PAQE	Paquera	0.44	311	⇑*e*P	Pg	06 53 38.9	+0.1
PAQE				*e*S	Sb	06 53 46.0	+0.3
ARZA	Esparza	0.46	351	⇑*e*P	Pg	06 53 39.0	-0.3
ARZA				*e*S	Sb	06 53 46.1	-0.3
ROBF	Roble, Puntare	0.47	343	⇑*e*P	Pb	06 53 40.2	+0.4
ATEO	Atenas	0.49	25	⇓*e*P	Pb	06 53 40.4	+0.1
ATEO				*e*S	Sb	06 53 47.2	-0.1
ACOS	Acosta	0.50	58	⇓*e*P	Pg	06 53 39.3	-0.7
ACOS				*e*S	Sb	06 53 46.4	-1.2
ENAS	Puntarenas	0.50	332	⇑*e*P	Pb	06 53 40.1	-0.4
PALD	Palmares	0.55	17	⇓*e*P	Pg	06 53 40.2	-0.5
ABE2	San Pablo	0.56	72	⇓*e*P	Pg	06 53 40.5	-0.7
SRA1	San Ramn	0.56	12	⇑*e*P	Pg	06 53 40.6	-0.5
RAMO	San Ramon	0.57	13	*e*P	Pg	06 53 40.9	-0.3
SANTA	Santa Ana	0.57	45	⇓*e*P	Pg	06 53 40.5	-0.7
RAZU	San Marcos de	0.58	77	⇓*e*P	Pg	06 53 40.9	-0.6
PITB	Pirrs, San	0.58	77	⇓*e*P	Pg	06 53 40.8	-0.7
TCS1	Tacares	0.59	30	⇓*e*P	Pb	06 53 41.4	-0.5
TCS1	Tacares	0.59	30	⇓P	Pb	06 53 41.4	-0.5
BELE	Belen	0.60	42	⇓*e*P	Pg	06 53 41.0	-0.7
NARAN	Naranjo de Ala	0.60	21	*e*P	Pb	06 53 41.8	-0.4
SARCI	Sarchi	0.61	24	⇓*e*P	Pb	06 53 41.9	-0.4
GREC	Grecia	0.61	28	⇓*e*P	Pb	06 53 41.8	-0.5
UELA	Alajuela	0.62	38	⇓*e*P	Pb	06 53 42.7	+0.2
LCR2	La Lucha 2	0.62	70	⇓*e*P	Pg	06 53 41.4	-0.8
LCR2	La Lucha 2	0.62	70	⇓P	Pn	06 53 49.0	+4.7
LCR2				S	Sb	06 53 50.0	-1.1
PAVB	Pavas, San Jos	0.62	49	*e*P	Pg	06 53 41.2	-1.0
PIEC	Cerro El Cedra	0.64	82	⇓*e*P	Pg	06 53 42.0	-0.5
AMPA	Desamparados	0.64	55	⇓*e*P	Pg	06 53 41.5	-1.1
POAS	San Pedro de P	0.65	33	⇓*e*P	Pb	06 53 42.4	-0.5
CENT	San Jose	0.65	52	⇓*e*P	Pb	06 53 42.8	-0.1
MEXI	Barrio Mexico	0.65	51	⇓*e*P	Pg	06 53 42.0	-0.7
LUJA	Lujan	0.65	53	⇓*e*P	Pb	06 53 42.9	-0.1
HDC	Heredia	0.67	45	⇓*e*P	Pg	06 53 42.4	-0.7
DOMI	Santo Domingo	0.67	48	*e*P	Pg	06 53 42.5	-0.6
SJS	Escuela Geolog	0.67	53	⇓*e*P	Pg	06 53 42.3	-0.8
SJS3	Mercedes San J	0.67	53	⇓*e*P	Pg	06 53 42.5	-0.7
TIBA	Tibas	0.67	50	*e*P	Pg	06 53 42.4	-0.7
LUPE	Guadalupe	0.68	52	⇓*e*P	Pg	06 53 42.6	-0.7
ZARE	Zarcero	0.68	17	⇓*e*P	Pb	06 53 43.4	-0.2
TRIO	Tres Rios	0.70	58	⇓*e*P	Pb	06 53 43.6	-0.3
CORON	Coronado	0.73	53	⇓*e*P	Pg	06 53 43.6	-0.7
VPS8	V Poas	0.73	28	⇓*e*P	Pb	06 53 44.0	-0.6
TAGO	Cartago	0.74	63	⇓*e*P	Pg	06 53 43.6	-0.9
VPS5	V. Poas	0.75	29	⇓*e*P	Pg	06 53 44.0	-0.6
VPL1	V. Platanar	0.76	17	⇓*e*P	Pg	06 53 44.2	-0.6
VBV1	V. Barva	0.76	40	⇓*e*P	Pg	06 53 44.2	-0.6
REPA	Paraso	0.78	67	⇓*e*P	Pg	06 53 44.1	-1.0
NYURE	Nandayure	0.80	306	⇑*e*P	Pg	06 53 45.0	-0.5
VPL2	V. Platanar	0.80	15	⇓*e*P	Pb	06 53 45.1	-0.5
QUEU	Ciudad Quesada	0.80	11	*e*P	Pb	06 53 45.8	+0.2
CVIMO	Finca Echandi	0.81	53	⇓*e*P	Pg	06 53 45.0	-0.8
MTEVE	Monteverde	0.82	344	⇑*e*P	Pb	06 53 46.0	+0.1
JUNT	Juntas	0.83	334	⇑*e*P	Pg	06 53 45.0	-1.1
JTS	Las Juntas de	0.83	335	⇑*e*P	Pg	06 53 45.0	-1.2
JTS	Las Juntas de	0.83	335	*e*P	Pg	06 53 45.2	-1.0
JTS				*e*S	Sg	06 53 56.2	-1.0
SOCE	Pocosol	0.85	359	⇑*e*P	Pg	06 53 45.9	-0.6
PCAYA	Pacayas	0.86	63	⇓*e*P	Pg	06 53 45.8	-1.0
ARTO	Ro Cuarto	0.89	25	⇓*e*P	Pg	06 53 46.4	-0.9

CASO	Castillo	0.91	351	⇑eP	Pg	06 53 46.8	-0.8
VINA	Juan Vinas	0.91	67	⇓eP	Pg	06 53 46.6	-1.1
ARE1	Arenal 1	0.93	353	⇑eP	Pg	06 53 47.5	-0.5
VARE2	V. Arenal	0.93	353	⇑eP	Pg	06 53 47.5	-0.6
FORC	Fortuna	0.93	356	⇑eP	Pg	06 53 47.4	-0.7
TUNA	La Fortuna	0.94	357	eP	Pg	06 53 47.6	-0.5
VTLA	Turrialba Volc	0.94	60	⇓eP	Pg	06 53 47.1	-1.0
VACR	Volcan Arenal	0.94	355	⇑eP	Pg	06 53 47.4	-0.8
CVTQ	Turrialba Volc	0.94	60	⇓eP	Pg	06 53 47.2	-1.1
CMARA	Lajas Hojancha	0.95	301	⇑eP	Pg	06 53 47.3	-1.1
VTR0	Volcan Turrial	0.96	59	⇓eP	Pg	06 53 47.5	-1.0
CEDE	Laguna Cedeo	0.96	354	⇑eP	Pg	06 53 47.9	-0.6
CHIK	Chiripa	0.96	341	⇑eP	Pg	06 53 47.7	-0.9
CVTR	Volcan Turrial	0.96	59	eP	Pg	06 53 47.4	-1.2
CVTV	Tajo	0.96	60	⇓eP	Pg	06 53 47.6	-1.0
VTCV	VTCV, Calle Va	0.97	62	⇓eP	Pg	06 53 47.7	-1.0
ITAL	Pital	0.97	19	eP	Pg	06 53 47.4	-1.3
TURIB	Turrialba	0.97	67	eP	Pg	06 53 47.4	-1.4
TABAC	Tabacon	0.98	350	⇑eP	Pg	06 53 48.4	-0.5
ABRB	Las Abras (San	0.99	61	⇓eP	Pg	06 53 48.2	-0.9
TILA	Tilaran	1.00	338	⇑eP	Pb	06 53 48.0	-1.0
NICO	Nicoya	1.03	306	eP	Pb	06 53 49.0	-0.5
OCHAL	Ojochal	1.03	115	S	Sb	06 54 01.6	-1.1
OCHAL	Ojochal	1.03	115	⇑P	Pb	06 53 47.8	-1.6
RVSTA	Santa Teresita	1.03	65	⇓eP	Pb	06 53 48.8	-0.7
INVE	Universidad In	1.05	334	⇑eP	Pb	06 53 49.0	-0.8
PILE	Guapiles	1.05	49	⇓eP	Pn	06 53 50.2	+0.1
RESJ	San Isidro (Tu	1.06	62	⇓eP	Pb	06 53 49.5	-0.5
EDPE	Pejibaye, P	1.08	110	eP	Pb	06 53 48.7	-1.5
SARA	Sarapiqu	1.08	32	eP	Pb	06 53 49.2	-1.0
SAJE	San Jernim	1.09	100	eP	Pb	06 53 49.1	-1.4
PLVR	Palo Verde	1.10	318	⇑eP	Pb	06 53 49.9	-0.8
QUEB	Quebradon, Cot	1.13	345	⇑eP	Pb	06 53 50.4	-0.7
TIMP	Tierras Morena	1.13	338	⇑eP	Pb	06 53 50.1	-1.0
RVLA	Villa Bonita	1.15	60	eP	Pb	06 53 51.0	-0.5
ELVJ	El Viejo (Barb	1.16	322	eP	Pb	06 53 51.5	-0.1
CARI	Cariari	1.19	46	⇓eP	Pb	06 53 51.3	-0.7
BAGA	Bagaces	1.19	327	⇑eP	Pn	06 53 51.2	-0.7
IRES	Siquirres	1.21	62	⇓eP	Pb	06 53 52.2	-0.3
TENO	El Achiote	1.23	342	⇑eP	Pn	06 53 51.5	-1.0
MOTZ	Rio Naranjo	1.24	338	⇑eP	Pn	06 53 52.5	-0.2
CUI	Cuipilapa	1.25	334	⇑eP	Pg	06 53 58.8	+4.6
PANP	Palmar Norte	1.26	117	eP	Pn	06 53 51.8	-1.1
COLC	Colonia	1.28	332	⇑eP	Pn	06 53 52.6	-0.6
HORNC	Hornillas	1.31	334	⇑eP	Pn	06 53 53.2	-0.5
TRT2	Tortugero	1.33	40	⇓eP	Pn	06 53 53.3	-0.5
FIMO	Fila Mora	1.34	114	eP	Pn	06 53 53.5	-0.6
MESS	Mesas	1.34	334	⇑eP	Pn	06 53 53.9	-0.2
TAAN	Batan	1.35	66	⇓eP	Pb	06 53 54.5	-0.4
DRK0	Durika	1.36	101	eP	Pn	06 53 53.5	-0.9
DRK0	Durika	1.36	101	S	Sn	06 54 12.4	+0.1
DRK0	Durika	1.36	101	⇓P	Pn	06 53 53.2	-1.3
DRK0	Durika	1.36	101	eP	Pb	06 53 55.0	-0.1
DRK0				eS	Sg	06 54 16.1	+2.2
VMAR	Armenia, Volca	1.37	338	⇑eP	Pn	06 53 54.4	-0.1
ALIBA	Liberia Airpor	1.41	319	⇑eP	Pn	06 53 55.3	+0.3
UPAL	Upala	1.42	343	⇑eP	Pn	06 53 55.4	+0.3
GPS2	Hotel Rincn d	1.43	329	⇑eP	Pn	06 53 55.0	-0.2
GPS3	Bodega del ICE	1.43	328	eP	Pb	06 53 56.6	+0.3
VERH	Veragua Rainfo	1.44	74	eP	Pn	06 53 55.2	-0.2
GPS1	Guardaparques	1.44	329	⇑eP	Pn	06 53 55.3	-0.2
ELI1	Hacienda Flor	1.46	320	eP	Pn	06 53 55.8	+0.2
VRLE	La Escondida,	1.46	329	⇑eP	Pn	06 53 55.6	-0.2
LAPC	Finca la Perla	1.48	326	⇑eP	Pn	06 53 55.7	-0.3
EDP2	Potrero Grande	1.49	110	eP	Pn	06 53 55.8	-0.3
PG27	Guanacaste Pro	1.52	329	⇑eP	Pn	06 53 56.4	-0.1
BUAI	Buenos Aires	1.52	332	⇑eP	Pn	06 53 56.6	0.0
PEJA	Penjamo Buenos	1.53	333	⇑eP	Pn	06 53 57.0	+0.3
JIME	Puerto Jimenez	1.60	128	eP	Pn	06 53 57.7	+0.2
CEUA	Cerro Uatsi, L	1.64	87	eP	Pb	06 53 59.5	-0.2
EDAD	Golfito	1.66	122	eP	Pn	06 53 57.6	-0.9
FITO	Golfito	1.68	122	eP	Pn	06 53 58.1	-0.7
BRIBI	Bribri	1.76	87	eP	Pb	06 54 01.3	-0.5
ALCO	Alturas Coton,	1.83	108	eP	Pn	06 54 00.7	-0.3
LCRUZ	La Cruz	1.84	327	⇑eP	Pn	06 54 01.9	+0.9
RSRNO	Rio Sereno	1.85	112	eP	Pn	06 54 01.7	+0.5
CARN	Rivas	1.88	331	⇑eP	Pn	06 54 02.3	+0.8
CARN	Rivas	1.88	331	⇑P	Pn	06 54 02.5	+1.0
CARN				S	Sg	06 54 29.5	-1.0
MLIR3	Monte Lirio, C	1.90	113	eP	Pb	06 54 03.6	-0.7
MLIR3				eS	Sb	06 54 28.7	+0.9
SCLRA	Santa Clara, W	1.92	111	eP	Pb	06 54 03.3	-1.4
CDITO	Canoas	1.95	119	S	Sn	06 54 26.4	-0.1
CDITO	Canoas	1.95	119	⇑P	Pn	06 54 02.2	-0.2
RGM0	Gandoca	1.96	88	eP	Pb	06 54 04.7	-0.6
RGM0	Gandoca	1.96	88	S	Sb	06 54 28.9	-0.7
RGM0	Gandoca	1.96	88	⇑P	Pb	06 54 04.7	-0.6
RGM0	Gandoca	1.96	88	eP	Pb	06 54 04.6	-0.6
RGM0				eS	Sb	06 54 30.3	+0.7
SCZRO	Santa Cruz, Re	2.02	116	eP	Pn	06 54 03.6	+0.2
BRU2	Volcan	2.02	111	eP	Pn	06 54 03.7	+0.2
BRU2	Volcan	2.02	111	S	Sn	06 54 29.3	+0.8
BRU2	Volcan	2.02	111	⇑P	Pn	06 54 03.7	+0.2
BRU2	Volcan	2.02	111	eP	Pb	06 54 05.0	-1.3
BRU2				eS	Sg	06 54 34.8	-0.1
DHOFF	Oeste 158, Vol	2.07	111	eP	Pn	06 54 04.4	+0.2
BC3P	Paso Ancho	2.08	110	eP	Pn	06 54 05.0	+0.6
BC3P				eS	Sb	06 54 34.5	+1.2
CLLRA	Cordillera,	2.11	112	eP	Pn	06 54 04.7	0.0
LMNES	Limones	2.23	129	eP	Pn	06 54 06.1	-0.1
BQTLY	Boquete Panama	2.24	110	eP	Pn	06 54 06.8	+0.2
JAPN	Al SSO del Vol	2.25	332	eP	Pn	06 54 07.7	+1.1
JAPN	Al SSO del Vol	2.25	332	⇓P	Pb	06 54 09.2	-1.1
CONN	Concepcion	2.26	333	⇓P	Pb	06 54 08.7	-1.7
CONN				S	Sb	06 54 39.9	+1.6
BQSF3	Alto Boquete,	2.27	110	eP	Pn	06 54 08.0	+1.0
DVD	David	2.38	117	eP	Pb	06 54 10.7	-1.8
DVD				eS	Sb	06 54 41.8	+0.1
CSTBL	De las Acacias	2.40	117	eP	Pn	06 54 09.3	+0.7
PBNVO	Pueblo Nuevo,	2.46	105	eP	Pn	06 54 09.2	-0.2
ACON	Acoyapa	2.49	347	⇑eP	Pn	06 54 10.2	+0.3
ACON	Acoyapa	2.49	347	P	Pn	06 54 10.6	+0.7
ACON	Acoyapa	2.49	347	S	Sb	06 54 43.5	-1.2
BLUN	Bluefields	2.59	18	eP	Pn	06 54 10.9	-0.3
BLUN	Bluefields	2.59	18	⇓P	Pn	06 54 11.4	+0.2
BLUN				S	Sb	06 54 45.1	-2.5
ESPN	Las Esperanzas	2.67	6	⇑eP	Pn	06 54 12.6	+0.4
NANN	Nandasmo	2.83	328	P	Pn	06 54 17.3	+2.8
SABN	Sabanita	2.86	328	P	Pb	06 54 18.3	-2.4
BOAB	BOACO BROADBAN	3.09	340	S	Sb	06 54 60.0	-2.0
BOAB	BOACO BROADBAN	3.09	340	⇑P	Pn	06 54 19.2	+1.1
COPN	Copaltepe	3.28	324	⇑P	Pn	06 54 23.0	+2.2
CNGA	Al SSO del Vol	3.60	325	⇓P	Pn	06 54 27.6	+2.5
CNGN	Cerro Negro	3.60	325	⇓P	Pn	06 54 28.2	+3.0
MATN	Matagalpa	3.62	339	S	Sb	06 55 13.1	-4.4
MATN	Matagalpa	3.62	339	⇑P	Pn	06 54 27.0	+1.5
GMAL	Guarumal, Vera	3.76	118	eP	Pn	06 54 29.7	+2.4
RCPN	Sur Rio San Ju	4.23	340	⇓P	Pn	06 54 35.8	+1.9
RCVN	Varillal2	4.32	339	P	Pn	06 54 37.3	+2.1
AZU	Azuero	4.61	112	eP	Pn	06 54 41.6	+2.6
BCIP	Isla Barro Col	4.71	94	eP	Pn	06 54 42.3	+1.9
CHOR3	La Chorrera	4.81	97	eP	Pn	06 54 41.9	+0.1
CHOR3				eS	Sn	06 55 40.7	+3.4
PRVC	Isla de Provid	4.96	39	P	Pn	06 54 46.9	+3.0
PRVC				S	Sn	06 55 43.9	+2.8

NAO ***01*** *07:00:16.9,39°.33N×19°.79E,h10^{km},mb4.6*

BJI ***01*** *07:00:22.2,40°.42N×20°.40E,h10^{km},mB5.0/29,mb5.0/56, Ms4.8/42,Ms7 4.4/41*

BEO ***01*** *07:00:25.7±0.6,40°.37N×21°.08E,h1^{km}±3^{km},ML4.8/13*

TIR ***01*** *07:00:26.8,40°.50N×20°.77E,h7^{km}±1^{km},Md3.1/3,Ml5.0/13*

IDC ***01*** *07:00:26.1±0.4,40°.49N×20°.89E,h0^{km},mb4.6/30, mbtmp4.6/46,ML4.2/14,MS4.2/86,Error ellipse: s-maj=7.9km s-min=7.5km az=46.0*

MOS ***01*** *07:00:26.4±1.1,40°.52N×20°.76E,h13^{km},mb5.0/39, MS4.3/18,Error ellipse: s-maj=3.3km s-min=2.3km az=89.2*

ATH ***01*** *07:00:27.3,40°.52N×20°.79E,h2^{km},Mw4.9,Moment Tensor Solution. s12 Moment tensor: M_{rr}-2.58; $M_{\theta\theta}$0.45; $M_{\phi\phi}$2.13; $M_{r\theta}$0.28; $M_{\theta\phi}$1.33; $M_{\phi r}$1.13; Fault plane solution: NP1:ϕ_s36.00000°,δ34.00000°,λ-79.00000°. NP2:ϕ_s202.00000°,δ57.00000°,λ-98.00000°.*

PDG ***01*** *07:00:27.3±1.2,40°.53N×20°.72E,h10^{km}±2^{km},MD5.0/11, ML4.9/12 Error ellipse: s-maj=0.8km s-min=1.3km az=0.0*

GCMT ***01*** *07:00:27.5±0.1,40°.45N±0°.01×20°.74E±0°.01,h12^{km}, MW5.0/144,Moment Tensor Solution. s86,c128; s144,c251; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.58±.11; $M_{\theta\theta}$0.63±.08; $M_{\phi\phi}$3.95±.08; $M_{r\theta}$-0.14±.22; $M_{\theta\phi}$1.58±.06; $M_{\phi r}$0.33±.18; Best double couple: $M_0$4.59500×10^{16} NP1:ϕ_s25.00000°,δ43.00000°, λ-85.00000°. NP2:ϕ_s199.00000°,δ47.00000°, λ-94.00000°. Principal axes: T 4.5890, Plg2.0000°, Azm292.0000°; N 0.0140, Plg3.0000°, Azm202.0000°; P -4.6010, Plg87.0000°, Azm49.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

THE ***01*** *07:00:28.0,41°N±1°×2°1E±°,h0^{km}±1^{km},M4.7/69, MLh4.7/69*

MED_RC ***01*** *07:00:28.0±0.1,40°.47N×20°.77E,h10^{km},MW5.0/57, Moment Tensor Solution. Body waves: s2,c3;Mantle waves: s57,c85; Duration: 1^{s}1 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.79±.07; $M_{\theta\theta}$0.51±.07; $M_{\phi\phi}$3.27±.05; $M_{r\theta}$-0.09±.42; $M_{\theta\phi}$1.01±.06; $M_{\phi r}$-1.03±.28; Best double couple: $M_0$3.84000×10^{16} NP1:ϕ_s201.00000°,δ37.00000°, λ-85.00000°. NP2:ϕ_s15.00000°,δ53.00000°,λ-94.00000°. Principal axes: T 3.7400, Plg8.0000°, Azm108.0000°; N 0.2000, Plg3.0000°, Azm17.0000°; P -3.9400, Plg82.0000°, Azm265.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=40s.*

NEIC ***01*** *07:00:28.7,40°.59N×20°.75E,h12^{km}*

NEIC ***01*** *07:00:28.5±1.6,40°.57N±0°.05×20°.74E±0°.06,h10^{km}±1^{km}, mb5.0/94,Mww5.0/63,Error ellipse: s-maj=8.7km s-min=7.0km az=219.0*

NEIC ***01*** *07:00:28.7,40°.39N×20°.75E,h12^{km},Moment Tensor Solution. Duration: 1^{s}7 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.86; $M_{\theta\theta}$0.25; $M_{\phi\phi}$3.61; $M_{r\theta}$-1.69; $M_{\theta\phi}$1.22; $M_{\phi r}$-1.03; Fault plane solution: $M_0$4.40000×10^{16} NP1: ϕ_s182.47000°,δ36.65000°,λ-116.38000°. NP2: ϕ_s34.20000°,δ57.67000°,λ-71.70000°. Principal axes: T 4.2948, Plg11.0000°, Azm111.0000°; N 0.2114, Plg15.0000°, Azm204.0000°; P -4.5062, Plg71.0000°, Azm347.0000°;*

SKO ***01*** *07:00:29.0,40°.50N×20°.81E,h15^{km},ML4.9*

BGS ***01*** *07:00:30.1±1.5,40°.73N×20°.67E,h10^{km},mb4.7*

GII ***01*** *07:00:31.0±0.0,40°.52N×20°.86E,h10^{km},confirmed*

AFAD ***01*** *07:00:34.0,40°.75N×21°.52E,h15^{km},MW4.7*

ISC 01 07:00:27.5±0.5,**40°.51N**±0°.01×**20°.79E**±0°.01,**h10**^{km}±3^{km}, **n1210,**σ1^s**92**/1300,**mb4.9**/119,**MS4.3**/97,**73C-61D,**
Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	Korca	0.12	360	Pg	Pg	07 00 30.2	-0.3
KBN				Sg	Sg	07 00 31.7	-1.0
KBN				AML	AML	07 00 33.8	
	2μm,0.4s						
KBN				AML	AML	07 00 35.1	
	1μm,0.5s						
NEST	Nestorio	0.22	115	Pg	Pg	07 00 31.6	-0.5
NEST				Sg	Sg	07 00 35.8	+0.5
NEST				AML	AML	07 00 36.8	
	1μm,1.0s						
NEST				AMd		07 01 42.7	
NEST	Nestorio	0.22	115	P	Pg	07 00 32.0	-0.1
NEST				S	Sg	07 00 34.3	-1.0
NEST	Nestorio	0.22	115	P	Pg	07 00 32.0	-0.1
LSK	Leskovik	0.38	202	Pg	Pg	07 00 34.0	-1.2
LSK				Sg	Sg	07 00 40.3	0.0
LSK				AML	AML	07 00 47.2	
	1μm,0.8s						
LSK				AML	AML	07 00 51.9	
	1μm,0.8s						
LSK				AMd		07 02 21.5	
PENT	Pentalofos	0.41	139	P	Pg	07 00 35.3	-0.4
PENT				S	Sg	07 00 41.4	+0.4
PENT	Pentalofos	0.41	139	P	Pg	07 00 34.9	-0.7
PENT				S	Sg	07 00 41.3	+0.2
OHR	Ohrid	0.60	1	P	Pg	07 00 39.4	+0.1
OHR				S	Sg	07 00 47.5	+0.2
OHR	Ohrid	0.60	1	*i* Pg	Pg	07 00 39.5	+0.3
OHR				*i* Sg	Sb	07 00 49.8	+1.0
OHR				*e*Lg	Lg	07 00 50.2	
	comp=E,87μm,0.6s						
OHR				*e*Lg	Lg	07 00 50.8	
	comp=N,36μm,0.5s						
OHR	Ohrid	0.60	1	P	Pg	07 00 39.1	-0.2
OHR	Ohrid	0.60	1	*e*Pg	Pb	07 00 40.4	+0.2
OHR				*e*Sg	Sn	07 00 50.6	-1.5
KPRO	Kipourio	0.70	141	P	Pg	07 00 40.4	-0.8
KPRO				S	Sg	07 00 50.4	-0.1
KPRO	Kipourio	0.70	141	P	Pg	07 00 40.2	-1.0
KPRO				S	Sg	07 00 51.0	+0.6
KZN	Kozani	0.78	105	P	Pg	07 00 42.6	+0.1
KZN				S	Sg	07 00 52.7	0.0
KZN	Kozani	0.78	105	P	Pg	07 00 42.0	-0.5
KZN	Kozani	0.78	105	P	Pg	07 00 42.9	+0.3
KZN				S	Sb	07 00 54.3	+0.5
MSVA	Metsovo	0.80	158	P	Pg	07 00 42.0	-0.9
JAN	Janina	0.85	177	P	Pg	07 00 42.5	-1.4
JAN				S	Sb	07 00 56.5	+0.6
JAN	Janina	0.85	177	P	Pg	07 00 42.0	-1.9
JAN	Janina	0.85	177	P	Pg	07 00 42.6	-1.4
JAN				S	Sg	07 00 54.4	-0.6
SRN	Sarande	0.87	224	Pg	Pg	07 00 43.8	-0.5
SRN				Sg	Sb	07 00 57.0	+0.7
SRN				AML	AML	07 01 01.2	
	comp=N,176nm,0.7s						
SRN				AML	AML	07 01 06.6	
	comp=N,151nm,0.7s						
SRN				AMd		07 01 52.5	
NASA	Naoussa	0.98	82	P	Pg	07 00 46.0	-0.5
NASA				S	Sb	07 00 59.9	+0.3
VLO	Vlora	0.99	268	Pg	Pg	07 00 46.4	-0.1
VLO				Sg	Sg	07 00 59.1	-0.2
VLO				AML	AML	07 01 12.4	
	comp=N,308nm,0.6s						
KTI	Kastanea	1.02	96	P	Pg	07 00 46.3	-0.8
IGT	Igoumenitsa	1.03	200	Pg	Pg	07 00 46.8	-0.6
IGT				Sn	Sn	07 01 02.3	-0.3
IGT	Igoumenitsa	1.03	200	P	Pg	07 00 47.3	-0.2
IGT				S	Sn	07 01 03.4	+0.9
IGT	Igoumenitsa	1.03	200	*i* Pg	Pg	07 00 47.2	-0.2
IGT				*i* Sg	Sn	07 01 03.9	+1.3
IGT	Igoumenitsa	1.03	200	P	Pg	07 00 46.7	-0.7
IGT	Igoumenitsa	1.03	200	P	Pg	07 00 47.0	-0.4
TIR	Tirane	1.09	321		Pb	07 00 46.3	-2.2
TIR	Tirane	1.09	321	Pn	Pb	07 00 47.9	-0.7
TIR				Sn	Sn	07 01 04.5	+0.5
TIR				AML	AML	07 01 10.7	
	comp=N,61nm,0.7s						
TIR				AML	AML	07 01 14.8	
	comp=N,71nm,0.7s						
TIR	Tirane	1.09	321	*i* Pg	Pb	07 00 47.8	-0.7
TIR				*i* Sg	Sn	07 01 07.0	+3.0
TIR	Tirane	1.09	321	P	Pb	07 00 47.7	-0.8
TIR	Tirane	1.09	321	*e*Pg	Pb	07 00 48.2	-0.3
TIR				*e*Sg	Sn	07 01 08.5	+4.5
TIR	Tirane	1.09	321	P	Pb	07 00 47.1	-1.4
KEK	Kerkira	1.10	224		Pb	07 00 48.6	0.0
KEK	Kerkira	1.10	224	P	Pn	07 00 50.4	+1.4
KEK				S	Sn	07 01 06.9	+2.8
KEK	Kerkira	1.10	224	P	Pn	07 00 49.3	+0.4
LFKM	Lefkimmi	1.20	208	P	Pg	07 00 50.7	+0.1
LFKM				S	Sn	07 01 08.9	+2.4
PHP	Peshkopia	1.21	348	Pg	Pb	07 00 50.2	-0.2
TETR	Tetrakomo, Epi	1.22	162	P	Pn	07 00 49.5	-1.2
GRG	Griva	1.31	69	P	Pn	07 00 51.9	+0.1
THL	Klokotos Trika	1.33	135	P	Pn	07 00 50.3	-1.8
THL				S	Sg	07 01 11.9	+1.6
THL	Klokotos Trika	1.33	135	P	Pn	07 00 51.3	-0.8
TYRN	Tyrnavos	1.36	125	P	Pn	07 00 51.8	-0.7
TYRN				S	Sg	07 01 11.6	+0.2
TYRN	Tyrnavos	1.36	125	P	Pn	07 00 52.5	-0.1
LRSO	Larissa Observ	1.49	124	P	Pn	07 00 54.7	+0.5
SKO	Skopje	1.54	18	⇓*i*Pg	Pb	07 00 56.1	-0.1
SKO				*i* Sg	Sg	07 01 18.1	+0.9
VAY	Valandovo	1.58	58	⇓*i*Pg	Pn	07 00 55.9	+0.4
VAY				*i* Sg	Sg	07 01 21.1	+2.9
VAY				*e*Lg	Lg	07 01 24.5	
	comp=E,16μm,1.0s						
VAY				*e*Lg	Lg	07 01 26.9	
	comp=N,32μm,1.5s						
AMPL	Ampelaki	1.62	168	P	Pn	07 00 56.8	+0.8
THE	Thessaloniki	1.66	85	Pn	Pn	07 00 57.1	+0.4
THE				Sn	Sb	07 01 19.4	+0.3
THE				AML	AML	07 01 27.9	
	comp=N,48nm,0.8s						
THE	Thessaloniki	1.66	85	P	Pn	07 00 56.5	-0.1
THE	Thessaloniki	1.66	85	⇓*i*Pg	Pn	07 00 56.7	0.0
THE				*i* Sg	Sg	07 01 23.9	+2.9
THE	Thessaloniki	1.66	85	P	Pn	07 00 57.1	+0.4
THE	Thessaloniki	1.66	85	P	Pn	07 00 56.8	+0.1
PUK	Puka	1.68	337	Pn	Pg	07 01 00.7	+1.0
PUK				Sg	Sg	07 01 23.3	+1.9
PUK				AML	AML	07 01 27.8	
	comp=N,148nm,1.6s						
PUK				AML	AML	07 01 30.7	
	comp=N,82nm,0.8s						
TSLK	Tsoukalades, L	1.68	184	P	Pg	07 00 59.6	-0.2
TSLK	Tsoukalades, L	1.68	184	P	Pn	07 00 56.8	-0.1
LKD2	Lefkada island	1.72	183	Pn	Pg	07 01 00.2	-0.3
LKD2				Sn	Sg	07 01 24.7	+2.0
LKD2				AML	AML	07 01 33.9	
	comp=N,58nm,0.7s						
LKD2	Lefkada island	1.72	183	P	Pg	07 00 59.9	-0.6
LKD2	Lefkada island	1.72	183	P	Pn	07 00 57.0	-0.5
KNT	Kendrikon	1.73	67	P	Pn	07 00 57.8	+0.2
KNT	Kendrikon	1.73	67	⇓*i*Pg	Pn	07 00 58.0	+0.3
KNT				*i* Sg	Sg	07 01 24.8	+1.7
KNT	Kendrikon	1.73	67	P	Pn	07 00 58.3	+0.7
HORT	Hortiatis	1.76	86	P	Pn	07 00 57.8	-0.3
HORT	Hortiatis	1.76	86	P	Pn	07 00 58.3	+0.2
EVR	Evrytania	1.77	153	P	Pb	07 01 00.3	+0.2
NYDR	Nydri-Lefkada	1.79	182	P	Pb	07 01 00.6	+0.2
NYDR	Nydri-Lefkada	1.79	182	P	Pn	07 00 58.1	-0.3
MAKR	Makrakomi, Fth	1.82	145	P	Pn	07 00 59.8	+1.0
SCTE	Santa Cesarea	1.83	257	Pn	Pn	07 00 59.1	+0.2
SCTE	Santa Cesarea	1.83	257	Pn	Pn	07 00 59.7	+0.8
SCTE				Sn	Sg	07 01 27.3	+1.0
SCTE				AML	AML	07 01 37.3	
	comp=N,55nm,0.9s						
SCTE	Santa Cesarea	1.83	257	P	Pn	07 00 57.7	-1.3
ULC	Ulcinj	1.86	322	Pn	Pb	07 01 01.3	-0.4
ULC	Ulcinj	1.86	322	*e*Pn	Pn	07 00 59.7	+0.2
ULC				*i* Sn	Sb	07 01 25.1	+0.1
EVGI	Lefkada island	1.89	183	P	Pb	07 01 02.0	0.0
AGG	Agios Georgios	1.90	141	P	Pn	07 01 00.6	+0.6
AGG	Agios Georgios	1.90	141	P	Pn	07 01 00.6	+0.6
AGG	Agios Georgios	1.90	141	P	Pn	07 01 01.2	+1.2
BCI	Bajram Curri	1.94	344	Pn	Pb	07 01 03.4	+0.5
BCI				Sn	Sg	07 01 30.4	+0.6
BCI				AML	AML	07 01 35.2	
	comp=N,114nm,0.7s						
PVO	Paravola	1.97	163	P	Pb	07 01 03.2	-0.3
SOH	Sokhos	1.98	80	P	Pn	07 01 01.8	+0.7
SOH	Sokhos	1.98	80	P	Pn	07 01 01.7	+0.7
PLG	Polygyros	2.03	93	P	Pn	07 01 02.2	+0.4
PLG	Polygyros	2.03	93	P	Pn	07 01 02.9	+1.1
PLG	Polygyros	2.03	93	P	Pn	07 01 02.0	+0.2
FSK	Fiskardo	2.05	185	P	Pb	07 01 03.6	-1.2
DRME	Dracevica, Mon	2.07	325	Pn	Pb	07 01 04.8	-0.4
DRME	Dracevica, Mon	2.07	325	⇑*i*Pn	Pb	07 01 04.5	-0.6
DRME	Dracevica, Mon	2.07	325	⇑*i*Pn	Pb	07 01 04.5	-0.6
DRME				*i* Sn	Sg	07 01 32.3	-1.7
ANX	Ano Chora	2.10	155	P	Pb	07 01 05.2	-0.6
PVY	Plav	2.18	344	*e*Pn	Pn	07 01 04.6	+0.7
PVY				*i* Sn	Sb	07 01 33.2	-0.9
KKB	Krupnik	2.21	52	⇓*i*Pn	Pn	07 01 05.1	+0.8
SRS	Serrai	2.21	73	P	Pn	07 01 04.1	-0.2
SRS	Serrai	2.21	73	⇓*i*Pn	Pn	07 01 04.2	0.0
SRS				*i* Sn	Sn	07 01 30.9	-0.8
SRS	Serrai	2.21	73	P	Pn	07 01 04.7	+0.4
SRS	Serrai	2.21	73	P	Pn	07 01 04.5	+0.2
NEO	Neokhori	2.22	122	P	Pn	07 01 04.8	+0.3
PDG	Podgorica	2.24	330	Pn	Pb	07 01 06.6	-1.4
PDG	Podgorica	2.24	330	⇑*i*Pn	Pb	07 01 06.9	-1.1
PDG	Podgorica	2.24	330	⇑P	Pb	07 01 07.0	-1.1
PDG	Podgorica	2.24	330	*e*Pn	Pb	07 01 06.6	-1.4
PDG				*e*Sn	Sg	07 01 38.7	-0.8
PDG	Podgorica	2.24	330	*e*Pn	Pn	07 01 06.0	+1.4
PDG				*i* Sn	Sb	07 01 35.9	+0.1
EFP	Efpalio	2.25	157	P	Pn	07 01 06.3	+1.6
AXAR	Agios Charalam	2.26	140	P	Pn	07 01 05.7	+0.8
DMLN	Damoulianata-K	2.29	188	P	Pn	07 01 06.8	+1.5
PAIG	Paliouri	2.29	104	P	Pn	07 01 05.1	-0.2
PAIG	Paliouri	2.29	104	P	Pn	07 01 05.4	+0.1
PAIG	Paliouri	2.29	104	P	Pn	07 01 05.1	-0.2
BUM	Brajici-Budva	2.29	322	⇑*i*Pn	Pn	07 01 06.8	+1.4
BUM				*i* Sn	Sb	07 01 37.1	-0.2
SERG	Sergoula	2.31	154	P	Pb	07 01 07.8	-1.5
SERG	Sergoula	2.31	154	P	Pn	07 01 05.9	+0.3
VLS	Valsamata	2.33	184	P	Pn	07 01 07.4	+1.5
VLS	Valsamata	2.33	184	P	Pn	07 01 07.5	+1.6
UPR	University Cam	2.35	160	P	Pb	07 01 09.0	-0.9
AXS	Araxos	2.35	169	P	Pb	07 01 08.9	-1.1
AXS	Araxos	2.35	169	P	Pn	07 01 07.9	+1.7
KALE	Kalithea	2.36	153	P	Pb	07 01 08.4	-1.7
BOSS	Bosilegrad	2.36	32	*e*Pn	Pn	07 01 07.0	+0.7
BOSS				*e*Sn	Sn	07 01 36.1	+0.8
PSDA	Pessada-Kefalo	2.40	184	P	Pn	07 01 08.2	+1.4
PSDA	Pessada-Kefalo	2.40	184	P	Pn	07 01 08.0	+1.2
RTZL	Ratzakli, Kefa	2.43	180	P	Pn	07 01 08.9	+1.7
BARS	Barje	2.43	18	⇓*i*Pn	Pn	07 01 08.2	+1.0
BARS				*i* Sn	Sn	07 01 38.1	+1.1
BARS	Barje	2.43	18	*e*Pn	Pn	07 01 08.3	+1.0
BARS				*e*Sn	Sb	07 01 39.6	-1.8
YRMI	Loutra Irminis	2.44	170	P	Pb	07 01 09.8	-1.6
OUR	Ouranopolis	2.44	93	P	Pn	07 01 07.5	+0.1
OUR	Ouranopolis	2.44	93	P	Pn	07 01 08.2	+0.8
OUR	Ouranopolis	2.44	93	P	Pn	07 01 07.8	+0.4
IVA	Berane	2.46	344	*e*Pn	Pn	07 01 08.5	+0.8
IVA				*i* Sn	Sb	07 01 40.5	-1.6
KOKK	Kokkinochori,	2.46	82	P	Pn	07 01 08.0	+0.3
MMB	Musomishta	2.47	64	P	Pn	07 01 08.5	+0.7
MMB	Musomishta	2.47	64	⇓*i*Pn	Pn	07 01 08.6	+0.7
MMB				*i* Sn	Sn	07 01 39.6	+1.6
MMB	Musomishta	2.47	64	P	Pn	07 01 08.8	+1.0
CEME	Cevo	2.48	326	⇓*i*Pn	Pn	07 01 09.4	+1.5
CEME				*i* Sn	Sb	07 01 42.1	-0.5
RLS	Riolos of Patr	2.50	168	P	Pb	07 01 11.0	-1.5
RLS	Riolos of Patr	2.50	168	P	Pb	07 01 11.0	-1.5
LKR	Lokris	2.52	137	P	Pn	07 01 09.1	+0.6
KOME	Kolasin	2.53	338	*e*Pn	Pb	07 01 10.8	-2.2
KOME				*i* Sn	Sb	07 01 43.3	-0.9
HCY	Herceg Novi	2.59	319	⇑*i*Pn	Pn	07 01 10.6	+1.1
HCY	Herceg Novi	2.59	319	⇓*i*Pn	Pn	07 01 10.9	+1.4
HCY				*i* Sn	Sb	07 01 44.3	-1.7
ORTH	Orthonies,Zaky	2.65	182	P	Pn	07 01 11.8	+1.4
KLV	Kalavryta, Ach	2.68	156	P	Pb	07 01 13.4	-2.1
KLV	Kalavryta, Ach	2.68	156	P	Pn	07 01 12.4	+1.7
SELS	Selova	2.72	5	*e*Pn	Pn	07 01 12.7	+1.4
SELS				*e*Sn	Sn	07 01 46.6	+2.4
AOS	Alonnisos	2.73	118	P	Pn	07 01 11.2	-0.2
LTHK	Lithakia	2.79	179	P	Pn	07 01 13.9	+1.6
SJES	Sjenica	2.82	348	*e*Pn	Pn	07 01 14.5	+1.8
SJES	Sjenica	2.82	348	*e*Pn	Pb	07 01 16.0	-2.0
SJES				*e*Sn	Sb	07 01 52.5	-0.1
TREB	Trebinje	2.87	321	⇑*i*Pn	Pn	07 01 14.2	+1.0
KAVA	Kavala	2.87	79	P	Pn	07 01 13.1	-0.2
KAVA	Kavala	2.87	79	P	Pn	07 01 13.2	-0.1
KTLO	Katakolo	2.89	172	P	Pn	07 01 15.6	+2.0
BRY	Bratogost	2.93	326	⇑*i*Pn	Pn	07 01 15.5	+1.3
BRY	Bratogost	2.93	326	⇓*i*Pn	Pn	07 01 15.7	+1.5
BRY				*i* Sn	Sb	07 01 52.7	-3.0
THAS	Thassos island	3.00	87	P	Pn	07 01 14.6	-0.4
THAS	Thassos island	3.00	87	P	Pn	07 01 14.6	-0.4
PLE	Pljevlja	3.01	340	*e*Pn	Pn	07 01 16.2	+0.9
PLE				*i* Sn	Sn	07 01 52.8	+1.4
UPM	Unac-Piva	3.04	333	⇑*i*Pn	Pn	07 01 17.6	+1.8
UPM				*i* Sn	Sn	07 01 53.0	+0.7
VILL	Villia	3.05	139	P	Pn	07 01 16.5	+0.7
GOCS	Kraljevo Serbi	3.05	1	*e*Pn	Pn	07 01 16.6	+0.7
GOCS				*e*Sn	Sn	07 01 55.8	+3.3
IVAS	Ivanjica	3.10	351	*e*Pn	Pn	07 01 17.6	+1.0
IVAS				*e*Sn	Sb	07 01 57.5	-3.2
MATE	Matera	3.11	274	⇓P	Pn	07 01 16.9	+0.2
MATE	Matera	3.11	274	*e*P	Pb	07 01 22.8	-0.1
KYMI	Kymi, Euboea I	3.17	125	P	Pn	07 01 18.0	+0.6
BOVS	Bovan	3.20	12	⇓P	Pn	07 01 18.8	+1.0
BOVS	Bovan	3.20	12	*e*Pn	Pn	07 01 18.4	+0.6
BOVS				*e*Sn	Sn	07 01 58.0	+2.0
RUDO	Rudo	3.28	342	*e*Pn	Pn	07 01 20.9	+1.9
STON	Ston	3.31	317	⇑*i*Pn	Pn	07 01 19.5	+0.2

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VLX   Vlachokerasia     3.37 158   P     Pn    07 01 23.6 +3.3
TIP   Timpagrande       3.37 248         Pn    07 01 19.8 -0.5
TIP   Timpagrande       3.37 248 ⇓P     Pn    07 01 20.7 +0.4
GRUS  Gruza             3.38 359  ePn    Pn    07 01 21.6 +1.3
GRUS                              eSn    Sn    07 02 02.7 +2.3
ATH   Athens Observa    3.40 137   P     Pn    07 01 21.4 +0.8
ATH   Athens Observa    3.40 137   P     Pn    07 01 21.9 +1.3
PLD   Plovdiv           3.40  60   P     Pn    07 01 21.6 +1.0
PLD   Plovdiv           3.40  60   P     Pn    07 01 21.5 +1.0
PTL   Penteli           3.42 135   P     Pn    07 01 21.8 +0.9
ITM   Ithomi            3.44 165         Pn    07 01 23.3 +2.2
ITM   Ithomi            3.44 165   P     Pn    07 01 23.8 +2.7
DION  Dionisos Attik    3.44 134   P     Pn    07 01 22.1 +0.9
ATHU  Athens Univers    3.44 137   P     Pn    07 01 22.0 +0.8
ZAGS  Zajecar           3.47  18  ePn    Pn    07 01 22.2 +0.6
ZAGS                              eSn    Sn    07 02 03.4 +0.7
BBLS  Lazi&#263i        3.51 343⇑iPn    Pn    07 01 24.7 +2.5
BBLS  Lazi&#263i        3.51 343  ePn    Pn    07 01 24.5 +2.3
VLY   Voula,Athens      3.53 138   P     Pn    07 01 19.6 -2.9
SMTH  Samothraki Isl    3.62  89   P     Pn    07 01 23.1 -0.4
KDZ   Kurdzhali         3.62  70   P     Pn    07 01 24.0 +0.4
KDZ   Kurdzhali         3.62  70   P     Pn    07 01 25.2 +1.6
KRND  KRANIDI           3.62 149   P     Pn    07 01 25.0 +1.4
DIVS  Divibare          3.64 351  ePn    Pn    07 01 25.2 +1.3
DIVS                              eSn    Sn    07 02 09.6 +2.7
RDO   Rodhopi           3.66  78         Pn    07 01 24.2 +0.1
RDO   Rodhopi           3.66  78   P     Pn    07 01 24.2 +0.1
PYL   PYLOS             3.68 168   P     Pn    07 01 26.2 +1.7
BORS2 Bor- Borsko je    3.69  14  ePn    Pn    07 01 24.0 -0.7
BORS2                             eSn    Sn    07 02 08.1 -0.1
TRUS  Trudelj           3.73 356  ePn    Pn    07 01 26.0 +1.0
KARY  Karystos          3.76 130   P     Pn    07 01 26.4 +0.9
SVIS  Svilajnac         3.77   5  ePn    Pn    07 01 26.8 +1.2
HAPS  Han Pijesak,Bl    3.83 340⇑iPn    Pn    07 01 28.7 +2.1
CUC   Castrocucco       3.84 264         Pn    07 01 26.9 +0.3
KUBS  Kucevo            3.96   9  ePn    Pn    07 01 27.3 -0.9
SGRT  San Giovanni R    4.01 290         Pn    07 01 28.8 -0.2
ALN   Alexandroupoli    4.01  83   Pn    Pn    07 01 29.6 +0.6
ALN   Alexandroupoli    4.01  83   P     Pn    07 01 29.3 +0.3
ALN   Alexandroupoli    4.01  83   P     Pn    07 01 27.2 -1.8
ALN   Alexandroupoli    4.01  83   P     Pn    07 01 29.6 +0.6
BOZC  Bozcaada          4.09  98   P     Pn    07 01 29.8 -0.2
PUNG  Punghina          4.09  22 ⇑P     Pn    07 01 31.5 +1.4
CAVK  Edirne/Enez-Ca    4.10  86   P     Pn    07 01 32.6 +2.5
CAVK  Edirne/Enez-Ca    4.10  86 ⇑P     Pn    07 01 30.8 +0.6
VLI   Veliai            4.14 155   P     Pn    07 01 32.5 +1.7
ECEA  Canakkale, Ece    4.15  95   P     Pn    07 01 33.9 +3.1
TEKS  Tekeris           4.15 347⇑iPn    Pn    07 01 32.3 +1.4
TEKS  Tekeris           4.15 347  ePn    Pn    07 01 32.2 +1.4
AVAS  Avala Beograd     4.19 357  ePn    Pn    07 01 31.9 +0.4
KOCA  Canakkale, Ayv    4.23 102   P     Pn    07 01 31.7 -0.3
EZN   Ezine             4.30  97   P     Pn    07 01 33.7 +0.9
EZN   Ezine             4.30  97 ⇑P     Pn    07 01 33.6 +0.7
EZN   Ezine             4.30  97   P     Pn    07 01 33.6 +0.7
BEO   Beograd           4.31 357   P     Pn    07 01 35.5 +2.5
BEO   Beograd           4.31 357  ePn    Pn    07 01 32.6 -0.4
MDVR  Moldovita         4.33   9 ⇑P     Pn    07 01 33.7 +0.3
SOI   Samo              4.40 238   P     Pn    07 01 34.3 -0.1
CEL   Celeste           4.41 241         Pn    07 01 34.2 -0.3
KESN  Edirne-Kesan      4.49  84   P     Pn    07 01 35.2 -0.8
GMB   Gambarie          4.50 240   P     Pn    07 01 35.6 -0.2
SRE   Strehaia          4.52  22 ⇑P     Pn    07 01 37.1 +1.1
SRE   Strehaia          4.52  22   P     Pn    07 01 37.1 +1.1
HERR  Herculane         4.53  15 ⇑P     Pn    07 01 36.9 +0.8
KTHA  Kythira Island    4.60 156   P     Pn    07 01 39.7 +2.5
VRSS  Vrsac             4.63   5  ePn    Pn    07 01 37.3 -0.2
DOB   Doboj             4.67 336  ePn    Pb    07 01 45.5 -3.9
AYVA  Ayvalik           4.69 103   P     Pn    07 01 39.0 +0.6
FRGS  Fruska Gora       4.70 352⇑iPn    Pn    07 01 39.5 +1.0
FRGS  Fruska Gora       4.70 352  ePn    Pn    07 01 39.3 +0.8
KARB  zmir-Karabur      4.72 111   P     Pn    07 01 39.9 +1.2
PAOL  Paolisi           4.75 278         Pn    07 01 39.6 +0.4
SZH   Strazhitsa        4.75  53   P     Pn    07 01 39.9 +0.7
SZH   Strazhitsa        4.75  53   P     Pn    07 01 40.6 +1.4
SART  Tekirdag          4.87  86   P     Pn    07 01 39.9 -0.9
BANR  Banloc            4.88   3 ⇑P     Pn    07 01 43.2 +2.3
COPA  Copaceanca        4.89  41 ⇓P     Pn    07 01 42.2 +1.2
BUHA  Balikesir, Bur    4.93 100   P     Pn    07 01 41.5 -0.1
ZEYE  Izmir, Urla-Ze    4.97 115   P     Pn    07 01 43.7 +1.5
BLY   Banja Luka        5.00 329⇑iPn    Pn    07 01 44.1 +1.5
ANKY  Antikythira Is    5.04 156   P     Pn    07 01 46.1 +3.0
APE   Apeiranthos       5.05 131   P     Pn    07 01 44.3 +1.0
APE   Apeiranthos       5.05 131   P     Pn    07 01 41.2 -2.1
APE   Apeiranthos       5.05 131 ⇑P     Pn    07 01 44.5 +1.2
APE   Apeiranthos       5.05 131c iP     Pn    07 01 44.2 +0.9
A050A Klekovaca         5.07 323⇑iPn    Pn    07 01 45.3 +1.7
HUMR  Humele            5.07  36 ⇑P     Pn    07 01 44.8 +1.2
ZEDA  zmir-Bergama      5.09 106   P     Pn    07 01 45.6 +1.9
GZR   Gura Zlata        5.10  16 ⇑P     Pn    07 01 44.8 +0.9
GZR   Gura Zlata        5.10  16   P     Pn    07 01 44.8 +0.9
BZS   Buzias            5.14   6 ⇑P     Pn    07 01 44.5 -0.1
BZS   Buzias            5.14   6   P     Pn    07 01 44.4 -0.1
ARMN  Kirklareli, Me    5.19  73   P     Pn    07 01 44.0 -1.2
BALY  Balya             5.29  96   P     Pn    07 01 45.3 -1.3
A051A Mrakovica         5.33 329⇑iPn    Pn    07 01 48.3 +1.1
SURR  Surduc            5.33  10 ⇑P     Pn    07 01 48.0 +0.9
PRIJ  Prijedor          5.38 327⇑iPn    Pn    07 01 49.8 +2.0
INTR  Introdacqua       5.40 288         Pn    07 01 48.2 +0.1
VIZE  Kirklareli, Vi    5.44  76   P     Pn    07 01 50.4 +1.8
STEP  BALIKESIR_Sava    5.45 100   P     Pn    07 01 49.8 +1.0
BAND  Balkesir-Ban      5.58  89   P     Pn    07 01 50.1 -0.5
BAND  Balkesir-Ban      5.58  89 ⇑P     Pn    07 01 51.6 +1.0
DEV   Deva              5.59  15   P     Pn    07 01 53.2 +2.5
DEV                                pmax  pmax
      comp=Z,185nm,0.9s
ARR   Arges             5.62  29 ⇑P     Pn    07 01 52.1 +1.0
AKHS  Akhisar           5.66 104   P     Pn    07 01 52.3 +0.7
MTUR  Matau             5.67  32 ⇓P     Pn    07 01 53.6 +1.7
MTUR  Matau             5.67  32   P     Pn    07 01 53.5 +1.7
GCAM  G?zelcaml?        5.74 117   P     Pn    07 01 55.1 +2.4
CTYL  Yalikoy Yolu      5.76  78 ⇑P     Pn    07 01 53.9 +1.0
VAE   Valguarnera       5.81 241   Pn    Pn    07 01 55.1 +1.2
      comp=Z,43nm,0.7s,baz=110,slow=1.4,SNR=9.4
VAE                                Sn    Sn    07 03 00.2 -0.3
      comp=Z,5.0nm,0.3s,baz=207,slow=10.0,SNR=4.0
GIB   Gibilmanna        5.82 247   P     Pn    07 01 56.4 +2.5
GIB                                pmax  pmax
      comp=Z,120nm,0.9s
VOIR                    5.83  31 ⇑P     Pn    07 01 55.4 +1.3
VOIR                    5.83  31   P     Pn    07 01 55.5 +1.4
AQU   L'Aquila          5.85 291   P     Pn    07 01 55.2 +0.9
AQU                                pmax  pmax
      comp=Z,573nm,1.0s
CAMP  Campotosto        5.90 293         Pn    07 01 55.7 +0.7
MORH  Mrgy, Hungar      5.92 345 ⇓P     Pn    07 01 56.8 +1.7
DURS  Dursunbey         5.97  96   P     Pn    07 01 56.4 +0.5
GUMA  Gualdo di Mace    6.13 297         Pn    07 01 58.1  0.0
IDI   Anoyia            6.14 147         Pn    07 01 59.4 +1.2
IDI   Anoyia            6.14 147   Pn    Pn    07 01 58.5 +0.2
      comp=Z,14nm,0.5s,baz=296,slow=19,SNR=12
IDI                                Sn    Sn    07 03 07.1 -1.4
      comp=Z,13nm,0.3s,baz=266,slow=18,SNR=4.4
NRCA  Norcia            6.20 295         Pn    07 01 59.6 +0.5
MLR   Muntele Rosu      6.25  35         Pn    07 02 00.5 +0.7
MLR   Muntele Rosu      6.25  35   Pn    Pn    07 02 00.7 +0.9
      comp=Z,6.7nm,0.3s,baz=318,slow=3.6,SNR=53
MLR                                Sn    Sn    07 03 10.6 -0.8
      comp=Z,4.1nm,0.3s,baz=239,slow=13,SNR=4.1
MLR                                LR    LR    07 04 17.3
      comp=Z,1µm,18.9s,baz=196,slow=37
      comp=Z,51nm,0.6s
MLR   Muntele Rosu      6.25  35 ⇑P     Pn    07 02 02.1 +2.2
MLR   Muntele Rosu      6.25  35   P     Pn    07 02 02.0 +2.2
ISR   Istrita           6.26  41 ⇑P     Pn    07 02 02.4 +2.6
ISR   Istrita           6.26  41   P     Pn    07 02 02.4 +2.6
FDMO  Fiordimonte       6.29 296         Pn    07 02 00.6 +0.4
KIRA  zmir-Kiraz        6.33 109   P     Pn    07 02 02.7 +1.7
MANT  Manisa            6.34 106         Pn    07 02 03.1 +2.0
MANT  Manisa            6.34 106   P     Pn    07 02 02.1 +1.0
AMRR  Amara             6.34  48 ⇓P     Pn    07 02 02.6 +1.7
AMRR  Amara             6.34  48   P     Pn    07 02 02.6 +1.7
NEHR  Nehoiu            6.36  38 ⇑P     Pn    07 02 03.7 +2.4
ZAG   Zagreb            6.37 328   P     Pn    07 02 02.4 +1.0
ZAG                                pmax  pmax
      comp=Z,336nm,0.6s
ULDT  Uludag            6.39  91   P     Pn    07 02 01.2 -0.7
MARR  Marisel-Cluj      6.39  15 ⇑P     Pn    07 02 04.5 +2.7
DOPR  Dopca             6.41  30 ⇑P     Pn    07 02 03.4 +1.5
BOJS  Bojanci           6.43 323⇑iPn    Pn    07 02 02.9 +0.6
BOJS  Bojanci           6.43 323  i Pn   Pn    07 02 02.9 +0.6
BOJS                              e            07 02 27.7
BOJS                              eSn    Sn    07 03 16.3 +0.6
BOJS                               IAML        07 04 42.9
      comp=Z,14µm,6.9s
DRGR                    6.43  12   P     Pn    07 02 04.5 +2.2
DRGR                               pmax  pmax
      comp=Z,56nm,1.0s
PTJ   Puntijarka        6.44 328   P     Pn    07 02 02.7 +0.2
YAZI  Mula-Dat§a-       6.47 124   P     Pn    07 02 02.7  0.0
ESEN  Aydn-Nazilli      6.47 112   P     Pn    07 02 04.0 +1.3
CESX  Cesi              6.50 292         Pn    07 02 03.8 +0.5
CRES  Cresnjevec Ost    6.59 326⇑iPn    Pn    07 02 04.9 +0.5
USAK  Uak-Merkez        6.60 103   P     Pn    07 02 06.5 +1.9
BEHE  Becsehely         6.64 335   Pn    Pn    07 02 05.6 +0.6
COVR  Voineasa-Covas    6.64  35 ⇑P     Pn    07 02 07.2 +2.0
BISRR Bisoca            6.65  39 ⇓P     Pn    07 02 07.6 +2.4
GRER                    6.66  41 ⇑P     Pn    07 02 07.6 +2.3
OZUR                    6.67  31 ⇓P     Pn    07 02 07.1 +1.6
MULA  Mugla, Merkez-    6.71 117   P     Pn    07 02 07.2 +1.0
HARR  Harsova           6.73  49 ⇑P     Pn    07 02 07.9 +1.6
HARR  Harsova           6.73  49   P     Pn    07 02 07.8 +1.6
TURR  Turia             6.73  33 ⇑P     Pn    07 02 08.2 +1.9
SILT  Sile              6.75  82 ⇓P     Pn    07 02 08.3 +1.8
MURB  Monte Urbino      6.75 297         Pn    07 02 07.4 +0.7
PLOR  Plostina          6.85  37 ⇑P     Pn    07 02 10.3 +2.3
PLOR  Plostina          6.85  37   P     Pn    07 02 10.2 +2.3
TIRR  Tirgusor          6.88  52         Pn    07 02 09.3 +0.9
TIRR  Tirgusor          6.88  52 ⇑P     Pn    07 02 09.8 +1.5
TIRR  Tirgusor          6.88  52   P     Pn    07 02 09.8 +1.5
VRI   Vrincioaia        6.89  37 ⇓P     Pn    07 02 11.1 +2.5
VRI   Vrincioaia        6.89  37   P     Pn    07 02 11.0 +2.5
CEY   Cerknica          7.00 320⇑iPn    Pn    07 02 10.6 +0.6
TAVA  DENIZLI_Tavas     7.02 113   P     Pn    07 02 12.9 +2.5
KARP  Karpathos         7.06 133   Pn    Pn    07 02 13.6 +2.8
KARP  Karpathos         7.06 133  eP     Pn    07 02 15.2 +4.3
SKDS  Skadanscina       7.07 318  i Pn   Pn    07 02 10.6 -0.4
BUD   Budapest          7.09 350   P     Pn    07 02 13.9 +2.7
BUD                                pmax  pmax
      comp=Z,127nm,0.8s
TPGR  Topolog           7.11  50 ⇑P     Pn    07 02 13.0 +1.5
CFR   Carcaliu          7.14  47 ⇓P     Pn    07 02 13.4 +1.5
CFR   Carcaliu          7.14  47   P     Pn    07 02 13.3 +1.5
LJU   Ljubljana         7.17 323   P     Pn    07 02 12.8 +0.4
LJU                                pmax  pmax
      comp=Z,1µm,0.8s
LJU   Ljubljana         7.17 323  i Pn   Pn    07 02 12.7 +0.3
TRI   Trieste           7.31 318         Pn    07 02 13.6 -0.6
TRI   Trieste           7.31 318   P     Pn    07 02 13.6 -0.6
JURR  Jurilovca         7.33  52 ⇑P     Pn    07 02 16.5 +2.0
TESR  Tescani           7.36  33 ⇑P     Pn    07 02 16.5 +1.5
SCTR  Scanteiesti       7.38  43 ⇑P     Pn    07 02 18.3 +3.1
BMR   Baia Mare         7.42  14   P     Pn    07 02 20.2 +4.4
BMR                                pmax  pmax
      comp=Z,71nm,0.7s
BORA  Eskisehir         7.43  92   Pn    Pn    07 02 16.9 +0.9
PSZ   Piszkesteto       7.44 355         Pn    07 02 17.2 +1.1
PSZ   Piszkesteto       7.44 355 ⇑P     Pn    07 02 17.9 +1.8
PSZ   Piszkesteto       7.44 355   P     Pn    07 02 17.8 +1.8
PSZ   Piszkesteto       7.44 355  eP     Pn    07 02 15.2 -0.9
SOKA  Soboth            7.45 328  i Pn   Pn    07 02 16.4 +0.2
      comp=Z,88nm,0.9s,SNR=75
SOKA                              eSn    Sn    07 03 40.2 -0.6
      comp=Z,52nm,0.7s
SRO   Srobarova         7.52 347  eP     Pn    07 02 20.6 +3.5
SRO                               e            07 03 46.0
SRO                                MLR   MLR
      comp=Z,100nm,0.7s
SRO   Srobarova         7.52 347  ePN    Pn    07 02 20.5 +3.5
SRO                               eSN    Sn    07 03 46.0 +3.7
SRO                               eLG    Lg    07 03 53.7
SRO                               eLG    Lg    07 05 08.5
OBKA  Obir              7.52 325⇑iPn    Pn    07 02 17.2  0.0
OBKA  Obir              7.52 325  i Pn   Pn    07 02 17.2  0.0
      comp=Z,56nm,0.5s,SNR=24
OBKA                              i Sn   Sn    07 03 44.3 +1.8
      comp=Z,232nm,0.9s
TLCR                    7.53  49 ⇓P     Pn    07 02 19.5 +2.2
TLCR                    7.53  49   P     Pn    07 02 19.4 +2.2
VLDR  Vladesti          7.54  43 ⇓P     Pn    07 02 19.4 +2.0
SABO  M.te Sabotino     7.58 319   Pn    Pn    07 02 17.5 -0.4
OSSC  Osservatorio P    7.72 296         Pn    07 02 19.7 -0.2
ARSA  Arzberg           7.74 332   Pn    Pn    07 02 20.5 +0.4
ARSA  Arzberg           7.74 332  i Pn   Pn    07 02 20.9 +0.7
      comp=Z,44nm,0.5s,SNR=66
ARSA                              eSn    Sn    07 03 48.1 +0.3
      comp=Z,37nm,0.6s
CASP  Castiglione de    7.77 290   Pn    Pn    07 02 20.6 -0.1
BURAR Bucovina Array    7.79  23   Pn    Pn    07 02 22.0 +1.1
BURAR Bucovina Array    7.79  23 ⇑P     Pn    07 02 22.7 +1.7
BURAR Bucovina Array    7.79  23   P     Pn    07 02 22.6 +1.7
SOP   Sopron            7.79 338   P     Pn    07 02 18.6 -2.3
SOP                                pmax  pmax
      comp=Z,43nm,2.1s
RONA  Rosalia, Austr    7.88 337  i Pn   Pn    07 02 23.6 +1.4
      comp=Z,20nm,0.6s,SNR=43
RONA                              eSn    Sn    07 03 52.5 +1.2
      comp=Z,35nm,0.5s
PRED  Cave del Predi    7.92 321   Pn    Pn    07 02 22.7  0.0
MDUB  Mudurnu           7.93  87         Pn    07 02 24.2 +1.3
KECS  Kecovo            7.98 359  eP     Pn    07 02 26.9 +3.5
KECS                              e            07 03 52.6
KECS                               MLR   MLR
      comp=Z,300nm,2.6s
KECS  Kecovo            7.98 359  ePN    Pn    07 02 26.9 +3.5
KECS                              eSN    Sn    07 03 52.6 -1.1
KECS                              eLG    Lg    07 05 11.1
MYKA  Terra Mystica     8.02 322  i Pn   Pn    07 02 24.2 +0.1
      comp=Z,6.4nm,0.3s,SNR=19
MYKA                              i Sn   Sn    07 03 53.9 -0.9
      comp=Z,90nm,0.6s
ISP   Isparta           8.02 106         Pn    07 02 26.6 +2.4
ISP   Isparta           8.02 106ceP     Pn    07 02 25.5 +1.3
ISP   Isparta           8.02 106  eP     Pn    07 02 24.9 +0.8
ELL   Elmali            8.06 115   Pn    Pn    07 02 29.3 +4.5
ELL   Elmali            8.06 115   P     Pn    07 02 29.3 +4.5
VYHS  Vyhne             8.11 351  eP     Pn    07 02 28.4 +3.2
VYHS                              e            07 03 57.5
VYHS  Vyhne             8.11 351  ePN    Pn    07 02 28.4 +3.2
VYHS                              eSN    Sn    07 03 57.5 +0.7
VYHS                              e            07 37 56.4
AKAS  Kas               8.13 119   Pn    Pn    07 02 28.5 +2.8
ZCCA  Zocca             8.21 301   Pn    Pn    07 02 27.8 +1.1
CONA  Conrad Observa    8.22 336  ePn    Pn    07 02 27.9 +1.1
      comp=Z,39nm,0.9s,SNR=16
CONA                              i Sn   Sn    07 04 00.5 +0.8
      comp=Z,41nm,0.6s
MODS  Modra-Piesok      8.26 343  eP     Pn    07 02 29.4 +2.2
MODS                              e            07 04 03.5
MODS                               MLR   MLR
      comp=Z,6µm,4.2s
MODS  Modra-Piesok      8.26 343  ePN    Pn    07 02 29.4 +2.2
MODS                              eSN    Sn    07 04 03.5 +3.0
MODS                              eSG    Sg    07 05 13.4  +21
MODS                              eLG    Lg    07 05 24.2
MODS                              e            07 37 57.6
TEOL  Teolo             8.26 309         Pn    07 02 26.1 -1.2
KBA   Koelnbreinsper    8.49 323   P     Pn    07 02 30.7 +0.1
KBA                                pmax  pmax
      comp=Z,100nm,0.9s
KBA   Koelnbreinsper    8.49 323  i Pn   Pn    07 02 30.7 +0.1
      comp=Z,44nm,0.9s,SNR=45
KBA                               i Sn   Sn    07 04 06.0 -0.5
      comp=Z,122nm,0.8s
KOLS  Kolonicke sedl    8.49   7  eP     Pn    07 02 34.8 +4.3
KOLS  Kolonicke sedl    8.49   7  ePN    Pn    07 02 34.8 +4.3
KOLS                              e            07 37 52.9
JAVC  Velka Javorina    8.64 346  ePN    Pn    07 02 35.2 +2.6
MILM  Milestii Mici     8.65  40  eP     Pn    07 02 33.0 +0.4
      comp=Z,160nm,1.2s
MILM                              eS     Sn    07 04 14.0 +3.9
MILM                               LqM         07 07 03.0
      comp=Z,4µm,10.5s
MILM  Milestii Mici     8.65  40 ⇑P     Pn    07 02 34.0 +1.4
MILM  Milestii Mici     8.65  40   P     Pn    07 02 34.0 +1.4
ABTA  Abfaltersbach     8.65 319  i Pn   Pn    07 02 32.8  0.0
      comp=Z,121nm,0.6s,SNR=54
ABTA                              eSn    Sn    07 04 09.1 -1.3
      comp=Z,197nm,0.7s
CTI   Castel Tesino     8.66 313         Pn    07 02 32.0 -0.9
CTI   Castel Tesino     8.66 313   P     Pn    07 02 32.0 -0.9
LANS  Liptovska Anna    8.69 354  eP     Pn    07 02 38.1 +4.8
LANS                              e            07 04 11.4
LANS  Liptovska Anna    8.69 354  ePN    Pn    07 02 38.1 +4.8
LANS                              eSN    Sn    07 04 11.4 +0.1
MOA   Molln             8.71 330  i Pn   Pn    07 02 34.4 +1.0
      comp=Z,27nm,0.4s,SNR=45
MOA                               eSn    Sn    07 04 13.2 +1.6
      comp=Z,62nm,0.6s
KIS   Kishinev          8.71  39  eP     Pn    07 02 36.0 +2.6
      comp=Z,110nm,2.5s
KIS                               eS     Sn    07 04 17.0 +5.5
KIS                               eL     L     07 05 13.0
KIS                                LqM         07 07 02.0
      comp=Z,2µm,11.0s
KIS                                LRM   MLR   07 07 29.0
      comp=Z,2µm,11.0s
KIS   Kishinev          8.71  39  eP     Pn    07 02 36.0 +2.6
KIS                               eS     Sn    07 04 17.0 +5.5
KIS                                pmax  pmax
      comp=Z,100nm,2.5s
KIS                                MLR   MLR
      comp=Z,900nm,8.0s
PRMA  PARMA             8.81 302         Pn    07 02 35.3 +0.5
VSL   Villasalto        8.82 267         Pn    07 02 33.9 -1.0
BIOA  Bad Ischl, Aus    8.83 327  i Pn   Pn    07 02 35.6 +0.5
      comp=Z,39nm,0.5s,SNR=35
BIOA                              eSn    Sn    07 04 16.9 +2.3
      comp=Z,48nm,0.5s
STHS  Stebnicka Huta    8.91   2  eP     Pn    07 02 41.0 +4.7
STHS                              e            07 04 22.1
STHS  Stebnicka Huta    8.91   2  ePN    Pn    07 02 41.0 +4.7
STHS                              eSN    Sn    07 04 22.1 +5.4
STHS                              eLG    Lg    07 04 30.0
STHS                              eLG    Lg    07 05 59.9
NIE   Niedzica          8.92 358  eP     Pn    07 02 39.5 +3.2
NIE                               eP           07 05 39.4
NIE   Niedzica          8.92 358   P     Pn    07 02 39.5 +3.2
NIE                                pmax  pmax
      comp=Z,41nm,1.0s
LESA  Schwarzleotal     9.05 322  i Pn   Pn    07 02 38.6 +0.4
      comp=Z,39nm,0.5s,SNR=45
LESA                              eSn    Sn    07 04 20.2  0.0
      comp=Z,98nm,0.6s
PGF   Pioggiola         9.07 287   P     Pn    07 02 39.3 +0.7
PGF                                pmax  pmax
      comp=Z,91nm,1.3s
MAUC  Maruska           9.10 348  ePN    Pn    07 02 42.4 +3.5
KRUC  Moravsky          9.10 341  ePN    Pn    07 02 40.6 +1.7
KRUC                              eSN    Sn    07 04 24.1 +2.8
KRUC  Moravsky          9.10 341   P     Pn    07 02 40.4 +1.5
KRUC                               pmax  pmax
      comp=Z,28nm,1.1s
MSSA  Maissana          9.16 298         Pn    07 02 38.7 -1.1
ANTO  Ankara            9.21  90   P     Pn    07 02 46.9 +6.5
ANTO                               pmax  pmax
      comp=Z,25nm,0.9s
RJOB  Jochberg          9.23 324  eP     Pn    07 02 41.9 +1.3
      baz=140
VRAC  Vranov            9.29 343   Pn    Pn    07 02 43.0 +1.6
      comp=Z,0.7nm,0.3s,baz=173,slow=13,SNR=22
VRAC                               Sn    Sn    07 04 25.3 -0.6
      comp=Z,0.7nm,0.3s,baz=76,slow=13,SNR=3.7
VRAC                               LR    LR    07 07 22.9
      comp=Z,2µm,18.9s,baz=168,slow=45
      comp=Z,15nm,0.7s
VRAC  Vranov            9.29 343  ePN    Pn    07 02 43.2 +1.8
VRAC                              eSN    Sn    07 04 29.3 +3.4
VRAC  Vranov            9.29 343 ⇓P     Pn    07 02 43.8 +2.4
WTTA  Wattenberg        9.44 319   P     Pn    07 02 44.7 +1.0
WTTA                               pmax  pmax
      comp=Z,135nm,0.8s
WTTA  Wattenberg        9.44 319  i Pn   Pn    07 02 44.8 +1.0
      comp=Z,36nm,0.4s,SNR=40
WTTA                              eSn    Sn    07 04 29.3 -0.7
      comp=Z,221nm,0.7s
CKRC  Cesky Krumlov     9.50 333  ePN    Pn    07 02 46.3 +1.9
CKRC                               AMS   AMS   07 08 20.0
      comp=Z,5µm,9.4s
CKRC  Cesky Krumlov     9.50 333  eP     Pn    07 02 46.3 +1.9
CKRC                               MLR   MLR
      comp=Z,5µm,9.4s
OKC   Ostrava-Krasne    9.51 350  ePN    Pn    07 02 47.5 +3.0
OKC                                AMS   AMS   07 07 50.0
      comp=Z,5µm,8.1s
OKC   Ostrava-Krasne    9.51 350  eP     Pn    07 02 47.5 +3.0
OKC                                MLR   MLR
      comp=Z,5µm,8.1s
WATA  Walderalm         9.52 319  i Pn   Pn    07 02 45.6 +0.9
      comp=Z,77nm,0.5s,SNR=92
WATA                              i Sn   Sn    07 04 32.1 +0.3
      comp=Z,322nm,1.1s
MORC  Moravsky Berou    9.55 347   Pn    Pn    07 02 46.5 +1.6
MORC  Moravsky Berou    9.55 347  ePN    Pn    07 02 46.9 +1.9
MORC                              eSN    Sn    07 04 34.8 +2.5
MORC  Moravsky Berou    9.55 347 ⇓P     Pn    07 02 47.8 +2.7
MORC  Moravsky Berou    9.55 347   P     Pn    07 02 47.7 +2.7
TREC  Trest             9.55 339   P     Pn    07 02 46.8 +1.7
TREC                               pmax  pmax
      comp=Z,38nm,1.3s
SQTA  Sankt Quirin      9.63 317  i Pn   Pn    07 02 47.1 +0.8
      comp=Z,27nm,0.4s,SNR=84
SQTA                              eSn    Sn    07 04 34.7 +0.2
      comp=Z,222nm,1.0s
STEB  Steborice         9.66 348  ePN    Pn    07 02 49.1 +2.6
STEB                              eSN    Sn    07 04 37.5 +2.5
OJC   Ojcow             9.74 356  eP     Pn    07 02 52.0 +4.4
OJC   Ojcow             9.74 356   Pn    Pn    07 02 49.1 +1.5
OJC   Ojcow             9.74 356   P     Pn    07 02 49.1 +1.5
GEC2  GERESS Array S    9.74 331         Pn    07 02 47.1 -0.6
GEC2  GERESS Array S    9.74 331  eP     Pn    07 02 49.2 +1.6
      baz=140
GERES GERESS Array B    9.74 331         Pn    07 02 48.2 +0.5
GERES GERESS Array B    9.74 331   Pn    Pn    07 02 49.2 +1.6
      comp=Z,0.2nm,0.3s,baz=149,slow=14,SNR=81
GERES                              Sn    Sn    07 04 38.5 +1.4
      comp=Z,0.3nm,0.3s,baz=153,slow=24,SNR=4.2
      comp=Z,15nm,0.6s
FETA  Feichten          9.76 315  i Pn   Pn    07 02 47.8 -0.2
      comp=Z,54nm,0.7s,SNR=72
FETA                              eSn    Sn    07 04 37.8 +0.1
      comp=Z,139nm,0.9s
MOTA  Moosalm           9.77 318  i Pn   Pn    07 02 48.7 +0.6
      comp=Z,161nm,0.9s,SNR=137
MOTA                              eSn    Sn    07 04 37.5 -0.3
      comp=Z,490nm,0.9s
FUORN Ofenpass-Fuorn    9.78 312         Pn    07 02 47.7 -0.7
ILGA  Ilgaz             9.82  83         Pn    07 02 50.7 +1.7
BR131 Keskin Array S    9.88  90         Pn    07 02 50.9 +1.3
BR131 Keskin Array S    9.88  90⇓eP     Pn    07 02 50.6 +1.0
BRTR  Keskin Array B    9.88  90         Pn    07 02 50.9 +1.3
BRTR  Keskin Array B    9.88  90   Pn    Pn    07 02 50.4 +0.8
      comp=Z,0.9nm,0.3s,baz=266,slow=12,SNR=23
BRTR                               Sn    Sn    07 04 38.5 -2.1
      comp=Z,0.3nm,0.3s,baz=276,slow=25,SNR=3.8
BRTR                               LR    LR    07 07 27.8
      comp=Z,2µm,18.4s,baz=284,slow=43
BRTR                               ScP   ScP   07 12 34.0 -0.3
      comp=Z,1.9nm,1.0s,baz=242,slow=3.1,SNR=9.1
      comp=Z,3.4nm,0.5s
BRTR  Keskin Array B    9.88  90   P     Pn    07 02 50.9 +1.3
KRLC  Kraliky           9.97 345  ePN    Pn    07 02 53.8 +3.0
KRLC                               AMS   AMS   07 07 30.0
      comp=Z,4µm,13.5s
KRLC  Kraliky           9.97 345  eP     Pn    07 02 53.8 +3.0
KRLC                               MLR   MLR
      comp=Z,4µm,13.5s
KHC   Kasperske Hory   10.02 332  ePN    Pn    07 02 52.6 +1.1
KHC                               eSN    Sn    07 04 45.6 +1.6
KHC                                AMS   AMS   07 08 40.0
      comp=Z,6µm,9.7s
KHC   Kasperske Hory   10.02 332  i P    Pn    07 02 52.4 +0.9
RETA  Reutte           10.04 317  ePn    Pn    07 02 52.0 +0.3
      comp=Z,9.1nm,0.3s,SNR=15
RETA                              eSn    Sn    07 04 43.2 -1.2
      comp=Z,145nm,0.7s
ZVC   Zvikov           10.07 335  ePN    Pn    07 02 54.4 +2.2
DAVOX Davos/Dischmat   10.09 312   Pn    Pn    07 02 53.7 +1.2
      comp=Z,7.1nm,0.3s,baz=156,slow=12,SNR=112
DAVOX                              Sn    Sn    07 04 44.6 -1.1
      comp=Z,2.9nm,0.3s,baz=243,slow=18,SNR=7.5
DAVOX                              LR    LR    07 08 07.2
      comp=Z,2µm,18.0s,baz=116,slow=45
      comp=Z,54nm,0.5s
KIRS  Kirsehir-Merke   10.19  93 ⇑P     Pn    07 02 56.0 +2.1
KEST  Kesra            10.20 246         Pn    07 02 55.7 +1.8
KEST  Kesra            10.20 246   Pn    Pn    07 02 56.5 +2.5
      comp=Z,0.7nm,0.3s,baz=17,slow=4.4,SNR=28
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KEST                                  LR      LR       07 07 29.0
      comp=Z,948nm,19.3s,baz=50,slow=41
      comp=Z,35nm,0.8s
TUE   Stuetta           10.22 309             Pn       07 02 54.3 -0.1
FUR   Furstenfeldbru    10.24 322  P          Pn       07 02 55.1 +0.6
FUR                                pmax       pmax
      comp=Z,123nm,0.8s
FUR   Furstenfeldbru    10.24 322 eP          Pn       07 02 54.8 +0.3
      baz=140
WET   Wettzell          10.30 330  P          Pn       07 02 55.2  0.0
WET                                pmax       pmax
      comp=Z,39nm,0.8s
WET   Wettzell          10.30 330 eP          Pn       07 02 55.7 +0.5
      baz=140
GOPC  GO Pecny, Ondr    10.31 338 ePN         Pn       07 02 56.6 +1.2
GOPC  GO Pecny, Ondr    10.31 338 eP          Pn       07 02 56.6 +1.2
DPC   Dobruska-Polom    10.33 344 ePN         Pn       07 02 58.3 +2.6
DPC                                AMS        AMS      07 07 40.0
      comp=Z,6µm,9.7s
DPC   Dobruska-Polom    10.33 344 eP          Pn       07 02 58.3 +2.6
DPC                                MLR        MLR
      comp=Z,6µm,9.7s
DAVA  Damuels           10.38 314 i Pn        Pn       07 02 58.3 +1.7
      comp=Z,105nm,0.6s,SNR=21
PRU   Pruhonice         10.45 337 ePN         Pn       07 02 58.4 +1.1
PRU                                AMS        AMS      07 07 30.0
      comp=Z,5µm,8.7s
PRU   Pruhonice         10.45 337 eP          Pn       07 02 58.4 +1.1
PRU                                MLR        MLR
      comp=Z,5µm,8.7s
UBR   Ueberruh          10.50 317 eP          Pn       07 02 57.0 -1.0
      baz=140
UPC   Upice             10.54 343 ePN         Pn       07 03 00.8 +2.2
UPC                                AMS        AMS      07 07 40.0
      comp=Z,6µm,9.1s
UPC   Upice             10.54 343 eP          Pn       07 03 00.8 +2.2
UPC                                MLR        MLR
      comp=Z,6µm,9.1s
OSTC  Ostas             10.55 344 ePN         Pn       07 03 01.3 +2.7
OSTC                               AMS        AMS      07 07 40.0
      comp=Z,6µm,9.3s
OSTC  Ostas             10.55 344 eP          Pn       07 03 01.3 +2.7
OSTC                               MLR        MLR
      comp=Z,6µm,9.3s
PRA   Prague            10.55 337  AMS        AMS      07 07 30.0
      comp=Z,5µm,8.6s
SIM   Simferopol'       10.76  61 eP          Pn       07 03 00.7 -0.9
SIM                               eS          Sn       07 04 59.0 -3.0
SIM                                pmax       pmax
      comp=Z,62nm,1.3s
SIM                                MLR        MLR
      comp=Z,500nm,15.3s
KSP   Ksiaz             10.80 345 eP          Pn       07 03 04.5 +2.4
KSP   Ksiaz             10.80 345  P          Pn       07 03 04.5 +2.4
KSP                                pmax       pmax
      comp=Z,16nm,1.4s
ISO   Isola             10.81 294  P          Pn       07 03 03.9 +1.6
ISO                                pmax       pmax
      comp=Z,17nm,1.4s
PVCC  Panska Ves        10.93 339 ePN         Pn       07 03 04.7 +0.9
PVCC                               AMS        AMS      07 07 40.0
      comp=Z,3µm,9.0s
PVCC  Panska Ves        10.93 339 eP          Pn       07 03 04.7 +0.9
PVCC                               MLR        MLR
      comp=Z,3µm,9.0s
BNI   Bardonecchia      11.32 298             Pn       07 03 08.8 -0.5
BNI   Bardonecchia      11.32 298  P          Pn       07 03 08.8 -0.5
HSKC  Hora Svate Kat    11.33 335 ePN         Pn       07 03 10.8 +1.4
HSKC                               AMS        AMS      07 08 00.0
      comp=Z,5µm,8.4s
NKC   Novy Kostel       11.35 332  AMS        AMS      07 09 10.0
      comp=Z,5µm,11.1s
NKC   Novy Kostel       11.35 332  P          Pn       07 03 11.5 +1.9
NKC                                pmax       pmax
      comp=Z,18nm,1.1s
GRA1  Grafenberg Arr    11.39 327             Pn       07 03 09.6 -0.6
GRF   Grafenberg Arr    11.39 327  P          Pn       07 03 09.6 -0.6
GRF   Grafenberg Arr    11.39 327 eP          Pn       07 03 09.6 -0.6
      baz=140
GRF                               eL          L        07 09 07.0
      comp=Z,3µm,18.6s
GRFO  Grafenberg        11.39 327             Pn       07 03 09.9 -0.3
GRFO  Grafenberg        11.39 327  P          Pn       07 03 09.9 -0.3
BRG   Berggiesshubel    11.41 338  P          Pn       07 03 11.1 +0.7
BRG                                pmax       pmax
      comp=Z,22nm,1.5s
BRG   Berggiesshubel    11.41 338 eP          Pn       07 03 11.3 +0.9
BRG                                Amp                 07 03 12.3
      comp=Z,11nm,1.0s
BRG   Berggiesshubel    11.41 338  S          Sn       07 05 19.0 +1.1
SENIN Lac Senin/Sane    11.41 305             Pn       07 03 10.0 -0.7
SLE   Schleitheim       11.42 313  P          Pn       07 03 09.6 -1.0
SLE                                pmax       pmax
      comp=Z,39nm,1.0s
TANN  Tannenbergstha    11.50 332 eP          Pn       07 03 13.2 +1.6
      baz=140
STU   Stuttgart         11.67 319             Pn       07 03 12.7 -1.3
STU   Stuttgart         11.67 319  P          Pn       07 03 12.7 -1.3
STU   Stuttgart         11.67 319 eP          Pn       07 03 12.8 -1.1
STU   Stuttgart         11.67 319 eP          Pn       07 03 13.2 -0.8
      baz=140
BNN   Bunyan            11.72  93  Pn         Pn       07 03 17.0 +2.2
KIEV  Kiev              11.76  27             Pn       07 03 16.1 +0.9
KIEV  Kiev              11.76  27 ⇑P          Pn       07 03 17.2 +1.9
KIEV  Kiev              11.76  27  P          Pn       07 03 17.1 +1.9
KIEV  Kiev              11.76  27 i P         Pn       07 03 16.7 +1.5
      SNR=12
AKASG Malin Array Be    11.77  27             Pn       07 03 15.9 +0.5
AKASG Malin Array Be    11.77  27  Pn         Pn       07 03 15.5 +0.1
      comp=Z,0.6nm,0.3s,baz=213,slow=13,SNR=25
AKASG                              Lg         Lg       07 06 38.3
      comp=Z,0.6nm,0.3s,baz=220,slow=29,SNR=1.9
AKASG                              LR         LR       07 08 39.4
      comp=Z,1µm,18.4s,baz=216,slow=42
AKASG                              PcP        PcP      07 09 02.9 -0.7
      comp=Z,0.5nm,0.3s,baz=87,slow=0.4,SNR=6.6
AKASG                              ScP        ScP      07 12 35.5 -0.9
      comp=Z,1.1nm,0.6s,baz=267,slow=1.0,SNR=5.5
      comp=Z,4.5nm,0.7s
AKASG Malin Array Be    11.77  27  P          Pn       07 03 15.9 +0.5
AKBB  Malin Array Si    11.77  27             Pn       07 03 16.2 +0.9
AKBB  Malin Array Si    11.77  27deP          Pn       07 03 16.7 +1.3
BFO   Black Forest      11.84 315             Pn       07 03 14.3 -2.1
BFO   Black Forest      11.84 315  P          Pn       07 03 14.3 -2.1
BFO   Black Forest      11.84 315 eP          Pn       07 03 14.9 -1.5
      baz=140
MOX   Moxa              11.99 331  P          Pn       07 03 18.8 +0.4
MOX                                pmax       pmax
      comp=Z,23nm,0.8s
MOX   Moxa              11.99 331 eP          Pn       07 03 19.5 +1.1
      baz=140
MOX                               eL          L        07 09 27.9
      comp=Z,2µm,18.6s
CLL   Collm             12.08 336             Pn       07 03 19.3 -0.2
CLL   Collm             12.08 336 i P         Pn       07 03 19.7 +0.2
CLL                                pmax       pmax
      comp=Z,20nm,1.2s
CLL   Collm             12.08 336 eP          Pn       07 03 20.0 +0.5
      baz=140
CLL   Collm             12.08 336 i P         Pn       07 03 19.7 +0.2
      comp=Z,20nm,1.2s
CLL                               ex          x        07 05 15.0
CLL                               ex          x        07 06 07.0
CLL                               i x         x        07 06 46.1
CLL                                AMS        AMS      07 07 00.0
      comp=N,2µm,18.6s
CLL                                AMS        AMS      07 07 00.0
      comp=E,4µm,18.3s
CLL                                AMS        AMS      07 08 00.0
ECH   Echery            12.42 313             Pn       07 03 22.6 -1.6
ECH   Echery            12.42 313  P          Pn       07 03 22.6 -1.6
MAHO  Mahon             12.65 273             Pn       07 03 29.3 +1.9
SSB   Saint Sauveur     12.83 297             Pn       07 03 28.8 -1.1
SSB   Saint Sauveur     12.83 297  P          Pn       07 03 28.8 -1.1
ANN   Anapa             12.98  65 eP          Pn       07 03 31.6 -0.3
ANN                               eS          Sn       07 05 56.7 +0.5
ANN                                pmax       pmax
      comp=Z,16nm,0.7s
GKP   Gorka Klasztor    12.99 350 eP          Pn       07 03 36.9 +4.8
TNS   Taunus Mts        13.01 322  P          Pn       07 03 31.8 -0.5
TNS                                pmax       pmax
      comp=Z,42nm,0.7s
TNS   Taunus Mts        13.01 322 eP          Pn       07 03 31.6 -0.7
      baz=140
GAZ   Gaziantep         13.23  99  Pn         Pn       07 03 38.4 +3.0
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SUW   Suwalki           13.61   6 eP          P        07 03 45.8 -3.5
SUW   Suwalki           13.61   6  P          P        07 03 45.9 -3.5
SUW                                pmax       pmax
      comp=Z,92nm,1.0s
WLF   Walferdange       13.79 316             Pn       07 03 44.0 +1.1
WLF   Walferdange       13.79 316  P          Pn       07 03 44.0 +1.1
WLF   Walferdange       13.79 316 dP          Pn       07 03 43.0  0.0
WLF                               dS          Sn       07 06 08.5 -7.5
WLF   Walferdange       13.79 316 eP          Pn       07 03 42.8 -0.1
      baz=140
MMAI  Mount Meron Ar    13.89 118  Pn         Pn       07 03 43.6 -0.8
      comp=Z,1.9nm,0.3s,baz=306,slow=11,SNR=8.4
MMAI                               LR         LR       07 09 49.3
      comp=Z,2µm,20.8s,baz=270,slow=41
      comp=Z,4.0nm,0.6s
BLGI  Bet Lehem HaGe    13.92 119  P          Pn       07 03 47.8 +3.1
LOR   Lormes            13.94 305  P          Pn       07 03 42.7 -2.3
LOR                                pmax       pmax
      comp=Z,39nm,0.9s
GEM   Giv'at Ha'Em      13.95 117 ⇑P          Pn       07 03 47.9 +2.8
NATI  Neve Ativ         13.97 116 ⇑P          Pn       07 03 48.3 +2.9
MTLF  Montolieu         14.11 288  P          Pn       07 03 48.3 +0.9
MTLF                               pmax       pmax
      comp=Z,20nm,1.9s
SLTI  Sal'it            14.12 121  P          Pn       07 03 50.6 +3.0
KSHT  Keshet            14.18 117 ⇑P          Pn       07 03 51.6 +3.1
MMLI  Mount Malkishu    14.25 120  P          Pn       07 03 53.0 +3.6
BTNL  Ternell           14.36 319 dP          Pn       07 03 50.5 -0.3
BTNL                              dS          Sn       07 06 22.5 -7.5
BUG   Bochum--Univer    14.39 324  P          Pn       07 03 54.5 +3.4
BUG                                pmax       pmax
      comp=Z,25nm,1.2s
SOC   Sochi             14.40  71 eP          Pn       07 03 50.7 -0.5
SOC                               e                    07 06 32.2
SOC                                pmax       pmax
      comp=Z,19nm,0.9s
SOC                                MLR        MLR
      comp=Z,435nm,15.0s
HMDT  Nahal Hemdat      14.44 120  P          P        07 03 55.4 -3.3
MEM   Membach           14.44 319 dP          Pn       07 03 52.0 +0.2
AMAZ  Amatzia           14.51 124  P          Pn       07 03 56.1 +3.2
KZIT  Kziot             14.61 127  P          Pn       07 03 56.9 +2.6
BCLA  Clavier           14.68 318 dP          Pn       07 03 55.6 +0.5
BCLA                              dS          Sn       07 06 30.2 -7.4
YTIR  Yattir            14.75 124  P          Pn       07 03 59.1 +2.9
BGES  Gesves            14.77 317 dP          Pn       07 03 56.6 +0.3
BGES                              dS          Sn       07 06 32.3 -7.5
CEST  Esterri de Car    14.78 285             Pn       07 03 55.6 -1.0
DSI   Dead Sea          14.78 123  P          Pn       07 03 59.1 +2.6
MNK   Minsk             14.79  16 i P         P        07 04 00.0 -2.5
      comp=E,30nm,0.8s
MNK                               i P         P        07 04 00.0 -2.5
      comp=N,14nm,0.8s
MNK                               i P         P        07 04 00.0 -2.5
      comp=Z,60nm,0.8s,baz=202
MNK                               i PP        PnPn     07 04 05.3 +0.9
MNK                               i PPP       PPP      07 04 15.7
MNK                               i S         Sn       07 06 45.8 +5.5
MNK                               i SS        S        07 06 57.7 -1.2
MNK                               i LQ        LQ       07 08 37.0
MNK                               i LR        LR       07 09 28.1
MNK                               i LRM       MLR      07 09 53.9
      comp=N,495nm,14.3s
MNK                               i LRM       MLR      07 09 56.1
      comp=E,457nm,12.0s
MNK                               i LRM       MLR      07 10 41.4
      comp=Z,306nm,10.6s
MNK   Minsk             14.79  16 i P         P        07 04 00.0 -2.5
MNK                               i S         Sn       07 06 45.7 +5.5
MNK                                pmax       pmax
      comp=N,14nm,0.8s
MNK                                pmax       pmax
      comp=E,30nm,0.8s
MNK                                pmax       pmax
      comp=Z,60nm,0.8s
MNK                                MLR        MLR
      comp=N,495nm,14.0s
MNK                                MLR        MLR
      comp=E,457nm,12.0s
MNK                                MLR        MLR
      comp=Z,306nm,11.0s
DOU   Dourbes           14.86 316 dP          Pn       07 03 56.9 -0.7
BMRD  Maredsous         14.89 316 dP          Pn       07 03 57.0 -0.9
BMRD                              dS          Sn       07 06 37.9 -4.8
MSBI  Mazada            14.94 123  P          Pn       07 04 01.0 +2.4
NACGM Naroch            14.95  14⇑iP          P        07 04 04.1 -0.2
GHAJ  Ghor Haditha      15.07 123  P          P        07 04 03.9 -1.9
BSD   Bornholm Skovb    15.13 347  P          P        07 04 05.9 -0.4
BSD                                pmax       pmax
      comp=Z,20nm,0.9s
BSD   Bornholm Skovb    15.13 347 eP          P        07 04 06.9 +0.7
PABE  Paberze           15.16   7             Pn       07 04 00.9 -0.5
PABE                               IAmb       IAmb     07 04 09.7
      comp=Z,28nm,0.6s
CLF   Chambon-Foret     15.23 306  Pn         Pn       07 04 01.4 -1.1
CLF                                IAmb       IAmb     07 04 03.4
      comp=Z,65nm,1.3s
LABN  Labinsk           15.25  68 eP          P        07 04 09.4 +1.7
LABN                               pmax       pmax
      comp=Z,98nm,0.8s
ERBR  Yeremizino-Bor    15.29  64 eP          Pn       07 04 03.8 +0.6
ERBR                               pmax       pmax
      comp=Z,88nm,1.6s
PRNI  Paran             15.37 127  P          P        07 04 07.7 -1.5
UCC   Uccle             15.39 317             Pn       07 04 05.4 +0.9
UCC   Uccle             15.39 317  P          Pn       07 04 05.4 +0.9
UCC                                pmax       pmax
      comp=Z,32nm,1.0s
UCC   Uccle             15.39 317 dP          Pn       07 04 04.9 +0.4
ASF   Jabal al Asfar    15.40 118  Pn         Pn       07 04 04.0 -0.9
      comp=Z,0.3nm,0.3s,baz=277,slow=3.2,SNR=7.2
ASF                                LR         LR       07 10 57.6
      comp=Z,1µm,20.6s,baz=336,slow=41
      comp=Z,2.4nm,0.8s
ASF   Jabal al Asfar    15.40 118  P          Pn       07 04 04.0 -0.9
HRFI  Mount Harif       15.62 128  P          P        07 04 10.6 -1.3
MBRI  Mt Berech         15.72 128  P          P        07 04 11.7 -1.4
EIL   Elat              15.83 129  Pn         Pn       07 04 08.9 -1.5
      comp=Z,0.6nm,0.3s,baz=345,slow=11,SNR=6.1
EIL                                Sn         Sn       07 06 56.9 -9.0
      comp=Z,1.0nm,0.3s,baz=318,slow=19,SNR=3.5
EIL                                LR         LR       07 13 15.0
      comp=Z,530nm,18.1s,baz=268,slow=49
      comp=Z,5.0nm,0.6s
EIL   Elat              15.83 129  P          P        07 04 13.1 -1.1
MARD  Mardin            15.88  95  Pn         Pn       07 04 12.7 +1.5
BLEU  Blekinge          16.14 350 i P         Pn       07 04 15.6 +1.3
BJUU  Bjuv              16.39 344 i P         P        07 04 22.4 +2.1
SHA1  Shidzhatmaz       16.54  72c iP         P        07 04 21.4 -0.8
KIV   Kislovodsk        16.57  71 eP          P        07 04 22.6 +0.1
KIV                               eS          Sn       07 07 27.9 +4.0
KIV                                pmax       pmax
      comp=Z,18nm,1.1s
KIV                                MLR        MLR
      comp=Z,201nm,14.0s
KIV   Kislovodsk        16.57  71 i P         P        07 04 22.7 +0.1
      SNR=9.0
DEL   Delary            16.61 346 i P         P        07 04 22.4 -0.2
VSR   Storozhevoye      16.64  44 eP          Pn       07 04 17.8 -2.9
VSR                                pmax       pmax
      comp=Z,40nm,1.2s
KBZ   Khabaz            16.71  72  Pn         Pn       07 04 21.0 -0.5
      comp=Z,0.1nm,0.3s,baz=269,slow=12,SNR=25
KBZ                                PcP        PcP      07 09 11.3 +1.0
      comp=Z,2.1nm,0.8s,baz=202,slow=4.6,SNR=3.7
KBZ                                LR         LR       07 12 00.1
      comp=Z,347nm,21.0s,baz=284,slow=42
KBZ                                ScP        ScP      07 12 46.0 +1.1
      comp=Z,5.6nm,1.0s,baz=207,slow=1.1,SNR=7.7
      comp=Z,8.7nm,1.1s
KBZ   Khabaz            16.71  72deP          P        07 04 23.3 -0.6
VORR  Voronezh          16.91  43 eP          Pn       07 04 22.5 -1.6
VORR                               S          Sn       07 07 32.8 +0.9
VORR                               pmax       pmax
      comp=Z,54nm,1.5s
GOF   Gofitskoye        16.94  67ceP          P        07 04 25.6 -0.9
LPSR  Galich'ya Gora    17.32  40 eP          Pn       07 04 27.5 -1.6
LPSR                               pmax       pmax
      comp=Z,40nm,0.9s
BORU  Boraas            17.91 346 i P         P        07 04 38.3 +1.3
OBN   Obninsk           17.99  30  Pn         Pn       07 04 35.8 -1.5
OBN                                IAmb       IAmb     07 04 45.5
      comp=Z,78nm,0.4s
OBN   Obninsk           17.99  30  P          Pn       07 04 36.1 -1.3
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      comp=Z,3.7nm,0.3s,baz=327,slow=13,SNR=12
OBN                                LR         LR       07 12 20.7
      comp=Z,803nm,21.3s,baz=166,slow=40
      comp=Z,14nm,0.3s
OBN   Obninsk           17.99  30 eP          Pn       07 04 35.9 -1.5
OBN                               i S         Sn       07 07 48.8 -9.0
OBN                                pmax       pmax
      comp=Z,88nm,1.5s
OBN                                MLR        MLR
      comp=Z,602nm,15.0s
VRH   Novokhopyorsk     18.02  47 eP          Pn       07 04 34.8 -3.0
VRH                                S          Sn       07 07 58.9 +0.2
VRH                                pmax       pmax
      comp=Z,146nm,1.9s
GNI   Garni             18.26  83  P          Pn       07 04 40.0 -1.0
      comp=Z,2.5nm,0.3s,baz=302,slow=2.7,SNR=36
      comp=Z,12nm,0.6s
GNI   Garni             18.26  83d iP         P        07 04 43.2 +2.0
GNI                                pmax       pmax
      comp=Z,66nm,0.9s
GNI   Garni             18.26  83  P          P        07 04 44.4 +3.2
VSU   Vasula            18.37  10deP          Pn       07 04 41.0 -1.1
VSU                                pmax       pmax
      comp=Z,55nm,0.9s
JSA   Saint Aubin       18.39 306 eP          P        07 04 42.5 +0.1
JSA                                IAmb       IAmb     07 04 47.5
      comp=Z,23nm,0.8s
ROSF  Rostrenen         18.83 303  P          Pn       07 04 48.1 +0.3
ROSF                               pmax       pmax
      comp=Z,63nm,1.2s
MOS   Moscow            18.86  30 eP          P        07 04 47.1 -0.3
MOS                               eS          S        07 08 21.3 -0.3
MOS                                pmax       pmax
      comp=Z,128nm,1.1s
MOS                                MLR        MLR
      comp=Z,600nm,17.0s
ESDC  Sonseca Array     18.95 276  P          P        07 04 48.4 -0.3
ESDC  Sonseca Array     18.95 276  P          Pn       07 04 49.2 -0.1
      comp=Z,0.4nm,0.3s,baz=74,slow=11,SNR=132
ESDC                               PcP        PcP      07 09 15.5 +1.3
      comp=Z,1.1nm,0.9s,baz=36,slow=2.6,SNR=4.1
ESDC                               LR         LR       07 12 09.0
      comp=Z,906nm,19.1s,baz=84,slow=37
ESDC                               ScP        ScP      07 12 50.9 +1.0
      comp=Z,1.8nm,1.1s,baz=46,slow=2.4,SNR=8.2
      comp=Z,23nm,0.9s
PAB   San Pablo         19.26 275  P          Pn       07 04 52.9 -0.2
PAB   San Pablo         19.26 275  P          Pn       07 04 52.9 -0.2
PAB                                pmax       pmax
      comp=Z,66nm,1.3s
MONM  Monmouth          19.79 313 eP          P        07 04 58.1 +0.4
MONM                               IAmb       IAmb     07 05 02.9
      comp=Z,34nm,0.8s
SNART Snartemo          19.84 339 eP          Pn       07 05 04.7 +4.9
DYA   Yadsworthy        19.89 308 eP          P        07 04 59.3 +0.5
DYA                                IAmb       IAmb     07 05 01.4
      comp=Z,37nm,0.9s
LBWR  Ladybower, Pea    19.95 318 eP          P        07 04 60.0 +0.4
LBWR                               IAmb       IAmb     07 05 01.4
      comp=Z,35nm,0.8s
MCH1  Michaelchurch     19.96 313 eP          P        07 05 00.2 +0.6
MCH1                               IAmb       IAmb     07 05 02.2
      comp=Z,48nm,1.0s
MAK   Makhachkala       20.06  74 eP          P        07 05 00.0 -0.7
MAK                               eS          S        07 08 45.5 -0.5
MAK                                pmax       pmax
      comp=Z,362nm,1.5s
MAK                                MLR        MLR
      comp=Z,461nm,12.0s
GDLE  Glaisdale, N Y    20.06 321 eP          P        07 05 01.1 +0.4
GDLE                               IAmb       IAmb     07 05 04.7
      comp=Z,22nm,0.8s
HLM1  Long Mynd         20.13 315 eP          P        07 05 01.8 +0.3
HLM1                               IAmb       IAmb     07 05 05.9
      comp=Z,28nm,0.8s
HFS   Hagfors           20.14 350  P          P        07 05 01.5  0.0
      comp=Z,16nm,0.6s,baz=156,slow=11,SNR=33
HFS                                LR         LR       07 14 14.4
      comp=Z,402nm,21.1s,baz=168,slow=41
      comp=Z,16nm,0.6s
PUL   Pulkovo           20.19  14⇓eP          P        07 05 02.5 +0.5
PUL                                pmax       pmax
      comp=Z,30nm,0.6s
HPK   Haverah Park      20.20 319 eP          P        07 05 02.7 +0.5
HPK                                IAmb       IAmb     07 05 05.1
      comp=Z,64nm,0.7s
AKT   Akhty             20.34  78 eP          P        07 05 03.3 -0.6
AKT                               ePPP        PPP      07 05 27.8
AKT                               eS          Sn       07 08 54.0 -0.9
AKT                               eSS         SnSn     07 09 12.5 +3.2
AKT                                pmax       pmax
      comp=Z,56nm,0.9s
AKT                                MLR        MLR
      comp=Z,629nm,17.0s
SBD   Saint Breward     20.39 308 eP          P        07 05 04.8 +0.6
KONO  Kongsberg         20.41 344⇓eP          P        07 05 04.1 -0.3
KONO                               pmax       pmax
      comp=Z,29nm,1.6s
FOEL  Foel Wylfa        20.48 315 eP          P        07 05 06.2 +1.0
FOEL                               IAmb       IAmb     07 05 07.9
      comp=Z,34nm,0.8s
CCA1  Carnmenellis      20.59 307 eP          P        07 05 06.8 +0.3
CCA1                               IAmb       IAmb     07 05 09.4
      comp=Z,48nm,0.8s
LLW   Llanuwychllyn     20.71 315 eP          P        07 05 07.9 +0.2
PBRG  Braganca          20.74 283 eP          P        07 05 08.4 +0.2
PBRG                              i Amb                07 05 12.8
      comp=Z,72nm,1.8s
MVO   Moncorvo          21.03 281 eP          P        07 05 11.7 +0.4
MVO                               i Amb                07 05 17.1
      comp=Z,54nm,1.4s
MVO                               eS          Sn       07 09 10.0 -1.5
MVO                               eLR         LR       07 13 05.2
MVO                               i AMs_20             07 16 09.5
      comp=Z,639nm,18.0s
NC602 NORSAR Array S    21.05 347  P          P        07 05 11.1 -0.1
NC602                              IAmb       IAmb     07 05 20.2
      comp=Z,38nm,0.7s
NC602 NORSAR Array S    21.05 347 eP          P        07 05 11.9 +0.6
NC602                              IAmb       IAmb     07 05 20.0
      comp=Z,47nm,0.9s
YLL   Llanberis         21.11 315 eP          P        07 05 12.2 +0.2
FINES FINESS Array B    21.21   7  P          P        07 05 11.8 -1.2
      comp=Z,4.8nm,0.3s,baz=166,slow=12,SNR=46
FINES                              PcP        PcP      07 09 17.9  0.0
      comp=Z,2.6nm,0.4s,baz=158,slow=1.8,SNR=9.5
FINES                              LR         LR       07 14 15.0
      comp=Z,816nm,19.9s,baz=194,slow=39
      comp=Z,4.8nm,0.3s
FIA1  FINESS Array S    21.21   7  P          P        07 05 12.2 -0.8
NAO01 NORSAR Array S    21.26 347  P          P        07 05 14.3 +0.7
NAO01                              IAmb       IAmb     07 05 17.2
      comp=Z,76nm,1.4s
NB2   NORSAR Subarra    21.39 347  P          P        07 05 14.3 -0.7
      comp=Z,22nm,0.8s,baz=162,slow=11
NB2   NORSAR Subarra    21.39 347  P          P        07 05 14.3 -0.7
      baz=162,slow=11
NOA   NORSAR Array B    21.39 347  P          P        07 05 14.3 -0.7
      comp=Z,6.3nm,0.7s,baz=166,slow=10,SNR=34
NOA                                PcP        PcP      07 09 17.9 -0.4
      comp=Z,1.0nm,0.7s,baz=134,slow=2.4,SNR=3.4
NOA                                LR         LR       07 14 01.2
      comp=Z,424nm,20.2s,baz=165,slow=38
      comp=Z,6.3nm,0.7s
MTE   Manteigas         21.53 279  P          P        07 05 16.2 -0.6
MTE                                IAmb       IAmb     07 05 18.7
      comp=Z,70nm,1.1s
MTE   Manteigas         21.53 279 eP          P        07 05 16.8 +0.1
MTE                               i Amb                07 05 18.8
      comp=Z,96nm,1.4s
MTE                               eS          Sn       07 09 22.1 -1.5
MTE                               eLR         LR       07 13 01.7
MTE                               i AMs_20             07 14 15.1
      comp=Z,799nm,18.0s
PVRL  Vila Real         21.53 281 eP          P        07 05 18.2 +1.5
PVRL                              i Amb                07 05 30.4
      comp=Z,61nm,1.6s
NC303 NORSAR Array S    21.54 348  P          P        07 05 16.3 -0.3
NC303                              IAmb       IAmb     07 05 24.4
      comp=Z,50nm,0.8s
POLO  Lamas de Olo      21.57 282 eP          P        07 05 17.9 +0.6
POLO                              i Amb                07 05 29.3
      comp=Z,37nm,1.9s
PCBR  Castelo Branco    21.58 277 eP          P        07 05 17.1 -0.1
PCBR                              i Amb                07 05 30.1
      comp=Z,41nm,1.6s
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PMRV  Marv??o            21.59 276 eP      P       07 05 17.4  0.0
PMRV                               i Amb           07 05 31.8
      comp=Z,77nm,1.6s
PMRV                               eS      S       07 09 14.4 -2.1
PMRV                               eLR     LR      07 13 06.6
PMRV                               i AMs_20        07 14 14.3
      comp=Z,650nm,18.0s
PBAR  Barrancos          21.61 273 eP      P       07 05 16.9 -0.6
PBAR                               i Amb           07 05 47.5
      comp=Z,90nm,1.6s
SKAR  Skarslia           21.62 343 eP      P       07 05 19.1 +1.5
NC204 NORSAR Array S     21.69 347  P      P       07 05 18.2  0.0
NC204                               IAmb   IAmb    07 05 27.1
      comp=Z,46nm,0.9s
EKA   Eskdalemuir Ar     21.70 321  P      P       07 05 18.8 +0.4
      comp=Z,49nm,1.0s,baz=122,slow=11,SNR=47
      comp=Z,49nm,1.0s
PCAB  Cabril             21.71 283 eP      P       07 05 18.6  0.0
PCAB                               i Amb           07 05 23.7
      comp=Z,110nm,1.4s
ESK   Eskdalemuir        21.71 321  P      P       07 05 18.9 +0.5
ESK                                 IAmb   IAmb    07 05 20.4
      comp=Z,117nm,1.2s
ESK   Eskdalemuir        21.71 321 eP      P       07 05 18.5  0.0
ESK                                 IAmb   IAmb    07 05 20.1
      comp=Z,36nm,1.1s
ESK   Eskdalemuir        21.71 321  P      P       07 05 18.9 +0.5
ESK                                 pmax   pmax
      comp=Z,117nm,1.3s
MDT   Midelt             21.72 257  P      P       07 05 18.5 -0.4
      comp=Z,24nm,0.9s,baz=86,slow=14,SNR=23
MDT                                 LR     LR      07 13 25.5
      comp=Z,578nm,21.6s,baz=61,slow=36
      comp=Z,24nm,0.9s
PVIS  Viseu              21.74 280 eP      P       07 05 18.6 -0.4
BELG  Belogornoye        21.84  48  P      P       07 05 20.7 +0.8
      comp=Z,46nm,0.8s,baz=50,slow=2.6,SNR=23
BELG                                LR     LR      07 14 19.7
      comp=Z,668nm,19.1s,baz=276,slow=38
      comp=Z,46nm,0.8s
BELG  Belogornoye        21.84  48d iP     P       07 05 19.9  0.0
BELG                                pmax   pmax
      comp=Z,10.0nm,0.9s
PGAV  Gavieira, Arco     21.86 283 eP      P       07 05 20.5 +0.2
PGAV                               i Amb           07 05 26.9
      comp=Z,113nm,1.6s
PGAV                               eS      Sn      07 09 27.6 -4.0
PGAV                               eLR     LR      07 13 48.9
PGAV                               i AMs_20        07 17 01.5
      comp=Z,684nm,16.0s
PESTR Estremoz           21.86 275 eP      P       07 05 19.9 -0.4
PESTR                              i Amb           07 05 36.5
      comp=Z,62nm,1.6s
TAM   Tamanrasset        21.87 221  P      P       07 05 23.4 +2.8
TAM                                 pmax   pmax
      comp=Z,23nm,1.0s
EDI   Edinburgh          22.04 322 eP      P       07 05 22.4 +0.4
BER   Bergen             22.09 339 eP      P       07 05 23.5 +1.0
NEWG  New Galloway       22.10 320 eP      P       07 05 22.9 +0.3
PSARD Sardoal            22.14 277 eP      P       07 05 23.3 +0.1
PSARD                              i Amb           07 05 24.6
      comp=Z,66nm,1.0s
GAL1  Galloway           22.21 319 eP      P       07 05 23.6 -0.3
GAL1                                IAmb   IAmb    07 05 27.8
      comp=Z,16nm,0.9s
COI   Coimbra            22.21 279  P      P       07 05 23.4 -0.6
COI                                 IAmb   IAmb    07 05 33.4
      comp=Z,67nm,0.9s
COI   Coimbra            22.21 279 eP      P       07 05 23.7 -0.3
COI                                i Amb           07 05 33.9
      comp=Z,100nm,1.7s
COI   Coimbra            22.21 279  P      P       07 05 23.4 -0.6
COI                                 pmax   pmax
      comp=Z,67nm,1.0s
IWEX  Carrickbyrne,      22.25 311  P      P       07 05 25.2 +0.9
EVO   Evora              22.27 274 eP      P       07 05 23.7 -0.9
EVO                                i Amb           07 05 40.7
      comp=Z,55nm,1.5s
PBEJ  Beja               22.28 273 eP      P       07 05 24.9 +0.1
PBEJ                               i Amb           07 05 59.7
      comp=Z,55nm,1.9s
PMTG  Montargil          22.30 276 eP      P       07 05 23.9 -1.0
PMTG                               i Amb           07 05 33.5
      comp=Z,74nm,1.8s
PCAS  Casmilo, Conde     22.31 278 eP      P       07 05 25.7 +0.7
PCAS                               i Amb           07 05 31.2
      comp=Z,62nm,1.3s
PVAQ  Vaqueiros          22.34 271  P      P       07 05 25.4 -0.1
PVAQ                                IAmb   IAmb    07 05 26.7
      comp=Z,55nm,1.1s
PVAQ  Vaqueiros          22.34 271 eP      P       07 05 25.3 -0.1
PVAQ                               i Amb           07 05 47.9
      comp=Z,85nm,2.0s
PVAQ                               i AMs_20        07 15 20.4
      comp=Z,331nm,16.0s
DSB   Dublin             22.36 314  P      P       07 05 26.3 +0.9
DSB   Dublin             22.36 314  P      P       07 05 26.5 +1.1
PCVE  Castro Verde       22.52 272 eP      P       07 05 27.5 +0.1
HYA   Hoyanger           22.54 341 eP      P       07 05 28.1 +0.8
HYA                                 IAmb   IAmb    07 05 31.8
      comp=Z,54nm,1.0s
PBDV  Barranco-do-Ve     22.55 271 eP      P       07 05 27.9 +0.2
PBDV                               i Amb           07 06 26.8
      comp=Z,106nm,1.9s
VAF   Ylistaro           22.60   2  P      P       07 05 29.0 +1.1
VAF                                 pmax   pmax
      comp=Z,71nm,0.9s
MESJ  Messejana          22.60 273 eP      P       07 05 28.1 -0.2
MESJ                               eS      S       07 09 37.5 +1.7
MESJ                                IAMs_20 IAMs_20 07 17 17.6
      comp=N,695nm,13.9s
MESJ  Messejana          22.60 273 eP      P       07 05 28.5 +0.3
MESJ                               i Amb           07 05 56.1
      comp=N,83nm,1.8s
MESJ  Messejana          22.60 273 eP      P       07 05 28.0 -0.2
MESJ                               eS      S       07 09 37.5 +1.7
PSBE  So Bento           22.64 277 eP      P       07 05 28.6  0.0
PSBE                               i Amb           07 05 41.0
      comp=N,94nm,2.1s
ILTH  Belurgan, Co L     22.66 316  P      P       07 05 30.7 +2.0
DOMB  Dombas             22.71 346 eP      P       07 05 30.3 +1.2
DOMB                                IAmb   IAmb    07 05 35.9
      comp=Z,45nm,0.9s
INVG  Invergeldie, C     22.72 323 eP      P       07 05 28.7 -0.5
MORF  Marmelete          23.08 272 eS      S       07 09 45.6 +1.3
MORF                                IAMs_20 IAMs_20 07 20 40.3
      comp=E,1µm,13.6s
LIS   Lisbon             23.09 275 eS      S       07 09 45.2 +1.0
LIS                                 IAMs_20 IAMs_20 07 15 42.5
      comp=Z,2µm,12.4s
AKN   Aaknes             23.25 344 eP      P       07 05 34.6 -0.1
PFVI  Vila Bisbo         23.27 271 eP      P       07 05 35.2 +0.1
KLMR  Klimovskoe         23.41  23 eP      P       07 05 34.3 -2.0
KLMR                                S      S       07 09 48.2 -1.0
KLMR                                pmax   pmax
      comp=Z,63nm,0.9s
KLMR                                MLR    MLR
      comp=Z,594nm,10.0s
IDGL  Inch Island, C     23.74 317  P      P       07 05 39.2 -0.3
IGLA  Glengowla, Co      24.09 313  P      P       07 05 41.8 -1.1
NSS   Namsos             24.61 351 eP      P       07 05 49.4 +1.9
OUL   Oulu               24.80   5  P      P       07 05 49.2  0.0
OUL                                 pmax   pmax
      comp=Z,40nm,0.9s
KIRV  Kirov              25.62  35  LR     LR      07 16 34.4
      comp=Z,824nm,19.8s,baz=237,slow=38
KIRV  Kirov              25.62  35deP      P       07 05 56.0 -0.7
MSF   Maaselka           25.88   8  P      P       07 05 58.8 -0.3
MSF                                 pmax   pmax
      comp=Z,32nm,2.1s
LEIR  Leirfjorden        26.02 353 eP      P       07 06 04.1 +3.8
RAYN  Ar Rayn            26.81 122  P      P       07 06 08.5 +0.6
RAYN  Ar Rayn            26.81 122  P      P       07 06 08.5 +0.6
RAYN                                pmax   pmax
      comp=Z,11nm,1.0s
AKTO  Aktyubinsk         27.67  56  LR     LR      07 18 37.4
      comp=Z,746nm,22.0s,baz=220,slow=40
APA   Apatity            27.99  10⇓iP      P       07 06 15.9 -2.1
APA                                 pmax   pmax
      comp=Z,8.0nm,0.7s
APA                                 MLR    MLR
      comp=Z,700nm,16.0s
KTK1  Kautokeino         28.60   2 eP      P       07 06 24.0 +0.6
AB31  Akbulak array      28.82  59  P      P       07 06 25.3 -0.3
ABKAR Akbulak array      28.82  59  P      P       07 06 24.8 -0.8

ARTI  Arti               29.11  44  P      P       07 06 27.2 -0.9
ARTI                                IAmb   IAmb    07 06 49.1
      comp=Z,16nm,0.5s
ARTI  Arti               29.11  44  LR     LR      07 18 33.7
      comp=Z,404nm,19.6s,baz=254,slow=37
ARTI  Arti               29.11  44 i P     P       07 06 27.0 -1.1
ARA0  ARCESS Array S     29.20   3 eP      P       07 06 29.0 +0.2
ARCES ARCESS Array B     29.20   3  P      P       07 06 27.6 -1.1
ARCES                               IAmb   IAmb    07 06 37.3
      comp=Z,46nm,1.3s
ARCES ARCESS Array B     29.20   3  P      P       07 06 27.7 -1.1
      comp=Z,3.7nm,0.5s,baz=187,slow=9.3,SNR=23
ARCES                               PcP    PcP     07 09 35.4 -0.3
      comp=Z,7.1nm,1.1s,baz=157,slow=3.4,SNR=3.9
ARCES                               LR     LR      07 19 44.4
      comp=Z,150nm,18.1s,baz=191,slow=40
      comp=Z,3.7nm,0.5s
VADS  Vadso              30.02   6 eP      P       07 06 36.1 +0.1
SVE   Sverdlovsk         30.43  44 eP      P       07 06 40.0 +0.2
SVE                                eS      S       07 11 49.5 +9.2
SVE                                 pmax   pmax
      comp=Z,21nm,1.0s
SVE                                 pmax   pmax
      comp=Z,746nm,11.0s
PMOZ  Porto Moniz, M     31.23 268 eS      S       07 11 58.0 +4.4
PMOZ                               i AMs_20        07 19 16.2
      comp=Z,92nm,18.0s
TORD  Torodi Ar. Bea     31.99 217  P      P       07 06 54.6 +0.7
TORD                                IAmb   IAmb    07 06 58.5
      comp=Z,51nm,1.9s
MZR   Muzera             32.58 112  P      P       07 06 58.2 -0.8
BANOM Banah              32.84 105  P      P       07 07 00.6 -0.7
ASUD  Al Ashush, Dub     32.89 108  P      P       07 07 01.6 -0.1
NAZ   Nazwa, Dubai       32.91 107  P      P       07 07 01.7 -0.3
MSFE  Esma-Masafi        33.06 106  P      P       07 07 03.5 +0.2
HRA   Herat              33.24  87  P      P       07 07 05.8 +0.8
UOSS  Minazif            33.34 107  P      P       07 07 05.0 -0.7
HATD  Hatta, Dubai       33.35 107  P      P       07 07 05.1 -0.7
ASHO  Ashiyiah           33.38 107 i P     P       07 07 05.1 -1.0
      SNR=5.6
JMIC  Jan Mayen          33.98 343  LR     LR      07 22 46.3
      comp=Z,205nm,18.4s,baz=326,slow=39
SOHO  SOHO               34.06 108 i P     P       07 07 11.0 -1.0
      SNR=14
BORG  Borgarnes          34.20 329  LR     LR      07 23 51.7
      comp=Z,286nm,18.5s,baz=123,slow=41
BRVK  Borovoye           35.43  52  P      P       07 07 24.0 +0.5
BRVK                                IAmb   IAmb    07 07 24.8
      comp=Z,19nm,0.8s
BRVK  Borovoye           35.43  52⇑eP      P       07 07 23.6 +0.1
BRVK                                pmax   pmax
      comp=Z,21nm,0.8s
BVAR  Borovoye Array     35.50  52  P      P       07 07 24.5 +0.4
      comp=Z,9.3nm,0.8s,baz=269,slow=5.9,SNR=30
BVAR                                LR     LR      07 24 35.1
      comp=Z,197nm,18.4s,baz=264,slow=41
      comp=Z,9.3nm,0.8s
BRLS  Borolday           36.26  69 eP      P       07 07 29.6 -1.2
BRLS  Borolday           36.26  69 eP      P       07 07 29.7 -1.1
KK31  Karatay Array      36.72  69  P      P       07 07 34.1 -0.6
KK31  Karatay Array      36.72  69  P      P       07 07 34.1 -0.6
KK31                                pmax   pmax
      comp=Z,4.0nm,0.8s
KKAR  Karatay Array      36.72  69  P      P       07 07 34.0 -0.7
KKAR  Karatay Array      36.72  69  P      P       07 07 34.0 -0.7
SIMJ  Simiganj           36.84  77  P      P       07 07 36.2 +0.2
BRZS  Berezniki          37.07  57 eP      P       07 07 36.7 -0.8
BRZS  Berezniki          37.07  57 eP      P       07 07 36.8 -0.8
SCO   Scoresbysund       37.10 338 i P     P       07 07 38.6 +1.1
GAR   Garm               37.71  76  P      P       07 07 43.5 +0.3
GAR                                 IAmb   IAmb    07 08 09.3
      comp=Z,63nm,1.4s
SPITS Spitsbergen Ar     37.83 359  P      P       07 07 44.4 +0.7
      comp=Z,3.8nm,0.6s,baz=149,slow=12,SNR=7.8
SPITS                               PcP    PcP     07 10 00.1 +0.2
      comp=Z,4.0nm,0.6s,baz=128,slow=9.6,SNR=6.6
SPITS                               LR     LR      07 25 33.5
      comp=Z,267nm,18.4s,baz=144,slow=40
      comp=Z,3.8nm,0.6s
KBL   Kabul              38.35  83  P      P       07 07 48.8  0.0
KBL   Kabul              38.35  83  P      P       07 07 48.8  0.0
KBL                                 pmax   pmax
      comp=Z,13nm,0.8s
BTLS  Baital             38.77  65 eP      P       07 07 51.3 -0.7
BTLS  Baital             38.77  65 eP      P       07 07 51.3 -0.7
LODK  Lodwar             39.19 157  P      P       07 07 57.2 +1.4
LODK                                IAmb   IAmb    07 07 58.8
      comp=Z,33nm,1.1s
SGDS  Sogindy            39.55  67 eP      P       07 07 57.8 -0.8
AAK   Ala-Archa          39.67  69  P      P       07 08 00.1 +0.4
AAK   Ala-Archa          39.67  69  LR     LR      07 28 55.3
      comp=Z,292nm,18.8s,baz=301,slow=43
AAK   Ala-Archa          39.67  69  P      P       07 08 00.1 +0.4
AAK                                 pmax   pmax
      comp=Z,4.0nm,0.8s
DAG   Danmarks Havn      40.07 347 i P     P       07 08 01.0 -1.4
KURBB Kurchatov Arra     40.71  56  P      P       07 08 07.2 -0.8
      comp=Z,3.5nm,0.9s,baz=283,slow=9.0,SNR=27
KURBB                               PcP    PcP     07 10 09.7 +0.3
      comp=Z,5.1nm,1.0s,baz=285,slow=3.6,SNR=7.7
KURBB                               LR     LR      07 28 42.0
      comp=Z,318nm,18.0s,baz=202,slow=42
      comp=Z,3.5nm,0.9s
KURK  Kurchatov          40.76  56  P      P       07 08 07.7 -0.7
KURK  Kurchatov          40.76  56⇑eP      P       07 08 07.5 -0.9
KURK                                pmax   pmax
      comp=Z,8.0nm,1.7s
DBIC  Dimbokro           40.76 221  P      P       07 08 09.5 +0.7
      comp=Z,13nm,0.6s,baz=34,slow=8.7,SNR=16
DBIC                                LR     LR      07 27 44.8
      comp=Z,365nm,18.7s,baz=37,slow=40
      comp=Z,13nm,0.6s
AAA   Alma-Ata           41.23  67 eP      P       07 08 11.6 -0.9
AAA                                 pmax   pmax
      comp=Z,13nm,0.4s
AAA   Alma-Ata           41.23  67 eP      P       07 08 11.6 -0.9
      comp=Z,13nm,0.4s
TNSS  Tian-Shan          41.30  67 eP      P       07 08 12.3 -1.1
TNSS  Tian-Shan          41.30  67 eP      P       07 08 12.4 -1.1
MDOK  Medeo              41.33  67 eP      P       07 08 12.5 -0.9
MDOK  Medeo              41.33  67 eP      P       07 08 12.5 -0.9
BBTS  Babate             41.44 242  LR     LR      07 27 53.0
      comp=Z,414nm,20.2s,baz=292,slow=40
KSH   Kashi              41.69  73  P      P       07 08 17.6 +1.2
KSH                                 PP     PP      07 09 53.0 +0.4
KSH                                 pmax   pmax
      comp=Z,3.0nm,0.5s
KSH                                 pmax   pmax
      comp=Z,170nm,6.7s
KSH                                 LR     LR
      comp=Z,940nm,21.0s
KSH                                 LR     LR
      comp=Z,540nm,20.3s
KSH                                 LR     LR
      comp=Z,260nm,20.6s
TDK   Taldyqorghan       41.78  64 eP      P       07 08 16.2 -0.7
TDK                                 pmax   pmax
      comp=Z,9.0nm,0.6s
TDK   Taldyqorghan       41.78  64 eP      P       07 08 16.2 -0.7
      comp=Z,8.7nm,0.6s
NIL   Nilore             41.90  82  P      P       07 08 18.4 +0.4
NIL                                 IAmb   IAmb    07 08 19.8
      comp=Z,31nm,0.9s
NIL   Nilore             41.90  82  P      P       07 08 18.4 +0.4
NIL                                 pmax   pmax
      comp=Z,31nm,1.0s
MBAR  Mbarara            41.91 165  P      P       07 08 19.4 +1.1
MBAR                                IAmb   IAmb    07 08 20.6
      comp=Z,25nm,1.1s
MBAR  Mbarara            41.91 165deP      P       07 08 19.2 +0.8
MBAR                                pmax   pmax
      comp=Z,16nm,0.9s
TARG  Taragay, Kyrgy     42.29  69  P      P       07 08 22.2 +0.6
TARG  Taragay, Kyrgy     42.29  69  P      P       07 08 22.2 +0.6
TARG                                pmax   pmax
      comp=Z,7.0nm,0.7s
SATY  Saty               42.31  67 eP      P       07 08 20.4 -1.0
SATY  Saty               42.31  67 eP      P       07 08 20.5 -1.0
ICESG Greenland Ices     42.36 332 i P     P       07 08 21.2 -0.6
ICESG                               IAmb   IAmb    07 08 28.1
      comp=Z,12nm,0.8s
KPKS  Kokpek             42.39  66 eP      P       07 08 21.0 -1.0
KPKS  Kokpek             42.39  66 eP      P       07 08 21.1 -1.0
UZB   Uzynbulak          42.72  67 eP      P       07 08 23.8 -1.0
UZB   Uzynbulak          42.72  67 eP      P       07 08 23.8 -1.0

SUMG  Summit             42.74 338  P      P       07 08 25.0 +0.1
SUMG                                IAmb   IAmb    07 08 29.9
      comp=Z,13nm,0.7s
SUMG  Summit             42.74 338  P      P       07 08 25.0 +0.1
SUMG                                pmax   pmax
      comp=Z,13nm,0.7s
SUMG  Summit             42.74 338 i P     P       07 08 25.0 +0.1
SUMG                                IAmb   IAmb    07 08 30.0
      comp=Z,13nm,0.8s
SHLS  Shalkode           43.02  66 eP      P       07 08 28.7 +1.5
SHLS  Shalkode           43.02  66 eP      P       07 08 28.8 +1.5
NOR   Nord               43.20 352 i P     P       07 08 26.7 -1.3
MAKZ  Makanchi           43.73  61  P      P       07 08 32.0 -0.7
MAKZ  Makanchi           43.73  61  P      P       07 08 32.0 -0.7
MAKZ                                pmax   pmax
      comp=Z,7.0nm,0.7s
MK31  Makanchi Array     43.94  60d iP     P       07 08 33.9 -0.6
MKAR  Makanchi Array     43.94  60  P      P       07 08 33.6 -0.9
MKAR  Makanchi Array     43.94  60  P      P       07 08 33.8 -0.7
      comp=Z,14nm,0.7s,baz=281,slow=6.6,SNR=143
MKAR                                PcP    PcP     07 10 20.1 -0.1
      comp=Z,2.7nm,0.7s,baz=280,slow=4.2,SNR=2.5
MKAR                                ScP    ScP     07 14 12.2 +0.3
      comp=Z,0.8nm,1.0s,baz=304,slow=3.3,SNR=3.6
MKAR                                LR     LR      07 28 03.8
      comp=Z,473nm,21.5s,baz=278,slow=38
      comp=Z,14nm,0.7s
ZALV  Zalesovo Beam      44.01  50  P      P       07 08 34.0 -0.8
ZALV  Zalesovo Beam      44.01  50  P      P       07 08 34.5 -0.3
      comp=Z,9.1nm,0.6s,baz=278,slow=9.1,SNR=37
ZALV                                PcP    PcP     07 10 19.8 -0.5
      comp=Z,3.5nm,0.8s,baz=274,slow=5.6,SNR=1.4
ZALV                                LR     LR      07 28 15.0
      comp=Z,468nm,19.1s,baz=276,slow=38
      comp=Z,9.1nm,0.6s
KMBO  Kilima Mbogo       44.07 156  P      P       07 08 37.9 +1.9
KMBO                                IAmb   IAmb    07 08 39.3
      comp=Z,19nm,1.1s
KMBO  Kilima Mbogo       44.07 156  P      P       07 08 37.9 +1.9
KMBO                                pmax   pmax
      comp=Z,19nm,1.2s
KMBO  Kilima Mbogo       44.07 156 i P     P       07 08 37.9 +1.9
      SNR=6.7
NRIK  Noril'sk           44.63  28  P      P       07 08 40.1 +0.5
NRIK                                IAmb   IAmb    07 08 41.2
      comp=Z,12nm,0.7s
NRIK  Noril'sk           44.63  28  P      P       07 08 40.3 +0.7
      comp=Z,13nm,0.7s,baz=257,slow=3.1,SNR=25
NRIK                                LR     LR      07 29 44.1
      comp=Z,327nm,18.1s,baz=261,slow=39
      comp=Z,13nm,0.7s
NRIK  Noril'sk           44.63  28deP      P       07 08 40.2 +0.5
NRIK                                pmax   pmax
      comp=Z,10.0nm,0.6s
ZSN   Zaisan             45.46  59 eP      P       07 08 45.8 -0.7
ZSN                                 pmax   pmax
      comp=Z,10.0nm,0.8s
ZSN   Zaisan             45.46  59 eP      P       07 08 45.9 -0.7
      comp=Z,10nm,0.8s
KIBK  Kibwezi            45.47 155  P      P       07 08 48.5 +1.5
KIBK                                IAmb   IAmb    07 08 49.8
      comp=Z,33nm,1.2s
SFJD  Kangerlussuaq      46.33 329  LR     LR      07 29 30.9
      comp=Z,355nm,18.5s,baz=86,slow=38
WMQ   Urumqi             48.48  63 eP      P       07 09 12.2 +1.9
WMQ                                 LR     LR
      comp=Z,640nm,14.7s
WMQ                                 LR     LR
      comp=Z,200nm,17.7s
EUNU  Eureka             53.28 348  P      P       07 09 46.6 +0.8
FRB   Frobisher Bay      54.31 327  LR     LR      07 33 22.3
      comp=Z,532nm,19.9s,baz=74,slow=36
HYB   Hyderabad          54.49  97 eP      P       07 09 56.7 +1.1
HYB                                esP     sP      07 10 01.4 +0.8
HYB                                ePcP    PcP     07 10 59.6 +0.7
HYB                                ePP     PP      07 11 59.3 +1.6
EVN   Everest            54.85  81  P      P       07 09 57.5 -1.3
LSZ   Lusaka             55.92 171  LR     LR      07 35 36.9
      comp=Z,335nm,18.1s,baz=352,slow=38
GOMU  GeErMu             56.62  69  P      P       07 10 10.8 -0.3
GOMU                                SS     SKiKP   07 21 52.6  +45
GOMU                                pmax   pmax
      comp=Z,10.0nm,0.6s
GOMU                                pmax   pmax
      comp=Z,200nm,4.6s
GOMU                                LR     LR
      comp=Z,230nm,17.2s
GOMU                                LR     LR
      comp=Z,330nm,17.3s
GOMU                                LR     LR
      comp=Z,300nm,18.4s
SCHQ  Schefferville      56.91 316  P      P       07 10 12.9 +0.5
      comp=Z,8.0nm,0.6s,baz=54,slow=5.7,SNR=16
SCHQ                                LR     LR      07 33 59.8
      comp=Z,417nm,19.4s,baz=51,slow=35
      comp=Z,8.0nm,0.6s
ILON  Igloolik, Nuna     56.91 336  P      P       07 10 12.6 +0.6
TIXI  Tiksi              57.40  21  P      P       07 10 15.3 -0.2
TIXI  Tiksi              57.40  21  LR     LR      07 39 03.4
      comp=Z,391nm,18.0s,baz=323,slow=40
TIXI  Tiksi              57.40  21⇓eP      P       07 10 15.1 -0.5
TIXI                                pmax   pmax
      comp=Z,3.0nm,0.9s
RES   Resolute Bay       57.59 344  LR     LR      07 36 11.5
      comp=Z,158nm,18.5s,baz=38,slow=37
GTA   Gaotai             58.56  63  P      P       07 10 23.2 -1.2
GTA                                 pP     pP      07 10 26.2 -1.9
GTA                                 pmax   pmax
      comp=Z,7.0nm,1.2s
GTA                                 LR     LR
      comp=Z,280nm,16.4s
GTA                                 LR     LR
      comp=Z,310nm,18.2s
GTA                                 LR     LR
      comp=Z,470nm,18.5s
XAUDM Khaudum            58.74 179  P      P       07 10 26.2 +0.5
SONM  Songino Array      58.84  52  P      P       07 10 25.4 -0.8
SONM  Songino Array      58.84  52  P      P       07 10 26.0 -0.1
      comp=Z,2.8nm,0.8s,baz=285,slow=9.1,SNR=18
SONM                                LR     LR      07 37 31.1
      comp=Z,418nm,21.8s,baz=298,slow=38
      comp=Z,2.8nm,0.8s
ULN   Ulaanbaatar        59.22  51 i P     P       07 10 28.4 -0.4
ULN                                 pmax   pmax
      comp=Z,4.0nm,1.0s
TSUM  Tsumeb             59.48 184  LR     LR      07 39 16.4
      comp=Z,363nm,18.5s,baz=326,slow=39
LMN   Caledonia Moun     59.76 306  P      P       07 10 32.6 +0.2
BATG  Bathurst New B     59.84 308  P      P       07 10 33.5 +0.6
BATG                                IAmb   IAmb    07 10 42.3
      comp=Z,11nm,0.8s
GRTLG Ghanzi             61.55 180  P      P       07 10 46.0 +1.2
GRTLG                               IAmb   IAmb    07 10 47.1
      comp=Z,20nm,1.1s
GRTLG Ghanzi             61.55 180 i P     P       07 10 46.1 +1.2
E62A  Clayton Lake       62.23 309  P      P       07 10 48.6 -0.6
E62A                                IAmb   IAmb    07 11 00.0
      comp=Z,24nm,1.3s
PALK  Pallekele          62.58 105  LR     LR      07 41 00.5
      comp=Z,280nm,19.5s,baz=303,slow=39
YAK   Yakutsk            62.99  30  LR     LR      07 40 51.3
      comp=Z,264nm,20.6s,baz=300,slow=38
YAK   Yakutsk            62.99  30 eP      P       07 10 52.8 -1.1
YAK                                 pmax   pmax
      comp=Z,24nm,0.8s
YAK                                 pmax   pmax
      comp=N,7.0nm,1.2s
YAK                                 pmax   pmax
      comp=E,8.0nm,1.4s
YAK                                 MLR    MLR
      comp=Z,229nm,17.0s
YAK                                 MLR    MLR
      comp=N,70nm,17.0s
YAK                                 MLR    MLR
      comp=E,154nm,18.0s
LZH   Lanzhou            62.99  64 eP      P       07 10 54.8 +0.1
LZH                                 pP     sP      07 10 59.2 -0.6
LZH                                 pmax   pmax
      comp=E,32nm,1.2s
LZH                                 LR     LR
      comp=E,310nm,15.8s
LZH                                 LR     LR
      comp=E,330nm,15.5s
LZH                                 LR     LR
      comp=E,360nm,15.8s
KGCAE Kacgae             63.05 179  P      P       07 10 56.4 +1.5
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KGCAE	Kacgae	63.05	179	*i* P	P	07 10 56.3	+1.5
MREMI	Moremi	63.06	173	P	P	07 10 55.7	+0.8
MREMI				IAmb	IAmb	07 10 57.3	
	comp=Z,15nm,0.9s						
KOOLE	Kule	63.17	181	P	P	07 10 56.7	+0.9
KDWAN	Kaudwane	63.66	176	P	P	07 10 59.9	+1.0
KDWAN				IAmb	IAmb	07 11 03.4	
	comp=Z,23nm,1.4s						
OPO	Ambohidratompo	63.70	152	LR	LR	07 40 08.8	
	comp=Z,122nm,20.6s,baz=182,slow=37						
LPHEP	Lephephe	63.72	175	*i* P	P	07 11 00.8	+1.6
LKGWB	Lokgwabe	64.29	180	P	P	07 11 04.0	+1.0
SKOMA	Sekoma	64.75	177	*i* P	P	07 11 06.9	+0.9
A36M	Sachs Harbour	65.28	349	P	P	07 11 07.7	-1.2
	baz=28						
LBTB	Lobatse	65.34	175	P	P	07 11 11.2	+1.4
LBTB				IAmb	IAmb	07 11 12.5	
	comp=Z,17nm,1.1s						
LBTB	Lobatse	65.34	175	LR	LR	07 42 40.9	
	comp=Z,247nm,18.4s,baz=357,slow=39						
LBTB	Lobatse	65.34	175	P	P	07 11 11.3	+1.4
LBTB				pmax	pmax		
	comp=Z,17nm,1.1s						
HHC	Hu-ho-hao-te	65.56	56	*e*P	P	07 11 10.6	-0.8
HHC				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,64nm,4.6s						
HHC				LR	LR		
	comp=Z,350nm,17.7s						
HHC				LR	LR		
	comp=Z,260nm,18.0s						
HHC				LR	LR		
	comp=Z,230nm,19.0s						
M65A	Busby, Falmout	65.59	305	P	P	07 11 10.4	-1.0
	baz=57						
PHPEN	Phepeng	65.67	178	P	P	07 11 13.0	+1.0
MAKGR	Makgori	66.08	176	*i* P	P	07 11 15.8	+1.2
XLT	XiLinHaoTe	66.66	52	*e*P	P	07 11 18.5	+0.2
XLT				pmax	pmax		
	comp=Z,16nm,1.0s						
XLT				pmax	pmax		
	comp=Z,61nm,3.7s						
XLT				LR	LR		
	comp=Z,41nm,18.0s						
XLT				LR	LR		
	comp=Z,340nm,17.7s						
XLT				LR	LR		
	comp=Z,350nm,16.3s						
PZH	PanZhiHua	66.76	74	P	P	07 11 20.7	+1.4
PZH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,100nm,5.2s						
ZEA	Zeya	66.91	38	*e*P	P	07 11 17.3	-2.4
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEA				MLR	MLR		
	comp=Z,200nm,14.0s						
FCC	Fort Churchill	67.35	329	P	P	07 11 23.3	+1.0
FCC				IAmb	IAmb	07 11 35.8	
	comp=Z,9.1nm,1.0s						
FCC	Fort Churchill	67.35	329	P	P	07 11 23.3	+1.0
FCC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
XAN	Xi'an	67.60	64	⇓P	P	07 11 23.6	-0.8
XAN				sP	sP	07 11 28.9	-0.6
XAN				pmax	pmax		
	comp=Z,45nm,1.0s						
XAN				pmax	pmax		
	comp=Z,120nm,3.8s						
XAN				LR	LR		
	comp=Z,180nm,9.2s						
XAN				LR	LR		
	comp=Z,100nm,10.1s						
XAN				LR	LR		
	comp=Z,180nm,8.5s						
KMI	Kunming	68.29	75	P	P	07 11 28.2	-0.9
KMI				pmax	pmax		
	comp=Z,14nm,0.8s						
BILL	Bilibino	68.70	13	P	P	07 11 31.4	+0.7
BILL	Bilibino	68.70	13	⇑*e*P	P	07 11 31.2	+0.5
BILL				pmax	pmax		
	comp=Z,5.0nm,1.3s						
A22K	Sinclair Lake	68.76	359	P	P	07 11 29.7	-1.3
	baz=3.4						
SADO	Sadowa	68.87	311	P	P	07 11 33.8	+1.7
SADO				IAmb	IAmb	07 11 34.8	
	comp=Z,7.5nm,0.9s						
SADO	Sadowa	68.87	311	LR	LR	07 42 18.1	
	comp=Z,21nm,18.0s,baz=117,slow=36						
BOSA	Boshof	68.89	176	P	P	07 11 33.6	+1.2
BOSA	Boshof	68.89	176	P	P	07 11 33.6	+1.2
	comp=Z,13nm,0.8s,baz=4.9,slow=7.2,SNR=22						
BOSA				LR	LR	07 44 48.4	
	comp=Z,323nm,18.3s,baz=2.5,slow=39						
	comp=Z,13nm,0.8s						
BOSA	Boshof	68.89	176	P	P	07 11 33.7	+1.2
BOSA				pmax	pmax		
	comp=Z,29nm,1.3s						
BJI	Beijing	68.92	55	P	P	07 11 32.3	-0.2
BJI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BJI				LR	LR		
	comp=Z,200nm,14.3s						
BJI				LR	LR		
	comp=Z,160nm,14.2s						
BJI				LR	LR		
	comp=Z,180nm,17.8s						
HEH	HeiHe	69.14	41	*e*P	P	07 11 33.7	0.0
HEH				pP	sP	07 11 38.3	-0.6
HEH				pmax	pmax		
	comp=Z,19nm,0.8s						
HEH				LR	LR		
	comp=Z,580nm,21.6s						
HEH				LR	LR		
	comp=Z,540nm,21.4s						
HEH				LR	LR		
	comp=Z,340nm,21.2s						
CMAR	Chiang Mai Arr	69.38	83	P	P	07 11 34.6	-1.1
	comp=Z,1.9nm,0.3s,baz=308,slow=8.1,SNR=9.7						
CMAR				LR	LR	07 49 12.2	
	comp=Z,69nm,18.2s,baz=295,slow=42						
	comp=Z,1.9nm,0.3s						
B22K	Teshekpuk Lake	69.39	358	P	P	07 11 32.9	-2.0
	baz=4.7						
C26K	Camden Bay	69.39	355	P	P	07 11 33.2	-1.8
	baz=12						
D28M	Stokes Point	69.44	352	P	P	07 11 33.6	-1.6
	baz=16						
HNS	HongShan	69.53	58	⇑P	P	07 11 36.0	-0.3
HNS				S	S	07 20 44.2	+0.2
HNS				pmax	pmax		
	comp=Z,14nm,0.7s						
HNS				LR	LR		
	comp=Z,370nm,18.4s						
HNS				LR	LR		
	comp=Z,230nm,19.2s						
HNS				LR	LR		
	comp=Z,170nm,15.2s						
C27K	Jago River	69.59	354	P	P	07 11 34.5	-1.7
	baz=12						
A19K	Wainwright	69.59	1	P	P	07 11 34.3	-1.9
	baz=358						
LYN	LuoYang	69.71	62	P	P	07 11 37.0	-0.5
LYN				pP	pP	07 11 41.6	+0.4
LYN				sP	sP	07 11 44.4	+1.8
LYN				pmax	pmax		
	comp=Z,20nm,0.6s						
LYN				pmax	pmax		
	comp=Z,200nm,7.8s						
LYN				LR	LR		
	comp=Z,270nm,13.7s						
LYN				LR	LR		
	comp=Z,390nm,14.4s						
LYN				LR	LR		
	comp=Z,310nm,24.0s						
D27M	Malcolm River	69.73	353	P	P	07 11 34.6	-2.6
	baz=15						
B20K	Meade River	69.79	359	P	P	07 11 35.4	-2.0
	baz=1.6						
C23K	Itkillik River	69.79	357	P	P	07 11 34.9	-2.5
	baz=6.9						
INK	Inuvik	69.81	350	LR	LR	07 44 49.1	
	comp=Z,103nm,18.7s,baz=8.5,slow=38						
INK	Inuvik	69.81	350	P	P	07 11 35.0	-2.5
	baz=20						
C24K	Franklin Bluff	69.82	356	P	P	07 11 35.4	-2.2
	baz=8.5						
SEY	Seymchan	69.89	21	LR	LR	07 46 27.7	
	comp=Z,248nm,18.1s,baz=329,slow=40						
SEY	Seymchan	69.89	21	⇑*e*P	P	07 11 39.1	+1.0
SEY				pmax	pmax		
	comp=Z,5.0nm,0.8s						
D25K	Kavik River	70.08	355	P	P	07 11 36.6	-2.7
	baz=10						
B21K	Ikpikpuk River	70.14	358	P	P	07 11 37.3	-2.2
	baz=3.7						
E28M	Babbage River	70.22	352	P	P	07 11 38.2	-1.9
	baz=16						
E29M	Blow River	70.25	352	P	P	07 11 41.4	+1.1
E29M				IAmb	IAmb	07 11 49.9	
	comp=Z,14nm,0.9s						
E29M	Blow River	70.25	352	P	P	07 11 37.7	-2.6
	baz=17						
D24K	Happy Valley	70.39	356	P	P	07 11 39.4	-1.7
	baz=8.3						
B18K	Kokolik River	70.43	1	P	P	07 11 38.6	-2.7
	baz=358						
C21K	Knifeblade Rid	70.61	358	P	P	07 11 39.8	-2.6
	baz=3.5						
F31M	Tsiigehtchic	70.65	350	P	P	07 11 40.3	-2.4
	baz=20						
D23K	Nanushuk River	70.66	357	P	P	07 11 40.0	-2.7
	baz=6.8						
C19K	Lookout Ridge	70.71	0	P	P	07 11 40.6	-2.5
	baz=360						
F30M	Barrier River	70.75	351	P	P	07 11 40.8	-2.5
	baz=19						
E27K	Coleen River	70.82	353	P	P	07 11 41.2	-2.6
	baz=14						
D22K	Ayikyak River	70.82	357	P	P	07 11 41.4	-2.4
	baz=5.2						
TOLK	Toolik Lake Re	70.93	356	P	P	07 11 41.2	-3.2
	baz=7.7						
D20K	Etivluk River	71.08	359	P	P	07 11 42.0	-3.4
	baz=2.0						
C18K	Utukok River	71.16	1	P	P	07 11 42.8	-3.1
	baz=358						
E25K	Arctic Village	71.21	355	P	P	07 11 43.2	-3.0
	baz=11						
G31M	Satah River	71.21	350	P	P	07 11 43.4	-2.7
	baz=20						
YKA	Yellowknife Ar	71.28	340	P	P	07 11 47.1	+0.5
	comp=Z,2.4nm,0.8s,baz=37,slow=6.3,SNR=8.8						
YKA				LR	LR	07 45 31.7	
	comp=Z,291nm,18.0s,baz=34,slow=38						
	comp=Z,2.4nm,0.8s						
C17K	DeLong Mountai	71.30	2	P	P	07 11 44.2	-2.4
	baz=357						
E21K	Killik River	71.30	358	P	P	07 11 43.7	-3.0
	baz=4.2						
D19K	Kuna River	71.32	360	P	P	07 11 43.8	-3.0
	baz=0.8						
G30M	tAoh Zraii Nji	71.41	351	P	P	07 11 44.2	-3.2
	baz=18						
E24K	Your Creek	71.44	356	P	P	07 11 44.7	-2.9
	baz=8.6						
C16K	Lisburne Hills	71.44	2	P	P	07 11 44.0	-3.4
	baz=355						
E23K	Chandalar	71.52	356	P	P	07 11 45.4	-2.7
	baz=7.6						
F26K	Sheenjek River	71.52	354	P	P	07 11 45.8	-2.3
	baz=12						
E20K	Nigu River	71.53	359	P	P	07 11 45.5	-2.7
	baz=2.4						
E22K	Anaktuvuk Pass	71.54	357	P	P	07 11 45.9	-2.3
	baz=5.9						
G29M	Pine Creek	71.69	351	P	P	07 11 47.0	-2.1
	baz=17						
RDOG	Red Dog Mine	71.73	1	P	P	07 11 47.0	-2.3
	baz=357						
F25K	Christian Rive	71.73	355	P	P	07 11 46.5	-2.8
	baz=11						
KLR	Kul'dur	71.95	40	LR	LR	07 48 01.0	
	comp=Z,175nm,19.1s,baz=315,slow=40						
KLR	Kul'dur	71.95	40	*d i*P	P	07 11 50.6	-0.3
KLR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
F24K	Squaw Lake	71.96	355	P	P	07 11 48.1	-2.6
	baz=9.0						
BNX	BinXian	71.99	45	⇓P	P	07 11 50.4	-0.8
BNX				pmax	pmax		
	comp=Z,13nm,0.7s						
EPYK	Eagle Plains	72.05	351	P	P	07 11 48.4	-2.9
	baz=18						
D17K	Noatak River	72.08	2	P	P	07 11 48.4	-2.9
	baz=357						
MA2	Magadan	72.08	24	P	P	07 11 52.5	+1.0
MA2				IAmb	IAmb	07 11 53.2	
	comp=Z,14nm,0.8s						
MA2	Magadan	72.08	24	LR	LR	07 48 21.6	
	comp=Z,146nm,18.4s,baz=312,slow=40						
MA2	Magadan	72.08	24	*de*P	P	07 11 52.0	+0.5
MA2				pmax	pmax		
	comp=Z,14nm,0.8s						
CN2	Changchun	72.15	47	P	P	07 11 51.5	-0.7
CN2				pP	pP	07 11 56.2	+0.2
CN2				S	S	07 21 10.8	-3.5
CN2				pmax	pmax		
	comp=Z,30nm,0.7s						
CN2				pmax	pmax		
	comp=Z,100nm,6.0s						
CN2				LR	LR		
	comp=Z,200nm,12.0s						
CN2				LR	LR		
	comp=Z,300nm,12.0s						
CN2				LR	LR		
	comp=Z,400nm,13.0s						
G27K	Doyon Strip	72.17	353	P	P	07 11 49.2	-2.8
	baz=14						
F22K	John River	72.18	357	P	P	07 11 48.7	-3.3
	baz=5.6						
G26K	Porcupine Rive	72.22	354	P	P	07 11 49.3	-2.9
	baz=12						
H31M	Peel River	72.28	350	P	P	07 11 49.3	-3.3
	baz=20						
E19K	Redstone River	72.35	359	P	P	07 11 49.7	-3.3
	baz=1.5,SNR=8.4						
COLD	Coldfoot	72.37	356	P	P	07 11 50.0	-3.1
	baz=7.1						
E18K	Tukpahlearik C	72.39	1	P	P	07 11 49.9	-3.3
	baz=359						
H29M	Whitestone	72.39	351	P	P	07 11 50.2	-3.1
	baz=16						
F21K	Alatna River	72.51	358	P	P	07 11 51.1	-2.9
	baz=4.5,SNR=8.2						
G25K	Bearman Lake	72.58	355	P	P	07 11 51.4	-2.9
	baz=10						
E17K	Hotham Inlet	72.72	1	P	P	07 11 52.8	-2.4
	baz=358						
H27K	Steamboat Moun	72.72	353	P	P	07 11 53.5	-1.8
	baz=14						
G22K	Bettles	72.74	357	P	P	07 11 53.6	-1.7
	baz=6.1						
F20K	Avaraart Lake	72.74	359	P	P	07 11 53.1	-2.2
	baz=2.7						
G24K	Hadweenzic Riv	72.74	355	P	P	07 11 53.0	-2.3
	baz=9.3						
WRGLY	Wrigley	72.74	344	P	P	07 11 53.7	-1.6
	baz=28						
G23K	Bananza Creek	72.88	356	P	P	07 11 53.7	-2.5
	baz=7.3						
F19K	Shaleruckik Mo	72.98	359	P	P	07 11 54.1	-2.6
	baz=1.1,SNR=6.1						
H25L	Birch Creek	73.06	354	P	P	07 11 55.5	-1.7
	baz=11						
I30M	Mount Dempster	73.11	350	P	P	07 11 55.6	-2.0
	baz=18						
I29M	Ogilvie Camp,	73.21	351	P	P	07 11 56.4	-1.7
	baz=16						
G21K	Allakaket	73.22	358	P	P	07 11 55.6	-2.5
	baz=4.5,SNR=6.0						
F18K	Selawik	73.22	0	P	P	07 11 55.6	-2.6
	baz=360						
FFC	Flin Flon	73.28	329	P	P	07 11 59.9	+1.2
FFC	Flin Flon	73.28	329	P	P	07 11 59.9	+1.2
FFC				pmax	pmax		
	comp=Z,10.0nm,1.3s						
I28M	Miner Creek	73.31	352	P	P	07 11 56.6	-2.3
	baz=15						
I27K	Kandik River	73.34	352	P	P	07 11 56.3	-2.7
	baz=14						
F17K	Baldwin Pennin	73.37	1	P	P	07 11 56.1	-2.9
	baz=358						
H24K	Noodor Dome	73.62	355	P	P	07 11 57.8	-2.8
	baz=8.9						
G19K	Purcell Mounta	73.67	359	P	P	07 11 58.5	-2.3
	baz=1.6						
J30M	Hart River	73.72	350	P	P	07 11 58.4	-2.9
	baz=18						
H23K	Yukon River	73.74	356	P	P	07 11 58.7	-2.6
	baz=7.6						
H22K	Ishtalitna Cre	73.76	357	P	P	07 11 58.9	-2.5
	baz=6.2						
PRP	Porcupine Dome	73.77	354	P	P	07 11 59.4	-2.2
	baz=11						
I26K	Coal Creek Min	73.78	353	P	P	07 11 59.1	-2.4
	baz=13						
G18K	Tagagawik	73.93	360	P	P	07 11 59.4	-3.0
	baz=0.4,SNR=7.2						
ULM	Lac du Bonnet	73.95	323	P	P	07 12 03.4	+0.7
	comp=Z,14nm,0.8s,baz=49,slow=5.5,SNR=18						
ULM				LR	LR	07 46 02.6	
	comp=Z,307nm,18.5s,baz=46,slow=37						
	comp=Z,14nm,0.8s						
F15K	North Star Dit	74.04	2	P	P	07 12 00.8	-2.1
	baz=356						
TNA	Tin City	74.05	4	P	P	07 12 01.6	-1.4
	baz=353						
H21K	Melozitna Rive	74.05	357	P	P	07 12 04.8	+1.7
H21K				IAmb	IAmb	07 12 13.2	
	comp=Z,20nm,0.9s						
H21K	Melozitna Rive	74.05	357	P	P	07 12 00.5	-2.6
	baz=5.0,SNR=17						
J29N	Klondike Camp	74.08	351	P	P	07 12 00.6	-2.7
	baz=16						
MDP	Montagnes des	74.11	263	LR	LR	07 41 39.2	
	comp=Z,81nm,19.4s,baz=47,slow=33						
F14K	Arctic Creek	74.21	3	P	P	07 12 01.3	-2.6
	baz=354						
H19K	Roundabout Mou	74.28	359	P	P	07 12 05.8	+1.5
H19K				IAmb	IAmb	07 12 13.8	
	comp=Z,11nm,1.1s						
H19K	Roundabout Mou	74.28	359	P	P	07 12 01.9	-2.4
	baz=2.1,SNR=5.9						
H20K	Anotleneega Mo	74.28	358	P	P	07 12 02.0	-2.5
	baz=3.4,SNR=6.6						
POKR	Poker Plat Res	74.31	355	P	P	07 12 06.0	+1.4
POKR				IAmb	IAmb	07 12 14.0	
	comp=Z,15nm,1.0s						
POKR	Poker Plat Res	74.31	355	P	P	07 12 02.0	-2.6
	baz=9.2						
G17K	Kiwalik Mounta	74.32	1	P	P	07 12 02.0	-2.6
	baz=359						
I23K	Minto, Yukon-K	74.40	356	P	P	07 12 02.7	-2.4
	baz=7.7						
G16K	Koyuk River	74.41	1	P	P	07 12 02.5	-2.6
	baz=358						
I21K	Tanana	74.50	357	P	P	07 12 03.1	-2.6
	baz=5.7,SNR=8.5						
K29M	Barlow Dome	74.58	350	P	P	07 12 03.4	-2.9
	baz=17						
COLA	College	74.58	355	*i* P	P	07 12 06.8	+0.7
COLA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
COLA	College	74.58	355	P	P	07 12 04.1	-2.0
	baz=8.9						
MLY	Manley	74.59	356	P	P	07 12 03.1	-3.2
	baz=6.6,SNR=9.1						
DAWY	Dawson	74.59	351	P	P	07 12 03.1	-3.2
	baz=16						
J26L	Joseph Creek	74.61	353	P	P	07 12 03.7	-2.7
	baz=12,SNR=11						
ILAR	Eielson Array	74.61	355	P	P	07 12 06.8	+0.5
	comp=Z,0.8nm,0.6s,baz=350,slow=3.0,SNR=23						
ILAR				LR	LR	07 47 48.6	
	comp=Z,75nm,19.4s,baz=22,slow=38						
	comp=Z,0.8nm,0.6s						
G40A	Rib Lake	74.62	317	P	P	07 12 07.5	+0.7
G40A				IAmb	IAmb	07 12 09.0	
	comp=Z,44nm,1.7s						
J25K	Salcha River,	74.65	354	P	P	07 12 03.6	-3.0
	baz=11						
H18K	Honhosa River	74.67	360	P	P	07 12 03.5	-3.2
	baz=0.6						
G15K	Niukluk	74.77	2	P	P	07 12 04.4	-2.8
	baz=356						
MMPY	Sheldon Lake,	74.79	347	P	P	07 12 04.7	-2.8
	baz=22						
H17K	Granite Mounta	74.89	0	P	P	07 12 05.8	-2.1
	baz=359						
K27K	Chicken	74.92	352	P	P	07 12 05.7	-2.4
	baz=13						
NEA2	Nenana	74.94	355	P	P	07 12 09.0	+0.7
NEA2	Nenana	74.94	355	P	P	07 12 05.8	-2.4
	baz=7.9						
I20K	Naaghedeneel	74.97	358	P	P	07 12 05.6	-2.7
	baz=3.7						
HDA	Harding Lake	74.98	355	P	P	07 12 04.8	-3.7
	baz=9.6,SNR=9.2						
WRH	Wood River Hil	74.99	355	P	P	07 12 08.4	-0.1
WRH				IAmb	IAmb	07 12 17.2	
	comp=Z,13nm,1.2s						
GCSA	Galena City Sc	75.07	359	P	P	07 12 06.4	-2.6
	baz=1.8						
SCRK	Sand Creek	75.16	353	P	P	07 12 06.6	-3.1
	baz=12						
H16K	Elim	75.17	1	P	P	07 12 06.7	-2.8
	baz=358						
TGTN	Hyland Airport	75.26	345	P	P	07 12 07.7	-2.5
	baz=24						
L29M	L29M	75.36	350	P	P	07 12 08.3	-2.5
	baz=16						
USA0B	Ussuriysk Arra	75.45	44	*de*P	P	07 12 10.5	-1.0
USRK	Ussuriysk Ar.	75.45	44	P	P	07 12 11.2	-0.3
	comp=Z,6.8nm,0.8s,baz=285,slow=5.8,SNR=13						
USRK				LR	LR	07 48 32.6	
	comp=Z,163nm,20.2s,baz=303,slow=38						
	comp=Z,6.8nm,0.8s						
RIDG	Independent Ri	75.47	353	P	P	07 12 07.7	-3.7
	baz=11						
NJ2	Nanjing	75.47	60	*e*P	P	07 12 11.0	-0.8
NJ2				pmax	pmax		
	comp=Z,22nm,0.6s						
K24K	Donnelly Dome	75.48	354	P	P	07 12 08.1	-3.4
	baz=10						
DOT	Dot Lake	75.49	353	P	P	07 12 11.5	+0.1
DOT				IAmb	IAmb	07 12 21.0	
	comp=Z,13nm,1.0s						
FARO	Faro, Yukon	75.50	348	P	P	07 12 07.7	-3.8
	baz=20,SNR=5.6						
BPAW	Bear Paw Mtn.	75.53	356	P	P	07 12 06.6	-5.1
	baz=6.4,SNR=7.3						
J20K	Nowinta River	75.58	358	P	P	07 12 07.7	-4.2
	baz=3.9,SNR=6.7						
GAMB	Gambell	75.59	6	P	P	07 12 07.7	-4.2
	baz=350						
M31M	Drury Creek, Y	75.69	348	P	P	07 12 08.5	-4.2
	baz=19						
MCK	McKinley	75.78	355	P	P	07 12 08.0	-5.1
	baz=8.0						
J19K	Poorman	75.80	358	P	P	07 12 09.0	-4.2
	baz=2.8						
CHUM	Lake Minchumin	75.81	357	P	P	07 12 08.9	-4.3
	baz=5.4						
BEAVL	Fort Liard	75.82	343	P	P	07 12 09.1	-4.3
	baz=26						
BCAR	Beaver Creek A	75.83	352	P	P	07 12 14.5	+1.1
L27K	Beaver Creek,	75.84	352	P	P	07 12 09.3	-4.2
	baz=14						
I17K	Unalakleet	75.94	1	P	P	07 12 10.1	-3.8
	baz=359						
SPMN	Marine on St.	75.99	318	P	P	07 12 16.1	+1.5
L26K	Log Cabin Wild	76.03	353	P	P	07 12 10.2	-4.4
	baz=12						
M29M	Somme Creek	76.04	350	P	P	07 12 15.4	+0.6
M29M				IAmb	IAmb	07 12 24.9	
	comp=Z,16nm,0.9s						
M29M	Somme Creek	76.04	350	P	P	07 12 10.6	-4.1
	baz=16,SNR=9.1						
TRF	Thorofare Moun	76.14	356	P	P	07 12 11.0	-4.4
	baz=6.9						
SJG	San Juan	76.19	282	LR	LR	07 39 26.6	
	comp=Z,52nm,20.8s,baz=78,slow=31						
CAST	Castle Rocks	76.26	357	P	P	07 12 16.4	+0.5
CAST				IAmb	IAmb	07 12 25.3	
	comp=Z,13nm,1.0s						
CAST	Castle Rocks	76.26	357	P	P	07 12 11.5	-4.4
	baz=5.5,SNR=12						
PAX	Paxson	76.28	354	P	P	07 12 12.1	-4.0
	baz=11						
DHY	Denali Highway	76.33	354	P	P	07 12 11.5	-4.9

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          baz=9.2,SNR=13
J18K  Innoko River      76.35 359  P      P       07 12 12.0  -4.4
          baz=1.9,SNR=6.2
BVCY  Beaver Creek      76.36 351  P      P       07 12 12.3  -4.2
          baz=14
K20K  Telida            76.40 358  P      P       07 12 12.4  -4.2
          baz=4.0,SNR=7.8
J17K  VABM Dome         76.44 360  P      P       07 12 17.5  +0.7
J17K                               IAmb   IAmb    07 12 26.3
          comp=Z,16nm,1.1s
J17K  VABM Dome         76.44 360  P      P       07 12 12.3  -4.5
          baz=0.1
N32M  Quiet Lake        76.48 347  P      P       07 12 12.2  -4.9
          baz=20
M27K  Edge Creek, AK    76.53 352  P      P       07 12 12.3  -5.2
          baz=13
J16K  Anvik River       76.55   1  P      P       07 12 12.7  -4.7
          baz=359
N31M  Braeburn, Yuko    76.59 349  P      P       07 12 13.2  -4.5
          baz=18
M26K  Nabesna, AK       76.61 352  P      P       07 12 12.8  -5.1
          baz=13
WAT1  Susitna Watana    76.66 355  P      P       07 12 13.5  -4.7
          baz=8.3
WTLY  Watson Lake, Y    76.66 345  P      P       07 12 13.5  -4.7
          baz=23
LIRD  Liard River Hi    76.74 343  P      P       07 12 14.0  -4.7
          baz=25
PPLA  Purkeypile        76.79 357  P      P       07 12 19.8  +0.8
PPLA                               IAmb   IAmb    07 12 28.4
          comp=Z,9.1nm,0.9s
PPLA  Purkeypile        76.79 357  P      P       07 12 13.9  -5.1
          baz=5.4
N30M  Aishikik Lake     76.80 349  P      P       07 12 13.3  -5.7
          baz=17
HARP  HAARP             76.82 353  P      P       07 12 14.3  -4.7
          baz=11
WAT6  Susitna Watana    76.84 355  P      P       07 12 14.2  -5.2
          baz=8.9
TTA   Tatalina          76.88 358  P      P       07 12 14.5  -5.0
          baz=2.5
YUK3  Moose Creek       76.94 351  P      P       07 12 15.3  -4.6
          baz=14
J14K  Nanvaranak Lak    77.03   2  P      P       07 12 15.1  -5.0
          baz=357
K17K  Iditarod          77.12 360  P      P       07 12 15.9  -4.7
          baz=0.7
YUK4  Talbot Arm        77.13 350  P      P       07 12 15.3  -5.8
          baz=16
WCI   Wyandotte Cave    77.15 309  P      P       07 12 23.0  +1.7
WCI   Wyandotte Cave    77.15 309  P      P       07 12 23.0  +1.7
WCI                                pmax   pmax
          comp=Z,79nm,2.0s
CUT   Chulitna          77.18 356  P      P       07 12 16.4  -4.6
          baz=6.9
M24K  Tolsona, Glenn    77.19 354  P      P       07 12 17.1  -4.1
          baz=10
QIZ   Qiongzhong        77.20  76  P      P       07 12 23.5  +1.7
QIZ                                S      S       07 22 15.4  +3.9
QIZ                                LR     LR
          comp=Z,170nm,13.4s
QIZ                                LR     LR
          comp=Z,150nm,25.7s
WHY   Whitehorse        77.24 348  P      P       07 12 17.3  -4.3
          baz=19
L20K  Farewell, AK      77.27 357  P      P       07 12 17.7  -3.9
          baz=4.1
O30N  Mendenhall        77.32 349  P      P       07 12 18.9  -3.0
          baz=18
P33M  Teslin, Yukon     77.32 347  P      P       07 12 19.1  -2.9
          baz=20
TKL   Tuckaleechee C    77.33 306  LR     LR      07 48 31.0
          comp=Z,316nm,18.6s,baz=58,slow=37
YUK8  Steele Glacier    77.33 351  P      P       07 12 19.5  -2.8
          baz=15
L40A  Anamosa           77.34 315  P      P       07 12 23.4  +1.1
L40A                               IAmb   IAmb    07 12 24.1
          comp=Z,14nm,0.9s
HYT   Haines Junctio    77.47 349  P      P       07 12 20.3  -2.6
          baz=17
YUK6  Outpost Mounta    77.48 350  P      P       07 12 20.6  -2.4
          baz=16
K15K  Wolf Creek Mou    77.53   1  P      P       07 12 20.9  -2.1
          baz=358
N25K  Chitina, Valde    77.55 353  P      P       07 12 20.8  -2.4
          baz=11
SCM   Sheep Creek Mo    77.56 354  P      P       07 12 20.5  -2.7
          baz=9.2
L19K  White Mountain    77.60 358  P      P       07 12 20.4  -3.0
          baz=3.3,SNR=12
L18K  Granite Mounta    77.60 359  P      P       07 12 20.4  -3.0
          baz=1.9,SNR=6.8
MCARA McCarthy VSAT     77.61 352  P      P       07 12 20.6  -2.9
          baz=12
SML   Sawmill           77.66 355  P      P       07 12 20.2  -3.6
          baz=8.4
SKT   Skwentna          77.67 356  P      P       07 12 19.8  -4.1
          baz=5.9
KSRS  Korea Array       77.70  51  P      P       07 12 23.9  -0.4
          comp=Z,16nm,0.8s,baz=314,slow=4.9,SNR=58
KSRS                               LR     LR      07 51 01.8
          comp=Z,155nm,18.4s,baz=305,slow=39
          comp=Z,16nm,0.8s
L17K  Donlin            77.70 360  P      P       07 12 20.1  -3.9
          baz=0.7
R33M  Jennings River    77.75 346  P      P       07 12 20.8  -3.6
          baz=22
KLU   Klutina           77.78 354  P      P       07 12 21.6  -2.9
          baz=10
M22K  Willow            77.82 356  P      P       07 12 21.5  -3.1
          baz=7.0
CTG   Chitna Glacier    77.83 351  P      P       07 12 21.4  -3.5
          baz=14
M20K  Styx River        77.84 357  P      P       07 12 21.2  -3.6
          baz=4.7
M19K  Big River Lodg    77.86 358  P      P       07 12 21.3  -3.5
          baz=3.7
O28M  Mount Upton       77.88 351  P      P       07 12 21.3  -4.0
          baz=15
PMR   Palmer            77.92 355  P      P       07 12 21.3  -3.8
          baz=7.8
KNK   Knik Glacier      78.06 355  P      P       07 12 22.4  -3.5
          baz=8.3
P32M  Atlin             78.06 347  P      P       07 12 22.2  -3.9
          baz=20
P30M  Million Dollar    78.07 349  P      P       07 12 21.9  -4.2
          baz=17
O29M  Mount Kennedy     78.12 350  P      P       07 12 22.9  -3.6
          baz=16
L16K  Owhat River       78.13   0  P      P       07 12 22.8  -3.5
          baz=360
SUA   Susitna One       78.15 356  P      P       07 12 22.1  -4.5
          baz=6.5
L15K  Ungalak Mounta    78.15   1  P      P       07 12 21.9  -4.6
          baz=358
BMRM  Bremner River     78.18 353  P      P       07 12 21.8  -4.9
          baz=11
CRQE  Cirque            78.23 352  P      P       07 12 22.6  -4.5
          baz=12
M18K  Stony River       78.32 358  P      P       07 12 23.4  -3.9
          baz=2.6
Q32M  Nakina River      78.39 346  P      P       07 12 24.0  -4.1
          baz=21
M17K  Holitna River     78.43 359  P      P       07 12 29.4  +1.3
M17K  Holitna River     78.43 359  P      P       07 12 23.7  -4.3
          baz=1.3
DLBC  Dease Lake        78.45 345  LR     LR      07 47 00.4
          comp=Z,147nm,20.1s,baz=337,slow=36
DLBC  Dease Lake        78.45 345  P      P       07 12 24.6  -3.7
          baz=22
RC01  Rabbit Creek A    78.46 355  P      P       07 12 24.5  -3.7
          baz=7.3
L14K  Kuka Creek        78.46   2  P      P       07 12 24.3  -3.8
          baz=357
GLI   Glacier Island    78.48 354  P      P       07 12 24.8  -3.5
          baz=9.3
PINM  Pinnacle          78.55 350  P      P       07 12 25.1  -3.7
          baz=15
W50A  Signal Mountai    78.57 307  P      P       07 12 28.9  -0.4
W50A                               IAmb   IAmb    07 12 44.0
          comp=Z,9.4nm,0.8s
PWL   Port Wells        78.60 355  P      P       07 12 25.3  -3.7
          baz=8.4
PLBC  Pleasant Camp     78.61 348  P      P       07 12 25.8  -3.3
          baz=18
P29M  Windy Craggy      78.65 349  P      P       07 12 25.6  -3.7
          baz=16
MESA  MESA              78.67 351  P      P       07 12 25.7  -3.9
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          baz=13
EYAK  Cordova Ski Ar    78.69 353  P      P       07 12 25.8  -3.6
          baz=10
YSS   Yuzhno-Sakhali    78.77  36beP      P       07 12 30.8  +0.7
YSS                               e*SP    PcP     07 12 39.9  +1.0
YSS                               eS      S       07 22 25.8  -1.7
YSS                                pmax   pmax
          comp=Z,20nm,1.0s
YSS                                MLR    MLR
          comp=Z,300nm,16.0s
M16K  Timber Creek      78.82 360  P      P       07 12 26.1  -4.1
          baz=0.1
PNL   Peninsula         78.85 350  P      P       07 12 26.4  -3.9
          baz=15
N19K  Bonanza Creek     78.96 358  P      P       07 12 28.3  -2.8
          baz=3.6
ECSD  EROS Data Cent    78.97 319  P      P       07 12 31.5  +0.2
O22K  Cooper Landing    79.07 355  P      P       07 12 28.1  -3.3
          baz=7.3
M14K  Bethel            79.07   1  P      P       07 12 28.7  -2.8
          baz=358
N18K  Kilae Creek       79.13 358  P      P       07 12 28.5  -3.4
          baz=2.5
M15K  Kasigluk River    79.15   1  P      P       07 12 28.4  -3.5
          baz=359
S34M  Telegraph Cree    79.16 345  P      P       07 12 29.1  -3.0
          baz=21
M11K  Mekoryuk          79.30   4  P      P       07 12 29.4  -3.4
          baz=354
N17K  Nushagak Hills    79.31 359  P      P       07 12 29.6  -3.3
          baz=1.5
M13K  Dall Lake         79.38   2  P      P       07 12 30.3  -2.9
          baz=357
SEW   Seward            79.42 355  P      P       07 12 30.9  -2.5
          baz=7.5
PETK  Petropavlovsk-    79.60  25  P      P       07 12 33.6  -1.0
          comp=Z,2.0nm,0.8s,baz=0.0,slow=2.1,SNR=4.3
PETK                               LR     LR      07 51 50.6
          comp=Z,159nm,19.6s,baz=317,slow=39
          comp=Z,2.0nm,0.8s
T35M  Bob Quinn         79.85 344  P      P       07 12 34.8  -1.1
          baz=22
Q23K  Middleton Isla    79.85 353  P      P       07 12 33.7  -2.1
          baz=9.9
BRSE  Bradley Lake S    79.86 356  P      P       07 12 34.1  -1.8
          baz=6.5
N14K  Kuskokwak Cree    79.91   1  P      P       07 12 34.6  -1.4
          baz=358
O18K  Koktuh Hills      79.94 358  P      P       07 12 34.8  -1.5
          baz=3.0
PCRV  Puerto La Cruz    80.01 275  LR     LR      07 43 40.9
          comp=Z,65nm,20.9s,slow=32
S31K  Pelican           80.02 348  P      P       07 12 35.0  -1.7
          baz=18
O17K  Koliganek Bris    80.06 359  P      P       07 12 35.5  -1.4
          baz=1.6
P19K  Oil Pt            80.08 357  P      P       07 12 34.8  -2.3
          baz=4.6
CCM   Cathedral Cave    80.13 312  P      P       07 12 38.8  +1.0
CCM                                IAmb   IAmb    07 12 42.4
          comp=Z,7.6nm,0.6s
CCM   Cathedral Cave    80.13 312  P      P       07 12 38.8  +1.0
CCM                                pmax   pmax
          comp=Z,8.0nm,0.6s
S32K  Killisnoo         80.22 347  P      P       07 12 35.5  -2.3
          baz=19
O16K  Kokwok River B    80.25 359  P      P       07 12 36.5  -1.4
          baz=0.8
P18K  Big Mountain,     80.41 358  P      P       07 12 37.3  -1.5
          baz=3.0
O14K  Tigyukauivet M    80.58   1  P      P       07 12 38.0  -1.7
          baz=358
P17K  Kvichak River     80.63 359  P      P       07 12 38.0  -2.0
          baz=2.1
O15K  Ungalikthiuk R    80.67   0  P      P       07 12 38.4  -1.8
          baz=360
SIT   Sitka             80.74 347  P      P       07 12 38.9  -1.7
          baz=18
WRAK  Wrangell Islan    80.80 345  P      P       07 12 39.4  -1.5
          baz=20
Q19K  Cape Douglas,     80.82 357  P      P       07 12 38.9  -2.2
          baz=4.2
ASAJ  Asahikawa         80.83  38  LR     LR      07 50 35.6
          comp=Z,291nm,20.5s,baz=357,slow=37
Q18K  Katmai Hardscr    81.14 358  P      P       07 12 40.8  -2.1
          baz=3.2
U33K  Whale Pass        81.23 346  P      P       07 12 41.2  -2.0
          baz=20
Q17K  Contact Creek     81.55 358  P      P       07 12 43.1  -2.0
          baz=2.5
EGMT  Eagleton          81.56 329  P      P       07 12 46.0  +0.7
V35K  Ketchikan         81.67 344  P      P       07 12 43.5  -2.0
          baz=21
CRAG  Craig             81.84 345  P      P       07 12 44.5  -1.9
          baz=20
KDAK  Kodiak Island     81.92 356  P      P       07 12 45.2  -1.7
          baz=5.0
R18K  Karluk            82.21 357  P      P       07 12 46.1  -2.2
          baz=3.6
RSSD  Black Hills       82.22 323  P      P       07 12 50.3  +1.3
RSSD  Black Hills       82.22 323  P      P       07 12 50.3  +1.3
SPIA  Saint Paul Isl    82.24   6  P      P       07 12 47.7  -0.8
          baz=352
JNU   Nakatsue          82.41  53  LR     LR      07 52 40.4
          comp=Z,255nm,19.4s,baz=322,slow=38
OHAK  Old Harbor        82.51 357  P      P       07 12 48.3  -1.6
          baz=4.5
ITTB  Itaituba          82.63 258 eP      P       07 12 52.0  +0.7
SII   Sitkinak Islan    83.21 357  P      P       07 12 51.9  -1.8
          baz=3.8
BBB   Bella Bella       83.81 341  LR     LR      07 51 45.7
          comp=Z,111nm,18.6s,baz=41,slow=37
CHIR  Chirikof Islan    83.99 358  P      P       07 12 56.0  -1.6
          baz=2.7
NEW   Newport           84.07 333  LR     LR      07 52 13.8
          comp=Z,225nm,19.5s,baz=36,slow=37
YNE   Yellowstone No    84.11 327  P      P       07 13 00.7  +1.8
MJAR  Matsushiro Arr    84.22  46  P      P       07 12 59.0  -0.2
          comp=Z,12nm,0.9s,baz=312,slow=5.0,SNR=25
MJAR                               LR     LR      07 53 49.9
          comp=Z,187nm,18.9s,baz=322,slow=38
          comp=Z,12nm,0.9s
SHEM  Shemya Is, Ala    84.30  16  LR     LR      07 54 30.7
          comp=Z,102nm,19.2s,baz=346,slow=38
KAN12 Harper NE Stat    84.40 315  P      P       07 13 00.3  +0.2
KAN12                              IAmb   IAmb    07 13 02.5
          comp=Z,15nm,0.9s
KAN17 Caldwell West     84.46 315  P      P       07 13 01.7  +1.3
K22A  Casper            84.50 324  P      P       07 13 01.4  +0.6
SDPT  Sand Point        84.51   1  P      P       07 12 58.6  -1.6
          baz=359
BDFB  Brasilia          84.71 244  P      P       07 13 02.4  +0.5
          comp=Z,5.4nm,0.8s,baz=69,slow=6.7,SNR=10
BDFB                               LR     LR      07 50 40.7
          comp=Z,132nm,20.5s,baz=55,slow=36
          comp=Z,5.4nm,0.8s
CHNA  Chernabura Isl    85.03   0  P      P       07 13 01.6  -1.3
          baz=360
JOW   Kunigami          85.08  59  LR     LR      07 53 31.3
          comp=Z,138nm,18.1s,baz=338,slow=38
SDV   Santo Domingo     85.38 278  P      P       07 13 06.4  +0.8
          comp=Z,8.2nm,0.3s,baz=36,slow=5.0,SNR=3.9
SDV                                LR     LR      07 46 16.6
          comp=Z,74nm,21.2s,baz=63,slow=32
          comp=Z,8.2nm,0.3s
PDAR  Pinedale Array    85.74 326  P      P       07 13 07.4  +0.4
          comp=Z,1.6nm,0.6s,baz=50,slow=4.6,SNR=17
PDAR                               LR     LR      07 54 10.4
          comp=Z,197nm,18.6s,baz=20,slow=38
          comp=Z,1.6nm,0.6s
UNV   Unalaska Valle    85.81   4  P      P       07 13 05.0  -1.8
          baz=354
WAH2  Wahluke Slope     86.21 334  P      P       07 13 09.5  +0.6
IPMB  Ipameri, GO       86.47 243 eP      P       07 13 11.5  +0.9
NIKH  Nikolski High     86.52   6  P      P       07 13 08.0  -2.4
          baz=353
PV10  Paradox Valley    89.07 323  P      P       07 13 24.2  +1.0
ELK   Elko              89.78 328  LR     LR      07 57 29.0
          comp=Z,262nm,18.1s,baz=32,slow=38
ANMO  Albuquerque       90.58 319  P      P       07 13 31.8  +1.5
ANMO  Albuquerque       90.58 319  LR     LR      07 53 37.3
          comp=Z,171nm,21.4s,baz=148,slow=35
ANMO  Albuquerque       90.58 319  P      P       07 13 31.8  +1.5
ANMO                               pmax   pmax
          comp=Z,7.0nm,1.4s
ROSC  El Rosal          90.77 277  LR     LR      07 51 38.9
          comp=Z,101nm,18.5s,baz=64,slow=34
NVAR  Mina Array Bea    92.99 329  P      P       07 13 42.2  +0.9
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          comp=Z,0.7nm,0.7s,baz=35,slow=5.4,SNR=4.0
NVAR                               LR     LR      07 59 21.1
          comp=Z,324nm,18.2s,baz=16,slow=38
          comp=Z,0.7nm,0.7s
JCJ   Chichijima        93.50  50  LR     LR      07 57 53.4
          comp=Z,90nm,21.4s,baz=334,slow=37
TXAR  Lajitas Array     93.52 314  P      P       07 13 44.2  +0.4
TXAR  Lajitas Array     93.52 314  P      P       07 13 45.5  +1.8
          comp=Z,4.0nm,0.8s,baz=70,slow=3.8,SNR=43
TXAR                               LR     LR      07 57 14.1
          comp=Z,91nm,18.4s,baz=40,slow=36
          comp=Z,4.0nm,0.8s
SIV   San Ignacio       94.20 253  LR     LR      07 55 32.5
          comp=Z,121nm,21.0s,baz=114,slow=35
JTS   Las Juntas de     95.09 288  LR     LR      07 52 57.5
          comp=Z,90nm,20.1s,baz=61,slow=33
PFO   Pinyon Flats O    96.36 325  LR     LR      08 00 55.5
          comp=Z,175nm,18.4s,baz=34,slow=38
DAV   Davao City (W)    96.55  75  LR     LR      08 02 19.7
          comp=Z,79nm,20.7s,baz=328,slow=38
CMIG  Matias Romero     97.29 300  LR     LR      07 59 40.5
          comp=Z,109nm,20.5s,baz=22,slow=36
CPUP  Villa Florida     98.31 243  LR     LR      08 00 56.8
          comp=Z,28nm,18.1s,baz=274,slow=37
LPAZ  La Paz            99.59 257  LR     LR      07 57 49.5
          comp=Z,75nm,21.2s,baz=66,slow=35
KAPI  Kappang          100.05  88  LR     LR      08 06 21.2
          comp=Z,32nm,18.3s,baz=300,slow=40
SYO   Syowa Base       110.09 173⇓ePdiff  Pdif    07 14 56.7  +0.1
SYO   Syowa Base       110.09 173⇑ePP     PP      07 19 34.4  +2.0
PLCA  Paso Flores      115.73 237  PKP    PKPdf   07 19 09.2  -0.6
          comp=Z,1.0nm,0.9s,baz=102,slow=4.6,SNR=3.2
WRA   Warramunga Arr   120.40  91  PKP    PKPdf   07 19 18.4  -1.0
          comp=Z,2.6nm,0.9s,baz=301,slow=2.0,SNR=7.6
ASAR  Alice Springs    122.19  95  PKP    PKPdf   07 19 22.1  -0.6
          comp=Z,7.4nm,0.8s,baz=310,slow=1.5,SNR=59
QSPA  South Pole Qui   130.36 180  PKP    PKPdf   07 19 36.1  -0.9
          comp=Z,2.8nm,1.0s,baz=240,slow=4.4,SNR=5.5
QSPA                               PP     PP      07 21 52.7  +1.1
          comp=Z,1.4nm,1.0s,baz=256,slow=4.2,SNR=3.4
STKA  Stephens Creek   132.24  99  PKP    PKPdf   07 19 41.4  -0.3
          comp=Z,3.8nm,0.7s,baz=327,slow=6.0,SNR=2.9
DZM   Mont Dzumac      145.66  68  PKPbc  PKPab   07 20 07.1  +0.1
          comp=Z,9.8nm,0.7s,baz=163,slow=5.9,SNR=6.7
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TIR ***01*** *07:03:00.5, 40°.49N×20°.80E, h0km, Ml3.5/6*
THE ***01*** *07:03:01.6, 40°N±2°×2°1E±°, h0km±3km, M3.1/4, MLh3.1/4*
SKO ***01*** *07:03:04.0, 40°.55N×20°.85E, h8km, ML3.5*
ISC 01 07:03:01.9±1.1**, 40°.50N**±0°.02×**20°.81E**±0°.02**, h2**km±11km**,**
n23, σ**0ˢ87**/38**, 2C, Greece-Albania border region**

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Code  Station Name       Δ°   AZ°    Phase ID          Time       Res
                                     Op     ISC       h  m  s     ISC
KBN   Korca              0.12 351    Pg     Pg      07 03 03.3  -1.0
KBN                                  Sg     Sg      07 03 05.3  -0.7
KBN                                  AML    AML     07 03 08.2
          148nm,0.5s
NEST  Nestorio           0.20 116    Pg     Pg      07 03 05.3  -0.4
NEST                                 Sg     Sg      07 03 08.7  +0.4
NEST                                 AML    AML     07 03 10.1
          37nm,0.6s
NEST  Nestorio           0.20 116    P      Pg      07 03 05.5  -0.2
NEST                                 S      Sg      07 03 08.8  +0.5
LSK   Leskovik           0.39 205    Pg     Pg      07 03 07.7  -1.5
LSK                                  Sg     Sg      07 03 15.1  +0.8
LSK                                  AML    AML     07 03 21.4
          25nm,0.7s
PENT  Pentalofos         0.39 141    P      Pg      07 03 09.2  -0.2
PENT                                 S      Sg      07 03 15.3  +0.8
OHR   Ohrid              0.61 359    P      Pg      07 03 13.5   0.0
OHR                                  S      Sg      07 03 22.8  +1.3
OHR   Ohrid              0.61 359⇑  iPg     Pg      07 03 13.5   0.0
OHR                                 i Sg    Sg      07 03 22.6  +1.1
OHR                                 eLg     Lg      07 03 23.2
          comp=E,3μm,0.5s
OHR                                 eLg     Lg      07 03 25.0
          comp=N,2μm,0.4s
KPRO  Kipourio           0.69 142    P      Pg      07 03 15.1   0.0
KPRO                                 S      Sb      07 03 26.0  -0.7
KZN   Kozani             0.76 105    P      Pg      07 03 16.1  -0.2
KZN                                  S      Sb      07 03 28.4  -0.2
SRN   Sarande            0.88 225    Pg     Pg      07 03 18.0  -0.7
SRN                                  Sg     Sb      07 03 32.4  +0.4
SRN                                  AML    AML     07 03 40.2
          comp=N,3.3nm,0.8s
VLO   Vlora              1.01 269    Pg     Pg      07 03 20.1  -1.0
IGT   Igoumenitsa        1.03 201    Pn     Pg      07 03 21.1  -0.6
IGT                                  Sn     Sb      07 03 35.9  -0.7
IGT   Igoumenitsa        1.03 201   ePg     Pn      07 03 24.2  +0.8
TIR   Tirane             1.11 320    Pn     Pg      07 03 23.1  -0.1
TIR                                  Sn     Sn      07 03 40.1  -0.3
TIR                                  AML    AML     07 03 48.4
          comp=N,2.3nm,0.8s
TIR   Tirane             1.11 320   ePg     Pb      07 03 23.9  +0.1
PHP   Peshkopia          1.22 347    Pg     Pg      07 03 23.6  -1.5
SKO   Skopje             1.54  18⇑  iPg     Pb      07 03 30.8  -0.4
SKO                                 i Sg    Sg      07 03 52.7  +1.2
VAY   Valandovo          1.56  58   ePg     Pn      07 03 30.1  -0.6
VAY                                 i Sg    Sg      07 03 52.8  +0.7
VAY                                 eLg     Lg      07 03 56.1
          comp=E,403nm,0.7s
PUK   Puka               1.69 336    Pn     Pb      07 03 33.8   0.0
PUK                                  Sn     Sg      07 03 58.6  +2.4
PUK                                  AML    AML     07 03 59.0
          comp=E,2.9nm,1.3s
PUK                                  AML    AML     07 04 03.4
          comp=E,2.6nm,0.9s
KNT   Kendrikon          1.71  67   ePn     Pn      07 03 32.9  +0.1
KNT                                 i Sg    Sg      07 03 57.2  +0.3
SCTE  Santa Cesarea      1.84 257    Sn     Sg      07 04 02.7  +1.5
ULC   Ulcinj             1.88 322    Pn     Pb      07 03 37.0   0.0
KKB   Krupnik            2.20  52   eLg     Lg      07 04 49.9
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TIR ***01*** *07:06:21.0, 40°.49N×20°.77E, h6km±1km, Ml3.1/7*
THE ***01*** *07:06:21.7, 41°N±1°×2°1E±°, h0km±1km, M3.0/18,*
MLh3.0/18
SKO ***01*** *07:06:23.4, 40°.49N×20°.85E, h5km, ML3.0*
ATH ***01*** *07:06:23.1, 40°.41N×20°.90E, h6km±1km, ML2.9/10,*
Manual Solution by N.Liadopoulou First location:
2019/06/01 07:07:08, This location: 2020/06/11 09:29:53
ML Amplitudes are expressed in micrometers, All
distances are expressed in degrees Latitude uncertainty: 1
km; Longitude uncertainty: 1 km
ISC 01 07:06:21.9±0.8**, 40°.49N**±0°.02×**20°.82E**±0°.02**, h8**km±6km**,**
n59, σ**1ˢ05**/83**, Greece-Albania border region**

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Code  Station Name       Δ°   AZ°    Phase ID          Time       Res
                                     Op     ISC       h  m  s     ISC
KBN   Korca              0.14 348    Pg     Pg      07 06 23.7  -1.2
KBN                                  Sg     Sg      07 06 25.8  -1.2
KBN                                  AML    AML     07 06 31.8
          25nm,0.6s
NEST  Nestorio           0.19 113    Pg     Pg      07 06 25.8  +0.1
NEST                                 Sg     Sb      07 06 30.0  +1.5
NEST                                 AML    AML     07 06 31.3
          15nm,0.4s
NEST                                 AML    AML     07 06 31.5
          14nm,0.2s
NEST  Nestorio           0.19 113    P      Pg      07 06 25.9  +0.1
NEST                                 S      Sb      07 06 30.0  +1.5
NEST  Nestorio           0.19 113    P      Pg      07 06 25.8  +0.1
NEST                                 S      Sg      07 06 27.9  -0.5
LSK   Leskovik           0.38 207    Pg     Pg      07 06 28.6  -0.8
LSK                                  Sg     Sg      07 06 34.2  -0.1
LSK                                  AML    AML     07 06 37.3
          23nm,0.4s
PENT  Pentalofos         0.38 140    P      Pg      07 06 29.0  -0.4
PENT                                 S      Sg      07 06 35.1  +0.8
PENT  Pentalofos         0.38 140    P      Pg      07 06 28.9  -0.4
PENT                                 S      Sg      07 06 33.1  -1.2
OHR   Ohrid              0.62 358    P      Pg      07 06 33.5  -0.4
OHR                                  S      Sg      07 06 41.9  -0.2
OHR   Ohrid              0.62 358   i Pg    Pg      07 06 33.5  -0.4
OHR                                 i Sg    Sg      07 06 43.1  +1.0
OHR                                 eLg     Lg      07 06 43.5
          comp=E,901nm,0.6s
OHR                                 eLg     Lg      07 06 43.7
          comp=N,338nm,0.5s
KPRO  Kipourio           0.68 142    P      Pg      07 06 34.3  -0.6
KPRO                                 S      Sb      07 06 45.8  +0.4
KPRO  Kipourio           0.68 142    P      Pg      07 06 34.1  -0.8
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KZN	**Kozani**	0.75	104	P	Pb	07 06 36.6	-0.5
KZN				S	Sn	07 06 47.7	-2.6
KZN	**Kozani**	0.75	104	P	Pb	07 06 37.2	+0.1
MSVA	**Metsovo**	0.77	159	P	Pg	07 06 36.8	+0.1
JAN	**Janina**	0.83	179	P	Pg	07 06 37.8	-0.1
JAN				S	Sg	07 06 47.5	-1.2
SRN	**Sarande**	0.88	226	Pg	Pb	07 06 37.8	-1.5
SRN				Sg	Sb	07 06 51.4	+0.2
SRN				AML	AML	07 06 54.1	
	comp=N,2.7nm,0.5s						
SRN				AML	AML	07 06 55.4	
	comp=N,1.4nm,0.5s						
KTI	**Kastanea**	0.99	95	P	Pb	07 06 40.5	-0.8
IGT	**Igoumenitsa**	1.03	202	Pg	Pb	07 06 41.9	0.0
IGT				Sg	Sn	07 06 57.6	+0.5
IGT				AML	AML	07 07 04.1	
	comp=N,1.1nm,0.5s						
IGT	**Igoumenitsa**	1.03	202	P	Pb	07 06 40.7	-1.2
IGT				S	Sn	07 06 56.5	-0.6
IGT	**Igoumenitsa**	1.03	202	*i* Pg	Pb	07 06 40.3	-1.6
IGT				*i* Sg	Sn	07 06 58.2	+1.1
IGT	**Igoumenitsa**	1.03	202	P	Pn	07 06 42.3	-0.3
KEK	**Kerkira**	1.10	226	P	Pb	07 06 43.5	+0.3
KEK				S	Sg	07 06 58.5	+1.1
KEK	**Kerkira**	1.10	226	P	Pg	07 06 44.3	+1.2
TIR	**Tirane**	1.12	320	Pn	Pn	07 06 42.0	-1.9
TIR	**Tirane**	1.12	320	*i* Pg	Pn	07 06 42.1	-1.8
TIR				*i* Sg	Sg	07 07 02.4	+4.4
TETR	**Tetrakomo, Epi**	1.19	163	P	Pg	07 06 45.0	+0.2
PHP	**Peshkopia**	1.23	347	Pg	Pn	07 06 43.2	-2.2
THL	**Klokotos Trika**	1.30	135	P	Pb	07 06 45.8	-0.7
THL	**Klokotos Trika**	1.30	135	P	Pb	07 06 46.3	-0.2
TYRN	**Tyrnavos**	1.33	125	P	Pb	07 06 46.9	-0.1
TYRN	**Tyrnavos**	1.33	125	P	Pb	07 06 46.6	-0.4
SKO	**Skopje**	1.55	17	*i* Pg	Pb	07 06 51.2	+0.4
SKO				*i* Sg	Sg	07 07 11.6	-0.2
VAY	**Valandovo**	1.56	57	*i* Pg	Pb	07 06 50.1	-0.9
VAY				*i* Sg	Sg	07 07 13.9	+1.7
VAY				*e*Lg	Lg	07 07 14.6	
	comp=N,121nm,0.7s						
VAY				*e*Lg	Lg	07 07 17.9	
	comp=E,137nm,0.7s						
AMPL	**Ampelaki**	1.59	169	P	Pb	07 06 51.4	-0.2
THE	**Thessaloniki**	1.64	84	*e*Pn	Pb	07 06 52.1	-0.1
THE				*i* Sg	Sg	07 07 16.0	+1.5
TSLK	**Tsoukalades, L**	1.67	185	P	Pb	07 06 52.4	-0.4
LKD2	**Lefkada island**	1.70	184	P	Pb	07 06 52.9	-0.5
LKD2	**Lefkada island**	1.70	184	P	Pb	07 06 53.2	-0.3
PUK	**Puka**	1.70	336	Pn	Pb	07 06 54.2	+0.7
PUK				Sn	Sg	07 07 17.9	+1.2
PUK				AML	AML	07 07 27.5	
	comp=E,0.8nm,0.6s						
KNT	**Kendrikon**	1.71	66	P	Pn	07 06 51.8	-0.2
KNT	**Kendrikon**	1.71	66	*e*Pn	Pb	07 06 52.3	-1.3
KNT				*e*Sn	Sg	07 07 17.4	+0.5
HORT	**Hortiatis**	1.74	86	P	Pn	07 06 51.9	-0.5
EVR	**Evrytania**	1.74	154	P	Pb	07 06 54.1	0.0
EVR	**Evrytania**	1.74	154	P	Pn	07 06 52.7	+0.2
NYDR	**Nydri-Lefkada**	1.78	183	P	Pb	07 06 53.7	-0.9
NYDR	**Nydri-Lefkada**	1.78	183	P	Pb	07 06 53.8	-0.8
MAKR	**Makrakomi, Fth**	1.79	145	P	Pb	07 06 53.7	-1.1
MAKR	**Makrakomi, Fth**	1.79	145	P	Pn	07 06 53.1	+0.1
AGG	**Agios Georgios**	1.87	141	P	Pb	07 06 55.0	-1.2
AGG	**Agios Georgios**	1.87	141	P	Pn	07 06 54.5	+0.3
EVGI	**Lefkada island**	1.87	184	P	Pb	07 06 55.3	-1.0
PVO	**Paravola**	1.95	164	P	Pn	07 06 55.2	0.0
BCI	**Bajram Curri**	1.96	343	Pn	Pb	07 06 58.8	+0.9
BCI				Sn	Sg	07 07 25.0	+0.1
BCI				AML	AML	07 07 33.0	
	comp=E,1.0nm,1.1s						
FSK	**Fiskardo**	2.04	186	P	Pn	07 06 57.0	+0.6
ANX	**Ano Chora**	2.08	156	P	Pn	07 06 58.0	+0.9
KKB	**Krupnik**	2.20	51	*e*Pn	Pn	07 06 59.5	+0.8
AXAR	**Agios Charalam**	2.23	140	P	Pn	07 06 59.9	+0.8
AXS	**Araxos**	2.33	169	P	Pb	07 07 03.0	-1.1
MMB	**Musomishta**	2.45	64	*e*Pn	Pn	07 07 03.1	+0.9

*ISK **01** 07:08:40.7, 39°73N×25°65E, h8^{km}, ML2.5/17*

*ATH **01** 07:08:40.7, 39°73N×25°65E, h9^{km}±1^{km}, ML2.5/6, Manual Solution by N.Liadopoulou First location: 2019/06/01 07:09:20, This location: 2019/06/03 11:07:30 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

*AFAD **01** 07:08:41.4, 39°68N×25°70E, h7^{km}±1^{km}, ML2.4*

ISC 01 07:08:40.9±1.0**, 39°73N**±0°02×**25°65E**±0°02**, h12**^{km}±9^{km}**,**
n45, σ0^{s}45/60**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	0.33	70	Pg	Pg	07 08 47.7	+0.1
BOZC				Sg	Sg	07 08 52.9	+0.9
BOZC	**Bozcaada**	0.33	70	P	Pg	07 08 47.7	+0.1
BOZC				P	Pb	07 08 47.8	-0.9
KOCA	**Canakkale, Ayv**	0.44	121	P	Pg	07 08 49.3	-0.2
GPNR	**Gulpinar-Canak**	0.46	126	Pg	Pg	07 08 50.2	+0.2
GPNR				Sg	Sb	07 08 57.3	-0.4
GOAD	**anakkale-G¶**	0.48	25	P	Pg	07 08 50.1	-0.2
GADA	**Gvkgeada**	0.50	22	Pg	Pg	07 08 51.0	+0.3
GADA				Sg	Sb	07 08 58.6	-0.3
ECEA	**Canakkale, Ece**	0.51	52	P	Pn	07 08 53.3	-0.7
ECEA				S	Sb	07 08 59.0	-0.2
EZN	**Ezine**	0.53	79	Pg	Pg	07 08 51.5	+0.3
EZN				Sg	Sb	07 08 59.4	-0.3
SIGR	**SIGRI**	0.54	163	Pg	Pg	07 08 51.4	-0.1
SIGR				Sg	Sb	07 08 59.6	-0.4
SIGR	**SIGRI**	0.54	163	P	Pg	07 08 51.3	-0.1
EFSA	**Agios Efstrati**	0.55	250	P	Pg	07 08 51.2	-0.4
EFSA				S	Sg	07 08 58.5	-0.3
CNKL	**anakkale-Mer**	0.66	59	P	Pn	07 08 55.8	-0.2
CNKL				P	Pn	07 08 55.8	-0.2
BAYC	**CANAKKALE_Bayr**	0.69	89	P	Pg	07 08 54.2	-0.1
BAYC				S	Sg	07 09 03.7	+0.3
COMU	**Canakkale**	0.73	59	Pg	Pb	07 08 55.6	0.0
SMTH	**Samothraki Isl**	0.75	353	P	Pg	07 08 55.4	-0.1
AYVA	**Ayvalik**	0.91	117	P	Pg	07 08 57.7	-0.7
AYVA				S	Sn	07 09 12.6	+0.1
AYVA				*i* IAML		07 09 14.0	
	comp=N,188nm,0.6s						
GELI	**Tayfur-Gelibol**	0.92	43	Pg	Pb	07 08 58.9	+0.1
GELI				Sg	Sb	07 09 12.2	+1.2
CAVK	**Edirne/Enez-Ca**	1.04	22	P	Pn	07 09 02.2	+0.9
LPK	**Lapseki**	1.07	52	Pg	Pb	07 09 01.6	+0.3
LPK				Sg	Sn	07 09 17.0	+0.5
ENEZ	**Enez**	1.08	21	Pn	Pn	07 09 02.0	+0.2
YAYO	**Edremit-Balk**	1.10	96	Pn	Pn	07 09 02.3	+0.1
CANM	**Can-anakkale**	1.11	75	Pn	Pn	07 09 02.6	+0.3
BUHA	**Balikesir, Bur**	1.12	101	P	Pg	07 09 02.2	-0.3
BUHA				S	Sg	07 09 16.3	-0.9
BUHA				*i* IAML		07 09 24.0	
	comp=N,84nm,0.7s						
BUHA				*i* IAML		07 09 24.0	
	comp=E,68nm,0.4s						
THAS	**Thassos island**	1.13	321	P	Pg	07 09 02.3	-0.4
ALEX	**Alexandroupoli**	1.14	10	P	Pg	07 09 02.2	-0.7
ERIK	**Erikli-Kesan**	1.15	35	Pn	Pg	07 09 02.7	-0.3
DKL	**Dikili**	1.17	124	Pn	Pn	07 09 03.6	+0.5
DKL	**Dikili**	1.17	124	P	Pn	07 09 03.3	+0.2
SKY	**Skiros Island**	1.20	226	P	Pb	07 09 03.4	-0.2
ALN	**Alexandroupoli**	1.21	14	Pn	Pn	07 09 03.9	+0.3
IZMD	**zmir-Dikili-**	1.24	126	P	Pb	07 09 04.2	0.0
YENI	**Yenice-Canakka**	1.24	80	Pn	Pg	07 09 04.7	-0.1
ZEDA	**zmir-Bergama**	1.34	124	P	Pg	07 09 06.9	+0.2
ZEDA				*i* IAML		07 09 15.0	
	comp=N,58nm,2.1s						
ZEDA				S	Sn	07 09 23.7	+0.5
KESN	**Edirne-Kesan**	1.35	35	P	Pn	07 09 04.9	-1.1
XANC	**Avdira**	1.36	337	P	Pn	07 09 06.0	+0.3
OUR	**Ouranopolis**	1.42	296	Pn	Pb	07 09 07.4	+0.1
OUR	**Ouranopolis**	1.42	296	P	Pn	07 09 06.7	+0.2
RDO	**Rodhopi**	1.42	357	Pn	Pb	07 09 07.2	-0.1
RDO	**Rodhopi**	1.42	357	P	Pn	07 09 06.4	-0.1
RKY	**Sarkoy-Tekirda**	1.51	50	Pn	Pn	07 09 08.1	+0.2
KAVA	**Kavala**	1.54	326	P	Pn	07 09 07.8	-0.4
KYMI	**Kymi, Euboea I**	1.63	228	P	Pn	07 09 10.0	+0.6
KOKK	**Kokkinochori,**	1.67	311	P	Pn	07 09 10.1	+0.1
EDC	**Edincik**	1.81	69	Pn	Pb	07 09 13.3	-0.6
SRS	**Serrai**	2.10	312	P	Pn	07 09 16.3	+0.4

WEL 01 07:09:09.2±1.1**, 32°S**±16°×**18°0W**±3°8**, h470**^{km}±26^{km}**,**
M4.1/6**, mB4.3**/6**, ML4.7**/9**, MLv4.5**/5**, Mw(mB)3.5**/6**, Error ellipse: s-maj=52.5km s-min=12.4km az=108.3, confirmed, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	6.19	193	P	P	07 10 46.4	+0.4
WMGZ				S	S	07 12 07.9	+2.6
HAZ	**Te Kaha**	6.27	197	P	P	07 10 46.4	-0.4
HAZ				S	S	07 12 06.6	-0.2
PKGZ	**Pakihiroa**	6.31	195	P	P	07 10 47.0	-0.3
PKGZ				S	S	07 12 07.6	+0.1
PUZ	**Puketiti**	6.47	193	P	P	07 10 49.4	+0.5
PUZ				S	S	07 12 10.5	0.0
RUGZ	**Raukumara Rang**	6.50	198	P	P	07 10 48.6	-0.7
OPRZ	**Ohinepanea**	6.73	205	P	P	07 10 53.1	+1.6
CNGZ	**Carnagh Statio**	6.88	193	P	P	07 10 52.7	-0.2
CNGZ				S	S	07 12 18.0	-0.1
MWZ	**Matawai**	6.88	197	P	P	07 10 53.2	+0.1
MWZ				S	S	07 12 19.4	+1.1
URZ	**Urewera**	6.93	200	P	P	07 10 52.5	-1.0
URZ				S	S	07 12 18.1	-1.0
MUGZ	**Murupara**	7.23	202	P	P	07 10 57.0	+0.3
MUGZ				S	S	07 12 25.4	+0.4
SNGZ	**Shannon Statio**	7.35	197	P	P	07 10 58.2	+0.2
SNGZ				S	S	07 12 29.3	+2.0
KNZ	**Kokohu**	7.50	195	P	P	07 10 59.3	-0.2
KNZ				S	S	07 12 31.1	+1.0
TLZ	**Tolley Road**	7.55	209	P	P	07 11 01.9	+1.8
MHGZ	**Mahia Peninsul**	7.58	193	P	P	07 11 01.8	+1.4
WHHZ	**Waihua**	7.66	197	P	P	07 11 01.9	+0.8
WHHZ				S	S	07 12 35.0	+1.8
ARHZ	**Aropaoanui**	7.90	198	P	P	07 11 04.2	+0.5
ARHZ				S	S	07 12 36.9	-0.8
BKZ	**Black Stump Fm**	7.95	201	P	P	07 11 04.2	-0.1
HIZ	**Hauiti**	7.99	211	P	P	07 11 07.4	+2.7
OTVZ	**Oturere**	8.22	205	P	P	07 11 06.5	-0.8
PXZ	**Pawanui**	8.65	197	P	P	07 11 12.2	+0.5
PXZ				S	S	07 12 53.3	+0.9

*IDC **01** 07:09:19.8±2.6, 16°36N×92°54W, h142^{km}±57^{km}, mb3.2/2, mbtmp3.5/5, Error ellipse: s-maj=166.9km s-min=20.4km az=34.0*

*GCG **01** 07:09:20.5±1.9, 15°99N×92°91W, h175^{km}±13^{km}, MD4.3, ML4.0*

*MEX **01** 07:09:22.0±0.9, 16°00N×92°94W, h183^{km}±5^{km}, MD4.3*

ISC 01 07:09:21.0±0.8**, 15°99N**±0°05×**92°96W**±0°04**, h177**^{km}±7^{km}**,**
n58, σ2^{s}11/104**, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.38	221	*i* P	Pn	07 09 45.4	+0.4
PCIG				*e*S	Sn	07 10 04.1	+0.6
TGBT	**Tuxtla Gutierr**	0.79	351	*e*P	Pn	07 09 48.0	+1.0
TGBT				*e*S	Sn	07 10 06.6	-0.5
TGIG		0.80	349	*e*P	Pn	07 09 47.7	+0.7
TGIG				*e*S	Sn	07 10 06.8	-0.6
TGIG		0.80	349	*i* P	Pn	07 09 47.8	+0.7
TGIG				*i* S	Sn	07 10 06.6	-0.7
TGIG				IAML		07 10 08.1	
	comp=E,2µm,0.2s						
CCIG	**Comitan**	0.84	70	*e*P	Pn	07 09 48.1	+0.6
CCIG				*e*S	Sn	07 10 08.7	+0.8
CCIG	**Comitan**	0.84	70	*i* P	Pn	07 09 48.2	+0.6
CCIG				*i* S	Sn	07 10 08.2	+0.3
CCIG				IAML		07 10 09.4	
	comp=N,636nm,0.6s						
PAVE	**Pavencul**	1.10	136	*e*P	Pn	07 09 49.4	-0.1
PAVE				*e*S	Sn	07 10 11.1	-0.3
PATR	**El Naranjo**	1.12	141	*e*P	Pn	07 09 49.0	-0.7
PATR				*e*S	Sn	07 10 11.1	-0.7
THIG		1.27	148	*e*P	Pn	07 09 50.9	+0.2
THIG				*e*S	Sn	07 10 13.6	0.0
THIG		1.27	148	*i* P	Pn	07 09 50.9	+0.2
THIG				*e*S	Sn	07 10 13.5	0.0
SMCA	**Catarina**	1.42	143	*e*P	Pn	07 09 51.5	-0.5
SMCA				*i* S	Sn	07 10 15.0	-0.9
SMCA				IAML		07 10 15.6	
	comp=E,1µm,0.4s						
HUEH	**Huehuetenango**	1.56	115	*e*P	Pn	07 09 53.2	-0.3
HUEH				*e*S	Sn	07 10 17.7	-0.9
HUEH	**Huehuetenango**	1.56	115	*i* P	Pn	07 09 53.3	-0.2
HUEH				*i* S	Sn	07 10 17.3	-1.3
HUEH				IAML		07 10 23.0	
	comp=E,1µm,0.5s						
RTAL	**Retalhuleu**	1.90	140	*e*P	Pn	07 09 57.2	+0.3
RTAL				*e*S	Sn	07 10 23.7	-1.0
CMIG	**Matias Romero**	2.14	301	P	Pn	07 10 00.2	+0.8
	comp=E,50nm,0.3s,baz=119,slow=13,SNR=250						
CMIG				S	Sn	07 10 29.0	-0.3
	comp=E,190nm,0.3s,baz=341,slow=21,SNR=68						
CMIG	**Matias Romero**	2.14	301	*e*P	Pn	07 10 00.3	+0.8
CMIG				*e*S	Sn	07 10 29.1	-0.3
STG8	**El Palmar, Qui**	2.18	134	*e*P	Pn	07 09 56.2	-4.1
STG8				IAML		07 10 30.8	
	comp=N,579nm,0.2s						
TUIG	**Tuzandepetl**	2.46	326	*e*S	Sn	07 10 35.4	-0.6
AVCB	**Coban**	2.51	102	*i* S	Sn	07 10 34.0	-3.1
AVCB				IAML		07 10 35.5	
	comp=E,1µm,0.6s						
HUIG	**Huatulco**	3.04	266	*e*P	Pn	07 10 09.6	-0.4
HUIG				*e*S	Sn	07 10 46.2	-2.0
HUIG	**Huatulco**	3.04	266	*i* P	Pn	07 10 09.6	-0.4
HUIG				*i* S	Sn	07 10 46.0	-2.1
PETF	**Flores**	3.11	72	*e*P	Pn	07 10 09.5	-1.3
PETF				*e*S	Sn	07 10 45.7	-4.0
PETF	**Flores**	3.11	72	*e*P	Pn	07 10 09.6	-1.3
PETF				IAML		07 10 47.5	
	comp=E,296nm,0.8s						
NEUV	**Arroyo Zacate**	3.21	303	*e*P	Pn	07 10 12.8	+0.6
NEUV				*e*S	Sn	07 10 50.3	-1.8
PMUV	**Sontecomapan**	3.27	321	*e*P	Pn	07 10 12.0	-1.0
PMUV				*e*S	Sn	07 10 50.9	-2.7
PANG	**Puerto Angel**	3.40	265	*e*P	Pn	07 10 14.0	-0.4
PANG				*e*S	Sn	07 10 55.0	-1.1
OXLC	**Oaxaca**	3.75	287	*e*P	Pn	07 10 22.7	+3.7
OXLC				*e*S	Sn	07 11 04.6	+0.3
OXBJ	**Oaxaca**	3.77	287	*e*P	Pn	07 10 20.4	+1.1
OXBJ				*e*S	Sn	07 11 03.8	-1.0
VHO	**Vista Hermosa**	3.77	287	*e*P	Pn	07 10 21.6	+2.2
VHO				*e*S	Sn	07 11 04.7	-0.3
PEIG	**Puerto Escondi**	4.03	271	*e*P	Pn	07 10 22.7	+0.3
PEIG				*e*S	Sn	07 11 08.6	-1.8
TOIG	**Toxpalan**	4.45	299	*e*P	Pn	07 10 29.7	+1.8
TOIG				*e*S	Sn	07 11 19.1	-1.2
YOIG	**Yosondua**	4.48	282	*e*P	Pn	07 10 30.6	+2.0
YOIG				*e*S	Sn	07 11 21.0	-0.4
TXIG	**Tlaxiaco**	4.78	286	*e*P	Pn	07 10 34.8	+2.5
TXIG				*e*S	Sn	07 11 23.0	-5.2
TPIG	**Tehuac#an**	4.85	300	*e*P	Pn	07 10 35.0	+1.8
TPIG				*e*S	Sn	07 11 27.8	-2.0
LVIG	**Laguna Verde**	4.96	319	*e*P	Pn	07 10 33.5	-0.9
LVIG				*e*S	Sn	07 11 28.0	-4.0
JAUV	**Jalcomulco**	4.97	313	*e*P	Pn	07 10 34.8	+0.2
JAUV				*e*S	Sn	07 11 28.9	-3.4
PNIG	**Pinotepa**	4.98	275	*e*P	Pn	07 10 35.8	+1.0
PNIG				*e*S	Sn	07 11 30.0	-2.6
HLIG	**Huajuapan de L**	4.98	292	*e*P	Pn	07 10 37.3	+2.3
HLIG				*e*S	Sn	07 11 30.8	-2.1
FTIG	**Fresnillo de T**	5.30	292	*e*P	Pn	07 10 41.8	+2.7
FTIG				*e*S	Sn	07 11 37.6	-2.6
TLIG	**Tlapa**	5.59	287	*e*P	Pn	07 10 45.5	+2.7
TLIG				*e*S	Sn	07 11 46.1	-1.0
CRIG	**Cruz Grande**	5.97	278	*e*P	Pn	07 10 48.9	+1.3
CRIG				*e*S	Sn	07 11 53.6	-2.1
PBCV	**Popocatepetl**	6.12	300	*e*P	Pn	07 10 48.9	-1.0
PBCV				*e*S	Sn	07 11 53.9	-5.8
PPPT	**Popocatepetl**	6.16	300	*e*P	Pn	07 10 54.6	+3.9
PPPT				*e*S	Sn	07 11 51.7	-9.5
PPPT				*e*S		07 11 58.2	
PBXN	**Popocatepetl**	6.21	300	*e*P	Pn	07 10 55.7	+4.4
PBXN				*e*S	Sn	07 12 00.3	-1.9
PPM	**Popocatepetl**	6.21	300	*e*P	Pn	07 10 55.4	+4.2
PPM				*e*S	Sn	07 12 05.9	+3.6
YAIG	**Yautepec**	6.49	297	*e*P	Pn	07 10 58.0	+3.4
YAIG				*e*S	Sn	07 12 06.8	-1.5
DAIG	**Los Arroyos**	6.50	280	*e*P	Pn	07 10 56.7	+2.1
DAIG				*e*S	Sn	07 12 07.1	-1.2
MEIG	**Mezcala**	6.66	288	*e*P	Pn	07 10 59.8	+3.0
MEIG				*e*S	Sn	07 12 08.4	-3.8
PLIG	**Platanillo**	6.69	292	*e*P	Pn	07 11 00.6	+3.4
PLIG				*e*S	Sn	07 12 10.1	-3.0
MAVM	**Malinalco, Edo**	6.90	296	*e*P	Pn	07 11 03.6	+3.6
MAVM				*e*S	Sn	07 12 16.6	-1.4
DEIG	**Demacu**	7.19	307	*e*P	Pn	07 11 05.8	+1.9
ARIG	**Puente Sto Nin**	7.42	289	*e*P	Pn	07 11 10.3	+3.5
ARIG				*e*S	Sn	07 12 28.2	-2.1
JTS	**Las Juntas de**	9.64	125	P	Pn	07 11 33.5	-2.5
	comp=E,1.6nm,0.3s,baz=318,slow=15,SNR=4.7						
MMIG	**Aquila**	10.19	284	*e*P	Pn	07 11 41.8	-1.3
CEGR	**Campo Tres**	10.92	290	*e*P	P	07 11 59.5	-0.7
TXAR	**Lajitas Array**	16.54	325	P	P	07 13 02.5	+0.1
	comp=E,0.2nm,0.6s,baz=142,slow=13,SNR=4.3						
NVAR	**Mina Array Bea**	31.55	320	P	P	07 15 29.8	+2.9
	comp=E,0.8nm,0.7s,baz=133,slow=6.9,SNR=5.7						
	comp=E,0.8nm,0.7s						
ILAR	**Eielson Array**	60.65	337	P	P	07 19 13.6	+0.5
	comp=E,0.5nm,0.7s,baz=122,slow=6.0,SNR=8.3						
	comp=E,0.5nm,0.7s						

*THE **01** 07:10:53.9, 41°N±2°×2°1E±°, h5^{km}±2^{km}, M2.4/10, MLh2.4/10*

TIR 01 07:10:52.7, 40°49N×20°77E, h11^{km}**, Ml2.8**/4**,**
Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	**Korca**	0.14	7	Pg	Pg	07 10 55.8	-0.2
KBN				Sg	Sg	07 10 58.1	-0.3
KBN				AML	AML	07 10 58.5	
	10nm,0.1s						
KBN				AML	AML	07 10 58.9	
	9.4nm,0.1s						
NEST	**Nestorio**	0.23	108	Pg	Pg	07 10 57.8	+0.3
NEST				Sg	Sg	07 11 01.6	+0.9
NEST				AML	AML	07 11 03.7	
	5.0nm,0.5s						
NEST	**Nestorio**	0.23	108	P	Pg	07 10 57.9	+0.4
NEST				S	Sg	07 11 01.6	+0.9
LSK	**Leskovik**	0.36	201	Pg	Pg	07 10 59.9	+0.1
LSK				Sg	Sb	07 11 05.8	-1.1
LSK				AML	AML	07 11 09.5	
	6.6nm,0.5s						
PENT	**Pentalofos**	0.41	135	P	Pg	07 11 01.1	+0.3
PENT				S	Sb	07 11 07.5	-0.7
KPRO	**Kipourio**	0.70	139	P	Pb	07 11 07.3	+0.4
KPRO				S	Sb	07 11 17.7	+1.1
KZN	**Kozani**	0.79	103	P	Pb	07 11 09.0	+0.5
KZN				S	Sn	07 11 20.6	-1.1
SRN	**Sarande**	0.84	224	Pg	Pb	07 11 09.7	+0.4
SRN				Sg	Sn	07 11 23.0	+0.1
SRN				AML	AML	07 11 32.3	
	0.6nm,0.5s						
IGT	**Igoumenitsa**	1.01	199	P	Pn	07 11 13.2	+0.4
KTI	**Kastanea**	1.03	95	P	Pb	07 11 12.7	0.0
KEK	**Kerkira**	1.07	224	P	Pn	07 11 15.0	+1.3
PHP	**Peshkopia**	1.22	349	Pg	Pg	07 11 17.0	+0.8
THL	**Klokotos Trika**	1.33	133	P	Pb	07 11 17.7	+0.1
TYRN	**Tyrnavos**	1.36	124	P	Pg	07 11 18.7	-0.2
KNT	**Kendrikon**	1.75	67	P	Pn	07 11 23.7	+0.6
HORT	**Hortiatis**	1.78	86	P	Pn	07 11 24.2	+0.7
ULC	**Ulcinj**	1.87	323	Pn	Pg	07 11 27.8	-0.8
DRME	**Dracevica, Mon**	2.08	326	Pn	Pb	07 11 31.2	+0.8

*NEIC **01** 07:19:05.9±1.5, 23°6S±0°1×180°0E±0°2, h546^{km}±9^{km}, mb4.5/17, Error ellipse: s-maj=21.0km s-min=17.3km az=94.0*

*IDC **01** 07:19:07.0±2.0, 23°47S×179°91E, h561^{km}±21^{km}, mb3.8/9, mbtmp4.7/10, Error ellipse: s-maj=15.9km s-min=13.6km az=15.0*

ISC 01 07:19:04.9±0.5**, 23°53S**±0°06×**179°89E**±0°08**, h535**^{km}**, n73,**
σ1^{s}61/83**, mb4.4**/22**, 6C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	6.02	343	P	P	07 20 44.7	+1.4
RAO	**Raoul Island**	6.03	161	P	P	07 20 43.8	+0.8
GLKZ	**Green Lake**	6.04	161	P	P	07 20 43.7	+0.6
GLKZ				S	S	07 22 05.7	+2.3
FUTU	**Fugatoga**	9.37	12	P	P	07 21 15.7	-0.5
NIUE	**Niue**	10.48	67	P	P	07 21 30.6	+3.0
DZM	**Mont Dzumac**	12.49	274	P	P	07 21 51.2	+2.5
DZM	**Mont Dzumac**	12.49	274	P	P	07 21 51.1	+2.4
	11nm,0.7s,baz=82,slow=19,SNR=8.6						
OUZ	**Omahuta**	12.87	204	P	P	07 21 55.4	+3.1
WCZ	**Waipu Caves**	13.27	200	P	P	07 21 58.8	+2.3
HAZ	**Te Kaha**	14.29	187	P	P	07 22 07.3	+0.2
HAZ				S	S	07 24 37.1	-0.2
WMGZ	**Waiomatatini S**	14.30	185	P	P	07 22 09.4	+2.3
WMGZ				S	S	07 24 36.1	-1.3
PKGZ	**Pakihiroa**	14.37	186	P	P	07 22 10.2	+2.2
PKGZ				S	S	07 24 37.8	-1.1
TGRZ	**Tauranga**	14.49	192	P	P	07 22 11.3	+2.2
RUGZ	**Raukumara Rang**	14.51	187	P	P	07 22 11.0	+1.4
PUZ	**Puketiti**	14.56	185	P	P	07 22 11.6	+1.7
PUZ				S	S	07 24 39.5	-3.0
TOZ	**Tahuroa Road**	14.65	194	P	P	07 22 11.6	+0.8
KMRZ	**Kaimai**	14.66	192	P	P	07 22 15.2	+4.2
TWGZ	**Tauwhareparae**	14.69	186	P	P	07 22 13.7	+2.4
TWGZ				S	S	07 24 43.5	-1.5
URZ	**Urewera**	14.87	189	P	P	07 22 10.6	-2.5
	19nm,0.3s,baz=0.3,slow=3.3,SNR=31						
URZ				S	S	07 24 45.1	-3.2
	14nm,0.8s,baz=179,slow=23,SNR=6.0						
URZ	**Urewera**	14.87	189	P	P	07 22 10.0	-3.1
URZ				S	S	07 24 44.8	-3.5
MWZ	**Matawai**	14.89	187	P	P	07 22 12.9	-0.5
MWZ				S	S	07 24 46.8	-2.0
CNGZ	**Carnagh Statio**	14.97	185	P	P	07 22 14.9	+0.7
RRRZ	**Republican Roa**	15.04	190	P	P	07 22 15.1	+0.1
PRRZ	**Plateau Road**	15.22	191	P	P	07 22 16.5	-0.3
SNGZ	**Shannon Statio**	15.36	188	P	P	07 22 18.4	+0.2
SNGZ				S	S	07 24 59.1	+1.9
BKZ	**Black Stump Fm**	15.85	190	P	P	07 22 20.9	-2.4
TCW	**Tory Channel**	18.25	194	P	P	07 22 44.6	-0.9
RPZ	**Rata Peaks**	21.41	198	P	P	07 23 13.8	-0.5
	24nm,0.6s,baz=327,slow=1.9,SNR=14						
	24nm,0.6s						
STKA	**Stephens Creek**	34.77	248	P	P	07 25 11.6	+0.8
STKA	**Stephens Creek**	34.77	248	P	P	07 25 11.9	+1.2
	6.8nm,0.6s,baz=95,slow=11,SNR=21						
	6.8nm,0.6s						
BBOO	**Buckleboo**	39.49	246	P	P	07 25 49.1	-0.4
BBOO				IAmb	IAmb	07 26 13.8	
	comp=Z,25nm,1.5s						
AS31	**Alice Springs**	41.99	260		P	07 26 10.0	+0.5
ASAR	**Alice Springs**	41.99	260	P	P	07 26 09.0	-0.6
ASAR	**Alice Springs**	41.99	260	P	P	07 26 10.3	+0.7
	comp=Z,5.6nm,0.8s,baz=92,slow=7.3,SNR=60						
ASAR				PcP	PcP	07 27 51.8	-0.5
	comp=Z,0.6nm,0.4s,baz=97,slow=4.1,SNR=5.1						
ASAR				ScP	ScP	07 30 48.9	-3.0
	comp=Z,0.7nm,0.9s,baz=93,slow=3.4,SNR=1.5						
ASAR				S	S	07 31 49.2	-0.7
	comp=Z,1.7nm,0.7s,baz=97,slow=14,SNR=14						
	comp=Z,5.6nm,0.8s						
WB0	**Warramunga Arr**	42.32	266	P	P	07 26 12.0	-0.2
WRA	**Warramunga Arr**	42.33	266	P	P	07 26 12.5	+0.2
	comp=Z,4.2nm,0.4s,baz=89,slow=5.9,SNR=68						
	comp=Z,4.2nm,0.4s						
FORT	**Forrest**	46.34	249		P	07 26 42.7	-0.3
KNRA	**Kununurra**	48.59	270	P	P	07 26 59.6	-0.4
KNRA				IAmb	IAmb	07 27 14.4	
	comp=Z,40nm,1.4s						
VNDA	**Vanda**	54.74	185		P	07 27 44.5	+1.1
VNDA	**Vanda**	54.74	185	P	P	07 27 44.9	+1.4
	comp=Z,3.1nm,0.5s,baz=6.5,slow=7.7,SNR=33						
VNDA				PcP	PcP	07 28 37.8	0.0
	comp=Z,0.5nm,0.6s,baz=43,slow=2.4,SNR=5.8						
	comp=Z,3.1nm,0.5s						
SBA	**Scott Base**	54.74	183		P	07 27 45.2	+1.8
SBA				IAmb	IAmb	07 27 47.0	
	comp=Z,19nm,0.9s						
MORW	**Morawa**	56.91	250	P	P	07 27 59.4	0.0
MORW				IAmb	IAmb	07 27 59.9	
	comp=Z,11nm,0.6s						
CASY	**Casey**	60.40	206	P	P	07 28 21.5	-0.6
CASY				IAmb	IAmb	07 28 22.4	

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               comp=Z,12nm,0.7s
QSPA  South Pole Qui     66.55 180           P        07 29 02.1 +0.4
QSPA  South Pole Qui     66.55 180  P        P        07 29 02.5 +0.8
               comp=Z,20nm,0.6s,baz=355,slow=0.5,SNR=172
               comp=Z,20nm,0.6s
SMAI  San Martin Ant     76.49 159  P        P        07 29 59.5 +0.1
SMAI                                IAmb     IAmb     07 30 00.8
               comp=Z,12nm,0.8s
BELA  Belgrano 2         76.81 173  P        P        07 30 00.5 -0.6
BELA                                IAmb     IAmb     07 30 01.4
               comp=Z,14nm,0.9s
MAW   Mawson             78.06 200  P        P        07 30 08.2 +0.3
               comp=Z,6.5nm,0.6s,baz=134,slow=5.6,SNR=23
               comp=Z,6.5nm,0.6s
ESPZ  Base Esperanza     82.60 158  P        P        07 30 31.4 -0.3
ESPZ                                IAmb     IAmb     07 30 34.6
               comp=Z,20nm,1.3s
NVAR  Mina Array Bea     84.56  44  P        P        07 30 41.9 -0.2
               comp=Z,0.3nm,0.7s,baz=246,slow=6.9,SNR=1.2
TROLL Troll, Antarti     84.70 181 ⇑P        P        07 30 41.3 -0.9
               comp=Z,606nm,0.5s
SNAA  Sanae              85.04 179 ⇑P        P        07 30 42.3 -1.4
               comp=Z,90nm,0.5s
SNAA  Sanae              85.04 179           P        07 30 42.1 -1.6
SNAA  Sanae              85.04 179  P        P        07 30 42.6 -1.2
               comp=Z,3.0nm,0.5s,baz=214,slow=8.7,SNR=24
               comp=Z,3.0nm,0.5s
VNA3  Neumayer Olymp     85.25 177 ⇑P        P        07 30 43.3 -1.4
               comp=Z,4.1nm,0.4s
VNA2  Neumayer--Watz     85.66 178 ⇑P        P        07 30 46.1 -0.6
               comp=Z,6.1nm,0.6s,baz=196,slow=4.9
VNA1  Neumayer--Stat     85.90 177 ⇑P        P        07 30 47.3 -0.5
               comp=Z,8.8nm,1.1s
RED   Redoubt Volcan     86.57  13  P        P        07 30 52.2 +1.2
RED                                 IAmb     IAmb     07 31 19.6
               comp=Z,15nm,1.2s
TXAR  Lajitas Array      90.32  58  P        P        07 31 09.0 -0.3
               comp=Z,0.7nm,0.8s,baz=219,slow=6.1,SNR=9.4
               comp=Z,0.7nm,0.8s
MKAR  Makanchi Array    111.83 313  PKiKP    PKiKP    07 36 37.0 -2.0
               comp=Z,0.4nm,0.6s,baz=80,slow=1.4,SNR=5.4
KURBB Kurchatov Arra    114.91 316  PKP      PKPdf    07 36 42.9 -1.8
               comp=Z,0.4nm,0.3s,baz=102,slow=1.4,SNR=6.4
BVAR  Borovoye Array    120.09 319  PKP      PKPdf    07 36 52.9 -1.7
               comp=Z,1.5nm,0.5s,baz=109,slow=1.7,SNR=6.6
BOSA  Boshof            122.69 207  PKP      PKPdf    07 36 59.8 -0.9
               comp=Z,1.9nm,0.7s,baz=163,slow=1.0,SNR=5.2
ARCES ARCESS Array B    131.51 348  PKP      PKPdf    07 37 15.0 -1.0
               comp=Z,1.8nm,0.7s,baz=22,slow=1.3,SNR=5.3
FINES FINESS Array B    138.06 341  PKhKP    PKPpre   07 37 19.1
               comp=Z,1.7nm,0.8s,baz=56,slow=4.8,SNR=4.2
FINES                               PKP      PKPdf    07 37 27.0 -1.3
               comp=Z,1.5nm,0.7s,baz=90,slow=3.8,SNR=5.1
NB2   NORSAR Subarra141.70 351      PKP      PKPpre   07 37 28.9
               comp=Z,0.4nm,0.5s,baz=12,slow=3.1
NOA   NORSAR Array B141.70 351      PKhKP    PKPpre   07 37 29.3
               comp=Z,0.4nm,0.6s,baz=14,slow=2.5,SNR=4.0
HFS   Hagfors           142.16 349  PKhKP    PKPpre   07 37 30.4
               comp=Z,3.5nm,0.3s,baz=64,slow=3.4,SNR=42
AKASG Malin Array Be    144.61 327  PKP      PKPdf    07 37 38.8 -1.6
               comp=Z,4.3nm,0.6s,baz=45,slow=3.8,SNR=27
BRTR  Keskin Array B    147.27 308  PKPbc    PKPbc    07 37 47.4 -1.3
               comp=Z,1.1nm,0.6s,baz=153,slow=4.4,SNR=8.0
MMAI  Mount Meron Ar    147.46 295  PKPbc    PKPbc    07 37 49.3  0.0
               comp=Z,8.1nm,0.6s,baz=75,slow=4.6,SNR=17
EKA   Eskdalemuir Ar    148.16   3  PKPbc    PKPbc    07 37 48.4 -1.8
               comp=Z,0.6nm,0.3s,baz=341,slow=2.5,SNR=8.7
CLL   Collm             150.47 343⇑iPKPbc    PKPbc    07 37 54.8 -1.1
               comp=Z,8.0nm,0.8s
```

THE 01 07:31:34.5, 40°.5N±0°.8×**2°1E**±°**, h5**^{km}±2^{km}**, M2.2**/10**,**
MLh2.2/10**, Greece-Albania border region**

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Code  Station Name          Δ°   AZ°    Phase ID          Time     Res
                                        Op       ISC      h  m  s  ISC
NEST  Nestorio              0.16 120    P        Pg       07 31 37.9 +0.1
NEST                                    S        Sg       07 31 41.7 +1.8
PENT  Pentalofos            0.37 145    P        Pg       07 31 41.9 +0.3
PENT                                    S        Sg       07 31 47.4 +1.0
OHR   Ohrid                 0.62 355    P        Pg       07 31 46.3  0.0
OHR                                     S        Sg       07 31 55.2 +0.8
KPRO  Kipourio              0.66 145    P        Pg       07 31 45.8 -1.4
KPRO                                    S        Sg       07 31 56.7 +0.9
KZN   Kozani                0.72 105    P        Pg       07 31 48.3 +0.1
KZN                                     S        Sb       07 31 58.9 -0.8
JAN   Janina                0.84 181    P        Pg       07 31 50.3 -0.3
JAN                                     S        Sb       07 32 02.4 -0.7
KTI   Kastanea              0.96  96    P        Pg       07 31 52.8 -0.1
IGT   Igoumenitsa           1.05 203    P        Pb       07 31 55.2 +0.2
KEK   Kerkira               1.13 227    P        Pg       07 31 55.7 -0.4
THL   Klokotos Trika        1.28 136    P        Pn       07 31 58.2 -0.8
TYRN  Tyrnavos              1.31 126    P        Pn       07 31 58.0 -1.4
KNT   Kendrikon             1.68  66    P        Pn       07 32 03.8 -0.7
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BEO ***01*** *07:32:11.9±0.6, 40°.19N×21°.10E, h0*^{km}*, ML3.0/12*
TIR ***01*** *07:32:15.6, 40°.43N×20°.75E, h11*^{km}*±1*^{km}*, Ml3.3/7*
ATH ***01*** *07:32:17.3, 40°.35N×20°.87E, h13*^{km}*±1*^{km}*, ML2.9/9, Manual Solution by A.Agalos First location: 2019/06/01 07:33:42, This location: 2019/06/01 12:48:26 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*
ISC 01 07:32:16.1±0.8**, 40°.42N**±0°.02×**20°.83E**±0°.02**, h11**^{km}±6^{km}**,**
n43, σ1s39/69**, Greece-Albania border region**

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Code  Station Name          Δ°   AZ°    Phase ID          Time     Res
                                        Op       ISC      h  m  s  ISC
NEST  Nestorio              0.17  91    Pg       Pg       07 32 20.6 +0.6
NEST                                    Sg       Sg       07 32 24.6 +1.9
NEST                                    AML      AML      07 32 25.2
               23nm,0.3s
NEST                                    AML      AML      07 32 26.6
               17nm,0.3s
NEST  Nestorio              0.17  91    P        Pg       07 32 20.7 +0.7
NEST                                    S        Sg       07 32 24.1 +1.4
KBN   Korca                 0.21 351    Pg       Pg       07 32 19.5 -1.2
KBN                                     Sg       Sg       07 32 22.8 -0.9
KBN                                     AML      AML      07 32 23.2
               29nm,0.3s
KBN                                     AML      AML      07 32 25.0
               22nm,0.2s
LSK   Leskovik              0.32 213    Pg       Pg       07 32 21.8 -0.8
LSK                                     Sg       Sg       07 32 26.8 -0.2
LSK                                     AML      AML      07 32 28.4
               20nm,0.2s
LSK                                     AML      AML      07 32 32.8
               17nm,0.6s
PENT  Pentalofos            0.32 133    P        Pb       07 32 23.1 -0.9
PENT                                    S        Sg       07 32 26.1 -1.0
KPRO  Kipourio              0.62 138    P        Pg       07 32 28.2  0.0
KPRO                                    S        Sg       07 32 35.4 -0.9
OHR   Ohrid                 0.69 358   ePg       Pg       07 32 29.0 -0.6
OHR                                    eSg       Sb       07 32 40.0 +0.1
KZN   Kozani                0.73  98    P        Pb       07 32 31.1 +0.3
KZN                                     S        Sb       07 32 41.0 +0.1
JAN   Janina                0.76 179    P        Pg       07 32 30.2 -0.6
JAN                                     S        Sg       07 32 40.2 -0.5
SRN   Sarande               0.83 230    Pg       Pg       07 32 31.5 -0.7
SRN                                     Sg       Sg       07 32 42.7 -0.4
SRN                                     AML      AML      07 32 46.9
               1.8nm,0.9s
IGT   Igoumenitsa           0.96 203    Pn       Pn       07 32 35.6  0.0
IGT                                     Sn       Sn       07 32 49.3 +0.1
IGT   Igoumenitsa           0.96 203    P        Pg       07 32 34.6 -0.1
KEK   Kerkira               1.06 229    P        Pn       07 32 37.8 +0.9
TETR  Tetrakomo, Epi        1.12 162    P        Pb       07 32 37.6  0.0
TIR   Tirane                1.18 322    Pn       Pb       07 32 37.7 -0.8
TIR                                     Sn       Sn       07 32 58.2 +3.6
TIR                                     AML      AML      07 33 01.5
               1.5nm,0.7s
TIR   Tirane                1.18 322   ePg       Pb       07 32 37.9 -0.6
TIR                                    eSg       Sn       07 33 00.6 +6.0
THL   Klokotos Trika        1.25 133    P        Pn       07 32 39.1 -0.3
THL                                     S        Sb       07 32 55.1 -0.6
TYRN  Tyrnavos              1.29 123    P        Pb       07 32 40.0 -0.3
PHP   Peshkopia             1.30 347    Pg       Pn       07 32 40.4 +0.1
TSLK  Tsoukalades, L        1.60 185    P        Pn       07 32 44.4 +0.1
LKD2  Lefkada island        1.63 185    P        Pb       07 32 45.5 -0.8
KNT   Kendrikon             1.74  64    P        Pb       07 32 47.2 -0.9
HORT  Hortiatis             1.74  83    P        Pn       07 32 46.3  0.0
PUK   Puka                  1.77 337    Pg       Pb       07 32 48.8 +0.2
PUK                                     Sg       Sg       07 33 14.8 +1.7
PUK                                     AML      AML      07 33 16.6
               2.4nm,1.0s
PUK                                     AML      AML      07 33 18.9
               1.4nm,0.5s
EVGI  Lefkada island        1.80 184    P        Pn       07 32 47.1 +0.1
ULC   Ulcinj                1.95 323    Pn       Pb       07 32 50.6 -1.1
BCI   Bajram Curri          2.03 344    Pn       Pg       07 32 54.0 -1.1
BCI                                     Sn       Sg       07 33 20.7 -0.7
BCI                                     AML      AML      07 33 26.7
               1.3nm,0.6s
DRME  Dracevica, Mon        2.16 326    Pn       Pb       07 32 53.8 -1.4
PDG   Podgorica             2.33 330   ePn       Pn       07 32 55.2 +0.8
PDG                                    eSn       Sb       07 33 27.9 +1.0
BOSS  Bosilegrad            2.42  30   ePn       Pn       07 32 54.4 -1.2
BOSS                                   eSn       Sn       07 33 26.0 +0.8
BARS  Barje                 2.51  17   ePn       Pn       07 32 56.5 -0.3
BARS                                   eSn       Sb       07 33 29.8 -2.2
SELS  Selova                2.81   4   ePn       Pn       07 33 00.7 -0.3
SELS                                   eSn       Sn       07 33 36.7 +1.9
SJES  Sjenica               2.91 348   ePn       Pn       07 33 03.4 +0.9
SJES                                   eSn       Sb       07 33 42.5 -1.2
GOCS  Kraljevo Serbi        3.14   1   ePn       Pn       07 33 07.1 +1.5
GOCS                                   eSn       Sb       07 33 47.2 -3.2
ZAPS  Zavoj                 3.16  25   ePn       Pn       07 33 04.7 -1.0
ZAPS                                   eSn       Sn       07 33 42.7 -0.7
IVAS  Ivanjica              3.20 351   ePn       Pn       07 33 05.9 -0.4
BOVS  Bovan                 3.28  11   ePn       Pn       07 33 06.8 -0.6
BOVS                                   eSn       Sn       07 33 48.9 +2.5
GRUS  Gruza                 3.47 359   ePn       Pn       07 33 09.8 -0.2
ZAGS  Zajecar               3.55  17   ePn       Pn       07 33 09.3 -1.8
ZAGS                                   eSn       Sn       07 33 54.4 +1.4
BBLS  Lazi&#263i            3.60 343   ePn       Pn       07 33 12.8 +0.9
BBLS                                   eSn       Sn       07 33 57.7 +3.2
DIVS  Divibare              3.73 351   ePn       Pn       07 33 14.2 +0.5
TEKS  Tekeris               4.24 347   ePn       Pn       07 33 20.1 -0.5
VRSS  Vrsac                 4.72   4   ePn       Pn       07 33 26.7 -0.4
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BEO ***01*** *07:36:48.7±0.6, 40°.12N×20°.96E, h0*^{km}*, ML3.2/10*
ATH ***01*** *07:36:50.4, 40°.51N×20°.65E, h9*^{km}*±2*^{km}*, ML3.2/6, Manual Solution by N.Liadopoulou First location: 2019/06/01 07:37:58, This location: 2020/06/29 17:10:31 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 1 km*
IDC ***01*** *07:36:51.9±4.7, 40°.40N×20°.22E, h0*^{km}*, mb3.4/5, mbtmp3.4/8, ML3.0/3, Error ellipse: s-maj=68.9km s-min=24.5km az=15.0*
TIR ***01*** *07:36:52.4, 40°.48N×20°.77E, h0*^{km}*±1*^{km}*, Md2.9/1, Ml3.6/8*
SKO ***01*** *07:36:54.6, 40°.46N×20°.91E, h4*^{km}*, ML3.2*
THE ***01*** *07:36:54.2, 41°N±2°×2°1E±°, h0*^{km}*±2*^{km}*, M3.0/21, MLh3.0/21*
ISC 01 07:36:53.8±0.8**, 40°.48N**±0°.01×**20°.88E**±0°.02**, h12**^{km}±5^{km}**,**
n92, σ1s68/128**, mb3.3**/4**, 1D, Greece-Albania border region**

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Code  Station Name          Δ°   AZ°    Phase ID          Time     Res
                                        Op       ISC      h  m  s  ISC
NEST  Nestorio              0.15 117    Pg       Pg       07 36 57.6 +0.2
NEST                                    Sg       Sg       07 37 01.2 +1.3
NEST                                    AML      AML      07 37 02.2
               27nm,0.3s
NEST  Nestorio              0.15 117    P        Pg       07 36 57.5 +0.2
NEST                                    S        Sg       07 37 00.3 +0.4
NEST  Nestorio              0.15 117    P        Pg       07 36 57.5 +0.2
NEST                                    S        Sg       07 37 01.4 +1.6
KBN   Korca                 0.16 334    Pg       Pg       07 36 55.6 -1.9
KBN                                     Sg       Sg       07 36 57.8 -2.3
KBN                                     AML      AML      07 36 59.6
               70nm,0.5s
KBN                                     AML      AML      07 37 01.1
               64nm,0.6s
PENT  Pentalofos            0.35 145    P        Pb       07 37 00.8 -1.2
PENT                                    S        Sb       07 37 06.7 -0.9
PENT  Pentalofos            0.35 145    P        Pb       07 37 00.8 -1.2
PENT                                    S        Sb       07 37 07.4 -0.1
LSK   Leskovik              0.39 212    Pg       Pg       07 37 00.0 -1.6
OHR   Ohrid                 0.63 355   iPg       Pg       07 37 05.4 -0.7
OHR                                    iSg       Sb       07 37 15.8 +0.2
OHR                                    eLg       Lg       07 37 16.0
               comp=E,1μm,0.5s
OHR                                    eLg       Lg       07 37 16.0
               comp=N,772nm,0.6s
OHR   Ohrid                 0.63 355   ePg       Pg       07 37 05.4 -0.7
OHR                                    eSg       Sb       07 37 16.3 +0.7
KPRO  Kipourio              0.65 145    P        Pb       07 37 05.7 -1.3
KPRO                                    S        Sb       07 37 17.0 +1.0
KPRO  Kipourio              0.65 145    P        Pb       07 37 05.7 -1.3
KPRO                                    S        Sb       07 37 16.1 +0.1
KZN   Kozani                0.71 104    P        Pn       07 37 08.6 -1.1
KZN                                     S        Sn       07 37 20.2 -0.3
KZN   Kozani                0.71 104    P        Pn       07 37 08.8 -0.8
KZN                                     S        Sn       07 37 19.5 -1.0
JAN   Janina                0.83 181    P        Pg       07 37 07.2 -2.5
SRN   Sarande               0.90 228    Pg       Pg       07 37 10.1 -1.1
SRN                                     Sg       Sb       07 37 23.4 +0.1
SRN                                     AML      AML      07 37 25.2
               comp=N,2.6nm,0.4s
SRN                                     AML      AML      07 37 27.0
               comp=N,5.4nm,0.7s
SRN                                     AMd               07 38 07.3
KTI   Kastanea              0.95  95    P        Pb       07 37 11.9 -0.4
IGT   Igoumenitsa           1.04 204    Pn       Pg       07 37 12.8 -0.9
IGT                                     Sn       Sb       07 37 28.1 +0.9
IGT   Igoumenitsa           1.04 204    P        Pg       07 37 12.8 -0.9
IGT   Igoumenitsa           1.04 204   ePg       Pg       07 37 12.8 -0.9
IGT                                    eLg       Lg       07 38 03.0
IGT   Igoumenitsa           1.04 204    P        Pg       07 37 10.0 -3.7
KEK   Kerkira               1.13 227    P        Pn       07 37 17.1 +1.7
KEK   Kerkira               1.13 227    P        Pg       07 37 12.2 -3.3
TIR   Tirane                1.16 319    Pn       Pg       07 37 14.7 -1.3
TIR                                     Sn       Sb       07 37 31.4 +0.8
TIR                                     AML      AML      07 37 54.6
               comp=N,1.4nm,1.0s
TIR   Tirane                1.16 319   ePg       Pb       07 37 15.7  0.0
TIR                                    iSg       Sn       07 37 34.5 +3.0
TIR   Tirane                1.16 319   ePg       Pb       07 37 15.5 -0.2
TIR                                    eSg       Sn       07 37 35.8 +4.3
PHP   Peshkopia             1.25 345    Pg       Pn       07 37 17.3 +0.3
THL   Klokotos Trika        1.27 136    P        Pg       07 37 16.4 -1.7
TYRN  Tyrnavos              1.29 126    P        Pn       07 37 18.3 +0.6
TYRN                                    S        Sn       07 37 37.7 +2.7
TYRN  Tyrnavos              1.29 126    P        Pb       07 37 17.2 -0.8
VAY   Valandovo             1.53  56⇓iPg         Pg       07 37 21.6 -1.6
VAY                                    iSg       Sn       07 37 42.7 +1.9
VAY                                    eLg       Lg       07 38 01.2
               comp=E,243nm,0.8s
VAY                                    eLg       Lg       07 38 03.0
               comp=N,291nm,0.9s
SKO   Skopje                1.55  16   iPg       Pg       07 37 22.6 -0.9
SKO                                    iSg       Sg       07 37 43.4 -0.2
AMPL  Ampelaki              1.58 170    P        Pg       07 37 23.0 -1.1
THE   Thessaloniki          1.60  84    Pn       Pb       07 37 22.3 -0.9
THE   Thessaloniki          1.60  84    P        Pb       07 37 22.4 -0.9
THE   Thessaloniki          1.60  84   iSg       Sg       07 37 44.7 -0.5
KNT   Kendrikon             1.68  65    P        Pb       07 37 23.3 -1.3
KNT   Kendrikon             1.68  65   ePn       Pb       07 37 23.4 -1.3
KNT                                    eSg       Sg       07 37 49.9 +2.2
HORT  Hortiatis             1.70  85    P        Pn       07 37 23.5 +0.2
LKD2  Lefkada island        1.70 186    Pn       Pg       07 37 25.9 -0.5
LKD2                                    Sn       Sg       07 37 50.3 +1.9
LKD2                                    AML      AML      07 38 08.7
               comp=N,2.1nm,0.6s
LKD2  Lefkada island        1.70 186    P        Pg       07 37 25.9 -0.5
PUK   Puka                  1.73 335    Pn       Pg       07 37 26.3 -0.6
PUK                                     Sn       Sg       07 37 50.1 +0.9
PUK                                     AML      AML      07 38 04.9
               comp=N,2.3nm,1.1s
MAKR  Makrakomi, Fth        1.76 146    P        Pg       07 37 26.0 -1.4
NYDR  Nydri-Lefkada         1.77 185    P        Pg       07 37 26.4 -1.4
EVGI  Lefkada island        1.87 185    P        Pb       07 37 27.6 -0.2
SCTE  Santa Cesarea         1.89 258    Pn       Pb       07 37 27.2 -1.0
SCTE                                    Sn       Sg       07 37 54.0 -0.4
SCTE                                    AML      AML      07 38 05.1
               comp=N,2.4nm,0.5s
SOH   Sokhos                1.92  79    P        Pb       07 37 27.0 -1.7
ULC   Ulcinj                1.92 321    Pn       Pb       07 37 28.0 -0.8
ULC   Ulcinj                1.92 321   iPn       Pb       07 37 28.0 -0.8
PLG   Polygyros             1.96  92    P        Pb       07 37 28.0 -1.5
BCI   Bajram Curri          1.98 342    Pn       Pg       07 37 31.1 -0.6
BCI                                     Sn       Sg       07 37 58.8 +1.4
BCI                                     AML      AML      07 38 20.7
               comp=N,1.3nm,1.0s
BCI                                     AML      AML      07 38 22.2
               comp=N,1.7nm,1.0s
FSK   Fiskardo              2.04 187    P        Pb       07 37 29.4 -1.3
DRME  Dracevica, Mon        2.13 324    Pn       Pb       07 37 31.1 -1.1
SRS   Serrai                2.16  72   eSn       Sn       07 37 57.6 +1.3
KKB   Krupnik               2.18  51   ePn       Pb       07 37 31.5 -1.6
KKB                                    eSn       Sb       07 38 00.3 +0.2
PAIG  Paliouri              2.22 104    P        Pn       07 37 30.7 +0.3
PDG   Podgorica             2.29 328   ePn       Pn       07 37 32.2 +0.8
PDG                                    eSn       Sg       07 38 05.4 -2.1
VLS   Valsamata             2.31 186    P        Pn       07 37 33.0 +1.3
AXS   Araxos                2.32 170    P        Pb       07 37 34.3 -1.2
BOSS  Bosilegrad            2.34  30   ePn       Pn       07 37 32.2  0.0
BOSS                                   eSn       Sb       07 38 06.1 +1.2
BUM   Brajici-Budva         2.35 321    Pn       Pn       07 37 33.0 +0.8
OUR   Ouranopolis           2.38  93    P        Pn       07 37 33.1 +0.6
PSDA  Pessada-Kefalo        2.38 186    P        Pn       07 37 33.5 +0.9
MMB   Musomishta            2.42  63   ePn       Pn       07 37 34.5 +1.2
BARS  Barje                 2.44  16   ePn       Pn       07 37 33.8 +0.4
BARS                                   eSn       Sn       07 38 05.3 +2.1
BARS  Barje                 2.44  16   ePn       Pn       07 37 33.5 +0.1
BARS                                   eSn       Sb       07 38 08.8 +1.3
BEY   Berane                2.50 343   ePn       Pb       07 37 38.3 -0.4
CEME  Cevo                  2.53 325    Pn       Pn       07 37 35.8 +1.0
SELS  Selova                2.74   4   ePn       Pn       07 37 38.6 +1.0
SELS                                   eSn       Sb       07 38 17.2 +0.9
SJES  Sjenica               2.86 347   ePn       Pn       07 37 40.9 +1.6
SJES                                   eSn       Sb       07 38 20.6 +0.9
BRY   Bratogost             2.98 325    Pn       Pb       07 37 44.4 -2.5
GOCS  Kraljevo Serbi        3.08 360   ePn       Pn       07 37 42.0 -0.3
ZAPS  Zavoj                 3.08  25   ePn       Pn       07 37 42.4 +0.1
ZAPS                                   eSn       Sb       07 38 25.3 -0.8
IVAS  Ivanjica              3.14 350   ePn       Pn       07 37 43.3 +0.2
BOVS  Bovan                 3.21  11   ePn       Pn       07 37 43.7 -0.3
GRUS  Gruza                 3.41 358   ePn       Pn       07 37 47.2 +0.5
GRUS                                   eSn       Sb       07 38 32.3 -3.1
ZAGS  Zajecar               3.48  16   ePn       Pn       07 37 47.9 +0.2
ZAGS                                   eSn       Sn       07 38 33.4 +4.6
BBLS  Lazi&#263i            3.55 343   ePn       Pn       07 37 49.7 +0.9
BBLS                                   eSn       Sn       07 38 35.6 +4.8
PYL   PYLOS                 3.65 169    P        Pn       07 37 52.3 +2.3
DIVS  Divibare              3.67 350   ePn       Pn       07 37 51.8 +1.3
TRUS  Trudelj               3.75 355   ePn       Pn       07 37 53.3 +1.8
KUBS  Kucevo                3.97   8   ePn       Pn       07 37 53.6 -0.9
TEKS  Tekeris               4.18 347   ePn       Pn       07 37 59.1 +1.7
VRSS  Vrsac                 4.65   4   ePn       Pn       07 38 03.7 -0.1
FRGS  Fruska Gora           4.74 351   ePn       Pn       07 38 05.4 +0.4
MLR   Muntele Rosu          6.23  35    Pn       Pn       07 38 31.6 +5.9
               comp=N,0.3nm,0.3s,baz=225,slow=10.0,SNR=2.1
MLR                                     Sn       Sn       07 39 31.6 -5.3
               comp=N,0.3nm,0.3s,baz=167,slow=9.6,SNR=4.0
               comp=N,1.4nm,0.5s
GERES GERESS Array B        9.79 331    Pn       Pn       07 39 13.3 -1.2
               baz=152,slow=14,SNR=2.4
               comp=N,0.2nm,0.4s
DAVOX Davos/Dischmat       10.15 312    Pn       Pn       07 39 14.0 -5.5
               comp=N,0.3nm,0.3s,baz=140,slow=16,SNR=2.0
DAVOX                                   Sn       Sn       07 41 06.5 -6.8
               comp=N,0.2nm,0.3s,baz=338,slow=19,SNR=1.3
               comp=N,0.3nm,0.3s
HFS   Hagfors              20.18 350    P        P        07 41 26.3 -1.6
               comp=N,1.6nm,0.8s,baz=166,slow=8.9,SNR=1.8
               comp=N,1.6nm,0.8s
FINES FINESS Array B       21.23   7    P        P        07 41 39.9 +0.6
               comp=N,1.5nm,0.8s,baz=190,slow=9.6,SNR=2.1
               comp=N,1.5nm,0.8s
NOA   NORSAR Array B       21.43 347    P        P        07 41 42.1 +0.7
               comp=N,0.7nm,0.9s,baz=157,slow=12,SNR=1.2
               comp=N,0.7nm,0.9s
ARCES ARCESS Array B       29.22   3    P        P        07 42 55.4 +0.5
               comp=N,1.7nm,0.8s,baz=179,slow=5.4,SNR=1.4
               comp=N,1.7nm,0.8s
MKAR  Makanchi Array       43.89  60    P        P        07 45 03.9 +3.8
               comp=N,0.1nm,0.4s,baz=279,slow=8.4,SNR=1.9
               comp=N,0.1nm,0.4s
```

DJA ***01*** *07:58:16.2±0.9, 4°N±7°×12°6E±°, h97*^{km}*±5*^{km}*, M4.3/7, mB4.9/3, mb4.4/4, MLv4.2/7, Mw(mB)4.2/3*
IDC ***01*** *07:58:19.8±1.9, 2°.76N×126°.52E, h0*^{km}*, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=182.7km s-min=22.5km az=66.0*
ISC 01 07:58:17.7±2.6**, 3°.1N**±0°.2×**126°.3E**±0°.3**, h10**^{km}**, n7, σ1s13**/5**,**
mb3.7/4**, Talaud Islands**

```
Code  Station Name          Δ°   AZ°    Phase ID          Time     Res
                                        Op       ISC      h  m  s  ISC
SGSI  Sangihe               1.00 308    P        Pn       07 58 37.2 -0.6
SGSI                                    S        Sn       07 58 52.8 +0.8
MRSI  Marisa                5.07 240    P        Pb       07 59 40.9 -5.7
      2μm118nm,0.5s
SANI  Sanana                5.09 184    P        Pb       07 59 46.8 -0.1
      0.3nm1μm33nm,1.0s
WRA   Warramunga Arr       24.18 161    P        P        08 03 35.6 +1.1
      1.7nm,0.4s,baz=341,slow=10,SNR=17
      1.7nm,0.4s
ASAR  Alice Springs        27.58 165    P        P        08 04 04.7 -0.5
      0.7nm,1.0s,baz=347,slow=8.1,SNR=2.2
      0.7nm,1.0s
MKAR  Makanchi Array       57.87 326    P        P        08 08 15.8 +6.0
      0.3nm,0.5s,baz=133,slow=6.1,SNR=4.5
      0.3nm,0.5s
KURBB Kurchatov Arra       62.08 328    P        P        08 08 45.0 +6.4
      0.4nm,0.6s,baz=126,slow=7.0,SNR=4.6
      0.4nm,0.6s
```

CATAC ***01*** *08:07:47.4±0.6, 13°N±3°×8°9W±°, h22*^{km}*±4*^{km}*, M2.6/15, MLv2.6/15, Error ellipse: s-maj=6.3km s-min=3.1km az=20.0, confirmed*
SNET ***01*** *08:07:48.6±0.6, 12°.63N×88°.63W, h37*^{km}*±3*^{km}*, ML2.6*
GCG ***01*** *08:07:49.7±0.3, 12°.70N×88°.73W, h52*^{km}*±30*^{km}*, MD3.6*
ISC 01 08:07:47.7±2.1**, 12°.60N**±0°.08×**88°.67W**±0°.04**, h26**^{km}±14^{km}**,**
n49, σ0s69/55**, Off coast of central America**

```
Code  Station Name          Δ°   AZ°    Phase ID          Time     Res
                                        Op       ISC      h  m  s  ISC
ALJI  Alcalda de J          0.73   7    S        Sb       08 08 12.5 +1.0
ALJI  Alcalda de J          0.73   7    P        Pb       08 08 01.8 -0.1
TECA  Tecapa                0.91  10   eP        Pn       08 08 04.6 -0.3
TECA                                    IAML              08 08 22.2
               comp=Z,39nm,0.3s
RANC  El Ranchito           0.91  24    P        Pn       08 08 02.8 -2.1
RANC  El Ranchito           0.91  24    S        Sb       08 08 15.9 -0.8
VSM   San Miguel            0.91  25   eP        Pn       08 08 05.1 +0.1
PACA  Pacayal               0.93  21   eP        Pn       08 08 05.0 -0.2
PACA  Pacayal               0.93  21    S        Sb       08 08 17.4 +0.1
PACA  Pacayal               0.93  21    P        Pn       08 08 05.0 -0.2
BLLM  Bellamira             0.94  26   eP        Pn       08 08 05.1 -0.2
TECO  Alcaldia de Te        0.94 353    S        Sb       08 08 17.3 -0.3
TECO  Alcaldia de Te        0.94 353    P        Pn       08 08 04.6 -0.6
CNRM  Centro Naciona        1.00  29    S        Sn       08 08 19.4 +0.2
CNRM  Centro Naciona        1.00  29    P        Pn       08 08 05.5 -0.5
PQSS  Presa 15 de Se        1.03   6   eP        Pn       08 08 06.2 -0.2
PQSS                                   eS        Sn       08 08 19.2 -0.7
PQSS                                    IAML              08 08 20.4
               comp=Z,56nm,0.2s
PQSS  Presa 15 de Se        1.03   6    P        Pn       08 08 06.2 -0.2
LCND  La Caada              1.04  47   eP        Pn       08 08 05.6 -0.8
LCND  La Caada              1.04  47    P        Pn       08 08 05.7 -0.8
LCND  La Caada              1.04  47    S        Sn       08 08 20.4 +0.2
COEG  Centro de Oper        1.04 348   eP        Pn       08 08 06.7  0.0
COEG                                    IAML              08 08 21.6
               comp=N,2μm,0.1s
COEG  Centro de Oper        1.04 348    S        Sn       08 08 20.3  0.0
COEG  Centro de Oper        1.04 348    P        Pn       08 08 06.1 -0.5
UESV  Universidad de        1.04 354    S        Sn       08 08 19.7 -0.6
UESV  Universidad de        1.04 354    P        Pn       08 08 06.0 -0.6
CNCH  Conchagua             1.06  50    P        Pn       08 08 06.8 -0.1
CNCH  Conchagua             1.06  50    S        Sn       08 08 21.5 +0.7
LALI  Alcalda de L          1.09 324    S        Sn       08 08 20.6 -0.9
LALI  Alcalda de L          1.09 324    P        Pn       08 08 07.4 +0.1
SCLA  Alcaldia de Sa        1.10 357    S        Sn       08 08 22.2 +0.4
SCLA  Alcaldia de Sa        1.10 357    P        Pn       08 08 07.6 +0.2
PAVA  Las Pavas             1.14 347    S        Sn       08 08 22.5 -0.4
CSGN  Cosiguina Volc        1.14  71    P        Pn       08 08 08.2 +0.2
CSGN                                    S        Sn       08 08 23.0  0.0
LOMA  Loma Larga            1.15 335   eP        Pn       08 08 08.2 -0.1
LOMA  Loma Larga            1.15 335    P        Pn       08 08 08.1 -0.1
LOMA  Loma Larga            1.15 335    S        Sn       08 08 23.7 +0.5
```

POTN	**Potosi Cosigui**	**1.20**	**70**	S	**Sn**	**08 08 24.2**	**0.0**
JAYA	**Jayaque - finc**	**1.30**	**324**	*i* P	**Pn**	**08 08 09.9**	**-0.4**
JAYA				*e*S	**Sn**	**08 08 25.7**	**-1.2**
JAYA	**Jayaque - finc**	**1.30**	**324**	P	**Pn**	**08 08 09.9**	**-0.4**
NUBE	**Las Nubes**	**1.69**	**320**	*e*P	**Pn**	**08 08 15.8**	**+0.2**
NUBE	**Las Nubes**	**1.69**	**320**	*i* P	**Pn**	**08 08 15.9**	**+0.3**
NUBE				*i* S	**Sn**	**08 08 36.4**	**-0.2**
NUBE	**Las Nubes**	**1.69**	**320**	P	**Pn**	**08 08 15.7**	**0.0**
POLN	**Al Sur del Vol**	**1.81**	**88**	P	**Pn**	**08 08 17.5**	**+0.4**
POLN				S	**Sn**	**08 08 38.0**	**-1.3**
MTO3	**Montecristo**	**1.91**	**339**	*e*P	**Pn**	**08 08 19.4**	**+0.5**
MTO3	**Montecristo**	**1.91**	**339**	*e*P	**Pn**	**08 08 19.3**	**+0.5**
MTO3	**Montecristo**	**1.91**	**339**	P	**Pn**	**08 08 19.4**	**+0.5**
MTO3	**Montecristo**	**1.91**	**339**	S	**Sn**	**08 08 44.6**	**+2.5**
TGUH	**Tegucigalpa,Un**	**1.99**	**43**	P	**Pn**	**08 08 19.8**	**+0.1**
TGUH				S	**Sn**	**08 08 43.9**	**0.0**
YUSH	**Yuscaran**	**2.23**	**53**	P	**Pn**	**08 08 24.2**	**+1.2**
YUSH	**Yuscaran**	**2.23**	**53**	S	**Sn**	**08 08 50.3**	**+0.5**

JMA ***01*** *08:09:04.5±0.1, 22°.5N±0°.8×12° 1E±°, h40^{km}, MV3.6/12, TAIWAN REGION*

TAP ***01*** *08:09:05.5, 22°.41N×120°.99E, h11^{km}, ML4.0, B*

ASIES ***01*** *08:09:05.5, 22°.41N×120°.99E, h11^{km}, ML4.0, Mw3.6, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}-1.57; $M_{\theta\theta}$3.62; $M_{\phi\phi}$-2.05; $M_{r\theta}$1.39; $M_{\theta\phi}$-0.11; $M_{\phi r}$1.44; Fault plane solution: $M_0$3.72949×10^{21} NP1: ϕ_s129.64000°, δ49.01000°, λ-23.19000°. NP2: ϕ_s235.33000°, δ72.71000°, λ-136.61000°. Principal axes: T Plg14.6930°, Azm357.4220°; N Plg43.9350°, Azm252.7890°; P Plg42.3760°, Azm101.2630°;*

ISC 01 08:09:05.2±0.8**, 22°.39N**±0°.02×**121°.04E**±0°.02**, h10**^{km}±6^{km}**, n104, **σ1^{s}.**01**/170**, 15C-3D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAW	**Tawu**	**0.14**	**255**	⇑*i*P	**Pg**	**08 09 08.6**	**+0.2**
TAW				*i* S	**Sg**	**08 09 10.4**	**-0.2**
TAWH	**Dawu Township**	**0.15**	**250**	⇑*i*P	**Pg**	**08 09 08.9**	**+0.3**
TAWH				*i* S	**Sg**	**08 09 10.8**	**-0.2**
EAST	**Anshuo**	**0.18**	**267**	⇓*i*P	**Pg**	**08 09 09.2**	**+0.1**
EAST				S	**Sg**	**08 09 11.3**	**-0.4**
ECL	**Taimali**	**0.22**	**338**	⇑*i*P	**Pg**	**08 09 10.0**	**+0.2**
ECL				S	**Sg**	**08 09 13.0**	**+0.1**
SLIU	**Shizi**	**0.28**	**232**	⇑*i*P	**Pg**	**08 09 11.3**	**+0.3**
SLIU				*i* S	**Sg**	**08 09 15.0**	**+0.1**
TTN	**Taitung**	**0.37**	**15**	*e*P	**Pb**	**08 09 14.4**	**+0.4**
TTN				S	**Sb**	**08 09 20.5**	**+0.7**
SCZT	**Fangliau**	**0.39**	**267**	*i* P	**Pg**	**08 09 12.9**	**0.0**
SCZT				S	**Sg**	**08 09 17.7**	**-0.4**
SMST	**Manzhou Townsh**	**0.42**	**207**	⇑*i*P	**Pb**	**08 09 14.3**	**-0.3**
SMST				*e*S	**Sb**	**08 09 20.4**	**-0.6**
TWGBT	**Beinan**	**0.42**	**5**	⇑*i*P	**Pg**	**08 09 14.2**	**+0.6**
TWGBT				*e*S	**Sb**	**08 09 20.7**	**-0.6**
TWG	**Pinlang**	**0.43**	**4**	⇑*i*P	**Pg**	**08 09 14.2**	**+0.5**
TWG				*e*S	**Sb**	**08 09 20.4**	**-0.9**
MASBT	**Mashibuluo**	**0.44**	**300**	⇓*i*P	**Pg**	**08 09 13.7**	**-0.1**
MASBT				S	**Sg**	**08 09 18.4**	**-1.2**
HEN	**Hengchun**	**0.48**	**216**	*i* P	**Pb**	**08 09 15.6**	**-0.1**
HEN				*e*S	**Sb**	**08 09 22.8**	**0.0**
TSMG	**Majia**	**0.48**	**310**	⇑*i*P	**Pg**	**08 09 14.1**	**-0.5**
TSMG				S	**Sg**	**08 09 19.5**	**-1.5**
LDUT	**Ludao**	**0.48**	**55**	⇑P	**Pb**	**08 09 16.7**	**+0.9**
LDUT				*e*S	**Sb**	**08 09 24.1**	**+1.1**
TWK1	**Hengchun**	**0.50**	**206**	⇑*i*P	**Pb**	**08 09 16.1**	**0.0**
TWKBT	**Hengchun**	**0.50**	**205**	⇑*i*P	**Pb**	**08 09 16.1**	**0.0**
TWKBT				*e*S	**Sb**	**08 09 23.4**	**0.0**
TSEB	**Hengchuen, Pin**	**0.51**	**195**	⇑*i*P	**Pb**	**08 09 16.9**	**+0.6**
TSEB				*e*S	**Sb**	**08 09 25.0**	**+1.3**
SSD	**Sandimen**	**0.52**	**313**	⇑*i*P	**Pg**	**08 09 15.1**	**-0.3**
SSD				*e*S	**Sg**	**08 09 20.8**	**-1.3**
LONT	**Longtian**	**0.52**	**9**	⇑P	**Pg**	**08 09 15.7**	**+0.4**
LONT				*e*S	**Sb**	**08 09 23.5**	**-0.5**
LAY	**Lan-yu**	**0.59**	**127**	*i* P	**Pg**	**08 09 17.5**	**+0.8**
LAY				*i* S	**Sg**	**08 09 26.5**	**+2.1**
SGLT	**Jiouru**	**0.61**	**303**	*e*P	**Pb**	**08 09 17.8**	**-0.2**
SGLT				*e*S	**Sb**	**08 09 25.9**	**-0.6**
EDH	**Donghe**	**0.63**	**23**	*e*P	**Pg**	**08 09 17.9**	**+0.6**
EDH				*e*S	**Sb**	**08 09 26.9**	**-0.2**
LYUB	**Lan-yu**	**0.64**	**128**	⇓P	**Pg**	**08 09 17.0**	**-0.6**
SCST	**Cishan**	**0.70**	**314**	⇑*e*P	**Pb**	**08 09 19.7**	**+0.1**
SCST				*e*S	**Sb**	**08 09 29.4**	**+0.1**
TWM1	**Shoushan**	**0.71**	**307**	*e*P	**Pn**	**08 09 20.3**	**-1.1**
TWM1				*e*S	**Sb**	**08 09 29.7**	**0.0**
ECS	**Chishang**	**0.72**	**13**	*e*P	**Pg**	**08 09 19.2**	**+0.1**
ECS				*e*S	**Sb**	**08 09 29.8**	**0.0**
SNJT	**Kaohsiung City**	**0.74**	**299**	*e*P	**Pn**	**08 09 22.4**	**+0.7**
WSSB	**Gushan**	**0.76**	**289**	*e*P	**Pn**	**08 09 22.6**	**+0.5**
CHKT	**Chengkung**	**0.76**	**23**	P	**Pg**	**08 09 20.3**	**+0.3**
CHKT				S	**Sb**	**08 09 31.6**	**+0.6**
EHD	**Haiduan**	**0.77**	**11**	*e*P	**Pg**	**08 09 19.2**	**-0.9**
ELDTW	**Lidau**	**0.79**	**358**	*e*P	**Pg**	**08 09 20.4**	**-0.2**
ELDTW				*e*S	**Sg**	**08 09 30.6**	**-0.3**
STYH	**Taoyuan**	**0.81**	**342**	*i* P	**Pg**	**08 09 19.8**	**-1.2**
STYH				*i* S	**Sg**	**08 09 29.8**	**-1.8**
FULB	**Fuli**	**0.83**	**16**	*i* P	**Pg**	**08 09 21.0**	**-0.4**
FULB				*e*S	**Sb**	**08 09 33.6**	**+0.4**
CHKH	**Chenggong**	**0.86**	**22**	*i* P	**Pg**	**08 09 21.4**	**-0.5**
CHKH				*e*S	**Sg**	**08 09 33.7**	**+0.6**
CHN1	**Nanshi**	**0.92**	**329**	P	**Pn**	**08 09 24.0**	**-0.3**
CHN1				*e*S	**Sn**	**08 09 37.3**	**-0.2**
CHN3	**Shinhua**	**0.92**	**318**	*e*P	**Pn**	**08 09 25.7**	**+1.4**
CHN3				S	**Sn**	**08 09 40.0**	**+2.4**
WTP	**Ta-pu**	**0.94**	**335**	*i* P	**Pn**	**08 09 24.0**	**-0.5**
WTP				*e*S	**Sn**	**08 09 36.8**	**-1.2**
SNST	**Tainan City**	**0.96**	**329**	*e*P	**Pn**	**08 09 25.2**	**+0.4**
SNST				*e*S	**Sn**	**08 09 39.1**	**+0.5**
TPUB	**Ta-pu**	**0.98**	**337**	*e*P	**Pn**	**08 09 25.1**	**+0.1**
EYUL	**Yuli**	**0.98**	**15**	*e*P	**Pg**	**08 09 23.3**	**-0.9**
EYUL				*e*S	**Sg**	**08 09 37.2**	**+0.2**
TWF1	**Yuli**	**0.98**	**14**	*e*P	**Pg**	**08 09 23.6**	**-0.6**
ECBN	**Changbin**	**0.99**	**22**	*e*P	**Pg**	**08 09 23.4**	**-0.9**
TWK	**Hsinying**	**1.01**	**330**	*e*P	**Pn**	**08 09 25.9**	**+0.5**
YULB	**Yu-li**	**1.02**	**13**	*e*P	**Pg**	**08 09 22.6**	**-2.3**
CHN4	**Tsaushan**	**1.04**	**337**	*i* P	**Pn**	**08 09 26.4**	**+0.5**
CHN4				*e*S	**Sn**	**08 09 41.4**	**+0.9**
SCLT	**Jiali**	**1.10**	**315**	*e*P	**Pn**	**08 09 27.7**	**+1.0**
SCLT				S	**Sn**	**08 09 43.6**	**+1.6**
WCKO	**Fanlu**	**1.12**	**339**	P	**Pn**	**08 09 27.8**	**+0.9**
WCKO				S	**Sn**	**08 09 44.3**	**+1.9**
EHYH	**Wanrong**	**1.13**	**14**	*e*P	**Pb**	**08 09 26.6**	**-0.3**
ALS	**Alishan**	**1.13**	**349**	*e*P	**Pn**	**08 09 27.4**	**0.0**
ALS				*e*S	**Sn**	**08 09 43.5**	**+0.3**
EHY	**Hungye**	**1.14**	**13**	*e*P	**Pb**	**08 09 26.1**	**-0.9**
HGSD	**Ruisui**	**1.15**	**18**	*e*P	**Pb**	**08 09 27.1**	**0.0**
TSCK	**Chigu Township**	**1.16**	**311**	*e*P	**Pn**	**08 09 27.8**	**+0.3**
ICHU	**Yijhu**	**1.19**	**324**	*i* P	**Pg**	**08 09 28.1**	**0.0**
ICHU				*i* S	**Sn**	**08 09 46.1**	**+1.9**
CHN8	**Yiju**	**1.22**	**321**	*e*P	**Pg**	**08 09 29.4**	**+0.8**
CHN8				*e*S	**Sn**	**08 09 47.5**	**+2.6**
CHY	**Chiayi**	**1.24**	**333**	P	**Pg**	**08 09 29.9**	**+0.8**
CHY				*e*S	**Sn**	**08 09 47.0**	**+1.7**
CHN5	**Tsauling**	**1.24**	**344**	*e*P	**Pg**	**08 09 29.9**	**+0.7**
CHN5				*e*S	**Sn**	**08 09 47.9**	**+2.3**
CHN2	**Minshiung**	**1.25**	**335**	*e*P	**Pg**	**08 09 30.5**	**+1.3**
CHN2				*e*S	**Sn**	**08 09 47.2**	**+1.6**
WHYT	**Xinyi Township**	**1.31**	**352**	*e*P	**Pg**	**08 09 30.1**	**-0.3**
WHYT				*e*S	**Sg**	**08 09 48.8**	**+1.4**
WSL	**Shuilin Townsh**	**1.35**	**326**	*e*P	**Pg**	**08 09 30.8**	**-0.4**
WARBT	**Fenglin Townsh**	**1.36**	**13**	*e*P	**Pn**	**08 09 29.6**	**-0.7**
VWDT	**VWDT**	**1.36**	**4**	*e*P	**Pn**	**08 09 29.9**	**-0.4**
WGK	**Gukeng**	**1.36**	**341**	*e*P	**Pg**	**08 09 31.9**	**+0.5**
WGK				*e*S	**Sg**	**08 09 51.2**	**+2.1**
WDLH	**Douliu**	**1.37**	**340**	*e*P	**Pg**	**08 09 31.8**	**+0.2**
WDLH				*e*S	**Sg**	**08 09 50.5**	**+1.1**
SSLB	**Suanglung**	**1.39**	**357**	*e*P	**Pn**	**08 09 30.6**	**-0.1**
WTK	**Tuku**	**1.42**	**335**	*e*P	**Pb**	**08 09 31.5**	**-0.4**
WTK				*e*S	**Sg**	**08 09 52.2**	**+1.2**
WJS	**Zhushan**	**1.45**	**349**	P	**Pg**	**08 09 33.6**	**+0.5**
WJS				*e*S	**Sg**	**08 09 54.1**	**+2.1**
WSF	**Szhu**	**1.45**	**329**	*e*P	**Pg**	**08 09 32.3**	**-0.8**
WSF				*e*S	**Sg**	**08 09 51.5**	**-0.5**
ESL	**Shilin**	**1.46**	**14**	*e*P	**Pn**	**08 09 31.0**	**-0.7**
SHUL	**Shoufeng**	**1.47**	**19**	*e*P	**Pn**	**08 09 30.6**	**-1.2**
SMLT	**Sun Moon Lake**	**1.49**	**355**	*e*P	**Pg**	**08 09 33.9**	**0.0**
SMLT				*e*S	**Sg**	**08 09 55.6**	**+2.4**
TYC	**Yuchr**	**1.51**	**354**	P	**Pg**	**08 09 34.5**	**+0.2**
TYC				*e*S	**Sg**	**08 09 55.4**	**+1.4**
WNT	**Mingjian**	**1.51**	**348**	*e*P	**Pg**	**08 09 34.9**	**+0.6**
WNT				*e*S	**Sg**	**08 09 55.9**	**+1.9**
WDGT	**Dungji**	**1.54**	**304**	*e*P	**Pn**	**08 09 32.1**	**-0.7**
WDGT				S	**Sn**	**08 09 51.6**	**-1.2**
OWD	**Renai**	**1.56**	**5**	*e*P	**Pn**	**08 09 32.7**	**-0.4**
WUSB	**Renai**	**1.59**	**3**	P	**Pn**	**08 09 33.8**	**+0.2**
WCS	**Beigang Elemen**	**1.66**	**356**	*e*P	**Pb**	**08 09 36.4**	**+0.5**
WCS				*e*S	**Sg**	**08 09 58.6**	**-0.1**
VCHM	**Qimei**	**1.69**	**299**	*e*P	**Pn**	**08 09 34.1**	**-0.8**
VCHM				*e*S	**Sn**	**08 09 54.4**	**-2.2**
PHUB	**P'eng-hu**	**1.75**	**310**	*i* P	**Pn**	**08 09 35.1**	**-0.6**
PHUB				*i* S	**Sn**	**08 09 56.7**	**-1.4**
TCU	**Taichung**	**1.78**	**349**	*e*P	**Pb**	**08 09 37.9**	**0.0**
PNG	**Penghu**	**1.80**	**311**	*e*P	**Pn**	**08 09 35.7**	**-0.6**
PNG				S	**Sn**	**08 09 57.6**	**-1.6**
NACB	**Ninganchiao**	**1.84**	**16**	*e*P	**Pn**	**08 09 35.3**	**-1.6**
TDCB	**Techi**	**1.85**	**3**	*e*P	**Pb**	**08 09 39.1**	**-0.2**
FUSS	**Fushou**	**1.86**	**6**	*e*P	**Pn**	**08 09 38.0**	**+0.7**
TWT	**Tachien**	**1.86**	**4**	*e*P	**Pb**	**08 09 39.6**	**+0.3**
WHP	**Taichung City**	**1.88**	**357**	P	**Pb**	**08 09 39.9**	**+0.2**
WHP				*e*S	**Sg**	**08 10 05.2**	**-0.4**
TWQ1	**Liyutan**	**1.96**	**353**	*e*P	**Pb**	**08 09 40.9**	**-0.1**
TWQ1				*e*S	**Sg**	**08 10 06.9**	**-1.5**
NSY	**Sanyi**	**2.03**	**353**	*e*P	**Pb**	**08 09 42.3**	**0.0**
NSY				*e*S	**Sb**	**08 10 08.4**	**+0.8**
NNSB	**Datong**	**2.05**	**9**	*e*P	**Pb**	**08 09 42.6**	**0.0**
NNS	**Nan Shan**	**2.06**	**8**	*e*P	**Pb**	**08 09 42.4**	**-0.4**
EOS4	**EOS4**	**2.08**	**34**	*e*P	**Pn**	**08 09 39.7**	**-0.2**
EOS4				S	**Sn**	**08 10 04.7**	**-1.0**
NMLH	**Miaoli**	**2.15**	**354**	*e*P	**Pb**	**08 09 44.6**	**+0.4**
NSTT	**Nanjuang**	**2.23**	**359**	*e*P	**Pb**	**08 09 45.3**	**-0.3**
NFF	**Wufeng Townshi**	**2.23**	**2**	*e*P	**Pb**	**08 09 44.7**	**-1.0**
LIOB	**Emei**	**2.24**	**359**	*e*P	**Pb**	**08 09 44.5**	**-1.3**
YHNB	**Yeheng**	**2.29**	**8**	*e*P	**Pn**	**08 09 43.5**	**+0.4**
KSHI	**Guanxi Townshi**	**2.38**	**3**	*e*P	**Pn**	**08 09 45.5**	**+1.3**
FUSB	**Fushanzhiwuyua**	**2.41**	**12**	*e*P	**Pn**	**08 09 46.5**	**+1.8**
JYNG	**Yonagunijimaku**	**2.69**	**40**	*e*P	**Pn**	**08 09 49.1**	**+0.5**
HATJ	**Hateruma jima**	**3.03**	**56**	P	**Pn**	**08 09 53.2**	**-0.1**
HATJ				*e*S	**Sn**	**08 10 25.7**	**-4.0**
IRIF	**Iriomote-Funau**	**3.14**	**51**	P	**Pn**	**08 09 54.9**	**+0.2**
IRIF				*e*S	**Sn**	**08 10 30.8**	**-1.4**
JKRS	**Kuro-shima**	**3.29**	**55**	*e*P	**Pn**	**08 09 57.1**	**+0.3**
JKRS				*e*S	**Sn**	**08 10 35.0**	**-1.0**
JIJ	**Ishigaki jima**	**3.46**	**55**	P	**Pn**	**08 09 58.9**	**-0.2**
JIJ				*e*S	**Sn**	**08 10 38.8**	**-1.4**
JISG	**Ishigakijimahi**	**3.71**	**53**	P	**Pn**	**08 10 02.3**	**-0.3**
JISG				*e*S	**Sn**	**08 10 43.9**	**-2.6**
JTJ	**Tarama**	**4.04**	**56**	*e*P	**Pn**	**08 10 07.5**	**+0.5**

SFS ***01*** *08:10:55.9, 36°.47N×8°.09W, h21^{km}, ML2.6/7, ML2.0/8, MLv1.7/8*

INMG ***01*** *08:10:55.5±1.6, 36°.43N×8°.12W, h16^{km}±6^{km}, ML1.5, Error ellipse: s-maj=7.8km s-min=6.7km az=55.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Faro*

MDD ***01*** *08:10:55.7±1.3, 36°.41N×8°.09W, h40^{km}, mb_Lg2.2/3, Error ellipse: s-maj=11.7km s-min=5.9km az=16.0*

IGIL ***01*** *08:10:55.6, 36°.43N×8°.12W, h16^{km}, ML1.2*

ISC 01 08:10:54.0±2.2**, 36°.4N**±0°.1×**8°.08W**±0°.05**, h29**^{km}**, n25, **σ**0^{s}.94**/42**, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.87**	**8**	*e*P	**Pn**	**08 11 10.5**	**+0.1**
PBDV				*e*S	**Sb**	**08 11 22.0**	**0.0**
PBDV				*i* AML	AML	08 11 24.2	
PBDV				*i* AML	AML	08 11 25.7	
PBDV				*i* AML	AML	08 11 28.0	
PFVI	**Vila Bisbo**	**0.96**	**322**	Pg	**Pn**	**08 11 11.0**	**-0.6**
PFVI	**Vila Bisbo**	**0.96**	**322**	*e*P	**Pn**	**08 11 11.3**	**-0.2**
PFVI				*e*S	**Sb**	**08 11 25.8**	**+1.3**
PFVI				*i* AML	AML	08 11 28.4	
PFVI				*i* AML	AML	08 11 32.4	
MORF	**Marmelete**	**1.03**	**334**	*e*P	**Pn**	**08 11 12.6**	**0.0**
MORF				*e*S	**Sn**	**08 11 25.2**	**-0.9**
MORF				IAML		08 11 26.7	
	comp=N,5.8nm,0.1s						
MORF	**Marmelete**	**1.03**	**334**	*e*P	**Pn**	**08 11 12.6**	**0.0**
MORF				*i* AML	AML	08 11 29.2	
MORF				*i* AML	AML	08 11 30.3	
MORF				*i* AML	AML	08 11 32.5	
PVAQ	**Vaqueiros**	**1.07**	**16**	Pg	**Pn**	**08 11 13.4**	**+0.4**
PVAQ	**Vaqueiros**	**1.07**	**16**	*e*P	**Pn**	**08 11 13.7**	**+0.7**
PVAQ				*i* AML	AML	08 11 28.6	
EGRO	**El Granado**	**1.25**	**22**	Sn	**Sn**	**08 11 30.6**	**-0.8**
EGRO				Pn	**Pn**	**08 11 16.2**	**+0.6**
EGRO	**El Granado**	**1.25**	**22**	Pg	**Pn**	**08 11 16.1**	**+0.6**
EGRO				Sg	**Sn**	**08 11 29.6**	**-1.8**
EGRO				*i* IVmb_Lg		08 11 36.3	
PCVE	**Castro Verde**	**1.25**	**2**	Pn	**Pn**	**08 11 16.2**	**+0.6**
PCVE				Sn	**Sn**	**08 11 30.8**	**-0.7**
PCVE	**Castro Verde**	**1.25**	**2**	*e*P	**Pn**	**08 11 16.2**	**+0.6**
PCVE				*e*S	**Sn**	**08 11 31.4**	**-0.1**
PCVE				*i* AML	AML	08 11 31.4	
PCVE				*i* AML	AML	08 11 31.5	
PCVE				*i* AML	AML	08 11 32.2	
PTEO	**Sao Teotonio**	**1.27**	**336**	*e*P	**Pn**	**08 11 16.2**	**+0.4**
PTEO				*i* AML	AML	08 11 40.6	
PTEO				*i* AML	AML	08 11 44.3	
MESJ	**Messejana**	**1.46**	**356**	*e*P	**Pn**	**08 11 18.9**	**+0.4**
MESJ				*e*S	**Sn**	**08 11 36.0**	**-0.7**
MESJ				IAML		08 11 37.3	
	comp=E,2.0nm,0.1s						
MESJ	**Messejana**	**1.46**	**356**	*e*P	**Pn**	**08 11 19.3**	**+0.8**
MESJ				*e*S	**Sn**	**08 11 36.3**	**-0.4**
MESJ				*i* AML	AML	08 11 36.8	
MESJ				*i* AML	AML	08 11 46.1	
MESJ				*i* AML	AML	08 11 46.1	
PBEJ	**Beja**	**1.66**	**6**	*e*S	**Sn**	**08 11 42.2**	**+0.8**
PBEJ				*i* AML	AML	08 11 42.3	
PBEJ				*i* AML	AML	08 11 42.7	
PBEJ				*i* AML	AML	08 11 42.9	
EMIN	**Mina Concepcio**	**1.79**	**39**	Pg	**Pn**	**08 11 22.1**	**-0.9**
EMIN				Sg	**Sn**	**08 11 43.5**	**-1.2**
EMIN				*i* IVmb_Lg		08 11 44.4	
ESPR	**Espera**	**1.86**	**74**	Pg	**Pn**	**08 11 25.0**	**+1.2**
ESPR				Sg	**Sn**	**08 11 45.2**	**-1.2**
ESPR				*i* IVmb_Lg		08 11 47.8	
PBAR	**Barrancos**	**1.98**	**25**	Sn	**Sn**	**08 11 48.3**	**-1.0**
PBAR				Pn	**Pn**	**08 11 27.3**	**+1.7**
PBAR	**Barrancos**	**1.98**	**25**	*e*P	**Pn**	**08 11 26.6**	**+1.0**
PBAR				*e*S	**Sn**	**08 11 48.6**	**-0.8**
PBAR				*i* AML	AML	08 11 52.4	
PBAR				*i* AML	AML	08 11 52.4	
PBAR				*i* AML	AML	08 12 01.4	
EVO	**Evora**	**2.15**	**1**	Sn	**Sn**	**08 11 52.5**	**-1.2**
EVO	**Evora**	**2.15**	**1**	*e*S	**Sn**	**08 11 52.9**	**-0.8**
EVO				*i* AML	AML	08 11 53.0	
EVO				*i* AML	AML	08 11 53.0	
EVO				*i* AML	AML	08 11 55.5	
PMTG	**Montargil**	**2.69**	**358**	*e*P	**Pn**	**08 11 36.4**	**+1.1**
PMTG				*e*S	**Sn**	**08 12 05.9**	**-1.0**
PMTG				*i* AML	AML	08 12 06.4	
PMTG				*i* AML	AML	08 12 06.8	
PMTG				*i* AML	AML	08 12 07.0	
ECAB	**El Cabril**	**2.72**	**51**	Pn	**Pn**	**08 11 36.4**	**+0.6**
ECAB				Sn	**Sn**	**08 12 06.0**	**-1.7**
PMRV	**Marv??o**	**3.10**	**10**	*e*P	**Pn**	**08 11 41.6**	**+0.7**
PMRV				*e*S	**Sn**	**08 12 15.9**	**-1.1**
PMRV				*i* AML	AML	08 12 16.5	
PMRV				*i* AML	AML	08 12 17.0	
PMRV				*i* AML	AML	08 12 17.1	
EADA	**Adamuz**	**3.32**	**56**	Pn	**Pn**	**08 11 45.0**	**+1.0**
EADA				Sn	**Sn**	**08 12 21.2**	**-1.3**

NEIC ***01*** *08:16:17.0±0.9, 19°.20N±0°.03×155°.50W±0°.01, h51^{km}±4^{km}, Error ellipse: s-maj=4.8km s-min=1.2km az=165.0*

HVO 01 08:16:18.8±0.8**, 19°.16N**±0°.03×**155°.478W**±0°.009**,** **h43**^{km}±4^{km}**, ML2.5**/34**, ML2.8**/40(NEIC)**, Error ellipse: s-maj=4.5km s-min=0.8km az=167.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HPO	**Honuapo**	**0.10**	**224**		Pn	08 16 26.2	+0.4
HTC	**Hot Caves**	**0.11**	**46**		Pn	08 16 25.3	-0.6
KHU	**Kahuku**	**0.15**	**303**		Pn	08 16 25.6	-0.8
KHU				IAML		08 16 31.0	
	comp=N,1µm,0.6s						
KHU				IAML		08 16 31.3	
	comp=E,824nm,0.5s						
HLP	**Hilina Pali**	**0.21**	**51**	Pn	Pn	08 16 26.0	-0.6
HLP				IAML		08 16 39.2	
	comp=E,1µm,0.7s						
HLP	**Hilina Pali**	**0.21**	**51**		Sn	08 16 31.6	-0.4
AIN	**Ainahou**	**0.21**	**5**		Pn	08 16 26.0	-0.7
AIN	**Ainahou**	**0.21**	**5**		Sn	08 16 31.5	-0.7
SDHHI	**Sand Hill**	**0.28**	**38**		Pn	08 16 26.1	-1.2
SDHHI					Sn	08 16 31.8	-1.4
WRMHI	**West Rim**	**0.29**	**35**		Pn	08 16 26.3	-1.1
WRMHI					Sn	08 16 32.5	-1.0
RIM	**Rim**	**0.30**	**40**		Pn	08 16 26.3	-1.2
RIM					Sn	08 16 32.3	-1.3
KKO	**Keanakako'i**	**0.31**	**41**		Pn	08 16 26.9	-0.7
KKO					Sn	08 16 32.3	-1.4
UWE	**Uwekahuna**	**0.31**	**34**		Pn	08 16 26.8	-0.9
UWE				IAML		08 16 39.9	
	comp=N,901nm,0.8s						
UWE	**Uwekahuna**	**0.31**	**34**		Sn	08 16 32.2	-1.5
OBL	**Observatory Le**	**0.31**	**36**		Pn	08 16 26.8	-0.8
BYL	**Byron's Ledge**	**0.32**	**40**		Pn	08 16 26.2	-1.5
BYL					Sn	08 16 32.6	-1.3
BYL	**Byron's Ledge**	**0.32**	**40**	IAML		08 16 37.4	
	comp=N,606nm,0.6s						
BYL				IAML		08 16 40.0	
	comp=E,621nm,0.7s						
UWB	**Uwekahuna Bluf**	**0.32**	**36**		Pn	08 16 26.8	-0.9
UWB					Sn	08 16 32.3	-1.6
PUH	**Pauahi**	**0.33**	**50**		Pn	08 16 26.9	-0.9
PUH				IAML		08 16 38.9	
	comp=N,644nm,0.6s						
PUH	**Pauahi**	**0.33**	**50**		Sn	08 16 32.1	-1.8
SBLHI	**Steaming Bluff**	**0.33**	**37**		Pn	08 16 26.9	-0.9
SBLHI					Sn	08 16 32.4	-1.7
HATHI	**Halemaʻumaʻu T**	**0.33**	**38**		Pn	08 16 26.9	-0.8
HATHI	**Halemaʻumaʻu T**	**0.33**	**38**	IAML		08 16 36.4	
	comp=E,690nm,0.8s						
HATHI				IAML		08 16 37.0	
	comp=N,590nm,0.8s						
MWH	**Mokuaweoweo**	**0.34**	**341**		Pn	08 16 26.9	-1.5
MWH				IAML		08 16 33.7	
	comp=N,585nm,0.6s						
MWH				IAML		08 16 38.0	
	comp=E,564nm,0.6s						
MWH	**Mokuaweoweo**	**0.34**	**341**		Sn	08 16 33.5	-1.5
MLH	**Mauna Loa**	**0.34**	**15**		Pn	08 16 26.7	-1.3
MLH					Sn	08 16 33.4	-1.1
MLH	**Mauna Loa**	**0.34**	**15**	IAML		08 16 33.9	
	comp=N,887nm,0.3s						
MLH				IAML		08 16 40.7	
	comp=E,608nm,0.5s						
RSD	**Rainshed**	**0.35**	**32**		Pn	08 16 26.2	-1.9
RSD	**Rainshed**	**0.35**	**32**		Sn	08 16 33.2	-1.3
KNHH	**Kane Nui o Ham**	**0.36**	**54**		Pn	08 16 27.2	-0.9
STCH	**Steam Cracks**	**0.40**	**56**		Pn	08 16 27.4	-1.1
STCH	**Steam Cracks**	**0.40**	**56**	IAML		08 16 34.1	
	comp=E,248nm,0.7s						
STCH				IAML		08 16 35.0	
	comp=N,360nm,0.9s						
ALEP	**Alea Permanent**	**0.41**	**337**		Pn	08 16 27.4	-1.5
ALEP					Sn	08 16 34.0	-2.0
NPOC	**North of Puʻu**	**0.42**	**57**		Pn	08 16 27.8	-0.9
JCUZ	**Jacuzzi**	**0.42**	**58**		Pn	08 16 27.9	-0.8
JCUZ					Sn	08 16 33.6	-2.2
HMH	**Humuʻula Sheep**	**0.44**	**359**		Pn	08 16 28.2	-1.0
HMH				IAML		08 16 36.2	
	comp=N,423nm,0.8s						
HMH	**Humuʻula Sheep**	**0.44**	**359**		Sn	08 16 35.0	-1.5
JOKA	**Jonika Flow**	**0.52**	**59**		Pn	08 16 28.9	-1.1
JOKA	**Jonika Flow**	**0.52**	**59**		Sn	08 16 36.0	-1.9
CPH	**Captain Cook**	**0.53**	**308**		Pn	08 16 28.3	-1.7
POHA	**Pohakuloa**	**0.59**	**355**	Pn	Pn	08 16 30.3	-0.8
POHA				IAML		08 16 38.6	
	comp=N,321nm,0.8s						
HUH	**Hualalai**	**0.62**	**327**		Pn	08 16 30.6	-0.9
HUH				IAML		08 16 39.5	
	comp=E,540nm,0.5s						
HUH	**Hualalai**	**0.62**	**327**		Sn	08 16 38.3	-2.3
MHA	**Mahukona**	**1.09**	**339**	Pn	Pn	08 16 36.2	-1.4

THE ***01*** *08:17:26.7, 41°N±2°×2°1E±°, h0^{km}±1^{km}, M2.4/13, MLh2.4/13*

TIR ***01*** *08:17:26.1, 40°.49N×20°.80E, h5^{km}±1^{km}, Md2.7/4, Ml2.5/6*

ATH ***01*** *08:17:29.2, 40°.33N×20°.88E, h6^{km}±1^{km}, Manual Solution by A.Andreou First location: 2019/06/03 13:36:36, This location: 2020/08/11 08:58:13 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

ISC 01 08:17:27.2±0.9**, 40°.48N**±0°.02×**20°.83E**±0°.02**, h8**^{km}±7^{km}**, n44, **σ**0^{s}.81**/62**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	**Korca**	**0.14**	**346**	Pg	**Pg**	**08 17 28.7**	**-1.7**
KBN				AML	AML	08 17 31.6	
	30nm,0.2s						
KBN				AMd		08 18 15.3	
NEST	**Nestorio**	**0.18**	**112**	Pg	**Pg**	**08 17 30.9**	**-0.1**
NEST				Sg	**Sg**	**08 17 34.1**	**+0.6**
NEST				AML	AML	08 17 38.0	
	4.1nm,0.3s						
NEST	**Nestorio**	**0.18**	**112**	P	**Pg**	**08 17 31.1**	**+0.1**
NEST				S	**Sg**	**08 17 34.4**	**+0.9**
NEST	**Nestorio**	**0.18**	**112**	P	**Pg**	**08 17 31.0**	**+0.1**
NEST				S	**Sg**	**08 17 34.7**	**+1.2**
PENT	**Pentalofos**	**0.37**	**141**	P	**Pg**	**08 17 34.4**	**-0.1**
PENT				S	**Sb**	**08 17 42.2**	**+0.2**
PENT	**Pentalofos**	**0.37**	**141**	P	**Pg**	**08 17 34.3**	**-0.1**
PENT				S	**Sg**	**08 17 37.3**	**-2.1**
OHR	**Ohrid**	**0.63**	**358**	S	**Sg**	**08 17 47.4**	**-0.3**
KPRO	**Kipourio**	**0.67**	**142**	P	**Pg**	**08 17 39.4**	**-0.6**
KPRO				S	**Sg**	**08 17 49.3**	**+0.5**
KPRO	**Kipourio**	**0.67**	**142**	P	**Pg**	**08 17 39.5**	**-0.6**
KZN	**Kozani**	**0.74**	**103**	P	**Pb**	**08 17 42.2**	**-0.1**
KZN				S	**Sb**	**08 17 53.3**	**+0.7**
KZN	**Kozani**	**0.74**	**103**	P	**Pb**	**08 17 42.7**	**+0.4**
KZN				S	**Sg**	**08 17 52.0**	**+0.9**
JAN	**Janina**	**0.82**	**179**	P	**Pg**	**08 17 41.7**	**-1.4**
JAN				S	**Sb**	**08 17 55.1**	**+0.1**
JAN	**Janina**	**0.82**	**179**	P	**Pg**	**08 17 42.2**	**-0.9**
SRN	**Sarande**	**0.88**	**227**	Pg	**Pg**	**08 17 43.7**	**-0.4**
SRN				Sg	**Sb**	**08 17 56.8**	**+0.4**
SRN				AML	AML	08 18 12.2	
	0.4nm,0.7s						
SRN				AMd		08 18 28.4	
KTI	**Kastanea**	**0.98**	**95**	P	**Pg**	**08 17 45.7**	**-0.4**
IGT	**Igoumenitsa**	**1.02**	**202**	Pg	**Pb**	**08 17 46.8**	**-0.3**
IGT				Sg	**Sn**	**08 18 01.8**	**-0.5**
IGT				AML	AML	08 18 12.4	
	0.4nm,0.6s						
IGT				AMd		08 18 36.6	
IGT	**Igoumenitsa**	**1.02**	**202**	P	**Pg**	**08 17 46.7**	**-0.2**
IGT				S	**Sb**	**08 18 01.2**	**+0.5**
IGT	**Igoumenitsa**	**1.02**	**202**	P	**Pg**	**08 17 46.5**	**-0.4**
KEK	**Kerkira**	**1.10**	**226**	P	**Pb**	**08 17 48.4**	**-0.1**
KEK	**Kerkira**	**1.10**	**226**	P	**Pn**	**08 17 49.7**	**+0.8**
TIR	**Tirane**	**1.13**	**320**	Pg	**Pg**	**08 17 48.1**	**-0.9**
TIR				Sg	**Sn**	**08 18 06.5**	**+1.5**
TIR				AML	AML	08 18 10.0	
	0.4nm,0.6s						
TETR	**Tetrakomo, Epi**	**1.19**	**163**	P	**Pg**	**08 17 49.1**	**-0.9**
THL	**Klokotos Trika**	**1.29**	**135**	P	**Pn**	**08 17 51.7**	**+0.3**
THL	**Klokotos Trika**	**1.29**	**135**	P	**Pn**	**08 17 51.7**	**+0.3**
THL				S	**Sg**	**08 18 07.1**	**-1.6**
TYRN	**Tyrnavos**	**1.32**	**125**	P	**Pn**	**08 17 52.1**	**+0.2**
TYRN	**Tyrnavos**	**1.32**	**125**	P	**Pn**	**08 17 51.6**	**-0.3**
TYRN				S	**Sg**	**08 18 08.0**	**-1.7**
AMPL	**Ampelaki**	**1.59**	**169**	P	**Pn**	**08 17 55.9**	**+0.4**
TSLK	**Tsoukalades, L**	**1.66**	**185**	P	**Pn**	**08 17 56.8**	**+0.2**
LKD2	**Lefkada island**	**1.70**	**185**	P	**Pn**	**08 17 57.8**	**+0.7**
KNT	**Kendrikon**	**1.71**	**66**	P	**Pn**	**08 17 57.0**	**-0.3**
PUK	**Puka**	**1.71**	**336**	Pn	**Pb**	**08 17 58.7**	**-0.2**
PUK				Sn	**Sg**	**08 18 24.8**	**+2.5**
PUK				AMd		08 18 49.8	
HORT	**Hortiatis**	**1.73**	**85**	P	**Pn**	**08 17 57.1**	**-0.6**
EVR	**Evrytania**	**1.74**	**154**	P	**Pn**	**08 17 58.1**	**+0.4**
NYDR	**Nydri-Lefkada**	**1.77**	**183**	P	**Pn**	**08 17 58.3**	**+0.2**
MAKR	**Makrakomi, Fth**	**1.78**	**145**	P	**Pn**	**08 17 58.0**	**-0.2**

AGG	**Agios Georgios**	**1.86**	**141**	P	Pn	08 17 60.0	+0.6
AGG	**Agios Georgios**	**1.86**	**141**	P	Pn	08 18 00.1	+0.8
AGG				S	Sn	08 18 22.8	-0.2
EVGI	**Lefkada island**	**1.86**	**184**	P	Pn	08 18 00.1	+0.7
PVO	**Paravola**	**1.94**	**164**	P	Pn	08 18 00.7	+0.3
BCI	**Bajram Curri**	**1.97**	**343**	Pn	Pg	08 18 03.7	-1.3
BCI				Sn	Sg	08 18 30.7	+0.2
BCI				AML	AML	08 18 39.8	
	0.5nm,0.7s						
EFP	**Efpalio**	**2.21**	**158**	P	Pn	08 18 04.1	0.0
KALE	**Kalithea**	**2.32**	**154**	P	Pn	08 18 05.6	-0.1
AXS	**Araxos**	**2.32**	**169**	P	Pn	08 18 05.9	+0.3
PSDA	**Pessada-Kefalo**	**2.37**	**185**	P	Pn	08 18 07.3	+1.0

IDC 01 08:25:51.6±3.0**, 33°.26N×80°.42E, h0^{km}, mb3.5**/4**, mbtmp3.5**/5**, ML2.8**/1**, Error ellipse: s-maj=131.9km s-min=24.3km az=71.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**13.60**	**5**	Pn	Pn	08 29 05.4	-0.3
	0.1nm,0.3s,baz=185,slow=14,SNR=2.6						
	0.1nm,0.4s						
ZALV	**Zalesovo Beam**	**20.92**	**7**	P	P	08 30 35.5	-0.1
	0.8nm,0.6s,baz=179,slow=12,SNR=2.1						
	0.8nm,0.6s						
BVAR	**Borovoye Array**	**21.03**	**343**	P	P	08 30 36.7	-0.1
	0.3nm,0.4s,baz=144,slow=12,SNR=4.4						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**73.79**	**128**	P	P	08 37 27.6	-0.4
	0.8nm,0.7s,baz=320,slow=5.7,SNR=5.6						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**76.16**	**131**	P	P	08 37 42.1	+0.4
	0.8nm,0.6s,baz=315,slow=5.7,SNR=13						
	0.8nm,0.6s						

ROM 01 08:30:37.0±0.1**, 38°.132N**±0°.004×**15°.177E**±0°.005**, h10^{km}, ML2.3**/57**, 8C-3D, Error ellipse: s-maj=0.4km s-min=0.3km az=142.0, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NOV	**Novara**	**0.11**	**197**	⇓P	Pg	08 30 40.0	+0.3
NOV				S	Sg	08 30 42.0	+0.4
NOV				AML	AML		
	comp=E,13725μm,0.7s						
NOV				AML	AML		
	comp=N,13850μm,0.4s						
NOV				AML	AML		
	comp=N,13312μm,0.2s						
NOV				AML	AML		
	comp=E,12568μm,0.2s						
MPNC	**Port Mandanici**	**0.14**	**84**	⇑P	Pg	08 30 41.0	+0.8
MPNC				S	Sg	08 30 43.6	+1.3
MPNC				AML	AML		
	comp=E,5255μm,0.5s						
MPNC				AML	AML		
	comp=N,4820μm,1.4s						
MPNC				AML	AML		
	comp=N,4820μm,0.6s						
MILZ	**Milazzo**	**0.15**	**17**	⇑P	Pg	08 30 41.1	+0.9
MILZ				S	Sg	08 30 43.8	+1.3
MILZ				AML	AML		
	comp=E,3975μm,0.3s						
MILZ				AML	AML		
	comp=N,2380μm,0.5s						
MILZ				AML	AML		
	comp=N,2380μm,1.5s						
AIO	**Antillo**	**0.17**	**165**	⇑P	Pg	08 30 41.0	+0.4
AIO				S	Sg	08 30 43.7	+0.6
AIO				AML	AML		
	comp=N,8185μm,0.2s						
AIO				AML	AML		
	comp=E,9100μm,0.2s						
ECTS	**Castiglione**	**0.25**	**190**	⇓P	Pb	08 30 43.0	-0.7
ECTS				S	Sb	08 30 47.0	-1.2
ECTS				AML	AML		
	comp=E,2395μm,0.3s						
ECTS				AML	AML		
	comp=N,2140μm,0.2s						
ECTS				AML	AML		
	comp=N,2135μm,0.2s						
MUCR	**Ucria**	**0.26**	**250**	⇑P	Pg	08 30 42.4	+0.2
MUCR				S	Sg	08 30 46.2	+0.5
MUCR				AML	AML		
	comp=N,1395μm,0.4s						
MUCR				AML	AML		
	comp=E,968μm,1.3s						
MUCR				AML	AML		
	comp=E,952μm,0.4s						
VPL	**Vulcano Piano**	**0.29**	**328**	⇑P	Pb	08 30 43.6	-0.7
VPL				S	Sb	08 30 48.4	-0.9
VPL				AML	AML		
	comp=E,1650μm,0.4s						
VPL				AML	AML		
	comp=N,2020μm,0.6s						
VPL				AML	AML		
	comp=N,2020μm,1.4s						
VPL				AML	AML		
	comp=E,1650μm,1.6s						
VPL				AML	AML		
	comp=E,1650μm,0.4s						
VPL				AML	AML		
	comp=N,1922μm,0.4s						
MSRU	**Castanea**	**0.29**	**63**	⇑P	Pb	08 30 43.6	-0.7
MSRU				S	Sb	08 30 48.5	-0.8
MSRU				AML	AML		
	comp=E,2730μm,0.3s						
MSRU				AML	AML		
	comp=N,2480μm,0.3s						
IVGP	**Vulcano Grotta**	**0.32**	**327**	P	Pg	08 30 43.7	+0.4
IVGP				S	Sb	08 30 48.9	-1.1
EPIT	**Pozzo Pitarron**	**0.33**	**197**	P	Pb	08 30 44.9	-0.2
EMCN	**Etna Monte Con**	**0.36**	**198**	P	Pb	08 30 45.6	0.0
EMSG	**Monte Spagnolo**	**0.36**	**210**	P	Pb	08 30 45.4	-0.2
EMSG				S	Sb	08 30 50.6	-0.7
EMSG				AML	AML		
	comp=E,902μm,0.6s						
EMSG				AML	AML		
	comp=N,1081μm,0.8s						
EMSG				AML	AML		
	comp=E,902μm,1.4s						
EMSG				AML	AML		
	comp=E,903μm,0.5s						
EMSG				AML	AML		
	comp=N,1058μm,0.3s						
LLI	**Lipari**	**0.36**	**330**	P	Pb	08 30 44.9	-0.7
EPZF	**Pizzo Felice**	**0.40**	**220**	P	Pb	08 30 45.6	-0.6
EPZF				S	Sb	08 30 51.7	-0.7
EPZF				AML	AML		
	comp=E,554μm,0.4s						
EPZF				AML	AML		
	comp=N,541μm,0.3s						
EPZF				AML	AML		
	comp=N,541μm,0.3s						
MTTG	**Motta San Giov**	**0.43**	**107**	⇑P	Pg	08 30 45.8	+0.5
MTTG				S	Sb	08 30 52.6	-0.6
MTTG				AML	AML		
	comp=N,516μm,0.4s						
MTTG				AML	AML		
	comp=E,308μm,0.6s						
MTTG				AML	AML		
	comp=E,308μm,1.4s						
MTTG				AML	AML		
	comp=E,307μm,0.6s						
SICLA	**Scilla**	**0.44**	**73**	P	Pg	08 30 46.0	+0.4
SICLA				S	Sb	08 30 52.7	-0.8
SICLA				AML	AML		
	comp=E,574μm,0.8s						
SICLA				AML	AML		
	comp=N,634μm,0.4s						
SICLA				AML	AML		
	comp=E,441μm,0.3s						
MSFR	**San Fratello**	**0.47**	**258**	⇑P	Pg	08 30 46.4	+0.2
MSFR				S	Sg	08 30 53.3	+0.9
MSFR				AML	AML		
	comp=E,232μm,1.3s						
MSFR				AML	AML		
	comp=N,266μm,0.3s						
MSFR				AML	AML		
	comp=E,232μm,0.7s						
MSFR				AML	AML		
	comp=N,266μm,1.7s						
CEL	**Celeste**	**0.58**	**77**	P	Pg	08 30 48.2	0.0
CEL				S	Sg	08 30 56.6	+0.7
CEL				AML	AML		
	comp=N,208μm,0.7s						
CEL				AML	AML		
	comp=E,174μm,0.2s						
CEL				AML	AML		
	comp=N,204μm,0.1s						
CEL				AML	AML		
	comp=E,181μm,0.2s						
CEL				AML	AML		
	comp=N,204μm,1.9s						
CEL				AML	AML		
	comp=E,174μm,1.8s						
CEL				AML	AML		
	comp=E,174μm,0.2s						
CEL				AML	AML		
	comp=N,197μm,0.1s						
CEL				AML	AML		
	comp=N,204μm,0.1s						
EPOZ	**Pozzillo**	**0.62**	**187**	AML	AML		
	comp=N,1335μm,1.1s						
EPOZ				AML	AML		
	comp=E,1126μm,0.4s						
GALF	**Gagliano Caste**	**0.64**	**229**	P	Pb	08 30 50.0	-0.3
GALF				AML	AML		
	comp=E,460μm,0.5s						
GALF				AML	AML		
	comp=N,282μm,1.1s						
IFIL	**Filicudi I Eol**	**0.65**	**312**	P	Pg	08 30 49.6	+0.1
IFIL				S	Sb	08 30 59.6	+0.1
IFIL				AML	AML		
	comp=N,722μm,0.3s						
IFIL				AML	AML		
	comp=E,1750μm,0.7s						
IFIL				AML	AML		
	comp=E,1750μm,1.3s						
IFIL				AML	AML		
	comp=E,1672μm,0.3s						
SOI	**Samo**	**0.69**	**95**	P	Pg	08 30 50.1	-0.3
SOI				S	Sb	08 31 01.0	+0.1
SOI				AML	AML		
	comp=N,134μm,1.4s						
SOI				AML	AML		
	comp=E,144μm,0.5s						
JOPP	**Joppolo**	**0.73**	**49**	P	Pg	08 30 51.2	+0.1
JOPP				S	Sg	08 31 01.3	+0.6
JOPP				AML	AML		
	comp=E,160μm,0.5s						
JOPP				AML	AML		
	comp=N,188μm,0.3s						
IACL	**Alicudi**	**0.76**	**302**	P	Pg	08 30 51.4	-0.3
IACL				S	Sb	08 31 03.1	+0.4
IACL				AML	AML		
	comp=E,553μm,1.1s						
IACL				AML	AML		
	comp=N,550μm,0.5s						
IACL				AML	AML		
	comp=E,553μm,0.9s						
HLNI	**Lentini**	**0.82**	**197**	P	Pg	08 30 53.0	+0.2
HLNI				AML	AML		
	comp=N,71μm,1.4s						
HLNI				AML	AML		
	comp=E,81μm,0.2s						
PLLN	**Pollina**	**0.83**	**261**	P	Pg	08 30 52.9	0.0
PLLN				S	Sb	08 31 04.6	-0.2
PLLN				AML	AML		
	comp=E,270μm,0.4s						
PLLN				AML	AML		
	comp=N,396μm,0.4s						
PETRA	**Petralia Sopra**	**0.89**	**251**	P	Pb	08 30 54.5	-0.1
PETRA				AML	AML		
	comp=E,156μm,0.6s						
PETRA				AML	AML		
	comp=N,163μm,0.4s						
PETRA				AML	AML		
	comp=E,156μm,1.4s						
CSLB	**Castelbuono**	**0.91**	**258**	⇓P	Pg	08 30 54.0	-0.4
CSLB				S	Sg	08 31 05.7	-0.5
CSLB				AML	AML		
	comp=E,53μm,1.0s						
CSLB				AML	AML		
	comp=N,68μm,0.8s						
GIB	**Gibilmanna**	**0.92**	**261**	P	Pg	08 30 54.5	-0.2
GIB				S	Sb	08 31 07.4	0.0
GIB				AML	AML		
	comp=N,216μm,0.6s						
GIB				AML	AML		
	comp=E,177μm,0.5s						
GIB				AML	AML		
	comp=N,216μm,1.4s						
SCIAR	**Sciara**	**1.14**	**261**	P	Pb	08 30 58.5	-0.4
SCIAR				AML	AML		
	comp=E,99μm,0.5s						
SCIAR				AML	AML		
	comp=N,95μm,0.8s						
SCIAR				AML	AML		
	comp=E,99μm,1.5s						
CAR1	**CAROLEI**	**1.38**	**36**	P	Pn	08 31 00.7	-1.7
CAR1				AML	AML		
	comp=N,68μm,1.6s						
CAR1				AML	AML		
	comp=E,73μm,0.4s						
CAR1				AML	AML		
	comp=N,68μm,0.4s						
CAR1				AML	AML		
	comp=N,66μm,0.3s						
CAR1				AML	AML		
	comp=E,73μm,0.4s						
CET2	**Cetraro**	**1.52**	**23**	P	Pn	08 31 02.9	-1.4
CET2				AML	AML		
	comp=E,68μm,0.2s						
CET2				AML	AML		
	comp=N,85μm,0.2s						
CET2				AML	AML		
	comp=E,68μm,0.2s						
CET2				AML	AML		
	comp=N,85μm,0.2s						
CUC	**Castrocucco**	**1.92**	**15**	P	Pn	08 31 09.1	-0.8
CUC				AML	AML		
	comp=E,26μm,0.5s						
CUC				AML	AML		
	comp=N,18μm,1.2s						
CUC				AML	AML		
	comp=E,26μm,1.5s						
CUC				AML	AML		
	comp=N,16μm,0.6s						
CUC				AML	AML		
	comp=E,26μm,0.5s						

ROM 01 08:31:35.7±0.3**, 38°.120N**±0°.009×**15°.158E**±0°.007**, h9^{km}**±2^{km}**, Md1.4**/4**, ML1.2**/6**, Error ellipse: s-maj=0.8km s-min=0.7km az=343.0, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NOV	**Novara**	**0.09**	**190**	P	Pg	08 31 38.7	+0.5
NOV				S	Sg	08 31 40.6	+0.8
NOV				AML	AML		
	comp=E,335μm,0.7s						
NOV				AML	AML		
	comp=N,334μm,0.4s						
NOV				AML	AML		
	comp=N,334μm,1.6s						
NOV				AML	AML		
	comp=E,335μm,1.3s						
NOV				END			
MPNC	**Port Mandanici**	**0.15**	**81**	P	Pg	08 31 39.7	+0.6
MPNC				S	Sg	08 31 42.3	+0.9
MPNC				AML	AML		
	comp=E,98μm,0.4s						
MPNC				AML	AML		
	comp=N,79μm,0.2s						
MPNC				END			
AIO	**Antillo**	**0.16**	**158**	P	Pg	08 31 39.7	+0.5
AIO				S	Sg	08 31 42.4	+0.8
AIO				AML	AML		
	comp=N,148μm,0.2s						
AIO				AML	AML		
	comp=E,142μm,0.2s						
AIO				END			
MUCR	**Ucria**	**0.24**	**251**	P	Pg	08 31 41.4	+0.8
MUCR				S	Sg	08 31 45.0	+1.2
MUCR				END			

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*THE **01** 08:36:53.0, 40°.4N±0°.9×20°.8E±0°.9, h3^{km}±2^{km}, M2.5/9, MLh2.5/9*

*TIR **01** 08:36:52.6, 40°.42N×20°.77E, h3^{km}±1^{km}, Md2.3/5, Ml2.8/5*

*ATH **01** 08:36:56.1, 40°.43N×20°.94E, h9^{km}±2^{km}, ML2.5/16, Manual Solution by A.Papageorgiou First location: 2019/06/01 08:38:08, This location: 2021/06/11 13:31:48 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*

ISC 01 08:36:53.4±1.1**, 40°.42N**±0°.02×**20°.80E**±0°.02**, h4^{km}**±10^{km}**, n44, σ0^{s}.88**/62**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEST	**Nestorio**	**0.19**	**91**	Pg	**Pg**	**08 36 57.1**	**-0.1**
NEST				Sg	**Sg**	**08 37 01.2**	**+1.5**
NEST				AML	AML	08 37 03.4	
	10nm,0.5s						
NEST				AMd		08 37 30.8	
NEST	**Nestorio**	**0.19**	**91**	P	**Pg**	**08 36 57.3**	**+0.1**
NEST				S	**Sg**	**08 37 00.4**	**+0.7**
NEST	**Nestorio**	**0.19**	**91**	P	**Pg**	**08 36 57.6**	**+0.4**
NEST				S	**Sg**	**08 37 00.7**	**+1.0**
KBN	**Korca**	**0.20**	**358**	P	**Pg**	**08 36 56.4**	**-1.1**
KBN				Sg	**Sg**	**08 36 60.0**	**-0.2**
KBN				AML	AML	08 37 00.7	
	8.0nm,0.3s						
KBN				AMd		08 37 26.4	
PENT	**Pentalofos**	**0.34**	**131**	P	**Pg**	**08 36 59.8**	**-0.3**
PENT				S	**Sg**	**08 37 04.9**	**+0.3**
PENT	**Pentalofos**	**0.34**	**131**	P	**Pg**	**08 37 00.8**	**+0.8**
KPRO	**Kipourio**	**0.63**	**137**	P	**Pg**	**08 37 04.9**	**-0.7**
KPRO				S	**Sg**	**08 37 14.1**	**+0.3**
OHR	**Ohrid**	**0.69**	**0**	P	**Pg**	**08 37 06.3**	**-0.4**
OHR				S	**Sg**	**08 37 16.2**	**+0.5**
KZN	**Kozani**	**0.75**	**98**	P	**Pb**	**08 37 08.7**	**-0.4**
KZN				S	**Sb**	**08 37 19.0**	**-0.8**
KZN	**Kozani**	**0.75**	**98**	P	**Pb**	**08 37 08.8**	**-0.4**
KZN				S	**Sb**	**08 37 18.9**	**-1.0**
JAN	**Janina**	**0.76**	**177**	P	**Pg**	**08 37 07.6**	**-0.5**
JAN				S	**Sg**	**08 37 17.3**	**-0.6**
SRN	**Sarande**	**0.82**	**229**	Pg	**Pg**	**08 37 08.6**	**-0.5**
SRN				S	**Sb**	**08 37 21.3**	**-0.2**
SRN				AML	AML	08 37 23.8	
	0.6nm,0.5s						
SRN				AMd		08 37 45.0	
IGT	**Igoumenitsa**	**0.96**	**202**	Pg	**Pb**	**08 37 12.0**	**-0.6**
IGT				Sg	**Sb**	**08 37 26.1**	**+0.5**
IGT				AMd		08 37 49.5	
IGT	**Igoumenitsa**	**0.96**	**202**	P	**Pg**	**08 37 10.4**	**-1.3**
IGT				S	**Sg**	**08 37 24.2**	**+0.1**
KTI	**Kastanea**	**1.01**	**91**	P	**Pg**	**08 37 12.2**	**-0.5**
KEK	**Kerkira**	**1.04**	**228**	P	**Pg**	**08 37 12.0**	**-1.5**
TETR	**Tetrakomo, Epi**	**1.14**	**161**	P	**Pn**	**08 37 18.0**	**+1.8**
TIR	**Tirane**	**1.17**	**323**	Pg	**Pn**	**08 37 17.4**	**+0.8**
TIR				Sg	**Sn**	**08 37 34.0**	**+1.0**
TIR				AML	AML	08 37 39.1	
	0.3nm,0.5s						
THL	**Klokotos Trika**	**1.27**	**132**	P	**Pg**	**08 37 16.3**	**-1.4**
THL	**Klokotos Trika**	**1.27**	**132**	P	**Pn**	**08 37 18.6**	**+0.7**
THL				S	**Sn**	**08 37 35.3**	**-0.1**
TYRN	**Tyrnavos**	**1.31**	**122**	P	**Pn**	**08 37 17.8**	**-0.7**
TYRN	**Tyrnavos**	**1.31**	**122**	P	**Pb**	**08 37 19.4**	**+0.8**
TYRN				S	**Sg**	**08 37 35.3**	**-0.2**
TSLK	**Tsoukalades, L**	**1.60**	**184**	P	**Pg**	**08 37 25.1**	**+1.0**
LKD2	**Lefkada island**	**1.63**	**184**	P	**Pg**	**08 37 25.2**	**+0.5**
EVR	**Evrytania**	**1.69**	**152**	P	**Pg**	**08 37 25.3**	**-0.5**
MAKR	**Makrakomi, Fth**	**1.74**	**143**	P	**Pb**	**08 37 25.7**	**-0.3**
KNT	**Kendrikon**	**1.76**	**64**	P	**Pb**	**08 37 25.5**	**-0.8**
PUK	**Puka**	**1.76**	**337**	Pn	**Pg**	**08 37 26.2**	**-1.0**
PUK				Sn	**Sg**	**08 37 51.6**	**+1.6**
PUK				AML	AML	08 37 55.9	
	0.4nm,0.5s						
PUK				AMd		08 38 17.0	
HORT	**Hortiatis**	**1.76**	**83**	P	**Pb**	**08 37 25.6**	**-0.8**
EVGI	**Lefkada island**	**1.80**	**184**	P	**Pb**	**08 37 26.8**	**-0.2**
SCTE	**Santa Cesarea**	**1.82**	**260**	P	**Pg**	**08 37 29.4**	**+1.1**
AGG	**Agios Georgios**	**1.83**	**139**	P	**Pb**	**08 37 26.5**	**-1.0**
PVO	**Paravola**	**1.89**	**162**	P	**Pb**	**08 37 28.5**	**0.0**
ANX	**Ano Chora**	**2.02**	**154**	P	**Pb**	**08 37 30.9**	**+0.1**
BCI	**Bajram Curri**	**2.02**	**344**	Pn	**Pg**	**08 37 31.5**	**-0.7**
BCI				Sn	**Sg**	**08 37 58.8**	**+0.4**
PLG	**Polygyros**	**2.02**	**90**	P	**Pn**	**08 37 29.3**	**+0.9**
EFP	**Efpalio**	**2.17**	**156**	P	**Pb**	**08 37 32.2**	**-1.0**
SERG	**Sergoula**	**2.23**	**154**	P	**Pb**	**08 37 32.9**	**-1.4**
AXS	**Araxos**	**2.27**	**168**	P	**Pb**	**08 37 33.2**	**-1.7**
KALE	**Kalithea**	**2.28**	**152**	P	**Pb**	**08 37 34.7**	**-0.4**
PSDA	**Pessada-Kefalo**	**2.31**	**184**	P	**Pb**	**08 37 34.9**	**-0.7**
YRMI	**Loutra Irminis**	**2.35**	**169**	P	**Pb**	**08 37 35.1**	**-1.3**
RLS	**Riolos of Patr**	**2.42**	**167**	P	**Pb**	**08 37 36.4**	**-1.1**
KLV	**Kalavryta, Ach**	**2.59**	**156**	P	**Pb**	**08 37 39.2**	**-1.4**

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*JMA **01** 08:37:29.4±0.2, 25°N±1°×122°.5E±0°.4, h3^{km}, NW OFF ISHIGAKIJIMA IS*

*TAP **01** 08:37:29.2, 24°.89N×122°.43E, h16^{km}, ML2.7, D*

ISC 01 08:37:29.2±1.1**, 24°.87N**±0°.04×**122°.45E**±0°.03**, h11^{km}**±10^{km}**, n38, σ0^{s}.47**/57**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.44**	**288**	*i* P	**Pg**	**08 37 38.1**	**+0.2**
TWB1				S	**Sg**	**08 37 44.1**	**+0.4**
EGS		**0.47**	**267**	P	**Pg**	**08 37 38.9**	**+0.4**
EGS				S	**Sb**	**08 37 45.7**	**-0.9**
EOS2	**EOS2**	**0.49**	**204**	*i* P	**Pb**	**08 37 40.0**	**+0.1**
EOS2				*i* S	**Sb**	**08 37 48.2**	**+1.2**
SXI1	**Grass Mountain**	**0.56**	**293**	*i* P	**Pb**	**08 37 40.8**	**-0.4**
SXI1				*e*S	**Sb**	**08 37 48.7**	**-0.7**
TIPB	**Shuangxi**	**0.57**	**280**	P	**Pb**	**08 37 41.0**	**-0.4**
TIPB				*e*S	**Sb**	**08 37 48.9**	**-0.7**
EOS3	**EOS3**	**0.60**	**192**	P	**Pb**	**08 37 41.8**	**+0.2**
EOS3				*e*S	**Sb**	**08 37 51.1**	**+1.1**
TWC	**Suao**	**0.60**	**244**	P	**Pg**	**08 37 40.9**	**-0.1**
JYNG	**Yonagunijimaku**	**0.62**	**133**	P	**Pg**	**08 37 41.1**	**-0.1**
JYNG				*e*S	**Sg**	**08 37 49.3**	**-0.1**
NWF	**Wu-fen Shan**	**0.64**	**288**	*e*P	**Pb**	**08 37 42.4**	**-0.1**
WFSB	**Wu-fen Shan**	**0.64**	**288**	P	**Pb**	**08 37 42.4**	**0.0**
WFSB				*e*S	**Sg**	**08 37 50.7**	**+0.7**
YOJ	**Yonaguni jima**	**0.66**	**129**	P	**Pg**	**08 37 41.7**	**-0.3**
YOJ				*e*S	**Sg**	**08 37 50.2**	**-0.4**
YOJ	**Yonaguni jima**	**0.66**	**129**	P	**Pg**	**08 37 41.7**	**-0.3**
NDS	**Dongshan**	**0.71**	**250**	*e*P	**Pg**	**08 37 42.3**	**-0.6**
TWE	**Neicheng**	**0.73**	**258**	*e*P	**Pg**	**08 37 43.3**	**0.0**
TWE				*e*S	**Sb**	**08 37 53.6**	**-0.3**
EWUT	**Wuta**	**0.74**	**235**	*e*P	**Pg**	**08 37 43.6**	**0.0**
EWUT				*e*S	**Sb**	**08 37 54.6**	**+0.2**
ENA	**Nanau**	**0.78**	**236**	*e*P	**Pg**	**08 37 44.4**	**+0.1**
ENA				*e*S	**Sg**	**08 37 54.5**	**-0.1**
FUSB	**Fushanzhiwuyua**	**0.79**	**262**	*e*P	**Pg**	**08 37 44.6**	**+0.1**
ENTT	**Nioudou**	**0.83**	**254**	*e*P	**Pb**	**08 37 45.6**	**-0.2**
ENTT				*e*S	**Sb**	**08 37 57.6**	**+0.5**
YM08	**YM08**	**0.84**	**292**	*e*P	**Pg**	**08 37 45.6**	**+0.2**
EAHA	**Aohua**	**0.84**	**230**	*e*P	**Pb**	**08 37 45.8**	**-0.1**
TWY	**Chenhua**	**0.87**	**298**	*e*P	**Pb**	**08 37 46.5**	**+0.2**
ZUZH	**Zhuzihu**	**0.87**	**290**	*e*P	**Pb**	**08 37 46.4**	**-0.1**
LATG	**Datong**	**0.90**	**248**	P	**Pb**	**08 37 46.8**	**-0.2**
LATG				*e*S	**Sb**	**08 37 59.0**	**-0.2**
YHNB	**Yeheng**	**1.00**	**258**	*e*P	**Pg**	**08 37 48.4**	**0.0**
NACB	**Ninganchiao**	**1.04**	**228**	P	**Pg**	**08 37 49.1**	**-0.2**
NACB				*e*S	**Sg**	**08 38 02.2**	**-0.7**
NNSB	**Datong**	**1.07**	**246**	*e*P	**Pg**	**08 37 49.4**	**-0.3**
NNSB				*e*S	**Sb**	**08 38 04.1**	**+0.2**
NNS	**Nan Shan**	**1.07**	**246**	*e*P	**Pn**	**08 37 50.3**	**-0.1**
ETLH	**Xiulin Townshi**	**1.10**	**233**	*e*P	**Pb**	**08 37 50.5**	**+0.1**
NFF	**Wufeng Townshi**	**1.23**	**259**	*e*P	**Pg**	**08 37 54.3**	**+1.4**
FUSS	**Fushou**	**1.26**	**241**	*e*P	**Pg**	**08 37 53.5**	**0.0**
FUSS				*e*S	**Sn**	**08 38 10.2**	**0.0**
LXIB	**Xiulin Townshi**	**1.27**	**228**	*e*P	**Pb**	**08 37 53.2**	**-0.1**
LXIB				*e*S	**Sg**	**08 38 09.8**	**-0.3**
IRIF	**Iriomote-Funau**	**1.28**	**114**	*e*P	**Pb**	**08 37 53.8**	**+0.3**
WHF	**Hehuan Shan**	**1.30**	**236**	*e*P	**Pg**	**08 37 54.2**	**-0.1**
WHF				*e*S	**Sg**	**08 38 10.9**	**-0.3**
LIOB	**Emei**	**1.32**	**260**	*e*P	**Pg**	**08 37 56.0**	**+1.4**
OWD	**Renai**	**1.48**	**232**	*e*P	**Pb**	**08 37 56.5**	**-0.3**
WHP	**Taichung City**	**1.49**	**247**	*e*P	**Pg**	**08 37 57.7**	**-0.2**
WUSB	**Renai**	**1.50**	**234**	*e*P	**Pg**	**08 37 57.8**	**-0.2**
VWDT	**VWDT**	**1.63**	**227**	*e*P	**Pb**	**08 37 59.4**	**0.0**

*BEO **01** 08:42:20.5±0.8, 40°.33N×21°.06E, h0^{km}, ML2.8/2*

*TIR **01** 08:42:21.2, 40°.43N×20°.77E, h3^{km}±1^{km}, Ml3.2/5*

*THE **01** 08:42:21.5, 40°.4N±1°.0×2°1E±°, h3^{km}±1^{km}, M2.6/13, MLh2.6/13*

*ATH **01** 08:42:23.7, 40°.40N×20°.95E, h7^{km}±1^{km}, Manual Solution by A.Andreou First location: 2019/06/01 08:43:24, This location: 2020/08/11 09:09:56 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

ISC 01 08:42:22.1±0.8**, 40°.42N**±0°.02×**20°.88E**±0°.02**, h13**^{km}±5^{km}**, n64, σ1^{s}01**/91**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEST	Nestorio	0.13	94	Pg	Pg	08 42 26.0	+0.5
NEST				Sg	Sb	08 42 29.6	+0.2
NEST				AML	AML	08 42 30.4	
	18nm,0.2s						
NEST				AML	AML	08 42 32.0	
	20nm,0.4s						
NEST	Nestorio	0.13	94	P	Pg	08 42 26.0	+0.5
NEST				S	Sg	08 42 28.5	+0.5
NEST	Nestorio	0.13	94	P	Pg	08 42 26.1	+0.5
NEST				S	Sg	08 42 27.9	-0.1
KBN	Korca	0.21	340	Pg	Pg	08 42 25.1	-1.7
KBN				Sg	Sg	08 42 28.3	-1.7
KBN				AML	AML	08 42 31.5	
	16nm,0.4s						
PENT	Pentalofos	0.30	139	P	Pg	08 42 28.6	+0.2
PENT				S	Sb	08 42 34.0	-0.4
PENT	Pentalofos	0.30	139	P	Pg	08 42 28.6	+0.2
PENT				S	Sg	08 42 32.5	-0.1
KPRO	Kipourio	0.60	142	P	Pg	08 42 33.7	-0.1
KPRO				S	Sb	08 42 43.1	+0.3
KPRO	Kipourio	0.60	142	P	Pg	08 42 33.7	-0.1
KPRO				S	Sb	08 42 42.2	-0.7
OHR	Ohrid	0.69	355	P	Pg	08 42 34.9	-0.6
OHR				S	Sg	08 42 44.7	0.0
OHR	Ohrid	0.69	355	*e*Pg	Pg	08 42 34.8	-0.8
OHR				*e*Sg	Sg	08 42 45.5	+0.9
KZN	Kozani	0.69	100	P	Pn	08 42 37.0	-0.8
KZN				S	Sn	08 42 48.5	+0.1
KZN	Kozani	0.69	100	P	Pn	08 42 37.5	-0.2
KZN				S	Sn	08 42 46.4	-2.0
MSVA	Metsovo	0.69	160	P	Pb	08 42 36.7	+0.6
MSVA				S	Sb	08 42 46.1	+0.4
JAN	Janina	0.77	182	P	Pg	08 42 35.8	-1.2
JAN				S	Sg	08 42 46.5	-0.6
JAN	Janina	0.77	182	P	Pb	08 42 37.8	+0.5
JAN				S	Sn	08 42 48.7	-1.4
SRN	Sarande	0.87	231	Pg	Pb	08 42 37.5	-1.5
SRN				Sg	Sb	08 42 50.3	-0.3
SRN				AML	AML	08 42 56.3	
	0.6nm,0.6s						
KTI	Kastanea	0.94	92	P	Pg	08 42 40.4	0.0
IGT	Igoumenitsa	0.98	205	Pg	Pb	08 42 40.5	-0.5
IGT	Igoumenitsa	0.98	205	P	Pb	08 42 39.1	-2.0
KEK	Kerkira	1.09	230	P	Pb	08 42 41.8	-1.1
KEK				S	Sb	08 42 55.5	-1.6
TETR	Tetrakomo, Epi	1.12	164	P	Pg	08 42 44.7	+1.0
TETR				S	Sn	08 42 58.4	-0.5
TIR	Tirane	1.20	320	*e*Pg	Pn	08 42 44.6	-0.1
TIR				*e*Sg	Sg	08 43 04.4	+3.5
THL	Klokotos Trika	1.22	134	P	Pb	08 42 45.0	-0.1
THL				S	Sg	08 43 03.1	+1.6
THL	Klokotos Trika	1.22	134	P	Pb	08 42 45.2	0.0
THL				S	Sg	08 43 01.5	-0.1
TYRN	Tyrnavos	1.26	124	P	Pg	08 42 46.2	-0.2
TYRN	Tyrnavos	1.26	124	P	Pg	08 42 46.5	+0.2
TYRN				S	Sg	08 43 02.2	-0.4
TSLK	Tsoukalades, L	1.61	186	P	Pg	08 42 52.8	-0.2
LKD2	Lefkada island	1.64	186	Pn	Pg	08 42 54.6	+1.0
LKD2	Lefkada island	1.64	186	P	Pb	08 42 52.1	-0.1
LKD2	Lefkada island	1.64	186	P	Pb	08 42 52.7	+0.4
EVR	Evrytania	1.67	154	P	Pb	08 42 53.2	+0.4
KNT	Kendrikon	1.70	64	P	Pb	08 42 52.6	-0.6
KNT	Kendrikon	1.70	64	P	Pb	08 42 52.9	-0.4
KNT				S	Sg	08 43 16.4	-0.4
HORT	Hortiatis	1.70	83	P	Pb	08 42 52.4	-0.9
MAKR	Makrakomi, Fth	1.71	145	P	Pb	08 42 53.0	-0.5
MAKR				S	Sb	08 43 14.2	-0.6
NYDR	Nydri-Lefkada	1.71	185	P	Pb	08 42 54.2	+0.7
NYDR				S	Sg	08 43 16.6	-0.6
PUK	Puka	1.78	336	Pn	Pb	08 42 54.7	+0.1
PUK				Sn	Sg	08 43 21.3	+1.9
PUK				AML	AML	08 43 23.4	
	1.4nm,0.7s						
AGG	Agios Georgios	1.79	141	P	Pb	08 42 55.0	+0.1
AGG	Agios Georgios	1.79	141	P	Pb	08 42 54.3	-0.6
EVGI	Lefkada island	1.81	186	P	Pb	08 42 55.7	+0.6
PVO	Paravola	1.87	164	P	Pb	08 42 55.4	-0.8
SCTE	Santa Cesarea	1.88	260	P	Pb	08 42 57.0	+0.7
SOH	Sokhos	1.92	77	P	Pb	08 42 56.7	-0.4
PLG	Polygyros	1.96	91	P	Pb	08 42 56.7	-1.0
FSK	Fiskardo	1.98	187	P	Pb	08 42 57.9	-0.1
BCI	Bajram Curri	2.04	343	Pn	Pb	08 43 00.0	+1.0
BCI				Sn	Sg	08 43 27.9	+0.4
BCI				AML	AML	08 43 33.3	
	0.9nm,0.8s						
EFP	Efpalio	2.15	158	P	Pb	08 42 59.9	-1.0
KALE	Kalithea	2.25	154	P	Pn	08 43 00.6	+1.5
VLS	Valsamata	2.25	186	P	Pn	08 43 00.8	+1.6
PDG	Podgorica	2.35	329	*e*Pn	Pn	08 43 01.3	+0.9
OUR	Ouranopolis	2.37	91	P	Pn	08 43 02.3	+1.6
BOSS	Bosilegrad	2.39	30	*e*Pn	Pn	08 43 01.5	+0.4
BARS	Barje	2.49	16	*e*Pn	Pn	08 43 02.6	+0.2
SELS	Selova	2.80	4	*e*Pn	Pn	08 43 08.8	+2.1
SJES	Sjenica	2.92	347	*e*Pn	Pn	08 43 09.9	+1.6
ZAPS	Zavoj	3.13	24	*e*Pn	Pn	08 43 10.4	-0.9
GOCS	Kraljevo Serbi	3.14	360	*e*Pn	Pn	08 43 13.9	+2.5
IVAS	Ivanjica	3.20	350	*e*Pn	Pn	08 43 14.3	+2.1
BOVS	Bovan	3.27	11	*e*Pn	Pn	08 43 12.9	-0.2
GRUS	Gruza	3.46	358	*e*Pn	Pn	08 43 16.2	+0.4
ZAGS	Zajecar	3.53	16	*e*Pn	Pn	08 43 17.8	+1.1
BBLS	Lazi&#263i	3.61	343	*e*Pn	Pn	08 43 18.8	+1.0
DIVS	Divibare	3.73	350	*e*Pn	Pn	08 43 19.5	0.0
KUBS	Kucevo	4.03	8	*e*Pn	Pn	08 43 24.3	+0.8

IDC 01 08:44:27.3±770.0**, 56°.18N×44°.73E, h0**^{km}**, Error ellipse: s-maj=324.7km s-min=87.6km az=106.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	DUBNA INFRASON	4.20	281	I	I	09 12 42.5	
	3.1nm,0.8s,baz=94,slow=319,SNR=19						
I37NO	I37NO	17.43	328	I	I	10 29 00.0	
	0.1nm,0.9s,baz=126,slow=327,SNR=12						
I26DE	FREYUNG INFRAS	20.12	262	I	I	10 42 40.0	
	baz=57,slow=321,SNR=9.0						
I18DK	QAANAAQ INFRAS	40.59	342	I	I	12 50 40.0	
	baz=54,slow=331,SNR=3.0						

IDC 01 08:52:08.2±12.0**, 17°.93S×175°.14W, h245**^{km}±67^{km}**, mb3.7**/3**, mbtmp4.3**/4**, Error ellipse: s-maj=147.6km s-min=107.5km az=127.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	6.49	271	P	Pn	08 53 42.5	0.0
	13nm,0.6s,baz=112,slow=17,SNR=6.6						
STKA	Stephens Creek	41.36	242	P	P	08 59 30.5	-0.1
	1.4nm,0.6s,baz=68,slow=13,SNR=4.3 1.4nm,0.6s						
WRA	Warramunga Arr	47.69	259	P	P	09 00 20.4	-0.4
	1.6nm,0.5s,baz=96,slow=7.4,SNR=14 1.6nm,0.5s						
ASAR	Alice Springs	47.78	254	P	P	09 00 21.5	+0.1
	8.3nm,0.6s,baz=89,slow=8.4,SNR=149						
ASAR				PcP	PcP	09 01 46.0	-0.4
	0.4nm,0.6s,baz=87,slow=4.9,SNR=1.9 8.3nm,0.6s						

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*BEO **01** 08:57:04.8±0.6, 40°.32N×21°.03E, h0^{km}, ML2.7/7*

*THE **01** 08:57:07.6, 40°.4N±0°.8×2°1E±°, h0^{km}±1^{km}, M2.5/13, MLh2.5/13*

*ATH **01** 08:57:08.5, 40°.47N×20°.98E, h5^{km}±1^{km}, Manual Solution by A.Andreou First location: 2019/06/01 08:58:19, This location: 2020/08/11 09:38:47 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

ISC 01 08:57:06.2±1.0**, 40°.46N**±0°.02×**20°.89E**±0°.03**, h7**^{km}±8^{km}**, n56, σ1^{s}23**/72**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEST	Nestorio	0.13	110	P	Pg	08 57 09.6	+0.5
NEST				S	Sg	08 57 11.3	+0.3
NEST	Nestorio	0.13	110	P	Pg	08 57 09.5	+0.5
NEST				S	Sg	08 57 12.2	+1.3
PENT	Pentalofos	0.32	144	P	Pg	08 57 12.2	-0.3
PENT				S	Sg	08 57 15.8	-1.1
PENT	Pentalofos	0.32	144	P	Pb	08 57 14.9	+0.5
PENT				S	Sb	08 57 18.4	-1.5
KPRO	Kipourio	0.62	144	P	Pg	08 57 17.4	-0.7
KPRO				S	Sg	08 57 25.1	-1.1
OHR	Ohrid	0.66	354	*e*Pg	Pg	08 57 18.4	-0.5
OHR				*e*Sg	Sb	08 57 29.6	+0.2
KZN	Kozani	0.69	102	P	Pb	08 57 20.1	-0.5
KZN				S	Sb	08 57 30.5	+0.1
KZN	Kozani	0.69	102	P	Pb	08 57 21.0	+0.4
KZN				S	Sb	08 57 29.4	-1.0
JAN	Janina	0.80	182	P	Pg	08 57 19.8	-1.8
JAN				S	Sg	08 57 31.3	-0.7
KTI	Kastanea	0.94	94	P	Pb	08 57 24.6	-0.3
IGT	Igoumenitsa	1.02	205	P	Pg	08 57 23.9	-1.9
KEK	Kerkira	1.12	229	P	Pn	08 57 28.4	+0.1
KEK	Kerkira	1.12	229	P	Pn	08 57 31.2	+2.8
TETR	Tetrakomo, Epi	1.15	165	P	Pn	08 57 31.6	+2.8
TIR	Tirane	1.18	319	*e*Pg	Pg	08 57 27.7	-1.1
TIR				*e*Sg	Sn	08 57 49.3	+3.8
THL	Klokotos Trika	1.24	136	P	Pg	08 57 28.8	-1.2
THL	Klokotos Trika	1.24	136	P	Pn	08 57 31.4	+1.4
THL				S	Sn	08 57 46.5	-0.5
TYRN	Tyrnavos	1.27	125	P	Pn	08 57 30.7	+0.3
TYRN	Tyrnavos	1.27	125	P	Pn	08 57 31.4	+1.0
AMPL	Ampelaki	1.55	171	P	Pn	08 57 34.5	+0.2
TSLK	Tsoukalades, L	1.64	186	P	Pg	08 57 38.4	+0.7
LKD2	Lefkada island	1.68	186	P	Pb	08 57 36.6	-0.8
LKD2	Lefkada island	1.68	186	P	Pg	08 57 38.5	+0.1
KNT	Kendrikon	1.68	65	P	Pg	08 57 37.7	-0.7
HORT	Hortiatis	1.69	85	P	Pn	08 57 36.0	-0.2
EVR	Evrytania	1.69	155	P	Pg	08 57 38.8	+0.1
MAKR	Makrakomi, Fth	1.73	146	P	Pg	08 57 39.6	+0.2
NYDR	Nydri-Lefkada	1.75	185	P	Pg	08 57 39.8	+0.1
AGG	Agios Georgios	1.81	142	P	Pn	08 57 38.2	+0.3
AGG	Agios Georgios	1.81	142	P	Pb	08 57 39.3	-0.5
PVO	Paravola	1.90	165	P	Pg	08 57 41.9	-0.8
SOH	Sokhos	1.91	78	P	Pb	08 57 40.0	-1.4
PLG	Polygyros	1.95	92	P	Pn	08 57 40.2	+0.4
ANX	Ano Chora	2.03	156	P	Pb	08 57 43.5	+0.1
NEO	Neokhori	2.13	122	P	Pb	08 57 44.1	-1.0
SRS	Serrai	2.15	71	P	Pb	08 57 44.4	-1.2
AXAR	Agios Charalam	2.17	140	P	Pb	08 57 45.8	-0.1
EFP	Efpalio	2.18	158	P	Pb	08 57 45.4	-0.5
SERG	Sergoula	2.23	156	P	Pb	08 57 46.3	-0.6
KALE	Kalithea	2.28	154	P	Pb	08 57 46.8	-0.9
PDG	Podgorica	2.32	329	*e*Pn	Pb	08 57 48.1	-0.3
PDG				*e*Sn	Sb	08 58 16.9	-0.4
BOSS	Bosilegrad	2.36	30	*e*Pn	Pn	08 57 46.4	+1.0
BOSS				*e*Sn	Sn	08 58 15.9	+1.2
OUR	Ouranopolis	2.37	92	P	Pn	08 57 46.6	+1.2
YRMI	Loutra Irminis	2.38	171	P	Pb	08 57 47.8	-1.6
BARS	Barje	2.46	16	*e*Pn	Pn	08 57 46.3	-0.4
BARS				*e*Sn	Sb	08 58 19.8	-1.4
SELS	Selova	2.77	3	*e*Pn	Pn	08 57 51.8	+0.8
SELS				*e*Sn	Sn	08 58 27.2	+2.6
SJES	Sjenica	2.88	347	*e*Pn	Pb	08 57 55.5	-2.5
SJES				*e*Sn	Sb	08 58 32.6	-1.0
ZAPS	Zavoj	3.10	24	*e*Pn	Pn	08 57 56.6	+1.0
GOCS	Kraljevo Serbi	3.10	360	*e*Pn	Pn	08 57 56.8	+1.1
IVAS	Ivanjica	3.16	350	*e*Pn	Pn	08 57 58.7	+2.2
BOVS	Bovan	3.23	11	*e*Pn	Pn	08 57 56.7	-0.7
GRUS	Gruza	3.43	358	*e*Pn	Pn	08 58 02.3	+2.2
ZAGS	Zajecar	3.50	16	*e*Pn	Pn	08 58 02.0	+1.0
BBLS	Lazi&#263i	3.58	343	*e*Pn	Pn	08 58 04.1	+1.9
KUBS	Kucevo	3.99	8	*e*Pn	Pn	08 58 07.6	-0.2
TEKS	Tekeris	4.21	347	*e*Pn	Pn	08 58 10.5	-0.3

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*IDC **01** 09:03:25.3±3.0, 40°.29N×20°.96E, h0^{km}, mb3.2/5, mbtmp3.3/7, ML2.6/1, MS2.7/4, Error ellipse: s-maj=47.0km s-min=29.6km az=12.0*

*TIR **01** 09:03:27.9, 40°.48N×20°.76E, h2^{km}±1^{km}, Ml3.7/6*

*BEO **01** 09:03:28.7±0.6, 40°.45N×21°.10E, h8^{km}±3^{km}, ML3.1/12*

*ATH **01** 09:03:28.6, 40°.52N×20°.79E, h6^{km}±1^{km}, ML3.5/22, Manual Solution by G.Panopoulou First location: 2019/06/01 09:04:27, This location: 2019/06/01 10:56:38 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*THE **01** 09:03:29.7, 40°N±2°×2°1E±°, h0^{km}±2^{km}, M3.3/23, MLh3.3/23*

*PDG **01** 09:03:29.0±0.7, 40°.45N×20°.84E, h13^{km}±1^{km}, ML3.5/11, Error ellipse: s-maj=0.9km s-min=1.3km az=0.0*

*SKO **01** 09:03:30.2, 40°.47N×20°.89E, h5^{km}, ML3.2*

ISC 01 09:03:28.9±0.8**, 40°.47N**±0°.01×**20°.84E**±0°.02**, h12**^{km}±5^{km}**, n135, σ1^{s}33**/196**, mb3.1**/4**, 1C-3D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	Korca	0.16	346	Pg	Pg	09 03 31.2	-1.5
KBN				Sg	Sg	09 03 33.2	-2.2
KBN				AML	AML	09 03 39.0	
	50nm,0.5s						
KBN				AML	AML	09 03 40.4	
	47nm,0.8s						
NEST	Nestorio	0.17	107	Pg	Pg	09 03 33.2	+0.4
NEST				Sg	Sg	09 03 37.1	+1.6
NEST				AML	AML	09 03 37.6	
	68nm,0.2s						
NEST				AML	AML	09 03 38.6	
	70nm,0.4s						
NEST	Nestorio	0.17	107	P	Pg	09 03 33.2	+0.4
NEST				S	Sg	09 03 36.4	+0.9
NEST	Nestorio	0.17	107	P	Pg	09 03 33.2	+0.4
NEST				S	Sg	09 03 36.5	+1.0
PENT	Pentalofos	0.35	139	P	Pg	09 03 36.2	+0.1
PENT				S	Sg	09 03 40.8	0.0
PENT	Pentalofos	0.35	139	P	Pg	09 03 36.1	+0.1
PENT				S	Sb	09 03 42.3	-0.5
OHR	Ohrid	0.65	357	P	Pg	09 03 40.8	-0.7
OHR	Ohrid	0.65	357	*i* Pg	Pg	09 03 41.0	-0.4
OHR				*i* Sg	Sg	09 03 50.9	+0.9
OHR				*e*Lg	Lg	09 03 54.8	
	comp=E,996nm,0.5s						
OHR				*e*Lg	Lg	09 03 58.9	
	comp=N,834nm,0.6s						
OHR	Ohrid	0.65	357	*e*Pg	Pg	09 03 41.3	-0.2
OHR				*e*Sg	Sb	09 03 51.8	+0.6
KPRO	Kipourio	0.65	142	P	Pg	09 03 41.1	-0.4
KPRO				S	Sg	09 03 49.2	-0.9
KPRO	Kipourio	0.65	142	P	Pg	09 03 41.2	-0.3
KPRO				S	Sb	09 03 52.0	+0.7
KZN	Kozani	0.73	102	P	Pb	09 03 43.7	0.0
KZN				S	Sb	09 03 54.0	+0.4
KZN	Kozani	0.73	102	P	Pb	09 03 44.0	+0.4
KZN				S	Sb	09 03 55.1	+1.5
MSVA	Metsovo	0.74	159	P	Pb	09 03 43.5	-0.4
MSVA				S	Sb	09 03 55.0	+1.0
JAN	Janina	0.81	179	P	Pg	09 03 43.3	-1.2
JAN				S	Sg	09 03 54.3	-0.7
SRN	Sarande	0.87	228	Pg	Pg	09 03 44.9	-0.7
SRN				Sg	Sb	09 03 58.1	+0.6
SRN				AML	AML	09 04 01.7	
	comp=N,10nm,0.6s						
SRN				AML	AML	09 04 02.9	
	comp=N,4.6nm,0.6s						
KTI	Kastanea	0.98	94	P	Pg	09 03 47.4	-0.4
IGT	Igoumenitsa	1.01	203	Pn	Pg	09 03 47.9	-0.4
IGT				Sn	Sn	09 04 03.2	+0.1
IGT	Igoumenitsa	1.01	203	P	Pg	09 03 47.3	-1.0
IGT				S	Sb	09 04 02.0	+0.4
IGT	Igoumenitsa	1.01	203	*i* Pg	Pg	09 03 47.5	-0.8
IGT				*i* Sg	Sn	09 04 04.6	+1.6
IGT	Igoumenitsa	1.01	203	P	Pg	09 03 47.5	-0.8
VLO	Vlora	1.02	271	Sg	Sg	09 04 01.0	-1.0
KEK	Kerkira	1.10	227	P	Pg	09 03 49.7	-0.3
KEK				S	Sb	09 04 05.2	+1.2
KEK	Kerkira	1.10	227	P	Pb	09 03 49.9	+0.1
TIR	Tirane	1.15	320	Pn	Pg	09 03 49.3	-1.7
TIR				Pg	Pb	09 03 50.0	-0.7
TIR				Sn	Sb	09 04 06.5	+0.9
TIR	Tirane	1.15	320	*i* Pg	Pg	09 03 49.9	-1.1
TIR				*i* Sg	Sn	09 04 08.9	+2.4
TIR	Tirane	1.15	320	*e*Pg	Pg	09 03 51.1	+0.1
TIR				*e*Sg	Sn	09 04 09.7	+3.2
TETR	Tetrakomo, Epi	1.17	163	P	Pb	09 03 51.3	+0.2
TETR				S	Sn	09 04 08.3	+1.1
PHP	Peshkopia	1.25	346	Pg	Pg	09 03 52.2	-0.8
THL	Klokotos Trika	1.27	134	P	Pg	09 03 52.1	-1.3
THL	Klokotos Trika	1.27	134	P	Pg	09 03 52.4	-1.0
THL				S	Sn	09 04 10.3	+0.7
TYRN	Tyrnavos	1.31	125	P	Pn	09 03 53.2	+0.2
TYRN	Tyrnavos	1.31	125	P	Pn	09 03 53.5	+0.5
TYRN				S	Sn	09 04 12.4	+1.9
LRSO	Larissa Observ	1.43	123	P	Pn	09 03 54.5	-0.2
VAY	Valandovo	1.57	56	⇓*i*Pg	Pn	09 03 57.6	+1.0
VAY				*i* Sg	Sg	09 04 20.7	+1.4
VAY				*e*Lg	Lg	09 04 25.0	
	comp=N,674nm,1.2s						
VAY				*e*Lg	Lg	09 04 25.3	
	comp=E,484nm,0.6s						
AMPL	Ampelaki	1.57	169	P	Pb	09 03 57.8	-0.1
SKO	Skopje	1.57	17	*i* Pg	Pn	09 03 57.3	+0.7
SKO				*i* Sg	Sg	09 04 19.6	+0.1
THE	Thessaloniki	1.63	83	P	Pn	09 03 58.3	+0.9
THE	Thessaloniki	1.63	83	*i* Pg	Pn	09 03 58.2	+0.9
THE				*i* Sg	Sn	09 04 19.6	+1.2
THE	Thessaloniki	1.63	83	P	Pn	09 03 58.1	+0.7
THE				S	Sb	09 04 19.7	+0.3
TSLK	Tsoukalades, L	1.65	185	P	Pn	09 03 57.9	+0.2
TSLK	Tsoukalades, L	1.65	185	P	Pb	09 03 59.5	+0.4
LKD2	Lefkada island	1.68	185	Pn	Pg	09 04 00.9	-0.2
LKD2				Sn	Sg	09 04 25.3	+2.3
LKD2				AML	AML	09 04 31.7	
	comp=E,3.2nm,0.8s						
LKD2				AML	AML	09 04 36.7	
	comp=E,2.6nm,0.6s						
LKD2	Lefkada island	1.68	185	P	Pn	09 03 58.5	+0.4
LKD2	Lefkada island	1.68	185	P	Pn	09 03 59.2	+1.1
KNT	Kendrikon	1.71	65	P	Pn	09 03 59.0	+0.4
KNT	Kendrikon	1.71	65	*i* Pn	Pb	09 04 00.6	+0.2
KNT	Kendrikon	1.71	65	P	Pn	09 03 59.0	+0.4
KNT				S	Sb	09 04 22.1	+0.3
EVR	Evrytania	1.72	154	P	Pb	09 03 59.9	-0.6
EVR	Evrytania	1.72	154	P	Pg	09 04 01.5	-0.4
HORT	Hortiatis	1.73	85	P	Pn	09 03 59.3	+0.4
HORT	Hortiatis	1.73	85	P	Pn	09 03 59.2	+0.3
HORT				S	Sb	09 04 22.5	+0.1
PUK	Puka	1.73	336	Pn	Pg	09 04 01.9	-0.1
PUK				Sn	Sg	09 04 25.9	+1.4
PUK				AML	AML	09 04 33.3	
	comp=E,2.8nm,0.6s						
NYDR	Nydri-Lefkada	1.75	184	P	Pb	09 04 00.6	-0.4
NYDR	Nydri-Lefkada	1.75	184	P	Pb	09 04 00.6	-0.4
MAKR	Makrakomi, Fth	1.76	145	P	Pb	09 04 00.5	-0.6
MAKR	Makrakomi, Fth	1.76	145	P	Pb	09 04 00.7	-0.5
AGG	Agios Georgios	1.84	141	P	Pn	09 04 01.5	+1.1
AGG	Agios Georgios	1.84	141	P	Pn	09 04 01.7	+1.2
EVGI	Lefkada island	1.85	184	P	Pb	09 04 02.4	-0.2
ULC	Ulcinj	1.92	322	*i* Pn	Pn	09 04 03.3	+1.8
ULC	Ulcinj	1.92	322	⇑*i*Pn	Pn	09 04 02.7	+1.2
ULC				*i* Sn	Sb	09 04 29.2	+1.4
PVO	Paravola	1.92	164	P	Pn	09 04 01.8	+0.4
PVO	Paravola	1.92	164	P	Pb	09 04 04.3	+0.4
SOH	Sokhos	1.95	79	P	Pn	09 04 02.4	+0.5
BCI	Bajram Curri	1.99	343	Pn	Pb	09 04 06.1	+1.1
BCI				Sn	Sg	09 04 33.5	+0.7
BCI				AML	AML	09 04 38.7	
	comp=E,3.3nm,0.6s						
PLG	Polygyros	1.99	92	P	Pn	09 04 03.7	+1.2
PLG	Polygyros	1.99	92	P	Pn	09 04 03.4	+0.9
FSK	Fiskardo	2.02	186	P	Pb	09 04 04.7	-0.8
ANX	Ano Chora	2.05	156	P	Pn	09 04 04.5	+1.2
DRME	Dracevica, Mon	2.12	325	Pn	Pn	09 04 06.3	+2.1
DRME	Dracevica, Mon	2.12	325	⇓*i*Pn	Pn	09 04 05.6	+1.4
DRME				*i* Sn	Sb	09 04 33.7	+0.1
NEO	Neokhori	2.17	121	P	Pn	09 04 05.2	+0.3
SRS	Serrai	2.19	72	*i* Pn	Pn	09 04 06.7	+1.5
SRS				*e*Sn	Sn	09 04 33.9	+1.7
SRS	Serrai	2.19	72	P	Pn	09 04 05.0	-0.1
KKB	Krupnik	2.21	51	*i* Pn	Pn	09 04 07.2	+1.7
PAIG	Paliouri	2.24	103	P	Pn	09 04 06.3	+0.4
SERG	Sergoula	2.26	155	P	Pn	09 04 06.8	+0.7
PDG	Podgorica	2.29	329	*e*Pn	Pn	09 04 09.0	+2.4
PDG				*e*Sn	Sn	09 04 37.9	+3.1
PDG	Podgorica	2.29	329	*e*Pn	Pn	09 04 08.1	+1.5
PDG				*i* Sn	Sb	09 04 38.1	-0.5
KALE	Kalithea	2.30	154	P	Pn	09 04 07.8	+1.1
BUM	Brajici-Budva	2.34	322	⇓*i*Pn	Pn	09 04 08.4	+1.0
BUM				*i* Sn	Sn	09 04 39.2	+3.1
PSDA	Pessada-Kefalo	2.36	185	P	Pn	09 04 08.6	+1.2
BOSS	Bosilegrad	2.37	31	*e*Pn	Pn	09 04 08.3	+0.6
BOSS				*e*Sn	Sn	09 04 33.6	-3.2
YRMI	Loutra Irminis	2.39	170	P	Pb	09 04 10.3	-1.6
MMB	Musomishta	2.45	63	*i* Pn	Pn	09 04 10.4	+1.6
MMB				*e*Sn	Sn	09 04 40.9	+2.1
BARS	Barje	2.46	17	*i* Pn	Pn	09 04 09.4	+0.5
BARS	Barje	2.46	17	*e*Pn	Pn	09 04 09.2	+0.3
BARS				*e*Sn	Sn	09 04 37.8	-1.1
BEY	Berane	2.51	344	*i* Pn	Pb	09 04 12.5	-1.4
IVA	Berane	2.51	344	*e*Pn	Pn	09 04 11.2	+1.6
IVA				*i* Sn	Sn	09 04 43.2	+3.1
CEME	Cevo	2.53	326	*e*Pn	Pn	09 04 11.0	+1.1
CEME				*i* Sn	Sn	09 04 43.8	+3.1
KOME	Kolasin	2.58	338	*e*Pn	Pn	09 04 12.3	+1.7
KOME				*i* Sn	Sn	09 04 45.1	+3.1
HCY	Herceg Novi	2.65	319	*e*Pn	Pn	09 04 11.7	+0.2
HCY				*i* Sn	Sn	09 04 46.9	+3.3
SELS	Selova	2.76	4	*e*Pn	Pn	09 04 13.0	0.0
SELS				*e*Sn	Sn	09 04 47.0	+0.7
SJES	Sjenica	2.87	347	*e*Pn	Pn	09 04 15.4	+0.8
SJES				*e*Sn	Sn	09 04 50.8	+1.7
BRY	Bratogost	2.98	325	*e*Pn	Pn	09 04 17.2	+1.0
BRY				*i* Sn	Sn	09 04 54.9	+3.0
PLE	Pljevlja	3.06	340	*e*Pn	Pn	09 04 19.0	+1.8
PLE				*i* Sn	Sn	09 04 57.2	+3.4
UPM	Unac-Piva	3.09	333	*e*Pn	Pn	09 04 19.0	+1.3
UPM				*i* Sn	Sn	09 04 57.5	+2.7
GOCS	Kraljevo Serbi	3.10	0	*e*Pn	Pn	09 04 18.6	+0.9
ZAPS	Zavoj	3.11	25	*e*Pn	Pn	09 04 17.1	-0.7
ZAPS				*e*Sn	Sn	09 04 54.3	-0.7
IVAS	Ivanjica	3.15	351	*e*Pn	Pn	09 04 18.4	0.0
BOVS	Bovan	3.23	11	*e*Pn	Pn	09 04 19.5	0.0
BOVS				*e*Sn	Sn	09 04 57.5	-0.4
GRUS	Gruza	3.42	359	*e*Pn	Pn	09 04 23.0	+0.9
ZAGS	Zajecar	3.50	17	*e*Pn	Pn	09 04 23.3	+0.1
ZAGS				*e*Sn	Sn	09 05 03.1	-1.4
BBLS	Lazi&#263i	3.56	343	*e*Pn	Pn	09 04 26.3	+2.2
DIVS	Divibare	3.68	350	*e*Pn	Pn	09 04 25.8	0.0
DIVS				*e*Sn	Sn	09 05 10.2	+1.0
BORS2	Bor- Borsko je	3.73	13	*e*Pn	Pn	09 04 25.5	-0.8
TRUS	Trudelj	3.77	355	*e*Pn	Pn	09 04 27.5	+0.6
TRUS				*e*Sn	Sn	09 05 12.2	+1.0
KUBS	Kucevo	3.99	9	*e*Pn	Pn	09 04 28.1	-1.8
TEKS	Tekeris	4.19	347	*e*Pn	Pn	09 04 33.6	+0.9
AVAS	Avala Beograd	4.24	357	*e*Pn	Pn	09 04 33.2	-0.1
VRSS	Vrsac	4.67	4	*e*Pn	Pn	09 04 38.2	-1.0
IDI	Anoyia	6.08	147	LR	LR	09 07 50.2	
	comp=E,169nm,21.1s,baz=293,slow=45						
MLR	Muntele Rosu	6.26	35	LR	LR	09 08 01.3	
	comp=E,50nm,18.7s,baz=183,slow=44						
SOKA	Soboth	7.50	328	*i* Pn	Pn	09 05 20.1	+1.9
	comp=E,1.7nm,0.3s						
SOKA				*e*Sn	Sn	09 06 42.3	-0.9
	comp=E,1.4nm,0.5s						
OBKA	Obir	7.57	325	*i* Pn	Pn	09 05 20.6	+1.4
	comp=E,1.0nm,0.2s						
OBKA				*i* Sn	Sn	09 06 46.0	+1.0
	comp=E,10nm,0.7s						
ARSA	Arzberg	7.79	332	*i* Pn	Pn	09 05 23.9	+1.7
	comp=E,4.3nm,0.6s						
KECS	Kecovo	8.02	358	*e*PN	Pn	09 05 28.3	+3.1

VYHS	Vyhne	8.15	351	eSN	Sn	09 07 02.5	+3.4
ABTA	Abfaltersbach	8.71	319	eSn	Sn	09 07 11.2	-1.7
	comp=E,9.6nm,0.8s						
MOA	Molln	8.76	330	i Pn	Pn	09 05 37.5	+2.2
	comp=E,1.2nm,0.3s						
MOA				eSn	Sn	09 07 14.6	+0.6
	comp=E,0.7nm,0.3s						
WTTA	Wattenberg	9.50	319	i Pn	Pn	09 05 47.2	+1.6
	comp=E,4.9nm,0.4s						
WTTA				eSn	Sn	09 07 31.0	-1.5
	comp=E,8.6nm,0.6s						
WATA	Walderalm	9.58	319	i Pn	Pn	09 05 47.1	+0.4
	comp=E,7.2nm,0.5s						
WATA				i Sn	Sn	09 07 33.1	-1.2
	comp=E,6.8nm,0.6s						
SQTA	Sankt Quirin	9.69	317	i Sn	Sn	09 07 36.1	-0.9
	comp=E,6.0nm,0.5s						
GERES	GERESS Array B	9.79	331	Pn	Pn	09 05 52.1	+2.4
	baz=158,slow=14,SNR=4.3						
	comp=E,0.6nm,0.5s						
FETA	Feichten	9.81	315	i Pn	Pn	09 05 51.8	+1.8
	comp=E,1.9nm,0.6s						
FETA				i Sn	Sn	09 07 39.5	-0.7
	comp=E,3.3nm,0.6s						
MOTA	Moosalm	9.82	318	i Pn	Pn	09 05 52.5	+2.4
	comp=E,2.3nm,0.4s						
MOTA				i Sn	Sn	09 07 39.1	-1.3
	comp=E,5.1nm,0.6s						
DAVOX	Davos/Dischmat	10.14	312	LR	LR	09 10 43.1	
	comp=E,32nm,21.8s,baz=264,slow=42						
ASF	Jabal al Asfar	15.35	118	LR	LR	09 14 27.2	
	comp=E,14nm,18.2s,baz=329,slow=44						
ESDC	Sonseca Array	18.99	276	P	P	09 07 49.8	-0.5
	comp=E,0.5nm,0.8s,baz=75,slow=8.2,SNR=4.1						
HFS	Hagfors	20.19	350	P	P	09 08 03.9	+0.7
	comp=E,1.8nm,0.8s,baz=163,slow=6.8,SNR=4.0						
	comp=E,1.8nm,0.8s						
FINES	FINESS Array B	21.25	7	P	P	09 08 13.0	-1.6
	comp=E,0.6nm,0.5s,baz=172,slow=13,SNR=4.6						
	comp=E,0.6nm,0.5s						
NOA	NORSAR Array B	21.43	347	P	P	09 08 15.0	-1.7
	comp=E,0.5nm,0.8s,baz=162,slow=10,SNR=1.9						
	comp=E,0.5nm,0.8s						
EKA	Eskdalemuir Ar	21.75	321	P	P	09 08 19.0	-1.0
	comp=E,0.8nm,0.8s,baz=127,slow=9.9,SNR=1.6						
	comp=E,0.8nm,0.8s						
MKAR	Makanchi Array	43.93	60	P	P	09 11 34.3	-1.2
	comp=E,0.1nm,0.4s,baz=269,slow=9.2,SNR=2.1						
	comp=E,0.1nm,0.4s						

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*NAO **01** 09:11:20.7,39°.10N×23°.43E,h10km,mb3.8*
*BEO **01** 09:11:37.4±0.6,40°.36N×20°.99E,h0km±3km,ML3.6/9*
*IDC **01** 09:11:38.2±0.9,40°.53N×20°.77E,h0km,mb3.6/10, mbtmp3.6/17,ML3.3/6,MS3.0/11,Error ellipse: s-maj=15.0km s-min=13.2km az=146.0*
*TIR **01** 09:11:38.9,40°.48N×20°.75E,h6km,Ml3.9/8*
*ATH **01** 09:11:39.8,40°.53N×20°.84E,h6km±1km,ML3.9/33, Manual Solution by G.Panopoulou First location: 2019/06/01 09:12:49, This location: 2020/10/14 18:06:05 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*
*PRU **01** 09:11:39.9,40°.35N×20°.82E,h10km,M4.2*
*PDG **01** 09:11:40.2±1.0,40°.52N×20°.87E,h12km±1km,ML3.9/11, Error ellipse: s-maj=0.9km s-min=1.4km az=0.0*
*SKO **01** 09:11:41.2,40°.47N×20°.90E,h11km,ML3.7*
*THE **01** 09:11:41.1,41°N±2°×2°1E±°,h0km±2km,M3.7/27, MLh3.7/27*
*AFAD **01** 09:11:44.0,40°.36N×21°.61E,h5km,MW3.9*
ISC 01 09:11:39.2±0.6**,40°.49N**±0°.01×**20°.85E**±0°.02**,h8**km±4km**,**
n228,σ1s64/282**,mb3.5**/8**,MS2.9**/8**,16C-28D,**
Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.14	342	Pg	Pg	09 11 42.1	-0.2
KBN				Sg	Sg	09 11 44.2	-0.3
KBN				AML	AML	09 11 50.1	
	108nm,0.4s						
NEST	Nestorio	0.17	115	Pg	Pg	09 11 44.0	+1.3
NEST				Sg	Sg	09 11 47.9	+2.7
NEST				AML	AML	09 11 48.5	
	74nm,0.2s						
NEST				AML	AML	09 11 55.5	
	89nm,0.8s						
NEST	Nestorio	0.17	115	P	Pg	09 11 44.1	+1.3
NEST				S	Sg	09 11 46.4	+1.2
NEST	Nestorio	0.17	115	P	Pg	09 11 44.0	+1.3
NEST				S	Sg	09 11 47.1	+1.9
PENT	Pentalofos	0.37	142	P	Pg	09 11 47.2	+0.8
PENT				S	Sb	09 11 54.0	+0.2
PENT	Pentalofos	0.37	142	P	Pg	09 11 47.2	+0.8
PENT				S	Sg	09 11 52.5	+1.3
LMS2	Laimos Florina	0.41	33	P	Pg	09 11 47.6	+0.3
OHR	Ohrid	0.62	357	⇓iPg	Pg	09 11 51.7	+0.4
OHR				i Sg	Sg	09 12 01.1	+1.6
OHR				eLg	Lg	09 12 01.8	
	comp=E,5µm,0.7s						
OHR				eLg	Lg	09 12 02.1	
	comp=N,1µm,0.6s						
OHR	Ohrid	0.62	357	ePg	Pg	09 11 51.7	+0.4
OHR				eSg	Sg	09 12 01.3	+1.8
KPRO	Kipourio	0.66	143	P	Pg	09 11 52.3	+0.4
KPRO				S	Sb	09 12 03.2	+0.8
KPRO	Kipourio	0.66	143	P	Pg	09 11 52.3	+0.4
KPRO				S	Sb	09 12 02.6	+0.3
KZN	Kozani	0.73	104	P	Pg	09 11 53.8	+0.6
KZN				S	Sb	09 12 06.2	+2.0
JAN	Janina	0.83	180	P	Pg	09 11 54.3	-0.8
JAN				S	Sg	09 12 07.0	+1.2
SRN	Sarande	0.89	227	Pg	Pg	09 11 55.7	-0.6
SRN				Sg	Sg	09 12 08.2	+0.5
SRN				AML	AML	09 12 11.2	
	comp=N,11nm,0.5s						
SRN				AML	AML	09 12 13.5	
	comp=N,12nm,0.8s						
NASA	Naoussa	0.94	81	P	Pb	09 11 58.1	+0.4
KTI	Kastanea	0.97	95	P	Pg	09 11 58.0	+0.2
IGT	Igoumenitsa	1.03	203	Pn	Pg	09 11 59.4	+0.4
IGT				Sn	Sg	09 12 13.5	+1.2
IGT	Igoumenitsa	1.03	203	P	Pg	09 11 58.8	-0.1
IGT				S	Sn	09 12 15.7	+1.2
IGT	Igoumenitsa	1.03	203	⇓iPg	Pg	09 11 59.3	+0.3
IGT				i Sg	Sn	09 12 15.9	+1.3
IGT	Igoumenitsa	1.03	203	P	Pg	09 11 59.4	+0.4
IGT				S	Sb	09 12 14.3	+1.4
KEK	Kerkira	1.11	226	P	Pg	09 12 01.6	+1.0
KEK				S	Sn	09 12 21.5	+4.9
KEK	Kerkira	1.11	226	P	Pb	09 12 01.8	+1.1
TIR	Tirane	1.14	319	Pn	Pg	09 12 00.4	-0.7
TIR				Sn	Sg	09 12 16.9	+1.2
TIR				AML	AML	09 12 20.8	
	comp=N,4.8nm,1.0s						
TIR	Tirane	1.14	319	⇓P	Pn	09 12 06.1	+4.7
TIR	Tirane	1.14	319	i Pg	Pg	09 12 00.5	-0.5
TIR				i Sg	Sn	09 12 21.7	+4.6
TIR	Tirane	1.14	319	ePg	Pg	09 12 00.1	-0.9
TIR				eSg	Sn	09 12 19.6	+2.4
TIR	Tirane	1.14	319	P	Pg	09 12 00.3	-0.7
TETR	Tetrakomo, Epi	1.19	164	P	Pn	09 12 03.6	+1.4
TETR				S	Sn	09 12 19.8	+1.3
THL	Klokotos Trika	1.28	135	P	Pn	09 12 03.5	+0.1
THL				S	Sn	09 12 22.7	+1.9
THL	Klokotos Trika	1.28	135	P	Pn	09 12 03.6	+0.2
THL				S	Sn	09 12 21.7	+0.9
TYRN	Tyrnavos	1.31	126	P	Pn	09 12 04.4	+0.6
TYRN				S	Sn	09 12 23.3	+1.8
TYRN	Tyrnavos	1.31	126	P	Pg	09 12 04.8	+0.4
TYRN				S	Sn	09 12 22.3	+0.8
VAY	Valandovo	1.55	57	P	Pn	09 12 08.0	+1.0
VAY	Valandovo	1.55	57	⇓iPg	Pb	09 12 08.4	+0.4
VAY				i Sg	Sg	09 12 32.8	+3.9
VAY				eLg	Lg	09 12 36.4	
	comp=E,872nm,0.7s						
VAY				eLg	Lg	09 12 38.4	
	comp=N,938nm,0.8s						
SKO	Skopje	1.55	17	i Pg	Pb	09 12 09.1	+1.0
SKO				i Sg	Sg	09 12 31.7	+2.7
AMPL	Ampelaki	1.59	170	P	Pn	09 12 08.6	+1.0
THE	Thessaloniki	1.62	84	P	Pn	09 12 07.6	-0.4
THE	Thessaloniki	1.62	84	i Pg	Pn	09 12 08.8	+0.8
THE				i Sg	Sg	09 12 31.1	-0.1
THE	Thessaloniki	1.62	84	P	Pn	09 12 08.7	+0.7
TSLK	Tsoukalades, L	1.67	185	P	Pg	09 12 11.5	+0.4
TSLK	Tsoukalades, L	1.67	185	P	Pn	09 12 09.9	+1.2
KNT	Kendrikon	1.70	66	P	Pn	09 12 09.9	+0.9
KNT	Kendrikon	1.70	66	⇓iPn	Pn	09 12 09.9	+0.9
KNT	Kendrikon	1.70	66	P	Pn	09 12 09.8	+0.8
LKD2	Lefkada island	1.70	185	Pn	Pg	09 12 12.1	+0.3
LKD2				Sn	Sg	09 12 36.2	+2.4
LKD2				AML	AML	09 12 43.6	
	comp=N,9.1nm,0.5s						
LKD2	Lefkada island	1.70	185	P	Pb	09 12 11.9	+1.3
LKD2	Lefkada island	1.70	185	P	Pn	09 12 10.7	+1.6
PUK	Puka	1.71	335	Pn	Pn	09 12 10.7	+1.3
PUK				Sn	Sg	09 12 36.6	+2.4
PUK				AML	AML	09 12 38.9	
	comp=N,12nm,1.0s						
PUK				AML	AML	09 12 45.0	
	comp=N,5.8nm,0.8s						
HORT	Hortiatis	1.72	86	P	Pn	09 12 10.1	+0.6
HORT	Hortiatis	1.72	86	P	Pn	09 12 09.3	-0.2
HORT				S	Sb	09 12 33.0	+0.2
EVR	Evrytania	1.73	154	P	Pb	09 12 12.1	+0.8
EVR	Evrytania	1.73	154	P	Pn	09 12 11.1	+1.5
MAKR	Makrakomi, Fth	1.77	146	P	Pb	09 12 12.1	+0.2
MAKR	Makrakomi, Fth	1.77	146	P	Pn	09 12 09.4	-0.8
NYDR	Nydri-Lefkada	1.77	184	P	Pb	09 12 13.1	+1.2
NYDR	Nydri-Lefkada	1.77	184	P	Pn	09 12 11.3	+1.2
AGG	Agios Georgios	1.86	142	P	Pn	09 12 12.2	+0.9
AGG	Agios Georgios	1.86	142	P	Pn	09 12 11.7	+0.4
AGG	Agios Georgios	1.86	142	P	Pn	09 12 12.3	+0.9
SCTE	Santa Cesarea	1.87	258	AML	AML	09 12 44.9	
	comp=N,12nm,0.5s						
SCTE	Santa Cesarea	1.87	258	P	Pn	09 12 11.2	-0.2
EVGI	Lefkada island	1.87	185	P	Pb	09 12 13.9	+0.3
EVGI	Lefkada island	1.87	185	P	Pn	09 12 13.1	+1.7
ULC	Ulcinj	1.91	321	i Pn	Pn	09 12 13.8	+1.8
ULC	Ulcinj	1.91	321	⇑iPn	Pn	09 12 13.2	+1.2
ULC				i Sn	Sb	09 12 39.3	+1.1
SOH	Sokhos	1.94	79	P	Pn	09 12 13.8	+1.4
SOH	Sokhos	1.94	79	P	Pn	09 12 13.5	+1.1
PVO	Paravola	1.94	164	P	Pn	09 12 14.2	+1.8
BCI	Bajram Curri	1.97	343	Pn	Pb	09 12 15.8	+0.6
BCI				Sn	Sg	09 12 43.6	+1.2
BCI				AML	AML	09 12 50.6	
	comp=N,7.5nm,1.1s						
PLG	Polygyros	1.99	92	P	Pn	09 12 12.1	-1.0
PLG	Polygyros	1.99	92	P	Pn	09 12 14.3	+1.3
FSK	Fiskardo	2.04	186	P	Pb	09 12 16.1	-0.3
FSK	Fiskardo	2.04	186	P	Pn	09 12 15.8	+2.1
ANX	Ano Chora	2.06	156	P	Pb	09 12 16.7	-0.2
ANX	Ano Chora	2.06	156	P	Pn	09 12 16.3	+2.1
DRME	Dracevica, Mon	2.11	324	⇑iPn	Pn	09 12 16.1	+1.3
DRME	Dracevica, Mon	2.11	324	⇑iPn	Pn	09 12 15.8	+1.0
DRME				i Sn	Sb	09 12 44.4	+0.4
NEO	Neokhori	2.17	122	P	Pn	09 12 16.8	+1.2
NEO	Neokhori	2.17	122	P	Pn	09 12 16.6	+1.0
SRS	Serrai	2.18	72	P	Pn	09 12 16.4	+0.8
SRS	Serrai	2.18	72	i Pn	Pn	09 12 16.6	+0.9
SRS	Serrai	2.18	72	P	Pn	09 12 16.2	+0.5
KKB	Krupnik	2.19	51	i Pn	Pn	09 12 17.6	+1.8
VVK	Vomvokou	2.19	160	P	Pb	09 12 18.6	-0.5
EFP	Efpalio	2.21	158	P	Pn	09 12 18.0	+1.9
AXAR	Agios Charalam	2.21	140	P	Pn	09 12 17.9	+1.7
PAIG	Paliouri	2.24	104	P	Pn	09 12 16.3	-0.2
SERG	Sergoula	2.27	155	P	Pn	09 12 18.5	+1.5
DMLN	Damoulianata-K	2.27	189	P	Pn	09 12 18.2	+1.1
PDG	Podgorica	2.28	329	⇑iPn	Pn	09 12 18.6	+1.5
PDG	Podgorica	2.28	329	⇓P	Pb	09 12 21.3	+0.7
PDG	Podgorica	2.28	329	ePn	Pn	09 12 18.3	+1.2
PDG				eSn	Sb	09 12 49.6	+0.7
PDG	Podgorica	2.28	329	⇓iPn	Pn	09 12 17.4	+0.3
PDG				i Sn	Sn	09 12 48.0	+2.7
PDG	Podgorica	2.28	329	P	Pn	09 12 17.8	+0.8
MESG	Mesagne	2.29	274	P	Pn	09 12 16.9	-0.3
VLS	Valsamata	2.31	185	P	Pn	09 12 19.4	+1.8
UPR	University Cam	2.32	161	P	Pb	09 12 20.6	-0.6
KALE	Kalithea	2.32	154	P	Pn	09 12 20.1	+2.4
AXS	Araxos	2.32	170	P	Pn	09 12 19.6	+1.9
BUM	Brajici-Budva	2.33	322	⇓iPn	Pn	09 12 18.6	+0.7
BUM				i Sn	Sn	09 12 49.2	+2.4
BOSS	Bosilegrad	2.35	31	ePn	Pn	09 12 17.9	-0.2
BOSS				eSn	Sn	09 12 49.0	+1.8
PSDA	Pessada-Kefalo	2.38	185	P	Pn	09 12 20.3	+1.9
OUR	Ouranopolis	2.40	93	P	Pn	09 12 19.6	+0.9
KOKK	Kokkinochori,	2.42	81	P	Pn	09 12 20.2	+1.2
MMB	Musomishta	2.44	63	i Pn	Pn	09 12 20.4	+1.1
BARS	Barje	2.44	17	⇓iPn	Pn	09 12 19.9	+0.6
BARS	Barje	2.44	17	ePn	Pn	09 12 19.9	+0.6
BARS				eSn	Sn	09 12 50.7	+1.4
RLS	Riolos of Patr	2.47	169	P	Pn	09 12 21.5	+1.8
LKR	Lokris	2.48	137	P	Pn	09 12 20.9	+1.1
BEY	Berane	2.49	344	i Pn	Pn	09 12 22.3	+2.3
IVA	Berane	2.49	344	⇓iPn	Pn	09 12 22.5	+2.5
IVA				i Sn	Sn	09 12 53.5	+2.9
CEME	Cevo	2.52	325	⇑iPn	Pn	09 12 20.3	-0.1
CEME				i Sn	Sn	09 12 54.4	+3.1
KOME	Kolasin	2.56	338	⇓iPn	Pn	09 12 23.6	+2.5
KOME				i Sn	Sn	09 12 54.7	+2.2
CLEM	Kyllini,Ilia,G	2.60	175	P	Pn	09 12 23.4	+1.9
HCY	Herceg Novi	2.64	319	ePn	Pn	09 12 22.2	+0.2
HCY	Herceg Novi	2.64	319	⇓iPn	Pn	09 12 22.8	+0.8
HCY				i Sn	Sn	09 12 56.8	+2.6
SELS	Selova	2.74	4	ePn	Pn	09 12 24.3	+0.9
SELS				eSn	Sn	09 13 00.7	+4.0
KAVA	Kavala	2.83	78	P	Pn	09 12 24.4	-0.2
SJES	Sjenica	2.85	347	ePn	Pn	09 12 28.3	+3.3
SJES	Sjenica	2.85	347	ePn	Pn	09 12 27.7	+2.7
SJES				eSn	Sn	09 13 02.6	+3.1
TREB	Trebinje	2.91	321	ePn	Pn	09 12 25.6	-0.2
THAS	Thassos island	2.95	86	P	Pn	09 12 26.1	-0.2
BRY	Bratogost	2.97	325	ePn	Pn	09 12 27.8	+1.1
BRY	Bratogost	2.97	325	⇑iPn	Pn	09 12 27.5	+0.8
BRY				i Sn	Sn	09 13 04.6	+2.1
PLE	Pljevlja	3.04	340	⇓iPn	Pn	09 12 28.2	+0.5
PLE				i Sn	Sn	09 13 06.4	+2.1
GOCS	Kraljevo Serbi	3.07	0	ePn	Pn	09 12 29.0	+0.9
UPM	Unac-Piva	3.08	333	ePn	Pn	09 12 30.3	+2.1
UPM	Unac-Piva	3.08	333	⇑iPn	Pn	09 12 29.1	+0.9
UPM				i Sn	Sn	09 13 07.5	+2.2
ZAPS	Zavoj	3.09	25	ePn	Pn	09 12 28.9	+0.7
ZAPS				eSn	Sn	09 13 06.1	+0.8
IVAS	Ivanjica	3.13	351	ePn	Pn	09 12 28.5	-0.3
MATE	Matera	3.16	274	⇓P	Pb	09 12 36.5	+1.0
BOVS	Bovan	3.21	11	⇓P	Pn	09 12 29.9	+0.1
BOVS	Bovan	3.21	11	ePn	Pn	09 12 30.1	+0.2
BOVS				eSn	Sn	09 13 10.6	+2.3
RUDO	Rudo	3.32	341	ePn	Pn	09 12 32.7	+1.3
STON	Ston	3.35	316	ePn	Pn	09 12 31.9	+0.1
GRUS	Gruza	3.40	358	ePn	Pn	09 12 33.4	+0.9
ZAGS	Zajecar	3.48	17	ePn	Pn	09 12 33.9	+0.3
BBLS	Lazi&#263i	3.54	343	⇑iPn	Pn	09 12 36.3	+1.8
BBLS	Lazi&#263i	3.54	343	ePn	Pn	09 12 35.9	+1.4
DIVS	Divibare	3.67	350	ePn	Pn	09 12 36.9	+0.7
DIVS				eSn	Sn	09 13 22.4	+2.8
BORS2	Bor- Borsko je	3.71	13	ePn	Pn	09 12 36.8	+0.1
TRUS	Trudelj	3.75	355	ePn	Pn	09 12 37.8	+0.5
HAPS	Han Pijesak,Bl	3.86	339	ePn	Pn	09 12 40.4	+1.5
KUBS	Kucevo	3.97	9	ePn	Pn	09 12 38.8	-1.5
ALN	Alexandroupoli	3.97	82	P	Pn	09 12 40.3	0.0
ALN				S	Sn	09 13 20.9	-6.2
ALN				i IAML		09 13 27.0	
	comp=N,36nm,0.7s						
ALN				i IAML		09 13 29.0	
	comp=N,32nm,0.7s						
PUNG	Punghina	4.09	21	⇓P	Pb	09 12 47.8	-3.6
TEKS	Tekeris	4.18	347	ePn	Pn	09 12 44.0	+0.8
TEKS	Tekeris	4.18	347	ePn	Pn	09 12 44.2	+1.0
AVAS	Avala Beograd	4.21	357	ePn	Pn	09 12 43.1	-0.6
EZN	Ezine	4.25	97	⇓P	Pn	09 12 45.7	+1.5
MDVR	Moldovita	4.34	8	⇓P	Pn	09 12 46.0	+0.5
BAYC	CANAKKALE_Bayr	4.43	98	P	Pn	09 12 48.0	+1.3
KESN	Edirne-Kesan	4.45	84	P	Pn	09 12 47.7	+0.4
KESN				S	Sn	09 13 36.5	-2.9
KESN				i IAML		09 13 39.0	
	comp=N,100nm,0.4s						
KESN				i IAML		09 13 40.0	
	comp=N,153nm,0.5s						
HERR	Herculane	4.54	14	⇑P	Pn	09 12 52.2	+4.0
VRSS	Vrsac	4.65	4	ePn	Pn	09 12 49.3	-0.3
FRGS	Fruska Gora	4.73	351	ePn	Pn	09 12 48.2	-2.6
FRGS	Fruska Gora	4.73	351	ePn	Pn	09 12 50.3	-0.5
BUHA	Balikesir, Bur	4.88	100	P	Pn	09 12 55.0	+2.1
URLA	Izmir	4.93	114	P	Pn	09 12 56.1	+2.6
APE	Apeiranthos	5.00	132	P	Pn	09 12 55.8	+1.3
APE	Apeiranthos	5.00	132	⇑P	Pn	09 12 53.6	-0.9
BLY	Banja Luka	5.04	329	ePn	Pn	09 12 56.3	+1.2
GZR	Gura Zlata	5.11	15	⇓P	Pn	09 12 56.6	+0.7
A050A	Klekovaca	5.11	323	ePn	Pn	09 12 57.3	+1.2
BZS	Buzias	5.16	6	⇓P	Pn	09 12 55.5	-1.2
SURR	Surduc	5.35	10	⇓P	Pb	09 13 07.4	-5.4
A051A	Mrakovica	5.37	329	⇑iPn	Pn	09 13 00.0	+0.3
LOT	Lotru	5.40	22	⇑P	Pn	09 13 00.5	+0.4
AKHS	Akhisar	5.61	104	P	Pg	09 13 28.0	+1.4
VOIR		5.83	31	⇑P	Pn	09 13 11.9	+5.9
MORH	Mrgy, Hungar	5.95	345	⇑P	Pn	09 13 11.1	+3.6
IDI	Anoyia	6.09	147	Pn	Pn	09 13 11.9	+2.4
	comp=N,3.9nm,0.4s,baz=340,slow=9.9,SNR=2.1						
IDI				Sn	Sn	09 14 21.2	+1.7
	comp=N,3.2nm,0.3s,baz=315,slow=20,SNR=5.9						
ISR	Istrita	6.24	40	⇓P	Pn	09 13 16.8	+5.2
MLR	Muntele Rosu	6.24	35	Pn	Pn	09 13 14.1	+2.4
	comp=N,1.1nm,0.3s,baz=252,slow=9.3,SNR=7.9						
MLR				Sn	Sn	09 14 23.3	+0.1
	baz=127,slow=20						
	comp=N,2.1nm,0.5s						
MLR	Muntele Rosu	6.24	35	⇓P	Pn	09 13 19.5	+7.9
DOPR	Dopca	6.40	30	⇓P	Pn	09 13 12.7	-1.0
MARR	Marisel-Cluj	6.40	14	⇓P	Pn	09 13 22.6	+8.8
BOJS	Bojanci	6.48	323	ePn	Pn	09 13 14.5	-0.2
CRES	Cresnjevec Ost	6.63	325	ePn	Pn	09 13 16.4	-0.5
PLOR	Plostina	6.83	36	⇑P	Pn	09 13 21.0	+1.3
VRI	Vrincioaia	6.88	37	⇓P	Pn	09 13 22.7	+2.4
CEY	Cerknica	7.04	320	ePn	Pn	09 13 22.2	-0.3
TPGR	Topolog	7.08	49	⇑P	Pn	09 13 25.4	+2.3
PSZ	Piszkesteto	7.46	355	⇓P	Pn	09 13 31.3	+3.0
SOKA	Soboth	7.49	328	i Pn	Pn	09 13 29.0	+0.3
	comp=N,3.3nm,0.5s						
SOKA				eSn	Sn	09 14 52.0	-1.8
	comp=N,5.2nm,0.7s						
TLCR		7.50	49	⇓P	Pn	09 13 31.0	+2.1
OBKA	Obir	7.56	325	ePn	Pn	09 13 31.1	+1.4
OBKA	Obir	7.56	325	i Pn	Pn	09 13 31.0	+1.2
	comp=N,3.3nm,0.4s						
OBKA				eSn	Sn	09 14 55.5	-0.2
	comp=N,28nm,0.7s						
ARSA	Arzberg	7.78	332	ePn	Pn	09 13 32.9	+0.3
	comp=N,3.4nm,0.5s						
KECS	Kecovo	8.00	358	ePN	Pn	09 13 40.0	+4.4
KECS				eSN	Sn	09 15 05.6	-0.6
VYHS	Vyhne	8.13	351	ePN	Pn	09 13 42.3	+4.8
VYHS				eSN	Sn	09 15 09.2	-0.4
CONA	Conrad Observa	8.26	336	i Pn	Pn	09 13 39.0	-0.2
	comp=N,1.5nm,0.4s						
MODS	Modra-Piesok	8.29	343	ePN	Pn	09 13 45.1	+5.5
KBA	Koelnbreinsper	8.53	323	i Pn	Pn	09 13 43.0	-0.1
	comp=N,0.8nm,0.2s						
KBA				i Sn	Sn	09 15 17.9	-1.7
	comp=N,8.4nm,0.8s						
ABTA	Abfaltersbach	8.70	319	ePn	Pn	09 13 45.3	0.0
	comp=N,12nm,0.7s,SNR=4.4						
ABTA				eSn	Sn	09 15 21.4	-2.1
	comp=N,22nm,0.8s						
MOA	Molln	8.75	329	i Pn	Pn	09 13 48.0	+2.1
	comp=N,2.5nm,0.5s						
MOA				i Sn	Sn	09 15 25.7	+1.1
	comp=N,0.8nm,0.3s						
STHS	Stebnicka Huta	8.93	2	ePN	Pn	09 13 53.4	+4.9
LESA	Schwarzleotal	9.10	322	i Pn	Pn	09 13 52.0	+1.3
	comp=N,4.9nm,0.5s						
LESA				i Sn	Sn	09 15 32.5	-0.8
	comp=N,11nm,0.7s						
VRAC	Vranov	9.32	343	LR	LR	09 18 35.2	
	comp=N,101nm,18.1s,baz=166,slow=45						
WTTA	Wattenberg	9.49	319	i Pn	Pn	09 13 57.8	+1.6
	comp=N,5.4nm,0.5s						
WTTA				eSn	Sn	09 15 40.4	-2.7
	comp=N,30nm,0.7s						
WATA	Walderalm	9.57	319	i Pn	Pn	09 13 58.1	+0.8
	comp=N,11nm,0.6s						
WATA				i Sn	Sn	09 15 42.3	-2.6
	comp=N,46nm,1.3s						
SQTA	Sankt Quirin	9.68	317	i Pn	Pn	09 13 58.3	-0.5
	comp=N,2.6nm,0.3s						
SQTA				eSn	Sn	09 15 45.8	-1.9
	comp=N,12nm,0.6s						
GERES	GERESS Array B	9.78	331	Pn	Pn	09 14 01.3	+1.2
	baz=148,slow=15,SNR=4.3						
	comp=N,0.6nm,0.5s						
FETA	Feichten	9.81	315	ePn	Pn	09 13 60.0	-0.5
	comp=N,6.4nm,0.8s,SNR=4.7						
FETA				eSn	Sn	09 15 50.4	-0.4
	comp=N,5.9nm,0.7s						
MOTA	Moosalm	9.81	318	ePn	Pn	09 14 00.7	+0.1
	comp=N,13nm,0.7s,SNR=12						
MOTA				i Sn	Sn	09 15 48.6	-2.5
	comp=N,26nm,0.9s						
BRTR	Keskin Array B	9.83	90	Pn	Pn	09 14 04.3	+3.4
	comp=N,0.1nm,0.3s,baz=280,slow=13,SNR=2.7						
BRTR				Sn	Sn	09 15 44.0	-7.5
	comp=N,0.1nm,0.3s,baz=264,slow=24,SNR=1.8						
	comp=N,0.5nm,0.7s						
KHC	Kasperske Hory	10.06	332	ePN	Pn	09 14 04.6	+0.7
DAVOX	Davos/Dischmat	10.13	312	Pn	Pn	09 14 05.2	+0.1
	comp=N,0.5nm,0.3s,baz=164,slow=22,SNR=13						
DAVOX				Sn	Sn	09 15 55.1	-3.8
	comp=N,0.3nm,0.3s,baz=180,slow=20,SNR=7.1						
DAVOX				LR	LR	09 19 10.4	
	comp=N,68nm,19.5s,baz=83,slow=45						
	comp=N,4.2nm,0.5s						
KEST	Kesra	10.23	246	Pn	Pn	09 14 07.2	+1.0
	comp=N,0.2nm,0.3s,baz=30,slow=8.1,SNR=4.6						
	comp=N,1.6nm,0.7s						
MMAI	Mount Meron Ar	13.84	118	LR	LR	09 21 10.4	
	comp=N,41nm,19.5s,baz=320,slow=41						
ESDC	Sonseca Array	18.99	276	P	P	09 15 59.6	-1.5
	comp=N,0.1nm,0.3s,baz=77,slow=11,SNR=14						
	comp=N,1.5nm,0.8s						
HFS	Hagfors	20.17	350	P	P	09 16 12.6	-1.1
	comp=N,1.0nm,0.5s,baz=157,slow=12,SNR=5.5						
HFS				LR	LR	09 25 27.4	
	comp=N,33nm,21.4s,baz=158,slow=41						
	comp=N,1.0nm,0.5s						
FINES	FINESS Array B	21.23	7	P	P	09 16 23.6	-1.6
	comp=N,1.4nm,0.8s,baz=163,slow=10.0,SNR=8.3						
FINES				LR	LR	09 25 24.6	
	comp=N,33nm,19.8s,baz=304,slow=39						
	comp=N,1.4nm,0.8s						
NB2	NORSAR Subarra	21.42	347	P	P	09 16 26.8	-0.5
	comp=Z,3.5nm,0.9s,baz=155,slow=10						
NOA	NORSAR Array B	21.42	347	P	P	09 16 26.3	-1.0
	comp=Z,0.5nm,0.6s,baz=157,slow=8.7,SNR=4.8						
NOA				LR	LR	09 25 35.4	
	comp=Z,11nm,18.2s,baz=160,slow=39						
	comp=Z,0.5nm,0.6s						
EKA	Eskdalemuir Ar	21.74	321	P	P	09 16 30.4	-0.3
	comp=Z,2.5nm,0.9s,baz=131,slow=14,SNR=4.6						
	comp=Z,2.5nm,0.9s						
BELG	Belogornoye	21.82	48	LR	LR	09 26 01.4	
	comp=Z,34nm,18.6s,baz=151,slow=40						
AKTO	Aktyubinsk	27.64	56	LR	LR	09 29 32.7	
	comp=Z,34nm,18.6s,baz=204,slow=39						
ARTI	Arti	29.09	44	LR	LR	09 29 23.1	
	comp=Z,31nm,18.7s,baz=44,slow=37						
ARCES	ARCESS Array B	29.22	3	P	P	09 17 39.3	-1.6
	comp=Z,3.6nm,1.0s,baz=187,slow=8.5,SNR=3.7						
	comp=Z,3.6nm,1.0s						
TORD	Torodi Ar. Bea	32.00	217	P	P	09 18 06.7	+0.7
	comp=Z,1.7nm,0.6s,baz=34,slow=10,SNR=2.7						
	comp=Z,1.7nm,0.6s						
MKAR	Makanchi Array	43.91	60	P	P	09 19 45.6	-0.6
	comp=Z,0.4nm,0.5s,baz=280,slow=8.2,SNR=5.3						
	comp=Z,0.4nm,0.5s						
ZALV	Zalesovo Beam	43.99	50	P	P	09 19 46.6	-0.1
	comp=Z,0.6nm,0.5s,baz=286,slow=10,SNR=1.6						
	comp=Z,0.6nm,0.5s						
NRIK	Noril'sk	44.63	28	LR	LR	09 39 57.5	
	comp=Z,32nm,18.7s,baz=329,slow=38						
SFJD	Kangerlussuaq	46.37	329	LR	LR	09 40 41.4	
	comp=Z,30nm,18.6s,baz=114,slow=38						
ILAR	Eielson Array	74.64	355	P	P	09 23 18.4	-0.1
	comp=Z,0.1nm,0.6s,baz=359,slow=4.0,SNR=1.9						
	comp=Z,0.1nm,0.6s						
TXAR	Lajitas Array	93.56	314	P	P	09 24 55.8	-0.2
	comp=Z,0.7nm,1.0s,baz=46,slow=3.6,SNR=4.6						
	comp=Z,0.7nm,1.0s						
ASAR	Alice Springs	122.14	95	PKP	PKPdf	09 30 34.0	-0.6

comp=Z,0.5nm,0.8s,baz=317,slow=1.4,SNR=3.6

*ROM **01** 09:14:19.1±0.2, 38°.508N±0°.005×16°.142E±0°.007, h10^{km}±1^{km}, ML3.4/94, Mw3.4, Error ellipse: s-maj=0.6km s-min=0.4km az=129.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-1.38; M$_{\theta\theta}$0.87; M$_{\phi\phi}$0.52; M$_{r\theta}$-0.49; M$_{\theta\phi}$0.75; M$_{\phi r}$-0.30; Fault plane solution: M$_{0}$1.53507×10^{14} NP1:φ$_{s}$54.00000°, δ56.00000°, λ-87.00000°. NP2:φ$_{s}$229.00000°, δ34.00000°, λ-95.00000°.*

*IDC **01** 09:14:19.0±1.4, 38°.76N×16°.45E, h0^{km}, mb3.6/3, mbtmp3.6/6, ML1.6/2 Error ellipse: s-maj=27.8km s-min=19.4km az=141.0*

ISC 01 09:14:19.5±0.9**, 38°.53N**±0°.02×**16°.14E**±0°.02**, h19**^{km}±2^{km}**, n76,** σ1^{s}**16**/108**, mb3.6**/3**, 10C-2D, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOPP	**Joppolo**	0.22	292	⇑P	Pg	09 14 24.8	0.0
JOPP				S	Sg	09 14 28.8	+0.3
JOPP				AML	AML		
	comp=E,19750µm,0.7s						
JOPP				AML	AML		
	comp=N,16300µm,0.8s						
PLAC	**Placanica**	0.24	108	⇑P	Pb	09 14 24.7	-0.3
PLAC				S	Sb	09 14 28.9	+0.1
PLAC				AML	AML		
	comp=E,47150µm,0.5s						
PLAC				AML	AML		
	comp=N,26250µm,0.7s						
PLAC				AML	AML		
	comp=E,24150µm,0.6s						
PLAC				AML	AML		
	comp=N,46200µm,0.5s						
PLAC				AML	AML		
	comp=E,24150µm,1.4s						
CEL	**Celeste**	0.33	216	P	Pg	09 14 25.9	-0.7
CEL				S	Sg	09 14 31.0	-0.5
CEL				AML	AML		
	comp=N,11200µm,0.6s						
CEL				AML	AML		
	comp=E,16800µm,0.4s						
CEL				AML	AML		
	comp=N,11250µm,0.6s						
CEL				AML	AML		
	comp=E,16750µm,0.4s						
GRI	**Girifalco**	0.37	36	P	Pg	09 14 27.0	-0.3
GRI				S	Sg	09 14 33.0	+0.4
GRI				AML	AML		
	comp=E,15150µm,0.7s						
GRI				AML	AML		
	comp=N,13250µm,0.7s						
SICLA	**Scilla**	0.43	231	⇓P	Pg	09 14 27.5	-0.8
SICLA				S	Sg	09 14 34.2	-0.1
SICLA				AML	AML		
	comp=E,11050µm,0.2s						
SICLA				AML	AML		
	comp=N,11800µm,0.6s						
GMB	**Gambarie**	0.43	215	⇑P	Pg	09 14 27.5	-0.9
GMB				S	Sg	09 14 34.1	-0.5
GMB				AML	AML		
	comp=N,32450µm,1.6s						
GMB				AML	AML		
	comp=N,32450µm,0.4s						
GMB				AML	AML		
	comp=E,25950µm,1.2s						
SOI	**Samo**	0.46	189	⇑P	Pg	09 14 27.8	-1.0
SOI				S	Sg	09 14 34.1	-1.1
SOI				AML	AML		
	comp=E,6420µm,1.3s						
SOI				AML	AML		
	comp=N,4495µm,0.5s						
SOI				AML	AML		
	comp=E,6420µm,0.7s						
SOI				AML	AML		
	comp=N,4495µm,1.5s						
MSRU	**Castanea**	0.56	242	⇑P	Pb	09 14 30.1	-0.5
MSRU				S	Sg	09 14 38.8	+0.5
MSRU				AML	AML		
	comp=E,15850µm,1.0s						
MSRU				AML	AML		
	comp=E,15850µm,1.0s						
MSRU				AML	AML		
	comp=N,8495µm,0.4s						
MTTG	**Motta San Giov**	0.63	214	P	Pb	09 14 30.9	-0.8
MTTG				S	Sb	09 14 40.4	+0.3
MTTG				AML	AML		
	comp=E,4505µm,0.5s						
MTTG				AML	AML		
	comp=N,6170µm,0.4s						
MTTG				AML	AML		
	comp=E,4505µm,1.5s						
MPNC	**Port Mandanici**	0.73	239	P	Pb	09 14 32.8	-0.7
MPNC				S	Sg	09 14 43.8	+0.3
MPNC				AML	AML		
	comp=N,10020µm,0.8s						
MPNC				AML	AML		
	comp=E,9740µm,0.5s						
MPNC				AML	AML		
	comp=N,10020µm,1.2s						
CAR1	**CAROLEI**	0.73	4	P	Pb	09 14 33.6	0.0
CAR1				S	Sg	09 14 44.4	+0.8
CAR1				AML	AML		
	comp=E,9000µm,0.8s						
CAR1				AML	AML		
	comp=N,6515µm,1.6s						
CAR1				AML	AML		
	comp=N,7500µm,0.5s						
CAR1				AML	AML		
	comp=E,9125µm,0.8s						
CAR1				AML	AML		
	comp=N,6515µm,0.4s						
MILZ	**Milazzo**	0.76	251	⇑P	Pb	09 14 33.7	-0.3
MILZ				S	Sg	09 14 44.2	-0.2
MILZ				AML	AML		
	comp=E,31500µm,0.5s						
MILZ				AML	AML		
	comp=N,13150µm,0.6s						
IST3	**Stromboli F**	0.76	291	⇑P	Pb	09 14 33.8	-0.3
IST3				S	Sg	09 14 44.7	0.0
IST3				AML	AML		
	comp=E,7185µm,0.6s						
IST3				AML	AML		
	comp=N,9770µm,0.4s						
SPS2	**Spezzano della**	0.78	11	P	Pb	09 14 34.4	-0.1
SPS2				S	Sg	09 14 46.1	+0.8
SPS2				AML	AML		
	comp=E,1165µm,0.3s						
SPS2				AML	AML		
	comp=E,1165µm,1.7s						
SPS2				AML	AML		
	comp=N,2010µm,0.3s						
TIP	**Timpagrande**	0.81	36	P	Pb	09 14 34.5	-0.5
TIP				S	Sg	09 14 47.0	+0.8
TIP				AML	AML		
	comp=E,1585µm,0.8s						
TIP				AML	AML		
	comp=E,1600µm,0.8s						
TIP				AML	AML		
	comp=N,1655µm,1.1s						
TIP				AML	AML		
	comp=N,1620µm,1.1s						
TIP				AML	AML		
	comp=E,1585µm,1.2s						
TIP				AML	AML		
	comp=E,1600µm,1.2s						
AIO	**Antillo**	0.91	233	P	Pb	09 14 36.4	-0.2
AIO				S	Sg	09 14 49.5	+0.4
AIO				AML	AML		
	comp=E,2520µm,0.6s						
AIO				AML	AML		
	comp=N,2475µm,0.9s						
CELI	**Celico**	0.92	18	⇓P	Pb	09 14 37.2	+0.3
CELI				S	Sn	09 14 50.2	-0.1
CELI				AML	AML		
	comp=E,1016µm,1.1s						
CELI				AML	AML		
	comp=N,1355µm,1.3s						
CELI				AML	AML		
	comp=E,1016µm,1.1s						
CELI				AML	AML		
	comp=N,3430µm,1.3s						
CELI				AML	AML		
	comp=N,3430µm,0.7s						
CELI				AML	AML		
	comp=E,2455µm,0.7s						
CELI				AML	AML		
	comp=N,1355µm,0.7s						
VPL	**Vulcano Piano**	0.92	261	⇑P	Pb	09 14 36.2	-0.6
VPL				S	Sb	09 14 48.7	+0.1
VPL				AML	AML		
	comp=N,6925µm,0.5s						
VPL				AML	AML		
	comp=E,4655µm,0.5s						
VPL				AML	AML		
	comp=E,4655µm,1.5s						
NOV	**Novara**	0.93	238	P	Pb	09 14 36.8	-0.2
NOV				S	Sg	09 14 50.1	+0.1
NOV				AML	AML		
	comp=N,5970µm,0.4s						
NOV				AML	AML		
	comp=E,9100µm,0.9s						
LLI	**Lipari**	0.94	265	P	Pb	09 14 36.7	-0.4
LLI				S	Sb	09 14 49.3	+0.1
LLI				AML	AML		
	comp=E,30950µm,0.6s						
LLI				AML	AML		
	comp=N,45850µm,0.6s						
LADO	**San Nicola del**	1.00	41	P	Pb	09 14 38.2	0.0
LADO				S	Sg	09 14 53.0	+0.8
CET2	**Cetraro**	1.01	352	P	Pb	09 14 37.8	-0.6
CET2				S	Sn	09 14 52.3	-0.1
CET2				AML	AML		
	comp=E,3770µm,0.9s						
CET2				AML	AML		
	comp=N,5020µm,0.5s						
CET2				AML	AML		
	comp=N,5020µm,1.5s						
CET2				AML	AML		
	comp=E,3770µm,1.1s						
PIPA	**Pietrapaola**	1.09	29	P	Pb	09 14 40.4	+0.6
PIPA				AML	AML		
	comp=E,1096µm,1.1s						
PIPA				AML	AML		
	comp=N,1070µm,0.7s						
PIPA				AML	AML		
	comp=E,1044µm,1.1s						
PIPA				AML	AML		
	comp=E,1044µm,0.9s						
PIPA				AML	AML		
	comp=E,1096µm,0.9s						
PIPA				AML	AML		
	comp=N,1068µm,0.7s						
MUCR	**Ucria**	1.11	245	⇑P	Pn	09 14 39.0	-1.0
MUCR				S	Sb	09 14 53.9	-0.3
MUCR				AML	AML		
	comp=E,1425µm,0.5s						
MUCR				AML	AML		
	comp=N,2020µm,1.0s						
EMCN	**Etna Monte Con**	1.14	230	P	Pn	09 14 40.4	-0.2
TDS	**Terranova Siba**	1.14	8	P	Pn	09 14 40.5	+0.1
TDS				AML	AML		
	comp=N,671µm,1.3s						
TDS				AML	AML		
	comp=E,558µm,0.7s						
TDS				AML	AML		
	comp=N,671µm,0.7s						
EMSG	**Monte Spagnolo**	1.17	234	P	Pg	09 14 41.9	-0.3
EPZF	**Pizzo Felice**	1.23	236	P	Pg	09 14 43.1	-0.2
IFIL	**Filicudi I Eol**	1.24	272	P	Pn	09 14 41.1	-0.6
IFIL				S	Sb	09 14 57.6	-0.1
IFIL				AML	AML		
	comp=E,6400µm,0.6s						
IFIL				AML	AML		
	comp=E,6400µm,1.4s						
IFIL				AML	AML		
	comp=N,2765µm,0.7s						
ESLN	**Serra La Nave**	1.24	228	P	Pn	09 14 38.5	-3.5
EPOZ	**Pozzillo**	1.31	220	P	Pn	09 14 41.6	-1.1
MSFR	**San Fratello**	1.32	249	P	Pn	09 14 42.2	-0.6
MSFR				AML	AML		
	comp=E,653µm,1.1s						
MSFR				AML	AML		
	comp=N,468µm,0.6s						
ESML	**S. M. di Licod**	1.35	228	P	Pg	09 14 45.1	-0.4
SALB	**San Lorenzo Be**	1.36	7	P	Pb	09 14 44.5	+0.1
MMN	**Mormanno**	1.37	355	P	Pn	09 14 43.4	-0.1
IACL	**Alicudi**	1.40	271	P	Pn	09 14 42.8	-1.1
AGST	**Augusta-Monte**	1.46	210	P	Pg	09 14 47.3	-0.3
HAGA	**Augusta**	1.46	213	P	Pb	09 14 45.8	-0.3
HAGA				S	Sb	09 15 05.0	+0.8
GALF	**Gagliano Caste**	1.48	237	P	Pg	09 14 47.9	-0.3
CUC	**Castrocucco**	1.49	350	P	Pn	09 14 44.5	-0.7
CUC				AML	AML		
	comp=N,900µm,0.7s						
CUC				AML	AML		
	comp=N,872µm,0.7s						
CUC				AML	AML		
	comp=E,1144µm,1.0s						
CUC				AML	AML		
	comp=E,1182µm,1.0s						
CUC				AML	AML		
	comp=N,872µm,1.3s						
CUC				AML	AML		
	comp=N,900µm,1.3s						
HLNI	**Lentini**	1.55	221	⇑P	Pn	09 14 46.4	+0.5
HLNI				S	Sb	09 15 07.2	+0.6
HLNI				AML	AML		
	comp=E,682µm,0.9s						
HLNI				AML	AML		
	comp=E,682µm,1.1s						
HLNI				AML	AML		
	comp=N,846µm,0.8s						
ORI	**Oriolo Calabro**	1.55	9	P	Pg	09 14 48.7	-0.7
CAGR	**Agira**	1.58	236	P	Pg	09 14 49.7	-0.2
BULG	**Bulgheria - Ca**	1.66	339	P	Pn	09 14 47.3	-0.3
BULG				S	Sb	09 15 09.2	-0.8
BULG				AML	AML		
	comp=N,1080µm,0.9s						
BULG				AML	AML		
	comp=N,1120µm,0.9s						
BULG				AML	AML		
	comp=N,1085µm,0.9s						
BULG				AML	AML		
	comp=E,723µm,0.5s						
BULG				AML	AML		
	comp=E,734µm,0.5s						
BULG				AML	AML		
	comp=N,1120µm,1.1s						
BULG				AML	AML		
	comp=N,1085µm,1.1s						
PLLN	**Pollina**	1.66	252	P	Pn	09 14 47.5	0.0
SIRI	**Monte Sirino -**	1.67	353	P	Pn	09 14 47.1	-0.7
SIRI				AML	AML		
	comp=N,622µm,0.7s						
SIRI				AML	AML		
	comp=E,642µm,1.0s						
SIRI				AML	AML		
	comp=N,626µm,0.7s						
SIRI				AML	AML		
	comp=E,639µm,0.6s						
SIRI				AML	AML		
	comp=N,626µm,1.3s						
SIRI				AML	AML		
	comp=N,622µm,1.3s						
SCHR	**S. Chirico Rap**	1.67	358	P	Pg	09 14 51.2	-0.5
VAE	**Valguarnera**	1.72	233	Pn	Pg	09 14 54.9	+2.3
	comp=N,6.6nm,0.3s,baz=76,slow=19,SNR=5.4						
VAE				Sn	Sg	09 15 23.4	+8.4
	comp=N,10nm,0.3s,baz=48,slow=19,SNR=7.2						
	comp=N,31nm,0.5s						
PETRA	**Petralia Sopra**	1.74	247	P	Pn	09 14 49.8	+1.0
CSLB	**Castelbuono**	1.74	251	P	Pn	09 14 49.2	+0.5
GIB	**Gibilmanna**	1.75	253	P	Pn	09 14 48.7	-0.1
GIB				S	Sb	09 15 13.2	+0.6
HVZN	**Vizzini**	1.76	220	P	Pb	09 14 50.6	-0.5
MCEL	**Monticello**	1.82	352	P	Pn	09 14 50.6	+0.8
MCEL				AML	AML		
	comp=E,414µm,0.9s						
MCEL				AML	AML		
	comp=N,536µm,0.8s						
MCEL				AML	AML		
	comp=E,418µm,0.9s						
MCEL				AML	AML		
	comp=N,541µm,0.8s						
MCEL				AML	AML		
	comp=N,541µm,1.2s						
MCEL				AML	AML		
	comp=N,536µm,1.2s						
MCEL				AML	AML		
	comp=E,418µm,1.1s						
MCEL				AML	AML		
	comp=E,414µm,1.1s						
HMDC	**Modica**	1.90	215	P	Pn	09 14 51.9	+1.1
SLCN	**Sala Consilina**	1.90	348	P	Pn	09 14 50.9	0.0
CMPR	**Campora**	1.90	340	P	Pn	09 14 51.0	0.0
CMPR				AML	AML		
	comp=N,338µm,1.2s						
CMPR				AML	AML		
	comp=E,393µm,0.9s						
CMPR				AML	AML		
	comp=N,338µm,0.8s						
SCIAR	**Sciara**	1.97	254	P	Pn	09 14 51.7	-0.2
HPAC	**Pachino**	2.00	204	P	Pn	09 14 53.8	+1.6
CDRU	**Civita di Ruta**	2.06	342	P	Pn	09 14 53.7	+0.5
CDRU				AML	AML		
	comp=E,437µm,1.2s						
CDRU				AML	AML		
	comp=E,437µm,0.8s						
CDRU				AML	AML		
	comp=N,162µm,0.7s						
MIGL	**Miglionico**	2.09	6	P	Pb	09 14 56.4	-0.4
SOLUN	**Solunto**	2.10	259	P	Pn	09 14 54.1	+0.6
MATE	**Matera**	2.17	11	P	Pb	09 14 56.9	-1.1
MATE				S	Sb	09 15 23.3	-1.1
MATE				AML	AML		
	comp=E,174µm,1.6s						
MATE				AML	AML		
	comp=E,174µm,0.4s						
MATE				AML	AML		
	comp=N,222µm,0.6s						
TAR1	**Taranto**	2.18	24	P	Pn	09 14 56.2	+1.4
TAR1				S	Sb	09 15 23.7	-1.3
CLTA	**Licata**	2.20	232	P	Pb	09 14 57.8	-0.8
ACER	**Acerenza**	2.26	356	P	Pn	09 14 57.8	+1.9
FAVR	**Favara**	2.33	238	P	Pn	09 14 57.8	+1.1
NOCI	**Noci**	2.37	17	P	Pn	09 14 58.5	+1.2
NOCI				S	Sb	09 15 28.8	-1.6
NOCI				AML	AML		
	comp=E,168µm,1.2s						
NOCI				AML	AML		
	comp=N,192µm,1.2s						
NOCI				AML	AML		
	comp=E,168µm,0.8s						
MCRV	**Calabrutti - M**	2.38	342	P	Pn	09 14 58.2	+0.7
AMUR	**Altamura**	2.41	8	P	Pn	09 14 59.3	+1.5
SNAL	**S. Angelo Dei**	2.50	344	P	Pn	09 15 00.8	+1.7
MTMR	**Montemarano**	2.55	340	P	Pn	09 15 00.5	+0.7
KEST	**Kesra**	6.10	245	Pn	Pn	09 15 55.5	+6.8
	comp=E,1.6nm,0.6s,baz=108,slow=9.6,SNR=4.2						
IDI	**Anoyia**	7.72	112	Pn	Pn	09 16 12.0	+1.2
	comp=E,0.7nm,0.3s,baz=272,slow=17,SNR=1.5						
IDI				Sn	Sn	09 17 37.0	-0.7
	comp=E,1.3nm,0.3s,baz=4.7,slow=21,SNR=6.8						
	comp=E,2.2nm,0.4s						
HFS	**Hagfors**	21.68	357	P	P	09 19 09.6	+0.8
	comp=E,1.6nm,0.7s,baz=192,slow=11,SNR=1.9						
	comp=E,1.6nm,0.7s						
FINES	**FINESS Array B**	23.76	12	P	P	09 19 29.9	-0.5
	comp=E,2.4nm,0.5s,baz=200,slow=8.5,SNR=15						
	comp=E,2.4nm,0.5s						
MKAR	**Makanchi Array**	48.04	58	P	P	09 22 56.9	-0.4
	comp=E,0.3nm,0.5s,baz=282,slow=6.1,SNR=3.3						
	comp=E,0.3nm,0.5s						

*JMA **01** 09:17:23.5±0.2, 24°N±1°×122°.6E±0°.6, h28^{km}±3^{km}, MV2.7/14, NW OFF ISHIGAKIJIMA IS*

*TAP **01** 09:17:23.8, 24°.12N×122°.64E, h33^{km}, ML3.3, C*

ISC 01 09:17:21.5±1.0**, 24°.05N**±0°.02×**122°.67E**±0°.02**, h17**^{km}±8^{km}**, n104,** σ0^{s}**89**/179**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS4	**EOS4**	0.33	282	*i* P	Pn	09 17 31.4	+0.4
EOS4				S	Sn	09 17 37.0	-0.3
EOS3	**EOS3**	0.40	306	*i* P	Pn	09 17 32.6	+0.3
EOS3				S	Sn	09 17 38.9	-0.3
JYNG	**Yonagunijimaku**	0.47	33	P	Pn	09 17 33.4	-0.1
JYNG				*e*S	Sn	09 17 40.0	-1.3
YOJ	**Yonaguni jima**	0.51	38	*e*P	Pn	09 17 34.0	0.0
YOJ				*e*S	Sn	09 17 41.2	-1.2
YOJ	**Yonaguni jima**	0.51	38	P	Pn	09 17 33.9	-0.1
YOJ				S	Sn	09 17 41.7	-0.7
EOS2	**EOS2**	0.54	313	*e*P	Pn	09 17 34.9	+0.6
EAHA	**Aohua**	0.89	288	P	Pn	09 17 39.9	+0.7
EAHA				*e*S	Sn	09 17 52.6	+0.9
EWUT	**Wuta**	0.90	296	*i* P	Pn	09 17 39.7	+0.3
EWUT				S	Sn	09 17 52.6	+0.7
ESAO	**Su ao**	0.91	305	P	Pn	09 17 40.0	+0.5
ESAO				S	Sn	09 17 52.1	-0.1
ENA	**Nanau**	0.92	294	P	Pn	09 17 40.0	+0.3
ENA				S	Sn	09 17 52.3	-0.2
TWC	**Suao**	0.93	307	*i* P	Pn	09 17 40.0	+0.3
TWC				S	Sn	09 17 52.4	-0.3
TWD	**Chiawan**	0.98	272	P	Pg	09 17 40.8	+0.3
TWD				*e*S	Sb	09 17 52.9	+0.3
NACB	**Ninganchiao**	0.99	277	P	Pn	09 17 40.5	0.0
NACB				*e*S	Sg	09 17 53.4	-0.3
TEYL	**Yanliau Villag**	0.99	260	P	Pn	09 17 41.0	+0.4
TEYL				*e*S	Sg	09 17 54.4	+0.5
IRIF	**Iriomote-Funau**	1.01	74	*e*P	Pg	09 17 42.8	+1.6
IRIF				*e*S	Sn	09 17 56.2	+1.6
EGS		1.03	320	*e*P	Pg	09 17 41.6	0.0
HATJ	**Hateruma jima**	1.04	90	*e*P	Pg	09 17 42.7	+1.1
NDS	**Dongshan**	1.04	304	*e*P	Pn	09 17 41.1	-0.2
NDS				*e*S	Sn	09 17 56.5	+1.1
SHUL	**Shoufeng**	1.04	256	*e*P	Pb	09 17 41.5	+0.4
SHUL				*e*S	Sb	09 17 55.5	+1.0
ETM	**Tongmen**	1.08	266	P	Pb	09 17 41.6	-0.1
ETM				*e*S	Sb	09 17 55.4	0.0
TEGC	**Jichi Village**	1.09	252	*e*P	Pn	09 17 42.1	+0.2
TEGC				*e*S	Sb	09 17 55.6	0.0
ETLH	**Xiulin Townshi**	1.09	278	P	Pn	09 17 42.3	+0.3
ETLH				*e*S	Sn	09 17 56.6	-0.2
TWE	**Neicheng**	1.13	306	*i* P	Pg	09 17 43.5	+0.2
TWE				*e*S	Sg	09 17 58.6	+0.4
TWB1	**Santiao Chiao**	1.13	327	P	Pg	09 17 42.6	-0.8
TWB1				*e*S	Sg	09 17 58.2	-0.2
LATG	**Datong**	1.15	295	P	Pg	09 17 43.6	-0.1
LATG				*e*S	Sg	09 18 00.2	+1.4
ESL	**Shilin**	1.15	258	*e*P	Pn	09 17 42.4	-0.5
ENTT	**Nioudou**	1.16	300	P	Pg	09 17 44.1	+0.1
ENTT				*e*S	Sg	09 17 59.6	+0.4
TIPB	**Shuangxi**	1.19	320	P	Pg	09 17 43.9	-0.7
TIPB				*e*S	Sg	09 17 59.7	-0.5
EGFH	**Guangfu**	1.20	252	*e*S	Sb	09 17 59.0	+0.2
FUSB	**Fushanzhiwuyua**	1.21	306	*e*P	Pg	09 17 45.1	+0.1
FUSB				*e*S	Sg	09 18 01.4	+0.6
WARBT	**Fenglin Townsh**	1.22	254	P	Pn	09 17 43.4	-0.4
WARBT				*e*S	Sb	09 17 58.8	-0.7
NNSB	**Datong**	1.23	288	P	Pb	09 17 44.3	0.0
NNSB				*e*S	Sn	09 18 00.1	-0.2
JKRS	**Kuro-shima**	1.24	81	*e*P	Pg	09 17 45.8	+0.3
NNS	**Nan Shan**	1.24	288	P	Pb	09 17 44.9	+0.4
SXI1	**Grass Mountain**	1.26	325	P	Pb	09 17 44.7	-0.2
SXI1				*e*S	Sg	09 18 00.8	-1.6
HGSD	**Ruisui**	1.27	244	*e*P	Pn	09 17 44.2	-0.2
HGSD				*e*S	Sn	09 17 59.2	-1.8
WHF	**Hehuan Shan**	1.28	274	P	Pn	09 17 45.3	+0.2
WHF				S	Sb	09 18 01.8	-0.1
NWF	**Wu-fen Shan**	1.29	322	*e*P	Pg	09 17 46.0	-0.5
NWF				*e*S	Sg	09 18 02.7	-0.8
WFSB	**Wu-fen Shan**	1.29	322	*e*P	Pg	09 17 45.7	-0.8
WFSB				*e*S	Sg	09 18 03.1	-0.3
FUSS	**Fushou**	1.31	279	*e*P	Pb	09 17 46.0	+0.1
YHNB	**Yeheng**	1.33	298	P	Pb	09 17 46.3	+0.3
YHNB				*e*S	Sb	09 18 02.3	-0.4
EHYH	**Wanrong**	1.33	246	*e*P	Pn	09 17 46.0	+0.7
EHYH				*e*S	Sn	09 18 02.2	-0.5
ECBN	**Changbin**	1.33	237	*e*P	Pn	09 17 45.5	+0.2
ECBN				*e*S	Sn	09 18 01.0	-1.6
EHY	**Hungye**	1.35	246	P	Pn	09 17 45.9	+0.4
EHY				*e*S	Sn	09 18 01.8	-1.1
TWA	**Mucha**	1.35	313	P	Pg	09 17 46.9	-0.7
TWA				*e*S	Sg	09 18 05.5	+0.2
OWD	**Renai**	1.37	266	*i* P	Pn	09 17 46.4	+0.5
OWD				*e*S	Sn	09 18 02.6	-1.1
TWT	**Tachien**	1.38	279	*e*S	Sb	09 18 05.1	+0.9
JIJ	**Ishigaki jima**	1.38	77	*e*P	Pg	09 17 47.6	-0.6
JIJ				*e*S	Sb	09 18 04.8	+0.6
YULB	**Yu-li**	1.42	243	*e*P	Pn	09 17 46.8	+0.3

YULB				*e*S	Sn	09 18 04.0	-0.7
WUSB	**Renai**	1.42	268	P	Pn	09 17 47.1	+0.6
WUSB				*e*S	Sb	09 18 05.5	+0.1
EYUL	**Yuli**	1.42	241	*e*P	Pn	09 17 47.0	+0.5
EYUL				*e*S	Sn	09 18 04.0	-0.8
VWDT	**VWDT**	1.43	258	P	Pb	09 17 47.5	-0.1
VWDT				S	Sn	09 18 05.1	+0.2
TWF1	**Yuli**	1.44	241	*e*P	Pn	09 17 47.2	+0.5
TWF1				*e*S	Sn	09 18 04.8	-0.4
CHKH	**Chenggong**	1.45	234	P	Pn	09 17 46.5	-0.3
CHKH				*e*S	Sn	09 18 03.0	-2.4
YM01	**YM01**	1.48	318	*e*P	Pb	09 17 48.2	-0.4
ZUZH	**Zhuzihu**	1.50	317	*e*P	Pb	09 17 48.5	-0.5
FULB	**Fuli**	1.52	236	*e*P	Pn	09 17 47.9	0.0
FULB				*e*S	Sn	09 18 05.8	-1.5
CHKT	**Chengkung**	1.53	232	*e*P	Pn	09 17 48.6	+0.7
CHKT				*e*S	Sn	09 18 05.0	-2.4
NFF	**Wufeng Townshi**	1.53	293	*e*P	Pb	09 17 49.4	0.0
KSHI	**Guanxi Townshi**	1.54	298	*e*P	Pg	09 17 50.2	-0.9
TWY	**Chenhua**	1.56	322	*e*P	Pb	09 17 49.3	-0.6
WHP	**Taichung City**	1.59	278	*e*P	Pg	09 17 51.6	-0.5
WHP				*e*S	Sb	09 18 10.9	+0.7
SSLB	**Suanglung**	1.59	261	*e*P	Pn	09 17 49.7	+0.8
SSLB				*e*S	Sn	09 18 09.6	+0.6
JISG	**Ishigakijimahi**	1.59	70	*e*P	Pb	09 17 50.1	-0.3
JISG				*e*S	Sb	09 18 10.2	-0.1
WCS	**Beigang Elemen**	1.60	271	*e*P	Pb	09 17 50.2	-0.5
EHD	**Haiduan**	1.61	236	*e*P	Pn	09 17 49.2	+0.1
EHD				*e*S	Sn	09 18 08.0	-1.6
LIOB	**Emei**	1.62	292	*e*P	Pb	09 17 51.1	+0.2
LIOB				*e*S	Sg	09 18 12.5	-1.2
NSTT	**Nanjuang**	1.62	291	*e*P	Pb	09 17 50.9	-0.1
NSTT				*e*S	Sn	09 18 09.9	+0.1
SMLT	**Sun Moon Lake**	1.62	264	P	Pb	09 17 50.6	-0.5
SMLT				*e*S	Sn	09 18 10.5	+0.5
EDH	**Donghe**	1.65	230	P	Pn	09 17 49.5	-0.2
EDH				S	Sn	09 18 07.8	-2.6
TYC	**Yuchr**	1.66	265	*e*P	Pb	09 17 51.1	-0.6
WHYT	**Xinyi Township**	1.70	258	*e*P	Pb	09 17 51.8	-0.5
WHYT				*e*S	Sn	09 18 12.5	+0.8
ELDTW	**Lidau**	1.74	241	*e*P	Pn	09 17 50.4	-0.6
ELDTW				*e*S	Sn	09 18 11.7	-1.2
LDUT	**Ludao**	1.76	219	*e*P	Pn	09 17 50.8	-0.4
LDUT				*e*S	Sn	09 18 10.5	-2.6
ALS	**Alishan**	1.79	253	*e*P	Pb	09 17 53.5	-0.5
ALS				*e*S	Sn	09 18 15.1	+0.8
WJS	**Zhushan**	1.79	263	*e*P	Pb	09 17 54.0	+0.2
WJS				*e*S	Sg	09 18 18.2	-1.0
LONT	**Longtian**	1.81	231	*e*P	Pn	09 17 52.1	+0.1
LONT				*e*S	Sn	09 18 13.8	-0.8
CHN5	**Tsauling**	1.88	256	*e*P	Pb	09 17 55.6	+0.3
CHN5				*e*S	Sb	09 18 18.6	+0.1
TWGBT	**Beinan**	1.91	230	*e*P	Pn	09 17 54.1	+0.9
TWGBT				*e*S	Sn	09 18 16.2	-0.6
TWG	**Pinlang**	1.91	230	*e*P	Pn	09 17 53.7	+0.5
TWG				*e*S	Sn	09 18 15.6	-1.3
STYH	**Taoyuan**	1.94	244	*e*P	Pn	09 17 53.4	-0.3
STYH				*e*S	Sn	09 18 16.1	-1.6
JTJ	**Tarama**	1.95	72	*e*P	Pb	09 17 55.8	-0.7
WDLH	**Douliu**	1.98	260	*e*P	Pb	09 17 56.8	-0.3
WDLH				*e*S	Sb	09 18 23.0	+1.5
WCKO	**Fanlu**	1.99	252	*e*P	Pb	09 17 57.4	+0.2
WCKO				*e*S	Sb	09 18 21.9	+0.3
TPUB	**Ta-pu**	2.01	249	*e*P	Pn	09 17 56.5	+1.9
TPUB				*e*S	Sn	09 18 21.2	+1.8
CHN4	**Tsaushan**	2.02	250	*e*P	Pb	09 17 57.8	0.0
CHN4				*e*S	Sb	09 18 23.1	+0.3
WTP	**Ta-pu**	2.05	247	*e*P	Pb	09 17 58.2	0.0
WTP				S	Sb	09 18 22.8	-0.6
WTK	**Tuku**	2.12	261	P	Pb	09 17 59.2	-0.2
WTK				*e*S	Sb	09 18 25.4	0.0
SGST	**Jiashian**	2.14	244	*e*P	Pb	09 17 59.3	-0.5
SGST				*e*S	Sn	09 18 24.6	+1.9
CHN1	**Nanshi**	2.14	247	*e*P	Pb	09 17 59.5	-0.4
CHN1				*e*S	Sn	09 18 25.1	+2.5
TWK	**Hsinying**	2.15	249	*e*P	Pb	09 17 59.2	-0.7
TWK				*e*S	Sn	09 18 25.1	+2.4
LYUB	**Lan-yu**	2.27	206	*e*P	Pn	09 17 57.1	-1.1
SSD	**Sandimen**	2.28	236	*e*P	Pb	09 18 01.5	-0.6
TSMG	**Majia**	2.29	235	*e*P	Pb	09 18 02.0	-0.3
ICHU	**Yijhu**	2.29	253	*e*P	Pn	09 18 00.8	+2.3
MASBT	**Mashibuluo**	2.36	233	*e*P	Pn	09 18 00.4	+1.0
EAST	**Anshuo**	2.36	226	*e*P	Pn	09 17 59.5	0.0
TAWH	**Dawu Township**	2.36	224	*e*P	Pn	09 18 00.2	+0.8
SCZT	**Fangliau**	2.52	229	*e*P	Pn	09 18 03.8	+2.2
TSEB	**Hengchuen, Pin**	2.69	218	*e*P	Pn	09 18 05.5	+1.5
TSEB				S	Sn	09 18 38.1	+2.0
TWKBT	**Hengchun**	2.71	219	*e*P	Pn	09 18 05.4	+1.1
WDGT	**Dungji**	2.87	255	*e*P	Pn	09 18 07.9	+1.5
VWUC	**VWUC**	3.08	288	*e*P	Pn	09 18 09.2	-0.1
PTMZ	**Houxiangcun**	3.38	288	*e*P	Pn	09 18 13.7	+0.3

IDC 01 09:18:18.0±1.6**, 7°.69S**×**133°.54E, h0^{km}, mb3.7**/3**, mbtmp3.6**/5**, ML3.6**/2**, Error ellipse: s-maj=91.7km s-min=19.8km az=76.0, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	12.21	176	Pn	Pn	09 21 13.0	-0.3
	0.4nm,0.3s,baz=354,slow=13,SNR=18						
WRA				Sn	Sn	09 23 24.4	-5.8
	0.8nm,0.3s,baz=360,slow=24,SNR=8.3						
WRA				Lg	Lg	09 24 43.5	
	0.6nm,0.3s,baz=359,slow=27,SNR=5.3						
	0.5nm,0.3s						
ASAR	**Alice Springs**	15.89	179	Pn	Pn	09 22 02.3	-0.9
	0.3nm,0.3s,baz=356,slow=12,SNR=16						
ASAR				Sn	Sn	09 24 54.2	-5.9
	0.2nm,0.3s,baz=3.9,slow=28,SNR=6.0						
ASAR				Lg	Lg	09 26 40.8	
	baz=2.0,slow=30						
	0.6nm,0.4s						
STKA	**Stephens Creek**	25.21	164	P	P	09 23 46.5	+0.9
	1.9nm,0.7s,baz=344,slow=8.0,SNR=10						
	1.9nm,0.7s						
MKAR	**Makanchi Array**	70.75	325	P	P	09 29 36.4	+0.2
	0.3nm,0.5s,baz=130,slow=5.8,SNR=4.5						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	74.96	327	P	P	09 30 00.3	-0.7
	0.3nm,0.5s,baz=115,slow=3.6,SNR=2.1						
	0.3nm,0.5s						

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*BEO **01** 09:18:40.7±0.7, 40°.29N×20°.94E, h3^{km}±3^{km}, ML2.8/8*
*TIR **01** 09:18:41.1, 40°.44N×20°.74E, h0^{km}±1^{km}, Ml3.0/7*
*THE **01** 09:18:44.7, 40°N±1°×2°1E±°, h2^{km}±1^{km}, M2.6/15, MLh2.6/15*

ISC 01 09:18:42.6±0.9**, 40°.39N**±0°.02×**20°.87E**±0°.02**, h12^{km}**±6^{km}**, n44, σ1^{s}.43**/68**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEST	**Nestorio**	0.14	78	Pg	Pg	09 18 46.6	+0.5
NEST				Sg	Sg	09 18 50.8	+2.2
NEST				AML	AML	09 18 51.9	
	12nm,0.3s						
NEST	**Nestorio**	0.14	78	P	Pg	09 18 46.7	+0.6
NEST				S	Sg	09 18 49.0	+0.4
KBN	**Korca**	0.24	346	Pg	Pg	09 18 45.5	-2.3
KBN				Sg	Sg	09 18 48.5	-2.8
KBN				AML	AML	09 18 49.6	
	28nm,0.3s						
PENT	**Pentalofos**	0.28	132	P	Pg	09 18 49.2	+0.7
PENT				S	Sg	09 18 51.8	-0.6
KPRO	**Kipourio**	0.57	138	P	Pn	09 18 54.1	-2.6
KPRO				S	Sb	09 19 00.2	-2.7
KZN	**Kozani**	0.70	96	P	Pn	09 18 58.2	-0.2
KZN				S	Sb	09 19 05.7	-0.6
OHR	**Ohrid**	0.73	356	*e*Pg	Pg	09 18 55.6	-1.1
OHR				*e*Sg	Sg	09 19 06.8	+0.5
JAN	**Janina**	0.73	181	P	Pn	09 18 57.7	-1.1
JAN				S	Sn	09 19 07.6	-2.3
SRN	**Sarande**	0.83	233	Pg	Pg	09 18 57.6	-1.2
SRN				Sg	Sb	09 19 10.4	+0.2
SRN				AML	AML	09 19 12.5	
	1.1nm,0.6s						
SRN				AML	AML	09 19 12.7	
	1.1nm,0.9s						
IGT	**Igoumenitsa**	0.95	206	Pn	Pn	09 19 01.0	-0.8
IGT				Sn	Sn	09 19 15.3	+0.1
IGT	**Igoumenitsa**	0.95	206	P	Pn	09 19 02.2	+0.4
IGT				S	Sn	09 19 16.2	+1.0
KTI	**Kastanea**	0.95	89	P	Pn	09 19 02.2	+0.2
KEK	**Kerkira**	1.06	231	P	Pn	09 19 05.0	+1.7
KEK				S	Sn	09 19 20.5	+2.5
THL	**Klokotos Trika**	1.21	133	P	Pn	09 19 05.8	+0.5
THL				S	Sn	09 19 21.0	-0.6
TIR	**Tirane**	1.23	322	Pn	Pn	09 19 03.6	-2.0
TIR				Sn	Sg	09 19 21.4	-0.7
TIR				AML	AML	09 19 31.5	
	0.7nm,0.6s						
TIR	**Tirane**	1.23	322	*e*Pg	Pn	09 19 03.4	-2.2
TIR				*e*Sg	Sn	09 19 24.6	+2.5
TYRN	**Tyrnavos**	1.25	122	P	Pn	09 19 07.2	+1.3
AMPL	**Ampelaki**	1.49	170	P	Pg	09 19 11.0	-0.1
TSLK	**Tsoukalades, L**	1.57	186	P	Pg	09 19 12.9	+0.2
LKD2	**Lefkada island**	1.60	186	Pn	Pg	09 19 13.8	+0.4
LKD2				Sn	Sg	09 19 37.8	+3.6
LKD2				AML	AML	09 19 46.5	
	0.7nm,0.7s						
MAKR	**Makrakomi, Fth**	1.68	144	P	Pg	09 19 13.2	-1.7
HORT	**Hortiatis**	1.72	82	P	Pb	09 19 13.1	-1.1
KNT	**Kendrikon**	1.73	63	P	Pg	09 19 14.8	-0.9
AGG	**Agios Georgios**	1.77	140	P	Pg	09 19 15.8	-0.7
PUK	**Puka**	1.81	336	Pn	Pn	09 19 14.7	+0.9
PUK				Sn	Sb	09 19 40.3	+1.8
PUK				AML	AML	09 19 43.6	
	1.5nm,0.7s						
SCTE	**Santa Cesarea**	1.86	261	Sn	Sg	09 19 41.6	-0.9
ULC	**Ulcinj**	2.00	323	Pn	Pn	09 19 16.4	+0.1
BCI	**Bajram Curri**	2.07	343	Pn	Pb	09 19 19.9	-0.3
BCI				Sn	Sg	09 19 48.6	-0.5
BCI				AML	AML	09 20 00.2	
	0.8nm,0.8s						
DRME	**Dracevica, Mon**	2.20	325	Pg	Pn	09 19 20.0	+1.0
PDG	**Podgorica**	2.38	330	*e*Pn	Pn	09 19 21.7	+0.3
PDG				*e*Sn	Sn	09 19 54.0	+3.5
BOSS	**Bosilegrad**	2.43	29	*e*Pn	Pn	09 19 23.3	+1.1
BOSS				*e*Sn	Sn	09 19 54.2	+2.3
BARS	**Barje**	2.53	16	*e*Pn	Pn	09 19 22.9	-0.7
BARS				*e*Sn	Sn	09 19 55.4	+1.0
CEME	**Cevo**	2.61	326	Pg	Pn	09 19 24.7	0.0
SELS	**Selova**	2.84	4	*e*Pn	Pn	09 19 28.9	+1.1
SELS				*e*Sn	Sn	09 20 03.2	+1.2
SJES	**Sjenica**	2.95	347	*e*Pn	Pn	09 19 28.7	-0.7
SJES				*e*Sn	Sn	09 20 07.5	+2.7
ZAPS	**Zavoj**	3.17	24	*e*Pn	Pn	09 19 33.2	+0.8
GOCS	**Kraljevo Serbi**	3.17	0	*e*Pn	Pn	09 19 32.6	+0.1
IVAS	**Ivanjica**	3.23	351	*e*Pn	Pn	09 19 33.1	-0.2
BOVS	**Bovan**	3.31	11	*e*Pn	Pn	09 19 33.8	-0.4
BOVS				*e*Sn	Sn	09 20 13.6	+0.1
BBLS	**Lazi&#263i**	3.64	343	*e*Pn	Pn	09 19 40.1	+1.2
DIVS	**Divibare**	3.77	350	*e*Pn	Pn	09 19 40.6	0.0
TRUS	**Trudelj**	3.85	355	*e*Pn	Pn	09 19 42.1	+0.4
KUBS	**Kucevo**	4.07	8	*e*Pn	Pn	09 19 44.1	-0.6
TEKS	**Tekeris**	4.28	347	*e*Pn	Pn	09 19 47.7	+0.1

PRU 01 09:19:19.0, 51°.36N×16°.20E, h0^{km}, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHVC	**Chvalec**	0.78	187	*e*PG	Pg	09 19 33.7	-0.2
CHVC				*e*SG	Sg	09 19 44.4	+0.4
OSTC	**Ostas**	0.81	179	*e*PG	Pg	09 19 32.4	-2.0
OSTC				*e*SG	Sg	09 19 45.3	+0.5
UPC	**Upice**	0.86	188	*e*PG	Pg	09 19 35.7	+0.2
UPC				*e*SG	Sg	09 19 47.0	+0.4
	comp=Z,9.6nm,0.4s						
DPC	**Dobruska-Polom**	1.01	176	*e*PG	Pg	09 19 37.7	-0.7
DPC				*e*SG	Sg	09 19 52.0	+0.5
PVCC	**Panska Ves**	1.33	232	*e*SG	Sg	09 20 01.3	-0.3
	comp=Z,12nm,0.3s						
KRLC	**Kraliky**	1.34	164	*e*PG	Pg	09 19 42.1	-2.5
KRLC				*e*SG	Sg	09 20 00.4	-1.6
BRG	**Berggiesshubel**	1.50	252	Pg	Pn	09 19 46.2	-1.0
BRG				Sg	Sg	09 20 06.3	-0.9
BRG				Amp		09 20 07.9	
	comp=Z,2.3nm,0.3s						
STEB	**Steborice**	1.74	144	*e*PG	Pn	09 19 51.0	+0.5
MORC	**Moravsky Berou**	1.80	151	*e*PN	Pn	09 19 48.7	-2.6
MORC				*e*SG	Sn	09 20 14.1	-0.8
HSKC	**Hora Svate Kat**	1.91	248	*e*SG	Sb	09 20 19.2	+0.2
KHC	**Kasperske Hory**	2.79	218	*e*SG	Sb	09 20 46.2	+1.6

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*TIR **01** 09:38:57.0, 40°.41N×20°.71E, h10^{km}±1^{km}, Ml2.8/4*
*THE **01** 09:38:57.3, 40°N±4°×2°1E±°, h27^{km}±4^{km}, M2.5/4, MLh2.5/4*

ISC 01 09:38:57.5±1.1**, 40°.44N**±0°.03×**20°.78E**±0°.04**, h18^{km}**±3^{km}**, n9, σ0^{s}.55**/18**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	0.18	2	Pg	Pb	09 39 01.4	-0.4
KBN				Sg	Sg	09 39 04.9	-0.7
KBN				AML	AML	09 39 05.4	
	11nm,0.3s						
KBN				AML	AML	09 39 07.0	
	6.8nm,0.3s						
NEST	**Nestorio**	0.21	97	Pg	Pg	09 39 02.5	-0.1
NEST				Sg	Sg	09 39 06.8	+0.6
NEST				AML	AML	09 39 07.8	
	5.4nm,0.3s						
NEST	**Nestorio**	0.21	97	P	Pg	09 39 02.6	-0.1
NEST				S	Sg	09 39 06.8	+0.6
PENT	**Pentalofos**	0.37	132	P	Pg	09 39 04.9	-0.4
PENT				S	Sb	09 39 11.4	+0.4
KPRO	**Kipourio**	0.66	137	P	Pb	09 39 09.8	-0.6
KPRO				S	Sg	09 39 19.4	+0.1
SRN	**Sarande**	0.82	227	Pg	Pb	09 39 12.6	-0.6
SRN				Sg	Sb	09 39 23.9	+0.1
SRN				AML	AML	09 39 28.9	
	0.4nm,0.4s						
IGT	**Igoumenitsa**	0.97	201	Pg	Pb	09 39 15.6	-0.1
IGT				Sg	Sg	09 39 29.1	0.0
IGT	**Igoumenitsa**	0.97	201	P	Pb	09 39 15.9	+0.2
IGT				S	Sn	09 39 29.9	+0.4
PUK	**Puka**	1.73	338	Pg	Pg	09 39 30.7	-0.2
PUK				Sg	Sg	09 39 54.7	+1.3
PUK				AML	AML	09 40 05.1	
	0.4nm,0.5s						

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*IDC **01** 09:45:27.9±1.1, 6°.35N×126°.81E, h86^{km}±8^{km}, mb4.6/27, mbtmp4.9/27, MS4.1/47, Error ellipse: s-maj=14.5km s-min=8.8km az=67.0*
*MAN **01** 09:45:27.8, 6°.21N×126°.64E, h70^{km}, mb6.0, ML5.0, MS5.5*
MAN INTENSITY V - MATI CITY; GOVERNOR GENEROSO DAVAO ORIENTAL; INTENSITY IV - DAVAO CITY; MANAY DAVAO ORIENTAL; INTENSITY III - GENERAL SANTOS CITY; SANTA CRUZ DAVAO DEL SUR; INTENSITY II - BISLIG CITY SURIGAO DEL SUR; GLAN SARANGANI; TUPI SOUTH COTABATO; INTENSITY I - GINGOOG CITY MISAMIS ORIENTAL; DAMULOG KADINGILAN AND KALILANGAN BUKIDNON.
*NEIC **01** 09:45:28.6±2.1, 6°.19N±0°.07×126°.60E±0°.08, h82^{km}±1^{km}, mb5.3/274, Mwb5.4/27, Mww5.4/43, Error ellipse: s-maj=14.5km s-min=9.9km az=60.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.76; M$_{\theta\theta}$0.74; M$_{\phi\phi}$-1.50; M$_{r\theta}$-0.97; M$_{\theta\phi}$0.06; M$_{\phi r}$0.68; Fault plane solution: M$_0$1.76000×10^{17} NP1:ϕ_s322.77000°, δ72.91000°, λ50.33000°. NP2:ϕ_s213.26000°, δ42.63000°, λ154.29000°. Principal axes: T 1.7798, Plg47.0000°, Azm192.0000°; N -0.0441, Plg38.0000°, Azm336.0000°; P -1.7357, Plg18.0000°, Azm81.0000°;*
*NEIC **01** 09:45:29.5, 6°.20N×126°.59E, h70^{km}*
*NEIC **01** 09:45:29.5, 6°.10N×126°.79E, h70^{km}, Moment Tensor Solution. Duration: 2^{s}.5 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.61; M$_{\theta\theta}$0.76; M$_{\phi\phi}$-1.37; M$_{r\theta}$-0.69; M$_{\theta\phi}$-0.35; M$_{\phi r}$0.73; Fault plane solution: M$_0$1.60000×10^{17} NP1: ϕ_s226.47000°, δ46.08000°, λ157.65000°. NP2: ϕ_s332.38000°, δ74.11000°, λ46.16000°. Principal axes: T 1.5798, Plg43.0000°, Azm200.0000°; N 0.0397, Plg42.0000°, Azm347.0000°; P -1.6195, Plg17.0000°, Azm93.0000°;*
*NEIC **01** 09:45:29.5, 6°.20N×126°.59E, h92^{km}*
*DJA **01** 09:45:30.9±0.3, 6°N±2°×12°7E±°, h99^{km}±2^{km}, M5.4/101, mB5.9/77, mb5.6/101, MLv6.0/11, Mw(mB)5.5/77, MwMwp5.1/47, Mwp5.4/47*
*GCMT **01** 09:45:30.6±0.1, 6°.14N±0°.01×126°.55E±0°.01, h82^{km}, MW5.5/144, Moment Tensor Solution. s129,c218; s144,c259; Duration: 1^{s}.3 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.04±.02; M$_{\theta\theta}$1.52±.02; M$_{\phi\phi}$-1.56±.02; M$_{r\theta}$-0.72±.02; M$_{\theta\phi}$-0.36±.02; M$_{\phi r}$0.93±.02; Best double couple: M$_0$1.97100×10^{17} NP1:ϕ_s232.00000°, δ53.00000°, λ179.00000°. NP2:ϕ_s322.00000°, δ89.00000°, λ37.00000°. Principal axes: T 1.9560, Plg25.0000°, Azm193.0000°; N 0.0320, Plg53.0000°, Azm323.0000°; P -1.9860, Plg24.0000°, Azm91.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*MOS **01** 09:45:31.8±1.3, 6°.28N×126°.59E, h88^{km}, mb5.1/70, MS4.4/8 Error ellipse: s-maj=9.1km s-min=4.0km az=117.0*

ISC 01 09:45:28.9±0.3**, 6°.18N**±0°.03×**126°.60E**±0°.04**, h93^{km}**±2^{km}**, h94^{km}:pP-P, n1114, σ1^{s}.44**/1083**, mb5.2**/284**, 39C-28D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	1.35	311	P	Pn	09 45 53.4	+0.5
	26μm,0.4s,baz=107,slow=1.9,SNR=866						
DAV				S	Sn	09 46 11.2	+0.2
	134μm,0.6s,baz=90,slow=20,SNR=61						
DAV				LR	LR	09 46 17.1	
	comp=Z,6μm,19.7s,baz=153,slow=35						
DAV	**Davao City (W)**	1.35	311	P	Pn	09 45 53.4	+0.5
DAV				S	Sn	09 46 12.6	+1.5
DAV	**Davao City (W)**	1.35	311	P	Pn	09 45 53.5	+0.5
DAV	**Davao City (W)**	1.35	311	P	Pn	09 45 47.0	-5.9
SGSI	**Sangihe**	2.70	203	P	Pn	09 46 11.2	+0.7
TNTI	**Ternate**	5.43	172		Pn	09 46 47.8	+0.4
TNTI	**Ternate**	5.43	172	P	Pn	09 46 48.0	+0.6
TNTI	**Ternate**	5.43	172	S	Sn	09 47 50.2	+1.6
TNTI	**Ternate**	5.43	172	P	Pn	09 46 48.0	+0.6
KMSI	**Cibinong**	6.15	205	P	Pn	09 46 59.2	+1.9
MRSI	**Marisa**	7.33	220	P	Pn	09 47 13.8	+0.4
TOLI2	**Tolitoli**	7.69	229		Pn	09 47 16.4	-1.9
TOLI2	**Tolitoli**	7.69	229	P	Pn	09 47 16.6	-1.6
TOLI2	**Tolitoli**	7.69	229	S	Sn	09 48 41.1	-2.7
I39PW	**PALAU INFRASON**	8.00	80	P	Pn	09 47 21.8	-0.8
	baz=261,slow=37,SNR=0.7						
I39PW				I	I	10 39 50.0	
	baz=271,slow=310,SNR=0.6						
MYLDM	**Lahad Datu**	8.12	263		Pn	09 47 26.1	+1.9
MYLDM	**Lahad Datu**	8.12	263	P	Pn	09 47 25.5	+1.3
LUWI	**Luwuk**	8.13	208		Pn	09 47 25.4	+1.1
LUWI	**Luwuk**	8.13	208	P	Pn	09 47 25.4	+1.1
LUWI	**Luwuk**	8.13	208	P	Pn	09 47 25.6	+1.3
SANI	**Sanana**	8.20	184	P	Pn	09 47 23.5	-1.7
SWI	**Sorong**	8.40	146	P	Pn	09 47 29.2	+1.2
	234nm,1.0s						
APSI	**Ampana**	8.61	215	P	Pn	09 47 33.9	+3.1
MPSI	**Mapaga**	8.86	229	P	Pn	09 47 33.0	-1.2
	5μm4μm344nm,0.9s						
NLAI	**Namlea**	9.37	177	P	Pn	09 47 39.8	-1.4
TGY	**Tagaytay City**	9.64	325	P	Pn	09 47 47.8	+2.8
	153nm,0.4s,baz=170,slow=11,SNR=18						
MSAI	**Masohi**	9.74	166	P	Pn	09 47 49.6	+3.3
	7μm384nm,1.1s						
PCI	**Palu**	9.76	224	P	Pn	09 47 48.1	+1.7
	6μm12μm902nm,1.2s						
AAI	**Ambon**	9.93	171	P	Pn	09 47 48.4	-0.4
	5μm383nm,0.8s						
KKM	**Kota Kinabalu**	10.33	270		Pn	09 47 56.6	+2.3
KKM	**Kota Kinabalu**	10.33	270	P	Pn	09 47 55.0	+0.6
FAKI	**Fak Fak**	10.65	148		Pn	09 47 59.6	+0.9
FAKI	**Fak Fak**	10.65	148	P	Pn	09 48 00.4	+1.7
FAKI	**Fak Fak**	10.65	148	S	Sn	09 49 58.3	+2.2
FAKI	**Fak Fak**	10.65	148	P	Pn	09 47 58.1	-0.6
	206nm,1.3s						
RKPI	**Ransiki, Papua**	10.75	135	P	Pn	09 48 01.8	+1.8
	3μm9μm419nm,1.3s						
KDI	**Kendari**	10.83	202	P	Pn	09 48 00.0	-1.0
	5μm219nm,1.1s						
BNDI	**Bandanaira**	11.13	163	P	Pn	09 48 06.5	+1.3
	9μm418nm,0.9s						
TTSI	**Tana Toraja**	11.40	217	P	Pn	09 48 10.3	+1.6
SMKI	**Samarinda**	11.46	235	P	Pn	09 48 10.8	+1.2
	5μm639nm,1.8s						
BAKI	**Biak**	11.99	127	P	Pn	09 48 18.9	+2.2
	5μm7μm299nm,1.4s						
KMPI	**Kaimana, Papua**	12.08	144	P	Pn	09 48 19.7	+1.8
	307nm,0.9s						
SPSI	**Sidrap Palu**	12.17	214	P	Pn	09 48 19.9	+0.8
	6μm5μm252nm,0.8s						
BKB	**Balikpapan**	12.19	233		Pn	09 48 15.4	-4.0
BKB	**Balikpapan**	12.19	233	P	Pn	09 48 18.8	-0.6
BKB	**Balikpapan**	12.19	233	P	Pn	09 48 19.5	+0.1
BBSI	**Bau Bau**	12.27	199	P	Pn	09 48 19.0	-1.5
	4μm4μm246nm,0.8s						
BNSI	**Bone**	12.35	212	P	Pn	09 48 22.8	+1.2
	6μm7μm557nm,1.4s						
SRPI	**Serui, Papua**	12.51	129	P	Pn	09 48 25.6	+1.9
	139nm,0.7s						
KAPI	**Kappang**	13.06	212	P	Pn	09 48 30.8	-0.1
	561nm,0.9s,baz=34,slow=8.4,SNR=112						
KAPI				S	Sn	09 50 56.4	+1.9
	8.2nm,0.5s,baz=189,slow=19,SNR=0.9						
KAPI				LR	LR	09 54 19.8	
	comp=Z,2μm,18.4s,baz=43,slow=40						
KAPI	**Kappang**	13.06	212	P	Pn	09 48 30.7	-0.2
KAPI	**Kappang**	13.06	212	P	Pn	09 48 31.3	+0.4
KAPI	**Kappang**	13.06	212	*c i*P	Pn	09 48 30.4	-0.5
KAPI				pmax	pmax		
	comp=Z,749nm,1.0s						
BSSI	**Bau Bau, Buton**	13.68	207	P	Pn	09 48 40.2	+1.1
	comp=Z,3μmcomp=Z,3μmcomp=Z,202nm,1.0s						
SMPI	**Sarmi**	14.56	124	P	P	09 48 52.9	-1.5
	comp=Z,4μmcomp=Z,4μmcomp=Z,244nm,1.1s						
SBUM	**Sibu**	14.81	256		Pn	09 48 54.9	+1.2
SBUM	**Sibu**	14.81	256	P	Pn	09 48 55.2	+1.5
MMRI	**Maumere**	15.35	197		Pn	09 48 59.4	-1.1
MMRI	**Maumere**	15.35	197	P	Pn	09 49 01.8	+1.3
MMRI	**Maumere**	15.35	197	P	Pn	09 49 00.4	-0.1
	comp=Z,4μmcomp=Z,7μmcomp=Z,473nm,1.2s						
EDFI	**Ende, Flores**	15.62	198	P	Pn	09 49 03.1	-0.9
	comp=Z,4μmcomp=Z,271nm,0.9s						
SOEI	**Soe**	16.00	188		Pn	09 49 08.9	+0.1
SOEI	**Soe**	16.00	188	P	Pn	09 49 09.5	+0.7
SOEI	**Soe**	16.00	188	P	P	09 49 10.1	-0.5
	comp=Z,9μmcomp=Z,674nm,1.4s						
GENI	**Genyem**	16.11	122	P	P	09 49 12.4	+0.8
GENI	**Genyem**	16.11	122	P	P	09 49 13.6	+2.0
	comp=Z,4μmcomp=Z,5μmcomp=Z,305nm,1.9s						
STKI	**Sintang**	16.27	249	P	P	09 49 13.4	-0.1
JAY	**Jayapura**	16.52	121	S	Sn	09 52 14.6	-3.9
	comp=Z,14nm,0.9s,baz=98,slow=17,SNR=1.0						
JAY				LR	LR	09 56 36.5	
	comp=Z,469nm,18.7s,baz=312,slow=41						
JAY	**Jayapura**	16.52	121	P	P	09 49 18.6	+2.4
BATI	**Baumata**	16.54	190	P	P	09 49 16.7	+0.3
KSM	**Kuching**	16.91	255	P	Pn	09 49 19.6	-0.4
KSM	**Kuching**	16.91	255	P	P	09 49 21.7	+1.2
WSI	**Waingapu**	16.95	202	P	P	09 49 21.1	+0.2
WBSI	**Waikabubak, Su**	17.28	205	P	P	09 49 24.6	0.0
	comp=Z,4μmcomp=Z,5μmcomp=Z,344nm,1.2s						
PLAI	**Plampang**	17.31	211	P	P	09 49 25.6	+0.7
PLAI	**Plampang**	17.31	211	P	Pn	09 49 24.8	-0.1
	comp=Z,4μmcomp=Z,5μmcomp=Z,557nm,1.1s						
BASI	**Baing, Sumba**	17.36	200	P	Pn	09 49 26.6	+1.1
	comp=Z,6μmcomp=Z,567nm,1.0s						
TWG	**Pinlang**	17.38	343		Pn	09 49 26.7	+1.0
TWSI	**Taliwang, Sumb**	17.71	213	P	P	09 49 28.7	-0.6
	comp=Z,4μmcomp=Z,4μmcomp=Z,405nm,0.9s						
YULB	**Yu-li**	17.86	344	P	P	09 49 31.0	+0.1
YULB	**Yu-li**	17.86	344	P	Pn	09 49 33.1	+1.6
TPUB	**Ta-pu**	17.97	342	P	Pn	09 49 33.5	+0.7
TPUB	**Ta-pu**	17.97	342	P	Pn	09 49 34.4	+1.6
SRBI	**Singaraja**	18.16	219	P	P	09 49 34.5	+0.2
	comp=Z,3μmcomp=Z,230nm,1.0s						
KMMI	**Kalianget**	18.21	224	P	Pn	09 49 36.6	+0.8
	comp=Z,323nm,1.3s						
SSLB	**Suanglung**	18.33	343	P	Pn	09 49 39.0	+1.8
SSLB	**Suanglung**	18.33	343	P	Pn	09 49 38.6	+1.5
BWJI	**Bawean**	18.35	230	P	Pn	09 49 39.1	+1.7
ABJI	**Asem Bagus**	18.57	222	P	Pn	09 49 40.7	+0.6
	comp=Z,190nm,1.1s						
DNP	**Denpasar**	18.62	218	P	Pn	09 49 41.4	+0.7

DLV	Lat	18.78	289	P	Pn	09 49 42.1	-0.6
DLV	Lat	18.78	289	P	Pn	09 49 43.3	+0.6
DRS	Darwin Rock St	18.98	167	P	Pn	09 49 44.5	-0.4
YHNB	Yeheng	19.06	345	P	Pn	09 49 47.3	+1.4
YHNB	Yeheng	19.06	345	P	Pn	09 49 47.0	+1.2
JAGI	Jajag, Banyuwa	19.13	221	P	P	09 49 44.2	-0.7
JAGI	Jajag, Banyuwa	19.13	221	P	Pn	09 49 46.7	0.0
JAGI	Jajag, Banyuwa	19.13	221	P	P	09 49 45.4	+0.5
	comp=Z,4µmcomp=Z,3µmcomp=Z,274nm,1.0s						
GRJI	Gresik	19.18	228	P	Pn	09 49 46.6	-0.7
MTN	Manton Dam	19.43	167	P	P	09 49 48.8	+0.6
MTN	Manton Dam	19.43	167	P	P	09 49 48.1	0.0
	comp=Z,0.0nmcomp=Z,281nm,0.8s						
MTN	Manton Dam	19.43	167	P	Pn	09 49 49.4	-0.8
GUMO	Guam	19.43	66	P	Pn	09 49 49.4	-0.8
	comp=Z,169nm,1.0s,baz=214,slow=5.8,SNR=6.5						
GUMO				S	S	09 53 17.7	-5.4
	comp=Z,56nm,0.9s,baz=165,slow=23,SNR=2.1						
GUMO				LR	LR	09 55 38.7	
	comp=Z,2µm,21.8s,baz=240,slow=32						
GMJI	Gumukmas	19.45	223	P	Pn	09 49 49.8	-0.7
	comp=Z,142nm,0.9s						
TBJI	Tambak Boyo	19.58	229	P	P	09 49 50.6	+0.8
	comp=Z,4µmcomp=Z,12µmcomp=Z,791nm,1.6s						
KDU	Kakadu	19.63	163	P	P	09 49 50.8	+0.5
	comp=Z,0.0nmcomp=Z,257nm,0.8s						
KDU	Kakadu	19.63	163	P	Pn	09 49 51.5	-1.0
KNMB	Chin-men Tao	19.82	337	P	Pn	09 49 53.5	-1.2
HKPS	Hong Kong Po S	20.02	324	P	Pn	09 49 56.3	-0.8
QZH	Quanzhou	20.17	338	eP	Pn	09 49 57.7	-1.1
QZH				S	S	09 53 37.4	-0.2
QZH				sS	sS	09 54 03.7	-1.9
QZH				pmax	pmax		
	comp=Z,190nm,1.1s						
QZH				LR	LR		
	comp=Z,790nm,16.4s						
NGJI	Ngawi	20.23	229	P	Pn	09 49 59.2	-0.4
	comp=Z,6µmcomp=Z,355nm,1.6s						
JOW	Kunigami	20.60	4	P	P	09 50 00.1	-0.6
JOW	Kunigami	20.60	4	P	P	09 49 58.9	-1.8
	comp=Z,12nm,0.6s,baz=139,slow=10,SNR=8.9						
JOW				S	S	09 53 44.8	-1.2
	comp=Z,7.3nm,0.7s,baz=147,slow=17,SNR=1.9						
JOW				LR	LR	09 57 32.7	
	comp=Z,542nm,21.4s,baz=202,slow=36						
JOW	Kunigami	20.60	4	P	Pn	09 50 02.5	-1.3
QIZ	Qiongzhong	20.72	310	P	P	09 50 03.6	+1.4
QIZ				pP	pP	09 50 23.0	+3.2
QIZ				sP	sP	09 50 32.0	+0.7
QIZ				S	S	09 53 48.3	-0.2
QIZ				pmax	pmax		
	comp=Z,29nm,1.6s						
QIZ				LR	LR		
	comp=Z,690nm,18.2s						
QIZ				LR	LR		
	comp=Z,1µm,17.5s						
QIZ	Qiongzhong	20.72	310	P	P	09 50 03.5	+1.4
SMRI	Semarang	20.80	231	P	P	09 50 03.9	+0.8
SMRI	Semarang	20.80	231	P	P	09 50 04.4	+1.4
SMRI	Semarang	20.80	231	P	P	09 50 03.7	+0.7
	comp=Z,4µmcomp=Z,244nm,0.9s						
TPI	Tanjungpandan	20.90	245	P	P	09 50 04.5	+0.4
	comp=Z,4µmcomp=Z,3µmcomp=Z,287nm,1.0s						
WOJI	Wonogiri, Jawa	20.94	229	P	P	09 50 04.3	-0.2
	comp=Z,214nm,1.3s						
PCJI	Pacitan	20.99	227	P	P	09 50 04.7	-0.3
	comp=Z,133nm,0.9s						
GZH	Guangzhou	21.11	324	P	P	09 50 10.2	+4.0
GZH				pP	pP	09 50 28.1	+3.7
GZH				S	S	09 54 02.2	+6.1
GZH				pmax	pmax		
	comp=Z,51nm,1.0s						
GZH				LR	LR		
	comp=Z,1µm,11.0s						
GZH				LR	LR		
	comp=Z,1µm,12.9s						
GZH				LR	LR		
	comp=Z,1µm,16.8s						
UGM	Wanagama	21.29	229	P	P	09 50 08.1	-0.1
UGM	Wanagama	21.29	229	P	P	09 50 09.0	+0.8
UGM	Wanagama	21.29	229	P	P	09 50 06.8	-1.4
	comp=Z,279nm,1.3s						
YOGI	Yogyakarta	21.40	230	P	P	09 50 10.1	+0.7
	comp=Z,281nm,1.0s						
KNRA	Kununurra	21.82	174	P	P	09 50 14.8	+1.0
KNRA	Kununurra	21.82	174	P	P	09 50 13.4	-0.4
	comp=Z,584nm,1.7s						
JCJI	Jatiwangi	22.21	236	P	P	09 50 21.1	+3.1
	comp=Z,10µmcomp=Z,460nm,1.3s						
UBPT	Khong Chiam	22.62	295	P	P	09 50 23.4	+1.0
TPRI	Tanjung Pinang	22.64	258	P	P	09 50 21.3	-1.2
CMJI	Cimerak	22.81	233	P	P	09 50 25.9	+1.7
	comp=Z,3µmcomp=Z,172nm,1.0s						
LEM	Lembang	22.93	236	LR	LR	10 00 47.3	
	comp=Z,833nm,19.1s,baz=50,slow=40						
LEM	Lembang	22.93	236	P	P	09 50 25.9	+0.3
	comp=Z,7µmcomp=Z,340nm,1.6s						
MYKOM	Kota Tinggi	23.11	260	P	P	09 50 26.4	-0.8
MYKOM	Kota Tinggi	23.11	260	P	P	09 50 26.6	-0.6
BBJI	Bungbulang	23.26	235	P	P	09 50 27.6	-1.1
CNJI	Cibinong	23.60	236	P	P	09 50 30.2	-1.5
	comp=Z,144nm,0.9s						
PMBI	Palembang	23.60	248	P	P	09 50 32.1	+0.4
PMBI	Palembang	23.60	248	P	P	09 50 33.8	+2.1
PMBI	Palembang	23.60	248	P	P	09 50 32.4	+0.7
	comp=Z,598nm,1.2s						
SKJI	Sukabumi	23.91	237	P	P	09 50 35.2	+0.7
	comp=Z,3µmcomp=Z,8µmcomp=Z,303nm,1.4s						
FITZ	Fitzroy Crossi	24.14	182	P	P	09 50 36.6	+0.1
FITZ	Fitzroy Crossi	24.14	182	P	P	09 50 36.3	-0.1
	comp=Z,47nm,1.1s						
FITZ	Fitzroy Crossi	24.14	182	P	P	09 50 37.6	+1.1
BLSI	Bandar Lampung	24.21	242	P	P	09 50 37.0	-0.2
	comp=Z,7µmcomp=Z,404nm,1.3s						
CGJI	Cibinong	24.43	239	P	P	09 50 38.0	-1.2
	comp=Z,4µmcomp=Z,273nm,1.5s						
GULI	GuiLin	24.55	322	P	P	09 50 42.3	+2.2
GULI				pmax	pmax		
	comp=Z,80nm,1.4s						
GULI				pmax	pmax		
	comp=Z,660nm,8.1s						
GULI				LR	LR		
	comp=Z,2µm,18.6s						
GULI				LR	LR		
	comp=Z,2µm,17.7s						
GULI				LR	LR		
	comp=Z,840nm,18.0s						
MDSI	Maura Dua	24.77	245	P	P	09 50 42.9	+0.6
	comp=Z,3µmcomp=Z,2µmcomp=Z,186nm,1.2s						
LWLI	Liwa	25.11	244	P	P	09 50 46.3	+0.8
SSE	Sheshan	25.30	349	P	P	09 50 48.1	+1.2
SSE				S	S	09 55 08.5	+2.3
SSE				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SSE				pmax	pmax		
	comp=Z,120nm,3.5s						
SSE				LR	LR		
	comp=Z,130nm,19.6s						
SSE				LR	LR		
	comp=Z,310nm,19.2s						
CNSH	ChangSha	25.43	331	P	P	09 51 02.8	+15
CNSH				S	S	09 55 33.6	+25
CNSH				pmax	pmax		
	comp=Z,31nm,1.1s						
CNSH				LR	LR		
	comp=N,790nm,26.1s						
CNSH				LR	LR		
	comp=E,1µm,33.0s						
CNSH				LR	LR		
	comp=Z,650nm,23.4s						
JCJ	Chichijima	25.55	34	P	P	09 50 47.1	-2.0
JCJ	Chichijima	25.55	34	LR	LR	09 59 42.5	
	comp=Z,284nm,21.6s,baz=248,slow=34						
JCJ	Chichijima	25.55	34	P	P	09 50 51.9	+2.7
PMG	Port Moresby	25.68	127	P	P	09 50 51.4	+0.9
PMG	Port Moresby	25.68	127	LR	LR	10 03 21.0	
	comp=Z,401nm,19.0s,baz=286,slow=42						
PMG	Port Moresby	25.68	127	⇑eP	P	09 50 51.5	+0.9
PMG				pmax	pmax		
	comp=Z,52nm,0.9s						
KAVG	Kavieng	25.69	109	P	P	09 50 51.9	+1.3
MNAI	Manna	25.83	247	P	P	09 50 52.2	+0.3
KULM	Kulim	25.84	269	P	P	09 50 51.8	-0.2
KULM	Kulim	25.84	269	P	P	09 50 51.5	-0.5
KSI	Kapahiang	25.89	248	P	P	09 50 54.2	+1.7
COEN	Coen	25.90	141	P	P	09 50 53.5	+1.0
COEN				IAmb	IAmb	09 51 24.9	
	comp=Z,67nm,0.9s						
COEN	Coen	25.90	141	P	P	09 50 53.5	+1.0
	comp=Z,87nm,1.4s						
COEN	Coen	25.90	141	P	P	09 50 54.0	+1.5
BKNI	Bangkinang	26.16	258	P	P	09 50 55.9	+0.9
BKNI	Bangkinang	26.16	258	P	P	09 50 54.9	-0.1
	comp=Z,4µmcomp=Z,125nm,0.5s						
SLVN	Son La	26.64	307	P	P	09 51 00.6	+1.4
NJ2	Nanjing	26.74	345	eP	P	09 51 02.1	+2.2
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
WHN	Wuhan	26.83	336	⇑P	P	09 51 02.8	+2.1
WHN				pP	pP	09 51 17.5	-3.6
WHN				S	S	09 55 33.3	+2.9
WHN				sS	sS	09 55 59.2	-5.7
WHN				pmax	pmax		
	comp=Z,200nm,1.0s						
WHN				pmax	pmax		
	comp=Z,1µm,3.7s						
WHN				LR	LR		
	comp=Z,1µm,12.4s						
WHN				LR	LR		
	comp=Z,1µm,10.7s						
WHN				LR	LR		
	comp=Z,4µm,24.7s						
PPI	Padang Panjang	26.98	257	P	P	09 51 02.2	0.0
	comp=Z,2µmcomp=Z,138nm,1.5s						
WRAB	Tennant Creek	27.05	164	P	P	09 51 02.8	+0.1
WRAB				IAmb	IAmb	09 51 44.0	
	comp=Z,94nm,0.7s						
WRAB	Tennant Creek	27.05	164	ceP	P	09 51 02.3	-0.5
WRAB				pmax	pmax		
	comp=Z,35nm,0.9s						
WRA	Warramunga Arr	27.05	164	P	P	09 51 02.8	-0.1
	comp=Z,24nm,0.7s,baz=343,slow=10,SNR=57						
WRA				PcP	PcP	09 54 21.9	-0.2
	comp=Z,7.5nm,0.8s,baz=341,slow=3.8,SNR=3.2						
WRA				S	S	09 55 28.9	-5.2
	comp=Z,2.1nm,0.6s,baz=348,slow=15,SNR=1.1						
WRA				LR	LR	10 02 46.9	
	comp=Z,509nm,18.6s,baz=20,slow=38						
	comp=Z,24nm,0.7s						
JNU	Nakatsue	27.10	8	P	P	09 51 00.8	-2.3
JNU				IAmb	IAmb	09 51 24.7	
	comp=Z,63nm,0.9s						
JNU	Nakatsue	27.10	8	LR	LR	10 01 29.4	
	comp=Z,367nm,21.6s,baz=178,slow=36						
JNU	Nakatsue	27.10	8	P	P	09 51 04.9	+1.7
MNSI	Mandailing Nat	27.49	260	P	P	09 51 06.5	-0.3
GYA	Guiyang	27.71	319	⇑P	P	09 51 12.1	+3.2
GYA				S	S	09 55 46.2	+1.5
GYA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GYA				pmax	pmax		
	comp=Z,150nm,4.9s						
GYA				LR	LR		
	comp=Z,770nm,17.0s						
GYA				LR	LR		
	comp=Z,650nm,12.7s						
GYA				LR	LR		
	comp=Z,840nm,15.0s						
PSI	Prapat	27.79	264	LR	LR	10 05 46.9	
	comp=Z,514nm,18.1s,baz=86,slow=44						
PSI	Prapat	27.79	264	P	P	09 51 09.2	-0.5
PSI	Prapat	27.79	264	P	P	09 51 09.4	-0.3
PSI				pmax	pmax		
	comp=Z,85nm,1.1s						
RPSI	Rantau Prapat	27.81	264	P	P	09 51 09.4	-0.3
RPSI				IAmb	IAmb	09 51 38.5	
	comp=Z,85nm,1.1s						
MBWA	Marble Bar	28.00	194	P	P	09 51 11.5	+0.2
MBWA				IAmb	IAmb	09 51 16.6	
	comp=Z,126nm,1.1s						
MBWA	Marble Bar	28.00	194	P	P	09 51 10.4	-0.8
	comp=Z,108nm,1.1s						
MBWA	Marble Bar	28.00	194	P	P	09 51 10.8	-0.4
MBWA	Marble Bar	28.00	194	P	P	09 51 11.4	+0.2
JMN	Monobe	28.23	13	P	P	09 51 12.7	-0.5
JMN				IAmb	IAmb	09 51 35.0	
	comp=Z,77nm,1.0s						
JMN	Monobe	28.23	13	P	P	09 51 15.1	+1.9
PSA00	Pilbara Seismi	28.37	193	P	P	09 51 14.7	+0.2
PSA00	Pilbara Seismi	28.37	193	P	P	09 51 13.8	-0.7
PSA00				IAmb	IAmb	09 51 15.7	
	comp=Z,72nm,1.1s						
PSA00	Pilbara Seismi	28.37	193	P	P	09 51 14.4	-0.1
	comp=Z,171nm,1.3s						
PSA00	Pilbara Seismi	28.37	193	P	P	09 51 14.7	+0.2
ENH	Enshi	28.87	328	P	P	09 51 20.3	+1.3
GSI	Gunungsitoli	29.36	262	P	P	09 51 21.4	-2.0
GSI	Gunungsitoli	29.36	262	P	P	09 51 21.5	-2.0
	comp=Z,138nm,0.8s						
QIS	Mount Isa	29.48	155	P	P	09 51 26.1	+1.6
LHMI	Lhok Sumawe	29.52	270	P	P	09 51 24.5	-0.4
LHMI	Lhok Sumawe	29.52	270	P	P	09 51 26.7	+1.8
	comp=Z,2µmcomp=Z,172nm,0.8s						
CM31	Chiang Mai Arr	29.59	297	P	P	09 51 25.8	+0.3
CM31	Chiang Mai Arr	29.59	297	P	P	09 51 25.8	+0.3
	SNR=7.3						
CMAR	Chiang Mai Arr	29.59	297	P	P	09 51 25.0	-0.5
CMAR	Chiang Mai Arr	29.59	297	P	P	09 51 25.1	-0.4
	comp=Z,2.7nm,0.8s,baz=112,slow=7.3,SNR=11						
CMAR				PcP	PcP	09 54 30.6	+2.2
	comp=Z,5.4nm,0.9s,baz=45,slow=0.5,SNR=6.3						
CMAR				ScP	ScP	09 58 03.5	+1.3
	comp=Z,7.8nm,1.0s,baz=138,slow=1.6,SNR=14						
CMAR				LR	LR	10 05 27.9	
	comp=Z,596nm,18.4s,baz=115,slow=40						
	comp=Z,2.7nm,0.8s						
CMAR	Chiang Mai Arr	29.59	297	i P	P	09 51 28.7	+3.2
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KMI	Kunming	29.61	312	P	P	09 51 27.8	+2.0
KMI				pP	sP	09 51 52.4	-5.3
KMI				S	S	09 56 11.3	-3.5
KMI				pmax	pmax		
	comp=Z,30nm,1.2s						
KMI				LR	LR		
	comp=Z,470nm,14.5s						
KMI				LR	LR		
	comp=Z,430nm,13.0s						
KMI				LR	LR		
	comp=Z,390nm,16.0s						
CHTO	Chiang Mai	29.72	298	P	P	09 51 26.7	+0.1
CHTO	Chiang Mai	29.72	298	P	P	09 51 26.8	+0.2
CHTO	Chiang Mai	29.72	298	P	P	09 51 27.9	+1.3
CHTO	Chiang Mai	29.72	298	P	P	09 51 26.7	+0.1
CHTO				pmax	pmax		
	comp=Z,43nm,1.3s						
MTSU	Mount Surprise	29.82	144	P	P	09 51 29.4	+1.9
MLSI	Meulaboh, Aceh	30.13	268	P	P	09 51 28.4	-1.9
	comp=Z,97nm,1.1s						
SNSI	Sinabang, Aceh	30.42	264	P	P	09 51 32.8	0.0
	comp=Z,73nm,0.7s						
AS31	Alice Springs	30.51	167	P	P	09 51 34.2	+0.7
AS31	Alice Springs	30.51	167	P	P	09 51 34.0	+0.5
	comp=Z,17nm,0.8s						
AS12	Alice Springs	30.51	167	P	P	09 51 34.1	+0.6
	comp=Z,55nm,0.9s						
ASAR	Alice Springs	30.51	167	P	P	09 51 34.0	+0.6
ASAR	Alice Springs	30.51	167	P	P	09 51 33.5	0.0
	comp=Z,9.9nm,0.3s,baz=347,slow=7.1,SNR=166						
ASAR				S	S	09 56 28.9	+0.5
	comp=Z,1.9nm,0.8s,baz=331,slow=2.3,SNR=3.1						
ASAR				ScP	ScP	09 58 06.8	+1.8
	comp=Z,5.4nm,0.9s,baz=301,slow=2.3,SNR=5.0						
	comp=Z,9.9nm,0.3s						
ASAR	Alice Springs	30.51	167	P	P	09 51 34.1	+0.6
AS01	Alice Springs	30.52	167	P	P	09 51 34.5	+0.9
JGF	Kuroka	30.91	17	P	P	09 51 39.5	+2.6
WRKA	Warakurna	31.07	177	P	P	09 51 39.7	+1.2
GIRL	Giralia	31.10	203	P	P	09 51 39.0	+0.3
GIRL	Giralia	31.10	203	P	P	09 51 40.1	+1.4
LYN	LuoYang	31.11	337	P	P	09 51 40.3	+1.7
LYN				pP	pP	09 51 55.7	-3.8
LYN				sP	sP	09 52 08.8	-1.3
LYN				PcP	PcP	09 54 34.3	+2.3
LYN				S	S	09 56 38.8	+1.3
LYN				PcS	PcS	09 58 19.2	+2.9
LYN				ScS	ScS	10 02 06.3	+2.2
LYN				pmax	pmax		
	comp=Z,34nm,0.7s						
LYN				pmax	pmax		
	comp=Z,180nm,3.6s						
LYN				LR	LR		
	comp=Z,1µm,22.0s						
LYN				LR	LR		
	comp=Z,2µm,18.6s						
LYN				LR	LR		
	comp=Z,1µm,24.7s						
TIA	Tai'an	31.13	345	P	P	09 51 42.1	+3.3
TIA				pP	pP	09 52 00.1	+0.8
TIA				sP	sP	09 52 10.4	+0.6
TIA				PP	PnPn	09 52 44.1	-0.1
TIA				S	S	09 56 35.6	-2.2
TIA				sS	sS	09 57 13.7	+1.2
TIA				ScP	ScP	09 58 08.5	+1.7
TIA				PcS	PcS	09 58 18.6	+2.3
TIA				pmax	pmax		
	comp=Z,15nm,0.9s						
TIA				pmax	pmax		
	comp=Z,68nm,3.7s						
TIA				LR	LR		
	comp=Z,570nm,10.1s						
TIA				LR	LR		
	comp=Z,1µm,7.1s						
TIA				LR	LR		
	comp=Z,590nm,16.6s						
KSAR	Wonju Array Be	31.14	2	P	P	09 51 40.6	+1.7
KSAR	Wonju Array Be	31.14	2	P	P	09 51 40.6	+1.7
PZH	PanZhiHua	31.14	313	P	P	09 51 48.1	+8.9
PZH				S	S	09 56 44.5	+5.9
PZH				pmax	pmax		
	comp=Z,20nm,0.7s						
PZH				pmax	pmax		
	comp=Z,170nm,4.8s						
PZH				LR	LR		
	comp=N,830nm,19.0s						
PZH				LR	LR		
	comp=E,610nm,22.1s						
PZH				LR	LR		
	comp=Z,560nm,19.8s						
KSRS	Korea Array	31.15	2	P	P	09 51 37.3	-1.7
	comp=Z,2.0nm,0.9s,baz=176,slow=11,SNR=8.2						
KSRS				PcP	PcP	09 54 33.0	+1.0
	comp=Z,6.1nm,0.9s,baz=185,slow=2.9,SNR=6.2						
KSRS				ScP	ScP	09 58 09.0	+2.2
	comp=Z,4.4nm,1.0s,baz=193,slow=3.4,SNR=9.7						
KSRS				LR	LR	10 06 20.2	
	comp=Z,244nm,19.1s,baz=180,slow=40						
	comp=Z,2.0nm,0.9s						
MAJO	Matsushiro	32.03	18	P	P	09 51 46.4	-0.4
MAJO	Matsushiro	32.03	18	P	P	09 51 48.8	+2.0
MAJO	Matsushiro	32.03	18	P	P	09 51 46.4	-0.4
MAJO				pmax	pmax		
	comp=Z,23nm,0.9s						
MJAR	Matsushiro Arr	32.03	18	P	P	09 51 42.9	-3.8
	comp=Z,2.3nm,0.8s,baz=195,slow=8.9,SNR=9.7						
MJAR				PcP	PcP	09 54 35.0	+0.4
	comp=Z,5.9nm,0.9s,baz=183,slow=2.6,SNR=4.2						
MJAR				ScP	ScP	09 58 11.7	+1.8
	comp=Z,6.8nm,1.1s,baz=200,slow=4.0,SNR=7.8						
MJAR				LR	LR	10 05 40.0	
	comp=Z,256nm,20.4s,baz=222,slow=38						
	comp=Z,2.3nm,0.8s						
TV1H	Townsville Har	32.17	142	P	P	09 51 49.7	+1.6
XAN	Xi'an	32.20	332	⇓P	P	09 51 48.1	-0.2
XAN				pP	pP	09 52 09.2	-0.1
XAN				S	S	09 56 54.0	-0.7
XAN				pmax	pmax		
	comp=Z,79nm,0.9s						
XAN				pmax	pmax		
	comp=Z,370nm,3.6s						
XAN				LR	LR		
	comp=Z,1µm,17.9s						
XAN				LR	LR		
	comp=Z,1µm,18.6s						
XAN				LR	LR		
	comp=Z,850nm,21.9s						
CTAO	Charters Tower	32.48	144	P	P	09 51 51.5	+0.6
CTAO				IAmb	IAmb	09 51 53.7	
	comp=Z,44nm,1.0s						
CTAO	Charters Tower	32.48	144	P	P	09 51 52.7	+1.8
CTAO	Charters Tower	32.48	144	P	P	09 51 51.5	+0.6
CTAO				pmax	pmax		
	comp=Z,44nm,1.0s						
CTAO	Charters Tower	32.48	144	P	P	09 51 53.1	+2.2
CTAO				sP	sP	09 52 23.9	+3.0
CD2	Chengdu	32.63	322	P	P	09 51 54.2	+2.1
CD2				pP	pP	09 52 14.4	+1.1
CD2				pmax	pmax		
	comp=Z,20nm,0.3s						
CD2				pmax	pmax		
	comp=Z,70nm,4.9s						
CD2				LR	LR		
	comp=Z,920nm,19.7s						
CD2				LR	LR		
	comp=Z,730nm,15.2s						
TNCH	TengChong	32.78	308	⇑P	P	09 51 56.8	+3.2
TNCH				pP	pP	09 52 13.1	-1.7
TNCH				sP	sP	09 52 24.1	-1.5
TNCH				S	S	09 57 02.2	-2.0
TNCH				ScS	ScS	10 02 14.3	+1.0
TNCH				pmax	pmax		
	comp=Z,130nm,4.0s						
TNCH				LR	LR		
	comp=Z,410nm,14.9s						
TNCH				LR	LR		
	comp=Z,430nm,11.2s						
TNCH				LR	LR		
	comp=Z,700nm,16.8s						
DL2	Dalian	32.89	353	P	P	09 51 53.7	-0.5
DL2				S	S	09 57 03.6	-1.5
DL2				pmax	pmax		
	comp=Z,120nm,0.9s						
DL2				pmax	pmax		
	comp=Z,280nm,9.4s						
DL2				LR	LR		
	comp=Z,270nm,13.3s						
DL2				LR	LR		
	comp=Z,890nm,10.8s						
DL2				LR	LR		
	comp=Z,620nm,13.3s						
HNS	HongShan	32.91	342	⇓P	P	09 51 54.6	+0.2
HNS				pP	pP	09 52 15.5	0.0
HNS				PcP	PcP	09 54 38.8	+1.9
HNS				S	S	09 57 04.6	-0.9
HNS				pmax	pmax		
	comp=Z,36nm,0.9s						
HNS				LR	LR		
	comp=Z,450nm,15.5s						
HNS				LR	LR		
	comp=Z,430nm,19.2s						
HNS				LR	LR		
	comp=Z,610nm,15.7s						
MEEK	Meekatharra	33.53	193	P	P	09 52 00.9	+0.9
TIY	Taiyuan	33.93	340	P	P	09 52 05.7	+2.3
TIY				pP	pP	09 52 28.6	+4.1
TIY				S	S	09 57 23.4	+1.9
TIY				pmax	pmax		
	comp=Z,130nm,3.8s						
TIY				LR	LR		
	comp=Z,450nm,14.4s						
TIY				LR	LR		
	comp=Z,370nm,17.2s						
TIY				LR	LR		
	comp=Z,420nm,17.2s						
JMM	Marumori	34.08	20	P	P	09 52 03.8	-0.8
JMM	Marumori	34.08	20	P	P	09 52 06.4	+1.9
BJT	Baijiatuau	34.97	346	P	P	09 52 13.8	+1.6
BJI	Beijing	34.99	346	P	P	09 52 10.7	-1.7
BJI				S	S	09 57 37.4	-0.1
BJI				sS	sS	09 58 12.3	-0.2
BJI				ScS	ScS	10 02 26.8	+2.9
BJI				sScS		10 03 08.6	
BJI				pmax	pmax		
	comp=Z,38nm,0.9s						
BJI				pmax	pmax		
	comp=Z,140nm,4.3s						
BJI				LR	LR		
	comp=Z,190nm,18.5s						
BJI				LR	LR		
	comp=Z,140nm,16.1s						
BJI				LR	LR		
	comp=Z,180nm,14.2s						
SNY	Shenyang	35.60	356	⇑P	P	09 52 23.6	+6.1
SNY				S	S	09 57 46.8	0.0
SNY				pmax	pmax		
	comp=Z,34nm,0.9s						

SNY				pmax	pmax		
	comp=Z,150nm,3.5s						
SNY				LR	LR		
	comp=Z,310nm,19.8s						
SNY				LR	LR		
	comp=Z,740nm,17.3s						
SNY				LR	LR		
	comp=Z,550nm,23.9s						
LZH	Lanzhou	36.35	328	*e*P	P	09 52 25.8	+1.5
LZH				pP	pP	09 52 46.9	+1.3
LZH				sP	sP	09 52 55.2	-1.0
LZH				S	S	09 57 56.7	-2.2
LZH				sS	sS	09 58 37.3	+3.3
LZH				pmax	pmax		
	comp=Z,69nm,1.3s						
LZH				pmax	pmax		
	comp=Z,360nm,5.5s						
LZH				LR	LR		
	comp=Z,2µm,14.8s						
LZH				LR	LR		
	comp=Z,2µm,14.4s						
LZH				LR	LR		
	comp=Z,1µm,15.1s						
MSHR	Mys Shultsa	36.47	6	*ce*P	P	09 52 24.9	-0.1
MSHR				pmax	pmax		
	comp=Z,31nm,1.1s						
MORW	Morawa	36.49	196	P	P	09 52 25.6	+0.2
MORW	Morawa	36.49	196	P	P	09 52 25.7	+0.4
HNR	Honiara	36.67	115	LR	LR	10 07 41.7	
	comp=Z,178nm,19.1s,baz=268,slow=36						
FORT	Forrest	36.78	178	P	P	09 52 28.2	+0.4
FORT	Forrest	36.78	178	P	P	09 52 29.2	+1.5
QLP	Quilpie	36.78	153	P	P	09 52 29.4	+1.6
HHC	Hu-ho-hao-te	37.05	341	*e*P	P	09 52 31.4	+1.3
HHC				pP	pP	09 52 54.2	+3.1
HHC				sP	sP	09 53 04.4	+2.7
HHC				S	S	09 58 10.7	+1.4
HHC				sS	sS	09 58 46.7	+2.3
HHC				ScS	ScS	10 02 33.6	-1.9
HHC				pmax	pmax		
	comp=Z,20nm,0.8s						
HHC				pmax	pmax		
	comp=Z,100nm,3.5s						
HHC				LR	LR		
	comp=Z,230nm,16.5s						
HHC				LR	LR		
	comp=Z,260nm,17.1s						
HHC				LR	LR		
	comp=Z,530nm,19.0s						
BTO	Baotou	37.36	339	*e*P	P	09 52 36.9	+4.2
BTO				pP	pwP	09 52 59.6	+3.9
BTO				S	S	09 58 18.3	+4.4
BTO				pmax	pmax		
	comp=Z,17nm,1.4s						
BTO				pmax	pmax		
	comp=Z,260nm,7.8s						
BTO				LR	LR		
	comp=Z,830nm,19.4s						
BTO				LR	LR		
	comp=Z,2µm,23.5s						
BTO				LR	LR		
	comp=Z,1µm,22.2s						
CN2	Changchun	37.48	359	P	P	09 52 38.0	+4.4
CN2				PcP	PcP	09 54 50.9	+0.7
CN2				S	S	09 58 19.7	+4.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,9.0s						
RK1H	Rockhampton Ha	37.53	142	P	P	09 52 35.8	+1.6
KMBL	Kambalda	37.61	187	P	P	09 52 35.8	+1.0
BLDU	Ballidu	37.79	194	P	P	09 52 37.6	+1.2
USA0B	Ussuriysk Arra	38.16	6	⇓*e*P	P	09 52 40.7	+1.4
USRK	Ussuriysk Ar.	38.16	6	P	P	09 52 38.8	-0.4
USRK	Ussuriysk Ar.	38.16	6	P	P	09 52 35.8	-3.5
	comp=Z,2.9nm,0.8s,baz=181,slow=8.2,SNR=12						
USRK				LR	LR	10 06 02.1	
	comp=Z,195nm,21.3s,baz=185,slow=32						
	comp=Z,2.9nm,0.8s						
USRK	Ussuriysk Ar.	38.16	6	P	P	09 52 38.8	-0.4
MDJ	Mudanjiang	38.37	3	P	P	09 52 40.3	-0.7
MDJ				S	S	09 58 28.3	-0.6
MDJ				SS	SS	10 01 16.6	-5.1
MDJ				ScS	ScS	10 02 39.0	-3.7
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MDJ				LR	LR		
	comp=Z,330nm,23.9s						
MDJ				LR	LR		
	comp=Z,240nm,19.7s						
MDJ				LR	LR		
	comp=Z,580nm,23.2s						
MDJ	Mudanjiang	38.37	3	P	P	09 52 42.8	+1.8
KLBR	Kellerberrin	38.50	192	P	P	09 52 43.4	+1.1
ERM	Erimo	38.60	20	*ce*P	P	09 52 40.6	-2.3
ERM				pmax	pmax		
	comp=Z,42nm,2.5s						
XLT	XiLinHaoTe	38.69	348	*e*P	P	09 52 47.8	+4.0
XLT				PcP	PcP	09 54 55.1	+1.1
XLT				S	S	09 58 35.6	+1.7
XLT				pmax	pmax		
	comp=Z,23nm,0.7s						
XLT				pmax	pmax		
	comp=Z,120nm,3.7s						
XLT				LR	LR		
	comp=Z,340nm,14.5s						
XLT				LR	LR		
	comp=Z,300nm,15.3s						
MUN	Mundaring	39.22	194	P	P	09 52 48.8	+0.5
MTKN	Mount Kenneth	39.28	195	P	P	09 52 49.8	+1.0
EIDS	Eidsvold	39.37	144	P	P	09 52 50.2	+0.6
EIDS				IAmb	IAmb	09 52 51.7	
	comp=Z,60nm,1.1s						
EIDS	Eidsvold	39.37	144	P	P	09 52 50.7	+1.1
BNX	BinXian	39.41	1	⇓P	P	09 52 49.8	+0.1
BNX				pP	pP	09 53 08.5	-2.0
BNX				sP	sP	09 53 19.1	-1.7
BNX				S	S	09 58 47.4	+2.9
BNX				sS	sS	09 59 21.8	+1.9
BNX				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BNX				pmax	pmax		
	comp=Z,190nm,5.7s						
BNX				LR	LR		
	comp=Z,180nm,12.5s						
BNX				LR	LR		
	comp=Z,300nm,11.9s						
BNX				LR	LR		
	comp=Z,570nm,26.0s						
TEY	Ternei	39.67	11	*e*P	P	09 52 53.9	+2.0
BBOO	Buckleboo	39.80	168	P	P	09 52 54.1	+0.9
BBOO	Buckleboo	39.80	168	P	P	09 52 54.5	+1.4
NWAO	Narrogin (SRO)	39.90	192	P	P	09 52 54.9	+1.0
NWAO	Narrogin (SRO)	39.90	192	LR	LR	10 09 30.6	
	comp=Z,245nm,21.8s,baz=16,slow=36						
NWAO	Narrogin (SRO)	39.90	192	P	P	09 52 54.8	+0.9
NWAO	Narrogin (SRO)	39.90	192	P	P	09 52 55.0	+1.0
NWAO	Narrogin (SRO)	39.90	192	P	P	09 52 54.6	+0.7
NWAO	Narrogin (SRO)	39.90	192	P	P	09 52 54.9	+1.0
NWAO				pmax	pmax		
	comp=Z,428nm,1.3s						
NWAO	Narrogin (SRO)	39.90	192	P	P	09 52 54.5	+0.7
ASAJ	Asahikawa	40.31	18	P	P	09 52 59.2	+2.1
ASAJ				pmax	pmax		
	comp=Z,99nm,1.2s						
JKA	Kamikawa-asahi	40.31	18	P	P	09 52 59.2	+2.1
WHYH	Whyalla	40.37	166	P	P	09 52 59.2	+1.5
STKA	Stephens Creek	40.46	160	P	P	09 52 59.2	+0.7
STKA	Stephens Creek	40.46	160	P	P	09 52 59.2	+0.7
	comp=Z,42nm,0.7s,baz=334,slow=8.7,SNR=91						
STKA				LR	LR	10 12 27.2	
	comp=Z,289nm,18.8s,baz=334,slow=40						
	comp=Z,42nm,0.7s						
STKA	Stephens Creek	40.46	160	P	P	09 53 00.1	+1.6
STKA	Stephens Creek	40.46	160	*c i*P	P	09 52 59.0	+0.5
LSA	Lhasa	40.76	309	P	P	09 53 01.7	0.0
LSA				pmax	pmax		
	comp=Z,3.0nm,0.4s						
LSA	Lhasa	40.76	309	P	P	09 53 01.3	-0.4
H11S3	WAKE ISLAND Hy	40.92	69	T	T	10 37 22.4	
	baz=269,slow=76						
H11S1	WAKE ISLAND Hy	40.94	69	T	T	10 37 20.2	
	baz=269,slow=76						
H11S2	WAKE ISLAND Hy	40.94	69	T	T	10 37 15.3	
	baz=269,slow=76						
GTA	Gaotai	40.95	328	P	P	09 53 04.4	+1.7
GTA				pP	pP	09 53 25.9	+1.6
GTA				ScP	ScP	09 58 44.1	+1.1
GTA				S	S	09 59 09.4	+1.4
GTA				sS	sS	09 59 45.0	+1.4
GTA				ScS	ScS	10 02 59.7	+1.2
GTA				pmax	pmax		
	comp=Z,51nm,1.3s						
GTA				LR	LR		
	comp=Z,1µm,19.6s						
GTA				LR	LR		
	comp=Z,1µm,18.5s						
GTA				LR	LR		
	comp=Z,930nm,17.8s						
HTT	Hallett	41.09	164	P	P	09 53 05.7	+1.9
H11N1	WAKE ISLAND Hy	41.38	67	T	T	10 37 55.0	
	baz=265,slow=75,SNR=198						
H11N2	WAKE ISLAND Hy	41.39	67	T	T	10 37 54.6	
	baz=265,slow=75,SNR=128						
H11N3	WAKE ISLAND Hy	41.40	67	T	T	10 37 56.0	
	baz=265,slow=75,SNR=154						
CMSA	Cobar Meteorol	41.70	155	P	P	09 53 10.3	+1.5
GOMU	GeErMu	41.71	320	P	P	09 53 10.5	+1.2
GOMU				sP	sP	09 53 42.1	+0.2
GOMU				S	S	09 59 22.1	+2.3
GOMU				pmax	pmax		
	comp=Z,21nm,1.2s						
GOMU				pmax	pmax		
	comp=Z,390nm,5.2s						
GOMU				LR	LR		
	comp=Z,2µm,19.3s						
GOMU				LR	LR		
	comp=Z,1µm,18.9s						
YSS	Yuzhno-Sakhali	42.93	16	*e*P	P	09 53 19.0	+0.5
YSS				*e**SP	pwP	09 53 43.9	-1.4
YSS				*e*		09 55 08.3	
YSS				*e*S	S	09 59 38.4	+1.8
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				smax	smax		
	comp=N,200nm,8.6s						
YSS				smax	smax		
	comp=E,100nm,7.8s						
KLR	Kul'dur	43.12	5	LR	LR	10 12 49.0	
	comp=E,117nm,18.4s,baz=190,slow=38						
KLR	Kul'dur	43.12	5	*de*P	P	09 53 18.6	-1.4
KLR				pmax	pmax		
	comp=Z,12nm,1.7s						
EVN	Everest	43.47	305	P	P	09 53 23.3	-0.7
ARMA	Armidale	43.59	148	P	P	09 53 24.5	+0.4
ARMA	Armidale	43.59	148	P	P	09 53 25.8	+1.6
HEH	HeiHe	43.93	1	*e*P	P	09 53 24.8	-1.7
HEH				sP	sP	09 53 56.8	-1.0
HEH				PcP	PP	09 55 10.6	+0.1
HEH				ScP	ScP	09 58 56.0	+1.5
HEH				S	S	09 59 49.2	-1.9
HEH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HEH				pmax	pmax		
	comp=Z,130nm,5.1s						
HEH				LR	LR		
	comp=Z,350nm,16.6s						
HEH				LR	LR		
	comp=Z,160nm,16.6s						
HEH				LR	LR		
	comp=Z,400nm,17.8s						
ULN	Ulaanbaatar	44.77	341	P	P	09 53 33.7	+0.2
ULN				IAmb	IAmb	09 54 11.0	
	comp=Z,49nm,1.0s						
ULN	Ulaanbaatar	44.77	341	P	P	09 53 34.3	+0.9
ULN	Ulaanbaatar	44.77	341	*de*P	P	09 53 33.3	-0.1
ULN				pmax	pmax		
	comp=Z,17nm,1.0s						
ULN	Ulaanbaatar	44.77	341	P	P	09 53 34.1	+0.7
SONM	Songino Array	44.95	341	P	P	09 53 34.9	0.0
SONM				IAmb	IAmb	09 54 09.7	
	comp=Z,45nm,1.1s						
SONM	Songino Array	44.95	341	P	P	09 53 34.8	0.0
	comp=Z,3.1nm,0.5s,baz=162,slow=8.6,SNR=22						
SONM				PcP	PcP	09 55 15.4	+0.7
	comp=Z,14nm,0.9s,baz=162,slow=3.8,SNR=4.2						
SONM				LR	LR	10 13 24.8	
	comp=Z,323nm,20.6s,baz=162,slow=37						
	comp=Z,3.1nm,0.5s						
SONM	Songino Array	44.95	341	P	P	09 53 34.9	0.0
SONM				pmax	pmax		
	comp=Z,45nm,1.1s						
ARPS	Mount Arapiles	45.05	163	P	P	09 53 37.5	+2.0
GRNR	Gornyy	45.19	9	*e*P	P	09 53 40.5	+3.9
MGBR	Mount Gambier	45.58	164	P	P	09 53 40.0	+0.2
PALK	Pallekele	45.58	274	LR	LR	10 13 07.8	
	comp=Z,178nm,21.6s,baz=84,slow=36						
CAN	Canberra	46.36	154	P	P	09 53 48.4	+2.4
CAN				IAmb	IAmb	09 54 32.2	
	comp=Z,41nm,0.8s						
CAN	Canberra	46.36	154	P	P	09 53 47.3	+1.3
CAN	Canberra	46.36	154	P	P	09 53 48.4	+2.4
CAN				pmax	pmax		
	comp=Z,41nm,0.8s						
CAN	Canberra	46.36	154	P	P	09 53 48.4	+2.4
CAN				sP	sP	09 54 17.9	+0.9
TYV	Tymovskoe	46.51	14	*e*P	P	09 53 54.5	+7.6
TYV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TYV				pmax	pmax		
	comp=Z,200nm,4.9s						
CIT	Chita	46.95	349	*e*P	P	09 53 50.6	+0.2
CIT				*e*		09 54 20.8	
CIT				*e*		09 54 32.6	
CIT				*e*		09 55 17.6	
CIT				*e*		09 56 38.0	
CIT				pmax	pmax		
	comp=Z,109nm,1.9s						
TOO	Toolangi	46.96	159	P	P	09 53 53.4	+2.8
TOO	Toolangi	46.96	159	P	P	09 53 53.4	+2.8
TOO				pmax	pmax		
	comp=Z,36nm,1.4s						
MLBS	Spotswood, Mel	46.98	160	P	P	09 53 52.7	+2.0
ZEA	Zeya	47.42	1	*e*P	P	09 53 59.1	+5.2
ZEA				*e*		10 03 38.1	
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
DZM	Mont Dzumac	48.07	127	P	P	09 53 59.6	0.0
DZM				IAmb	IAmb	09 54 02.6	
	comp=Z,32nm,0.8s						
DZM	Mont Dzumac	48.07	127	P	P	09 54 01.0	+1.4
ZAK	Zakamensk	48.19	340	*e*P	P	09 53 59.6	-0.5
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
HYB	Hyderabad	48.21	288	*e*P	P	09 54 00.6	-0.1
HYB				*e*pP	pP	09 54 20.8	-2.1
HYB				*e*PcP	PcP	09 55 26.6	-0.1
HYB				*e*PP	PP	09 55 53.7	-0.2
HYB				*e*ScP	ScP	09 59 13.8	+0.7
HYB				*e*S	S	10 00 54.6	+1.1
HYB				*e*ScS	ScS	10 03 45.5	+0.3
YATNC	Mamie plateau,	48.42	127	P	P	09 54 04.0	+1.8
IRK	Irkutsk	49.47	342	*e*P	P	09 54 11.1	+1.4
IRK				pmax	pmax		
	comp=Z,56nm,2.3s						
MOY	Mondy	50.05	339	*e*P	P	09 54 15.1	+0.8
MOY				pmax	pmax		
	comp=Z,47nm,2.3s						
WMQ	Urumqi	50.67	324	*e*P	P	09 54 21.2	+2.2
WMQ				LR	LR		
	comp=Z,2µm,18.9s						
WMQ				LR	LR		
	comp=Z,840nm,18.1s						
WMQ				LR	LR		
	comp=Z,520nm,16.5s						
MOO	Moorlands	51.90	161	P	P	09 54 28.2	+0.2
BOD	Bodaibo	52.44	352	*e*P	P	09 54 30.9	-0.9
BOD				pmax	pmax		
	comp=Z,51nm,1.3s						
PEA0B	Petropavlovsk-	53.23	23	P	P	09 54 37.2	-0.6
PEA0B	Petropavlovsk-	53.23	23	*de*P	P	09 54 37.1	-0.6
PETK	Petropavlovsk-	53.23	23	P	P	09 54 37.1	-0.7
PETK	Petropavlovsk-	53.23	23	P	P	09 54 36.4	-1.4
	comp=Z,6.3nm,0.8s,baz=212,slow=3.6,SNR=13						
PETK				LR	LR	10 14 10.2	
	comp=Z,113nm,21.3s,baz=217,slow=32						
	comp=Z,6.3nm,0.8s						
PETK	Petropavlovsk-	53.23	23	P	P	09 54 37.1	-0.7
PET	Petropavlovsk	53.54	23	P	P	09 54 40.5	+0.5
PET	Petropavlovsk	53.54	23	*e*P	P	09 54 42.7	+2.7
PET				*e*S	S	10 02 09.2	+3.3
PET				pmax	pmax		
	comp=Z,100nm,9.1s						
PET				MLR	MLR		
	comp=Z,200nm,14.0s						
PET				MLR	MLR		
	comp=Z,200nm,13.0s						
ZSN	Zaisan	54.40	326	*e*P	P	09 54 46.1	-0.3
ZSN				pmax	pmax		
	comp=Z,19nm,1.2s						
ZSN	Zaisan	54.40	326	*e*P	P	09 54 46.2	-0.3
	comp=Z,19nm,1.2s						
SHLS	Shalkode	55.40	319	*e*P	P	09 54 51.5	-2.4
SHLS	Shalkode	55.40	319	*e*P	P	09 54 51.5	-2.4
MK31	Makanchi Array	55.49	324	P	P	09 54 54.9	+0.5
MK31				IAmb	IAmb	09 55 18.3	
	comp=Z,27nm,0.8s						
MK31	Makanchi Array	55.49	324	*de*P	P	09 54 54.7	+0.4
MKAR	Makanchi Array	55.49	324	P	P	09 54 54.5	+0.1
MKAR	Makanchi Array	55.49	324	P	P	09 54 53.8	-0.5
	comp=Z,12nm,0.5s,baz=115,slow=7.1,SNR=142						
MKAR				ScP	ScP	09 59 45.0	+1.0
	comp=Z,3.6nm,0.9s,baz=123,slow=4.5,SNR=3.7						
MKAR				LR	LR	10 20 59.3	
	comp=Z,480nm,18.1s,baz=106,slow=38						
MKAR				PKPPKP	P'P'df	10 24 54.0	-4.3
	comp=Z,1.4nm,1.1s,baz=72,slow=1.5,SNR=5.7						
MKAR				PKP2bc		10 25 07.3	
	comp=Z,0.4nm,0.7s,baz=85,slow=2.6,SNR=4.0						
	comp=Z,12nm,0.5s						
MKAR	Makanchi Array	55.49	324	*i* P	P	09 54 55.2	+0.9
MKAR				pmax	pmax		
	comp=Z,12nm,0.5s						
MAKZ	Makanchi	55.68	324	P	P	09 54 55.9	+0.2
MAKZ				IAmb	IAmb	09 55 31.4	
	comp=Z,48nm,1.1s						
MAKZ	Makanchi	55.68	324	P	P	09 54 55.9	+0.2
MAKZ				pmax	pmax		
	comp=Z,48nm,1.1s						
MAKZ	Makanchi	55.68	324	P	P	09 54 56.1	+0.4
MAKZ				pP	pP	09 55 16.7	-1.7
UZB	Uzynbulak	55.68	319	*e*P	P	09 54 55.6	-0.3
UZB	Uzynbulak	55.68	319	*e*P	P	09 54 55.7	-0.3
YAK	Yakutsk	55.78	2	P	P	09 54 55.2	-0.8
YAK	Yakutsk	55.78	2	LR	LR	10 21 04.9	
	comp=Z,90nm,19.8s,baz=171,slow=38						
YAK	Yakutsk	55.78	2	*e*P	P	09 54 55.0	-1.0
YAK				*e*PPP	PPP	09 58 14.6	
YAK				*e*S	S	10 02 43.6	+8.0
YAK				*e**SS	pS	10 02 48.7	-8.8
YAK				*e*SS	SS	10 06 20.7	-1.7
YAK				pmax	pmax		
	comp=Z,18nm,0.9s						
YAK				smax	smax		
	comp=E,52nm,2.7s						
TARG	Taragay, Kyrgy	55.86	317	P	P	09 54 57.1	-0.5
TARG				IAmb	IAmb	09 55 29.7	
	comp=Z,43nm,1.1s						
TARG	Taragay, Kyrgy	55.86	317	P	P	09 54 57.1	-0.5
TARG				pmax	pmax		
	comp=Z,43nm,1.1s						
SATY	Saty	56.05	319	*e*P	P	09 54 58.4	-0.1
SATY	Saty	56.05	319	*e*P	P	09 54 58.4	-0.1
KPKS	Kokpek	56.05	319	*e*P	P	09 54 58.2	-0.3
KPKS	Kokpek	56.05	319	*e*P	P	09 54 58.3	-0.3
MSVF	Nonsavu	56.07	116	P	P	09 54 58.5	-0.5
MSVF				IAmb	IAmb	09 55 34.7	
	comp=Z,40nm,0.9s						
MSVF	Nonsavu	56.07	116	LR	LR	10 18 22.2	
	comp=Z,135nm,18.8s,baz=310,slow=35						
MSVF	Nonsavu	56.07	116	P	P	09 55 00.8	+1.8
MSVF	Nonsavu	56.07	116	*ce*P	P	09 55 00.7	+1.8
MSVF				pmax	pmax		
	comp=Z,26nm,1.0s						
ZHN	Zhinishke	56.08	319	*e*P	P	09 54 57.5	-1.2
KSH	Kashi	56.24	314	P	P	09 55 03.7	+3.7
KSH				pP	pP	09 55 20.8	-1.8
KSH				ScP	ScP	09 59 49.7	+2.1
KSH				pmax	pmax		
	comp=Z,9.0nm,1.4s						
KSH				LR	LR		
	comp=Z,540nm,17.9s						
KSH				LR	LR		
	comp=Z,310nm,16.8s						
KSH				LR	LR		
	comp=Z,380nm,21.6s						
NIL	Nilore	56.35	306	P	P	09 54 59.9	-0.9
NIL	Nilore	56.35	306	P	P	09 55 00.1	-0.6
NIL	Nilore	56.35	306	P	P	09 54 59.9	-0.9
NIL				pmax	pmax		
	comp=Z,85nm,1.0s						
MA2	Magadan	56.38	14	P	P	09 55 00.4	+0.1
MA2				IAmb	IAmb	09 56 18.1	
	comp=Z,22nm,0.9s						
MA2	Magadan	56.38	14	*de*P	P	09 54 59.6	-0.8
MA2				pmax	pmax		
	comp=Z,11nm,1.0s						
TDK	Taldyqorghan	56.94	321	*e*P	P	09 55 04.6	0.0
TDK				pmax	pmax		
	comp=Z,26nm,1.3s						
TDK	Taldyqorghan	56.94	321	*e*P	P	09 55 04.7	0.0
	comp=Z,26nm,1.3s						
ARXS	Arharly	56.94	320	*e*P	P	09 55 04.4	-0.4
MDOK	Medeo	56.98	318	*e*P	P	09 55 05.0	-0.2
MDOK	Medeo	56.98	318	*e*P	P	09 55 05.0	-0.2
AAA	Alma-Ata	57.09	318	*e*P	P	09 55 05.7	-0.1
AAA	Alma-Ata	57.09	318	*e*P	P	09 55 05.7	-0.1
BOOM	Boomskoye usch	57.44	317	P	P	09 55 06.4	-2.1
BOOM				IAmb	IAmb	09 55 57.8	
	comp=Z,26nm,1.1s						
BOOM	Boomskoye usch	57.44	317	P	P	09 55 06.4	-2.1
BOOM				pmax	pmax		
	comp=Z,26nm,1.1s						
ZAA0	Zalesovo Array	58.37	332	P	P	09 55 13.7	-0.8
ZAA0				IAmb	IAmb	09 55 44.3	
	comp=Z,26nm,0.9s						
ZALV	Zalesovo Beam	58.37	332	P	P	09 55 13.8	-0.6
ZALV	Zalesovo Beam	58.37	332	P	P	09 55 13.0	-1.4
	comp=Z,20nm,0.9s,baz=106,slow=5.3,SNR=43						
ZALV				LR	LR	10 23 23.0	
	comp=Z,186nm,19.2s,baz=130,slow=39						
ZALV				PKP2bc		10 25 01.6	
	comp=Z,1.2nm,0.8s,baz=335,slow=6.6,SNR=4.3						
	comp=Z,20nm,0.9s						
ZALV	Zalesovo Beam	58.37	332	P	P	09 55 13.8	-0.6
AAK	Ala-Archa	58.48	317	P	P	09 55 16.6	+0.9
AAK				IAmb	IAmb	09 55 52.3	
	comp=Z,18nm,0.9s						
AAK	Ala-Archa	58.48	317	*d i*P	P	09 55 15.7	0.0
AAK				pmax	pmax		
	comp=Z,28nm,1.3s						
SGDS	Sogindy	58.71	318	*e*P	P	09 55 17.0	-0.2
ARSB	Arslanbob	59.03	315	P	P	09 55 18.7	-0.8
ARSB	Arslanbob	59.03	315	P	P	09 55 18.7	-0.8
ARSB				pmax	pmax		
	comp=Z,63nm,1.4s						
KURK	Kurchatov	59.63	327	P	P	09 55 23.2	0.0
KURK	Kurchatov	59.63	327	P	P	09 55 23.5	+0.3
KURK				S	S	10 03 26.4	0.0
KURK	Kurchatov	59.63	327	*d i*P	P	09 55 23.5	+0.3
KURK				pmax	pmax		
	comp=Z,152nm,1.7s						
KURK	Kurchatov	59.63	327	P	P	09 55 23.5	+0.3
KURK				pP	pP	09 55 42.9	-3.0
KURBB	Kurchatov Arra	59.63	327	P	P	09 55 23.6	+0.3
	comp=Z,31nm,0.8s,baz=127,slow=5.8,SNR=185						
KURBB				LR	LR	10 21 36.6	
	comp=Z,136nm,18.9s,baz=178,slow=36						
	comp=Z,31nm,0.8s						
SEY	Seymchan	59.69	13	LR	LR	10 21 17.2	
	comp=Z,52nm,21.0s,baz=203,slow=36						
SEY	Seymchan	59.69	13	*de*P	P	09 55 23.6	+0.2
SEY				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BTLS	Baital	59.73	319	*e*P	P	09 55 24.0	-0.1
BTLS	Baital	59.73	319	*e*P	P	09 55 24.0	-0.1
ARK	Arkit	59.92	315	P	P	09 55 26.1	+0.5
ARK				pmax	pmax		
	comp=Z,27nm,1.4s						
KBL	Kabul	59.96	306	P	P	09 55 25.0	-1.1
KBL	Kabul	59.96	306	P	P	09 55 25.6	-0.5
	SNR=7.9						
KBL	Kabul	59.96	306	P	P	09 55 25.0	-1.1
KBL				pmax	pmax		

	comp=Z,59nm,1.5s						
BTK	Batken	60.15	313	P	P	09 55 26.8	-0.4
BTK	Batken	60.15	313	P	P	09 55 26.8	-0.4
BTK				pmax	pmax		
	comp=Z,44nm,1.0s						
GAR	Garm	60.20	312	P	P	09 55 26.9	-0.6
OUZ	Omahuta	60.41	136	P	P	09 55 29.6	+0.8
SHEM	Shemya Is, Ala	60.43	31	LR	LR	10 21 05.7	
	comp=Z,66nm,19.1s,baz=258,slow=36						
DZA	Taraz	60.74	316	*e*P	P	09 55 30.8	-0.2
DZA	Taraz	60.74	316	*e*P	P	09 55 30.8	-0.2
CHGR	Chuyangaron	60.96	311	P	P	09 55 32.4	-0.3
CHGR	Chuyangaron	60.96	311	P	P	09 55 32.4	-0.3
CHGR				pmax	pmax		
	comp=Z,60nm,0.9s						
SIMJ	Simiganj	61.07	311	P	P	09 55 33.7	+0.2
SIMJ				IAmb	IAmb	09 56 03.5	
	comp=Z,18nm,0.9s						
DZET	Dzherino	61.25	311	P	P	09 55 35.5	+0.8
DZET				pmax	pmax		
	comp=Z,34nm,1.4s						
KK31	Karatay Array	61.38	316	P	P	09 55 35.4	0.0
KK31				IAmb	IAmb	09 56 18.5	
	comp=Z,28nm,0.8s						
KK31	Karatay Array	61.38	316	P	P	09 55 35.4	0.0
KK31				pmax	pmax		
	comp=Z,28nm,0.8s						
KKAR	Karatay Array	61.38	316	P	P	09 55 35.1	-0.2
KKAR	Karatay Array	61.38	316	P	P	09 55 35.1	-0.2
BRLS	Borolday	61.82	316	*e*P	P	09 55 38.4	+0.1
BRLS	Borolday	61.82	316	*e*P	P	09 55 38.4	+0.1
BRZS	Berezniki	62.64	324	*e*P	P	09 55 43.4	-0.2
BRZS	Berezniki	62.64	324	*e*P	P	09 55 43.5	-0.2
MSZ	Milford Sound	62.76	148	P	P	09 55 46.6	+2.2
DCZ	Deep Cove	62.89	149	P	P	09 55 46.8	+1.6
QRZ	Quartz Range	62.92	142	P	P	09 55 47.5	+1.9
DSZ	Denniston Nort	63.04	143	P	P	09 55 48.3	+1.9
TOZ	Tahuroa Road	63.06	138	P	P	09 55 49.0	+2.5
WHZ	Wether Hill Ro	63.59	149	P	P	09 55 51.1	+1.2
NNZ	Nelson	63.67	142	P	P	09 55 51.0	+0.5
THZ	Tophouse	63.71	143	P	P	09 55 51.9	+1.0
LBZ	Lake Benmore	63.78	147	P	P	09 55 52.8	+1.5
LBZ	Lake Benmore	63.78	147	P	P	09 55 52.7	+1.5
RPZ	Rata Peaks	63.83	146	LR	LR	10 25 32.2	
	comp=Z,251nm,18.1s,baz=314,slow=38						
RPZ	Rata Peaks	63.83	146	P	P	09 55 53.2	+1.6
EAZ	Earnscleugh	63.86	148	P	P	09 55 53.1	+1.4
RAO	Raoul Island	63.87	127	LR	LR	10 23 17.1	
	comp=Z,77nm,19.2s,baz=259,slow=36						
LTZ	Lake Taylor	63.95	144	P	P	09 55 53.8	+1.4
OXZ	Oxford	64.15	145	P	P	09 55 54.4	+0.7
TMZ	Timaru	64.23	146	P	P	09 55 55.9	+1.8
APZ	The Paps	64.25	150	P	P	09 55 55.9	+1.6
URZ	Urewera	64.42	138	LR	LR	10 21 53.8	
	comp=Z,148nm,21.7s,baz=30,slow=34						
URZ	Urewera	64.42	138	P	P	09 55 56.7	+1.2
ODZ	Otahua Downs	64.45	147	P	P	09 55 57.7	+2.1
KHZ	Kahutara	64.48	143	P	P	09 55 56.7	+1.0
BKZ	Black Stump Fm	64.49	139	P	P	09 55 57.1	+1.1
GVZ	Greta Valley S	64.51	144	P	P	09 55 57.1	+1.0
RTZ	Ruatahuna	64.52	138	P	P	09 55 57.5	+1.2
HAZ	Te Kaha	64.61	137	P	P	09 55 59.6	+2.9
ADK	Adak	65.03	35	P	P	09 55 59.8	+0.6
ADK				IAmb	IAmb	09 56 01.6	
	comp=Z,50nm,0.9s						
ADK	Adak	65.03	35	P	P	09 55 59.8	+0.6
ADK				pmax	pmax		
	comp=Z,50nm,0.9s						
PXZ	Pawanui	65.19	139	P	P	09 56 03.1	+2.6
BVAR	Borovoye Array	65.22	326	P	P	09 55 59.8	-0.7
	comp=Z,22nm,0.7s,baz=115,slow=7.0,SNR=94						
BVAR				LR	LR	10 27 28.8	
	comp=Z,203nm,18.3s,baz=109,slow=39						
	comp=Z,22nm,0.7s						
BRVK	Borovoye	65.29	326	P	P	09 56 00.9	0.0
BRVK				IAmb	IAmb	09 56 02.5	
	comp=Z,61nm,1.1s						
BRVK	Borovoye	65.29	326	P	P	09 56 01.5	+0.6
BRVK	Borovoye	65.29	326	*d i*P	P	09 56 01.1	+0.2
BRVK				pmax	pmax		
	comp=Z,65nm,1.0s						
BRVK	Borovoye	65.29	326	P	P	09 56 01.9	+1.0
TIXI	Tiksi	65.41	1	P	P	09 55 59.8	-1.5
TIXI				IAmb	IAmb	09 56 19.6	
	comp=Z,44nm,0.8s						
TIXI	Tiksi	65.41	1	LR	LR	10 26 55.0	
	comp=Z,107nm,20.5s,baz=198,slow=38						
TIXI	Tiksi	65.41	1⇑	*e*P	P	09 56 00.0	-1.3
TIXI				pmax	pmax		
	comp=Z,15nm,1.0s						
TIXI	Tiksi	65.41	1	P	P	09 55 59.9	-1.5
TIXI				pP	pP	09 56 17.1	-6.7
ATKA	Atka Island	66.57	35	P	P	09 56 08.7	-0.4
BILL	Bilibino	67.23	15	P	P	09 56 12.3	-0.7
BILL	Bilibino	67.23	15⇓	*e*P	P	09 56 11.8	-1.3
BILL				pmax	pmax		
	comp=Z,17nm,2.5s						
WSAR	Wadi Sarin	67.36	292	P	P	09 56 13.7	-1.1
BIDO	Bidbid	67.83	293	P	P	09 56 16.3	-1.4
	SNR=5.7						
MHTO	MHTO	67.88	290	P	P	09 56 16.0	-2.0
SMDO	Samad	67.88	292	P	P	09 56 16.8	-1.4
NRIK	Noril'sk	68.03	346	P	P	09 56 17.8	-0.3
NRIK				IAmb	IAmb	09 56 53.0	
	comp=Z,52nm,1.0s						
NRIK	Noril'sk	68.03	346	P	P	09 56 16.1	-1.9
	comp=Z,19nm,0.9s,baz=139,slow=6.3,SNR=30						
NRIK				LR	LR	10 27 20.0	
	comp=Z,400nm,21.9s,baz=148,slow=37						
	comp=Z,19nm,0.9s						
NRIK	Noril'sk	68.03	346	*ce*P	P	09 56 18.0	-0.1
DQM	DQM	68.25	289	P	P	09 56 19.5	-0.9
HOQ	Hoqain	68.58	293	P	P	09 56 20.7	-1.7
BSY	Bisya	68.65	292	P	P	09 56 21.7	-1.1
ARQ	Araqi	69.30	293	P	P	09 56 25.7	-1.2
SOHO	SOHO	69.32	293	P	P	09 56 25.5	-1.5
UOSS	Minazif	69.66	294	P	P	09 56 27.6	-1.4
HATD	Hatta, Dubai	69.72	294	P	P	09 56 28.5	-0.9
MASF	Masafi	69.72	295	P	P	09 56 29.0	-0.4
ASHO	Ashiyiah	69.78	294	P	P	09 56 27.5	-2.3
NIKH	Nikolski High	69.90	36	P	P	09 56 29.8	-0.2
	baz=253						
ALNE	Al Ain	70.03	293	P	P	09 56 30.2	-1.2
	SNR=6.4						
ABKAR	Akbulak array	70.19	320	P	P	09 56 32.0	+0.2
ABKAR	Akbulak array	70.19	320	P	P	09 56 32.2	+0.5
ABKAR				IAmb	IAmb	09 56 54.4	
	comp=Z,26nm,0.9s						
SPIA	Saint Paul Isl	70.47	31	P	P	09 56 33.1	-0.2
	baz=250						
UMZA	Um Al Zommool	70.53	292	P	P	09 56 33.3	-1.1
P08K	Saint George I	70.64	32	P	P	09 56 34.2	-0.2
	baz=251						
RBK	Rabkut	71.40	286	P	P	09 56 38.1	-1.7
DOK	Doka	71.47	287	P	P	09 56 38.6	-1.5
UNV	Unalaska Valle	71.50	35	IAmb	IAmb	09 57 12.5	
	comp=Z,69nm,1.1s						
UNV	Unalaska Valle	71.50	35	P	P	09 56 41.9	+2.3
UNV	Unalaska Valle	71.50	35	P	P	09 56 39.5	-0.1
	baz=255						
AKTO	Aktyubinsk	71.68	321	LR	LR	10 30 54.2	
	comp=Z,438nm,19.2s,baz=116,slow=38						
MZWR	Madinat Zayed	71.73	293	P	P	09 56 40.4	-1.2
WHFO	Wadi Hawf	71.81	287	P	P	09 56 40.8	-1.5
SVE	Sverdlovsk	71.82	328	*c i*P	P	09 56 41.8	+0.3
SVE				*e*S	S	10 05 51.7	-2.9
SVE				pmax	pmax		
	comp=Z,90nm,1.3s						
MZR	Muzera	72.09	292	P	P	09 56 42.9	-0.9
	SNR=16						
GAMB	Gambell	72.22	24	P	P	09 56 43.1	-0.6
	baz=247						
ABTO	Aybut	72.27	286	P	P	09 56 43.9	-1.1
GHWR	Ruwais	72.66	293	P	P	09 56 46.5	-0.7
JRN	Qarnain Island	72.70	294	P	P	09 56 46.7	-0.6
ARTI	Arti	72.90	327	P	P	09 56 47.3	-0.6
ARTI				IAmb	IAmb	09 57 11.0	
	comp=Z,58nm,1.2s						
ARTI	Arti	72.90	327	LR	LR	10 29 55.1	
	comp=Z,177nm,20.9s,baz=104,slow=37						
ARTI	Arti	72.90	327	*d i*P	P	09 56 47.4	-0.5
ARTI						09 57 05.6	
ARTI						09 59 27.1	
ARTI				S	S	10 06 06.7	-0.2
ARTI						10 06 43.3	
ARTI				SS	SS	10 10 45.8	-3.0
ARTI				pmax	pmax		
	comp=Z,58nm,1.3s						
CASY	Casey	73.22	187	P	P	09 56 50.2	+0.7
M11K	Mekoryuk	73.49	29	P	P	09 56 51.1	-0.2
	baz=253						
SLWR	Sila	73.74	293	P	P	09 56 52.9	-0.6
TRNA	Turayna	74.18	294	P	P	09 56 55.1	-0.9
TNA	Tin City	74.40	23	P	P	09 56 55.7	-0.8
	baz=250						
SHMA	Al-Shehemyia	74.42	295	P	P	09 56 56.3	-1.1
SMRA	Abu-Samra	74.54	294	P	P	09 56 57.2	-0.9
	SNR=6.9						
K13K	Kusilvak Mount	74.65	27	IAmb	IAmb	09 57 00.8	
	comp=Z,28nm,0.9s						
K13K	Kusilvak Mount	74.65	27	P	P	09 56 57.8	-0.2
	baz=254						
SAKB	Bahrain	74.81	295	P	P	09 56 58.5	-1.2
F14K	Arctic Creek	75.00	23	P	P	09 56 59.1	-0.8
	baz=252						
ANM	Nome	75.10	24	P	P	09 56 59.5	-1.1
	baz=253						
SDPT	Sand Point	75.25	34	P	P	09 57 00.9	-0.7
	baz=259						
J14K	Nanvaranak Lak	75.36	27	P	P	09 57 01.7	-0.4
	baz=255						
L14K	Kuka Creek	75.40	28	P	P	09 57 02.0	-0.3
	baz=256,SNR=11						
N14K	Kuskokwak Cree	75.55	30	IAmb	IAmb	09 57 05.5	
	comp=Z,42nm,0.9s						
N14K	Kuskokwak Cree	75.55	30	P	P	09 57 03.1	-0.1
	baz=257,SNR=7.7						
M14K	Bethel	75.61	29	P	P	09 57 03.8	+0.3
	baz=257,SNR=6.6						
O14K	Tigyukauivet M	75.61	30	IAmb	IAmb	09 57 41.1	
	comp=Z,27nm,0.9s						
O14K	Tigyukauivet M	75.61	30	P	P	09 57 03.7	+0.1
	baz=258,SNR=5.2						
CHNA	Chernabura Isl	75.66	35	P	P	09 57 03.7	-0.3
	baz=260						
F15K	North Star Dit	75.73	23	P	P	09 57 04.3	+0.1
	baz=253						
G15K	Niukluk	75.77	24	P	P	09 57 04.4	0.0
	baz=254						
S14K	Fog Glacier	75.93	34	P	P	09 57 05.1	-0.5
	baz=260						
L15K	Ungalak Mounta	76.04	28	P	P	09 57 06.0	0.0
	baz=257						
K15K	Wolf Creek Mou	76.16	27	P	P	09 57 06.4	-0.3
	baz=257						
M15K	Kasigluk River	76.20	29	P	P	09 57 06.7	-0.3
	baz=258,SNR=9.4						
C16K	Lisburne Hills	76.25	21	P	P	09 57 07.1	0.0
	baz=252						
O15K	Ungalikthiuk R	76.32	31	P	P	09 57 07.2	-0.4
	baz=259						
N15K	Kwethluk River	76.38	30	IAmb	IAmb	09 57 10.6	
	comp=Z,39nm,0.9s						
N15K	Kwethluk River	76.38	30	P	P	09 57 07.9	-0.1
	baz=258,SNR=11						
H16K	Elim	76.42	25	P	P	09 57 08.1	0.0
	baz=256						
G16K	Koyuk River	76.56	24	P	P	09 57 08.6	-0.3
	baz=255						
J16K	Anvik River	76.80	26	IAmb	IAmb	09 57 58.7	
	comp=Z,34nm,1.1s						
J16K	Anvik River	76.80	26	P	P	09 57 10.2	0.0
	baz=257,SNR=5.7						
I17K	Unalakleet	76.89	26	P	P	09 57 11.4	+0.6
I17K				IAmb	IAmb	09 57 59.1	
	comp=Z,103nm,1.8s						
I17K	Unalakleet	76.89	26	P	P	09 57 11.0	+0.2
	baz=257,SNR=7.8						
D17K	Noatak River	76.90	22	P	P	09 57 11.2	+0.5
	baz=254,SNR=8.5						
L16K	Owhat River	76.98	28	IAmb	IAmb	09 58 02.2	
	comp=Z,55nm,1.4s						
L16K	Owhat River	76.98	28	P	P	09 57 11.5	+0.2
	baz=259,SNR=9.0						
RDOG	Red Dog Mine	77.06	21	P	P	09 57 12.1	+0.5
	baz=254						
C17K	DeLong Mountai	77.08	21	P	P	09 57 11.9	+0.1
	baz=254						
N16K	Nishlik Lake	77.09	29	P	P	09 57 12.4	+0.4
	baz=260,SNR=13						
M16K	Timber Creek	77.10	29	P	P	09 57 11.7	-0.3
	baz=259,SNR=11						
RAR	Rarotonga	77.11	113	LR	LR	10 28 07.5	
	comp=Z,91nm,20.0s,baz=291,slow=33						
E17K	Hotham Inlet	77.20	22	P	P	09 57 12.3	-0.2
	baz=255,SNR=5.9						
R16K	Pilot Point	77.21	32	P	P	09 57 13.0	+0.3
	baz=261						
P16K	Nushagak River	77.23	31	P	P	09 57 12.8	+0.1
	baz=261						
F17K	Baldwin Pennin	77.26	23	P	P	09 57 12.9	+0.2
	baz=256						
O16K	Kokwok River B	77.27	30	IAmb	IAmb	09 57 15.3	
	comp=Z,37nm,1.0s						
O16K	Kokwok River B	77.27	30	P	P	09 57 12.4	-0.6
	baz=260,SNR=10						
G17K	Kiwalik Mounta	77.28	24	P	P	09 57 12.6	-0.4
	baz=257,SNR=5.9						
KBD	Kabd	77.34	298	P	P	09 57 13.0	-1.0
H17K	Granite Mounta	77.46	25	P	P	09 57 13.8	-0.2
	baz=258,SNR=6.8						
J17K	VABM Dome	77.50	26	IAmb	IAmb	09 58 04.5	
	comp=Z,106nm,1.9s						
J17K	VABM Dome	77.50	26	P	P	09 57 14.3	+0.2
	baz=259,SNR=7.3						
AKT	Akhty	77.60	311	*e*P	P	09 57 14.3	-1.1
AKT				*e*		09 57 23.6	
AKT				*e**SP	sP	09 57 46.0	-3.1
AKT				*e*		10 00 08.2	
AKT				pmax	pmax		
	comp=Z,20nm,1.0s						
AKT				MLR	MLR		
	comp=Z,118nm,12.0s						
L17K	Donlin	77.61	28	P	P	09 57 15.3	+0.5
	baz=260,SNR=9.9						
K17K	Iditarod	77.72	27	IAmb	IAmb	09 57 51.7	
	comp=Z,56nm,1.2s						
K17K	Iditarod	77.72	27	P	P	09 57 16.4	+0.9
	baz=260,SNR=12						
E18K	Tukpahlearik C	77.75	22	P	P	09 57 15.7	+0.2
	baz=256,SNR=8.8						
O17K	Koliganek Bris	77.80	30	P	P	09 57 16.1	+0.2
	baz=261,SNR=7.7						
B18K	Kokolik River	77.80	20	P	P	09 57 16.0	+0.3
	baz=255						
C18K	Utukok River	77.83	21	IAmb	IAmb	09 57 37.3	
	comp=Z,31nm,1.1s						
C18K	Utukok River	77.83	21	P	P	09 57 16.0	-0.1
	baz=256						
N17K	Nushagak Hills	77.87	29	P	P	09 57 16.7	+0.4
	baz=261,SNR=9.6						
M17K	Holitna River	77.89	29	IAmb	IAmb	09 57 57.9	
	comp=Z,37nm,1.2s						
M17K	Holitna River	77.89	29	P	P	09 57 17.0	+0.6
	baz=261,SNR=7.9						
F18K	Selawik	77.92	23	P	P	09 57 16.4	-0.1
	baz=258,SNR=5.5						
P17K	Kvichak River	78.04	31	P	P	09 57 17.6	+0.3
	baz=262,SNR=7.6						
CHIR	Chirikof Islan	78.05	34	P	P	09 57 16.9	-0.4
	baz=263						
KIRV	Kirov	78.08	329	*ce*P	P	09 57 17.9	+0.5
H18K	Honhosa River	78.14	25	P	P	09 57 17.0	-0.8
	baz=259						
G18K	Tagagawik	78.17	24	P	P	09 57 18.0	+0.1
	baz=259,SNR=7.3						
Q17K	Contact Creek	78.20	32	P	P	09 57 17.3	-1.0
	baz=263						
A19K	Wainwright	78.26	19	P	P	09 57 18.0	-0.3
	baz=255						
L18K	Granite Mounta	78.37	28	P	P	09 57 17.9	-1.1
	baz=261,SNR=6.3						
BELG	Belogornoye	78.40	322	LR	LR	10 35 01.7	
	comp=Z,121nm,19.3s,baz=92,slow=38						
C19K	Lookout Ridge	78.50	21	IAmb	IAmb	09 57 58.8	
	comp=Z,38nm,0.9s						
C19K	Lookout Ridge	78.50	21	P	P	09 57 19.9	+0.2
	baz=257						
N18K	Kilae Creek	78.52	29	P	P	09 57 20.1	+0.2
	baz=262,SNR=6.0						
J18K	Innoko River	78.56	26	IAmb	IAmb	09 57 43.3	
	comp=Z,71nm,1.9s						
J18K	Innoko River	78.56	26	P	P	09 57 20.3	+0.2
	baz=261,SNR=8.0						
M18K	Stony River	78.67	29	P	P	09 57 20.9	+0.2
	baz=262,SNR=11						
P18K	Big Mountain,	78.69	31	P	P	09 57 20.5	-0.3
	baz=263						
GCSA	Galena City Sc	78.69	25	P	P	09 57 20.6	-0.1
	baz=260						
F19K	Shaleruckik Mo	78.70	23	P	P	09 57 20.1	-0.7
	baz=259						
Q18K	Katmai Hardscr	78.71	31	P	P	09 57 20.3	-0.8
	baz=263,SNR=7.2						
O18K	Koktuh Hills	78.75	30	IAmb	IAmb	09 57 23.8	
	comp=Z,41nm,0.9s						
O18K	Koktuh Hills	78.75	30	P	P	09 57 20.9	-0.3
	baz=263,SNR=15						
TTA	Tatalina	78.79	27	P	P	09 57 22.9	+1.5
TTA	Tatalina	78.79	27	P	P	09 57 21.6	+0.1
	baz=262,SNR=5.3						
G19K	Purcell Mounta	78.85	24	P	P	09 57 21.6	+0.1
	baz=260,SNR=12						
R18K	Karluk	78.88	33	P	P	09 57 20.9	-1.0
	baz=264						
D19K	Kuna River	78.90	21	IAmb	IAmb	09 57 51.2	
	comp=Z,28nm,0.9s						
D19K	Kuna River	78.90	21	P	P	09 57 21.6	-0.3
	baz=258,SNR=9.8						
SII	Sitkinak Islan	78.92	34	P	P	09 57 21.7	-0.5
	baz=264						
H19K	Roundabout Mou	79.00	24	IAmb	IAmb	09 57 56.0	
	comp=Z,39nm,1.1s						
H19K	Roundabout Mou	79.00	24	P	P	09 57 22.4	0.0
	baz=261,SNR=21						
E19K	Redstone River	79.03	22	IAmb	IAmb	09 57 27.4	
	comp=Z,33nm,1.0s						
E19K	Redstone River	79.03	22	P	P	09 57 22.5	-0.1
	baz=260,SNR=24						
J19K	Poorman	79.12	26	P	P	09 57 23.6	+0.5
	baz=262,SNR=8.1						
L19K	White Mountain	79.22	28	P	P	09 57 24.2	+0.5
	baz=263,SNR=8.9						
N19K	Bonanza Creek	79.23	29	P	P	09 57 24.3	+0.4
	baz=263,SNR=18						
O19K	Port Alsworth	79.24	30	IAmb	IAmb	09 58 13.8	
	comp=Z,60nm,1.6s						
O19K	Port Alsworth	79.24	30	P	P	09 57 23.6	-0.1
	baz=264						
M19K	Big River Lodg	79.40	28	IAmb	IAmb	09 58 04.0	
	comp=Z,51nm,1.6s						
M19K	Big River Lodg	79.40	28	P	P	09 57 24.4	-0.3
	baz=263						
RAYN	Ar Rayn	79.42	293	P	P	09 57 24.4	-1.2
RAYN				IAmb	IAmb	09 57 56.5	
	comp=Z,31nm,0.8s						
RAYN	Ar Rayn	79.42	293	P	P	09 57 24.8	-0.8
RAYN	Ar Rayn	79.42	293	P	P	09 57 24.4	-1.2
RAYN				pmax	pmax		
	comp=Z,31nm,0.8s						
Q19K	Cape Douglas,	79.44	31	IAmb	IAmb	09 57 26.0	
	comp=Z,47nm,0.9s						
Q19K	Cape Douglas,	79.44	31	P	P	09 57 23.6	-1.4
	baz=264						
OHAK	Old Harbor	79.48	33	IAmb	IAmb	09 57 27.2	
	comp=Z,26nm,0.9s						
OHAK	Old Harbor	79.48	33	P	P	09 57 26.3	+1.2
OHAK	Old Harbor	79.48	33	P	P	09 57 25.4	+0.3
	baz=265,SNR=7.6						
D20K	Etivluk River	79.48	21	P	P	09 57 24.8	-0.2
	baz=260,SNR=8.0						
B20K	Meade River	79.53	20	P	P	09 57 24.7	-0.4
	baz=259						
F20K	Avaraart Lake	79.53	23	P	P	09 57 24.9	-0.4
	baz=261						
E20K	Nigu River	79.56	22	P	P	09 57 25.4	-0.1
	baz=260,SNR=12						
H20K	Anotleneega Mo	79.64	25	P	P	09 57 25.4	-0.6
	baz=262,SNR=19						
L20K	Farewell, AK	79.70	28	P	P	09 57 26.8	+0.5
	baz=264,SNR=8.5						
I20K	Naaghedeneel	79.72	25	IAmb	IAmb	09 58 04.8	
	comp=Z,68nm,1.1s						
I20K	Naaghedeneel	79.72	25	P	P	09 57 26.9	+0.6
	baz=263,SNR=10						
K20K	Telida	79.72	27	P	P	09 57 26.7	+0.3
	baz=263						
P19K	Oil Pt	79.72	31	P	P	09 57 26.4	-0.1
	baz=265						
J20K	Nowinta River	79.78	26	P	P	09 57 27.4	+0.7
	baz=263,SNR=11						
GNI	Garni	79.83	310	P	P	09 57 28.6	+0.9
KDAK	Kodiak Island	79.90	32	P	P	09 57 27.2	-0.3
KDAK				IAmb	IAmb	09 57 29.5	
	comp=Z,39nm,0.8s						
KDAK	Kodiak Island	79.90	32	LR	LR	10 29 01.1	
	comp=Z,179nm,19.6s,baz=244,slow=33						
KDAK	Kodiak Island	79.90	32	P	P	09 57 27.2	-0.3
KDAK				pmax	pmax		
	comp=Z,39nm,0.9s						
KDAK	Kodiak Island	79.90	32	P	P	09 57 27.3	-0.1
	baz=266						
A21K	Barrow	79.95	19	P	P	09 57 27.5	0.0
	baz=259						
M20K	Styx River	79.99	28	P	P	09 57 27.8	-0.2
	baz=264						
Q20K	Shuyak Island	80.07	32	P	P	09 57 28.3	0.0
	baz=266						
SYI	Shuyak Island	80.07	32	IAmb	IAmb	09 57 29.5	
	comp=Z,31nm,0.9s						
O20K	Slope Mountain	80.07	30	P	P	09 57 28.6	+0.2
	baz=265						
C21K	Knifeblade Rid	80.20	21	P	P	09 57 29.0	0.0
	baz=262						
B21K	Ikpikpuk River	80.33	20	P	P	09 57 29.3	-0.2
	baz=262						
G21K	Allakaket	80.33	24	IAmb	IAmb	09 57 34.0	
	comp=Z,31nm,0.9s						
G21K	Allakaket	80.33	24	P	P	09 57 30.2	+0.6
	baz=263,SNR=27						
N20K	Mount Spurr	80.37	29	P	P	09 57 29.6	-0.4
	baz=265,SNR=6.8						
E21K	Killik River	80.40	22	P	P	09 57 29.9	-0.1
	baz=262						
A22K	Sinclair Lake	80.42	19	P	P	09 57 30.4	+0.5
	baz=261						
F21K	Alatna River	80.43	23	P	P	09 57 30.5	+0.3
	baz=263,SNR=5.6						
H21K	Melozitna Rive	80.52	24	P	P	09 57 30.9	+0.2
	baz=264,SNR=25						
PPLA	Purkeypile	80.52	27	P	P	09 57 30.9	0.0
	baz=265,SNR=6.3						
HOM	Homer	80.53	31	P	P	09 57 30.9	+0.1
	baz=266						
CHUM	Lake Minchumin	80.55	26	P	P	09 57 31.3	+0.4
	baz=265,SNR=11						
CAST	Castle Rocks	80.61	27	IAmb	IAmb	09 58 06.7	
	comp=Z,29nm,0.9s						
CAST	Castle Rocks	80.61	27	P	P	09 57 30.8	-0.4
	baz=265,SNR=27						
CNPM	China Poot	80.73	31	IAmb	IAmb	09 57 33.2	
	comp=Z,29nm,0.8s						
SKT	Skwentna	80.75	28	P	P	09 57 31.1	-0.9
	baz=266,SNR=17						
I21K	Tanana	80.82	25	IAmb	IAmb	09 57 54.3	
	comp=Z,45nm,0.9s						
I21K	Tanana	80.82	25	P	P	09 57 32.7	+0.4
	baz=265,SNR=28						
B22K	Teshekpuk Lake	80.84	20	IAmb	IAmb	09 57 35.9	
	comp=Z,40nm,1.1s						
B22K	Teshekpuk Lake	80.84	20	P	P	09 57 32.3	+0.1
	baz=263						
CAPN	Captain Cook N	80.85	30	P	P	09 57 32.5	+0.1
	baz=266						
BRLK	Bradley Lake	80.92	31	IAmb	IAmb	09 57 36.7	
	comp=Z,42nm,0.9s						
D22K	Ayikyak River	80.92	21	IAmb	IAmb	09 58 21.7	
	comp=Z,73nm,1.6s						
D22K	Ayikyak River	80.92	21	P	P	09 57 32.6	-0.1
	baz=264						
F22K	John River	80.96	23	P	P	09 57 33.3	+0.3
	baz=264						
BRSE	Bradley Lake S	80.99	31	P	P	09 57 33.4	+0.1
	baz=267,SNR=13						
SUA	Susitna One	81.09	29	IAmb	IAmb	09 58 09.7	
	comp=Z,43nm,0.8s						
SUA	Susitna One	81.09	29	P	P	09 57 33.5	-0.4
	baz=266,SNR=19						
GOF	Gofitskoye	81.11	315	*ce*P	P	09 57 40.8	+6.6
H22K	Ishtalitna Cre	81.13	24	P	P	09 57 33.4	-0.5

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      baz=265
GEVA  Gevas             81.14 308   IAmb    IAmb    09 58 05.6
      comp=Z,47nm,1.1s
KTH   Kantishna Hill    81.14  27   IAmb    IAmb    09 58 12.6
      comp=Z,48nm,1.3s
BPAW  Bear Paw Mtn.     81.16  26   IAmb    IAmb    09 58 12.8
      comp=Z,44nm,1.0s
BPAW  Bear Paw Mtn.     81.16  26   P       P       09 57 33.7  -0.4
      baz=266,SNR=42
E22K  Anaktuvuk Pass    81.16  22   IAmb    IAmb    09 57 56.4
      comp=Z,39nm,0.9s
E22K  Anaktuvuk Pass    81.16  22   P       P       09 57 34.6  +0.5
      baz=264,SNR=11
G22K  Bettles           81.17  23   P       P       09 57 34.0   0.0
      baz=265
KBZ   Khabaz            81.22 313   P       P       09 57 33.6  -1.2
      comp=Z,1.0nm,0.5s,baz=92,slow=7.9,SNR=12
      comp=Z,1.0nm,0.5s
KBZ   Khabaz            81.22 313ceP        P       09 57 34.2  -0.6
KBZ                                 pmax    pmax
      comp=Z,39nm,1.5s
SLKM  Skilak Lake       81.29  30   IAmb    IAmb    09 57 36.2
      comp=Z,47nm,1.2s
MLY   Manley            81.33  25   IAmb    IAmb    09 58 13.8
      comp=Z,32nm,0.9s
MLY   Manley            81.33  25   P       P       09 57 34.8  -0.2
      baz=266,SNR=50
KIV   Kislovodsk        81.37 313   P       P       09 57 36.8  +1.1
KIV   Kislovodsk        81.37 313  eP       P       09 57 36.1  +0.4
KIV                                 pmax    pmax
      comp=Z,14nm,1.1s
KIV                                 MLR     MLR
      comp=Z,115nm,19.0s
SHA1  Shidzhatmaz       81.39 313⇑eP        P       09 57 35.8  -0.2
M22K  Willow            81.41  29   P       P       09 57 35.1  -0.3
      baz=267,SNR=25
TRF   Thorofare Moun    81.42  27   IAmb    IAmb    09 57 36.8
      comp=Z,30nm,1.0s
TRF   Thorofare Moun    81.42  27   P       P       09 57 34.4  -1.3
      baz=267,SNR=27
O22K  Cooper Landing    81.54  30   P       P       09 57 35.0  -1.1
      baz=268
RC01  Rabbit Creek A    81.56  29   IAmb    IAmb    09 57 37.6
      comp=Z,32nm,1.0s
RC01  Rabbit Creek A    81.56  29   P       P       09 57 35.7  -0.6
      baz=268,SNR=9.8
D23K  Nanushuk River    81.65  21   IAmb    IAmb    09 57 58.7
      comp=Z,40nm,1.1s
D23K  Nanushuk River    81.65  21   P       P       09 57 36.1  -0.5
      baz=265,SNR=6.7
SEW   Seward            81.66  30   IAmb    IAmb    09 58 11.1
      comp=Z,75nm,1.4s
SEW   Seward            81.66  30   P       P       09 57 36.2  -0.6
      baz=268,SNR=6.1
COLD  Coldfoot          81.70  23   P       P       09 57 36.4  -0.5
      baz=266,SNR=26
G23K  Bananza Creek     81.73  24   IAmb    IAmb    09 57 41.1
      comp=Z,38nm,1.0s
G23K  Bananza Creek     81.73  24   P       P       09 57 37.5  +0.4
      baz=266,SNR=34
C23K  Itkillik River    81.74  20   IAmb    IAmb    09 57 39.3
      comp=Z,50nm,1.1s
C23K  Itkillik River    81.74  20   P       P       09 57 37.8  +0.7
      baz=265,SNR=8.4
BWN   Browne            81.83  26   IAmb    IAmb    09 58 20.6
      comp=Z,49nm,0.8s
PMR   Palmer            81.87  29   IAmb    IAmb    09 57 39.2
      comp=Z,32nm,0.9s
PMR   Palmer            81.87  29   P       P       09 57 38.2  +0.4
PMR   Palmer            81.87  29   P       P       09 57 37.4  -0.4
      baz=268,SNR=27
H23K  Yukon River       81.88  24   IAmb    IAmb    09 57 41.5
      comp=Z,33nm,0.8s
H23K  Yukon River       81.88  24   P       P       09 57 38.2  +0.4
      baz=267,SNR=39
I23K  Minto, Yukon-K    81.92  25   P       P       09 57 38.7  +0.7
      baz=267,SNR=25
GURO  Guroymak-BITLI    81.94 308   IAmb    IAmb    09 58 16.9
      comp=Z,36nm,0.9s
GHO   Glory Hole Cre    81.97  29   IAmb    IAmb    09 58 13.5
      comp=Z,37nm,1.2s
E23K  Chandalar         81.98  22   P       P       09 57 38.9  +0.4
      baz=267
VRH   Novokhopyorsk     82.01 321  eP       P       09 57 39.2  +0.4
VRH                                 pmax    pmax
      comp=Z,72nm,1.7s
NEA2  Nenana            82.02  26   IAmb    IAmb    09 57 40.9
      comp=Z,32nm,0.9s
NEA2  Nenana            82.02  26   P       P       09 57 38.3  -0.3
      baz=268,SNR=37
TOLK  Toolik Lake Re    82.03  22   IAmb    IAmb    09 58 00.4
      comp=Z,24nm,0.8s
TOLK  Toolik Lake Re    82.03  22   P       P       09 57 39.0  +0.4
      baz=266,SNR=10.0
MCK   McKinley          82.04  27   IAmb    IAmb    09 58 15.5
      comp=Z,64nm,1.0s
MCK   McKinley          82.04  27   P       P       09 57 38.5  -0.3
      baz=268,SNR=28
RND   Reindeer          82.06  27   IAmb    IAmb    09 58 19.5
      comp=Z,45nm,1.1s
WAT1  Susitna Watana    82.18  27   P       P       09 57 39.4  -0.2
      baz=268
KNK   Knik Glacier      82.19  29   IAmb    IAmb    09 57 41.1
      comp=Z,42nm,0.9s
KNK   Knik Glacier      82.19  29   P       P       09 57 39.1  -0.5
      baz=269,SNR=16
PWL   Port Wells        82.23  29   P       P       09 57 39.4  -0.4
      baz=269,SNR=31
SML   Sawmill           82.26  29   P       P       09 57 40.0   0.0
      baz=269,SNR=20
D24K  Happy Valley      82.33  21   P       P       09 57 40.2  +0.1
      baz=267,SNR=11
C24K  Franklin Bluff    82.40  21   P       P       09 57 40.2  -0.2
      baz=267
E24K  Your Creek        82.40  22   P       P       09 57 40.7  +0.1
      baz=268
WRH   Wood River Hil    82.44  26   IAmb    IAmb    09 58 18.8
      comp=Z,36nm,1.0s
M23K  Glacier View      82.54  29   P       P       09 57 41.2  -0.2
      baz=269,SNR=7.7
COLA  College           82.55  25   P       P       09 57 40.7  -0.6
COLA  College           82.55  25   P       P       09 57 43.5  +2.2
COLA  College           82.55  25  ⇑P       P       09 57 40.8  -0.5
COLA  College           82.55  25   P       P       09 57 40.8  -0.5
      baz=269
WAT6  Susitna Watana    82.55  28   P       P       09 57 41.3  -0.3
      baz=269,SNR=25
H24K  Noodor Dome       82.56  24   IAmb    IAmb    09 57 44.9
      comp=Z,46nm,0.9s
H24K  Noodor Dome       82.56  24   P       P       09 57 42.3  +0.8
      baz=268,SNR=39
CCB   Clear Creek Bu    82.56  26   IAmb    IAmb    09 58 18.4
      comp=Z,46nm,1.2s
F24K  Squaw Lake        82.61  23   P       P       09 57 42.1  +0.5
      baz=268,SNR=18
P23K  Montague Islan    82.68  30   P       P       09 57 41.5  -0.6
      baz=270
DHY   Denali Highway    82.72  27   P       P       09 57 41.8  -0.7
      baz=269,SNR=12
POKR  Poker Plat Res    82.73  25   P       P       09 57 41.5  -0.8
      baz=269
SCM   Sheep Creek Mo    82.73  29   P       P       09 57 42.8  +0.3
      baz=270,SNR=15
G24K  Hadweenzic Riv    82.75  24   IAmb    IAmb    09 58 04.5
      comp=Z,47nm,1.2s
G24K  Hadweenzic Riv    82.75  24   P       P       09 57 42.8  +0.5
      baz=269,SNR=24
LABN  Labinsk           82.77 314  eP       P       09 57 43.2  +0.3
LABN                               eS       S       10 07 54.7  +1.1
LABN                                pmax    pmax
      comp=Z,34nm,0.8s
GLI   Glacier Island    82.84  29   IAmb    IAmb    09 57 44.4
      comp=Z,44nm,1.0s
GLI   Glacier Island    82.84  29   P       P       09 57 42.3  -0.6
      baz=270,SNR=6.0
VOI   Vohitsoka         82.89 247   P       P       09 57 43.0  -1.2
ERBR  Yeremizino-Bor    82.91 315  eP       P       09 57 42.7  -0.9
ERBR                               eS       S       10 07 54.7  -0.3
ERBR                                pmax    pmax
      comp=Z,19nm,0.7s
HDA   Harding Lake      82.93  26   IAmb    IAmb    09 58 14.9
      comp=Z,27nm,0.8s
HDA   Harding Lake      82.93  26   P       P       09 57 42.2  -1.1
      baz=270,SNR=14
ILAR  Eielson Array     82.96  26   P       P       09 57 42.2  -1.3
      comp=Z,9.3nm,0.9s,baz=246,slow=5.4,SNR=82
ILAR                                PKKPbc  PKKPbc  10 16 04.5  -3.8
      comp=Z,0.8nm,1.0s,baz=49,slow=1.8,SNR=4.7
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ILAR                                LR      LR      10 34 20.3
      comp=Z,41nm,19.7s,baz=244,slow=35
      comp=Z,9.3nm,0.9s
KOPT  Kop Dagi          83.09 309   IAmb    IAmb    09 58 20.9
      comp=Z,57nm,1.0s
FID   Port Fidalgo      83.14  30   IAmb    IAmb    09 57 46.1
      comp=Z,38nm,0.9s
D25K  Kavik River       83.20  21   P       P       09 57 44.3  -0.5
      baz=269
Q23K  Middleton Isla    83.22  31   P       P       09 57 44.5  -0.4
      baz=271
KLMR  Klimovskoe        83.22 331  eP       P       09 57 42.9  -2.0
KLMR                                pmax    pmax
      comp=Z,134nm,1.1s
M24K  Tolsona, Glenn    83.28  28   P       P       09 57 45.7  +0.4
      baz=270,SNR=14
G25K  Bearman Lake      83.29  24   P       P       09 57 46.0  +0.9
      baz=270,SNR=8.6
VSLR  Vesyoloye         83.30 313⇓eP        P       09 57 46.3  +0.6
VSLR                                pmax    pmax
      comp=Z,27nm,0.9s
KLU   Klutina           83.40  29   IAmb    IAmb    09 57 47.8
      comp=Z,31nm,1.0s
KLU   Klutina           83.40  29   P       P       09 57 46.1  +0.2
      baz=271,SNR=12
H25L  Birch Creek       83.41  24   P       P       09 57 46.9  +1.2
      baz=270,SNR=24
K24K  Donnelly Dome     83.44  27   P       P       09 57 45.5  -0.5
      baz=271,SNR=17
F25K  Christian Rive    83.47  23   IAmb    IAmb    09 57 49.5
      comp=Z,27nm,1.0s
F25K  Christian Rive    83.47  23   P       P       09 57 47.0  +0.9
      baz=270,SNR=24
E25K  Arctic Village    83.50  22   P       P       09 57 47.1  +0.9
      baz=270,SNR=18
EYAK  Cordova Ski Ar    83.50  30   IAmb    IAmb    09 58 16.7
      comp=Z,35nm,1.1s
EYAK  Cordova Ski Ar    83.50  30   P       P       09 57 48.1  +1.8
EYAK  Cordova Ski Ar    83.50  30   P       P       09 57 46.5  +0.2
      baz=271
SOC   Sochi             83.53 313  eP       P       09 57 46.1  -0.7
SOC                                ePPP     PPP     10 02 51.2
SOC                                eS       S       10 07 59.7  -1.6
SOC                                eSS      SS      10 13 22.3  -6.8
SOC                                 pmax    pmax
      comp=Z,8.0nm,0.6s
SOC                                 MLR     MLR
      comp=Z,173nm,21.0s
PRP   Porcupine Dome    83.53  25   P       P       09 57 46.5  -0.1
      baz=271,SNR=9.6
VORD  Divnogorie        83.55 321  eP       P       09 57 46.3  -0.5
VORD                                pmax    pmax
      comp=Z,20nm,0.9s
VORR  Voronezh          83.58 321  eP       P       09 57 47.6  +0.7
VORR                                pmax    pmax
      comp=Z,68nm,1.6s
PAX   Paxson            83.59  27   IAmb    IAmb    09 57 48.7
      comp=Z,38nm,1.1s
PAX   Paxson            83.59  27   P       P       09 57 46.7  -0.2
      baz=271,SNR=27
J25K  Salcha River,     83.61  26   P       P       09 57 46.0  -0.9
      baz=271,SNR=26
VSR   Storozhevoye      83.62 321  eP       P       09 57 45.8  -1.3
VSR                                 pmax    pmax
      comp=Z,20nm,0.8s
C26K  Camden Bay        83.72  20   P       P       09 57 47.8  +0.5
      baz=271
LPSR  Galich'ya Gora    83.72 322  eP       P       09 57 48.0  +0.4
LPSR                                pmax    pmax
      comp=Z,69nm,1.8s
HARP  HAARP             83.75  28   P       P       09 57 47.8  +0.1
      baz=271,SNR=7.9
RIDG  Independent Ri    83.86  27   P       P       09 57 48.1  -0.1
      baz=272,SNR=38
BMAR  Burnt Mountain    83.88  23   P       P       09 57 48.7  +0.5
N25K  Chitina, Valde    84.04  29   IAmb    IAmb    09 57 51.8
      comp=Z,49nm,1.1s
N25K  Chitina, Valde    84.04  29   P       P       09 57 49.5  +0.4
      baz=272,SNR=16
F26K  Sheenjek River    84.04  23   IAmb    IAmb    09 57 51.8
      comp=Z,28nm,1.1s
F26K  Sheenjek River    84.04  23   P       P       09 57 49.4  +0.4
      baz=272,SNR=15
BMRM  Bremner River     84.05  29   P       P       09 57 49.4  +0.2
      baz=272,SNR=17
C27K  Jago River        84.14  21   IAmb    IAmb    09 57 52.1
      comp=Z,56nm,1.1s
C27K  Jago River        84.14  21   P       P       09 57 50.3  +0.8
      baz=272,SNR=6.7
KAIM  Kayak Island      84.18  30   P       P       09 57 50.1  +0.2
      baz=272
G26K  Porcupine Rive    84.20  23   P       P       09 57 50.7  +0.9
      baz=272,SNR=23
DOT   Dot Lake          84.21  27   IAmb    IAmb    09 57 52.0
      comp=Z,27nm,1.0s
SCRK  Sand Creek        84.23  26   IAmb    IAmb    09 57 52.4
      comp=Z,40nm,1.4s
SCRK  Sand Creek        84.23  26   P       P       09 57 49.9  -0.2
      baz=272,SNR=16
HMT   Hamilton          84.25  30   IAmb    IAmb    09 57 52.7
      comp=Z,45nm,0.9s
MOS   Moscow            84.36 325  eP       P       09 57 49.2  -1.6
MOS                                 pmax    pmax
      comp=Z,117nm,1.3s
J26L  Joseph Creek      84.39  26   IAmb    IAmb    09 57 52.4
      comp=Z,31nm,0.9s
J26L  Joseph Creek      84.39  26   P       P       09 57 51.0   0.0
      baz=273,SNR=41
MENT  Mentasta          84.39  27   IAmb    IAmb    09 57 53.3
      comp=Z,21nm,0.9s
MENT  Mentasta          84.39  27   P       P       09 57 52.6  +1.7
I26K  Coal Creek Min    84.53  25   IAmb    IAmb    09 58 21.4
      comp=Z,34nm,0.9s
I26K  Coal Creek Min    84.53  25   P       P       09 57 51.5   0.0
      baz=273,SNR=47
L26K  Log Cabin Wild    84.56  27   P       P       09 57 52.1  +0.3
      baz=273,SNR=13
BGLC  Bering Glacier    84.74  30   P       P       09 57 52.9  +0.3
      baz=273
M26K  Nabesna, AK       84.76  28   P       P       09 57 53.6  +0.8
      baz=273,SNR=13
MCARA McCarthy VSAT     84.80  29   IAmb    IAmb    09 58 05.2
      comp=Z,32nm,0.8s
MCARA McCarthy VSAT     84.80  29   P       P       09 57 52.7  -0.2
      baz=273
CRQE  Cirque            84.80  30   P       P       09 57 52.8  -0.3
      baz=273,SNR=12
E27K  Coleen River      84.98  22   IAmb    IAmb    09 57 56.7
      comp=Z,51nm,1.1s
E27K  Coleen River      84.98  22   P       P       09 57 54.2  +0.5
      baz=274,SNR=18
OBN   Obninsk           85.00 325   P       P       09 57 53.9  -0.2
OBN   Obninsk           85.00 325  ⇓P       P       09 57 54.8  +0.8
OBN   Obninsk           85.00 325d iP       P       09 57 53.8  -0.2
OBN                                 pmax    pmax
      comp=Z,189nm,1.7s
OBN                                 MLR     MLR
      comp=Z,160nm,18.0s
OBN   Obninsk           85.00 325   P       P       09 57 54.7  +0.7
      comp=Z,2μmcomp=Z,95nm,1.7s
G27K  Doyon Strip       85.05  23   IAmb    IAmb    09 57 57.3
      comp=Z,30nm,1.2s
G27K  Doyon Strip       85.05  23   P       P       09 57 54.8  +0.7
      baz=274,SNR=16
LVZ   Lovozero          85.06 338ceP        P       09 57 53.8  -0.3
LVZ                                 pmax    pmax
      comp=Z,31nm,1.1s
K27K  Chicken           85.07  26   P       P       09 57 54.8  +0.6
      baz=274
ANN   Anapa             85.10 314  eP       P       09 57 53.6  -1.2
ANN                                eS       SKSac   10 08 08.6  -2.6
ANN                                 pmax    pmax
      comp=Z,80nm,1.1s
D27M  Malcolm River     85.13  21   P       P       09 57 54.3  -0.2
      baz=274
H27K  Steamboat Moun    85.15  24   P       P       09 57 55.4  +0.8
      baz=274,SNR=23
I27K  Kandik River      85.16  25   P       P       09 57 54.8  +0.1
      baz=274,SNR=42
L27K  Beaver Creek,     85.25  27   P       P       09 57 55.5  +0.3
      baz=274,SNR=18
BCAR  Beaver Creek A    85.27  27   P       P       09 57 55.4  +0.1
M27K  Edge Creek, AK    85.28  28   P       P       09 57 55.9  +0.4
      baz=274,SNR=7.8
MESA  MESA              85.41  30   P       P       09 57 56.5  +0.3
      baz=274
APA   Apatity           85.56 337⇓iP        P       09 57 54.5  -2.0
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APA                                 pmax    pmax
      comp=Z,23nm,0.9s
CTG   Chitna Glacier    85.64  29   P       P       09 57 57.9  +0.6
      baz=275,SNR=23
E28M  Babbage River     85.70  22   IAmb    IAmb    09 58 42.3
      comp=Z,33nm,1.1s
E28M  Babbage River     85.70  22   P       P       09 57 57.7  +0.4
      baz=276,SNR=9.0
BVCY  Beaver Creek      85.75  28   P       P       09 57 57.3  -0.4
      baz=275
LOGN  Logan Glacier     85.82  29   IAmb    IAmb    09 58 55.5
      comp=Z,31nm,1.0s
VNDA  Vanda             85.86 173   P       P       09 57 58.5  +0.7
VNDA  Vanda             85.86 173   P       P       09 57 57.5  -0.3
      comp=Z,11nm,0.8s,baz=315,slow=5.7,SNR=38
      comp=Z,11nm,0.8s
VNDA  Vanda             85.86 173   P       P       09 57 58.5  +0.7
VNDA                                pmax    pmax
      comp=Z,18nm,1.1s
I28M  Miner Creek       85.87  25   P       P       09 57 58.7  +0.5
      baz=276,SNR=50
D28M  Stokes Point      85.91  21   P       P       09 57 57.8  -0.4
      baz=277
PPT   Papeete           85.99 108   LR      LR      10 27 28.5
      comp=Z,67nm,21.2s,baz=294,slow=29
YUK3  Moose Creek       85.99  28   P       P       09 57 59.0  -0.1
      baz=276
MAW   Mawson            86.00 200   P       P       09 57 58.6   0.0
      comp=Z,9.0nm,1.0s,baz=61,slow=6.6,SNR=12
      comp=Z,9.0nm,1.0s
O28M  Mount Upton       86.22  29   IAmb    IAmb    09 58 59.4
      comp=Z,20nm,0.9s
O28M  Mount Upton       86.22  29   P       P       09 57 59.9  -0.4
      baz=276
DAWY  Dawson            86.24  26   P       P       09 58 00.1   0.0
      baz=276,SNR=13
PINM  Pinnacle          86.26  30   P       P       09 57 59.6  -0.7
      baz=276
E29M  Blow River        86.33  22   IAmb    IAmb    09 58 38.8
      comp=Z,50nm,1.6s
E29M  Blow River        86.33  22   P       P       09 57 59.5  -0.9
      baz=277
YUK8  Steele Glacier    86.38  29   P       P       09 58 00.8  -0.3
      baz=276
H29M  Whitestone        86.42  24   IAmb    IAmb    09 58 44.9
      comp=Z,26nm,0.9s
H29M  Whitestone        86.42  24   P       P       09 58 00.4  -0.5
      baz=277,SNR=9.3
G29M  Pine Creek        86.47  23   P       P       09 58 00.4  -0.7
      baz=277,SNR=18
I29M  Ogilvie Camp,     86.55  25   IAmb    IAmb    09 58 04.1
      comp=Z,20nm,0.9s
I29M  Ogilvie Camp,     86.55  25   P       P       09 58 01.0  -0.6
      baz=277,SNR=19
J29N  Klondike Camp     86.71  26   P       P       09 58 01.7  -0.7
      baz=277
PNL   Peninsula         86.73  30   P       P       09 58 02.0  -0.6
      baz=277
SBA   Scott Base        86.77 172   P       P       09 58 03.4  +1.1
SBA                                 IAmb    IAmb    09 58 26.7
      comp=Z,28nm,1.3s
SBA   Scott Base        86.77 172   P       P       09 58 03.4  +1.1
SBA                                 pmax    pmax
      comp=Z,28nm,1.3s
M29M  Somme Creek       86.85  28   P       P       09 58 02.9  -0.3
      baz=277,SNR=8.9
YUK4  Talbot Arm        86.90  29   P       P       09 58 02.7  -0.9
      baz=277
L29M  L29M              86.92  27   P       P       09 58 03.2  -0.2
      baz=278,SNR=10
EPYK  Eagle Plains      87.06  24   IAmb    IAmb    09 58 38.8
      comp=Z,28nm,1.0s
EPYK  Eagle Plains      87.06  24   P       P       09 58 04.3  +0.3
      baz=279,SNR=12
O29M  Mount Kennedy     87.07  30   P       P       09 58 03.5  -0.8
      baz=277
K29M  Barlow Dome       87.09  26   P       P       09 58 04.0  -0.3
      baz=278,SNR=9.7
YUK6  Outpost Mounta    87.09  29   P       P       09 58 03.2  -1.3
      baz=277
G30M  tAoh Zraii Nji    87.16  23   P       P       09 58 03.6  -1.0
      baz=279,SNR=5.8
F30M  Barrier River     87.23  22   IAmb    IAmb    09 58 56.5
      comp=Z,22nm,0.9s
F30M  Barrier River     87.23  22   P       P       09 58 04.3  -0.5
      baz=279,SNR=9.5
I30M  Mount Dempster    87.38  25   P       P       09 58 05.1  -0.5
      baz=279,SNR=7.4
SIM   Simferopol'       87.44 315  eP       P       09 58 06.4  +0.1
SIM                                 pmax    pmax
      comp=Z,20nm,1.1s
J30M  Hart River        87.50  25   P       P       09 58 06.4  +0.1
      baz=279,SNR=6.7
HYT   Haines Junctio    87.52  29   P       P       09 58 06.4   0.0
      baz=278
P29M  Windy Craggy      87.58  30   P       P       09 58 06.1  -0.5
      baz=278
N30M  Aishikik Lake     87.63  29   P       P       09 58 06.0  -0.9
      baz=278,SNR=5.2
MMAI  Mount Meron Ar    87.68 303   P       P       09 58 06.8  -1.0
      comp=Z,2.9nm,0.8s,baz=20,slow=8.0,SNR=4.3
      comp=Z,2.9nm,0.8s
GHAJ  Ghor Haditha      87.71 301   IAmb    IAmb    09 58 37.7
      comp=Z,30nm,0.9s
PUL   Pulkovo           87.87 330⇑eP        P       09 58 09.1  +1.2
PUL                                 pmax    pmax
      comp=Z,63nm,0.7s
P30M  Million Dollar    87.89  30   P       P       09 58 06.5  -1.7
      baz=279
G31M  Satah River       87.93  23   IAmb    IAmb    09 58 09.3
      comp=Z,23nm,0.9s
G31M  Satah River       87.93  23   P       P       09 58 06.7  -1.3
      baz=281,SNR=14
INK   Inuvik            87.94  22   IAmb    IAmb    09 58 09.5
      comp=Z,20nm,0.9s
INK   Inuvik            87.94  22   LR      LR      10 40 17.0
      comp=Z,29nm,19.6s,baz=276,slow=38
INK   Inuvik            87.94  22   P       P       09 58 08.4  +0.3
INK                                 pmax    pmax
      comp=Z,22nm,1.0s
INK   Inuvik            87.94  22   P       P       09 58 07.4  -0.8
      baz=282,SNR=14
F31M  Tsiigehtchic      88.03  22   IAmb    IAmb    09 58 09.7
      comp=Z,28nm,1.0s
F31M  Tsiigehtchic      88.03  22   P       P       09 58 07.3  -1.2
      baz=281,SNR=9.8
SPITS Spitsbergen Ar    88.06 349   P       P       09 58 04.6  -4.0
      comp=Z,11nm,0.9s,baz=98,slow=6.0,SNR=7.9
SPITS                               LR      LR      10 42 15.7
      comp=Z,155nm,21.7s,baz=8.5,slow=39
H31M  Peel River        88.11  24   P       P       09 58 07.3  -1.8
      baz=281
ARA0  ARCESS Array S    88.12 340  eP       P       09 58 08.4  -0.6
ARCES ARCESS Array B    88.12 340   P       P       09 58 08.5  -0.5
ARCES ARCESS Array B    88.12 340   P       P       09 58 07.7  -1.3
      comp=Z,30nm,0.9s,baz=76,slow=6.4,SNR=25
      comp=Z,30nm,0.9s
ARCES ARCESS Array B    88.12 340   P       P       09 58 08.5  -0.5
ARCES                               pmax    pmax
      comp=Z,40nm,1.0s
ILGA  Ilgaz             88.16 311   IAmb    IAmb    09 59 10.6
      comp=Z,29nm,1.0s
SGF   Sodankyl          88.19 338   P       P       09 58 09.0  -0.3
SGF                                 pmax    pmax
      comp=Z,53nm,1.4s
O30N  Mendenhall        88.22  29   P       P       09 58 08.6  -1.1
      baz=279
KIRS  Kirsehir-Merke    88.22 309  ⇓P       P       09 58 05.5  -4.7
N31M  Braeburn, Yuko    88.25  28   IAmb    IAmb    09 59 06.3
      comp=Z,30nm,1.4s
N31M  Braeburn, Yuko    88.25  28   P       P       09 58 09.7  -0.1
      baz=280
PLBC  Pleasant Camp     88.29  30   P       P       09 58 09.6  -0.4
      baz=279
BR104 Keskin Array S    88.37 310   P       P       09 58 11.9  +0.9
      comp=Z,71nmcomp=Z,8.2nm,0.8s
BR131 Keskin Array S    88.37 310   P       P       09 58 10.3  -0.6
BR131 Keskin Array S    88.37 310   P       P       09 58 11.4  +0.4
      SNR=9.1
BR131 Keskin Array S    88.37 310ceP        P       09 58 11.4  +0.4
BRTR  Keskin Array B    88.37 310   P       P       09 58 10.4  -0.6
BRTR  Keskin Array B    88.37 310   P       P       09 58 09.4  -1.6
      comp=Z,4.0nm,0.9s,baz=109,slow=4.5,SNR=18
      comp=Z,4.0nm,0.9s
BRTR  Keskin Array B    88.37 310  i P      P       09 58 10.3  -0.7
BRTR                                pmax    pmax
      comp=Z,5.0nm,1.0s
BR106 Keskin Array S    88.39 310   P       P       09 58 11.8  +0.7
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      comp=Z,48nmcomp=Z,6.3nm,0.9s
BR105 Keskin Array S    88.39 310    P       P       09 58 11.6 +0.5
      comp=Z,67nmcomp=Z,8.5nm,0.9s
S31K  Pelican           88.60  32    P       P       09 58 11.0 -0.5
      baz=279
M31M  Drury Creek, Y    88.77  28    P       P       09 58 11.8 -0.4
      baz=281
SKAG  Skagway           88.81  30    P       P       09 58 11.6 -0.8
      baz=280
WHY   Whitehorse        88.82  29    IAmb    IAmb    09 58 38.0
      comp=Z,16nm,0.8s
WHY   Whitehorse        88.82  29    P       P       09 58 12.1 -0.5
      baz=280
OUL   Oulu              88.93 335    P       P       09 58 14.0 +1.2
OUL                                  pmax    pmax
      comp=Z,29nm,1.0s
KTK1  Kautokeino        89.03 339   eP       P       09 58 12.8 -0.5
CSS   Mathiatis         89.17 305    IAmb    IAmb    09 58 32.4
      comp=Z,19nm,1.1s
SIT   Sitka             89.24  33    P       P       09 58 14.3 -0.2
      baz=280
FARO  Faro, Yukon       89.24  27    IAmb    IAmb    09 58 16.4
      comp=Z,20nm,0.9s
FARO  Faro, Yukon       89.24  27    P       P       09 58 14.0 -0.4
      baz=282
R32K  Eaglecrest        89.44  31    P       P       09 58 14.8 -0.7
      baz=281
KMBO  Kilima Mbogo      89.47 269    P       P       09 58 15.5 -1.3
KMBO  Kilima Mbogo      89.47 269    P       P       09 58 15.5 -1.3
KMBO                                 pmax    pmax
      comp=Z,18nm,1.3s
S32K  Killisnoo         89.56  32    P       P       09 58 14.8 -1.2
      baz=281
N32M  Quiet Lake        89.59  28    IAmb    IAmb    09 58 18.1
      comp=Z,23nm,0.9s
N32M  Quiet Lake        89.59  28    P       P       09 58 15.2 -0.9
      baz=282
P32M  Atlin             89.60  30    P       P       09 58 15.0 -1.2
      baz=282
FIA1  FINESS Array S    89.62 332    P       P       09 58 16.0 -0.1
FINES FINESS Array B    89.63 332    P       P       09 58 15.8 -0.3
FINES FINESS Array B    89.63 332    P       P       09 58 15.1 -1.1
      comp=Z,4.6nm,0.5s,baz=73,slow=3.5,SNR=27
      comp=Z,4.6nm,0.5s
FINES FINESS Array B    89.63 332  i P       P       09 58 16.1 -0.1
FINES                                pmax    pmax
      comp=Z,5.0nm,0.5s
A36M  Sachs Harbour     89.70  17    P       P       09 58 16.9 +0.6
A36M                                 IAmb    IAmb    09 59 07.6
      comp=Z,30nm,1.1s
A36M  Sachs Harbour     89.70  17    P       P       09 58 15.1 -1.2
      baz=289
JETT  Jettan, Norway    89.84 340   eP       P       09 58 16.8 -0.3
P33M  Teslin, Yukon     89.91  29    P       P       09 58 16.8 -0.9
      baz=282
AK08  Malin Array Si    89.91 321    P       P       09 58 17.8  0.0
VSU   Vasula            89.92 329ceP         P       09 58 16.6 -1.0
VSU                                  pmax    pmax
      comp=Z,32nm,0.9s
AK10  Malin Array Si    89.92 321    P       P       09 58 18.0 +0.2
AKASG Malin Array Be    89.92 321    P       P       09 58 17.1 -0.7
AKASG                                IAmb    IAmb    09 58 40.9
      comp=Z,22nm,1.1s
AKASG Malin Array Be    89.92 321    P       P       09 58 16.7 -1.1
      comp=Z,10nm,0.8s,baz=72,slow=4.3,SNR=42
      comp=Z,10nm,0.8s
AKASG Malin Array Be    89.92 321  i P       P       09 58 18.1 +0.3
AKASG                                pmax    pmax
      comp=Z,11nm,0.8s
AKBB  Malin Array Si    89.92 321    IAmb    IAmb    09 58 40.6
      comp=Z,34nm,1.1s
AKBB  Malin Array Si    89.92 321deP         P       09 58 16.8 -1.0
AKBB  Malin Array Si    89.92 321    P       P       09 58 17.9 +0.1
AK01  Malin Array Si    89.93 321    P       P       09 58 17.8  0.0
KIEV  Kiev              89.93 321    P       P       09 58 17.5 -0.3
KIEV                                 IAmb    IAmb    09 58 40.6
      comp=Z,28nm,1.1s
KIEV  Kiev              89.93 321  ⇑P        P       09 58 17.1 -0.7
KIEV  Kiev              89.93 321    P       P       09 58 17.5 -0.3
KIEV                                 pmax    pmax
      comp=Z,28nm,1.1s
KIEV  Kiev              89.93 321    P       P       09 58 17.9 +0.1
      comp=Z,103nm,1.1s
AK07  Malin Array Si    89.96 321    P       P       09 58 18.1 +0.1
AK21  Malin Array Si    90.02 321    P       P       09 58 18.0 -0.3
AK17  Malin Array Si    90.03 321    P       P       09 58 18.2 -0.1
MNK   Minsk             90.06 325  i P       P       09 58 17.5 -0.9
      comp=E,14nm,0.8s
MNK                                i P       P       09 58 17.5 -0.9
      comp=N,9.0nm,0.9s
MNK                                i P       P       09 58 17.5 -0.9
      comp=Z,13nm,0.8s,baz=79
MNK                                i pP      pwP     09 58 44.1 -0.7
MNK                                i sP      sP      09 58 53.3 +1.2
MNK                                i PP      PP      10 01 51.6 -0.9
MNK                                i PPP     PPP     10 03 49.0
MNK                                i SKS             10 07 55.9
MNK                                i S       SKSac   10 08 39.5 -1.5
MNK                                i sS      pS      10 09 36.0 +0.6
MNK                                i PS      PS      10 10 21.9 -0.1
MNK                                i SS      SS      10 16 21.9  +78
MNK                                i SSS     SSS     10 19 15.4
MNK                                i LQ      LQ      10 31 36.4
MNK   Minsk             90.06 325  i P       P       09 58 17.4 -0.9
MNK                                i *SP     sP      09 58 53.2 +1.2
MNK                                i                 10 01 51.5
MNK                                i PPP     PPP     10 03 49.0
MNK                                i S       SKSac   10 08 39.4 -1.5
MNK                                i PS      PS      10 10 21.8 -0.1
MNK                                  pmax    pmax
      comp=E,14nm,0.8s
MNK                                  pmax    pmax
      comp=Z,13nm,0.8s
MNK                                  pmax    pmax
      comp=N,9.0nm,0.9s
MNK                                  MLR     MLR
      comp=Z,173nm,19.0s
MNK                                  MLR     MLR
      comp=N,146nm,17.0s
MNK                                  MLR     MLR
      comp=E,107nm,19.0s
MMPY  Sheldon Lake,     90.10  27    P       P       09 58 17.2 -1.3
      baz=284
TRO   Tromso            90.31 341   eP       P       09 58 19.1 -0.1
Q32M  Nakina River      90.46  31    P       P       09 58 19.7 -0.7
      baz=283
NACGM Naroch            90.61 325   eP       P       09 58 20.6 -0.3
      comp=Z,11nm,0.9s,baz=78
U33K  Whale Pass        90.62  33    P       P       09 58 20.3 -0.6
      baz=282
NOR   Nord              90.65 355    P       P       09 58 20.1 -0.5
NOR                                  pmax    pmax
      comp=Z,16nm,1.2s
NOR   Nord              90.65 355  i P       P       09 58 19.6 -1.0
NOR                                  IAmb    IAmb    09 58 21.0
      comp=Z,17nm,1.2s
CRAG  Craig             90.75  34    P       P       09 58 19.7 -1.8
      baz=282
MI28  Mi28,Pidlybu      90.85 321    P       P       09 58 22.3 +0.2
LODK  Lodwar            90.87 274    P       P       09 58 21.9 -1.2
WRAK  Wrangell Islan    90.97  33    P       P       09 58 21.3 -1.3
      baz=283
LUBAR Lubar, Ukraine    90.99 320    P       P       09 58 22.8  0.0
R33M  Jennings River    91.01  30    P       P       09 58 22.7 -0.2
      baz=284
S34M  Telegraph Cree    91.28  31    P       P       09 58 23.8 -0.1
      baz=284
TPGR  Topolog           91.46 315  ⇑P        P       09 58 25.9 +0.8
CFR   Carcaliu          91.60 316  ⇑P        P       09 58 26.2 +0.5
CFR   Carcaliu          91.60 316  ⇑P        P       09 58 26.2 +0.5
V35K  Ketchikan         91.62  34    P       P       09 58 25.2 -0.4
      baz=283
DLBC  Dease Lake        91.72  31    LR      LR      10 35 16.0
      comp=Z,60nm,21.8s,baz=293,slow=33
DLBC  Dease Lake        91.72  31    P       P       09 58 25.5 -0.6
      baz=285
TGTN  Hyland Airport    91.75  28    P       P       09 58 25.8 -0.3
      baz=286
RNPP9 Sopachiv          91.85 322    P       P       09 58 27.5 +0.8
WTLY  Watson Lake, Y    91.89  29    IAmb    IAmb    09 58 28.6
      comp=Z,14nm,1.0s
WTLY  Watson Lake, Y    91.89  29    P       P       09 58 26.5 -0.3
      baz=286
RNPP8 Varash            91.89 322    P       P       09 58 27.8 +0.9
RNPP5 Staryi Chortor    91.90 322    P       P       09 58 27.6 +0.6
T35M  Bob Quinn         91.97  32    P       P       09 58 26.9 -0.3
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      baz=284
STEI  Steigen           92.17 339   eP       P       09 58 26.9 -0.9
EUNU  Eureka            92.27   5    IAmb    IAmb    09 58 29.8
      comp=Z,17nm,1.1s
TESR  Tescani           92.37 317  ⇓P        P       09 58 29.7 +0.4
VRI   Vrincioaia        92.44 316  ⇑P        P       09 58 30.9 +1.3
VRI   Vrincioaia        92.44 316  ⇑P        P       09 58 30.9 +1.3
MANT  Manisa            92.46 309    IAmb    IAmb    09 59 12.7
      comp=Z,12nm,1.0s
PLOR  Plostina          92.50 316  ⇑P        P       09 58 29.6 -0.4
PLOR  Plostina          92.50 316  ⇑P        P       09 58 29.6 -0.4
SUW   Suwalki           92.86 325   eP       P       09 58 30.2 -1.1
TURR  Turia             92.89 317  ⇑P        P       09 58 31.4 -0.4
MLR   Muntele Rosu      93.06 316  ⇓P        P       09 58 33.8 +1.2
MLR   Muntele Rosu      93.06 316  ⇓P        P       09 58 33.8 +1.2
BURAR Bucovina Array    93.10 318    P       P       09 58 32.2 -0.6
BURAR Bucovina Array    93.10 318  ⇑P        P       09 58 33.8 +1.1
BURAR Bucovina Array    93.10 318  ⇑P        P       09 58 33.8 +1.1
BUR08 Bucovina Ar. S    93.10 318    IAmb    IAmb    09 59 06.2
      comp=Z,11nm,1.0s
WRGLY Wrigley           93.34  25    P       P       09 58 32.9 -0.5
      baz=291
LIRD  Liard River Hi    93.40  29    P       P       09 58 33.2 -0.6
      baz=288
BEAVL Fort Liard        93.65  28    P       P       09 58 34.8 -0.1
      baz=289
VOIR                    93.68 316    P       P       09 58 35.6 +0.1
VOIR                                 pmax    pmax
      comp=Z,5.0nm,1.8s
TOAD  Toad River Com    94.00  30    P       P       09 58 36.6  0.0
      baz=289
KOTAN Kotaneelee Air    94.14  28    P       P       09 58 37.1  0.0
      baz=290
KWP   Kalwaria Pacla    94.24 321   eP       P       09 58 38.2 +0.4
KWP   Kalwaria Pacla    94.24 321    P       P       09 58 39.0 +1.2
BBB   Bella Bella       94.42  37    LR      LR      10 44 35.2
      comp=Z,54nm,18.0s,baz=280,slow=38
SYO   Syowa Base        94.65 201⇑iP         P       09 58 39.6 +0.4
SYO   Syowa Base        94.65 201⇑ePcP       PcP     09 58 42.0 +2.5
KOLS  Kolonicke sedl    94.70 320   eP       P       09 58 43.1 +3.2
KOLS  Kolonicke sedl    94.70 320   eP       P       09 58 43.1 +3.2
KOLS                                e                09 59 02.4
MARR  Marisel-Cluj      94.71 318  ⇓P        P       09 58 40.5 +0.3
DAG   Danmarks Havn     94.82 352    P       P       09 58 39.2 -0.7
DAG                                  pmax    pmax
      comp=Z,41nm,1.1s
DAG   Danmarks Havn     94.82 352  i P       P       09 58 38.1 -1.8
DAG                                  IAmb    IAmb    09 58 40.2
      comp=Z,28nm,0.9s
DRGR                    94.95 318    P       P       09 58 41.2  0.0
DRGR                                 pmax    pmax
      comp=Z,9.0nm,1.5s
RES   Resolute Bay      95.44  10    LR      LR      10 46 57.0
      comp=Z,30nm,19.4s,baz=26,slow=39
RES   Resolute Bay      95.44  10    P       P       09 58 42.9 +0.2
RES                                  pmax    pmax
      comp=Z,12nm,1.2s
SURR  Surduc            95.61 317  ⇓P        P       09 58 44.3 +0.2
HFS   Hagfors           95.80 332    P       P       09 58 43.5 -1.2
      comp=Z,18nm,0.9s,baz=76,slow=6.3,SNR=21
      comp=Z,18nm,0.9s
NIE   Niedzica          95.81 321   eP       P       09 58 45.0 -0.1
NIE   Niedzica          95.81 321    P       P       09 58 46.7 +1.6
NIE                                  pmax    pmax
      comp=Z,5.0nm,1.2s
OJC   Ojcow             95.89 322   eP       P       09 58 46.2 +0.8
OJC   Ojcow             95.89 322    P       P       09 58 45.6 +0.2
OJC                                  pmax    pmax
      comp=Z,21nm,1.1s
KECS  Kecovo            95.96 320   eP       P       09 58 45.9 +0.2
KECS  Kecovo            95.96 320   eP       P       09 58 45.9 +0.2
BZS   Buzias            95.98 317  ⇑P        P       09 58 46.3 +0.5
BZS   Buzias            95.98 317  ⇑P        P       09 58 46.3 +0.5
QSPA  South Pole Qui    96.07 180    P       P       09 58 46.6 +0.8
      comp=Z,19nm,1.0s,baz=334,slow=1.9,SNR=30
QSPA                                 PP      PP      10 02 38.3 -1.2
      comp=Z,3.7nm,1.0s,baz=31,slow=2.6,SNR=3.4
QSPA                                 S       SKSac   10 09 13.7  0.0
      comp=Z,2.8nm,1.2s,baz=14,slow=18,SNR=8.6
      comp=Z,19nm,1.0s
MDVR  Moldovita         96.13 316  ⇓P        P       09 58 45.9 -0.7
NC405 NORSAR Array S    96.30 334    P       P       09 58 46.0 -1.0
BOVS  Bovan             96.43 315  ⇑P        P       09 58 46.3 -1.6
NEEM  North Greenlan    96.49 359  i P       P       09 58 47.1 -0.8
NEEM                                 IAmb    IAmb    09 58 48.9
      comp=Z,16nm,0.9s
NB2   NORSAR Subarra    96.55 334    P       P       09 58 46.9 -1.2
      comp=Z,16nm,1.0s,baz=65,slow=4.4
NB2   NORSAR Subarra    96.55 334    P       P       09 58 46.9 -1.2
      baz=65,slow=4.4
NOA   NORSAR Array B    96.55 334    P       P       09 58 46.3 -1.8
      comp=Z,7.8nm,0.9s,baz=65,slow=4.5,SNR=19
NOA                                  LR      LR      10 47 08.4
      comp=Z,132nm,18.2s,baz=195,slow=38
      comp=Z,7.8nm,0.9s
VYHS  Vyhne             97.00 320   eP       P       09 58 51.4 +0.9
VYHS  Vyhne             97.00 320   eP       P       09 58 51.4 +0.9
VYHS                                e                09 59 13.4
DBG   Daneborg          97.10 351  i P       P       09 58 49.3 -1.0
DBG                                  IAmb    IAmb    09 58 51.0
      comp=Z,14nm,1.0s
STEB  Steborice         97.22 322   eP       Pdif    09 58 52.2 +0.7
YKA   Yellowknife Ar    97.33  24    P       P       09 58 50.9 -0.7
      comp=Z,3.6nm,0.8s,baz=305,slow=5.2,SNR=20
YKA                                  PKKPbc  PKKPbc  10 15 27.8 -4.3
      comp=Z,1.8nm,0.9s,baz=85,slow=1.8,SNR=6.6
      comp=Z,3.6nm,0.8s
YKA   Yellowknife Ar    97.33  24  i P       Pdif    09 58 51.9 +0.3
YKA                                  pmax    pmax
      comp=Z,4.0nm,0.9s
MORC  Moravsky Berou    97.42 322    IAmb    IAmb    09 59 16.2
      comp=Z,13nm,1.2s
MORC  Moravsky Berou    97.42 322   eP       P       09 58 51.5 -0.8
MORC                                e                09 59 14.2
MORC  Moravsky Berou    97.42 322    P       P       09 58 51.2 -1.1
MORC                                 pmax    pmax
      comp=Z,9.0nm,1.4s
JAVC  Velka Javorina    97.63 321   eP       Pdif    09 58 55.3 +1.9
KRLC  Kraliky           97.78 322    P       Pdif    09 58 55.3 +1.3
KRLC                                 pmax    pmax
      comp=Z,6.0nm,1.1s
AKN   Aaknes            97.82 336   eP       P       09 58 53.8 -0.1
KSP   Ksiaz             97.82 323   eP       Pdif    09 58 54.5 +0.4
KSP   Ksiaz             97.82 323    P       Pdif    09 58 54.5 +0.4
KSP                                  pmax    pmax
      comp=Z,18nm,1.4s
DPC   Dobruska-Polom    97.97 323   eP       Pdif    09 58 55.8 +1.0
DPC                                  AMS     AMS     10 39 40.0
      comp=Z,200nm,20.9s
DPC   Dobruska-Polom    97.97 323   eP       Pdif    09 58 55.8 +1.0
DPC                                  MLR     MLR
      comp=Z,200nm,20.9s
UPC   Upice             98.10 323    AMS     AMS     10 41 50.0
      comp=Z,300nm,16.6s
VRAC  Vranov            98.15 322   eP       Pdif    09 58 56.6 +1.0
VRAC                                e                09 59 17.5
VRAC  Vranov            98.15 322    P       Pdif    09 58 56.2 +0.6
VRAC                                 pmax    pmax
      comp=Z,10.0nm,1.6s
KRUC  Moravsky          98.36 321   eP       Pdif    09 58 57.2 +0.7
KRUC  Moravsky          98.36 321    P       Pdif    09 58 57.6 +1.1
KRUC                                 pmax    pmax
      comp=Z,10.0nm,1.6s
TREC  Trest             98.84 322    P       Pdif    09 59 00.1 +1.4
TREC                                 pmax    pmax
      comp=Z,8.0nm,0.9s
PVCC  Panska Ves        98.96 323    P       Pdif    09 59 00.4 +1.2
PVCC                                 pmax    pmax
      comp=Z,13nm,1.1s
PRU   Pruhonice         99.17 323    P       Pdif    09 59 01.1 +1.0
PRU                                  pmax    pmax
      comp=Z,9.0nm,1.7s
BRG   Berggiesshubel    99.20 324    P       Pdif    09 59 00.5 +0.3
BRG                                  pmax    pmax
      comp=Z,11nm,1.5s
BRG   Berggiesshubel    99.20 324    P       Pdif    09 59 18.5  +18
BRG                                  Amp             09 59 24.1
      comp=Z,12nm,1.1s
BRG   Berggiesshubel    99.20 324    P       PKiKP   10 03 32.5 +2.7
BRG                                  Amp             10 03 34.3
      comp=Z,8.6nm,1.3s
BRG   Berggiesshubel    99.20 324⇓ePif               09 59 00.9
BRG   Berggiesshubel    99.20 324    Amp             09 59 04.3
      comp=Z,3.8nm,0.9s
CLL   Collm             99.59 324  i P       Pdif    09 59 01.6 -0.3
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CLL                                 eS       S       10 10 21.0 -6.2
CLL                                  pmax    pmax
      comp=Z,7.0nm,1.5s
CLL   Collm             99.59 324  i Pdif    Pdif    09 59 01.6 -0.3
      comp=Z,7.0nm,1.5s
CLL                                i x       x       09 59 12.6
CLL                                i x       x       09 59 19.6
CLL                                i (pPdif)         09 59 28.2
CLL                                 ePP      PP      10 03 06.0 -0.5
CLL                                 esPP             10 03 35.0
CLL                                 ePPPP            10 06 55.0
CLL                                 eSdif    S       10 10 21.0 -6.2
CLL                                 ex       x       10 11 10.0
CLL                                 ePS      PS      10 12 17.0  +11
CLL                                 ePPS     PPS     10 12 51.0
CLL                                 eSS      SS      10 17 36.0  +17
CKRC  Cesky Krumlov     99.73 322   eP       Pdif    09 59 03.3 +0.6
CKRC                                 AMS     AMS     10 45 00.0
      comp=Z,200nm,19.2s
CKRC  Cesky Krumlov     99.73 322   eP       Pdif    09 59 03.3 +0.6
CKRC                                 MLR     MLR
      comp=Z,200nm,19.2s
KHC   Kasperske Hory   100.07 322   eP       Pdif    09 59 04.8 +0.6
KHC                                 epP      pPdif   09 59 26.5 -1.8
KHC                                  AMS     AMS     10 43 40.0
      comp=Z,300nm,20.4s
KHC   Kasperske Hory   100.07 322   eP       Pdif    09 59 04.8 +0.6
KHC                                  MLR     MLR
      comp=Z,300nm,20.4s
GERES GERESS Array B   100.10 322    P       Pdif    09 59 04.0 -0.4
      comp=Z,2.6nm,0.8s,baz=101,slow=2.7,SNR=13
GERES GERESS Array B   100.10 322    P       Pdif    09 59 04.0 -0.4
WET   Wettzell         100.49 322    P       Pdif    09 59 06.6 +0.6
WET                                  pmax    pmax
      comp=Z,5.0nm,1.3s
SCO   Scoresbysund     100.62 350  i P       Pdif    09 59 07.2 +1.1
SUMG  Summit           100.80 355   eP       Pdif    09 59 07.6 +0.2
GRF   Grafenberg Arr   101.27 323   ePdiff   Pdif    09 59 09.4 -0.1
NVAR  Mina Array Bea   105.37  48    Pdiff   Pdif    09 59 25.6 -2.6
      comp=Z,0.4nm,0.8s,baz=248,slow=4.0,SNR=3.6
NVAR                                 PKKPbc  PKKPbc  10 15 07.3 -1.0
      comp=Z,0.4nm,0.7s,baz=166,slow=3.7,SNR=2.9
NVAR                                 PKKP    PKKPdf  10 15 19.0 +0.5
      comp=Z,1.7nm,0.8s,baz=127,slow=4.4,SNR=10.0
EKA   Eskdalemuir Ar   106.00 333    PKiKP   PKiKP   10 03 42.1  0.0
      comp=Z,1.5nm,0.8s,baz=64,slow=7.5,SNR=3.6
SNAA  Sanae            107.54 195    PKKP            10 15 12.4
      comp=Z,1.7nm,0.8s,baz=287,slow=8.8,SNR=3.9
PDAR  Pinedale Array   109.59  40    PKiKP   PKiKP   10 03 48.8 -0.8
      comp=Z,1.1nm,1.1s,baz=19,slow=5.0,SNR=4.1
PDAR                                 PKKPbc  PKKPbc  10 14 52.9 -2.5
      comp=Z,0.7nm,0.9s,baz=105,slow=5.1,SNR=4.8
PDAR                                 PKKP    PKKPab  10 15 04.0 -3.2
      comp=Z,1.0nm,0.7s,baz=117,slow=5.2,SNR=9.9
ULM   Lac du Bonnet    112.88  28    PKiKP   PKiKP   10 03 54.3 -0.9
      comp=Z,0.7nm,0.4s,baz=340,slow=12,SNR=3.2
ESDC  Sonseca Array    115.53 319    PKKPbc  PKKPbc  10 14 34.2 -1.0
      comp=Z,1.7nm,1.0s,baz=256,slow=3.6,SNR=7.9
SCHQ  Schefferville    118.18   9    PKP     PKPdf   10 04 04.9 -0.4
      comp=Z,5.7nm,0.8s,baz=246,slow=2.7,SNR=7.9
TXAR  Lajitas Array    120.19  51    PKP     PKPdf   10 04 10.0  0.0
      comp=Z,2.0nm,0.9s,baz=225,slow=1.3,SNR=19
TXAR                                 PKKPbc  PKKPbc  10 14 17.0 -1.4
      comp=Z,2.9nm,1.1s,baz=123,slow=4.6,SNR=14
TXAR                                 PKKP    PKKPdf  10 14 44.5 -5.9
      comp=Z,1.4nm,1.0s,baz=140,slow=7.9,SNR=4.3
TXAR  Lajitas Array    120.19  51    PKIKP   PKPdf   10 04 10.0  0.0
TORD  Torodi Ar. Bea   122.01 290    PKP     PKPdf   10 04 13.3 -0.4
      comp=Z,9.1nm,0.7s,baz=29,slow=3.2,SNR=8.9
DBIC  Dimbokro         129.91 284    PKP     PKPdf   10 04 27.0 -1.8
      comp=Z,11nm,1.0s,baz=64,slow=4.1,SNR=3.8
DBIC                                 SKPbc   SKPab   10 07 42.9 -0.1
      comp=Z,52nm,1.1s,baz=79,slow=4.9,SNR=12
PLCA  Paso Flores      142.32 158    PKP     PKPdf   10 04 48.3 -2.9
      comp=Z,8.1nm,0.9s,baz=281,slow=1.5,SNR=15
LMGC  Las Mercedes     145.08  41   eP       PKPbc   10 04 54.3 -1.8
PINC  Pinares de May   145.55  39   eP       PKPdf   10 04 55.4 -1.9
MTDJ  Mount Denham     146.01  44   eP       PKPdf   10 04 56.4 -1.9
QMBU  Quimbuelo        146.38  38   eP       PKPdf   10 04 59.4 +0.6
GTBY  Guantanamo Bay   146.39  39   eP       PKPbc   10 04 59.6 -0.5
MASC  Masc             146.75  38   eP       PKPdf   10 04 57.2 -2.1
SDDR  Presa de Saban   149.41  35   eP       PKPdf   10 05 03.9 +0.1
OTAV  Otavalo          154.19  77   eP       PKPdf   10 05 10.6 -1.1
ROSC  El Rosal         156.42  63    PKP     PKPdf   10 05 13.9 -0.6
      comp=Z,8.3nm,0.4s,baz=322,slow=1.7,SNR=9.7
ROSC  El Rosal         156.42  63    PKIKP   PKPdf   10 05 14.0 -0.6
CPUP  Villa Florida    159.61 170    PKP     PKPdf   10 05 18.2 +0.5
      comp=Z,0.4nm,0.6s,baz=225,slow=2.9,SNR=4.7
CPUP                                 PKPab   PKPab   10 05 57.5 +1.4
      comp=Z,5.0nm,0.9s,baz=264,slow=5.0,SNR=14
LPAZ  La Paz           162.42 126    PKP     PKPdf   10 05 20.5 -1.2
      comp=Z,6.5nm,1.1s,baz=20,slow=1.6,SNR=21
LPAZ                                 PKPab   PKPab   10 06 08.9 -0.7
      comp=Z,16nm,1.1s,baz=234,slow=1.7,SNR=6.3
BDFB  Brasilia         169.22 209    PKP     PKPdf   10 05 25.4 -1.1
      comp=Z,1.2nm,0.4s,baz=153,slow=11,SNR=2.1
BDFB                                 PKPab   PKPab   10 06 39.2 +0.5
      comp=Z,5.8nm,1.0s,baz=134,slow=4.3,SNR=3.3
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*LDO **01** 09:49:53.3±1.8, 39°.18N±0°.02×73°.73W±0°.04, h7^{km}±2^{km}, Error ellipse: s-maj=5.9km s-min=3.0km az=105.0*

NEIC 01 09:49:51.3±1.3**, 39°.17N**±0°.02×**73°.69W**±0°.05**, h10**^{km}±2^{km}**, ML2.4**/6**, ML2.0**/6(LDO)**, Error ellipse: s-maj=6.5km s-min=3.2km az=116.0, Off east coast of United States**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                     Op      ISC       h  m  s   ISC
P61A  Hammonton         0.99 301             Pg      09 50 09.4 -1.0
P61A                                         Sg      09 50 22.4 -0.9
P61A                                 IAML            09 50 23.9
      87nm,0.3s
PANJ  Princeton         1.44 327             Pn      09 50 17.5 +0.1
PANJ                                         Sn      09 50 34.7 -1.6
TUPA  Temple Univers    1.52 311             Pn      09 50 18.6  0.0
R61A  Willards          1.54 237             Pn      09 50 18.8  0.0
PSUB  Penn St. - Bra    1.56 300             Pn      09 50 19.6 +0.5
PSUB                                         Sn      09 50 38.5 -0.9
CPNY  Central Park      1.63 353             Pb      09 50 21.2 -0.4
CPNY                                         Sn      09 50 40.8 -0.4
P60A  Greenville        1.64 294             Pb      09 50 20.9 -0.7
P60A                                         Sn      09 50 41.1 -0.1
NED   Newark            1.65 289             Pb      09 50 21.1 -0.7
NED                                          Sn      09 50 41.4 -0.2
BRNJ  Basking Ridge     1.65 336             Pb      09 50 21.3 -0.6
BRNJ                                         Sn      09 50 42.2 +0.5
BRNJ  Basking Ridge     1.65 336     Pn      Pn      09 50 19.4 -1.0
WUPA  West Chester U    1.67 298             Pb      09 50 21.4 -0.7
WUPA                                         Sn      09 50 41.5 -0.5
WUPA  West Chester U    1.67 298     Pn      Pn      09 50 20.6  0.0
N62A  Caumsett State    1.77   5     Pn      Pn      09 50 22.4 +0.4
N62A                                 IAML            09 50 47.8
      47nm,0.6s
PAL   Palisades         1.84 355     Pn      Pn      09 50 23.5 +0.5
TRNY  Table Rock, Ra    2.01 348     Pn      Pn      09 50 25.1 -0.3
S61A  Accomac           2.15 227     Pn      Pn      09 50 26.8 -0.5
SDMD  Soldier's Deli    2.46 277     Pn      Pn      09 50 29.8 -1.6
KSCT  Kent School, K    2.56   3     Pn      Pn      09 50 32.7 -0.2
M63A  Gales Ferry       2.56  29     Pn      Pn      09 50 31.4 -1.4
UCCT  U. Connecticut    2.85  23     Pn      Pn      09 50 35.9 -0.9
N58A  Sunbury           2.86 307     Pn      Pn      09 50 36.1 -0.9
L61B  Northampton       3.36  13     Pn      Pn      09 50 42.5 -1.5
K62A  Royalston         3.66  17     Pn      Pn      09 50 47.1 -0.9
I62A  Tamworth          5.02  20     Pn      Pn      09 51 05.6 -1.1
LBNH  Lisbon            5.23  14     Pn      Pn      09 51 08.6 -1.1
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*IDC **01** 09:51:13.7±4.3, 17°.63S×173°.43W, h137^{km}±38^{km}, mb3.6/9, mbtmp4.1/10, Error ellipse: s-maj=34.3km s-min=20.7km az=135.0*

ISC 01 09:51:09.9±0.8**, 17°.7S**±0°.2×**173°.2W**±0°.2**, h100**^{km}**, n12, σ1.**^{s}**90**/13**, mb3.9**/9**, Tonga Islands**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                     Op      ISC       h  m  s   ISC
MSVF  Nonsavu           8.39 268     P       Pn      09 53 09.1 +0.3
      22nm,0.8s,baz=115,slow=14,SNR=15
URZ   Urewera          22.23 201     P       P       09 55 58.2 -0.2
      12nm,0.7s,baz=95,slow=16,SNR=14
      12nm,0.7s
URZ   Urewera          22.23 201     P       P       09 55 58.2 -0.2
STKA  Stephens Creek   43.16 242     P       P       09 59 00.0 -0.9
      4.5nm,1.0s,baz=90,slow=17,SNR=1.6
      4.5nm,1.0s
```

WRA	Warramunga Arr	49.60	259	P	P	09 59 48.5	-3.0
	1.3nm,0.9s,baz=95,slow=7.4,SNR=1.4						
	1.3nm,0.9s						
ASAR	Alice Springs	49.68	254	P	P	09 59 49.8	-2.3
	9.9nm,0.5s,baz=88,slow=8.5,SNR=50						
ASAR				pP	pP	10 00 20.7	+5.2
	1.9nm,0.8s,baz=86,slow=7.8,SNR=2.1						
ASAR				PcP	PcP	10 01 12.1	+0.1
	0.7nm,0.8s,baz=121,slow=3.7,SNR=2.3						
	9.9nm,0.5s						
PETK	Petropavlovsk-	74.84	342	P	P	10 02 38.6	-0.6
	2.1nm,1.0s,baz=196,slow=14,SNR=2.8						
	2.1nm,1.0s						
NVAR	Mina Array Bea	75.84	41	P	P	10 02 47.1	+1.5
	0.4nm,0.7s,baz=254,slow=7.4,SNR=2.5						
	0.4nm,0.7s						
TXAR	Lajitas Array	81.67	56	P	P	10 03 17.8	+0.2
	0.2nm,0.8s,baz=274,slow=5.0,SNR=2.2						
	0.2nm,0.8s						
PDAR	Pinedale Array	83.78	42	P	P	10 03 28.4	-0.1
	0.6nm,0.6s,baz=205,slow=3.3,SNR=4.6						
	0.6nm,0.6s						
ILAR	Eielson Array	84.60	11	P	P	10 03 31.0	-0.7
	0.5nm,1.0s,baz=257,slow=3.6,SNR=2.1						
	0.5nm,1.0s						
BRTR	Keskin Array B	148.03	319	PKPbc	PKPdf	10 10 40.8	-0.2
	0.5nm,0.7s,baz=108,slow=4.0,SNR=4.1						

BEO ***01*** *10:16:04.5±0.7, 40°.34N×20°.93E, h8^{km}±3^{km}, ML2.9/9*

TIR ***01*** *10:16:04.6, 40°.43N×20°.76E, h14^{km}±1^{km}, Ml3.1/4*

ATH ***01*** *10:16:06.3, 40°.49N×20°.84E, h3^{km}±1^{km}, Manual Solution by A.Andreou First location: 2019/06/01 10:16:23, This location: 2020/08/11 10:36:06 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

SKO ***01*** *10:16:06.8, 40°.40N×20°.86E, h1^{km}, ML2.9*

THE ***01*** *10:16:07.4, 40°.4N±1°.0×2°1E±°, h3^{km}±1^{km}, M2.7/9, MLh2.7/9*

ISC 01 10:16:05.5±0.8**, 40°.42N**±0°.01×**20°.84E**±0°.02**, h11**^{km}±5^{km}**, n72, σ1^{s}23**/107**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEST	Nestorio	0.16	91	Pg	Pb	10 16 09.6	-1.0
NEST				Sg	Sg	10 16 13.7	+2.0
NEST				AML	AML	10 16 15.5	
	23nm,0.2s						
NEST	Nestorio	0.16	91	P	Pb	10 16 09.7	-1.0
NEST				S	Sg	10 16 11.4	-0.3
NEST	Nestorio	0.16	91	P	Pb	10 16 09.6	-1.0
NEST				S	Sg	10 16 13.8	+2.1
KBN	Korca	0.21	349	Pg	Pg	10 16 08.6	-1.5
KBN				Sg	Sg	10 16 11.8	-1.3
KBN				AML	AML	10 16 12.5	
	49nm,0.3s						
PENT	Pentalofos	0.32	134	P	Pg	10 16 12.0	0.0
PENT				S	Sg	10 16 15.4	-0.8
PENT	Pentalofos	0.32	134	P	Pb	10 16 13.6	+0.3
PENT				S	Sb	10 16 18.5	-0.1
KPRO	Kipourio	0.61	139	P	Pg	10 16 16.8	-0.6
KPRO				S	Sb	10 16 25.7	-1.3
KPRO	Kipourio	0.61	139	P	Pn	10 16 19.5	-0.8
KPRO				S	Sn	10 16 28.8	-1.4
OHR	Ohrid	0.69	357	*i* Pg	Pg	10 16 18.3	-0.8
OHR				*i* Sg	Sg	10 16 28.7	+0.6
OHR				*e*Lg	Lg	10 16 29.4	
	comp=E,991nm,0.6s						
OHR				*e*Lg	Lg	10 16 29.7	
	comp=N,704nm,0.8s						
OHR	Ohrid	0.69	357	*e*Pg	Pg	10 16 18.2	-0.8
OHR				*e*Sg	Sb	10 16 29.3	-0.1
KZN	Kozani	0.72	99	P	Pb	10 16 20.2	0.0
KZN				S	Sb	10 16 29.0	-1.1
KZN	Kozani	0.72	99	P	Pn	10 16 21.2	-0.6
JAN	Janina	0.76	179	P	Pg	10 16 18.5	-1.7
JAN				S	Sb	10 16 30.3	-0.9
SRN	Sarande	0.84	230	Pg	Pg	10 16 20.0	-1.7
SRN				Sg	Sb	10 16 32.9	-0.5
SRN				AML	AML	10 16 35.1	
	comp=N,1.3nm,0.7s						
IGT	Igoumenitsa	0.97	204	Pg	Pg	10 16 23.7	-0.4
IGT				Sg	Sn	10 16 37.2	-1.6
IGT	Igoumenitsa	0.97	204	P	Pg	10 16 22.9	-1.2
IGT				S	Sn	10 16 37.5	-1.4
IGT	Igoumenitsa	0.97	204	*i* Pg	Pg	10 16 23.4	-0.7
IGT				*i* Sg	Sn	10 16 38.9	0.0
IGT	Igoumenitsa	0.97	204	P	Pn	10 16 26.4	+1.2
KTI	Kastanea	0.97	91	P	Pn	10 16 24.5	-0.9
VLO	Vlora	1.03	273	Pg	Pb	10 16 23.7	-1.7
VLO				Sg	Sg	10 16 39.0	+0.3
KEK	Kerkira	1.06	229	P	Pn	10 16 27.9	+1.4
TETR	Tetrakomo, Epi	1.12	163	P	Pn	10 16 30.9	+3.6
TIR	Tirane	1.19	322	Pg	Pn	10 16 27.3	-0.9
TIR				Sg	Sn	10 16 45.7	+1.4
TIR				AML	AML	10 16 51.7	
	comp=N,0.9nm,0.5s						
TIR	Tirane	1.19	322	*i* Pg	Pn	10 16 26.3	-1.9
TIR				*i* Sg	Sn	10 16 49.7	+5.4
TIR	Tirane	1.19	322	*e*Pg	Pg	10 16 28.7	+0.3
TIR				*e*Sg	Sn	10 16 46.0	+1.7
THL	Klokotos Trika	1.24	133	P	Pg	10 16 31.1	+1.8
TYRN	Tyrnavos	1.28	123	P	Pg	10 16 29.8	-0.3
VAY	Valandovo	1.59	55	*i* Pg	Pb	10 16 34.8	-0.2
VAY				*i* Sg	Sg	10 16 59.7	+2.9
VAY				*e*Lg	Lg	10 17 03.5	
	comp=N,144nm,0.8s						
VAY				*e*Lg	Lg	10 17 06.7	
	comp=E,146nm,1.0s						
TSLK	Tsoukalades, L	1.60	185	P	Pg	10 16 36.6	+0.4
SKO	Skopje	1.62	16	*e*Pg	Pb	10 16 35.4	-0.1
SKO				*i* Sg	Sg	10 16 59.2	+1.6
LKD2	Lefkada island	1.63	185	P	Pg	10 16 36.8	-0.1
LKD2				S	Sg	10 16 60.0	+1.9
THE	Thessaloniki	1.63	82	*i* Pg	Pb	10 16 34.8	-0.9
EVR	Evrytania	1.68	153	P	Pg	10 16 38.1	+0.5
NYDR	Nydri-Lefkada	1.71	184	P	Pg	10 16 37.8	-0.4
MAKR	Makrakomi, Fth	1.72	144	P	Pg	10 16 38.2	-0.3
MAKR				S	Sg	10 17 01.3	+0.5
KNT	Kendrikon	1.73	64	P	Pb	10 16 37.3	-0.1
KNT	Kendrikon	1.73	64	*e*Pn	Pb	10 16 37.0	-0.4
KNT				*e*Sn	Sg	10 17 02.2	+1.0
KNT	Kendrikon	1.73	64	P	Pb	10 16 36.8	-0.6
HORT	Hortiatis	1.73	83	P	Pn	10 16 36.1	+0.3
HORT	Hortiatis	1.73	83	P	Pn	10 16 36.0	+0.3
PUK	Puka	1.77	337	Pn	Pb	10 16 37.6	-0.5
PUK				Sn	Sb	10 17 01.0	+0.5
EVGI	Lefkada island	1.80	185	P	Pg	10 16 39.3	-0.7
EVGI				S	Sg	10 17 03.9	+0.5
AGG	Agios Georgios	1.81	140	P	Pg	10 16 39.3	-0.9
SCTE	Santa Cesarea	1.85	260	P	Pb	10 16 39.9	+0.6
PVO	Paravola	1.88	163	P	Pg	10 16 40.3	-1.2
ULC	Ulcinj	1.96	323	*i* Pn	Pn	10 16 39.3	+0.6
FSK	Fiskardo	1.97	186	P	Pb	10 16 41.6	+0.2
ANX	Ano Chora	2.00	155	P	Pg	10 16 42.4	-1.6
BCI	Bajram Curri	2.03	344	Pn	Pb	10 16 41.7	-0.8
BCI				Sn	Sb	10 17 08.2	+0.3
NEO	Neokhori	2.14	120	P	Pb	10 16 43.8	-0.7
EFP	Efpalio	2.15	157	P	Pb	10 16 44.0	-0.5
SERG	Sergoula	2.21	154	P	Pb	10 16 45.4	-0.2
KKB	Krupnik	2.24	50	*e*Pn	Pb	10 16 46.2	+0.2
PDG	Podgorica	2.34	330	*e*Pn	Pn	10 16 43.8	-0.1
PDG				*e*Sn	Sn	10 17 13.1	+0.4
BOSS	Bosilegrad	2.42	30	*e*Pn	Pn	10 16 44.9	-0.1
BOSS				*e*Sn	Sn	10 17 14.3	-0.3
MMB	Musomishta	2.48	62	*i* Pn	Pb	10 16 47.9	-2.2
BARS	Barje	2.51	17	*i* Pn	Pn	10 16 46.4	+0.1
BARS	Barje	2.51	17	*e*Pn	Pn	10 16 45.9	-0.4
BARS				*e*Sn	Sb	10 17 19.4	-2.1
BEY	Berane	2.55	344	*e*Pn	Pb	10 16 50.6	-0.8
SELS	Selova	2.81	4	*e*Pn	Pn	10 16 51.2	+0.7
SELS				*e*Sn	Sn	10 17 26.0	+1.7
SJES	Sjenica	2.91	347	*e*Pn	Pn	10 16 52.5	+0.5
SJES				*e*Sn	Sn	10 17 28.6	+1.5
GOCS	Kraljevo Serbi	3.14	0	*e*Pn	Pn	10 16 54.2	-0.9
ZAPS	Zavoj	3.15	25	*e*Pn	Pn	10 16 56.5	+1.3
IVAS	Ivanjica	3.20	351	*e*Pn	Pn	10 16 57.8	+1.9
BOVS	Bovan	3.28	11	*e*Pn	Pn	10 16 56.1	-0.8
BOVS				*e*Sn	Sn	10 17 35.8	-0.1
GRUS	Gruza	3.47	359	*e*Pn	Pn	10 16 58.9	-0.6
ZAGS	Zajecar	3.55	17	*e*Pn	Pn	10 17 01.4	+0.8
ZAGS				*e*Sn	Sn	10 17 42.5	0.0
BBLS	Lazi&#263i	3.61	343	*e*Pn	Pn	10 17 02.5	+1.0
DIVS	Divibare	3.73	351	*e*Pn	Pn	10 17 04.1	+0.9
TRUS	Trudelj	3.82	355	*e*Pn	Pn	10 17 04.0	-0.3
KUBS	Kucevo	4.04	9	*e*Pn	Pn	10 17 05.3	-2.1
TEKS	Tekeris	4.24	347	*e*Pn	Pn	10 17 10.0	-0.1

IDC ***01*** *10:17:41.0±0.4, 14°.09S×14°.49W, h0^{km}, mb4.7/36, mbtmp4.7/36, MS4.7/65, Error ellipse: s-maj=16.6km s-min=9.6km az=119.0*

MOS ***01*** *10:17:41.3±1.0, 14°.07S×14°.53W, h10^{km}, mb5.2/51, MS4.9/12, Error ellipse: s-maj=9.4km s-min=5.5km az=60.5*

NEIC ***01*** *10:17:43.5, 14°.17S×14°.53W, h12^{km}*

NEIC ***01*** *10:17:43.5, 14°.17S×14°.53W, h12^{km}, Moment Tensor Solution. Duration: 2^{s}5 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.03; $M_{\theta\theta}$0.02; $M_{\phi\phi}$1.01; $M_{r\theta}$0.99; $M_{\theta\phi}$-0.28; $M_{\phi r}$-0.73; Fault plane solution: $M_0$1.62000×10^{17} NP1: ϕ_s184.29000°, δ26.77000°, λ-47.67000°. NP2: ϕ_s318.72000°, δ70.55000°, λ-108.76000°. Principal axes: T 1.5060, Plg23.0000°, Azm63.0000°; N 0.2070, Plg18.0000°, Azm325.0000°; P -1.7131, Plg60.0000°, Azm202.0000°;*

NEIC ***01*** *10:17:43.5±1.3, 14°.14S±0°.09×14°.53W±0°.10, h10^{km}±1^{km}, mb5.2/211, Ms_20 5.0/368, Mww5.4/27 Error ellipse: s-maj=16.1km s-min=15.1km az=109.0*

GCMT ***01*** *10:17:45.5±0.1, 14°.16S±0°.01×14°.52W±0°.01, h12^{km}, MW5.4/157, Moment Tensor Solution. s106,c150; s157,c320; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.33±.02; $M_{\theta\theta}$0.13±.01; $M_{\phi\phi}$1.20±.01; $M_{r\theta}$0.65±.05; $M_{\theta\phi}$-0.46±.01; $M_{\phi r}$-0.54±.04; Best double couple: $M_0$1.59200×10^{17} NP1: ϕ_s174.00000°, δ32.00000°, λ-65.00000°. NP2: ϕ_s325.00000°, δ61.00000°, λ-105.00000°. Principal axes: T 1.5640, Plg15.0000°, Azm66.0000°; N 0.0570, Plg13.0000°, Azm332.0000°; P -1.6190, Plg70.0000°, Azm202.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***01*** *10:17:49.3, 13°.73S×12°.83W, h33^{km}, mb5.4, Ms4.8*

ISC 01 10:17:43.6±0.3**, 14°.11S**±0°.05×**14°.54W**±0°.05**, h14**^{km}**, n702, σ1^{s}45**/483**, mb5.2**/214**, MS5.0**/266**, 23C-16D, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10S2	ASCENSION HYDR	5.12	359	T	T	10 24 24.2	
	baz=177,slow=74,SNR=8317						
H10S3	ASCENSION HYDR	5.13	359	T	T	10 24 24.7	
	baz=43,slow=74,SNR=4938						
ASCN	Ascension	6.14	2	Pn	Pn	10 19 15.0	+0.9
H10N1	ASCENSION HYDR	6.23	1	T	T	10 25 39.4	
	baz=180,slow=73,SNR=147						
H10N3	ASCENSION HYDR	6.23	0	T	T	10 25 34.5	
	baz=180,slow=73,SNR=783						
H10N2	ASCENSION HYDR	6.25	0	T	T	10 25 38.6	
	baz=180,slow=73,SNR=158						
NBAN	Anadia - AL	21.72	279	*e*P	P	10 22 35.3	+0.6
RCBR	Riachuelo	22.57	289		P	10 22 43.9	0.0
RCBR	Riachuelo	22.57	289	P	P	10 22 43.9	0.0
RCBR				pmax	pmax		
	comp=Z,33nm,1.1s						
DBIC	Dimbokro	22.77	26		P	10 22 45.2	-0.7
DBIC	Dimbokro	22.77	26	P	P	10 22 45.6	-0.3
	comp=Z,19nm,0.9s,baz=218,slow=9.9,SNR=12						
DBIC				S	S	10 26 55.6	+1.0
	comp=Z,13nm,1.2s,baz=285,slow=23,SNR=2.4						
DBIC				LR	LR	10 29 28.1	
	comp=Z,2μm,19.3s,baz=202,slow=31						
	comp=Z,19nm,0.9s						
CMC01	Camacan, BA	24.19	264	*e*P	P	10 23 00.9	+0.9
GUA01	Guaratinga, BA	24.48	261	*e*P	P	10 23 04.1	+1.4
RIB01	Linhares ES	25.28	255	*e*P	P	10 23 12.8	+3.0
SJMB	Sao Joao De Ma	25.95	256	*e*P	P	10 23 17.6	+1.6
NBPB	Pedra_Branca-C	26.08	287	*e*P	P	10 23 17.3	+0.2
MBO	M'Bour	28.42	355	P	P	10 23 38.0	0.0
BBTS	Babate	28.66	356	LR	LR	10 33 14.9	
	comp=Z,2μm,19.5s,baz=63,slow=33						
SDBA	SAO DESIDERIO	29.59	270	*e*P	P	10 23 49.0	+0.3
SACV	Santiago Islan	30.26	342	P	P	10 23 55.0	+0.6
PMNB	Patos De Minas	30.90	257	*e*P	P	10 24 01.5	+1.2
WIN	Windhoek	31.13	110	P	P	10 24 01.7	-0.7
WIN	Windhoek	31.13	110	P	P	10 24 01.7	-0.7
WIN				pmax	pmax		
	comp=Z,28nm,1.1s						
TSUM	Tsumeb	31.16	104	P	P	10 24 02.6	0.0
TSUM	Tsumeb	31.16	104	IAMs_20	IAMs_20	10 34 02.5	
	comp=Z,3μm,20.0s						
TSUM	Tsumeb	31.16	104	LR	LR	10 33 53.6	
	comp=Z,3μm,21.4s,baz=302,slow=31						
TOA0	Torodi Ar. Sit	31.50	31	P	P	10 24 01.3	-4.1
TOA0				S	S	10 29 14.1	+0.8
TORD	Torodi Ar. Bea	31.50	31	P	P	10 24 04.8	-0.5
TORD				IAmb	IAmb	10 24 13.0	
	comp=Z,46nm,1.3s						
TORD	Torodi Ar. Bea	31.50	31	P	P	10 24 04.0	-1.3
	comp=Z,16nm,0.9s,baz=226,slow=8.2,SNR=7.7						
TORD				S	S	10 29 13.8	+0.5
	comp=Z,2.3nm,0.4s,baz=216,slow=20,SNR=1.4						
TORD				LR	LR	10 34 57.8	
	comp=Z,3μm,18.2s,baz=206,slow=33						
	comp=Z,16nm,0.9s						
BDFB	Brasilia	32.37	263		P	10 24 13.1	-0.1
BDFB	Brasilia	32.37	263	P	P	10 24 13.7	+0.4
	comp=Z,4.8nm,0.6s,baz=102,slow=7.0,SNR=9.4						
BDFB				LR	LR	10 34 47.7	
	comp=Z,3μm,21.4s,baz=93,slow=32						
	comp=Z,4.8nm,0.6s						
SMTB	Santa Maria do	32.78	276	*e*P	P	10 24 18.0	+1.2
KOOLE	Kule	34.02	110	P	P	10 24 27.6	0.0
QNGWA	Qangwa	34.56	104		P	10 24 31.8	-0.5
XAUDM	Khaudum	34.67	102	P	P	10 24 32.8	-0.5
ITRB	Iturama	34.67	256	*e*P	P	10 24 34.7	+1.5
GRTLG	Ghanzi	34.75	107		P	10 24 33.3	-0.7
GRTLG				IAmb	IAmb	10 24 41.2	
	comp=Z,45nm,1.3s						
PRPB	Parauapebas	35.57	279	*e*P	P	10 24 41.5	+0.5
PCMB	Pacaembu	35.67	253	*e*P	P	10 24 43.5	+1.7
LDASE	Londrina, Braz	35.76	250	*e*P	P	10 24 44.2	+1.6
KGCAE	Kacgae	35.84	110		P	10 24 43.1	-0.2
SNDB	Serra Nova Dou	35.85	269	*e*P	P	10 24 43.9	+0.5
PHPEN	Phepeng	36.84	114	P	P	10 24 50.8	-1.0
SUR	Sutherland	36.99	126		P	10 24 52.9	-0.2
SUR				IAmb	IAmb	10 25 02.0	
	comp=Z,55nm,0.9s						
SUR	Sutherland	36.99	126	P	P	10 24 52.5	-0.6
SUR				P	P	10 24 52.5	-0.6
PHDHD	Phuduhudu	37.76	105	P	P	10 24 58.5	-1.2
RPRD	Ribas do Rio P	37.86	255	*e*P	P	10 25 02.0	+1.6
KDWAN	Kaudwane	38.15	110	P	P	10 25 02.1	-0.8
KDWAN				IAmb	IAmb	10 25 11.0	
	comp=Z,56nm,1.0s						
MAKGR	Makgori	38.62	114	P	P	10 25 06.8	-0.1
MAKGR				IAmb	IAmb	10 25 14.3	
	comp=Z,43nm,1.0s						
LBTB	Lobatse	39.21	112		P	10 25 12.0	+0.2
LBTB	Lobatse	39.21	112	LR	LR	10 38 20.2	
	comp=Z,2μm,21.6s,baz=269,slow=32						
LBTB	Lobatse	39.21	112	P	P	10 25 12.0	+0.2
LBTB				pmax	pmax		
	comp=Z,26nm,1.3s						
LPHEP	Lephephe	39.24	110		P	10 25 12.0	-0.1
CPSB	Cacapava Do Su	39.26	239	*e*P	P	10 25 18.6	+6.6
BOSA	Boshof	39.57	118		P	10 25 14.1	-0.7
BOSA	Boshof	39.57	118	P	P	10 25 14.1	-0.7
	comp=Z,12nm,0.9s,baz=282,slow=6.5,SNR=18						
BOSA				LR	LR	10 38 23.9	
	comp=Z,2μm,21.9s,baz=282,slow=31						
	comp=Z,12nm,0.9s						
BOSA	Boshof	39.57	118	P	P	10 25 14.1	-0.7
BOSA				pmax	pmax		
	comp=Z,30nm,1.0s						
AQDB	Aquidauana	39.73	255	P	P	10 25 17.1	+1.0
AQDB	Aquidauana	39.73	255	*e*P	P	10 25 18.1	+2.1
SALV	Santo Antonio	39.75	262	*e*P	P	10 25 17.5	+1.3
PLTB	Pedras Altas	39.77	237	P	P	10 25 17.4	+1.1
PLTB				IAmb	IAmb	10 25 19.9	
	comp=Z,102nm,2.0s						
MREMI	Moremi	40.62	108		P	10 25 23.1	-0.5
NPGB	Novo Progresso	40.69	276	*e*P	P	10 25 25.8	+1.7
MAL2	Monte Alegre,	40.96	283		P	10 25 26.9	+0.5
MAL2				IAmb	IAmb	10 25 35.5	
	comp=Z,60nm,1.1s						
PDRB	Porto dos Gac	41.17	268	*e*P	P	10 25 30.3	+2.2
LSZ	Lusaka	41.30	97		P	10 25 29.3	0.0
LSZ				IAmb	IAmb	10 25 32.8	
	comp=Z,84nm,1.9s						
LSZ	Lusaka	41.30	97	P	P	10 25 33.0	+3.8
LSZ				P	P	10 25 33.0	+3.8
LSZ	Lusaka	41.30	97	P	P	10 25 29.3	0.0
LSZ				pmax	pmax		
	comp=Z,84nm,1.9s						
MATP	Matopo	41.48	105	LR	LR	10 40 27.2	
	comp=Z,2μm,20.4s,baz=260,slow=33						
TAM	Tamanrasset	41.61	28		P	10 25 32.2	+0.6
TAM				IAMs_20	IAMs_20	10 40 19.2	
	comp=Z,2μm,20.0s						
TAM	Tamanrasset	41.61	28	P	P	10 25 32.2	+0.6
TAM				pmax	pmax		
	comp=Z,56nm,0.2s						
GRHM	Grahamstown, E	41.71	124		P	10 25 32.0	-0.4
ITTB	Itaituba	41.73	279	*e*P	P	10 25 33.3	+0.6
ITQB	Itaqui	41.76	241		P	10 25 33.8	+1.1
ITQB				IAmb	IAmb	10 25 43.8	
	comp=Z,51nm,1.0s						
ITQB	Itaqui	41.76	241	*e*P	P	10 25 35.9	+3.1
CPUP	Villa Florida	41.77	246		P	10 25 33.7	+0.9
CPUP	Villa Florida	41.77	246	P	P	10 25 33.0	+0.1
	comp=Z,2.1nm,0.8s,baz=32,slow=2.1,SNR=14						
CPUP				LR	LR	10 40 40.6	
	comp=Z,926nm,19.5s,baz=324,slow=33						
	comp=Z,2.1nm,0.8s						
CPUP	Villa Florida	41.77	246	P	P	10 25 33.7	+0.9
CPUP				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MDP	Montagnes des	42.35	294	LR	LR	10 41 56.2	
	comp=Z,657nm,18.9s,baz=110,slow=34						
PTLB	Pontes e Lacer	43.09	262		P	10 25 45.4	+1.7
PTLB				IAMs_20	IAMs_20	10 41 03.9	
	comp=Z,2μm,20.0s						
SIV	San Ignacio	44.91	261	LR	LR	10 42 43.2	
	comp=Z,2μm,21.5s,baz=108,slow=33						
POGA	Pongola	44.97	115	P	P	10 25 58.7	0.0
POGA				IAmb	IAmb	10 26 06.3	
	comp=Z,30nm,1.1s						
PMOZ	Porto Moniz, M	46.74	357	*e*P	P	10 26 13.8	+1.2
PMOZ				*i* Amb		10 26 16.4	
	comp=Z,93nm,1.5s						
PMOZ				*e*S	S	10 33 16.9	+15
PMOZ				*e*LR	LR	10 39 55.1	
PMOZ				*i* AMs_20		10 41 41.6	
	comp=Z,229nm,20.0s						
MBAR	Mbarara	46.75	77	P	P	10 26 12.8	-0.4
MBAR	Mbarara	46.75	77	P	P	10 26 15.1	+1.9
MBAR				P	P	10 26 15.1	+1.9
MBAR				S	S	10 33 07.6	+4.5
MBAR				S	S	10 33 07.6	+4.5
MBAR	Mbarara	46.75	77	*ce*P	P	10 26 14.7	+1.6
MBAR				pmax	pmax		
	comp=Z,25nm,1.0s						
MACA	Manacapuru-AM	46.81	279	IAmb	IAmb	10 26 22.4	
	comp=Z,21nm,1.1s						
MACA	Manacapuru-AM	46.81	279	*e*P	P	10 26 12.7	-0.7
PMPST	Porto Santo, M	46.95	358	*e*P	P	10 26 15.0	+0.9
PMPST				*i* Amb		10 26 33.2	
	comp=Z,158nm,1.9s						
MDT	Midelt	47.62	11	LR	LR	10 44 54.9	
	comp=Z,2μm,20.3s,baz=200,slow=34						
AVE	Averroes	47.63	8		P	10 26 20.4	+1.0
AVE				IAMs_20	IAMs_20	10 44 56.9	
	comp=Z,1μm,18.0s						
SAML	Samuel	47.87	271		P	10 26 21.2	-0.5
SAML	Samuel	47.87	271	P	P	10 26 21.2	-0.5
SAML				pmax	pmax		
	comp=Z,37nm,1.2s						
SAML				MLR	MLR		
	comp=Z,1μm,21.0s						
SAML	Samuel	47.87	271	*e*P	P	10 26 23.0	+1.3
TRQA	Tornquist	48.19	231		P	10 26 23.9	+0.1
TRQA				IAmb	IAmb	10 26 31.4	
	comp=Z,40nm,1.2s						
TRQA	Tornquist	48.19	231	P	P	10 26 23.9	+0.1
TRQA				pmax	pmax		
	comp=Z,40nm,1.3s						
BOAV	Boa Vista	48.43	286	P	P	10 26 25.5	-0.5
BOAV	Boa Vista	48.43	286	*e*P	P	10 26 26.4	+0.3
TEFE	Tefe	50.51	277	*e*P	P	10 26 42.9	+1.0
PFVI	Vila Bisbo	51.25	6	*e*P	P	10 26 48.1	+1.1
MORF	Marmelete	51.44	6	*e*P	P	10 26 48.6	+0.1
MORF				*i* Amb		10 26 57.4	
	comp=Z,85nm,1.8s						
MORF	Marmelete	51.44	6	*e*P	P	10 26 48.6	+0.1
PBDV	Barranco-do-Ve	51.46	7	*e*P	P	10 26 49.3	+0.8
PBDV				*i* Amb		10 27 15.3	
	comp=Z,79nm,1.8s						
PVAQ	Vaqueiros	51.64	7	*e*P	P	10 26 49.6	-0.3
PVAQ				*i* Amb		10 26 59.5	
	comp=Z,24nm,1.7s						
PVAQ				*e*LR	LR	10 42 56.4	
PVAQ				*i* AMs_20		10 47 11.4	
	comp=Z,467nm,22.0s						
LPAZ	La Paz	51.64	260		P	10 26 50.5	-0.6
LPAZ	La Paz	51.64	260	P	P	10 26 51.0	-0.1
	comp=Z,6.3nm,0.9s,baz=98,slow=6.1,SNR=20						
LPAZ				LR	LR	10 47 14.1	
	comp=Z,1μm,21.6s,baz=106,slow=34						
	comp=Z,6.3nm,0.9s						
LPAZ	La Paz	51.64	260	*e*P	P	10 26 50.9	-0.2
PTEO	Sao Teotonio	51.67	6	*e*P	P	10 26 51.1	+1.0
PTEO				*i* Amb		10 26 56.2	
	comp=Z,98nm,2.0s						
PSMN	Pico do Norte,	51.80	349	*e*T	T	11 21 53.7	
PSMN	Pico do Norte,	51.80	349	*e*T	T	11 21 53.7	
PCVE	Castro Verde	51.83	7	*e*P	P	10 26 52.1	+0.8
PCVE				*i* Amb		10 26 54.0	
	comp=Z,59nm,1.9s						
CFA	Coronel Fontan	51.94	241	LR	LR	10 45 53.8	
	comp=Z,724nm,21.8s,baz=56,slow=33						
MESJ	Messejana	52.01	6	*e*P	P	10 26 53.6	+0.9
MESJ				IAmb	IAmb	10 27 00.7	
	comp=Z,48nm,1.5s						
MESJ				*e*S	S	10 34 18.5	+2.7
MESJ	Messejana	52.01	6	*e*P	P	10 26 53.9	+1.2
MESJ				*i* Amb		10 27 01.7	
	comp=Z,52nm,1.6s						
PBEJ	Beja	52.24	7	*e*P	P	10 26 55.3	+1.0
ZON	Zonda	52.31	241	IAmb	IAmb	10 27 09.9	
	comp=Z,74nm,1.9s						
PB09	IPOC Station P	52.38	253	IAMs_20	IAMs_20	10 52 17.7	
	comp=Z,1μm,19.0s						
LODK	Lodwar	52.45	74		P	10 26 55.8	-0.7
LODK				IAmb	IAmb	10 27 05.6	
	comp=Z,32nm,1.3s						
LODK	Lodwar	52.45	74	P	P	10 26 59.0	+2.5
	SNR=17						
PBAR	Barrancos	52.48	7	*e*P	P	10 26 57.5	+1.3
PBAR				*i* Amb		10 27 14.9	
	comp=Z,38nm,1.8s						
BART	Pico Bartolome	52.57	349	*e*T	T	11 22 56.7	
BART	Pico Bartolome	52.57	349	*e*T	T	11 22 56.7	
PB01	IPOC Station P	52.63	254	IAMs_20	IAMs_20	10 49 43.4	
	comp=Z,1μm,21.0s						
EVO	Evora	52.72	6	*e*P	P	10 26 58.0	+0.1
EVO				*i* Amb		10 27 07.8	
	comp=Z,51nm,1.5s						
KMBO	Kilima Mbogo	52.79	81		P	10 26 58.3	-1.0
KMBO	Kilima Mbogo	52.79	81	IAMs_20	IAMs_20	10 46 45.4	
	comp=Z,1μm,19.0s						
KMBO	Kilima Mbogo	52.79	81	P	P	10 27 02.3	+3.0
KMBO				P	P	10 27 02.3	+3.0
KMBO	Kilima Mbogo	52.79	81	P	P	10 26 58.3	-1.0
KMBO				pmax	pmax		
	comp=Z,28nm,1.2s						
PB18	Visviri	52.82	259	IAMs_20	IAMs_20	10 49 16.6	
	comp=Z,2μm,22.0s						
CART	Cartagena	52.97	13	IAMs_20	IAMs_20	10 47 55.4	
	comp=Z,1μm,20.0s						
PESTR	Estremoz	53.10	7	IAmb	IAmb	10 27 03.0	
	comp=Z,26nm,1.1s						
PESTR	Estremoz	53.10	7	*e*P	P	10 27 01.8	+1.1
PESTR				*i* Amb		10 27 15.7	
	comp=Z,44nm,1.8s						
KIBK	Kibwezi	53.21	82	IAMs_20	IAMs_20	10 46 27.4	
	comp=Z,2μm,21.0s						

KIBK	**Kibwezi**	**53.21**	**82**	P	**P**	**10 27 05.5**	**+3.3**
PMTG	**Montargil**	**53.23**	**6**	*e*P	**P**	**10 27 02.2**	**+0.5**
PMTG				*i* Amb		10 27 11.2	
	comp=Z,26nm,1.6s						
CO01	**Juntas del Tor**	**53.37**	**243**	IAmb	IAmb	10 27 13.7	
	comp=Z,40nm,1.1s						
AC06	**Mina Casimiro**	**53.45**	**246**	IAmb	IAmb	10 27 12.8	
	comp=Z,42nm,1.1s						
AC05	**El Transito**	**53.45**	**244**	IAmb	IAmb	10 27 19.4	
	comp=Z,42nm,1.1s						
PSBE	**So Bento**	**53.62**	**6**	*e*P	**P**	**10 27 05.7**	**+1.1**
PSBE				*i* Amb		10 27 19.7	
	comp=Z,64nm,2.0s						
PMRV	**Marv??o**	**53.68**	**7**	*e*P	**P**	**10 27 06.0**	**+1.1**
PMRV				*i* Amb		10 27 14.2	
	comp=Z,48nm,1.4s						
PMRV				*e*LR	LR	10 39 02.3	
PMRV				*i* AMs_20		10 46 18.0	
	comp=Z,246nm,20.0s						
PSARD	**Sardoal**	**53.76**	**6**	*e*P	**P**	**10 27 06.6**	**+1.0**
PSARD				*i* Amb		10 27 08.5	
	comp=Z,42nm,1.2s						
LCO	**Las Campanas**	**53.84**	**244**	P	**P**	**10 27 09.6**	**+2.8**
LCO				pmax	pmax		
	comp=Z,42nm,0.9s						
LMEL	**Las Melosas**	**53.86**	**238**	IAmb	IAmb	10 27 13.1	
	comp=Z,19nm,0.9s						
H05S1	**Guadeloupe/Mar**	**53.88**	**300**	T	T	11 25 15.5	
	SNR=17						
VA03	**San Esteban**	**54.02**	**240**	IAmb	IAmb	10 27 17.2	
	comp=Z,25nm,0.9s						
MT03	**Universidad Ad**	**54.07**	**239**	IAMs_20	IAMs_20	10 48 42.8	
	comp=Z,2µm,20.0s						
PCBR	**Castelo Branco**	**54.07**	**7**	*e*P	**P**	**10 27 08.8**	**+1.0**
PCBR				*i* Amb		10 27 20.1	
	comp=Z,22nm,2.7s						
PCAS	**Casmilo, Conde**	**54.18**	**6**	*e*P	**P**	**10 27 09.5**	**+0.9**
PCAS				*i* Amb		10 27 23.3	
	comp=Z,48nm,1.8s						
PEL	**Peldehue**	**54.18**	**239**		**P**	**10 27 08.7**	**-0.3**
PEL				IAmb	IAmb	10 27 17.8	
	comp=Z,39nm,1.1s						
PEL	**Peldehue**	**54.18**	**239**	P	**P**	**10 27 08.7**	**-0.3**
PEL				pmax	pmax		
	comp=Z,39nm,1.1s						
BO04	**La Punta**	**54.21**	**238**	IAmb	IAmb	10 27 18.4	
	comp=Z,25nm,1.0s						
BO04				IAMs_20	IAMs_20	10 46 18.5	
	comp=Z,2µm,21.0s						
PAB	**San Pablo**	**54.22**	**10**		**P**	**10 27 08.6**	**-0.4**
PAB	**San Pablo**	**54.22**	**10**	P	**P**	**10 27 08.6**	**-0.4**
PAB				pmax	pmax		
	comp=Z,20nm,1.3s						
CO02	**Combarbal**	**54.25**	**242**	IAmb	IAmb	10 27 20.8	
	comp=Z,38nm,1.1s						
COI	**Coimbra**	**54.34**	**6**	IAmb	IAmb	10 27 18.0	
	comp=Z,21nm,0.8s						
COI	**Coimbra**	**54.34**	**6**	*e*P	**P**	**10 27 11.1**	**+1.3**
COI				*i* Amb		10 27 22.8	
	comp=Z,40nm,2.2s						
ESDC	**Sonseca Array**	**54.41**	**10**		**P**	**10 27 10.2**	**-0.1**
ESDC	**Sonseca Array**	**54.41**	**10**	P	**P**	**10 27 09.8**	**-0.6**
	comp=Z,7.0nm,0.8s,baz=190,slow=7.1,SNR=50						
ESDC				LR	LR	10 48 43.2	
	comp=Z,602nm,20.4s,baz=183,slow=34						
	comp=Z,7.0nm,0.8s						
BO02	**Sierra Bellavi**	**54.46**	**237**	IAmb	IAmb	10 27 20.4	
	comp=Z,33nm,1.1s						
KEST	**Kesra**	**54.48**	**24**	P	**P**	**10 27 10.6**	**-0.4**
	comp=Z,19nm,0.9s,baz=272,slow=2.4,SNR=16						
KEST				LR	LR	10 49 07.8	
	comp=Z,1µm,21.1s,baz=212,slow=35						
	comp=Z,19nm,0.9s						
KEST	**Kesra**	**54.48**	**24**	P	**P**	**10 27 12.4**	**+1.4**
	SNR=7.2						
KEST				P	**P**	**10 27 12.4**	**+1.4**
	SNR=7.2						
MTE	**Manteigas**	**54.62**	**7**		**P**	**10 27 11.9**	**0.0**
MTE	**Manteigas**	**54.62**	**7**	*e*P	**P**	**10 27 12.7**	**+0.8**
MTE				*i* Amb		10 27 26.4	
	comp=Z,46nm,1.3s						
MTE				*e*S	**S**	**10 34 57.3**	**+6.0**
MTE				*e*LR	LR	10 40 53.0	
MTE				*i* AMs_20		10 49 15.8	
	comp=Z,412nm,18.0s						
BO01	**Tunca**	**54.65**	**238**		**P**	**10 27 11.7**	**-0.7**
BO01				IAmb	IAmb	10 27 15.1	
	comp=Z,18nm,0.8s						
MT01	**Popeta**	**54.73**	**238**	IAMs_20	IAMs_20	10 45 59.2	
	comp=Z,1µm,22.0s						
PVIS	**Viseu**	**54.89**	**6**	*e*P	**P**	**10 27 14.6**	**+0.8**
H05N1	**Guadeloupe/Mar**	**55.01**	**302**	T	T	11 26 45.9	
	SNR=11						
PCRV	**Puerto La Cruz**	**55.24**	**293**	LR	LR	10 49 58.2	
	comp=Z,536nm,19.7s,slow=35						
MVO	**Moncorvo**	**55.43**	**7**	*e*P	**P**	**10 27 18.7**	**+1.0**
MVO				*i* Amb		10 27 27.5	
	comp=Z,56nm,1.6s						
MVO				*e*S	**S**	**10 35 11.1**	**+8.9**
MVO				*e*LR	LR	10 44 43.2	
MVO				*i* AMs_20		10 52 01.6	
	comp=Z,436nm,18.0s						
PVRL	**Vila Real**	**55.47**	**6**	*e*P	**P**	**10 27 18.7**	**+0.8**
PVRL				*i* Amb		10 27 20.2	
	comp=Z,39nm,1.2s						
POLO	**Lamas de Olo**	**55.55**	**6**	*e*P	**P**	**10 27 19.2**	**+0.5**
POLO				*i* Amb		10 27 27.3	
	comp=Z,22nm,1.0s						
PCAB	**Cabril**	**55.87**	**6**	*e*P	**P**	**10 27 21.6**	**+0.7**
PCAB				*i* Amb		10 27 29.4	
	comp=Z,87nm,0.9s						
PGAV	**Gavieira, Arco**	**56.09**	**6**	*e*P	**P**	**10 27 22.7**	**+0.2**
PGAV				*i* Amb		10 27 36.9	
	comp=Z,71nm,1.5s						
PGAV				*e*LR	LR	10 45 33.7	
PGAV				*i* AMs_20		10 50 03.5	
	comp=Z,567nm,20.0s						
PBRG	**Braganca**	**56.10**	**7**	*e*P	**P**	**10 27 23.4**	**+0.9**
PBRG				*i* Amb		10 27 37.1	
	comp=Z,32nm,1.9s						
MAHO	**Mahon**	**56.51**	**17**	IAmb	IAmb	10 27 34.3	
	comp=Z,29nm,1.1s						
MAHO				IAMs_20	IAMs_20	10 49 50.9	
	comp=Z,1µm,20.0s						
VNA1	**Neumayer--Stat**	**56.64**	**178**	⇑P	**P**	**10 27 26.3**	**+0.3**
	comp=Z,9.1nm,0.8s						
LL03	**Petrohue**	**56.73**	**230**	IAMs_20	IAMs_20	10 47 47.7	
	comp=Z,1µm,22.0s						
VNA2	**Neumayer--Watz**	**56.95**	**177**	⇑P	**P**	**10 27 28.2**	**0.0**
	comp=Z,10nm,0.8s,baz=343,slow=9.6						
CZSB	**Cruzeiro do Su**	**57.35**	**270**		**P**	**10 27 31.5**	**-0.4**
CZSB				IAMs_20	IAMs_20	10 50 54.1	
	comp=Z,1µm,20.0s						
CZSB	**Cruzeiro do Su**	**57.35**	**270**	*e*P	**P**	**10 27 31.6**	**-0.4**
MG01	**Puerto William**	**57.72**	**213**	IAMs_20	IAMs_20	10 47 42.9	
	comp=Z,1µm,21.0s						
VSL	**Villasalto**	**57.81**	**22**		**P**	**10 27 35.0**	**+0.3**
VSL				IAmb	IAmb	10 27 38.9	
	comp=Z,24nm,1.1s						
VSL				IAMs_20	IAMs_20	10 51 22.2	
	comp=Z,1µm,18.0s						
BAUV	**El Baul**	**57.81**	**290**		**P**	**10 27 34.6**	**-0.6**
SNAA	**Sanae**	**57.97**	**176**	⇑P	**P**	**10 27 35.3**	**-0.2**
	comp=Z,145nm,0.9s						
SNAA	**Sanae**	**57.97**	**176**		**P**	**10 27 34.8**	**-0.6**
SNAA				IAmb	IAmb	10 27 44.6	
	comp=Z,28nm,1.2s						
SNAA	**Sanae**	**57.97**	**176**	P	**P**	**10 27 34.7**	**-0.7**
	comp=Z,6.2nm,0.9s,baz=321,slow=7.3,SNR=12						
SNAA				LR	LR	10 46 15.2	
	comp=Z,435nm,20.9s,baz=13,slow=30						
	comp=Z,6.2nm,0.9s						
SNAA	**Sanae**	**57.97**	**176**	⇑*e*P	**P**	**10 27 35.7**	**+0.3**
SNAA				pmax	pmax		
	comp=Z,22nm,1.7s						
VAE	**Valguarnera**	**58.09**	**27**	LR	LR	10 51 05.5	
	comp=Z,629nm,18.8s,baz=236,slow=35						
USHA	**Ushuaia**	**58.10**	**213**	LR	LR	10 48 04.5	
	comp=Z,557nm,21.9s,baz=60,slow=31						
CEST	**Esterri de Car**	**58.27**	**14**		**P**	**10 27 38.6**	**+0.7**
TROLL	**Troll, Antarti**	**58.77**	**174**	⇑P	**P**	**10 27 41.3**	**+0.2**
	comp=Z,190nm,0.5s						
NVL	**N'lazarevskaya**	**58.89**	**170**	*e*P	**P**	**10 27 42.4**	**+0.6**
NVL				pmax	pmax		
	comp=Z,17nm,0.9s						
ABPO	**Ambohimpanom**	**59.16**	**104**	IAMs_20	IAMs_20	10 50 49.2	
	comp=Z,1µm,20.0s						
CEL	**Celeste**	**59.39**	**28**	IAMs_20	IAMs_20	10 55 40.1	
	comp=Z,1µm,18.0s						
SJG	**San Juan**	**60.12**	**301**	LR	LR	10 50 41.7	
	comp=Z,240nm,20.2s,baz=90,slow=33						
SDV	**Santo Domingo**	**60.16**	**289**	IAMs_20	IAMs_20	10 52 41.1	
	comp=Z,994nm,20.0s						
SDV	**Santo Domingo**	**60.16**	**289**	LR	LR	10 53 03.1	
	comp=Z,882nm,20.0s,baz=108,slow=35						
TIP	**Timpagrande**	**60.53**	**28**	IAmb	IAmb	10 28 01.7	
	comp=Z,25nm,1.2s						
NNA	**Nana**	**60.58**	**264**	LR	LR	10 53 48.3	
	comp=Z,1µm,18.4s,baz=110,slow=36						
PMSA	**Palmer Station**	**60.73**	**202**	LR	LR	10 47 60.0	
	comp=Z,533nm,20.8s,baz=54,slow=30						
CUC	**Castrocucco**	**60.78**	**26**		**P**	**10 27 55.0**	**-0.3**
RUSC	**La Rusia**	**61.38**	**285**	P	**P**	**10 28 00.1**	**-0.4**
RUSC				IAmb	IAmb	10 28 16.5	
	comp=Z,20nm,1.1s						
SSB	**Saint Sauveur**	**61.59**	**15**	P	**P**	**10 28 01.0**	**+0.4**
INTR	**Introdacqua**	**61.69**	**24**	P	**P**	**10 28 01.6**	**+0.1**
INTR				IAmb	IAmb	10 28 09.6	
	comp=Z,15nm,1.0s						
CESX	**Cesi**	**61.70**	**22**	IAmb	IAmb	10 28 09.4	
	comp=Z,18nm,1.1s						
IDI	**Anoyia**	**61.72**	**36**	P	**P**	**10 28 01.4**	**-0.3**
	comp=Z,18nm,1.0s,baz=212,slow=5.2,SNR=6.6						
IDI				LR	LR	10 55 06.4	
	comp=Z,165nm,21.0s,baz=238,slow=36						
	comp=Z,18nm,1.0s						
AQU	**L'Aquila**	**61.79**	**23**	P	**P**	**10 28 02.4**	**+0.4**
BNI	**Bardonecchia**	**61.95**	**17**		**P**	**10 28 03.7**	**+0.5**
BNI				IAmb	IAmb	10 28 12.1	
	comp=Z,30nm,1.2s						
BNI	**Bardonecchia**	**61.95**	**17**	P	**P**	**10 28 03.7**	**+0.5**
BNI				pmax	pmax		
	comp=Z,30nm,1.3s						
OSSC	**Osservatorio P**	**62.02**	**21**	P	**P**	**10 28 02.9**	**-0.6**
NRCA	**Norcia**	**62.09**	**23**	IAMs_20	IAMs_20	10 53 29.6	
	comp=Z,998nm,22.0s						
MSSA	**Maissana**	**62.14**	**19**	IAMs_20	IAMs_20	10 52 52.9	
	comp=Z,1µm,21.0s						
ROSC	**El Rosal**	**62.21**	**283**	P	**P**	**10 28 05.8**	**0.0**
	comp=Z,4.5nm,0.3s,baz=122,slow=1.1,SNR=5.5						
ROSC				LR	LR	10 53 40.1	
	comp=Z,3µm,21.8s,baz=140,slow=35						
	comp=Z,4.5nm,0.3s						
FDMO	**Fiordimonte**	**62.26**	**23**	IAmb	IAmb	10 28 13.2	
	comp=Z,15nm,1.0s						
FDMO				IAMs_20	IAMs_20	10 53 42.9	
	comp=Z,1µm,21.0s						
ATD	**Arta Tunnel**	**62.33**	**69**	P	**P**	**10 28 05.1**	**-1.2**
ATD				IAmb	IAmb	10 28 10.8	
	comp=Z,22nm,1.0s						
ATD	**Arta Tunnel**	**62.33**	**69**	LR	LR	10 53 06.6	
	comp=Z,75nm,20.0s,baz=210,slow=34						
ATD	**Arta Tunnel**	**62.33**	**69**	P	**P**	**10 28 09.3**	**+3.0**
KEK	**Kerkira**	**62.37**	**29**	IAMs_20	IAMs_20	10 54 15.8	
	comp=Z,1µm,20.0s						
ATAH	**Atahualpa**	**62.99**	**269**	LR	LR	10 56 25.1	
	comp=Z,1µm,18.1s,baz=108,slow=37						
TIR	**Tirane**	**63.69**	**28**	IAMs_20	IAMs_20	10 55 48.8	
	comp=Z,1µm,19.0s						
TEOL	**Teolo**	**63.77**	**20**	IAmb	IAmb	10 28 22.0	
	comp=Z,19nm,1.1s						
TUE	**Stuetta**	**64.02**	**18**	IAmb	IAmb	10 28 24.3	
	comp=Z,18nm,1.1s						
TUE				IAMs_20	IAMs_20	10 54 34.7	
	comp=Z,1µm,21.0s						
PDG	**Podgorica**	**64.27**	**27**	IAmb	IAmb	10 28 27.2	
	comp=Z,18nm,0.9s						
FUORN	**Ofenpass-Fuorn**	**64.44**	**19**		**P**	**10 28 19.0**	**-0.8**
DAVOX	**Davos/Dischmat**	**64.46**	**18**	P	**P**	**10 28 19.0**	**-0.8**
	comp=Z,7.8nm,0.8s,baz=197,slow=6.5,SNR=11						
DAVOX				LR	LR	10 54 51.3	
	comp=Z,1µm,21.8s,baz=258,slow=35						
	comp=Z,7.8nm,0.8s						
SYO	**Syowa Base**	**64.48**	**161**	⇑*e*P	**P**	**10 28 19.6**	**+0.1**
SYO	**Syowa Base**	**64.48**	**161**	⇑*e*sP	sP	10 28 23.0	-1.3
BELA	**Belgrano 2**	**64.57**	**185**	P	**P**	**10 28 20.0**	**0.0**
SC01	**Santiago de lo**	**64.57**	**300**	P	**P**	**10 28 20.1**	**-0.8**
EIL	**Elat**	**64.58**	**47**	P	**P**	**10 28 21.2**	**+0.4**
	comp=Z,14nm,1.1s,baz=234,slow=6.4,SNR=7.6						
EIL				LR	LR	10 54 12.2	
	comp=Z,574nm,21.1s,baz=246,slow=34						
	comp=Z,14nm,1.1s						
SLOR	**San Lorenzo -**	**64.60**	**276**	P	**P**	**10 28 19.6**	**-2.2**
SLOR				IAMs_20	IAMs_20	10 55 53.5	
	comp=Z,1µm,19.0s						
TRI	**Trieste**	**64.80**	**22**	P	**P**	**10 28 21.9**	**0.0**
TRI	**Trieste**	**64.80**	**22**	P	**P**	**10 28 21.9**	**0.0**
TRI				pmax	pmax		
	comp=Z,27nm,1.1s						
OTAV	**Otavalo**	**64.81**	**277**	P	**P**	**10 28 22.2**	**-1.0**
OTAV	**Otavalo**	**64.81**	**277**	P	**P**	**10 28 22.2**	**-1.0**
OTAV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
DAVA	**Damuels**	**64.92**	**18**	*i* P	**P**	**10 28 21.6**	**-1.2**
	comp=Z,32nm,1.3s,SNR=9.0						
DAVA				*i* PP	**PP**	**10 30 45.0**	**-0.9**
	comp=Z,3.8nm,1.0s						
FETA	**Feichten**	**64.94**	**19**	*e*P	**P**	**10 28 21.7**	**-1.2**
	comp=Z,13nm,0.8s,SNR=11						
FETA				*i* PP	**PP**	**10 30 47.2**	**+1.1**
	comp=Z,3.7nm,1.1s						
SABO	**M.te Sabotino**	**64.98**	**21**	IAMs_20	IAMs_20	10 57 11.5	
	comp=Z,705nm,18.0s						
ECH	**Echery**	**64.99**	**16**	IAmb	IAmb	10 28 30.8	
	comp=Z,30nm,1.4s						
CEY	**Cerknica**	**65.07**	**22**	*e*P	**P**	**10 28 24.5**	**+0.9**
SQTA	**Sankt Quirin**	**65.27**	**19**	*i* P	**P**	**10 28 23.8**	**-1.3**
	comp=Z,14nm,1.2s,SNR=7.2						
SQTA				*e*PP	**PP**	**10 30 50.6**	**+1.6**
	comp=Z,9.1nm,1.3s						
ABTA	**Abfaltersbach**	**65.27**	**20**	*e*P	**P**	**10 28 24.8**	**-0.3**
	comp=Z,15nm,1.7s						
ABTA				*i* PP	**PP**	**10 30 51.5**	**+2.6**
	comp=Z,4.5nm,1.2s						
UBR	**Ueberruh**	**65.34**	**18**	*e*P	**P**	**10 28 24.8**	**-0.6**
	comp=Z,33nm,0.9s,baz=206,slow=6.4						
MOTA	**Moosalm**	**65.34**	**19**	*i* P	**P**	**10 28 24.1**	**-1.4**
	comp=Z,14nm,1.2s,SNR=5.6						
MOTA				*e*PP	**PP**	**10 30 50.6**	**+1.0**
	comp=Z,12nm,1.5s						
RETA	**Reutte**	**65.36**	**19**	*i* P	**P**	**10 28 24.2**	**-1.4**
	comp=Z,19nm,1.4s						
RETA				*e*PP	**PP**	**10 30 50.8**	**+1.1**
	comp=Z,3.6nm,0.8s						
LJU	**Ljubljana**	**65.37**	**22**	*e*P	**P**	**10 28 26.6**	**+1.1**
BFO	**Black Forest**	**65.41**	**17**	P	**P**	**10 28 25.1**	**-0.7**
BFO				IAmb	IAmb	10 28 33.3	
	comp=Z,19nm,0.9s						
BFO				IAMs_20	IAMs_20	10 56 50.4	
	comp=Z,696nm,19.0s						
BFO	**Black Forest**	**65.41**	**17**	P	**P**	**10 28 25.1**	**-0.7**
BFO				pmax	pmax		
	comp=Z,19nm,0.9s						
BFO				MLR	MLR		
	comp=Z,700nm,19.0s						
BFO	**Black Forest**	**65.41**	**17**	*e*P	**P**	**10 28 25.3**	**-0.5**
	comp=Z,22nm,1.0s,baz=206,slow=6.4						
BFO				*e*L	L	10 56 34.3	
	comp=Z,732nm,18.2s						
WTTA	**Wattenberg**	**65.44**	**19**	*i* P	**P**	**10 28 25.3**	**-1.0**
	comp=Z,31nm,1.4s,SNR=8.5						
WTTA				*i* PP	**PP**	**10 30 52.1**	**+1.6**
	comp=Z,12nm,1.1s						
WATA	**Walderalm**	**65.48**	**19**	*e*P	**P**	**10 28 25.5**	**-1.0**
	comp=Z,21nm,1.7s						
WATA				*i* PP	**PP**	**10 30 52.2**	**+1.4**
	comp=Z,8.1nm,0.9s						
MYKA	**Terra Mystica**	**65.56**	**21**	*i* P	**P**	**10 28 26.5**	**-0.3**
	comp=Z,9.9nm,1.1s						
MYKA				*i* PP	**PP**	**10 30 53.9**	**+2.5**
	comp=Z,6.6nm,1.2s						
OBKA	**Obir**	**65.77**	**22**	*i* P	**P**	**10 28 28.3**	**0.0**
	comp=Z,17nm,1.6s						
KBA	**Koelnbreinsper**	**65.84**	**21**	*i* P	**P**	**10 28 28.0**	**-0.8**
	comp=Z,8.4nm,1.3s						
LESA	**Schwarzleotal**	**65.92**	**20**	*e*P	**P**	**10 28 28.3**	**-1.0**
	comp=Z,9.4nm,1.1s						
GHAJ	**Ghor Haditha**	**65.96**	**46**	IAMs_20	IAMs_20	10 55 54.9	
	comp=Z,900nm,20.0s						
STU	**Stuttgart**	**66.05**	**17**	IAMs_20	IAMs_20	10 53 25.4	
	comp=Z,946nm,21.0s						
WLF	**Walferdange**	**66.07**	**15**	*d*P	**P**	**10 28 30.0**	**0.0**
WLF				*d*x	x	10 28 37.8	
WLF	**Walferdange**	**66.07**	**15**	*e*P	**P**	**10 28 30.2**	**+0.2**
	comp=Z,82nm,1.6s,baz=206,slow=6.4						
PERS	**Pernice**	**66.08**	**22**	*e*P	**P**	**10 28 31.1**	**+0.9**
SOKA	**Soboth**	**66.09**	**22**	*e*P	**P**	**10 28 29.9**	**-0.4**
	comp=Z,12nm,1.2s,SNR=7.8						
DOU	**Dourbes**	**66.11**	**13**	*d*P	**P**	**10 28 31.2**	**+0.9**
	comp=Z,6.5nm,1.9s						
DOU				*d*x	x	10 28 37.5	
FUR	**Furstenfeldbru**	**66.13**	**19**	*e*L	L	10 55 04.4	
	comp=Z,655nm,20.3s						
RJOB	**Jochberg**	**66.23**	**20**	*e*P	**P**	**10 28 30.3**	**-0.9**
	comp=Z,8.4nm,0.8s,baz=206,slow=6.4						
BMRD	**Maredsous**	**66.34**	**13**	*d*P	**P**	**10 28 32.5**	**+0.8**
BIOA	**Bad Ischl, Aus**	**66.47**	**20**	*i* P	**P**	**10 28 31.2**	**-1.5**
	comp=Z,7.6nm,1.1s						
BGES	**Gesves**	**66.49**	**14**	*d*P	**P**	**10 28 33.2**	**+0.5**
	comp=Z,5.7nm,1.7s						
BGES				*d*x	x	10 28 39.9	
BCLA	**Clavier**	**66.57**	**14**	*d*P	**P**	**10 28 34.4**	**+1.2**
BCLA				*d*x	x	10 28 40.7	
UCC	**Uccle**	**66.72**	**13**	IAMs_20	IAMs_20	10 57 57.0	
	comp=Z,982nm,18.0s						
UCC	**Uccle**	**66.72**	**13**	*d*P	**P**	**10 28 35.8**	**+1.7**
UCC				*d*x	x	10 28 41.8	
ARSA	**Arzberg**	**66.75**	**22**	IAmb	IAmb	10 28 42.7	
	comp=Z,14nm,1.0s						
ARSA				IAMs_20	IAMs_20	10 57 12.9	
	comp=Z,997nm,20.0s						
ARSA	**Arzberg**	**66.75**	**22**	*e*P	**P**	**10 28 34.2**	**-0.3**
	comp=Z,8.2nm,0.9s,SNR=5.8						
ARSA				*i* PP	**PP**	**10 31 04.5**	**+2.7**
	comp=Z,3.4nm,0.8s						
MOA	**Molln**	**66.82**	**21**	*e*P	**P**	**10 28 34.1**	**-0.8**
	comp=Z,10nm,1.0s,SNR=6.0						
MOA				*e*PP	**PP**	**10 31 03.5**	**+1.1**
	comp=Z,5.0nm,1.5s						
MMAI	**Mount Meron Ar**	**66.84**	**44**	P	**P**	**10 28 36.2**	**+0.8**
	comp=Z,2.8nm,0.7s,baz=197,slow=7.1,SNR=2.9						
MMAI				LR	LR	10 55 36.0	
	comp=Z,316nm,22.0s,baz=262,slow=34						
	comp=Z,2.8nm,0.7s						
MEM	**Membach**	**66.91**	**14**	*d*P	**P**	**10 28 35.7**	**+0.4**
MEM				*d*x	x	10 28 42.4	
BTNL	**Ternell**	**66.92**	**14**	*d*P	**P**	**10 28 35.4**	**-0.1**
TNS	**Taunus Mts**	**67.17**	**16**	*e*P	**P**	**10 28 37.0**	**-0.1**
	comp=Z,42nm,1.4s,baz=206,slow=6.4						
TNS				*e*L	L	10 57 19.8	
	comp=Z,336nm,19.9s						
ASF	**Jabal al Asfar**	**67.39**	**46**	P	**P**	**10 28 38.1**	**-0.8**
	comp=Z,4.5nm,0.9s,baz=239,slow=4.0,SNR=6.6						
ASF				LR	LR	10 57 09.4	
	comp=Z,711nm,19.8s,baz=267,slow=35						
	comp=Z,4.5nm,0.9s						
RONA	**Rosalia, Austr**	**67.41**	**22**	*e*P	**P**	**10 28 38.8**	**+0.1**
	comp=Z,19nm,1.3s,SNR=8.1						
RONA				*e*PP	**PP**	**10 31 06.8**	**-0.8**
	comp=Z,2.0nm,0.7s						
CONA	**Conrad Observa**	**67.45**	**22**	*e*P	**P**	**10 28 38.7**	**-0.2**
	comp=Z,26nm,1.6s,SNR=10.0						
GRFO	**Grafenberg**	**67.47**	**18**	IAMs_20	IAMs_20	10 55 58.8	
	comp=Z,858nm,22.0s						
GRA1	**Grafenberg Arr**	**67.47**	**18**	IAMs_20	IAMs_20	10 56 10.8	
	comp=Z,878nm,22.0s						
GRF	**Grafenberg Arr**	**67.47**	**18**	*e*P	**P**	**10 28 38.4**	**-0.5**
	comp=Z,55nm,1.7s,baz=206,slow=6.4						
GRF				*e*L	L	10 56 10.5	
	comp=Z,828nm,21.9s						
WET	**Wettzell**	**67.49**	**19**	*e*P	**P**	**10 28 38.5**	**-0.6**
	comp=Z,21nm,1.2s,baz=206,slow=6.4						
WET				*e*L	L	10 57 03.1	
	comp=Z,673nm,21.0s						
GEC2	**GERESS Array S**	**67.50**	**20**	*e*P	**P**	**10 28 38.6**	**-0.7**
	comp=Z,72nm,2.0s,baz=206,slow=6.4						
GEC2				*e*L	L	10 56 32.2	
	comp=Z,1µm,21.7s						
GERES	**GERESS Array B**	**67.50**	**20**	P	**P**	**10 28 38.5**	**-0.7**
	comp=Z,2.9nm,0.8s,baz=199,slow=3.7,SNR=18						
GERES				PP	**PP**	**10 31 01.7**	**-6.6**
	comp=Z,3.3nm,0.9s,baz=208,slow=11,SNR=7.6						
GERES				LR	LR	10 57 04.8	
	comp=Z,1µm,20.9s,baz=228,slow=35						
	comp=Z,2.9nm,0.8s						
CKRC	**Cesky Krumlov**	**67.67**	**20**	*e*P	**P**	**10 28 40.1**	**-0.2**
CKRC				AMS	AMS	10 56 20.0	
	comp=Z,1µm,24.9s						
CKRC	**Cesky Krumlov**	**67.67**	**20**	*e*P	**P**	**10 28 40.1**	**-0.2**
CKRC				MLR	MLR		
	comp=Z,1µm,24.9s						
KHC	**Kasperske Hory**	**67.70**	**20**	*e*P	**P**	**10 28 41.2**	**+0.7**
KHC				*e*x	x	10 31 05.5	
KHC				AMS	AMS	10 56 00.0	
	comp=Z,900nm,17.6s						
KHC	**Kasperske Hory**	**67.70**	**20**	*e*P	**P**	**10 28 41.2**	**+0.7**
KHC				*e*		10 31 05.5	
KHC				MLR	MLR		
	comp=Z,900nm,17.6s						
ROTZ	**Rotzenmuhle**	**67.83**	**18**	*e*P	**P**	**10 28 40.7**	**-0.5**
	comp=Z,8.0nm,1.3s,baz=206,slow=6.4						
MANZ	**Manzenberg**	**67.99**	**18**	*e*P	**P**	**10 28 41.9**	**-0.4**
	comp=Z,35nm,2.5s,baz=206,slow=6.4						
KASTN	**Kahler Asten**	**68.05**	**15**	*e*P	**P**	**10 28 42.4**	**-0.2**
	comp=Z,36nm,1.8s,baz=206,slow=6.4						
BORA	**Eskisehir**	**68.08**	**36**	IAmb	IAmb	10 28 51.2	
	comp=Z,20nm,1.1s						
ZVC	**Zvikov**	**68.17**	**20**	AMS	AMS	10 55 50.0	
	comp=Z,900nm,24.5s						
SRO	**Srobarova**	**68.26**	**23**	*e*P	**P**	**10 28 45.6**	**+1.7**
SRO				*e*		10 28 51.8	
SRO				pmax	pmax		
	comp=Z,318nm,3.4s						
SRO	**Srobarova**	**68.26**	**23**	*e*P	**P**	**10 28 45.6**	**+1.7**
SRO				*e*		10 28 51.8	
BUD	**Budapest**	**68.26**	**24**	P	**P**	**10 28 44.1**	**+0.1**
NKC	**Novy Kostel**	**68.31**	**18**	AMS	AMS	10 56 10.0	
	comp=Z,800nm,18.4s						
MODS	**Modra-Piesok**	**68.34**	**22**	*e*P	**P**	**10 28 44.5**	**0.0**
MODS				*e*		10 28 52.1	
MODS				pmax	pmax		
	comp=Z,656nm,3.1s						
MODS	**Modra-Piesok**	**68.34**	**22**	*e*P	**P**	**10 28 44.5**	**0.0**
MODS				*e*		10 28 52.1	
MOX	**Moxa**	**68.43**	**18**	*e*P	**P**	**10 28 44.7**	**-0.3**
	comp=Z,15nm,1.1s,baz=206,slow=6.4						
MOX				*e*L	L	10 56 48.6	
	comp=Z,822nm,21.4s						
TANN	**Tannenbergstha**	**68.48**	**18**	*e*P	**P**	**10 28 44.9**	**-0.5**
	comp=Z,58nm,2.1s,baz=206,slow=6.4						
TREC	**Trest**	**68.48**	**21**	AMS	AMS	10 56 10.0	
	comp=Z,900nm,21.7s						
KRUC	**Moravsky**	**68.60**	**21**	*e*P	**P**	**10 28 45.2**	**-0.8**
DEV	**Deva**	**68.61**	**27**	P	**P**	**10 28 48.9**	**+2.7**
NMDO	**Nuevo Mundo**	**68.66**	**299**	IAMs_20	IAMs_20	11 01 35.5	
	comp=Z,331nm,21.0s						
PRU	**Pruhonice**	**68.76**	**20**	AMS	AMS	10 56 50.0	
	comp=Z,800nm,19.2s						
GOPC	**GO Pecny, Ondr**	**68.78**	**20**	AMS	AMS	10 57 00.0	
	comp=Z,800nm,20.2s						
PRA	**Prague**	**68.80**	**20**	AMS	AMS	10 56 20.0	
	comp=Z,1µm,23.4s						
VRAC	**Vranov**	**68.88**	**21**	P	**P**	**10 28 47.0**	**-0.8**
	comp=Z,4.6nm,1.0s,baz=209,slow=6.3,SNR=8.6						
VRAC				LR	LR	10 59 02.8	
	comp=Z,900nm,19.7s,baz=216,slow=36						
	comp=Z,4.6nm,1.0s						
VRAC	**Vranov**	**68.88**	**21**	*e*P	**P**	**10 28 48.1**	**+0.3**
JAVC	**Velka Javorina**	**68.89**	**22**	*e*P	**P**	**10 28 48.2**	**+0.3**
HSKC	**Hora Svate Kat**	**68.94**	**19**	AMS	AMS	10 56 40.0	
	comp=Z,900nm,21.1s						
PSZ	**Piszkesteto**	**68.96**	**24**	IAmb	IAmb	10 28 56.7	
	comp=Z,25nm,1.0s						
NEUB	**Neuenburg**	**68.98**	**17**	*e*P	**P**	**10 28 48.1**	**-0.2**
	comp=Z,21nm,0.9s,baz=206,slow=6.4						
VYHS	**Vyhne**	**69.02**	**23**	*e*P	**P**	**10 28 48.7**	**0.0**
VYHS				*e*		10 28 55.8	
VYHS				pmax	pmax		
	comp=Z,21nm,1.1s						
VYHS	**Vyhne**	**69.02**	**23**	*e*P	**P**	**10 28 48.7**	**0.0**
VYHS				*e*		10 28 55.8	
RICC	**Richard**	**69.10**	**19**	AMS	AMS	10 57 20.0	
	comp=Z,1µm,22.9s						
CLZ	**Clausthal**	**69.15**	**16**	*e*P	**P**	**10 28 49.1**	**-0.3**
	comp=Z,49nm,1.8s,baz=206,slow=6.4						
PVCC	**Panska Ves**	**69.24**	**19**	AMS	AMS	10 56 30.0	
	comp=Z,800nm,18.5s						
PVCC	**Panska Ves**	**69.24**	**19**	P	**P**	**10 28 48.9**	**-1.1**
BRG	**Berggiesshubel**	**69.34**	**19**	*e*P	**P**	**10 28 50.1**	**-0.5**
	comp=Z,9.9nm,1.1s,baz=206,slow=6.4						

BRG	**Berggiesshubel**	**69.34**	**19**	*e*P	**P**	**10 28 50.0**	**-0.6**
BRG				Amp		10 28 52.2	
	comp=Z,6.0nm,0.9s						
BRG	**Berggiesshubel**	**69.34**	**19**	P	P	10 28 57.3	+6.8
BRG				Amp		10 28 59.2	
	comp=Z,9.9nm,1.1s						
MAUC	**Maruska**	**69.37**	**22**	*e*P	**P**	**10 28 52.2**	**+1.3**
MAUC				*e*x	x	10 28 58.3	
ANTO	**Ankara**	**69.43**	**37**	P	**P**	**10 28 51.4**	**-0.1**
ANTO	**Ankara**	**69.43**	**37**	P	**P**	**10 28 52.0**	**+0.5**
CLL	**Collm**	**69.43**	**18**	IAMs_20	IAMs_20	10 56 57.7	
	comp=Z,772nm,22.0s						
CLL	**Collm**	**69.43**	**18**	*e*L	L	10 57 20.3	
	comp=Z,694nm,21.6s						
CLL	**Collm**	**69.43**	**18**	*e*P	**P**	**10 28 50.0**	**-1.1**
	comp=Z,11nm,1.5s						
CLL				*i* x	x	10 28 58.0	
	comp=Z,56nm,2.4s						
CLL				*i* PP	**PP**	**10 31 22.0**	**-2.9**
	comp=Z,50nm,2.3s						
CLL				*i* sPP		10 31 30.7	
	comp=Z,58nm,2.3s						
CLL				*e*Sx	Sx	10 37 50.0	
CLL				*e*x	x	10 41 54.0	
CLL				*e*SSS	SSS	10 45 42.0	
CLL				*e*SSSS		10 47 00.0	
CLL				AMS	AMS	10 57 00.0	
	comp=Z,700nm,21.5s						
ASSE	**Asse, Remlinge**	**69.49**	**16**	*e*P	**P**	**10 28 51.4**	**-0.1**
	comp=Z,52nm,1.9s,baz=206,slow=6.4						
KRLC	**Kraliky**	**69.59**	**21**	*e*P	**P**	**10 28 52.5**	**+0.3**
KRLC				AMS	AMS	10 57 30.0	
	comp=Z,700nm,15.6s						
KRLC	**Kraliky**	**69.59**	**21**	*e*P	**P**	**10 28 52.5**	**+0.3**
KRLC				MLR	MLR		
	comp=Z,700nm,15.6s						
RAYN	**Ar Rayn**	**69.60**	**58**	P	**P**	**10 28 53.6**	**+0.7**
RAYN	**Ar Rayn**	**69.60**	**58**	IAMs_20	IAMs_20	10 54 54.3	
	comp=Z,828nm,22.0s						
RAYN	**Ar Rayn**	**69.60**	**58**	P	**P**	**10 28 54.7**	**+1.8**
RAYN	**Ar Rayn**	**69.60**	**58**	P	**P**	**10 28 53.6**	**+0.7**
RAYN				pmax	pmax		
	comp=Z,11nm,1.1s						
MORC	**Moravsky Berou**	**69.61**	**22**	IAmb	IAmb	10 29 00.5	
	comp=Z,26nm,1.2s						
MORC	**Moravsky Berou**	**69.61**	**22**	*e*P	**P**	**10 28 52.0**	**-0.4**
MORC	**Moravsky Berou**	**69.61**	**22**	P	**P**	**10 28 52.4**	**0.0**
CHIV	**Chivirico**	**69.64**	**298**	IAMs_20	IAMs_20	11 04 23.5	
	comp=Z,172nm,21.0s						
KECS	**Kecovo**	**69.65**	**24**	*e*P	**P**	**10 28 52.7**	**+0.1**
KECS				*e*		10 29 00.2	
KECS				pmax	pmax		
	comp=Z,20nm,0.7s						
KECS	**Kecovo**	**69.65**	**24**	*e*P	**P**	**10 28 52.7**	**+0.1**
KECS				*e*		10 29 00.2	
DPC	**Dobruska-Polom**	**69.66**	**21**	*e*P	**P**	**10 28 52.4**	**-0.3**
DPC				AMS	AMS	10 58 30.0	
	comp=Z,700nm,18.9s						
DPC	**Dobruska-Polom**	**69.66**	**21**	*e*P	**P**	**10 28 52.4**	**-0.3**
DPC				MLR	MLR		
	comp=Z,700nm,18.9s						
NRDL	**Niedersach Rie**	**69.67**	**16**	*e*P	**P**	**10 28 53.4**	**+0.9**
	comp=Z,28nm,1.2s,baz=206,slow=6.4						
UPC	**Upice**	**69.69**	**20**	AMS	AMS	10 58 20.0	
	comp=Z,800nm,21.5s						
RETH	**Rethem/Aller,**	**69.70**	**15**	*e*P	**P**	**10 28 53.4**	**+0.7**
	comp=Z,84nm,1.7s,baz=206,slow=6.4						
MLR	**Muntele Rosu**	**69.70**	**29**	IAMs_20	IAMs_20	10 58 52.0	
	comp=Z,772nm,20.0s						
MLR	**Muntele Rosu**	**69.70**	**29**	P	**P**	**10 28 51.8**	**-1.3**
	comp=Z,22nm,1.1s,baz=182,slow=2.9,SNR=17						
MLR				LR	LR	10 59 22.1	
	comp=Z,784nm,20.1s,baz=204,slow=36						
	comp=Z,22nm,1.1s						
CHVC	**Chvalec**	**69.78**	**20**	AMS	AMS	10 58 30.0	
	comp=Z,700nm,19.5s						
LANS	**Liptovska Anna**	**69.80**	**23**	*e*P	**P**	**10 28 55.7**	**+2.2**
LANS				*e*		10 29 01.8	
LANS				pmax	pmax		
	comp=Z,4.0nm,0.7s						
LANS	**Liptovska Anna**	**69.80**	**23**	*e*P	**P**	**10 28 55.7**	**+2.2**
LANS				*e*		10 29 01.8	
OSTC	**Ostas**	**69.80**	**20**	*e*P	**P**	**10 28 54.1**	**+0.6**
OSTC				*e*x	x	10 28 59.4	
OSTC				AMS	AMS	10 58 30.0	
	comp=Z,700nm,18.0s						
OSTC	**Ostas**	**69.80**	**20**	*e*P	**P**	**10 28 54.1**	**+0.6**
OSTC				*e*		10 28 59.4	
OSTC				MLR	MLR		
	comp=Z,700nm,18.0s						
ESK	**Eskdalemuir**	**69.82**	**7**	P	**P**	**10 28 54.2**	**+0.7**
ESK				IAmb	IAmb	10 28 56.9	
	comp=Z,31nm,1.1s						
ESK	**Eskdalemuir**	**69.82**	**7**	P	**P**	**10 28 54.2**	**+0.7**
ESK				pmax	pmax		
	comp=Z,31nm,1.2s						
STEB	**Steborice**	**69.82**	**22**	*e*P	**P**	**10 28 54.2**	**+0.6**
FLTG	**Flechtingen**	**69.83**	**17**	*e*P	**P**	**10 28 53.8**	**+0.2**
	comp=Z,122nm,2.1s,baz=206,slow=6.4						
BR131	**Keskin Array S**	**69.83**	**38**		**P**	**10 28 54.1**	**0.0**
BR131				IAmb	IAmb	10 29 02.6	
	comp=Z,21nm,1.2s						
BR131	**Keskin Array S**	**69.83**	**38**	P	**P**	**10 28 54.7**	**+0.6**
	SNR=9.9						
BR131				P	**P**	**10 28 54.7**	**+0.6**
	SNR=9.9						
BR131	**Keskin Array S**	**69.83**	**38**	*ce*P	**P**	**10 28 54.4**	**+0.3**
BRTR	**Keskin Array B**	**69.83**	**38**	P	**P**	**10 28 53.7**	**-0.4**
BRTR	**Keskin Array B**	**69.83**	**38**	P	**P**	**10 28 53.9**	**-0.3**
	comp=Z,4.7nm,0.9s,baz=199,slow=7.3,SNR=22						
BRTR				LR	LR	11 01 00.6	
	comp=Z,199nm,20.3s,baz=244,slow=37						
	comp=Z,4.7nm,0.9s						
BRTR	**Keskin Array B**	**69.83**	**38**	*ce*P	**P**	**10 28 54.5**	**+0.3**
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
EKA	**Eskdalemuir Ar**	**69.84**	**7**	P	**P**	**10 28 53.0**	**-0.5**
	comp=Z,14nm,0.9s,baz=182,slow=5.9,SNR=21						
	comp=Z,14nm,0.9s						
OKC	**Ostrava-Krasne**	**69.87**	**22**	AMS	AMS	10 58 20.0	
	comp=Z,800nm,19.9s						
KSP	**Ksiaz**	**70.07**	**20**	*e*P	**P**	**10 28 55.3**	**+0.2**
KSP	**Ksiaz**	**70.07**	**20**	P	**P**	**10 28 57.9**	**+2.8**
TIRR	**Tirgusor**	**70.16**	**31**	P	**P**	**10 28 53.1**	**-2.7**
NIE	**Niedzica**	**70.33**	**23**	*e*P	**P**	**10 28 58.2**	**+1.4**
GAZ	**Gaziantep**	**70.49**	**42**	P	**P**	**10 28 59.1**	**+1.1**
GAZ				IAmb	IAmb	10 29 06.9	
	comp=Z,31nm,1.3s						
BNN	**Bunyan**	**70.63**	**40**	P	**P**	**10 28 58.5**	**-0.4**
STHS	**Stebnicka Huta**	**70.70**	**24**	*e*P	**P**	**10 28 59.8**	**+0.8**
STHS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
STHS	**Stebnicka Huta**	**70.70**	**24**	*e*P	**P**	**10 28 59.8**	**+0.8**
KOLS	**Kolonicke sedl**	**70.72**	**25**	*e*P	**P**	**10 29 00.7**	**+1.5**
KOLS				*e*		10 29 07.1	
KOLS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KOLS	**Kolonicke sedl**	**70.72**	**25**	*e*P	**P**	**10 29 00.7**	**+1.5**
KOLS				*e*		10 29 07.1	
ILGA	**Ilgaz**	**70.73**	**37**	IAMs_20	IAMs_20	10 58 37.1	
	comp=Z,746nm,22.0s						
OJC	**Ojcow**	**70.79**	**23**	*e*P	**P**	**10 28 58.8**	**-0.7**
BURAR	**Bucovina Array**	**70.96**	**27**		**P**	**10 29 00.5**	**-0.3**
BURAR	**Bucovina Array**	**70.96**	**27**	P	**P**	**10 29 00.5**	**-0.3**
BUR08	**Bucovina Ar. S**	**70.97**	**27**	P	**P**	**10 29 00.4**	**-0.4**
BSEG	**Bad Segeberg**	**71.03**	**15**	*e*P	**P**	**10 29 01.2**	**+0.4**
	comp=Z,28nm,1.2s,baz=206,slow=6.4						
BSEG				*e*L	L	11 01 15.3	
	comp=Z,414nm,18.1s						
BRU2	**Volcan**	**71.33**	**284**	IAMs_20	IAMs_20	10 58 09.1	
	comp=Z,831nm,21.0s						
KSV	**Kosov**	**71.42**	**27**	P	**P**	**10 29 02.1**	**-1.3**
KWP	**Kalwaria Pacla**	**71.45**	**25**	*e*P	**P**	**10 29 05.0**	**+1.5**
LVV	**L'vov**	**72.14**	**25**	P	**P**	**10 29 06.6**	**-1.1**
MAW	**Mawson**	**72.25**	**157**	P	**P**	**10 29 07.5**	**-0.7**
	comp=Z,6.6nm,0.8s,baz=286,slow=9.7,SNR=13						
MAW				LR	LR	10 55 14.5	
	comp=Z,254nm,19.9s,baz=288,slow=31						
	comp=Z,6.6nm,0.8s						
ARPR	**Arapgir-MALATY**	**72.33**	**41**	P	**P**	**10 29 09.6**	**+0.3**
ARPR				IAmb	IAmb	10 29 18.1	
	comp=Z,31nm,1.0s						
GBN	**Guysborough**	**72.88**	**327**	IAmb	IAmb	10 29 14.0	
	comp=Z,21nm,1.0s						
COP	**Copenhagen**	**73.14**	**16**	*i* P	P	10 29 07.7	-5.7
COP				IAmb	IAmb	10 29 10.1	
	comp=Z,35nm,0.7s						
HAL	**Halifax**	**73.48**	**326**	IAmb	IAmb	10 29 24.7	
	comp=Z,23nm,1.0s						
KBD	**Kabd**	**73.87**	**54**	P	**P**	**10 29 19.7**	**+1.3**
ABTO	**Aybut**	**73.87**	**67**	P	**P**	**10 29 20.7**	**+1.9**
ABTO				P	**P**	**10 29 20.7**	**+1.9**
ABTO				P	**pP**	**10 29 21.1**	**-1.2**
ABTO				P	**pP**	**10 29 21.1**	**-1.2**
JTS	**Las Juntas de**	**73.91**	**285**	LR	LR	11 00 53.5	
	comp=Z,2µm,21.6s,baz=117,slow=35						
WHFO	**Wadi Hawf**	**74.50**	**67**	P	**P**	**10 29 23.6**	**+1.3**
WHFO				P	**P**	**10 29 23.6**	**+1.3**
RBK	**Rabkut**	**74.74**	**67**	P	**P**	**10 29 26.3**	**+2.6**
RBK				P	**P**	**10 29 26.3**	**+2.6**
TRNA	**Turayna**	**74.84**	**59**	P	**P**	**10 29 25.4**	**+1.3**
LMN	**Caledonia Moun**	**74.92**	**326**	IAmb	IAmb	10 29 32.7	
	comp=Z,30nm,1.1s						
SLWR	**Sila**	**74.98**	**60**	P	**P**	**10 29 26.2**	**+1.3**
SLWR				P	**P**	**10 29 26.2**	**+1.3**
KIEV	**Kiev**	**75.00**	**27**	P	**P**	**10 29 23.7**	**-0.8**
KIEV				IAmb	IAmb	10 29 31.8	
	comp=Z,33nm,1.1s						
KIEV	**Kiev**	**75.00**	**27**	P	**P**	**10 29 23.7**	**-0.8**
KIEV				pmax	pmax		
	comp=Z,33nm,1.1s						
KIEV				MLR	MLR		
	comp=Z,600nm,22.0s						
AKASG	**Malin Array Be**	**75.01**	**27**	P	**P**	**10 29 22.7**	**-1.8**
AKASG				IAmb	IAmb	10 29 31.4	
	comp=Z,31nm,1.2s						
AKASG	**Malin Array Be**	**75.01**	**27**	P	**P**	**10 29 23.5**	**-1.0**
	comp=Z,15nm,0.9s,baz=225,slow=6.1,SNR=55						
AKASG				LR	LR	11 02 42.6	
	comp=Z,496nm,21.6s,baz=226,slow=36						
	comp=Z,15nm,0.9s						
AKBB	**Malin Array Si**	**75.01**	**27**	IAmb	IAmb	10 29 31.8	
	comp=Z,33nm,1.0s						
DOK	**Doka**	**75.06**	**66**	P	**P**	**10 29 26.5**	**+1.0**
DOK				P	**P**	**10 29 26.5**	**+1.0**
SHMA	**Al-Shehemyia**	**75.08**	**58**	P	**P**	**10 29 26.8**	**+1.2**
SUW	**Suwalki**	**75.09**	**22**	*e*P	**P**	**10 29 24.2**	**-0.7**
SUW	**Suwalki**	**75.09**	**22**	IAMs_20	IAMs_20	11 02 50.3	
	comp=Z,573nm,19.0s						
GGN	**Saint George**	**75.58**	**325**	IAmb	IAmb	10 29 37.0	
	comp=Z,23nm,1.1s						
SOC	**Sochi**	**75.79**	**37**	*e*P	**P**	**10 29 27.8**	**-1.4**
SOC				*e*		10 32 22.9	
SOC				*e*PPP	PPP	10 34 03.7	
SOC				*e*S	**S**	**10 39 10.6**	**-0.3**
SOC				*e*SS	**SS**	**10 44 00.8**	**-2.5**
SOC				pmax	pmax		
	comp=Z,19nm,0.9s						
VSLR	**Vesyoloye**	**75.91**	**38**	*i* P	**P**	**10 29 31.2**	**+1.3**
VSLR				pmax	pmax		
	comp=Z,18nm,1.1s						
G65A	**Princeton**	**76.04**	**324**	IAmb	IAmb	10 29 38.9	
	comp=Z,21nm,1.1s						
QSPA	**South Pole Qui**	**76.05**	**180**	P	**P**	**10 29 31.1**	**+0.5**
	comp=Z,12nm,0.8s,baz=200,slow=2.9,SNR=52						
QSPA				LR	LR	10 58 57.4	
	comp=Z,306nm,18.8s,baz=202,slow=33						
	comp=Z,12nm,0.8s						
HERN	**Volcan Telica**	**76.38**	**287**	IAMs_20	IAMs_20	11 00 15.9	
	comp=Z,362nm,21.0s						
BATG	**Bathurst New B**	**76.49**	**327**	IAmb	IAmb	10 29 41.6	
	comp=Z,34nm,1.1s						
HRV	**Adam Dziewonsk**	**76.85**	**320**	P	**P**	**10 29 35.4**	**+0.1**
HRV				IAmb	IAmb	10 29 44.0	
	comp=Z,27nm,1.1s						
HRV	**Adam Dziewonsk**	**76.85**	**320**	P	**P**	**10 29 35.4**	**+0.1**
HRV				pmax	pmax		
	comp=Z,27nm,1.1s						
GNI	**Garni**	**77.04**	**43**	P	**P**	**10 29 36.9**	**+0.3**
GNI				IAmb	IAmb	10 29 49.5	
	comp=Z,36nm,1.4s						
GNI	**Garni**	**77.04**	**43**	P	**P**	**10 29 36.3**	**-0.3**
	comp=Z,2.5nm,0.3s,baz=331,slow=4.5,SNR=5.9						
GNI				LR	LR	11 03 33.2	
	comp=Z,207nm,21.8s,baz=265,slow=36						
	comp=Z,2.5nm,0.3s						
GNI	**Garni**	**77.04**	**43**	P	**P**	**10 29 38.2**	**+1.6**
GNI	**Garni**	**77.04**	**43**	*ce*P	**P**	**10 29 37.5**	**+0.9**
GNI				pmax	pmax		
	comp=Z,7.0nm,1.2s						
NACGM	**Naroch**	**77.11**	**23⇑**	*i*P	**P**	**10 29 37.2**	**+0.8**
MNK	**Minsk**	**77.24**	**24**	*i* P	**P**	**10 29 34.7**	**-2.4**
	comp=E,11nm,0.8s						
MNK				*i* P	**P**	**10 29 34.7**	**-2.4**
	comp=N,6.0nm,0.6s						
MNK				*i* P	**P**	**10 29 34.7**	**-2.4**
	comp=Z,27nm,0.9s,baz=222						
MNK				*i* PcP	**sP**	**10 29 42.7**	**+0.7**
MNK				*i* PP	**PP**	**10 32 28.0**	**-3.4**
MNK				*i* PPP	PPP	10 34 15.2	
MNK				*i* S	**S**	**10 39 24.5**	**-1.8**
MNK				*i* SS	**SS**	**10 44 23.7**	**-1.0**
MNK				*i* SSS	SSS	10 47 21.9	
MNK				*i* LQ	LQ	10 57 37.3	
MNK				*i* LRM	MLR	11 04 29.2	
	comp=Z,500nm,18.5s						
MNK				*i* LRM	MLR	11 04 43.1	
	comp=E,354nm,17.4s						
MNK	**Minsk**	**77.24**	**24**	*i* P	**P**	**10 29 34.7**	**-2.4**
MNK				*i*		10 29 42.7	
MNK				*i*		10 32 28.0	
MNK				*i* PPP	PPP	10 34 15.1	
MNK				*i* S	**S**	**10 39 24.4**	**-1.8**
MNK				*i* SS	**SS**	**10 44 23.7**	**-1.0**
MNK				pmax	pmax		
	comp=N,6.0nm,0.6s						
MNK				pmax	pmax		
	comp=E,11nm,0.8s						
MNK				pmax	pmax		
	comp=Z,27nm,0.9s						
MNK				MLR	MLR		
	comp=N,378nm,18.0s						
MNK				MLR	MLR		
	comp=Z,500nm,19.0s						
MNK				MLR	MLR		
	comp=E,354nm,17.0s						
HFS	**Hagfors**	**77.40**	**14**	P	**P**	**10 29 37.7**	**-0.3**
	comp=E,4.5nm,0.9s,baz=216,slow=7.3,SNR=4.4						
HFS				LR	LR	11 05 48.9	
	comp=E,370nm,18.6s,baz=202,slow=37						
	comp=E,4.5nm,0.9s						
UMZA	**Um Al Zommool**	**77.42**	**63**	P	**P**	**10 29 40.2**	**+1.3**
UMZA				P	**P**	**10 29 40.2**	**+1.3**
I62A	**Tamworth**	**77.47**	**322**	IAmb	IAmb	10 29 41.4	
	comp=Z,24nm,1.2s						
SHA1	**Shidzhatmaz**	**77.64**	**39⇑**	*e*P	**P**	**10 29 39.8**	**-0.2**
NB2	**NORSAR Subarra**	**77.66**	**13**	P	**P**	**10 29 39.2**	**-0.3**
	comp=Z,111nm,2.5s,baz=208,slow=6.2						
NB2	**NORSAR Subarra**	**77.66**	**13**	P	**P**	**10 29 39.1**	**-0.4**
NB2				pmax	pmax		
	comp=Z,275nm,2.7s						
NB2	**NORSAR Subarra**	**77.66**	**13**	P	**P**	**10 29 39.2**	**-0.3**
	baz=208,slow=6.2						
NOA	**NORSAR Array B**	**77.66**	**13**	P	**P**	**10 29 39.5**	**0.0**
	comp=Z,3.6nm,0.9s,baz=207,slow=5.9,SNR=10						
NOA				LR	LR	11 05 34.8	
	comp=Z,138nm,18.0s,baz=210,slow=37						
	comp=Z,3.6nm,0.9s						
KIV	**Kislovodsk**	**77.78**	**38**	P	**P**	**10 29 39.6**	**-1.0**
KIV	**Kislovodsk**	**77.78**	**38**	P	**P**	**10 29 41.6**	**+1.0**
KIV	**Kislovodsk**	**77.78**	**38**	*e*P	**P**	**10 29 41.4**	**+0.9**
KIV				pmax	pmax		
	comp=Z,20nm,1.1s						
KBZ	**Khabaz**	**77.78**	**39**	P	**P**	**10 29 39.8**	**-0.6**
	comp=Z,8.2nm,0.9s,baz=244,slow=2.9,SNR=18						
KBZ				LR	LR	11 04 08.2	
	comp=Z,124nm,21.2s,baz=254,slow=36						
	comp=Z,8.2nm,0.9s						
KBZ	**Khabaz**	**77.78**	**39⇑**	*e*P	**P**	**10 29 40.7**	**+0.3**
KBZ				pmax	pmax		
	comp=Z,12nm,1.0s						
TRNY	**Table Rock, Ra**	**77.82**	**318**	P	**P**	**10 29 40.6**	**-0.1**
AJN	**Ajban**	**77.94**	**61**	P	**P**	**10 29 43.1**	**+1.4**
AJN				P	**P**	**10 29 43.1**	**+1.4**
D62A	**Allapoint, All**	**77.99**	**325**	IAmb	IAmb	10 29 49.8	
	comp=Z,20nm,1.0s						
Y58A	**Scranton**	**78.18**	**310**	IAMs_20	IAMs_20	10 56 59.5	
	comp=Z,640nm,21.0s						
NHSC	**New Hope**	**78.22**	**309**	IAMs_20	IAMs_20	10 57 11.5	
	comp=Z,769nm,20.0s						
ASUD	**Al Ashush, Dub**	**78.26**	**61**	P	**P**	**10 29 45.4**	**+1.9**
ASUD				P	**P**	**10 29 45.4**	**+1.9**
ALNE	**Al Ain**	**78.41**	**61**	P	**P**	**10 29 45.5**	**+1.1**
	SNR=7.2						
ALNE				P	**P**	**10 29 45.5**	**+1.1**
	SNR=7.2						
CBN	**Corbin Frederi**	**78.48**	**314**	IAMs_20	IAMs_20	10 56 58.2	
	comp=Z,638nm,21.0s						
DQM	**DQM**	**78.53**	**66**	P	**P**	**10 29 45.7**	**+0.5**
DQM				P	**P**	**10 29 45.7**	**+0.5**
NAZ	**Nazwa, Dubai**	**78.67**	**61**	P	**P**	**10 29 47.3**	**+1.5**
NAZ				P	**P**	**10 29 47.3**	**+1.5**
R58B	**Mineral**	**78.72**	**314**	IAMs_20	IAMs_20	10 57 16.8	
	comp=Z,561nm,20.0s						
Y57A	**Sumter**	**78.77**	**309**	IAMs_20	IAMs_20	10 57 08.1	
	comp=Z,712nm,20.0s						
BORG	**Borgarnes**	**78.79**	**357**	LR	LR	10 57 53.4	
	comp=Z,224nm,20.5s,baz=149,slow=31						
ARQ	**Araqi**	**78.81**	**62**	P	**P**	**10 29 46.7**	**0.0**
	SNR=7.5						
ARQ				P	**P**	**10 29 46.7**	**0.0**
	SNR=7.5						
L59A	**Walton**	**78.88**	**319**	IAmb	IAmb	10 29 55.7	
	comp=Z,37nm,1.3s						
ASHO	**Ashiyiah**	**78.90**	**61**	P	**P**	**10 29 48.2**	**+1.1**
ASHO				P	**P**	**10 29 48.2**	**+1.1**
NRS	**Narsarsuaq**	**78.94**	**345**	*i* P	**P**	**10 29 46.6**	**+0.2**
NRS				IAmb	IAmb	10 29 47.1	
	comp=Z,11nm,0.8s						
LMQ	**La Malbaie**	**78.97**	**325**	P	**P**	**10 29 46.6**	**-0.3**
KSPA	**Keystone Colle**	**79.03**	**318**	P	**P**	**10 29 47.7**	**+0.3**
BIRD	**Birdtown, Kers**	**79.09**	**310**	IAMs_20	IAMs_20	10 57 56.6	
	comp=Z,633nm,21.0s						
SOHO	**SOHO**	**79.11**	**62**	P	**P**	**10 29 48.0**	**-0.2**
SOHO				P	**P**	**10 29 48.0**	**-0.2**
UOSS	**Minazif**	**79.11**	**61**	IAMs_20	IAMs_20	11 06 59.3	
	comp=Z,601nm,19.0s						
J59A	**Piesco**	**79.19**	**320**	IAmb	IAmb	10 29 57.3	
	comp=Z,24nm,1.2s						
ESQI	**Esquipulas**	**79.30**	**288**	IAMs_20	IAMs_20	11 03 19.2	
	comp=Z,667nm,22.0s						
JSC	**Jenkinsville**	**79.53**	**309**	IAMs_20	IAMs_20	10 58 40.3	
	comp=Z,540nm,20.0s						
AKT	**Akhty**	**79.67**	**43**	*e*P	**P**	**10 29 51.3**	**+0.3**
AKT				*e*		10 29 59.1	
AKT				*e*		10 32 53.2	
AKT				pmax	pmax		
	comp=Z,8.0nm,1.9s						
AKT				MLR	MLR		
	comp=Z,375nm,21.0s						
VSU	**Vasula**	**79.80**	**21⇓**	*e*P	**P**	**10 29 51.0**	**-0.1**
VSU				pmax	pmax		
	comp=Z,14nm,1.2s						
M57A	**Sunshine Farm,**	**79.81**	**317**	IAmb	IAmb	10 30 01.3	
	comp=Z,23nm,1.1s						
VORD	**Divnogorie**	**79.96**	**31**	*e*P	**P**	**10 29 51.2**	**-1.0**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SMDO	**Samad**	**80.03**	**63**	P	**P**	**10 29 54.3**	**+0.9**
	SNR=9.8						
SMDO				P	**P**	**10 29 54.3**	**+0.9**
	SNR=9.8						
VSR	**Storozhevoye**	**80.05**	**31**	*e*P	**P**	**10 29 51.8**	**-0.9**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
Q56A	**Snyder Ridge,**	**80.12**	**314**	IAmb	IAmb	10 30 02.9	
	comp=Z,28nm,1.0s						
Q56A				IAMs_20	IAMs_20	10 57 00.8	
	comp=Z,699nm,22.0s						
MAK	**Makhachkala**	**80.25**	**41**	*e*P	**P**	**10 29 49.8**	**-4.2**
MAK				*e*		10 32 59.3	
MAK				*e*S	**S**	**10 39 52.4**	**-6.5**
MAK				*e*SS	**SS**	**10 45 07.1**	**-3.4**
MAK				pmax	pmax		
	comp=Z,63nm,0.4s						
MAK				MLR	MLR		
	comp=Z,340nm,17.0s						
BIDO	**Bidbid**	**80.26**	**63**	P	**P**	**10 29 55.6**	**+1.1**
BIDO				P	**P**	**10 29 55.6**	**+1.1**
VORR	**Voronezh**	**80.34**	**31**	P	**P**	**10 29 53.8**	**-0.5**
VORR				pmax	pmax		
	comp=Z,25nm,1.2s						
L56A	**Greenwood**	**80.48**	**318**	IAmb	IAmb	10 30 04.5	
	comp=Z,34nm,1.1s						
WSAR	**Wadi Sarin**	**80.60**	**63**	LR	LR	11 05 14.8	
	comp=Z,8.3nm,19.3s,baz=256,slow=35						
WSAR	**Wadi Sarin**	**80.60**	**63**	P	**P**	**10 29 56.1**	**-0.3**
	SNR=8.0						
TRQ	**Mont Tremblant**	**80.66**	**322**	P	**P**	**10 29 56.0**	**-0.3**
TRQ				IAmb	IAmb	10 30 04.8	
	comp=Z,30nm,1.3s						
LPSR	**Galich'ya Gora**	**80.78**	**30**	*e*P	**P**	**10 29 55.8**	**-0.8**
LPSR				pmax	pmax		
	comp=Z,44nm,1.4s						
BG3	**Lake Jocassee**	**81.08**	**309**	IAmb	IAmb	10 30 08.9	
	comp=Z,38nm,1.2s						
BG3				IAMs_20	IAMs_20	10 58 18.2	
	comp=Z,597nm,22.0s						
V53A	**Saluda**	**81.27**	**310**	IAmb	IAmb	10 30 08.8	
	comp=Z,35nm,1.5s						
OBN	**Obninsk**	**81.28**	**27**	IAMs_20	IAMs_20	11 05 07.0	
	comp=Z,774nm,22.0s						
OBN	**Obninsk**	**81.28**	**27**	LR	LR	11 07 59.1	
	comp=Z,657nm,18.6s,baz=194,slow=37						
OBN	**Obninsk**	**81.28**	**27**	*i* P	**P**	**10 29 58.5**	**-0.7**
OBN				*i*		10 30 04.6	
OBN				*i*		10 33 03.0	
OBN				*e*S	**S**	**10 40 01.1**	**-8.0**
OBN				*i* SS	**SS**	**10 45 27.9**	**+2.6**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,620nm,18.0s						
VRH	**Novokhopyorsk**	**81.33**	**32**	*e*P	**P**	**10 29 58.5**	**-1.1**
VRH				pmax	pmax		
	comp=Z,38nm,1.4s						
O54A	**Avella**	**81.46**	**315**	IAMs_20	IAMs_20	10 57 51.1	
	comp=Z,808nm,21.0s						
Y52A	**Lilburn**	**81.49**	**308**	IAmb	IAmb	10 30 10.0	
	comp=Z,23nm,1.1s						
SCHQ	**Schefferville**	**81.62**	**332**	P	**P**	**10 30 00.6**	**-0.5**
	comp=Z,5.7nm,0.7s,baz=131,slow=5.1,SNR=9.1						
SCHQ				LR	LR	11 00 48.7	
	comp=Z,225nm,20.4s,baz=140,slow=32						
	comp=Z,5.7nm,0.7s						
FINES	**FINESS Array B**	**81.87**	**18**	P	**P**	**10 30 01.6**	**-0.6**
	comp=Z,4.7nm,0.9s,baz=167,slow=9.4,SNR=8.1						
FINES				LR	LR	11 07 53.1	
	comp=Z,258nm,18.3s,baz=230,slow=37						
	comp=Z,4.7nm,0.9s						
FINES	**FINESS Array B**	**81.87**	**18**	*i* P	**P**	**10 30 02.5**	**+0.3**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
W52A	**Murphy**	**81.87**	**309**	IAmb	IAmb	10 30 11.8	
	comp=Z,18nm,1.1s						
W52A				IAMs_20	IAMs_20	11 00 33.1	
	comp=Z,603nm,20.0s						
TKL	**Tuckaleechee C**	**81.98**	**310**	LR	LR	10 59 48.5	
	comp=Z,591nm,20.4s,baz=94,slow=31						
N53A	**Lisbon**	**82.05**	**315**	IAMs_20	IAMs_20	10 58 11.6	
	comp=Z,687nm,21.0s						
X51A	**Calhoun**	**82.37**	**308**	IAMs_20	IAMs_20	10 59 50.3	
	comp=Z,527nm,20.0s						
CCIG	**Comitan**	**82.38**	**289**	IAMs_20	IAMs_20	11 04 44.9	
	comp=Z,656nm,22.0s						
CPCT	**Cooper Cave**	**82.46**	**309**	IAMs_20	IAMs_20	10 59 51.6	
	comp=Z,633nm,19.0s						
M52A	**Chesterland**	**82.72**	**316**	IAMs_20	IAMs_20	10 57 58.5	
	comp=Z,618nm,22.0s						
SADO	**Sadowa**	**82.74**	**320**	LR	LR	11 00 00.9	
	comp=Z,24nm,18.9s,baz=104,slow=31						
W50A	**Signal Mountai**	**82.96**	**309**	IAMs_20	IAMs_20	11 01 27.2	
	comp=Z,575nm,20.0s						
N51A	**Ashland**	**83.15**	**315**	IAMs_20	IAMs_20	10 58 42.7	
	comp=Z,692nm,22.0s						
BUKO	**Buck Lake**	**83.22**	**320**	IAmb	IAmb	10 30 18.2	
	comp=Z,19nm,1.2s						
ACSO	**Alum Creek Sta**	**83.28**	**314**	IAMs_20	IAMs_20	10 58 59.2	
	comp=Z,710nm,22.0s						
Y49A	**Blount Mountai**	**83.29**	**307**	IAmb	IAmb	10 30 18.5	
	comp=Z,16nm,1.0s						
VLDQ	**Val d'Or**	**83.33**	**323**		**P**	**10 30 10.9**	**+0.9**
VLDQ				IAmb	IAmb	10 30 18.8	
	comp=Z,14nm,1.1s						
SWET	**Sewanee**	**83.43**	**309**	P	**P**	**10 30 10.5**	**-0.5**
SWET				IAmb	IAmb	10 30 19.2	
	comp=Z,22nm,1.2s						

SWET				IAMs_20	IAMs_20	11 01 22.4	
	comp=Z,584nm,20.0s						
LRAL	**Lakeview Retre**	**83.44**	**306**		**P**	**10 30 10.8**	**-0.2**
LRAL				IAmb	IAmb	10 30 19.5	
	comp=Z,21nm,1.5s						
U49A	**Red Boiling Sp**	**83.81**	**310**	IAMs_20	IAMs_20	11 00 25.4	
	comp=Z,631nm,21.0s						
X48A	**Hartselle**	**84.00**	**308**	IAmb	IAmb	10 30 22.1	
	comp=Z,14nm,1.1s						
O49A	**Covington**	**84.21**	**314**	IAmb	IAmb	10 30 23.0	
	comp=Z,16nm,1.0s						
V48A	**Smith Brothers**	**84.30**	**309**	IAmb	IAmb	10 30 23.6	
	comp=Z,23nm,1.1s						
V48A				IAMs_20	IAMs_20	11 01 30.4	
	comp=Z,561nm,20.0s						
AAM	**Ann Arbor**	**84.60**	**316**	IAMs_20	IAMs_20	11 00 13.1	
	comp=Z,594nm,20.0s						
P48A	**Milroy**	**84.69**	**313**	IAmb	IAmb	10 30 24.7	
	comp=Z,22nm,1.1s						
O48B	**Farmland**	**84.81**	**314**	IAmb	IAmb	10 30 25.7	
	comp=Z,17nm,1.0s						
ICESG	**Greenland Ices**	**84.88**	**351**	*i* P	**P**	**10 30 14.5**	**-3.5**
ICESG				IAmb	IAmb	10 30 19.9	
	comp=Z,11nm,1.0s						
T47A	**Sharon Grove**	**84.97**	**310**	IAmb	IAmb	10 30 19.9	
	comp=Z,13nm,1.0s						
PLAL	**Pickwick Lake**	**84.98**	**308**	IAmb	IAmb	10 30 26.5	
	comp=Z,16nm,1.1s						
PLAL				IAMs_20	IAMs_20	11 02 20.5	
	comp=Z,523nm,20.0s						
BELG	**Belogornoye**	**85.06**	**33**	P	**P**	**10 30 18.6**	**-0.2**
	comp=Z,13nm,0.7s,baz=282,slow=9.3,SNR=6.0						
BELG				LR	LR	11 10 17.0	
	comp=Z,284nm,20.0s,baz=262,slow=37						
	comp=Z,13nm,0.7s						
BELG	**Belogornoye**	**85.06**	**33**	⇑*e*P	**P**	**10 30 18.3**	**-0.5**
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SFJD	**Kangerlussuaq**	**85.10**	**347**	LR	LR	11 01 33.9	
	comp=Z,186nm,18.7s,baz=124,slow=31						
CMIG	**Matias Romero**	**85.13**	**289**	LR	LR	11 08 27.1	
	comp=Z,372nm,21.3s,baz=134,slow=36						
WVT	**Waverly**	**85.20**	**309**	IAMs_20	IAMs_20	11 01 47.4	
	comp=Z,664nm,21.0s						
OXF	**Oxford**	**85.84**	**307**	IAmb	IAmb	10 30 30.9	
	comp=Z,25nm,1.1s						
OLIL	**Olney**	**86.34**	**311**	IAmb	IAmb	10 30 33.6	
	comp=Z,29nm,1.2s						
GLAT	**Glass**	**86.36**	**309**	IAMs_20	IAMs_20	11 02 32.9	
	comp=Z,515nm,19.0s						
LNXT	**Lenox**	**86.45**	**308**	IAMs_20	IAMs_20	11 02 57.4	
	comp=Z,555nm,19.0s						
MET	**Memphis--Engin**	**86.46**	**307**	IAMs_20	IAMs_20	11 03 25.6	
	comp=Z,562nm,18.0s						
E46A	**Sault Ste Mari**	**86.70**	**319**	IAmb	IAmb	10 30 35.0	
	comp=Z,17nm,1.3s						
PVMO	**Portageville**	**86.72**	**309**	IAMs_20	IAMs_20	11 02 36.5	
	comp=Z,612nm,21.0s						
SIUC	**Southern Illin**	**86.81**	**310**	IAmb	IAmb	10 30 35.5	
	comp=Z,16nm,1.0s						
SIUC				IAMs_20	IAMs_20	11 02 08.7	
	comp=Z,620nm,21.0s						
PARMO	**Parma**	**86.84**	**309**	IAMs_20	IAMs_20	11 02 57.8	
	comp=Z,633nm,20.0s						
PBMO	**Poplar Bluff**	**87.39**	**309**	IAMs_20	IAMs_20	11 03 24.4	
	comp=Z,600nm,20.0s						
L44A	**Lake County Fo**	**87.46**	**315**	IAMs_20	IAMs_20	11 01 38.9	
	comp=Z,732nm,22.0s						
FVM	**French Village**	**87.80**	**310**	IAmb	IAmb	10 30 40.7	
	comp=Z,17nm,1.0s						
FVM				IAMs_20	IAMs_20	11 03 19.9	
	comp=Z,609nm,20.0s						
FRB	**Frobisher Bay**	**87.90**	**339**	LR	LR	11 03 08.7	
	comp=Z,142nm,19.4s,baz=110,slow=31						
SUMG	**Summit**	**87.93**	**353**	P	**P**	**10 30 36.8**	**+3.8**
SUMG	**Summit**	**87.93**	**353**	⇓*i*P	**P**	**10 30 33.5**	**+0.5**
SUMG				IAmb	IAmb	10 30 37.4	
	comp=Z,30nm,1.4s						
K43A	**Burlington**	**87.94**	**315**	IAMs_20	IAMs_20	11 00 20.0	
	comp=Z,666nm,22.0s						
ARCES	**ARCESS Array B**	**88.03**	**13**	LR	LR	11 10 12.3	
	comp=Z,229nm,18.9s,baz=219,slow=36						
SBA	**Scott Base**	**88.20**	**180**	P	**P**	**10 30 35.0**	**+1.1**
SBA	**Scott Base**	**88.20**	**180**	P	**P**	**10 30 35.0**	**+1.1**
SBA				pmax	pmax		
	comp=Z,93nm,2.0s						
CCM	**Cathedral Cave**	**88.43**	**310**	P	**P**	**10 30 35.1**	**-0.5**
CCM				IAmb	IAmb	10 30 43.9	
	comp=Z,19nm,1.0s						
CCM	**Cathedral Cave**	**88.43**	**310**	IAMs_20	IAMs_20	11 03 17.7	
	comp=Z,616nm,20.0s						
CCM	**Cathedral Cave**	**88.43**	**310**	P	**P**	**10 30 35.1**	**-0.5**
CCM				pmax	pmax		
	comp=Z,19nm,1.0s						
VNDA	**Vanda**	**88.52**	**179**	P	**P**	**10 30 35.6**	**+0.3**
VNDA	**Vanda**	**88.52**	**179**	P	**P**	**10 30 35.5**	**+0.1**
	comp=Z,2.5nm,0.9s,baz=223,slow=5.8,SNR=13						
VNDA				LR	LR	11 06 53.6	
	comp=Z,252nm,18.0s,baz=168,slow=33						
	comp=Z,2.5nm,0.9s						
VNDA	**Vanda**	**88.52**	**179**	P	**P**	**10 30 35.7**	**+0.3**
VNDA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MGMO	**Mountain Grove**	**88.91**	**309**	IAMs_20	IAMs_20	11 04 01.4	
	comp=Z,595nm,20.0s						
KIRV	**Kirov**	**89.04**	**28**	P	**P**	**10 30 37.8**	**-0.1**
	comp=Z,6.2nm,0.5s,baz=277,slow=7.0,SNR=3.9						
KIRV				LR	LR	11 12 51.0	
	comp=Z,591nm,18.2s,baz=243,slow=37						
	comp=Z,6.2nm,0.5s						
LVZ	**Lovozero**	**89.10**	**17**	⇑*e*P	**P**	**10 30 37.9**	**-0.2**
LVZ				pmax	pmax		
	comp=Z,22nm,1.0s						
HKT	**Hockley**	**89.59**	**301**	⇑*e*P	**P**	**10 30 39.5**	**-1.7**
HKT				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKTO	**Aktyubinsk**	**90.02**	**38**	P	**P**	**10 30 42.3**	**-0.5**
	comp=Z,7.3nm,0.9s,baz=242,slow=3.3,SNR=18						
AKTO				LR	LR	11 14 53.7	
	comp=Z,200nm,20.1s,baz=270,slow=38						
	comp=Z,7.3nm,0.9s						
TREL	**Terrell**	**90.58**	**304**	IAmb	IAmb	10 30 54.7	
	comp=Z,23nm,1.2s						
DAG	**Danmarks Havn**	**90.74**	**359**	P	**P**	**10 30 47.1**	**+1.5**
DAG				pmax	pmax		
	comp=Z,15nm,1.9s						
DAG	**Danmarks Havn**	**90.74**	**359**	*i* P	**P**	**10 30 46.0**	**+0.4**
DAG				IAmb	IAmb	10 30 48.0	
	comp=Z,11nm,1.0s						
AB31	**Akbulak array**	**90.74**	**39**		**P**	**10 30 46.0**	**-0.2**
ABKAR	**Akbulak array**	**90.74**	**39**	P	**P**	**10 30 45.2**	**-1.0**
FW06	**Azle**	**91.84**	**303**	IAMs_20	IAMs_20	11 06 45.2	
	comp=Z,454nm,20.0s						
T35A	**Sooner Cattle**	**92.08**	**307**	IAMs_20	IAMs_20	11 07 07.5	
	comp=Z,493nm,18.0s						
OK051	**E0350 and S346**	**92.22**	**307**	IAMs_20	IAMs_20	11 11 26.1	
	comp=Z,567nm,20.0s						
HNDO	**Hondo**	**92.37**	**300**	P	**P**	**10 30 54.2**	**0.0**
HNDO				IAmb	IAmb	10 31 03.2	
	comp=Z,9.9nm,1.0s						
PLPT	**Palo Pinto**	**92.41**	**303**		**P**	**10 30 54.1**	**-0.2**
PLPT				IAmb	IAmb	10 31 03.5	
	comp=Z,14nm,1.1s						
ARTI	**Arti**	**92.46**	**32**	P	**P**	**10 30 53.8**	**-0.2**
ARTI				IAmb	IAmb	10 31 02.0	
	comp=Z,9.5nm,0.8s						
ARTI	**Arti**	**92.46**	**32**	P	**P**	**10 30 53.5**	**-0.5**
	comp=Z,5.8nm,0.8s,baz=326,slow=2.4,SNR=8.2						
ARTI				LR	LR	11 15 58.1	
	comp=Z,260nm,18.0s,baz=256,slow=38						
	comp=Z,5.8nm,0.8s						
ARTI	**Arti**	**92.46**	**32**	*c i*P	**P**	**10 30 54.0**	**0.0**
ARTI						10 34 36.6	
ARTI				S	**SKSac**	**10 41 27.6**	**+0.7**
ARTI				SS	**SS**	**10 48 11.6**	**+2.6**
ARTI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BRDY	**Brady**	**92.58**	**301**	IAmb	IAmb	10 31 03.5	
	comp=Z,9.4nm,1.0s						
WTFS	**Witchita Falls**	**92.78**	**304**	IAmb	IAmb	10 31 04.4	
	comp=Z,12nm,0.9s						
JCT	**Junction City**	**93.05**	**301**	P	**P**	**10 30 56.9**	**-0.5**
JCT				IAmb	IAmb	10 31 05.8	
	comp=Z,11nm,0.9s						
JCT	**Junction City**	**93.05**	**301**	P	**P**	**10 30 56.9**	**-0.5**
JCT				pmax	pmax		
	comp=Z,11nm,1.0s						
CROK	**Carrier**	**93.11**	**307**	IAMs_20	IAMs_20	11 17 50.7	
	comp=Z,437nm,20.0s						
SIMJ	**Simiganj**	**93.75**	**51**	IAMs_20	IAMs_20	11 17 10.6	
	comp=Z,539nm,20.0s						
SPITS	**Spitsbergen Ar**	**93.75**	**6**	LR	LR	11 11 35.2	
	comp=Z,158nm,19.5s,baz=169,slow=34						
NEEM	**North Greenlan**	**93.78**	**353**	*i* P	**P**	**10 30 59.4**	**-0.6**
NEEM				IAmb	IAmb	10 31 02.5	
	comp=Z,7.4nm,1.0s						
EPLO	**Experimental L**	**93.78**	**320**	IAmb	IAmb	10 31 09.6	
	comp=Z,13nm,1.2s						
APMT	**Aspermont**	**94.01**	**303**	IAmb	IAmb	10 31 11.6	
	comp=Z,15nm,1.4s						
ECSD	**EROS Data Cent**	**94.01**	**314**	IAMs_20	IAMs_20	11 05 27.2	
	comp=Z,477nm,20.0s						
R32A	**Long Quarter,**	**94.16**	**308**	IAMs_20	IAMs_20	11 09 01.5	
	comp=Z,418nm,20.0s						
SGCY	**Sterling City**	**94.49**	**302**	IAmb	IAmb	10 31 12.4	
	comp=Z,13nm,0.9s						
BGNE	**Belgrade**	**94.50**	**311**	IAMs_20	IAMs_20	11 06 26.3	
	comp=Z,513nm,20.0s						
ULM	**Lac du Bonnet**	**95.28**	**320**	LR	LR	11 08 50.8	
	comp=Z,205nm,18.4s,baz=111,slow=32						
MNHN	**Monahans**	**95.72**	**301**	IAmb	IAmb	10 31 18.0	
	comp=Z,8.1nm,1.1s						
SUSD	**Miller**	**95.82**	**314**	IAMs_20	IAMs_20	11 06 46.2	
	comp=Z,400nm,20.0s						
NIL	**Nilore**	**95.88**	**57**	IAMs_20	IAMs_20	11 16 22.5	
	comp=Z,486nm,20.0s						
TXAR	**Lajitas Array**	**96.04**	**299**	P	**P**	**10 31 10.8**	**-0.4**
	comp=Z,0.8nm,1.0s,baz=123,slow=6.2,SNR=4.9						
TXAR				LR	LR	11 11 16.6	
	comp=Z,49nm,21.3s,baz=88,slow=34						
	comp=Z,0.8nm,1.0s						
PALK	**Pallekele**	**96.80**	**84**	LR	LR	11 11 20.2	
	comp=Z,430nm,19.3s,baz=264,slow=33						
RTBA	**Rita Blanca**	**96.82**	**306**	IAmb	IAmb	10 31 23.7	
	comp=Z,11nm,1.3s						
E28A	**Huff**	**97.50**	**316**	IAMs_20	IAMs_20	11 08 40.4	
	comp=Z,576nm,20.0s						
BVAR	**Borovoye Array**	**98.12**	**37**	P	**P**	**10 31 18.3**	**-1.6**
	comp=Z,0.3nm,0.4s,baz=343,slow=2.0,SNR=2.0						
BVAR				LR	LR	11 20 10.5	
	comp=Z,145nm,18.2s,baz=236,slow=38						
	comp=Z,0.3nm,0.4s						
AAK	**Ala-Archa**	**98.71**	**48**	IAMs_20	IAMs_20	11 20 52.9	
	comp=Z,445nm,20.0s						
AAK	**Ala-Archa**	**98.71**	**48**	LR	LR	11 17 10.9	
	comp=Z,194nm,20.0s,baz=264,slow=36						
FRU1	**Bishkek**	**98.84**	**48**	IAMs_20	IAMs_20	11 22 47.2	
	comp=Z,476nm,20.0s						
KSH	**Kashi**	**99.22**	**52**	P	**Pdif**	**10 31 27.3**	**+1.9**
KSH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KSH				LR	LR		
	comp=Z,2µm,19.9s						
KSH				LR	LR		
	comp=Z,550nm,22.3s						
KSH				LR	LR		
	comp=Z,470nm,23.4s						
ANMO	**Albuquerque**	**99.49**	**304**	LR	LR	11 10 34.5	
	comp=Z,223nm,21.6s,baz=208,slow=32						
ISCO	**Idaho Springs**	**99.70**	**309**	IAMs_20	IAMs_20	11 11 20.1	
	comp=Z,558nm,21.0s						
BOOM	**Boomskoye usch**	**99.73**	**49**	IAMs_20	IAMs_20	11 25 46.9	
	comp=Z,350nm,18.0s						
TARG	**Taragay, Kyrgy**	**100.97**	**50**	IAMs_20	IAMs_20	11 21 37.8	
	comp=Z,518nm,20.0s						
PRZ	**Przheval'sk**	**101.53**	**49**	IAMs_20	IAMs_20	11 22 04.4	
	comp=Z,388nm,21.0s						
KURBB	**Kurchatov Arra**	**102.70**	**41**	PKiKP	**PKiKP**	**10 35 56.8**	**-4.4**
	comp=Z,0.9nm,0.9s,baz=272,slow=7.9,SNR=5.0						
KURK	**Kurchatov**	**102.77**	**41**	IAMs_20	IAMs_20	11 25 29.8	
	comp=Z,409nm,20.0s						
P18A	**Preston Nutter**	**103.20**	**308**	IAMs_20	IAMs_20	11 13 29.0	
	comp=Z,404nm,20.0s						
BSUT	**Blindstream Ca**	**103.71**	**309**	IAMs_20	IAMs_20	11 13 15.3	
	comp=Z,483nm,21.0s						
YMP	**Mirror Lake Pl**	**103.75**	**313**	IAMs_20	IAMs_20	11 12 08.0	
	comp=Z,518nm,20.0s						
EGMT	**Eagleton**	**103.81**	**316**	IAMs_20	IAMs_20	11 11 29.6	
	comp=Z,529nm,20.0s						
YNR	**Norris Junctio**	**104.11**	**313**	IAMs_20	IAMs_20	11 13 02.8	
	comp=Z,471nm,19.0s						
YNM	**Yellowstone No**	**104.13**	**313**	IAMs_20	IAMs_20	11 13 32.2	
	comp=Z,496nm,20.0s						
MPU	**Maple Canyon**	**104.31**	**308**	IAMs_20	IAMs_20	11 14 26.3	
	comp=Z,439nm,18.0s						
YMR	**Madison River**	**104.31**	**313**	IAMs_20	IAMs_20	11 13 48.0	
	comp=Z,378nm,20.0s						
YHB	**Horse Butte**	**104.48**	**313**	IAMs_20	IAMs_20	11 12 53.6	
	comp=Z,478nm,20.0s						
MVU	**Marysvale**	**104.59**	**307**	IAMs_20	IAMs_20	11 13 30.7	
	comp=Z,391nm,20.0s						
MKAR	**Makanchi Array**	**104.79**	**45**	PKiKP	**PKiKP**	**10 36 03.0**	**-2.2**
	comp=Z,0.5nm,0.9s,baz=263,slow=8.4,SNR=3.7						
DUG	**Dugway, Tooele**	**105.23**	**308**	IAMs_20	IAMs_20	11 14 56.6	
	comp=Z,442nm,19.0s						
BLYC	**Blythe**	**105.91**	**301**	IAMs_20	IAMs_20	11 13 49.0	
	comp=Z,362nm,19.0s						
MSO	**Missoula**	**106.56**	**315**	IAMs_20	IAMs_20	11 15 13.2	
	comp=Z,473nm,21.0s						
ELK	**Elko**	**107.12**	**309**	IAMs_20	IAMs_20	11 16 13.6	
	comp=Z,392nm,19.0s						
WMQ	**Urumqi**	**108.42**	**48**	Pdif	**Pdif**	**10 32 08.0**	**+1.9**
WMQ				LR	LR		
	comp=Z,380nm,19.5s						
WMQ				LR	LR		
	comp=Z,250nm,20.3s						
WVOR	**Wild Horse Val**	**109.75**	**310**	IAMs_20	IAMs_20	11 16 38.9	
	comp=Z,428nm,20.0s						
LSA	**Lhasa**	**110.35**	**63**	IAMs_20	IAMs_20	11 24 12.0	
	comp=Z,364nm,19.0s						
KEBM	**Edson Butte**	**113.94**	**311**	IAMs_20	IAMs_20	11 16 24.9	
	comp=Z,445nm,20.0s						
G31M	**Satah River**	**114.35**	**338**	IAMs_20	IAMs_20	11 24 05.7	
	comp=Z,288nm,18.0s						
H31M	**Peel River**	**114.80**	**337**	IAMs_20	IAMs_20	11 19 45.7	
	comp=Z,378nm,21.0s						
KULM	**Kulim**	**115.68**	**91**	IAMs_20	IAMs_20	11 21 01.9	
	comp=Z,433nm,20.0s						
J30M	**Hart River**	**116.05**	**336**	IAMs_20	IAMs_20	11 21 11.8	
	comp=Z,347nm,20.0s						
P33M	**Teslin, Yukon**	**116.07**	**331**	IAMs_20	IAMs_20	11 15 25.5	
	comp=Z,320nm,20.0s						
CMAR	**Chiang Mai Arr**	**116.31**	**76**	PKP	**PKPdf**	**10 36 27.3**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=262,slow=3.3,SNR=5.6						
CHTO	**Chiang Mai**	**116.35**	**76**	IAMs_20	IAMs_20	11 23 44.8	
	comp=Z,269nm,19.0s						
I29M	**Ogilvie Camp,**	**116.49**	**337**	IAMs_20	IAMs_20	11 21 09.2	
	comp=Z,324nm,20.0s						
J29N	**Klondike Camp**	**116.85**	**336**	IAMs_20	IAMs_20	11 21 36.7	
	comp=Z,360nm,18.0s						
MYKOM	**Kota Tinggi**	**117.94**	**96**	IAMs_20	IAMs_20	11 22 32.5	
	comp=Z,406nm,19.0s						
HYT	**Haines Junctio**	**118.03**	**332**	IAMs_20	IAMs_20	11 24 23.2	
	comp=Z,268nm,19.0s						
I26K	**Coal Creek Min**	**118.31**	**338**	IAMs_20	IAMs_20	11 22 51.2	
	comp=Z,379nm,20.0s						
PRP	**Porcupine Dome**	**119.04**	**339**	IAMs_20	IAMs_20	11 20 02.5	
	comp=Z,318nm,20.0s						
DOT	**Dot Lake**	**119.50**	**337**	IAMs_20	IAMs_20	11 22 40.8	
	comp=Z,362nm,20.0s						
PZH	**PanZhiHua**	**119.50**	**67**	PKP	**PKiKP**	**10 36 34.1**	**+0.2**
PZH				AMB	AMB		
	comp=Z,110nm,8.3s						
PZH				LR	LR		
	comp=Z,190nm,19.6s						
PZH				LR	LR		
	comp=Z,280nm,19.8s						
PZH				LR	LR		
	comp=Z,340nm,19.1s						
CTGM	**Chitina Glacie**	**119.67**	**333**	IAMs_20	IAMs_20	11 22 37.6	
	comp=Z,332nm,20.0s						
M26K	**Nabesna, AK**	**119.70**	**335**	IAMs_20	IAMs_20	11 20 54.2	
	comp=Z,336nm,21.0s						
RIDG	**Independent Ri**	**119.75**	**337**	IAMs_20	IAMs_20	11 23 09.3	
	comp=Z,378nm,20.0s						
POKR	**Poker Plat Res**	**119.93**	**339**	IAMs_20	IAMs_20	11 24 05.0	
	comp=Z,304nm,20.0s						
ILAR	**Eielson Array**	**119.93**	**339**	PKP	**PKPdf**	**10 36 31.5**	**-1.8**
	comp=Z,0.5nm,0.8s,baz=75,slow=2.3,SNR=7.5						
GRNC	**Granite Creek**	**119.96**	**333**	IAMs_20	IAMs_20	11 23 09.2	
	comp=Z,322nm,20.0s						
MCARA	**McCarthy VSAT**	**120.20**	**334**	IAMs_20	IAMs_20	11 21 55.5	
	comp=Z,314nm,21.0s						
I23K	**Minto, Yukon-K**	**120.57**	**340**	IAMs_20	IAMs_20	11 22 06.9	
	comp=Z,298nm,21.0s						
NEA2	**Nenana**	**120.80**	**339**	IAMs_20	IAMs_20	11 24 19.1	
	comp=Z,280nm,21.0s						
BERG	**Berg Lake**	**120.97**	**333**	IAMs_20	IAMs_20	11 24 15.2	
	comp=Z,428nm,21.0s						
SONM	**Songino Array**	**121.00**	**42**	PKP	**PKPdf**	**10 36 33.2**	**-2.8**
	comp=Z,0.5nm,0.5s,baz=323,slow=2.2,SNR=2.9						
LZH	**Lanzhou**	**121.04**	**56**	*e*PKP	**PKPdf**	**10 36 33.4**	**-3.1**
LZH				sPKP		10 36 45.7	
DHY	**Denali Highway**	**121.06**	**337**	IAMs_20	IAMs_20	11 23 42.2	
	comp=Z,417nm,21.0s						
SLVN	**Son La**	**121.23**	**73**	IAMs_20	IAMs_20	11 26 08.0	
	comp=Z,302nm,20.0s						
KLU	**Klutina**	**121.35**	**335**	IAMs_20	IAMs_20	11 25 41.9	
	comp=Z,322nm,20.0s						
ULN	**Ulaanbaatar**	**121.42**	**42**	IAMs_20	IAMs_20	11 35 59.4	
	comp=Z,307nm,19.0s						
DIV	**Divide**	**121.48**	**335**	IAMs_20	IAMs_20	11 23 34.3	
	comp=Z,327nm,20.0s						
SCM	**Sheep Creek Mo**	**121.73**	**336**	IAMs_20	IAMs_20	11 24 38.0	
	comp=Z,312nm,19.0s						
KTH	**Kantishna Hill**	**122.08**	**339**	IAMs_20	IAMs_20	11 21 55.0	
	comp=Z,319nm,19.0s						
GLI	**Glacier Island**	**122.16**	**335**	IAMs_20	IAMs_20	11 26 16.3	
	comp=Z,263nm,19.0s						
KNK	**Knik Glacier**	**122.42**	**336**	IAMs_20	IAMs_20	11 25 20.1	
	comp=Z,367nm,21.0s						
CUT	**Chulitna**	**122.54**	**337**	IAMs_20	IAMs_20	11 24 37.1	
	comp=Z,356nm,20.0s						
PWL	**Port Wells**	**122.68**	**335**	IAMs_20	IAMs_20	11 23 51.0	
	comp=Z,334nm,21.0s						
PPLA	**Purkeypile**	**122.94**	**338**	IAMs_20	IAMs_20	11 27 21.7	
	comp=Z,306nm,19.0s						
SKT	**Skwentna**	**123.27**	**337**	IAMs_20	IAMs_20	11 25 09.5	
	comp=Z,370nm,21.0s						
SLKM	**Skilak Lake**	**123.64**	**335**	IAMs_20	IAMs_20	11 24 23.4	
	comp=Z,335nm,21.0s						
M19K	**Big River Lodg**	**124.37**	**338**	IAMs_20	IAMs_20	11 26 31.4	
	comp=Z,370nm,20.0s						
DLV	**Lat**	**124.56**	**85**	IAMs_20	IAMs_20	11 26 24.3	
	comp=Z,336nm,20.0s						
N19K	**Bonanza Creek**	**125.11**	**337**	IAMs_20	IAMs_20	11 27 19.1	
	comp=Z,307nm,18.0s						
K17K	**Iditarod**	**125.14**	**341**	IAMs_20	IAMs_20	11 28 56.8	
	comp=Z,268nm,20.0s						
O19K	**Port Alsworth**	**125.45**	**337**	IAMs_20	IAMs_20	11 25 13.1	
	comp=Z,348nm,20.0s						
YAK	**Yakutsk**	**125.78**	**20**	IAMs_20	IAMs_20	11 36 20.3	
	comp=Z,256nm,20.0s						
YAK	**Yakutsk**	**125.78**	**20**	⇑*i*PKIKP	**PKiKP**	**10 36 46.3**	**+1.3**
BILL	**Bilibino**	**126.11**	**360**	⇑*i*PKIKP	**PKPdf**	**10 36 44.5**	**-0.6**
BILL				pmax	pmax		
	comp=Z,6.0nm,2.5s						
SBUM	**Sibu**	**126.18**	**97**	IAMs_20	IAMs_20	11 23 53.8	
	comp=Z,331nm,22.0s						
ENH	**Enshi**	**126.24**	**63**	IAMs_20	IAMs_20	11 35 45.6	
	comp=Z,276nm,21.0s						
HHC	**Hu-ho-hao-te**	**126.27**	**49**	*e*PKP	**PKPdf**	**10 36 43.3**	**-3.0**
HHC				LR	LR		
	comp=Z,220nm,20.0s						
HHC				LR	LR		
	comp=Z,380nm,20.6s						
HHC				LR	LR		
	comp=Z,510nm,19.6s						
P18K	**Big Mountain,**	**126.32**	**336**	IAMs_20	IAMs_20	11 27 04.1	
	comp=Z,327nm,19.0s						
QIZ	**Qiongzhong**	**126.64**	**77**	PKP	**PKPdf**	**10 36 47.6**	**+0.1**
QIZ				SS	SS	10 55 49.8	-0.5
QIZ				LR	LR		
	comp=Z,220nm,18.2s						
QIZ				LR	LR		
	comp=Z,230nm,20.2s						
ACHA	**Angle Creek He**	**127.12**	**335**	IAMs_20	IAMs_20	11 30 35.4	
	comp=Z,295nm,19.0s						
BJT	**Baijiatuau**	**129.87**	**49**	IAMs_20	IAMs_20	11 42 21.7	
	comp=Z,284nm,19.0s						
SEY	**Seymchan**	**130.37**	**8**	PKP	**PKPdf**	**10 36 51.7**	**-1.6**
	comp=Z,2.7nm,0.8s,baz=8.8,slow=4.3,SNR=6.7						
SEY	**Seymchan**	**130.37**	**8**	⇑*i*PKIKP	**PKiKP**	**10 36 54.5**	**+0.3**
SEY				pmax	pmax		
	comp=Z,11nm,2.5s						
ASAR	**Alice Springs**	**131.40**	**140**		**PKPdf**	**10 36 56.3**	**-0.3**
ASAR	**Alice Springs**	**131.40**	**140**	PKP	**PKPdf**	**10 36 56.5**	**-0.1**
	comp=Z,1.6nm,0.9s,baz=213,slow=1.0,SNR=12						
HEH	**HeiHe**	**132.55**	**32**	PKP	**PKPdf**	**10 36 57.9**	**+0.1**
HEH				LR	LR		
	comp=Z,160nm,22.6s						
HEH				LR	LR		
	comp=Z,130nm,22.9s						
HEH				LR	LR		
	comp=Z,350nm,22.6s						
NJ2	**Nanjing**	**133.94**	**59**	*e*PKP	**PKPdf**	**10 37 00.7**	**-0.3**
DL2	**Dalian**	**134.24**	**49**	PKP	**PKPdf**	**10 36 59.4**	**-1.9**
DL2				PP	**PP**	**10 39 35.4**	**+2.8**
DL2				SS	SS	10 57 27.8	+5.8
DL2				AMB	AMB		
	comp=Z,150nm,10.0s						
DL2				LR	LR		
	comp=Z,230nm,20.8s						
DL2				LR	LR		
	comp=Z,260nm,16.9s						
DL2				LR	LR		
	comp=Z,410nm,20.5s						
WRA	**Warramunga Arr**	**134.36**	**137**	PKP	**PKPdf**	**10 36 59.4**	**-2.9**
	comp=Z,1.9nm,0.9s,baz=240,slow=2.1,SNR=6.4						
KNMB	**Chin-men Tao**	**134.58**	**70**	IAMs_20	IAMs_20	11 35 11.6	
	comp=Z,265nm,20.0s						
KLR	**Kul'dur**	**135.40**	**31**	⇑*i*PKIKP	**PKPdf**	**10 37 03.2**	**0.0**
KLR				pmax	pmax		
	comp=Z,10.0nm,2.5s						
SSLB	**Suanglung**	**136.97**	**70**	IAMs_20	IAMs_20	11 33 35.9	
	comp=Z,260nm,21.0s						
MDJ	**Mudanjiang**	**136.98**	**38**	IAMs_20	IAMs_20	11 43 28.7	
	comp=Z,290nm,20.0s						
YHNB	**Yeheng**	**137.27**	**69**	IAMs_20	IAMs_20	11 37 34.0	
	comp=Z,226nm,20.0s						
YULB	**Yu-li**	**137.31**	**71**	IAMs_20	IAMs_20	11 44 50.1	
	comp=Z,255nm,19.0s						
NACB	**Ninganchiao**	**137.52**	**70**	IAMs_20	IAMs_20	11 34 11.5	
	comp=Z,238nm,21.0s						
INCN	**Inchon**	**138.42**	**49**	IAMs_20	IAMs_20	11 40 24.7	
	comp=Z,262nm,22.0s						
DAV	**Davao City (W)**	**140.22**	**96**	IAMs_20	IAMs_20	11 35 00.1	
	comp=Z,300nm,21.0s						
PETK	**Petropavlovsk-**	**140.61**	**7**	PKP	**PKPdf**	**10 37 09.8**	**-2.9**
	comp=Z,3.2nm,0.9s,baz=88,slow=5.0,SNR=5.4						
YSS	**Yuzhno-Sakhali**	**142.15**	**26**	IAMs_20	IAMs_20	11 43 17.4	
	comp=Z,325nm,22.0s						
JOW	**Kunigami**	**143.07**	**64**	IAMs_20	IAMs_20	11 40 38.2	
	comp=Z,227nm,20.0s						
ASAJ	**Asahikawa**	**144.29**	**29**	PKP	**PKPab**	**10 37 17.5**	**+0.1**
	comp=Z,9.3nm,0.9s,baz=257,slow=14,SNR=3.1						
JMN	**Monobe**	**145.36**	**50**		**PKPbc**	**10 37 21.1**	**-0.4**
JMN				IAMs_20	IAMs_20	11 47 41.5	
	comp=Z,284nm,20.0s						
JTM	**Tenmabayashi**	**145.95**	**34**		**PKPdf**	**10 37 22.0**	**-0.4**
ERM	**Erimo**	**146.15**	**31**		**PKPab**	**10 37 24.8**	**+0.5**
ERM	**Erimo**	**146.15**	**31**	⇑*e*PKP2	**PKPab**	**10 37 24.3**	**0.0**
ERM				pmax	pmax		
	comp=Z,44nm,1.0s						
JGF	**Kuroka**	**146.91**	**45**		**PKPdf**	**10 37 25.2**	**+0.9**
MAJO	**Matsushiro**	**146.95**	**43**		**PKPdf**	**10 37 25.4**	**+1.1**
MAJO	**Matsushiro**	**146.95**	**43**	PKP2	**PKPdf**	**10 37 25.4**	**+1.1**
MJAR	**Matsushiro Arr**	**146.95**	**43**	PKPbc	**PKPdf**	**10 37 25.0**	**+0.7**
	comp=Z,1.8nm,0.4s,baz=313,slow=2.1,SNR=11						

JMA 01 10:25:14.1±0.5**, 32°N**±1°×**14°1E**±°**, h0^{km}, MV3.5**/12**, NEAR TORISHIMA IS, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**1.87**	**327**	*e*S	Sn	10 26 12.1	+0.4
JHJ2	**Mitsune**	**1.89**	**328**	P	Pn	10 25 48.2	+0.6
JHJ2				S	Sb	10 26 13.4	-0.3
BSO1	**Boso 1**	**3.14**	**360**	*e*S	Sn	10 26 44.2	+1.9
BSO3	**Boso 3**	**3.31**	**353**	*e*S	Sn	10 26 48.5	+1.5
JRY	**Ryogami san**	**4.83**	**339**	*e*P	Pn	10 26 31.2	+3.1
JAG	**Ashikaga**	**5.08**	**346**	*e*P	Pn	10 26 33.8	+2.4
JAG				*e*S	Sn	10 27 31.9	+1.1

BGSI ***01*** *10:27:49.3±1.3, 15°80S×29°59E, h27^{km}±59^{km}, ML3.9*
BUL ***01*** *10:28:03.8±1.3, 16°70S×28°58E, h31^{km}±13^{km}, MD3.9*
PRE ***01*** *10:28:42.5±0.3, 20°39S×28°18E, h5^{km}*
ISC 01 10:27:58.9±1.2**, 16°75S**±0°05×**28°62E**±0°09**, h8^{km}, n20, σ2^{s}89**/29**, Zambia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSZ	Lusaka	1.52	344	i P	Pg	10 28 29.5	+1.4
LSZ				i S	Sn	10 28 45.2	-1.4
BLWY	Bulawayo	3.37	180	i P	Pn	10 28 54.2	+2.2
BLWY				i S	Sn	10 29 32.1	-0.2
KSANE	Kasane	3.46	252	i P	Pn	10 28 56.6	+3.3
KSANE				IAML		10 29 51.3	
	comp=N,560nm,0.3s						
MATP	Matopo	3.66	182	i P	Pn	10 28 58.6	+2.7
MATP				i S	Sn	10 29 39.4	0.0
SOOWA	Sowa	4.42	211	i P	Pn	10 29 11.6	+5.1
SOOWA				i S	Sb	10 30 10.3	-0.2
PHDHD	Phuduhudu	5.17	228	i P	Pn	10 29 20.8	+4.1
PHDHD				i S	Sb	10 30 29.2	-2.8
PHDHD				IAML		10 30 54.4	
	comp=E,230nm,0.6s						
MUSN	Musina, Limpop	5.63	168	i P	Pn	10 29 25.5	+2.5
MUSN				i S	Sn	10 30 26.0	-1.9
MREMI	Moremi	5.89	191	i P	Pn	10 29 26.9	+0.3
MREMI				i S	Sn	10 30 41.5	+7.1
MREMI				IAML		10 31 10.2	
	comp=N,652nm,0.5s						
LPHEP	Lephephe	7.07	201	i P	Pn	10 29 44.9	+2.1
LPHEP				IAML		10 31 42.9	
	comp=E,58nm,1.2s						
XAUDM	Khaudum	7.16	255	i P	Pn	10 29 44.9	+0.7
XAUDM				IAML		10 32 01.8	
	comp=N,267nm,0.4s						
MOPA	Mopani	7.22	159	i P	Pn	10 29 46.0	+1.2
MOPA				i S	Sn	10 31 02.7	-4.3
QNGWA	Qangwa	7.60	248	i P	Pn	10 29 52.0	+1.9
QNGWA				IAML		10 32 16.1	
	comp=E,31nm,0.2s						
KGCAE	Kacgae	8.56	224	i P	Pn	10 30 05.2	+2.0
KGCAE				IAML		10 32 44.4	
	comp=N,61nm,0.4s						
LBTB	Lobatse	8.69	198	i P	Pn	10 30 06.6	+1.5
LBTB				i S	Sn	10 31 36.0	-7.4
MAKGR	Makgori	9.69	201	i P	Pn	10 30 19.3	+0.4
MAKGR				i S	Sn	10 32 09.3	+1.3
MAKGR				IAML		10 33 09.9	
	comp=N,64nm,0.6s						
TSUM	Tsumeb	10.78	255	i P	Pn	10 30 33.4	-0.3
TSUM				i S	Sn	10 32 22.0	-13
BOSA	Boshof	12.21	194	i P	Pn	10 30 53.1	-0.2
BOSA				i S	Sn	10 32 56.6	-13
BRAK	Brakfontein	15.84	198	eP	Pn	10 31 40.2	-2.2
GRAF	Camdeboo Natio	15.91	193	eP	Pn	10 31 40.2	-3.0
FRAZ	Fraserburg	16.47	202	eP	Pn	10 31 50.0	-0.5

IDC **01** *10:33:31.4±2.2, 19°.43N×64°.90W, h0km, mb3.5/6, mbtmp3.8/9, ML3.4/3, Error ellipse: s-maj=49.5km s-min=18.1km az=103.0*

RSPR **01** *10:33:35.6, 19°.37N×64°.66W, h35km±19km, MD4.0/15*

NEIC **01** *10:33:37.1±1.2, 19°.18N±0°.07×64°.90W±0°.04, h20km±8km, mb4.1/12, ML4.0/32, Md4.0/15(RSPR), Error ellipse: s-maj=9.9km s-min=6.1km az=176.0*

ISC 01 10:33:32.7±3.6**, 19°.43N**±0°.06×**64°.81W**±0°.06**, h12**km±25km**, n91, σ1s.78**/100**, mb3.9**/11**, 11C-4D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUMP	Col San Antoni	1.62	218		Pn	10 34 00.8	-0.2
HUMP				Sn	Sn	10 34 20.0	-1.8
HUMP				IAML		10 34 25.2	
	comp=E,2µm,0.3s						
HUMP	Col San Antoni	1.62	218⇓	eP	Pn	10 34 00.8	-0.2
HUMP	Col San Antoni	1.62	218	eS	Sn	10 34 21.1	-0.8
GCPR	Guaynabo City	1.64	227		Pn	10 34 01.6	+0.1
GCPR				Sn	Sn	10 34 20.4	-2.1
GCPR	Guaynabo City	1.64	227⇑	eP	Pn	10 34 02.0	+0.6
GCPR	Guaynabo City	1.64	227	eS	Sn	10 34 22.1	-0.4
PDPR	Patillas Dam,	1.81	220		Pn	10 34 03.7	-0.1
PDPR	Patillas Dam,	1.81	220⇑	eP	Pn	10 34 03.9	+0.1
PDPR	Patillas Dam,	1.81	220	eS	Sn	10 34 26.9	+0.2
SJG	San Juan	1.83	224		Pn	10 34 03.8	-0.1
SJG				IAML		10 34 30.0	
	comp=E,1µm,0.5s						
SJG				IAML		10 34 35.0	
	comp=E,1µm,0.6s						
SJG	San Juan	1.83	224	Pn	Pn	10 34 03.7	-0.3
SJG	San Juan	1.83	224	Pn	Pn	10 34 04.0	+0.1
	comp=E,16nm,0.3s,baz=62,slow=14,SNR=30						
SJG				Sn	Sn	10 34 25.8	-1.1
	comp=E,104nm,0.3s,baz=128,slow=18,SNR=15						
SJG	San Juan	1.83	224⇑	eP	Pn	10 34 04.0	+0.1
SJG	San Juan	1.83	224	eS	Sn	10 34 27.0	0.0
SJG	San Juan	1.83	224	eP	Pn	10 34 04.0	+0.1
SJG				eS	Sn	10 34 27.2	+0.2
ECPR	Experimental S	1.84	233⇑	eP	Pn	10 34 04.6	+0.4
ECPR	Experimental S	1.84	233	eS	Sn	10 34 27.9	+0.5
EMPR	Esperanza - Ma	1.88	240		Pn	10 34 05.9	+1.2
EMPR				IAML		10 34 38.5	
	comp=E,2µm,0.8s						
EMPR				IAML		10 34 51.5	
	comp=N,2µm,0.8s						
EMPR	Esperanza - Ma	1.88	240		Sn	10 34 28.8	+0.4
EMPR	Esperanza - Ma	1.88	240⇑	eP	Pn	10 34 06.0	+1.2
EMPR	Esperanza - Ma	1.88	240	eS	Sn	10 34 28.8	+0.4
AOPR	Arecibo Observ	2.13	240		Pn	10 34 08.9	+0.7
AOPR	Arecibo Observ	2.13	240		Sn	10 34 35.7	+1.0
AOPR	Arecibo Observ	2.13	240⇑	eP	Pn	10 34 09.0	+0.8
AOPR	Arecibo Observ	2.13	240	eS	Sn	10 34 35.7	+1.0
AOPR	Arecibo Observ	2.13	240	eP	Pn	10 34 09.4	+1.2
CELP	Cerrillos	2.15	232		Pn	10 34 09.1	+0.7
CELP				IAML		10 34 41.9	
	comp=N,934nm,0.4s						
CELP	Cerrillos	2.15	232		Sn	10 34 35.4	+0.3
CELP	Cerrillos	2.15	232⇑	eP	Pn	10 34 09.2	+0.8
CELP	Cerrillos	2.15	232	eS	Sn	10 34 35.4	+0.3
UUPR	Utuado, UPR, P	2.16	237		Pn	10 34 09.1	+0.6
OBIP	Obispado Ponce	2.19	231		Pn	10 34 09.5	+0.5
OBIP				IAML		10 34 43.2	
	comp=E,1µm,0.5s						
OBIP				IAML		10 34 45.2	
	comp=N,901nm,0.7s						
OBIP	Obispado Ponce	2.19	231		Sn	10 34 36.1	+0.1
OBIP	Obispado Ponce	2.19	231⇓	eP	Pn	10 34 09.7	+0.7
OBIP	Obispado Ponce	2.19	231	eS	Sn	10 34 36.1	+0.1
SABA	Saba	2.33	140		Pb	10 34 13.3	-1.4
SABA				IAML		10 34 54.9	
	comp=N,702nm,0.8s						
AGPR	Aguadilla, PR	2.38	247		Pn	10 34 12.7	+1.2
AGPR				IAML		10 34 49.5	
	comp=E,647nm,0.5s						
AGPR				IAML		10 34 49.6	
	comp=N,811nm,0.6s						
AGPR	Aguadilla, PR	2.38	247		Sn	10 34 41.8	+1.1
AGPR	Aguadilla, PR	2.38	247⇑	eP	Pn	10 34 13.1	+1.5
AGPR	Aguadilla, PR	2.38	247	eS	Sn	10 34 41.8	+1.1
GBPR	Guanica, Bosqu	2.44	234		Pn	10 34 14.0	+1.7
GBPR	Guanica, Bosqu	2.44	234⇑	eP	Pn	10 34 14.0	+1.7
GBPR				eS	Sn	10 34 43.4	+1.3
PRSN	Puerto Rico Se	2.52	242		Pn	10 34 14.7	+1.2
PRSN				IAML		10 34 50.8	
	comp=N,1µm,0.3s						
MLPR	Magueyes Islan	2.57	236⇑	eP	Pn	10 34 15.5	+1.3
MLPR	Magueyes Islan	2.57	236	eS	Sn	10 34 46.1	+0.7
SEUS	St. Eustatius	2.59	138	Pn	Pn	10 34 16.8	+2.3
SEUS				IAML		10 35 06.3	
	comp=N,545nm,1.3s						
SEUS				IAML		10 35 07.7	
	comp=E,526nm,1.3s						
CRPR	Cabo Rojo, PR	2.60	237		Pn	10 34 15.2	+0.6
CRPR	Cabo Rojo, PR	2.60	237		Sn	10 34 46.7	+0.6
CRPR	Cabo Rojo, PR	2.60	237⇓	eP	Pn	10 34 15.7	+1.1
CRPR	Cabo Rojo, PR	2.60	237	eS	Sn	10 34 46.7	+0.6
IDE	Isla Desecheo	2.73	248		Pn	10 34 17.8	+1.4
IDE					Sn	10 34 50.4	+1.0
IDE	Isla Desecheo	2.73	248⇓	eP	Pn	10 34 17.8	+1.4
IDE	Isla Desecheo	2.73	248	eS	Sn	10 34 50.4	+1.0
SKI	Saint Kitts	2.87	136	eP	Pn	10 34 18.6	+0.3
ANWB	Willy Bob	3.36	121	eP	Pn	10 34 26.3	+1.2
MBFL	Flemmings, Mon	3.63	137	eP	Pn	10 34 29.1	+0.2
ABD	La Joyeuse, An	4.32	132	Pn	Pn	10 34 40.8	+2.6
ABD				IAML		10 35 53.8	
	comp=N,238nm,1.8s						
ABD				IAML		10 37 14.9	
	comp=E,228nm,2.3s						
DR12	Loma Pena Alta	4.37	262		Pn	10 34 41.1	+2.1
CBE	Ff, Capester	4.52	137	Pn	Pn	10 34 41.7	+0.6
BIM	Bigot	6.05	143	Pn	Pn	10 35 02.2	0.0
SDDR	Presa de Saban	6.14	267		Pn	10 35 06.7	+3.4
SDDR	Presa de Saban	6.14	267	eP	Pn	10 35 06.3	+3.0
SDDR				eS	Sn	10 36 08.0	-5.5
SDDR	Presa de Saban	6.14	267⇑	eP	Pn	10 35 06.6	+3.3
SDDR	Presa de Saban	6.14	267	eS	Sn	10 36 15.9	+2.4
SDDR	Presa de Saban	6.14	267	eP	Pn	10 35 06.4	+3.0
GRTK	Grand Turk	6.28	290	Pn	Pn	10 35 07.7	+2.5
GRTK	Grand Turk	6.28	290	eP	Pn	10 35 07.9	+2.7
GRTK				eS	Sn	10 36 12.1	-4.8
MASC	Masc	8.90	276	eP	Pn	10 35 40.5	-0.7
PCRV	Puerto La Cruz	9.20	179	Pn	Pn	10 35 45.3	-0.1
	comp=E,0.8nm,0.3s,baz=357,slow=8.4,SNR=6.2						
	comp=E,5.1nm,0.5s						
QMBU	Quimbuelo	9.45	276	eP	Pn	10 35 47.5	-1.2
QMBU				eS	Sn	10 37 27.7	-7.3
BAUV	El Baul	10.88	197		Pn	10 36 07.9	-0.6
SDV	Santo Domingo	11.90	209	Pn	Pn	10 36 22.9	+0.3
	comp=E,2.3nm,0.3s,baz=40,slow=10,SNR=4.3						
	comp=E,14nm,0.5s						
RUSC	La Rusia	15.68	212		Pn	10 37 13.5	-0.6
ROSC	El Rosal	17.21	214		Pn	10 37 33.1	-0.4
ROSC				IAmb	IAmb	10 37 37.0	
	comp=Z,17nm,0.8s						
ROSC	El Rosal	17.21	214	P	Pn	10 37 32.7	-0.8
	comp=Z,2.0nm,0.3s,baz=121,slow=3.7,SNR=6.8						
	comp=Z,15nm,0.6s						
BOAV	Boa Vista	17.44	166		Pn	10 37 35.0	-1.0
JTS	Las Juntas de	21.46	248	P	P	10 38 20.5	-0.8
	comp=Z,3.5nm,0.7s,baz=60,slow=10,SNR=4.4						
	comp=Z,3.5nm,0.7s						
OTAV	Otavalo	23.30	217	P	P	10 38 41.1	0.0
OTAV				IAmb	IAmb	10 38 44.0	
	comp=Z,9.0nm,1.1s						
SAML	Samuel	28.24	177	P	P	10 39 24.3	-1.5
TXAR	Lajitas Array	36.60	293	P	P	10 40 39.6	+0.6
	comp=Z,0.1nm,0.5s,baz=105,slow=9.5,SNR=4.1						
	comp=Z,0.1nm,0.5s						
SDCO	Great Sand Dun	39.75	306	P	P	10 41 08.6	+2.8
PV02	Paradox Valley	42.34	306	P	P	10 41 30.0	+3.0
PV03	Paradox Valley	42.44	306	P	P	10 41 30.8	+3.0
PV18	Skein Mesa, Pa	42.48	306	P	P	10 41 31.6	+3.4
PV18				IAmb	IAmb	10 41 32.8	
	comp=Z,3.5nm,0.7s						
PV16	Nyswonger Mesa	42.50	306	P	P	10 41 31.0	+2.7
PV16				IAmb	IAmb	10 41 36.6	
	comp=Z,4.6nm,1.3s						
PV17	East Wray Mesa	42.53	306	P	P	10 41 31.5	+3.0
PV17				IAmb	IAmb	10 41 33.5	
	comp=Z,2.5nm,0.8s						
PDAR	Pinedale Array	44.17	312	P	P	10 41 40.8	-1.0
	comp=Z,0.6nm,0.6s,baz=115,slow=11,SNR=6.3						
	comp=Z,0.6nm,0.6s						
TPAW	Teton Pass	45.36	312	P	P	10 41 53.9	+2.6
TPAW				IAmb	IAmb	10 41 57.8	
	comp=Z,1.6nm,0.9s						
NVAR	Mina Array Bea	49.79	304	P	P	10 42 25.4	-0.3
	comp=Z,0.2nm,0.5s,baz=80,slow=11,SNR=4.1						
	comp=Z,0.2nm,0.5s						
YKA	Yellowknife Ar	54.85	334	P	P	10 43 03.3	+0.7
	comp=Z,0.7nm,0.7s,baz=122,slow=6.6,SNR=4.6						
	comp=Z,0.7nm,0.7s						
ILAR	Eielson Array	69.24	333	P	P	10 44 39.4	+0.1
	comp=Z,0.3nm,0.6s,baz=102,slow=4.5,SNR=7.2						
	comp=Z,0.3nm,0.6s						

IDC 01 10:40:39.3±5.4**, 51°.87N**×**158°.53E, h108**km±38km**, mb3.0**/3**, mbtmp3.4**/3**, Error ellipse: s-maj=76.2km s-min=30.0km az=2.0, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	1.34	338	P	Pn	10 41 03.8	-0.3
	69nm,0.4s,baz=149,slow=9.4,SNR=288						
PETK				S	Sn	10 41 22.9	0.0
	6.3nm,0.6s,baz=145,slow=13,SNR=6.8						
MKAR	Makanchi Array	47.83	296	P	P	10 49 05.2	-0.5
	0.7nm,0.9s,baz=37,slow=7.7,SNR=4.3						
	0.7nm,0.9s						
NVAR	Mina Array Bea	57.07	68	P	P	10 50 12.5	-1.7
	0.1nm,0.3s,baz=298,slow=6.9,SNR=2.0						
	0.1nm,0.3s						
TXAR	Lajitas Array	72.00	65	P	P	10 51 53.0	+1.6
	0.2nm,0.6s,baz=288,slow=4.2,SNR=4.5						
	0.2nm,0.6s						

UCR **01** *10:47:13.1±1.2, 10°.47N×86°.54W, h18km±9km, MW3.7*

CATAC **01** *10:47:15.7±0.6, 10°N±3°×8°6W±°, h29km±7km, M3.2/14, MLv3.2/14, Error ellipse: s-maj=10.5km s-min=3.3km az=49.1, confirmed*

ISC 01 10:47:14.5±1.9**, 10°.29N**±0°.06×**86°.35W**±0°.07**, h16**km±12km**, n39, σ0s.92**/45**, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALIBA	Liberia Airpor	0.84	69	eP	Pn	10 47 31.7	0.0
ALIBA				eS	Sn	10 47 46.7	+2.9
INDI	Punta indio, G	0.93	117	P	Pn	10 47 33.5	+0.6
INDI	Punta indio, G	0.93	117	S	Sn	10 47 45.3	-0.6
CMARA	Lajas Hojancha	0.94	106	eP	Pn	10 47 34.3	+1.2
CMARA	Lajas Hojancha	0.94	106	S	Sn	10 47 45.8	-0.7
CMARA	Lajas Hojancha	0.94	106	P	Pn	10 47 33.5	+0.3
PLVR	Palo Verde	0.98	86	eP	Pn	10 47 33.7	-0.1
LCRUZ	La Cruz	1.06	42	eP	Pb	10 47 33.8	-0.6
VRLE	La Escondida,	1.09	62	eP	Pb	10 47 34.5	-0.5
NYURE	Nandayure	1.11	105	eP	Pg	10 47 37.5	+1.5
CARN	Rivas	1.21	42	eP	Pn	10 47 35.7	-1.0
CARN	Rivas	1.21	42	P	Pn	10 47 35.7	-1.0
CARN				S	Sn	10 47 53.3	+0.5
TILA	Tilaran	1.36	82	eP	Pg	10 47 40.8	0.0
JTS	Las Juntas de	1.37	90	eP	Pb	10 47 39.2	-0.6
JAPN	Al SSO del Vol	1.40	28	eP	Pn	10 47 37.3	-2.0
MORN	Al O del Volca	1.43	29	P	Pn	10 47 40.2	+0.4
CONN	Concepcion	1.45	29	P	Pn	10 47 40.6	+0.5
CONN				S	Sb	10 48 00.2	+0.6
MTEVE	Monteverde	1.49	89	eP	Pg	10 47 42.6	-0.7
ARE1	Arenal 1	1.61	84	eP	Pb	10 47 43.7	-0.2
NANN	Nandasmo	1.66	8	P	Pb	10 47 44.2	-0.5
MAS3	Al N del Volca	1.74	5	S	Sn	10 48 07.1	+1.1
UNAN	Cigeo UNAN	1.82	2	P	Pn	10 47 45.5	+0.3
UNAN				S	Sn	10 48 08.5	+0.6
COPN	Copaltepe	1.90	353	P	Pb	10 47 47.6	-1.2
APQ2	Apoyeque	1.90	1	P	Pn	10 47 46.7	+0.4
APQ2				S	Sn	10 48 09.6	-0.3
COVE	Coope Vega, Sa	1.96	77	S	Sn	10 48 10.0	-1.4
COVE	Coope Vega, Sa	1.96	77	P	Pn	10 47 46.5	-0.6
ACON	Acoyapa	2.03	34	P	Pn	10 47 47.3	-0.7
ACON	Acoyapa	2.03	34	S	Sn	10 48 14.7	+1.6
MOMN	Momotombo	2.12	355	P	Pn	10 47 49.8	+0.5
MOM2	El Cardon	2.14	356	P	Pn	10 47 49.6	0.0
MOM2				S	Sn	10 48 16.1	+0.2
CNGA	Al SSO del Vol	2.22	351	S	Sn	10 48 18.2	+0.2
BOAB	BOACO BROADBAN	2.25	17	P	Pn	10 47 50.3	-0.8
BOAB	BOACO BROADBAN	2.25	17	S	Sn	10 48 19.8	+1.2
LCR2	La Lucha 2	2.37	103	S	Sn	10 48 21.2	-0.5
LCR2	La Lucha 2	2.37	103	P	Pn	10 47 52.0	-0.9
TRT2	Tortugero	2.58	84	P	Pn	10 47 56.4	+0.8
MATN	Matagalpa	2.66	9	P	Pn	10 47 56.5	-0.3
OCHAL	Ojochal	2.91	114	S	Sn	10 48 34.5	-0.4
DRK0	Durika	3.22	108	S	Sn	10 48 42.6	-0.2

BEO **01** *10:49:28.7±0.5, 40°.29N×20°.96E, h0km, ML3.2/12*

IDC **01** *10:49:29.7±1.7, 40°.63N×20°.94E, h0km, mb3.4/7, mbtmp3.5/12, ML3.4/5, MS4.0/3, Error ellipse: s-maj=32.8km s-min=16.1km az=30.0*

ATH **01** *10:49:30.9, 40°.48N×20°.79E, h6km±1km, ML3.4/31, Manual Solution by G.Panopoulou First location: 2019/06/01 10:50:32, This location: 2020/10/14 18:16:52 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

TIR **01** *10:49:30.6, 40°.45N×20°.78E, h0km±1km, Md2.5/2, Ml3.6/6*

THE **01** *10:49:32.7, 40°N±2°×2°1E±°, h0km±1km, M3.2/36, MLh3.2/36*

SKO **01** *10:49:32.7, 40°.46N×20°.88E, h8km, ML3.2*

ISC 01 10:49:31.3±0.8**, 40°.47N**±0°.01×**20°.88E**±0°.02**, h15**km±6km**, n182, σ1s.32**/236**, mb3.5**/6**, MS4.1**/3**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEST	Nestorio	0.14	115	Pg	Pb	10 49 35.5	-0.3
NEST				Sg	Sb	10 49 38.8	+0.1
NEST				AML	AML	10 49 43.6	
	40nm,0.4s						
NEST				AMd		10 50 21.0	
NEST	Nestorio	0.14	115	P	Pb	10 49 35.5	-0.3
NEST				S	Sb	10 49 38.3	-0.4
NEST	Nestorio	0.14	115	P	Pb	10 49 35.4	-0.3
NEST				S	Sb	10 49 38.3	-0.4
KBN	Korca	0.17	335	Pg	Pg	10 49 34.0	-1.5
KBN				Sg	Sg	10 49 36.6	-1.6
KBN				AML	AML	10 49 40.4	
	70nm,0.7s						
PENT	Pentalofos	0.34	145	P	Pb	10 49 38.4	-0.7
PENT				S	Sb	10 49 43.6	-0.8
PENT	Pentalofos	0.34	145	P	Pb	10 49 38.4	-0.7
PENT				S	Sb	10 49 44.3	-0.1
LMS2	Laimos Florina	0.41	29	P	Pg	10 49 39.3	-0.2
LMS2				S	Sb	10 49 46.6	+0.1
KPRO	Kipourio	0.64	144	P	Pb	10 49 43.6	-0.6
KPRO				S	Sn	10 49 53.8	-2.0
KPRO	Kipourio	0.64	144	P	Pb	10 49 43.5	-0.6
KPRO				S	Sb	10 49 53.5	+0.6
OHR	Ohrid	0.64	354	i Pg	Pg	10 49 43.6	-0.2
OHR				i Sg	Sb	10 49 53.6	+0.6
OHR				eLg	Lg	10 49 54.5	
	comp=E,1µm,0.5s						
OHR				eLg	Lg	10 49 58.3	
	comp=N,687nm,0.4s						
OHR	Ohrid	0.64	354	ePg	Pg	10 49 43.6	-0.2
OHR				eSg	Sb	10 49 53.7	+0.7
KZN	Kozani	0.70	104	P	Pn	10 49 46.2	-0.5
KZN				S	Sn	10 49 56.2	-1.2
KZN	Kozani	0.70	104	P	Pn	10 49 46.2	-0.5
KZN				S	Sn	10 49 56.4	-0.9
MSVA	Metsovo	0.74	162	P	Pb	10 49 45.8	-0.1
JAN	Janina	0.82	182	P	Pg	10 49 45.4	-1.7
JAN				S	Sb	10 49 57.8	-0.3
JAN	Janina	0.82	182	P	Pg	10 49 46.6	-0.5
JAN				S	Sb	10 49 57.6	-0.4
SRN	Sarande	0.90	229	Pg	Pb	10 49 47.1	-1.4
SRN				Sg	Sg	10 50 00.5	0.0
SRN				AML	AML	10 50 03.9	
	comp=N,6.4nm,0.4s						
KTI	Kastanea	0.95	95	P	Pn	10 49 50.0	-0.2
IGT	Igoumenitsa	1.03	204	Pg	Pb	10 49 50.5	-0.3
IGT				Sg	Sn	10 50 06.1	+0.7
IGT				AMd		10 50 49.2	
IGT	Igoumenitsa	1.03	204	P	Pb	10 49 49.6	-1.2
IGT				S	Sb	10 50 03.6	-0.6
IGT	Igoumenitsa	1.03	204	i Pg	Pb	10 49 50.1	-0.7
IGT				i Sg	Sn	10 50 06.7	+1.3
IGT	Igoumenitsa	1.03	204	P	Pb	10 49 49.0	-1.8
VLO	Vlora	1.06	270	Pg	Pb	10 49 50.1	-1.2
VLO				Sg	Sb	10 50 04.5	-0.4
VLO				AML	AML	10 50 10.5	
	comp=N,20nm,0.6s						
KEK	Kerkira	1.12	228	P	Pg	10 49 53.4	+0.4
KEK				S	Sn	10 50 09.8	+2.1
KEK	Kerkira	1.12	228	P	Pb	10 49 51.5	-0.9
TIR	Tirane	1.16	319	Pg	Pn	10 49 52.4	-0.7
TIR				Sg	Sg	10 50 11.1	+2.2
TIR				AML	AML	10 50 13.0	
	comp=N,1.6nm,0.5s						
TIR	Tirane	1.16	319	i Pg	Pn	10 49 51.5	-1.5
TIR				i Sg	Sg	10 50 13.1	+4.2
TIR	Tirane	1.16	319	ePg	Pn	10 49 51.8	-1.2
TIR				eSg	Sg	10 50 12.7	+3.8
TIR	Tirane	1.16	319	P	Pn	10 49 52.6	-0.4
TETR	Tetrakomo, Epi	1.17	165	P	Pg	10 49 53.2	-0.6
THL	Klokotos Trika	1.26	136	P	Pg	10 49 54.9	-0.6
THL				S	Sg	10 50 14.5	+2.6
THL	Klokotos Trika	1.26	136	P	Pg	10 49 54.7	-0.7
THL				S	Sg	10 50 12.2	+0.4
TYRN	Tyrnavos	1.29	126	P	Pg	10 49 56.5	+0.5
TYRN	Tyrnavos	1.29	126	P	Pg	10 49 56.0	0.0
TYRN				S	Sg	10 50 13.4	+0.6
VAY	Valandovo	1.54	56	P	Pg	10 50 00.0	-0.7
VAY	Valandovo	1.54	56	i Pg	Pg	10 50 00.1	-0.7
VAY				i Sg	Sg	10 50 23.5	+2.8
VAY				eLg	Lg	10 50 25.3	
	comp=N,239nm,0.5s						
VAY				eLg	Lg	10 50 28.9	
	comp=E,398nm,0.7s						
SKO	Skopje	1.56	16	i Pg	Pg	10 50 00.9	-0.2
SKO				i Sg	Sg	10 50 22.8	+1.4
AMPL	Ampelaki	1.57	170	P	Pg	10 50 00.8	-0.7
AMPL	Ampelaki	1.57	170	P	Pb	10 50 00.1	0.0
THE	Thessaloniki	1.60	84	P	Pg	10 50 00.6	-1.3
THE	Thessaloniki	1.60	84	i Pg	Pg	10 50 00.6	-1.3
THE				i Sg	Sg	10 50 23.1	+0.4
THE	Thessaloniki	1.60	84	P	Pg	10 50 00.6	-1.3
TSLK	Tsoukalades, L	1.66	186	P	Pg	10 50 03.6	+0.6
TSLK	Tsoukalades, L	1.66	186	P	Pb	10 50 01.0	-0.5
KNT	Kendrikon	1.68	65	P	Pb	10 50 01.7	-0.1
KNT	Kendrikon	1.68	65	i Pn	Pb	10 50 01.7	-0.1
KNT				eSn	Sg	10 50 25.7	+0.4
KNT	Kendrikon	1.68	65	P	Pb	10 50 01.5	-0.4
LKD2	Lefkada island	1.69	186	P	Pg	10 50 03.4	-0.4
LKD2	Lefkada island	1.69	186	P	Pb	10 50 01.6	-0.6
HORT	Hortiatis	1.70	85	P	Pb	10 50 01.8	-0.4
HORT	Hortiatis	1.70	85	P	Pb	10 50 01.4	-0.8
EVR	Evrytania	1.71	155	P	Pg	10 50 03.8	-0.3
EVR	Evrytania	1.71	155	P	Pb	10 50 02.0	-0.5
PUK	Puka	1.73	335	Pn	Pg	10 50 03.8	-0.8
PUK				Sn	Sg	10 50 29.7	+2.5
PUK				AML	AML	10 50 32.6	
	comp=E,2.4nm,0.5s						
MAKR	Makrakomi, Fth	1.75	146	P	Pb	10 50 03.3	+0.2
MAKR	Makrakomi, Fth	1.75	146	P	Pb	10 50 02.9	-0.2
NYDR	Nydri-Lefkada	1.76	185	P	Pg	10 50 04.0	-1.1
NYDR	Nydri-Lefkada	1.76	185	P	Pn	10 50 01.8	+0.5
AGG	Agios Georgios	1.83	142	P	Pb	10 50 04.2	-0.2
AGG	Agios Georgios	1.83	142	P	Pb	10 50 03.8	-0.7
EVGI	Lefkada island	1.86	185	P	Pb	10 50 05.5	+0.5
EVGI	Lefkada island	1.86	185	P	Pn	10 50 03.1	+0.5
PDO	Prodromos	1.89	173	P	Pg	10 50 06.5	-1.0
PDO	Prodromos	1.89	173	P	Pb	10 50 04.7	-0.8
SCTE	Santa Cesarea	1.89	259	P	Pn	10 50 02.3	-0.7
SOH	Sokhos	1.91	79	P	Pb	10 50 05.4	-0.5
SOH	Sokhos	1.91	79	P	Pb	10 50 05.0	-0.9
PVO	Paravola	1.92	165	P	Pb	10 50 05.9	-0.1
PVO	Paravola	1.92	165	P	Pb	10 50 05.1	-0.9
ULC	Ulcinj	1.93	321	i Pn	Pb	10 50 05.5	-0.7
PLG	Polygyros	1.96	92	P	Pb	10 50 06.2	-0.5
PLG	Polygyros	1.96	92	P	Pb	10 50 05.4	-1.3
BCI	Bajram Curri	1.99	342	Pn	Pg	10 50 08.5	-0.9
BCI				Sn	Sg	10 50 37.2	+2.0
BCI	Bajram Curri	1.99	342	P	Pb	10 50 07.0	-0.1
FSK	Fiskardo	2.03	187	P	Pb	10 50 07.7	-0.1
FSK	Fiskardo	2.03	187	P	Pn	10 50 05.0	+0.1
ANX	Ano Chora	2.04	156	P	Pg	10 50 08.9	-1.6
ANX	Ano Chora	2.04	156	P	Pb	10 50 06.3	-1.8
DRME	Dracevica, Mon	2.13	324	ePn	Pn	10 50 07.9	+1.5
NEO	Neokhori	2.15	122	P	Pb	10 50 08.3	-1.5
SRS	Serrai	2.16	72	P	Pb	10 50 08.8	-1.3
SRS	Serrai	2.16	72	i Pn	Pb	10 50 08.4	-1.6
SRS				eSn	Sb	10 50 35.8	-0.8
SRS	Serrai	2.16	72	P	Pn	10 50 07.5	+0.8
VVK	Vomvokou	2.17	160	P	Pb	10 50 09.4	-0.9
KKB	Krupnik	2.18	50	i Pn	Pb	10 50 09.3	-1.1
EFP	Efpalio	2.19	158	P	Pn	10 50 08.2	+1.0
PAIG	Paliouri	2.21	103	P	Pb	10 50 09.2	-1.8
PAIG	Paliouri	2.21	103	P	Pb	10 50 09.1	-1.8
SERG	Sergoula	2.25	156	P	Pb	10 50 11.5	-0.2
SERG	Sergoula	2.25	156	P	Pn	10 50 08.5	+0.5
DMLN	Damoulianata-K	2.27	190	P	Pn	10 50 09.6	+1.4
KALE	Kalithea	2.30	154	P	Pn	10 50 10.0	+1.3
PDG	Podgorica	2.30	329	ePn	Pn	10 50 10.6	+1.9
PDG	Podgorica	2.30	329	ePn	Pn	10 50 10.4	+1.7
PDG				eSn	Sb	10 50 41.7	+0.9
VLS	Valsamata	2.31	186	P	Pb	10 50 10.6	-1.9
VLS	Valsamata	2.31	186	P	Pn	10 50 09.5	+0.8
AXS	Araxos	2.31	170	P	Pb	10 50 12.0	-0.6
AXS	Araxos	2.31	170	P	Pb	10 50 10.4	-2.2
BOSS	Bosilegrad	2.35	30	ePn	Pn	10 50 10.8	+1.4
BOSS				eSn	Sb	10 50 42.5	+0.3

PSDA	Pessada-Kefalo	2.37	186	P	Pb	10 50 11.6	-2.0
PSDA	Pessada-Kefalo	2.37	186	P	Pn	10 50 10.8	+1.2
YRMI	Loutra Irminis	2.40	171	P	Pn	10 50 11.3	+1.3
RTZL	Ratzakli, Kefa	2.40	182	P	Pb	10 50 12.3	-1.8
KOKK	Kokkinochori,	2.40	81	P	Pb	10 50 12.0	-2.1
KOKK	Kokkinochori,	2.40	81	P	Pb	10 50 11.8	-2.3
MMB	Musomishta	2.42	63	i Pn	Pb	10 50 13.1	-1.4
MMB				eSn	Sb	10 50 42.9	-1.4
BARS	Barje	2.44	16	i Pn	Pn	10 50 12.0	+1.3
BARS				eSn	Sn	10 50 42.1	+1.8
BARS	Barje	2.44	16	ePn	Pn	10 50 12.1	+1.5
BARS				eSn	Sb	10 50 44.6	-0.2
RLS	Riolos of Patr	2.46	169	P	Pb	10 50 14.4	-0.7
RLS	Riolos of Patr	2.46	169	P	Pn	10 50 11.8	+1.0
BEY	Berane	2.51	343	ePn	Pb	10 50 16.0	-0.1
KLV	Kalavryta, Ach	2.62	157	P	Pn	10 50 14.2	+1.1
HCY	Herceg Novi	2.67	318	ePn	Pn	10 50 13.8	+0.1
SELS	Selova	2.75	4	ePn	Pn	10 50 16.0	+1.1
SELS				eSn	Sb	10 50 53.3	-0.4
SJES	Sjenica	2.87	347	ePn	Pb	10 50 20.2	-2.0
SJES	Sjenica	2.87	347	ePn	Pn	10 50 18.5	+1.9
SJES				eSn	Sn	10 50 53.5	+2.6
THAS	Thassos island	2.93	86	P	Pn	10 50 17.9	+0.6
TREB	Trebinje	2.94	321	ePn	Pn	10 50 17.9	+0.5
BRY	Bratogost	2.99	325	ePn	Pn	10 50 19.4	+1.1
GOCS	Kraljevo Serbi	3.09	360	ePn	Pn	10 50 21.7	+2.1
GOCS				eSn	Sb	10 51 00.2	-3.2
ZAPS	Zavoj	3.09	25	ePn	Pn	10 50 21.0	+1.5
ZAPS				eSn	Sb	10 51 00.0	-3.4
UPM	Unac-Piva	3.10	332	ePn	Pn	10 50 21.2	+1.4
IVAS	Ivanjica	3.15	350	ePn	Pn	10 50 20.8	+0.4
BOVS	Bovan	3.22	11	ePn	Pn	10 50 22.2	+0.9
BOVS				eSn	Sb	10 51 03.8	-3.3
RUDO	Rudo	3.34	341	ePn	Pn	10 50 24.5	+1.6
STON	Ston	3.38	316	ePn	Pn	10 50 23.6	+0.2
GRUS	Gruza	3.41	358	ePn	Pn	10 50 24.9	+0.9
ZAGS	Zajecar	3.48	16	ePn	Pn	10 50 26.0	+1.1
ZAGS				eSn	Sn	10 51 08.9	+3.0
BBLS	Lazi&#263i	3.56	343	ePn	Pn	10 50 28.4	+2.3
BBLS	Lazi&#263i	3.56	343	ePn	Pn	10 50 29.1	+3.0
BBLS				eSn	Sn	10 51 12.2	+4.2
DIVS	Divibare	3.68	350	ePn	Pn	10 50 28.5	+0.8
BORS2	Bor- Borsko je	3.71	13	ePn	Pn	10 50 29.7	+1.6
TRUS	Trudelj	3.76	355	ePn	Pn	10 50 29.8	+1.0
HAPS	Han Pijesak,Bl	3.88	339	ePn	Pn	10 50 31.9	+1.4
KUBS	Kucevo	3.98	8	ePn	Pn	10 50 31.2	-0.6
TEKS	Tekeris	4.19	347	ePn	Pn	10 50 36.3	+1.6
TEKS	Tekeris	4.19	347	ePn	Pn	10 50 35.6	+0.9
AVAS	Avala Beograd	4.23	356	ePn	Pn	10 50 36.0	+0.8
VRSS	Vrsac	4.66	4	ePn	Pn	10 50 41.9	+0.8
FRGS	Fruska Gora	4.75	351	ePn	Pn	10 50 44.3	+2.0
FRGS	Fruska Gora	4.75	351	ePn	Pn	10 50 44.1	+1.8
BLY	Banja Luka	5.07	329	ePn	Pn	10 50 51.9	+5.2
A050A	Klekovaca	5.14	323	ePn	Pn	10 50 48.8	+1.1
A051A	Mrakovica	5.40	328	ePn	Pn	10 50 52.6	+1.3
IDI	Anoyia	6.07	147	Pn	Pn	10 51 06.2	+5.7
	comp=E,0.4nm,0.3s,baz=70,slow=17,SNR=1.9						
IDI				Sn	Sn	10 52 12.9	+3.1
	comp=E,0.8nm,0.3s,baz=338,slow=19,SNR=2.3						
MLR	Muntele Rosu	6.24	35	Pn	Pn	10 51 02.1	-0.8
	comp=E,0.7nm,0.3s,baz=170,slow=17,SNR=2.6						
	comp=E,0.8nm,0.4s						
BOJS	Bojanci	6.50	322	ePn	Pn	10 51 06.1	-0.3
CRES	Cresnjevec Ost	6.66	325	ePn	Pn	10 51 08.4	-0.1
CEY	Cerknica	7.07	320	ePn	Pn	10 51 14.1	-0.1
SOKA	Soboth	7.51	328	i Pn	Pn	10 51 20.8	+0.5
	comp=E,1.8nm,0.4s,SNR=6.9						
SOKA				i Sn	Sn	10 52 43.4	-1.9
	comp=E,1.3nm,0.4s						
OBKA	Obir	7.59	325	ePn	Pn	10 51 22.4	+1.1
OBKA	Obir	7.59	325	i Pn	Pn	10 51 22.4	+1.1
	comp=E,2.2nm,0.4s						
OBKA				eSn	Sn	10 52 48.5	+1.4
	comp=E,11nm,0.6s						
ARSA	Arzberg	7.80	332	i Pn	Pn	10 51 25.7	+1.5
	comp=E,2.1nm,0.4s						
KECS	Kecovo	8.01	358	ePN	Pn	10 51 32.7	+5.6
MYKA	Terra Mystica	8.09	322	i Pn	Pn	10 51 28.2	-0.1
	comp=E,2.0nm,0.3s						
MYKA				i Sn	Sn	10 52 58.4	-1.1
	comp=E,1.3nm,0.3s						
VYHS	Vyhne	8.15	350	ePN	Pn	10 51 35.2	+6.2
VYHS				eSN	Sn	10 52 59.2	-1.6
KBA	Koelnbreinsper	8.56	323	i Pn	Pn	10 51 34.9	+0.2
	comp=E,0.5nm,0.3s						
KBA				i Sn	Sn	10 53 11.9	+0.8
	comp=E,1.6nm,0.5s						
ABTA	Abfaltersbach	8.72	319	i Pn	Pn	10 51 36.4	-0.5
	comp=E,2.5nm,0.4s						
ABTA				i Sn	Sn	10 53 12.5	-2.6
	comp=E,3.2nm,0.4s						
MOA	Molln	8.77	329	i Pn	Pn	10 51 38.4	+0.9
	comp=E,1.3nm,0.3s						
MOA				eSn	Sn	10 53 17.1	+1.1
	comp=E,1.9nm,0.4s						
LESA	Schwarzleotal	9.12	322	ePn	Pn	10 51 42.4	+0.1
	comp=E,3.4nm,0.5s						
LESA				i Sn	Sn	10 53 23.3	-1.5
	comp=E,1.4nm,0.4s						
WTTA	Wattenberg	9.51	319	ePn	Pn	10 51 47.9	0.0
	comp=E,2.9nm,0.3s,SNR=4.8						
WTTA				eSg	Sn	10 53 33.1	-1.5
	comp=E,12nm,0.8s						
WATA	Walderalm	9.59	319	i Pn	Pn	10 51 50.0	+1.1
	comp=E,6.5nm,0.3s,SNR=8.2						
WATA				i Sn	Sn	10 53 35.5	-1.0
	comp=E,2.2nm,0.3s						
SQTA	Sankt Quirin	9.71	317	i Pn	Pn	10 51 51.5	+1.1
	comp=E,4.6nm,0.4s						
SQTA				i Sn	Sn	10 53 37.5	-1.7
	comp=E,6.3nm,0.7s						
GERES	GERESS Array B	9.80	331	Pn	Pn	10 51 51.5	-0.2
	comp=E,0.1nm,0.3s,baz=161,slow=14,SNR=8.2						
	comp=E,0.5nm,0.4s						
BRTR	Keskin Array B	9.81	90	Pn	Pn	10 51 52.9	+1.1
	comp=E,0.1nm,0.3s,baz=249,slow=14,SNR=1.5						
	comp=E,0.2nm,0.4s						
FETA	Feichten	9.83	315	i Pn	Pn	10 51 52.6	+0.4
	comp=E,1.6nm,0.4s						
FETA				i Sn	Sn	10 53 40.8	-1.6
	comp=E,1.1nm,0.4s						
MOTA	Moosalm	9.84	317	ePn	Pn	10 51 52.4	+0.1
	comp=E,2.2nm,0.4s,SNR=5.2						
MOTA				i Sn	Sn	10 53 40.9	-1.7
	comp=E,1.9nm,0.4s						
KHC	Kasperske Hory	10.09	332	ePN	Pn	10 51 56.4	+0.8
DAVOX	Davos/Dischmat	10.16	312	Pn	Pn	10 51 56.4	-0.3
	comp=E,1.5nm,0.3s,baz=100,slow=8.1,SNR=15						
DAVOX				Sn	Sn	10 53 48.3	-2.1
	comp=E,0.4nm,0.3s,baz=234,slow=19,SNR=4.4						
	comp=E,3.4nm,0.4s						
DAVA	Damuels	10.45	314	i Pn	Pn	10 52 01.5	+0.8
	comp=E,4.0nm,0.3s,SNR=6.0						
MMAI	Mount Meron Ar	13.81	118	Pn	Pn	10 52 48.6	+2.0
	comp=E,0.4nm,0.3s,baz=300,slow=11,SNR=1.5						
	comp=E,0.9nm,0.6s						
HFS	Hagfors	20.19	350	P	P	10 54 03.7	-1.4
	comp=E,2.7nm,1.0s,baz=148,slow=14,SNR=6.5						
	comp=E,2.7nm,1.0s						
FINES	FINESS Array B	21.24	7	P	P	10 54 15.1	-1.3
	comp=E,2.1nm,0.9s,baz=170,slow=12,SNR=6.5						
	comp=E,2.1nm,0.9s						
NOA	NORSAR Array B	21.43	347	P	P	10 54 16.8	-1.8
	comp=E,0.3nm,0.6s,baz=162,slow=10,SNR=1.5						
	comp=E,0.3nm,0.6s						
EKA	Eskdalemuir Ar	21.77	321	P	P	10 54 21.7	-0.4
	comp=E,2.0nm,1.1s,baz=116,slow=8.6,SNR=3.6						
	comp=E,2.0nm,1.1s						
ARCES	ARCESS Array B	29.23	3	P	P	10 55 31.4	-0.7
	comp=E,3.8nm,1.1s,baz=186,slow=8.3,SNR=2.7						
	comp=E,3.8nm,1.1s						
MKAR	Makanchi Array	43.90	60	P	P	10 57 37.3	+0.2
	comp=E,0.2nm,0.4s,baz=291,slow=8.6,SNR=2.5						
	comp=E,0.2nm,0.4s						
TIXI	Tiksi	57.41	21	LR	LR	11 27 09.8	
	comp=E,110nm,21.6s,baz=332,slow=40						
YAK	Yakutsk	62.98	30	LR	LR	11 32 49.1	
	comp=E,126nm,18.6s,baz=309,slow=41						
YKA	Yellowknife Ar	71.33	340	P	P	11 00 50.3	+0.4
	comp=E,0.2nm,0.5s,baz=22,slow=7.6,SNR=1.3						
	comp=E,0.2nm,0.5s						
MA2	Magadan	72.08	24	LR	LR	11 37 58.3	
	comp=E,107nm,20.6s,baz=324,slow=40						
ASAR	Alice Springs	122.12	95	PKP	PKiKP	11 08 25.5	-0.2
	comp=E,0.2nm,0.6s,baz=301,slow=1.9,SNR=5.8						

IDC ***01*** *10:59:34.7±0.8, 29.°79S×71.°52W, h0km, mb3.9/5, mbtmp3.8/7, ML4.0/2, Error ellipse: s-maj=43.9km s-min=22.8km az=76.0*

SJA ***01*** *10:59:36.7±0.7, 29.°66S×71.°63W, h16km±2km, ML4.3, MW4.1*

GUC ***01*** *10:59:41.2±0.8, 29.°69S×71.°31W, h59km±2km, ML4.5*

NEIC ***01*** *10:59:42.1±1.5, 29.°70S±0.°03×71.°37W±0.°07, h46km±6km, mb4.4/30, ML4.5(GUC), Error ellipse: s-maj=8.3km s-min=4.3km az=100.0*

ISC 01 10:59:38.6±1.2**, 29.°63S**±0.°02×**71.°52W**±0.°03**, h23**km±9km**, n138,** σ**2.ˢ12**/188**, mb4.4**/19**, 5C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.38	140		Pn	10 59 50.4	+1.6
CO05				Sn	Sn	10 59 56.8	+1.4
CO05	La Serena	0.38	140	⇑iP	Pn	10 59 50.4	+1.6
CO05				i S	Sn	10 59 56.7	+1.2
CO05				IAML		10 59 57.3	
	comp=N,29µm,0.4s						
GO04	Tololo Observa	0.83	131	Pn	Pb	10 59 55.5	+0.9
GO04				Sn	Sb	11 00 05.7	+0.2
GO04	Tololo Observa	0.83	131	eP	Pb	10 59 55.2	+0.6
GO04				i S	Sb	11 00 05.4	-0.1
GO04	Tololo Observa	0.83	131	eP	Pb	10 59 54.4	-0.2
GO04				eP	Pb	10 59 55.2	+0.6
GO04				eS	Sb	11 00 06.5	+1.0
GO04				IAML		11 00 08.2	
	comp=Z,24µm,0.4s						
LCO	Las Campanas	0.94	50		Pn	10 59 58.5	+1.7
LCO				Sn	Sn	11 00 10.6	+0.9
LCO	Las Campanas	0.94	50	eP	Pn	10 59 57.7	+0.9
LCO				i S	Sn	11 00 10.1	+0.4
LCO	Las Campanas	0.94	50	eP	Pn	10 59 57.6	+0.9
LCO				eS	Sn	11 00 11.0	+1.3
LCO				IAML		11 00 12.2	
	comp=Z,14µm,0.2s						
CO06	Fray Jorge	1.05	185		Pb	10 59 59.8	+1.7
CO06				Sn	Sn	11 00 13.8	+1.8
CO06	Fray Jorge	1.05	185	⇑eP	Pb	10 59 59.6	+1.5
CO06				i S	Sn	11 00 13.2	+1.3
CO01	Juntas del Tor	1.29	106		Pn	11 00 02.4	+0.9
CO01				Sn	Sn	11 00 17.5	-0.8
CO01	Juntas del Tor	1.29	106	⇑iP	Pn	11 00 02.3	+0.9
CO01				i S	Sn	11 00 16.0	-2.3
CO01				IAML		11 00 18.5	
	comp=N,13µm,0.3s						
CO01	Juntas del Tor	1.29	106	eP	Pn	11 00 02.4	+0.9
CO01				eS	Sn	11 00 16.5	-1.7
CO01				IAML		11 00 18.5	
	comp=Z,10µm,0.2s						
AC05	El Transito	1.35	55		Pb	11 00 04.2	+0.9
AC05	El Transito	1.35	55	⇓iP	Pb	11 00 04.1	+0.9
AC05				IAML		11 00 21.9	
	comp=N,8µm,0.3s						
AC05	El Transito	1.35	55	eP	Pb	11 00 03.8	+0.6
AC05				IAML		11 00 21.3	
	comp=Z,3µm,0.3s						
AC05				eS	Sb	11 00 21.4	+1.3
CO03	El Pedregal	1.41	149		Pn	11 00 03.5	+0.4
CO03				Sn	Sn	11 00 19.7	-1.2
CO03	El Pedregal	1.41	149	⇑iP	Pn	11 00 03.4	+0.4
CO03				i S	Sn	11 00 19.7	-1.2
CO03				IAML		11 00 20.6	
	comp=E,28µm,0.2s						
CO03	El Pedregal	1.41	149	eP	Pn	11 00 03.5	+0.4
CO03				eS	Sn	11 00 20.2	-0.7
CO03				IAML		11 00 20.8	
	comp=Z,8µm,0.2s						
AC04	Llanos de Chal	1.47	16		Pb	11 00 06.2	+1.0
AC04	Llanos de Chal	1.47	16	eP	Pb	11 00 06.2	+1.0
AC04				i S	Sb	11 00 24.9	+1.4
AC04	Llanos de Chal	1.47	16	eP	Pb	11 00 05.5	+0.2
AC04				eS	Sb	11 00 26.3	+2.8
AC04				eS	Sn	11 00 27.8	+5.5
AC04				IAML		11 00 30.0	
	comp=Z,3µm,0.4s						
CO02	Combarbal	1.64	164		Pn	11 00 07.1	+0.8
CO02	Combarbal	1.64	164	⇑iP	Pn	11 00 07.0	+0.8
CO02				i S	Sn	11 00 25.9	-0.7
CO02	Combarbal	1.64	164	eP	Pn	11 00 07.0	+0.8
CO02				eS	Sn	11 00 26.5	-0.1
CO02				eS	Sb	11 00 26.8	-1.7
CO02				IAML		11 00 30.0	
	comp=Z,5µm,0.3s						
GO03	Copiapo	2.32	30		Pb	11 00 17.9	-1.8
GO03	Copiapo	2.32	30	eP	Pn	11 00 16.8	+1.3
GO03				i S	Sb	11 00 46.6	-1.4
GO03				IAML		11 00 56.8	
	comp=N,4µm,0.9s						
GO03	Copiapo	2.32	30	eP	Pb	11 00 18.0	-1.8
GO03				eS	Sn	11 00 35.0	-8.4
GO03				IAML		11 00 53.9	
	comp=Z,1µm,0.7s						
ACCO	Cerro Coronel	2.34	115	eP	Pb	11 00 23.3	+3.0
ACCO				eS	Sb	11 00 53.1	+4.2
AC06	Mina Casimiro	2.48	25		Pn	11 00 19.7	+2.0
AC06	Mina Casimiro	2.48	25	eP	Pn	11 00 19.8	+2.0
DOCA	Reserva Natura	2.49	123	eP	Pn	11 00 20.6	+2.5
DOCA				eP	Pb	11 00 21.4	-1.5
DOCA				eS	Sb	11 00 53.7	+0.4
DOCA				IAML		11 01 01.7	
	comp=Z,726nm,0.6s						
AGUA	GUANDACOL	2.65	88	eP	Pb	11 00 23.7	-1.7
AGUA				eS	Sb	11 01 03.1	+5.6
AGUA				IAML		11 01 04.5	
	comp=Z,1µm,0.4s						
RTLS	Leoncito	2.89	139	eP	Pn	11 00 26.9	+3.3
RTLS				eS	Sn	11 00 56.3	-1.6
RTLS				IAML		11 01 11.4	
	comp=Z,2µm,0.7s						
VA06	Catapilco	2.93	176		Pn	11 00 25.2	+1.3
VCA	Vinchina	3.03	74	eP	Pb	11 00 29.5	-2.5
VCA				eS	Sb	11 01 06.7	-2.0
VCA				IAML		11 01 16.2	
	comp=Z,2µm,0.3s						
ZON	Zonda	3.11	129		Pn	11 00 29.2	+2.8
ZON	Zonda	3.11	129	eP	Pn	11 00 28.8	+2.4
ZON				eS	Sn	11 01 03.8	+0.9
ZON				eS	Sb	11 01 07.3	-3.6
ZON				IAML		11 01 23.1	
	comp=Z,356nm,0.4s						
RTLL	Cerro Villicun	3.13	124	eP	Pn	11 00 29.2	+2.6
RTLL				eS	Sn	11 01 07.8	+4.4
SJA	San Juan	3.18	127	eP	Pn	11 00 27.3	-0.1
SJA				eP	Pb	11 00 31.3	-3.2
SJA				eS	Sn	11 01 06.3	+1.7
SJA				eS	Sb	11 01 06.8	-6.1
SJA				IAML		11 01 25.8	
	comp=Z,469nm,0.9s						
VA03	San Esteban	3.24	165		Pn	11 00 30.4	+2.2
VA03	San Esteban	3.24	165	eP	Pn	11 00 29.9	+1.8
VA03				IAML		11 01 18.6	
	comp=E,2µm,0.2s						
VA03	San Esteban	3.24	165	eP	Pn	11 00 30.0	+1.8
VA03				eS	Sn	11 01 06.3	+0.2
VA03				eS	Sb	11 01 06.8	-7.8
VA03				IAML		11 01 21.2	
	comp=Z,1µm,0.5s						
ROCH	El Roble	3.37	173	eP	Pn	11 00 31.3	+1.3
ROCH				IAML		11 01 23.2	
	comp=N,2µm,0.3s						
ROC1	El Roble	3.37	173	eP	Pn	11 00 31.4	+1.3
ROC1				eS	Sn	11 01 06.3	-3.2
VA01	Torpederas	3.39	182	eS	Sn	11 00 55.2	-14
CFA	Coronel Fontan	3.45	126	eP	Pn	11 00 32.6	+1.6
CFA				eS	Sn	11 01 14.7	+3.4
CFA				IAML		11 01 22.7	
	comp=Z,410nm,0.7s						
AC02	Maricunga	3.49	38		Pn	11 00 34.8	+2.8
AC02	Maricunga	3.49	38	eP	Pn	11 00 34.6	+2.6
AC02				eP	Pb	11 00 34.8	-5.2
AC02				eS	Sb	11 01 18.8	-3.4
AC02				IAML		11 01 32.0	
	comp=Z,552nm,0.4s						
AC01	Pan de Azucar	3.56	14		Pn	11 00 33.3	+0.8
AC01	Pan de Azucar	3.56	14	eP	Pn	11 00 21.7	-11
AC01				eS	Sb	11 01 19.8	-3.9
AC01				IAML		11 01 33.6	
	comp=Z,291nm,1.0s						
PEL	Peldehue	3.58	169		Pn	11 00 34.5	+1.7
MT02	Curacav	3.64	175		Pn	11 00 34.6	+1.0
MT02	Curacav	3.64	175	eP	Pn	11 00 34.6	+1.0
MT02				eS	Sn	11 01 18.3	+2.5
MT02				IAML		11 01 26.7	
	comp=Z,554nm,0.4s						
AVFE	Valle Fertil	3.67	107	eP	Pn	11 00 36.2	+2.1
AVFE				eS	Sn	11 01 18.1	+1.3
AVFE				IAML		11 01 29.9	
	comp=Z,469nm,0.3s						
MT05	Renca	3.81	170		Pn	11 00 37.8	+1.7
MT05	Renca	3.81	170	eP	Pn	11 00 37.9	+1.9
MT05				eS	Sn	11 01 21.8	+1.6
MT05				IAML		11 01 46.2	
	comp=Z,519nm,0.9s						
MT16	CCHEN	3.89	168		Pn	11 00 39.2	+2.2
ARCO	CERRO ARCO	3.90	146	eP	Pn	11 00 40.0	+2.6
ARCO				eS	Sn	11 01 27.3	+4.8
ARCO				IAML		11 01 36.8	
	comp=Z,482nm,0.4s						
MT04	Ro Olivares	3.95	163	eP	Pn	11 00 40.4	+2.3
MT04				eS	Sn	11 01 27.9	+4.0
MT04				IAML		11 01 46.8	
	comp=Z,377nm,0.5s						
MT03	Universidad Ad	3.95	168		Pn	11 00 40.2	+2.2
MT03	Universidad Ad	3.95	168	eP	Pn	11 00 39.6	+1.6
MT03				eS	Sn	11 01 21.8	-1.9
MT03				eS	Sb	11 01 26.5	-8.6
MT03				IAML		11 01 41.0	
	comp=Z,535nm,0.2s						
ACLC	CERRO LA CRUZ	3.99	88	eP	Pn	11 00 40.7	+2.1
ACLC				eS	Sn	11 01 26.3	+1.6
ACLC				eS	Sb	11 01 27.8	-8.4
ACLC				IAML		11 01 32.9	
	comp=Z,410nm,0.7s						
MT08	Bocatoma Ro	4.02	162		Pn	11 00 43.5	+4.5
MT08	Bocatoma Ro	4.02	162	eP	Pn	11 00 41.9	+2.9
MT08				eS	Sn	11 01 27.8	+2.3
MT08				eS	Sb	11 01 28.8	-8.3
MT08				IAML		11 01 46.9	
	comp=Z,556nm,0.5s						
VA05	Santo Domingo	4.02	181		Pn	11 00 39.2	+0.4
AAGR	Agrelo	4.15	147	eP	Pn	11 00 29.0	-12
AAGR				IAML		11 02 00.7	
	comp=Z,362nm,0.6s						
MT09	Talagante	4.16	174		Pn	11 00 42.3	+1.4
MT01	Popeta	4.23	177		Pn	11 00 42.8	+1.1
MT01	Popeta	4.23	177	eP	Pn	11 00 42.8	+1.1
MT01				eS	Sn	11 01 28.8	-1.7
MT01				eS	Sb	11 01 32.7	-10
MT01				IAML		11 01 47.3	
	comp=Z,454nm,0.6s						
MT13	San Alfonso	4.24	166		Pn	11 00 44.5	+2.5
MT13	San Alfonso	4.24	166	eP	Pn	11 00 44.2	+2.3
MT13				eP	Pb	11 00 45.3	-7.2
MT13				eS	Sn	11 01 33.8	+3.0
MT13				IAML		11 01 48.0	
	comp=Z,483nm,0.5s						
LMEL	Las Melosas	4.36	165		Pn	11 00 46.4	+2.8
LMEL	Las Melosas	4.36	165	eP	Pn	11 00 45.8	+2.2
LMEL				eS	Sn	11 01 36.9	+3.1
LMEL				IAML		11 01 50.8	
	comp=Z,380nm,0.3s						
BO04	La Punta	4.42	170		Pn	11 00 45.9	+1.5
ACHE	Chepes	4.47	111	eP	Pn	11 00 47.0	+1.8
ACHE				eS	Sn	11 01 40.3	+3.8
GO02	Mina Guanaco	4.77	22		Pn	11 00 49.2	-0.2
BO01	Tunca	4.77	176		Pn	11 00 50.0	+0.9
BO01	Tunca	4.77	176	eP	Pn	11 00 49.9	+0.9
BO01				eS	Sn	11 01 45.3	+1.7
BO01				IAML		11 02 04.3	
	comp=Z,198nm,0.6s						
CYA	Choya	5.15	78	eP	Pn	11 00 56.5	+2.1
CYA				eS	Sn	11 01 48.3	-4.8
CYA				IAML		11 02 02.4	
	comp=Z,197nm,0.9s						
BO02	Sierra Bellavi	5.19	173		Pn	11 00 56.3	+1.3
BO02	Sierra Bellavi	5.19	173	eP	Pn	11 00 56.9	+1.9
BO02				eS	Sn	11 01 54.6	+0.4
BO02				IAML		11 02 11.9	
	comp=Z,329nm,0.6s						
BI02	San Fabin de	7.02	178		Pn	11 01 20.9	+0.8
H03N1	Juan Fernandez	7.36	237	Pn	Pn	11 01 25.8	+1.3
	baz=114,slow=18						
H03N1				T	T	11 09 10.2	
	baz=64,slow=71,SNR=1515						
H03N2	Juan Fernandez	7.38	237	Pn	Pn	11 01 25.9	+1.2
	baz=114,slow=18						
H03N2				T	T	11 09 12.7	
	baz=64,slow=71,SNR=1344						
H03N3	Juan Fernandez	7.38	237	Pn	Pn	11 01 25.0	+0.3
	baz=114,slow=18						
H03N3				T	T	11 09 07.4	
	baz=64,slow=71,SNR=1195						
H03S1	Juan Fernandez	7.56	234	Pn	Pn	11 01 26.6	-0.6
TRQA	Tornquist	11.56	139		Pn	11 02 22.2	0.0
ITQB	Itaqui	12.96	94		Pn	11 02 41.0	-0.5
CPUP	Villa Florida	12.97	79	Pn	Pn	11 02 41.0	-0.5
	comp=Z,0.1nm,0.3s,baz=13,slow=19,SNR=4.5						
	comp=Z,0.7nm,0.6s						
LPAZ	La Paz	13.64	14	Pn	Pn	11 02 49.6	-1.6
LPAZ	La Paz	13.64	14	Pn	Pn	11 02 53.8	+2.5
	comp=Z,0.4nm,0.3s,baz=206,slow=9.3,SNR=8.5						
	comp=Z,2.0nm,0.5s						
PLTB	Pedras Altas	15.56	102	Pn	Pn	11 03 14.8	-1.9
COYC	Coyhaique	15.93	181	Pn	Pn	11 03 20.6	-0.6
ITAB	Concordia	17.23	87	P	Pn	11 03 37.6	-0.2
CZSB	Cruzeiro do Su	21.81	357		P	11 04 30.1	+0.8
CZSB				IAmb	IAmb	11 04 34.6	
	comp=Z,15nm,0.9s						
VAO	Valinhos	22.96	79	P	P	11 04 41.3	-0.3
VAO				IAmb	IAmb	11 05 02.9	
	comp=Z,25nm,1.5s						
SLOR	San Lorenzo -	29.49	346	P	P	11 05 42.1	+0.4
BOAV	Boa Vista	33.54	20	P	P	11 06 16.3	-0.4
BOAV				IAmb	IAmb	11 06 17.0	
	comp=Z,3.3nm,0.7s						
RUSC	La Rusia	35.34	357	P	P	11 06 33.2	+0.2
RUSC				IAmb	IAmb	11 06 36.8	
	comp=Z,6.9nm,0.9s						
ILAM	Ilet Lapin Mar	45.32	15	P	P	11 07 55.5	+0.5
CELP	Cerrillos	47.66	6	P	P	11 08 13.3	0.0
PETF	Flores	49.54	337	P	P	11 08 27.9	+0.1
SNAA	Sanae	55.48	159	P	P	11 09 11.4	+0.1
SNAA				IAmb	IAmb	11 09 11.7	
	comp=Z,4.7nm,1.2s						
SNAA	Sanae	55.48	159	P	P	11 09 11.2	-0.1
	comp=Z,0.8nm,0.6s,baz=287,slow=5.5,SNR=3.8						
	comp=Z,0.8nm,0.6s						
QSPA	South Pole Qui	60.60	180	P	P	11 09 46.0	-1.3
QSPA				IAmb	IAmb	11 10 28.9	
	comp=Z,3.8nm,1.2s						
QSPA	South Pole Qui	60.60	180	P	P	11 09 46.4	-0.9
	comp=Z,1.4nm,1.0s,baz=204,slow=7.1,SNR=2.4						
	comp=Z,1.4nm,1.0s						
X48A	Hartselle	65.40	346	P	P	11 10 19.5	+0.2
X48A				IAmb	IAmb	11 10 39.9	
	comp=Z,5.9nm,1.1s						
TXAR	Lajitas Array	66.17	329	P	P	11 10 25.9	+1.4
	comp=Z,0.5nm,0.6s,baz=155,slow=8.0,SNR=9.9						
	comp=Z,0.5nm,0.6s						
OZNA	Ozona	66.48	332	P	P	11 10 27.9	+1.4
OZNA				IAmb	IAmb	11 10 28.4	
	comp=Z,2.6nm,0.7s						
VHRN	Van Horn	68.00	329	P	P	11 10 36.6	+0.5
APMT	Aspermont	68.21	334	P	P	11 10 38.6	+1.2
APMT				IAmb	IAmb	11 10 39.1	
	comp=Z,2.7nm,0.7s						
PBMO	Poplar Bluff	68.40	344	P	P	11 10 39.1	+0.8
PBMO				IAmb	IAmb	11 10 59.3	
	comp=Z,4.3nm,0.7s						
MNTX	Cornudas Mount	68.95	329	P	P	11 10 42.5	+0.5
P40A	Paris	71.41	343	P	P	11 10 57.6	+0.8
P40A				IAmb	IAmb	11 11 18.7	
	comp=Z,10nm,1.4s						
L61B	Northampton	71.73	359	P	P	11 10 59.3	+0.7
X16A	Lo Mia Camp, P	74.02	327	P	P	11 11 14.9	+2.2
SDCO	Great Sand Dun	74.18	333	P	P	11 11 15.5	+1.8
WUAZ	Wupatki	74.88	327	P	P	11 11 20.1	+2.5
WUAZ				IAmb	IAmb	11 11 20.7	
	comp=Z,4.2nm,1.1s						
E62A	Clayton Lake	75.91	1	P	P	11 11 23.2	+0.1
PV02	Paradox Valley	75.92	331	P	P	11 11 23.8	+0.2

PV18	Skein Mesa, Pa	76.02	330	P	P	11 11 26.2	+1.9
PV18				IAmb	IAmb	11 11 26.6	
	comp=Z,3.6nm,0.7s						
PV10	Paradox Valley	76.19	330	P	P	11 11 26.9	+1.7
PV10				IAmb	IAmb	11 11 27.5	
	comp=Z,3.3nm,0.8s						
MAW	Mawson	77.24	164	P	P	11 11 29.0	-1.5
	comp=Z,0.7nm,0.4s,baz=214,slow=11,SNR=2.0						
	comp=Z,0.7nm,0.4s						
P18A	Preston Nutter	77.75	330	P	P	11 11 35.9	+1.9
P18A				IAmb	IAmb	11 11 36.6	
	comp=Z,3.3nm,0.9s						
PDAR	Pinedale Array	80.08	333	P	P	11 11 47.2	+0.5
	comp=Z,0.3nm,0.4s,baz=134,slow=6.4,SNR=4.0						
	comp=Z,0.3nm,0.4s						
BOSA	Boshof	81.72	118	P	P	11 11 54.5	-1.4
BOSA				IAmb	IAmb	11 12 09.1	
	comp=Z,8.2nm,1.2s						
WRA	Warramunga Arr	124.77	210	PKP	PKPdf	11 18 35.5	-1.8
	comp=Z,0.3nm,0.6s,baz=162,slow=1.6,SNR=5.5						
H11S2	WAKE ISLAND Hy	126.16	272	T	T	13 37 34.6	
	baz=115,slow=75,SNR=33						
H11S1	WAKE ISLAND Hy	126.18	272	T	T	13 37 32.6	
	baz=115,slow=75,SNR=34						
H11S3	WAKE ISLAND Hy	126.18	272	T	T	13 37 35.0	
	baz=115,slow=75,SNR=29						
H11N3	WAKE ISLAND Hy	126.47	274	T	T	13 38 12.4	
	baz=115						
H11N1	WAKE ISLAND Hy	126.48	274	T	T	13 38 01.0	
	baz=115						
H11N2	WAKE ISLAND Hy	126.48	274	T	T	13 38 15.6	
	baz=115						
ZALV	Zalesovo Beam	150.24	29	PKPbc	PKPbc	11 19 26.9	-0.4
	comp=Z,3.4nm,0.5s,baz=307,slow=4.5,SNR=14						
MKAR	Makanchi Array	153.40	43	PKPbc	PKPbc	11 19 33.7	-1.2
	comp=Z,0.1nm,0.5s,baz=348,slow=2.1,SNR=2.2						
HHC	Hu-ho-hao-te	168.52	348	*e*P	PKPdf	11 19 44.2	+0.5
PZH	PanZhiHua	173.29	116	PKP	PKPdf	11 19 46.2	-0.4

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*UPP **01** 11:03:50.5±2.9, 67°.49N×31°.21E, h0^{km}, ML1.7*

*IDC **01** 11:03:54.5±2.9, 67°.59N×30°.83E, h0^{km}, mbtmp2.7/2, ML1.8/2, Error ellipse: s-maj=47.1km s-min=15.1km az=76.0*

*KOLA **01** 11:03:56.2, 67°.56N×30°.59E, h0^{km}, ML2.2, Error ellipse: s-maj=4.2km s-min=2.3km az=30.0, Kovdor City, Mines*

ISC 01 11:03:53.3±0.8, **67°.63N**±0°.04×**30°.52E**±0°.04, **h0**^{km}**, n23,** σ**0^{s}.95**/31, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA0	Apatity Array	0.95	90	P	Pg	11 04 12.0	+0.6
APA0				S	Sb	11 04 25.0	-0.6
APA	Apatity	1.11	92	P	Pg	11 04 14.8	+0.3
APA				S	Sg	11 04 29.1	+0.2
KVDA	Kovda	1.32	135	P	Pg	11 04 18.1	-0.3
KVDA				S	Sg	11 04 35.1	-0.4
LVZ	Lovozero	1.60	78	P	Pg	11 04 24.1	+0.2
LVZ				S	Sg	11 04 45.3	+0.8
PRVG	Vayda Guba	2.21	15	P	Pb	11 04 34.1	0.0
PRVG				S	Sb	11 05 01.0	-1.0
TERR	Teriberka	2.32	45	S	Sg	11 05 06.7	-1.0
KEV	Kevo	2.49	331	*e*P	Pb	11 04 37.4	-1.4
VADS	Vadso	2.54	351	S	Sb	11 05 11.3	-0.1
ARCES	ARCESS Array B	2.66	318	Pn	Pb	11 04 39.5	-2.2
	0.2nm,0.3s,baz=137,slow=16,SNR=13						
ARCES				Sn	Sb	11 05 15.9	+1.2
	0.5nm,0.3s,baz=135,slow=28,SNR=9.9						
	0.6nm,0.3s						
ARCES	ARCESS Array B	2.66	318	P	Pb	11 04 40.6	-1.0
ARCES				S	Sb	11 05 14.6	-0.2
HEF	Hetta	2.70	290	*e*P	Pb	11 04 41.5	-0.8
LANU	Lannavaara	3.26	281	P	Pn	11 04 46.8	+1.2
KALU	Kalix	3.35	241	P	Pn	11 04 46.1	-0.7
KALU				S	Sn	11 05 28.4	+1.2
ERTU	Ertsjaerv	3.43	256	P	Pn	11 04 48.7	+0.8
DUNU	Dundret	3.88	267	P	Pn	11 04 54.2	+0.2
KUA	Kurravaara	3.88	280	P	Pn	11 04 54.4	+0.3
KOVU	Salmi	3.95	283	P	Pn	11 04 56.1	+0.9
HARU	Harads	4.04	253	P	Pn	11 04 55.8	-0.5
SJUU	Sjulsmark	4.15	243	P	Pn	11 04 57.0	-0.7
RATU	Laukkuluspa	4.16	278	P	Pn	11 04 58.3	+0.3
RATU				S	Sn	11 05 49.5	+2.2
I37NO	I37NO	4.64	294	I	I	11 33 40.0	
	baz=102,slow=333,SNR=1.2						
FAUS	Fauske	5.85	275	S	Sn	11 06 28.4	-0.4
FINES	FINESS Array B	6.50	199	Pn	Pn	11 05 30.9	+0.9
	0.1nm,0.3s,baz=15,slow=12,SNR=2.2						
	1.7nm,0.8s						

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*TIR **01** 11:05:47.3, 40°.46N×20°.80E, h8^{km}±1^{km}, Md2.0/1, Ml3.1/6*

*BEO **01** 11:05:48.2±0.6, 40°.44N×20°.97E, h6^{km}±2^{km}, ML2.6/11*

*ATH **01** 11:05:48.7, 40°.51N×20°.89E, h7^{km}±3^{km}, Manual Solution by A.Andreou First location: 2019/06/01 11:06:55, This location: 2020/08/11 10:44:19 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

*THE **01** 11:05:49.4, 40°N±2°×2°1E±°, h10^{km}±2^{km}, M2.6/12, MLh2.6/12*

*SKO **01** 11:05:49.2, 40°.45N×20°.92E, h7^{km}, ML2.8*

ISC 01 11:05:48.0±1.0, **40°.46N**±0°.02×**20°.82E**±0°.02, **h6**^{km}±8^{km}, **n90,** σ**0^{s}.85**/122, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.16	350	Pg	Pg	11 05 50.4	-0.9
KBN				Sg	Sg	11 05 53.2	-0.4
KBN				AML	AML	11 05 53.6	
	20nm,0.4s						
KBN				AMd		11 06 15.4	
NEST	Nestorio	0.18	105	Pg	Pg	11 05 51.9	+0.3
NEST				Sg	Sg	11 05 54.8	+0.8
NEST				AML	AML	11 05 57.0	
	16nm,0.3s						
NEST	Nestorio	0.18	105	P	Pg	11 05 52.0	+0.3
NEST				S	Sg	11 05 54.3	+0.3
NEST	Nestorio	0.18	105	P	Pg	11 05 52.1	+0.5
NEST				S	Sg	11 05 54.7	+0.7
PENT	Pentalofos	0.36	138	P	Pg	11 05 54.9	-0.1
PENT				S	Sg	11 05 59.5	-0.2
PENT	Pentalofos	0.36	138	P	Pg	11 05 54.9	-0.1
PENT				S	Sg	11 06 00.2	+0.4
OHR	Ohrid	0.65	358	*e*Pg	Pg	11 06 00.2	-0.4
OHR				*e*Sg	Sg	11 06 10.0	+1.0
OHR				*e*Lg	Lg	11 06 11.1	
	comp=E,348nm,0.5s						
OHR				*e*Lg	Lg	11 06 15.2	
	comp=N,245nm,0.4s						
OHR	Ohrid	0.65	358	*e*Pg	Pg	11 05 59.9	-0.6
OHR				*e*Sg	Sg	11 06 10.3	+1.3
KPRO	Kipourio	0.65	141	P	Pg	11 05 60.0	-0.6
KPRO				S	Sg	11 06 07.9	-1.2
KPRO	Kipourio	0.65	141	P	Pg	11 05 60.0	-0.6
KPRO				S	Sb	11 06 11.4	+0.1
KZN	Kozani	0.74	102	P	Pb	11 06 03.5	+0.1
KZN				S	Sg	11 06 11.7	-0.2
KZN	Kozani	0.74	102	P	Pb	11 06 03.5	+0.1
SRN	Sarande	0.86	228	Pg	Pg	11 06 04.2	-0.3
SRN				Sg	Sb	11 06 16.8	-0.3
SRN				AML	AML	11 06 20.4	
	comp=N,1.5nm,0.6s						
NASA	Naoussa	0.96	79	P	Pg	11 06 07.4	+0.9
KTI	Kastanea	0.99	94	P	Pg	11 06 06.6	-0.4
IGT	Igoumenitsa	1.00	202	Pg	Pg	11 06 07.0	-0.3
IGT				Sg	Sn	11 06 22.0	-1.1
IGT	Igoumenitsa	1.00	202	P	Pg	11 06 06.7	-0.5
IGT				S	Sn	11 06 22.6	-0.6
IGT	Igoumenitsa	1.00	202	*i* Pg	Pg	11 06 06.6	-0.6
IGT				*e*Sg	Sn	11 06 22.9	-0.2
KEK	Kerkira	1.08	227	P	Pn	11 06 10.8	+1.0
KEK	Kerkira	1.08	227	P	Pn	11 06 11.0	+1.1
TIR	Tirane	1.15	321	Pn	Pg	11 06 09.3	-0.7
TIR				Sn	Sn	11 06 26.7	0.0
TIR				AML	AML	11 06 32.2	
	comp=N,0.6nm,0.5s						
TIR	Tirane	1.15	321	*i* Pg	Pg	11 06 09.4	-0.7
TIR				*e*Sg	Sn	11 06 30.4	+3.7
TIR	Tirane	1.15	321	*e*Pg	Pg	11 06 09.0	-1.0
TIR				*e*Sg	Sn	11 06 28.9	+2.2
TETR	Tetrakomo, Epi	1.17	163	P	Pn	11 06 11.7	+0.6
TETR				S	Sn	11 06 29.0	+1.6
PHP	Peshkopia	1.25	347	Pg	Pg	11 06 10.5	-1.7
THL	Klokotos Trika	1.28	134	P	Pn	11 06 12.6	+0.1
THL	Klokotos Trika	1.28	134	P	Pn	11 06 12.6	+0.1
TYRN	Tyrnavos	1.32	124	P	Pn	11 06 12.7	-0.3
TYRN	Tyrnavos	1.32	124	P	Pn	11 06 13.1	+0.1
AMPL	Ampelaki	1.57	169	P	Pb	11 06 17.6	+0.1
VAY	Valandovo	1.58	56	*i* Pg	Pn	11 06 16.8	+0.2
VAY				*e*Sg	Sg	11 06 40.5	+1.8
VAY				*e*Lg	Lg	11 06 41.7	
	comp=N,89nm,0.6s						
VAY				*e*Lg	Lg	11 06 43.4	
	comp=E,79nm,0.7s						
SKO	Skopje	1.58	17	*e*Pg	Pn	11 06 16.7	0.0
SKO				*e*Sg	Sb	11 06 39.2	+1.2
TSLK	Tsoukalades, L	1.64	185	P	Pg	11 06 19.1	-0.4
THE	Thessaloniki	1.64	83	*i* Pg	Pn	11 06 16.9	-0.5
THE	Thessaloniki	1.64	83	P	Pn	11 06 17.2	-0.3
LKD2	Lefkada island	1.68	184	Pn	Pg	11 06 19.9	-0.3
LKD2	Lefkada island	1.68	184	P	Pn	11 06 17.9	-0.1
LKD2	Lefkada island	1.68	184	P	Pg	11 06 19.8	-0.3
EVR	Evrytania	1.72	153	P	Pb	11 06 19.7	-0.5
KNT	Kendrikon	1.72	65	P	Pn	11 06 18.3	-0.3
KNT	Kendrikon	1.72	65	*e*Pn	Pn	11 06 18.3	-0.3
KNT	Kendrikon	1.72	65	P	Pn	11 06 18.4	-0.3
PUK	Puka	1.73	336	Pn	Pb	11 06 20.8	+0.5
PUK				Sn	Sg	11 06 44.9	+1.3
PUK				AML	AML	11 06 49.9	
	comp=E,1.0nm,0.4s						
HORT	Hortiatis	1.74	85	P	Pn	11 06 18.3	-0.6
HORT	Hortiatis	1.74	85	P	Pn	11 06 18.1	-0.9
NYDR	Nydri-Lefkada	1.75	183	P	Pg	11 06 21.0	-0.5
EVGI	Lefkada island	1.84	184	P	Pb	11 06 22.2	+0.1
SCTE	Santa Cesarea	1.84	259	P	Pb	11 06 21.5	-0.7
AGG	Agios Georgios	1.85	141	P	Pn	11 06 20.9	+0.5
ULC	Ulcinj	1.92	322	*i* Pn	Pn	11 06 22.1	+0.8
PVO	Paravola	1.92	163	P	Pb	11 06 22.6	-0.9
SOH	Sokhos	1.96	79	P	Pn	11 06 21.8	-0.1
BCI	Bajram Curri	1.99	344	Pg	Pb	11 06 25.0	+0.3
BCI				Sg	Sg	11 06 51.9	+0.1
BCI				AML	AML	11 06 53.9	
	comp=E,0.8nm,0.9s						
PLG	Polygyros	2.00	92	P	Pn	11 06 22.9	+0.4
FSK	Fiskardo	2.01	186	P	Pb	11 06 24.2	-0.8
ANX	Ano Chora	2.05	155	P	Pn	11 06 24.1	+0.9
NEO	Neokhori	2.18	121	P	Pn	11 06 24.9	0.0
EFP	Efpalio	2.20	157	P	Pn	11 06 26.2	+1.0
SRS	Serrai	2.20	72	*i* Pn	Pn	11 06 25.1	-0.1
SRS	Serrai	2.20	72	P	Pn	11 06 25.3	0.0
KKB	Krupnik	2.22	51	*i* Pn	Pn	11 06 25.8	+0.3
SERG	Sergoula	2.26	155	P	Pn	11 06 27.0	+1.0
VLS	Valsamata	2.29	185	P	Pn	11 06 26.9	+0.5
PDG	Podgorica	2.29	330	*e*Pn	Pn	11 06 26.9	+0.5
PDG				*e*Sn	Sb	11 06 57.6	-0.8
AXS	Araxos	2.30	169	P	Pb	11 06 28.7	-1.3
PSDA	Pessada-Kefalo	2.35	185	P	Pn	11 06 27.9	+0.7
BOSS	Bosilegrad	2.38	31	*e*Pn	Pn	11 06 27.9	+0.2
BOSS				*e*Sn	Sn	11 06 56.6	-0.7
YRMI	Loutra Irminis	2.39	170	P	Pb	11 06 30.1	-1.4
OUR	Ouranopolis	2.42	92	P	Pn	11 06 28.2	+0.1
KOKK	Kokkinochori,	2.44	81	P	Pn	11 06 28.5	0.0
BARS	Barje	2.47	17	*i* Pn	Pn	11 06 28.5	-0.4
BARS	Barje	2.47	17	*e*Pn	Pn	11 06 28.4	-0.4
BARS				*e*Sn	Sn	11 06 57.9	-1.5
LKR	Lokris	2.47	136	P	Pn	11 06 29.4	+0.5
BEY	Berane	2.51	344	*i* Pn	Pb	11 06 32.6	-0.9
ORTH	Orthonies,Zaky	2.61	182	P	Pn	11 06 31.9	+1.1
KLV	Kalavryta, Ach	2.62	156	P	Pn	11 06 32.0	+1.0
SELS	Selova	2.76	4	*e*Pn	Pn	11 06 32.6	-0.4
SELS				*e*Sn	Sn	11 07 06.7	0.0
KAVA	Kavala	2.85	78	P	Pn	11 06 33.3	-0.9
SJES	Sjenica	2.87	347	*e*Pn	Pn	11 06 35.6	+1.1
SJES				*e*Sn	Sn	11 07 09.8	+0.4
VIL2	Platees	2.94	139	P	Pn	11 06 36.5	+1.2
THAS	Thassos island	2.97	86	P	Pn	11 06 34.7	-1.1
GOCS	Kraljevo Serbi	3.10	1	*e*Pn	Pn	11 06 38.8	+1.2
GOCS				*e*Sn	Sn	11 07 14.6	-0.4
ZAPS	Zavoj	3.12	25	*e*Pn	Pn	11 06 38.7	+0.9
ZAPS				*e*Sn	Sn	11 07 16.1	+0.7
IVAS	Ivanjica	3.15	351	*e*Pn	Pn	11 06 39.3	+1.0
BOVS	Bovan	3.24	11	*e*Pn	Pn	11 06 38.7	-0.7
BOVS				*e*Sn	Sn	11 07 17.6	-0.7
ZAGS	Zajecar	3.51	17	*e*Pn	Pn	11 06 42.1	-1.0
ZAGS				*e*Sn	Sn	11 07 24.0	-1.0
BBLS	Lazi&#263i	3.56	343	*e*Pn	Pn	11 06 45.4	+1.4
DIVS	Divibare	3.69	351	*e*Pn	Pn	11 06 46.5	+0.8
KUBS	Kucevo	4.00	9	*e*Pn	Pn	11 06 48.1	-1.8
TEKS	Tekeris	4.20	347	*e*Pn	Pn	11 06 52.4	-0.2

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*THE **01** 11:08:56.6, 40°N±2°×2°1E±°, h2^{km}±1^{km}, M2.5/8, MLh2.5/8*

*TIR **01** 11:08:56.9, 40°.51N×20°.85E, h5^{km}, Md2.0/2, Ml3.1/5*

*ATH **01** 11:08:57.3, 40°.43N×20°.88E, h13^{km}±1^{km}, ML2.6/9, Manual Solution by A.Agalos First location: 2019/06/01 11:10:06, This location: 2019/06/01 14:33:52 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

ISC 01 11:08:57.0±1.0, **40°.47N**±0°.02×**20°.83E**±0°.02, **h5**^{km}±9^{km}, **n37,** σ**0^{s}.81**/54, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.15	348	Pg	Pg	11 08 59.3	-0.9
KBN				Sg	Sg	11 09 01.4	-0.8
KBN				AML	AML	11 09 02.7	
	21nm,0.3s						
KBN				AMd		11 09 22.3	
NEST	Nestorio	0.18	109	Pg	Pg	11 09 01.1	+0.5
NEST				Sg	Sg	11 09 03.9	+0.9
NEST				AML	AML	11 09 05.3	
	21nm,0.2s						
NEST				AMd		11 09 28.0	
NEST	Nestorio	0.18	109	P	Pg	11 09 01.1	+0.5
NEST				S	Sg	11 09 03.8	+0.8
NEST	Nestorio	0.18	109	P	Pg	11 09 00.9	+0.3
NEST				S	Sg	11 09 03.4	+0.4
PENT	Pentalofos	0.36	139	P	Pg	11 09 04.1	0.0
PENT				S	Sg	11 09 10.0	+1.0
PENT	Pentalofos	0.36	139	P	Pg	11 09 04.1	0.0
PENT				S	Sg	11 09 08.1	-0.8
KPRO	Kipourio	0.66	141	P	Pg	11 09 09.3	-0.4
KPRO				S	Sb	11 09 20.3	-0.3
KPRO	Kipourio	0.66	141	P	Pg	11 09 09.2	-0.6
KPRO				S	Sg	11 09 17.6	-0.7
KZN	Kozani	0.74	103	P	Pg	11 09 11.6	+0.4
KZN				S	Sb	11 09 23.2	+0.4
KZN	Kozani	0.74	103	P	Pg	11 09 11.6	+0.4
JAN	Janina	0.82	179	S	Sb	11 09 24.8	-0.2
JAN	Janina	0.82	179	P	Pg	11 09 12.3	-0.4
JAN				S	Sg	11 09 23.2	-0.1
SRN	Sarande	0.87	227	P	Pg	11 09 13.6	0.0
SRN				Sg	Sb	11 09 27.1	+0.7
SRN				AML	AML	11 09 35.2	
	0.9nm,0.5s						
KTI	Kastanea	0.99	94	P	Pg	11 09 15.6	-0.4
IGT	Igoumenitsa	1.01	202	Pg	Pb	11 09 17.7	+0.6
IGT				Sg	Sn	11 09 33.3	+0.8
IGT	Igoumenitsa	1.01	202	P	Pg	11 09 15.5	-1.0
IGT				S	Sg	11 09 29.3	-0.3
IGT	Igoumenitsa	1.01	202	P	Pg	11 09 16.6	+0.1
KEK	Kerkira	1.10	226	P	Pg	11 09 18.1	+0.1
TIR	Tirane	1.14	320	Pg	Pn	11 09 19.9	+0.3
TIR				Sg	Sn	11 09 36.0	+0.5
TIR				AML	AML	11 09 41.9	
	0.5nm,0.3s						
TETR	Tetrakomo, Epi	1.18	163	P	Pg	11 09 19.3	-0.4
PHP	Peshkopia	1.24	347	Pn	Pg	11 09 19.0	-1.9
THL	Klokotos Trika	1.29	135	P	Pg	11 09 20.9	-0.8
THL				S	Sn	11 09 40.1	+0.9
THL	Klokotos Trika	1.29	135	P	Pg	11 09 19.9	-1.8
TYRN	Tyrnavos	1.32	125	P	Pg	11 09 20.6	-1.8
TSLK	Tsoukalades, L	1.65	185	P	Pn	11 09 25.0	-1.6
KNT	Kendrikon	1.71	66	P	Pn	11 09 27.2	-0.4
KNT	Kendrikon	1.71	66	P	Pn	11 09 26.9	-0.7
PUK	Puka	1.72	336	Pn	Pb	11 09 29.4	+0.2
PUK				Sn	Sg	11 09 53.9	+1.6
PUK				AML	AML	11 09 56.0	
	0.8nm,0.9s						
EVR	Evrytania	1.73	154	P	Pn	11 09 27.4	-0.5
HORT	Hortiatis	1.74	85	P	Pn	11 09 27.5	-0.4
HORT	Hortiatis	1.74	85	P	Pn	11 09 26.6	-1.3
SCTE	Santa Cesarea	1.85	258	P	Pn	11 09 29.2	-0.2
EVGI	Lefkada island	1.85	184	P	Pn	11 09 28.8	-0.7
SOH	Sokhos	1.95	79	P	Pn	11 09 29.9	-0.9
BCI	Bajram Curri	1.98	343	Pn	Pg	11 09 35.0	+0.1
BCI				Sn	Sg	11 10 01.2	+0.7
PLG	Polygyros	2.00	92	P	Pn	11 09 30.7	-0.8
KOKK	Kokkinochori,	2.44	81	P	Pn	11 09 36.6	-0.9

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*IDC **01** 11:14:08.7±1.0, 12°.44N×144°.44E, h0^{km}, mb3.7/7, mbtmp3.7/7, MS3.8/1, Error ellipse: s-maj=33.2km s-min=16.2km az=107.0*

*NEIC **01** 11:14:13.3±1.8, 12°.63N±0°.08×144°.3E±0°.2, h35^{km}±7^{km}, mb4.4/9, Error ellipse: s-maj=22.7km s-min=11.2km az=94.0*

ISC 01 11:14:12.6±0.8, **12°.52N**±0°.10×**144°.4E**±0°.1, **h30**^{km}**, n23,** σ**1^{s}.45**/20, **mb3.9**/11, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.18	26		Pb	11 14 32.7	-1.7
GUMO	Guam	1.18	26	Pn	Pb	11 14 32.9	-1.4
	116nm,0.3s,baz=196,slow=2.8,SNR=113						
GUMO				Sn	Sb	11 14 49.6	+0.4
	221nm,0.3s,baz=198,slow=19,SNR=30						
GUMO				LR	LR	11 15 11.4	
	comp=Z,880nm,19.6s,baz=242,slow=52						
TNTI	Ternate	20.49	237	P	P	11 18 46.5	-1.7
TNTI				IAmb	IAmb	11 19 11.4	
	comp=Z,14nm,0.5s						
H11N1	WAKE ISLAND Hy	22.79	69	T	T	11 43 11.9	
	baz=259,slow=75						
H11N2	WAKE ISLAND Hy	22.80	69	T	T	11 42 51.0	
	baz=259,slow=75,SNR=39						
H11N3	WAKE ISLAND Hy	22.81	69	T	T	11 43 09.7	
	baz=259,slow=75						
SBUM	Sibu	33.34	255	P	P	11 20 47.3	-1.0
WB0	Warramunga Arr	33.55	197	P	P	11 20 49.8	-0.1
WB0				IAmb	IAmb	11 21 04.1	
	comp=Z,5.5nm,1.1s						
WR8	Warramunga Arr	33.70	197	P	P	11 20 50.4	-0.8
WR8				IAmb	IAmb	11 21 10.0	
	comp=Z,4.7nm,1.1s						
WRA	Warramunga Arr	33.73	197	P	P	11 20 50.7	-0.8
	comp=Z,1.4nm,0.8s,baz=18,slow=9.5,SNR=6.9						
	comp=Z,1.4nm,0.8s						
BJT	Baijiatuau	36.96	323	P	P	11 21 16.8	-2.4
BJT				IAmb	IAmb	11 21 36.1	
	comp=Z,5.2nm,1.0s						
AS31	Alice Springs	37.39	196	P	P	11 21 23.0	+0.1
ASAR	Alice Springs	37.39	196	P	P	11 21 21.8	-1.1
ASAR	Alice Springs	37.39	196	P	P	11 21 23.0	0.0
	comp=Z,0.7nm,0.7s,baz=15,slow=9.6,SNR=12						
	comp=Z,0.7nm,0.7s						
CMAR	Chiang Mai Arr	44.06	284	P	P	11 22 20.1	+1.9
	comp=Z,0.4nm,0.3s,baz=99,slow=8.3,SNR=4.4						
	comp=Z,0.4nm,0.3s						
BBOO	Buckleboo	45.77	190	P	P	11 22 31.6	+0.2
BBOO				IAmb	IAmb	11 22 42.8	
	comp=Z,4.2nm,1.0s						
MKAR	Makanchi Array	61.90	317	P	P	11 24 32.4	+3.0
	comp=Z,0.2nm,0.6s,baz=86,slow=7.4,SNR=2.4						
	comp=Z,0.2nm,0.6s						
KURBB	Kurchatov Arra	65.11	320	P	P	11 24 52.1	+1.7
	comp=Z,0.3nm,0.4s,baz=104,slow=6.6,SNR=4.3						
	comp=Z,0.3nm,0.4s						
KK31	Karatay Array	69.77	311	P	P	11 25 20.5	+0.4
KKAR	Karatay Array	69.77	311	P	P	11 25 20.4	+0.3
BVAR	Borovoye Array	70.44	322	P	P	11 25 23.9	-0.1
	comp=Z,0.5nm,0.5s,baz=96,slow=5.4,SNR=2.3						
	comp=Z,0.5nm,0.5s						
BBB	Bella Bella	78.72	39	LR	LR	11 52 59.9	
	comp=Z,60nm,20.9s,baz=314,slow=30						
NVAR	Mina Array Bea	87.98	51	P	P	11 27 02.1	+1.8
	comp=Z,0.5nm,0.8s,baz=274,slow=4.9,SNR=4.5						
	comp=Z,0.5nm,0.8s						

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*NEIC **01** 11:16:20.9±1.1, 19°.16N±0°.04×155°.47W±0°.02, h50^{km}±3^{km}, Error ellipse: s-maj=5.3km s-min=3.1km az=168.0*

HVO 01 11:16:22.7±0.9, **19°.16N**±0°.03×**155°.47W**±0°.02, **h43**^{km}±3^{km}, **ML2.5**/40, **ML2.8**/42(NEIC), **Error ellipse: s-maj=4.8km s-min=2.9km az=177.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HTC	Hot Caves	0.10	41		Pn	11 16 29.0	-0.8
HPO	Honuapo	0.11	229		Pn	11 16 29.1	-0.6
KHU	Kahuku	0.16	301		Pn	11 16 29.5	-0.8
KHU				IAML		11 16 35.4	
	comp=E,697nm,0.5s						
KHU	Kahuku	0.16	301		Sn	11 16 34.6	-1.1
HLP	Hilina Pali	0.20	48		Pn	11 16 30.4	0.0
HLP				IAML		11 16 39.4	
	comp=E,972nm,0.5s						
HLP				IAML		11 16 41.7	
	comp=N,836nm,0.6s						
AIN	Ainahou	0.21	2		Pn	11 16 30.2	-0.4
AIN	Ainahou	0.21	2		Sn	11 16 35.4	-0.8
SDHHI	Sand Hill	0.28	36		Pn	11 16 30.0	-1.2
SDHHI					Sn	11 16 35.7	-1.4
WRMHI	West Rim	0.29	33		Pn	11 16 30.5	-0.8
WRMHI					Sn	11 16 36.2	-1.1
RIM	Rim	0.30	38		Pn	11 16 30.5	-0.8
RIM					Sn	11 16 36.2	-1.2
KKO	Keanakako'i	0.30	39		Pn	11 16 30.4	-1.0
KKO					Sn	11 16 36.4	-1.2
UWE	Uwekahuna	0.31	32		Pn	11 16 30.5	-1.0
UWE	Uwekahuna	0.31	32		Sn	11 16 36.6	-1.0
OBL	Observatory Le	0.31	34		Pn	11 16 30.5	-0.9
OBL					Sn	11 16 36.4	-1.2
BYL	Byron's Ledge	0.32	38		Pn	11 16 30.6	-0.9
BYL					Sn	11 16 36.8	-1.0
BYL				IAML		11 16 45.4	
	comp=N,527nm,0.6s						
BYL				IAML		11 16 47.5	
	comp=E,580nm,0.5s						
UWB	Uwekahuna Bluf	0.32	34		Pn	11 16 30.3	-1.2
UWB					Sn	11 16 36.3	-1.5
PUH	Pauahi	0.32	48		Pn	11 16 30.8	-0.8
PUH					Sn	11 16 36.7	-1.0
PUH				IAML		11 16 37.0	
	comp=N,713nm,0.6s						
SBLHI	Steaming Bluff	0.32	35		Pn	11 16 30.5	-1.1
SBLHI					Sn	11 16 36.1	-1.8
HATHI	Halema‘uma‘u T	0.33	37		Pn	11 16 30.4	-1.2
HATHI					Sn	11 16 36.8	-1.2
HATHI				IAML		11 16 39.5	
	comp=N,593nm,0.8s						
HATHI				IAML		11 16 40.8	
	comp=E,754nm,0.7s						
MLH	Mauna Loa	0.34	13		Pn	11 16 31.2	-0.8
MLH					Sn	11 16 37.4	-1.0
MLH				IAML		11 16 44.5	
	comp=E,507nm,0.5s						
MWH	Mokuaweoweo	0.34	339		Pn	11 16 30.8	-1.4
MWH				IAML		11 16 44.3	
	comp=E,571nm,0.8s						
MWH				IAML		11 16 50.4	
	comp=N,491nm,0.5s						
MWH	Mokuaweoweo	0.34	339		Sn	11 16 36.8	-2.2
RSD	Rainshed	0.35	31		Pn	11 16 30.4	-1.5
RSD	Rainshed	0.35	31		Sn	11 16 37.0	-1.4
KNHH	Kane Nui o Ham	0.35	52		Pn	11 16 30.8	-1.1
STCH	Steam Cracks	0.39	55		Pn	11 16 31.4	-0.9
STCH	Steam Cracks	0.39	55		Sn	11 16 37.7	-1.5
NPOC	North of Pu‘u	0.41	56		Pn	11 16 31.6	-1.0
NPOC					Sn	11 16 37.8	-1.7
JCUZ	Jacuzzi	0.41	57		Pn	11 16 31.6	-0.9
JCUZ					Sn	11 16 37.9	-1.6
ALEP	Alea Permanent	0.41	336		Pn	11 16 31.5	-1.4
ALEP					Sn	11 16 38.3	-1.7
HMH	Humu‘ula Sheep	0.44	358		Pn	11 16 32.3	-0.8
HMH					Sn	11 16 39.7	-0.8
HMH				IAML		11 16 50.9	
	comp=N,406nm,0.6s						
JOKA	Jonika Flow	0.51	58		Pn	11 16 32.6	-1.2
JOKA					Sn	11 16 39.6	-2.1
JOKA	Jonika Flow	0.51	58	IAML		11 16 40.6	
	comp=N,441nm,1.0s						
JOKA				IAML		11 16 41.0	
	comp=E,243nm,0.7s						

CPH	Captain Cook	0.54	307		Pn	11 16 32.2	-1.8
POHA	Pohakuloa	0.60	354		Pn	11 16 34.2	-0.9
POHA	Pohakuloa	0.60	354	IAML		11 16 42.3	
	comp=E,353nm,0.6s						
POHA				Sn	Sn	11 16 42.5	-1.3
POHA				IAML		11 16 42.6	
	comp=E,376nm,0.6s						
HUH	Hualalai	0.63	326		Pn	11 16 34.2	-1.3
HUH					Sn	11 16 43.2	-1.4
HUH				IAML		11 17 00.7	
	comp=N,433nm,0.8s						
HUH				IAML		11 17 01.9	
	comp=E,495nm,0.5s						
HPAH	Hawaii Prepara	0.89	346		Pn	11 16 37.5	-1.4
HPAH					Sn	11 16 47.7	-3.0
MHA	Mahukona	1.10	338		Pn	11 16 40.1	-1.6
MHA					Sn	11 16 53.0	-2.6
HLK	Haleakala	1.75	335		Pn	11 16 48.8	-2.0
HLK					Sn	11 17 07.7	-4.3

BEO **01** *11:17:48.0±0.6, 40°.34N×20°.93E, h0^{km}, ML2.7/10*
ATH **01** *11:17:49.9, 40°.40N×20°.84E, h8^{km}±1^{km}, ML2.8/13, Manual Solution by A.Agalos First location: 2019/06/01 11:19:04, This location: 2019/06/01 14:26:17 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
TIR **01** *11:17:49.4, 40°.46N×20°.76E, h3^{km}±2^{km}, Ml3.1/4*
THE **01** *11:17:50.2, 40°N±2°×2°1E±°, h0^{km}±1^{km}, M2.6/14, MLh2.6/14*
ISC 01 11:17:49.8±1.0**, 40°.44N**±0°.02×**20°.83E**±0°.02**, h4**^{km}±9^{km}**, n61, σ0^{s}82**/87**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEST	Nestorio	0.17	99	Pg	Pg	11 17 53.7	+0.6
NEST				Sg	Sg	11 17 57.9	+2.5
NEST				AML	AML	11 17 58.4	
	16nm,0.2s						
NEST	Nestorio	0.17	99	P	Pg	11 17 53.8	+0.6
NEST				S	Sg	11 17 55.6	+0.1
NEST	Nestorio	0.17	99	P	Pg	11 17 53.7	+0.6
NEST				S	Sg	11 17 56.1	+0.7
KBN	Korca	0.18	350	Pg	Pg	11 17 52.0	-1.5
KBN				Sg	Sg	11 17 54.9	-1.0
KBN				AML	AML	11 17 55.3	
	18nm,0.4s						
PENT	Pentalofos	0.34	136	P	Pg	11 17 56.6	+0.2
PENT	Pentalofos	0.34	136	P	Pg	11 17 56.4	0.0
PENT				S	Sg	11 18 00.6	-0.3
KPRO	Kipourio	0.64	140	P	Pg	11 18 01.8	-0.2
KPRO				S	Sb	11 18 11.6	-1.1
KPRO	Kipourio	0.64	140	P	Pg	11 18 01.6	-0.4
KPRO				S	Sg	11 18 10.1	-0.2
OHR	Ohrid	0.67	358	ePg	Pg	11 18 02.0	-0.7
OHR				eSg	Sg	11 18 12.0	+0.6
KZN	Kozani	0.73	100	P	Pb	11 18 05.1	0.0
KZN				S	Sb	11 18 15.0	-0.5
KZN	Kozani	0.73	100	P	Pb	11 18 04.7	-0.5
JAN	Janina	0.78	179	P	Pg	11 18 04.0	-0.8
JAN				S	Sb	11 18 16.3	-0.6
JAN	Janina	0.78	179	P	Pg	11 18 04.1	-0.8
SRN	Sarande	0.85	229	Pg	Pg	11 18 06.4	+0.3
SRN				S	Sb	11 18 18.8	+0.1
SRN				AML	AML	11 18 22.1	
	1.5nm,0.7s						
KTI	Kastanea	0.98	92	P	Pg	11 18 08.5	-0.2
IGT	Igoumenitsa	0.98	203	Pg	Pn	11 18 10.9	+0.5
IGT				Sg	Sn	11 18 24.0	-0.6
IGT	Igoumenitsa	0.98	203	P	Pg	11 18 08.5	-0.2
IGT				S	Sb	11 18 23.8	+1.1
IGT	Igoumenitsa	0.98	203	P	Pg	11 18 08.0	-0.7
KEK	Kerkira	1.07	228	S	Sb	11 18 26.5	+1.2
KEK	Kerkira	1.07	228	P	Pg	11 18 10.5	+0.1
TETR	Tetrakomo, Epi	1.15	162	P	Pg	11 18 11.6	-0.2
TIR	Tirane	1.16	321	ePg	Pg	11 18 10.4	-1.7
TIR				eSg	Sn	11 18 30.0	+0.9
THL	Klokotos Trika	1.26	134	P	Pg	11 18 13.1	-0.9
THL				S	Sn	11 18 32.1	+0.6
THL	Klokotos Trika	1.26	134	P	Pg	11 18 12.9	-1.1
PHP	Peshkopia	1.28	347	Pn	Pg	11 18 14.0	-0.3
TYRN	Tyrnavos	1.30	124	P	Pb	11 18 14.6	-0.1
TYRN				S	Sn	11 18 32.3	-0.2
TYRN	Tyrnavos	1.30	124	P	Pg	11 18 14.3	-0.4
TYRN				S	Sg	11 18 31.1	-0.5
AMPL	Ampelaki	1.55	169	P	Pn	11 18 18.3	+0.2
VAY	Valandovo	1.59	56	P	Pn	11 18 18.7	+0.1
TSLK	Tsoukalades, L	1.62	185	P	Pn	11 18 18.2	-0.9
LKD2	Lefkada island	1.66	185	P	Pn	11 18 20.0	+0.4
LKD2	Lefkada island	1.66	185	P	Pn	11 18 18.6	-1.0
EVR	Evrytania	1.70	153	P	Pn	11 18 20.5	+0.2
EVR	Evrytania	1.70	153	P	Pn	11 18 19.2	-1.1
KNT	Kendrikon	1.73	65	P	Pn	11 18 20.2	-0.4
KNT	Kendrikon	1.73	65	P	Pn	11 18 20.2	-0.4
NYDR	Nydri-Lefkada	1.73	183	P	Pn	11 18 19.9	-0.7
HORT	Hortiatis	1.74	84	P	Pn	11 18 20.4	-0.4
HORT	Hortiatis	1.74	84	P	Pn	11 18 20.2	-0.6
PUK	Puka	1.75	336	Pn	Pb	11 18 22.7	+0.3
PUK				Sn	Sg	11 18 47.0	+1.0
PUK				AML	AML	11 18 50.9	
	0.6nm,0.5s						
EVGI	Lefkada island	1.82	184	P	Pn	11 18 21.4	-0.4
AGG	Agios Georgios	1.83	140	P	Pn	11 18 21.4	-0.6
SCTE	Santa Cesarea	1.84	259	P	Pn	11 18 21.4	-0.8
SOH	Sokhos	1.96	78	P	Pn	11 18 23.5	-0.3
FSK	Fiskardo	1.99	186	P	Pn	11 18 23.9	-0.2
PLG	Polygyros	2.00	91	P	Pn	11 18 24.1	-0.2
AXAR	Agios Charalam	2.19	139	P	Pn	11 18 27.0	0.0
SRS	Serrai	2.20	71	P	Pn	11 18 26.5	-0.6
VLS	Valsamata	2.27	185	P	Pn	11 18 27.2	-0.8
PDG	Podgorica	2.31	330	ePn	Pn	11 18 28.6	0.0
PDG				eSn	Sn	11 18 59.3	+1.9
BOSS	Bosilegrad	2.40	31	ePn	Pn	11 18 29.4	-0.4
BOSS				eSn	Sn	11 19 00.5	+0.9
BARS	Barje	2.49	17	ePn	Pn	11 18 30.1	-0.9
BARS				eSn	Sn	11 19 02.3	+0.5
SELS	Selova	2.78	4	ePn	Pn	11 18 34.5	-0.6
SELS				eSn	Sn	11 19 11.4	+2.2
SJES	Sjenica	2.89	347	ePn	Pn	11 18 37.0	+0.3
SJES				eSn	Sn	11 19 13.7	+1.8
GOCS	Kraljevo Serbi	3.12	1	ePn	Pn	11 18 40.9	+1.1
ZAPS	Zavoj	3.13	25	ePn	Pn	11 18 39.7	-0.3
ZAPS				eSn	Sn	11 19 17.5	-0.3
IVAS	Ivanjica	3.17	351	ePn	Pn	11 18 40.5	0.0
BOVS	Bovan	3.26	11	ePn	Pn	11 18 40.4	-1.2
BOVS				eSn	Sn	11 19 20.3	-0.5
GRUS	Gruza	3.45	359	ePn	Pn	11 18 44.2	0.0
ZAGS	Zajecar	3.53	17	ePn	Pn	11 18 43.7	-1.6
ZAGS				eSn	Sn	11 19 28.1	+0.7
BBLS	Lazi&#263i	3.58	343	ePn	Pn	11 18 46.9	+0.8

NNC **01** *11:30:40.5±3.4, 37°.87N×71°.90E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=26.8km s-min=20.5km az=161.0*
IDC **01** *11:31:01.4±13.0, 38°.74N×72°.04E, h298^{km}±84^{km}, mb3.1/5, mbtmp3.8/9, Error ellipse: s-maj=150.6km s-min=34.0km az=179.0*
ISC 01 11:30:39.2±1.7**, 37°.5N**±0°.1×**72°.0E**±0°.1**, h150**^{km}**, n19, σ0^{s}88**/24**, mb3.7**/5**, 3C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	4.79	15	P	Pn	11 31 51.2	+1.0
	SNR=95						
EKS2	Erkin-Say	5.32	14	P	Pn	11 31 58.3	+1.4
	SNR=7.8						
AAK	Ala-Archa	5.46	20	P	Pn	11 32 00.2	+1.3
	SNR=19						
AAK	Ala-Archa	5.46	20	⇓P	Pn	11 31 59.8	+0.9
	7.7nm,0.3s						
AAK				⇓S	Sn	11 33 01.4	+0.3
	27nm,0.7s						
KK31	Karatay Array	5.69	349	P	Pn	11 32 02.6	+0.8
	5.3nm,0.3s,baz=151,slow=8.5,SNR=142						
KK31				⇑S	Sn	11 33 05.3	-1.1
	117nm,0.7s,baz=157,slow=12,SNR=38						
CHMS	Chumysh	5.87	20	P	Pn	11 32 05.1	+1.0
	SNR=8.4						
CHMS	Chumysh	5.87	20	⇓P	Pn	11 32 04.8	+0.7
	20nm,0.7s						
CHMS				⇑S	Sn	11 33 09.3	-1.3
	9.2nm,0.8s						
TKM2	Tokmak 2	6.06	26	P	Pn	11 32 07.5	+0.6
	SNR=7.7						
TKM2	Tokmak 2	6.06	26	⇓P	Pn	11 32 07.2	+0.3
	3.2nm,0.6s						
TKM2				⇑S	Sn	11 33 15.2	-0.3
	6.1nm,0.9s						
MKAR	Makanchi Array	12.00	36	P	P	11 33 32.2	+0.2
	0.5nm,0.5s,baz=207,slow=10,SNR=3.2						
KURBB	Kurchatov Arra	13.91	18	P	P	11 33 53.0	-0.1
	1.8nm,0.8s,baz=210,slow=10,SNR=10						
AB31	Akbulak array	14.62	327	P	P	11 34 00.2	-0.8
	0.7nm,0.3s,baz=138,slow=13,SNR=21						
AB31				S	Sn	11 36 41.6	+0.9
	8.0nm,0.8s,baz=155,slow=21,SNR=16						
BVAR	Borovoye Array	15.55	356	P	Pn	11 34 09.4	-0.8
	1.4nm,0.5s,baz=160,slow=12,SNR=9.8						
ZALV	Zalesovo Beam	18.66	24	P	P	11 34 45.7	+0.3
	1.5nm,0.5s,baz=210,slow=11,SNR=6.2						
FINES	FINESS Array B	37.09	325	P	P	11 37 35.6	+0.9
	0.6nm,0.4s,baz=111,slow=10,SNR=6.6						
	0.6nm,0.4s						
ARCES	ARCESS Array B	40.52	337	P	P	11 38 03.4	+0.3
	2.9nm,0.9s,baz=117,slow=8.6,SNR=2.3						
	2.9nm,0.9s						
HFS	Hagfors	42.76	321	P	P	11 38 22.4	+0.9
	2.0nm,0.6s,baz=91,slow=12,SNR=4.7						
	2.0nm,0.6s						
NOA	NORSAR Array B	44.05	322	P	P	11 38 31.0	-0.8
	0.7nm,0.6s,baz=95,slow=4.4,SNR=2.2						
	0.7nm,0.6s						
ILAR	Eielson Array	73.58	16	P	P	11 41 54.8	-0.7
	0.2nm,0.8s,baz=301,slow=6.3,SNR=4.1						
	0.2nm,0.8s						

IDC **01** *11:37:53.4±1.2, 40°.57N×21°.11E, h0^{km}, mb3.5/6, mbtmp3.6/13, ML3.1/6, MS2.7/3, Error ellipse: s-maj=20.6km s-min=16.0km az=46.0*
TIR **01** *11:37:54.4, 40°.42N×20°.74E, h0^{km}±2^{km}, Ml3.4/4*
SKO **01** *11:37:56.6, 40°.37N×20°.87E, h0^{km}, ML3.5*
PDG **01** *11:37:56.2±0.9, 40°.46N×20°.90E, h10^{km}±1^{km}, ML3.5/10, Error ellipse: s-maj=1.0km s-min=1.6km az=0.0*
THE **01** *11:37:56.4, 40°N±2°×2°1E±°, h0^{km}±2^{km}, M3.4/39, MLh3.4/39*
ATH **01** *11:37:56.9, 40°.33N×20°.89E, h12^{km}±1^{km}, ML3.4/19, Manual Solution by A.Agalos First location: 2019/06/01 11:38:52, This location: 2019/06/01 12:00:43 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
BEO **01** *11:37:59.3±0.8, 40°.64N×20°.82E, h14^{km}±2^{km}, ML3.1/7*
NAO **01** *11:38:02.0, 40°.53N×20°.80E, h10^{km}, mb3.5*
ISC 01 11:37:55.3±0.8**, 40°.42N**±0°.01×**20°.83E**±0°.02**, h12**^{km}±5^{km}**, n180, σ1^{s}33**/225**, mb3.4**/5**, 3C-6D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEST	Nestorio	0.17	92	Pg	Pg	11 37 59.5	+0.2
NEST				Sg	Sb	11 38 03.8	+1.7
NEST				AML	AML	11 38 05.7	
	51nm,0.3s						
NEST	Nestorio	0.17	92	P	Pg	11 37 59.7	+0.4
NEST				S	Sg	11 38 02.8	+0.7
NEST	Nestorio	0.17	92	P	Pg	11 37 59.8	+0.5
NEST				S	Sb	11 38 03.6	+1.5
KBN	Korca	0.20	352	Pg	Pg	11 37 58.5	-1.4
KBN				Sg	Sg	11 38 01.7	-1.3
KBN				AML	AML	11 38 03.8	
	34nm,0.2s						
PENT	Pentalofos	0.33	133	P	Pg	11 38 02.2	+0.1
PENT				S	Sb	11 38 08.1	-0.3
PENT	Pentalofos	0.33	133	P	Pg	11 38 02.1	+0.1
PENT				S	Sg	11 38 05.1	-1.4
KPRO	Kipourio	0.62	138	P	Pg	11 38 07.3	-0.2
KPRO				S	Sb	11 38 17.9	+1.0
KPRO	Kipourio	0.62	138	P	Pg	11 38 07.2	-0.2
KPRO				S	Sg	11 38 14.2	-1.5
OHR	Ohrid	0.69	358	P	Pg	11 38 08.1	-0.7
OHR	Ohrid	0.69	358	⇓iPg	Pg	11 38 08.1	-0.7
OHR				i Sg	Sb	11 38 19.7	+0.9
OHR				eLg	Lg	11 38 19.9	
	comp=E,2µm,0.7s						
OHR				eLg	Lg	11 38 26.0	
	comp=N,1µm,0.9s						
OHR	Ohrid	0.69	358	ePg	Pg	11 38 08.0	-0.7
OHR				eSg	Sg	11 38 16.8	-1.1
KZN	Kozani	0.73	99	P	Pb	11 38 10.4	+0.4
KZN				S	Sb	11 38 20.3	+0.3
KZN	Kozani	0.73	99	P	Pb	11 38 11.0	+1.0
KZN				S	Sb	11 38 20.7	+0.7
JAN	Janina	0.76	179	P	Pg	11 38 09.5	-0.6
JAN				S	Sg	11 38 18.9	-1.2
SRN	Sarande	0.83	230	P	Pg	11 38 10.6	-0.9
SRN				Sg	Sg	11 38 23.4	+1.0
SRN				AML	AML	11 38 26.1	
	comp=N,6.9nm,0.9s						
IGT	Igoumenitsa	0.97	203	Pg	Pb	11 38 14.4	+0.4
IGT				Sg	Sg	11 38 27.7	+1.2
IGT	Igoumenitsa	0.97	203	P	Pb	11 38 13.3	-0.7
IGT				S	Sn	11 38 30.0	+1.7
IGT	Igoumenitsa	0.97	203	i Pg	Pb	11 38 13.3	-0.7
IGT				i Sg	Sn	11 38 28.2	-0.2
IGT	Igoumenitsa	0.97	203	P	Pb	11 38 14.1	+0.1
IGT				S	Sb	11 38 26.8	+0.1
NASA	Naoussa	0.97	77	P	Pn	11 38 15.2	+0.4
KTI	Kastanea	0.98	91	P	Pb	11 38 14.8	+0.4
VLO	Vlora	1.02	273	P	Pb	11 38 14.5	-0.4
VLO				Sg	Sb	11 38 28.7	+0.6
KEK	Kerkira	1.06	228	P	Pb	11 38 16.3	+0.7
KEK	Kerkira	1.06	228	P	Pg	11 38 16.7	+0.9
TETR	Tetrakomo, Epi	1.13	162	P	Pb	11 38 16.7	-0.1
TIR	Tirane	1.18	322	Pg	Pn	11 38 16.4	-1.3
TIR				Sg	Sg	11 38 34.8	+1.5
TIR				AML	AML	11 38 40.8	
	comp=N,3.3nm,0.9s						
TIR	Tirane	1.18	322	i Pg	Pn	11 38 16.0	-1.6
TIR				i Sg	Sg	11 38 39.8	+6.4
TIR	Tirane	1.18	322	ePg	Pn	11 38 16.3	-1.3
TIR				eSg	Sb	11 38 31.8	-1.0
THL	Klokotos Trika	1.25	133	P	Pn	11 38 18.6	0.0
THL	Klokotos Trika	1.25	133	P	Pn	11 38 18.4	-0.2
TYRN	Tyrnavos	1.29	123	P	Pg	11 38 20.6	+0.5
TYRN	Tyrnavos	1.29	123	P	Pn	11 38 19.4	+0.3
AMPL	Ampelaki	1.53	169	P	Pb	11 38 24.4	+0.9
VAY	Valandovo	1.60	55	P	Pb	11 38 24.7	-0.1
VAY	Valandovo	1.60	55	⇓iPg	Pb	11 38 24.8	-0.1
VAY				i Sg	Sg	11 38 50.1	+3.3
VAY				eLg	Lg	11 38 56.3	
	comp=N,735nm,1.0s						
VAY				eLg	Lg	11 38 56.6	
	comp=E,673nm,1.2s						
TSLK	Tsoukalades, L	1.60	185	P	Pg	11 38 26.5	+0.4
TSLK	Tsoukalades, L	1.60	185	P	Pn	11 38 24.2	+0.8
SKO	Skopje	1.62	16	i Pg	Pb	11 38 25.8	+0.7
SKO				i Sg	Sg	11 38 49.4	+2.0
LKD2	Lefkada island	1.64	185	P	Pg	11 38 27.0	+0.3
LKD2	Lefkada island	1.64	185	P	Pb	11 38 25.3	-0.1
THE	Thessaloniki	1.64	82	P	Pn	11 38 24.9	+0.9
THE	Thessaloniki	1.64	82	i Pg	Pn	11 38 24.8	+0.9
THE	Thessaloniki	1.64	82	P	Pn	11 38 24.9	+0.9
EVR	Evrytania	1.68	153	P	Pg	11 38 27.8	+0.2
EVR	Evrytania	1.68	153	P	Pb	11 38 26.4	+0.1
NYDR	Nydri-Lefkada	1.71	183	P	Pg	11 38 28.0	-0.1
MAKR	Makrakomi, Fth	1.73	144	P	Pb	11 38 28.1	+1.0
MAKR	Makrakomi, Fth	1.73	144	P	Pn	11 38 25.9	+0.7
KNT	Kendrikon	1.74	64	P	Pn	11 38 26.4	+1.1
KNT	Kendrikon	1.74	64	ePn	Pg	11 38 29.5	+0.8
KNT	Kendrikon	1.74	64	P	Pn	11 38 26.6	+1.2
HORT	Hortiatis	1.74	83	P	Pn	11 38 25.9	+0.4
HORT	Hortiatis	1.74	83	P	Pn	11 38 25.9	+0.4
PUK	Puka	1.77	337	Pn	Pb	11 38 27.9	+0.2
EVGI	Lefkada island	1.80	184	P	Pb	11 38 29.1	+0.8
AGG	Agios Georgios	1.82	140	P	Pb	11 38 28.6	+0.1
AGG	Agios Georgios	1.82	140	P	Pn	11 38 26.4	0.0
PDO	Prodromos	1.84	171	P	Pb	11 38 30.2	+1.3
PVO	Paravola	1.88	163	P	Pb	11 38 30.5	+0.9
ULC	Ulcinj	1.95	323	ePn	Pn	11 38 29.6	+1.3
ULC	Ulcinj	1.95	323	⇓iPn	Pn	11 38 29.6	+1.3
ULC				i Sn	Sb	11 38 57.5	+2.4
SOH	Sokhos	1.96	77	P	Pn	11 38 29.9	+1.3
SOH	Sokhos	1.96	77	P	Pn	11 38 29.8	+1.3
FSK	Fiskardo	1.97	186	P	Pn	11 38 29.3	+0.8
PLG	Polygyros	2.00	91	P	Pn	11 38 30.4	+1.4
PLG	Polygyros	2.00	91	P	Pn	11 38 29.8	+0.9
ANX	Ano Chora	2.01	155	P	Pb	11 38 32.0	+0.1
ANX	Ano Chora	2.01	155	P	Pn	11 38 29.1	-0.1
BCI	Bajram Curri	2.03	344	Pn	Pb	11 38 33.2	+1.1
DRME	Dracevica, Mon	2.15	325	ePn	Pn	11 38 32.0	+1.0
DRME	Dracevica, Mon	2.15	325	⇑iPn	Pn	11 38 32.1	+1.0
DRME				i Sn	Sb	11 39 02.1	+1.2
NEO	Neokhori	2.15	120	P	Pn	11 38 32.3	+1.2
NEO	Neokhori	2.15	120	P	Pn	11 38 31.5	+0.4
EFP	Efpalio	2.16	157	P	Pb	11 38 34.3	0.0
AXAR	Agios Charalam	2.18	139	P	Pb	11 38 33.9	-0.8
AXAR	Agios Charalam	2.18	139	P	Pn	11 38 32.1	+0.8
SRS	Serrai	2.21	71	P	Pn	11 38 32.9	+1.0
SRS	Serrai	2.21	71	ePn	Pn	11 38 32.9	+1.0
SRS	Serrai	2.21	71	P	Pn	11 38 32.8	+1.0
SERG	Sergoula	2.22	154	P	Pb	11 38 34.7	-0.7
PAIG	Paliouri	2.24	102	P	Pn	11 38 33.4	+1.2
KKB	Krupnik	2.24	50	ePn	Pn	11 38 34.2	+1.9
KKB				i Sn	Sb	11 39 04.1	+0.6
VLS	Valsamata	2.25	185	P	Pn	11 38 34.3	+1.9
VLS	Valsamata	2.25	185	P	Pn	11 38 33.0	+0.6
AXS	Araxos	2.26	169	P	Pb	11 38 35.7	-0.4
PSDA	Pessada-Kefalo	2.31	185	P	Pn	11 38 35.2	+2.0
PSDA	Pessada-Kefalo	2.31	185	P	Pn	11 38 33.2	0.0
PDG	Podgorica	2.33	330	ePn	Pn	11 38 34.7	+1.3
PDG	Podgorica	2.33	330	ePn	Pn	11 38 34.6	+1.2
PDG				eSn	Sn	11 39 00.8	-1.1
PDG	Podgorica	2.33	330	⇓iPn	Pn	11 38 33.8	+0.4
PDG				i Sn	Sb	11 39 06.1	+0.2
RTZL	Ratzakli, Kefa	2.34	181	P	Pn	11 38 35.8	+2.1
OUR	Ouranopolis	2.41	91	P	Pn	11 38 35.8	+1.2
OUR	Ouranopolis	2.41	91	P	Pn	11 38 35.5	+0.9
RLS	Riolos of Patr	2.41	168	P	Pb	11 38 38.0	-0.7
BOSS	Bosilegrad	2.42	30	ePn	Pn	11 38 35.9	+1.2
LKR	Lokris	2.44	136	P	Pn	11 38 36.4	+1.4
LKR	Lokris	2.44	136	P	Pn	11 38 35.1	+0.2
KOKK	Kokkinochori,	2.45	80	P	Pn	11 38 36.3	+1.2
KOKK	Kokkinochori,	2.45	80	P	Pn	11 38 36.3	+1.2
MMB	Musomishta	2.48	62	P	Pn	11 38 36.7	+1.1
MMB	Musomishta	2.48	62	ePn	Pn	11 38 37.4	+1.8
MMB				i Sn	Sb	11 39 08.9	-1.5
BARS	Barje	2.50	17	ePn	Pn	11 38 38.5	+2.6
BARS				i Sn	Sb	11 39 12.8	+1.7
BARS	Barje	2.50	17	ePn	Pn	11 38 37.0	+1.1
BEY	Berane	2.55	344	ePn	Pb	11 38 39.8	-1.2
IVA	Berane	2.55	344	ePn	Pn	11 38 39.0	+2.5
IVA				i Sn	Sb	11 39 11.8	-0.5
CEME	Cevo	2.56	327	⇑iPn	Pn	11 38 37.4	+0.7
CEME				i Sn	Sb	11 39 11.3	-1.4
KLV	Kalavryta, Ach	2.59	156	P	Pn	11 38 39.3	+2.2
KOME	Kolasin	2.62	338	⇑iPn	Pn	11 38 40.0	+2.5
KOME				i Sn	Sb	11 39 13.0	-1.4
HCY	Herceg Novi	2.68	320	ePn	Pn	11 38 38.0	-0.3
HCY	Herceg Novi	2.68	320	ePn	Pn	11 38 38.4	+0.1
HCY				i Sn	Sb	11 39 14.9	-1.1
SELS	Selova	2.80	4	ePn	Pn	11 38 40.7	+0.7
SELS				eSn	Sn	11 39 12.6	-1.2
KAVA	Kavala	2.86	77	P	Pn	11 38 41.5	+0.8
SJES	Sjenica	2.91	348	ePn	Pn	11 38 44.2	+2.7
SJES	Sjenica	2.91	348	ePn	Pn	11 38 42.4	+0.9
TREB	Trebinje	2.95	322	ePn	Pn	11 38 41.7	-0.3
THAS	Thassos island	2.97	85	P	Pn	11 38 42.5	+0.2
THAS	Thassos island	2.97	85	P	Pn	11 38 42.3	0.0
BRY	Bratogost	3.01	326	ePn	Pn	11 38 43.5	+0.6
BRY	Bratogost	3.01	326	⇓iPn	Pn	11 38 43.6	+0.6
BRY				i Sn	Sn	11 39 23.0	+3.9
PLE	Pljevlja	3.10	340	⇓iPn	Pn	11 38 46.0	+1.9
PLE				i Sn	Sn	11 39 25.4	+4.3
UPM	Unac-Piva	3.13	333	ePn	Pn	11 38 46.4	+1.8
UPM	Unac-Piva	3.13	333	ePn	Pn	11 38 46.7	+2.1
UPM				i Sn	Sn	11 39 25.3	+3.3
GOCS	Kraljevo Serbi	3.14	1	ePn	Pn	11 38 45.9	+1.2
ZAPS	Zavoj	3.15	25	ePn	Pn	11 38 47.1	+2.3
ZAPS	Zavoj	3.15	25	ePn	Pn	11 38 47.4	+2.6
IVAS	Ivanjica	3.19	351	ePn	Pn	11 38 47.5	+2.1
BOVS	Bovan	3.28	11	ePn	Pn	11 38 46.5	0.0
BOVS				eSn	Sn	11 39 22.5	-2.9
RUDO	Rudo	3.37	342	ePn	Pn	11 38 48.8	+1.0
STON	Ston	3.39	317	ePn	Pn	11 38 46.7	-1.3
GRUS	Gruza	3.47	359	ePn	Pn	11 38 49.5	+0.4
ZAGS	Zajecar	3.55	17	ePn	Pn	11 38 50.9	+0.7
BBLS	Lazi&#263i	3.60	343	ePn	Pn	11 38 52.1	+1.1
BBLS	Lazi&#263i	3.60	343	ePn	Pn	11 38 52.7	+1.7
DIVS	Divibare	3.73	351	ePn	Pn	11 38 54.0	+1.3
BORS2	Bor- Borsko je	3.77	13	ePn	Pn	11 38 54.8	+1.5
TRUS	Trudelj	3.81	355	ePn	Pn	11 38 54.6	+0.8
HAPS	Han Pijesak,Bl	3.92	340	ePn	Pn	11 38 56.3	+0.9
KUBS	Kucevo	4.04	9	ePn	Pn	11 38 55.6	-1.3
TEKS	Tekeris	4.24	347	ePn	Pn	11 39 00.4	+0.7
TEKS	Tekeris	4.24	347	ePn	Pn	11 38 59.9	+0.2
AVAS	Avala Beograd	4.28	357	ePn	Pn	11 38 59.2	-1.0
VRSS	Vrsac	4.71	4	ePn	Pn	11 39 05.4	-0.8
FRGS	Fruska Gora	4.79	351	ePn	Pn	11 39 07.8	+0.5
FRGS	Fruska Gora	4.79	351	ePn	Pn	11 39 07.1	-0.2
BLY	Banja Luka	5.09	329	ePn	Pn	11 39 10.4	-1.0
A050A	Klekovaca	5.15	323	ePn	Pn	11 39 12.3	0.0
A051A	Mrakovica	5.42	329	ePn	Pn	11 39 16.0	0.0
VAE	Valguarnera	5.80	242	Pn	Pn	11 39 26.2	+5.1
	comp=E,6.9nm,0.3s,baz=324,slow=23,SNR=4.5						
	comp=E,12nm,0.4s						
IDI	Anoyia	6.05	147	Pn	Pn	11 39 25.6	+1.0
	comp=E,5.8nm,0.9s,baz=307,slow=5.1,SNR=1.8						
IDI				Sn	Sn	11 40 35.7	+1.9
	comp=E,0.8nm,0.3s,baz=335,slow=14,SNR=3.0						
MLR	Muntele Rosu	6.30	35	Pn	Pn	11 39 25.7	-2.5
	comp=E,0.1nm,0.3s,baz=146,slow=21,SNR=1.7						
	comp=E,1.0nm,0.6s						
BOJS	Bojanci	6.52	323	ePn	Pn	11 39 30.5	-0.5
CRES	Cresnjevec Ost	6.68	326	ePn	Pn	11 39 31.8	-1.4
CEY	Cerknica	7.08	321	ePn	Pn	11 39 38.1	-0.7
SOKA	Soboth	7.54	328	i Pn	Pn	11 39 44.9	-0.2
	comp=E,5.1nm,0.7s						
OBKA	Obir	7.61	325	ePn	Pn	11 39 44.8	-1.2
OBKA	Obir	7.61	325	i Pn	Pn	11 39 46.6	+0.7
	comp=E,1.6nm,0.2s						
OBKA				i Sn	Sn	11 41 14.2	+2.1
	comp=E,5.7nm,0.5s						
KECS	Kecovo	8.06	358	ePN	Pn	11 39 59.2	+7.0
MODS	Modra-Piesok	8.35	343	ePN	Pn	11 40 01.4	+5.3
KBA	Koelnbreinsper	8.58	323	i Pn	Pn	11 39 59.1	-0.3
	comp=E,1.1nm,0.3s						
KBA				eSn	Sn	11 41 35.5	-0.6
	comp=E,3.2nm,0.7s						
MOA	Molln	8.79	330	i Pn	Pn	11 40 03.6	+1.4
	comp=E,0.7nm,0.3s						
LESA	Schwarzleotal	9.14	323	i Pn	Pn	11 40 07.0	0.0
	comp=E,0.7nm,0.2s						
VRAC	Vranov	9.38	343	LR	LR	11 44 04.1	
	comp=E,70nm,21.6s,baz=160,slow=40						
WTTA	Wattenberg	9.53	319	i Pn	Pn	11 40 13.0	+0.6
	comp=E,1.2nm,0.3s						
WTTA				i Sn	Sn	11 41 57.9	-1.6
	comp=E,7.1nm,0.6s						
WATA	Walderalm	9.61	319	i Pn	Pn	11 40 13.2	-0.3
	comp=E,3.0nm,0.4s						
WATA				i Sn	Sn	11 42 00.1	-1.2
	comp=E,7.8nm,0.6s						
SQTA	Sankt Quirin	9.72	318	i Pn	Pn	11 40 15.0	+0.1
	comp=E,1.3nm,0.3s						
SQTA				i Sn	Sn	11 42 04.7	+0.7
	comp=E,4.3nm,0.5s						
GERES	GERESS Array B	9.83	331	Pn	Pn	11 40 16.5	0.0
	baz=159,slow=16,SNR=10.0						
GERES				LR	LR	11 44 24.3	
	comp=E,68nm,18.6s,baz=122,slow=40						
	comp=E,1.6nm,0.8s						
FETA	Feichten	9.84	315	ePn	Pn	11 40 16.9	+0.2
	comp=E,1.0nm,0.4s						
FETA				i Sn	Sn	11 42 08.4	+1.3
	comp=E,2.5nm,0.6s						
MOTA	Moosalm	9.85	318	i Pn	Pn	11 40 16.7	-0.2
	comp=E,3.3nm,0.5s						
MOTA				i Sn	Sn	11 42 06.4	-1.0
	comp=E,15nm,0.8s						
DAVOX	Davos/Dischmat	10.16	312	Pn	Pn	11 40 21.1	0.0

	comp=E,0.4nm,0.3s,baz=105,slow=11,SNR=7.4						
DAVOX				Sn	Sn	11 42 11.3	-3.8
	comp=E,0.5nm,0.3s,baz=122,slow=22,SNR=2.0						
	comp=E,2.4nm,0.6s						
DAVA	Damuels	10.46	315	*i* Pn	Pn	11 40 25.7	+0.5
	comp=E,1.6nm,0.3s						
MMAI	Mount Meron Ar	13.82	118	Pn	Pn	11 41 09.3	-1.8
	comp=E,0.2nm,0.3s,baz=280,slow=13,SNR=2.4						
	comp=E,0.8nm,0.5s						
ESDC	Sonseca Array	18.98	276	P	Pn	11 42 17.7	+0.4
	comp=E,0.1nm,0.3s,baz=83,slow=11,SNR=2.4						
	comp=E,0.4nm,0.9s						
HFS	Hagfors	20.23	350	P	P	11 42 29.4	-0.6
	comp=E,5.8nm,1.1s,baz=173,slow=13,SNR=5.9						
	comp=E,5.8nm,1.1s						
FINES	FINESS Array B	21.29	7	P	P	11 42 39.3	-2.1
	comp=E,0.6nm,0.6s,baz=179,slow=11,SNR=3.3						
	comp=E,0.6nm,0.6s						
NB2	NORSAR Subarra	21.48	347	P	P	11 42 45.6	+2.1
	comp=Z,2.7nm,1.0s,baz=160,slow=11						
NOA	NORSAR Array B	21.48	347	P	P	11 42 43.4	-0.1
	comp=Z,0.8nm,0.7s,baz=152,slow=10,SNR=4.2						
NOA				LR	LR	11 51 27.3	
	comp=Z,11nm,21.6s,baz=265,slow=38						
	comp=Z,0.8nm,0.7s						
EKA	Eskdalemuir Ar	21.78	321	P	P	11 42 47.6	+0.8
	comp=Z,1.4nm,0.8s,baz=119,slow=9.4,SNR=2.2						
	comp=Z,1.4nm,0.8s						
ARCES	ARCESS Array B	29.28	3	P	P	11 43 56.0	-1.0
	comp=Z,3.5nm,1.1s,baz=186,slow=9.3,SNR=2.2						
	comp=Z,3.5nm,1.1s						
MKAR	Makanchi Array	43.96	60	P	P	11 45 59.7	-2.4
	comp=Z,0.2nm,0.5s,baz=293,slow=6.2,SNR=4.1						
	comp=Z,0.2nm,0.5s						
ASAR	Alice Springs	122.15	95	PKP	PKPdf	11 56 48.4	-1.7
	comp=Z,0.8nm,1.1s,baz=0.0,slow=1.9,SNR=4.5						

IDC 01 11:38:55.4±1.6**,11°.12S**×**166°.23E,h0^{km},mb3.7**/4**,**
mbtmp3.8/5**,ML3.3**/1**,Error ellipse: s-maj=56.4km**
s-min=29.5km az=125.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.89	179	Pn	Pn	11 41 34.3	+1.5
	0.2nm,0.3s,baz=356,slow=12,SNR=1.8						
	5.3nm,0.9s						
WRA	Warramunga Arr	31.90	250	P	P	11 45 23.0	+0.1
	0.6nm,0.8s,baz=84,slow=9.0,SNR=2.6						
	0.6nm,0.8s						
ASAR	Alice Springs	33.18	244	P	P	11 45 33.1	-1.0
	0.3nm,0.7s,baz=71,slow=9.0,SNR=4.9						
	0.3nm,0.7s						
ILAR	Eielson Array	83.43	18	P	P	11 51 23.9	-0.5
	0.8nm,0.5s,baz=232,slow=5.1,SNR=23						
	0.8nm,0.5s						
MKAR	Makanchi Array	93.90	317	P	P	11 52 16.4	+1.4
	0.3nm,0.5s,baz=93,slow=5.8,SNR=4.0						
	0.3nm,0.5s						

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*TAP **01** 11:42:08.3,24°.69N×122°.75E,h94^{km},ML3.2,C*
*JMA **01** 11:42:08.4±0.1,25°N±1°×122°.7E±0°.4,h97^{km},MV2.0/10,*
NW OFF ISHIGAKIJIMA IS
ISC 01 11:42:08.1±1.4**,24°.65N**±0°.04×**122°.76E**±0°.03**,h98^{km}**±7^{km}**,**
n110,σ1^{s}**00**/182**,2C-17D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.26	140	*e*P	Pn	11 42 22.4	+0.2
JYNG				*e*S	Sn	11 42 33.1	+0.3
YOJ	Yonaguni jima	0.29	129	P	Pn	11 42 22.5	+0.1
YOJ	Yonaguni jima	0.29	129	S	Sn	11 42 32.9	-0.2
YOJ	Yonaguni jima	0.29	129	P	Pn	11 42 22.6	+0.1
YOJ	Yonaguni jima	0.29	129	⇓*i*P	Pn	11 42 22.6	+0.1
YOJ				S	Sn	11 42 33.2	+0.2
EOS2	EOS2	0.54	245	⇓*i*P	Pn	11 42 24.4	+0.6
EOS2				S	Sn	11 42 36.2	+0.7
EOS3	EOS3	0.54	228	⇓*i*P	Pn	11 42 24.6	+0.8
EOS3				*i* S	Sn	11 42 37.0	+1.4
EOS4	EOS4	0.66	218	P	Pn	11 42 25.2	+0.6
EOS4				*e*S	Sn	11 42 37.6	+0.7
EGS		0.78	285	*e*P	Pn	11 42 26.5	+0.4
TWB1	Santiao Chiao	0.79	297	⇓P	Pn	11 42 26.2	0.0
TWC	Suao	0.83	267	⇓P	Pn	11 42 26.4	-0.1
TWC				*e*S	Sn	11 42 39.2	-1.3
ESAO	Su ao	0.84	265	*e*P	Pn	11 42 26.9	+0.2
ESAO				*e*S	Sn	11 42 39.6	-1.0
TIPB	Shuangxi	0.91	291	⇓P	Pn	11 42 27.7	+0.2
TIPB				*e*S	Sn	11 42 40.8	-1.2
EWUT	Wuta	0.92	257	*e*P	Pn	11 42 27.9	+0.4
EWUT				*e*S	Sn	11 42 41.3	-0.8
SXI1	Grass Mountain	0.92	299	⇓*i*P	Pn	11 42 27.7	+0.1
ILA	Ilan	0.93	277	*e*P	Pn	11 42 28.2	+0.6
ILA				*e*S	Sn	11 42 41.6	-0.7
IRIF	Iriomote-Funau	0.94	109	*e*P	Pn	11 42 28.0	+0.3
NDS	Dongshan	0.95	269	*e*P	Pn	11 42 27.3	-0.6
ENA	Nanau	0.96	257	*e*P	Pn	11 42 28.2	+0.3
ENA				*e*S	Sn	11 42 42.2	-0.5
EAHA	Aohua	0.98	251	*e*P	Pn	11 42 28.5	+0.3
EAHA				*e*S	Sn	11 42 43.3	0.0
TWE	Neicheng	1.00	274	⇓P	Pn	11 42 28.6	+0.3
TWE				*e*S	Sn	11 42 42.4	-1.2
FUSB	Fushanzhiwuyua	1.07	276	⇓P	Pn	11 42 29.6	+0.3
FUSB				*e*S	Sn	11 42 44.4	-0.8
ENTT	Nioudou	1.09	270	⇑P	Pn	11 42 30.0	+0.7
ENTT				*e*S	Sn	11 42 45.5	+0.1
TWA	Mucha	1.12	287	*e*P	Pn	11 42 30.1	+0.4
TWA				*e*S	Sn	11 42 45.6	-0.4
LATG	Datong	1.13	265	⇓P	Pn	11 42 30.4	+0.5
LATG				*e*S	Sn	11 42 46.3	-0.1
ETL	Fush Village	1.15	245	*e*P	Pn	11 42 29.9	-0.2
ETL				*e*S	Sn	11 42 45.9	-0.8
NWLT	Wulai	1.15	277	*e*P	Pn	11 42 30.4	+0.3
NWLT				*e*S	Sn	11 42 45.9	-0.9
NACB	Ninganchiao	1.17	246	P	Pn	11 42 30.0	-0.2
NACB	Ninganchiao	1.17	246	S	Sn	11 42 46.7	-0.2
NACB	Ninganchiao	1.17	246	*e*P	Pn	11 42 29.8	-0.4
NACB				*e*S	Sn	11 42 45.5	-1.4
YM01	YM01	1.19	295	*e*P	Pn	11 42 30.8	+0.2
YM01				*e*S	Sn	11 42 46.8	-0.7
TWD	Chiawan	1.21	242	⇓P	Pn	11 42 30.4	-0.3
TWD				*e*S	Sn	11 42 46.7	-1.0
ZUZH	Zhuzihu	1.22	295	*e*P	Pn	11 42 31.2	+0.3
TWY	Chenhua	1.23	301	*e*P	Pn	11 42 31.4	+0.4
ETLH	Xiulin Townshi	1.25	250	*e*P	Pn	11 42 31.2	0.0
ETLH				*e*S	Sn	11 42 48.0	-0.8
HWA	Hwalien	1.25	238	*e*S	Sn	11 42 49.0	+0.3
YHNB	Yeheng	1.26	271	P	Pn	11 42 32.1	+0.7
YHNB	Yeheng	1.26	271	S	Sn	11 42 49.4	+0.3
YHNB	Yeheng	1.26	271	⇓P	Pn	11 42 32.2	+0.7
YHNB				*e*S	Sn	11 42 48.5	-0.5
NNSB	Datong	1.28	260	*e*P	Pn	11 42 32.0	+0.3
NNSB				*e*S	Sn	11 42 49.1	-0.3
NNS	Nan Shan	1.28	261	*e*P	Pn	11 42 32.1	+0.3
NNS				*e*S	Sn	11 42 48.8	-0.8
JIJ	Ishigaki jima	1.29	102	*e*P	Pn	11 42 32.7	+1.0
TEYL	Yanliau Villag	1.32	234	*e*P	Pn	11 42 31.9	-0.1
TEYL				*e*S	Sn	11 42 49.2	-0.9
ETM	Tongmen	1.34	240	*e*P	Pn	11 42 32.1	-0.2
ETM				*e*S	Sn	11 42 49.8	-0.9
SHUL	Shoufeng	1.39	232	⇓P	Pn	11 42 33.0	+0.1
SHUL				*e*S	Sn	11 42 51.4	-0.3
JISG	Ishigakijimahi	1.41	92	*e*P	Pn	11 42 33.8	+0.7
JISG				*e*S	Sn	11 42 53.0	+0.9
FUSS	Fushou	1.44	254	*e*P	Pn	11 42 34.2	+0.4
KSHI	Guanxi Townshi	1.45	275	*e*P	Pn	11 42 34.4	+0.8
WHF	Hehuan Shan	1.46	250	⇓P	Pn	11 42 34.4	+0.2
WHF				S	Sn	11 42 52.6	-1.1
TEGC	Jichi Village	1.46	230	*e*P	Pn	11 42 34.0	+0.3
TEGC				*e*S	Sn	11 42 52.8	-0.3
ESL	Shilin	1.47	236	⇑*i*P	Pn	11 42 33.7	-0.2
ESL				*e*S	Sn	11 42 52.3	-1.1
NFF	Wufeng Townshi	1.50	270	*e*P	Pn	11 42 34.9	+0.6
NFF				*e*S	Sn	11 42 53.7	-0.4
TWT	Tachien	1.50	255	*e*P	Pn	11 42 35.5	+1.0
TWT				*e*S	Sn	11 42 54.6	+0.3
TDCB	Techi	1.51	255	*e*P	Pn	11 42 35.4	+0.9
TDCB				*e*S	Sn	11 42 54.0	-0.7
EGFH	Guangfu	1.56	232	*e*P	Pn	11 42 34.9	-0.1
EGFH				*e*S	Sn	11 42 54.5	-1.0
WARBT	Fenglin Townsh	1.56	234	⇓P	Pn	11 42 34.7	-0.3
WARBT				*e*S	Sn	11 42 54.0	-1.5
LIOB	Emei	1.59	270	*e*P	Pn	11 42 36.1	+0.7
LIOB				*e*S	Sn	11 42 56.1	0.0
NSTT	Nanjuang	1.60	270	*e*P	Pn	11 42 36.1	+0.6
NSTT				*e*S	Sn	11 42 56.1	-0.3
OWD	Renai	1.60	245	*e*P	Pn	11 42 36.0	+0.3
OWD				*e*S	Sn	11 42 55.2	-1.4
WUSB	Renai	1.64	247	*e*P	Pn	11 42 36.7	+0.6
WUSB				*e*S	Sn	11 42 56.5	-0.8
HGSD	Ruisui	1.68	227	*e*P	Pn	11 42 36.5	-0.1
HGSD				*e*S	Sn	11 42 56.9	-1.2
WHP	Taichung City	1.70	258	*e*P	Pn	11 42 38.2	+1.4
WHP				*e*S	Sn	11 42 59.1	+0.5
VWDT	VWDT	1.73	239	⇓P	Pn	11 42 37.8	+0.7
VWDT				*e*S	Sn	11 42 58.0	-1.2
EHYH	Wanrong	1.73	229	*e*P	Pn	11 42 37.4	+0.2
EHYH				*e*S	Sn	11 42 57.7	-1.6
EHY	Hungye	1.74	229	*e*P	Pn	11 42 37.0	-0.3
EHY				*e*S	Sn	11 42 55.6	-3.9
WCS	Beigang Elemen	1.79	251	*e*P	Pn	11 42 39.1	+1.2
WCS				*e*S	Sn	11 43 01.2	+0.7
ECBN	Changbin	1.79	222	*e*S	Sn	11 42 59.4	-1.2
NMLH	Miaoli	1.80	267	*e*P	Pn	11 42 38.7	+0.7
YULB	Yu-li	1.83	227	P	Pn	11 42 38.2	-0.3
YULB	Yu-li	1.83	227	S	Sn	11 43 00.2	-1.4
YULB	Yu-li	1.83	227	⇓P	Pn	11 42 38.2	-0.3
YULB				*e*S	Sn	11 42 59.4	-2.2
EYUL	Yuli	1.85	226	*e*P	Pn	11 42 39.1	+0.5
EYUL				*e*S	Sn	11 43 01.6	-0.4
SSLB	Suanglung	1.86	243	P	Pn	11 42 39.7	+0.8
SSLB	Suanglung	1.86	243	S	Sn	11 43 03.2	+0.9
SSLB	Suanglung	1.86	243	*e*P	Pn	11 42 39.5	+0.7
SSLB				*e*S	Sn	11 43 01.0	-1.3
TWF1	Yuli	1.86	226	*e*P	Pn	11 42 38.8	-0.1
TWF1				*e*S	Sn	11 43 00.8	-1.4
SMLT	Sun Moon Lake	1.86	246	*e*P	Pn	11 42 40.2	+1.3
SMLT				*e*S	Sn	11 43 03.6	+1.1
TYC	Yuchr	1.89	247	*e*P	Pn	11 42 40.3	+1.2
TYC				*e*S	Sn	11 43 03.2	+0.3
CHKH	Chenggong	1.92	221	*e*S	Sn	11 43 01.8	-1.7
FULB	Fuli	1.97	223	*e*P	Pn	11 42 40.3	0.0
FULB				*e*S	Sn	11 43 04.2	-0.6
WHYT	Xinyi Township	1.98	242	*e*P	Pn	11 42 42.1	+1.7
WHYT				*e*S	Sn	11 43 05.8	+0.7
CHKT	Chengkung	2.00	220	*e*S	Sn	11 43 03.9	-1.6
WJS	Zhushan	2.03	247	*e*P	Pn	11 42 42.6	+1.6
WJS				*e*S	Sn	11 43 07.5	+1.3
EHD	Haiduan	2.06	224	*e*P	Pn	11 42 41.3	-0.2
EHD				*e*S	Sn	11 43 05.6	-1.3
ECS	Chishang	2.10	223	*e*S	Sn	11 43 07.6	0.0
ALS	Alishan	2.12	238	*e*P	Pn	11 42 44.1	+1.7
ALS				*e*S	Sn	11 43 09.6	+1.0
EDH	Donghe	2.14	219	*e*P	Pn	11 42 42.0	-0.4
EDH				*e*S	Sn	11 43 07.0	-1.6
ELDTW	Lidau	2.16	228	*e*P	Pn	11 42 43.1	+0.3
ELDTW				*e*S	Sn	11 43 08.0	-1.3
CHN5	Tsauling	2.17	242	*e*S	Sn	11 43 10.9	+1.3
LONT	Longtian	2.29	221	*e*P	Pn	11 42 45.6	+1.2
LONT				*e*S	Sn	11 43 11.1	-1.1
LDUT	Ludao	2.30	211	*e*S	Sn	11 43 09.9	-2.4
WCKO	Fanlu	2.31	239	*e*P	Pn	11 42 46.4	+1.7
WCKO				*e*S	Sn	11 43 13.9	+1.2
CHN4	Tsaushan	2.37	237	*e*P	Pn	11 42 47.8	+2.3
CHN4				*e*S	Sn	11 43 15.5	+1.5
TPUB	Ta-pu	2.37	236	P	Pn	11 42 45.5	0.0
TPUB	Ta-pu	2.37	236	S	Sn	11 43 16.2	+2.1
TPUB	Ta-pu	2.37	236	*e*P	Pn	11 42 47.6	+2.1
TPUB				*e*S	Sn	11 43 15.6	+1.6
TWGBT	Beinan	2.39	221	P	Pn	11 42 46.4	+0.7
TWGBT	Beinan	2.39	221	*e*P	Pn	11 42 46.0	+0.3
TWGBT				*e*S	Sn	11 43 13.0	-1.5
TWG	Pinlang	2.39	221	*e*P	Pn	11 42 46.0	+0.3
TWG				*e*S	Sn	11 43 12.9	-1.6
WTP	Ta-pu	2.41	235	*e*P	Pn	11 42 47.6	+1.5
WTP				*e*S	Sn	11 43 15.6	+0.5
TWK	Hsinying	2.50	237	*e*S	Sn	11 43 18.4	+1.4
CHN1	Nanshi	2.51	235	*e*P	Pn	11 42 49.7	+2.4
CHN1				*e*S	Sn	11 43 18.2	+0.8
SNST	Tainan City	2.51	236	*e*S	Sn	11 43 18.4	+1.0
WSL	Shuilin Townsh	2.57	245	*e*S	Sn	11 43 19.0	+0.1
ECL	Taimali	2.63	219	*e*S	Sn	11 43 18.6	-1.7
MASBT	Mashibuluo	2.82	224	*e*P	Pn	11 42 52.2	+0.8
MASBT				*e*S	Sn	11 43 23.3	-1.4
TAWH	Dawu Township	2.87	217	*e*P	Pn	11 42 53.2	+1.1
SCZT	Fangliau	3.00	221	*e*P	Pn	11 42 54.7	+0.9
SCZT				*e*S	Sn	11 43 29.7	+0.6
VWUC	VWUC	3.03	277	*e*P	Pn	11 42 54.0	-0.2
VWUC				*e*S	Sn	11 43 26.6	-3.1
JOW	Kunigami	5.42	65	P	Pn	11 43 25.6	-1.0

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*IDC **01** 11:56:06.8±4.1,22°.02S×178°.06W,h0^{km},mb4.1/4,*
mbtmp4.1/4,Error ellipse: s-maj=106.2km s-min=38.9km
az=29.0
*NEIC **01** 11:57:18.2±1.4,23°.9S±0°.2×179°.7E±0°.2,h594^{km}±16^{km},*
mb4.3/19,Error ellipse: s-maj=24.4km s-min=21.7km
az=211.0
ISC 01 11:57:17.0±1.3**,23°.8S**±0°.1×**179°.9E**±0°.2**,h600^{km},n28,**
σ1^{s}**36**/28**,mb4.1**/12**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINNC	Pines Island,	11.46	273	P	P	11 59 50.6	+0.2
FUNA	Funafuti	15.17	358	P	P	12 00 29.3	+2.4
BKZ	Black Stump Fm	15.61	190	P	P	12 00 29.4	-1.3
BKZ				IAmb	IAmb	12 00 51.3	
	comp=Z,22nm,1.4s						
GVZ	Greta Valley S	19.96	195	P	P	12 01 09.3	-0.9
WHZ	Wether Hill Ro	24.08	201	P	P	12 01 47.8	+0.9
WHZ				IAmb	IAmb	12 01 49.7	
	comp=Z,12nm,1.0s						
EIDS	Eidsvold	26.19	261	P	P	12 02 05.8	0.0
EIDS				IAmb	IAmb	12 02 34.4	
	comp=Z,8.4nm,1.1s						
CTAO	Charters Tower	31.34	270	P	P	12 02 50.0	-0.3
CTAO				IAmb	IAmb	12 02 58.4	
	comp=Z,8.2nm,1.0s						
TOO	Toolangi	32.40	237	P	P	12 02 58.2	-0.9
TOO				IAmb	IAmb	12 03 18.9	
	comp=Z,7.8nm,1.4s						
STKA	Stephens Creek	34.64	248	P	P	12 03 18.5	+0.6
STKA				IAmb	IAmb	12 03 19.2	
	comp=Z,8.3nm,0.7s						
STKA	Stephens Creek	34.64	248	P	P	12 03 19.0	+1.1
	comp=Z,1.4nm,0.6s,baz=77,slow=10.0,SNR=4.7						
	comp=Z,1.4nm,0.6s						
MGBR	Mount Gambier	36.24	238	P	P	12 03 32.5	+1.5
BBOO	Buckleboo	39.37	247	P	P	12 03 56.5	0.0
BBOO				IAmb	IAmb	12 04 05.5	
	comp=Z,5.8nm,1.1s						
AS31	Alice Springs	41.92	261	P	P	12 04 16.1	-0.7
ASAR	Alice Springs	41.92	261	P	P	12 04 15.8	-1.1
ASAR	Alice Springs	41.92	261	P	P	12 04 17.0	+0.1
	comp=Z,1.3nm,0.4s,baz=98,slow=7.7,SNR=15						
	comp=Z,1.3nm,0.4s						
WR8	Warramunga Arr	42.12	266	P	P	12 04 17.9	-0.6
WR8				IAmb	IAmb	12 04 25.4	
	comp=Z,6.6nm,1.1s						
WB2	Warramunga Arr	42.26	266	P	P	12 04 18.8	-0.8
WB2				IAmb	IAmb	12 04 26.7	
	comp=Z,18nm,1.4s						
WB0	Warramunga Arr	42.27	266	P	P	12 04 19.0	-0.6
WRA	Warramunga Arr	42.27	266	P	P	12 04 19.2	-0.5
	comp=Z,2.7nm,0.6s,baz=103,slow=8.0,SNR=66						
	comp=Z,2.7nm,0.6s						
MTN	Manton Dam	47.30	274	P	P	12 04 57.0	-1.1
KNRA	Kununurra	48.55	270	P	P	12 05 07.0	-0.3
FITZ	Fitzroy Crossi	50.70	266		P	12 05 22.8	-0.2
PSA00	Pilbara Seismi	55.05	260	P	P	12 05 54.5	+0.7
MBWA	Marble Bar	55.26	260	P	P	12 05 55.5	+0.2
MORW	Morawa	56.79	250	P	P	12 06 05.8	+0.1
MORW				IAmb	IAmb	12 06 17.3	
	comp=Z,17nm,1.4s						
QSPA	South Pole Qui	66.31	180	P	P	12 07 08.8	+1.7
QSPA	South Pole Qui	66.31	180	P	P	12 07 08.3	+1.2
	comp=Z,0.6nm,0.6s,baz=25,slow=5.8,SNR=6.9						
	comp=Z,0.6nm,0.6s						
HFS	Hagfors	142.39	349	PKP	PKPdf	12 15 37.0	-4.8
	comp=Z,0.6nm,0.3s,baz=41,slow=2.6,SNR=6.6						

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*BEO **01** 12:01:38.8±0.6,40°.43N×20°.69E,h0^{km},ML2.7/8*
*ATH **01** 12:01:40.1,40°.48N×20°.88E,h18^{km}±1^{km},ML3.3/14,*
Manual Solution by A.Agalos First location: 2019/06/01
12:02:50, This location: 2019/06/01 12:18:25 ML
Amplitudes are expressed in micrometers, All distances
are expressed in degrees Latitude uncertainty: 1 km;
Longitude uncertainty: 1 km
*TIR **01** 12:01:40.7,40°.41N×20°.78E,h5^{km}±2^{km},Ml3.2/3*
*THE **01** 12:01:41.4,40°N±5°×2°1E±°,h6^{km}±3^{km},M2.8/7,MLh2.8/7*
ISC 01 12:01:39.9±0.9**,40°.52N**±0°.02×**20°.88E**±0°.02**,h19^{km}**±2^{km}**,**
n56,σ1^{s}**39**/81**,Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.13	327	Pg	Pg	12 01 44.9	+0.8
KBN				Sg	Sg	12 01 47.1	+0.2
KBN				AML	AML	12 01 48.0	
	26nm,0.3s						
NEST	Nestorio	0.17	128	Pg	Pg	12 01 45.0	+0.5
NEST				Sg	Sg	12 01 49.2	+1.5
NEST				AML	AML	12 01 51.2	
	11nm,0.3s						
NEST	Nestorio	0.17	128	P	Pb	12 01 43.6	+0.2
NEST				S	Sb	12 01 45.4	-0.1
NEST	Nestorio	0.17	128	P	Pg	12 01 44.6	+0.1
NEST				S	Sg	12 01 47.6	-0.1
PENT	Pentalofos	0.38	148	P	Pg	12 01 47.5	-0.3
PENT				S	Sg	12 01 52.1	-1.1
PENT	Pentalofos	0.38	148	P	Pg	12 01 47.8	-0.1
PENT				S	Sg	12 01 52.7	-0.5
OHR	Ohrid	0.60	354	*e*Pg	Pb	12 01 49.4	-2.3
OHR				*e*Sg	Sg	12 02 00.6	+0.7
KPRO	Kipourio	0.67	146	P	Pb	12 01 52.7	-0.3
KPRO				S	Sb	12 01 58.6	-3.3
KPRO	Kipourio	0.67	146	P	Pb	12 01 52.9	-0.1
KPRO				S	Sb	12 02 01.3	-0.6
KZN	Kozani	0.71	107	P	Pg	12 01 54.1	+0.2
MSVA	Metsovo	0.78	163	P	Pb	12 01 55.1	+0.2
MSVA				S	Sb	12 02 05.0	-0.2
JAN	Janina	0.86	181	P	Pn	12 01 57.4	+0.4
JAN				S	Sg	12 02 08.7	+0.7
JAN	Janina	0.86	181	P	Pb	12 01 56.1	-0.1
JAN				S	Sb	12 02 07.3	-0.1
SRN	Sarande	0.93	227	Pg	Pb	12 01 55.9	-1.4
SRN				Sg	Sb	12 02 08.3	-0.9
SRN				AML	AML	12 02 11.5	
	4.1nm,0.6s						
KTI	Kastanea	0.95	97	P	Pb	12 01 56.7	-1.2
VLO	Vlora	1.06	268	Pg	Pb	12 01 59.8	+0.3
VLO				S	Sb	12 02 13.6	+0.6
IGT	Igoumenitsa	1.07	203	Pg	Pb	12 01 59.8	0.0
IGT				Sg	Sb	12 02 13.3	-0.1
IGT	Igoumenitsa	1.07	203	P	Pb	12 01 59.3	-0.4
TIR	Tirane	1.13	318	Pg	Pn	12 01 58.1	-2.6
TIR				Sg	Sg	12 02 21.1	+4.5
TIR	Tirane	1.13	318	*e*Pg	Pn	12 01 57.4	-3.3
TIR				*e*Sg	Sb	12 02 12.8	-2.4
KEK	Kerkira	1.15	226	P	Pn	12 02 00.6	-0.5
TETR	Tetrakomo, Epi	1.21	165	P	Pn	12 02 01.3	-0.5
THL	Klokotos Trika	1.29	137	P	Pb	12 02 03.6	0.0
THL	Klokotos Trika	1.29	137	P	Pn	12 02 02.5	-0.4
THL				S	Sn	12 02 19.8	+0.2
TYRN	Tyrnavos	1.31	127	P	Pb	12 02 04.2	+0.3
KNT	Kendrikon	1.66	67	P	Pn	12 02 08.8	+0.8
HORT	Hortiatis	1.69	87	P	Pn	12 02 08.5	-0.1
TSLK	Tsoukalades, L	1.70	186	P	Pn	12 02 08.8	+0.3
LKD2	Lefkada island	1.73	186	P	Pn	12 02 09.4	+0.3
EVR	Evrytania	1.75	156	P	Pn	12 02 09.5	+0.2
MAKR	Makrakomi, Fth	1.79	147	P	Pn	12 02 09.9	+0.2
NYDR	Nydri-Lefkada	1.81	184	P	Pn	12 02 10.1	+0.1
AGG	Agios Georgios	1.86	143	P	Pn	12 02 11.0	+0.2
SCTE	Santa Cesarea	1.90	257	P	Pn	12 02 11.8	+0.6
EVGI	Lefkada island	1.90	185	P	Pn	12 02 11.4	+0.1
PVO	Paravola	1.96	165	P	Pn	12 02 12.3	+0.2
FSK	Fiskardo	2.07	187	P	Pn	12 02 13.6	0.0
ANX	Ano Chora	2.08	157	P	Pn	12 02 13.7	-0.2
EFP	Efpalio	2.23	159	P	Pn	12 02 15.2	-0.7
PDG	Podgorica	2.27	328	*e*Pn	Pn	12 02 18.1	+1.8
PDG				*e*Sn	Sb	12 02 47.0	-0.9
SERG	Sergoula	2.29	156	P	Pn	12 02 16.4	-0.2
BOSS	Bosilegrad	2.31	31	*e*Pn	Pb	12 02 20.4	-0.6
BOSS				*e*Sn	Sb	12 02 50.3	+1.1
BARS	Barje	2.40	17	*e*Pn	Pn	12 02 20.0	+1.8
BARS				*e*Sn	Sb	12 02 52.2	+0.4
SELS	Selova	2.71	4	*e*Pn	Pb	12 02 26.5	-1.2
SELS				*e*Sn	Sb	12 02 59.9	-0.6
SJES	Sjenica	2.82	346	*e*Pn	Pn	12 02 26.7	+2.6
SJES				*e*Sn	Sb	12 03 02.5	-1.5
GOCS	Kraljevo Serbi	3.04	360	*e*Pn	Pn	12 02 29.1	+2.0
ZAPS	Zavoj	3.05	25	*e*Pn	Pb	12 02 31.6	-2.0
ZAPS				*e*Sn	Sb	12 03 07.9	-2.5
IVAS	Ivanjica	3.10	350	*e*Pn	Pn	12 02 29.8	+1.9
BOVS	Bovan	3.18	11	*e*Pn	Pn	12 02 30.8	+2.0
BOVS				*e*Sn	Sb	12 03 11.0	-3.0
GRUS	Gruza	3.37	358	*e*Pn	Pn	12 02 34.7	+3.2
ZAGS	Zajecar	3.44	17	*e*Pn	Pn	12 02 34.6	+2.1
BBLS	Lazi&#263i	3.52	342	*e*Pn	Pn	12 02 34.7	+1.1
DIVS	Divibare	3.64	350	*e*Pn	Pn	12 02 37.7	+2.4
KUBS	Kucevo	3.94	8	*e*Pn	Pn	12 02 40.2	+0.9
TEKS	Tekeris	4.15	347	*e*Pn	Pn	12 02 43.7	+1.4
VRSS	Vrsac	4.62	4	*e*Pn	Pn	12 02 49.1	+0.5

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*AEIC **01** 12:04:41.9±1.3,53°.99N±0°.03×166°.29W±0°.03,h7^{km}±5^{km},*
Error ellipse: s-maj=5.1km s-min=0.9km az=155.0
NEIC 01 12:04:42.4±0.4**,53°.98N**±0°.04×**166°.29W**±0°.04**,h18^{km}**±4^{km}**,**
ML2.6/8**,ML2.3**(AEIC)**,Error ellipse: s-maj=6.1km**
s-min=1.3km az=153.0,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UNV	Unalaska Valle	0.19	223	Pg	Pg	12 04 47.1	0.0
UNV				IAML		12 04 50.5	
	comp=E,1μm,0.3s						
UNV				IAML		12 04 50.5	
	comp=N,1μm,0.2s						
AKRB	Akutan Reef Bi	0.20	41		Pb	12 04 50.7	+3.3
AKMO	Akutan Morgan	0.20	57		Pb	12 04 50.1	+2.7
ZRO	Akutan Zero	0.21	59		Pg	12 04 47.5	0.0
ZRO					Sg	12 04 50.9	-0.1
MTBL	Makushin Table	0.23	266		Pb	12 04 51.8	+3.7
LVA	Lava Point	0.23	40	Pg	Pg	12 04 47.6	-0.2
LVA				IAML		12 04 51.7	
	comp=E,971nm,0.5s						
AKGG	Akutan Green G	0.28	39		Pg	12 04 48.5	-0.1
AKGG					Sg	12 04 52.5	-0.2
AHB	Akutan Harbor	0.31	65		Pg	12 04 49.1	0.0
MREP	Makushin Rep’t	0.32	237		Pg	12 04 49.4	+0.1
AKUT	Akutan	0.34	63		Pg	12 04 49.5	0.0
AKUT					Sg	12 04 54.3	-0.2
MGOD	Makushin Gods	0.40	241		Pg	12 04 50.6	+0.1
MAPS	Pakushin South	0.42	246		Pg	12 04 50.9	-0.2
MAPS					Sg	12 04 57.0	0.0
WECS	Westdahl Cape	1.04	58		Pn	12 05 02.1	-0.1
WEBT	Westdahl Beart	1.09	55		Pn	12 05 02.8	+0.1
OKTU	Okmok Mt. Tuli	1.20	241		Pn	12 05 04.5	+0.1
OKNC	Okmok New Cone	1.21	245		Pn	12 05 04.5	0.0
OKNC					Sg	12 05 21.4	-0.2
NIKH	Nikolski High	1.84	238	Pn	Pb	12 05 14.5	-1.0
NIKH				IAML		12 06 20.1	
	comp=E,65nm,2.6s						

TRN 01 12:14:02.8,15°.11N×**60°.44W,h29^{km},MD3.8,2D,**
North-east of Martinique.,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILAM	Ilet Lapin Mar	0.54	231	⇓*i*P	Pn	12 14 15.0	+0.5
ILAM				*e*S	Sn	12 14 23.8	+1.2
SVN	Savane Anatole	0.75	249	*e*P	Pn	12 14 18.2	+0.7
SVN				*e*S	Sn	12 14 30.2	+2.2
DLPL	La Plaine	0.81	286	*e*P	Pb	12 14 19.1	+0.8
DLPL				*e*S	Sn	12 14 31.6	+2.3
BIM	Bigot	0.85	226	⇓*i*P	Pb	12 14 19.6	+0.5
BIM				*e*S	Sn	12 14 32.3	+1.9
MDN	Morne-Daniel	0.94	283	*e*P	Pb	12 14 21.8	+1.2
MDN				*e*S	Sb	12 14 35.4	+2.7
DWS	Wesley	0.95	298	*e*P	Pn	12 14 19.2	-1.0
DWS				*e*S	Sb	12 14 35.2	+2.1
DSLB	Salisbury	1.00	289	*e*P	Pb	12 14 21.7	+0.1
DSLB				*e*S	Sb	12 14 35.7	+1.3

MAGL	Barre de l'ile	1.16	316	eP	Pn	12 14 23.0	-0.1
MAGL				eS	Sb	12 14 40.7	+1.7
SLBI	Saint Lucia, B	1.20	206	eP	Pn	12 14 24.2	+0.6
SLBI				eS	Sb	12 14 39.9	-0.2
TBG	Guadaloupe-3	1.38	302	eP	Pn	12 14 26.7	+0.6
TBG				eS	Sb	12 14 44.8	-0.3
SVB	Belmont	1.99	203	eP	Pn	12 14 35.5	+0.9
SVB				eS	Sn	12 15 00.1	+1.5
SVT	Saint Vincent	2.08	202	eP	Pn	12 14 36.1	+0.3
SVT				eS	Sn	12 15 00.5	-0.3
SVOC	Richmond Hill,	2.09	201	eS	Sn	12 15 02.2	+1.3
BBGH	Gun Hill	2.14	156	e	Pn	12 14 38.1	+1.5
ANBD	Bethesda, Anti	2.31	327	eP	Pn	12 14 40.2	+1.4
ANBD				eS	Sn	12 15 07.7	+1.4
MBFL	Flemmings, Mon	2.36	314	eP	Pn	12 14 41.3	+1.7
MBFL				eS	Sn	12 15 09.2	+1.6
GCMP	Grenada, Carri	2.78	200	eP	Pn	12 14 46.0	+0.6
GCMP				eS	Sn	12 15 19.5	+1.5
ANWB	Willy Bob	2.85	333	e	Pn	12 14 37.5	-8.9
GRSS	Sisters	3.02	202	eP	Pn	12 14 50.0	+1.3
GRSS				eS	Sn	12 15 24.1	+0.2
GRW	Mount Saint Ca	3.17	202	eP	Pb	12 14 56.3	-2.2
GRW				eS	Sn	12 15 30.1	+2.4
GRGR	Grenville	3.19	202	eP	Pn	12 14 52.0	+0.9
GRGR	Grenville	3.19	202	eP	Pn	12 14 52.3	+1.2
GRGR				eS	Sn	12 15 28.4	+0.2

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*BEO **01** 12:22:24.1±0.6, 40°.22N×20°.91E, h0^{km}, ML3.0/9*
*TIR **01** 12:22:25.9, 40°.39N×20°.76E, h0^{km}±1^{km}, Ml3.3/5*
*ATH **01** 12:22:27.3, 40°.34N×20°.84E, h11^{km}±1^{km}, ML2.9/14, Manual Solution by A.Agalos First location: 2019/06/01 12:23:39, This location: 2019/06/01 12:35:48 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*SKO **01** 12:22:28.9, 40°.47N×20°.72E, h15^{km}, ML3.1*
*THE **01** 12:22:29.1, 40°N±1°×2°1E±°, h0^{km}±1^{km}, M2.9/23, MLh2.9/23*
*IDC **01** 12:22:47.1±6.8, 42°.40N×20°.57E, h0^{km}, mb3.6/1, mbtmp3.4/5, ML2.6/4, MS3.3/1, Error ellipse: s-maj=101.9km s-min=23.4km az=13.0*
ISC 01 12:22:27.1±0.9, **40°.41N**±0°.02×**20°.83E**±0°.02, **h10**^{km}±6^{km}, **n89**, σ1§**16**/116, **2C-1D**, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEST	Nestorio	0.17	87	Pg	Pg	12 22 31.4	+0.7
NEST				Sg	Sg	12 22 34.9	+1.5
NEST				AML	AML	12 22 37.4	
	23nm,0.3s						
NEST	Nestorio	0.17	87	P	Pg	12 22 31.7	+0.9
NEST				S	Sg	12 22 33.9	+0.6
NEST	Nestorio	0.17	87	P	Pg	12 22 31.5	+0.7
NEST				S	Sg	12 22 33.9	+0.6
KBN	Korca	0.22	352	Pg	Pg	12 22 30.4	-1.2
KBN				Sg	Sg	12 22 33.7	-1.1
KBN				AML	AML	12 22 36.9	
	29nm,0.4s						
PENT	Pentalofos	0.32	131	P	Pb	12 22 33.7	-1.2
PENT				S	Sg	12 22 37.0	-0.7
PENT	Pentalofos	0.32	131	P	Pb	12 22 33.8	-1.2
PENT				S	Sg	12 22 36.9	-0.8
KPRO	Kipourio	0.61	138	P	Pb	12 22 38.8	-1.1
KPRO				S	Sg	12 22 46.2	-0.8
KPRO	Kipourio	0.61	138	P	Pg	12 22 38.5	-0.3
KPRO				S	Sg	12 22 46.1	-0.8
MSVA	Metsovo	0.69	157	P	Pg	12 22 39.7	-0.8
OHR	Ohrid	0.71	358	⇓iPg	Pg	12 22 40.1	-0.6
OHR				i Sg	Sb	12 22 51.2	-0.2
OHR				eLg	Lg	12 22 51.5	
	comp=E,1µm,0.6s						
OHR				eLg	Lg	12 22 54.0	
	comp=N,625nm,0.4s						
OHR	Ohrid	0.71	358	ePg	Pg	12 22 40.0	-0.7
OHR				eSg	Sb	12 22 51.4	0.0
KZN	Kozani	0.73	97	P	Pn	12 22 42.8	-0.8
KZN				S	Sb	12 22 51.8	-0.2
KZN	Kozani	0.73	97	P	Pn	12 22 42.1	-1.4
KZN				S	Sb	12 22 51.5	-0.6
JAN	Janina	0.75	179	P	Pg	12 22 40.6	-0.9
JAN				S	Sb	12 22 52.9	+0.3
JAN	Janina	0.75	179	P	Pg	12 22 40.5	-0.9
SRN	Sarande	0.82	231	P	Pg	12 22 41.9	-1.0
SRN				Sg	Sg	12 22 54.1	+0.4
SRN				AML	AML	12 22 57.5	
	comp=N,2.0nm,0.5s						
IGT	Igoumenitsa	0.95	204	Pg	Pg	12 22 45.2	-0.2
IGT				Sg	Sb	12 22 58.6	+0.3
IGT	Igoumenitsa	0.95	204	P	Pg	12 22 44.7	-0.7
IGT				S	Sn	12 23 01.0	+0.7
IGT	Igoumenitsa	0.95	204	i Pg	Pg	12 22 44.7	-0.7
IGT				i Sg	Sn	12 23 02.1	+1.9
IGT	Igoumenitsa	0.95	204	P	Pg	12 22 44.7	-0.7
KTI	Kastanea	0.98	90	P	Pn	12 22 46.5	-0.7
KEK	Kerkira	1.05	229	P	Pn	12 22 49.4	+1.4
KEK				S	Sn	12 23 04.9	+2.3
KEK	Kerkira	1.05	229	P	Pg	12 22 47.0	-0.2
TETR	Tetrakomo, Epi	1.11	162	P	Pg	12 22 47.9	-0.6
TIR	Tirane	1.19	322	Pg	Pb	12 22 48.9	-0.9
TIR				Sg	Sn	12 23 07.5	+1.4
TIR				AML	AML	12 23 13.1	
	comp=N,1.1nm,0.4s						
TIR	Tirane	1.19	322	ePg	Pb	12 22 48.0	-1.8
TIR	Tirane	1.19	322	ePg	Pb	12 22 48.2	-1.6
TIR				eSg	Sn	12 23 08.4	+2.2
THL	Klokotos Trika	1.24	132	P	Pn	12 22 50.0	-0.5
THL	Klokotos Trika	1.24	132	P	Pb	12 22 49.6	-1.0
TYRN	Tyrnavos	1.28	122	P	Pg	12 22 52.1	+0.4
TYRN	Tyrnavos	1.28	122	P	Pn	12 22 50.5	-0.6
PHP	Peshkopia	1.31	347	Pg	Pn	12 22 51.1	-0.5
TSLK	Tsoukalades, L	1.58	185	P	Pn	12 22 54.4	-0.8
VAY	Valandovo	1.61	55	ePn	Pb	12 22 56.7	-0.2
VAY				i Sg	Sg	12 23 21.4	+2.7
VAY				eLg	Lg	12 23 24.7	
	comp=N,152nm,0.9s						
VAY				eLg	Lg	12 23 28.9	
	comp=E,164nm,0.6s						
LKD2	Lefkada island	1.62	185	P	Pb	12 22 57.3	+0.2
LKD2	Lefkada island	1.62	185	P	Pn	12 22 54.9	-0.9
SKO	Skopje	1.63	16	ePg	Pg	12 22 57.7	-0.7
THE	Thessaloniki	1.64	81	P	Pb	12 22 56.1	-1.4
EVR	Evrytania	1.67	153	P	Pg	12 22 59.2	+0.1
EVR	Evrytania	1.67	153	P	Pn	12 22 55.6	-0.9
NYDR	Nydri-Lefkada	1.69	183	P	Pb	12 22 58.7	+0.3
MAKR	Makrakomi, Fth	1.72	144	P	Pg	12 22 58.8	-1.2
HORT	Hortiatis	1.74	83	P	Pb	12 22 57.8	-1.5
HORT	Hortiatis	1.74	83	P	Pn	12 22 57.5	-0.1
KNT	Kendrikon	1.74	64	P	Pb	12 22 58.0	-1.3
KNT	Kendrikon	1.74	64	P	Pb	12 22 57.8	-1.4
PUK	Puka	1.78	337	Pn	Pb	12 23 00.2	+0.3
PUK				Sn	Sg	12 23 26.4	+2.0
PUK				AML	AML	12 23 30.7	
	comp=E,1.8nm,0.5s						
EVGI	Lefkada island	1.79	184	P	Pg	12 23 00.5	-0.9
AGG	Agios Georgios	1.80	140	P	Pb	12 22 60.0	-0.3
PDO	Prodromos	1.82	171	P	Pb	12 23 00.9	+0.3
SCTE	Santa Cesarea	1.84	260	P	Pn	12 22 58.3	-0.5
PVO	Paravola	1.87	163	P	Pb	12 23 01.0	-0.3
ULC	Ulcinj	1.96	323	ePn	Pn	12 23 01.5	+0.9
PLG	Polygyros	2.00	90	P	Pb	12 23 02.4	-1.2
PLG	Polygyros	2.00	90	P	Pn	12 23 00.9	-0.1
BCI	Bajram Curri	2.04	344	Pn	Pb	12 23 05.0	+0.7
BCI	Bajram Curri	2.04	344	P	Pb	12 23 04.4	0.0
EFP	Efpalio	2.15	157	P	Pb	12 23 05.7	-0.4
AXAR	Agios Charalam	2.16	139	P	Pb	12 23 05.3	-1.1
SRS	Serrai	2.22	70	P	Pn	12 23 04.9	+0.9
VLS	Valsamata	2.23	185	P	Pn	12 23 04.1	-0.2
PAIG	Paliouri	2.24	101	P	Pn	12 23 05.1	+0.8
AXS	Araxos	2.25	169	P	Pn	12 23 03.6	-0.7
KKB	Krupnik	2.25	50	⇑iPn	Pb	12 23 05.8	-2.1
PSDA	Pessada-Kefalo	2.30	185	P	Pn	12 23 04.8	-0.3
PDG	Podgorica	2.34	330	ePn	Pn	12 23 06.4	+0.7
PDG				eSn	Sb	12 23 38.4	0.0
BOSS	Bosilegrad	2.43	30	ePn	Pn	12 23 07.7	+0.8
BOSS				eSn	Sb	12 23 39.8	-1.2
BARS	Barje	2.52	17	⇑iPn	Pn	12 23 08.2	0.0
BARS	Barje	2.52	17	ePn	Pn	12 23 08.2	0.0
BARS				eSn	Sn	12 23 40.9	+1.9
SELS	Selova	2.82	4	ePn	Pn	12 23 12.5	+0.2
SELS				eSn	Sb	12 23 50.6	-1.6
SJES	Sjenica	2.92	348	ePn	Pn	12 23 14.9	+1.1
SJES				eSn	Sb	12 23 52.9	-2.4
GOCS	Kraljevo Serbi	3.15	1	ePn	Pn	12 23 18.0	+1.0
GOCS				eSn	Sb	12 23 58.4	-3.5
ZAPS	Zavoj	3.17	25	ePn	Pn	12 23 17.1	0.0
IVAS	Ivanjica	3.21	351	ePn	Pn	12 23 19.1	+1.4
BOVS	Bovan	3.29	11	ePn	Pn	12 23 18.3	-0.5
BOVS				eSn	Sn	12 24 00.3	+2.3
GRUS	Gruza	3.48	359	ePn	Pn	12 23 21.6	+0.2
ZAGS	Zajecar	3.56	17	ePn	Pn	12 23 22.2	-0.3
BBLS	Lazi&#263i	3.62	343	ePn	Pn	12 23 24.3	+1.0
DIVS	Divibare	3.74	351	ePn	Pn	12 23 26.0	+1.0
TRUS	Trudelj	3.83	355	ePn	Pn	12 23 26.1	0.0
KUBS	Kucevo	4.05	9	ePn	Pn	12 23 28.2	-1.0
TEKS	Tekeris	4.25	347	ePn	Pn	12 23 32.7	+0.7
VRSS	Vrsac	4.73	4	ePn	Pn	12 23 38.6	+0.1
MLR	Muntele Rosu	6.32	35	Pn	Pn	12 24 04.5	+4.1
	comp=E,0.2nm,0.3s,baz=292,slow=16,SNR=1.7						
	comp=E,0.6nm,0.3s						
GERES	GERESS Array B	9.84	331	Pn	Pn	12 24 46.5	-2.3
	baz=137,slow=17,SNR=4.9						
	comp=E,0.4nm,0.7s						
HFS	Hagfors	20.25	350	P	P	12 27 01.8	-0.5
	comp=E,0.2nm,0.3s,baz=173,slow=14,SNR=4.6						
	comp=E,1.0nm,0.6s						
FINES	FINESS Array B	21.31	7	P	P	12 27 13.5	-0.3
	comp=E,0.1nm,0.3s,baz=187,slow=11,SNR=3.5						
	comp=E,3.8nm,1.2s						
ZALV	Zalesovo Beam	44.05	50	P	P	12 30 47.1	+12
	comp=E,0.5nm,0.5s,baz=286,slow=7.4,SNR=1.9						
	comp=E,0.5nm,0.5s						
SFJD	Kangerlussuaq	46.43	329	LR	LR	12 49 06.9	
	comp=E,35nm,19.5s,baz=347,slow=35						

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*NEIC **01** 12:41:49.7±0.9, 5°.92S±0°.05×142°.38E±0°.09, h10^{km}±1^{km}, mb4.2/9, Error ellipse: s-maj=15.6km s-min=6.4km az=294.0*
*IDC **01** 12:41:49.7±0.8, 5°.92S×142°.64E, h0^{km}, mb3.8/9, mbtmp3.9/12, ML2.2/1, MS3.2/11, Error ellipse: s-maj=27.0km s-min=15.4km az=79.0*
*DJA **01** 12:41:52.5±0.4, 6°S±4°×14°2E±°, h10^{km}, M4.8/6, mb4.6/6, MLv4.9/6*
ISC 01 12:41:53.2±0.6, **6°.16S**±0°.05×**142°.32E**±0°.07, **h28**^{km}, **n40**, σ1§**74**/37, **mb3.8**/9, **MS3.1**/6, **New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	3.96	336	Pn	Pn	12 42 52.1	-0.1
	24nm,0.3s,baz=172,slow=13,SNR=22						
JAY				Sn	Sn	12 43 38.9	+1.2
	11nm,0.3s,baz=192,slow=19,SNR=6.3						
JAY				LR	LR	12 44 20.8	
	comp=Z,234nm,20.2s,baz=60,slow=39						
JAY	Jayapura	3.96	336	P	Pn	12 42 52.4	+0.2
GENI	Genyem	4.14	329	P	Pn	12 42 54.8	+0.2
SMPI	Sarmi	5.49	319	P	Pn	12 43 14.2	+1.1
	0.6nm103nm,1.0s						
PMG	Port Moresby	5.78	124	Pn	Pn	12 43 16.9	-0.3
PMG	Port Moresby	5.78	124	Pn	Pn	12 43 17.3	+0.1
	4.8nm,0.3s,baz=27,slow=4.5,SNR=13						
PMG				Sn	Sn	12 44 22.0	-0.6
	3.4nm,0.3s,baz=296,slow=21,SNR=7.9						
PMG				LR	LR	12 45 23.5	
	comp=Z,99nm,20.9s,baz=246,slow=38						
	12nm,0.4s						
COEN	Coen	7.79	174	Pn	Pn	12 43 46.1	+1.3
RABL	Rabaul	10.00	79	Pn	Pn	12 44 11.7	-3.4
FAKI	Fak Fak	10.54	287		Pn	12 44 20.1	-2.4
FAKI	Fak Fak	10.54	287	P	Pn	12 44 22.4	-0.1
MTN	Manton Dam	12.87	238	Pn	Pn	12 44 54.8	+0.4
WB0	Warramunga Arr	15.57	209	Pn	Pn	12 45 32.0	+1.2
WB0				IAmb	IAmb	12 45 41.6	
	comp=Z,16nm,0.8s						
WR8	Warramunga Arr	15.68	208	Pn	Pn	12 45 32.8	+0.5
WR8				IAmb	IAmb	12 45 42.9	
	comp=Z,14nm,0.8s						
WRAB	Tennant Creek	15.73	209	Pn	Pn	12 45 34.4	+1.4
WRAB				IAmb	IAmb	12 45 45.3	
	comp=Z,12nm,0.7s						
WRA	Warramunga Arr	15.74	209	Pn	Pn	12 45 32.8	-0.3
	comp=Z,0.9nm,0.3s,baz=28,slow=13,SNR=25						
WRA				Sn	Sn	12 48 21.7	-5.2
	comp=Z,0.6nm,0.3s,baz=22,slow=20,SNR=5.3						
WRA				Lg	Lg	12 50 16.5	
	comp=Z,0.3nm,0.3s,baz=24,slow=24,SNR=4.5						
KNRA	Kununurra	16.32	233	Pn	Pn	12 45 41.2	+0.8
KNRA				IAmb	IAmb	12 45 54.9	
	comp=Z,22nm,0.8s						
HNR	Honiara	17.77	102	LR	LR	12 52 51.1	
	comp=Z,111nm,20.3s,baz=7.0,slow=38						
AS31	Alice Springs	19.19	204		P	12 46 16.3	+1.3
ASAR	Alice Springs	19.20	204		P	12 46 16.2	+1.2
ASAR	Alice Springs	19.20	204	P	Pn	12 46 17.9	+1.9
	comp=Z,6.7nm,0.6s,baz=33,slow=9.1,SNR=59						
ASAR				S	Sn	12 49 49.6	-0.9
	comp=Z,1.9nm,0.7s,baz=18,slow=28,SNR=4.3						
ASAR				Lg	Lg	12 52 11.9	
	comp=Z,0.2nm,0.3s,baz=21,slow=27,SNR=4.1						
ASAR				LR	LR	12 54 25.4	
	comp=Z,327nm,18.5s,baz=90,slow=39						
GUMO	Guam	19.78	7	LR	LR	12 53 04.7	
	comp=Z,30nm,20.2s,baz=122,slow=35						
FITZ	Fitzroy Crossi	20.14	232	P	P	12 46 24.6	-0.7
FITZ	Fitzroy Crossi	20.14	232	P	Pn	12 46 30.8	+3.6
	comp=Z,2.2nm,0.4s,baz=55,slow=12,SNR=6.1						
FITZ				S	S	12 50 07.9	-2.3
	comp=Z,5.4nm,0.8s,baz=106,slow=7.4,SNR=2.4						
FITZ				Lg	Lg	12 52 41.7	
	comp=Z,0.3nm,0.3s,baz=109,slow=24,SNR=3.8						
	comp=Z,2.2nm,0.4s						
KAPI	Kappang	22.49	272	LR	LR	12 57 52.3	
	comp=Z,52nm,18.1s,baz=98,slow=42						
STKA	Stephens Creek	25.59	181	P	P	12 47 24.1	+4.0
	comp=Z,2.6nm,0.8s,baz=354,slow=9.5,SNR=5.9						
STKA				LR	LR	12 58 37.6	
	comp=Z,96nm,21.4s,baz=26,slow=39						
	comp=Z,2.6nm,0.8s						
MYLDM	Lahad Datu	26.31	295	P	P	12 47 24.2	-2.6
MYLDM				IAmb	IAmb	12 47 57.7	
	comp=Z,8.9nm,1.0s						
BBOO	Buckleboo	27.15	192	P	P	12 47 34.6	+0.4
MJAR	Matsushiro Arr	42.65	355	LR	LR	13 04 50.6	
	comp=Z,23nm,18.3s,baz=174,slow=32						
KSRS	Korea Array	45.42	344	P	P	12 50 10.6	+1.1
	comp=Z,0.3nm,0.4s,baz=164,slow=8.5,SNR=4.5						
	comp=Z,0.3nm,0.4s						
ASAJ	Asahikawa	50.04	0	LR	LR	13 16 28.2	
	comp=Z,12nm,19.0s,baz=175,slow=42						
SHEM	Shemya Is, Ala	64.57	21	LR	LR	13 14 30.3	
	comp=Z,20nm,21.5s,baz=258,slow=30						
YAK	Yakutsk	68.69	354	LR	LR	13 22 17.5	
	comp=Z,10nm,18.4s,baz=118,slow=36						
MKAR	Makanchi Array	74.70	322	P	P	12 53 28.6	-1.8
MKAR	Makanchi Array	74.70	322	P	P	12 53 31.2	+0.8
	comp=Z,0.5nm,0.8s,baz=107,slow=6.6,SNR=6.2						
	comp=Z,0.5nm,0.8s						
ZALV	Zalesovo Beam	76.71	329	P	P	12 53 42.6	+0.9
	comp=Z,0.3nm,0.3s,baz=108,slow=4.7,SNR=1.8						
	comp=Z,0.3nm,0.3s						
KURBB	Kurchatov Arra	78.60	324	P	P	12 53 53.1	+0.8
	comp=Z,0.5nm,0.9s,baz=117,slow=4.5,SNR=4.2						
	comp=Z,0.5nm,0.9s						
QSPA	South Pole Qui	83.81	180	P	P	12 54 20.4	+0.4
QSPA	South Pole Qui	83.81	180	P	P	12 54 21.5	+1.6
	comp=Z,1.5nm,0.6s,baz=290,slow=0.7,SNR=17						
	comp=Z,1.5nm,0.6s						
BVAR	Borovoye Array	84.18	325	P	P	12 54 21.9	0.0
	comp=Z,1.4nm,0.8s,baz=96,slow=1.5,SNR=5.2						
	comp=Z,1.4nm,0.8s						
ILAR	Eielson Array	87.49	24	P	P	12 54 36.0	-2.0
	comp=Z,0.5nm,0.9s,baz=254,slow=5.3,SNR=4.5						
	comp=Z,0.5nm,0.9s						

DJA 01 12:44:31.8±0.4, **10°S**±6°×**11°8E**±°, **h10**^{km}, **M3.9**/13, **mb4.0**/2, **MLv3.8**/13, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	Plampang	0.78	342	P	Pg	12 44 46.2	-0.6
WBSI	Waikabubak, Su	1.35	93	P	Pn	12 44 53.9	-2.9
TWSI	Taliwang, Sumb	1.40	306	P	Pn	12 44 55.8	-1.5
BASI	Baing, Sumba	2.60	105	P	Pn	12 45 14.9	+0.9
SRBI	Singaraja	3.14	298	P	Pn	12 45 22.2	+0.8
EDFI	Ende, Flores	3.71	78	P	Pn	12 45 30.7	+1.3
JAGI	Jajag, Banyuwa	3.97	286	P	Pn	12 45 33.3	+0.4
BSSI	Bau Bau, Buton	4.19	36	P	Pn	12 45 36.6	+0.7
MMRI	Maumere	4.27	78	P	Pn	12 45 36.2	-0.7
GMJI	Gumukmas	4.70	286	P	Pn	12 45 43.0	+0.2
SPSI	Sidrap Palu	5.83	17	P	Pn	12 45 59.1	+0.7

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*TIR **01** 12:47:12.9, 40°.47N×20°.84E, h10^{km}±1^{km}, Ml3.8/6*
*THE **01** 12:47:13.4, 40°N±2°×2°1E±°, h1^{km}±1^{km}, M3.3/24, MLh3.3/24*
*PDG **01** 12:47:13.8±0.9, 40°.51N×20°.85E, h12^{km}±1^{km}, ML3.6/11, Error ellipse: s-maj=0.9km s-min=1.6km az=0.0*
*ATH **01** 12:47:13.6, 40°.38N×20°.85E, h10^{km}±1^{km}, ML3.3/14, Manual Solution by A.Agalos First location: 2019/06/01 12:48:27, This location: 2019/06/01 13:01:35 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*BEO **01** 12:47:13.0±0.6, 40°.44N×21°.02E, h4^{km}±2^{km}, ML3.4/12*
*SKO **01** 12:47:14.6, 40°.45N×20°.90E, h5^{km}, ML3.5*
*IDC **01** 12:47:17.6±3.4, 40°.54N×20°.65E, h55^{km}±28^{km}, mb3.2/6, mbtmp3.4/11, ML3.2/5, MS2.8/4, Error ellipse: s-maj=32.1km s-min=16.8km az=1.0*
ISC 01 12:47:12.5±0.8, **40°.44N**±0°.02×**20°.80E**±0°.02, **h11**^{km}±5^{km}, **n173**, σ1§**45**/238, **mb3.5**/5, **11C-13D**, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	Korca	0.18	356	Pg	Pg	12 47 15.7	-0.9
KBN				Sg	Sg	12 47 18.8	-0.6
KBN				AML	AML	12 47 22.3	
	128nm,0.6s						
NEST	Nestorio	0.19	98	Pg	Pg	12 47 17.2	+0.5
NEST				S	Sg	12 47 19.8	+0.2
NEST				AML	AML	12 47 21.8	
	50nm,0.7s						
NEST	Nestorio	0.19	98	P	Pg	12 47 17.2	+0.5
NEST				S	Sg	12 47 20.2	+0.5
NEST	Nestorio	0.19	98	P	Pg	12 47 17.3	+0.6
NEST				S	Sg	12 47 19.7	+0.1
PENT	Pentalofos	0.35	134	P	Pg	12 47 20.2	+0.5
PENT				S	Sg	12 47 24.2	-0.2
PENT	Pentalofos	0.35	134	P	Pg	12 47 19.9	+0.2
PENT				S	Sg	12 47 22.9	-1.5
KPRO	Kipourio	0.65	138	P	Pg	12 47 25.2	+0.1
KPRO				S	Sb	12 47 34.7	-0.2
KPRO	Kipourio	0.65	138	P	Pg	12 47 25.1	0.0
OHR	Ohrid	0.67	360	P	Pg	12 47 25.6	+0.1
OHR	Ohrid	0.67	360	⇓iPg	Pg	12 47 25.6	+0.1
OHR				i Sg	Sb	12 47 35.5	-0.1
OHR				eLg	Lg	12 47 36.1	
	comp=E,3µm,0.7s						
OHR				eLg	Lg	12 47 40.5	
	comp=N,2µm,0.7s						
OHR	Ohrid	0.67	360	ePg	Pg	12 47 25.7	+0.2
OHR				eSg	Sb	12 47 35.8	+0.2
KZN	Kozani	0.75	100	P	Pn	12 47 28.8	-0.3
KZN				S	Sb	12 47 39.2	+1.2
KZN	Kozani	0.75	100	P	Pb	12 47 27.9	+0.3
KZN				S	Sb	12 47 37.6	-0.3
JAN	Janina	0.79	177	P	Pg	12 47 27.3	-0.4
JAN				S	Sn	12 47 40.5	-0.7
JAN	Janina	0.79	177	P	Pg	12 47 27.3	-0.4
SRN	Sarande	0.83	228	Pg	Pb	12 47 29.4	+0.4
SRN				Sg	Sn	12 47 43.2	+0.8
SRN				AML	AML	12 47 44.2	
	comp=N,4.0nm,0.6s						
IGT	Igoumenitsa	0.98	202	Pg	Pn	12 47 33.5	+1.3
IGT				Sg	Sn	12 47 47.8	+1.9
IGT	Igoumenitsa	0.98	202	P	Pb	12 47 31.9	+0.4
IGT				S	Sb	12 47 45.0	+0.6
IGT	Igoumenitsa	0.98	202	i Pg	Pb	12 47 31.8	+0.4
IGT				i Sg	Sn	12 47 48.2	+2.3
IGT	Igoumenitsa	0.98	202	P	Pb	12 47 31.8	+0.4
NASA	Naoussa	0.98	78	P	Pb	12 47 31.8	+0.2
VLO	Vlora	1.00	272	Pg	Pn	12 47 32.9	+0.5
VLO				Sg	Sn	12 47 50.2	+3.7
VLO				AML	AML	12 47 51.0	
	comp=N,25nm,0.8s						
KTI	Kastanea	1.00	92	P	Pn	12 47 32.5	-0.2
KEK	Kerkira	1.06	227	P	Pn	12 47 34.4	+1.0
KEK				S	Sn	12 47 49.0	+1.0
KEK	Kerkira	1.06	227	P	Pn	12 47 34.3	+1.0
TIR	Tirane	1.15	322	Pg	Pb	12 47 34.5	+0.1
TIR				Sg	Sn	12 47 52.3	+2.0
TIR				AML	AML	12 47 58.6	
	comp=N,4.7nm,1.0s						
TIR	Tirane	1.15	322	⇑P	Pb	12 47 34.3	-0.1
TIR	Tirane	1.15	322	i Pg	Pb	12 47 33.4	-1.0
TIR				i Sg	Sn	12 47 54.8	+4.5
TIR	Tirane	1.15	322	ePg	Pb	12 47 34.7	+0.3
TIR				eSg	Sn	12 47 53.2	+2.9
TETR	Tetrakomo, Epi	1.15	162	P	Pb	12 47 34.9	+0.4
PHP	Peshkopia	1.27	348	Pg	Pb	12 47 36.8	+0.3
PHP				Sg	Sg	12 47 54.0	+0.5
THL	Klokotos Trika	1.28	133	P	Pb	12 47 36.9	+0.4
THL				S	Sg	12 47 54.8	+1.2
THL	Klokotos Trika	1.28	133	P	Pn	12 47 36.3	0.0
TYRN	Tyrnavos	1.32	123	P	Pb	12 47 37.3	+0.1
AMPL	Ampelaki	1.55	168	P	Pg	12 47 42.2	-0.1
VAY	Valandovo	1.60	56	P	Pb	12 47 42.1	0.0
VAY	Valandovo	1.60	56	⇓iPg	Pb	12 47 42.1	0.0
VAY				i Sg	Sg	12 48 05.8	+1.8
VAY				eLg	Lg	12 48 09.6	
	comp=N,636nm,0.7s						
VAY				eLg	Lg	12 48 10.0	
	comp=E,554nm,0.7s						
SKO	Skopje	1.60	17	i Pg	Pg	12 47 44.1	+0.8
SKO				i Sg	Sg	12 48 04.1	0.0
TSLK	Tsoukalades, L	1.62	184	P	Pn	12 47 41.4	+0.4
LKD2	Lefkada island	1.65	184	P	Pn	12 47 42.1	+0.6
THE	Thessaloniki	1.66	83	P	Pn	12 47 42.3	+0.8
THE	Thessaloniki	1.66	83	i Pg	Pn	12 47 42.2	+0.7
THE				i Sg	Sb	12 48 04.6	+0.6
THE	Thessaloniki	1.66	83	P	Pn	12 47 42.2	+0.7
EVR	Evrytania	1.71	153	P	Pn	12 47 42.7	+0.4
NYDR	Nydri-Lefkada	1.73	183	P	Pn	12 47 43.6	+1.2
NYDR	Nydri-Lefkada	1.73	183	P	Pn	12 47 43.2	+0.7
PUK	Puka	1.74	337	Pn	Pg	12 47 46.2	+0.2
PUK				Sn	Sg	12 48 10.4	+1.9
PUK				AML	AML	12 48 14.6	
	comp=E,6.0nm,0.9s						
KNT	Kendrikon	1.75	65	P	Pb	12 47 44.6	0.0
KNT	Kendrikon	1.75	65	ePn	Pb	12 47 43.8	-0.7
KNT	Kendrikon	1.75	65	P	Pb	12 47 44.1	-0.4
MAKR	Makrakomi, Fth	1.76	144	P	Pb	12 47 44.5	-0.3
MAKR	Makrakomi, Fth	1.76	144	P	Pn	12 47 43.4	+0.5
HORT	Hortiatis	1.76	84	P	Pn	12 47 43.3	+0.4
HORT	Hortiatis	1.76	84	P	Pn	12 47 43.4	+0.4
EVGI	Lefkada island	1.82	184	P	Pn	12 47 44.7	+1.0
SCTE	Santa Cesarea	1.82	259	P	Pn	12 47 44.8	+1.0
AGG	Agios Georgios	1.84	140	P	Pn	12 47 44.2	+0.1
AGG	Agios Georgios	1.84	140	P	Pn	12 47 45.0	+1.0
PDO	Prodromos	1.86	171	P	Pn	12 47 45.7	+1.4
PVO	Paravola	1.91	163	P	Pb	12 47 46.8	-0.5
PVO	Paravola	1.91	163	P	Pn	12 47 45.6	+0.7
ULC	Ulcinj	1.92	323	i Pn	Pb	12 47 47.4	-0.2
ULC	Ulcinj	1.92	323	⇓iPn	Pn	12 47 46.3	+1.1
ULC				i Sn	Sb	12 48 12.5	+0.9
SOH	Sokhos	1.98	78	P	Pn	12 47 46.8	+0.8
SOH	Sokhos	1.98	78	P	Pn	12 47 46.7	+0.7
BCI	Bajram Curri	2.00	344	P	Pb	12 47 50.1	+1.1
BCI				Sg	Sg	12 48 17.1	+0.3
BCI	Bajram Curri	2.00	344	P	Pn	12 47 47.8	+1.5
PLG	Polygyros	2.02	91	P	Pb	12 47 48.3	-0.9
DRME	Dracevica, Mon	2.13	326	ePn	Pn	12 47 49.7	+1.7
DRME	Dracevica, Mon	2.13	326	⇑iPn	Pn	12 47 49.0	+1.0
DRME				i Sn	Sb	12 48 17.4	-0.1
NEO	Neokhori	2.18	121	P	Pn	12 47 50.1	+1.3
SRS	Serrai	2.22	71	P	Pn	12 47 50.3	+1.0
SRS	Serrai	2.22	71	i Pn	Pb	12 47 51.3	-1.4
SRS	Serrai	2.22	71	P	Pn	12 47 50.2	+1.0
KKB	Krupnik	2.25	51	i Pn	Pb	12 47 51.6	-1.4
PAIG	Paliouri	2.26	102	P	Pn	12 47 50.6	+0.8
VLS	Valsamata	2.27	184	P	Pn	12 47 50.3	+0.4
PDG	Podgorica	2.30	330	ePn	Pn	12 47 52.2	+1.8

PDG	Podgorica	2.30	330	⇓P	Pb	12 47 52.6	-1.4
PDG	Podgorica	2.30	330	*e*Pn	Pb	12 47 52.8	-1.2
PDG				*e*Sn	Sb	12 48 23.4	+0.9
PDG	Podgorica	2.30	330	⇓*i*Pn	Pn	12 47 52.4	+2.0
PDG				*i* Sn	Sb	12 48 21.7	-0.8
BUM	Brajici-Budva	2.35	323	⇓*i*Pn	Pn	12 47 52.1	+1.0
BUM				*i* Sn	Sb	12 48 23.0	-0.9
BOSS	Bosilegrad	2.41	31	*e*Pn	Pn	12 47 52.9	+1.0
BOSS				*e*Sn	Sn	12 48 22.0	+0.7
OUR	Ouranopolis	2.43	91	P	Pn	12 47 53.2	+1.1
KOKK	Kokkinochori,	2.46	80	P	Pn	12 47 53.8	+1.2
MMB	Musomishta	2.49	63	*i* Pn	Pn	12 47 54.9	+1.9
MMB				*i* Sn	Sn	12 48 25.3	+1.9
BARS	Barje	2.49	17	*i* Pn	Pn	12 47 53.8	+0.8
BARS	Barje	2.49	17	*e*Pn	Pn	12 47 53.0	0.0
BARS				*e*Sn	Sn	12 48 22.9	-0.5
BEY	Berane	2.52	345	*i* Pn	Pb	12 47 58.2	+0.3
IVA	Berane	2.52	345	*e*Pn	Pb	12 47 56.9	-0.9
IVA				*i* Sn	Sn	12 48 26.7	+2.5
CEME	Cevo	2.54	327	⇓*i*Pn	Pn	12 47 54.5	+0.9
CEME				*i* Sn	Sb	12 48 27.4	-1.9
KOME	Kolasin	2.59	339	*e*Pn	Pb	12 47 57.4	-1.7
KOME				*i* Sn	Sn	12 48 28.4	+2.4
HCY	Herceg Novi	2.65	320	*e*Pn	Pn	12 47 55.4	+0.2
HCY	Herceg Novi	2.65	320	⇓*i*Pn	Pn	12 47 55.1	-0.1
HCY				*i* Sn	Sn	12 48 30.1	+2.8
SELS	Selova	2.79	5	*e*Pn	Pn	12 47 58.8	+1.7
SELS				*e*Sn	Sn	12 48 32.1	+1.4
SJES	Sjenica	2.88	348	*e*Pn	Pb	12 48 02.3	-1.7
SJES	Sjenica	2.88	348	*e*Pn	Pn	12 48 00.8	+2.3
SJES				*e*Sn	Sn	12 48 36.3	+3.1
TREB	Trebinje	2.92	322	*e*Pn	Pn	12 47 59.5	+0.6
BRY	Bratogost	2.99	326	*e*Pn	Pn	12 48 01.1	+1.2
BRY	Bratogost	2.99	326	⇑*i*Pn	Pn	12 48 00.7	+0.8
BRY				*i* Sn	Sn	12 48 38.9	+3.1
PLE	Pljevlja	3.07	340	⇓*i*Pn	Pn	12 48 03.5	+2.4
PLE				*i* Sn	Sn	12 48 39.4	+1.5
UPM	Unac-Piva	3.10	333	*e*Pn	Pn	12 48 03.9	+2.4
UPM	Unac-Piva	3.10	333	⇓*i*Pn	Pn	12 48 03.7	+2.2
UPM				*i* Sn	Sn	12 48 40.8	+2.1
GOCS	Kraljevo Serbi	3.12	1	*e*Pn	Pn	12 48 03.6	+1.9
GOCS				*e*Sn	Sn	12 48 41.3	+2.3
MATE	Matera	3.13	275	⇓P	Pn	12 48 02.5	+0.8
ZAPS	Zavoj	3.14	25	*e*Pn	Pn	12 48 03.0	+1.0
ZAPS				*e*Sn	Sn	12 48 40.9	+1.4
IVAS	Ivanjica	3.17	351	*e*Pn	Pn	12 48 04.4	+2.0
BOVS	Bovan	3.26	12	⇓P	Pn	12 48 04.8	+1.3
BOVS	Bovan	3.26	12	*e*Pn	Pn	12 48 04.0	+0.5
BOVS				*e*Sn	Sn	12 48 43.5	+1.2
RUDO	Rudo	3.35	342	*e*Pn	Pn	12 48 06.2	+1.4
STON	Ston	3.36	317	*e*Pn	Pn	12 48 05.3	+0.4
TIP	Timpagrande	3.36	249	⇓P	Pb	12 48 13.3	+1.1
GRUS	Gruza	3.44	359	*e*Pn	Pn	12 48 06.8	+0.7
ZAGS	Zajecar	3.53	17	*e*Pn	Pn	12 48 07.9	+0.6
ZAGS				*e*Sn	Sn	12 48 48.1	-0.9
BBLS	Lazi&#263i	3.58	344	*e*Pn	Pn	12 48 11.5	+3.5
BBLS	Lazi&#263i	3.58	344	*e*Pn	Pn	12 48 11.7	+3.7
BBLS				*e*Sn	Sn	12 48 52.4	+2.2
DIVS	Divibare	3.70	351	*e*Pn	Pn	12 48 11.8	+2.1
DIVS				*e*Sn	Sn	12 48 54.0	+0.6
BORS2	Bor- Borsko je	3.76	13	*e*Pn	Pn	12 48 11.3	+0.9
TRUS	Trudelj	3.79	356	*e*Pn	Pn	12 48 12.6	+1.8
HAPS	Han Pijesak,Bl	3.89	340	*e*Pn	Pn	12 48 13.7	+1.4
KUBS	Kucevo	4.02	9	*e*Pn	Pn	12 48 13.2	-0.8
TEKS	Tekeris	4.21	347	*e*Pn	Pn	12 48 18.2	+1.6
TEKS	Tekeris	4.21	347	*e*Pn	Pn	12 48 17.8	+1.2
AVAS	Avala Beograd	4.26	357	*e*Pn	Pn	12 48 17.7	+0.4
MDVR	Moldovita	4.39	8	⇑P	Pn	12 48 20.7	+1.6
HERR	Herculane	4.59	14	⇑P	Pn	12 48 25.7	+3.8
VRSS	Vrsac	4.70	5	*e*Pn	Pn	12 48 23.4	+0.2
FRGS	Fruska Gora	4.77	352	*e*Pn	Pn	12 48 24.4	+0.1
FRGS	Fruska Gora	4.77	352	*e*Pn	Pn	12 48 24.2	-0.1
BLY	Banja Luka	5.07	329	*e*Pn	Pn	12 48 28.8	+0.5
A050A	Klekovaca	5.13	323	*e*Pn	Pn	12 48 30.4	+1.1
GZR	Gura Zlata	5.16	16	⇑P	Pn	12 48 33.4	+3.8
BZS	Buzias	5.21	6	⇑P	Pn	12 48 32.8	+2.5
A051A	Mrakovica	5.39	329	*e*Pn	Pn	12 48 33.6	+0.7
MORH	Mrgy, Hungar	5.98	345	⇑P	Pn	12 48 42.5	+1.6
MLR	Muntele Rosu	6.30	35	P	Pn	12 48 49.7	+4.3
	comp=E,0.5nm,0.3s,baz=316,slow=10,SNR=7.8						
MLR				S	Sn	12 49 59.1	+1.7
	comp=E,4.7nm,0.7s,baz=204,slow=13,SNR=3.1						
	comp=E,2.0nm,0.6s						
MLR	Muntele Rosu	6.30	35	⇑P	Pn	12 48 50.0	+4.6
BOJS	Bojanci	6.49	323	*e*Pn	Pn	12 48 47.2	-0.7
CRES	Cresnjevec Ost	6.65	326	*e*Pn	Pn	12 48 49.8	-0.3
VRI	Vrincioaia	6.94	37	⇑P	Pn	12 48 57.0	+3.0
TPGR	Topolog	7.14	49	⇑P	Pn	12 48 56.2	-0.7
SOKA	Soboth	7.51	328	*e*Pn	Pn	12 49 02.5	+0.5
	comp=E,2.6nm,0.5s,SNR=4.4						
SOKA				*i* Sn	Sn	12 50 26.9	-0.2
	comp=E,6.2nm,0.8s						
OBKA	Obir	7.58	325	*e*Pn	Pn	12 49 03.3	+0.4
OBKA	Obir	7.58	325	*i* Pn	Pn	12 49 03.1	+0.2
	comp=E,1.8nm,0.4s						
OBKA				*i* Sn	Sn	12 50 29.6	+0.8
	comp=E,26nm,1.0s						
ARSA	Arzberg	7.80	332	*i* Pn	Pn	12 49 06.1	+0.2
	comp=E,2.4nm,0.5s						
ARSA				*i* Sn	Sn	12 50 32.2	-2.0
	comp=E,2.7nm,0.5s						
KECS	Kecovo	8.04	358	*e*PN	Pn	12 49 13.0	+3.8
MYKA	Terra Mystica	8.08	322	*i* Pn	Pn	12 49 09.7	0.0
	comp=E,1.2nm,0.3s						
MYKA				*i* Sn	Sn	12 50 41.8	+0.7
	comp=E,4.7nm,0.6s						
VYHS	Vyhne	8.17	351	*e*PN	Pn	12 49 16.0	+5.0
VYHS				*e*SN	Sn	12 50 42.0	-1.3
MODS	Modra-Piesok	8.32	344	*e*PN	Pn	12 49 17.8	+4.8
KBA	Koelnbreinsper	8.55	323	*i* Pn	Pn	12 49 15.0	-1.3
	comp=E,1.4nm,0.5s						
KBA				*i* Sn	Sn	12 50 50.6	-2.2
	comp=E,5.0nm,0.6s						
ABTA	Abfaltersbach	8.71	319	*e*Pn	Pn	12 49 18.2	-0.2
	comp=E,3.8nm,0.6s						
ABTA				*i* Sn	Sn	12 50 55.5	-1.1
	comp=E,15nm,0.9s						
MOA	Molln	8.77	330	*i* Pn	Pn	12 49 19.6	+0.4
	comp=E,1.2nm,0.3s						
MOA				*i* Sn	Sn	12 50 59.1	+1.2
	comp=E,5.0nm,0.5s						
LESA	Schwarzleotal	9.11	323	*i* Pn	Pn	12 49 24.0	+0.1
	comp=E,1.7nm,0.3s						
LESA				*e*Sn	Sn	12 51 06.4	-0.1
	comp=E,10nm,0.7s						
WTTA	Wattenberg	9.50	319	*i* Pn	Pn	12 49 28.6	-0.8
	comp=E,1.9nm,0.3s						
WTTA				*i* Sn	Sn	12 51 14.5	-1.6
	comp=E,14nm,0.6s						
WATA	Walderalm	9.58	319	*i* Pn	Pn	12 49 30.3	-0.1
	comp=E,7.2nm,0.5s						
WATA				*i* Sn	Sn	12 51 16.8	-1.2
	comp=E,5.8nm,0.5s						
SQTA	Sankt Quirin	9.69	318	*i* Pn	Pn	12 49 32.2	+0.3
	comp=E,1.5nm,0.2s						
SQTA				*i* Sn	Sn	12 51 19.7	-0.9
	comp=E,10nm,0.7s						
GERES	GERESS Array B	9.80	331	P	Pn	12 49 32.6	-0.8
	baz=150,slow=14,SNR=8.2						
	comp=E,0.7nm,0.6s						
FETA	Feichten	9.81	315	*i* Pn	Pn	12 49 34.3	+0.7
	comp=E,2.7nm,0.7s,SNR=4.6						
FETA				*i* Sn	Sn	12 51 22.5	-1.3
	comp=E,4.9nm,0.7s						
MOTA	Moosalm	9.82	318	*i* Pn	Pn	12 49 34.8	+1.0
	comp=E,8.0nm,0.7s,SNR=8.9						
MOTA				*e*Sn	Sn	12 51 22.7	-1.4
	comp=E,21nm,0.9s						
BRTR	Keskin Array B	9.87	90	P	Pn	12 49 37.2	+2.8
	comp=E,0.1nm,0.3s,baz=255,slow=10,SNR=2.2						
BRTR				LR	LR	12 54 37.6	
	comp=E,45nm,21.7s,baz=320,slow=44						
	comp=E,0.2nm,0.4s						
DAVOX	Davos/Dischmat	10.14	312	P	Pn	12 49 38.2	+0.1
	comp=E,0.7nm,0.3s,baz=105,slow=19,SNR=6.8						
DAVOX				S	Sn	12 51 27.4	-4.4
	comp=E,2.3nm,0.7s,baz=188,slow=18,SNR=3.2						
DAVOX				LR	LR	12 54 31.0	
	comp=E,49nm,19.4s,baz=83,slow=43						
	comp=E,1.7nm,0.4s						
DAVA	Damuels	10.43	315	*i* Pn	Pn	12 49 43.3	+1.2
	comp=E,2.2nm,0.3s						
DAVA				*i* Sn	Sn	12 51 39.5	+0.5
	comp=E,10nm,0.7s						
CLL	Collm	12.14	336	*e*Px	Pn	12 50 05.0	-0.3
ESDC	Sonseca Array	18.96	276	P	P	12 51 33.9	+0.2
	baz=81,slow=8.6,SNR=6.0						
	comp=E,0.8nm,1.0s						
HFS	Hagfors	20.21	350	P	P	12 51 46.8	-0.2
	comp=E,1.3nm,0.7s,baz=216,slow=7.3,SNR=4.6						
	comp=E,1.3nm,0.7s						
FINES	FINESS Array B	21.28	7	P	P	12 51 58.1	-0.5
	comp=E,0.4nm,0.4s,baz=145,slow=14,SNR=4.1						
	comp=E,0.4nm,0.4s						
NOA	NORSAR Array B	21.45	347	LR	LR	13 00 21.5	
	comp=E,18nm,19.9s,baz=40,slow=37						
EKA	Eskdalemuir Ar	21.75	321	P	P	12 52 03.0	-0.8
	comp=E,2.8nm,0.8s,baz=122,slow=8.9,SNR=9.0						
	comp=E,2.8nm,0.8s						
BVAR	Borovoye Array	35.53	52	LR	LR	13 11 45.5	
	comp=E,28nm,18.1s,baz=202,slow=41						
MKAR	Makanchi Array	43.96	60	P	P	12 55 18.7	-0.8
	comp=E,0.4nm,0.5s,baz=283,slow=7.3,SNR=3.7						
	comp=E,0.4nm,0.5s						
ZALV	Zalesovo Beam	44.04	50	P	P	12 55 19.2	-0.7
	comp=E,0.3nm,0.5s,baz=274,slow=11,SNR=1.3						
	comp=E,0.3nm,0.5s						
TXAR	Lajitas Array	93.57	314	P	P	13 00 26.7	-2.2
	comp=E,0.2nm,0.9s,baz=66,slow=4.3,SNR=4.3						
	comp=E,0.2nm,0.9s						
ASAR	Alice Springs	122.17	95	PKP	PKPdf	13 06 06.7	-0.8
	comp=E,0.4nm,0.8s,baz=342,slow=2.4,SNR=2.6						

IDC 01 13:00:03.7±4.6,**23°.00S**×**177°.18W**,**h0**^{km},**mb3.9**/4, **mbtmp3.9**/4,**Error ellipse: s-maj=288.0km s-min=34.6km az=156.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	44.74	259	P	P	13 08 19.1	-0.1
	0.4nm,0.4s,baz=95,slow=7.4,SNR=10						
	0.4nm,0.4s						
WRA	Warramunga Arr	45.06	264	P	P	13 08 21.5	-0.3
	1.1nm,0.4s,baz=103,slow=8.0,SNR=51						
	1.1nm,0.4s						
FITZ	Fitzroy Crossi	53.49	264	P	P	13 09 26.3	0.0
	11nm,1.1s,baz=134,slow=5.7,SNR=3.4						
	11nm,1.1s						
NVAR	Mina Array Bea	82.32	43	P	P	13 12 27.7	0.0
	0.1nm,0.4s,baz=209,slow=6.5,SNR=1.5						
	0.1nm,0.4s						

SCB ***01*** *13:00:10.4±0.8,21°.87S×67°.37W,h159^{km}±9^{km},ML3.4/2, MW3.2,Error ellipse: s-maj=6.4km s-min=3.7km az=0.0*

ISC 01 13:00:08.2±2.1,**21°.95S**±0°.06×**67°.40W**±0°.05, **h183**^{km}±18^{km},**n20**,σ1^{s}**24**/30,**3C,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	1.72	275	⇑*i*P	Pn	13 00 44.1	+1.4
PB09	IPOC Station P	1.72	275	Pg	Pn	13 00 44.3	+1.6
YJA	Yavi	1.76	98	Pg	Pn	13 00 44.5	+1.1
MOCB	Mochara	1.78	67	Pg	Pn	13 00 44.1	+0.5
MOCB				Sg	S	13 01 09.5	-1.4
MOCB				IAML		13 01 13.7	
	218nm,0.4s						
PB01	IPOC Station P	2.15	294	⇑*i*P	Pn	13 00 47.6	+0.5
PB01				*i* S	S	13 01 16.6	-0.6
PB01				IAML		13 01 18.2	
	comp=N,212nm,0.4s						
PB01	IPOC Station P	2.15	294	Pg	Pn	13 00 48.2	+1.1
PB01				Sg	S	13 01 17.2	0.0
PB01				IAML		13 01 18.3	
	comp=N,183nm,0.4s						
PB06	IPOC Station P	2.15	249	*e*P	Pn	13 00 48.1	+0.8
PB06				*i* S	S	13 01 18.1	+0.7
PB06				IAML		13 01 20.1	
	comp=E,112nm,0.2s						
PB03	IPOC Station P	2.19	267	*e*P	Pn	13 00 48.2	+0.6
PB03				*i* S	S	13 01 18.0	-0.2
PB03				IAML		13 01 19.9	
	comp=E,244nm,0.1s						
PB05	IPOC Station P	2.75	250	*e*P	Pn	13 00 54.9	+0.8
PB05				*i* S	S	13 01 27.9	-1.7
PB05				IAML		13 01 29.3	
	comp=N,62nm,0.4s						
GO01	Chusmiza	2.82	323	*e*P	Pn	13 00 56.1	+0.8
GO01				*i* S	S	13 01 31.4	-0.5
GO01	Chusmiza	2.82	323	Pg	Pn	13 00 56.4	+1.0
PB11	IPOC Station P	3.03	315	⇑*i*P	Pn	13 00 57.4	-0.2
PB11				*i* S	S	13 01 33.9	-2.0
PB11				IAML		13 01 37.5	
	comp=E,131nm,0.2s						
PB10	IPOC Station P	3.30	241	*e*P	Pn	13 01 01.2	+0.6
PB10				*i* S	S	13 01 39.0	-2.6
PB10				IAML		13 01 41.5	
	comp=E,52nm,0.4s						
SOET	ToroToro	4.09	22	Pg	Pn	13 01 11.2	+0.2
PB16	IPOC Station P	4.11	331	*e*P	Pn	13 01 12.0	+0.7
PB16				*i* S	S	13 01 58.8	-1.8
PB16				IAML		13 02 03.8	
	comp=N,27nm,0.4s						
PB16	IPOC Station P	4.11	331	Pg	Pn	13 01 12.4	+1.1
BBOE	La Paz, Chanca	5.14	354	Pg	Pn	13 01 25.9	+1.3
BBOD	La Paz, Gloria	5.40	348	Pg	Pn	13 01 29.5	+1.5
LPAZ	La Paz	5.67	353	Pg	Pn	13 01 32.8	+1.2
BBOB	La Paz, Bander	5.82	353	Pg	Pn	13 01 34.5	+1.1

NAO ***01*** *13:01:14.6,39°.69N×23°.03E,h10^{km},mb3.7*
BEO ***01*** *13:01:23.4±0.5,40°.20N×20°.87E,h0^{km},ML3.3/10*
IDC ***01*** *13:01:23.6±1.7,40°.37N×20°.68E,h0^{km},mb3.2/4, mbtmp3.3/9,ML3.0/4,MS2.9/9,Error ellipse: s-maj=26.6km s-min=19.0km az=38.0*
TIR ***01*** *13:01:26.0,40°.42N×20°.75E,h1^{km}±2^{km},Ml3.6/3*
ATH ***01*** *13:01:26.8,40°.35N×20°.82E,h9^{km}±1^{km},ML3.2/16, Manual Solution by A.Agalos First location: 2019/06/01 13:02:38, This location: 2019/06/01 13:23:30 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
SKO ***01*** *13:01:27.9,40°.40N×20°.88E,h11^{km},ML3.3*
PDG ***01*** *13:01:27.2±1.0,40°.50N×20°.80E,h7^{km}±2^{km},ML3.5/10, Error ellipse: s-maj=1.1km s-min=2.2km az=0.0*
THE ***01*** *13:01:29.8,40°N±2°×2°1E±°,h5^{km}±1^{km},M3.1/35, MLh3.1/35*

ISC 01 13:01:26.3±0.8,**40°.40N**±0°.02×**20°.80E**±0°.02,**h10**^{km}±6^{km}, **n156**,σ1^{s}**33**/202,**mb3.4**/3,**MS2.9**/4,**13C-7D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEST	Nestorio	0.19	85	Pg	Pg	13 01 31.0	+0.7
NEST				S	Sg	13 01 35.2	+2.0
NEST				AML	AML	13 01 36.1	
	46nm,0.3s						
NEST	Nestorio	0.19	85	P	Pg	13 01 31.2	+0.8
NEST				S	Sg	13 01 33.1	-0.2
NEST	Nestorio	0.19	85	P	Pg	13 01 31.1	+0.7
NEST				S	Sg	13 01 33.9	+0.6
KBN	Korca	0.23	358	P	Pg	13 01 30.1	-0.9
KBN				Sg	Sg	13 01 33.6	-0.6
KBN				AML	AML	13 01 37.4	
	66nm,0.8s						
PENT	Pentalofos	0.33	128	P	Pb	13 01 33.4	-0.8
PENT				S	Sg	13 01 37.9	+0.6
PENT	Pentalofos	0.33	128	P	Pb	13 01 33.4	-0.8
PENT				S	Sg	13 01 36.6	-0.6
KPRO	Kipourio	0.62	135	P	Pg	13 01 38.5	+0.2
KPRO				S	Sg	13 01 45.2	-1.1
KPRO	Kipourio	0.62	135	P	Pg	13 01 38.3	+0.1
KPRO				S	Sg	13 01 45.3	-1.1
MSVA	Metsovo	0.69	155	P	Pg	13 01 39.1	-0.6
OHR	Ohrid	0.71	0	⇓*i*Pg	Pg	13 01 39.9	-0.2
OHR				*i* Sg	Sg	13 01 50.2	+0.8
OHR				*e*Lg	Lg	13 01 50.8	
	comp=E,2µm,0.6s						
OHR				*e*Lg	Lg	13 01 51.1	
	comp=N,886nm,0.6s						
OHR	Ohrid	0.71	0	*e*Pg	Pg	13 01 39.5	-0.6
OHR				*e*Sg	Sb	13 01 50.7	0.0
JAN	Janina	0.74	177	P	Pg	13 01 39.4	-1.2
JAN	Janina	0.74	177	P	Pg	13 01 40.1	-0.5
JAN				S	Sg	13 01 49.6	-0.7
KZN	Kozani	0.75	97	P	Pb	13 01 41.9	+0.5
KZN				S	Sb	13 01 50.9	-0.9
KZN	Kozani	0.75	97	P	Pb	13 01 41.4	-0.1
KZN				S	Sb	13 01 51.0	-0.7
SRN	Sarande	0.80	230	Pg	Pg	13 01 41.8	+0.1
SRN				Sg	Sb	13 01 54.9	+1.8
SRN				AML	AML	13 01 56.9	
	comp=N,2.4nm,0.7s						
IGT	Igoumenitsa	0.94	203	Pg	Pb	13 01 45.4	+0.9
IGT				S	Sn	13 02 00.7	+1.8
IGT	Igoumenitsa	0.94	203	*i* Pg	Pb	13 01 44.7	+0.2
IGT				*i* Sg	Sn	13 01 59.5	+0.6
IGT	Igoumenitsa	0.94	203	P	Pg	13 01 44.4	+0.1
IGT				S	Sg	13 01 56.0	-0.4
KTI	Kastanea	1.01	90	P	Pb	13 01 45.9	+0.1
KEK	Kerkira	1.03	229	P	Pg	13 01 46.6	+0.5
TETR	Tetrakomo, Epi	1.11	161	P	Pg	13 01 47.5	-0.2
TIR	Tirane	1.18	324	P	Pg	13 01 48.9	-0.1
TIR	Tirane	1.18	324	⇓P	Pg	13 01 47.9	-1.1
TIR	Tirane	1.18	324	*i* Pg	Pg	13 01 47.4	-1.7
TIR				*i* Sg	Sn	13 02 11.2	+6.2
TIR	Tirane	1.18	324	*e*Pg	Pg	13 01 47.2	-1.8
TIR				*e*Sg	Sn	13 02 08.8	+3.8
THL	Klokotos Trika	1.25	131	P	Pn	13 01 50.9	+1.1
THL				S	Sb	13 02 06.3	+0.3
THL	Klokotos Trika	1.25	131	P	Pg	13 01 49.5	-0.7
THL				S	Sg	13 02 05.8	-0.7
TYRN	Tyrnavos	1.30	121	P	Pn	13 01 51.6	+1.2
TYRN				S	Sn	13 02 08.2	+0.4
TYRN	Tyrnavos	1.30	121	P	Pg	13 01 50.2	-1.0
TYRN				S	Sb	13 02 07.5	+0.1
AMPL	Ampelaki	1.51	168	P	Pg	13 01 57.6	+2.4
TSLK	Tsoukalades, L	1.57	184	P	Pg	13 01 58.7	+2.2
LKD2	Lefkada island	1.61	184	P	Pg	13 01 58.8	+1.7
LKD2	Lefkada island	1.61	184	P	Pn	13 01 54.7	-0.1
VAY	Valandovo	1.63	55	P	Pg	13 01 57.0	-0.5
VAY	Valandovo	1.63	55	*i* Pg	Pg	13 01 57.0	-0.5
VAY				*i* Sg	Sg	13 02 21.0	+2.4
VAY				*e*Lg	Lg	13 02 25.6	
	comp=N,769nm,1.4s						
VAY				*e*Lg	Lg	13 02 29.0	
	comp=E,487nm,1.2s						
SKO	Skopje	1.65	17	*i* Pg	Pb	13 01 56.7	+0.1
SKO				*i* Sg	Sb	13 02 17.9	+0.4
THE	Thessaloniki	1.67	81	P	Pn	13 01 56.1	+0.6
THE				S	Sn	13 02 17.3	+0.4
THE	Thessaloniki	1.67	81	*i* Pg	Pn	13 01 56.0	+0.5
THE	Thessaloniki	1.67	81	P	Pn	13 01 55.7	+0.2
NYDR	Nydri-Lefkada	1.68	183	P	Pg	13 01 59.3	+0.7
MAKR	Makrakomi, Fth	1.72	143	P	Pg	13 01 58.6	-0.7
MAKR	Makrakomi, Fth	1.72	143	P	Pn	13 01 56.8	+0.5
HORT	Hortiatis	1.77	83	P	Pn	13 01 57.6	+0.6
HORT	Hortiatis	1.77	83	P	Pn	13 01 57.1	+0.2
KNT	Kendrikon	1.77	64	P	Pn	13 01 57.7	+0.7
KNT	Kendrikon	1.77	64	*i* Pn	Pn	13 01 57.6	+0.7
KNT	Kendrikon	1.77	64	P	Pn	13 01 57.4	+0.5
EVGI	Lefkada island	1.78	184	P	Pg	13 02 00.1	-0.2
EVGI	Lefkada island	1.78	184	P	Pn	13 01 57.7	+0.7
PUK	Puka	1.78	338	Pn	Pb	13 01 59.6	+0.6
AGG	Agios Georgios	1.81	139	P	Pb	13 01 59.6	+0.1
AGG	Agios Georgios	1.81	139	P	Pn	13 01 57.7	+0.2
SCTE	Santa Cesarea	1.81	260	P	Pn	13 01 58.0	+0.5
PDO	Prodromos	1.82	170	P	Pg	13 02 01.4	+0.3
PVO	Paravola	1.87	162	P	Pg	13 02 02.2	+0.1
PVO	Paravola	1.87	162	P	Pn	13 01 58.6	+0.4
FSK	Fiskardo	1.94	185	P	Pn	13 01 59.4	+0.1
ULC	Ulcinj	1.96	324	*i* Pn	Pn	13 02 00.9	+1.4
ULC	Ulcinj	1.96	324	⇓*i*Pn	Pn	13 02 00.4	+0.9
ULC				*i* Sn	Sb	13 02 27.6	+1.2
SOH	Sokhos	1.99	77	P	Pn	13 02 01.4	+1.3
SOH	Sokhos	1.99	77	P	Pn	13 02 00.3	+0.3
ANX	Ano Chora	2.00	154	P	Pb	13 02 03.0	+0.2
PLG	Polygyros	2.02	90	P	Pn	13 02 01.6	+1.2
PLG	Polygyros	2.02	90	P	Pn	13 02 00.7	+0.3
BCI	Bajram Curri	2.04	345	P	Pb	13 02 04.6	+1.1
EFP	Efpalio	2.15	156	P	Pb	13 02 05.3	+0.1
NEO	Neokhori	2.16	119	P	Pn	13 02 02.4	+0.1
DRME	Dracevica, Mon	2.16	326	⇓*i*Pn	Pn	13 02 03.8	+1.5
DRME				*i* Sn	Sb	13 02 32.6	+0.3
AXAR	Agios Charalam	2.17	138	P	Pb	13 02 05.0	-0.6
SERG	Sergoula	2.21	153	P	Pb	13 02 07.1	+0.9
VLS	Valsamata	2.22	184	P	Pb	13 02 05.4	-1.1
VLS	Valsamata	2.22	184	P	Pn	13 02 03.9	+0.7
SRS	Serrai	2.24	70	P	Pn	13 02 04.0	+0.6
SRS	Serrai	2.24	70	*i* Pn	Pn	13 02 04.2	+0.8
SRS	Serrai	2.24	70	P	Pn	13 02 03.6	+0.2
AXS	Araxos	2.24	168	P	Pb	13 02 07.0	+0.1
AXS	Araxos	2.24	168	P	Pn	13 02 03.9	+0.4
PAIG	Paliouri	2.26	101	P	Pn	13 02 05.0	+1.4
KKB	Krupnik	2.28	50	*i* Pn	Pb	13 02 06.1	-1.3
PSDA	Pessada-Kefalo	2.29	184	P	Pb	13 02 06.3	-1.2
PSDA	Pessada-Kefalo	2.29	184	P	Pn	13 02 04.7	+0.7
RTZL	Ratzakli, Kefa	2.32	181	P	Pb	13 02 07.1	-1.0
PDG	Podgorica	2.34	331	⇑P	Pn	13 02 06.4	+1.6
PDG	Podgorica	2.34	331	*e*Pn	Pn	13 02 06.2	+1.5
PDG				*e*Sn	Sb	13 02 38.0	+0.6
PDG	Podgorica	2.34	331	*e*Pn	Pn	13 02 06.2	+1.5
PDG				*i* Sn	Sb	13 02 37.2	-0.2
PDG	Podgorica	2.34	331	P	Pn	13 02 06.4	+1.6
BUM	Brajici-Budva	2.38	324	*e*Pn	Pn	13 02 05.8	+0.4
RLS	Riolos of Patr	2.39	167	P	Pb	13 02 09.3	-0.1
OUR	Ouranopolis	2.43	90	P	Pn	13 02 07.5	+1.5
LKR	Lokris	2.44	135	P	Pn	13 02 08.3	+2.2
BOSS	Bosilegrad	2.45	31	*e*Pn	Pn	13 02 07.0	+0.7
BOSS				*e*Sn	Sb	13 02 39.7	-0.9
KOKK	Kokkinochori,	2.47	79	P	Pn	13 02 07.8	+1.2
KOKK	Kokkinochori,	2.47	79	P	Pn	13 02 07.6	+1.0
MMB	Musomishta	2.51	62	*i* Pn	Pn	13 02 06.8	-0.4
BARS	Barje	2.53	17	*i* Pn	Pn	13 02 07.8	+0.4
BARS	Barje	2.53	17	*e*Pn	Pn	13 02 07.8	+0.4
BARS				*e*Sn	Sb	13 02 42.8	-0.2
IVA	Berane	2.56	345	*e*Pn	Pn	13 02 08.2	+0.3
IVA				*i* Sn	Sn	13 02 41.5	+2.3
CEME	Cevo	2.57	327	⇓*i*Pn	Pn	13 02 08.3	+0.3
CEME				*i* Sn	Sn	13 02 42.2	+2.9
KOME	Kolasin	2.63	339	*e*Pn	Pn	13 02 10.2	+1.3
KOME				*i* Sn	Sn	13 02 44.5	+3.6
HCY	Herceg Novi	2.68	321	⇑*i*Pn	Pn	13 02 09.6	+0.1
HCY				*i* Sn	Sn	13 02 45.2	+3.2
SELS	Selova	2.83	5	*e*Pn	Pn	13 02 12.8	+1.3
SELS				*e*Sn	Sb	13 02 50.7	-0.9
KAVA	Kavala	2.89	77	P	Pn	13 02 12.9	+0.6
SJES	Sjenica	2.93	348	*e*Pn	Pn	13 02 14.7	+1.8
SJES				*e*Sn	Sb	13 02 52.5	-1.9
BRY	Bratogost	3.02	327	*e*Pn	Pn	13 02 14.8	+0.5
BRY				*i* Sn	Sn	13 02 53.0	+2.4
PLE	Pljevlja	3.11	341	⇑*i*Pn	Pn	13 02 17.0	+1.5
PLE				*i* Sn	Sn	13 02 55.1	+2.3
MATE	Matera	3.13	276	⇑P	Pb	13 02 19.9	-2.0
UPM	Unac-Piva	3.14	334	⇓*i*Pn	Pn	13 02 17.4	+1.5
UPM				*i* Sn	Sn	13 02 56.2	+2.6
GOCS	Kraljevo Serbi	3.16	1	*e*Pn	Pn	13 02 18.2	+2.0
GOCS				*e*Sn	Sn	13 02 56.9	+2.9
ZAPS	Zavoj	3.18	25	*e*Pn	Pn	13 02 17.1	+0.7
IVAS	Ivanjica	3.21	352	*e*Pn	Pn	13 02 18.5	+1.7
IVAS				*e*Sn	Sn	13 02 59.0	+3.8
BOVS	Bovan	3.31	12	⇑P	Pn	13 02 18.2	+0.1
BOVS	Bovan	3.31	12	*e*Pn	Pn	13 02 17.9	-0.1
TIP	Timpagrande	3.34	250	⇑P	Pb	13 02 24.6	-1.0
GRUS	Gruza	3.49	359	*e*Pn	Pn	13 02 20.6	+0.1
ZAGS	Zajecar	3.58	17	*e*Pn	Pn	13 02 22.0	+0.3
ZAGS				*e*Sn	Sn	13 03 05.6	+1.6
BBLS	Lazi&#263i	3.62	344	*e*Pn	Pn	13 02 23.4	+1.0
DIVS	Divibare	3.75	351	*e*Pn	Pn	13 02 24.8	+0.6
BORS2	Bor- Borsko je	3.80	13	*e*Pn	Pn	13 02 24.7	-0.1
TRUS	Trudelj	3.83	356	*e*Pn	Pn	13 02 25.4	+0.1
KUBS	Kucevo	4.06	9	*e*Pn	Pn	13 02 27.2	-1.3
TEKS	Tekeris	4.25	348	*e*Pn	Pn	13 02 31.1	0.0
AVAS	Avala Beograd	4.30	357	*e*Pn	Pn	13 02 32.2	+0.5
MDVR	Moldovita	4.43	8	⇑P	Pn	13 02 34.0	+0.4
HERR	Herculane	4.64	14	⇓P	Pn	13 02 37.8	+1.5
VRSS	Vrsac	4.74	5	*e*Pn	Pn	13 02 37.5	-0.2
FRGS	Fruska Gora	4.81	352	*e*Pn	Pn	13 02 39.7	+0.9
BZS	Buzias	5.25	6	⇑P	Pn	13 02 46.4	+1.7
SURR	Surduc	5.44	10	⇑P	Pn	13 02 48.4	+1.1
MORH	Mrgy, Hungar	6.02	346	⇑P	Pn	13 02 56.3	+1.0
IDI	Anoyia	6.04	146	Pn	Pn	13 02 56.6	+0.9
	comp=E,4.6nm,0.8s,baz=345,slow=20,SNR=1.4						
IDI				Sn	Sn	13 04 07.3	+2.4
	comp=E,0.8nm,0.3s,baz=308,slow=18,SNR=1.8						

MLR	**Muntele Rosu**	6.34	35	Pn	Pn	13 03 00.0	+0.2
	comp=E,0.2nm,0.3s,baz=197,slow=14,SNR=1.9						
MLR				LR	LR	13 06 22.6	
	comp=E,59nm,20.4s,baz=139,slow=47						
	comp=E,1.5nm,0.7s						
MLR	**Muntele Rosu**	6.34	35	⇑P	Pn	13 02 60.0	+0.2
PLOR	**Plostina**	6.93	36	⇑P	Pn	13 03 08.8	+0.9
VRI	**Vrincioaia**	6.97	36	⇑P	Pn	13 03 10.6	+2.2
SOKA	**Soboth**	7.54	328	*i* Pn	Pn	13 03 14.6	-1.7
	comp=E,1.2nm,0.4s						
OBKA	**Obir**	7.61	325	*i* Pn	Pn	13 03 16.5	-0.8
	comp=E,0.8nm,0.3s						
VYHS	**Vyhne**	8.21	351	*e*PN	Pn	13 03 28.1	+2.7
VYHS				*e*SN	Sn	13 05 00.5	+2.2
KBA	**Koelnbreinsper**	8.58	324	*e*Pn	Pn	13 03 30.2	-0.4
	comp=E,1.2nm,0.6s						
ABTA	**Abfaltersbach**	8.74	319	*i* Pn	Pn	13 03 31.8	-0.9
	comp=E,0.9nm,0.4s						
ABTA				*i* Sn	Sn	13 05 12.5	+1.2
	comp=E,5.5nm,0.8s						
VRAC	**Vranov**	9.39	343	LR	LR	13 07 47.6	
	comp=E,57nm,20.6s,baz=182,slow=41						
WTTA	**Wattenberg**	9.53	319	*e*Pn	Pn	13 03 43.3	-0.3
	comp=E,2.1nm,0.5s						
WTTA				*i* Sn	Sn	13 05 29.1	-1.7
	comp=E,5.8nm,0.8s						
WATA	**Walderalm**	9.61	319	*i* Pn	Pn	13 03 45.1	+0.4
	comp=E,0.9nm,0.2s						
GERES	**GERESS Array B**	9.84	331	Pn	Pn	13 03 47.3	-0.5
	baz=158,slow=14,SNR=7.4						
GERES				LR	LR	13 07 55.1	
	comp=E,65nm,18.4s,baz=150,slow=40						
	comp=E,0.6nm,0.5s						
FETA	**Feichten**	9.84	316	*i* Pn	Pn	13 03 48.3	+0.4
	comp=E,2.1nm,0.7s						
FETA				*i* Sn	Sn	13 05 41.3	+2.8
	comp=E,1.7nm,0.6s						
MOTA	**Moosalm**	9.85	318	*i* Pn	Pn	13 03 48.2	+0.2
	comp=E,3.4nm,0.6s						
MOTA				*i* Sn	Sn	13 05 41.0	+2.2
	comp=E,7.0nm,0.8s						
DAVOX	**Davos/Dischmat**	10.16	312	Pn	Pn	13 03 49.9	-2.4
	comp=E,0.2nm,0.3s,baz=137,slow=19,SNR=3.9						
DAVOX				LR	LR	13 08 43.6	
	comp=E,64nm,18.6s,baz=84,slow=44						
	comp=E,1.9nm,0.7s						
ASF	**Jabal al Asfar**	15.34	117	LR	LR	13 11 54.8	
	comp=E,48nm,20.2s,baz=42,slow=41						
ESDC	**Sonseca Array**	18.96	276	P	P	13 05 43.5	-4.2
	baz=67,slow=11,SNR=4.7						
	comp=E,0.3nm,0.8s						
HFS	**Hagfors**	20.25	350	P	P	13 06 01.7	+0.3
	comp=E,1.5nm,0.6s,baz=170,slow=10,SNR=4.2						
HFS				LR	LR	13 15 51.7	
	comp=E,38nm,18.8s,baz=154,slow=43						
	comp=E,1.5nm,0.6s						
FINES	**FINESS Array B**	21.32	7	P	P	13 06 12.4	-0.5
	comp=E,1.4nm,0.8s,baz=183,slow=11,SNR=4.5						
	comp=E,1.4nm,0.8s						
NB2	**NORSAR Subarra**	21.50	347	P	P	13 06 14.2	-0.7
	comp=Z,4.0nm,1.2s,baz=156,slow=10						
NOA	**NORSAR Array B**	21.50	347	P	P	13 06 15.0	+0.1
	comp=Z,0.5nm,0.6s,baz=154,slow=9.1,SNR=2.1						
NOA				LR	LR	13 15 48.8	
	comp=Z,17nm,20.1s,baz=175,slow=40						
	comp=Z,0.5nm,0.6s						
ARCES	**ARCESS Array B**	29.31	3	LR	LR	13 20 02.8	
	comp=Z,33nm,20.7s,baz=94,slow=38						
BORG	**Borgarnes**	34.30	329	LR	LR	13 24 44.0	
	comp=Z,50nm,19.3s,baz=42,slow=41						
MKAR	**Makanchi Array**	43.99	60	P	P	13 09 31.8	-1.8
	comp=Z,0.2nm,0.7s,baz=283,slow=7.1,SNR=1.8						
	comp=Z,0.2nm,0.7s						

*BEO **01** 13:09:45.8±0.6, 40°.34N×21°.03E, h0^{km}±2^{km}, ML3.3/12*

*IDC **01** 13:09:45.1±1.5, 40°.33N×20°.69E, h0^{km}, mb3.2/5, mbtmp3.3/9, ML3.4/4, Error ellipse: s-maj=24.0km s-min=17.7km az=165.0*

*ATH **01** 13:09:47.4, 40°.46N×20°.81E, h10^{km}±1^{km}, ML3.3/18, Manual Solution by A.Agalos First location: 2019/06/01 13:11:00, This location: 2019/06/01 13:38:12 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*SKO **01** 13:09:48.9, 40°.45N×20°.87E, h7^{km}, ML3.4*

*TIR **01** 13:09:48.3, 40°.50N×20°.84E, h6^{km}±3^{km}, Ml3.6/6*

*THE **01** 13:09:48.8, 40°.5N±1°.0×2°1E±°, h4^{km}±1^{km}, M3.1/23, MLh3.1/23*

*SOF **01** 13:09:56.3, 40°.9N±0°.2×21°.4E±0°.3, h8^{km}±31^{km}, MD3.2/4*

ISC 01 13:09:47.8±0.8**, 40°.46N**±0°.02×**20°.82E**±0°.02**, h11**^{km}±5^{km}**, n158, σ1^{s}.44**/210**, mb3.2**/4**, 6C-8D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	0.17	351	Pg	Pg	13 09 50.5	-1.0
KBN				Sg	Sg	13 09 53.5	-0.7
KBN				AML	AML	13 09 53.9	
	80nm,0.4s						
NEST	**Nestorio**	0.18	105	Pg	Pg	13 09 51.9	+0.1
NEST				Sg	Sg	13 09 55.7	+1.1
NEST				AML	AML	13 10 00.2	
	40nm,0.4s						
NEST	**Nestorio**	0.18	105	P	Pg	13 09 52.2	+0.4
NEST				S	Sg	13 09 55.0	+0.4
NEST	**Nestorio**	0.18	105	P	Pg	13 09 52.0	+0.1
NEST				S	Sg	13 09 54.7	+0.1
PENT	**Pentalofos**	0.36	137	P	Pg	13 09 55.0	0.0
PENT				S	Sb	13 10 01.6	-0.4
PENT	**Pentalofos**	0.36	137	P	Pg	13 09 54.8	-0.2
PENT				S	Sg	13 10 00.1	+0.3
OHR	**Ohrid**	0.65	359	P	Pg	13 10 00.6	+0.1
OHR				S	Sb	13 10 10.4	0.0
OHR	**Ohrid**	0.65	359	⇓*i*Pg	Pg	13 10 00.3	-0.2
OHR				*i* Sg	Sb	13 10 10.3	0.0
OHR				*e*Lg	Lg	13 10 12.4	
	comp=E,1µm,0.4s						
OHR				*e*Lg	Lg	13 10 12.9	
	comp=N,714nm,0.3s						
OHR	**Ohrid**	0.65	359	*e*Pg	Pg	13 10 00.3	-0.2
OHR				*e*Sg	Sb	13 10 11.2	+0.9
KPRO	**Kipourio**	0.66	140	P	Pg	13 10 00.1	-0.4
KPRO				S	Sb	13 10 11.3	+0.8
KPRO	**Kipourio**	0.66	140	P	Pg	13 09 60.0	-0.6
KPRO				S	Sg	13 10 08.8	-0.3
KZN	**Kozani**	0.74	102	P	Pb	13 10 02.6	-0.2
KZN				S	Sb	13 10 12.8	-0.2
KZN	**Kozani**	0.74	102	P	Pg	13 10 02.3	+0.1
JAN	**Janina**	0.80	178	P	Pg	13 10 02.2	-1.1
JAN				S	Sn	13 10 18.7	+1.6
JAN	**Janina**	0.80	178	P	Pg	13 10 02.2	-1.1
SRN	**Sarande**	0.85	228	Pg	Pg	13 10 04.2	-0.1
SRN				S	Sn	13 10 19.3	+1.0
SRN				AML	AML	13 10 20.5	
	comp=N,3.8nm,0.8s						
NASA	**Naoussa**	0.97	79	P	Pg	13 10 05.9	-0.5
NASA				S	Sb	13 10 19.7	+0.3
KTI	**Kastanea**	0.99	93	P	Pg	13 10 06.6	-0.4
IGT	**Igoumenitsa**	1.00	202	P	Pn	13 10 09.7	+1.9
IGT				Sg	Sn	13 10 24.6	+2.7
IGT	**Igoumenitsa**	1.00	202	P	Pg	13 10 06.6	-0.4
IGT				S	Sn	13 10 24.2	+2.3
IGT	**Igoumenitsa**	1.00	202	*i* Pg	Pg	13 10 06.8	-0.3
IGT				*i* Sg	Sb	13 10 21.8	+1.5
IGT	**Igoumenitsa**	1.00	202	P	Pg	13 10 06.6	-0.4
KEK	**Kerkira**	1.08	227	P	Pn	13 10 09.9	+0.9
KEK				S	Sn	13 10 25.8	+1.9
KEK	**Kerkira**	1.08	227	P	Pb	13 10 08.7	+0.2
TIR	**Tirane**	1.14	321	P	Pb	13 10 09.6	0.0
TIR				Sg	Sn	13 10 28.6	+3.2
TIR				AML	AML	13 10 33.4	
	comp=N,3.0nm,0.6s						
TIR	**Tirane**	1.14	321	⇑P	Pn	13 10 11.2	+1.4
TIR	**Tirane**	1.14	321	*i* Pg	Pb	13 10 08.9	-0.7
TIR				*i* Sg	Sn	13 10 27.5	+2.1
TIR	**Tirane**	1.14	321	*e*Pg	Pb	13 10 08.7	-0.9
TIR				*e*Sg	Sn	13 10 28.8	+3.4
TIR	**Tirane**	1.14	321	P	Pb	13 10 08.4	-1.2
TETR	**Tetrakomo, Epi**	1.17	162	P	Pb	13 10 10.2	+0.1
PHP	**Peshkopia**	1.26	347	P	Pn	13 10 11.3	-0.1
THL	**Klokotos Trika**	1.28	134	P	Pn	13 10 11.4	-0.3
THL				S	Sn	13 10 30.7	+1.9
THL	**Klokotos Trika**	1.28	134	P	Pn	13 10 11.0	-0.6
TYRN	**Tyrnavos**	1.32	124	P	Pb	13 10 12.7	+0.2
TYRN				S	Sg	13 10 34.0	+3.8
TYRN	**Tyrnavos**	1.32	124	P	Pn	13 10 12.2	0.0
AMPL	**Ampelaki**	1.57	169	P	Pb	13 10 17.1	+0.3
AMPL				S	Sg	13 10 40.5	+2.3
SKO	**Skopje**	1.58	17	*i* Pg	Pb	13 10 17.4	+0.3
VAY	**Valandovo**	1.58	57	P	Pn	13 10 16.5	+0.8
VAY				S	Sb	13 10 37.5	+0.5
VAY	**Valandovo**	1.58	57	⇓*i*Pg	Pb	13 10 16.7	-0.4
VAY				*i* Sg	Sg	13 10 39.8	+1.2
VAY				*e*Lg	Lg	13 10 44.5	
	comp=N,683nm,0.8s						
VAY				*e*Lg	Lg	13 10 44.9	
	comp=E,566nm,0.7s						
THE	**Thessaloniki**	1.64	83	P	Pn	13 10 16.9	+0.3
THE				S	Sb	13 10 39.2	+0.3
THE	**Thessaloniki**	1.64	83	*i* Pg	Pn	13 10 17.0	+0.4
THE				*i* Sg	Sg	13 10 39.6	-1.0
THE	**Thessaloniki**	1.64	83	P	Pn	13 10 16.1	-0.5
LKD2	**Lefkada island**	1.67	184	P	Pb	13 10 18.5	-0.1
KNT	**Kendrikon**	1.73	65	P	Pn	13 10 18.4	+0.6
KNT	**Kendrikon**	1.73	65	*i* Pn	Pn	13 10 18.2	+0.5
KNT	**Kendrikon**	1.73	65	P	Pn	13 10 17.7	-0.1
PUK	**Puka**	1.73	336	Pn	Pg	13 10 20.9	0.0
PUK				Sn	Sg	13 10 45.9	+2.5
PUK				AML	AML	13 10 52.6	
	comp=E,3.6nm,0.5s						
HORT	**Hortiatis**	1.74	85	P	Pn	13 10 18.4	+0.3
HORT	**Hortiatis**	1.74	85	P	Pn	13 10 17.5	-0.6
NYDR	**Nydri-Lefkada**	1.75	183	P	Pb	13 10 19.9	0.0
MAKR	**Makrakomi, Fth**	1.77	145	P	Pb	13 10 19.9	-0.3
MAKR	**Makrakomi, Fth**	1.77	145	P	Pn	13 10 18.4	0.0
SCTE	**Santa Cesarea**	1.84	259	P	Pn	13 10 19.1	-0.2
EVGI	**Lefkada island**	1.84	184	P	Pn	13 10 20.4	+1.1
AGG	**Agios Georgios**	1.85	140	P	Pn	13 10 20.5	+1.0
AGG	**Agios Georgios**	1.85	140	P	Pn	13 10 20.1	+0.6
ULC	**Ulcinj**	1.92	322	*i* Pn	Pn	13 10 22.2	+1.8
PVO	**Paravola**	1.92	163	P	Pn	13 10 20.9	+0.4
SOH	**Sokhos**	1.96	79	P	Pn	13 10 21.7	+0.6
SOH	**Sokhos**	1.96	79	P	Pn	13 10 21.1	0.0
BCI	**Bajram Curri**	1.99	344	P	Pb	13 10 25.2	+1.2
BCI				Sn	Sg	13 10 52.5	+0.9
BCI				AML	AML	13 10 55.5	
	comp=E,2.1nm,0.9s						
PLG	**Polygyros**	2.01	92	P	Pn	13 10 22.5	+0.8
PLG	**Polygyros**	2.01	92	P	Pn	13 10 21.0	-0.7
NEO	**Neokhori**	2.18	121	P	Pn	13 10 25.0	+0.9
NEO	**Neokhori**	2.18	121	P	Pn	13 10 23.8	-0.3
SRS	**Serrai**	2.21	72	P	Pn	13 10 25.2	+0.8
SRS	**Serrai**	2.21	72	*i* Pn	Pn	13 10 25.2	+0.8
SRS	**Serrai**	2.21	72	P	Pn	13 10 24.1	-0.3
AXAR	**Agios Charalam**	2.21	139	P	Pn	13 10 24.7	+0.2
KKB	**Krupnik**	2.22	51	*i* P	Pn	13 10 26.2	+1.6
KKB	**Krupnik**	2.22	51	*i* Pn	Pn	13 10 26.0	+1.3
PAIG	**Paliouri**	2.25	103	P	Pn	13 10 25.2	+0.2
VLS	**Valsamata**	2.29	185	P	Pn	13 10 25.9	+0.4
PDG	**Podgorica**	2.29	330	*e*Pn	Pn	13 10 27.3	+1.8
PDG	**Podgorica**	2.29	330	⇑P	Pn	13 10 27.4	+1.8
PDG	**Podgorica**	2.29	330	*e*Pn	Pn	13 10 27.2	+1.8
PDG				*e*Sn	Sb	13 10 58.1	+0.6
PSDA	**Pessada-Kefalo**	2.35	185	P	Pn	13 10 26.2	-0.1
BOSS	**Bosilegrad**	2.39	31	*e*Pn	Pn	13 10 27.4	+0.5
BOSS				*e*Sn	Sn	13 10 57.3	+1.2
OUR	**Ouranopolis**	2.42	92	P	Pn	13 10 27.1	-0.2
KOKK	**Kokkinochori,**	2.45	81	P	Pn	13 10 27.2	-0.4
BARS	**Barje**	2.47	17	⇑*i*Pn	Pn	13 10 28.7	+0.7
BARS	**Barje**	2.47	17	*e*Pn	Pn	13 10 28.7	+0.7
BARS				*e*Sn	Sn	13 10 59.4	+1.2
MMB	**Musomishta**	2.47	63	*i* P	Pb	13 10 30.4	-1.8
MMB	**Musomishta**	2.47	63	*i* Pn	Pn	13 10 30.0	+2.0
LKR	**Lokris**	2.47	136	P	Pn	13 10 28.2	+0.2
BEY	**Berane**	2.51	344	*i* Pn	Pn	13 10 30.7	+2.1
HCY	**Herceg Novi**	2.65	319	*e*Pn	Pn	13 10 30.6	+0.2
SELS	**Selova**	2.77	5	*e*Pn	Pn	13 10 33.0	+0.9
SELS				*e*Sn	Sn	13 11 08.6	+3.1
PLNA	**Plana**	2.81	43	*i* P	Pn	13 10 33.9	+1.1
VTS	**Vitosha**	2.82	39	*i* P	Pn	13 10 34.7	+1.8
SJES	**Sjenica**	2.87	348	*e*Pn	Pn	13 10 35.6	+2.0
SJES	**Sjenica**	2.87	348	*e*Pn	Pn	13 10 36.0	+2.4
SJES				*e*Sn	Sb	13 11 12.0	-2.2
TREB	**Trebinje**	2.92	321	*e*Pn	Pn	13 10 34.5	+0.3
BRY	**Bratogost**	2.98	326	*e*Pn	Pn	13 10 36.1	+1.0
UPM	**Unac-Piva**	3.09	333	*e*Pn	Pn	13 10 39.4	+2.7
GOCS	**Kraljevo Serbi**	3.10	1	*e*Pn	Pn	13 10 37.5	+0.7
GOCS				*e*Sn	Sn	13 11 17.1	+3.3
ZAPS	**Zavoj**	3.12	25	*e*Pn	Pn	13 10 38.0	+1.0
ZAPS				*e*Sn	Sn	13 11 16.0	+1.7
MATE	**Matera**	3.14	275	⇓P	Pn	13 10 38.9	+1.7
IVAS	**Ivanjica**	3.15	351	*e*Pn	Pn	13 10 37.0	-0.5
RZN	**Rozhen**	3.21	66	*i* P	Pn	13 10 39.9	+1.6
BOVS	**Bovan**	3.24	11	*e*Pn	Pn	13 10 38.7	+0.1
BOVS				*e*Sn	Sn	13 11 17.3	+0.2
RUDO	**Rudo**	3.33	342	*e*Pn	Pn	13 10 40.9	+1.0
STON	**Ston**	3.36	317	*e*Pn	Pn	13 10 39.2	-0.9
TIP	**Timpagrande**	3.38	249	⇓P	Pn	13 10 42.4	+1.8
GRUS	**Gruza**	3.43	359	*e*Pn	Pn	13 10 41.6	+0.5
ZAGS	**Zajecar**	3.51	17	*e*Pn	Pn	13 10 42.7	+0.4
ZAGS				*e*Sn	Sn	13 11 24.2	+0.4
BBLS	**Lazi&#263i**	3.56	343	*e*Pn	Pn	13 10 44.8	+1.7
BBLS	**Lazi&#263i**	3.56	343	*e*Pn	Pn	13 10 44.9	+1.8
KDZ	**Kurdzhali**	3.61	70	*e*P	Pg	13 10 56.5	-0.5
DIVS	**Divibare**	3.69	351	*e*Pn	Pn	13 10 45.4	+0.6
DIVS				*e*Sn	Sn	13 11 29.6	+1.3
BORS2	**Bor- Borsko je**	3.73	13	*e*Pn	Pn	13 10 45.7	+0.3
TRUS	**Trudelj**	3.77	355	*e*Pn	Pn	13 10 46.5	+0.6
HAPS	**Han Pijesak,Bl**	3.88	340	*e*Pn	Pn	13 10 48.4	+0.9
KUBS	**Kucevo**	4.00	9	*e*Pn	Pn	13 10 47.2	-1.8
TEKS	**Tekeris**	4.20	347	*e*Pn	Pn	13 10 52.9	+1.2
TEKS	**Tekeris**	4.20	347	*e*Pn	Pn	13 10 52.9	+1.2
AVAS	**Avala Beograd**	4.24	357	*e*Pn	Pn	13 10 52.3	0.0
MDVR	**Moldovita**	4.37	8	⇑P	Pn	13 10 56.1	+1.9
HERR	**Herculane**	4.57	14	⇓P	Pn	13 11 00.2	+3.3
VRSS	**Vrsac**	4.67	4	*e*Pn	Pn	13 10 58.5	+0.2
FRGS	**Fruska Gora**	4.75	351	*e*Pn	Pn	13 10 56.2	-3.2
FRGS	**Fruska Gora**	4.75	351	*e*Pn	Pn	13 10 59.8	+0.4
BLY	**Banja Luka**	5.06	329	*e*Pn	Pn	13 11 04.4	+0.9
A050A	**Klekovaca**	5.12	323	*e*Pn	Pn	13 11 05.8	+1.3
BZS	**Buzias**	5.19	6	⇓P	Pn	13 11 08.1	+2.8
SURR	**Surduc**	5.38	10	⇓P	Pn	13 11 11.2	+3.3
A051A	**Mrakovica**	5.38	329	*e*Pn	Pn	13 11 08.5	+0.4
MORH	**Mrgy, Hungar**	5.97	345	⇓P	Pn	13 11 17.9	+1.9
IDI	**Anoyia**	6.08	147	Sn	Sn	13 12 27.2	-0.2
	comp=E,0.3nm,0.3s,baz=112,slow=8.1,SNR=2.1						
MLR	**Muntele Rosu**	6.28	35	Pn	Pn	13 11 24.5	+4.1
	comp=E,0.4nm,0.3s,baz=302,slow=8.2,SNR=3.5						
MLR				Sn	Sn	13 12 35.2	+3.0
	comp=E,0.3nm,0.3s,baz=312,slow=24,SNR=3.4						
	comp=E,1.3nm,0.4s						
MLR	**Muntele Rosu**	6.28	35	⇑P	Pn	13 11 23.8	+3.3
BOJS	**Bojanci**	6.49	323	*e*Pn	Pn	13 11 21.8	-1.4
CRES	**Cresnjevec Ost**	6.64	326	*e*Pn	Pn	13 11 25.0	-0.3
VRI	**Vrincioaia**	6.92	37	⇑P	Pn	13 11 31.8	+2.7
CEY	**Cerknica**	7.05	321	*e*Pn	Pn	13 11 30.0	-0.9
SOKA	**Soboth**	7.50	328	*e*Pn	Pn	13 11 38.3	+1.2
	comp=E,2.3nm,0.5s						
SOKA				*i* Sn	Sn	13 13 00.6	-1.6
	comp=E,1.7nm,0.5s						
OBKA	**Obir**	7.57	325	*e*Pn	Pn	13 11 37.5	-0.6
OBKA	**Obir**	7.57	325	*i* Pn	Pn	13 11 40.3	+2.2
	comp=E,1.7nm,0.4s						
OBKA				*i* Sn	Sn	13 13 04.9	+0.9
	comp=E,16nm,0.8s						
ARSA	**Arzberg**	7.79	332	*i* Pn	Pn	13 11 43.1	+2.0
	comp=E,2.0nm,0.4s						
KECS	**Kecovo**	8.03	358	*e*PN	Pn	13 11 48.9	+4.6
VYHS	**Vyhne**	8.16	351	*e*PN	Pn	13 11 51.9	+5.8
VYHS				*e*SN	Sn	13 13 17.5	-0.7
KBA	**Koelnbreinsper**	8.54	323	*i* Pn	Pn	13 11 53.5	+1.9
	comp=E,0.7nm,0.3s						
KBA				*i* Sn	Sn	13 13 26.7	-1.2
	comp=E,1.2nm,0.4s						
ABTA	**Abfaltersbach**	8.70	319	*i* Pn	Pn	13 11 56.1	+2.4
	comp=E,3.1nm,0.6s						
ABTA				*e*Sn	Sn	13 13 30.2	-1.6
	comp=E,8.4nm,0.7s						
MOA	**Molln**	8.76	330	*i* Sn	Sn	13 13 32.4	-0.7
	comp=E,2.2nm,0.5s						
WTTA	**Wattenberg**	9.49	319	*i* Pn	Pn	13 12 06.0	+1.5
	comp=E,2.1nm,0.3s						
WTTA				*e*Sn	Sn	13 13 49.3	-2.1
	comp=E,9.1nm,0.6s						
WATA	**Walderalm**	9.57	319	*i* Pn	Pn	13 12 07.1	+1.4
	comp=E,5.2nm,0.5s						
WATA				*i* Sn	Sn	13 13 52.4	-0.9
	comp=E,6.8nm,0.5s						
SQTA	**Sankt Quirin**	9.68	317	*i* Pn	Pn	13 12 11.0	+3.9
	comp=E,3.4nm,0.4s						
SQTA				*i* Sn	Sn	13 13 53.2	-2.7
	comp=E,4.4nm,0.5s						
FETA	**Feichten**	9.81	315	*e*Pn	Pn	13 12 10.5	+1.6
	comp=E,4.2nm,0.8s						
FETA				*e*Sn	Sn	13 13 58.7	-0.4
	comp=E,3.2nm,0.6s						
MOTA	**Moosalm**	9.82	318	*i* Pn	Pn	13 12 08.4	-0.6
	comp=E,2.2nm,0.5s						
MOTA				*i* Sn	Sn	13 13 58.1	-1.2
	comp=E,3.8nm,0.5s						
BRTR	**Keskin Array B**	9.85	90	Pn	Pn	13 12 11.0	+1.5
	baz=245,slow=15,SNR=1.5						
	comp=E,0.2nm,0.5s						
DAVOX	**Davos/Dischmat**	10.13	312	Pn	Pn	13 12 12.7	-0.7
	comp=E,0.3nm,0.3s,baz=145,slow=18,SNR=3.7						
DAVOX				Sn	Sn	13 14 03.7	-3.4
	comp=E,0.2nm,0.3s,baz=90,slow=20,SNR=2.2						
	comp=E,1.1nm,0.5s						
ESDC	**Sonseca Array**	18.97	276	P	P	13 14 07.7	-1.5
	baz=82,slow=10,SNR=5.8						
	comp=E,0.5nm,0.7s						
HFS	**Hagfors**	20.19	350	P	P	13 14 20.7	-1.5
	comp=E,1.3nm,0.6s,baz=149,slow=12,SNR=1.7						
	comp=E,1.3nm,0.6s						
FINES	**FINESS Array B**	21.26	7	P	P	13 14 32.5	-1.2
	comp=E,1.7nm,0.8s,baz=162,slow=13,SNR=4.7						
	comp=E,1.7nm,0.8s						
NOA	**NORSAR Array B**	21.44	347	P	P	13 14 35.0	-0.8
	comp=E,0.4nm,0.7s,baz=166,slow=10,SNR=3.3						
	comp=E,0.4nm,0.7s						
EKA	**Eskdalemuir Ar**	21.75	321	P	P	13 14 39.5	+0.5
	comp=E,1.1nm,0.7s,baz=122,slow=9.8,SNR=3.8						
	comp=E,1.1nm,0.7s						
MKAR	**Makanchi Array**	43.94	60	P	P	13 17 54.0	-0.6
	comp=E,0.2nm,0.6s,baz=287,slow=4.9,SNR=3.6						
	comp=E,0.2nm,0.6s						
ASAR	**Alice Springs**	122.16	95	PKP	PKPdf	13 28 41.9	-1.0
	comp=E,0.3nm,0.8s,baz=326,slow=2.4,SNR=4.1						

*TIR **01** 13:24:57.6, 40°.48N×20°.74E, h11^{km}±1^{km}, Ml2.7/6*

*ATH **01** 13:24:58.4, 40°.48N×20°.81E, h9^{km}±1^{km}, ML2.6/15, Manual Solution by A.Agalos First location: 2019/06/01 13:26:10, This location: 2019/06/01 13:51:38 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*THE **01** 13:24:58.5, 40°N±2°×2°1E±°, h0^{km}±1^{km}, M2.5/19, MLh2.5/19*

ISC 01 13:24:58.3±0.9**, 40°.49N**±0°.02×**20°.78E**±0°.03**, h10**^{km}±7^{km}**, n55, σ0^{s}.43**/64**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	0.14	3	Pg	Pg	13 25 01.4	-0.1
KBN				Sg	Sg	13 25 03.1	-0.7
KBN				AML	AML	13 25 04.2	
	37nm,0.4s						
KBN				AML	AML	13 25 04.6	
	20nm,0.4s						
NEST	**Nestorio**	0.22	109	Pg	Pg	13 25 03.1	+0.3
NEST				Sg	Sg	13 25 07.0	+1.1
NEST				AML	AML	13 25 07.2	
	5.2nm,0.2s						
NEST				AML	AML	13 25 07.3	
	6.2nm,0.3s						
NEST	**Nestorio**	0.22	109	P	Pg	13 25 03.0	+0.3
NEST	**Nestorio**	0.22	109	P	Pg	13 25 02.9	+0.1
NEST				S	Sg	13 25 05.6	-0.3
PENT	**Pentalofos**	0.40	136	P	Pg	13 25 06.1	0.0
PENT	**Pentalofos**	0.40	136	P	Pg	13 25 06.1	0.0
PENT				S	Sg	13 25 11.4	0.0
OHR	**Ohrid**	0.63	1	P	Pg	13 25 10.6	+0.1
KPRO	**Kipourio**	0.69	140	P	Pg	13 25 11.3	-0.3
KPRO	**Kipourio**	0.69	140	P	Pg	13 25 11.4	-0.3
KPRO				S	Sg	13 25 21.0	+0.3
KZN	**Kozani**	0.78	103	P	Pb	13 25 14.1	+0.2
KZN	**Kozani**	0.78	103	P	Pb	13 25 13.8	-0.1
JAN	**Janina**	0.83	176	P	Pg	13 25 13.2	-1.0
JAN	**Janina**	0.83	176	P	Pg	13 25 13.6	-0.6
JAN				S	Sb	13 25 25.7	-0.3
SRN	**Sarande**	0.85	225	Pg	Pg	13 25 14.6	0.0
SRN				Sg	Sb	13 25 26.7	+0.2
SRN				AML	AML	13 25 31.5	
	0.7nm,0.5s						
NASA	**Naoussa**	0.99	81	P	Pg	13 25 17.2	-0.1
IGT	**Igoumenitsa**	1.01	200	Pg	Pb	13 25 18.2	+0.3
IGT				Sg	Sn	13 25 32.4	-0.5
IGT				AML	AML	13 25 39.8	
	0.5nm,0.7s						
IGT	**Igoumenitsa**	1.01	200	P	Pg	13 25 17.3	-0.4
IGT	**Igoumenitsa**	1.01	200	P	Pg	13 25 17.8	+0.1
KTI	**Kastanea**	1.02	95	P	Pg	13 25 17.6	-0.4
KEK	**Kerkira**	1.08	225	P	Pb	13 25 19.1	+0.1
KEK	**Kerkira**	1.08	225	P	Pn	13 25 19.9	+0.5
TIR	**Tirane**	1.11	322	P	Pn	13 25 20.1	+0.2
TETR	**Tetrakomo, Epi**	1.20	161	P	Pg	13 25 21.4	+0.1
PHP	**Peshkopia**	1.23	348	Pg	Pn	13 25 20.9	-0.6
PHP				AML	AML	13 25 42.5	
	0.5nm,0.5s						
PRGA	**Parga**	1.23	194	P	Pb	13 25 21.7	+0.1
THL	**Klokotos Trika**	1.32	134	P	Pn	13 25 22.8	+0.1
THL	**Klokotos Trika**	1.32	134	P	Pn	13 25 22.7	-0.1
TYRN	**Tyrnavos**	1.36	124	P	Pg	13 25 24.7	+0.4
TYRN	**Tyrnavos**	1.36	124	P	Pn	13 25 23.5	+0.3
TSLK	**Tsoukalades, L**	1.66	183	P	Pn	13 25 28.1	+0.6
TSLK	**Tsoukalades, L**	1.66	183	P	Pn	13 25 27.4	0.0
THE	**Thessaloniki**	1.67	84	P	Pn	13 25 27.5	-0.1
LKD2	**Lefkada island**	1.70	183	P	Pn	13 25 28.2	+0.2
KNT	**Kendrikon**	1.75	67	P	Pn	13 25 28.9	+0.2
KNT	**Kendrikon**	1.75	67	P	Pn	13 25 28.7	+0.1
EVR	**Evrytania**	1.76	153	P	Pn	13 25 29.4	+0.5
NYDR	**Nydri-Lefkada**	1.77	182	P	Pn	13 25 29.6	+0.7
HORT	**Hortiatis**	1.77	86	P	Pn	13 25 29.1	0.0
HORT	**Hortiatis**	1.77	86	P	Pn	13 25 28.8	-0.3
MAKR	**Makrakomi, Fth**	1.80	144	P	Pb	13 25 30.8	-0.6
MAKR	**Makrakomi, Fth**	1.80	144	P	Pn	13 25 29.4	0.0
SCTE	**Santa Cesarea**	1.82	258	P	Pn	13 25 30.4	+0.8
EVGI	**Lefkada island**	1.86	183	P	Pb	13 25 31.5	-0.9
AGG	**Agios Georgios**	1.89	140	P	Pn	13 25 31.6	+1.0
AGG	**Agios Georgios**	1.89	140	P	Pn	13 25 30.6	0.0
PVO	**Paravola**	1.95	163	P	Pn	13 25 31.6	+0.1
BCI	**Bajram Curri**	1.96	344	Pn	Pg	13 25 35.6	-0.2
BCI				Sn	Sb	13 25 59.1	+0.7
BCI				AML	AML	13 26 09.0	
	0.4nm,0.4s						
SOH	**Sokhos**	1.99	79	P	Pn	13 25 32.7	+0.6
SOH	**Sokhos**	1.99	79	P	Pn	13 25 31.9	-0.1
PLG	**Polygyros**	2.04	92	P	Pn	13 25 33.4	+0.7
PLG	**Polygyros**	2.04	92	P	Pn	13 25 32.9	+0.2
ANX	**Ano Chora**	2.08	155	P	Pn	13 25 33.6	+0.1
ANX	**Ano Chora**	2.08	155	P	Pn	13 25 33.3	-0.1
PAIG	**Paliouri**	2.29	103	P	Pn	13 25 36.6	+0.5
KOKK	**Kokkinochori,**	2.47	81	P	Pn	13 25 38.6	0.0

*BEO **01** 13:42:15.5±0.6, 40°.20N×20°.97E, h0^{km}, ML3.1/8*

*IDC **01** 13:42:17.9±1.7, 40°.44N×20°.79E, h0^{km}, mb3.5/6, mbtmp3.5/10, ML3.1/3, MS2.6/2, Error ellipse: s-maj=21.3km s-min=18.7km az=19.0*

*TIR **01** 13:42:18.9, 40°.42N×20°.78E, h0^{km}±3^{km}, Ml3.2/4*

*THE **01** 13:42:19.8, 40°N±1°×2°1E±°, h1^{km}±1^{km}, M3.0/20, MLh3.0/20*

*PDG **01** 13:42:19.6±1.0, 40°.45N×20°.75E, h10^{km}±2^{km}, ML3.3/11, Error ellipse: s-maj=1.1km s-min=1.7km az=0.0*

*ATH **01** 13:42:19.6, 40°.34N×20°.82E, h9^{km}±1^{km}, ML3.1/14, Manual Solution by A.Agalos First location: 2019/06/01 13:42:40, This location: 2019/06/01 14:10:45 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*SKO **01** 13:42:20.7, 40°.45N×20°.73E, h10^{km}, ML3.0*

ISC 01 13:42:18.9±0.9**, 40°.38N**±0°.02×**20°.76E**±0°.02**, h8**^{km}±7^{km}**,**

n146, $\sigma 1\overset{s}{.}08$/189, mb3.6/5, 9C-12D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEST	Nestorio	0.23	81	Pg	Pg	13 42 23.8	+0.4
NEST				Sg	Sg	13 42 27.8	+1.2
NEST				AML	AML	13 42 28.6	
	22nm,0.2s						
NEST	Nestorio	0.23	81	P	Pg	13 42 23.9	+0.4
NEST				S	Sg	13 42 26.6	+0.2
NEST	Nestorio	0.23	81	P	Pg	13 42 23.8	+0.4
NEST				S	Sg	13 42 26.7	+0.2
KBN	Korca	0.24	5	Pg	Pg	13 42 22.6	-1.2
KBN				Sg	Sg	13 42 26.2	-0.9
KBN				AML	AML	13 42 27.0	
	87nm,0.4s						
PENT	Pentalofos	0.34	122	P	Pg	13 42 26.1	+0.4
PENT				S	Sg	13 42 30.8	+0.5
PENT	Pentalofos	0.34	122	P	Pg	13 42 25.7	0.0
PENT				S	Sg	13 42 29.3	-0.9
KPRO	Kipourio	0.63	132	P	Pg	13 42 31.1	0.0
KPRO				S	Sg	13 42 41.2	+1.9
KPRO	Kipourio	0.63	132	P	Pg	13 42 30.9	-0.1
KPRO				S	Sg	13 42 38.6	-0.7
MSVA	Metsovo	0.69	152	P	Pg	13 42 32.2	0.0
MSVA				S	Sg	13 42 40.8	-0.5
JAN	Janina	0.73	174	P	Pg	13 42 32.5	-0.4
JAN				S	Sg	13 42 43.6	+1.2
JAN	Janina	0.73	174	P	Pg	13 42 32.5	-0.4
JAN				S	Sg	13 42 42.3	-0.1
OHR	Ohrid	0.73	2	⇓*i*Pg	Pg	13 42 32.4	-0.5
OHR				*i* Sg	Sg	13 42 43.0	+0.5
OHR				*e*Lg	Lg	13 42 43.5	
	comp=E,1µm,0.6s						
OHR				*e*Lg	Lg	13 42 45.1	
	comp=N,471nm,0.3s						
OHR	Ohrid	0.73	2	*e*Pg	Pg	13 42 32.2	-0.8
OHR				*e*Sg	Sg	13 42 43.0	+0.5
SRN	Sarande	0.77	229	P	Pg	13 42 34.0	+0.4
SRN				Sg	Sn	13 42 48.1	+0.3
SRN				AML	AML	13 42 48.1	
	comp=N,2.1nm,0.3s						
KZN	Kozani	0.78	95	P	Pg	13 42 33.3	-0.5
KZN				S	Sg	13 42 45.5	+1.5
KZN	Kozani	0.78	95	P	Pg	13 42 34.2	+0.4
IGT	Igoumenitsa	0.91	201	P	Pb	13 42 37.7	+0.8
IGT				Sg	Sn	13 42 52.9	+1.5
IGT	Igoumenitsa	0.91	201	P	Pg	13 42 36.6	+0.3
IGT				S	Sn	13 42 51.0	-0.4
IGT	Igoumenitsa	0.91	201	*i* Pg	Pg	13 42 36.6	+0.3
IGT				*i* Sg	Sn	13 42 53.1	+1.7
IGT	Igoumenitsa	0.91	201	P	Pg	13 42 36.7	+0.3
VLO	Vlora	0.97	276	P	Pn	13 42 38.8	0.0
VLO				Sg	Sn	13 42 53.3	+0.6
KEK	Kerkira	0.99	228	P	Pb	13 42 38.6	+0.2
KEK				S	Sn	13 42 54.8	+1.4
KEK	Kerkira	0.99	228	P	Pn	13 42 39.2	0.0
NASA	Naoussa	1.03	76	P	Pb	13 42 38.9	-0.1
KTI	Kastanea	1.04	89	P	Pb	13 42 39.2	0.0
TETR	Tetrakomo, Epi	1.11	159	P	Pb	13 42 39.9	-0.5
TIR	Tirane	1.18	325	Pg	Pn	13 42 40.1	-1.7
TIR				Sg	Sg	13 42 59.4	+2.6
TIR				AML	AML	13 43 04.5	
	comp=N,1.9nm,0.9s						
TIR	Tirane	1.18	325	⇑P	Pn	13 42 40.4	-1.3
TIR	Tirane	1.18	325	*e*Pg	Pn	13 42 40.4	-1.3
TIR	Tirane	1.18	325	*e*Pg	Pn	13 42 39.3	-2.4
TIR				*e*Sg	Sg	13 43 00.1	+3.3
THL	Klokotos Trika	1.26	130	P	Pn	13 42 42.4	-0.5
THL				S	Sn	13 43 00.4	+0.3
THL	Klokotos Trika	1.26	130	P	Pn	13 42 41.9	-1.0
TYRN	Tyrnavos	1.31	120	P	Pn	13 42 43.6	0.0
TYRN				S	Sn	13 43 01.7	+0.4
TYRN	Tyrnavos	1.31	120	P	Pn	13 42 43.0	-0.6
AMPL	Ampelaki	1.50	166	P	Pb	13 42 47.4	+0.4
AMPL				S	Sg	13 43 07.5	+0.4
TSLK	Tsoukalades, L	1.56	183	P	Pb	13 42 48.8	+0.8
TSLK	Tsoukalades, L	1.56	183	P	Pn	13 42 47.6	+0.7
LKD2	Lefkada island	1.59	183	P	Pn	13 42 48.1	+0.7
VAY	Valandovo	1.67	55	P	Pn	13 42 49.1	+0.7
VAY	Valandovo	1.67	55	*i* Pn	Pn	13 42 49.2	+0.8
VAY				*e*Sg	Sg	13 43 14.9	+2.5
VAY				*e*Lg	Lg	13 43 19.5	
	comp=N,264nm,1.0s						
VAY				*e*Lg	Lg	13 43 21.6	
	comp=E,206nm,0.8s						
NYDR	Nydri-Lefkada	1.67	182	P	Pn	13 42 49.2	+0.8
SKO	Skopje	1.67	18	*e*Pn	Pn	13 42 49.4	+0.9
THE	Thessaloniki	1.70	81	P	Pn	13 42 48.9	+0.1
THE	Thessaloniki	1.70	81	*i* Pn	Pn	13 42 50.4	+1.5
EVGI	Lefkada island	1.76	183	P	Pn	13 42 50.1	+0.4
EVGI	Lefkada island	1.76	183	P	Pn	13 42 49.7	0.0
SCTE	Santa Cesarea	1.78	261	P	Pn	13 42 49.9	-0.1
HORT	Hortiatis	1.80	82	P	Pn	13 42 50.2	-0.2
HORT	Hortiatis	1.80	82	P	Pn	13 42 49.8	-0.5
KNT	Kendrikon	1.80	64	P	Pn	13 42 50.1	-0.2
KNT	Kendrikon	1.80	64	*i* Pn	Pn	13 42 51.2	+0.9
KNT	Kendrikon	1.80	64	P	Pn	13 42 50.5	+0.2
AGG	Agios Georgios	1.82	138	P	Pn	13 42 52.0	+1.5
AGG	Agios Georgios	1.82	138	P	Pn	13 42 51.0	+0.4
PVO	Paravola	1.86	161	P	Pn	13 42 51.2	+0.1
ULC	Ulcinj	1.95	325	⇓*i*Pn	Pn	13 42 52.3	-0.1
ULC				*i* Sn	Sb	13 43 19.3	+0.1
ANX	Ano Chora	2.00	153	P	Pn	13 42 53.4	+0.3
SOH	Sokhos	2.02	77	P	Pn	13 42 54.2	+0.8
SOH	Sokhos	2.02	77	P	Pn	13 42 53.4	-0.1
PLG	Polygyros	2.05	89	P	Pn	13 42 54.9	+1.1
PLG	Polygyros	2.05	89	P	Pn	13 42 53.9	+0.1
DRME	Dracevica, Mon	2.16	327	*e*Pn	Pn	13 42 55.8	+0.6
DRME	Dracevica, Mon	2.16	327	⇓*i*Pn	Pn	13 42 56.2	+1.0
DRME				*i* Sn	Sb	13 43 24.6	-0.6
AXAR	Agios Charalam	2.18	137	P	Pn	13 42 55.0	-0.6
SRS	Serrai	2.27	70	*i* Pn	Pn	13 42 58.1	+1.3
SRS	Serrai	2.27	70	P	Pn	13 42 57.7	+0.9
KKB	Krupnik	2.31	50	*i* Pn	Pn	13 42 59.3	+2.0
PDG	Podgorica	2.34	332	*e*Pn	Pn	13 42 58.3	+0.6
PDG	Podgorica	2.34	332	⇑P	Pn	13 42 58.3	+0.6
PDG	Podgorica	2.34	332	*e*Pn	Pn	13 42 58.2	+0.6
PDG				*e*Sn	Sb	13 43 29.5	-0.8
PDG	Podgorica	2.34	332	⇑*i*Pn	Pn	13 42 58.1	+0.5
PDG				*i* Sn	Sb	13 43 28.7	-1.6
BUM	Brajici-Budva	2.38	324	⇑*i*Pn	Pn	13 42 58.9	+0.6
BUM				*i* Sn	Sn	13 43 28.2	+0.6
BOSS	Bosilegrad	2.48	31	*e*Pn	Pn	13 42 59.4	-0.2
BOSS				*e*Sn	Sn	13 43 30.8	+0.7
KOKK	Kokkinochori,	2.51	79	P	Pn	13 42 59.8	-0.1
BARS	Barje	2.56	18	⇑*i*Pn	Pn	13 43 00.5	-0.3
BARS	Barje	2.56	18	*e*Pn	Pn	13 43 00.4	-0.3
BARS				*e*Sn	Sn	13 43 33.5	+1.4
CEME	Cevo	2.57	328	*e*Pn	Pn	13 43 01.0	+0.1
CEME				*i* Sn	Sn	13 43 34.4	+2.0
IVA	Berane	2.57	346	⇓*i*Pn	Pn	13 43 01.6	+0.6
IVA				*i* Sn	Sn	13 43 33.8	+1.3
KOME	Kolasin	2.64	340	⇓*i*Pn	Pn	13 43 02.7	+0.8
KOME				*i* Sn	Sn	13 43 35.9	+1.8
HCY	Herceg Novi	2.67	321	*e*Pn	Pn	13 43 01.3	-1.0
HCY	Herceg Novi	2.67	321	⇑*i*Pn	Pn	13 43 02.1	-0.2
HCY				*i* Sn	Sn	13 43 37.3	+2.4
SELS	Selova	2.85	5	*e*Pn	Pn	13 43 03.8	-0.9
VIL2	Platees	2.91	137	P	Pn	13 43 06.0	+0.4
KAVA	Kavala	2.92	77	P	Pn	13 43 05.5	-0.2
SJES	Sjenica	2.94	349	*e*Pn	Pn	13 43 06.5	+0.4
SJES	Sjenica	2.94	349	*e*Pn	Pn	13 43 06.4	+0.4
SJES				*e*Sn	Sb	13 43 44.9	-2.8
TREB	Trebinje	2.95	323	*e*Pn	Pn	13 43 05.7	-0.4
BRY	Bratogost	3.02	327	*e*Pn	Pn	13 43 07.4	+0.3
BRY	Bratogost	3.02	327	⇓*i*Pn	Pn	13 43 07.8	+0.7
BRY				*i* Sn	Sn	13 43 45.3	+1.7
MATE	Matera	3.10	276	⇑P	Pg	13 43 17.0	-1.3
PLE	Pljevlja	3.12	341	⇓*i*Pn	Pn	13 43 08.4	-0.1
PLE				*i* Sn	Sn	13 43 47.7	+1.7
UPM	Unac-Piva	3.14	334	*e*Pn	Pn	13 43 10.3	+1.4
UPM	Unac-Piva	3.14	334	⇑*i*Pn	Pn	13 43 09.5	+0.6
UPM				*i* Sn	Sn	13 43 48.1	+1.4
GOCS	Kraljevo Serbi	3.18	2	*e*Pn	Pn	13 43 08.3	-1.0
ZAPS	Zavoj	3.21	25	*e*Pn	Pn	13 43 09.6	-0.1
IVAS	Ivanjica	3.22	352	*e*Pn	Pn	13 43 08.4	-1.5
TIP	Timpagrande	3.31	250	⇑P	Pn	13 43 13.7	+2.6
BOVS	Bovan	3.33	12	⇓P	Pn	13 43 10.8	-0.4
BOVS	Bovan	3.33	12	*e*Pn	Pn	13 43 10.5	-0.8
BOVS				*e*Sn	Sn	13 43 51.3	+0.3
STON	Ston	3.38	318	*e*Pn	Pn	13 43 11.8	-0.2
RUDO	Rudo	3.40	343	*e*Pn	Pn	13 43 11.7	-0.5
GRUS	Gruza	3.50	359	*e*Pn	Pn	13 43 12.7	-1.0
ZAGS	Zajecar	3.60	17	*e*Pn	Pn	13 43 14.2	-0.8
BBLS	Lazi&#263i	3.62	344	*e*Pn	Pn	13 43 16.0	+0.6
BBLS	Lazi&#263i	3.62	344	*e*Pn	Pn	13 43 16.0	+0.6
DIVS	Divibare	3.76	352	*e*Pn	Pn	13 43 16.9	-0.4
BORS2	Bor- Borsko je	3.82	14	*e*Pn	Pn	13 43 17.7	-0.4
TRUS	Trudelj	3.85	356	*e*Pn	Pn	13 43 17.8	-0.6
HAPS	Han Pijesak,Bl	3.94	341	*e*Pn	Pn	13 43 20.3	+0.5
KUBS	Kucevo	4.08	9	*e*Pn	Pn	13 43 19.4	-2.3
TEKS	Tekeris	4.26	348	*e*Pn	Pn	13 43 24.2	+0.1
TEKS	Tekeris	4.26	348	*e*Pn	Pn	13 43 24.5	+0.4
AVAS	Avala Beograd	4.32	358	*e*Pn	Pn	13 43 24.1	-0.8
MDVR	Moldovita	4.45	9	⇓P	Pn	13 43 28.6	+1.8
VRSS	Vrsac	4.76	5	*e*Pn	Pn	13 43 29.8	-1.1
FRGS	Fruska Gora	4.82	352	*e*Pn	Pn	13 43 30.6	-1.3
FRGS	Fruska Gora	4.82	352	*e*Pn	Pn	13 43 30.4	-1.5
BLY	Banja Luka	5.10	330	*e*Pn	Pn	13 43 36.1	+0.5
A050A	Klekovaca	5.15	324	*e*Pn	Pn	13 43 36.6	+0.2
BZS	Buzias	5.27	7	⇓P	Pn	13 43 36.5	-1.5
A051A	Mrakovica	5.43	330	*e*Pn	Pn	13 43 39.7	-0.5
MORH	Mrgy, Hungar	6.03	346	⇓P	Pn	13 43 48.9	+0.5
IDI	Anoyia	6.04	146	Pn	Pn	13 43 50.2	+1.6
	comp=E,3.5nm,0.7s,baz=272,slow=17,SNR=1.2						
IDI				Sn	Sn	13 44 59.6	+1.5
	comp=E,1.2nm,0.3s,baz=278,slow=23,SNR=5.6						
MLR	Muntele Rosu	6.37	35	Pn	Pn	13 43 52.6	-0.5
	comp=E,0.5nm,0.3s,baz=198,slow=3.2,SNR=4.8						
MLR				Sn	Sn	13 45 06.7	+0.5
	comp=E,0.1nm,0.3s,baz=141,slow=18,SNR=1.4						
	comp=E,0.7nm,0.3s						
MLR	Muntele Rosu	6.37	35	⇓P	Pn	13 43 50.7	-2.5
BOJS	Bojanci	6.52	324	*e*Pn	Pn	13 43 53.9	-1.2
CRES	Cresnjevec Ost	6.68	326	*e*Pn	Pn	13 43 55.5	-1.8
CEY	Cerknica	7.08	321	*e*Pn	Pn	13 44 01.8	-1.0
SOKA	Soboth	7.54	328	*e*Pn	Pn	13 44 08.5	-0.7
	comp=E,1.0nm,0.3s						
OBKA	Obir	7.61	326	*e*Pn	Pn	13 44 09.1	-1.0
OBKA	Obir	7.61	326	*e*Pn	Pn	13 44 09.7	-0.5
	comp=E,1.6nm,0.4s						
ARSA	Arzberg	7.84	333	*i* Pn	Pn	13 44 13.9	+0.7
	comp=E,1.3nm,0.3s						
KECS	Kecovo	8.10	359	*e*PN	Pn	13 44 16.8	0.0
VYHS	Vyhne	8.23	351	*e*PN	Pn	13 44 20.7	+2.2
VYHS				*e*		14 13 14.2	
MODS	Modra-Piesok	8.37	344	*e*PN	Pn	13 44 24.3	+3.8
KBA	Koelnbreinsper	8.58	324	*i* Pn	Pn	13 44 22.7	-0.8
	comp=E,0.8nm,0.3s						
ABTA	Abfaltersbach	8.73	319	*i* Pn	Pn	13 44 23.9	-1.6
	comp=E,1.6nm,0.5s						
GERES	GERESS Array B	9.84	332	Pn	Pn	13 44 41.6	+0.9
	baz=154,slow=14,SNR=4.3						
	comp=E,0.4nm,0.4s						
DAVOX	Davos/Dischmat	10.15	313	Pn	Pn	13 44 43.7	-1.4
	comp=E,0.7nm,0.3s,baz=82,slow=23,SNR=7.2						
	comp=E,1.7nm,0.4s						
HFS	Hagfors	20.26	350	P	P	13 46 53.7	-0.8
	comp=E,1.5nm,0.6s,baz=172,slow=12,SNR=6.6						
	comp=E,1.5nm,0.6s						
FINES	FINESS Array B	21.34	7	P	P	13 47 04.9	-1.2
	comp=E,3.3nm,1.0s,baz=179,slow=11,SNR=5.9						
	comp=E,3.3nm,1.0s						
NOA	NORSAR Array B	21.50	347	P	P	13 47 07.1	-0.9
	comp=E,0.7nm,0.8s,baz=152,slow=9.9,SNR=2.3						
NOA				LR	LR	13 56 15.7	
	comp=E,3.8nm,19.1s,baz=30,slow=39						
	comp=E,0.7nm,0.8s						
EKA	Eskdalemuir Ar	21.78	321	P	P	13 47 11.9	+0.9
	comp=E,2.8nm,1.0s,baz=122,slow=12,SNR=3.4						
	comp=E,2.8nm,1.0s						
ARCES	ARCESS Array B	29.32	3	P	P	13 48 19.8	-1.9
	comp=E,1.4nm,0.8s,baz=184,slow=9.0,SNR=3.6						
	comp=E,1.4nm,0.8s						
MKAR	Makanchi Array	44.02	60	P	P	13 50 27.6	+0.7
	comp=E,0.2nm,0.6s,baz=295,slow=6.6,SNR=2.4						
	comp=E,0.2nm,0.6s						
MDP	Montagnes des	74.07	263	LR	LR	14 23 52.4	
	comp=E,17nm,21.6s,baz=102,slow=34						

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*NEIC **01** 13:53:27.7±2.3, 23.°4S±0.°1×177.°1W±0.°2, h96^{km}±7^{km}, mb4.6/16, Error ellipse: s-maj=24.4km s-min=13.4km az=126.0*

*NOU **01** 13:53:32.9, 23.°17S×176.°51W, h181^{km}, mb4.4/14, South of Fiji Islands*

*IDC **01** 13:53:38.4±3.2, 23.°17S×177.°30W, h200^{km}±29^{km}, mb3.7/12, mbtmp4.3/14, MS3.1/1, Error ellipse: s-maj=20.3km s-min=15.0km az=161.0*

ISC 01 13:53:34.3±0.4, **23.°35S**±0.°06×**177.°11W**±0.°08, **h167**^{km}, **n65, $\sigma 1\overset{s}{.}77$**/60, **mb4.1**/19, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKBA	Tubou, Lakemba	5.33	342	P	Pn	13 54 51.7	-0.7
RAO	Raoul Island	5.93	187	P	Pn	13 55 07.7	+7.6
	197nm,0.3s,baz=343,slow=19,SNR=2.0						
RAO				S	Sn	13 56 06.7	-0.8
	360nm,0.3s,baz=56,slow=23,SNR=1.9						
MSVF	Nonsavu	7.20	320	P	Pn	13 55 18.0	+0.9
DGTI	Dogotuki	7.61	336	P	Pn	13 55 22.5	-0.1
NIUE	Niue	7.93	59		Pn	13 55 20.7	-6.1
AFI	Afiamalu	10.66	29	Pn	Pn	13 55 51.7	-11
AFI	Afiamalu	10.66	29	P	Pn	13 55 55.8	-7.0
YATNC	Mamie plateau,	14.82	272	P	P	13 57 00.6	+3.1
DZM	Mont Dzumac	15.23	272	P	P	13 57 06.0	+3.9
	9.0nm,0.9s,baz=89,slow=17,SNR=7.5						
DZM	Mont Dzumac	15.23	272	P	P	13 57 05.6	+3.5
URZ	Urewera	15.67	197	P	Pn	13 57 03.7	-2.3
	4.5nm,0.4s,baz=353,slow=6.0,SNR=8.8						
URZ				S	Sn	13 59 46.2	-15
	10nm,0.7s,baz=325,slow=20,SNR=7.8						
URZ	Urewera	15.67	197	P	P	13 57 07.1	+0.5
RAR	Rarotonga	16.18	86	P	P	13 57 15.4	+2.9
	18nm,0.9s,baz=204,slow=6.4,SNR=1.9						
RAR				S	S	13 59 56.6	-15
	8.1nm,0.6s,baz=145,slow=19,SNR=1.5						
VLAKA	Lakatoro	16.24	294	P	Pn	13 57 16.8	+3.6
BKZ	Black Stump Fm	16.68	198	P	Pn	13 57 19.9	+1.5
QRZ	Quartz Range	19.49	204	P	Pn	13 57 50.2	-1.3
TUWZ	Tuamarina	19.53	200	P	P	13 57 45.6	-3.2
INZ	Inchbonnie	21.54	203	P	P	13 58 08.1	-2.2
INZ				IAmb	IAmb	13 58 11.4	
	comp=Z,29nm,1.2s						
RPZ	Rata Peaks	22.54	203	P	P	13 58 21.1	+0.9
CMSA	Cobar Meteorol	33.88	248	P	P	14 00 03.7	+2.5
CTAO	Charters Tower	34.14	268	P	P	14 00 04.5	+0.9
CTAO	Charters Tower	34.14	268	P	P	14 00 04.3	+0.8
QLP	Quilpie	35.11	257	P	P	14 00 13.4	+1.6
STKA	Stephens Creek	37.39	248	P	P	14 00 31.2	+0.1
	comp=Z,1.1nm,0.4s,baz=127,slow=10,SNR=3.6						
	comp=Z,1.1nm,0.4s						
COEN	Coen	38.67	277	P	P	14 00 40.2	-1.7
BBOO	Buckleboo	42.10	246	P	P	14 01 08.4	-1.6
BBOO				IAmb	IAmb	14 01 12.2	
	comp=Z,7.0nm,1.1s						
AS31	Alice Springs	44.74	259	P	P	14 01 30.8	-0.5
ASAR	Alice Springs	44.74	259	P	P	14 01 31.2	-0.1
	comp=Z,1.5nm,0.4s,baz=97,slow=6.5,SNR=22						
ASAR				LR	LR	14 18 26.4	
	comp=Z,24nm,20.6s,baz=200,slow=33						
	comp=Z,1.5nm,0.4s						
WR8	Warramunga Arr	44.95	265	P	P	14 01 32.5	-0.4
WB0	Warramunga Arr	45.09	265	P	P	14 01 33.2	-0.8
WB0				IAmb	IAmb	14 01 34.3	
	comp=Z,8.1nm,0.7s						
WRA	Warramunga Arr	45.10	265	P	P	14 01 33.0	-1.1
	comp=Z,5.7nm,0.7s,baz=103,slow=8.5,SNR=21						
	comp=Z,5.7nm,0.7s						
UWE	Uwekahuna	47.54	28	P	P	14 01 55.8	+2.6
HATHI	Halema‘uma‘u T	47.56	28	P	P	14 01 56.9	+3.6
SBA	Scott Base	55.10	184	P	P	14 02 50.0	+1.5
MORW	Morawa	59.55	249	P	P	14 03 18.9	-1.6
MORW				IAmb	IAmb	14 03 21.5	
	comp=Z,4.8nm,0.9s						
QSPA	South Pole Qui	66.74	180	P	P	14 04 09.1	+1.8
QSPA				IAmb	IAmb	14 04 09.8	
	comp=Z,5.1nm,0.8s						
QSPA	South Pole Qui	66.74	180	P	P	14 04 08.7	+1.4
	comp=Z,4.6nm,0.7s,baz=18,slow=0.7,SNR=40						
	comp=Z,4.6nm,0.7s						
MJAR	Matsushiro Arr	72.98	324	P	P	14 04 44.2	-1.4
	comp=Z,1.3nm,0.8s,baz=162,slow=5.7,SNR=4.9						
	comp=Z,1.3nm,0.8s						
BELA	Belgrano 2	76.64	172		P	14 05 06.6	+0.5
PETK	Petropavlovsk-	79.22	345	P	P	14 05 18.7	-1.8
	comp=Z,1.5nm,0.7s,baz=100,slow=8.3,SNR=3.6						
	comp=Z,1.5nm,0.7s						
NVAR	Mina Array Bea	82.53	43	P	P	14 05 39.0	+0.4
	comp=Z,1.2nm,0.8s,baz=220,slow=8.7,SNR=9.4						
	comp=Z,1.2nm,0.8s						
J05D	Fort Rock, OR	83.84	37	P	P	14 05 45.9	+0.8
SNAA	Sanae	85.15	178	P	P	14 05 51.8	+0.5
	comp=Z,1.2nm,0.7s,baz=133,slow=11,SNR=3.7						
	comp=Z,1.2nm,0.7s						
TMUT	Trail Mountain	87.56	45	P	P	14 06 04.5	+0.8
TMUT				IAmb	IAmb	14 06 05.5	
	comp=Z,5.3nm,0.7s						
TXAR	Lajitas Array	87.90	57	P	P	14 06 05.9	+0.5
	comp=Z,1.4nm,0.9s,baz=210,slow=7.5,SNR=15						
	comp=Z,1.4nm,0.9s						
TRF	Thorofare Moun	89.05	12		P	14 06 09.2	-0.8
TRF				IAmb	IAmb	14 06 12.5	
	comp=Z,5.1nm,0.8s						
PDAR	Pinedale Array	90.47	43	P	P	14 06 17.2	0.0
	comp=Z,1.2nm,0.8s,baz=219,slow=3.8,SNR=9.2						
	comp=Z,1.2nm,0.8s						
ILAR	Eielson Array	90.90	12	P	P	14 06 17.6	-0.8
	comp=Z,0.5nm,0.7s,baz=221,slow=5.3,SNR=11						
	comp=Z,0.5nm,0.7s						
J26L	Joseph Creek	91.36	14		P	14 06 21.1	+0.5
J26L				IAmb	IAmb	14 06 23.5	
	comp=Z,1.7nm,0.7s						
CMAR	Chiang Mai Arr	91.84	289	P	P	14 06 22.9	-1.0
	comp=Z,1.2nm,0.7s,baz=116,slow=4.7,SNR=10						
	comp=Z,1.2nm,0.7s						
KURBB	Kurchatov Arra	116.68	316	PKP	PKiKP	14 11 57.6	-0.7
	comp=Z,0.4nm,0.6s,baz=102,slow=1.9,SNR=4.3						
BVAR	Borovoye Array	121.77	319	PKhKP	PKPpre	14 12 03.3	
	comp=Z,0.8nm,0.4s,baz=111,slow=2.4,SNR=4.2						
SPITS	Spitsbergen Ar	124.74	357	PKP	PKiKP	14 12 12.9	-0.6
	comp=Z,3.9nm,0.9s,baz=46,slow=8.3,SNR=1.2						
ARCES	ARCESS Array B	131.86	350	PKP	PKiKP	14 12 27.2	-0.7
	comp=Z,2.3nm,0.8s,baz=38,slow=1.9,SNR=7.6						
FINES	FINESS Array B	138.72	343	PKP	PKiKP	14 12 40.2	-1.8
	comp=Z,2.5nm,0.9s,baz=45,slow=1.9,SNR=3.6						
NOA	NORSAR Array B	141.89	353	PKP	PKiKP	14 12 47.2	-1.4
	comp=Z,0.4nm,0.5s,baz=12,slow=3.8,SNR=2.2						
HFS	Hagfors	142.47	351	PKhKP	PKPpre	14 12 41.3	
	comp=Z,1.6nm,0.7s,baz=74,slow=5.3,SNR=6.4						
AKASG	Malin Array Be	145.89	330	PKPbc	PKPbc	14 12 52.6	-1.2
	comp=Z,3.1nm,0.5s,baz=43,slow=4.3,SNR=17						
EKA	Eskdalemuir Ar	147.74	6	PKPbc	PKPbc	14 12 58.2	-0.7
	comp=Z,0.5nm,0.3s,baz=344,slow=2.8,SNR=14						
BRTR	Keskin Array B	149.32	309	PKPbc	PKPbc	14 13 02.5	-1.1
	comp=Z,2.8nm,0.6s,baz=145,slow=5.5,SNR=11						
MMAI	Mount Meron Ar	149.87	296	PKPbc	PKiKP	14 13 05.0	-1.0
	comp=Z,2.5nm,0.6s,baz=85,slow=3.7,SNR=5.2						
CLL	Collm	151.01	347	*i* PKPbc	PKiKP	14 13 07.3	-0.3
	comp=Z,6.0nm,0.5s						
CLL				*i* x	x	14 13 09.2	
CLL				*e*PKPab	PKPab	14 13 16.0	+0.8
MORC	Moravsky Berou	151.22	340	*e*PKP	PKPab	14 13 12.9	-3.3
KRUC	Moravsky	152.21	341	*e*PKP	PKPab	14 13 15.3	-5.0
GERES	GERESS Array B	153.15	344	PKPbc	PKiKP	14 13 13.2	+0.9
	comp=Z,1.1nm,0.8s,baz=22,slow=1.4,SNR=8.6						

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*ISN **01** 13:59:25.3±1.1, 33.°76N×45.°74E, h8^{km}±6^{km}, ML3.4*

*TEH **01** 13:59:25.8, 33.°76N×45.°79E, h11^{km}±36^{km}*

*IDC **01** 13:59:36.0±12.0, 35.°63N×46.°16E, h0^{km}, mb3.7/4, mbtmp3.7/5, ML4.2/1, Error ellipse: s-maj=244.9km s-min=32.7km az=11.0*

ISC 01 13:59:25.5±0.7, **33.°77N**±0.°03×**45.°80E**±0.°03, **h10**^{km}, **n33, $\sigma 1\overset{s}{.}69$**/37, **mb3.7**/4, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLG1	Gilan-e-Gharb	0.36	15	Pg	Pg	13 59 33.5	+0.9
ILBA	Ilam Banvizeh	0.37	113	Pg	Pg	13 59 33.4	+0.6
IBDR	Badra	0.67	171	*e*Pg	Pg	13 59 39.0	+0.6
IBDR				*e*Sg	Sg	13 59 47.0	-0.1
IBDR				AML	AML	13 59 57.8	
	comp=E,1µm,0.2s						
IBDR				AML	AML	13 59 58.7	
	comp=N,1µm,0.8s						
KGS1	Ghasr-e-Shirin	0.76	347	Pg	Pg	13 59 40.8	+0.7
IGHG	Ghaleghazi	0.85	48	Pg	Pg	13 59 42.0	+0.1
IDHR	Dehrash	1.05	27	Pg	Pg	13 59 45.8	+0.1
KCHF	Cheshme Sefid,	1.15	63	Pg	Pn	13 59 48.6	+0.8
BHD	Baghdad	1.29	248	*e*Pn	Pg	13 59 51.0	+0.8
BHD				*e*Sn	Sg	14 00 09.0	+2.1
BHD				AML	AML	14 00 09.8	
	comp=E,1µm,0.7s						
ILIN	Lien	1.50	40	Pg	Pg	13 59 55.0	+0.8
IKFM	Kafar-mosalman	1.72	98	Pg	Pg	13 59 58.4	-0.2
IBZA	Bozab	1.85	67	Pn	Pb	14 00 00.1	+0.6
SNQR	Sonqor, Kerman	1.86	54	Pn	Pb	14 00 00.2	+0.4
IKRK	Kirkuk	2.03	324	*e*Pn	Pn	14 00 01.0	+1.3
IKRK				*e*Sn	Sb	14 00 28.0	+0.3
RAFI	Al-Rafai	2.06	173	*e*Pn	Pb	14 00 02.0	-0.9
RAFI				*e*Sn	Sb	14 00 29.0	+0.5
HSAM	Samen	2.37	78	Pn	Pn	14 00 06.8	+2.1
HGHA	Hamedan- Ghaye	3.05	55	Pn	Pn	14 00 16.5	+2.6
QABG	Abgarm-Qazvin	3.67	57	Pn	Pn	14 00 25.1	+2.6
JHBN	Jahan bin	4.37	109	Pn	Pn	14 00 33.1	+0.9
IPIR	Pirpir	4.40	103	Pn	Pn	14 00 34.7	+2.0
ZNGN	Zangian	4.56	110	Pn	Pn	14 00 36.2	+1.4
IVRN	Varamin	5.05	74	Pn	Pn	14 00 43.1	+1.7
KRSH	Karshahi	5.27	86	Pn	Pn	14 00 46.8	+2.2
ISFB	Sefidab	5.38	82	Pn	Pn	14 00 47.2	+1.4
IDMV	Damavand	5.44	69	Pn	Pn	14 00 48.3	+1.4
IZEF	Zefreh	5.53	97	Pn	Pn	14 00 50.1	+1.9
KLNJ	Kolanjah	5.62	118	Pn	Pn	14 00 51.9	+2.5
IRAM	Ramesheh	5.88	108	Pn	Pn	14 00 54.9	+2.1
IFIR	Firoozkooh	6.02	70	Pn	Pn	14 00 57.5	+2.6
AKASG	Malin Array Be	20.82	329	P	P	14 04 04.7	-2.3
	comp=E,0.6nm,0.3s,baz=142,slow=9.6,SNR=5.8						
	comp=E,2.0nm,0.7s						
BVAR	Borovoye Array	26.04	35	P	P	14 04 54.2	-4.6
	comp=E,0.2nm,0.4s,baz=232,slow=8.4,SNR=2.0						
	comp=E,0.2nm,0.4s						
MKAR	Makanchi Array	30.44	54	P	P	14 05 38.5	+0.4
	comp=E,0.5nm,0.5s,baz=250,slow=7.0,SNR=6.1						
	comp=E,0.5nm,0.5s						
HFS	Hagfors	33.68	331	P	P	14 06 05.0	-1.4
	comp=E,3.5nm,0.9s,baz=108,slow=14,SNR=5.6						
	comp=E,3.5nm,0.9s						
ZALV	Zalesovo Beam	34.02	42	P	P	14 06 09.4	0.0
	comp=E,0.4nm,0.3s,baz=248,slow=7.6,SNR=2.3						
	comp=E,0.4nm,0.3s						

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*JMA **01** 14:04:16.0±0.1, 40.°4N±0.°3×142.°1E±0.°7, h50^{km}, MV3.7/40, NE OFF IWATE PREF*

JMA Felt I J1 at NE OFF IWATE PREF .

*IDC **01** 14:04:16.7±2.5, 40.°39N×142.°30E, h71^{km}±19^{km}, mb3.5/7, mbtmp3.6/11, MS2.9/3, Error ellipse: s-maj=35.5km s-min=15.7km az=105.0*

ISC 01 14:04:15.9±1.1, **40.°37N**±0.°04×**142.°11E**±0.°08, **h51**^{km}±8^{km}, **n29, $\sigma 1\overset{s}{.}10$**/31, **mb3.9**/7, **14D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKEN	Kujiedanarisaw	0.34	241	*i* P	Pn	14 04 25.4	-0.1
JKEN				S	Sn	14 04 31.7	-0.6
JANG	Nango	0.45	270	⇓*i*P	Pn	14 04 26.5	-0.2
JANG				⇓S	Sn	14 04 33.7	-0.6
JTH	Tanohata	0.47	203	*i* P	Pn	14 04 26.6	-0.2
JTH				S	Sn	14 04 33.9	-0.8
JKZ	Kuzumaki	0.71	237	⇓*i*P	Pn	14 04 29.8	0.0
JKZ				⇓S	Sn	14 04 39.4	-0.5
JARK	Aomorirokkasho	0.85	319	⇓*i*P	Pn	14 04 31.3	-0.3
JARK				⇓S	Sn	14 04 42.2	-0.9
JTM	Tenmabayashi	0.89	298	⇓*i*P	Pn	14 04 31.8	-0.4
JTM				⇓S	Sn	14 04 43.1	-1.0
JOM	Ohasama	1.09	215	⇓*i*P	Pn	14 04 34.8	-0.1
JOM				⇓S	Sn	14 04 48.7	-0.2
JAH	Hinai	1.14	261	⇓*i*P	Pn	14 04 35.5	0.0
JAH				⇓S	Sn	14 04 49.6	-0.5
JOT	Ohata	1.29	322	⇓*i*P	Pn	14 04 37.1	-0.4
JOT				⇓*e*S	Sn	14 04 52.8	-0.9
JRG	Rokugo	1.49	230	*e*P	Pn	14 04 40.6	+0.3
ASAJ	Asahikawa	3.76	5	P	Pn	14 05 12.3	+1.0
	7.2nm,0.4s,baz=223,slow=9.7,SNR=41						
ASAJ				S	Sn	14 05 54.8	+0.5

	6.4nm,0.4s,baz=224,slow=14,SNR=3.8						
MJAR	Matsushiro Arr	4.89	220	P	Pn	14 05 28.8	+1.8
	1.8nm,0.7s,baz=30,slow=14,SNR=16						
USRK	Ussuriysk Ar.	8.42	300	P	Pn	14 06 17.6	+2.5
	3.3nm,0.7s,baz=108,slow=12,SNR=4.7						
KSRS	Korea Array	11.43	260	P	Pn	14 06 60.0	+3.6
	0.4nm,0.6s,baz=61,slow=13,SNR=1.7						
KSRS				LR	LR	14 10 32.2	
	comp=Z,14nm,20.1s,baz=170,slow=32						
SONM	Songino Array	26.52	298	P	P	14 09 49.1	+0.4
	0.3nm,0.3s,baz=94,slow=19,SNR=2.3						
	0.3nm,0.3s						
H11N2	WAKE ISLAND Hy	29.55	127	T	T	14 41 13.2	
	baz=319,slow=75,SNR=37						
H11N1	WAKE ISLAND Hy	29.56	127	T	T	14 41 08.5	
	baz=319,slow=75,SNR=36						
H11N3	WAKE ISLAND Hy	29.57	127	T	T	14 41 12.5	
	baz=319,slow=75,SNR=40						
H11S1	WAKE ISLAND Hy	30.37	129	T	T	14 42 23.3	
	baz=322						
H11S3	WAKE ISLAND Hy	30.37	129	T	T	14 42 48.6	
	baz=322,slow=74						
H11S2	WAKE ISLAND Hy	30.39	129	T	T	14 42 43.5	
	baz=322,slow=74						
ZALV	Zalesovo Beam	40.14	310	P	P	14 11 45.7	-0.8
	1.0nm,0.4s,baz=95,slow=8.8,SNR=4.3						
	1.0nm,0.4s						
NRIK	Noril'sk	40.49	334	LR	LR	14 29 03.7	
	comp=Z,16nm,18.8s,baz=64,slow=37						
MKAR	Makanchi Array	42.88	299	P	P	14 12 08.8	-0.4
	0.7nm,0.7s,baz=82,slow=9.1,SNR=5.0						
	0.7nm,0.7s						
KURBB	Kurchatov Arra	44.44	305	P	P	14 12 20.8	-0.8
	1.0nm,0.5s,baz=79,slow=8.4,SNR=13						
	1.0nm,0.5s						
BVAR	Borovoye Array	48.78	310	P	P	14 12 54.9	-0.6
	0.7nm,0.4s,baz=79,slow=8.8,SNR=2.5						
	0.7nm,0.4s						
ASAR	Alice Springs	64.16	188	P	P	14 14 44.0	-1.1
	0.2nm,0.7s,baz=6.6,slow=7.5,SNR=1.5						
	0.2nm,0.7s						
FINES	FINESS Array B	66.12	332	P	P	14 14 56.7	-0.7
	2.1nm,0.9s,baz=9.7,slow=7.3,SNR=2.2						
	2.1nm,0.9s						
SFJD	Kangerlussuaq	72.52	5	LR	LR	14 47 26.0	
	comp=Z,30nm,20.0s,baz=26,slow=36						

ISN 01 14:04:16.6±0.8, 33°.64N×45°.62E, h3^{km}±4^{km}, ML2.5

TEH 01 14:04:18.0, 33°.67N×45°.69E, h11^{km}±82^{km}

ISC 01 14:04:17.8±1.4, **33°.66N**±0°.03×**45°.67E**±0°.04, **h5**^{km}±13^{km}, **n11**, σ**1^{s}09**/16, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILBA	Ilam Banvizeh	0.45	94	Pg	Pb	14 04 27.6	-0.7
ILBA				Sg	Sb	14 04 34.0	-1.4
GLG1	Gilan-e-Gharb	0.50	24	Pg	Pg	14 04 27.8	+0.4
IBDR	Badra	0.59	158	ePg	Pg	14 04 29.0	-0.2
IBDR				eSg	Sg	14 04 37.0	+0.2
IBDR				AML	AML	14 04 45.0	
	comp=E,248nm,0.4s						
IBDR				AML	AML	14 04 47.2	
	comp=Z,222nm,0.5s						
IBDR				AML	AML	14 04 48.2	
	comp=N,262nm,0.2s						
IGHG	Ghaleghazi	1.00	48	Pg	Pn	14 04 38.7	-0.1
BHD	Baghdad	1.14	250	ePn	Pn	14 04 41.0	+0.6
BHD				eSn	Sn	14 04 58.0	+1.6
IDHR	Dehrash	1.20	30	Pg	Pn	14 04 41.1	-0.3
KCHF	Cheshme Sefid,	1.30	61	Pg	Pg	14 04 44.9	+2.2
ILIN	Lien	1.65	40	Pg	Pg	14 04 49.5	0.0
RAFI	Al-Rafai	1.97	169	ePn	Pb	14 04 53.0	-1.1
RAFI				eSn	Sb	14 05 19.0	+0.1
SNQR	Sonqor, Kerman	2.02	53	Pn	Pb	14 04 54.8	-0.3
IKRK	Kirkuk	2.05	328	ePn	Pb	14 04 54.0	-1.5
IKRK				eSn	Sb	14 05 21.0	-0.4

ISN 01 14:09:02.9±0.9, 33°.73N×45°.72E, h8^{km}±5^{km}, ML2.8

TEH 01 14:09:04.2, 33°.72N×45°.74E, h10^{km}±56^{km}

ISC 01 14:09:04.4±0.9, **33°.73N**±0°.03×**45°.77E**±0°.04, **h10**^{km}, **n12**, σ**0^{s}64**/16, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILBA	Ilam Banvizeh	0.38	105	Pg	Pg	14 09 11.7	-0.1
GLG1	Gilan-e-Gharb	0.40	16	Pg	Pg	14 09 12.1	-0.3
IBDR	Badra	0.63	168	ePg	Pg	14 09 16.0	-0.5
IBDR				eSg	Sg	14 09 24.0	-0.7
IBDR				AML	AML	14 09 29.9	
	comp=E,108nm,0.5s						
IBDR				AML	AML	14 09 37.3	
	comp=N,143nm,0.8s						
IGHG	Ghaleghazi	0.90	47	Pg	Pb	14 09 22.7	+0.6
IDHR	Dehrash	1.10	27	Pg	Pg	14 09 25.4	-0.1
KCHF	Cheshme Sefid,	1.19	62	Pg	Pn	14 09 27.4	+0.2
BHD	Baghdad	1.25	249	ePn	Pg	14 09 28.0	-0.3
BHD				eSn	Sn	14 09 46.0	+1.3
BHD				AML	AML	14 09 47.5	
	comp=E,765nm,0.5s						
ILIN	Lien	1.54	39	Pg	Pb	14 09 33.7	+0.5
IKFM	Kafar-mosalman	1.74	96	Pg	Pg	14 09 37.4	-0.4
SNQR	Sonqor, Kerman	1.91	53	Pn	Pb	14 09 39.1	-0.4
RAFI	Al-Rafai	2.02	172	ePn	Pn	14 09 39.0	+0.6
RAFI				eSn	Sb	14 10 06.0	-0.3
IKRK	Kirkuk	2.05	325	ePn	Pn	14 09 39.0	+0.1
IKRK				eSn	Sb	14 10 06.0	-1.2

BEO 01 14:28:45.8±0.5, 39°.95N×20°.88E, h0^{km}, ML3.2/11

IDC 01 14:28:50.0±1.9, 40°.44N×20°.78E, h0^{km}, mb3.1/5, mbtmp3.3/9, ML3.1/3, MS2.6/1, Error ellipse: s-maj=31.8km s-min=19.0km az=41.0

TIR 01 14:28:51.2, 40°.43N×20°.75E, h1^{km}±1^{km}, Ml3.4/10

ATH 01 14:28:52.2, 40°.38N×20°.81E, h12^{km}±1^{km}, ML3.0/13, Manual Solution by A.Agalos First location: 2019/06/01 14:29:51, This location: 2019/06/01 14:47:15 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km

PDG 01 14:28:52.5±0.4, 40°.48N×20°.87E, h6^{km}±1^{km}, ML3.3/10, Error ellipse: s-maj=0.6km s-min=1.3km az=0.0

THE 01 14:28:53.4, 40°N±1°×2°1E±°, h3^{km}±1^{km}, M3.0/20, MLh3.0/20

ISC 01 14:28:51.5±1.0, **40°.35N**±0°.02×**20°.78E**±0°.02, **h7**^{km}±8^{km}, **n105**, σ**1^{s}42**/148, **mb3.1**/4, **1C-2D**, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEST	Nestorio	0.22	72	Pg	Pg	14 28 56.6	+0.7
NEST				Sg	Sg	14 29 00.3	+1.4
NEST				AML	AML	14 29 02.6	
	29nm,0.4s						
NEST	Nestorio	0.22	72	P	Pg	14 28 56.8	+0.9
NEST				S	Sg	14 28 58.8	0.0
NEST	Nestorio	0.22	72	P	Pg	14 28 56.6	+0.7
NEST				S	Sg	14 28 59.6	+0.8
KBN	Korca	0.28	2	Pg	Pg	14 28 55.7	-1.3
KBN				Sg	Sg	14 28 58.6	-2.1
KBN				AML	AML	14 29 02.4	
	27nm,0.3s						
PENT	Pentalofos	0.32	119	P	Pb	14 28 59.0	-0.5
PENT				S	Sb	14 29 03.1	-1.9
PENT	Pentalofos	0.32	119	P	Pb	14 28 59.0	-0.5
PENT				S	Sb	14 29 03.3	-1.7
KPRO	Kipourio	0.60	131	P	Pb	14 29 04.4	0.0
KPRO				S	Sb	14 29 11.9	-1.2
KPRO	Kipourio	0.60	131	P	Pb	14 29 04.2	-0.1
KPRO				S	Sb	14 29 11.8	-1.2
JAN	Janina	0.69	175	P	Pb	14 29 05.9	-0.1
JAN				S	Sn	14 29 16.5	-2.3
JAN	Janina	0.69	175	P	Pb	14 29 06.1	+0.1
JAN				S	Sb	14 29 16.3	+0.5
SRN	Sarande	0.76	232	Pg	Pb	14 29 07.1	+0.1
SRN				Sg	Sn	14 29 20.4	0.0
SRN				AML	AML	14 29 22.8	
	2.4nm,0.5s						
KZN	Kozani	0.76	93	P	Pn	14 29 08.0	-0.8
KZN				S	Sb	14 29 18.6	+0.8
KZN	Kozani	0.76	93	P	Pb	14 29 07.4	+0.2
OHR	Ohrid	0.76	1	ePg	Pg	14 29 05.8	-0.4
OHR				eSg	Sn	14 29 22.3	+1.6
IGT	Igoumenitsa	0.88	203	Pn	Pn	14 29 10.0	-0.5
IGT				Sn	Sn	14 29 25.1	+1.7
IGT				AML	AML	14 29 33.5	
	1.8nm,0.5s						
IGT	Igoumenitsa	0.88	203	P	Pn	14 29 09.9	-0.5
IGT				S	Sn	14 29 24.1	+0.6
IGT	Igoumenitsa	0.88	203	P	Pn	14 29 09.9	-0.5
KEK	Kerkira	0.98	230	P	Pn	14 29 13.0	+1.2
KEK				S	Sn	14 29 27.9	+2.0
KEK	Kerkira	0.98	230	P	Pn	14 29 12.3	+0.5
VLO	Vlora	0.99	277	Pg	Pn	14 29 11.7	-0.1
VLO				Sg	Sb	14 29 24.1	-0.1
VLO				AML	AML	14 29 37.9	
	13nm,0.6s						
KTI	Kastanea	1.02	87	P	Pb	14 29 11.6	-0.1
NASA	Naoussa	1.02	74	P	Pb	14 29 11.6	0.0
TETR	Tetrakomo, Epi	1.07	159	P	Pn	14 29 13.7	+0.6
TIR	Tirane	1.22	326	Pn	Pg	14 29 14.0	-0.8
TIR				Sn	Sg	14 29 30.9	+0.3
TIR				AML	AML	14 29 38.5	
	1.5nm,0.5s						
TIR	Tirane	1.22	326	ePg	Pg	14 29 13.6	-1.2
TIR				eSg	Sn	14 29 36.6	+4.9
THL	Klokotos Trika	1.23	129	P	Pn	14 29 15.3	+0.1
THL				S	Sn	14 29 34.2	+2.2
THL	Klokotos Trika	1.23	129	P	Pn	14 29 15.2	0.0
TYRN	Tyrnavos	1.29	119	P	Pb	14 29 16.9	+0.8
TYRN	Tyrnavos	1.29	119	P	Pb	14 29 15.7	-0.4
PHP	Peshkopia	1.36	349	Pg	Pn	14 29 15.3	-1.8
PHP				Sg	Sb	14 29 35.4	+0.4
PHP				AML	AML	14 29 46.2	
	2.1nm,0.9s						
AMPL	Ampelaki	1.46	167	P	Pg	14 29 20.6	+1.1
LKD2	Lefkada island	1.56	183	Pn	Pg	14 29 23.6	+2.2
LKD2				Sn	Sg	14 29 47.4	+5.8
LKD2				AML	AML	14 29 55.3	
	1.5nm,0.7s						
LKD2	Lefkada island	1.56	183	P	Pg	14 29 20.9	-0.5
LKD2	Lefkada island	1.56	183	P	Pb	14 29 19.8	-0.9
EVR	Evrytania	1.64	151	P	Pg	14 29 21.8	-1.1
VAY	Valandovo	1.67	54	P	Pn	14 29 21.8	+0.6
THE	Thessaloniki	1.69	80	Pn	Pn	14 29 22.1	+0.6
THE				Sn	Sg	14 29 48.6	+2.6
THE	Thessaloniki	1.69	80	P	Pn	14 29 21.9	+0.3
THE	Thessaloniki	1.69	80	P	Pn	14 29 21.2	-0.4
EVGI	Lefkada island	1.73	183	P	Pb	14 29 23.2	-0.4
PDO	Prodromos	1.77	170	P	Pg	14 29 24.3	-1.3
AGG	Agios Georgios	1.79	137	P	Pb	14 29 24.4	-0.2
HORT	Hortiatis	1.79	81	P	Pn	14 29 23.1	+0.2
HORT	Hortiatis	1.79	81	P	Pn	14 29 22.7	-0.2
SCTE	Santa Cesarea	1.79	262	Pn	Pg	14 29 25.5	-0.3
SCTE				S	Sg	14 29 50.2	+1.2
SCTE				AML	AML	14 29 53.7	
	1.4nm,0.5s						
SCTE	Santa Cesarea	1.79	262	P	Pn	14 29 22.8	-0.1
KNT	Kendrikon	1.81	63	P	Pn	14 29 23.4	+0.3
KNT	Kendrikon	1.81	63	P	Pn	14 29 22.9	-0.2
PVO	Paravola	1.82	161	P	Pg	14 29 25.6	-0.8
FSK	Fiskardo	1.89	185	P	Pb	14 29 25.2	-1.2
ULC	Ulcinj	1.99	325	Pn	Pb	14 29 28.4	+0.3
ULC	Ulcinj	1.99	325	ePn	Pn	14 29 26.7	+1.1
ULC				i Sn	Sb	14 29 54.1	+1.1
SOH	Sokhos	2.02	76	P	Pb	14 29 27.3	-1.3
SOH	Sokhos	2.02	76	P	Pn	14 29 26.3	+0.2
PLG	Polygyros	2.04	88	P	Pn	14 29 27.2	+0.8
PLG	Polygyros	2.04	88	P	Pn	14 29 26.3	0.0
BCI	Bajram Curri	2.09	345	Pn	Pb	14 29 29.6	-0.1
BCI				Sn	Sg	14 29 58.7	+0.2
BCI				AML	AML	14 30 06.2	
	2.2nm,0.8s						
DRME	Dracevica, Mon	2.19	327	Pn	Pb	14 29 31.5	-0.1
DRME	Dracevica, Mon	2.19	327⇑	iPn	Pn	14 29 29.3	+0.8
DRME				i Sn	Sb	14 29 59.1	+0.1
PDG	Podgorica	2.38	332	ePn	Pn	14 29 31.6	+0.7
PDG				eSn	Sb	14 30 05.5	+1.4
PDG	Podgorica	2.38	332⇓	iPn	Pn	14 29 31.8	+0.9
PDG				i Sn	Sb	14 30 03.3	-0.8
PDG	Podgorica	2.38	332	P	Pn	14 29 30.9	0.0
BUM	Brajici-Budva	2.41	325	ePn	Pn	14 29 31.7	+0.2
BUM				i Sn	Sb	14 30 04.3	-1.0
OUR	Ouranopolis	2.45	89	P	Pn	14 29 32.2	+0.3
BOSS	Bosilegrad	2.50	30	ePn	Pn	14 29 32.8	+0.1
BOSS				eSn	Sb	14 30 07.0	-0.8
BARS	Barje	2.59	17	ePn	Pn	14 29 33.9	0.0
BARS				eSn	Sb	14 30 11.1	+0.8
CEME	Cevo	2.60	328⇓	iPn	Pn	14 29 34.4	+0.3
CEME				i Sn	Sn	14 30 08.5	+2.4
IVA	Berane	2.61	346	ePn	Pn	14 29 34.6	+0.4
IVA				i Sn	Sn	14 30 08.2	+2.0
KOME	Kolasin	2.67	340	ePn	Pn	14 29 36.6	+1.5
KOME				i Sn	Sn	14 30 10.5	+2.7
SELS	Selova	2.88	5	ePn	Pn	14 29 37.6	-0.3
SELS				eSn	Sb	14 30 17.8	-1.0
SJES	Sjenica	2.97	349	ePn	Pn	14 29 40.7	+1.4
SJES				eSn	Sb	14 30 19.1	-2.4
BRY	Bratogost	3.05	327	ePn	Pn	14 29 41.4	+1.0
BRY				i Sn	Sn	14 30 19.2	+1.9
PLE	Pljevlja	3.15	341	ePn	Pn	14 29 42.4	+0.6
PLE				i Sn	Sn	14 30 21.8	+2.0
UPM	Unac-Piva	3.18	334	ePn	Pn	14 29 42.8	+0.7
UPM				i Sn	Sn	14 30 22.6	+2.2
GOCS	Kraljevo Serbi	3.21	1	ePn	Pn	14 29 43.5	+1.0
GOCS				eSn	Sn	14 30 24.0	+2.8
ZAPS	Zavoj	3.24	25	ePn	Pn	14 29 42.4	-0.4
ZAPS				eSn	Sn	14 30 24.5	+2.9
IVAS	Ivanjica	3.26	352	ePn	Pn	14 29 42.6	-0.6
BOVS	Bovan	3.36	12	ePn	Pn	14 29 43.5	-0.9
BOVS				eSn	Sn	14 30 28.6	+4.1
GRUS	Gruza	3.54	359	ePn	Pn	14 29 48.1	+1.2
ZAGS	Zajecar	3.63	17	ePn	Pn	14 29 48.6	+0.5
BBLS	Lazi&#263i	3.66	344	ePn	Pn	14 29 49.8	+1.1
BBLS				eSn	Sn	14 30 37.2	+5.0
DIVS	Divibare	3.79	351	ePn	Pn	14 29 50.4	-0.1
TRUS	Trudelj	3.88	356	ePn	Pn	14 29 50.0	-1.7
KUBS	Kucevo	4.12	9	ePn	Pn	14 29 53.6	-1.3
TEKS	Tekeris	4.30	348	ePn	Pn	14 29 57.4	0.0
AVAS	Avala Beograd	4.35	358	ePn	Pn	14 29 57.4	-0.7
VRSS	Vrsac	4.79	5	ePn	Pn	14 30 02.9	-1.2
FRGS	Fruska Gora	4.86	352	ePn	Pn	14 30 04.3	-0.8
IDI	Anoyia	6.01	146	Pn	Pn	14 30 21.3	+0.3
	5.3nm,0.8s,baz=322,slow=17,SNR=2.7						
IDI				Sn	Sn	14 31 32.7	+2.7
	0.6nm,0.3s,baz=64,slow=20,SNR=2.1						
MLR	Muntele Rosu	6.39	35	Pn	Pn	14 30 25.6	-0.6
	0.2nm,0.3s,baz=236,slow=3.6,SNR=2.0						
	0.5nm,0.3s						
SOKA	Soboth	7.58	328	i Pn	Pn	14 30 42.0	-0.5
	2.0nm,0.5s						
KECS	Kecovo	8.14	359	ePN	Pn	14 30 54.0	+4.0
VYHS	Vyhne	8.26	351	ePN	Pn	14 30 56.8	+5.0
ABTA	Abfaltersbach	8.77	320	i Pn	Pn	14 30 59.0	+0.2
	2.1nm,0.5s						
VRAC	Vranov	9.44	343	LR	LR	14 34 51.5	
	comp=Z,32nm,18.6s,baz=178,slow=39						
WATA	Walderalm	9.64	319	i Pn	Pn	14 31 10.9	+0.1
	2.4nm,0.4s						
FETA	Feichten	9.87	316	i Pn	Pn	14 31 13.2	-0.7
	1.1nm,0.4s						
GERES	GERESS Array B	9.88	332	Pn	Pn	14 31 12.7	-1.3
	baz=148,slow=13,SNR=6.4						
	0.3nm,0.4s						
MOTA	Moosalm	9.88	318	i Pn	Pn	14 31 13.7	-0.4
	2.0nm,0.4s						
DAVOX	Davos/Dischmat	10.19	313	Pn	Pn	14 31 17.5	-0.8
	0.4nm,0.3s,baz=128,slow=17,SNR=4.9						
	1.8nm,0.6s						
HFS	Hagfors	20.30	350	P	P	14 33 26.0	-1.8
	1.8nm,0.8s,baz=171,slow=13,SNR=4.3						
	1.8nm,0.8s						
FINES	FINESS Array B	21.37	7	P	P	14 33 38.1	-1.2
	1.0nm,0.7s,baz=183,slow=11,SNR=4.2						
	1.0nm,0.7s						
NOA	NORSAR Array B	21.54	347	P	P	14 33 40.0	-1.2
	0.6nm,0.8s,baz=155,slow=9.9,SNR=3.6						
	0.6nm,0.8s						
EKA	Eskdalemuir Ar	21.82	321	P	P	14 33 42.7	-1.4
	0.5nm,0.8s,baz=122,slow=9.8,SNR=2.5						
	0.5nm,0.8s						
MKAR	Makanchi Array	44.03	60	P	P	14 36 58.4	-1.3
	0.1nm,0.3s,baz=298,slow=9.5,SNR=2.2						
	0.1nm,0.3s						

IDC 01 14:48:45.0±0.7, 29°.99N×142°.97E, h0^{km}, mb4.0/18, mbtmp4.0/21, ML3.3/4, MS2.8/14, Error ellipse: s-maj=22.5km s-min=15.4km az=77.0

MOS 01 14:48:45.6±0.9, 30°.03N×143°.03E, h15^{km}, mb4.6/19, Error ellipse: s-maj=12.0km s-min=5.9km az=118.0

NEIC 01 14:48:45.7±2.6, 29°.99N±0°.06×143°.06E±0°.09, h10^{km}±1^{km}, mb4.8/20, Error ellipse: s-maj=14.9km s-min=8.8km az=58.0

JMA 01 14:48:48.3±0.4, 30°N±1°×14°3E±°, h54^{km}, MV4.3/24, NEAR TORISHIMA IS

NIED 01 14:48:48.3, 29°.96N×142°.68E, h54^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.29; $M_{\theta\theta}$0.11; $M_{\phi\phi}$1.18; $M_{r\theta}$-0.42; $M_{\theta\phi}$-0.61; $M_{\phi r}$0.06; Fault plane solution: $M_0$1.45000×10^{15} NP1: ϕ_s351.00000°, δ42.00000°, λ-66.00000°. NP2: ϕ_s140.00000°, δ52.00000°, λ-110.00000°.

ISC 01 14:48:49.4±0.5, **30°.00N**±0°.04×**142°.93E**±0°.08, **h30**^{km}, **n125**, σ**1^{s}87**/130, **mb4.4**/50, **MS2.9**/8, **9C-9D**, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	2.97	193	eP	Pn	14 49 33.0	-1.4
CBIJ				eS	Sn	14 50 04.9	-4.2
JCJ	Chichijima	2.97	193		Pn	14 49 33.2	-1.3
JCJ	Chichijima	2.97	193	Pn	Pn	14 49 31.9	-2.5
	9.8nm,0.3s,baz=302,slow=23,SNR=20						
JCJ				Sn	Sn	14 50 03.2	-5.8
	31nm,0.3s,baz=244,slow=23,SNR=10						
JCJ				LR	LR	14 50 34.6	
	comp=Z,221nm,18.2s,baz=350,slow=37						
JHH2	Haha-jima-NKT2	3.42	191	eP	Pn	14 49 39.6	-1.1
JHH2				eS	Sn	14 50 17.6	-2.6
JAOM	Aogashimamukai	3.66	313	eP	Pn	14 49 42.9	-1.1
JHCJ	Hachijojimakas	4.07	320	eP	Pn	14 49 47.9	-1.7
JHCJ				eS	Sn	14 50 32.2	-3.9
JHJ2	Mitsune	4.08	320	Pn	Pn	14 49 47.5	-2.3
JHJ2	Mitsune	4.08	320	eP	Pn	14 49 47.5	-2.3
JHJ2				eS	Sn	14 50 33.0	-3.6
JMKN	Mikurajimanish	4.81	325	eP	Pn	14 49 58.2	-1.5
JMKN				eS	Sn	14 50 50.2	-4.2
BSO1	Boso 1	4.92	341	eP	Pn	14 49 59.0	-1.8
BSO1				eS	Sn	14 50 53.5	-3.0
JMYK	Miyake Tsubota	4.96	326	eS	Sn	14 50 55.6	-2.6
JKO	Kozu shima	5.27	323	eP	Pn	14 50 05.0	-1.1
JIM2	Oshima 3	5.56	329	eP	Pn	14 50 09.3	-0.8
JIM2				eS	Sn	14 51 10.3	-2.6
JKUC	kamogawauchiur	5.64	337	eP	Pn	14 50 10.1	-1.0
JKUC				eS	Sn	14 51 11.3	-3.6
JOD2	Odawara 2	6.17	329	eP	Pn	14 50 17.3	-1.2
JOD2				eS	Sn	14 51 23.6	-4.4
JRY	Ryogami san	6.89	332	eP	Pn	14 50 27.4	-0.9
JRY				eS	Sn	14 51 42.3	-3.4
JGF	Kuroka	7.29	321		Pn	14 50 34.8	+0.9
MJAR	Matsushiro Arr	7.63	330	Pn	Pn	14 50 37.4	-1.1
	0.4nm,0.3s,baz=154,slow=11,SNR=73						
MJAR				Sn	Sn	14 51 58.3	-5.6
	0.2nm,0.3s,baz=156,slow=17,SNR=7.3						
MJAR				LR	LR	14 53 41.1	
	comp=Z,37nm,20.1s,baz=152,slow=39						
	9.1nm,0.8s						
MAJO	Matsushiro	7.63	330		Pn	14 50 37.2	-1.3
MAJO	Matsushiro	7.63	330	P	Pn	14 50 38.0	-0.5
MAJO				pmax	pmax		
	comp=Z,26nm,0.7s						
MJB9	Matsu-Tunnel	7.63	330		Pn	14 50 37.1	-1.4
JMM	Marumori	8.04	348		Pn	14 50 40.9	-3.3
JMK	Ichinoseki	9.04	351	eP	Pn	14 50 54.6	-3.2
JMK				eS	Sn	14 52 28.8	-10
JNU	Nakatsue	10.74	290	Pn	Pn	14 51 20.3	-0.9
	comp=Z,0.1nm,0.3s,baz=70,slow=6.9,SNR=4.4						
JNU				LR	LR	14 55 03.1	
	comp=Z,86nm,19.4s,baz=108,slow=35						
	comp=Z,5.2nm,0.9s						
ERM	Erimo	11.99	1	P	Pn	14 51 34.3	-3.9
ERM				pmax	pmax		
	comp=Z,17nm,2.1s						
JOW	Kunigami	13.28	260	LR	LR	14 56 27.8	
	comp=Z,67nm,20.4s,baz=182,slow=35						
ASAJ	Asahikawa	14.09	359	Pn	Pn	14 52 03.0	-3.9
	comp=Z,0.3nm,0.3s,baz=173,slow=17,SNR=1.7						
ASAJ				Sn	Sn	14 54 30.5	-12
	comp=Z,0.3nm,0.3s,baz=172,slow=22,SNR=1.5						
ASAJ				LR	LR	15 03 39.0	
	comp=Z,13nm,18.0s,baz=155,slow=63						
YUK	Yuzh-Kuril'sk	14.20	9	P	Pn	14 52 01.4	-7.0
KSRS	Korea Array	14.52	305	Pn	Pn	14 52 12.9	+0.1
	comp=Z,0.2nm,0.3s,baz=113,slow=13,SNR=15						
KSRS				LR	LR	14 57 21.4	
	comp=Z,14nm,21.0s,baz=125,slow=35						
	comp=Z,3.7nm,0.7s						
KSAR	Wonju Array Be	14.54	305	Pn	Pn	14 52 14.0	+0.9
KSAR	Wonju Array Be	14.54	305	P	Pn	14 52 14.0	+0.9
PSTR	Posyet	15.94	326⇑	eP	Pn	14 52 32.0	+0.6
USA0B	Ussuriysk Arra	16.62	331⇓	eP	Pn	14 52 38.9	-1.2
NACB	Ninganchiao	19.85	258	P	P	14 53 16.4	-1.6
YHNB	Yeheng	19.86	260	P	P	14 53 16.2	-2.0
YHNB				IAmb	IAmb	14 53 24.1	
	comp=Z,56nm,1.4s						
YULB	Yu-li	20.40	256	P	P	14 53 23.1	-0.9
KLR	Kul'dur	21.00	339	P	P	14 53 31.2	+0.9
	comp=Z,2.2nm,0.5s,baz=146,slow=8.8,SNR=8.3						
	comp=Z,2.2nm,0.5s						
KLR	Kul'dur	21.00	339⇓	eP	P	14 53 31.0	+0.7
KLR				pmax	pmax		
	comp=Z,13nm,2.5s						
HEH	HeiHe	23.36	334	eP	P	14 53 56.0	+0.8
HEH				pmax	pmax		
	comp=Z,5.0nm,1.2s						
PEA0B	Petropavlovsk-	25.50	21	i P	P	14 54 14.5	-0.4
PETK	Petropavlovsk-	25.50	21	LR	LR	15 02 51.8	
	comp=Z,29nm,21.7s,baz=166,slow=33						
PET	Petropavlovsk	25.73	22⇓	eP	P	14 54 16.6	-0.3
TGY	Tagaytay City	25.73	237	LR	LR	15 05 38.9	
	comp=Z,37nm,18.1s,baz=280,slow=39						
ZEA	Zeya	26.32	339	eP	P	14 54 23.0	+0.7
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
DAV	Davao City (W)	28.04	219	LR	LR	15 06 26.0	
	comp=Z,22nm,19.7s,baz=207,slow=38						
MA2	Magadan	30.05	8	deP	P	14 54 56.5	+1.0
SHEM	Shemya Is, Ala	32.19	36	LR	LR	15 05 35.4	
	comp=Z,23nm,19.9s,baz=186,slow=31						
ULN	Ulaanbaatar	32.74	313		P	14 55 19.1	-0.5
ULN	Ulaanbaatar	32.74	313⇓	eP	P	14 55 21.1	+1.5
ULN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SONM	Songino Array	33.15	313	P	P	14 55 23.6	+0.5
	comp=Z,1.4nm,0.7s,baz=117,slow=8.4,SNR=8.3						
	comp=Z,1.4nm,0.7s						
YAK	Yakutsk	33.20	349	LR	LR	15 11 36.7	
	comp=Z,13nm,20.3s,baz=152,slow=41						
SEY	Seymchan	33.51	8⇓	eP	P	14 55 26.3	+0.4
SEY				pmax	pmax		
	comp=Z,2.0nm,1.3s						
GOMU	GeErMu	40.45	292	P	P	14 56 25.0	-0.7
GOMU				pmax	pmax		
	comp=Z,13nm,0.9s						
BILL	Bilibino	40.49	13⇑	eP	P	14 56 25.7	+0.6
BILL				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KAPI	Kappang	41.30	216	LR	LR	15 17 55.0	
	comp=Z,20nm,18.0s,baz=126,slow=42						
CHTO	Chiang Mai	41.35	265	P	P	14 56 32.9	+0.1
CHTO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CMAR	Chiang Mai Arr	41.50	264	P	P	14 56 34.2	+0.2
	comp=Z,1.0nm,0.6s,baz=51,slow=8.0,SNR=8.2						
CMAR				LR	LR	15 13 32.4	
	comp=Z,20nm,21.0s,baz=190,slow=36						
	comp=Z,1.0nm,0.6s						
CMAR	Chiang Mai Arr	41.50	264	i P	P	14 56 34.7	+0.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TIXI	Tiksi	42.40	353	LR	LR	15 23 54.4	
	comp=Z,12nm,18.1s,baz=185,slow=50						
TIXI	Tiksi	42.40	353⇑	eP	P	14 56 41.1	+0.4
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.7s						
COEN	Coen	43.70	180	P	P	14 56 49.1	-2.7
LSA	Lhasa	44.59	283	P	P	14 56 58.9	-0.6
LSA				IAmb	IAmb	14 57 24.5	

	comp=Z,8.9nm,0.4s						
LSA	Lhasa	44.59	283	P	P	14 56 58.9	-0.6
LSA				pmax	pmax		
	comp=Z,9.0nm,0.4s						
ANM	Nome	47.09	28	P	P	14 57 16.1	-2.0
ANM	Nome	47.09	28	P	P	14 57 16.2	-2.0
ANM				pmax	pmax		
	comp=Z,41nm,1.4s						
ZALV	Zalesovo Beam	47.77	317	P	P	14 57 23.3	-0.3
	comp=Z,0.6nm,0.4s,baz=101,slow=7.7,SNR=3.9						
ZALV				PcP	PcP	14 58 52.4	+0.1
	comp=Z,1.2nm,0.6s,baz=71,slow=1.8,SNR=4.2						
	comp=Z,0.6nm,0.4s						
EVN	Everest	48.71	282	P	P	14 57 31.1	-0.9
P16K	Nushagak River	48.98	36	P	P	14 57 30.1	-2.7
MK31	Makanchi Array	49.18	308	*d i*P	P	14 57 35.5	+0.9
MKAR	Makanchi Array	49.18	308		P	14 57 33.6	-1.0
MKAR	Makanchi Array	49.18	308	P	P	14 57 35.3	+0.6
	comp=Z,2.7nm,0.9s,baz=88,slow=9.1,SNR=19						
	comp=Z,2.7nm,0.9s						
MKAR	Makanchi Array	49.18	308	*i* P	P	14 57 35.7	+1.1
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
J17K	VABM Dome	49.37	30	P	P	14 57 33.8	-2.0
J17K				IAmb	IAmb	14 57 52.2	
	comp=Z,28nm,2.0s						
N17K	Nushagak Hills	49.63	34	P	P	14 57 36.5	-1.4
N17K				IAmb	IAmb	14 58 12.6	
	comp=Z,16nm,1.6s						
WB0	Warramunga Arr	50.16	190	P	P	14 57 40.2	-2.0
WB0				IAmb	IAmb	14 58 41.7	
	comp=Z,22nm,1.4s						
NRIK	Noril'sk	50.21	338	*ce*P	P	14 57 43.0	+0.9
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WRA	Warramunga Arr	50.34	191	P	P	14 57 43.1	-0.5
	comp=Z,1.4nm,0.6s,baz=8.4,slow=7.5,SNR=6.1						
WRA				PcP	PcP	14 59 03.6	+1.5
	comp=Z,0.8nm,0.7s,baz=360,slow=3.5,SNR=2.5						
	comp=Z,1.4nm,0.6s						
C19K	Lookout Ridge	50.83	23	P	P	14 57 47.8	+0.9
C19K				IAmb	IAmb	14 58 45.6	
	comp=Z,64nm,1.9s						
KURK	Kurchatov	51.46	313		P	14 57 52.3	+0.5
KURK	Kurchatov	51.46	313	⇑*e*P	P	14 57 52.6	+0.8
KURK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KURBB	Kurchatov Arra	51.52	313	P	P	14 57 53.0	+0.8
	comp=Z,2.8nm,0.6s,baz=90,slow=7.4,SNR=17						
	comp=Z,2.8nm,0.6s						
D20K	Etivluk River	51.73	24	P	P	14 57 53.6	0.0
D20K				IAmb	IAmb	14 57 56.2	
	comp=Z,13nm,1.3s						
B20K	Meade River	51.92	22	P	P	14 57 53.7	-1.2
B21K	Ikpikpuk River	52.66	23	P	P	14 57 59.4	-1.0
B21K				IAmb	IAmb	14 59 09.7	
	comp=Z,22nm,1.5s						
TARG	Taragay, Kyrgy	52.91	302	P	P	14 58 05.3	+2.0
TARG				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ASAR	Alice Springs	54.06	190	P	P	14 58 10.7	-0.5
ASAR	Alice Springs	54.06	190	P	P	14 58 11.3	+0.1
	comp=Z,1.1nm,1.1s,baz=2.9,slow=7.5,SNR=4.1						
ASAR				PcP	PcP	14 59 17.4	+1.4
	comp=Z,0.5nm,0.9s,baz=356,slow=5.1,SNR=2.3						
	comp=Z,1.1nm,1.1s						
KSH	Kashi	54.70	299	P	P	14 58 20.9	+4.9
KSH				pmax	pmax		
	comp=Z,13nm,0.8s						
ILAR	Eielson Array	54.86	30	P	P	14 58 16.2	-0.4
	comp=Z,0.7nm,0.9s,baz=258,slow=6.4,SNR=6.6						
	comp=Z,0.7nm,0.9s						
AAK	Ala-Archa	55.18	303	⇓*e*P	P	14 58 20.9	+1.4
AAK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
BVAR	Borovoye Array	56.38	316	P	P	14 58 28.2	+0.5
	comp=Z,1.7nm,0.6s,baz=79,slow=7.7,SNR=11						
	comp=Z,1.7nm,0.6s						
BRVK	Borovoye	56.44	316	*de*P	P	14 58 28.9	+0.8
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARK	Arkit	57.19	303	P	P	14 58 35.5	+1.7
ARK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KKAR	Karatay Array	57.95	305		P	14 58 39.9	+0.9
KKAR	Karatay Array	57.95	305	P	P	14 58 39.9	+0.9
NIL	Nilore	58.29	293	P	P	14 58 43.8	+2.3
NIL				pmax	pmax		
	comp=Z,14nm,0.7s						
CHGR	Chuyangaron	60.05	300	P	P	14 58 55.4	+1.7
CHGR	Chuyangaron	60.05	300	P	P	14 58 55.4	+1.7
CHGR				pmax	pmax		
	comp=Z,29nm,0.7s						
DZET	Dzherino	60.26	300	P	P	14 58 57.2	+2.0
DZET				pmax	pmax		
	comp=Z,15nm,0.7s						
ARTI	Arti	62.66	321	*c i*P	P	14 59 11.9	+1.0
ARTI						14 59 50.3	
ARTI						15 01 25.6	
ARTI				S	S	15 07 41.4	+4.3
ARTI				SS	SS	15 11 45.9	+4.6
ARTI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
AB31	Akbulak array	63.56	313	IAmb	IAmb	14 59 23.2	
	comp=Z,2.6nm,0.6s						
ABKAR	Akbulak array	63.56	313		P	14 59 16.7	-0.3
KIRV	Kirov	66.68	325	⇑*e*P	P	14 59 38.0	+1.0
NWAO	Narrogin (SRO)	67.15	203	P	P	14 59 41.6	+1.3
NWAO				pmax	pmax		
	comp=Z,29nm,2.2s						
RES	Resolute Bay	69.09	14	P	P	14 59 52.1	+0.1
RES				pmax	pmax		
	comp=Z,3.0nm,1.2s						
DAG	Danmarks Havn	72.87	356	P	P	15 00 15.3	+0.4
AKT	Akhty	74.38	309	*e*P	P	15 00 25.5	+0.9
AKT				pmax	pmax		
	comp=Z,6.0nm,0.9s						
FINES	FINESS Array B	75.64	334	P	P	15 00 30.8	-0.5
	comp=Z,1.6nm,0.8s,baz=57,slow=5.1,SNR=4.6						
	comp=Z,1.6nm,0.8s						
KBZ	Khabaz	76.52	313	P	P	15 00 36.8	+0.2
	comp=Z,3.0nm,0.8s,baz=52,slow=1.9,SNR=12						
	comp=Z,3.0nm,0.8s						
KBZ	Khabaz	76.52	313	*ce*P	P	15 00 38.0	+1.4
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AKASG	Malin Array Be	80.67	324	P	P	15 00 59.4	+0.1
	comp=Z,0.9nm,0.6s,baz=53,slow=5.0,SNR=7.8						
	comp=Z,0.9nm,0.6s						
AKASG	Malin Array Be	80.67	324	*i* P	P	15 00 59.7	+0.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKBB	Malin Array Si	80.67	324	⇑*e*P	P	15 01 00.0	+0.7
KIEV	Kiev	80.68	324	P	P	15 01 00.1	+0.7
KIEV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HFS	Hagfors	81.02	337	P	P	15 01 01.1	0.0
	comp=Z,1.9nm,0.8s,baz=40,slow=7.9,SNR=2.1						
	comp=Z,1.9nm,0.8s						
NB2	NORSAR Subarra	81.16	338	P	P	15 01 02.3	+0.4
	comp=Z,4.1nm,0.9s,baz=40,slow=5.3						
NOA	NORSAR Array B	81.16	338	P	P	15 01 01.0	-0.9
	comp=Z,1.4nm,0.8s,baz=39,slow=5.1,SNR=4.6						
	comp=Z,1.4nm,0.8s						
NOA	NORSAR Array B	81.16	338	P	P	15 01 01.0	-0.9
PDAR	Pinedale Array	81.70	45	P	P	15 01 05.9	+0.5
	comp=Z,0.2nm,0.6s,baz=291,slow=9.2,SNR=1.7						
	comp=Z,0.2nm,0.6s						
BR131	Keskin Array S	84.51	313	IAmb	IAmb	15 01 21.7	
	comp=Z,2.8nm,0.8s						
BRTR	Keskin Array B	84.51	313	P	P	15 01 20.4	+0.7
BRTR	Keskin Array B	84.51	313	P	P	15 01 21.0	+1.2
	comp=Z,1.8nm,0.7s,baz=107,slow=5.4,SNR=13						
	comp=Z,1.8nm,0.7s						
RAYN	Ar Rayn	84.58	294	P	P	15 01 21.8	+1.5
RAYN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TXAR	Lajitas Array	93.35	53	P	P	15 02 03.0	+1.0
	comp=Z,0.4nm,0.7s,baz=290,slow=3.6,SNR=6.2						
	comp=Z,0.4nm,0.7s						
TXAR	Lajitas Array	93.35	53	P	P	15 02 03.0	+1.0

*SCB **01** 14:56:28.4±1.3, 20°.98S×66°.81W, h232^{km}±10^{km}, ML4.0/5, MW3.5, Error ellipse: s-maj=6.4km s-min=4.3km az=0.0*

*IDC **01** 14:56:29.1±1.9, 20°.76S×66°.55W, h240^{km}±21^{km}, mb3.2/2, mbtmp3.8/6, Error ellipse: s-maj=25.5km s-min=16.6km az=36.0*

ISC 01 14:56:28.0±0.8**, 20°.89S**±0°.06×**66°.71W**±0°.05**, h232**^{km}±7^{km}**, n25, σ**1^{s}**64**/32**, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCB	Mochara	1.06	110	Pg	Pn	14 57 03.1	+1.0
MOCB				Sg	S	14 57 29.1	+0.4
MOCB				IAML		14 57 34.0	
	2μm,0.6s						
YJA	Yavi	1.70	139	Pg	Pn	14 57 07.9	+1.1
YJA				Sg	S	14 57 37.1	0.0
PB08	IPOC Station P	2.41	288	Pg	Pn	14 57 13.7	+0.2
PB08				Sg	S	14 57 48.6	-0.4
PB08				IAML		14 57 50.5	
	122nm,0.7s						
PB09	IPOC Station P	2.52	249	Pg	Pn	14 57 14.2	-0.3
SOEO	Opoqueri	2.57	334	Pg	Pn	14 57 17.4	+2.1
PB01	IPOC Station P	2.60	266	Pg	Pn	14 57 14.9	-0.3
PB01				Sg	S	14 57 49.3	-2.8
PB01				IAML		14 57 53.6	
	606nm,0.2s						
GO01	Chusmiza	2.63	297	Pg	Pn	14 57 16.6	+0.7
SOET	ToroToro	2.89	17	Pg	Pn	14 57 19.9	+1.3
PB11	IPOC Station P	2.98	292	Pg	Pn	14 57 19.7	+0.3
PB11				Sg	S	14 57 57.6	-2.1
PB11				IAML		14 57 59.9	
	1μm,0.2s						
PB16	IPOC Station P	3.66	313	Pg	Pn	14 57 29.0	+1.3
PB16				Sg	S	14 58 13.7	-0.8
PB16				IAML		14 58 18.2	
	48nm,0.4s						
BBOJ	La Paz, Jacaqu	4.14	340	Pg	Pn	14 57 35.4	+2.1
SOEJ	Jacaque	4.14	340	Pg	Pn	14 57 35.7	+2.4
BBOE	La Paz, Chanca	4.23	343	Pg	Pn	14 57 36.1	+1.6
BBOD	La Paz, Gloria	4.59	337	Pg	Pn	14 57 40.2	+1.3
LPAZ	La Paz	4.77	343	P	Pn	14 57 42.3	+1.2
	5.2nm,0.3s,baz=151,slow=4.8,SNR=30						
LPAZ				S	S	14 58 39.0	+0.1
	6.9nm,0.6s,baz=292,slow=18,SNR=7.3						
LPAZ	La Paz	4.77	343	Pg	Pn	14 57 42.4	+1.2
BBOB	La Paz, Bander	4.91	344	Pg	Pn	14 57 43.8	+1.0
SIV	San Ignacio	7.24	49	P	Pn	14 58 11.3	-0.3
	27nm,0.6s,baz=232,slow=10,SNR=149						
SIV				S	S	14 59 29.0	-5.6
	1.7nm,0.4s,baz=223,slow=7.0,SNR=3.5						
CPUP	Villa Florida	10.16	124	P	Pn	14 58 48.9	0.0
	0.4nm,0.7s,baz=182,slow=13,SNR=3.1						
BDFB	Brasilia	18.50	77	P	P	15 00 27.4	-0.1
	2.9nm,0.4s,baz=265,slow=8.6,SNR=4.9						
TXAR	Lajitas Array	61.34	323	P	P	15 06 19.8	+0.2
	0.1nm,0.4s,baz=156,slow=7.8,SNR=4.0						
	0.1nm,0.4s						
QSPA	South Pole Qui	69.30	180	P	P	15 07 11.1	+1.0
	1.2nm,0.4s,baz=158,slow=10,SNR=32						
	1.2nm,0.4s						
ASAR	Alice Springs	131.37	205	PKP	PKPdf	15 15 13.1	-0.4
	0.2nm,0.5s,baz=132,slow=1.5,SNR=7.8						
WRA	Warramunga Arr	134.49	208	PKP	PKPdf	15 15 19.2	-0.2
	0.2nm,0.7s,baz=135,slow=1.6,SNR=2.2						
MKAR	Makanchi Array	143.93	37	PKP	PKPbc	15 15 34.9	+0.7
	0.3nm,0.8s,baz=306,slow=2.7,SNR=3.8						

*IDC **01** 15:00:20.3±0.8, 32°.48N×142°.52E, h0^{km}, mb3.7/12, mbtmp3.7/15, ML3.7/3, Error ellipse: s-maj=25.0km s-min=16.9km az=76.0*

*NIED **01** 15:00:24.1, 32°.60N×142°.37E, h20^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-4.03; M$_{\theta\theta}$0.46; M$_{\phi\phi}$3.57; M$_{r\theta}$-5.04; M$_{\theta\phi}$-1.02; M$_{\phi r}$3.64; Fault plane solution: M$_{0}$7.30000×10^{14} NP1: φ$_{s}$358.00000°, δ20.00000°, λ-48.00000°. NP2: φ$_{s}$134.00000°, δ75.00000°, λ-104.00000°.*

*JMA **01** 15:00:24.1±0.2, 32°.6N±0°.6×142°.4E±0°.9, h20^{km}, MV4.0/24, FAR E OFF IZU ISLANDS*

ISC 01 15:00:26.3±0.7**, 32°.48N**±0°.05×**142°.50E**±0°.08**, h52**^{km}**, n29, σ2**^{s}**71**/40**, mb3.6**/12**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	2.31	270	*e*P	Pn	15 01 00.8	-1.1
JAOM				*e*S	Sn	15 01 27.9	-1.3
JHJ2	Mitsune	2.35	286	P	Pn	15 01 00.6	-1.7
JHJ2				*e*S	Sn	15 01 27.4	-2.6
JHCJ	Hachijojimakas	2.35	285	*e*P	Pn	15 01 00.7	-1.7
JHCJ				*e*S	Sn	15 01 27.7	-2.4
BSO1	Boso 1	2.51	330	*e*P	Pn	15 01 02.6	-1.5
BSO1				*e*S	Sn	15 01 32.0	-1.2
JMKN	Mikurajimanish	2.82	301	*e*P	Pn	15 01 07.2	-1.5
BSO3	Boso 3	2.85	325	*e*P	Pn	15 01 08.0	-0.9
JOD2	Odawara 2	3.97	315	*e*P	Pn	15 01 23.2	-1.4
JOD2				*e*S	Sn	15 02 06.4	-3.5
JYN	Shimob	4.45	314	*e*P	Pn	15 01 31.1	-0.2
JYN				*e*S	Sn	15 02 21.5	-0.4
JRY	Ryogami san	4.62	321	*e*P	Pn	15 01 33.0	-0.5
JAG	Ashikaga	4.67	328	*e*P	Pn	15 01 33.0	-1.1
JAG				*e*S	Sn	15 02 23.5	-3.6
CBIJ	Chichi jima	5.38	183	*e*P	Pn	15 01 41.8	-2.2
CBIJ				*e*S	Sn	15 02 39.3	-5.2
JCJ	Chichijima	5.38	183	Pn	Pn	15 01 40.7	-3.3
	6.1nm,0.3s,baz=33,slow=16,SNR=21						
JCJ				Sn	Sn	15 02 37.0	-7.5
	7.6nm,0.3s,baz=101,slow=23,SNR=4.5						
	16nm,0.3s						
MJAR	Matsushiro Arr	5.38	320	Pn	Pn	15 01 42.1	-1.9
	0.7nm,0.3s,baz=147,slow=11,SNR=86						
MJAR				Sn	Sn	15 02 42.9	-1.7
	0.1nm,0.3s,baz=207,slow=23,SNR=4.1						
	6.0nm,0.5s						
JMK	Ichinoseki	6.54	351	*e*P	Pn	15 01 56.9	-2.9
JMK				*e*S	Sn	15 03 05.6	-7.4
JCH	Churui	10.14	4	*e*P	Pn	15 02 45.0	-4.0
JCH				*e*S	Sn	15 04 29.0	-12
ASAJ	Asahikawa	11.62	0	Pn	Pn	15 03 06.4	-2.8
	0.7nm,0.3s,baz=193,slow=19,SNR=9.9						
	2.0nm,0.4s						
SONM	Songino Array	31.24	310	P	P	15 06 42.2	+1.3
	0.4nm,0.5s,baz=108,slow=10.0,SNR=1.8						
	0.4nm,0.5s						
MKAR	Makanchi Array	47.40	306	P	P	15 08 57.0	+1.7
	0.2nm,0.5s,baz=98,slow=9.8,SNR=4.9						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	49.59	311	P	P	15 09 13.1	+1.0
	0.7nm,0.3s,baz=84,slow=8.5,SNR=4.3						
	0.7nm,0.3s						
WRA	Warramunga Arr	52.71	190	P	P	15 09 36.7	+1.0
	0.9nm,0.7s,baz=10,slow=7.6,SNR=3.9						
	0.9nm,0.7s						
ILAR	Eielson Array	52.90	30	P	P	15 09 37.7	+1.0
	0.3nm,0.6s,baz=261,slow=6.3,SNR=8.7						
	0.3nm,0.6s						
BVAR	Borovoye Array	54.35	315	P	P	15 09 47.8	+0.3
	0.6nm,0.8s,baz=96,slow=14,SNR=3.7						
	0.6nm,0.8s						
ASAR	Alice Springs	56.44	189	P	P	15 10 03.9	+1.2
	0.2nm,0.6s,baz=7.4,slow=7.2,SNR=6.6						
	0.2nm,0.6s						
FINES	FINESS Array B	73.26	333	P	P	15 11 53.0	+1.3
	1.5nm,0.8s,baz=35,slow=5.1,SNR=2.1						
	1.5nm,0.8s						
NVAR	Mina Array Bea	77.01	53	P	P	15 12 15.3	+1.3
	0.6nm,0.7s,baz=297,slow=6.5,SNR=4.1						
	0.6nm,0.7s						
AKASG	Malin Array Be	78.46	323	P	P	15 12 22.8	+1.3
	0.1nm,0.3s,baz=52,slow=1.5,SNR=1.3						
	0.1nm,0.3s						
NOA	NORSAR Array B	78.73	338	P	P	15 12 24.6	+1.7
	0.5nm,0.6s,baz=25,slow=16,SNR=1.5						
	0.5nm,0.6s						
PDAR	Pinedale Array	80.22	45	P	P	15 12 33.4	+1.8
	0.5nm,0.7s,baz=231,slow=0.9,SNR=4.9						
	0.5nm,0.7s						
QSPA	South Pole Qui	122.24	180	PKP	PKiKP	15 19 16.3	+1.6
	1.4nm,0.9s,baz=0.0,slow=0.0,SNR=2.6						

*IDC **01** 15:02:56.9±0.4, 0°.91N×25°.88W, h0^{km}, mb4.6/31, mbtmp4.6/32, ML5.5/1, MS4.5/60, Error ellipse: s-maj=16.4km s-min=10.0km az=135.0*

*MOS **01** 15:02:58.6±1.0, 0°.71N×25°.91W, h10^{km}, mb5.2/63, MS4.6/9, Error ellipse: s-maj=10.8km s-min=5.0km az=52.2*

*NEIC **01** 15:03:01.7±1.6, 0°.82N±0°.09×25°.98W±0°.08, h10^{km}±1^{km}, mb5.1/227, Mww5.3/18, Error ellipse: s-maj=16.1km s-min=13.1km az=145.0*

*NEIC **01** 15:03:01.7, 0°.82N×25°.97W, h12^{km}*

*NEIC **01** 15:03:01.7, 0°.82N×25°.97W, h12^{km}, Moment Tensor Solution. Duration: 2^{s}2 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.03; M$_{\theta\theta}$0.18; M$_{\phi\phi}$-0.16; M$_{r\theta}$0.06; M$_{\theta\phi}$-1.00; M$_{\phi r}$0.10; Fault plane solution: M$_{0}$1.03000×10^{17} NP1: φ$_{s}$265.35000°, δ84.56000°, λ-175.83000°. NP2: φ$_{s}$174.96000°, δ85.85000°, λ-5.45000°. Principal axes: T 1.0331, Plg1.0000°, Azm220.0000°; N -0.0131, Plg83.0000°, Azm318.0000°; P -1.0199, Plg7.0000°, Azm130.0000°;*

*INMG **01** 15:03:02.0±2.8, 0°.75N×25°.98W, h10^{km}, mb4.8, Ms4.5, MW5.0, #DIST_RANGE: DISTANT*

*GCMT **01** 15:03:03.7±0.1, 0°.82N±0°.01×25°.91W±0°.01, h12^{km}, MW5.4/153, Moment Tensor Solution. s127,c212; s153,c303; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.07±.02; M$_{\theta\theta}$0.30±.02; M$_{\phi\phi}$-0.23±.02; M$_{r\theta}$0.58±.04; M$_{\theta\phi}$-1.69±.01; M$_{\phi r}$-0.25±.04; Best double couple: M$_{0}$1.81500×10^{17} NP1:φ$_{s}$177.00000°, δ73.00000°, λ7.00000°. NP2:φ$_{s}$85.00000°, δ83.00000°, λ163.00000°. Principal axes: T 1.9320, Plg17.0000°, Azm40.0000°; N -0.2340, Plg72.0000°, Azm244.0000°; P -1.6980, Plg7.0000°, Azm132.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **01** 15:03:06.1, 0°.45N×24°.54W, h33^{km}, mb4.8*

ISC 01 15:03:00.8±0.3**, 0°.68N**±0°.05×**25°.88W**±0°.05**, h14**^{km}**, n554, σ1**^{s}**80**/460**, mb5.0**/220**, MS4.7**/84**, 32C-31D, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	Riachuelo	11.91	237		Pn	15 05 48.5	-1.9
RCBR	Riachuelo	11.91	237	P	Pn	15 05 48.5	-1.9
RCBR	Riachuelo	11.91	237	*e*P	Pn	15 05 47.0	-3.4
NBCL	Cascavel-CE	13.32	248	*e*P	Pn	15 06 08.7	-1.0
H10N3	ASCENSION HYDR	14.15	127	T	T	15 20 51.5	
	baz=306,slow=75,SNR=2970						
H10N2	ASCENSION HYDR	14.16	127	T	T	15 20 48.6	
	baz=306,slow=75,SNR=2422						
H10N1	ASCENSION HYDR	14.18	127	T	T	15 20 53.0	
	baz=306,slow=75,SNR=1766						
ASCN	Ascension	14.32	127	Pn	Pn	15 06 25.9	+2.5
SACV	Santiago Islan	14.38	9		Pn	15 06 20.0	-4.2
NBAN	Anadia - AL	14.59	225	*e*P	Pn	15 06 26.7	-0.3
MBO	M'Bour	16.23	33		Pn	15 06 47.8	-0.9
BBTS	Babate	16.69	33	Pn	Pn	15 06 51.2	-3.2
	16nm,0.3s,baz=221,slow=0.7,SNR=43						
BBTS				Sn	Sn	15 09 45.0	-15
	2.1nm,0.3s,baz=148,slow=23,SNR=1.1						
BBTS				LR	LR	15 11 51.7	
	comp=Z,4μm,20.9s,baz=107,slow=32						
	40nm,0.4s						
CMC01	Camacan, BA	20.87	220	*e*P	Pn	15 07 44.4	-0.8
DBIC	Dimbokro	21.80	74		P	15 07 52.3	-0.4
DBIC	Dimbokro	21.80	74	P	P	15 07 50.1	-2.6
	112nm,1.0s,baz=264,slow=13,SNR=44						
DBIC				S	S	15 11 44.6	-9.1
	6.9nm,0.8s,baz=349,slow=16,SNR=2.6						
DBIC				LR	LR	15 14 16.3	
	comp=Z,2μm,21.7s,baz=254,slow=31						
	112nm,1.0s						
DBIC	Dimbokro	21.80	74	PKHKP	PKPpre	15 07 50.2	
DBIC	Dimbokro	21.80	74	P	P	15 07 52.3	-0.4
DBIC				pmax	pmax		
	comp=Z,178nm,1.1s						
GUA01	Guaratinga, BA	21.97	218	*e*P	P	15 07 55.9	+1.3
TMAB	Tom-Au,PA,Br	22.41	262	*e*P	P	15 07 60.0	+0.6
SMTB	Santa Maria do	23.61	246	*e*P	P	15 08 10.8	-0.9
JANB	Januaria	24.01	229	*e*P	P	15 08 15.5	0.0
RIB01	Linhares ES	24.45	215	*e*P	P	15 08 21.1	+1.6
PRPB	Parauapebas	24.84	254	*e*P	P	15 08 23.6	+0.5
DIAM	Diamantina, MG	25.72	222	*e*P	P	15 08 32.3	+1.1
ACRG	Accra	26.10	79	P	P	15 08 34.3	-0.2
MDP	Montagnes des	27.08	280	LR	LR	15 18 15.4	
	comp=Z,369nm,18.8s,baz=100,slow=34						
CAM01	Campos-RJ	27.16	214	*e*P	P	15 08 44.9	+1.0
BDFB	Brasilia	27.22	233		P	15 08 45.5	+0.8
BDFB	Brasilia	27.22	233	P	P	15 08 44.5	-0.2
	comp=Z,8.0nm,0.7s,baz=63,slow=10,SNR=12						
BDFB				LR	LR	15 18 22.3	
	comp=Z,4μm,20.6s,baz=57,slow=34						
	comp=Z,8.0nm,0.7s						
BDFB	Brasilia	27.22	233	P	P	15 08 45.5	+0.8
BDFB				pmax	pmax		
	comp=Z,25nm,1.0s						
PMNB	Patos De Minas	27.80	226	*e*P	P	15 08 50.7	+0.8
SNDB	Serra Nova Dou	28.19	243	*e*P	P	15 08 53.9	+0.6
BSCB	Bom Sucesso	28.38	220	*e*P	P	15 08 55.6	+0.6
VAS01	Vassouras-RJ	28.53	216	*e*P	P	15 08 57.9	+1.6
IPMB	Ipameri, GO	28.75	229	*e*P	P	15 08 58.7	+0.3
TORD	Torodi Ar. Bea	30.00	64		P	15 09 08.8	-0.6
TORD	Torodi Ar. Bea	30.00	64	P	P	15 09 06.5	-2.8
	comp=Z,18nm,0.8s,baz=258,slow=8.9,SNR=20						
TORD				LR	LR	15 19 57.6	
	comp=Z,3μm,19.0s,baz=245,slow=34						
	comp=Z,18nm,0.8s						
ITTB	Itaituba	30.25	260	*e*P	P	15 09 11.7	+0.1
ARAG	Araguaiana, MT	30.35	236	*e*P	P	15 09 12.9	+0.5
NPGB	Novo Progresso	30.39	255	*e*P	P	15 09 12.3	-0.6
SPB	Sao Paulo	31.95	220	*e*P	P	15 09 27.4	+1.0
FUL	Funchal	32.91	14	*e*T	T	15 43 40.4	
PMAR	Madeira	32.98	14	*e*T	T	15 43 42.5	
PDRB	Porto dos Gac	32.99	247	*e*P	P	15 09 36.0	+0.2
PMOZ	Porto Moniz, M	33.01	13	*e*S	S	15 15 04.7	+11
PMOZ				*e*tx	tx	15 17 16.9	
PMOZ				*i* AMs_20		15 19 59.7	
	comp=Z,1μm,20.0s						
PMOZ				*e*T	T	15 43 50.6	
FRTB	Fartura	33.17	222	*e*P	P	15 09 38.4	+1.1
PCMB	Pacaembu	33.24	227	*e*P	P	15 09 40.0	+2.2
SALV	Santo Antonio	33.73	239	*e*P	P	15 09 43.2	+1.0
LDASE	Londrina, Braz	34.27	224	*e*P	P	15 09 48.5	+1.7
RPRD	Ribas do Rio P	34.41	231	*e*P	P	15 09 49.8	+1.8
BOAV	Boa Vista	34.67	273		P	15 09 48.9	-1.5
BOAV	Boa Vista	34.67	273	*e*P	P	15 09 51.9	+1.5
TRCB	Terra Rica	34.97	226	*e*P	P	15 09 54.0	+1.1
MACA	Manacapuru-AM	35.00	264	P	P	15 09 53.2	0.0
PTGB	Pitanga	35.79	223	*e*P	P	15 09 59.9	0.0
AQDB	Aquidauana	35.97	233	P	P	15 10 02.0	+0.5
AQDB				IAmb	IAmb	15 10 03.9	
	comp=Z,28nm,1.2s						
PSMN	Pico do Norte,	36.15	1	*e*T	T	15 47 12.9	
PSMN	Pico do Norte,	36.15	1	*e*T	T	15 47 12.9	
PTLB	Pontes e Lacer	36.56	243		P	15 10 07.9	+1.3
PTLB	Pontes e Lacer	36.56	243	*e*P	P	15 10 07.4	+0.9
VILB	Vilhena	36.63	247	P	P	15 10 06.7	-0.5
VILB				IAmb	IAmb	15 10 10.3	
	comp=Z,20nm,1.0s						
VILB	Vilhena	36.63	247	*e*P	P	15 10 07.7	+0.4
BDQN	Bodoquena, MS	36.80	233	*e*P	P	15 10 09.6	+1.1
AVE	Averroes	36.80	26	P	P	15 10 08.1	-0.2
AVE				IAmb	IAmb	15 10 11.4	
	comp=Z,39nm,1.0s						
CMLA	Cha da Macela	36.91	0	*e*T	T	15 47 55.5	
CMLA	Cha da Macela	36.91	0	*e*T	T	15 47 55.5	
TAM	Tamanrasset	37.62	52		P	15 10 15.3	-0.4
TAM	Tamanrasset	37.62	52	P	P	15 10 15.3	-0.4
TAM				pmax	pmax		
	comp=Z,68nm,0.9s						
MDT	Midelt	37.72	30	LR	LR	15 25 17.5	
	comp=Z,3μm,19.9s,baz=244,slow=36						
SAML	Samuel	38.37	255		P	15 10 22.6	+0.7
SAML	Samuel	38.37	255	P	P	15 10 22.6	+0.7
SAML				pmax	pmax		
	comp=Z,21nm,1.2s						
SAML	Samuel	38.37	255	*e*P	P	15 10 23.0	+1.0
SIV	San Ignacio	38.49	243	P	P	15 10 20.7	-2.3
	comp=Z,9.5nm,0.8s,baz=86,slow=9.1,SNR=4.2						
SIV				LR	LR	15 25 36.1	
	comp=Z,2μm,18.4s,baz=90,slow=35						
	comp=Z,9.5nm,0.8s						
BBSD	Serra de San D	38.55	241	*e*P	P	15 10 24.4	+1.0
SJPY	San Joaquin	38.82	227	*e*P	P	15 10 26.4	+0.8
TEFE	Tefe	38.96	264	*e*P	P	15 10 28.4	+1.5
PCRV	Puerto La Cruz	39.67	285	LR	LR	15 26 09.4	
	comp=Z,243nm,21.2s,slow=35						
PTEO	Sao Teotonio	39.95	21	*e*P	P	15 10 36.1	+1.2
PTEO				*i* Amb		15 10 59.9	

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      comp=Z,82nm,1.6s
PBDV  Barranco-do-Ve   39.98  23 eP       P         15 10 36.6 +1.4
PVAQ  Vaqueiros        40.21  23 eP       P         15 10 39.0 +2.1
PVAQ                             i AMs_20           15 24 59.3
      comp=Z,629nm,20.0s
PCVE  Castro Verde     40.29  22 eP       P         15 10 39.7 +2.1
PCVE                             i Amb              15 10 48.2
      comp=Z,39nm,1.7s
MESJ  Messejana        40.40  22 ePP      PP        15 12 11.9 +0.2
MESJ                             eS       S         15 16 48.0 +1.5
MESJ                              IAMs_20 IAMs_20   15 22 24.8
      comp=Z,918nm,22.2s
MESJ  Messejana        40.40  22 eP       P         15 10 39.4 +0.8
CPUP  Villa Florida    40.50 226  P       P         15 10 40.7 +1.1
CPUP  Villa Florida    40.50 226  P       P         15 10 39.6  0.0
      comp=Z,3.4nm,1.1s,baz=303,slow=7.2,SNR=7.5
CPUP                              LR      LR        15 27 10.7
      comp=Z,417nm,18.7s,baz=276,slow=36
      comp=Z,3.4nm,1.1s
CPUP  Villa Florida    40.50 226  P       P         15 10 40.7 +1.1
CPUP                              pmax    pmax
      comp=Z,17nm,1.6s
CPSB  Cacapava Do Su   40.54 218 eP       P         15 10 41.0 +1.1
PBEJ  Beja             40.70  22 eP       P         15 10 45.7 +4.7
PBEJ                             i Amb              15 10 45.8
      comp=Z,32nm,1.3s
EVO   Evora            41.09  21 eP       P         15 10 45.9 +1.6
EVO                              i Amb              15 10 55.9
      comp=Z,26nm,2.2s
PBAR  Barrancos        41.14  23 eP       P         15 10 46.0 +1.4
PBAR                             i Amb              15 11 16.7
      comp=Z,27nm,1.9s
PMTG  Montargil        41.49  21 eP       P         15 10 49.6 +2.1
PMTG                             i Amb              15 10 52.4
      comp=Z,24nm,1.2s
PESTR Estremoz         41.54  22 eP       P         15 10 49.8 +1.8
PESTR                            i Amb              15 10 59.0
      comp=Z,20nm,1.6s
PLTB  Pedras Altas     41.60 217          P         15 10 49.9 +1.3
PLTB                              IAmb    IAmb      15 10 52.3
      comp=Z,44nm,1.1s
PLTB  Pedras Altas     41.60 217 eP       P         15 10 50.5 +2.0
PSARD Sardoal          41.98  21 eP       P         15 10 53.7 +2.1
PSARD                            i Amb              15 11 04.0
      comp=Z,33nm,1.7s
ITQB  Itaqui           42.08 222          P         15 10 54.4 +1.9
ITQB                              IAmb    IAmb      15 10 55.6
      comp=Z,68nm,1.2s
ITQB  Itaqui           42.08 222 eP       P         15 10 54.2 +1.6
PMRV  Marv??o          42.11  21 eP       P         15 10 54.6 +2.0
PMRV                             i Amb              15 10 58.6
      comp=Z,45nm,1.6s
PMRV                             eS       S         15 17 16.4 +4.6
PMRV                             ex       x         15 20 31.4
PMRV                             i AMs_20           15 27 34.0
      comp=Z,562nm,18.0s
PCAS  Casmilo, Conde   42.27  20 eP       P         15 10 55.7 +1.8
PCAS                             i Amb              15 11 12.3
      comp=Z,29nm,1.8s
COI   Coimbra          42.44  20  P       P         15 10 55.4 +0.1
COI                               IAmb    IAmb      15 10 57.9
      comp=Z,67nm,1.8s
COI   Coimbra          42.44  20  P       P         15 10 55.4 +0.1
COI                               pmax    pmax
      comp=Z,67nm,1.8s
PCBR  Castelo Branco   42.44  21 eP       P         15 10 56.5 +1.3
PCBR                             i Amb              15 11 08.8
      comp=Z,14nm,1.4s
BAUV  El Baul          42.77 282  P       P         15 10 59.6 +1.3
BAUV                              IAmb    IAmb      15 11 04.8
      comp=Z,31nm,1.1s
MTE   Manteigas        42.91  21 eP       P         15 11 00.2 +1.0
MTE                              i Amb              15 12 07.8
      comp=Z,20nm,1.7s
MTE                              ex       x         15 17 31.4
MTE                              etx      tx        15 20 42.0
MTE                              i AMs_20           15 27 37.0
      comp=Z,559nm,18.0s
PVIS  Viseu            43.07  20 eP       P         15 11 02.0 +1.6
SJG   San Juan         43.18 296  LR      LR        15 25 10.6
      comp=Z,251nm,20.9s,baz=88,slow=31
PAB   San Pablo        43.39  24  P       P         15 11 03.9 +0.7
PAB   San Pablo        43.39  24  P       P         15 11 03.9 +0.7
PAB                               pmax    pmax
      comp=Z,6.0nm,0.9s
ESDC  Sonseca Array    43.66  25  P       P         15 11 05.3  0.0
ESDC  Sonseca Array    43.66  25  P       P         15 11 02.0 -3.3
      comp=Z,3.4nm,1.1s,baz=221,slow=8.8,SNR=38
ESDC                              LR      LR        15 28 57.0
      comp=Z,459nm,19.1s,baz=223,slow=36
      comp=Z,3.4nm,1.1s
ESBB  Sonseca Array    43.66  25  P       P         15 11 05.7 +0.5
POLO  Lamas de Olo     43.69  20 eP       P         15 11 06.6 +1.1
MVO   Moncorvo         43.77  21 eP       P         15 11 07.7 +1.5
MVO                              i Amb              15 11 17.1
      comp=Z,27nm,1.8s
MVO                              ex       x         15 21 07.3
MVO                              i AMs_20           15 28 31.9
      comp=Z,558nm,18.0s
PCAB  Cabril           43.91  19 eP       P         15 11 09.2 +2.0
PCAB                             i Amb              15 11 10.4
      comp=Z,32nm,1.4s
PGAV  Gavieira, Arco   44.06  19 eP       P         15 11 10.1 +1.6
PGAV                             i Amb              15 11 12.6
      comp=Z,37nm,1.7s
PGAV                             eS       S         15 17 49.3 +8.7
PGAV                             ex       x         15 21 43.5
PGAV                             i AMs_20           15 30 39.6
      comp=Z,559nm,16.0s
PBRG  Braganca         44.43  20 eP       P         15 11 12.8 +1.4
PBRG                             i Amb              15 11 29.4
      comp=Z,20nm,1.7s
LPAZ  La Paz           44.96 246  P       P         15 11 17.5 +0.8
LPAZ                              IAmb    IAmb      15 11 18.9
      comp=Z,29nm,0.9s
LPAZ  La Paz           44.96 246  P       P         15 11 14.1 -2.6
      comp=Z,25nm,0.9s,baz=64,slow=4.7,SNR=3.6
LPAZ                              LR      LR        15 29 22.8
      comp=Z,1µm,18.7s,baz=70,slow=35
      comp=Z,25nm,0.9s
LPAZ  La Paz           44.96 246  P       P         15 11 17.5 +0.8
LPAZ                              pmax    pmax
      comp=Z,29nm,0.9s
LPAZ  La Paz           44.96 246 eP       P         15 11 15.6 -1.1
SDV   Santo Domingo    45.29 282  P       P         15 11 19.1 +0.2
SDV                               IAmb    IAmb      15 11 30.7
      comp=Z,13nm,0.6s
PB18  Visviri          46.59 245  P       P         15 11 29.8 +0.3
PB18                              IAmb    IAmb      15 11 36.8
      comp=Z,23nm,1.1s
PB16  IPOC Station P   46.86 244  P       P         15 11 31.1 -0.4
TSUM  Tsumeb           47.00 117  P       P         15 11 33.4 +1.2
TSUM                              IAmb    IAmb      15 11 36.5
      comp=Z,22nm,0.9s
TSUM  Tsumeb           47.00 117  LR      LR        15 26 55.4
      comp=Z,1µm,21.4s,baz=281,slow=30
GO01  Chusmiza         47.02 242  P       P         15 11 31.9 -0.8
GO01                              IAmb    IAmb      15 13 20.3
      comp=Z,31nm,1.6s
CZSB  Cruzeiro do Su   47.43 259  P       P         15 11 34.8 -0.7
WIN   Windhoek         47.80 122  P       P         15 11 40.2 +1.7
WIN   Windhoek         47.80 122  P       P         15 11 40.2 +1.7
WIN                               pmax    pmax
      comp=Z,31nm,1.0s
KEST  Kesra            47.83  39  P       P         15 11 39.8 +1.5
KEST                              IAmb    IAmb      15 11 49.5
      comp=Z,23nm,1.0s
KEST  Kesra            47.83  39  P       P         15 11 35.8 -2.5
      comp=Z,19nm,1.0s,baz=243,slow=3.5,SNR=18
KEST                              LR      LR        15 31 36.9
      comp=Z,2µm,20.8s,baz=229,slow=36
      comp=Z,19nm,1.0s
CEST  Esterri de Car   48.32  27  P       P         15 11 43.5 +1.5
CEST                              IAmb    IAmb      15 11 50.5
      comp=Z,16nm,1.1s
PB06  IPOC Station P   48.46 238  P       P         15 11 43.0 -0.6
ROSC  El Rosal         48.55 276  P       P         15 11 43.4 -1.2
      comp=Z,5.3nm,0.3s,baz=131,slow=11,SNR=4.4
ROSC                              LR      LR        15 31 24.4
      comp=Z,797nm,19.2s,baz=96,slow=35
      comp=Z,5.3nm,0.3s
GO02  Mina Guanaco     49.46 235  P       P         15 11 52.4 +1.1
FLOC  Florencia        49.77 271  P       P         15 11 54.4 +0.9
FLOC                              IAmb    IAmb      15 12 23.2
      comp=Z,15nm,1.0s
XAUDM Khaudum          50.16 115  P       P         15 11 58.5 +2.0
QNGWA Qangwa           50.31 116  P       P         15 11 59.0 +1.3
QNGWA                             IAmb    IAmb      15 12 03.1
      comp=Z,26nm,1.4s
QNGWA Qangwa           50.31 116 i P      P         15 11 59.4 +1.7
KOOLE Kule             50.61 121  P       P         15 12 00.7 +0.8
KOOLE                             IAmb    IAmb      15 12 04.8
      comp=Z,30nm,0.8s
KOOLE Kule             50.61 121 i P      P         15 12 03.0 +3.1
TRQA  Tornquist        50.91 217  P       P         15 12 02.6 +0.9
TRQA                              IAmb    IAmb      15 12 06.4
      comp=Z,26nm,1.2s
TRQA  Tornquist        50.91 217  P       P         15 12 02.6 +0.9
TRQA                              pmax    pmax
      comp=Z,27nm,1.2s
GRTLG Ghanzi           50.93 118  P       P         15 12 03.7 +1.4
GRTLG Ghanzi           50.93 118 i P      P         15 12 04.3 +1.9
CFA   Coronel Fontan   51.37 227  P       P         15 12 05.0 -0.4
      comp=Z,4.9nm,0.7s,baz=88,slow=9.1,SNR=11
CFA                               LR      LR        15 34 27.4
      comp=Z,580nm,19.6s,baz=22,slow=37
      comp=Z,4.9nm,0.7s
AC05  El Transito      51.59 232  P       P         15 12 08.6 +1.4
ZON   Zonda            51.66 228  P       P         15 12 08.6 +1.0
ZON                               IAmb    IAmb      15 12 12.7
      comp=Z,25nm,1.4s
ZON   Zonda            51.66 228  P       P         15 12 08.6 +1.0
ZON                               pmax    pmax
      comp=Z,25nm,1.4s
SSB   Saint Sauveur    51.90  27  P       P         15 12 10.5 +1.5
SSB   Saint Sauveur    51.90  27  P       P         15 12 10.5 +1.5
SSB                               pmax    pmax
      comp=Z,23nm,1.7s
CO01  Juntas del Tor   51.97 230  P       P         15 12 11.2 +1.0
VAE   Valguarnera      52.13  41  LR      LR        15 35 24.7
      comp=Z,5µm,18.0s,baz=318,slow=38
NNA   Nana             52.13 254  LR      LR        15 33 34.8
      comp=Z,186nm,20.9s,baz=68,slow=35
NNA   Nana             52.13 254⇑eP       P         15 12 10.1 -1.2
NNA                               pmax    pmax
      comp=Z,21nm,1.0s
ISO   Isola            52.27  30  P       P         15 12 13.1 +1.2
ISO                               pmax    pmax
      comp=Z,10.0nm,1.2s
KGCAE Kacgae           52.30 120  P       P         15 12 13.6 +1.1
KGCAE Kacgae           52.30 120 i P      P         15 12 14.5 +2.0
GO04  Tololo Observa   52.61 230  P       P         15 12 15.6 +0.7
BNI   Bardonecchia     52.72  29  P       P         15 12 16.8 +1.5
BNI   Bardonecchia     52.72  29  P       P         15 12 16.8 +1.5
BNI                               pmax    pmax
      comp=Z,20nm,1.3s
VAL   Valentia         52.75  12  P       P         15 12 16.7 +1.6
CO03  El Pedregal      52.83 230  P       P         15 12 17.0 +0.6
ATAH  Atahualpa        52.96 261  LR      LR        15 33 44.3
      comp=Z,423nm,21.8s,baz=83,slow=35
COHC  Cochancay        53.45 266  P       P         15 12 21.2 +0.2
CEL   Celeste          53.54  41  P       P         15 12 23.1 +1.7
CEL                               IAmb    IAmb      15 12 24.4
      comp=Z,22nm,1.0s
PHPEN Phepeng          53.77 123  IAmb    IAmb      15 12 27.5
      comp=Z,19nm,1.0s
LMEL  Las Melosas      53.92 226  IAmb    IAmb      15 12 26.6
      comp=Z,16nm,0.9s
MT13  San Alfonso      53.93 226  IAmb    IAmb      15 12 34.0
      comp=Z,28nm,1.2s
IGLA  Glengowla, Co    54.32  12  P       P         15 12 28.0 +1.3
ZCCA  Zocca            54.40  32  IAmb    IAmb      15 13 00.2
      comp=Z,26nm,1.1s
INTR  Introdacqua      54.52  36  IAmb    IAmb      15 12 38.6
      comp=Z,16nm,1.0s
MURB  Monte Urbino     54.52  34  IAmb    IAmb      15 12 31.3
      comp=Z,23nm,1.1s
NRCA  Norcia           54.58  35  IAmb    IAmb      15 12 33.5
      comp=Z,27nm,1.2s
FDMO  Fiordimonte      54.69  34  IAmb    IAmb      15 12 33.9
      comp=Z,25nm,1.4s
DSB   Dublin           54.84  14  P       P         15 12 32.1 +1.6
SUR   Sutherland       54.97 131  P       P         15 12 33.3 +1.3
SUR                               IAmb    IAmb      15 12 34.8
      comp=Z,14nm,0.9s
HAL   Halifax          55.04 328  P       P         15 12 32.0 -0.1
HAL                               IAmb    IAmb      15 12 33.7
      comp=Z,20nm,1.0s
HAL   Halifax          55.04 328  P       P         15 12 32.0 -0.1
HAL                               pmax    pmax
      comp=Z,20nm,1.0s
ECH   Echery           55.30  26  P       P         15 12 35.2 +1.3
MAKGR Makgori          55.53 122  IAmb    IAmb      15 12 43.2
      comp=Z,43nm,1.6s
LPHEP Lephephe         55.64 119 i P      P         15 12 37.9 +1.0
LSZ   Lusaka           55.72 109  P       P         15 12 39.0 +1.4
LSZ   Lusaka           55.72 109  LR      LR        15 31 55.5
      comp=Z,776nm,21.7s,baz=288,slow=31
LSZ   Lusaka           55.72 109  P       P         15 12 39.0 +1.4
LSZ                               pmax    pmax
      comp=Z,10.0nm,1.0s
DAVA  Damuels          55.88  29 eP       P         15 12 38.5 +0.2
      comp=Z,16nm,1.0s,SNR=5.5
CTI   Castel Tesino    55.90  31  IAmb    IAmb      15 12 39.9
      comp=Z,10nm,0.8s
BFO   Black Forest     55.91  27  P       P         15 12 39.0 +0.7
BFO   Black Forest     55.91  27  P       P         15 12 39.0 +0.7
BFO                               pmax    pmax
      comp=Z,12nm,1.1s
BFO   Black Forest     55.91  27 eP       P         15 12 39.4 +1.1
      comp=Z,11nm,1.1s,baz=224,slow=7.0
BFO                              eL       L         15 33 15.2
      comp=Z,394nm,20.6s
LBTB  Lobatse          55.94 121  IAmb    IAmb      15 12 43.9
      comp=Z,27nm,1.6s
LBTB  Lobatse          55.94 121  LR      LR        15 31 59.9
      comp=Z,682nm,21.3s,baz=284,slow=31
FETA  Feichten         56.10  29 i P      P         15 12 40.3 +0.4
      comp=Z,18nm,1.0s,SNR=8.6
BI02  San Fabin de     56.11 224  IAmb    IAmb      15 12 42.4
      comp=Z,31nm,1.0s
UBR   Ueberruh         56.26  29 eP       P         15 12 41.9 +1.0
      comp=Z,16nm,1.0s,baz=224,slow=7.0
BROLN Tlhalogang       56.30 116 i P      P         15 12 42.5 +0.9
RETA  Reutte           56.44  29 i P      P         15 12 42.6 +0.3
      comp=Z,11nm,1.0s
SQTA  Sankt Quirin     56.48  30 eP       P         15 12 42.8 +0.3
      comp=Z,27nm,1.2s,SNR=9.6
MOTA  Moosalm          56.51  29 eP       P         15 12 42.8  0.0
      comp=Z,13nm,1.0s,SNR=8.0
MBAR  Mbarara          56.63  91⇑eP       P         15 12 43.9 -0.4
MBAR                              pmax    pmax
      comp=Z,15nm,1.4s
WTTA  Wattenberg       56.72  30 i P      P         15 12 44.9 +0.6
      comp=Z,12nm,0.9s,SNR=6.6
WATA  Walderalm        56.74  30 i P      P         15 12 44.3 -0.1
      comp=Z,14nm,1.2s,SNR=6.0
ABTA  Abfaltersbach    56.81  31 eP       P         15 12 46.3 +1.4
      comp=Z,27nm,1.3s,SNR=11
BOSA  Boshof           56.90 125          P         15 12 46.3 +0.4
BOSA                              IAmb    IAmb      15 12 49.9
      comp=Z,12nm,0.8s
BOSA  Boshof           56.90 125  P       P         15 12 45.4 -0.6
      comp=Z,13nm,0.9s,baz=303,slow=7.5,SNR=15
BOSA                              LR      LR        15 32 38.1
      comp=Z,1µm,20.4s,baz=284,slow=31
      comp=Z,13nm,0.9s
BOSA  Boshof           56.90 125  P       P         15 12 46.3 +0.4
BOSA                              pmax    pmax
      comp=Z,12nm,0.8s
CADS  Cadrg            57.10  32 i P      P         15 12 48.1 +1.3
PRED  Cave del Predi   57.15  32  IAmb    IAmb      15 12 50.2
      comp=Z,18nm,1.3s
CEY   Cerknica         57.15  33 eP       P         15 12 48.8 +1.6
FUR   Furstenfeldbru   57.16  29 eP       P         15 12 48.3 +1.1
      comp=Z,26nm,1.1s,baz=224,slow=7.0
FUR                              eL       L         15 35 18.0
      comp=Z,308nm,21.5s
MATP  Matopo           57.17 115  LR      LR        15 33 22.4
      comp=Z,478nm,21.8s,baz=260,slow=32
MYKA  Terra Mystica    57.31  31 eP       P         15 12 48.4  0.0
      comp=Z,25nm,1.6s,SNR=8.8
LESA  Schwarzleotal    57.35  30 eP       P         15 12 49.1 +0.5
      comp=Z,18nm,0.9s,SNR=11
TNS   Taunus Mts       57.36  25 eP       P         15 12 50.0 +1.4
      comp=Z,15nm,0.9s,baz=224,slow=7.0
TNS                              eL       L         15 37 46.1
      comp=Z,510nm,18.8s
LJU   Ljubljana        57.40  32 eP       P         15 12 50.6 +1.6
KBA   Koelnbreinsper   57.45  31 i P      P         15 12 50.2 +0.7
      comp=Z,6.1nm,0.8s
EKA   Eskdalemuir Ar   57.54  15  P       P         15 12 46.5 -3.3
      comp=Z,6.8nm,0.9s,baz=207,slow=7.4,SNR=13
      comp=Z,6.8nm,0.9s
RJOB  Jochberg         57.62  30 eP       P         15 12 51.0 +0.5
      comp=Z,12nm,0.8s,baz=224,slow=7.0
OBKA  Obir             57.71  32 i P      P         15 12 51.2 -0.1
      comp=Z,8.1nm,1.1s
BUG   Bochum--Univer   57.78  24 eP       P         15 12 53.1 +1.6
      comp=Z,15nm,1.0s,baz=224,slow=7.0
PLCA  Paso Flores      57.81 219  P       P         15 12 51.9 -0.2
      comp=Z,1.6nm,0.7s,baz=58,slow=2.8,SNR=4.8
PLCA                              LR      LR        15 36 42.3
      comp=Z,456nm,20.0s,baz=48,slow=35
      comp=Z,1.6nm,0.7s
BIOA  Bad Ischl, Aus   58.01  30 i P      P         15 12 53.5 +0.3
      comp=Z,12nm,1.0s
KASTN Kahler Asten     58.07  25 eP       P         15 12 54.9 +1.3
      comp=Z,5.8nm,0.9s,baz=224,slow=7.0
BATG  Bathurst New B   58.08 329  P       P         15 12 54.0 +0.3
BATG                              IAmb    IAmb      15 13 13.0
      comp=Z,34nm,1.4s
SOKA  Soboth           58.08  32 eP       P         15 12 53.7 -0.1
      comp=Z,12nm,1.0s,SNR=11
GRFO  Grafenberg       58.21  27  P       P         15 12 54.8 +0.3
GRFO  Grafenberg       58.21  27  P       P         15 12 54.8 +0.3
GRFO                              pmax    pmax
      comp=Z,11nm,0.9s
GRF   Grafenberg Arr   58.21  27 eL       L         15 37 55.5
      comp=Z,393nm,20.6s
MOA   Molln            58.43  31 eP       P         15 12 56.3 +0.1
      comp=Z,12nm,0.9s,SNR=8.2
WET   Wettzell         58.61  29 eP       P         15 12 58.3 +0.9
      comp=Z,9.2nm,1.0s,baz=224,slow=7.0
WET                              eL       L         15 38 10.3
      comp=Z,434nm,19.3s
IBBN  Ibbenburen       58.64  23 eP       P         15 12 59.2 +1.7
      comp=Z,31nm,1.1s,baz=224,slow=7.0
ARSA  Arzberg          58.70  32  IAmb    IAmb      15 13 00.1
      comp=Z,19nm,1.6s
ARSA  Arzberg          58.70  32 i P      P         15 12 58.9 +0.9
      comp=Z,6.6nm,1.1s
ROTZ  Rotzenmuhle      58.72  28 eP       P         15 12 58.9 +0.8
      comp=Z,2.8nm,1.0s,baz=224,slow=7.0
GEC2  GERESS Array S   58.81  29  IAmb    IAmb      15 13 00.9
      comp=Z,14nm,1.1s
GEC2  GERESS Array S   58.81  29 eP       P         15 12 59.7 +0.9
      comp=Z,19nm,1.3s,baz=224,slow=7.0
GEC2                             eL       L         15 35 31.1
      comp=Z,542nm,21.8s
GERES GERESS Array B   58.81  29  P       P         15 12 58.8 -0.1
GERES GERESS Array B   58.81  29  P       P         15 12 55.1 -3.8
      comp=Z,5.0nm,1.0s,baz=222,slow=8.4,SNR=26
      comp=Z,5.0nm,1.0s
GERES GERESS Array B   58.81  29  P       P         15 12 58.8 -0.1
MANZ  Manzenberg       58.82  28 eP       P         15 12 59.9 +1.0
      comp=Z,2.7nm,1.0s,baz=224,slow=7.0
KHC   Kasperske Hory   58.94  29 eP       P         15 13 00.7 +1.0
KHC                              eS       S         15 21 07.1 +1.6
KHC                               AMS     AMS       15 43 30.0
      comp=Z,500nm,12.0s
KHC   Kasperske Hory   58.94  29c iP      P         15 13 00.4 +0.7
KHC                               pmax    pmax
      comp=Z,20nm,0.9s
GTTG  Gottingen        58.98  25 eP       P         15 13 01.7 +1.8
      comp=Z,28nm,1.4s,baz=224,slow=7.0
MOX   Moxa             59.06  27 eP       P         15 13 02.0 +1.5
      comp=Z,8.6nm,0.9s,baz=224,slow=7.0
MOX                              eL       L         15 37 27.9
      comp=Z,391nm,18.5s
CKRC  Cesky Krumlov    59.09  30 eP       P         15 13 01.9 +1.1
CKRC                             eS       S         15 21 07.4 -0.1
CKRC                              AMS     AMS       15 44 20.0
      comp=Z,400nm,14.6s
CKRC  Cesky Krumlov    59.09  30 eP       P         15 13 01.9 +1.1
CKRC                             eS       S         15 21 07.4 -0.1
CKRC                              MLR     MLR
      comp=Z,400nm,14.6s
NKC   Novy Kostel      59.15  28  AMS     AMS       15 44 00.0
      comp=Z,500nm,14.1s
SOCE  Pocosol          59.16 282  IAmb    IAmb      15 13 34.6
      comp=Z,39nm,1.6s
TANN  Tannenbergstha   59.28  27 eP       P         15 13 03.3 +1.2
      comp=Z,12nm,1.0s,baz=224,slow=7.0
CONA  Conrad Observa   59.30  31 i P      P         15 13 03.1 +0.8
      comp=Z,9.0nm,1.3s
TRNY  Table Rock, Ra   59.36 319  P       P         15 13 02.9 +0.1
TRNY                              IAmb    IAmb      15 13 13.6
      comp=Z,38nm,1.6s
CLZ   Clausthal        59.37  25 eP       P         15 13 04.3 +1.6
      comp=Z,3.6nm,0.9s,baz=224,slow=7.0
RONA  Rosalia, Austr   59.39  32 i P      P         15 13 03.8 +1.0
      comp=Z,13nm,0.9s,SNR=7.7
ZVC   Zvikov           59.44  29 eP       P         15 13 03.6 +0.4
ZVC                              eS       S         15 21 12.4 +0.4
ZVC                               AMS     AMS       15 43 40.0
      comp=Z,500nm,12.6s
ASSE  Asse, Remlinge   59.71  25 eP       P         15 13 06.4 +1.5
      comp=Z,10nm,1.1s,baz=224,slow=7.0
NRDL  Niedersach Rie   59.74  25 eP       P         15 13 07.2 +2.2
      comp=Z,15nm,1.1s,baz=224,slow=7.0
MORH  Mrgy, Hungar     59.77  34 ⇓P       P         15 13 07.1 +1.7
HSKC  Hora Svate Kat   59.87  28 eP       P         15 13 07.3 +1.2
HSKC                             eS       S         15 21 23.8 +6.3
PRU   Pruhonice        59.98  29 eS       S         15 21 20.0 +1.2
PRU                               AMS     AMS       15 39 10.0
      comp=Z,400nm,14.6s
LL02  Futaleuf         59.98 217          P         15 13 07.7 +0.7
PRA   Prague           59.98  29  AMS     AMS       15 45 30.0
      comp=Z,500nm,19.0s
TREC  Trest            59.99  30 eP       P         15 13 07.8 +0.8
TREC  Trest            59.99  30 eP       P         15 13 07.8 +0.8
GOPC  GO Pecny, Ondr   60.05  29 eS       S         15 21 24.2 +4.4
FLTG  Flechtingen      60.09  25 eP       P         15 13 08.9 +1.4
      comp=Z,10nm,1.0s,baz=224,slow=7.0
BOVS  Bovan            60.15  38 ⇑P       P         15 13 10.6 +2.5
CLL   Collm            60.15  27 i P      P         15 13 08.6 +0.6
CLL                              eS       S         15 21 27.0 +6.0
CLL                               pmax    pmax
      comp=Z,9.0nm,1.1s
CLL   Collm            60.15  27 eP       P         15 13 09.2 +1.2
      comp=Z,8.4nm,1.1s,baz=224,slow=7.0
CLL                              eL       L         15 39 23.8
      comp=Z,321nm,18.0s
CLL   Collm            60.15  27 i P      P         15 13 08.6 +0.6
      comp=Z,9.0nm,1.1s
CLL                              i x      x         15 13 22.7
CLL                              ePP      PP        15 15 24.0 +3.3
CLL                              ePPP     PPP       15 16 41.0
CLL                              eS       S         15 21 27.0 +6.0
      comp=N,500nm,28.6s
CLL                              eS       S         15 21 27.0 +6.0
      comp=E,500nm,26.3s
CLL                              eS       S         15 21 27.0 +6.0
      comp=Z,200nm,20.0s
CLL                              ex       x         15 23 17.0
CLL                              ex       x         15 24 08.0
CLL                              eSS      SS        15 25 24.0 +5.8
CLL                              eSSS     SSS       15 28 04.0
CLL                               AMS     AMS       15 46 00.0
      comp=N,200nm,21.6s
CLL                               AMS     AMS       15 46 00.0
      comp=E,200nm,21.3s
MVL   Millersville     60.24 317  IAmb    IAmb      15 13 10.7
      comp=Z,16nm,1.1s
BRG   Berggiesshubel   60.29  28 eP       P         15 13 10.0 +1.1
      comp=Z,6.2nm,1.0s,baz=224,slow=7.0
BRG   Berggiesshubel   60.29  28 eP       P         15 13 10.0 +1.1
BRG                               Amp               15 13 11.3
      comp=Z,6.3nm,1.0s
BRG   Berggiesshubel   60.29  28  S       S         15 21 25.0 +2.2
KRUC  Moravsky         60.30  31 eP       P         15 13 09.2 +0.2
MODS  Modra-Piesok     60.32  32 eP       P         15 13 10.0 +0.7
MODS                              pmax    pmax
      comp=Z,33nm,1.0s
MODS  Modra-Piesok     60.32  32 eP       P         15 13 10.0 +0.7
PVCC  Panska Ves       60.35  28 eP       P         15 13 11.1 +1.7
PVCC  Panska Ves       60.35  28 eP       P         15 13 11.1 +1.7
SRO   Srobarova        60.53  33 eP       P         15 13 12.9 +2.2
SRO                               pmax    pmax
      comp=Z,22nm,1.2s
SRO   Srobarova        60.53  33 eP       P         15 13 12.9 +2.2
VRAC  Vranov           60.55  30 eP       P         15 13 11.3 +0.5
BUD   Budapest         60.73  33  P       P         15 13 14.5 +2.5
MDVR  Moldovita        60.76  37 ⇑P       P         15 13 14.1 +1.7
N58A  Sunbury          60.87 318          P         15 13 12.8 -0.3
N58A                              IAmb    IAmb      15 13 15.0
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      comp=Z,24nm,1.2s
BSEG  Bad Segeberg     60.88  24 eP     P      15 13 14.3 +1.5
      comp=Z,24nm,0.9s,baz=224,slow=7.0
BSEG                             eL     L      15 38 39.5
      comp=Z,354nm,19.8s
BINY  Binghamton       61.03 319  P     P      15 13 12.9 -1.3
BINY                              IAmb  IAmb   15 13 18.2
      comp=Z,28nm,1.3s
UPC   Upice            61.03  29 eS     S      15 21 36.1 +3.8
UPC                               AMS   AMS    15 44 40.0
      comp=Z,500nm,13.3s
DPC   Dobruska-Polom   61.08  29 eP     P      15 13 14.7 +0.3
DPC                              eS     S      15 21 38.5 +5.4
DPC                               AMS   AMS    15 44 50.0
      comp=Z,500nm,17.0s
DPC   Dobruska-Polom   61.08  29 eP     P      15 13 14.7 +0.3
DPC                              eS     S      15 21 38.5 +5.4
DPC                               MLR   MLR
      comp=Z,500nm,17.0s
KRLC  Kraliky          61.13  30 eP     P      15 13 16.2 +1.4
KRLC  Kraliky          61.13  30 eP     P      15 13 16.2 +1.4
KRLC                              MLR   MLR
      comp=Z,600nm,15.7s
BZS   Buzias           61.15  36 ⇓P     P      15 13 16.8 +1.9
BZS   Buzias           61.15  36 ⇓P     P      15 13 16.8 +1.9
OSTC  Ostas            61.16  29 eS     S      15 21 35.4 +1.3
OSTC                              AMS   AMS    15 44 50.0
      comp=Z,500nm,17.2s
MAUC  Maruska          61.22  31 eP     P      15 13 16.9 +1.5
VYHS  Vyhne            61.22  32 eP     P      15 13 16.2 +0.8
VYHS                              pmax  pmax
      comp=Z,21nm,1.2s
VYHS  Vyhne            61.22  32 eP     P      15 13 16.2 +0.8
RUE   Ruedersdorf      61.31  26 eP     P      15 13 17.9 +2.1
RUE   Ruedersdorf      61.31  26 eP     P      15 13 18.1 +2.3
      comp=Z,25nm,0.7s,baz=224,slow=7.0
MORC  Moravsky Berou   61.33  31        P      15 13 16.5 +0.3
MORC                              IAmb  IAmb   15 13 18.6
      comp=Z,11nm,1.0s
MORC  Moravsky Berou   61.33  31 eP     P      15 13 16.9 +0.8
MORC  Moravsky Berou   61.33  31 ⇑P     P      15 13 17.3 +1.2
MORC  Moravsky Berou   61.33  31 ⇑P     P      15 13 17.3 +1.2
KSP   Ksiaz            61.39  29 eP     P      15 13 18.0 +1.6
KSP   Ksiaz            61.39  29  P     P      15 13 18.2 +1.8
PSZ   Piszkesteto      61.46  33  P     P      15 13 18.4 +1.3
PSZ   Piszkesteto      61.46  33 ⇓P     P      15 13 18.2 +1.1
PSZ   Piszkesteto      61.46  33  P     P      15 13 18.4 +1.3
PSZ                               pmax  pmax
      comp=Z,40nm,1.0s
PSZ   Piszkesteto      61.46  33 eP     P      15 13 18.4 +1.3
SURR  Surduc           61.52  36 ⇑P     P      15 13 18.6 +1.2
STEB  Steborice        61.55  30 eP     P      15 13 18.9 +1.4
ALN   Alexandroupoli   61.63  43        P      15 13 16.9 -1.4
ALN                               IAmb  IAmb   15 13 20.9
      comp=Z,24nm,1.3s
ALN   Alexandroupoli   61.63  43  P     P      15 13 16.9 -1.4
ALN                               pmax  pmax
      comp=Z,24nm,1.3s
OKC   Ostrava-Krasne   61.68  31 eS     S      15 21 40.3 -0.2
OKC                               AMS   AMS    15 43 10.0
      comp=Z,600nm,17.2s
LANS  Liptovska Anna   61.95  32 eP     P      15 13 22.3 +2.0
LANS                              pmax  pmax
      comp=Z,7.0nm,1.0s
LANS  Liptovska Anna   61.95  32 eP     P      15 13 22.3 +2.0
NIE   Niedzica         62.55  32 eP     P      15 13 26.2 +2.0
NIE   Niedzica         62.55  32  P     P      15 13 26.3 +2.0
MARR  Marisel-Cluj     62.60  36 ⇑P     P      15 13 25.8 +1.1
OJC   Ojcow            62.76  31 eP     P      15 13 27.3 +1.7
OJC   Ojcow            62.76  31        P      15 13 24.7 -0.9
OJC   Ojcow            62.76  31  P     P      15 13 24.7 -0.9
ARR   Arges            62.84  38 ⇓P     P      15 13 28.3 +2.0
STHS  Stebnicka Huta   63.05  32 eP     P      15 13 28.3 +0.7
STHS                              pmax  pmax
      comp=Z,7.0nm,1.0s
STHS  Stebnicka Huta   63.05  32 eP     P      15 13 28.3 +0.7
VOIR                   63.12  38 ⇑P     P      15 13 29.7 +1.4
VOIR                   63.12  38 ⇑P     P      15 13 29.7 +1.4
KOLS  Kolonicke sedl   63.34  33 eP     P      15 13 36.6 +7.1
KOLS                              pmax  pmax
      comp=Z,6.0nm,0.7s
KOLS  Kolonicke sedl   63.34  33 eP     P      15 13 36.5 +7.0
BMR   Baia Mare        63.34  35  P     P      15 13 28.5 -1.1
SCHQ  Schefferville    63.48 335  P     P      15 13 27.3 -3.1
      comp=Z,2.0nm,0.5s,baz=120,slow=5.6,SNR=6.2
SCHQ                              LR    LR     15 37 54.4
      comp=Z,392nm,19.0s,baz=136,slow=33
      comp=Z,2.0nm,0.5s
DOPR  Dopca            63.59  37 ⇓P     P      15 13 32.9 +1.6
MLR   Muntele Rosu     63.70  38  P     P      15 13 30.6 -1.6
MLR   Muntele Rosu     63.70  38 ⇓P     P      15 13 33.8 +1.6
MLR   Muntele Rosu     63.70  38 ⇓P     P      15 13 33.8 +1.6
O53A  New Philadelph   63.71 315  IAmb  IAmb   15 13 34.3
      comp=Z,22nm,1.1s
TKL   Tuckaleechee C   63.92 310  P     P      15 13 30.6 -3.0
      comp=Z,3.8nm,0.8s,baz=148,slow=4.6,SNR=4.5
TKL                               LR    LR     15 35 12.1
      comp=Z,546nm,21.6s,baz=113,slow=30
      comp=Z,3.8nm,0.8s
BORG  Borgarnes        64.01   2  LR    LR     15 36 14.5
      comp=Z,170nm,18.0s,baz=174,slow=31
TURR  Turia            64.02  38 ⇑P     P      15 13 35.8 +1.7
O52A  Adamsville       64.10 315  IAmb  IAmb   15 13 36.8
      comp=Z,18nm,1.0s
P52A  Corning          64.12 314  IAmb  IAmb   15 13 37.2
      comp=Z,16nm,1.1s
SADO  Sadowa           64.26 321  LR    LR     15 35 04.7
      comp=Z,44nm,21.6s,baz=130,slow=30
PLOR  Plostina         64.31  38 ⇓P     P      15 13 36.7 +0.7
PLOR  Plostina         64.31  38 ⇓P     P      15 13 36.7 +0.7
BURAR Bucovina Array   64.31  36        P      15 13 37.1 +1.1
BURAR Bucovina Array   64.31  36 ⇑P     P      15 13 37.2 +1.1
BURAR Bucovina Array   64.31  36 ⇑P     P      15 13 37.2 +1.1
BUR08 Bucovina Ar. S   64.31  36  IAmb  IAmb   15 13 49.7
      comp=Z,12nm,1.1s
VRI   Vrincioaia       64.36  38 ⇓P     P      15 13 37.5 +1.1
VRI   Vrincioaia       64.36  38 ⇓P     P      15 13 37.5 +1.1
EIL   Elat             64.54  57  LR    LR     15 40 40.3
      comp=Z,1μm,20.7s,baz=247,slow=35
HARR  Harsova          64.57  40 ⇓P     P      15 13 38.8 +1.1
HARR  Harsova          64.57  40 ⇓P     P      15 13 38.8 +1.1
TESR  Tescani          64.62  37 ⇓P     P      15 13 38.9 +0.9
P51A  Williamsport     64.73 314  IAmb  IAmb   15 13 40.8
      comp=Z,26nm,1.3s
TIRR  Tirgusor         64.78  40 ⇑P     P      15 13 39.4 +0.3
TIRR  Tirgusor         64.78  40 ⇑P     P      15 13 39.4 +0.3
CFR   Carcaliu         64.92  39 ⇓P     P      15 13 40.7 +0.7
CFR   Carcaliu         64.92  39 ⇓P     P      15 13 40.7 +0.7
TPGR  Topolog          64.96  40 ⇓P     P      15 13 41.3 +1.0
R50A  Paris            65.23 312  IAmb  IAmb   15 13 44.3
      comp=Z,22nm,1.3s
USHA  Ushuaia          65.38 205  LR    LR     15 37 40.0
      comp=Z,702nm,20.8s,baz=86,slow=32
SWET  Sewanee          65.45 309  IAmb  IAmb   15 13 45.7
      comp=Z,12nm,1.0s
U49A  Red Boiling Sp   65.73 310  IAmb  IAmb   15 13 47.6
      comp=Z,16nm,1.0s
MMAI  Mount Meron Ar   65.79  54  P     P      15 13 42.6 -3.4
      comp=Z,1.1nm,0.5s,baz=252,slow=0.3,SNR=9.1
      comp=Z,1.1nm,0.5s
ANTO  Ankara           65.95  46  P     P      15 13 48.1 +1.2
ANTO  Ankara           65.95  46 ⇓P     P      15 13 48.8 +1.9
ANTO  Ankara           65.95  46 ⇓P     P      15 13 48.8 +1.9
SORM  Soroca           66.41  36 ⇑P     P      15 13 49.8 +0.3
SORM  Soroca           66.41  36 ⇑P     P      15 13 49.8 +0.3
BR131 Keskin Array S   66.51  46ceP     P      15 13 51.4 +0.9
BRTR  Keskin Array B   66.51  46  P     P      15 13 47.0 -3.5
      comp=Z,10nm,0.9s,baz=227,slow=5.5,SNR=53
      comp=Z,10nm,0.9s
BRTR  Keskin Array B   66.51  46ceP     P      15 13 49.7 -0.8
BRTR                              pmax  pmax
      comp=Z,26nm,1.0s
KIRS  Kirsehir-Merke   66.51  47 ⇓P     P      15 13 52.0 +1.5
NB2   NORSAR Subarra   66.52  19  P     P      15 13 51.9 +1.8
      comp=Z,2.2nm,0.8s,baz=221,slow=6.5
NOA   NORSAR Array B   66.52  19  P     P      15 13 47.7 -2.3
      comp=Z,4.5nm,0.8s,baz=222,slow=6.3,SNR=12
NOA                               LR    LR     15 39 41.9
      comp=Z,268nm,19.8s,baz=205,slow=33
      comp=Z,4.5nm,0.8s
SUW   Suwalki          66.66  29 eP     P      15 13 52.3 +1.3
SUW   Suwalki          66.66  29 eP     P      15 13 51.9 +0.9
HFS   Hagfors          66.68  20  P     P      15 13 47.8 -3.2
      comp=Z,4.7nm,0.8s,baz=190,slow=6.0,SNR=6.5
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      comp=Z,4.7nm,0.8s
T47A  Sharon Grove     66.89 310  IAmb  IAmb   15 13 54.6
      comp=Z,30nm,1.5s
PABE  Paberze          67.89  28 eP     P      15 14 00.3 +1.5
KIEV  Kiev             68.10  34 ⇑P     P      15 14 00.7 +0.5
KIEV  Kiev             68.10  34 ⇑P     P      15 14 00.7 +0.5
AKASG Malin Array Be   68.11  34  P     P      15 13 57.0 -3.3
      comp=Z,43nm,0.7s,baz=241,slow=6.7,SNR=36
AKASG                             LR    LR     15 44 40.3
      comp=Z,285nm,19.7s,baz=242,slow=37
      comp=Z,43nm,0.7s
AKBB  Malin Array Si   68.11  34d iP    P      15 14 00.4 +0.1
VSVD  Vaisvydziai      68.14  28 eP     P      15 14 01.5 +1.2
OLIL  Olney            68.17 312  P     P      15 13 59.7 -1.2
DIKM  Dikmen           68.32  45 ⇓P     P      15 14 03.1 +1.3
SFJD  Kangerlussuaq    68.42 350  LR    LR     15 37 29.7
      comp=Z,235nm,19.2s,baz=164,slow=30
NACGM Naroch           68.91  29 eP     P      15 14 06.0 +0.8
ATD   Arta Tunnel      69.03  78  LR    LR     15 42 50.4
      comp=Z,9.4nm,19.9s,baz=258,slow=35
IDID  Didziasalis      69.11  29 eP     P      15 14 04.8 -1.6
MNK   Minsk            69.25  30 i P    P      15 14 07.2 -0.1
      comp=E,14nm,0.8s
MNK                              i P    P      15 14 07.2 -0.1
      comp=N,15nm,0.9s
MNK                              i P    P      15 14 07.2 -0.1
      comp=Z,23nm,0.8s,baz=240
MNK                              i PcP  PcP    15 14 30.8 -0.1
MNK                              i PP   PP     15 16 39.7 -0.7
MNK                              i PPP  PPP    15 18 19.9
MNK                              i S    S      15 23 13.6 +0.5
MNK                              i SS   SS     15 27 37.8 -2.0
MNK                              i SSS  SSS    15 31 28.8
MNK                              i LQ   LQ     15 40 16.6
MNK                              i LR   LR     15 44 32.1
MNK                              i LRM  MLR    15 47 01.9
      comp=E,327nm,17.1s
MNK                              i LRM  MLR    15 47 01.9
      comp=N,272nm,16.7s
MNK                              i LRM  MLR    15 47 03.3
      comp=Z,428nm,16.3s
MNK   Minsk            69.25  30 i P    P      15 14 07.1 -0.1
MNK                              i             15 14 30.8
MNK                              i             15 16 39.7
MNK                              i PPP  PPP    15 18 19.9
MNK                              i S    S      15 23 13.6 +0.5
MNK                              i SS   SS     15 27 37.8 -2.0
MNK                               pmax  pmax
      comp=Z,23nm,0.8s
MNK                               pmax  pmax
      comp=N,15nm,0.9s
MNK                               pmax  pmax
      comp=E,14nm,0.8s
MNK                               MLR   MLR
      comp=N,272nm,17.0s
MNK                               MLR   MLR
      comp=E,327nm,17.0s
MNK                               MLR   MLR
      comp=Z,428nm,16.0s
PBMO  Poplar Bluff     69.39 309  IAmb  IAmb   15 14 09.6
      comp=Z,21nm,1.6s
SCO   Scoresbysund     69.74   1 i P    P      15 14 12.0 +2.0
SCO                               IAmb  IAmb   15 14 13.1
      comp=Z,4.3nm,0.9s
CMIG  Matias Romero    69.75 288  LR    LR     15 43 41.9
      comp=Z,92nm,21.8s,baz=105,slow=35
LCAR  Lake Charles     69.77 308  IAmb  IAmb   15 14 25.2
      comp=Z,19nm,1.5s
FRB   Frobisher Bay    70.27 341  LR    LR     15 39 25.6
      comp=Z,112nm,21.5s,baz=152,slow=31
CCM   Cathedral Cave   70.35 310        P      15 14 14.1 -0.3
CCM                               IAmb  IAmb   15 14 15.4
      comp=Z,17nm,1.2s
CCM   Cathedral Cave   70.35 310  P     P      15 14 14.1 -0.3
CCM                               pmax  pmax
      comp=Z,17nm,1.3s
VSU   Vasula           70.79  26⇓eP     P      15 14 14.8 -1.8
VSU                               pmax  pmax
      comp=Z,21nm,1.3s
ANN   Anapa            70.86  42 eP     P      15 14 17.2 -0.1
ANN                              ePPP   PPP    15 18 33.7
ANN                              eS     S      15 23 35.3 +3.0
ANN                               pmax  pmax
      comp=Z,33nm,0.8s
ANN                               MLR   MLR
      comp=Z,308nm,16.0s
MGMO  Mountain Grove   70.91 309  IAmb  IAmb   15 14 19.1
      comp=Z,14nm,1.1s
PMSA  Palmer Station   70.96 196  LR    LR     15 38 44.6
      comp=Z,264nm,20.4s,baz=26,slow=30
MARD  Mardin           71.16  51  IAmb  IAmb   15 14 21.9
      comp=Z,24nm,1.0s
KOPT  Kop Dagi         71.63  48  IAmb  IAmb   15 14 25.7
      comp=Z,19nm,1.0s
VAF   Ylistaro         71.81  21 eP     P      15 14 24.5 +1.8
SOC   Sochi            72.05  44 eP     P      15 14 23.9 -0.7
SOC                              e             15 17 00.2
SOC                              ePPP   PPP    15 18 45.5
SOC                              eS     S      15 23 46.0 -0.1
SOC                              eSS    SS     15 28 21.7 -1.6
SOC                              eSSS   SSS    15 31 39.1
SOC                               pmax  pmax
      comp=Z,19nm,0.8s
SOC                               MLR   MLR
      comp=Z,185nm,21.0s
KEF   Keuruu           72.10  22 eP     P      15 14 25.5 +1.0
FINES FINESS Array B   72.16  23        P      15 14 25.9 +1.0
FINES FINESS Array B   72.16  23  P     P      15 14 22.1 -2.7
      comp=Z,7.8nm,1.0s,baz=180,slow=3.8,SNR=24
FINES                             LR    LR     15 44 29.1
      comp=Z,400nm,19.5s,baz=237,slow=35
      comp=Z,7.8nm,1.0s
FINES FINESS Array B   72.16  23 i P    P      15 14 26.7 +1.8
FINES                             pmax  pmax
      comp=Z,14nm,0.9s
SUMG  Summit           72.23 356        P      15 14 24.7 -0.9
SUMG  Summit           72.23 356  P     P      15 14 24.7 -0.9
SUMG                              pmax  pmax
      comp=Z,8.0nm,0.7s
SUMG  Summit           72.23 356 i P    P      15 14 21.5 -4.1
SUMG                              IAmb  IAmb   15 14 23.2
      comp=Z,23nm,0.1s
VSLR  Vesyoloye        72.23  44⇑eP     P      15 14 26.7 +1.0
VSLR                              pmax  pmax
      comp=Z,32nm,0.9s
HKT   Hockley          72.34 301⇓eP     P      15 14 26.4 -0.2
HKT                               pmax  pmax
      comp=Z,12nm,1.8s
RAYN  Ar Rayn          72.68  66        P      15 14 30.1 +1.2
RAYN                              IAmb  IAmb   15 14 32.3
      comp=Z,9.9nm,0.8s
RAYN  Ar Rayn          72.68  66  P     P      15 14 30.1 +1.2
RAYN                              pmax  pmax
      comp=Z,10.0nm,0.8s
LABN  Labinsk          73.04  43 eP     P      15 14 31.6 +1.1
LABN                             eS     SKiKP  15 24 02.0 -1.2
LABN                              pmax  pmax
      comp=Z,35nm,0.8s
LABN                              MLR   MLR
      comp=N,491nm,17.0s
LABN                              MLR   MLR
      comp=E,288nm,14.0s
LABN                              MLR   MLR
      comp=Z,359nm,17.0s
GEVA  Gevas            73.15  50        P      15 14 32.6 +1.1
ERBR  Yeremizino-Bor   73.19  42 eP     P      15 14 30.9 -0.5
ERBR                             eS     SKiKP  15 24 02.5 -0.9
ERBR                              pmax  pmax
      comp=Z,45nm,0.9s
DBG   Daneborg         73.61   2 i P    P      15 14 35.8 +2.5
DBG                               IAmb  IAmb   15 14 37.1
      comp=Z,5.7nm,0.8s
SNAA  Sanae            73.74 173  P     P      15 14 34.0 -0.2
      comp=Z,1.8nm,0.9s,baz=14,slow=8.2,SNR=5.8
SNAA                              LR    LR     15 38 35.4
      comp=Z,257nm,21.9s,baz=14,slow=29
      comp=Z,1.8nm,0.9s
SNAA  Sanae            73.74 173⇑eP     P      15 14 34.7 +0.5
SNAA                              pmax  pmax
      comp=Z,6.0nm,1.4s
OBN   Obninsk          74.02  32 eP     P      15 14 36.8 +0.8
OBN                              i             15 14 45.4
OBN                               pmax  pmax
      comp=Z,10.0nm,0.5s
VORD  Divnogorie       74.06  37 eP     P      15 14 34.0 -2.4
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VORD                              pmax  pmax
      comp=Z,30nm,0.9s
VSR   Storozhevoye     74.07  36 eP     P      15 14 34.3 -2.1
VSR                               pmax  pmax
      comp=Z,20nm,1.0s
W35A  Tecumseh         74.12 306  IAmb  IAmb   15 14 47.9
      comp=Z,26nm,1.2s
SHA1  Shidzhatmaz      74.14  45deP     P      15 14 38.4 +1.1
T35A  Sooner Cattle    74.17 308  IAmb  IAmb   15 14 48.6
      comp=Z,15nm,0.9s
KIV   Kislovodsk       74.22  44        P      15 14 38.4 +0.8
KIV   Kislovodsk       74.22  44 eP     P      15 14 38.3 +0.8
KIV                               pmax  pmax
      comp=Z,20nm,1.0s
KIV                               MLR   MLR
      comp=Z,149nm,18.0s
VORR  Voronezh         74.25  36 eP     P      15 14 34.9 -2.5
VORR                              pmax  pmax
      comp=Z,33nm,1.0s
KBZ   Khabaz           74.31  45  P     P      15 14 35.7 -2.2
      comp=Z,17nm,0.8s,baz=247,slow=4.5,SNR=47
      comp=Z,17nm,0.8s
KBZ   Khabaz           74.31  45ceP     P      15 14 38.7 +0.8
KBZ                               pmax  pmax
      comp=Z,20nm,0.9s
LPSR  Galich'ya Gora   74.40  35 eP     P      15 14 38.5 +0.2
LPSR                              pmax  pmax
      comp=Z,38nm,1.0s
NCK   Nalchik          74.74  45⇓eP     P      15 14 40.4 -0.1
NCK                               pmax  pmax
      comp=Z,26nm,1.0s
MOS   Moscow           74.81  32 eP     P      15 14 39.9 -0.7
MOS                               pmax  pmax
      comp=Z,53nm,0.8s
GNI   Garni            74.82  49deP     P      15 14 40.7 -0.6
GNI                               pmax  pmax
      comp=Z,11nm,1.0s
WTFS  Witchita Falls   75.18 305  IAmb  IAmb   15 14 44.4
      comp=Z,17nm,0.9s
833A  Chaparral WMA,   75.18 299  IAmb  IAmb   15 14 51.1
      comp=Z,16nm,0.9s
HNDO  Hondo            75.24 300  IAmb  IAmb   15 14 45.9
      comp=Z,15nm,1.0s
BRDY  Brady            75.25 302        P      15 14 42.6 -1.1
BRDY                              IAmb  IAmb   15 14 45.0
      comp=Z,11nm,0.8s
VRH   Novokhopyorsk    75.59  37 eP     P      15 14 43.2 -2.0
VRH                               pmax  pmax
      comp=Z,10.0nm,1.0s
JCT   Junction City    75.82 301  IAmb  IAmb   15 14 48.8
      comp=Z,16nm,0.9s
ABTX  Abilene, Hawle   75.98 303  IAmb  IAmb   15 14 49.5
      comp=Z,12nm,0.9s
DAG   Danmarks Havn    76.12   2 i P    P      15 14 49.5 +1.8
DAG                               IAmb  IAmb   15 14 50.3
      comp=Z,14nm,0.9s
APMT  Aspermont        76.48 304  IAmb  IAmb   15 14 55.0
      comp=Z,39nm,1.7s
ARCES ARCESS Array B   76.68  16  P     P      15 14 48.4 -2.7
      comp=Z,4.1nm,1.0s,baz=225,slow=3.7,SNR=6.1
      comp=Z,4.1nm,1.0s
ULM   Lac du Bonnet    76.78 322  LR    LR     15 42 39.6
      comp=Z,401nm,21.3s,baz=122,slow=31
ULM   Lac du Bonnet    76.78 322⇑eP     P      15 14 50.6 -1.4
OZNA  Ozona            77.01 301  IAmb  IAmb   15 14 55.6
      comp=Z,11nm,0.8s
DKNS  Dickens          77.19 304  IAmb  IAmb   15 14 56.8
      comp=Z,12nm,1.0s
MAK   Makhachkala      77.42  46 eP     P      15 14 52.0 -3.7
MAK                              ePPP   PPP    15 19 33.9
MAK                              eS     S      15 24 40.4 -5.7
MAK                              eSS    SS     15 29 41.9 -3.1
MAK                               pmax  pmax
      comp=Z,142nm,1.4s
MAK                               MLR   MLR
      comp=Z,284nm,15.0s
POST  Post             77.59 304  IAmb  IAmb   15 14 58.9
      comp=Z,16nm,0.8s
KLMR  Klimovskoe       77.64  27 eP     P      15 14 55.3 -1.3
KLMR                              pmax  pmax
      comp=Z,55nm,1.5s
NEEM  North Greenlan   77.91 355 i P    P      15 14 59.7 +1.5
NEEM                              IAmb  IAmb   15 15 00.6
      comp=Z,8.1nm,0.7s
BELA  Belgrano 2       78.61 182        P      15 15 03.4 +1.7
BELA                              IAmb  IAmb   15 15 24.9
      comp=Z,12nm,1.0s
LVZ   Lovozero         78.64  20⇑eP     P      15 15 03.7 +1.6
LVZ                               pmax  pmax
      comp=Z,44nm,1.1s
MSTX  Muleshoe         78.75 304  IAmb  IAmb   15 15 15.4
      comp=Z,19nm,1.0s
TXAR  Lajitas Array    79.02 300  P     P      15 15 05.0 -0.1
TXAR  Lajitas Array    79.02 300  P     P      15 15 03.1 -1.9
      comp=Z,2.8nm,0.8s,baz=111,slow=7.1,SNR=14
TXAR                              LR    LR     15 45 48.0
      comp=Z,126nm,22.0s,baz=72,slow=33
      comp=Z,2.8nm,0.8s
TXAR  Lajitas Array    79.02 300  P     P      15 15 05.0 -0.1
OGNE  Ogallala         79.11 311  IAmb  IAmb   15 15 16.9
      comp=Z,22nm,1.1s
KSCO  Kaye Shedlock’   79.28 309  IAmb  IAmb   15 15 08.9
      comp=Z,32nm,1.1s
PECS  Pecos            79.39 302  IAmb  IAmb   15 15 09.6
      comp=Z,19nm,0.8s
BELG  Belogornoye      79.44  37  LR    LR     15 53 20.0
      comp=Z,406nm,19.4s,baz=251,slow=38
BELG  Belogornoye      79.44  37deP     P      15 15 07.3 +0.6
BELG                              pmax  pmax
      comp=Z,5.0nm,1.0s
BLKN  Baker Lake       80.87 335        P      15 15 15.1 +1.0
NOR   Nord             80.98   1 i P    P      15 15 22.1 +7.6
NOR                               IAmb  IAmb   15 15 23.2
      comp=Z,2.6nm,0.7s
RSSD  Black Hills      81.03 314        P      15 15 14.9 -0.9
RSSD  Black Hills      81.03 314  P     P      15 15 14.9 -0.9
RSSD                              pmax  pmax
      comp=Z,5.0nm,1.0s
ISCO  Idaho Springs    81.67 310  P     P      15 15 21.0 +1.6
KIRV  Kirov            81.78  31ceP     P      15 15 19.8 +0.7
ANMO  Albuquerque      81.88 305        P      15 15 20.6 +0.1
ANMO                              IAmb  IAmb   15 15 32.8
      comp=Z,28nm,1.9s
ANMO  Albuquerque      81.88 305  P     P      15 15 18.7 -1.7
      comp=Z,3.2nm,0.8s,baz=121,slow=18,SNR=6.1
ANMO                              LR    LR     15 46 46.6
      comp=Z,326nm,21.9s,baz=202,slow=32
      comp=Z,3.2nm,0.8s
ANMO  Albuquerque      81.88 305⇑eP     P      15 15 20.8 +0.3
ANMO                              pmax  pmax
      comp=Z,3.0nm,1.4s
SYO   Syowa Base       82.03 161⇓iX     P      15 15 18.0 -2.2
LAO   LASA Array       82.88 317  IAmb  IAmb   15 15 42.6
      comp=Z,24nm,1.1s
O20A  White River Ci   83.72 310  IAmb  IAmb   15 15 34.1
      comp=Z,19nm,1.4s
RES   Resolute Bay     83.89 346  P     P      15 15 30.8 +1.0
RES                               IAmb  IAmb   15 15 40.9
      comp=Z,9.5nm,1.1s
RES   Resolute Bay     83.89 346  LR    LR     15 46 29.7
      comp=Z,98nm,21.9s,baz=196,slow=31
RES   Resolute Bay     83.89 346  P     P      15 15 30.8 +1.0
RES                               pmax  pmax
      comp=Z,9.0nm,1.1s
PV13  Radium Mtn., P   84.02 308  IAmb  IAmb   15 15 44.8
      comp=Z,23nm,1.5s
PV03  Paradox Valley   84.05 308  IAmb  IAmb   15 15 44.9
      comp=Z,14nm,1.4s
PV17  East Wray Mesa   84.14 308  IAmb  IAmb   15 15 45.3
      comp=Z,29nm,1.6s
PV20  West Nyswonger   84.15 308  IAmb  IAmb   15 15 45.4
      comp=Z,14nm,1.0s
EUNU  Eureka           84.43 351  IAmb  IAmb   15 15 44.4
      comp=Z,16nm,1.0s
LPIG  La Paz           84.64 294  LR    LR     15 51 24.1
      comp=Z,105nm,19.5s,baz=29,slow=34
X18A  Snowflake        84.72 304  IAmb  IAmb   15 15 48.5
      comp=Z,20nm,1.4s
RLMT  Red Lodge        84.85 315  IAmb  IAmb   15 15 40.4
      comp=Z,23nm,1.6s
PDAR  Pinedale Array   84.89 313        P      15 15 35.2 -0.6
PDAR  Pinedale Array   84.89 313  P     P      15 15 32.8 -3.0
      comp=Z,0.4nm,0.6s,baz=93,slow=7.4,SNR=8.0
PDAR                              LR    LR     15 47 46.9
      comp=Z,354nm,21.8s,baz=99,slow=32
      comp=Z,0.4nm,0.6s
YNE   Yellowstone No   85.36 315  IAmb  IAmb   15 15 43.6
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	comp=Z,17nm,1.1s						
SRU	San Rafael Swe	85.41	309	IAmb	IAmb	15 15 57.0	
	comp=Z,28nm,2.0s						
YMP	Mirror Lake Pl	85.45	315	IAmb	IAmb	15 15 56.0	
	comp=Z,26nm,1.4s						
HMU	Henry Mountain	85.53	308	IAmb	IAmb	15 15 52.2	
	comp=Z,11nm,1.2s						
AKTO	Aktyubinsk	85.58	40	LR	LR	15 57 14.0	
	comp=Z,250nm,21.8s,baz=257,slow=38						
BSUT	Blindstream Ca	85.66	310	IAmb	IAmb	15 15 52.1	
	comp=Z,20nm,1.6s						
LOHW	Long Hollow	85.71	314	IAmb	IAmb	15 15 51.9	
	comp=Z,24nm,1.5s						
SNOW	Snow King Moun	85.81	313	P	P	15 15 40.4	-0.1
SNOW				IAmb	IAmb	15 15 52.6	
	comp=Z,31nm,1.5s						
TMUT	Trail Mountain	85.95	309	IAmb	IAmb	15 17 56.5	
	comp=Z,8.6nm,0.6s						
TPAW	Teton Pass	85.95	313	IAmb	IAmb	15 15 46.1	
	comp=Z,11nm,1.1s						
FXWY	Fox Creek	86.01	314	IAmb	IAmb	15 15 53.3	
	comp=Z,16nm,1.5s						
AHID	Auburn Hatcher	86.03	313	IAmb	IAmb	15 15 46.0	
	comp=Z,12nm,1.1s						
TCUT	Toone Canyon	86.18	311	IAmb	IAmb	15 16 14.1	
	comp=Z,24nm,1.5s						
YHL	Hebgen Lake	86.19	315	IAmb	IAmb	15 15 56.0	
	comp=Z,23nm,1.3s						
ARTI	Arti	86.25	34		P	15 15 42.7	+0.7
ARTI				IAmb	IAmb	15 15 45.1	
	comp=Z,16nm,0.9s						
ARTI	Arti	86.25	34	LR	LR	15 54 49.2	
	comp=Z,182nm,20.9s,baz=268,slow=36						
ARTI	Arti	86.25	34	*c i*P	P	15 15 44.0	+2.0
ARTI						15 19 01.2	
ARTI				S	SKSac	15 26 10.3	+2.5
ARTI				SS	SS	15 31 54.5	-1.3
ARTI				pmax	pmax		
	comp=Z,17nm,0.9s						
HWUT	Hardware Ranch	86.32	311	IAmb	IAmb	15 15 59.9	
	comp=Z,15nm,1.3s						
MVU	Marysvale	86.70	308	IAmb	IAmb	15 15 57.6	
	comp=Z,28nm,1.8s						
AB31	Akbulak array	86.76	41		P	15 15 44.9	+0.2
ABKAR	Akbulak array	86.76	41		P	15 15 45.0	+0.3
ABKAR	Akbulak array	86.76	41	IAmb	IAmb	15 15 47.2	
	comp=Z,5.1nm,0.9s						
SVE	Sverdlovsk	87.52	33	*e*P	P	15 15 50.5	+2.3
SVE				pmax	pmax		
	comp=Z,14nm,1.1s						
YKA	Yellowknife Ar	88.81	332	LR	LR	15 50 58.6	
	comp=Z,447nm,21.2s,baz=75,slow=32						
ELK	Elko	89.08	311	LR	LR	15 51 36.1	
	comp=Z,235nm,19.7s,baz=94,slow=33						
PFO	Pinyon Flats O	90.11	303	LR	LR	15 54 13.4	
	comp=Z,176nm,19.2s,baz=91,slow=34						
PFO	Pinyon Flats O	90.11	303	⇑*e*P	P	15 16 01.2	+0.1
PFO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MAW	Mawson	90.14	157	LR	LR	15 48 02.1	
	comp=Z,168nm,20.9s,baz=279,slow=30						
NEW	Newport	90.33	318	LR	LR	15 51 27.9	
	comp=Z,399nm,21.3s,baz=84,slow=32						
QSPA	South Pole Qui	90.75	180	P	P	15 16 01.8	-1.5
	comp=Z,4.7nm,1.0s,baz=211,slow=3.0,SNR=8.3						
QSPA				LR	LR	15 52 32.0	
	comp=Z,134nm,18.6s,baz=177,slow=33						
	comp=Z,4.7nm,1.0s						
NVAR	Mina Array Bea	91.49	308	LR	LR	15 54 59.3	
	comp=Z,134nm,19.0s,baz=72,slow=34						
BVAR	Borovoye Array	93.25	37	P	P	15 16 13.3	-1.7
	comp=Z,0.5nm,0.6s,baz=264,slow=4.2,SNR=5.0						
BVAR				LR	LR	15 59 32.0	
	comp=Z,235nm,20.5s,baz=270,slow=36						
	comp=Z,0.5nm,0.6s						
INK	Inuvik	95.84	339	LR	LR	15 55 43.3	
	comp=Z,298nm,20.8s,baz=86,slow=33						
DLBC	Dease Lake	96.81	329	LR	LR	15 56 41.3	
	comp=Z,256nm,19.9s,baz=74,slow=33						
BBB	Bella Bella	96.96	323	LR	LR	15 55 29.9	
	comp=Z,349nm,21.5s,baz=69,slow=33						
AAK	Ala-Archa	97.18	47	LR	LR	16 05 12.7	
	comp=Z,138nm,18.6s,baz=274,slow=38						
NRIK	Noril'sk	97.48	19	LR	LR	16 01 58.1	
	comp=Z,261nm,18.3s,baz=296,slow=36						
NRIK	Noril'sk	97.48	19	⇑*e*P	Pdif	15 16 39.1	+5.0
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURBB	Kurchatov Arra	98.60	39	P	P	15 16 38.6	-0.8
	comp=Z,2.0nm,1.1s,baz=284,slow=5.6,SNR=6.7						
KURBB				LR	LR	16 04 50.0	
	comp=Z,154nm,18.0s,baz=169,slow=38						
	comp=Z,2.0nm,1.1s						
KURK	Kurchatov	98.63	38	⇓*e*P	Pdif	15 16 42.1	+2.5
KURK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
MKAR	Makanchi Array	101.87	42	P	Pdif	15 16 51.8	-2.3
	comp=Z,0.4nm,0.8s,baz=287,slow=4.9,SNR=4.4						
ILAR	Eielson Array	102.13	338	P	Pdif	15 16 53.1	-1.8
	comp=Z,0.2nm,0.8s,baz=80,slow=5.5,SNR=1.9						
WMQ	Urumqi	106.34	44	Pdif	Pdif	15 17 16.7	+2.5
WMQ				LR	LR		
	comp=N,250nm,20.9s						
WMQ				LR	LR		
	comp=E,290nm,18.7s						
WMQ				LR	LR		
	comp=Z,340nm,24.3s						
CMAR	Chiang Mai Arr	122.57	68	PKP	PKPdf	15 21 55.9	-1.1
	comp=Z,0.4nm,0.4s,baz=265,slow=2.3,SNR=4.3						
PZH	PanZhiHua	122.81	58	PKP	PKPdf	15 21 57.4	-0.1
HHC	Hu-ho-hao-te	123.44	38	*e*P	PKPdf	15 21 53.1	-5.2
HHC				LR	LR		
	comp=N,200nm,18.6s						
HHC				LR	LR		
	comp=E,180nm,19.1s						
HHC				LR	LR		
	comp=Z,310nm,20.0s						
PETK	Petropavlovsk-	126.32	357	PKP	PKPdf	15 22 00.9	-2.3
	comp=Z,1.7nm,0.8s,baz=53,slow=5.7,SNR=3.9						
PETK	Petropavlovsk-	126.32	357	PKIKP	PKPdf	15 22 01.0	-2.3
DL2	Dalian	130.60	34	PKP	PKPdf	15 22 08.5	-3.3
DL2				PP	PP	15 24 26.5	+0.7
DL2	Dalian	130.60	34	SS	SS	15 41 56.1	+2.4
DL2				AMB	AMB		
	comp=Z,190nm,11.6s						
DL2				LR	LR		
	comp=N,280nm,17.7s						
DL2				LR	LR		
	comp=E,220nm,17.5s						
DL2				LR	LR		
	comp=Z,420nm,18.4s						
QIZ	Qiongzhong	132.34	63	PKP	PKPdf	15 22 16.1	+0.4
QIZ				PP	PP	15 24 47.9	+10
QIZ	Qiongzhong	132.34	63	SS	SS	15 42 23.4	+6.2
QIZ				LR	LR		
	comp=E,190nm,18.4s						
QIZ				LR	LR		
	comp=Z,220nm,22.3s						
NJ2	Nanjing	133.40	42	*e*P	PKiKP	15 22 18.1	-0.4
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
MJAR	Matsushiro Arr	140.13	20	PKhKP	PKPpre	15 22 25.3	
	comp=Z,1.0nm,1.0s,baz=99,slow=7.7,SNR=3.6						
MJAR				PP	PP	15 25 25.8	+0.3
	comp=Z,0.9nm,0.9s,baz=326,slow=6.2,SNR=4.8						
STKA	Stephens Creek	146.79	160	PKPbc	PKPbc	15 22 43.4	+0.2
	comp=Z,3.1nm,0.8s,baz=256,slow=8.3,SNR=5.4						
ASAR	Alice Springs	149.89	141		PKiKP	15 22 52.4	-0.2
ASAR	Alice Springs	149.89	141	PKPbc	PKPdf	15 22 49.1	+2.2
	comp=Z,4.0nm,0.9s,baz=197,slow=2.1,SNR=24						
MSVF	Nonsavu	151.00	233	PKPbc	PKPbc	15 22 53.7	-0.8
	comp=Z,7.4nm,0.9s,baz=146,slow=7.4,SNR=4.8						
WRA	Warramunga Arr	152.77	136	PKPbc	PKPbc	15 22 57.2	-1.2
	comp=Z,1.2nm,0.9s,baz=246,slow=2.3,SNR=3.7						

BEO ***01*** *15:19:21.5±0.5, 40°.26N×20°.97E, h0^{km}, ML3.9/10*

PDG ***01*** *15:19:24.8±0.7, 40°.53N×20°.81E, h10^{km}±1^{km}, MD4.1/2, ML4.0/11, Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*

MOS ***01*** *15:19:24.1±1.1, 40°.51N×20°.77E, h14^{km}, mb4.3/10, Error ellipse: s-maj=5.4km s-min=3.7km az=84.5*

TIR ***01*** *15:19:24.5, 40°.51N×20°.79E, h6^{km}±2^{km}, Ml4.0/11*

PRU ***01*** *15:19:25.5, 40°.19N×20°.59E, h10^{km}, M4.4*

THE ***01*** *15:19:25.9, 41°N±1°×2°1E±°, h0^{km}±1^{km}, M3.8/44, MLh3.8/44*

NAO ***01*** *15:19:25.2, 40°.50N×20°.83E, h10^{km}, mb3.0*

NEIC ***01*** *15:19:25.8±1.4, 40°.59N±0°.05×20°.73E±0°.04, h10^{km}±2^{km}, mb4.3/12, Error ellipse: s-maj=8.9km s-min=4.8km az=186.0*

ATH ***01*** *15:19:25.9, 40°.48N×20°.91E, h7^{km}±2^{km}, ML3.9/24, Manual Solution by A.Agalos First location: 2019/06/01 15:20:27, This location: 2019/06/01 15:33:28 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

SKO ***01*** *15:19:27.4, 40°.51N×20°.91E, h8^{km}, ML3.9*

AFAD ***01*** *15:19:28.5, 40°.53N×21°.44E, h6^{km}±5^{km}, MW4.0*

IDC ***01*** *15:19:28.8±1.5, 40°.61N×20°.83E, h37^{km}±13^{km}, mb3.7/18, mbtmp3.8/28, ML3.6/7, MS4.1/3, Error ellipse: s-maj=12.6km s-min=10.4km az=31.0*

ISC 01 15:19:25.2±0.8**, 40°.51N**±0°.01×**20°.84E**±0°.02**, h10**^{km}±5^{km}**, n393, σ1§49**/470**, mb4.2**/28**, MS4.2**/3**, 41C-17D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	Korca	0.12	340	Pg	Pg	15 19 27.3	-0.8
KBN				Sg	Sg	15 19 29.0	-1.2
KBN				AML	AML	15 19 30.3	
	272nm,0.3s						
NEST	Nestorio	0.19	121	Pg	Pg	15 19 29.6	+0.3
NEST				Sg	Sg	15 19 33.0	+0.9
NEST				AML	AML	15 19 35.1	
	133nm,0.3s						
NEST				AML	AML	15 19 35.3	
	194nm,0.4s						
NEST	Nestorio	0.19	121	P	Pg	15 19 29.6	+0.3
NEST				S	Sg	15 19 31.8	-0.2
NEST	Nestorio	0.19	121	P	Pg	15 19 29.3	0.0
NEST				S	Sg	15 19 30.8	-1.2
PENT	Pentalofos	0.39	144	P	Pg	15 19 32.6	-0.3
PENT				S	Sg	15 19 39.1	+1.0
PENT	Pentalofos	0.39	144	P	Pg	15 19 32.5	-0.5
PENT				S	Sg	15 19 37.2	-1.0
LSK	Leskovik	0.41	207	Pg	Pg	15 19 32.7	-0.5
LSK				Sg	Sg	15 19 38.6	0.0
LSK				AML	AML	15 19 44.4	
	202nm,0.5s						
OHR	Ohrid	0.60	357	P	Pg	15 19 37.2	+0.3
OHR				S	Sb	15 19 46.9	+0.5
OHR	Ohrid	0.60	357	⇑*i*Pg	Pg	15 19 37.3	+0.3
OHR				*i* Sg	Sb	15 19 47.3	+0.9
OHR				*e*Lg	Lg	15 19 47.7	
	comp=E,7μm,0.5s						
OHR				*e*Lg	Lg	15 19 48.0	
	comp=N,4μm,0.7s						
OHR	Ohrid	0.60	357	P	Pg	15 19 36.7	-0.2
OHR	Ohrid	0.60	357	*e*Pg	Pg	15 19 37.2	+0.3
OHR				*e*Sg	Sb	15 19 48.0	+1.6
KPRO	Kipourio	0.69	144	P	Pg	15 19 37.8	-0.7
KPRO				S	Sb	15 19 49.1	+0.3
KPRO	Kipourio	0.69	144	P	Pg	15 19 37.6	-0.9
KPRO				S	Sg	15 19 46.1	-1.4
KZN	Kozani	0.74	106	P	Pg	15 19 38.9	-0.6
KZN				S	Sg	15 19 50.4	+1.2
KZN	Kozani	0.74	106	P	Pg	15 19 38.0	-1.5
KZN	Kozani	0.74	106	P	Pg	15 19 39.2	-0.3
MSVA	Metsovo	0.79	160	P	Pg	15 19 40.6	+0.2
JAN	Janina	0.85	179	P	Pg	15 19 39.7	-2.0
JAN				S	Sg	15 19 53.7	+0.9
JAN	Janina	0.85	179	P	Pg	15 19 41.7	0.0
JAN				S	Sg	15 19 52.7	-0.1
SRN	Sarande	0.90	226	Pg	Pg	15 19 41.5	-1.1
SRN				Sg	Sb	15 19 55.5	+0.5
SRN				AML	AML	15 20 02.8	
	comp=N,15nm,0.7s						
NASA	Naoussa	0.94	82	P	Pg	15 19 43.1	-0.3
NASA				S	Sg	15 19 55.3	-0.4
KTI	Kastanea	0.98	97	P	Pg	15 19 43.8	-0.4
VLO	Vlora	1.03	268	Pg	Pg	15 19 44.4	-0.6
IGT	Igoumenitsa	1.05	202	Pg	Pg	15 19 44.4	-1.1
IGT				Sg	Sb	15 20 00.2	+0.9
IGT				AML	AML	15 20 08.7	
	comp=N,9.1nm,0.6s						
IGT	Igoumenitsa	1.05	202	P	Pg	15 19 44.4	-1.1
IGT				S	Sn	15 20 01.0	+0.3
IGT	Igoumenitsa	1.05	202	*i* Pg	Pg	15 19 44.4	-1.1
IGT				*i* Sg	Sn	15 20 04.8	+4.1
IGT	Igoumenitsa	1.05	202	P	Pg	15 19 44.0	-1.5
IGT	Igoumenitsa	1.05	202	P	Pg	15 19 45.0	-0.5
TIR	Tirane	1.11	319		Pg	15 19 44.7	-2.0
TIR	Tirane	1.11	319	Pn	Pg	15 19 45.0	-1.6
TIR				Sn	Sn	15 20 02.6	+0.3
TIR				AML	AML	15 20 10.5	
	comp=N,14nm,0.5s						
TIR	Tirane	1.11	319	*i* Pg	Pg	15 19 47.1	+0.5
TIR				*i* Sg	Sn	15 20 07.4	+5.1
TIR	Tirane	1.11	319	P	Pg	15 19 44.7	-2.0
TIR	Tirane	1.11	319	*e*Pg	Pg	15 19 45.6	-1.0
TIR				*e*Sg	Sn	15 20 05.2	+2.9
KEK	Kerkira	1.13	225		Pg	15 19 46.5	-0.5
KEK	Kerkira	1.13	225	P	Pg	15 19 47.4	+0.4
KEK				S	Sn	15 20 05.4	+2.8
KEK	Kerkira	1.13	225	P	Pn	15 19 48.1	+1.0
TETR	Tetrakomo, Epi	1.21	164	P	Pb	15 19 48.0	-0.3
LFKM	Lefkimmi	1.22	210	S	Sn	15 20 07.4	+2.6
THL	Klokotos Trika	1.31	136	P	Pn	15 19 48.8	-0.7
THL				S	Sb	15 20 07.4	+0.7
THL	Klokotos Trika	1.31	136	P	Pn	15 19 48.8	-0.7
TYRN	Tyrnavos	1.33	126	P	Pn	15 19 49.7	-0.2
TYRN				S	Sg	15 20 10.8	+2.7
TYRN	Tyrnavos	1.33	126	P	Pn	15 19 49.9	0.0
LRSO	Larissa Observ	1.46	125	P	Pb	15 19 53.1	+0.7
LRSO				S	Sb	15 20 12.1	+1.1
SKO	Skopje	1.53	17	⇑*i*Pg	Pg	15 19 54.9	+0.3
VAY	Valandovo	1.54	58	P	Pn	15 19 53.8	+1.0
VAY	Valandovo	1.54	58	⇓*i*Pg	Pn	15 19 53.8	+1.0
VAY				*i* Sg	Sg	15 20 17.2	+2.4
VAY				*e*Lg	Lg	15 20 18.9	
	comp=N,2μm,0.6s						
VAY				*e*Lg	Lg	15 20 21.8	
	comp=E,1μm,0.7s						
AMPL	Ampelaki	1.61	170	P	Pn	15 19 54.8	+1.1
THE	Thessaloniki	1.62	85	Pn	Pn	15 19 54.2	+0.3
THE	Thessaloniki	1.62	85	P	Pn	15 19 54.2	+0.3
THE	Thessaloniki	1.62	85	*i* Pg	Pn	15 19 54.6	+0.8
THE				*i* Sg	Sb	15 20 17.1	+1.3
THE	Thessaloniki	1.62	85	P	Pn	15 19 54.7	+0.8
THE	Thessaloniki	1.62	85	P	Pn	15 19 53.9	0.0
PUK	Puka	1.69	335	Pn	Pn	15 19 55.5	+0.7
PUK				Sn	Sg	15 20 21.3	+1.8
PUK				AML	AML	15 20 25.3	
	comp=E,15nm,0.9s						
KNT	Kendrikon	1.69	67	P	Pn	15 19 55.4	+0.5
KNT	Kendrikon	1.69	67	*i* Pn	Pn	15 19 55.5	+0.7
KNT				*e*Sn	Sg	15 20 21.7	+2.1
KNT	Kendrikon	1.69	67	P	Pn	15 19 55.5	+0.7
KNT	Kendrikon	1.69	67	P	Pn	15 19 55.3	+0.5
TSLK	Tsoukalades, L	1.69	185	P	Pb	15 19 57.2	+0.8
TSLK	Tsoukalades, L	1.69	185	P	Pn	15 19 55.9	+1.1
HORT	Hortiatis	1.72	86	P	Pn	15 19 55.5	+0.2
HORT	Hortiatis	1.72	86	P	Pn	15 19 55.4	0.0
LKD2	Lefkada island	1.73	185	Pn	Pb	15 19 57.4	+0.4
LKD2				Sn	Sg	15 20 22.9	+2.2
LKD2				AML	AML	15 20 29.2	
	comp=E,9.6nm,0.6s						
LKD2	Lefkada island	1.73	185	P	Pn	15 19 56.4	+1.0
LKD2	Lefkada island	1.73	185	P	Pn	15 19 56.3	+1.0
EVR	Evrytania	1.76	155	P	Pn	15 19 57.4	+1.5
EVR	Evrytania	1.76	155	P	Pn	15 19 56.6	+0.7
MAKR	Makrakomi, Fth	1.80	146	P	Pn	15 19 57.5	+1.2
MAKR	Makrakomi, Fth	1.80	146	P	Pn	15 19 57.2	+0.9
NYDR	Nydri-Lefkada	1.80	184	P	Pn	15 19 56.8	+0.5
SCTE	Santa Cesarea	1.87	257		Pn	15 19 56.3	-0.9
AGG	Agios Georgios	1.88	142	P	Pn	15 19 58.1	+0.7
AGG	Agios Georgios	1.88	142	P	Pn	15 19 57.0	-0.4
AGG	Agios Georgios	1.88	142	P	Pn	15 19 57.7	+0.3
ULC	Ulcinj	1.88	321	Pn	Pn	15 19 58.8	+1.3
ULC	Ulcinj	1.88	321	*i* Pn	Pn	15 19 59.0	+1.5
ULC	Ulcinj	1.88	321	⇑*i*Pn	Pn	15 19 57.9	+0.4
ULC				*i* Sn	Sb	15 20 24.0	+0.7
EVGI	Lefkada island	1.89	184	P	Pn	15 19 59.4	+1.8
EVGI	Lefkada island	1.89	184	P	Pn	15 19 58.8	+1.2
PDO	Prodromos	1.93	172	P	Pb	15 20 00.2	-0.3
SOH	Sokhos	1.94	80	P	Pn	15 19 59.1	+0.8
SOH	Sokhos	1.94	80	P	Pn	15 19 59.3	+1.1
SOH	Sokhos	1.94	80	P	Pn	15 19 58.7	+0.5
BCI	Bajram Curri	1.94	343	Pn	Pb	15 20 02.0	+1.3
BCI				Sn	Sg	15 20 30.1	+2.5
BCI				AML	AML	15 20 34.8	
	comp=E,14nm,0.6s						
BCI	Bajram Curri	1.94	343	P	Pn	15 19 59.5	+1.3
PVO	Paravola	1.97	164	P	Pn	15 20 00.5	+1.9
PVO	Paravola	1.97	164	P	Pn	15 19 59.5	+0.9
PLG	Polygyros	1.99	93	P	Pn	15 19 59.3	+0.3
PLG	Polygyros	1.99	93	P	Pn	15 19 59.4	+0.3
FSK	Fiskardo	2.06	186	P	Pn	15 20 01.2	+1.3
FSK	Fiskardo	2.06	186	P	Pn	15 20 00.9	+1.0
DRME	Dracevica, Mon	2.09	324	Pn	Pn	15 20 02.1	+1.8
DRME	Dracevica, Mon	2.09	324	*e*Pn	Pn	15 20 01.7	+1.5
DRME	Dracevica, Mon	2.09	324	⇑*i*Pn	Pn	15 20 00.7	+0.5
DRME				*i* Sn	Sn	15 20 28.4	+2.1
ANX	Ano Chora	2.09	156	P	Pb	15 20 02.8	-0.5
SRS	Serrai	2.17	73	P	Pn	15 20 02.1	+0.7
SRS	Serrai	2.17	73	*i* Pn	Pn	15 20 02.2	+0.7
SRS	Serrai	2.17	73	P	Pn	15 20 02.2	+0.7
SRS	Serrai	2.17	73	P	Pn	15 20 01.7	+0.3
KKB	Krupnik	2.18	52	*i* Pn	Pn	15 20 02.8	+1.3
KKB				*e*Sn	Sn	15 20 29.1	+0.5
NEO	Neokhori	2.19	123	P	Pn	15 20 02.2	+0.5
NEO	Neokhori	2.19	123	P	Pn	15 20 01.9	+0.1
AXAR	Agios Charalam	2.24	141	P	Pn	15 20 03.7	+1.4
AXAR	Agios Charalam	2.24	141	P	Pn	15 20 02.9	+0.5
EFP	Efpalio	2.24	158	P	Pn	15 20 03.1	+0.7
PAIG	Paliouri	2.25	104	P	Pn	15 20 02.7	+0.2
PAIG	Paliouri	2.25	104	P	Pn	15 20 02.7	+0.2
PDG	Podgorica	2.26	329		Pn	15 20 03.2	+0.6
PDG	Podgorica	2.26	329	⇑*i*Pn	Pn	15 20 04.3	+1.7
PDG	Podgorica	2.26	329	⇑P	Pn	15 20 04.5	+1.9
PDG	Podgorica	2.26	329	*e*Pn	Pn	15 20 04.1	+1.5
PDG				*e*Sn	Sb	15 20 35.5	+1.5
PDG	Podgorica	2.26	329	⇑*i*Pn	Pn	15 20 03.3	+0.7
PDG				*i* Sn	Sn	15 20 32.8	+2.4
PDG	Podgorica	2.26	329	P	Pn	15 20 04.4	+1.9
SERG	Sergoula	2.30	155	P	Pn	15 20 04.3	+1.1
SERG	Sergoula	2.30	155	P	Pn	15 20 04.6	+1.4
DMLN	Damoulianata-K	2.30	189	P	Pn	15 20 03.5	+0.3
BUM	Brajici-Budva	2.31	321	*e*Pn	Pn	15 20 03.9	+0.5
BUM				*i* Sn	Sn	15 20 34.3	+2.4
BOSS	Bosilegrad	2.33	31	*e*Pn	Pn	15 20 04.3	+0.6
BOSS				*e*Sn	Sb	15 20 35.6	-0.7
VLS	Valsamata	2.34	185	P	Pn	15 20 04.7	+0.9
VLS	Valsamata	2.34	185	P	Pn	15 20 04.9	+1.1
VLS	Valsamata	2.34	185	P	Pn	15 20 04.3	+0.5
AXS	Araxos	2.35	170	P	Pn	15 20 05.3	+1.5
AXS	Araxos	2.35	170	P	Pn	15 20 05.2	+1.3
PSDA	Pessada-Kefalo	2.40	185	P	Pn	15 20 05.8	+1.2
PSDA	Pessada-Kefalo	2.40	185	P	Pn	15 20 05.3	+0.7
OUR	Ouranopolis	2.41	93	P	Pn	15 20 05.4	+0.8
OUR	Ouranopolis	2.41	93	P	Pn	15 20 05.8	+1.2
OUR	Ouranopolis	2.41	93	P	Pn	15 20 05.2	+0.6
BARS	Barje	2.42	17	⇓*i*Pn	Pn	15 20 05.4	+0.7
BARS	Barje	2.42	17	*e*Pn	Pn	15 20 05.5	+0.7
BARS				*e*Sn	Sb	15 20 38.0	-0.6
KOKK	Kokkinochori,	2.42	82	P	Pn	15 20 06.0	+1.1
KOKK	Kokkinochori,	2.42	82	P	Pn	15 20 05.2	+0.3
MMB	Musomishta	2.43	64	P	Pn	15 20 06.0	+1.0
MMB	Musomishta	2.43	64	*i* Pn	Pn	15 20 06.1	+1.0
MMB				*e*Sn	Sn	15 20 37.2	+2.4
MMB	Musomishta	2.43	64	P	Pn	15 20 06.5	+1.5
RTZL	Ratzakli, Kefa	2.43	181	P	Pn	15 20 06.5	+1.5
YRMI	Loutra Irminis	2.44	170	P	Pn	15 20 06.6	+1.6
BEY	Berane	2.46	344	*i* Pn	Pn	15 20 07.0	+1.5
IVA	Berane	2.46	344	*e*Pn	Pn	15 20 06.1	+0.6
IVA				*i* Sn	Sn	15 20 38.1	+2.4
CEME	Cevo	2.49	325	⇓*i*Pn	Pn	15 20 07.6	+1.7
CEME				*i* Sn	Sn	15 20 38.2	+1.8
LKR	Lokris	2.50	137	P	Pn	15 20 06.6	+0.7
LKR	Lokris	2.50	137	P	Pn	15 20 06.6	+0.7
RLS	Riolos of Patr	2.50	169	P	Pn	15 20 08.5	+2.6
KOME	Kolasin	2.54	337	⇑*i*Pn	Pn	15 20 08.0	+1.5
KOME				*i* Sn	Sn	15 20 39.6	+2.0
HCY	Herceg Novi	2.62	318	*e*Pn	Pn	15 20 06.0	-1.5
HCY	Herceg Novi	2.62	318	⇓*i*Pn	Pn	15 20 07.9	+0.4
HCY				*i* Sn	Sn	15 20 40.6	+1.3
CLEM	Kyllini,Ilia,G	2.63	175	P	Pn	15 20 08.4	+0.7
ORTH	Orthonies,Zaky	2.66	182	P	Pn	15 20 08.7	+0.6
KLV	Kalavryta, Ach	2.67	157	P	Pn	15 20 10.6	+2.4
KLV	Kalavryta, Ach	2.67	157	P	Pn	15 20 09.8	+1.5
AOS	Alonnisos	2.70	119	P	Pn	15 20 08.9	+0.3
SELS	Selova	2.71	4	*e*Pn	Pn	15 20 09.1	+0.2
SELS				*e*Sn	Sb	15 20 47.2	0.0
SJES	Sjenica	2.82	347	⇑*i*Pn	PKiKP	15 20 11.1	-0.1
SJES	Sjenica	2.82	347	*e*Pn	Pn	15 20 11.1	+0.6
SJES				*e*Sn	Sb	15 20 50.6	+0.2
KAVA	Kavala	2.83	79	P	Pn	15 20 10.6	+0.1
TREB	Trebinje	2.89	321	*e*Pn	PKiKP	15 20 11.4	+1.9
BRY	Bratogost	2.94	325	*e*Pn	PKiKP	15 20 13.3	+3.3
BRY	Bratogost	2.94	325	⇓*i*Pn	Pn	15 20 12.7	+0.5
BRY				*i* Sn	Sn	15 20 49.0	+1.4
THAS	Thassos island	2.96	87	P	Pn	15 20 12.2	-0.1
THAS	Thassos island	2.96	87	P	Pn	15 20 12.1	-0.1
PLE	Pljevlja	3.02	339	⇓*i*Pn	Pn	15 20 15.6	+2.5
PLE				*i* Sn	Sn	15 20 50.1	+0.7
GOCS	Kraljevo Serbi	3.05	0	*e*Pn	Pn	15 20 13.3	-0.3
UPM	Unac-Piva	3.05	332	*e*Pn	PKiKP	15 20 15.6	+5.1
UPM	Unac-Piva	3.05	332	*e*Pn	Pn	15 20 14.6	+0.9
UPM				*i* Sn	Sn	15 20 52.3	+1.9
ZAPS	Zavoj	3.07	25	*e*Pn	Pn	15 20 15.0	+1.2
IVAS	Ivanjica	3.10	351	*e*Pn	Pn	15 20 13.7	-0.6
IVAS				*e*Sn	Sb	15 20 56.6	-1.9
MATE	Matera	3.15	274	⇑P	Pn	15 20 14.6	-0.2
BOVS	Bovan	3.19	11	⇑P	Pn	15 20 15.9	+0.5
BOVS	Bovan	3.19	11	*e*Pn	Pn	15 20 15.5	+0.1
BOVS				*e*Sn	Sn	15 20 55.0	+1.6
RUDO	Rudo	3.29	341	⇑*i*Pn	Pn	15 20 17.9	+1.1
STON	Ston	3.33	316	⇑*i*Pn	Pn	15 20 17.5	+0.2
PLD	Plovdiv	3.37	60	P	Pn	15 20 20.5	+2.7
GRUS	Gruza	3.38	358	*e*Pn	Pn	15 20 17.5	-0.5
TIP	Timpagrande	3.41	248		Pn	15 20 18.3	-0.3
TIP	Timpagrande	3.41	248	⇓P	Pn	15 20 20.1	+1.5
ITM	Ithomi	3.44	165		Pn	15 20 20.6	+1.8
ZAGS	Zajecar	3.46	17	*e*Pn	Pn	15 20 19.5	+0.4
ZAGS				*e*Sn	Sn	15 21 02.7	+2.6
BBLS	Lazi&#263i	3.52	343	⇑*i*Pn	Pn	15 20 20.5	+0.5
BBLS	Lazi&#263i	3.52	343	*e*Pn	Pn	15 20 21.6	+1.6
RDO	Rodhopi	3.62	78		Pn	15 20 22.3	+1.0
DIVS	Divibare	3.64	350	*e*Pn	Pn	15 20 21.9	+0.2
BORS2	Bor- Borsko je	3.68	13	*e*Pn	Pn	15 20 22.0	-0.2
TRUS	Trudelj	3.72	355	*e*Pn	Pn	15 20 23.1	+0.4
SVIS	Svilajnac	3.76	4	*e*Pn	Pn	15 20 24.5	+1.3
HAPS	Han Pijesak,Bl	3.84	339	*e*Pn	Pn	15 20 25.3	+0.9
CUC	Castrocucco	3.88	264		Pn	15 20 24.7	-0.2
GOAD	anakkale-G¶	3.89	94	P	Pn	15 20 27.0	+2.0
KUBS	Kucevo	3.95	9	*e*Pn	Pn	15 20 24.4	-1.4
ALN	Alexandroupoli	3.98	83		Pn	15 20 26.7	+0.5
ALN	Alexandroupoli	3.98	83	P	Pn	15 20 26.6	+0.4
ALN				S	Sn	15 21 10.3	-2.6
ALN				*i* IAML		15 21 13.0	
	comp=E,80nm,0.7s						
ALN				*i* IAML		15 21 14.0	
	comp=E,42nm,0.6s						
ALN	Alexandroupoli	3.98	83	P	Pn	15 20 26.7	+0.5
SGRT	San Giovanni R	4.04	290		Pn	15 20 26.3	-0.9
BOZC	Bozcaada	4.05	98	P	Pn	15 20 27.0	-0.2
CAVK	Edirne/Enez-Ca	4.06	86	P	Pg	15 20 40.8	-2.2
TEKS	Tekeris	4.15	347	⇑*i*Pn	Pn	15 20 29.5	+0.9
TEKS	Tekeris	4.15	347	*e*Pn	Pn	15 20 29.3	+0.7
AVAS	Avala Beograd	4.19	357	*e*Pn	Pn	15 20 28.6	-0.6
KOCA	Canakkale, Ayv	4.19	102	P	Pn	15 20 28.8	-0.4
EZN	Ezine	4.26	97	⇑P	Pn	15 20 31.7	+1.5
EZN	Ezine	4.26	97	P	Pn	15 20 31.6	+1.5
MDVR	Moldovita	4.32	8	⇑P	Pn	15 20 31.6	+0.7
BAYC	CANAKKALE_Bayr	4.44	98	P	Pn	15 20 34.1	+1.4
BAYC				S	Sn	15 21 19.5	-4.9
BAYC				*i* IAML		15 21 28.0	
	comp=E,55nm,0.6s						
BAYC				*i* IAML		15 21 28.0	
	comp=E,32nm,0.4s						
CEL	Celeste	4.44	241		Pn	15 20 31.8	-1.0
KESN	Edirne-Kesan	4.45	84	P	Pn	15 20 32.6	-0.5
KESN				S	Sn	15 21 22.1	-3.1
KESN				*i* IAML		15 21 25.0	
	comp=E,193nm,0.5s						
KESN				*i* IAML		15 21 27.0	

	comp=E,125nm,0.4s						
SRE	Strehaia	4.50	22	⇑P	Pn	15 20 34.9	+1.4
SRE	Strehaia	4.50	22	P	Pn	15 20 34.8	+1.4
HERR	Herculane	4.52	14	⇑P	Pn	15 20 34.7	+1.1
VRSS	Vrsac	4.62	4	ePn	Pn	15 20 34.5	-0.6
FRGS	Fruska Gora	4.70	351	⇑iPn	Pn	15 20 35.2	-1.0
FRGS	Fruska Gora	4.70	351	ePn	Pn	15 20 37.0	+0.8
PAOL	Paolisi	4.79	278		Pn	15 20 37.4	-0.1
KIRK	Kırklareli	4.89	73	P	Pn	15 20 38.1	-0.7
BUHA	Balikesir, Bur	4.89	100	P	Pn	15 20 40.5	+1.7
URLA	Izmir	4.95	114	P	Pn	15 20 41.6	+2.0
BLY	Banja Luka	5.02	329	⇑iPn	Pn	15 20 42.1	+1.6
APE	Apeiranthos	5.03	132	P	Pn	15 20 42.5	+1.8
APE	Apeiranthos	5.03	132	⇓P	Pn	15 20 44.6	+4.0
APE	Apeiranthos	5.03	132	ceP	Pn	15 20 42.0	+1.3
GZR	Gura Zlata	5.08	16	⇑P	Pn	15 20 41.9	+0.4
GZR	Gura Zlata	5.08	16	P	Pn	15 20 41.8	+0.4
A050A	Klekovaca	5.09	323	⇑iPn	Pn	15 20 42.4	+0.8
BZS	Buzias	5.13	6	⇓P	Pn	15 20 42.7	+0.6
BZS	Buzias	5.13	6	P	Pn	15 20 42.7	+0.6
A051A	Mrakovica	5.35	329	⇑iPn	Pn	15 20 45.6	+0.5
LOT	Lotru	5.38	23	⇑P	Pn	15 20 46.4	+0.8
STEP	BALIKESIR_Sava	5.41	100	P	Pn	15 20 47.8	+1.8
INTR	Introdacqua	5.44	288		Pn	15 20 46.3	-0.1
BKES	Balkesir-Mer	5.49	96	P	Pn	15 20 44.7	-2.4
ARR	Arges	5.59	29	⇑P	Pn	15 20 49.9	+1.4
VOIR		5.81	31	⇑P	Pn	15 20 52.5	+1.0
VOIR		5.81	31	P	Pn	15 20 52.5	+1.0
VAE	Valguarnera	5.85	241	Pn	Pn	15 20 54.9	+2.9
	comp=E,2.7nm,0.3s,baz=231,slow=19,SNR=2.0						
AQU	L'Aquila	5.88	291	P	Pn	15 20 52.9	+0.4
AQU				pmax	pmax		
	comp=Z,115nm,0.8s						
MORH	Mrgy, Hungar	5.92	345	⇓P	Pn	15 20 54.3	+1.4
CAMP	Campotosto	5.93	292		Pn	15 20 52.5	-0.7
IDI	Anoyia	6.12	147	Pn	Pn	15 20 57.8	+2.1
	comp=Z,7.8nm,0.7s,baz=309,slow=13,SNR=8.1						
IDI				Sn	Sn	15 22 07.3	+1.5
	comp=Z,1.6nm,0.3s,baz=331,slow=24,SNR=1.7						
GUMA	Gualdo di Mace	6.16	297		Pn	15 20 53.9	-2.4
MLR	Muntele Rosu	6.22	35		Pn	15 20 58.0	+0.8
MLR	Muntele Rosu	6.22	35	Pn	Pn	15 20 58.9	+1.7
	comp=Z,1.1nm,0.3s,baz=228,slow=10,SNR=13						
MLR				Sn	Sn	15 22 02.7	-5.7
	baz=261,slow=19						
	comp=Z,9.0nm,0.7s						
MLR	Muntele Rosu	6.22	35	⇑P	Pn	15 21 00.1	+2.8
MLR	Muntele Rosu	6.22	35	P	Pn	15 21 00.0	+2.8
NRCA	Norcia	6.23	294		Pn	15 20 56.4	-0.9
MANT	Manisa	6.30	106		Pn	15 21 00.2	+1.8
FDMO	Fiordimonte	6.32	296		Pn	15 20 57.6	-0.8
MARR	Marisel-Cluj	6.38	14	⇑P	Pn	15 21 00.8	+1.5
BOJS	Bojanci	6.45	322	⇑iPn	Pn	15 21 00.2	0.0
BOJS	Bojanci	6.45	322	i Pn	Pn	15 21 00.2	0.0
BOJS				eSn	Sn	15 22 11.8	-2.1
PTJ	Puntijarka	6.46	328	P	Pn	15 21 01.2	+0.8
CESX	Cesi	6.54	291		Pn	15 21 00.5	-0.9
CRES	Cresnjevec Ost	6.61	325	⇑iPn	Pn	15 21 02.2	-0.2
HARR	Harsova	6.69	49	⇓P	Pn	15 21 05.3	+1.7
HARR	Harsova	6.69	49	P	Pn	15 21 05.2	+1.7
MURB	Monte Urbino	6.79	297		Pn	15 21 04.5	-0.3
TIRR	Tirgusor	6.85	52	Pn	Pn	15 21 06.2	+0.6
TIRR	Tirgusor	6.85	52	P	Pn	15 21 06.2	+0.6
VRI	Vrincioaia	6.86	37	⇑P	Pn	15 21 08.5	+2.5
VRI	Vrincioaia	6.86	37	P	Pn	15 21 08.4	+2.5
CEY	Cerknica	7.02	320	⇑iPn	Pn	15 21 07.8	-0.2
KARP	Karpathos	7.03	133	Pn	Pn	15 21 11.3	+3.1
TPGR	Topolog	7.07	50	⇑P	Pn	15 21 10.7	+2.0
CFR	Carcaliu	7.10	47	⇓P	Pn	15 21 11.2	+2.1
CFR	Carcaliu	7.10	47	P	Pn	15 21 11.2	+2.1
LJU	Ljubljana	7.19	322	P	Pn	15 21 14.7	+4.3
LJU				pmax	pmax		
	comp=Z,125nm,0.9s						
PSZ	Piszkesteto	7.43	355		Pn	15 21 13.3	-0.5
PSZ	Piszkesteto	7.43	355	⇑P	Pn	15 21 14.9	+1.1
PSZ	Piszkesteto	7.43	355	P	Pn	15 21 14.9	+1.1
SOKA	Soboth	7.46	328	i Pn	Pn	15 21 14.6	+0.4
	comp=Z,11nm,0.5s,SNR=17						
SOKA				i Sn	Sn	15 22 38.5	-0.4
	comp=Z,10nm,0.6s						
TLCR		7.49	49	⇑P	Pn	15 21 17.1	+2.7
TLCR		7.49	49	P	Pn	15 21 17.1	+2.7
SRO	Srobarova	7.52	347	eSN	Sn	15 22 44.2	+4.1
OBKA	Obir	7.54	325	ePn	Pn	15 21 15.9	+0.7
OBKA	Obir	7.54	325	i Pn	Pn	15 21 16.3	+1.1
	comp=Z,11nm,0.5s						
OBKA				eSn	Sn	15 22 40.5	-0.2
	comp=Z,21nm,0.4s						
SABO	M.te Sabotino	7.60	318		Pn	15 21 14.9	-1.1
ARSA	Arzberg	7.75	332		Pn	15 21 18.2	+0.1
ARSA	Arzberg	7.75	332	ePn	Pn	15 21 18.7	+0.7
	comp=Z,6.9nm,0.5s,SNR=7.4						
ARSA				i Sn	Sn	15 22 45.2	-0.7
	comp=Z,3.0nm,0.5s						
BURAR	Bucovina Array	7.77	22	⇓P	Pn	15 21 20.7	+2.3
BURAR	Bucovina Array	7.77	22	P	Pn	15 21 20.6	+2.3
BUR08	Bucovina Ar. S	7.79	22		Pn	15 21 18.3	-0.3
RONA	Rosalia, Austr	7.89	337	i Pn	Pn	15 21 21.2	+1.2
	comp=Z,2.9nm,0.7s						
RONA				i Sn	Sn	15 22 50.5	+1.1
	comp=Z,2.9nm,0.3s						
PRED	Cave del Predi	7.94	321		Pn	15 21 19.8	-0.9
KECS	Kecovo	7.97	358	eP	Pn	15 21 23.8	+2.7
KECS				e		15 22 52.7	
KECS	Kecovo	7.97	358	ePN	Pn	15 21 23.8	+2.7
KECS				eSN	Sn	15 22 52.6	+1.3
MYKA	Terra Mystica	8.04	322	i Pn	Pn	15 21 21.8	-0.3
	comp=Z,7.0nm,0.6s						
MYKA				i Sn	Sn	15 22 51.0	-2.0
	comp=Z,12nm,0.5s						
VYHS	Vyhne	8.11	351	eP	Pn	15 21 27.8	+4.9
VYHS				e		15 22 54.9	
VYHS	Vyhne	8.11	351	ePN	Pn	15 21 27.8	+4.9
VYHS				eSN	Sn	15 22 54.9	+0.3
CONA	Conrad Observa	8.23	336	i Pn	Pn	15 21 24.7	+0.1
	comp=Z,2.1nm,0.6s						
CONA				i Sn	Sn	15 22 57.7	0.0
	comp=Z,3.5nm,0.6s						
MODS	Modra-Piesok	8.26	343	eP	Pn	15 21 27.5	+2.4
MODS				e		15 23 01.8	
MODS	Modra-Piesok	8.26	343	ePN	Pn	15 21 27.5	+2.4
MODS				eSN	Sn	15 23 01.8	+3.4
TEOL	Teolo	8.29	309		Pn	15 21 23.9	-1.6
KOLS	Kolonicke sedl	8.48	6	eP	Pn	15 21 32.0	+3.9
KOLS	Kolonicke sedl	8.48	6	ePN	Pn	15 21 32.0	+3.9
KBA	Koelnbreinsper	8.51	323	P	Pn	15 21 31.3	+2.7
KBA				pmax	pmax		
	comp=Z,18nm,0.9s						
KBA	Koelnbreinsper	8.51	323	ePn	Pn	15 21 28.3	-0.3
	comp=Z,3.5nm,0.4s,SNR=5.8						
KBA				eSn	Sn	15 23 02.9	-1.8
	comp=Z,9.2nm,0.7s						
ABTA	Abfaltersbach	8.67	319	ePn	Pn	15 21 30.7	-0.1
	comp=Z,14nm,0.6s,SNR=5.4						
ABTA				eSn	Sn	15 23 07.6	-1.0
	comp=Z,35nm,0.9s						
CTI	Castel Tesino	8.69	313		Pn	15 21 29.0	-2.0
CTI	Castel Tesino	8.69	313	P	Pn	15 21 29.0	-2.0
MOA	Molln	8.72	329	i Pn	Pn	15 21 32.6	+1.2
	comp=Z,2.4nm,0.3s						
MOA				i Sn	Sn	15 23 12.5	+2.8
	comp=Z,9.5nm,0.4s						
BIOA	Bad Ischl, Aus	8.85	327	i Pn	Pn	15 21 33.8	+0.7
	comp=Z,10.0nm,0.5s						
BIOA				eSn	Sn	15 23 11.8	-1.0
	comp=Z,11nm,0.5s						
STHS	Stebnicka Huta	8.91	2	eP	Pn	15 21 41.3	+7.4
STHS	Stebnicka Huta	8.91	2	ePN	Pn	15 21 41.3	+7.4
NIE	Niedzica	8.91	358	P	Pn	15 21 38.4	+4.4
NIE				pmax	pmax		
	comp=Z,3.0nm,0.7s						
LESA	Schwarzleotal	9.07	322	i Pn	Pn	15 21 36.1	-0.1
	comp=Z,8.0nm,0.5s,SNR=7.3						
LESA				eSn	Sn	15 23 16.4	-2.0
	comp=Z,20nm,0.7s						
KRUC	Moravsky	9.11	341	ePN	Pn	15 21 37.0	+0.3
WTTA	Wattenberg	9.46	319	P	Pn	15 21 43.6	+1.9
WTTA				pmax	pmax		
	comp=Z,19nm,0.7s						
WTTA	Wattenberg	9.46	319	i Pn	Pn	15 21 42.0	+0.3
	comp=Z,8.2nm,0.4s,SNR=5.5						
WTTA				i Sn	Sn	15 23 26.1	-2.2
	comp=Z,57nm,0.7s						
CKRC	Cesky Krumlov	9.52	333	ePN	Pn	15 21 44.4	+2.1
CKRC	Cesky Krumlov	9.52	333	eP	Pn	15 21 44.4	+2.1
WATA	Walderalm	9.54	319	i Pn	Pn	15 21 43.8	+1.0
	comp=Z,17nm,0.6s,SNR=14						
WATA				i Sn	Sn	15 23 29.2	-0.9
	comp=Z,62nm,1.0s						
MORC	Moravsky Berou	9.55	347	ePN	Pn	15 21 43.7	+0.9
SQTA	Sankt Quirin	9.65	317	i Pn	Pn	15 21 45.0	+0.7
	comp=Z,11nm,0.5s						
SQTA				i Sn	Sn	15 23 31.0	-1.8
	comp=Z,17nm,0.5s						
GEC2	GERESS Array S	9.76	331		Pn	15 21 45.9	+0.3
GERES	GERESS Array B	9.76	331	Pn	Pn	15 21 45.5	-0.1
	comp=Z,0.1nm,0.3s,baz=151,slow=14,SNR=28						
GERES				Sn	Sn	15 23 30.4	-4.8
	comp=Z,0.1nm,0.3s,baz=156,slow=24,SNR=7.2						
	comp=Z,3.6nm,0.7s						
GERES	GERESS Array B	9.76	331	eP	Pn	15 21 46.3	+0.7
FETA	Feichten	9.78	315	ePn	Pn	15 21 46.5	+0.4
	comp=Z,5.1nm,0.4s,SNR=5.7						
FETA				i Sn	Sn	15 23 34.4	-1.6
	comp=Z,10.0nm,0.8s						
MOTA	Moosalm	9.79	317	ePn	Pn	15 21 46.7	+0.5
	comp=Z,12nm,0.6s,SNR=17						
MOTA				i Sn	Sn	15 23 34.6	-1.6
	comp=Z,50nm,0.7s						
FUORN	Ofenpass-Fuorn	9.80	312		Pn	15 21 46.7	+0.3
BR131	Keskin Array S	9.84	90	⇓eP	Pn	15 21 49.1	+2.3
BRTR	Keskin Array B	9.84	90	Pn	Pn	15 21 47.2	+0.4
	comp=Z,0.1nm,0.3s,baz=266,slow=13,SNR=3.7						
	comp=Z,0.6nm,0.6s						
KHC	Kasperske Hory	10.04	332	ePN	Pn	15 21 50.4	+1.0
KHC				eSN	Sn	15 23 41.1	-0.9
KHC	Kasperske Hory	10.04	332	⇓eP	Pn	15 21 50.5	+1.0
ZVC	Zvikov	10.09	334	ePN	Pn	15 21 51.9	+1.8
DAVOX	Davos/Dischmat	10.11	312	Pn	Pn	15 21 50.9	+0.3
	comp=Z,1.7nm,0.3s,baz=127,slow=15,SNR=11						
DAVOX				Sn	Sn	15 23 38.5	-5.6
	comp=Z,0.9nm,0.3s,baz=311,slow=19,SNR=9.8						
	comp=Z,4.8nm,0.4s						
KEST	Kesra	10.23	246	Pn	Pn	15 21 54.7	+2.5
	comp=Z,0.3nm,0.3s,baz=13,slow=7.3,SNR=8.0						
	comp=Z,4.9nm,0.7s						
TUE	Stuetta	10.25	309		Pn	15 21 51.1	-1.5
DAVA	Damuels	10.40	314	i Pn	Pn	15 21 54.7	+0.2
	comp=Z,7.4nm,0.4s						
DAVA				eSn	Sn	15 23 49.1	-2.1
	comp=Z,15nm,0.6s						
SENIN	Lac Senin/Sane	11.44	305		Pn	15 22 07.9	-1.0
STU	Stuttgart	11.69	319	P	Pn	15 22 10.5	-1.5
STU				pmax	pmax		
	comp=Z,18nm,0.7s						
AKASG	Malin Array Be	11.75	27	Pn	Pn	15 22 13.4	+0.6
	comp=Z,0.3nm,0.5s,baz=213,slow=12,SNR=1.7						
AKBB	Malin Array Si	11.75	27	⇑eP	Pn	15 22 13.0	+0.2
BFO	Black Forest	11.87	315		Pn	15 22 12.3	-2.1
BFO	Black Forest	11.87	315	P	Pn	15 22 12.3	-2.1
CLL	Collm	12.09	336	e(sPP)		15 22 33.0	
CLL				ex	x	15 24 13.0	
CLL				ex	x	15 25 04.0	
MMAI	Mount Meron Ar	13.86	118	Pn	Pn	15 22 43.4	+1.7
	comp=Z,0.5nm,0.3s,baz=300,slow=14,SNR=1.7						
	comp=Z,0.6nm,0.5s						
CEST	Esterri de Car	14.81	285	Pn	Pn	15 22 54.4	-0.4
NACGM	Naroch	14.94	13	eP	Pn	15 22 59.3	+3.1
	comp=Z,3.0nm,0.9s,baz=198						
KOPT	Kop Dagi	15.02	85	Pn	Pn	15 22 58.8	+1.0
KOPT				IAmb	IAmb	15 23 23.9	
	comp=Z,8.8nm,1.4s						
GHAJ	Ghor Haditha	15.04	123	Pn	Pn	15 23 00.6	+2.8
GHAJ				IAmb	IAmb	15 23 12.8	
	comp=Z,7.4nm,0.6s						
PABE	Paberze	15.14	7	Pn	Pn	15 22 59.4	+0.4
PABE				IAmb	IAmb	15 23 36.2	
	comp=Z,16nm,1.0s						
KIV	Kislovodsk	16.53	71	eP	Pn	15 23 17.3	+0.1
KIV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GEVA	Gevas	17.31	90	Pn	Pn	15 23 28.1	+1.1
OBN	Obninsk	17.96	30	i P	Pn	15 23 35.0	+0.2
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
VSU	Vasula	18.36	10	⇑eP	Pn	15 23 38.5	-1.1
VSU				pmax	pmax		
	comp=Z,17nm,1.0s						
ESBB	Sonseca Array	18.98	276	P	P	15 23 45.7	-1.1
ESDC	Sonseca Array	18.98	276	P	P	15 23 45.4	-1.4
ESDC	Sonseca Array	18.98	276	P	P	15 23 46.7	-0.2
	comp=Z,0.1nm,0.3s,baz=74,slow=10,SNR=14						
	comp=Z,1.2nm,0.8s						
HFS	Hagfors	20.14	350	P	P	15 23 57.9	-1.3
	comp=Z,3.0nm,0.5s,baz=165,slow=12,SNR=11						
	comp=Z,3.0nm,0.5s						
AKT	Akhty	20.30	78	eP	P	15 24 01.6	+0.4
AKT				e		15 24 18.6	
AKT				pmax	pmax		
	comp=Z,13nm,0.9s						
NC602	NORSAR Array S	21.05	347	P	P	15 24 07.8	-1.2
NC602				IAmb	IAmb	15 24 08.8	
	comp=Z,25nm,1.4s						
NORES	NORESS Array B	21.05	347	P	P	15 24 08.9	-0.1
FINES	FINESS Array B	21.20	7	P	P	15 24 09.3	-1.3
FINES	FINESS Array B	21.20	7	P	P	15 24 09.2	-1.5
	comp=Z,1.9nm,0.5s,baz=166,slow=13,SNR=20						
FINES				PcP	PcP	15 28 14.1	-1.5
	comp=Z,0.8nm,0.4s,baz=147,slow=2.8,SNR=6.8						
	comp=Z,1.9nm,0.5s						
FIA1	FINESS Array S	21.20	7	P	P	15 24 09.3	-1.3
FIA1				IAmb	IAmb	15 24 25.3	
	comp=Z,14nm,0.9s						
NB201	NORSAR Array S	21.39	347	P	P	15 24 11.9	-0.9
NB2	NORSAR Subarra	21.39	347	P	P	15 24 11.7	-1.0
	comp=Z,0.4nm,0.5s,baz=160,slow=11						
NB2	NORSAR Subarra	21.39	347	P	P	15 24 09.6	-3.2
NOA	NORSAR Array B	21.39	347	P	P	15 24 11.2	-1.5
	comp=Z,0.9nm,0.6s,baz=153,slow=9.9,SNR=7.8						
	comp=Z,0.9nm,0.6s						
NOA	NORSAR Array B	21.39	347	eP	P	15 24 11.8	-1.0
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
EKA	Eskdalemuir Ar	21.72	321	P	P	15 24 15.4	-0.9
	comp=Z,1.3nm,0.5s,baz=116,slow=9.5,SNR=13						
	comp=Z,1.3nm,0.5s						
ESK	Eskdalemuir	21.73	321	P	P	15 24 15.4	-1.0
ESK				IAmb	IAmb	15 24 47.2	
	comp=Z,25nm,1.4s						
ESK	Eskdalemuir	21.73	321	P	P	15 24 15.4	-1.0
ESK				pmax	pmax		
	comp=Z,25nm,1.4s						
MDT	Midelt	21.76	257	P	P	15 24 17.2	+0.2
	comp=Z,2.0nm,0.8s,baz=82,slow=10,SNR=3.9						
	comp=Z,2.0nm,0.8s						
BELG	Belogornoye	21.81	48	deP	P	15 24 18.2	+1.0
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KLMR	Klimovskoe	23.39	23	eP	P	15 24 32.2	-1.6
KLMR				pmax	pmax		
	comp=Z,13nm,1.2s						
ARCES	ARCESS Array B	29.19	3	P	P	15 25 24.7	-1.8
ARCES	ARCESS Array B	29.19	3	P	P	15 25 24.3	-2.2
	comp=Z,1.8nm,0.7s,baz=186,slow=9.6,SNR=7.5						
	comp=Z,1.8nm,0.7s						
ARCES	ARCESS Array B	29.19	3	P	P	15 25 24.7	-1.8
ARCES				pmax	pmax		
	comp=Z,18nm,1.4s						
BRVK	Borovoye	35.40	52	⇓eP	P	15 26 21.5	+0.5
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BVAR	Borovoye Array	35.46	52	P	P	15 26 20.4	-1.1
	comp=Z,0.7nm,0.7s,baz=272,slow=10,SNR=4.2						
	comp=Z,0.7nm,0.7s						
SPITS	Spitsbergen Ar	37.82	358	P	P	15 26 39.8	-1.6
	comp=Z,7.6nm,1.0s,baz=216,slow=12,SNR=1.2						
	comp=Z,7.6nm,1.0s						
DBIC	Dimbokro	40.79	221	LR	LR	15 44 47.5	
	comp=Z,82nm,19.6s,baz=13,slow=37						
MK31	Makanchi Array	43.90	60	⇑eP	P	15 27 31.2	-0.7
MKAR	Makanchi Array	43.90	60	P	P	15 27 31.3	-0.6
	comp=Z,0.9nm,0.6s,baz=279,slow=7.5,SNR=8.8						
MKAR				PcP	PcP	15 29 16.8	-1.1
	comp=Z,0.3nm,0.6s,baz=270,slow=2.9,SNR=2.1						
	comp=Z,0.9nm,0.6s						
ZALV	Zalesovo Beam	43.98	50	P	P	15 27 31.6	-0.7
	comp=Z,0.7nm,0.4s,baz=270,slow=10,SNR=3.8						
	comp=Z,0.7nm,0.4s						
ZALV	Zalesovo Beam	43.98	50	eP	P	15 27 32.1	-0.2
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SCHQ	Schefferville	56.93	316	P	P	15 29 09.8	-0.5
	comp=Z,1.5nm,0.5s,baz=356,slow=7.7,SNR=4.6						
	comp=Z,1.5nm,0.5s						
LZH	Lanzhou	62.96	65	eP	P	15 29 52.5	+0.3
LZH				pP	sP	15 29 57.5	+0.3
LZH				pmax	pmax		
	comp=Z,12nm,1.2s						
YAK	Yakutsk	62.96	30	⇑eP	P	15 29 50.6	-0.9
YAK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC	Hu-ho-hao-te	65.53	56	eP	P	15 30 08.9	0.0
HHC				pmax	pmax		
	comp=Z,12nm,0.5s						
HHC				pmax	pmax		
	comp=Z,69nm,4.4s						
XLT	XiLinHaoTe	66.62	52	eP	P	15 30 20.1	+4.2
XLT				pmax	pmax		
	comp=Z,9.0nm,0.7s						
PZH	PanZhiHua	66.72	74	P	P	15 30 18.1	+1.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.7s						
BOSA	Boshof	68.90	176	P	P	15 30 30.5	+0.4
	comp=Z,1.6nm,0.7s,baz=356,slow=8.1,SNR=4.1						
	comp=Z,1.6nm,0.7s						
ILAR	Eielson Array	74.61	355	P	P	15 31 03.8	-0.3
	comp=Z,0.3nm,0.8s,baz=347,slow=4.4,SNR=4.2						
	comp=Z,0.3nm,0.8s						
ILAR	Eielson Array	74.61	355	eP	P	15 31 04.9	+0.8
KSRS	Korea Array	77.67	51	P	P	15 31 21.0	-0.9
	comp=Z,0.9nm,0.6s,baz=311,slow=4.9,SNR=6.5						
	comp=Z,0.9nm,0.6s						
KSRS	Korea Array	77.67	51	eP	P	15 31 21.4	-0.5
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PSI	Prapat	79.13	96	LR	LR	16 08 58.1	
	comp=Z,351nm,20.2s,baz=256,slow=38						
NEW	Newport	84.08	333	P	P	15 31 55.3	-0.8
	comp=Z,1.2nm,0.5s,baz=60,slow=8.1,SNR=2.8						
	comp=Z,1.2nm,0.5s						
MJAR	Matsushiro Arr	84.18	46	P	P	15 31 55.7	-1.1
	comp=Z,0.7nm,0.9s,baz=350,slow=2.7,SNR=2.8						
	comp=Z,0.7nm,0.9s						
SHEM	Shemya Is, Ala	84.28	16	LR	LR	16 15 48.8	
	comp=Z,100nm,19.2s,baz=182,slow=40						
PDAR	Pinedale Array	85.76	326	P	P	15 32 04.3	-0.6
	comp=Z,0.4nm,0.6s,baz=68,slow=5.5,SNR=4.2						
	comp=Z,0.4nm,0.6s						
TXAR	Lajitas Array	93.54	314	P	P	15 32 42.1	+0.4
	comp=Z,1.2nm,1.0s,baz=70,slow=4.1,SNR=7.4						
	comp=Z,1.2nm,1.0s						
WRA	Warramunga Arr	120.36	91	PKP	PKPdf	15 38 16.1	-0.9
	comp=Z,0.8nm,1.2s,baz=319,slow=1.7,SNR=1.5						
ASAR	Alice Springs	122.15	95	PKP	PKPdf	15 38 19.3	-1.1
	comp=Z,0.9nm,0.5s,baz=303,slow=1.6,SNR=38						
QSPA	South Pole Qui	130.36	180	PKP	PKPdf	15 38 33.4	-1.3
	comp=Z,1.6nm,1.0s,baz=270,slow=4.0,SNR=2.7						

IDC 01 15:21:38.7±1.9**, 5°.27N×125°.44E, h0^{km}, mb3.8**/4**, mbtmp3.8**/4**, Error ellipse: s-maj=205.6km s-min=24.3km az=68.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	29.92	164	P	P	15 27 48.6	0.0
	0.5nm,0.4s,baz=335,slow=7.9,SNR=37						
	0.5nm,0.4s						
SONM	Songino Array	45.44	342	P	P	15 29 58.8	-0.7
	0.6nm,0.6s,baz=152,slow=6.5,SNR=1.8						
	0.6nm,0.6s						
MKAR	Makanchi Array	55.57	325	P	P	15 31 17.0	+0.9
	0.6nm,0.3s,baz=126,slow=7.4,SNR=12						
	0.6nm,0.3s						
KURBB	Kurchatov Arra	59.76	327	P	P	15 31 44.6	-0.9
	0.4nm,0.5s,baz=134,slow=5.2,SNR=4.8						
	0.4nm,0.5s						

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*IDC **01** 15:22:52.8±2.1, 26°.90S×70°.96W, h0^{km}, mbtmp3.6/3, ML3.4/3, Error ellipse: s-maj=92.6km s-min=34.2km az=87.0*

*GUC **01** 15:22:57.3±0.8, 27°.19S×71°.07W, h15^{km}±6^{km}, ML3.7*

ISC 01 15:22:52.9±0.8**, 27°.17S**±0°.03×**71°.24W**±0°.06**, h25^{km}, n23, σ2^{s}.35**/28**, 1C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AC06	Mina Casimiro	0.81	104	⇓iP	Pb	15 23 08.4	+0.1
AC06				i S	Sb	15 23 16.5	-2.4
GO03	Copiapo	0.99	116	eP	Pb	15 23 11.2	-0.2
GO03				i S	Sb	15 23 21.8	-2.3
GO03				IAML		15 23 22.8	
	comp=E,3μm,0.3s						
AC04	Llanos de Chal	1.05	172	eP	Pb	15 23 13.8	+1.4
AC04				eS	Sb	15 23 26.6	+1.0
AC04				IAML		15 23 28.0	
	comp=E,3μm,0.2s						
AC01	Pan de Azucar	1.16	30	eP	Pb	15 23 15.6	+1.2
AC01				eS	Sb	15 23 29.4	+0.4
AC01				IAML		15 23 35.9	
	comp=N,2μm,0.4s						
AC05	El Transito	1.87	153	⇑iP	Pb	15 23 26.8	+0.3
AC05				IAML		15 23 54.3	
	comp=E,847nm,0.5s						
LCO	Las Campanas	1.90	166	eP	Pb	15 23 26.9	-0.2
AC02	Maricunga	1.91	81	eP	Pb	15 23 27.2	-0.1
AC02				IAML		15 23 53.2	
	comp=N,2μm,0.4s						
GO02	Mina Guanaco	2.48	37	eP	Pb	15 23 35.2	-1.8
GO02				IAML		15 24 15.3	
	comp=N,787nm,0.4s						
PB14	IPOC Station P	2.64	17	eP	Pn	15 23 36.7	+2.5
PB14				IAML		15 24 18.2	
	comp=E,271nm,0.5s						
CO05	La Serena	2.74	180	eP	Pn	15 23 38.8	+3.5
CO05				IAML		15 24 23.9	
	comp=E,891nm,0.7s						
CO01	Juntas del Tor	2.98	161	eP	Pb	15 23 43.1	-2.3
CO01				IAML		15 24 28.2	
	comp=N,358nm,0.4s						
CFA	Coronel Fontan	5.14	150	Pn	Pn	15 24 12.9	+4.6
	comp=N,1.7nm,0.3s,baz=334,slow=13,SNR=32						
CFA				Sn	Sn	15 25 07.4	+0.5
	comp=N,1.0nm,0.3s,baz=342,slow=6.3,SNR=3.8						
	comp=N,5.1nm,0.3s						
H03N1	Juan Fernandez	9.12	225	T	T	15 34 35.0	
	baz=52,slow=71,SNR=1265						
H03N2	Juan Fernandez	9.13	225	T	T	15 34 35.1	
	baz=52,slow=71,SNR=1159						
H03N3	Juan Fernandez	9.13	225	T	T	15 34 34.0	
	baz=52,slow=71,SNR=1295						
H03S3	Juan Fernandez	9.37	223	Pn	Pn	15 25 07.2	+1.1
	baz=36,slow=20						
H03S3				Sn	Sn	15 26 47.1	-3.4
H03S1	Juan Fernandez	9.38	223	Pn	Pn	15 25 07.5	+1.2
	baz=36,slow=20						
H03S1				Sn	Sn	15 26 46.2	-4.6
H03S2	Juan Fernandez	9.39	223	Pn	Pn	15 25 06.7	+0.3
	baz=36,slow=20						
H03S2				Sn	Sn	15 26 46.1	-4.9
LPAZ	La Paz	11.20	16	Pn	Pn	15 25 30.9	-1.1
	comp=N,0.1nm,0.3s,baz=236,slow=3.6,SNR=2.1						
	comp=N,0.5nm,0.4s						
SIV	San Ignacio	14.58	42	Pn	Pn	15 26 15.3	-2.5
	baz=216,slow=13,SNR=1.9						
	comp=N,0.7nm,0.6s						
KURBB	Kurchatov Arra	147.18	36	PKPbc	PKPab	15 42 35.6	+0.3
	comp=N,0.5nm,0.9s,baz=298,slow=3.6,SNR=4.4						
ZALV	Zalesovo Beam	147.95	27	PKPbc	PKiKP	15 42 38.1	+0.6
	comp=N,1.2nm,0.7s,baz=318,slow=1.9,SNR=2.7						
MKAR	Makanchi Array	151.39	40	PKPbc	PKiKP	15 42 47.4	+2.6
	comp=N,0.8nm,0.6s,baz=322,slow=2.2,SNR=10						

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*IDC **01** 15:35:44.7±30.0, 36°.21N×71°.46E, h230^{km}±186^{km}, mb3.0/2, mbtmp3.4/5, Error ellipse: s-maj=266.8km s-min=69.2km az=29.0*

*NNC **01** 15:35:58.5±6.8, 37°.95N×71°.89E, h0^{km}, mb3.7, mpv3.2, Error ellipse: s-maj=53.3km s-min=41.8km az=171.0*

ISC 01 15:35:53.3±2.7**, 37°.4N**±0°.2×**72°.1E**±0°.1**, h130^{km}, n8, σ2^{s}.06**/10**, 1C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC

AAK	**Ala-Archa**	**5.53**	**19**	⇑P	**Pn**	**15 37 16.1**	**+2.5**
	1.4nm,0.3s						
AAK				⇓S	**Sn**	**15 38 16.1**	**-0.1**
	7.2nm,0.6s						
KK31	**Karatay Array**	**5.81**	**349**	⇓P	**Pn**	**15 37 19.8**	**+2.6**
	0.8nm,0.2s,baz=157,slow=11,SNR=19						
KK31				S	**Sn**	**15 38 21.4**	**-1.1**
	6.4nm,0.2s,baz=156,slow=17,SNR=36						
MKAR	**Makanchi Array**	**12.04**	**36**	P	**P**	**15 38 45.3**	**-2.5**
	0.1nm,0.3s,baz=208,slow=14,SNR=1.0						
KURBB	**Kurchatov Arra**	**13.99**	**17**	P	**Pn**	**15 39 07.7**	**+2.1**
	0.6nm,0.7s,baz=208,slow=11,SNR=6.0						
AB31	**Akbulak array**	**14.74**	**327**	P	**P**	**15 39 17.7**	**-0.1**
	1.1nm,0.5s,baz=136,slow=11,SNR=14						
AB31				S	**Sn**	**15 41 57.1**	**-1.1**
	0.8nm,0.6s,baz=147,slow=23,SNR=5.6						
BVAR	**Borovoye Array**	**15.65**	**356**	P	**Pn**	**15 39 25.7**	**-0.8**
	0.7nm,0.7s,baz=170,slow=10,SNR=5.8						
ZALV	**Zalesovo Beam**	**18.73**	**24**	P	**P**	**15 40 00.1**	**-1.5**
	1.1nm,0.4s,baz=220,slow=11,SNR=6.1						
	1.1nm,0.4s						
SONM	**Songino Array**	**27.10**	**56**	P	P	15 41 16.1	-7.8
	0.5nm,0.6s,baz=240,slow=8.1,SNR=2.1						
	0.5nm,0.6s						

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*PRU **01** 15:41:22.4, 51°.52N×16°.06E, h0^{km}*

IPEC 01 15:41:20.3±0.2**, 51°.59N×16°.18E, h1**^{km}**, ML1.7**/5**, Error ellipse: s-maj=1.8km s-min=1.4km az=55.0, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.75**	**175**	*e*Pg	Pg	15 41 35.1	+0.4
KSP				*e*Sg	Sg	15 41 45.1	+0.7
CHVC	**Chvalec**	**1.01**	**185**	*e*PG	Pg	15 41 40.0	+0.5
CHVC				*e*SG	Sg	15 41 52.6	0.0
OSTC	**Ostas**	**1.03**	**179**	*e*PG	Pb	15 41 40.7	-0.3
OSTC				*e*SG	Sg	15 41 53.5	0.0
	comp=Z,8.8nm,0.6s						
UPC	**Upice**	**1.09**	**186**	*e*PG	Pg	15 41 41.2	+0.1
UPC				*e*SG	Sg	15 41 55.0	-0.2
	comp=Z,18nm,0.4s						
DPC	**Dobruska-Polom**	**1.24**	**176**	*e*PG	Pg	15 41 43.9	-0.2
DPC				*e*SG	Sg	15 41 59.6	-0.6
	comp=Z,5.5nm,0.5s						
PIVO	**Bartosovice**	**1.42**	**170**	*e*Pn	Pn	15 41 47.3	0.0
	baz=351						
PIVO				*e*Sg	Sg	15 42 05.2	-0.8
	15nm,0.4s,baz=351						
PVCC	**Panska Ves**	**1.47**	**224**	*e*PG	Pn	15 41 47.7	-0.2
PVCC				*e*SG	Sg	15 42 06.5	-1.0
	comp=Z,24nm,0.2s						
KRLC	**Kraliky**	**1.56**	**166**	*e*PG	Pn	15 41 49.5	+0.2
KRLC				*e*SG	Sn	15 42 09.6	-0.6
	comp=Z,7.9nm,0.5s						
BRG	**Berggiesshubel**	**1.58**	**244**	Pg	Pn	15 41 49.6	+0.2
BRG				Sg	Sn	15 42 09.7	-0.8
BRG				Amp		15 42 10.2	
	comp=Z,13nm,0.3s						
PRU	**Pruhonice**	**1.91**	**214**	*e*SG	Sn	15 42 19.0	+0.4
	comp=Z,4.1nm,0.4s						
STEB	**Steborice**	**1.94**	**148**	*e*PG	Pg	15 41 57.0	-0.5
STEB				*e*SG	Sg	15 42 24.2	+1.6
HSKC	**Hora Svate Kat**	**1.99**	**241**	*e*PG	Pn	15 41 55.3	+0.2
HSKC				*e*SG	Sn	15 42 21.6	+0.9
CLL	**Collm**	**2.01**	**263**	*e*Pn	Pn	15 41 54.0	-1.3
CLL				*i* Pg	Pb	15 41 56.8	-0.8
CLL				*i* x	x	15 42 00.2	
CLL				*e*Sg	Sb	15 42 23.0	-0.1
	comp=Z,4.0nm,0.4s						
CLL				*i* x	x	15 42 29.3	
MORC	**Moravsky Berou**	**2.01**	**154**	*e*Pn	Pn	15 41 55.2	-0.2
	baz=335						
MORC				*e*Sg	Sb	15 42 23.2	0.0
	comp=Z,3.6nm,0.3s,baz=335						
MORC	**Moravsky Berou**	**2.01**	**154**	*e*PN	Pn	15 41 55.3	-0.1
MORC				*e*SG	Sb	15 42 23.3	+0.1
VRAC	**Vranov**	**2.30**	**173**	*e*Pn	Pn	15 41 59.3	0.0
	baz=354						
VRAC				*e*Sg	Sb	15 42 32.3	+0.9
	comp=Z,2.6nm,0.4s,baz=354						
KRUC	**Moravsky**	**2.53**	**177**	*e*Pn	Pn	15 42 02.5	0.0
	baz=357						
KRUC				*e*Sg	Sb	15 42 39.3	+1.1
	comp=Z,2.7nm,0.5s,baz=357						
KRUC	**Moravsky**	**2.53**	**177**	*e*PN	Pn	15 42 02.6	+0.1
KRUC				*e*SG	Sb	15 42 39.4	+1.2
NKC	**Novy Kostel**	**2.73**	**242**	*e*SG	Sg	15 42 46.1	-1.7
	comp=Z,5.9nm,0.3s						
KHC	**Kasperske Hory**	**2.97**	**215**	*e*PG	Pb	15 42 14.6	+0.6
KHC				*e*SG	Sb	15 42 52.6	+1.8

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*IDC **01** 15:44:55.8±1.6, 4°.02S×154°.41E, h496^{km}±20^{km}, mb3.4/18, mbtmp4.2/19, Error ellipse: s-maj=15.9km s-min=8.7km az=101.0*

ISC 01 15:44:54.2±0.7**, 3°.99S**±0°.09×**154°.5E**±0°.2**, h476**^{km}**, n19,** σ**1**^{s}.**12**/22**, mb3.8**/18**, North of Solomon Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**9.04**	**233**	P	**P**	**15 47 03.5**	**+2.3**
	18nm,1.0s,baz=84,slow=4.1,SNR=3.1						
DZM	**Mont Dzumac**	**21.39**	**148**	P	**P**	**15 49 07.3**	**+0.3**
	7.5nm,0.5s,baz=297,slow=5.7,SNR=19						
	7.5nm,0.5s						
WRA	**Warramunga Arr**	**25.23**	**229**	P	**P**	**15 49 41.5**	**+0.1**
	6.6nm,0.4s,baz=53,slow=9.2,SNR=25						
WRA				S	**S**	**15 53 30.1**	**-2.5**
	1.0nm,0.8s,baz=52,slow=13,SNR=2.6						
	6.6nm,0.4s						
ASAR	**Alice Springs**	**27.88**	**224**	P	**P**	**15 50 04.5**	**-0.2**
	2.2nm,0.3s,baz=55,slow=9.0,SNR=182						
ASAR				S	**S**	**15 54 11.6**	**-2.4**
	0.1nm,0.4s,baz=50,slow=14,SNR=1.3						
ASAR				ScP	**ScP**	**15 56 00.4**	**-0.7**
	0.4nm,1.0s,baz=30,slow=3.6,SNR=1.6						
	2.2nm,0.3s						
STKA	**Stephens Creek**	**30.27**	**202**	P	**P**	**15 50 25.1**	**-0.3**
	1.1nm,0.4s,baz=56,slow=14,SNR=5.7						
	1.1nm,0.4s						
MJAR	**Matsushiro Arr**	**43.09**	**341**	P	**P**	**15 52 10.4**	**-0.9**
	1.2nm,0.6s,baz=147,slow=5.2,SNR=4.7						
	1.2nm,0.6s						
JNU	**Nakatsue**	**43.15**	**331**	P	**P**	**15 52 11.2**	**-0.6**
	10nm,1.1s,baz=318,slow=3.3,SNR=6.2						
	10nm,1.1s						
KSRS	**Korea Array**	**48.06**	**331**	P	**P**	**15 52 49.8**	**+0.4**
	1.2nm,0.6s,baz=148,slow=7.5,SNR=7.8						
	1.2nm,0.6s						
ASAJ	**Asahikawa**	**49.07**	**349**	P	**P**	**15 52 57.7**	**+0.9**
	4.3nm,0.8s,baz=238,slow=20,SNR=1.8						
	4.3nm,0.8s						
PETK	**Petropavlovsk-**	**56.95**	**2**	P	**P**	**15 53 53.1**	**0.0**
	3.2nm,0.6s,baz=163,slow=6.6,SNR=19						
	3.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**59.06**	**294**	P	**P**	**15 54 08.1**	**0.0**
	0.5nm,0.3s,baz=112,slow=6.9,SNR=1.6						
	0.5nm,0.3s						
MA2	**Magadan**	**63.44**	**358**	P	**P**	**15 54 36.2**	**+0.1**
	2.9nm,0.6s,baz=152,slow=12,SNR=3.9						
	2.9nm,0.6s						
SONM	**Songino Array**	**66.55**	**327**	P	**P**	**15 54 57.4**	**+1.1**
	1.2nm,0.6s,baz=144,slow=6.4,SNR=5.0						
	1.2nm,0.6s						
VNDA	**Vanda**	**73.58**	**178**	P	**P**	**15 55 38.0**	**+0.6**
	0.9nm,0.6s,baz=331,slow=5.3,SNR=9.1						
	0.9nm,0.6s						
ILAR	**Eielson Array**	**80.79**	**22**	P	**P**	**15 56 16.1**	**-1.0**
	0.7nm,0.6s,baz=241,slow=4.8,SNR=12						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**80.83**	**319**	P	**P**	**15 56 18.1**	**+0.5**
	0.8nm,0.6s,baz=100,slow=7.3,SNR=7.2						
	0.8nm,0.6s						
KURBB	**Kurchatov Arra**	**84.20**	**322**	P	**P**	**15 56 33.9**	**-0.7**
	0.4nm,0.6s,baz=100,slow=5.2,SNR=5.3						
	0.4nm,0.6s						
QSPA	**South Pole Qui**	**85.97**	**180**	P	**P**	**15 56 42.9**	**-0.2**
	1.8nm,0.8s,baz=342,slow=2.2,SNR=10.0						
	1.8nm,0.8s						
BVAR	**Borovoye Array**	**89.60**	**323**	P	**P**	**15 56 59.4**	**-0.8**
	1.1nm,0.5s,baz=104,slow=6.1,SNR=5.6						
	1.1nm,0.5s						

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*NIED **01** 15:45:51.5, 44°.31N×149°.62E, h30^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$3.47; M$_{θθ}$3.18; M$_{φφ}$-6.66; M$_{rθ}$-6.62; M$_{θφ}$-2.25; M$_{φr}$-3.71; Fault plane solution: M$_0$9.78000×10^{14} NP1: φ$_s$337.00000°, δ36.00000°, λ22.00000°. NP2: φ$_s$229.00000°, δ78.00000°, λ124.00000°.*

*SKHL **01** 15:45:53.4±0.5, 43°.80N×149°.60E, h63^{km}±2^{km}, mb3.9/3*

*IDC **01** 15:45:56.4±4.6, 44°.05N×149°.48E, h36^{km}±36^{km}, mb3.6/11, mbtmp3.7/14, ML2.3/3, MS3.5/2, Error ellipse: s-maj=27.9km s-min=21.4km az=94.0*

ISC 01 15:45:56.7±0.9**, 43°.97N**±0°.09×**149°.36E**±0°.09**, h38**^{km}**, n27,** σ**0**^{s}.**98**/23**, mb3.9**/11**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.65**	**320**	*e*P	**Pn**	**15 46 22.3**	**-0.7**
KUR				AMB	AMB	15 46 25.0	
	60nm,0.5s						
KUR				*e*S	**Sn**	**15 46 43.6**	**+0.7**
KUR				A	A	15 46 51.8	
	350nm,0.6s						
KUR				A	A	15 46 51.8	
	260nm,0.6s						
SHO	**Shikotan**	**1.83**	**268**	*e*P	**Pn**	**15 46 24.1**	**-1.4**
SHO				AMB	AMB	15 46 24.8	
	20nm,0.4s						
SHO				*e*S	**Sn**	**15 46 46.4**	**-1.0**
SHO				A	A	15 47 56.0	
	70nm,0.3s						
SHO				A	A	15 47 56.0	
	60nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.52**	**273**	*e*P	**Pn**	**15 46 33.5**	**-1.5**
YUK				AMB	AMB	15 46 38.3	
	40nm,0.3s						
YUK				*e*S	**Sn**	**15 47 03.9**	**-0.6**
NMR	**Nemuro--Hokkai**	**2.70**	**258**	*e*P	**Pn**	**15 46 35.8**	**-1.7**
NMR				*e*S	**Sn**	**15 47 09.2**	**+0.3**
ASAJ	**Asahikawa**	**4.88**	**274**	Pn	**Pn**	**15 47 08.4**	**+1.1**
	0.2nm,0.3s,baz=13,slow=33,SNR=1.3						
	3.7nm,0.9s						
PETK	**Petropavlovsk-**	**10.68**	**28**	Pn	**Pn**	**15 48 25.9**	**-1.0**
	0.1nm,0.3s,baz=215,slow=13,SNR=2.1						
	0.9nm,0.7s						
MJAR	**Matsushiro Arr**	**11.29**	**233**	Pn	**Pn**	**15 48 36.2**	**+0.9**
	baz=32,slow=15,SNR=2.0						
	0.4nm,0.7s						
USRK	**Ussuriysk Ar.**	**12.49**	**277**	LR	LR	15 54 16.4	
	comp=Z,80nm,18.8s,baz=173,slow=40						
H11N2	**WAKE ISLAND Hy**	**28.27**	**143**	T	T	16 22 50.4	
	baz=333,slow=75,SNR=3.9						
H11N1	**WAKE ISLAND Hy**	**28.29**	**143**	T	T	16 22 52.0	
	baz=333,slow=75,SNR=3.9						
H11N3	**WAKE ISLAND Hy**	**28.29**	**143**	T	T	16 22 57.1	
	baz=333,slow=75,SNR=3.2						
H11S1	**WAKE ISLAND Hy**	**29.28**	**145**	T	T	16 24 03.9	
	baz=334,slow=76,SNR=3.5						
H11S3	**WAKE ISLAND Hy**	**29.28**	**145**	T	T	16 24 10.2	
	baz=334,slow=76,SNR=4.5						
H11S2	**WAKE ISLAND Hy**	**29.29**	**145**	T	T	16 24 15.9	
	baz=334,slow=76,SNR=2.8						
SONM	**Songino Array**	**29.86**	**293**	P	**P**	**15 52 00.9**	**+0.5**
	0.7nm,0.6s,baz=54,slow=7.3,SNR=2.4						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**45.89**	**298**	P	**P**	**15 54 15.2**	**0.0**
	1.6nm,0.8s,baz=74,slow=8.3,SNR=17						
	1.6nm,0.8s						
KURBB	**Kurchatov Arra**	**46.81**	**304**	P	**P**	**15 54 22.3**	**0.0**
	1.4nm,1.0s,baz=69,slow=8.5,SNR=6.2						
	1.4nm,1.0s						
KAPI	**Kappang**	**55.58**	**217**	LR	LR	16 19 12.3	
	comp=Z,125nm,21.1s,baz=274,slow=36						
WRA	**Warramunga Arr**	**65.08**	**196**	P	**P**	**15 56 35.0**	**+1.9**
	0.6nm,1.0s,baz=15,slow=6.3,SNR=1.8						
	0.6nm,1.0s						
FINES	**FINESS Array B**	**65.39**	**334**	P	**P**	**15 56 34.5**	**-0.3**
	1.3nm,0.6s,baz=36,slow=7.1,SNR=5.8						
	1.3nm,0.6s						
ASAR	**Alice Springs**	**68.78**	**195**	P	**P**	**15 56 56.5**	**-0.2**
	0.3nm,0.8s,baz=14,slow=6.9,SNR=4.7						
	0.3nm,0.8s						
NB2	**NORSAR Subarra**	**69.96**	**340**	P	**P**	**15 57 03.9**	**+0.3**
	comp=Z,2.2nm,0.8s,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**69.96**	**340**	P	**P**	**15 57 03.1**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=33,slow=7.4,SNR=2.1						
	comp=Z,0.8nm,0.7s						
HFS	**Hagfors**	**70.09**	**338**	P	**P**	**15 57 04.3**	**-0.1**
	comp=Z,3.5nm,1.0s,baz=44,slow=5.1,SNR=5.9						
	comp=Z,3.5nm,1.0s						
KBZ	**Khabaz**	**70.83**	**313**	P	**P**	**15 57 10.6**	**+1.4**
	comp=Z,0.8nm,0.4s,baz=56,slow=11,SNR=4.7						
	comp=Z,0.8nm,0.4s						
AKASG	**Malin Array Be**	**72.33**	**325**	P	**P**	**15 57 18.1**	**0.0**
	comp=Z,0.2nm,0.3s,baz=38,slow=6.9,SNR=1.8						
	comp=Z,0.2nm,0.3s						
TXAR	**Lajitas Array**	**81.19**	**58**	P	**P**	**15 58 07.7**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=326,slow=4.2,SNR=1.7						
	comp=Z,0.1nm,0.3s						

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*BEO **01** 15:49:10.9±0.7, 40°.17N×21°.04E, h0^{km}±3^{km}, ML2.8/10*

*TIR **01** 15:49:14.7, 40°.46N×20°.81E, h1^{km}±1^{km}, Ml3.1/8*

*SKO **01** 15:49:16.8, 40°.43N×20°.96E, h9^{km}, ML2.8*

*THE **01** 15:49:16.9, 40°N±1°×2°1E±°, h3^{km}±1^{km}, M2.6/19, MLh2.6/19*

*ATH **01** 15:49:16.0, 40°.45N×20°.96E, h7^{km}±2^{km}, ML2.8/14, Manual Solution by A.Agalos First location: 2019/06/01 15:50:24, This location: 2019/06/01 16:17:26 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*

ISC 01 15:49:15.0±0.9**, 40°.47N**±0°.01×**20°.90E**±0°.02**, h8**^{km}±6^{km}**, n88,** σ**1**^{s}.**23**/121**, 2C-2D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEST	**Nestorio**	**0.13**	**116**	Pg	**Pg**	**15 49 18.5**	**+0.6**
NEST				Sg	**Sg**	**15 49 22.3**	**+2.4**
NEST				AML	AML	15 49 24.8	
	27nm,0.6s						
NEST	**Nestorio**	**0.13**	**116**	P	**Pg**	**15 49 18.5**	**+0.6**
NEST				S	**Sg**	**15 49 19.9**	**0.0**
NEST	**Nestorio**	**0.13**	**116**	P	**Pg**	**15 49 18.3**	**+0.4**
NEST				S	**Sg**	**15 49 20.1**	**+0.3**
KBN	**Korca**	**0.17**	**331**	Pg	**Pg**	**15 49 17.3**	**-1.3**
KBN				Sg	**Sg**	**15 49 20.5**	**-0.7**
KBN				AML	AML	15 49 21.0	
	22nm,0.4s						
KBN				AML	AML	15 49 21.0	
	23nm,0.5s						
PENT	**Pentalofos**	**0.33**	**146**	P	**Pg**	**15 49 21.6**	**+0.1**
PENT				S	**Sb**	**15 49 27.0**	**-1.8**
PENT	**Pentalofos**	**0.33**	**146**	P	**Pg**	**15 49 21.6**	**+0.1**
PENT				S	**Sg**	**15 49 25.6**	**-0.3**
LSK	**Leskovik**	**0.39**	**216**	Pg	**Pg**	**15 49 21.0**	**-1.7**
LSK				Sg	**Sg**	**15 49 28.1**	**+0.2**
LSK				AML	AML	15 49 32.6	
	10nm,0.6s						
LSK				AML	AML	15 49 34.4	
	16nm,0.5s						
KPRO	**Kipourio**	**0.63**	**145**	P	**Pg**	**15 49 26.8**	**-0.3**
KPRO				S	**Sb**	**15 49 36.4**	**-0.9**
KPRO	**Kipourio**	**0.63**	**145**	P	**Pg**	**15 49 26.8**	**-0.3**
KPRO				S	**Sg**	**15 49 35.6**	**+0.3**
OHR	**Ohrid**	**0.64**	**353**	*i* Pg	**Pb**	**15 49 27.3**	**-1.3**
OHR				*e*Sg	**Sb**	**15 49 38.4**	**+0.6**
OHR				*e*Lg	Lg	15 49 38.8	
	comp=E,574nm,0.6s						
OHR				*e*Lg	Lg	15 49 39.6	
	comp=N,255nm,0.6s						
OHR	**Ohrid**	**0.64**	**353**	*e*Pg	**Pb**	**15 49 27.7**	**-0.9**
OHR				*e*Sg	**Sn**	**15 49 40.9**	**-0.2**
KZN	**Kozani**	**0.69**	**104**	P	**Pb**	**15 49 28.6**	**-0.8**
KZN				S	**Sb**	**15 49 39.0**	**0.0**
KZN	**Kozani**	**0.69**	**104**	P	**Pb**	**15 49 28.5**	**-0.8**
JAN	**Janina**	**0.81**	**183**	P	**Pg**	**15 49 29.6**	**-1.0**
JAN				S	**Sn**	**15 49 44.8**	**-0.4**
JAN	**Janina**	**0.81**	**183**	P	**Pb**	**15 49 30.8**	**-0.7**
NASA	**Naoussa**	**0.91**	**79**	P	**Pb**	**15 49 32.7**	**-0.3**
SRN	**Sarande**	**0.91**	**230**	Pg	**Pg**	**15 49 31.3**	**-1.2**
SRN				Sg	**Sb**	**15 49 45.5**	**+0.3**
SRN				AML	AML	15 49 47.3	
	comp=N,1.0nm,0.8s						
KTI	**Kastanea**	**0.93**	**94**	P	**Pn**	**15 49 33.8**	**-0.8**
IGT	**Igoumenitsa**	**1.03**	**205**	Pn	**Pb**	**15 49 35.1**	**-0.1**
IGT				Sn	**Sn**	**15 49 50.1**	**-0.4**
IGT				AML	AML	15 50 00.1	
	comp=N,0.7nm,0.6s						
IGT	**Igoumenitsa**	**1.03**	**205**	P	**Pg**	**15 49 33.9**	**-0.9**
IGT				S	**Sn**	**15 49 52.1**	**+1.6**
KEK	**Kerkira**	**1.13**	**228**	P	**Pn**	**15 49 39.2**	**+2.0**
KEK	**Kerkira**	**1.13**	**228**	P	**Pn**	**15 49 38.2**	**+0.9**
TETR	**Tetrakomo, Epi**	**1.16**	**165**	P	**Pn**	**15 49 37.3**	**-0.4**
TIR	**Tirane**	**1.18**	**319**	Pn	**Pn**	**15 49 38.0**	**+0.1**
TIR				Sn	**Sn**	**15 49 54.6**	**+0.5**
TIR				AML	AML	15 50 01.3	
	comp=N,0.9nm,0.6s						
TIR	**Tirane**	**1.18**	**319**	*i* Pg	**Pn**	**15 49 40.1**	**+2.3**
TIR				*e*Sg	**Sn**	**15 49 57.8**	**+3.7**
TIR	**Tirane**	**1.18**	**319**	*e*Pg	**Pn**	**15 49 38.2**	**+0.4**
TIR				*e*Sg	**Sn**	**15 49 58.3**	**+4.2**
THL	**Klokotos Trika**	**1.25**	**136**	P	**Pb**	**15 49 38.4**	**-0.4**
THL				S	**Sn**	**15 49 57.2**	**+1.4**
THL	**Klokotos Trika**	**1.25**	**136**	P	**Pn**	**15 49 38.8**	**0.0**
THL				S	**Sb**	**15 49 55.2**	**+0.2**
TYRN	**Tyrnavos**	**1.27**	**126**	P	**Pn**	**15 49 39.8**	**+0.6**
TYRN				S	**Sb**	**15 49 55.9**	**+0.1**
TYRN	**Tyrnavos**	**1.27**	**126**	P	**Pn**	**15 49 39.2**	**+0.1**
VAY	**Valandovo**	**1.53**	**56**	P	**Pb**	**15 49 43.3**	**-0.3**
VAY				S	**Sn**	**15 50 02.5**	**-0.2**
VAY	**Valandovo**	**1.53**	**56**	*i* Pg	**Pb**	**15 49 43.3**	**-0.3**
VAY				*e*Sg	**Sg**	**15 50 07.0**	**+2.9**
VAY				*e*Lg	Lg	15 50 11.2	
	comp=E,86nm,0.6s						
VAY				*e*Lg	Lg	15 50 12.0	
	comp=N,105nm,0.7s						
SKO	**Skopje**	**1.56**	**15**	*i* Pg	**Pg**	**15 49 45.1**	**+0.2**
SKO				*e*Sg	**Sg**	**15 50 06.5**	**+1.5**
AMPL	**Ampelaki**	**1.56**	**171**	P	**Pg**	**15 49 44.4**	**-0.6**
TSLK	**Tsoukalades, L**	**1.65**	**187**	P	**Pg**	**15 49 45.7**	**-1.0**
KNT	**Kendrikon**	**1.67**	**65**	P	**Pb**	**15 49 45.2**	**-0.8**
KNT	**Kendrikon**	**1.67**	**65**	*i* Pn	**Pb**	**15 49 45.2**	**-0.8**
KNT	**Kendrikon**	**1.67**	**65**	P	**Pn**	**15 49 44.7**	**+0.1**
HORT	**Hortiatis**	**1.68**	**85**	P	**Pn**	**15 49 45.2**	**+0.3**
HORT	**Hortiatis**	**1.68**	**85**	P	**Pn**	**15 49 45.0**	**+0.1**
LKD2	**Lefkada island**	**1.69**	**186**	Pn	**Pg**	**15 49 47.5**	**+0.1**
LKD2				Sn	**Sg**	**15 50 12.1**	**+2.7**
LKD2				AML	AML	15 50 20.7	
	comp=N,0.5nm,0.8s						
LKD2	**Lefkada island**	**1.69**	**186**	P	**Pb**	**15 49 46.1**	**-0.3**
EVR	**Evrytania**	**1.70**	**155**	P	**Pb**	**15 49 45.9**	**-0.8**
MAKR	**Makrakomi, Fth**	**1.74**	**146**	P	**Pb**	**15 49 46.2**	**-1.1**
MAKR	**Makrakomi, Fth**	**1.74**	**146**	P	**Pn**	**15 49 45.8**	**+0.2**
PUK	**Puka**	**1.74**	**335**	Pn	**Pg**	**15 49 47.8**	**-0.6**
PUK				Sn	**Sg**	**15 50 13.6**	**+2.5**
PUK				AML	AML	15 50 15.5	
	comp=N,1.0nm,1.5s						
NYDR	**Nydri-Lefkada**	**1.76**	**185**	P	**Pg**	**15 49 47.8**	**-1.0**
NYDR	**Nydri-Lefkada**	**1.76**	**185**	P	**Pb**	**15 49 46.8**	**-0.8**
AGG	**Agios Georgios**	**1.82**	**142**	P	**Pb**	**15 49 47.8**	**-0.8**
AGG	**Agios Georgios**	**1.82**	**142**	P	**Pn**	**15 49 47.1**	**+0.4**
EVGI	**Lefkada island**	**1.86**	**186**	P	**Pg**	**15 49 49.8**	**-0.8**
EVGI	**Lefkada island**	**1.86**	**186**	P	**Pb**	**15 49 48.5**	**-0.7**
SOH	**Sokhos**	**1.90**	**79**	P	**Pb**	**15 49 48.9**	**-1.2**
PVO	**Paravola**	**1.91**	**165**	P	**Pb**	**15 49 49.8**	**-0.5**
PVO	**Paravola**	**1.91**	**165**	P	**Pb**	**15 49 49.3**	**-1.0**
ULC	**Ulcinj**	**1.94**	**321**	*i* Pn	**Pb**	**15 49 50.0**	**-0.8**
PLG	**Polygyros**	**1.95**	**92**	P	**Pb**	**15 49 49.8**	**-1.0**
PLG	**Polygyros**	**1.95**	**92**	P	**Pn**	**15 49 48.8**	**+0.3**
FSK	**Fiskardo**	**2.03**	**187**	P	**Pb**	**15 49 50.5**	**-1.6**
ANX	**Ano Chora**	**2.04**	**157**	P	**Pb**	**15 49 51.3**	**-1.1**
ANX	**Ano Chora**	**2.04**	**157**	P	**Pb**	**15 49 50.8**	**-1.6**
NEO	**Neokhori**	**2.13**	**122**	P	**Pn**	**15 49 51.4**	**+0.4**
SRS	**Serrai**	**2.15**	**72**	P	**Pb**	**15 49 52.6**	**-1.6**
SRS	**Serrai**	**2.15**	**72**	*i* Pn	**Pn**	**15 49 52.1**	**+0.9**
SRS	**Serrai**	**2.15**	**72**	P	**Pn**	**15 49 51.4**	**+0.2**
KKB	**Krupnik**	**2.17**	**50**	*i* Pn	**Pb**	**15 49 53.0**	**-1.6**
EFP	**Efpalio**	**2.19**	**159**	P	**Pb**	**15 49 53.3**	**-1.6**
PDG	**Podgorica**	**2.31**	**328**	⇓P	**Pb**	**15 49 56.3**	**-0.7**
PDG	**Podgorica**	**2.31**	**328**	*e*Pn	**Pb**	**15 49 55.6**	**-1.4**
PDG				*e*Sn	**Sb**	**15 50 26.4**	**+0.6**
BOSS	**Bosilegrad**	**2.35**	**30**	*e*Pn	**Pn**	**15 49 54.6**	**+0.6**
BOSS				*e*Sn	**Sb**	**15 50 25.8**	**-1.0**
KOKK	**Kokkinochori,**	**2.38**	**81**	P	**Pn**	**15 49 55.1**	**+0.6**
MMB	**Musomishta**	**2.41**	**63**	*i* Pn	**Pb**	**15 49 56.9**	**-1.8**
BARS	**Barje**	**2.44**	**16**	*i* Pn	**Pn**	**15 49 55.5**	**+0.3**
BARS	**Barje**	**2.44**	**16**	*e*Pn	**Pn**	**15 49 55.7**	**+0.4**
BARS				*e*Sn	**Sb**	**15 50 27.4**	**-2.1**
BEY	**Berane**	**2.51**	**343**	*e*Pn	**Pb**	**15 50 00.0**	**-0.5**
SELS	**Selova**	**2.75**	**3**	*e*Pn	**Pn**	**15 50 00.8**	**+1.3**
SJES	**Sjenica**	**2.87**	**346**	*e*Pn	**Pn**	**15 50 01.2**	**-0.1**
SJES				*e*Sn	**Sb**	**15 50 41.7**	**-0.3**
ZAPS	**Zavoj**	**3.09**	**24**	*e*Pn	**Pn**	**15 50 05.2**	**+1.0**
ZAPS				*e*Sn	**Sb**	**15 50 45.4**	**-2.7**
GOCS	**Kraljevo Serbi**	**3.09**	**360**	*e*Pn	**Pn**	**15 50 05.5**	**+1.2**
GOCS				*e*Sn	**Sb**	**15 50 46.0**	**-2.2**
IVAS	**Ivanjica**	**3.15**	**350**	*e*Pn	**Pn**	**15 50 05.7**	**+0.6**
BOVS	**Bovan**	**3.22**	**11**	⇓P	**Pn**	**15 50 05.8**	**-0.1**
BOVS	**Bovan**	**3.22**	**11**	*e*Pn	**Pn**	**15 50 05.5**	**-0.4**
BOVS				*e*Sn	**Sn**	**15 50 47.7**	**+3.2**
GRUS	**Gruza**	**3.42**	**358**	*e*Pn	**Pn**	**15 50 09.7**	**+1.0**
ZAGS	**Zajecar**	**3.48**	**16**	*e*Pn	**Pn**	**15 50 08.5**	**-1.1**
DIVS	**Divibare**	**3.69**	**350**	*e*Pn	**Pn**	**15 50 11.8**	**-0.7**
TEKS	**Tekeris**	**4.20**	**347**	*e*Pn	**Pn**	**15 50 19.6**	**+0.2**
MDVR	**Moldovita**	**4.35**	**8**	⇑P	**Pg**	**15 50 35.7**	**-2.7**
MLR	**Muntele Rosu**	**6.23**	**35**	⇑P	Pg	15 51 27.3	+13

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*GEN **01** 15:49:28.9, 46°.35N×6°.80E, h13^{km}±4^{km}, Ml1.8*

*ZUR **01** 15:49:29.5, 46°.37N×6°.75E, h2^{km}, MLh2.4/112, Error ellipse: s-maj=967.4km s-min=643.0km az=249.0*

*LDG **01** 15:49:29.7±0.1, 46°.36N×6°.76E, h2^{km}, Md2.3/3, Ml2.7/31, Error ellipse: s-maj=0.9km s-min=0.8km az=67.0*

STR 01 15:49:29.4±0.3**, 46°N**±2°×°±°**, h13**^{km}±3^{km}**, MLv2.4**/24**, 14C-19D, Error ellipse: s-maj=0.0km s-min=0.0km az=85.5, preliminary, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NVL2	**Le Croseau, ST**	**0.03**	**342**	⇑Pg	Pg	15 49 30.6	-1.2
NVL2				Sg	Sg	15 49 31.6	-1.9
NVL2	**Le Croseau, ST**	**0.03**	**342**	⇑Pg	Pg	15 49 30.6	-1.2
NVL2				Sg	Sg	15 49 31.6	-1.9
NVL1	**Lau de Morge,**	**0.03**	**267**	⇓Pg	Pg	15 49 30.3	-1.7
NVL1				Sg	Sg	15 49 30.9	-2.8
NVL1	**Lau de Morge,**	**0.03**	**267**	⇓Pg	Pg	15 49 30.3	-1.7
NVL1				Sg	Sg	15 49 30.9	-2.8
NVL3	**Port Valais, L**	**0.04**	**78**	⇑Pg	Pg	15 49 31.3	-0.6
NVL3				Sg	Sg	15 49 32.8	-0.8
NVL3	**Port Valais, L**	**0.04**	**78**	⇑Pg	Pg	15 49 31.3	-0.6
NVL3				Sg	Sg	15 49 32.8	-0.8
AIGLE	**Aigle**	**0.10**	**103**	Pg	Pg	15 49 32.2	-0.3
AIGLE				Sg	Sg	15 49 34.6	+0.1
AIGLE	**Aigle**	**0.10**	**103**	⇑Pg	Pg	15 49 32.2	-0.2
AIGLE				Sg	Sg	15 49 34.6	+0.1
AIGLE	**Aigle**	**0.10**	**103**	Pg	Pg	15 49 32.2	-0.2
AIGLE				Sg	Sg	15 49 34.7	+0.1
A173A	**Vacheresse, 74**	**0.10**	**251**	⇑Pg	Pg	15 49 30.9	-1.6
A173A				Sg	Sg	15 49 32.0	-2.7
SAIG	**Aigle Rue de l**	**0.11**	**114**	Pg	Pg	15 49 32.6	0.0
SAIG				Sg	Sg	15 49 35.3	+0.4
ILLEZ	**Chalet Vouargn**	**0.17**	**150**	Pg	Pg	15 49 33.2	-0.2
ILLEZ				Sg	Sg	15 49 36.5	+0.2
ILLEZ	**Chalet Vouargn**	**0.17**	**150**	Pg	Pg	15 49 33.3	-0.2
ILLEZ				Sg	Sg	15 49 36.5	+0.2
LAVEY	**Lavey les Bain**	**0.22**	**139**	Pg	Pg	15 49 34.6	+0.4
LAVEY	**Lavey les Bain**	**0.22**	**139**	Pg	Pg	15 49 34.6	+0.4
LAVEY				Sg	Sb	15 49 38.3	-0.8
GRYON	**Gryon**	**0.23**	**119**	Pg	Pb	15 49 35.0	-0.5
GRYON				Sg	Sb	15 49 39.2	-0.5
GRYON	**Gryon**	**0.23**	**119**	Pg	Pb	15 49 35.0	-0.5
GRYON				Sg	Sb	15 49 39.1	-0.6
SCOD	**Ch¢teau-dO**	**0.24**	**63**	⇓Pg	Pb	15 49 35.4	-0.3
RAW3	**Les Diablerets**	**0.24**	**90**	Sg	Sb	15 49 40.1	+0.1
RAW3	**Les Diablerets**	**0.24**	**90**	⇓Pg	Pb	15 49 35.5	-0.2
RAW3				Sg	Sb	15 49 40.1	+0.1
SALAN	**Lac Salanfe**	**0.24**	**154**	⇓Pg	Pg	15 49 34.9	+0.1
SALAN				Sg	Sg	15 49 38.8	+0.5
SALAN	**Lac Salanfe**	**0.24**	**154**	⇓Pg	Pg	15 49 34.9	+0.1
SALAN				Sg	Sg	15 49 38.8	+0.5
RAW4	**Former Reservo**	**0.29**	**122**	Pg	Pb	15 49 36.4	-0.2
RAW4				Sg	Sb	15 49 41.1	-0.3
OGSI	**Sixt**	**0.30**	**189**	⇓Pg	Pg	15 49 35.5	-0.1
OGSI	**Sixt**	**0.30**	**189**	⇓Pg	Pg	15 49 35.5	-0.1
OGSI				Sg	Sg	15 49 40.1	+0.3
OGSI	**Sixt**	**0.30**	**189**	Pg	Pg	15 49 35.5	-0.1
OGSI				Sg	Sg	15 49 40.0	+0.2

FULLY	Reservoir Maze	0.30	133	⇓Pg	Pb	15 49 36.3	-0.4
FULLY				Sg	Sb	15 49 41.2	-0.4
FULLY	Reservoir Maze	0.30	133	⇓Pg	Pb	15 49 36.3	-0.4
FULLY				Sg	Sb	15 49 41.2	-0.4
SEMOS	Emosson Stauma	0.31	165	Pg	Pg	15 49 35.7	-0.1
SEMOS				Sg	Sg	15 49 40.4	+0.3
SBUL	Bulle cole,	0.31	32	⇑Pg	Pb	15 49 36.7	-0.1
SBUL	Bulle cole,	0.31	32	⇑Pg	Pb	15 49 36.7	-0.1
SENIN	Lac Senin/Sane	0.33	90	⇓Pg	Pb	15 49 37.1	-0.2
SENIN				Sg	Sb	15 49 42.9	+0.3
SENIN	Lac Senin/Sane	0.33	90	⇓Pg	Pb	15 49 37.1	-0.2
SENIN				Sg	Sb	15 49 42.9	+0.3
SENIN	Lac Senin/Sane	0.33	90	P	Pb	15 49 37.2	-0.2
SENIN				S	Sb	15 49 42.9	+0.3
VET01	Vtroz, Route	0.34	114	Sg	Sb	15 49 43.0	+0.3
VET01	Vtroz, Route	0.34	114	Sg	Sb	15 49 43.0	+0.3
RAW2	Sanetsch, VS	0.35	98	Pg	Pb	15 49 37.5	-0.1
RAW2				Sg	Sb	15 49 43.4	+0.4
RAW2	Sanetsch, VS	0.35	98	⇓Pg	Pb	15 49 37.5	-0.1
RAW2				Sg	Sb	15 49 43.4	+0.4
TORNY	Torny/Romont	0.42	13	Sg	Sb	15 49 45.6	+0.5
TORNY	Torny/Romont	0.42	13	Pg	Pg	15 49 37.0	-0.8
TORNY	Torny/Romont	0.42	13	Sg	Sb	15 49 45.6	+0.6
JAUN	Jaun, Euschels	0.42	50	⇑Pg	Pb	15 49 38.8	0.0
JAUN	Jaun, Euschels	0.42	50	⇑Pg	Pb	15 49 38.8	0.0
JAUN				Sg	Sb	15 49 46.1	+0.9
STSW2	Zeuzier, Staus	0.43	92	Sg	Sb	15 49 45.8	+0.5
STSW2	Zeuzier, Staus	0.43	92	Sg	Sb	15 49 45.8	+0.5
RAW1	Lenk, BE	0.43	82	⇓Pg	Pb	15 49 39.0	+0.1
RAW1				Sg	Sb	15 49 46.1	+0.7
RAW1	Lenk, BE	0.43	82	⇓Pg	Pb	15 49 39.0	+0.1
RAW1				Sg	Sb	15 49 46.1	+0.7
OG02	Monnetier-Morn	0.46	243	Pg	Pg	15 49 37.9	-0.7
OG02	Monnetier-Morn	0.46	243	Pg	Pg	15 49 37.9	-0.7
STAF	Tafers	0.52	32	⇑Pg	Pb	15 49 40.7	+0.3
STAF	Tafers	0.52	32	⇑Pg	Pb	15 49 40.7	+0.3
VANNI	Vissoie, Val d	0.56	106	P	Pg	15 49 39.5	-0.9
VANNI				S	Sb	15 49 49.9	+0.7
CABF	La Chapelle	0.56	296	*e*Pg	Pg	15 49 40.2	-0.3
CABF				*e*Sg	Sg	15 49 46.3	-1.7
	44nm,0.3s						
SALEV	Sal¨ve	0.58	239	Pg	Pg	15 49 40.8	-0.1
SALEV	Sal¨ve	0.58	239	Pg	Pg	15 49 40.6	-0.3
MRGE	Morge	0.62	164	P	Pb	15 49 41.8	-0.3
MRGE				S	Sb	15 49 50.2	-0.5
BRANT	Les Verrieres	0.62	338	Pg	Pg	15 49 41.7	+0.1
BRANT	Les Verrieres	0.62	338	Pg	Pg	15 49 41.7	+0.1
BRANT				Sg	Sb	15 49 50.9	0.0
BRANT	Les Verrieres	0.62	338	Pg	Pg	15 49 41.7	+0.1
WIMIS	Wimmis	0.63	61	Pg	Pb	15 49 42.7	+0.4
WIMIS	Wimmis	0.63	61	Pg	Pb	15 49 42.7	+0.4
SAVIG	Le Moulin, Sav	0.66	243	Pg	Pg	15 49 42.4	+0.2
SAVIG	Le Moulin, Sav	0.66	243	Pg	Pg	15 49 42.4	+0.2
LAUCH	Lauchernalp	0.66	85	P	Pb	15 49 43.4	+0.5
LAUCH				S	Sb	15 49 53.1	+1.0
RSL	Roselend	0.69	191	Pg	Pg	15 49 42.6	-0.2
RSL	Roselend	0.69	191	Pg	Pg	15 49 42.6	-0.2
RSL	Roselend	0.69	191	Pg	Pg	15 49 42.6	-0.2
RSL				Sg	Sg	15 49 52.0	+0.1
RSL	Roselend	0.69	191	P	Pg	15 49 42.7	-0.2
RSL				S	Sg	15 49 51.5	-0.5
MH36	Zermatt, Posit	0.70	123	Pg	Pb	15 49 43.8	0.0
MH36	Zermatt, Posit	0.70	123	Pg	Pb	15 49 43.8	0.0
MH44	Zermatt, Posit	0.70	123	Pg	Pb	15 49 43.9	+0.1
MH44	Zermatt, Posit	0.70	123	Pg	Pb	15 49 43.9	+0.1
EMBD	Embd, Matterta	0.72	101	Pg	Pn	15 49 45.0	-0.4
RIVEL	MONT RIVEL	0.73	303	Pg	Pg	15 49 43.4	-0.3
RIVEL	MONT RIVEL	0.73	303	Pg	Pg	15 49 43.4	-0.3
RIVEL	MONT RIVEL	0.73	303	Pg	Pg	15 49 43.2	-0.4
STFL	Fournets-Luisa	0.77	347	Pg	Pg	15 49 44.4	+0.1
OGMY	Moye	0.81	234	Pg	Pg	15 49 44.8	-0.2
OGMY				Sg	Sn	15 49 58.9	+0.6
SIMPL	Simplonpass	0.84	98	P	Pn	15 49 47.0	-0.1
SIMPL				S	Sb	15 49 58.3	+1.0
LPL	La Plagne	0.85	184	*e*Pg	Pg	15 49 45.7	-0.2
LPL				*e*Sg	Sg	15 49 56.6	-0.4
	22nm,0.3s						
MMK	Mattmark	0.85	111	P	Pn	15 49 47.4	+0.1
MMK				S	Sn	15 49 58.8	-1.0
LPG	La Plagne	0.87	183	*e*Pg	Pg	15 49 46.2	0.0
LPG				*e*Sg	Sg	15 49 57.0	-0.6
	34nm,0.3s						
SATI	Passo dei Sala	0.88	123	⇓Pg	Pb	15 49 46.6	0.0
SATI	Passo dei Sala	0.88	123	⇓Pg	Pb	15 49 46.6	0.0
SATI	Passo dei Sala	0.88	123	Pg	Pb	15 49 46.7	0.0
SATI	Passo dei Sala	0.88	123	Sg	Sn	15 49 59.5	-1.0
SATI	Passo dei Sala	0.88	123	P	Pb	15 49 46.6	-0.1
SATI				S	Sg	15 49 58.2	+0.2
CHMF	Charmoille	0.89	353	⇑Pg	Pb	15 49 47.0	+0.2
CHMF	Charmoille	0.89	353	⇑Pn	Pb	15 49 47.0	+0.2
CHMF				Sg	Sn	15 49 59.6	-0.9
CHMF	Charmoille	0.89	353	Pg	Pb	15 49 46.9	+0.2
CHMF				Pn	Pn	15 49 48.5	+0.8
CHMF				Sg	Sn	15 50 00.1	-0.4
FIESA	Fiescheralp	0.90	85	⇓Pg	Pn	15 49 47.7	-0.2
FIESA	Fiescheralp	0.90	85	⇓Pg	Pn	15 49 47.7	-0.2
FIESA	Fiescheralp	0.90	85	P	Pn	15 49 47.7	-0.2
FIESA				S	Sn	15 50 01.0	+0.1
OG35	Corcelles	0.92	250	Pg	Pg	15 49 46.3	-1.0
OG35				Sg	Sg	15 49 59.2	-0.1
CIRO	Champorcher	0.92	145	Pg	Pg	15 49 47.2	-0.1
CIRO	Champorcher	0.92	145	P	Pn	15 49 47.9	-0.4
CIRO				S	Sg	15 49 59.3	-0.1
BOUC	Bouclans	0.96	337	Pg	Pb	15 49 47.8	-0.2
TRAV	Traversella	1.07	142	Pn	Pn	15 49 50.2	+0.1
TRAV	Traversella	1.07	142	P	Pn	15 49 50.3	+0.2
OGSM	Saint Maurice	1.09	226	Pg	Pb	15 49 49.4	-0.6
OGSM				Sg	Sg	15 50 04.6	+0.1
OGMO	Fort Saint-Gob	1.16	185	Pn	Pb	15 49 50.8	-0.5
OGMO	Fort Saint-Gob	1.16	185	P	Pb	15 49 50.8	-0.5
RSP	Reno Superiore	1.25	165	Pg	Pg	15 49 53.8	+0.2
RSP	Reno Superiore	1.25	165	Sg	Sg	15 50 10.2	+0.3
RSP	Reno Superiore	1.25	165	P	Pg	15 49 53.9	+0.3
GRN	Grenoble	1.35	214	Pg	Pg	15 49 55.2	-0.2
GRN				Sg	Sg	15 50 13.5	+0.6
RRL	Rocca Remolon	1.44	181	Pg	Pg	15 49 56.9	-0.2
RRL	Rocca Remolon	1.44	181	Sg	Sg	15 50 16.9	+1.0
HINF	Hinteralfeld	1.45	1	*e*Pg	Pg	15 49 56.9	-0.5
HINF				*e*Sg	Sb	15 50 15.4	+0.6
	18nm,0.2s						
PLYF	Puligny Montra	1.55	293	Pg	Pb	15 49 58.3	+0.5
PLYF				Sn	Sb	15 50 18.0	+0.6
BHB	Bricherasio	1.55	168	Pg	Pg	15 49 58.6	-0.6
BHB	Bricherasio	1.55	168	Sg	Sg	15 50 19.9	+0.5
ORIF	Oris-en-Rattie	1.59	205	*e*Pg	Pb	15 49 58.6	0.0
ORIF				*e*Sg	Sb	15 50 19.0	+0.4
	25nm,0.3s						
ORIF	Oris-en-Rattie	1.59	205	Pg	Pn	15 49 57.4	+0.1
MBDF	Montbardon	1.64	181	*e*Pg	Pb	15 50 00.1	+0.6
MBDF				*e*Sg	Sg	15 50 21.6	-0.5
	9.0nm,0.3s						
HAU	Haudompre	1.67	349	*e*Pg	Pb	15 50 00.4	+0.3
HAU				*e*Sg	Sg	15 50 22.2	-1.1
	49nm,0.3s						
SSB	Saint Sauveur	1.93	237	Pg	Pb	15 50 05.2	+0.8
SSB				Sg	Sb	15 50 29.7	+1.4
JAUF	Jausiers	1.94	181	Pg	Pb	15 50 04.7	+0.1
SMF	Signal de Mont	2.08	279	*e*Pg	Pb	15 50 07.4	+0.5
SMF				*e*Sg	Sb	15 50 33.1	+0.5
	11nm,0.2s						
VIVF	Saint-Julien-l	2.13	226	*e*Pn	Pn	15 50 04.9	+0.2
VIVF	Saint-Julien-l	2.13	226	*e*Pg	Pb	15 50 08.4	+0.6
VIVF				*e*Sg	Sb	15 50 35.3	+1.1
	19nm,0.3s						
PCP	Piancastagn	2.19	146	Pg	Pb	15 50 09.4	+0.5
SFTF	Sexfontaines	2.21	327	*e*Pn	Pn	15 50 06.0	+0.3
SFTF	Sexfontaines	2.21	327	*e*Pg	Pg	15 50 13.0	+1.3
SFTF				*e*Sg	Sb	15 50 38.1	+1.8
	6.9nm,0.3s						
LOR	Lormes	2.23	295	*e*Pg	Pb	15 50 10.1	+0.7
	baz=116						
LOR				*e*Sg	Sb	15 50 37.8	+0.9
	8.1nm,0.3s						
PLDF	La Plantade	2.26	261	Pn	Pn	15 50 06.1	-0.4
PLDF				Sg	Sb	15 50 39.9	+2.0
DAVA	Damuels	2.30	65	*e*Pg	Pg	15 50 14.0	+0.6
	8.4nm,0.4s						
DAVA				Sg	Sg	15 50 45.1	+1.9
	13nm,0.3s						
PAGF	Fort de Pagny	2.31	342	*e*Pg	Pb	15 50 11.0	0.0
	baz=159						
PAGF				*e*Sg	Sg	15 50 41.8	-2.0
	2.6nm,0.2s						
COLF	Collangettes	2.34	250	Pn	Pn	15 50 07.4	-0.2
SSF	Saint Saulge	2.38	288	*e*Pg	Pb	15 50 13.4	+1.3
SSF				*e*Sg	Sb	15 50 42.5	+1.1
	6.9nm,0.2s						
AVF	Avril sur Loir	2.43	281	*e*P	Pn	15 50 08.7	0.0
AVF				*e*Sg	Sb	15 50 43.2	+0.5
	3.6nm,0.2s						
MEZF	Maizieres J'vi	2.45	331	*e*Pg	Pg	15 50 15.4	-1.0
	baz=153						
MEZF				*e*Sg	Sg	15 50 45.9	-2.3
	13nm,0.4s						
SAVF	Savonnieres en	2.53	334	*e*Pg	Pb	15 50 15.7	+1.1
SAVF	Savonnieres en	2.53	334	*e*Pg	Pb	15 50 16.2	+1.6
SAVF				*e*Sn	Sn	15 50 38.3	-2.5
SAVF				*e*Sg	Sg	15 50 48.3	-2.3
	5.5nm,0.3s						
SAVF				*e*Sg	Sg	15 50 48.3	-2.3
	3.6nm,0.3s						
SMRF	Simiane la Rot	2.54	201	*e*Pg	Pb	15 50 15.7	+0.8
SMRF				*e*Sg	Sg	15 50 48.6	-2.5
	0.9nm,0.2s						
BGF	Bois d'Agland	2.75	275	*e*Pn	Pn	15 50 13.3	+0.1
BGF	Bois d'Agland	2.75	275	*e*Pg	Pb	15 50 19.2	+0.8
BGF				*e*Sg	Sb	15 50 54.6	+2.6
	15nm,0.3s						
FETA	Feichten	2.77	75	*i* Pg	Pg	15 50 23.5	+1.0
	0.4nm,0.1s						
FETA				*e*Sg	Sg	15 51 01.0	+2.6
	3.1nm,0.4s						
HYF	Humbligny	3.01	289	*e*Pn	Pn	15 50 17.0	+0.3
LMR	La Mourre	3.04	184	*e*Pg	Pg	15 50 25.5	-2.1
LMR				*e*Sg	Sg	15 51 04.1	-2.8
	1.4nm,0.2s						
LASF	Ste Croix	3.10	224	*e*P	Pn	15 50 19.0	+1.0
LASF	Ste Croix	3.10	224	*e*Pg	Pb	15 50 26.2	+1.8
LASF				*e*Sn	Sn	15 50 52.1	-2.8
LASF				*e*Sg	Sb	15 51 05.1	+3.0
	4.6nm,0.3s						
MOTA	Moosalm	3.10	70	*i* Pn	Pn	15 50 20.3	+2.2
	0.5nm,0.1s						
MOTA				*i* Sn	Sn	15 50 57.6	+2.5
	0.6nm,0.1s						
MOTA				*e*Sg	Sg	15 51 10.1	+1.1
	2.8nm,0.3s						
SQTA	Sankt Quirin	3.14	73	*e*Pg	Pg	15 50 29.8	+0.3
	1.6nm,0.2s						
SQTA				*e*Sg	Sg	15 51 10.9	+0.8
	3.5nm,0.3s						
TCF	Toulx Ste Croi	3.19	270	*e*Pn	Pn	15 50 18.2	-1.1
TCF	Toulx Ste Croi	3.19	270	*e*Pg	Pg	15 50 28.5	-2.1
TCF				*e*Sn	Sn	15 50 53.9	-3.3
TCF				*e*Sg	Sb	15 51 07.5	+2.7
	3.2nm,0.2s						
CAF	Calviac	3.63	248	*e*Pg	Pb	15 50 36.0	+2.6
CAF				*e*Sg	Sb	15 51 20.9	+3.6
	2.8nm,0.3s						
RJF	Les Rejaudoux	3.85	256	*e*Sg	Sb	15 51 28.0	+4.3
	3.1nm,0.3s						
BAIF	Baives	4.09	336	*e*P	Pn	15 50 33.7	+2.2
BAIF				*e*Sn	Sn	15 51 15.4	-3.8
	0.6nm,0.2s						
MTLF	Montolieu	4.45	229	*e*Pn	Pn	15 50 36.0	-0.6
MTLF				*e*Sg	Sg	15 51 47.7	-4.6
	3.0nm,0.5s						
LFF	La Frestale	4.49	254	*e*Sg	Sg	15 51 48.5	-5.1
	4.4nm,0.3s						
MFF	Saint Martin d	4.82	275	*e*P	Pn	15 50 43.3	+1.8
MFF				*e*Sg	Sg	15 51 59.7	-4.3
	0.4nm,0.2s						

DJA 01 15:54:50.3±0.2**,3°S**±2°×**12°2E**±°**,h10^{km},M4.0**/19**,mb4.2**/5**,**
MLv3.9/19**,Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDI	Kendari	1.01	169	P	Pg	15 55 09.8	0.0
KDI				S	Sg	15 55 22.9	0.0
LUWI	Luwuk	1.94	10	P	Pn	15 55 22.4	-0.9
LUWI				S	Sn	15 55 48.6	+0.9
APSI	Ampana	2.18	339	P	Pn	15 55 25.7	-0.9
BBSI	Bau Bau	2.52	177	P	Pn	15 55 31.5	+0.2
TTSI	Tana Toraja	2.60	268	P	Pn	15 55 32.4	0.0
BNSI	Bone	2.72	238	P	Pn	15 55 33.9	-0.1
SPSI	Sidrap Palu	2.83	249	P	Pn	15 55 36.7	+1.1
BKSI	Bulukumba	3.28	224	P	Pn	15 55 42.2	+0.4
PCI	Palu	3.29	308	P	Pn	15 55 42.5	+0.5
MRSI	Marisa	3.45	352	P	Pn	15 55 43.5	-0.6
BSSI	Bau Bau, Buton	3.70	211	P	Pn	15 55 48.4	+0.8
KMSI	Cibinong	3.84	24	P	Pn	15 55 49.4	-0.1
MPSI	Mapaga	4.13	322	P	Pn	15 55 52.7	-0.8
EDFI	Ende, Flores	5.80	187	P	Pn	15 56 15.8	-0.7
	0.1nm18nm,1.0s						

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*THE **01** 16:00:59.1,38°N±3°×2°1E±°,h10^{km}±2^{km},M2.7/17,*
MLh2.7/17

ATH 01 16:00:55.7,37°.40N×20°.73E,h14^{km}±2^{km}**,ML2.6**/9**,**
Manual Solution by A.Agalos First location: 2019/06/01 16:01:55, This location: 2019/06/01 16:33:42 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km,Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LTHK	Lithakia	0.32	16	P	Pg	16 01 02.7	+0.3
LTHK				S	Sg	16 01 05.4	-1.5
LTHK	Lithakia	0.32	16	P	Pg	16 01 02.7	+0.3
LTHK				S	Sg	16 01 06.8	0.0
KYPS	Kipseli, Zakin	0.43	10	P	Pg	16 01 04.5	+0.3
KYPS				S	Sg	16 01 10.2	+0.1
ORTH	Orthonies,Zaky	0.45	357	P	Pg	16 01 05.0	+0.3
ORTH				S	Sg	16 01 10.9	+0.1
KTLO	Katakolo	0.53	62	P	Pg	16 01 06.1	0.0
KTLO				S	Sg	16 01 13.6	+0.3
CLEM	Kyllini,Ilia,G	0.59	33	P	Pg	16 01 07.1	-0.1
RTZL	Ratzakli, Kefa	0.68	3	P	Pb	16 01 09.2	-0.2
RTZL				S	Sg	16 01 17.1	-0.7
PSDA	Pessada-Kefalo	0.72	351	P	Pb	16 01 10.0	-0.1
PSDA				S	Sg	16 01 18.0	-1.4
PSDA	Pessada-Kefalo	0.72	351	P	Pg	16 01 09.8	0.0
PSDA				S	Sb	16 01 19.8	-0.1
KRES	Krestena	0.74	74	P	Pg	16 01 10.2	+0.1
VLS	Valsamata	0.79	352	P	Pg	16 01 10.9	-0.1
VLS				S	Sg	16 01 20.0	-1.3
VLS	Valsamata	0.79	352	P	Pg	16 01 10.6	-0.3
VLS				S	Sb	16 01 21.8	+0.1
AMT	Artemida-Makis	0.79	80	P	Pg	16 01 11.1	0.0
YRMI	Loutra Irminis	0.86	35	P	Pg	16 01 11.6	-0.8
RLS	Riolos of Patr	0.88	41	P	Pg	16 01 12.5	-0.3
RLS				S	Sg	16 01 24.3	0.0
RLS	Riolos of Patr	0.88	41	P	Pg	16 01 12.2	-0.5
DMLN	Damoulianata-K	0.88	342	P	Pb	16 01 13.2	+0.4
DMLN				S	Sb	16 01 24.5	0.0
DMLN	Damoulianata-K	0.88	342	P	Pb	16 01 13.0	+0.1
PYL2	Kinigos	0.94	121	P	Pb	16 01 13.7	0.0
AXS	Araxos	0.95	33	P	Pg	16 01 14.1	+0.1
AXS				S	Sb	16 01 25.9	-0.4
AXS	Araxos	0.95	33	P	Pb	16 01 13.4	-0.5
PYL	PYLOS	0.95	121	P	Pb	16 01 14.0	0.0
ITM	Ithomi	0.98	102	P	Pb	16 01 14.3	-0.2
FSK	Fiskardo	1.07	353	P	Pb	16 01 15.6	-0.3
FSK	Fiskardo	1.07	353	P	Pb	16 01 15.4	-0.6
EVGI	Lefkada island	1.22	357	P	Pn	16 01 18.4	0.0
EVGI	Lefkada island	1.22	357	P	Pn	16 01 18.4	0.0
PDO	Prodromos	1.25	17	P	Pb	16 01 19.0	-0.1
KLV	Kalavryta, Ach	1.30	60	P	Pn	16 01 19.4	-0.1
NYDR	Nydri-Lefkada	1.31	359	P	Pb	16 01 20.2	+0.1
NYDR	Nydri-Lefkada	1.31	359	P	Pb	16 01 20.3	+0.1
PVO	Paravola	1.37	27	P	Pb	16 01 21.3	+0.2
PVO	Paravola	1.37	27	P	Pb	16 01 21.1	-0.1
LKD2	Lefkada island	1.39	358	Pn	Pb	16 01 21.1	-0.3
LKD2				AML	AML	16 01 46.0	
	0.9nm,0.4s						
LKD2	Lefkada island	1.39	358	P	Pb	16 01 21.6	+0.1
LKD2	Lefkada island	1.39	358	P	Pb	16 01 21.1	-0.4
TSLK	Tsoukalades, L	1.43	358	P	Pb	16 01 21.9	-0.2
TSLK	Tsoukalades, L	1.43	358	P	Pn	16 01 21.6	+0.4
SERG	Sergoula	1.46	46	P	Pb	16 01 22.5	-0.2
KALE	Kalithea	1.49	48	P	Pg	16 01 24.2	-0.2
KALE	Kalithea	1.49	48	P	Pb	16 01 22.9	-0.4
ANX	Ano Chora	1.52	38	P	Pb	16 01 23.8	0.0
ANX	Ano Chora	1.52	38	P	Pn	16 01 23.0	+0.4
AMPL	Ampelaki	1.57	14	P	Pb	16 01 24.2	-0.3
LTK	Loutraki	1.88	70	P	Pb	16 01 28.8	-1.1
AXAR	Agios Charalam	2.05	48	P	Pb	16 01 31.8	-0.9
AGG	Agios Georgios	2.06	37	P	Pn	16 01 31.3	+1.4
VILL	Villia	2.19	69	P	Pb	16 01 33.7	-1.4

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*PDG **01** 16:01:07.1±0.8,40°.31N×20°.83E,h2^{km}±2^{km},ML3.2/10,*
Error ellipse: s-maj=2.0km s-min=3.0km az=0.0
*BEO **01** 16:01:08.2±0.7,40°.28N×20°.97E,h4^{km}±3^{km},ML2.9/10*

TIR 01 16:01:04.2,40°.44N×20°.78E,h0^{km}±1^{km}**,Ml3.2**/7**,1C-2D,**
Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	Korca	0.18	2	Pg	Pg	16 01 07.8	+0.1
KBN				Sg	Sg	16 01 10.8	+0.7
KBN				AML	AML	16 01 17.0	
	29nm,0.3s						
NEST	Nestorio	0.21	97	Pg	Pg	16 01 08.4	+0.3
NEST				Sn	Sg	16 01 12.6	+1.7
NEST				AML	AML	16 01 23.5	
	16nm,0.7s						
OHR	Ohrid	0.67	1	*e*Pg	Pn	16 01 22.6	+1.7
OHR				*e*Sg	Sn	16 01 34.9	+2.8
SRN	Sarande	0.82	227	Pg	Pb	16 01 21.4	+0.2
SRN				Sn	Sb	16 01 33.9	+1.1
SRN				AML	AML	16 01 43.4	
	2.2nm,0.8s						
IGT	Igoumenitsa	0.97	201	Pn	Pb	16 01 24.1	+0.2
IGT				Sn	Sn	16 01 39.1	-0.4
VLO	Vlora	0.98	272	Pg	Pb	16 01 23.5	-0.4
VLO				S	Sb	16 01 38.1	+0.7
TIR	Tirane	1.14	323	AML	AML	16 01 56.6	
	1.0nm,0.9s						
TIR	Tirane	1.14	323	*e*Pg	Pn	16 01 32.2	+4.9
TIR				*e*Sg	Sn	16 01 52.0	+8.4
PUK	Puka	1.73	338	Pn	Pg	16 01 37.7	+0.3
PUK				Sn	Sg	16 02 03.2	+3.3
PUK				AML	AML	16 02 12.5	
	1.3nm,0.7s						
SCTE	Santa Cesarea	1.81	259	P	Pg	16 01 41.8	+3.0
SCTE				S	Sg	16 02 05.1	+2.9
ULC	Ulcinj	1.91	323	Pn	Pn	16 01 38.5	+0.5
ULC	Ulcinj	1.91	323	⇓*i*Pn	Pg	16 01 42.9	+2.1
ULC				*i* Sn	Sg	16 02 12.2	+6.6
BCI	Bajram Curri	2.00	345	Pn	Pg	16 01 42.5	+0.1
BCI				Sn	Sg	16 02 11.5	+3.2
BCI				AML	AML	16 02 22.6	
	1.0nm,0.6s						
DRME	Dracevica, Mon	2.12	326	*e*Pn	Pg	16 01 46.3	+1.5
DRME				*i* Sn	Sg	16 02 17.0	+4.8
PDG	Podgorica	2.29	331	*e*Pn	Pg	16 01 49.3	+1.2
PDG				*e*Sn	Sg	16 02 21.4	+3.6
PDG	Podgorica	2.29	331	*e*Pn	Pg	16 01 48.9	+0.8
PDG				*i* Sn	Sg	16 02 21.7	+3.9
BUM	Brajici-Budva	2.34	323	*e*Pn	Pg	16 01 48.3	-0.7
BUM				*i* Sn	Sg	16 02 22.0	+2.7
BOSS	Bosilegrad	2.42	31	*e*Pn	Pg	16 01 50.6	+0.1
BOSS				*e*Sn	Sg	16 02 21.5	-0.4
BARS	Barje	2.50	18	*e*Pn	Pg	16 01 51.7	-0.3
BARS				*e*Sn	Sb	16 02 21.5	+0.4
IVA	Berane	2.52	345	*e*Pn	Pb	16 01 50.8	+0.5
IVA				*i* Sn	Sg	16 02 25.9	+0.9
CEME	Cevo	2.52	327	*e*Pn	Pg	16 01 51.7	-0.9
CEME				*i* Sn	Sg	16 02 26.3	+1.0
KOME	Kolasin	2.59	339	*e*Pn	Pb	16 01 52.3	+0.9
KOME				*i* Sn	Sg	16 02 28.4	+1.1
HCY	Herceg Novi	2.64	320	⇓*i*Pn	Pb	16 01 53.0	+0.7
HCY				*i* Sn	Sg	16 02 29.6	+0.6
SELS	Selova	2.79	5	*e*Pn	Pb	16 01 55.1	+0.3
SELS				*e*Sn	Sb	16 02 31.5	+2.0
SJES	Sjenica	2.88	348	*e*Pn	Pg	16 01 58.0	-1.4
SJES				*e*Sn	Sb	16 02 34.2	+1.9
BRY	Bratogost	2.98	326	*e*Pn	Pb	16 01 57.8	-0.3
BRY				*i* Sn	Sg	16 02 37.6	-2.2
UPM	Unac-Piva	3.09	334	⇑*i*Pn	Pb	16 02 00.2	0.0
UPM				*i* Sn	Sb	16 02 40.7	+2.2
GOCS	Kraljevo Serbi	3.12	1	*e*Pn	Pb	16 02 00.6	+0.1
GOCS				*e*Sn	Sb	16 02 39.8	+0.7
ZAPS	Zavoj	3.15	25	*e*Pn	Pb	16 01 59.4	-1.6
IVAS	Ivanjica	3.17	352	*e*Pn	Pb	16 02 01.6	+0.3
BOVS	Bovan	3.27	12	*e*Pn	Pb	16 02 01.5	-1.4
BOVS				*e*Sn	Sb	16 02 41.1	-2.1
GRUS	Gruza	3.44	359	*e*Pn	Pb	16 02 04.1	-1.9
ZAGS	Zajecar	3.54	17	*e*Pn	Pb	16 02 05.2	-2.4
BBLS	Lazi&#263i	3.57	344	*e*Pn	Pb	16 02 07.2	-1.0
DIVS	Divibare	3.70	351	*e*Pn	Pb	16 02 08.8	-1.6
TEKS	Tekeris	4.21	348	*e*Pn	Pb	16 02 15.8	-3.2
FRGS	Fruska Gora	4.77	352	*e*Pn	Pn	16 02 22.7	+5.5

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*IDC **01** 16:02:49.0±4.3,48°.89N×93°.98W,h0^{km},Error ellipse:*
s-maj=40.2km s-min=22.8km az=50.0
*OTT **01** 16:02:49.0±0.1,48°.83N×93°.99W,h0^{km},MN2.4/4,Blast,*
50km northwest from Fort Frances, On Mining explosion.

ISC 01 16:02:46.8±0.9**,48°.89N**±0°.05×**94°.03W**±0°.04**,h0^{km},n11,**
σ0^{s}.37/17**,Minnesota**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EPLO	Experimental L	0.81	14	PG	**Pb**	**16 03 03.5**	**-0.3**
EPLO				SG	**Sb**	**16 03 15.4**	**0.0**
EPLO				Trac		16 03 16.3	
	comp=Z,11nm,0.0s						
AGMN	Agassiz Nation	1.35	245	PG	**Pg**	**16 03 12.4**	**-0.3**
AGMN				SG	**Sb**	**16 03 30.6**	**-0.3**
ATKO	Atikokan Iron	1.60	91	PG	**Pn**	**16 03 16.5**	**+0.2**
ATKO				SG	**Sn**	**16 03 37.4**	**-0.3**
ATKO				Trac		16 03 40.2	
	comp=Z,5.2nm,0.0s						
SOLO	Sioux Lookout	1.70	47	PN	**Pb**	**16 03 18.7**	**-0.2**
SOLO				SN	**Sg**	**16 03 42.0**	**+0.5**
SOLO				Trac		16 03 44.6	
	comp=Z,4.0nm,0.1s						
ULM	Lac du Bonnet	1.82	319	Pn	**Pb**	**16 03 21.2**	**+0.3**
	0.6nm,0.3s,baz=140,slow=15,SNR=2.9						
ULM				Lg	Lg	16 03 45.9	
	1.1nm,0.3s,baz=228,slow=18,SNR=8.0						
ULM	Lac du Bonnet	1.82	319	PN	**Pn**	**16 03 19.6**	**+0.2**
ULM				SN	**Sb**	**16 03 44.4**	**+0.1**
ULM				Trac		16 03 49.1	
	comp=Z,0.6nm,0.1s						
I10CA	LAC DU BONNET	1.85	316	I	I	16 15 18.7	
	0.1nm,0.8s,baz=134,slow=327,SNR=2.5						
EYMN	Ely	1.93	118	PN	**Pn**	**16 03 21.2**	**+0.4**
EYMN				SN	**Sn**	**16 03 45.5**	**-0.3**
TBO	Thunder Bay	3.06	93	PN	**Pn**	**16 03 36.9**	**+0.4**
TBO				SN	**Sn**	**16 04 13.9**	**+0.1**
TBO				Trac		16 04 25.6	
	comp=Z,1.5nm,0.1s						
PKLO	Pickle Lake	3.52	41	PN	**Pn**	**16 03 42.0**	**-0.7**
PKLO				SN	**Sn**	**16 04 25.4**	**+0.3**
PKLO				Trac		16 04 43.8	
	comp=Z,0.9nm,0.1s						
I56US	NEWPORT INFRAS	15.29	276	I	I	17 40 10.0	
	baz=81,slow=317,SNR=3.3						

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*IDC **01** 16:13:59.5±0.5,1°.68S×122°.72E,h0^{km},mb4.5/22,*
mbtmp4.5/25,ML4.2/2,MS3.3/3,Error ellipse:
s-maj=20.8km s-min=11.9km az=78.0
*DJA **01** 16:14:03.5±0.8,2°S±2°×12°3E±°,h11^{km}±6^{km},M4.8/27,*
mb5.0/24,mB5.3/11,MLv5.0/27,Mw(mB)4.7/11
*NEIC **01** 16:14:05.2±2.1,1°.76S±0°.05×122°.68E±0°.07,h35^{km}±1^{km},*
mb5.0/100,Error ellipse: s-maj=11.5km s-min=8.4km
az=91.0

ISC 01 16:14:04.6±0.8**,1°.76S**±0°.04×**122°.66E**±0°.05**,h31^{km}**±6^{km}**,**
n454,σ0^{s}.93/416**,mb4.9**/86**,MS3.2**/3**,1C-4D,Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	Luwuk	0.72	9		**Pn**	**16 14 18.3**	**-0.4**
LUWI	Luwuk	0.72	9	P	**Pn**	**16 14 18.8**	**+0.1**
LUWI	Luwuk	0.72	9	P	**Pn**	**16 14 18.5**	**-0.2**
APSI	Ampana	1.31	310	P	**Pn**	**16 14 26.4**	**-0.5**

KDI	Kendari	2.19	181	P	Pn	16 14 38.0	-0.9
MRSI	Marisa	2.33	342	P	Pn	16 14 41.6	+0.7
KMSI	Cibinong	2.67	30	P	Pb	16 14 47.9	-3.8
PCI	Palu	2.94	287	P	Pn	16 14 49.7	+0.4
TTSI	Tana Toraja	3.11	246	P	Pn	16 14 49.9	-1.7
SANI	Sanana	3.34	95	P	Pn	16 14 54.5	-0.3
SANI	Sanana	3.34	95	P	Pn	16 14 54.5	-0.3
TOLI2	Tolitoli	3.41	327		Pn	16 14 56.3	+0.5
TOLI2	Tolitoli	3.41	327	P	Pn	16 14 57.5	+1.7
MPSI	Mapaga	3.45	307	P	Pn	16 14 56.2	-0.2
SPSI	Sidrap Palu	3.62	233	P	Pn	16 14 58.0	-0.7
BNSI	Bone	3.66	224	P	Pn	16 14 58.5	-0.7
BBSI	Bau Bau	3.71	181	P	Pn	16 14 59.7	-0.2
KAPI	Kappang	4.35	222		Pn	16 15 08.5	-0.1
KAPI	Kappang	4.35	222	Pn	Pn	16 15 08.4	-0.2
	36nm,0.3s,baz=12,slow=4.5,SNR=63						
KAPI				Sn	Sn	16 15 57.0	-1.3
	102nm,0.3s,baz=41,slow=18,SNR=16						
	102nm,0.3s						
KAPI	Kappang	4.35	222	P	Pn	16 15 08.3	-0.3
NLAI	Namlea	4.68	108	P	Pn	16 15 15.3	+2.1
BSSI	Bau Bau, Buton	4.86	206	P	Pn	16 15 15.5	-0.3
TNTI	Ternate	5.34	62		Pn	16 15 22.6	+0.4
TNTI	Ternate	5.34	62	P	Pn	16 15 22.9	+0.6
TNTI	Ternate	5.34	62	P	Pn	16 15 24.8	+2.5
	1.1nm3µm120nm,0.4s						
BKB	Balikpapan	5.78	275		Pn	16 15 27.9	-0.4
BKB	Balikpapan	5.78	275	P	Pn	16 15 30.5	+2.1
BKB	Balikpapan	5.78	275	P	Pn	16 15 28.4	0.0
	0.8nm2µm227nm,0.8s						
AAI	Ambon	5.85	109	P	Pn	16 15 31.7	+2.3
	0.6nm159nm,1.0s						
SGSI	Sangihe	6.12	28	P	Pn	16 15 34.6	+1.6
	1.2nm2µm148nm,0.8s						
MMRI	Maumere	6.85	183		Pn	16 15 42.6	-0.4
MMRI	Maumere	6.85	183	P	Pn	16 15 42.8	-0.2
MMRI	Maumere	6.85	183	P	Pn	16 15 42.9	-0.1
	0.4nm119nm,0.9s						
EDFI	Ende, Flores	7.01	188	P	Pn	16 15 44.7	-0.7
	0.2nm43nm,0.9s						
MYLDM	Lahad Datu	8.04	329		Pn	16 15 58.7	-0.8
MYLDM	Lahad Datu	8.04	329	P	Pn	16 16 02.4	+2.9
SOEI	Soe	8.11	169		Pn	16 15 57.5	-3.0
SOEI	Soe	8.11	169	P	Pn	16 15 59.9	-0.6
SOEI	Soe	8.11	169	P	Pn	16 16 03.8	+3.3
	132nm,0.8s						
BATI	Baumata	8.46	173	P	Pn	16 16 08.3	+3.1
	71nm,1.0s						
WBSI	Waikabubak, Su	8.48	202	P	Pn	16 16 05.3	-0.2
	71nm,0.9s						
PLAI	Plampang	8.54	214	P	Pn	16 16 06.1	-0.2
	49nm,1.2s						
SWI	Sorong	8.65	84	P	Pn	16 16 09.5	+1.8
	1µm68nm,0.6s						
TWSI	Taliwang, Sumb	9.01	219	P	Pn	16 16 11.9	-0.8
FAKI	Fak Fak	9.65	97	Pn	Pn	16 16 20.1	-1.5
FAKI	Fak Fak	9.65	97	P	Pn	16 16 22.2	+0.7
FAKI	Fak Fak	9.65	97	P	Pn	16 16 22.3	+0.7
	34nm,0.7s						
KKM	Kota Kinabalu	10.07	320	Pn	Pn	16 16 27.6	+0.3
KKM	Kota Kinabalu	10.07	320	P	Pn	16 16 29.3	+1.9
SBUM	Sibu	11.24	292		Pn	16 16 43.0	-0.3
BAKI	Biak	13.46	88	P	Pn	16 17 15.8	+2.1
	49nm,1.3s						
KDU	Kakadu	14.58	139	P	Pn	16 17 28.4	-0.5
KNRA	Kununurra	15.09	157	Pn	Pn	16 17 33.4	-2.4
KNRA				IAmb	IAmb	16 17 33.7	
	comp=Z,116nm,1.9s						
LEM	Lembang	15.82	251	Pn	Pn	16 17 45.0	-0.5
	comp=Z,5.9nm,0.4s,baz=36,slow=11,SNR=5.5						
LEM				LR	LR	16 24 46.5	
	comp=Z,172nm,18.7s,baz=20,slow=41						
TGY	Tagaytay City	15.85	354	Pn	Pn	16 17 43.5	-2.2
	comp=Z,54nm,0.3s,baz=148,slow=13,SNR=4.8						
FITZ	Fitzroy Crossi	16.50	170	Pn	Pn	16 17 53.9	-0.2
FITZ	Fitzroy Crossi	16.50	170	Pn	Pn	16 17 54.4	+0.4
	comp=Z,0.3nm,0.3s,baz=6.9,slow=11,SNR=6.7						
	comp=Z,5.8nm,0.7s						
FITZ	Fitzroy Crossi	16.50	170	P	Pn	16 17 53.8	-0.2
DLV	Lat	19.58	314	P	P	16 18 26.7	-3.9
PSA00	Pilbara Seismi	19.89	188	P	P	16 18 32.9	-0.8
WRAB	Tennant Creek	21.38	148	P	P	16 18 49.5	-0.3
WR8	Warramunga Arr	21.48	148	P	P	16 18 50.4	-0.5
COEN	Coen	23.63	122	P	P	16 19 13.7	+0.3
WRKA	Warakurna	23.78	167	P	P	16 19 14.6	-0.2
UBPT	Khong Chiam	23.99	315		P	16 19 17.9	+1.1
UBPT				IAmb	IAmb	16 19 19.3	
	comp=Z,50nm,1.4s						
RPSI	Rantau Prapat	24.14	280		P	16 19 16.8	-1.4
RPSI				IAmb	IAmb	16 19 25.6	
	comp=Z,51nm,1.4s						
PSI	Prapat	24.15	281	P	P	16 19 18.4	-0.1
	comp=Z,19nm,0.8s,baz=186,slow=2.7,SNR=8.2						
	comp=Z,19nm,0.8s						
QIZ	Qiongzhong	24.19	329	P	P	16 19 18.9	+0.3
QIZ				S	S	16 23 37.6	+2.4
QIZ				pmax	pmax		
	comp=Z,29nm,1.7s						
AS31	Alice Springs	24.36	154		P	16 19 19.5	-0.6
ASAR	Alice Springs	24.36	154		P	16 19 19.8	-0.3
ASAR	Alice Springs	24.36	154	P	P	16 19 20.2	+0.1
	comp=Z,13nm,0.7s,baz=330,slow=7.9,SNR=198						
ASAR				PcP	PcP	16 22 59.8	+0.4
	comp=Z,1.2nm,0.6s,baz=348,slow=1.8,SNR=9.2						
	comp=Z,13nm,0.7s						
AS01	Alice Springs	24.37	154	P	P	16 19 20.4	+0.1
QIS	Mount Isa	24.96	140	P	P	16 19 25.7	+0.1
YULB	Yu-li	25.03	357	P	P	16 19 28.5	+2.3
MEEK	Meekatharra	25.04	189	P	P	16 19 26.4	+0.1
YOJ	Yonaguni jima	26.06	1	P	P	16 19 37.4	+1.9
JOW	Kunigami	28.93	10	P	P	16 20 03.4	+2.1
FORT	Forrest	29.32	170	P	P	16 20 04.6	0.0
CM31	Chiang Mai Arr	30.79	312	P	P	16 20 18.0	+0.2
CMAR	Chiang Mai Arr	30.79	312		P	16 20 16.0	-1.8
CMAR	Chiang Mai Arr	30.79	312	P	P	16 20 18.9	+1.0
	comp=Z,6.8nm,0.7s,baz=138,slow=7.2,SNR=59						
CMAR				PcP	PcP	16 23 16.1	+1.2
	comp=Z,1.2nm,0.8s,baz=189,slow=2.7,SNR=6.9						
CMAR				LR	LR	16 32 42.5	
	comp=Z,29nm,18.7s,baz=35,slow=36						
	comp=Z,6.8nm,0.7s						
CHTO	Chiang Mai	31.01	312	P	P	16 20 20.5	+0.7
CHTO	Chiang Mai	31.01	312	P	P	16 20 21.4	+1.6
CHTO	Chiang Mai	31.01	312	P	P	16 20 21.2	+1.5
GYA	Guiyang	32.02	332	⇓P	P	16 20 31.1	+2.4
GYA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BBOO	Buckleboo	33.36	159	P	P	16 20 38.6	-1.6
BBOO	Buckleboo	33.36	159	P	P	16 20 40.1	-0.1
NJ2	Nanjing	33.82	354	*e*P	P	16 20 45.9	+1.8
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
JCJ	Chichijima	34.31	32	P	P	16 20 49.2	+0.7
PZH	PanZhiHua	34.60	326	P	P	16 20 53.7	+2.5
PZH				pmax	pmax		
	comp=Z,7.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.3s						
STKA	Stephens Creek	34.88	151		P	16 20 53.1	-0.3
STKA	Stephens Creek	34.88	151	P	P	16 20 53.4	0.0
	comp=Z,10nm,0.8s,baz=323,slow=8.5,SNR=16						
	comp=Z,10nm,0.8s						
STKA	Stephens Creek	34.88	151	P	P	16 20 54.1	+0.7
HTT	Hallett	35.01	156	P	P	16 20 54.6	0.0
TNCH	TengChong	35.45	320	P	P	16 20 59.9	+1.3
TNCH				S	S	16 26 33.4	+1.4
TNCH				sS	sS	16 26 49.1	+2.3
TNCH				SS	SnSn	16 28 51.8	-1.1
TNCH				pmax	pmax		
	comp=Z,15nm,1.0s						
TNCH				pmax	pmax		
	comp=Z,150nm,4.0s						
TNCH				LR	LR		
	comp=Z,120nm,5.2s						
TNCH				LR	LR		
	comp=Z,110nm,4.3s						
TNCH				LR	LR		
	comp=Z,100nm,11.6s						
CMSA	Cobar Meteorol	36.75	146	P	P	16 21 10.4	+0.9
JMN	Monobe	36.84	16	P	P	16 21 09.7	-0.6
JMN				IAmb	IAmb	16 21 12.5	
	comp=Z,11nm,0.7s						
XAN	Xi'an	37.88	341	⇓P	P	16 21 19.7	+0.7
XAN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
TIA	Tai'an	38.12	353	P	P	16 21 21.5	+0.5
TIA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ARPS	Mount Arapiles	39.09	155	P	P	16 21 29.4	+0.3
KSRS	Korea Array	39.32	7	P	P	16 21 30.1	-0.9
	comp=Z,1.2nm,0.7s,baz=184,slow=9.0,SNR=7.1						
	comp=Z,1.2nm,0.7s						
JGF	Kuroka	39.62	19		P	16 21 32.5	-1.2
JGF	Kuroka	39.62	19	P	P	16 21 34.6	+1.0
HNS	HongShan	39.65	350	⇑P	P	16 21 35.0	+1.3
HNS				pmax	pmax		
	comp=Z,11nm,1.0s						
MJAR	Matsushiro Arr	40.76	19	P	P	16 21 41.2	-1.9
	comp=Z,7.5nm,0.8s,baz=188,slow=8.9,SNR=44						
	comp=Z,7.5nm,0.8s						
MAJO	Matsushiro	40.76	19		P	16 21 41.1	-2.0
TOO	Toolangi	41.37	152	P	P	16 21 46.7	-1.4
CAN	Canberra	41.41	147	P	P	16 21 48.3	-0.2
CAN	Canberra	41.41	147	P	P	16 21 48.6	+0.1
BJI	Beijing	42.02	353	P	P	16 21 54.3	+1.1
BJI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PALK	Pallekele	42.81	283	LR	LR	16 38 56.1	
	comp=Z,38nm,22.0s,baz=95,slow=35						
JMM	Marumori	42.85	21	P	P	16 22 00.1	0.0
JMM				IAmb	IAmb	16 23 29.9	
	comp=Z,61nm,2.0s						
HHC	Hu-ho-hao-te	43.59	348	*e*P	P	16 22 09.6	+3.4
HHC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,69nm,6.9s						
EVN	Everest	45.37	313		P	16 22 20.4	-0.8
GOMU	GeErMu	45.81	328	P	P	16 22 26.6	+2.3
GOMU				sP	sP	16 22 39.3	+2.3
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
XLT	XiLinHaoTe	45.83	353	*e*P	P	16 22 17.8	-6.2
XLT				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GTA	Gaotai	46.02	335	*e*P	P	16 22 27.8	+2.2
GTA				sP	sP	16 22 41.2	+3.0
GTA				PcP	PcP	16 24 03.2	+1.3
GTA				pmax	pmax		
	comp=Z,19nm,1.0s						
VLAKA	Lakatoro	46.33	111	P	P	16 22 28.4	+0.2
USRK	Ussuriysk Ar.	46.51	9	P	P	16 22 28.1	-1.0
	comp=Z,6.0nm,0.6s,baz=198,slow=6.3,SNR=49						
	comp=Z,6.0nm,0.6s						
USA0B	Ussuriysk Arra	46.51	9		P	16 22 27.9	-1.3
MDJ	Mudanjiang	46.58	7	IAmb	IAmb	16 22 30.1	
	comp=Z,8.9nm,0.7s						
MDJ	Mudanjiang	46.58	7	P	P	16 22 29.3	-0.4
MDJ				pmax	pmax		
	comp=Z,14nm,0.9s						
HYB	Hyderabad	47.45	296	*e*P	P	16 22 36.5	-0.5
HYB				*e*sP	sP	16 22 52.0	+2.5
JKA	Kamikawa-asahi	49.03	19		P	16 22 49.0	+0.2
SONM	Songino Array	51.39	346	P	P	16 23 07.0	+0.3
SONM	Songino Array	51.39	346	P	P	16 23 06.4	-0.3
	comp=Z,1.9nm,0.8s,baz=166,slow=7.6,SNR=9.0						
SONM				PcP	PcP	16 24 21.6	+0.5
	comp=Z,3.1nm,0.8s,baz=170,slow=5.3,SNR=6.5						
	comp=Z,1.9nm,0.8s						
HEH	HeiHe	51.97	4	*e*P	P	16 23 09.7	-1.1
HEH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WMQ	Urumqi	55.12	330	*e*P	P	16 23 35.9	+1.8
KSH	Kashi	59.26	319	P	P	16 24 04.9	+1.3
KSH				PcP	PcP	16 24 52.7	+1.0
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MKAR	Makanchi Array	59.92	329		P	16 24 06.7	-1.2
MKAR	Makanchi Array	59.92	329	P	P	16 24 07.6	-0.3
	comp=Z,5.3nm,0.7s,baz=125,slow=7.8,SNR=56						
MKAR				PcP	PcP	16 24 53.8	-0.2
	comp=Z,4.0nm,0.7s,baz=127,slow=4.9,SNR=11						
	comp=Z,5.3nm,0.7s						
MAKZ	Makanchi	60.10	329		P	16 24 08.0	-1.1
PETK	Petropavlovsk-	62.02	23	P	P	16 24 21.5	-0.5
	comp=Z,1.3nm,0.7s,baz=212,slow=4.3,SNR=7.4						
	comp=Z,1.3nm,0.7s						
ARSB	Arslanbob	62.15	320	P	P	16 24 22.7	-0.6
GAR	Garm	62.82	316		P	16 24 27.4	-0.3
GAR				IAmb	IAmb	16 24 28.3	
	comp=Z,7.3nm,0.8s						
ZAA0	Zalesovo Array	63.77	336	P	P	16 24 33.0	-0.5
ZALV	Zalesovo Beam	63.77	336		P	16 24 31.8	-1.7
ZALV	Zalesovo Beam	63.77	336	P	P	16 24 32.1	-1.5
	comp=Z,3.3nm,0.7s,baz=131,slow=6.1,SNR=13						
	comp=Z,3.3nm,0.7s						
KURBB	Kurchatov Arra	64.31	331	P	P	16 24 36.0	-1.1
	comp=Z,4.3nm,0.8s,baz=136,slow=6.1,SNR=47						
	comp=Z,4.3nm,0.8s						
KURK	Kurchatov	64.32	331		P	16 24 35.4	-1.9
KURK				IAmb	IAmb	16 24 38.1	
	comp=Z,10nm,0.7s						
BVAR	Borovoye Array	69.80	329	P	P	16 25 11.4	-0.7
	comp=Z,4.0nm,0.9s,baz=133,slow=9.4,SNR=10						
	comp=Z,4.0nm,0.9s						
NRIK	Noril'sk	74.82	348		P	16 25 40.6	-1.1
NRIK	Noril'sk	74.82	348	P	P	16 25 40.4	-1.3
	comp=Z,3.0nm,0.6s,baz=154,slow=4.3,SNR=11						
	comp=Z,3.0nm,0.6s						
VNDA	Vanda	78.57	172		P	16 26 02.4	-0.4
VNDA	Vanda	78.57	172	P	P	16 26 02.2	-0.5
	comp=Z,2.5nm,0.7s,baz=315,slow=6.4,SNR=24						
	comp=Z,2.5nm,0.7s						
NIKH	Nikolski High	78.61	35	P	P	16 26 04.2	+0.7
	baz=252						
SPIA	Saint Paul Isl	79.26	31	P	P	16 26 07.4	+0.5
	baz=250						
P08K	Saint George I	79.42	31	P	P	16 26 07.8	0.0
	baz=250						
UNV	Unalaska Valle	80.22	35	P	P	16 26 12.5	+0.4
	baz=253						
GAMB	Gambell	81.03	24	P	P	16 26 16.4	+0.2
	baz=247						
M11K	Mekoryuk	82.30	28	P	P	16 26 23.1	0.0
	baz=253						
TNA	Tin City	83.19	23	P	P	16 26 27.8	+0.2
	baz=250						
K13K	Kusilvak Mount	83.46	27	P	P	16 26 28.8	-0.2
	baz=254						
M13K	Dall Lake	83.66	29	P	P	16 26 30.1	0.0
	baz=255						
F14K	Arctic Creek	83.80	23	P	P	16 26 31.0	+0.3
	baz=252						
KBZ	Khabaz	83.81	314	P	P	16 26 29.9	-1.3
	comp=Z,1.3nm,0.6s,baz=87,slow=2.0,SNR=4.9						
	comp=Z,1.3nm,0.6s						
ANM	Nome	83.91	24	P	P	16 26 32.1	+0.8
	baz=253						
SDPT	Sand Point	83.99	34	P	P	16 26 31.7	-0.2
	baz=258						
J14K	Nanvaranak Lak	84.18	26	P	P	16 26 33.0	+0.3
	baz=255						
L14K	Kuka Creek	84.21	28	P	P	16 26 33.8	+0.9
L14K	Kuka Creek	84.21	28	P	P	16 26 33.0	+0.1
	baz=256,SNR=6.4						
N14K	Kuskokwak Cree	84.35	29	P	P	16 26 33.9	+0.3
	baz=257						
CHNA	Chernabura Isl	84.39	35	P	P	16 26 34.7	+0.8
	baz=259						
O14K	Tigyukauivet M	84.41	30	P	P	16 26 34.6	+0.7
	baz=257						
M14K	Bethel	84.41	29	P	P	16 26 35.5	+1.6
M14K	Bethel	84.41	29	P	P	16 26 34.0	+0.1
	baz=256,SNR=14						
F15K	North Star Dit	84.53	23	P	P	16 26 34.4	-0.1
	baz=254						
KIBK	Kibwezi	84.55	268	P	P	16 26 35.9	+0.2
G15K	Niukluk	84.58	24	P	P	16 26 34.5	-0.2
	baz=254						
S14K	Fog Glacier	84.69	33	P	P	16 26 35.1	-0.5
	baz=259						
L15K	Ungalak Mounta	84.85	28	P	P	16 26 36.1	-0.1
	baz=257						
K15K	Wolf Creek Mou	84.97	27	P	P	16 26 37.0	+0.2
	baz=257						
M15K	Kasigluk River	85.01	29	P	P	16 26 36.8	-0.1
	baz=258,SNR=6.5						
C16K	Lisburne Hills	85.02	21	P	P	16 26 36.7	-0.2
	baz=253						
O15K	Ungalikthiuk R	85.11	30	P	P	16 26 37.9	+0.4
	baz=258,SNR=5.8						
N15K	Kwethluk River	85.19	29	P	P	16 26 37.9	+0.1
	baz=258,SNR=8.6						
H16K	Elim	85.23	25	P	P	16 26 38.8	+0.9
	baz=256						
G16K	Koyuk River	85.37	24	P	P	16 26 39.3	+0.7
	baz=256						
J16K	Anvik River	85.61	26	P	P	16 26 40.4	+0.5
	baz=257						
D17K	Noatak River	85.68	22	P	P	16 26 40.9	+0.7
	baz=255						
I17K	Unalakleet	85.71	26	P	P	16 26 41.1	+0.7
	baz=257						
L16K	Owhat River	85.80	28	P	P	16 26 40.9	0.0
	baz=258						
RDOG	Red Dog Mine	85.84	21	P	P	16 26 41.2	+0.2
	baz=255						
C17K	DeLong Mountai	85.85	21	P	P	16 26 41.1	+0.1
	baz=255						
SYO	Syowa Base	85.88	201	⇓*e*P	P	16 26 42.5	+1.4
SYO	Syowa Base	85.88	201	⇓*e*PcP	PcP	16 26 45.8	+1.9
N16K	Nishlik Lake	85.89	29	P	P	16 26 41.4	0.0
	baz=259						
M16K	Timber Creek	85.90	29	P	P	16 26 42.4	+1.0
M16K	Timber Creek	85.90	29	P	P	16 26 41.2	-0.3
	baz=259						
R16K	Pilot Point	85.98	32	P	P	16 26 41.3	-0.5
	baz=260						
E17K	Hotham Inlet	85.99	22	P	P	16 26 41.5	-0.2
	baz=256						
P16K	Nushagak River	86.02	31	P	P	16 26 41.4	-0.6
	baz=260						
F17K	Baldwin Pennin	86.06	23	P	P	16 26 42.3	+0.2
	baz=256						
O16K	Kokwok River B	86.06	30	P	P	16 26 41.7	-0.5
O16K				IAmb	IAmb	16 26 47.8	
	comp=Z,19nm,1.3s						
O16K	Kokwok River B	86.06	30	P	P	16 26 42.2	-0.1
	baz=260						
G17K	Kiwalik Mounta	86.08	24	P	P	16 26 42.1	-0.2
	baz=257,SNR=8.2						
H17K	Granite Mounta	86.27	25	P	P	16 26 43.9	+0.8
H17K	Granite Mounta	86.27	25	P	P	16 26 43.6	+0.5
	baz=258,SNR=12						
J17K	VABM Dome	86.31	26	IAmb	IAmb	16 26 50.0	
	comp=Z,23nm,1.8s						
J17K	VABM Dome	86.31	26	P	P	16 26 43.0	-0.3
	baz=259						
L17K	Donlin	86.42	28	P	P	16 26 43.7	-0.3
	baz=260						
K17K	Iditarod	86.53	27	IAmb	IAmb	16 26 47.1	
	comp=Z,7.5nm,0.8s						
K17K	Iditarod	86.53	27	P	P	16 26 44.1	-0.4
	baz=259						
E18K	Tukpahlearik C	86.53	22	P	P	16 26 43.8	-0.6
	baz=257						
B18K	Kokolik River	86.56	20	P	P	16 26 44.0	-0.5
	baz=256						
O17K	Koliganek Bris	86.59	30	P	P	16 26 44.4	-0.4
	baz=261						
C18K	Utukok River	86.60	21	P	P	16 26 45.0	+0.2
	baz=256						
N17K	Nushagak Hills	86.67	29	P	P	16 26 44.7	-0.5
	baz=261						
M17K	Holitna River	86.70	28	P	P	16 26 45.0	-0.3
	baz=260						
F18K	Selawik	86.72	23	P	P	16 26 45.0	-0.2
	baz=258						
CHIR	Chirikof Islan	86.78	34	P	P	16 26 45.3	-0.5
	baz=262						
P17K	Kvichak River	86.83	31	P	P	16 26 46.3	+0.3
	baz=261						
H18K	Honhosa River	86.95	25	IAmb	IAmb	16 26 48.6	
	comp=Z,12nm,1.2s						
H18K	Honhosa River	86.95	25	P	P	16 26 46.8	+0.3
	baz=259						
G18K	Tagagawik	86.97	24	P	P	16 26 47.2	+0.6
	baz=259						
Q17K	Contact Creek	86.98	32	P	P	16 26 47.1	+0.2
	baz=262						
A19K	Wainwright	87.01	19	P	P	16 26 46.9	+0.3
	baz=256						
L18K	Granite Mounta	87.18	28	IAmb	IAmb	16 26 50.0	
	comp=Z,8.2nm,0.7s						
L18K	Granite Mounta	87.18	28	P	P	16 26 47.5	-0.2
	baz=261						
C19K	Lookout Ridge	87.27	21	P	P	16 26 47.8	-0.2
	baz=258						
N18K	Kilae Creek	87.33	29	P	P	16 26 48.2	-0.3
	baz=262						
J18K	Innoko River	87.37	26	IAmb	IAmb	16 26 50.4	
	comp=Z,4.9nm,0.6s						
J18K	Innoko River	87.37	26	P	P	16 26 48.8	+0.3
	baz=261						
P18K	Big Mountain,	87.48	30	P	P	16 26 49.5	+0.2
	baz=262						
M18K	Stony River	87.48	28	P	P	16 26 49.3	+0.2
	baz=262						
Q18K	Katmai Hardscr	87.49	31	P	P	16 26 49.8	+0.4
	baz=262						
F19K	Shaleruckik Mo	87.50	23	P	P	16 26 49.8	+0.7
	baz=260						
GCSA	Galena City Sc	87.50	25	P	P	16 26 49.3	+0.1
	baz=261,SNR=9.9						
O18K	Koktuh Hills	87.55	30	P	P	16 26 49.5	-0.1
	baz=262						
TTA	Tatalina	87.60	27	P	P	16 26 49.7	-0.1
	baz=262						
R18K	Karluk	87.65	32	P	P	16 26 50.2	+0.2
	baz=263						
G19K	Purcell Mounta	87.65	24	P	P	16 26 49.8	0.0
	baz=260,SNR=11						
D19K	Kuna River	87.67	21	IAmb	IAmb	16 26 55.0	
	comp=Z,4.9nm,0.8s						
D19K	Kuna River	87.67	21	P	P	16 26 49.6	-0.4
	baz=259						
SII	Sitkinak Islan	87.67	33	P	P	16 26 49.9	-0.3
	baz=263						
H19K	Roundabout Mou	87.81	24	P	P	16 26 50.2	-0.3
	baz=261,SNR=20						
E19K	Redstone River	87.82	22	IAmb	IAmb	16 26 52.9	
	comp=Z,7.5nm,0.8s						
E19K	Redstone River	87.82	22	P	P	16 26 50.1	-0.6
	baz=260						
J19K	Poorman	87.93	26	IAmb	IAmb	16 26 53.4	
	comp=Z,5.0nm,0.8s						
J19K	Poorman	87.93	26	P	P	16 26 50.5	-0.8
	baz=262						
L19K	White Mountain	88.03	28	IAmb	IAmb	16 26 54.0	
	comp=Z,5.5nm,0.8s						
L19K	White Mountain	88.03	28	P	P	16 26 51.6	-0.2
	baz=262						
N19K	Bonanza Creek	88.03	29	P	P	16 26 51.2	-0.7
	baz=263						
QSPA	South Pole Qui	88.19	180	P	P	16 26 52.1	-0.5
	comp=Z,2.4nm,0.8s,baz=292,slow=1.4,SNR=17						
	comp=Z,2.4nm,0.8s						
M19K	Big River Lodg	88.21	28	IAmb	IAmb	16 26 55.0	
	comp=Z,3.9nm,0.7s						
M19K	Big River Lodg	88.21	28	P	P	16 26 52.5	-0.2
	baz=263						
Q19K	Cape Douglas,	88.23	31	P	P	16 26 52.0	-0.8
	baz=264						
OHAK	Old Harbor	88.24	33	P	P	16 26 53.0	+0.3
	baz=264						
D20K	Etivluk River	88.25	21	P	P	16 26 52.2	-0.5
	baz=261						
B20K	Meade River	88.28	20	P	P	16 26 52.6	-0.2
	baz=260						
F20K	Avaraart Lake	88.33	23	P	P	16 26 52.7	-0.3
	baz=262						
E20K	Nigu River	88.34	22	P	P	16 26 53.1	-0.1
	baz=261						
H20K	Anotleneega Mo	88.45	24	P	P	16 26 53.8	+0.1
	baz=262,SNR=5.7						
L20K	Farewell, AK	88.52	27	P	P	16 26 53.9	-0.2
	baz=263						
P19K	Oil Pt	88.52	30	P	P	16 26 54.5	+0.3
	baz=264						
I20K	Naaghedeneel	88.53	25	P	P	16 26 54.3	+0.3
	baz=263						
K20K	Telida	88.53	27	P	P	16 26 54.5	+0.4
	baz=263						
J20K	Nowinta River	88.60	26	IAmb	IAmb	16 26 56.7	
	comp=Z,6.9nm,0.8s						
J20K	Nowinta River	88.60	26	P	P	16 26 54.5	+0.1
	baz=263						
KDAK	Kodiak Island	88.67	32	P	P	16 26 54.5	-0.3
	baz=265						

M20K	Styx River	88.80	28	P	P	16 26 55.3	-0.2
	baz=264						
Q20K	Shuyak Island	88.85	31	P	P	16 26 55.4	-0.2
	baz=265						
C21K	Knifeblade Rid	88.97	21	P	P	16 26 55.4	-0.7
	baz=262						
B21K	Ikpikpuk River	89.09	20	P	P	16 26 56.8	+0.3
	baz=263						
G21K	Allakaket	89.13	23	IAmb	IAmb	16 26 59.5	
	comp=Z,7.5nm,1.1s						
G21K	Allakaket	89.13	23	P	P	16 26 57.1	+0.3
	baz=264						
N20K	Mount Spurr	89.17	29	P	P	16 26 57.4	+0.2
	baz=265						
SPCR	Spurr Chakacha	89.17	29	P	P	16 26 57.4	+0.2
	baz=265						
E21K	Killik River	89.18	22	P	P	16 26 56.8	-0.3
	baz=263						
F21K	Alatna River	89.22	23	P	P	16 26 57.2	-0.1
	baz=264						
H21K	Melozitna Rive	89.33	24	IAmb	IAmb	16 27 00.6	
	comp=Z,6.8nm,1.0s						
H21K	Melozitna Rive	89.33	24	P	P	16 26 57.8	0.0
	baz=264,SNR=8.4						
PPLA	Purkeypile	89.33	27	P	P	16 26 57.5	-0.6
	baz=265						
CHUM	Lake Minchumin	89.37	26	P	P	16 26 57.6	-0.3
	baz=265						
CAST	Castle Rocks	89.43	27	P	P	16 26 58.2	-0.2
	baz=265						
SKT	Skwentna	89.56	28	P	P	16 26 58.0	-1.0
	baz=266						
B22K	Teshekpuk Lake	89.59	20	P	P	16 26 58.1	-0.8
	baz=264						
I21K	Tanana	89.63	25	IAmb	IAmb	16 27 01.5	
	comp=Z,9.3nm,1.0s						
I21K	Tanana	89.63	25	P	P	16 26 59.1	-0.1
	baz=265,SNR=8.4						
CAPN	Captain Cook N	89.65	29	P	P	16 26 59.3	0.0
	baz=266						
D22K	Ayikyak River	89.69	21	P	P	16 26 59.2	-0.3
	baz=264						
F22K	John River	89.75	23	P	P	16 26 59.4	-0.3
	baz=265						
BRSE	Bradley Lake S	89.78	30	P	P	16 26 59.6	-0.5
	baz=266						
SUA	Susitna One	89.90	29	P	P	16 27 00.5	-0.2
	baz=266						
H22K	Ishtalitna Cre	89.94	24	P	P	16 27 00.2	-0.5
	baz=266						
E22K	Anaktuvuk Pass	89.94	22	P	P	16 27 00.6	-0.1
	baz=265						
G22K	Bettles	89.96	23	P	P	16 27 00.8	0.0
	baz=266						
BPAW	Bear Paw Mtn.	89.97	26	IAmb	IAmb	16 28 10.3	
	comp=Z,5.5nm,0.7s						
BPAW	Bear Paw Mtn.	89.97	26	P	P	16 27 00.7	-0.2
	baz=266						
MLY	Manley	90.14	25	IAmb	IAmb	16 27 04.0	
	comp=Z,7.3nm,0.9s						
MLY	Manley	90.14	25	P	P	16 27 01.3	-0.3
	baz=266,SNR=12						
M22K	Willow	90.21	28	P	P	16 27 01.7	-0.3
	baz=267						
TRF	Thorofare Moun	90.23	27	P	P	16 27 02.0	-0.3
	baz=267						
BRTR	Keskin Array B	90.35	310	P	P	16 27 01.7	-1.7
	comp=Z,0.5nm,0.8s,baz=88,slow=2.0,SNR=4.4						
	comp=Z,0.5nm,0.8s						
RC01	Rabbit Creek A	90.36	29	P	P	16 27 01.7	-1.0
	baz=267						
D23K	Nanushuk River	90.42	21	P	P	16 27 02.7	-0.2
	baz=266						
SEW	Seward	90.45	30	P	P	16 27 02.3	-0.8
	baz=267						
COLD	Coldfoot	90.49	23	IAmb	IAmb	16 27 05.5	
	comp=Z,7.4nm,0.7s						
COLD	Coldfoot	90.49	23	P	P	16 27 03.0	-0.2
	baz=267						
C23K	Itkillik River	90.50	20	P	P	16 27 02.9	-0.3
	baz=266						
G23K	Bananza Creek	90.53	23	IAmb	IAmb	16 27 06.0	
	comp=Z,8.7nm,0.8s						
G23K	Bananza Creek	90.53	23	P	P	16 27 03.4	-0.1
	baz=267,SNR=11						
H23K	Yukon River	90.68	24	P	P	16 27 04.7	+0.5
	baz=267,SNR=10.0						
I23K	Minto, Yukon-K	90.73	25	P	P	16 27 04.5	+0.2
	baz=267,SNR=9.4						
E23K	Chandalar	90.76	22	IAmb	IAmb	16 27 06.9	
	comp=Z,5.9nm,0.8s						
E23K	Chandalar	90.76	22	P	P	16 27 04.7	+0.1
	baz=267						
TOLK	Toolik Lake Re	90.81	21	P	P	16 27 04.7	0.0
	baz=267						
NEA2	Nenana	90.83	26	P	P	16 27 04.9	0.0
	baz=268						
MCK	McKinley	90.85	26	IAmb	IAmb	16 27 06.5	
	comp=Z,6.5nm,0.8s						
MCK	McKinley	90.85	26	P	P	16 27 05.0	0.0
	baz=268						
RND	Reindeer	90.88	27	IAmb	IAmb	16 27 05.9	
	comp=Z,6.8nm,0.8s						
KNK	Knik Glacier	90.99	29	P	P	16 27 06.0	+0.3
	baz=268						
WAT1	Susitna Watana	91.00	27	P	P	16 27 05.4	-0.3
	baz=268						
PWL	Port Wells	91.03	29	P	P	16 27 05.4	-0.5
	baz=268						
SML	Sawmill	91.06	28	P	P	16 27 06.0	-0.1
	baz=268,SNR=5.0						
D24K	Happy Valley	91.10	21	P	P	16 27 06.3	+0.4
	baz=268						
E24K	Your Creek	91.19	22	P	P	16 27 06.2	-0.3
	baz=268						
M23K	Glacier View	91.35	28	P	P	16 27 08.0	+0.6
	baz=269						
WAT6	Susitna Watana	91.36	28	P	P	16 27 07.4	-0.1
	baz=269,SNR=7.7						
H24K	Noodor Dome	91.37	24	IAmb	IAmb	16 27 10.7	
	comp=Z,13nm,1.5s						
H24K	Noodor Dome	91.37	24	P	P	16 27 07.6	+0.2
	baz=269,SNR=6.7						
CCB	Clear Creek Bu	91.38	26	IAmb	IAmb	16 27 08.1	
	comp=Z,4.1nm,0.7s						
F24K	Squaw Lake	91.40	23	P	P	16 27 07.8	+0.4
	baz=269						
P23K	Montague Islan	91.48	30	P	P	16 27 07.2	-0.7
	baz=269						
DHY	Denali Highway	91.54	27	IAmb	IAmb	16 27 09.8	
	comp=Z,5.0nm,0.7s						
DHY	Denali Highway	91.54	27	P	P	16 27 07.9	-0.4
	baz=269,SNR=5.4						
POKR	Poker Plat Res	91.54	25	P	P	16 27 07.9	-0.2
	baz=269						
SCM	Sheep Creek Mo	91.54	28	P	P	16 27 08.3	0.0
	baz=269						
G24K	Hadweenzic Riv	91.55	23	IAmb	IAmb	16 27 10.4	
	comp=Z,3.8nm,0.7s						
G24K	Hadweenzic Riv	91.55	23	P	P	16 27 07.6	-0.5
	baz=269						
GLI	Glacier Island	91.64	29	P	P	16 27 08.6	-0.1
	baz=269						
HDA	Harding Lake	91.74	26	IAmb	IAmb	16 27 09.3	
	comp=Z,5.2nm,0.9s						
HDA	Harding Lake	91.74	26	P	P	16 27 09.1	0.0
	baz=270						
IL31		91.77	25	IAmb	IAmb	16 27 10.6	
	comp=Z,7.9nm,1.6s						
ILAR	Eielson Array	91.77	25	P	P	16 27 08.0	-1.2
	comp=Z,0.9nm,0.6s,baz=243,slow=5.2,SNR=19						
	comp=Z,0.9nm,0.6s						
D25K	Kavik River	91.97	21	P	P	16 27 09.9	-0.2
	baz=270						
M24K	Tolsona, Glenn	92.09	28	P	P	16 27 10.6	-0.2
	baz=270						
G25K	Bearman Lake	92.09	23	P	P	16 27 10.7	+0.1
	baz=270						
KLU	Klutina	92.21	29	P	P	16 27 11.1	-0.3
	baz=270						
H25L	Birch Creek	92.21	24	P	P	16 27 11.5	+0.3
	baz=271						
K24K	Donnelly Dome	92.26	26	P	P	16 27 11.2	-0.3
	baz=271						
F25K	Christian Rive	92.26	23	P	P	16 27 11.7	+0.2
	baz=271						
E25K	Arctic Village	92.28	22	P	P	16 27 12.0	+0.5
	baz=271						
EYAK	Cordova Ski Ar	92.30	30	P	P	16 27 11.4	-0.3
	baz=270						
PRP	Porcupine Dome	92.34	25	P	P	16 27 11.8	-0.2
	baz=271						
PAX	Paxson	92.41	27	IAmb	IAmb	16 27 14.1	
	comp=Z,5.9nm,1.2s						
PAX	Paxson	92.41	27	P	P	16 27 12.2	-0.1
	baz=271						
J25K	Salcha River,	92.42	26	P	P	16 27 12.1	-0.2
	baz=271						
C26K	Camden Bay	92.48	20	P	P	16 27 12.3	0.0
	baz=272						
HARP	HAARP	92.56	28	P	P	16 27 12.7	-0.2
	baz=271						
RIDG	Independent Ri	92.67	26	IAmb	IAmb	16 27 14.8	
	comp=Z,5.4nm,0.6s						
RIDG	Independent Ri	92.67	26	P	P	16 27 13.0	-0.5
	baz=272						
BMAR	Burnt Mountain	92.67	23	P	P	16 27 14.8	+1.4
F26K	Sheenjek River	92.83	22	P	P	16 27 13.8	-0.2
	baz=272						
N25K	Chitina, Valde	92.84	29	P	P	16 27 14.2	-0.1
	baz=272						
BMRM	Bremner River	92.86	29	P	P	16 27 14.1	-0.3
	baz=272						
C27K	Jago River	92.91	20	P	P	16 27 14.3	-0.1
	baz=273						
G26K	Porcupine Rive	93.00	23	P	P	16 27 14.9	0.0
	baz=273						
DOT	Dot Lake	93.02	26	IAmb	IAmb	16 27 16.6	
	comp=Z,9.9nm,1.5s						
SCRK	Sand Creek	93.05	26	P	P	16 27 14.8	-0.4
	baz=272						
J26L	Joseph Creek	93.21	26	IAmb	IAmb	16 27 17.5	
	comp=Z,4.9nm,0.8s						
J26L	Joseph Creek	93.21	26	P	P	16 27 15.7	-0.3
	baz=273,SNR=5.8						
I26K	Coal Creek Min	93.34	25	IAmb	IAmb	16 27 18.2	
	comp=Z,7.4nm,0.9s						
I26K	Coal Creek Min	93.34	25	P	P	16 27 16.2	-0.3
	baz=273,SNR=7.8						
L26K	Log Cabin Wild	93.37	27	P	P	16 27 16.5	-0.1
	baz=273						
M26K	Nabesna, AK	93.57	28	P	P	16 27 17.4	-0.2
	baz=273						
CRQE	Cirque	93.61	29	P	P	16 27 18.0	0.0
	baz=273						
MCARA	McCarthy VSAT	93.61	29	P	P	16 27 17.7	0.0
	baz=273						
E27K	Coleen River	93.76	22	P	P	16 27 18.5	+0.2
	baz=275						
G27K	Doyon Strip	93.85	23	P	P	16 27 19.2	+0.4
	baz=275						
K27K	Chicken	93.88	26	IAmb	IAmb	16 27 21.9	
	comp=Z,8.0nm,0.9s						
K27K	Chicken	93.88	26	P	P	16 27 18.9	-0.1
	baz=274						
D27M	Malcolm River	93.90	21	P	P	16 27 18.8	-0.2
	baz=275						
H27K	Steamboat Moun	93.95	24	IAmb	IAmb	16 27 22.0	
	comp=Z,6.2nm,1.1s						
H27K	Steamboat Moun	93.95	24	P	P	16 27 19.1	-0.2
	baz=275,SNR=5.6						
I27K	Kandik River	93.96	24	P	P	16 27 19.3	0.0
	baz=274,SNR=14						
L27K	Beaver Creek,	94.06	27	IAmb	IAmb	16 27 22.5	
	comp=Z,5.6nm,0.8s						
L27K	Beaver Creek,	94.06	27	P	P	16 27 19.9	+0.1
	baz=274						
BCAR	Beaver Creek A	94.08	27	P	P	16 27 21.1	+1.1
M27K	Edge Creek, AK	94.09	28	P	P	16 27 19.9	-0.2
	baz=274						
ARCES	ARCESS Array B	94.14	340	P	P	16 27 19.8	-0.3
	comp=Z,5.1nm,1.0s,baz=52,slow=6.0,SNR=4.0						
	comp=Z,5.1nm,1.0s						
MESA	MESA	94.20	30	P	P	16 27 20.6	-0.2
	baz=274						
CTG	Chitna Glacier	94.45	29	P	P	16 27 21.4	-0.4
	baz=274						
E28M	Babbage River	94.48	21	P	P	16 27 21.4	-0.3
	baz=277						
BVCY	Beaver Creek	94.56	28	P	P	16 27 21.9	-0.2
	baz=275						
I28M	Miner Creek	94.67	25	P	P	16 27 22.8	+0.1
	baz=276,SNR=14						
D28M	Stokes Point	94.68	21	P	P	16 27 22.6	+0.1
	baz=277						
FINES	FINESS Array B	94.69	331	P	P	16 27 20.3	-2.4
	comp=Z,2.6nm,0.9s,baz=95,slow=7.2,SNR=3.0						
	comp=Z,2.6nm,0.9s						
YUK3	Moose Creek	94.80	28	P	P	16 27 23.5	0.0
	baz=275						
SPITS	Spitsbergen Ar	95.02	349	P	P	16 27 22.4	-1.6
	comp=Z,7.3nm,1.0s,baz=69,slow=4.6,SNR=4.9						
	comp=Z,7.3nm,1.0s						
O28M	Mount Upton	95.03	29	IAmb	IAmb	16 27 27.7	
	comp=Z,7.1nm,0.9s						
O28M	Mount Upton	95.03	29	P	P	16 27 23.9	-0.7
	baz=275						
DAWY	Dawson	95.06	26	P	P	16 27 24.8	+0.4
	baz=276						
PINM	Pinnacle	95.06	30	P	P	16 27 23.1	-1.4
	baz=275						
E29M	Blow River	95.11	22	P	P	16 27 23.6	-0.9
	baz=278						
YUK8	Steele Glacier	95.18	29	P	P	16 27 25.0	-0.3
	baz=276						
H29M	Whitestone	95.22	24	P	P	16 27 26.2	+1.1
	baz=278						
G29M	Pine Creek	95.27	23	P	P	16 27 26.1	+0.8
	baz=278						
I29M	Ogilvie Camp,	95.36	25	P	P	16 27 26.6	+0.9
	baz=278						
J29N	Klondike Camp	95.52	25	P	P	16 27 27.1	+0.5
	baz=278						
M29M	Somme Creek	95.66	28	P	P	16 27 27.4	+0.1
	baz=277,SNR=7.7						
YUK4	Talbot Arm	95.71	29	P	P	16 27 27.2	-0.4
	baz=277						
L29M	L29M	95.73	27	P	P	16 27 27.4	-0.2
	baz=277,SNR=8.0						
EPYK	Eagle Plains	95.86	23	P	P	16 27 28.4	+0.4
	baz=279						
O29M	Mount Kennedy	95.87	30	P	P	16 27 28.4	+0.1
	baz=277						
YUK6	Outpost Mounta	95.90	29	P	P	16 27 28.3	-0.2
	baz=277						
K29M	Barlow Dome	95.90	26	IAmb	IAmb	16 27 30.7	
	comp=Z,4.6nm,0.7s						
K29M	Barlow Dome	95.90	26	P	P	16 27 28.4	0.0
	baz=278,SNR=5.7						
G30M	tAoh Zraii Nji	95.96	23	P	P	16 27 29.2	+0.7
	baz=280						
F30M	Barrier River	96.02	22	P	P	16 27 28.3	-0.4
	baz=280						
I30M	Mount Dempster	96.18	25	IAmb	IAmb	16 27 31.3	
	comp=Z,4.2nm,0.8s						
I30M	Mount Dempster	96.18	25	P	P	16 27 29.0	-0.6
	baz=279						
J30M	Hart River	96.31	25	IAmb	IAmb	16 27 32.5	
	comp=Z,13nm,1.6s						
J30M	Hart River	96.31	25	P	P	16 27 29.1	-1.1
	baz=279						
HYT	Haines Junctio	96.33	29	IAmb	IAmb	16 31 09.1	
	comp=Z,9.4nm,1.4s						
HYT	Haines Junctio	96.33	29	P	P	16 27 30.4	0.0
	baz=278						
P29M	Windy Craggy	96.37	30	P	P	16 27 30.5	0.0
	baz=277						
N30M	Aishikik Lake	96.44	28	IAmb	IAmb	16 27 33.6	
	comp=Z,4.7nm,0.8s						
N30M	Aishikik Lake	96.44	28	P	P	16 27 30.5	-0.2
	baz=278						
P30M	Million Dollar	96.69	30	P	P	16 27 31.8	-0.2
	baz=278						
INK	Inuvik	96.72	21	P	P	16 27 31.5	-0.2
	baz=282						
G31M	Satah River	96.72	23	P	P	16 27 32.3	+0.4
	baz=281						
F31M	Tsiigehtchic	96.82	22	P	P	16 27 32.5	+0.2
	baz=282						
H31M	Peel River	96.92	24	P	P	16 27 32.8	0.0
	baz=281						
O30N	Mendenhall	97.02	29	P	P	16 27 32.9	-0.5
	baz=279						
N31M	Braeburn, Yuko	97.06	28	P	P	16 27 33.8	+0.2
	baz=279						
PLBC	Pleasant Camp	97.09	30	P	Pdif	16 27 34.1	+0.4
	baz=279						
S31K	Pelican	97.38	32	P	P	16 27 35.0	0.0
	baz=278						
R31K	City Hall, Gus	97.57	31	P	P	16 27 35.9	+0.1
	baz=279						
M31M	Drury Creek, Y	97.58	27	P	P	16 27 36.0	+0.1
	baz=281						
WHY	Whitehorse	97.63	29	P	P	16 27 35.8	-0.4
	baz=280						
SIT	Sitka	98.00	33	P	Pdif	16 27 38.2	+0.4
	baz=279						
FARO	Faro, Yukon	98.05	27	P	Pdif	16 27 38.5	+0.5
	baz=282						
R32K	Eaglecrest	98.23	31	P	Pdif	16 27 39.4	+0.6
	baz=280						
S32K	Killisnoo	98.33	32	P	P	16 27 39.4	+0.2
	baz=280						
A36M	Sachs Harbour	98.39	17	P	Pdif	16 27 39.9	+0.6
	baz=291						
P32M	Atlin	98.40	30	P	P	16 27 38.8	-0.8
	baz=281						
N32M	Quiet Lake	98.40	28	P	P	16 27 38.9	-0.7
	baz=282						
P33M	Teslin, Yukon	98.72	29	P	P	16 27 40.5	-0.5
	baz=282						
MMPY	Sheldon Lake,	98.92	27	P	P	16 27 41.0	-0.9
	baz=284						
Q32M	Nakina River	99.25	30	P	Pdif	16 27 42.4	-1.2
	baz=282						
U33K	Whale Pass	99.37	33	P	Pdif	16 27 42.6	-1.3
	baz=281						
CRAG	Craig	99.49	34	P	Pdif	16 27 42.8	-1.6
	baz=281						
WRAK	Wrangell Islan	99.73	33	P	Pdif	16 27 44.1	-1.4
	baz=282						
R33M	Jennings River	99.81	30	P	Pdif	16 27 44.3	-1.7
	baz=283						
S34M	Telegraph Cree	100.06	31	P	Pdif	16 27 45.6	-1.4
	baz=283						
V35K	Ketchikan	100.36	34	P	Pdif	16 27 46.5	-1.9
	baz=282						
T35M	Bob Quinn	100.74	32	P	Pdif	16 27 47.9	-2.2
	baz=284						
HFS	Hagfors	100.89	331	P	Pdif	16 27 49.1	-1.6
	comp=Z,1.3nm,0.8s,baz=99,slow=19,SNR=1.3						
SCHQ	Schefferville	126.53	7	PKP	PKPdf	16 33 05.2	+0.4
	comp=Z,1.9nm,0.7s,baz=307,slow=5.1,SNR=2.7						
TEIG	Tepich	144.65	57	PKPdf	PKPdf	16 33 39.2	0.0
PLTB	Pedras Altas	146.48	186	PKPbc	PKPbc	16 33 44.2	+0.7
LCO	Las Campanas	146.84	158	PKPbc	PKPab	16 33 46.1	-0.1
CPUP	Villa Florida	152.08	180	PKPbc	PKPbc	16 33 58.2	+0.4
	comp=Z,0.8nm,0.8s,baz=225,slow=1.4,SNR=4.9						

BEO ***01*** *16:17:20.8±0.6, 40°.27N×20°.88E, h0km, ML2.8/10*

TIR ***01*** *16:17:22.4, 40°.46N×20°.79E, h7km±1km, Ml3.2/8*

ATH ***01*** *16:17:23.8, 40°.37N×20°.90E, h8km±1km, ML2.8/15, Manual Solution by A.Agalos First location: 2019/06/01 16:18:25, This location: 2019/06/01 16:28:19 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*

SKO ***01*** *16:17:24.1, 40°.45N×20°.87E, h9km, ML2.9*

THE ***01*** *16:17:26.1, 40°N±2°×2°1E±°, h2km±1km, M2.7/12, MLh2.7/12*

ISC 01 16:17:23.2±1.1**, 40°.44N**±0°.02×**20°.85E**±0°.02**, h1**km±9km**, n77, **σ1s.**05**/106**, 1D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEST	Nestorio	0.15	101	Pg	Pg	16 17 26.8	+0.6
NEST				Sg	Sg	16 17 29.9	+1.6
NEST				AML	AML	16 17 31.2	
	20nm,0.5s						
NEST				AML	AML	16 17 33.5	
	20nm,0.3s						
NEST	Nestorio	0.15	101	P	Pg	16 17 26.9	+0.6
NEST				S	Sg	16 17 29.2	+0.9
NEST	Nestorio	0.15	101	P	Pg	16 17 26.9	+0.6
NEST				S	Sg	16 17 29.3	+1.0
KBN	Korca	0.19	345	Pg	Pg	16 17 25.5	-1.4
KBN				Sg	Sg	16 17 27.9	-1.4
KBN				AML	AML	16 17 29.4	
	35nm,0.5s						
PENT	Pentalofos	0.33	138	P	Pg	16 17 29.8	+0.2
PENT				S	Sg	16 17 34.1	+0.2
PENT	Pentalofos	0.33	138	P	Pg	16 17 29.5	-0.1
PENT				S	Sg	16 17 32.6	-1.2
LSK	Leskovik	0.35	213	Pg	Pg	16 17 28.5	-1.5
KPRO	Kipourio	0.63	141	P	Pg	16 17 35.0	-0.3
KPRO	Kipourio	0.63	141	P	Pg	16 17 34.7	-0.5
OHR	Ohrid	0.67	357	⇓ *i*Pg	Pg	16 17 35.3	-0.7
OHR				*i* Sg	Sg	16 17 45.4	+0.6
OHR				*e*Lg	Lg	16 17 46.1	
	comp=E,689nm,0.7s						
OHR				*e*Lg	Lg	16 17 46.8	
	comp=N,316nm,0.4s						
OHR	Ohrid	0.67	357	*e*Pg	Pg	16 17 35.3	-0.7
OHR				*e*Sg	Sg	16 17 46.6	+1.9
KZN	Kozani	0.72	101	P	Pg	16 17 35.9	-1.0
KZN	Kozani	0.72	101	P	Pg	16 17 37.3	+0.3
KZN				S	Sg	16 17 46.8	+0.6
JAN	Janina	0.79	180	P	Pg	16 17 37.6	-0.7
SRN	Sarande	0.86	229	Pn	Pg	16 17 39.1	-0.6
SRN				Sn	Sg	16 17 52.1	+1.3
SRN				AML	AML	16 17 53.5	
	comp=N,0.9nm,0.7s						
IGT	Igoumenitsa	0.99	204	Pn	Pg	16 17 42.3	+0.1
IGT				Sn	Sb	16 17 56.7	-0.1
IGT				AML	AML	16 18 05.3	
	comp=N,0.9nm,0.6s						
KEK	Kerkira	1.09	228	P	Pb	16 17 45.0	+0.2
TETR	Tetrakomo, Epi	1.15	163	P	Pg	16 17 44.6	-0.6
TIR	Tirane	1.17	321	Pn	Pg	16 17 44.0	-1.7
TIR				Sn	Sg	16 18 01.3	+0.5
TIR				AML	AML	16 18 08.5	
	comp=N,0.8nm,0.5s						
TIR	Tirane	1.17	321	*i* Pg	Pg	16 17 44.5	-1.2
TIR				*i* Sg	Sn	16 18 04.3	+1.0
TIR	Tirane	1.17	321	*e*Pg	Pg	16 17 43.6	-2.1
TIR				*e*Sg	Sn	16 18 04.4	+1.0
THL	Klokotos Trika	1.25	134	P	Pg	16 17 46.2	-1.1
THL	Klokotos Trika	1.25	134	P	Pg	16 17 46.1	-1.1
TYRN	Tyrnavos	1.29	124	P	Pn	16 17 46.2	-2.1
AMPL	Ampelaki	1.54	169	P	Pg	16 17 52.7	-0.2
VAY	Valandovo	1.57	56	P	Pn	16 17 51.8	-0.4
VAY	Valandovo	1.57	56	*i* Pg	Pn	16 17 51.8	-0.4
VAY				*i* Sg	Sg	16 18 15.5	+1.8
VAY				*e*Lg	Lg	16 18 16.6	
	comp=N,109nm,0.6s						
VAY				*e*Lg	Lg	16 18 19.9	
	comp=E,123nm,0.6s						
SKO	Skopje	1.59	16	*i* Pg	Pn	16 17 52.5	0.0
SKO				*i* Sg	Sn	16 18 13.3	-0.4
THE	Thessaloniki	1.62	83	*i* Pn	Pn	16 17 52.0	-0.9
THE	Thessaloniki	1.62	83	P	Pn	16 17 52.4	-0.5
LKD2	Lefkada island	1.66	185	Pn	Pb	16 17 54.6	0.0
LKD2				Sn	Sg	16 18 18.4	+1.9
LKD2				AML	AML	16 18 25.9	
	comp=E,1.0nm,0.7s						
LKD2	Lefkada island	1.66	185	P	Pg	16 17 55.1	0.0
LKD2	Lefkada island	1.66	185	P	Pn	16 17 52.5	-1.0
EVR	Evrytania	1.69	154	P	Pn	16 17 54.0	0.0
EVR	Evrytania	1.69	154	P	Pn	16 17 53.5	-0.5
KNT	Kendrikon	1.71	65	P	Pn	16 17 53.0	-1.1
KNT				S	Sn	16 18 15.0	-1.7
KNT	Kendrikon	1.71	65	*i* Pn	Pn	16 17 53.1	-1.1
KNT	Kendrikon	1.71	65	P	Pn	16 17 53.8	-0.4
HORT	Hortiatis	1.72	84	P	Pn	16 17 53.3	-1.1
HORT				S	Sn	16 18 13.9	-3.1
HORT	Hortiatis	1.72	84	P	Pn	16 17 53.3	-1.1
NYDR	Nydri-Lefkada	1.73	184	P	Pg	16 17 56.6	+0.2
NYDR	Nydri-Lefkada	1.73	184	P	Pn	16 17 53.5	-0.9
MAKR	Makrakomi, Fth	1.74	145	P	Pn	16 17 53.4	-1.1
PUK	Puka	1.75	336	Pn	Pn	16 17 55.2	+0.5
PUK				Sn	Sb	16 18 19.5	+0.7
PUK				AML	AML	16 18 22.7	
	comp=E,1.8nm,0.8s						
AGG	Agios Georgios	1.82	141	P	Pn	16 17 55.6	0.0
AGG	Agios Georgios	1.82	141	P	Pn	16 17 55.1	-0.5
EVGI	Lefkada island	1.83	185	P	Pn	16 17 55.3	-0.4
SOH	Sokhos	1.94	78	P	Pn	16 17 56.6	-0.7
SOH	Sokhos	1.94	78	P	Pn	16 17 57.2	-0.2
ULC	Ulcinj	1.94	322	Pn	Pn	16 17 56.9	-0.5

ULC	Ulcinj	1.94	322	*i* Pn	Pn	16 17 57.1	-0.2
PLG	Polygyros	1.98	91	P	Pn	16 17 57.6	-0.3
FSK	Fiskardo	1.99	186	P	Pn	16 17 58.0	+0.1
BCI	Bajram Curri	2.01	343	Pg	Pn	16 17 59.7	+1.4
BCI				Sg	Sb	16 18 26.0	-0.1
BCI				AML	AML	16 18 29.0	
	comp=E,0.8nm,0.8s						
ANX	Ano Chora	2.02	155	P	Pn	16 17 58.2	-0.4
SRS	Serrai	2.19	71	*i* Pn	Pn	16 18 01.2	+0.5
SRS	Serrai	2.19	71	P	Pn	16 18 01.2	+0.5
KKB	Krupnik	2.22	50	*i* Pn	Pn	16 18 01.1	0.0
VLS	Valsamata	2.27	185	P	Pn	16 18 00.8	-1.1
PDG	Podgorica	2.32	329	*e*Pn	Pn	16 18 02.2	-0.3
PDG				*e*Sn	Sn	16 18 33.2	+1.6
BOSS	Bosilegrad	2.39	30	*e*Pn	Pn	16 18 02.3	-1.2
BOSS				*e*Sn	Sb	16 18 35.5	-1.5
OUR	Ouranopolis	2.40	92	P	Pn	16 18 03.1	-0.4
KOKK	Kokkinochori,	2.43	80	P	Pn	16 18 03.4	-0.6
MMB	Musomishta	2.46	62	*i* Pn	Pn	16 18 04.5	+0.1
BARS	Barje	2.48	17	*i* Pn	Pn	16 18 03.4	-1.3
BARS	Barje	2.48	17	*e*Pn	Pn	16 18 03.4	-1.3
BARS				*e*Sn	Sn	16 18 37.8	+2.2
SELS	Selova	2.78	4	*e*Pn	Pn	16 18 08.9	0.0
SELS				*e*Sn	Sn	16 18 45.6	+2.5
SJES	Sjenica	2.89	347	*e*Pn	Pn	16 18 10.3	-0.2
SJES				*e*Sn	Sn	16 18 47.5	+1.6
THAS	Thassos island	2.95	86	P	Pn	16 18 09.4	-1.8
GOCS	Kraljevo Serbi	3.12	0	*e*Pn	Pn	16 18 14.6	+1.0
GOCS				*e*Sn	Sn	16 18 52.9	+1.4
ZAPS	Zavoj	3.13	25	*e*Pn	Pn	16 18 14.8	+1.2
IVAS	Ivanjica	3.17	351	*e*Pn	Pn	16 18 14.7	+0.4
GRUS	Gruza	3.44	358	*e*Pn	Pn	16 18 17.8	-0.2
ZAGS	Zajecar	3.52	17	*e*Pn	Pn	16 18 18.1	-0.9
ZAGS				*e*Sn	Sn	16 19 00.4	-0.8
DIVS	Divibare	3.71	350	*e*Pn	Pn	16 18 21.4	-0.3
DIVS				*e*Sn	Sn	16 19 07.5	+1.5
KUBS	Kucevo	4.01	8	*e*Pn	Pn	16 18 25.7	-0.1
TEKS	Tekeris	4.22	347	*e*Pn	Pn	16 18 27.9	-0.7

DJA 01 16:52:20.4±2.0**,2°S**±3°×**12°3E**±°**,h12**^{km}±18^{km}**,M3.8**/13**, mb4.1**/3**,MLv3.7**/13**,Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	1.43	5	P	Pn	16 52 45.9	-0.2
KDI	Kendari	1.48	181	P	Pn	16 52 46.9	0.0
APSI	Ampana	1.84	327	P	Pn	16 52 52.0	+0.2
TTSI	Tana Toraja	2.88	258	P	Pn	16 53 05.4	-0.7
BBSI	Bau Bau	3.00	181	P	Pn	16 53 07.3	-0.5
MRSI	Marisa	3.01	347	P	Pn	16 53 07.9	0.0
BNSI	Bone	3.17	233	P	Pn	16 53 10.1	-0.1
PCI	Palu	3.20	299	P	Pn	16 53 11.1	+0.5
SPSI	Sidrap Palu	3.23	243	P	Pn	16 53 11.6	+0.7
SANI	Sanana	3.37	83	P	Pn	16 53 11.5	-1.4
BSSI	Bau Bau, Buton	4.23	210	P	Pn	16 53 25.3	+0.5
EDFI	Ende, Flores	6.31	189	P	Pn	16 53 53.9	+0.5
	27nm,1.7s						

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*AFAD **01** 16:52:51.9, 40°.25N×33°.40E, h5^{km}±1^{km}, MW3.4*
*ISK **01** 16:52:51.2, 40°.27N×33°.40E, h5^{km}, ML3.5/35*
ISC 01 16:52:52.3±0.9**,40°.27N**±0°.02×**33°.41E**±0°.02**,h10**^{km}±7^{km}**, n70,**σ**1^{s}04**/95**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOKD	Ankara-Kalecik	0.20	166	P	Pg	16 52 56.8	+0.3
GOKD				S	Sg	16 53 00.8	+1.4
GOKD				*i* IAML		16 53 01.0	
	comp=N,2µm,0.3s						
GOKD				*i* IAML		16 53 01.0	
	comp=E,1µm,0.3s						
ELDT	Eldivan	0.23	3	P	Pg	16 52 56.4	-0.6
ELDT				S	Sg	16 53 00.5	+0.2
ELDT				*i* IAML		16 53 01.0	
	comp=N,2µm,0.2s						
ELDT				*i* IAML		16 53 01.0	
	comp=E,2µm,0.4s						
CANT	Cankiri	0.38	25	Pg	Pg	16 52 59.9	+0.1
CANT				Sg	Sb	16 53 06.2	-0.9
DELI	KIRIKKALE	0.47	124	P	Pg	16 53 01.3	-0.3
YENC	ankr-Yen	0.53	38	P	Pg	16 53 02.8	+0.1
YENC				S	Sb	16 53 11.0	-0.6
YENC				*i* IAML		16 53 11.0	
	comp=N,2µm,0.2s						
BR131	Keskin Array S	0.57	162	Pg	Pb	16 53 03.5	-1.0
ANTO	Ankara	0.62	230	Pg	Pb	16 53 04.3	-1.0
ANTO				Sg	Sb	16 53 13.8	-0.3
LOD	Lodumlu	0.62	233	Pg	Pb	16 53 04.5	-0.9
LOD				Sg	Sb	16 53 13.9	-0.3
KESK	Krkkale-Ke	0.64	168	P	Pg	16 53 04.1	-0.7
KESK				S	Sg	16 53 13.1	-0.1
KESK				*i* IAML		16 53 15.0	
	comp=N,670nm,0.2s						
SUNG	orum-Sungurl	0.64	97	P	Pb	16 53 05.0	-0.8
SUNG				*i* IAML		16 53 14.0	
	comp=N,737nm,0.3s						
SUNG				S	Sb	16 53 14.3	-0.5
CMDR	Camlidere-ANKA	0.75	288	P	Pb	16 53 06.6	-1.0
BBAL	Bala	0.76	197	P	Pb	16 53 07.8	+0.1
ILGA	Ilgaz	0.82	16	P	Pg	16 53 07.8	-0.4
ILGA				S	Sg	16 53 19.1	+0.2
ILGA				*i* IAML		16 53 21.0	
	comp=E,555nm,0.6s						
ILGA				*i* IAML		16 53 23.0	
	comp=N,546nm,0.7s						
AFSR	Afar-Bala (An	0.86	198	Pg	Pb	16 53 08.6	-0.8
AFSR				Sg	Sn	16 53 21.9	-1.4
DERS	Karabk-Eskip	0.88	312	P	Pb	16 53 08.9	-0.9
DERS				S	Sb	16 53 22.4	+0.8
DERS				*i* IAML		16 53 23.0	
	comp=E,348nm,0.6s						
AKPI	Kirsehir/Akpin	0.88	149	P	Pg	16 53 08.9	-0.5
TOS	Tosya	0.90	31	Pg	Pb	16 53 09.5	-0.6
KAMT	Kaman	0.93	165	Pg	Pb	16 53 09.7	-0.9
CORM	Corum	0.94	95	Pg	Pb	16 53 10.6	-0.2
CDAG	Cicekdag	0.98	131	P	Pg	16 53 10.6	-0.6
KBUK	KARABUK-Merkez	1.14	329	P	Pg	16 53 13.1	-1.1
KKUL	Konya-Kulu	1.16	199	P	Pn	16 53 15.2	+0.5
KKUL				S	Sn	16 53 30.4	-0.2
BCAM	Yenicaga	1.16	299	P	Pg	16 53 13.6	-1.1
BCAM				S	Sb	16 53 29.9	0.0
BCAM				*i* IAML		16 53 34.0	
	comp=N,464nm,0.4s						
YOZG	Bozok Univ. Me	1.17	114	P	Pg	16 53 13.4	-1.4
AYAZ	Ayas K¶y, M	1.18	69	P	Pg	16 53 13.9	-1.1
KAGI	orum-Kargı	1.19	43	P	Pg	16 53 14.5	-0.7
KIRS	Kirsehir-Merke	1.20	161	P	Pg	16 53 14.0	-1.3
KIRS				S	Sn	16 53 31.4	-0.2
KIRS				*i* IAML		16 53 36.0	
	comp=E,285nm,0.7s						
KIBS	BOLU	1.20	278	P	Pb	16 53 14.8	-0.5
KIBS				S	Sn	16 53 32.4	+0.6
KIBS				*i* IAML		16 53 38.0	
	comp=E,1µm,0.6s						
COAL	Corum-Alaca	1.21	90	P	Pg	16 53 14.5	-1.0
COAL				S	Sg	16 53 30.4	-0.7
COAL				*i* IAML		16 53 40.0	
	comp=N,351nm,0.5s						
SERE	Sereflikochisa	1.32	175	Pn	Pb	16 53 17.8	+0.5
SERE				Sn	Sn	16 53 36.9	+2.1
YUVA	Yuva-Kibriscik	1.32	276	Pn	Pb	16 53 17.5	+0.1
YUVA				Sn	Sn	16 53 36.5	+1.7
SEYI	Kastamonu-Seyd	1.39	10	P	Pn	16 53 17.5	-0.4
SEYI				S	Sb	16 53 36.1	-0.3
SEYI				*i* IAML		16 53 44.0	
	comp=E,324nm,1.0s						
MCUR	KIREHR	1.40	142	P	Pg	16 53 18.5	-0.7
MCUR				S	Sn	16 53 38.0	+1.3
MCUR				*i* IAML		16 53 41.0	
	comp=N,307nm,0.3s						
MCUR				*i* IAML		16 53 41.0	
	comp=E,460nm,0.4s						
DEVR	Zonguldak/Devr	1.40	309	P	Pg	16 53 18.3	-0.9
DEVR				S	Sn	16 53 37.2	+0.6
DEVR				*i* IAML		16 53 41.0	
	comp=E,372nm,0.4s						
BOLU	Bolu-Merkez-Mu	1.42	292	P	Pg	16 53 19.2	-0.3
BOLU				S	Sn	16 53 39.5	+2.4
BOLU				*i* IAML		16 53 42.0	
	comp=E,576nm,0.5s						
KOZK	Kozakli-Nevseh	1.54	133	Pn	Pg	16 53 21.0	-0.9
YOZ	Yozgat	1.59	112	Pn	Pb	16 53 21.8	-0.2
BTIN	Bartın	1.63	328	P	Pn	16 53 21.1	0.0
SIRC	Yozgat	1.63	124	P	Pb	16 53 22.3	-0.3
SIRC				S	Sg	16 53 45.0	+0.3
SIRC				*i* IAML		16 53 48.0	
	comp=E,270nm,0.3s						
AKSY	AKSARAY - Alti	1.64	170	P	Pb	16 53 21.7	-1.0
AKSY				S	Sg	16 53 44.4	-0.6
AKSY				*i* IAML		16 53 48.0	
	comp=E,325nm,1.2s						
CBEY	Konya-Cihanbey	1.65	197	P	Pg	16 53 23.4	-0.6
KURC	Kurucasile-Bar	1.66	342	Pn	Pb	16 53 22.3	-0.7
AUSIV	SIVRIHISAR	1.66	241	P	Pb	16 53 22.5	-0.6
SVRH	Sivrihisar-ESK	1.67	241	Pn	Pb	16 53 22.5	-0.7
MDUB	Mudurnu	1.70	278	Pn	Pb	16 53 23.1	-0.7
CHBY	Cihanbeyli	1.73	194	Pn	Pb	16 53 23.7	-0.6
BZK	Bozkurt	1.75	15	Pn	Pb	16 53 23.8	-0.8
KIZT	Kizilcal	1.82	221	Pn	Pg	16 53 25.9	-1.3
BTAS	Taskesti	1.87	280	P	Pb	16 53 25.9	-0.7
HACI	Hacifakili, Ak	1.87	107	P	Pb	16 53 26.2	-0.5
HACI				S	Sb	16 53 49.4	-0.7
HACI				*i* IAML		16 53 54.0	
	comp=N,112nm,0.3s						
HACI				*i* IAML		16 53 56.0	
	comp=E,149nm,0.7s						
SUSU	Bolu-G¶ynk-	1.96	273	P	Pb	16 53 27.5	-0.7
DIKM	Dikmen	1.97	45	Pn	Pb	16 53 27.0	-1.3
CIFT	Cifteler, Eski	2.02	244	Pn	Pb	16 53 27.5	-1.7
GULA	Gulagac	2.02	161	Pn	Pb	16 53 28.3	-1.0
SULT	Sultanhani-AKS	2.06	178	Pn	Pb	16 53 29.0	-1.0
KVT	Kavak	2.16	67	Pn	Pn	16 53 29.9	+1.4
LADK	Ladik-KONYA	2.22	202	Pn	Pb	16 53 30.6	-2.0
GULT	Gulveren	2.22	275	Pn	Pn	16 53 30.4	+1.1
BNN	Bunyan	2.35	126	Pn	Pb	16 53 32.9	-2.0
TOKT	Tokat	2.40	88	Pn	Pn	16 53 33.3	+1.6
SAUV	Serdivan-Sakar	2.40	282	Pn	Pn	16 53 32.9	+1.2
KONT	Konya--Tatoy	2.46	200	Pn	Pb	16 53 34.2	-2.4
YESY	Yesilyurt	2.49	174	Pn	Pn	16 53 34.8	+1.7
CAVI	Cavuskoy	2.73	270	Pn	Pn	16 53 37.8	+1.5
SVSK	Karacayir	2.77	96	Pn	Pn	16 53 38.6	+1.8
SHUT	Suhut-Afyon	2.80	233	Pn	Pn	16 53 38.6	+1.3
CMRD	Camardi-Nigde	2.88	154	Pn	Pn	16 53 40.2	+1.8
RSDY	Resadiye-TOKAT	3.00	86	Pn	Pn	16 53 41.8	+1.8
YLV	Yalova	3.10	277	Pn	Pn	16 53 42.5	+1.1
TVSB	Tavsanli	3.15	256	Pn	Pn	16 53 43.6	+1.5

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*JMA **01** 16:54:46.9±0.2, 44°N±1°×14°8E±°, h0^{km}, MV4.0/28, SE OFF ETOROFU*
*SKHL **01** 16:54:48.5±0.1, 44°.40N×148°.00E, h64^{km}±5^{km}, mb4.7/4*
ISC 01 16:54:44.5±3.0**,44°.3N**±0°.1×**148°.4E**±0°.2**,h65**^{km}**,n17, **σ**1^{s}72**/29**,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.01	338	*e*P	Pn	16 55 03.4	+0.6
KUR				AMB	AMB	16 55 03.8	
	380nm,0.2s						
KUR				*e*S	Sn	16 55 14.5	-1.9
KUR				A	A	16 55 16.0	
	1µm,0.3s						
KUR				A	A	16 55 16.0	
	710nm,0.3s						
SHO	Shikotan	1.21	250	*i* P	Pn	16 55 06.1	+0.7
SHO				AMB	AMB	16 55 06.4	
	80nm,0.3s						
SHO				*e*S	Sn	16 55 18.5	-2.6
SHO				A	A	16 55 19.5	
	150nm,0.2s						
SHO				A	A	16 55 19.5	
	620nm,0.2s						
YUK	Yuzh-Kuril'sk	1.84	263	*i* P	Pn	16 55 14.0	+0.1
YUK				AMB	AMB	16 55 16.8	
	210nm,0.2s						
YUK				*e*S	Sn	16 55 33.2	-3.0
YUK				A	A	16 55 37.7	
	290nm,0.3s						
YUK				A	A	16 55 37.7	
	650nm,0.3s						
NEM2	Nemuro 2	2.14	245	P	Pn	16 55 18.3	+0.4
NEM2				*e*S	Sn	16 55 41.0	-2.3
NMR	Nemuro--Hokkai	2.14	245	*i* P	Pn	16 55 18.5	+0.5
NMR				*e*S	Sn	16 55 40.9	-2.6
GLVR	Golovnino	2.15	256	*i* P	Pn	16 55 19.1	+1.1
GLVR				AMB	AMB	16 55 21.3	
	110nm,0.1s						
GLVR				*e*S	Sn	16 55 42.0	-1.6
GLVR				A	A	16 55 47.6	
	650nm,0.2s						
GLVR				A	A	16 55 47.6	
	400nm,0.2s						
JRA	Rausu	2.39	262	P	Pn	16 55 23.1	+1.9
JRA				*e*S	Sn	16 55 49.6	+0.2
JNSB	Nemuroshibetsu	2.50	259	P	Pn	16 55 24.4	+1.6
JNSB				*e*S	Sn	16 55 52.0	-0.3
JKHN	Kushirohamanak	2.64	244	*e*P	Pn	16 55 25.7	+0.9
JKHN				*e*S	Sn	16 55 54.4	-1.3
JNK	Nakash	2.75	256	P	Pn	16 55 27.8	+1.6
JNK				*e*S	Sn	16 55 57.9	-0.4
AKK	Akkeshi	2.88	245	*e*P	Pn	16 55 28.6	+0.6
JAK	Akkeshi	2.98	245	*i* P	Pn	16 55 30.4	+1.0
JAK				*e*S	Sn	16 56 02.2	-1.8
JTKR	Abashiri--Toko	3.25	266	*e*P	Pn	16 55 35.6	+2.6
JAR	Ashorobuto	3.50	255	P	Pn	16 55 39.0	+2.6
JOB	Onbets	3.60	249	*e*P	Pn	16 55 39.5	+1.8
JOB				*e*S	Sn	16 56 18.3	-0.7
JCH	Churui	4.03	247	*e*P	Pn	16 55 45.4	+1.6
JNBK	Urakawa-nobuka	4.59	246	*e*P	Pn	16 55 53.6	+2.3

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*IDC **01** 17:00:21.9±1.6, 6°.95S×128°.82E, h0^{km}, mb3.7/4, mbtmp3.8/6, ML3.9/2, Error ellipse: s-maj=100.0km s-min=28.3km az=65.0*
*NEIC **01** 17:00:37.8±1.6, 7°.6S±0°.1×128°.22E±0°.07, h207^{km}±23^{km}, mb4.5/6, Error ellipse: s-maj=16.7km s-min=9.9km az=185.0*
ISC 01 17:00:36.8±0.7**,7°.76S**±0°.06×**128°.26E**±0°.05**,h150**^{km}**,n31, **σ**2^{s}84**/36**,mb3.5**/4**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.02	94	Pn	Pn	17 01 28.6	+4.2
SAUI				Sn	Sn	17 02 00.8	-0.3
SOEI	Soe	4.42	243	Pn	Pn	17 01 45.6	+2.8
SOEI				Sn	Sn	17 02 35.0	+1.0
DRS	Darwin Rock St	5.32	151	P	Pn	17 01 57.5	+3.0
MTN	Manton Dam	5.79	151		Pn	17 02 03.8	+3.1
MTN				Sn	Sn	17 03 06.4	+0.1
MTN	Manton Dam	5.79	151	P	Pn	17 02 03.4	+2.7
MMRI	Maumere	6.03	261	Pn	Pn	17 02 02.9	-1.0
FAKI	Fak Fak	6.24	40	Pn	Pn	17 02 05.2	-1.6
FAKI	Fak Fak	6.24	40	P	Pn	17 02 05.4	-1.3
KDU	Kakadu	6.41	140	P	Pn	17 02 11.4	+2.4
KNRA	Kununurra	7.88	176		Pn	17 02 30.8	+2.2
KNRA				Sn	Sn	17 03 54.0	-2.7
FITZ	Fitzroy Crossi	10.59	194	Pn	Pn	17 03 04.1	-0.5
WB0	Warramunga Arr	13.33	154	Pn	Pn	17 03 40.4	0.0
WRA	Warramunga Arr	13.46	155	Pn	Pn	17 03 41.5	-0.6
	0.6nm,0.3s,baz=334,slow=11,SNR=5.4						
WRA				Sn	Sn	17 06 05.3	-5.9
	2.7nm,0.3s,baz=331,slow=23,SNR=8.9						
	0.5nm,0.3s						
WR8	Warramunga Arr	13.54	154		Pn	17 03 43.8	+0.8
MBWA	Marble Bar	15.66	211		Pn	17 04 08.4	-1.1
MBWA				IAmb	IAmb	17 04 18.5	
	comp=Z,46nm,1.3s						
MBWA	Marble Bar	15.66	211	P	P	17 04 13.7	+3.2
COEN	Coen	15.88	114		Pn	17 04 11.0	-1.2
COEN				IAmb	IAmb	17 04 14.7	
	comp=Z,42nm,1.5s						
COEN	Coen	15.88	114	P	P	17 04 19.7	+6.8
PSA00	Pilbara Seismi	15.95	210		Pn	17 04 11.8	-1.3
PSA00				IAmb	IAmb	17 04 50.5	
	comp=Z,18nm,1.1s						
PSA00	Pilbara Seismi	15.95	210		Pn	17 04 11.6	-1.5
PSA00				IAmb	IAmb	17 04 20.5	
	comp=Z,11nm,1.2s						
PSA00	Pilbara Seismi	15.95	210	P	P	17 04 17.5	+3.8
AS31	Alice Springs	16.71	162	P	P	17 04 20.8	-1.3
ASAR	Alice Springs	16.71	162	P	P	17 04 20.6	-1.5
ASAR	Alice Springs	16.71	162	P	Pn	17 04 25.6	+3.3
	comp=Z,0.6nm,0.3s,baz=338,slow=11,SNR=63						
ASAR				S	S	17 07 23.8	-4.5
	comp=Z,0.9nm,0.4s,baz=222,slow=18,SNR=6.8						
	comp=Z,2.7nm,0.6s						
QIS	Mount Isa	16.80	140	P	Pn	17 04 31.3	+7.9
WRKA	Warakurna	17.18	180	P	Pn	17 04 32.8	+4.8
PMG	Port Moresby	18.75	96	P	P	17 04 40.8	-3.7
CMAR	Chiang Mai Arr	38.93	312	P	P	17 07 50.1	+1.7
	comp=Z,0.5nm,0.7s,baz=128,slow=8.3,SNR=4.1						
	comp=Z,0.5nm,0.7s						
MKAR	Makanchi Array	67.93	328	P	P	17 11 20.2	+0.8
	comp=Z,0.7nm,1.0s,baz=124,slow=7.8,SNR=3.9						
	comp=Z,0.7nm,1.0s						
ZALV	Zalesovo Beam	71.52	335	P	P	17 11 40.4	-0.7
	comp=Z,0.6nm,0.5s,baz=134,slow=4.2,SNR=2.4						
	comp=Z,0.6nm,0.5s						
KURBB	Kurchatov Arra	72.27	329	P	P	17 11 46.5	+0.8
	comp=Z,0.5nm,0.5s,baz=131,slow=4.7,SNR=10						
	comp=Z,0.5nm,0.5s						

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*IDC **01** 17:11:12.6±1.9, 10°.26S×120°.45E, h0^{km}, mb3.6/4, mbtmp3.6/6, ML3.7/2, MS3.0/1, Error ellipse: s-maj=78.0km s-min=27.2km az=54.0*
*DJA **01** 17:11:16.6±0.8, 11°S±6°×12°0E±°, h12^{km}±5^{km}, M4.2/13, mb4.3/6, MLv4.1/13*
ISC 01 17:11:15.3±0.9**,10°.66S**±0°.08×**120°.20E**±0°.05**,h30**^{km}**,n26, **σ**2^{s}35**/25**,mb3.8**/4**,Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BASI	Baing, Sumba	0.58	41	P	Pb	17 11 27.0	0.0
WSI	Waingapu	0.99	6	P	Pb	17 11 33.3	-0.6
WBSI	Waikabubak, Su	1.28	322	P	Pb	17 11 38.1	-0.8
WBSI				S	Sb	17 11 53.4	-1.7
EDFI	Ende, Flores	2.40	38	P	Pn	17 11 53.0	+0.3
MMRI	Maumere	2.85	45	P	Pn	17 11 59.9	+1.2
MMRI	Maumere	2.85	45	P	Pn	17 11 59.8	+1.1
PLAI	Plampang	3.00	307	P	Pn	17 12 03.5	+2.7
PLAI	Plampang	3.00	307	P	Pn	17 12 02.7	+1.9
BATI	Baumata	3.44	83	P	Pn	17 12 10.3	+3.4
SOEI	Soe	4.11	78	P	Pn	17 12 22.4	+6.2
SOEI	Soe	4.11	78	P	Pn	17 12 20.9	+4.7
BSSI	Bau Bau, Buton	4.50	4	P	Pn	17 12 22.5	+1.1
BKSI	Bulukumba	5.30	359	P	Pn	17 12 33.6	+1.1
SRBI	Singaraja	5.54	297	P	Pn	17 12 38.5	+2.7
	0.3nm38nm,0.9s						
KAPI	Kappang	5.63	355	LR	LR	17 15 13.8	
	comp=Z,126nm,18.2s,baz=172,slow=46						
KAPI	Kappang	5.63	355	P	Pn	17 12 23.4	-14
BNSI	Bone	6.22	359	P	Pn	17 12 46.8	+1.7
	0.1nm18nm,0.8s						
JAGI	Jajag, Banyuwa	6.34	290	P	Pn	17 12 48.2	+1.4
JAGI	Jajag, Banyuwa	6.34	290	P	Pn	17 12 46.5	-0.3
GMJI	Gumukmas	7.07	289	P	Pn	17 12 57.7	+0.9
WRA	Warramunga Arr	16.46	126	Pn	Pn	17 15 06.2	+1.9
	0.3nm,0.3s,baz=304,slow=14,SNR=3.0						
WRA				Sn	Sn	17 17 52.3	-14
	0.2nm,0.3s,baz=293,slow=22,SNR=2.4						
	1.2nm,0.8s						
ASAR	Alice Springs	18.39	136	P	Pn	17 15 30.9	+2.8
	0.2nm,0.3s,baz=314,slow=12,SNR=18						
ASAR				S	Sn	17 18 46.5	-6.3
	1.0nm,0.6s,baz=307,slow=22,SNR=7.3						
	1.0nm,0.6s						
MJAR	Matsushiro Arr	49.92	19	P	P	17 20 04.5	-1.8
	0.8nm,0.7s,baz=185,slow=8.0,SNR=4.3						
	0.8nm,0.7s						
SONM	Songino Array	59.51	349	P	P	17 21 15.6	-0.2
	0.4nm,0.3s,baz=154,slow=8.0,SNR=2.9						
	0.4nm,0.3s						
MKAR	Makanchi Array	66.46	333	P	P	17 22 02.0	+0.1
	0.3nm,0.4s,baz=152,slow=6.5,SNR=5.1						
	0.3nm,0.4s						
KURBB	Kurchatov Arra	70.97	333	P	P	17 22 30.3	+0.4
	0.2nm,0.5s,baz=135,slow=6.2,SNR=2.9						
	0.2nm,0.5s						

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*NEIC **01** 17:14:29.2±2.1, 8°.07N±0°.08×126°.61E±0°.09, h49^{km}±7^{km}, mb4.5/31, Error ellipse: s-maj=13.2km s-min=11.9km az=67.0*
*IDC **01** 17:14:33.3±1.8, 7°.97N×126°.65E, h90^{km}±18^{km}, mb3.6/15, mbtmp4.0/16, MS3.1/7, Error ellipse: s-maj=25.5km s-min=13.5km az=84.0*
ISC 01 17:14:30.5±0.4**,8°.02N**±0°.06×**126°.61E**±0°.08**,h68**^{km}**,n72, **σ**1^{s}31**/63**,mb4.3**/29**,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.39	227	Pn	Pn	17 14 53.1	-0.9
DAV	Davao City (W)	1.39	227	P	Pn	17 14 56.3	+2.3
	295nm,0.4s,baz=29,slow=2.1,SNR=8.0						
DAV				S	Sn	17 15 16.2	+4.7
	790nm,0.6s,baz=258,slow=23,SNR=11						
DAV				LR	LR	17 15 33.3	
	comp=Z,547nm,21.0s,baz=6.5,slow=43						
DAV	Davao City (W)	1.39	227	P	Pn	17 14 53.0	-1.0
TNTI	Ternate	7.24	174		Pn	17 16 11.8	-1.9
TGY	Tagaytay City	8.22	318	LR	LR	17 20 04.5	
	comp=Z,143nm,18.9s,baz=146,slow=40						
MYLDM	Lahad Datu	8.53	251	Pn	Pn	17 16 28.2	-3.2
TOLI2	Tolitoli	8.99	221	Pn	Pn	17 16 35.5	-2.1
SAUI	Saumlaki	16.57	163	Pn	Pn	17 18 15.6	-3.0
JAY	Jayapura	17.52	126	LR	LR	17 23 33.6	
	comp=Z,86nm,21.6s,baz=9.0,slow=31						
GUMO	Guam	18.77	71	LR	LR	17 24 54.6	
	comp=Z,29nm,21.1s,baz=130,slow=33						
JOW	Kunigami	18.78	5	P	Pn	17 18 46.5	+0.9
	15nm,0.6s,baz=216,slow=8.6,SNR=7.4						
MTN	Manton Dam	21.20	168	P	P	17 19 10.9	+0.2
KNRA	Kununurra	23.64	175	P	P	17 19 34.8	-1.0
KNRA				IAmb	IAmb	17 19 39.6	
	comp=Z,12nm,0.9s						
JNU	Nakatsue	25.29	8	P	P	17 19 48.4	-2.4
JNU				IAmb	IAmb	17 19 53.5	
	comp=Z,18nm,0.9s						
KULM	Kulim	25.92	266	P	P	17 19 55.1	-1.6
KULM				IAmb	IAmb	17 19 59.0	
	comp=Z,23nm,1.5s						
FITZ	Fitzroy Crossi	25.96	182	P	P	17 19 56.8	-0.1
WRA	Warramunga Arr	28.81	165	P	P	17 20 22.9	+0.5
	comp=Z,0.3nm,0.6s,baz=343,slow=9.9,SNR=1.7						
	comp=Z,0.3nm,0.6s						
KSRS	Korea Array	29.33	2	P	P	17 20 27.1	+0.3
	comp=Z,0.6nm,0.4s,baz=167,slow=9.8,SNR=4.9						
KSRS				LR	LR	17 35 27.8	
	comp=Z,10nm,18.4s,baz=170,slow=43						
	comp=Z,0.6nm,0.4s						
MJAR	Matsushiro Arr	30.30	19	P	P	17 20 35.3	-0.2
	comp=Z,0.7nm,0.7s,baz=189,slow=9.3,SNR=4.0						
	comp=Z,0.7nm,0.7s						
AS31	Alice Springs	32.28	167	P	P	17 20 52.3	-0.8
ASAR	Alice Springs	32.28	167	P	P	17 20 52.5	-0.6
ASAR	Alice Springs	32.28	167	P	P	17 20 52.8	-0.3
	comp=Z,0.3nm,0.5s,baz=346,slow=6.9,SNR=6.2						
	comp=Z,0.3nm,0.5s						
USRK	Ussuriysk Ar.	36.35	7	P	P	17 21 29.5	+1.6
	comp=Z,7.6nm,0.7s,baz=185,slow=7.5,SNR=12						
	comp=Z,7.6nm,0.7s						
ASAJ	Asahikawa	38.57	19	LR	LR	17 37 10.3	
	comp=Z,21nm,20.3s,baz=124,slow=35						
H11S3	WAKE ISLAND Hy	40.29	71	T	T	18 05 21.5	
	baz=259,slow=75,SNR=16						
H11S1	WAKE ISLAND Hy	40.30	71	T	T	18 05 23.2	
	baz=259,slow=75,SNR=8.3						
H11S2	WAKE ISLAND Hy	40.30	71	T	T	18 05 23.2	
	baz=259,slow=75,SNR=7.4						
H11N1	WAKE ISLAND Hy	40.69	69	T	T	18 06 00.2	
	baz=256,slow=75,SNR=22						
H11N2	WAKE ISLAND Hy	40.70	69	T	T	18 05 56.3	
	baz=256,slow=75,SNR=9.7						
H11N3	WAKE ISLAND Hy	40.71	69	T	T	18 06 01.7	
	baz=256,slow=75,SNR=18						
BBOO	Buckleboo	41.59	168	P	P	17 22 11.6	-0.2
BBOO				IAmb	IAmb	17 22 42.5	
	comp=Z,9.6nm,1.1s						
NWAO	Narrogin (SRO)	41.68	192	P	P	17 22 14.1	+1.5
NWAO				IAmb	IAmb	17 22 52.0	
	comp=Z,18nm,1.1s						
STKA	Stephens Creek	42.17	161	P	P	17 22 17.1	+0.4
STKA	Stephens Creek	42.17	161	P	P	17 22 16.9	+0.3
	comp=Z,1.3nm,0.7s,baz=323,slow=8.8,SNR=3.0						
	comp=Z,1.3nm,0.7s						
EVN	Everest	42.46	303	P	P	17 22 18.6	-1.2
PINNC	Pines Island,	50.25	128	P	P	17 23 21.7	+1.5

PEA0B	**Petropavlovsk-**	**51.55**	**23**	P	**P**	**17 23 30.6**	**+1.1**
PETK	**Petropavlovsk-**	**51.55**	**23**	P	**P**	**17 23 31.3**	**+1.7**
PETK	**Petropavlovsk-**	**51.55**	**23**	P	**P**	**17 23 30.6**	**+1.0**
	comp=Z,1.8nm,0.7s,baz=202,slow=2.7,SNR=6.6						
	comp=Z,1.8nm,0.7s						
KAAM	**Kaadhehdhoo**	**53.94**	**265**	P	**P**	**17 23 49.0**	**+1.3**
MKAR	**Makanchi Array**	**54.02**	**324**	P	**P**	**17 23 47.9**	**0.0**
MKAR				PcP	**PcP**	**17 24 51.9**	**-0.3**
MKAR	**Makanchi Array**	**54.02**	**324**	P	**P**	**17 23 49.0**	**+1.1**
	comp=Z,1.8nm,0.7s,baz=119,slow=8.1,SNR=17						
MKAR				PcP	**PcP**	**17 24 53.4**	**+1.2**
	comp=Z,0.7nm,0.7s,baz=116,slow=5.6,SNR=4.4						
	comp=Z,1.8nm,0.7s						
MAKZ	**Makanchi**	**54.21**	**323**	P	**P**	**17 23 49.2**	**-0.1**
MA2	**Magadan**	**54.61**	**15**	P	**P**	**17 23 52.5**	**+0.6**
MA2				IAmb	IAmb	17 23 54.8	
	comp=Z,5.4nm,0.8s						
NIL	**Nilore**	**55.29**	**305**	P	**P**	**17 23 56.9**	**-0.4**
NIL				IAmb	IAmb	17 24 00.1	
	comp=Z,7.9nm,1.1s						
ZALV	**Zalesovo Beam**	**56.76**	**332**	P	**P**	**17 24 06.6**	**-0.8**
ZALV	**Zalesovo Beam**	**56.76**	**332**	P	**P**	**17 24 07.3**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=108,slow=9.5,SNR=3.6						
	comp=Z,0.5nm,0.4s						
AAK	**Ala-Archa**	**57.16**	**316**	LR	LR	17 50 16.7	
	comp=Z,57nm,21.6s,baz=100,slow=38						
KURK	**Kurchatov**	**58.11**	**326**	P	**P**	**17 24 16.3**	**-0.7**
KURK				IAmb	IAmb	17 24 18.5	
	comp=Z,3.3nm,1.1s						
KURBB	**Kurchatov Arra**	**58.11**	**326**	P	**P**	**17 24 17.8**	**+0.8**
	comp=Z,2.1nm,0.8s,baz=126,slow=6.2,SNR=19						
	comp=Z,2.1nm,0.8s						
KK31	**Karatay Array**	**60.07**	**315**	P	**P**	**17 24 30.9**	**+0.1**
KKAR	**Karatay Array**	**60.07**	**315**	P	**P**	**17 24 30.5**	**-0.2**
KKAR	**Karatay Array**	**60.07**	**315**	P	**P**	**17 24 30.4**	**-0.4**
KKAR				IAmb	IAmb	17 24 32.3	
	comp=Z,1.9nm,1.1s						
TIXI	**Tiksi**	**63.59**	**1**	P	**P**	**17 24 53.9**	**+0.2**
TIXI				IAmb	IAmb	17 24 55.3	
	comp=Z,3.1nm,0.7s						
TIXI	**Tiksi**	**63.59**	**1**	LR	LR	17 53 45.1	
	comp=Z,14nm,20.2s,baz=192,slow=37						
GSTR	**Great Sitkin T**	**63.97**	**35**	P	**P**	**17 24 55.5**	**-1.2**
NRIK	**Noril'sk**	**66.27**	**346**	P	**P**	**17 25 10.8**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=122,slow=7.3,SNR=4.5						
	comp=Z,1.2nm,0.5s						
ABKAR	**Akbulak array**	**68.80**	**320**	P	**P**	**17 25 26.5**	**-1.1**
L14K	**Kuka Creek**	**73.79**	**28**	P	**P**	**17 25 57.9**	**+0.5**
L14K				IAmb	IAmb	17 26 29.5	
	comp=Z,9.4nm,1.4s						
N14K	**Kuskokwak Cree**	**73.96**	**30**	P	**P**	**17 25 58.0**	**-0.4**
M14K	**Bethel**	**74.00**	**29**	P	**P**	**17 25 59.6**	**+0.9**
C19K	**Lookout Ridge**	**76.80**	**21**	P	**P**	**17 26 14.8**	**+0.2**
C19K				IAmb	IAmb	17 26 19.3	
	comp=Z,3.7nm,0.9s						
D19K	**Kuna River**	**77.20**	**21**	P	**P**	**17 26 17.5**	**+0.7**
D19K				IAmb	IAmb	17 26 20.0	
	comp=Z,7.6nm,1.2s						
D20K	**Etivluk River**	**77.78**	**21**	P	**P**	**17 26 22.3**	**+2.2**
D20K				IAmb	IAmb	17 26 30.1	
	comp=Z,5.4nm,1.3s						
KDAK	**Kodiak Island**	**78.36**	**33**	P	**P**	**17 26 24.1**	**+0.7**
B22K	**Teshekpuk Lake**	**79.12**	**20**	P	**P**	**17 26 28.2**	**+0.9**
MLY	**Manley**	**79.68**	**25**	P	**P**	**17 26 31.8**	**+1.1**
ILAR	**Eielson Array**	**81.31**	**26**	P	**P**	**17 26 40.2**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=257,slow=6.3,SNR=4.4						
	comp=Z,0.3nm,0.7s						
I28M	**Miner Creek**	**84.21**	**25**	P	**P**	**17 26 55.6**	**+1.2**
I28M				IAmb	IAmb	17 26 59.0	
	comp=Z,5.3nm,1.1s						
ARCES	**ARCESS Array B**	**86.41**	**340**	P	**P**	**17 27 04.7**	**-0.5**
	comp=Z,4.3nm,0.9s,baz=102,slow=5.1,SNR=3.9						
	comp=Z,4.3nm,0.9s						
VNDA	**Vanda**	**87.67**	**173**	P	**P**	**17 27 10.3**	**-0.7**
	comp=Z,0.6nm,1.0s,baz=315,slow=5.1,SNR=2.2						
	comp=Z,0.6nm,1.0s						
FINES	**FINESS Array B**	**88.02**	**332**	P	**P**	**17 27 13.2**	**+0.1**
	comp=Z,0.9nm,0.4s,baz=70,slow=4.9,SNR=16						
	comp=Z,0.9nm,0.4s						

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*BEO **01** 17:14:51.9±0.7, 40°.31N×20°.98E, h0^{km}, ML2.6/7*
*TIR **01** 17:14:52.9, 40°.46N×20°.75E, h5^{km}±1^{km}, Ml2.9/7*
*THE **01** 17:14:53.8, 40°N±2°×2°1E±°, h6^{km}±2^{km}, M2.5/9, MLh2.5/9*
*ATH **01** 17:14:54.1, 40°.41N×20°.85E, h8^{km}±2^{km}, ML2.7/13, Manual Solution by A.Agalos First location: 2019/06/01 17:15:57, This location: 2019/06/01 17:43:28 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

ISC 01 17:14:53.9±0.9, **40°.46N**±0°.02×**20°.83E**±0°.02, **h7**^{km}±7^{km}, **n62**, σ**0ˢ.83**/86, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	**0.17**	**350**	Pg	**Pg**	**17 14 56.4**	**-1.0**
KBN				Sg	**Sg**	**17 14 58.8**	**-1.1**
KBN				AML	AML	17 14 59.6	
	15nm,0.4s						
NEST	**Nestorio**	**0.17**	**104**	Pg	**Pg**	**17 14 58.0**	**+0.5**
NEST				Sg	**Sg**	**17 15 01.6**	**+1.7**
NEST				AML	AML	17 15 02.6	
	9.6nm,0.2s						
NEST	**Nestorio**	**0.17**	**104**	P	**Pg**	**17 14 58.0**	**+0.5**
NEST				S	**Sg**	**17 15 01.1**	**+1.1**
NEST	**Nestorio**	**0.17**	**104**	P	**Pg**	**17 14 58.0**	**+0.5**
NEST				S	**Sg**	**17 15 00.1**	**+0.1**
LSK	**Leskovik**	**0.35**	**210**	Pg	**Pg**	**17 14 59.4**	**-1.4**
LSK				Sg	**Sg**	**17 15 05.0**	**-0.4**
LSK				AML	AML	17 15 06.9	
	9.0nm,0.2s						
PENT	**Pentalofos**	**0.35**	**137**	P	**Pg**	**17 15 00.8**	**0.0**
PENT				S	**Sg**	**17 15 04.5**	**-0.9**
KPRO	**Kipourio**	**0.65**	**141**	P	**Pg**	**17 15 05.9**	**-0.5**
KPRO				S	**Sb**	**17 15 16.3**	**-0.5**
KPRO	**Kipourio**	**0.65**	**141**	P	**Pg**	**17 15 05.9**	**-0.5**
OHR	**Ohrid**	**0.66**	**358**	P	**Pg**	**17 15 06.3**	**-0.2**
OHR				S	**Sg**	**17 15 15.4**	**+0.3**
OHR	**Ohrid**	**0.66**	**358**	*e*Pg	**Pg**	**17 15 06.2**	**-0.3**
OHR				*e*Sg	**Sb**	**17 15 16.6**	**-0.4**
KZN	**Kozani**	**0.74**	**101**	P	**Pg**	**17 15 07.7**	**-0.3**
JAN	**Janina**	**0.80**	**179**	P	**Pg**	**17 15 08.3**	**-1.0**
SRN	**Sarande**	**0.86**	**228**	Pg	**Pg**	**17 15 09.6**	**-0.8**
SRN				Sg	**Sg**	**17 15 21.5**	**0.0**
SRN				AML	AML	17 15 24.7	
	0.5nm,0.4s						
NASA	**Naoussa**	**0.96**	**79**	P	**Pb**	**17 15 12.4**	**-0.4**
KTI	**Kastanea**	**0.99**	**93**	P	**Pg**	**17 15 12.4**	**-0.4**
IGT	**Igoumenitsa**	**1.00**	**203**	Pg	**Pg**	**17 15 13.0**	**0.0**
IGT				Sg	**Sb**	**17 15 27.1**	**+0.3**
IGT	**Igoumenitsa**	**1.00**	**203**	P	**Pg**	**17 15 12.4**	**-0.6**
IGT				S	**Sg**	**17 15 26.5**	**+0.5**
IGT	**Igoumenitsa**	**1.00**	**203**	P	**Pg**	**17 15 12.5**	**-0.6**
KEK	**Kerkira**	**1.08**	**227**	P	**Pb**	**17 15 15.2**	**+0.3**
TIR	**Tirane**	**1.15**	**321**	Pn	**Pg**	**17 15 15.2**	**-0.8**
TIR				Sn	**Sg**	**17 15 31.0**	**+0.1**
TIR				AML	AML	17 15 39.4	
	0.5nm,0.5s						
TIR	**Tirane**	**1.15**	**321**	*e*Pg	**Pg**	**17 15 15.1**	**-0.8**
TIR				*e*Sg	**Sn**	**17 15 35.4**	**+3.0**
TIR	**Tirane**	**1.15**	**321**	P	**Pn**	**17 15 16.9**	**+0.6**
TETR	**Tetrakomo, Epi**	**1.16**	**163**	P	**Pg**	**17 15 15.1**	**-1.1**
PHP	**Peshkopia**	**1.26**	**347**	Pg	**Pg**	**17 15 17.5**	**-0.5**
THL	**Klokotos Trika**	**1.27**	**134**	P	**Pn**	**17 15 17.0**	**-1.1**
THL				S	**Sn**	**17 15 35.2**	**-0.2**
THL	**Klokotos Trika**	**1.27**	**134**	P	**Pn**	**17 15 16.9**	**-1.1**
TYRN	**Tyrnavos**	**1.31**	**124**	P	**Pn**	**17 15 18.0**	**-0.5**
TYRN				S	**Sn**	**17 15 35.9**	**-0.4**
TYRN	**Tyrnavos**	**1.31**	**124**	P	**Pn**	**17 15 18.0**	**-0.5**
VAY	**Valandovo**	**1.58**	**56**	P	**Pn**	**17 15 22.3**	**+0.1**
VAY				S	**Sb**	**17 15 43.1**	**-0.4**
VAY	**Valandovo**	**1.58**	**56**	*e*Pn	**Pn**	**17 15 22.0**	**-0.2**
VAY				*e*Sn	**Sb**	**17 15 43.4**	**-0.1**
TSLK	**Tsoukalades, L**	**1.64**	**185**	P	**Pn**	**17 15 23.2**	**+0.2**
LKD2	**Lefkada island**	**1.67**	**185**	Pn	**Pg**	**17 15 27.4**	**+1.5**
LKD2				Sn	**Sb**	**17 15 46.0**	**-0.1**
LKD2				AML	AML	17 15 57.2	
	0.4nm,0.5s						
EVR	**Evrytania**	**1.71**	**153**	P	**Pn**	**17 15 23.9**	**-0.3**
KNT	**Kendrikon**	**1.72**	**65**	P	**Pn**	**17 15 23.8**	**-0.5**
KNT	**Kendrikon**	**1.72**	**65**	P	**Pn**	**17 15 23.9**	**-0.3**
PUK	**Puka**	**1.73**	**336**	Pn	**Pg**	**17 15 26.8**	**-0.3**
PUK				Sn	**Sg**	**17 15 50.5**	**+0.9**
PUK				AML	AML	17 15 55.2	
	0.8nm,0.6s						
HORT	**Hortiatis**	**1.74**	**85**	P	**Pn**	**17 15 24.3**	**-0.2**
HORT	**Hortiatis**	**1.74**	**85**	P	**Pn**	**17 15 24.0**	**-0.5**
MAKR	**Makrakomi, Fth**	**1.76**	**145**	P	**Pn**	**17 15 24.4**	**-0.3**
EVGI	**Lefkada island**	**1.84**	**184**	P	**Pn**	**17 15 26.4**	**+0.6**
AGG	**Agios Georgios**	**1.84**	**141**	P	**Pn**	**17 15 25.7**	**-0.1**
AGG	**Agios Georgios**	**1.84**	**141**	P	**Pn**	**17 15 25.8**	**-0.1**
SCTE	**Santa Cesarea**	**1.85**	**259**	P	**Pn**	**17 15 25.9**	**0.0**
PVO	**Paravola**	**1.92**	**163**	P	**Pn**	**17 15 26.8**	**0.0**
SOH	**Sokhos**	**1.96**	**78**	P	**Pn**	**17 15 27.7**	**+0.2**
PLG	**Polygyros**	**2.00**	**92**	P	**Pn**	**17 15 28.9**	**+0.8**
PLG	**Polygyros**	**2.00**	**92**	P	**Pn**	**17 15 28.0**	**-0.1**
FSK	**Fiskardo**	**2.00**	**186**	P	**Pn**	**17 15 28.5**	**+0.4**
NEO	**Neokhori**	**2.17**	**121**	P	**Pn**	**17 15 29.6**	**-0.8**
EFP	**Efpalio**	**2.19**	**157**	P	**Pn**	**17 15 31.0**	**+0.3**
SRS	**Serrai**	**2.20**	**72**	P	**Pn**	**17 15 31.0**	**+0.1**
PDG	**Podgorica**	**2.30**	**330**	*e*Pn	**Pn**	**17 15 33.2**	**+1.1**
PDG				*e*Sn	**Sb**	**17 16 04.7**	**+0.5**
BOSS	**Bosilegrad**	**2.39**	**31**	*e*Pn	**Pn**	**17 15 33.3**	**-0.1**
BARS	**Barje**	**2.47**	**17**	*e*Pn	**Pn**	**17 15 34.6**	**+0.1**
BARS				*e*Sn	**Sn**	**17 16 06.4**	**+1.4**
SELS	**Selova**	**2.77**	**4**	*e*Pn	**Pn**	**17 15 39.0**	**+0.3**
SELS				*e*Sn	**Sb**	**17 16 16.1**	**-1.7**
SJES	**Sjenica**	**2.87**	**347**	*e*Pn	**Pn**	**17 15 40.9**	**+0.7**
SJES				*e*Sn	**Sb**	**17 16 18.5**	**-2.4**
ZAPS	**Zavoj**	**3.12**	**25**	*e*Pn	**Pn**	**17 15 44.4**	**+0.9**
IVAS	**Ivanjica**	**3.16**	**351**	*e*Pn	**Pn**	**17 15 44.5**	**+0.5**
BOVS	**Bovan**	**3.24**	**11**	*e*Pn	**Pn**	**17 15 44.6**	**-0.5**
ZAGS	**Zajecar**	**3.51**	**17**	*e*Pn	**Pn**	**17 15 48.1**	**-0.7**
KUBS	**Kucevo**	**4.00**	**9**	*e*Pn	**Pn**	**17 15 53.3**	**-2.3**
TEKS	**Tekeris**	**4.20**	**347**	*e*Pn	**Pn**	**17 15 59.4**	**+1.1**

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*IDC **01** 17:16:01.1±1.2, 2°.65N×128°.84E, h0^{km}, mb3.6/5, mbtmp3.6/5, MS3.1/1, Error ellipse: s-maj=69.1km s-min=21.8km az=75.0*
*DJA **01** 17:16:02.5±1.3, 3°N±8°×12°9E±1°1, h10^{km}, M3.6/4, MLv3.6/4*

ISC 01 17:16:05.8±1.2, **2°.6N**±0°.1×**128°.8E**±0°.2, **h35**^{km}, **n7**, σ**1ˢ.02**/7, **mb3.5**/5, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.34**	**219**	P	**Pn**	**17 16 40.6**	**-1.2**
TNTI				S	**Sn**	**17 17 10.2**	**+0.9**
PMG	**Port Moresby**	**21.81**	**123**	LR	LR	17 29 24.5	
	comp=Z,51nm,20.6s,baz=260,slow=37						
WRA	**Warramunga Arr**	**23.05**	**167**	P	**P**	**17 21 09.2**	**+0.9**
	0.7nm,0.5s,baz=345,slow=11,SNR=1.9						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**26.58**	**170**	P	**P**	**17 21 40.7**	**-0.2**
	0.5nm,0.6s,baz=345,slow=8.2,SNR=4.4						
	0.5nm,0.6s						
MJAR	**Matsushiro Arr**	**34.86**	**13**	P	**P**	**17 22 53.3**	**-0.5**
	0.4nm,0.6s,baz=188,slow=10.0,SNR=2.0						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**59.68**	**325**	P	**P**	**17 26 07.7**	**+0.9**
	0.6nm,0.5s,baz=115,slow=8.8,SNR=6.8						
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**63.82**	**327**	P	**P**	**17 26 34.8**	**+0.3**
	0.6nm,0.5s,baz=128,slow=6.2,SNR=7.9						
	0.6nm,0.5s						

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*TIR **01** 17:18:42.6, 40°.44N×20°.75E, h3^{km}±1^{km}, Ml3.0/5*
*THE **01** 17:18:43.5, 40°N±2°×2°1E±°, h3^{km}±2^{km}, M2.7/14, MLh2.7/14*
*ATH **01** 17:18:43.9, 40°.43N×20°.85E, h9^{km}±2^{km}, ML2.7/12, Manual Solution by A.Agalos First location: 2019/06/01 17:19:49, This location: 2019/06/01 17:54:35 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

ISC 01 17:18:43.7±1.0, **40°.44N**±0°.02×**20°.82E**±0°.02, **h7**^{km}±8^{km}, **n48**, σ**0ˢ.86**/71, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEST	**Nestorio**	**0.18**	**98**	Pg	**Pg**	**17 18 47.8**	**+0.5**
NEST				Sg	**Sg**	**17 18 51.4**	**+1.5**
NEST				AML	AML	17 18 52.4	
	9.9nm,0.3s						
NEST	**Nestorio**	**0.18**	**98**	P	**Pg**	**17 18 47.9**	**+0.5**
NEST				S	**Sg**	**17 18 49.3**	**-0.5**
NEST	**Nestorio**	**0.18**	**98**	P	**Pg**	**17 18 47.5**	**+0.1**
NEST				S	**Sg**	**17 18 50.3**	**+0.5**
KBN	**Korca**	**0.19**	**353**	Pg	**Pg**	**17 18 46.3**	**-1.2**
KBN				Sg	**Sg**	**17 18 49.1**	**-1.0**
KBN				AML	AML	17 18 49.3	
	13nm,0.4s						
KBN				AML	AML	17 18 52.7	
	17nm,0.7s						
PENT	**Pentalofos**	**0.35**	**134**	P	**Pg**	**17 18 50.6**	**+0.1**
KPRO	**Kipourio**	**0.64**	**139**	P	**Pg**	**17 18 55.9**	**-0.2**
KPRO				S	**Sb**	**17 19 05.7**	**-0.8**
KPRO	**Kipourio**	**0.64**	**139**	P	**Pg**	**17 18 55.8**	**-0.3**
KPRO				S	**Sg**	**17 19 04.2**	**-0.1**
OHR	**Ohrid**	**0.67**	**359**	P	**Pg**	**17 18 55.8**	**-0.9**
OHR				S	**Sg**	**17 19 05.3**	**-0.1**
KZN	**Kozani**	**0.74**	**100**	P	**Pg**	**17 18 57.9**	**-0.1**
KZN				S	**Sg**	**17 19 07.9**	**+0.3**
JAN	**Janina**	**0.78**	**178**	P	**Pg**	**17 18 59.0**	**+0.3**
SRN	**Sarande**	**0.84**	**229**	Pn	**Pg**	**17 18 59.3**	**-0.5**
SRN				Sn	**Sg**	**17 19 11.5**	**+0.8**
SRN				AML	AML	17 19 14.3	
	0.8nm,0.4s						
SRN				AML	AML	17 19 16.2	
	1.6nm,0.6s						
IGT	**Igoumenitsa**	**0.98**	**202**	Pn	**Pg**	**17 18 58.0**	**-4.5**
IGT				Sn	**Sn**	**17 19 17.8**	**-0.3**
IGT	**Igoumenitsa**	**0.98**	**202**	P	**Pg**	**17 19 02.4**	**-0.1**
IGT				S	**Sb**	**17 19 16.7**	**+0.5**
IGT	**Igoumenitsa**	**0.98**	**202**	P	**Pg**	**17 19 02.3**	**-0.1**
KTI	**Kastanea**	**0.99**	**92**	P	**Pg**	**17 19 02.6**	**-0.2**
KEK	**Kerkira**	**1.06**	**227**	P	**Pn**	**17 19 05.5**	**+0.4**
TETR	**Tetrakomo, Epi**	**1.15**	**162**	P	**Pb**	**17 19 05.8**	**-0.2**
TIR	**Tirane**	**1.16**	**322**	Pn	**Pg**	**17 19 04.9**	**-1.1**
TIR				Sn	**Sn**	**17 19 25.6**	**+3.0**
THL	**Klokotos Trika**	**1.27**	**133**	P	**Pg**	**17 19 07.2**	**-0.9**
THL				S	**Sb**	**17 19 24.7**	**+0.2**
THL	**Klokotos Trika**	**1.27**	**133**	P	**Pg**	**17 19 07.0**	**-1.0**
THL				S	**Sb**	**17 19 24.9**	**+0.3**
TYRN	**Tyrnavos**	**1.31**	**123**	P	**Pn**	**17 19 08.6**	**+0.1**
TYRN				S	**Sg**	**17 19 25.1**	**-0.6**
TYRN	**Tyrnavos**	**1.31**	**123**	P	**Pg**	**17 19 08.0**	**-0.8**
TYRN				S	**Sb**	**17 19 25.9**	**+0.3**
VAY	**Valandovo**	**1.60**	**56**	P	**Pn**	**17 19 12.5**	**+0.1**
VAY				S	**Sn**	**17 19 32.5**	**-0.8**
TSLK	**Tsoukalades, L**	**1.62**	**184**	P	**Pb**	**17 19 13.9**	**0.0**
TSLK				S	**Sg**	**17 19 35.7**	**0.0**
TSLK	**Tsoukalades, L**	**1.62**	**184**	P	**Pn**	**17 19 13.2**	**+0.5**
LKD2	**Lefkada island**	**1.65**	**184**	P	**Pn**	**17 19 13.9**	**+0.6**
EVR	**Evrytania**	**1.70**	**153**	P	**Pn**	**17 19 13.9**	**-0.1**
EVR				S	**Sg**	**17 19 38.3**	**-0.1**
EVR	**Evrytania**	**1.70**	**153**	P	**Pn**	**17 19 13.9**	**-0.1**
NYDR	**Nydri-Lefkada**	**1.73**	**183**	P	**Pn**	**17 19 14.3**	**+0.1**
KNT	**Kendrikon**	**1.74**	**65**	P	**Pn**	**17 19 14.3**	**-0.1**
KNT				S	**Sn**	**17 19 36.4**	**-0.4**
KNT	**Kendrikon**	**1.74**	**65**	P	**Pn**	**17 19 14.1**	**-0.3**
PUK	**Puka**	**1.75**	**337**	Pn	**Pb**	**17 19 16.4**	**+0.2**
PUK				Sn	**Sg**	**17 19 41.1**	**+1.2**
PUK				AML	AML	17 19 43.5	
	0.8nm,0.8s						
HORT	**Hortiatis**	**1.75**	**84**	P	**Pn**	**17 19 14.4**	**-0.2**
HORT				S	**Sn**	**17 19 37.3**	**+0.1**
HORT	**Hortiatis**	**1.75**	**84**	P	**Pn**	**17 19 14.1**	**-0.6**
MAKR	**Makrakomi, Fth**	**1.75**	**144**	P	**Pn**	**17 19 13.8**	**-0.7**
EVGI	**Lefkada island**	**1.82**	**184**	P	**Pn**	**17 19 15.7**	**+0.2**
AGG	**Agios Georgios**	**1.83**	**140**	P	**Pn**	**17 19 15.8**	**0.0**
AGG	**Agios Georgios**	**1.83**	**140**	P	**Pn**	**17 19 15.6**	**-0.1**
SCTE	**Santa Cesarea**	**1.83**	**259**	P	**Pn**	**17 19 16.0**	**+0.3**
SOH	**Sokhos**	**1.97**	**78**	P	**Pn**	**17 19 16.9**	**-0.7**
SOH	**Sokhos**	**1.97**	**78**	P	**Pn**	**17 19 16.8**	**-0.7**
FSK	**Fiskardo**	**1.99**	**186**	P	**Pn**	**17 19 18.4**	**+0.6**
BCI	**Bajram Curri**	**2.01**	**344**	Pn	**Pb**	**17 19 21.3**	**+0.7**
BCI				Sn	**Sg**	**17 19 48.8**	**+0.6**
BCI				AML	AML	17 19 49.7	
	0.6nm,0.8s						
PLG	**Polygyros**	**2.01**	**91**	P	**Pn**	**17 19 17.4**	**-0.7**
ANX	**Ano Chora**	**2.03**	**155**	P	**Pn**	**17 19 19.0**	**+0.5**
ANX	**Ano Chora**	**2.03**	**155**	P	**Pn**	**17 19 19.0**	**+0.5**
VLS	**Valsamata**	**2.27**	**185**	P	**Pn**	**17 19 21.5**	**-0.2**
PSDA	**Pessada-Kefalo**	**2.33**	**185**	P	**Pn**	**17 19 22.4**	**-0.1**

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*BEO **01** 17:38:10.9±0.9, 40°.29N×20°.77E, h0^{km}, ML2.7/4*
*TIR **01** 17:38:11.1, 40°.41N×20°.73E, h4^{km}±1^{km}, Ml3.1/7*
*ATH **01** 17:38:12.4, 40°.39N×20°.80E, h9^{km}±1^{km}, ML2.6/10, Manual Solution by A.Agalos First location: 2019/06/01 17:39:17, This location: 2019/06/01 18:01:26 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **01** 17:38:13.7, 40°N±11°×2°1E±1°3, h4^{km}±20^{km}, M2.4/6, MLh2.4/6*

ISC 01 17:38:12.0±1.0, **40°.41N**±0°.02×**20°.77E**±0°.02, **h5**^{km}±9^{km}, **n47**, σ**0ˢ.77**/67, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	**0.21**	**3**	Pg	**Pg**	**17 38 15.6**	**-0.6**
KBN				Sg	**Sg**	**17 38 18.7**	**-0.4**
KBN				AML	AML	17 38 19.6	
	18nm,0.4s						
KBN				AML	AML	17 38 20.6	
	8.0nm,0.3s						
NEST	**Nestorio**	**0.21**	**89**	Pg	**Pg**	**17 38 16.6**	**+0.4**
NEST				Sg	**Sg**	**17 38 20.4**	**+1.4**
NEST				AML	AML	17 38 21.9	
	15nm,0.3s						
NEST	**Nestorio**	**0.21**	**89**	P	**Pg**	**17 38 16.7**	**+0.5**
NEST				S	**Sg**	**17 38 19.1**	**+0.1**
NEST	**Nestorio**	**0.21**	**89**	P	**Pg**	**17 38 16.8**	**+0.5**
NEST				S	**Sg**	**17 38 19.2**	**+0.2**
LSK	**Leskovik**	**0.29**	**207**	Pg	**Pg**	**17 38 17.2**	**-0.6**
LSK				Sg	**Sg**	**17 38 21.7**	**+0.1**
LSK				AML	AML	17 38 25.0	
	9.2nm,0.6s						
PENT	**Pentalofos**	**0.35**	**128**	P	**Pg**	**17 38 19.1**	**+0.2**
PENT				S	**Sg**	**17 38 23.4**	**-0.2**
KPRO	**Kipourio**	**0.64**	**135**	P	**Pg**	**17 38 24.0**	**-0.4**
KPRO				S	**Sg**	**17 38 32.7**	**-0.1**
OHR	**Ohrid**	**0.70**	**2**	*e*Pg	**Pg**	**17 38 25.2**	**-0.3**
JAN	**Janina**	**0.76**	**175**	P	**Pg**	**17 38 26.4**	**-0.1**
KZN	**Kozani**	**0.77**	**98**	P	**Pb**	**17 38 27.1**	**-0.8**
KZN				S	**Sb**	**17 38 37.3**	**-1.4**
SRN	**Sarande**	**0.80**	**228**	Pg	**Pg**	**17 38 27.1**	**-0.2**
SRN				Sn	**Sg**	**17 38 38.9**	**+1.2**
SRN				AML	AML	17 38 42.4	
	0.7nm,0.7s						
IGT	**Igoumenitsa**	**0.94**	**201**	Pn	**Pg**	**17 38 30.0**	**-0.1**
IGT				Sn	**Sb**	**17 38 43.6**	**+0.1**
IGT	**Igoumenitsa**	**0.94**	**201**	P	**Pg**	**17 38 30.2**	**+0.2**
KEK	**Kerkira**	**1.02**	**227**	P	**Pb**	**17 38 32.5**	**+0.3**
TIR	**Tirane**	**1.16**	**324**	Pn	**Pg**	**17 38 32.8**	**-1.5**
TIR				Sn	**Sn**	**17 38 50.8**	**-0.3**
TIR				AML	AML	17 38 55.9	
	0.4nm,0.6s						
TIR	**Tirane**	**1.16**	**324**	*e*Pg	**Pg**	**17 38 33.1**	**-1.2**
THL	**Klokotos Trika**	**1.28**	**131**	P	**Pg**	**17 38 36.1**	**-0.4**
THL				S	**Sn**	**17 38 54.9**	**+1.0**
THL	**Klokotos Trika**	**1.28**	**131**	P	**Pg**	**17 38 35.6**	**-0.9**
THL				S	**Sg**	**17 38 52.9**	**-0.1**
PHP	**Peshkopia**	**1.29**	**349**	Pg	**Pg**	**17 38 36.1**	**-0.8**
PHP				Sg	**Sg**	**17 38 52.9**	**-0.8**
TYRN	**Tyrnavos**	**1.32**	**122**	P	**Pb**	**17 38 37.5**	**+0.3**
TYRN				S	**Sn**	**17 38 56.6**	**+1.5**
TYRN	**Tyrnavos**	**1.32**	**122**	P	**Pg**	**17 38 36.6**	**-0.7**
VAY	**Valandovo**	**1.64**	**56**	*e*Pn	**Pb**	**17 38 42.4**	**-0.3**
VAY				*e*Sn	**Sg**	**17 39 06.3**	**+1.7**
MAKR	**Makrakomi, Fth**	**1.75**	**143**	P	**Pn**	**17 38 42.9**	**-0.1**
PUK	**Puka**	**1.76**	**338**	Pn	**Pb**	**17 38 44.9**	**+0.1**
PUK				Sn	**Sg**	**17 39 09.7**	**+1.2**
PUK				AML	AML	17 39 15.8	
	0.8nm,0.8s						
KNT	**Kendrikon**	**1.78**	**64**	P	**Pn**	**17 38 43.4**	**0.0**
KNT	**Kendrikon**	**1.78**	**64**	P	**Pn**	**17 38 43.2**	**-0.2**
HORT	**Hortiatis**	**1.78**	**83**	P	**Pn**	**17 38 43.1**	**-0.4**
HORT				S	**Sn**	**17 39 06.5**	**-0.1**
HORT	**Hortiatis**	**1.78**	**83**	P	**Pn**	**17 38 42.7**	**-0.8**
SCTE	**Santa Cesarea**	**1.80**	**260**	P	**Pn**	**17 38 43.3**	**-0.3**
AGG	**Agios Georgios**	**1.84**	**139**	P	**Pb**	**17 38 45.3**	**-0.8**
AGG	**Agios Georgios**	**1.84**	**139**	P	**Pn**	**17 38 43.9**	**-0.3**
ULC	**Ulcinj**	**1.93**	**324**	Pn	**Pn**	**17 38 46.5**	**+0.9**
SOH	**Sokhos**	**2.01**	**77**	P	**Pn**	**17 38 46.3**	**-0.2**
BCI	**Bajram Curri**	**2.02**	**345**	Pn	**Pg**	**17 38 50.0**	**-0.8**
BCI				Sn	**Sg**	**17 39 18.1**	**+1.1**
BCI				AML	AML	17 39 21.8	
	0.5nm,0.4s						
BCI				AML	AML	17 39 34.3	
	0.5nm,0.8s						
PLG	**Polygyros**	**2.04**	**90**	P	**Pn**	**17 38 46.0**	**-1.0**
VLS	**Valsamata**	**2.24**	**184**	P	**Pn**	**17 38 49.7**	**0.0**
PDG	**Podgorica**	**2.32**	**331**	*e*Sn	**Sb**	**17 39 23.5**	**+0.4**
BARS	**Barje**	**2.53**	**18**	*e*Pn	**Pn**	**17 38 53.6**	**-0.1**
SELS	**Selova**	**2.82**	**5**	*e*Pn	**Pn**	**17 38 59.1**	**+1.4**
SJES	**Sjenica**	**2.91**	**348**	*e*Pn	**Pn**	**17 39 01.2**	**+2.2**
ZAPS	**Zavoj**	**3.18**	**25**	*e*Pn	**Pn**	**17 39 03.5**	**+0.8**
IVAS	**Ivanjica**	**3.19**	**352**	*e*Pn	**Pn**	**17 39 03.6**	**+0.7**
BOVS	**Bovan**	**3.29**	**12**	*e*Pn	**Pn**	**17 39 03.7**	**-0.5**
ZAGS	**Zajecar**	**3.57**	**17**	*e*Pn	**Pn**	**17 39 08.6**	**+0.7**
ZAGS				*e*Sn	**Sn**	**17 39 51.1**	**+0.7**
TEKS	**Tekeris**	**4.24**	**348**	*e*Pn	**Pn**	**17 39 17.6**	**+0.4**
BOJS	**Bojanci**	**6.50**	**323**	*e*Pn	**Pn**	**17 39 47.6**	**-0.7**
CEY	**Cerknica**	**7.06**	**321**	*e*Pn	**Pn**	**17 39 55.7**	**-0.3**

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*IDC **01** 17:45:36.1±1.0, 2°.50S×138°.63E, h0^{km}, mb3.7/6, mbtmp3.8/8, ML3.8/2, MS1.9/1, Error ellipse: s-maj=28.9km s-min=22.6km az=86.0*
*DJA **01** 17:45:45.1±0.4, 2°S±4°×13°9E±°, h61^{km}±8^{km}, M4.2/6, mb4.3/2, MLv4.1/6*

ISC 01 17:45:44.2±1.0, **2°.7S**±0°.1×**138°.86E**±0°.04, **h67**^{km}±12^{km}, **n14**, σ**1ˢ.54**/21, **mb3.7**/5, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**0.68**	**347**	P	**Pn**	**17 45 58.7**	**0.0**
SMPI				S	**Sn**	**17 46 08.1**	**-1.2**
GENI	**Genyem**	**1.31**	**87**	P	**Pn**	**17 46 08.1**	**+1.6**
GENI				S	**Sn**	**17 46 23.9**	**+0.6**
JAY	**Jayapura**	**1.85**	**86**	Pn	**Pn**	**17 46 14.2**	**+0.4**
	7.1nm,0.3s,baz=237,slow=11,SNR=75						
JAY				Sn	**Sn**	**17 46 36.0**	**-0.3**
	53nm,0.3s,baz=348,slow=23,SNR=22						
JAY				LR	LR	17 46 46.0	
	comp=Z,31nm,20.2s,baz=282,slow=34						
	18nm,0.4s						
JAY	**Jayapura**	**1.85**	**86**	P	**Pn**	**17 46 14.2**	**+0.4**
JAY				S	**Sn**	**17 46 34.4**	**-1.9**
SRPI	**Serui, Papua**	**2.73**	**286**	P	**Pn**	**17 46 26.6**	**+0.8**
SRPI				S	**Sn**	**17 46 56.5**	**-1.2**
BAKI	**Biak**	**3.11**	**298**	P	**Pn**	**17 46 32.2**	**+1.2**
BAKI				S	**Sn**	**17 47 06.9**	**-0.1**
FAKI	**Fak Fak**	**6.61**	**268**	P	**Pn**	**17 47 20.4**	**+1.6**
	0.2nm38nm,1.4s						
WRA	**Warramunga Arr**	**17.74**	**194**	P	**P**	**17 49 47.0**	**+0.2**
	0.7nm,0.3s,baz=18,slow=12,SNR=16						
WRA				S	S	17 52 53.4	-14
	0.5nm,0.7s,baz=1.7,slow=23,SNR=1.5						
	1.0nm,0.4s						
FITZ	**Fitzroy Crossi**	**20.09**	**219**	P	**P**	**17 50 11.8**	**-0.7**
	2.8nm,0.9s,baz=26,slow=6.8,SNR=7.9						
	2.8nm,0.9s						
ASAR	**Alice Springs**	**21.43**	**193**	P	**P**	**17 50 28.1**	**+1.1**
	1.2nm,0.5s,baz=15,slow=10,SNR=48						
ASAR				S	**S**	**17 54 16.6**	**-4.7**
	0.3nm,0.8s,baz=17,slow=23,SNR=1.8						
	1.2nm,0.5s						
MKAR	**Makanchi Array**	**69.84**	**322**	P	**P**	**17 56 48.2**	**+0.4**
	0.5nm,0.6s,baz=111,slow=7.9,SNR=6.6						
	0.5nm,0.6s						
VNDA	**Vanda**	**75.82**	**175**	P	**P**	**17 57 23.9**	**+1.3**
	0.5nm,0.5s,baz=325,slow=2.7,SNR=6.1						
	0.5nm,0.5s						
BVAR	**Borovoye Array**	**79.35**	**325**	P	**P**	**17 57 41.9**	**-0.9**
	0.5nm,0.6s,baz=116,slow=6.8,SNR=4.2						
	0.5nm,0.6s						
QSPA	**South Pole Qui**	**87.29**	**180**	P	**P**	**17 58 23.7**	**+0.2**
	0.7nm,0.8s,baz=288,slow=3.2,SNR=8.1						
	0.7nm,0.8s						

*NEIC **01** 17:55:43.4±1.8, 14°.41S±0°.06×71°.17W±0°.09, h31^{km}±3^{km}, mb4.6/76, Error ellipse: s-maj=12.8km s-min=9.0km az=85.0*

*VAO **01** 17:55:44.8±0.8, 14°.25S×70°.93W, h0^{km}, mb4.4*

*IDC **01** 17:55:46.9±1.7, 14°.48S×71°.12W, h67^{km}±15^{km}, mb3.8/11, mbtmp4.0/17, MS3.3/12, Error ellipse: s-maj=20.3km s-min=10.7km az=48.0*

ISC 01 17:55:43.6±0.4**, 14°.46S**±0°.05×**71°.19W**±0°.06**, h35^{km}, n148, σ1^{s}.35**/139**, mb4.5**/43**, MS3.4**/8**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	3.46	122		Pn	17 56 37.4	+1.8
LPAZ	La Paz	3.46	122	P	Pn	17 56 39.1	+3.4
	27nm,0.6s,baz=297,slow=9.1,SNR=54						
LPAZ				S	Sn	17 57 18.6	+2.8
	22nm,0.5s,baz=140,slow=18,SNR=1.4						
LPAZ				LR	LR	17 58 10.6	
	comp=Z,169nm,18.0s,baz=328,slow=42						
LPAZ	La Paz	3.46	122	*e*P	Pn	17 56 39.3	+3.7
PB18	Visviri	3.52	152		Pn	17 56 37.9	+1.5
PB16	IPOC Station P	4.18	158		Pn	17 56 46.9	+1.4
PB11	IPOC Station P	5.47	165		Pn	17 57 02.8	0.0
GO01	Chusmiza	5.52	160		Pn	17 57 04.3	+0.5
TA02	Huaiquique	5.87	170		Pn	17 57 08.9	+0.8
PB08	IPOC Station P	5.98	161		Pn	17 57 11.1	+1.1
NNA	Nana	6.03	293	P	Pn	17 57 12.7	+2.3
	8.2nm,0.5s,baz=148,slow=7.3,SNR=3.8						
TA01	Diego Aracena	6.15	171	Pn	Pn	17 57 13.6	+1.6
PB01	IPOC Station P	6.75	166	Pn	Pn	17 57 22.3	+2.0
CZSB	Cruzeiro do Su	6.85	347		Pn	17 57 21.9	+0.3
CZSB	Cruzeiro do Su	6.85	347	*e*P	Pn	17 57 23.7	+2.0
PB09	IPOC Station P	7.53	166	Pn	Pn	17 57 32.4	+1.3
PB03	IPOC Station P	7.67	170		Pn	17 57 33.8	+0.7
PB06	IPOC Station P	8.35	170	Pn	Pn	17 57 42.7	+0.4
PB05	IPOC Station P	8.40	174	Pn	Pn	17 57 44.7	+1.6
PB10	IPOC Station P	9.03	176	Pn	Pn	17 57 53.0	+1.4
SAML	Samuel	9.56	56		Pn	17 57 57.8	-1.1
SAML	Samuel	9.56	56	*e*P	Pn	17 57 58.5	-0.3
SIV	San Ignacio	9.88	100	P	Pn	17 58 04.1	+0.8
	14nm,0.9s,baz=281,slow=12,SNR=29						
SIV				S	Sn	17 59 54.9	+1.8
	4.0nm,0.6s,baz=167,slow=14,SNR=1.5						
SIV				LR	LR	18 01 46.2	
	comp=Z,79nm,19.9s,baz=294,slow=37						
PB14	IPOC Station P	10.14	176	Pn	Pn	17 58 07.0	-0.1
ATAH	Atahualpa	10.15	315	P	Pn	17 58 12.4	+5.1
	2.8nm,0.8s,baz=132,slow=17,SNR=2.4						
ATAH				S	Sn	18 00 05.3	+5.1
	2.8nm,0.6s,baz=94,slow=14,SNR=1.6						
TBTG	Tabatinga, AM	10.28	7	*e*P	Pn	17 58 10.9	+2.1
BBSD	Serra de San D	10.54	106	*e*P	Pn	17 58 13.1	+0.9
VILB	Vilhena	10.78	83		Pn	17 58 12.9	-2.8
VILB	Vilhena	10.78	83	*e*P	Pn	17 58 17.6	+2.0
AC01	Pan de Azucar	11.64	177	Pn	Pn	17 58 27.9	+0.6
PTLB	Pontes e Lacer	11.69	96		Pn	17 58 27.2	-0.8
PTLB	Pontes e Lacer	11.69	96	*e*P	Pn	17 58 28.8	+0.8
AC02	Maricunga	12.47	171	Pn	Pn	17 58 37.9	-1.2
TEFE	Tefe	12.65	31	*e*P	Pn	17 58 42.6	+1.4
COHC	Cochancay	14.33	325	Pn	Pn	17 59 03.4	-0.8
AC05	El Transito	14.34	177	Pn	Pn	17 59 04.7	+0.5
PDRB	Porto dos Gac	14.37	80	*e*P	Pn	17 59 05.9	+1.3
SALV	Santo Antonio	15.03	97	*e*P	Pn	17 59 15.8	+2.3
MACA	Manacapuru-AM	15.28	44	Pn	Pn	17 59 14.4	-2.4
MACA				IAmb	IAmb	17 59 43.2	
	comp=Z,34nm,0.8s						
AQDB	Aquidauana	15.94	114	Pn	Pn	17 59 24.1	-1.2
OTAV	Otavalo	16.27	333	Pn	Pn	17 59 29.0	-1.1
OTAV	Otavalo	16.27	333	*e*P	P	17 59 34.8	+2.0
FLOC	Florencia	16.54	344	Pn	Pn	17 59 32.8	-0.3
NPGB	Novo Progresso	17.20	66	*e*P	P	17 59 43.5	+0.8
CFA	Coronel Fontan	17.28	172	P	Pn	17 59 42.5	+0.3
	comp=Z,1.9nm,0.9s,baz=16,slow=12,SNR=3.5						
CPUP	Villa Florida	17.54	134	P	Pn	17 59 44.5	-1.0
	comp=Z,0.2nm,0.5s,baz=354,slow=6.2,SNR=1.9						
CPUP				LR	LR	18 08 08.0	
	comp=Z,32nm,21.2s,baz=142,slow=42						
ITTB	Itaituba	18.23	58	*e*P	P	17 59 54.9	+0.9
MT08	Bocatoma Ro	18.93	177	P	P	18 00 02.6	+0.8
MT13	San Alfonso	19.22	178	P	P	18 00 05.8	+0.9
LMEL	Las Melosas	19.33	178	P	P	18 00 06.3	+0.3
ROSC	El Rosal	19.42	351	LR	LR	18 08 09.6	
	comp=Z,160nm,18.4s,baz=96,slow=38						
BO04	La Punta	19.45	179	P	P	18 00 08.2	+0.9
SNDB	Serra Nova Dou	19.52	85	*e*P	Pn	18 00 11.2	+1.6
BOAV	Boa Vista	19.80	33		P	18 00 10.2	-1.0
BOAV	Boa Vista	19.80	33	*e*P	Pn	18 00 14.6	+1.7
ITQB	Itaqui	20.25	141	P	P	18 00 14.9	-1.1
ITQB				IAmb	IAmb	18 00 26.3	
	comp=Z,25nm,1.2s						
RUSC	La Rusia	20.30	355	P	P	18 00 15.8	-1.4
BDFB	Brasilia	22.41	96	LR	LR	18 10 05.5	
	comp=Z,122nm,19.0s,baz=314,slow=38						
BAUV	El Baul	23.46	8	P	P	18 00 48.7	-1.4
BAUV				IAmb	IAmb	18 01 16.2	
	comp=Z,35nm,1.2s						
PLCA	Paso Flores	26.18	179	P	P	18 01 14.6	-0.4
	comp=Z,2.5nm,0.7s,baz=352,slow=10,SNR=5.3						
	comp=Z,2.5nm,0.7s						
MDP	Montagnes des	26.76	45	LR	LR	18 12 38.2	
	comp=Z,204nm,18.7s,baz=286,slow=38						
SJG	San Juan	32.74	9	LR	LR	18 16 36.3	
	comp=Z,37nm,19.0s,baz=173,slow=38						
MG05	Puerto Natales	37.14	181	P	P	18 02 49.9	-1.0
TKL	Tuckaleechee C	51.25	347	LR	LR	18 28 24.4	
	comp=Z,28nm,18.3s,baz=155,slow=38						
DRIO	Del Rio	52.06	327	P	P	18 04 48.8	-1.4
DRIO				IAmb	IAmb	18 05 19.4	
	comp=Z,3.6nm,0.8s						
MIAR	Mount Ida	53.18	337		P	18 04 57.7	-0.6
MIAR				IAmb	IAmb	18 05 02.3	
	comp=Z,7.1nm,1.1s						
TXAR	Lajitas Array	53.65	324	P	P	18 05 02.1	+0.1
TXAR	Lajitas Array	53.65	324	P	P	18 05 01.9	-0.2
	comp=Z,0.3nm,0.5s,baz=142,slow=7.7,SNR=5.1						
	comp=Z,0.3nm,0.5s						
LCAR	Lake Charles	53.68	340	P	P	18 05 01.3	-0.6
LCAR				IAmb	IAmb	18 05 02.1	
	comp=Z,7.7nm,1.2s						
SMAI	San Martin Ant	53.70	178	P	P	18 05 02.0	+0.3
FCAR	Ozark Folk Cen	53.85	339	P	P	18 05 01.8	-1.4
FCAR				IAmb	IAmb	18 05 03.3	
	comp=Z,4.0nm,0.9s						
PBMO	Poplar Bluff	54.10	341	P	P	18 05 03.5	-1.5
ABTX	Abilene, Hawle	54.15	330	P	P	18 05 03.4	-2.2
ABTX				IAmb	IAmb	18 05 06.8	
	comp=Z,5.3nm,0.7s						
CGM3	Cape Girardeau	54.34	342	P	P	18 05 05.1	-1.7
P53A	Whipple	54.50	350	P	P	18 05 06.0	-1.9
T42A	Van Buren	54.54	340		P	18 05 06.4	-1.8
T42A				IAmb	IAmb	18 05 10.9	
	comp=Z,5.7nm,0.9s						
WTFS	Witchita Falls	54.55	332	P	P	18 05 07.0	-1.3
SIUC	Southern Illin	54.59	342	P	P	18 05 06.8	-1.8
HHAR	Hobbs	54.85	338		P	18 05 09.9	-0.6
HHAR				IAmb	IAmb	18 05 12.5	
	comp=Z,12nm,1.3s						
APMT	Aspermont	54.96	330		P	18 05 11.0	-0.4
APMT				IAmb	IAmb	18 05 15.2	
	comp=Z,5.4nm,0.8s						
MGMO	Mountain Grove	55.04	339	P	P	18 05 10.6	-1.3
FVM	French Village	55.20	342	P	P	18 05 12.4	-0.6
WMOK	Wichita Mounta	55.51	332	P	P	18 05 14.5	-0.7
CCM	Cathedral Cave	55.52	341		P	18 05 14.3	-1.0
CCM				IAmb	IAmb	18 05 15.5	
	comp=Z,6.0nm,0.9s						
DKNS	Dickens	55.62	330	P	P	18 05 15.8	-0.4
DKNS				IAmb	IAmb	18 05 19.7	
	comp=Z,3.9nm,0.7s						
SMWD	Samnorwood	56.48	331		P	18 05 21.5	-0.8
P40A	Paris	57.12	341	P	P	18 05 25.6	-1.0
N41A	Harden Midland	57.84	342	P	P	18 05 29.5	-2.2
ANMO	Albuquerque	59.45	327	P	P	18 05 41.5	-1.9
ANMO	Albuquerque	59.45	327	P	P	18 05 41.7	-1.6
ANMO				IAmb	IAmb	18 05 44.2	
	comp=Z,1.4nm,0.8s						
ANMO	Albuquerque	59.45	327	P	P	18 05 41.7	-1.6
ANMO				IAmb	IAmb	18 05 44.2	
	comp=Z,1.4nm,0.8s						
SDCO	Great Sand Dun	61.12	329	P	P	18 05 54.8	0.0
SDCO				IAmb	IAmb	18 05 56.1	
	comp=Z,1.9nm,0.7s						
ECSD	EROS Data Cent	62.40	339		P	18 06 01.6	-1.4
ECSD				IAmb	IAmb	18 06 04.9	
	comp=Z,5.8nm,1.1s						
PV01	Paradox Valley	62.97	327	P	P	18 06 06.8	-0.4
PV01				IAmb	IAmb	18 06 08.8	
	comp=Z,3.0nm,0.8s						
PV15	Paradox Valley	63.08	328	P	P	18 06 08.1	+0.2
PV15				IAmb	IAmb	18 06 10.1	
	comp=Z,7.1nm,1.0s						
PV13	Radium Mtn., P	63.12	327	P	P	18 06 07.1	-1.1
PV13				IAmb	IAmb	18 06 09.9	
	comp=Z,3.6nm,0.8s						
O20A	White River Ci	64.31	329	P	P	18 06 14.6	-1.4
O20A				IAmb	IAmb	18 06 17.4	
	comp=Z,2.8nm,0.7s						
P18A	Preston Nutter	64.95	328		P	18 06 20.8	+0.5
P18A				IAmb	IAmb	18 06 26.8	
	comp=Z,4.5nm,1.1s						
MVU	Marysvale	65.19	325		P	18 06 22.2	+0.5
MVU				IAmb	IAmb	18 06 24.2	
	comp=Z,7.0nm,1.3s						
K22A	Casper	65.45	332	P	P	18 06 22.6	-0.6
BSUT	Blindstream Ca	65.89	328	P	P	18 06 26.7	+0.3
BSUT				IAmb	IAmb	18 06 35.0	
	comp=Z,7.7nm,1.4s						
PSUT	Pine Spring	66.13	324	P	P	18 06 27.9	+0.2
PSUT				IAmb	IAmb	18 06 32.5	
	comp=Z,6.1nm,1.4s						
AGMN	Agassiz Nation	66.23	342	P	P	18 06 26.9	-1.0
JLU	Jordanelle	66.30	327	P	P	18 06 28.6	-0.2
JLU				IAmb	IAmb	18 06 31.8	
	comp=Z,6.3nm,1.3s						
E28A	Huff	66.30	338		P	18 06 28.2	-0.2
TPNV	Topopah Spring	66.44	322	P	P	18 06 29.7	0.0
SPR3	Spring Creek 3	66.72	325	P	P	18 06 31.9	+0.3
SPR3				IAmb	IAmb	18 06 35.7	
	comp=Z,4.4nm,1.3s						
DUG	Dugway, Tooele	66.72	326		P	18 06 31.5	+0.1
DUG				IAmb	IAmb	18 06 34.5	
	comp=Z,7.6nm,1.3s						
BW06	Boulder Array	66.95	330	P	P	18 06 32.3	-0.7
BW06				IAmb	IAmb	18 06 37.8	
	comp=Z,3.7nm,1.2s						
PDAR	Pinedale Array	66.95	330		P	18 06 32.5	-0.5
PDAR	Pinedale Array	66.95	330	P	P	18 06 33.4	+0.4
	comp=Z,0.4nm,0.5s,baz=131,slow=4.1,SNR=7.4						
	comp=Z,0.4nm,0.5s						
MDND	Maddock	67.01	340		P	18 06 33.0	0.0
GMN	Gold Mountain	67.28	321	P	P	18 06 34.6	-0.6
ULM	Lac du Bonnet	67.98	343	P	P	18 06 37.9	-1.1
ULM	Lac du Bonnet	67.98	343	P	P	18 06 39.0	0.0
	comp=Z,2.2nm,0.5s,baz=147,slow=4.6,SNR=2.8						
	comp=Z,2.2nm,0.5s						
FXWY	Fox Creek	68.32	330	P	P	18 06 41.7	+0.1
FXWY				IAmb	IAmb	18 06 44.0	
	comp=Z,3.7nm,1.1s						
NVAR	Mina Array Bea	68.64	322	P	P	18 06 44.0	+0.3
	comp=Z,0.4nm,0.7s,baz=72,slow=5.5,SNR=2.0						
	comp=Z,0.4nm,0.7s						
YNE	Yellowstone No	68.87	332	P	P	18 06 44.4	-0.6
YNE				IAmb	IAmb	18 06 47.0	
	comp=Z,8.3nm,1.0s						
DBIC	Dimbokro	69.04	77	LR	LR	18 35 56.4	
	comp=Z,44nm,18.3s,baz=222,slow=35						
SCHQ	Schefferville	69.11	3	LR	LR	18 36 03.3	
	comp=Z,21nm,21.6s,baz=134,slow=35						
YHL	Hebgen Lake	69.30	331		P	18 06 48.1	+0.4
YHL				IAmb	IAmb	18 06 51.1	
	comp=Z,9.2nm,1.2s						
SNAA	Sanae	69.61	162		P	18 06 48.7	-0.3
SNAA				IAmb	IAmb	18 06 51.7	
	comp=Z,3.9nm,0.8s						
SNAA	Sanae	69.61	162	P	P	18 06 47.6	-1.4
	comp=Z,5.2nm,1.0s,baz=270,slow=9.0,SNR=13						
	comp=Z,5.2nm,1.0s						
BOZ	Bozeman (W)	70.06	331	P	P	18 06 51.6	-0.7
BOZ				IAmb	IAmb	18 06 54.1	
	comp=Z,3.9nm,1.1s						
PAHR	Pah Rah Range	70.11	322	IAmb	IAmb	18 06 55.5	
	comp=Z,6.3nm,1.2s						
MFID	Camas Ranch	70.59	327	IAmb	IAmb	18 07 00.9	
	comp=Z,9.4nm,1.4s						
MSO	Missoula	72.06	331		P	18 07 05.1	+0.8
FFC	Flin Flon	73.70	342	P	P	18 07 13.5	-0.1
FFC				IAmb	IAmb	18 07 17.5	
	comp=Z,4.4nm,1.1s						
NEW	Newport	74.60	330	LR	LR	18 43 14.6	
	comp=Z,17nm,18.5s,baz=92,slow=38						
QSPA	South Pole Qui	75.69	180	P	P	18 07 25.5	+0.2
	comp=Z,1.8nm,0.7s,baz=174,slow=1.4,SNR=16						
	comp=Z,1.8nm,0.7s						
TORD	Torodi Ar. Bea	77.19	73	P	P	18 07 33.4	-1.1
	comp=Z,6.6nm,1.2s,baz=282,slow=7.2,SNR=3.5						
	comp=Z,6.6nm,1.2s						
ESDC	Sonseca Array	82.43	46	P	P	18 08 01.2	-1.3
	comp=Z,0.9nm,0.9s,baz=268,slow=4.3,SNR=7.3						
	comp=Z,0.9nm,0.9s						
VNDA	Vanda	83.37	190	P	P	18 08 06.8	+0.1
	comp=Z,0.7nm,0.8s,baz=151,slow=6.6,SNR=4.4						
	comp=Z,0.7nm,0.8s						
YKA	Yellowknife Ar	83.86	341	P	P	18 08 09.6	+0.3
	comp=Z,4.5nm,0.7s,baz=137,slow=4.8,SNR=20						
	comp=Z,4.5nm,0.7s						
YKAW3	Yellowknife Wh	83.91	341	IAmb	IAmb	18 08 10.5	
	comp=Z,8.5nm,0.8s						
TSUM	Tsumeb	84.22	108	LR	LR	18 44 36.7	
	comp=Z,25nm,18.2s,baz=155,slow=35						
BYL	Byron's Ledge	89.29	290	P	P	18 08 36.1	-0.9
L29M	L29M	92.78	335	P	P	18 08 52.2	+0.1
L29M				IAmb	IAmb	18 08 53.6	
	comp=Z,3.6nm,0.9s						
ZALV	Zalesovo Beam	136.32	20	PKP	PKPdf	18 15 01.6	+0.2
	comp=Z,4.1nm,0.9s,baz=319,slow=4.3,SNR=8.1						
KURBB	Kurchatov Arra	136.40	28	PKP	PKPdf	18 15 00.7	-0.9
	comp=Z,0.2nm,0.5s,baz=308,slow=2.6,SNR=2.4						
MJAR	Matsushiro Arr	145.77	315	PKPbc	PKPdf	18 15 19.4	+0.4
	comp=Z,4.6nm,0.8s,baz=58,slow=1.2,SNR=17						
MAJO	Matsushiro	145.77	315		PKPdf	18 15 18.2	-0.7
MJB9	Matsu-Tunnel	145.77	315		PKPdf	18 15 18.5	-0.5
SONM	Songino Array	146.66	3	PKPbc	PKPdf	18 15 20.4	+0.2
SONM	Songino Array	146.66	3	PKPbc	PKPdf	18 15 20.9	+0.6
	comp=Z,1.7nm,0.9s,baz=318,slow=2.0,SNR=5.3						
KSRS	Korea Array	151.48	327	PKPbc	PKPdf	18 15 32.0	+3.9
	comp=Z,2.3nm,0.8s,baz=3.6,slow=1.2,SNR=10						
KSAR	Wonju Array Be	151.51	327	PKPdf	PKPdf	18 15 26.1	-2.1
KSAR				PKPbc	PKPbc	18 15 32.6	-1.8
GTA	Gaotai	153.91	16	*e*PKPbc	PKPdf	18 15 32.6	+0.7
PZH	PanZhiHua	166.31	28	PKP	PKPdf	18 15 44.3	-1.7

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*TIR **01** 18:10:21.4, 40°.45N×20°.75E, h4^{km}±1^{km}, Ml3.2/6*

*BEO **01** 18:10:21.5±0.6, 40°.31N×20°.75E, h0^{km}, ML2.9/3*

*ATH **01** 18:10:22.8, 40°.38N×20°.85E, h8^{km}±1^{km}, ML3.1/15, Manual Solution by A.Agalos First location: 2019/06/01 18:11:26, This location: 2019/06/01 19:28:14 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*PDG **01** 18:10:22.5±1.1, 40°.47N×20°.79E, h0^{km}±11^{km}, ML3.1/9, Error ellipse: s-maj=1.3km s-min=2.2km az=0.0*

*THE **01** 18:10:24.5, 40°N±1°×2°1E±°, h2^{km}±1^{km}, M3.0/21, MLh3.0/21*

ISC 01 18:10:22.0±1.1**, 40°.41N**±0°.02×**20°.79E**±0°.02**, h1^{km}**±10^{km}**, n99, σ1^{s}.18**/135**, 1C-6D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEST	Nestorio	0.20	89	Pg	Pg	18 10 26.4	+0.5
NEST				Sg	Sg	18 10 30.4	+1.9
NEST				AML	AML	18 10 30.9	
	17nm,0.5s						
NEST				AML	AML	18 10 35.0	
	23nm,0.7s						
NEST	Nestorio	0.20	89	P	Pg	18 10 26.3	+0.5
NEST				S	Sg	18 10 27.5	-1.0
NEST	Nestorio	0.20	89	P	Pg	18 10 26.3	+0.5
NEST				S	Sg	18 10 28.9	+0.4
KBN	Korca	0.21	0	Pg	Pg	18 10 25.2	-1.0
KBN				Sg	Sg	18 10 27.9	-1.1
KBN				AML	AML	18 10 28.8	
	22nm,0.3s						
KBN				AML	AML	18 10 33.5	
	29nm,0.6s						
LSK	Leskovik	0.30	209	Pg	Pg	18 10 27.8	+0.2
LSK				Sg	Sb	18 10 33.3	-2.3
LSK				AML	AML	18 10 38.5	
	33nm,0.5s						
PENT	Pentalofos	0.34	128	P	Pg	18 10 29.1	+0.5
PENT				S	Sg	18 10 31.6	-1.4
PENT	Pentalofos	0.34	128	P	Pg	18 10 29.2	+0.6
PENT				S	Sg	18 10 32.6	-0.4
KPRO	Kipourio	0.63	136	P	Pg	18 10 34.1	-0.1
KPRO				S	Sg	18 10 42.1	-0.2
KPRO	Kipourio	0.63	136	P	Pg	18 10 34.2	+0.1
KPRO				S	Sg	18 10 42.2	-0.2
OHR	Ohrid	0.70	1	*e*Pg	Pg	18 10 35.1	-0.3
OHR				*e*Sg	Sg	18 10 45.3	+0.8
JAN	Janina	0.75	176	P	Pg	18 10 36.2	-0.2
JAN				S	Sb	18 10 47.5	-1.2
JAN	Janina	0.75	176	P	Pg	18 10 36.6	+0.2
JAN				S	Sg	18 10 47.0	+0.8
KZN	Kozani	0.76	98	P	Pg	18 10 36.7	+0.1
KZN				S	Sg	18 10 45.6	-0.8
KZN	Kozani	0.76	98	P	Pg	18 10 36.9	+0.3
KZN				S	Sg	18 10 47.0	+0.6
SRN	Sarande	0.80	229	Pg	Pg	18 10 37.6	+0.3
SRN				Sg	Sb	18 10 50.6	+0.5
SRN				AML	AML	18 10 53.5	
	2.8nm,0.8s						
IGT	Igoumenitsa	0.94	202	Pg	Pb	18 10 41.0	-0.2
IGT				Sg	Sn	18 10 55.7	-0.9
IGT	Igoumenitsa	0.94	202	P	Pg	18 10 40.6	+0.5
IGT				S	Sn	18 10 56.2	-0.3
IGT	Igoumenitsa	0.94	202	P	Pg	18 10 40.6	+0.5
VLO	Vlora	0.99	274	Pg	Pb	18 10 42.1	+0.2
KTI	Kastanea	1.02	91	P	Pg	18 10 41.4	-0.1
KEK	Kerkira	1.03	228	P	Pn	18 10 43.8	+0.3
KEK				S	Sn	18 11 01.3	+2.7
KEK	Kerkira	1.03	228	P	Pn	18 10 43.4	-0.2
TETR	Tetrakomo, Epi	1.13	160	P	Pb	18 10 44.0	-0.3
TIR	Tirane	1.17	324	Pn	Pg	18 10 44.1	-0.3
TIR				Sn	Sg	18 11 00.5	+1.0
TIR				AML	AML	18 11 08.9	
	1.0nm,0.9s						
TIR	Tirane	1.17	324	*e*Pg	Pg	18 10 43.4	-1.0
THL	Klokotos Trika	1.27	131	P	Pg	18 10 45.6	-0.6
THL				S	Sg	18 11 02.3	-0.3
THL	Klokotos Trika	1.27	131	P	Pg	18 10 45.7	-0.6
PHP	Peshkopia	1.30	349	Pg	Pg	18 10 45.6	-1.4
TYRN	Tyrnavos	1.31	122	P	Pg	18 10 47.3	+0.2
TYRN	Tyrnavos	1.31	122	P	Pg	18 10 46.2	-0.9
AMPL	Ampelaki	1.52	167	P	Pg	18 10 52.2	+1.0
TSLK	Tsoukalades, L	1.59	184	P	Pg	18 10 53.0	+0.6
TSLK	Tsoukalades, L	1.59	184	P	Pn	18 10 51.2	-0.1
LKD2	Lefkada island	1.62	184	Pn	Pg	18 10 54.2	+1.1
LKD2	Lefkada island	1.62	184	P	Pg	18 10 53.2	+0.1
LKD2	Lefkada island	1.62	184	P	Pn	18 10 51.8	+0.1
VAY	Valandovo	1.63	55	*e*Pn	Pn	18 10 51.1	-0.7
VAY				*e*Sn	Sg	18 11 16.3	+1.9
EVR	Evrytania	1.69	152	P	Pb	18 10 53.4	-0.5
EVR	Evrytania	1.69	152	P	Pn	18 10 52.8	+0.1
NYDR	Nydri-Lefkada	1.70	182	P	Pn	18 10 53.0	+0.3
MAKR	Makrakomi, Fth	1.74	143	P	Pn	18 10 53.9	+0.5
MAKR	Makrakomi, Fth	1.74	143	P	Pn	18 10 52.8	-0.6
PUK	Puka	1.77	338	Pn	Pn	18 10 55.0	+1.3
PUK				Sn	Sb	18 11 19.4	+1.5
KNT	Kendrikon	1.77	64	P	Pn	18 10 53.2	-0.6
KNT	Kendrikon	1.77	64	P	Pn	18 10 53.3	-0.5
HORT	Hortiatis	1.77	83	P	Pn	18 10 52.9	-1.0
HORT	Hortiatis	1.77	83	P	Pn	18 10 52.6	-1.3
EVGI	Lefkada island	1.79	183	P	Pb	18 10 55.8	+0.2
SCTE	Santa Cesarea	1.81	260	Pn	Pn	18 10 53.6	-0.6
SCTE	Santa Cesarea	1.81	260	P	Pn	18 10 54.4	+0.1
AGG	Agios Georgios	1.83	139	P	Pn	18 10 55.1	+0.5
ULC	Ulcinj	1.94	324	Pn	Pn	18 10 57.0	+0.9
ULC	Ulcinj	1.94	324	⇓*i*Pn	Pn	18 10 56.2	+0.1
ULC				*i* Sn	Sg	18 11 24.8	+0.5
FSK	Fiskardo	1.96	185	P	Pn	18 10 56.5	+0.2
SOH	Sokhos	2.00	77	P	Pn	18 10 55.6	-1.4
SOH	Sokhos	2.00	77	P	Pn	18 10 56.5	-0.4
ANX	Ano Chora	2.02	154	P	Pn	18 10 57.6	+0.4
BCI	Bajram Curri	2.03	345	Pn	Pb	18 10 59.4	-0.3
BCI				Sn	Sb	18 11 27.3	+1.9
BCI				AML	AML	18 11 41.1	
	1.4nm,0.9s						
BCI	Bajram Curri	2.03	345	P	Pb	18 10 59.4	-0.3
PLG	Polygyros	2.03	90	P	Pn	18 10 56.8	-0.7
PLG	Polygyros	2.03	90	P	Pn	18 10 56.5	-0.9
DRME	Dracevica, Mon	2.15	326	⇓*i*Pn	Pn	18 10 59.6	+0.6
DRME				*i* Sn	Sb	18 11 29.8	+1.0
EFP	Efpalio	2.16	156	P	Pn	18 10 59.8	+0.6
NEO	Neokhori	2.18	120	P	Pn	18 10 58.6	-0.8
VLS	Valsamata	2.23	184	P	Pn	18 10 59.9	-0.3
AXS	Araxos	2.26	168	P	Pn	18 11 00.8	+0.4
PSDA	Pessada-Kefalo	2.30	184	P	Pn	18 11 01.0	0.0
PDG	Podgorica	2.32	331	*e*Pn	Pn	18 11 02.0	+0.6
PDG				*e*Sn	Sb	18 11 33.9	0.0
PDG	Podgorica	2.32	331	⇑*i*Pn	Pn	18 11 01.5	+0.1
PDG				*i* Sn	Sn	18 11 31.2	+0.6
BUM	Brajici-Budva	2.37	324	⇓*i*Pn	Pn	18 11 01.2	-0.8
BUM				*i* Sn	Sn	18 11 27.1	-4.6
BOSS	Bosilegrad	2.44	31	*e*Pn	Pn	18 11 02.0	-1.0
KOKK	Kokkinochori,	2.48	80	P	Pn	18 11 03.0	-0.6
BARS	Barje	2.52	17	*e*Pn	Pn	18 11 04.6	+0.4
IVA	Berane	2.55	345	*e*Pn	Pn	18 11 05.5	+0.9
IVA				*i* Sn	Sn	18 11 39.4	+3.1
CEME	Cevo	2.56	327	⇓*i*Pn	Pn	18 11 04.0	-0.6
CEME				*i* Sn	Sn	18 11 35.8	-0.6
ORTH	Orthonies,Zaky	2.56	182	P	Pn	18 11 04.7	+0.1
KOME	Kolasin	2.62	339	⇓*i*Pn	Pn	18 11 06.4	+0.9
KOME				*i* Sn	Sn	18 11 40.9	+2.9
HCY	Herceg Novi	2.67	320	*e*Pn	Pn	18 11 05.4	-0.7
HCY				*i* Sn	Sn	18 11 41.9	+2.8
SELS	Selova	2.82	5	*e*Pn	Pn	18 11 08.8	+0.6
VTS	Vitosha	2.87	39	*e*Pn	Pn	18 11 10.6	+1.5
SJES	Sjenica	2.91	348	*e*Pn	Pn	18 11 11.4	+1.8
BRY	Bratogost	3.00	327	*e*Pn	Pn	18 11 11.8	+0.9
BRY				*i* Sn	Sn	18 11 50.3	+2.7
THAS	Thassos island	3.00	85	P	Pn	18 11 09.1	-1.6
PLE	Pljevlja	3.10	341	⇓*i*Pn	Pn	18 11 15.8	+3.6
ZAPS	Zavoj	3.18	25	*e*Pn	Pn	18 11 15.4	+2.2
IVAS	Ivanjica	3.20	352	*e*Pn	Pn	18 11 14.4	+0.9
BOVS	Bovan	3.29	12	*e*Pn	Pn	18 11 16.0	+1.3
STON	Ston	3.38	318	*e*Pn	Pn	18 11 14.5	-1.3
GRUS	Gruza	3.48	359	*e*Pn	Pn	18 11 18.5	+1.3
ZAGS	Zajecar	3.57	17	*e*Pn	Pn	18 11 19.9	+1.4
DIVS	Divibare	3.73	351	*e*Pn	Pn	18 11 22.4	+1.6
HAPS	Han Pijesak,Bl	3.92	340	*e*Pn	Pn	18 11 23.6	+0.2
TEKS	Tekeris	4.24	348	*e*Pn	Pn	18 11 27.6	-0.1
BOJS	Bojanci	6.51	323	*e*Pn	Pn	18 11 58.1	-0.8
BOJS				*e*Sn	Sn	18 13 12.3	-1.5
CEY	Cerknica	7.07	321	*e*Pn	Pn	18 12 05.2	-1.4
SOKA	Soboth	7.53	328	*e*Pn	Pn	18 12 12.2	-0.7
	2.4nm,0.7s						
SOKA				*e*Sn	Sn	18 13 36.5	-2.5
	0.8nm,0.5s						
WTTA	Wattenberg	9.52	319	*i* Pn	Pn	18 12 40.2	-0.1
	1.9nm,0.4s						
WTTA				*i* Sn	Sn	18 14 24.6	-3.3
	2.9nm,0.5s						
WATA	Walderalm	9.59	319	*i* Pn	Pn	18 12 40.7	-0.6
	2.0nm,0.4s						
FETA	Feichten	9.83	316	*i* Pn	Pn	18 12 44.1	-0.4
	1.3nm,0.4s						

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*IDC **01** 18:10:47.4±1.6, 6°.73S×129°.74E, h0^{km}, mb3.6/3, mbtmp3.7/6, ML3.8/3, Error ellipse: s-maj=84.9km s-min=22.9km az=72.0*

ISC 01 18:11:03.7±1.1**, 7°.06S**±0°.09×**129°.8E**±0°.2**, h150^{km}, n16, σ1^{s}.44**/12**, mb3.3**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	4.79	31	P	Pn	18 12 13.9	-0.5
DRS	Darwin Rock St	5.45	169	P	Pn	18 12 22.1	-1.0
MTN	Manton Dam	5.90	167	P	Pn	18 12 27.1	-2.0
KDU	Kakadu	6.19	155	P	Pn	18 12 31.1	-1.8
LUWI	Luwuk	9.20	310	P	Pn	18 13 02.6	-11
FITZ	Fitzroy Crossi	11.70	200	Pn	Pn	18 13 40.0	-6.1
	0.3nm,0.3s,baz=20,slow=9.7,SNR=16						
FITZ				Sn	Sn	18 15 39.6	-16
	1.3nm,0.3s,baz=175,slow=18,SNR=12						
	3.6nm,0.8s						
FITZ	Fitzroy Crossi	11.70	200	P	Pn	18 13 41.0	-5.1

WRA	Warramunga Arr	13.55	161	Pn	Pn	18 14 06.2	-3.8
	0.5nm,0.3s,baz=335,slow=14,SNR=11						
WRA				Sn	Sn	18 16 31.6	-8.5
	0.6nm,0.3s,baz=331,slow=22,SNR=8.6						
	0.6nm,0.4s						
QIS	Mount Isa	16.45	146	P	Pn	18 14 48.2	+2.2
ASAR	Alice Springs	16.98	167	P	P	18 14 51.3	-0.6
	0.4nm,0.3s,baz=342,slow=9.0,SNR=33						
ASAR				S	S	18 17 52.2	-9.1
	0.6nm,0.4s,baz=342,slow=25,SNR=7.4						
	1.1nm,0.6s						
AS01	Alice Springs	16.99	167	P	P	18 14 51.9	-0.1
WRKA	Warakurna	17.94	184	P	P	18 15 02.1	-0.3
BBOO	Buckleboo	26.28	168	P	P	18 16 26.8	+1.6
STKA	Stephens Creek	27.04	157	P	P	18 16 33.5	+1.5
	1.6nm,0.7s,baz=335,slow=8.4,SNR=3.4						
	1.6nm,0.7s						
MKAR	Makanchi Array	68.16	327	P	P	18 21 47.9	+0.1
	0.2nm,0.4s,baz=129,slow=5.7,SNR=4.4						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	72.45	329	P	P	18 22 13.7	0.0
	0.1nm,0.5s,baz=127,slow=4.9,SNR=2.3						
	0.1nm,0.5s						

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*NEIC **01** 18:14:21.6±0.7, 19.°17N±0.°03×155.°50W±0.°02, h45^{km}±4^{km}, Error ellipse: s-maj=4.6km s-min=2.3km az=163.0*

HVO 01 18:14:22.7±0.9**, 19.°12N**±0.°03×**155.°47W**±0.°01**, h41**^{km}±4^{km}**, ML2.3**/6**, ML2.5**/30(NEIC)**, Error ellipse: s-maj=4.7km s-min=1.2km az=165.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HTC	Hot Caves	0.14	29		Pn	18 14 29.2	-0.5
KHU	Kahuku	0.19	312		Pn	18 14 29.4	-0.9
KHU					Sn	18 14 34.3	-1.4
KHU	Kahuku	0.19	312	IAML		18 14 34.8	
	comp=N,533nm,0.4s						
KHU				IAML		18 14 35.0	
	comp=E,297nm,0.5s						
HLP	Hilina Pali	0.23	40		Pn	18 14 29.7	-0.8
HLP	Hilina Pali	0.23	40		Sn	18 14 35.2	-0.7
HLP	Hilina Pali	0.23	40	IAML		18 14 33.9	
	comp=E,410nm,1.6s						
AIN	Ainahou	0.25	2		Pn	18 14 30.0	-0.8
AIN					Sn	18 14 35.3	-1.2
AIN	Ainahou	0.25	2	IAML		18 14 35.8	
	comp=E,990nm,0.4s						
AIN				IAML		18 14 36.3	
	comp=N,757nm,0.7s						
SDHHI	Sand Hill	0.32	31		Pn	18 14 30.4	-1.0
SDHHI					Sn	18 14 36.2	-1.3
WRMHI	West Rim	0.33	29		Pn	18 14 30.5	-1.0
WRMHI					Sn	18 14 36.6	-1.1
KKO	Keanakako'i	0.34	34		Pn	18 14 30.6	-1.0
KKO					Sn	18 14 36.7	-1.2
UWE	Uwekahuna	0.34	29		Pn	18 14 30.7	-1.0
UWE	Uwekahuna	0.34	29	IAML		18 14 42.9	
	comp=N,473nm,0.6s						
OBL	Observatory Le	0.34	30		Pn	18 14 30.4	-1.4
PUH	Pauahi	0.35	43		Pn	18 14 30.6	-1.2
PUH					Sn	18 14 36.7	-1.4
PUH	Pauahi	0.35	43	IAML		18 14 38.8	
	comp=N,321nm,3.0s						
PUH				IAML		18 14 43.0	
	comp=E,173nm,1.3s						
BYL	Byron's Ledge	0.35	34	Pn	Pn	18 14 30.4	-1.4
BYL				IAML		18 14 41.1	
	comp=N,203nm,1.0s						
BYL				IAML		18 14 46.4	
	comp=E,344nm,1.1s						
HATHI	Halema‘uma‘u T	0.36	33	Pn	Pn	18 14 30.6	-1.2
HATHI				IAML		18 14 38.1	
	comp=N,290nm,1.1s						
HATHI				IAML		18 14 48.0	
	comp=E,257nm,0.7s						
MLH	Mauna Loa	0.38	11		Pn	18 14 31.2	-1.1
MLH	Mauna Loa	0.38	11	IAML		18 14 44.0	
	comp=N,299nm,0.5s						
KNHH	Kane Nui o Ham	0.38	47		Pn	18 14 30.9	-1.2
RSD	Rainshed	0.39	27	Pn	Pn	18 14 30.5	-1.7
STCH	Steam Cracks	0.42	51		Pn	18 14 31.1	-1.5
STCH	Steam Cracks	0.42	51	IAML		18 14 37.3	
	comp=E,109nm,0.9s						
STCH				IAML		18 14 39.6	
	comp=N,161nm,1.9s						
NPOC	North of Pu‘u	0.43	51		Pn	18 14 31.4	-1.3
HMH	Humu‘ula Sheep	0.48	358	Pn	Pn	18 14 31.7	-1.8
HMH				IAML		18 14 39.1	
	comp=E,319nm,0.5s						
HMH				IAML		18 14 41.2	
	comp=N,260nm,1.6s						
JOKA	Jonika Flow	0.54	54	Pn	Pn	18 14 32.7	-1.4
JOKA				IAML		18 14 47.2	
	comp=N,251nm,3.5s						
HUH	Hualalai	0.66	328	Pn	Pn	18 14 33.6	-2.3

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*HVO **01** 18:20:50.6±1.3, 19.°16N±0.°04×155.°48W±0.°01, h42^{km}±3^{km}, Error ellipse: s-maj=6.6km s-min=1.5km az=185.0*

NEIC 01 18:20:47.9±1.1**, 19.°15N**±0.°05×**155.°47W**±0.°03**, h52**^{km}±3^{km}**, ML2.5**/34**, ML2.4**/6(HVO)**, Error ellipse: s-maj=8.0km s-min=3.6km az=173.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HTC	Hot Caves	0.11	38		Pn	18 20 57.4	+1.4
KHU	Kahuku	0.17	304		Pn	18 20 56.5	0.0
KHU					Sn	18 21 02.2	-0.4
KHU				IAML		18 21 03.4	
	comp=N,410nm,0.4s						
KHU				IAML		18 21 03.8	
	comp=E,368nm,0.5s						
AIN	Ainahou	0.22	2		Sn	18 21 02.9	-0.2
AIN	Ainahou	0.22	2		Pn	18 20 56.5	-0.2
AIN				IAML		18 21 04.2	
	comp=E,2µm,0.3s						
AIN				IAML		18 21 09.8	
	comp=N,829nm,0.4s						
SDHHI	Sand Hill	0.29	35		Pn	18 20 58.3	+1.1
SDHHI					Sn	18 21 03.8	-0.1
WRMHI	West Rim	0.30	32		Pn	18 20 58.0	+0.7
WRMHI					Sn	18 21 03.8	-0.3
RIM	Rim	0.30	37		Pn	18 20 58.3	+0.9
KKO	Keanakako'i	0.31	38		Pn	18 20 58.3	+0.9
KKO					Sn	18 21 04.1	-0.1
UWE	Uwekahuna	0.32	32		Pn	18 20 57.1	-0.4
UWE				IAML		18 21 10.7	
	comp=E,337nm,0.7s						
UWE				IAML		18 21 14.7	
	comp=N,366nm,0.6s						
UWE	Uwekahuna	0.32	32		Sn	18 21 04.2	-0.1
OBL	Observatory Le	0.32	33		Pn	18 20 58.4	+1.0
OBL					Sn	18 21 04.6	+0.3
BYL	Byron's Ledge	0.33	37	Pn	Pn	18 20 57.2	-0.4
BYL				IAML		18 21 13.5	
	comp=N,234nm,2.5s						
BYL	Byron's Ledge	0.33	37		Sn	18 21 04.6	+0.2
PUH	Pauahi	0.33	47	Pn	Pn	18 20 56.8	-0.7
PUH				IAML		18 21 05.9	
	comp=N,222nm,1.6s						
PUH	Pauahi	0.33	47		Sn	18 21 04.4	0.0
UWB	Uwekahuna Bluf	0.33	33		Pn	18 20 58.4	+0.8
HATHI	Halema‘uma‘u T	0.33	36	Pn	Pn	18 20 57.3	-0.3
HATHI				IAML		18 21 11.5	
	comp=E,236nm,0.8s						
SBLHI	Steaming Bluff	0.33	35		Pn	18 20 58.5	+0.8
SBLHI					Sn	18 21 05.0	+0.4
MLH	Mauna Loa	0.35	13	Pn	Pn	18 20 57.2	-0.8
MLH				IAML		18 21 09.6	
	comp=E,217nm,2.5s						
MLH				IAML		18 21 10.3	
	comp=N,223nm,1.1s						
MWH	Mokuaweoweo	0.35	340		Sn	18 21 05.6	0.0
MWH	Mokuaweoweo	0.35	340		Pn	18 20 57.4	-0.8
MWH				IAML		18 21 06.4	
	comp=E,486nm,0.4s						
MWH				IAML		18 21 07.5	
	comp=N,626nm,0.3s						
RSD	Rainshed	0.36	30	Pn	Pn	18 20 56.9	-1.0
KNHH	Kane Nui o Ham	0.36	51		Pn	18 20 57.5	-0.4
STCH	Steam Cracks	0.40	54	Pn	Pn	18 20 58.0	-0.2
NPOC	North of Pu‘u	0.41	55		Pn	18 20 59.2	+0.8
NPOC					Sn	18 21 06.5	+0.6
ALEP	Alea Permanent	0.42	337		Pn	18 20 59.7	+0.9
ALEP					Sn	18 21 06.3	-0.3
HMH	Humu‘ula Sheep	0.45	358	Pn	Pn	18 20 58.2	-0.8
HMH				IAML		18 21 08.0	
	comp=N,248nm,0.5s						
HMH	Humu‘ula Sheep	0.45	358		Sn	18 21 07.0	0.0
JOKA	Jonika Flow	0.52	57	Pn	Pn	18 20 58.8	-0.7
JOKA				IAML		18 21 12.5	
	comp=N,232nm,2.5s						
POHA	Pohakuloa	0.61	354		Sn	18 21 09.0	-1.0
POHA	Pohakuloa	0.61	354	Pn	Pn	18 21 00.7	0.0
POHA				IAML		18 21 25.4	
	comp=N,145nm,2.0s						
POHA				IAML		18 21 28.8	
	comp=N,174nm,1.2s						
HUH	Hualalai	0.63	327	Pn	Pn	18 21 02.4	+1.3
MHA	Mahukona	1.11	338	Pn	Pn	18 21 07.2	+0.1

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*TIR **01** 18:22:23.9, 40.°45N×20.°76E, h11^{km}±1^{km}, Ml3.3/6*
*THE **01** 18:22:24.9, 40°N±2°×2°1E±°, h0^{km}±2^{km}, M2.8/7, MLh2.8/7*
*BEO **01** 18:22:25.0±0.7, 40.°41N×20.°83E, h5^{km}±3^{km}, ML3.0/4*
*ATH **01** 18:22:26.9, 40.°39N×21.°01E, h9^{km}±1^{km}, ML2.9/7, Manual Solution by F.Xalaris First location: 2019/06/01 18:23:35, This location: 2020/10/11 07:19:38 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

ISC 01 18:22:24.5±1.0**, 40.°44N**±0.°02×**20.°79E**±0.°02**, h6**^{km}±8^{km}**, n81, σ1^{s}.22**/113**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.18	359	Pg	Pg	18 22 27.7	-0.6
KBN				Sg	Sg	18 22 30.4	-0.4
KBN				AML	AML	18 22 31.2	
	37nm,0.3s						
NEST	Nestorio	0.20	97	Pg	Pg	18 22 28.8	+0.3
NEST				Sg	Sg	18 22 32.7	+1.5
NEST				AML	AML	18 22 34.8	
	19nm,0.2s						
NEST				AML	AML	18 22 36.1	
	25nm,0.3s						
NEST	Nestorio	0.20	97	P	Pg	18 22 28.9	+0.3
NEST				S	Sg	18 22 31.3	+0.1
NEST	Nestorio	0.20	97	P	Pg	18 22 28.8	+0.3
NEST				S	Sg	18 22 30.6	-0.6
LSK	Leskovik	0.33	207	Pg	Pg	18 22 30.5	-0.4
PENT	Pentalofos	0.36	133	P	Pg	18 22 31.6	+0.1
PENT				S	Sg	18 22 34.4	-1.9
KPRO	Kipourio	0.65	138	P	Pg	18 22 36.8	-0.3
KPRO				S	Sb	18 22 47.7	0.0
OHR	Ohrid	0.67	0	P	Pg	18 22 36.9	-0.5
OHR				S	Sb	18 22 47.8	-0.4
OHR	Ohrid	0.67	0	*e*Pg	Pg	18 22 37.4	-0.1
OHR				*e*Sg	Sb	18 22 47.9	-0.4
KZN	Kozani	0.76	100	P	Pg	18 22 38.5	-0.6
KZN				S	Sg	18 22 46.5	-2.5
SRN	Sarande	0.82	228	Pg	Pg	18 22 40.3	-0.1
SRN				Sg	Sg	18 22 52.9	+1.8
SRN				AML	AML	18 22 56.2	
	1.6nm,0.5s						
IGT	Igoumenitsa	0.97	201	Pn	Pg	18 22 43.5	+0.3
IGT				Sn	Sn	18 22 58.4	-0.4
IGT	Igoumenitsa	0.97	201	P	Pg	18 22 43.5	+0.3
KTI	Kastanea	1.01	92	P	Pg	18 22 43.8	-0.1
TIR	Tirane	1.15	323	Pn	Pb	18 22 45.9	-0.8
TIR				Sn	Sb	18 23 02.7	+0.8
TIR				AML	AML	18 23 10.9	
	1.7nm,0.7s						
TIR	Tirane	1.15	323	*e*Pg	Pb	18 22 46.0	-0.8
TETR	Tetrakomo, Epi	1.16	161	P	Pn	18 22 47.5	+0.2
PHP	Peshkopia	1.27	348	Pg	Pn	18 22 48.0	-0.9
THL	Klokotos Trika	1.28	133	P	Pn	18 22 47.9	-1.0
THL				S	Sn	18 23 08.2	+1.8
TYRN	Tyrnavos	1.32	123	P	Pn	18 22 49.2	-0.2
TYRN				S	Sn	18 23 09.3	+1.9
VAY	Valandovo	1.61	56	P	Pn	18 22 52.6	-0.8
VAY				S	Sg	18 23 16.4	+0.2
VAY	Valandovo	1.61	56	*e*Pn	Pb	18 22 54.0	-0.6
VAY				*e*Sn	Sg	18 23 16.7	+0.4
TSLK	Tsoukalades, L	1.62	184	P	Pb	18 22 55.0	+0.3
LKD2	Lefkada island	1.65	184	P	Pg	18 22 56.6	+0.4
EVR	Evrytania	1.71	152	P	Pb	18 22 55.8	-0.6
NYDR	Nydri-Lefkada	1.73	182	P	Pg	18 22 57.7	+0.1
PUK	Puka	1.74	337	Pn	Pb	18 22 57.2	+0.3
PUK				Sn	Sg	18 23 20.9	+0.5
PUK				AML	AML	18 23 27.4	
	2.0nm,0.4s						
KNT	Kendrikon	1.75	65	P	Pn	18 22 55.4	-0.1
KNT	Kendrikon	1.75	65	P	Pn	18 22 55.5	0.0
HORT	Hortiatis	1.77	84	P	Pn	18 22 55.4	-0.3
HORT	Hortiatis	1.77	84	P	Pn	18 22 55.0	-0.6
SOH	Sokhos	1.99	78	P	Pn	18 22 58.6	0.0
BCI	Bajram Curri	2.00	344	Pn	Pb	18 23 02.4	+1.1
BCI				Sn	Sb	18 23 27.2	+0.7
BCI				AML	AML	18 23 31.5	
	1.5nm,0.8s						
PLG	Polygyros	2.03	91	P	Pn	18 22 59.3	0.0
DRME	Dracevica, Mon	2.12	326	Pn	Pn	18 23 02.3	+1.7
DRME	Dracevica, Mon	2.12	326	*e*Pn	Pn	18 23 01.5	+1.0
PDG	Podgorica	2.30	330	*e*Pn	Pn	18 23 03.7	+0.8
PDG	Podgorica	2.30	330	*e*Pn	Pn	18 23 04.4	+1.5
PDG				*e*Sn	Sb	18 23 35.7	+0.6
BOSS	Bosilegrad	2.41	31	*e*Pn	Pn	18 23 04.5	0.0
BARS	Barje	2.50	18	*e*Pn	Pn	18 23 05.6	0.0
BARS				*e*Sn	Sn	18 23 36.6	+0.2
HCY	Herceg Novi	2.65	320	*e*Pn	Pn	18 23 07.4	-0.3
SELS	Selova	2.79	5	*e*Pn	Pn	18 23 11.4	+1.7
VTS	Vitosha	2.85	39	*e*Pn	Pn	18 23 10.9	+0.3
SJES	Sjenica	2.88	348	*e*Pn	Pb	18 23 15.2	-1.2
TREB	Trebinje	2.92	322	*e*Pn	Pn	18 23 11.5	0.0
BRY	Bratogost	2.98	326	*e*Pn	Pn	18 23 14.6	+2.1
UPM	Unac-Piva	3.10	334	*e*Pn	Pn	18 23 15.4	+1.3
GOCS	Kraljevo Serbi	3.12	1	*e*Pn	Pn	18 23 17.1	+2.8
GOCS				*e*Sn	Sn	18 23 53.4	+1.5
ZAPS	Zavoj	3.15	25	*e*Pn	Pn	18 23 16.1	+1.5
BOVS	Bovan	3.27	12	*e*Pn	Pn	18 23 16.0	-0.2
RUDO	Rudo	3.35	342	*e*Pn	Pn	18 23 19.6	+2.2
STON	Ston	3.36	317	*e*Pn	Pn	18 23 17.3	-0.1
STON	Ston	3.36	317	*e*Pn	Pn	18 23 16.8	-0.6
STON				*e*Sn	Sn	18 23 58.1	+0.5
ZAGS	Zajecar	3.54	17	*e*Pn	Pn	18 23 20.1	+0.2
ZAGS				*e*Sn	Sn	18 24 00.7	-1.3
BBLS	Lazi&#263i	3.58	344	*e*Pn	Pn	18 23 22.8	+2.2
BBLS	Lazi&#263i	3.58	344	*e*Pn	Pn	18 23 22.4	+1.8
HAPS	Han Pijesak,Bl	3.89	340	*e*Pn	Pn	18 23 25.1	+0.2
HAPS	Han Pijesak,Bl	3.89	340	*e*Pn	Pn	18 23 25.9	+1.0
KUBS	Kucevo	4.02	9	*e*Pn	Pn	18 23 25.7	-0.9
TEKS	Tekeris	4.21	348	*e*Pn	Pn	18 23 29.4	+0.2
TEKS	Tekeris	4.21	348	*e*Pn	Pn	18 23 30.0	+0.8
MDVR	Moldovita	4.39	9	*e*Pn	Pn	18 23 33.7	+2.0
BLY	Banja Luka	5.06	329	*e*Pn	Pn	18 23 40.0	-0.9
A050A	Klekovaca	5.12	323	*e*Pn	Pn	18 23 41.5	-0.3
BZS	Buzias	5.21	6	*e*Pn	Pn	18 23 44.5	+1.6
A051A	Mrakovica	5.39	329	*e*Pn	Pn	18 23 45.6	+0.1
BOJS	Bojanci	6.49	323	*e*Pn	Pn	18 23 59.6	-0.9
BOJS	Bojanci	6.49	323	*e*Pn	Pn	18 24 00.2	-0.3
BOJS				*e*Sn	Sn	18 25 12.3	-2.5
CRES	Cresnjevec Ost	6.65	326	*e*Pn	Pn	18 24 02.0	-0.7
CEY	Cerknica	7.05	321	*e*Pn	Pn	18 24 05.1	-3.2
SOKA	Soboth	7.51	328	*i* Pn	Pn	18 24 17.1	+2.5
	1.4nm,0.5s						
SOKA				*i* Sn	Sn	18 25 37.4	-2.6
	2.1nm,0.6s						
OBKA	Obir	7.58	325	*e*Pn	Pn	18 24 22.0	+6.5
OBKA	Obir	7.58	325	*i* Pn	Pn	18 24 17.1	+1.6
	0.8nm,0.4s						
OBKA				*e*Sn	Sn	18 25 41.9	+0.3
	4.5nm,0.5s						
KBA	Koelnbreinsper	8.55	323	*i* Pn	Pn	18 24 31.9	+3.0
	0.5nm,0.3s						
KBA				*e*Sn	Sn	18 26 03.4	-2.2
	1.0nm,0.3s						
ABTA	Abfaltersbach	8.71	319	*i* Pn	Pn	18 24 33.9	+3.0
	1.7nm,0.5s						
ABTA				*e*Sn	Sn	18 26 07.4	-2.0
	4.5nm,0.8s						
MOA	Molln	8.77	330	*i* Pn	Pn	18 24 34.7	+3.0
	0.9nm,0.4s						
MOA				*e*Sg	Sn	18 26 10.7	-0.1
	1.8nm,0.5s						
WTTA	Wattenberg	9.50	319	*e*Pn	Pn	18 24 42.7	+0.8
	1.8nm,0.4s						
WTTA				*e*Sn	Sn	18 26 28.8	-0.2
	5.3nm,0.7s						
WATA	Walderalm	9.58	319	*i* Pn	Pn	18 24 43.9	+1.0
	3.0nm,0.6s						
WATA				*e*Sn	Sn	18 26 29.5	-1.4
	2.4nm,0.5s						
FETA	Feichten	9.81	315	*e*Pn	Pn	18 24 46.5	+0.3
	1.7nm,0.5s						
FETA				*i* Sn	Sn	18 26 36.7	+0.1
	2.3nm,0.6s						
MOTA	Moosalm	9.82	318	*i* Pn	Pn	18 24 46.5	+0.2
	1.9nm,0.4s						
MOTA				*i* Sn	Sn	18 26 35.9	-1.0
	7.2nm,0.9s						
DAVA	Damuels	10.43	315	*i* Pn	Pn	18 24 55.1	+0.5
	4.0nm,0.6s						

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*IDC **01** 18:22:49.4±1.0, 36.°24N×69.°40E, h0^{km}, mb3.6/11, mbtmp3.7/16, ML3.3/5, MS2.8/4, Error ellipse: s-maj=18.5km s-min=17.3km az=47.0*
*NNC **01** 18:22:54.4±4.5, 36.°67N×69.°18E, h0^{km}, mb4.5, mpv4.1, Error ellipse: s-maj=38.3km s-min=29.9km az=159.0*

ISC 01 18:22:56.2±0.9**, 36.°44N**±0.°08×**69.°25E**±0.°08**, h48**^{km}**, n30, σ1^{s}.76**/34**, mb3.6**/11**, MS2.8**/4**, 6C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.64	30	P	Pn	18 24 32.0	+0.4
	SNR=30						
KK31	Karatay Array	6.72	8	⇓P	Pn	18 24 32.0	-0.3
	1.7nm,0.3s,baz=201,slow=13,SNR=34						
KK31				S	Sn	18 25 50.0	+2.5
	7.3nm,0.4s,baz=198,slow=25,SNR=10						
EKS2	Erkin-Say	7.13	28	P	Pn	18 24 39.0	+1.1
	SNR=8.7						
AAK	Ala-Archa	7.39	32	P	Pn	18 24 42.6	+0.9
	SNR=12						
AAK	Ala-Archa	7.39	32	Pn	Pn	18 24 42.6	+0.9
	3.2nm,0.3s,baz=223,slow=7.4,SNR=22						
AAK				Sn	Sn	18 26 06.5	+2.3
	0.9nm,0.3s,baz=179,slow=23,SNR=8.8						
	8.6nm,0.4s						
AAK	Ala-Archa	7.39	32	⇑P	Pn	18 24 41.8	+0.1
	6.7nm,0.5s						
AAK				⇑S	Sn	18 26 03.8	-0.4
	19nm,0.6s						
CHMS	Chumysh	7.80	31	P	Pn	18 24 47.6	+0.6
	SNR=19						
CHMS	Chumysh	7.80	31	⇑P	Pn	18 24 47.4	+0.3
	15nm,0.5s						
CHMS				⇓S	Sn	18 26 14.4	+0.4
	25nm,0.7s						
USP	Ospenovka	7.92	29	P	Pn	18 24 48.7	0.0
	SNR=13						
TKM2	Tokmak 2	8.11	35	P	Pn	18 24 51.5	0.0
	SNR=20						
TKM2	Tokmak 2	8.11	35	⇑P	Pn	18 24 51.5	0.0
	7.4nm,0.6s						
TKM2				⇑S	Sn	18 26 23.6	+1.7
	6.6nm,0.7s						
MKAR	Makanchi Array	14.20	39	Pn	Pn	18 26 11.3	-3.1
	0.1nm,0.3s,baz=230,slow=16,SNR=6.5						
	0.4nm,0.6s						
AB31	Akbulak array	14.50	335	P	Pn	18 26 15.1	-3.3
	5.0nm,0.7s,baz=153,slow=16,SNR=63						
AB31				⇑S	Sn	18 28 53.7	-3.9
	1.0nm,0.5s,baz=157,slow=23,SNR=7.0						
KURBB	Kurchatov Arra	15.67	22	Pn	Pn	18 26 30.3	-3.3
	baz=212,slow=11,SNR=5.7						
	0.3nm,0.4s						
AKTO	Aktyubinsk	16.17	333	Pn	Pn	18 26 39.1	-0.9
	0.3nm,0.3s,baz=145,slow=11,SNR=12						
	3.4nm,0.6s						
BVAR	Borovoye Array	16.60	2	Pn	Pn	18 26 42.5	-2.9
	0.1nm,0.3s,baz=161,slow=9.0,SNR=8.7						
	1.0nm,0.5s						
ZALV	Zalesovo Beam	20.58	27	P	P	18 27 30.4	-0.4
	3.1nm,0.5s,baz=218,slow=10,SNR=12						
ZALV				LR	LR	18 35 00.9	
	comp=Z,5.0nm,20.3s,baz=131,slow=35						
	3.1nm,0.5s						
ARTI	Arti	21.26	343	P	P	18 27 39.4	+1.2
	0.8nm,0.3s,baz=173,slow=4.6,SNR=3.9						
	0.8nm,0.3s						
KBZ	Khabaz	21.38	298	P	P	18 27 39.3	-0.3
	1.9nm,0.7s,baz=116,slow=9.4,SNR=6.7						
	1.9nm,0.7s						
SONM	Songino Array	29.53	56	LR	LR	18 42 07.1	
	comp=Z,35nm,19.4s,baz=44,slow=39						
CMAR	Chiang Mai Arr	31.68	116	P	P	18 29 13.9	-1.3
	0.3nm,0.6s,baz=304,slow=9.1,SNR=2.0						
CMAR				LR	LR	18 43 49.1	
	comp=Z,12nm,18.0s,baz=135,slow=40						
	0.3nm,0.6s						
AKASG	Malin Array Be	31.89	309	P	P	18 29 18.4	+1.7
	0.1nm,0.3s,baz=84,slow=7.4,SNR=6.5						
	0.1nm,0.3s						
FINES	FINESS Array B	36.75	327	P	P	18 30 00.1	+1.4
	0.3nm,0.4s,baz=113,slow=10.0,SNR=3.4						
	0.3nm,0.4s						
HFS	Hagfors	42.25	322	P	P	18 30 45.9	+1.5
	1.7nm,0.8s,baz=116,slow=12,SNR=1.8						
	1.7nm,0.8s						
HEH	HeiHe	43.40	53	*e*P	P	18 30 54.9	+1.0
HEH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NOA	NORSAR Array B	43.58	323	P	P	18 30 57.1	+1.8
	comp=Z,0.4nm,0.6s,baz=107,slow=8.0,SNR=2.0						
	comp=Z,0.4nm,0.6s						
GUMO	Guam	70.56	87	LR	LR	19 07 02.4	
	comp=Z,14nm,18.6s,baz=86,slow=38						
YKA	Yellowknife Ar	81.36	2	P	P	18 35 08.5	+1.2
	comp=Z,0.9nm,0.8s,baz=2.2,slow=6.1,SNR=3.4						
	comp=Z,0.9nm,0.8s						
WRA	Warramunga Arr	83.16	121	P	P	18 35 17.9	+0.6
	comp=Z,0.4nm,0.7s,baz=337,slow=4.6,SNR=1.5						
	comp=Z,0.4nm,0.7s						
ASAR	Alice Springs	85.38	124	P	P	18 35 26.2	-2.3
	comp=Z,0.3nm,0.6s,baz=318,slow=4.4,SNR=5.5						
	comp=Z,0.3nm,0.6s						

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*BEO **01** 18:25:45.8±0.8, 40.°47N×20.°88E, h7^{km}±3^{km}, ML2.7/3*
*PDG **01** 18:25:45.8±0.6, 40.°52N×20.°90E, h6^{km}±1^{km}, ML3.0/11, Error ellipse: s-maj=1.0km s-min=1.7km az=0.0*
*THE **01** 18:25:46.6, 40°N±2°×2°1E±°, h0^{km}±4^{km}, M2.6/9, MLh2.6/9*
*ATH **01** 18:25:46.2, 40.°45N×20.°91E, h7^{km}±1^{km}, ML2.9/12, Manual Solution by F.Xalaris First location: 2019/06/01 18:26:52, This location: 2020/10/11 07:14:53 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*

ISC 01 18:25:45.7±0.9**, 40.°48N**±0.°02×**20.°90E**±0.°02**, h10**^{km}±6^{km}**, n56, σ0^{s}.98**/80**, 4C-6D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEST	Nestorio	0.13	120	P	Pg	18 25 49.0	+0.2
NEST				S	Sg	18 25 50.9	0.0
NEST	Nestorio	0.13	120	P	Pg	18 25 49.0	+0.2
NEST				S	Sg	18 25 51.0	0.0
PENT	Pentalofos	0.34	147	P	Pg	18 25 51.9	-0.5
PENT				S	Sb	18 25 58.1	-1.2
PENT	Pentalofos	0.34	147	P	Pg	18 25 52.0	-0.5
PENT				S	Sg	18 25 56.8	-0.1
OHR	Ohrid	0.63	353	*e*Pg	Pg	18 25 57.5	-0.5
OHR				*e*Sg	Sb	18 26 07.8	-0.1
KPRO	Kipourio	0.64	146	P	Pg	18 25 57.1	-0.9
KPRO				S	Sg	18 26 05.2	-1.0
KZN	Kozani	0.69	104	P	Pb	18 25 59.5	-0.3
KZN				S	Sb	18 26 08.6	-0.8
JAN	Janina	0.82	183	P	Pg	18 26 01.6	+0.1
JAN				S	Sg	18 26 12.6	+0.3
NASA	Naoussa	0.90	80	P	Pb	18 26 03.5	+0.1
KTI	Kastanea	0.93	95	P	Pb	18 26 03.8	-0.2
IGT	Igoumenitsa	1.04	205	P	Pg	18 26 04.3	-1.4
KEK	Kerkira	1.14	228	P	Pb	18 26 08.2	+0.7
TIR	Tirane	1.17	318	*e*Pg	Pg	18 26 06.6	-1.5
TETR	Tetrakomo, Epi	1.17	166	P	Pg	18 26 07.7	-0.4
THL	Klokotos Trika	1.25	137	P	Pg	18 26 08.7	-1.0
TYRN	Tyrnavos	1.28	127	P	Pb	18 26 09.6	-0.2
TYRN	Tyrnavos	1.28	127	P	Pb	18 26 09.6	-0.2

VAY	Valandovo	1.52	56	P	Pg	18 26 13.7	-1.1
VAY	Valandovo	1.52	56	*e*Pn	Pg	18 26 14.1	-0.7
VAY				*e*Sn	Sg	18 26 36.3	+1.8
THE	Thessaloniki	1.58	84	P	Pn	18 26 14.2	+0.4
THE	Thessaloniki	1.58	84	P	Pg	18 26 14.9	-1.1
KNT	Kendrikon	1.66	65	P	Pn	18 26 15.4	+0.5
TSLK	Tsoukalades, L	1.67	187	P	Pn	18 26 15.3	+0.5
HORT	Hortiatis	1.68	85	P	Pn	18 26 15.5	+0.3
MAKR	Makrakomi, Fth	1.75	147	P	Pb	18 26 17.3	-0.5
MAKR	Makrakomi, Fth	1.75	147	P	Pn	18 26 16.8	+0.7
NYDR	Nydri-Lefkada	1.77	185	P	Pb	18 26 18.2	0.0
AGG	Agios Georgios	1.83	142	P	Pn	18 26 17.9	+0.7
SCTE	Santa Cesarea	1.90	258	P	Pn	18 26 17.9	-0.3
ULC	Ulcinj	1.94	320	⇑*i*Pn	Pn	18 26 18.8	+0.1
ULC				*i* Sn	Sb	18 26 45.6	+0.3
PLG	Polygyros	1.95	92	P	Pn	18 26 19.4	+0.6
PLG				S	Sb	18 26 45.6	0.0
PLG	Polygyros	1.95	92	P	Pn	18 26 19.8	+1.0
FSK	Fiskardo	2.04	187	P	Pn	18 26 21.0	+1.0
DRME	Dracevica, Mon	2.14	323	⇓*i*Pn	Pn	18 26 21.5	+0.1
DRME				*i* Sn	Sb	18 26 50.8	-0.3
NEO	Neokhori	2.14	123	P	Pn	18 26 22.1	+0.6
PAIG	Paliouri	2.20	104	P	Pn	18 26 22.7	+0.4
PDG	Podgorica	2.31	328	*e*Sn	Sb	18 26 55.2	-0.7
PDG	Podgorica	2.31	328	⇓*i*Pn	Pn	18 26 23.7	0.0
PDG				*i* Sn	Sn	18 26 54.4	+2.3
BOSS	Bosilegrad	2.34	30	*e*Pn	Pn	18 26 24.3	+0.1
BUM	Brajici-Budva	2.36	321	⇓*i*Pn	Pn	18 26 24.7	+0.1
BUM				*i* Sn	Sn	18 26 55.7	+2.1
BARS	Barje	2.43	16	*e*Pn	Pn	18 26 25.6	+0.1
IVA	Berane	2.50	343	⇑*i*Pn	Pn	18 26 27.3	+0.8
IVA				*i* Sn	Sn	18 26 59.4	+2.2
CEME	Cevo	2.54	325	⇑*i*Pn	Pn	18 26 27.0	-0.1
CEME				*i* Sn	Sn	18 27 00.4	+2.3
KOME	Kolasin	2.58	337	⇑*i*Pn	Pn	18 26 28.4	+0.8
KOME				*i* Sn	Sn	18 27 00.7	+1.5
HCY	Herceg Novi	2.67	318	⇓*i*Pn	Pn	18 26 27.1	-1.6
HCY				*i* Sn	Sn	18 27 03.2	+2.1
SELS	Selova	2.74	3	*e*Pn	Pn	18 26 30.1	+0.4
SELS				*e*Sn	Sn	18 27 02.2	-0.7
VTS	Vitosha	2.76	39	*e*Pn	Pn	18 26 30.1	0.0
BRY	Bratogost	3.00	325	*e*Pn	Pn	18 26 33.5	+0.2
BRY				*i* Sn	Sn	18 27 10.9	+1.5
PLE	Pljevlja	3.06	339	⇓*i*Pn	Pn	18 26 34.6	+0.4
PLE				*i* Sn	Sn	18 27 12.4	+1.4
UPM	Unac-Piva	3.10	332	⇓*i*Pn	Pn	18 26 35.2	+0.4
UPM				*i* Sn	Sn	18 27 13.8	+1.8
BOVS	Bovan	3.21	11	*e*Pn	Pn	18 26 35.9	-0.2
GRUS	Gruza	3.41	358	*e*Pn	Pn	18 26 39.0	+0.1
ZAGS	Zajecar	3.47	16	*e*Pn	Pn	18 26 39.8	0.0
ZAGS				*e*Sn	Sn	18 27 20.5	-0.4
BBLS	Lazi&#263i	3.56	342	*e*Pn	Pn	18 26 42.2	+1.2
TEKS	Tekeris	4.19	346	*e*Pn	Pn	18 26 49.5	-0.1
BOJS	Bojanci	6.51	322	*e*Pn	Pn	18 27 20.6	-0.8
BOJS				*e*Sn	Sn	18 28 32.5	-3.2

NEIC ***01*** *18:26:47.4±1.9, 47°.60N±0°.02×122°.80W±0°.02, h26^{km}±6^{km},*
Error ellipse: s-maj=2.6km s-min=2.0km az=134.0

SEA 01 18:26:47.9±2.1**, 47°.59N**±0°.02×**122°.75W**±0°.03**, h24**^{km}±4^{km}**,**
ML2.6/33**, ML2.6**/90(NEIC)**, Error ellipse: s-maj=2.8km**
s-min=2.6km az=56.0, Washington

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMR	Kitsap County	0.08	190		Pb	18 26 51.7	-0.6
KIMR					Sb	18 26 54.9	-0.3
KITP	Kitsap County	0.12	41		Pb	18 26 52.6	0.0
KITP					Sb	18 26 57.0	+1.2
BABE	Bainbridge Sch	0.14	82		Pb	18 26 53.0	+0.2
BABE					Sb	18 26 57.9	+1.7
KINR	Kitsap County	0.18	23		Pb	18 26 53.0	-0.2
KINR					Sb	18 26 57.7	+0.9
ALKI	Alki Wastewate	0.22	93		Sb	18 26 59.2	+1.5
B013	Quilcene	0.25	334		Pb	18 26 53.3	-0.9
B013					Sb	18 26 57.7	-0.7
B013	Quilcene	0.25	334		Pb	18 26 53.3	-0.9
VVHS	Vashon High Sc	0.26	129		Pb	18 26 53.7	-0.5
SP2	Seward Park 2	0.34	95		Pb	18 26 55.5	+0.1
SP2					Sn	18 27 02.2	-1.1
NOWS	NOAA--Sand Poi	0.35	73		Sn	18 27 03.1	-0.5
UPS	University of	0.37	151		Pb	18 26 55.5	-0.4
KNEL	Kent Elementar	0.39	121		Sb	18 27 03.3	+1.3
D04E	Lakebay	0.41	182		Pb	18 26 56.3	-0.2
BLN	Blyn Mountain	0.45	340		Pb	18 26 56.1	-1.1
SWID	South Whidbey	0.48	28		Pb	18 26 57.2	-0.5
SWID					Sb	18 27 05.3	+0.9
EVGW	Everett Gatewa	0.48	56		Pb	18 26 57.3	-0.5
EVGW					Sb	18 27 05.1	+0.6
SMW	South Mountain	0.48	237		Pb	18 26 57.2	-0.7
PAYL	Puyallup Schoo	0.49	143		Pb	18 26 57.1	-0.8
PAYL					Sb	18 27 05.3	+0.6
EARN	East Ridge Ele	0.50	72		Sb	18 27 06.1	+1.1
SQM	Sequim	0.53	338		Pb	18 26 58.0	-0.6
EGRN	Evergreen Coll	0.54	197		Pb	18 26 57.7	-1.0
BLH	Bald Hill	0.54	62		Pb	18 26 57.8	-1.1
BLH					Sb	18 27 05.8	-0.4
PCEP	Pierce County	0.57	147		Pb	18 26 58.2	-1.0
ELW	Echo Lake	0.60	98		Sb	18 27 07.5	-0.4
PCFR	Pierce County	0.63	161		Pb	18 26 59.1	-1.2
GHW	Garrison Hill	0.63	149		Pb	18 26 59.1	-1.2
D05A	Enumclaw	0.65	127		Pb	18 26 59.9	-0.7
D05A					Sb	18 27 09.2	-0.1
D05A				IAML		18 27 10.1	
	comp=N,238nm,0.5s						
CPW	Capitol Peak	0.67	204		Pb	18 26 59.7	-1.2
OSD	Olympics--Snow	0.69	290		Pb	18 27 00.9	-0.5
CDMR	Cedar Moraine	0.69	103		Sb	18 27 10.1	-0.3
B04A	Port Angeles	0.69	313		Pb	18 27 00.4	-1.0
HTW	Haystack Looko	0.69	71		Pb	18 27 00.2	-1.2
B941	Kapowsin	0.70	149		Pb	18 26 59.9	-1.5
SVOH	Skagit Valley	0.71	6		Pb	18 27 00.4	-1.2
OLQ	Olympics--Lake	0.72	265		Pb	18 27 01.8	0.0
NLWA	Neilton Lookou	0.79	256		Pb	18 27 01.9	-1.0
B017	Montesano	0.81	223		Pb	18 27 02.6	-0.7
B05A	Bryant	0.81	33		Pb	18 27 01.8	-1.5
RRHS	Rochester High	0.81	194		Pb	18 27 02.2	-1.1
JCW	Jim Creek	0.82	42		Pb	18 27 02.0	-1.5
VGZ	Gonzales	0.92	335		Pb	18 27 03.2	-1.8
OBSR	Observation Ro	0.94	137		Pb	18 27 04.1	-1.5
UWFH	University of	0.98	350		Pn	18 27 04.4	-1.7
FMW	Mount Fremont	0.98	131		Pn	18 27 04.7	-1.6
REMR	Mount Rainier-	0.98	141		Pn	18 27 04.7	-1.7
RCS	Mount Rainier-	0.99	136		Pn	18 27 05.0	-1.6
OBC	Olympics--Boni	1.00	297		Pn	18 27 02.5	-4.0
RCM	Mount Rainier-	1.02	137		Pn	18 27 05.4	-1.6
E04D	Cinebar	1.04	173		Pn	18 27 05.7	-1.2
PANH	Panhandle Gap,	1.05	134		Pn	18 27 05.7	-1.5
LON	Longmire	1.05	142		Pn	18 27 05.5	-1.7
LON				Sn	Sb	18 27 18.9	-2.0
LON				IAML		18 27 19.8	
	comp=N,186nm,0.2s						
LON	Longmire	1.05	142		Pn	18 27 05.6	-1.6
MCW	Mount Constitu	1.10	357		Pn	18 27 06.6	-1.2
B019	Raymond	1.12	214		Pn	18 27 07.1	-0.9
A04D	Lummi Island	1.14	1	Pn	Pn	18 27 06.8	-1.4
A04D				IAML		18 27 27.4	
	comp=N,121nm,0.8s						
B011	North Saanich	1.16	336		Pn	18 27 07.1	-1.5
PGC	Sidney	1.17	336		Pn	18 27 07.1	-1.6
PGC				Sn	Sn	18 27 21.9	-1.8
PGC				IAML		18 27 25.6	
	comp=N,87nm,0.5s						
PGC				IAML		18 27 25.8	
	comp=E,103nm,0.4s						
E03A	Lebam	1.18	209		Pn	18 27 08.0	-0.9
E03A				Sn	Sn	18 27 23.8	-0.4
E03A				IAML		18 27 24.8	
	comp=N,102nm,0.6s						
E03A				IAML		18 27 29.3	
	comp=E,110nm,0.6s						
KOSW	Kosmos	1.19	161		Pn	18 27 08.2	-0.9
RPW	Rockport	1.20	43		Pn	18 27 08.4	-0.7
SYMB	Survey Mountai	1.20	324		Pn	18 27 07.7	-1.6
GPW	Glacier Peak	1.21	63		Pn	18 27 09.0	-0.5
SNB	Saturna Island	1.22	347		Pn	18 27 08.8	-0.7
TDL	Tradedollar La	1.29	163		Pn	18 27 09.7	-0.8
WRW	Wenatchee Ridg	1.29	77		Pn	18 27 09.9	-0.6
ERK	Elk Rock	1.31	168		Pn	18 27 09.6	-1.2
B201	Coldwater, Mou	1.32	165		Pn	18 27 09.9	-1.0
MBW	Mount Baker	1.33	25		Pn	18 27 10.8	-0.3
JRO	Jston Ridge Ob	1.36	164		Pn	18 27 10.7	-0.8
JRO				Sn	Sn	18 27 28.2	-0.6
RADR	Rader Ridge	1.37	212		Pn	18 27 11.2	-0.3
RADR				IAML		18 27 41.1	
	comp=E,106nm,0.7s						
STD	Studebaker Rid	1.40	165		Pn	18 27 11.3	-0.7
B202	Windy Ridge, M	1.41	162		Pn	18 27 11.3	-0.7
FL2	Flat Top 2	1.42	169		Pn	18 27 11.5	-0.8
SHW	Mount Saint He	1.44	166		Pn	18 27 12.1	-0.4
SEPW	September Lobe	1.44	164		Pn	18 27 12.5	-0.2
LTY	Liberty	1.45	102		Pn	18 27 11.8	-0.8
LTY				Sn	Sn	18 27 31.2	+0.3
LTY				IAML		18 27 32.2	
	comp=E,128nm,0.2s						
LTY				IAML		18 27 32.4	
	comp=N,125nm,0.3s						
ESD	East Dome	1.45	163		Pn	18 27 12.5	-0.2
HSR	South Ridge	1.47	164		Pn	18 27 12.9	0.0
B023	Clatskanie	1.49	189		Pn	18 27 12.8	-0.4
JLK	June Lake	1.50	164		Pn	18 27 13.2	-0.1
F04D	Rainier, OR	1.51	187		Pn	18 27 13.0	-0.5
TBM	Table Mountain	1.52	105		Pb	18 27 14.6	-0.8
B926	Mesachie Lake	1.54	324		Pb	18 27 14.9	-0.9
CLRS	Cowichan Lake	1.54	324		Pn	18 27 13.0	-0.8
CDFW	Cedar Flats	1.55	162		Pn	18 27 13.9	0.0
NAC	Naches	1.56	122		Pn	18 27 14.8	+0.6
AWST	Adams West	1.59	155		Pn	18 27 14.7	+0.1
MTMW	Mount Mitchell	1.60	167		Pn	18 27 14.8	0.0
EBG	Ellensburg	1.63	114		Pb	18 27 16.4	-0.9
ETW	Entiat	1.64	88		Pn	18 27 16.2	+0.9
NLW	Nelson Butte	1.70	72		Pn	18 27 17.2	+1.1
F03A	Seaside	1.75	199		Pn	18 27 17.1	+0.4
YA2	Yakima	1.85	124		Pb	18 27 19.8	-1.2
F05D	White Salmon	1.92	152		Pn	18 27 20.4	+1.3
MXC	Moxie City	1.96	120		Pn	18 27 19.8	+0.2
MXC				IAML		18 27 47.2	
	comp=N,58nm,0.6s						
MXC				IAML		18 27 48.9	
	comp=E,41nm,0.4s						
SHB	Sechelt	2.15	340		Pn	18 27 22.6	+0.3
E07A	Sunnyside	2.23	116		Pn	18 27 23.4	+0.1
E07A				IAML		18 27 55.3	
	comp=E,64nm,0.5s						
E07A				IAML		18 27 55.7	
	comp=N,56nm,0.5s						
VLL	Laurance Lake	2.25	160		Pb	18 27 26.0	-1.8
SHRK	Shell Rock	2.28	158		Pb	18 27 26.9	-1.5
OZB	Mount Ozzard	2.29	308	Pn	Pn	18 27 24.2	-0.1
OZB				IAML		18 28 16.8	
	comp=N,42nm,2.2s						
OZB				IAML		18 28 18.1	
	comp=E,39nm,1.2s						
FHE	Frenchman Hill	2.30	105		Pn	18 27 24.9	+0.6
WAH2	Wahluke Slope	2.32	110		Pn	18 27 25.6	+1.0
WAH2	Wahluke Slope	2.32	110	Pn	Pn	18 27 24.9	+0.3
WAH2	Wahluke Slope	2.32	110	IAML		18 28 00.5	
	comp=N,60nm,0.6s						
G04A	Mulino	2.39	175		Pn	18 27 25.8	+0.3
G04A				IAML		18 28 12.1	
	comp=E,47nm,0.7s						
G04A				IAML		18 28 20.8	
	comp=N,43nm,0.7s						
HOOD	Mount Hood Mea	2.39	161	Pn	Pn	18 27 25.9	+0.3
HOOD				IAML		18 28 00.8	
	comp=N,26nm,0.5s						
HOOD				IAML		18 28 01.4	
	comp=E,23nm,0.5s						
TDH	Tom, Dick, Har	2.39	164		Pb	18 27 28.1	-2.2
G03D	McMinnville, O	2.40	189	Pn	Pn	18 27 25.9	+0.3
G03D				IAML		18 27 52.5	
	comp=N,35nm,2.1s						
G03D				IAML		18 28 13.6	
	comp=E,28nm,1.4s						
B08A	Colville Reser	2.42	70		Pn	18 27 25.5	-0.5
GBL	Gable Mountain	2.45	113		Pn	18 27 27.5	+1.1
HEBO	Mount Hebo	2.47	197	Pn	Pn	18 27 26.4	-0.3
HAWA	Hanford	2.50	117	Pn	Pn	18 27 26.5	-0.6
HAWA				IAML		18 28 03.0	
	comp=E,21nm,0.5s						
F07A	Phinny Hill Vi	2.57	130	Pn	Pn	18 27 26.8	-1.2
F07A				IAML		18 28 09.4	
	comp=N,33nm,0.5s						
F07A				IAML		18 28 09.6	
	comp=E,29nm,0.3s						
D08A	Wollman Farm,	2.66	100	Pn	Pn	18 27 28.1	-1.1
D08A				IAML		18 28 09.9	
	comp=N,21nm,0.3s						
E08A	Dider Farm, El	2.75	112	Pn	Pn	18 27 29.8	-0.7
E08A				IAML		18 28 16.1	
	comp=E,20nm,0.5s						
G06A	Carlson Farm,	2.77	147	Pn	Pn	18 27 30.5	-0.3
H04A	Detroit Lake	2.93	172		Pn	18 27 32.5	-0.4
H04A				IAML		18 28 22.8	
	comp=E,16nm,0.4s						
H04A				IAML		18 28 23.7	
	comp=N,22nm,0.4s						
YPT	Yellepit	3.02	119	Pn	Pn	18 27 34.8	+0.7
YPT				IAML		18 28 26.5	
	comp=N,13nm,0.8s						
YPT				IAML		18 28 27.1	
	comp=E,13nm,0.6s						
COR	Corvallis	3.03	188	Pn	Pn	18 27 34.2	0.0
COR				IAML		18 29 01.4	
	comp=E,27nm,3.1s						
COR				IAML		18 29 26.5	
	comp=E,28nm,2.2s						
H04D	Lebanon	3.06	180	Pn	Pn	18 27 35.4	+0.7
H04D				IAML		18 28 27.3	
	comp=E,22nm,2.3s						
H04D				IAML		18 28 36.3	
	comp=N,19nm,1.9s						
LLLB	Lillooet	3.08	10	Pn	Pn	18 27 34.7	-0.3
LLLB				IAML		18 28 32.3	
	comp=N,13nm,0.9s						
BUCK	Buck Mountain	3.39	183	Pn	Pn	18 27 38.4	-1.0
I05D	Terrebonne, OR	3.39	163		Pn	18 27 39.1	-0.2
I05D				IAML		18 28 17.1	
	comp=N,13nm,4.5s						
I05D				IAML		18 28 49.2	
	comp=E,15nm,3.5s						
G08A	Pilot Rock	3.48	130	Pn	Pn	18 27 39.9	-0.8
LNOR	Lincton Mounta	3.52	118	Pn	Pn	18 27 40.4	-0.6
LNOR				IAML		18 28 52.5	
	comp=N,9.1nm,2.3s						
I02E	Swisshome, OR	3.56	193		Pn	18 27 41.0	-0.6
NEW	Newport	3.84	78	Pn	Pn	18 27 45.2	-0.3
PINE	Pine Mountain	4.00	161		Pn	18 27 45.4	-2.4
PINE				IAML		18 29 09.8	
	comp=E,9.4nm,2.5s						
PINE				IAML		18 30 21.1	
	comp=N,6.9nm,4.4s						
I07A	Izee	4.17	146	Pn	Pn	18 27 48.1	-2.1
J04A	Umpqua Nationa	4.37	174	Pn	Pn	18 27 52.1	-0.8
J05D	Fort Rock, OR	4.43	166	Pn	Pn	18 27 52.9	-0.8
J05D				IAML		18 29 31.1	
	comp=E,9.5nm,4.6s						

SKO ***01*** *18:30:07.5, 40°.06N×20°.68E, h0^{km}, ML4.2*
BEO ***01*** *18:30:10.7±0.6, 40°.30N×20°.89E, h0^{km}, ML4.0/8*
IDC ***01*** *18:30:11.3±0.6, 40°.52N×20°.81E, h0^{km}, mb3.8/21,*
mbtmp3.8/34, ML3.6/13, MS3.0/14, Error ellipse:
s-maj=10.0km s-min=9.2km az=21.0
TIR ***01*** *18:30:11.9, 40°.42N×20°.79E, h9^{km}±4^{km}, Ml4.1/9*
NEIC ***01*** *18:30:11.6±1.6, 40°.41N±0°.05×20°.76E±0°.06, h10^{km}±1^{km},*
mb4.3/17, Error ellipse: s-maj=8.5km s-min=7.5km
az=314.0
PDG ***01*** *18:30:11.7±1.1, 40°.46N×20°.73E, h3^{km}±2^{km}, MD4.3/2,*
ML4.2/12, Error ellipse: s-maj=1.2km s-min=1.5km az=0.0
ATH ***01*** *18:30:12.4, 40°.42N×20°.80E, h6^{km}±2^{km}, ML3.9/20,*
Manual Solution by A.Agalos First location: 2019/06/01
18:31:09, This location: 2019/06/01 18:41:18 ML
Amplitudes are expressed in micrometers, All distances
are expressed in degrees Latitude uncertainty: 1 km;
Longitude uncertainty: 1 km
MED_RC ***01*** *18:30:13.0±0.2, 40°.44N×20°.71E, h12^{km}, MW4.4/33,*
Moment Tensor Solution.Mantle waves: s33,c43;
Duration: 1s0 Moment tensor: Scale 10^{15}Nm;
M_{rr}-4.79±.32; $M_{\theta\theta}$1.51±.19; $M_{\phi\phi}$3.28±.22; $M_{r\theta}$0.44±.54;
$M_{\theta\phi}$2.08±.14; $M_{\phi r}$-1.51±.43; Best double couple:
$M_0$4.97000×10^{15} NP1:ϕ_s226.00000°, δ40.00000°,
λ-71.00000°. NP2:ϕ_s21.00000°, δ52.00000°,
λ-106.00000°. Principal axes: T 4.7700, Plg6.0000°,
Azm122.0000°; N 0.4000, Plg12.0000°, Azm30.0000°; P
-5.1700, Plg76.0000°, Azm238.0000°; nsta1 refers to
body waves. nsta2 refers to surface waves, cutoff=35s.
THE ***01*** *18:30:15.0, 40°N±1°×2°1E±°, h4^{km}±1^{km}, M3.9/44,*
MLh3.9/44
NAO ***01*** *18:30:20.6, 40°.50N×20°.83E, h10^{km}, mb3.9*
SOF ***01*** *18:30:20.1, 40°.93N±0°.08×21°.22E±0°.07, h10^{km}±31^{km},*
MD3.2/8

ISC 01 18:30:11.9±0.9**, 40°.43N**±0°.01×**20°.79E**±0°.02**, h7**^{km}±6^{km}**,**
n367, σ1s63/415**, mb4.1**/33**, MS3.0**/10**, 25C-9D,**
Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	Korca	0.19	1	Pg	Pg	18 30 15.7	-0.1
KBN				Sg	Sg	18 30 19.4	+1.0
KBN				AML	AML	18 30 27.2	
	187nm,0.4s						
NEST	Nestorio	0.20	95	Pg	Pg	18 30 16.7	+0.7
NEST				Sg	Sg	18 30 28.8	+10
NEST				AML	AML	18 30 30.1	
	134nm,0.4s						
NEST				AML	AML	18 30 33.9	
	126nm,0.5s						
NEST	Nestorio	0.20	95	P	Pg	18 30 16.7	+0.7
NEST				S	Sg	18 30 18.6	-0.2
NEST	Nestorio	0.20	95	P	Pg	18 30 16.8	+0.7
NEST				S	Sg	18 30 19.5	+0.7
LSK	Leskovik	0.32	207	Pg	Pg	18 30 17.8	-0.3
LSK				Sg	Sb	18 30 31.2	+5.9
LSK				AML	AML	18 30 36.5	
	269nm,0.6s						
PENT	Pentalofos	0.36	131	P	Pg	18 30 19.4	+0.4
PENT				S	Sg	18 30 22.9	-0.8
PENT	Pentalofos	0.36	131	P	Pg	18 30 19.4	+0.4
PENT				S	Sg	18 30 23.6	-0.1
KPRO	Kipourio	0.65	137	P	Pg	18 30 24.4	0.0
KPRO				S	Sg	18 30 33.5	+0.5
KPRO	Kipourio	0.65	137	P	Pg	18 30 24.3	-0.2
KPRO				S	Sg	18 30 33.1	+0.2
OHR	Ohrid	0.68	1	⇓*i*Pg	Pg	18 30 25.3	+0.3
OHR				*e*Sg	Sn	18 30 43.4	+4.4
OHR				*e*Lg	Lg	18 30 44.1	
	comp=E,7μm,0.6s						
OHR				*e*Lg	Lg	18 30 44.1	
	comp=N,3μm,0.5s						
OHR	Ohrid	0.68	1	*e*Pg	Pg	18 30 25.3	+0.3
OHR				*e*Sg	Sb	18 30 35.8	-0.1
KZN	Kozani	0.76	99	P	Pg	18 30 26.3	-0.3
KZN				S	Sg	18 30 34.3	-2.3
KZN	Kozani	0.76	99	P	Pb	18 30 27.1	-0.6
JAN	Janina	0.78	176	P	Pg	18 30 26.5	-0.3
JAN				S	Sb	18 30 38.9	+0.3
JAN	Janina	0.78	176	P	Pg	18 30 26.6	-0.3
JAN				S	Sg	18 30 37.3	+0.4
SRN	Sarande	0.82	228	Pg	Pg	18 30 27.4	-0.2
SRN				Sg	Sb	18 30 40.5	+0.9
SRN				AML	AML	18 30 43.6	
	comp=N,16nm,0.6s						
IGT	Igoumenitsa	0.96	201	Pg	Pb	18 30 30.8	-0.3
IGT				Sg	Sn	18 30 46.8	+0.8
IGT				AML	AML	18 30 57.9	
	comp=N,13nm,1.0s						
IGT	Igoumenitsa	0.96	201	P	Pb	18 30 30.7	-0.3
IGT				S	Sn	18 30 47.2	+1.2
IGT	Igoumenitsa	0.96	201	P	Pb	18 30 30.7	-0.3
VLO	Vlora	0.98	273	Pg	Pn	18 30 32.2	0.0
NASA	Naoussa	1.00	78	P	Pg	18 30 30.7	-0.3
KTI	Kastanea	1.02	92	P	Pb	18 30 32.2	+0.2
KEK	Kerkira	1.04	227		Pg	18 30 30.7	-1.2
KEK	Kerkira	1.04	227	P	Pn	18 30 33.3	+0.3
KEK				S	Sn	18 30 52.6	+4.7
KEK	Kerkira	1.04	227	P	Pb	18 30 32.4	+0.1
TETR	Tetrakomo, Epi	1.15	161	P	Pn	18 30 34.2	-0.3
TIR	Tirane	1.15	323		Pg	18 30 33.5	-0.6
TIR	Tirane	1.15	323	Pn	Pg	18 30 33.8	-0.3
TIR				Sn	Sn	18 30 53.3	+2.7
TIR				AML	AML	18 31 10.2	
	comp=N,13nm,1.0s						
TIR	Tirane	1.15	323	*i* Pg	Pg	18 30 31.1	-2.9
TIR				*e*Sg	Sg	18 30 48.9	0.0
TIR	Tirane	1.15	323	*e*Pg	Pg	18 30 33.1	-0.9
THL	Klokotos Trika	1.28	132	P	Pn	18 30 35.6	-0.7
THL				S	Sg	18 30 51.6	-1.5
THL	Klokotos Trika	1.28	132	P	Pn	18 30 35.5	-0.7
TYRN	Tyrnavos	1.32	122	P	Pg	18 30 37.0	-0.3
TYRN				S	Sb	18 30 53.0	-1.3
TYRN	Tyrnavos	1.32	122	P	Pg	18 30 36.9	-0.3
AMPL	Ampelaki	1.54	167	P	Pn	18 30 39.9	-0.1
TSLK	Tsoukalades, L	1.61	184	P	Pg	18 30 43.0	+0.3
TSLK	Tsoukalades, L	1.61	184	P	Pb	18 30 41.3	-0.7
SKO	Skopje	1.62	18	*i* Pg	Pb	18 30 42.1	-0.1
VAY	Valandovo	1.62	56	P	Pn	18 30 41.5	+0.6
VAY	Valandovo	1.62	56	*i* Pg	Pn	18 30 41.6	+0.6
VAY				*e*Sg	Sg	18 31 06.2	+2.2
VAY				*e*Lg	Lg	18 31 16.7	
	comp=N,2μm,0.8s						
VAY				*e*Lg	Lg	18 31 20.9	
	comp=E,2μm,1.0s						
VAY	Valandovo	1.62	56	*e*Pn	Pn	18 30 41.4	+0.4
LKD2	Lefkada island	1.64	183	P	Pg	18 30 43.6	+0.1
LKD2	Lefkada island	1.64	183	P	Pb	18 30 42.1	-0.5
THE	Thessaloniki	1.67	82	P	Pn	18 30 41.7	0.0
THE	Thessaloniki	1.67	82	*i* Pg	Pn	18 30 41.9	+0.2
THE	Thessaloniki	1.67	82	P	Pn	18 30 41.6	0.0
EVR	Evrytania	1.71	152	P	Pg	18 30 44.7	0.0
EVR	Evrytania	1.71	152	P	Pb	18 30 42.8	-1.0
NYDR	Nydri-Lefkada	1.72	182	P	Pg	18 30 44.5	-0.3
NYDR	Nydri-Lefkada	1.72	182	P	Pb	18 30 43.0	-0.9
PUK	Puka	1.74	338		Pg	18 30 45.5	+0.1
PUK	Puka	1.74	338	Pn	Pb	18 30 44.2	-0.1
PUK				Sn	Sg	18 31 10.0	+2.0
PUK				AML	AML	18 31 13.2	
	comp=E,18nm,0.9s						
MAKR	Makrakomi, Fth	1.76	143	P	Pb	18 30 44.1	-0.4
MAKR	Makrakomi, Fth	1.76	143	P	Pn	18 30 43.4	+0.5
KNT	Kendrikon	1.76	65	P	Pn	18 30 43.3	+0.3
KNT	Kendrikon	1.76	65	*e*Pn	Pn	18 30 43.3	+0.3
KNT	Kendrikon	1.76	65	P	Pn	18 30 43.1	+0.2
HORT	Hortiatis	1.77	84	P	Pn	18 30 42.3	-0.9
HORT	Hortiatis	1.77	84	P	Pn	18 30 42.8	-0.4
SCTE	Santa Cesarea	1.81	259		Pn	18 30 43.0	-0.6
SCTE	Santa Cesarea	1.81	259	P	Pn	18 30 43.4	-0.2
EVGI	Lefkada island	1.81	183	P	Pg	18 30 46.5	-0.2
EVGI	Lefkada island	1.81	183	P	Pn	18 30 43.8	+0.1
AGG	Agios Georgios	1.84	139	P	Pb	18 30 45.2	-0.9
AGG	Agios Georgios	1.84	139	P	Pb	18 30 45.0	-1.1
PDO	Prodromos	1.86	170	P	Pb	18 30 45.8	-0.5
PVO	Paravola	1.90	162	P	Pb	18 30 46.9	-0.1
PVO	Paravola	1.90	162	P	Pn	18 30 45.6	+0.8
ULC	Ulcinj	1.92	323	Pn	Pb	18 30 47.0	-0.3
ULC	Ulcinj	1.92	323	⇑*i*Pn	Pn	18 30 46.0	+0.8
ULC				*i* Sn	Sg	18 31 13.1	-0.6
FSK	Fiskardo	1.98	185	P	Pb	18 30 48.5	+0.3
FSK	Fiskardo	1.98	185	P	Pn	18 30 46.7	+0.8
SOH	Sokhos	1.99	78	P	Pn	18 30 46.7	+0.6
SOH	Sokhos	1.99	78	P	Pn	18 30 46.2	0.0
BCI	Bajram Curri	2.01	345	Pn	Pg	18 30 50.3	-0.1
BCI				Sn	Sg	18 31 18.6	+2.2
BCI				AML	AML	18 31 26.2	
	comp=E,9.3nm,0.7s						
BCI	Bajram Curri	2.01	345	P	Pb	18 30 49.7	+0.9
PLG	Polygyros	2.03	91	P	Pn	18 30 47.1	+0.5
PLG	Polygyros	2.03	91	P	Pn	18 30 46.8	+0.1
ANX	Ano Chora	2.04	154	P	Pn	18 30 46.8	+0.1
ANX	Ano Chora	2.04	154	P	Pn	18 30 47.2	+0.5
DRME	Dracevica, Mon	2.13	326	*e*Pn	Pb	18 30 49.6	-1.3
DRME	Dracevica, Mon	2.13	326	⇑*i*Pn	Pn	18 30 48.8	+0.8
DRME				*i* Sn	Sb	18 31 17.9	+0.4
EFP	Efpalio	2.18	156	P	Pb	18 30 50.7	-1.1
NEO	Neokhori	2.19	120	P	Pn	18 30 49.7	+0.9
NEO	Neokhori	2.19	120	P	Pn	18 30 49.1	+0.3
AXAR	Agios Charalam	2.21	138	P	Pn	18 30 49.2	+0.1
AXAR	Agios Charalam	2.21	138	P	Pn	18 30 49.3	+0.3
DMLN	Damoulianata-K	2.21	188	P	Pb	18 30 51.5	-0.8
DMLN	Damoulianata-K	2.21	188	P	Pn	18 30 48.8	-0.4

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SRS   Serrai           2.24  71  P     Pn   18 30 50.4 +0.9
SRS   Serrai           2.24  71  P     Pn   18 30 49.9 +0.4
MESG  Mesagne          2.24 275  P     Pn   18 30 49.6 +0.1
PVY   Plav             2.25 344⇑iPn    Pn   18 30 50.8 +1.1
PVY                             i Sn   Sb   18 31 21.2 +0.1
VLS   Valsamata        2.26 184  P     Pn   18 30 49.4 -0.3
VLS   Valsamata        2.26 184  P     Pn   18 30 50.5 +0.7
KKB   Krupnik          2.26  51 i P    Pb   18 30 51.8 -1.4
KKB   Krupnik          2.26  51 ePn    Pn   18 30 50.8 +0.9
PAIG  Paliouri         2.27 102  P     Pn   18 30 50.5 +0.5
AXS   Araxos           2.28 168  P     Pb   18 30 53.1 -0.3
AXS   Araxos           2.28 168  P     Pn   18 30 50.2 +0.2
KALE  Kalithea         2.29 152  P     Pb   18 30 52.2 -1.5
PDG   Podgorica        2.30 331        Pn   18 30 51.6 +1.3
PDG   Podgorica        2.30 331 ePn    Pn   18 30 52.0 +1.6
PDG   Podgorica        2.30 331 ⇑P     Pn   18 30 52.0 +1.6
PDG   Podgorica        2.30 331 ePn    Pb   18 30 52.3 -1.6
PDG                             eSn    Sb   18 31 23.1 +0.6
PDG   Podgorica        2.30 331⇑iPn    Pn   18 30 51.7 +1.3
PDG                             i Sn   Sb   18 31 22.7 +0.2
PDG   Podgorica        2.30 331  P     Pn   18 30 50.9 +0.5
PSDA  Pessada-Kefalo   2.32 184  P     Pb   18 30 52.3 -1.8
PSDA  Pessada-Kefalo   2.32 184  P     Pn   18 30 51.2 +0.6
BUM   Brajici-Budva    2.35 323⇑iPn    Pn   18 30 51.6 +0.5
BUM                             i Sn   Sb   18 31 23.5 -0.4
RTZL  Ratzakli, Kefa   2.35 180  P     Pb   18 30 53.4 -1.3
BOSS  Bosilegrad       2.42  31 ePn    Pn   18 30 52.6 +0.5
BOSS                            eSn    Sb   18 31 24.5 -1.5
RLS   Riolos of Patr   2.43 167  P     Pb   18 30 55.2 -0.8
RLS   Riolos of Patr   2.43 167  P     Pn   18 30 52.7 +0.6
OUR   Ouranopolis      2.44  91  P     Pn   18 30 52.9 +0.6
OUR   Ouranopolis      2.44  91  P     Pn   18 30 52.3 +0.1
LKR   Lokris           2.47 135  P     Pn   18 30 53.9 +1.3
KOKK  Kokkinochori,    2.48  80  P     Pn   18 30 53.3 +0.5
KOKK  Kokkinochori,    2.48  80  P     Pn   18 30 53.1 +0.4
BARS  Barje            2.50  18 ePn    Pn   18 30 53.6 +0.5
BARS  Barje            2.50  18 ePn    Pn   18 30 53.7 +0.5
MMB   Musomishta       2.50  63 i P    Pb   18 30 55.5 -1.8
MMB   Musomishta       2.50  63  P     Pn   18 30 54.0 +0.8
BEY   Berane           2.53 345 ePn    Pb   18 30 56.0 -1.8
IVA   Berane           2.53 345⇓iPn    Pn   18 30 55.2 +1.6
IVA                             i Sn   Sb   18 31 27.9 -1.2
CEME  Cevo             2.54 327⇑iPn    Pn   18 30 54.6 +1.0
CEME                            i Sn   Sb   18 31 27.8 -1.5
KOME  Kolasin          2.60 339⇑iPn    Pn   18 30 55.8 +1.3
KOME                            i Sn   Sb   18 31 29.6 -1.5
KLV   Kalavryta, Ach   2.61 156  P     Pn   18 30 55.5 +0.9
HCY   Herceg Novi      2.65 320 ePn    Pn   18 30 55.5 +0.3
HCY   Herceg Novi      2.65 320 ePn    Pn   18 30 55.8 +0.7
HCY                             i Sn   Sb   18 31 30.7 -1.8
AOS   Alonnisos        2.70 117  P     Pn   18 30 56.1 +0.3
SELS  Selova           2.80   5 ePn    Pn   18 30 58.4 +1.2
PLNA  Plana            2.85  43 i P    Pn   18 30 59.6 +1.6
VTS   Vitosha          2.85  39 i P    Pn   18 30 58.9 +0.8
VTS   Vitosha          2.85  39 ePn    Pn   18 30 58.6 +0.5
KAVA  Kavala           2.89  78  P     Pn   18 30 58.6 +0.1
KAVA  Kavala           2.89  78  P     Pn   18 30 58.6 +0.1
SJES  Sjenica          2.89 348 ePn    Pb   18 31 02.3 -1.6
SJES  Sjenica          2.89 348 ePn    Pn   18 31 01.2 +2.6
TREB  Trebinje         2.92 322 ePn    Pn   18 30 59.1 +0.2
AMT   Artemida-Makis   2.98 166  P     Pn   18 30 59.8 +0.1
BRY   Bratogost        2.99 326 ePn    Pn   18 31 00.8 +0.9
BRY   Bratogost        2.99 326⇓iPn    Pn   18 31 01.1 +1.2
BRY                             i Sn   Sn   18 31 38.2 +2.1
THAS  Thassos island   3.00  85  P     Pn   18 30 59.7 -0.3
PLE   Pljevlja         3.08 341⇓iPn    Pn   18 31 04.0 +2.9
PLE                             i Sn   Sn   18 31 41.5 +3.2
UPM   Unac-Piva        3.10 334 ePn    Pn   18 31 03.8 +2.2
UPM   Unac-Piva        3.10 334⇑iPn    Pn   18 31 02.9 +1.3
UPM                             i Sn   Sn   18 31 41.8 +2.7
MATE  Matera           3.12 275 ⇑P     Pn   18 31 02.6 +1.1
GOCS  Kraljevo Serbi   3.13   1 ePn    Pn   18 31 02.5 +0.7
ZAPS  Zavoj            3.16  25 ePn    Pn   18 31 03.2 +1.0
IVAS  Ivanjica         3.18 352 ePn    Pn   18 31 02.9 +0.4
RZN   Rozhen           3.24  66 i P    Pn   18 31 06.4 +2.9
BOVS  Bovan            3.27  12 ⇑P     Pn   18 31 04.2 +0.5
BOVS  Bovan            3.27  12 ePn    Pn   18 31 03.9 +0.2
PGB   Panagyurishte    3.29  50 i P    Pb   18 31 09.3 -1.3
TIP   Timpagrande      3.34 249        Pn   18 31 04.3 -0.4
TIP   Timpagrande      3.34 249 ⇓P     Pn   18 31 06.2 +1.4
RUDO  Rudo             3.35 342 ePn    Pn   18 31 06.3 +1.5
STON  Ston             3.36 318 ePn    Pn   18 31 03.6 -1.3
STON  Ston             3.36 318 ePn    Pn   18 31 05.3 +0.4
ITM   Ithomi           3.37 164        Pn   18 31 07.3 +2.2
PLD   Plovdiv          3.44  59 eP     Pn   18 31 07.9 +1.9
GRUS  Gruza            3.46 359 ePn    Pn   18 31 07.5 +1.3
ZAGS  Zajecar          3.55  17 ePn    Pn   18 31 07.9 +0.5
BBLS  Lazi&#263i       3.58 344 ePn    Pn   18 31 10.0 +2.0
BBLS  Lazi&#263i       3.58 344 ePn    Pn   18 31 10.7 +2.7
MPEP  Malo Peshtene    3.66  36 eP     Pg   18 31 20.4 -1.7
RDO   Rodhopi          3.68  77        Pn   18 31 08.7 -0.6
DIVS  Divibare         3.71 351 ePn    Pn   18 31 10.9 +1.1
TRUS  Trudelj          3.80 356 ePn    Pn   18 31 11.8 +0.8
CUC   Castrocucco      3.83 265        Pn   18 31 10.8 -0.6
HAPS  Han Pijesak,Bl   3.90 340 ePn    Pn   18 31 13.9 +1.5
HAPS  Han Pijesak,Bl   3.90 340 ePn    Pn   18 31 14.4 +2.0
ALN   Alexandroupoli   4.03  82        Pn   18 31 14.3 +0.2
KUBS  Kucevo           4.03   9 ePn    Pn   18 31 12.7 -1.4
SGRT  San Giovanni R   4.03 291        Pn   18 31 12.7 -1.5
TEKS  Tekeris          4.22 348 ePn    Pn   18 31 17.7 +1.0
TEKS  Tekeris          4.22 348 ePn    Pn   18 31 17.8 +1.0
AVAS  Avala Beograd    4.27 357 ePn    Pn   18 31 17.2 -0.2
EZN   Ezine            4.29  96 ⇓P     Pn   18 31 22.0 +4.4
CEL   Celeste          4.37 242        Pn   18 31 17.9 -0.9
MDVR  Moldovita        4.40   9 ePn    Pn   18 31 18.9 -0.4
SRE   Strehaia         4.59  22 ⇑P     Pn   18 31 24.4 +2.6
HERR  Herculane        4.61  15 ⇑P     Pn   18 31 24.6 +2.6
VRSS  Vrsac            4.71   5 ePn    Pn   18 31 23.0 -0.4
PAOL  Paolisi          4.76 279        Pn   18 31 23.1 -1.1
FRGS  Fruska Gora      4.78 352 ePn    Pn   18 31 25.5 +1.1
FRGS  Fruska Gora      4.78 352 ePn    Pn   18 31 25.1 +0.7
APE   Apeiranthos      5.00 131 ⇑P     Pn   18 31 31.5 +4.0
BLY   Banja Luka       5.07 330 ePn    Pn   18 31 29.0 +0.7
A050A Klekovaca        5.13 324 ePn    Pn   18 31 30.4 +1.2
GZR   Gura Zlata       5.17  16 ⇑P     Pn   18 31 32.1 +2.3
BZS   Buzias           5.22   6 ⇑P     Pn   18 31 31.8 +1.4
BZS   Buzias           5.22   6 ePn    Pn   18 31 31.1 +0.7
A051A Mrakovica        5.39 329 ePn    Pn   18 31 33.4 +0.5
SURR  Surduc           5.41  10 ⇓P     Pn   18 31 35.4 +2.4
INTR  Introdacqua      5.42 289        Pn   18 31 33.1 -0.2
LOT   Lotru            5.47  23 ⇑P     Pn   18 31 36.9 +2.9
VAE   Valguarnera      5.78 241  Pn    Pn   18 31 44.4 +6.2
      comp=E,1.3nm,0.3s,baz=83,slow=3.3,SNR=3.9
VAE                              Sn    Sb   18 32 54.3 -8.3
      comp=E,0.9nm,0.3s,baz=12,slow=16,SNR=2.5
VOIR                   5.90  31 ⇑P     Pn   18 31 42.8 +2.9
CAMP  Campotosto       5.92 293        Pn   18 31 38.8 -1.5
MORH  Mrgy, Hungar     5.99 346 ⇑P     Pn   18 31 42.4 +1.4
IDI   Anoyia           6.08 146  Pn    Pn   18 31 43.7 +1.4
      comp=E,5.9nm,0.7s,baz=40,slow=22,SNR=1.6
IDI                              Sn    Sn   18 32 58.9 +6.7
      comp=E,2.9nm,0.3s,baz=343,slow=11,SNR=3.0
GUMA  Gualdo di Mace   6.16 298        Pn   18 31 41.9 -1.6
NRCA  Norcia           6.23 295        Pn   18 31 43.5 -0.9
ISR   Istrita          6.31  40 ⇑P     Pn   18 31 49.5 +4.0
MLR   Muntele Rosu     6.32  35  Pn    Pn   18 31 46.1 +0.5
      comp=E,3.4nm,0.8s,baz=249,slow=12
MLR                              Sn    Sn   18 32 58.8 +0.7
      comp=E,0.7nm,0.3s,baz=224,slow=15,SNR=3.2
MLR   Muntele Rosu     6.32  35 ⇑P     Pn   18 31 49.2 +3.6
FDMO  Fiordimonte      6.32 297        Pn   18 31 45.3 -0.2
MANT  Manisa           6.32 105        Pn   18 31 45.6 -0.2
MARR  Marisel-Cluj     6.47  14 ⇓P     Pn   18 31 50.5 +2.8
BOJS  Bojanci          6.49 323 ePn    Pn   18 31 47.8 -0.1
BOJS  Bojanci          6.49 323 i Pn   Pn   18 31 47.9 -0.1
BOJS                            e           18 32 00.1
BOJS                            eSn    Sn   18 33 01.4 -0.8
BOJS  Bojanci          6.49 323 ePn    Pn   18 31 48.0 +0.1
CESX  Cesi             6.53 292        Pn   18 31 47.4 -1.1
CRES  Cresnjevec Ost   6.65 326 ePn    Pn   18 31 49.9 -0.2
BEHE  Becsehely        6.70 336        Pn   18 31 50.1 -0.7
RIY   Rijeka           6.73 319 ePn    Pn   18 31 51.2  0.0
RIY                             eSn    Sn   18 33 09.0 +0.9
MURB  Monte Urbino     6.79 297        Pn   18 31 52.0  0.0
PLOR  Plostina         6.91  36 ⇑P     Pn   18 31 56.6 +2.9
TIRR  Tirgusor         6.93  52        Pn   18 31 53.6 -0.3
VRI   Vrincioaia       6.95  37 ⇑P     Pn   18 31 56.6 +2.3
CEY   Cerknica         7.05 321 ePn    Pn   18 31 55.5 -0.1
CEY   Cerknica         7.05 321 ePn    Pn   18 31 55.6 -0.1
ARG   Arkhangelos      7.14 124  Pn    Pn   18 31 55.7 -1.1
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TPGR  Topolog          7.16  49 ⇓P     Pn   18 32 00.6 +3.6
CFR   Carcaliu         7.19  46 ⇑P     Pn   18 31 60.0 +2.5
TRI   Trieste          7.36 318        Pn   18 31 57.8 -2.1
BORA  Eskisehir        7.43  91        Pn   18 32 00.8  0.0
SOKA  Soboth           7.51 328 i Pn   Pn   18 32 02.2 +0.2
      comp=E,9.2nm,0.5s,SNR=6.5
PSZ   Piszkesteto      7.51 355        Pn   18 32 02.1 +0.1
PSZ   Piszkesteto      7.51 355 ⇑P     Pn   18 32 04.4 +2.5
OBKA  Obir             7.58 325 ePn    Pn   18 32 02.1 -0.8
OBKA  Obir             7.58 325 i Pn   Pn   18 32 02.5 -0.4
      comp=E,6.3nm,0.4s
OBKA                            i Sn   Sn   18 33 30.2 +1.1
      comp=E,33nm,0.9s
SRO   Srobarova        7.59 347 eSN    Sn   18 33 34.4 +5.2
SABO  M.te Sabotino    7.63 319        Pn   18 32 02.5 -1.1
CASP  Castiglione de   7.80 291  Pn    Pn   18 32 05.3 -0.5
ARSA  Arzberg          7.80 333        Pn   18 32 04.8 -1.2
ARSA  Arzberg          7.80 333 i Pn   Pn   18 32 08.0 +2.1
      comp=E,4.3nm,0.5s
BURAR Bucovina Array   7.86  22  Pn    Pn   18 32 06.4 -0.3
BUR08 Bucovina Ar. S   7.88  22        Pn   18 32 06.1 -0.9
RONA  Rosalia, Austr   7.95 338 ePn    Pn   18 32 09.6 +1.6
      comp=E,2.7nm,0.5s
RONA                            eSn    Sn   18 33 39.4 +1.2
      comp=E,4.0nm,0.5s
PRED  Cave del Predi   7.98 321        Pn   18 32 07.4 -1.0
KECS  Kecovo           8.05 359 ePN    Pn   18 32 12.7 +3.4
MYKA  Terra Mystica    8.08 322 i Pn   Pn   18 32 08.8 -1.0
      comp=E,6.2nm,0.7s
VYHS  Vyhne            8.18 351 ePN    Pn   18 32 14.2 +3.1
VYHS                            eSN    Sn   18 33 45.9 +2.1
ZCCA  Zocca            8.25 302        Pn   18 32 11.1 -1.0
CONA  Conrad Observa   8.29 336 i Pn   Pn   18 32 14.2 +1.6
      comp=E,1.3nm,0.4s
TEOL  Teolo            8.31 309        Pn   18 32 11.1 -1.7
MODS  Modra-Piesok     8.33 344 ePN    Pn   18 32 17.8 +4.7
KBA   Koelnbreinsper   8.55 323 ePn    Pn   18 32 16.0 -0.3
      comp=E,4.8nm,0.5s
KBA                             eSn    Sn   18 33 53.5 +0.4
      comp=E,10nm,0.6s
KOLS  Kolonicke sedl   8.57   7 ePN    Pn   18 32 23.8 +7.4
ABTA  Abfaltersbach    8.71 319 i Pn   Pn   18 32 18.0 -0.4
      comp=E,21nm,0.6s,SNR=5.8
ABTA                            eSn    Sn   18 33 55.3 -1.5
      comp=E,15nm,0.8s
CTI   Castel Tesino    8.71 313        Pn   18 32 17.1 -1.4
JAVC  Velka Javorina   8.71 346 ePN    Pn   18 32 20.4 +2.0
MOA   Molln            8.77 330 i Pn   Pn   18 32 20.7 +1.5
      comp=E,3.7nm,0.5s
MOA                             eSn    Sn   18 34 01.2 +3.0
      comp=E,5.0nm,0.6s
MOA   Molln            8.77 330 ePn    Pn   18 32 20.9 +1.7
BIOA  Bad Ischl, Aus   8.89 327 i Pn   Pn   18 32 21.0 +0.1
      comp=E,2.0nm,0.3s
BIOA                            eSn    Sn   18 34 02.1 +0.8
      comp=E,8.5nm,0.5s
LESA  Schwarzleotal    9.11 323 i Pn   Pn   18 32 23.8 -0.1
      comp=E,12nm,0.6s
LESA                            eSn    Sn   18 34 06.3 -0.4
      comp=E,19nm,0.8s
KRUC  Moravsky         9.18 342 ePN    Pn   18 32 26.5 +1.8
MAUC  Maruska          9.18 348 ePN    Pn   18 32 29.2 +4.5
MSSA  Maissana         9.20 299  Pn    Pn   18 32 24.2 -0.9
VRAC  Vranov           9.36 343  Pn    Pn   18 32 27.5 +0.3
      comp=E,0.9nm,0.3s,baz=168,slow=21,SNR=3.3
      comp=E,2.0nm,0.5s
VRAC  Vranov           9.36 343 ePN    Pn   18 32 27.7 +0.5
WTTA  Wattenberg       9.50 319 ePn    Pn   18 32 29.4  0.0
      comp=E,9.0nm,0.5s,SNR=7.4
WTTA                            eSn    Sn   18 34 17.0 +0.6
      comp=E,24nm,0.7s
CKRC  Cesky Krumlov    9.57 333 ePN    Pn   18 32 33.6 +3.5
CKRC                             AMS   AMS  18 36 40.0
      comp=E,400nm,10.9s
WATA  Walderalm        9.58 319 i Pn   Pn   18 32 31.1 +0.7
      comp=E,12nm,0.6s,SNR=21
WATA                            eSn    Sn   18 34 16.6 -1.7
      comp=E,31nm,1.0s
MORC  Moravsky Berou   9.62 347        Pn   18 32 30.7 -0.1
MORC  Moravsky Berou   9.62 347 ePN    Pn   18 32 32.4 +1.5
SQTA  Sankt Quirin     9.69 318 ePn    Pn   18 32 32.2 +0.4
      comp=E,27nm,0.6s,SNR=11
SQTA                            eSn    Sn   18 34 22.3 +1.4
      comp=E,16nm,0.5s
GEC2  GERESS Array S   9.80 331        Pn   18 32 33.0 -0.5
GERES GERESS Array B   9.80 331        Pn   18 32 32.6 -0.8
GERES GERESS Array B   9.80 331  Pn    Pn   18 32 33.8 +0.3
      baz=153,slow=15,SNR=17
GERES                            Sn    Sn   18 34 20.9 -2.9
      baz=238,slow=33
      comp=E,2.2nm,0.8s
FETA  Feichten         9.81 315 ePn    Pn   18 32 34.5 +0.9
      comp=E,28nm,1.5s,SNR=7.8
FETA                            i Sn   Sn   18 34 25.3 +1.3
      comp=E,12nm,0.9s
MOTA  Moosalm          9.82 318 ePn    Pn   18 32 34.0 +0.3
      comp=E,19nm,0.8s,SNR=20
MOTA                            eSn    Sn   18 34 25.4 +1.1
      comp=E,43nm,1.0s
FUORN Ofenpass-Fuorn   9.83 312        Pn   18 32 32.8 -1.1
BRTR  Keskin Array B   9.88  90  Pn    Pn   18 32 36.4 +1.9
      comp=E,0.1nm,0.3s,baz=263,slow=9.8,SNR=4.2
BRTR                             Sn    Sn   18 34 25.6 -0.2
      baz=230,slow=15,SNR=1.2
BRTR                             LR    LR   18 37 29.6
      comp=E,29nm,18.1s,baz=298,slow=44
KRLC  Kraliky         10.05 345  AMS   AMS  18 37 10.0
      comp=E,500nm,7.9s
KHC   Kasperske Hory  10.09 332 ePN    Pn   18 32 39.3 +2.0
KHC                             eSN    Sn   18 34 31.7 +1.0
KHC                              AMS   AMS  18 38 40.0
      comp=E,500nm,9.2s
DAVOX Davos/Dischmat  10.13 312  Pn    Pn   18 32 38.8 +0.8
      comp=E,1.2nm,0.3s,baz=124,slow=19,SNR=15
DAVOX                            Sn    Sn   18 34 32.8 +0.8
      comp=E,0.3nm,0.3s,baz=272,slow=22,SNR=1.4
DAVOX                            LR    LR   18 37 35.9
      comp=E,120nm,20.5s,baz=84,slow=44
      comp=E,5.2nm,0.6s
ZVC   Zvikov          10.14 335 ePN    Pn   18 32 41.0 +3.0
ZVC                              AMS   AMS  18 37 10.0
      comp=E,500nm,9.7s
KEST  Kesra           10.16 246  Pn    Pn   18 32 41.2 +2.9
      comp=E,0.2nm,0.3s,baz=49,slow=16,SNR=3.6
      comp=E,4.8nm,1.1s
TUE   Stuetta         10.27 310        Pn   18 32 38.3 -1.6
GOPC  GO Pecny, Ondr  10.38 338  AMS   AMS  18 37 10.0
      comp=E,700nm,8.2s
DPC   Dobruska-Polom  10.40 344  AMS   AMS  18 37 20.0
      comp=E,700nm,9.4s
DAVA  Damuels         10.43 315 i Pn   Pn   18 32 43.5 +1.4
      comp=E,9.3nm,0.6s
DAVA                            i Sn   Sn   18 34 37.9 -1.3
      comp=E,9.3nm,0.6s
PRU   Pruhonice       10.52 337  AMS   AMS  18 37 10.0
      comp=E,700nm,8.2s
UPC   Upice           10.62 343  AMS   AMS  18 37 20.0
      comp=E,900nm,7.7s
BNI   Bardonecchia    11.35 299  Pn    Pn   18 32 54.6 -0.1
GRA1  Grafenberg Arr  11.46 327  Pn    Pn   18 32 53.8 -2.2
SENIN Lac Senin/Sane  11.46 306        Pn   18 32 55.0 -1.1
BRG   Berggiesshubel  11.48 338 eP     Pn   18 32 59.3 +3.0
BRG                              Amp        18 32 59.6
      comp=Z,1.5nm,0.8s
STU   Stuttgart       11.73 319        Pn   18 32 57.0 -2.6
AKASG Malin Array Be  11.84  27  Pn    Pn   18 32 59.9 -1.2
      comp=Z,0.2nm,0.3s,baz=215,slow=12,SNR=1.5
BFO   Black Forest    11.89 316        Pn   18 32 58.5 -3.4
CLL   Collm           12.14 336 eP     Pn   18 33 07.0 +1.7
CLL                             esPP        18 33 16.0
CLL                             ex     x    18 33 35.0
CLL                             i x    x    18 34 02.4
CLL                             ex     x    18 35 13.0
CLL                             ex     x    18 36 34.0
CLL                              AMS   AMS  18 38 00.0
ECH   Echery          12.47 313        Pn   18 33 07.7 -2.1
MMAI  Mount Meron Ar  13.86 118  Pn    Pn   18 33 31.4 +2.5
      comp=Z,0.7nm,0.3s,baz=330,slow=13,SNR=2.2
MMAI                             LR    LR   18 40 21.1
      comp=Z,55nm,19.8s,baz=309,slow=44
      comp=Z,0.5nm,0.4s
NACGM Naroch          15.02  13 eP     Pn   18 33 46.9 +2.3
      comp=Z,4.0nm,0.7s,baz=198
GHAJ  Ghor Haditha    15.04 123  P     P    18 33 48.1 -2.2
GHAJ                             IAmb  IAmb 18 34 21.0
      comp=Z,19nm,1.1s
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ASF   Jabal al Asfar  15.37 117  Pn    P    18 33 51.7 -2.5
      comp=Z,0.2nm,0.3s,baz=64,slow=20,SNR=1.6
      comp=Z,0.5nm,0.3s
EIL   Elat            15.79 128  Pn    P    18 33 57.5 -1.2
      comp=Z,0.2nm,0.3s,baz=296,slow=19,SNR=3.6
      comp=Z,2.0nm,0.8s
KBZ   Khabaz          16.73  71  Pn    Pn   18 34 06.4 -0.4
      comp=Z,0.1nm,0.3s,baz=194,slow=11,SNR=2.3
KBZ                              LR    LR   18 42 45.4
      comp=Z,28nm,20.1s,baz=294,slow=45
      comp=Z,0.3nm,0.4s
OBN   Obninsk         18.05  30  P     Pn   18 34 22.0 -1.1
      comp=Z,1.6nm,0.3s,baz=270,slow=6.1,SNR=1.5
      comp=Z,5.5nm,0.4s
GNI   Garni           18.27  83        Pn   18 34 24.2 -1.9
GNI   Garni           18.27  83  P     P    18 34 26.5 +0.2
      comp=Z,0.5nm,0.3s,baz=98,slow=5.1,SNR=3.5
      comp=Z,1.5nm,0.3s
ESDC  Sonseca Array   18.95 276  P     Pn   18 34 34.6 +0.4
      comp=Z,0.1nm,0.3s,baz=77,slow=11,SNR=12
      comp=Z,1.8nm,0.9s
HFS   Hagfors         20.21 350  P     P    18 34 46.4 -0.8
      comp=Z,3.0nm,0.7s,baz=150,slow=10,SNR=6.3
HFS                              LR    LR   18 42 28.5
      comp=Z,85nm,21.9s,baz=170,slow=37
      comp=Z,3.0nm,0.7s
PBRG  Braganca        20.75 283 eP     Pn   18 35 02.2 +6.5
PBRG                             IAmb  IAmb 18 35 20.8
      comp=Z,10.0nm,1.4s
MVO   Moncorvo        21.04 281 eP     P    18 35 00.6 +4.1
MVO                              IAmb  IAmb 18 35 12.5
      comp=Z,14nm,1.5s
NC602 NORSAR Array S  21.12 347  P     P    18 34 55.8 -1.3
NC602                            IAmb  IAmb 18 35 20.9
      comp=Z,16nm,1.1s
FINES FINESS Array B  21.29   7  P     P    18 34 57.3 -1.5
FINES FINESS Array B  21.29   7  P     P    18 34 58.5 -0.3
      comp=Z,1.3nm,0.5s,baz=173,slow=11,SNR=9.3
      comp=Z,1.3nm,0.5s
FIA1  FINESS Array S  21.29   7  P     P    18 34 57.6 -1.3
NAO01 NORSAR Array S  21.33 347  P     P    18 34 58.0 -1.3
NAO01                            IAmb  IAmb 18 35 21.4
      comp=Z,19nm,1.2s
NC405 NORSAR Array S  21.45 348  P     P    18 34 59.4 -1.2
NC405                            IAmb  IAmb 18 35 17.4
      comp=Z,19nm,0.9s
NB201 NORSAR Array S  21.45 347  P     P    18 34 59.1 -1.6
NB201                            IAmb  IAmb 18 35 17.9
      comp=Z,33nm,1.4s
NB2   NORSAR Subarra  21.46 347  P     P    18 35 00.3 -0.4
      comp=Z,7.9nm,1.2s,baz=160,slow=11
NOA   NORSAR Array B  21.46 347  P     P    18 34 59.4 -1.3
      comp=Z,1.6nm,0.9s,baz=154,slow=10,SNR=7.5
NOA                              LR    LR   18 44 03.6
      comp=Z,31nm,20.2s,baz=165,slow=39
      comp=Z,1.6nm,0.9s
NBO00 NORSAR Array S  21.53 347        P    18 35 00.2 -1.2
MTE   Manteigas       21.54 279 eP     P    18 35 08.0 +6.2
MTE                              IAmb  IAmb 18 35 34.4
      comp=Z,22nm,1.6s
PCBR  Castelo Branco  21.58 278 eP     P    18 35 11.7  +10
PCBR                             IAmb  IAmb 18 35 12.9
      comp=Z,13nm,1.5s
POLO  Lamas de Olo    21.59 282 eP     P    18 35 03.5 +1.1
PMRV  Marv??o         21.60 277 eP     P    18 35 03.5 +1.1
PMRV                             IAmb  IAmb 18 35 16.6
      comp=Z,22nm,1.6s
NC303 NORSAR Array S  21.61 348  P     P    18 35 00.8 -1.6
PBAR  Barrancos       21.62 273 eP     P    18 35 08.8 +6.2
MDT   Midelt          21.70 258  P     P    18 35 04.8 +1.1
      comp=Z,1.8nm,0.9s,baz=83,slow=14,SNR=5.4
MDT                              LR    LR   18 42 23.0
      comp=Z,31nm,19.9s,baz=66,slow=34
      comp=Z,1.8nm,0.9s
PVIS  Viseu           21.75 280 eP     P    18 35 10.0 +5.9
EKA   Eskdalemuir Ar  21.75 321  P     P    18 35 03.7 -0.2
      comp=Z,3.1nm,0.8s,baz=116,slow=9.4,SNR=12
      comp=Z,3.1nm,0.8s
NC204 NORSAR Array S  21.76 347        P    18 35 03.5 -0.5
NC204                            IAmb  IAmb 18 35 15.9
      comp=Z,17nm,1.1s
TAM   Tamanrasset     21.81 221        P    18 35 03.2 -1.8
TAM                              IAmb  IAmb 18 35 20.7
      comp=Z,7.1nm,0.8s
PESTR Estremoz        21.87 275 eP     P    18 35 03.9 -1.5
BELG  Belogornoye     21.89  48  P     P    18 35 04.9 -0.5
      comp=Z,7.0nm,0.9s,baz=121,slow=8.0,SNR=1.9
      comp=Z,7.0nm,0.9s
PSARD Sardoal         22.15 277 eP     P    18 35 08.1 -0.3
PMTG  Montargil       22.31 276 eP     P    18 35 07.5 -2.5
PCAS  Casmilo, Conde  22.32 279 eP     P    18 35 11.9 +1.8
PVAQ  Vaqueiros       22.34 271 eP     P    18 35 11.5 +1.1
PVAQ                             IAmb  IAmb 18 35 22.2
      comp=Z,49nm,1.6s
KIRV  Kirov           25.68  35  LR    LR   18 47 12.1
      comp=Z,29nm,20.6s,baz=253,slow=40
AKTO  Aktyubinsk      27.71  56  LR    LR   18 48 14.5
      comp=Z,50nm,19.5s,baz=140,slow=39
ABKAR Akbulak array   28.86  59  P     P    18 36 10.3 -0.6
ABKAR Akbulak array   28.86  59  P     P    18 36 10.1 -0.9
ABKAR                            IAmb  IAmb 18 36 21.2
      comp=Z,2.9nm,1.4s
ARTI  Arti            29.16  44  LR    LR   18 48 30.4
      comp=Z,23nm,20.9s,baz=249,slow=38
ARCES ARCESS Array B  29.27   3  P     P    18 36 12.3 -2.2
ARCES ARCESS Array B  29.27   3  P     P    18 36 12.5 -1.9
      comp=Z,4.1nm,1.0s,baz=184,slow=9.7,SNR=5.3
ARCES                            LR    LR   18 48 57.5
      comp=Z,30nm,19.1s,baz=158,slow=39
      comp=Z,4.1nm,1.0s
TORD  Torodi Ar. Bea  31.93 217  P     P    18 36 35.8 -2.6
TORD                             IAmb  IAmb 18 36 53.3
      comp=Z,4.1nm,1.3s
TORD  Torodi Ar. Bea  31.93 217  P     P    18 36 39.7 +1.3
      comp=Z,0.5nm,0.3s,baz=31,slow=10,SNR=4.6
      comp=Z,0.5nm,0.3s
HRA   Herat           33.25  87  P     P    18 36 49.0 -1.1
BORG  Borgarnes       34.26 329  LR    LR   18 51 51.4
      comp=Z,31nm,19.6s,baz=123,slow=38
BVAR  Borovoye Array  35.55  52  P     P    18 37 08.8 -0.7
      comp=Z,0.4nm,0.4s,baz=251,slow=9.0,SNR=2.7
BVAR                             LR    LR   18 51 49.4
      comp=Z,26nm,19.6s,baz=249,slow=37
      comp=Z,0.4nm,0.4s
KKAR  Karatay Array   36.75  69  P     P    18 37 20.7 +0.7
ARSB  Arslanbob       38.98  71  P     P    18 37 38.6 -0.4
LODK  Lodwar          39.13 157  P     P    18 37 39.6 -0.7
DBIC  Dimbokro        40.70 221  P     P    18 37 54.6 +1.2
      comp=Z,2.5nm,0.6s,baz=18,slow=6.4,SNR=1.9
      comp=Z,2.5nm,0.6s
KURBB Kurchatov Arra  40.76  56  P     P    18 37 52.7 -0.8
      comp=Z,0.2nm,0.7s,baz=288,slow=9.7,SNR=2.9
      comp=Z,0.2nm,0.7s
MKAR  Makanchi Array  43.98  60  P     P    18 38 19.1 -0.7
      comp=Z,0.6nm,0.7s,baz=282,slow=6.8,SNR=9.1
MKAR                             LR    LR   18 56 55.7
      comp=Z,30nm,19.7s,baz=284,slow=36
      comp=Z,0.6nm,0.7s
ZALV  Zalesovo Beam   44.06  50  P     P    18 38 19.4 -0.8
      comp=Z,0.6nm,0.5s,baz=279,slow=10,SNR=2.2
      comp=Z,0.6nm,0.5s
SCHQ  Schefferville   56.96 316  P     P    18 39 57.2 -0.5
      comp=Z,1.0nm,0.5s,baz=49,slow=9.9,SNR=3.7
      comp=Z,1.0nm,0.5s
HHC   Hu-ho-hao-te    65.60  56 eP     P    18 40 55.5 -1.2
HHC                              pmax  pmax
      comp=Z,5.0nm,0.5s
HHC                              pmax  pmax
      comp=Z,73nm,4.7s
PZH   PanZhiHua       66.78  74  P     P    18 41 05.7 +1.2
PZH                              pmax  pmax
      comp=Z,8.0nm,1.0s
PZH                              pmax  pmax
      comp=Z,100nm,4.4s
BOSA  Boshof          68.82 176  P     P    18 41 17.7 +0.7
      comp=Z,1.6nm,0.6s,baz=342,slow=5.3,SNR=5.3
      comp=Z,1.6nm,0.6s
ILAR  Eielson Array   74.69 355  P     P    18 41 52.1 +0.2
      comp=Z,0.4nm,0.9s,baz=336,slow=2.0,SNR=2.1
      comp=Z,0.4nm,0.9s
USRK  Ussuriysk Ar.   75.51  44  P     P    18 41 56.7 -0.2
      comp=Z,0.9nm,0.7s,baz=78,slow=3.5,SNR=1.5
      comp=Z,0.9nm,0.7s
KSRS  Korea Array     77.75  51  P     P    18 42 08.6 -1.1
      comp=Z,0.9nm,0.8s,baz=308,slow=6.0,SNR=4.1
      comp=Z,0.9nm,0.8s
MJAR  Matsushiro Arr  84.27  46  P     P    18 42 44.3 -0.3
      comp=Z,1.6nm,1.0s,baz=322,slow=5.0,SNR=5.1
```

	comp=Z,1.6nm,1.0s						
PDAR	**Pinedale Array**	**85.80**	**326**	P	**P**	**18 42 52.8**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=69,slow=4.9,SNR=4.6						
	comp=Z,0.4nm,0.7s						
TXAR	**Lajitas Array**	**93.57**	**314**	P	**P**	**18 43 29.8**	**+0.7**
	comp=Z,0.9nm,0.8s,baz=57,slow=4.6,SNR=7.9						
	comp=Z,0.9nm,0.8s						
ASAR	**Alice Springs**	**122.19**	**95**	PKP	**PKPdf**	**18 49 07.2**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=356,slow=3.3,SNR=7.9						

IDC 01 18:34:59.8±293.0**, 22°.77N×158°.20W, h0km, Error ellipse: s-maj=124.8km s-min=90.1km az=158.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I59US	**HAWAII INFRASO**	**3.82**	**145**	I	I	18 59 30.0	
	0.1nm,1.2s,baz=328,slow=325,SNR=2.4						
I60US	**Wake Island**	**32.98**	**271**	I	I	21 52 40.0	
	baz=77,slow=315,SNR=0.9						
I44RU	**PETROPAVLOVSK**	**45.03**	**324**	I	I	23 14 50.0	
	baz=117,slow=322,SNR=1.0						

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*ATH **01** 18:35:00.6, 40°.45N×20°.80E, h11km±1km, ML2.9/10, Manual Solution by A.Agalos First location: 2019/06/01 18:36:41, This location: 2019/06/01 19:37:59 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*TIR **01** 18:35:00.1, 40°.45N×20°.80E, h15km±1km, Ml3.2/8*

*THE **01** 18:35:03.6, 40°N±2°×2°1E±°, h3km±4km, M2.6/11, MLh2.6/11*

ISC 01 18:35:00.6±0.9**, 40°.45N**±0°.02×**20°.79E**±0°.02**, h10**km±7km**, n44, σ0s.51**/59**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	**Korca**	**0.17**	**359**	Pg	**Pg**	**18 35 04.1**	**-0.4**
KBN				Sg	**Sg**	**18 35 07.1**	**-0.1**
KBN				AML	AML	18 35 07.4	
	36nm,0.3s						
KBN				AML	AML	18 35 09.6	
	19nm,0.4s						
NEST	**Nestorio**	**0.20**	**100**	Pg	**Pg**	**18 35 05.2**	**+0.3**
NEST				Sg	**Sg**	**18 35 08.1**	**+0.3**
NEST				AML	AML	18 35 09.9	
	18nm,0.4s						
NEST	**Nestorio**	**0.20**	**100**	P	**Pg**	**18 35 05.0**	**+0.1**
NEST	**Nestorio**	**0.20**	**100**	P	**Pg**	**18 35 05.2**	**+0.3**
NEST				S	**Sg**	**18 35 08.0**	**+0.2**
LSK	**Leskovik**	**0.33**	**206**	Pg	**Pg**	**18 35 06.9**	**-0.5**
LSK				Sg	**Sb**	**18 35 13.3**	**-0.8**
LSK				AML	AML	18 35 15.4	
	17nm,0.5s						
PENT	**Pentalofos**	**0.37**	**134**	P	**Pg**	**18 35 08.0**	**0.0**
PENT				S	**Sg**	**18 35 13.3**	**+0.5**
KPRO	**Kipourio**	**0.66**	**138**	P	**Pg**	**18 35 13.4**	**0.0**
KPRO				S	**Sb**	**18 35 22.8**	**-0.7**
KPRO	**Kipourio**	**0.66**	**138**	P	**Pg**	**18 35 13.1**	**-0.3**
KPRO				S	**Sb**	**18 35 22.7**	**-0.7**
KZN	**Kozani**	**0.76**	**100**	P	**Pb**	**18 35 15.5**	**-0.5**
KZN				S	**Sb**	**18 35 26.4**	**-0.1**
JAN	**Janina**	**0.79**	**177**	P	**Pg**	**18 35 15.7**	**-0.3**
SRN	**Sarande**	**0.83**	**227**	Pg	**Pg**	**18 35 16.9**	**+0.3**
SRN				Sg	**Sn**	**18 35 29.6**	**-1.0**
SRN				AML	AML	18 35 33.3	
	1.9nm,0.8s						
IGT	**Igoumenitsa**	**0.98**	**201**	Pg	**Pb**	**18 35 19.7**	**0.0**
IGT				Sg	**Sn**	**18 35 35.7**	**+1.3**
IGT	**Igoumenitsa**	**0.98**	**201**	P	**Pb**	**18 35 19.9**	**+0.2**
KTI	**Kastanea**	**1.01**	**93**	P	**Pg**	**18 35 19.8**	**-0.3**
KEK	**Kerkira**	**1.06**	**226**	P	**Pg**	**18 35 21.1**	**+0.1**
TIR	**Tirane**	**1.14**	**322**	Pn	**Pb**	**18 35 22.2**	**-0.2**
TIR				Sn	**Sn**	**18 35 39.1**	**+0.7**
TIR				AML	AML	18 35 46.8	
	0.7nm,0.7s						
TETR	**Tetrakomo, Epi**	**1.16**	**161**	P	**Pg**	**18 35 23.3**	**+0.3**
PHP	**Peshkopia**	**1.26**	**348**	Pg	**Pb**	**18 35 24.4**	**-0.2**
PHP				Sg	**Sn**	**18 35 42.1**	**+0.6**
PHP				AML	AML	18 35 52.9	
	0.9nm,0.6s						
THL	**Klokotos Trika**	**1.29**	**133**	P	**Pn**	**18 35 23.8**	**-0.8**
TYRN	**Tyrnavos**	**1.33**	**123**	P	**Pn**	**18 35 25.2**	**0.0**
TYRN				S	**Sg**	**18 35 43.9**	**+0.5**
TYRN	**Tyrnavos**	**1.33**	**123**	P	**Pn**	**18 35 25.0**	**-0.2**
VAY	**Valandovo**	**1.60**	**57**	P	**Pb**	**18 35 30.4**	**+0.1**
TSLK	**Tsoukalades, L**	**1.63**	**184**	P	**Pn**	**18 35 29.5**	**+0.2**
LKD2	**Lefkada island**	**1.66**	**184**	P	**Pg**	**18 35 33.7**	**+1.2**
EVR	**Evrytania**	**1.72**	**153**	P	**Pg**	**18 35 33.0**	**-0.6**
PUK	**Puka**	**1.73**	**337**	Pn	**Pg**	**18 35 33.7**	**-0.1**
PUK				Sn	**Sg**	**18 35 55.9**	**-0.4**
PUK				AML	AML	18 36 01.8	
	1.4nm,0.8s						
NYDR	**Nydri-Lefkada**	**1.73**	**182**	P	**Pg**	**18 35 33.8**	**-0.1**
NYDR	**Nydri-Lefkada**	**1.73**	**182**	P	**Pn**	**18 35 30.9**	**+0.2**
KNT	**Kendrikon**	**1.75**	**65**	P	**Pb**	**18 35 32.0**	**-0.8**
KNT	**Kendrikon**	**1.75**	**65**	P	**Pn**	**18 35 30.8**	**-0.2**
HORT	**Hortiatis**	**1.76**	**84**	P	**Pn**	**18 35 31.9**	**+0.6**
HORT	**Hortiatis**	**1.76**	**84**	P	**Pn**	**18 35 31.4**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.77**	**144**	P	**Pn**	**18 35 31.6**	**+0.4**
SCTE	**Santa Cesarea**	**1.82**	**259**	P	**Pn**	**18 35 31.8**	**-0.1**
EVGI	**Lefkada island**	**1.83**	**183**	P	**Pg**	**18 35 35.1**	**-0.6**
AGG	**Agios Georgios**	**1.85**	**140**	P	**Pb**	**18 35 34.0**	**-0.6**
AGG	**Agios Georgios**	**1.85**	**140**	P	**Pn**	**18 35 32.5**	**0.0**
SOH	**Sokhos**	**1.98**	**78**	P	**Pn**	**18 35 35.3**	**+1.0**
SOH	**Sokhos**	**1.98**	**78**	P	**Pn**	**18 35 34.3**	**0.0**
BCI	**Bajram Curri**	**1.99**	**344**	Pn	**Pg**	**18 35 38.7**	**-0.2**
BCI				Sn	**Sb**	**18 36 02.5**	**+0.7**
BCI				AML	AML	18 36 29.6	
	1.1nm,0.6s						
PDG	**Podgorica**	**2.29**	**330**	P	**Pn**	**18 35 38.6**	**+0.1**
KOKK	**Kokkinochori,**	**2.47**	**80**	P	**Pn**	**18 35 40.6**	**-0.2**
VIL2	**Platees**	**2.94**	**139**	P	**Pn**	**18 35 48.4**	**+0.9**
LTRZ	**Laterza**	**3.03**	**274**	P	**Pn**	**18 35 48.6**	**0.0**

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*NAO **01** 18:37:27.9, 39°.83N×25°.73E, h10km, mb4.0*

*THE **01** 18:37:36.1, 40°N±1°×2°1E±°, h0km±1km, M3.3/20, MLh3.3/20*

*ATH **01** 18:37:38.7, 40°.54N×20°.58E, h6km, ML3.5/8, Manual Solution by K.Orfanogiannaki First location: 2019/06/01 18:38:52, This location: 2020/10/04 18:35:22 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*

*PDG **01** 18:37:39.3±0.9, 40°.18N×20°.74E, h11km±2km, ML3.6/11, Error ellipse: s-maj=1.6km s-min=1.8km az=0.0*

*IDC **01** 18:37:40.2±1.2, 40°.27N×20°.66E, h0km, mb3.5/8, mbtmp3.5/14, ML3.3/5, MS2.7/1, Error ellipse: s-maj=18.2km s-min=14.5km az=19.0*

*NEIC **01** 18:37:41.2±2.0, 40°.70N±0°.05×20°.71E±0°.07, h10km±2km, mb4.2/5, Error ellipse: s-maj=9.4km s-min=7.3km az=238.0*

*BEO **01** 18:37:42.7±0.8, 40°.36N×20°.80E, h0km±3km, ML3.3/4*

*TIR **01** 18:37:42.9, 40°.43N×20°.76E, h7km±1km, Ml3.6/10*

ISC 01 18:37:41.6±0.8**, 40°.35N**±0°.02×**20°.80E**±0°.02**, h14**km±5km**, n171, σ2s.26**/213**, mb3.6**/9**, 6C, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEST	**Nestorio**	**0.20**	**72**	Pg	**Pb**	**18 37 47.8**	**+0.7**
NEST				Sg	**Sg**	**18 37 51.5**	**+2.1**
NEST				AML	AML	18 37 52.7	
	73nm,0.3s						
NEST	**Nestorio**	**0.20**	**72**	P	Pg	18 37 41.0	-5.2
NEST				S	**Sb**	**18 37 45.0**	**-5.9**
NEST	**Nestorio**	**0.20**	**72**	P	**Pg**	**18 37 47.1**	**+0.8**
NEST				S	**Sg**	**18 37 51.6**	**+2.2**
LSK	**Leskovik**	**0.25**	**217**	Pg	**Pb**	**18 37 48.5**	**+0.4**
LSK				Sg	**Sb**	**18 37 54.3**	**+1.9**
LSK				AML	AML	18 38 01.1	
	34nm,0.5s						
KBN	**Korca**	**0.27**	**358**	Pg	**Pg**	**18 37 46.7**	**-0.7**
KBN				Sg	**Sg**	**18 37 49.9**	**-1.3**
KBN				AML	AML	18 37 52.5	
	64nm,0.2s						
PENT	**Pentalofos**	**0.30**	**121**	P	Pg	18 37 43.4	-4.6
PENT				S	**Sg**	**18 37 49.4**	**-2.8**
PENT	**Pentalofos**	**0.30**	**121**	P	**Pb**	**18 37 49.0**	**+0.1**
PENT				S	**Sn**	**18 37 57.0**	**-1.2**
KPRO	**Kipourio**	**0.59**	**132**	P	Pg	18 37 48.4	-4.7
KPRO				S	**Sg**	**18 37 58.7**	**-2.2**
KPRO	**Kipourio**	**0.59**	**132**	P	**Pn**	**18 37 55.1**	**-0.6**
KPRO				S	**Sn**	**18 38 06.0**	**+0.9**
JAN	**Janina**	**0.70**	**177**	P	Pb	18 37 50.8	-4.8
JAN				S	**Sb**	**18 38 02.7**	**-2.4**
JAN	**Janina**	**0.70**	**177**	P	**Pn**	**18 37 56.5**	**-0.7**
JAN				S	**Sn**	**18 38 08.6**	**+0.8**
KZN	**Kozani**	**0.74**	**93**	P	Pb	18 37 51.3	-5.2
KZN				S	**Sb**	**18 38 03.9**	**-2.7**
KZN	**Kozani**	**0.74**	**93**	P	**Pg**	**18 37 57.1**	**+1.0**
KZN				S	**Sn**	**18 38 10.3**	**+1.3**
OHR	**Ohrid**	**0.76**	**0**	*e*Pg	**Pb**	**18 37 56.9**	**+0.2**
OHR				*e*Sg	**Sb**	**18 38 06.6**	**-0.3**
SRN	**Sarande**	**0.77**	**233**	Pg	**Pn**	**18 37 59.2**	**+1.1**
SRN				Sg	**Sn**	**18 38 10.4**	**+0.9**
SRN				AML	AML	18 38 14.4	
	3.3nm,0.9s						
IGT	**Igoumenitsa**	**0.90**	**204**	Pg	**Pn**	**18 38 01.7**	**+1.8**
IGT				Sg	**Sn**	**18 38 15.9**	**+3.3**
IGT				AML	AML	18 38 25.2	
	2.4nm,0.8s						
IGT	**Igoumenitsa**	**0.90**	**204**	P	Pb	18 37 54.0	-4.9
IGT				S	**Sb**	**18 38 08.0**	**-2.7**
IGT	**Igoumenitsa**	**0.90**	**204**	P	**Pb**	**18 37 58.6**	**-0.4**
IGT				S	**Sn**	**18 38 12.2**	**-0.4**
KEK	**Kerkira**	**1.00**	**230**		**Pb**	**18 38 00.4**	**-0.3**
KEK	**Kerkira**	**1.00**	**230**	P	**Pb**	**18 37 57.5**	**-3.2**
KEK				S	**Sb**	**18 38 08.8**	**-5.0**
KEK	**Kerkira**	**1.00**	**230**	P	**Pb**	**18 37 58.3**	**-2.4**
VLO	**Vlora**	**1.00**	**277**	Pg	**Pg**	**18 38 03.4**	**+2.5**
VLO				Sg	**Sn**	**18 38 15.0**	**-0.1**
KTI	**Kastanea**	**1.01**	**87**	P	Pb	18 37 55.9	-5.0
TETR	**Tetrakomo, Epi**	**1.07**	**160**	P	**Pg**	**18 38 04.8**	**+2.4**
TIR	**Tirane**	**1.22**	**325**		Pn	18 37 55.8	-8.5
TIR	**Tirane**	**1.22**	**325**	Pn	**Pb**	**18 38 05.0**	**+0.5**
TIR				Sn	**Sg**	**18 38 22.2**	**+1.2**
TIR				AML	AML	18 38 29.0	
	4.1nm,0.7s						
TIR	**Tirane**	**1.22**	**325**	⇑P	**Pb**	**18 38 05.2**	**+0.7**
TIR	**Tirane**	**1.22**	**325**	*e*Pg	**Pn**	**18 38 04.2**	**-0.1**
THL	**Klokotos Trika**	**1.22**	**130**	P	**Pn**	**18 38 01.1**	**-3.2**
THL				S	**Sb**	**18 38 19.3**	**-0.8**
THL	**Klokotos Trika**	**1.22**	**130**	P	**Pg**	**18 38 05.9**	**+0.8**
TYRN	**Tyrnavos**	**1.27**	**120**	P	**Pn**	**18 38 01.1**	**-4.0**
TYRN				S	**Sb**	**18 38 19.7**	**-1.9**
TYRN	**Tyrnavos**	**1.27**	**120**	P	**Pg**	**18 38 07.1**	**+1.0**
PHP	**Peshkopia**	**1.36**	**349**	P	**Pn**	**18 38 06.3**	**+0.1**
AMPL	**Ampelaki**	**1.47**	**167**	P	**Pn**	**18 38 04.2**	**-3.5**
TSLK	**Tsoukalades, L**	**1.53**	**184**	P	**Pn**	**18 38 05.6**	**-3.0**
LKD2	**Lefkada island**	**1.57**	**184**	Pn	**Pg**	**18 38 14.2**	**+2.5**
LKD2				Sn	**Sg**	**18 38 37.9**	**+5.8**
LKD2				AML	AML	18 38 44.1	
	2.2nm,0.6s						
LKD2	**Lefkada island**	**1.57**	**184**	P	**Pn**	**18 38 05.8**	**-3.3**
EVR	**Evrytania**	**1.63**	**151**	P	**Pn**	**18 38 08.3**	**-1.8**
EVR	**Evrytania**	**1.63**	**151**	P	**Pb**	**18 38 12.4**	**+0.8**
VAY	**Valandovo**	**1.66**	**54**	P	**Pn**	**18 38 06.7**	**-3.6**
VAY	**Valandovo**	**1.66**	**54**	*e*Pn	**Pb**	**18 38 13.1**	**+1.2**
VAY				*e*Sn	**Sg**	**18 38 36.8**	**+1.9**
THE	**Thessaloniki**	**1.68**	**80**	P	**Pn**	**18 38 07.6**	**-3.0**
MAKR	**Makrakomi, Fth**	**1.69**	**142**	P	**Pn**	**18 38 07.5**	**-3.3**
EVGI	**Lefkada island**	**1.73**	**184**	P	**Pn**	**18 38 09.1**	**-2.2**
HORT	**Hortiatis**	**1.77**	**81**	P	Pn	18 38 07.3	-4.7
AGG	**Agios Georgios**	**1.78**	**138**	P	**Pn**	**18 38 09.5**	**-2.6**
KNT	**Kendrikon**	**1.79**	**62**	P	Pn	18 38 07.5	-4.6
SCTE	**Santa Cesarea**	**1.81**	**262**		**Pn**	**18 38 10.8**	**-1.6**
PUK	**Puka**	**1.82**	**338**		**Pn**	**18 38 10.6**	**-2.1**
PUK	**Puka**	**1.82**	**338**	Pn	**Pg**	**18 38 16.5**	**-0.1**
PUK				Sn	**Sg**	**18 38 40.9**	**+0.7**
PUK				AML	AML	18 38 44.0	
	6.2nm,1.0s						
ULC	**Ulcinj**	**1.99**	**324**	Pn	**Pb**	**18 38 18.0**	**+0.3**
ULC	**Ulcinj**	**1.99**	**324**	*e*Pn	**Pn**	**18 38 16.3**	**+1.4**
ULC				*i* Sn	**Sg**	**18 38 45.7**	**+0.1**
PLG	**Polygyros**	**2.02**	**89**	P	Pn	18 38 10.7	-4.7
BCI	**Bajram Curri**	**2.08**	**345**	Pn	**Pg**	**18 38 21.2**	**-0.4**
BCI				Sn	**Sg**	**18 38 48.6**	**-0.1**
BCI				AML	AML	18 38 57.2	
	3.6nm,0.5s						
DRME	**Dracevica, Mon**	**2.20**	**327**	*e*Pn	**Pb**	**18 38 19.9**	**-1.3**
DRME				*i* Sn	**Sg**	**18 38 51.0**	**-1.3**
KKB	**Krupnik**	**2.31**	**49**	*i* P	**Pb**	**18 38 22.7**	**-0.3**
PDG	**Podgorica**	**2.38**	**331**		**Pn**	**18 38 16.0**	**-4.2**
PDG	**Podgorica**	**2.38**	**331**	⇑P	**Pb**	**18 38 23.0**	**-1.2**
PDG	**Podgorica**	**2.38**	**331**	*e*Pn	**Pb**	**18 38 23.3**	**-0.9**
PDG				*e*Sn	**Sb**	**18 38 53.0**	**-0.4**
PDG	**Podgorica**	**2.38**	**331**	*e*Pn	**Pn**	**18 38 21.3**	**+1.1**
PDG				*i* Sn	**Sb**	**18 38 54.6**	**+1.2**
BUM	**Brajici-Budva**	**2.42**	**324**	Pn	**Pb**	**18 38 23.5**	**-1.5**
BUM	**Brajici-Budva**	**2.42**	**324**	⇑*i*Pn	**Pn**	**18 38 22.2**	**+1.4**
BUM				*e*Sn	**Sb**	**18 38 55.7**	**+1.1**
BOSS	**Bosilegrad**	**2.49**	**30**	*e*Pn	**Pn**	**18 38 23.8**	**+2.1**
MMB	**Musomishta**	**2.53**	**61**	*e*P	**Pb**	**18 38 25.2**	**-1.7**
BARS	**Barje**	**2.58**	**17**	*e*Pn	**Pn**	**18 38 24.7**	**+1.7**
IVA	**Berane**	**2.61**	**345**	*e*Pn	**Pn**	**18 38 25.2**	**+1.7**
IVA				*i* Sn	**Sb**	**18 39 01.0**	**+0.9**
CEME	**Cevo**	**2.61**	**328**	*e*Pn	**Pn**	**18 38 24.5**	**+1.1**
CEME				*i* Sn	**Sb**	**18 38 59.8**	**-0.3**
KOME	**Kolasin**	**2.67**	**339**	*e*Pn	**Pn**	**18 38 25.2**	**+0.8**
KOME				*i* Sn	**Sb**	**18 39 02.0**	**-0.1**
HCY	**Herceg Novi**	**2.72**	**321**	*e*Pn	**Pn**	**18 38 26.0**	**+1.1**
HCY				*i* Sn	**Sb**	**18 39 02.7**	**-0.5**
SELS	**Selova**	**2.87**	**5**	*e*Pn	**Pn**	**18 38 29.0**	**+1.9**
PLNA	**Plana**	**2.90**	**42**	*e*P	**Pn**	**18 38 30.2**	**+2.7**
VTS	**Vitosha**	**2.91**	**38**	*e*P	**Pn**	**18 38 29.9**	**+2.2**
SJES	**Sjenica**	**2.97**	**348**	*e*Pn	**Pb**	**18 38 32.1**	**-2.3**
BRY	**Bratogost**	**3.06**	**327**	*e*Pn	**Pn**	**18 38 31.3**	**+1.6**
BRY				*i* Sn	**Sb**	**18 39 10.3**	**-2.9**
PLE	**Pljevlja**	**3.15**	**341**	*e*Pn	**Pn**	**18 38 33.2**	**+2.2**
PLE				*i* Sn	**Sb**	**18 39 13.4**	**-2.5**
UPM	**Unac-Piva**	**3.18**	**334**	*e*Pn	**Pn**	**18 38 32.9**	**+1.5**
UPM				*i* Sn	**Sb**	**18 39 14.6**	**-2.1**
GOCS	**Kraljevo Serbi**	**3.21**	**1**	*e*Pn	**Pn**	**18 38 33.1**	**+1.4**
ZAPS	**Zavoj**	**3.22**	**25**	*e*Pn	**Pn**	**18 38 34.0**	**+2.1**
IVAS	**Ivanjica**	**3.26**	**352**	*e*Pn	**Pn**	**18 38 33.6**	**+1.2**
RZN	**Rozhen**	**3.27**	**65**	*e*P	**Pn**	**18 38 35.9**	**+3.3**
ITM	**Ithomi**	**3.29**	**164**		**Pb**	**18 38 38.9**	**-0.9**
TIP	**Timpagrande**	**3.33**	**251**		**Pn**	**18 38 35.3**	**+1.9**
BOVS	**Bovan**	**3.35**	**11**	⇑P	**Pn**	**18 38 35.2**	**+1.6**
BOVS	**Bovan**	**3.35**	**11**	*e*Pn	**Pn**	**18 38 34.9**	**+1.3**
BOVS				*e*Sn	**Sn**	**18 39 14.2**	**+1.1**
STON	**Ston**	**3.42**	**318**	*e*Pn	**Pn**	**18 38 35.9**	**+1.3**
GRUS	**Gruza**	**3.53**	**359**	*e*Pn	**Pn**	**18 38 38.1**	**+2.0**
ZAGS	**Zajecar**	**3.62**	**17**	*e*Pn	**Pn**	**18 38 40.0**	**+2.7**
RDO	**Rodhopi**	**3.69**	**76**		**Pn**	**18 38 38.0**	**-0.2**
MPEP	**Malo Peshtene**	**3.72**	**35**	*e*P	**Pn**	**18 38 41.9**	**+3.2**
CUC	**Castrocucco**	**3.83**	**266**		**Pn**	**18 38 40.2**	**-0.1**
TRUS	**Trudelj**	**3.88**	**356**	*e*Pn	**Pn**	**18 38 43.3**	**+2.4**
HAPS	**Han Pijesak,Bl**	**3.97**	**340**	*e*Pn	**Pn**	**18 38 44.6**	**+2.3**
ALN	**Alexandroupoli**	**4.03**	**81**	Pn	**Pn**	**18 38 44.2**	**+1.3**
SGRT	**San Giovanni R**	**4.07**	**292**	Pn	**Pn**	**18 38 42.5**	**-1.1**
TEKS	**Tekeris**	**4.30**	**348**	*e*Pn	**Pn**	**18 38 49.1**	**+2.5**
CEL	**Celeste**	**4.34**	**243**		**Pn**	**18 38 50.2**	**+2.9**
VRSS	**Vrsac**	**4.78**	**4**	*e*Pn	**Pn**	**18 38 54.2**	**+0.9**
PAOL	**Paolisi**	**4.78**	**280**		**Pn**	**18 38 51.7**	**-1.7**
FRGS	**Fruska Gora**	**4.86**	**352**	*e*Pn	**Pn**	**18 38 57.0**	**+2.7**
BZS	**Buzias**	**5.29**	**6**	⇑P	**Pn**	**18 39 02.7**	**+2.4**
INTR	**Introdacqua**	**5.46**	**290**		**Pn**	**18 39 00.1**	**-2.6**
CAMP	**Campotosto**	**5.96**	**294**		**Pn**	**18 39 07.2**	**-2.5**
IDI	**Anoyia**	**6.00**	**146**	Pn	**Pn**	**18 39 13.1**	**+2.9**
IDI	**Anoyia**	**6.00**	**146**	Pn	**Pn**	**18 39 10.6**	**+0.5**
	7.7nm,0.9s,baz=255,slow=16,SNR=1.4						
IDI				Sn	**Sn**	**18 40 21.1**	**+2.3**
	0.3nm,0.3s,baz=317,slow=18,SNR=1.7						
GUMA	**Gualdo di Mace**	**6.21**	**298**	Pn	**Pn**	**18 39 09.9**	**-2.9**
NRCA	**Norcia**	**6.27**	**296**		**Pn**	**18 39 11.2**	**-2.6**
FDMO	**Fiordimonte**	**6.36**	**297**		**Pn**	**18 39 11.4**	**-3.6**
MLR	**Muntele Rosu**	**6.37**	**35**	Pn	Pn	18 39 10.8	-4.4
MLR	**Muntele Rosu**	**6.37**	**35**	Pn	**Pn**	**18 39 19.1**	**+3.9**
	0.5nm,0.3s,baz=234,slow=11,SNR=5.8						
MLR				Sn	**Sn**	**18 40 31.9**	**+4.0**
	baz=129,slow=21						
	1.8nm,0.5s						
MLR	**Muntele Rosu**	**6.37**	**35**	⇑P	Pn	18 39 21.6	+6.4
BOJS	**Bojanci**	**6.56**	**324**	*e*Pn	**Pn**	**18 39 19.0**	**+1.3**
BOJS				*e*Sn	**Sn**	**18 40 31.9**	**-0.4**
CESX	**Cesi**	**6.57**	**293**		**Pn**	**18 39 14.1**	**-3.7**
WDD	**Wied Dalam**	**6.69**	**230**	Pn	**Pn**	**18 39 20.9**	**+1.4**
RIY	**Rijeka**	**6.80**	**319**	*e*Pn	**Pn**	**18 39 22.4**	**+1.5**
MURB	**Monte Urbino**	**6.83**	**298**		**Pn**	**18 39 17.5**	**-3.9**
KARP	**Karpathos**	**6.95**	**132**	Pn	**Pn**	**18 39 26.6**	**+3.5**
CEY	**Cerknica**	**7.12**	**321**	*e*Pn	**Pn**	**18 39 27.0**	**+1.6**
CEY				*e*Sn	**Sn**	**18 40 46.5**	**+0.3**
BORA	**Eskisehir**	**7.42**	**91**	Pn	**Pn**	**18 39 30.4**	**+0.9**
TRI	**Trieste**	**7.43**	**318**	Pn	**Pn**	**18 39 26.9**	**-2.7**
SOKA	**Soboth**	**7.58**	**328**	*i* Pn	**Pn**	**18 39 32.9**	**+1.1**
	2.8nm,0.5s,SNR=5.7						
SOKA				*e*Sn	**Sn**	**18 40 59.2**	**+1.6**
	1.7nm,0.5s						
PSZ	**Piszkesteto**	**7.59**	**355**	Pn	**Pn**	**18 39 28.2**	**-3.7**
OBKA	**Obir**	**7.65**	**326**	*i* Pn	**Pn**	**18 39 35.4**	**+2.7**
	2.5nm,0.5s						
OBKA				*i* Sn	**Sn**	**18 41 00.9**	**+1.7**
	12nm,0.8s						
SABO	**M.te Sabotino**	**7.70**	**319**		**Pn**	**18 39 29.2**	**-4.1**
RONA	**Rosalia, Austr**	**8.03**	**338**	*i* Pn	**Pn**	**18 39 41.5**	**+3.7**
	1.3nm,0.4s						
PRED	**Cave del Predi**	**8.05**	**322**		**Pn**	**18 39 33.7**	**-4.4**
KECS	**Kecovo**	**8.13**	**359**	*e*PN	Pn	18 39 45.0	+5.8
KECS				*e*SN	**Sn**	**18 41 13.9**	**+3.0**
MYKA	**Terra Mystica**	**8.15**	**323**	*i* Pn	**Pn**	**18 39 40.1**	**+0.6**
	1.0nm,0.4s						
MYKA				*i* Sn	**Sn**	**18 41 13.5**	**+2.1**
	1.4nm,0.3s						
VYHS	**Vyhne**	**8.26**	**351**	*e*PN	Pn	18 39 48.4	+7.4
VYHS				*e*SN	**Sn**	**18 41 16.8**	**+2.7**
TEOL	**Teolo**	**8.36**	**310**		**Pn**	**18 39 38.1**	**-4.3**
KBA	**Koelnbreinsper**	**8.62**	**324**	*i* Pn	**Pn**	**18 39 47.5**	**+1.4**
	1.9nm,0.4s						
KBA				*i* Sn	**Sn**	**18 41 23.5**	**+0.4**
	1.8nm,0.4s						
KOLS	**Kolonicke sedl**	**8.64**	**6**	*e*PN	Pn	18 39 56.5	+10
CTI	**Castel Tesino**	**8.77**	**313**		**Pn**	**18 39 43.9**	**-4.3**
ABTA	**Abfaltersbach**	**8.77**	**319**	*e*Pn	**Pn**	**18 39 49.0**	**+0.9**
	4.8nm,0.7s						
ABTA				*i* Sn	**Sn**	**18 41 26.3**	**-0.5**
	3.4nm,0.6s						
MOA	**Molln**	**8.84**	**330**	*i* Pn	**Pn**	**18 39 52.4**	**+3.4**
	1.6nm,0.4s						
MOA				*e*Sn	**Sn**	**18 41 32.9**	**+4.5**
	1.8nm,0.4s						
LESA	**Schwarzleotal**	**9.18**	**323**	*i* Pn	**Pn**	**18 39 54.9**	**+1.2**
	3.2nm,0.4s						
LESA				*i* Sn	**Sn**	**18 41 36.0**	**-0.7**
	1.6nm,0.4s						
MSSA	**Maissana**	**9.24**	**299**	Pn	**Pn**	**18 39 51.2**	**-3.4**
VRAC	**Vranov**	**9.44**	**343**	LR	LR	18 44 38.9	
	comp=Z,40nm,19.0s,baz=170,slow=44						
WTTA	**Wattenberg**	**9.56**	**319**	*i* Pn	**Pn**	**18 39 59.9**	**+0.9**
	2.2nm,0.4s						
WTTA				*e*Sn	**Sn**	**18 41 47.3**	**+0.9**
	8.1nm,0.6s						
WATA	**Walderalm**	**9.64**	**319**	*i* Pn	**Pn**	**18 40 01.6**	**+1.5**
	5.7nm,0.5s,SNR=8.0						
WATA				*i* Sn	**Sn**	**18 41 48.4**	**+0.2**
	3.1nm,0.4s						
SQTA	**Sankt Quirin**	**9.75**	**318**	*e*Pn	**Pn**	**18 40 03.4**	**+1.8**
	11nm,0.7s						
SQTA				*i* Sn	**Sn**	**18 41 49.1**	**-1.8**
	8.2nm,0.6s						
BRTR	**Keskin Array B**	**9.87**	**90**	Pn	**Pn**	**18 40 06.4**	**+3.1**
	0.1nm,0.3s,baz=343,slow=18,SNR=1.3						
	0.1nm,0.4s						
FETA	**Feichten**	**9.87**	**316**	*i* Pn	**Pn**	**18 40 02.8**	**-0.5**
	1.9nm,0.4s						
FETA				*i* Sn	**Sn**	**18 41 51.5**	**-2.4**
	1.3nm,0.5s						
GERES	**GERESS Array B**	**9.88**	**332**	Pn	**Pn**	**18 40 05.2**	**+1.9**
	baz=154,slow=13,SNR=6.3						
	0.8nm,0.6s						
FUORN	**Ofenpass-Fuorn**	**9.89**	**313**		**Pn**	**18 39 59.2**	**-4.3**
MOTA	**Moosalm**	**9.89**	**318**	*i* Pn	**Pn**	**18 40 04.6**	**+1.1**
	5.2nm,0.6s,SNR=7.5						
MOTA				*i* Sn	**Sn**	**18 41 54.8**	**+0.6**
	5.4nm,0.7s						
KEST	**Kesra**	**10.14**	**247**	Pn	**Pn**	**18 40 09.4**	**+2.5**
KHC	**Kasperske Hory**	**10.16**	**332**	*e*PN	**Pn**	**18 40 09.0**	**+1.9**
KHC				*e*SN	**Sn**	**18 42 01.5**	**+0.6**
DAVOX	**Davos/Dischmat**	**10.19**	**313**	Pn	**Pn**	**18 40 08.7**	**+1.0**
	1.3nm,0.3s,baz=103,slow=12,SNR=12						
DAVOX				Sn	**Sn**	**18 42 05.3**	**+3.5**
	0.2nm,0.3s,baz=16,slow=23,SNR=4.0						
	3.8nm,0.5s						
TUE	**Stuetta**	**10.33**	**310**		**Pn**	**18 40 06.3**	**-3.2**
DAVA	**Damuels**	**10.49**	**315**	*i* Pn	**Pn**	**18 40 11.9**	**+0.1**
	5.0nm,0.4s						
SENIN	**Lac Senin/Sane**	**11.51**	**306**	Pn	**Pn**	**18 40 22.7**	**-3.1**
BFO	**Black Forest**	**11.96**	**316**		**Pn**	**18 40 27.5**	**-4.1**
ECH	**Echery**	**12.53**	**313**	Pn	**Pn**	**18 40 36.2**	**-3.2**
ESDC	**Sonseca Array**	**18.97**	**276**	P	**P**	**18 42 02.2**	**-0.3**
	baz=78,slow=11,SNR=4.7						
	0.4nm,0.9s						
HFS	**Hagfors**	**20.29**	**350**	P	Pn	18 42 19.0	+0.2
	3.8nm,0.9s,baz=144,slow=13,SNR=7.8						
	3.8nm,0.9s						
FINES	**FINESS Array B**	**21.36**	**7**	P	**P**	**18 42 24.7**	**-3.6**
FINES	**FINESS Array B**	**21.36**	**7**	P	**P**	**18 42 29.3**	**+1.0**
	0.6nm,0.4s,baz=172,slow=12,SNR=6.0						
	0.6nm,0.4s						
NC405	**NORSAR Array S**	**21.52**	**348**	P	**P**	**18 42 26.9**	**-3.1**
NC405				IAmb	IAmb	18 43 14.0	
	comp=Z,23nm,1.5s						
NB2	**NORSAR Subarra**	**21.54**	**347**	P	**P**	**18 42 32.1**	**+1.8**
	comp=Z,5.8nm,1.0s,baz=150,slow=10						
NOA	**NORSAR Array B**	**21.54**	**347**	P	**P**	**18 42 31.2**	**+1.0**
	comp=Z,0.5nm,0.6s,baz=150,slow=9.8,SNR=3.8						
	comp=Z,0.5nm,0.6s						
NC303	**NORSAR Array S**	**21.69**	**348**	P	**P**	**18 42 28.1**	**-3.7**
NC303				IAmb	IAmb	18 42 42.2	
	comp=Z,12nm,1.1s						
EKA	**Eskdalemuir Ar**	**21.82**	**321**	P	**P**	**18 42 32.7**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=111,slow=9.1,SNR=3.6						
	comp=Z,0.6nm,0.7s						
NC204	**NORSAR Array S**	**21.84**	**347**	P	**P**	**18 42 29.1**	**-4.4**
AB31	**Akbulak array**	**28.89**	**59**	P	**P**	**18 43 37.2**	**-2.6**
ABKAR	**Akbulak array**	**28.89**	**59**	P	**P**	**18 43 37.7**	**-2.1**
ABKAR	**Akbulak array**	**28.89**	**59**	P	**P**	**18 43 37.2**	**-2.6**
ABKAR				IAmb	IAmb	18 43 54.5	
	comp=Z,2.0nm,0.6s						
ARCES	**ARCESS Array B**	**29.35**	**3**	P	**P**	**18 43 43.8**	**0.0**
	comp=Z,2.5nm,0.9s,baz=187,slow=8.3,SNR=2.1						
	comp=Z,2.5nm,0.9s						
MKAR	**Makanchi Array**	**44.01**	**60**		**P**	**18 45 47.5**	**-1.1**
MKAR	**Makanchi Array**	**44.01**	**60**	P	**P**	**18 45 50.5**	**+1.9**
	comp=Z,0.3nm,0.6s,baz=282,slow=7.3,SNR=4.3						
	comp=Z,0.3nm,0.6s						
MJAR	**Matsushiro Arr**	**84.32**	**46**	P	**P**	**18 50 15.3**	**+2.0**
	comp=Z,0.8nm,1.0s,baz=10,slow=5.1,SNR=4.3						
	comp=Z,0.8nm,1.0s						
TXAR	**Lajitas Array**	**93.63**	**314**	P	**P**	**18 50 58.1**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=69,slow=5.2,SNR=2.9						
	comp=Z,0.2nm,0.7s						

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*NNC **01** 18:40:33.6±3.0, 37°.74N×71°.81E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=23.9km s-min=18.5km az=160.0*

*IDC **01** 18:40:34.9±5.6, 37°.56N×71°.88E, h197km±38km, mb3.2/6, mbtmp3.8/12, MS3.5/1, Error ellipse: s-maj=62.2km s-min=32.2km az=156.0*

ISC 01 18:40:28.6±1.6**, 37°.2N**±0°.1×**71°.9E**±0°.1**, h150**km**, n27, σ1s.80**/32**, mb3.5**/6**, 5C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.14**	**15**	P	**Pn**	**18 41 46.5**	**+2.2**
	SNR=51						
UCH	**Uchtor**	**5.44**	**21**	P	**Pn**	**18 41 50.6**	**+2.4**
	SNR=6.9						
EKS2	**Erkin-Say**	**5.67**	**14**	P	**Pn**	**18 41 53.4**	**+2.4**
	SNR=11						
AAK	**Ala-Archa**	**5.81**	**19**	P	**Pn**	**18 41 55.4**	**+2.5**
	SNR=19						
AAK	**Ala-Archa**	**5.81**	**19**	P	**Pn**	**18 41 55.3**	**+2.5**
	15nm,0.3s,baz=183,slow=7.5,SNR=29						
AAK				S	**Sn**	**18 42 58.7**	**0.0**
	13nm,0.4s,baz=334,slow=22,SNR=27						
AAK	**Ala-Archa**	**5.81**	**19**	⇓P	**Pn**	**18 41 54.9**	**+2.0**
	12nm,0.5s						
AAK				⇓S	**Sn**	**18 42 57.9**	**-0.9**
	32nm,0.7s						
KBK	**Karagaybulak**	**5.96**	**22**	P	**Pn**	**18 41 58.1**	**+3.3**

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       SNR=6.9
KK31   Karatay Array       6.02 350 ⇓P     Pn     18 41 57.5 +2.0
       3.8nm,0.3s,baz=158,slow=11,SNR=84
KK31                               S     Sn     18 43 00.8 -2.8
       12nm,0.4s,baz=170,slow=15,SNR=22
ULHL   Ulahol              6.07  32  P     Pn     18 41 58.0 +1.6
       SNR=16
CHMS   Chumysh             6.22  20  P     Pn     18 42 00.3 +2.2
       SNR=7.5
CHMS   Chumysh             6.22  20 ⇑P     Pn     18 41 59.4 +1.2
       6.1nm,0.6s
CHMS                               ⇑S     Sn     18 43 06.7 -1.6
       3.9nm,0.4s
TKM2   Tokmak 2            6.40  25  P     Pn     18 42 02.9 +2.1
       SNR=17
TKM2   Tokmak 2            6.40  25 ⇑P     Pn     18 42 02.5 +1.7
       4.9nm,0.5s
TKM2                               ⇑S     Sn     18 43 11.9 -1.1
       2.7nm,0.6s
USP    Ospenovka           6.40  17  P     Pn     18 42 03.0 +2.3
       SNR=6.0
MKAR   Makanchi Array     12.32  35  P     Pn     18 43 19.8 +0.9
       0.3nm,0.5s,baz=204,slow=10,SNR=7.2
KURBB  Kurchatov Arra     14.26  17  P     Pn     18 43 43.6 +0.1
       0.6nm,0.4s,baz=203,slow=11,SNR=11
AB31   Akbulak array      14.88 328 ⇓P     P      18 43 54.2 +0.9
       1.4nm,0.6s,baz=134,slow=12,SNR=37
AB31                               ⇑S     Sn     18 46 37.9 +1.6
       0.6nm,0.5s,baz=152,slow=23,SNR=4.5
BVAR   Borovoye Array     15.89 357  P     Pn     18 44 02.5 -1.3
       1.0nm,0.5s,baz=157,slow=11,SNR=7.7
AKTO   Aktyubinsk         16.58 327  P     Pn     18 44 12.1 -0.1
       5.2nm,0.4s,baz=137,slow=7.9,SNR=22
ZALV   Zalesovo Beam      19.01  24  P     P      18 44 37.7 -0.9
       2.6nm,0.4s,baz=204,slow=10,SNR=16
BRTR   Keskin Array B     29.93 287  P     P      18 46 23.2 +0.6
       0.4nm,0.6s,baz=121,slow=7.0,SNR=2.4
       0.4nm,0.6s
EIL    Elat               31.59 267  LR    LR     19 02 52.5
       comp=Z,74nm,18.7s,baz=246,slow=42
AKASG  Malin Array Be     33.10 308  P     P      18 46 49.7 -0.3
       0.1nm,0.2s,baz=106,slow=9.3,SNR=2.0
       0.1nm,0.2s
FINES  FINESS Array B     37.34 325  P     P      18 47 24.5 -1.7
       4.1nm,1.1s,baz=126,slow=9.7,SNR=3.8
       4.1nm,1.1s
ARCES  ARCESS Array B     40.81 337  P     P      18 47 53.8 -1.1
       0.5nm,0.4s,baz=121,slow=8.6,SNR=7.2
       0.5nm,0.4s
HFS    Hagfors            42.99 321  P     P      18 48 11.9 -0.7
       1.9nm,0.5s,baz=91,slow=12,SNR=11
       1.9nm,0.5s
NOA    NORSAR Array B     44.29 323  P     P      18 48 21.6 -1.5
       0.3nm,0.5s,baz=95,slow=7.6,SNR=1.5
       0.3nm,0.5s
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*TIR **01** 18:40:50.5, 40°.41N×20°.73E, h6^{km}±1^{km}, Ml3.3/7*

*THE **01** 18:40:50.8, 40°N±1°×2°1E±$^\circ$, h4^{km}±1^{km}, M2.9/12, MLh2.9/12*

ISC 01 18:40:50.9±1.0, **40°.41N**±0°.02×**20°.73E**±0°.03, **h7**^{km}±9^{km}, **n25**, σ**0^s.77**/39, **Greece-Albania border region**

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Code   Station Name        Δ°  AZ°   Phase ID          Time     Res
                                    Op    ISC       h  m  s   ISC
KBN    Korca               0.22  12  Pg    Pg     18 40 54.8 -0.6
KBN                                  Sg    Sg     18 40 58.1 -0.2
KBN                                  AML   AML    18 41 02.2
       25nm,0.6s
NEST   Nestorio            0.25  88  Pg    Pg     18 40 56.0 +0.2
NEST                                 Sg    Sg     18 40 59.4 +0.3
NEST                                 AML   AML    18 41 02.5
       15nm,0.5s
NEST   Nestorio            0.25  88  P     Pg     18 40 55.9 +0.1
NEST                                 S     Sg     18 40 59.5 +0.3
LSK    Leskovik            0.27 201  Pg    Pg     18 40 56.2 -0.1
LSK                                  Sg    Sg     18 41 01.1 +1.2
LSK                                  AML   AML    18 41 03.1
       22nm,0.3s
KPRO   Kipourio            0.67 133  P     Pg     18 41 03.3 -0.4
KPRO                                 S     Sg     18 41 12.9 +0.5
OHR    Ohrid               0.70   5  P     Pg     18 41 04.4 -0.1
OHR                                  S     Sb     18 41 14.8 -0.7
SRN    Sarande             0.77 227  Pg    Pb     18 41 06.5  0.0
SRN                                  Sg    Sb     18 41 17.7 +0.6
SRN                                  AML   AML    18 41 21.6
       1.6nm,0.7s
IGT    Igoumenitsa         0.93 199  Pg    Pg     18 41 06.7 -1.9
IGT                                  Sg    Sb     18 41 22.4 +0.7
IGT    Igoumenitsa         0.93 199  P     Pg     18 41 07.9 -0.8
IGT                                  S     Sg     18 41 20.6  0.0
KTI    Kastanea            1.06  90  P     Pg     18 41 11.3  0.0
TIR    Tirane              1.14 325  Pn    Pg     18 41 12.3 -0.5
PHP    Peshkopia           1.29 351  Pg    Pn     18 41 14.7 -0.7
PHP                                  Sg    Sn     18 41 34.2 +1.1
PHP                                  AML   AML    18 41 41.3
       1.0nm,0.4s
THL    Klokotos Trika      1.30 130  P     Pn     18 41 14.4 -1.0
THL                                  S     Sg     18 41 32.0 -0.6
TYRN   Tyrnavos            1.35 121  P     Pn     18 41 15.3 -0.8
TYRN                                 S     Sb     18 41 33.7 -0.3
LKD2   Lefkada island      1.62 182  Pn    Pg     18 41 23.1 +1.2
LKD2   Lefkada island      1.62 182  P     Pn     18 41 19.8  0.0
VAY    Valandovo           1.67  56  P     Pn     18 41 20.1 -0.5
NYDR   Nydri-Lefkada       1.69 181  P     Pn     18 41 19.8 -1.1
THE    Thessaloniki        1.72  82  P     Pn     18 41 21.5 +0.2
PUK    Puka                1.75 339  Pn    Pg     18 41 24.0 -0.4
PUK                                  Sn    Sg     18 41 48.9 +1.8
PUK                                  AML   AML    18 41 51.4
       1.0nm,1.3s
MAKR   Makrakomi, Fth      1.77 142  P     Pn     18 41 21.3 -0.6
KNT    Kendrikon           1.81  65  P     Pn     18 41 21.9 -0.7
HORT   Hortiatis           1.82  83  P     Pn     18 41 22.3 -0.4
AGG    Agios Georgios      1.86 138  P     Pn     18 41 23.3 +0.1
BCI    Bajram Curri        2.02 346  Pn    Pg     18 41 29.1 -0.5
BCI                                  Sn    Sg     18 41 56.8 +1.0
BCI                                  AML   AML    18 42 06.3
       1.7nm,1.0s
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*IDC **01** 18:50:08.1±3.1, 12°.28S×166°.61E, h223^{km}±30^{km}, mb3.5/12, mbtmp4.1/14, Error ellipse: s-maj=20.0km s-min=17.3km az=115.0*

*NEIC **01** 18:50:12.3±2.8, 12°.3S±0°.1×166°.9E±0°.2, h271^{km}±8^{km}, mb4.4/51, Error ellipse: s-maj=21.3km s-min=14.8km az=94.0*

ISC 01 18:50:10.5±0.5, **12°.34S**±0°.06×**166°.69E**±0°.10, **h250**^{km}, **n83**, σ**1^s.07**/81, **mb4.3**/34, **Santa Cruz Islands**

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Code   Station Name         Δ°  AZ°   Phase ID          Time     Res
                                     Op    ISC       h  m  s   ISC
DZM    Mont Dzumac          9.68 181  Pn    Pn     18 52 25.3 +0.1
DZM    Mont Dzumac          9.68 181  P     Pn     18 52 25.0 -0.1
       4.5nm,0.5s,baz=15,slow=6.5,SNR=13
DZM                                   S     S      18 54 12.2 -2.0
       3.1nm,0.7s,baz=131,slow=23,SNR=1.4
PINNC  Pines Island,       10.24 176  Pn    Pn     18 52 34.3 +2.2
MSVF   Nonsavu             12.21 117  P     Pn     18 52 57.5 +0.6
       4.2nm,0.2s,baz=132,slow=22,SNR=3.0
EIDS   Eidsvold            19.62 226  P     P      18 54 22.1 +1.6
EIDS                                  IAmb  IAmb   18 54 22.8
       comp=Z,14nm,0.6s
CTAO   Charters Tower      21.06 246  P     P      18 54 36.0 +0.2
CTAO                                  IAmb  IAmb   18 54 45.8
       comp=Z,13nm,1.1s
ARMA   Armidale            22.76 215  P     P      18 54 52.9 +1.3
TOZ    Tahuroa Road        26.48 164  P     P      18 55 24.1 -0.9
BKZ    Black Stump Fm      28.10 164  P     P      18 55 37.5 -1.8
MRZ    Mangatainoka R      29.27 166  P     P      18 55 47.5 -2.1
BFZ    Birch Farm          29.46 165  P     P      18 55 49.3 -2.0
TUWZ   Tuamarina           29.67 169  P     P      18 55 52.6 -0.5
STKA   Stephens Creek      30.17 226  P     P      18 55 57.5 -0.3
STKA   Stephens Creek      30.17 226  P     P      18 55 57.4 -0.3
       comp=Z,0.8nm,0.5s,baz=36,slow=9.7,SNR=4.1
       comp=Z,0.8nm,0.5s
LTZ    Lake Taylor         30.71 172  P     P      18 56 01.6 -0.7
WR8    Warramunga Arr      31.79 252  P     P      18 56 12.0  0.0
WR8                                   IAmb  IAmb   18 56 13.7
       comp=Z,24nm,1.5s
WB0    Warramunga Arr      31.86 252  P     P      18 56 12.8 +0.2
WB0                                   IAmb  IAmb   18 56 52.5
       comp=Z,15nm,1.4s
WRA    Warramunga Arr      31.94 252  P     P      18 56 12.7 -0.6
       comp=Z,0.2nm,0.3s,baz=84,slow=9.0,SNR=1.5
       comp=Z,0.2nm,0.3s
ASAR   Alice Springs       33.07 245  P     P      18 56 22.4 -0.7
       comp=Z,0.9nm,0.6s,baz=72,slow=9.8,SNR=11
       comp=Z,0.9nm,0.6s
BBOO   Buckleboo           34.65 229  P     P      18 56 36.4 -0.2
KNRA   Kununurra           36.91 260  P     P      18 56 56.9 +1.0
KNRA                                  IAmb  IAmb   18 57 01.6
       comp=Z,24nm,1.1s
FITZ   Fitzroy Crossi      39.96 257  P     P      18 57 21.9 +0.7
UGM    Wanagama            55.39 269  P     P      18 59 19.4 -0.1
MJAR   Matsushiro Arr      55.54 332  P     P      18 59 18.9 -1.3
       comp=Z,1.1nm,0.7s,baz=166,slow=8.9,SNR=8.4
       comp=Z,1.1nm,0.7s
MAJO   Matsushiro          55.54 332  P     P      18 59 17.8 -2.3
MJB9   Matsu-Tunnel        55.55 332  P     P      18 59 18.4 -1.7
JKA    Kamikawa-asahi      60.31 340  P     P      18 59 54.0 +1.0
JKA                                   IAmb  IAmb   19 00 16.2
       comp=Z,28nm,1.5s
VNDA   Vanda               65.22 181  P     P      19 00 21.6 -3.2
SBA    Scott Base          65.51 180  P     P      19 00 27.4 +0.7
CASY   Casey               65.52 202  P     P      19 00 27.4 +0.5
CASY                                  IAmb  IAmb   19 00 31.0
       comp=Z,12nm,1.5s
PETK   Petropavlovsk-      65.64 354  P     P      19 00 27.8  0.0
       comp=Z,2.0nm,0.9s,baz=185,slow=6.9,SNR=4.0
       comp=Z,2.0nm,0.9s
CMAR   Chiang Mai Arr      73.47 294  P     P      19 01 16.4 +0.1
       comp=Z,0.9nm,0.7s,baz=128,slow=5.0,SNR=7.4
       comp=Z,0.9nm,0.7s
N14K   Kuskokwak Cree      76.37  16  P     P      19 01 31.7 -0.2
ACHA   Angle Creek He      76.85  20  P     P      19 01 34.1 -0.6
M14K   Bethel              77.01  15  P     P      19 01 35.7 +0.3
K13K   Kusilvak Mount      77.38  13  P     P      19 01 37.9 +0.4
K13K                                  IAmb  IAmb   19 01 38.8
       comp=Z,8.4nm,1.1s
KDAK   Kodiak Island       77.44  21  P     P      19 01 38.2 +0.3
KDAK                                  IAmb  IAmb   19 02 08.9
       comp=Z,9.8nm,1.2s
QSPA   South Pole Qui      77.67 180  P     P      19 01 39.4  0.0
QSPA   South Pole Qui      77.67 180  P     P      19 01 39.6 +0.2
       comp=Z,2.7nm,1.0s,baz=0.0,slow=1.0,SNR=11
       comp=Z,2.7nm,1.0s
M16K   Timber Creek        78.03  16  P     P      19 01 41.3 +0.2
M16K                                  IAmb  IAmb   19 01 42.8
       comp=Z,6.2nm,0.9s
K15K   Wolf Creek Mou      78.43  15  P     P      19 01 42.6 -0.7
K15K                                  IAmb  IAmb   19 01 45.0
       comp=Z,9.3nm,0.9s
M17K   Holitna River       78.77  17  P     P      19 01 45.5 +0.4
M17K                                  IAmb  IAmb   19 02 29.3
       comp=Z,9.7nm,1.2s
CNPM   China Poot          79.22  20  P     P      19 01 48.7 +1.0
CNPM                                  IAmb  IAmb   19 01 54.9
       comp=Z,16nm,1.3s
K17K   Iditarod            79.61  16  P     P      19 01 50.6 +1.0
K17K                                  IAmb  IAmb   19 02 32.1
       comp=Z,16nm,1.5s
BILL   Bilibino            80.17 360  P     P      19 01 52.0 -0.6
BILL                                  IAmb  IAmb   19 01 53.9
       comp=Z,4.4nm,0.8s
SONM   Songino Array       80.25 324  P     P      19 01 52.5 -1.1
       comp=Z,0.9nm,0.6s,baz=191,slow=2.9,SNR=1.5
       comp=Z,0.9nm,0.6s
G16K   Koyuk River         80.91  13  P     P      19 01 56.2 -0.3
G16K                                  IAmb  IAmb   19 02 19.2
       comp=Z,10nm,1.2s
J19K   Poorman             81.36  16  P     P      19 01 58.2 -0.7
J19K                                  IAmb  IAmb   19 02 19.1
       comp=Z,7.8nm,1.4s
H18K   Honhosa River       81.61  14  P     P      19 01 58.4 -1.8
H18K                                  IAmb  IAmb   19 02 05.7
       comp=Z,7.8nm,1.4s
SCM    Sheep Creek Mo      82.23  20  P     P      19 02 03.8 +0.3
SCM                                   IAmb  IAmb   19 02 04.1
       comp=Z,5.3nm,0.7s
BERG   Berg Lake           82.53  22  P     P      19 02 05.2 +0.2
DHY    Denali Highway      83.09  19  P     P      19 02 05.2 -2.9
SAO    San Andreas Ge      83.24  50  P     P      19 02 08.9 -0.3
SAO                                   IAmb  IAmb   19 02 29.4
       comp=Z,8.8nm,1.0s
F20K   Avaraart Lake       83.78  14  P     P      19 02 11.2 -0.1
G21K   Allakaket           83.90  15  P     P      19 02 12.6 +0.7
CCB    Clear Creek Bu      84.08  18  P     P      19 02 11.3 -1.5
CCB                                   IAmb  IAmb   19 02 12.8
       comp=Z,3.1nm,0.6s
IL31                       84.44  18        P      19 02 13.1 -1.6
IL31                                  IAmb  IAmb   19 02 14.9
       comp=Z,4.1nm,0.7s
ILAR   Eielson Array       84.44  18  P     P      19 02 14.2 -0.5
       comp=Z,3.2nm,0.6s,baz=248,slow=5.3,SNR=35
       comp=Z,3.2nm,0.6s
J25K   Salcha River,       84.80  19        P      19 02 15.8 -0.7
J25K                                  IAmb  IAmb   19 02 17.4
       comp=Z,4.5nm,0.6s
G23K   Bananza Creek       84.95  16  P     P      19 02 15.8 -1.4
J05D   Fort Rock, OR       85.73  44        P      19 02 21.3 -0.4
J05D                                  IAmb  IAmb   19 02 44.2
       comp=Z,5.9nm,1.2s
NVAR   Mina Array Bea      86.15  49  P     P      19 02 23.6 -0.4
       comp=Z,0.3nm,0.5s,baz=240,slow=4.2,SNR=2.3
       comp=Z,0.3nm,0.5s
X18A   Snowflake           91.52  55  P     P      19 02 45.2 -4.1
DLMT   Dillon              92.26  44  P     P      19 02 50.3 -2.1
YHL    Hebgen Lake         93.10  45        P      19 02 52.0 -4.5
MKAR   Makanchi Array      95.09 317  P     P      19 03 05.1 -0.1
       comp=Z,0.7nm,0.5s,baz=82,slow=6.3,SNR=11
       comp=Z,0.7nm,0.5s
KURBB  Kurchatov Arra      98.26 320  P     Pdif   19 03 17.9 -1.5
       comp=Z,0.3nm,0.8s,baz=104,slow=3.9,SNR=2.8
       comp=Z,0.3nm,0.8s
ARCES  ARCESS Array B     117.81 346  PKP    PKPdf  19 08 26.9 +0.4
       comp=Z,1.8nm,0.5s,baz=77,slow=2.1,SNR=17
FINES  FINESS Array B     123.31 339  PKP    PKPdf  19 08 37.7 +0.4
       comp=Z,2.2nm,1.0s,baz=75,slow=2.2,SNR=4.4
EKA    Eskdalemuir Ar     136.38 352  PKP    PKPdf  19 09 02.8 +0.6
       comp=Z,0.2nm,0.4s,baz=357,slow=1.8,SNR=1.6
KEST   Kesra              149.00 323  PKPbc  PKPbc  19 09 30.9 +1.4
       comp=Z,3.1nm,0.6s,baz=124,slow=5.2,SNR=6.5
POLO   Lamas de Olo       150.68 352  ePKPdf PKPbc  19 09 34.5 +1.1
PVRL   Vila Real          150.76 351  ePKPdf PKPbc  19 09 34.9 +1.4
MVO    Moncorvo           150.76 350  ePKPdf PKPbc  19 09 35.1 +1.6
PVIS   Viseu              151.34 351  ePKPdf PKPbc  19 09 35.9 +1.0
ESDC   Sonseca Array      151.55 345  PKPbc  PKPbc  19 09 36.5 +1.1
       comp=Z,1.3nm,0.8s,baz=11,slow=2.5,SNR=13
ESDC                                  PKPab  PKPab  19 09 46.0 +1.3
       comp=Z,1.1nm,0.7s,baz=12,slow=3.7,SNR=8.5
MTE    Manteigas          151.59 351  ePKPdf PKPbc  19 09 36.6 +1.1
PCAS   Casmilo, Conde     152.07 352  ePKPdf PKPbc  19 09 37.4 +1.0
PCBR   Castelo Branco     152.13 350  ePKPdf PKPbc  19 09 37.5 +1.0
PSARD  Sardoal            152.47 351  ePKPdf PKPbc  19 09 38.4 +1.0
PMRV   Marv??o            152.52 350  ePKPdf PKPbc  19 09 38.4 +0.9
PMTG   Montargil          153.00 351  ePKPdf PKPbc  19 09 38.9 +0.4
TORD   Torodi Ar. Bea     165.34 275  PKPab  PKPab  19 10 45.2  0.0
       comp=Z,1.1nm,1.1s,baz=48,slow=6.6,SNR=3.9
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*SKO **01** 18:50:13.9, 40°.24N×20°.83E, h0^{km}, ML4.2*

*BEO **01** 18:50:13.5±0.6, 40°.31N×20°.76E, h0^{km}, ML4.2/7*

*TIR **01** 18:50:13.8, 40°.46N×20°.79E, h18^{km}±1^{km}, Ml4.4/11*

*IDC **01** 18:50:13.6±0.5, 40°.45N×20°.79E, h0^{km}, mb4.1/24, mbtmp4.1/38, ML3.7/14, MS3.6/58, Error ellipse: s-maj=9.1km s-min=8.9km az=37.0*

*PDG **01** 18:50:14.4±0.9, 40°.45N×20°.74E, h11^{km}±1^{km}, MD4.4/2, ML4.3/11, Error ellipse: s-maj=0.7km s-min=1.2km az=0.0*

*NEIC **01** 18:50:14.5±2.5, 40°.47N±0°.05×20°.72E±0°.07, h10^{km}±1^{km}, mb4.4/52, Error ellipse: s-maj=8.9km s-min=7.5km az=228.0*

*ATH **01** 18:50:14.8, 40°.41N×20°.81E, h6^{km}, Mw4.4, Moment Tensor Solution. s9 Moment tensor: M$_{rr}$-4.43; M$_{\theta\theta}$1.71; M$_{\phi\phi}$2.72; M$_{r\theta}$2.17; M$_{\theta\phi}$2.45; M$_{\phi r}$0.77; Fault plane solution: NP1:φ$_s$26.00000°, δ35.00000°, λ-113.00000°. NP2: φ$_s$233.00000°, δ58.00000°, λ-75.00000°.*

*MOS **01** 18:50:14.1±1.4, 40°.39N×20°.59E, h16^{km}, mb4.4/15 Error ellipse: s-maj=4.1km s-min=2.6km az=88.6*

*NAO **01** 18:50:14.5, 40°.46N×20°.78E, h10^{km}, mb4.3*

*GCMT **01** 18:50:15.5±0.4, 40°.34N±0°.03×20°.65E±0°.03, h19^{km}±1^{km}, MW4.7/92, Moment Tensor Solution. s18,c19; s92,c114; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.40±.10; M$_{\theta\theta}$0.60±.07; M$_{\phi\phi}$0.79±.06; M$_{r\theta}$-0.01±.15; M$_{\theta\phi}$0.62±.04; M$_{\phi r}$0.07±.13; Best double couple: M$_0$1.36600×10^{16} NP1:φ$_s$43.00000°, δ44.00000°, λ-87.00000°. NP2: φ$_s$218.00000°, δ46.00000°, λ-93.00000°. Principal axes: T 1.3290, Plg1.0000°, Azm310.0000°; N 0.0690, Plg2.0000°, Azm220.0000°; P -1.4030, Plg88.0000°, Azm62.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*THE **01** 18:50:16.0, 40°N±2°×2°1E±$^\circ$, h1^{km}±2^{km}, M4.0/42, MLh4.0/42*

*MED_RC **01** 18:50:15.0±0.2, 40°.50N×20°.78E, h12^{km}, MW4.6/47, Moment Tensor Solution.Mantle waves: s47,c81; Duration: 1^s.0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.80±.05; M$_{\theta\theta}$0.24±.03; M$_{\phi\phi}$0.55±.03; M$_{r\theta}$0.32±.08; M$_{\theta\phi}$0.42±.02; M$_{\phi r}$-0.50±.06; Best double couple: M$_0$1.00000×10^{16} NP1:φ$_s$237.00000°, δ42.00000°, λ-49.00000°. NP2:φ$_s$8.00000°, δ60.00000°, λ-121.00000°. Principal axes: T 0.8900, Plg10.0000°, Azm119.0000°; N 0.2200, Plg26.0000°, Azm24.0000°; P -1.1100, Plg62.0000°, Azm228.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*AFAD **01** 18:50:18.0, 40°.52N×20°.73E, h35^{km}, MW4.3*

*SOF **01** 18:50:25.5, 40°.80N±0°.08×21°.53E±0°.06, h10^{km}±31^{km}, MD3.4/6*

ISC 01 18:50:13.5±1.0, **40°.44N**±0°.01×**20°.73E**±0°.02, **h0**^{km}±6^{km}, **n623**, σ**1^s.74**/646, **mb4.3**/55, **MS3.7**/53, **43C-26D**, **Greece-Albania border region**

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Code   Station Name        Δ°  AZ°   Phase ID          Time     Res
                                    Op    ISC       h  m  s   ISC
KBN    Korca               0.19  13  Pg    Pg     18 50 18.3 +1.1
KBN                                  Sg    Sg     18 50 21.3 +1.6
KBN                                  AML   AML    18 50 23.0
       326nm,0.3s
KBN                                  AML   AML    18 50 25.8
       306nm,0.6s
NEST   Nestorio            0.24  95  Pg    Pg     18 50 19.2 +1.1
NEST                                 Sg    Sg     18 50 22.8 +1.5
NEST                                 AML   AML    18 50 24.8
       319nm,0.4s
NEST   Nestorio            0.24  95  P     Pg     18 50 19.7 +1.6
NEST                                 S     Sg     18 50 22.4 +1.1
NEST   Nestorio            0.24  95  P     Pg     18 50 19.6 +1.4
NEST                                 S     Sg     18 50 21.6 +0.3
LSK    Leskovik            0.30 199  Pg    Pg     18 50 20.3 +1.0
PENT   Pentalofos          0.39 128  P     Pg     18 50 22.1 +1.1
PENT                                 S     Sg     18 50 27.9 +1.8
PENT   Pentalofos          0.39 128  P     Pg     18 50 22.0 +1.0
PENT                                 S     Sg     18 50 25.6 -0.5
OHR    Ohrid               0.68   4 ⇓iPg   Pb     18 50 28.0 -0.2
OHR                                 i Sg   Sb     18 50 39.3 +1.1
OHR                                 eLg    Lg     18 50 39.5
       comp=E,8µm,0.6s
OHR                                 eLg    Lg     18 50 44.3
       comp=N,3µm,0.4s
OHR    Ohrid               0.68   4  P     Pb     18 50 27.8 -0.4
OHR    Ohrid               0.68   4 ePg    Pb     18 50 27.8 -0.4
OHR                                 eSg    Sb     18 50 38.6 +0.5
KPRO   Kipourio            0.68 135  P     Pg     18 50 27.0 +0.5
KPRO                                 S     Sg     18 50 35.0 -0.3
KPRO   Kipourio            0.68 135  P     Pg     18 50 26.9 +0.4
KPRO                                 S     Sg     18 50 35.8 +0.4
MSVA   Metsovo             0.75 152  P     Pg     18 50 28.6 +0.8
AMYA   Amyntaio            0.77  70  P     Pg     18 50 28.7 +0.5
JAN    Janina              0.78 173  P     Pg     18 50 28.5 +0.1
JAN                                  S     Sb     18 50 40.3 -0.8
JAN    Janina              0.78 173  P     Pg     18 50 28.0 -0.5
JAN    Janina              0.78 173  P     Pg     18 50 28.6 +0.1
JAN                                  S     Sg     18 50 39.5 +0.9
SRN    Sarande             0.79 226  Pg    Pb     18 50 30.0  0.0
SRN                                  Sg    Sb     18 50 43.1 +1.8
SRN                                  AML   AML    18 50 45.6
       comp=N,24nm,0.8s
KZN    Kozani              0.80  99  P     Pg     18 50 29.4 +0.5
KZN                                  S     Sb     18 50 41.9 +0.1
KZN    Kozani              0.80  99  P     Pg     18 50 29.4 +0.5
KZN    Kozani              0.80  99  P     Pg     18 50 29.4 +0.5
VLO    Vlora               0.94 272  Pg    Pb     18 50 33.4 +0.7
IGT    Igoumenitsa         0.95 199  Pn    Pb     18 50 33.3 +0.5
IGT                                  Sn    Sn     18 50 47.6 -0.7
IGT                                  AML   AML    18 50 52.1
       comp=N,21nm,0.6s
IGT    Igoumenitsa         0.95 199  P     Pb     18 50 32.7 -0.1
IGT                                  S     Sn     18 50 49.0 +0.6
IGT    Igoumenitsa         0.95 199  P     Pg     18 50 32.0 +0.3
IGT                                  S     Sn     18 50 48.9 +0.6
IGT    Igoumenitsa         0.95 199  P     Pb     18 50 32.8 -0.1
KEK    Kerkira             1.02 225        Pn     18 50 35.5 +0.6
KEK    Kerkira             1.02 225  P     Pn     18 50 35.7 +0.8
KEK                                  S     Sn     18 50 52.8 +2.8
KEK    Kerkira             1.02 225  P     Pn     18 50 35.6 +0.6
NASA   Naoussa             1.04  79  P     Pb     18 50 34.0 -0.3
KTI    Kastanea            1.06  92  P     Pg     18 50 34.1 +0.3
LFKM   Lefkimmi            1.11 208  P     Pn     18 50 39.0 +2.7
LFKM                                 S     Sn     18 50 55.8 +3.5
TIR    Tirane              1.12 324        Pg     18 50 34.5 -0.4
TIR    Tirane              1.12 324  Pn    Pg     18 50 35.3 +0.2
TIR                                  Sn    Sn     18 50 52.4 -0.2
TIR                                  AML   AML    18 51 02.0
       comp=N,13nm,1.0s
TIR    Tirane              1.12 324 ⇑P     Pn     18 50 37.1 +0.6
TIR    Tirane              1.12 324 i Pg   Pg     18 50 35.0  0.0
TIR                                 i Sg   Sn     18 51 01.0 +8.4
TIR    Tirane              1.12 324  P     Pg     18 50 34.6 -0.4
TIR    Tirane              1.12 324 ePg    Pg     18 50 35.6 +0.6
TETR   Tetrakomo, Epi      1.17 159  P     Pg     18 50 36.1 +0.2
PRGA   Parga               1.18 193  P     Pn     18 50 37.8 +0.6
TRKA   Trikala             1.19 138  P     Pg     18 50 36.6 +0.4
PHP    Peshkopia           1.27 350  Pg    Pg     18 50 38.1 +0.3
THL    Klokotos Trika      1.31 131  P     Pg     18 50 37.5 -1.2
THL                                  S     Sb     18 50 56.4  0.0
THL    Klokotos Trika      1.31 131  P     Pg     18 50 37.8 -0.8
TYRN   Tyrnavos            1.36 122  P     Pn     18 50 38.6 -1.0
TYRN   Tyrnavos            1.36 122  P     Pn     18 50 39.4 -0.3
GRG    Griva               1.37  67  P     Pb     18 50 40.5 +0.5
GINA   Giannouli           1.48 121  P     Pn     18 50 41.0 -0.4
LRSO   Larissa Observ      1.48 120  P     Pn     18 50 41.6 +0.2
AMPL   Ampelaki            1.56 166  P     Pb     18 50 43.2  0.0
TSLK   Tsoukalades, L      1.61 182  P     Pg     18 50 45.6 +1.2
TSLK   Tsoukalades, L      1.61 182  P     Pn     18 50 43.4 +0.3
SKO    Skopje              1.62  19 i Pg   Pg     18 50 45.4 +0.8
LKD2   Lefkada island      1.65 182  Pn    Pg     18 50 45.9 +0.9
LKD2                                 Sn    Sg     18 51 09.3 +3.0
LKD2                                 AML   AML    18 51 18.4
       comp=N,18nm,0.9s
LKD2   Lefkada island      1.65 182  P     Pg     18 50 46.1 +1.1
LKD2   Lefkada island      1.65 182  P     Pb     18 50 44.6 -0.1
VAY    Valandovo           1.65  57  P     Pb     18 50 44.2 -0.6
VAY    Valandovo           1.65  57 ⇑iPg   Pb     18 50 44.2 -0.6
VAY                                 i Sg   Sg     18 51 08.2 +1.7
VAY                                 eLg    Lg     18 51 16.9
       comp=N,3µm,1.0s
VAY                                 eLg    Lg     18 51 17.3
       comp=E,4µm,0.9s
VAY    Valandovo           1.65  57  P     Pb     18 50 44.4 -0.4
VAY                                  S     Sg     18 51 08.3 +1.7
VAY    Valandovo           1.65  57 ePn    Pb     18 50 44.4 -0.4
VAY                                 eSn    Sg     18 51 08.1 +1.6
THE    Thessaloniki        1.71  83  Pn    Pn     18 50 44.6 +0.1
THE                                  Sn    Sb     18 51 07.9 +0.1
THE                                  AML   AML    18 51 16.3
       comp=E,12nm,1.5s
THE    Thessaloniki        1.71  83  P     Pn     18 50 44.5 -0.1
THE    Thessaloniki        1.71  83 i Pg   Pn     18 50 44.5 -0.1
THE                                 i Sg   Sg     18 51 08.6 +0.1
THE    Thessaloniki        1.71  83  P     Pn     18 50 44.4 -0.1
THE    Thessaloniki        1.71  83  P     Pn     18 50 44.1 -0.4
NYDR   Nydri-Lefkada       1.72 181  P     Pg     18 50 47.2 +0.7
NYDR   Nydri-Lefkada       1.72 181  P     Pb     18 50 45.8 -0.1
PUK    Puka                1.73 339        Pb     18 50 46.3 +0.2
PUK    Puka                1.73 339  Pn    Pg     18 50 47.9 +1.3
PUK                                  Sn    Sg     18 51 09.8 +0.9
PUK                                  AML   AML    18 51 15.7
       comp=E,24nm,1.2s
EVR    Evrytania           1.73 151  P     Pg     18 50 47.2 +0.5
SCTE   Santa Cesarea       1.77 259        Pn     18 50 45.6 +0.2
SCTE   Santa Cesarea       1.77 259  Pn    Pn     18 50 45.9 +0.5
SCTE   Santa Cesarea       1.77 259  P     Pn     18 50 45.4 +0.1
MAKR   Makrakomi, Fth      1.78 142  P     Pb     18 50 46.9 -0.1
MAKR   Makrakomi, Fth      1.78 142  P     Pn     18 50 45.9 +0.3
KNT    Kendrikon           1.80  65  P     Pn     18 50 45.9 +0.2
KNT    Kendrikon           1.80  65 ePn    Pn     18 50 45.8 +0.2
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KNT	Kendrikon	1.80	65	P	Pn	18 50 45.9	+0.2
KNT	Kendrikon	1.80	65	P	Pn	18 50 45.8	0.0
HORT	Hortiatis	1.81	84	P	Pn	18 50 45.7	-0.2
HORT	Hortiatis	1.81	84	P	Pn	18 50 45.5	-0.5
EVGI	Lefkada island	1.81	182	P	Pb	18 50 48.1	+0.6
EVGI	Lefkada island	1.81	182	P	Pn	18 50 46.4	+0.5
PDO	Prodromos	1.87	169	P	Pb	18 50 48.7	+0.2
AGG	Agios Georgios	1.87	138	P	Pn	18 50 47.5	+0.7
AGG	Agios Georgios	1.87	138	P	Pb	18 50 48.1	-0.5
AGG				S	Sb	18 51 12.2	-0.3
AGG				*i* IAML		18 51 22.0	
	comp=E,885nm,0.6s						
AGG	Agios Georgios	1.87	138	*i* P	Pb	18 50 48.0	-0.5
AGG				*i* S	Sb	18 51 12.2	-0.3
AGG	Agios Georgios	1.87	138	P	Pn	18 50 46.4	-0.4
ULC	Ulcinj	1.89	324	Pn	Pb	18 50 48.8	-0.2
ULC	Ulcinj	1.89	324	⇓*i*Pn	Pb	18 50 48.5	-0.4
ULC				*i* Sn	Sg	18 51 14.4	0.0
PVO	Paravola	1.92	161	P	Pb	18 50 49.5	+0.2
FSK	Fiskardo	1.98	184	P	Pb	18 50 50.2	-0.1
BCI	Bajram Curri	1.99	346	Pn	Pb	18 50 50.6	0.0
BCI				Sn	Sg	18 51 17.4	-0.1
BCI				AML	AML	18 51 26.4	
	comp=E,20nm,0.8s						
BCI	Bajram Curri	1.99	346	P	Pb	18 50 50.2	-0.4
SOH	Sokhos	2.03	78	P	Pn	18 50 49.7	+0.7
SOH	Sokhos	2.03	78	P	Pn	18 50 49.7	+0.7
SOH	Sokhos	2.03	78	P	Pn	18 50 49.2	+0.2
ANX	Ano Chora	2.06	153	P	Pb	18 50 51.5	-0.3
PLG	Polygyros	2.07	91	P	Pn	18 50 49.6	+0.1
PLG	Polygyros	2.07	91	P	Pn	18 50 49.6	+0.1
PLG	Polygyros	2.07	91	P	Pn	18 50 49.5	-0.1
DRME	Dracevica, Mon	2.10	327	Pn	Pb	18 50 52.0	-0.4
DRME	Dracevica, Mon	2.10	327	⇑*i*Pn	Pb	18 50 51.7	-0.8
DRME	Dracevica, Mon	2.10	327	⇑*i*Pn	Pb	18 50 51.7	-0.8
DRME				*i* Sn	Sb	18 51 19.9	+0.8
MESG	Mesagne	2.20	275	P	Pn	18 50 52.1	+0.8
EFP	Efpalio	2.20	155	P	Pb	18 50 53.0	-1.2
DMLN	Damoulianata-K	2.21	187	P	Pb	18 50 53.1	-1.2
DMLN	Damoulianata-K	2.21	187	P	Pn	18 50 52.4	+0.9
NEO	Neokhori	2.23	120	P	Pn	18 50 52.3	+0.7
NEO	Neokhori	2.23	120	P	Pn	18 50 51.4	-0.2
AXAR	Agios Charalam	2.23	138	P	Pn	18 50 51.4	-0.4
VLS	Valsamata	2.26	183	P	Pn	18 50 53.6	+1.6
VLS	Valsamata	2.26	183	P	Pn	18 50 53.6	+1.6
VLS	Valsamata	2.26	183	P	Pn	18 50 52.8	+0.7
SERG	Sergoula	2.27	153	P	Pb	18 50 54.6	-0.7
SRS	Serrai	2.28	72	P	Pn	18 50 52.7	+0.4
SRS	Serrai	2.28	72	*e*Pn	Pn	18 50 52.8	+0.4
SRS	Serrai	2.28	72	P	Pn	18 50 52.7	+0.4
SRS	Serrai	2.28	72	P	Pn	18 50 52.6	+0.3
PDG	Podgorica	2.28	331		Pn	18 50 53.9	+1.5
PDG	Podgorica	2.28	331	⇑*i*Pn	Pb	18 50 54.2	-1.3
PDG	Podgorica	2.28	331	⇑P	Pb	18 50 54.7	-0.7
PDG	Podgorica	2.28	331	*e*Pn	Pb	18 50 54.5	-1.0
PDG	Podgorica	2.28	331	*e*Pn	Pb	18 50 54.2	-1.3
PDG				*i* Sn	Sb	18 51 24.1	-0.1
PDG	Podgorica	2.28	331	P	Pn	18 50 53.5	+1.2
KKB	Krupnik	2.29	51	*i* P	Pb	18 50 55.8	+0.1
KKB	Krupnik	2.29	51	*e*Pn	Pn	18 50 53.8	+1.3
KKB	Krupnik	2.29	51	P	Pn	18 50 54.0	+1.5
AXS	Araxos	2.29	167	P	Pb	18 50 55.3	-0.4
AXS	Araxos	2.29	167	P	Pn	18 50 53.5	+1.0
PAIG	Paliouri	2.31	102	P	Pn	18 50 52.6	-0.2
PAIG	Paliouri	2.31	102	P	Pn	18 50 52.6	-0.2
BUM	Brajici-Budva	2.32	324	⇓*i*Pn	Pn	18 50 54.2	+1.2
BUM				*i* Sn	Sb	18 51 25.2	-0.3
PSDA	Pessada-Kefalo	2.32	183	P	Pn	18 50 54.5	+1.7
PSDA	Pessada-Kefalo	2.32	183	P	Pn	18 50 53.6	+0.7
RTZL	Ratzakli, Kefa	2.36	179	P	Pn	18 50 55.3	+1.9
YRMI	Loutra Irminis	2.38	168	P	Pn	18 50 54.6	+1.0
BOSS	Bosilegrad	2.44	32	*e*Pn	Pn	18 50 55.4	+0.8
RLS	Riolos of Patr	2.44	166	P	Pb	18 50 56.7	-1.6
OUR	Ouranopolis	2.48	91	P	Pn	18 50 55.5	+0.4
OUR	Ouranopolis	2.48	91	P	Pn	18 50 55.5	+0.4
OUR	Ouranopolis	2.48	91	P	Pn	18 50 55.0	-0.2
LKR	Lokris	2.50	135	P	Pn	18 50 56.2	+0.8
LKR	Lokris	2.50	135	P	Pn	18 50 55.4	+0.1
CEME	Cevo	2.51	328	⇑*i*Pn	Pn	18 50 56.9	+1.3
CEME				*i* Sn	Sb	18 51 29.7	-1.2
BARS	Barje	2.51	18	*e*Pn	Pn	18 50 56.1	+0.5
BARS				*e*Sn	Sb	18 51 31.7	+0.8
IVA	Berane	2.51	346	*e*Pn	Pb	18 50 57.7	-1.8
IVA				*i* Sn	Sb	18 51 30.0	-1.0
KOKK	Kokkinochori,	2.52	80	P	Pn	18 50 55.9	+0.3
KOKK	Kokkinochori,	2.52	80	P	Pn	18 50 55.6	0.0
MMB	Musomishta	2.54	63	*i* P	Pb	18 50 58.5	-1.4
MMB	Musomishta	2.54	63	P	Pn	18 50 56.6	+0.6
MMB	Musomishta	2.54	63	P	Pn	18 50 56.6	+0.6
KOME	Kolasin	2.58	340	*e*Pn	Pb	18 50 59.4	-1.2
KOME				*e*Sn	Sb	18 51 31.2	-1.7
ORTH	Orthonies,Zaky	2.58	181	P	Pn	18 50 57.2	+0.7
HCY	Herceg Novi	2.62	321	*e*Pn	Pn	18 50 57.2	+0.2
HCY	Herceg Novi	2.62	321	⇑*i*Pn	Pn	18 50 58.0	+1.0
HCY				*i* Sn	Sb	18 51 32.5	-1.5
KLV	Kalavryta, Ach	2.63	155	P	Pb	18 50 59.5	-2.0
AOS	Alonnisos	2.73	117	P	Pn	18 50 58.5	-0.1
SELS	Selova	2.80	6	*e*Pn	Pn	18 51 00.3	+0.8
PLNA	Plana	2.87	44	*i* P	Pb	18 51 03.4	-2.3
VTS	Vitosha	2.88	40	*i* P	Pb	18 51 03.9	-1.9
VTS	Vitosha	2.88	40	P	Pn	18 51 00.9	+0.2
VTS	Vitosha	2.88	40	*e*Pn	Pn	18 51 01.3	+0.6
SJES	Sjenica	2.88	349	⇑*i*Pn	Pn	18 51 02.6	+1.9
SJES	Sjenica	2.88	349	*e*Pn	Pn	18 51 02.6	+1.9
TREB	Trebinje	2.90	323	*e*Pn	Pn	18 51 01.2	+0.4
KAVA	Kavala	2.93	78	P	Pn	18 51 00.5	-0.7
BRY	Bratogost	2.96	327	*e*Pn	Pn	18 51 03.2	+1.4
BRY	Bratogost	2.96	327	⇓*i*Pn	Pn	18 51 02.8	+1.0
BRY				*i* Sn	Sn	18 51 40.7	+2.6
PLE	Pljevlja	3.06	341	⇑*i*Pn	Pn	18 51 06.0	+2.8
PLE				*i* Sn	Sn	18 51 42.8	+2.2
MATE	Matera	3.08	275	⇓P	Pn	18 51 04.3	+1.1
UPM	Unac-Piva	3.08	334	*e*Pn	Pn	18 51 06.4	+2.9
UPM	Unac-Piva	3.08	334	⇓*i*Pn	Pn	18 51 06.5	+2.9
UPM				*i* Sn	Sn	18 51 43.7	+2.5
GOCS	Kraljevo Serbi	3.13	2	*e*Pn	Pn	18 51 04.9	+0.8
IVAS	Ivanjica	3.17	352	*e*Pn	Pn	18 51 04.9	+0.3
ZAPS	Zavoj	3.17	26	*e*Pn	Pn	18 51 05.9	+1.3
BOVS	Bovan	3.28	12	⇓P	Pn	18 51 06.5	+0.4
BOVS	Bovan	3.28	12	*e*Pn	Pn	18 51 06.4	+0.4
TIP	Timpagrande	3.31	249		Pn	18 51 07.2	+0.7
TIP	Timpagrande	3.31	249	⇑P	Pn	18 51 07.9	+1.4
PGB	Panagyurishte	3.32	50	*i* P	Pb	18 51 10.3	-2.9
PGB	Panagyurishte	3.32	50	P	Pn	18 51 09.7	+3.1
STON	Ston	3.33	318	*e*Pn	Pn	18 51 06.9	+0.2
STON	Ston	3.33	318	*e*Pn	Pn	18 51 07.3	+0.6
RUDO	Rudo	3.34	343	*e*Pn	Pn	18 51 08.7	+1.8
ITM	Ithomi	3.38	164		Pn	18 51 10.1	+2.6
GRUS	Gruza	3.45	360	*e*Pn	Pn	18 51 09.8	+1.4
PLD	Plovdiv	3.48	59	P	Pn	18 51 10.2	+1.4
PLD	Plovdiv	3.48	59	*e*Pn	Pn	18 51 10.9	+2.1
ZAGS	Zajecar	3.55	18	*e*Pn	Pn	18 51 10.8	+0.9
BBLS	Lazi&#263i	3.57	344	⇑*i*Pn	Pn	18 51 12.1	+2.0
BBLS	Lazi&#263i	3.57	344	*e*Pn	Pn	18 51 12.2	+2.1
MPEP	Malo Peshtene	3.68	37	*i* P	Pn	18 51 14.8	+3.2
DIVS	Divibare	3.70	352	*e*Pn	Pn	18 51 13.0	+1.0
RDO	Rodhopi	3.72	77		Pn	18 51 12.1	0.0
BORS2	Bor- Borsko je	3.77	14	*e*Pn	Pn	18 51 14.4	+1.5
CUC	Castrocucco	3.79	265		Pn	18 51 13.9	+0.7
TRUS	Trudelj	3.79	356	*e*Pn	Pn	18 51 14.1	+0.9
HAPS	Han Pijesak,BI	3.88	341	⇑*i*Pn	Pn	18 51 16.4	+2.0
HAPS	Han Pijesak,BI	3.88	341	*e*Pn	Pn	18 51 16.6	+2.2
GOAD	anakkale-G¶	3.97	92	P	Pn	18 51 18.3	+2.8
SGRT	San Giovanni R	3.99	291		Pn	18 51 15.1	-0.9
ALN	Alexandroupoli	4.07	82		Pn	18 51 16.8	-0.1
ALN	Alexandroupoli	4.07	82	P	Pn	18 51 17.0	+0.1
ALN	Alexandroupoli	4.07	82	P	Pn	18 51 16.8	-0.1
BOZC	Bozcaada	4.12	97	P	Pn	18 51 18.0	+0.3
TEKS	Tekeris	4.21	348	*e*Pn	Pn	18 51 20.0	+1.2
TEKS	Tekeris	4.21	348	*e*Pn	Pn	18 51 20.1	+1.2
KOCA	Canakkale, Ayv	4.26	101	P	Pn	18 51 20.4	+0.8
AVAS	Avala Beograd	4.26	358	*e*Pn	Pn	18 51 20.0	+0.4
CEL	Celeste	4.33	241		Pn	18 51 19.5	-1.1
BEO	Beograd	4.38	358	P	Pb	18 51 26.3	-4.9
MDVR	Moldovita	4.40	9	⇑P	Pn	18 51 24.0	+2.4
MDVR	Moldovita	4.40	9	*e*Pn	Pn	18 51 22.1	+0.5
BAYC	CANAKKALE_Bayr	4.51	97	P	Pn	18 51 23.8	+0.7
SRE	Strehaia	4.60	23	⇑P	Pn	18 51 27.3	+3.0
SRE	Strehaia	4.60	23	P	Pn	18 51 27.2	+3.0
HERR	Herculane	4.61	15	⇓P	Pn	18 51 27.6	+3.2
VRSS	Vrsac	4.71	5	*e*Pn	Pn	18 51 25.8	+0.1
AYVA	Ayvalik	4.72	102	P	Pn	18 51 28.5	+2.6
PAOL	Paolisi	4.72	279		Pn	18 51 25.5	-0.5
FRGS	Fruska Gora	4.77	352	⇑*i*Pn	Pn	18 51 27.0	+0.4
FRGS	Fruska Gora	4.77	352	*e*Pn	Pn	18 51 27.2	+0.6
SZH	Strazhitsa	4.83	52	P	Pn	18 51 29.2	+1.8
SZH				S	Sn	18 52 25.9	+1.9
BUHA	Balikesir, Bur	4.96	99	P	Pn	18 51 30.2	+1.0
ZEYE	Izmir, Urla-Ze	4.98	114	P	Pn	18 51 31.2	+1.7
URLA	Izmir	4.99	113	P	Pn	18 51 31.2	+1.6
APE	Apeiranthos	5.04	130	P	Pn	18 51 31.9	+1.6
APE	Apeiranthos	5.04	130	⇑P	Pn	18 51 31.8	+1.5
APE	Apeiranthos	5.04	130	*ce*P	Pn	18 51 32.2	+1.9
BLY	Banja Luka	5.04	330	*e*Pn	Pn	18 51 31.6	+1.3
BLY	Banja Luka	5.04	330	*e*Pn	Pn	18 51 32.1	+1.8
A050A	Klekovaca	5.10	324	⇑*i*Pn	Pn	18 51 32.2	+1.0
ZEDA	zmir-Bergama	5.11	105	P	Pn	18 51 33.3	+2.0
GZR	Gura Zlata	5.18	16	⇑P	Pn	18 51 35.1	+2.9
GZR	Gura Zlata	5.18	16	P	Pn	18 51 35.1	+2.9
BZS	Buzias	5.22	7	⇓P	Pn	18 51 34.2	+1.4
BZS	Buzias	5.22	7	P	Pn	18 51 34.1	+1.4
BZS	Buzias	5.22	7	*e*Pn	Pn	18 51 32.5	-0.2
A051A	Mrakovica	5.37	330	⇑*i*Pn	Pn	18 51 35.9	+1.0
INTR	Introdacqua	5.38	289		Pn	18 51 34.7	-0.4
SURR	Surduc	5.41	10	⇑P	Pn	18 51 37.1	+1.8
STEP	BALIKESIR_Sava	5.48	99	P	Pn	18 51 38.7	+2.4
ARR	Arges	5.70	29	⇓P	Pn	18 51 42.0	+2.5
VAE	Valguarnera	5.74	241	Pn	Pn	18 51 44.7	+4.7
	comp=E,1.0nm,0.3s,baz=132,slow=3.4,SNR=3.9						
VAE				Sn	Sn	18 52 50.8	+4.2
	comp=E,0.8nm,0.3s,baz=261,slow=18,SNR=3.0						
AQU	L'Aquila	5.84	292	P	Pn	18 51 42.9	+1.6
AQU				pmax	pmax		
	comp=Z,117nm,0.9s						
CAMP	Campotosto	5.89	293		Pn	18 51 42.1	+0.1
MORH	Mrgy, Hungar	5.97	346	⇓P	Pn	18 51 44.4	+1.4
CICN	Ciocanesti	5.99	49	⇑P	Pn	18 51 44.2	+0.9
IDI	Anoyia	6.10	146	Pn	Pn	18 51 46.9	+2.0
IDI	Anoyia	6.10	146	Pn	Pn	18 51 45.3	+0.4
	comp=Z,18nm,1.2s,baz=332,slow=11,SNR=12						
IDI				Sn	Sn	18 52 56.2	+0.8
	comp=Z,5.3nm,0.3s,baz=79,slow=16,SNR=3.9						
GUMA	Gualdo di Mace	6.12	298		Pn	18 51 44.5	-0.7
NRCA	Norcia	6.19	295		Pn	18 51 46.1	-0.1
AYDN	Tasoluk	6.21	114	P	Pn	18 51 47.5	+1.1
FDMO	Fiordimonte	6.28	297		Pn	18 51 46.8	-0.6
MLR	Muntele Rosu	6.33	35		Pn	18 51 49.6	+1.4
MLR	Muntele Rosu	6.33	35	Pn	Pn	18 51 48.9	+0.7
	comp=Z,1.0nm,0.3s,baz=242,slow=3.4,SNR=14						
MLR				Sn	Sn	18 53 02.0	+0.8
	comp=Z,0.9nm,0.3s,baz=199,slow=14,SNR=3.1						
MLR				LR	LR	18 55 02.6	
	comp=Z,458nm,18.6s,baz=200,slow=46						
	comp=Z,1.7nm,0.4s						
MLR	Muntele Rosu	6.33	35	⇓P	Pn	18 51 51.5	+3.3
MLR	Muntele Rosu	6.33	35	P	Pn	18 51 49.6	+1.4
ISR	Istrita	6.34	40	⇑P	Pn	18 51 50.9	+2.7
ISR	Istrita	6.34	40	P	Pn	18 51 50.8	+2.7
KIRA	zmir-Kiraz	6.35	108	P	Pn	18 51 50.2	+1.8
MANT	Manisa	6.36	105		Pn	18 51 50.1	+1.5
MANT	Manisa	6.36	105	P	Pn	18 51 49.9	+1.3
NEHR	Nehoiu	6.45	37	⇑P	Pn	18 51 52.9	+3.3
BOJS	Bojanci	6.46	323	⇑*i*Pn	Pn	18 51 50.4	+0.6
BOJS	Bojanci	6.46	323	*i* Pn	Pn	18 51 50.2	+0.3
BOJS				*i* Pg	Pg	18 52 16.3	-1.0
BOJS				*e*Sn	Sn	18 53 03.7	-0.6
BOJS				IAML		18 54 26.9	
	comp=Z,2µm,5.8s						
BOJS	Bojanci	6.46	323	*e*Pn	Pn	18 51 50.3	+0.5
ESEN	Aydn-Nazilli	6.48	112	P	Pn	18 51 52.0	+1.9
PTJ	Puntijarka	6.48	329	P	Pn	18 51 50.7	+0.5
CESX	Cesi	6.49	292		Pn	18 51 49.5	-0.8
DRGR		6.51	12	P	Pn	18 51 56.3	+5.7
CRES	Cresnjevec Ost	6.62	326	⇑*i*Pn	Pn	18 51 52.4	+0.3
BEHE	Becsehely	6.68	336		Pn	18 51 52.6	-0.3
RIY	Rijeka	6.70	319	*e*Pn	Pn	18 51 53.7	+0.6
RIY				*e*Sn	Sn	18 53 10.8	+0.7
COVR	Voineasa-Covas	6.73	35	⇓P	Pn	18 51 56.9	+3.4
MURB	Monte Urbino	6.75	297		Pn	18 51 52.7	-1.1
HARR	Harsova	6.80	49	⇑P	Pn	18 51 57.6	+3.1
HARR	Harsova	6.80	49	P	Pn	18 51 57.6	+3.1
PLOR	Plostina	6.93	37	⇑P	Pn	18 51 59.1	+2.8
PLOR	Plostina	6.93	37	P	Pn	18 51 59.0	+2.8
TIRR	Tirgusor	6.96	52		Pn	18 51 57.6	+1.0
TIRR	Tirgusor	6.96	52	P	Pn	18 51 57.6	+1.0
VRI	Vrincioaia	6.97	37	⇓P	Pn	18 51 59.4	+2.6
VRI	Vrincioaia	6.97	37	P	Pn	18 51 59.4	+2.6
CEY	Cerknica	7.03	321	⇑*i*Pn	Pn	18 51 58.0	+0.4
CEY	Cerknica	7.03	321	*e*Pn	Pn	18 51 58.2	+0.6
BUD	Budapest	7.15	351	P	Pn	18 52 01.7	+2.4
BUD				pmax	pmax		
	comp=Z,49nm,0.6s						
ARG	Arkhangelos	7.18	124		Pn	18 52 02.9	+3.3
ARG	Arkhangelos	7.18	124	P	Pn	18 52 02.9	+3.3
TPGR	Topolog	7.18	50	⇑P	Pn	18 52 03.0	+3.3
LJU	Ljubljana	7.21	323	P	Pn	18 52 01.1	+1.1
LJU				pmax	pmax		
	comp=Z,245nm,0.9s						
CFR	Carcaliu	7.22	47	⇓P	Pn	18 52 03.6	+3.4
CFR	Carcaliu	7.22	47	P	Pn	18 52 03.5	+3.4
TRI	Trieste	7.33	318		Pn	18 51 59.8	-1.9
TRI	Trieste	7.33	318	P	Pn	18 51 59.8	-1.9
TESR	Tescani	7.44	33	⇓P	Pn	18 52 06.0	+2.7
BORA	Eskisehir	7.47	91		Pn	18 52 04.7	+1.0
SOKA	Soboth	7.49	328	*i* Pn	Pn	18 52 04.7	+0.7
	comp=Z,18nm,0.6s,SNR=28						
SOKA				*i* Sn	Sn	18 53 32.4	+2.8
	comp=Z,12nm,0.7s						
PSZ	Piszkesteto	7.50	356		Pn	18 52 04.4	+0.2
PSZ	Piszkesteto	7.50	356	⇓P	Pn	18 52 06.1	+1.9
PSZ	Piszkesteto	7.50	356	P	Pn	18 52 06.0	+1.9
OBKA	Obir	7.55	326	*e*Pn	Pn	18 52 05.5	+0.7
	comp=Z,12nm,0.5s,SNR=6.4						
OBKA				*e*Sn	Sn	18 53 33.1	+1.9
	comp=Z,42nm,0.6s						
SABO	M.te Sabotino	7.60	319		Pn	18 52 04.9	-0.6
TLCR		7.60	49	⇑P	Pn	18 52 08.7	+3.3
TLCR		7.60	49	P	Pn	18 52 08.7	+3.3
CASP	Castiglione de	7.76	291	Pn	Pn	18 52 06.4	-1.2
ARSA	Arzberg	7.78	333		Pn	18 52 06.8	-1.1
ARSA	Arzberg	7.78	333	*e*Pn	Pn	18 52 08.7	+0.8
	comp=Z,5.6nm,0.4s,SNR=11						
ARSA	Arzberg	7.78	333	*e*Pn	Pn	18 52 09.9	+2.0
BURAR	Bucovina Array	7.87	23		Pn	18 52 09.2	0.0
BURAR	Bucovina Array	7.87	23	⇑P	Pn	18 52 12.2	+3.0
BURAR	Bucovina Array	7.87	23	P	Pn	18 52 12.2	+3.0
BUR08	Bucovina Ar. S	7.89	23		Pn	18 52 09.1	-0.4
RONA	Rosalia, Austr	7.93	338	*i* Pn	Pn	18 52 11.1	+1.1
	comp=Z,8.0nm,0.7s,SNR=8.8						
PRED	Cave del Predi	7.95	321		Pn	18 52 08.9	-1.4
MDUB	Mudurnu	7.98	86	Pn	Pn	18 52 12.6	+1.8
KECS	Kecovo	8.05	359	*e*P	Pn	18 52 16.3	+4.7
KECS				*e*		18 53 49.9	
KECS	Kecovo	8.05	359	*e*PN	Pn	18 52 16.3	+4.7
KECS				*e*SN	Sn	18 53 49.9	+6.7
MYKA	Terra Mystica	8.05	323	*i* Pn	Pn	18 52 11.6	0.0
	comp=Z,5.4nm,0.5s						
MYKA				*i* Sn	Sn	18 53 45.4	+2.0
	comp=Z,6.4nm,0.5s						
AKAS	Kas	8.14	118	Pn	Pn	18 52 13.2	+0.2
VYHS	Vyhne	8.17	351	*e*P	Pn	18 52 16.2	+3.0
VYHS				*e*		18 53 51.9	
VYHS	Vyhne	8.17	351	*e*PN	Pn	18 52 16.2	+3.0
VYHS				*e*SN	Sn	18 53 51.9	+5.7
ZCCA	Zocca	8.21	302		Pn	18 52 12.2	-1.6
CONA	Conrad Observa	8.27	337	*i* Pn	Pn	18 52 15.8	+1.1
	comp=Z,7.0nm,0.9s						
TEOL	Teolo	8.27	309		Pn	18 52 13.6	-1.1
MODS	Modra-Piesok	8.31	344	*e*P	Pn	18 52 20.3	+5.1
MODS	Modra-Piesok	8.31	344	*e*PN	Pn	18 52 20.3	+5.1
KBA	Koelnbreinsper	8.52	324	P	Pn	18 52 18.7	+0.5
KBA				pmax	pmax		
	comp=Z,28nm,1.1s						
KBA	Koelnbreinsper	8.52	324	*e*Pn	Pn	18 52 18.5	+0.3
	comp=Z,16nm,1.0s,SNR=18						
KBA				*e*Sn	Sn	18 53 57.0	+1.8
	comp=Z,7.3nm,0.5s						
KOLS	Kolonicke sedl	8.57	7	*e*P	Pn	18 52 23.0	+4.3
KOLS	Kolonicke sedl	8.57	7	*e*PN	Pn	18 52 23.0	+4.3
ABTA	Abfaltersbach	8.68	319	*i* Pn	Pn	18 52 20.1	-0.2
	comp=Z,18nm,0.5s,SNR=19						
ABTA				*i* Sn	Sn	18 54 00.4	+1.6
	comp=Z,22nm,0.7s						
CTI	Castel Tesino	8.68	313		Pn	18 52 18.9	-1.5
CTI	Castel Tesino	8.68	313	P	Pn	18 52 18.9	-1.5
JAVC	Velka Javorina	8.70	347	*e*PN	Pn	18 52 22.9	+2.4
MOA	Molln	8.74	330	*e*Pn	Pn	18 52 22.4	+1.3
	comp=Z,4.9nm,0.3s,SNR=7.3						
MOA				*i* Sn	Sn	18 54 03.5	+3.1
	comp=Z,7.4nm,0.7s						
MOA	Molln	8.74	330	*e*Pn	Pn	18 52 22.5	+1.3
LANS	Liptovska Anna	8.76	355	*e*P	Pn	18 52 30.2	+8.8
LANS	Liptovska Anna	8.76	355	*e*PN	Pn	18 52 30.2	+8.8
VSL	Villasalto	8.77	268		Pn	18 52 20.2	-1.3
PRMA	PARMA	8.81	303	Pn	Pn	18 52 19.4	-2.7
BIOA	Bad Ischl, Aus	8.87	327	*e*Pn	Pn	18 52 23.7	+0.9
	comp=Z,19nm,0.9s,SNR=13						
BIOA				*i* Sn	Sn	18 54 07.2	+3.8
	comp=Z,17nm,0.9s						
NIE	Niedzica	8.99	358	P	Pn	18 52 29.0	+4.5
NIE				pmax	pmax		
	comp=Z,11nm,1.1s						
STHS	Stebnicka Huta	8.99	2	*e*P	Pn	18 52 29.7	+5.2
STHS	Stebnicka Huta	8.99	2	*e*PN	Pn	18 52 29.7	+5.2
LESA	Schwarzleotal	9.08	323	*i* Pn	Pn	18 52 25.8	0.0
	comp=Z,21nm,0.8s,SNR=14						
LESA				*i* Sn	Sn	18 54 09.6	+0.8
	comp=Z,11nm,0.6s						
KRUC	Moravsky	9.16	342	*e*PN	Pn	18 52 27.2	+0.4
KRUC	Moravsky	9.16	342	P	Pn	18 52 28.3	+1.5
KRUC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MSSA	Maissana	9.16	299		Pn	18 52 25.7	-1.2
MAUC	Maruska	9.16	348	*e*PN	Pn	18 52 30.3	+3.4
VRAC	Vranov	9.34	343	Pn	Pn	18 52 30.3	+1.0
	comp=Z,6.9nm,0.7s,baz=168,slow=14,SNR=7.5						
VRAC	Vranov	9.34	343	*e*PN	Pn	18 52 31.0	+1.7
WTTA	Wattenberg	9.47	319	P	Pn	18 52 31.8	+0.6
WTTA				pmax	pmax		
	comp=Z,30nm,0.6s						
WTTA	Wattenberg	9.47	319	*i* Pn	Pn	18 52 31.4	+0.2
	comp=Z,12nm,0.5s,SNR=17						
WTTA				*e*Sn	Sn	18 54 17.3	-1.1
	comp=Z,61nm,1.5s						
CKRC	Cesky Krumlov	9.55	334	*e*PN	Pn	18 52 34.0	+1.9
CKRC				AMS	AMS	18 56 40.0	
	comp=Z,2µm,11.4s						
CKRC	Cesky Krumlov	9.55	334	*e*P	Pn	18 52 34.0	+1.9
CKRC				MLR	MLR		
	comp=Z,2µm,11.4s						
WATA	Walderalm	9.55	319	*e*Pn	Pn	18 52 33.0	+0.8
	comp=Z,44nm,0.6s,SNR=45						
WATA				*e*Sn	Sn	18 54 20.0	-0.3
	comp=Z,38nm,0.8s						
OKC	Ostrava-Krasne	9.58	350	AMS	AMS	18 57 30.0	
	comp=Z,2µm,8.2s						
TREC	Trest	9.61	339	AMS	AMS	18 56 40.0	
	comp=Z,3µm,9.2s						
TREC	Trest	9.61	339	P	Pn	18 52 34.3	+1.4
TREC				pmax	pmax		
	comp=Z,12nm,1.0s						
MORC	Moravsky Berou	9.61	348		Pn	18 52 32.7	-0.2
MORC	Moravsky Berou	9.61	348	*e*PN	Pn	18 52 34.5	+1.5
MORC	Moravsky Berou	9.61	348	⇑P	Pn	18 52 35.5	+2.5
MORC	Moravsky Berou	9.61	348	P	Pn	18 52 35.5	+2.5
SQTA	Sankt Quirin	9.66	318	*e*Pn	Pn	18 52 34.7	+0.9
	comp=Z,11nm,0.4s,SNR=14						
SQTA				*i* Sn	Sn	18 54 24.6	+1.7
	comp=Z,18nm,0.6s						
FETA	Feichten	9.78	316	*e*Pn	Pn	18 52 36.2	+0.7
	comp=Z,16nm,0.6s,SNR=16						
FETA				*i* Sn	Sn	18 54 26.9	+0.9
	comp=Z,15nm,0.9s						
GEC2	GERESS Array S	9.78	332		Pn	18 52 35.5	0.0
GEC2	GERESS Array S	9.78	332	P	Pn	18 52 38.6	+3.2
GEC2				pmax	pmax		
	comp=Z,13nm,0.9s						
GEC2	GERESS Array S	9.78	332	*e*P	Pn	18 52 36.6	+1.2
	baz=140,slow=0.0						
GERES	GERESS Array B	9.78	332		Pn	18 52 35.8	+0.4
GERES	GERESS Array B	9.78	332	Pn	Pn	18 52 36.2	+0.8
	comp=Z,0.1nm,0.3s,baz=155,slow=14,SNR=26						
GERES				Sn	Sn	18 54 27.5	+1.5
	baz=159,slow=23,SNR=1.3						
	comp=Z,6.3nm,0.7s						
MOTA	Moosalm	9.79	318	*e*Pn	Pn	18 52 36.2	+0.6
	comp=Z,47nm,0.8s,SNR=40						
MOTA				*e*Sn	Sn	18 54 27.9	+1.6
	comp=Z,23nm,0.7s						
FUORN	Ofenpass-Fuorn	9.79	313		Pn	18 52 35.1	-0.6
OJC	Ojcow	9.81	356	Pn	Pn	18 52 35.7	+0.1
OJC	Ojcow	9.81	356	P	Pn	18 52 35.7	+0.1
ILGA	Ilgaz	9.88	82	Pn	Pn	18 52 36.7	-0.2
BR131	Keskin Array S	9.92	90	Pn	Pn	18 52 37.7	+0.3
BR131	Keskin Array S	9.92	90	⇑*e*P	Pn	18 52 39.4	+2.0
BRTR	Keskin Array B	9.92	90		Pn	18 52 38.2	+0.8
BRTR	Keskin Array B	9.92	90	Pn	Pn	18 52 37.8	+0.3
	comp=Z,0.1nm,0.3s,baz=264,slow=12,SNR=5.9						
BRTR	Keskin Array B	9.92	90	*i* P	Pn	18 52 42.7	+5.3
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KRLC	Kraliky	10.03	345	*e*PN	Pn	18 52 40.8	+2.0
KRLC				AMS	AMS	18 57 20.0	
	comp=Z,2µm,10.8s						
KRLC	Kraliky	10.03	345	*e*P	Pn	18 52 40.8	+2.0
KRLC				MLR	MLR		
	comp=Z,2µm,10.8s						
KHC	Kasperske Hory	10.07	332	*e*PN	Pn	18 52 41.7	+2.4
KHC				*e*SN	Sn	18 54 38.2	+5.4
KHC				AMS	AMS	18 57 10.0	
	comp=Z,2µm,13.3s						
KHC	Kasperske Hory	10.07	332	⇓*e*P	Pn	18 52 41.1	+1.8
KHC				pmax	pmax		
	comp=Z,16nm,0.6s						
DAVOX	Davos/Dischmat	10.10	312	Pn	Pn	18 52 40.2	+0.3
	comp=Z,2.5nm,0.3s,baz=150,slow=16,SNR=27						
DAVOX				Sn	Sn	18 54 32.1	-1.9
	comp=Z,0.3nm,0.3s,baz=234,slow=16,SNR=4.3						
DAVOX				LR	LR	18 57 34.3	
	comp=Z,540nm,20.7s,baz=110,slow=44						
	comp=Z,13nm,0.5s						
ZVC	Zvikov	10.12	335	*e*PN	Pn	18 52 41.8	+1.8
KEST	Kesra	10.13	246	Pn	Pn	18 52 40.6	+0.5
KEST	Kesra	10.13	246	Pn	Pn	18 52 41.9	+1.7
	comp=Z,0.1nm,0.3s,baz=43,slow=7.7,SNR=6.4						
KEST				LR	LR	18 57 42.8	
	comp=Z,150nm,18.3s,baz=61,slow=44						
	comp=Z,3.2nm,0.9s						
TUE	Stuetta	10.24	310		Pn	18 52 41.0	-0.8
WET	Wettzell	10.34	330	P	Pn	18 52 42.8	-0.1
WET				pmax	pmax		
	comp=Z,10.0nm,1.5s						
WET	Wettzell	10.34	330	*e*P	Pn	18 52 44.0	+1.1
	baz=140,slow=0.0						
DPC	Dobruska-Polom	10.39	344	*e*PN	Pn	18 52 46.0	+2.4
DPC				AMS	AMS	18 57 20.0	
	comp=Z,3µm,9.6s						
DPC	Dobruska-Polom	10.39	344	*e*P	Pn	18 52 46.0	+2.4
DPC				MLR	MLR		
	comp=Z,3µm,9.6s						
DAVA	Damuels	10.40	315	*e*Pn	Pn	18 52 45.3	+1.3
	comp=Z,12nm,0.5s,SNR=10						
DAVA				*e*Sn	Sn	18 54 41.2	0.0
	comp=Z,6.9nm,0.5s						
PRU	Pruhonice	10.50	338	AMS	AMS	18 57 20.0	
	comp=Z,2µm,9.9s						
PRU	Pruhonice	10.50	338	P	Pn	18 52 46.5	+1.4
PRU				pmax	pmax		
	comp=Z,8.0nm,1.8s						
UBR	Ueberruh	10.52	317	*e*P	Pn	18 52 44.5	-1.0
	baz=140,slow=0.0						
UPC	Upice	10.60	343	AMS	AMS	18 57 20.0	
	comp=Z,3µm,9.5s						
OSTC	Ostas	10.60	344	AMS	AMS	18 57 30.0	
	comp=Z,3µm,9.7s						
PRA	Prague	10.60	337	AMS	AMS	18 57 20.0	
	comp=Z,2µm,10.1s						
LLS	Linth-Limmern	10.63	311	P	Pn	18 52 49.1	+1.9
LLS				pmax	pmax		
	comp=Z,21nm,1.2s						
CHVC	Chvalec	10.67	344	*e*PN	Pn	18 52 49.8	+2.3
CHVC				AMS	AMS	18 57 30.0	
	comp=Z,2µm,9.4s						
CHVC	Chvalec	10.67	344	*e*P	Pn	18 52 49.8	+2.3
CHVC				MLR	MLR		
	comp=Z,2µm,9.4s						
KSP	Ksiaz	10.86	345	P	Pn	18 52 53.5	+3.4

KSP				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PVCC	Panska Ves	10.98	339	AMS	AMS	18 57 30.0	
	comp=Z,2µm,9.2s						
MANZ	Manzenberg	11.31	330	eP	Pn	18 52 59.9	+3.6
	baz=140,slow=0.0						
BNI	Bardonecchia	11.31	299		Pn	18 52 55.6	-0.9
BNI	Bardonecchia	11.31	299	P	Pn	18 52 55.6	-0.9
CSS	Mathiatis	11.37	115	Pn	Pn	18 52 58.9	+1.7
NKC	Novy Kostel	11.39	332	AMS	AMS	18 57 50.0	
	comp=Z,2µm,10.0s						
SENIN	Lac Senin/Sane	11.42	306		Pn	18 52 56.3	-1.7
GRA1	Grafenberg Arr	11.43	327	Pn	Pn	18 52 56.6	-1.3
GRF	Grafenberg Arr	11.43	327	P	Pn	18 52 56.6	-1.3
GRF	Grafenberg Arr	11.43	327	eL	L	18 58 00.2	
	comp=Z,974nm,19.3s						
GRFO	Grafenberg	11.43	327	Pn	Pn	18 52 56.9	-1.0
GRFO	Grafenberg	11.43	327	P	Pn	18 52 56.9	-1.0
SLE	Schleitheim	11.44	314	P	Pn	18 53 03.6	+5.5
SLE				pmax	pmax		
	comp=Z,17nm,0.8s						
BRG	Berggiesshubel	11.46	338	P	Pn	18 53 00.3	+2.0
BRG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BRG	Berggiesshubel	11.46	338	eP	Pn	18 53 00.2	+2.0
BRG				Amp		18 53 02.2	
	comp=Z,5.3nm,1.1s						
TANN	Tannenbergstha	11.54	333	eP	Pn	18 53 02.3	+2.9
	baz=140,slow=0.0						
STU	Stuttgart	11.70	319		Pn	18 52 59.6	-1.9
STU	Stuttgart	11.70	319	P	Pn	18 52 59.6	-1.9
BNN	Bunyan	11.76	93	Pn	Pn	18 53 02.2	-0.4
KIEV	Kiev	11.85	27	Pn	Pn	18 53 03.4	-0.1
KIEV	Kiev	11.85	27	P	Pn	18 53 03.4	-0.1
AKASG	Malin Array Be	11.86	27	Pn	Pn	18 53 03.4	-0.3
	comp=Z,0.2nm,0.3s,baz=211,slow=12,SNR=5.6						
AKASG				LR	LR	18 58 38.7	
	comp=Z,126nm,20.6s,baz=210,slow=43						
AKASG	Malin Array Be	11.86	27	i P	Pn	18 53 09.1	+5.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKBB	Malin Array Si	11.86	27	Pn	Pn	18 53 03.6	0.0
AKBB	Malin Array Si	11.86	27	⇑eP	Pn	18 53 08.5	+4.8
BFO	Black Forest	11.86	316		Pn	18 53 01.4	-2.4
BFO	Black Forest	11.86	316	P	Pn	18 53 01.4	-2.4
BFO	Black Forest	11.86	316	eP	Pn	18 53 02.0	-1.8
	baz=140,slow=0.0						
MOX	Moxa	12.03	331	P	Pn	18 53 10.9	+4.8
MOX				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MOX	Moxa	12.03	331	eP	Pn	18 53 06.8	+0.6
	baz=140,slow=0.0						
MOX				eL	L	18 58 54.9	
	comp=Z,655nm,18.3s						
CLL	Collm	12.12	336	Pn	Pn	18 53 05.6	-1.8
CLL	Collm	12.12	336	P	Pn	18 53 05.6	-1.8
CLL	Collm	12.12	336	eP	Pn	18 53 07.0	-0.3
CLL				esP		18 53 10.0	
CLL				ex	x	18 53 36.0	
CLL				ex	x	18 54 31.0	
CLL				ex	x	18 54 56.0	
CLL				ex	x	18 55 18.0	
CLL				AMS	AMS	18 57 00.0	
	comp=N,600nm,19.2s						
CLL				AMS	AMS	18 57 00.0	
	comp=E,1µm,18.6s						
CLL				AMS	AMS	18 58 00.0	
ECH	Echery	12.44	313		Pn	18 53 09.1	-2.5
ECH	Echery	12.44	313	P	Pn	18 53 09.1	-2.5
SSB	Saint Sauveur	12.82	298	Pn	Pn	18 53 15.8	-1.2
SSB	Saint Sauveur	12.82	298	P	Pn	18 53 15.8	-1.2
ARPR	Arapgir-MALATY	13.61	90	Pn	Pn	18 53 27.5	-0.4
MMAI	Mount Meron Ar	13.89	118	Pn	Pn	18 53 32.6	+1.0
	comp=E,0.7nm,0.3s,baz=302,slow=14,SNR=5.2						
	comp=E,1.8nm,0.6s						
LOR	Lormes	13.95	305	P	Pn	18 53 32.5	+0.2
LOR				pmax	pmax		
	comp=Z,7.0nm,2.9s						
BTNL	Ternell	14.39	320	dP	P	18 53 42.7	-2.9
MNK	Minsk	14.87	16	i P	P	18 53 47.8	-2.9
	comp=E,2.0nm,0.7s						
MNK				i P	P	18 53 47.8	-2.9
	comp=N,10.0nm,0.8s						
MNK				i P	P	18 53 47.8	-2.9
	comp=Z,4.0nm,0.7s,baz=202						
MNK				i PP	PnPn	18 53 55.2	+2.5
MNK				i PPP	PPP	18 53 59.5	
MNK				i S	Sn	18 56 34.2	+4.1
MNK				i SS	S	18 56 48.0	-0.7
MNK				i SSS	SSS	18 57 00.7	
MNK				i LQ	LQ	18 58 11.4	
MNK				i LR	LR	18 59 05.0	
MNK				i LRM	MLR	18 59 52.3	
	comp=Z,134nm,11.4s						
MNK				i LRM	MLR	18 59 57.5	
	comp=E,119nm,12.7s						
MNK				i LRM	MLR	19 00 06.5	
	comp=N,71nm,11.4s						
MNK	Minsk	14.87	16	i P	P	18 53 47.8	-2.9
MNK				i S	Sn	18 56 34.1	+4.1
MNK				pmax	pmax		
	comp=E,2.0nm,0.7s						
MNK				pmax	pmax		
	comp=N,10.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MNK				MLR	MLR		
	comp=Z,134nm,11.0s						
DOU	Dourbes	14.88	316	dP	Pn	18 53 43.6	-1.4
NACGM	Naroch	15.03	14	eP	P	18 53 50.6	-2.0
	comp=Z,6.0nm,1.1s,baz=198						
GHAJ	Ghor Haditha	15.07	123	Pn	Pn	18 53 49.0	+1.4
KOPT	Kop Dagi	15.11	85	Pn	Pn	18 53 49.3	+0.9
PABE	Paberze	15.23	7		Pn	18 53 48.5	-1.1
PABE				IAmb	IAmb	18 54 04.5	
	comp=Z,18nm,0.8s						
CLF	Chambon-Foret	15.24	306	Pn	Pn	18 53 48.0	-1.8
ASF	Jabal al Asfar	15.41	117	Pn	Pn	18 53 53.6	+1.4
	comp=Z,0.1nm,0.3s,baz=223,slow=3.8,SNR=3.3						
	comp=Z,0.4nm,0.3s						
EIL	Elat	15.82	128	Pn	Pn	18 53 58.8	+1.3
	comp=Z,0.3nm,0.3s,baz=317,slow=10,SNR=5.4						
	comp=Z,4.0nm,0.7s						
MARD	Mardin	15.92	95	Pn	Pn	18 53 57.2	-1.7
GURO	Guroymak-BITLI	16.55	90	Pn	Pn	18 54 05.5	-1.5
SHA1	Shidzhatmaz	16.60	71	⇓eP	P	18 54 11.3	+1.0
KIV	Kislovodsk	16.64	71	Pn	Pn	18 54 06.2	-1.8
KIV	Kislovodsk	16.64	71	eP	P	18 54 12.5	+1.9
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KVAR	Kislovodsk Arr	16.64	71	Pn	P	18 54 10.0	-0.7
	baz=286,slow=18						
	comp=Z,0.9nm,0.4s						
VORD	Divnogorie	16.66	45	eP	P	18 54 10.1	-0.5
VORD				pmax	pmax		
	comp=Z,8.0nm,0.9s						
VSR	Storozhevoye	16.72	44	eP	P	18 54 12.2	+0.8
VSR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KBZ	Khabaz	16.77	71	Pn	P	18 54 11.5	-0.4
	comp=Z,0.1nm,0.3s,baz=295,slow=15,SNR=4.8						
KBZ				LR	LR	19 03 33.8	
	comp=Z,47nm,18.8s,baz=287,slow=48						
	comp=Z,0.3nm,0.4s						
KBZ	Khabaz	16.77	71	⇑eP	P	18 54 13.5	+1.6
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
OBN	Obninsk	18.07	30		P	18 54 27.9	+1.7
OBN	Obninsk	18.07	30	P	Pn	18 54 25.6	-0.1
	comp=Z,3.0nm,0.3s,baz=184,slow=22,SNR=3.5						
	comp=Z,6.6nm,0.4s						
OBN	Obninsk	18.07	30	eP	P	18 54 29.7	+3.5
OBN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,147nm,15.0s						
GNI	Garni	18.31	83	Pn	Pn	18 54 26.8	-2.2
GNI	Garni	18.31	83	P	P	18 54 29.8	+0.6
	comp=Z,0.3nm,0.3s,baz=334,slow=11,SNR=6.1						
GNI				LR	LR	19 01 34.3	
	comp=Z,157nm,19.3s,baz=250,slow=37						
	comp=Z,2.1nm,0.5s						
GNI	Garni	18.31	83	⇓eP	P	18 54 32.4	+3.2
GNI				pmax	pmax		
	comp=Z,18nm,1.5s						
VSU	Vasula	18.45	10	ceP	P	18 54 32.0	+1.7
VSU				pmax	pmax		
	comp=Z,76nm,2.5s						
ESDC	Sonseca Array	18.91	276	P	P	18 54 35.8	+0.2
	comp=Z,0.1nm,0.3s,baz=73,slow=11,SNR=14						
ESDC				LR	LR	19 01 45.7	
	comp=Z,134nm,18.7s,baz=82,slow=36						
	comp=Z,1.1nm,0.8s						
MOS	Moscow	18.94	30	eP	Pn	18 54 37.4	+1.1
MOS				pmax	pmax		
	comp=Z,44nm,1.0s						
PAB	San Pablo	19.22	276	P	P	18 54 34.2	-5.0
PAB	San Pablo	19.22	276	P	P	18 54 34.2	-5.0
PAB				pmax	pmax		
	comp=Z,13nm,1.4s						
MAK	Makhachkala	20.12	74	eP	P	18 54 44.6	-4.2
MAK				eS	S	18 58 31.0	-4.5
MAK				pmax	pmax		
	comp=Z,91nm,1.0s						
MAK				MLR	MLR		
	comp=Z,181nm,13.0s						
HFS	Hagfors	20.20	350	P	P	18 54 48.8	-0.8
	comp=Z,11nm,0.5s,baz=156,slow=11,SNR=38						
	comp=Z,11nm,0.5s						
AKT	Akhty	20.39	78	eP	P	18 54 51.6	-0.3
AKT				e		18 55 08.3	
AKT				eS	S	18 58 40.2	-0.9
AKT				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AKT				MLR	MLR		
	comp=Z,121nm,19.0s						
KONO	Kongsberg	20.47	344	P	P	18 54 49.1	-3.3
KONO				IAmb	IAmb	18 55 21.0	
	comp=Z,35nm,1.4s						
KONO	Kongsberg	20.47	344	P	P	18 54 49.1	-3.3
KONO				pmax	pmax		
	comp=Z,35nm,1.4s						
PBRG	Braganca	20.71	283	eP	Pn	18 54 57.7	+0.1
PBRG				i Amb		18 55 06.6	
	comp=Z,18nm,1.7s						
MVO	Moncorvo	21.00	281	eP	P	18 54 58.0	-0.4
MVO				i Amb		18 55 21.5	
	comp=Z,19nm,1.7s						
NC602	NORSAR Array S	21.11	347	P	P	18 54 56.3	-3.0
NC602				IAmb	IAmb	18 55 03.6	
	comp=Z,11nm,0.8s						
NORES	NORESS Array B	21.11	347	P	P	18 55 01.8	+2.5
FINES	FINESS Array B	21.29	7	P	P	18 54 58.2	-3.0
FINES	FINESS Array B	21.29	7	P	P	18 55 00.7	-0.6
	comp=Z,2.7nm,0.4s,baz=175,slow=11,SNR=21						
	comp=Z,2.7nm,0.4s						
FIA1	FINESS Array S	21.29	7	P	P	18 54 58.6	-2.7
FIA1				IAmb	IAmb	18 55 21.1	
	comp=Z,20nm,0.9s						
NAO01	NORSAR Array S	21.32	347	P	P	18 54 59.1	-2.5
NAO01				IAmb	IAmb	18 55 08.2	
	comp=Z,21nm,0.9s						
NC405	NORSAR Array S	21.43	348	P	P	18 55 00.6	-2.3
NB201	NORSAR Array S	21.44	347		P	18 55 01.0	-2.0
NB201				IAmb	IAmb	18 55 10.3	
	comp=Z,32nm,1.4s						
NB2	NORSAR Subarra	21.45	347	P	P	18 55 02.5	-0.5
	comp=Z,18nm,1.2s,baz=160,slow=11						
NOA	NORSAR Array B	21.45	347	P	P	18 55 02.9	-0.1
	comp=Z,2.6nm,0.7s,baz=151,slow=9.8,SNR=16						
NOA				LR	LR	19 03 50.4	
	comp=Z,120nm,20.5s,baz=165,slow=38						
	comp=Z,2.6nm,0.7s						
MTE	Manteigas	21.50	279	eP	P	18 55 05.1	+1.3
MTE				i Amb		18 55 13.7	
	comp=Z,23nm,1.4s						
NBO00	NORSAR Array S	21.51	347	P	P	18 55 01.4	-2.3
NBO00				IAmb	IAmb	18 55 09.5	
	comp=Z,18nm,0.8s						
PCBR	Castelo Branco	21.54	278	eP	P	18 55 05.4	+1.2
POLO	Lamas de Olo	21.55	282	eP	P	18 55 04.6	+0.3
POLO				i Amb		18 55 28.9	
	comp=Z,6.9nm,1.4s						
PMRV	Marv??o	21.56	276	eP	P	18 55 06.2	+1.8
PMRV				i Amb		18 55 08.3	
	comp=Z,19nm,1.8s						
PBAR	Barrancos	21.57	273	eP	P	18 55 07.8	+3.2
PBAR				i Amb		18 55 47.3	
	comp=Z,33nm,1.9s						
MDT	Midelt	21.66	257	P	P	18 55 07.6	+1.9
	comp=Z,2.3nm,0.9s,baz=54,slow=7.1,SNR=5.5						
MDT				LR	LR	19 04 02.0	
	comp=Z,76nm,21.4s,baz=58,slow=38						
	comp=Z,2.3nm,0.9s						
PVIS	Viseu	21.71	280	eP	P	18 55 09.7	+3.6
EKA	Eskdalemuir Ar	21.72	321	P	P	18 55 06.3	+0.3
	comp=Z,5.8nm,0.8s,baz=115,slow=10,SNR=17						
	comp=Z,5.8nm,0.8s						
ESK	Eskdalemuir	21.74	321		P	18 55 03.4	-2.8
ESK	Eskdalemuir	21.74	321	P	P	18 55 03.4	-2.8
ESK				pmax	pmax		
	comp=Z,29nm,1.2s						
NC204	NORSAR Array S	21.75	347		P	18 55 05.1	-1.2
NC204				IAmb	IAmb	18 55 10.5	
	comp=Z,23nm,0.9s						
TAM	Tamanrasset	21.79	221		P	18 55 07.0	-0.1
TAM				IAmb	IAmb	18 55 18.6	
	comp=Z,15nm,1.0s						
TAM	Tamanrasset	21.79	221	P	P	18 55 07.0	-0.1
TAM				pmax	pmax		
	comp=Z,15nm,1.0s						
PGAV	Gavieira, Arco	21.83	284	eP	P	18 55 04.7	-2.7
PGAV				i Amb		18 55 11.5	
	comp=Z,21nm,1.7s						
BELG	Belogornoye	21.92	48	P	P	18 55 09.2	+1.1
	comp=Z,8.2nm,0.8s,baz=180,slow=2.4,SNR=5.5						
BELG				LR	LR	19 03 37.1	
	comp=Z,59nm,20.7s,baz=210,slow=37						
	comp=Z,8.2nm,0.8s						
BELG	Belogornoye	21.92	48	deP	P	18 55 11.1	+3.0
BELG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PSARD	Sardoal	22.11	277	eP	P	18 55 09.2	-1.1
PCAS	Casmilo, Conde	22.27	279	eP	P	18 55 11.9	-0.2
PVAQ	Vaqueiros	22.30	271	eP	P	18 55 08.9	-3.5
PVAQ				i Amb		18 55 12.2	
	comp=Z,39nm,1.7s						
PBDV	Barranco-do-Ve	22.51	271	eP	P	18 55 19.8	+5.2
KLMR	Klimovskoe	23.49	23	eP	P	18 55 25.5	+0.9
KLMR				e		18 55 50.7	
KLMR				pmax	pmax		
	comp=Z,15nm,1.0s						
KIRV	Kirov	25.70	35	LR	LR	19 07 00.4	
	comp=Z,139nm,18.4s,baz=240,slow=39						
KIRV	Kirov	25.70	35	⇑eP	P	18 55 48.4	+3.5
AKTO	Aktyubinsk	27.74	56	LR	LR	19 07 40.0	
	comp=Z,34nm,19.2s,baz=43,slow=38						
AB31	Akbulak array	28.89	59	P	P	18 56 12.9	-0.8
ABKAR	Akbulak array	28.89	59	P	P	18 56 13.1	-0.6
ARTI	Arti	29.19	44	P	P	18 56 16.6	+0.3
	comp=Z,1.5nm,0.4s,baz=104,slow=0.7,SNR=3.7						
ARTI				LR	LR	19 08 25.3	
	comp=Z,42nm,21.2s,baz=254,slow=38						
	comp=Z,1.5nm,0.4s						
ARTI	Arti	29.19	44	c iP	P	18 56 17.8	+1.5
ARTI				S	S	19 01 12.8	+3.4
ARTI				SS	SnSn	19 02 34.1	+0.9
ARTI				pmax	pmax		
	comp=Z,14nm,2.7s						
ARCES	ARCESS Array B	29.27	3	P	P	18 56 16.4	-0.6
	comp=Z,3.4nm,0.6s,baz=188,slow=11,SNR=13						
ARCES				LR	LR	19 09 24.8	
	comp=Z,120nm,18.8s,baz=179,slow=39						
	comp=Z,3.4nm,0.6s						
TORD	Torodi Ar. Bea	31.91	217		P	18 56 39.6	-1.0
TORD	Torodi Ar. Bea	31.91	217	P	P	18 56 41.4	+0.7
	comp=Z,3.1nm,0.8s,baz=31,slow=10,SNR=13						
	comp=Z,3.1nm,0.8s						
HRA	Herat	33.29	87	P	P	18 56 52.2	-0.7
BORG	Borgarnes	34.24	329	LR	LR	19 11 27.4	
	comp=Z,179nm,20.8s,baz=126,slow=37						
BRVK	Borovoye	35.51	52	P	P	18 57 10.9	-0.9
BRVK				IAmb	IAmb	18 57 45.1	
	comp=Z,3.0nm,0.8s						
BRVK	Borovoye	35.51	52	deP	P	18 57 14.4	+2.7
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BVAR	Borovoye Array	35.58	52	P	P	18 57 12.0	-0.3
	comp=Z,0.7nm,0.5s,baz=298,slow=10.0,SNR=4.6						
	comp=Z,0.7nm,0.5s						
BVAR	Borovoye Array	35.58	52	P	P	18 57 12.0	-0.3
KK31	Karatay Array	36.79	69	P	P	18 57 20.7	-2.1
KK31	Karatay Array	36.79	69	P	P	18 57 20.7	-2.1
KK31				pmax	pmax		
	comp=Z,4.0nm,1.5s						
KKAR	Karatay Array	36.79	69	P	P	18 57 20.6	-2.2
KKAR	Karatay Array	36.79	69	P	P	18 57 20.6	-2.2
SCO	Scoresbysund	37.15	338	P	P	18 57 22.8	-2.6
SCO				IAmb	IAmb	18 57 32.4	
	comp=Z,6.6nm,0.9s						
SCO	Scoresbysund	37.15	338	P	P	18 57 22.8	-2.6
SCO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GAR	Garm	37.77	76	P	P	18 57 29.4	-1.8
GAR				IAmb	IAmb	18 57 44.3	
	comp=Z,7.2nm,1.1s						
SPITS	Spitsbergen Ar	37.90	359	P	P	18 57 31.9	+0.1
	comp=Z,5.8nm,0.8s,baz=252,slow=10,SNR=11						
SPITS				LR	LR	19 15 01.4	
	comp=Z,131nm,18.1s,baz=140,slow=39						
	comp=Z,5.8nm,0.8s						
LODK	Lodwar	39.15	156	P	P	18 57 41.2	-1.8
AAK	Ala-Archa	39.74	69	LR	LR	19 18 33.1	
	comp=Z,56nm,18.9s,baz=290,slow=43						
AAK	Ala-Archa	39.74	69	⇑eP	P	18 57 50.0	+2.2
AAK				pmax	pmax		
	comp=Z,3.0nm,1.7s						
DBIC	Dimbokro	40.68	221	P	P	18 57 56.7	+1.1
	comp=Z,2.8nm,0.6s,baz=41,slow=7.5,SNR=5.9						
DBIC				LR	LR	19 16 01.5	
	comp=Z,60nm,19.1s,baz=29,slow=38						
	comp=Z,2.8nm,0.6s						
KURBB	Kurchatov Arra	40.79	56	P	P	18 57 55.3	-0.9
	comp=Z,0.6nm,0.9s,baz=281,slow=9.6,SNR=5.4						
	comp=Z,0.6nm,0.9s						
KURK	Kurchatov	40.83	55	P	P	18 57 55.3	-1.2
KSH	Kashi	41.75	73	P	P	18 58 03.3	-1.1
KSH				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MBAR	Mbarara	41.85	165	P	P	18 58 02.3	-3.1
MBAR				IAmb	IAmb	18 58 07.3	
	comp=Z,6.5nm,1.1s						
MBAR	Mbarara	41.85	165	⇑eP	P	18 58 06.7	+1.3
MBAR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SUMG	Summit	42.79	338		P	18 58 10.6	-2.2
SUMG				IAmb	IAmb	18 58 18.4	
	comp=Z,11nm,1.0s						
SUMG	Summit	42.79	338	P	P	18 58 10.6	-2.2
SUMG				pmax	pmax		
	comp=Z,11nm,1.0s						
MAKZ	Makanchi	43.80	60	P	P	18 58 19.6	-1.3
MAKZ	Makanchi	43.80	60	P	P	18 58 19.6	-1.3
MAKZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MK31	Makanchi Array	44.01	60	deP	P	18 58 21.4	-1.2
MKAR	Makanchi Array	44.01	60		P	18 58 20.7	-1.9
MKAR	Makanchi Array	44.01	60	P	P	18 58 21.7	-0.9
	comp=Z,1.4nm,0.6s,baz=283,slow=6.9,SNR=16						
MKAR				LR	LR	19 17 53.9	
	comp=Z,80nm,21.7s,baz=280,slow=38						
	comp=Z,1.4nm,0.6s						
MKAR	Makanchi Array	44.01	60	ceP	P	18 58 21.7	-0.9
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ZALV	Zalesovo Beam	44.09	50		P	18 58 21.2	-1.8
ZALV	Zalesovo Beam	44.09	50	P	P	18 58 21.9	-1.0
	comp=Z,1.2nm,0.4s,baz=285,slow=7.1,SNR=5.1						
ZALV				LR	LR	19 18 29.5	
	comp=Z,47nm,18.9s,baz=290,slow=38						
	comp=Z,1.2nm,0.4s						
ZALV	Zalesovo Beam	44.09	50	P	P	18 58 22.0	-1.0
NRIK	Noril'sk	44.71	28	LR	LR	19 17 50.5	
	comp=Z,58nm,20.2s,baz=265,slow=37						
KIBK	Kibwezi	45.42	155	P	P	18 58 32.7	-1.5
KIBK				IAmb	IAmb	18 58 36.6	
	comp=Z,7.4nm,1.1s						
SFJD	Kangerlussuaq	46.37	329	LR	LR	19 19 27.9	
	comp=Z,167nm,19.0s,baz=83,slow=38						
TULEG	Thule	50.99	342	P	P	18 59 15.6	-0.8
FRB	Frobisher Bay	54.34	327	LR	LR	19 23 32.0	
	comp=Z,134nm,19.2s,baz=77,slow=37						
EVN	Everest	54.90	81		P	18 59 44.2	-2.5
EVN				IAmb	IAmb	19 00 09.8	
	comp=Z,5.1nm,0.9s						
LSZ	Lusaka	55.86	171	LR	LR	19 26 42.4	
	comp=Z,68nm,19.3s,baz=16,slow=39						
SCHQ	Schefferville	56.93	316	P	P	18 59 58.4	-1.7
	comp=Z,1.4nm,0.4s,baz=51,slow=3.8,SNR=6.2						
SCHQ				LR	LR	19 23 55.8	
	comp=Z,78nm,18.1s,baz=117,slow=36						
	comp=Z,1.4nm,0.4s						
ILON	Igloolik, Nuna	56.95	336	P	P	18 59 59.2	-0.8
ILON				IAmb	IAmb	19 00 03.3	
	comp=Z,3.6nm,0.8s						
TIXI	Tiksi	57.48	21	LR	LR	19 28 18.0	
	comp=Z,59nm,18.3s,baz=343,slow=40						
RES	Resolute Bay	57.65	344	LR	LR	19 26 00.2	
	comp=Z,55nm,18.4s,baz=24,slow=37						
GTA	Gaotai	58.63	63	eP	P	19 00 12.7	+0.2
GTA				sP		19 00 19.3	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
TSUM	Tsumeb	59.40	183	LR	LR	19 29 11.2	
	comp=Z,110nm,18.6s,baz=1.0,slow=39						
PALK	Pallekele	62.60	105	LR	LR	19 30 58.5	
	comp=Z,48nm,18.3s,baz=298,slow=39						
KGCAE	Kacgae	62.98	178	P	P	19 00 41.9	-0.1
YAK	Yakutsk	63.07	30	LR	LR	19 32 23.3	
	comp=Z,37nm,18.4s,baz=295,slow=40						
KOOLE	Kule	63.10	181	P	P	19 00 42.3	-0.5
LPHEP	Lephephe	63.65	175	P	P	19 00 47.1	+0.7
OPO	Ambohidratompo	63.66	152	LR	LR	19 30 59.0	
	comp=Z,47nm,18.1s,baz=184,slow=38						
LBTB	Lobatse	65.27	175	LR	LR	19 31 50.0	
	comp=Z,64nm,18.0s,baz=13,slow=38						
PHPEN	Phepeng	65.60	178	P	P	19 00 58.5	-0.7
HHC	Hu-ho-hao-te	65.64	56	eP	P	19 00 59.0	-0.4
HHC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,40nm,4.9s						
PZH	PanZhiHua	66.82	74	P	P	19 01 07.5	+0.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,110nm,4.8s						
BOSA	Boshof	68.83	176	P	P	19 01 20.5	+0.9
	comp=Z,4.0nm,0.7s,baz=351,slow=7.7,SNR=9.3						
BOSA				LR	LR	19 32 41.7	
	comp=Z,48nm,20.4s,baz=5.0,slow=37						
	comp=Z,4.0nm,0.7s						
SADO	Sadowa	68.89	311	LR	LR	19 30 35.7	
	comp=Z,6.6nm,18.7s,baz=120,slow=35						
CMAR	Chiang Mai Arr	69.43	83	LR	LR	19 35 59.6	
	comp=Z,36nm,18.8s,baz=305,slow=40						
SEY	Seymchan	69.97	21	deP	P	19 01 29.5	+3.3
SEY				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YKA	Yellowknife Ar	71.33	340	P	P	19 01 33.9	-0.6
	comp=Z,1.1nm,0.7s,baz=346,slow=5.1,SNR=4.4						
YKA				LR	LR	19 35 45.6	
	comp=Z,51nm,18.3s,baz=310,slow=38						
	comp=Z,1.1nm,0.7s						
YKA	Yellowknife Ar	71.33	340	i P	P	19 01 38.2	+3.7
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MA2	Magadan	72.17	24	LR	LR	19 37 25.3	
	comp=Z,55nm,18.2s,baz=268,slow=39						
J30M	Hart River	73.78	350	P	P	19 01 49.0	-0.2
J30M				IAmb	IAmb	19 01 51.9	
	comp=Z,2.9nm,0.8s						
ULM	Lac du Bonnet	73.98	323	P	P	19 01 51.3	+0.7
	comp=Z,6.2nm,0.9s,baz=58,slow=5.3,SNR=5.4						
ULM				LR	LR	19 34 32.4	
	comp=Z,95nm,20.9s,baz=82,slow=36						
	comp=Z,6.2nm,0.9s						
H21K	Melozitna Rive	74.12	357	P	P	19 01 51.5	+0.3
H21K				IAmb	IAmb	19 02 01.2	
	comp=Z,5.4nm,1.1s						
MLY	Manley	74.66	356	P	P	19 01 54.5	+0.2
MLY				IAmb	IAmb	19 02 13.1	
	comp=Z,4.1nm,1.3s						
J26L	Joseph Creek	74.67	353	IAmb	IAmb	19 01 59.0	
	comp=Z,2.8nm,1.1s						
ILAR	Eielson Array	74.68	355	P	P	19 01 54.7	+0.3
	comp=Z,0.4nm,0.6s,baz=356,slow=2.8,SNR=6.9						
ILAR				LR	LR	19 34 58.5	

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          comp=Z,22nm,22.0s,baz=96,slow=36
          comp=Z,0.4nm,0.6s
J20K  Nowinta River      75.65 358  P      P       19 01 59.3  -0.6
J20K                                IAmb   IAmb    19 02 03.9
          comp=Z,2.7nm,0.8s
BCAR  Beaver Creek A     75.90 352  P      P       19 02 01.3  -0.1
L27K  Beaver Creek,      75.91 352  P      P       19 02 01.6  +0.1
L27K                                IAmb   IAmb    19 02 06.6
          comp=Z,2.3nm,0.9s
SJG   San Juan           76.17 282  LR     LR      19 31 37.6
          comp=Z,13nm,20.4s,baz=160,slow=33
J18K  Innoko River       76.42 359  P      P       19 02 03.4  -1.0
J18K                                IAmb   IAmb    19 02 17.3
          comp=Z,3.6nm,0.9s
TKL   Tuckaleechee C     77.33 306  LR     LR      19 37 59.6
          comp=Z,60nm,18.1s,baz=49,slow=37
L19K  White Mountain     77.67 358  P      P       19 02 11.1  -0.3
L19K                                IAmb   IAmb    19 02 14.9
          comp=Z,3.8nm,0.9s
KSRS  Korea Array        77.78  51  P      P       19 02 11.6  -0.9
          comp=Z,1.1nm,0.8s,baz=318,slow=4.9,SNR=6.6
KSRS                                LR     LR      19 41 30.9
          comp=Z,27nm,18.8s,baz=310,slow=40
          comp=Z,1.1nm,0.8s
PETK  Petropavlovsk-     79.68  25  LR     LR      19 41 12.5
          comp=Z,38nm,20.1s,baz=333,slow=38
ASAJ  Asahikawa          80.91  38  LR     LR      19 41 12.6
          comp=Z,45nm,18.1s,baz=333,slow=38
KDAK  Kodiak Island      81.98 356  LR     LR      19 42 00.6
          comp=Z,32nm,18.7s,baz=19,slow=38
BBB   Bella Bella        83.86 341  LR     LR      19 44 12.1
          comp=Z,29nm,18.1s,baz=141,slow=39
NEW   Newport            84.11 333  LR     LR      19 41 38.2
          comp=Z,96nm,18.9s,baz=18,slow=37
MJAR  Matsushiro Arr     84.30  46  P      P       19 02 46.7  -0.5
          comp=Z,1.5nm,1.0s,baz=319,slow=6.9,SNR=6.6
          comp=Z,1.5nm,1.0s
SHEM  Shemya Is, Ala     84.38  16  LR     LR      19 44 17.9
          comp=Z,21nm,19.1s,baz=286,slow=38
SDV   Santo Domingo      85.34 278  LR     LR      19 39 43.3
          comp=Z,29nm,18.9s,baz=55,slow=35
PDAR  Pinedale Array     85.78 326  P      P       19 02 55.7  +0.8
          comp=Z,0.5nm,0.6s,baz=57,slow=5.5,SNR=4.9
PDAR                                LR     LR      19 44 06.4
          comp=Z,45nm,18.3s,baz=20,slow=38
          comp=Z,0.5nm,0.6s
ELK   Elko               89.82 328  LR     LR      19 44 28.8
          comp=Z,127nm,20.4s,baz=30,slow=36
ANMO  Albuquerque        90.61 319  LR     LR      19 45 27.0
          comp=Z,81nm,18.3s,baz=143,slow=37
NVAR  Mina Array Bea     93.03 329  LR     LR      19 47 10.0
          comp=Z,92nm,19.7s,baz=358,slow=37
TXAR  Lajitas Array      93.53 314  P      P       19 03 32.8  +1.2
          comp=Z,0.8nm,0.7s,baz=67,slow=3.5,SNR=7.6
TXAR                                LR     LR      19 46 29.9
          comp=Z,34nm,18.7s,baz=30,slow=36
          comp=Z,0.8nm,0.7s
PFO   Pinyon Flats O     96.39 325  LR     LR      19 47 17.7
          comp=Z,63nm,21.9s,baz=48,slow=36
CMIG  Matias Romero      97.29 300  LR     LR      19 44 28.2
          comp=Z,25nm,21.7s,baz=1.5,slow=33
CPUP  Villa Florida      98.24 243  LR     LR      19 48 48.8
          comp=Z,8.9nm,20.7s,baz=289,slow=36
LPAZ  La Paz             99.53 257  LR     LR      19 50 34.1
          comp=Z,19nm,18.3s,baz=72,slow=36
ASAR  Alice Springs     122.23  95  PKP    PKPdf   19 09 09.7  -0.8
          comp=Z,1.6nm,0.8s,baz=318,slow=1.4,SNR=14
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IDC ***01*** *19:01:21.7±0.8, 40°.46N×20°.74E, h0km, mb3.6/10, mbtmp3.7/16, ML3.3/3, MS2.9/3, Error ellipse: s-maj=16.1km s-min=13.4km az=83.0*

TIR ***01*** *19:01:21.8, 40°.44N×20°.79E, h8km±2km, Ml3.5/8*

PDG ***01*** *19:01:22.5±0.8, 40°.44N×20°.78E, h9km±1km, ML3.5/11, Error ellipse: s-maj=1.0km s-min=1.4km az=0.0*

ATH ***01*** *19:01:22.2, 40°.42N×20°.80E, h9km±1km, ML3.3/7, Manual Solution by K.Orfanogiannaki First location: 2019/06/01 19:02:23, This location: 2020/10/04 18:38:18 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

BEO ***01*** *19:01:22.5±0.6, 40°.38N×20°.73E, h0km, ML3.3/9*

SKO ***01*** *19:01:23.1, 40°.33N×20°.86E, h0km, ML3.5*

THE ***01*** *19:01:23.6, 40°N±2°×2°1E±°, h6km±2km, M3.1/17, MLh3.1/17*

NAO ***01*** *19:01:24.6, 40°.46N×20°.78E, h10km, mb3.8*

ISC 01 19:01:22.2±1.0**, 40°.42N**±0°.01×**20°.77E**±0°.02**, h4**km±7km**, n165, σ1s.37**/226**, mb3.6**/8**, 17C-5D, Greece-Albania border region**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
KBN   Korca               0.21   3   Pg     Pg       19 01 25.6  -0.7
KBN                                  Sg     Sg       19 01 28.7  -0.4
KBN                                  AML    AML      19 01 30.2
          63nm,0.6s
NEST  Nestorio            0.21  90   Pg     Pg       19 01 26.4  +0.1
NEST                                 Sg     Sg       19 01 29.4  +0.3
NEST                                 AML    AML      19 01 34.0
          38nm,0.3s
NEST                                 AML    AML      19 01 34.4
          43nm,0.7s
NEST  Nestorio            0.21  90   P      Pg       19 01 26.5  +0.1
NEST                                 S      Sg       19 01 30.0  +0.9
NEST  Nestorio            0.21  90   P      Pg       19 01 26.4  +0.1
NEST                                 S      Sg       19 01 29.1   0.0
LSK   Leskovik            0.30 207   Pg     Pg       19 01 27.3  -0.7
LSK                                  Sg     Sg       19 01 33.4  +1.5
LSK                                  AML    AML      19 01 37.8
          86nm,0.5s
PENT  Pentalofos          0.35 128   P      Pg       19 01 29.0  -0.1
PENT                                 S      Sg       19 01 32.4  -1.4
PENT  Pentalofos          0.35 128   P      Pg       19 01 28.7  -0.4
PENT                                 S      Sg       19 01 34.1  +0.4
KPRO  Kipourio            0.65 135   P      Pg       19 01 34.1  -0.5
KPRO                                 S      Sg       19 01 42.8  -0.1
KPRO  Kipourio            0.65 135   P      Pg       19 01 34.0  -0.5
KPRO                                 S      Sg       19 01 42.9  -0.1
OHR   Ohrid               0.69   2⇓iPg    Pg       19 01 35.4  -0.2
OHR                                 i Sg    Sb       19 01 47.1  +0.1
OHR                                 eLg     Lg       19 01 47.5
          comp=E,2µm,0.6s
OHR                                 eLg     Lg       19 01 50.0
          comp=N,1µm,0.5s
OHR   Ohrid               0.69   2  ePg     Pg       19 01 35.4  -0.2
OHR                                 eSg     Sg       19 01 44.8  +0.2
JAN   Janina              0.76 175   P      Pg       19 01 36.2  -0.6
JAN                                  S      Sg       19 01 46.8  +0.2
JAN   Janina              0.76 175   P      Pg       19 01 37.0  +0.2
JAN                                  S      Sg       19 01 47.1  +0.5
KZN   Kozani              0.77  98   P      Pg       19 01 36.8  -0.1
KZN                                  S      Sb       19 01 48.1  -1.0
KZN   Kozani              0.77  98   P      Pg       19 01 36.9  -0.1
SRN   Sarande             0.80 228   Pg     Pg       19 01 37.8  +0.3
SRN                                  Sg     Sb       19 01 50.9  +1.1
SRN                                  AML    AML      19 01 53.9
          comp=N,6.2nm,0.8s
IGT   Igoumenitsa         0.94 201   Pg     Pg       19 01 40.6  +0.3
IGT                                  Sg     Sn       19 01 56.0  -0.3
IGT                                  AML    AML      19 02 04.6
          comp=N,3.8nm,0.5s
IGT   Igoumenitsa         0.94 201   P      Pg       19 01 40.6  +0.3
IGT                                  S      Sb       19 01 54.8  +0.8
IGT   Igoumenitsa         0.94 201  ePg     Pg       19 01 40.4  +0.1
IGT                                 eSg     Sn       19 01 58.6  +2.3
IGT   Igoumenitsa         0.94 201   P      Pg       19 01 40.2  -0.1
VLO   Vlora               0.98 274   Pg     Pb       19 01 42.3  +0.6
VLO                                  Sg     Sn       19 01 57.1  +0.1
KEK   Kerkira             1.03 227   P      Pn       19 01 43.5  +0.1
KEK                                  S      Sn       19 01 57.9  -0.4
KEK   Kerkira             1.03 227   P      Pg       19 01 42.5  +0.7
KTI   Kastanea            1.03  91   P      Pg       19 01 41.3  -0.6
LFKM  Lefkimmi            1.11 210   S      Sn       19 02 00.7  +0.4
TETR  Tetrakomo, Epi      1.14 160   P      Pg       19 01 43.8  -0.2
TIR   Tirane              1.16 324   Pn     Pg       19 01 44.4   0.0
TIR                                  Sn     Sn       19 02 02.5  +0.9
TIR                                  AML    AML      19 02 13.8
          comp=N,2.8nm,0.7s
TIR   Tirane              1.16 324 ⇑P      Pn       19 01 45.8  +0.6
TIR   Tirane              1.16 324 i Pg     Pg       19 01 44.4   0.0
TIR                                i Sg     Sn       19 02 06.9  +5.4
TIR   Tirane              1.16 324 ePg      Pg       19 01 44.2  -0.2
THL   Klokotos Trika      1.28 131   P      Pn       19 01 45.4  -1.4
THL   Klokotos Trika      1.28 131   P      Pn       19 01 45.3  -1.5
THL                                  S      Sg       19 02 03.0  -0.2
PHP   Peshkopia           1.29 349   Pg     Pn       19 01 46.6  -0.5
TYRN  Tyrnavos            1.32 122   P      Pn       19 01 47.0  -0.5
TYRN  Tyrnavos            1.32 122   P      Pn       19 01 46.7  -0.8
AMPL  Ampelaki            1.53 167   P      Pb       19 01 51.0  -0.1
LKD2  Lefkada island      1.63 183   Pn     Pg       19 01 53.9  +0.5
LKD2                                 Sn     Sg       19 02 17.8  +3.3
LKD2  Lefkada island      1.63 183   P      Pg       19 01 53.6  +0.2
SKO   Skopje              1.63  18 i Pg     Pg       19 01 53.4  -0.1
SKO                                i Sg     Sg       19 02 15.4  +0.7
VAY   Valandovo           1.64  56   P      Pn       19 01 51.6  -0.2
VAY   Valandovo           1.64  56 i Pg     Pb       19 01 52.7  -0.3
VAY                                i Sg     Sg       19 02 17.4  +2.7
VAY                                eLg      Lg       19 02 22.6
          comp=N,877nm,1.2s
VAY                                eLg      Lg       19 02 23.7
          comp=E,539nm,0.8s
VAY   Valandovo           1.64  56 ePn      Pb       19 01 52.6  -0.3
VAY                                eSn      Sg       19 02 17.4  +2.7
THE   Thessaloniki        1.69  82   Pn     Pn       19 01 52.1  -0.3
THE   Thessaloniki        1.69  82   P      Pn       19 01 51.9  -0.5
THE   Thessaloniki        1.69  82 ePg      Pn       19 01 52.7  +0.2
THE                                eSg      Sg       19 02 16.5  +0.2
NYDR  Nydri-Lefkada       1.70 182   P      Pb       19 01 54.1  +0.1
PUK   Puka                1.76 338   Pn     Pg       19 01 55.7  -0.2
PUK                                  Sn     Sb       19 02 18.1  +0.6
KNT   Kendrikon           1.78  65   P      Pn       19 01 53.3  -0.5
KNT   Kendrikon           1.78  65 i Pn     Pb       19 01 54.8  -0.6
HORT  Hortiatis           1.78  83   P      Pn       19 01 53.2  -0.8
SCTE  Santa Cesarea       1.80 260   Pn     Pb       19 01 56.4  +0.7
SCTE                                 Sn     Sg       19 02 20.8  +0.8
SCTE                                 AML    AML      19 02 24.2
          comp=E,4.4nm,0.4s
AGG   Agios Georgios      1.84 139   P      Pn       19 01 54.5  -0.1
ULC   Ulcinj              1.93 324   Pn     Pn       19 01 57.0  +1.2
ULC   Ulcinj              1.93 324⇑iPn     Pn       19 01 57.0  +1.2
ULC                                i Sn     Sg       19 02 24.4  +0.2
BCI   Bajram Curri        2.02 345   Pn     Pg       19 02 00.6  -0.3
BCI                                  Sn     Sg       19 02 29.6  +2.5
BCI                                  AML    AML      19 02 36.5
          comp=E,3.0nm,0.7s
DRME  Dracevica, Mon      2.14 326   Pn     Pb       19 02 00.8  -0.7
DRME  Dracevica, Mon      2.14 326 ePn      Pb       19 02 00.4  -1.1
DRME  Dracevica, Mon      2.14 326⇑iPn     Pn       19 01 59.9  +1.2
DRME                               i Sn     Sb       19 02 29.1  +0.7
SRS   Serrai              2.25  71 i Pn     Pn       19 02 01.1  +0.8
KKB   Krupnik             2.28  51 i Pn     Pn       19 02 02.0  +1.4
PDG   Podgorica           2.31 331 ePn      Pn       19 02 02.8  +1.7
PDG   Podgorica           2.31 331 ⇑P       Pn       19 02 02.6  +1.4
PDG   Podgorica           2.31 331 ePn      Pb       19 02 02.9  -1.6
PDG   Podgorica           2.31 331⇑iPn     Pn       19 02 02.0  +0.9
PDG                                i Sn     Sb       19 02 33.3  -0.1
BUM   Brajici-Budva       2.35 324⇑iPn     Pn       19 02 02.6  +0.8
BUM                                i Sn     Sb       19 02 33.9  -0.8
BOSS  Bosilegrad          2.44  31 ePn      Pn       19 02 03.3  +0.4
BOSS                               eSn      Sb       19 02 35.6  -1.6
BARS  Barje               2.52  18 i Pn     Pn       19 02 04.4  +0.3
BARS  Barje               2.52  18 ePn      Pn       19 02 04.3  +0.3
IVA   Berane              2.54 345⇓iPn     Pn       19 02 05.5  +1.2
IVA                                i Sn     Sb       19 02 38.7  -1.4
CEME  Cevo                2.54 327 ePn      Pn       19 02 04.5  +0.1
CEME                               i Sn     Sb       19 02 38.9  -1.3
KOME  Kolasin             2.61 339⇑iPn     Pn       19 02 07.1  +1.8
KOME                               i Sn     Sb       19 02 40.8  -1.3
HCY   Herceg Novi         2.66 321 ePn      Pn       19 02 06.2  +0.4
HCY   Herceg Novi         2.66 321⇓iPn     Pn       19 02 06.4  +0.6
HCY                                i Sn     Sb       19 02 41.6  -1.7
SELS  Selova              2.81   5 ePn      Pn       19 02 07.8  -0.2
SELS                               eSn      Sn       19 02 44.6  +2.2
VTS   Vitosha             2.87  39 ePn      Pn       19 02 09.8  +0.8
SJES  Sjenica             2.91 348 ePn      Pn       19 02 12.0  +2.6
SJES  Sjenica             2.91 348 ePn      Pn       19 02 10.6  +1.2
TREB  Trebinje            2.93 322 ePn      Pn       19 02 09.5  -0.1
BRY   Bratogost           3.00 327 ePn      Pn       19 02 11.6  +1.0
BRY   Bratogost           3.00 327⇑iPn     Pn       19 02 11.6  +1.0
BRY                                i Sn     Sn       19 02 49.0  +1.9
PLE   Pljevlja            3.09 341 ePn      Pn       19 02 13.8  +1.9
PLE                                i Sn     Sn       19 02 51.5  +2.1
MATE  Matera              3.11 276 ⇑P       Pb       19 02 19.0  +1.0
UPM   Unac-Piva           3.12 334 ePn      Pn       19 02 14.6  +2.3
UPM   Unac-Piva           3.12 334 ePn      Pn       19 02 13.7  +1.4
UPM                                i Sn     Sn       19 02 52.5  +2.4
GOCS  Kraljevo Serbi      3.15   1 ePn      Pn       19 02 13.7  +1.1
ZAPS  Zavoj               3.18  25 ePn      Pn       19 02 14.4  +1.4
IVAS  Ivanjica            3.19 352 ePn      Pn       19 02 13.1  -0.2
BOVS  Bovan               3.29  12 ⇓P       Pn       19 02 13.6  -0.9
BOVS  Bovan               3.29  12 ePn      Pn       19 02 14.5   0.0
TIP   Timpagrande         3.33 250 ⇑P       Pg       19 02 24.9  -1.2
STON  Ston                3.37 318 ePn      Pn       19 02 15.6   0.0
STON  Ston                3.37 318 ePn      Pn       19 02 15.5   0.0
RUDO  Rudo                3.37 342 ePn      Pn       19 02 16.8  +1.2
GRUS  Gruza               3.47 359 ePn      Pn       19 02 17.9  +0.9
ZAGS  Zajecar             3.56  17 ePn      Pn       19 02 18.7  +0.4
ZAGS                               eSn      Sn       19 03 03.2  +2.3
BBLS  Lazi&#263i          3.59 344 ePn      Pn       19 02 20.2  +1.5
BBLS  Lazi&#263i          3.59 344 ePn      Pn       19 02 20.3  +1.5
TRUS  Trudelj             3.81 356 ePn      Pn       19 02 23.8  +2.0
HAPS  Han Pijesak,BI      3.91 340 ePn      Pn       19 02 24.6  +1.4
HAPS  Han Pijesak,BI      3.91 340 ePn      Pn       19 02 24.7  +1.5
TEKS  Tekeris             4.23 348 ePn      Pn       19 02 27.9  +0.4
TEKS  Tekeris             4.23 348 ePn      Pn       19 02 28.6  +1.1
AVAS  Avala Beograd       4.28 358 ePn      Pn       19 02 27.9  -0.3
MDVR  Moldovita           4.42   9 ⇑P       Pn       19 02 31.6  +1.5
MDVR  Moldovita           4.42   9 ePn      Pn       19 02 31.2  +1.1
HERR  Herculane           4.62  15 ⇑P       Pn       19 02 33.9  +1.1
VRSS  Vrsac               4.72   5 ePn      Pn       19 02 33.6  -0.6
FRGS  Fruska Gora         4.79 352 ePn      Pn       19 02 36.6  +1.4
FRGS  Fruska Gora         4.79 352 ePn      Pn       19 02 36.7  +1.5
BANR  Banloc              4.97   3 ePn      Pn       19 02 37.7  +0.1
BLY   Banja Luka          5.08 330 ePn      Pn       19 02 39.2  +0.1
A050A Klekovaca           5.13 324 ePn      Pn       19 02 39.6  -0.3
BZS   Buzias              5.24   7 ⇑P       Pn       19 02 42.2  +1.0
A051A Mrakovica           5.40 329 ePn      Pn       19 02 43.5  -0.2
LOT   Lotru               5.49  23 ⇓P       Pn       19 02 46.8  +2.0
VAE   Valguarnera         5.76 241   Pn     Pn       19 02 51.2  +2.6
          comp=E,2.6nm,0.3s,baz=45,slow=2.9,SNR=1.9
MORH  Mrgy, Hungar        6.00 346 ⇑P       Pn       19 02 52.8  +1.0
IDI   Anoyia              6.07 146   Pn     Pn       19 02 55.0  +2.3
          comp=E,7.6nm,1.0s,baz=323,slow=15,SNR=1.6
IDI                                  Sn     Sn       19 04 05.4  +2.7
          comp=E,0.5nm,0.3s,baz=333,slow=16,SNR=2.0
MLR   Muntele Rosu        6.33  35   Pn     Pn       19 02 58.1  +1.6
          comp=E,0.5nm,0.3s,baz=240,slow=10,SNR=7.8
MLR                                  Sn     Sn       19 04 15.5  +6.2
          comp=E,0.3nm,0.3s,baz=266,slow=14,SNR=3.5
          comp=E,1.9nm,0.5s
MLR   Muntele Rosu        6.33  35 ⇑P       Pn       19 02 59.1  +2.6
BOJS  Bojanci             6.50 323 ePn      Pn       19 02 58.4  -0.2
BOJS  Bojanci             6.50 323 ePn      Pn       19 02 58.7  +0.1
CRES  Cresnjevec Ost      6.66 326 ePn      Pn       19 03 00.6  -0.2
RIY   Rijeka              6.74 319 ePn      Pn       19 03 01.4  -0.5
VRI   Vrincioaia          6.97  37 ⇑P       Pn       19 03 07.0  +1.9
CEY   Cerknica            7.06 321 ePn      Pn       19 03 06.1  -0.3
LJU   Ljubljana           7.24 323 ePn      Pn       19 03 08.7  -0.1
SOKA  Soboth              7.52 328 i Pn     Pn       19 03 12.9  +0.2
          comp=E,4.3nm,0.5s,SNR=11
SOKA                               i Sn     Sn       19 04 41.5  +3.0
          comp=E,3.0nm,0.6s
PSZ   Piszkesteto         7.53 355 ⇑P       Pn       19 03 14.8  +2.0
OBKA  Obir                7.59 325 ePn      Pn       19 03 12.7  -0.9
OBKA  Obir                7.59 325 i Pn     Pn       19 03 13.9  +0.2
          comp=E,4.1nm,0.4s
OBKA                               i Sn     Sn       19 04 41.3  +1.2
          comp=E,9.2nm,0.6s
ARSA  Arzberg             7.81 333 i Pn     Pn       19 03 17.4  +0.7
          comp=E,3.0nm,0.7s
RONA  Rosalia, Austr      7.96 338 ePn      Pn       19 03 18.6  -0.1
          comp=E,1.6nm,0.5s
KECS  Kecovo              8.07 359 ePN      Pn       19 03 24.6  +4.5
MYKA  Terra Mystica       8.09 323 i Pn     Pn       19 03 20.1  -0.4
          comp=E,1.9nm,0.3s
MYKA                               i Sn     Sn       19 04 53.7  +1.4
          comp=E,2.7nm,0.6s
VYHS  Vyhne               8.19 351 ePN      Pn       19 03 25.2  +3.3
KBA   Koelnbreinsper      8.56 324 i Pn     Pn       19 03 27.0   0.0
          comp=E,2.3nm,0.4s
KBA                                i Sn     Sn       19 05 03.3  -0.8
          comp=E,1.4nm,0.4s
KOLS  Kolonicke sedl      8.58   7 ePN      Pn       19 03 31.4  +4.2
ABTA  Abfaltersbach       8.71 319 i Pn     Pn       19 03 28.3  -0.8
          comp=E,3.6nm,0.5s,SNR=9.6
ABTA                               i Sn     Sn       19 05 06.8  -1.0
          comp=E,6.8nm,0.8s
MOA   Molln               8.78 330 i Pn     Pn       19 03 31.3  +1.4
          comp=E,2.4nm,0.4s
MOA                                i Sn     Sn       19 05 10.3  +1.0
          comp=E,1.6nm,0.5s
BIOA  Bad Ischl, Aus      8.90 327 ePn      Pn       19 03 33.0  +1.4
          comp=E,1.6nm,0.3s
LESA  Schwarzleotal       9.12 323 i Pn     Pn       19 03 34.4  -0.2
          comp=E,1.9nm,0.3s
LESA                               i Sn     Sn       19 05 16.3  -1.4
          comp=E,1.3nm,0.3s
VRAC  Vranov              9.37 343   LR     LR       19 08 02.2
          comp=E,66nm,20.7s,baz=160,slow=43
WTTA  Wattenberg          9.51 319 i Pn     Pn       19 03 39.7  -0.3
          comp=E,3.5nm,0.4s
WTTA                               eSn      Sn       19 05 22.9  -4.4
          comp=E,5.8nm,0.5s
WATA  Walderalm           9.58 319 ePn      Pn       19 03 41.2  +0.2
          comp=E,6.8nm,0.5s,SNR=10
WATA                               i Sn     Sn       19 05 27.3  -2.0
          comp=E,7.3nm,0.8s
SQTA  Sankt Quirin        9.69 318 ePn      Pn       19 03 42.7  +0.2
          comp=E,4.7nm,0.4s,SNR=5.5
SQTA                               eSn      Sn       19 05 29.7  -2.2
          comp=E,9.7nm,0.7s
GERES GERESS Array B      9.81 332   Pn     Pn       19 03 44.5  +0.4
          baz=150,slow=14,SNR=12
GERES                                LR     LR       19 08 15.8
          comp=E,94nm,21.5s,baz=152,slow=42
          comp=E,1.5nm,0.7s
FETA  Feichten            9.82 316 i Pn     Pn       19 03 44.3  +0.1
          comp=E,0.9nm,0.3s
FETA                               eSn      Sn       19 05 32.6  -2.4
          comp=E,1.7nm,0.5s
MOTA  Moosalm             9.83 318 ePn      Pn       19 03 44.6  +0.2
          comp=E,4.2nm,0.4s,SNR=12
MOTA                               eSn      Sn       19 05 35.2  -0.1
          comp=E,6.7nm,0.7s
KHC   Kasperske Hory     10.10 332 ePN      Pn       19 03 48.8  +0.8
KHC                                eSN      Sn       19 05 43.3  +1.6
DAVOX Davos/Dischmat     10.14 312   Pn     Pn       19 03 48.2  -0.5
          comp=E,4.7nm,0.4s,baz=127,slow=8.7,SNR=16
DAVOX                                Sn     Sn       19 05 39.9  -3.1
          comp=E,0.3nm,0.3s,baz=131,slow=19,SNR=1.6
DAVOX                                LR     LR       19 08 49.6
          comp=E,69nm,19.2s,baz=88,slow=44
DAVA  Damuels            10.44 315 i Pn     Pn       19 03 53.7  +0.9
          comp=E,5.1nm,0.4s
ESDC  Sonseca Array      18.94 276   P      P        19 05 44.0  -0.3
          baz=65,slow=10,SNR=6.1
          comp=E,0.7nm,0.8s
HFS   Hagfors            20.23 350   P      P        19 05 57.0  -1.1
          comp=E,1.1nm,0.5s,baz=165,slow=7.4,SNR=7.1
          comp=E,1.1nm,0.5s
FINES FINESS Array B     21.30   7   P      P        19 06 08.1  -1.5
          comp=E,1.2nm,0.4s,baz=180,slow=8.7,SNR=13
          comp=E,1.2nm,0.4s
NB2   NORSAR Subarra     21.47 347   P      P        19 06 11.9  +0.3
          comp=Z,7.6nm,1.7s,baz=160,slow=11
NOA   NORSAR Array B     21.47 347   P      P        19 06 11.3  -0.2
          comp=Z,0.9nm,0.7s,baz=162,slow=11,SNR=6.5
          comp=Z,0.9nm,0.7s
EKA   Eskdalemuir Ar     21.76 321   P      P        19 06 13.3  -1.3
          comp=Z,1.7nm,0.8s,baz=116,slow=8.9,SNR=4.9
          comp=Z,1.7nm,0.8s
ARCES ARCESS Array B     29.29   3   P      P        19 07 24.5  -0.8
          comp=Z,2.4nm,0.8s,baz=188,slow=9.6,SNR=2.2
          comp=Z,2.4nm,0.8s
TORD  Torodi Ar. Bea     31.91 217   P      P        19 07 50.0  +1.1
          comp=Z,0.3nm,0.5s,baz=19,slow=9.7,SNR=3.0
          comp=Z,0.3nm,0.5s
MKAR  Makanchi Array     43.99  60   P      P        19 09 30.2  -0.5
          comp=Z,0.2nm,0.6s,baz=282,slow=6.5,SNR=3.6
MKAR                                 PcP    PcP      19 11 16.9  +0.6
          comp=Z,0.1nm,0.6s,baz=264,slow=2.9,SNR=1.7
          comp=Z,0.2nm,0.6s
ZALV  Zalesovo Beam      44.08  50   P      P        19 09 31.0  -0.1
          comp=Z,0.3nm,0.4s,baz=286,slow=7.8,SNR=2.1
          comp=Z,0.3nm,0.4s
SCHQ  Schefferville      56.96 316   P      P        19 11 08.2  -0.3
          comp=Z,1.6nm,0.8s,baz=63,slow=2.3,SNR=2.3
          comp=Z,1.6nm,0.8s
BOSA  Boshof             68.81 176   P      P        19 12 27.3  -0.3
          comp=Z,1.3nm,0.8s,baz=18,slow=9.6,SNR=5.7
          comp=Z,1.3nm,0.8s
ASAR  Alice Springs     122.19  95   PKP    PKPdf    19 20 16.9  -1.7
          comp=Z,0.3nm,0.9s,baz=296,slow=2.0,SNR=4.6
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JMA ***01*** *19:08:09.8±0.5, 47°N±2°×14°2E±°, h7km, MV2.6/16, SOUTH SAKHALIN*

SKHL ***01*** *19:08:10.8±0.4, 46°.40N×142°.10E, h9km±1km, mb3.9/4*

ISC 01 19:08:12.8±1.1**, 46°.56N**±0°.06×**141°.99E**±0°.09**, h29**km±10km**, n6, σ0s.67**/11**, Sakhalin Island**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
NEVR  Nevel`sk            0.14 323  ePg     Pb       19 08 17.8  -0.5
NEVR                                 AMB    AMB      19 08 18.0
          130nm,0.3s
NEVR                                eSg     Sb       19 08 22.7  +0.7
NEVR                                 A      A        19 08 23.5
          2µm,0.5s
NEVR                                 A      A        19 08 23.5
          2µm,0.5s
YSS   Yuzhno-Sakhali      0.66  53  ePg     Pn       19 08 25.9  -0.3
YSS                                  AMB    AMB      19 08 26.2
          30nm,0.2s
YSS                                 eSg     Sn       19 08 36.2  +0.6
YSS                                  A      A        19 08 36.8
          240nm,0.3s
YSS                                  A      A        19 08 36.8
          100nm,0.3s
JWK2  Keihoku             1.25 183  eP      Pb       19 08 35.0  -0.6
JWK2                                eS      Sb       19 08 52.1  +0.8
JRBN  Rebuntou            1.30 210  eP      Pn       19 08 34.7  -0.3
JRBN                                eS      Sn       19 08 51.6  +0.2
JRR   Rishiri             1.50 199  eS      Sb       19 08 59.1  +0.7
JSE   Soyaes              1.66 165  eP      Pn       19 08 40.2  +0.4
JSE                                 eS      Sb       19 09 02.4  -0.6
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IDC ***01*** *19:09:38.3±3.2, 12°.84S×168°.78E, h593km±33km, mb2.9/9, mbtmp3.9/9, Error ellipse: s-maj=35.4km s-min=19.1km az=111.0*

ISC 01 19:09:38.8±1.1**, 12°.8S**±0°.2×**168°.8E**±0°.2**, h600**km**, n10, σ0s.91**/12**, mb3.5**/9**, Santa Cruz Islands region**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
STKA  Stephens Creek     31.35 228   P      P        19 15 12.1  +0.1
          1.7nm,0.5s,baz=59,slow=10,SNR=8.2
          1.7nm,0.5s
WRA   Warramunga Arr     33.76 253   P      P        19 15 31.5  -1.0
          1.3nm,0.5s,baz=83,slow=8.7,SNR=9.0
          1.3nm,0.5s
ASAR  Alice Springs      34.76 247   P      P        19 15 40.0  -0.8
          2.1nm,0.5s,baz=77,slow=8.8,SNR=15
ASAR                                 PcP    PcP      19 17 56.2  -0.7
          0.3nm,0.7s,baz=90,slow=4.0,SNR=1.9
ASAR                                 ScP    ScP      19 20 45.6  -0.6
          0.3nm,0.9s,baz=64,slow=3.6,SNR=4.2
          2.1nm,0.5s
MJAR  Matsushiro Arr     56.96 331   P      P        19 18 28.4   0.0
          0.5nm,0.7s,baz=165,slow=7.6,SNR=4.5
          0.5nm,0.7s
VNDA  Vanda              64.77 182   P      P        19 19 19.6  +0.8
          0.1nm,0.4s,baz=333,slow=2.3,SNR=1.5
          0.1nm,0.4s
PETK  Petropavlovsk-     66.37 353   P      P        19 19 29.3  +0.2
          1.4nm,0.8s,baz=163,slow=4.8,SNR=2.7
          1.4nm,0.8s
CMAR  Chiang Mai Arr     75.57 293   P      P        19 20 25.4  +1.8
          0.2nm,0.3s,baz=109,slow=6.7,SNR=2.1
          0.2nm,0.3s
ILAR  Eielson Array      84.29  18   P      P        19 21 07.1  -1.0
          0.4nm,0.5s,baz=231,slow=5.7,SNR=7.8
          0.4nm,0.5s
MKAR  Makanchi Array     96.88 316   P      P        19 22 07.0  +0.3
          0.5nm,0.9s,baz=103,slow=3.1,SNR=2.8
          0.5nm,0.9s
KEST  Kesra             150.63 324   PKPbc  PKPbc    19 28 24.3  -0.2
          1.8nm,0.8s,baz=90,slow=1.0,SNR=2.2
```

IDC 01 19:16:40.6±1.8,4°.92S×124°.14E,h0^{km},mb3.1/2, mbtmp3.3/3,ML3.3/1,Error ellipse: s-maj=272.9km s-min=28.3km az=61.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	17.93	147	P	Pn	19 20 51.8	+0.2
	0.1nm,0.3s,baz=322,slow=12,SNR=1.9						
	0.5nm,0.7s						
ASAR	Alice Springs	20.88	154	P	P	19 21 24.4	-0.1
	0.3nm,0.7s,baz=329,slow=12,SNR=5.7						
	0.3nm,0.7s						
MKAR	Makanchi Array	63.38	329	P	P	19 27 11.9	0.0
	0.3nm,0.5s,baz=131,slow=7.0,SNR=4.8						
	0.3nm,0.5s						

IDC 01 19:23:00.4±10.0,31°.05S×176°.36W,h0^{km},mb3.5/2, mbtmp3.5/2,Error ellipse: s-maj=462.5km s-min=55.3km az=157.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	44.49	267	P	P	19 31 14.3	+0.5
	0.2nm,0.6s,baz=107,slow=7.7,SNR=6.4						
	0.2nm,0.6s						
WRA	Warramunga Arr	45.54	272	P	P	19 31 21.3	-0.9
	0.6nm,0.5s,baz=115,slow=6.9,SNR=5.5						
	0.6nm,0.5s						
FINES	FINESS Array B	146.23	341	PKPbc	PKPdf	19 42 41.3	+0.3
	6.6nm,1.1s,baz=41,slow=2.6,SNR=11						

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*IDC **01** 19:25:44.5±0.9,23°.64N×143°.92E,h0^{km},mb3.9/12, mbtmp3.8/15,ML3.4/3,Error ellipse: s-maj=29.4km s-min=17.3km az=80.0*
*NEIC **01** 19:25:46.9±0.8,23°.7N±0°.1×143°.8E±0°.2,h10^{km}±1^{km}, mb4.5/12,Error ellipse: s-maj=26.3km s-min=17.3km az=77.0*
ISC 01 19:25:49.2±0.7,23°.73N±0°.08×143°.8E±0°.1,h28^{km},n33, σ1^{s}.08/34,mb4.1/18,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	3.64	337		Pn	19 26 43.6	-0.1
JCJ	Chichijima	3.64	337	Pn	Pn	19 26 42.6	-1.1
	11nm,0.3s,baz=108,slow=20,SNR=11						
JCJ				Sn	Sn	19 27 24.8	-1.0
	12nm,0.3s,baz=162,slow=20,SNR=7.0						
	31nm,0.4s						
MJAR	Matsushiro Arr	13.64	341	Pn	Pn	19 28 58.9	-1.8
	baz=162,slow=10,SNR=5.4						
	0.5nm,0.6s						
MAJO	Matsushiro	13.64	341	Pn	Pn	19 29 00.5	-0.3
MJB9	Matsu-Tunnel	13.64	341	Pn	Pn	19 29 00.7	-0.2
JMM	Marumori	14.32	350	Pn	Pn	19 29 07.2	-2.8
KSRS	Korea Array	19.28	319	P	Pn	19 30 13.8	+1.0
	0.1nm,0.3s,baz=126,slow=12,SNR=4.8						
	0.9nm,0.7s						
KS19	Wonju Array Si	19.34	319		P	19 30 12.8	+0.4
CMAR	Chiang Mai Arr	42.01	272	P	P	19 33 39.0	+0.6
	0.3nm,0.4s,baz=72,slow=10,SNR=1.0						
	0.3nm,0.4s						
WB0	Warramunga Arr	44.19	193	P	P	19 33 54.6	-1.2
WB0				IAmb	IAmb	19 34 03.2	
	comp=Z,14nm,1.3s						
WR8	Warramunga Arr	44.35	193	P	P	19 33 56.6	-0.5
WRA	Warramunga Arr	44.37	193	P	P	19 33 56.0	-1.2
	comp=Z,1.0nm,0.7s,baz=17,slow=8.6,SNR=3.2						
	comp=Z,1.0nm,0.7s						
KULM	Kulim	45.34	253	P	P	19 34 04.9	-0.3
KULM				IAmb	IAmb	19 34 28.6	
	comp=Z,11nm,1.2s						
ASAR	Alice Springs	48.07	192	P	P	19 34 24.8	-1.6
	comp=Z,0.5nm,0.6s,baz=9.3,slow=7.0,SNR=8.5						
	comp=Z,0.5nm,0.6s						
ZALV	Zalesovo Beam	52.97	321	P	P	19 35 04.1	+1.0
	comp=Z,0.6nm,0.5s,baz=93,slow=7.5,SNR=1.8						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	53.74	312	P	P	19 35 09.1	+0.2
MKAR	Makanchi Array	53.74	312	P	P	19 35 09.6	+0.8
	comp=Z,1.0nm,0.9s,baz=94,slow=7.8,SNR=7.4						
	comp=Z,1.0nm,0.9s						
K17K	Iditarod	54.60	29	P	P	19 35 16.3	+1.5
K17K				IAmb	IAmb	19 35 27.1	
	comp=Z,7.3nm,1.4s						
STKA	Stephens Creek	55.33	182	P	P	19 35 19.8	-0.6
STKA	Stephens Creek	55.33	182	P	P	19 35 19.4	-1.0
	comp=Z,1.0nm,0.6s,baz=339,slow=8.6,SNR=2.9						
	comp=Z,1.0nm,0.6s						
H18K	Honhosa River	55.35	26	P	P	19 35 20.5	+0.3
KURK	Kurchatov	56.37	316	P	P	19 35 28.1	+0.4
KURBB	Kurchatov Arra	56.42	316	P	P	19 35 28.8	+0.7
	comp=Z,2.4nm,0.7s,baz=94,slow=7.9,SNR=4.2						
	comp=Z,2.4nm,0.7s						
J20K	Nowinta River	56.80	28	P	P	19 35 31.8	+1.2
J20K				IAmb	IAmb	19 35 33.1	
	comp=Z,3.2nm,1.1s						
ILAR	Eielson Array	60.00	28	P	P	19 35 51.8	-1.2
	comp=Z,0.9nm,0.9s,baz=259,slow=6.2,SNR=7.9						
	comp=Z,0.9nm,0.9s						
BVAR	Borovoye Array	61.49	319	P	P	19 36 04.5	+1.2
	comp=Z,1.9nm,0.6s,baz=92,slow=7.7,SNR=15						
	comp=Z,1.9nm,0.6s						
BRVK	Borovoye	61.55	319	P	P	19 36 04.8	+1.1
BRVK				IAmb	IAmb	19 36 05.8	
	comp=Z,2.0nm,0.8s						
KKAR	Karatay Array	62.23	308	P	P	19 36 09.0	+0.5
H29M	Whitestone	63.65	26	P	P	19 36 18.1	+0.6
H29M				IAmb	IAmb	19 36 27.0	
	comp=Z,3.4nm,1.1s						
ABKAR	Akbulak array	68.47	316	P	P	19 36 49.0	+0.2
KBZ	Khabaz	81.35	314	P	P	19 38 04.6	+1.4
	comp=Z,0.6nm,0.5s,baz=79,slow=5.2,SNR=4.0						
	comp=Z,0.6nm,0.5s						
NVAR	Mina Array Bea	81.47	52	P	P	19 38 05.5	+1.2
	comp=Z,0.2nm,0.5s,baz=317,slow=5.2,SNR=1.8						
	comp=Z,0.2nm,0.5s						
FINES	FINESS Array B	81.59	335	P	P	19 38 04.1	-0.1
	comp=Z,1.7nm,0.7s,baz=63,slow=5.2,SNR=6.4						
	comp=Z,1.7nm,0.7s						

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*IDC **01** 19:26:20.4±1.0,40°.40N×20°.67E,h0^{km},mb3.4/6, mbtmp3.4/12,ML3.2/3,MS2.4/3,Error ellipse: s-maj=17.3km s-min=13.7km az=64.0*
*TIR **01** 19:26:21.6,40°.45N×20°.79E,h4^{km}±1^{km},Ml3.5/9*
*BEO **01** 19:26:21.3±0.8,40°.36N×20°.93E,h5^{km}±3^{km},ML3.2/4*
*PDG **01** 19:26:22.0±0.7,40°.51N×20°.79E,h11^{km}±1^{km},ML3.4/11, Error ellipse: s-maj=1.1km s-min=1.7km az=0.0*
*ATH **01** 19:26:22.1,40°.46N×20°.81E,h6^{km},ML3.3/7,Manual Solution by K.Orfanogiannaki First location: 2019/06/01 19:28:12, This location: 2020/10/04 18:39:11 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*
*SKO **01** 19:26:23.1,40°.40N×20°.89E,h0^{km},ML3.2*
*THE **01** 19:26:24.1,40°N±1°×2°1E±°,h0^{km},M3.2/26,MLh3.2/26*
ISC 01 19:26:22.0±0.8,40°.43N±0°.01×20°.81E±0°.02,h10^{km}±5^{km}, n147,σ1^{s}.54/211,mb3.3/4,11C-8D,Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEST	Nestorio	0.18	95	Pg	Pg	19 26 26.4	+0.4
NEST				Sg	Sg	19 26 29.4	+0.7
NEST				AML	AML	19 26 30.8	
	34nm,0.5s						
NEST	Nestorio	0.18	95	P	Pg	19 26 26.3	+0.4
NEST				S	Sg	19 26 28.1	-0.6
NEST	Nestorio	0.18	95	P	Pg	19 26 26.2	+0.2
NEST				S	Sg	19 26 28.9	+0.2
KBN	Korca	0.19	355	Pg	Pg	19 26 25.1	-1.0
KBN				Sg	Sg	19 26 27.7	-1.3
KBN				AML	AML	19 26 28.9	
	86nm,0.7s						
LSK	Leskovik	0.32	210	Pg	Pg	19 26 28.2	-0.3
LSK				Sg	Sb	19 26 34.3	-0.8
LSK				AML	AML	19 26 42.5	
	42nm,0.5s						
PENT	Pentalofos	0.34	133	P	Pg	19 26 29.3	+0.4
PENT				S	Sg	19 26 33.3	-0.1
PENT	Pentalofos	0.34	133	P	Pg	19 26 29.1	+0.2
PENT				S	Sb	19 26 34.5	-1.3
KPRO	Kipourio	0.64	138	P	Pg	19 26 34.5	+0.1
KPRO				S	Sb	19 26 43.8	-0.4
KPRO	Kipourio	0.64	138	P	Pg	19 26 34.4	0.0
KPRO				S	Sb	19 26 44.2	0.0
OHR	Ohrid	0.68	359	i Pg	Pg	19 26 35.0	-0.2
OHR				i Sg	Sg	19 26 45.2	+1.1
OHR				eLg	Lg	19 26 46.6	
	comp=N,603nm,0.6s						
OHR				eLg	Lg	19 26 48.9	
	comp=E,1µm,0.6s						
OHR	Ohrid	0.68	359	ePg	Pg	19 26 34.6	-0.6
OHR				eSg	Sg	19 26 44.7	+0.6
KZN	Kozani	0.75	99	P	Pg	19 26 36.8	+0.4
KZN				S	Sg	19 26 45.2	-1.0
KZN	Kozani	0.75	99	P	Pg	19 26 36.3	-0.1
KZN				S	Sb	19 26 47.9	+0.5
JAN	Janina	0.77	178	P	Pg	19 26 36.8	-0.2
JAN				S	Sg	19 26 46.4	-0.6
JAN	Janina	0.77	178	P	Pg	19 26 36.7	-0.2
JAN				S	Sb	19 26 48.1	0.0
SRN	Sarande	0.83	229	Pg	Pb	19 26 38.2	-0.2
SRN				Sg	Sb	19 26 51.2	+1.6
SRN				AML	AML	19 26 53.1	
	comp=E,4.2nm,0.7s						
IGT	Igoumenitsa	0.97	202	Pg	Pn	19 26 41.5	-0.1
IGT				Sg	Sn	19 26 56.8	+1.5
IGT	Igoumenitsa	0.97	202	P	Pb	19 26 41.3	+0.5
IGT				S	Sn	19 26 56.9	+1.5
IGT	Igoumenitsa	0.97	202	i Pg	Pb	19 26 41.3	+0.5
NASA	Naoussa	0.98	78	P	Pg	19 26 40.6	-0.3
KTI	Kastanea	1.00	92	P	Pb	19 26 42.0	+0.6
VLO	Vlora	1.00	273	Pg	Pg	19 26 41.1	-0.2
KEK	Kerkira	1.06	228	P	Pn	19 26 45.4	+2.6
KEK				S	Sn	19 27 00.3	+2.8
KEK	Kerkira	1.06	228	P	Pb	19 26 42.9	+0.6
LFKM	Lefkimmi	1.14	211	P	Pn	19 26 45.5	+1.6
TETR	Tetrakomo, Epi	1.14	162	P	Pn	19 26 44.6	+0.6
TETR				S	Sn	19 26 60.0	+0.2
TIR	Tirane	1.16	322	Pn	Pg	19 26 42.9	-1.4
TIR				Sn	Sn	19 27 01.6	+1.4
TIR				AML	AML	19 27 04.3	
	comp=E,1.7nm,0.7s						
TIR				AML	AML	19 27 08.4	
	comp=E,2.2nm,0.6s						
TIR	Tirane	1.16	322	i Pg	Pg	19 26 43.7	-0.6
TIR				i Sg	Sn	19 27 05.1	+4.9
TIR	Tirane	1.16	322	ePg	Pg	19 26 43.6	-0.7
TIR				eSg	Sn	19 27 04.0	+3.8
THL	Klokotos Trika	1.27	133	P	Pn	19 26 46.3	+0.6
THL				S	Sn	19 27 04.5	+1.8
THL	Klokotos Trika	1.27	133	P	Pn	19 26 46.8	+1.1
PHP	Peshkopia	1.28	348	Pg	Pg	19 26 45.7	-0.9
TYRN	Tyrnavos	1.31	123	P	Pb	19 26 47.3	+0.7
TYRN	Tyrnavos	1.31	123	P	Pb	19 26 47.3	+0.7
TYRN				S	Sn	19 27 04.7	+0.9
AMPL	Ampelaki	1.54	168	P	Pg	19 26 51.7	+0.2
VAY	Valandovo	1.60	56	P	Pn	19 26 51.6	+1.2
VAY	Valandovo	1.60	56	i Pg	Pn	19 26 51.8	+1.4
VAY				i Sg	Sg	19 27 15.0	+1.4
VAY				eLg	Lg	19 27 16.4	
	comp=N,314nm,0.6s						
VAY				eLg	Lg	19 27 18.0	
	comp=E,232nm,0.7s						
VAY	Valandovo	1.60	56	ePn	Pn	19 26 51.6	+1.2
TSLK	Tsoukalades, L	1.61	184	P	Pg	19 26 53.3	+0.5
SKO	Skopje	1.61	17	i Pg	Pb	19 26 52.3	+0.5
SKO				i Sg	Sb	19 27 13.6	+1.4
LKD2	Lefkada island	1.64	184	Pn	Pg	19 26 54.1	+0.6
LKD2				Sn	Sg	19 27 17.6	+2.8
LKD2				AML	AML	19 27 22.5	
	comp=E,2.0nm,0.9s						
LKD2	Lefkada island	1.64	184	P	Pg	19 26 54.2	+0.7
THE	Thessaloniki	1.66	82	P	Pb	19 26 52.8	+0.2
THE	Thessaloniki	1.66	82	i Pg	Pn	19 26 51.5	+0.5
THE				i Sg	Sn	19 27 13.2	+0.9
EVR	Evrytania	1.70	153	P	Pg	19 26 54.4	-0.2
NYDR	Nydri-Lefkada	1.72	183	P	Pg	19 26 55.2	+0.2
MAKR	Makrakomi, Fth	1.75	144	P	Pb	19 26 54.3	+0.2
KNT	Kendrikon	1.75	65	P	Pn	19 26 53.7	+1.4
KNT	Kendrikon	1.75	65	i Pn	Pn	19 26 53.7	+1.4
KNT				i Sn	Sb	19 27 17.4	+1.3
PUK	Puka	1.75	337	Pn	Pb	19 26 55.5	+1.2
PUK				Sn	Sg	19 27 20.0	+1.7
PUK				AML	AML	19 27 25.0	
	comp=E,3.2nm,0.7s						
HORT	Hortiatis	1.75	84	P	Pn	19 26 52.8	+0.3
EVGI	Lefkada island	1.81	184	P	Pg	19 26 56.1	-0.6
AGG	Agios Georgios	1.83	140	P	Pb	19 26 55.7	+0.2
PVO	Paravola	1.90	163	P	Pb	19 26 56.2	-0.4
ULC	Ulcinj	1.93	323	i Pn	Pn	19 26 56.9	+2.0
ULC	Ulcinj	1.93	323	ePn	Pn	19 26 55.5	+0.6
ULC				i Sn	Sb	19 27 22.2	+0.7
SOH	Sokhos	1.98	78	P	Pn	19 26 57.4	+1.9
BCI	Bajram Curri	2.01	344	Pn	Pb	19 26 59.1	+0.4
BCI				Sn	Sg	19 27 27.4	+0.7
BCI				AML	AML	19 27 34.3	
	comp=E,3.0nm,1.0s						
BCI	Bajram Curri	2.01	344	P	Pb	19 27 00.1	+1.5
PLG	Polygyros	2.02	91	P	Pn	19 26 57.4	+1.4
DRME	Dracevica, Mon	2.14	326	ePn	Pn	19 26 59.1	+1.4
DRME	Dracevica, Mon	2.14	326	⇓ i Pn	Pn	19 26 59.7	+2.0
DRME				i Sn	Sn	19 27 27.1	+2.8
SRS	Serrai	2.22	71	P	Pn	19 27 00.8	+1.9
SRS	Serrai	2.22	71	i Pn	Pb	19 27 01.5	-0.7
SRS				i Sn	Sn	19 27 28.1	+1.7
KKB	Krupnik	2.25	50	i Pn	Pn	19 27 00.6	+1.3
PDG	Podgorica	2.31	330	ePn	Pn	19 27 01.7	+1.6
PDG	Podgorica	2.31	330	⇑P	Pb	19 27 04.0	+0.3
PDG	Podgorica	2.31	330	⇑ i Pn	Pn	19 27 00.8	+0.7
PDG				i Sn	Sn	19 27 31.4	+2.8
BUM	Brajici-Budva	2.36	323	⇑ i Pn	Pn	19 27 01.4	+0.6
BUM				i Sn	Sn	19 27 32.4	+2.6
BOSS	Bosilegrad	2.42	31	ePn	Pn	19 27 01.9	+0.4
MMB	Musomishta	2.49	62	i Pn	Pn	19 27 05.6	+3.0
MMB				i Sn	Sn	19 27 34.2	+1.2
BARS	Barje	2.50	17	i Pn	Pn	19 27 03.1	+0.4
BARS	Barje	2.50	17	ePn	Pn	19 27 03.1	+0.4
BEY	Berane	2.53	345	i Pn	Pb	19 27 06.6	-1.0
IVA	Berane	2.53	345	⇓ i Pn	Pb	19 27 08.6	+1.0
IVA				i Sn	Sn	19 27 36.9	+2.7
CEME	Cevo	2.55	327	⇑ i Pn	Pn	19 27 04.3	+0.9
CEME				i Sn	Sn	19 27 36.7	+2.3
KOME	Kolasin	2.60	339	⇑ i Pn	Pn	19 27 04.0	-0.2
KOME				i Sn	Sn	19 27 38.9	+3.0
HCY	Herceg Novi	2.66	320	ePn	Pn	19 27 05.1	+0.2
HCY				i Sn	Sn	19 27 39.7	+2.5
SELS	Selova	2.80	5	ePn	Pn	19 27 08.9	+2.1
SJES	Sjenica	2.90	348	ePn	Pg	19 27 16.4	-1.1
TREB	Trebinje	2.94	322	ePn	Pn	19 27 08.1	-0.6
BRY	Bratogost	3.00	326	⇑ i Pn	Pn	19 27 07.6	-2.0
BRY				i Sn	Sn	19 27 47.6	+1.9
PLE	Pljevlja	3.08	340	⇓ i Pn	Pn	19 27 10.7	-0.1
PLE				i Sn	Sn	19 27 49.8	+2.0
UPM	Unac-Piva	3.11	333	⇓ i Pn	Pn	19 27 12.7	+1.4
UPM				i Sn	Sn	19 27 50.4	+1.8
MATE	Matera	3.13	275	⇓P	Pb	19 27 19.9	+2.1
IVAS	Ivanjica	3.18	351	ePn	Pn	19 27 14.4	+2.3
BOVS	Bovan	3.27	11	⇑P	Pn	19 27 13.4	+0.2
BOVS	Bovan	3.27	11	ePn	Pn	19 27 13.3	0.0
BOVS				eSn	Sn	19 27 51.3	-0.9
RUDO	Rudo	3.36	342	ePn	Pn	19 27 17.7	+3.2
TIP	Timpagrande	3.36	249	⇓P	Pg	19 27 25.7	-0.7
STON	Ston	3.37	317	ePn	Pn	19 27 14.9	+0.3
GRUS	Gruza	3.46	359	ePn	Pn	19 27 16.5	+0.7
GRUS				eSn	Sn	19 28 00.8	+4.0
ZAGS	Zajecar	3.54	17	ePn	Pn	19 27 17.4	+0.4
BBLS	Lazi&#263i	3.59	344	ePn	Pb	19 27 27.2	+1.7
HAPS	Han Pijesak,Bl	3.90	340	ePn	Pn	19 27 23.2	+1.1
KUBS	Kucevo	4.03	9	ePn	Pn	19 27 22.3	-1.4
TEKS	Tekeris	4.22	347	ePn	Pn	19 27 27.9	+1.5
TEKS	Tekeris	4.22	347	ePn	Pn	19 27 27.5	+1.1
AVAS	Avala Beograd	4.27	357	ePn	Pn	19 27 26.9	-0.1
MDVR	Moldovita	4.40	8	⇓P	Pn	19 27 29.9	+1.1
HERR	Herculane	4.60	14	⇓P	Pn	19 27 32.9	+1.3
VRSS	Vrsac	4.71	4	ePn	Pn	19 27 32.5	-0.5
FRGS	Fruska Gora	4.78	351	ePn	Pn	19 27 34.6	+0.6
FRGS	Fruska Gora	4.78	351	ePn	Pn	19 27 34.8	+0.8
BLY	Banja Luka	5.08	329	ePn	Pn	19 27 40.4	+2.3
A050A	Klekovaca	5.14	323	ePn	Pn	19 27 39.9	+0.9
BZS	Buzias	5.22	6	⇑P	Pn	19 27 41.3	+1.3
A051A	Mrakovica	5.41	329	ePn	Pn	19 27 43.4	+0.8
VAE	Valguarnera	5.79	241	Pn	Pn	19 27 48.2	+0.3
	comp=E,2.5nm,0.4s,baz=77,slow=19,SNR=1.4						
VAE				Sn	Sn	19 28 59.4	+5.0
	comp=E,0.4nm,0.3s,baz=49,slow=19,SNR=2.1						
MORH	Mrgy, Hungar	5.99	345	⇑P	Pn	19 27 51.8	+1.2
IDI	Anoyia	6.06	147	Pn	Pn	19 27 53.2	+1.4
	comp=E,8.3nm,0.9s,baz=323,slow=20,SNR=1.8						
IDI				Sn	Sn	19 29 02.6	+1.4
	comp=E,0.6nm,0.3s,baz=311,slow=19,SNR=3.3						
MLR	Muntele Rosu	6.31	35	Pn	Pn	19 27 59.2	+4.1
	comp=E,0.4nm,0.3s,baz=346,slow=3.3,SNR=5.1						
	comp=E,1.2nm,0.5s						
MLR	Muntele Rosu	6.31	35	⇑P	Pn	19 27 57.1	+2.0
BOJS	Bojanci	6.50	323	ePn	Pn	19 27 57.6	-0.1
BOJS	Bojanci	6.50	323	ePn	Pn	19 27 57.9	+0.2
BOJS				eSn	Sn	19 29 09.9	-2.0
CRES	Cresnjevec Ost	6.66	326	ePn	Pn	19 27 59.8	0.0
RIY	Rijeka	6.74	319	ePn	Pn	19 28 01.0	0.0
VRI	Vrincioaia	6.94	37	⇑P	Pn	19 28 05.8	+2.1
CEY	Cerknica	7.07	321	ePn	Pn	19 28 05.4	0.0
CEY	Cerknica	7.07	321	eSn	Sn	19 29 24.8	-1.0
LJU	Ljubljana	7.24	323	ePn	Pn	19 28 07.6	-0.2
SOKA	Soboth	7.52	328	i Pn	Pn	19 28 12.4	+0.7
	comp=E,3.0nm,0.5s						
SOKA				i Sn	Sn	19 29 34.4	-2.6
	comp=E,1.9nm,0.5s						
OBKA	Obir	7.59	325	ePn	Pn	19 28 12.3	-0.3
OBKA	Obir	7.59	325	i Pn	Pn	19 28 13.1	+0.5
	comp=E,1.0nm,0.2s						
OBKA				i Sn	Sn	19 29 35.2	-3.6
	comp=E,6.6nm,0.6s						
MYKA	Terra Mystica	8.09	322	i Pn	Pn	19 28 19.7	+0.2
	comp=E,1.6nm,0.4s						
MYKA				i Sn	Sn	19 29 49.6	-1.4
	comp=E,3.2nm,0.5s						
VYHS	Vyhne	8.18	351	ePN	Pn	19 28 26.7	+6.0
VYHS				eSN	Sn	19 29 52.1	-1.1
KBA	Koelnbreinsper	8.56	323	i Pn	Pn	19 28 26.6	+0.6
	comp=E,1.0nm,0.4s						
KBA				eSn	Sn	19 29 56.7	-6.0
	comp=E,1.9nm,0.5s						
ABTA	Abfaltersbach	8.72	319	ePn	Pn	19 28 27.5	-0.7
	comp=E,5.3nm,0.5s						
ABTA				i Sn	Sn	19 30 04.6	-1.9
	comp=E,5.9nm,0.7s						
MOA	Molln	8.78	330	i Pn	Pn	19 28 29.7	+0.8
	comp=E,1.3nm,0.4s						
MOA				i Sn	Sn	19 30 05.9	-1.9
	comp=E,1.6nm,0.4s						
LESA	Schwarzleotal	9.12	323	i Pn	Pn	19 28 33.0	-0.7
	comp=E,2.3nm,0.5s						
LESA				i Sn	Sn	19 30 13.7	-2.7
	comp=E,3.0nm,0.5s						
VRAC	Vranov	9.37	343	LR	LR	19 33 17.1	
	comp=E,38nm,18.7s,baz=134,slow=44						
WTTA	Wattenberg	9.51	319	i Pn	Pn	19 28 39.5	+0.4
	comp=E,2.5nm,0.4s						
WTTA				eSn	Sn	19 30 22.9	-3.1
	comp=E,11nm,0.6s						
WATA	Walderalm	9.59	319	ePn	Pn	19 28 40.9	+0.8
	comp=E,5.8nm,0.5s,SNR=13						
WATA				i Sn	Sn	19 30 25.0	-2.9
	comp=E,7.5nm,0.9s						
SQTA	Sankt Quirin	9.70	318	i Pn	Pn	19 28 42.1	+0.5
	comp=E,2.5nm,0.3s						
SQTA				eSn	Sn	19 30 27.8	-2.8
	comp=E,3.2nm,0.5s						
GERES	GERESS Array B	9.81	331	Pn	Pn	19 28 43.3	+0.1
	baz=149,slow=12,SNR=6.5						
GERES				Sn	Sn	19 30 32.3	-1.1
	baz=149,slow=25,SNR=1.9						
	comp=E,0.4nm,0.5s						
FETA	Feichten	9.82	315	ePn	Pn	19 28 43.1	-0.2
	comp=E,2.9nm,0.5s						
FETA				eSn	Sn	19 30 31.2	-2.5
	comp=E,1.8nm,0.5s						
MOTA	Moosalm	9.84	318	i Pn	Pn	19 28 43.7	+0.2
	comp=E,6.6nm,0.8s,SNR=9.5						
MOTA				i Sn	Sn	19 30 32.4	-1.6
	comp=E,7.5nm,0.7s						
DAVOX	Davos/Dischmat	10.15	312	Pn	Pn	19 28 47.4	-0.4
	comp=E,3.0nm,0.4s,baz=117,slow=18,SNR=10						
DAVOX				Sn	Sn	19 30 39.9	-1.8
	comp=E,0.2nm,0.3s,baz=0.0,slow=20,SNR=2.5						
DAVOX				LR	LR	19 34 28.9	
	comp=E,18nm,18.1s,baz=83,slow=48						
DAVA	Damuels	10.45	315	i Pn	Pn	19 28 52.5	+0.7
	comp=E,4.3nm,0.4s,SNR=4.6						
DAVA				i Sn	Sn	19 30 46.8	-2.1
	comp=E,2.3nm,0.4s						
ESDC	Sonseca Array	18.97	276	P	P	19 30 42.3	-1.0
	baz=87,slow=11,SNR=4.5						
	comp=E,0.2nm,0.7s						
HFS	Hagfors	20.22	350	P	P	19 30 54.9	-1.9
	comp=E,1.9nm,0.9s,baz=164,slow=14,SNR=1.5						
	comp=E,1.9nm,0.9s						
FINES	FINESS Array B	21.29	7	P	P	19 31 07.1	-1.2
	comp=E,1.3nm,0.6s,baz=184,slow=11,SNR=4.2						
	comp=E,1.3nm,0.6s						
NOA	NORSAR Array B	21.46	347	P	P	19 31 09.4	-0.9
	comp=E,0.4nm,0.6s,baz=161,slow=11,SNR=1.7						
NOA				LR	LR	19 40 05.6	
	comp=E,5.1nm,19.1s,baz=220,slow=38						
	comp=E,0.4nm,0.6s						
EKA	Eskdalemuir Ar	21.76	321	P	P	19 31 13.8	+0.3
	comp=E,1.0nm,0.8s,baz=121,slow=9.9,SNR=5.9						
	comp=E,1.0nm,0.8s						
TORD	Torodi Ar. Bea	31.94	217	P	P	19 32 47.6	-0.3
	comp=E,0.4nm,0.3s,baz=28,slow=8.2,SNR=4.0						
	comp=E,0.4nm,0.3s						
MKAR	Makanchi Array	43.96	60	P	P	19 34 27.9	-1.2
	comp=E,0.3nm,0.6s,baz=280,slow=8.3,SNR=4.7						
	comp=E,0.3nm,0.6s						
ASAR	Alice Springs	122.17	95	PKP	PKPdf	19 45 16.9	-0.3
	comp=E,0.2nm,0.6s,baz=298,slow=1.7,SNR=6.2						

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*TIR **01** 19:31:18.2,40°.40N×20°.76E,h2^{km}±2^{km},Ml3.0/8*
*PDG **01** 19:31:19.2±0.3,40°.47N×20°.75E,h7^{km},ML3.0/10,Error ellipse: s-maj=0.6km s-min=1.1km az=0.0*
*SKO **01** 19:31:20.3,40°.36N×20°.88E,h3^{km},ML2.9*
*ATH **01** 19:31:20.1,40°.38N×20°.85E,h4^{km}±1^{km},Manual Solution by A.Andreou First location: 2019/06/01 19:32:31, This location: 2020/08/11 10:49:26 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **01** 19:31:22.0,40°N±1°×2°1E±°,h0^{km}±2^{km},M2.5/9,MLh2.5/9*
ISC 01 19:31:19.7±0.7,40°.41N±0°.02×20°.80E±0°.02,h10^{km},n69, σ1^{s}.18/98,4C-3D,Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEST	Nestorio	0.19	88	Pg	Pg	19 31 23.6	-0.3
NEST				Sg	Sg	19 31 26.7	+0.2
NEST				AML	AML	19 31 28.8	
	14nm,0.3s						
NEST	Nestorio	0.19	88	P	Pg	19 31 23.5	-0.3
NEST				S	Sg	19 31 25.4	-1.1
NEST	Nestorio	0.19	88	P	Pg	19 31 23.8	0.0
KBN	Korca	0.21	357	Pg	Pg	19 31 22.5	-1.7
KBN				Sg	Sg	19 31 25.7	-1.6
KBN				AML	AML	19 31 27.2	
	27nm,0.3s						
LSK	Leskovik	0.30	211	Pg	Pg	19 31 24.0	-1.9
LSK				Sg	Sg	19 31 28.4	-1.5
LSK				AML	AML	19 31 33.4	
	11nm,0.6s						
PENT	Pentalofos	0.33	130	P	Pg	19 31 25.9	-0.5
PENT				S	Sg	19 31 29.3	-1.6
PENT	Pentalofos	0.33	130	P	Pg	19 31 26.1	-0.3
KPRO	Kipourio	0.62	136	P	Pg	19 31 31.0	-0.9
KPRO				S	Sg	19 31 39.0	-1.1
KPRO	Kipourio	0.62	136	P	Pg	19 31 31.1	-0.8
KPRO				S	Sg	19 31 39.7	-0.3
OHR	Ohrid	0.70	360	i Pg	Pg	19 31 32.3	-1.0
OHR				i Sg	Sb	19 31 43.5	-0.4
OHR				eLg	Lg	19 31 43.8	
	comp=N,293nm,0.5s						
OHR				eLg	Lg	19 31 43.8	
	comp=E,836nm,0.5s						
KZN	Kozani	0.75	98	P	Pg	19 31 34.0	-0.1
JAN	Janina	0.75	177	P	Pg	19 31 33.7	-0.5
JAN				S	Sg	19 31 43.7	-0.4
SRN	Sarande	0.81	230	Pg	Pg	19 31 34.1	-1.3

SRN				Sg	Sb	19 31 46.9	0.0
SRN				AML	AML	19 32 00.7	
	comp=E,0.7nm,0.6s						
IGT	Igoumenitsa	0.95	203	Pg	Pg	19 31 37.7	-0.3
IGT				Sg	Sg	19 31 48.2	-2.1
IGT				AML	AML	19 32 00.2	
	comp=E,0.6nm,0.7s						
IGT	Igoumenitsa	0.95	203	*i* Pg	Pg	19 31 37.2	-0.8
IGT	Igoumenitsa	0.95	203	P	Pg	19 31 37.7	-0.3
KEK	Kerkira	1.04	228	P	Pn	19 31 40.5	+0.1
TETR	Tetrakomo, Epi	1.12	161	P	Pb	19 31 41.0	-0.3
TIR	Tirane	1.18	323	Pn	Pb	19 31 41.9	-0.2
TIR				Sn	Sn	19 32 01.0	+2.7
TIR				AML	AML	19 32 10.1	
	comp=E,0.4nm,0.6s						
TIR	Tirane	1.18	323	*i* Pg	Pb	19 31 40.6	-1.5
TIR				*i* Sg	Sn	19 32 04.2	+5.8
TYRN	Tyrnavos	1.30	122	P	Pn	19 31 43.9	-0.1
PHP	Peshkopia	1.30	348	Pg	Pn	19 31 42.2	-1.8
TSLK	Tsoukalades, L	1.59	184	P	Pb	19 31 48.8	-0.3
VAY	Valandovo	1.62	55	P	Pb	19 31 49.0	-0.8
VAY	Valandovo	1.62	55	*i* Pg	Pb	19 31 49.0	-0.8
VAY				*i* Sg	Sg	19 32 13.0	+1.2
VAY				*e*Lg	Lg	19 32 17.8	
	comp=N,119nm,0.7s						
VAY				*e*Lg	Lg	19 32 21.2	
	comp=E,91nm,0.6s						
LKD2	Lefkada island	1.62	184	Pg	Pg	19 31 51.0	+0.1
LKD2	Lefkada island	1.62	184	P	Pg	19 31 51.2	+0.4
LKD2	Lefkada island	1.62	184	P	Pb	19 31 49.5	-0.3
SKO	Skopje	1.63	17	*i* Pg	Pb	19 31 49.9	-0.1
SKO				*i* Sg	Sg	19 32 11.8	-0.5
THE	Thessaloniki	1.66	82	P	Pb	19 31 49.7	-0.7
EVR	Evrytania	1.68	152	P	Pb	19 31 51.1	+0.3
EVR	Evrytania	1.68	152	P	Pn	19 31 49.7	+0.4
NYDR	Nydri-Lefkada	1.70	183	P	Pg	19 31 52.1	-0.1
NYDR	Nydri-Lefkada	1.70	183	P	Pb	19 31 50.2	-0.8
MAKR	Makrakomi, Fth	1.73	143	P	Pn	19 31 50.3	+0.4
KNT	Kendrikon	1.76	64	P	Pn	19 31 50.4	+0.1
KNT	Kendrikon	1.76	64	*e*Pn	Pn	19 31 50.5	+0.2
KNT	Kendrikon	1.76	64	P	Pb	19 31 51.4	-0.7
HORT	Hortiatis	1.76	83	P	Pn	19 31 50.1	-0.3
PUK	Puka	1.77	337	Pn	Pb	19 31 51.9	-0.5
PUK				Sn	Sg	19 32 17.9	+1.2
PUK				AML	AML	19 32 23.0	
	comp=E,0.9nm,0.6s						
EVGI	Lefkada island	1.79	184	P	Pb	19 31 52.0	-0.7
AGG	Agios Georgios	1.82	139	P	Pb	19 31 52.1	-1.0
SCTE	Santa Cesarea	1.82	260	P	Pb	19 31 52.4	-0.7
PVO	Paravola	1.88	162	P	Pn	19 31 52.8	+0.9
ULC	Ulcinj	1.95	323	*i* Pn	Pn	19 31 53.6	+0.7
ULC	Ulcinj	1.95	323	⇓*i*Pn	Pn	19 31 53.1	+0.2
ULC				*i* Sn	Sb	19 32 20.3	+0.6
FSK	Fiskardo	1.96	186	P	Pb	19 31 54.2	-1.2
PLG	Polygyros	2.02	90	P	Pn	19 31 54.1	+0.2
BCI	Bajram Curri	2.03	344	Pn	Pb	19 31 56.6	-0.2
BCI				Sn	Sg	19 32 25.8	+0.7
BCI				AML	AML	19 32 32.5	
	comp=E,0.9nm,0.6s						
DRME	Dracevica, Mon	2.15	326	⇓*i*Pn	Pn	19 31 56.0	+0.3
DRME				*i* Sn	Sb	19 32 25.5	-0.1
DMLN	Damoulianata-K	2.19	189	P	Pn	19 31 57.2	+1.0
SRS	Serrai	2.23	71	*i* Pn	Pn	19 31 57.6	+0.8
SRS				*i* Sn	Sn	19 32 25.3	+0.9
SRS	Serrai	2.23	71	P	Pn	19 31 57.4	+0.6
VLS	Valsamata	2.23	184	P	Pn	19 31 57.9	+1.1
AXS	Araxos	2.25	168	P	Pn	19 31 57.7	+0.6
KALE	Kalithea	2.27	152	P	Pn	19 31 58.0	+0.7
KKB	Krupnik	2.27	50	*i* Pn	Pb	19 31 59.0	-1.8
PSDA	Pessada-Kefalo	2.30	184	P	Pn	19 31 58.7	+1.1
PDG	Podgorica	2.33	331	⇑*i*Pn	Pn	19 31 57.8	-0.3
PDG				*i* Sn	Sb	19 32 29.3	-1.3
BUM	Brajici-Budva	2.37	323	*e*Pn	Pn	19 31 58.3	-0.5
BUM				*i* Sn	Sb	19 32 30.8	-1.2
RLS	Riolos of Patr	2.40	167	P	Pn	19 32 00.1	+1.0
KOKK	Kokkinochori,	2.47	79	P	Pn	19 32 00.4	+0.4
MMB	Musomishta	2.50	62	*i* Pn	Pb	19 32 03.1	-1.7
MMB				*i* Sn	Sn	19 32 31.9	+0.7
IVA	Berane	2.55	345	⇑*i*Pn	Pn	19 32 02.1	+0.8
IVA				*i* Sn	Sb	19 32 35.2	-2.0
CEME	Cevo	2.56	327	⇓*i*Pn	Pn	19 32 01.7	+0.3
CEME				*i* Sn	Sb	19 32 35.4	-2.0
KOME	Kolasin	2.62	339	⇑*i*Pn	Pn	19 32 03.0	+0.8
KOME				*i* Sn	Sn	19 32 36.3	+2.1
BRY	Bratogost	3.01	326	*e*Pn	Pn	19 32 08.4	+0.8
BRY				*i* Sn	Sn	19 32 46.2	+2.3
PLE	Pljevlja	3.10	341	⇑*i*Pn	Pn	19 32 09.5	+0.6
PLE				*i* Sn	Sn	19 32 48.4	+2.3
UPM	Unac-Piva	3.13	334	*e*Pn	Pn	19 32 09.9	+0.6
UPM				*i* Sn	Sn	19 32 48.8	+2.0

GCG 01 19:38:18.0±0.6, 14°.45N×91°.78W, h68^{km}±8^{km}, MD3.5, ML3.5, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG8	El Palmar, Qui	0.42	90	*i* P	Pn	19 38 29.8	-0.4
STG8				*e*S	Sn	19 38 39.5	+0.4
STG8				IAML		19 38 41.3	
	comp=E,2μm,0.1s						
SMCA	Catarina	0.49	325	*e*P	Pn	19 38 30.5	-0.1
SMCA				IAML		19 38 42.1	
	comp=N,487nm,0.1s						
THIG		0.65	314	*i* S	Sn	19 38 43.8	+1.1
FG16	Alotenango, Sa	1.24	98	*i* P	Pn	19 38 35.8	-3.9
FG16				*i* S	Sn	19 38 50.2	-5.9
FG16				IAML		19 38 53.4	
	comp=E,4μm,0.2s						

IDC ***01*** *19:46:10.6±4.7, 37°.33N×71°.90E, h100^{km}±38^{km}, mb3.5/13, mbtmp3.8/18, MS2.8/2, Error ellipse: s-maj=47.4km s-min=26.4km az=141.0*

NNC ***01*** *19:46:15.8±3.2, 38°.00N×71°.67E, h0^{km}, mb4.2, mpv3.8, Error ellipse: s-maj=25.5km s-min=19.1km az=165.0*

ISC 01 19:46:15.5±1.2, 37°.7N±0°.1×71°.77E±0°.10, h130^{km}, n33, σ0^{s}.82/38, mb3.6/11, 4C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	4.71	18	P	Pn	19 47 25.4	+0.3
	SNR=64						
UCH	Uchtor	5.03	24	P	Sn	19 48 26.5	-0.4
	SNR=18						
EKS2	Erkin-Say	5.24	16	P	Pn	19 47 32.4	+0.6
	SNR=11						
AAK	Ala-Archa	5.40	22	P	Pn	19 47 34.9	+0.9
	SNR=10.0						
AAK	Ala-Archa	5.40	22	P	Pn	19 47 33.5	-0.5
	7.0nm,0.5s,baz=198,slow=9.1,SNR=18						
AAK				S	Sn	19 48 36.3	+1.1
	8.3nm,0.4s,baz=344,slow=20,SNR=17						
AAK	Ala-Archa	5.40	22	⇑P	Pn	19 47 34.0	0.0
	7.4nm,0.6s						
AAK				⇓S	Sn	19 48 34.9	-0.3
	18nm,0.5s						
KK31	Karatay Array	5.53	350	⇓P	Pn	19 47 35.5	-0.2
	6.0nm,0.2s,baz=183,slow=15,SNR=288						
KK31				⇓S	Sn	19 48 36.8	-1.4
	23nm,0.4s,baz=168,slow=22,SNR=13						
CHMS	Chumysh	5.81	22	P	Pn	19 47 39.9	+0.5
	SNR=7.3						
CHMS	Chumysh	5.81	22	⇓P	Pn	19 47 39.3	-0.1
	7.3nm,0.5s						
CHMS				⇑S	Sn	19 48 43.7	-1.1
	8.8nm,0.6s						
USP	Ospenovka	5.98	19	P	Pn	19 47 41.9	+0.1
	SNR=9.8						
TKM2	Tokmak 2	6.02	28	P	Pn	19 47 43.0	+0.6
	SNR=8.9						
TKM2	Tokmak 2	6.02	28	⇑P	Pn	19 47 42.6	+0.2
	7.8nm,1.4s						
TKM2				⇑S	Sn	19 48 50.3	+0.1
	3.1nm,0.6s						
MKAR	Makanchi Array	12.00	37	P	Pn	19 49 00.9	-1.4
	0.5nm,0.7s,baz=214,slow=14,SNR=6.1						
KURBB	Kurchatov Arra	13.84	18	P	P	19 49 29.8	-0.2
	0.6nm,0.7s,baz=204,slow=11,SNR=4.2						
AB31	Akbulak array	14.41	327	⇓P	Pn	19 49 33.9	+0.6
	0.9nm,0.4s,baz=139,slow=14,SNR=50						
AB31				S	Sn	19 52 11.9	-0.6
	6.9nm,0.8s,baz=152,slow=22,SNR=12						
BVAR	Borovoye Array	15.40	357	P	Pn	19 49 44.4	-1.2
	0.8nm,0.5s,baz=164,slow=13,SNR=9.3						
AKTO	Aktyubinsk	16.12	327	P	Pn	19 49 54.5	-0.1
	9.8nm,0.3s,baz=142,slow=8.8,SNR=36						
AKTO				S	Sn	19 52 41.9	-12
	2.6nm,0.5s,baz=185,slow=19,SNR=8.2						
ZALV	Zalesovo Beam	18.61	25	P	P	19 50 22.8	+0.2
	1.0nm,0.4s,baz=220,slow=11,SNR=5.7						
ZALV				LR	LR	19 57 19.5	
	comp=Z,20nm,18.4s,baz=104,slow=36						
ARTI	Arti	20.78	339	P	P	19 50 47.1	+1.1
	1.5nm,0.3s,baz=170,slow=12,SNR=4.6						
	1.5nm,0.3s						
GNI	Garni	21.16	285	P	P	19 50 48.8	-1.6
	4.8nm,0.4s,baz=128,slow=18,SNR=4.0						
	4.8nm,0.4s						
KBZ	Khabaz	22.65	295	P	P	19 51 05.4	-0.2
	1.0nm,0.8s,baz=67,slow=7.7,SNR=2.2						
	1.0nm,0.8s						
ASF	Jabal al Asfar	29.01	270	LR	LR	20 05 27.4	
	comp=Z,31nm,19.9s,baz=190,slow=40						
BRTR	Keskin Array B	29.69	286	P	P	19 52 10.2	+1.0
	0.3nm,0.6s,baz=91,slow=11,SNR=2.8						
	0.3nm,0.6s						
AKASG	Malin Array Be	32.72	307	P	P	19 52 36.3	+0.8
	0.4nm,0.5s,baz=110,slow=8.8,SNR=5.4						
	0.4nm,0.5s						
FINES	FINESS Array B	36.88	325	P	P	19 53 11.7	+0.6
	2.3nm,0.9s,baz=108,slow=8.6,SNR=7.8						
	2.3nm,0.9s						
ARCES	ARCESS Array B	40.32	337	P	P	19 53 40.9	+1.2
	1.6nm,0.8s,baz=120,slow=8.3,SNR=1.4						
	1.6nm,0.8s						
HFS	Hagfors	42.55	321	P	P	19 53 58.5	+0.5
	1.6nm,0.4s,baz=96,slow=10,SNR=11						
	1.6nm,0.4s						
NB2	NORSAR Subarra	43.84	322	P	P	19 54 08.6	+0.2
	comp=Z,0.4nm,0.5s,baz=93,slow=7.9						
NOA	NORSAR Array B	43.84	322	P	P	19 54 08.4	0.0
	comp=Z,0.6nm,0.6s,baz=93,slow=7.8,SNR=3.8						
	comp=Z,0.6nm,0.6s						
KEST	Kesra	49.26	288	P	P	19 54 51.7	+0.7
	comp=Z,0.7nm,0.5s,baz=104,slow=4.2,SNR=1.6						
	comp=Z,0.7nm,0.5s						
EKA	Eskdalemuir Ar	51.90	315	P	P	19 55 10.1	-0.2
	comp=Z,0.2nm,0.4s,baz=72,slow=6.3,SNR=2.0						
	comp=Z,0.2nm,0.4s						
ESDC	Sonseca Array	57.47	297	P	P	19 55 50.6	-0.3
	comp=Z,0.6nm,0.7s,baz=70,slow=6.9,SNR=6.5						
	comp=Z,0.6nm,0.7s						
TORD	Torodi Ar. Bea	66.36	269	P	P	19 56 48.5	-2.1
	comp=Z,0.7nm,0.3s,baz=64,slow=7.1,SNR=4.7						
	comp=Z,0.7nm,0.3s						

WEL 01 20:09:02.7±0.8, 45°S±4°×16°7E±°, h12^{km}, M3.8/10, ML3.8/8, MLv3.8/10, Error ellipse: s-maj=8.5km s-min=4.8km az=118.6, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DCZ	Deep Cove	0.32	189	P	Pb	20 09 10.5	+0.2
DCZ				S	Sb	20 09 15.8	+0.3
MSZ	Milford Sound	0.69	47	P	Pg	20 09 15.7	-0.4
MOSS	Mossburn Schoo	0.88	126	P	Pn	20 09 20.5	-0.4
WHZ	Wether Hill Ro	0.90	146	P	Pb	20 09 20.2	0.0
WHZ				S	Sb	20 09 32.9	+0.8
RRKS	Rarakau	1.01	170	P	Pg	20 09 22.2	0.0
QTPS	Queenstown Pol	1.02	84	P	Pb	20 09 22.0	-0.3
PYZ	Puysegur Point	1.09	200	P	Pb	20 09 21.7	-1.7
ORPS	Orepuki	1.20	162	P	Pn	20 09 24.8	-0.4
WKZ	Wanaka	1.31	76	P	Pg	20 09 27.6	-0.3
EAZ	Earnscleugh	1.47	94	P	Pb	20 09 29.6	-0.4
EAZ				S	Sn	20 09 47.8	-0.5
JCZ	Jackson Bay	1.55	47	P	Pn	20 09 29.2	-0.9
APZ	The Paps	1.77	163	P	Pn	20 09 33.1	0.0
TUZ	Tuapeka	1.87	116	P	Pn	20 09 34.8	+0.3
SYZ	Scrubby Hill	1.93	137	P	Pn	20 09 35.3	+0.1
SYZ				S	Sn	20 09 58.4	-1.0
LBZ	Lake Benmore	2.24	71	P	Pn	20 09 39.8	+0.2
ODZ	Otahua Downs	2.42	89	P	Pn	20 09 41.5	-0.6
FOZ	Fox Glacier	2.46	50	P	Pn	20 09 41.1	-1.5
HHSZ	Highcliff Hill	2.48	108	P	Pn	20 09 43.2	+0.3
TMZ	Timaru	2.80	75	P	Pn	20 09 47.1	-0.2
ARCZ	Arundel	3.07	68	P	Pn	20 09 50.5	-0.5
RPZ	Rata Peaks	3.09	64	P	Pn	20 09 50.8	-0.5
WVZ	Waitaha Valley	3.27	52	P	Pn	20 09 52.2	-1.5
MHCZ	Mount Hutt	3.51	64	P	Pn	20 09 56.5	-0.5
WACZ	Wakanui South	3.51	72	P	Pn	20 09 56.6	-0.4
INZ	Inchbonnie	3.89	53	P	Pn	20 10 01.4	-0.9
OXZ	Oxford	3.91	64	P	Pn	20 10 01.4	-1.2
MQZ	McQueen's Vall	4.15	72	P	Pn	20 10 04.8	-1.0
LTZ	Lake Taylor	4.34	59	P	Pn	20 10 07.2	-1.3
AMCZ	Amberley	4.37	65	P	Pn	20 10 08.3	-0.6
OKCZ	Okains Bay	4.41	73	P	Pn	20 10 10.0	+0.5
GVZ	Greta Valley S	4.72	65	P	Pn	20 10 12.7	-0.9
DSZ	Denniston Nort	4.76	46	P	Pn	20 10 12.3	-2.0
THZ	Tophouse	5.34	53	P	Pn	20 10 21.8	-0.5
MRNZ	Matariki Terra	5.51	49	P	Pn	20 10 23.4	-1.1
QRZ	Quartz Range	5.81	44	P	Pn	20 10 26.7	-1.9
NNZ	Nelson	5.97	51	P	Pn	20 10 29.8	-1.1
TUWZ	Tuamarina	6.15	55	P	Pn	20 10 35.2	+1.9
DUWZ	D'Urville Isla	6.55	51	P	Pn	20 10 39.7	+0.8

MOS ***01*** *20:13:55.3±0.9, 23°.45N×142°.62E, h68^{km}, mb5.5/85, MS4.3/10, Error ellipse: s-maj=7.2km s-min=3.4km az=115.9*

BJI ***01*** *20:13:55.7, 23°.63N×142°.88E, h52^{km}, mB5.1/48, mb5.2/95, Ms4.3/89, Ms7 4.2/87*

NEIC ***01*** *20:14:00.6±2.0, 23°.45N±0°.06×142°.73E±0°.09, h66^{km}±3^{km}, mb5.4/174, Mww5.1/24, Error ellipse: s-maj=11.8km s-min=9.3km az=76.0*

IDC ***01*** *20:14:00.5±1.0, 23°.47N×142°.49E, h77^{km}±8^{km}, mb4.8/28, mbtmp5.2/30, MS3.9/73, Error ellipse: s-maj=12.6km s-min=6.7km az=71.0*

JMA ***01*** *20:14:01.4±0.2, 23°.6N±0°.8×14°2E±°, h132^{km}±1^{km}, MD5.7/63, MV6.3/63, IOTO ISLANDS REGION*

JMA Felt I J1 at IOTO ISLANDS REGION .

GCMT ***01*** *20:14:02.5±0.1, 23°.47N±0°.01×142°.77E±0°.01, h93^{km}±1^{km}, MW5.2/140, Moment Tensor Solution. s85,c132; s140,c256; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.45±.12; $M_{\theta\theta}$2.38±.12; $M_{\phi\phi}$-3.82±.12; $M_{r\theta}$-4.51±.07; $M_{\theta\phi}$-2.99±.10; $M_{\phi r}$-1.98±.09; Best double couple: $M_0$6.65800×10^{16} NP1:ϕ_s341.00000°,δ40.00000°, λ13.00000°. NP2:ϕ_s241.00000°,δ82.00000°,λ130.00000°. Principal axes: T 6.5370, Plg40.0000°, Azm187.0000°; N 0.2520, Plg39.0000°, Azm55.0000°; P -6.7790, Plg26.0000°, Azm301.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 20:13:59.7±0.3, 23°.50N±0°.03×142°.74E±0°.04, h68^{km}±2^{km}, h68^{km}:pP-P, n1219, σ1^{s}.43/1312, mb5.3/260, 36C-56D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHH2	Haha-jima-NKT2	3.17	351	P	Pn	20 14 48.5	+1.4
JHH2				*e*S	Sn	20 15 24.7	+0.9
JHH2	Haha-jima-NKT2	3.17	351	A	A	20 14 48.5	
	comp=N,116nm,0.4s,comp=E,107nm,0.5s						
CBIJ	Chichi jima	3.62	352	P	Pn	20 14 54.8	+1.5
CBIJ				*e*S	Sn	20 15 35.8	+0.9
CBIJ	Chichi jima	3.62	352	A	A	20 14 54.8	
	comp=N,31nm,0.6s,comp=E,50nm,0.4s						
JCJ	Chichijima	3.62	352	Pn	Pn	20 14 54.7	+1.4
JCJ	Chichijima	3.62	352	P	Pn	20 14 53.7	+0.4
	comp=E,3μm,0.4s,baz=238,slow=12,SNR=1403						
JCJ				S	Sn	20 15 34.5	-0.3
	comp=E,11μm,0.4s,baz=270,slow=20,SNR=25						
JAOM	Aogashimamukai	9.31	344	P	Pn	20 16 11.8	+0.6
JAOM				*e*S	Sn	20 17 53.2	-1.1
JHCJ	Hachijojimakas	9.89	345	*e*P	Pn	20 16 17.1	-1.8
JHCJ				*e*S	Sn	20 18 01.9	-6.4
JHJ2	Mitsune	9.92	346	Pn	Pn	20 16 18.7	-0.7
JHJ2	Mitsune	9.92	346	*e*P	Pn	20 16 18.5	-0.9
JHJ2				*e*S	Sn	20 18 01.6	-7.5
GUMO	Guam	10.06	168	P	Pn	20 16 28.6	+7.2
	comp=E,130nm,0.9s,baz=342,slow=16,SNR=7.2						
GUMO				LR	LR	20 19 14.4	
	comp=E,1μm,21.1s,baz=9.5,slow=31						
JKDJ	Kitadaitoujima	10.68	286	*e*P	Pn	20 16 35.0	+5.1
JMKN	Mikurajimanish	10.72	346	*e*P	Pn	20 16 25.3	-5.0
JMKN				*e*S	Sn	20 18 22.4	-6.3
JMZ	Minamidaito 2	10.72	285	Pn	Pn	20 16 35.2	+4.8
JMZ	Minamidaito 2	10.72	285	P	Pn	20 16 36.1	+5.7
JMZ	Minamidaito 2	10.72	285	*e*P	Pn	20 16 34.1	+3.7
JMYK	Miyake Tsubota	10.89	346	*e*P	Pn	20 16 31.0	-1.6
JMYK				*e*S	Sn	20 18 27.5	-5.3
JKO	Kozu shima	11.11	344	*e*P	Pn	20 16 35.0	-0.6
JKO				*e*S	Sn	20 18 35.2	-3.0
BSO1	Boso 1	11.22	353	P	Pn	20 16 36.5	-0.2
BSO1				*e*S	Sn	20 18 37.1	-3.0
JSKK	Shikinejimakit	11.23	345	*e*P	Pn	20 16 35.2	-2.1
JSKK				*e*S	Sn	20 18 36.6	-4.5
JNIO	Niijimaoohara	11.24	345	*e*P	Pn	20 16 36.0	-1.3
JNIO				*e*S	Sn	20 18 36.6	-4.7
JTHY	Toshimahigashi	11.39	345	*e*P	Pn	20 16 37.8	-1.7
JTHY				*e*S	Sn	20 18 39.8	-5.3
JIM2	Oshima 3	11.55	346	*e*P	Pn	20 16 39.8	-1.9
JIM2				*e*S	Sn	20 18 41.2	-7.7
JIM2	Oshima 3	11.55	346	A	A	20 16 39.8	
	comp=N,4.0nm,0.7s,comp=E,4.0nm,0.7s						
JWKM	Wakayamakushim	11.66	330	*e*P	Pn	20 16 44.9	+1.7
JIZS	Izushimoda	11.68	344	*e*P	Pn	20 16 41.5	-1.9
JIZS				*e*S	Sn	20 18 47.6	-4.4
TATJ	Tateyama 2	11.76	348	*e*P	Pn	20 16 43.9	-0.6
JSG	Sagara	11.83	341		Pn	20 16 45.1	-0.3
JSG	Sagara	11.83	341	*e*P	Pn	20 16 46.2	+0.8
JKUC	kamogawauchiur	11.83	350	*e*P	Pn	20 16 43.2	-2.3
JKUC				*e*S	Sn	20 18 47.9	-7.9
JMMH	Miemihama	11.85	332	*e*P	Pn	20 16 46.4	+0.6
JHTM	Izuhatsuma	11.88	345	*e*P	Pn	20 16 44.6	-1.5
JTNC	Tanabenakahech	12.03	330	*e*P	Pn	20 16 49.4	+1.1
JIE	Ise	12.07	335	*e*P	Pn	20 16 48.8	0.0
JKN2	Miekihoku	12.11	334	*e*P	Pn	20 16 48.9	-0.3
JAA	Atsumi	12.12	338	*e*P	Pn	20 16 46.8	-2.7
HMMJ	Hamamatsu 2	12.13	340	*e*P	Pn	20 16 48.4	-1.2
JOD2	Odawara 2	12.15	346	*e*P	Pn	20 16 47.3	-2.6
JOD2				*e*S	Sn	20 18 58.2	-5.3
JWM	Minabe	12.18	330	*e*P	Pn	20 16 47.7	-2.5
JFNN	Fujinakano	12.18	344	*e*P	Pn	20 16 49.3	-1.0
SHZ3	Shizuoka 3	12.19	342	*e*P	Pn	20 16 49.0	-1.5
JSSY	Shinshiroyabe	12.26	339	*e*P	Pn	20 16 50.1	-1.2
JSMT	Sammumatsuo	12.27	351	*e*P	Pn	20 16 50.5	-1.0
JNTK	Naratenkawa	12.29	332	*e*P	Pn	20 16 51.7	-0.2
JWY	Kouya	12.38	331	P	Pn	20 16 54.1	+1.1
MRT2	Murotomisaki 2	12.41	324	*e*P	Pn	20 16 55.4	+2.0
TOK	Tokyo	12.42	349	*e*P	Pn	20 16 51.4	-2.1
TOK				*e*S	Sn	20 19 04.4	-5.7
TOK	Tokyo	12.42	349	A	A	20 16 51.4	
	comp=N,5.0nm,0.5s,comp=E,8.0nm,0.8s						
JSGW	Sagamiharawaka	12.45	347	*e*P	Pn	20 16 50.9	-3.1
JSGW				*e*S	Sn	20 19 03.0	-7.8
TSUJ	Tsu 2	12.46	335	*e*P	Pn	20 16 54.4	+0.3
JYN	Shimob	12.50	344	*e*P	Pn	20 16 52.7	-2.0
JYN				*e*S	Sn	20 19 08.4	-3.9
JNY	Yasuok	12.56	341	*e*P	Pn	20 16 53.7	-1.8
JIHU	Itakohorinouch	12.57	352	*e*P	Pn	20 16 54.5	-1.1
JAO	Obara	12.66	339	*e*P	Pn	20 16 55.0	-1.9
JHE	Heguri	12.71	333	*e*P	Pn	20 16 57.0	-0.5
JAM	Amami Oshima	12.79	295	*e*P	Pn	20 17 02.5	+3.9
JTO	Tosashimizu	12.79	319	*e*P	Pn	20 17 00.6	+2.0
JMN	Monobe	12.82	325		Pn	20 17 01.6	+2.6
JYT	Yasato	12.88	351	*e*P	Pn	20 16 56.9	-2.8
JRY	Ryogami san	12.91	346	*e*P	Pn	20 16 57.7	-2.6
JRY				*e*S	Sn	20 19 16.4	-5.8
JGF	Kuroka	12.94	340		Pn	20 16 59.0	-1.6
JAMN	Amaminishikomi	13.09	294	P	Pn	20 17 06.8	+4.1
JTK	Tokunoshima	13.15	292	*e*P	Pn	20 17 07.4	+3.9
JAG	Ashikaga	13.20	348	*e*P	Pn	20 16 59.9	-4.2
JAG				*e*S	Sn	20 19 17.8	-11
JOW	Kunigami	13.51	287		Pn	20 17 11.8	+3.5
JOW	Kunigami	13.51	287	P	Pn	20 17 11.3	+3.0
	comp=E,136nm,0.6s,baz=108,slow=16,SNR=23						
JOW				S	Sn	20 19 35.6	-1.2
	comp=E,12nm,0.6s,baz=105,slow=20,SNR=1.3						
JOW	Kunigami	13.51	287	P	P	20 17 15.2	0.0
MJAR	Matsushiro Arr	13.58	344	P	Pn	20 17 06.7	-2.5
	comp=E,37nm,0.5s,baz=163,slow=11,SNR=159						
MJAR				ScP	ScP	20 25 54.5	-3.5
	comp=E,2.5nm,1.0s,baz=148,slow=1.7,SNR=5.9						
MAJO	Matsushiro	13.58	344		Pn	20 17 06.5	-2.7
MAJO	Matsushiro	13.58	344	*d* *i*P	Pn	20 17 05.6	-3.6
MJB9	Matsu-Tunnel	13.58	344		Pn	20 17 07.4	-1.8
JNU	Nakatsue	14.17	315		Pn	20 17 20.1	+3.1
JNU	Nakatsue	14.17	315	P	Pn	20 17 19.8	+2.8
	comp=E,161nm,0.9s,baz=129,slow=4.7,SNR=108						
JNU				S	Sn	20 19 49.1	-3.7
	comp=E,4.0nm,0.6s,baz=216,slow=17,SNR=0.7						
JNU				LR	LR	20 22 38.9	
	comp=E,332nm,18.6s,baz=155,slow=37						
JMST	Minamisoumatoc	14.27	354	A	A	20 17 16.0	
	comp=N,2.0nm,0.9s,comp=E,2.0nm,0.6s						
JMM	Marumori	14.42	354		Pn	20 17 17.9	-2.3
JTM	Tenmabayashi	17.30	356		Pn	20 17 56.2	-0.3
YOJ	Yonaguni jima	18.05	277		Pn	20 18 07.9	+2.0
YOJ	Yonaguni jima	18.05	277	P	Pn	20 18 07.9	+2.0
YOJ				pmax	pmax		
	comp=Z,490nm,0.6s						
TJN	Taejon	18.47	318		P	20 18 09.9	-0.1
TJN				IAmb	IAmb	20 18 13.1	
	comp=Z,416nm,1.0s						
TJN	Taejon	18.47	318	*d* *i*P	P	20 18 09.3	-0.7
ERM	Erimo	18.47	1		Pn	20 18 12.5	+1.7
ERM				IAmb	IAmb	20 18 23.1	
	comp=Z,237nm,1.1s						
ERM	Erimo	18.47	1	*d* *i*P	Pn	20 18 11.8	+1.0
KSRS	Korea Array	18.85	321	P	P	20 18 13.8	-0.4
	comp=Z,142nm,0.7s,baz=134,slow=10,SNR=180						
KSRS				S	S	20 21 40.3	-4.4
	comp=Z,1.0nm,0.9s,baz=140,slow=7.8,SNR=0.6						
KSRS				LR	LR	20 24 37.9	
	comp=Z,451nm,20.9s,baz=130,slow=34						
KSRS				ScP	ScP	20 26 05.7	-2.4
	comp=Z,1.8nm,0.8s,baz=147,slow=1.3,SNR=8.4						
KSAR	Wonju Array Be	18.86	321		P	20 18 13.8	-0.5
KSAR	Wonju Array Be	18.86	321	P	P	20 18 13.8	-0.5
KS19	Wonju Array Si	18.91	321	P	P	20 18 14.3	-0.6
KS19				IAmb	IAmb	20 18 19.5	
	comp=Z,175nm,0.8s						
NACB	Ninganchiao	19.35	276	P	P	20 18 20.6	+0.8
TATO	Taipei	19.43	279	P	Pn	20 18 21.9	-0.5
TATO				IAmb	IAmb	20 18 37.3	
	comp=Z,324nm,0.8s						
INCN	Inchon	19.63	319		P	20 18 21.2	-1.5
INCN				IAmb	IAmb	20 18 27.5	
	comp=Z,155nm,0.7s						
INCN	Inchon	19.63	319	P	P	20 18 21.2	-1.5
INCN				pmax	pmax		
	comp=Z,155nm,0.7s						
YULB	Yu-li	19.67	274	P	Pn	20 18 25.2	0.0
TWG	Pinlang	19.93	272	P	P	20 18 26.7	+0.6
TWG				IAmb	IAmb	20 18 32.1	
	comp=Z,256nm,1.7s						
SSLB	Suanglung	19.96	275	P	Pn	20 18 28.3	-0.4
SSLB				IAmb	IAmb	20 18 36.2	
	comp=Z,104nm,0.7s						
ASAJ	Asahikawa	20.57	360	P	Pn	20 18 35.6	0.0
	comp=Z,76nm,0.8s,baz=211,slow=8.9,SNR=31						
ASAJ				S	S	20 22 19.4	+0.4
	comp=Z,35nm,0.8s,baz=246,slow=18,SNR=6.3						
ASAJ	Asahikawa	20.57	360	P	P	20 18 34.6	+1.8
ASAJ				pmax	pmax		
	comp=Z,98nm,0.6s						
JKA	Kamikawa-asahi	20.57	360	P	P	20 18 34.6	+1.8
JKA				IAmb	IAmb	20 18 43.2	
	comp=Z,98nm,0.6s						
SSE	Sheshan	20.57	296	P	P	20 18 33.7	+0.8
SSE				S	S	20 22 22.6	+3.4
SSE				pmax	pmax		
	comp=Z,190nm,0.6s						
SSE				pmax	pmax		
	comp=Z,200nm,3.5s						
SSE				LR	LR		
	comp=Z,150nm,23.0s						
SSE				LR	LR		
	comp=Z,200nm,23.7s						
YUK	Yuzh-Kuril'sk	20.65	6	*e*P	P	20 18 35.4	+1.8
YUK				*e*S	S	20 22 18.5	-1.9
YUK				pmax	pmax		
	comp=N,103nm,0.9s						
YUK				pmax	pmax		
	comp=Z,398nm,0.9s						

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MSHR  Mys Shultsa      21.33 336d iP   P       20 18 39.9 -1.0
MSHR                             pmax  pmax
      comp=Z,117nm,0.7s
PSTR  Posyet           21.52 335⇑eP    P       20 18 42.2 -0.8
VLA   Vladivostok      21.54 338ceP    P       20 18 42.3 -0.8
VLA                              pmax  pmax
      comp=Z,124nm,0.9s
QZH   Quanzhou         22.06 279 P     P       20 18 49.4 +0.4
QZH                              sP    pP      20 19 09.2 +6.4
QZH                              S     S       20 22 46.0 -2.4
QZH                              pmax  pmax
      comp=Z,60nm,0.8s
QZH                              LR    LR
      comp=Z,590nm,15.9s
TEY   Ternei           22.06 348⇑eP    P       20 18 49.9 +1.1
TEY                              pmax  pmax
      comp=N,50nm,0.5s
TEY                              pmax  pmax
      comp=Z,60nm,0.5s
PATS  Pohnpei          22.33 135 P     P       20 18 51.5 -0.4
PATS                             IAmb  IAmb    20 19 07.4
      comp=Z,331nm,1.1s
PATS  Pohnpei          22.33 135 P     P       20 18 51.9  0.0
USA0B Ussuriysk Arra   22.46 339 P     P       20 18 52.0 -1.1
USA0B                            IAmb  IAmb    20 18 54.0
      comp=Z,82nm,0.8s
USA0B Ussuriysk Arra   22.46 339d iP   P       20 18 51.8 -1.3
USRK  Ussuriysk Ar.    22.46 339 P     P       20 18 51.3 -1.8
      comp=Z,78nm,0.7s,baz=155,slow=11,SNR=99
      comp=Z,78nm,0.7s
TGY   Tagaytay City    22.62 249 LR    LR      20 27 17.2
      comp=Z,169nm,19.9s,baz=42,slow=36
NJ2   Nanjing          22.75 297 ⇓P    P       20 18 55.9 -0.4
NJ2                              sP    pwP     20 19 15.0 +1.3
NJ2                              S     S       20 22 58.4 -1.6
NJ2                              pmax  pmax
      comp=Z,75nm,0.7s
NJ2                              LR    LR
      comp=Z,300nm,14.2s
NJ2                              LR    LR
      comp=Z,280nm,20.8s
NJ2                              LR    LR
      comp=Z,560nm,20.6s
H11N1 WAKE ISLAND Hy 22.76   95  T     T       20 42 49.9
      baz=282,slow=75,SNR=78
H11N2 WAKE ISLAND Hy 22.77   95  T     T       20 43 04.3
      baz=282,slow=75,SNR=67
H11N3 WAKE ISLAND Hy 22.78   95  T     T       20 42 42.9
      baz=282,slow=75,SNR=69
H11S3 WAKE ISLAND Hy 22.90   98  T     T       20 42 50.5
      baz=284,slow=74,SNR=67
H11S1 WAKE ISLAND Hy 22.91   98  T     T       20 42 51.1
      baz=284,slow=74,SNR=52
H11S2 WAKE ISLAND Hy 22.91   98  T     T       20 42 51.4
      baz=284,slow=74,SNR=47
DAV   Davao City (W)   23.20 228 LR    LR      20 26 09.0
      comp=Z,327nm,21.5s,baz=66,slow=32
YSS   Yuzhno-Sakhali   23.41   0 P     P       20 19 03.4 +0.9
YSS   Yuzhno-Sakhali   23.41   0deP    P       20 19 03.3 +0.8
YSS                             e*PP   pP      20 19 17.4 +0.7
YSS                             eS     S       20 23 15.3 +5.0
YSS                              pmax  pmax
      comp=Z,500nm,8.5s
YSS                              pmax  pmax
      comp=Z,100nm,0.8s
YSS                              smax  smax
      comp=N,900nm,5.3s
YSS                              smax  smax
      comp=E,1µm,5.9s
DL2   Dalian           23.62 315 P     P       20 19 01.4 -3.2
DL2                              S     S       20 23 13.4 -0.6
DL2                              pmax  pmax
      comp=E,100nm,0.7s
DL2                              pmax  pmax
      comp=E,250nm,4.8s
DL2                              LR    LR
      comp=E,450nm,22.7s
DL2                              LR    LR
      comp=E,400nm,20.8s
DL2                              LR    LR
      comp=E,670nm,24.9s
MDJ   Mudanjiang       23.66 336 P     P       20 19 05.8 +1.0
MDJ                              IAmb  IAmb    20 19 08.9
      comp=Z,68nm,0.6s
MDJ   Mudanjiang       23.66 336 P     P       20 19 05.3 +0.5
MDJ                              PP    PnPn    20 19 40.3 +4.9
MDJ                              S     S       20 23 12.8 -1.6
MDJ                              pmax  pmax
      comp=Z,54nm,1.2s
MDJ                              pmax  pmax
      comp=Z,370nm,3.9s
MDJ                              LR    LR
      comp=Z,520nm,17.8s
MDJ                              LR    LR
      comp=Z,230nm,21.2s
MDJ                              LR    LR
      comp=Z,580nm,20.7s
SNY   Shenyang         24.28 323 ⇑P    P       20 19 08.6 -1.9
SNY                              pmax  pmax
      comp=Z,170nm,0.8s
SNY                              pmax  pmax
      comp=Z,480nm,3.5s
SNY                              LR    LR
      comp=Z,350nm,19.6s
SNY                              LR    LR
      comp=Z,350nm,18.1s
SNY                              LR    LR
      comp=Z,850nm,22.9s
CN2   Changchun        24.75 329 P     P       20 19 14.6 -0.2
CN2                              S     S       20 23 31.2 -0.9
CN2                              pmax  pmax
      comp=Z,30nm,0.7s
CN2                              pmax  pmax
      comp=Z,200nm,5.0s
CN2                              LR    LR
      comp=Z,300nm,13.0s
CN2                              LR    LR
      comp=Z,300nm,13.0s
CN2                              LR    LR
      comp=Z,500nm,18.0s
BNX   BinXian          25.44 334 ⇓P    P       20 19 20.6 -0.4
BNX                              S     S       20 23 47.5 +4.5
BNX                              sS    sS      20 24 06.2 -3.2
BNX                              pmax  pmax
      comp=Z,170nm,0.6s
BNX                              pmax  pmax
      comp=Z,190nm,3.8s
BNX                              LR    LR
      comp=Z,220nm,17.9s
BNX                              LR    LR
      comp=Z,430nm,15.2s
BNX                              LR    LR
      comp=Z,480nm,18.4s
TIA   Tai'an           25.49 306 P     P       20 19 21.0 -0.6
TIA                              pP    pP      20 19 28.6 -8.2
TIA                              PP    PnPn    20 19 55.8 -4.7
TIA                              S     S       20 23 42.0 -2.0
TIA                              pmax  pmax
      comp=Z,85nm,0.7s
TIA                              pmax  pmax
      comp=Z,140nm,3.7s
TIA                              LR    LR
      comp=Z,450nm,18.2s
TIA                              LR    LR
      comp=Z,350nm,22.5s
TIA                              LR    LR
      comp=Z,590nm,24.7s
UGL   Uglegorsk        25.54 359 eP    P       20 19 21.8  0.0
UGL                              pmax  pmax
      comp=Z,300nm,1.0s
UGL                              pmax  pmax
      comp=Z,200nm,1.2s
SGSI  Sangihe          25.77 223 P     P       20 19 23.2 -1.1
      comp=Z,2µmcomp=Z,140nm,0.7s
MANU  Manus Island     25.78 169 P     P       20 19 23.6 -0.8
MANU                             IAmb  IAmb    20 19 25.8
      comp=Z,214nm,1.8s
JAY   Jayapura         25.93 185 LR    LR      20 27 38.1
      comp=Z,396nm,21.9s,baz=14,slow=32
JAY   Jayapura         25.93 185 P     P       20 19 24.2 -1.5
WHN   Wuhan            26.20 292 ⇓P    P       20 19 28.7 +0.7
WHN                              sP    pwP     20 19 48.1 +0.7
WHN                              S     S       20 23 59.7 +4.4
WHN                              pmax  pmax
      comp=Z,630nm,1.6s
WHN                              LR    LR
      comp=Z,1µm,20.9s
WHN                              LR    LR
      comp=Z,1µm,15.6s
WHN                              LR    LR
      comp=Z,780nm,9.4s
SWI   Sorong           26.66 206 P     P       20 19 31.6 -0.7
      comp=Z,77nm,0.7s
TNTI  Ternate          27.07 216 P     P       20 19 35.5 -0.5
TNTI  Ternate          27.07 216 P     P       20 19 35.3 -0.7
KLR   Kul'dur          27.11 344 LR    LR      20 31 25.0
      comp=Z,321nm,18.8s,baz=156,slow=39
KLR   Kul'dur          27.11 344deP    P       20 19 36.5 +0.5
KLR                              pmax  pmax
      comp=Z,97nm,0.8s
CNSH  ChangSha         27.19 286 P     P       20 19 38.4 +1.4
CNSH                             S     S       20 24 11.7 +0.7
CNSH                             pmax  pmax
      comp=Z,22nm,1.0s
CNSH                             LR    LR
      comp=N,280nm,15.5s
CNSH                             LR    LR
      comp=E,420nm,15.9s
CNSH                             LR    LR
      comp=Z,480nm,17.6s
TYV   Tymovskoe        27.32 360 eP    P       20 19 39.6 +1.7
TYV                              eS    S       20 24 18.9 +6.4
TYV                              pmax  pmax
      comp=Z,55nm,0.8s
TYV                              pmax  pmax
      comp=Z,200nm,3.8s
TYV                              smax  smax
      comp=N,300nm,8.7s
TYV                              smax  smax
      comp=E,400nm,8.7s
GRNR  Gornyy           27.66 351⇓iP    P       20 19 42.4 +1.4
GRNR                             pmax  pmax
      comp=Z,40nm,0.9s
GRNR                             MLR   MLR
      comp=E,130nm,15.0s
HNS   HongShan         27.73 306 ⇓P    P       20 19 41.0 -0.7
HNS                              pP    pP      20 19 53.8 -3.3
HNS                              S     S       20 24 19.8 +0.5
HNS                              sS    sS      20 24 43.6 -2.2
HNS                              ScP   ScP     20 26 30.6 -1.2
HNS                              pmax  pmax
      comp=E,120nm,0.8s
HNS                              LR    LR
      comp=E,400nm,16.8s
HNS                              LR    LR
      comp=E,330nm,17.1s
HNS                              LR    LR
      comp=E,260nm,19.1s
BJT   Baijiatuau       27.81 313 P     P       20 19 43.2 +0.8
BJT   Baijiatuau       27.81 313 P     P       20 19 43.2 +0.8
BJT                              pmax  pmax
      comp=Z,26nm,0.9s
BJI   Beijing          27.82 313 P     P       20 19 44.1 +1.7
BJI                              pP    pP      20 19 56.4 -1.4
BJI                              sS    sS      20 24 42.8 -4.3
BJI                              pmax  pmax
      comp=Z,16nm,0.8s
BJI                              LR    LR
      comp=Z,140nm,17.3s
BJI                              LR    LR
      comp=Z,120nm,15.3s
BJI                              LR    LR
      comp=Z,220nm,17.2s
FAKI  Fak Fak          28.17 203 P     P       20 19 44.9 -0.9
FAKI                             IAmb  IAmb    20 19 46.5
      comp=Z,54nm,0.8s
FAKI  Fak Fak          28.17 203 P     P       20 19 44.9 -0.9
FAKI  Fak Fak          28.17 203 P     P       20 19 45.1 -0.7
      comp=Z,79nm,0.7s
LYN   LuoYang          28.57 300 P     P       20 19 49.6 +0.4
LYN                              pP    pP      20 20 00.1 -4.5
LYN                              sP    pwP     20 20 09.0 +0.3
LYN                              S     S       20 24 30.6 -1.9
LYN                              sS    sS      20 24 50.2 -8.9
LYN                              pmax  pmax
      comp=Z,71nm,0.8s
LYN                              pmax  pmax
      comp=Z,210nm,5.1s
LYN                              LR    LR
      comp=Z,480nm,15.8s
LYN                              LR    LR
      comp=Z,520nm,22.7s
LYN                              LR    LR
      comp=Z,840nm,26.1s
KMSI  Cibinong         29.16 221 P     P       20 19 55.0 +0.4
      comp=Z,1µmcomp=Z,117nm,0.8s
HEH   HeiHe            29.27 340 eP    P       20 19 55.0 -0.2
HEH                              pP    pP      20 20 11.5 +0.9
HEH                              S     S       20 24 42.1 -1.1
HEH                              pmax  pmax
      comp=Z,130nm,0.9s
HEH                              LR    LR
      comp=Z,360nm,20.2s
HEH                              LR    LR
      comp=Z,330nm,22.3s
HEH                              LR    LR
      comp=Z,720nm,20.9s
TIY   Taiyuan          29.53 306 P     P       20 19 59.5 +1.7
TIY                              PP    PnPn    20 20 56.7 +1.6
TIY                              S     S       20 24 43.4 -4.4
TIY                              pmax  pmax
      comp=Z,20nm,0.5s
TIY                              LR    LR
      comp=Z,300nm,16.5s
TIY                              LR    LR
      comp=Z,290nm,24.7s
TIY                              LR    LR
      comp=Z,440nm,24.7s
XLT   XiLinHaoTe       29.88 319 eP    P       20 20 00.2 -0.7
XLT                              S     S       20 24 53.8 +0.6
XLT                              pmax  pmax
      comp=Z,7.0nm,0.8s
XLT                              pmax  pmax
      comp=Z,85nm,4.9s
XLT                              LR    LR
      comp=Z,42nm,15.4s
XLT                              LR    LR
      comp=Z,320nm,18.2s
XLT                              LR    LR
      comp=Z,410nm,23.8s
SANI  Sanana           30.18 215 P     P       20 20 01.8 -1.8
      comp=Z,67nm,0.8s
ENH   Enshi            30.34 290 P     P       20 20 04.8 -0.2
ENH   Enshi            30.34 290 P     P       20 20 04.7 -0.3
AAI   Ambon            30.51 210 P     P       20 20 07.0 +0.5
      comp=Z,2µmcomp=Z,165nm,1.1s
MRSI  Marisa           30.51 224 P     P       20 20 07.0 +0.4
      comp=Z,1µmcomp=Z,116nm,0.9s
BNDI  Bandanaira       30.53 206 P     P       20 20 05.8 -0.9
NLAI  Namlea           30.63 212 P     P       20 20 07.1 -0.5
      comp=Z,63nm,1.0s
TOLI2 Tolitoli         30.80 227 P     P       20 20 09.3 +0.2
TOLI2 Tolitoli         30.80 227 P     P       20 20 09.0 -0.1
KKM   Kota Kinabalu    30.86 240 P     P       20 20 10.7 +0.9
QIZ   Qiongzhong       30.93 268 P     P       20 20 11.8 +1.5
QIZ                              S     S       20 25 13.9 +3.9
QIZ                              LR    LR
      comp=Z,210nm,13.1s
QIZ                              LR    LR
      comp=Z,370nm,22.4s
LUWI  Luwuk            31.17 221 P     P       20 20 12.0 -0.4
LUWI                             IAmb  IAmb    20 20 19.1
      comp=Z,58nm,0.8s
LUWI  Luwuk            31.17 221 P     P       20 20 12.0 -0.4
LUWI  Luwuk            31.17 221 P     P       20 20 11.9 -0.4
      comp=Z,3µmcomp=Z,83nm,1.0s
XAN   Xi'an            31.32 297 ⇓P    P       20 20 13.5 -0.1
XAN                              pP    pP      20 20 24.0 -5.1
XAN                              S     S       20 25 15.2 -0.7
XAN                              pmax  pmax
      comp=Z,31nm,0.4s
XAN                              pmax  pmax
      comp=Z,140nm,3.8s
XAN                              LR    LR
      comp=Z,360nm,17.8s
XAN                              LR    LR
      comp=Z,510nm,18.6s
XAN                              LR    LR
      comp=Z,720nm,21.3s
HHC   Hu-ho-hao-te     31.33 311 eP    P       20 20 13.9 +0.2
HHC                              PP    PnPn    20 21 18.7 +0.2
HHC                              S     S       20 25 20.1 +4.1
HHC                              SS    SnSn    20 27 05.5  0.0
HHC                              pmax  pmax
      comp=Z,23nm,0.5s
HHC                              pmax  pmax
      comp=Z,63nm,4.7s
HHC                              LR    LR
      comp=Z,150nm,11.8s
HHC                              LR    LR
      comp=Z,130nm,11.7s
HHC                              LR    LR
      comp=Z,360nm,15.7s
HIA   Hailar           31.45 331 P     P       20 20 13.8 -0.7
HIA                              IAmb  IAmb    20 20 14.8
      comp=Z,22nm,0.6s
HIA   Hailar           31.45 331 P     P       20 20 13.8 -0.7
HIA                              pmax  pmax
      comp=Z,22nm,0.6s
PEA0B Petropavlovsk-   31.68  17 P     P       20 20 17.6 +1.2
PEA0B Petropavlovsk-   31.68  17deP    P       20 20 18.0 +1.5
PETK  Petropavlovsk-   31.68  17 P     P       20 20 18.2 +1.7
PETK  Petropavlovsk-   31.68  17 P     P       20 20 17.9 +1.4
      comp=Z,4.5nm,0.7s,baz=218,slow=7.7,SNR=9.6
PETK                             ScP   ScP     20 26 40.5 -3.7
      comp=Z,1.5nm,0.7s,baz=191,slow=5.8,SNR=4.4
PETK                             LR    LR      20 32 15.4
      comp=Z,107nm,22.0s,baz=204,slow=34
      comp=Z,4.5nm,0.7s
PETK  Petropavlovsk-   31.68  17 P     P       20 20 18.2 +1.7
APSI  Ampana           31.76 223 P     P       20 20 16.4 -1.2
      comp=Z,679nmcomp=Z,42nm,1.0s
PET   Petropavlovsk    31.87  18 P     P       20 20 18.3 +0.2
PET   Petropavlovsk    31.87  18 eP    P       20 20 18.8 +0.7
PET                              eS    S       20 25 23.2 -0.6
PET                              pmax  pmax
      comp=Z,18nm,1.4s
PET                              MLR   MLR
      comp=Z,200nm,10.0s
PET                              MLR   MLR
      comp=Z,200nm,11.0s
MPSI  Mapaga           31.96 227 P     P       20 20 18.7 -0.6
BTO   Baotou           32.32 310 eP    P       20 20 23.9 +1.5
BTO                              pP    pP      20 20 35.9 -2.0
BTO                              sP    pwP     20 20 41.5 -0.4
BTO                              PP    PnPn    20 21 33.9 +2.8
BTO                              S     S       20 25 36.3 +5.0
BTO                              sS    sS      20 25 55.2 -2.8
BTO                              pmax  pmax
      comp=Z,23nm,0.8s
BTO                              pmax  pmax
      comp=Z,270nm,9.7s
BTO                              LR    LR
      comp=Z,760nm,19.5s
BTO                              LR    LR
      comp=Z,550nm,23.4s
BTO                              LR    LR
      comp=Z,760nm,23.5s
ZEA   Zeya             32.38 343 eP    P       20 20 23.0 +0.4
ZEA                              eS    S       20 25 28.3 -3.5
ZEA                              pmax  pmax
      comp=Z,200nm,0.7s
ZEA                              pmax  pmax
      comp=E,40nm,0.5s
ZEA                              pmax  pmax
      comp=N,50nm,0.7s
ZEA                              pmax  pmax
      comp=Z,210nm,0.7s
ZEA                              MLR   MLR
      comp=N,200nm,16.0s
GYA   Guiyang          32.77 283 ⇑P    P       20 20 27.9 +1.4
GYA                              pP    pP      20 20 40.4 -1.6
GYA                              S     S       20 25 36.1 -2.6
GYA                              pmax  pmax
      comp=N,16nm,0.7s
GYA                              pmax  pmax
      comp=N,120nm,3.5s
GYA                              LR    LR
      comp=N,240nm,11.6s
GYA                              LR    LR
      comp=N,250nm,21.1s
GYA                              LR    LR
      comp=N,450nm,21.2s
PCI   Palu             32.92 226 P     P       20 20 25.9 -1.9
      comp=N,46nm,0.8s
PMG   Port Moresby     32.98 172 P     P       20 20 27.5 -0.7
PMG                              IAmb  IAmb    20 20 28.3
      comp=Z,32nm,0.7s
PMG   Port Moresby     32.98 172 LR    LR      20 31 42.1
      comp=Z,252nm,19.4s,baz=350,slow=32
PMG   Port Moresby     32.98 172 P     P       20 20 27.4 -0.8
PMG   Port Moresby     32.98 172 P     P       20 20 27.5 -0.7
PMG                              pmax  pmax
      comp=Z,32nm,0.7s
TTSI  Tana Toraja      34.56 223 P     P       20 20 40.8 -1.2
      comp=Z,48nm,1.1s
BBSI  Bau Bau          34.89 217 P     P       20 20 45.4 +0.6
      comp=Z,125nm,1.1s
SPSI  Sidrap Palu      35.31 222 P     P       20 20 47.5 -0.9
      comp=Z,1µmcomp=Z,160nm,0.7s
CD2   Chengdu          35.31 291 P     P       20 20 49.5 +1.1
CD2                              PP    PP      20 22 13.3 +3.7
CD2                              pmax  pmax
      comp=Z,50nm,0.6s
CD2                              pmax  pmax
      comp=Z,130nm,4.2s
CD2                              LR    LR
      comp=Z,330nm,12.7s
CD2                              LR    LR
      comp=Z,260nm,12.1s
BNSI  Bone             35.44 221 P     P       20 20 50.8 +1.3
LZH   Lanzhou          35.78 300 eP    P       20 20 53.2 +0.7
LZH                              pP    pP      20 21 05.3 -2.9
LZH                              sP    pwP     20 21 11.1 -1.2
LZH                              S     S       20 26 23.6 -1.5
LZH                              sS    sS      20 26 49.4 -2.6
LZH                              ScS   ScS     20 31 02.8 -1.9
LZH                              pmax  pmax
      comp=Z,79nm,1.3s
LZH                              pmax  pmax
      comp=Z,190nm,4.4s
LZH                              LR    LR
      comp=Z,430nm,15.1s
LZH                              LR    LR
      comp=Z,390nm,14.4s
LZH                              LR    LR
      comp=Z,640nm,14.8s
TATA  Tatamba Isabel   35.81 150 P     P       20 20 52.1 -0.6
SLVN  Son La           35.89 274 P     P       20 20 54.4 +0.9
UBPT  Khong Chiam      36.01 264 P     P       20 20 55.7 +1.3
KAPI  Kappang          36.14 221 P     P       20 20 56.4 +0.8
KAPI                             IAmb  IAmb    20 20 57.6
      comp=Z,97nm,1.3s
KAPI  Kappang          36.14 221 LR    LR      20 36 14.0
      comp=Z,37nm,20.1s,baz=22,slow=37
KAPI  Kappang          36.14 221 P     P       20 20 56.8 +1.3
KAPI  Kappang          36.14 221c iP   P       20 20 56.5 +1.0
KAPI                             pmax  pmax
      comp=Z,53nm,1.1s
KAPI  Kappang          36.14 221 P     P       20 20 56.7 +1.2
SBUM  Sibu             36.19 239 P     P       20 20 56.6 +0.6
SBUM  Sibu             36.19 239 P     P       20 20 57.3 +1.3
KMI   Kunming          36.40 281 ⇓P    P       20 20 59.0 +1.0
KMI                              S     S       20 26 34.3 -0.5
KMI                              pmax  pmax
      comp=Z,27nm,0.8s
KMI                              LR    LR
      comp=Z,180nm,17.2s
KMI                              LR    LR
      comp=Z,250nm,18.3s
KMI                              LR    LR
      comp=Z,390nm,21.5s
MA2   Magadan          36.50   7 P     P       20 20 59.5 +1.4
MA2                              IAmb  IAmb    20 21 07.6
      comp=Z,31nm,0.8s
MA2   Magadan          36.50   7 LR    LR      20 33 34.2
      comp=Z,104nm,21.3s,baz=196,slow=32
MA2   Magadan          36.50   7d iP   P       20 20 59.7 +1.6
MA2                              pmax  pmax
      comp=Z,17nm,0.9s
HNR   Honiara          36.80 151 LR    LR      20 36 48.0
      comp=Z,124nm,18.7s,baz=276,slow=37
PZH   PanZhiHua        37.16 283 ⇓P    P       20 21 05.1 +0.7
PZH                              PP    PnPn    20 22 34.9 +3.6
PZH                              S     S       20 26 43.0 -3.3
PZH                              pmax  pmax
      comp=Z,160nm,0.8s
PZH                              pmax  pmax
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	comp=Z,130nm,4.8s						
PZH				LR	LR		
	comp=Z,220nm,22.9s						
PZH				LR	LR		
	comp=Z,270nm,20.2s						
PZH				LR	LR		
	comp=Z,370nm,20.7s						
COEN	**Coen**	**37.23**	**179**	P	**P**	**20 21 04.7**	**-0.1**
COEN				IAmb	IAmb	20 21 06.7	
	comp=Z,65nm,0.8s						
COEN	**Coen**	**37.23**	**179**	P	**P**	**20 21 05.3**	**+0.6**
	comp=Z,92nm,0.8s						
COEN	**Coen**	**37.23**	**179**	P	**P**	**20 21 04.6**	**-0.1**
ULN	**Ulaanbaatar**	**37.33**	**320**	P	**P**	**20 21 05.0**	**-0.5**
ULN	**Ulaanbaatar**	**37.33**	**320**	d iP	**P**	**20 21 04.8**	**-0.7**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ULN	**Ulaanbaatar**	**37.33**	**320**	P	**P**	**20 21 04.7**	**-0.8**
KDU	**Kakadu**	**37.34**	**197**	P	**P**	**20 21 04.8**	**-0.8**
	comp=Z,33nm,0.8s						
KDU	**Kakadu**	**37.34**	**197**	P	**P**	**20 21 04.4**	**-1.2**
DRS	**Darwin Rock St**	**37.54**	**199**	P	**P**	**20 21 06.6**	**-0.7**
SOEI	**Soe**	**37.66**	**211**	P	**P**	**20 21 07.4**	**-1.2**
SOEI	**Soe**	**37.66**	**211**	P	**P**	**20 21 07.2**	**-1.4**
SOEI	**Soe**	**37.66**	**211**	P	**P**	**20 21 06.7**	**-1.9**
	comp=Z,152nm,0.6s						
SHEM	**Shemya Is, Ala**	**37.68**	**31**	LR	LR	20 33 26.5	
	comp=Z,160nm,21.8s,baz=235,slow=31						
MMRI	**Maumere**	**37.70**	**214**	P	**P**	**20 21 08.7**	**-0.1**
MMRI	**Maumere**	**37.70**	**214**	P	**P**	**20 21 09.0**	**+0.2**
MMRI	**Maumere**	**37.70**	**214**	P	**P**	**20 21 09.4**	**+0.6**
	comp=Z,2µmcomp=Z,196nm,0.8s						
SONM	**Songino Array**	**37.70**	**319**	P	**P**	**20 21 07.5**	**-1.2**
SONM				IAmb	IAmb	20 21 11.8	
	comp=Z,16nm,0.6s						
SONM	**Songino Array**	**37.70**	**319**	P	**P**	**20 21 07.2**	**-1.5**
	comp=Z,18nm,0.7s,baz=131,slow=8.3,SNR=28						
SONM				ScP	**ScP**	**20 27 04.0**	**-2.1**
	comp=Z,1.2nm,0.5s,baz=131,slow=4.0,SNR=2.0						
SONM				LR	LR	20 37 18.1	
	comp=Z,255nm,19.9s,baz=93,slow=37						
	comp=Z,18nm,0.7s						
SONM	**Songino Array**	**37.70**	**319**	P	**P**	**20 21 07.5**	**-1.2**
SONM				pmax	pmax		
	comp=Z,16nm,0.6s						
MTN	**Manton Dam**	**37.86**	**199**	P	**P**	**20 21 09.0**	**-1.1**
MTN	**Manton Dam**	**37.86**	**199**	P	**P**	**20 21 09.5**	**-0.5**
	comp=Z,109nm,0.8s						
MTN	**Manton Dam**	**37.86**	**199**	P	**P**	**20 21 09.0**	**-1.1**
EDFI	**Ende, Flores**	**38.09**	**215**	P	**P**	**20 21 11.4**	**-0.7**
	comp=Z,2µmcomp=Z,204nm,0.8s						
STKI	**Sintang**	**38.26**	**237**	P	**P**	**20 21 13.5**	**0.0**
	comp=Z,23nm,0.9s						
BATI	**Baumata**	**38.34**	**211**	P	**P**	**20 21 12.9**	**-1.3**
	comp=Z,136nm,0.8s						
GTA	**Gaotai**	**39.51**	**304**	P	**P**	**20 21 23.9**	**0.0**
GTA				sP	pP	20 21 42.1	+2.3
GTA				PP	**PP**	**20 22 55.8**	**+0.1**
GTA				ScP	**ScP**	**20 27 11.5**	**-1.7**
GTA				S	**S**	**20 27 17.6**	**-3.9**
GTA				ScS	**ScS**	**20 31 22.8**	**-2.9**
GTA				pmax	pmax		
	comp=Z,18nm,0.9s						
GTA				LR	LR		
	comp=Z,390nm,18.9s						
GTA				LR	LR		
	comp=Z,270nm,18.9s						
GTA				LR	LR		
	comp=Z,340nm,18.2s						
YAK	**Yakutsk**	**39.53**	**350**	P	**P**	**20 21 23.8**	**+0.2**
YAK	**Yakutsk**	**39.53**	**350**	LR	LR	20 38 37.4	
	comp=Z,322nm,20.9s,baz=154,slow=37						
YAK	**Yakutsk**	**39.53**	**350**	eP	**P**	**20 21 23.6**	**0.0**
YAK				e*PP	**pP**	**20 21 35.4**	**-4.0**
YAK				eS	**S**	**20 27 22.6**	**+1.7**
YAK				e*SS	sS	20 27 41.0	-7.0
YAK				eSS	**SS**	**20 30 12.2**	**-5.5**
YAK				pmax	pmax		
	comp=Z,168nm,0.9s						
YAK				pmax	pmax		
	comp=E,9.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,54nm,1.3s						
YAK				smax	smax		
	comp=E,29nm,1.4s						
YAK				smax	smax		
	comp=N,80nm,2.1s						
YAK	**Yakutsk**	**39.53**	**350**	P	**P**	**20 21 23.9**	**+0.2**
YAK				pP	**pP**	**20 21 39.9**	**+0.5**
WSI	**Waingapu**	**39.60**	**216**	P	**P**	**20 21 22.8**	**-1.9**
SEY	**Seymchan**	**39.95**	**7**	d iP	**P**	**20 21 28.6**	**+1.5**
SEY				pmax	pmax		
	comp=Z,19nm,0.7s						
BOD	**Bodaibo**	**40.03**	**336**	eP	**P**	**20 21 27.5**	**-0.3**
BOD				pmax	pmax		
	comp=Z,35nm,1.2s						
TNCH	**TengChong**	**40.21**	**281**	⇓P	**P**	**20 21 30.5**	**+0.6**
TNCH				pP	pP	20 21 44.7	-1.2
TNCH				sP	pwP	20 21 50.9	+1.2
TNCH				PP	**PnPn**	**20 23 10.8**	**+3.1**
TNCH				S	**S**	**20 27 35.0**	**+2.7**
TNCH				sS	sS	20 27 56.2	-3.3
TNCH				SS	**SS**	**20 30 29.4**	**-3.2**
TNCH				ScS	**ScS**	**20 31 30.6**	**+0.2**
TNCH				pmax	pmax		
	comp=Z,29nm,0.7s						
TNCH				pmax	pmax		
	comp=Z,95nm,2.9s						
TNCH				LR	LR		
	comp=Z,250nm,14.4s						
TNCH				LR	LR		
	comp=Z,180nm,11.7s						
TNCH				LR	LR		
	comp=Z,310nm,37.0s						
PLAI	**Plampang**	**40.34**	**220**	P	**P**	**20 21 30.4**	**-0.5**
PLAI	**Plampang**	**40.34**	**220**	P	**P**	**20 21 29.3**	**-1.6**
	comp=Z,2µmcomp=Z,142nm,1.3s						
ZAK	**Zakamensk**	**40.68**	**321**	eP	**P**	**20 21 31.5**	**-1.9**
ZAK				pmax	pmax		
	comp=Z,11nm,0.8s						
CHTO	**Chiang Mai**	**40.99**	**272**	P	**P**	**20 21 36.7**	**+0.5**
CHTO				IAmb	IAmb	20 21 38.7	
	comp=Z,27nm,0.7s						
CHTO	**Chiang Mai**	**40.99**	**272**	P	**P**	**20 21 36.9**	**+0.7**
CHTO	**Chiang Mai**	**40.99**	**272**	P	**P**	**20 21 36.7**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,27nm,0.7s						
CHTO	**Chiang Mai**	**40.99**	**272**	P	**P**	**20 21 36.7**	**+0.5**
IRK	**Irkutsk**	**41.01**	**324**	eP	**P**	**20 21 34.8**	**-1.1**
IRK				pmax	pmax		
	comp=Z,25nm,0.5s						
CM31	**Chiang Mai Arr**	**41.08**	**272**	P	**P**	**20 21 38.1**	**+1.1**
CM31				IAmb	IAmb	20 21 39.4	
	comp=Z,49nm,0.6s						
CMAR	**Chiang Mai Arr**	**41.08**	**272**	P	**P**	**20 21 37.7**	**+0.7**
CMAR	**Chiang Mai Arr**	**41.08**	**272**	P	**P**	**20 21 36.7**	**-0.2**
	comp=Z,26nm,0.5s,baz=73,slow=8.8,SNR=282						
CMAR				ScP	**ScP**	**20 27 17.5**	**-2.0**
	comp=Z,1.7nm,0.6s,baz=76,slow=3.8,SNR=8.1						
CMAR				LR	LR	20 37 08.6	
	comp=Z,193nm,21.6s,baz=80,slow=34						
	comp=Z,26nm,0.5s						
CMAR	**Chiang Mai Arr**	**41.08**	**272**	P	**P**	**20 21 37.7**	**+0.7**
KNRA	**Kununurra**	**41.26**	**201**	P	**P**	**20 21 37.6**	**-0.7**
KNRA				IAmb	IAmb	20 21 38.7	
	comp=Z,101nm,1.2s						
KNRA	**Kununurra**	**41.26**	**201**	P	**P**	**20 21 37.7**	**-0.6**
	comp=Z,68nm,0.9s						
MTSU	**Mount Surprise**	**41.40**	**178**	P	**P**	**20 21 40.4**	**+0.9**
	comp=Z,23nm,0.7s						
JAGI	**Jajag, Banyuwa**	**42.31**	**225**	P	**P**	**20 21 46.9**	**-0.1**
JAGI				IAmb	IAmb	20 21 47.9	
	comp=Z,105nm,0.8s						
JAGI	**Jajag, Banyuwa**	**42.31**	**225**	P	**P**	**20 21 46.9**	**-0.1**
JAGI	**Jajag, Banyuwa**	**42.31**	**225**	P	**P**	**20 21 46.0**	**-1.0**
	comp=Z,155nm,1.0s						
MOY	**Mondy**	**42.54**	**322**	eP	**P**	**20 21 47.9**	**-0.7**
MOY				pmax	pmax		
	comp=Z,20nm,2.8s						
GOMU	**GeErMu**	**43.05**	**298**	P	**P**	**20 21 54.4**	**+1.1**
GOMU				sP	pP	20 22 10.3	+1.0
GOMU				S	**S**	**20 28 17.4**	**+2.9**
GOMU				pmax	pmax		
	comp=Z,82nm,1.0s						
GOMU				pmax	pmax		
	comp=Z,380nm,3.6s						
GOMU				LR	LR		
	comp=Z,280nm,20.8s						
GOMU				LR	LR		
	comp=Z,290nm,21.8s						
GOMU				LR	LR		
	comp=Z,460nm,22.4s						
MYKOM	**Kota Tinggi**	**43.40**	**246**	P	**P**	**20 21 58.0**	**+2.2**
CTAO	**Charters Tower**	**43.45**	**175**	P	**P**	**20 21 55.8**	**-0.3**
CTAO				IAmb	IAmb	20 21 57.6	
	comp=Z,119nm,1.1s						
CTAO	**Charters Tower**	**43.45**	**175**	P	**P**	**20 21 55.9**	**-0.3**
CTAO	**Charters Tower**	**43.45**	**175**	P	**P**	**20 21 55.8**	**-0.3**
CTAO				pmax	pmax		
	comp=Z,119nm,1.1s						
CTAO	**Charters Tower**	**43.45**	**175**	P	**P**	**20 21 56.1**	**0.0**
QIS	**Mount Isa**	**43.89**	**184**	P	**P**	**20 21 59.2**	**-0.4**
	comp=Z,59nm,0.8s						
QIS	**Mount Isa**	**43.89**	**184**	P	**P**	**20 21 58.9**	**-0.7**
WRAB	**Tennant Creek**	**43.93**	**191**	P	**P**	**20 21 59.4**	**-0.6**
WRAB	**Tennant Creek**	**43.93**	**191**	c iP	**P**	**20 21 59.1**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,92nm,0.9s						
WRA	**Warramunga Arr**	**43.94**	**191**	P	**P**	**20 21 58.8**	**-1.3**
	comp=Z,78nm,0.6s,baz=10,slow=8.2,SNR=744						
WRA				PcP	**PcP**	**20 23 45.6**	**+0.6**
	comp=Z,9.1nm,0.7s,baz=13,slow=3.7,SNR=2.1						
WRA				ScP	**ScP**	**20 27 28.7**	**-2.1**
	comp=Z,4.9nm,0.7s,baz=7.7,slow=4.5,SNR=8.0						
WRA				S	**S**	**20 28 22.3**	**-4.6**
	comp=Z,1.6nm,0.6s,baz=14,slow=15,SNR=5.2						
	comp=Z,78nm,0.6s						
UGM	**Wanagama**	**44.34**	**229**	P	**P**	**20 22 03.3**	**-0.1**
UGM	**Wanagama**	**44.34**	**229**	P	**P**	**20 22 03.3**	**-0.1**
KULM	**Kulim**	**44.37**	**253**	P	**P**	**20 22 04.6**	**+0.9**
KULM	**Kulim**	**44.37**	**253**	P	**P**	**20 22 04.8**	**+1.1**
FITZ	**Fitzroy Crossi**	**44.58**	**203**	P	**P**	**20 22 04.8**	**-0.3**
FITZ	**Fitzroy Crossi**	**44.58**	**203**	P	**P**	**20 22 04.9**	**-0.2**
	comp=Z,28nm,1.1s						
FITZ	**Fitzroy Crossi**	**44.58**	**203**	P	**P**	**20 22 04.4**	**-0.8**
SANVU	**Saraoutou**	**45.50**	**146**	P	**P**	**20 22 11.4**	**-1.1**
LEM	**Lembang**	**45.66**	**233**	LR	LR	20 43 57.7	
	comp=Z,57nm,18.2s,baz=83,slow=40						
BBJI	**Bungbulang**	**46.07**	**232**	P	**P**	**20 22 16.6**	**-0.5**
LSA	**Lhasa**	**46.23**	**289**	P	**P**	**20 22 20.6**	**+1.8**
LSA				IAmb	IAmb	20 22 22.3	
	comp=Z,62nm,0.6s						
LSA	**Lhasa**	**46.23**	**289**	P	**P**	**20 22 20.7**	**+1.8**
LSA				pmax	pmax		
	comp=Z,32nm,0.6s						
LSA	**Lhasa**	**46.23**	**289**	P	**P**	**20 22 20.6**	**+1.8**
LSA				pmax	pmax		
	comp=Z,62nm,0.6s						
LSA	**Lhasa**	**46.23**	**289**	P	**P**	**20 22 20.6**	**+1.8**
LSA	**Lhasa**	**46.23**	**289**	P	**P**	**20 22 20.9**	**+2.1**
NIKH	**Nikolski High**	**46.82**	**38**	P	**P**	**20 22 21.9**	**-0.5**
	baz=250						
BILL	**Bilibino**	**46.85**	**12**	P	**P**	**20 22 23.7**	**+1.2**
BILL				IAmb	IAmb	20 22 48.0	
	comp=Z,36nm,0.7s						
BILL	**Bilibino**	**46.85**	**12**	d iP	**P**	**20 22 23.5**	**+1.0**
BILL				pmax	pmax		
	comp=Z,27nm,0.9s						
BILL	**Bilibino**	**46.85**	**12**	P	**P**	**20 22 23.9**	**+1.4**
BILL				pP	**pP**	**20 22 39.9**	**+1.4**
PSI	**Prapat**	**47.08**	**251**	LR	LR	20 44 32.6	
	comp=Z,62nm,18.1s,baz=64,slow=39						
PSI	**Prapat**	**47.08**	**251**	P	**P**	**20 22 25.5**	**+0.3**
PSI				pmax	pmax		
	comp=Z,11nm,0.8s						
RPSI	**Rantau Prapat**	**47.13**	**251**	P	**P**	**20 22 25.5**	**+0.1**
PPI	**Padang Panjang**	**47.51**	**246**	P	P	20 22 33.4	+5.1
AS01	**Alice Springs**	**47.65**	**191**	P	**P**	**20 22 27.9**	**-1.3**
AS31	**Alice Springs**	**47.66**	**191**	P	**P**	**20 22 28.3**	**-1.0**
AS31				IAmb	IAmb	20 22 30.4	
	comp=Z,24nm,0.4s						
AS31	**Alice Springs**	**47.66**	**191**	P	**P**	**20 22 28.2**	**-1.0**
	comp=Z,25nm,0.6s						
ASAR	**Alice Springs**	**47.66**	**191**	P	**P**	**20 22 28.3**	**-1.0**
ASAR	**Alice Springs**	**47.66**	**191**	P	**P**	**20 22 28.6**	**-0.7**
	comp=Z,23nm,0.6s,baz=13,slow=7.2,SNR=334						
ASAR				ScP	**ScP**	**20 27 44.1**	**-2.1**
	comp=Z,2.6nm,0.6s,baz=11,slow=5.1,SNR=7.8						
ASAR				S	**S**	**20 29 16.6**	**-3.7**
	comp=Z,0.7nm,0.6s,baz=12,slow=23,SNR=5.0						
ASAR				LR	LR	20 43 07.7	
	comp=Z,166nm,18.6s,baz=15,slow=37						
	comp=Z,23nm,0.6s						
LHMI	**Lhok Sumawe**	**47.67**	**255**	P	**P**	**20 22 30.1**	**+0.6**
LHMI				IAmb	IAmb	20 22 53.6	
	comp=Z,49nm,0.9s						
SPIA	**Saint Paul Isl**	**47.67**	**33**	P	**P**	**20 22 28.6**	**-0.4**
	baz=245						
P08K	**Saint George I**	**47.79**	**34**	P	**P**	**20 22 28.5**	**-1.4**
	baz=246						
UNV	**Unalaska Valle**	**48.44**	**38**	P	**P**	**20 22 36.0**	**+1.1**
UNV				IAmb	IAmb	20 23 21.2	
	comp=Z,29nm,1.0s						
UNV	**Unalaska Valle**	**48.44**	**38**	P	**P**	**20 22 34.3**	**-0.6**
	baz=252						
KOUNC	**Koumac, New Ca**	**48.56**	**153**	P	**P**	**20 22 36.1**	**-0.1**
TIXI	**Tiksi**	**48.83**	**354**	P	**P**	**20 22 38.3**	**+0.7**
TIXI				IAmb	IAmb	20 23 01.0	
	comp=Z,22nm,0.6s						
TIXI	**Tiksi**	**48.83**	**354**	LR	LR	20 43 49.1	
	comp=Z,128nm,21.6s,baz=176,slow=37						
TIXI	**Tiksi**	**48.83**	**354**	⇓eP	**P**	**20 22 38.4**	**+0.7**
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
TIXI	**Tiksi**	**48.83**	**354**	P	**P**	**20 22 37.8**	**+0.1**
GSI	**Gunungsitoli**	**48.99**	**250**	P	**P**	**20 22 39.5**	**-0.3**
GSI				IAmb	IAmb	20 22 41.2	
	comp=Z,30nm,0.7s						
GSI	**Gunungsitoli**	**48.99**	**250**	P	**P**	**20 22 40.3**	**+0.5**
WMQ	**Urumqi**	**49.13**	**308**	eP	**P**	**20 22 41.2**	**+0.6**
WMQ				pP	pP	20 22 54.6	-2.3
WMQ				pmax	pmax		
	comp=Z,34nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,120nm,4.9s						
WMQ				LR	LR		
	comp=Z,180nm,18.3s						
WMQ				LR	LR		
	comp=Z,350nm,19.5s						
WMQ				LR	LR		
	comp=Z,350nm,23.3s						
EIDS	**Eidsvold**	**49.24**	**170**	P	**P**	**20 22 40.7**	**-0.7**
EIDS				IAmb	IAmb	20 22 41.4	
	comp=Z,40nm,0.6s						
EIDS	**Eidsvold**	**49.24**	**170**	P	**P**	**20 22 40.5**	**-0.9**
	comp=Z,58nm,0.6s						
MBWA	**Marble Bar**	**49.72**	**209**	P	**P**	**20 22 45.0**	**-0.1**
MBWA	**Marble Bar**	**49.72**	**209**	P	**P**	**20 22 45.2**	**0.0**
	comp=Z,104nm,1.0s						
MBWA	**Marble Bar**	**49.72**	**209**	P	**P**	**20 22 44.8**	**-0.3**
MBWA	**Marble Bar**	**49.72**	**209**	P	**P**	**20 22 45.0**	**-0.1**
QLP	**Quilpie**	**49.80**	**178**	P	**P**	**20 22 44.6**	**-1.1**
	comp=Z,0.0nmcomp=Z,136nm,0.8s						
PSA00	**Pilbara Seismi**	**50.03**	**208**	P	**P**	**20 22 47.6**	**+0.1**
	comp=Z,127nm,1.0s						
PSA00	**Pilbara Seismi**	**50.03**	**208**	P	**P**	**20 22 47.3**	**-0.2**
GAMB	**Gambell**	**50.15**	**24**	P	**P**	**20 22 46.4**	**-1.5**
	baz=238						
EVN	**Everest**	**50.21**	**288**	P	**P**	**20 22 50.9**	**+1.2**
WRKA	**Warakurna**	**50.23**	**197**	P	**P**	**20 22 48.2**	**-0.8**
	comp=Z,109nm,0.9s						
WRKA	**Warakurna**	**50.23**	**197**	P	**P**	**20 22 48.1**	**-0.9**
DZM	**Mont Dzumac**	**50.83**	**151**	P	**P**	**20 22 53.2**	**-0.4**
DZM				IAmb	IAmb	20 22 54.4	
	comp=Z,47nm,1.1s						
DZM	**Mont Dzumac**	**50.83**	**151**	LR	LR	20 41 22.2	
	comp=Z,467nm,21.6s,baz=359,slow=32						
DZM	**Mont Dzumac**	**50.83**	**151**	P	**P**	**20 22 53.2**	**-0.4**
DZM	**Mont Dzumac**	**50.83**	**151**	P	**P**	**20 22 52.8**	**-0.8**
DZM				PcP	**PcP**	**20 24 10.6**	**+1.0**
M11K	**Mekoryuk**	**50.90**	**30**	P	**P**	**20 22 53.0**	**-0.5**
	baz=247						
YATNC	**Mamie plateau,**	**51.02**	**151**	P	**P**	**20 22 55.1**	**+0.2**
OUENC	**Ouen Island, N**	**51.31**	**151**	P	**P**	**20 22 57.1**	**0.0**
ZSN	**Zaisan**	**51.50**	**313**	eP	**P**	**20 22 58.5**	**+0.2**
ZSN				pmax	pmax		
	comp=Z,30nm,0.7s						
ZSN	**Zaisan**	**51.50**	**313**	eP	**P**	**20 22 58.5**	**+0.2**
	comp=Z,30nm,0.7s						
PINNC	**Pines Island,**	**51.75**	**151**	P	**P**	**20 23 01.4**	**+1.0**
K13K	**Kusilvak Mount**	**52.20**	**28**	P	**P**	**20 23 05.2**	**+2.0**
K13K				IAmb	IAmb	20 23 29.2	
	comp=Z,35nm,1.2s						
K13K	**Kusilvak Mount**	**52.20**	**28**	P	**P**	**20 23 02.0**	**-1.2**
	baz=247						
SDPT	**Sand Point**	**52.22**	**37**	P	**P**	**20 23 02.4**	**-1.1**
	baz=256						
M13K	**Dall Lake**	**52.23**	**30**	P	**P**	**20 23 02.6**	**-0.9**
	baz=250						
TNA	**Tin City**	**52.46**	**23**	P	**P**	**20 23 03.6**	**-1.5**
	baz=241						
YSA	**Yasawairara**	**52.49**	**136**	P	**P**	**20 23 06.6**	**+0.7**
ZAA0	**Zalesovo Array**	**52.56**	**321**	P	**P**	**20 23 05.3**	**-0.7**
ZAA0				IAmb	IAmb	20 23 09.3	
	comp=Z,14nm,0.6s						
ZALV	**Zalesovo Beam**	**52.56**	**321**	P	**P**	**20 23 05.2**	**-0.8**
ZALV	**Zalesovo Beam**	**52.56**	**321**	P	**P**	**20 23 05.0**	**-1.0**
	comp=Z,18nm,0.5s,baz=107,slow=7.2,SNR=91						
ZALV				ScP	**ScP**	**20 28 04.5**	**-2.3**
	comp=Z,1.1nm,0.6s,baz=116,slow=3.4,SNR=2.6						
ZALV				S	**S**	**20 30 25.0**	**-2.7**
	comp=Z,0.5nm,0.4s,baz=101,slow=28,SNR=2.2						
ZALV				LR	LR	20 47 37.7	
	comp=Z,193nm,18.5s,baz=96,slow=38						
	comp=Z,18nm,0.5s						
ZALV	**Zalesovo Beam**	**52.56**	**321**	P	**P**	**20 23 05.2**	**-0.8**
CHNA	**Chernabura Isl**	**52.60**	**38**	P	**P**	**20 23 04.6**	**-1.7**
	baz=257						
N14K	**Kuskokwak Cree**	**52.85**	**31**	P	**P**	**20 23 07.4**	**-0.7**
	baz=252						
O14K	**Tigyukauivet M**	**52.85**	**32**	P	**P**	**20 23 07.3**	**-0.9**
	baz=253						
L14K	**Kuka Creek**	**52.86**	**30**	P	**P**	**20 23 07.0**	**-1.1**
	baz=250						
S14K	**Fog Glacier**	**52.95**	**36**	P	**P**	**20 23 07.9**	**-1.1**
	baz=256						
ANM	**Nome**	**52.97**	**25**	P	**P**	**20 23 08.1**	**-0.8**
	baz=245						
J14K	**Nanvaranak Lak**	**52.98**	**28**	P	**P**	**20 23 08.4**	**-0.6**
	baz=248						
M14K	**Bethel**	**52.99**	**30**	P	**P**	**20 23 08.2**	**-0.9**
	baz=251						
F14K	**Arctic Creek**	**53.01**	**24**	P	**P**	**20 23 08.0**	**-1.1**
	baz=243						
MK31	**Makanchi Array**	**53.19**	**312**	d iP	**P**	**20 23 10.5**	**-0.4**
MKAR	**Makanchi Array**	**53.19**	**312**	P	**P**	**20 23 10.7**	**-0.2**
MKAR	**Makanchi Array**	**53.19**	**312**	P	**P**	**20 23 10.2**	**-0.7**
	comp=Z,53nm,0.6s,baz=90,slow=8.9,SNR=493						
MKAR				ScP	**ScP**	**20 28 07.8**	**-2.1**
	comp=Z,1.5nm,0.8s,baz=84,slow=5.8,SNR=3.0						
MKAR				S	**S**	**20 30 36.1**	**-0.6**
	comp=Z,4.1nm,1.3s,baz=91,slow=17,SNR=6.7						
MKAR				LR	LR	20 47 41.7	
	comp=Z,159nm,20.4s,baz=76,slow=38						
	comp=Z,53nm,0.6s						
MKAR	**Makanchi Array**	**53.19**	**312**	P	**P**	**20 23 10.7**	**-0.2**
MAKZ	**Makanchi**	**53.41**	**312**	P	**P**	**20 23 12.4**	**-0.1**
MAKZ				IAmb	IAmb	20 23 14.3	
	comp=Z,32nm,0.7s						
MAKZ	**Makanchi**	**53.41**	**312**	P	**P**	**20 23 12.4**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,32nm,0.7s						
MAKZ	**Makanchi**	**53.41**	**312**	P	**P**	**20 23 12.4**	**-0.1**
L15K	**Ungalak Mounta**	**53.51**	**29**	P	**P**	**20 23 12.5**	**-0.5**
	baz=251						
O15K	**Ungalikthiuk R**	**53.54**	**33**	P	**P**	**20 23 12.3**	**-0.9**
	baz=254						
MSVF	**Nonsavu**	**53.56**	**137**	P	**P**	**20 23 14.0**	**+0.1**
MSVF	**Nonsavu**	**53.56**	**137**	LR	LR	20 44 44.0	
	comp=Z,72nm,19.7s,baz=338,slow=34						
MSVF	**Nonsavu**	**53.56**	**137**	P	**P**	**20 23 15.4**	**+1.5**
MSVF	**Nonsavu**	**53.56**	**137**	deP	**P**	**20 23 16.0**	**+2.1**
MSVF				pmax	pmax		
	comp=Z,96nm,1.5s						
M15K	**Kasigluk River**	**53.56**	**31**	P	**P**	**20 23 11.7**	**-1.6**
	baz=252						
GIRL	**Giralia**	**53.59**	**213**	P	**P**	**20 23 15.0**	**+1.1**
GIRL	**Giralia**	**53.59**	**213**	P	**P**	**20 23 13.7**	**-0.2**
G15K	**Niukluk**	**53.67**	**25**	P	**P**	**20 23 13.0**	**-1.0**
	baz=246						
N15K	**Kwethluk River**	**53.69**	**31**	P	**P**	**20 23 13.2**	**-1.1**
	baz=253,SNR=6.0						
K15K	**Wolf Creek Mou**	**53.70**	**29**	P	**P**	**20 23 13.6**	**-0.7**
	baz=250						
F15K	**North Star Dit**	**53.74**	**24**	P	**P**	**20 23 13.2**	**-1.4**
	baz=245						
H16K	**Elim**	**54.24**	**26**	P	**P**	**20 23 16.7**	**-1.5**
	baz=248						
ARMA	**Armidale**	**54.28**	**171**	P	**P**	**20 23 18.8**	**-0.2**
ARMA				IAmb	IAmb	20 23 19.8	
	comp=Z,70nm,1.3s						
ARMA	**Armidale**	**54.28**	**171**	P	**P**	**20 23 19.2**	**+0.2**
	comp=Z,43nm,1.7s						
R16K	**Pilot Point**	**54.30**	**35**	P	**P**	**20 23 16.7**	**-2.0**
	baz=257						
N16K	**Nishlik Lake**	**54.41**	**31**	P	**P**	**20 23 17.5**	**-2.1**
	baz=254,SNR=9.0						
P16K	**Nushagak River**	**54.42**	**33**	P	**P**	**20 23 18.1**	**-1.5**
	baz=256						
L16K	**Owhat River**	**54.43**	**30**	P	**P**	**20 23 18.0**	**-1.6**
	baz=253						
J16K	**Anvik River**	**54.43**	**28**	P	**P**	**20 23 18.0**	**-1.6**
	baz=250,SNR=6.8						
M16K	**Timber Creek**	**54.47**	**31**	P	**P**	**20 23 18.2**	**-1.8**
	baz=254						
G16K	**Koyuk River**	**54.48**	**25**	P	**P**	**20 23 18.5**	**-1.4**
	baz=247						
O16K	**Kokwok River B**	**54.51**	**32**	P	**P**	**20 23 18.4**	**-1.8**
	baz=255						
I17K	**Unalakleet**	**54.60**	**27**	P	**P**	**20 23 19.1**	**-1.6**
	baz=250						
C16K	**Lisburne Hills**	**54.64**	**21**	P	**P**	**20 23 19.6**	**-1.4**
	baz=242						
CMSA	**Cobar Meteorol**	**54.79**	**177**	P	**P**	**20 23 22.6**	**0.0**
	comp=Z,91nm,1.2s						
CMSA	**Cobar Meteorol**	**54.79**	**177**	P	**P**	**20 23 22.4**	**-0.2**
CHIR	**Chirikof Islan**	**55.02**	**37**	P	**P**	**20 23 21.9**	**-2.1**
	baz=260						
MEEK	**Meekatharra**	**55.03**	**207**	P	**P**	**20 23 23.4**	**-1.0**
	comp=Z,84nm,0.9s						
MEEK	**Meekatharra**	**55.03**	**207**	P	**P**	**20 23 23.7**	**-0.7**
O17K	**Koliganek Bris**	**55.04**	**32**	P	**P**	**20 23 23.2**	**-0.9**
	baz=256						
STKA	**Stephens Creek**	**55.07**	**181**	P	**P**	**20 23 23.7**	**-0.8**
STKA	**Stephens Creek**	**55.07**	**181**	P	**P**	**20 23 23.6**	**-1.0**
	comp=Z,234nm,0.6s						
STKA	**Stephens Creek**	**55.07**	**181**	P	**P**	**20 23 23.5**	**-1.0**
	comp=Z,34nm,0.3s,baz=356,slow=9.2,SNR=185						
STKA				LR	LR	20 47 57.3	
	comp=Z,111nm,19.0s,baz=17,slow=37						
	comp=Z,34nm,0.3s						
STKA	**Stephens Creek**	**55.07**	**181**	P	**P**	**20 23 23.4**	**-1.1**
STKA	**Stephens Creek**	**55.07**	**181**	ceP	**P**	**20 23 23.8**	**-0.8**
L17K	**Donlin**	**55.09**	**29**	P	**P**	**20 23 24.6**	**+0.2**
	baz=254,SNR=6.0						
SHLS	**Shalkode**	**55.09**	**307**	eP	**P**	**20 23 22.7**	**-2.2**
SHLS				pmax	pmax		
	comp=Z,15nm,0.6s						
SHLS	**Shalkode**	**55.09**	**307**	eP	**P**	**20 23 22.7**	**-2.2**
	comp=Z,15nm,0.6s						
J17K	**VABM Dome**	**55.12**	**28**	P	**P**	**20 23 24.1**	**-0.5**
	baz=252						
D17K	**Noatak River**	**55.15**	**22**	P	**P**	**20 23 24.3**	**-0.4**
	baz=245,SNR=14						
N17K	**Nushagak Hills**	**55.18**	**31**	P	**P**	**20 23 24.3**	**-0.8**
	baz=256						
G17K	**Kiwalik Mounta**	**55.18**	**25**	P	**P**	**20 23 24.3**	**-0.7**
	baz=249,SNR=6.3						
P17K	**Kvichak River**	**55.23**	**33**	P	**P**	**20 23 24.7**	**-0.8**
	baz=257						
K17K	**Iditarod**	**55.25**	**29**	P	**P**	**20 23 28.0**	**+2.4**
K17K				IAmb	IAmb	20 23 51.8	
	comp=Z,56nm,0.8s						
K17K	**Iditarod**	**55.25**	**29**	P	**P**	**20 23 25.3**	**-0.3**
	baz=253,SNR=12						
H17K	**Granite Mounta**	**55.28**	**26**	P	**P**	**20 23 25.6**	**-0.1**
	baz=250,SNR=5.3						
M17K	**Holitna River**	**55.28**	**30**	P	**P**	**20 23 25.1**	**-0.7**
	baz=255						
F17K	**Baldwin Pennin**	**55.30**	**24**	P	**P**	**20 23 25.5**	**-0.3**
	baz=248,SNR=7.4						
Q17K	**Contact Creek**	**55.32**	**34**	P	**P**	**20 23 25.5**	**-0.8**
	baz=258						
E17K	**Hotham Inlet**	**55.34**	**23**	P	**P**	**20 23 25.8**	**-0.3**
	baz=247,SNR=7.1						
RDOG	**Red Dog Mine**	**55.36**	**22**	P	**P**	**20 23 28.0**	**+1.7**
RDOG				IAmb	IAmb	20 23 37.5	

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      comp=Z,28nm,0.7s
RDOG  Red Dog Mine       55.36  22  P     P      20 23 26.0 -0.2
      baz=245,SNR=15
UZB   Uzynbulak          55.41 307  eP    P      20 23 27.3 +0.1
UZB                                 pmax  pmax
      comp=Z,9.0nm,0.5s
UZB   Uzynbulak          55.41 307  eP    P      20 23 27.3 +0.1
      comp=Z,8.8nm,0.5s
C17K  DeLong Mountai     55.45  21  P     P      20 23 26.5 -0.4
      baz=244,SNR=11
KPKS  Kokpek             55.65 308  eP    P      20 23 29.0 +0.1
KPKS  Kokpek             55.65 308  eP    P      20 23 29.1 +0.1
FORT  Forrest            55.77 195  P     P      20 23 28.8 -0.8
FORT  Forrest            55.77 195  P     P      20 23 28.8 -0.8
      comp=Z,353nm,0.8s
FORT  Forrest            55.77 195  P     P      20 23 28.7 -0.8
N18K  Kilae Creek        55.84  31  P     P      20 23 31.4 +1.6
N18K                                IAmb  IAmb   20 23 55.2
      comp=Z,36nm,1.6s
N18K  Kilae Creek        55.84  31  P     P      20 23 29.3 -0.5
      baz=257
L18K  Granite Mounta     55.84  30  P     P      20 23 29.0 -0.7
      baz=255
TDK   Taldyqorghan       55.84 309  eP    P      20 23 30.5 +0.4
TDK   Taldyqorghan       55.84 309  eP    P      20 23 30.5 +0.4
ZHN   Zhinishke          55.84 307  eP    P      20 23 30.4 +0.1
ZHN   Zhinishke          55.84 307  eP    P      20 23 30.4 +0.1
Q18K  Katmai Hardscr     55.85  34  P     P      20 23 29.2 -0.9
      baz=259
SATY  Saty               55.86 307  eP    P      20 23 30.5 +0.1
SATY                                pmax  pmax
      comp=Z,9.0nm,0.6s
SATY  Saty               55.86 307  eP    P      20 23 30.6 +0.1
      comp=Z,8.7nm,0.6s
P18K  Big Mountain,      55.88  33  P     P      20 23 29.3 -0.9
      baz=258
PRZ   Przheval'sk        55.88 306  P     P      20 23 32.2 +1.5
PRZ   Przheval'sk        55.88 306  P     P      20 23 32.2 +1.5
PRZ                                 pmax  pmax
      comp=Z,83nm,0.6s
KURK  Kurchatov          55.89 316  P     P      20 23 29.7 -0.6
KURK  Kurchatov          55.89 316  P     P      20 23 29.9 -0.4
KURK                                S     S      20 31 10.0 -2.7
KURK  Kurchatov          55.89 316  P     P      20 23 29.9 -0.4
E18K  Tukpahlearik C     55.91  23  P     P      20 23 30.8 +0.6
      baz=248,SNR=11
SII   Sitkinak Islan     55.93  37  P     P      20 23 29.8 -0.7
      baz=261
KURBB Kurchatov Arra     55.94 316  P     P      20 23 29.9 -0.8
      comp=Z,65nm,0.6s,baz=94,slow=8.0,SNR=595
KURBB                               S     S      20 31 10.0 -3.4
      comp=Z,5.2nm,1.2s,baz=92,slow=11,SNR=16
KURBB                               LR    LR     20 50 01.5
      comp=Z,209nm,19.1s,baz=212,slow=39
      comp=Z,65nm,0.6s
R18K  Karluk             55.95  35  P     P      20 23 29.4 -1.2
      baz=260
F18K  Selawik            55.96  24  P     P      20 23 29.8 -0.7
      baz=249
H18K  Honhosa River      55.97  26  P     P      20 23 30.3 -0.3
      baz=251
O18K  Koktuh Hills       55.99  33  P     P      20 23 30.6 -0.3
      baz=258,SNR=7.3
M18K  Stony River        56.05  31  P     P      20 23 31.0 -0.3
      baz=256
G18K  Tagagawik          56.09  25  P     P      20 23 31.3 -0.3
      baz=251
J18K  Innoko River       56.16  28  P     P      20 23 31.3 -0.7
      baz=254
NRIK  Noril'sk           56.17 339  P     P      20 23 32.1 +0.1
NRIK  Noril'sk           56.17 339  P     P      20 23 32.3 +0.2
      comp=Z,98nm,0.6s,baz=109,slow=12,SNR=178
NRIK                                S     S      20 31 15.6 -0.4
      comp=Z,1.8nm,0.7s,baz=180,slow=20,SNR=8.6
NRIK                                LR    LR     20 49 50.2
      comp=Z,278nm,18.1s,baz=113,slow=38
      comp=Z,98nm,0.6s
NRIK  Noril'sk           56.17 339deP     P      20 23 32.0  0.0
NRIK                                pmax  pmax
      comp=Z,64nm,0.8s
C18K  Utukok River       56.18  21  P     P      20 23 31.8 -0.4
      baz=246,SNR=9.3
ARXS  Arharly            56.26 308  eP    P      20 23 33.4 +0.2
B18K  Kokolik River      56.28  21  P     P      20 23 32.0 -0.7
      baz=245
TTA   Tatalina           56.32  29  P     P      20 23 31.6 -1.7
      baz=255
BBOO  Buckleboo          56.35 187  P     P      20 23 33.0 -0.7
BBOO                                IAmb  IAmb   20 23 34.0
      comp=Z,41nm,0.8s
BBOO  Buckleboo          56.35 187  P     P      20 23 32.6 -1.1
      comp=Z,60nm,1.2s
BBOO  Buckleboo          56.35 187  P     P      20 23 32.9 -0.8
TARG  Taragay, Kyrgy     56.35 305  P     P      20 23 35.9 +1.6
TARG                                IAmb  IAmb   20 23 38.6
      comp=Z,32nm,0.7s
TARG  Taragay, Kyrgy     56.35 305  P     P      20 23 35.9 +1.6
TARG                                pmax  pmax
      comp=Z,32nm,0.7s
GCSA  Galena City Sc     56.45  27  P     P      20 23 33.3 -0.7
      baz=253
O19K  Port Alsworth      56.49  32  P     P      20 23 33.7 -0.8
      baz=259
OHAK  Old Harbor         56.51  36  P     P      20 23 33.4 -1.2
      baz=262
N19K  Bonanza Creek      56.54  31  P     P      20 23 33.3 -1.6
      baz=258
Q19K  Cape Douglas,      56.60  34  P     P      20 23 33.6 -1.7
      baz=260
L19K  White Mountain     56.66  30  P     P      20 23 34.2 -1.5
      baz=257
HTT   Hallett            56.73 184  P     P      20 23 36.0 -0.5
      comp=Z,10nm,1.5s
HTT   Hallett            56.73 184  P     P      20 23 35.8 -0.6
F19K  Shaleruckik Mo     56.74  24  P     P      20 23 34.9 -1.2
      baz=251
J19K  Poorman            56.77  28  P     P      20 23 35.2 -1.2
      baz=255,SNR=12
G19K  Purcell Mounta     56.78  25  P     P      20 23 34.9 -1.6
      baz=252
M19K  Big River Lodg     56.81  30  P     P      20 23 36.6 -0.1
      baz=257
H19K  Roundabout Mou     56.85  26  P     P      20 23 37.6 +0.7
      baz=253,SNR=16
MDOK  Medeo              56.85 307  eP    P      20 23 37.6 +0.1
MDOK  Medeo              56.85 307  eP    P      20 23 37.6 +0.1
A19K  Wainwright         56.86  20  P     P      20 23 37.5 +0.7
      baz=246
C19K  Lookout Ridge      56.90  21  P     P      20 23 37.8 +0.5
      baz=248
P19K  Oil Pt             56.93  33  P     P      20 23 37.2 -0.4
      baz=260
TNSS  Tian-Shan          56.93 307  eP    P      20 23 38.2 -0.2
TNSS  Tian-Shan          56.93 307  eP    P      20 23 38.3 -0.2
AAA   Alma-Ata           56.95 307  eP    P      20 23 38.3 +0.2
AAA   Alma-Ata           56.95 307  eP    P      20 23 38.3 +0.2
KDAK  Kodiak Island      56.97  35  P     P      20 23 38.7 +0.8
KDAK                                IAmb  IAmb   20 24 04.8
      comp=Z,91nm,1.6s
KDAK  Kodiak Island      56.97  35  LR    LR     20 45 13.4
      comp=Z,124nm,22.0s,baz=245,slow=33
KDAK  Kodiak Island      56.97  35diP     P      20 23 39.1 +1.2
KDAK                                pmax  pmax
      comp=Z,27nm,1.8s
KDAK  Kodiak Island      56.97  35  P     P      20 23 37.8 -0.1
      baz=262
E19K  Redstone River     57.14  23  P     P      20 23 39.5 +0.5
      baz=251
L20K  Farewell, AK       57.17  30  P     P      20 23 40.2 +0.9
      baz=258
D19K  Kuna River         57.17  22  P     P      20 23 39.2 -0.1
      baz=250
Q20K  Shuyak Island      57.19  34  P     P      20 23 39.9 +0.5
      baz=261
COCO  West Island        57.21 237  P     P      20 23 40.7 +0.6
COCO  West Island        57.21 237  P     P      20 23 41.0 +0.9
COCO                                pmax  pmax
      comp=Z,343nm,0.4s
HMH   Humu‘ula Sheep     57.22  81  P     P      20 23 41.9 +1.3
K20K  Telida             57.28  29  P     P      20 23 40.5 +0.5
      baz=257,SNR=12
O20K  Slope Mountain     57.31  33  P     P      20 23 39.9 -0.5
      baz=260
KUU   Kurty              57.34 308  eP    P      20 23 41.1 +0.3
KUU   Kurty              57.34 308  eP    P      20 23 41.1 +0.3
M20K  Styx River         57.39  30  P     P      20 23 41.2 +0.2
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      baz=259
J20K  Nowinta River      57.44  28  P     P      20 23 41.6 +0.5
      baz=256,SNR=29
SYDH  Sydney Hard Ro     57.45 172  P     P      20 23 41.9 +0.5
I20K  Naaghedeneel       57.45  27  P     P      20 23 43.4 +2.3
I20K                                IAmb  IAmb   20 24 06.7
      comp=Z,42nm,1.2s
I20K  Naaghedeneel       57.45  27  P     P      20 23 41.8 +0.7
      baz=256,SNR=5.4
H20K  Anotleneega Mo     57.47  26  P     P      20 23 41.7 +0.4
      baz=255,SNR=12
ULHL  Ulahol             57.49 306  P     P      20 23 43.9 +1.8
      SNR=15
F20K  Avaraart Lake      57.57  24  P     P      20 23 42.3 +0.3
      baz=253,SNR=9.1
BOOM  Boomskoye usch     57.70 306  P     P      20 23 45.0 +1.4
BOOM  Boomskoye usch     57.70 306  P     P      20 23 45.0 +1.4
BOOM                                pmax  pmax
      comp=Z,95nm,0.5s
N20K  Mount Spurr        57.70  31  P     P      20 23 43.5 +0.5
      baz=260
SPCR  Spurr Chakacha     57.70  31  P     P      20 23 43.6 +0.6
      baz=260
HOM   Homer              57.73  33  P     P      20 23 43.8 +0.6
      baz=261
D20K  Etivluk River      57.77  22  P     P      20 23 44.2 +0.9
      baz=251
E20K  Nigu River         57.77  23  P     P      20 23 43.7 +0.2
      baz=252
KSH   Kashi              57.90 303  P     P      20 23 48.8 +3.9
KSH                                 sP    sP     20 24 11.2 +2.2
KSH                                 S     S      20 31 46.2 +6.3
KSH                                 ScS   ScS    20 33 29.7 +1.2
KSH                                 pmax  pmax
      comp=Z,39nm,0.7s
KSH                                 LR    LR
      comp=Z,150nm,21.0s
KSH                                 LR    LR
      comp=Z,200nm,19.2s
KSH                                 LR    LR
      comp=Z,170nm,21.0s
CNPM  China Poot         57.91  33  P     P      20 23 45.0 +0.5
CNPM                                IAmb  IAmb   20 24 09.5
      comp=Z,26nm,0.9s
TKM2  Tokmak 2           57.93 307  P     P      20 23 45.9 +0.7
      SNR=101
STLK  Strandline Lak     57.93  31  P     P      20 23 45.8 +1.1
B20K  Meade River        58.02  21  P     P      20 23 46.0 +1.0
      baz=250,SNR=12
PPLA  Purkeypile         58.02  29  P     P      20 23 45.5 +0.1
      baz=259
KMBL  Kambalda           58.09 201  P     P      20 23 45.1 -1.0
      comp=Z,62nm,0.8s
KMBL  Kambalda           58.09 201  P     P      20 23 45.1 -1.0
SKT   Skwentna           58.16  30  P     P      20 23 46.9 +0.7
SKT                                 IAmb  IAmb   20 24 11.0
      comp=Z,19nm,1.0s
SKT   Skwentna           58.16  30  P     P      20 23 45.6 -0.6
      baz=260,SNR=5.7
CHUM  Lake Minchumin     58.16  28  P     P      20 23 45.9 -0.3
      baz=258
CAST  Castle Rocks       58.17  29  P     P      20 23 46.3  0.0
      baz=259,SNR=20
BRSE  Bradley Lake S     58.19  33  P     P      20 23 46.2 -0.3
      baz=262
MORW  Morawa             58.24 208  P     P      20 23 46.7 -0.4
MORW  Morawa             58.24 208  P     P      20 23 46.4 -0.7
      comp=Z,84nm,0.9s
MORW  Morawa             58.24 208  P     P      20 23 46.5 -0.6
G21K  Allakaket          58.27  25  P     P      20 23 46.7 -0.2
      baz=255
H21K  Melozitna Rive     58.34  26  P     P      20 23 47.5 +0.1
      baz=257,SNR=6.9
KBK   Karagaybulak       58.42 307  P     P      20 23 50.0 +1.4
      SNR=42
SUA   Susitna One        58.44  31  P     P      20 23 49.9 +1.6
SUA                                 IAmb  IAmb   20 24 19.1
      comp=Z,12nm,0.8s
SUA   Susitna One        58.44  31  P     P      20 23 48.5 +0.2
      baz=261
F21K  Alatna River       58.46  24  P     P      20 23 48.6 +0.3
      baz=255,SNR=5.9
C21K  Knifeblade Rid     58.53  22  P     P      20 23 49.0 +0.3
      baz=253
CHMS  Chumysh            58.54 307  P     P      20 23 50.4 +1.2
      SNR=35
I21K  Tanana             58.57  27  P     P      20 23 49.0  0.0
      baz=258,SNR=13
SGDS  Sogindy            58.60 308  eP    P      20 23 50.0 +0.3
      comp=Z,10nm,0.5s
E21K  Killik River       58.61  23  P     P      20 23 49.4 +0.1
      baz=254,SNR=9.7
FRU1  Bishkek            58.64 307  P     P      20 23 51.5 +1.5
FRU1  Bishkek            58.64 307  P     P      20 23 51.5 +1.5
FRU1                                pmax  pmax
      comp=Z,49nm,0.6s
USP   Ospenovka          58.71 307  P     P      20 23 51.3 +0.9
      SNR=48
B21K  Ikpikpuk River     58.73  21  P     P      20 23 49.9 -0.1
      baz=252,SNR=8.6
AAK   Ala-Archa          58.76 307  P     P      20 23 52.6 +1.8
      SNR=35
AAK   Ala-Archa          58.76 307  P     P      20 23 51.8 +0.9
AAK   Ala-Archa          58.76 307  S     S      20 31 49.4 -1.6
      comp=Z,0.9nm,0.3s,baz=197,slow=17,SNR=4.3
AAK                                 LR    LR     20 51 44.1
      comp=Z,115nm,18.5s,baz=86,slow=39
AAK   Ala-Archa          58.76 307diP     P      20 23 51.7 +0.9
AAK                                 pmax  pmax
      comp=Z,36nm,0.7s
AAK   Ala-Archa          58.76 307 iP     P      20 23 51.8 +0.9
      SNR=36
UCH   Uchtor             58.77 306  P     P      20 23 53.9 +2.6
      SNR=13
BPAW  Bear Paw Mtn.      58.78  28  P     P      20 23 50.8 +0.4
      baz=259
M22K  Willow             58.78  31  P     P      20 23 50.4 -0.1
      baz=262
CAN   Canberra           58.80 174  P     P      20 23 51.0 +0.1
CAN   Canberra           58.80 174  P     P      20 23 51.1 +0.1
      comp=Z,98nm,1.1s
CAN   Canberra           58.80 174  P     P      20 23 50.9  0.0
CAN   Canberra           58.80 174  P     P      20 23 51.0 +0.1
CAN                                 pmax  pmax
      comp=Z,105nm,1.1s
CAN   Canberra           58.80 174  P     P      20 23 50.4 -0.5
CUT   Chulitna           58.81  30  P     P      20 23 50.9 +0.3
      baz=261
CNB   Canberra Magne     58.83 174  P     P      20 23 51.1  0.0
      comp=Z,84nm,1.1s
CNB   Canberra Magne     58.83 174  P     P      20 23 51.2 +0.1
RC01  Rabbit Creek A     58.87  32  P     P      20 23 51.1  0.0
      baz=262
SEW   Seward             58.88  33  P     P      20 23 51.6 +0.4
      baz=263
BTLS  Baital             58.93 310  eP    P      20 23 52.0 +0.2
BTLS  Baital             58.93 310  eP    P      20 23 52.1 +0.2
TRF   Thorofare Moun     58.97  29  P     P      20 23 52.4 +0.4
      baz=260,SNR=11
H22K  Ishtalitna Cre     58.97  26  P     P      20 23 52.9 +1.1
      baz=258
F22K  John River         59.02  24  P     P      20 23 52.8 +0.7
      baz=256,SNR=12
A22K  Sinclair Lake      59.05  20  P     P      20 23 53.9 +1.8
      baz=251,SNR=5.4
MLY   Manley             59.06  27  P     P      20 23 53.1 +0.7
      baz=259,SNR=10
G22K  Bettles            59.14  25  P     P      20 23 54.3 +1.4
      baz=257
D22K  Ayikyak River      59.18  22  P     P      20 23 54.2 +1.0
      baz=255,SNR=32
PMR   Palmer             59.23  31  P     P      20 23 53.8 +0.2
      baz=262
EKS2  Erkin-Say          59.28 307  P     P      20 23 56.3 +1.8
      SNR=5.9
E22K  Anaktuvuk Pass     59.31  23  P     P      20 23 54.9 +0.8
      baz=256,SNR=14
BLDU  Ballidu            59.31 206  P     P      20 23 54.2 -0.3
      comp=Z,138nm,0.7s
BLDU  Ballidu            59.31 206  P     P      20 23 54.2 -0.3
B22K  Teshekpuk Lake     59.34  21  P     P      20 23 54.7 +0.5
      baz=253,SNR=6.0
AML   Almayashu          59.39 306  P     P      20 23 57.8 +2.3
      SNR=11
PWL   Port Wells         59.52  32  P     P      20 23 55.9 +0.3
      baz=264
KNK   Knik Glacier       59.52  31  P     P      20 23 56.1 +0.4
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KNK   Knik Glacier       59.52  31  P     P      20 23 56.8 +1.1
      baz=263,SNR=8.6
MCK   McKinley           59.61  29  P     P      20 23 56.9 +0.7
      baz=261
SML   Sawmill            59.63  31  P     P      20 23 56.7 +0.2
      baz=263,SNR=11
I23K  Minto, Yukon-K     59.65  27  P     P      20 23 56.6 +0.1
      baz=260,SNR=13
WAT1  Susitna Watana     59.66  30  P     P      20 23 57.0 +0.4
      baz=262
G23K  Bananza Creek      59.67  25  P     P      20 23 57.0 +0.4
      baz=259,SNR=15
BRZS  Berezniki          59.68 315  eP    P      20 23 57.2 +0.3
BRZS  Berezniki          59.68 315  eP    P      20 23 57.3 +0.3
NEA2  Nenana             59.69  28  P     P      20 23 57.0 +0.3
      baz=261,SNR=11
H23K  Yukon River        59.70  26  P     P      20 23 58.4 +1.6
H23K                                IAmb  IAmb   20 24 23.1
      comp=Z,17nm,0.8s
H23K  Yukon River        59.70  26  P     P      20 23 57.4 +0.6
      baz=260,SNR=9.8
COLD  Coldfoot           59.71  25  P     P      20 23 57.3 +0.5
      baz=258,SNR=8.1
KLBR  Kellerberrin       59.77 205  P     P      20 23 57.0 -0.6
      comp=Z,254nm,0.8s
KLBR  Kellerberrin       59.77 205  P     P      20 23 57.1 -0.6
P23K  Montague Islan     59.90  33  P     P      20 23 57.9 -0.3
      baz=265
D23K  Nanushuk River     59.91  23  P     P      20 23 58.3 +0.2
      baz=257,SNR=16
M23K  Glacier View       59.91  31  P     P      20 23 58.3 -0.1
      baz=264
ARPS  Mount Arapiles     59.95 181  P     P      20 23 58.3 -0.5
      comp=Z,209nm,0.7s
ARPS  Mount Arapiles     59.95 181  P     P      20 23 58.2 -0.5
ARSB  Arslanbob          60.00 305  P     P      20 24 00.7 +1.3
ARSB  Arslanbob          60.00 305  P     P      20 24 00.7 +1.3
ARSB                                pmax  pmax
      comp=Z,120nm,1.3s
WAT6  Susitna Watana     60.00  30  P     P      20 23 59.0 -0.1
      baz=263,SNR=12
HYB   Hyderabad          60.02 277  eP    P      20 24 00.6 +0.7
HYB                                 epP   pP     20 24 18.1 +1.4
HYB                                 eS    S      20 32 08.6 +0.9
E23K  Chandalar          60.09  24  P     P      20 24 00.6 +1.1
      baz=258,SNR=23
SCM   Sheep Creek Mo     60.11  31  P     P      20 24 00.8 +1.1
SCM                                 IAmb  IAmb   20 24 25.0
      comp=Z,40nm,0.9s
SCM   Sheep Creek Mo     60.11  31  P     P      20 24 00.9 +1.1
SCM                                 pmax  pmax
      comp=Z,40nm,0.9s
SCM   Sheep Creek Mo     60.11  31  P     P      20 24 00.1 +0.3
      baz=264,SNR=7.5
GLI   Glacier Island     60.12  32  P     P      20 23 59.5 -0.3
      baz=265
C23K  Itkillik River     60.13  22  P     P      20 23 59.4 -0.2
      baz=256,SNR=14
DHY   Denali Highway     60.22  30  P     P      20 24 01.1 +0.5
      baz=263
TOLK  Toolik Lake Re     60.23  23  P     P      20 24 01.2 +0.8
      baz=258,SNR=7.3
OHH   Osh                60.23 304  P     P      20 24 02.5 +1.5
OHH                                 pmax  pmax
      comp=Z,63nm,1.3s
COLA  College            60.24  27⇑eP     P      20 24 02.1 +1.6
COLA                                pmax  pmax
      comp=Z,6.0nm,0.6s
H24K  Noodor Dome        60.38  26  P     P      20 24 01.5  0.0
      baz=261,SNR=18
Q23K  Middleton Isla     60.39  34  P     P      20 24 01.3 -0.2
      baz=266
POKR  Poker Plat Res     60.45  27  P     P      20 24 03.5 +1.6
POKR                                IAmb  IAmb   20 24 29.2
      comp=Z,16nm,0.8s
POKR  Poker Plat Res     60.45  27  P     P      20 24 02.0  0.0
      baz=262
E24K  Your Creek         60.51  24  P     P      20 24 02.3  0.0
      baz=259,SNR=13
HDA   Harding Lake       60.57  28  P     P      20 24 02.4 -0.3
      baz=263,SNR=7.8
D24K  Happy Valley       60.60  22  P     P      20 24 02.8  0.0
      baz=258,SNR=9.6
ILAR  Eielson Array      60.64  28  P     P      20 24 03.1 -0.2
ILAR  Eielson Array      60.64  28  P     P      20 24 03.0 -0.2
      comp=Z,4.1nm,0.7s,baz=259,slow=5.9,SNR=53
ILAR                                LR    LR     20 48 59.5
      comp=Z,83nm,20.7s,baz=264,slow=34
      comp=Z,4.1nm,0.7s
ILAR  Eielson Array      60.64  28  P     P      20 24 03.1 -0.2
F24K  Squaw Lake         60.64  24  P     P      20 24 04.5 +1.2
      baz=260,SNR=8.6
G24K  Hadweenzic Riv     60.67  25  P     P      20 24 03.4  0.0
      baz=261,SNR=8.0
M24K  Tolsona, Glenn     60.67  31  P     P      20 24 03.2 -0.3
      baz=265
ARK   Arkit              60.71 306  P     P      20 24 05.6 +1.4
ARK                                 pmax  pmax
      comp=Z,92nm,0.8s
MUN   Mundaring          60.72 206  P     P      20 24 03.4 -0.7
      comp=Z,46nm,1.3s
MUN   Mundaring          60.72 206  P     P      20 24 03.6 -0.5
KLU   Klutina            60.74  31  P     P      20 24 04.4 +0.3
      baz=266
C24K  Franklin Bluff     60.76  22  P     P      20 24 04.6 +0.7
      baz=258
EYAK  Cordova Ski Ar     60.76  32  P     P      20 24 04.4 +0.3
      baz=266
TOO   Toolangi           60.80 177  P     P      20 24 04.1 -0.5
TOO                                 IAmb  IAmb   20 24 05.8
      comp=Z,21nm,0.9s
TOO   Toolangi           60.80 177  P     P      20 24 04.8 +0.2
      comp=Z,26nm,1.4s
TOO   Toolangi           60.80 177  P     P      20 24 04.1 -0.5
TOO                                 pmax  pmax
      comp=Z,21nm,1.0s
NIL   Nilore             60.85 297  P     P      20 24 06.7 +1.4
NIL   Nilore             60.85 297  P     P      20 24 06.7 +1.4
NIL                                 pmax  pmax
      comp=Z,86nm,0.7s
NIL   Nilore             60.85 297  P     P      20 24 06.6 +1.4
MGBR  Mount Gambier      60.93 182  P     P      20 24 05.6 +0.2
K24K  Donnelly Dome      61.01  29  P     P      20 24 06.1 +0.3
      baz=264
BVAR  Borovoye Array     61.05 319  P     P      20 24 06.5 +0.3
      comp=Z,72nm,0.6s,baz=92,slow=7.4,SNR=411
BVAR                                S     S      20 32 18.5 -1.2
      comp=Z,1.0nm,0.7s,baz=107,slow=12,SNR=5.7
BVAR                                LR    LR     20 51 23.4
      comp=Z,137nm,20.0s,baz=82,slow=37
      comp=Z,72nm,0.6s
DZA   Taraz              61.05 307  eP    P      20 24 06.7 +0.3
DZA                                 pmax  pmax
      comp=Z,10.0nm,0.6s
DZA   Taraz              61.05 307  eP    P      20 24 06.8 +0.3
      comp=Z,10nm,0.6s
PAX   Paxson             61.08  30  P     P      20 24 06.5 +0.2
      baz=265,SNR=9.2
BRVK  Borovoye           61.11 319  P     P      20 24 06.6  0.0
BRVK  Borovoye           61.11 319diP     P      20 24 06.5  0.0
BRVK                                pmax  pmax
      comp=Z,68nm,1.0s
BRVK  Borovoye           61.11 319  P     P      20 24 06.6  0.0
BRVK                                pP    pP     20 24 23.2 -0.3
DRK   Karamyk            61.11 303  P     P      20 24 08.5 +1.3
DRK                                 IAmb  IAmb   20 24 10.7
      comp=Z,28nm,0.7s
DRK   Karamyk            61.11 303  P     P      20 24 08.5 +1.3
DRK                                 pmax  pmax
      comp=Z,28nm,0.7s
NWAO  Narrogin (SRO)     61.16 204  P     P      20 24 06.7 -0.4
NWAO  Narrogin (SRO)     61.16 204  LR    LR     20 52 46.2
      comp=Z,91nm,18.0s,baz=326,slow=38
NWAO  Narrogin (SRO)     61.16 204  P     P      20 24 06.5 -0.6
NWAO  Narrogin (SRO)     61.16 204  P     P      20 24 06.7 -0.4
NWAO                                pmax  pmax
      comp=Z,105nm,1.2s
HARP  HAARP              61.17  30  P     P      20 24 07.2 +0.3
      baz=266
G25K  Bearman Lake       61.22  25  P     P      20 24 07.5 +0.5
      baz=262
H25L  Birch Creek        61.27  26  P     P      20 24 07.4  0.0
      baz=263,SNR=6.7
J25K  Salcha River,      61.27  28  P     P      20 24 07.6  0.0
      baz=264,SNR=5.5
PRP   Porcupine Dome     61.30  27  P     P      20 24 07.7 -0.1
      baz=264
```

BMRM	Bremner River	61.34	32	P	P	20 24 09.1	+1.0
BMRM				IAmb	IAmb	20 24 38.5	
	comp=Z,29nm,0.8s						
BMRM	Bremner River	61.34	32	P	P	20 24 08.6	+0.4
	baz=267						
N25K	Chitina, Valde	61.38	31	P	P	20 24 08.2	-0.3
	baz=267						
GEXS	Deakin Univers	61.39	179	P	P	20 24 09.1	+0.6
KAIM	Kayak Island	61.39	33	P	P	20 24 08.7	+0.4
	baz=268						
RIDG	Independent Ri	61.42	29	P	P	20 24 09.5	+0.9
RIDG				IAmb	IAmb	20 24 46.5	
	comp=Z,16nm,0.7s						
RIDG	Independent Ri	61.42	29	P	P	20 24 08.0	-0.6
	baz=265,SNR=10						
D25K	Kavik River	61.49	22	P	P	20 24 09.2	+0.2
	baz=261,SNR=17						
F25K	Christian Rive	61.50	24	P	P	20 24 09.6	+0.5
	baz=262,SNR=5.2						
PALK	Pallekele	61.51	265	LR	LR	20 48 40.8	
	comp=Z,54nm,21.9s,baz=70,slow=34						
E25K	Arctic Village	61.60	24	P	P	20 24 09.8	+0.1
	baz=262,SNR=7.2						
KK31	Karatay Array	61.63	308	P	P	20 24 11.1	+0.8
KK31	Karatay Array	61.63	308	P	P	20 24 11.1	+0.8
KK31				pmax	pmax		
	comp=Z,122nm,0.7s						
KKAR	Karatay Array	61.63	308	P	P	20 24 11.2	+0.9
KKAR	Karatay Array	61.63	308	P	P	20 24 11.3	+0.9
KKAR				pmax	pmax		
	comp=Z,128nm,0.7s						
BTK	Batken	61.78	304	P	P	20 24 11.8	+0.3
BTK				IAmb	IAmb	20 24 13.8	
	comp=Z,53nm,1.4s						
BTK	Batken	61.78	304	P	P	20 24 11.8	+0.3
BTK				pmax	pmax		
	comp=Z,53nm,1.4s						
SCRK	Sand Creek	61.82	29	P	P	20 24 11.2	-0.2
	baz=266,SNR=28						
BMAR	Burnt Mountain	61.89	25	P	P	20 24 13.7	+2.0
J26L	Joseph Creek	62.04	28	P	P	20 24 12.5	-0.3
	baz=266,SNR=33						
L26K	Log Cabin Wild	62.05	30	P	P	20 24 12.8	+0.1
	baz=267						
CRQE	Cirque	62.08	32	P	P	20 24 12.4	-0.7
	baz=268						
C26K	Camden Bay	62.09	22	P	P	20 24 12.8	0.0
	baz=262						
F26K	Sheenjek River	62.09	24	P	P	20 24 12.1	-0.8
	baz=264,SNR=11						
BRLS	Borolday	62.13	308	*e*P	P	20 24 14.9	+1.2
BRLS				pmax	pmax		
	comp=Z,12nm,0.7s						
BRLS	Borolday	62.13	308	*e*P	P	20 24 14.9	+1.2
	comp=Z,12nm,0.7s						
MCARA	McCarthy VSAT	62.13	32	P	P	20 24 12.9	-0.4
	baz=268						
G26K	Porcupine Rive	62.15	25	P	P	20 24 13.3	0.0
	baz=264						
M26K	Nabesna, AK	62.18	30	P	P	20 24 13.0	-0.7
	baz=268						
I26K	Coal Creek Min	62.27	27	P	P	20 24 13.7	-0.5
	baz=266						
GAR	Garm	62.32	303	P	P	20 24 15.9	+0.8
C27K	Jago River	62.46	22	P	P	20 24 15.0	-0.4
	baz=263						
MESA	MESA	62.63	33	P	P	20 24 15.4	-1.6
	baz=270						
K27K	Chicken	62.66	29	P	P	20 24 15.8	-1.0
	baz=268						
M27K	Edge Creek, AK	62.70	31	P	P	20 24 16.2	-1.1
	baz=269						
L27K	Beaver Creek,	62.74	30	P	P	20 24 17.0	-0.4
	baz=268,SNR=7.0						
RKGY	Rocky Gully	62.75	204	P	P	20 24 18.6	+0.9
	comp=Z,57nm,0.9s						
BCAR	Beaver Creek A	62.76	30	P	P	20 24 18.3	+0.7
I27K	Kandik River	62.93	27	P	P	20 24 17.7	-0.9
	baz=267						
CTG	Chitna Glacier	62.94	32	P	P	20 24 18.2	-0.7
	baz=270						
G27K	Doyon Strip	62.98	26	P	P	20 24 18.3	-0.7
	baz=266						
H27K	Steamboat Moun	62.99	26	P	P	20 24 19.1	0.0
	baz=267,SNR=23						
E27K	Coleen River	63.09	24	P	P	20 24 18.6	-1.1
	baz=266						
BVCY	Beaver Creek	63.17	30	P	P	20 24 19.9	-0.4
	baz=270						
CHGR	Chuyangaron	63.27	303	P	P	20 24 22.1	+0.7
CHGR	Chuyangaron	63.27	303	P	P	20 24 22.1	+0.7
CHGR				pmax	pmax		
	comp=Z,232nm,0.6s						
YUK3	Moose Creek	63.36	31	P	P	20 24 21.1	-0.7
	baz=270						
SIMJ	Simiganj	63.38	303	P	P	20 24 23.0	+0.8
SIMJ				IAmb	IAmb	20 24 24.5	
	comp=Z,65nm,0.9s						
SIMJ	Simiganj	63.38	303	P	P	20 24 23.3	+1.1
D27M	Malcolm River	63.39	23	P	P	20 24 20.7	-1.0
	baz=266,SNR=5.2						
PINM	Pinnacle	63.48	33	P	P	20 24 21.1	-1.3
	baz=271						
DZET	Dzherino	63.50	303	P	P	20 24 23.8	+0.8
DZET				pmax	pmax		
	comp=Z,103nm,0.7s						
O28M	Mount Upton	63.50	32	P	P	20 24 21.2	-1.6
	baz=271						
I28M	Miner Creek	63.62	27	P	P	20 24 24.6	+1.3
I28M				IAmb	IAmb	20 24 51.1	
	comp=Z,16nm,0.8s						
I28M	Miner Creek	63.62	27	P	P	20 24 22.6	-0.7
	baz=269,SNR=11						
YUK8	Steele Glacier	63.70	32	P	P	20 24 23.1	-1.0
	baz=271						
DAWY	Dawson	63.84	29	P	P	20 24 24.4	-0.3
	baz=270						
E28M	Babbage River	63.87	24	P	P	20 24 24.9	+0.1
	baz=268,SNR=8.8						
PNL	Peninsula	63.93	34	P	P	20 24 24.6	-0.7
	baz=272						
KBL	Kabul	64.12	298	P	P	20 24 27.8	+0.5
KBL	Kabul	64.12	298	P	P	20 24 27.8	+0.5
KBL				pmax	pmax		
	comp=Z,106nm,0.8s						
D28M	Stokes Point	64.19	23	P	P	20 24 25.9	-0.8
	baz=268						
YUK4	Talbot Arm	64.24	32	P	P	20 24 27.3	-0.3
	baz=272,SNR=5.8						
H29M	Whitestone	64.27	26	P	P	20 24 27.4	-0.1
	baz=270,SNR=8.0						
M29M	Somme Creek	64.29	30	P	P	20 24 27.0	-0.8
	baz=272,SNR=9.2						
I29M	Ogilvie Camp,	64.30	27	P	P	20 24 27.1	-0.6
	baz=270						
O29M	Mount Kennedy	64.31	33	P	P	20 24 27.0	-1.0
	baz=272						
GLAD	Gladstone	64.34	176	P	P	20 24 27.5	-0.5
YUK6	Outpost Mounta	64.39	32	P	P	20 24 27.7	-0.8
	baz=272						
G29M	Pine Creek	64.41	25	P	P	20 24 27.9	-0.4
	baz=270,SNR=9.5						
L29M	L29M	64.42	30	P	P	20 24 28.3	-0.2
	baz=272,SNR=7.2						
E29M	Blow River	64.47	24	P	P	20 24 28.7	0.0
	baz=269						
K29M	Barlow Dome	64.67	29	P	P	20 24 30.1	-0.2
	baz=272,SNR=6.9						
P29M	Windy Craggy	64.77	34	P	P	20 24 30.5	-0.3
	baz=274						
HYT	Haines Junctio	64.81	32	P	P	20 24 33.0	+1.8
HYT	Haines Junctio	64.81	32	P	P	20 24 30.6	-0.6
	baz=273						
EPYK	Eagle Plains	64.94	26	P	P	20 24 31.7	-0.1
	baz=271,SNR=8.2						
N30M	Aishikik Lake	64.98	31	P	P	20 24 31.7	-0.5
	baz=273						
I30M	Mount Dempster	65.12	27	P	P	20 24 32.3	-0.8
	baz=272,SNR=15						
G30M	tAoh Zraii Nji	65.12	25	P	P	20 24 32.0	-1.0
	baz=272						
P30M	Million Dollar	65.13	33	P	P	20 24 32.5	-0.7
	baz=274						
J30M	Hart River	65.16	28	P	P	20 24 33.2	-0.2
	baz=272						
F30M	Barrier River	65.27	25	P	P	20 24 34.1	+0.2
	baz=272,SNR=9.6						
OUZ	Omahuta	65.31	152	P	P	20 24 36.2	+1.7
OUZ	Omahuta	65.31	152	P	P	20 24 36.2	+1.7
PLBC	Pleasant Camp	65.48	34	P	P	20 24 35.6	+0.2
	baz=275						
O30N	Mendenhall	65.51	32	P	P	20 24 35.8	+0.2
	baz=274						
N31M	Braeburn, Yuko	65.61	31	P	P	20 24 36.6	+0.4
	baz=274						
S31K	Pelican	65.69	35	P	P	20 24 37.0	+0.3
	baz=276						
MOO	Moorlands	65.73	176	P	P	20 24 37.3	+0.2
G31M	Satah River	65.89	25	P	P	20 24 38.3	+0.4
	baz=273,SNR=12						
R31K	City Hall, Gus	65.90	35	P	P	20 24 38.6	+0.6
	baz=276						
H31M	Peel River	65.93	27	P	P	20 24 38.9	+0.7
	baz=274,SNR=7.7						
SKAG	Skagway	66.01	34	P	P	20 24 39.4	+0.7
	baz=276						
F31M	Tsiigehtchic	66.07	25	P	P	20 24 39.2	+0.2
	baz=274						
INK	Inuvik	66.09	24	P	P	20 24 40.2	+1.1
INK	Inuvik	66.09	24	P	P	20 24 40.2	+1.1
INK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
INK	Inuvik	66.09	24	P	P	20 24 39.5	+0.4
	baz=273						
WHY	Whitehorse	66.11	32	P	P	20 24 39.9	+0.3
	baz=276						
TAU	Tasmania Unive	66.21	176	P	P	20 24 40.0	-0.1
TAU				IAmb	IAmb	20 24 43.1	
	comp=Z,62nm,1.1s						
TAU	Tasmania Unive	66.21	176	P	P	20 24 40.0	-0.1
TAU	Tasmania Unive	66.21	176	P	P	20 24 40.0	-0.1
TAU				pmax	pmax		
	comp=Z,63nm,1.2s						
WCZ	Waipu Caves	66.24	152	P	P	20 24 42.2	+1.8
SIT	Sitka	66.28	36	P	P	20 24 41.1	+0.7
	baz=277						
SVE	Sverdlovsk	66.39	324	*ce*P	P	20 24 41.6	+0.4
SVE				*e*S	S	20 33 27.9	+2.0
SVE				pmax	pmax		
	comp=Z,92nm,0.8s						
R32K	Eaglecrest	66.56	35	P	P	20 24 42.8	+0.5
	baz=277						
S32K	Killisnoo	66.63	36	P	P	20 24 43.3	+0.5
	baz=277						
FARO	Faro, Yukon	66.68	30	P	P	20 24 43.2	+0.1
	baz=276						
P32M	Atlin	66.81	33	P	P	20 24 43.5	-0.4
	baz=277						
N32M	Quiet Lake	66.93	32	P	P	20 24 45.1	+0.4
	baz=277						
GRZ	Great Barrier	66.99	152	P	P	20 24 46.2	+1.0
P33M	Teslin, Yukon	67.18	33	P	P	20 24 46.6	+0.2
	baz=278						
KUZ	Kuaotunu	67.52	152	P	P	20 24 49.3	+0.8
KUZ	Kuaotunu	67.52	152	P	P	20 24 49.1	+0.5
MMPY	Sheldon Lake,	67.60	30	P	P	20 24 49.2	+0.3
	baz=278						
U33K	Whale Pass	67.61	37	P	P	20 24 49.2	+0.2
	baz=279						
Q32M	Nakina River	67.63	34	P	P	20 24 49.2	-0.2
	baz=278						
ARTI	Arti	67.68	323	P	P	20 24 49.4	-0.1
ARTI	Arti	67.68	323	LR	LR	20 57 53.4	
	comp=Z,142nm,19.0s,baz=91,slow=39						
ARTI	Arti	67.68	323	*d i*P	P	20 24 49.2	-0.3
ARTI				*PP	pP	20 25 06.8	+0.2
ARTI						20 25 16.6	
ARTI				S	S	20 33 43.8	+2.3
ARTI				SS	SS	20 38 03.7	+0.6
ARTI				pmax	pmax		
	comp=Z,151nm,0.7s						
ARTI	Arti	67.68	323	⇓P	P	20 24 49.2	-0.3
CRAG	Craig	67.71	38	P	P	20 24 49.9	+0.3
	baz=279						
ABKAR	Akbulak array	67.98	315	P	P	20 24 51.6	+0.2
ABKAR	Akbulak array	67.98	315	P	P	20 24 51.7	+0.3
ABKAR				IAmb	IAmb	20 24 53.0	
	comp=Z,92nm,0.8s						
WRAK	Wrangell Islan	67.99	37	P	P	20 24 51.6	+0.3
	baz=279						
R33M	Jennings River	68.23	33	P	P	20 24 52.8	-0.2
	baz=279						
TOZ	Tahuroa Road	68.25	152	P	P	20 24 53.8	+0.7
S34M	Telegraph Cree	68.39	35	P	P	20 24 54.3	+0.4
	baz=280						
A36M	Sachs Harbour	68.49	20	P	P	20 24 55.0	+0.8
	baz=279,SNR=6.2						
HIZ	Hauiti	68.64	153	P	P	20 24 56.9	+1.3
HIZ	Hauiti	68.64	153	P	P	20 24 57.2	+1.6
HIZ	Hauiti	68.64	153	P	P	20 24 57.1	+1.5
KARZ	Kaharoa	68.81	152	P	P	20 24 59.0	+2.3
DLBC	Dease Lake	68.87	34	LR	LR	20 50 42.9	
	comp=Z,45nm,21.6s,baz=270,slow=32						
DLBC	Dease Lake	68.87	34	P	P	20 24 56.7	-0.3
	baz=280						
OMRZ	Omania	68.94	152	P	P	20 24 58.7	+1.2
AKTO	Aktyubinsk	68.97	317	LR	LR	20 57 07.9	
	comp=Z,187nm,18.8s,baz=14,slow=38						
NEZ	North Egmont	68.98	154	P	P	20 24 59.8	+2.0
T35M	Bob Quinn	69.03	36	P	P	20 24 57.9	0.0
	baz=281						
HLRZ	Highlands Stat	69.05	152	P	P	20 25 00.3	+2.1
VRZ	Vera Road	69.12	154	P	P	20 24 59.6	+1.1
TGTN	Hyland Airport	69.17	31	P	P	20 24 59.2	+0.5
	baz=281						
WATZ	Wairara	69.17	153	P	P	20 25 00.3	+1.3
HAZ	Te Kaha	69.27	151	P	P	20 24 59.4	0.0
PRRZ	Plateau Road	69.28	152	P	P	20 24 59.4	-0.2
TWVZ	Taurewa	69.36	153	P	P	20 25 01.3	+1.2
URZ	Urewera	69.39	152	LR	LR	20 53 43.2	
	comp=Z,95nm,19.3s,baz=48,slow=34						
URZ	Urewera	69.39	152	P	P	20 24 59.4	-0.8
URZ	Urewera	69.39	152	P	P	20 24 59.3	-0.9
RUGZ	Raukumara Rang	69.39	151	P	P	20 24 59.4	-1.0
WTVZ	West Tongariro	69.46	153	P	P	20 25 01.6	+0.9
PKGZ	Pakihiroa	69.49	151	P	P	20 25 01.4	+0.5
OTVZ	Oturere	69.53	153	P	P	20 25 02.1	+0.8
TRVZ	Turoa	69.60	153	P	P	20 25 02.5	+0.8
WHVZ	Whangaehu Hut	69.60	153	P	P	20 25 02.6	+0.8
WMGZ	Waiomatatini S	69.60	150	P	P	20 25 01.8	+0.2
HRA	Herat	69.62	300	P	P	20 25 03.5	+1.3
HRA				IAmb	IAmb	20 25 04.7	
	comp=Z,32nm,0.8s						
RTZ	Ruatahuna	69.63	152	P	P	20 25 00.7	-1.1
RTZ	Ruatahuna	69.63	152	P	P	20 25 00.8	-1.0
MWZ	Matawai	69.63	151	P	P	20 25 01.1	-0.6
WNVZ	Wahianoa	69.64	153	P	P	20 25 02.8	+0.8
TWGZ	Tauwhareparae	69.70	151	P	P	20 25 02.0	-0.2
QRZ	Quartz Range	69.73	156	P	P	20 25 02.5	+0.2
QRZ	Quartz Range	69.73	156	P	P	20 25 02.4	+0.1
WAZ	Wanganui	69.75	154	P	P	20 25 04.4	+2.0
MTHZ	Maungataniwha	69.76	152	P	P	20 25 01.7	-0.8
MOVZ	Moawhango	69.77	153	P	P	20 25 02.5	-0.1
BKZ	Black Stump Fm	69.88	153	P	P	20 25 03.2	-0.1
BKZ	Black Stump Fm	69.88	153	P	P	20 25 03.0	-0.2
SNGZ	Shannon Statio	69.92	152	P	P	20 25 03.5	0.0
RAHZ	Arahi	69.92	152	P	P	20 25 03.7	+0.2
NMHZ	Naumai	69.95	152	P	P	20 25 04.0	+0.2
CNGZ	Carnagh Statio	70.06	151	P	P	20 25 04.3	0.0
KWHZ	Kaweka Forest	70.06	153	P	P	20 25 04.9	+0.5
KNZ	Kokohu	70.26	152	P	P	20 25 05.2	-0.3
DSZ	Denniston Nort	70.27	157	P	P	20 25 06.3	+0.6
NNZ	Nelson	70.39	156	P	P	20 25 05.8	-0.5
TSZ	Takapari Road	70.41	153	P	P	20 25 05.9	-0.6
THZ	Tophouse	70.69	157	P	P	20 25 08.2	0.0
MRZ	Mangatainoka R	70.76	154	P	P	20 25 08.0	-0.6
MRZ	Mangatainoka R	70.76	154	P	P	20 25 08.1	-0.4
SNZO	South Karori	70.97	155	P	P	20 25 08.7	-1.1
WRGLY	Wrigley	70.98	29	P	P	20 25 10.3	+0.6
	baz=284						
BEAVL	Fort Liard	70.99	32	P	P	20 25 10.7	+0.9
	baz=284						
INZ	Inchbonnie	71.01	158	P	P	20 25 08.8	-1.2
BFZ	Birch Farm	71.05	154	P	P	20 25 10.3	0.0
BFZ	Birch Farm	71.05	154	P	P	20 25 10.0	-0.3
WVZ	Waitaha Valley	71.08	159	P	P	20 25 09.4	-1.0
FOZ	Fox Glacier	71.19	160	P	P	20 25 11.4	+0.3
TOAD	Toad River Com	71.23	33	P	P	20 25 11.8	+0.5
	baz=284						
BBB	Bella Bella	71.29	41	LR	LR	20 48 08.4	
	comp=Z,33nm,21.4s,baz=348,slow=29						
LTZ	Lake Taylor	71.35	157	P	P	20 25 11.5	-0.6
JCZ	Jackson Bay	71.35	160	P	P	20 25 13.1	+0.9
RAR	Rarotonga	71.47	124	LR	LR	20 48 52.5	
	comp=Z,248nm,19.7s,baz=290,slow=29						
KHZ	Kahutara	71.49	156	P	P	20 25 11.0	-1.9
KHZ	Kahutara	71.49	156	P	P	20 25 10.7	-2.1
KOTAN	Kotaneelee Air	71.49	32	P	P	20 25 12.9	+0.1
	baz=285						
MSZ	Milford Sound	71.64	161	P	P	20 25 15.0	+1.2
OXZ	Oxford	71.75	158	P	P	20 25 13.3	-1.2
RPZ	Rata Peaks	71.76	159	LR	LR	20 53 39.1	
	comp=Z,94nm,21.7s,baz=326,slow=33						
RPZ	Rata Peaks	71.76	159	P	P	20 25 13.5	-1.0
RPZ	Rata Peaks	71.76	159	P	P	20 25 13.0	-1.6
GVZ	Greta Valley S	71.78	157	P	P	20 25 13.7	-1.0
KIRV	Kirov	71.95	327	LR	LR	21 00 00.1	
	comp=Z,237nm,18.9s,baz=71,slow=38						
KIRV	Kirov	71.95	327	*d i*P	P	20 25 15.6	0.0
LBZ	Lake Benmore	72.07	160	P	P	20 25 15.5	-0.9
DCZ	Deep Cove	72.14	162	P	P	20 25 17.0	+0.3
MQZ	McQueen’s Vall	72.30	158	P	P	20 25 17.6	-0.1
TMZ	Timaru	72.34	159	P	P	20 25 17.7	-0.3
EAZ	Earnscleugh	72.56	161	P	P	20 25 19.9	+0.7
WHZ	Wether Hill Ro	72.76	162	P	P	20 25 20.0	-0.5
ODZ	Otahua Downs	72.81	160	P	P	20 25 20.7	0.0
ODZ	Otahua Downs	72.81	160	P	P	20 25 20.3	-0.4
TUZ	Tuapeka	73.31	161	P	P	20 25 24.5	+0.9
EUNU	Eureka	73.38	8	P	P	20 25 24.8	+0.9
EUNU				IAmb	IAmb	20 25 26.1	
	comp=Z,22nm,0.7s						
SYZ	Scrubby Hill	73.69	161	P	P	20 25 26.0	+0.1
SYZ	Scrubby Hill	73.69	161	P	P	20 25 25.6	-0.3
SPA0	Spitsbergen Ar	74.00	350	*e*P	P	20 25 28.7	+1.3
SPB2	Spitsbergen Ar	74.00	350	P	P	20 25 28.8	+1.3
SPB2				IAmb	IAmb	20 25 53.1	
	comp=Z,40nm,1.0s						
SPITS	Spitsbergen Ar	74.00	350	P	P	20 25 28.3	+0.8
	comp=Z,8.6nm,0.5s,baz=79,slow=7.6,SNR=39						
SPITS				LR	LR	20 59 37.2	
	comp=Z,116nm,21.1s,baz=9.5,slow=37						
	comp=Z,8.6nm,0.5s						
KBS	Kingsbay	74.16	351	P	P	20 25 29.5	+1.1
KBS	Kingsbay	74.16	351	P	P	20 25 29.5	+1.1
KBS				pmax	pmax		
	comp=Z,273nm,2.0s						
KBS	Kingsbay	74.16	351	*e*P	P	20 25 29.8	+1.4
KBS	Kingsbay	74.16	351	*i* P	P	20 25 29.3	+1.0
NOR	Nord	74.59	357	*i* P	P	20 25 31.1	+0.3
NOR				IAmb	IAmb	20 25 32.8	
	comp=Z,3.7nm,0.9s						
BELG	Belogornoye	74.74	321	LR	LR	21 00 02.0	
	comp=Z,98nm,20.0s,baz=63,slow=37						
BELG	Belogornoye	74.74	321	*c i*P	P	20 25 31.7	-0.4
BELG				pmax	pmax		
	comp=Z,18nm,0.9s						
YKA	Yellowknife Ar	75.07	28	P	P	20 25 34.6	+0.8
YKA	Yellowknife Ar	75.07	28	P	P	20 25 34.4	+0.6
	comp=Z,2.6nm,0.6s,baz=296,slow=6.5,SNR=16						
YKA				LR	LR	20 58 23.2	
	comp=Z,49nm,21.2s,baz=288,slow=35						
	comp=Z,2.6nm,0.6s						
YKA	Yellowknife Ar	75.07	28	P	P	20 25 34.6	+0.8
RES	Resolute Bay	75.43	13	P	P	20 25 36.8	+1.1
RES	Resolute Bay	75.43	13	LR	LR	20 59 58.9	
	comp=Z,25nm,22.0s,baz=300,slow=36						
RES	Resolute Bay	75.43	13	P	P	20 25 36.8	+1.1
RES				pmax	pmax		
	comp=Z,20nm,0.8s						
APA	Apatity	75.56	338	⇓*i*P	P	20 25 35.9	-0.6
APA				pmax	pmax		
	comp=Z,27nm,0.6s						
KLMR	Klimovskoe	75.94	331	*e*P	P	20 25 35.2	-3.7
KLMR				*e**PP	PcP	20 25 53.6	+2.6
KLMR				*e*		20 28 27.2	
KLMR				S	S	20 35 12.6	-3.5
KLMR				pmax	pmax		
	comp=Z,38nm,1.7s						
KEV	Kevo	76.53	341	P	P	20 25 42.3	+0.3
KEV				IAmb	IAmb	20 27 36.2	
	comp=Z,93nm,1.6s						
KEV	Kevo	76.53	341	P	P	20 25 42.3	+0.3
KEV				pmax	pmax		
	comp=Z,93nm,1.6s						
HAMF	Hammerfest	76.99	343	*e*P	P	20 25 45.0	+0.4
BANOM	Banah	77.07	293	P	P	20 25 47.3	+1.3
ARA0	ARCESS Array S	77.09	341	*e*P	P	20 25 46.1	+0.8
ARCES	ARCESS Array B	77.09	341	P	P	20 25 45.8	+0.5
ARCES	ARCESS Array B	77.09	341	P	P	20 25 45.1	-0.1
	comp=Z,15nm,0.7s,baz=58,slow=5.7,SNR=67						
ARCES				LR	LR	21 04 08.4	
	comp=Z,163nm,21.4s,baz=65,slow=39						
	comp=Z,15nm,0.7s						
ARCES	ARCESS Array B	77.09	341	P	P	20 25 45.8	+0.5
ARCES				pmax	pmax		
	comp=Z,15nm,0.8s						
SHME	Shamm	77.16	293	P	P	20 25 48.1	+1.7
MSFE	Esma-Masafi	77.38	292	P	P	20 25 48.8	+1.1
SOHO	SOHO	77.48	291	*i* P	P	20 25 48.5	+0.3
	SNR=8.2						
UOSS	Minazif	77.48	292	P	P	20 25 48.9	+0.6
HATD	Hatta, Dubai	77.59	292	P	P	20 25 50.4	+1.5
PPT	Papeete	77.67	115	P	P	20 25 51.7	+2.4
	comp=Z,31nm,0.8s,baz=250,slow=16,SNR=5.9						
PPT				LR	LR	20 52 44.0	
	comp=Z,120nm,20.4s,baz=330,slow=30						
	comp=Z,31nm,0.8s						
ASHO	Ashiyiah	77.70	292	P	P	20 25 51.0	+1.4
B08A	Colville Reser	77.83	43	P	P	20 25 50.8	+1.0
YBH	Yreka Blue Hor	77.98	50	P	P	20 25 52.6	+1.8
YBH	Yreka Blue Hor	77.98	50	P	P	20 25 52.6	+1.8
YBH				pmax	pmax		
	comp=Z,30nm,1.7s						
MAK	Makhachkala	78.01	312	*c i*P	P	20 25 48.6	-2.2
MAK				*e**PP	pP	20 26 06.0	-2.3
MAK				*e*		20 28 42.6	
MAK				*e*PPP	PPP	20 30 36.5	
MAK				*e*S	S	20 35 35.5	-3.7
MAK				*e**SS	ScS	20 36 06.7	+2.0
MAK				*e*SS	SS	20 40 43.3	+2.2
MAK				*e*SSS	SSS	20 44 04.4	
MAK				pmax	pmax		
	comp=Z,95nm,1.0s						
MAK				MLR	MLR		
	comp=Z,345nm,18.0s						
KTK1	Kautokeino	78.06	341	*e*P	P	20 25 51.4	+0.8
ALNE	Al Ain	78.18	291	P	P	20 25 52.6	+0.5
ASUD	Al Ashush, Dub	78.34	292	P	P	20 25 54.0	+1.0
AKT	Akhty	78.38	310	*e*P	P	20 25 50.7	-2.4
AKT				*e*		20 25 59.6	
AKT				*e**PP	pP	20 26 07.8	-2.8
AKT				*e*S	S	20 35 41.4	-2.2
AKT				*e*S	SKSac	20 36 03.1	+1.0
AKT				*e**SS	ScS	20 36 10.9	+2.8
AKT				pmax	pmax		
	comp=Z,42nm,0.6s						
AKT				MLR	MLR		
	comp=Z,184nm,24.0s						
JETT	Jettan, Norway	78.54	342	*e*P	P	20 25 54.1	+0.8
VRH	Novokhopyorsk	78.59	321	*e*P	P	20 25 54.6	+0.7
VRH				pmax	pmax		
	comp=Z,30nm,0.8s						
LKRN	Lenkeran, Azer	78.62	307	P	P	20 25 56.0	+1.7
SEKA	Sheki	78.85	310	P	P	20 25 56.9	+1.3
TRO	Tromso	78.90	343	*e*P	P	20 25 55.2	0.0
NEEM	North Greenlan	78.94	3	*i* P	P	20 25 56.9	+1.2
NEEM				IAmb	IAmb	20 25 58.1	
	comp=Z,18nm,0.5s						
MOS	Moscow	78.95	326	*e*P	P	20 25 53.3	-2.5
MNGR	Mingechevir, A	79.09	310	P	P	20 25 57.9	+1.1
NEW	Newport	79.23	42	LR	LR	20 58 15.8	
	comp=Z,34nm,18.2s,baz=327,slow=33						
NEW	Newport	79.23	42	P	P	20 25 58.7	+1.2
NEW				pmax	pmax		
	comp=Z,8.0nm,0.8s						
DAG	Danmarks Havn	79.32	356	P	P	20 25 57.7	+0.3
DAG				pmax	pmax		
	comp=Z,18nm,1.0s						
DAG	Danmarks Havn	79.32	356	*i* P	P	20 25 57.3	-0.1
DAG				IAmb	IAmb	20 26 00.8	
	comp=Z,6.3nm,0.6s						
OUL	Oulu	79.42	337	P	P	20 25 58.8	+0.7
OUL				pmax	pmax		
	comp=Z,23nm,0.7s						
LPSR	Galich'ya Gora	79.60	323	*e*P	P	20 26 00.6	+1.2

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LPSR                                pmax     pmax
       comp=Z,23nm,0.9s
GANJ  Ganja               79.68 310   P        P        20 26 01.0 +0.9
OBN   Obninsk             79.77 326   P        P        20 26 01.1 +0.9
OBN                                 IAmb     IAmb     20 26 01.8
       comp=Z,38nm,0.6s
OBN   Obninsk             79.77 326   LR       LR       21 04 45.7
       comp=Z,240nm,18.0s,baz=333,slow=38
OBN   Obninsk             79.77 326  eP        P        20 26 00.9 +0.7
OBN                                  i                  20 26 05.9
OBN                                  i                  20 26 19.5
OBN                                  i S       S        20 35 57.4 -0.1
OBN                                   pmax     pmax
       comp=Z,12nm,0.6s
OBN                                   MLR      MLR
       comp=Z,241nm,18.0s
VORR  Voronezh            79.84 322  eP        P        20 26 00.3 -0.4
VORR                                  pmax     pmax
       comp=Z,15nm,0.8s
VSR   Storozhevoye        80.05 322  eP        P        20 26 01.2 -0.6
VSR                                   pmax     pmax
       comp=Z,20nm,0.6s
VORD  Divnogorie          80.09 321  eP        P        20 26 01.8 -0.2
VORD                                  pmax     pmax
       comp=Z,20nm,0.6s
GOF   Gofitskoye          80.21 315ceP         P        20 26 03.6 +0.8
AFDM  Forest Hills D      80.23  52   P        P        20 26 04.5 +1.4
NCK   Nalchik             80.46 313deP         P        20 26 06.4 +2.2
NCK                                   pmax     pmax
       comp=Z,13nm,0.8s
BMO   Blue Mountains      80.46  45   P        P        20 26 05.3 +1.0
BMO   Blue Mountains      80.46  45   P        P        20 26 05.3 +1.0
BMO                                   pmax     pmax
       comp=Z,15nm,1.1s
MZR   Muzera              80.50 291  i P       P        20 26 05.0 +0.2
       SNR=12
WVOR  Wild Horse Val      80.53  48   P        P        20 26 05.5 +0.7
WVOR                                  pmax     pmax
       comp=Z,10.0nm,1.0s
NAX   Nakhchivan          80.83 309   P        P        20 26 07.9 +1.5
KBZ   Khabaz              80.83 314   P        P        20 26 05.8 -0.3
       comp=Z,36nm,0.7s,baz=78,slow=7.6,SNR=65
KBZ                                   LR       LR       21 05 10.1
       comp=Z,94nm,20.3s,baz=64,slow=38
       comp=Z,36nm,0.7s
KBZ   Khabaz              80.83 314d iP        P        20 26 06.7 +0.6
KBZ                                   pmax     pmax
       comp=Z,50nm,0.9s
KIV   Kislovodsk          80.88 314   P        P        20 26 08.1 +1.5
KIV                                   IAmb     IAmb     20 26 16.9
       comp=Z,24nm,0.6s
KIV   Kislovodsk          80.88 314  ⇑P        P        20 26 08.4 +1.8
KIV   Kislovodsk          80.88 314  eP        P        20 26 07.2 +0.6
KIV                                  eS        S        20 36 11.2 +1.3
KIV                                   pmax     pmax
       comp=Z,21nm,1.0s
KIV   Kislovodsk          80.88 314  i P       P        20 26 07.8 +1.3
       SNR=11
TRLG  Trialeti            80.88 311   P        P        20 26 06.3 -0.4
GNI   Garni               80.98 310   P        P        20 26 08.6 +1.3
GNI   Garni               80.98 310   LR       LR       21 06 31.4
       comp=Z,58nm,20.3s,baz=58,slow=39
GNI   Garni               80.98 310deP         P        20 26 08.2 +0.9
GNI                                   pmax     pmax
       comp=Z,8.0nm,0.8s
SHA1  Shidzhatmaz         80.99 314d iP        P        20 26 07.9 +0.6
STEI  Steigen             81.03 342  eP        P        20 26 06.9 +0.2
PLID  Pearl Lake          81.21  45   P        P        20 26 09.0 +0.5
LOF   Lofoten             81.36 343  eP        P        20 26 08.6 +0.1
FIA1  FINESS Array S      81.39 334   P        P        20 26 08.2 -0.5
FIA1                                  IAmb     IAmb     20 26 09.0
       comp=Z,44nm,0.6s
FINES FINESS Array B      81.39 334   P        P        20 26 08.1 -0.6
       comp=Z,17nm,0.5s,baz=56,slow=5.3,SNR=161
FINES                                 LR       LR       21 05 14.7
       comp=Z,92nm,19.4s,baz=60,slow=38
       comp=Z,17nm,0.5s
FAUS  Fauske              81.39 342  eP        P        20 26 09.1 +0.4
BLKN  Baker Lake          81.42  22   P        P        20 26 09.2 +0.4
KEF   Keuruu              81.45 335  eP        P        20 26 08.3 -0.8
ERBR  Yeremizino-Bor      81.58 316  eP        P        20 26 10.8 +0.7
ERBR                                 e*PP      pP       20 26 28.3 +0.5
ERBR                                 eS        S        20 36 16.9  0.0
ERBR                                  pmax     pmax
       comp=Z,67nm,0.8s
VAF   Ylistaro            81.77 337  eP        P        20 26 10.4 -0.3
DBG   Daneborg            81.80 355  i P       P        20 26 10.9 +0.2
DBG                                   IAmb     IAmb     20 26 11.8
       comp=Z,2.8nm,0.6s
LABN  Labinsk             81.88 315  eP        P        20 26 15.3 +3.6
LABN                                 e*PP      pP       20 26 32.7 +3.3
LABN                                 eS        S        20 36 23.7 +3.7
LABN                                  pmax     pmax
       comp=Z,25nm,0.9s
KARS  Kars                81.96 311   P        P        20 26 13.9 +1.5
KARS  Kars                81.96 311   P        P        20 26 13.9 +1.5
KARS                                  pmax     pmax
       comp=Z,188nm,1.5s
NVAR  Mina Array Bea      82.35  52   P        P        20 26 15.5 +0.9
       comp=Z,4.9nm,0.9s,baz=293,slow=5.1,SNR=24
       comp=Z,4.9nm,0.9s
VAGH  Vaagaholmen         82.42 342  eP        P        20 26 14.9 +0.8
MOR8  Moi Rana            82.47 341  eP        P        20 26 13.4 -1.0
KONS  Konsvik             82.62 342  eP        P        20 26 16.8 +1.6
MEF   Metsahovi           82.77 334  eP        P        20 26 15.9 -0.1
VSU   Vasula              82.78 332deP         P        20 26 15.7 -0.4
VSU                                   pmax     pmax
       comp=Z,25nm,1.3s
VSU   Vasula              82.78 332  eP        P        20 26 15.1 -0.9
VSLR  Vesyoloye           82.84 314ceP         P        20 26 17.3 +0.6
VSLR                                  pmax     pmax
       comp=Z,68nm,1.1s
LEIR  Leirfjorden         82.90 342  eP        P        20 26 17.3 +0.8
GEVA  Gevas               82.92 309   P        P        20 26 18.0 +0.5
GEVA                                  IAmb     IAmb     20 26 20.8
       comp=Z,35nm,1.5s
SOC   Sochi               82.99 314  eP        P        20 26 17.9 +0.4
SOC                                  e                  20 29 26.3
SOC                                  ePPP      PPP      20 31 29.6
SOC                                  eS        S        20 36 33.9 +2.6
SOC                                  eSS       SS       20 41 54.9 -0.5
SOC                                  eSSS      SSS      20 45 20.3
SOC                                   pmax     pmax
       comp=Z,15nm,0.5s
SOC                                   MLR      MLR
       comp=Z,149nm,20.0s
RAF   Rauma               83.33 335  eP        P        20 26 17.9 -1.0
ELK   Elko                83.55  48   LR       LR       20 59 43.8
       comp=Z,45nm,19.6s,baz=274,slow=33
GURO  Guroymak-BITLI      83.55 309   P        P        20 26 21.5 +0.8
JMIC  Jan Mayen           83.64 351   LR       LR       21 04 13.6
       comp=Z,18nm,19.3s,baz=146,slow=36
MTSE  Matsula             83.89 333  eP        P        20 26 21.2 -0.6
ANN   Anapa               83.92 316  eP        P        20 26 22.8 +0.6
ANN                                  e*PP      pP       20 26 41.2 +1.3
ANN                                  eS        SKSac    20 36 37.7 -1.8
ANN                                   pmax     pmax
       comp=Z,70nm,0.8s
KOPT  Kop Dagi            84.00 311   P        P        20 26 24.2 +1.0
KOPT                                  IAmb     IAmb     20 26 31.8
       comp=Z,28nm,0.6s
SUMG  Summit              84.18   0   P        P        20 26 24.6 +1.1
SUMG  Summit              84.18   0   P        P        20 26 24.6 +1.1
SUMG                                  pmax     pmax
       comp=Z,15nm,0.8s
NSS   Namsos              84.36 341  eP        P        20 26 23.6 -0.5
YHL   Hebgen Lake         84.39  43   P        P        20 26 26.5 +1.4
MNK   Minsk               84.44 328  i P       P        20 26 25.4 +0.7
       comp=E,5.0nm,0.9s
MNK                                  i P       P        20 26 25.4 +0.7
       comp=N,12nm,0.9s
MNK                                  i P       P        20 26 25.4 +0.7
       comp=Z,19nm,0.8s,baz=57
MNK                                  i PcP     PcP      20 26 29.4 +1.2
MNK                                  i PP      PP       20 29 40.9 +0.9
MNK                                  i PPP     PPP      20 31 33.5
MNK                                  i S       SKSac    20 36 45.3 +2.9
MNK                                  i PS      PnS      20 37 02.2  -45
MNK                                  i SS      SS       20 42 17.6 +1.6
MNK                                  i SSS     SSS      20 45 42.9
MNK   Minsk               84.44 328  i P       P        20 26 25.3 +0.7
MNK                                  i                  20 29 40.8
MNK                                  i PPP     PPP      20 31 33.4
MNK                                  i S       SKSac    20 36 45.3 +2.9
MNK                                  i SS      SS       20 42 17.6 +1.6
MNK                                  i SSS     SSS      20 45 42.9
MNK                                   pmax     pmax
       comp=E,5.0nm,0.9s
MNK                                   pmax     pmax
       comp=N,12nm,0.9s
MNK                                   pmax     pmax
       comp=Z,19nm,0.8s
MNK                                   MLR      MLR
       comp=E,62nm,12.0s
IDID  Didziasalis         84.54 329  eP        P        20 26 23.0 -2.2
NACGM Naroch              84.75 329  eP        P        20 26 26.1 -0.2
       comp=Z,14nm,0.8s,baz=56
DUG   Dugway, Tooele      85.45  48   P        P        20 26 31.3 +1.0
DUG                                   pmax     pmax
       comp=Z,16nm,0.8s
VSVD  Vaisvydziai         85.45 330  eP        P        20 26 29.1 -0.6
PFO   Pinyon Flats O      85.71  55   LR       LR       20 59 57.4
       comp=Z,72nm,19.1s,baz=352,slow=32
PFO   Pinyon Flats O      85.71  55c iP        P        20 26 32.3 +0.6
PFO                                   pmax     pmax
       comp=Z,15nm,1.0s
PABE  Paberze             85.72 330   P        P        20 26 30.4 -0.6
PABE                                  IAmb     IAmb     20 26 31.6
       comp=Z,38nm,0.6s
PABE  Paberze             85.72 330  eP        P        20 26 30.5 -0.6
AKASG Malin Array Be      85.81 324   P        P        20 26 31.8 +0.2
AKASG Malin Array Be      85.81 324   P        P        20 26 30.2 -1.4
       comp=Z,5.7nm,0.4s,baz=53,slow=5.3,SNR=40
AKASG                                 LR       LR       21 08 19.4
       comp=Z,192nm,20.0s,baz=52,slow=38
       comp=Z,5.7nm,0.4s
AKASG Malin Array Be      85.81 324   P        P        20 26 31.8 +0.2
AKASG                                 pmax     pmax
       comp=Z,6.0nm,0.8s
AKBB  Malin Array Si      85.81 324   P        P        20 26 31.2 -0.4
AKBB                                  IAmb     IAmb     20 26 34.1
       comp=Z,20nm,0.8s
AKBB  Malin Array Si      85.81 324deP         P        20 26 30.9 -0.7
KIEV  Kiev                85.82 324  ⇑P        P        20 26 30.8 -0.9
KIEV  Kiev                85.82 324  ⇑P        P        20 26 30.8 -0.9
KIEV  Kiev                85.82 324  i P       P        20 26 31.5 -0.2
       SNR=13
ARPR  Arapgir-MALATY      85.91 311   P        P        20 26 33.2 +0.6
ARPR                                  IAmb     IAmb     20 26 36.7
       comp=Z,16nm,0.7s
SIM   Simferopol'         85.93 318  eP        P        20 26 30.7 -1.7
SIM                                  e                  20 29 53.0
SIM                                  eS        S        20 36 59.0 -1.6
SIM                                   pmax     pmax
       comp=Z,17nm,0.8s
PBUR  Paburge             86.33 331  eP        P        20 26 33.8 -0.2
PDAR  Pinedale Array      86.41  45   P        P        20 26 34.9 -0.2
PDAR  Pinedale Array      86.41  45   P        P        20 26 35.1  0.0
       comp=Z,0.9nm,0.7s,baz=287,slow=6.2,SNR=6.7
PDAR                                  LR       LR       21 00 41.5
       comp=Z,35nm,19.7s,baz=296,slow=32
LAO   LASA Array          86.53  40   P        P        20 26 36.1 +0.8
LAO                                   IAmb     IAmb     20 27 01.3
       comp=Z,22nm,0.8s
HFS   Hagfors             86.92 337   P        P        20 26 35.1 -1.8
       comp=Z,8.1nm,0.6s,baz=68,slow=4.8,SNR=27
HFS                                   PP       PP       20 29 59.4 -0.5
       comp=Z,5.3nm,0.8s,baz=43,slow=8.7,SNR=3.9
HFS                                   LR       LR       21 08 26.7
       comp=Z,129nm,19.6s,baz=47,slow=38
       comp=Z,8.1nm,0.6s
SUW   Suwalki             86.98 329  eP        P        20 26 35.5 -1.7
SUW   Suwalki             86.98 329   P        P        20 26 35.7 -1.6
SUW   Suwalki             86.98 329   P        P        20 26 35.7 -1.6
SUW   Suwalki             86.98 329  eP        P        20 26 36.7 -0.6
RAYN  Ar Rayn             87.06 294   P        P        20 26 38.5 +0.1
RAYN                                  IAmb     IAmb     20 27 02.7
       comp=Z,16nm,0.7s
RAYN  Ar Rayn             87.06 294  ⇑P        P        20 26 38.6 +0.2
RAYN  Ar Rayn             87.06 294  i P       P        20 26 38.5 +0.1
       SNR=16
DOMB  Dombas              87.08 340  eP        P        20 26 38.2 +0.5
NB2   NORSAR Subarra      87.13 339   P        P        20 26 36.2 -1.7
       comp=Z,4.4nm,0.6s,baz=42,slow=5.1
NB2                                   PP       PP       20 29 55.4 -6.2
       comp=Z,3.8nm,1.0s,baz=68,slow=6.9
NB2   NORSAR Subarra      87.13 339   P        P        20 26 36.2 -1.7
       baz=42,slow=5.1
NOA   NORSAR Array B      87.13 339   P        P        20 26 36.3 -1.6
       comp=Z,4.3nm,0.7s,baz=47,slow=5.6,SNR=31
NOA                                   PP       PP       20 30 00.4 -1.2
       comp=Z,1.0nm,0.7s,baz=47,slow=8.3,SNR=3.6
NOA                                   LR       LR       21 08 36.5
       comp=Z,49nm,19.4s,baz=50,slow=38
       comp=Z,4.3nm,0.7s
NC602 NORSAR Array S      87.24 338  eP        P        20 26 39.2 +0.8
NORES NORESS Array B      87.24 338   P        P        20 26 39.2 +0.8
SORM  Soroca              87.68 322  ⇑P        P        20 26 40.0 -0.8
SORM  Soroca              87.68 322  ⇑P        P        20 26 40.0 -0.8
BNN   Bunyan              87.74 312   P        P        20 26 41.2 -0.3
BNN                                   IAmb     IAmb     20 26 44.5
       comp=Z,27nm,0.8s
113A  Mohawk Valley,      88.11  55   P        P        20 26 43.9 +0.8
HORU  Horodok             88.14 324   P        P        20 26 43.8 +0.8
BR131 Keskin Array S      88.81 313   P        P        20 26 45.5 -1.0
BR131                                 IAmb     IAmb     20 26 48.5
       comp=Z,11nm,0.7s
BR131 Keskin Array S      88.81 313c iP        P        20 26 45.7 -0.8
BRTR  Keskin Array B      88.81 313   P        P        20 26 45.3 -1.2
BRTR  Keskin Array B      88.81 313   P        P        20 26 45.1 -1.5
       comp=Z,9.4nm,0.7s,baz=66,slow=3.3,SNR=61
       comp=Z,9.4nm,0.7s
BRTR  Keskin Array B      88.81 313   P        P        20 26 45.3 -1.2
KIRS  Kirsehir-Merke      88.92 313  ⇑P        P        20 26 47.7 +0.7
SFJD  Kangerlussuaq       89.23   5   LR       LR       21 03 39.8
       comp=Z,36nm,21.7s,baz=349,slow=33
ANTO  Ankara              89.31 314   P        P        20 26 49.2 +0.4
ANTO                                  IAmb     IAmb     20 26 51.2
       comp=Z,17nm,0.7s
ANTO  Ankara              89.31 314  ⇑P        P        20 26 49.9 +1.2
ANTO  Ankara              89.31 314  ⇑P        P        20 26 49.9 +1.2
KSV   Kosov               89.39 324   P        P        20 26 50.1 +1.2
CFR   Carcaliu            89.43 320  ⇑P        P        20 26 48.2 -0.9
CFR   Carcaliu            89.43 320  ⇑P        P        20 26 48.2 -0.9
TPGR  Topolog             89.44 320  ⇑P        P        20 26 48.6 -0.6
BEL   Belsk               89.46 328  eP        P        20 26 50.0 +1.0
MORS  Morshin             89.54 325   P        P        20 26 51.3 +1.8
TESR  Tescani             89.55 322  ⇑P        P        20 26 49.4 -0.2
FRB   Frobisher Bay       89.65  13   LR       LR       21 12 13.6
       comp=Z,36nm,19.5s,baz=340,slow=39
BURAR Bucovina Array      89.72 323   P        P        20 26 50.2 -0.4
BURAR                                 IAmb     IAmb     20 26 53.5
       comp=Z,10nm,0.7s
BURAR Bucovina Array      89.72 323  ⇓P        P        20 26 50.4 -0.1
BURAR Bucovina Array      89.72 323  ⇓P        P        20 26 50.4 -0.1
KWP   Kalwaria Pacla      89.86 326  eP        P        20 26 50.3 -0.7
KWP   Kalwaria Pacla      89.86 326   P        P        20 26 50.8 -0.3
KWP                                   pmax     pmax
       comp=Z,24nm,0.9s
VRI   Vrincioaia          89.87 321  ⇑P        P        20 26 52.4 +1.2
VRI   Vrincioaia          89.87 321  ⇑P        P        20 26 52.4 +1.2
PLOR  Plostina            89.92 321  ⇓P        P        20 26 52.1 +0.7
PLOR  Plostina            89.92 321  ⇓P        P        20 26 52.1 +0.7
ASF   Jabal al Asfar      90.14 305   LR       LR       21 13 15.1
       comp=Z,47nm,19.2s,baz=106,slow=40
TURR  Turia               90.17 322  ⇑P        P        20 26 53.6 +1.0
ULM   Lac du Bonnet       90.17  33   LR       LR       21 07 34.3
       comp=Z,38nm,19.8s,baz=338,slow=36
ISCO  Idaho Springs       90.47  46   P        P        20 26 55.4 +0.9
ISCO  Idaho Springs       90.47  46   P        P        20 26 55.4 +0.9
ISCO                                  pmax     pmax
       comp=Z,4.0nm,0.9s
KOLS  Kolonicke sedl      90.51 325  eP        P        20 26 55.6 +1.5
KOLS                                  pmax     pmax
       comp=Z,4.0nm,0.9s
KOLS  Kolonicke sedl      90.51 325  eP        P        20 26 55.6 +1.5
MLR   Muntele Rosu        90.53 321   LR       LR       21 10 20.3
       comp=Z,119nm,21.0s,baz=53,slow=37
MLR   Muntele Rosu        90.53 321  ⇓P        P        20 26 56.9 +2.5
MLR   Muntele Rosu        90.53 321  ⇓P        P        20 26 56.9 +2.5
DOPR  Dopca               90.58 322  ⇑P        P        20 26 54.4 -0.1
TRSU  Trosnyk             90.66 324   P        P        20 26 54.7 -0.1
STHS  Stebnicka Huta      90.74 326  eP        P        20 26 55.8 +0.6
STHS  Stebnicka Huta      90.74 326  eP        P        20 26 55.8 +0.6
BORA  Eskisehir           90.84 315   P        P        20 26 55.4 -0.5
BORA                                  IAmb     IAmb     20 26 57.9
       comp=Z,9.0nm,0.7s
MMAI  Mount Meron Ar      90.85 307   P        P        20 26 54.6 -1.5
       comp=Z,3.0nm,0.7s,baz=68,slow=3.9,SNR=7.5
MMAI                                  LR       LR       21 12 44.9
       comp=Z,35nm,18.2s,baz=40,slow=39
       comp=Z,3.0nm,0.7s
OJC   Ojcow               90.97 327  eP        P        20 26 55.4 -0.8
OJC   Ojcow               90.97 327   P        P        20 26 56.5 +0.3
OJC   Ojcow               90.97 327   P        P        20 26 56.5 +0.3
BORG  Borgarnes           91.18 353   LR       LR       21 08 45.0
       comp=Z,30nm,20.2s,baz=357,slow=36
NIE   Niedzica            91.22 327  eP        P        20 26 58.9 +1.5
NIE   Niedzica            91.22 327   P        P        20 26 59.4 +2.0
NIE                                   pmax     pmax
       comp=Z,3.0nm,0.9s
CSS   Mathiatis           91.40 309   P        P        20 26 58.3 -0.2
CSS                                   IAmb     IAmb     20 27 22.9
       comp=Z,10nm,0.8s
MARR  Marisel-Cluj        91.43 323  ⇑P        P        20 26 58.0 -0.6
SDCO  Great Sand Dun      91.61  47   P        P        20 27 00.8 +0.9
LOT   Lotru               91.80 322  ⇓P        P        20 27 04.4 +4.1
STEB  Steborice           92.14 328  eP        P        20 27 01.1 -0.5
KSP   Ksiaz               92.25 329  eP        P        20 27 02.5 +0.4
KSP   Ksiaz               92.25 329   P        P        20 27 02.5 +0.4
KSP                                   pmax     pmax
       comp=Z,10.0nm,0.8s
MORC  Moravsky Berou      92.36 328  eP        P        20 27 02.5 -0.2
MORC  Moravsky Berou      92.36 328  ⇓P        P        20 27 02.5 -0.2
MORC  Moravsky Berou      92.36 328  ⇓P        P        20 27 02.5 -0.2
PSZ   Piszkesteto         92.38 326   P        P        20 27 03.5 +0.6
PSZ                                   pmax     pmax
       comp=Z,6.0nm,0.9s
ANMO  Albuquerque         92.40  50   P        P        20 27 03.7 +0.3
ANMO                                  IAmb     IAmb     20 27 30.3
       comp=Z,8.5nm,0.9s
ANMO  Albuquerque         92.40  50   LR       LR       21 04 44.0
       comp=Z,46nm,19.1s,baz=56,slow=33
ANMO  Albuquerque         92.40  50d iP        P        20 27 04.8 +1.4
ANMO                                  pmax     pmax
       comp=Z,3.0nm,1.0s
OSTC  Ostas               92.47 329  eP        P        20 27 04.0 +0.8
OSTC  Ostas               92.47 329  eP        P        20 27 04.0 +0.8
MAUC  Maruska             92.49 328  eP        P        20 27 05.5 +2.2
Y22D  IRIS PASSCAL I      92.51  51   P        P        20 27 03.7 -0.2
       baz=301
CHVC  Chvalec             92.53 329  eP        P        20 27 03.3 -0.1
CHVC  Chvalec             92.53 329  eP        P        20 27 03.3 -0.1
KRLC  Kraliky             92.53 329  eP        P        20 27 03.6 +0.1
KRLC  Kraliky             92.53 329  eP        P        20 27 03.6 +0.1
SURR  Surduc              92.54 323  ⇑P        P        20 27 05.1 +1.6
VYHS  Vyhne               92.56 326  eP        P        20 27 04.1 +0.5
VYHS                                  pmax     pmax
       comp=Z,7.0nm,0.9s
VYHS  Vyhne               92.56 326  eP        P        20 27 04.1 +0.5
DPC   Dobruska-Polom      92.56 329  eP        P        20 27 03.5 -0.1
DPC   Dobruska-Polom      92.56 329  eP        P        20 27 03.5 -0.1
UPC   Upice               92.60 329  eP        P        20 27 03.9 +0.1
UPC   Upice               92.60 329  eP        P        20 27 03.9 +0.1
T25A  Trinidad            92.67  47   P        P        20 27 05.5 +0.9
T25A                                  IAmb     IAmb     20 27 31.6
       comp=Z,8.3nm,1.0s
EIL   Elat                92.80 304   LR       LR       21 12 38.2
       comp=Z,34nm,20.9s,baz=66,slow=38
JAVC  Velka Javorina      92.90 327  eP        P        20 27 05.6 +0.4
VRAC  Vranov              93.13 328   LR       LR       21 13 40.3
       comp=Z,97nm,18.1s,baz=48,slow=38
VRAC  Vranov              93.13 328  eP        P        20 27 06.2  0.0
PVCC  Panska Ves          93.26 330  eP        P        20 27 07.6 +0.8
PVCC  Panska Ves          93.26 330  eP        P        20 27 07.6 +0.8
KRUC  Moravsky            93.40 328  eP        P        20 27 05.7 -1.7
KRUC  Moravsky            93.40 328   P        P        20 27 06.1 -1.3
KRUC                                  pmax     pmax
       comp=Z,6.0nm,0.9s
CLL   Collm               93.43 331   P        P        20 27 07.5  0.0
CLL   Collm               93.43 331   P        P        20 27 07.5  0.0
CLL                                   pmax     pmax
       comp=Z,4.0nm,0.8s
CLL   Collm               93.43 331  i P       P        20 27 06.4 -1.1
       comp=Z,27nm,2.0s
CLL                                  i x       x        20 27 12.9
CLL                                  i x       x        20 27 19.4
CLL                                  i PP      PP       20 30 54.1 +2.4
CLL                                  eSKSac    SKSac    20 37 36.0 +0.1
CLL                                  eSP       SP       20 39 19.0 -3.2
CLL                                  ePPS      PPS      20 40 06.0
CLL                                  eSS       SS       20 44 42.0  +16
ECSD  EROS Data Cent      93.80  39   P        P        20 27 09.7 +0.3
MORH  Mrgy, Hungar        94.13 325  ⇓P        P        20 27 11.9 +1.1
RONA  Rosalia, Austr      94.36 327  i PcP     PcP      20 27 13.0 +0.7
       comp=Z,1.8nm,0.6s
CONA  Conrad Observa      94.42 327  i PcP     PcP      20 27 13.4 +0.7
       comp=Z,2.4nm,0.8s
CKRC  Cesky Krumlov       94.57 329  eP        P        20 27 15.3 +2.5
CKRC                                  AMS      AMS      21 09 50.0
       comp=Z,200nm,14.9s
CKRC  Cesky Krumlov       94.57 329  eP        P        20 27 15.3 +2.5
CKRC                                  MLR      MLR
       comp=Z,200nm,14.9s
KHC   Kasperske Hory      94.70 329  eP        P        20 27 13.3 -0.1
KHC                                   AMS      AMS      21 09 40.0
       comp=Z,200nm,19.4s
KHC   Kasperske Hory      94.70 329⇑eP         P        20 27 13.9 +0.5
KHC                                   pmax     pmax
       comp=Z,6.0nm,0.8s
GEC2  GERESS Array S      94.84 329   P        P        20 27 14.4 +0.2
GEC2  GERESS Array S      94.84 329   P        P        20 27 15.0 +0.8
GEC2                                  pmax     pmax
       comp=Z,5.0nm,0.8s
GERES GERESS Array B      94.84 329   P        P        20 27 14.7 +0.5
GERES GERESS Array B      94.84 329   P        P        20 27 12.9 -1.2
       comp=Z,2.4nm,0.7s,baz=46,slow=2.8,SNR=21
GERES                                 PP       PP       20 31 01.8 -1.1
       comp=Z,0.5nm,0.6s,baz=36,slow=8.5,SNR=3.9
GERES                                 PKKP     PKKPdf   20 44 09.2 -0.4
       comp=Z,0.3nm,0.5s,baz=193,slow=3.8,SNR=3.6
GERES                                 LR       LR       21 14 28.2
       comp=Z,119nm,18.1s,baz=44,slow=38
       comp=Z,2.4nm,0.7s
GERES GERESS Array B      94.84 329   P        P        20 27 14.7 +0.5
MNTX  Cornudas Mount      94.84  53   P        P        20 27 15.0 +0.6
ARSA  Arzberg             95.05 327  i PcP     PcP      20 27 16.0 +0.6
       comp=Z,2.7nm,0.8s
MOA   Molln               95.26 328  i P       P        20 27 15.3 -0.7
       comp=Z,4.1nm,1.3s
BIOA  Bad Ischl, Aus      95.67 328  i PcP     P        20 27 17.9  0.0
       comp=Z,1.2nm,0.5s
SOKA  Soboth              95.69 327  i PcP     PcP      20 27 18.9 +0.6
       comp=Z,1.8nm,0.8s
KBA   Koelnbreinsper      96.25 328  ePcP      PcP      20 27 21.2 +0.3
       comp=Z,2.3nm,0.6s
EKA   Eskdalemuir Ar      96.26 341   P        P        20 27 21.5 +1.2
       comp=Z,1.0nm,0.7s,baz=46,slow=4.1,SNR=3.7
EKA                                   PP       PP       20 31 12.0 -1.4
       comp=Z,2.6nm,0.7s,baz=31,slow=7.0,SNR=9.1
EKA                                   PKKP     PKKPdf   20 44 03.3 -3.7
       comp=Z,0.5nm,0.6s,baz=226,slow=3.8,SNR=3.7
       comp=Z,1.0nm,0.7s
LESA  Schwarzleotal       96.33 328  i PcP     PcP      20 27 21.8 +0.7
       comp=Z,3.1nm,0.8s
ABTA  Abfaltersbach       96.88 328  i PcP     P        20 27 23.3 -0.3
       comp=Z,3.1nm,1.0s
MOTA  Moosalm             97.13 329  ePcP      Pdif     20 27 24.8  0.0
       comp=Z,3.0nm,1.1s
SQTA  Sankt Quirin        97.17 329  i PcP     P        20 27 24.3 -0.6
       comp=Z,1.3nm,0.8s
TXAR  Lajitas Array       97.34  54   P        P        20 27 25.9 -0.1
TXAR  Lajitas Array       97.34  54   P        Pdif     20 27 26.5 +0.5
       comp=Z,0.6nm,0.8s,baz=304,slow=5.1,SNR=6.3
TXAR                                  PKKP     PKKPbc   20 44 04.0 +0.3
       comp=Z,0.8nm,0.6s,baz=114,slow=3.7,SNR=16
TXAR                                  LR       LR       21 06 46.8
       comp=Z,31nm,18.9s,baz=312,slow=32
       comp=Z,0.6nm,0.8s
FETA  Feichten            97.54 329  ePcP      P        20 27 26.1 -0.5
       comp=Z,2.1nm,0.9s
SCHQ  Schefferville       97.97  17   LR       LR       21 09 39.6
       comp=Z,28nm,21.9s,baz=306,slow=34
FUORN Ofenpass-Fuorn      98.05 329   P        Pdif     20 27 29.9 +0.9
FUORN                                 IAmb     IAmb     20 27 31.7
       comp=Z,7.5nm,1.2s
DAVOX Davos/Dischmat      98.11 329   LR       LR       21 15 12.5
       comp=Z,90nm,18.4s,baz=63,slow=38
VNDA  Vanda              101.43 176   P        Pdif     20 27 43.5 +0.6
       comp=Z,0.5nm,0.5s,baz=340,slow=4.5,SNR=6.9
VNDA                                  PP       PP       20 31 52.7 -0.9
       comp=Z,0.8nm,0.8s,baz=338,slow=9.5,SNR=3.7
MAW   Mawson             107.71 203   PP       PP       20 32 36.7 -3.5
       comp=Z,5.8nm,1.1s,baz=63,slow=6.8,SNR=5.2
```

M65A	Busby, Falmout	108.26	26	P	PKiKP	20 32 20.4	+0.1
	baz=328						
ESDC	Sonseca Array	109.89	333	PP	PP	20 32 52.4	-3.2
	comp=Z,2.2nm,0.9s,baz=31,slow=6.8,SNR=9.0						
ESDC				PKKPbc	PKKPbc	20 43 26.0	-0.9
	comp=Z,0.5nm,0.6s,baz=230,slow=2.9,SNR=6.1						
ESDC				PKKPab	PKKPab	20 43 39.1	-1.5
	comp=Z,0.8nm,0.6s,baz=227,slow=4.2,SNR=8.6						
QSPA	South Pole Qui	113.28	180	PKiKP	PKiKP	20 32 28.2	-0.7
	comp=Z,2.1nm,0.4s,baz=281,slow=2.6,SNR=49						
SYO	Syowa Base	116.42	203	⇓ epPdiff	pPdif	20 29 09.5	+1.8
SYO	Syowa Base	116.42	203	⇓ iX	PKiKP	20 32 40.8	+6.0
LSZ	Lusaka	118.16	265		PKiKP	20 32 40.0	+0.1
LSZ	Lusaka	118.16	265	PKIKP	PKiKP	20 32 40.0	+0.1
MREMI	Moremi	120.92	257		PKPdf	20 32 44.3	-0.7
LBTB	Lobatse	123.14	255		PKPdf	20 32 48.8	-0.4
LBTB	Lobatse	123.14	255	PKIKP	PKPdf	20 32 48.8	-0.4
KDWAN	Kaudwane	123.60	257		PKiKP	20 32 50.3	-0.1
LCR2	La Lucha 2	123.61	60		PKiKP	20 32 50.7	-0.1
GRHM	Grahamstown, E	123.91	245	PKPdf	PKPdf	20 32 50.4	0.0
BOSA	Boshof	124.15	250	PKPdf	PKPdf	20 32 51.0	-0.1
BOSA	Boshof	124.15	250	PKP	PKPdf	20 32 50.7	-0.3
	comp=Z,2.4nm,0.7s,baz=72,slow=0.7,SNR=10						
BOSA	Boshof	124.15	250	PKIKP	PKPdf	20 32 51.0	-0.1
TROLL	Troll, Antarti	126.58	194	⇓ PKPdf	PKiKP	20 32 54.6	-0.3
	comp=Z,709nm,0.6s						
TORD	Torodi Ar. Bea	127.29	310	PKP	PKPdf	20 32 56.8	-0.5
	comp=Z,1.1nm,0.4s,baz=26,slow=2.0,SNR=2.2						
TORD				PP	PP	20 34 54.6	-2.1
	comp=Z,1.1nm,0.3s,baz=39,slow=9.3,SNR=4.4						
KOOLE	Kule	127.52	258		PKiKP	20 32 58.3	0.0
SNAA	Sanae	128.00	193	⇓ PKPdf	PKPdf	20 32 56.5	-0.6
	comp=Z,138nm,0.6s						
SNAA	Sanae	128.00	193		PKPdf	20 32 56.6	-0.4
SNAA	Sanae	128.00	193	PKP	PKPdf	20 32 56.9	-0.2
	comp=Z,6.9nm,0.7s,baz=107,slow=1.4,SNR=21						
SNAA				PP	PP	20 34 58.2	-2.4
	comp=Z,2.5nm,0.9s,baz=159,slow=5.8,SNR=3.3						
VNA2	Neumayer--Watz	129.50	192	⇓ PKPdf	PKPdf	20 32 59.8	-0.1
	comp=Z,32nm,0.6s,baz=29,slow=11						
VNA3	Neumayer Olymp	129.67	191	⇓ PKPdf	PKPdf	20 32 59.8	-0.4
	comp=Z,13nm,0.7s						
VNA1	Neumayer--Stat	129.90	192	⇓ PKPdf	PKPdf	20 33 00.7	+0.1
	comp=Z,15nm,1.0s						
RUSC	La Rusia	134.44	55		PKPdf	20 33 11.2	-0.3
BAUV	El Baul	135.90	47		PKPdf	20 33 13.1	-0.5
DBIC	Dimbokro	136.40	309	PKP	PKPdf	20 33 13.8	-0.8
	comp=Z,3.2nm,0.6s,baz=59,slow=2.2,SNR=5.6						
DBIC				PP	PP	20 35 53.4	-2.0
	comp=Z,2.9nm,0.6s,baz=40,slow=7.9,SNR=4.3						
DBIC				SKPbc	SKPbc	20 36 39.3	-1.7
	comp=Z,2.9nm,0.6s,baz=38,slow=2.5,SNR=4.4						
COYC	Coyhaique	144.25	137		PKPbc	20 33 26.3	+0.2
LL06	Loncomilla	144.55	131	PKPdf	PKPbc	20 33 27.7	+0.5
LL02	Futaleuf	145.40	133		PKPdf	20 33 29.6	-0.3
LR05	Currie	146.37	128		PKPbc	20 33 32.3	-0.6
PLCA	Paso Flores	147.23	130		PKPbc	20 33 35.4	-0.1
PLCA	Paso Flores	147.23	130	PKPbc	PKPbc	20 33 35.6	+0.1
	comp=Z,22nm,0.5s,baz=247,slow=3.3,SNR=50						
EFI	East Falkland	147.63	156		PKPbc	20 33 35.9	-0.1
EFI	East Falkland	147.63	156	PKP2	PKPbc	20 33 35.9	-0.1
BI02	San Fabin de	147.95	122		PKPbc	20 33 37.6	0.0
BO02	Sierra Bellavi	148.77	119		PKPbc	20 33 40.0	+0.2
PEL	Peldehue	149.16	116		PKPbc	20 33 39.9	-0.9
PEL	Peldehue	149.16	116	PKHKP	PKPpre	20 33 39.9	
HOPE	Hope Point	149.25	181		PKPbc	20 33 39.8	-0.3
HOPE	Hope Point	149.25	181	PKP2	PKPbc	20 33 39.8	-0.3
PB18	Visviri	149.31	85		PKPdf	20 33 39.8	+2.0
TA02	Huaiquique	149.37	90	PKPbc	PKPbc	20 33 41.7	+0.2
LCO	Las Campanas	149.58	108		PKPbc	20 33 42.1	-0.1
LCO	Las Campanas	149.58	108	PKP2	PKPbc	20 33 42.1	-0.1
MACA	Manacapuru-AM	149.64	52	PKPbc	PKPbc	20 33 41.9	-0.6
PB11	IPOC Station P	149.70	89		PKPdf	20 33 38.3	+0.4
GO01	Chusmiza	150.10	89	PKPdf	PKPdf	20 33 39.3	+0.4
LPAZ	La Paz	150.15	82	PKPdf	PKPdf	20 33 39.3	+0.1
LPAZ	La Paz	150.15	82	PKP	PKPdf	20 33 39.9	+0.7
	comp=Z,6.4nm,0.7s,baz=286,slow=0.9,SNR=32						
LPAZ				PKPbc	PKPbc	20 33 44.5	+0.2
	comp=Z,28nm,0.7s,baz=329,slow=2.8,SNR=48						
AC02	Maricunga	151.01	103		PKPbc	20 33 46.0	0.0
SAML	Samuel	151.29	64		PKPdf	20 33 40.0	-0.3
SAML	Samuel	151.29	64	PKIKP	PKPdf	20 33 40.0	-0.3
TRQA	Tornquist	154.38	130		PKPbc	20 33 51.8	-0.7
TRQA	Tornquist	154.38	130	PKIKP	PKPbc	20 33 51.8	-0.7
PTLB	Pontes e Lacer	157.90	73		PKPab	20 34 22.1	-0.5
CPUP	Villa Florida	161.58	103		PKPab	20 34 38.2	-0.2
CPUP	Villa Florida	161.58	103	PKPab	PKPab	20 34 38.6	+0.1
	comp=Z,1.5nm,0.6s,baz=270,slow=1.2,SNR=9.7						
BDFB	Brasilia	167.21	54	PKP	PKPdf	20 33 58.6	-0.1
	comp=Z,3.3nm,0.7s,baz=315,slow=2.9,SNR=4.6						
BDFB				PKPab	PKPab	20 35 03.0	-0.5
	comp=Z,2.7nm,0.8s,baz=0.0,slow=4.0,SNR=3.9						

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*SNET **01** 20:14:55.1±0.9, 13°.19N×89°.48W, h63^{km}, ML3.1*
*GCG **01** 20:14:55.7±0.3, 13°.17N×89°.54W, h50^{km}±6^{km}, MD3.3*
ISC 01 20:14:55.0±3.5**, 13°.1N**±0°.2×**89°.5W**±0°.1**, h33**^{km}±10^{km}**, n8, σ0ˢ.30**/13**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	0.57	8	eP	Pb	20 15 06.8	-0.1
JAYA				eS	Sb	20 15 15.2	+0.2
JAYA	Jayaque - finc	0.57	8	i P	Pb	20 15 06.7	-0.2
JAYA				i S	Sb	20 15 15.3	+0.3
LFRS	El Faro	0.70	40	eP	Pn	20 15 08.6	-0.2
COEG	Centro de Oper	0.82	50	eP	Pn	20 15 09.9	-0.6
COEG				eS	Sn	20 15 21.6	0.0
NUBE	Las Nubes	0.85	343	i P	Pn	20 15 10.8	-0.1
NUBE				i S	Sn	20 15 22.5	+0.2
PACA	Pacayal	1.23	72	eP	Pn	20 15 16.4	+0.2
PACA				eS	Sn	20 15 32.1	+0.4
LCY	Lacayo	1.25	74	eP	Pn	20 15 16.2	-0.1
MTO3	Montecristo	1.32	7	i P	Pn	20 15 17.4	0.0

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*NEIC **01** 20:26:08.1±2.1, 37°.26N±0°.01×115°.01W±0°.02, h5^{km}±1^{km}, Error ellipse: s-maj=2.9km s-min=2.3km az=53.0*
REN 01 20:26:08.8±2.1**, 37°.24N**±0°.01×**115°.030W**±0°.009**, h8**^{km}±4^{km}**, ML3.0**/9**, ML2.7**/55(NEIC)**, Error ellipse: s-maj=1.8km s-min=0.8km az=204.0, Southern Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRN	Pahroc Range	0.17	354		Pg	20 26 12.1	-0.2
PRN					Sg	20 26 14.9	+0.1
S11A	Rachel	0.70	306		Pg	20 26 20.6	-1.7
S11A				Sg	Sg	20 26 30.6	-0.9
S11A				IAML		20 26 35.4	
	comp=N,404nm,0.5s						
S11A				IAML		20 26 35.5	
	comp=E,510nm,0.4s						
SHPR	Sheep Range	0.74	188		Pg	20 26 22.1	-0.8
SHPR					Sg	20 26 32.5	0.0
SHPR				IAML		20 26 37.8	
	comp=N,249nm,0.5s						
CPY	CP-1	0.88	250		Pg	20 26 25.6	0.0
CPY					Sg	20 26 37.1	+0.2
MCY	Mercury	0.94	233		Pg	20 26 26.5	-0.4
TPNV	Topopah Spring	1.02	254		Pg	20 26 27.1	-1.2
TPNV				Sg	Sb	20 26 42.6	+0.3
TPNV				IAML		20 26 44.9	
	comp=N,314nm,0.3s						
NSP	Numbskull Pass	1.07	242		Pb	20 26 29.6	-0.1
R11B	Troy Canyon, C	1.20	339	Pg	Pg	20 26 31.1	-0.6
R11B				IAML		20 26 49.2	
	comp=N,130nm,0.5s						
R11B				IAML		20 26 52.3	
	comp=E,185nm,0.7s						
SDH	Striped Hills	1.20	241		Pn	20 26 32.6	+0.5
AMDNV	Amargosa	1.27	232		Pn	20 26 32.9	+0.1
LCMT	Little Creek M	1.45	98		Pn	20 26 35.0	-0.3
LCMT				IAML		20 26 56.2	
	comp=N,145nm,0.8s						
V12A	Nelson	1.51	174		Pn	20 26 35.0	-1.3
V12A				IAML		20 26 59.7	
	comp=N,125nm,0.8s						
V12A				IAML		20 27 00.9	
	comp=E,174nm,0.5s						
PSUT	Pine Spring	1.59	35		Pn	20 26 36.9	-0.6
PSUT				IAML		20 27 05.2	
	comp=E,83nm,0.9s						
PSUT				IAML		20 27 07.0	
	comp=N,80nm,1.0s						
SGV	South Grapevin	1.62	262		Pn	20 26 38.0	+0.1
GWY	Greenwater Val	1.68	232		Pb	20 26 39.7	-0.4
GWY				IAML		20 27 07.1	
	comp=N,131nm,0.4s						
GWY				IAML		20 27 09.4	
	comp=E,104nm,0.5s						
GMN	Gold Mountain	1.78	273		Pn	20 26 39.8	-0.3
GMN				IAML		20 27 09.2	
	comp=N,53nm,0.5s						
SPR3	Spring Creek 3	1.84	17		Pn	20 26 39.7	-1.3
SPR3				IAML		20 27 07.7	
	comp=N,100nm,0.6s						
SPR3				IAML		20 27 08.4	
	comp=E,85nm,0.6s						
GRAC	Grapevine Rang	1.88	263		Pn	20 26 41.2	-0.1
MZP	Montezuma Peak	1.93	285		Pn	20 26 42.0	-0.2
MZP				IAML		20 27 12.5	
	comp=E,57nm,0.4s						
TPH	Tonopah	1.93	296		Pn	20 26 42.1	-0.1
W13A	Hualapai Mount	2.33	156	Pn	Pn	20 26 47.2	-0.4
W13A				IAML		20 27 29.2	
	comp=E,32nm,0.7s						
DSP	Deep Springs	2.35	274		Pn	20 26 47.7	+0.1
DSP				IAML		20 27 35.9	
	comp=N,30nm,1.4s						
NV11	Mina Array Sit	2.75	297	Pn	Pn	20 26 53.8	+0.5
NV11				IAML		20 27 37.4	
	comp=N,26nm,0.7s						
NV08	Mina Array Sit	2.85	295		Pn	20 26 55.0	+0.2
LHV	Little Huntoon	2.93	291		Pn	20 26 56.5	+0.8
LHV				IAML		20 27 52.6	
	comp=N,39nm,0.6s						
RYN	Ryan	3.09	298	Pn	Pn	20 26 58.5	+0.4
RYN				IAML		20 27 53.3	
	comp=E,30nm,0.5s						
RYN				IAML		20 27 54.0	
	comp=N,31nm,0.6s						
ELK	Elko	3.51	357		Pn	20 27 03.7	-0.2
BGU	Big Grassy Mou	4.00	22	Pn	Pn	20 27 10.7	+0.2
BGU				IAML		20 28 20.1	
	comp=E,10.0nm,0.9s						

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*NEIC **01** 20:27:40.1±2.1, 37°.261N±0°.008×115°.03W±0°.02, h5^{km}±1^{km}, Error ellipse: s-maj=3.0km s-min=2.3km az=72.0*
REN 01 20:27:40.9±2.6**, 37°.27N**±0°.02×**115°.08W**±0°.02**, h2**^{km}±2^{km}**, ML2.8**/17**, ML2.7**/44(NEIC)**, Error ellipse: s-maj=2.9km s-min=1.9km az=125.0, Southern Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRN	Pahroc Range	0.14	11		Pg	20 27 43.5	-0.2
PRN					Sg	20 27 46.0	+0.3
S11A	Rachel	0.65	306		Pg	20 27 52.0	-1.4
S11A					Sg	20 28 01.4	-0.4
S11A				IAML		20 28 06.6	
	comp=N,336nm,0.4s						
S11A				IAML		20 28 06.7	
	comp=E,374nm,0.3s						
SHPR	Sheep Range	0.76	185		Pg	20 27 53.9	-1.6
SHPR				IAML		20 28 09.1	
	comp=N,203nm,0.4s						
CPY	CP-1	0.85	247		Pg	20 27 56.7	-0.4
MCY	Mercury	0.93	230		Pg	20 27 58.5	-0.2
TPNV	Topopah Spring	0.98	252		Pg	20 27 59.8	0.0
TPNV				IAML		20 28 16.0	
	comp=N,314nm,0.7s						
TPNV				IAML		20 28 16.1	
	comp=N,294nm,0.3s						
NSP	Numbskull Pass	1.05	240		Pg	20 28 01.3	+0.2
R11B	Troy Canyon, C	1.15	340	Pg	Pg	20 28 02.7	-0.3
R11B				IAML		20 28 20.5	
	comp=N,105nm,0.3s						
R11B				IAML		20 28 23.5	
	comp=E,130nm,0.7s						
SDH	Striped Hills	1.18	239		Pg	20 28 03.5	-0.1
AMDNV	Amargosa	1.26	230		Pg	20 28 04.5	-0.5
LCMT	Little Creek M	1.49	99		Pn	20 28 07.4	-1.5
LCMT				IAML		20 28 27.4	
	comp=N,136nm,0.7s						
LCMT				IAML		20 28 28.6	
	comp=E,71nm,0.4s						
V12A	Nelson	1.55	173		Pn	20 28 07.7	-2.0
V12A				IAML		20 28 31.0	
	comp=N,83nm,0.8s						
V12A				IAML		20 28 32.2	
	comp=E,106nm,0.5s						
PSUT	Pine Spring	1.60	37		Pn	20 28 08.6	-1.8
PSUT				IAML		20 28 33.8	
	comp=E,56nm,0.5s						
PSUT				IAML		20 28 38.2	
	comp=N,66nm,0.9s						
GWY	Greenwater Val	1.67	230		Pn	20 28 10.7	-0.7
GWY				IAML		20 28 38.4	
	comp=N,94nm,0.4s						
GWY				IAML		20 28 39.7	
	comp=E,81nm,0.5s						
GMN	Gold Mountain	1.74	272		Pn	20 28 11.2	-1.2
Q12A	Willow Creek R	1.78	6		Pb	20 28 14.3	-0.2
GRAC	Grapevine Rang	1.84	262	Pn	Pn	20 28 13.2	-0.4
TPH	Tonopah	1.88	296	Pn	Pn	20 28 13.0	-1.3
MZP	Montezuma Peak	1.88	284		Pn	20 28 13.5	-0.8
DSP	Deep Springs	2.30	273		Pn	20 28 19.0	-0.9
W13A	Hualapai Mount	2.37	155	Pn	Pn	20 28 18.7	-2.3
U15A	North Rim	2.39	110	Pn	Pn	20 28 20.9	-0.6
U15A				IAML		20 28 56.7	
	comp=N,57nm,0.7s						
U15A				IAML		20 28 57.8	
	comp=E,50nm,0.6s						
NVAR	Mina Array Bea	2.80	295	Pn	Pn	20 28 26.2	-0.8
LHV	Little Huntoon	2.88	291	Pn	Pn	20 28 27.8	0.0
LHV				IAML		20 29 15.5	
	comp=E,32nm,0.7s						
LHV				IAML		20 29 19.5	
	comp=N,26nm,0.7s						
RYN	Ryan	3.04	298	Pn	Pn	20 28 29.2	-1.0
RYN				IAML		20 29 20.4	
	comp=N,22nm,0.4s						
RYN				IAML		20 29 24.5	
	comp=E,21nm,0.5s						

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*UCR **01** 20:32:40.5±1.2, 10°.39N×85°.31W, h52^{km}±7^{km}, MW3.5*
*CATAC **01** 20:32:41.1±0.2, 10°N±3°×8°5W±°, h32^{km}±6^{km}, M3.0/9, MLv3.0/9, Error ellipse: s-maj=7.4km s-min=4.6km az=25.4, confirmed*
ISC 01 20:32:41.8±1.4**, 10°.37N**±0°.03×**85°.27W**±0°.04**, h47**^{km}±9^{km}**, n37, σ0ˢ.85**/42**, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NICO	Nicoya	0.29	216	eP	Pn	20 32 49.7	-0.9
NICO				eS	Sn	20 32 57.2	+0.4
COLC	Colonia	0.30	13	eP	Pn	20 32 50.1	-0.6
COLC				eS	Sn	20 32 57.9	+0.9
TILA	Tilaran	0.31	72	eP	Pn	20 32 50.2	-0.7
JTS	Las Juntas de	0.32	104	eP	Pn	20 32 50.0	-0.8
SACU	Santa Cruz	0.33	251	eP	Pn	20 32 50.2	-0.6
SACU				eS	Sn	20 32 57.7	+0.4
NYURE	Nandayure	0.37	177	eP	Pn	20 32 50.3	-1.1
CMARA	Lajas Hojancha	0.38	203	eP	Pn	20 32 50.5	-1.0
CMARA	Lajas Hojancha	0.38	203	S	Sn	20 32 59.3	+0.9
CMARA	Lajas Hojancha	0.38	203	P	Pn	20 32 50.5	-1.0
ELI1	Hacienda Flor	0.39	314	eP	Pn	20 32 51.6	+0.1
ARE1	Arenal 1	0.55	81	eP	Pn	20 32 53.1	-0.4
INDI	Punta indio, G	0.55	204	S	Sn	20 33 03.8	+1.9
INDI	Punta indio, G	0.55	204	P	Pn	20 32 52.7	-0.8
UPAL	Upala	0.58	26	eP	Pn	20 32 53.2	-0.7
PAQE	Paquera	0.64	149	eP	Pn	20 32 53.8	-0.8
SOCE	Pocosol	0.64	89	eP	Pn	20 32 54.0	-0.7
SOCE	Pocosol	0.64	89	P	Pn	20 32 53.9	-0.8
SOCE	Pocosol	0.64	89	S	Sn	20 33 05.0	+1.0
LCRUZ	La Cruz	0.79	333	eP	Pn	20 32 56.1	-0.5
CBL1	Cabuya	0.80	167	eP	Pn	20 32 55.1	-1.6
SRA1	San Ramn	0.83	110	eP	Pn	20 32 56.6	-0.7
CARN	Rivas	0.85	343	P	Pn	20 32 56.6	-0.8
CARN				S	Sn	20 33 10.1	+1.3
VPS8	V Poas	1.03	101	eP	Pn	20 32 59.7	-0.5
JAPN	Al SSO del Vol	1.22	341	P	Pn	20 33 02.2	-0.3
MORN	Al O del Volca	1.23	342	S	Sn	20 33 18.4	+0.4
ABE2	San Pablo	1.37	119	eP	Pn	20 33 04.7	-0.1
LCR2	La Lucha 2	1.40	117	eP	Pn	20 33 05.0	-0.1
LCR2	La Lucha 2	1.40	117	P	Pn	20 33 04.9	-0.1
TRT2	Tortugero	1.52	83	S	Sn	20 33 24.8	-0.4
TRT2	Tortugero	1.52	83	P	Pn	20 33 06.1	-0.5
ACON	Acoyapa	1.59	3	S	Sn	20 33 26.6	-0.3
ACON	Acoyapa	1.59	3	P	Pn	20 33 06.6	-0.9
NANN	Nandasmo	1.77	332	S	Sn	20 33 32.4	+1.1
BOAB	BOACO BROADBAN	2.10	349	P	Pn	20 33 13.5	-1.0
BOAB	BOACO BROADBAN	2.10	349	S	Sn	20 33 39.7	+0.2
BLUN	Bluefields	2.19	42	P	Pn	20 33 15.6	-0.1
BLUN				S	Sn	20 33 41.2	-0.4
DRK0	Durika	2.28	119	eP	Pn	20 33 18.5	+1.3

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*NEIC **01** 20:52:11.6±1.4, 37°.26N±0°.01×115°.02W±0°.01, h5^{km}±1^{km}, Error ellipse: s-maj=2.7km s-min=2.0km az=344.0*
REN 01 20:52:11.9±1.6**, 37°.24N**±0°.01×**115°.00W**±0°.02**, h6**^{km}±3^{km}**, ML2.6**/19**, ML2.4**/50(NEIC)**, Error ellipse: s-maj=1.9km s-min=1.7km az=127.0, Southern Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRN	Pahroc Range	0.17	346		Pg	20 52 15.5	+0.1
PRN				Sg	Sg	20 52 17.6	-0.1
S11A	Rachel	0.72	304		Pg	20 52 23.9	-1.8
S11A					Sg	20 52 34.1	-0.9
S11A				IAML		20 52 38.6	
	comp=N,133nm,0.5s						
S11A				IAML		20 52 39.4	
	comp=E,162nm,0.5s						
SHPR	Sheep Range	0.75	190		Pg	20 52 25.9	-0.4
SHPR					Sg	20 52 35.9	-0.1
SHPR				IAML		20 52 41.1	
	comp=N,110nm,0.4s						
ICU	Indian Springs	0.86	96		Pg	20 52 28.3	-0.1
CPY	CP-1	0.90	250		Pg	20 52 29.1	-0.1
MCY	Mercury	0.97	233		Pg	20 52 29.9	-0.5
TPNV	Topopah Spring	1.04	254	Pg	Pg	20 52 31.4	-0.5
TPNV				IAML		20 52 49.4	
	comp=N,127nm,0.3s						
NSP	Numbskull Pass	1.10	242		Pg	20 52 32.8	-0.1
R11B	Troy Canyon, C	1.20	337		Pg	20 52 34.3	-0.5
R11B				IAML		20 52 52.0	
	comp=N,58nm,0.5s						
R11B				IAML		20 52 55.5	
	comp=E,79nm,0.7s						
SDH	Striped Hills	1.23	241		Pb	20 52 35.5	0.0
AMDNV	Amargosa	1.30	233		Pn	20 52 36.4	0.0
LCMT	Little Creek M	1.42	99		Pn	20 52 38.4	0.0
LCMT				IAML		20 52 59.4	
	comp=N,61nm,0.4s						
LCMT				IAML		20 53 00.7	
	comp=E,48nm,0.2s						
V12A	Nelson	1.52	175		Pn	20 52 39.6	0.0
V12A				IAML		20 53 03.0	
	comp=N,57nm,0.7s						
PSUT	Pine Spring	1.57	35		Pn	20 52 40.6	0.0
PSUT				IAML		20 53 10.2	
	comp=N,38nm,0.9s						
PSUT				IAML		20 53 12.9	
	comp=E,35nm,0.8s						
SGV	South Grapevin	1.65	261		Pn	20 52 41.3	-0.2
GWY	Greenwater Val	1.71	232		Pb	20 52 43.1	-0.7
GWY				IAML		20 53 10.4	
	comp=N,54nm,0.4s						
GWY				IAML		20 53 11.8	
	comp=E,46nm,0.5s						
GMN	Gold Mountain	1.80	272		Pn	20 52 43.5	-0.2
GMN				IAML		20 53 16.4	
	comp=N,24nm,0.9s						
SPR3	Spring Creek 3	1.83	17		Pn	20 52 42.6	-1.5
SPR3				IAML		20 53 10.8	
	comp=N,42nm,0.6s						
SPR3				IAML		20 53 11.6	
	comp=E,43nm,0.5s						
TPH	Tonopah	1.95	296		Pn	20 52 44.9	-0.8
MZP	Montezuma Peak	1.95	284		Pn	20 52 44.7	-1.0
U15A	North Rim	2.32	110		Pb	20 52 52.6	-1.6
W13A	Hualapai Mount	2.32	157		Pn	20 52 50.8	0.0
NVAR	Mina Array Bea	2.87	295	Pn	Pn	20 52 58.3	0.0
LHV	Little Huntoon	2.96	291	Pn	Pn	20 52 59.9	+0.6
LHV				IAML		20 53 47.5	
	comp=E,17nm,0.8s						
LHV				IAML		20 53 58.3	
	comp=N,16nm,1.1s						
RYN	Ryan	3.11	297	Pn	Pn	20 53 01.4	-0.2
RYN				IAML		20 53 56.5	
	comp=E,10.0nm,0.6s						
RYN				IAML		20 53 57.3	
	comp=N,12nm,0.7s						
DUG	Dugway, Tooele	3.41	29		Pn	20 53 06.1	+0.4
DUG				IAML		20 54 02.5	
	comp=N,6.9nm,1.2s						
DUG				IAML		20 54 12.9	
	comp=N,8.6nm,0.7s						
ELK	Elko	3.50	357		Pn	20 53 06.7	-0.3
Y14A	Wickenburg	3.68	153		Pn	20 53 09.3	0.0
Y14A				IAML		20 54 13.4	
	comp=E,7.2nm,0.8s						
Y14A				IAML		20 54 14.0	
	comp=N,5.7nm,0.7s						
BGU	Big Grassy Mou	3.98	22	Pn	Pn	20 53 13.6	0.0
BGU				IAML		20 54 28.5	
	comp=E,4.2nm,1.2s						

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*NEIC **01** 21:08:51.0±1.9, 37°.24N±0°.01×114°.97W±0°.01, h5^{km}±1^{km}, Error ellipse: s-maj=3.0km s-min=2.2km az=347.0*
REN 01 21:08:51.2±1.7**, 37°.24N**±0°.01×**114°.98W**±0°.02**, h4**^{km}±4^{km}**, ML2.6**/11**, ML2.3**/26(NEIC)**, Error ellipse: s-maj=2.1km s-min=1.7km az=69.0, Southern Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRN	Pahroc Range	0.18	342		Pg	21 08 54.8	0.0
PRN					Sg	21 08 57.4	+0.3
S11A	Rachel	0.73	304		Pg	21 09 03.8	-1.5
S11A				IAML		21 09 18.1	
	comp=N,202nm,0.2s						
SHPR	Sheep Range	0.74	191		Pg	21 09 05.6	0.0
SHPR					Sg	21 09 15.2	0.0
ICU	Indian Springs	0.85	96		Pg	21 09 08.0	+0.4
CPY	CP-1	0.91	251		Pg	21 09 08.4	-0.3
MCY	Mercury	0.97	234		Pg	21 09 10.0	+0.1
TPNV	Topopah Spring	1.05	254	Pg	Pg	21 09 11.5	+0.1
TPNV				IAML		21 09 27.7	
	comp=N,117nm,0.3s						
NSP	Numbskull Pass	1.11	243		Pb	21 09 12.8	-0.3
R11B	Troy Canyon, C	1.21	337		Pg	21 09 14.2	-0.2
R11B				IAML		21 09 31.7	
	comp=E,87nm,0.2s						
R11B				IAML		21 09 31.9	
	comp=N,68nm,0.3s						
SDH	Striped Hills	1.24	242		Pg	21 09 14.9	0.0
AMDNV	Amargosa	1.30	233		Pg	21 09 16.1	-0.1
LCMT	Little Creek M	1.41	99		Pn	21 09 17.9	+0.1
LCMT				IAML		21 09 38.9	
	comp=N,59nm,0.5s						
LCMT				IAML		21 09 41.3	
	comp=E,31nm,0.3s						
PSUT	Pine Spring	1.57	34		Pn	21 09 19.9	-0.3
PSUT				IAML		21 09 49.6	
	comp=N,31nm,0.8s						
PSUT				IAML		21 09 50.4	
	comp=E,31nm,0.6s						
SGV	South Grapevin	1.66	262		Pn	21 09 21.1	-0.3
GWY	Greenwater Val	1.71	233		Pn	21 09 22.6	+0.4
GWY				IAML		21 09 50.0	
	comp=N,36nm,0.4s						
GWY				IAML		21 09 51.3	
	comp=E,36nm,0.5s						
SPR3	Spring Creek 3	1.83	16		Pn	21 09 22.1	-1.8
SPR3				IAML		21 09 49.9	
	comp=N,36nm,0.4s						
SPR3				IAML		21 09 51.0	
	comp=E,31nm,0.5s						
TPH	Tonopah	1.96	296	Pn	Pn	21 09 24.4	-1.2
MZP	Montezuma Peak	1.96	284	Pn	Pn	21 09 24.6	-1.0
MZP				IAML		21 09 55.1	
	comp=E,16nm,0.4s						
W13A	Hualapai Mount	2.31	157	Pn	Pn	21 09 30.0	-0.4
DSP	Deep Springs	2.38	274		Pn	21 09 30.5	-0.7

NOU ***01*** *21:10:08.0, 37°.50S×176°.46E, h197^{km}, MLv3.8/13, North Island, New Zealand*
WEL ***01*** *21:10:09.7±1.1, 37°S±7°×17°7E±°, h186^{km}±10^{km}, M3.1/12, MLv3.1/12, Error ellipse: s-maj=9.2km s-min=6.2km az=28.7, confirmed*
ISC 01 21:10:07.7±1.2**, 37°.51S**±0°.05×**176°.48E**±0°.05**, h200^{km}, n79, σ1^{s}.04**/78**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOZ	Tahuroa Road	0.81	254	P	Pn	21 10 38.1	+1.9
URZ	Urewera	0.90	147	P	Pn	21 10 37.5	+0.7
URZ	Urewera	0.90	147	P	S	21 10 59.9	
URZ	Urewera	0.90	147	P	Pn	21 10 37.5	+0.7
URZ				S	Sn	21 10 59.8	+0.4
KUZ	Kuaotunu	0.98	321	P	Pn	21 10 37.8	+0.4
MUGZ	Murupara	0.99	167	P	Pn	21 10 38.8	+1.3
MUGZ				S	Sn	21 11 01.5	+0.9
RUGZ	Raukumara Rang	1.05	116	P	Pn	21 10 37.5	-0.5
HAZ	Te Kaha	1.06	104	P	Pn	21 10 37.7	-0.2
HAZ				S	Sn	21 11 00.2	-1.0
MKAZ	Moumakai	1.13	291	P	Pn	21 10 39.7	+1.3
MWZ	Matawai	1.17	135	P	Pn	21 10 39.8	+1.1
MWZ				S	Sn	21 11 02.8	-0.1
RTZ	Ruatahuna	1.17	161	P	Pn	21 10 40.0	+1.2
WIAZ	Waiheke Island	1.29	303	P	Pn	21 10 40.6	+0.9
ETAZ	East Tamaki Re	1.36	294	P	Pn	21 10 41.3	+1.0
TWGZ	Tauwhareparae	1.36	120	P	Pn	21 10 41.9	+1.6
TWGZ				S	Sn	21 11 07.0	+1.4
SNGZ	Shannon Statio	1.44	152	P	Pn	21 10 42.5	+1.6
SNGZ				S	Sn	21 11 07.8	+1.0
MXZ	Matakaoa Point	1.45	93	P	Pn	21 10 40.8	-0.2
MXZ	Matakaoa Point	1.45	93	P	S	21 11 05.9	
MXZ	Matakaoa Point	1.45	93	P	Pn	21 10 40.9	0.0
MXZ				S	Sn	21 11 05.9	-0.8
MBAZ	Motutapu North	1.47	300	P	Pn	21 10 42.3	+1.1
RAHZ	Arahi	1.48	161	P	Pn	21 10 43.2	+1.9
RAHZ				S	Sn	21 11 09.5	+2.0
GRZ	Great Barrier	1.50	327	P	Pn	21 10 41.5	0.0
PUZ	Puketiti	1.51	112	P	Pn	21 10 42.0	+0.5
PUZ				S	Sn	21 11 06.9	-1.0
AWAZ	Awhitu Peninsu	1.53	286	P	Pn	21 10 43.0	+1.3
WMGZ	Waiomatatini S	1.56	102	P	Pn	21 10 42.3	+0.3
WMGZ				S	Sn	21 11 08.0	-0.5
ABAZ	Army Bay	1.60	304	P	Pn	21 10 43.5	+1.2
NMHZ	Naumai	1.60	171	P	Pn	21 10 44.7	+2.3
BKZ	Black Stump Fm	1.65	180	P	Pn	21 10 44.2	+1.3
BKZ	Black Stump Fm	1.65	180	P	Pn	21 10 44.1	+1.2
BKZ				S	Sn	21 11 11.4	+1.0
WHHZ	Waihua	1.67	160	P	Pn	21 10 45.2	+2.2
CNGZ	Carnagh Statio	1.67	126	P	Pn	21 10 44.4	+1.4
KNZ	Kokohu	1.78	149	P	Pn	21 10 45.1	+1.1
ARHZ	Aropaoanui	1.80	167	P	Pn	21 10 46.0	+1.8
SNVZ	South Ngauruho	1.80	201	P	Pn	21 10 46.6	+2.2
TRVZ	Turoa	1.93	202	P	Pn	21 10 47.9	+2.1
MCHZ	McNeill Hill	1.94	175	P	Pn	21 10 47.7	+2.1
WNVZ	Wahianoa	1.94	201	P	Pn	21 10 47.4	+1.6
MOVZ	Moawhango	1.98	197	P	Pn	21 10 47.3	+1.3
VRZ	Vera Road	2.11	220	P	Pn	21 10 50.4	+3.1
KRHZ	Kereru	2.13	182	P	Pn	21 10 48.4	+0.8
CKHZ	Cape Kidnapper	2.19	168	P	Pn	21 10 49.6	+1.4
KAHZ	Kahuranaki	2.30	172	P	Pn	21 10 50.8	+1.4
WCZ	Waipu Caves	2.33	312	P	Pn	21 10 50.2	+0.4
PNHZ	Pukenui	2.41	185	P	Pn	21 10 51.7	+1.0
PXZ	Pawanui	2.53	173	P	Pn	21 10 53.0	+1.0
WPHZ	Waipukurau	2.55	181	P	Pn	21 10 53.0	+0.9
TSZ	Takapari Road	2.58	189	P	Pn	21 10 53.3	+0.8
PKE	Pukeiti	2.58	229	P	Pn	21 10 56.3	+3.8
PRHZ	Porangahau	2.75	178	P	Pn	21 10 55.4	+0.9
DVHZ	Dannevirke	2.79	185	P	Pn	21 10 55.3	+0.3
POWZ	Post Office Ro	2.93	191	P	Pn	21 10 57.0	+0.5
BFZ	Birch Farm	3.17	183	P	Pn	21 11 00.4	+1.0
BFZ	Birch Farm	3.17	183	S	Sn	21 11 40.5	+0.6
BFZ	Birch Farm	3.17	183	P	Pn	21 10 59.5	+0.2
MRZ	Mangatainoka R	3.22	192	P	Pn	21 10 59.7	-0.2
OUZ	Omahuta	3.26	314	P	Pn	21 11 00.3	-0.2
OUZ	Omahuta	3.26	314	P	Pn	21 11 00.5	-0.1
OGWZ	Otaki Gorge	3.46	197	P	Pn	21 11 02.6	-0.1
HOWZ	Holdsworth Sta	3.46	192	P	Pn	21 11 02.2	-0.7
MTW	Mount Morrison	3.72	191	P	Pn	21 11 05.1	-0.9
CAW	Cannon Point	3.76	197	P	Pn	21 11 05.9	-0.6
DUWZ	D'Urville Isla	3.84	210	P	Pn	21 11 07.2	-0.3
TCW	Tory Channel	4.07	204	P	Pn	21 11 10.0	-0.3
TUWZ	Tuamarina	4.38	206	P	Pn	21 11 13.9	-0.2
NNZ	Nelson	4.41	212	P	Pn	21 11 14.0	-0.6
TKNZ	Takaka Hill	4.46	217	P	Pn	21 11 15.7	+0.6
QRZ	Quartz Range	4.52	222	P	Pn	21 11 16.4	+0.5
QRZ	Quartz Range	4.52	222	S	Sn	21 12 09.0	-0.7
QRZ	Quartz Range	4.52	222	P	Pn	21 11 15.3	-0.7
BSWZ	Blackbirch Sta	4.66	205	P	Pn	21 11 17.4	-0.3
MRNZ	Matariki Terra	4.84	215	P	Pn	21 11 19.8	-0.2
THZ	Tophouse	5.07	212	P	Pn	21 11 23.4	+0.5
KHZ	Kahutara	5.40	204	P	Pn	21 11 27.2	+0.1
KHZ	Kahutara	5.40	204	S	Sn	21 12 28.7	-1.1
KHZ	Kahutara	5.40	204	P	Pn	21 11 25.9	-1.2
GVZ	Greta Valley S	6.05	205	P	Pn	21 11 34.5	-1.1
LTZ	Lake Taylor	6.17	210	P	Pn	21 11 35.9	-1.3
INZ	Inchbonnie	6.48	215	P	Pn	21 11 39.6	-1.5
ARCZ	Arundel	7.59	210	P	Pn	21 11 53.4	-2.1
TMZ	Timaru	8.02	209	P	Pn	21 11 58.7	-2.5

NEIC ***01*** *21:22:51.9±1.9, 26°.18N±0°.08×66°.62W±0°.04, h10^{km}±1^{km}, mb4.2/10, Error ellipse: s-maj=12.9km s-min=6.4km az=359.0*
ISC 01 21:22:51.2±0.9**, 26°.16N**±0°.08×**66°.6W**±0°.1**, h10^{km}, n47, σ1^{s}.05**/47**, 1D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRTK	Grand Turk	6.19	223	Pn	Pn	21 24 21.3	-1.3
GRTK				Sn	Sn	21 25 21.8	-12
GRTK	Grand Turk	6.19	223	⇓eP	Pn	21 24 21.6	-1.0
GRTK				eS	Sn	21 25 20.9	-13
BBSR	BB Station	6.42	15	Pn	Pn	21 24 25.2	-0.6
EMPR	Esperanza - Ma	7.64	179	Pn	Pn	21 24 42.9	+0.3
AGPR	Aguadilla, PR	7.67	183	Pn	Pn	21 24 44.0	+1.0
DR12	Loma Pena Alta	7.76	200		Pn	21 24 45.2	+0.9
AOPR	Arecibo Observ	7.78	181		Pn	21 24 45.7	+1.2
GCPR	Guaynabo City	7.83	176	Pn	Pn	21 24 45.4	+0.2
UUPR	Utuado, UPR, P	7.87	181	Pn	Pn	21 24 47.2	+1.4
PRSN	Puerto Rico Se	7.92	183	Pn	Pn	21 24 47.5	+1.1
HUMP	Col San Antoni	8.01	175	Pn	Pn	21 24 47.8	+0.1
CELP	Cerrillos	8.04	180	Pn	Pn	21 24 48.8	+0.6
OBIP	Obispado Ponce	8.08	180	Pn	Pn	21 24 49.7	+1.1
PDPR	Patillas Dam,	8.12	176	Pn	Pn	21 24 50.7	+1.5
SDDR	Presa de Saban	8.33	212	Pn	Pn	21 24 53.5	+1.4
SDDR	Presa de Saban	8.33	212	eP	Pn	21 24 54.0	+1.9
SDDR				eS	Sn	21 26 16.0	-10
BANI	BANI	8.46	205	Pn	Pn	21 24 54.7	+0.7
MASC	Masc	9.18	231	eP	Pn	21 25 04.0	+0.4
NMDO	Nuevo Mundo	9.47	236	Pn	Pn	21 25 06.3	-1.4
QMBU	Quimbuelo	9.57	233	eP	Pn	21 25 08.7	-0.4
QMBU				eS	Sn	21 26 42.6	-14
GTBY	Guantanamo Bay	9.96	233	Pn	Pn	21 25 14.4	-0.1
GTBY	Guantanamo Bay	9.96	233	eP	Pn	21 25 13.7	-0.7
HLGC	Holguin	10.11	241	eP	Pn	21 25 17.4	+1.0
PINC	Pinares de May	10.12	238	eP	Pn	21 25 15.7	-1.0
GDHS	Morne Mazeau,	10.83	154	Pn	Pn	21 25 24.8	-1.7
CHIV	Chivirico	10.90	238	Pn	Pn	21 25 25.4	-1.8
PILO	Pilon	11.70	240	eP	Pn	21 25 37.4	-0.9
060A	Indiantown	12.31	277	Pn	Pn	21 25 45.8	-0.8
Y60A	Bolivia	12.71	311		Pn	21 25 52.2	+0.2
MTDJ	Mount Denham	12.80	234	Pn	Pn	21 25 54.3	+0.8
061Z	Ochoppi	12.84	272	Pn	Pn	21 25 52.4	-1.3
DWPF	Disney Wildern	13.32	282	Pn	Pn	21 25 59.4	-0.9
Y57A	Sumter	14.24	307		Pn	21 26 12.6	-0.3
456A	Hilliard	14.27	292		Pn	21 26 13.0	-0.4
V58A	Windy Hill, Pi	14.37	315	Pn	Pn	21 26 15.7	+1.1
656A	Willston	14.43	286		Pn	21 26 16.6	+1.0
RCRC	Randolf Colleg	15.53	319		Pn	21 26 30.6	+0.3
S57A	Dark Hollow, R	15.57	321		Pn	21 26 31.7	+0.9
PAULI	Pauline	15.66	307		Pn	21 26 33.1	+1.2
PAULI				IAmb	IAmb	21 26 36.4	
	comp=Z,9.7nm,0.4s						
HODGE	Hodges	15.71	305		Pn	21 26 33.9	+1.3
HODGE				IAmb	IAmb	21 26 35.3	
	comp=Z,12nm,0.8s						
BLA	Blacksburg	16.07	317	Pn	Pn	21 26 39.0	+1.6
BLA				IAmb	IAmb	21 26 41.1	
	comp=Z,15nm,0.6s						
UCCT	U. Connecticut	16.26	345	Pn	Pn	21 26 40.5	+0.8
UCCT				IAmb	IAmb	21 26 44.9	
	comp=Z,9.2nm,0.8s						
KSCT	Kent School, K	16.52	342		Pn	21 26 43.1	+0.1
KSCT				IAmb	IAmb	21 26 47.6	
	comp=Z,47nm,0.8s						
Y52A	Lilburn	16.92	301		Pn	21 26 47.5	-0.6
ACCN	Adirondack Com	18.12	343	P	Pn	21 27 03.3	+0.4
ACCN				IAmb	IAmb	21 27 12.1	
	comp=Z,4.9nm,0.6s						
VLDQ	Val d'Or	23.50	342	P	P	21 28 02.8	+1.7
LPAZ	La Paz	42.22	182	P	P	21 30 45.0	-0.2

ISN ***01*** *21:23:12.2±0.7, 33°.63N×45°.77E, h6^{km}±14^{km}, ML2.6*
TEH ***01*** *21:23:13.3, 33°.64N×45°.82E, h10^{km}±85^{km}*
ISC 01 21:23:13.9±0.9**, 33°.61N**±0°.04×**45°.81E**±0°.04**, h19^{km}, n11, σ1^{s}.10**/14**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILBA	Ilam Banvizeh	0.33	87	Pg	Pg	21 23 20.5	-0.5
IBDR	Badra	0.51	169	ePg	Pb	21 23 23.0	-1.1
IBDR				eSg	Sb	21 23 30.0	-1.1
IBDR				AML	AML	21 23 36.4	
	comp=E,134nm,0.5s						
GLG1	Gilan-e-Gharb	0.51	9	Pg	Pg	21 23 22.7	-1.6
KGS1	Ghasr-e-Shirin	0.92	348	Pg	Pn	21 23 32.0	+0.2
IGHG	Ghaleghazi	0.96	41	Pg	Pn	21 23 32.9	+0.4
IDHR	Dehrash	1.19	23	Pg	Pb	21 23 35.8	-0.2
KCHF	Cheshme Sefid,	1.22	57	Pg	Pg	21 23 38.0	+0.5
BHD	Baghdad	1.24	255	ePn	Pb	21 23 37.0	+0.3
BHD				eSn	Sg	21 23 56.0	+1.8
ILIN	Lien	1.62	36	Pg	Pg	21 23 44.1	-1.0
IKFM	Kafar-mosalman	1.70	92	Pg	Pb	21 23 45.7	+1.1
IKRK	Kirkuk	2.16	326	ePn	Pn	21 23 50.0	+1.1
IKRK				eSn	Sb	21 24 18.0	-0.9

BEO ***01*** *21:46:11.0±0.6, 40°.30N×20°.83E, h0^{km}, ML2.6/3*
TIR ***01*** *21:46:12.1, 40°.50N×20°.90E, h18^{km}±1^{km}, Ml3.0/10*
ATH ***01*** *21:46:12.1, 40°.40N×20°.82E, h6^{km}±1^{km}, ML2.6/12, Manual Solution by F.Xalaris First location: 2019/06/01 21:47:13, This location: 2019/06/01 22:10:14 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
SKO ***01*** *21:46:13.9, 40°.42N×20°.90E, h5^{km}, ML2.7*
THE ***01*** *21:46:13.8, 41°N±2°×2°1E±°, h3^{km}±3^{km}, M2.6/21, MLh2.6/21*
ISC 01 21:46:12.5±0.8**, 40°.43N**±0°.01×**20°.85E**±0°.02**, h10^{km}**±6^{km}**, n93, σ1^{s}.16**/137**, 9C-10D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEST	Nestorio	0.15	97	⇑iPg	Pg	21 46 16.7	+0.7
NEST				Sg	Sg	21 46 19.4	+1.0
NEST				AML	AML	21 46 22.9	
	20nm,0.4s						
NEST	Nestorio	0.15	97	P	Pg	21 46 16.7	+0.7
NEST				S	Sg	21 46 18.3	-0.1
NEST	Nestorio	0.15	97	P	Pg	21 46 16.7	+0.7
NEST				S	Sg	21 46 18.5	+0.2
KBN	Korca	0.20	345	⇑iPg	Pg	21 46 15.7	-1.0
KBN				Sg	Sg	21 46 18.9	-0.8
KBN				AML	AML	21 46 20.4	
	12nm,0.4s						
PENT	Pentalofos	0.32	137	P	Pb	21 46 19.1	-1.3
PENT				S	Sg	21 46 22.8	-0.5
LSK	Leskovik	0.34	215	⇓ePg	Pg	21 46 17.5	-1.8
LSK				Sg	Sg	21 46 23.3	-0.6
LSK				AML	AML	21 46 31.4	
	9.0nm,0.5s						
KPRO	Kipourio	0.62	141	P	Pb	21 46 24.3	-1.1
KPRO				S	Sb	21 46 33.9	-0.2
KPRO	Kipourio	0.62	141	P	Pb	21 46 24.2	-1.1
KPRO				S	Sb	21 46 32.4	-1.7
OHR	Ohrid	0.68	356	P	Pg	21 46 25.0	-0.7
OHR				S	Sg	21 46 33.8	-0.9
OHR	Ohrid	0.68	356	⇓iPg	Pg	21 46 25.6	-0.1
OHR				i Sg	Sb	21 46 36.1	+0.1
OHR				eLg	Lg	21 46 36.4	
	comp=E,553nm,0.6s						
OHR				eLg	Lg	21 46 36.8	
	comp=N,184nm,0.5s						
OHR	Ohrid	0.68	356	ePg	Pg	21 46 25.7	0.0
OHR				eSg	Sb	21 46 36.1	+0.1
KZN	Kozani	0.71	100	P	Pb	21 46 26.4	-0.6
JAN	Janina	0.78	180	P	Pg	21 46 26.5	-1.0
SRN	Sarande	0.86	230	⇓ePn	Pg	21 46 27.9	-1.2
SRN				Sn	Sg	21 46 40.6	+0.4
SRN				AML	AML	21 46 50.2	
	comp=N,0.6nm,0.4s						
KTI	Kastanea	0.96	92	P	Pn	21 46 31.5	-0.8
IGT	Igoumenitsa	0.98	204	⇓ePn	Pb	21 46 31.9	+0.2
IGT				Sn	Sn	21 46 48.5	+2.1
IGT				AML	AML	21 46 49.6	
	comp=N,0.5nm,0.4s						
IGT	Igoumenitsa	0.98	204	⇓iPg	Pg	21 46 31.0	-0.5
IGT				i Sg	Sn	21 46 46.8	+0.5
IGT	Igoumenitsa	0.98	204	P	Pg	21 46 30.3	-1.1
VLO	Vlora	1.04	272	⇓ePn	Pg	21 46 32.5	0.0
VLO				Sn	Sg	21 46 46.5	+0.5
VLO				AML	AML	21 46 54.8	
	comp=N,3.3nm,0.5s						
KEK	Kerkira	1.08	229	P	Pg	21 46 32.4	-0.9
TETR	Tetrakomo, Epi	1.13	163	P	Pn	21 46 34.3	-0.2
TIR	Tirane	1.18	321	⇑ePn	Pg	21 46 34.0	-1.2
TIR				Sn	Sb	21 46 51.7	+1.3
TIR				AML	AML	21 47 03.0	
	comp=N,0.6nm,0.8s						
TIR	Tirane	1.18	321	ePg	Pg	21 46 33.1	-2.1
TIR				i Sg	Sn	21 46 54.8	+3.5
TIR	Tirane	1.18	321	ePg	Pg	21 46 33.1	-2.1
TIR	Tirane	1.18	321	P	Pg	21 46 35.1	-0.1
THL	Klokotos Trika	1.24	134	P	Pn	21 46 37.1	+1.2
THL				S	Sn	21 46 55.6	+2.9
THL	Klokotos Trika	1.24	134	P	Pn	21 46 35.6	-0.3
TYRN	Tyrnavos	1.28	124	P	Pn	21 46 36.6	+0.2
TYRN				S	Sn	21 46 55.9	+2.3
TYRN	Tyrnavos	1.28	124	P	Pn	21 46 36.7	+0.2
PHP	Peshkopia	1.29	346	⇓ePn	Pn	21 46 35.0	-1.6
PHP				Sn	Sg	21 46 52.4	-1.6
PHP				AML	AML	21 47 05.1	
	comp=N,0.8nm,0.5s						
VAY	Valandovo	1.57	55	P	Pn	21 46 40.3	-0.2
VAY				S	Sn	21 47 00.1	-0.8
VAY	Valandovo	1.57	55	i Pg	Pg	21 46 41.6	-1.1
VAY				i Sg	Sg	21 47 04.6	+1.4
VAY				eLg	Lg	21 47 06.8	
	comp=N,61nm,0.7s						
VAY				eLg	Lg	21 47 13.4	
	comp=E,74nm,0.6s						
VAY	Valandovo	1.57	55	ePn	Pb	21 46 41.5	-0.2
VAY				eSn	Sg	21 47 04.8	+1.6
SKO	Skopje	1.60	16	i Pg	Pb	21 46 42.4	+0.3
SKO				i Sg	Sg	21 47 05.5	+1.5
TSLK	Tsoukalades, L	1.61	186	P	Pn	21 46 40.5	-0.5
THE	Thessaloniki	1.62	82	⇓ePn	Pn	21 46 41.1	0.0
THE				Sn	Sg	21 47 04.2	-0.5
THE	Thessaloniki	1.62	82	P	Pn	21 46 41.0	-0.1
THE				S	Sg	21 47 02.9	-1.7
THE	Thessaloniki	1.62	82	i Pg	Pb	21 46 41.9	-0.5
THE				i Sg	Sg	21 47 04.1	-0.5
LKD2	Lefkada island	1.65	185	⇓iPn	Pg	21 46 45.1	+1.0
LKD2				Sn	Sg	21 47 08.3	+2.8
LKD2				AML	AML	21 47 18.8	
	comp=E,0.4nm,0.7s						
LKD2	Lefkada island	1.65	185	P	Pg	21 46 44.7	+0.6
LKD2				S	Sg	21 47 06.7	+1.2
LKD2	Lefkada island	1.65	185	P	Pn	21 46 41.9	+0.3
EVR	Evrytania	1.68	154	P	Pg	21 46 44.8	0.0
EVR				S	Sg	21 47 07.9	+1.3
EVR	Evrytania	1.68	154	P	Pb	21 46 42.8	-0.9
KNT	Kendrikon	1.71	64	P	Pb	21 46 43.0	-1.1
KNT				S	Sn	21 47 04.1	-0.3
KNT	Kendrikon	1.71	64	i Pn	Pb	21 46 43.3	-0.8
KNT	Kendrikon	1.71	64	P	Pb	21 46 43.2	-0.8
HORT	Hortiatis	1.72	84	P	Pb	21 46 43.0	-1.2
HORT				S	Sn	21 47 04.0	-0.6
HORT	Hortiatis	1.72	84	P	Pb	21 46 43.1	-1.2
NYDR	Nydri-Lefkada	1.72	184	P	Pg	21 46 45.1	-0.4
NYDR				S	Sg	21 47 08.2	+0.3
NYDR	Nydri-Lefkada	1.72	184	P	Pn	21 46 43.0	+0.5
MAKR	Makrakomi, Fth	1.73	145	P	Pg	21 46 44.8	-0.9
MAKR				S	Sg	21 47 08.3	+0.3
MAKR	Makrakomi, Fth	1.73	145	P	Pg	21 46 45.1	-0.6
PUK	Puka	1.77	336	⇓ePn	Pn	21 46 44.3	+1.1
PUK				Sn	Sb	21 47 08.6	+1.3
PUK				AML	AML	21 47 15.3	
	comp=E,0.7nm,0.5s						
AGG	Agios Georgios	1.81	141	P	Pb	21 46 45.2	-0.5
AGG				S	Sg	21 47 09.5	-1.2
AGG	Agios Georgios	1.81	141	P	Pb	21 46 45.7	-0.1
EVGI	Lefkada island	1.82	185	P	Pg	21 46 46.2	-1.1
EVGI				S	Sg	21 47 11.4	+0.5
EVGI	Lefkada island	1.82	185	P	Pg	21 46 46.2	-1.1
PDO	Prodromos	1.85	172	P	Pb	21 46 45.5	-0.9
SCTE	Santa Cesarea	1.86	260	⇑ePn	Pn	21 46 43.7	-0.7
SCTE				Sn	Sg	21 47 13.5	+1.1
SCTE	Santa Cesarea	1.86	260	P	Pn	21 46 43.7	-0.7
PVO	Paravola	1.89	164	P	Pg	21 46 48.2	-0.5
PVO				S	Sg	21 47 13.4	+0.2
SOH	Sokhos	1.94	78	P	Pb	21 46 46.5	-1.5
SOH				S	Sn	21 47 09.7	-0.3
ULC	Ulcinj	1.95	322	⇑ePn	Pn	21 46 47.1	+1.4
ULC	Ulcinj	1.95	322	i Pn	Pn	21 46 46.9	+1.2
PLG	Polygyros	1.98	91	P	Pb	21 46 47.3	-1.3
PLG				S	Sb	21 47 13.2	-0.2
PLG	Polygyros	1.98	91	P	Pb	21 46 47.5	-1.1
NEO	Neokhori	2.14	121	P	Pn	21 46 49.2	+0.9
AXAR	Agios Charalam	2.17	139	P	Pb	21 46 50.5	-1.3
SRS	Serrai	2.19	71	P	Pn	21 46 49.8	+0.9
SRS	Serrai	2.19	71	i Pn	Pb	21 46 51.0	-1.2
KKB	Krupnik	2.22	50	i Pn	Pb	21 46 51.1	-1.6
SERG	Sergoula	2.22	155	P	Pb	21 46 52.2	-0.5
PAIG	Paliouri	2.22	102	P	Pn	21 46 50.2	+0.8
PDG	Podgorica	2.33	329	ePn	Pn	21 46 51.4	+0.5
PDG				eSn	Sb	21 47 23.4	0.0
BOSS	Bosilegrad	2.40	30	ePn	Pn	21 46 52.4	+0.6
MMB	Musomishta	2.46	62	i Pn	Pb	21 46 55.6	-1.2
BARS	Barje	2.49	17	⇑iPn	Pn	21 46 53.6	+0.5
BARS	Barje	2.49	17	ePn	Pn	21 46 53.5	+0.4
BEY	Berane	2.54	344	⇑ePn	Pb	21 46 57.3	-0.9
BEY	Berane	2.54	344	⇑iPn	Pb	21 46 57.5	-0.8
HCY	Herceg Novi	2.68	319	⇑ePn	Pn	21 46 57.2	+1.5
SELS	Selova	2.79	4	ePn	Pn	21 46 59.8	+2.5
VTS	Vitosha	2.82	39	ePn	Pn	21 46 57.2	-0.6
SJES	Sjenica	2.90	347	ePn	Pn	21 47 01.7	+2.8
ZAPS	Zavoj	3.13	25	ePn	Pn	21 47 04.6	+2.6
IVAS	Ivanjica	3.19	351	ePn	Pn	21 47 05.2	+2.5
BOVS	Bovan	3.26	11	ePn	Pn	21 47 03.8	+0.1
STON	Ston	3.40	317	ePn	Pn	21 47 04.7	-0.8
ZAGS	Zajecar	3.53	16	ePn	Pn	21 47 08.3	+0.9
ZAGS				eSn	Sn	21 47 51.0	+1.9
HAPS	Han Pijesak,Bl	3.92	339	ePn	Pn	21 47 13.7	+0.9
TEKS	Tekeris	4.23	347	ePn	Pn	21 47 18.1	+1.1
BOJS	Bojanci	6.52	323	ePn	Pn	21 47 47.8	-0.7
CEY	Cerknica	7.09	321	ePn	Pn	21 47 55.6	-0.7
CEY				eSn	Sn	21 49 15.8	-1.0

IDC ***01*** *21:49:20.1±1.4, 1°.11N×99°.68E, h183^{km}±7^{km}, mb3.6/11, mbtmp4.0/12, Error ellipse: s-maj=47.7km s-min=12.9km az=54.0*
DJA ***01*** *21:49:22.4±0.4, 1°N±4°×10°0E±°, h160^{km}±5^{km}, M3.9/12, mB4.9/1, mb4.3/1, MLv3.6/12, Mw(mB)4.2/1*
ISC 01 21:49:21.3±0.8**, 1°.22N**±0°.08×**99°.7E**±0°.1**, h200^{km}, n21, σ2^{s}.11**/23**, mb3.8**/11**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNSI	Mandailing Nat	0.44	196	P	Pn	21 49 46.5	-1.7
MNSI				S	Sn	21 50 04.1	-5.0
BKNI	Bangkinang	1.61	124	P	Pn	21 49 54.3	-1.6
PSI	Prapat	1.75	334	P	Pn	21 49 55.5	-1.9
	50nm,0.3s,baz=168,slow=11,SNR=89						
PSI				S	Sn	21 50 22.1	-3.5
	16nm,0.8s,baz=173,slow=17,SNR=12						
PPI	Padang Panjang	1.81	157	P	Pn	21 49 56.8	-1.1
GSI	Gunungsitoli	2.13	272	P	Pn	21 50 00.9	-0.2
TSI	Tuntungan	2.53	333	P	Pn	21 50 02.6	-2.9
LHMI	Lhok Sumawe	4.84	325	P	Pn	21 50 31.1	-2.5
BSI	Banda Aceh	6.11	314	P	Pn	21 50 48.6	-1.4
MNAI	Manna	6.43	150	P	Pn	21 50 51.4	-2.7
CMAR	Chiang Mai Arr	17.14	358	P	Pn	21 53 08.3	-1.1
	0.9nm,0.6s,baz=188,slow=11,SNR=7.7						
WRA	Warramunga Arr	39.94	124	P	P	21 56 36.5	0.0
	1.5nm,0.5s,baz=305,slow=9.1,SNR=12 1.5nm,0.5s						
ASAR	Alice Springs	41.44	129	P	P	21 56 48.4	-0.3
	0.2nm,0.3s,baz=296,slow=7.7,SNR=8.5 0.2nm,0.3s						
SONM	Songino Array	46.79	6	P	P	21 57 32.4	+1.6
	1.7nm,0.5s,baz=190,slow=9.3,SNR=5.2 1.7nm,0.5s						
MKAR	Makanchi Array	47.87	344	P	P	21 57 40.5	+1.5
	1.2nm,0.4s,baz=157,slow=8.6,SNR=25 1.2nm,0.4s						
MJAR	Matsushiro Arr	50.01	41	P	P	21 57 57.0	+1.4
	0.3nm,0.6s,baz=227,slow=4.8,SNR=1.9 0.3nm,0.6s						
KURBB	Kurchatov Arra	52.40	343	P	P	21 58 14.4	+1.5
	0.7nm,0.4s,baz=159,slow=7.0,SNR=8.5 0.7nm,0.4s						
ZALV	Zalesovo Beam	53.97	349	P	P	21 58 25.6	+1.2
	2.4nm,0.4s,baz=156,slow=7.1,SNR=11 2.4nm,0.4s						
BVAR	Borovoye Array	57.08	339	P	P	21 58 47.4	+0.9
	1.1nm,0.5s,baz=151,slow=11,SNR=6.9 1.1nm,0.5s						
FINES	FINESS Array B	81.14	332	P	P	22 01 15.6	+1.4
	0.7nm,0.7s,baz=111,slow=6.2,SNR=6.0 0.7nm,0.7s						
ARCES	ARCESS Array B	83.36	340	P	P	22 01 26.7	+1.2
	3.5nm,1.0s,baz=94,slow=3.6,SNR=6.2 3.5nm,1.0s						
SPITS	Spitsbergen Ar	87.44	348	P	P	22 01 46.2	+0.7
	11nm,1.2s,baz=116,slow=4.9,SNR=1.5 11nm,1.2s						

MEX ***01*** *21:51:09.6±0.5, 14°.15N×92°.61W, h16^{km}±369^{km}, MD3.9*
GCG ***01*** *21:51:10.5±0.7, 14°.53N×92°.10W, h112^{km}±12^{km}, MD4.0, ML3.0*
ISC 01 21:51:05.2±3.0**, 14°.25N**±0°.09×**92°.65W**±0°.05**, h12^{km}**±17^{km}**, n11, σ2^{s}.02**/21**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.76	30	eP	Pb	21 51 20.8	+0.4
THIG				eS	Sn	21 51 33.9	+0.8
PATR	El Naranjo	0.95	25	eP	Pn	21 51 25.6	+0.8
PATR				eS	Sn	21 51 38.1	-0.3
RTAL	Retalhuleu	0.97	73	eP	Pn	21 51 26.3	+1.6
RTAL				eS	Sn	21 51 39.3	+1.0
PAVE	Pavencul	1.05	26	eP	Pn	21 51 27.3	+1.3
PAVE				eS	Sn	21 51 41.0	+0.3
STG8	El Palmar, Qui	1.28	81	eP	Pb	21 51 28.5	-0.9
STG8				i S	Sb	21 51 43.2	-2.6
STG8				IAML		21 51 46.2	
	comp=E,590nm,0.2s						
PCIG		1.55	339	eP	Pn	21 51 34.4	+1.7
PCIG				eS	Sn	21 51 52.6	-0.2
CCIG	Comitan	2.08	14	eP	Pn	21 51 34.1	-6.1
CCIG				eS	Sg	21 52 12.0	-0.3
TGIG		2.56	350	eP	Pn	21 51 50.4	+3.7
TGIG				eS	Sb	21 52 20.5	-2.1
TGIG		2.56	350	eP	Pn	21 51 50.3	+3.7
TGIG				i S	Sb	21 52 20.4	-2.2
TGIG				IAML		21 52 24.8	
	comp=N,50nm,0.4s						
CMIG	Matias Romero	3.55	323	eP	Pn	21 52 01.5	+1.2
CMIG				eS	Sn	21 52 38.8	-3.5
NEUV	Arroyo Zacate	4.59	319	eP	Pn	21 52 15.8	+1.2
NEUV				i S	Sn	21 53 08.5	+0.7

NNC ***01*** *21:52:14.0±3.5, 37°.30N×71°.34E, h0^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=28.3km s-min=22.4km az=157.0*
IDC ***01*** *21:52:26.6±17.0, 37°.32N×71°.62E, h258^{km}±140^{km}, mb3.4/3, mbtmp3.8/6, Error ellipse: s-maj=192.5km*

s-min=82.1km az=168.0

ISC 01 21:52:09.2±2.0, 36°.7N±0°.1×71°.4E±0°.1, h100km, n11, σ1.44/16, mb4.1/3, 4C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	6.38	21	⇓P	Pn	21 53 42.9	+2.3
	1.5nm,0.3s						
AAK				⇓S	Sn	21 54 52.0	-0.1
	7.7nm,0.6s						
KK31	Karatay Array	6.41	354	⇑P	Pn	21 53 42.8	+1.8
	7.3nm,0.2s,baz=180,slow=13,SNR=240						
KK31				⇑S	Sn	21 54 51.4	-1.3
	2.6nm,0.3s,baz=189,slow=26,SNR=8.2						
CHMS	Chumysh	6.78	21	⇓P	Pn	21 53 47.9	+1.8
	3.3nm,0.6s						
CHMS				⇓S	Sn	21 55 00.2	-1.6
	4.7nm,0.7s						
TKM2	Tokmak 2	6.99	26	⇓P	Pn	21 53 50.5	+1.5
	1.9nm,0.8s						
TKM2				⇑S	Sn	21 55 05.9	-1.1
	3.0nm,0.7s						
MKAR	Makanchi Array	12.93	36	P	P	21 55 15.0	-0.8
	0.2nm,0.4s,baz=216,slow=12,SNR=1.6						
AB31	Akbulak array	15.04	330	P	Pn	21 55 37.7	+1.5
	0.8nm,0.5s,baz=167,slow=11,SNR=31						
AB31				⇑S	Sn	21 58 21.8	-0.4
	1.6nm,0.8s,baz=152,slow=22,SNR=4.3						
BVAR	Borovoye Array	16.32	358	P	Pn	21 55 53.3	+1.1
	0.7nm,0.6s,baz=176,slow=12,SNR=5.0						
ZALV	Zalesovo Beam	19.59	24	P	P	21 56 28.3	-0.8
	0.9nm,0.3s,baz=216,slow=9.1,SNR=6.7						
FINES	FINESS Array B	37.47	326	P	P	21 59 11.9	-0.7
	2.0nm,1.0s,baz=123,slow=7.0,SNR=3.5						
	2.0nm,1.0s						
ARCES	ARCESS Array B	41.06	337	P	P	21 59 41.7	-0.7
	2.8nm,0.9s,baz=120,slow=8.3,SNR=1.3						
	2.8nm,0.9s						
HFS	Hagfors	43.08	322	P	P	21 59 57.5	-1.4
	2.9nm,0.9s,baz=83,slow=12,SNR=2.7						
	2.9nm,0.9s						

IDC 01 21:56:59.2±13.0, 24°.73N×141°.91E, h340km±89km, mb2.7/3, mbtmp3.5/4, Error ellipse: s-maj=310.4km s-min=22.7km az=73.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	17.42	320	P	P	22 00 40.4	0.0
	1.1nm,0.7s,baz=135,slow=12,SNR=8.2						
WRA	Warramunga Arr	45.01	190	P	P	22 04 41.9	-0.2
	0.3nm,0.3s,baz=6.5,slow=8.0,SNR=6.2						
	0.3nm,0.3s						
MKAR	Makanchi Array	51.81	311	P	P	22 05 33.5	+0.2
	0.2nm,0.4s,baz=90,slow=8.6,SNR=5.0						
	0.2nm,0.4s						
BVAR	Borovoye Array	59.62	318	P	P	22 06 27.9	-0.3
	0.2nm,0.3s,baz=95,slow=8.7,SNR=1.7						
	0.2nm,0.3s						

TIR 01 22:06:59.0, 40°.42N×20°.73E, h10km±1km, Md3.2/1, Ml2.9/9
BEO 01 22:07:01.2±2.0, 40°.45N×20°.81E, h11km±7km, ML2.6/3
THE 01 22:07:02.6, 40°N±2°×2°1E±°, h7km±4km, M2.5/22, MLh2.5/22
ATH 01 22:07:02.2, 40°.37N×20°.98E, h6km±1km, ML2.5/13, Manual Solution by F.Xalaris First location: 2019/06/01 22:08:03, This location: 2021/06/05 10:38:05 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km

ISC 01 22:06:59.6±1.1, 40°.46N±0°.02×20°.80E±0°.02, h2km±9km, n72, σ0.99/102, 8C-8D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.16	358	⇑*i*Pg	Pg	22 07 03.3	+0.5
KBN				Sg	Sg	22 07 06.6	+1.6
KBN				AML	AML	22 07 08.0	
	17nm,0.2s						
NEST	Nestorio	0.20	104	⇑*e*Pg	Pg	22 07 04.4	+0.9
NEST				Sg	Sg	22 07 08.4	+2.3
NEST				AML	AML	22 07 09.4	
	8.8nm,0.3s						
NEST				AMd		22 08 21.5	
NEST	Nestorio	0.20	104	P	Pg	22 07 04.4	+0.9
NEST				S	Sg	22 07 06.0	-0.1
NEST	Nestorio	0.20	104	P	Pg	22 07 04.3	+0.9
NEST				S	Sg	22 07 06.2	+0.1
LSK	Leskovik	0.34	206	⇓*e*Pg	Pg	22 07 04.7	-1.6
LSK				Sg	Sg	22 07 09.5	-1.3
LSK				AML	AML	22 07 18.7	
	13nm,0.6s						
PENT	Pentalofos	0.37	135	P	Pg	22 07 06.8	0.0
PENT				S	Sg	22 07 09.8	-1.9
OHR	Ohrid	0.65	0	*e*Pg	Pb	22 07 13.2	-0.5
OHR				*e*Sg	Sb	22 07 23.6	+0.4
KPRO	Kipourio	0.67	139	P	Pg	22 07 11.8	-0.7
KPRO				S	Sg	22 07 21.6	+0.5
KPRO	Kipourio	0.67	139	P	Pg	22 07 11.8	-0.7
KPRO				S	Sg	22 07 19.5	-1.5
KZN	Kozani	0.76	101	P	Pg	22 07 14.0	-0.2
KZN				S	Sg	22 07 22.5	-1.5
JAN	Janina	0.81	177	P	Pg	22 07 15.9	+0.8
SRN	Sarande	0.84	227	⇑*e*Pn	Pg	22 07 14.0	-1.7
SRN				Sn	Sg	22 07 26.7	0.0
SRN				AML	AML	22 07 35.1	
	0.5nm,0.5s						
VLO	Vlora	0.99	271	⇓*e*Pn	Pb	22 07 20.0	+0.5
VLO				Sn	Sg	22 07 30.5	-1.0
VLO				AML	AML	22 07 44.5	
	2.0nm,0.6s						
IGT	Igoumenitsa	0.99	201	⇓*e*Pn	Pg	22 07 18.3	-0.3
IGT				Sn	Sg	22 07 30.5	-1.0
IGT				AML	AML	22 07 35.6	
	0.5nm,0.5s						
KTI	Kastanea	1.01	93	P	Pg	22 07 19.2	+0.2
TIR	Tirane	1.13	322	⇑*e*Pn	Pg	22 07 21.3	-0.1
TIR				Sn	Sn	22 07 38.1	-0.4
TIR				AML	AML	22 07 48.6	
	0.4nm,0.9s						
TIR	Tirane	1.13	322	*e*Pg	Pb	22 07 21.6	-0.3
TETR	Tetrakomo, Epi	1.18	162	P	Pg	22 07 22.4	+0.2
PHP	Peshkopia	1.25	348	⇑*e*Pn	Pg	22 07 23.1	-0.5
PHP				Sn	Sn	22 07 41.7	+0.1
PHP				AML	AML	22 07 47.9	
	0.5nm,0.5s						
THL	Klokotos Trika	1.29	133	P	Pg	22 07 23.0	-1.5
THL				S	Sg	22 07 41.5	+0.2
TYRN	Tyrnavos	1.33	124	P	Pn	22 07 24.4	-0.7
TYRN				S	Sg	22 07 42.7	+0.2
TYRN	Tyrnavos	1.33	124	P	Pn	22 07 24.5	-0.7
VAY	Valandovo	1.60	57	P	Pn	22 07 28.7	-0.1
VAY				S	Sn	22 07 48.5	-1.5
VAY	Valandovo	1.60	57	*e*Pn	Pb	22 07 29.5	-0.3
TSLK	Tsoukalades, L	1.64	184	P	Pn	22 07 30.7	+1.3
THE	Thessaloniki	1.66	83	P	Pn	22 07 28.0	-1.8
THE				S	Sn	22 07 49.5	-2.1
LKD2	Lefkada island	1.67	184	⇓*e*Pn	Pn	22 07 30.5	+0.5
LKD2				Sn	Sn	22 07 53.3	+1.4
LKD2	Lefkada island	1.67	184	P	Pb	22 07 31.6	+0.4
LKD2				S	Sn	22 07 53.6	+1.6
LKD2	Lefkada island	1.67	184	P	Pb	22 07 31.7	+0.5
PUK	Puka	1.72	337	⇓*i*Pn	Pg	22 07 32.3	-0.3
PUK				Sn	Sg	22 07 56.7	+1.8
PUK				AML	AML	22 08 06.7	
	0.6nm,0.6s						
EVR	Evrytania	1.73	153	P	Pn	22 07 31.8	+1.1
EVR				S	Sn	22 07 54.5	+1.1
EVR	Evrytania	1.73	153	P	Pn	22 07 31.4	+0.7
KNT	Kendrikon	1.74	66	P	Pn	22 07 31.1	+0.2
KNT	Kendrikon	1.74	66	P	Pb	22 07 31.8	-0.5
NYDR	Nydri-Lefkada	1.75	183	P	Pb	22 07 32.7	+0.3
NYDR				S	Sn	22 07 54.5	+0.8
NYDR	Nydri-Lefkada	1.75	183	P	Pn	22 07 32.1	+1.2
HORT	Hortiatis	1.76	85	P	Pn	22 07 30.9	-0.3
HORT				S	Sn	22 07 52.0	-2.2
HORT	Hortiatis	1.76	85	P	Pn	22 07 31.2	+0.1
MAKR	Makrakomi, Fth	1.78	144	P	Pn	22 07 31.6	+0.3
MAKR				S	Sn	22 07 54.2	-0.3
SCTE	Santa Cesarea	1.82	258	⇑*e*Pn	Pn	22 07 30.9	-1.1
SCTE				Sn	Sb	22 07 57.6	+0.6
EVGI	Lefkada island	1.84	183	P	Pn	22 07 33.6	+1.4
EVGI				S	Sb	22 07 58.7	+1.3
AGG	Agios Georgios	1.86	140	P	Pn	22 07 32.9	+0.4
AGG				S	Sn	22 07 56.3	-0.3
AGG	Agios Georgios	1.86	140	P	Pn	22 07 33.0	+0.4
PDO	Prodromos	1.88	171	P	Pn	22 07 33.6	+0.8
ULC	Ulcinj	1.90	323	⇑*e*Pn	Pb	22 07 34.4	-0.6
PVO	Paravola	1.93	163	P	Pb	22 07 35.5	+0.1
SOH	Sokhos	1.98	79	P	Pn	22 07 34.6	+0.4
SOH				S	Sn	22 07 59.0	-0.5
PLG	Polygyros	2.02	92	P	Pn	22 07 33.4	-1.4
PLG	Polygyros	2.02	92	P	Pn	22 07 35.5	+0.7
ANX	Ano Chora	2.06	155	P	Pn	22 07 36.3	+1.0
NEO	Neokhori	2.19	121	P	Pn	22 07 37.4	+0.3
EFP	Efpalio	2.21	157	P	Pn	22 07 38.7	+1.5
AXAR	Agios Charalam	2.22	139	P	Pn	22 07 37.3	-0.2
SRS	Serrai	2.22	72	P	Pn	22 07 36.9	-0.6
PAIG	Paliouri	2.27	103	P	Pn	22 07 38.5	+0.4
PDG	Podgorica	2.28	330	*e*Pn	Pb	22 07 39.7	-1.8
BOSS	Bosilegrad	2.39	31	*e*Pn	Pn	22 07 40.2	+0.4
KOKK	Kokkinochori,	2.46	81	P	Pn	22 07 40.8	0.0
BARS	Barje	2.47	18	*e*Pn	Pn	22 07 41.1	+0.2
BEY	Berane	2.50	345	⇑*e*Pn	Pb	22 07 45.2	-0.1
HCY	Herceg Novi	2.63	320	⇓*e*Pn	Pn	22 07 43.5	+0.4
SELS	Selova	2.77	5	*e*Pn	Pn	22 07 46.8	+1.8
VTS	Vitosha	2.83	40	*e*Pn	Pn	22 07 47.1	+1.2
SJES	Sjenica	2.86	348	*e*Pn	Pn	22 07 47.8	+1.4
BRY	Bratogost	2.97	326	⇓*e*Pn	Pn	22 07 48.6	+0.8
UPM	Unac-Piva	3.08	333	⇓*e*Pn	Pn	22 07 51.7	+2.3
GOCS	Kraljevo Serbi	3.10	1	*e*Pn	Pn	22 07 50.0	+0.4
BOVS	Bovan	3.24	12	*e*Pn	Pn	22 07 51.2	-0.3
GRUS	Gruza	3.42	359	*e*Pn	Pn	22 07 53.8	-0.2
TEKS	Tekeris	4.19	348	*e*Pn	Pn	22 08 05.0	+0.5
BOJS	Bojanci	6.47	323	*e*Pn	Pn	22 08 35.3	-0.6
CEY	Cerknica	7.04	321	*e*Pn	Pn	22 08 43.1	-0.5

SCB 01 22:32:06.8±1.5, 21°.40S×66°.66W, h211km±21km, ML2.9/3, MW3.8, Error ellipse: s-maj=8.6km s-min=8.2km az=0.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YJA	Yavi	1.32	126	Pg	Pn	22 32 40.8	+0.3
PB09	IPOC Station P	2.44	260	Pg	Pn	22 32 52.3	+1.4
PB08	IPOC Station P	2.65	298	Pg	Pn	22 32 54.1	+0.6
PB08				Sg	S	22 33 30.3	+0.9
PB08				IAML		22 33 34.3	
	8.7nm,0.2s						
PB01	IPOC Station P	2.66	277	Pg	Pn	22 32 53.8	+0.5
PB01				Sg	S	22 33 28.8	-0.4
PB01				IAML		22 33 30.2	
	26nm,0.2s						
GO01	Chusmiza	2.93	305	Pg	Pn	22 32 57.0	+0.2
PB11	IPOC Station P	3.24	300	Pg	Pn	22 33 00.0	-0.1
PB11				Sg	S	22 33 40.6	-0.8
PB11				IAML		22 33 43.4	
	86nm,0.2s						
SOET	ToroToro	3.36	14	Pg	Pn	22 33 02.2	+0.5
PB16	IPOC Station P	4.06	318	Pg	Pn	22 33 11.1	+0.8
SOEJ	Jacaque	4.63	342	Pg	Pn	22 33 18.5	+1.1
BBOE	La Paz, Chanca	4.73	344	Pg	Pn	22 33 18.6	-0.1
BBOD	La Paz, Gloria	5.08	338	Pg	Pn	22 33 24.5	+1.5
LPAZ	La Paz	5.27	344	Pg	Pn	22 33 26.4	+0.9
BBOB	La Paz, Bander	5.41	345	Pg	Pn	22 33 27.0	-0.2

CRAAG 01 22:51:07.0, 36°.88N×3°.20E, Ml3.4, Algerie 08km NW El-Marsa
MDD 01 22:51:09.7±0.6, 36°.83N×3°.24E, h30km±9km, Mb3.9/34, M_mb3.2/37, Error ellipse: s-maj=6.6km s-min=3.0km az=154.0

ISC 01 22:51:07.1±1.2, 36°.89N±0°.04×3°.26E±0°.04, h24km±11km, n33, σ1.84/48, 15C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABA	Alger-Bouzarea	0.20	243	P	Pb	22 51 11.9	-0.7
AKED	El Kharrouba	0.27	152	P	Pb	22 51 14.2	+0.6
ADOR	Douera	0.36	229	P	Pb	22 51 15.2	+0.1
ADJB	Djebel Djouab	0.75	169	P	Pb	22 51 22.2	+0.6
ABKD	Sidi Amar	0.84	245	P	Pn	22 51 22.9	-0.6
AKET	Djebel Ketaf	0.98	149	P	Pn	22 51 26.0	+0.4
ABSD	Ouled Sidi Bra	1.64	152	P	Pn	22 51 35.2	+0.6
SET	Setif	1.86	111	P	Pn	22 51 39.0	+1.4
EANR	'Ain N'Sour	1.98	242	P	Pb	22 51 43.7	+1.3
EIBI	Ibiza	2.61	325	Pn	Pn	22 51 48.8	+0.9
EIBI				Sn	Sn	22 52 16.8	-2.0
EIBI	Ibiza	2.61	325	Pn	Pn	22 51 48.6	+0.7
EIBI				⇑*i*IVmb_VC		22 51 55.3	
	288nm,SNR=3.1						
EIBI				Sn	Sn	22 52 17.1	-1.7
ETOS	Mallorca	2.89	353	Pn	Pn	22 51 52.4	+0.7
ETOS	Mallorca	2.89	353	Pn	Pn	22 51 52.4	+0.7
ETOS				⇑*i*IVmb_VC		22 51 53.5	
	279nm,SNR=5.7						
ETOS				Sn	Sn	22 52 26.8	+1.0
EBEN2	Beniarda presa	3.26	304	Pn	Pn	22 51 58.5	+1.7
EBEN2				⇑*i*IVmb_VC		22 52 00.4	
	219nm,SNR=1.0						
EBEN2				Sn	Sn	22 52 32.5	-2.3
ECOL	Islas Columbre	3.62	327	Pn	Pn	22 52 02.2	+0.5
ECOL				Sn	Sn	22 52 41.0	-2.5
EZAR	Zarzadilla de	4.06	285	Pn	Pn	22 52 08.5	+0.6
EZAR				⇑*i*IVmb_VC		22 52 12.9	
	72nm,SNR=0.9						
EZAR				Sn	Sn	22 52 52.9	-1.8
EVIV	Cofrentes, Val	4.19	306	Pn	Pn	22 52 11.9	+2.3
EVIV				⇑*i*IVmb_VC		22 52 17.6	
	122nm,SNR=1.5						
EVIV				Sn	Sn	22 52 57.3	-0.4
ECHE	Chera	4.28	310	Pn	Pn	22 52 12.4	+1.6
ECHE	Chera	4.28	310	Pn	Pn	22 52 12.6	+1.8
ECHE				⇑*i*IVmb_VC		22 52 14.5	
	134nm,SNR=1.6						
ENIJ	Nijar	4.38	273	⇑*i*IVmb_VC		22 52 15.0	
	168nm,SNR=1.2						
ENIJ				Sn	Sn	22 53 00.3	-2.1
EMOS	Mosqueruela	4.53	321	Pn	Pn	22 52 15.5	+1.1
EMOS				⇑*i*IVmb_VC		22 52 19.4	
	55nm,SNR=1.3						
EMOS				Sn	Sn	22 53 03.1	-3.3
ERTA	Horta de San J	4.65	332	⇑*i*IVmb_VC		22 52 18.3	
	65nm,SNR=1.5						
ERTA				Sn	Sn	22 53 05.5	-3.7
EPOB	Poblet	4.76	340	Pn	Pn	22 52 19.9	+2.4
EPOB				⇑*i*IVmb_VC		22 52 24.2	
	56nm,SNR=1.5						
EPOB				Sn	Sn	22 53 09.1	-2.9
E0901	Celadas (Terue	4.96	318	Pn	Pn	22 52 21.8	+1.6
E0901				⇑*i*IVmb_VC		22 52 27.2	
	124nm,SNR=1.3						
E0901				Sn	Sn	22 53 16.9	+0.1
EQES	Quesada	5.12	282	Pn	Pn	22 52 24.5	+2.0
EQES				⇑*i*IVmb_VC		22 52 27.5	
	118nm,SNR=1.8						
EQES				Sn	Sn	22 53 21.4	+0.5
EMIR	Miracle	5.19	346	Pn	Pn	22 52 26.0	+2.6
EMIR				Sn	Sn	22 53 21.2	-1.3
E0803	Jimena (Jaen)	5.44	282	Pn	Pn	22 52 28.8	+2.0
VSL	Villasalto	5.48	60	Pn	Pn	22 52 28.4	+1.2
VSL				Sn	Sn	22 53 26.4	-3.1
EJON	La Jonquera	5.56	357	Pn	Pn	22 52 29.9	+1.6
EJON				Sn	Sn	22 53 28.2	-3.3
EJON	La Jonquera	5.56	357	Pn	Pn	22 52 29.9	+1.6
EJON				⇑*i*IVmb_VC		22 52 31.1	
	144nm,SNR=2.7						
ESAC	San Caprasio	5.62	330	Pn	Pn	22 52 30.6	+1.4
ESAC				⇑*i*IVmb_VC		22 52 36.8	
	110nm,SNR=1.3						
DGI	Dorgali Grotta	6.04	54	Pn	Pn	22 52 35.8	+0.9
DGI				Sn	Sn	22 53 41.3	-2.0
PAB	San Pablo	6.54	296	Pn	Pn	22 52 44.3	+2.3
PAB				⇑*i*IVmb_VC		22 52 49.5	
	31nm,SNR=0.9						

IDC 01 23:14:42.8±1.9, 1°.77N×121°.97E, h0km, mb3.5/3, mbtmp3.5/3, MS2.6/1, Error ellipse: s-maj=347.4km s-min=29.4km az=61.0
DJA 01 23:14:44.4±0.4, 1°N±4°×12°0E±°, h10km, M4.1/12, mb4.2/3, MLv4.0/12

ISC 01 23:14:44.3±1.3, 0°.8N±0°.1×120°.1E±0°.1, h10km, n13, σ1.20/12, mb3.4/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPSI	Mapaga	0.48	209	P	Pg	23 14 51.9	-1.8
PCI	Palu	1.68	190	P	Pn	23 15 13.4	-0.4
MRSI	Marisa	1.83	99	P	Pn	23 15 15.6	-0.2
APSI	Ampana	2.25	138	P	Pn	23 15 21.9	+0.4
LUWI	Luwuk	3.19	124	P	Pn	23 15 35.8	+1.3
TTSI	Tana Toraja	3.79	185	P	Pn	23 15 43.7	+0.9
KMSI	Cibinong	3.85	93	P	Pn	23 15 43.4	-0.2
SPSI	Sidrap Palu	4.71	184	P	Pn	23 15 57.6	+2.2
BNSI	Bone	5.13	180	P	Pn	23 16 01.8	+0.6
	0.1nm40nm,1.1s						
WRA	Warramunga Arr	24.85	147	P	P	23 20 06.4	-0.7
	0.5nm,0.4s,baz=330,slow=8.7,SNR=2.6						
	0.5nm,0.4s						
CMAR	Chiang Mai Arr	27.24	311	LR	LR	23 34 12.1	
	comp=Z,12nm,18.1s,baz=200,slow=42						
ASAR	Alice Springs	27.73	152	P	P	23 20 34.0	+0.9
	0.4nm,0.6s,baz=333,slow=9.7,SNR=7.7						
	0.4nm,0.6s						
MKAR	Makanchi Array	56.49	330	P	P	23 24 27.3	+0.7
	0.2nm,0.5s,baz=119,slow=9.0,SNR=2.9						
	0.2nm,0.5s						

IDC 01 23:36:13.4±3.6, 26°.94S×73°.08E, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=133.0km s-min=31.3km az=38.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	19.20	358	T	T	00 00 53.5	
	baz=180,slow=76,SNR=12						
H08S2	Diego Garcia H	19.20	358	T	T	00 00 55.5	
	baz=180,slow=76,SNR=17						
H08S3	Diego Garcia H	19.22	358	T	T	00 00 56.8	
	baz=180,slow=76,SNR=15						
H04N2	CROZET ISLANDS	25.55	216	T	T	00 07 49.0	
	baz=49,slow=74,SNR=84						
H04N1	CROZET ISLANDS	25.56	216	T	T	00 07 49.5	
	baz=49,slow=74,SNR=88						
H04N3	CROZET ISLANDS	25.57	216	T	T	00 07 44.1	
	baz=49,slow=74,SNR=72						
H01W2	Cape Leeuwin H	35.91	113	T	T	00 21 14.2	
	baz=276						
H01W3	Cape Leeuwin H	35.91	113	T	T	00 21 16.5	
	baz=276						
H01W1	Cape Leeuwin H	35.92	113	T	T	00 21 16.5	
	baz=276						
ASAR	Alice Springs	54.63	101	P	P	23 45 44.1	-0.2
	0.9nm,0.8s,baz=253,slow=6.6,SNR=8.7						
	0.9nm,0.8s						
WRA	Warramunga Arr	56.18	97	P	P	23 45 55.6	+0.1
	3.0nm,1.1s,baz=250,slow=9.1,SNR=2.8						
	3.0nm,1.1s						
MKAR	Makanchi Array	73.86	7	P	P	23 47 50.0	+0.2
	0.6nm,0.9s,baz=177,slow=5.8,SNR=4.0						
	0.6nm,0.9s						
BRTR	Keskin Array B	75.83	330	P	P	23 48 01.6	0.0
	0.6nm,0.9s,baz=130,slow=5.8,SNR=4.7						
	0.6nm,0.9s						
SONM	Songino Array	80.24	22	P	P	23 48 25.8	-0.1
	0.7nm,0.9s,baz=197,slow=4.4,SNR=2.7						
	0.7nm,0.9s						

GCG 01 23:37:11.7±0.8, 13°.24N×89°.38W, h57km±7km, MD3.5
CATAC 01 23:37:11.7±0.8, 13°N±6°×8°9W±°, h33km±4km, M2.9/6, MLv2.9/6, Error ellipse: s-maj=12.7km s-min=6.9km az=24.3, confirmed
SNET 01 23:37:12.2±0.8, 13°.27N×89°.37W, h56km±6km, ML3.0

ISC 01 23:37:12.4±2.3, 13°.2N±0°.1×89°.40W±0°.07, h49km±11km, n35, σ0.50/45, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.30	15	*e*P	Pn	23 37 21.3	-0.2
LALI				*e*S	Sn	23 37 28.2	+0.3
LALI				IAML		23 37 31.3	
	comp=Z,180nm,0.2s						
LALI	Alcalda de L	0.30	15	*e*P	Pn	23 37 20.8	-0.7
LALI				*e*S	Sn	23 37 28.2	+0.3
LALI	Alcalda de L	0.30	15	P	Pn	23 37 20.7	-0.7
JAYA	Jayaque - finc	0.46	354	*e*P	Pn	23 37 22.8	-0.5
JAYA				*e*S	Sn	23 37 31.2	+0.2
JAYA				IAML		23 37 32.2	
	comp=Z,588nm,0.1s						
JAYA	Jayaque - finc	0.46	354	*i* P	Pn	23 37 22.9	-0.3
JAYA				*e*S	Sn	23 37 31.4	+0.3
JAYA	Jayaque - finc	0.46	354	P	Pn	23 37 23.1	-0.2
LOMA	Loma Larga	0.50	26	*e*P	Pn	23 37 23.5	-0.2
LOMA	Loma Larga	0.50	26	P	Pn	23 37 23.5	-0.2
LOMA	Loma Larga	0.50	26	S	Sn	23 37 32.7	+0.9
PMON	Piamonte	0.52	9	*e*P	Pn	23 37 23.6	-0.3
PMON				*e*S	Sn	23 37 32.8	+0.6
PMON	Piamonte	0.52	9	P	Pn	23 37 23.5	-0.4
LFRS	El Faro	0.54	38	*e*P	Pn	23 37 23.7	-0.5
LFRS				*e*S	Sn	23 37 32.9	+0.3
UEES	Universidad Ev	0.54	17	*e*P	Pn	23 37 23.8	-0.4
BOQS	Boqueron	0.55	12	*e*P	Pn	23 37 24.3	-0.1
PIC2	El Picacho	0.56	14	*e*P	Pn	23 37 24.5	-0.1
CEDA	San Andres	0.60	0	*e*P	Pn	23 37 24.6	-0.3
COEG	Centro de Oper	0.66	50	*e*P	Pn	23 37 25.0	-0.7
COEG	Centro de Oper	0.66	50	P	Pn	23 37 24.9	-0.7
COEG	Centro de Oper	0.66	50	S	Sn	23 37 35.1	0.0
CEVE	Cerro Verde	0.66	341	*e*P	Pn	23 37 25.8	-0.1
CEVE				*e*S	Sn	23 37 36.4	+0.8
CEVE				IAML		23 37 42.0	
	comp=Z,631nm,0.2s						
SBLS	San Blas	0.67	341	*e*P	Pn	23 37 26.1	+0.1
SBLS				*e*S	Sn	23 37 36.1	+0.2
PAVA	Las Pavas	0.68	41	*e*P	Pn	23 37 25.7	-0.3
TECO	Alcaldia de Te	0.69	61	*e*P	Pn	23 37 25.0	-1.0
NUBE	Las Nubes	0.79	332	*e*P	Pn	23 37 27.2	-0.3
NUBE	Las Nubes	0.79	332	*i* P	Pn	23 37 27.2	-0.3
NUBE				*e*S	Sn	23 37 38.6	+0.2
NUBE	Las Nubes	0.79	332	P	Pn	23 37 27.4	-0.1
PACA	Pacayal	1.08	75	*e*P	Pn	23 37 31.3	0.0
PACA				*e*S	Sn	23 37 45.9	+0.6
PACA				IAML		23 37 47.4	
	comp=Z,1μm,0.2s						
PACA	Pacayal	1.08	75	S	Sn	23 37 46.6	+1.3
PACA	Pacayal	1.08	75	P	Pn	23 37 31.2	-0.1
LCY	Lacayo	1.10	78	*e*P	Pn	23 37 31.4	-0.1
BLLM	Bellamira	1.16	78	*e*P	Pn	23 37 32.2	0.0
MTO3	Montecristo	1.19	2	*i* P	Pn	23 37 32.3	-0.6
MTO3	Montecristo	1.19	2	P	Pn	23 37 32.3	-0.6
MTO3	Montecristo	1.19	2	S	Sn	23 37 47.9	-0.3
CNCH	Conchagua	1.52	87	*e*P	Pn	23 37 36.5	-0.8
CNCH				IAML		23 37 59.1	
	comp=Z,174nm,0.1s						

TEH 01 23:41:32.5, 30°.32N×51°.60E, h5km
DSN 01 23:41:37.6±1.6, 29°.85N×51°.71E, h10km, ML3.2/6, Error ellipse: s-maj=21.8km s-min=8.8km az=12.0

ISC 01 23:41:34.4±1.0, 30°.18N±0°.06×51°.57E±0°.06, h15km, n32, σ1.36/32, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAZ2	Kazeron-Fars-I	0.57	172	Pg	Pb	23 41 47.2	+1.0
KLNJ	Kolanjah	0.83	1	Pg	Pg	23 41 46.5	-4.1
IBRJ	Brojen	1.75	351	Pg	Pn	23 42 03.4	-1.0
IRAM	Ramesheh	1.77	23	Pg	Pn	23 42 03.4	-1.3
DSBU	Dashti - Bushe	1.83	189	Pn	Pg	23 42 09.6	0.0
ZNGN	Zangian	2.03	343	Pn	Pn	23 42 08.5	+0.1
QIR1	Qir	2.13	142	Pn	Pb	23 42 13.1	+0.4
JHBN	Jahan bin	2.19	339	Pn	Pn	23 42 11.3	+0.7
JHRM	Jahrom	2.42	133	Pn	Pb	23 42 17.0	-0.7
ISAD	Sadrabad	2.51	46	Pn	Pn	23 42 16.1	+1.1
IPIR	Pirpir	2.56	347	Pn	Pn	23 42 16.4	+0.6
IZEF	Zefreh	2.79	13	Pn	Pn	23 42 19.1	+0.4
IMEH	Mehriz	2.88	64	Pn	Pn	23 42 21.4	+1.4
IKLH	Kolahrood	3.13	0	Pn	Pn	23 42 24.2	+0.7
LMD1	Lamerd	3.15	153	Pn	Pb	23 42 28.0	-2.2
ICHK	Chekchek	3.19	49	Pn	Pn	23 42 24.9	+0.7
ANAR	Anarak	3.52	31	Pn	Pn	23 42 30.5	+1.7
IBAF	Bafgh	3.71	67	Pn	Pn	23 42 32.3	+0.9

KHGB	Koh Gabri	4.25	86	Pn	Pn	23 42 40.9	+2.1
NGRK	Negar Kerman	4.51	95	Pn	Pn	23 42 44.9	+2.3
IKFM	Kafar-mosalman	4.60	317	Pn	Pn	23 42 45.1	+1.7
IVRN	Varamin	4.81	2	Pn	Pn	23 42 47.4	+1.0
KRM1	Kerman Provinc	4.94	85	Pn	Pn	23 42 50.3	+2.0
HAGD	Aghdareh	5.07	337	Pn	Pn	23 42 50.5	+0.5
TPRV	Parvadeh(Tabas	5.21	56	Pn	Pn	23 42 52.7	+0.8
BANOM	Banah	5.95	134	P	Pn	23 43 00.5	-1.6
MSFE	Esma-Masafi	6.29	139	P	Pn	23 43 05.6	-1.1
UOSS	Minazif	6.64	141	P	Pn	23 43 10.8	-0.6
HATD	Hatta, Dubai	6.69	142	P	Pn	23 43 12.7	+0.4
ASHO	Ashiyiah	6.77	143	P	Pn	23 43 13.1	-0.2
ASHO				S	Sn	23 44 26.9	-3.3
MZR	Muzera	7.35	166	P	Pn	23 43 21.9	+0.7
RAYN	Ar Rayn	8.56	221	P	Pn	23 43 39.0	+1.0

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*GCG **01** 23:46:17.9±0.4, 13°.13N×87°.91W, h191^{km}±18^{km}, MD4.0*
*SNET **01** 23:46:18.4±0.8, 13°.12N×87°.77W, h170^{km}±4^{km}, ML3.6*
*CATAC **01** 23:46:18.5±0.5, 13°N±5°×8°8W±°, h172^{km}±3^{km}, M3.1/18, MLv3.1/18, Error ellipse: s-maj=10.9km s-min=3.8km az=21.7, confirmed*
ISC 01 23:46:18.7±2.1, 13°.12N±0°.10×87°.76W±0°.05, h173^{km}±12^{km}, n61, σ0^{s}.50/71, 14C-6D, Honduras

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	0.17	334	eP	Pn	23 46 41.4	-0.5
CNCH				eS	Sn	23 46 59.1	-0.7
CNCH	Conchagua	0.17	334	S	Sn	23 47 00.4	+0.5
CNCH	Conchagua	0.17	334	⇑P	Pn	23 46 41.6	-0.4
LCND	La Caada	0.23	325	eP	Pn	23 46 41.5	-0.4
LCND	La Caada	0.23	325	⇑P	Pn	23 46 41.6	-0.4
CSGN	Cosiguina Volc	0.24	127	⇑P	Pn	23 46 41.6	-0.5
CSGN				S	Sn	23 47 00.6	+0.7
POTN	Potosi Cosigui	0.27	116	⇑P	Pn	23 46 41.9	0.0
POTN				S	Sn	23 47 00.2	+0.5
BLLM	Bellamira	0.57	304	eP	Pn	23 46 42.9	-0.2
VSM	San Miguel	0.59	301	eP	Pn	23 46 43.3	-0.2
LCY	Lacayo	0.60	300	eP	Pn	23 46 43.3	0.0
RANC	El Ranchito	0.60	301	P	Pn	23 46 41.4	-2.0
PACA	Pacayal	0.65	302	eP	Pn	23 46 43.4	-0.2
PACA	Pacayal	0.65	302	P	Pn	23 46 42.9	-0.7
CAHU	Cacacuatique	0.78	326	eP	Pn	23 46 44.6	+0.1
TECA	Tecapa	0.81	297	eP	Pn	23 46 44.5	-0.1
ALJI	Alcalda de J	0.82	285	eP	Pn	23 46 44.1	-0.4
PQSS	Presa 15 de Se	0.93	303	eP	Pn	23 46 45.1	-0.1
QUEN	Al S del Volca	1.03	121	P	Pn	23 46 46.7	+0.7
HERN	Volcan Telica	1.04	119	⇑P	Pn	23 46 45.9	-0.3
TGUH	Tegucigalpa,Un	1.04	27	⇓P	Pn	23 46 46.3	+0.1
TGUH				S	Sn	23 47 07.0	-0.5
HOYN	Al Sur del Vol	1.04	120	⇓P	Pn	23 46 46.2	0.0
HOYN				S	Sn	23 47 08.1	+0.8
TECO	Alcaldia de Te	1.08	293	eP	Pn	23 46 46.0	-0.4
TECO				eS	Sn	23 47 07.7	0.0
TECO	Alcaldia de Te	1.08	293	S	Sn	23 47 08.2	+0.4
TECO	Alcaldia de Te	1.08	293	⇑P	Pn	23 46 46.1	-0.4
SCLA	Alcaldia de Sa	1.11	301	eP	Pn	23 46 46.7	0.0
SCLA				eS	Sn	23 47 09.0	+0.8
SCLA	Alcaldia de Sa	1.11	301	⇑P	Pn	23 46 46.7	0.0
UESV	Universidad de	1.13	297	eP	Pn	23 46 46.5	-0.3
COEG	Centro de Oper	1.20	294	eP	Pn	23 46 47.2	-0.3
COEG	Centro de Oper	1.20	294	S	Sn	23 47 10.2	+0.6
COEG	Centro de Oper	1.20	294	⇑P	Pn	23 46 47.4	-0.1
PAVA	Las Pavas	1.29	297	eP	Pn	23 46 48.1	-0.2
LIMN	Finca el Limon	1.36	92	⇓P	Pn	23 46 48.9	0.0
LFRS	El Faro	1.36	292	eP	Pn	23 46 48.5	-0.4
LBRS	Las Brisas	1.39	296	eP	Pn	23 46 49.5	+0.3
LOMA	Loma Larga	1.47	291	eP	Pn	23 46 49.7	-0.3
LOMA	Loma Larga	1.47	291	S	Sn	23 47 15.1	+1.0
LOMA	Loma Larga	1.47	291	⇑P	Pn	23 46 49.7	-0.3
COPN	Copaltepe	1.47	129	⇓P	Pn	23 46 49.8	0.0
LALI	Alcalda de L	1.57	284	eP	Pn	23 46 50.3	-0.4
LALI	Alcalda de L	1.57	284	eP	Pn	23 46 50.3	-0.4
LALI				eS	Sn	23 47 15.6	+0.1
RCVN	Varillal2	1.59	73	⇑P	Pn	23 46 50.8	-0.3
BOQS	Boqueron	1.60	293	eP	Pn	23 46 52.4	+1.0
PMON	Piamonte	1.62	291	eP	Pn	23 46 51.5	0.0
PMON	Piamonte	1.62	291	S	Sn	23 47 16.1	-0.7
PMON	Piamonte	1.62	291	⇓P	Pn	23 46 51.4	0.0
RCPN	Sur Rio San Ju	1.67	76	⇑P	Pn	23 46 51.8	-0.2
JAYA	Jayaque - finc	1.73	288	eP	Pn	23 46 52.0	-0.6
JAYA				IAML		23 47 23.2	
	comp=Z,362nm,0.2s						
JAYA	Jayaque - finc	1.73	288	i P	Pn	23 46 52.2	-0.4
JAYA				eS	Sn	23 47 19.1	+0.3
JAYA	Jayaque - finc	1.73	288	S	Sn	23 47 18.7	-0.1
JAYA	Jayaque - finc	1.73	288	⇑P	Pn	23 46 52.2	-0.4
MATN	Matagalpa	1.79	96	⇓P	Pn	23 46 52.2	-1.0
SNJE	San Jose	1.95	293	eP	Pn	23 46 54.6	-0.4
SBLS	San Blas	1.95	292	eP	Pn	23 46 55.1	+0.1
MTO3	Montecristo	2.01	309	eP	Pn	23 46 55.8	+0.1
MTO3	Montecristo	2.01	309	i P	Pn	23 46 55.9	+0.3
MTO3	Montecristo	2.01	309	S	Sn	23 47 24.4	0.0
MTO3	Montecristo	2.01	309	⇑P	Pn	23 46 56.0	+0.3
NUBE	Las Nubes	2.12	292	i P	Pn	23 46 56.5	-0.3
NUBE	Las Nubes	2.12	292	S	Sn	23 47 25.8	-0.5
NUBE	Las Nubes	2.12	292	⇑P	Pn	23 46 56.5	-0.3
SLOZ	Alcaldia de Sa	2.17	295	eP	Pn	23 46 57.3	+0.1
SLOZ				eS	Sn	23 47 27.7	+0.6

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*IDC **02** 00:28:14.8±2.6, 20°.00S×177°.88W, h517^{km}±25^{km}, mb2.9/5, mbtmp3.7/6, Error ellipse: s-maj=40.3km s-min=23.8km az=140.0*
ISC 02 00:28:13.2±1.0, 20°.1S±0°.2×177°.7W±0°.2, h500^{km}, n9, σ1^{s}.41/9, mb3.3/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.62	299	P	P	00 29 38.3	+1.3
	3.2nm,0.4s,baz=83,slow=8.1,SNR=7.5						
ASAR	Alice Springs	44.87	256	P	P	00 35 42.1	-0.5
	1.0nm,0.6s,baz=86,slow=8.3,SNR=8.6						
	1.0nm,0.6s						
WRA	Warramunga Arr	44.91	262	P	P	00 35 41.8	-1.3
	0.6nm,0.5s,baz=98,slow=7.9,SNR=1.8						
	0.6nm,0.5s						
QSPA	South Pole Qui	70.00	180	P	P	00 38 34.3	+0.4
	0.6nm,0.6s,baz=100,slow=5.1,SNR=3.1						
	0.6nm,0.6s						
NVAR	Mina Array Bea	80.53	43	P	P	00 39 33.9	+0.6
	0.4nm,0.5s,baz=253,slow=4.6,SNR=5.8						
	0.4nm,0.5s						
ILAR	Eielson Array	87.83	13	P	P	00 40 07.0	-1.4
	0.3nm,0.6s,baz=206,slow=5.2,SNR=2.7						
	0.3nm,0.6s						
BVAR	Borovoye Array	118.91	320	PKP	PKPdf	00 46 03.1	-1.2
	0.3nm,0.4s,baz=82,slow=3.1,SNR=3.0						
BRTR	Keskin Array B	146.73	313	PKPbc	PKPdf	00 46 58.5	+2.0
	0.4nm,0.7s,baz=148,slow=7.2,SNR=3.8						
GERES	GERESS Array B	149.85	345	PKPbc	PKPbc	00 47 06.0	-0.5
	0.2nm,0.5s,baz=44,slow=3.1,SNR=4.4						

CATAC 02 00:34:20.6±0.2, 10°N±1°×8°5W±°, h8^{km}±2^{km}, M3.1/7, MLv3.1/7, 3C-4D, Error ellipse: s-maj=4.1km s-min=3.1km az=86.1, confirmed, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCE	Pocosol	0.12	199	⇓P	Pg	00 34 24.2	+0.9
SOCE				S	Sg	00 34 26.6	+1.5
COVE	Coope Vega, Sa	0.28	38	S	Sb	00 34 32.5	-0.5
COVE	Coope Vega, Sa	0.28	38	⇓P	Pb	00 34 27.2	-0.8
TCS1	Tacares	0.53	148	⇓P	Pg	00 34 31.2	+0.4
TRT2	Tortugero	0.83	86	S	Sb	00 34 48.6	-0.2
TRT2	Tortugero	0.83	86	⇑P	Pg	00 34 36.5	-0.2
LCR2	La Lucha 2	0.94	143	S	Sb	00 34 51.8	-0.1
LCR2	La Lucha 2	0.94	143	⇓P	Pg	00 34 38.1	-0.6
INDI	Punta indio, G	1.10	236	S	Sb	00 34 56.9	+0.4
INDI	Punta indio, G	1.10	236	⇑P	Pg	00 34 41.3	-0.5
ACON	Acoyapa	1.58	338	S	Sb	00 35 10.2	0.0
ACON	Acoyapa	1.58	338	⇑P	Pn	00 34 49.1	+0.2
OCHAL	Ojochal	1.67	146	S	Sb	00 35 12.6	-0.2
OCHAL	Ojochal	1.67	146	P	Pn	00 34 49.4	-0.7

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*SJA **02** 00:36:21.0±0.7, 21°.21S×68°.58W, h140^{km}±4^{km}, ML3.3, MW3.5*
*GUC **02** 00:36:23.0±0.6, 21°.19S×68°.55W, h128^{km}±5^{km}, ML3.6*
ISC 02 00:36:21.5±1.5, 21°.21S±0°.03×68°.55W±0°.05, h137^{km}±12^{km}, n21, σ0^{s}.82/41, 3C-4D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	0.87	228	⇑eP	Pn	00 36 44.8	+0.7
PB09				eS	Sn	00 37 01.5	+0.2
PB09				IAML		00 37 02.9	
	comp=N,1μm,0.4s						
PB09	IPOC Station P	0.87	228	eP	Pn	00 36 44.7	+0.7
PB09				eS	Sn	00 37 01.4	+0.1
PB09				IAML		00 37 02.7	
	comp=Z,1μm,0.3s						
PB01	IPOC Station P	0.89	281	⇓eP	Pn	00 36 44.0	-0.2
PB01				eS	Sn	00 37 00.6	-0.8
PB01				IAML		00 37 02.9	
	comp=E,2μm,0.2s						
PB01	IPOC Station P	0.89	281	eP	Pn	00 36 44.0	-0.2
PB01				eS	Sn	00 37 01.6	+0.2
PB01				IAML		00 37 03.8	
	comp=Z,898nm,0.2s						
PB08	IPOC Station P	1.20	332	⇓eP	Pn	00 36 47.8	+0.3
PB08				eS	Sn	00 37 06.7	-0.4
PB08				IAML		00 37 07.5	
	comp=N,931nm,0.2s						
PB08	IPOC Station P	1.20	332	eP	Pn	00 36 47.8	+0.3
PB08				eS	Sn	00 37 07.4	+0.3
PB08				IAML		00 37 08.8	
	comp=Z,410nm,0.2s						
PB03	IPOC Station P	1.40	233	⇑iP	Pn	00 36 49.6	+0.5
PB03				eS	Sn	00 37 09.8	-0.4
PB03				IAML		00 37 11.5	
	comp=N,1μm,0.3s						
PB03	IPOC Station P	1.40	233	eP	Pn	00 36 49.3	+0.2
PB03				eS	Sn	00 37 10.0	-0.2
PB03				IAML		00 37 10.5	
	comp=Z,867nm,0.2s						
GO01	Chusmiza	1.65	338	⇓eP	Pn	00 36 52.5	+0.2
GO01				eS	Sn	00 37 15.1	-0.6
GO01				IAML		00 37 17.9	
	comp=N,2μm,0.1s						
TA01	Diego Aracena	1.65	293	eP	Pn	00 36 51.7	-0.1
TA01				eS	Sn	00 37 14.3	-0.6
TA01				IAML		00 37 15.8	
	comp=E,966nm,0.3s						
TA02	Huaiquique	1.75	302	eP	Pn	00 36 52.8	-0.1
TA02				eS	Sn	00 37 15.8	-1.1
PB06	IPOC Station P	1.76	212	⇑eP	Pn	00 36 53.8	+0.6
PB06				eS	Sn	00 37 17.5	0.0
PB06				IAML		00 37 18.9	
	comp=E,537nm,0.3s						
PB06	IPOC Station P	1.76	212	eP	Pn	00 36 53.8	+0.6
PB06				eS	Sn	00 37 17.9	+0.4
PB06				IAML		00 37 21.2	
	comp=Z,325nm,0.2s						
PB11	IPOC Station P	1.77	324	⇓eP	Pn	00 36 53.2	-0.2
PB11				eS	Sn	00 37 16.4	-1.3
PB11				IAML		00 37 18.6	
	comp=E,773nm,0.3s						
PB11	IPOC Station P	1.77	324	eP	Pn	00 36 53.2	-0.2
PB11				eS	Sn	00 37 17.7	-0.1
PB11				IAML		00 37 21.1	
	comp=Z,395nm,0.2s						
PB05	IPOC Station P	2.24	223	eP	Pn	00 36 59.1	+0.2
PB05				eS	Sn	00 37 27.3	-0.3
PB05				IAML		00 37 32.8	
	comp=Z,117nm,0.3s						
PB10	IPOC Station P	2.95	219	eP	Pn	00 37 08.0	+0.3
PB10				eS	Sn	00 37 42.6	-0.8
PB10				IAML		00 37 48.5	
	comp=Z,49nm,1.0s						
YJA	Yavi	2.98	109	eP	Pn	00 37 10.1	+1.5
YJA				eS	Sn	00 37 41.5	-3.3
YJA				IAML		00 37 47.5	
	comp=Z,7.0nm,1.2s						
PB16	IPOC Station P	3.00	342	eP	Pn	00 37 09.9	+1.0
PB16				eS	Sn	00 37 46.9	+1.5
PB16				IAML		00 37 51.1	
	comp=Z,55nm,0.4s						
PB14	IPOC Station P	3.80	206	eP	Pn	00 37 18.6	-0.6
PB14				eS	Sn	00 38 04.3	+0.5
PB14				IAML		00 38 11.4	
	comp=Z,29nm,0.6s						
AZAP	Zapla	4.40	134	eP	Pn	00 37 27.3	+0.4
AZAP				IAML		00 38 43.6	
	comp=Z,9.6nm,3.5s						

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*TIR **02** 01:00:09.2, 40°.51N×20°.85E, h16^{km}, Ml3.1/8*
*BEO **02** 01:00:09.3±0.7, 40°.38N×20°.85E, h0^{km}, ML2.8/4*
*PDG **02** 01:00:10.6±0.7, 40°.51N×20°.87E, h9^{km}±1^{km}, ML2.9/11, Error ellipse: s-maj=0.9km s-min=1.5km az=0.0*
*ATH **02** 01:00:11.6±0.3, 40°.50N×20°.96E, h5^{km}, ML2.8/15, Manual Solution by S.Liakopoulos First location: 2019/06/02 01:01:14, This location: 2020/10/26 11:16:10 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*THE **02** 01:00:12.8, 40°N±2°×2°1E±°, h0^{km}±1^{km}, M2.6/31, MLh2.6/31*
*SKO **02** 01:00:12.7, 40°.53N×20°.92E, h4^{km}, ML2.8*
ISC 02 01:00:10.6±1.0, 40°.51N±0°.01×20°.87E±0°.02, h3^{km}±9^{km}, n137, σ1^{s}.11/196, 12C-13D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	Korca	0.13	331	⇑iPg	Pg	01 00 12.7	-0.5
KBN				Sg	Sg	01 00 14.9	-0.1
KBN				AML	AML	01 00 16.0	
	28nm,0.4s						
NEST	Nestorio	0.17	124	⇑iPg	Pg	01 00 14.5	+0.7
NEST				Sg	Sg	01 00 17.4	+1.4
NEST				AML	AML	01 00 18.7	
	16nm,0.2s						
NEST	Nestorio	0.17	124	P	Pg	01 00 14.5	+0.7
NEST				S	Sg	01 00 16.7	+0.7
NEST	Nestorio	0.17	124	P	Pg	01 00 14.5	+0.7
NEST				S	Sg	01 00 16.4	+0.4
PENT	Pentalofos	0.37	147	P	Pg	01 00 17.6	-0.2
PENT				S	Sg	01 00 23.7	+1.0
LSK	Leskovik	0.41	210	Pg	Pg	01 00 16.6	-1.9
LSK				Sg	Sg	01 00 23.4	-0.5
LSK				AML	AML	01 00 26.4	
	9.5nm,0.4s						
OHR	Ohrid	0.61	355	i Pg	Pg	01 00 22.6	+0.3
OHR				i Sg	Sg	01 00 32.3	+2.2
OHR				eLg	Lg	01 00 32.9	
	comp=N,236nm,0.4s						
OHR				eLg	Lg	01 00 33.1	
	comp=E,752nm,0.5s						
OHR	Ohrid	0.61	355	ePg	Pg	01 00 22.3	+0.1
OHR				eSg	Sg	01 00 32.1	+2.0
KPRO	Kipourio	0.67	146	P	Pg	01 00 22.9	-0.6
KPRO				S	Sg	01 00 32.6	+0.5
KPRO	Kipourio	0.67	146	P	Pg	01 00 22.9	-0.6
KPRO				S	Sb	01 00 33.2	-1.4
KZN	Kozani	0.72	106	P	Pg	01 00 24.3	0.0
KZN				S	Sg	01 00 33.6	0.0
MSVA	Metsovo	0.77	162	P	Pg	01 00 26.3	+0.9
MSVA				S	Sb	01 00 37.4	-0.3
SRN	Sarande	0.92	227	⇓ePn	Pg	01 00 27.4	-0.7
SRN				Sn	Sg	01 00 41.0	+1.0
SRN				AML	AML	01 00 41.8	
	comp=E,0.9nm,0.5s						
KTI	Kastanea	0.96	96	P	Pg	01 00 29.0	+0.1
VLO	Vlora	1.05	268	⇑ePn	Pb	01 00 29.0	-2.3
VLO				Sn	Sb	01 00 43.5	-2.0
VLO				AML	AML	01 00 51.4	
	comp=E,3.0nm,0.5s						
IGT	Igoumenitsa	1.06	203	⇓ePn	Pb	01 00 29.4	-2.1
IGT				Sn	Sb	01 00 44.8	-0.9
IGT	Igoumenitsa	1.06	203	⇓iPg	Pb	01 00 29.9	-1.6
IGT				i Sg	Sn	01 00 51.2	+3.7
IGT	Igoumenitsa	1.06	203	P	Pb	01 00 31.2	-0.4
IGT				S	Sb	01 00 46.5	+0.7
TIR	Tirane	1.13	318	⇓iPn	Pb	01 00 31.3	-1.6
TIR				Sn	Sb	01 00 45.7	-2.3
TIR				AML	AML	01 00 55.8	
	comp=E,1.1nm,0.5s						
TIR	Tirane	1.13	318	i Pg	Pb	01 00 31.5	-1.3
TIR				i Sg	Sn	01 00 49.7	+0.3
TIR	Tirane	1.13	318	ePg	Pb	01 00 31.4	-1.4
KEK	Kerkira	1.14	226	P	Pb	01 00 33.0	0.0
KEK				S	Sg	01 00 49.9	+2.6
PHP	Peshkopia	1.22	345	⇑iPn	Pn	01 00 32.4	-2.2
PHP				Sn	Sb	01 00 49.5	-1.0
PHP				AML	AML	01 01 00.1	
	comp=E,0.8nm,0.4s						
THL	Klokotos Trika	1.29	137	P	Pn	01 00 34.2	-1.3
THL				S	Sb	01 00 51.2	-1.1
THL	Klokotos Trika	1.29	137	P	Pn	01 00 34.1	-1.3
THL				S	Sb	01 00 51.2	-1.1
TYRN	Tyrnavos	1.31	127	P	Pn	01 00 34.9	-0.9
TYRN				S	Sg	01 00 53.2	+0.5
TYRN	Tyrnavos	1.31	127	P	Pn	01 00 34.9	-0.9
TYRN				S	Sg	01 00 52.4	-0.4
ARTB	Arta	1.35	176	P	Pb	01 00 37.0	+0.5
VAY	Valandovo	1.52	57	P	Pb	01 00 38.7	-0.7
VAY				S	Sg	01 01 01.2	+1.7
VAY	Valandovo	1.52	57	i Pg	Pb	01 00 38.8	-0.7
VAY				i Sg	Sg	01 01 02.1	+2.6
VAY				eLg	Lg	01 01 04.9	
	comp=N,83nm,0.7s						
VAY				eLg	Lg	01 01 06.2	
	comp=E,92nm,0.8s						
VAY	Valandovo	1.52	57	ePn	Pb	01 00 38.9	-0.5
VAY				eSn	Sg	01 01 01.2	+1.7
SKO	Skopje	1.52	16	i Pg	Pb	01 00 39.5	0.0
SKO				i Sg	Sg	01 01 00.4	+0.8
THE	Thessaloniki	1.60	85	⇓ePn	Pn	01 00 36.3	-3.5
THE				Sn	Sg	01 01 01.9	-0.1
THE	Thessaloniki	1.60	85	P	Pn	01 00 39.1	-0.6
THE				S	Sg	01 01 00.8	-1.2
THE	Thessaloniki	1.60	85	i Pg	Pn	01 00 39.5	-0.3
THE				i Sg	Sg	01 01 01.5	-0.5
THE	Thessaloniki	1.60	85	P	Pn	01 00 39.0	-0.7
KNT	Kendrikon	1.67	66	P	Pn	01 00 40.7	0.0
KNT				S	Sg	01 01 03.3	-1.0
KNT	Kendrikon	1.67	66	i Pn	Pn	01 00 40.7	0.0
KNT				i Sn	Sg	01 01 06.9	+2.6
KNT	Kendrikon	1.67	66	P	Pn	01 00 40.5	-0.2
TSLK	Tsoukalades, L	1.69	186	S	Sg	01 01 05.7	+0.9
TSLK	Tsoukalades, L	1.69	186	P	Pb	01 00 42.0	-0.3
HORT	Hortiatis	1.70	86	P	Pn	01 00 40.7	-0.6
HORT				S	Sg	01 01 03.9	-1.3
HORT	Hortiatis	1.70	86	P	Pn	01 00 40.6	-0.6
PUK	Puka	1.70	335	⇑ePn	Pn	01 00 40.9	-0.3
PUK				Sn	Sb	01 01 04.5	+0.2
PUK				AML	AML	01 01 09.9	
	comp=E,1.2nm,0.8s						
LKD2	Lefkada island	1.72	186	⇑iPn	Pb	01 00 43.0	+0.1
LKD2				Sn	Sb	01 01 05.9	+0.9
LKD2	Lefkada island	1.72	186	P	Pb	01 00 43.0	+0.1
LKD2				S	Sg	01 01 08.0	+2.0
LKD2	Lefkada island	1.72	186	P	Pb	01 00 42.6	-0.3
EVR	Evrytania	1.75	155	P	Pb	01 00 43.1	-0.3
EVR				S	Sg	01 01 07.7	+1.0
EVR	Evrytania	1.75	155	P	Pb	01 00 42.6	-0.7
MAKR	Makrakomi, Fth	1.78	147	P	Pb	01 00 43.2	-0.7
MAKR				S	Sg	01 01 07.5	-0.3
MAKR	Makrakomi, Fth	1.78	147	P	Pb	01 00 43.0	-0.9
NYDR	Nydri-Lefkada	1.80	184	P	Pb	01 00 43.8	-0.3
NYDR				S	Sg	01 01 08.5	+0.2
NYDR	Nydri-Lefkada	1.80	184	P	Pn	01 00 43.4	+0.9
AGG	Agios Georgios	1.86	142	P	Pn	01 00 43.6	+0.2
AGG				S	Sb	01 01 07.6	-1.3
AGG	Agios Georgios	1.86	142	P	Pn	01 00 43.4	0.0
EVGI	Lefkada island	1.89	185	P	Pn	01 00 44.8	+1.0
EVGI				S	Sb	01 01 10.2	+0.5
EVGI	Lefkada island	1.89	185	P	Pn	01 00 44.6	+0.9
ULC	Ulcinj	1.90	320	⇓ePn	Pn	01 00 44.4	+0.4
ULC	Ulcinj	1.90	320	i Pn	Pn	01 00 44.6	+0.7
ULC	Ulcinj	1.90	320	⇓iPn	Pn	01 00 43.6	-0.3
ULC				i Sn	Sb	01 01 10.8	+0.7
SOH	Sokhos	1.92	80	P	Pn	01 00 44.3	+0.2
SOH				S	Sb	01 01 09.2	-1.3
SOH	Sokhos	1.92	80	P	Pn	01 00 44.1	0.0
PDO	Prodromos	1.92	173	P	Pb	01 00 46.2	-0.1
BCI	Bajram Curri	1.95	342	P	Pb	01 00 47.7	+0.9
PVO	Paravola	1.96	165	P	Pb	01 00 46.5	-0.3
PVO	Paravola	1.96	165	P	Pb	01 00 46.4	-0.4
PLG	Polygyros	1.97	93	P	Pn	01 00 45.1	+0.3
PLG				S	Sb	01 01 10.7	-1.4
PLG	Polygyros	1.97	93	P	Pn	01 00 44.9	+0.1
FSK	Fiskardo	2.06	187	P	Pn	01 00 46.8	+0.8
ANX	Ano Chora	2.08	157	P	Pb	01 00 47.8	-1.1
ANX	Ano Chora	2.08	157	P	Pb	01 00 47.9	-1.0
DRME	Dracevica, Mon	2.10	323	ePn	Pn	01 00 47.4	+0.7
DRME	Dracevica, Mon	2.10	323	⇓iPn	Pn	01 00 46.7	0.0
DRME				i Sn	Sb	01 01 15.8	-0.1
SRS	Serrai	2.15	73	P	Pn	01 00 47.2	-0.1
SRS	Serrai	2.15	73	i Pn	Pn	01 00 47.3	-0.1
KKB	Krupnik	2.16	51	i Pn	Pn	01 00 48.3	+0.8
NEO	Neokhori	2.17	123	P	Pn	01 00 47.6	0.0
AXAR	Agios Charalam	2.22	141	P	Pn	01 00 47.9	-0.4
EFP	Efpalio	2.23	159	P	Pn	01 00 49.8	+1.4
EFP	Efpalio	2.23	159	P	Pn	01 00 49.7	+1.3
PAIG	Paliouri	2.23	104	P	Pn	01 00 48.5	+0.1
PDG	Podgorica	2.27	328	ePn	Pn	01 00 49.4	+0.4
PDG	Podgorica	2.27	328	ePn	Pn	01 00 49.7	+0.7
PDG				eSn	Sb	01 01 20.7	0.0
PDG	Podgorica	2.27	328	⇑iPn	Pn	01 00 49.3	+0.3
PDG				i Sn	Sb	01 01 19.8	-0.9
SERG	Sergoula	2.28	156	P	Pn	01 00 49.7	+0.5
BOSS	Bosilegrad	2.33	31	ePn	Pn	01 00 49.7	-0.1
BUM	Brajici-Budva	2.33	321	⇓iPn	Pn	01 00 50.1	+0.3
BUM				i Sn	Sn	01 01 20.9	+1.9
VLS	Valsamata	2.34	185	P	Pn	01 00 50.1	+0.2
OUR	Ouranopolis	2.38	93	P	Pn	01 00 50.5	+0.1
OUR	Ouranopolis	2.38	93	P	Pn	01 00 50.3	-0.2
KOKK	Kokkinochori,	2.40	82	P	Pn	01 00 51.1	+0.4
PSDA	Pessada-Kefalo	2.40	185	P	Pn	01 00 51.0	+0.3
BARS	Barje	2.41	17	i Pn	Pn	01 00 50.7	-0.2
BARS	Barje	2.41	17	ePn	Pn	01 00 50.7	-0.2
MMB	Musomishta	2.41	64	P	Pn	01 00 51.4	+0.5
MMB	Musomishta	2.41	64	i Pn	Pn	01 00 51.2	+0.2
MMB				i Sn	Sb	01 01 22.1	-2.7
BEY	Berane	2.47	343	⇑iPn	Pb	01 00 54.8	-0.9
BEY	Berane	2.47	343	i Pn	Pb	01 00 55.9	+0.2
IVA	Berane	2.47	343	⇑iPn	Pn	01 00 54.1	+2.3
IVA				i Sn	Sb	01 01 26.0	-0.6
LKR	Lokris	2.48	138	P	Pn	01 00 52.3	+0.5
RLS	Riolos of Patr	2.49	169	P	Pb	01 00 54.0	-1.9
CEME	Cevo	2.51	325	⇑iPn	Pn	01 00 52.3	0.0
CEME				i Sn	Sn	01 01 25.4	+1.9
KOME	Kolasin	2.55	337	⇓iPn	Pn	01 00 53.4	+0.5
KOME				i Sn	Sb	01 01 27.2	-1.7
HCY	Herceg Novi	2.63	318	⇓ePn	Pn	01 00 53.5	-0.5
HCY	Herceg Novi	2.63	318	ePn	Pn	01 00 53.2	-0.8
HCY	Herceg Novi	2.63	318	⇓iPn	Pn	01 00 54.1	+0.1
HCY				i Sn	Sn	01 01 27.8	+1.3
SELS	Selova	2.72	4	ePn	Pn	01 00 55.8	+0.7
VTS	Vitosha	2.75	39	ePn	Pn	01 00 55.9	+0.1
SJES	Sjenica	2.83	347	ePn	Pn	01 00 59.2	+2.4
SJES	Sjenica	2.83	347	ePn	Pn	01 00 58.8	+2.0
TREB	Trebinje	2.91	320	ePn	Pn	01 00 56.8	-0.9
BRY	Bratogost	2.96	325	⇑iPn	Pn	01 00 58.3	-0.2
BRY	Bratogost	2.96	325	ePn	Pn	01 00 58.4	-0.2
BRY	Bratogost	2.96	325	⇓iPn	Pn	01 00 58.6	0.0
BRY				i Sn	Sn	01 01 36.1	+1.4
PLE	Pljevlja	3.03	339	⇑iPn	Pn	01 01 01.1	+1.6
PLE				i Sn	Sn	01 01 37.3	+1.0
GOCS	Kraljevo Serbi	3.05	0	ePn	Pn	01 01 00.9	+1.1
UPM	Unac-Piva	3.07	332	ePn	Pn	01 01 00.0	-0.1
UPM				i Sn	Sn	01 01 38.7	+1.3
BOVS	Bovan	3.19	11	ePn	Pn	01 01 01.1	-0.5
RUDO	Rudo	3.30	341	ePn	Pn	01 01 04.3	+1.1
STON	Ston	3.35	316	ePn	Pn	01 01 03.3	-0.5
STON	Ston	3.35	316	ePn	Pn	01 01 03.1	-0.7
STON				eSn	Sn	01 01 43.0	-1.0
GRUS	Gruza	3.38	358	ePn	Pn	01 01 05.8	+1.6
ZAGS	Zajecar	3.45	17	ePn	Pn	01 01 05.1	-0.1
BBLS	Lazi&#263i	3.53	343	ePn	Pb	01 01 14.3	+0.6
TRUS	Trudelj	3.73	355	ePn	Pn	01 01 09.5	+0.5
HAPS	Han Pijesak,Bl	3.85	339	ePn	Pn	01 01 09.4	-1.4
TEKS	Tekeris	4.16	347	ePn	Pn	01 01 15.2	+0.3
TEKS	Tekeris	4.16	347	ePn	Pn	01 01 15.4	+0.5
BLY	Banja Luka	5.04	329	ePn	Pn	01 01 28.9	+1.9
A050A	Klekovaca	5.11	323	ePn	Pn	01 01 29.0	+1.0
A051A	Mrakovica	5.36	328	ePn	Pn	01 01 30.3	-1.2
BOJS	Bojanci	6.47	322	ePn	Pn	01 01 45.6	-1.1

BOJS	**Bojanci**	**6.47**	**322**	*e*Pn	**Pn**	**01 01 45.5**	**-1.1**
CRES	**Cresnjevec Ost**	**6.63**	**325**	*e*Pn	**Pn**	**01 01 46.6**	**-2.2**
CEY	**Cerknica**	**7.04**	**320**	*e*Pn	**Pn**	**01 01 52.9**	**-1.6**
CEY	**Cerknica**	**7.04**	**320**	*e*Pn	**Pn**	**01 01 53.6**	**-0.9**
CEY				*e*Sn	**Sn**	**01 03 13.2**	**-1.8**
OBKA	**Obir**	**7.55**	**325**	*e*Pn	Pb	01 02 14.0	-8.3

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*IDC **02** 01:07:03.1±1.1, 0°.16N×97°.97E, h0^{km}, mb3.7/11, mbtmp3.7/13, ML3.1/1, MS3.2/7, Error ellipse: s-maj=34.6km s-min=18.4km az=57.0*

*DJA **02** 01:07:07.6±0.5, 0°N±4°×9°8E±°, h13^{km}±4^{km}, M4.5/12, mb4.5/6, MLv4.5/12*

ISC 02 01:07:04.7±0.9**, 0°.16N**±0°.09×**97°.8E**±0°.1**, h10^{km}, n41, σ1^s.37**/26**, mb3.9**/11**, MS3.2**/4**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**1.16**	**349**	P	**Pb**	**01 07 27.3**	**+0.4**
GSI				S	**Sb**	**01 07 43.5**	**+1.5**
MNSI	**Mandailing Nat**	**1.90**	**70**	P	**Pn**	**01 07 35.9**	**-1.2**
PPI	**Padang Panjang**	**2.67**	**103**	P	**Pn**	**01 07 48.0**	**+0.2**
PSI	**Prapat**	**2.86**	**23**	Pn	**Pn**	**01 07 47.3**	**-3.2**
	3.3nm,0.3s,baz=344,slow=9.1,SNR=16						
PSI				LR	LR	01 09 09.4	
	comp=Z,438nm,19.0s,baz=184,slow=47						
	6.9nm,0.4s						
BKNI	**Bangkinang**	**3.25**	**87**	P	**Pn**	**01 07 55.5**	**-0.2**
TSI	**Tuntungan**	**3.41**	**13**	P	**Pn**	**01 08 00.3**	**+2.4**
BSI	**Banda Aceh**	**5.86**	**335**	P	**Pn**	**01 08 32.1**	**+0.4**
MNAI	**Manna**	**6.83**	**131**	P	**Pn**	**01 08 47.3**	**+2.2**
MDSI	**Maura Dua**	**7.87**	**126**	P	**Pn**	**01 09 01.0**	**+1.7**
	0.1nm34nm,0.6s						
TPI	**Tanjungpandan**	**10.27**	**106**	P	**Pn**	**01 09 33.0**	**+0.8**
CMAR	**Chiang Mai Arr**	**18.22**	**3**	P	**Pn**	**01 11 17.3**	**-0.6**
	1.5nm,0.3s,baz=194,slow=11,SNR=7.0						
CMAR				LR	LR	01 18 07.4	
	comp=Z,61nm,19.8s,baz=195,slow=36						
PALK	**Pallekele**	**18.45**	**293**	LR	LR	01 18 05.8	
	comp=Z,88nm,19.0s,baz=120,slow=36						
KAPI	**Kappang**	**22.52**	**103**	LR	LR	01 22 52.4	
	comp=Z,66nm,19.1s,baz=30,slow=42						
H08S2	**Diego Garcia H**	**26.39**	**252**	T	T	01 40 12.3	
	baz=73,slow=75,SNR=833						
H08S3	**Diego Garcia H**	**26.39**	**252**	T	T	01 40 10.5	
	baz=73,slow=75,SNR=1265						
H08S1	**Diego Carcia H**	**26.41**	**252**	T	T	01 40 07.3	
	baz=73,slow=75,SNR=1056						
H01W3	**Cape Leeuwin H**	**38.06**	**158**	T	T	01 54 42.6	
	baz=334,slow=76,SNR=8.3						
H01W2	**Cape Leeuwin H**	**38.07**	**158**	T	T	01 54 38.7	
	baz=334,slow=76,SNR=7.6						
H01W1	**Cape Leeuwin H**	**38.08**	**158**	T	T	01 54 42.5	
	baz=334,slow=76,SNR=7.0						
WRA	**Warramunga Arr**	**40.98**	**121**	P	**P**	**01 14 45.9**	**-2.3**
	1.0nm,0.5s,baz=299,slow=8.7,SNR=4.9						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**42.30**	**127**	P	**P**	**01 14 58.0**	**-0.9**
	0.7nm,0.5s,baz=300,slow=7.3,SNR=12						
	0.7nm,0.5s						
KSRS	**Korea Array**	**46.38**	**33**	P	**P**	**01 15 30.2**	**-1.1**
	1.6nm,0.8s,baz=225,slow=8.7,SNR=7.2						
KSRS				LR	LR	01 36 50.9	
	comp=Z,28nm,18.6s,baz=195,slow=39						
	1.6nm,0.8s						
SONM	**Songino Array**	**48.07**	**8**	P	**P**	**01 15 44.1**	**-0.5**
	0.7nm,0.5s,baz=188,slow=10,SNR=4.5						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**48.39**	**346**	P	**P**	**01 15 47.4**	**+0.5**
	0.4nm,0.5s,baz=161,slow=9.1,SNR=7.4						
	0.4nm,0.5s						
MJAR	**Matsushiro Arr**	**52.06**	**41**	LR	LR	01 38 30.0	
	comp=Z,19nm,20.3s,baz=218,slow=36						
KURBB	**Kurchatov Arra**	**52.89**	**345**	P	**P**	**01 16 21.4**	**+0.7**
	0.2nm,0.6s,baz=164,slow=6.8,SNR=4.5						
	0.2nm,0.6s						
USRK	**Ussuriysk Ar.**	**53.36**	**30**	P	**P**	**01 16 23.4**	**-0.9**
	0.6nm,0.4s,baz=272,slow=3.8,SNR=2.0						
	0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**54.68**	**351**	P	**P**	**01 16 34.2**	**+0.4**
	0.8nm,0.5s,baz=179,slow=9.2,SNR=9.4						
	0.8nm,0.5s						
BVAR	**Borovoye Array**	**57.42**	**341**	P	**P**	**01 16 53.5**	**0.0**
	0.6nm,0.5s,baz=144,slow=7.8,SNR=3.3						
	0.6nm,0.5s						
H04N2	**CROZET ISLANDS**	**61.26**	**215**	T	T	02 24 02.1	
	baz=55,slow=75,SNR=622						
H04N1	**CROZET ISLANDS**	**61.27**	**215**	T	T	02 24 02.6	
	baz=55,slow=75,SNR=718						
H04N3	**CROZET ISLANDS**	**61.27**	**215**	T	T	02 24 01.3	
	baz=55,slow=75,SNR=667						
H04S1	**CROZET ISLANDS**	**61.58**	**214**	T	T	02 24 14.9	
	baz=55,slow=75,SNR=22						
H04S3	**CROZET ISLANDS**	**61.59**	**214**	T	T	02 24 21.2	
	baz=55,slow=75,SNR=38						
H04S2	**CROZET ISLANDS**	**61.60**	**214**	T	T	02 24 16.2	
	baz=55,slow=75,SNR=12						
KBZ	**Khabaz**	**65.25**	**319**	P	**P**	**01 17 47.7**	**+1.1**
	0.7nm,0.8s,baz=117,slow=4.5,SNR=2.2						
	0.7nm,0.8s						
BRTR	**Keskin Array B**	**70.25**	**312**	P	**P**	**01 18 18.2**	**-0.3**
	0.2nm,0.5s,baz=127,slow=6.3,SNR=2.0						
	0.2nm,0.5s						
MA2	**Magadan**	**72.01**	**25**	LR	LR	01 52 08.3	
	comp=Z,17nm,19.5s,baz=195,slow=38						
NVAR	**Mina Array Bea**	**129.27**	**37**	PKP	**PKPdf**	**01 26 14.0**	**-0.1**
	0.3nm,0.7s,baz=330,slow=1.7,SNR=1.7						
PDAR	**Pinedale Array**	**130.71**	**27**	PKP	**PKPdf**	**01 26 17.9**	**+1.1**
	0.1nm,0.5s,baz=262,slow=4.9,SNR=1.6						
TXAR	**Lajitas Array**	**144.22**	**33**	PKP	**PKPab**	**01 26 41.2**	**+1.6**
	0.1nm,0.4s,baz=326,slow=3.9,SNR=1.9						

IDC 02 01:07:05.4±253.0**, 21°.10N×157°.41W, h0^{km}, Error ellipse: s-maj=101.6km s-min=46.8km az=138.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I59US	**HAWAII INFRASO**	**2.07**	**136**	I	I	01 20 00.0	
	baz=317,slow=312,SNR=2.4						
I58US	**Midway Islands**	**19.47**	**295**	I	I	03 08 40.0	
	baz=106,slow=318,SNR=1.5						
I60US	**Wake Island**	**33.77**	**273**	I	I	04 31 50.0	
	baz=78,slow=315,SNR=0.9						
I44RU	**PETROPAVLOVSK**	**46.80**	**324**	I	I	05 52 56.8	
	baz=117,slow=325,SNR=1.3						

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*IDC **02** 01:07:18.1±0.7, 46°.90S×10°.57W, h0^{km}, mb4.0/11, mbtmp4.0/11, MS3.7/31, Error ellipse: s-maj=21.2km s-min=17.7km az=62.0*

*NEIC **02** 01:07:20.3±1.0, 47°.0S±0°.1×10°.6W±0°.2, h10^{km}±1^{km}, mb4.7/28, Error ellipse: s-maj=24.9km s-min=20.6km az=161.0*

*GCMT **02** 01:07:24.3±0.4, 46°.91S±0°.03×10°.31W±0°.03, h22^{km}±2^{km}, MW4.8/80, Moment Tensor Solution. s13,c14; s80,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.01±.11; $M_{\theta\theta}$0.80±.10; $M_{\phi\phi}$-0.80±.10; $M_{r\theta}$0.55±.15; $M_{\theta\phi}$-1.45±.08; $M_{\phi r}$-0.76±.17; Best double couple: $M_0$1.88800×10^{16} NP1:ϕ_s73.00000°,δ63.00000°,λ173.00000°. NP2: ϕ_s167.00000°,δ84.00000°,λ27.00000°. Principal axes: T 2.0240, Plg23.0000°, Azm33.0000°; N -0.2720, Plg62.0000°, Azm179.0000°; P -1.7520, Plg14.0000°, Azm297.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 01:07:19.8±0.5**, 47°.0S**±0°.1×**10°.59W**±0°.10**, h10^{km}, n66, σ0^s.73**/38**, mb4.6**/22**, MS3.8**/31**, 1C, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**25.06**	**174**		**P**	**01 12 44.7**	**+0.8**
SNAA	**Sanae**	**25.06**	**174**	P	**P**	**01 12 44.5**	**+0.6**
	3.5nm,0.8s,baz=317,slow=10,SNR=11						
SNAA				LR	LR	01 20 00.5	
	comp=Z,111nm,20.9s,baz=314,slow=30						
	3.5nm,0.8s						
SUR	**Sutherland**	**27.99**	**70**	P	**P**	**01 13 11.2**	**+0.4**
SUR				IAmb	IAmb	01 13 53.1	
	comp=Z,25nm,1.4s						
SYO	**Syowa Base**	**33.11**	**150**⇑	*e*P	**P**	**01 13 53.2**	**-2.2**
BOSA	**Boshof**	**33.35**	**69**		**P**	**01 13 57.0**	**-1.1**
BOSA				IAmb	IAmb	01 13 58.7	
	comp=Z,10.0nm,1.0s						
BOSA	**Boshof**	**33.35**	**69**	P	**P**	**01 13 56.8**	**-1.3**
	comp=Z,7.1nm,0.9s,baz=229,slow=10,SNR=10						
BOSA				LR	LR	01 25 13.5	
	comp=Z,134nm,18.0s,baz=228,slow=32						
	comp=Z,7.1nm,0.9s						
PMSA	**Palmer Station**	**33.59**	**218**	LR	LR	01 24 56.4	
	comp=Z,227nm,20.1s,baz=83,slow=32						
KOOLE	**Kule**	**34.39**	**57**	P	**P**	**01 14 06.8**	**-0.4**
KOOLE				IAmb	IAmb	01 14 07.8	
	comp=Z,13nm,0.8s						
MAKGR	**Makgori**	**35.03**	**65**	P	**P**	**01 14 11.4**	**-1.3**
MAKGR				IAmb	IAmb	01 14 12.6	
	comp=Z,7.5nm,0.8s						
KGCAE	**Kacgae**	**35.66**	**59**		**P**	**01 14 17.8**	**-0.3**
TSUM	**Tsumeb**	**36.02**	**49**		**P**	**01 14 21.0**	**-0.2**
TSUM				IAmb	IAmb	01 14 22.4	
	comp=Z,16nm,1.1s						
TSUM	**Tsumeb**	**36.02**	**49**	LR	LR	01 26 07.6	
	comp=Z,146nm,18.3s,baz=210,slow=31						
LBTB	**Lobatse**	**36.10**	**65**		**P**	**01 14 21.2**	**-0.7**
LBTB				IAmb	IAmb	01 14 22.3	
	comp=Z,6.8nm,0.8s						
LBTB	**Lobatse**	**36.10**	**65**	LR	LR	01 26 44.7	
	comp=Z,135nm,18.3s,baz=221,slow=32						
GRTLG	**Ghanzi**	**36.25**	**56**		**P**	**01 14 22.5**	**-0.7**
GRTLG				IAmb	IAmb	01 14 23.9	
	comp=Z,24nm,1.4s						
LPHEP	**Lephephe**	**37.47**	**64**	P	**P**	**01 14 33.4**	**-0.2**
QNGWA	**Qangwa**	**37.68**	**54**		**P**	**01 14 35.4**	**0.0**
QNGWA				IAmb	IAmb	01 14 36.6	
	comp=Z,14nm,1.1s						
TRQA	**Tornquist**	**38.31**	**264**	P	**P**	**01 14 40.6**	**+0.1**
MREMI	**Moremi**	**39.04**	**65**	P	**P**	**01 14 46.2**	**-0.5**
PHDHD	**Phuduhudu**	**39.08**	**59**	P	**P**	**01 14 47.2**	**+0.1**
PHDHD				IAmb	IAmb	01 14 47.9	
	comp=Z,9.6nm,0.7s						
MAW	**Mawson**	**41.61**	**146**	P	**P**	**01 15 07.1**	**-0.3**
	comp=Z,3.8nm,1.1s,baz=315,slow=8.1,SNR=4.5						
MAW				LR	LR	01 30 44.8	
	comp=Z,25nm,19.0s,baz=264,slow=34						
	comp=Z,3.8nm,1.1s						
H04S2	**CROZET ISLANDS**	**41.66**	**114**	T	T	02 00 00.9	
	baz=246,slow=76,SNR=27						
H04S3	**CROZET ISLANDS**	**41.66**	**114**	T	T	02 00 01.4	
	baz=246,slow=76,SNR=20						
H04S1	**CROZET ISLANDS**	**41.68**	**114**	T	T	01 59 58.4	
	baz=246,slow=76,SNR=15						
CPUP	**Villa Florida**	**42.04**	**283**	P	**P**	**01 15 11.2**	**-0.2**
CPUP	**Villa Florida**	**42.04**	**283**	P	**P**	**01 15 11.0**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=337,slow=5.8,SNR=8.3						
CPUP				LR	LR	01 28 33.6	
	comp=Z,16nm,22.0s,baz=22,slow=30						
	comp=Z,0.7nm,0.6s						
PLCA	**Paso Flores**	**42.77**	**256**	P	**P**	**01 15 17.4**	**0.0**
	comp=Z,1.8nm,0.5s,baz=167,slow=4.5,SNR=3.3						
	comp=Z,1.8nm,0.5s						
QSPA	**South Pole Qui**	**43.30**	**180**	P	**P**	**01 15 22.0**	**+0.6**
QSPA	**South Pole Qui**	**43.30**	**180**	P	**P**	**01 15 21.8**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=45,slow=1.1,SNR=9.0						
QSPA				LR	LR	01 31 14.9	
	comp=Z,141nm,21.1s,baz=210,slow=33						
	comp=Z,1.2nm,0.6s						
BDFB	**Brasilia**	**44.00**	**303**	P	**P**	**01 15 27.9**	**+0.3**
BDFB	**Brasilia**	**44.00**	**303**	P	**P**	**01 15 27.5**	**0.0**
	comp=Z,4.2nm,0.6s,baz=137,slow=5.5,SNR=9.2						
BDFB				LR	LR	01 30 02.8	
	comp=Z,154nm,21.7s,baz=145,slow=31						
	comp=Z,4.2nm,0.6s						
LSZ	**Lusaka**	**45.08**	**59**	P	**P**	**01 15 36.5**	**+0.3**
LSZ				IAmb	IAmb	01 15 37.3	
	comp=Z,7.1nm,0.9s						
LSZ	**Lusaka**	**45.08**	**59**	LR	LR	01 32 36.2	
	comp=Z,141nm,18.2s,baz=221,slow=34						
BO01	**Tunca**	**46.48**	**263**	P	**P**	**01 15 46.7**	**-0.3**
BO01				IAmb	IAmb	01 15 47.9	
	comp=Z,11nm,0.8s						
SIV	**San Ignacio**	**51.78**	**289**	LR	LR	01 35 31.3	
	comp=Z,62nm,20.6s,baz=115,slow=33						
PB09	**IPOC Station P**	**53.12**	**277**	P	**P**	**01 16 38.5**	**+0.7**
DBIC	**Dimbokro**	**53.63**	**7**	LR	LR	01 34 17.3	
	comp=Z,67nm,18.6s,baz=166,slow=30						
PB16	**IPOC Station P**	**55.69**	**280**	P	**P**	**01 16 57.2**	**+0.2**
PB16				IAmb	IAmb	01 17 01.7	
	comp=Z,4.2nm,0.7s						
VNDA	**Vanda**	**55.71**	**178**	P	**P**	**01 16 56.5**	**+0.8**
	comp=Z,0.2nm,0.7s,baz=207,slow=9.4,SNR=1.4						
VNDA				LR	LR	01 38 30.0	
	comp=Z,102nm,21.1s,baz=184,slow=34						
	comp=Z,0.2nm,0.7s						
LPAZ	**La Paz**	**56.21**	**283**	P	**P**	**01 16 59.3**	**-1.5**
	comp=Z,1.1nm,0.8s,baz=105,slow=8.6,SNR=5.1						
LPAZ				LR	LR	01 39 32.8	
	comp=Z,26nm,21.7s,baz=80,slow=34						
	comp=Z,1.1nm,0.8s						
SAML	**Samuel**	**58.42**	**293**	P	**P**	**01 17 15.4**	**-0.3**
SAML				IAmb	IAmb	01 17 16.6	
	comp=Z,10nm,1.2s						
TORD	**Torodi Ar. Bea**	**60.83**	**14**	P	**P**	**01 17 31.8**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=201,slow=7.5,SNR=5.9						
	comp=Z,1.2nm,0.7s						
MDP	**Montagnes des**	**63.75**	**312**	LR	LR	01 43 04.1	
	comp=Z,103nm,19.7s,baz=166,slow=34						
NNA	**Nana**	**65.15**	**279**	LR	LR	01 46 35.7	
	comp=Z,39nm,18.2s,baz=154,slow=36						
ATAH	**Atahualpa**	**69.72**	**282**	LR	LR	01 48 19.9	
	comp=Z,52nm,20.9s,baz=152,slow=35						
TAM	**Tamanrasset**	**70.93**	**16**	P	**P**	**01 18 38.1**	**+0.9**
PCRV	**Puerto La Cruz**	**74.45**	**304**	LR	LR	01 48 35.1	
	comp=Z,107nm,20.5s,slow=33						
ROSC	**El Rosal**	**76.05**	**293**	LR	LR	01 50 38.6	
	comp=Z,38nm,21.2s,baz=112,slow=34						
SDV	**Santo Domingo**	**76.93**	**298**	LR	LR	01 50 39.8	
	comp=Z,43nm,21.5s,baz=18,slow=34						
MDT	**Midelt**	**79.59**	**5**	LR	LR	01 50 14.9	
	comp=Z,91nm,18.4s,baz=181,slow=32						
H08S1	**Diego Carcia H**	**79.73**	**90**	T	T	02 47 21.0	
	baz=224						
H08S2	**Diego Garcia H**	**79.74**	**90**	T	T	02 47 18.4	
	baz=224						
H08S3	**Diego Garcia H**	**79.75**	**90**	T	T	02 47 21.1	
	baz=224						
SJG	**San Juan**	**81.76**	**308**	LR	LR	01 53 28.5	
	comp=Z,26nm,19.4s,baz=191,slow=34						
KEST	**Kesra**	**84.24**	**16**	LR	LR	01 54 54.6	
	comp=Z,56nm,18.4s,baz=298,slow=34						
ESDC	**Sonseca Array**	**86.45**	**5**	P	**P**	**01 20 02.7**	**+0.6**
	comp=Z,1.0nm,0.9s,baz=178,slow=4.1,SNR=7.9						
ESDC				LR	LR	01 55 04.2	
	comp=Z,21nm,19.3s,baz=164,slow=33						
	comp=Z,1.0nm,0.9s						
EIL	**Elat**	**86.63**	**38**	LR	LR	01 57 30.1	
	comp=Z,63nm,18.1s,baz=247,slow=35						
NWAO	**Narrogin (SRO)**	**87.66**	**138**	LR	LR	01 50 19.8	
	comp=Z,42nm,21.4s,baz=118,slow=29						
ASF	**Jabal al Asfar**	**89.63**	**39**	LR	LR	01 59 14.4	
	comp=Z,35nm,18.0s,baz=212,slow=35						
MMAI	**Mount Meron Ar**	**89.73**	**37**	LR	LR	01 58 10.4	
	comp=Z,75nm,20.1s,baz=204,slow=34						
URZ	**Urewera**	**94.88**	**186**	LR	LR	01 56 15.0	
	comp=Z,38nm,21.4s,baz=316,slow=31						
MLR	**Muntele Rosu**	**97.51**	**25**	LR	LR	02 02 31.6	
	comp=Z,23nm,20.5s,baz=180,slow=34						
VRAC	**Vranov**	**98.74**	**18**	LR	LR	02 02 52.0	
	comp=Z,19nm,19.4s,baz=215,slow=34						
BVAR	**Borovoye Array**	**121.05**	**44**	PKP	**PKPdf**	**01 26 11.5**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=217,slow=3.6,SNR=1.6						
PZH	**PanZhiHua**	**123.82**	**86**	PKP	**PKiKP**	**01 26 18.9**	**+0.7**
ILAR	**Eielson Array**	**150.51**	**323**	PKPbc	**PKPbc**	**01 27 09.8**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=25,slow=1.0,SNR=20						

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*NEIC **02** 01:08:04.5±0.2, 36°.66N±0°.02×98°.853W±0°.006, h5^{km}±2^{km}, Error ellipse: s-maj=2.2km s-min=0.4km az=191.0*

NEIC 02 01:08:04.4±0.3**, 36°.66N**±0°.02×**98°.853W**±0°.008**, h5^{km}**±1^{km}**, mb_Lg2.6**/5**, ML2.1**/15**, ML2.3**/8**, Error ellipse: s-maj=2.8km s-min=2.1km az=185.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NOKA	**Waynoka**	**0.07**	**247**		Pg	01 08 06.5	+0.5
NOKA				Sg	Sg	01 08 07.9	+0.8
NOKA				IAML		01 08 08.1	
	comp=E,3μm,0.3s						
OK038	**West end E0370**	**0.20**	**154**		Pg	01 08 09.0	+0.5
OK038				Sg	Sg	01 08 12.3	+1.2
OK038				IAML		01 08 14.6	
	comp=E,1μm,0.3s						
CROK	**Carrier**	**0.72**	**102**		Pg	01 08 18.3	+0.1
CROK					Sg	01 08 28.3	+0.8
CROK				IAML		01 08 36.0	
	comp=E,94nm,0.2s						
CROK				IAML		01 08 43.9	
	comp=N,67nm,0.3s						
GC02	**Grant County #**	**0.82**	**76**		Pg	01 08 19.9	-0.3
GC02					Sg	01 08 31.4	+0.6
KAN05	**Bluff City Nor**	**0.90**	**60**		Pg	01 08 22.1	+0.3
KAN05					Sg	01 08 34.0	+0.5
KAN08	**Anthony NE Sta**	**0.91**	**51**	Pg	Pg	01 08 21.9	+0.1
KAN08					Sg	01 08 34.2	+0.6
KAN12	**Harper NE Stat**	**0.93**	**47**		Pg	01 08 22.3	-0.1
KAN12					Sb	01 08 35.5	-0.3
KAN17	**Caldwell West**	**0.95**	**66**		Pg	01 08 22.9	+0.2
KAN17					Sg	01 08 35.7	+0.6
CSTR	**Hydro, Custer**	**1.02**	**172**		Pb	01 08 24.4	-0.2
CSTR					Sb	01 08 38.1	-0.2
KAN09	**Caldwell North**	**1.10**	**64**		Pg	01 08 25.3	-0.2
KAN09					Sg	01 08 40.0	+0.3
KAN13	**South Haven SW**	**1.16**	**72**		Pg	01 08 26.0	-0.6
DRZT	**Darrouzett**	**1.18**	**260**		Pg	01 08 26.7	-0.4
DRZT					Sb	01 08 43.1	+0.1
BLOK	**Blackwell**	**1.32**	**85**		Pn	01 08 29.1	-0.4
BLOK					Sb	01 08 47.0	0.0
OK051	**E0350 and S346**	**1.63**	**95**		Pn	01 08 34.2	+0.4
OK052	**Battle Ridge R**	**1.79**	**111**		Pb	01 08 37.1	-0.5
SMWD	**Samnorwood**	**1.92**	**216**		Pb	01 08 39.4	-0.6
WMOK	**Wichita Mounta**	**1.92**	**178**		Pn	01 08 38.2	+0.4
CBKS	**Cedar Bluff**	**2.26**	**342**	IAmb_Lg		01 09 22.0	
	comp=Z,14nm,1.0s						
SPMN	**Marine on St.**	**9.70**	**26**	IAmb_Lg		01 13 37.2	
	comp=Z,2.9nm,0.8s						

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*DJA **02** 01:13:20.8±0.2, 2°N±3°×12°7E±°, h10^{km}, M4.3/17, mB4.8/5, mb4.6/9, MLv4.3/17, Mw(mB)4.1/5*

*NEIC **02** 01:13:21.6±1.7, 1°.51N±0°.09×126°.53E±0°.07, h35^{km}±2^{km}, mb4.5/16, Error ellipse: s-maj=17.6km s-min=9.0km az=212.0*

*IDC **02** 01:13:22.2±2.6, 1°.57N×126°.60E, h53^{km}±23^{km}, mb3.9/18, mbtmp4.2/20, ML4.3/2, MS3.3/7, Error ellipse: s-maj=30.1km s-min=9.2km az=78.0*

ISC 02 01:13:21.9±0.4**, 1°.57N**±0°.05×**126°.63E**±0°.06**, h47^{km}, n66, σ1^s.58**/67**, mb4.4**/25**, MS3.5**/6**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.08**	**137**		**Pn**	**01 13 41.2**	**+0.4**
TNTI				Sn	**Sn**	**01 13 54.6**	**0.0**
TNTI	**Ternate**	**1.08**	**137**	P	**Pn**	**01 13 41.0**	**+0.3**
TNTI				S	**Sn**	**01 13 54.4**	**-0.3**
SGSI	**Sangihe**	**2.37**	**332**	P	**Pn**	**01 13 59.5**	**+1.1**
KMSI	**Cibinong**	**2.82**	**250**	P	**Pn**	**01 14 06.7**	**+2.2**
SANI	**Sanana**	**3.65**	**190**	P	**Pn**	**01 14 16.3**	**+0.4**
LUWI	**Luwuk**	**4.64**	**236**		**Pn**	**01 14 29.1**	**-0.5**
LUWI	**Luwuk**	**4.64**	**236**	P	**Pn**	**01 14 33.4**	**+3.8**
NLAI	**Namlea**	**4.80**	**174**	P	**Pn**	**01 14 33.2**	**+1.5**
MRSI	**Marisa**	**4.81**	**257**	P	**Pn**	**01 14 33.6**	**+1.8**
SWI	**Sorong**	**5.23**	**118**	P	**Pn**	**01 14 38.1**	**+0.5**
APSI	**Ampana**	**5.55**	**244**	P	**Pn**	**01 14 45.4**	**+3.3**
DAV	**Davao City (W)**	**5.56**	**349**	LR	LR	01 17 04.7	
	comp=Z,194nm,19.9s,baz=143,slow=40						
TOLI2	**Tolitoli**	**5.86**	**266**		**Pn**	**01 14 46.5**	**+0.3**
MPSI	**Mapaga**	**6.84**	**260**	P	**Pn**	**01 15 03.4**	**+3.7**
	0.1nm15nm,0.7s						
FAKI	**Fak Fak**	**7.17**	**128**	Pn	**Pn**	**01 15 05.8**	**+1.4**
FAKI	**Fak Fak**	**7.17**	**128**	P	**Pn**	**01 15 06.9**	**+2.6**
	0.2nm55nm,1.5s						
TTSI	**Tana Toraja**	**8.20**	**236**	P	**Pn**	**01 15 23.0**	**+4.6**
	0.1nm19nm,0.5s						
SPSI	**Sidrap Palu**	**8.79**	**231**	P	**Pn**	**01 15 28.2**	**+1.8**
	29nm,0.4s						
BNSI	**Bone**	**8.81**	**228**	P	**Pn**	**01 15 28.6**	**+1.9**
	38nm,0.7s						
MYLDM	**Lahad Datu**	**8.87**	**294**		**Pn**	**01 15 30.8**	**+3.2**
KAPI	**Kappang**	**9.48**	**226**	P	**Pn**	**01 15 37.9**	**+1.9**
	2.7nm,0.3s,baz=35,slow=5.3,SNR=5.5						
KAPI				S	**Sn**	**01 17 17.8**	**-3.5**
	2.4nm,0.3s,baz=64,slow=20,SNR=1.7						
	11nm,0.5s						
MTN	**Manton Dam**	**15.00**	**163**	Pn	**Pn**	**01 16 51.1**	**+0.1**
KNRA	**Kununurra**	**17.27**	**173**	Pn	**Pn**	**01 17 18.0**	**-1.7**
KNRA				IAmb	IAmb	01 17 22.9	
	comp=Z,22nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.57**	**183**	P	**P**	**01 17 44.5**	**-1.5**
FITZ	**Fitzroy Crossi**	**19.57**	**183**	P	**P**	**01 17 45.2**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=11,slow=7.5,SNR=10						
	comp=Z,3.2nm,0.7s						
COEN	**Coen**	**22.52**	**134**	P	**P**	**01 18 18.3**	**+0.4**
COEN				IAmb	IAmb	01 18 27.0	
	comp=Z,37nm,1.3s						
WB0	**Warramunga Arr**	**22.53**	**161**	P	**P**	**01 18 17.6**	**-0.4**
WB0				IAmb	IAmb	01 18 21.7	
	comp=Z,18nm,0.8s						
WRA	**Warramunga Arr**	**22.68**	**161**	P	**P**	**01 18 18.9**	**-0.7**
	comp=Z,16nm,0.6s,baz=339,slow=11,SNR=28						
WRA				PcP	**PcP**	**01 22 11.2**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=338,slow=2.0,SNR=2.0						
WRA				S	**S**	**01 22 23.7**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=358,slow=25,SNR=2.8						
	comp=Z,16nm,0.6s						
PMG	**Port Moresby**	**23.18**	**118**	LR	LR	01 29 46.9	
	comp=Z,103nm,18.9s,baz=290,slow=42						
MBWA	**Marble Bar**	**23.57**	**196**	P	**P**	**01 18 28.6**	**+0.2**
AS31	**Alice Springs**	**26.06**	**165**	P	**P**	**01 18 51.0**	**-0.2**
AS31				IAmb	IAmb	01 18 54.4	
	comp=Z,5.9nm,0.5s						
ASAR	**Alice Springs**	**26.07**	**165**	P	**P**	**01 18 51.0**	**-0.2**
	comp=Z,9.3nm,0.8s,baz=347,slow=7.3,SNR=84						
ASAR				PcP	**PcP**	**01 22 18.8**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=344,slow=1.9,SNR=3.3						
ASAR				S	**S**	**01 23 20.7**	**+1.4**
	comp=Z,1.5nm,0.7s,baz=345,slow=22,SNR=7.1						
	comp=Z,9.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**31.92**	**303**	LR	LR	01 32 34.7	
	comp=Z,22nm,19.2s,baz=205,slow=36						
FORT	**Forrest**	**32.20**	**178**	P	**P**	**01 19 44.8**	**-0.8**
BBOO	**Buckleboo**	**35.34**	**166**	P	**P**	**01 20 12.6**	**-0.3**
BBOO				IAmb	IAmb	01 20 47.4	
	comp=Z,11nm,1.2s						
KSRS	**Korea Array**	**35.73**	**2**	P	**P**	**01 20 16.2**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=181,slow=9.8,SNR=5.6						
	comp=Z,0.7nm,0.7s						
STKA	**Stephens Creek**	**36.17**	**158**	P	**P**	**01 20 19.0**	**-1.0**
	comp=Z,3.2nm,0.7s,baz=316,slow=9.7,SNR=5.4						
	comp=Z,3.2nm,0.7s						
MJAR	**Matsushiro Arr**	**36.41**	**16**	P	**P**	**01 20 21.6**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=185,slow=9.6,SNR=8.4						
	comp=Z,1.4nm,0.8s						
ARMA	**Armidale**	**39.75**	**145**	P	**P**	**01 20 51.0**	**+0.7**
USRK	**Ussuriysk Ar.**	**42.72**	**6**	P	**P**	**01 21 14.3**	**0.0**
	comp=Z,2.7nm,0.7s,baz=141,slow=9.3,SNR=4.1						
	comp=Z,2.7nm,0.7s						
SONM	**Songino Array**	**49.30**	**342**	P	**P**	**01 22 04.2**	**-2.1**
	comp=Z,0.3nm,0.4s,baz=163,slow=7.5,SNR=2.5						
	comp=Z,0.3nm,0.4s						
WMQ	**Urumqi**	**54.43**	**326**	*e*P	**P**	**01 22 47.2**	**+2.6**
WMQ				PP	PcP	01 23 35.5	-12
WMQ				pmax	pmax		
	comp=Z,96nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,190nm,8.9s						
PETK	**Petropavlovsk-**	**57.46**	**22**	P	**P**	**01 23 07.0**	**+1.0**
	comp=Z,1.0nm,0.8s,baz=291,slow=2.5,SNR=2.7						
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**59.27**	**326**	P	**P**	**01 23 18.4**	**-0.4**
	comp=Z,1.7nm,0.4s,baz=123,slow=7.8,SNR=5.7						
	comp=Z,1.7nm,0.4s						
YAK	**Yakutsk**	**60.36**	**2**	LR	LR	01 50 42.3	
	comp=Z,15nm,20.1s,baz=183,slow=37						
KURBB	**Kurchatov Arra**	**63.50**	**328**	P	**P**	**01 23 46.7**	**-0.5**
	comp=Z,1.8nm,0.6s,baz=127,slow=6.4,SNR=11						
	comp=Z,1.8nm,0.6s						
KURK	**Kurchatov**	**63.50**	**328**	P	**P**	**01 23 47.1**	**-0.1**
KURK				IAmb	IAmb	01 23 55.1	
	comp=Z,4.2nm,0.9s						
KKAR	**Karatay Array**	**64.74**	**318**	P	**P**	**01 23 55.9**	**+0.3**
BVAR	**Borovoye Array**	**69.07**	**327**	P	**P**	**01 24 22.6**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=102,slow=6.1,SNR=2.1						
	comp=Z,0.7nm,0.5s						
NRIK	**Noril'sk**	**72.49**	**346**	P	**P**	**01 24 42.1**	**-1.2**
	comp=Z,0.9nm,0.4s,baz=126,slow=6.1,SNR=5.4						

	comp=Z,0.9nm,0.4s						
AB31	Akbulak array	73.75	321	P	P	01 24 50.3	-0.9
ABKAR	Akbulak array	73.75	321	P	P	01 24 50.9	-0.3
AKTO	Aktyubinsk	75.28	322	P	P	01 24 59.5	-0.6
	comp=Z,1.3nm,0.4s,baz=88,slow=4.9,SNR=4.5						
	comp=Z,1.3nm,0.4s						
ARTI	Arti	76.78	328	P	P	01 25 07.2	-1.2
	comp=Z,2.9nm,0.6s,baz=46,slow=3.0,SNR=4.1						
	comp=Z,2.9nm,0.6s						
VNDA	Vanda	81.31	173	P	P	01 25 33.3	+0.5
VNDA				IAmb	IAmb	01 25 35.0	
	comp=Z,4.1nm,1.1s						
VNDA	Vanda	81.31	173	P	P	01 25 32.9	+0.1
	comp=Z,2.6nm,0.8s,baz=313,slow=6.3,SNR=18						
	comp=Z,2.6nm,0.8s						
SBA	Scott Base	82.22	172	P	P	01 25 37.9	+0.3
L18K	Granite Mounta	82.42	27	P	P	01 25 40.8	+1.8
G19K	Purcell Mounta	83.04	23	P	P	01 25 43.8	+1.7
G19K				IAmb	IAmb	01 26 09.5	
	comp=Z,4.7nm,1.0s						
KBZ	Khabaz	84.38	314	LR	LR	02 07 41.7	
	comp=Z,26nm,19.3s,baz=158,slow=39						
PPT	Papeete	84.56	108	LR	LR	02 01 25.0	
	comp=Z,25nm,19.2s,baz=112,slow=34						
BRTR	Keskin Array B	91.31	310	P	P	01 26 21.9	-1.1
	comp=Z,0.6nm,0.8s,baz=98,slow=6.4,SNR=3.6						
	comp=Z,0.6nm,0.8s						
QSPA	South Pole Qui	91.49	180	P	P	01 26 22.5	-0.7
QSPA	South Pole Qui	91.49	180	P	P	01 26 22.1	-1.1
	comp=Z,1.3nm,1.0s,baz=6.5,slow=1.8,SNR=7.6						
	comp=Z,1.3nm,1.0s						
FINES	FINESS Array B	93.67	332	P	P	01 26 33.6	+0.4
	comp=Z,1.6nm,0.9s,baz=79,slow=8.6,SNR=1.8						
FINES				LR	LR	02 10 58.6	
	comp=Z,33nm,20.2s,baz=238,slow=37						
	comp=Z,1.6nm,0.9s						
SCHQ	Schefferville	122.70	9	PKP	PKPdf	01 32 09.9	-2.7
	comp=Z,1.2nm,0.7s,baz=83,slow=11,SNR=2.0						

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*THR **02** 01:16:54.6±0.0,27.°50N×59.°29E,h10^{km}±7^{km},ML4.5*
*DSN **02** 01:16:56.2±1.1,27.°77N×59.°14E,h10^{km},ML4.0/18,Error ellipse: s-maj=37.1km s-min=10.1km az=146.0*
*TEH **02** 01:16:57.2,27.°53N×59.°29E,h100^{km}*
*IDC **02** 01:16:58.6±0.5,27.°67N×59.°29E,h69^{km}±4^{km},mb3.6/26, mbtmp3.9/29,MS3.1/7,Error ellipse: s-maj=10.9km s-min=10.0km az=146.0*
*NEIC **02** 01:16:58.8±1.7,27.°69N±0.°06×59.°29E±0.°06,h62^{km}±6^{km}, mb4.4/38,Error ellipse: s-maj=9.6km s-min=6.8km az=208.0*
*OMAN **02** 01:17:01.4±0.1,27.°15N×59.°18E,h11^{km}±1^{km},mb5.5/11, ml4.4/20,Error ellipse: s-maj=3.3km s-min=1.3km az=16.0*
ISC 02 01:16:57.4±0.3**,27.°57N**±0.°04×**59.°31E**±0.°03**,h50^{km},n220,** σ**1^{s}98**/247**,mb4.2**/45**,MS3.0**/5**,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHNJ	Kahnooj	1.47	285	Pg	Pn	01 17 23.9	+2.4
KBAM	BAM	1.73	334	Pg	Pn	01 17 27.0	+1.9
CHBR	Chabahar	2.23	152	Pn	Pn	01 17 33.6	+1.7
CHBR	Chabahar	2.23	152	*e*PnA		01 17 33.7	
CHBR				*e*Sg	Sn	01 18 00.5	+2.2
CHBR				IAML		01 18 06.1	
	comp=Z,2.0nm,1.0s						
ZHSF	Zahedan	2.41	32	Pn	Pn	01 17 36.7	+2.3
ZHSF	Zahedan	2.41	32	*e*PnA		01 17 36.7	
ZHSF				IAML		01 18 14.6	
	comp=Z,1.0nm,1.0s						
IBND	Bandar-abas	2.46	268	Pn	Pn	01 17 37.4	+2.3
NGCH	Negor - Chabah	2.75	143	Pn	Pn	01 17 39.9	+0.9
NGCH	Negor - Chabah	2.75	143	P	Pn	01 17 41.4	+2.4
	SNR=107						
NGCH				S	Sn	01 18 13.6	+2.7
SRVN	Saravan	2.75	93	Pn	Pn	01 17 42.1	+3.0
SRVN	Saravan	2.75	93	*e*PnA		01 17 42.1	
SRVN				IAML		01 18 18.1	
	comp=Z,0.9nm,1.0s						
CHMN	Cheshme madani	2.76	326	Pn	Pn	01 17 41.4	+1.9
BNDS	Bandar-Abbas	2.79	267	*e*PnA		01 17 42.4	
BNDS				IAML		01 18 17.8	
	comp=Z,3.2nm,1.0s						
BANOM	Banah	3.15	239	P	Pn	01 17 46.8	+2.2
BANOM				S	Sn	01 18 23.2	+2.2
BANOM	Banah	3.15	239	P	Pn	01 17 46.8	+2.2
BANOM				S	Sn	01 18 23.2	+2.2
BANOM	Banah	3.15	239	*i* P	Pn	01 17 46.8	+2.2
	SNR=705						
BANOM				S	Sn	01 18 21.7	+0.7
SHME	Shamm	3.21	243	P	Pn	01 17 48.3	+2.9
	SNR=91						
SHME	Shamm	3.21	243	*i* P	Pn	01 17 48.3	+2.9
	SNR=92						
KRBR	Kerman	3.28	318	Pn	Pn	01 17 48.6	+2.0
KRM1	Kerman Provinc	3.42	329	Pn	Pn	01 17 50.6	+2.1
MDH	Madha	3.52	231	P	Pn	01 17 50.7	+1.1
	SNR=262						
MDH				S	Sn	01 18 28.1	-2.0
MDH	Madha	3.52	231	*i* P	Pn	01 17 50.7	+1.1
	SNR=110						
MASF	Masafi	3.58	233	P	Pn	01 17 51.6	+1.2
	SNR=42						
MSFE	Esma-Masafi	3.58	233	*i* P	Pn	01 17 51.2	+0.7
	SNR=44						
KHGB	Koh Gabri	3.74	319	Pn	Pn	01 17 55.2	+2.4
UOSS	Minazif	3.82	228		Pn	01 17 54.4	+0.7
UOSS				Sn	Sn	01 18 34.6	-2.9
UOSS	Minazif	3.82	228	Pn	Pn	01 17 54.5	+0.7
UOSS	Minazif	3.82	228	P	Pn	01 17 54.3	+0.5
UOSS	Minazif	3.82	228	*i* P	Pn	01 17 54.5	+0.7
	SNR=66						
UMQ	Umm Al-Quwin	3.85	239	P	Pn	01 17 58.5	+4.4
	SNR=13						
UMQ	Umm Al-Quwin	3.85	239	*i* P	Pn	01 17 57.9	+3.8
	SNR=13						
NHDN	Nehbandan	3.86	9	Pn	Pn	01 17 56.9	+2.6
HATD	Hatta, Dubai	3.95	227	P	Pn	01 17 56.2	+0.7
	SNR=21						
HATD				S	Sn	01 18 40.0	-0.7
HATD	Hatta, Dubai	3.95	227	*i* P	Pn	01 17 56.2	+0.7
	SNR=66						
ASHO	Ashiyiah	4.10	226	P	Pn	01 17 59.2	+1.6
	SNR=94						
ASHO	Ashiyiah	4.10	226	*i* P	Pn	01 17 59.0	+1.4
	SNR=94						
ZRDN	Zarand Kerman	4.16	325	Pn	Pn	01 18 00.9	+2.4
NAZ	Nazwa, Dubai	4.17	233	P	Pn	01 18 02.2	+3.8
	SNR=56						
NAZ	Nazwa, Dubai	4.17	233	*i* P	Pn	01 18 02.3	+3.8
	SNR=15						
BIDO	Bidbid	4.17	195	P	Pn	01 17 59.0	+0.4
	SNR=20						
BIDO				S	Sn	01 18 43.6	-2.5
SOHO	SOHO	4.24	217	P	Pn	01 18 00.2	+0.7
SOHO				S	Sn	01 18 44.7	-3.0
SOHO	SOHO	4.24	217	*i* P	Pn	01 18 00.2	+0.7
	SNR=7.7						
WSAR	Wadi Sarin	4.36	188	P	Pn	01 18 02.8	+1.7
	comp=Z,0.5nm,0.3s,baz=59,slow=24,SNR=107						
WSAR				S	Sn	01 18 48.4	-2.2
	comp=Z,1.5nm,0.3s,baz=13,slow=24,SNR=5.7						
WSAR	Wadi Sarin	4.36	188	P	Pn	01 18 02.4	+1.3
WSAR				S	Sn	01 18 49.1	-1.6
HOQ	Hoqain	4.37	205	Pn	Pn	01 18 01.5	+0.3
HOQ	Hoqain	4.37	205	P	Pn	01 18 01.6	+0.4
	SNR=157						
HOQ				S	Sn	01 18 48.4	-2.4
FAQ	Al Faqa, Dubai	4.37	231	P	Pn	01 18 05.1	+3.9
	SNR=105						
FAQ				S	Sn	01 18 54.4	+3.5
FAQ	Al Faqa, Dubai	4.37	231	*i* P	Pn	01 18 05.0	+3.9
	SNR=37						
BSRN	Basiran	4.38	358	Pn	Pn	01 18 03.8	+2.3
BSRN	Basiran	4.38	358	*e*PnA		01 18 03.1	
BSRN				IAML		01 19 24.8	
	comp=Z,0.7nm,1.0s						
LAR1	LAR	4.38	272	Pn	Pn	01 18 03.0	+1.5
ASUD	Al Ashush, Dub	4.63	232	P	Pn	01 18 09.1	+4.3
	SNR=351						
ASUD				S	Sn	01 19 00.1	+2.9
ASUD	Al Ashush, Dub	4.63	232	*i* P	Pn	01 18 09.1	+4.3
	SNR=351						
SMDO	Samad	4.64	195	P	Pn	01 18 06.2	+1.2
	SNR=24						
SMDO				S	Sn	01 18 56.2	-1.4
	SNR=10						
ALNE	Al Ain	4.75	223	P	Pn	01 18 09.9	+3.4
	SNR=42						
ALNE				S	Sn	01 19 01.9	+1.7
	SNR=6.8						
ALNE	Al Ain	4.75	223	*i* P	Pn	01 18 09.9	+3.4
	SNR=42						
IKOO	Kooshah	4.84	357	Pn	Pn	01 18 10.1	+2.2
AJN	Ajban	4.91	233	P	Pn	01 18 11.9	+3.3
	SNR=55						
AJN	Ajban	4.91	233	*i* P	Pn	01 18 12.0	+3.3
	SNR=55						
ARQ	Araqi	4.91	211	P	Pn	01 18 12.3	+3.5
	SNR=187						
ARQ				S	Sn	01 19 06.1	+1.8
	SNR=9.7						
JHRM	Jahrom	5.15	282	Pn	Pn	01 18 13.7	+1.7
IDAH	Dahanechah	5.17	5	Pn	Pn	01 18 15.1	+2.7
BSY	Bisya	5.17	202	P	Pn	01 18 15.3	+3.0
	SNR=49						
BSY				S	Sn	01 19 11.8	+1.1
	SNR=8.3						
JMDO	Jabal Madar	5.29	192	P	Pn	01 18 16.2	+2.2
	SNR=29						
JMDO				S	Sn	01 19 13.4	-0.3
	SNR=9.0						
ITEG	Tejag	5.33	355	Pn	Pn	01 18 17.4	+2.8
LMD1	Lamerd	5.47	269	Pn	Pn	01 18 18.1	+1.8
LMD1	Lamerd	5.47	269	*e*PnA		01 18 18.2	
LMD1				IAML		01 18 53.5	
	comp=Z,0.9nm,1.0s						
IMEH	Mehriz	5.59	314	Pn	Pn	01 18 20.4	+2.2
QIR1	Qir	5.61	281	Pn	Pn	01 18 19.7	+1.3
GHIR	Ghir-Karzin	5.64	279	*e*PnA		01 18 20.4	
GHIR				IAML		01 18 53.0	
	comp=Z,0.1nm,1.0s						
AFRZ	Afriz	5.84	358	Pn	Pn	01 18 24.0	+2.5
TPRV	Parvadeh(Tabas	5.89	338	Pn	Pn	01 18 24.6	+2.4
SHRT	Shahrakht	6.11	8	Pn	Pn	01 18 27.9	+2.7
SHRT	Shahrakht	6.11	8	*e*PnA		01 18 27.7	
SHRT				IAML		01 20 03.5	
	comp=Z,0.1nm,1.0s						
UMZA	Um Al Zommool	6.13	219	P	Pn	01 18 27.0	+1.7
UMZA				S	Sn	01 19 33.3	-0.9
MZWR	Madinat Zayed	6.20	233	P	Pn	01 18 28.5	+2.2
TKDS	Koohdasht(Taba	6.31	343	Pn	Pn	01 18 30.2	+2.3
SHI	Shiraz	6.32	291	Pn	Pn	01 18 29.5	+1.3
TABS	Tabas	6.34	343	*e*PnA		01 18 30.4	
TABS				IAML		01 20 34.6	
	comp=Z,0.3nm,1.0s						
JRN	Qarnain Island	6.37	247	P	Pn	01 18 29.8	+1.2
	SNR=16						
MHTO	MHTO	6.67	191	P	Pn	01 18 35.5	+2.6
	SNR=7.8						
MHTO				S	Sn	01 19 47.7	+0.2
GHWR	Ruwais	6.82	240	P	Pn	01 18 35.6	+0.7
MZR	Muzera	6.97	231	P	Pn	01 18 38.3	+1.4
	SNR=22						
MZR	Muzera	6.97	231	*i* P	Pn	01 18 38.8	+1.8
	SNR=86						
KAZ2	Kazeron-Fars-I	7.03	289	Pn	Pn	01 18 39.2	+1.5
DSBU	Dashti - Bushe	7.16	278	Pn	Pn	01 18 40.0	+0.4
HRA	Herat	7.24	20		Pn	01 18 40.9	+0.1
IRAM	Ramesheh	7.36	307	Pn	Pn	01 18 43.5	+1.1
ANAR	Anarak	7.39	321	Pn	Pn	01 18 45.4	+2.7
TAPT	Tabas- Tapeh t	7.52	346	Pn	Pn	01 18 47.2	+2.7
KLNJ	Kolanjah	7.56	299	Pn	Pn	01 18 46.8	+1.5
KLNJ	Kolanjah	7.56	299	*e*PnA		01 18 46.7	
KLNJ				IAML		01 20 09.6	
	comp=Z,220nm,1.0s						
KLNJ	Kolanjah	7.56	299	*e*PnA		01 18 46.7	
KLNJ				IAML		01 20 10.9	
	comp=Z,0.4nm,1.0s						
SHMA	Al-Shehemyia	7.66	259	P	Pn	01 18 48.0	+1.7
	SNR=66						
TBJM	Torbat-e-JAM	7.72	6	Pn	Pn	01 18 50.2	+2.9
TRNA	Turayna	7.80	251	P	Pn	01 18 49.1	+0.7
	SNR=183						
SAKB	Bahrain	8.00	261	P	Pn	01 18 52.8	+1.7
SMRA	Abu-Samra	8.13	252	P	Pn	01 18 54.1	+1.3
	SNR=70						
IBRJ	Brojen	8.22	304	Pn	Pn	01 18 55.7	+1.3
JRKH	Jarkhoshk	8.36	6	Pn	Pn	01 18 58.9	+2.9
ZNGN	Zangian	8.63	304	Pn	Pn	01 19 01.6	+1.8
IMYA	Miami	8.77	4	Pn	Pn	01 19 05.4	+3.7
SHRO	Shahrood	8.85	342	*e*Pn	Pn	01 19 05.1	+2.4
SHRO				IAML		01 19 09.3	
	comp=Z,6.4nm,0.7s						
IPAY	Payeh	8.86	358	Pn	Pn	01 19 06.4	+3.4
IPIR	Pirpir	8.89	307	Pn	Pn	01 19 05.5	+2.0
SBZV	Sabzevar	8.91	351	Pn	Pn	01 19 07.0	+3.4
SBZV	Sabzevar	8.91	351	*e*PnA		01 19 06.9	
SBZV				IAML		01 19 08.6	
	comp=Z,24nm,1.0s						
ISFB	Sefidab	9.08	320	Pn	Pn	01 19 08.4	+2.6
DOK	Doka	10.11	209	P	Pn	01 19 20.5	+0.6
	SNR=12						
BJRD	Bojnurd	10.22	351	*e*Pn	Pn	01 19 24.8	+3.2
BJRD				IAML_BB		01 20 21.4	
	comp=Z,220nm,1.0s						
BHUJ	Bhuj	10.29	112	*e*P	Pn	01 19 22.9	+0.5
BHUJ				*e*S	Sn	01 21 19.3	+3.0
BHUJ				IAML		01 21 19.6	
	comp=E,75nm,0.3s						
BHUJ				IAML		01 21 19.9	
	comp=N,79nm,0.4s						
MRVT	Maraveh tapeh	10.42	346	Pn	Pn	01 19 27.4	+3.3
MRVT	Maraveh tapeh	10.42	346	*e*PnA		01 19 27.5	
MRVT				IAML		01 19 29.6	
	comp=Z,11nm,0.7s						
DMTO	DMTO	10.60	203	P	Pn	01 19 26.8	+0.1
	SNR=5.0						
KBL	Kabul	10.85	48		Pn	01 19 29.5	-0.7
RBK	Rabkut	11.07	206	P	Pn	01 19 33.5	+0.3
	SNR=8.1						
BKNR	BIKANER	12.38	85	*e*P	Pn	01 19 53.5	+2.7
BKNR				*e*S	Sn	01 22 10.4	+3.1
BKNR				IAML		01 22 13.7	
	comp=E,91nm,0.5s						
BKNR				IAML		01 22 14.8	
	comp=N,56nm,0.3s						
RAYN	Ar Rayn	13.10	255		Pn	01 19 57.3	-3.6
RAYN	Ar Rayn	13.10	255	*i* P	Pn	01 19 57.5	-3.4
	SNR=54						
NIL	Nilore	13.44	60		Pn	01 20 06.1	+0.7
SIMJ	Simiganj	13.71	34		Pn	01 20 08.7	-0.4
CHGR	Chuyangaron	13.78	34		Pn	01 20 08.6	-1.5
GAR	Garm	14.63	36		Pn	01 20 20.6	-0.9
SRNI	Srinagar	14.84	60	*e*P	Pn	01 20 23.6	-0.5
SRNI				*e*S	Sn	01 23 08.7	+1.4
SRNI				IAML		01 23 09.7	
	comp=N,367nm,0.2s						
SRNI				IAML		01 23 09.9	
	comp=E,335nm,0.0s						
DHRM	DHARAMSHALA	15.45	68	*e*P	Pn	01 20 31.7	-0.6
DHRM				*e*S	Sn	01 23 24.6	+2.1
DHRM				IAML		01 23 30.8	
	comp=N,21nm,0.6s						
BTK	Batken	15.68	35		Pn	01 20 33.5	-1.5
BTK				IAmb	IAmb	01 20 39.0	
	comp=Z,10nm,0.5s						
DRK	Karamyk	15.78	38		Pn	01 20 36.1	-0.4
GNI	Garni	17.40	320	P	Pn	01 20 56.4	-0.3
GNI	Garni	17.40	320	P	Pn	01 20 56.5	-0.1
	comp=Z,1.5nm,0.5s,baz=50,slow=24,SNR=1.4						
GNI				LR	LR	01 28 19.7	
	comp=Z,40nm,21.6s,baz=146,slow=39						
ARSB	Arslanbob	17.72	36	P	Pn	01 20 59.3	-1.4
ARSB				IAmb	IAmb	01 21 01.3	
	comp=Z,14nm,0.7s						
HNLY	HANLEY	17.77	68	*e*P	P	01 21 03.2	+1.3
HNLY				*e*S	Sn	01 24 20.2	+1.1
HNLY				IAML		01 24 40.0	
	comp=N,16nm,1.9s						
HNLY				IAML		01 24 40.6	
	comp=E,16nm,0.9s						
KK31	Karatay Array	17.96	27		Pn	01 21 02.8	-0.7
KKAR	Karatay Array	17.96	27	P	Pn	01 21 03.0	-0.4
KKAR	Karatay Array	17.96	27		Pn	01 21 02.0	-1.5
GURO	Guroymak-BITLI	18.12	312	P	P	01 21 04.1	-1.3
KSH	Kashi	18.26	45	P	P	01 21 00.8	-6.1
KSH				pmax	pmax		
	comp=Z,21nm,0.6s						
MARD	Mardin	18.38	307		P	01 21 07.5	-0.8
AAK	Ala-Archa	19.45	35		P	01 21 18.7	-1.3
AAK				IAmb	IAmb	01 21 24.0	
	comp=Z,7.0nm,0.5s						
AAK	Ala-Archa	19.45	35	P	P	01 21 19.6	-0.4
	comp=Z,5.3nm,0.4s,baz=199,slow=8.3,SNR=10						
AAK				S	S	01 24 55.2	-2.1
	comp=Z,1.0nm,0.3s,baz=264,slow=8.7,SNR=1.2						
AAK				LR	LR	01 29 26.1	
	comp=Z,39nm,19.9s,baz=220,slow=39						
ASF	Jabal al Asfar	19.96	289	P	P	01 21 26.2	+0.7
	comp=Z,16nm,0.8s,baz=128,slow=7.8,SNR=32						
ASF				S	S	01 24 54.0	-13
	comp=Z,2.0nm,0.7s,baz=188,slow=11,SNR=2.4						
BOOM	Boomskoye usch	20.12	38	P	P	01 21 26.7	-0.6
BOOM				IAmb	IAmb	01 21 32.2	
	comp=Z,7.4nm,0.6s						
KBZ	Khabaz	20.86	325	P	P	01 21 34.9	-0.1
	comp=Z,0.2nm,0.3s,baz=339,slow=13,SNR=1.6						
	comp=Z,0.2nm,0.3s						
GAZ	Gaziantep	20.93	303	P	P	01 21 35.2	-0.8
GHAJ	Ghor Haditha	21.00	286	P	P	01 21 36.9	+0.3
GHAJ				IAmb	IAmb	01 22 03.7	
	comp=Z,12nm,0.8s						
KIV	Kislovodsk	21.13	325	P	P	01 21 37.8	-0.3
KIV				IAmb	IAmb	01 22 01.3	
	comp=Z,14nm,1.0s						
MMAI	Mount Meron Ar	21.32	291	P	P	01 21 41.1	+0.9
	comp=Z,4.2nm,0.7s,baz=93,slow=13,SNR=6.9						
	comp=Z,4.2nm,0.7s						
EIL	Elat	21.48	281	P	P	01 21 43.6	+1.8
	comp=Z,7.5nm,0.6s,baz=62,slow=4.0,SNR=12						
PRZ	Przheval'sk	21.51	41	P	P	01 21 40.5	-1.7
PRZ				IAmb	IAmb	01 21 47.6	
	comp=Z,25nm,1.3s						
AB31	Akbulak array	21.66	1	P	P	01 21 42.2	-1.3
AB31				IAmb	IAmb	01 22 01.1	
	comp=Z,10.0nm,0.9s						
ABKAR	Akbulak array	21.66	1	P	P	01 21 43.2	-0.3
ABKAR				IAmb	IAmb	01 22 01.1	
	comp=Z,10.0nm,0.9s						
ABKAR	Akbulak array	21.66	1		P	01 21 43.5	0.0
AKTO	Aktyubinsk	22.85	358	P	P	01 21 55.5	-0.8
	comp=Z,1.9nm,0.6s,baz=156,slow=8.0,SNR=8.8						
	comp=Z,1.9nm,0.6s						
BRTR	Keskin Array B	24.48	306	P	P	01 22 10.4	-1.5
BRTR	Keskin Array B	24.48	306	P	P	01 22 10.9	-1.0
	comp=Z,1.4nm,0.9s,baz=123,slow=11,SNR=9.7						
BRTR				PcP	PcP	01 25 48.0	-1.5
	comp=Z,0.4nm,0.6s,baz=119,slow=5.4,SNR=2.5						
	comp=Z,1.4nm,0.9s						
BR131	Keskin Array S	24.48	306	P	P	01 22 10.4	-1.5
ILGA	Ilgaz	24.95	309	P	P	01 22 15.0	-1.2
MAKZ	Makanchi	26.20	37	P	P	01 22 26.7	-0.6
MAKZ				IAmb	IAmb	01 22 27.3	
	comp=Z,3.8nm,0.5s						
BELG	Belogornoye	26.29	344	LR	LR	01 35 17.7	
	comp=Z,16nm,18.8s,baz=247,slow=42						
MKAR	Makanchi Array	26.36	37	P	P	01 22 27.9	-0.9
MKAR	Makanchi Array	26.36	37	P	P	01 22 28.1	-0.6
	comp=Z,1.5nm,0.4s,baz=223,slow=8.3,SNR=18						
	comp=Z,1.5nm,0.4s						
ELL	Elmali	26.43	298	P	P	01 22 30.1	+0.5
MDUB	Mudurnu	26.49	306	P	P	01 22 28.7	-1.4
MDUB				IAmb	IAmb	01 22 47.1	
	comp=Z,6.1nm,0.8s						
BVAR	Borovoye Array	26.73	15	P	P	01 22 30.8	-1.2
	comp=Z,0.5nm,0.5s,baz=184,slow=8.7,SNR=4.3						
BVAR				PcP	PcP	01 25 52.5	-1.6
	comp=Z,1.2nm,0.5s,baz=228,slow=2.2,SNR=5.5						
	comp=Z,0.5nm,0.5s						
BRVK	Borovoye	26.73	15	P	P	01 22 30.1	-1.9
BORA	Eskisehir	26.83	305	P	P	01 22 32.1	-1.1
BORA				IAmb	IAmb	01 22 50.5	
	comp=Z,8.7nm,1.4s						
KURBB	Kurchatov Arra	27.27	27	P	P	01 22 35.8	-1.1
	comp=Z,0.5nm,0.6s,baz=226,slow=8.5,SNR=7.6						
	comp=Z,0.5nm,0.6s						
MLR	Muntele Rosu	31.92	313	LR	LR	01 37 50.0	
	comp=Z,33nm,19.0s,baz=128,slow=39						
ZALV	Zalesovo Beam	32.33	28	P	P	01 23 19.0	-2.6
ZALV	Zalesovo Beam	32.33	28	P	P	01 23 20.0	-1.6
	comp=Z,1.1nm,0.3s,baz=225,slow=8.6,SNR=3.8						
ZALV				PcP	PcP	01 26 06.5	-2.0
	comp=Z,0.9nm,0.5s,baz=215,slow=4.8,SNR=2.6						
	comp=Z,1.1nm,0.3s						
AKASG	Malin Array Be	32.46	324	P	P	01 23 21.4	-1.4
	comp=Z,0.1nm,0.3s,baz=130,slow=8.1,SNR=2.0						
AKASG				pP	pP	01 23 38.4	+2.5
	comp=Z,0.3nm,0.4s,baz=126,slow=8.4,SNR=4.1						
AKASG				PcP	PcP	01 26 06.6	-2.2
	comp=Z,0.1nm,0.3s,baz=98,slow=2.6,SNR=4.1						
	comp=Z,0.1nm,0.3s						
GTA	Gaotai	35.51	60	*e*P	P	01 23 50.7	+1.2
GTA				pP	pP	01 24 06.6	+3.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
KOLS	Kolonicke sedl	35.57	317	*e*P	P	01 23 52.3	+2.5
STHS	Stebnicka Huta	36.38	317	*e*P	P	01 23 58.1	+1.4
TIP	Timpagrande	37.06	299	P	P	01 24 02.5	-0.2
TIP				IAmb	IAmb	01 24 20.4	
	comp=Z,7.1nm,1.0s						
CMAR	Chiang Mai Arr	37.46	95	P	P	01 24 05.4	-0.8
	comp=Z,0.8nm,0.3s,baz=229,slow=30,SNR=2.3						
CMAR				PcP	PcP	01 26 22.7	-1.3
	comp=Z,0.7nm,0.3s,baz=323,slow=3.1,SNR=1.7						
CMAR				LR	LR	01 41 16.6	
	comp=Z,16nm,18.8s,baz=170,slow=39						
	comp=Z,0.8nm,0.3s						
PZH	PanZhiHua	37.68	82	P	P	01 24 09.7	+1.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,110nm,5.2s						
CUC	Castrocucco	37.86	301	P	P	01 24 08.1	-1.4
CUC				IAmb	IAmb	01 24 28.3	
	comp=Z,7.0nm,0.7s						
LZH	Lanzhou	38.50	66	*e*P	P	01 24 16.9	+1.8
LZH				pP	sP	01 24 34.6	+0.1
LZH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
FIA1	FINESS Array S	40.48	336	P	P	01 24 28.6	-2.4
FINES	FINESS Array B	40.48	336	P	P	01 24 28.2	-2.7
FINES	FINESS Array B	40.48	336	P	P	01 24 28.8	-2.1
	comp=Z,2.5nm,0.9s,baz=127,slow=8.5,SNR=8.1						
FINES				pP	pP	01 24 46.7	+2.3
	comp=Z,1.1nm,0.4s,baz=130,slow=7.8,SNR=2.9						
	comp=Z,2.5nm,0.9s						
GERES	GERESS Array B	40.90	314	P	P	01 24 32.3	-2.4
	comp=Z,0.2nm,0.5s,baz=112,slow=8.0,SNR=2.7						
GERES				pP	pP	01 24 49.7	+1.5
	comp=Z,0.9nm,0.6s,baz=105,slow=8.4,SNR=6.6						
GERES				PcP	PcP	01 26 33.0	-1.4
	comp=Z,0.1nm,0.5s,baz=108,slow=2.2,SNR=3.7						
	comp=Z,0.2nm,0.5s						
SONM	Songino Array	41.63	48	P	P	01 24 39.9	-0.9
	comp=Z,0.4nm,0.6s,baz=249,slow=7.6,SNR=2.6						
SONM				pP	pP	01 24 57.3	+3.1
	comp=Z,0.9nm,0.6s,baz=255,slow=10,SNR=1.8						
	comp=Z,0.4nm,0.6s						
XAN	Xi'an	42.76	69	P	P	01 24 45.4	-4.7
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC	Hu-ho-hao-te	44.58	59	*e*P	P	01 25 04.4	-0.3
HHC				pmax	pmax		
	comp=Z,17nm,0.5s						
HHC				pmax	pmax		
	comp=Z,59nm,4.8s						
HFS	Hagfors	44.81	330	P	P	01 25 03.1	-3.0
	comp=Z,2.4nm,0.8s,baz=114,slow=9.8,SNR=2.3						
HFS				pP	pP	01 25 22.1	+2.4
	comp=Z,1.7nm,0.7s,baz=115,slow=10.0,SNR=2.2						
	comp=Z,2.4nm,0.8s						
NB2	NORSAR Subarra	46.31	330	P	P	01 25 18.1	+0.1
	comp=Z,0.8nm,0.7s,baz=113,slow=7.9						
NOA	NORSAR Array B	46.31	330	P	P	01 25 16.1	-1.9
	comp=Z,0.2nm,0.5s,baz=119,slow=7.4,SNR=4.3						
NOA				pP	pP	01 25 33.6	+2.0
	comp=Z,0.3nm,0.5s,baz=122,slow=8.2,SNR=1.7						
	comp=Z,0.2nm,0.5s						
ARCES	ARCESS Array B	46.34	344	P	P	01 25 15.9	-2.1
	comp=Z,3.1nm,0.9s,baz=138,slow=9.2,SNR=12						
ARCES				pP	pP	01 25 33.4	+1.8
	comp=Z,3.1nm,0.9s,baz=137,slow=8.4,SNR=2.1						
	comp=Z,3.1nm,0.9s						
NJ2	Nanjing	51.30	70	*e*P	P	01 25 55.2	-1.4
EKA	Eskdalemuir Ar	52.24	320	P	P	01 26 01.6	-1.7
	comp=Z,0.1nm,0.3s,baz=97,slow=7.6,SNR=2.1						

EKA				pP	pP	01 26 19.8	+2.7
	comp=Z,0.3nm,0.4s,baz=106,slow=7.0,SNR=2.0						
	comp=Z,0.1nm,0.3s						
ESDC	Sonseca Array	53.07	300	P	P	01 26 08.2	-1.5
	comp=Z,0.3nm,0.5s,baz=71,slow=6.9,SNR=9.9						
ESDC				pP	pP	01 26 25.9	+2.4
	comp=Z,0.4nm,0.7s,baz=68,slow=7.5,SNR=2.9						
	comp=Z,0.3nm,0.5s						
SPITS	Spitsbergen Ar	54.23	350	P	P	01 26 16.7	-0.9
	comp=Z,1.1nm,0.6s,baz=118,slow=12,SNR=4.1						
SPITS				pP	pP	01 26 33.4	+2.0
	comp=Z,4.7nm,1.0s,baz=112,slow=9.5,SNR=1.3						
	comp=Z,1.1nm,0.6s						
TORD	Torodi Ar. Bea	55.44	267	P	P	01 26 26.4	-0.8
	comp=Z,1.6nm,0.5s,baz=59,slow=7.6,SNR=20						
TORD				pP	pP	01 26 43.8	+2.6
	comp=Z,2.8nm,0.5s,baz=61,slow=7.3,SNR=8.9						
	comp=Z,1.6nm,0.5s						
KSRS	Korea Array	57.56	61	P	P	01 26 40.8	-1.2
	comp=Z,1.0nm,0.7s,baz=276,slow=7.2,SNR=6.2						
KSRS				pP	pP	01 26 58.0	+2.0
	comp=Z,1.2nm,0.7s,baz=281,slow=6.9,SNR=3.7						
	comp=Z,1.0nm,0.7s						
MREMI	Moremi	58.59	215	P	P	01 26 48.8	-0.6
MREMI				IAmb	IAmb	01 26 49.7	
	comp=Z,4.6nm,0.7s						
QNGWA	Qangwa	59.63	222	P	P	01 26 57.3	+0.6
QNGWA				IAmb	IAmb	01 27 27.6	
	comp=Z,7.9nm,1.4s						
LPHEP	Lephephe	60.06	216	P	P	01 26 59.4	-0.1
GRTLG	Ghanzi	61.02	221	P	P	01 27 06.5	+0.4
GRTLG				IAmb	IAmb	01 27 08.2	
	comp=Z,8.0nm,1.2s						
LBTB	Lobatse	61.55	215		P	01 27 10.3	+0.7
LBTB	Lobatse	61.55	215	LR	LR	01 56 56.5	
	comp=Z,28nm,18.4s,baz=118,slow=39						
KGCAE	Kacgae	61.62	219	P	P	01 27 10.9	+0.8
MAKGR	Makgori	62.62	215	P	P	01 27 17.0	+0.2
KOOLE	Kule	62.88	221	P	P	01 27 19.2	+0.6
KOOLE				IAmb	IAmb	01 27 20.2	
	comp=Z,3.7nm,0.6s						
BOSA	Boshof	64.71	213	P	P	01 27 30.4	-0.1
BOSA				IAmb	IAmb	01 27 31.4	
	comp=Z,5.2nm,0.8s						
BOSA	Boshof	64.71	213	P	P	01 27 30.1	-0.4
	comp=Z,4.6nm,0.7s,baz=37,slow=6.3,SNR=16						
BOSA				pP	pP	01 27 48.6	+4.0
	comp=Z,2.0nm,0.7s,baz=32,slow=6.4,SNR=2.5						
	comp=Z,4.6nm,0.7s						
FITZ	Fitzroy Crossi	78.65	117	P	P	01 28 54.0	-0.4
	comp=Z,3.9nm,0.9s,baz=292,slow=7.6,SNR=1.5						
	comp=Z,3.9nm,0.9s						
KNRA	Kununurra	79.83	114	P	P	01 29 00.5	-0.4
FRB	Frobisher Bay	80.20	339	LR	LR	02 06 27.8	
	comp=Z,28nm,18.2s,baz=314,slow=37						
TOLK	Toolik Lake Re	81.74	10	P	P	01 29 08.7	-1.6
H17K	Granite Mounta	82.90	16	P	P	01 29 14.5	-1.9
H17K				IAmb	IAmb	01 29 34.4	
	comp=Z,6.4nm,1.4s						
BMAR	Burnt Mountain	83.60	9	P	P	01 29 19.2	-0.8
ILAR	Eielson Array	85.72	11	P	P	01 29 28.4	-2.3
	comp=Z,0.4nm,0.8s,baz=344,slow=2.9,SNR=3.6						
	comp=Z,0.4nm,0.8s						
WRA	Warramunga Arr	86.58	114	P	P	01 29 35.4	-0.3
	comp=Z,3.1nm,0.8s,baz=305,slow=4.3,SNR=11						
	comp=Z,3.1nm,0.8s						
ASAR	Alice Springs	88.14	118	P	P	01 29 43.0	-0.1
	comp=Z,3.4nm,0.8s,baz=304,slow=5.1,SNR=24						
	comp=Z,3.4nm,0.8s						
DSLB	Salisbury	108.40	299	eP	Pdif	01 31 15.5	+0.4
QSPA	South Pole Qui	117.41	180	PKP	PKPdf	01 35 35.4	-1.3
	comp=Z,1.2nm,1.0s,baz=166,slow=8.4,SNR=2.0						
VNDA	Vanda	119.43	166	PKP	PKPdf	01 35 38.3	-1.9
	comp=Z,0.3nm,0.9s,baz=256,slow=5.9,SNR=0.9						
TXAR	Lajitas Array	121.11	343	PKP	PKPdf	01 35 43.7	-1.5
	comp=Z,0.4nm,0.5s,baz=188,slow=4.0,SNR=5.2						
CPUP	Villa Florida	124.08	256	PKP	PKPdf	01 35 49.3	-1.4
	comp=Z,0.4nm,0.9s,baz=20,slow=7.2,SNR=1.8						

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*CATAC **02** 01:22:43.8±0.8, 13°N±6°×8°9W±°, h27^{km}±4^{km}, M3.1/13, MLv3.1/13, Error ellipse: s-maj=14.0km s-min=5.8km az=34.2, confirmed*

*SNET **02** 01:22:44.8±0.9, 13.°13N×89.°46W, h48^{km}±9^{km}, ML2.9*

*GCG **02** 01:22:44.4±0.5, 13.°12N×89.°55W, h50^{km}±9^{km}, MD3.5*

ISC 02 01:22:44.1±2.4**, 13.°1N**±0.°1×**89.°51W**±0.°08**, h43**^{km}**, n46,** σ**0.^{s}41**/58**, 11C-2D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.48	23	eP	Pn	01 22 54.6	-0.1
LALI				eS	Sn	01 23 01.7	-0.4
LALI	Alcalda de L	0.48	23	eP	Pn	01 22 54.6	-0.1
LALI				i S	Sn	01 23 03.0	+0.9
LALI	Alcalda de L	0.48	23	⇓P	Pn	01 22 54.6	-0.1
JAYA	Jayaque - finc	0.61	6	eP	Pn	01 22 56.3	-0.3
JAYA				eS	Sn	01 23 05.2	-0.2
JAYA				IAML		01 23 07.9	
	comp=Z,902nm,0.2s						
JAYA	Jayaque - finc	0.61	6	i P	Pn	01 22 56.3	-0.3
JAYA				i S	Sn	01 23 04.9	-0.5
JAYA	Jayaque - finc	0.61	6	⇓P	Pn	01 22 56.3	-0.3
PANCS	Alcalda de	0.65	30	P	Pn	01 22 56.9	-0.1
LOMA	Loma Larga	0.68	29	eP	Pn	01 22 57.1	-0.4
LOMA				eS	Sn	01 23 07.2	+0.1
LOMA	Loma Larga	0.68	29	P	Pn	01 22 57.2	-0.4
PMON	Piamonte	0.69	16	eP	Pn	01 22 57.3	-0.3
PMON				eS	Sn	01 23 07.4	+0.1
PMON	Piamonte	0.69	16	⇑P	Pn	01 22 57.3	-0.3
UEES	Universidad Ev	0.72	22	eP	Pn	01 22 58.1	+0.1
UEES				eS	Sn	01 23 08.3	+0.4
UEES				IAML		01 23 09.3	
	comp=Z,653nm,0.1s						
UEES	Universidad Ev	0.72	22	⇑P	Pn	01 22 59.3	+1.3
BOQS	Boqueron	0.72	18	eP	Pn	01 22 57.9	-0.2
BOQS				eS	Sn	01 23 08.3	+0.2
LFRS	El Faro	0.72	37	eP	Pn	01 22 57.8	-0.2
LFRS				eS	Sn	01 23 07.6	-0.4
CEVE	Cerro Verde	0.78	352	eP	Pn	01 22 59.0	+0.1
CEVE				eS	Sn	01 23 10.2	+0.5
CEVE				IAML		01 23 12.6	
	comp=Z,644nm,0.3s						
CEVE	Cerro Verde	0.78	352	⇑P	Pn	01 22 59.1	+0.1
SBLS	San Blas	0.80	352	eP	Pn	01 22 59.1	-0.1
LFU	La Fuente	0.80	29	eP	Pn	01 22 59.1	+0.1
SNJE	San Jose	0.82	354	eP	Pn	01 22 59.4	-0.2
COEG	Centro de Oper	0.84	47	eP	Pn	01 22 59.1	-0.5
COEG	Centro de Oper	0.84	47	⇑P	Pn	01 22 59.1	-0.5
TECO	Alcaldia de Te	0.86	55	eP	Pn	01 22 59.1	-0.8
TECO				IAML		01 23 14.1	
	comp=Z,83nm,0.2s						
TECO	Alcaldia de Te	0.86	55	S	Sn	01 23 10.8	-0.6
TECO	Alcaldia de Te	0.86	55	⇑P	Pn	01 22 59.1	-0.8
PAVA	Las Pavas	0.87	40	eP	Pn	01 22 59.8	-0.2
PAVA				IAML		01 23 13.8	
	comp=Z,872nm,0.3s						
PAVA	Las Pavas	0.87	40	⇑P	Pn	01 22 59.9	-0.1
NUBE	Las Nubes	0.89	343	eP	Pn	01 22 59.9	-0.5
NUBE				eS	Sn	01 23 11.9	-0.3
NUBE	Las Nubes	0.89	343	i P	Pn	01 23 00.1	-0.3
NUBE				i S	Sn	01 23 12.3	+0.1
NUBE	Las Nubes	0.89	343	⇑P	Pn	01 23 00.1	-0.3
UESV	Universidad de	0.92	50	eP	Pn	01 23 00.1	-0.5
UNIC	Universidad Ca	0.93	358	eP	Pn	01 23 01.2	+0.4
SCLA	Alcaldia de Sa	1.00	49	eP	Pn	01 23 01.7	-0.1
SLOZ	Alcaldia de Sa	1.01	345	eP	Pn	01 23 02.1	+0.2
PACA	Pacayal	1.23	70	eP	Pn	01 23 05.5	+0.5
PACA	Pacayal	1.23	70	S	Sn	01 23 21.5	+1.0
PACA	Pacayal	1.23	70	⇑P	Pn	01 23 04.8	-0.2
MTO3	Montecristo	1.35	6	eP	Pn	01 23 06.7	0.0
MTO3	Montecristo	1.35	6	i P	Pn	01 23 06.8	0.0
MTO3	Montecristo	1.35	6	S	Sn	01 23 24.3	+0.6
MTO3	Montecristo	1.35	6	⇑P	Pn	01 23 06.8	0.0
LCND	La Caada	1.60	80	eP	Pn	01 23 09.9	-0.1
LCND	La Caada	1.60	80	⇑P	Pn	01 23 10.0	+0.1
CNCH	Conchagua	1.65	82	eP	Pn	01 23 10.8	+0.1
CNCH	Conchagua	1.65	82	S	Sn	01 23 30.9	+0.2
CNCH	Conchagua	1.65	82	⇑P	Pn	01 23 10.6	-0.2

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*AEIC **02** 01:25:24.0±1.5, 53.°95N±0.°05×162.°07W±0.°06, h19^{km}±7^{km}, Error ellipse: s-maj=8.3km s-min=4.7km az=164.0*

NEIC 02 01:25:21.8±2.0**, 53.°90N**±0.°06×**161.°94W**±0.°06**, h10**^{km}±2^{km}**, ML2.9**/14**, ML2.8**(AEIC)**, Error ellipse: s-maj=10.9km s-min=5.8km az=172.0, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISLZ	Isanotski Laza	1.33	309		Pn	01 25 45.3	-1.1
ISLZ					Sb	01 26 01.7	-2.2
HAG	Hague Volcano	1.42	1		Pn	01 25 47.6	-0.1
HAG					Sn	01 26 06.2	-0.2
ISNN	Isanotski Nort	1.43	312		Pn	01 25 47.5	-0.2
ISNN					Sn	01 26 05.3	-1.2
PS4A	Pavlof South-4	1.45	2		Pn	01 25 48.2	+0.2
PS4A					Sb	01 26 07.2	-0.1
SSLS	Shishaldin Sou	1.46	305		Pn	01 25 48.0	-0.2
SSLS					Sn	01 26 07.2	-0.2
PVV	Pavlof Volcano	1.48	3		Pn	01 25 48.1	-0.3
PVV					Sn	01 26 07.8	0.0
CNBA	Chernabura Isl	1.65	55	Pn	Pn	01 25 50.0	-0.8
CNBA				Sn	Sn	01 26 09.5	-2.6
SDPT	Sand Point	1.68	30		Pn	01 25 50.5	-0.7
SDPT				Sn	Sn	01 26 11.0	-1.8
SDPT				IAML		01 26 16.9	
	comp=E,229nm,0.3s						
WECS	Westdahl Cape	1.78	292		Pn	01 25 52.8	+0.2
WEBT	Westdahl Beart	1.79	294		Pn	01 25 52.9	+0.1
AKUT	Akutan	2.27	277	Pn	Pn	01 25 59.9	+0.6
AKUT				IAML		01 26 29.6	
	comp=E,46nm,1.2s						
AKUT				IAML		01 26 32.1	
	comp=N,55nm,1.5s						
AHB	Akutan Harbor	2.30	277		Pn	01 26 00.1	+0.4
AKBBA	Akutan Broad B	2.37	276		Pn	01 26 00.6	0.0
LVA	Lava Point	2.43	278	Pn	Pn	01 26 02.8	+1.3
LVA				IAML		01 26 47.1	
	comp=E,74nm,1.4s						
LVA				IAML		01 26 49.5	
	comp=N,128nm,1.3s						
UNV	Unalaska Valle	2.71	271		Pn	01 26 05.8	+0.6
UNV				IAML		01 26 41.8	
	comp=E,24nm,1.3s						
VNFG	Fog Glacier, M	2.75	29		Pn	01 26 07.3	+1.2
MTBL	Makushin Table	2.80	273		Pn	01 26 07.6	+0.9
MREP	Makushin Rep't	2.85	270		Pn	01 26 08.2	+0.9
MAPS	Pakushin South	2.96	270		Pn	01 26 09.7	+0.8
O14K	Tigyukauivet M	5.38	4	Pn	Pn	01 26 43.0	+1.0
O14K				IAML		01 27 51.2	
	comp=N,5.5nm,1.3s						
O14K				IAML		01 28 46.9	
	comp=E,6.6nm,1.1s						
O15K	Ungalikthiuk R	5.42	12	Pn	Pn	01 26 43.2	+0.7

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*IDC **02** 01:52:33.1±1.3, 37.°19N×114.°92W, h0^{km}, mbtmp3.0/4, ML3.3/4, Error ellipse: s-maj=13.0km s-min=8.7km az=179.0*

*NEIC **02** 01:52:34.9±1.9, 37.°27N±0.°03×115.°03W±0.°02, h5^{km}±1^{km}, Error ellipse: s-maj=6.1km s-min=2.9km az=160.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.37; $M_{\theta\theta}$-0.50; $M_{\phi\phi}$0.87; $M_{r\theta}$0.21; $M_{\theta\phi}$1.63; $M_{\phi r}$-0.56; Fault plane solution: $M_0$1.89000×10^{14} NP1: ϕ_s350.35000°, δ82.43000°, λ-159.83000°. NP2: ϕ_s257.58000°, δ70.01000°, λ-8.05000°. Principal axes: T 2.0083, Plg9.0000°, Azm123.0000°; N -0.2558, Plg69.0000°, Azm10.0000°; P -1.7525, Plg20.0000°, Azm216.0000°;*

*NEIC **02** 01:52:35.3, 37.°22N×115.°01W, h2^{km}*

*REN **02** 01:52:35.3±1.9, 37.°22N±0.°04×115.°01W±0.°02, h2^{km}±5^{km}, ML3.5/14, ML3.5/142(NEIC), Mwr3.5/48(NEIC), Error ellipse: s-maj=5.8km s-min=1.7km az=169.0*

ISC 02 01:52:35.5±1.1**, 37.°21N**±0.°03×**115.°03W**±0.°03**, h10**^{km}±9^{km}**, n69,** σ**1.^{s}17**/61**, Southern Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRN	Pahroc Range	0.19	354		Pg	01 52 39.1	-0.6
S11A	Rachel	0.72	307		Pg	01 52 47.4	-2.0
S11A				IAML		01 53 02.3	
	comp=N,2µm,0.4s						
S11A				IAML		01 53 03.1	
	comp=E,2µm,0.4s						
SHPR	Sheep Range	0.72	189		Pg	01 52 48.3	-1.0
CPY	CP-1	0.87	251		Pg	01 52 52.3	0.0
CPY					Sg	01 53 04.1	+0.4
ICU	Indian Springs	0.88	94		Pg	01 52 52.1	-0.4
ICU					Sg	01 53 03.9	-0.2
MCY	Mercury	0.93	234		Pg	01 52 53.1	-0.3
TPNV	Topopah Spring	1.01	255		Pg	01 52 54.7	-0.3
TPNV				IAML		01 53 11.6	
	comp=E,2µm,0.6s						
TPNV				IAML		01 53 16.1	
	comp=E,1µm,0.6s						
NSP	Numbskull Pass	1.07	243		Pg	01 52 55.9	-0.1
SDH	Striped Hills	1.19	242		Pb	01 52 58.6	+0.3
R11B	Troy Canyon, C	1.22	339		Pg	01 52 57.8	-1.1
R11B				IAML		01 53 16.3	
	comp=N,924nm,0.3s						
R11B				IAML		01 53 19.2	
	comp=E,1µm,0.7s						
AMDNV	Amargosa	1.26	233		Pn	01 52 59.7	+0.6
LCMT	Little Creek M	1.44	98		Pn	01 53 02.0	+0.3
LCMT				IAML		01 53 23.0	
	comp=N,651nm,0.7s						
LCMT				IAML		01 53 25.0	
	comp=E,454nm,0.4s						
V12A	Nelson	1.49	174		Pb	01 53 03.2	-0.1
V12A				IAML		01 53 26.4	
	comp=N,670nm,0.8s						
V12A				IAML		01 53 27.6	
	comp=E,514nm,1.2s						
PSUT	Pine Spring	1.61	35		Pn	01 53 04.3	+0.2
PSUT				IAML		01 53 29.4	
	comp=E,838nm,0.3s						
PSUT				IAML		01 53 30.5	
	comp=N,524nm,0.6s						
SGV	South Grapevin	1.62	262		Pn	01 53 04.6	+0.4
GWY	Greenwater Val	1.67	233		Pn	01 53 05.3	+0.4
GWY				IAML		01 53 34.1	
	comp=N,379nm,0.6s						
GWY				IAML		01 53 44.9	
	comp=E,454nm,0.8s						
KNB	Kanab	1.77	96		Pn	01 53 07.0	+0.6
KNB				IAML		01 53 32.6	
	comp=E,326nm,0.7s						
KNB				IAML		01 53 35.5	
	comp=N,421nm,0.7s						
GMN	Gold Mountain	1.78	273		Pn	01 53 06.8	+0.3
GMN				IAML		01 53 41.5	
	comp=N,330nm,0.7s						
Q12A	Willow Creek R	1.83	5		Pn	01 53 07.2	+0.1
SPR3	Spring Creek 3	1.86	17		Pn	01 53 06.4	-1.3
SPR3				IAML		01 53 34.5	
	comp=N,490nm,0.6s						
SPR3				IAML		01 53 35.7	
	comp=E,310nm,0.8s						
GRAC	Grapevine Rang	1.88	264		Pn	01 53 08.2	+0.5
GRAC				IAML		01 53 38.9	
	comp=N,839nm,0.4s						
TUQ	Turquoise Moun	1.92	202		Pb	01 53 10.3	-0.3
MZP	Montezuma Peak	1.94	285		Pn	01 53 09.0	+0.4
MZP	Montezuma Peak	1.94	285	IAML		01 53 39.4	
	comp=E,395nm,0.4s						
TPH	Tonopah	1.94	297		Pn	01 53 08.8	+0.1
W13A	Hualapai Mount	2.30	156		Pn	01 53 14.2	+0.5
Q09A	Carvers	2.35	314		Pn	01 53 15.1	+0.8
DSP	Deep Springs	2.35	275		Pn	01 53 14.7	+0.6
GSC	Goldstone, Bar	2.39	218		Pn	01 53 15.5	+0.8
GSC				IAML		01 54 04.6	
	comp=E,201nm,0.8s						
GMRC	Granite Mounta	2.48	192		Pn	01 53 16.3	+0.3
MVU	Marysvale	2.57	59		Pn	01 53 18.6	+1.2
MVU				IAML		01 54 00.1	
	comp=E,281nm,0.5s						
MVU				IAML		01 54 00.9	
	comp=N,309nm,0.6s						
NV11	Mina Array Sit	2.76	297		Pn	01 53 20.1	+0.2
NV11				IAML		01 54 04.3	
	comp=N,141nm,0.3s						
NVAR	Mina Array Bea	2.86	296		Pn	01 53 21.4	0.0
NVAR	Mina Array Bea	2.86	296	Pn	Pn	01 53 21.5	+0.1
	comp=N,4.2nm,0.3s,baz=115,slow=14,SNR=87						
NVAR				Pg	Pb	01 53 27.8	+1.0
	comp=N,25nm,0.3s,baz=117,slow=16,SNR=25						
NVAR				Lg	Lg	01 54 03.2	
	comp=N,14nm,0.3s,baz=120,slow=17,SNR=4.4						
	comp=N,5.0nm,0.4s						
NV08	Mina Array Sit	2.87	295		Pn	01 53 21.5	+0.1
BENR	Benton	2.87	281		Pn	01 53 22.4	+1.0
NV09	Mina Array Sit	2.89	296		Pn	01 53 22.1	+0.4
LHV	Little Huntoon	2.94	292		Pn	01 53 23.0	+0.7
LHV				IAML		01 54 13.6	
	comp=N,234nm,0.4s						
LHV				IAML		01 54 14.7	
	comp=E,310nm,0.4s						
RYN	Ryan	3.10	298		Pn	01 53 24.7	+0.1
RYN	Ryan	3.10	298	IAML		01 54 20.2	
	comp=E,183nm,0.8s						
RYN				IAML		01 54 22.5	
	comp=N,185nm,0.5s						
MCBM	Casa Benchmark	3.11	279		Pn	01 53 26.8	+2.0
DUG	Dugway, Tooele	3.44	30		Pn	01 53 29.7	+0.5
DUG				IAML		01 54 27.5	
	comp=N,98nm,1.0s						
DUG				IAML		01 54 35.6	
	comp=N,90nm,1.2s						
BLYC	Blythe	3.48	173		Pn	01 53 31.7	+2.0
BLYC				IAML		01 54 31.8	
	comp=E,92nm,0.7s						
BLYC				IAML		01 54 43.2	
	comp=N,59nm,0.9s						
Q16A	Castle Valley	3.48	60	IAML		01 54 26.1	
	comp=E,63nm,0.5s						
ELK	Elko	3.53	357		Pn	01 53 30.6	0.0
ELK				IAML		01 54 34.1	
	comp=E,61nm,0.7s						
ELK	Elko	3.53	357	Pn	Pn	01 53 29.8	-0.8
	comp=E,2.1nm,0.3s,baz=176,slow=12,SNR=48						
ELK				Sn	Sn	01 54 13.7	+1.3
	comp=E,6.1nm,0.3s,baz=207,slow=23,SNR=3.7						
ELK				Lg	Lg	01 54 24.2	
	comp=E,26nm,0.3s,baz=266,slow=9.5,SNR=18						
	comp=E,5.8nm,0.3s						
TMUT	Trail Mountain	3.65	54	IAML		01 54 36.3	
	comp=N,65nm,0.4s						
TMUT				IAML		01 54 39.6	
	comp=E,110nm,0.7s						
Y14A	Wickenburg	3.66	153	IAML		01 54 37.2	
	comp=E,76nm,0.7s						
Y14A				IAML		01 54 37.6	
	comp=N,64nm,0.8s						
PFO	Pinyon Flats O	3.78	198		Pn	01 53 34.3	+0.4
BGU	Big Grassy Mou	4.02	22		Pn	01 53 37.8	+0.6
BGU				IAML		01 54 51.0	
	comp=N,40nm,1.4s						
BGU				IAML		01 54 53.6	
	comp=E,52nm,0.7s						
SRU	San Rafael Swe	4.02	61	IAML		01 54 44.8	
	comp=E,75nm,0.6s						
SRU				IAML		01 54 48.0	
	comp=N,60nm,0.8s						
PNTR	Pine Nut	4.06	299		Pn	01 53 38.4	+0.6
PNTR	Pine Nut	4.06	299	IAML		01 54 47.0	
	comp=N,93nm,0.8s						
PNTR				IAML		01 54 52.9	
	comp=E,99nm,0.9s						
ELS	Elsinore Mount	4.06	210		Pn	01 53 39.5	+1.7
JLU	Jordanelle	4.38	38		Pn	01 53 42.2	-0.1
113A	Mohawk Valley,	4.55	167	IAML		01 55 08.9	
	comp=N,29nm,1.0s						
113A				IAML		01 55 10.9	
	comp=E,31nm,2.1s						
YUH	Yuha Desert	4.62	189		Pn	01 53 42.7	-2.5
TCUT	Toone Canyon	4.81	35	IAML		01 55 24.3	
	comp=N,68nm,0.6s						
TCUT				IAML		01 55 27.0	
	comp=E,52nm,0.7s						
HVU	Hansel Valley	4.88	20	IAML		01 55 19.4	
	comp=E,52nm,0.5s						
HVU				IAML		01 55 19.4	
	comp=N,64nm,0.5s						
X18A	Snowflake	4.92	122	IAML		01 55 10.4	
	comp=E,41nm,0.9s						
X18A				IAML		01 55 12.7	
	comp=N,48nm,0.9s						
PV03	Paradox Valley	5.01	76	IAML		01 55 24.1	
	comp=N,66nm,1.1s						
PV22	Blue Mesa, Par	5.11	73		Pn	01 53 55.4	+3.2
PV22				IAML		01 55 28.6	
	comp=E,49nm,0.8s						
PV22				IAML		01 55 30.6	
	comp=N,46nm,1.0s						
PV07	Paradox Valley	5.20	74	IAML		01 55 31.7	
	comp=E,50nm,1.0s						
TUC	Tucson	6.01	143		Pn	01 54 05.1	+0.6
MFID	Camas Ranch	6.22	355		Pn	01 54 10.5	+3.0
S22A	4UR Ranch, Cre	6.54	83		Pn	01 54 13.9	+1.9
PDAR	Pinedale Array	6.95	35	Pn	Pn	01 54 17.2	-0.3
	comp=E,0.2nm,0.3s,baz=218,slow=9.6,SNR=8.3						
PDAR				Lg	Lg	01 56 12.6	
	comp=E,0.2nm,0.3s,baz=225,slow=29,SNR=1.4						
	comp=E,0.2nm,0.4s						
ANMO	Albuquerque	7.30	106	Pn	Pn	01 54 20.7	-1.6
	comp=E,0.1nm,0.3s,baz=342,slow=6.4,SNR=1.5						
ANMO				Pg	Pb	01 54 42.8	+0.5
	comp=E,0.2nm,0.3s,baz=315,slow=5.7,SNR=4.9						
ANMO				Sn	Sn	01 55 41.6	-3.7
	baz=228,slow=16,SNR=0.8						
ANMO				Lg	Lg	01 56 18.1	
	comp=E,0.5nm,0.3s,baz=286,slow=20,SNR=5.8						
	comp=E,0.5nm,0.5s						
TXAR	Lajitas Array	12.33	126	Pg	Pn	01 56 15.7	+45
	baz=298,slow=2.5,SNR=1.6						

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*IDC **02** 01:59:44.5±1.8, 5.°49S×147.°60E, h185^{km}±15^{km}, mb3.6/8, mbtmp4.2/11, Error ellipse: s-maj=24.3km s-min=12.3km az=100.0*

*NEIC **02** 01:59:45.2±0.9, 5.°5S±0.°1×147.°6E±0.°1, h176^{km}±7^{km}, mb4.1/10, Error ellipse: s-maj=18.8km s-min=14.5km az=94.0*

ISC 02 01:59:43.4±0.7**, 5.°53S**±0.°07×**147.°6E**±0.°1**, h170**^{km}**, n30,** σ**1.^{s}16**/33**, mb3.8**/11**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.88	186	P	Pn	02 00 43.9	+1.2
	293nm,0.3s,baz=345,slow=5.9,SNR=156						
PMG				S	Sn	02 01 27.3	-1.7
	110nm,0.4s,baz=89,slow=23,SNR=11						
JAY	Jayapura	7.48	293	P	Pn	02 01 31.4	+1.4
	5.8nm,0.5s,baz=102,slow=5.7,SNR=4.2						
COEN	Coen	9.44	207	Pn	Pn	02 01 57.9	+2.1
CTAO	Charters Tower	14.53	185	P	P	02 03 03.6	+0.4
MTN	Manton Dam	17.78	245	Pn	Pn	02 03 41.0	+0.4
WB0	Warramunga Arr	19.11	221	P	P	02 03 54.3	+0.8
WB0				IAmb	IAmb	02 03 58.3	
	comp=Z,18nm,0.8s						
WRA	Warramunga Arr	19.27	221	P	P	02 03 56.0	+0.8
	comp=Z,16nm,0.8s,baz=48,slow=11,SNR=42						
WRA				S	S	02 07 21.1	-3.3
	comp=Z,2.0nm,0.8s,baz=44,slow=21,SNR=3.8						
KNRA	Kununurra	21.05	240	P	P	02 04 13.7	-0.6
AS31	Alice Springs	22.33	215	P	P	02 04 28.0	+0.5
AS31				IAmb	IAmb	02 04 36.9	
	comp=Z,4.5nm,0.9s						
ASAR	Alice Springs	22.34	215	P	P	02 04 27.5	0.0
ASAR	Alice Springs	22.34	215	P	P	02 04 28.2	+0.7
	comp=Z,5.8nm,0.5s,baz=48,slow=8.8,SNR=112						
ASAR				S	S	02 08 20.3	-0.2
	comp=Z,4.9nm,0.9s,baz=29,slow=22,SNR=14						
	comp=Z,5.8nm,0.5s						
FITZ	Fitzroy Crossi	24.81	238	P	P	02 04 50.3	+0.3
SONM	Songino Array	64.28	330	P	P	02 10 00.2	-0.5
	comp=Z,0.9nm,0.7s,baz=135,slow=9.1,SNR=4.2						
	comp=Z,0.9nm,0.7s						
VNDA	Vanda	72.35	177	P	P	02 10 51.0	+0.8
VNDA				IAmb	IAmb	02 11 11.0	
	comp=Z,3.8nm,1.4s						
VNDA	Vanda	72.35	177	P	P	02 10 50.2	0.0
	comp=Z,0.8nm,0.6s,baz=333,slow=7.6,SNR=13						
	comp=Z,0.8nm,0.6s						
MKAR	Makanchi Array	77.50	320	P	P	02 11 20.1	-0.2
MKAR	Makanchi Array	77.50	320	P	P	02 11 19.9	-0.5
	comp=Z,0.6nm,0.6s,baz=101,slow=6.3,SNR=6.1						
	comp=Z,0.6nm,0.6s						
ACHA	Angle Creek He	78.16	27	P	P	02 11 24.9	+1.2
ACHA				IAmb	IAmb	02 11 44.2	
	comp=Z,4.5nm,1.4s						
ZALV	Zalesovo Beam	78.92	328	P	P	02 11 26.9	-1.0

	comp=Z,0.8nm,0.5s,baz=119,slow=5.1,SNR=2.7						
	comp=Z,0.8nm,0.5s						
MLY	Manley	83.46	22	P	P	02 11 53.3	+1.6
MLY				IAmb	IAmb	02 11 54.0	
	comp=Z,1.9nm,0.8s						
H23K	Yukon River	84.28	22	P	P	02 11 56.8	+1.0
QSPA	South Pole Qui	84.44	180	P	P	02 11 56.4	-0.4
QSPA				IAmb	IAmb	02 12 38.3	
	comp=Z,6.1nm,1.4s						
QSPA	South Pole Qui	84.44	180	P	P	02 11 56.2	-0.6
	comp=Z,1.6nm,0.8s,baz=215,slow=1.8,SNR=10.0						
	comp=Z,1.6nm,0.8s						
ILAR	Eielson Array	84.82	23	P	P	02 11 58.1	-0.4
ILAR	Eielson Array	84.82	23	P	P	02 11 57.8	-0.7
	comp=Z,1.2nm,0.7s,baz=254,slow=4.9,SNR=16						
	comp=Z,1.2nm,0.7s						
BVAR	Borovoye Array	86.73	324	P	P	02 12 05.9	-2.2
	comp=Z,0.5nm,0.6s,baz=101,slow=7.5,SNR=3.1						
	comp=Z,0.5nm,0.6s						
GERES	GERESS Array B	121.84	326	PKP	PKPdf	02 18 16.6	-1.0
	comp=Z,0.3nm,0.6s,baz=20,slow=5.0,SNR=3.0						
TORD	Torodi Ar. Bea	145.53	285	PKPbc	PKPdf	02 19 01.7	-0.8
	comp=Z,1.1nm,0.5s,baz=76,slow=2.6,SNR=8.7						
SAML	Samuel	146.13	115	PKPbc	PKPdf	02 19 04.4	+0.9
PTLB	Pontes e Lacer	146.31	129	PKPbc	PKPdf	02 19 04.2	+0.5

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*IDC **02** 02:08:28.7±1.1, 33°.83N×137°.38E, h331^{km}±8^{km}, mb3.1/12, mbtmp3.8/17, Error ellipse: s-maj=18.7km s-min=15.4km az=157.0*

*JMA **02** 02:08:30.1±0.2, 34°N±1°×13°7E±°, h348^{km}±2^{km}, MV3.2/35, ENSYUNADA*

ISC 02 02:08:30.7±0.8**, 34°.08N**±0°.08×**137°.21E**±0°.05**, h339**^{km}±6^{km}**, n37, σ0^s.94**/48**, mb3.3**/12**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTO4	TONANKAI O.B.S	0.29	105	P	Pn	02 09 14.2	+1.1
JIE	Ise	0.52	307	P	Pn	02 09 14.3	+0.6
JIE				eS	S	02 09 48.1	-0.1
JAA	Atsumi	0.55	355	P	Pn	02 09 14.6	+0.9
TTO1	TONANKAI O.B.S	0.58	217	eP	Pn	02 09 14.3	+0.8
JWY	Kouya	1.34	276	P	Pn	02 09 17.2	+0.3
JTNC	Tanabenakahech	1.35	259	P	Pn	02 09 16.9	0.0
JTNC				eS	S	02 09 53.5	-0.5
JYTA	Yamagatataniai	1.56	346	P	Pn	02 09 18.5	+0.6
JYN	Shimob	1.79	38	eP	Pn	02 09 20.2	+0.6
JWT	Wachi	1.91	309	P	Pn	02 09 20.5	+0.2
JWT				eS	S	02 09 58.9	-1.2
JOD2	Odawara 2	1.95	52	eP	Pn	02 09 21.2	+0.6
JOD2				eS	S	02 10 00.4	-0.2
JKG	Kaga	2.30	342	P	Pn	02 09 23.4	+0.3
JAI	Aioi	2.31	264	P	Pn	02 09 23.1	-0.2
JAI				eS	S	02 10 04.2	-1.3
JRY	Ryogami san	2.38	35	eP	Pn	02 09 24.6	+0.7
JRY				eS	S	02 10 06.7	+0.2
JHJ2	Mitsune	2.38	113	eP	Pn	02 09 24.7	+0.7
MAT	Matsushiro	2.59	18	eP	Pn	02 09 25.6	0.0
MAT				eS	S	02 10 08.2	-1.4
MJAR	Matsushiro Arr	2.59	18	P	Pn	02 09 25.6	+0.1
	8.2nm,0.6s,baz=189,slow=9.2,SNR=35						
MJAR				S	S	02 10 09.8	+0.2
	5.3nm,0.9s,baz=198,slow=16,SNR=7.6						
JMN	Monobe	2.79	264	P	Pn	02 09 27.2	-0.2
JMN				eS	S	02 10 11.5	-1.4
JAG	Ashikaga	2.97	38	P	Pn	02 09 28.2	-0.7
JAG				eS	S	02 10 12.9	-2.9
BSO1	Boso 1	3.17	79	eP	Pn	02 09 29.1	-1.1
BSO1				eS	S	02 10 16.5	-1.6
JHS	Saijyo	3.50	286	eP	Pn	02 09 34.2	+0.3
JHS				eS	S	02 10 24.1	-0.8
JNU	Nakatsue	5.37	261	P	Pn	02 09 53.7	-0.2
	3.0nm,0.4s,baz=79,slow=1.9,SNR=8.8						
JCJ	Chichijima	8.18	147	P	Pn	02 10 19.9	-7.0
	15nm,0.6s,baz=356,slow=20,SNR=11						
JCJ				S	S	02 11 48.4	-13
	20nm,0.4s,baz=287,slow=19,SNR=9.5						
KSRS	Korea Array	8.26	297	P	Pn	02 10 28.1	+0.5
	5.1nm,0.7s,baz=111,slow=12,SNR=28						
KLR	Kul'dur	15.67	347	P	P	02 11 52.6	-0.2
	0.6nm,0.4s,baz=191,slow=8.0,SNR=2.0						
SONM	Songino Array	26.82	310	P	P	02 13 43.1	+2.2
	0.5nm,0.4s,baz=130,slow=7.2,SNR=3.6						
	0.5nm,0.4s						
CMAR	Chiang Mai Arr	37.43	255	P	P	02 15 12.7	+0.1
	0.9nm,0.3s,baz=71,slow=10,SNR=0.9						
	0.9nm,0.3s						
MKAR	Makanchi Array	42.86	304	P	P	02 15 56.9	+0.4
	0.5nm,0.5s,baz=91,slow=9.6,SNR=6.2						
	0.5nm,0.5s						
NRIK	Noril'sk	44.59	337	P	P	02 16 11.3	+1.6
	0.9nm,0.5s,baz=63,slow=4.9,SNR=2.0						
	0.9nm,0.5s						
BVAR	Borovoye Array	50.07	314	PcP	PcP	02 18 04.2	-1.7
	0.3nm,0.5s,baz=108,slow=4.7,SNR=2.2						
ILAR	Eielson Array	53.80	31	P	P	02 17 19.4	+0.6
	0.2nm,0.6s,baz=258,slow=5.2,SNR=5.2						
	0.2nm,0.6s						
ARCES	ARCESS Array B	65.53	339	P	P	02 18 38.2	+0.2
	4.9nm,1.0s,baz=52,slow=6.0,SNR=1.9						
	4.9nm,1.0s						
FINES	FINESS Array B	69.79	331	P	P	02 19 04.1	-0.4
	0.5nm,0.5s,baz=64,slow=3.2,SNR=5.5						
	0.5nm,0.5s						
HFS	Hagfors	75.31	334	P	P	02 19 36.6	-0.3
	2.5nm,1.0s,baz=45,slow=4.3,SNR=1.9						
	2.5nm,1.0s						
NVAR	Mina Array Bea	79.50	51	P	P	02 20 00.1	-0.6
	0.2nm,0.4s,baz=302,slow=1.1,SNR=1.4						
	0.2nm,0.4s						
PDAR	Pinedale Array	82.17	43	P	P	02 20 13.7	-0.8
	0.2nm,0.3s,baz=316,slow=8.4,SNR=2.8						
	0.2nm,0.3s						
GERES	GERESS Array B	83.33	326	P	P	02 20 19.6	-0.6
	0.2nm,0.5s,baz=32,slow=9.3,SNR=4.3						
	0.2nm,0.5s						
TXAR	Lajitas Array	94.64	50	P	P	02 21 13.9	-0.1
	0.1nm,0.4s,baz=298,slow=2.7,SNR=3.8						
	0.1nm,0.4s						

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*NEIC **02** 02:19:48.1±0.5, 34°.053N±0°.008×117°.497W±0°.008, h5^{km}±1^{km}, Error ellipse: s-maj=1.9km s-min=1.4km az=309.0*

PAS 02 02:19:48.6±0.6**, 34°.048N**±0°.007×**117°.504W**±0°.009**, h4**^{km}±2^{km}**, ML3.1**/212**, ML2.8**/28(NEIC)**, Error ellipse: s-maj=1.4km s-min=0.4km az=225.0, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLSC	Mira Loma	0.07	228		Pg	02 19 51.3	+1.3
FON	Fontana	0.07	47		Pg	02 19 50.3	+0.1
CHNC	Chino	0.15	251		Pg	02 19 54.7	+3.0
SS2	San Sevaine	0.16	1		Pg	02 19 51.8	+0.1
CLTC	Calectric	0.16	74		Pg	02 19 52.1	+0.3
RSBC	Riverside Bore	0.17	117		Pg	02 19 52.0	+0.1
RSBC	Riverside Bore	0.17	117		Sg	02 19 54.4	+0.4
RSBC	Riverside Bore	0.17	117		Sg	02 19 54.5	+0.5
CFSC	Central Fire S	0.19	73		Pg	02 19 52.7	+0.3
SSK	Sunset Peak	0.23	316		Pg	02 19 53.1	+0.1
HLNC	Highland	0.25	73		Pg	02 19 53.7	+0.3
PSRC	Puddingstone R	0.26	280		Pn	02 19 57.7	-1.5
PEC	Perris	0.33	119		Pn	02 19 59.5	-0.6
CFT	Crafton Hills	0.33	92		Pg	02 19 55.2	+0.3
SVD	Seven Oaks Dam	0.34	80		Pg	02 19 55.3	+0.1
SVD					Sg	02 20 00.7	+1.0
ELS	Elsinore Mount	0.41	171	Pg	Pg	02 19 56.3	-0.1
ELS				IAML		02 20 02.2	
	comp=E,824nm,0.2s						
BBSC	Beaumont Base	0.45	106		Pg	02 19 57.6	+0.3
BREC	Barre Substati	0.46	239		Pb	02 19 58.6	-0.7
MWC	Mount Wilson	0.49	291		Pg	02 19 57.9	-0.2
MWC					Sg	02 20 04.9	+0.4
ADO	Adelanto Recei	0.50	7		Pg	02 19 58.3	0.0
ADO					Sg	02 20 05.1	+0.2
GVRC	Garvey Reservo	0.51	270		Pg	02 19 58.6	+0.2
MURC	Murrieta	0.52	150		Sg	02 20 05.2	0.0
CHFC	Chilao Flat St	0.52	303		Sg	02 20 05.2	-0.2
BBRC	Big Bear Solar	0.53	66		Sg	02 20 05.5	-0.1
DLAC	Del Amo	0.53	248		Pg	02 19 58.5	-0.3
VTV	Victorville	0.53	16		Pg	02 19 58.5	-0.3
DGR	Domenigoni Val	0.57	134		Sg	02 20 06.7	-0.3
PASC	Pasadena Art C	0.58	282		Sg	02 20 07.3	+0.1
PASC	Pasadena Art C	0.58	282	Pg	Pg	02 19 59.4	-0.3
PASC				IAML		02 20 07.8	
	comp=E,520nm,0.4s						
PASC				IAML		02 20 07.8	
	comp=N,494nm,0.4s						
DECC	Green Verdugo	0.72	287		Pg	02 20 02.0	-0.4
DECC					Sg	02 20 11.9	+0.2
HLLC	North Hollywoo	0.72	280		Sg	02 20 11.7	-0.1
FMP	Fort Macarthur	0.74	243		Pg	02 20 02.4	-0.3
DEVC	Devers	0.78	98		Sg	02 20 14.2	+0.6
CRY	Cary Ranch	0.80	127		Pg	02 20 03.3	-0.7
CRY					Sg	02 20 13.7	-0.6
RPV	Rancho Palos V	0.81	248		Pg	02 20 03.7	-0.4
HYS	Haystack Butte	0.81	356		Pg	02 20 03.7	-0.5
PLM	Palomar	0.88	142		Pg	02 20 04.7	-0.7
PLM					Sg	02 20 16.3	-0.4
BZNA	Buzz No.'s Pla	0.89	128		Pg	02 20 05.2	-0.5
BZNA					Sg	02 20 16.4	-0.9
SNDA	J Saunders Pla	0.89	123		Pg	02 20 05.3	-0.4
SNDA					Sg	02 20 17.1	-0.1
ALPC	Antelope	0.92	314		Pn	02 20 17.5	+9.2
EW2	E Wide Canyon	0.92	96		Pg	02 20 05.8	-0.3
EW2					Sg	02 20 18.7	+0.6
GORC	Green Oak Ranc	0.92	166		Sg	02 20 17.6	-0.6
RRX	Edison Barstow	0.93	27		Sg	02 20 18.7	+0.3
BLAC	Blackrock camp	0.93	88		Pg	02 20 05.9	-0.5
FRD	Ford Ranch, An	0.93	126		Sg	02 20 18.0	-0.5
FRD	Ford Ranch, An	0.93	126		Sg	02 20 18.0	-0.6
PFO	Pinyon Flats O	0.97	116		Pg	02 20 06.2	-1.0
PFO					Sg	02 20 18.9	-1.0
PFO	Pinyon Flats O	0.97	116	Pg	Pg	02 20 06.3	-1.0
PFO				Sg	Sg	02 20 19.4	-0.4
PFO				IAML		02 20 23.9	
	comp=N,84nm,0.5s						
PFO				IAML		02 20 24.4	
	comp=N,104nm,1.0s						
XPFO	Pinon Flat	0.98	116		Pg	02 20 06.3	-1.0
XPFO					Sg	02 20 18.9	-1.0
CIAC	Catalina I. Ai	0.99	230		Pg	02 20 07.2	-0.5
CIAC					Sg	02 20 20.6	0.0
PMD	Palm Desert	1.02	113		Sg	02 20 20.2	-1.1
DPP	Dos Picos Cty	1.15	156		Pg	02 20 08.8	-1.8
CCAC	Calif City Air	1.18	339		Pg	02 20 10.4	-0.9
CCAC				IAML		02 20 28.6	
	comp=E,386nm,0.5s						
GSC	Goldstone, Bar	1.38	25		Pn	02 20 14.3	-0.4
TKX	Tecate	1.66	153		Pn	02 20 17.5	-0.9
ISA	Isabella, Lake	1.80	334		Pn	02 20 19.7	-0.7
ISA				IAML		02 20 46.1	
	comp=E,61nm,0.8s						
CBX	Cerro Bola	1.87	158	Pn	Pn	02 20 21.4	-0.1
YUH	Yuha Desert	1.92	136		Pb	02 20 23.6	-0.7
YUH				IAML		02 20 49.1	
	comp=N,98nm,0.6s						
YUH				IAML		02 20 51.0	
	comp=E,62nm,0.7s						
W13A	Hualapai Mount	3.17	70		Pn	02 20 39.0	-0.4
W13A				IAML		02 21 18.6	
	comp=N,12nm,0.4s						
LCMT	Little Creek M	4.56	48		Pn	02 20 59.4	+0.9

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*NOU **02** 02:22:15.6, 38°.70S×176°.29E, h75^{km}, MLv3.5/12, North Island, New Zealand*

*WEL **02** 02:22:16.1±0.9, 39°S±4°×17°6E±°, h70^{km}±8^{km}, M3.1/59, ML2.9/26, MLv3.1/59, Error ellipse: s-maj=5.9km s-min=5.2km az=146.3, confirmed*

ISC 02 02:22:14.8±1.4**, 38°.68S**±0°.03×**176°.23E**±0°.03**, h93**^{km}±7^{km}**, n113, σ0^s.82**/119**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALRZ	Allen Road	0.15	36	P	Pn	02 22 28.0	-0.1
WPRZ	Whakapapatarin	0.17	342	P	Pn	02 22 28.1	-0.1
MRHZ	Matea Rd	0.21	136	P	Pn	02 22 28.2	-0.1
MRHZ				S	Sn	02 22 37.5	-0.8
PRRZ	Plateau Road	0.23	35	P	Pn	02 22 28.4	+0.1
HRRZ	Handcock Road	0.30	8	P	Pn	02 22 28.5	-0.1
GRRZ	Galatos Road	0.35	344	P	Pn	02 22 29.0	+0.1
HSRZ	Hossack Road	0.37	2	P	Pn	02 22 29.0	0.0
KUTZ	Kaahu Road	0.37	301	P	Pn	02 22 29.0	0.0
WATZ	Wairara	0.39	266	P	Pn	02 22 29.2	+0.1
RATZ	Rangitukua	0.40	243	P	Pn	02 22 29.4	+0.2
RATZ				S	Sn	02 22 39.4	-0.6
RRRZ	Republican Roa	0.41	33	P	Pn	02 22 29.1	-0.2
RITZ	Rihia Road	0.41	225	P	Pn	02 22 29.8	+0.5
HLRZ	Highlands Stat	0.44	13	P	Pn	02 22 30.2	+0.7
MUGZ	Murupara	0.47	64	P	Pn	02 22 29.3	-0.3
MTHZ	Maungataniwha	0.51	110	P	Pn	02 22 30.3	+0.3
MTHZ				S	Sn	02 22 41.4	+0.1
UTU	Utuhina	0.51	357	P	Pn	02 22 30.1	+0.2
KATZ	Kakaramea	0.51	235	P	Pn	02 22 30.3	+0.2
BKZ	Black Stump Fm	0.52	157	P	Pn	02 22 30.3	+0.2
BKZ	Black Stump Fm	0.52	157	S	Sn	02 22 41.4	-0.2
BKZ	Black Stump Fm	0.52	157	P	Pn	02 22 30.4	+0.2
OMRZ	Omania	0.59	11	P	Pn	02 22 30.5	-0.2
RTZ	Ruatahuna	0.59	84	P	Pn	02 22 30.8	+0.1
TMVZ	Te Maari	0.59	223	P	Pn	02 22 31.0	+0.2
TMVZ				S	Sn	02 22 42.8	0.0
NTVZ	North Tongarir	0.60	226	P	Pn	02 22 31.4	+0.6
NMHZ	Naumai	0.61	133	P	Pn	02 22 32.0	+1.2
KRVZ	Karewarewa	0.62	228	P	Pn	02 22 31.4	+0.4
TLZ	Tolley Road	0.65	303	P	Pn	02 22 31.3	+0.1
TLZ				S	Sn	02 22 42.9	-0.5
OTVZ	Oturere	0.65	222	P	Pn	02 22 32.0	+0.6
OTVZ				S	Sn	02 22 44.0	+0.4
NNVZ	North Ngauruho	0.66	227	P	Pn	02 22 31.9	+0.5
WTVZ	West Tongariro	0.66	229	P	Pn	02 22 31.7	+0.4
KARZ	Kaharoa	0.66	1	P	Pn	02 22 31.3	0.0
SNVZ	South Ngauruho	0.68	222	P	Pn	02 22 32.3	+0.7
NGZ	Ngauruhoe	0.69	225	P	Pn	02 22 32.3	+0.6
RAHZ	Arahi	0.71	109	P	Pn	02 22 32.4	+0.7
TWVZ	Taurewa	0.73	238	P	Pn	02 22 32.3	+0.4
TUVZ	Tukino	0.73	217	P	Pn	02 22 32.7	+0.6
COVZ	Chateau Observ	0.74	226	P	Pn	02 22 32.8	+0.6
KWHZ	Kaweka Forest	0.75	169	P	Pn	02 22 33.0	+0.8
FWVZ	Far West T-bar	0.78	223	P	Pn	02 22 33.1	+0.5
WHVZ	Whangaehu Hut	0.78	220	P	Pn	02 22 33.2	+0.6
MARZ	Manawahe	0.78	27	P	Pn	02 22 32.3	-0.1
MAVZ	Matarangi	0.78	222	P	Pn	02 22 33.3	+0.6
URZ	Urewera	0.81	59	P	Pn	02 22 32.4	-0.3
URZ	Urewera	0.81	59	P	Sn	02 22 45.4	-0.6
URZ	Urewera	0.81	59	P	Pn	02 22 32.4	-0.3
MOVZ	Moawhango	0.81	207	P	Pn	02 22 33.1	+0.3
TRVZ	Turoa	0.81	221	P	Pn	02 22 33.5	+0.5
ARHZ	Aropaoanui	0.83	134	P	Pn	02 22 33.9	+1.0
MCHZ	McNeill Hill	0.84	155	P	Pn	02 22 34.6	+1.6
KMRZ	Kaimai	0.87	345	P	Pn	02 22 33.4	0.0
SNGZ	Shannon Statio	0.87	97	P	Pn	02 22 34.5	+1.1
OPRZ	Ohinepanea	0.88	17	P	Pn	02 22 33.1	-0.2
WHHZ	Waihua	0.88	117	P	Pn	02 22 35.4	+2.0
MTVZ	Mangateitei	0.92	220	P	Pn	02 22 34.7	+0.8
PKVZ	Pokaka	0.92	228	P	Pn	02 22 34.5	+0.6
RAGZ	Rawiri	0.95	79	P	Pn	02 22 34.9	+0.7
TGRZ	Tauranga	0.95	1	P	Pn	02 22 34.2	0.0
KRHZ	Kereru	0.96	174	P	Pn	02 22 35.1	+0.8
MWZ	Matawai	1.08	71	P	Pn	02 22 35.7	+0.1
HIZ	Hauiti	1.09	279	P	Pn	02 22 36.1	+0.4
HIZ	Hauiti	1.09	279	P	Sn	02 22 52.2	+0.7
HIZ	Hauiti	1.09	279	P	Pn	02 22 36.1	+0.4
TOZ	Tahuroa Road	1.11	329	P	Pn	02 22 36.1	+0.2
KNZ	Kokohu	1.18	107	P	Pn	02 22 37.2	+0.5
RIGZ	Rimuhau	1.20	92	P	Pn	02 22 37.9	+0.9
KAHZ	Kahuranaki	1.22	156	P	Pn	02 22 38.1	+0.9
PNHZ	Pukenui	1.23	181	P	Pn	02 22 37.7	+0.3
VRZ	Vera Road	1.23	249	P	Pn	02 22 38.0	+0.6
TKGZ	Te Karaka	1.29	80	P	Pn	02 22 39.1	+1.0
PRGZ	Paritu Road	1.31	101	P	Pn	02 22 38.9	+0.5
RUGZ	Raukumara Rang	1.35	58	P	Pn	02 22 38.2	-0.7
TSZ	Takapari Road	1.39	189	P	Pn	02 22 39.5	+0.1
WPHZ	Waipukurau	1.39	173	P	Pn	02 22 39.5	+0.2
MHGZ	Mahia Peninsul	1.39	110	P	Pn	02 22 40.0	+0.6
MYRZ	Mayor Island	1.40	0	P	Pn	02 22 39.9	+0.4
PXZ	Pawanui	1.43	160	P	Pn	02 22 40.1	+0.3
WAZ	Wanganui	1.44	222	P	Pn	02 22 41.1	+1.2
TWGZ	Tauwhareparae	1.47	70	P	Pn	02 22 42.0	+1.7
HAZ	Te Kaha	1.53	53	P	Pn	02 22 40.4	-0.7
CNGZ	Carnagh Statio	1.56	83	P	Pn	02 22 42.2	+0.7
PRHZ	Porangahau	1.61	169	P	Pn	02 22 42.0	-0.1
DVHZ	Dannevirke	1.61	182	P	Pn	02 22 41.7	-0.4
LREZ	Lake Rotokare	1.62	241	P	Pn	02 22 43.5	+1.3
PKGZ	Pakihiroa	1.67	61	P	Pn	02 22 43.3	+0.4
OHWZ	Ohakea	1.68	205	P	Pn	02 22 45.4	+2.5
PUZ	Puketiti	1.71	70	P	Pn	02 22 45.0	+1.7
POWZ	Post Office Ro	1.74	192	P	Pn	02 22 43.5	-0.2
NEZ	North Egmont	1.76	250	P	Pn	02 22 45.5	+1.3
ANWZ	Angora Road	1.78	174	P	Pn	02 22 44.1	-0.2
MKAZ	Moumakai	1.79	331	P	Pn	02 22 44.5	+0.2
PKE	Pukeiti	1.82	253	P	Pn	02 22 45.8	+1.0
KHEZ	Kahui Hut	1.83	250	P	Pn	02 22 46.2	+1.2
KUZ	Kuaotunu	1.98	348	P	Pn	02 22 46.6	-0.2
KUZ	Kuaotunu	1.98	348	P	Pn	02 22 46.8	0.0
MXZ	Matakaoa Point	1.98	56	P	Pn	02 22 47.8	+0.9
MXZ	Matakaoa Point	1.98	56	P	Pn	02 22 48.1	+1.2
BFZ	Birch Farm	2.00	180	P	Pn	02 22 46.6	-0.4
BFZ	Birch Farm	2.00	180	P	Pn	02 22 46.3	-0.8
ETAZ	East Tamaki Re	2.01	329	P	Pn	02 22 47.5	+0.3
MRZ	Mangatainoka R	2.04	194	P	Pn	02 22 46.7	-0.8
WIAZ	Waiheke Island	2.08	335	P	Pn	02 22 48.3	+0.2
TIWZ	Tintock	2.11	187	P	Pn	02 22 47.9	-0.7
HOWZ	Holdsworth Sta	2.28	194	P	Pn	02 22 49.4	-1.3
OGWZ	Otaki Gorge	2.28	201	P	Pn	02 22 49.9	-0.8
KIW	Kapiti Island	2.40	205	P	Pn	02 22 51.2	-1.1
TMWZ	Te Maipa	2.43	186	P	Pn	02 22 51.4	-1.5
MTW	Mount Morrison	2.53	193	P	Pn	02 22 52.2	-1.9
TRWZ	Traveller	2.74	189	P	Pn	02 22 55.4	-1.5
PAWZ	Paruwai Farm	2.76	193	P	Pn	02 22 55.1	-2.1
MSWZ	Moikau Station	2.83	195	P	Pn	02 22 56.2	-1.9
SNZO	South Karori	2.87	204	P	Pn	02 22 58.7	+0.1
PLWZ	Palliser	2.98	194	P	Pn	02 22 57.9	-2.2
QRZ	Quartz Range	3.56	232	P	Pn	02 23 09.0	+1.0

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*IDC **02** 02:31:06.6±1.1, 40°.32N×20°.64E, h0^{km}, mb3.4/7, mbtmp3.4/12, ML3.1/3, MS2.5/3, Error ellipse: s-maj=19.6km s-min=16.5km az=67.0*

*TIR **02** 02:31:07.9, 40°.44N×20°.72E, h0^{km}±1^{km}, Ml3.4/11*

*BEO **02** 02:31:08.4±0.7, 40°.32N×20°.73E, h0^{km}, ML3.1/6*

*PDG **02** 02:31:09.7±0.7, 40°.45N×20°.80E, h8^{km}±1^{km}, ML3.2/10, Error ellipse: s-maj=0.7km s-min=1.1km az=0.0*

*SKO **02** 02:31:10.8, 40°.40N×20°.82E, h2^{km}, ML3.2*

*ATH **02** 02:31:10.0±0.3, 40°.46N×20°.83E, h5^{km}, ML3.3/19, Manual Solution by S.Liakopoulos First location: 2019/06/02 02:32:08, This location: 2020/10/26 11:33:26 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

*THE **02** 02:31:12.0, 40°N±1°×2°1E±°, h3^{km}±1^{km}, M3.1/40, MLh3.1/40*

*NAO **02** 02:31:14.8, 41°.09N×23°.85E, h33^{km}, mb3.0*

ISC 02 02:31:09.2±0.9**, 40°.41N**±0°.01×**20°.79E**±0°.02**, h9**^{km}±6^{km}**, n216, σ1^s.40**/266**, mb3.3**/5**, 16C-13D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEST	Nestorio	0.20	89	Pg	Pg	02 31 13.6	+0.2
NEST				Sg	Sg	02 31 17.8	+1.5
NEST				AML	AML	02 31 20.2	
	39nm,0.3s						
NEST	Nestorio	0.20	89	P	Pg	02 31 14.1	+0.7
NEST				S	Sg	02 31 16.3	+0.1
NEST	Nestorio	0.20	89	P	Pg	02 31 14.1	+0.7
NEST				S	Sg	02 31 15.9	-0.3
KBN	Korca	0.21	1	⇑iP	Pg	02 31 13.0	-0.6
KBN				Sg	Sg	02 31 15.1	-1.5
KBN				AML	AML	02 31 27.0	
	32nm,0.5s						
LSK	Leskovik	0.30	209	Pg	Pg	02 31 14.3	-0.8
LSK				Sg	Sg	02 31 19.5	+0.4
LSK				AML	AML	02 31 22.1	
	45nm,0.5s						
PENT	Pentalofos	0.35	128	P	Pg	02 31 16.4	+0.4
PENT				S	Sg	02 31 19.6	-1.0
PENT	Pentalofos	0.35	128	P	Pg	02 31 16.4	+0.4
PENT				S	Sb	02 31 22.8	-0.5
LMS2	Laimos Florina	0.50	33	P	Pg	02 31 18.5	-0.5
KPRO	Kipourio	0.64	136	P	Pg	02 31 21.3	-0.2
KPRO				S	Sg	02 31 29.5	-0.3
KPRO	Kipourio	0.64	136	P	Pg	02 31 21.3	-0.2
KPRO				S	Sb	02 31 31.7	+0.1
OHR	Ohrid	0.70	1	i Pg	Pg	02 31 22.8	+0.1
OHR				i Sg	Sg	02 31 33.8	+1.9
OHR				eLg	Lg	02 31 34.2	
	comp=E,1μm,0.6s						
OHR				eLg	Lg	02 31 34.2	
	comp=N,680nm,0.6s						
OHR	Ohrid	0.70	1	ePg	Pg	02 31 22.3	-0.4
OHR				eSg	Sg	02 31 33.8	+1.9
JAN	Janina	0.76	176	P	Pg	02 31 23.1	-0.7
JAN				S	Sg	02 31 32.8	-0.8
KZN	Kozani	0.76	98	P	Pg	02 31 23.6	-0.3
KZN				S	Sg	02 31 33.3	-0.5
KZN	Kozani	0.76	98	P	Pg	02 31 23.9	0.0
KZN				S	Sg	02 31 34.5	+0.7
SRN	Sarande	0.80	229	Pn	Pg	02 31 24.1	-0.5
SRN				Sn	Sb	02 31 37.4	+1.2
SRN				AML	AML	02 31 44.4	
	comp=N,1.7nm,0.4s						
IGT	Igoumenitsa	0.94	202	Pn	Pg	02 31 27.6	+0.2
IGT				Sn	Sb	02 31 42.4	+2.1
IGT				AML	AML	02 31 45.1	
	comp=N,1.5nm,0.8s						
IGT	Igoumenitsa	0.94	202	P	Pg	02 31 27.3	-0.1
IGT				S	Sn	02 31 43.3	+1.0
IGT	Igoumenitsa	0.94	202	⇑iPg	Pg	02 31 27.5	+0.2
IGT				i Sg	Sb	02 31 42.4	+2.1
IGT	Igoumenitsa	0.94	202	P	Pg	02 31 28.1	+0.8
IGT				S	Sn	02 31 43.1	+0.8
VLO	Vlora	0.99	274	Pn	Pg	02 31 27.0	-1.2
VLO				Sn	Sg	02 31 40.0	-1.0
VLO				AML	AML	02 31 48.4	
	comp=N,8.2nm,0.5s						
KTI	Kastanea	1.02	91	P	Pg	02 31 29.0	+0.2
KEK	Kerkira	1.03	228	P	Pg	02 31 29.8	+0.9
KEK				S	Sn	02 31 48.1	+3.7
KEK	Kerkira	1.03	228	P	Pg	02 31 29.7	+0.7
KEK				S	Sb	02 31 45.0	+2.2
LFKM	Lefkimmi	1.11	210	P	Pg	02 31 30.8	+0.2
LFKM				S	Sn	02 31 49.7	+3.3
TETR	Tetrakomo, Epi	1.13	160	P	Pb	02 31 31.6	+0.6
TETR				S	Sb	02 31 47.4	+1.6
PRGA	Parga	1.16	195	P	Pn	02 31 33.3	+1.6
TIR	Tirane	1.17	324	Pn	Pg	02 31 30.6	-1.0
TIR				Sn	Sg	02 31 48.0	+1.2
TIR				AML	AML	02 31 58.4	
	comp=N,1.1nm,0.5s						
TIR	Tirane	1.17	324	⇓P	Pg	02 31 30.6	-1.0
TIR	Tirane	1.17	324	i Pg	Pg	02 31 30.4	-1.2
TIR				i Sg	Sn	02 31 50.5	+2.7
TIR	Tirane	1.17	324	ePg	Pg	02 31 30.0	-1.6
THL	Klokotos Trika	1.27	131	P	Pg	02 31 32.4	-1.2
THL				S	Sb	02 31 50.2	+0.5
THL	Klokotos Trika	1.27	131	P	Pg	02 31 33.2	-0.4
PHP	Peshkopia	1.30	349	Pn	Pg	02 31 32.5	-1.7
PHP				Sn	Sg	02 31 51.9	+0.9
PHP				AML	AML	02 32 07.1	
	comp=N,1.0nm,1.1s						
TYRN	Tyrnavos	1.31	122	P	Pg	02 31 34.0	-0.5
TYRN				S	Sg	02 31 50.6	-0.8
TYRN	Tyrnavos	1.31	122	P	Pg	02 31 33.9	-0.5
TYRN				S	Sn	02 31 52.5	+1.2
GINA	Giannouli	1.44	121	P	Pn	02 31 36.2	+0.8
LRSO	Larissa Observ	1.44	120	P	Pg	02 31 37.2	+0.4
LRSO	Larissa Observ	1.44	120	P	Pn	02 31 36.6	+1.2
SOFA	Sofades	1.47	136	P	Pg	02 31 37.9	+0.5
AMPL	Ampelaki	1.52	167	P	Pn	02 31 37.1	+0.5
TSLK	Tsoukalades, L	1.59	184	P	Pg	02 31 40.7	+1.0
TSLK	Tsoukalades, L	1.59	184	P	Pg	02 31 40.0	+0.3
LKD2	Lefkada island	1.62	184	Pn	Pg	02 31 40.5	+0.1
LKD2				Sn	Sg	02 32 04.8	+3.4
LKD2	Lefkada island	1.62	184	P	Pg	02 31 40.7	+0.4
LKD2	Lefkada island	1.62	184	P	Pg	02 31 40.6	+0.3
VAY	Valandovo	1.63	56	P	Pn	02 31 39.2	+1.1
VAY	Valandovo	1.63	56	⇓iPg	Pn	02 31 39.2	+1.1
VAY				i Sg	Sg	02 32 03.2	+1.6
VAY				eLg	Lg	02 32 07.2	
	comp=N,189nm,0.7s						

VAY				*e*Lg	Lg	02 32 07.8	
	comp=E,338nm,1.0s						
VAY	**Valandovo**	1.63	56	*e*Pn	Pn	02 31 39.2	+1.1
VAY				*e*Sn	Sg	02 32 03.4	+1.8
SKO	**Skopje**	1.64	17	⇓*i*Pg	Pb	02 31 40.4	+0.8
SKO				*i* Sg	Sg	02 32 02.4	+0.5
THE	**Thessaloniki**	1.68	82	P	Pn	02 31 39.3	+0.5
THE				Sn	Sg	02 32 06.8	+3.7
THE				AML	AML	02 32 12.8	
	comp=E,0.5nm,0.6s						
THE	**Thessaloniki**	1.68	82	P	Pn	02 31 39.2	+0.5
THE	**Thessaloniki**	1.68	82	⇓*i*Pg	Pn	02 31 39.2	+0.5
THE				*i* Sg	Sg	02 32 03.9	+0.8
THE	**Thessaloniki**	1.68	82	P	Pn	02 31 38.7	0.0
EVR	**Evrytania**	1.69	152	P	Pb	02 31 41.3	+0.8
EVR	**Evrytania**	1.69	152	P	Pb	02 31 41.0	+0.4
NYDR	**Nydri-Lefkada**	1.70	182	P	Pb	02 31 41.6	+1.0
NYDR	**Nydri-Lefkada**	1.70	182	P	Pb	02 31 41.5	+1.0
MAKR	**Makrakomi, Fth**	1.74	143	P	Pb	02 31 41.5	+0.2
MAKR	**Makrakomi, Fth**	1.74	143	P	Pb	02 31 41.4	+0.1
PUK	**Puka**	1.76	338	Pn	Pn	02 31 41.7	+1.6
PUK				Sn	Sb	02 32 06.0	+1.9
PUK				AML	AML	02 32 11.1	
	comp=E,2.5nm,0.8s						
KNT	**Kendrikon**	1.77	64	P	Pn	02 31 40.5	+0.5
KNT	**Kendrikon**	1.77	64	*i* Pn	Pn	02 31 40.5	+0.5
KNT				*i* Sn	Sg	02 32 06.8	+0.6
KNT	**Kendrikon**	1.77	64	P	Pn	02 31 40.6	+0.6
HORT	**Hortiatis**	1.77	83	P	Pn	02 31 40.6	+0.5
HORT	**Hortiatis**	1.77	83	P	Pn	02 31 40.5	+0.3
EVGI	**Lefkada island**	1.79	183	P	Pb	02 31 42.8	+0.6
EVGI	**Lefkada island**	1.79	183	P	Pb	02 31 42.4	+0.2
AGG	**Agios Georgios**	1.83	139	P	Pn	02 31 42.3	+1.4
AGG	**Agios Georgios**	1.83	139	P	Pn	02 31 42.2	+1.4
PDO	**Prodromos**	1.84	170	P	Pg	02 31 44.2	-0.2
PVO	**Paravola**	1.88	162	P	Pb	02 31 44.5	+0.8
PVO	**Paravola**	1.88	162	P	Pb	02 31 43.9	+0.2
ULC	**Ulcinj**	1.94	324	P	Pn	02 31 43.9	+1.5
ULC	**Ulcinj**	1.94	324	⇑*i*Pn	Pn	02 31 43.9	+1.5
ULC	**Ulcinj**	1.94	324	⇑*i*Pn	Pn	02 31 43.8	+1.4
ULC				*i* Sn	Sb	02 32 10.5	+1.5
FSK	**Fiskardo**	1.96	185	P	Pn	02 31 44.8	+2.2
FSK	**Fiskardo**	1.96	185	P	Pn	02 31 44.5	+2.0
SOH	**Sokhos**	2.00	77	P	Pn	02 31 44.3	+1.1
SOH	**Sokhos**	2.00	77	P	Pn	02 31 44.0	+0.8
ANX	**Ano Chora**	2.02	154	P	Pb	02 31 46.3	+0.2
ANX	**Ano Chora**	2.02	154	P	Pb	02 31 45.9	-0.2
BCI	**Bajram Curri**	2.03	345	Pn	Pn	02 31 46.1	+2.5
BCI				Sn	Sg	02 32 15.0	+0.6
BCI				AML	AML	02 32 21.6	
	comp=E,1.5nm,0.7s						
BCI	**Bajram Curri**	2.03	345	P	Pb	02 31 47.2	+1.0
PLG	**Polygyros**	2.03	90	P	Pn	02 31 44.9	+1.3
PLG	**Polygyros**	2.03	90	P	Pn	02 31 44.2	+0.6
DRME	**Dracevica, Mon**	2.15	326	P	Pn	02 31 47.1	+1.9
DRME	**Dracevica, Mon**	2.15	326	*e*Pn	Pn	02 31 46.8	+1.6
DRME	**Dracevica, Mon**	2.15	326	⇑*i*Pn	Pb	02 31 48.7	+0.5
DRME				*i* Sn	Sn	02 32 15.1	+3.2
EFP	**Efpalio**	2.16	156	P	Pn	02 31 47.5	+2.1
NEO	**Neokhori**	2.18	120	P	Pn	02 31 46.6	+1.0
NEO	**Neokhori**	2.18	120	P	Pn	02 31 46.7	+1.0
AXAR	**Agios Charalam**	2.19	138	P	Pn	02 31 47.6	+1.8
AXAR	**Agios Charalam**	2.19	138	P	Pn	02 31 47.6	+1.8
DMLN	**Damoulianata-K**	2.19	188	P	Pn	02 31 48.2	+2.3
SERG	**Sergoula**	2.23	153	P	Pb	02 31 49.5	-0.1
SERG	**Sergoula**	2.23	153	P	Pb	02 31 49.1	-0.5
VLS	**Valsamata**	2.24	184	P	Pn	02 31 47.7	+1.3
VLS	**Valsamata**	2.24	184	P	Pn	02 31 47.9	+1.4
MESG	**Mesagne**	2.25	275	P	Pn	02 31 48.0	+1.4
SRS	**Serrai**	2.25	71	P	Pn	02 31 47.2	+0.6
SRS	**Serrai**	2.25	71	*i* Pn	Pn	02 31 47.4	+0.8
SRS	**Serrai**	2.25	71	P	Pn	02 31 47.1	+0.5
AXS	**Araxos**	2.26	168	P	Pb	02 31 50.0	-0.1
PAIG	**Paliouri**	2.27	101	P	Pn	02 31 47.2	+0.3
KALE	**Kalithea**	2.27	152	P	Pb	02 31 50.6	+0.1
KKB	**Krupnik**	2.27	50	⇓*i*Pn	Pn	02 31 48.7	+1.7
KKB				*i* Sn	Sn	02 32 18.4	+3.2
PSDA	**Pessada-Kefalo**	2.30	184	P	Pn	02 31 49.0	+1.7
PDG	**Podgorica**	2.32	331	*e*Pn	Pn	02 31 48.7	+1.1
PDG	**Podgorica**	2.32	331	⇑P	Pn	02 31 48.9	+1.3
PDG	**Podgorica**	2.32	331	*e*Pn	Pn	02 31 49.1	+1.5
PDG	**Podgorica**	2.32	331	⇑*i*Pn	Pn	02 31 49.0	+1.3
PDG				*i* Sn	Sn	02 32 18.5	+2.2
RTZL	**Ratzakli, Kefa**	2.33	180	P	Pn	02 31 49.8	+2.0
BUM	**Brajici-Budva**	2.36	324	P	Pn	02 31 49.2	+0.9
BUM	**Brajici-Budva**	2.36	324	⇓*i*Pn	Pn	02 31 49.3	+1.0
BUM				*i* Sn	Sn	02 32 20.8	+3.4
BOSS	**Bosilegrad**	2.44	31	*e*Pn	Pn	02 31 50.0	+0.7
OUR	**Ouranopolis**	2.44	91	P	Pn	02 31 50.4	+1.2
KOKK	**Kokkinochori,**	2.48	80	P	Pn	02 31 50.6	+0.8
MMB	**Musomishta**	2.52	62	P	Pn	02 31 51.5	+1.2
MMB	**Musomishta**	2.52	62	*i* Pn	Pn	02 31 52.3	+2.0
MMB				*i* Sn	Sn	02 32 23.9	+2.8
BARS	**Barje**	2.52	17	*i* Pn	Pn	02 31 51.0	+0.6
BARS	**Barje**	2.52	17	*e*Pn	Pn	02 31 51.1	+0.7
BEY	**Berane**	2.55	345	P	Pn	02 31 54.0	+3.2
BEY	**Berane**	2.55	345	*i* Pn	Pb	02 31 54.8	-0.4
IVA	**Berane**	2.55	345	⇓*i*Pn	Pn	02 31 52.3	+1.5
IVA				*i* Sn	Sn	02 32 25.2	+3.2
CEME	**Cevo**	2.55	327	P	Pn	02 31 51.9	+1.0
CEME	**Cevo**	2.55	327	⇑*i*Pn	Pn	02 31 51.3	+0.4
CEME				*i* Sn	Sn	02 32 25.8	+3.7
KOME	**Kolasin**	2.62	339	⇓*i*Pn	Pn	02 31 52.8	+1.0
KOME				*i* Sn	Sn	02 32 26.9	+3.2
HCY	**Herceg Novi**	2.67	320	*e*Pn	Pn	02 31 52.1	-0.2
SELS	**Selova**	2.82	5	*e*Pn	Pn	02 31 56.0	+1.5
NOCI	**Noci**	2.86	279	P	Pn	02 31 55.1	+0.1
VTS	**Vitosha**	2.87	39	*e*Pn	Pn	02 31 57.5	+2.2
SJES	**Sjenica**	2.91	348	*e*Pn	Pn	02 31 57.6	+1.8
SJES	**Sjenica**	2.91	348	*e*Pn	Pn	02 31 56.9	+1.1
TREB	**Trebinje**	2.94	322	*e*Pn	Pn	02 31 54.1	-2.0
BRY	**Bratogost**	3.00	327	P	Pn	02 31 58.7	+1.5
BRY	**Bratogost**	3.00	327	*e*Pn	Pn	02 31 57.7	+0.6
BRY	**Bratogost**	3.00	327	⇓*i*Pn	Pn	02 31 58.5	+1.4
BRY				*i* Sn	Sn	02 32 35.8	+2.5
PLE	**Pljevlja**	3.10	341	P	Pn	02 32 01.2	+2.8
PLE	**Pljevlja**	3.10	341	⇑*i*Pn	Pn	02 31 59.2	+0.8
PLE				*i* Sn	Sn	02 32 38.5	+2.9
MATE	**Matera**	3.12	276	⇑P	Pn	02 32 00.5	+1.9
UPM	**Unac-Piva**	3.12	334	*e*Pn	Pn	02 32 00.5	+1.7
UPM	**Unac-Piva**	3.12	334	⇑*i*Pn	Pn	02 32 00.0	+1.2
UPM				*i* Sn	Sn	02 32 39.1	+2.8
GOCS	**Kraljevo Serbi**	3.15	1	*e*Pn	Pn	02 32 02.1	+3.0
ZAPS	**Zavoj**	3.18	25	*e*Pn	Pn	02 32 01.0	+1.6
IVAS	**Ivanjica**	3.20	352	*e*Pn	Pn	02 32 00.9	+1.2
BOVS	**Bovan**	3.29	12	⇓P	Pn	02 32 01.4	+0.4
BOVS	**Bovan**	3.29	12	*e*Pn	Pn	02 32 01.4	+0.4
TIP	**Timpagrande**	3.34	250	⇑P	Pn	02 32 04.1	+2.5
RUDO	**Rudo**	3.37	342	*e*Pn	Pn	02 32 02.8	+0.7
STON	**Ston**	3.37	318	*e*Pn	Pn	02 32 01.6	-0.5
STON	**Ston**	3.37	318	*e*Pn	Pn	02 32 02.2	+0.1
GRUS	**Gruza**	3.48	359	*e*Pn	Pn	02 32 05.4	+1.9
ZAGS	**Zajecar**	3.57	17	*e*Pn	Pn	02 32 06.4	+1.7
BBLS	**Lazi&#263i**	3.60	344	*e*Pn	Pn	02 32 05.7	+0.4
DIVS	**Divibare**	3.73	351	*e*Pn	Pn	02 32 08.6	+1.5
TRUS	**Trudelj**	3.82	356	*e*Pn	Pn	02 32 08.9	+0.7
HAPS	**Han Pijesak,Bl**	3.92	340	*e*Pn	Pn	02 32 10.5	+0.9
HAPS	**Han Pijesak,Bl**	3.92	340	*e*Pn	Pn	02 32 11.0	+1.4
SGRT	**San Giovanni R**	4.04	291	P	Pn	02 32 12.2	+0.8
KUBS	**Kucevo**	4.05	9	*e*Pn	Pn	02 32 10.7	-0.7
TEKS	**Tekeris**	4.24	348	*e*Pn	Pn	02 32 14.8	+0.8
TEKS	**Tekeris**	4.24	348	*e*Pn	Pn	02 32 14.7	+0.8
AVAS	**Avala Beograd**	4.29	357	*e*Pn	Pn	02 32 14.5	-0.1
MDVR	**Moldovita**	4.42	9	⇓P	Pn	02 32 17.7	+1.2
VRSS	**Vrsac**	4.73	5	*e*Pn	Pn	02 32 20.0	-0.7
FRGS	**Fruska Gora**	4.80	352	*e*Pn	Pn	02 32 21.6	-0.1
BLY	**Banja Luka**	5.08	330	*e*Pn	Pn	02 32 26.0	+0.4
A050A	**Klekovaca**	5.14	324	*e*Pn	Pn	02 32 26.6	+0.1
BZS	**Buzias**	5.24	6	⇑P	Pn	02 32 29.4	+1.7
BZS	**Buzias**	5.24	6	*e*Pn	Pn	02 32 28.9	+1.2
A051A	**Mrakovica**	5.41	329	*e*Pn	Pn	02 32 30.6	+0.4
SURR	**Surduc**	5.43	10	⇓P	Pn	02 32 32.3	+2.0
MORH	**Mrgy, Hungar**	6.01	346	⇑P	Pn	02 32 38.3	+0.1
IDI	**Anoyia**	6.06	146	Pn	Pn	02 32 39.5	+0.4
	comp=E,6.0nm,1.0s,baz=338,slow=14,SNR=1.8						
IDI				Sn	Sn	02 33 47.5	-1.0
	comp=E,1.1nm,0.3s,baz=277,slow=22,SNR=6.5						
MLR	**Muntele Rosu**	6.33	35	Pn	Pn	02 32 45.5	+2.7
	comp=E,0.3nm,0.3s,baz=282,slow=9.3,SNR=4.8						
	comp=E,0.9nm,0.4s						
MLR	**Muntele Rosu**	6.33	35	⇑P	Pn	02 32 45.8	+3.0
BOJS	**Bojanci**	6.51	323	*e*Pn	Pn	02 32 44.7	-0.4
BOJS	**Bojanci**	6.51	323	*e*Pn	Pn	02 32 44.9	-0.2
BOJS	**Bojanci**	6.51	323	*e*Pn	Pn	02 32 44.9	-0.2
CRES	**Cresnjevec Ost**	6.67	326	*e*Pn	Pn	02 32 46.6	-0.7
VRI	**Vrincioaia**	6.97	37	⇑P	Pn	02 32 54.7	+3.2
CEY	**Cerknica**	7.07	321	*e*Pn	Pn	02 32 52.4	-0.4
CEY	**Cerknica**	7.07	321	*e*Pn	Pn	02 32 52.5	-0.4
CEY	**Cerknica**	7.07	321	*e*Pn	Pn	02 32 52.5	-0.4
PERS	**Pernice**	7.46	328	*e*Pn	Pn	02 32 58.3	0.0
SOKA	**Soboth**	7.53	328	*i* Pn	Pn	02 32 59.3	+0.1
	comp=E,1.3nm,0.4s						
PSZ	**Piszkesteto**	7.53	355	⇓P	Pn	02 33 01.0	+1.8
OBKA	**Obir**	7.60	325	*e*Pn	Pn	02 32 58.9	-1.2
OBKA	**Obir**	7.60	325	*e*Pn	Pn	02 33 01.6	+1.5
	comp=E,0.5nm,0.3s						
ARSA	**Arzberg**	7.82	333	*e*Pn	Pn	02 33 03.6	+0.4
	comp=E,0.8nm,0.3s						
ARSA	**Arzberg**	7.82	333	*e*Pn	Pn	02 33 04.2	+1.0
KECS	**Kecovo**	8.07	359	*e*PN	Pn	02 33 12.1	+5.5
MYKA	**Terra Mystica**	8.10	323	*e*Pn	Pn	02 33 07.3	+0.3
	comp=E,0.3nm,0.2s						
VYHS	**Vyhne**	8.20	351	*e*PN	Pn	02 33 16.9	+8.5
VYHS				*e*SN	Sn	02 34 44.1	+3.0
ABTA	**Abfaltersbach**	8.72	319	*e*Pn	Pn	02 33 16.9	+1.3
	comp=E,2.3nm,0.6s						
MOA	**Molln**	8.79	330	*e*Pn	Pn	02 33 17.8	+1.4
	comp=E,0.2nm,0.2s						
LESA	**Schwarzleotal**	9.13	323	*e*Pn	Pn	02 33 21.1	-0.1
	comp=E,0.3nm,0.2s						
VRAC	**Vranov**	9.38	343	LR	LR	02 37 16.1	
	comp=E,30nm,21.6s,baz=168,slow=39						
WTTA	**Wattenberg**	9.51	319	*e*Pn	Pn	02 33 26.7	+0.1
	comp=E,1.0nm,0.3s						
WATA	**Walderalm**	9.59	319	*e*Pn	Pn	02 33 28.2	+0.7
	comp=E,4.1nm,0.5s						
SQTA	**Sankt Quirin**	9.70	318	*e*Pn	Pn	02 33 29.9	+0.9
	comp=E,0.9nm,0.3s						
GERES	**GERESS Array B**	9.82	331	Pn	Pn	02 33 31.2	+0.6
	baz=150,slow=12,SNR=8.2						
	comp=E,0.5nm,0.5s						
FETA	**Feichten**	9.82	316	*e*Pn	Pn	02 33 31.6	+0.8
	comp=E,1.1nm,0.6s						
MOTA	**Moosalm**	9.84	318	*e*Pn	Pn	02 33 31.1	+0.1
	comp=E,4.0nm,0.7s						
DAVOX	**Davos/Dischmat**	10.15	312	Pn	Pn	02 33 33.5	-1.8
	comp=E,0.3nm,0.3s,baz=103,slow=13,SNR=6.4						
DAVOX				LR	LR	02 38 47.1	
	comp=E,36nm,18.8s,baz=82,slow=46						
	comp=E,1.4nm,0.5s						
ESDC	**Sonseca Array**	18.95	276	P	P	02 35 28.8	-1.9
	comp=E,0.3nm,0.9s,baz=91,slow=12,SNR=2.3						
HFS	**Hagfors**	20.24	350	P	P	02 35 42.6	-1.8
	comp=E,1.3nm,0.6s,baz=155,slow=11,SNR=7.3						
	comp=E,1.3nm,0.6s						
FINES	**FINESS Array B**	21.31	7	P	P	02 35 55.6	-0.4
	comp=E,1.7nm,0.8s,baz=170,slow=9.6,SNR=6.9						
	comp=E,1.7nm,0.8s						
NB2	**NORSAR Subarra**	21.48	347	P	P	02 35 59.6	+1.7
	comp=Z,0.5nm,0.6s,baz=153,slow=11						
NOA	**NORSAR Array B**	21.48	347	P	P	02 35 56.7	-1.2
	comp=Z,0.2nm,0.5s,baz=162,slow=11,SNR=3.4						
NOA				LR	LR	02 44 07.0	
	comp=Z,9.4nm,19.4s,baz=5.0,slow=36						
	comp=Z,0.2nm,0.5s						
EKA	**Eskdalemuir Ar**	21.77	321	P	P	02 35 59.2	-1.8
	comp=Z,0.7nm,0.7s,baz=127,slow=10,SNR=2.0						
	comp=Z,0.7nm,0.7s						
ARCES	**ARCESS Array B**	29.29	3	P	P	02 37 09.7	-1.9
	comp=Z,1.9nm,0.8s,baz=184,slow=9.5,SNR=1.2						
	comp=Z,1.9nm,0.8s						
TORD	**Torodi Ar. Bea**	31.91	217	P	P	02 37 32.6	-2.6
	comp=Z,0.7nm,0.3s,baz=32,slow=9.9,SNR=3.0						
	comp=Z,0.7nm,0.3s						
MKAR	**Makanchi Array**	43.99	60	P	P	02 39 15.5	-1.3
	comp=Z,0.3nm,0.6s,baz=286,slow=8.7,SNR=3.6						
	comp=Z,0.3nm,0.6s						
ASAR	**Alice Springs**	122.18	95	PKP	PKPdf	02 50 03.5	-1.1
	comp=Z,0.2nm,0.5s,baz=297,slow=0.8,SNR=4.1						

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*NEIC **02** 02:38:51.2±2.0, 23°.6S±0°.1×171°.55E±0°.10, h10^{km}±1^{km}, mb4.7/10, Error ellipse: s-maj=24.2km s-min=14.5km az=172.0*

*IDC **02** 02:39:00.6±2.0, 22°.30S×171°.21E, h98^{km}±18^{km}, mb3.7/7, mbtmp4.1/9, MS3.2/1, Error ellipse: s-maj=25.5km s-min=15.0km az=178.0*

*NOU **02** 02:39:14.1, 22°.24S×169°.90E, h0^{km}, MLv4.4/7, Southeast of Loyalty Islands*

ISC 02 02:39:00.9±0.6**, 22°.4S**±0°.1×**171°.22E**±0°.07**, h100**^{km}**, n34,** σ**1**^{s}**14**/30**, mb4.2**/11**, 1D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INH	**Isangel**	3.38	327	P	Pn	02 39 59.2	+7.4
PINNC	**Pines Island,**	3.50	266		Pn	02 39 54.1	+0.8
PINNC	**Pines Island,**	3.50	266	P	Pn	02 39 54.2	+0.9
YATNC	**Mamie plateau,**	4.03	274	P	Pn	02 39 59.3	-1.2
OUENC	**Ouen Island, N**	4.05	269	P	Pn	02 40 00.2	-0.6
ONTNC	**Ouen Toro**	4.41	270		Pn	02 40 04.6	-1.0
ONTNC	**Ouen Toro**	4.41	270	P	Pn	02 40 04.7	-1.0
DZM	**Mont Dzumac**	4.44	273	P	Pn	02 40 05.8	-0.3
	78nm,0.3s,baz=116,slow=4.7,SNR=160						
DZM				S	Sn	02 40 55.4	-1.4
	114nm,0.5s,baz=64,slow=19,SNR=3.7						
DZM	**Mont Dzumac**	4.44	273	P	Pn	02 40 05.5	-0.6
KOUNC	**Koumac, New Ca**	6.72	285	P	Pn	02 40 37.8	+0.8
MSVF	**Nonsavu**	7.93	55		Pn	02 40 54.5	+1.0
MSVF	**Nonsavu**	7.93	55	P	Pn	02 40 53.3	-0.2
	11nm,0.9s,baz=224,slow=8.9,SNR=9.0						
RAO	**Raoul Island**	11.92	127	P	Pn	02 41 48.0	+0.5
	322nm,0.3s,baz=69,slow=20,SNR=2.1						
URZ	**Urewera**	16.59	164	LR	LR	02 47 29.9	
	comp=Z,79nm,20.7s,baz=54,slow=30						
EIDS	**Eidsvold**	18.65	257	P	Pn	02 43 14.0	+1.5
SNZO	**South Karori**	19.07	172		P	02 42 59.4	-16
CTAO	**Charters Tower**	23.38	271	P	P	02 44 02.5	+1.6
CTAO				IAmb	IAmb	02 44 34.5	
	comp=Z,20nm,1.2s						
STKA	**Stephens Creek**	27.92	244	P	P	02 44 43.3	+1.5
	comp=Z,1.6nm,0.5s,baz=75,slow=12,SNR=4.2						
	comp=Z,1.6nm,0.5s						
AS31	**Alice Springs**	34.30	261	P	P	02 45 38.6	+0.6
AS31				IAmb	IAmb	02 45 39.7	
	comp=Z,3.7nm,0.7s						
ASAR	**Alice Springs**	34.30	261	P	P	02 45 38.6	+0.7
	comp=Z,8.7nm,0.7s,baz=81,slow=9.3,SNR=80						
	comp=Z,8.7nm,0.7s						
WB0	**Warramunga Arr**	34.41	267	P	P	02 45 38.5	-0.5
WB0				IAmb	IAmb	02 45 43.7	
	comp=Z,19nm,1.4s						
WRA	**Warramunga Arr**	34.42	267	P	P	02 45 38.8	-0.3
	comp=Z,1.2nm,0.4s,baz=98,slow=8.4,SNR=6.0						
	comp=Z,1.2nm,0.4s						
MTN	**Manton Dam**	39.27	277	P	P	02 46 20.5	+0.3
FITZ	**Fitzroy Crossi**	42.85	267	P	P	02 46 50.8	+1.3
MBWA	**Marble Bar**	47.64	261	P	P	02 47 27.0	-0.3
VNDA	**Vanda**	55.35	182	P	P	02 48 24.8	+0.9
	comp=Z,0.3nm,0.7s,baz=317,slow=8.8,SNR=2.0						
	comp=Z,0.3nm,0.7s						
QSPA	**South Pole Qui**	67.66	180	P	P	02 49 43.0	-4.1
QSPA				IAmb	IAmb	02 50 12.1	
	comp=Z,6.6nm,1.5s						
QSPA	**South Pole Qui**	67.66	180	P	P	02 49 47.4	+0.3
	comp=Z,1.3nm,0.7s,baz=342,slow=0.7,SNR=7.1						
	comp=Z,1.3nm,0.7s						
SMAI	**San Martin Ant**	80.25	161	P	P	02 50 54.7	-5.5
SMAI				IAmb	IAmb	02 50 58.6	
	comp=Z,11nm,0.7s						
SYO	**Syowa Base**	82.41	196	⇓*e*P	P	02 51 08.2	-3.4
SNAA	**Sanae**	86.08	182	P	P	02 51 29.7	-0.5
	comp=Z,1.1nm,1.0s,baz=25,slow=7.3,SNR=2.0						
	comp=Z,1.1nm,1.0s						
NVAR	**Mina Array Bea**	89.53	48	P	P	02 51 46.8	-0.6
	comp=Z,0.2nm,0.6s,baz=219,slow=2.6,SNR=1.8						
	comp=Z,0.2nm,0.6s						
EKA	**Eskdalemuir Ar**	146.85	354	PKPbc	PKPdf	02 58 30.0	+0.8
	comp=Z,0.5nm,0.6s,baz=13,slow=1.6,SNR=2.1						
GERES	**GERESS Array B**	148.15	331	PKPbc	PKPbc	02 58 33.7	-1.4
	comp=Z,0.6nm,0.8s,baz=42,slow=2.2,SNR=6.0						

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*JMA **02** 02:47:10.1±0.6, 45°N±2°×14°9E±°, h30^{km}, MV3.5/13, SE OFF ETOROFU*

*SKHL **02** 02:47:12.7±0.1, 44°.40N×148°.80E, h31^{km}±8^{km}, mb4.3/3*

ISC 02 02:47:11.3±3.9**, 44°.33N**±0°.10×**148°.9E**±0°.2**, h35**^{km}**, n15,** σ**1**^{s}**17**/22**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	1.18	321	*e*P	Pn	02 47 31.3	0.0
KUR				AMB	AMB	02 47 32.6	
	80nm,0.2s						
KUR				*e*S	Sn	02 47 45.3	-0.8
KUR				A	A	02 47 49.7	
	490nm,0.2s						
KUR				A	A	02 47 49.7	
	280nm,0.2s						
SHO	**Shikotan**	1.58	254	*e*P	Pn	02 47 37.2	+0.4
SHO				AMB	AMB	02 47 37.6	
	20nm,0.3s						
SHO				*e*S	Sn	02 47 55.5	-0.5
SHO				A	A	02 47 57.1	
	130nm,0.3s						
SHO				A	A	02 47 57.1	
	140nm,0.3s						
YUK	**Yuzh-Kuril'sk**	2.23	264	*e*P	Pn	02 47 46.8	+1.1
YUK				AMB	AMB	02 47 49.2	
	70nm,0.2s						
YUK				*e*S	Sn	02 48 12.3	+0.4
YUK				A	A	02 48 19.3	
	290nm,0.3s						
YUK				A	A	02 48 19.3	
	300nm,0.3s						
NEM2	**Nemuro 2**	2.50	248	*e*P	Pn	02 47 49.0	-0.4
NEM2				*e*S	Sn	02 48 17.5	-1.1
NMR	**Nemuro--Hokkai**	2.51	249	*e*P	Pn	02 47 50.1	+0.6
NMR				*e*S	Sn	02 48 18.8	0.0
JRA	**Rausu**	2.77	263	*e*P	Pn	02 47 54.0	+0.9
JNK	**Nakash**	3.13	258	*e*S	Sn	02 48 33.8	-0.5
AKK	**Akkeshi**	3.24	248	*e*P	Pn	02 48 01.9	+2.3
JAK	**Akkeshi**	3.35	248	*e*P	Pn	02 48 00.6	-0.5
JAK				*e*S	Sn	02 48 37.9	-1.6
JTKR	**Abashiri--Toko**	3.63	266	*e*P	Pn	02 48 06.1	+1.1
JAR	**Ashorobuto**	3.87	256	*e*P	Pn	02 48 10.1	+1.7
JAR				*e*S	Sn	02 48 53.0	+0.4
JOB	**Onbets**	3.96	251	*e*S	Sn	02 48 53.9	-0.9
JCH	**Churui**	4.40	249	*e*P	Pn	02 48 15.6	+0.1
JCH				*e*S	Sn	02 49 02.8	-2.7
JNBK	**Urakawa-nobuka**	4.95	248	*e*P	Pn	02 48 23.7	+0.6
JANG	**Nango**	6.76	237	*e*S	Sn	02 49 56.2	-7.6

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*SLM **02** 03:02:30.2±0.4, 36°.528N±0°.007×89°.57W±0°.01, h8^{km}±1^{km}, Error ellipse: s-maj=1.2km s-min=1.1km az=122.0*

NEIC 02 03:02:30.8±0.4**, 36°.529N**±0°.003×**89°.57W**±0°.01**, h5**^{km}±1^{km}**, ML2.0**/24**, Md2.5**/37(SLM)**, Error ellipse: s-maj=2.8km s-min=1.7km az=69.0, New Madrid region, Missouri**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WALK	**Watson Lake**	0.02	66		Pg	03 02 31.8	+0.1
NMEM	**New Madrid Sch**	0.05	344		Pg	03 02 32.1	+0.1
NMMO	**New Madrid**	0.06	14		Pg	03 02 32.3	+0.1
MARMO	**Marston**	0.08	270		Pg	03 02 32.6	0.0
MARMO					Sg	03 02 34.5	+0.8
PENMO	**Penman**	0.09	211		Pg	03 02 32.6	-0.1
PENMO					Sg	03 02 34.7	+0.7
CATM	**Catron**	0.10	323		Pg	03 02 33.0	+0.1
CATM					Sg	03 02 35.3	+0.9
SJMO	**Saint John’s B**	0.12	37		Pg	03 02 33.3	-0.1
SJMO					Sg	03 02 35.8	+0.8
PPLM	**Point Pleasant**	0.13	185		Pg	03 02 33.3	-0.1
PPLM					Sg	03 02 35.7	+0.7
POBM	**Portage Bay**	0.14	212		Pg	03 02 33.5	-0.1
POBM					Sg	03 02 36.2	+0.7
PGVM	**Portageville**	0.15	242		Pg	03 02 33.6	-0.1
PGVM					Sg	03 02 36.2	+0.6
PVMO	**Portageville**	0.16	222	Pg	Pg	03 02 33.7	-0.2
PVMO	**Portageville**	0.16	222		Sg	03 02 36.6	+0.6
KEWM	**Kewanee**	0.17	354		Pg	03 02 34.0	-0.1
KEWM					Sg	03 02 37.0	+0.6
WYBT	**Wynnburg**	0.19	162		Pg	03 02 34.4	-0.1
WYBT					Sg	03 02 37.8	+0.8
PARMO	**Parma**	0.20	312		Pg	03 02 34.7	0.0
PARMO				IAML		03 02 38.1	
	comp=E,250nm,0.1s						
PARMO				IAML		03 02 38.1	
	comp=N,305nm,0.1s						
HENM	**Henderson Moun**	0.20	23		Pg	03 02 34.5	-0.2
HENM					Sg	03 02 37.9	+0.5
COKM	**Charter Oak**	0.22	325		Pg	03 02 35.0	-0.1
COKM					Sg	03 02 38.5	+0.5
FLPT	**Flippin**	0.23	121		Pg	03 02 35.2	-0.2
FLPT					Sg	03 02 39.1	+0.7
WADM	**Wardell**	0.24	228		Pg	03 02 35.3	-0.2
WADM					Sg	03 02 39.4	+0.6
MATM	**Matthews**	0.25	353		Sg	03 02 39.3	+0.4
EPRM	**East Prairie**	0.25	42		Pg	03 02 35.4	-0.3
EPRM					Sg	03 02 39.5	+0.4
TOPM	**Tallapoosa**	0.26	269		Pg	03 02 35.5	-0.3
DWDM	**Dogwood**	0.27	13		Pg	03 02 35.9	-0.2
DWDM					Sg	03 02 40.1	+0.4
HICK	**Hickman**	0.28	88		Pg	03 02 35.9	-0.2
HICK				IAML		03 02 44.9	
	comp=N,257nm,0.2s						
MLDM	**Malden**	0.30	289		Pg	03 02 36.3	-0.3
GLAT	**Glass**	0.34	139		Pg	03 02 37.1	-0.3
GLAT					Sg	03 02 42.5	+0.5
GLAT	**Glass**	0.34	139	IAML		03 02 42.6	
	comp=E,129nm,0.2s						
GLAT				IAML		03 02 42.6	
	comp=N,128nm,0.3s						
CHRM	**Charleston**	0.36	27		Pg	03 02 37.4	-0.4
BRNM	**Bernie**	0.40	299		Pg	03 02 38.0	-0.4
BRGM	**Braggadocio**	0.40	216		Pg	03 02 38.1	-0.3
LNXT	**Lenox**	0.43	172		Pg	03 02 39.0	-0.1
PEBM	**Pemiscott Bayo**	0.48	210		Pg	03 02 39.6	-0.4
PEBM	**Pemiscott Bayo**	0.48	210	IAML		03 02 51.5	
	comp=E,83nm,0.7s						
FMKY	**Fulgham**	0.55	76		Pg	03 02 40.7	-0.6
GNAR	**Gosnell**	0.67	213		Pg	03 02 43.3	-0.3
GNAR	**Gosnell**	0.67	213	IAML		03 02 55.6	
	comp=E,66nm,0.4s						
PBMO	**Poplar Bluff**	0.73	290		Pg	03 02 44.0	-0.8
CGM3	**Cape Girardeau**	0.77	355		Sg	03 02 54.8	-0.7
CGM3				IAML		03 03 00.1	
	comp=N,64nm,0.1s						
CGM3	**Cape Girardeau**	0.77	355		Pg	03 02 44.9	-0.6
T45A	**Paducah**	0.89	56	Pg	Pg	03 02 46.9	-0.9
T45A				IAML		03 03 00.8	
	comp=N,47nm,0.5s						
T45A				IAML		03 03 05.0	
	comp=N,50nm,0.4s						
LPAR	**Lepanto**	1.10	213		Pg	03 02 51.1	-0.8
HBAR	**Harrisburg**	1.31	223		Pn	03 02 54.4	-1.3
T42A	**Van Buren**	1.32	293		Pn	03 02 54.1	-1.8
T42A				IAML		03 03 13.4	
	comp=N,28nm,0.2s						
T42A				IAML		03 03 13.8	
	comp=N,28nm,0.1s						
LCAR	**Lake Charles**	1.36	251		Pn	03 02 54.7	-1.7
FVM	**French Village**	1.60	335		Pn	03 02 59.7	-0.1
FCAR	**Ozark Folk Cen**	2.16	254		Pn	03 03 07.3	-0.1

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*MOS **02** 03:03:05.6±0.9, 0°.70N×98°.53E, h32^{km}, mb5.9/81, MS4.4/13, Error ellipse: s-maj=6.7km s-min=3.4km az=117.2*

*BJI **02** 03:03:06.6, 0°.38N×98°.49E, h60^{km}, mB5.5/57, mb5.6/94, Ms4.8/98, Ms7 4.6/93*

*NEIC **02** 03:03:08.2, 0°.65N×98°.45E, h30^{km}*

*DJA **02** 03:03:09.5±0.2, 1°N±1°×9°8E±°, h47^{km}±2^{km}, M5.3/107, mb5.5/107, mB5.8/61, MLv5.8/19, Mw(mB)5.4/61, MwMwp5.0/16, Mwp5.3/16*

*NEIC **02** 03:03:09.6±2.5, 0°.65N±0°.06×98°.45E±0°.05, h43^{km}±1^{km}, mb5.6/302, Mwb5.3/21, Mww5.4/16, Error ellipse: s-maj=11.5km s-min=8.2km az=213.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.45; $M_{\theta\theta}$-0.23; $M_{\phi\phi}$0.68; $M_{r\theta}$-0.65; $M_{\theta\phi}$0.42; $M_{\phi r}$-0.71; Fault plane solution: $M_0$1.21000×10^{17} NP1:ϕ_s167.04000°, δ25.20000°, λ-144.06000°. NP2:ϕ_s43.78000°, δ75.53000°, λ-69.14000°. Principal axes: T 1.3152, Plg28.0000°, Azm117.0000°; N -0.2634, Plg20.0000°, Azm218.0000°; P -1.0518, Plg55.0000°, Azm340.0000°;*

*IDC **02** 03:03:09.3±0.5, 0°.60N×98°.50E, h51^{km}±3^{km}, mb5.1/41, mbtmp5.3/45, MS4.3/71 Error ellipse: s-maj=10.3km s-min=7.6km az=73.0*

*BGR **02** 03:03:10.8, 0°.52N×97°.37E, h33^{km}, mb5.8, mB_BB5.9, Ms4.3*

*GCMT **02** 03:03:11.2±0.1, 0°.65N±0°.01×98°.46E±0°.01, h43^{km}±1^{km}, MW5.3/135, Moment Tensor Solution. s111,c171; s135,c274; Duration: 1s.1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.29±.02; $M_{\theta\theta}$-0.25±.01; $M_{\phi\phi}$0.53±.01; $M_{r\theta}$-0.79±.02; $M_{\theta\phi}$0.17±.01; $M_{\phi r}$-0.68±.02; Best double couple: $M_0$1.15100×10^{17} NP1:ϕ_s156.00000°, δ22.00000°, λ-159.00000°. NP2:ϕ_s46.00000°, δ82.00000°, λ-69.00000°. Principal axes: T 1.1560, Plg34.0000°, Azm119.0000°; N -0.0100, Plg20.0000°, Azm223.0000°; P -1.1460, Plg49.0000°, Azm338.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 03:03:09.3±0.3, **0°.61N**±0°.03×**98°.46E**±0°.03, **h51**^{km}±1^{km}, **h52**^{km}**:pP-P, n1407,** σ**1s.27**/1395, **mb5.6**/372, **MS4.5**/116, **40C-121D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	1.12	308		Pn	03 03 29.7	+1.0
GSI	Gunungsitoli	1.12	308	P	Pn	03 03 30.1	+1.4
GSI	Gunungsitoli	1.12	308	P	Pn	03 03 29.5	+0.8
MNSI	Mandailing Nat	1.14	81	P	Pn	03 03 30.2	+1.3
SISI	Saibi	2.03	162	P	Pn	03 03 41.2	+0.1
RPSI	Rantau Prapat	2.12	13		Pn	03 03 44.3	+2.0
PPI	Padang Panjang	2.21	119	P	Pn	03 03 45.8	+2.2
PSI	Prapat	2.22	12	P	Pn	03 03 43.8	0.0
	822nm,0.3s,baz=257,slow=3.6,SNR=786						
PSI				S	Sn	03 04 04.2	-5.9
	3µm,0.7s,baz=133,slow=16,SNR=15						
PSI				LR	LR	03 04 12.3	
	comp=Z,2µm,19.3s,baz=232,slow=30						
PSI	Prapat	2.22	12	P	Pn	03 03 44.7	+0.9
PSI	Prapat	2.22	12	S	Sn	03 04 08.9	-1.3
BKNI	Bangkinang	2.60	96		Pn	03 03 50.5	+1.6
BKNI	Bangkinang	2.60	96	P	Pn	03 03 50.9	+2.0
BKNI	Bangkinang	2.60	96	P	Pn	03 03 50.2	+1.3
TSI	Tuntungan	2.87	2	P	Pn	03 03 54.7	+2.1
LHMI	Lhok Sumawe	4.83	342		Pn	03 04 19.9	+0.4
LHMI	Lhok Sumawe	4.83	342	P	Pn	03 04 21.0	+1.5
LHMI	Lhok Sumawe	4.83	342	P	Pn	03 04 20.2	+0.7
KULM	Kulim	5.13	25		Pn	03 04 26.0	+2.3
KULM	Kulim	5.13	25	P	Pn	03 04 25.6	+1.9
MYKOM	Kota Tinggi	5.51	78		Pn	03 04 30.4	+1.5
MYKOM	Kota Tinggi	5.51	78	P	Pn	03 04 31.0	+2.1
BSI	Banda Aceh	5.79	327	P	Pn	03 04 32.1	-0.6
	6.7nm8µm18µm700nm,0.5s						
KSI	Kapahiang	5.92	136	P	Pn	03 04 34.6	+0.1
	9.8nm5µm1µm,0.9s						
MNAI	Manna	6.68	138		Pn	03 04 45.3	+0.4
MNAI	Manna	6.68	138	P	Pn	03 04 45.4	+0.5
MNAI	Manna	6.68	138	P	Pn	03 04 45.0	+0.1
	18µm506nm,0.5s						
PMBI	Palembang	7.22	119	P	Pn	03 04 52.0	-0.4
	4.8nm450nm,1.0s						
MDSI	Maura Dua	7.64	132	P	Pn	03 04 58.5	+0.5
	2.2nm4µm6µm638nm,0.8s						
LWLI	Liwa	7.91	135	P	Pn	03 05 02.1	+0.2
SRIT	Nakonsritamara	8.01	8		Pn	03 05 03.1	-0.1
KASI	Kota Agung	8.57	135	P	Pn	03 05 09.7	-1.2
	3µm277nm,0.5s						
BLSI	Bandar Lampung	9.01	131	P	Pn	03 05 17.5	+0.6
	6µm328nm,0.6s						
TPI	Tanjungpandan	9.78	110	P	Pn	03 05 30.1	+2.7
	4µm7µm661nm,1.2s						
SBJI	Serang	10.17	131	P	Pn	03 05 31.6	-1.1
CGJI	Cibinong	10.18	135	P	Pn	03 05 30.1	-2.8
	6µm304nm,1.0s						
TNG	Tangerang	10.59	130	P	Pn	03 05 38.0	-0.5
TNG				P	Pn	03 05 39.4	+0.9
	462nm,0.7s						
SKJI	Sukabumi	11.07	133	P	Pn	03 05 42.9	-2.2
CNJI	Cibinong	11.69	132	P	Pn	03 05 49.9	-3.7
	2µm270nm,0.6s						
LEM	Lembang	11.75	129	P	Pn	03 05 53.9	-0.6
	101nm,0.6s,baz=242,slow=6.4,SNR=22						
LEM				LR	LR	03 10 44.7	
	comp=Z,3µm,20.5s,baz=306,slow=39						
LEM	Lembang	11.75	129	P	Pn	03 05 54.1	-0.5
	3µm302nm,0.7s						
KSM	Kuching	11.88	86		Pn	03 05 58.2	+2.1
JCJI	Jatiwangi	12.07	126	P	Pn	03 06 00.1	+1.4
COCO	West Island	12.82	187	Pn	Pn	03 06 08.3	-0.7
COCO	West Island	12.82	187	P	Pn	03 06 10.6	+1.6
COCO	West Island	12.82	187	P	Pn	03 06 08.3	-0.7
CMJI	Cimerak	12.99	130	P	Pn	03 06 06.9	-4.4
	4µm329nm,0.6s						
STKI	Sintang	13.03	92	P	Pn	03 06 14.4	+2.6
	10µm516nm,0.9s						
SMRI	Semarang	14.17	123		Pn	03 06 27.4	0.0
SMRI	Semarang	14.17	123	P	Pn	03 06 28.0	+0.6
SMRI	Semarang	14.17	123	P	Pn	03 06 27.6	+0.2
	3µm337nm,0.8s						
YOGI	Yogyakarta	14.47	126	P	Pn	03 06 28.8	-2.5
	201nm,0.7s						
UGM	Wanagama	14.71	125		Pn	03 06 31.1	-3.4
UGM	Wanagama	14.71	125	P	Pn	03 06 31.9	-2.6
WOJI	Wonogiri, Jawa	15.00	124	P	Pn	03 06 35.8	-2.4
	200nm,0.7s						
DLV	Lat	15.02	41	P	Pn	03 06 40.3	+1.6
NGJI	Ngawi	15.20	122	P	Pn	03 06 40.7	-0.1
	245nm,0.8s						
TBJI	Tambak Boyo	15.26	119	P	Pn	03 06 42.6	+0.9
	418nm,0.8s						
PCJI	Pacitan	15.40	125	P	Pn	03 06 39.3	-4.2
	233nm,0.4s						
GRJI	Gresik	15.86	118	P	Pn	03 06 50.0	+0.6
	3µm521nm,0.8s						
UBPT	Khong Chiam	16.13	25	P	Pn	03 06 53.0	+0.3
UBPT				IAmb	IAmb	03 06 54.7	
	comp=Z,324nm,1.0s						
KMMI	Kalianget	17.24	116	P	Pn	03 07 06.4	-0.3
	comp=Z,5µmcomp=Z,527nm,1.0s						
GMJI	Gumukmas	17.35	121	P	Pn	03 07 07.4	-0.6
CM31	Chiang Mai Arr	17.74	2	P	P	03 07 13.0	-0.1
CM31	Chiang Mai Arr	17.74	2	P	Pn	03 07 12.2	-0.5
	SNR=25						
CMAR	Chiang Mai Arr	17.74	2	P	Pn	03 07 11.4	-1.3
CMAR	Chiang Mai Arr	17.74	2	P	Pn	03 07 12.0	-0.8
	comp=Z,23nm,0.5s,baz=192,slow=11,SNR=64						
CMAR	Chiang Mai Arr	17.74	2	*i* P	Pn	03 07 12.0	-0.8
CMAR				pmax	pmax		
	comp=Z,37nm,0.4s						
JAGI	Jajag, Banyuwa	18.06	120	P	P	03 07 14.6	-2.0
JAGI	Jajag, Banyuwa	18.06	120	P	Pn	03 07 17.5	+0.8
JAGI	Jajag, Banyuwa	18.06	120	P	P	03 07 16.0	-0.6
	comp=Z,82nm,0.7s						
CHTO	Chiang Mai	18.09	1	P	P	03 07 15.6	-1.3
CHTO	Chiang Mai	18.09	1	P	P	03 07 16.0	-0.9
CHTO	Chiang Mai	18.09	1	P	P	03 07 16.3	-0.6
CHTO	Chiang Mai	18.09	1	P	P	03 07 15.6	-1.3
CHTO				pmax	pmax		
	comp=Z,30nm,0.7s						
KKM	Kota Kinabalu	18.52	73	P	Pn	03 07 23.1	+0.6
KKM	Kota Kinabalu	18.52	73	P	Pn	03 07 24.3	+1.8
BKB	Balikpapan	18.53	96	P	Pn	03 07 23.5	+1.0
BKB				IAmb	IAmb	03 07 28.0	
	comp=Z,754nm,1.2s						
BKB	Balikpapan	18.53	96	P	Pn	03 07 25.3	+2.8
BKB	Balikpapan	18.53	96	P	Pn	03 07 23.4	+1.0
	comp=Z,7µmcomp=Z,449nm,1.0s						
SMKI	Samarinda	18.78	93	P	Pn	03 07 26.8	+1.3
	comp=Z,185nm,0.7s						
SRBI	Singaraja	18.80	118	P	P	03 07 23.3	-1.5
	comp=Z,3µmcomp=Z,198nm,1.5s						
PALK	Pallekele	18.90	291	P	Pn	03 07 27.9	+1.0
PALK	Pallekele	18.90	291	P	Pn	03 07 28.0	+1.0
	comp=Z,43nm,0.7s,baz=106,slow=10.0,SNR=30						
PALK				S	Sn	03 10 43.1	-15
	comp=Z,75nm,0.6s,baz=344,slow=4.0,SNR=20						
PALK				LR	LR	03 13 51.8	
	comp=Z,2µm,21.1s,baz=104,slow=34						
PALK	Pallekele	18.90	291	P	Pn	03 07 28.4	+1.5
PALK	Pallekele	18.90	291	P	Pn	03 07 27.9	+1.0
PALK				pmax	pmax		
	comp=Z,50nm,0.8s						
MYLDM	Lahad Datu	20.52	77	P	Pn	03 07 45.2	-0.9
MYLDM				IAmb	IAmb	03 07 48.0	
	comp=Z,238nm,1.1s						
MYLDM	Lahad Datu	20.52	77	P	Pn	03 07 45.6	-0.5
TWSI	Taliwang, Sumb	20.57	117	P	P	03 07 43.8	-0.3
	comp=Z,153nm,1.0s						
SLVN	Son La	21.27	14	P	P	03 07 51.1	-0.5
SLVN	Son La	21.27	14	P	P	03 07 51.0	-0.5
PLAI	Plampang	21.41	116	P	P	03 07 49.1	-4.0
	comp=Z,2µmcomp=Z,2µmcomp=Z,124nm,1.3s						
PCI	Palu	21.43	94	P	P	03 07 54.3	+1.0
	comp=Z,5µmcomp=Z,492nm,1.4s						
QIZ	Qiongzhong	21.44	31	P	P	03 07 55.0	+1.7
QIZ				PP	PnPn	03 08 14.2	-1.1
QIZ				S	S	03 11 49.4	+0.8
QIZ				pmax	pmax		
	comp=Z,53nm,0.9s						
QIZ				pmax	pmax		
	comp=Z,200nm,3.0s						
QIZ				LR	LR		
	comp=Z,810nm,15.9s						
QIZ				LR	LR		
	comp=Z,630nm,15.1s						
MPSI	Mapaga	21.44	91	P	P	03 07 54.4	+1.0
	comp=Z,2µmcomp=Z,198nm,1.1s						
TTSI	Tana Toraja	21.66	100	P	P	03 07 57.3	+1.5
	comp=Z,3µmcomp=Z,211nm,1.8s						
SPSI	Sidrap Palu	21.78	102	P	P	03 07 57.6	+0.6
MDRS	Chennai	21.88	305	*e*P	P	03 08 00.2	+2.1
KAPI	Kappang	21.99	105	P	P	03 07 59.7	+0.4
KAPI				IAmb	IAmb	03 08 08.7	
	comp=Z,228nm,1.1s						
KAPI	Kappang	21.99	105	P	P	03 07 59.4	+0.1
	comp=Z,51nm,0.8s,baz=291,slow=8.4,SNR=16						
KAPI				LR	LR	03 18 17.0	
	comp=Z,2µm,18.4s,baz=258,slow=41						
	comp=Z,51nm,0.8s						
KAPI	Kappang	21.99	105	P	P	03 08 00.9	+1.5
KAPI	Kappang	21.99	105	P	P	03 08 00.4	+1.1
KAPI	Kappang	21.99	105	*de*P	P	03 07 58.6	-0.7
KAPI				pmax	pmax		
	comp=Z,70nm,0.6s						
BNSI	Bone	22.20	103	P	P	03 08 01.4	-0.1
	comp=Z,3µmcomp=Z,4µmcomp=Z,298nm,1.4s						
TOLI2	Tolitoli	22.32	89	P	P	03 08 02.8	-0.1
TOLI2				IAmb	IAmb	03 08 10.6	
	comp=Z,454nm,1.6s						
TOLI2	Tolitoli	22.32	89	P	P	03 08 03.8	+0.8
KOD	Kodaikanal	22.96	295	*e*P	P	03 08 11.3	+1.4
KOD				IAmb	IAmb	03 08 13.9	
	comp=Z,102nm,0.6s						
BSSI	Bau Bau, Buton	22.99	107	P	P	03 08 08.4	-1.6
	comp=Z,3µmcomp=Z,288nm,1.0s						
WBSI	Waikabubak, Su	23.20	117	P	P	03 08 07.6	-4.4
	comp=Z,126nm,1.0s						
APSI	Ampana	23.24	94	P	P	03 08 12.4	0.0
	comp=Z,4µmcomp=Z,368nm,1.2s						
MRSI	Marisa	23.48	90	P	P	03 08 14.1	-0.6
	comp=Z,3µmcomp=Z,244nm,0.7s						
VJD	Vijayawada	23.62	313	*e*P	P	03 08 16.9	+1.0
VJD				IAmb	IAmb	03 08 19.3	
	comp=Z,394nm,1.6s						
RAGD	RAYAGADA	23.65	322	*e*P	P	03 08 16.1	-0.1
AZL	Aizawl	23.66	347	*e*P	P	03 08 15.8	-0.6
AZL				IAMb		03 08 25.2	
	comp=Z,168nm,0.7s						
TNCH	TengChong	24.27	0	⇓*i*P	P	03 08 22.5	+0.4
TNCH				pP	pP	03 08 31.3	-3.9
TNCH				PP	PnPn	03 08 57.0	+2.8
TNCH				S	S	03 12 40.1	+2.5
TNCH				pmax	pmax		
	comp=Z,690nm,1.0s						
TNCH				LR	LR		
	comp=Z,1µm,5.3s						
TNCH				LR	LR		
	comp=Z,2µm,5.4s						
TNCH				LR	LR		
	comp=Z,2µm,21.6s						
LUWI	Luwuk	24.37	94	P	P	03 08 22.6	-0.3
LUWI	Luwuk	24.37	94	P	P	03 08 22.8	-0.1
LUWI	Luwuk	24.37	94	P	P	03 08 22.5	-0.3
	comp=Z,6µmcomp=Z,683nm,1.2s						
IMP	Imphal	24.47	350	*e*P	P	03 08 23.1	-0.6
IMP				IAmb	IAmb	03 08 30.2	
	comp=Z,400nm,1.2s						
KMI	Kunming	24.71	9	⇓P	P	03 08 26.8	+0.7
KMI				S	S	03 12 45.9	+1.0
KMI				pmax	pmax		
	comp=Z,47nm,1.2s						
KMI				pmax	pmax		
	comp=Z,630nm,5.0s						
KMI				LR	LR		
	comp=Z,2µm,20.0s						
KMI				LR	LR		
	comp=Z,920nm,16.2s						
KMI				LR	LR		
	comp=Z,2µm,23.5s						
BBSI	Bau Bau	24.83	104	P	P	03 08 27.6	+0.5
	comp=Z,3µmcomp=Z,387nm,1.0s						
EDFI	Ende, Flores	24.95	112	P	P	03 08 28.2	-0.1
	comp=Z,74nm,0.8s						
KOHI	KOHIMA	25.31	351	*e*P	P	03 08 30.9	-0.6
MMRI	Maumere	25.41	112	IAmb	IAmb	03 08 40.9	
	comp=Z,246nm,1.1s						
MMRI	Maumere	25.41	112	P	P	03 08 33.3	+0.9
	comp=Z,210nm,1.2s						
JHSG	JHARSUGUGA	25.43	327	*e*P	P	03 08 33.6	+1.2
JHSG				IAmb	IAmb	03 08 40.7	
	comp=Z,332nm,1.2s						
KMSI	Cibinong	25.52	90	P	P	03 08 36.9	+3.5
HYB	Hyderabad	25.74	312	*e*P	P	03 08 36.2	+0.9
HYB				*e*sP	sP	03 08 52.8	-1.5
HYB				*e*PcP	PcP	03 12 04.7	+0.1
HYB				*e*S	S	03 13 02.4	+1.5
PZH	PanZhiHua	25.93	7	P	P	03 08 37.0	-0.1
PZH				PP	PnPn	03 09 21.5	+4.7
PZH				S	S	03 13 07.8	+3.8
PZH				sS	sS	03 13 28.7	+2.6
PZH				pmax	pmax		
	comp=Z,40nm,1.2s						
PZH				pmax	pmax		
	comp=Z,370nm,6.4s						
PZH				LR	LR		
	comp=Z,1µm,20.1s						
PZH				LR	LR		
	comp=Z,1µm,20.6s						
PZH				LR	LR		
	comp=Z,2µm,21.1s						
HKPS	Hong Kong Po S	26.40	34	P	P	03 08 42.0	+0.8
GZH	Guangzhou	26.61	32	P	P	03 08 49.1	+6.0
GZH				S	S	03 13 24.0	+9.5
GZH				pmax	pmax		
	comp=Z,49nm,1.0s						
GZH				LR	LR		
	comp=Z,1µm,13.6s						
GZH				LR	LR		
	comp=Z,1µm,14.9s						
GZH				LR	LR		
	comp=Z,850nm,12.7s						
BLSP	Bilaspur	26.65	324	*e*P	P	03 08 43.8	+0.2
BLSP				IAMb		03 08 44.9	
	comp=Z,781nm,1.8s						
GYA	Guiyang	26.88	16	⇑P	P	03 08 45.7	+0.1
GYA				S	S	03 13 20.4	+1.4
GYA				pmax	pmax		
	comp=Z,37nm,0.5s						
GYA				pmax	pmax		
	comp=Z,390nm,5.0s						
GYA				LR	LR		
	comp=Z,820nm,18.1s						
GYA				LR	LR		
	comp=Z,990nm,16.0s						
GYA				LR	LR		
	comp=Z,2µm,20.4s						
GULI	GuiLin	27.09	24	P	P	03 08 48.3	+0.9
GULI				S	S	03 13 13.6	-8.5
GULI				pmax	pmax		
	comp=Z,60nm,1.1s						
GULI				pmax	pmax		
	comp=Z,120nm,8.7s						
GULI				LR	LR		
	comp=Z,890nm,21.7s						
GULI				LR	LR		
	comp=Z,510nm,19.5s						
GULI				LR	LR		
	comp=Z,930nm,19.5s						
ZIRO	ZIRO	27.12	351	*e*P	P	03 08 48.0	+0.1
H08S2	Diego Garcia H	27.16	252	T	T	03 36 28.4	
	baz=72,slow=75,SNR=2464						
H08S3	Diego Garcia H	27.17	252	T	T	03 36 28.7	
	baz=72,slow=75,SNR=3276						
H08S1	Diego Carcia H	27.18	252	T	T	03 36 29.8	
	baz=72,slow=75,SNR=3734						
SGSI	Sangihe	27.22	83	P	P	03 08 48.7	0.0
	comp=Z,120nm,1.0s						
SOEI	Soe	27.68	113	IAmb	IAmb	03 09 07.3	
	comp=Z,119nm,0.8s						
SOEI	Soe	27.68	113	P	P	03 08 53.3	+0.4
SOEI	Soe	27.68	113	P	P	03 08 54.1	+1.2
	comp=Z,157nm,0.8s						
GIRL	Giralia	27.76	147	P	P	03 08 54.1	+0.7
DAV	Davao City (W)	27.79	76	LR	LR	03 20 30.5	
	comp=Z,984nm,21.9s,baz=255,slow=38						
NGP	Nagpur	27.85	318	*e*P	P	03 08 54.7	+0.4
NGP				IAmb	IAmb	03 08 56.5	
	comp=Z,212nm,1.6s						
GTK	Tadong	28.19	341	*e*P	P	03 08 58.5	+1.2
NLAI	Namlea	28.88	98	P	P	03 09 03.5	0.0
	comp=Z,1µmcomp=Z,142nm,0.7s						
AKL	Akola	28.94	315	*e*P	P	03 09 05.0	+0.9
AKL				IAmb	IAmb	03 10 00.7	
	comp=Z,32nm,0.8s						
ALBI	Allahabad	29.35	328	*e*P	P	03 09 08.2	+0.6
ALBI				IAmb	IAmb	03 09 09.3	
	comp=Z,238nm,1.1s						
EVN	Everest	29.39	339	P	P	03 09 09.3	+0.8
EVN				IAmb	IAmb	03 09 17.2	
	comp=Z,88nm,1.0s						
LSA	Lhasa	29.75	347	IAmb	IAmb	03 09 14.1	
	comp=Z,189nm,1.0s						
LSA	Lhasa	29.75	347	P	P	03 09 12.9	+1.3
LSA				pmax	pmax		
	comp=Z,180nm,1.0s						
LSA				LR	LR		
	comp=Z,680nm,25.1s						
LSA				LR	LR		
	comp=Z,880nm,25.9s						
LSA	Lhasa	29.75	347	P	P	03 09 12.9	+1.3
LSA	Lhasa	29.75	347	P	P	03 09 12.8	+1.3
MBWA	Marble Bar	30.01	137	P	P	03 09 12.5	-0.9
NRDN	NARMADA NAGAR	30.19	318	*e*P	P	03 09 17.9	+2.8
NRDN				IAmb	IAmb	03 09 19.0	
	comp=Z,165nm,1.2s						
PSA00	Pilbara Seismi	30.37	138	P	P	03 09 17.0	+0.4
PSA00				IAmb	IAmb	03 09 30.6	
	comp=Z,164nm,1.5s						
PSA00	Pilbara Seismi	30.37	138	P	P	03 09 15.9	-0.7
BHPL	Bhopal	30.39	319	*e*P	P	03 09 17.6	+0.8
BHPL				IAmb	IAmb	03 09 18.7	
	comp=Z,45nm,0.9s						
CD2	Chengdu	30.55	9	P	P	03 09 17.7	-0.4
CD2				S	S	03 14 20.0	+3.6
CD2				pmax	pmax		
	comp=Z,60nm,0.9s						
CD2				pmax	pmax		
	comp=Z,420nm,3.6s						
CD2				LR	LR		
	comp=Z,2µm,20.3s						
CD2				LR	LR		
	comp=Z,2µm,22.9s						
MSAI	Masohi	30.71	98	P	P	03 09 18.6	-1.1
CNSH	ChangSha	30.72	26	⇓P	P	03 09 20.1	+0.5
CNSH				S	S	03 14 19.4	+0.4
CNSH				pmax	pmax		
	comp=Z,59nm,1.1s						
CNSH				LR	LR		
	comp=Z,710nm,18.2s						
CNSH				LR	LR		
	comp=Z,460nm,12.3s						
CNSH				LR	LR		
	comp=Z,590nm,22.0s						
JHNI	Jhansi	31.31	324	*e*P	P	03 09 24.3	-0.6
JHNI				IAmb	IAmb	03 09 25.5	
	comp=Z,156nm,0.9s						
YULB	Yu-li	31.69	43	P	P	03 09 28.1	-0.1
SSLB	Suanglung	31.73	42	P	P	03 09 28.7	+0.1
FITZ	Fitzroy Crossi	32.57	126	LR	LR	03 25 06.3	
	comp=Z,1µm,20.0s,baz=312,slow=40						
SWI	Sorong	32.83	93	P	P	03 09 36.5	-1.9
	comp=Z,61nm,1.0s						
MEEK	Meekatharra	33.34	146	P	P	03 09 44.1	+1.4
WHN	Wuhan	33.37	25	⇓*i*P	P	03 09 44.0	+1.1
WHN				S	S	03 15 01.0	+0.6
WHN				pmax	pmax		
	comp=Z,370nm,1.0s						
WHN				LR	LR		
	comp=Z,940nm,11.7s						
WHN				LR	LR		
	comp=Z,2µm,16.5s						
WHN				LR	LR		
	comp=Z,2µm,20.6s						
LGTI	Lohaghat	33.52	330	*e*P	P	03 09 45.1	+1.0
PTH	Pithoragarh	33.62	330	*e*P	P	03 09 46.1	+0.8
FAKI	Fak Fak	33.96	96	IAmb	IAmb	03 10 10.1	
	comp=Z,64nm,1.0s						
FAKI	Fak Fak	33.96	96	P	P	03 09 47.5	-0.7
FAKI	Fak Fak	33.96	96	P	P	03 09 46.8	-1.4
	comp=Z,55nm,0.9s						
MORW	Morawa	33.97	152	P	P	03 09 50.3	+2.2
MORW	Morawa	33.97	152	P	P	03 09 50.0	+1.9
SONA	Sohna	34.26	325	*e*P	P	03 09 50.3	-0.3
SONA				IAmb	IAmb	03 09 51.5	
	comp=Z,94nm,0.9s						
AJM	Ajmer	34.45	320	*e*P	P	03 09 53.0	+0.7
NDI	New Delhi	34.52	326	*e*P	P	03 09 51.8	-1.0
NDI				IAmb	IAmb	03 09 59.4	
	comp=Z,56nm,0.9s						
KUDL	Kundal	34.52	324	*e*P	P	03 09 52.5	-0.4
KUDL				IAmb	IAmb	03 09 53.7	
	comp=Z,49nm,1.0s						
XAN	Xi'an	34.67	15	⇓P	P	03 09 53.2	-0.9
XAN				S	S	03 15 19.1	-1.3
XAN				SS	SnSn	03 17 37.6	+0.6
XAN				pmax	pmax		
	comp=Z,310nm,0.9s						
XAN				pmax	pmax		
	comp=Z,620nm,4.1s						
XAN				LR	LR		
	comp=Z,1µm,19.2s						
XAN				LR	LR		
	comp=Z,1µm,15.1s						
XAN				LR	LR		
	comp=Z,2µm,22.7s						
DRS	Darwin Rock St	34.70	113	P	P	03 09 55.9	+1.3
DDI	Dehra Dun	35.34	329	*e*P	P	03 10 00.8	+0.8
GOMU	GeErMu	35.57	355	P	P	03 10 02.7	+0.5
GOMU				PP	PP	03 11 26.1	+2.3
GOMU				PcP	PcP	03 12 32.0	+1.6
GOMU				S	S	03 15 41.0	+6.2
GOMU				pmax	pmax		
	comp=Z,56nm,1.7s						
GOMU				pmax	pmax		
	comp=Z,600nm,5.8s						
GOMU				LR	LR		
	comp=Z,760nm,18.4s						
GOMU				LR	LR		
	comp=Z,290nm,17.2s						
GOMU				LR	LR		
	comp=Z,1µm,20.2s						
BLDU	Ballidu	35.58	152	P	P	03 10 03.4	+1.4
LZH	Lanzhou	35.65	7	⇓P	P	03 10 03.0	+0.3
LZH				sP	sP	03 10 22.8	+0.8
LZH				PcP	PcP	03 12 31.9	+1.5
LZH				S	S	03 15 31.1	-4.5
LZH				ScP	ScP	03 16 13.3	+1.0
LZH				pmax	pmax		
	comp=Z,140nm,1.1s						
LZH				pmax	pmax		
	comp=Z,630nm,4.8s						
LZH				LR	LR		
	comp=Z,930nm,18.0s						
LZH				LR	LR		
	comp=Z,1µm,19.6s						
LZH				LR	LR		
	comp=Z,2µm,20.0s						
LYN	LuoYang	36.21	20	⇓P	P	03 10 07.7	+0.4
LYN				PP	PP	03 11 31.8	+1.3
LYN				PcP	PcP	03 12 32.4	+0.5
LYN				S	S	03 15 42.8	-1.2
LYN				SS	SnSn	03 18 11.6	-2.8
LYN				pmax	pmax		
	comp=Z,570nm,0.9s						
LYN				pmax	pmax		
	comp=Z,410nm,4.4s						

LYN				LR	LR		
	comp=Z,1µm,18.9s						
LYN				LR	LR		
	comp=Z,900nm,15.8s						
LYN				LR	LR		
	comp=Z,1µm,15.1s						
KDU	**Kakadu**	**36.24**	**113**	P	**P**	**03 10 08.4**	**+0.6**
MUN	**Mundaring**	**36.51**	**154**	P	**P**	**03 10 12.0**	**+2.1**
NJ2	**Nanjing**	**36.73**	**30**	⇓P	**P**	**03 10 12.1**	**+0.4**
NJ2				S	**S**	**03 15 51.1**	**-0.8**
NJ2				sS	**sS**	**03 16 11.5**	**-2.9**
NJ2				ScP	**ScP**	**03 16 15.6**	**-0.6**
NJ2				pmax	pmax		
	comp=Z,54nm,0.8s						
NJ2				LR	LR		
	comp=Z,470nm,16.6s						
NJ2				LR	LR		
	comp=Z,630nm,19.9s						
NJ2				LR	LR		
	comp=Z,700nm,19.9s						
HNLY	**HANLEY**	**36.88**	**332**	*e*P	**P**	**03 10 14.1**	**+0.4**
HNLY				IAmb	IAmb	03 10 15.6	
	comp=Z,95nm,0.7s						
KLBR	**Kellerberrin**	**36.89**	**152**	P	**P**	**03 10 14.4**	**+1.3**
BHK	**Bhakra**	**37.07**	**328**	*e*P	**P**	**03 10 14.6**	**-0.1**
SSE	**Sheshan**	**37.19**	**33**	P	**P**	**03 10 16.3**	**+0.6**
SSE				S	**S**	**03 15 59.0**	**0.0**
SSE				pmax	pmax		
	comp=Z,40nm,0.9s						
SSE				pmax	pmax		
	comp=Z,66nm,8.9s						
SSE				LR	LR		
	comp=Z,290nm,19.1s						
SSE				LR	LR		
	comp=Z,400nm,16.3s						
NWAO	**Narrogin (SRO)**	**37.77**	**154**	P	**P**	**03 10 22.6**	**+2.0**
NWAO	**Narrogin (SRO)**	**37.77**	**154**	LR	LR	03 23 50.5	
	comp=Z,859nm,21.6s,baz=304,slow=33						
NWAO	**Narrogin (SRO)**	**37.77**	**154**	P	**P**	**03 10 22.4**	**+1.8**
NWAO	**Narrogin (SRO)**	**37.77**	**154**	P	**P**	**03 10 21.4**	**+0.8**
NWAO	**Narrogin (SRO)**	**37.77**	**154**	P	**P**	**03 10 22.5**	**+1.9**
NWAO	**Narrogin (SRO)**	**37.77**	**154**	P	**P**	**03 10 22.6**	**+2.0**
NWAO				pmax	pmax		
	comp=Z,159nm,0.9s						
DHRM	**DHARAMSHALA**	**37.78**	**329**	*e*P	**P**	**03 10 21.3**	**+0.3**
THN	**Thein Dam**	**38.23**	**328**	*e*P	**P**	**03 10 24.6**	**+0.1**
H01W3	**Cape Leeuwin H**	**38.24**	**159**	T	T	03 52 15.4	
	baz=333,slow=76,SNR=7.8						
H01W2	**Cape Leeuwin H**	**38.25**	**159**	T	T	03 52 22.1	
	baz=333,slow=76,SNR=5.9						
H01W1	**Cape Leeuwin H**	**38.26**	**159**	T	T	03 52 13.0	
	baz=333,slow=76,SNR=9.8						
GTA	**Gaotai**	**38.63**	**2**	P	**P**	**03 10 28.8**	**+0.9**
GTA				PP	**PnPn**	**03 12 03.1**	**+3.5**
GTA				PcP	**PcP**	**03 12 40.8**	**+1.4**
GTA				S	**S**	**03 16 19.8**	**-1.1**
GTA				ScP	**ScP**	**03 16 22.8**	**-0.6**
GTA				PcS	**PcS**	**03 16 27.4**	**-1.4**
GTA				ScS	**ScS**	**03 20 32.8**	**-1.2**
GTA				pmax	pmax		
	comp=Z,150nm,1.5s						
GTA				pmax	pmax		
	comp=Z,630nm,5.3s						
GTA				LR	LR		
	comp=Z,340nm,19.6s						
GTA				LR	LR		
	comp=Z,630nm,22.5s						
GTA				LR	LR		
	comp=Z,1µm,23.6s						
KMBL	**Kambalda**	**38.80**	**147**	P	**P**	**03 10 30.6**	**+1.3**
TIY	**Taiyuan**	**39.10**	**18**	P	**P**	**03 10 32.4**	**+0.6**
TIY				S	**S**	**03 16 22.7**	**-5.2**
TIY				pmax	pmax		
	comp=Z,74nm,0.6s						
TIY				LR	LR		
	comp=Z,720nm,21.3s						
TIY				LR	LR		
	comp=Z,630nm,17.9s						
TIY				LR	LR		
	comp=Z,600nm,24.7s						
TIA	**Tai'an**	**39.43**	**24**	P	**P**	**03 10 34.5**	**0.0**
TIA				PcP	**PcP**	**03 12 42.4**	**+0.6**
TIA				ScP	**ScP**	**03 16 26.1**	**-0.3**
TIA				S	**S**	**03 16 31.2**	**-1.5**
TIA				ScS	**ScS**	**03 20 35.8**	**-2.7**
TIA				pmax	pmax		
	comp=Z,140nm,1.1s						
TIA				pmax	pmax		
	comp=Z,430nm,3.8s						
TIA				LR	LR		
	comp=Z,580nm,18.6s						
TIA				LR	LR		
	comp=Z,880nm,18.5s						
TIA				LR	LR		
	comp=Z,810nm,22.9s						
HNS	**HongShan**	**39.56**	**20**	⇓P	**P**	**03 10 36.4**	**+0.9**
HNS				PcP	**PcP**	**03 12 42.9**	**+0.8**
HNS				ScP	**ScP**	**03 16 26.8**	**0.0**
HNS				S	**S**	**03 16 34.5**	**-0.1**
HNS				ScS	**ScS**	**03 20 36.8**	**-2.3**
HNS				pmax	pmax		
	comp=Z,270nm,1.0s						
HNS				LR	LR		
	comp=Z,210nm,9.4s						
HNS				LR	LR		
	comp=Z,530nm,15.8s						
HNS				LR	LR		
	comp=Z,470nm,21.1s						
SMPI	**Sarmi**	**40.33**	**94**	P	**P**	**03 10 40.8**	**-1.5**
	comp=Z,1µmcomp=Z,52nm,1.0s						
NIL	**Nilore**	**40.49**	**327**	P	**P**	**03 10 43.3**	**-0.1**
NIL	**Nilore**	**40.49**	**327**	P	**P**	**03 10 43.4**	**0.0**
NIL	**Nilore**	**40.49**	**327**	P	**P**	**03 10 43.3**	**0.0**
NIL				pmax	pmax		
	comp=Z,193nm,0.7s						
NIL	**Nilore**	**40.49**	**327**	P	**P**	**03 10 43.7**	**+0.3**
WRA	**Warramunga Arr**	**40.66**	**122**	P	**P**	**03 10 42.5**	**-2.4**
	comp=Z,37nm,0.8s,baz=301,slow=9.1,SNR=86						
WRA				pP	**pP**	**03 10 56.7**	**-1.8**
	comp=Z,29nm,0.5s,baz=302,slow=9.0,SNR=10						
WRA				PcP	**PcP**	**03 12 46.5**	**+0.4**
	comp=Z,2.4nm,0.6s,baz=301,slow=3.1,SNR=5.0						
WRA				ScP	**ScP**	**03 16 29.6**	**-1.9**
	comp=Z,4.5nm,1.1s,baz=307,slow=3.6,SNR=5.6						
WRA				S	**S**	**03 16 43.4**	**-8.3**
	comp=Z,6.9nm,1.2s,baz=297,slow=15,SNR=6.8						
	comp=Z,37nm,0.8s						
WRAB	**Tennant Creek**	**40.66**	**122**	*de*P	**P**	**03 10 43.2**	**-1.8**
WRAB				pmax	pmax		
	comp=Z,58nm,0.9s						
BTO	**Baotou**	**41.17**	**13**	⇓*i*P	**P**	**03 10 50.7**	**+1.8**
BTO				pP	**sP**	**03 11 05.9**	**-2.5**
BTO				sP	pP	03 11 13.3	+11
BTO				PP	**PnPn**	**03 12 30.3**	**+0.8**
BTO				S	**S**	**03 17 01.1**	**+2.3**
BTO				sS	**sS**	**03 17 27.8**	**+6.3**
BTO				SS	**SS**	**03 20 02.4**	**-1.0**
BTO				pmax	pmax		
	comp=Z,330nm,1.4s						
BTO				pmax	pmax		
	comp=Z,2µm,5.3s						
BTO				LR	LR		
	comp=Z,2µm,19.5s						
BTO				LR	LR		
	comp=Z,2µm,17.3s						
BTO				LR	LR		
	comp=Z,2µm,19.1s						
HHC	**Hu-ho-hao-te**	**41.78**	**15**	⇓*i*P	**P**	**03 10 55.7**	**+1.8**
HHC				S	**S**	**03 17 11.4**	**+3.6**
HHC				pmax	pmax		
	comp=Z,190nm,1.4s						
HHC				pmax	pmax		
	comp=Z,190nm,4.6s						
HHC				LR	LR		
	comp=Z,540nm,20.2s						
HHC				LR	LR		
	comp=Z,690nm,19.3s						
HHC				LR	LR		
	comp=Z,880nm,21.0s						
FORT	**Forrest**	**42.02**	**141**	P	**P**	**03 10 56.9**	**+0.9**
FORT	**Forrest**	**42.02**	**141**	P	**P**	**03 10 57.9**	**+2.0**
AS31	**Alice Springs**	**42.04**	**127**	P	**P**	**03 10 54.7**	**-1.6**
ASAR	**Alice Springs**	**42.04**	**127**	P	**P**	**03 10 54.6**	**-1.6**
	comp=Z,30nm,0.8s,baz=299,slow=8.0,SNR=238						
ASAR				pP	**pP**	**03 11 07.8**	**-2.1**
	comp=Z,16nm,0.5s,baz=301,slow=8.0,SNR=10						
ASAR				PcP	**PcP**	**03 12 51.1**	**+0.6**
	comp=Z,8.0nm,0.7s,baz=297,slow=2.9,SNR=8.7						
ASAR				ScP	**ScP**	**03 16 35.5**	**-1.4**
	comp=Z,5.9nm,1.0s,baz=295,slow=3.9,SNR=10						
ASAR				S	**S**	**03 17 04.8**	**-7.3**
	comp=Z,3.0nm,0.9s,baz=301,slow=15,SNR=7.6						
	comp=Z,30nm,0.8s						
JAY	**Jayapura**	**42.35**	**94**	LR	LR	03 31 09.3	
	comp=Z,283nm,21.6s,baz=204,slow=40						
JAY	**Jayapura**	**42.35**	**94**	P	**P**	**03 10 58.5**	**-0.4**
BJT	**Baijiatuau**	**42.41**	**20**	P	**P**	**03 11 00.5**	**+1.6**
BJT	**Baijiatuau**	**42.41**	**20**	P	**P**	**03 11 00.5**	**+1.6**
BJI	**Beijing**	**42.43**	**20**	P	**P**	**03 11 00.2**	**+1.1**
BJI				S	**S**	**03 17 18.7**	**+1.5**
BJI				pmax	pmax		
	comp=Z,180nm,0.9s						
BJI				pmax	pmax		
	comp=Z,430nm,3.5s						
BJI				LR	LR		
	comp=Z,130nm,14.8s						
BJI				LR	LR		
	comp=Z,170nm,14.9s						
BJI				LR	LR		
	comp=Z,140nm,12.9s						
KBL	**Kabul**	**43.53**	**324**	P	**P**	**03 11 08.0**	**-0.4**
KBL	**Kabul**	**43.53**	**324**	P	**P**	**03 11 08.2**	**-0.2**
	SNR=18						
KBL	**Kabul**	**43.53**	**324**	P	**P**	**03 11 08.0**	**-0.4**
KBL				pmax	pmax		
	comp=Z,28nm,0.8s						
DL2	**Dalian**	**43.62**	**26**	⇓*i*P	**P**	**03 11 09.5**	**+0.8**
DL2				sP	**sP**	**03 11 30.3**	**+2.0**
DL2				S	**S**	**03 17 34.2**	**-0.5**
DL2				pmax	pmax		
	comp=Z,620nm,1.2s						
DL2				pmax	pmax		
	comp=Z,2µm,6.3s						
DL2				LR	LR		
	comp=Z,770nm,14.9s						
DL2				LR	LR		
	comp=Z,510nm,15.2s						
DL2				LR	LR		
	comp=Z,650nm,19.6s						
JLN	**Jalan Bani Buh**	**43.62**	**302**	P	**P**	**03 11 09.9**	**+0.9**
	SNR=17						
KSH	**Kashi**	**43.83**	**335**	P	**P**	**03 11 09.7**	**-0.9**
KSH				S	**S**	**03 17 37.8**	**-0.2**
KSH				ScS	**ScS**	**03 21 01.2**	**-4.2**
KSH				pmax	pmax		
	comp=Z,75nm,0.7s						
KSH				LR	LR		
	comp=Z,710nm,22.3s						
KSH				LR	LR		
	comp=Z,510nm,23.7s						
KSH				LR	LR		
	comp=Z,1µm,25.4s						
WUS	**Wushi**	**43.99**	**339**	P	**P**	**03 11 12.4**	**+0.5**
WMQ	**Urumqi**	**44.08**	**349**	⇓P	**P**	**03 11 13.6**	**+1.2**
WMQ				pmax	pmax		
	comp=Z,210nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,820nm,5.1s						
WMQ				LR	LR		
	comp=Z,510nm,22.3s						
WMQ				LR	LR		
	comp=Z,380nm,16.9s						
WMQ				LR	LR		
	comp=Z,500nm,23.3s						
DQM	**DQM**	**44.40**	**298**	P	**P**	**03 11 16.8**	**+1.5**
	SNR=6.1						
MHTO	**MHTO**	**44.40**	**300**	P	**P**	**03 11 16.0**	**+0.7**
	SNR=13						
JNU	**Nakatsue**	**44.43**	**40**	P	**P**	**03 11 14.9**	**-0.5**
JNU				IAmb	IAmb	03 11 16.2	
	comp=Z,83nm,1.0s						
JNU	**Nakatsue**	**44.43**	**40**	LR	LR	03 31 12.3	
	comp=Z,280nm,19.1s,baz=202,slow=38						
JNU	**Nakatsue**	**44.43**	**40**	P	**P**	**03 11 15.5**	**+0.1**
JTU	**Tsushima**	**44.43**	**37**	P	**P**	**03 11 15.8**	**+0.5**
TJN	**Taejon**	**44.54**	**34**	IAmb	IAmb	03 11 18.3	
	comp=Z,174nm,0.9s						
TJN	**Taejon**	**44.54**	**34**	P	**P**	**03 11 16.4**	**+0.3**
TJN	**Taejon**	**44.54**	**34**	*d i*P	**P**	**03 11 15.6**	**-0.5**
WSAR	**Wadi Sarin**	**44.72**	**303**	P	**P**	**03 11 19.2**	**+1.4**
	SNR=13						
JMDO	**Jabal Madar**	**44.82**	**302**	P	**P**	**03 11 20.1**	**+1.4**
	SNR=8.5						
INCN	**Inchon**	**44.95**	**32**	P	**P**	**03 11 18.8**	**-0.7**
INCN				IAmb	IAmb	03 11 19.9	
	comp=Z,193nm,1.9s						
INCN	**Inchon**	**44.95**	**32**	P	**P**	**03 11 19.0**	**-0.5**
INCN	**Inchon**	**44.95**	**32**	P	**P**	**03 11 18.8**	**-0.7**
INCN				pmax	pmax		
	comp=Z,193nm,1.9s						
SMDO	**Samad**	**45.14**	**303**	P	**P**	**03 11 22.5**	**+1.2**
	SNR=14						
BIDO	**Bidbid**	**45.26**	**303**	P	**P**	**03 11 23.8**	**+1.7**
	SNR=25						
KSAR	**Wonju Array Be**	**45.60**	**33**	P	**P**	**03 11 24.4**	**-0.1**
KSAR	**Wonju Array Be**	**45.60**	**33**	P	**P**	**03 11 24.4**	**-0.1**
KSRS	**Korea Array**	**45.63**	**33**	P	**P**	**03 11 24.5**	**-0.3**
	comp=Z,54nm,0.8s,baz=222,slow=8.7,SNR=348						
KSRS				ScP	**ScP**	**03 16 50.4**	**-0.9**
	comp=Z,3.4nm,1.1s,baz=221,slow=5.0,SNR=8.3						
KSRS				S	**S**	**03 18 01.9**	**-1.9**
	comp=Z,0.7nm,0.8s,baz=239,slow=16,SNR=5.3						
KSRS				LR	LR	03 31 21.3	
	comp=Z,267nm,19.0s,baz=225,slow=37						
	comp=Z,54nm,0.8s						
KS19	**Wonju Array Si**	**45.63**	**33**	IAmb	IAmb	03 11 25.8	
	comp=Z,80nm,0.8s						
SHLS	**Shalkode**	**45.64**	**341**	*e*P	**P**	**03 11 23.5**	**-1.4**
SHLS				pmax	pmax		
	comp=Z,65nm,0.7s						
SHLS	**Shalkode**	**45.64**	**341**	*e*P	**P**	**03 11 23.6**	**-1.4**
	comp=Z,65nm,0.7s						
BSY	**Bisya**	**45.73**	**302**	P	**P**	**03 11 27.5**	**+1.6**
	SNR=28						
UZB	**Uzynbulak**	**45.78**	**340**	*e*P	**P**	**03 11 25.7**	**-0.4**
UZB				pmax	pmax		
	comp=Z,69nm,0.6s						
UZB	**Uzynbulak**	**45.78**	**340**	*e*P	**P**	**03 11 25.7**	**-0.4**
	comp=Z,69nm,0.6s						
PDGK	**Podgornoye**	**45.79**	**341**	P	**P**	**03 11 26.7**	**+0.6**
XLT	**XiLinHaoTe**	**45.87**	**18**	*e*P	**P**	**03 11 27.4**	**+0.7**
XLT				pP	pP	03 11 42.4	+2.0
XLT				PcP	**PcP**	**03 13 04.1**	**+0.9**
XLT				PP	**PP**	**03 13 14.6**	**-0.4**
XLT				ScP	**ScP**	**03 16 52.5**	**+0.3**
XLT				S	**S**	**03 18 07.6**	**+0.2**
XLT				pmax	pmax		
	comp=Z,160nm,1.1s						
XLT				pmax	pmax		
	comp=Z,600nm,4.6s						
XLT				LR	LR		
	comp=Z,42nm,20.2s						
XLT				LR	LR		
	comp=Z,270nm,14.3s						
XLT				LR	LR		
	comp=Z,540nm,18.9s						
HOQ	**Hoqain**	**45.97**	**303**	P	**P**	**03 11 29.0**	**+1.3**
	SNR=23						
ZHN	**Zhinishke**	**46.00**	**340**	*e*P	**P**	**03 11 27.3**	**-0.5**
ZHN				pmax	pmax		
	comp=Z,45nm,0.7s						
ZHN	**Zhinishke**	**46.00**	**340**	*e*P	**P**	**03 11 27.3**	**-0.5**
	comp=Z,45nm,0.7s						
ULHL	**Ulahol**	**46.01**	**337**	P	**P**	**03 11 29.1**	**+1.1**
	SNR=49						
DMTO	**DMTO**	**46.02**	**294**	P	**P**	**03 11 29.8**	**+1.6**
KPKS	**Kokpek**	**46.18**	**340**	*e*P	**P**	**03 11 28.7**	**-0.4**
KPKS				pmax	pmax		
	comp=Z,88nm,1.3s						
KPKS	**Kokpek**	**46.18**	**340**	*e*P	**P**	**03 11 28.7**	**-0.4**
	comp=Z,88nm,1.3s						
TNSS	**Tian-Shan**	**46.42**	**338**	*e*P	**P**	**03 11 30.6**	**-0.8**
TNSS	**Tian-Shan**	**46.42**	**338**	*e*P	**P**	**03 11 30.6**	**-0.8**
MDOK	**Medeo**	**46.49**	**338**	*e*P	**P**	**03 11 31.1**	**-0.6**
MDOK	**Medeo**	**46.49**	**338**	*e*P	**P**	**03 11 31.2**	**-0.6**
SIMJ	**Simiganj**	**46.50**	**328**	P	**P**	**03 11 31.2**	**-0.6**
SIMJ	**Simiganj**	**46.50**	**328**	P	**P**	**03 11 31.5**	**-0.3**
ARQ	**Araqi**	**46.54**	**302**	P	**P**	**03 11 33.9**	**+1.7**
	SNR=14						
COEN	**Coen**	**46.58**	**110**	P	**P**	**03 11 33.2**	**+0.5**
AAA	**Alma-Ata**	**46.58**	**338**	*e*P	**P**	**03 11 31.8**	**-0.5**
AAA	**Alma-Ata**	**46.58**	**338**	*e*P	**P**	**03 11 31.9**	**-0.5**
RBK	**Rabkut**	**46.64**	**294**	P	**P**	**03 11 34.9**	**+1.8**
	SNR=9.1						
UCH	**Uchtor**	**46.69**	**336**	P	**P**	**03 11 35.0**	**+1.4**
	SNR=19						
JMN	**Monobe**	**46.76**	**42**	IAmb	IAmb	03 11 35.1	
	comp=Z,58nm,0.9s						
JMN	**Monobe**	**46.76**	**42**	P	**P**	**03 11 34.3**	**+0.5**
TKM2	**Tokmak 2**	**46.84**	**337**	P	**P**	**03 11 35.6**	**+1.1**
	SNR=271						
TKM2	**Tokmak 2**	**46.84**	**337**	P	**P**	**03 11 34.9**	**+0.4**
SOHO	**SOHO**	**46.84**	**303**	P	**P**	**03 11 35.7**	**+1.2**
SOHO	**SOHO**	**46.84**	**303**	*i* P	**P**	**03 11 35.3**	**+0.8**
	SNR=13						
SNY	**Shenyang**	**46.86**	**26**	⇓P	**P**	**03 11 33.8**	**-0.6**
SNY				pP	**pP**	**03 11 44.4**	**-3.7**
SNY				S	**S**	**03 18 19.1**	**-2.3**
SNY				pmax	pmax		
	comp=Z,130nm,1.3s						
SNY				pmax	pmax		
	comp=Z,460nm,3.6s						
SNY				LR	LR		
	comp=Z,500nm,20.2s						
SNY				LR	LR		
	comp=Z,500nm,16.2s						
SNY				LR	LR		
	comp=Z,670nm,21.1s						
KBK	**Karagaybulak**	**46.87**	**336**	P	**P**	**03 11 36.4**	**+1.7**
	SNR=68						
AML	**Almayashu**	**46.96**	**335**	P	**P**	**03 11 37.1**	**+1.4**
	SNR=21						
DOK	**Doka**	**47.02**	**295**	P	**P**	**03 11 37.3**	**+1.2**
	SNR=11						
AAK	**Ala-Archa**	**47.04**	**336**	P	**P**	**03 11 36.5**	**+0.4**
	SNR=32						
AAK	**Ala-Archa**	**47.04**	**336**	P	**P**	**03 11 37.3**	**+1.3**
AAK				IAmb	IAmb	03 11 43.1	
	comp=Z,107nm,1.1s						
AAK	**Ala-Archa**	**47.04**	**336**	LR	LR	03 33 13.0	
	comp=Z,836nm,21.4s,baz=150,slow=38						
AAK	**Ala-Archa**	**47.04**	**336**	P	**P**	**03 11 37.4**	**+1.3**
AAK	**Ala-Archa**	**47.04**	**336**	*d i*P	**P**	**03 11 37.1**	**+1.1**
AAK				pmax	pmax		
	comp=Z,88nm,1.0s						
AAK	**Ala-Archa**	**47.04**	**336**	*i* P	**P**	**03 11 37.2**	**+1.3**
	SNR=51						
AAK	**Ala-Archa**	**47.04**	**336**	P	**P**	**03 11 37.4**	**+1.3**
AAK				sP	**sP**	**03 11 55.4**	**-0.3**
AAK				PcP	**PcP**	**03 13 08.6**	**+1.1**
AAK				ScP	**ScP**	**03 16 57.7**	**+0.4**
ARXS	**Arharly**	**47.13**	**340**	*i* P	**P**	**03 11 36.4**	**-0.2**
WHFO	**Wadi Hawf**	**47.15**	**294**	P	**P**	**03 11 38.2**	**+1.1**
	SNR=6.9						
CHMS	**Chumysh**	**47.24**	**336**	P	**P**	**03 11 38.3**	**+0.9**
	SNR=29						
EKS2	**Erkin-Say**	**47.36**	**335**	P	**P**	**03 11 40.0**	**+1.5**
	SNR=119						
KUU	**Kurty**	**47.38**	**338**	*e*P	**P**	**03 11 38.1**	**-0.4**
KUU				pmax	pmax		
	comp=Z,68nm,0.8s						
KUU	**Kurty**	**47.38**	**338**	*e*P	**P**	**03 11 38.1**	**-0.4**
	comp=Z,68nm,0.8s						
ABTO	**Aybut**	**47.43**	**293**	P	**P**	**03 11 40.7**	**+1.4**
UOSS	**Minazif**	**47.44**	**304**	P	**P**	**03 11 39.3**	**+0.1**
UOSS	**Minazif**	**47.44**	**304**	P	**P**	**03 11 39.4**	**+0.2**
UOSS	**Minazif**	**47.44**	**304**	*i* P	**P**	**03 11 39.4**	**+0.2**
	SNR=8.6						
HATD	**Hatta, Dubai**	**47.45**	**304**	P	**P**	**03 11 40.3**	**+1.0**
	SNR=23						
HATD	**Hatta, Dubai**	**47.45**	**304**	*i* P	**P**	**03 11 40.1**	**+0.8**
	SNR=17						
ASHO	**Ashiyiah**	**47.46**	**304**	P	**P**	**03 11 40.4**	**+1.0**
	SNR=16						
ASHO	**Ashiyiah**	**47.46**	**304**	*i* P	**P**	**03 11 40.3**	**+1.0**
	SNR=16						
UMZA	**Um Al Zommool**	**47.46**	**301**	P	**P**	**03 11 40.5**	**+1.1**
ALNE	**Al Ain**	**47.47**	**303**	P	**P**	**03 11 40.8**	**+1.4**
	SNR=35						
ALNE	**Al Ain**	**47.47**	**303**	*i* P	**P**	**03 11 40.5**	**+1.1**
	SNR=19						
MDH	**Madha**	**47.51**	**305**	P	**P**	**03 11 39.8**	**+0.1**
	SNR=6.7						
MDH	**Madha**	**47.51**	**305**	*i* P	**P**	**03 11 39.5**	**-0.2**
	SNR=8.0						
SONM	**Songino Array**	**47.54**	**7**	P	**P**	**03 11 40.8**	**+1.1**
	comp=Z,74nm,0.8s,baz=190,slow=8.9,SNR=295						
SONM				PcP	**PcP**	**03 13 09.7**	**+0.6**
	comp=Z,22nm,0.8s,baz=189,slow=4.2,SNR=5.7						
SONM				PP	**PP**	**03 13 28.2**	**-3.5**
	comp=Z,9.2nm,0.7s,baz=184,slow=4.5,SNR=4.5						
SONM				ScP	**ScP**	**03 16 58.7**	**-0.5**
	comp=Z,2.8nm,1.0s,baz=222,slow=2.0,SNR=4.5						
SONM				S	**S**	**03 18 35.4**	**+4.3**
	comp=Z,0.9nm,0.8s,baz=186,slow=13,SNR=2.0						
SONM				LR	LR	03 33 42.1	
	comp=Z,652nm,19.2s,baz=192,slow=38						
	comp=Z,74nm,0.8s						
USP	**Ospenovka**	**47.56**	**336**	P	**P**	**03 11 40.8**	**+0.9**
	SNR=250						
TDK	**Taldyqorghan**	**47.63**	**341**	*e*P	**P**	**03 11 40.0**	**-0.3**
TDK	**Taldyqorghan**	**47.63**	**341**	*e*P	**P**	**03 11 40.0**	**-0.3**
MSFE	**Esma-Masafi**	**47.65**	**305**	*i* P	**P**	**03 11 41.5**	**+0.6**
	SNR=13						
ULN	**Ulaanbaatar**	**47.65**	**8**	P	**P**	**03 11 41.6**	**+0.9**
ULN				IAmb	IAmb	03 11 42.9	
	comp=Z,99nm,1.1s						
ULN	**Ulaanbaatar**	**47.65**	**8**	P	**P**	**03 11 41.8**	**+1.1**
ULN				S	**S**	**03 18 32.9**	**0.0**
ULN	**Ulaanbaatar**	**47.65**	**8**	*d i*P	**P**	**03 11 41.5**	**+0.9**
ULN				pmax	pmax		
	comp=Z,76nm,1.0s						
ULN	**Ulaanbaatar**	**47.65**	**8**	P	**P**	**03 11 41.9**	**+1.2**
ULN				pP	**pP**	**03 11 50.9**	**-3.5**
MASF	**Masafi**	**47.65**	**305**	P	**P**	**03 11 42.2**	**+1.3**
	SNR=9.0						
SGDS	**Sogindy**	**47.67**	**337**	*e*P	**P**	**03 11 40.3**	**-0.5**
GUMO	**Guam**	**47.71**	**72**	LR	LR	03 31 20.7	
	comp=Z,72nm,21.4s,baz=233,slow=36						
FAQ	**Al Faqa, Dubai**	**47.87**	**303**	P	**P**	**03 11 43.8**	**+1.3**
	SNR=9.8						
FAQ	**Al Faqa, Dubai**	**47.87**	**303**	*i* P	**P**	**03 11 43.6**	**+1.1**
	SNR=9.8						
NAZ	**Nazwa, Dubai**	**47.91**	**304**	P	**P**	**03 11 44.0**	**+1.1**
	SNR=9.2						
NAZ	**Nazwa, Dubai**	**47.91**	**304**	*i* P	**P**	**03 11 43.8**	**+0.9**
	SNR=11						
SHME	**Shamm**	**47.95**	**305**	P	**P**	**03 11 44.1**	**+1.0**
ASUD	**Al Ashush, Dub**	**48.04**	**303**	P	**P**	**03 11 45.8**	**+1.9**
	SNR=15						
ASUD	**Al Ashush, Dub**	**48.04**	**303**	*i* P	**P**	**03 11 45.6**	**+1.7**
	SNR=20						
MK31	**Makanchi Array**	**48.12**	**345**	*d i*P	**P**	**03 11 44.5**	**+0.4**
MK31				pmax	pmax		
	comp=Z,124nm,0.5s						
MKAR	**Makanchi Array**	**48.12**	**345**	P	**P**	**03 11 44.8**	**+0.6**
	comp=Z,143nm,0.5s,baz=155,slow=8.0,SNR=1509						
MKAR				LR	LR	03 35 03.7	
	comp=Z,390nm,21.2s,baz=162,slow=40						
	comp=Z,143nm,0.5s						
ZSN	**Zaisan**	**48.13**	**348**	*e*P	**P**	**03 11 43.8**	**-0.4**
ZSN	**Zaisan**	**48.13**	**348**	*e*P	**P**	**03 11 43.8**	**-0.4**
MAKZ	**Makanchi**	**48.21**	**345**	P	**P**	**03 11 45.2**	**+0.5**
MAKZ	**Makanchi**	**48.21**	**345**	P	**P**	**03 11 45.3**	**+0.5**
MAKZ				pmax	pmax		
	comp=Z,139nm,0.7s						
MAKZ	**Makanchi**	**48.21**	**345**	P	**P**	**03 11 45.4**	**+0.5**
AJN	**Ajban**	**48.30**	**303**	P	**P**	**03 11 47.0**	**+1.1**
	SNR=6.2						
AJN	**Ajban**	**48.30**	**303**	*i* P	**P**	**03 11 46.6**	**+0.8**
	SNR=7.5						
BBOO	**Buckleboo**	**48.59**	**137**	IAmb	IAmb	03 11 49.0	
	comp=Z,134nm,1.4s						
BBOO	**Buckleboo**	**48.59**	**137**	P	**P**	**03 11 48.1**	**+0.1**
DZA	**Taraz**	**48.60**	**333**	*e*P	**P**	**03 11 47.2**	**-0.7**
DZA				pmax	pmax		
	comp=Z,36nm,0.6s						
DZA	**Taraz**	**48.60**	**333**	*e*P	**P**	**03 11 47.3**	**-0.7**
	comp=Z,36nm,0.6s						
MZR	**Muzera**	**49.01**	**300**	P	**P**	**03 11 53.0**	**+1.6**
	SNR=25						
MZR	**Muzera**	**49.01**	**300**	*i* P	**P**	**03 11 52.5**	**+1.2**
	SNR=24						
KK31	**Karatay Array**	**49.14**	**333**	P	**P**	**03 11 51.2**	**-0.8**
KKAR	**Karatay Array**	**49.14**	**333**	P	**P**	**03 11 52.3**	**+0.3**
KKAR	**Karatay Array**	**49.14**	**333**	IAmb	IAmb	03 11 53.8	
	comp=Z,224nm,1.4s						

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KKAR  Karatay Array    49.14 333   P     P      03 11 52.3 +0.3
BTLS  Baital           49.23 337  eP     P      03 11 52.2 -0.4
BTLS  Baital           49.23 337  eP     P      03 11 52.2 -0.4
CN2   Changchun        49.27  26   P     P      03 11 52.8 -0.1
CN2                                ScP   ScP    03 17 06.4  0.0
CN2                                S     S      03 18 56.4 +1.0
CN2                                pmax  pmax
      comp=Z,150nm,1.1s
CN2                                LR    LR
      comp=Z,2µm,17.0s
CN2                                LR    LR
      comp=Z,1µm,17.0s
CN2                                LR    LR
      comp=Z,400nm,19.0s
BRLS  Borolday         49.39 332  eP     P      03 11 52.6 -1.4
BRLS                               pmax  pmax
      comp=Z,93nm,1.8s
BRLS  Borolday         49.39 332  eP     P      03 11 52.6 -1.4
      comp=Z,93nm,1.8s
PMG   Port Moresby     49.50 103   P     P      03 11 53.8 -1.4
PMG   Port Moresby     49.50 103   LR    LR     03 37 12.2
      comp=Z,364nm,18.1s,baz=294,slow=41
PMG   Port Moresby     49.50 103d iP     P      03 11 54.3 -0.9
PMG                                pmax  pmax
      comp=Z,37nm,1.0s
JCJ   Chichijima       49.53  54   P     P      03 11 54.1 -1.1
JCJ                                IAmb  IAmb   03 12 02.1
      comp=Z,75nm,0.9s
JCJ   Chichijima       49.53  54   P     P      03 11 54.7 -0.6
ZAK   Zakamensk        49.75   4  eP     P      03 11 56.5 -0.2
ZAK                                pmax  pmax
      comp=Z,30nm,1.3s
WHYH  Whyalla          49.76 136   P     P      03 11 57.1 +0.2
JGF   Kuroka           50.18  42   P     P      03 11 59.2 -0.9
JGF   Kuroka           50.18  42   P     P      03 11 59.8 -0.3
JRN   Qarnain Island   50.25 302   P     P      03 12 01.6 +0.9
      SNR=7.4
MOY   Mondy            50.91   2  eP     P      03 12 05.3 -0.1
MOY                                pmax  pmax
      comp=Z,68nm,2.9s
HTT   Hallett          50.92 136   P     P      03 12 06.2 +0.4
MSHR  Mys Shultsa      51.05  31⇑eP     P      03 12 06.2 -0.2
MSHR                               pmax  pmax
      comp=Z,32nm,1.0s
CTAO  Charters Tower   51.12 117   P     P      03 12 06.3 -1.1
CTAO                               IAmb  IAmb   03 12 15.9
      comp=Z,47nm,1.0s
CTAO  Charters Tower   51.12 117   P     P      03 12 06.9 -0.5
CTAO  Charters Tower   51.12 117   P     P      03 12 06.3 -1.1
CTAO                               pmax  pmax
      comp=Z,47nm,1.0s
CTAO  Charters Tower   51.12 117   P     P      03 12 06.3 -1.1
CTAO                               PcP   PcP    03 13 23.3 +0.7
MAJO  Matsushiro       51.28  41   P     P      03 12 07.6 -0.7
MAJO  Matsushiro       51.28  41   P     P      03 12 08.6 +0.2
MAJO  Matsushiro       51.28  41d iP     P      03 12 07.2 -1.2
MAJO                               pmax  pmax
      comp=Z,19nm,1.1s
MJAR  Matsushiro Arr   51.28  41   P     P      03 12 07.3 -1.1
      comp=Z,18nm,1.0s,baz=222,slow=7.0,SNR=49
MJAR                               pP    pP     03 12 21.7 -0.6
      comp=Z,2.1nm,0.4s,baz=287,slow=15,SNR=5.1
MJAR                               ScP   ScP    03 17 13.9 -1.4
      comp=Z,7.0nm,1.2s,baz=226,slow=4.6,SNR=8.6
      comp=Z,18nm,1.0s
TV1H  Townsville Har   51.36 115   P     P      03 12 09.9 +0.8
TRNA  Turayna          51.56 302   P     P      03 12 11.6 +1.0
      SNR=13
TRNA                               S     S      03 19 25.8 -2.1
BNX   BinXian          51.65  26 ⇓P     P      03 12 10.9  0.0
BNX                                pP    pP     03 12 26.2 +1.4
BNX                                sP    sP     03 12 32.5 +1.8
BNX                                S     S      03 19 27.9 -0.6
BNX                                sS    sS     03 19 56.4 +4.6
BNX                                ScS   ScS    03 21 53.2 -3.5
BNX                                pmax  pmax
      comp=Z,100nm,0.8s
BNX                                pmax  pmax
      comp=Z,97nm,4.6s
BNX                                LR    LR
      comp=Z,390nm,18.4s
BNX                                LR    LR
      comp=Z,580nm,18.4s
BNX                                LR    LR
      comp=Z,340nm,19.5s
IRK   Irkutsk          51.68   5  eP     P      03 12 10.6 -0.4
IRK                                pmax  pmax
      comp=Z,160nm,1.8s
QLP   Quilpie          51.70 125   P     P      03 12 12.0 +0.4
MDJ   Mudanjiang       51.78  28   P     P      03 12 12.4 +0.5
MDJ                                S     S      03 19 30.1 -0.1
MDJ                                pmax  pmax
      comp=Z,27nm,0.9s
MDJ                                pmax  pmax
      comp=Z,310nm,4.3s
MDJ                                LR    LR
      comp=Z,580nm,18.6s
MDJ                                LR    LR
      comp=Z,760nm,17.5s
MDJ                                LR    LR
      comp=Z,330nm,19.9s
HIA   Hailar           51.80  18   IAmb  IAmb   03 12 14.9
      comp=Z,47nm,0.9s
VLA   Vladivostok      51.81  31c iP     P      03 12 12.7 +0.6
VLA                                pmax  pmax
      comp=Z,52nm,1.5s
SMRA  Abu-Samra        51.90 301   P     P      03 12 14.2 +1.2
      SNR=19
SMRA                               S     S      03 19 31.8 -0.7
SEM   Semipalatinsk    51.98 345  eP     P      03 12 12.7 -0.8
SEM   Semipalatinsk    51.98 345  eP     P      03 12 12.8 -0.8
STKA  Stephens Creek   52.03 132   P     P      03 12 13.7 -0.4
      comp=Z,20nm,0.8s,baz=308,slow=7.7,SNR=48
STKA                               LR    LR     03 37 51.3
      comp=Z,437nm,19.5s,baz=307,slow=40
      comp=Z,20nm,0.8s
STKA  Stephens Creek   52.03 132   P     P      03 12 14.1 +0.1
STKA  Stephens Creek   52.03 132c iP     P      03 12 13.3 -0.7
SHMA  Al-Shehemyia     52.17 303   P     P      03 12 16.3 +1.2
      SNR=10
OTUK  Ortayu           52.55 338   P     P      03 12 17.3 -0.3
SAKB  Bahrain          52.57 303   P     P      03 12 19.1 +1.0
SAKB                               S     S      03 19 40.9 -0.8
KURBB Kurchatov Arra   52.63 344   P     P      03 12 18.5 +0.4
      comp=Z,114nm,1.0s,baz=164,slow=7.1,SNR=570
KURBB                              PP    PP     03 14 19.4 +1.8
      comp=Z,10nm,0.9s,baz=165,slow=8.3,SNR=4.2
KURBB                              S     S      03 19 42.8 +1.1
      comp=Z,1.1nm,0.9s,baz=160,slow=14,SNR=3.6
KURBB                              LR    LR     03 37 36.4
      comp=Z,680nm,21.8s,baz=158,slow=39
      comp=Z,114nm,1.0s
USA0B Ussuriysk Arra   52.63  30   IAmb  IAmb   03 12 19.8
      comp=Z,98nm,1.0s
USA0B Ussuriysk Arra   52.63  30d iP     P      03 12 18.3 +0.1
USRK  Ussuriysk Ar.    52.63  30   P     P      03 12 18.6 +0.4
      comp=Z,61nm,0.9s,baz=227,slow=5.4,SNR=113
USRK                               ScP   ScP    03 17 21.5 +0.5
      comp=Z,1.9nm,0.8s,baz=260,slow=4.2,SNR=4.1
USRK                               LR    LR     03 37 48.7
      comp=Z,363nm,18.1s,baz=218,slow=40
      comp=Z,61nm,0.9s
KURK  Kurchatov        52.69 344   P     P      03 12 19.0 +0.5
KURK  Kurchatov        52.69 344   P     P      03 12 19.2 +0.7
KURK                               S     S      03 19 43.7 +1.2
KURK  Kurchatov        52.69 344d iP     P      03 12 18.9 +0.4
KURK                               pmax  pmax
      comp=Z,229nm,1.0s
KURK  Kurchatov        52.69 344   P     P      03 12 19.0 +0.5
KURK                               pP    pP     03 12 29.3 -3.1
CIT   Chita            52.77  12  eP     P      03 12 20.6 +1.4
CIT                               e             03 12 29.0
CIT                               e             03 12 34.4
CIT                               e             03 13 29.2
CIT                               e             03 15 25.2
CIT                               eS     S      03 19 48.4 +4.6
CIT                               e             03 20 08.0
CIT                                pmax  pmax
      comp=Z,236nm,1.6s
JMM   Marumori         53.73  41   IAmb  IAmb   03 12 27.5
      comp=Z,70nm,1.5s
JMM   Marumori         53.73  41   P     P      03 12 26.8 +0.4
BRZS  Berezniki        53.88 340  eP     P      03 12 26.8 -0.5
BRZS  Berezniki        53.88 340  eP     P      03 12 26.9 -0.5
ZALV  Zalesovo Beam    54.34 350   P     P      03 12 30.9 +0.3
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      comp=Z,94nm,0.6s,baz=165,slow=6.2,SNR=397
ZALV                               pP    pP     03 12 45.4 +0.9
      comp=Z,35nm,0.5s,baz=168,slow=6.5,SNR=5.7
ZALV                               S     S      03 20 05.5 +0.7
      comp=Z,1.8nm,0.6s,baz=156,slow=14,SNR=4.5
ZALV                               LR    LR     03 41 08.3
      comp=Z,313nm,19.3s,baz=176,slow=42
      comp=Z,94nm,0.6s
ARPS  Mount Arapiles   54.74 138   P     P      03 12 34.4 +0.6
CMSA  Cobar Meteorol   54.95 130   P     P      03 12 35.4 -0.1
HEH   HeiHe            55.26  22  eP     P      03 12 37.4 +0.1
HEH                                pP    pP     03 12 51.4 +0.1
HEH                                PcP   PcP    03 13 37.0 -0.6
HEH                                ScP   ScP    03 17 31.3 -1.0
HEH                                S     S      03 20 16.4 -0.9
HEH                                ScS   ScS    03 22 15.2 -6.8
HEH                                pmax  pmax
      comp=Z,42nm,1.2s
HEH                                pmax  pmax
      comp=Z,360nm,3.8s
HEH                                LR    LR
      comp=Z,480nm,18.8s
HEH                                LR    LR
      comp=Z,570nm,16.4s
HEH                                LR    LR
      comp=Z,550nm,17.6s
JTM   Tenmabayashi     55.55  39   IAmb  IAmb   03 12 40.9
      comp=Z,61nm,1.1s
KBD   Kabd             56.06 305   P     P      03 12 44.2 +0.7
RAYN  Ar Rayn          56.14 298   P     P      03 12 44.8 +0.6
RAYN                               IAmb  IAmb   03 12 45.4
      comp=Z,46nm,0.7s
RAYN  Ar Rayn          56.14 298   P     P      03 12 44.8 +0.6
RAYN  Ar Rayn          56.14 298   P     P      03 12 44.8 +0.6
RAYN                               pmax  pmax
      comp=Z,46nm,0.7s
RAYN  Ar Rayn          56.14 298 i P     P      03 12 44.5 +0.4
      SNR=50
RAYN  Ar Rayn          56.14 298   P     P      03 12 44.2 +0.1
RAYN                               PcP   PcP    03 13 41.6 -0.1
KLR   Kul'dur          56.22  26   P     P      03 12 44.9 +0.7
      comp=Z,95nm,0.8s,baz=241,slow=7.0,SNR=355
KLR                                ScP   ScP    03 17 36.2 -0.4
      comp=Z,2.2nm,0.9s,baz=208,slow=6.2,SNR=3.8
KLR                                LR    LR     03 38 18.6
      comp=Z,460nm,18.8s,baz=219,slow=38
      comp=Z,95nm,0.8s
KLR   Kul'dur          56.22  26d iP     P      03 12 44.7 +0.5
KLR                                pmax  pmax
      comp=Z,123nm,0.8s
ATD   Arta Tunnel      56.25 283   LR    LR     03 34 15.0
      comp=Z,7.2nm,19.2s,baz=64,slow=33
EIDS  Eidsvold         57.00 121   IAmb  IAmb   03 12 50.6
      comp=Z,36nm,0.6s
EIDS  Eidsvold         57.00 121   P     P      03 12 49.4 -0.8
BVAR  Borovoye Array   57.22 340   P     P      03 12 51.1 -0.1
      comp=Z,67nm,0.6s,baz=147,slow=8.6,SNR=291
BVAR                               pP    pP     03 13 03.9 -1.4
      comp=Z,34nm,0.6s,baz=138,slow=8.9,SNR=10
BVAR                               ScP   ScP    03 17 39.9 -1.0
      comp=Z,3.1nm,0.9s,baz=114,slow=6.5,SNR=3.4
BVAR                               S     S      03 20 43.1  0.0
      comp=Z,0.8nm,0.4s,baz=144,slow=17,SNR=3.8
BVAR                               LR    LR     03 40 59.8
      comp=Z,272nm,19.4s,baz=159,slow=40
      comp=Z,67nm,0.6s
BRVK  Borovoye         57.28 340   P     P      03 12 51.4 -0.2
BRVK  Borovoye         57.28 340   P     P      03 12 51.7  0.0
BRVK  Borovoye         57.28 340d iP     P      03 12 51.2 -0.4
BRVK                               pmax  pmax
      comp=Z,182nm,1.7s
BRVK  Borovoye         57.28 340   P     P      03 12 51.4 -0.2
ERM   Erimo            57.53  38   P     P      03 12 54.2 +0.6
ZEA   Zeya             58.05  20  eP     P      03 12 57.7 +0.7
ZEA                               eS     S      03 20 55.3 +1.3
ZEA                                pmax  pmax
      comp=Z,100nm,1.3s
ZEA                                pmax  pmax
      comp=E,20nm,0.8s
ZEA                                pmax  pmax
      comp=N,30nm,1.0s
ZEA                                pmax  pmax
      comp=Z,50nm,0.9s
ZEA                                smax  smax
      comp=E,200nm,7.1s
BOD   Bodaibo          58.36  10  eP     P      03 12 59.4 +0.3
BOD                                pmax  pmax
      comp=Z,201nm,1.1s
ASAJ  Asahikawa        58.38  36   LR    LR     03 41 06.4
      comp=Z,155nm,18.2s,baz=122,slow=39
JKA   Kamikawa-asahi   58.38  36   IAmb  IAmb   03 13 09.8
      comp=Z,60nm,1.4s
AB31  Akbulak array    58.62 331 i P     P      03 13 00.3 -0.8
ABKAR Akbulak array    58.62 331   P     P      03 13 00.7 -0.4
ABKAR Akbulak array    58.62 331   IAmb  IAmb   03 13 01.9
      comp=Z,308nm,1.6s
CAN   Canberra         59.10 133   IAmb  IAmb   03 13 06.6
      comp=Z,44nm,1.0s
CAN   Canberra         59.10 133   P     P      03 13 05.0 +0.2
CAN   Canberra         59.10 133   P     P      03 13 03.7 -1.1
LKRN  Lenkeran, Azer   59.15 316   P     P      03 13 05.6 +0.6
ARMA  Armidale         59.17 126   IAmb  IAmb   03 13 07.7
      comp=Z,130nm,1.8s
ARMA  Armidale         59.17 126   P     P      03 13 05.9 +0.4
GRNR  Gornyy           59.41  27⇓iP     P      03 13 07.1 +0.5
GRNR                               pmax  pmax
      comp=Z,40nm,1.1s
GRNR                               MLR   MLR
      comp=E,230nm,15.0s
YSS   Yuzhno-Sakhali   60.13  33   P     P      03 13 11.8 +0.2
YSS                                IAmb  IAmb   03 13 13.0
      comp=Z,88nm,1.2s
YSS   Yuzhno-Sakhali   60.13  33κ iP     P      03 13 11.7 +0.2
YSS                                pmax  pmax
      comp=Z,100nm,5.9s
YSS                                pmax  pmax
      comp=Z,40nm,1.1s
AKTO  Aktyubinsk       60.34 331   LR    LR     03 41 38.5
      comp=Z,267nm,20.0s,baz=76,slow=38
KIBK  Kibwezi          60.47 267   P     P      03 13 16.4 +1.7
KIBK                               IAmb  IAmb   03 13 17.4
      comp=Z,60nm,1.4s
KIBK  Kibwezi          60.47 267   P     P      03 13 16.6 +1.9
      SNR=5.7
GLAD  Gladstone        61.04 139   P     P      03 13 19.1 +1.2
AKT   Akhty            61.14 318 i P     P      03 13 18.6 -0.1
AKT                               e             03 14 01.0
AKT                               e             03 15 33.6
AKT                               ePPP   PPP    03 17 01.3
AKT                                pmax  pmax
      comp=Z,108nm,1.4s
KMBO  Kilima Mbogo     61.23 268   P     P      03 13 21.6 +1.6
KMBO  Kilima Mbogo     61.23 268   P     P      03 13 22.1 +2.1
KMBO  Kilima Mbogo     61.23 268   P     P      03 13 21.6 +1.6
KMBO                               pmax  pmax
      comp=Z,25nm,1.0s
KMBO  Kilima Mbogo     61.23 268 i P     P      03 13 21.9 +1.9
      SNR=15
KMBO  Kilima Mbogo     61.23 268   P     P      03 13 21.8 +1.9
MOO   Moorlands        61.25 141   P     P      03 13 19.7 +0.4
MNGR  Mingechevir, A   61.25 317   P     P      03 13 19.6 +0.3
SEKA  Sheki            61.37 318   P     P      03 13 20.3 +0.1
TAU   Tasmania Unive   61.57 141   P     P      03 13 23.3 +1.9
TAU                                IAmb  IAmb   03 13 24.2
      comp=Z,119nm,1.3s
TAU   Tasmania Unive   61.57 141   P     P      03 13 22.0 +0.6
TAU   Tasmania Unive   61.57 141   P     P      03 13 23.3 +1.9
TAU                                pmax  pmax
      comp=Z,119nm,1.3s
NAX   Nakhchivan       61.65 315   P     P      03 13 21.1 -1.1
GANJ  Ganja            61.71 317   P     P      03 13 22.6 +0.1
MAK   Makhachkala      61.99 320  eP     P      03 13 21.2 -3.0
MAK                               e*PP   pP     03 13 36.3 -2.1
MAK                               eS     S      03 21 39.9 -5.1
MAK                               e*SS   sS     03 22 08.4 -0.2
MAK                                pmax  pmax
      comp=Z,104nm,0.9s
MAK                                MLR   MLR
      comp=Z,209nm,16.0s
H04N2 CROZET ISLANDS   62.01 215   T     T      04 20 03.1
      baz=55,slow=75,SNR=5105
HNR   Honiara          62.02 101   LR    LR     03 43 54.8
      comp=Z,205nm,21.0s,baz=248,slow=40
HNR   Honiara          62.02 101   P     P      03 13 25.9 +0.9
HNR   Honiara          62.02 101   P     P      03 13 25.6 +0.6
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HNR   Honiara          62.02 101   P     P      03 13 25.5 +0.6
H04N1 CROZET ISLANDS   62.02 215   T     T      04 20 06.8
      baz=55,slow=75,SNR=2954
H04N3 CROZET ISLANDS   62.03 215   T     T      04 20 13.8
      baz=55,slow=75,SNR=3823
H04S1 CROZET ISLANDS   62.33 214   T     T      04 20 30.9
      baz=55,slow=75,SNR=70
H04S3 CROZET ISLANDS   62.34 214   T     T      04 20 57.9
      baz=55,slow=75,SNR=113
H04S2 CROZET ISLANDS   62.35 214   T     T      04 20 59.0
      baz=55,slow=75,SNR=48
TYV   Tymovskoe        62.45  30  eP     P      03 13 28.3 +1.2
TYV                                pmax  pmax
      comp=Z,300nm,3.9s
TYV                                pmax  pmax
      comp=Z,29nm,1.2s
GNI   Garni            62.59 316   P     P      03 13 28.8 +0.3
GNI   Garni            62.59 316   LR    LR     03 43 31.5
      comp=Z,107nm,21.9s,baz=114,slow=39
GNI   Garni            62.59 316   P     P      03 13 29.3 +0.8
GNI   Garni            62.59 316d iP     P      03 13 28.6 +0.1
GNI                                pmax  pmax
      comp=Z,72nm,1.2s
GNI   Garni            62.59 316   P     P      03 13 29.0 +0.5
GNI   Garni            62.59 316   P     P      03 13 28.9 +0.3
      comp=Z,1µmcomp=Z,74nm,1.1s
LODK  Lodwar           63.11 274   P     P      03 13 34.7 +2.3
      SNR=11
TRLG  Trialeti         63.61 317   P     P      03 13 35.5 +0.2
SVE   Sverdlovsk       63.70 338c iP     P      03 13 35.3  0.0
SVE                               eS     S      03 22 03.3 -2.6
SVE                                pmax  pmax
      comp=Z,183nm,1.2s
SVE                                smax  smax
      comp=Z,581nm,21.0s
HURO  Huro Makira      64.04 102   P     P      03 13 39.2 +0.8
ARTI  Arti             64.25 337   P     P      03 13 38.5 -0.6
ARTI  Arti             64.25 337   LR    LR     03 44 02.9
      comp=Z,582nm,21.3s,baz=146,slow=38
ARTI  Arti             64.25 337d iP     P      03 13 38.3 -0.7
ARTI                               *PP   pP     03 13 53.0 -0.3
ARTI                                            03 14 13.2
ARTI                                            03 15 55.4
ARTI                               S     S      03 22 14.4 +1.6
ARTI                               SS    SS     03 26 22.8 -0.4
ARTI                               pmax  pmax
      comp=Z,76nm,0.7s
ARTI                               MLR   MLR
      comp=Z,611nm,21.0s
ARTI  Arti             64.25 337   P     P      03 13 38.4 -0.6
ARTI                               pP    pP     03 13 51.4 -1.9
ARTI                               sP    sP     03 13 58.0 -1.1
ARTI                               PcP   PcP    03 14 12.9 -0.5
MARD  Mardin           64.36 312   IAmb  IAmb   03 13 41.6
      comp=Z,88nm,0.8s
NCK   Nalchik          64.78 319⇓eP     P      03 13 42.7  0.0
NCK                                pmax  pmax
      comp=Z,59nm,0.8s
KBZ   Khabaz           65.34 319   P     P      03 13 46.4 +0.1
      comp=Z,45nm,0.8s,baz=111,slow=5.5,SNR=146
KBZ                                PP    PP     03 16 10.5 -0.1
      comp=Z,6.2nm,0.9s,baz=125,slow=5.6,SNR=3.1
KBZ                                LR    LR     03 47 48.8
      comp=Z,62nm,18.1s,baz=108,slow=41
      comp=Z,45nm,0.8s
KBZ   Khabaz           65.34 319ceP     P      03 13 46.2 -0.1
KBZ                                pmax  pmax
      comp=Z,61nm,1.0s
SHA1  Shidzhatmaz      65.50 319d iP     P      03 13 47.7  0.0
KOPT  Kop Dagi         65.53 314   IAmb  IAmb   03 13 51.1
      comp=Z,59nm,1.3s
KVAR  Kislovodsk Arr   65.56 319   LR    LR     03 45 16.9
      comp=Z,104nm,20.6s,baz=270,slow=38
KIV   Kislovodsk       65.57 319   P     P      03 13 47.9 -0.1
KIV                                IAmb  IAmb   03 13 49.1
      comp=Z,101nm,1.0s
KIV   Kislovodsk       65.57 319   P     P      03 13 48.3 +0.4
KIV   Kislovodsk       65.57 319 ⇑P     P      03 13 48.4 +0.4
KIV   Kislovodsk       65.57 319  eP     P      03 13 47.5 -0.5
KIV                               e             03 14 18.6
KIV                               eS     S      03 22 29.9 +0.2
KIV                                pmax  pmax
      comp=Z,81nm,1.0s
KIV                                pmax  pmax
      comp=Z,44nm,3.7s
KIV   Kislovodsk       65.57 319 i P     P      03 13 47.9 -0.1
      SNR=31
KIV   Kislovodsk       65.57 319   P     P      03 13 47.8 -0.1
      comp=Z,1µmcomp=Z,96nm,1.2s
KIV   Kislovodsk       65.57 319   P     P      03 13 48.1 +0.1
YAK   Yakutsk          65.64  16   P     P      03 13 47.4 -0.4
YAK   Yakutsk          65.64  16   P     P      03 13 47.4 -0.4
      comp=Z,159nm,0.9s,baz=214,slow=2.5,SNR=54
YAK                                LR    LR     03 44 10.6
      comp=Z,491nm,21.0s,baz=216,slow=38
      comp=Z,159nm,0.9s
YAK   Yakutsk          65.64  16d iP     P      03 13 47.2 -0.6
YAK                               e             03 14 18.3
YAK                               e             03 16 11.1
YAK                               ePPP   PPP    03 17 47.9
YAK                               eS     S      03 22 26.2 -3.3
YAK                               e*SS   sS     03 23 02.1 +8.5
YAK                               e             03 23 32.3
YAK                               eSS    SS     03 26 41.6 -2.8
YAK                                pmax  pmax
      comp=Z,218nm,1.0s
YAK                                pmax  pmax
      comp=N,76nm,1.3s
YAK                                pmax  pmax
      comp=E,47nm,1.4s
YAK                                pmax  pmax
      comp=Z,74nm,2.1s
YAK                                pmax  pmax
      comp=N,29nm,2.2s
YAK                                pmax  pmax
      comp=E,30nm,2.0s
YAK                                smax  smax
      comp=E,194nm,3.5s
YAK                                smax  smax
      comp=N,89nm,2.7s
YAK   Yakutsk          65.64  16   P     P      03 13 47.4 -0.4
GOF   Gofitskoye       65.81 320d iP     P      03 13 48.9 -0.4
ASF   Jabal al Asfar   65.83 305   LR    LR     03 44 27.4
      comp=N,198nm,19.3s,baz=120,slow=38
GHAJ  Ghor Haditha     66.70 304   IAmb  IAmb   03 13 57.3
      comp=Z,144nm,1.7s
BELG  Belogornoye      66.71 329   LR    LR     03 47 14.5
      comp=Z,298nm,20.4s,baz=120,slow=40
BELG  Belogornoye      66.71 329d iP     P      03 13 53.9 -1.0
BELG                               pmax  pmax
      comp=Z,24nm,1.1s
EIL   Elat             66.83 302   LR    LR     03 43 34.8
      comp=Z,552nm,18.9s,baz=68,slow=36
VSLR  Vesyoloye        67.14 318d iP     P      03 13 57.4 -0.5
VSLR                               pmax  pmax
      comp=Z,115nm,1.2s
MMAI  Mount Meron Ar   67.27 306   P     P      03 13 59.7 +0.7
      comp=Z,13nm,0.6s,baz=108,slow=7.1,SNR=24
MMAI                               LR    LR     03 45 52.4
      comp=Z,305nm,18.8s,baz=98,slow=38
      comp=Z,13nm,0.6s
SOC   Sochi            67.40 318  eP     P      03 13 57.0 -2.5
SOC                               e             03 16 23.8
SOC                               ePPP   PPP    03 18 03.3
SOC                               eS     S      03 22 50.0 -1.6
SOC                               eSS    SS     03 27 10.0 -2.5
SOC                                pmax  pmax
      comp=Z,70nm,0.6s
KOUNC Koumac, New Ca   67.67 112   P     P      03 14 02.6 +1.0
MBAR  Mbarara          67.73 269   P     P      03 14 03.9 +1.5
MBAR  Mbarara          67.73 269   P     P      03 14 04.4 +2.0
MBAR  Mbarara          67.73 269d iP     P      03 14 03.8 +1.4
MBAR                               pmax  pmax
      comp=Z,23nm,1.0s
MBAR  Mbarara          67.73 269   P     P      03 14 04.3 +1.9
TOKA  Tokat            68.53 314   IAmb  IAmb   03 14 07.8
      comp=Z,55nm,0.8s
NRIK  Noril'sk         69.00 356   P     P      03 14 08.6 -0.4
NRIK                               IAmb  IAmb   03 14 09.9
      comp=Z,86nm,1.0s
NRIK  Noril'sk         69.00 356   P     P      03 14 08.6 -0.4
      comp=Z,49nm,0.9s,baz=155,slow=5.3,SNR=94
NRIK                               PP    PP     03 16 42.8 +0.9
      comp=Z,6.9nm,0.8s,baz=193,slow=12,SNR=3.5
NRIK                               LR    LR     03 48 26.9
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         comp=Z,253nm,21.4s,baz=168,slow=39
         comp=Z,49nm,0.9s
NRIK  Noril'sk          69.00 356d iP      P       03 14 08.4  -0.6
NRIK                               pmax    pmax
         comp=Z,91nm,1.1s
VRH   Novokhopyorsk     69.31 326d iP      P       03 14 10.2  -1.1
VRH                                pmax    pmax
         comp=Z,158nm,1.0s
KIRV  Kirov             69.37 335  LR      LR      03 47 44.1
         comp=Z,259nm,20.1s,baz=133,slow=38
KIRV  Kirov             69.37 335d iP      P       03 14 11.0  -0.5
CSS   Mathiatis         69.42 307  IAmb    IAmb    03 14 13.8
         comp=Z,194nm,1.5s
CSS   Mathiatis         69.42 307  P       P       03 14 12.6  +0.2
         comp=Z,1µmcomp=Z,88nm,1.3s
SKR   Severo-Kuril's    69.60  35 eP       P       03 14 12.9  -0.2
SKR                               eS       S       03 23 20.4  +2.9
SKR                               eSS      SS      03 27 52.5  +6.3
SKR                                pmax    pmax
         comp=Z,100nm,5.0s
SKR                                MLR     MLR
         comp=Z,200nm,18.0s
DIKM  Dikmen            69.82 315 ⇑P       P       03 14 15.2  +0.5
DIKM  Dikmen            69.82 315  P       P       03 14 14.7   0.0
         comp=Z,749nmcomp=Z,56nm,1.1s
DZM   Mont Dzumac       69.90 114  P       P       03 14 16.1  +0.5
KIRS  Kirsehir-Merke    70.06 312 ⇓P       P       03 14 16.2  -0.1
OUENC Ouen Island, N    70.32 114  P       P       03 14 18.9  +0.8
BR104 Keskin Array S    70.43 312  P       P       03 14 17.9  -0.7
         comp=Z,409nmcomp=Z,46nm,1.2s
BR131 Keskin Array S    70.43 312  IAmb    IAmb    03 14 19.1
         comp=Z,56nm,1.0s
BR131 Keskin Array S    70.43 312  P       P       03 14 18.0  -0.6
         SNR=56
BR131 Keskin Array S    70.43 312d iP      P       03 14 17.6  -1.1
BRTR  Keskin Array B    70.43 312  P       P       03 14 17.9  -0.8
         comp=Z,28nm,0.8s,baz=131,slow=7.0,SNR=220
BRTR                               LR      LR      03 46 41.9
         comp=Z,251nm,22.0s,baz=117,slow=37
         comp=Z,28nm,0.8s
BRTR  Keskin Array B    70.43 312 i P      P       03 14 17.8  -0.8
BRTR                               pmax    pmax
         comp=Z,29nm,0.8s
BR105 Keskin Array S    70.45 312  P       P       03 14 18.0  -0.7
         comp=Z,449nmcomp=Z,51nm,1.1s
BR106 Keskin Array S    70.45 312  P       P       03 14 18.0  -0.8
         comp=Z,404nmcomp=Z,48nm,1.1s
VORD  Divnogorie        70.59 325 eP       P       03 14 15.6  -3.5
VORD                               pmax    pmax
         comp=Z,50nm,1.0s
VSR   Storozhevoye      70.77 325 eP       P       03 14 16.1  -4.1
VSR                                pmax    pmax
         comp=Z,60nm,1.0s
BZK   Bozkurt           70.81 315 ⇓P       P       03 14 21.2  +0.5
BZK   Bozkurt           70.81 315  P       P       03 14 21.0  +0.3
         comp=Z,3µmcomp=Z,412nm,1.0s
VORR  Voronezh          70.93 326 eP       P       03 14 20.1  -1.1
VORR                               pmax    pmax
         comp=Z,99nm,0.8s
ANTO  Ankara            71.10 312  P       P       03 14 22.2  -0.4
ANTO                               IAmb    IAmb    03 14 23.4
         comp=Z,113nm,1.1s
ANTO  Ankara            71.10 312  P       P       03 14 22.6  -0.1
ANTO  Ankara            71.10 312 ⇓P       P       03 14 22.2  -0.4
ANTO  Ankara            71.10 312  P       P       03 14 22.2  -0.4
ANTO                               pmax    pmax
         comp=Z,113nm,1.2s
ANTO  Ankara            71.10 312  P       P       03 14 22.2  -0.4
         comp=Z,556nmcomp=Z,50nm,1.2s
ANTO  Ankara            71.10 312  P       P       03 14 22.4  -0.2
ANTO                               pP      pP      03 14 34.1  -2.9
ANTO                               PcP     PcP     03 14 41.9  -0.7
LSZ   Lusaka            71.16 254  P       P       03 14 24.6  +1.2
LSZ   Lusaka            71.16 254  LR      LR      03 40 38.7
         comp=Z,445nm,21.7s,baz=86,slow=32
LSZ   Lusaka            71.16 254  P       P       03 14 24.8  +1.4
LSZ   Lusaka            71.16 254  P       P       03 14 24.6  +1.2
LSZ                                pmax    pmax
         comp=Z,10.0nm,0.8s
LSZ   Lusaka            71.16 254  P       P       03 14 24.5  +1.1
MA2   Magadan           71.32  25  P       P       03 14 23.7  +0.4
MA2                                IAmb    IAmb    03 14 24.8
         comp=Z,64nm,0.7s
MA2   Magadan           71.32  25  P       P       03 14 23.8  +0.4
         comp=Z,52nm,0.6s,baz=232,slow=5.4,SNR=57
MA2                                LR      LR      03 51 37.0
         comp=Z,107nm,18.0s,baz=244,slow=41
         comp=Z,52nm,0.6s
MA2   Magadan           71.32  25  P       P       03 14 23.8  +0.4
MA2   Magadan           71.32  25d iP      P       03 14 23.5  +0.1
MA2                                pmax    pmax
         comp=Z,58nm,0.9s
MA2   Magadan           71.32  25  P       P       03 14 23.8  +0.4
         comp=Z,1µmcomp=Z,136nm,1.4s
MA2   Magadan           71.32  25  P       P       03 14 23.6  +0.4
MA2                                pP      pP      03 14 38.0  +0.1
LPSR  Galich'ya Gora    71.48 326d iP      P       03 14 23.6  -0.9
LPSR                               pmax    pmax
         comp=Z,135nm,0.8s
PEA0B Petropavlovsk-    71.53  33deP       P       03 14 24.3  -0.5
PETK  Petropavlovsk-    71.53  33  P       P       03 14 24.3  -0.5
PETK  Petropavlovsk-    71.53  33  P       P       03 14 24.5  -0.4
         comp=Z,10nm,0.9s,baz=194,slow=4.3,SNR=17
PETK                               LR      LR      03 47 07.6
         comp=Z,87nm,20.9s,baz=253,slow=37
         comp=Z,10nm,0.9s
SIM   Simferopol'       71.64 318κ iP      P       03 14 25.6  -0.1
SIM                               e                03 17 06.0
SIM                               eS       S       03 23 40.0  -1.5
SIM                                pmax    pmax
         comp=Z,360nm,1.6s
SIM                                pmax    pmax
         comp=Z,47nm,1.9s
SIM                                smax    smax
         comp=N,60nm,11.0s
PET   Petropavlovsk     72.02  33  P       P       03 14 28.3  +0.6
PET   Petropavlovsk     72.02  33 eP       P       03 14 27.9  +0.2
PET                               eS       S       03 23 46.7  +1.3
PET                                pmax    pmax
         comp=Z,200nm,3.4s
PET                                pmax    pmax
         comp=Z,38nm,0.6s
PET                                MLR     MLR
         comp=Z,100nm,19.0s
ISP   Isparta           72.31 310  IAmb    IAmb    03 14 31.3
         comp=Z,56nm,1.0s
ISP   Isparta           72.31 310  P       P       03 14 29.0  -0.9
ISP   Isparta           72.31 310 eP       P       03 14 28.9  -1.1
MAW   Mawson            72.44 194  P       P       03 14 31.9  +2.0
         comp=Z,3.9nm,0.7s,baz=45,slow=2.9,SNR=12
MAW                                LR      LR      03 39 31.1
         comp=Z,424nm,22.0s,baz=23,slow=30
         comp=Z,3.9nm,0.7s
BROLN Tlhalogang        72.65 248 i P      P       03 14 33.6  +1.3
MREMI Moremi            72.74 246 i P      P       03 14 34.0  +1.2
SAHE  Sakarya_HENDEK    72.79 313 ⇑P       P       03 14 32.4  -0.2
MOS   Moscow            73.48 329 eP       P       03 14 34.3  -2.0
MOS                               e*PP     pP      03 14 48.6  -2.3
MOS                               e*SP     sP      03 14 54.5  -2.1
MOS                               eS       S       03 23 58.4  -3.6
MOS                                pmax    pmax
         comp=Z,500nm,1.5s
MOS                                pmax    pmax
         comp=Z,198nm,0.8s
TIXI  Tiksi             73.55  10  P       P       03 14 35.6  -0.8
TIXI                               IAmb    IAmb    03 14 36.9
         comp=Z,85nm,0.9s
TIXI  Tiksi             73.55  10  P       P       03 14 35.7  -0.8
         comp=Z,39nm,0.6s,baz=214,slow=2.2,SNR=165
TIXI                               PP      PP      03 17 20.0  -0.9
         comp=Z,3.6nm,0.5s,baz=232,slow=9.4,SNR=4.2
TIXI                               S       S       03 23 55.6  -6.6
         comp=Z,0.7nm,0.3s,baz=286,slow=23,SNR=19
TIXI                               LR      LR      03 50 36.2
         comp=Z,341nm,18.0s,baz=226,slow=39
         comp=Z,39nm,0.6s
TIXI  Tiksi             73.55  10 i P      P       03 14 35.6  -0.8
TIXI                               pmax    pmax
         comp=Z,89nm,1.0s
TIXI                               MLR     MLR
         comp=Z,351nm,17.4s
OBN   Obninsk           73.78 328  P       P       03 14 37.8  -0.3
OBN   Obninsk           73.78 328  LR      LR      03 51 56.8
         comp=Z,215nm,18.9s,baz=58,slow=40
OBN   Obninsk           73.78 328d iP      P       03 14 37.7  -0.3
OBN                               i                03 14 51.2
OBN                               e                03 17 23.4
OBN                               i S      S       03 24 10.1  +4.8
OBN                                pmax    pmax
         comp=Z,277nm,1.7s
OBN                                MLR     MLR
         comp=Z,233nm,19.0s
OBN   Obninsk           73.78 328  P       P       03 14 37.8  -0.3
         comp=Z,2µmcomp=Z,148nm,1.2s
SEY   Seymchan          73.81  23  P       P       03 14 38.4  +0.3
         comp=Z,67nm,1.0s,baz=244,slow=6.2,SNR=148
SEY                                LR      LR      03 49 54.2
         comp=Z,190nm,18.3s,baz=246,slow=38
         comp=Z,67nm,1.0s
SEY   Seymchan          73.81  23d iP      P       03 14 38.3  +0.2
SEY                                pmax    pmax
         comp=Z,134nm,1.3s
YLV   Yalova            73.81 312  P       P       03 14 38.3  -0.4
         comp=Z,2µmcomp=Z,195nm,1.1s
ARG   Arkhangelos       73.83 308  IAmb    IAmb    03 14 38.9
         comp=Z,101nm,1.1s
ARG   Arkhangelos       73.83 308  P       P       03 14 37.7  -1.2
MANT  Manisa            73.96 310  IAmb    IAmb    03 14 40.7
         comp=Z,45nm,0.9s
ISK   Istanbul-Kandi    74.16 313  P       P       03 14 40.2  -0.4
KLYT  Kilyos            74.21 313 ⇑P       P       03 14 40.9   0.0
LPHEP Lephephe          74.30 246 i P      P       03 14 43.3  +1.3
NE56  Odesa             74.30 319  P       P       03 14 40.5  -0.8
KARP  Karpathos         74.48 307 eP       P       03 14 42.3  -0.4
KARP  Karpathos         74.48 307  P       P       03 14 43.1  +0.4
         comp=Z,3µmcomp=Z,280nm,1.2s
BAND  Balkesir-Ban      74.71 312 ⇑P       P       03 14 43.7  -0.2
LBTB  Lobatse           74.76 244  LR      LR      03 43 47.2
         comp=Z,167nm,20.9s,baz=82,slow=33
LBTB  Lobatse           74.76 244  P       P       03 14 45.1  +0.5
CTYL  Yalikoy Yolu      74.82 313 ⇑P       P       03 14 44.4   0.0
KLMR  Klimovskoe        74.82 334 eP       P       03 14 41.6  -2.5
KLMR                              e*PP     PcP     03 14 55.1  -2.8
KLMR                              e                03 17 29.2
KLMR                               pmax    pmax
         comp=Z,155nm,1.4s
KLMR                               MLR     MLR
         comp=Z,230nm,19.0s
PURM  Purcari           74.94 318  P       P       03 14 44.9  -0.2
         comp=Z,2µmcomp=Z,192nm,1.1s
PHDHD Phuduhudu         75.14 249 i P      P       03 14 48.2  +1.4
JURR  Jurilovca         75.17 316 ⇑P       P       03 14 46.4   0.0
TLCR                    75.31 317 ⇑P       P       03 14 47.8  +0.5
TLCR                    75.31 317  P       P       03 14 47.7  +0.5
TIRR  Tirgusor          75.42 316  IAmb    IAmb    03 14 48.8
         comp=Z,89nm,1.0s
TIRR  Tirgusor          75.42 316 ⇓P       P       03 14 47.6  -0.2
TIRR  Tirgusor          75.42 316  P       P       03 14 47.6  -0.2
TPGR  Topolog           75.51 316 ⇓P       P       03 14 48.1  -0.3
BOSA  Boshof            75.58 240  P       P       03 14 49.2  -0.1
         comp=Z,5.5nm,0.7s,baz=87,slow=4.1,SNR=18
BOSA                               LR      LR      03 41 03.6
         comp=Z,93nm,20.7s,baz=70,slow=30
         comp=Z,5.5nm,0.7s
MAKGR Makgori           75.58 243 i P      P       03 14 50.4  +1.0
DCZ   Deep Cove         75.63 137  IAmb    IAmb    03 15 13.8
         comp=Z,64nm,1.3s
MILM  Milestii Mici     75.75 318⇓iP       P       03 14 48.9  -0.8
         comp=Z,250nm,1.0s
MILM  Milestii Mici     75.75 318 ⇓P       P       03 14 49.1  -0.6
MILM  Milestii Mici     75.75 318 i P      P       03 14 48.9  -0.8
KIS   Kishinev          75.77 319 i P      P       03 14 49.0  -0.8
         comp=Z,600nm,0.9s
KIS   Kishinev          75.77 319d iP      P       03 14 49.0  -0.8
KIS                                pmax    pmax
         comp=Z,600nm,0.9s
CFR   Carcaliu          75.78 317 ⇓P       P       03 14 49.7  -0.2
CFR   Carcaliu          75.78 317  P       P       03 14 49.7  -0.2
HARR  Harsova           75.81 316 ⇑P       P       03 14 50.4  +0.3
HARR  Harsova           75.81 316  P       P       03 14 50.3  +0.3
EZN   Ezine             75.93 311 ⇑P       P       03 14 51.0   0.0
EZN   Ezine             75.93 311  P       P       03 14 50.9   0.0
EZN   Ezine             75.93 311  P       P       03 14 50.4  -0.5
         comp=Z,670nmcomp=Z,55nm,1.2s
VLDR  Vladesti          75.97 317 ⇑P       P       03 14 51.5  +0.5
APE   Apeiranthos       76.04 308 ⇑P       P       03 14 51.0  -0.7
APE   Apeiranthos       76.04 308  P       P       03 14 50.9  -0.7
SKOMA Sekoma            76.19 245 i P      P       03 14 54.2  +1.3
IDI   Anoyia            76.26 306  IAmb    IAmb    03 14 54.1
         comp=Z,84nm,1.0s
IDI   Anoyia            76.26 306  PP      PP      03 17 44.2  -0.6
         comp=Z,6.2nm,0.9s,baz=301,slow=15,SNR=13
IDI                                LR      LR      03 51 50.1
         comp=Z,128nm,21.9s,baz=102,slow=38
ALN   Alexandroupoli    76.35 312  IAmb    IAmb    03 14 54.1
         comp=Z,65nm,1.1s
ALN   Alexandroupoli    76.35 312  P       P       03 14 52.9  -0.3
SORM  Soroca            76.36 320 ⇓P       P       03 14 52.8  -0.3
SORM  Soroca            76.36 320  P       P       03 14 52.8  -0.3
SORM  Soroca            76.36 320  P       P       03 14 52.7  -0.4
         comp=Z,15µmcomp=Z,231nm,1.0s
JCZ   Jackson Bay       76.39 136  P       P       03 14 54.3  +0.7
AK09  Malin Array Si    76.43 322  P       P       03 14 52.8  -0.7
AK10  Malin Array Si    76.44 322  P       P       03 14 52.9  -0.7
AK08  Malin Array Si    76.45 322  P       P       03 14 52.8  -0.8
AK07  Malin Array Si    76.46 322  P       P       03 14 53.0  -0.6
GHRR                    76.48 317 ⇑P       P       03 14 55.0  +1.1
AKASG Malin Array Be    76.49 322  P       P       03 14 52.9  -0.9
AKASG                              IAmb    IAmb    03 17 32.5
         comp=Z,119nm,1.2s
AKASG Malin Array Be    76.49 322  P       P       03 14 52.9  -0.9
         comp=Z,17nm,0.6s,baz=90,slow=4.8,SNR=135
AKASG                              PP      PP      03 17 46.5  +0.3
         comp=Z,0.7nm,0.6s,baz=98,slow=6.8,SNR=5.2
AKASG                              LR      LR      03 53 05.3
         comp=Z,156nm,21.6s,baz=114,slow=39
         comp=Z,17nm,0.6s
AKASG Malin Array Be    76.49 322  P       P       03 14 52.9  -0.9
AKASG                              pmax    pmax
         comp=Z,119nm,1.2s
AKBB  Malin Array Si    76.49 322  IAmb    IAmb    03 14 54.1
         comp=Z,220nm,1.7s
AKBB  Malin Array Si    76.49 322d iP      P       03 14 52.9  -0.9
AKBB  Malin Array Si    76.49 322  P       P       03 14 53.0  -0.9
KIEV  Kiev              76.50 322  P       P       03 14 53.0  -0.8
KIEV                               IAmb    IAmb    03 14 54.1
         comp=Z,198nm,1.7s
KIEV  Kiev              76.50 322 ⇓P       P       03 14 53.2  -0.7
KIEV  Kiev              76.50 322  P       P       03 14 53.1  -0.8
KIEV  Kiev              76.50 322 i P      P       03 14 53.2  -0.7
         SNR=22
KIEV  Kiev              76.50 322  P       P       03 14 53.0  -0.8
         comp=Z,4µmcomp=Z,325nm,1.4s
AK12  Malin Array Si    76.51 322  P       P       03 14 53.1  -0.9
AK16  Malin Array Si    76.55 322  P       P       03 14 53.3  -0.9
AK17  Malin Array Si    76.58 322  P       P       03 14 53.5  -0.9
BISRR Bisoca            76.84 317 ⇓P       P       03 14 57.2  +1.2
ISR   Istrita           76.86 316 ⇑P       P       03 14 57.5  +1.4
ISR   Istrita           76.86 316  P       P       03 14 57.5  +1.4
VRI   Vrincioaia        76.90 317 ⇓P       P       03 14 57.1  +0.8
VRI   Vrincioaia        76.90 317  P       P       03 14 57.1  +0.8
VRI   Vrincioaia        76.90 317  P       P       03 14 57.1  +0.8
         comp=Z,2µmcomp=Z,192nm,1.1s
PLOR  Plostina          76.95 317 ⇑P       P       03 14 57.5  +0.9
PLOR  Plostina          76.95 317  P       P       03 14 57.5  +0.9
SULR                    76.97 316 ⇑P       P       03 14 57.8  +1.2
TESR  Tescani           77.10 318 ⇓P       P       03 14 57.8  +0.4
TESR  Tescani           77.10 318  P       P       03 14 57.7  +0.4
         comp=Z,2µmcomp=Z,276nm,1.0s
MI30  MI30,Zelenitsa    77.13 322  P       P       03 14 56.5  -1.0
LUBAR Lubar, Ukraine    77.19 321  P       P       03 14 57.6  -0.2
COVR  Voineasa-Covas    77.25 317 ⇑P       P       03 14 58.5  +0.2
MI29  MI29, Kamyanyy    77.26 322  P       P       03 14 57.7  -0.5
         comp=Z,13µmcomp=Z,691nm,1.3s
PHPEN Phepeng           77.28 244 i P      P       03 15 00.1  +1.2
MLR   Muntele Rosu      77.36 317  PP      PP      03 17 54.5  +0.6
         comp=Z,15nm,1.2s,baz=69,slow=10,SNR=3.0
MLR                                LR      LR      03 54 12.9
         comp=Z,126nm,20.3s,baz=111,slow=40
MLR   Muntele Rosu      77.36 317 ⇓P       P       03 14 59.5  +0.5
MLR   Muntele Rosu      77.36 317  P       P       03 14 59.5  +0.5
MLR   Muntele Rosu      77.36 317  P       P       03 14 59.3  +0.3
TURR  Turia             77.43 317 ⇑P       P       03 14 59.8  +0.5
BIZ   Bicaz             77.56 318 ⇑P       P       03 15 01.9  +1.9
PRAR  RASCA             77.57 318 ⇑P       P       03 14 59.9  -0.1
KGCAE Kacgae            77.58 247 i P      P       03 15 02.2  +1.5
OUR   Ouranopolis       77.79 311  P       P       03 15 00.9  -0.5
HUMR  Humele            77.83 315 ⇑P       P       03 15 01.6  +0.1
DOPR  Dopca             77.83 317 ⇑P       P       03 15 01.8  +0.2
HORU  Horodok           77.86 320  P       P       03 15 01.0  -0.6
RPZ   Rata Peaks        77.90 135  LR      LR      03 50 10.4
         comp=Z,436nm,21.1s,baz=296,slow=36
RPZ   Rata Peaks        77.90 135  P       P       03 15 02.5  +0.5
VOIR                    77.96 316 ⇑P       P       03 15 02.1  -0.3
VOIR                    77.96 316  P       P       03 15 02.0  -0.3
INZ   Inchbonnie        77.97 134  P       P       03 15 02.5  +0.2
INZ                                IAmb    IAmb    03 15 03.2
         comp=Z,90nm,0.9s
QNGWA Qangwa            78.23 250 i P      P       03 15 06.0  +1.7
ARR   Arges             78.23 316 ⇑P       P       03 15 04.0  +0.1
BURAR Bucovina Array    78.29 319  P       P       03 15 05.0  +0.8
BURAR                              IAmb    IAmb    03 15 06.0
         comp=Z,87nm,0.8s
BURAR Bucovina Array    78.29 319 ⇓P       P       03 15 05.3  +1.1
BURAR Bucovina Array    78.29 319  P       P       03 15 05.2  +1.1
BUR08 Bucovina Ar. S    78.31 319  IAmb    IAmb    03 15 06.3
         comp=Z,129nm,1.1s
MNK   Minsk             78.31 326 i P      P       03 15 02.3  -1.6
         comp=E,11nm,0.6s
MNK                               i P      P       03 15 02.3  -1.6
         comp=N,92nm,1.1s
MNK                               i P      P       03 15 02.3  -1.6
         comp=Z,131nm,0.9s,baz=106
MNK                               i pP     PcP     03 15 15.8  +2.7
MNK                               i sP     sP      03 15 21.7  -2.6
MNK                               i PP     PP      03 17 54.6  -6.8
MNK                               i PPP    PPP     03 19 47.6
MNK                               i S      S       03 24 55.0  -0.3
MNK                               i sS     sS      03 25 19.1  -0.6
MNK                               i SS     SS      03 29 58.6   0.0
MNK                               i SSS    SSS     03 33 23.6
MNK                               i LR     LR      03 50 34.1
MNK                               i LRM    MLR     03 52 07.7
         comp=E,155nm,22.5s
MNK                               i LRM    MLR     03 52 12.1
         comp=N,67nm,18.0s
MNK                               i LRM    MLR     03 52 40.2
         comp=Z,101nm,20.2s
MNK   Minsk             78.31 326 i P      P       03 15 02.3  -1.6
MNK                               i *PP    PcP     03 15 15.8  +2.7
MNK                               i PPP    PPP     03 19 47.6
MNK                               i S      S       03 24 55.0  -0.3
MNK                               i *SS    sS      03 25 19.1  -0.6
MNK                               i SS     SS      03 29 58.6   0.0
MNK                               i SSS    SSS     03 33 23.5
MNK                                pmax    pmax
         comp=Z,131nm,0.9s
MNK                                pmax    pmax
         comp=E,11nm,0.6s
MNK                                pmax    pmax
         comp=N,92nm,1.1s
MNK                                MLR     MLR
         comp=E,155nm,23.0s
MNK                                MLR     MLR
         comp=N,67nm,18.0s
MNK                                MLR     MLR
         comp=Z,101nm,20.0s
GRTLG Ghanzi            78.35 248 i P      P       03 15 06.2  +1.2
QRZ   Quartz Range      78.39 132  P       P       03 15 05.6  +0.9
QRZ                                IAmb    IAmb    03 15 06.4
         comp=Z,105nm,0.8s
QRZ   Quartz Range      78.39 132  P       P       03 15 05.3  +0.6
OXZ   Oxford            78.52 134  IAmb    IAmb    03 15 07.1
         comp=Z,85nm,1.2s
TNR   Turnu Rosu        78.54 316 ⇑P       P       03 15 05.7  +0.3
TNR   Turnu Rosu        78.54 316  P       P       03 15 05.7  +0.3
KSV   Kosov             78.54 319  P       P       03 15 04.9  -0.5
PUL   Pulkovo           78.60 331ceP       P       03 15 06.0  +0.6
PUL                                pmax    pmax
         comp=Z,68nm,0.4s
PUL                                MLR     MLR
         comp=Z,449nm,18.0s
RNPP5 Staryi Chortor    78.66 322  P       P       03 15 05.4  -0.5
RNPP9 Sopachiv          78.70 322  P       P       03 15 05.6  -0.5
RNPP8 Varash            78.71 322  P       P       03 15 05.8  -0.4
ARCR  ARCALIA           78.76 318 ⇑P       P       03 15 07.8  +1.2
THZ   Tophouse          78.84 133  IAmb    IAmb    03 15 08.3
         comp=Z,93nm,1.0s
LOT   Lotru             78.85 316 ⇓P       P       03 15 06.7  -0.5
ITM   Ithomi            78.91 308  IAmb    IAmb    03 15 08.1
         comp=Z,96nm,1.0s
STNU  Starunia          78.99 320  P       P       03 15 07.9  +0.1
NACGM Naroch            79.03 326 eP       P       03 15 07.8   0.0
         comp=E,36nm,1.3s
CJR   Cluj-Napoca       79.20 317 ⇑P       P       03 15 10.4  +1.3
CJR   Cluj-Napoca       79.20 317  P       P       03 15 10.3  +1.3
CBBR  Cluj-Babes-Bol    79.24 318 ⇓P       P       03 15 10.4  +1.2
KOOLE Kule              79.44 247 i P      P       03 15 12.2  +1.3
BMR   Baia Mare         79.44 318 ⇓P       P       03 15 11.4  +1.1
BMR   Baia Mare         79.44 318  P       P       03 15 11.4  +1.1
MORS  Morshin           79.47 320  P       P       03 15 10.9  +0.5
LVV   L'vov             79.52 321  P       P       03 15 10.6   0.0
MARR  Marisel-Cluj      79.52 317 ⇓P       P       03 15 11.7  +0.9
DEV   Deva              79.52 317 ⇓P       P       03 15 11.8  +1.0
DEV   Deva              79.52 317  P       P       03 15 11.7  +1.0
GZR   Gura Zlata        79.53 316 ⇑P       P       03 15 11.3  +0.4
GZR   Gura Zlata        79.53 316  P       P       03 15 11.3  +0.4
ISAL  Salakas           79.56 327 eP       P       03 15 12.2  +1.4
MEZ   Mezhgor'ye        79.59 319  P       P       03 15 12.0  +0.9
HERR  Herculane         79.69 315 ⇓P       P       03 15 11.9  +0.2
MESR  Meseseni          79.71 318 ⇑P       P       03 15 13.2  +1.4
DRGR                    79.81 317 ⇑P       P       03 15 13.3  +0.9
DRGR                    79.81 317  P       P       03 15 13.3  +0.9
LVZ   Lovozero          79.81 340  P       P       03 15 11.8  -0.1
LVZ                                IAmb    IAmb    03 15 12.1
         comp=Z,35nm,0.7s
LVZ   Lovozero          79.81 340 eP       P       03 15 11.8  -0.1
LVZ                                pmax    pmax
         comp=Z,30nm,0.8s
LVZ                                MLR     MLR
         comp=Z,690nm,20.8s
SYO   Syowa Base        79.84 198⇑eP       P       03 15 15.0  +3.0
SYO   Syowa Base        79.84 198⇓ePcP     PcP     03 15 20.2  +0.8
TRSU  Trosnyk           79.88 319  P       P       03 15 13.4  +0.8
SUR   Sutherland        79.90 237  P       P       03 15 15.7  +2.3
VSU   Vasula            79.99 330d iP      P       03 15 11.5  -1.5
VSU                                pmax    pmax
         comp=Z,69nm,1.0s
VSU   Vasula            79.99 330 eP       P       03 15 11.9  -1.0
BOVS  Bovan             80.00 314 ⇓P       P       03 15 13.0  -0.4
SURR  Surduc            80.04 316 ⇓P       P       03 15 14.1  +0.5
SNZO  South Karori      80.09 132  P       P       03 15 14.3  +0.4
BERU  Beregovo          80.11 319  P       P       03 15 14.5  +0.6
APA   Apatity           80.11 339⇓iP       P       03 15 11.7  -1.8
APA                                pmax    pmax
         comp=Z,33nm,0.9s
MUKU  Mukachevo         80.12 319  S       S       03 25 16.1  +1.3
KUZ   Kuaotunu          80.17 127  P       P       03 15 15.2  +0.8
MDVR  Moldovita         80.17 315 ⇓P       P       03 15 14.5  +0.1
MSVF  Nonsavu           80.27 108  P       P       03 15 16.4  +0.9
MSVF  Nonsavu           80.27 108  LR      LR      03 51 53.2
         comp=Z,202nm,20.8s,baz=265,slow=36
MSVF  Nonsavu           80.27 108  P       P       03 15 16.4  +0.9
MSVF                               pmax    pmax
         comp=Z,21nm,1.0s
KWP   Kalwaria Pacla    80.32 320 eP       P       03 15 15.3  +0.3
BZS   Buzias            80.37 316 ⇓P       P       03 15 15.5  +0.2
BZS   Buzias            80.37 316  P       P       03 15 15.5  +0.2
KOLS  Kolonicke sedl    80.48 320 eP       P       03 15 16.7  +0.8
KOLS                               pmax    pmax
         comp=Z,126nm,0.9s
KOLS  Kolonicke sedl    80.48 320 eP       P       03 15 16.7  +0.8
KOLS                              ePP      PP      03 18 19.6   0.0
TIM   Timisoara         80.66 316 ⇑P       P       03 15 18.1  +1.2
TIM   Timisoara         80.66 316  P       P       03 15 18.1  +1.2
PABE  Paberze           80.74 326 eP       P       03 15 16.8  -0.3
SHEM  Shemya Is, Ala    80.83  37  LR      LR      03 54 10.9
         comp=Z,29nm,18.9s,baz=296,slow=38
VSVD  Vaisvydziai       80.87 327 eP       P       03 15 17.6  -0.1
SUW   Suwalki           80.88 325 eP       P       03 15 17.6  -0.2
SUW   Suwalki           80.88 325 eP       P       03 15 17.4  -0.5
TIR   Tirane            81.03 312  P       P       03 15 16.3  -2.7
FINES FINESS Array B    81.10 332  P       P       03 15 18.9   0.0
         comp=Z,45nm,0.5s,baz=104,slow=5.7,SNR=571
FINES                              LR      LR      03 54 38.4
         comp=Z,257nm,21.0s,baz=110,slow=38
         comp=Z,45nm,0.5s
BKZ   Black Stump Fm    81.11 130  IAmb    IAmb    03 15 20.3
         comp=Z,82nm,0.6s
BKZ   Black Stump Fm    81.11 130  P       P       03 15 20.1  +0.5
BFZ   Birch Farm        81.14 131  P       P       03 15 20.3  +0.7
SJES  Sjenica           81.19 314⇓iP       P       03 15 20.2  +0.2
STHS  Stebnicka Huta    81.22 320 eP       P       03 15 19.6  -0.3
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STHS                             pmax   pmax
      comp=Z,53nm,0.8s
STHS  Stebnicka Huta   81.22 320 eP     P       03 15 19.6 -0.3
BILL  Bilibino         81.26  21 P      P       03 15 19.0 -0.7
BILL  Bilibino         81.26  21deP     P       03 15 19.0 -0.7
BILL                             pmax   pmax
      comp=Z,29nm,2.5s
BILL                             MLR    MLR
      comp=Z,190nm,18.0s
URZ   Urewera          81.47 129 LR     LR      03 53 10.3
      comp=Z,353nm,19.8s,baz=8.5,slow=37
URZ   Urewera          81.47 129 P      P       03 15 22.0 +0.6
MTSE  Matsula          81.53 329 eP     P       03 15 20.7 -0.5
FRGS  Fruska Gora      81.56 315⇓iP     P       03 15 21.4 -0.4
KECS  Kecovo           81.57 319 eP     P       03 15 21.9 +0.2
KECS                             pmax   pmax
      comp=Z,55nm,0.8s
KECS  Kecovo           81.57 319 eP     P       03 15 21.9 +0.2
TSUM  Tsumeb           81.58 251 P      P       03 15 23.9 +1.4
TSUM  Tsumeb           81.58 251 LR     LR      03 46 56.2
      comp=Z,193nm,21.8s,baz=73,slow=32
MEF   Metsahovi        81.59 331 eP     P       03 15 21.2 -0.3
PDG   Podgorica        81.61 313⇓iP     P       03 15 21.4 -0.6
PDG   Podgorica        81.61 313 ⇓P     P       03 15 21.7 -0.3
DRME  Dracevica, Mon   81.64 312⇓iP     P       03 15 21.7 -0.5
RUDO  Rudo             81.67 314 eP     P       03 15 21.5 -0.9
TEKS  Tekeris          81.68 315⇓iP     P       03 15 22.2 -0.2
BBLS  Lazi&#263i       81.68 314⇓iP     P       03 15 22.4 -0.1
R9F13 Warsaw-Wawer     81.75 323 eP     P       03 15 22.5  0.0
NIE   Niedzica         81.83 320 eP     P       03 15 24.0 +0.8
NIE   Niedzica         81.83 320 P      P       03 15 23.7 +0.6
KEF   Keuruu           81.84 333 eP     P       03 15 22.8  0.0
PSZ   Piszkesteto      81.88 318 IAmb   IAmb    03 15 24.8
      comp=Z,62nm,0.9s
PSZ   Piszkesteto      81.88 318 ⇓P     P       03 15 23.7 +0.3
PSZ   Piszkesteto      81.88 318 P      P       03 15 23.7 +0.3
PSZ   Piszkesteto      81.88 318 eP     P       03 15 23.5 +0.1
BEL   Belsk            81.90 322 eP     P       03 15 23.8 +0.4
BEL   Belsk            81.90 322 P      P       03 15 24.1 +0.7
UPM   Unac-Piva        81.96 313⇓iP     P       03 15 23.2 -0.9
PBUR  Paburge          81.98 327 eP     P       03 15 23.5 -0.1
HAPS  Han Pijesak,Bl   82.03 314⇓iP     P       03 15 24.6 +0.2
HCY   Herceg Novi      82.18 313⇓iP     P       03 15 24.0 -1.0
BRY   Bratogost        82.19 313⇓iP     P       03 15 24.5 -0.8
OJC   Ojcow            82.27 321 eP     P       03 15 25.7 +0.3
OJC   Ojcow            82.27 321 P      P       03 15 25.4  0.0
TREB  Trebinje         82.31 313 eP     P       03 15 25.1 -0.6
LANS  Liptovska Anna   82.33 319 eP     P       03 15 26.3 +0.5
LANS                             pmax   pmax
      comp=Z,12nm,0.8s
LANS  Liptovska Anna   82.33 319 eP     P       03 15 26.3 +0.5
BUD   Budapest         82.41 318 P      P       03 15 26.5 +0.4
VADS  Vadso            82.41 341 eP     P       03 15 26.0 +0.4
MORH  Mrgy, Hungar     82.50 316 ⇓P     P       03 15 26.8 +0.1
VYHS  Vyhne            82.66 319 eP     P       03 15 27.5 +0.1
VYHS                             pmax   pmax
      comp=Z,67nm,1.4s
VYHS  Vyhne            82.66 319 eP     P       03 15 27.5 +0.1
STON  Ston             82.80 313⇓iP     P       03 15 27.3 -0.9
SRO   Srobarova        82.92 318 eP     P       03 15 29.4 +0.6
SRO                              pmax   pmax
      comp=Z,69nm,0.9s
SRO   Srobarova        82.92 318 eP     P       03 15 29.4 +0.6
RAF   Rauma            83.03 331 eP     P       03 15 28.7 -0.3
VAF   Ylistaro         83.03 334 eP     P       03 15 29.2 +0.3
KEV   Kevo             83.07 341 P      P       03 15 29.1  0.0
KEV                              IAmb   IAmb    03 15 30.3
      comp=Z,50nm,1.1s
KEV   Kevo             83.07 341 P      P       03 15 29.1  0.0
KEV                              pmax   pmax
      comp=Z,50nm,1.1s
TIP   Timpagrande      83.17 309 IAmb   IAmb    03 15 32.3
      comp=Z,106nm,1.4s
TIP   Timpagrande      83.17 309 ⇓P     P       03 15 31.1 +0.7
OKC   Ostrava-Krasne   83.28 320 eP     P       03 15 31.3 +0.7
OKC   Ostrava-Krasne   83.28 320 eP     P       03 15 31.3 +0.7
SLATY Slatina          83.29 315 eP     P       03 15 30.6 -0.1
MATE  Matera           83.34 311 ⇓P     P       03 15 31.4 +0.4
MATE  Matera           83.34 311 eP     P       03 15 31.3 +0.2
BLY   Banja Luka       83.36 315⇓iP     P       03 15 31.2 +0.1
MAUC  Maruska          83.43 320 eP     P       03 15 31.8 +0.4
JAVC  Velka Javorina   83.47 319 eP     P       03 15 32.5 +0.8
ARA0  ARCESS Array S   83.51 340 eP     P       03 15 31.6 +0.2
ARCES ARCESS Array B   83.51 340 P      P       03 15 31.6 +0.2
ARCES                            IAmb   IAmb    03 15 32.9
      comp=Z,39nm,0.8s
ARCES ARCESS Array B   83.51 340 P      P       03 15 31.6 +0.2
      comp=Z,12nm,0.4s,baz=100,slow=4.9,SNR=192
ARCES                            LR     LR      03 56 20.1
      comp=Z,478nm,20.9s,baz=107,slow=38
      comp=Z,12nm,0.4s
ARCES ARCESS Array B   83.51 340 P      P       03 15 31.6 +0.2
ARCES                            pmax   pmax
      comp=Z,39nm,0.9s
STEB  Steborice        83.53 320 eP     P       03 15 32.7 +0.8
A051A Mrakovica        83.59 315⇓iP     P       03 15 32.1 -0.3
SMOL  Smolenice        83.59 319 eP     P       03 15 32.5 +0.3
SMOL                             pmax   pmax
      comp=Z,28nm,1.7s
MORC  Moravsky Berou   83.66 320 IAmb   IAmb    03 15 34.2
      comp=Z,114nm,1.4s
MORC  Moravsky Berou   83.66 320 eP     P       03 15 32.9 +0.3
MORC  Moravsky Berou   83.66 320 ⇓P     P       03 15 33.2 +0.5
MORC  Moravsky Berou   83.66 320 P      P       03 15 33.1 +0.5
MODS  Modra-Piesok     83.68 318 eP     P       03 15 32.8 +0.1
MODS                             pmax   pmax
      comp=Z,138nm,1.1s
MODS  Modra-Piesok     83.68 318 eP     P       03 15 32.8 +0.1
MODS                             ePP    PP      03 18 45.1 -0.9
CEL   Celeste          83.78 308 IAmb   IAmb    03 15 35.6
      comp=Z,79nm,0.9s
A050A Klekovaca        83.80 315⇓iP     P       03 15 32.8 -0.7
CUC   Castrocucco      83.96 310 IAmb   IAmb    03 15 35.2
      comp=Z,34nm,1.0s
SOP   Sopron           84.09 318 P      P       03 15 35.1 +0.3
SGRT  San Giovanni R   84.15 312 IAmb   IAmb    03 15 36.2
      comp=Z,41nm,0.9s
KTK1  Kautokeino       84.16 340 eP     P       03 15 34.8 +0.2
KOGS  Kog              84.18 316 i P    P       03 15 35.4 +0.2
KRLC  Kraliky          84.18 320 eP     P       03 15 36.1 +0.8
KRLC  Kraliky          84.18 320 eP     P       03 15 36.1 +0.8
VRAC  Vranov           84.22 319 P      P       03 15 35.5 +0.1
      comp=Z,8.2nm,0.8s,baz=104,slow=5.9,SNR=21
VRAC                             LR     LR      03 57 56.4
      comp=Z,96nm,19.6s,baz=82,slow=39
      comp=Z,8.2nm,0.8s
VRAC  Vranov           84.22 319 eP     P       03 15 35.5 +0.1
VRAC  Vranov           84.22 319 ⇑P     P       03 15 36.1 +0.6
VRAC  Vranov           84.22 319 P      P       03 15 36.0 +0.6
GKP   Gorka Klasztor   84.25 323 eP     P       03 15 35.6 +0.1
GKP   Gorka Klasztor   84.25 323 eP     P       03 15 35.1 -0.3
RONA  Rosalia, Austr   84.26 318 i P    P       03 15 35.6 -0.2
      comp=Z,9.6nm,0.8s,SNR=13
KRUC  Moravsky         84.33 319 eP     P       03 15 35.9 -0.1
HAMF  Hammerfest       84.40 341 eP     P       03 15 35.7 -0.1
DPC   Dobruska-Polom   84.50 320 eP     P       03 15 37.8 +0.9
DPC                              AMS    AMS     04 00 00.0
      comp=Z,200nm,16.7s
DPC   Dobruska-Polom   84.50 320 eP     P       03 15 37.8 +0.9
DPC                              MLR    MLR
      comp=Z,200nm,16.7s
GCIS  Gornji Cirnik    84.56 316 eP     P       03 15 37.1 -0.1
KSP   Ksiaz            84.57 321 eP     P       03 15 37.9 +0.7
CONA  Conrad Observa   84.58 318 i P    P       03 15 37.2 -0.2
      comp=Z,11nm,0.8s,SNR=19
OSTC  Ostas            84.59 321 AMS    AMS     03 59 50.0
      comp=Z,200nm,17.5s
CRES  Cresnjevec Ost   84.67 316⇓iP     P       03 15 37.8  0.0
CHVC  Chvalec          84.69 321 eP     P       03 15 38.6 +0.8
CHVC                             AMS    AMS     04 00 10.0
      comp=Z,200nm,16.2s
CHVC  Chvalec          84.69 321 eP     P       03 15 38.6 +0.8
CHVC                             MLR    MLR
      comp=Z,200nm,16.2s
UPC   Upice            84.71 321 eP     P       03 15 38.6 +0.7
UPC   Upice            84.71 321 eP     P       03 15 38.6 +0.7
WDD   Wied Dalam       84.72 306 IAmb   IAmb    03 15 38.9
      comp=Z,53nm,0.6s
RAO   Raoul Island     84.73 119 LR     LR      03 53 03.8
      comp=Z,506nm,20.4s,baz=245,slow=35
ARSA  Arzberg          84.75 317 IAmb   IAmb    03 15 39.8
      comp=Z,46nm,1.0s
ARSA  Arzberg          84.75 317 eP     P       03 15 38.4 +0.3
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      comp=Z,44nm,1.0s,SNR=32
BOJS  Bojanci          84.79 315⇓iP     P       03 15 38.5 +0.1
VAE   Valguarnera      84.90 307 P      P       03 15 40.2 +1.0
      comp=Z,27nm,1.0s,baz=341,slow=3.8,SNR=13
VAE                              LR     LR      03 59 32.0
      comp=Z,64nm,19.0s,baz=36,slow=40
      comp=Z,27nm,1.0s
TREC  Trest            84.94 319 eP     P       03 15 39.6 +0.5
TREC  Trest            84.94 319 eP     P       03 15 39.6 +0.5
PAOL  Paolisi          84.98 311 IAmb   IAmb    03 15 40.6
      comp=Z,108nm,1.4s
VNDA  Vanda            85.01 169 P      P       03 15 40.2 +1.4
VNDA  Vanda            85.01 169 P      P       03 15 39.5 +0.7
      comp=Z,5.4nm,1.1s,baz=309,slow=5.6,SNR=17
VNDA                             LR     LR      03 47 51.6
      comp=Z,268nm,21.9s,baz=314,slow=32
      comp=Z,5.4nm,1.1s
VNDA  Vanda            85.01 169 P      P       03 15 40.2 +1.4
VNDA                             pmax   pmax
      comp=Z,19nm,1.4s
SOKA  Soboth           85.03 317 i P    P       03 15 40.0 +0.3
      comp=Z,69nm,1.1s,SNR=58
JETT  Jettan, Norway   85.25 340 eP     P       03 15 39.9 -0.4
LJU   Ljubljana        85.34 316 eP     P       03 15 41.6 +0.5
OBKA  Obir             85.36 316⇓iP     P       03 15 41.5 +0.2
OBKA  Obir             85.36 316 i P    P       03 15 41.6 +0.3
      comp=Z,28nm,0.9s,SNR=14
CEY   Cerknica         85.39 316⇓iP     P       03 15 41.1 -0.3
GOPC  GO Pecny, Ondr   85.45 320 eP     P       03 15 42.3 +0.7
GOPC  GO Pecny, Ondr   85.45 320 eP     P       03 15 42.3 +0.7
CRNS  Crni Vrh         85.53 316 i P    P       03 15 42.0 -0.1
PRU   Pruhonice        85.61 320 eP     P       03 15 42.8 +0.4
PRU   Pruhonice        85.61 320 eP     P       03 15 42.8 +0.4
PVCC  Panska Ves       85.63 320 P      P       03 15 43.2 +0.7
MOA   Molln            85.64 318 eP     P       03 15 42.4 -0.2
      comp=Z,11nm,0.8s,SNR=12
CKRC  Cesky Krumlov    85.68 319 eP     P       03 15 43.4 +0.6
CKRC  Cesky Krumlov    85.68 319 eP     P       03 15 43.4 +0.6
TRO   Tromso           85.78 340 eP     P       03 15 42.6 -0.1
BSD   Bornholm Skovb   85.80 325 eP     P       03 15 42.6 -0.5
BSD   Bornholm Skovb   85.80 325 i P    P       03 15 42.2 -0.9
BSD                              IAmb   IAmb    03 15 43.7
      comp=Z,46nm,0.6s
ZVC   Zvikov           85.80 319 eP     P       03 15 43.7 +0.4
TRI   Trieste          85.85 316 IAmb   IAmb    03 15 44.1
      comp=Z,40nm,1.0s
AQU   L'Aquila         85.93 312 P      P       03 15 44.5 +0.3
RICC  Richard          85.94 320 eP     P       03 15 44.6 +0.6
SABO  M.te Sabotino    85.98 316 IAmb   IAmb    03 15 45.2
      comp=Z,40nm,1.0s
MYKA  Terra Mystica    85.99 317 i P    P       03 15 44.2 -0.2
      comp=Z,27nm,0.8s,SNR=21
PRED  Cave del Predi   86.03 316 IAmb   IAmb    03 15 45.8
      comp=Z,63nm,0.8s
BIOA  Bad Ischl, Aus   86.05 318 eP     P       03 15 44.3 -0.4
      comp=Z,14nm,0.8s,SNR=16
BRG   Berggiesshubel   86.06 321 eP     P       03 15 45.0 +0.5
      comp=Z,145nm,1.8s,baz=93,slow=4.8
BRG   Berggiesshubel   86.06 321⇓iP     P       03 15 45.0 +0.5
BRG                              Amp            03 15 45.8
      comp=Z,27nm,0.9s
BRG                              PP     PP      03 19 03.5 -1.7
BRG                              Amp            03 19 07.7
      comp=Z,8.1nm,1.4s
BRG   Berggiesshubel   86.06 321 S      SKSac   03 26 10.0 +3.7
GEC2  GERESS Array S   86.08 319 eP     P       03 15 45.3 +0.5
      comp=Z,124nm,1.4s,baz=93,slow=4.8
GERES GERESS Array B   86.08 319 P      P       03 15 45.1 +0.2
      comp=Z,28nm,1.0s,baz=99,slow=4.2,SNR=176
GERES                            LR     LR      03 59 56.5
      comp=Z,99nm,20.1s,baz=102,slow=40
      comp=Z,28nm,1.0s
SBA   Scott Base       86.11 169 P      P       03 15 45.9 +1.6
SBA                              IAmb   IAmb    03 15 47.8
      comp=Z,64nm,1.9s
SBA   Scott Base       86.11 169 P      P       03 15 45.9 +1.6
SBA                              pmax   pmax
      comp=Z,64nm,1.9s
NRCA  Norcia           86.16 313 IAmb   IAmb    03 15 46.6
      comp=Z,52nm,1.0s
KHC   Kasperske Hory   86.18 319 eP     P       03 15 45.4 +0.1
KHC                              esP    sP      03 16 05.5 -0.3
KHC                              AMS    AMS     03 58 50.0
      comp=Z,200nm,19.4s
KHC   Kasperske Hory   86.18 319deP     P       03 15 45.3  0.0
KHC                              pmax   pmax
      comp=Z,37nm,0.7s
FDMO  Fiordimonte      86.19 313 IAmb   IAmb    03 15 46.7
      comp=Z,59nm,1.4s
KBA   Koelnbreinsper   86.22 317 i P    P       03 15 45.1 -0.6
      comp=Z,8.9nm,0.7s,SNR=12
RUE   Ruedersdorf      86.27 322 eP     P       03 15 46.0 +0.5
RUE   Ruedersdorf      86.27 322 eP     P       03 15 46.3 +0.8
      comp=Z,288nm,1.4s,baz=93,slow=4.8
HSKC  Hora Svate Kat   86.36 321 eP     P       03 15 46.6 +0.5
HSKC                             AMS    AMS     04 00 40.0
      comp=Z,200nm,19.9s
WET   Wettzell         86.64 319 eP     P       03 15 48.0 +0.5
      comp=Z,35nm,0.9s,baz=93,slow=4.8
WET                              eL     L       04 01 39.6
      comp=Z,186nm,20.6s
RGN   Rugen            86.67 324 eP     P       03 15 48.5 +1.1
      baz=93,slow=4.8
CLL   Collm            86.67 321 IAmb   IAmb    03 15 49.0
      comp=Z,41nm,1.2s
CLL   Collm            86.67 321⇓iP     P       03 15 47.5 -0.1
CLL                              e              03 26 08.0
CLL                              pmax   pmax
      comp=Z,45nm,1.3s
CLL   Collm            86.67 321 eP     P       03 15 47.7 +0.1
      comp=Z,39nm,1.2s,baz=93,slow=4.8
CLL                              eL     L       03 58 47.2
      comp=Z,116nm,21.3s
CLL   Collm            86.67 321⇓iP     P       03 15 47.5 -0.1
      comp=Z,45nm,1.3s
CLL                              ePcP   PcP     03 15 51.0 +1.1
CLL                              esP    sP      03 16 07.0 -1.1
CLL                              ePP    PP      03 19 12.0 +1.8
CLL                              ePPP   PPP     03 21 04.0
CLL                              eSKSac SKSac   03 26 08.0 -2.1
CLL                              eS     S       03 26 20.0 -0.9
CLL                              esS    sS      03 26 48.0 +2.3
CLL                              ePS    PnS     03 27 26.0 +0.5
LESA  Schwarzleotal    86.69 317 i P    P       03 15 47.2 -0.7
      comp=Z,16nm,0.7s,SNR=20
ABTA  Abfaltersbach    86.77 317 i P    P       03 15 47.6 -0.7
      comp=Z,21nm,1.0s,SNR=15
FAUS  Fauske           86.80 337 eP     P       03 15 47.8  0.0
HFS   Hagfors          86.85 330 P      P       03 15 48.4 +0.1
      comp=Z,38nm,0.5s,baz=126,slow=4.0,SNR=221
HFS                              PP     PP      03 19 11.6 +0.2
      comp=Z,5.6nm,0.9s,baz=86,slow=10,SNR=3.1
HFS                              LR     LR      03 57 25.0
      comp=Z,154nm,21.0s,baz=92,slow=38
      comp=Z,38nm,0.5s
STEI  Steigen          86.88 338 eP     P       03 15 48.1 -0.1
NKC   Novy Kostel      86.97 320 eP     P       03 15 49.8 +0.7
NKC   Novy Kostel      86.97 320 eP     P       03 15 49.8 +0.7
TANN  Tannenbergstha   86.97 320 eP     P       03 15 49.5 +0.3
      comp=Z,41nm,1.5s,baz=93,slow=4.8
MOR8  Moi Rana         87.02 336 eP     P       03 15 48.6 -0.3
ROTZ  Rotzenmuhle      87.11 320 eP     P       03 15 50.6 +0.8
      comp=Z,7.4nm,0.8s,baz=93,slow=4.8
MANZ  Manzenberg       87.18 320 eP     P       03 15 51.0 +0.9
      comp=Z,15nm,1.0s,baz=93,slow=4.8
COP   Copenhagen       87.25 326 i P    P       03 15 50.2  0.0
COP                              IAmb   IAmb    03 15 51.8
      comp=Z,137nm,1.0s
WTTA  Wattenberg       87.39 317 i P    P       03 15 50.9 -0.5
      comp=Z,45nm,1.0s,SNR=23
WATA  Walderalm        87.43 317 eP     P       03 15 50.8 -0.8
      comp=Z,17nm,0.7s,SNR=24
NEUB  Neuenburg        87.44 321 eP     P       03 15 51.7 +0.5
      comp=Z,101nm,1.3s,baz=93,slow=4.8
MOX   Moxa             87.52 320 eP     P       03 15 52.2 +0.5
      comp=Z,103nm,1.7s,baz=93,slow=4.8
MOX                              eL     L       04 02 09.5
      comp=Z,142nm,20.2s
VAGH  Vaagaholmen      87.53 337 eP     P       03 15 51.6 +0.3
LOF   Lofoten          87.53 338 eP     P       03 15 51.5 +0.2
LEIR  Leirfjorden      87.55 336 eP     P       03 15 51.6 +0.2
KONS  Konsvik          87.57 336 eP     P       03 15 52.0 +0.5
STOK  Stokkvaagen      87.60 336 eP     P       03 15 51.6 -0.1
FUR   Furstenfeldbru   87.66 318 eP     P       03 15 52.4  0.0
      comp=Z,49nm,1.2s,baz=93,slow=4.8
FUR                              eL     L       04 04 37.7
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      comp=Z,114nm,21.9s
SQTA  Sankt Quirin     87.68 317 i P    P       03 15 52.3 -0.5
      comp=Z,20nm,0.7s,SNR=20
GRA1  Grafenberg Arr   87.74 320 IAmb   IAmb    03 15 54.8
      comp=Z,75nm,1.2s
GRF   Grafenberg Arr   87.74 320 eP     P       03 15 53.7 +0.9
      comp=Z,43nm,0.9s,baz=93,slow=4.8
GRF                              eL     L       04 00 54.1
      comp=Z,103nm,20.0s
GRFO  Grafenberg       87.74 320 P      P       03 15 53.6 +0.8
GRFO                             IAmb   IAmb    03 15 54.7
      comp=Z,65nm,1.1s
GRFO  Grafenberg       87.74 320 P      P       03 15 53.6 +0.8
GRFO                             pmax   pmax
      comp=Z,65nm,1.1s
MOTA  Moosalm          87.75 317 i P    P       03 15 52.5 -0.6
      comp=Z,34nm,0.9s,SNR=29
ZCCA  Zocca            87.77 314 IAmb   IAmb    03 15 59.4
      comp=Z,79nm,1.3s
SPA0  Spitsbergen Ar   87.78 348 eP     P       03 15 52.0 -0.4
SPITS Spitsbergen Ar   87.78 348 P      P       03 15 52.1 -0.4
      comp=Z,21nm,0.6s,baz=102,slow=7.8,SNR=68
SPITS                            LR     LR      04 01 33.3
      comp=Z,383nm,21.6s,baz=84,slow=40
      comp=Z,21nm,0.6s
SPITS Spitsbergen Ar   87.78 348 P      P       03 15 52.3 -0.1
SPITS                            pmax   pmax
      comp=Z,154nm,1.4s
GORT1 Trebel           87.79 323 eP     P       03 15 53.5 +0.7
      comp=Z,124nm,1.2s,baz=93,slow=4.8
FLTG  Flechtingen      87.81 322 eP     P       03 15 53.0  0.0
      comp=Z,55nm,1.2s,baz=93,slow=4.8
NC405 NORSAR Array S   87.89 331 IAmb   IAmb    03 15 54.5
      comp=Z,41nm,0.8s
NSS   Namsos           87.93 334 eP     P       03 15 53.4 +0.1
NC602 NORSAR Array S   87.95 331 IAmb   IAmb    03 15 54.6
      comp=Z,60nm,1.1s
NC602 NORSAR Array S   87.95 331 eP     P       03 15 53.7 +0.2
NORES NORESS Array B   87.95 331 P      P       03 15 53.3 -0.2
RETA  Reutte           87.99 317 i P    P       03 15 53.9 -0.2
      comp=Z,29nm,0.7s,SNR=21
FETA  Feichten         88.00 317 i P    P       03 15 54.3  0.0
      comp=Z,9.8nm,0.7s,SNR=16
NC303 NORSAR Array S   88.06 331 IAmb   IAmb    03 15 55.3
      comp=Z,81nm,1.4s
NB201 NORSAR Array S   88.09 331 IAmb   IAmb    03 15 55.4
      comp=Z,45nm,1.1s
NB2   NORSAR Subarra   88.13 331 P      P       03 15 54.0 -0.4
      comp=Z,59nm,1.1s,baz=97,slow=5.1
NB2                              PP     PP      03 19 20.6 -1.1
      comp=Z,1.2nm,0.7s,baz=94,slow=8.6
NB2   NORSAR Subarra   88.13 331 P      P       03 15 51.0 -3.4
NB2                              pmax   pmax
      comp=Z,23nm,1.1s
NB2   NORSAR Subarra   88.13 331 P      P       03 15 54.0 -0.4
      baz=97,slow=5.1
NOA   NORSAR Array B   88.13 331 P      P       03 15 54.1 -0.4
      comp=Z,37nm,1.1s,baz=95,slow=4.9,SNR=68
NOA                              PP     PP      03 19 20.3 -1.4
      comp=Z,4.5nm,1.1s,baz=94,slow=8.3,SNR=4.7
NOA                              LR     LR      03 58 23.6
      comp=Z,126nm,21.8s,baz=95,slow=38
      comp=Z,37nm,1.1s
ASSE  Asse, Remlinge   88.16 322 eP     P       03 15 55.2 +0.7
      comp=Z,102nm,1.2s,baz=93,slow=4.8
NAO01 NORSAR Array S   88.28 331 IAmb   IAmb    03 15 56.9
      comp=Z,62nm,1.2s
OSL   Oslo             88.33 330 eP     P       03 15 56.0 +0.7
CLZ   Clausthal        88.33 322 eP     P       03 15 56.4 +0.8
      comp=Z,142nm,1.2s,baz=93,slow=4.8
NBO00 NORSAR Array S   88.34 331 IAmb   IAmb    03 15 56.7
      comp=Z,55nm,1.1s
NC204 NORSAR Array S   88.35 331 IAmb   IAmb    03 15 56.9
      comp=Z,40nm,1.0s
BSEG  Bad Segeberg     88.41 324 eP     P       03 15 56.8 +1.0
      comp=Z,122nm,1.2s,baz=93,slow=4.8
BSEG                             eL     L       03 59 27.1
      comp=Z,154nm,21.7s
UBR   Ueberruh         88.44 317 eP     P       03 15 56.2  0.0
      comp=Z,18nm,0.7s,baz=93,slow=4.8
NRDL  Niedersach Rie   88.51 322 eP     P       03 15 57.4 +1.2
      comp=Z,156nm,1.1s,baz=93,slow=4.8
OVD   Ostervraa, Den   88.54 327 i P    P       03 15 56.5 +0.2
OVD                              IAmb   IAmb    03 15 58.2
      comp=Z,104nm,0.7s
UBBA  Unterbreizbach   88.55 321 eP     P       03 15 57.1 +0.6
      comp=Z,66nm,1.6s,baz=93,slow=4.8
DAVOX Davos/Dischmat   88.58 317 P      P       03 15 57.7 +0.6
      comp=Z,43nm,0.6s,baz=118,slow=4.0,SNR=146
DAVOX                            LR     LR      04 00 58.8
      comp=Z,104nm,22.0s,baz=78,slow=39
      comp=Z,43nm,0.6s
GTTG  Gottingen        88.58 321 eP     P       03 15 57.5 +0.8
      comp=Z,111nm,1.1s,baz=93,slow=4.8
DAVA  Damuels          88.59 317 eP     P       03 15 57.2 +0.1
      comp=Z,48nm,0.9s,SNR=30
KBS   Kingsbay         88.73 349 eP     P       03 15 56.4 -0.5
SSRD  Sdr. Stenderup   88.83 325 i P    P       03 15 56.5 -1.2
SSRD                             IAmb   IAmb    03 15 59.9
      comp=Z,123nm,0.9s
KONO  Kongsberg        88.90 329 P      P       03 15 58.6 +0.6
KONO                             IAmb   IAmb    03 15 59.4
      comp=Z,44nm,1.2s
KONO  Kongsberg        88.90 329 P      P       03 15 58.6 +0.6
KONO                             pmax   pmax
      comp=Z,44nm,1.2s
KONO  Kongsberg        88.90 329 eP     P       03 15 58.5 +0.6
VSL   Villasalto       88.90 309 IAmb   IAmb    03 15 59.8
      comp=Z,53nm,1.1s
KEST  Kesra            88.92 306 P      P       03 16 00.2 +1.4
      comp=Z,39nm,0.8s,baz=94,slow=0.9,SNR=70
KEST                             LR     LR      03 59 21.2
      comp=Z,109nm,19.9s,baz=48,slow=38
      comp=Z,39nm,0.8s
KEST  Kesra            88.92 306 P      P       03 16 00.3 +1.4
      SNR=13
TUE   Stuetta          88.94 316 IAmb   IAmb    03 16 00.9
      comp=Z,45nm,1.4s
RETH  Rethem/Aller,    88.97 323 eP     P       03 15 59.3 +0.9
      comp=Z,99nm,1.2s,baz=93,slow=4.8
STU   Stuttgart        89.06 319 IAmb   IAmb    03 16 00.7
      comp=Z,82nm,1.6s
STU   Stuttgart        89.06 319 P      P       03 15 59.2 +0.2
STU   Stuttgart        89.06 319 eP     P       03 15 59.9 +0.9
STU   Stuttgart        89.06 319 eP     P       03 15 59.4 +0.4
      comp=Z,51nm,0.8s,baz=93,slow=4.8
GAMB  Gambell          89.38  26 P      P       03 16 00.4 +0.2
      baz=270
NVL   N'lazarevskaya   89.46 199 eP     P       03 16 16.2  +16
NVL                              pmax   pmax
      comp=Z,37nm,1.5s
TNS   Taunus Mts       89.54 320 eP     P       03 16 02.2 +0.9
      comp=Z,85nm,1.0s,baz=93,slow=4.8
TNS                              eL     L       04 02 23.1
      comp=Z,167nm,20.2s
SKAR  Skarslia         89.55 331 eP     P       03 16 02.0 +0.9
KASTN Kahler Asten     89.55 321 eP     P       03 16 02.2 +0.9
      comp=Z,115nm,1.3s,baz=93,slow=4.8
BFO   Black Forest     89.63 318 P      P       03 16 02.0 +0.2
BFO                              IAmb   IAmb    03 16 02.8
      comp=Z,25nm,0.7s
BFO   Black Forest     89.63 318 P      P       03 16 02.0 +0.2
BFO                              pmax   pmax
      comp=Z,25nm,0.7s
BFO   Black Forest     89.63 318 eP     P       03 16 01.9 +0.2
      comp=Z,25nm,0.8s,baz=93,slow=4.8
BFO                              eL     L       04 03 33.5
      comp=Z,158nm,20.3s
MOL   Molde            89.88 332 eP     P       03 16 03.5 +0.9
IBBN  Ibbenburen       89.95 322 eP     P       03 16 04.1 +1.0
      comp=Z,100nm,1.0s,baz=93,slow=4.8
SNART Snartemo         90.14 328 eP     P       03 16 04.6 +0.7
AKN   Aaknes           90.15 332 eP     P       03 16 04.7 +0.8
SPIA  Saint Paul Isl   90.19  33 P      P       03 16 04.3 +0.2
      baz=272
BUG   Bochum--Univer   90.27 321 eP     P       03 16 05.4 +0.8
      comp=Z,67nm,0.9s,baz=93,slow=4.8
SENIN Lac Senin/Sane   90.36 316 IAmb   IAmb    03 16 08.0
      comp=Z,30nm,0.8s
ECH   Echery           90.42 318 IAmb   IAmb    03 16 06.8
      comp=Z,36nm,0.9s
BLS5  Blasjo           90.50 329 eP     P       03 16 06.6 +1.0
QSPA  South Pole Qui   90.56 180 P      P       03 16 07.5 +1.6
QSPA                             IAmb   IAmb    03 16 08.6
      comp=Z,40nm,1.6s
QSPA  South Pole Qui   90.56 180 P      P       03 16 06.9 +1.1
      comp=Z,1.6nm,0.5s,baz=14,slow=0.1,SNR=33
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QSPA				LR	LR	03 52 29.9	
	comp=Z,274nm,18.4s,baz=319,slow=33						
	comp=Z,1.6nm,0.5s						
P08K	Saint George I	90.59	34	P	P	03 16 06.1	+0.2
	baz=272						
BNI	Bardonecchia	90.83	315	IAmb	IAmb	03 16 11.7	
	comp=Z,30nm,1.0s						
BNI	Bardonecchia	90.83	315	P	P	03 16 07.4	-0.2
TNA	Tin City	90.95	25	P	P	03 16 07.6	+0.2
	baz=274						
BTNL	Ternell	91.01	320	dP	P	03 16 08.2	0.0
	comp=Z,24nm,1.2s						
WLF	Walferdange	91.03	320	dP	P	03 16 08.9	+0.6
	comp=Z,31nm,1.1s						
WLF				dPP	PP	03 19 46.4	+1.3
WLF	Walferdange	91.03	320	eP	P	03 16 09.3	+1.1
	comp=Z,84nm,1.2s,baz=93,slow=4.8						
ASK	Askoy	91.08	330	eP	P	03 16 10.1	+1.9
MEM	Membach	91.09	320	dP	P	03 16 08.9	+0.4
	comp=Z,25nm,1.1s						
BHOU	Houvegnez	91.10	320	dP	P	03 16 09.5	+1.0
	comp=Z,9.0nm,1.3s						
KMY	Karmoy	91.13	329	eP	P	03 16 08.8	+0.4
BSTI	Sart Tilman	91.37	320	dP	P	03 16 10.5	+0.7
	comp=Z,3.8nm,1.2s						
BCLA	Clavier	91.55	320	dP	P	03 16 11.1	+0.5
	comp=Z,16nm,1.1s						
F14K	Arctic Creek	91.62	25	P	P	03 16 10.6	0.0
	baz=275						
BGES	Gesves	91.69	320	dP	P	03 16 11.5	+0.2
	comp=Z,17nm,1.0s						
C16K	Lisburne Hills	91.74	22	IAmb	IAmb	03 16 12.5	
	comp=Z,38nm,1.4s						
C16K	Lisburne Hills	91.74	22	P	P	03 16 11.1	+0.1
	baz=276						
JOHN	Johnston Islan	91.75	73	P	P	03 16 12.0	-0.2
BMRD	Maredsous	91.90	320	dP	P	03 16 12.9	+0.7
BMRD				dPP	PP	03 19 51.3	-0.6
DOU	Dourbes	92.02	320	dP	P	03 16 13.2	+0.4
	comp=Z,17nm,1.1s						
ANM	Nome	92.11	25	P	P	03 16 12.7	-0.1
	baz=276						
M11K	Mekoryuk	92.12	30	P	P	03 16 12.9	-0.1
	baz=275						
UCC	Uccle	92.13	321	dP	P	03 16 13.5	+0.3
	comp=Z,5.2nm,0.9s						
F15K	North Star Dit	92.29	24	IAmb	IAmb	03 16 15.2	
	comp=Z,19nm,1.1s						
F15K	North Star Dit	92.29	24	P	P	03 16 13.8	+0.1
	baz=277						
SSB	Saint Sauveur	92.33	315	IAmb	IAmb	03 16 15.9	
	comp=Z,40nm,1.1s						
TAM	Tamanrasset	92.47	293	IAmb	IAmb	03 16 18.1	
	comp=Z,29nm,1.0s						
UNV	Unalaska Valle	92.49	36	P	P	03 16 14.7	-0.1
	baz=274						
C17K	DeLong Mountai	92.51	21	P	P	03 16 14.6	0.0
	baz=278						
G15K	Niukluk	92.63	25	P	P	03 16 14.9	-0.4
	baz=277						
D17K	Noatak River	92.65	22	P	P	03 16 15.8	+0.5
	baz=278,SNR=6.2						
RDOG	Red Dog Mine	92.67	22	P	P	03 16 15.7	+0.2
	baz=278						
K13K	Kusilvak Mount	92.71	28	IAmb	IAmb	03 16 17.6	
	comp=Z,31nm,1.4s						
K13K	Kusilvak Mount	92.71	28	P	P	03 16 15.9	+0.2
	baz=276						
MAHO	Mahon	92.83	310	IAmb	IAmb	03 16 18.9	
	comp=Z,50nm,1.3s						
B18K	Kokolik River	92.87	20	P	P	03 16 16.6	+0.3
	baz=279,SNR=5.6						
A19K	Wainwright	92.97	20	P	P	03 16 17.1	+0.4
	baz=280						
NOR	Nord	92.98	352	i P	P	03 16 15.4	-1.2
NOR				IAmb	IAmb	03 16 17.1	
	comp=Z,20nm,1.1s						
J14K	Nanvaranak Lak	93.12	27	IAmb	IAmb	03 16 19.3	
	comp=Z,17nm,1.1s						
J14K	Nanvaranak Lak	93.12	27	P	P	03 16 17.9	+0.3
	baz=277						
C18K	Utukok River	93.20	21	P	P	03 16 18.3	+0.3
	baz=280,SNR=5.2						
E17K	Hotham Inlet	93.23	23	P	P	03 16 18.4	+0.4
	baz=279						
G16K	Koyuk River	93.28	24	IAmb	IAmb	03 16 19.9	
	comp=Z,24nm,0.9s						
G16K	Koyuk River	93.28	24	P	P	03 16 18.7	+0.4
	baz=279,SNR=9.6						
H16K	Elim	93.44	25	P	P	03 16 19.3	+0.3
	baz=279						
M13K	Dall Lake	93.52	29	P	P	03 16 20.4	+1.0
	baz=278						
F17K	Baldwin Pennin	93.56	23	IAmb	IAmb	03 16 21.1	
	comp=Z,18nm,0.9s						
F17K	Baldwin Pennin	93.56	23	P	P	03 16 20.0	+0.5
	baz=280						
E18K	Tukpahlearik C	93.64	22	IAmb	IAmb	03 16 21.6	
	comp=Z,25nm,1.2s						
E18K	Tukpahlearik C	93.64	22	P	P	03 16 20.3	+0.4
	baz=280						
C19K	Lookout Ridge	93.69	21	P	P	03 16 20.9	+0.8
	baz=281,SNR=11						
L14K	Kuka Creek	93.72	29	IAmb	IAmb	03 16 22.2	
	comp=Z,26nm,1.1s						
L14K	Kuka Creek	93.72	29	P	P	03 16 21.1	+0.8
	baz=278						
G17K	Kiwalik Mounta	93.96	24	P	P	03 16 21.8	+0.4
	baz=280						
K15K	Wolf Creek Mou	94.12	27	P	P	03 16 23.0	+0.8
	baz=279,SNR=5.7						
SNAA	Sanae	94.13	198	P	P	03 16 23.4	+1.3
	comp=Z,0.8nm,0.9s,baz=354,slow=23,SNR=2.0						
SNAA				LR	LR	03 53 08.7	
	comp=Z,120nm,18.3s,baz=112,slow=32						
M14K	Bethel	94.16	29	IAmb	IAmb	03 16 24.1	
	comp=Z,28nm,1.0s						
M14K	Bethel	94.16	29	P	P	03 16 23.0	+0.7
	baz=279,SNR=8.1						
F18K	Selawik	94.16	23	P	P	03 16 22.7	+0.5
	baz=281						
A21K	Barrow	94.18	18	P	P	03 16 22.9	+0.7
	baz=284						
I17K	Unalakleet	94.23	26	IAmb	IAmb	03 16 24.6	
	comp=Z,25nm,1.2s						
I17K	Unalakleet	94.23	26	P	P	03 16 23.3	+0.7
	baz=280,SNR=5.9						
L15K	Ungalak Mounta	94.24	28	P	P	03 16 23.2	+0.5
	baz=279,SNR=11						
B20K	Meade River	94.33	20	P	P	03 16 23.6	+0.7
	baz=284						
D19K	Kuna River	94.34	21	IAmb	IAmb	03 16 24.7	
	comp=Z,64nm,1.4s						
D19K	Kuna River	94.34	21	P	P	03 16 23.7	+0.5
	baz=283,SNR=18						
H17K	Granite Mounta	94.37	25	IAmb	IAmb	03 16 24.9	
	comp=Z,20nm,0.9s						
H17K	Granite Mounta	94.37	25	P	P	03 16 23.9	+0.6
	baz=281						
J16K	Anvik River	94.37	26	IAmb	IAmb	03 16 25.4	
	comp=Z,38nm,0.9s						
J16K	Anvik River	94.37	26	P	P	03 16 24.2	+0.9
	baz=280,SNR=26						
N14K	Kuskokwak Cree	94.42	30	IAmb	IAmb	03 16 25.2	
	comp=Z,32nm,1.1s						
N14K	Kuskokwak Cree	94.42	30	P	P	03 16 24.3	+0.7
	baz=279						
G18K	Tagagawik	94.70	24	P	P	03 16 24.7	-0.1
	baz=282						
O14K	Tigyukauivet M	94.73	30	P	P	03 16 25.5	+0.5
	baz=279						
A22K	Sinclair Lake	94.78	18	P	P	03 16 25.7	+0.7
	baz=286						
M15K	Kasigluk River	94.78	29	P	P	03 16 25.8	+0.6
	baz=280,SNR=13						
D20K	Etivluk River	94.83	21	P	P	03 16 26.0	+0.6
	baz=284,SNR=32						
F19K	Shaleruckik Mo	94.84	23	IAmb	IAmb	03 16 26.6	
	comp=Z,25nm,1.1s						
F19K	Shaleruckik Mo	94.84	23	P	P	03 16 25.4	+0.1
	baz=283,SNR=18						
E19K	Redstone River	94.90	22	IAmb	IAmb	03 16 27.2	
	comp=Z,20nm,0.9s						
E19K	Redstone River	94.90	22	P	P	03 16 26.0	+0.3
	baz=284,SNR=14						
JMIC	Jan Mayen	94.91	342	LR	LR	04 04 24.6	
	comp=Z,204nm,21.7s,baz=78,slow=39						
H18K	Honhosa River	94.97	24	IAmb	IAmb	03 16 27.4	
	comp=Z,18nm,0.9s						
H18K	Honhosa River	94.97	24	P	P	03 16 26.4	+0.3
	baz=282,SNR=14						
J17K	VABM Dome	95.03	26	IAmb	IAmb	03 16 28.2	
	comp=Z,18nm,0.9s						
J17K	VABM Dome	95.03	26	P	P	03 16 27.0	+0.7
	baz=282,SNR=19						
E20K	Nigu River	95.09	21	P	P	03 16 27.1	+0.5
	baz=285,SNR=30						
N15K	Kwethluk River	95.16	29	P	P	03 16 27.8	+0.7
	baz=280,SNR=8.9						
L16K	Owhat River	95.18	28	IAmb	IAmb	03 16 28.8	
	comp=Z,22nm,1.2s						
L16K	Owhat River	95.18	28	P	P	03 16 27.6	+0.6
	baz=281,SNR=13						
G19K	Purcell Mounta	95.27	23	P	P	03 16 27.9	+0.5
	baz=284,SNR=46						
B21K	Ikpikpuk River	95.28	20	P	P	03 16 27.9	+0.6
	baz=286,SNR=15						
C21K	Knifeblade Rid	95.35	20	P	P	03 16 28.4	+0.7
	baz=286,SNR=13						
DAG	Danmarks Havn	95.43	348	i P	P	03 16 27.0	-0.9
DAG				IAmb	IAmb	03 16 27.9	
	comp=Z,14nm,0.9s						
B22K	Teshekpuk Lake	95.47	19	P	P	03 16 28.6	+0.5
	baz=287,SNR=6.8						
O15K	Ungalikthiuk R	95.48	30	P	P	03 16 28.7	+0.3
	baz=280						
K17K	Iditarod	95.51	27	P	P	03 16 29.5	+0.9
	baz=282						
M16K	Timber Creek	95.55	29	IAmb	IAmb	03 16 30.5	
	comp=Z,20nm,1.2s						
M16K	Timber Creek	95.55	29	P	P	03 16 29.5	+0.7
	baz=281						
F20K	Avaraart Lake	95.57	22	IAmb	IAmb	03 16 30.2	
	comp=Z,26nm,0.9s						
F20K	Avaraart Lake	95.57	22	P	P	03 16 29.2	+0.5
	baz=285,SNR=30						
L17K	Donlin	95.64	27	P	P	03 16 29.9	+0.7
	baz=282,SNR=11						
H19K	Roundabout Mou	95.67	24	P	P	03 16 30.0	+0.8
	baz=284,SNR=47						
GCSA	Galena City Sc	95.68	25	P	P	03 16 30.2	+0.9
	baz=284,SNR=11						
N16K	Nishlik Lake	95.75	29	P	P	03 16 30.7	+0.9
	baz=282,SNR=21						
SDPT	Sand Point	95.79	34	P	P	03 16 30.6	+0.7
	baz=280						
E21K	Killik River	95.83	21	IAmb	IAmb	03 16 31.3	
	comp=Z,38nm,1.0s						
E21K	Killik River	95.83	21	P	P	03 16 30.4	+0.5
	baz=287						
J18K	Innoko River	96.05	26	IAmb	IAmb	03 16 32.4	
	comp=Z,17nm,0.9s						
J18K	Innoko River	96.05	26	P	P	03 16 31.5	+0.4
	baz=284						
EKA	Eskdalemuir Ar	96.10	326	P	P	03 16 31.4	0.0
	comp=Z,8.9nm,0.7s,baz=97,slow=5.1,SNR=26						
	comp=Z,8.9nm,0.7s						
S14K	Fog Glacier	96.14	33	P	P	03 16 32.0	+0.3
	baz=280						
D22K	Ayikyak River	96.16	20	IAmb	IAmb	03 16 33.2	
	comp=Z,54nm,1.6s						
D22K	Ayikyak River	96.16	20	P	P	03 16 32.1	+0.7
	baz=288,SNR=5.2						
M17K	Holitna River	96.19	28	IAmb	IAmb	03 16 33.8	
	comp=Z,19nm,1.0s						
M17K	Holitna River	96.19	28	P	P	03 16 32.5	+0.8
	baz=283,SNR=7.1						
O16K	Kokwok River B	96.26	30	P	P	03 16 32.5	+0.4
	baz=282,SNR=6.0						
H20K	Anotleneega Mo	96.31	24	P	P	03 16 32.9	+0.7
	baz=286,SNR=29						
L18K	Granite Mounta	96.36	27	IAmb	IAmb	03 16 34.3	
	comp=Z,18nm,1.2s						
L18K	Granite Mounta	96.36	27	P	P	03 16 33.2	+0.8
	baz=284,SNR=12						
F21K	Alatna River	96.37	22	IAmb	IAmb	03 16 33.6	
	comp=Z,18nm,0.9s						
F21K	Alatna River	96.37	22	P	P	03 16 32.7	+0.3
	baz=287,SNR=20						
CHNA	Chernabura Isl	96.38	35	P	P	03 16 33.2	+0.5
	baz=280						
J19K	Poorman	96.39	25	IAmb	IAmb	03 16 34.3	
	comp=Z,23nm,0.9s						
J19K	Poorman	96.39	25	P	P	03 16 33.3	+0.7
	baz=285,SNR=33						
P16K	Nushagak River	96.43	30	P	P	03 16 33.6	+0.8
	baz=282						
TORD	Torodi Ar. Bea	96.45	283	P	P	03 16 34.0	+0.1
	comp=Z,1.4nm,0.4s,baz=88,slow=5.8,SNR=3.8						
	comp=Z,1.4nm,0.4s						
TTA	Tatalina	96.49	26	P	P	03 16 33.1	0.0
TTA	Tatalina	96.49	26	P	P	03 16 33.8	+0.7
	baz=284,SNR=11						
N17K	Nushagak Hills	96.51	29	IAmb	IAmb	03 16 35.2	
	comp=Z,17nm,1.1s						
N17K	Nushagak Hills	96.51	29	P	P	03 16 33.9	+0.8
	baz=283,SNR=6.3						
C23K	Itkillik River	96.54	19	IAmb	IAmb	03 16 34.6	
	comp=Z,24nm,1.1s						
C23K	Itkillik River	96.54	19	P	P	03 16 33.6	+0.5
	baz=290						
G21K	Allakaket	96.56	23	P	P	03 16 33.8	+0.5
	baz=287,SNR=37						
I20K	Naaghedeneel	96.66	24	P	P	03 16 34.6	+0.9
	baz=286,SNR=8.7						
E22K	Anaktuvuk Pass	96.69	21	IAmb	IAmb	03 16 35.4	
	comp=Z,30nm,1.4s						
E22K	Anaktuvuk Pass	96.69	21	P	P	03 16 34.4	+0.5
	baz=289,SNR=8.6						
O17K	Koliganek Bris	96.72	30	P	P	03 16 34.3	+0.2
	baz=283						
F22K	John River	96.76	21	P	P	03 16 34.7	+0.5
	baz=288						
D23K	Nanushuk River	96.81	20	IAmb	IAmb	03 16 36.3	
	comp=Z,22nm,1.1s						
D23K	Nanushuk River	96.81	20	P	P	03 16 34.9	+0.6
	baz=290						
M18K	Stony River	96.93	28	P	P	03 16 35.7	+0.7
	baz=284,SNR=7.0						
R16K	Pilot Point	96.95	32	P	P	03 16 36.0	+0.8
	baz=282						
J20K	Nowinta River	96.97	25	IAmb	IAmb	03 16 37.0	
	comp=Z,15nm,0.9s						
J20K	Nowinta River	96.97	25	P	P	03 16 35.9	+0.7
	baz=286,SNR=20						
H21K	Melozitna Rive	97.09	23	IAmb	IAmb	03 16 37.6	
	comp=Z,32nm,1.3s						
H21K	Melozitna Rive	97.09	23	P	Pdif	03 16 36.5	+0.7
	baz=287,SNR=28						
N18K	Kilae Creek	97.09	29	P	Pdif	03 16 36.4	+0.5
	baz=284,SNR=5.7						
P17K	Kvichak River	97.18	30	P	Pdif	03 16 36.5	+0.3
	baz=283						
G22K	Bettles	97.19	22	P	Pdif	03 16 36.2	0.0
	baz=289,SNR=9.3						
L19K	White Mountain	97.20	27	P	Pdif	03 16 37.0	+0.6
	baz=285,SNR=10.0						
C24K	Franklin Bluff	97.20	19	P	Pdif	03 16 36.5	+0.4
	baz=292						
K20K	Telida	97.23	26	IAmb	IAmb	03 16 38.3	
	comp=Z,26nm,0.9s						
K20K	Telida	97.23	26	P	Pdif	03 16 37.1	+0.6
	baz=286,SNR=36						
TOLK	Toolik Lake Re	97.30	20	P	Pdif	03 16 37.2	+0.5
	baz=291,SNR=5.6						
D24K	Happy Valley	97.37	19	P	Pdif	03 16 37.6	+0.7
	baz=292						
M19K	Big River Lodg	97.48	27	IAmb	IAmb	03 16 39.6	
	comp=Z,28nm,1.9s						
M19K	Big River Lodg	97.48	27	P	Pdif	03 16 38.2	+0.6
	baz=286						
E23K	Chandalar	97.50	21	IAmb	IAmb	03 16 39.3	
	comp=Z,28nm,1.5s						
E23K	Chandalar	97.50	21	P	Pdif	03 16 38.0	+0.4
	baz=291,SNR=7.5						
L20K	Farewell, AK	97.56	27	P	Pdif	03 16 38.3	+0.3
	baz=286,SNR=10						
I21K	Tanana	97.56	24	IAmb	IAmb	03 16 39.7	
	comp=Z,22nm,1.1s						
I21K	Tanana	97.56	24	P	Pdif	03 16 38.5	+0.6
	baz=288,SNR=14						
COLD	Coldfoot	97.58	21	P	Pdif	03 16 38.3	+0.4
	baz=290						
H22K	Ishtalitna Cre	97.58	23	P	Pdif	03 16 38.6	+0.6
	baz=289,SNR=23						
O18K	Koktuh Hills	97.63	29	IAmb	IAmb	03 16 39.7	
	comp=Z,16nm,1.0s						
O18K	Koktuh Hills	97.63	29	P	Pdif	03 16 38.4	+0.1
	baz=285,SNR=6.2						
Q17K	Contact Creek	97.68	31	P	Pdif	03 16 38.8	+0.2
	baz=284						
N19K	Bonanza Creek	97.73	28	IAmb	IAmb	03 16 40.5	
	comp=Z,22nm,1.0s						
N19K	Bonanza Creek	97.73	28	P	Pdif	03 16 39.0	+0.2
	baz=285,SNR=13						
P18K	Big Mountain,	97.73	30	P	Pdif	03 16 38.8	0.0
	baz=284						
G23K	Bananza Creek	97.82	22	IAmb	IAmb	03 16 40.8	
	comp=Z,27nm,1.6s						
G23K	Bananza Creek	97.82	22	P	Pdif	03 16 39.3	+0.3
	baz=290,SNR=9.1						
CHUM	Lake Minchumin	97.83	25	P	Pdif	03 16 39.4	+0.4
	baz=288,SNR=9.5						
E24K	Your Creek	97.89	20	P	Pdif	03 16 39.4	+0.1
	baz=292						
O19K	Port Alsworth	97.97	29	IAmb	IAmb	03 16 40.7	
	comp=Z,20nm,1.2s						
O19K	Port Alsworth	97.97	29	P	Pdif	03 16 39.9	+0.2
	baz=285						
Q18K	Katmai Hardscr	98.03	30	P	P	03 16 39.8	-0.4
	baz=285						
M20K	Styx River	98.06	27	P	Pdif	03 16 40.3	0.0
	baz=287						
CAST	Castle Rocks	98.07	25	IAmb	IAmb	03 16 42.3	
	comp=Z,26nm,1.3s						
CAST	Castle Rocks	98.07	25	P	Pdif	03 16 40.2	0.0
	baz=288,SNR=23						
D25K	Kavik River	98.11	19	IAmb	IAmb	03 16 41.1	
	comp=Z,15nm,1.1s						
D25K	Kavik River	98.11	19	P	Pdif	03 16 40.3	+0.1
	baz=294						
MLY	Manley	98.11	24	P	Pdif	03 16 40.5	+0.1
	baz=289,SNR=8.9						
PPLA	Purkeypile	98.18	26	P	P	03 16 40.7	-0.1
	baz=288						
F24K	Squaw Lake	98.31	21	P	Pdif	03 16 41.9	+0.7
	baz=292						
H23K	Yukon River	98.31	23	IAmb	IAmb	03 16 43.2	
	comp=Z,23nm,1.6s						
H23K	Yukon River	98.31	23	P	Pdif	03 16 41.8	+0.6
	baz=290,SNR=7.9						
BPAW	Bear Paw Mtn.	98.31	25	P	Pdif	03 16 41.5	+0.2
	baz=289						
C26K	Camden Bay	98.33	18	P	Pdif	03 16 41.6	+0.5
	baz=295						
CHIR	Chirikof Islan	98.39	33	P	Pdif	03 16 42.3	+0.5
	baz=284						
R18K	Karluk	98.59	31	P	P	03 16 42.4	-0.1
	baz=285						
I23K	Minto, Yukon-K	98.62	23	P	Pdif	03 16 42.8	+0.3
	baz=291						
Q19K	Cape Douglas,	98.64	30	P	P	03 16 42.7	-0.1
	baz=286						
P19K	Oil Pt	98.65	29	P	Pdif	03 16 43.0	+0.2
	baz=286						
N20K	Mount Spurr	98.68	28	P	P	03 16 42.7	-0.3
	baz=287						
SPCR	Spurr Chakacha	98.68	28	P	Pdif	03 16 43.1	+0.1
	baz=287						
SKT	Skwentna	98.75	27	P	P	03 16 42.4	-0.8
	baz=288,SNR=6.0						
G24K	Hadweenzic Riv	98.77	22	IAmb	IAmb	03 16 44.9	
	comp=Z,24nm,1.9s						
G24K	Hadweenzic Riv	98.77	22	P	P	03 16 43.1	-0.1
	baz=293						
O20K	Slope Mountain	98.82	29	P	P	03 16 43.4	-0.3
	baz=287						
TRF	Thorofare Moun	98.82	25	P	P	03 16 43.4	-0.3
	baz=290,SNR=6.7						
C27K	Jago River	98.83	18	P	P	03 16 43.1	-0.4
	baz=297						
E25K	Arctic Village	98.87	20	P	Pdif	03 16 43.8	+0.1
	baz=295						
NEA2	Nenana	98.93	24	P	P	03 16 43.8	-0.1
	baz=291						
H24K	Noodor Dome	98.94	22	P	Pdif	03 16 44.3	+0.2
	baz=292						
SII	Sitkinak Islan	98.99	32	P	P	03 16 44.1	-0.3
	baz=285						
F25K	Christian Rive	99.07	20	P	Pdif	03 16 44.4	-0.2
	baz=294						
ESDC	Sonseca Array	99.16	310	P	Pdif	03 16 45.4	-0.3
ESDC	Sonseca Array	99.16	310	P	Pdif	03 16 45.8	+0.1
	comp=Z,1.4nm,0.6s,baz=61,slow=4.0,SNR=33						
ESDC				PP	PP	03 20 46.6	-2.0
	comp=Z,1.4nm,1.0s,baz=67,slow=5.9,SNR=4.6						
ESDC				LR	LR	04 05 19.4	
	comp=Z,136nm,20.9s,baz=90,slow=38						
	comp=Z,1.4nm,0.6s						
CUT	Chulitna	99.18	26	P	Pdif	03 16 45.0	-0.1
	baz=289						
G25K	Bearman Lake	99.24	21	P	Pdif	03 16 45.0	-0.3
	baz=294						
SUA	Susitna One	99.27	27	P	Pdif	03 16 45.1	-0.6
	baz=289						
OHAK	Old Harbor	99.29	32	P	Pdif	03 16 45.6	-0.1
	baz=286						
MCK	McKinley	99.29	25	IAmb	IAmb	03 16 47.0	
	comp=Z,19nm,1.1s						
MCK	McKinley	99.29	25	P	Pdif	03 16 45.3	-0.3
	baz=291						
CAPN	Captain Cook N	99.31	28	P	Pdif	03 16 45.4	-0.2
	baz=288						
Q20K	Shuyak Island	99.36	30	P	Pdif	03 16 45.3	-0.6
	baz=287						
POKR	Poker Plat Res	99.39	23	P	Pdif	03 16 45.4	-0.7
	baz=292						
HOM	Homer	99.42	29	P	Pdif	03 16 45.9	-0.3
	baz=288						
M22K	Willow	99.46	27	P	Pdif	03 16 46.1	-0.3
	baz=289						
KDAK	Kodiak Island	99.50	31	LR	LR	04 05 43.0	
	comp=Z,114nm,19.1s,baz=304,slow=38						
KDAK	Kodiak Island	99.50	31	P	Pdif	03 16 45.9	-0.7
	baz=287						
F26K	Sheenjek River	99.54	20	P	Pdif	03 16 46.7	0.0
	baz=296						
H25L	Birch Creek	99.55	22	P	Pdif	03 16 46.0	-0.7
	baz=294						
ILAR	Eielson Array	99.74	23	P	Pdif	03 16 46.5	-1.1
	comp=Z,0.6nm,0.6s,baz=292,slow=4.4,SNR=11						
ILAR				PP	PP	03 20 52.0	0.0
	comp=Z,1.0nm,1.1s,baz=198,slow=4.0,SNR=4.5						
ILAR				PKKP	PKKPbc	03 33 10.8	-0.2
	comp=Z,0.3nm,0.7s,baz=128,slow=1.5,SNR=2.8						
ILAR				LR	LR	04 05 30.2	
	comp=Z,154nm,19.5s,baz=293,slow=38						
	comp=Z,0.6nm,0.6s						
WAT1	Susitna Watana	99.78	25	P	Pdif	03 16 47.4	-0.4
	baz=291						
BRSE	Bradley Lake S	99.83	29	P	Pdif	03 16 47.8	-0.2
	baz=288						
HDA	Harding Lake	99.85	24	P	Pdif	03 16 47.7	-0.4
	baz=293						
RC01	Rabbit Creek A	99.86	27	P	Pdif	03 16 48.1	-0.1
	baz=290						
D27M	Malcolm River	99.87	18	P	Pdif	03 16 47.9	-0.2
	baz=299						
PMR	Palmer	99.96	27	P	Pdif	03 16 48.4	-0.1
	baz=290						
PRP	Porcupine Dome	99.97	22	P	Pdif	03 16 48.6	-0.2
	baz=294						
G26K	Porcupine Rive	100.00	21	P	Pdif	03 16 49.2	+0.6
	baz=296						
E27K	Coleen River	100.18	19	P	Pdif	03 16 49.8	+0.3
	baz=298						
DHY	Denali Highway	100.19	25	P	Pdif	03 16 49.4	-0.4
	baz=292						
WAT6	Susitna Watana	100.22	25	P	Pdif	03 16 49.8	-0.2
	baz=292,SNR=11						
SML	Sawmill	100.24	26	P	Pdif	03 16 50.0	+0.1
	baz=291,SNR=5.6						
NEEM	North Greenlan	100.26	354	i P	Pdif	03 16 49.8	-0.2
NEEM				IAmb	IAmb	03 16 51.5	
	comp=Z,7.9nm,1.0s						
SEW	Seward	100.32	28	P	Pdif	03 16 50.3	+0.2
	baz=290						
KNK	Knik Glacier	100.32	27	P	Pdif	03 16 50.7	+0.5
	baz=291						
J25K	Salcha River,	100.40	23	P	Pdif	03 16 50.6	0.0
	baz=294						
D28M	Stokes Point	100.51	18	P	Pdif	03 16 50.8	0.0
	baz=301						
M23K	Glacier View	100.51	26	P	Pdif	03 16 51.2	+0.1
	baz=292						

K24K	Donnelly Dome	100.56	24	P	Pdif	03 16 51.8	+0.5
	baz=294						
PWL	Port Wells	100.58	27	P	Pdif	03 16 51.4	0.0
	baz=291						
E28M	Babbage River	100.64	18	P	Pdif	03 16 51.7	+0.2
	baz=300						
MDT	Midelt	100.64	303	PP	PP	03 21 00.9	+0.9
	comp=Z,3.6nm,1.0s,baz=78,slow=7.8,SNR=9.4						
SCM	Sheep Creek Mo	100.67	26	P	Pdif	03 16 52.0	+0.1
	baz=292						
G27K	Doyon Strip	100.81	20	P	Pdif	03 16 52.7	+0.4
	baz=298,SNR=5.0						
I26K	Coal Creek Min	100.95	22	P	Pdif	03 16 53.2	+0.2
	baz=296						
RIDG	Independent Ri	100.97	24	P	Pdif	03 16 52.7	-0.5
	baz=295						
F28M	Old Crow	101.03	19	P	Pdif	03 16 53.6	+0.3
	baz=300						
PAX	Paxson	101.03	25	P	Pdif	03 16 53.7	+0.2
	baz=294						
M24K	Tolsona, Glenn	101.07	26	P	Pdif	03 16 54.0	+0.4
	baz=293						
H27K	Steamboat Moun	101.13	21	P	Pdif	03 16 54.3	+0.5
	baz=298,SNR=5.0						
GLI	Glacier Island	101.14	27	P	Pdif	03 16 53.9	+0.1
	baz=292						
J26L	Joseph Creek	101.15	23	P	Pdif	03 16 54.0	0.0
	baz=296						
SCRK	Sand Creek	101.22	23	P	Pdif	03 16 54.8	+0.5
	baz=295						
E29M	Blow River	101.26	18	P	Pdif	03 16 54.7	+0.5
	baz=302						
P23K	Montague Islan	101.32	28	P	Pdif	03 16 54.8	+0.1
	baz=292						
I27K	Kandik River	101.39	22	P	Pdif	03 16 54.5	-0.5
	baz=298						
HARP	HAARP	101.39	25	P	Pdif	03 16 54.9	-0.1
	baz=294						
KLU	Klutina	101.42	26	P	Pdif	03 16 55.1	-0.1
	baz=293						
EYAK	Cordova Ski Ar	101.87	27	P	Pdif	03 16 57.0	-0.1
	baz=293						
L26K	Log Cabin Wild	101.89	24	P	Pdif	03 16 57.1	-0.1
	baz=296						
K27K	Chicken	101.95	23	P	Pdif	03 16 57.3	-0.1
	baz=297						
N25K	Chitina, Valde	101.96	26	P	Pdif	03 16 56.9	-0.7
	baz=294						
G29M	Pine Creek	102.00	20	P	Pdif	03 16 57.6	-0.1
	baz=302						
Q23K	Middleton Isla	102.03	28	P	Pdif	03 16 57.8	0.0
	baz=292						
I28M	Miner Creek	102.08	21	P	Pdif	03 16 58.1	0.0
	baz=300						
SUMG	Summit	102.11	348	*i* P	PP	03 21 09.0	-1.2
BMRM	Bremner River	102.22	26	P	Pdif	03 16 58.9	+0.1
	baz=294						
H29M	Whitestone	102.25	20	P	Pdif	03 16 58.8	+0.1
	baz=301						
M26K	Nabesna, AK	102.30	25	P	Pdif	03 16 59.1	0.0
	baz=296						
F30M	Barrier River	102.36	19	P	Pdif	03 16 59.3	+0.2
	baz=304						
A36M	Sachs Harbour	102.40	13	P	Pdif	03 16 59.1	-0.1
	baz=315						
L27K	Beaver Creek,	102.49	24	P	Pdif	03 16 59.6	-0.3
	baz=297						
G30M	tAoh Zraii Nji	102.57	19	P	Pdif	03 16 60.0	-0.2
	baz=303						
TULEG	Thule	102.60	357	*i* P	Pdif	03 16 58.6	-1.4
TULEG				IAmb	IAmb	03 16 59.3	
	comp=Z,18nm,0.5s						
INK	Inuvik	102.66	17	P	Pdif	03 17 00.6	+0.2
	baz=306						
I29M	Ogilvie Camp,	102.71	21	P	Pdif	03 17 01.1	+0.3
	baz=301						
KAIM	Kayak Island	102.73	27	P	Pdif	03 17 01.2	+0.3
	baz=294						
EPYK	Eagle Plains	102.73	20	P	Pdif	03 17 01.3	+0.4
	baz=303						
MCARA	McCarthy VSAT	102.74	26	P	Pdif	03 17 01.3	+0.3
	baz=296						
M27K	Edge Creek, AK	102.79	25	P	Pdif	03 17 01.5	+0.1
	baz=297						
DAWY	Dawson	102.97	22	P	Pdif	03 17 02.2	+0.2
	baz=300						
CRQE	Cirque	102.98	26	P	Pdif	03 17 01.9	-0.3
	baz=296						
F31M	Tsiigehtchic	103.10	18	P	Pdif	03 17 02.2	-0.2
	baz=306						
G31M	Satah River	103.23	19	P	Pdif	03 17 02.9	-0.1
	baz=305						
I30M	Mount Dempster	103.48	21	P	Pdif	03 17 04.4	0.0
	baz=303						
YUK3	Moose Creek	103.65	25	P	Pdif	03 17 05.2	-0.1
	baz=298						
CTG	Chitna Glacier	103.66	26	P	Pdif	03 17 05.4	+0.2
	baz=297						
MESA	MESA	103.74	27	P	Pdif	03 17 05.8	+0.1
	baz=296						
K29M	Barlow Dome	103.79	22	P	Pdif	03 17 05.9	+0.1
	baz=302						
J30M	Hart River	103.84	21	P	Pdif	03 17 06.1	+0.1
	baz=303						
H31M	Peel River	103.85	20	P	Pdif	03 17 06.2	+0.3
	baz=305						
L29M	L29M	103.94	23	P	Pdif	03 17 06.6	+0.3
	baz=301						
M29M	Somme Creek	104.15	24	P	Pdif	03 17 07.7	+0.4
	baz=300						
YUK8	Steele Glacier	104.18	25	P	Pdif	03 17 07.6	-0.1
	baz=299						
O28M	Mount Upton	104.24	26	P	Pdif	03 17 08.1	0.0
	baz=298						
PINM	Pinnacle	104.54	26	P	Pdif	03 17 09.3	+0.2
	baz=298						
YUK4	Talbot Arm	104.62	25	P	Pdif	03 17 09.5	-0.1
	baz=300						
ICESG	Greenland Ices	104.91	346	*i* P	PP	03 21 29.4	-1.6
YUK6	Outpost Mounta	104.94	25	P	Pdif	03 17 11.0	-0.1
	baz=300						
PNL	Peninsula	105.12	26	P	Pdif	03 17 11.8	+0.2
PNL	Peninsula	105.12	26	P	PKiKP	03 21 26.8	+0.9
	baz=299						
O29M	Mount Kennedy	105.17	26	P	PKiKP	03 21 26.8	+0.7
	baz=300						
N30M	Aishikik Lake	105.21	24	P	PKiKP	03 21 26.9	+0.8
	baz=301						
HYT	Haines Junctio	105.36	25	P	PKiKP	03 21 27.0	+0.6
	baz=301						
N31M	Braeburn, Yuko	105.73	24	P	PKiKP	03 21 27.6	+0.6
	baz=303						
P29M	Windy Craggy	105.87	26	P	PKiKP	03 21 28.2	+1.0
	baz=300						
M31M	Drury Creek, Y	105.88	23	P	PKiKP	03 21 28.1	+0.9
	baz=304						
P30M	Million Dollar	105.96	25	P	PKiKP	03 21 28.2	+0.7
	baz=301						
O30N	Mendenhall	105.98	25	P	PKiKP	03 21 28.3	+0.8
	baz=302						
FARO	Faro, Yukon	106.27	23	P	PKiKP	03 21 28.7	+0.7
	baz=305						
WHY	Whitehorse	106.55	24	P	PKiKP	03 21 29.1	+0.5
	baz=303						
PLBC	Pleasant Camp	106.56	26	P	PKiKP	03 21 29.0	+0.5
	baz=302						
MMPY	Sheldon Lake,	106.83	22	P	PKiKP	03 21 29.6	+0.6
	baz=307						
SKAG	Skagway	107.01	26	P	PKiKP	03 21 30.0	+0.7
	baz=303						
S31K	Pelican	107.40	27	P	PKiKP	03 21 30.7	+0.7
	baz=301						
P32M	Atlin	107.62	25	P	PKiKP	03 21 31.0	+0.4
	baz=304						
P33M	Teslin, Yukon	107.64	24	P	PKiKP	03 21 31.1	+0.4
	baz=305						
R32K	Eaglecrest	108.01	26	P	PKiKP	03 21 31.9	+0.7
	baz=303						
SIT	Sitka	108.29	28	P	PKiKP	03 21 32.4	+0.7
	baz=302						
S32K	Killisnoo	108.42	27	P	PKiKP	03 21 32.5	+0.5
	baz=303						
Q32M	Nakina River	108.59	25	P	PKiKP	03 21 33.0	+0.4
	baz=305						
R33M	Jennings River	108.88	24	P	PKiKP	03 21 33.5	+0.5
	baz=307						
S34M	Telegraph Cree	109.69	26	P	PKiKP	03 21 35.0	+0.6
	baz=306						
U33K	Whale Pass	109.83	28	P	PKiKP	03 21 35.1	+0.5
	baz=304						
DLBC	Dease Lake	109.85	25	P	PKiKP	03 21 34.9	+0.2
	baz=307						
CRAG	Craig	110.19	28	P	PKiKP	03 21 36.0	+0.6
	baz=304						
T35M	Bob Quinn	110.63	26	P	PKiKP	03 21 36.5	+0.2
	baz=307						
BEAVL	Fort Liard	110.68	22	P	PKiKP	03 21 36.9	+0.7
	baz=313						
V35K	Ketchikan	110.98	28	P	PKiKP	03 21 37.1	+0.3
	baz=305						
TOAD	Toad River Com	111.52	23	P	PKiKP	03 21 38.5	+0.6
	baz=312						
YKA	Yellowknife Ar	112.31	16	PP	PP	03 22 24.4	0.0
	comp=Z,10.0nm,1.2s,baz=329,slow=7.7,SNR=12						
FFC	Flin Flon	122.33	14		PKPdf	03 21 58.4	-0.3
FFC	Flin Flon	122.33	14	PKIKP	PKPdf	03 21 58.4	-0.3
SCHQ	Schefferville	123.43	350	PKP	PKPdf	03 22 00.7	-0.2
	comp=Z,6.4nm,0.9s,baz=63,slow=7.2,SNR=6.8						
SCHQ				PP	PP	03 23 41.7	+0.3
	comp=Z,4.0nm,0.9s,baz=29,slow=7.4,SNR=4.4						
ULM	Lac du Bonnet	127.86	12	PKP	PKPdf	03 22 09.4	-0.1
	comp=Z,6.1nm,0.6s,baz=345,slow=4.7,SNR=9.6						
ULM				pPKP	pPKPdf	03 22 24.4	-0.5
	comp=Z,3.3nm,0.5s,baz=327,slow=3.1,SNR=4.6						
NVAR	Mina Array Bea	128.50	37		PKiKP	03 22 12.1	+0.1
NVAR	Mina Array Bea	128.50	37	PKP	PKiKP	03 22 12.3	+0.3
	comp=Z,7.2nm,1.0s,baz=281,slow=1.4,SNR=25						
NVAR				pPKP	pPKPdf	03 22 27.9	+1.0
	comp=Z,1.2nm,0.6s,baz=342,slow=3.0,SNR=4.5						
NVAR				PP	PP	03 24 16.2	0.0
	comp=Z,1.5nm,1.0s,baz=312,slow=5.5,SNR=3.4						
NVAR				SKPbc	SKPbc	03 25 26.9	
	comp=Z,1.1nm,0.8s,baz=254,slow=2.0,SNR=4.1						
PDAR	Pinedale Array	130.00	27		PKPdf	03 22 14.2	+0.1
PDAR	Pinedale Array	130.00	27	PKP	PKPdf	03 22 12.3	-1.8
	comp=Z,2.9nm,0.8s,baz=294,slow=3.4,SNR=23						
PDAR				PP	PP	03 24 25.1	-0.6
	comp=Z,1.7nm,1.1s,baz=290,slow=4.3,SNR=4.1						
PDAR				SKPbc	SKPab	03 25 31.1	-1.2
	comp=Z,6.0nm,1.1s,baz=325,slow=1.8,SNR=12						
RSSD	Black Hills	131.15	21		PKPdf	03 22 15.6	-0.6
RSSD	Black Hills	131.15	21	PKIKP	PKPdf	03 22 15.6	-0.6
LMN	Caledonia Moun	131.43	344		PKPdf	03 22 16.6	+0.2
ANMO	Albuquerque	137.64	31	PKPdf	PKPdf	03 22 29.4	+0.8
ANMO	Albuquerque	137.64	31	PKIKP	PKPdf	03 22 29.4	+0.8
PLCA	Paso Flores	138.84	193	PKP	PKiKP	03 22 31.7	-1.0
	comp=Z,1.7nm,0.8s,baz=238,slow=8.8,SNR=2.2						
WCI	Wyandotte Cave	141.10	6		PKPdf	03 22 33.6	-0.9
WCI	Wyandotte Cave	141.10	6	PKIKP	PKPdf	03 22 33.6	-0.9
TXAR	Lajitas Array	143.48	34		PKPbc	03 22 36.6	+0.2
TXAR	Lajitas Array	143.48	34	PKP	PKPbc	03 22 37.1	+0.7
	comp=Z,2.0nm,0.5s,baz=265,slow=1.4,SNR=23						
TXAR				SKPbc	SKPbc	03 26 12.2	-1.4
	comp=Z,3.0nm,0.8s,baz=273,slow=1.0,SNR=7.5						
TXAR	Lajitas Array	143.48	34	PKIKP	PKPbc	03 22 36.6	+0.2
BDFB	Brasilia	143.70	244		PKPdf	03 22 38.9	-1.0
BDFB	Brasilia	143.70	244	PKP	PKPbc	03 22 38.2	+0.8
	comp=Z,8.7nm,0.5s,baz=103,slow=4.1,SNR=27						
W57A	Gilead	144.39	358		PKPbc	03 22 38.8	-0.1
CPUP	Villa Florida	145.40	220		PKPab	03 22 42.9	+0.4
CPUP	Villa Florida	145.40	220	PKPbc	PKPab	03 22 43.1	+0.6
	comp=Z,3.4nm,0.6s,baz=350,slow=2.1,SNR=46						
CPUP				pPKPbc	pPKPdf	03 22 58.4	+0.5
	comp=Z,3.4nm,0.6s,baz=7.1,slow=4.4,SNR=6.8						
CFA	Coronel Fontan	146.71	201	PKPbc	PKPbc	03 22 46.8	+0.5
	comp=Z,4.4nm,0.5s,baz=162,slow=1.5,SNR=18						
352A	Blakely	147.92	5		PKPbc	03 22 50.0	+0.5
SIV	San Ignacio	154.68	232	PKP	PKPdf	03 22 57.8	+0.5
	comp=Z,1.9nm,0.8s,baz=112,slow=4.3,SNR=7.9						
SIV				PKPbc	PKPbc	03 23 05.7	-0.1
	comp=Z,2.6nm,0.9s,baz=191,slow=1.3,SNR=8.7						
SIV				PKPab	PKPab	03 23 19.8	-0.9
	comp=Z,1.4nm,0.5s,baz=150,slow=1.9,SNR=6.7						
LPAZ	La Paz	159.57	220	PKPab	PKPab	03 23 41.0	-1.3
	comp=Z,4.6nm,0.5s,baz=180,slow=3.0,SNR=3.7						
SAML	Samuel	159.93	245		PKPdf	03 23 04.2	+0.3
SAML	Samuel	159.93	245	PKIKP	PKPdf	03 23 04.2	+0.3
SAML	Samuel	159.93	245	*e*P	PKPdf	03 23 04.5	+0.6
RUSC	La Rusia	169.37	308		PKPdf	03 23 11.6	-1.2
ROSC	El Rosal	170.98	307	PKP	PKPdf	03 23 13.5	0.0
	comp=Z,6.5nm,0.6s,baz=194,slow=8.1,SNR=5.0						
ROSC				PKPab	PKPab	03 24 32.0	-0.5
	comp=Z,3.3nm,0.4s,baz=85,slow=3.3,SNR=4.0						
OTAV	Otavalo	176.80	285		PKPab	03 24 58.0	-0.6
OTAV	Otavalo	176.80	285	PKP2	PKPab	03 24 58.0	-0.6
OTAV	Otavalo	176.80	285	*e*P	PKPdf	03 23 15.9	+0.2

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*UPP **02** 03:06:36.8±0.1, 67°.20N×20°.69E, h0^{km}, ML2.3, Confirmed Induced event*

*HEL **02** 03:06:36.8±0.3, 67°.20N×20°.58E, h0^{km}, ML1.4, Suspected explosion*

*IDC **02** 03:06:40.9±1.2, 67°.19N×22°.34E, h0^{km}, mbtmp2.6/3, ML1.7/3, Error ellipse: s-maj=21.8km s-min=8.0km az=101.0*

ISC 02 03:06:36.4±0.8**, 67°.17N**±0°.02×**20°.75E**±0°.03**, h0**^{km}**, n32, σ0^{s}.88**/49**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.08	238	P	Pg	03 06 38.7	+0.8
DUNU				S	Sg	03 06 40.0	+1.1
RATU	Laukkuluspa	0.80	327	P	Pg	03 06 51.0	-0.6
RATU				S	Sg	03 07 00.9	-1.1
KUA	Kurravaara	0.81	349	P	Pg	03 06 51.3	-0.5
KUA				S	Sg	03 07 01.5	-0.8
ERTU	Ertsjaerv	0.84	136	P	Pb	03 06 53.0	-0.7
ERTU				S	Sb	03 07 05.1	-0.5
ERTU	Ertsjaerv	0.84	136	PG	Pb	03 06 52.8	-0.9
ERTU				SG	Sb	03 07 04.9	-0.7
SALU	Saltoluokta	0.90	285	P	Pg	03 06 53.0	-0.5
SALU	Saltoluokta	0.90	285	*e*P	Pg	03 06 53.0	-0.5
PAJU	Pajala	0.94	98	P	Pb	03 06 54.9	-0.6
PAJU	Pajala	0.94	98	PG	Pb	03 06 54.9	-0.6
	baz=283						
PAJU				SB	Sb	03 07 08.4	-0.1
LANU	Lannavaara	1.01	28	PG	Pg	03 06 56.2	+0.6
LANU				SN	Sb	03 07 11.0	+0.5
HARU	Harads	1.01	175	P	Pb	03 06 55.9	-0.7
KOVU	Salmi	1.09	348	P	Pg	03 06 56.3	-0.9
KLF	Kolari	1.26	85	PG	Pg	03 07 00.4	0.0
KLF				MSG		03 07 16.7	
	comp=Z,1.7nm,0.2s						
KLF				SG	Sb	03 07 17.7	+0.1
HEF	Hetta	1.67	40	*e*P	Pn	03 07 07.0	+0.1
HEF	Hetta	1.67	40	PG	Pn	03 07 06.9	+0.1
	baz=229						
HEF				MSG		03 07 27.1	
	comp=Z,2.6nm,0.2s						
HEF				SN	Sn	03 07 29.3	+0.4
KALU	Kalix	1.68	140	P	Pg	03 07 08.0	-0.5
KALU	Kalix	1.68	140	PG	Pg	03 07 08.2	-0.3
	baz=320						
KALU				SN	Sg	03 07 31.5	+1.4
SJUU	Sjulsmark	1.70	168	P	Pg	03 07 08.2	-0.7
TOF	Tornio	1.80	126	PG	Pb	03 07 10.0	0.0
TOF				MSG		03 07 32.5	
	comp=Z,2.0nm,0.2s						
TOF				SG	Sg	03 07 34.7	+0.7
KIF	Kilpisjarvi	1.85	1	PG	Pb	03 07 10.1	-0.8
KIF				MSG		03 07 32.0	
	comp=Z,4.0nm,0.2s						
KIF				SG	Sg	03 07 36.2	+0.5
KTK1	Kautokeino	2.08	26	PB	Pn	03 07 12.5	0.0
KTK1				SG	Sb	03 07 41.6	+0.4
RNF	Rovaniemi	2.15	103	PG	Pb	03 07 15.6	-0.5
	baz=289						
RNF				SG	Sg	03 07 45.0	-0.4
TRO	Tromso	2.57	346	PG	Pb	03 07 22.2	-1.0
TRO				SG	Sb	03 07 56.5	+1.2
RANF	Ranua	2.67	113	PB	Pb	03 07 24.8	-0.2
	baz=301						
RANF				SB	Sb	03 07 59.6	+1.2
ARA0	ARCESS Array S	2.96	34	PB	Pn	03 07 26.1	+1.5
ARA0				SG	Sb	03 08 07.3	+0.7
ARCES	ARCESS Array B	2.96	34	Pn	Pn	03 07 25.8	+1.2
	comp=Z,0.1nm,0.3s,baz=210,slow=14,SNR=16						
ARCES				Lg	Lg	03 08 02.4	
	comp=Z,0.2nm,0.3s,baz=211,slow=28,SNR=6.7						
	comp=Z,0.5nm,0.3s						
OUF	Merijarvi	3.25	148	SG	Sg	03 08 19.4	-1.4
KEV	Kevo	3.48	39	SN	Sn	03 08 14.8	+1.4
OLKF	Oulanka, Finla	3.54	100	SG	Sg	03 08 29.6	-0.2
MSF	Maaselka	3.55	107	SG	Sg	03 08 28.2	-2.0
FINES	FINESS Array B	6.19	156	Pn	Pn	03 08 10.5	+1.6
	baz=349,slow=13,SNR=1.8						
FINES				Sn	Sn	03 09 18.5	-1.8
	comp=Z,0.1nm,0.3s,baz=351,slow=25,SNR=1.8						
FINES				Lg	Lg	03 09 50.8	
	comp=Z,0.2nm,0.3s,baz=347,slow=31,SNR=5.6						
	comp=Z,2.6nm,1.0s						
NOA	NORSAR Array B	7.42	219	Pn	Pn	03 08 34.3	+8.5
	baz=29,slow=8.1,SNR=1.7						
	comp=Z,0.2nm,0.7s						

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*IDC **02** 03:17:08.6±1.9, 36°.88S×179°.19W, h0^{km}, mb3.6/3, mbtmp3.6/3, MS3.5/1, Error ellipse: s-maj=63.7km s-min=40.7km az=42.0*

*WEL **02** 03:17:13.7±1.0, 37°S±9°×17°9W±°, h33^{km}, M3.6/9, ML4.0/12, MLv3.6/9, Error ellipse: s-maj=11.9km s-min=6.7km az=177.8, confirmed*

ISC 02 03:17:13.1±3.4**, 37°.5S**±0°.1×**179°.2W**±0°.2**, h43**^{km}±28^{km}**, n30, σ0^{s}.70**/35**, mb3.5**/3**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.90	259	P	Pn	03 17 43.1	+0.1
WMGZ				S	Sn	03 18 06.4	+0.6
MXZ	Matakaoa Point	1.96	266	P	Pn	03 17 43.1	-0.7
MXZ				S	Sn	03 18 06.6	-0.6
PUZ	Puketiti	2.08	252	P	Pn	03 17 45.2	-0.3
PUZ				S	Sn	03 18 10.1	-0.1
PKGZ	Pakihiroa	2.17	259	P	Pn	03 17 46.4	-0.4
PKGZ				S	Sn	03 18 12.1	-0.4
CNGZ	Carnagh Statio	2.27	243	P	Pn	03 17 48.2	+0.2
TWGZ	Tauwhareparae	2.32	251	P	Pn	03 17 48.9	+0.1
TWGZ				S	Sn	03 18 16.9	+0.8
HAZ	Te Kaha	2.39	262	P	Pn	03 17 50.1	+0.3
HAZ				S	Sn	03 18 17.8	0.0
RUGZ	Raukumara Rang	2.50	258	P	Pn	03 17 51.4	0.0
RUGZ				S	Sn	03 18 20.4	-0.4
TKGZ	Te Karaka	2.50	246	P	Pn	03 17 51.4	+0.1
TKGZ				S	Sn	03 18 21.1	+0.5
PRGZ	Paritu Road	2.70	237	P	Pn	03 17 53.5	-0.5
MWZ	Matawai	2.71	250	P	Pn	03 17 53.9	-0.2
MWZ				S	Sn	03 18 25.2	-0.4
KNZ	Kokohu	2.89	237	P	Pn	03 17 56.5	-0.1
KNZ				S	Sn	03 18 29.9	-0.1
URZ	Urewera	3.00	254	P	Pn	03 17 58.1	0.0
URZ				S	Sn	03 18 32.0	-0.8
RTZ	Ruatahuna	3.20	248	P	Pn	03 18 01.7	+0.7
RTZ				S	Sn	03 18 38.7	+0.7
BKZ	Black Stump Fm	3.77	242	P	Pn	03 18 08.5	-0.3
BKZ				S	Sn	03 18 51.7	-0.1
PXZ	Pawanui	3.99	229	S	Sn	03 18 55.0	-2.1
WCZ	Waipu Caves	5.38	285	P	Pn	03 18 31.0	+0.2
CTZ	Chatham Island	6.57	163	P	Pn	03 18 48.3	+1.2
ASAR	Alice Springs	42.22	275	P	P	03 25 03.4	+1.3
	0.6nm,0.7s,baz=114,slow=7.8,SNR=5.8						
	0.6nm,0.7s						
WRA	Warramunga Arr	43.84	280	P	P	03 25 15.9	+0.8
	0.3nm,0.4s,baz=120,slow=8.3,SNR=1.4						
	0.3nm,0.4s						
NWAO	Narrogin (SRO)	51.25	255	LR	LR	03 44 30.4	
	comp=Z,57nm,21.7s,baz=46,slow=32						
QSPA	South Pole Qui	52.66	180	P	P	03 26 28.5	+5.7
	1.1nm,0.9s,baz=37,slow=15,SNR=1.9						
	1.1nm,0.9s						
H03S2	Juan Fernandez	77.45	123	T	T	04 54 53.3	
	baz=224,slow=74,SNR=26						
H03S1	Juan Fernandez	77.46	123	T	T	04 54 57.1	
	baz=224,slow=74,SNR=29						
H03S3	Juan Fernandez	77.47	123	T	T	04 54 54.9	
	baz=224,slow=74,SNR=21						
H03N3	Juan Fernandez	77.68	123	T	T	04 55 09.3	
	baz=228,slow=72,SNR=39						
H03N2	Juan Fernandez	77.68	123	T	T	04 55 08.9	
	baz=228,slow=72,SNR=34						
H03N1	Juan Fernandez	77.70	123	T	T	04 55 09.2	
	baz=228,slow=72,SNR=29						
ARCES	ARCESS Array B	145.20	345	PKP	PKiKP	03 36 47.4	-1.3
	4.6nm,0.9s,baz=27,slow=4.2,SNR=6.2						
FINES	FINESS Array B	151.26	335	PKPbc	PKPbc	03 37 00.5	-0.4
	2.4nm,1.0s,baz=31,slow=4.5,SNR=1.8						

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*JMA **02** 03:18:47.8±0.1, 42°.8N±0°.2×142°.0E±0°.3, h36^{km}, MV3.6/38, ISHIKARI DEPRESSION*

JMA Felt II J1 at ISHIKARI DEPRESSION .

*NIED **02** 03:18:47.8, 42°.79N×142°.00E, h36^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.61; $M_{\theta\theta}$1.41; $M_{\phi\phi}$-4.02; $M_{r\theta}$-2.44; $M_{\theta\phi}$1.45; $M_{\phi r}$1.57; Fault plane solution: $M_0$4.78000×10^{14} NP1: ϕ_s198.00000°, δ40.00000°, λ146.00000°. NP2: ϕ_s316.00000°, δ69.00000°, λ55.00000°.*

*IDC **02** 03:18:50.6±1.3, 42°.82N×142°.19E, h69^{km}±11^{km}, mb3.4/14, mbtmp3.7/18 Error ellipse: s-maj=20.2km s-min=12.2km az=109.0*

ISC 02 03:18:47.6±0.9**, 42°.79N**±0°.03×**142°.01E**±0°.03**, h34**^{km}±2^{km}**, n33, σ0^{s}.96**/44**, mb3.7**/14**, 19D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIAM	Iburiatsuma	0.18	202	⇓*i*P	Pb	03 18 54.3	+0.2
JIAM				⇓*e*S	Sb	03 18 59.5	+1.0
JBT2	Biratori 2	0.26	93	*i* P	Pn	03 18 55.0	+0.4
JBT2				*e*S	Sb	03 19 00.2	+0.2
JEW	Eniwo	0.42	277	⇓*i*P	Pb	03 18 57.1	+0.1
JEW				⇓*e*S	Sb	03 19 03.9	+0.5
JSHD	Hidakashinhida	0.51	138	⇓P	Pb	03 18 58.8	+0.5
JSHD				⇓*e*S	Sn	03 19 06.7	+0.8
JFR	Furan	0.57	49	⇓*i*P	Pb	03 18 59.1	-0.2
JFR				⇓*e*S	Sb	03 19 07.2	-0.1
JISS	Ishikarishitsu	0.65	318	⇓*i*P	Pn	03 19 00.7	+0.4
JISS				⇓*e*S	Sn	03 19 10.4	+1.1
JAB	Ashibetsu	0.73	12	⇓P	Pb	03 19 02.8	+0.8
JAB				⇓*e*S	Sb	03 19 12.5	+0.8
JNBK	Urakawa-nobuka	0.75	133	⇓P	Pn	03 19 01.9	+0.3
JNB	Noboribetsu	0.79	246	⇓*i*P	Pn	03 19 01.6	-0.6
JNB				⇓S	Sn	03 19 11.8	-0.9
JHR	Hokuryu	0.97	348	P	Pb	03 19 06.1	+0.1
JHR				*e*S	Sb	03 19 19.4	+0.8
JCH	Churui	1.01	100	⇓*e*P	Pn	03 19 05.3	0.0
JCH				⇓*e*S	Sn	03 19 18.4	+0.1
JEM	Erimo	1.15	132	*e*P	Pn	03 19 08.5	+1.3
JEM				*e*S	Sb	03 19 23.4	-0.1
JKK2	Kamakawa 2	1.21	26	⇓*e*P	Pn	03 19 09.0	+0.9
JKK2				⇓*e*S	Sn	03 19 24.5	+1.2
ASAJ	Asahikawa	1.39	18	P	Pn	03 19 11.9	+1.3
	87nm,0.2s,baz=219,slow=12,SNR=474						
ASAJ				S	Sb	03 19 30.4	0.0
	226nm,0.4s,baz=63,slow=32,SNR=24						
MJAR	Matsushiro Arr	6.89	206	P	Pn	03 20 29.3	+3.1
	1.2nm,0.4s,baz=26,slow=16,SNR=12						
USRK	Ussuriysk Ar.	7.42	284	P	Pn	03 20 38.7	+5.3
	0.8nm,0.6s,baz=97,slow=14,SNR=2.0						
KSRS	Korea Array	12.03	248	P	Pn	03 21 41.4	+5.0
	0.5nm,0.6s,baz=58,slow=13,SNR=2.9						
PETK	Petropavlovsk-	14.70	40	P	Pn	03 22 13.5	+0.7
	1.0nm,0.7s,baz=230,slow=11,SNR=2.4						
SEY	Seymchan	21.07	13	P	P	03 23 28.7	+0.2
	1.6nm,0.7s,baz=184,slow=11,SNR=5.0						
	1.6nm,0.7s						
SONM	Songino Array	25.40	294	P	P	03 24 12.4	+0.6
	0.4nm,0.3s,baz=82,slow=10,SNR=2.3						
	0.4nm,0.3s						
TIXI	Tiksi	29.65	352	P	P	03 24 49.1	-0.2
	2.2nm,0.6s,baz=322,slow=5.8,SNR=8.2						
	2.2nm,0.6s						
ZALV	Zalesovo Beam	38.58	307	P	P	03 26 06.6	-0.3
	0.5nm,0.4s,baz=87,slow=10,SNR=2.2						
	0.5nm,0.4s						
MKAR	Makanchi Array	41.68	297	P	P	03 26 32.1	-0.7
	0.2nm,0.4s,baz=77,slow=6.4,SNR=3.4						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	43.02	303	P	P	03 26 43.3	-0.1
	0.6nm,0.6s,baz=78,slow=8.7,SNR=4.6						
	0.6nm,0.6s						
ILAR	Eielson Array	44.46	35	P	P	03 26 51.7	-3.2
	0.6nm,0.8s,baz=278,slow=8.2,SNR=7.4						
	0.6nm,0.8s						
BVAR	Borovoye Array	47.19	309	P	P	03 27 16.5	-0.1
	0.3nm,0.3s,baz=80,slow=8.9,SNR=1.5						
	0.3nm,0.3s						

WRA	**Warramunga Arr**	**62.82**	**188**	P	**P**	**03 29 09.1**	**-0.6**
	1.1nm,0.6s,baz=1.8,slow=6.5,SNR=6.1						
	1.1nm,0.6s						
FINES	**FINESS Array B**	**63.97**	**331**	P	**P**	**03 29 16.0**	**-0.9**
	1.3nm,0.7s,baz=60,slow=11,SNR=6.6						
	1.3nm,0.7s						
ASAR	**Alice Springs**	**66.55**	**188**	P	**P**	**03 29 33.5**	**-0.5**
	0.3nm,0.4s,baz=3.5,slow=6.9,SNR=5.9						
	0.3nm,0.4s						
KBZ	**Khabaz**	**67.56**	**309**	P	**P**	**03 29 40.7**	**+0.4**
	1.2nm,1.0s,baz=52,slow=3.8,SNR=2.6						
	1.2nm,1.0s						
HFS	**Hagfors**	**69.05**	**335**	P	**P**	**03 29 49.1**	**-0.3**
	0.6nm,0.5s,baz=66,slow=5.4,SNR=5.5						
	0.6nm,0.5s						
NOA	**NORSAR Array B**	**69.07**	**337**	P	**P**	**03 29 49.0**	**-0.5**
	0.3nm,0.7s,baz=25,slow=2.6,SNR=1.9						
	0.3nm,0.7s						
SNAA	**Sanae**	**146.36**	**199**	PKPbc	**PKPbc**	**03 38 24.1**	**+0.5**
	0.9nm,0.5s,baz=213,slow=8.4,SNR=13						

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*SJA **02** 03:21:15.1±0.8, 23°.63S×69°.37W, h111^{km}±5^{km}, ML4.5, MW4.3*

*NEIC **02** 03:21:17.0±2.3, 23°.67S±0°.04×69°.36W±0°.05, h95^{km}±5^{km}, mb4.5/23, Mwr4.2/10, Mwr4.6(GUC), Error ellipse: s-maj=7.3km s-min=6.1km az=120.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-2.68; M$_{\theta\theta}$0.49; M$_{\phi\phi}$2.20; M$_{r\theta}$0.22; M$_{\theta\phi}$-0.99; M$_{\phi r}$-0.58; Fault plane solution: M$_0$2.74000×10^{15} NP1:ϕ_s336.30000°, δ51.56000°, λ-88.93000°. NP2:ϕ_s154.58000°, δ38.46000°, λ-91.35000°. Principal axes: T 2.7172, Plg7.0000°, Azm66.0000°; N 0.0384, Plg1.0000°, Azm156.0000°; P -2.7556, Plg83.0000°, Azm253.0000°;*

*IDC **02** 03:21:17.6±0.5, 23°.57S×69°.21W, h93^{km}±3^{km}, mb4.0/13, mbtmp4.3/15 Error ellipse: s-maj=21.2km s-min=12.9km az=92.0*

*GUC **02** 03:21:17.2±0.8, 23°.67S×69°.36W, h86^{km}±4^{km}, ML4.5*

*NEIC **02** 03:21:17, 23°.67S×69°.36W, h95^{km}*

*VAO **02** 03:21:20.3±1.3, 23°.44S×68°.95W, h83^{km}±8^{km}, mb4.8*

ISC 02 03:21:17.1±0.4**, 23°.67S**±0°.03×**69°.34W**±0°.04**, h92**^{km}±3^{km}**, n138, σ1^{s}.32**/152**, mb4.5**/23**, 10C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB06	**IPOC Station P**	**0.98**	**348**		**Pn**	**03 21 37.3**	**+0.3**
PB06				Sn	**Sn**	**03 21 51.9**	**+0.1**
PB06	**IPOC Station P**	**0.98**	**348**	⇓*i*P	**Pn**	**03 21 37.3**	**+0.3**
PB06				*i* S	**Sn**	**03 21 51.9**	**+0.1**
PB06				IAML		03 21 53.1	
	comp=E,21µm,0.5s						
PB06	**IPOC Station P**	**0.98**	**348**	*e*P	**Pn**	**03 21 36.6**	**-0.3**
PB06				*e*S	**Sn**	**03 21 52.3**	**+0.6**
PB06				IAML		03 21 53.2	
	comp=Z,8µm,0.1s						
PB10	**IPOC Station P**	**1.12**	**278**		**Pn**	**03 21 39.0**	**+0.6**
PB10				Sn	**Sn**	**03 21 54.5**	**+0.2**
PB10	**IPOC Station P**	**1.12**	**278**	⇑*i*P	**Pn**	**03 21 39.0**	**+0.6**
PB10				*i* S	**Sn**	**03 21 54.1**	**-0.3**
PB10				IAML		03 21 56.5	
	comp=E,7µm,0.4s						
PB10	**IPOC Station P**	**1.12**	**278**	*e*P	**Pn**	**03 21 38.4**	**0.0**
PB10				*e*S	**Sn**	**03 21 55.5**	**+1.2**
PB10				IAML		03 21 57.5	
	comp=Z,7µm,0.2s						
PB05	**IPOC Station P**	**1.13**	**316**		**Pn**	**03 21 38.9**	**+0.3**
PB05	**IPOC Station P**	**1.13**	**316**	⇓*i*P	**Pn**	**03 21 39.1**	**+0.5**
PB05				*i* S	**Sn**	**03 21 54.7**	**0.0**
PB05				IAML		03 21 56.6	
	comp=N,14µm,0.5s						
PB05	**IPOC Station P**	**1.13**	**316**	*e*P	**Pn**	**03 21 38.3**	**-0.3**
AF01	**San Pedro de A**	**1.28**	**57**		**Pn**	**03 21 41.5**	**+0.9**
AF01	**San Pedro de A**	**1.28**	**57**	⇑*i*P	**Pn**	**03 21 41.5**	**+0.9**
AF01				*i* S	**Sn**	**03 21 59.1**	**+0.8**
AF01				IAML		03 22 00.9	
	comp=N,20µm,0.3s						
AF01	**San Pedro de A**	**1.28**	**57**	*e*P	**Pn**	**03 21 40.7**	**+0.1**
AF01				*e*S	**Sn**	**03 21 59.7**	**+1.4**
AF01				IAML		03 22 22.5	
	comp=Z,12µm,0.5s						
PB14	**IPOC Station P**	**1.36**	**225**		**Pn**	**03 21 42.1**	**+0.5**
PB14	**IPOC Station P**	**1.36**	**225**	⇑*i*P	**Pn**	**03 21 42.1**	**+0.5**
PB14				*i* S	**Sn**	**03 22 00.7**	**+0.7**
PB14	**IPOC Station P**	**1.36**	**225**	*e*P	**Pn**	**03 21 41.4**	**-0.2**
PB14				*e*S	**Sn**	**03 22 01.1**	**+1.1**
PB14				IAML		03 22 03.2	
	comp=Z,5µm,0.2s						
GO02	**Mina Guanaco**	**1.51**	**189**		**Pn**	**03 21 44.1**	**+0.8**
GO02	**Mina Guanaco**	**1.51**	**189**	*e*P	**Pn**	**03 21 43.9**	**+0.5**
GO02				*i* S	**Sn**	**03 22 04.0**	**+0.8**
GO02	**Mina Guanaco**	**1.51**	**189**	*e*P	**Pn**	**03 21 43.9**	**+0.5**
GO02				*e*S	**Sn**	**03 22 05.2**	**+2.0**
PB03	**IPOC Station P**	**1.65**	**347**		**Pn**	**03 21 45.3**	**+0.1**
PB03	**IPOC Station P**	**1.65**	**347**	⇑*e*P	**Pn**	**03 21 45.2**	**+0.1**
PB03				IAML		03 22 08.0	
	comp=E,6µm,0.5s						
PB03	**IPOC Station P**	**1.65**	**347**	*e*P	**Pn**	**03 21 44.5**	**-0.6**
PB03				*e*S	**Sn**	**03 22 06.0**	**-0.3**
PB03				IAML		03 22 07.7	
	comp=Z,7µm,0.2s						
PB09	**IPOC Station P**	**1.86**	**3**		**Pn**	**03 21 48.7**	**+0.8**
PB09	**IPOC Station P**	**1.86**	**3**	*e*P	**Pn**	**03 21 48.6**	**+0.8**
PB09				*e*S	**Sn**	**03 22 12.3**	**+1.2**
PB09				IAML		03 22 14.9	
	comp=E,3µm,0.5s						
PB09	**IPOC Station P**	**1.86**	**3**	*e*P	**Pn**	**03 21 48.0**	**+0.1**
PB09				*e*S	**Sn**	**03 22 12.7**	**+1.6**
PB09				IAML		03 22 14.8	
	comp=Z,2µm,0.5s						
PB01	**IPOC Station P**	**2.61**	**357**		**Pn**	**03 21 57.3**	**-0.3**
PB01	**IPOC Station P**	**2.61**	**357**	⇑*i*P	**Pn**	**03 21 57.3**	**-0.3**
PB01				IAML		03 23 00.2	
	comp=E,2µm,0.3s						
PB01	**IPOC Station P**	**2.61**	**357**	*e*P	**Pn**	**03 21 56.9**	**-0.8**
AC01	**Pan de Azucar**	**2.72**	**204**		**Pn**	**03 21 58.3**	**-0.7**
AC01	**Pan de Azucar**	**2.72**	**204**	⇑*i*P	**Pn**	**03 21 58.2**	**-0.7**
AC01				IAML		03 22 50.2	
AC01	**Pan de Azucar**	**2.72**	**204**	*e*P	**Pn**	**03 21 58.4**	**-0.7**
AC01				*e*S	**Sn**	**03 22 30.8**	**-0.4**
AC01				IAML		03 22 35.9	
	comp=Z,801nm,0.2s						
AC02	**Maricunga**	**3.16**	**177**		**Pn**	**03 22 06.7**	**+1.4**
AC02	**Maricunga**	**3.16**	**177**	*e*P	**Pn**	**03 22 06.8**	**+1.4**
AC02	**Maricunga**	**3.16**	**177**	*e*P	**Pn**	**03 22 06.0**	**+0.7**
TA01	**Diego Aracena**	**3.18**	**346**		**Pn**	**03 22 03.7**	**-1.5**
TA01	**Diego Aracena**	**3.18**	**346**	*e*P	**Pn**	**03 22 03.4**	**-1.8**
TA01	**Diego Aracena**	**3.18**	**346**	*e*P	**Pn**	**03 22 03.5**	**-1.7**
TA01				*e*S	Sn	03 22 24.5	-18
PB08	**IPOC Station P**	**3.51**	**3**		**Pn**	**03 22 09.3**	**-0.7**
PB08	**IPOC Station P**	**3.51**	**3**	*e*P	**Pn**	**03 22 09.3**	**-0.7**
PB08				*i* S	**Sn**	**03 22 50.3**	**-0.4**
PB08	**IPOC Station P**	**3.51**	**3**	*e*P	**Pn**	**03 22 09.1**	**-0.9**
AC06	**Mina Casimiro**	**3.79**	**194**		**Pn**	**03 22 12.0**	**-1.4**
PB11	**IPOC Station P**	**3.90**	**356**		**Pn**	**03 22 13.3**	**-1.7**
GO01	**Chusmiza**	**3.98**	**2**		**Pn**	**03 22 15.5**	**-1.0**
GO03	**Copiapo**	**3.99**	**191**		**Pn**	**03 22 15.0**	**-1.2**
AC04	**Llanos de Chal**	**4.78**	**199**		**Pn**	**03 22 23.9**	**-2.9**
AC05	**El Transito**	**5.22**	**189**		**Pn**	**03 22 31.6**	**-1.3**
PB16	**IPOC Station P**	**5.31**	**358**		**Pn**	**03 22 34.7**	**+0.2**
LCO	**Las Campanas**	**5.46**	**193**		**Pn**	**03 22 33.7**	**-2.6**
CO01	**Juntas del Tor**	**6.32**	**186**		**Pn**	**03 22 47.4**	**-0.6**
GO04	**Tololo Observa**	**6.61**	**191**		**Pn**	**03 22 48.5**	**-3.4**
LPAZ	**La Paz**	**7.43**	**9**		**Pn**	**03 23 03.2**	**-0.2**
LPAZ	**La Paz**	**7.43**	**9**	P	**Pn**	**03 23 03.6**	**+0.2**
	comp=Z,6.9nm,0.4s,baz=192,slow=3.8,SNR=59						
LPAZ	**La Paz**	**7.43**	**9**	*e*P	**Pn**	**03 23 03.3**	**-0.2**
LPAZ	**La Paz**	**7.43**	**9**	*e*P	**Pn**	**03 23 04.4**	**+0.9**
CFA	**Coronel Fontan**	**7.97**	**173**	P	**Pn**	**03 23 08.9**	**-1.3**
	comp=Z,6.6nm,0.5s,baz=316,slow=16,SNR=25						
CFA				S	**Sn**	**03 24 32.1**	**-6.7**
	comp=Z,4.4nm,0.3s,baz=155,slow=17,SNR=1.4						
BBSD	**Serra de San D**	**10.42**	**53**	*e*P	**Pn**	**03 23 39.7**	**-3.9**
PTLB	**Pontes e Lacer**	**12.62**	**51**	Pn	**Pn**	**03 24 10.1**	**-3.2**
PTLB	**Pontes e Lacer**	**12.62**	**51**	*e*P	**Pn**	**03 24 09.9**	**-3.4**
H03N1	**Juan Fernandez**	**12.86**	**219**	T	T	03 36 20.9	
	baz=44,slow=72,SNR=62						
H03N2	**Juan Fernandez**	**12.87**	**219**	T	T	03 36 32.0	
	baz=44,slow=72,SNR=14						
H03N3	**Juan Fernandez**	**12.88**	**219**	T	T	03 36 35.5	
	baz=44,slow=72,SNR=14						
VILB	**Vilhena**	**13.74**	**41**	P	**Pn**	**03 24 24.7**	**-3.3**
VILB	**Vilhena**	**13.74**	**41**	*e*P	**Pn**	**03 24 26.8**	**-1.3**
SALV	**Santo Antonio**	**14.98**	**61**	*e*P	**Pn**	**03 24 42.2**	**-1.8**
TRQA	**Tornquist**	**15.67**	**158**	P	**Pn**	**03 24 53.2**	**+0.6**
TRQA				IAmb	IAmb	03 24 56.1	
	comp=Z,12nm,0.8s						
CPSB	**Cacapava Do Su**	**15.67**	**119**	*e*P	**Pn**	**03 24 53.4**	**+0.6**
PTGB	**Pitanga**	**15.80**	**97**	*e*P	**P**	**03 24 56.7**	**+0.2**
PLTB	**Pedras Altas**	**16.09**	**124**	Pn	**Pn**	**03 24 54.6**	**-3.4**
PDRB	**Porto dos Gac**	**16.96**	**47**	*e*P	**P**	**03 25 09.1**	**-0.2**
PLCA	**Paso Flores**	**17.05**	**183**	P	**P**	**03 25 10.6**	**+0.5**
	comp=Z,2.5nm,1.0s,baz=27,slow=13,SNR=3.1						
ITRB	**Iturama**	**18.08**	**81**	*e*P	**P**	**03 25 21.1**	**-0.4**
CLDB	**Colider**	**18.12**	**48**	*e*P	**P**	**03 25 22.2**	**+0.1**
ARAG	**Araguaiana, MT**	**18.30**	**68**	*e*P	**P**	**03 25 23.4**	**-0.6**
SPB	**Sao Paulo**	**20.08**	**94**	P	P	03 25 35.6	-7.7
SPB				IAmb	IAmb	03 25 36.5	
	comp=Z,12nm,0.5s						
IPMB	**Ipameri, GO**	**20.54**	**78**	*e*P	**P**	**03 25 47.9**	**-0.5**
TEFE	**Tefe**	**20.55**	**14**	*e*P	**P**	**03 25 47.6**	**-0.8**
VAO	**Valinhos**	**20.56**	**93**	P	**P**	**03 25 47.9**	**-0.7**
VAO				IAmb	IAmb	03 25 51.2	
	comp=Z,19nm,0.5s						
VAO	**Valinhos**	**20.56**	**93**	*e*P	**P**	**03 25 47.7**	**-0.9**
SNDB	**Serra Nova Dou**	**20.72**	**59**	*e*P	**P**	**03 25 49.1**	**-1.1**
NPGB	**Novo Progresso**	**21.30**	**41**	*e*P	**P**	**03 25 53.6**	**-2.9**
BDFB	**Brasilia**	**21.60**	**72**	P	**P**	**03 25 59.1**	**-0.7**
BDFB				IAmb	IAmb	03 26 00.2	
	comp=Z,19nm,0.6s						
BDFB	**Brasilia**	**21.60**	**72**	P	**P**	**03 25 59.1**	**-0.7**
	comp=Z,12nm,0.4s,baz=243,slow=9.4,SNR=24						
	comp=Z,12nm,0.4s						
PMNB	**Patos De Minas**	**21.96**	**81**	*e*P	**P**	**03 26 02.5**	**-1.1**
MACA	**Manacapuru-AM**	**22.04**	**24**	P	**P**	**03 26 02.2**	**-2.1**
MACA	**Manacapuru-AM**	**22.04**	**24**	*e*P	**P**	**03 26 03.0**	**-1.3**
ITTB	**Itaituba**	**23.25**	**36**	*e*P	**P**	**03 26 14.7**	**-2.0**
JANB	**Januaria**	**25.09**	**75**	*e*P	**P**	**03 26 33.6**	**+0.2**
SMTB	**Santa Maria do**	**25.49**	**58**	*e*P	**P**	**03 26 37.8**	**+0.7**
PRPB	**Parauapebas**	**25.60**	**50**	*e*P	**P**	**03 26 38.9**	**+0.9**
SDBA	**SAO DESIDERIO**	**25.75**	**68**	*e*P	**P**	**03 26 40.2**	**+0.8**
MAL2	**Monte Alegre,**	**26.05**	**37**	P	**P**	**03 26 41.8**	**-0.2**
SJMB	**Sao Joao De Ma**	**26.69**	**85**	*e*P	**P**	**03 26 49.2**	**+1.4**
RIB01	**Linhares ES**	**27.26**	**86**	*e*P	**P**	**03 26 53.5**	**+0.6**
BOAV	**Boa Vista**	**27.29**	**20**	*e*P	**P**	**03 26 55.8**	**+2.6**
GUA01	**Guaratinga, BA**	**28.58**	**81**	*e*P	**P**	**03 27 05.7**	**+1.0**
CMC01	**Camacan, BA**	**29.25**	**79**	*e*P	**P**	**03 27 11.3**	**+0.7**
NBPB	**Pedra_Branca-C**	**33.84**	**63**	*e*P	**P**	**03 27 52.3**	**+1.4**
NBAN	**Anadia - AL**	**34.49**	**72**	*e*P	**P**	**03 27 56.9**	**+0.3**
SMAI	**San Martin Ant**	**44.49**	**179**	P	**P**	**03 29 18.8**	**-0.1**
SMAI				IAmb	IAmb	03 29 24.1	
	comp=Z,6.7nm,0.7s						
VNA3	**Neumayer Olymp**	**58.17**	**161**	⇑P	**P**	**03 31 01.8**	**+0.8**
	comp=Z,8.3nm,0.8s						
VNA2	**Neumayer--Watz**	**58.76**	**160**	⇑P	**P**	**03 31 05.9**	**+0.8**
	comp=Z,7.2nm,0.6s,baz=280,slow=8.3						
Y49A	**Blount Mountai**	**59.47**	**344**	P	**P**	**03 31 09.3**	**-1.1**
Y49A				IAmb	IAmb	03 31 11.9	
	comp=Z,5.7nm,1.2s						
SNAA	**Sanae**	**60.38**	**161**	⇑P	**P**	**03 31 16.9**	**+0.7**
	comp=Z,80nm,0.5s						
SNAA	**Sanae**	**60.38**	**161**	P	**P**	**03 31 16.6**	**+0.3**
SNAA	**Sanae**	**60.38**	**161**	P	**P**	**03 31 16.6**	**+0.3**
	comp=Z,6.1nm,0.9s,baz=279,slow=8.2,SNR=16						
SNAA				pP	**pP**	**03 31 41.1**	**+1.0**
	comp=Z,2.0nm,0.9s,baz=27,slow=23,SNR=2.3						
SNAA				sP	**sP**	**03 31 51.1**	**+0.6**
	comp=Z,2.6nm,0.7s,baz=283,slow=6.2,SNR=3.1						
	comp=Z,6.1nm,0.9s						
W50A	**Signal Mountai**	**60.47**	**345**	P	**P**	**03 31 15.3**	**-2.0**
W50A				IAmb	IAmb	03 31 35.6	
	comp=Z,8.6nm,1.3s						
TKL	**Tuckaleechee C**	**60.56**	**347**	P	**P**	**03 31 16.8**	**-1.0**
SWET	**Sewanee**	**60.63**	**344**	P	**P**	**03 31 17.3**	**-1.1**
WVT	**Waverly**	**61.99**	**343**	P	**P**	**03 31 26.6**	**-0.9**
WVT				IAmb	IAmb	03 31 27.7	
	comp=Z,3.5nm,0.8s						
TROLL	**Troll, Antarti**	**62.09**	**160**	⇑P	**P**	**03 31 28.4**	**+0.4**
	comp=Z,168nm,0.5s						
TXAR	**Lajitas Array**	**62.18**	**326**	P	**P**	**03 31 29.8**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=122,slow=2.9,SNR=3.3						
	comp=Z,0.5nm,0.8s						
VHRN	**Van Horn**	**64.03**	**326**	P	**P**	**03 31 41.9**	**+0.6**
VHRN				IAmb	IAmb	03 31 42.7	
	comp=Z,2.5nm,0.7s						
QSPA	**South Pole Qui**	**66.54**	**180**	P	**P**	**03 31 58.1**	**+1.2**
QSPA				IAmb	IAmb	03 32 23.3	
	comp=Z,12nm,1.4s						
QSPA	**South Pole Qui**	**66.54**	**180**	P	**P**	**03 31 58.2**	**+1.2**
	comp=Z,3.8nm,0.5s,baz=310,slow=0.9,SNR=58						
QSPA				pP	**pP**	**03 32 21.8**	**+0.8**
	comp=Z,2.1nm,0.4s,baz=317,slow=1.0,SNR=4.4						
QSPA				sP	**sP**	**03 32 32.0**	**+0.7**
	comp=Z,2.4nm,0.7s,baz=112,slow=2.1,SNR=3.4						
	comp=Z,3.8nm,0.5s						
ANMO	**Albuquerque**	**68.10**	**328**	P	**P**	**03 32 09.0**	**+1.6**
DBIC	**Dimbokro**	**69.74**	**73**	P	**P**	**03 32 17.2**	**-0.5**
	comp=Z,4.4nm,0.7s,baz=240,slow=6.8,SNR=7.4						
	comp=Z,4.4nm,0.7s						
SRU	**San Rafael Swe**	**73.37**	**328**	IAmb	IAmb	03 32 41.4	
	comp=Z,3.0nm,0.6s						
VNDA	**Vanda**	**74.66**	**190**	P	**P**	**03 32 48.0**	**+2.0**
	comp=Z,0.7nm,0.6s,baz=286,slow=9.6,SNR=3.1						
	comp=Z,0.7nm,0.6s						
PDAR	**Pinedale Array**	**75.78**	**331**	P	**P**	**03 32 54.1**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=139,slow=7.7,SNR=3.9						
	comp=Z,0.3nm,0.5s						
ULM	**Lac du Bonnet**	**77.25**	**343**	P	**P**	**03 33 00.9**	**-0.1**
	comp=Z,4.0nm,0.6s,baz=149,slow=7.4,SNR=7.5						
	comp=Z,4.0nm,0.6s						
YNE	**Yellowstone No**	**77.76**	**332**	IAmb	IAmb	03 33 31.1	
	comp=Z,4.4nm,1.0s						
SCHQ	**Schefferville**	**78.20**	**1**	pP	pP	03 33 28.9	-1.9
	comp=Z,1.3nm,0.4s,baz=212,slow=8.1,SNR=3.1						
TORD	**Torodi Ar. Bea**	**78.46**	**70**	P	**P**	**03 33 08.2**	**-0.3**
	comp=Z,5.5nm,0.5s,baz=254,slow=5.5,SNR=5.3						
TORD				pP	**pP**	**03 33 32.9**	**-0.4**
	comp=Z,7.1nm,0.6s,baz=254,slow=5.4,SNR=7.6						
	comp=Z,5.5nm,0.5s						
PLID	**Pearl Lake**	**80.56**	**329**	IAmb	IAmb	03 33 21.7	
	comp=Z,3.9nm,0.8s						
MAW	**Mawson**	**82.38**	**163**	P	**P**	**03 33 29.4**	**+0.9**
	comp=Z,5.2nm,0.8s,baz=215,slow=7.6,SNR=13						
MAW				pP	**pP**	**03 33 54.4**	**+0.8**
	comp=Z,2.6nm,0.8s,baz=237,slow=8.6,SNR=4.4						
	comp=Z,5.2nm,0.8s						
BOSA	**Boshof**	**82.79**	**118**	P	**P**	**03 33 31.5**	**-0.1**
	comp=Z,3.7nm,0.6s,baz=267,slow=4.0,SNR=14						
	comp=Z,3.7nm,0.6s						
ESDC	**Sonseca Array**	**87.65**	**45**	P	**P**	**03 33 55.5**	**+0.1**
	comp=Z,0.6nm,1.0s,baz=252,slow=5.1,SNR=4.0						
ESDC				pP	**pP**	**03 34 19.5**	**-1.1**
	comp=Z,0.8nm,1.0s,baz=223,slow=5.3,SNR=3.1						
	comp=Z,0.6nm,1.0s						
YKA	**Yellowknife Ar**	**93.09**	**341**	P	**P**	**03 34 20.5**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=137,slow=4.3,SNR=5.5						
	comp=Z,1.0nm,0.7s						
H11S2	**WAKE ISLAND Hy**	**127.72**	**276**	T	T	06 00 20.6	
	baz=107,slow=75,SNR=10						
H11S1	**WAKE ISLAND Hy**	**127.73**	**276**	T	T	06 00 18.4	
	baz=107,slow=75,SNR=0.6						
H11S3	**WAKE ISLAND Hy**	**127.74**	**276**	T	T	06 00 22.4	
	baz=107,slow=75,SNR=6.4						
ASAR	**Alice Springs**	**127.81**	**207**	PKP	**PKPdf**	**03 40 12.2**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=145,slow=2.0,SNR=10						
ASAR				pPKP	**pPKPdf**	**03 40 38.6**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=153,slow=1.8,SNR=3.0						
BVAR	**Borovoye Array**	**137.79**	**36**	PKP	**PKPdf**	**03 40 30.2**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=306,slow=2.8,SNR=3.7						
KURBB	**Kurchatov Arra**	**143.35**	**35**	PKP	PKPbc	03 40 38.5	+0.6
	comp=Z,0.8nm,0.8s,baz=300,slow=3.2,SNR=6.2						
KURBB				pPKP	pPKPdf	03 41 04.5	-2.3
	comp=Z,0.3nm,0.5s,baz=307,slow=3.2,SNR=3.5						
ZALV	**Zalesovo Beam**	**144.07**	**26**	PKP	PKPbc	03 40 40.5	+0.7
	comp=Z,2.3nm,0.8s,baz=316,slow=6.2,SNR=8.8						
ZALV				pPKP	pPKPdf	03 41 07.5	-0.5
	comp=Z,1.7nm,0.8s,baz=298,slow=3.1,SNR=2.0						
KSH	**Kashi**	**146.74**	**53**	PKPbc	**PKPab**	**03 40 49.6**	**-0.5**
KSH				pPKP	pPKPbc	03 41 15.2	+0.4
MKAR	**Makanchi Array**	**147.60**	**38**	PKPbc	**PKPdf**	**03 40 49.2**	**+1.2**
	comp=Z,2.2nm,0.6s,baz=309,slow=2.7,SNR=18						
MKAR				pPKPbc	**pPKPdf**	**03 41 14.2**	**-0.1**
	comp=Z,3.7nm,0.8s,baz=336,slow=2.7,SNR=9.6						
MJAR	**Matsushiro Arr**	**153.03**	**305**	pPKPab	pPKPab	03 41 41.4	+0.2
	comp=Z,1.8nm,0.9s,baz=74,slow=2.3,SNR=4.7						
PZH	**PanZhiHua**	**171.44**	**69**	PKP	**PKPdf**	**03 41 14.2**	**-1.3**

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*SNET **02** 03:30:43.8±1.0, 13°.11N×89°.46W, h55^{km}±9^{km}, ML2.9*

*CATAC **02** 03:30:43.2±0.7, 13°N±5°×8°9W±°, h31^{km}±5^{km}, M3.0/13, MLv3.0/13, Error ellipse: s-maj=12.0km s-min=7.2km az=33.0, confirmed*

*GCG **02** 03:30:44.1±0.4, 13°.15N×89°.53W, h54^{km}±6^{km}, MD3.5*

ISC 02 03:30:43.3±2.4**, 13°.0N**±0°.1×**89°.51W**±0°.08**, h48**^{km}±18^{km}**, n51, σ0^{s}.53**/63**, 11D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.49**	**21**	*e*P	**Pn**	**03 30 54.3**	**-0.1**
LALI				*e*S	**Sn**	**03 31 02.7**	**+0.5**
LALI	**Alcalda de L**	**0.49**	**21**	*i* P	**Pn**	**03 30 54.3**	**-0.1**
LALI				*i* S	**Sn**	**03 31 02.5**	**+0.3**
LALI	**Alcalda de L**	**0.49**	**21**	⇓P	**Pn**	**03 30 54.2**	**-0.1**
JAYA	**Jayaque - finc**	**0.62**	**5**	*e*P	**Pn**	**03 30 55.9**	**-0.3**
JAYA				IAML		03 31 05.9	
	comp=Z,786nm,0.2s						
JAYA	**Jayaque - finc**	**0.62**	**5**	*e*P	**Pn**	**03 30 56.0**	**-0.3**
JAYA				*e*S	**Sn**	**03 31 04.7**	**-0.7**
JAYA	**Jayaque - finc**	**0.62**	**5**	⇓P	**Pn**	**03 30 55.9**	**-0.3**
ITCA	**Escuela Especi**	**0.68**	**19**	P	**Pn**	**03 30 56.6**	**-0.2**
LOMA	**Loma Larga**	**0.69**	**28**	*e*P	**Pn**	**03 30 56.8**	**-0.2**
LOMA				*e*S	**Sn**	**03 31 07.4**	**+0.5**
LOMA	**Loma Larga**	**0.69**	**28**	S	**Sn**	**03 31 08.0**	**+1.1**
LOMA	**Loma Larga**	**0.69**	**28**	P	**Pn**	**03 30 56.9**	**-0.1**
PMON	**Piamonte**	**0.70**	**15**	*e*P	**Pn**	**03 30 57.0**	**-0.2**
PMON				*e*S	**Sn**	**03 31 07.6**	**+0.4**
PMON	**Piamonte**	**0.70**	**15**	⇓P	**Pn**	**03 30 56.8**	**-0.3**
UEES	**Universidad Ev**	**0.73**	**21**	⇓P	**Pn**	**03 30 57.8**	**+0.3**
LFRS	**El Faro**	**0.73**	**36**	*e*P	**Pn**	**03 30 57.4**	**-0.2**
LFRS				*e*S	**Sn**	**03 31 07.5**	**-0.3**
BOQS	**Boqueron**	**0.73**	**17**	*e*P	**Pn**	**03 30 57.6**	**0.0**
PIC2	**El Picacho**	**0.75**	**19**	*e*P	**Pn**	**03 30 58.1**	**+0.2**
CEVE	**Cerro Verde**	**0.80**	**352**	*e*P	**Pn**	**03 30 58.6**	**0.0**
CEVE				*e*S	**Sn**	**03 31 10.3**	**+0.6**
CEVE				IAML		03 31 11.6	
	comp=Z,457nm,0.2s						
CEVE	**Cerro Verde**	**0.80**	**352**	P	**Pn**	**03 30 58.6**	**0.0**
LFU	**La Fuente**	**0.81**	**28**	*e*P	**Pn**	**03 30 58.8**	**+0.3**
SBLS	**San Blas**	**0.81**	**352**	*e*P	**Pn**	**03 30 58.6**	**-0.1**
SBLS				*e*P		03 30 58.9	
SNJE	**San Jose**	**0.84**	**353**	*e*P	**Pn**	**03 30 58.9**	**-0.2**
SNJE				*e*P		03 30 59.1	
COEG	**Centro de Oper**	**0.85**	**46**	*e*P	**Pn**	**03 30 58.4**	**-0.6**
COEG				*e*S	**Sn**	**03 31 09.9**	**-0.5**
COEG				IAML		03 31 12.5	
	comp=Z,147nm,0.3s						
COEG	**Centro de Oper**	**0.85**	**46**	⇓P	**Pn**	**03 30 58.5**	**-0.5**
TECO	**Alcaldia de Te**	**0.87**	**54**	*e*P	**Pn**	**03 30 58.4**	**-0.9**
TECO				IAML		03 31 13.2	
	comp=Z,64nm,0.1s						
TECO	**Alcaldia de Te**	**0.87**	**54**	⇓P	**Pn**	**03 30 58.5**	**-0.8**
PAVA	**Las Pavas**	**0.88**	**39**	*e*P	**Pn**	**03 30 59.3**	**-0.1**
PAVA	**Las Pavas**	**0.88**	**39**	⇓P	**Pn**	**03 30 59.4**	**-0.1**
NUBE	**Las Nubes**	**0.91**	**343**	*e*P	**Pn**	**03 30 59.6**	**-0.3**
NUBE				*e*S	**Sn**	**03 31 11.8**	**-0.3**
NUBE	**Las Nubes**	**0.91**	**343**	*i* P	**Pn**	**03 30 59.6**	**-0.3**
NUBE				*e*S	**Sn**	**03 31 11.9**	**-0.2**
NUBE	**Las Nubes**	**0.91**	**343**	⇓P	**Pn**	**03 30 59.6**	**-0.3**
UESV	**Universidad de**	**0.92**	**49**	P	**Pn**	**03 30 59.6**	**-0.4**
UNIC	**Universidad Ca**	**0.95**	**357**	*e*P	**Pn**	**03 31 00.9**	**+0.5**
SCLA	**Alcaldia de Sa**	**1.01**	**48**	*e*P	**Pn**	**03 31 01.2**	**0.0**
SLOZ	**Alcaldia de Sa**	**1.03**	**345**	*e*P	**Pn**	**03 31 01.4**	**0.0**
TECA	**Tecapa**	**1.08**	**65**	*e*P	**Pn**	**03 31 01.5**	**-0.8**
TECA				*e*P		03 31 01.9	
PACA	**Pacayal**	**1.23**	**69**	*e*P	**Pn**	**03 31 04.5**	**+0.2**
PACA				*e*S	**Sn**	**03 31 20.4**	**+0.5**
PACA				IAML		03 31 24.1	
	comp=Z,2µm,0.2s						
PACA	**Pacayal**	**1.23**	**69**	⇓P	**Pn**	**03 31 04.4**	**+0.2**
LCY	**Lacayo**	**1.24**	**71**	*e*P	**Pn**	**03 31 04.5**	**+0.1**
RANC	**El Ranchito**	**1.25**	**71**	S	**Sn**	**03 31 18.8**	**-1.5**
RANC	**El Ranchito**	**1.25**	**71**	⇓P	**Pn**	**03 31 02.7**	**-1.8**
BLLM	**Bellamira**	**1.30**	**71**	*e*P	**Pn**	**03 31 05.2**	**+0.1**
MTO3	**Montecristo**	**1.37**	**6**	*e*P	**Pn**	**03 31 06.0**	**-0.2**
MTO3	**Montecristo**	**1.37**	**6**	*i* P	**Pn**	**03 31 06.2**	**-0.1**
MTO3	**Montecristo**	**1.37**	**6**	S	**Sn**	**03 31 23.2**	**-0.1**
MTO3	**Montecristo**	**1.37**	**6**	P	**Pn**	**03 31 06.2**	**-0.1**
ESQI	**Esquipulas**	**1.53**	**6**	*e*P	**Pn**	**03 31 08.5**	**+0.2**
LCND	**La Caada**	**1.60**	**80**	*e*P	**Pn**	**03 31 09.2**	**+0.1**
LCND				IAML		03 31 32.8	
	comp=Z,83nm,0.4s						
LCND	**La Caada**	**1.60**	**80**	⇓P	**Pn**	**03 31 09.5**	**+0.3**
CNCH	**Conchagua**	**1.65**	**81**	*e*P	**Pn**	**03 31 09.9**	**-0.1**
CNCH				*e*S	**Sn**	**03 31 31.5**	**+1.5**
CNCH	**Conchagua**	**1.65**	**81**	P	**Pn**	**03 31 10.1**	**+0.1**
CNCH	**Conchagua**	**1.65**	**81**	S	**Sn**	**03 31 30.6**	**+0.6**

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*SJA **02** 03:39:23.4±0.7, 21°.46S×69°.04W, h97^{km}±3^{km}, ML3.5, MW3.6*

*GUC **02** 03:39:24.7±0.8, 21°.46S×68°.97W, h92^{km}±4^{km}, ML3.6*

ISC 02 03:39:25.7±1.3**, 21°.45S**±0°.03×**69°.08W**±0°.05**, h88**^{km}±8^{km}**, n28, σ1^{s}.59**/49**, 3C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.38**	**203**	*e*P	**Pn**	**03 39 39.2**	**-0.4**
PB09				*i* S	**Sn**	**03 39 50.2**	**+0.3**
PB09				IAML		03 39 52.8	
	comp=E,2µm,0.4s						
PB09	**IPOC Station P**	**0.38**	**203**	*e*P	**Pn**	**03 39 39.1**	**-0.4**
PB09				*e*S	**Sn**	**03 39 50.4**	**+0.6**
PB09				IAML		03 39 51.5	
	comp=Z,2µm,0.4s						
PB01	**IPOC Station P**	**0.55**	**317**	⇑*i*P	**Pn**	**03 39 40.0**	**-0.8**
PB01				*i* S	**Sn**	**03 39 52.4**	**+0.4**
PB01				IAML		03 39 53.4	
	comp=E,6µm,0.2s						
PB01	**IPOC Station P**	**0.55**	**317**	*e*P	**Pn**	**03 39 40.0**	**-0.8**
PB01				*e*S	**Sn**	**03 39 53.1**	**+1.1**
PB01				IAML		03 39 53.2	
	comp=Z,2µm,0.2s						
PB03	**IPOC Station P**	**0.86**	**226**	⇑*i*P	**Pn**	**03 39 43.7**	**-0.2**
PB03				*i* S	**Sn**	**03 39 58.8**	**+1.3**
PB03				IAML		03 39 59.4	
	comp=E,3µm,0.2s						
PB03	**IPOC Station P**	**0.86**	**226**	*e*P	**Pn**	**03 39 43.0**	**-0.9**
PB03				*e*S	**Sn**	**03 39 58.2**	**+0.7**
PB03				IAML		03 39 59.5	
	comp=Z,2µm,0.2s						
PB08	**IPOC Station P**	**1.30**	**357**	*e*P	**Pn**	**03 39 48.3**	**-1.0**
PB08				*i* S	**Sn**	**03 40 07.6**	**+0.6**
PB08				IAML		03 40 10.1	
	comp=E,526nm,0.2s						
PB08	**IPOC Station P**	**1.30**	**357**	*e*P	**Pn**	**03 39 48.6**	**-0.7**
PB08				*e*S	**Sn**	**03 40 08.0**	**+1.1**
PB08				IAML		03 40 08.7	
	comp=Z,318nm,0.7s						
PB06	**IPOC Station P**	**1.33**	**200**	⇑*i*P	**Pn**	**03 39 49.1**	**-0.4**
PB06				*i* S	**Sn**	**03 40 07.2**	**-0.1**
PB06				IAML		03 40 09.7	
	comp=E,2µm,0.2s						
PB06	**IPOC Station P**	**1.33**	**200**	*e*P	**Pn**	**03 39 49.1**	**-0.4**
PB06				*e*S	**Sn**	**03 40 08.7**	**+1.4**
PB06				IAML		03 40 09.5	
	comp=Z,841nm,0.6s						
TA01	**Diego Aracena**	**1.35**	**310**	*e*P	**Pn**	**03 39 49.1**	**-0.4**
TA01				*i* S	**Sn**	**03 40 08.2**	**+0.8**
TA01				IAML		03 40 11.7	
	comp=E,1µm,0.2s						
TA01	**Diego Aracena**	**1.35**	**310**	*e*P	**Pn**	**03 39 49.0**	**-0.4**
TA01				*e*S	**Sn**	**03 40 09.1**	**+1.6**
TA01				IAML		03 40 14.8	
	comp=Z,524nm,0.4s						
TA02	**Huaiquique**	**1.53**	**320**	*e*P	**Pn**	**03 39 50.8**	**-0.9**
TA02				*e*S	**Sn**	**03 40 11.5**	**+0.1**
TA02	**Huaiquique**	**1.53**	**320**	*e*P	**Pn**	**03 39 51.3**	**-0.4**
TA02				*e*S	**Sn**	**03 40 15.9**	**+4.5**
TA02				IAML		03 40 21.5	
	comp=Z,911nm,0.1s						
AF01	**San Pedro de A**	**1.71**	**151**	*e*P	**Pn**	**03 39 53.2**	**-1.2**
AF01				*e*S	**Sn**	**03 40 18.2**	**+2.1**
AF01				IAML		03 40 37.8	
	comp=Z,245nm,0.3s						
PB05	**IPOC Station P**	**1.74**	**216**	⇓*i*P	**Pn**	**03 39 54.2**	**-0.4**
PB05				*e*S	**Sn**	**03 40 16.4**	**-0.1**
PB05				IAML		03 40 22.5	
	comp=E,570nm,0.5s						
PB05	**IPOC Station P**	**1.74**	**216**	*e*P	**Pn**	**03 39 54.2**	**-0.4**
PB05				*e*S	**Sn**	**03 40 10.5**	**-6.1**

PB05				IAML		03 40 26.6	
	comp=Z,303nm,0.4s						
PB11	IPOC Station P	1.76	342	⇓iP	Pn	03 39 53.6	-1.3
PB11				eS	Sn	03 40 16.8	-0.3
PB11				IAML		03 40 20.6	
	comp=N,1µm,0.2s						
PB11	IPOC Station P	1.76	342	eP	Pn	03 39 53.7	-1.3
PB11				eS	Sn	03 40 17.7	+0.6
PB11				IAML		03 40 23.4	
	comp=Z,440nm,0.2s						
GO01	Chusmiza	1.77	357	⇓iP	Pn	03 39 54.4	-1.0
GO01				eS	Sn	03 40 17.2	-0.6
GO01				IAML		03 40 23.4	
	comp=N,1µm,0.1s						
GO01	Chusmiza	1.77	357	eP	Pn	03 39 54.7	-0.7
PB10	IPOC Station P	2.47	213	eP	Pn	03 40 05.3	+1.3
PB10				eS	Sn	03 40 44.3	+11
PB10				IAML		03 40 45.6	
	comp=Z,138nm,0.3s						
PB16	IPOC Station P	3.12	353	eP	Pn	03 40 12.7	-0.7
PB14	IPOC Station P	3.39	201	eP	Pn	03 40 16.7	-0.1
PB14				eS	Sn	03 40 59.8	+3.6
PB14				IAML		03 41 07.6	
	comp=Z,114nm,0.4s						
YJA	Yavi	3.39	103	eP	Pn	03 40 17.0	+0.1
AC01	Pan de Azucar	4.88	196	eP	Pn	03 40 33.8	-2.9
AC01				eS	Sn	03 41 42.5	+11
AC01				IAML		03 42 05.2	
	comp=Z,42nm,1.1s						
LPAZ	La Paz	5.21	10	eP	Pn	03 40 41.2	-0.6
LPAZ				eS	Sn	03 41 19.4	-22
AC02	Maricunga	5.36	180	eP	Pn	03 40 41.7	-2.1

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*SNET **02** 03:45:15.8±0.9, 13.°05N×89.°47W, h35^{km}, ML3.7*
*CATAC **02** 03:45:15.3±0.5, 13°N±3°×8°9W±°, h25^{km}±3^{km}, M3.7/31, MLv3.7/31, Error ellipse: s-maj=6.4km s-min=3.9km az=33.2, confirmed*
*GCG **02** 03:45:16.8±0.9, 13.°10N×89.°57W, h34^{km}±8^{km}, MD4.1, ML3.5, MW3.0*
ISC 02 03:45:16.4±1.5**, 13.°05N**±0.°05×**89.°44W**±0.°03**, h34**^{km}±2^{km}**, n102,** σ0.^{s}59/114**, 23C-6D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.45	15	eP	Pn	03 45 26.4	-0.1
LALI				eS	Sn	03 45 34.1	+0.8
LALI	Alcalda de L	0.45	15	iP	Pn	03 45 26.6	0.0
LALI				IAML		03 45 35.4	
	comp=N,984nm,0.3s						
LALI	Alcalda de L	0.45	15	S	Sn	03 45 33.8	+0.5
LALI	Alcalda de L	0.45	15	⇑P	Pn	03 45 26.6	0.0
JAYA	Jayaque - finc	0.60	359	eP	Pb	03 45 28.2	-0.6
JAYA				eS	Sb	03 45 36.8	-0.4
JAYA	Jayaque - finc	0.60	359	iP	Pb	03 45 28.2	-0.6
JAYA				eS	Sb	03 45 37.2	0.0
JAYA	Jayaque - finc	0.60	359	⇑P	Pb	03 45 28.2	-0.6
PANCS	Alcalda de	0.61	25	eP	Pb	03 45 28.5	-0.4
PANCS	Alcalda de	0.61	25	P	Pn	03 45 28.4	-0.3
PANCS	Alcalda de	0.61	25	S	Sb	03 45 37.8	+0.4
ITCA	Escuela Especi	0.64	14	eP	Pb	03 45 28.9	-0.5
ITCA				eS	Sb	03 45 38.5	+0.3
ITCA	Escuela Especi	0.64	14	⇑P	Pb	03 45 28.8	-0.5
LOMA	Loma Larga	0.64	24	eP	Pb	03 45 29.1	-0.4
LOMA				eS	Sb	03 45 39.2	+0.9
LOMA	Loma Larga	0.64	24	⇑P	Pb	03 45 29.0	-0.4
PMON	Piamonte	0.67	11	eP	Pn	03 45 29.3	-0.3
PMON	Piamonte	0.67	11	⇑P	Pn	03 45 29.2	-0.3
LFRS	El Faro	0.68	33	eP	Pb	03 45 29.6	-0.4
SEMO	Seminario San	0.68	18	P	Pn	03 45 29.2	-0.5
UTEC	Universidad Te	0.68	20	eP	Pn	03 45 29.5	-0.2
UTEC	Universidad Te	0.68	20	S	Sb	03 45 40.3	+0.9
UTEC	Universidad Te	0.68	20	⇑P	Pn	03 45 29.6	-0.2
UEES	Universidad Ev	0.69	17	eP	Pn	03 45 29.6	-0.2
UEES	Universidad Ev	0.69	17	S	Sb	03 45 40.1	+0.6
UEES	Universidad Ev	0.69	17	⇑P	Pn	03 45 29.6	-0.2
BOQS	Boqueron	0.69	13	eP	Pb	03 45 29.9	-0.5
BOQS				eS	Sb	03 45 40.0	+0.1
UESS	Universidad de	0.70	19	eP	Pn	03 45 29.8	-0.2
IGN	Direccin Gen	0.71	22	eP	Pn	03 45 29.9	-0.2
IGN	Direccin Gen	0.71	22	S	Sb	03 45 41.2	+1.1
IGN	Direccin Gen	0.71	22	⇑P	Pn	03 45 29.9	-0.2
PIC2	El Picacho	0.71	15	eP	Pb	03 45 30.1	-0.6
UDBS	Universidad Do	0.71	23	eP	Pb	03 45 30.2	-0.4
UDBS	Universidad Do	0.71	23	S	Sb	03 45 41.3	+1.1
UDBS	Universidad Do	0.71	23	⇑P	Pb	03 45 30.1	-0.5
CEDA	San Andres	0.75	3	eP	Pn	03 45 30.3	-0.4
CEDA	San Andres	0.75	3	S	Sb	03 45 41.4	+0.4
CEDA	San Andres	0.75	3	⇑P	Pn	03 45 30.3	-0.4
LFU	La Fuente	0.76	25	eP	Pb	03 45 31.1	-0.3
LBRS	Las Brisas	0.78	30	eP	Pb	03 45 31.4	-0.4
COEG	Centro de Oper	0.78	44	eP	Pn	03 45 30.9	-0.3
COEG	Centro de Oper	0.78	44	S	Sb	03 45 42.6	+0.4
COEG	Centro de Oper	0.78	44	P	Pn	03 45 30.8	-0.3
CEVE	Cerro Verde	0.79	347	eP	Pn	03 45 30.8	-0.6
CEVE				eS	Sb	03 45 42.9	+0.4
CEVE	Cerro Verde	0.79	347	⇑P	Pn	03 45 30.9	-0.5
QUEZ	Alcaldia de Qu	0.79	12	eP	Pn	03 45 31.0	-0.3
SBLS	San Blas	0.80	347	eP	Pn	03 45 31.0	-0.6
TECO	Alcaldia de Te	0.80	53	eP	Pn	03 45 30.8	-0.5
TECO				eS	Sn	03 45 42.2	+0.1
TECO	Alcaldia de Te	0.80	53	⇑P	Pn	03 45 30.9	-0.5
SNVI	San Vicente	0.81	47	eP	Pn	03 45 31.4	-0.2
PAVA	Las Pavas	0.82	37	eP	Pb	03 45 31.8	-0.5
PAVA	Las Pavas	0.82	37	S	Sb	03 45 43.7	+0.5
PAVA	Las Pavas	0.82	37	⇑P	Pb	03 45 31.8	-0.5
SNJE	San Jose	0.82	349	eP	Pn	03 45 31.4	-0.5
UESV	Universidad de	0.86	48	eP	Pn	03 45 31.9	-0.3
UESV	Universidad de	0.86	48	S	Sn	03 45 43.9	+0.3
UESV	Universidad de	0.86	48	⇓P	Pn	03 45 32.0	-0.2
ALJI	Alcalda de J	0.89	72	eP	Pn	03 45 32.2	-0.3
ALJI	Alcalda de J	0.89	72	S	Sn	03 45 44.7	+0.4
ALJI	Alcalda de J	0.89	72	⇑P	Pn	03 45 32.3	-0.3
NUBE	Las Nubes	0.91	339	eP	Pn	03 45 31.9	-1.0
NUBE	Las Nubes	0.91	339	iP	Pn	03 45 32.1	-0.8
NUBE				iS	Sn	03 45 44.3	-0.5
NUBE	Las Nubes	0.91	339	⇑P	Pn	03 45 32.1	-0.8
UNIC	Universidad Ca	0.93	354	eP	Pn	03 45 32.9	-0.3
UNIC	Universidad Ca	0.93	354	S	Sb	03 45 46.7	+0.4
UNIC	Universidad Ca	0.93	354	⇑P	Pn	03 45 32.9	-0.3
SCLA	Alcaldia de Sa	0.95	47	eP	Pn	03 45 33.5	+0.1
SCLA				eS	Sb	03 45 46.8	0.0
SCLA	Alcaldia de Sa	0.95	47	⇑P	Pn	03 45 33.5	+0.1
LOAL	Lomas de Alarc	0.99	341	S	Sb	03 45 48.3	+0.1
LOAL	Lomas de Alarc	0.99	341	⇑P	Pn	03 45 33.7	-0.4
TECA	Tecapa	1.01	64	eP	Pn	03 45 34.1	-0.4
SLOZ	Alcaldia de Sa	1.02	341	eP	Pn	03 45 33.8	-0.6
SLOZ	Alcaldia de Sa	1.02	341	⇓P	Pn	03 45 33.8	-0.6
PACA	Pacayal	1.16	69	eP	Pn	03 45 36.9	+0.4
PACA				eS	Sn	03 45 52.1	+0.8
PACA	Pacayal	1.16	69	⇑P	Pn	03 45 37.0	+0.6
LCY	Lacayo	1.18	72	eP	Pn	03 45 37.0	+0.3
RANC	El Ranchito	1.18	71	S	Sn	03 45 51.1	-0.7
RANC	El Ranchito	1.18	71	⇓P	Pn	03 45 35.0	-1.8
VSM	San Miguel	1.20	72	eP	Pn	03 45 37.4	+0.4
BLLM	Bellamira	1.23	72	eP	Pn	03 45 37.8	+0.4
MTO3	Montecristo	1.34	3	eP	Pn	03 45 38.8	-0.2
MTO3	Montecristo	1.34	3	iP	Pn	03 45 38.8	-0.2
MTO3	Montecristo	1.34	3	⇑P	Pn	03 45 38.8	-0.2
CAHU	Cacacuatique	1.39	59	eP	Pn	03 45 39.6	0.0
ESQI	Esquipulas	1.50	4	eP	Pn	03 45 40.6	-0.4
ESQI	Esquipulas	1.50	4	⇑P	Pn	03 45 41.3	+0.2
LCND	La Caada	1.53	80	eP	Pn	03 45 41.7	+0.3
LCND	La Caada	1.53	80	⇓P	Pn	03 45 41.7	+0.3
CNCH	Conchagua	1.58	82	eP	Pn	03 45 42.1	0.0
CNCH	Conchagua	1.58	82	⇓P	Pn	03 45 42.2	0.0
FG16	Alotenango, Sa	1.60	319	eP	Pb	03 45 46.8	+1.4
FG16				IAML		03 46 18.5	
	comp=E,3µm,0.2s						
FG8	Yepocapa, Chim	1.62	318	eP	Pb	03 45 47.8	+2.0
CSGN	Cosiguina Volc	1.84	92	P	Pn	03 45 45.8	+0.1
POTN	Potosi Cosigui	1.89	91	P	Pn	03 45 46.1	-0.2
ESSG	Sabana Grande	1.89	315	eP	Pn	03 45 45.3	-1.1
ESSG				e		03 45 45.3	
ESSG				IAML		03 46 09.3	
	comp=E,348nm,0.2s						
STG8	El Palmar, Qui	2.32	307	iP	Pb	03 45 56.6	-1.1
STG8				iS	Sb	03 46 27.6	+1.5
STG8				IAML		03 46 30.8	
	comp=E,386nm,0.2s						
TGUH	Tegucigalpa,Un	2.33	64	⇑P	Pn	03 45 52.4	-0.1
QUEN	Al S del Volca	2.57	100	P	Pn	03 45 55.8	+0.1
CNGN	Cerro Negro	2.73	101	⇑P	Pn	03 45 57.2	-0.8
MOMN	Momotombo	2.90	102	P	Pn	03 46 00.8	+0.5
COPN	Copaltepe	2.91	107	⇓P	Pn	03 46 00.5	0.0
RCVN	Varillal2	3.21	80	P	Pn	03 46 04.6	+0.1
MATN	Matagalpa	3.43	92	P	Pn	03 46 06.2	-1.5
BOAB	BOACO BROADBAN	3.73	99	P	Pn	03 46 10.7	-1.0

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*IDC **02** 03:47:43.8±1.6, 6.°63S×154.°07E, h0^{km}, mb3.8/8, mbtmp3.9/9, ML2.2/1, Error ellipse: s-maj=55.8km s-min=22.0km az=117.0*
ISC 02 03:47:51.1±1.3**, 6.°7S**±0.°2×**153.°9E**±0.°2**, h48**^{km}**, n11,** σ**1.^{s}10**/12**, mb3.7**/9**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.16	247	Pn	Pn	03 49 32.2	-1.2
	2.0nm,0.3s,baz=95,slow=5.9,SNR=4.5						
PMG				Sn	Sn	03 50 53.8	+0.4
	1.3nm,0.3s,baz=165,slow=19,SNR=2.5						
	24nm,0.7s						
WRA	Warramunga Arr	23.08	233	P	P	03 52 53.3	+0.4
	0.9nm,0.7s,baz=65,slow=8.8,SNR=2.3						
	0.9nm,0.7s						
ASAR	Alice Springs	25.55	226	P	P	03 53 16.4	+0.6
	1.6nm,0.8s,baz=57,slow=8.4,SNR=11						
	1.6nm,0.8s						
STKA	Stephens Creek	27.57	203	P	P	03 53 33.9	+0.2
	0.5nm,0.3s,baz=22,slow=16,SNR=1.4						
	0.5nm,0.3s						
SONM	Songino Array	68.45	328	P	P	03 58 48.5	+0.2
	0.6nm,0.6s,baz=157,slow=8.0,SNR=3.6						
	0.6nm,0.6s						
MKAR	Makanchi Array	82.41	319	P	P	04 00 09.5	+1.1
	0.5nm,0.8s,baz=101,slow=7.5,SNR=3.7						
	0.5nm,0.8s						
ZALV	Zalesovo Beam	83.28	326	P	P	04 00 12.6	0.0
	0.5nm,0.3s,baz=108,slow=4.7,SNR=2.6						
	0.5nm,0.3s						
ILAR	Eielson Array	83.49	22	P	P	04 00 12.3	-1.2
	0.4nm,0.6s,baz=247,slow=5.1,SNR=8.1						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	85.91	322	P	P	04 00 25.5	-0.4
	0.4nm,0.4s,baz=101,slow=4.5,SNR=2.3						
	0.4nm,0.4s						
BVAR	Borovoye Array	91.36	323	P	P	04 00 54.2	+2.4
	0.6nm,0.5s,baz=129,slow=4.6,SNR=2.5						
TORD	Torodi Ar. Bea	151.84	285	PKPbc	PKPbc	04 07 42.0	+0.2
	1.8nm,0.6s,baz=56,slow=3.1,SNR=1.4						

DJA 02 03:53:49.7±0.8**, 10°S**±7°×**11°9E**±°**, h17**^{km}±6^{km}**, M3.9**/8**, mb4.3**/1**, MLv3.7**/8**, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.28	45	P	Pb	03 53 57.1	+0.8
WSI	Waingapu	1.10	81	P	Pg	03 54 11.4	+0.3
BASI	Baing, Sumba	1.42	106	P	Pn	03 54 13.5	-1.2
PLAI	Plampang	1.72	306	P	Pn	03 54 18.4	-0.5
TWSI	Taliwang, Sumb	2.53	295	P	Pn	03 54 30.5	+0.5
EDFI	Ende, Flores	2.69	67	P	Pn	03 54 32.9	+0.5
BSSI	Bau Bau, Buton	3.89	19	P	Pn	03 54 48.4	-0.4
JAGI	Jajag, Banyuwa	5.16	285	P	Pn	03 55 05.5	-0.7

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*NAO **02** 04:18:00.0, 38.°40N×23.°54E, h10^{km}, mb3.8*
*TIR **02** 04:18:23.4, 40.°42N×20.°76E, h14^{km}, Ml3.5/9*
*BEO **02** 04:18:23.0±0.6, 40.°28N×20.°82E, h0^{km}, ML3.3/5*
*THE **02** 04:18:24.0, 40.°4N±1.°0×2°1E±°, h0^{km}±2^{km}, M3.1/11, MLh3.1/11*
*ATH **02** 04:18:24.1, 40.°49N×20.°76E, h3^{km}±1^{km}, ML3.3/14, Manual Solution by M.Papanikolaou First location: 2019/06/02 04:19:26, This location: 2020/10/04 22:07:00 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 1 km*
*IDC **02** 04:18:24.2±1.3, 40.°42N×20.°69E, h0^{km}, mb3.4/6, mbtmp3.4/11, ML3.1/5, MS2.8/1, Error ellipse: s-maj=19.1km s-min=15.0km az=164.0*
*PDG **02** 04:18:25.5±0.8, 40.°44N×20.°87E, h11^{km}±1^{km}, ML3.4/11, Error ellipse: s-maj=0.9km s-min=1.6km az=0.0*
*SKO **02** 04:18:26.6, 40.°42N×20.°84E, h6^{km}, ML3.4*
ISC 02 04:18:24.2±1.0**, 40.°42N**±0.°01×**20.°75E**±0.°02**, h3**^{km}±8^{km}**, n161,** σ**1.^{s}14**/212**, mb3.2**/4**, 17C-10D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.21	8	Pg	Pg	04 18 28.1	-0.2
KBN				Sg	Sg	04 18 31.1	0.0
KBN				AML	AML	04 18 32.2	
	76nm,0.5s						
NEST	Nestorio	0.23	90	Pg	Pg	04 18 29.1	+0.5
NEST				Sg	Sg	04 18 32.1	+0.5
NEST				AML	AML	04 18 35.4	
	58nm,0.3s						
NEST	Nestorio	0.23	90	P	Pg	04 18 29.4	+0.7
NEST				S	Sg	04 18 33.2	+1.6
NEST	Nestorio	0.23	90	P	Pg	04 18 29.4	+0.7
NEST				S	Sg	04 18 32.1	+0.5
LSK	Leskovik	0.29	203	Pg	Pg	04 18 29.5	-0.3
LSK				Sg	Sg	04 18 34.7	+1.1
LSK				AML	AML	04 18 47.6	
	27nm,0.6s						
LSK	Leskovik	0.29	203	P	Pg	04 18 29.3	-0.5
PENT	Pentalofos	0.37	126	P	Pg	04 18 31.5	+0.1
PENT				S	Sb	04 18 38.1	-1.7
PENT	Pentalofos	0.37	126	P	Pg	04 18 31.5	+0.1
PENT				S	Sb	04 18 37.9	-1.8
KPRO	Kipourio	0.66	134	P	Pg	04 18 36.6	-0.3
KPRO				S	Sb	04 18 47.1	-0.9
KPRO	Kipourio	0.66	134	P	Pg	04 18 36.7	-0.2
KPRO				S	Sb	04 18 47.4	-0.6
OHR	Ohrid	0.70	3	P	Pg	04 18 38.1	+0.5
OHR				S	Sb	04 18 48.7	-0.4
OHR	Ohrid	0.70	3	⇓iPg	Pg	04 18 37.9	+0.3
OHR				iSg	Sb	04 18 49.2	0.0
OHR				eLg	Lg	04 18 49.4	
	comp=E,2µm,0.6s						
OHR				eLg	Lg	04 18 51.8	
	comp=N,1µm,0.4s						
OHR	Ohrid	0.70	3	ePg	Pg	04 18 38.1	+0.5
OHR				eSg	Sb	04 18 48.9	-0.2
JAN	Janina	0.76	174	P	Pg	04 18 38.6	-0.3
JAN				S	Sg	04 18 49.6	+0.9
SRN	Sarande	0.79	227	Pn	Pg	04 18 39.0	-0.3
SRN				Sn	Sb	04 18 51.8	+0.2
SRN				AML	AML	04 18 55.5	
	comp=N,1.5nm,0.5s						
KZN	Kozani	0.79	98	P	Pg	04 18 39.0	-0.3
KZN				S	Sb	04 18 52.6	+0.8
KZN	Kozani	0.79	98	P	Pg	04 18 39.7	+0.3
KZN				S	Sb	04 18 50.5	-1.3
IGT	Igoumenitsa	0.94	200	Pn	Pb	04 18 43.3	+0.1
IGT				Sn	Sb	04 18 56.1	+0.1
IGT	Igoumenitsa	0.94	200	P	Pg	04 18 41.9	-0.3
IGT	Igoumenitsa	0.94	200	iPg	Pg	04 18 42.5	+0.2
IGT				iSg	Sn	04 18 59.7	+1.4
IGT	Igoumenitsa	0.94	200	P	Pg	04 18 42.7	+0.4
KEK	Kerkira	1.01	226	P	Pb	04 18 44.9	+0.4
KTI	Kastanea	1.04	91	P	Pb	04 18 44.4	-0.6
TETR	Tetrakomo, Epi	1.14	159	P	Pb	04 18 46.5	-0.2
TIR	Tirane	1.15	324	Pn	Pg	04 18 45.9	-0.3
TIR				Sn	Sb	04 19 02.7	+0.6
TIR				AML	AML	04 19 15.7	
	comp=N,1.5nm,0.9s						
TIR	Tirane	1.15	324	⇑P	Pg	04 18 46.2	0.0
TIR	Tirane	1.15	324	⇓iPg	Pg	04 18 46.1	-0.2
TIR				iSg	Sn	04 19 08.4	+4.9
TIR	Tirane	1.15	324	ePg	Pg	04 18 45.9	-0.3
PHP	Peshkopia	1.29	350	Pn	Pg	04 18 47.2	-1.8
PHP				Sn	Sb	04 19 06.3	+0.1
PHP				AML	AML	04 19 18.8	
	comp=N,2.7nm,0.8s						
THL	Klokotos Trika	1.29	131	P	Pg	04 18 47.8	-1.2
TYRN	Tyrnavos	1.34	121	P	Pn	04 18 49.3	-0.6
TYRN	Tyrnavos	1.34	121	P	Pn	04 18 49.0	-0.8
TSLK	Tsoukalades, L	1.59	183	P	Pb	04 18 54.4	+0.1
LKD2	Lefkada island	1.63	183	Pn	Pg	04 18 56.5	+1.1
LKD2				Sn	Sg	04 19 17.4	+0.9
LKD2				AML	AML	04 19 26.8	
	comp=N,1.2nm,0.4s						
LKD2	Lefkada island	1.63	183	P	Pb	04 18 55.0	+0.1
SKO	Skopje	1.64	18	⇓iPg	Pg	04 18 55.5	-0.1
SKO				iSg	Sg	04 19 17.5	+0.6
VAY	Valandovo	1.65	56	P	Pn	04 18 54.2	+0.1
VAY	Valandovo	1.65	56	⇓iPg	Pb	04 18 54.5	-0.8
VAY				iSg	Sg	04 19 18.5	+1.3
VAY				eLg	Lg	04 19 23.2	
	comp=N,353nm,0.8s						
VAY				eLg	Lg	04 19 26.8	
	comp=E,317nm,0.6s						
VAY	Valandovo	1.65	56	ePn	Pn	04 18 54.3	+0.1
VAY				eSn	Sg	04 19 17.3	+0.1
NYDR	Nydri-Lefkada	1.70	181	P	Pn	04 18 55.3	+0.5
THE	Thessaloniki	1.70	82	Pn	Pb	04 18 55.3	-0.9
THE				Sn	Sb	04 19 17.6	-0.4
THE	Thessaloniki	1.70	82	iPg	Pb	04 18 55.3	-0.9
THE				iSg	Sg	04 19 18.3	-0.6
EVR	Evrytania	1.71	151	P	Pn	04 18 55.1	+0.1
PUK	Puka	1.75	339	Pn	Pg	04 18 57.4	-0.4
PUK				Sn	Sg	04 19 21.0	+0.5
PUK				AML	AML	04 19 26.6	
	comp=E,4.7nm,0.7s						
MAKR	Makrakomi, Fth	1.76	142	P	Pn	04 18 56.0	+0.3
KNT	Kendrikon	1.79	65	P	Pn	04 18 55.9	-0.2
KNT	Kendrikon	1.79	65	iPn	Pn	04 18 56.1	0.0
KNT				iSn	Sg	04 19 23.8	+2.0
KNT	Kendrikon	1.79	65	P	Pn	04 18 55.7	-0.4
HORT	Hortiatis	1.80	83	P	Pn	04 18 55.7	-0.6
HORT	Hortiatis	1.80	83	P	Pn	04 18 55.1	-1.2
AGG	Agios Georgios	1.85	138	P	Pn	04 18 56.8	-0.1
ULC	Ulcinj	1.92	324	Pn	Pb	04 18 59.4	-0.6
ULC	Ulcinj	1.92	324	⇓iPn	Pb	04 18 59.6	-0.3
ULC	Ulcinj	1.92	324	⇑iPn	Pb	04 18 59.3	-0.6
ULC				iSn	Sg	04 19 26.5	+0.6
FSK	Fiskardo	1.96	184	P	Pb	04 19 00.0	-0.6
BCI	Bajram Curri	2.02	345	Pn	Pg	04 19 02.4	-0.5
BCI				Sn	Sg	04 19 28.2	-0.7
BCI				AML	AML	04 19 38.2	
	comp=E,2.2nm,0.6s						
ANX	Ano Chora	2.03	153	P	Pb	04 19 00.7	-1.2
PLG	Polygyros	2.06	90	P	Pn	04 18 58.8	-1.0
PLG	Polygyros	2.06	90	P	Pn	04 19 00.1	+0.3
DRME	Dracevica, Mon	2.13	327	ePn	Pn	04 19 01.4	+0.7
DRME	Dracevica, Mon	2.13	327	⇑iPn	Pn	04 19 01.7	+1.0
DRME				iSn	Sg	04 19 31.6	-0.9
EFP	Efpalio	2.18	155	P	Pn	04 19 02.5	+1.1
VLS	Valsamata	2.24	183	P	Pn	04 19 02.5	+0.2
SERG	Sergoula	2.24	153	P	Pn	04 19 02.6	+0.3
SRS	Serrai	2.27	71	iPn	Pn	04 19 02.8	+0.1
SRS				iSn	Sb	04 19 32.4	-2.0
AXS	Araxos	2.27	167	P	Pn	04 19 03.1	+0.5
KKB	Krupnik	2.29	51	iPn	Pn	04 19 01.9	-1.1
KKB				iSn	Sn	04 19 31.9	+0.1
PAIG	Paliouri	2.30	101	P	Pn	04 19 02.8	-0.2
PDG	Podgorica	2.31	331	ePn	Pn	04 19 04.3	+1.1
PDG	Podgorica	2.31	331	⇑P	Pn	04 19 03.9	+0.7
PDG	Podgorica	2.31	331	ePn	Pn	04 19 04.6	+1.5
PDG				eSn	Sb	04 19 36.5	+1.1
PDG	Podgorica	2.31	331	⇑iPn	Pn	04 19 04.2	+1.1
PDG				iSn	Sb	04 19 35.6	+0.2
BUM	Brajici-Budva	2.34	324	Pn	Pn	04 19 04.8	+1.0
BUM	Brajici-Budva	2.34	324	⇓iPn	Pn	04 19 04.8	+1.0
BUM				iSn	Sb	04 19 36.8	+0.2
BOSS	Bosilegrad	2.45	31	ePn	Pn	04 19 05.5	+0.3
BARS	Barje	2.53	18	⇑iPn	Pn	04 19 06.2	0.0
BARS				iSn	Sn	04 19 37.9	+0.3
BARS	Barje	2.53	18	ePn	Pn	04 19 06.3	0.0
BARS				eSn	Sn	04 19 38.4	+0.8
CEME	Cevo	2.54	328	⇓iPn	Pn	04 19 06.7	+0.3
CEME				iSn	Sb	04 19 41.2	-0.9
BEY	Berane	2.54	346	Pn	Pn	04 19 08.2	+1.8
BEY	Berane	2.54	346	iPn	Pn	04 19 08.2	+1.8
IVA	Berane	2.54	346	⇑iPn	Pb	04 19 09.3	-1.2
IVA				iSn	Sn	04 19 39.1	+1.2
MMB	Musomishta	2.54	63	iPn	Pn	04 19 08.1	+1.7
MMB				iSn	Sn	04 19 37.4	-0.4
KOME	Kolasin	2.60	340	⇑iPn	Pn	04 19 09.0	+1.7
KOME				iSn	Sb	04 19 42.8	-1.2
HCY	Herceg Novi	2.65	321	ePn	Pn	04 19 07.4	-0.4
HCY	Herceg Novi	2.65	321	ePn	Pn	04 19 09.5	+1.7
HCY				iSn	Sb	04 19 44.2	-1.0
SELS	Selova	2.81	6	ePn	Pn	04 19 10.0	-0.2
VTS	Vitosha	2.88	39	ePn	Pn	04 19 11.8	+0.5
SJES	Sjenica	2.90	349	ePn	Pn	04 19 13.9	+2.4
SJES	Sjenica	2.90	349	ePn	Pn	04 19 12.4	+0.9
TREB	Trebinje	2.92	323	ePn	Pn	04 19 11.2	-0.4
BRY	Bratogost	2.98	327	Pn	Pn	04 19 11.4	-1.2
BRY	Bratogost	2.98	327	ePn	Pn	04 19 13.3	+0.7
BRY	Bratogost	2.98	327	⇓iPn	Pn	04 19 14.0	+1.4
BRY				iSn	Sn	04 19 51.6	+2.6
PLE	Pljevlja	3.08	341	⇑iPn	Pn	04 19 15.2	+1.2
PLE				iSn	Sn	04 19 54.1	+2.7
MATE	Matera	3.09	276	⇑P	Pb	04 19 17.9	-2.0
UPM	Unac-Piva	3.11	334	Pn	Pn	04 19 16.1	+1.7
UPM	Unac-Piva	3.11	334	ePn	Pn	04 19 16.1	+1.7
UPM	Unac-Piva	3.11	334	⇓iPn	Pn	04 19 15.9	+1.5
UPM				iSn	Sn	04 19 55.1	+3.0
ZAPS	Zavoj	3.18	26	ePn	Pn	04 19 15.5	+0.2
IVAS	Ivanjica	3.19	352	ePn	Pn	04 19 15.3	-0.1
BOVS	Bovan	3.29	12	⇑P	Pn	04 19 16.6	-0.2
BOVS	Bovan	3.29	12	ePn	Pn	04 19 16.5	-0.2
TIP	Timpagrande	3.31	249	⇑P	Pb	04 19 21.0	-2.8
STON	Ston	3.35	318	ePn	Pn	04 19 17.6	+0.1
STON	Ston	3.35	318	ePn	Pn	04 19 16.7	-0.8
RUDO	Rudo	3.36	343	ePn	Pn	04 19 18.3	+0.6
GRUS	Gruza	3.47	360	ePn	Pn	04 19 19.6	+0.4
ZAGS	Zajecar	3.57	18	ePn	Pn	04 19 20.4	-0.1
BBLS	Lazi&#263i	3.59	344	ePn	Pn	04 19 21.9	+1.0
DIVS	Divibare	3.72	352	ePn	Pn	04 19 24.1	+1.4
TRUS	Trudelj	3.81	356	ePn	Pn	04 19 25.2	+1.3
HAPS	Han Pijesak,Bl	3.90	341	ePn	Pn	04 19 26.1	+0.9
HAPS	Han Pijesak,Bl	3.90	341	ePn	Pn	04 19 26.3	+1.1
TEKS	Tekeris	4.23	348	ePn	Pn	04 19 30.1	+0.5
TEKS	Tekeris	4.23	348	ePn	Pn	04 19 30.6	+1.0
MDVR	Moldovita	4.42	9	⇑P	Pn	04 19 33.5	+1.3
HERR	Herculane	4.63	15	⇑P	Pn	04 19 37.0	+1.9
VRSS	Vrsac	4.72	5	ePn	Pn	04 19 35.2	-1.2
FRGS	Fruska Gora	4.79	352	ePn	Pn	04 19 37.9	+0.6
BLY	Banja Luka	5.07	330	ePn	Pn	04 19 43.8	+2.7
A050A	Klekovaca	5.12	324	ePn	Pn	04 19 42.6	+0.6
A051A	Mrakovica	5.39	330	ePn	Pn	04 19 45.8	+0.1
MORH	Mrgy, Hungar	6.00	346	⇑P	Pn	04 19 54.5	+0.6
IDI	Anoyia	6.08	146	Sn	Sn	04 21 08.2	+3.1
	comp=E,0.7nm,0.3s,baz=279,slow=24,SNR=1.5						
MLR	Muntele Rosu	6.34	35	Pn	Pn	04 20 02.4	+3.6
	comp=E,0.3nm,0.3s,baz=285,slow=15,SNR=3.6						
MLR				Sn	Sn	04 21 12.5	+0.8
	baz=294,slow=23						
	comp=E,1.0nm,0.5s						
MLR	Muntele Rosu	6.34	35	⇓P	Pn	04 20 02.0	+3.2
BOJS	Bojanci	6.49	323	ePn	Pn	04 19 59.5	-1.1
BOJS	Bojanci	6.49	323	ePn	Pn	04 20 00.3	-0.3
BOJS				eSn	Sn	04 21 14.4	-0.8
DRGR		6.53	12	⇑P	Pn	04 20 02.7	+1.4
CRES	Cresnjevec Ost	6.65	326	ePn	Pn	04 20 01.8	-1.1
GBRS	Gornja Briga	6.71	322	ePn	Pn	04 20 03.8	0.0
RIY	Rijeka	6.73	319	ePn	Pn	04 20 03.7	-0.2
VRI	Vrincioaia	6.98	37	⇑P	Pn	04 20 09.4	+1.9
CEY	Cerknica	7.05	321	ePn	Pn	04 20 07.6	-0.8
CEY	Cerknica	7.05	321	ePn	Pn	04 20 08.1	-0.3
CEY				eSn	Sn	04 21 27.8	-1.2
JAVS	Javornik	7.34	320	iPn	Pn	04 20 11.1	-1.3
VOJS	Vojsko	7.52	320	iPn	Pn	04 20 13.9	-1.0
OBKA	Obir	7.58	326	ePn	Pn	04 20 13.2	-2.5
OBKA	Obir	7.58	326	ePn	Pn	04 20 15.4	-0.2
	comp=E,1.3nm,0.4s						
ARSA	Arzberg	7.80	333	ePn	Pn	04 20 19.2	+0.5
	comp=E,0.7nm,0.4s						
KECS	Kecovo	8.07	359	ePN	Pn	04 20 22.9	+0.6
VYHS	Vyhne	8.19	351	ePN	Pn	04 20 26.3	+2.3
VYHS				eSN	Sn	04 21 57.4	+0.3
ABTA	Abfaltersbach	8.70	319	ePn	Pn	04 20 30.2	-0.8
	comp=E,1.5nm,0.6s						
LESA	Schwarzleotal	9.11	323	ePn	Pn	04 20 35.6	-1.0
	comp=E,0.9nm,0.5s						
WTTA	Wattenberg	9.49	319	ePn	Pn	04 20 41.8	-0.2
	comp=E,0.6nm,0.3s						
WATA	Walderalm	9.57	319	ePn	Pn	04 20 43.0	-0.1

	comp=E,3.7nm,0.6s						
SQTA	**Sankt Quirin**	9.68	318	*i* Pn	Pn	04 20 44.5	0.0
	comp=E,0.3nm,0.2s						
FETA	**Feichten**	9.80	316	*e*Pn	Pn	04 20 45.6	-0.6
	comp=E,1.9nm,0.6s						
GERES	**GERESS Array B**	9.81	332	Pn	Pn	04 20 47.4	+1.2
	baz=154,slow=13,SNR=8.0						
	comp=E,0.7nm,0.6s						
MOTA	**Moosalm**	9.82	318	*e*Pn	Pn	04 20 45.2	-1.2
	comp=E,5.2nm,0.9s						
BRTR	**Keskin Array B**	9.91	90	Pn	Pn	04 20 49.9	+2.2
	baz=278,slow=10.0,SNR=1.8						
	comp=E,0.2nm,0.4s						
DAVOX	**Davos/Dischmat**	10.12	313	Pn	Pn	04 20 50.8	+0.1
	comp=E,0.4nm,0.3s,baz=126,slow=17,SNR=5.6						
DAVOX				Sn	Sn	04 22 42.3	-2.6
	comp=E,0.2nm,0.3s,baz=6.3,slow=22,SNR=2.5						
	comp=E,1.2nm,0.5s						
MMAI	**Mount Meron Ar**	13.87	118	LR	LR	04 29 30.9	
	comp=E,39nm,19.9s,baz=334,slow=48						
ESDC	**Sonseca Array**	18.92	276	P	P	04 22 46.3	+0.1
	baz=87,slow=11,SNR=5.1						
	comp=E,0.6nm,0.9s						
HFS	**Hagfors**	20.23	350	P	P	04 22 59.8	-0.4
	comp=E,0.7nm,0.5s,baz=156,slow=15,SNR=4.4						
	comp=E,0.7nm,0.5s						
FINES	**FINESS Array B**	21.31	7	P	P	04 23 12.0	+0.1
	comp=E,2.5nm,0.8s,baz=187,slow=14,SNR=4.0						
	comp=E,2.5nm,0.8s						
NB2	**NORSAR Subarra**	21.47	347	P	P	04 23 12.9	-0.8
	comp=Z,3.6nm,1.2s,baz=156,slow=10						
NOA	**NORSAR Array B**	21.47	347	P	P	04 23 12.8	-0.9
	comp=Z,0.2nm,0.5s,baz=156,slow=10.0,SNR=4.1						
	comp=Z,0.2nm,0.5s						
EKA	**Eskdalemuir Ar**	21.75	321	P	P	04 23 15.6	-1.1
	comp=Z,0.7nm,0.7s,baz=113,slow=11,SNR=2.2						
	comp=Z,0.7nm,0.7s						
TORD	**Torodi Ar. Bea**	31.90	217	P	P	04 24 52.0	+0.9
	comp=Z,1.6nm,0.4s,baz=27,slow=8.8,SNR=1.7						
	comp=Z,1.6nm,0.4s						
MKAR	**Makanchi Array**	44.01	60	P	P	04 26 32.0	-1.0
	comp=Z,0.3nm,0.7s,baz=280,slow=8.3,SNR=2.3						
	comp=Z,0.3nm,0.7s						

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*IDC **02** 04:23:32.5±2.1, 19°.76N×109°.26W, h0km, mb3.3/4, mbtmp3.5/7, ML3.1/3, MS3.4/1, Error ellipse: s-maj=55.0km s-min=25.1km az=58.0*

*MEX **02** 04:23:42.0±0.5, 20°.56N×108°.47W, h10km±91km, MD4.2*

ISC 02 04:23:38.3±1.6**, 19°.9N**±0°.2×**108°.8W**±0°.1**, h30km, n19, σ2ˢ.08**/19**, mb3.5**/3**, Revilla Gigedo Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H06S1	**SOCORRO T**	2.34	240	T	T	04 26 12.1	
	SNR=2.9						
CJM	**Chamela**	3.58	96	*e*P	Pn	04 24 31.5	-0.4
CJM				*e*S	Sn	04 25 11.8	-1.4
SLBS	**Sierra La Lagu**	3.88	345	*e*P	Pn	04 24 32.2	-3.7
CIHU	**Emiliano Zapat**	3.91	99	*e*P	Pn	04 24 36.1	-0.2
CEGR	**Campo Tres**	4.71	96	*e*P	Pn	04 24 48.8	+1.3
CEGR				*e*S	Sn	04 25 42.0	+0.8
SOMAC	**Volcano de Col**	4.91	94	*e*P	Pn	04 24 50.8	+0.4
SOMAC				*e*S	Sn	04 25 43.7	-2.7
MNGA	**Volcan de Coli**	4.92	95	*e*P	Pn	04 24 51.4	+0.9
MNGA				*e*S	Sn	04 25 46.0	-0.6
INCO	**Volcan de Coli**	4.93	94	*e*P	Pn	04 24 53.6	+2.8
INCO				*e*S	Sn	04 25 43.9	-3.1
TXAR	**Lajitas Array**	10.46	26	Pn	Pn	04 26 10.4	+4.0
	baz=200,slow=13,SNR=10.0						
	1.5nm,1.0s						
CMIG	**Matias Romero**	13.52	100	Pn	Pn	04 26 49.9	+1.7
	0.1nm,0.3s,baz=250,slow=12,SNR=4.0						
	1.4nm,0.5s						
ANMO	**Albuquerque**	15.10	7	Pn	Pn	04 27 10.8	+1.1
	0.1nm,0.3s,baz=127,slow=5.8,SNR=3.1						
	0.5nm,0.5s						
NVAR	**Mina Array Bea**	20.18	338	P	P	04 28 09.8	-0.9
	1.3nm,0.9s,baz=161,slow=13,SNR=11						
	1.3nm,0.9s						
PDAR	**Pinedale Array**	22.77	359	P	P	04 28 38.3	-0.3
	0.2nm,0.5s,baz=222,slow=7.4,SNR=2.3						
	0.2nm,0.5s						
YKA	**Yellowknife Ar**	42.71	356	LR	LR	04 49 52.7	
	comp=Z,51nm,20.2s,baz=282,slow=37						
ILAR	**Eielson Array**	51.42	340	P	P	04 32 38.5	-1.7
	0.5nm,0.8s,baz=155,slow=7.4,SNR=5.7						
	0.5nm,0.8s						
LPAZ	**La Paz**	53.80	129	P	P	04 32 59.8	+0.6
	0.8nm,0.8s,baz=337,slow=5.3,SNR=3.8						
	0.8nm,0.8s						
H03N2	**Juan Fernandez**	60.26	151	T	T	05 39 14.6	
	baz=329,slow=78,SNR=7.2						
H03N1	**Juan Fernandez**	60.27	151	T	T	05 39 16.2	
	baz=329,slow=78,SNR=9.3						
H03N3	**Juan Fernandez**	60.27	151	T	T	05 39 15.1	
	baz=329,slow=78,SNR=7.8						

DNK 02 04:35:27.0±2.8**, 71°.75N×14°.84W, h18km**±72km**, ML1.4, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCO	**Scoresbysund**	2.64	245	*e*P	Pn	04 36 08.5	-0.1
DBG	**Daneborg**	3.02	331	*i* P	Pn	04 36 14.5	+0.7
DBG				*e*S	Sn	04 36 48.0	-1.4
DBG				IAML		04 36 55.1	
	comp=Z,2.8nm,0.4s						
DBG	**Daneborg**	3.02	331	*i* P	Pn	04 36 15.3	+1.5
DBG				*i* S	Sb	04 36 53.2	-3.3
DBG				IAML		04 36 54.8	
	comp=Z,5.1nm,0.5s						
DAG	**Danmarks Havn**	5.16	350	*i* S	Sn	04 37 38.5	-3.5
DAG				*e*	Pn	04 36 39.8	-3.3
	baz=178,slow=7.9						
DAG				*i* P	Pn	04 36 41.4	-1.7
DAG				IAML		04 37 40.8	
	comp=Z,1.7nm,0.3s						
DAG	**Danmarks Havn**	5.16	350	*i* P	Pn	04 36 40.6	-2.5
DAG				*i* S	Sn	04 37 41.1	-0.9
DAG				IAML		04 37 43.2	
	comp=Z,2.0nm,0.3s						
NOR	**Nord**	9.92	358	*e*		04 36 20.3	
NOR				*e*		04 37 00.7	

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*DJA **02** 04:37:14.1±0.5, 4°S±6°×13°8E±°, h10km, M4.0/6, mb4.2/1, MLv3.9/6*

*IDC **02** 04:37:22.8±3.5, 3°.14S×137°.85E, h40km±37km, mb3.8/4, mbtmp4.1/7, ML3.6/3, Error ellipse: s-maj=22.3km s-min=16.8km az=86.0*

ISC 02 04:37:21.5±0.8**, 3°.23S**±0°.07×**137°.78E**±0°.05**, h35km, n13, σ2ˢ.75**/17**, mb4.3**/3**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	**Sarmi**	1.54	37	P	Pn	04 37 42.8	-3.7
SRPI	**Serui, Papua**	2.05	311	P	Pn	04 37 50.9	-2.6
SRPI				S	Sn	04 38 19.6	+1.8
GENI	**Genyem**	2.46	75	P	Pn	04 37 57.1	-2.1
BAKI	**Biak**	2.62	320	P	Pn	04 38 00.3	-1.1
JAY	**Jayapura**	3.00	76	P	Pn	04 38 06.2	-0.5
	2.8nm,0.3s,baz=222,slow=11,SNR=9.1						
JAY				S	Sn	04 38 41.1	-0.3
	36nm,0.6s,baz=142,slow=19,SNR=4.3						
	12nm,0.5s						
JAY	**Jayapura**	3.00	76	P	Pn	04 38 04.4	-2.3
FAKI	**Fak Fak**	5.54	273	P	Pn	04 38 37.7	-3.8
WRA	**Warramunga Arr**	16.95	191	P	P	04 41 18.9	+1.1
	0.6nm,0.3s,baz=14,slow=12,SNR=8.4						
WRA				S	Sn	04 44 17.3	-6.3
	1.1nm,1.0s,baz=0.9,slow=20,SNR=1.5						
	4.5nm,0.7s						
FITZ	**Fitzroy Crossi**	18.98	218	P	Pn	04 41 42.1	+1.2
	0.1nm,0.3s,baz=33,slow=12,SNR=2.5						
FITZ				S	Sn	04 45 02.6	-10
	6.0nm,1.0s,baz=36,slow=20,SNR=2.1						
	6.8nm,1.0s						
ASAR	**Alice Springs**	20.66	190	P	P	04 42 00.5	+1.9
	7.6nm,0.7s,baz=12,slow=11,SNR=39						
ASAR				S	S	04 45 50.1	+2.5
	5.3nm,0.9s,baz=15,slow=23,SNR=8.1						
	7.6nm,0.7s						
CMAR	**Chiang Mai Arr**	43.90	301	P	P	04 45 25.6	+0.4
	1.7nm,0.3s,baz=132,slow=7.8,SNR=5.6						
	1.7nm,0.3s						
MKAR	**Makanchi Array**	69.63	323	P	P	04 48 27.6	+0.1
	0.3nm,0.7s,baz=111,slow=7.9,SNR=3.0						
	0.3nm,0.7s						
QSPA	**South Pole Qui**	86.72	180	P	P	04 50 04.0	+2.2
	1.9nm,1.0s,baz=336,slow=4.5,SNR=5.4						
	1.9nm,1.0s						

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*IDC **02** 04:45:07.0±1.1, 29°.92N×142°.86E, h0km, mb3.9/11, mbtmp3.9/13, ML3.2/3, MS2.2/1, Error ellipse: s-maj=34.5km s-min=21.1km az=74.0*

*JMA **02** 04:45:08.0±0.3, 30°.1N±0°.7×14°3E±°, h48km, MV3.9/13, NEAR TORISHIMA IS*

ISC 02 04:45:12.0±0.9**, 29°.96N**±0°.06×**142°.6E**±0°.2**, h35km, n22, σ1ˢ.93**/26**, mb3.9**/10**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	2.88	187	*e*P	Pn	04 45 55.2	-0.1
JCJ	**Chichijima**	2.88	187	Pn	Pn	04 45 53.2	-2.2
	2.7nm,0.3s,baz=306,slow=16,SNR=1.8						
JCJ				Sn	Sn	04 46 25.4	-3.4
	6.6nm,0.3s,baz=90,slow=20,SNR=2.1						
JHJ2	**Mitsune**	3.93	324	*e*P	Pn	04 46 09.2	-0.6
JMKN	**Mikurajimanish**	4.67	328	*e*S	Sn	04 47 11.9	-1.2
BSO1	**Boso 1**	4.87	344	*e*P	Pn	04 46 20.0	-2.2
BSO1				*e*S	Sn	04 47 15.1	-2.1
BSO3	**Boso 3**	5.14	341	*e*P	Pn	04 46 25.1	-1.1
BSO4	**Boso 4**	5.36	340	*e*P	Pn	04 46 28.3	-1.1
JOD2	**Odawara 2**	6.05	332	*e*P	Pn	04 46 37.7	-1.3
JOD2				*e*S	Sn	04 47 46.4	-0.7
JAG	**Ashikaga**	6.96	339	P	Pn	04 46 50.1	-1.3
JAG				*e*S	Sn	04 48 05.9	-3.5
MJAR	**Matsushiro Arr**	7.52	332	Pn	Pn	04 46 58.8	-0.4
	0.4nm,0.3s,baz=152,slow=11,SNR=23						
MJAR				Sn	Sn	04 48 22.0	-1.1
	0.1nm,0.3s,baz=157,slow=17,SNR=4.1						
	3.0nm,0.5s						
KSRS	**Korea Array**	14.30	305	Pn	P	04 48 34.8	-3.9
	0.1nm,0.3s,baz=113,slow=13,SNR=11						
KSRS				LR	LR	04 53 31.9	
	comp=Z,10nm,21.9s,baz=200,slow=35						
	1.4nm,0.6s						
KLR	**Kul'dur**	20.94	340	P	Pn	04 49 54.1	-0.1
	1.1nm,0.5s,baz=138,slow=7.2,SNR=5.0						
	1.1nm,0.5s						
SONM	**Songino Array**	32.96	313	P	P	04 51 44.1	+0.7
	1.0nm,0.7s,baz=110,slow=8.2,SNR=1.3						
	1.0nm,0.7s						
CMAR	**Chiang Mai Arr**	41.20	264	P	P	04 52 56.0	+2.5
	0.6nm,0.3s,baz=66,slow=9.0,SNR=1.6						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	48.97	308	P	P	04 53 57.1	+2.2
	0.5nm,0.5s,baz=90,slow=9.6,SNR=6.4						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	51.33	313	P	P	04 54 13.8	+1.1
	1.1nm,0.6s,baz=91,slow=7.1,SNR=9.3						
	1.1nm,0.6s						
BVAR	**Borovoye Array**	56.20	316	P	P	04 54 50.2	+1.9
	1.6nm,0.5s,baz=87,slow=6.9,SNR=7.2						
	1.6nm,0.5s						
STKA	**Stephens Creek**	61.51	181	P	P	04 55 25.7	+0.4
	1.4nm,0.6s,baz=320,slow=18,SNR=2.1						
	1.4nm,0.6s						
FINES	**FINESS Array B**	75.54	334	P	P	04 56 53.2	+0.6
	3.4nm,1.1s,baz=65,slow=4.7,SNR=8.4						
	3.4nm,1.1s						
KBZ	**Khabaz**	76.33	313	P	P	04 56 59.1	+1.8
	1.0nm,0.7s,baz=42,slow=6.5,SNR=3.7						
	1.0nm,0.7s						
NVAR	**Mina Array Bea**	78.48	52	P	P	04 57 09.7	-0.1
	0.3nm,0.8s,baz=292,slow=3.9,SNR=2.6						
	0.3nm,0.8s						
BRTR	**Keskin Array B**	84.32	313	P	P	04 57 42.6	+2.0
	0.5nm,0.7s,baz=126,slow=3.8,SNR=4.6						
	0.5nm,0.7s						

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*BEO **02** 04:51:52.2±0.6, 40°.40N×20°.87E, h0km, ML3.1/8*

*ATH **02** 04:51:53.2, 40°.50N×20°.80E, h11km±2km, ML3.0/13, Manual Solution by A.Fokaefs First location: 2019/06/02 04:52:55, This location: 2019/06/03 09:38:01 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

*TIR **02** 04:51:53.3, 40°.52N×20°.82E, h4km±1km, Ml3.3/10*

*PDG **02** 04:51:54.5±0.6, 40°.55N×20°.92E, h11km±1km, ML3.2/11, Error ellipse: s-maj=0.8km s-min=1.1km az=0.0*

*THE **02** 04:51:55.2, 41°N±3°×2°1E±°, h0km±3km, M2.8/13, MLh2.8/13*

*SKO **02** 04:51:56.2, 40°.53N×20°.94E, h7km, ML3.2*

ISC 02 04:51:53.1±1.1**, 40°.53N**±0°.01×**20°.88E**±0°.02**, h3km**±9km**, n130, σ1ˢ.35**/178**, 12C-9D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	**Korca**	0.12	322	Pg	Pg	04 51 55.6	+0.1
KBN				Sg	Sg	04 51 57.3	+0.3
KBN				AML	AML	04 51 59.1	
	46nm,0.2s						
NEST	**Nestorio**	0.17	132	Pg	Pg	04 51 57.9	+1.5
NEST				Sg	Sg	04 52 01.2	+2.5
NEST				AML	AML	04 52 04.4	
	28nm,0.3s						
NEST	**Nestorio**	0.17	132	P	Pg	04 51 58.0	+1.5
NEST	**Nestorio**	0.17	132	P	Pg	04 51 57.9	+1.5
PENT	**Pentalofos**	0.39	150	P	Pb	04 52 01.3	-1.4
PENT				S	Sb	04 52 06.8	-2.3
LSK	**Leskovik**	0.44	210	Pg	Pg	04 52 00.7	-0.8
LSK				Sg	Sg	04 52 08.0	+0.9
LSK				AML	AML	04 52 19.0	
	20nm,0.7s						
OHR	**Ohrid**	0.58	354	⇑*i*Pg	Pb	04 52 05.5	-0.6
OHR				*i* Sg	Sb	04 52 15.1	+0.3
OHR				*e*Lg	Lg	04 52 15.5	
	comp=N,656nm,0.6s						
OHR				*e*Lg	Lg	04 52 15.6	
	comp=E,2µm,0.5s						
OHR	**Ohrid**	0.58	354	*e*Pg	Pb	04 52 04.9	-1.1
OHR				*e*Sg	Sb	04 52 14.7	-0.1
KPRO	**Kipourio**	0.68	147	P	Pb	04 52 06.4	-1.3
KPRO				S	Sb	04 52 17.8	+0.3
KPRO	**Kipourio**	0.68	147	P	Pb	04 52 06.2	-1.5
KPRO				S	Sb	04 52 16.6	-0.9
KZN	**Kozani**	0.71	108	P	Pb	04 52 07.6	-0.7
KZN				S	Sb	04 52 18.6	+0.1
JAN	**Janina**	0.87	182	P	Pg	04 52 08.8	-1.0
SRN	**Sarande**	0.94	226	Pn	Pg	04 52 10.3	-0.7
SRN				Sn	Sb	04 52 25.3	+0.5
SRN				AML	AML	04 52 33.3	
	comp=E,1.9nm,0.6s						
KTI	**Kastanea**	0.95	98	P	Pn	04 52 12.4	-1.2
VLO	**Vlora**	1.06	267	Pn	Pg	04 52 12.9	-0.4
VLO				Sn	Sg	04 52 27.1	0.0
VLO				AML	AML	04 52 38.6	
	comp=E,8.6nm,0.4s						
IGT	**Igoumenitsa**	1.08	203	Pn	Pg	04 52 13.8	0.0
IGT				Sn	Sn	04 52 29.9	-0.8
IGT				AML	AML	04 52 37.3	
	comp=E,1.4nm,0.5s						
IGT	**Igoumenitsa**	1.08	203	*i* Pg	Pg	04 52 13.7	-0.1
IGT				*i* Sg	Sn	04 52 34.6	+3.9
IGT	**Igoumenitsa**	1.08	203	P	Pg	04 52 12.8	-1.0
TIR	**Tirane**	1.12	317	Pn	Pg	04 52 13.8	-0.9
TIR				Sn	Sn	04 52 31.4	-0.3
TIR				AML	AML	04 52 38.5	
	comp=E,1.4nm,0.8s						
TIR	**Tirane**	1.12	317	⇑P	Pg	04 52 14.7	+0.1
TIR	**Tirane**	1.12	317	*i* Pg	Pg	04 52 14.2	-0.5
TIR				*i* Sg	Sn	04 52 37.5	+5.7
TIR	**Tirane**	1.12	317	*e*Pg	Pg	04 52 13.8	-0.9
KEK	**Kerkira**	1.17	226	P	Pg	04 52 14.4	-1.0
PHP	**Peshkopia**	1.20	344	Pn	Pg	04 52 15.8	-0.4
PHP				Sn	Sn	04 52 33.5	-0.3
PHP				AML	AML	04 52 41.9	
	comp=E,1.6nm,0.6s						
TETR	**Tetrakomo, Epi**	1.22	166	P	Pb	04 52 16.3	-0.6
THL	**Klokotos Trika**	1.30	138	P	Pn	04 52 17.8	-0.3
THL				S	Sn	04 52 37.3	+1.3
THL	**Klokotos Trika**	1.30	138	P	Pb	04 52 17.2	-0.9
TYRN	**Tyrnavos**	1.32	128	P	Pn	04 52 18.4	0.0
TYRN	**Tyrnavos**	1.32	128	P	Pn	04 52 17.9	-0.5
SKO	**Skopje**	1.50	16	*i* Pg	Pg	04 52 22.0	+0.1
SKO				*i* Sg	Sn	04 52 44.5	+3.4
VAY	**Valandovo**	1.50	58	P	Pg	04 52 21.8	0.0
VAY				S	Sn	04 52 42.9	+1.8
VAY	**Valandovo**	1.50	58	⇑*i*Pg	Pg	04 52 21.9	0.0
VAY				*i* Sg	Sn	04 52 44.7	+3.6
VAY				*e*Lg	Lg	04 52 46.1	
	comp=N,301nm,0.8s						
VAY				*e*Lg	Lg	04 52 49.2	
	comp=E,362nm,0.9s						
VAY	**Valandovo**	1.50	58	*e*Pn	Pg	04 52 21.9	0.0
VAY				*e*Sn	Sn	04 52 44.5	+3.4
THE	**Thessaloniki**	1.59	86	P	Pg	04 52 23.1	-0.5
THE				S	Sg	04 52 44.6	+0.5
THE	**Thessaloniki**	1.59	86	⇑*i*Pg	Pg	04 52 24.7	+1.1
KNT	**Kendrikon**	1.65	67	P	Pg	04 52 23.6	-1.2
KNT				S	Sg	04 52 46.8	+0.6
KNT	**Kendrikon**	1.65	67	*i* Pn	Pg	04 52 23.7	-1.2
KNT	**Kendrikon**	1.65	67	P	Pb	04 52 23.3	-0.9
PUK	**Puka**	1.69	334	Pn	Pg	04 52 26.2	+0.8
PUK				Sn	Sg	04 52 49.8	+2.5
PUK				AML	AML	04 52 53.0	
	comp=E,1.0nm,0.7s						
HORT	**Hortiatis**	1.69	87	P	Pg	04 52 24.1	-1.4
HORT				S	Sg	04 52 47.3	-0.1
HORT	**Hortiatis**	1.69	87	P	Pb	04 52 23.7	-1.2
TSLK	**Tsoukalades, L**	1.71	186	P	Pg	04 52 26.5	+0.6
LKD2	**Lefkada island**	1.75	186	Pn	Pg	04 52 27.3	+0.7
LKD2				Sn	Sg	04 52 52.0	+2.8
LKD2	**Lefkada island**	1.75	186	P	Pg	04 52 27.0	+0.4
LKD2	**Lefkada island**	1.75	186	P	Pn	04 52 23.7	-0.7
MAKR	**Makrakomi, Fth**	1.79	147	P	Pb	04 52 25.5	-1.2
NYDR	**Nydri-Lefkada**	1.82	185	P	Pg	04 52 27.5	-0.5
AGG	**Agios Georgios**	1.87	143	P	Pn	04 52 25.4	-0.7
ULC	**Ulcinj**	1.89	320	Pn	Pn	04 52 27.2	+0.8
ULC	**Ulcinj**	1.89	320	*i* Pn	Pb	04 52 27.6	-0.6
ULC	**Ulcinj**	1.89	320	*e*Pn	Pb	04 52 27.7	-0.6
ULC				*i* Sn	Sg	04 52 53.8	-0.1
SOH	**Sokhos**	1.90	80	P	Pb	04 52 26.6	-1.8
BCI	**Bajram Curri**	1.94	342	Pn	Pg	04 52 29.6	-0.6
BCI				Sn	Sg	04 52 58.0	+2.7
BCI				AML	AML	04 53 01.6	
	comp=E,1.6nm,0.7s						
PLG	**Polygyros**	1.96	94	P	Pb	04 52 28.2	-1.4
PLG				S	Sg	04 52 54.0	-2.1
PLG	**Polygyros**	1.96	94	P	Pb	04 52 27.5	-2.0
FSK	**Fiskardo**	2.08	187	P	Pn	04 52 29.0	+0.1
DRME	**Dracevica, Mon**	2.09	323	*e*Pn	Pb	04 52 30.9	-0.8
DRME	**Dracevica, Mon**	2.09	323	⇓*i*Pn	Pb	04 52 30.8	-0.9
DRME				*i* Sn	Sb	04 52 59.4	+1.3
SRS	**Serrai**	2.14	73	P	Pb	04 52 30.3	-2.2
SRS	**Serrai**	2.14	73	*i* Pn	Pb	04 52 31.7	-0.8
SRS				*i* Sn	Sb	04 52 58.0	-1.5
SRS	**Serrai**	2.14	73	P	Pn	04 52 29.6	-0.1
KKB	**Krupnik**	2.14	52	*i* Pn	Pb	04 52 30.7	-1.9
KKB				*i* Sn	Sg	04 52 59.8	-2.1
PVY	**Plav**	2.18	342	⇓*i*Pn	Pb	04 52 31.6	-1.6
PVY				*i* Sn	Sb	04 53 01.0	+0.3
PAIG	**Paliouri**	2.23	105	P	Pn	04 52 31.0	+0.1
PDG	**Podgorica**	2.26	328	*e*Pn	Pn	04 52 32.3	+1.0
PDG	**Podgorica**	2.26	328	⇑P	Pn	04 52 32.7	+1.3
PDG	**Podgorica**	2.26	328	*e*Pn	Pn	04 52 32.8	+1.5
PDG				*e*Sn	Sb	04 53 03.2	+0.3
PDG	**Podgorica**	2.26	328	⇓*i*Pn	Pb	04 52 32.9	-1.6
PDG				*i* Sn	Sb	04 53 03.0	+0.1
BOSS	**Bosilegrad**	2.30	31	*e*Pn	Pn	04 52 32.7	+0.7
BUM	**Brajici-Budva**	2.32	320	*e*Pn	Pn	04 52 33.2	+1.0
BUM				*i* Sn	Sb	04 53 04.0	-0.6
BARS	**Barje**	2.39	17	⇓*i*Pn	Pn	04 52 33.7	+0.5
BARS	**Barje**	2.39	17	*e*Pn	Pn	04 52 33.8	+0.6
BARS				*e*Sn	Sb	04 53 04.3	-2.4
MMB	**Musomishta**	2.40	64	*i* Pn	Pb	04 52 35.3	-1.6
MMB				*i* Sn	Sb	04 53 05.2	-1.7
BEY	**Berane**	2.45	343	Pn	Pb	04 52 37.8	-0.1
BEY	**Berane**	2.45	343	*i* Pn	Pb	04 52 37.7	-0.2
IVA	**Berane**	2.45	343	*e*Pn	Pn	04 52 35.7	+1.6
IVA				*i* Sn	Sb	04 53 07.8	-0.8
CEME	**Cevo**	2.50	324	⇓*i*Pn	Pn	04 52 35.9	+1.2
CEME				*i* Sn	Sb	04 53 08.2	-1.6
KOME	**Kolasin**	2.54	337	⇑*i*Pn	Pb	04 52 37.6	-1.7
KOME				*i* Sn	Sb	04 53 10.1	-0.8
KOME	**Kolasin**	2.54	337	⇑*i*Pn	Pb	04 52 37.6	-1.7
KOME				*i* Sn	Sb	04 53 09.5	-1.4
HCY	**Herceg Novi**	2.62	318	*e*Pn	Pn	04 52 35.4	-1.0
HCY	**Herceg Novi**	2.62	318	⇑*i*Pn	Pn	04 52 36.7	+0.3
HCY				*i* Sn	Sn	04 53 11.3	+2.5
SELS	**Selova**	2.69	4	*e*Pn	Pn	04 52 37.7	+0.3
VTS	**Vitosha**	2.73	39	*e*Pn	Pn	04 52 38.7	+0.7
SJES	**Sjenica**	2.81	346	*e*Pn	Pn	04 52 40.6	+1.5
SJES	**Sjenica**	2.81	346	*e*Pn	Pn	04 52 40.5	+1.5
SJES				*e*Sn	Sb	04 53 17.6	-1.3
TREB	**Trebinje**	2.90	320	*e*Pn	Pn	04 52 39.8	-0.3
BRY	**Bratogost**	2.95	324	*e*Pn	Pn	04 52 41.6	+0.6
BRY	**Bratogost**	2.95	324	*e*Pn	Pn	04 52 41.8	+0.8
BRY				*i* Sn	Sn	04 53 19.2	+2.2
PLE	**Pljevlja**	3.01	339	⇓*i*Pn	Pn	04 52 43.7	+1.9
GOCS	**Kraljevo Serbi**	3.03	360	*e*Pn	Pn	04 52 43.3	+1.2
ZAPS	**Zavoj**	3.04	25	*e*Pn	Pn	04 52 43.2	+1.1
UPM	**Unac-Piva**	3.05	332	*e*Pn	Pn	04 52 43.4	+0.9
UPM	**Unac-Piva**	3.05	332	*e*Pn	Pn	04 52 43.7	+1.2
UPM				*i* Sn	Sn	04 53 22.1	+2.5
IVAS	**Ivanjica**	3.09	350	*e*Pn	Pn	04 52 42.4	-0.5
BOVS	**Bovan**	3.16	11	⇑P	Pn	04 52 44.1	+0.3
BOVS	**Bovan**	3.16	11	*e*Pn	Pn	04 52 43.9	+0.1
MATE	**Matera**	3.18	274	⇑P	Pn	04 52 43.1	-0.9
RUDO	**Rudo**	3.29	340	*e*Pn	Pn	04 52 45.3	-0.2
STON	**Ston**	3.34	316	*e*Pn	Pn	04 52 45.9	-0.3
STON	**Ston**	3.34	316	*e*Pn	Pn	04 52 46.3	+0.1
STON				*e*Sn	Sn	04 53 25.4	-1.0
GRUS	**Gruza**	3.36	358	*e*Pn	Pn	04 52 48.4	+1.9
ZAGS	**Zajecar**	3.43	17	*e*Pn	Pn	04 52 48.2	+0.7
BBLS	**Lazi&#263i**	3.51	342	*e*Pn	Pn	04 52 49.3	+0.7
TRUS	**Trudelj**	3.71	355	*e*Pn	Pn	04 52 51.1	-0.2
HAPS	**Han Pijesak,Bl**	3.83	339	*e*Pn	Pn	04 52 54.5	+1.4
HAPS	**Han Pijesak,Bl**	3.83	339	*e*Pn	Pn	04 52 54.4	+1.4
TEKS	**Tekeris**	4.14	346	*e*Pn	Pn	04 52 57.5	+0.3
TEKS	**Tekeris**	4.14	346	*e*Pn	Pn	04 52 57.7	+0.5
AVAS	**Avala Beograd**	4.17	356	*e*Pn	Pn	04 52 57.9	+0.2
MDVR	**Moldovita**	4.29	8	⇓P	Pn	04 52 59.6	+0.3
HERR	**Herculane**	4.49	14	⇑P	Pn	04 53 02.8	+0.7
VRSS	**Vrsac**	4.60	4	*e*Pn	Pn	04 53 03.8	+0.2
FRGS	**Fruska Gora**	4.69	351	*e*Pn	Pn	04 53 05.0	+0.2
BLY	**Banja Luka**	5.02	328	*e*Pn	Pn	04 53 10.2	+0.9
A050A	**Klekovaca**	5.09	322	*e*Pn	Pn	04 53 10.1	-0.3
BZS	**Buzias**	5.11	6	⇓P	Pn	04 53 10.8	+0.2
BZS	**Buzias**	5.11	6	*e*Pn	Pn	04 53 10.2	-0.4
A051A	**Mrakovica**	5.35	328	*e*Pn	Pn	04 53 13.9	0.0
MLR	**Muntele Rosu**	6.19	35	⇓P	Pn	04 53 22.0	-3.5
BOJS	**Bojanci**	6.46	322	*e*Pn	Pn	04 53 28.4	-0.7
BOJS	**Bojanci**	6.46	322	*e*Pn	Pn	04 53 29.0	-0.1
CRES	**Cresnjevec Ost**	6.61	325	*e*Pn	Pn	04 53 31.0	-0.2
VRI	**Vrincioaia**	6.83	37	⇑P	Pn	04 53 36.6	+2.4
CEY	**Cerknica**	7.03	320	*e*Pn	Pn	04 53 36.4	-0.5
CEY	**Cerknica**	7.03	320	*e*Pn	Pn	04 53 36.8	-0.1
CEY				*e*Sn	Sn	04 54 55.9	-1.4
OBKA	**Obir**	7.54	325	*e*Pn	Pn	04 53 45.8	+1.8
OBKA	**Obir**	7.54	325	*e*Pn	Pn	04 53 43.1	-0.9
	comp=E,0.1nm,0.1s						
ARSA	**Arzberg**	7.75	332	*i* Pn	Pn	04 53 46.2	-0.7
	comp=E,0.3nm,0.3s						
ABTA	**Abfaltersbach**	8.68	318	*e*Pn	Pn	04 53 58.5	-1.1
	comp=E,0.5nm,0.4s						
MOTA	**Moosalm**	9.80	317	*e*Pn	Pn	04 54 12.7	-2.4
	comp=E,1.4nm,0.6s						

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*NEIC **02** 04:52:32.5±1.9, 7°.33S±0°.08×107°.63E±0°.10, h73km±7km, mb4.4/13, Error ellipse: s-maj=14.1km s-min=10.3km az=110.0*

*IDC **02** 04:52:35.9±0.8, 7°.53S×107°.97E, h92km±10km, mb3.7/8, mbtmp4.0/8, Error ellipse: s-maj=38.8km s-min=18.2km az=50.0*

*DJA **02** 04:52:36.2±0.2, 8°S±3°×10°8E±°, h70km±4km, M4.4/24, mb4.6/6, MLv4.3/24, MwMwp5.6/1, Mwp5.7/1*

ISC 02 04:52:34.9±0.6**, 7°.74S**±0°.05×**107°.87E**±0°.05**, h75km, n63, σ1ˢ.54**/57**, mb4.1**/11**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBJI	**Bungbulang**	0.35	321	P	Pn	04 52 49.5	+2.4
CMJI	**Cimerak**	0.57	95	P	Pn	04 52 51.7	+2.8

CMJI				S	Sn	04 53 01.8	+2.6
CNJI	Cibinong	0.85	300	P	Pn	04 52 54.1	+2.2
CNJI				S	Sn	04 53 06.7	+2.2
LEM	Lembang	0.94	344	P	Pn	04 52 55.0	+1.9
	979nm,0.4s,baz=148,slow=19,SNR=139						
LEM				S	Sn	04 53 07.4	+0.8
	271nm,0.4s,baz=107,slow=19,SNR=5.9						
LEM	Lembang	0.94	344	P	Pn	04 52 55.0	+1.9
SKJI	Sukabumi	1.49	299	P	Pn	04 53 02.7	+2.7
YOGI	Yogyakarta	2.40	92	P	Pn	04 53 13.0	+0.9
CGJI	Cibinong	2.43	297	P	Pn	04 53 14.0	+1.5
UGM	Wanagama	2.63	94		Pn	04 53 16.7	+1.4
UGM	Wanagama	2.63	94	P	Pn	04 53 16.6	+1.4
UGM	Wanagama	2.63	94	P	Pn	04 53 16.6	+1.4
SMRI	Semarang	2.64	75		Pn	04 53 17.3	+2.0
SMRI	Semarang	2.64	75	P	Pn	04 53 17.4	+2.0
SMRI	Semarang	2.64	75	P	Pn	04 53 17.3	+2.0
WOJI	Wonogiri, Jawa	3.03	92	P	Pn	04 53 21.9	+1.4
PCJI	Pacitan	3.31	98	P	Pn	04 53 26.2	+1.9
XMI	Christmas Isla	3.45	218	P	Pn	04 53 27.5	+1.1
XMIS	Christmas Isla	3.50	219	Pn	Pn	04 53 27.6	+0.6
XMIS	Christmas Isla	3.50	219	P	Pn	04 53 27.7	+0.7
BLSI	Bandar Lampung	3.51	312	P	Pn	04 53 28.3	+1.1
NGJI	Ngawi	3.58	84	P	Pn	04 53 30.4	+2.4
GRJI	Gresik	4.64	80	P	Pn	04 53 42.9	+0.3
MDSI	Maura Dua	4.89	311	P	Pn	04 53 47.0	+1.0
TPI	Tanjungpandan	4.95	357	P	Pn	04 53 47.5	+0.7
GMJI	Gumukmas	5.54	96	P	Pn	04 53 56.0	+1.1
MNAI	Manna	5.93	304	P	Pn	04 54 07.2	+7.0
MNAI	Manna	5.93	304	P	Pn	04 54 01.5	+1.3
JAGI	Jajag, Banyuwa	6.26	97		Pn	04 54 06.3	+1.6
JAGI	Jajag, Banyuwa	6.26	97	P	Pn	04 54 06.3	+1.6
	82nm,1.1s						
ABJI	Asem Bagus	6.30	91	P	Pn	04 54 07.5	+2.2
	0.4nm36nm,0.7s						
KSI	Kapahiang	6.64	307	P	Pn	04 54 10.2	+0.3
SRBI	Singaraja	7.28	93	P	Pn	04 54 20.6	+2.0
PLAI	Plampang	9.86	97	P	Pn	04 54 54.2	+0.3
PSA00	Pilbara Seismi	17.96	141	P	P	04 56 37.9	-1.5
PSA00				IAmb	IAmb	04 57 03.3	
	comp=Z,18nm,0.9s						
PSA00	Pilbara Seismi	17.96	141	P	P	04 56 40.2	+0.9
PSA00				IAmb	IAmb	04 56 57.4	
	comp=Z,21nm,1.4s						
FITZ	Fitzroy Crossi	20.13	122	P	P	04 57 04.1	+1.1
KNRA	Kununurra	21.91	113	P	P	04 57 21.5	-0.7
KNRA				IAmb	IAmb	04 57 41.5	
	comp=Z,35nm,1.4s						
MORW	Morawa	22.57	161	P	P	04 57 31.0	+1.8
MORW				IAmb	IAmb	04 57 39.8	
	comp=Z,17nm,1.4s						
MTN	Manton Dam	23.43	104	P	P	04 57 34.9	-2.9
WRA	Warramunga Arr	28.36	118	P	P	04 58 21.7	-0.6
	comp=Z,0.4nm,0.3s,baz=297,slow=8.4,SNR=12						
	comp=Z,0.4nm,0.3s						
ASAR	Alice Springs	29.56	125	P	P	04 58 32.4	-0.5
	comp=Z,0.4nm,0.6s,baz=304,slow=9.3,SNR=7.6						
ASAR				PcP	PcP	05 01 34.7	-1.7
	comp=Z,0.3nm,0.3s,baz=291,slow=2.0,SNR=3.0						
	comp=Z,0.4nm,0.6s						
H08S2	Diego Garcia H	35.05	268	T	T	05 36 32.6	
	baz=92,slow=76,SNR=4.9						
H08S3	Diego Garcia H	35.06	268	T	T	05 36 27.0	
	baz=92,slow=76,SNR=5.2						
H08S1	Diego Carcia H	35.07	268	T	T	05 36 25.4	
	baz=92,slow=76,SNR=4.7						
BBOO	Buckleboo	36.13	138	P	P	04 59 29.7	-0.3
STKA	Stephens Creek	39.51	132	P	P	04 59 58.7	+0.2
STKA	Stephens Creek	39.51	132	P	P	04 59 58.2	-0.3
	comp=Z,7.8nm,0.5s,baz=318,slow=7.5,SNR=30						
	comp=Z,7.8nm,0.5s						
JNU	Nakatsue	46.15	27	P	P	05 00 45.9	-6.3
JNU				IAmb	IAmb	05 00 49.8	
	comp=Z,9.8nm,1.1s						
MKAR	Makanchi Array	58.87	340	P	P	05 02 23.7	-2.2
	comp=Z,0.1nm,0.4s,baz=162,slow=6.1,SNR=2.3						
	comp=Z,0.1nm,0.4s						
H04N2	CROZET ISLANDS	61.27	221	T	T	06 09 54.0	
	baz=70,slow=75,SNR=33						
H04N1	CROZET ISLANDS	61.29	221	T	T	06 09 49.4	
	baz=70,slow=75,SNR=42						
H04N3	CROZET ISLANDS	61.29	221	T	T	06 09 50.8	
	baz=70,slow=75,SNR=31						
ZALV	Zalesovo Beam	64.46	345	P	P	05 03 02.0	-1.3
	comp=Z,0.4nm,0.4s,baz=188,slow=5.0,SNR=2.0						
	comp=Z,0.4nm,0.4s						
ABKAR	Akbulak array	70.48	329	P	P	05 03 36.4	-5.0
VNDA	Vanda	75.09	170	P	P	05 04 08.6	+0.3
VNDA	Vanda	75.09	170	P	P	05 04 08.6	+0.3
	comp=Z,0.7nm,0.4s,baz=318,slow=6.3,SNR=10						
	comp=Z,0.7nm,0.4s						
SBA	Scott Base	76.16	169	P	P	05 04 15.4	+1.0
QSPA	South Pole Qui	82.26	180	P	P	05 04 47.2	-0.8
QSPA				IAmb	IAmb	05 05 24.7	
	comp=Z,4.1nm,1.4s						
QSPA	South Pole Qui	82.26	180	P	P	05 04 47.7	-0.3
	comp=Z,1.8nm,1.0s,baz=330,slow=4.0,SNR=3.1						
	comp=Z,1.8nm,1.0s						
SNAA	Sanae	89.08	197	P	P	05 05 21.8	+0.2
SNAA				IAmb	IAmb	05 05 34.7	
	comp=Z,6.9nm,1.5s						
SNAA	Sanae	89.08	197	P	P	05 05 22.1	+0.5
	comp=Z,2.4nm,1.0s,baz=198,slow=6.4,SNR=3.2						
	comp=Z,2.4nm,1.0s						
TXAR	Lajitas Array	143.39	50	PKP	PKPab	05 11 57.0	-0.8
	comp=Z,0.3nm,0.8s,baz=307,slow=2.5,SNR=2.5						
BDFB	Brasilia	146.68	226	PKPbc	PKPdf	05 12 07.3	-0.3
	comp=Z,1.2nm,0.6s,baz=90,slow=17,SNR=2.4						

GCG 02 05:05:22.0±0.3,14°.61N×92°.32W,h67km±7km,MD3.8, ML2.6,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.30	11	eS	Sn	05 05 41.6	+0.7
SMCA	Catarina	0.34	45	eP	Pn	05 05 33.3	+0.1
SMCA				eS	Sn	05 05 42.0	+0.5
SMCA				IAML		05 05 43.6	
	comp=E,340nm,0.1s						
STG8	El Palmar, Qui	0.96	100	eP	Pn	05 05 37.8	-2.3
STG8				eS	Sn	05 05 50.3	-3.1
STG8				IAML		05 05 51.7	
	comp=E,174nm,0.1s						
CCIG	Comitan	1.67	6	i P	Pn	05 05 49.9	+0.6

IDC 02 05:08:09.6±2.3,15°.47S×173°.26W,h0km,mb3.6/4, mbtmp3.6/4,MS3.3/8,Error ellipse: s-maj=121.3km s-min=35.2km az=151.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.63	254	LR	LR	05 13 10.4	
	comp=Z,79nm,21.4s,baz=31,slow=35						
ASAR	Alice Springs	50.21	252	P	P	05 17 06.3	-1.4
	1.1nm,0.8s,baz=95,slow=8.2,SNR=1.8						
	1.1nm,0.8s						
NWAO	Narrogin (SRO)	64.70	241	LR	LR	05 45 15.6	
	comp=Z,25nm,18.9s,baz=104,slow=34						
SHEM	Shemya Is, Ala	68.79	352	LR	LR	05 43 32.6	
	comp=Z,23nm,21.6s,baz=292,slow=31						
NVAR	Mina Array Bea	74.29	42	P	P	05 19 48.9	-0.4
	0.2nm,0.6s,baz=224,slow=5.8,SNR=2.5						
	0.2nm,0.6s						
KDAK	Kodiak Island	74.97	11	LR	LR	05 44 25.4	
	comp=Z,24nm,20.5s,baz=193,slow=29						
ELK	Elko	77.55	41	LR	LR	05 47 11.4	
	comp=Z,19nm,20.4s,baz=212,slow=30						
TXAR	Lajitas Array	80.54	56	P	P	05 20 24.3	0.0
	0.3nm,0.9s,baz=252,slow=10.0,SNR=3.8						
	0.3nm,0.9s						
NEW	Newport	80.69	34	LR	LR	05 50 24.1	
	comp=Z,25nm,18.3s,baz=84,slow=31						
PDAR	Pinedale Array	82.23	42	LR	LR	05 50 31.2	
	comp=Z,14nm,20.6s,baz=207,slow=31						
ILAR	Eielson Array	82.49	11	P	P	05 20 32.3	-1.4
	0.9nm,0.8s,baz=212,slow=5.7,SNR=8.3						
	0.9nm,0.8s						
ULM	Lac du Bonnet	93.91	39	LR	LR	05 57 07.5	
	comp=Z,28nm,19.8s,baz=302,slow=31						
GERES	GERESS Array B	146.23	352	PKPbc	PKPab	05 27 52.5	-0.3
	0.5nm,0.7s,baz=13,slow=1.8,SNR=7.3						
BRTR	Keskin Array B	146.30	321	PKPbc	PKPab	05 27 54.1	+0.6
	1.0nm,0.9s,baz=34,slow=3.1,SNR=5.4						

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*IDC **02** 05:08:40.2±1.3,29°.99N×142°.64E,h0km,mb3.7/8, mbtmp3.7/11,ML3.2/3,MS2.3/1,Error ellipse: s-maj=32.9km s-min=27.3km az=55.0*

*JMA **02** 05:08:41.1±0.3,30°.0N±0°.7×14°3E±°,h52km,MV3.9/20, NEAR TORISHIMA IS*

ISC 02 05:08:44.6±0.8,30°.06N±0°.05×142°.7E±0°.1,h35km,n22, σ2ˢ70/30,mb3.8/8,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.99	189	eP	Pn	05 09 27.4	-2.1
CBIJ				eS	Sn	05 10 00.4	-3.7
JCJ	Chichijima	2.99	189	Pn	Pn	05 09 27.1	-2.4
	4.4nm,0.3s,baz=8.4,slow=21,SNR=9.1						
JCJ				Sn	Sn	05 09 57.4	-6.7
	12nm,0.3s,baz=90,slow=20,SNR=3.5						
	17nm,0.4s						
JHH2	Haha-jima-NKT2	3.45	188	eS	Sn	05 10 13.7	-1.7
JHJ2	Mitsune	3.92	322	eP	Pn	05 09 41.7	-0.6
JHJ2				eS	Sn	05 10 26.2	-1.0
BSO1	Boso 1	4.81	343	eP	Pn	05 09 52.6	-1.4
BSO3	Boso 3	5.08	339	eP	Pn	05 09 58.0	-0.1
BSO3				eS	Sn	05 10 56.4	+1.0
BSO4	Boso 4	5.31	338	eP	Pn	05 10 02.6	+1.3
JOD2	Odawara 2	6.03	330	eP	Pn	05 10 10.6	-0.6
JOD2				eS	Sn	05 11 19.4	+0.4
JHO	Hitachi	6.78	345	eP	Pn	05 10 19.4	-2.2
JHO				eS	Sn	05 11 32.2	-5.3
JAG	Ashikaga	6.91	338	eP	Pn	05 10 22.7	-0.7
JAG				eS	Sn	05 11 39.8	-1.1
MJAR	Matsushiro Arr	7.49	331	Pn	Pn	05 10 29.8	-1.5
	0.2nm,0.3s,baz=151,slow=11,SNR=20						
MJAR				Sn	Sn	05 11 52.9	-2.0
	baz=157,slow=17,SNR=7.2						
	3.8nm,0.8s						
JMK	Ichinoseki	8.96	352	eS	Sn	05 12 23.5	-7.6
JNU	Nakatsue	10.55	290	Pn	Pn	05 11 15.0	+1.7
	0.2nm,0.3s,baz=90,slow=6.1,SNR=2.2						
KSRS	Korea Array	14.34	305	Pn	Pn	05 12 04.0	-1.0
	0.1nm,0.3s,baz=110,slow=13,SNR=8.5						
KSRS				LR	LR	05 17 15.4	
	comp=Z,12nm,20.3s,baz=170,slow=36						
	0.4nm,0.4s						
SONM	Songino Array	32.98	313	P	P	05 15 15.4	-0.8
	0.5nm,0.5s,baz=142,slow=7.3,SNR=2.2						
	0.5nm,0.5s						
MKAR	Makanchi Array	49.00	308	P	P	05 17 29.4	+1.6
	0.8nm,0.8s,baz=83,slow=9.9,SNR=8.6						
	0.8nm,0.8s						
KURBB	Kurchatov Arra	51.34	313	P	P	05 17 46.5	+1.1
	1.2nm,0.8s,baz=92,slow=7.2,SNR=7.1						
	1.2nm,0.8s						
ILAR	Eielson Array	54.90	30	P	P	05 18 11.9	+0.5
	0.1nm,0.6s,baz=262,slow=7.8,SNR=1.7						
	0.1nm,0.6s						
BVAR	Borovoye Array	56.21	316	P	P	05 18 22.4	+1.4
	0.6nm,0.5s,baz=60,slow=8.5,SNR=3.6						
	0.6nm,0.5s						
FINES	FINESS Array B	75.51	334	P	P	05 20 26.8	+1.8
	2.6nm,1.0s,baz=35,slow=6.5,SNR=3.9						
	2.6nm,1.0s						
NVAR	Mina Array Bea	78.33	52	P	P	05 20 44.1	+2.5
	0.4nm,0.8s,baz=314,slow=4.0,SNR=3.0						
	0.4nm,0.8s						
BRTR	Keskin Array B	84.34	313	P	P	05 21 14.0	+0.6
	0.6nm,0.7s,baz=116,slow=5.6,SNR=4.6						
	0.6nm,0.7s						

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*IDC **02** 05:08:57.5±1.6,22°.11S×122°.32E,h0km,mb3.4/1, mbtmp3.8/6,ML4.0/4,MS2.9/3,Error ellipse: s-maj=24.5km s-min=20.4km az=149.0*

*NOU **02** 05:08:58.6,21°.76S×122°.30E,h0km,mb4.6/10,Western Australia*

ISC 02 05:08:59.7±0.8,21°.77S±0°.09×122°.39E±0°.07,h10km,n16, σ1ˢ76/18,Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSA00	Pilbara Seismi	2.38	274	P	Pn	05 09 37.7	-1.1
MBWA	Marble Bar	2.55	283	P	Pn	05 09 39.9	-1.3
FITZ	Fitzroy Crossi	4.76	41	Pn	Pn	05 10 12.8	+1.2
	3.3nm,0.3s,baz=221,slow=11,SNR=58						
FITZ				Sn	Sn	05 11 06.8	-0.1
	5.2nm,0.3s,baz=156,slow=21,SNR=11						
FITZ				Lg	Lg	05 11 31.2	
	5.1nm,0.3s,baz=353,slow=13,SNR=4.7						
FITZ				LR	LR	05 12 37.9	
	comp=Z,57nm,18.9s,baz=180,slow=44						
	7.2nm,0.3s						
GIRL	Giralia	7.61	262	P	Pn	05 10 49.9	-0.8
MORW	Morawa	9.26	217	P	Pn	05 11 12.1	-1.3
BLDU	Ballidu	10.18	209	P	Pn	05 11 25.2	-0.7
FORT	Forrest	10.31	152	P	Pn	05 11 28.9	+1.1
KLBR	Kellerberrin	10.62	202	P	Pn	05 11 32.4	+0.3
ASAR	Alice Springs	10.79	102	Pn	Pn	05 11 35.1	+0.6
	1.1nm,0.3s,baz=282,slow=12,SNR=90						
ASAR				Sn	Sn	05 13 38.1	+2.7
	0.5nm,0.3s,baz=275,slow=23,SNR=6.1						
ASAR				Lg	Lg	05 14 38.0	
	0.4nm,0.3s,baz=277,slow=32,SNR=4.1						
ASAR				LR	LR	05 15 57.2	
	comp=Z,72nm,19.8s,baz=265,slow=39						
	5.8nm,0.6s						
WRA	Warramunga Arr	11.32	83	Pn	Pn	05 11 41.5	-0.1
	0.5nm,0.3s,baz=263,slow=14,SNR=7.5						
WRA				Sn	Sn	05 13 43.5	-4.8
	0.4nm,0.3s,baz=251,slow=25,SNR=4.7						
WRA				Lg	Lg	05 14 59.1	
	baz=260,slow=33						
	1.1nm,0.6s						
MUN	Mundaring	11.57	207	P	Pn	05 11 43.9	-1.0
NWAO	Narrogin (SRO)	12.02	201	Pn	Pn	05 11 44.4	-6.8
	4.0nm,0.8s,baz=29,slow=11,SNR=7.5						
NWAO				Sn	Sn	05 13 55.5	-10
	2.7nm,0.3s,baz=312,slow=19,SNR=7.1						
NWAO				Lg	Lg	05 15 04.8	
	1.7nm,0.3s,baz=116,slow=23,SNR=7.2						
NWAO				LR	LR	05 16 37.0	
	comp=Z,136nm,20.1s,baz=242,slow=39						
NWAO	Narrogin (SRO)	12.02	201	P	Pn	05 11 50.7	-0.5
	8.0nm,1.0s						
MTN	Manton Dam	12.18	45	P	Pn	05 11 53.9	+0.5
STKA	Stephens Creek	19.85	124	P	P	05 13 29.6	-1.3
	0.4nm,0.3s,baz=293,slow=9.5,SNR=9.7						
	2.6nm,0.7s						
MKAR	Makanchi Array	77.25	333	P	P	05 20 56.0	+1.9
	0.2nm,0.6s,baz=144,slow=5.2,SNR=2.4						
	0.2nm,0.6s						

GCG 02 05:10:37.1±0.9,14°.24N×91°.82W,h64km±10km,MD3.6, ML3.3,Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG8	El Palmar, Qui	0.50	65	i P	Pn	05 10 50.4	+0.7
STG8				i S	Sn	05 11 01.0	+2.2
STG8				IAML		05 11 01.2	
	comp=N,2μm,0.2s						
SMCA	Catarina	0.66	338	eP	Pn	05 10 50.8	-0.4
QUEO	Labor Ovalle	0.70	25	i P	Pn	05 10 53.1	+1.2
QUEO				i S	Sn	05 11 05.7	+3.0
QUEO				IAML		05 11 06.2	
	comp=E,836nm,0.1s						
SOKI	Kika Raxquin	0.71	35	i S	Sn	05 11 05.3	+2.2
ESSG	Sabana Grande	0.97	81	i P	Pn	05 10 55.5	+0.5
ESSG				IAML		05 11 11.2	
	comp=N,302nm,0.2s						
FG8	Yepocapa, Chim	1.22	89	i P	Pn	05 10 54.2	-4.1
FG8				i S	Sn	05 11 07.9	-6.3
FG16	Alotenango, Sa	1.27	88	i P	Pn	05 10 55.5	-3.6
FG16				i S	Sn	05 11 09.9	-5.6
FG16				IAML		05 11 12.0	
	comp=N,2μm,0.2s						
NUBE	Las Nubes	2.01	99	eP	Pn	05 11 09.3	+0.4
JAYA	Jayaque - finc	2.38	104	eP	Pn	05 11 14.2	+0.3

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*SOME **02** 05:33:18.7,41°.68N×80°.15E,h20km*

*NNC **02** 05:33:19.4±0.9,41°.72N×80°.08E,h0km,mb3.9,mpv3.8, Error ellipse: s-maj=6.1km s-min=5.0km az=149.0*

*KRNET **02** 05:33:20.3±0.1,41°.76N×80°.02E,mb3.3*

ISC 02 05:33:21.4±2.9,41°.83N±0°.08×80°.09E±0°.06,h2km±15km, n37,σ1ˢ22/63,22C-3D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	1.41	341	P	Pn	05 33 46.4	-1.8
	202nm,0.2s						
SHLS				S	Sg	05 34 06.7	+0.1
	261nm,0.3s						
SHLS	Shalkode	1.41	341	eP	Pn	05 33 46.4	-1.8
	202nm,0.2s						
SHLS				eS	Sg	05 34 06.7	+0.1
	261nm,0.3s						
PRZ	Przheval'sk	1.42	298	⇑iP	Pn	05 33 46.8	-1.6
PRZ				⇑iS	Sb	05 34 06.5	-0.7
UZB	Uzynbulak	1.54	330	P	Pn	05 33 49.6	-0.4
	100nm,0.3s						
UZB				S	Sg	05 34 12.1	+1.4
	173nm,0.3s						
PDGK	Podgornoye	1.56	344	⇑Pn	Pn	05 33 49.7	-0.7
	12nm,0.3s						
PDGK				⇑Sn	Sg	05 34 14.1	+2.4
	224nm,0.7s						
KTMS	Ketmen	1.63	7	eP	Pn	05 33 50.6	-0.7
	10nm,0.3s						
KTMS				eS	Sg	05 34 13.6	-0.2
	73nm,0.3s						
TARG	Taragay, Kyrgy	1.71	267	⇓iP	Pn	05 33 51.4	-1.2
TARG				⇓iS	Sn	05 34 13.9	-1.3
SATY	Saty	1.75	315	P	Pn	05 33 53.1	+0.2
	71nm,0.2s						
SATY				S	Sg	05 34 18.1	+0.5
	112nm,0.2s						
ZHN	Zhinishke	1.81	318	Pg	Pb	05 33 54.4	-1.0
	214nm,0.3s						
ZHN				Lg	Lg	05 34 20.3	
	606nm,0.3s						
ZHN	Zhinishke	1.81	318	eP	Pb	05 33 54.4	-1.0
	214nm,0.3s						
ZHN				eS	Sg	05 34 20.3	+0.7
	606nm,0.3s						
KPKS	Kokpek	1.94	328	Pg	Pb	05 33 56.0	-1.5
	64nm,0.1s						
KPKS				Lg	Lg	05 34 22.8	
	320nm,0.5s						
KDJ	Kajisay	2.19	279	⇑iP	Pn	05 33 59.2	+0.2
KDJ				⇑iS	Sb	05 34 27.5	-1.9
DJR	Jarkent	2.51	355	Pg	Pb	05 34 06.6	-0.7
	8.3nm,0.2s						
DJR				Lg	Lg	05 34 41.6	
	36nm,0.2s						
DJR	Jarkent	2.51	355	eP	Pb	05 34 06.6	-0.7
	8.3nm,0.2s						
DJR				eS	Sg	05 34 41.5	-0.6
	36nm,0.2s						
BLB	Baldybastay	2.56	333	Pg	Pb	05 34 07.3	-0.8
	68nm,0.3s						
BLB				Lg	Lg	05 34 42.5	
	125nm,0.4s						
KOTS	Kotyrbulak	2.61	304	Pg	Pb	05 34 07.5	-1.4
	18nm,0.3s						
KOTS				Lg	Lg	05 34 43.0	
	119nm,0.3s						
KOTS	Kotyrbulak	2.61	304	eP	Pb	05 34 07.5	-1.4
	18nm,0.3s						
KOTS				eS	Sb	05 34 43.0	+1.4
	119nm,0.3s						
MDOK	Medeo	2.61	302	⇑Pn	Pn	05 34 04.2	-0.6
	10nm,0.6s						
MDOK				Pg	Pb	05 34 07.6	-1.5
	14nm,0.5s						
MDOK				Lg	Lg	05 34 42.9	
	63nm,0.4s						
MDOK				⇓Lg	Lg	05 34 45.1	
	49nm,0.5s						
KNOS	Konyrlen	2.62	346	Pg	Pb	05 34 08.5	-0.6
	8.5nm,0.1s						
KNOS				Lg	Lg	05 34 44.5	
	19nm,0.2s						
TNSS	Tian-Shan	2.62	299	Pg	Pb	05 34 07.6	-1.6
	13nm,0.3s						
TNSS				Lg	Lg	05 34 43.3	
	66nm,0.3s						
TNSS	Tian-Shan	2.62	299	eP	Pb	05 34 07.7	-1.6
	13nm,0.3s						
TNSS				eS	Sb	05 34 43.3	+1.2
	66nm,0.3s						
IZV	Izvestkoviy	2.84	296	Pg	Pb	05 34 11.2	-1.7
IZV				Lg	Lg	05 34 49.1	
	69nm,0.4s						
IZV	Izvestkoviy	2.84	296	eP	Pb	05 34 11.2	-1.7
IZV				eS	Sb	05 34 49.1	+0.9
	69nm,0.4s						
ULHL	Ulahol	2.89	280	⇑iP	Pn	05 34 09.2	+0.5
ULHL				⇑iS	Sn	05 34 44.6	+0.4
ARXS	Arharly	2.90	326	Pg	Pb	05 34 13.8	-0.2
	8.6nm,0.4s						
ARXS				Lg	Lg	05 34 53.5	
	60nm,0.6s						
MTBS	Maitube	3.00	297	eP	Pb	05 34 14.8	-0.8
	6.8nm,0.3s						
MTBS				eS	Sb	05 34 55.0	+2.3
	33nm,0.5s						
NRN	Naryn	3.09	264	⇑eP	Pn	05 34 12.1	+0.6
NRN				⇑eS	Sn	05 34 49.5	+0.4
KTBS	Karatobe	3.13	308	Pg	Pb	05 34 16.9	-1.0
	6.3nm,0.3s						
KTBS				Lg	Lg	05 34 59.0	
	53nm,0.4s						
BOOM	Boomskoye usch	3.15	284	⇑iP	Pn	05 34 12.8	+0.6
BOOM				⇑iS	Sn	05 34 51.1	+0.6
KST	Kastek	3.29	293	eP	Pb	05 34 19.3	-1.2
	3.7nm,0.2s						
KST				eS	Sb	05 35 02.7	+1.7
	64nm,0.5s						
KAPS	Kapalarasan	3.50	352	Pg	Pb	05 34 24.4	+0.3
	3.3nm,0.1s						
TKM2	Tokmak 2	3.50	290	⇑Pn	Pn	05 34 15.9	-1.1
	1.4nm,0.3s						
TKM2				⇑Pg	Pb	05 34 25.1	+0.9
	2.1nm,0.3s						
TKM2				⇑Lg	Lg	05 35 11.3	
	26nm,0.6s						
TKM2	Tokmak 2	3.50	290	⇑iP	Pn	05 34 17.7	+0.6
TKM2				⇑iS	Sn	05 34 59.6	+0.4
ARLS	Aral	4.30	272	⇑iP	Pn	05 34 28.4	+0.3
ARLS				⇑iS	Sn	05 35 18.4	-0.5
AML	Almayashu	4.77	276	⇑eP	Pn	05 34 35.2	+0.5
AML				⇑iS	Sn	05 35 30.2	-0.6
MRKS	Merke	5.17	283	eP	Pb	05 34 55.7	+3.1
	0.8nm,0.1s						
MRKS				eS	Sg	05 36 05.1	-2.3
	6.0nm,0.3s						
MK31	Makanchi Array	5.21	17	Pn	Pn	05 34 40.4	+0.1
	0.2nm,0.2s,baz=200,slow=13,SNR=95						
MK31				Sn	Sn	05 35 41.9	+0.8
	1.9nm,0.5s,baz=200,slow=15,SNR=5.3						

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*JMA **02** 05:38:25.9±0.5,45°N±3°×15°0E±°,h30km,MV3.8/15, KURILE ISLANDS REGION*

*SKHL **02** 05:38:26.4±0.5,44°.60N×150°.10E,h62km±7km,mb4.1/2*

ISC 02 05:38:26.9±3.5,44°.50N±0°.10×149°.9E±0°.2,h34km,n15, σ2ˢ94/23,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.60	298	eP	Pb	05 38 53.1	-2.8
KUR				AMB	AMB	05 38 54.4	
	90nm,0.4s						
KUR				eS	Sb	05 39 13.5	-2.3
KUR				A	A	05 39 15.4	
	150nm,0.2s						
KUR				A	A	05 39 15.4	
	60nm,0.2s						
SHO	Shikotan	2.28	255	eP	Pb	05 39 04.4	-2.9
SHO				AMB	AMB	05 39 06.7	
	20nm,0.3s						
SHO				eS	Sb	05 39 32.5	-2.6
SHO				A	A	05 39 34.1	
	50nm,0.3s						
SHO				A	A	05 39 34.1	
	40nm,0.3s						
NEM2	Nemuro 2	3.19	251	P	Pn	05 39 16.5	+1.9
NEM2				eS	Sn	05 39 54.3	+2.8
NMR	Nemuro--Hokkai	3.20	251	eP	Pn	05 39 16.9	+2.1
NMR				eS	Sn	05 39 55.3	+3.6
JRA	Rausu	3.46	262	eP	Pn	05 39 21.6	+3.3

AKK	Akkeshi	3.93	250	eS	Sn	05 40 12.5	+2.7
JAK	Akkeshi	4.04	250	eP	Pn	05 39 28.1	+1.8
JAK				eS	Sn	05 40 14.1	+1.8
JTKR	Abashiri--Toko	4.32	265	eP	Pn	05 39 33.5	+3.3
JAR	Ashorobuto	4.57	257	eP	Pn	05 39 36.8	+3.1
JAR				eS	Sn	05 40 29.4	+3.9
JOB	Onbets	4.66	252	eS	Sn	05 40 30.9	+3.2
JCH	Churui	5.09	251	eP	Pn	05 39 43.3	+2.6
JCH				eS	Sn	05 40 40.2	+1.9
JAB	Ashibetsu	5.61	262	eP	Pn	05 39 48.1	+0.3
JNBK	Urakawa-nobuka	5.64	249	eP	Pn	05 39 51.0	+2.7
JNBK				eS	Sn	05 40 53.1	+1.3
JANG	Nango	7.43	239	eS	Sn	05 41 32.7	-3.2
JTH	Tanohata	7.49	235	eS	Sn	05 41 33.7	-3.7

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*SJA **02** 05:57:02.3±0.7, 21°.96S×68°.82W, h131^{km}±3^{km}, ML3.7, MW3.7*

*IDC **02** 05:57:04.2±8.7, 21°.89S×68°.73W, h106^{km}±63^{km}, mb3.3/4, mbtmp3.6/5, Error ellipse: s-maj=71.9km s-min=28.0km az=29.0*

*GUC **02** 05:57:04.4±0.8, 21°.93S×68°.80W, h118^{km}±3^{km}, ML3.8*

ISC 02 05:57:04.4±0.8, **21°.96S**±0°.03×**68°.84W**±0°.04, **h122**^{km}±6^{km}, **n40,** σ**1^{s}.57**/67, **8C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	0.41	293	⇑iP	Pn	05 57 21.7	-0.5
PB09				i S	Sn	05 57 34.8	-0.9
PB09				IAML		05 57 36.8	
	comp=E,5µm,0.2s						
PB09	IPOC Station P	0.41	293	eP	Pn	05 57 21.5	-0.8
PB09				eS	Sn	05 57 35.1	-0.6
PB09				IAML		05 57 35.7	
	comp=Z,4µm,0.5s						
PB03	IPOC Station P	0.85	264	⇑iP	Pn	05 57 25.0	-0.4
PB03				i S	Sn	05 57 40.7	-0.5
PB03				IAML		05 57 42.8	
	comp=E,3µm,0.1s						
PB03	IPOC Station P	0.85	264	eP	Pn	05 57 25.0	-0.4
PB03				eS	Sn	05 57 41.7	+0.4
PB03				IAML		05 57 43.2	
	comp=Z,2µm,0.1s						
PB06	IPOC Station P	1.00	222	⇑iP	Pn	05 57 26.6	-0.2
PB06				i S	Sn	05 57 43.7	-0.2
PB06				IAML		05 57 44.8	
	comp=E,3µm,0.2s						
PB06	IPOC Station P	1.00	222	eP	Pn	05 57 26.5	-0.3
PB06				eS	Sn	05 57 44.4	+0.6
PB06				IAML		05 57 45.3	
	comp=Z,2µm,0.3s						
PB01	IPOC Station P	1.09	326	⇑iP	Pn	05 57 26.7	-0.9
PB01				i S	Sn	05 57 44.2	-1.0
PB01				IAML		05 57 46.0	
	comp=E,3µm,0.3s						
PB01	IPOC Station P	1.09	326	eP	Pn	05 57 26.8	-0.9
PB01				eS	Sn	05 57 45.5	+0.3
PB01				IAML		05 57 47.6	
	comp=Z,1µm,0.2s						
AF01	San Pedro de A	1.16	148	⇓iP	Pn	05 57 27.9	-0.7
AF01				i S	Sn	05 57 46.1	-0.8
AF01				IAML		05 57 47.9	
	comp=E,2µm,0.7s						
AF01	San Pedro de A	1.16	148	eP	Pn	05 57 27.9	-0.7
AF01				eS	Sn	05 57 46.5	-0.4
AF01				IAML		05 58 04.0	
	comp=Z,970nm,0.6s						
PB05	IPOC Station P	1.54	234	⇑iP	Pn	05 57 32.4	-0.2
PB05				i S	Sn	05 57 53.7	-0.3
PB05				IAML		05 57 58.3	
	comp=E,760nm,0.4s						
PB05	IPOC Station P	1.54	234	eP	Pn	05 57 32.1	-0.4
PB05				eS	Sn	05 57 54.5	+0.5
PB05				IAML		05 57 56.5	
	comp=Z,420nm,0.1s						
PX03	IPOC Station P	1.71	334	eP	Pn	05 57 32.9	-1.7
PX03				i S	Sn	05 57 56.0	-1.6
PX03				IAML		05 57 57.7	
	comp=N,2µm,0.2s						
PB08	IPOC Station P	1.83	351	⇑iP	Pn	05 57 35.9	-0.4
PB08				eS	Sn	05 57 59.7	-0.9
PB08				IAML		05 58 02.0	
	comp=E,396nm,0.3s						
PB08	IPOC Station P	1.83	351	eP	Pn	05 57 35.9	-0.4
PB08				eS	Sn	05 58 01.0	+0.4
PB08				IAML		05 58 01.6	
	comp=Z,314nm,0.2s						
TA01	Diego Aracena	1.87	318	eP	Pn	05 57 35.1	-1.2
TA01				eS	Sn	05 57 59.4	-1.3
TA01				IAML		05 58 02.3	
	comp=N,959nm,0.3s						
TA01	Diego Aracena	1.87	318	eP	Pn	05 57 35.4	-0.9
TA01				eS	Sn	05 58 01.5	+0.8
TA01				IAML		05 58 02.0	
	comp=Z,339nm,0.6s						
TA02	Huaiquique	2.07	324	eP	Pn	05 57 36.9	-1.9
TA02				eS	Sn	05 58 03.5	-1.6
TA02				IAML		05 58 12.5	
	comp=N,1µm,0.1s						
TA02	Huaiquique	2.07	324	eP	Pn	05 57 37.5	-1.3
TA02				eS	Sn	05 58 06.3	+1.2
TA02				IAML		05 58 09.2	
	comp=Z,372nm,0.1s						
PB10	IPOC Station P	2.21	225	eP	Pn	05 57 40.1	-0.5
PB10	IPOC Station P	2.21	225	eP	Pn	05 57 40.1	-0.5
PB10				eS	Sn	05 58 08.0	-0.4
PB10				IAML		05 58 13.2	
	comp=Z,193nm,0.3s						
GO01	Chusmiza	2.30	352	⇑iP	Pn	05 57 41.6	-0.7
GO01				eS	Sn	05 58 09.8	-1.4
GO01				IAML		05 58 12.1	
	comp=N,850nm,0.2s						
GO01	Chusmiza	2.30	352	eP	Pn	05 57 42.0	-0.3
GO01				eS	Sn	05 58 11.5	+0.3
PB11	IPOC Station P	2.32	341	⇑iP	Pn	05 57 40.7	-1.4
PB11				eS	Sn	05 58 08.8	-2.2
PB11				IAML		05 58 09.9	
	comp=E,1µm,0.2s						
PB11	IPOC Station P	2.32	341	eP	Pn	05 57 40.6	-1.5
PB11				eS	Sn	05 58 09.0	-2.0
PB11				IAML		05 58 16.1	
	comp=Z,339nm,0.6s						
PB14	IPOC Station P	3.02	208	eP	Pn	05 57 50.5	-0.8
PB14				eS	Sn	05 58 14.5	-13
PB14				IAML		05 58 21.3	
	comp=Z,215nm,0.3s						
YJA	Yavi	3.09	95	eP	Pn	05 57 52.3	-0.1
SALTA		3.22	135	eP	Pn	05 57 48.7	-5.5
SALTA				eP		05 57 49.2	
SALTA				eP		05 57 50.1	
GO02	Mina Guanaco	3.26	192	eP	Pn	05 57 53.8	-0.7
GO02				eS	Sn	05 58 26.7	-6.5
PB16	IPOC Station P	3.66	350	eP	Pn	05 57 59.5	-0.5
PB16				eS	Sn	05 58 37.6	-5.3
PB16				IAML		05 59 11.2	
	comp=Z,50nm,0.4s						
SLA	San Lorenzo	4.12	133	eP	Pn	05 58 06.2	+0.5
AZAP	Zapla	4.14	124	eP	Pn	05 58 05.2	-1.0
AC01	Pan de Azucar	4.47	201	eP	Pn	05 58 07.8	-2.5
AC01				eS	Sn	05 58 58.0	-3.4
AC01				IAML		05 59 00.0	
	comp=Z,48nm,1.9s						
AC02	Maricunga	4.86	183	eP	Pn	05 58 15.1	-0.9
AC02				eS	Sn	05 58 52.2	-19
LPAZ	La Paz	5.68	7	P	Pn	05 58 27.3	+0.1
	comp=Z,1.2nm,0.4s,baz=153,slow=7.1,SNR=25						
LPAZ				S	Sn	05 59 29.6	-1.9
	comp=Z,3.2nm,0.7s,baz=128,slow=3.8,SNR=5.9						
BDFB	Brasilia	20.68	76	P	P	06 01 33.1	-1.9
	comp=Z,1.5nm,0.4s,baz=240,slow=11,SNR=8.1						
	comp=Z,1.5nm,0.4s						
TXAR	Lajitas Array	61.04	325	P	P	06 07 06.5	+1.1
	comp=Z,0.1nm,0.5s,baz=156,slow=3.3,SNR=1.9						
	comp=Z,0.1nm,0.5s						
PDAR	Pinedale Array	74.54	330	P	P	06 08 30.9	+1.0
	comp=Z,0.2nm,0.6s,baz=136,slow=5.8,SNR=2.0						
	comp=Z,0.2nm,0.6s						
TORD	Torodi Ar. Bea	77.45	70	P	P	06 08 49.6	+2.8
	comp=Z,1.5nm,0.3s,baz=261,slow=5.4,SNR=1.5						
	comp=Z,1.5nm,0.3s						
MKAR	Makanchi Array	145.97	36	PKPbc	PKPab	06 16 30.6	+0.1
	comp=Z,0.3nm,0.7s,baz=300,slow=3.2,SNR=2.5						

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*BEO **02** 06:12:41.9±1.5, 40°.20N×20°.77E, h4^{km}±6^{km}, ML2.7/11*

*TIR **02** 06:12:42.8, 40°.42N×20°.73E, h0^{km}, Md3.1/11, Ml2.9/9*

*PDG **02** 06:12:44.3±0.5, 40°.49N×20°.78E, h5^{km}±1^{km}, ML2.9/11, Error ellipse: s-maj=0.8km s-min=1.1km az=0.0*

*ATH **02** 06:12:45.3, 40°.31N×20°.88E, h9^{km}±2^{km}, ML2.6/12, Manual Solution by A.Fokaefs First location: 2019/06/02 06:13:50, This location: 2020/10/02 07:30:28 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

*THE **02** 06:12:47.6, 40°N±3°×2°1E±°, h0^{km}±7^{km}, M2.4/12, MLh2.4/12*

ISC 02 06:12:44.1±1.1, **40°.39N**±0°.02×**20°.77E**±0°.02, **h1**^{km}±10^{km}, **n80,** σ**1^{s}.14**/114, **12C-7D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEST	Nestorio	0.22	83	Pg	Pg	06 12 48.5	+0.3
NEST				Sg	Sg	06 12 52.8	+1.8
NEST				AML	AML	06 12 58.4	
	7.1nm,0.5s						
NEST				AMd		06 13 46.7	
NEST	Nestorio	0.22	83	P	Pg	06 12 49.3	+1.1
NEST				S	Sg	06 12 51.7	+0.6
NEST	Nestorio	0.22	83	P	Pg	06 12 49.2	+0.9
NEST				S	Sg	06 12 51.4	+0.4
KBN	Korca	0.23	4	Pg	Pg	06 12 47.1	-1.5
KBN				Sg	Sg	06 12 50.7	-1.0
KBN				AML	AML	06 12 52.1	
	24nm,0.2s						
KBN				AMd		06 13 40.2	
LSK	Leskovik	0.27	208	Pg	Pg	06 12 49.2	-0.1
LSK				Sg	Sg	06 12 54.3	+1.5
LSK				AML	AML	06 12 56.5	
	19nm,0.2s						
LSK				AMd		06 13 41.6	
PENT	Pentalofos	0.34	124	P	Pg	06 12 51.3	+0.6
PENT				S	Sg	06 12 53.7	-1.4
KPRO	Kipourio	0.63	133	P	Pg	06 12 56.4	+0.3
KPRO	Kipourio	0.63	133	P	Pg	06 12 55.9	-0.3
KPRO				S	Sg	06 13 01.9	-2.4
OHR	Ohrid	0.72	2	ePg	Pg	06 12 57.7	-0.2
OHR				eSg	Sg	06 13 09.3	+2.0
JAN	Janina	0.73	175	P	Pg	06 12 58.1	-0.1
JAN				S	Sg	06 13 06.2	-1.5
KZN	Kozani	0.77	96	P	Pg	06 12 59.0	+0.1
KZN				S	Sg	06 13 08.5	-0.4
SRN	Sarande	0.78	229	Pg	Pg	06 12 59.3	+0.3
SRN				Sg	Sb	06 13 11.5	+0.2
SRN				AML	AML	06 13 14.4	
	0.9nm,0.4s						
SRN				AMd		06 14 11.0	
IGT	Igoumenitsa	0.92	202	Pn	Pb	06 13 02.0	-0.8
IGT				Sn	Sn	06 13 16.3	-1.6
IGT				AMd		06 14 14.9	
IGT	Igoumenitsa	0.92	202	P	Pb	06 13 02.5	-0.3
IGT				S	Sb	06 13 14.0	-1.4
VLO	Vlora	0.97	275	Pn	Pg	06 13 01.3	-1.5
VLO				AMd		06 14 10.8	
KEK	Kerkira	1.00	228	P	Pn	06 13 05.0	-0.3
TETR	Tetrakomo, Epi	1.11	159	P	Pn	06 13 06.1	-0.7
TIR	Tirane	1.18	325	Pn	Pg	06 13 05.7	-0.9
TIR				Sn	Sg	06 13 22.8	+0.9
TIR				AML	AML	06 13 30.6	
	0.7nm,0.6s						
TIR				AMd		06 14 21.1	
TIR	Tirane	1.18	325	⇓P	Pg	06 13 05.8	-0.9
TIR	Tirane	1.18	325	ePg	Pg	06 13 05.9	-0.7
TIR				eSg	Sn	06 13 25.9	+1.6
THL	Klokotos Trika	1.26	130	P	Pg	06 13 07.8	-0.5
THL	Klokotos Trika	1.26	130	P	Pg	06 13 07.3	-1.0
TYRN	Tyrnavos	1.31	121	P	Pg	06 13 08.8	-0.5
TYRN	Tyrnavos	1.31	121	P	Pg	06 13 08.1	-1.1
PHP	Peshkopia	1.32	349	Pn	Pn	06 13 08.1	-1.5
PHP				Sn	Sg	06 13 27.2	+0.8
PHP				AML	AML	06 13 37.8	
	0.8nm,0.9s						
PHP				AMd		06 14 19.8	
TSLK	Tsoukalades, L	1.56	183	P	Pg	06 13 14.0	0.0
LKD2	Lefkada island	1.60	183	Pn	Pg	06 13 14.8	0.0
LKD2				Sn	Sg	06 13 38.9	+3.4
LKD2				AML	AML	06 13 43.3	
	0.6nm,0.4s						
LKD2				AMd		06 14 41.6	
LKD2	Lefkada island	1.60	183	P	Pg	06 13 16.7	+2.0
LKD2				S	Sg	06 13 38.5	+3.0
LKD2	Lefkada island	1.60	183	P	Pg	06 13 15.0	+0.2
VAY	Valandovo	1.65	55	ePg	Pn	06 13 13.3	-0.9
VAY				eSg	Sg	06 13 39.1	+1.9
NYDR	Nydri-Lefkada	1.68	182	P	Pg	06 13 17.1	+1.0
NYDR				S	Sg	06 13 40.1	+2.2
NYDR	Nydri-Lefkada	1.68	182	P	Pg	06 13 15.6	-0.5
EVR	Evrytania	1.68	151	P	Pg	06 13 16.5	+0.3
EVR	Evrytania	1.68	151	P	Pg	06 13 15.8	-0.4
EVGI	Lefkada island	1.77	183	P	Pg	06 13 18.3	+0.3
PUK	Puka	1.78	338	Pn	Pn	06 13 16.6	+0.6
PUK				Sn	Sb	06 13 41.9	+1.6
PUK				AML	AML	06 13 49.7	
	0.4nm,0.5s						
PUK				AMd		06 14 37.5	
HORT	Hortiatis	1.79	83	P	Pn	06 13 15.5	-0.6
HORT	Hortiatis	1.79	83	P	Pn	06 13 15.3	-0.8
SCTE	Santa Cesarea	1.79	261	Pn	Pn	06 13 16.1	+0.1
SCTE				Sn	Sg	06 13 42.0	+0.5
SCTE				AML	AML	06 13 45.9	
	0.6nm,0.5s						
SCTE				AMd		06 14 52.5	
KNT	Kendrikon	1.79	64	P	Pn	06 13 16.1	0.0
KNT	Kendrikon	1.79	64	P	Pn	06 13 15.7	-0.4
AGG	Agios Georgios	1.82	138	P	Pb	06 13 17.6	-0.6
AGG				S	Sb	06 13 40.3	-1.2
ULC	Ulcinj	1.95	324	⇑iPn	Pn	06 13 18.3	0.0
ULC				i Sn	Sn	06 13 44.7	+1.3
BCI	Bajram Curri	2.04	345	Pn	Pn	06 13 18.6	-1.0
PLG	Polygyros	2.04	90	P	Pn	06 13 20.3	+0.7
DRME	Dracevica, Mon	2.16	327	⇓iPn	Pn	06 13 20.2	-0.9
DRME				i Sn	Sn	06 13 50.3	+1.9
PDG	Podgorica	2.33	331	⇑P	Pn	06 13 24.6	+1.1
PDG	Podgorica	2.33	331	ePn	Pn	06 13 23.0	-0.5
PDG	Podgorica	2.33	331	⇓iPn	Pn	06 13 23.0	-0.5
PDG				i Sn	Sn	06 13 53.7	+0.9
BUM	Brajici-Budva	2.37	324	⇑iPn	Pn	06 13 23.6	-0.6
BUM				i Sn	Sn	06 13 54.3	+0.4
BOSS	Bosilegrad	2.47	31	ePn	Pn	06 13 25.9	+0.5
BARS	Barje	2.55	18	ePn	Pn	06 13 25.8	-0.7
CEME	Cevo	2.56	328	⇑iPn	Pn	06 13 26.1	-0.7
CEME				i Sn	Sn	06 13 59.3	+0.7
IVA	Berane	2.56	345	⇑iPn	Pn	06 13 26.8	0.0
IVA				i Sn	Sn	06 13 58.7	0.0
KOME	Kolasin	2.63	339	⇓iPn	Pn	06 13 27.8	+0.1
KOME				i Sn	Sn	06 14 01.0	+0.7
HCY	Herceg Novi	2.67	321	⇓iPn	Pn	06 13 28.1	-0.1
HCY				i Sn	Sn	06 14 03.0	+1.8
SELS	Selova	2.84	5	ePn	Pn	06 13 33.4	+2.9
VTS	Vitosha	2.90	39	ePn	Pn	06 13 30.8	-0.6
SJES	Sjenica	2.93	349	ePn	Pn	06 13 32.0	+0.2
BRY	Bratogost	3.02	327	⇓iPn	Pn	06 13 33.1	+0.1
BRY				i Sn	Sn	06 14 10.2	+0.4
MATE	Matera	3.11	276	⇑P	Pg	06 13 42.6	-1.1
PLE	Pljevlja	3.11	341	⇓iPn	Pn	06 13 33.5	-0.9
PLE				i Sn	Sn	06 14 12.6	+0.4
UPM	Unac-Piva	3.14	334	⇑iPn	Pn	06 13 34.9	+0.1
UPM				i Sn	Sn	06 14 13.5	+0.6
GOCS	Kraljevo Serbi	3.17	1	ePn	Pn	06 13 34.1	-1.0
ZAPS	Zavoj	3.20	25	ePn	Pn	06 13 35.3	-0.2
IVAS	Ivanjica	3.22	352	ePn	Pn	06 13 35.4	-0.3
BOVS	Bovan	3.32	12	⇑P	Pn	06 13 36.6	-0.5
BOVS	Bovan	3.32	12	ePn	Pn	06 13 35.9	-1.2
STON	Ston	3.38	318	ePn	Pn	06 13 36.3	-1.6
GRUS	Gruza	3.50	359	ePn	Pn	06 13 39.4	-0.1
BLKB	Belogradchik	3.53	23	⇑S	Sn	06 14 19.9	-2.5
ZAGS	Zajecar	3.59	17	ePn	Pn	06 13 41.0	+0.2
DIVS	Divibare	3.75	351	ePn	Pn	06 13 42.9	-0.2
TRUS	Trudelj	3.84	356	ePn	Pn	06 13 43.6	-0.7
KUBS	Kucevo	4.08	9	ePn	Pn	06 13 44.8	-2.7
TEKS	Tekeris	4.26	348	ePn	Pn	06 13 49.5	-0.5
MDVR	Moldovita	4.44	9	⇑P	Pn	06 13 53.9	+1.3
VRSS	Vrsac	4.75	5	ePn	Pn	06 13 56.2	-0.5
GZR	Gura Zlata	5.21	16	⇑P	Pn	06 14 05.6	+2.4
BZS	Buzias	5.26	7	⇑P	Pn	06 14 05.5	+1.7

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*IDC **02** 06:25:07.2±1.1, 56°.51S×25°.10W, h0^{km}, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=44.3km s-min=29.3km az=61.0*

*NEIC **02** 06:25:10.1±2.0, 56°.8S±0°.1×25°.5W±0°.2, h10^{km}±1^{km}, mb4.5/20, Error ellipse: s-maj=25.6km s-min=9.8km az=48.0*

ISC 02 06:25:12.1±0.7, **56°.64S**±0°.10×**25°.5W**±0°.1, **h29**^{km}**, n30,** σ**1^{s}.19**/30, **mb4.3**/12, **3C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA3	Neumayer Olymp	16.11	162	⇑P	Pn	06 28 55.2	-1.0
	comp=Z,0.4nm,0.2s						
VNA2	Neumayer--Watz	16.28	159	⇑P	Pn	06 28 58.4	+0.1
	comp=Z,0.7nm,0.2s,baz=326,slow=13						
SNAA	Sanae	17.81	157	⇑P	P	06 29 20.5	+2.5
	comp=Z,5.9nm,0.2s						
SNAA	Sanae	17.81	157		Pn	06 29 15.1	-2.4
PMSA	Palmer Station	20.25	231	P	P	06 29 42.7	-2.0
BELA	Belgrano 2	21.56	185	P	P	06 29 58.5	-0.3
BELA				IAmb	IAmb	06 30 02.0	
	comp=Z,7.2nm,0.6s						
MG05	Puerto Natales	27.55	260	P	P	06 30 57.5	+1.5
MG05				IAmb	IAmb	06 31 01.6	
	comp=Z,8.6nm,1.1s						
GO09	Cerro Castillo	27.66	261	P	P	06 30 56.4	-0.7
GO09				IAmb	IAmb	06 31 23.1	
	comp=Z,7.1nm,0.9s						
TRQA	Tornquist	30.44	292	P	P	06 31 21.7	-0.2
PLTB	Pedras Altas	31.62	310	P	P	06 31 33.3	+1.0
PLTB				IAmb	IAmb	06 31 50.9	
	comp=Z,5.2nm,1.1s						
QSPA	South Pole Qui	33.60	180	P	P	06 31 50.3	+0.7
QSPA				IAmb	IAmb	06 32 02.0	
	comp=Z,2.5nm,0.8s						
CPUP	Villa Florida	37.93	310	P	P	06 32 26.5	-0.3
	comp=Z,1.3nm,1.0s,baz=225,slow=8.6,SNR=4.9						
	comp=Z,1.3nm,1.0s						
PB14	IPOC Station P	45.47	296	P	P	06 33 28.0	-0.9
VNDA	Vanda	46.02	182	P	P	06 33 32.1	-0.1
VNDA	Vanda	46.02	182	P	P	06 33 32.5	+0.2
	comp=Z,0.4nm,0.8s,baz=195,slow=6.2,SNR=6.4						
	comp=Z,0.4nm,0.8s						
PB09	IPOC Station P	47.28	299	P	P	06 33 43.3	+0.3
PB01	IPOC Station P	48.04	299	P	P	06 33 49.8	+1.1
PTLB	Pontes e Lacer	48.40	314	P	P	06 33 53.2	+1.8
PB08	IPOC Station P	48.65	300	P	P	06 33 55.1	+1.3
PB08				IAmb	IAmb	06 33 55.8	
	comp=Z,4.5nm,0.8s						
GO01	Chusmiza	49.08	300	P	P	06 33 58.2	+1.0
GO01				IAmb	IAmb	06 33 59.1	
	comp=Z,6.6nm,0.8s						
PB11	IPOC Station P	49.22	300	P	P	06 33 58.8	+0.9
PB16	IPOC Station P	50.38	301	P	P	06 34 08.1	+0.9
QNGWA	Qangwa	50.60	63	P	P	06 34 08.9	+0.6
PB18	Visviri	51.01	301	P	P	06 34 12.9	+1.0
PB18				IAmb	IAmb	06 34 16.1	
	comp=Z,10nm,1.0s						
LPAZ	La Paz	51.51	304	P	P	06 34 15.9	+0.1
LPAZ				IAmb	IAmb	06 34 18.4	
	comp=Z,5.2nm,0.8s						
LPAZ	La Paz	51.51	304	P	P	06 34 15.4	-0.3
	comp=Z,3.7nm,0.5s,baz=141,slow=4.9,SNR=10						
	comp=Z,3.7nm,0.5s						
CASY	Casey	53.02	159	P	P	06 34 26.2	+0.5
CASY				IAmb	IAmb	06 34 32.6	
	comp=Z,6.3nm,1.0s						
TORD	Torodi Ar. Bea	73.12	28	P	P	06 36 37.8	-1.8
	comp=Z,1.6nm,0.3s,baz=202,slow=6.4,SNR=1.3						
	comp=Z,1.6nm,0.3s						
SONM	Songino Array	149.80	86	PKPbc	PKPbc	06 44 56.8	-1.5
	comp=Z,0.6nm,0.7s,baz=219,slow=1.8,SNR=2.1						
ILAR	Eielson Array	151.23	311	PKPbc	PKiKP	06 45 01.8	+0.2
	comp=Z,1.0nm,0.8s,baz=120,slow=1.8,SNR=12						

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*IDC **02** 06:26:27.7±0.7, 9°.20S×158°.92E, h0^{km}, mb3.9/10, mbtmp3.9/11, ML3.9/1, MS3.3/4, Error ellipse: s-maj=22.1km s-min=15.8km az=9.0*

ISC 02 06:26:32.9±0.7, **9°.2S**±0°.2×**158°.93E**±0°.09, **h35**^{km}**, n21,** σ**0^{s}.69**/13, **mb3.9**/10, **MS3.0**/3, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.03	102	Pn	Pn	06 26 49.7	-1.2
	713nm,0.3s,baz=258,slow=4.2,SNR=139						
HNR				Sn	Sn	06 27 04.7	+0.7
	707nm,0.3s,baz=17,slow=19,SNR=6.7						
HNR				LR	LR	06 27 14.8	
	comp=Z,640nm,18.1s,baz=252,slow=45						
PMG	Port Moresby	11.62	268	LR	LR	06 33 26.9	
	comp=Z,158nm,18.5s,baz=218,slow=36						
JAY	Jayapura	19.30	289	P	P	06 30 54.7	-0.5
	0.3nm,0.3s,baz=190,slow=21,SNR=2.5						
	17nm,0.9s						
WRA	Warramunga Arr	26.04	243	P	P	06 32 02.7	-0.5
	2.3nm,0.8s,baz=69,slow=10,SNR=7.7						
	2.3nm,0.8s						
STKA	Stephens Creek	27.70	213	LR	LR	06 43 13.3	
	comp=Z,40nm,18.6s,baz=28,slow=36						
ASAR	Alice Springs	27.90	236	P	P	06 32 18.9	-1.1
	1.0nm,0.8s,baz=74,slow=8.9,SNR=5.8						
ASAR				LR	LR	06 43 01.8	
	comp=Z,42nm,19.3s,baz=89,slow=36						
	1.0nm,0.8s						
H11S2	WAKE ISLAND Hy	28.58	16	T	T	07 01 14.6	
	baz=194,slow=76,SNR=40						
H11S3	WAKE ISLAND Hy	28.58	16	T	T	07 01 18.5	
	baz=194,slow=76,SNR=40						
H11S1	WAKE ISLAND Hy	28.60	16	T	T	07 01 18.6	
	baz=194,slow=76,SNR=20						
H11N1	WAKE ISLAND Hy	29.80	15	T	T	07 02 46.7	
	baz=196,slow=76,SNR=21						
H11N3	WAKE ISLAND Hy	29.81	15	T	T	07 02 42.8	
	baz=196,slow=76,SNR=30						
H11N2	WAKE ISLAND Hy	29.82	15	T	T	07 02 48.2	
	baz=196,slow=76,SNR=30						
PETK	Petropavlovsk-	62.09	359	P	P	06 36 50.4	+0.4
	0.6nm,0.6s,baz=190,slow=7.4,SNR=2.1						
	0.6nm,0.6s						
VNDA	Vanda	68.30	179	P	P	06 37 30.9	+0.9
	0.9nm,0.7s,baz=333,slow=5.6,SNR=7.1						
	0.9nm,0.7s						
SONM	Songino Array	73.32	326	P	P	06 38 01.6	+0.5
	0.8nm,0.6s,baz=148,slow=6.8,SNR=3.3						
	0.8nm,0.6s						
QSPA	South Pole Qui	80.77	180	P	P	06 38 43.3	+0.5
	2.1nm,1.0s,baz=72,slow=0.9,SNR=5.5						
	2.1nm,1.0s						
ILAR	Eielson Array	84.04	20	P	P	06 38 59.7	+0.2
	0.2nm,0.5s,baz=245,slow=5.4,SNR=2.6						
	0.2nm,0.5s						
MKAR	Makanchi Array	87.64	318	P	P	06 39 17.7	-0.1
	0.3nm,0.5s,baz=111,slow=4.6,SNR=4.3						
	0.3nm,0.5s						
ZALV	Zalesovo Beam	88.20	325	P	P	06 39 20.2	-0.1
	0.5nm,0.5s,baz=137,slow=9.1,SNR=2.1						
	0.5nm,0.5s						
NVAR	Mina Array Bea	90.05	51	P	P	06 39 29.4	-0.3
	0.7nm,0.9s,baz=253,slow=4.4,SNR=4.1						
	0.7nm,0.9s						
PFO	Pinyon Flats O	90.59	56	LR	LR	07 15 01.2	
	comp=Z,27nm,19.0s,baz=248,slow=32						

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*KRNET **02** 06:29:45.9±0.1, 40°.18N×77°.17E, h19^{km}, mb3.3*

*SOME **02** 06:29:45.7, 40°.17N×77°.05E, h15^{km}*

*NNC **02** 06:29:47.9±0.6, 40°.28N×77°.08E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=4.1km s-min=3.2km az=164.0*

ISC 02 06:29:50.8±1.4, **40°.37N**±0°.07×**77°.09E**±0°.03, **h10**^{km}**, n49,** σ**1^{s}.38**/73, **17C-17D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRN	Naryn	1.35	323	⇑eP	Pn	06 30 15.0	-1.0
NRN				⇑eS	Sg	06 30 36.2	+1.9
TARG	Taragay, Kyrgy	1.47	21	⇑iP	Pn	06 30 16.4	-1.3
TARG				⇑iS	Sg	06 30 38.9	+0.9
KDJ	Kajisay	1.77	2	⇓iP	Pn	06 30 22.0	+0.4
KDJ				⇓iS	Sg	06 30 48.7	+1.2
ULHL	Ulahol	1.98	341	P	Pb	06 30 26.9	-0.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	SNR=11						
ULHL	Ulahol	1.98	341	⇓iP	Pb	06 30 25.7	-1.4
ULHL				⇓iS	Sg	06 30 55.1	+0.5
BOOM	Boomskoye usch	2.29	338	⇑iP	Pn	06 30 29.9	+1.1
BOOM				⇑iS	Sg	06 31 02.4	-2.1
PRZ	Przheval'sk	2.33	25	⇓eP	Pn	06 30 30.5	+1.1
PRZ				⇓eS	Sb	06 31 01.9	-0.1
SALK	Salom-Alik	2.54	283	⇑iP	Pn	06 30 32.3	+0.1
SALK				⇑iS	Sb	06 31 06.2	-1.8
ARLS	Aral	2.57	306	⇓eP	Pn	06 30 33.2	+0.6
ARLS				⇓eS	Sb	06 31 07.2	-1.6
TNSS	Tian-Shan	2.67	358	Pg	Pb	06 30 38.5	-0.4
	22nm,0.4s						
TNSS				Lg	Lg	06 31 16.6	
	17nm,0.8s						
TNSS	Tian-Shan	2.67	358	eP	Pb	06 30 38.5	-0.4
	22nm,0.4s						
TNSS				eS	Sg	06 31 16.6	0.0
	17nm,0.8s						
IZV	Izvestkoviy	2.69	353	Pg	Pb	06 30 38.6	-0.6
	12nm,0.5s						
IZV				Lg	Lg	06 31 16.7	
	27nm,0.7s						
IZV	Izvestkoviy	2.69	353	eP	Pb	06 30 38.6	-0.6
	12nm,0.5s						
IZV				eS	Sg	06 31 16.7	-0.6
	27nm,0.7s						
SFK	Sufi-Kurgan	2.77	264	⇑iP	Pn	06 30 34.5	-0.9
SFK				⇑iS	Sn	06 31 10.0	+0.9
TKM2	Tokmak 2	2.79	337	P	Pb	06 30 41.3	+0.5
	SNR=30						
TKM2	Tokmak 2	2.79	337	⇓Pn	Pn	06 30 35.7	0.0
	6.6nm,0.3s						
TKM2				⇑Lg	Lg	06 31 20.4	
	7.9nm,0.6s						
TKM2	Tokmak 2	2.79	337	⇑iP	Pn	06 30 37.0	+1.3
TKM2				⇑iS	Sb	06 31 14.3	-0.8
MDOK	Medeo	2.80	359	⇓Pn	Pn	06 30 36.0	+0.3
	11nm,0.6s						
MDOK				Pg	Pb	06 30 40.8	-0.1
	13nm,0.4s						
MDOK				⇑Lg	Lg	06 31 19.5	
	49nm,0.9s						
MDOK				Lg	Lg	06 31 20.4	
	30nm,0.9s						
KBK	Karagaybulak	2.80	326	P	Pb	06 30 41.6	+0.7
	SNR=28						
KST	Kastek	2.81	343	Pg	Pb	06 30 40.3	-0.8
	11nm,0.5s						
KST				Lg	Lg	06 31 19.5	
	16nm,0.6s						
KST	Kastek	2.81	343	eP	Pb	06 30 40.3	-0.8
	11nm,0.5s						
KST				eS	Sg	06 31 19.5	-1.4
	16nm,0.6s						
MTBS	Maitube	2.81	350	Pg	Pb	06 30 40.7	-0.4
	9.4nm,0.3s						
MTBS				Lg	Lg	06 31 20.3	
	15nm,0.7s						
MTBS	Maitube	2.81	350	eP	Pb	06 30 40.6	-0.4
	9.4nm,0.3s						
MTBS				eS	Sg	06 31 20.3	-0.6
	15nm,0.7s						
SATY	Saty	2.87	20	Pg	Pb	06 30 41.9	-0.1
	14nm,0.5s						
SATY				Lg	Lg	06 31 22.5	
	28nm,0.6s						
KOTS	Kotyrbulak	2.87	0	Pg	Pb	06 30 41.8	-0.3
	18nm,0.4s						
KOTS				Lg	Lg	06 31 22.1	
	72nm,0.8s						
KOTS	Kotyrbulak	2.87	0	eP	Pb	06 30 41.8	-0.3
	18nm,0.4s						
KOTS				eS	Sg	06 31 22.1	-0.7
	72nm,0.8s						
ZHN	Zhinishke	2.98	19	Pg	Pb	06 30 43.5	-0.4
	17nm,0.3s						
ZHN				Lg	Lg	06 31 25.3	
	47nm,0.5s						
ZHN	Zhinishke	2.98	19	eP	Pb	06 30 43.5	-0.4
	17nm,0.3s						
ZHN				eS	Sg	06 31 25.2	-1.1
	47nm,0.5s						
AAK	Ala-Archa	2.99	320	P	Pb	06 30 45.1	+0.8
	SNR=5.4						
DGS	Degeres	3.04	341	Pg	Pb	06 30 44.3	-0.7
	27nm,0.5s						
DGS				Lg	Lg	06 31 26.6	
	14nm,0.4s						
AML	Almayashu	3.11	306	P	Pb	06 30 43.9	-2.5
	SNR=6.4						
AML	Almayashu	3.11	306	⇓iP	Pn	06 30 41.2	+1.0
AML				⇓iS	Sb	06 31 21.1	-3.4
UZB	Uzynbulak	3.13	27	Pg	Pb	06 30 46.3	-0.3
	7.4nm,0.6s						
UZB				Lg	Lg	06 31 30.1	
	13nm,0.4s						
ARSB	Arslanbob	3.26	288	⇑eP	Pn	06 30 42.2	+0.1
ARSB				⇑eS	Sn	06 31 23.1	+2.1
SHLS	Shalkode	3.31	32	Pg	Pg	06 30 52.7	-1.4
	7.2nm,0.5s						
SHLS				Lg	Lg	06 31 40.8	
	25nm,0.8s						
SHLS	Shalkode	3.31	32	eP	Pg	06 30 52.6	-1.4
	7.2nm,0.5s						
SHLS				eS	Sg	06 31 40.9	+3.9
	25nm,0.8s						
KPKS	Kokpek	3.32	20	Pg	Pb	06 30 49.1	-0.6
	5.4nm,0.5s						
KPKS				Lg	Lg	06 31 34.8	
	28nm,0.5s						
KTBS	Karatobe	3.36	355	Pg	Pb	06 30 50.3	-0.1
	8.6nm,0.4s						
KTBS				Lg	Lg	06 31 36.8	
	20nm,0.4s						
PDGK	Podgornoye	3.46	30	⇓Pg	Pb	06 30 52.8	+0.6
	5.0nm,0.5s						
PDGK				⇓Lg	Lg	06 31 40.6	
	20nm,0.6s						
USP	Ospenovka	3.49	327	P	Pb	06 30 53.2	+0.6
	SNR=8.7						
MRKS	Merke	3.75	311	Pg	Pb	06 30 56.0	-1.1
	7.3nm,0.5s						
MRKS				Lg	Lg	06 31 46.7	
	4.5nm,0.3s						
MRKS	Merke	3.75	311	eP	Pb	06 30 56.0	-1.1
	7.3nm,0.5s						
MRKS				eS	Sb	06 31 46.7	+4.1
	4.5nm,0.3s						
BLB	Baldybastay	3.87	15	Pg	Pb	06 30 59.9	+0.7
	26nm,0.4s						
BLB				Lg	Lg	06 31 53.3	
	46nm,0.5s						
KTMS	Ketmen	3.92	37	Pg	Pb	06 31 00.8	+0.7
	1.0nm,0.2s						
KTMS				Lg	Lg	06 31 54.9	
	7.6nm,0.4s						
KTMS	Ketmen	3.92	37	eP	Pb	06 31 00.8	+0.7
	1.0nm,0.2s						
KTMS				eS	Sg	06 31 54.9	-1.9
	7.6nm,0.4s						
MNAS	Manas	4.05	303	⇓eP	Pn	06 30 53.6	+0.7
MNAS				⇓eS	Sn	06 31 43.2	+2.8
DJR	Jarkent	4.44	26	Pg	Pb	06 31 10.1	+1.3
	3.4nm,0.4s						
DJR				Lg	Lg	06 32 10.7	
	9.5nm,0.7s						
DJR	Jarkent	4.44	26	eP	Pb	06 31 10.1	+1.3
	3.4nm,0.4s						
DJR				eS	Sg	06 32 10.7	-2.6
	9.5nm,0.7s						
KK31	Karatay Array	5.63	301	⇑Pg	Pb	06 31 32.3	+3.2
	0.7nm,0.5s,baz=125,slow=16,SNR=6.1						
KK31				⇓Lg	Lg	06 32 48.9	
	1.7nm,0.6s,baz=124,slow=28,SNR=3.7						

NEIC ***02*** *06:39:58.9±1.0, 18°.5S±0°.1×177°.6W±0°.2, h632^{km}±18^{km}, mb4.3/19, Error ellipse: s-maj=27.8km s-min=7.0km az=47.0*

IDC ***02*** *06:39:58.3±1.7, 18°.76S×177°.68W, h626^{km}±19^{km}, mb3.0/12, mbtmp4.0/15, Error ellipse: s-maj=18.9km s-min=15.2km az=104.0*

ISC 02 06:39:59.7±0.5**, 18°.57S**±0°.09×**177°.74W**±0°.10**, h650**^{km}**, n61,** σ**1**^{s}.**14**/62**, mb4.0**/22**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.09	281	P	P	06 41 27.8	-1.7
MSVF	Nonsavu	4.09	281	P	P	06 41 28.0	-1.6
	52nm,0.7s,baz=144,slow=21,SNR=45						
FUTU	Fugatoga	4.25	355	P	P	06 41 27.5	-3.1
AFI	Afiamalu	7.36	52	P	P	06 41 52.3	-3.1
FUNA	Funafuti	10.41	343	P	P	06 42 22.2	-1.4
DZM	Mont Dzumac	15.24	254	P	P	06 43 08.2	-0.2
DZM				IAmb	IAmb	06 43 28.6	
	comp=Z,24nm,1.5s						
DZM	Mont Dzumac	15.24	254	P	P	06 43 07.8	-0.6
	comp=Z,6.5nm,1.0s,baz=103,slow=14						
URZ	Urewera	20.13	192	P	P	06 43 48.6	-3.7
	comp=Z,13nm,0.9s,baz=64,slow=1.6,SNR=5.7						
EIDS	Eidsvold	29.65	251	P	P	06 45 15.4	-0.6
EIDS				IAmb	IAmb	06 45 37.0	
	comp=Z,11nm,1.1s						
ARMA	Armidale	30.17	241	P	P	06 45 21.4	+0.8
ARMA				IAmb	IAmb	06 45 46.2	
	comp=Z,10nm,1.1s						
CAN	Canberra	33.82	234	P	P	06 45 51.4	+0.3
CAN				IAmb	IAmb	06 45 51.7	
	comp=Z,5.6nm,0.6s						
CTAO	Charters Tower	33.97	261	P	P	06 45 53.1	+0.6
CTAO				IAmb	IAmb	06 45 53.5	
	comp=Z,6.8nm,0.7s						
TOO	Toolangi	37.26	232	P	P	06 46 20.2	+0.9
TOO				IAmb	IAmb	06 46 26.6	
	comp=Z,2.9nm,1.1s						
COEN	Coen	37.75	271	P	P	06 46 24.5	+1.0
COEN				IAmb	IAmb	06 46 25.9	
	comp=Z,9.9nm,0.8s						
TAU	Tasmania Unive	38.19	223	P	P	06 46 26.8	+0.3
STKA	Stephens Creek	38.88	242	P	P	06 46 32.7	+0.4
STKA	Stephens Creek	38.88	242	P	P	06 46 32.5	+0.2
	comp=Z,2.0nm,0.4s,baz=97,slow=9.5,SNR=4.4						
	comp=Z,2.0nm,0.4s						
BBOO	Buckleboo	43.65	242	P	P	06 47 09.9	+0.2
BBOO				IAmb	IAmb	06 47 10.4	
	comp=Z,8.4nm,0.9s						
WRA	Warramunga Arr	45.14	260	P	P	06 47 21.4	+0.1
	comp=Z,2.6nm,0.4s,baz=96,slow=7.8,SNR=26						
WRA				PcP	PcP	06 48 48.0	+0.8
	comp=Z,0.5nm,0.4s,baz=102,slow=3.1,SNR=2.7						
	comp=Z,2.6nm,0.4s						
AS31	Alice Springs	45.23	255	P	P	06 47 22.2	+0.3
ASAR	Alice Springs	45.23	255	P	P	06 47 21.8	-0.1
ASAR	Alice Springs	45.23	255	P	P	06 47 22.1	+0.2
	comp=Z,6.4nm,0.7s,baz=87,slow=8.1,SNR=89						
ASAR				PcP	PcP	06 48 48.0	+0.6
	comp=Z,1.0nm,0.5s,baz=98,slow=3.9,SNR=8.5						
	comp=Z,6.4nm,0.7s						
MTN	Manton Dam	49.42	269	P	P	06 47 53.3	+0.3
KNRA	Kununurra	51.06	265	P	P	06 48 05.6	+0.7
KNRA				IAmb	IAmb	06 48 28.6	
	comp=Z,28nm,1.4s						
FAKI	Fak Fak	51.33	281	P	P	06 48 06.1	-0.9
FITZ	Fitzroy Crossi	53.55	261	P	P	06 48 22.9	+0.3
TNTI	Ternate	57.23	283	P	P	06 48 48.2	+0.2
TNTI				IAmb	IAmb	06 48 50.9	
	comp=Z,20nm,0.9s						
PSA00	Pilbara Seismi	58.36	256	P	P	06 48 55.0	-0.5
PSA00				IAmb	IAmb	06 49 22.0	
	comp=Z,19nm,1.1s						
SBA	Scott Base	59.81	184	P	P	06 49 06.3	+2.2
VNDA	Vanda	59.85	185	P	P	06 49 05.7	+1.3
VNDA	Vanda	59.85	185	P	P	06 49 03.9	-0.5
	comp=Z,0.4nm,0.5s,baz=318,slow=7.9,SNR=2.7						
	comp=Z,0.4nm,0.5s						
QSPA	South Pole Qui	71.49	180	P	P	06 50 17.3	+0.6
QSPA	South Pole Qui	71.49	180	P	P	06 50 17.0	+0.3
	comp=Z,2.8nm,0.7s,baz=246,slow=0.7,SNR=26						
	comp=Z,2.8nm,0.7s						
PETK	Petropavlovsk-	74.47	345	P	P	06 50 35.1	+1.5
	comp=Z,0.6nm,0.6s,baz=160,slow=5.6,SNR=1.7						
	comp=Z,0.6nm,0.6s						
NVAR	Mina Array Bea	79.46	43	P	P	06 51 02.1	+1.0
	comp=Z,0.3nm,0.6s,baz=256,slow=5.5,SNR=2.5						
	comp=Z,0.3nm,0.6s						
MAW	Mawson	83.46	200	P	P	06 51 21.0	+0.4
	comp=Z,1.3nm,0.8s,baz=14,slow=14,SNR=1.3						
	comp=Z,1.3nm,0.8s						
TXAR	Lajitas Array	85.81	57	P	P	06 51 34.4	+1.6
	comp=Z,0.6nm,0.7s,baz=198,slow=5.6,SNR=10						
	comp=Z,0.6nm,0.7s						
ILAR	Eielson Array	86.38	13	P	P	06 51 35.4	+0.9
	comp=Z,0.2nm,0.5s,baz=204,slow=4.0,SNR=1.9						
	comp=Z,0.2nm,0.5s						
PDAR	Pinedale Array	87.39	43	P	P	06 51 41.7	+1.6
	comp=Z,0.2nm,0.5s,baz=232,slow=5.6,SNR=2.4						
	comp=Z,0.2nm,0.5s						
SNAA	Sanae	89.93	178	P	P	06 51 50.5	-0.7
	comp=Z,0.5nm,0.5s,baz=29,slow=15,SNR=1.6						
	comp=Z,0.5nm,0.5s						
ARCES	ARCESS Array B	127.07	350	PKP	PKiKP	06 57 52.0	+0.3
	comp=Z,2.4nm,0.8s,baz=21,slow=1.8,SNR=5.2						
FINES	FINESS Array B	133.99	344	PKP	PKiKP	06 58 05.8	0.0
	comp=Z,1.3nm,1.0s,baz=338,slow=1.5,SNR=4.2						
AKASG	Malin Array Be	141.43	332	PKhKP	PKPpre	06 58 14.3	
	comp=Z,0.4nm,0.4s,baz=45,slow=4.2,SNR=4.8						
EKA	Eskdalemuir Ar	143.06	5	PKP	PKPdf	06 58 20.0	-1.0
	comp=Z,0.5nm,0.4s,baz=328,slow=3.0,SNR=4.2						
BRTR	Keskin Array B	145.69	315	PKPbc	PKPab	06 58 28.7	-1.4
	comp=Z,0.6nm,0.6s,baz=155,slow=4.6,SNR=5.2						
CLL	Collm	146.24	348	i PKPbc	PKPab	06 58 30.7	-1.0
MLR	Muntele Rosu	146.72	329	PKPbc	PKPbc	06 58 30.7	0.0
	comp=Z,0.6nm,0.3s,baz=342,slow=10.0,SNR=3.7						
MMAI	Mount Meron Ar	147.03	302	PKPbc	PKiKP	06 58 33.6	+0.1
	comp=Z,0.7nm,0.3s,baz=60,slow=3.5,SNR=2.1						
GERES	GERESS Array B	148.41	346	PKPbc	PKiKP	06 58 35.6	-0.3
	comp=Z,0.5nm,0.7s,baz=43,slow=2.4,SNR=4.2						
CONA	Conrad Observa	148.68	342	i PKiKP	PKiKP	06 58 37.2	+0.7
	comp=Z,1.7nm,0.8s						
LESA	Schwarzleotal	149.98	346	i PKiKP	PKiKP	06 58 40.1	+0.9
	comp=Z,1.5nm,0.5s						
KBA	Koelnbreinsper	150.14	345	ePKiKP	PKiKP	06 58 39.8	+0.1
	comp=Z,0.9nm,0.5s						
WATA	Walderalm	150.31	347	i PKiKP	PKiKP	06 58 40.7	+0.7
	comp=Z,2.1nm,0.5s						
WTTA	Wattenberg	150.36	347	ePKiKP	PKiKP	06 58 40.8	+0.7
	comp=Z,2.5nm,0.4s						
MOTA	Moosalm	150.39	348	i PKiKP	PKiKP	06 58 40.8	+0.6
	comp=Z,2.0nm,0.9s						
MYKA	Terra Mystica	150.48	344	ePKiKP	PKiKP	06 58 40.1	-0.2
	comp=Z,1.1nm,0.5s						
SQTA	Sankt Quirin	150.49	348	i PKiKP	PKiKP	06 58 41.2	+0.9
	comp=Z,1.4nm,0.4s						
ABTA	Abfaltersbach	150.65	346	ePKiKP	PKiKP	06 58 41.1	+0.5
	comp=Z,4.0nm,0.5s						
DAVA	Damuels	150.68	349	ePKiKP	PKiKP	06 58 42.4	+1.6
	comp=Z,0.7nm,0.5s						
FETA	Feichten	150.78	348	ePKiKP	PKiKP	06 58 41.9	+0.9
	comp=Z,1.2nm,0.6s						
TORD	Torodi Ar. Bea	174.59	174	PKPab	PKPab	07 00 34.8	-0.7
	comp=Z,1.1nm,0.3s,baz=182,slow=5.6,SNR=1.3						

IDC 02 06:47:14.0±13.0**, 15°.41S**×**66°.44E, h0**^{km}**, mb3.7**/3**, mbtmp3.7**/3**, Error ellipse: s-maj=705.9km s-min=34.1km az=173.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	9.72	38	T	T	06 59 57.8	
	baz=212,slow=75,SNR=435						
H08S2	Diego Garcia H	9.73	38	T	T	06 59 58.6	
	baz=212,slow=75,SNR=332						
H08S3	Diego Garcia H	9.74	38	T	T	07 00 04.7	
	baz=212,slow=75,SNR=493						
H04N2	CROZET ISLANDS	33.02	199	T	T	07 27 54.0	
	baz=28,slow=76,SNR=96						
H04N1	CROZET ISLANDS	33.03	199	T	T	07 28 01.5	
	baz=28,slow=76,SNR=102						
H04N3	CROZET ISLANDS	33.04	199	T	T	07 27 53.8	
	baz=28,slow=76,SNR=101						
BOSA	Boshof	40.18	244	P	P	06 54 52.3	-0.1
	1.9nm,0.9s,baz=63,slow=6.8,SNR=2.0						
	1.9nm,0.9s						
H01W3	Cape Leeuwin H	46.84	124	T	T	07 44 53.5	
	baz=281						
H01W2	Cape Leeuwin H	46.84	124	T	T	07 44 54.3	
	baz=281						
H01W1	Cape Leeuwin H	46.86	124	T	T	07 45 01.0	
	baz=281						
ASAR	Alice Springs	63.62	109	P	P	06 57 47.3	0.0
	0.5nm,0.7s,baz=267,slow=5.9,SNR=4.5						
	0.5nm,0.7s						
WRA	Warramunga Arr	64.47	105	P	P	06 57 53.0	0.0
	0.6nm,0.7s,baz=266,slow=6.5,SNR=2.4						
	0.6nm,0.7s						

DNK ***02*** *06:49:38.2±2.6, 81°.76N×3°.28W, h18^{km}±37^{km}, ML1.7*

BER ***02*** *06:49:40.6±3.5, 81°.84N×3°.93W, h24^{km}±68^{km}, Mw3.1, ML1.7(DNK), Confirmed Earthquake*

KOLA ***02*** *06:49:40.5, 81°.95N×2°.15W, h0^{km}, ML2.0, Error ellipse: s-maj=135.7km s-min=56.6km az=40.0, Arctic Ocean,Knipovich ridge, north*

ISC 02 06:49:23.7±0.9**, 82°.30N**±0°.05×**1°.48E**±0°.05**, h10**^{km}**, n20,** σ**1**^{s}.**93**/28**, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NOR	Nord	2.64	264	e	Pn	06 50 06.9	+0.6
	baz=89,slow=18						
NOR				i P	Pb	06 50 09.0	-2.0
NOR				i		06 50 30.6	
NOR				IAML		06 50 33.3	
	comp=Z,13nm,0.4s						
NOR	Nord	2.64	264	e	Pn	06 50 06.9	+0.6
	baz=89,slow=18						
NOR				i P	Pb	06 50 09.0	-2.0
NOR				i		06 50 30.6	
NOR				IAML		06 50 33.3	
	comp=Z,13nm,0.4s						
KBS	Kingsbay	3.79	148	P	Pg	06 50 36.5	+0.3
KBS				S	Sb	06 51 18.1	+1.7
KBS	Kingsbay	3.79	148	eP	Pg	06 50 37.1	+0.9
KBS				IAML		06 50 39.0	
	comp=Z,2.2nm,0.2s						
KBS	Kingsbay	3.79	148	i P	Pg	06 50 36.6	+0.3
KBS				i S	Sb	06 51 17.2	+0.8
BRBB	Barentsburg B	4.74	146	P	Pg	06 50 51.1	-3.1
BRBB	Barentsburg B	4.74	146	eP	Pg	06 50 52.0	-2.3
BRBA	Barentsburg A	4.77	146	eP	Pg	06 50 52.3	-2.6
SPA0	Spitsbergen Ar	4.83	141	eP	Pg	06 50 52.3	-3.8
SPA0				IAML		06 50 56.5	
	comp=Z,2.4nm,0.6s						
SPA0				eS	Sb	06 51 47.2	+0.8
SPITS	Spitsbergen Ar	4.83	141	P	Pg	06 50 52.3	-3.8
SPITS				S	Sb	06 51 47.1	+0.8
HSPB	Hornsund (broa	5.87	147	P	Pb	06 51 06.2	+0.3
HSPB	Hornsund (broa	5.87	147	eP	Pb	06 51 06.0	+0.1
DAG	Danmarks Havn	6.59	224	eP	Pn	06 51 01.9	+1.5
DAG				i S	Sn	06 52 03.5	-12
DAG				IAML		06 52 11.1	
	comp=Z,3.5nm,0.3s						
DAG	Danmarks Havn	6.59	224	i P	Pn	06 51 01.0	+0.6
DAG				i S	Sn	06 52 03.5	-12
DAG				IAML		06 52 11.1	
	comp=Z,3.5nm,0.3s						
ZFI2	Zemlya Franca-	6.79	79	eP	Pb	06 51 24.2	+2.6
ZFI2				eS	Sb	06 52 41.7	-0.9
	comp=Z,37nm,1.6s						
OMEGA	Omega	6.81	79	eP	Pb	06 51 24.2	+2.2
OMEGA				eS	Sb	06 52 41.7	-1.6
	comp=Z,30nm,1.6s						
DBG	Daneborg	9.04	220	i P	Pn	06 51 34.6	+0.6
DBG				i S	Sn	06 53 00.6	-15
DBG				IAML		06 53 07.3	
	comp=Z,1.5nm,0.4s						
DBG	Daneborg	9.04	220	i P	Pn	06 51 34.6	+0.6
DBG				i S	Sn	06 53 00.6	-15
DBG				IAML		06 53 07.3	
	comp=Z,1.5nm,0.4s						
NEEM	North Greenlan	10.00	270	i P	Pn	06 51 49.5	+2.1
NEEM				IAML		06 53 25.8	
	comp=Z,1.0nm,0.3s						
NEEM				i		06 53 27.1	
NEEM	North Greenlan	10.00	270	i P	Pn	06 51 49.5	+2.1
NEEM				IAML		06 53 25.8	
	comp=Z,1.0nm,0.3s						
NEEM				i		06 53 27.1	

NEIC ***02*** *06:52:46.1±1.8, 17°.3S±0°.1×177°.7W±0°.2, h607^{km}±16^{km}, mb4.2/12, Error ellipse: s-maj=24.1km s-min=17.7km az=81.0*

IDC ***02*** *06:52:50.4±1.5, 18°.19S×178°.23W, h590^{km}±16^{km}, mb3.1/11, mbtmp4.0/13, Error ellipse: s-maj=17.5km s-min=14.6km az=113.0*

ISC 02 06:52:46.4±0.8**, 17°.4S**±0°.1×**177°.86W**±0°.10**, h600**^{km}**, n34,** σ**1**^{s}.**65**/31**, mb3.9**/16**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUTU	Fugatoga	3.09	355	P	P	06 54 04.7	-1.5
MSVF	Nonsavu	3.92	265	P	P	06 54 13.1	+1.7
MSVF	Nonsavu	3.92	265	P	P	06 54 12.9	+1.5
	19nm,0.6s,baz=75,slow=2.9,SNR=26						
NIUE	Niue	7.72	104	P	P	06 54 41.8	-1.3
RAO	Raoul Island	11.80	180	P	P	06 55 24.4	+1.4
DZM	Mont Dzumac	15.49	250	P	P	06 56 00.5	+1.3
DZM				IAmb	IAmb	06 56 24.6	
	comp=Z,7.3nm,1.0s						
DZM	Mont Dzumac	15.49	250	P	P	06 55 57.3	-2.0
	comp=Z,6.6nm,1.0s,baz=126,slow=19,SNR=1.7						
URZ	Urewera	21.24	191	P	P	06 56 46.0	-5.1
	comp=Z,11nm,0.9s,baz=24,slow=1.7,SNR=5.9						
	comp=Z,11nm,0.9s						
EIDS	Eidsvold	29.93	249	P	P	06 58 07.7	0.0
EIDS				IAmb	IAmb	06 58 16.6	
	comp=Z,7.9nm,1.1s						
ARMA	Armidale	30.65	239	P	P	06 58 13.5	-0.3
ARMA				IAmb	IAmb	06 58 14.8	
	comp=Z,6.1nm,0.9s						
CAN	Canberra	34.43	232	P	P	06 58 45.0	-0.6
COEN	Coen	37.63	270	P	P	06 59 11.3	-0.8
COEN				IAmb	IAmb	06 59 21.4	
	comp=Z,12nm,1.1s						
TOO	Toolangi	37.89	231	P	P	06 59 12.5	-1.5
TOO				IAmb	IAmb	06 59 14.0	
	comp=Z,3.6nm,0.7s						
STKA	Stephens Creek	39.33	241	P	P	06 59 25.9	+0.2
STKA	Stephens Creek	39.33	241	P	P	06 59 25.0	-0.6
	comp=Z,5.4nm,0.7s,baz=92,slow=10,SNR=9.1						
	comp=Z,5.4nm,0.7s						
BBOO	Buckleboo	44.11	241	P	P	07 00 03.0	-0.1
BBOO				IAmb	IAmb	07 00 03.4	
	comp=Z,5.6nm,0.8s						
WRA	Warramunga Arr	45.24	259	P	P	07 00 12.9	+0.9
	comp=Z,0.5nm,0.3s,baz=97,slow=7.5,SNR=2.1						
	comp=Z,0.5nm,0.3s						
AS31	Alice Springs	45.43	254	P	P	07 00 14.1	+0.7
ASAR	Alice Springs	45.43	254	P	P	07 00 13.5	+0.1
ASAR	Alice Springs	45.43	254	P	P	07 00 13.9	+0.6
	comp=Z,2.7nm,0.5s,baz=87,slow=8.9,SNR=45						
ASAR				S	S	07 06 09.3	-3.0
	comp=Z,0.9nm,0.7s,baz=90,slow=15,SNR=5.2						
	comp=Z,2.7nm,0.5s						
MTN	Manton Dam	49.34	268	P	P	07 00 41.7	-0.9
FITZ	Fitzroy Crossi	53.63	260	P	P	07 01 14.4	+1.1
SBA	Scott Base	60.95	184	P	P	07 02 03.9	+1.8
VNDA	Vanda	60.99	185	P	P	07 02 02.8	+0.5
VNDA	Vanda	60.99	185	P	P	07 02 02.5	+0.2
	comp=Z,0.4nm,0.6s,baz=291,slow=9.1,SNR=2.5						
	comp=Z,0.4nm,0.6s						
MJAR	Matsushiro Arr	67.82	323	P	P	07 02 52.4	+6.4
	comp=Z,0.9nm,0.5s,baz=157,slow=5.3,SNR=4.1						
	comp=Z,0.9nm,0.5s						
QSPA	South Pole Qui	72.65	180	P	P	07 03 15.2	+1.1
QSPA	South Pole Qui	72.65	180	P	P	07 03 14.8	+0.7
	comp=Z,1.4nm,0.6s,baz=108,slow=0.9,SNR=17						
	comp=Z,1.4nm,0.6s						
PETK	Petropavlovsk-	73.33	345	P	P	07 03 26.4	+8.5
	comp=Z,1.1nm,0.6s,baz=148,slow=5.3,SNR=5.3						
	comp=Z,1.1nm,0.6s						
ILAR	Eielson Array	85.28	13	P	P	07 04 28.1	+7.6
	comp=Z,0.3nm,0.4s,baz=220,slow=5.0,SNR=13						
	comp=Z,0.3nm,0.4s						
TXAR	Lajitas Array	85.28	57	P	P	07 04 30.6	+9.2
	comp=Z,0.3nm,0.7s,baz=238,slow=6.9,SNR=4.0						
	comp=Z,0.3nm,0.7s						
SNAA	Sanae	91.09	178	P	P	07 04 48.6	+0.9
	comp=Z,0.7nm,0.7s,baz=202,slow=17,SNR=1.7						
	comp=Z,0.7nm,0.7s						
BRTR	Keskin Array B	144.79	316	PKPbc	PKiKP	07 11 22.7	+2.2
	comp=Z,0.4nm,0.8s,baz=157,slow=4.0,SNR=3.7						
GERES	GERESS Array B	147.26	346	PKPbc	PKPab	07 11 29.8	+2.5
	comp=Z,0.6nm,0.6s,baz=26,slow=3.5,SNR=6.7						

TIR 02 07:00:55.0, 40°.41N×20°.95E, h44^{km}, Md2.7/4, Ml2.0/4, 2C-1D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEST	**Nestorio**	**0.07**	**86**	Pg	Pn	07 01 02.7	+0.5
NEST				Sg	Sn	07 01 08.0	+0.8
NEST				AML	AML	07 01 14.0	
	0.4nm,0.2s						
NEST				AMd		07 01 58.3	
NEST	**Nestorio**	**0.07**	**86**	⇑ePg	Pn	07 01 06.4	+4.2
NEST				Sg	Sn	07 01 10.1	+2.9
NEST				AML	AML	07 01 11.5	
	0.4nm,0.1s						
KBN	**Korca**	**0.25**	**330**	Pg	Pn	07 01 04.9	+1.7
KBN				Sg	Sn	07 01 09.3	+0.3
KBN				AML	AML	07 01 10.6	
	0.9nm,0.1s						
KBN	**Korca**	**0.25**	**330**	⇑ePg	Pn	07 01 05.7	+2.5
KBN				Sg	Sn	07 01 09.9	+0.9
KBN				AML	AML	07 01 11.4	
	0.7nm,0.2s						
LSK	**Leskovik**	**0.37**	**226**	Pg	Pn	07 01 04.8	+0.3
LSK				Sg	Sn	07 01 12.3	+1.2
LSK				AML	AML	07 01 14.9	
	1.2nm,0.3s						
LSK				AMd		07 01 48.1	
LSK	**Leskovik**	**0.37**	**226**	⇓ePg	Pn	07 01 07.2	+2.7
LSK				Sg	Sn	07 01 11.9	+0.7
LSK				AML	AML	07 01 15.0	
	0.7nm,0.3s						
SRN	**Sarande**	**0.90**	**234**	Pg	Pn	07 01 13.1	+1.9
SRN				S	Sn	07 01 26.8	+3.7
SRN				AML	AML	07 01 31.3	
SRN				AMd		07 02 01.6	
SRN	**Sarande**	**0.90**	**234**	Pn	Pn	07 01 17.1	+5.9
SRN				Sn	Sn	07 01 30.1	+7.0
IGT	**Igoumenitsa**	**1.00**	**209**	Pg	Pn	07 01 14.4	+1.8
IGT				Sg	Sn	07 01 28.8	+3.3
IGT				AMd		07 02 13.5	

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*SNET **02** 07:10:51.6±0.8, 13°.08N×89°.47W, h48^{km}±8^{km}, ML3.1*
*GCG **02** 07:10:51.3±0.6, 13°.06N×89°.62W, h40^{km}±19^{km}, MD3.6*
*CATAC **02** 07:10:51.3±0.5, 13°N±3°×8°9W±°, h29^{km}±3^{km}, M3.3/25, MLv3.3/25, Error ellipse: s-maj=9.1km s-min=4.8km az=43.1, confirmed*

ISC 02 07:10:50.3±1.7, **13°.01N**±0°.07×**89°.49W**±0°.05, **h27**^{km}±12^{km}, **n78, σ0^{s}.50**/95, **17C-4D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.50**	**19**	eP	**Pn**	**07 11 01.9**	**+0.3**
LALI				eS	**Sn**	**07 11 09.7**	**+0.3**
LALI	**Alcalda de L**	**0.50**	**19**	i P	**Pn**	**07 11 02.1**	**+0.4**
LALI	**Alcalda de L**	**0.50**	**19**	⇑P	**Pn**	**07 11 02.1**	**+0.4**
JAYA	**Jayaque - finc**	**0.64**	**3**	eP	**Pn**	**07 11 03.7**	**-0.1**
JAYA				eS	**Sn**	**07 11 13.1**	**0.0**
JAYA				IAML		07 11 14.4	
	comp=Z,2µm,0.2s						
JAYA	**Jayaque - finc**	**0.64**	**3**	i P	**Pn**	**07 11 03.7**	**-0.1**
JAYA				i S	**Sb**	**07 11 12.9**	**+1.2**
JAYA	**Jayaque - finc**	**0.64**	**3**	⇑P	**Pn**	**07 11 03.7**	**-0.1**
PANCS	**Alcalda de**	**0.67**	**27**	P	**Pn**	**07 11 04.0**	**0.0**
ITCA	**Escuela Especi**	**0.69**	**17**	⇓P	**Pn**	**07 11 04.4**	**+0.1**
LOMA	**Loma Larga**	**0.70**	**26**	eP	**Pn**	**07 11 04.5**	**0.0**
LOMA				eS	**Sn**	**07 11 14.6**	**0.0**
LOMA	**Loma Larga**	**0.70**	**26**	⇑P	**Pn**	**07 11 04.6**	**0.0**
PMON	**Piamonte**	**0.72**	**14**	eP	**Pn**	**07 11 04.7**	**0.0**
PMON				eS	**Sn**	**07 11 15.8**	**+0.9**
PMON	**Piamonte**	**0.72**	**14**	⇑P	**Pn**	**07 11 04.7**	**0.0**
LFRS	**El Faro**	**0.74**	**34**	eP	**Pn**	**07 11 05.2**	**+0.2**
LFRS				eS	**Sb**	**07 11 15.1**	**+0.7**
UTEC	**Universidad Te**	**0.74**	**22**	eP	**Pn**	**07 11 05.0**	**0.0**
UTEC	**Universidad Te**	**0.74**	**22**	⇑P	**Pn**	**07 11 05.1**	**0.0**
UEES	**Universidad Ev**	**0.74**	**19**	eP	**Pn**	**07 11 05.0**	**0.0**
UEES				eS	**Sn**	**07 11 15.8**	**+0.2**
UEES				IAML		07 11 17.8	
	comp=Z,829nm,0.1s						
UEES	**Universidad Ev**	**0.74**	**19**	⇑P	**Pn**	**07 11 05.1**	**0.0**
BOQS	**Boqueron**	**0.75**	**16**	eP	**Pn**	**07 11 05.3**	**+0.1**
UESS	**Universidad de**	**0.76**	**22**	eP	**Pn**	**07 11 05.3**	**0.0**
PIC2	**El Picacho**	**0.76**	**17**	eP	**Pn**	**07 11 05.7**	**+0.2**
IGN	**Direccin Gen**	**0.76**	**24**	eP	**Pn**	**07 11 05.4**	**+0.1**
IGN	**Direccin Gen**	**0.76**	**24**	P	**Pn**	**07 11 05.2**	**-0.1**
UDBS	**Universidad Do**	**0.77**	**25**	eP	**Pn**	**07 11 05.5**	**0.0**
UDBS				eS	**Sb**	**07 11 15.9**	**+0.6**
UDBS	**Universidad Do**	**0.77**	**25**	⇑P	**Pn**	**07 11 05.4**	**-0.1**
CEDA	**San Andres**	**0.79**	**7**	eP	**Pn**	**07 11 05.7**	**0.0**
CEDA	**San Andres**	**0.79**	**7**	⇑P	**Pn**	**07 11 05.7**	**0.0**
LFU	**La Fuente**	**0.82**	**26**	eP	**Pn**	**07 11 06.5**	**+0.3**
LFU				eS	**Sn**	**07 11 18.1**	**+0.7**
CEVE	**Cerro Verde**	**0.82**	**351**	eP	**Pn**	**07 11 06.3**	**0.0**
CEVE				IAML		07 11 24.3	
	comp=Z,704nm,0.2s						
CEVE	**Cerro Verde**	**0.82**	**351**	⇓P	**Pn**	**07 11 06.5**	**+0.2**
SBLS	**San Blas**	**0.83**	**351**	eP	**Pn**	**07 11 06.5**	**0.0**
LBRS	**Las Brisas**	**0.84**	**31**	eP	**Pn**	**07 11 06.9**	**+0.4**
COEG	**Centro de Oper**	**0.84**	**44**	eP	**Pb**	**07 11 06.2**	**-0.3**
COEG				IAML		07 11 20.3	
	comp=Z,494nm,0.3s						
COEG	**Centro de Oper**	**0.84**	**44**	⇑P	**Pb**	**07 11 06.4**	**0.0**
SNJE	**San Jose**	**0.86**	**352**	eP	**Pb**	**07 11 06.7**	**-0.1**
TECO	**Alcaldia de Te**	**0.86**	**53**	eP	**Pb**	**07 11 06.3**	**-0.4**
TECO				eS	**Sb**	**07 11 18.1**	**+0.2**
TECO				IAML		07 11 19.7	
	comp=Z,137nm,0.2s						
TECO	**Alcaldia de Te**	**0.86**	**53**	⇑P	**Pb**	**07 11 06.4**	**-0.4**
PAVA	**Las Pavas**	**0.88**	**38**	eP	**Pn**	**07 11 07.2**	**+0.2**
PAVA	**Las Pavas**	**0.88**	**38**	⇑P	**Pn**	**07 11 07.3**	**+0.3**
UESV	**Universidad de**	**0.92**	**48**	eP	**Pb**	**07 11 07.3**	**-0.3**
UESV				eS	**Sb**	**07 11 19.7**	**+0.1**
UESV	**Universidad de**	**0.92**	**48**	⇑P	**Pb**	**07 11 07.4**	**-0.3**
NUBE	**Las Nubes**	**0.93**	**342**	eP	**Pb**	**07 11 07.5**	**-0.4**
NUBE				eS	**Sb**	**07 11 19.5**	**-0.4**
NUBE	**Las Nubes**	**0.93**	**342**	i P	**Pb**	**07 11 07.5**	**-0.4**
NUBE				i S	**Sb**	**07 11 19.6**	**-0.3**
NUBE	**Las Nubes**	**0.93**	**342**	⇑P	**Pb**	**07 11 07.4**	**-0.4**
ALJI	**Alcalda de J**	**0.95**	**71**	eP	**Pn**	**07 11 07.9**	**+0.1**
ALJI	**Alcalda de J**	**0.95**	**71**	⇑P	**Pn**	**07 11 07.9**	**+0.1**
UNIC	**Universidad Ca**	**0.96**	**357**	eP	**Pb**	**07 11 08.1**	**-0.3**
UNIC	**Universidad Ca**	**0.96**	**357**	⇑P	**Pn**	**07 11 08.3**	**+0.2**
SCLA	**Alcaldia de Sa**	**1.01**	**47**	eP	**Pn**	**07 11 08.9**	**+0.2**
SCLA	**Alcaldia de Sa**	**1.01**	**47**	⇓P	**Pb**	**07 11 08.8**	**-0.4**
SLOZ	**Alcaldia de Sa**	**1.05**	**344**	eP	**Pn**	**07 11 09.3**	**+0.1**
SLOZ	**Alcaldia de Sa**	**1.05**	**344**	⇑P	**Pn**	**07 11 09.4**	**+0.1**
TECA	**Tecapa**	**1.07**	**63**	eP	**Pb**	**07 11 10.1**	**-0.2**
PQSS	**Presa 15 de Se**	**1.09**	**56**	eP	**Pn**	**07 11 09.8**	**0.0**
PQSS				eS	**Sb**	**07 11 23.6**	**-0.7**
PQSS	**Presa 15 de Se**	**1.09**	**56**	⇓P	**Pn**	**07 11 09.6**	**-0.1**
PACA	**Pacayal**	**1.22**	**68**	eP	**Pb**	**07 11 12.3**	**-0.5**
PACA				eS	**Sn**	**07 11 28.3**	**+0.9**
PACA	**Pacayal**	**1.22**	**68**	⇑P	**Pb**	**07 11 12.3**	**-0.5**
LCY	**Lacayo**	**1.23**	**70**	eP	**Pb**	**07 11 12.4**	**-0.6**
RANC	**El Ranchito**	**1.24**	**70**	P	**Pn**	**07 11 10.4**	**-1.6**
RANC	**El Ranchito**	**1.24**	**70**	S	**Sn**	**07 11 27.2**	**-0.7**
VSM	**San Miguel**	**1.25**	**71**	eP	**Pb**	**07 11 12.9**	**-0.5**
BLLM	**Bellamira**	**1.29**	**71**	eP	**Pb**	**07 11 13.1**	**-0.8**
MTO3	**Montecristo**	**1.38**	**5**	eP	**Pn**	**07 11 14.1**	**+0.1**
MTO3	**Montecristo**	**1.38**	**5**	i P	**Pn**	**07 11 14.1**	**+0.1**
MTO3	**Montecristo**	**1.38**	**5**	S	**Sn**	**07 11 30.6**	**-1.0**
ESQI	**Esquipulas**	**1.54**	**5**	eP	**Pn**	**07 11 16.4**	**+0.3**
ESQI	**Esquipulas**	**1.54**	**5**	S	**Sn**	**07 11 35.6**	**+0.2**
LCND	**La Caada**	**1.58**	**79**	eP	**Pn**	**07 11 17.0**	**+0.4**
LCND	**La Caada**	**1.58**	**79**	P	**Pn**	**07 11 17.0**	**+0.4**
CNCH	**Conchagua**	**1.63**	**81**	eP	**Pn**	**07 11 17.6**	**+0.3**
CNCH				IAML		07 11 43.2	
	comp=Z,628nm,0.3s						
CNCH	**Conchagua**	**1.63**	**81**	S	**Sn**	**07 11 37.9**	**+0.3**
CNCH	**Conchagua**	**1.63**	**81**	P	**Pn**	**07 11 17.7**	**+0.3**
CSGN	**Cosiguina Volc**	**1.88**	**91**	P	**Pn**	**07 11 21.2**	**+0.5**
CSGN				S	**Sn**	**07 11 43.2**	**-0.4**
POTN	**Potosi Cosigui**	**1.93**	**90**	P	**Pn**	**07 11 22.2**	**+0.8**
POTN				S	**Sn**	**07 11 44.1**	**-0.6**
CNGA	**Al SSO del Vol**	**2.77**	**100**	P	**Pn**	**07 11 35.4**	**+2.4**
CNGN	**Cerro Negro**	**2.77**	**100**	P	**Pn**	**07 11 33.1**	**+0.1**
COPN	**Copaltepe**	**2.95**	**106**	P	**Pn**	**07 11 35.9**	**+0.6**
RCVN	**Varillal2**	**3.26**	**80**	P	**Pn**	**07 11 39.5**	**-0.3**
MATN	**Matagalpa**	**3.47**	**91**	P	**Pn**	**07 11 42.3**	**-0.4**

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*NEIC **02** 07:36:55.3±0.9, 27°.5S±0°.1×72°.6E±0°.1, h10^{km}±1^{km}, mb4.5/11, Error ellipse: s-maj=26.1km s-min=15.1km az=212.0*
*IDC **02** 07:36:59.0±1.0, 26°.41S×71°.62E, h0^{km}, mb3.8/10, mbtmp3.8/10, MS3.5/15, Error ellipse: s-maj=38.8km s-min=21.7km az=78.0*

ISC 02 07:37:01.2±0.7, **26°.4S**±0°.1×**71°.9E**±0°.1, **h10**^{km}, **n46, σ1^{s}.19**/23, **mb4.1**/17, **MS3.6**/15, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**18.70**	**2**	T	T	08 00 27.6	
	baz=182,slow=76,SNR=8.6						
H08S2	**Diego Garcia H**	**18.70**	**2**	T	T	08 00 27.7	
	baz=182,slow=76,SNR=14						
H08S3	**Diego Garcia H**	**18.71**	**2**	T	T	08 00 29.0	
	baz=182,slow=76,SNR=9.3						
H04N2	**CROZET ISLANDS**	**25.36**	**214**	T	T	08 08 50.6	
	baz=46,slow=74,SNR=440						
H04N1	**CROZET ISLANDS**	**25.37**	**214**	T	T	08 08 57.3	
	baz=46,slow=74,SNR=272						
H04N3	**CROZET ISLANDS**	**25.38**	**214**	T	T	08 08 56.0	
	baz=46,slow=74,SNR=320						
CRZF	**Crozet Islands**	**25.52**	**213**	P	P	07 42 19.0	-11
PALK	**Pallekele**	**34.58**	**16**	LR	LR	07 54 32.4	
	comp=Z,95nm,20.3s,baz=156,slow=30						
H01W2	**Cape Leeuwin H**	**37.09**	**114**	T	T	08 23 28.7	
	baz=272,slow=74,SNR=4.7						
H01W3	**Cape Leeuwin H**	**37.09**	**114**	T	T	08 23 26.7	
	baz=272,slow=74,SNR=3.9						
H01W1	**Cape Leeuwin H**	**37.10**	**114**	T	T	08 23 27.3	
	baz=272,slow=74,SNR=4.0						
PSI	**Prapat**	**39.09**	**46**	LR	LR	07 57 00.8	
	comp=Z,82nm,19.6s,baz=269,slow=31						
LEM	**Lembang**	**39.19**	**67**	LR	LR	07 58 25.3	
	comp=Z,81nm,18.0s,baz=150,slow=33						
NWAO	**Narrogin (SRO)**	**39.69**	**110**	P	P	07 44 17.8	-16
NWAO				IAmb	IAmb	07 44 41.9	
	comp=Z,22nm,1.1s						
KIBK	**Kibwezi**	**40.35**	**301**	P	**P**	**07 44 41.1**	**+1.6**
KIBK				IAmb	IAmb	07 44 42.9	
	comp=Z,10nm,1.5s						
BOSA	**Boshof**	**41.21**	**256**	LR	LR	07 58 50.9	
	comp=Z,83nm,18.5s,baz=126,slow=32						
LBTB	**Lobatse**	**41.55**	**261**	LR	LR	07 58 15.7	
	comp=Z,109nm,21.5s,baz=110,slow=31						
MAW	**Mawson**	**41.55**	**185**	LR	LR	07 58 22.6	
	comp=Z,93nm,18.5s,baz=354,slow=31						
KMBO	**Kilima Mbogo**	**41.73**	**301**	P	**P**	**07 44 52.6**	**+1.6**
LSZ	**Lusaka**	**42.13**	**276**	LR	LR	07 59 42.9	
	comp=Z,62nm,18.9s,baz=160,slow=33						
XAUDM	**Khaudum**	**47.12**	**269**	P	**P**	**07 45 32.2**	**-1.7**
KAPI	**Kappang**	**50.38**	**74**	LR	LR	08 05 31.0	
	comp=Z,27nm,19.3s,baz=309,slow=34						
CMAR	**Chiang Mai Arr**	**51.79**	**33**	P	**P**	**07 46 06.3**	**-3.0**
CMAR	**Chiang Mai Arr**	**51.79**	**33**	P	**P**	**07 46 11.1**	**+1.7**
	comp=Z,0.7nm,0.3s,baz=215,slow=7.1,SNR=6.4						
CMAR				LR	LR	08 03 58.1	
	comp=Z,29nm,21.8s,baz=190,slow=31						
	comp=Z,0.7nm,0.3s						
ASAR	**Alice Springs**	**55.78**	**102**	P	**P**	**07 46 39.3**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=257,slow=7.5,SNR=4.2						
ASAR				LR	LR	08 08 33.3	
	comp=Z,49nm,18.3s,baz=269,slow=34						
	comp=Z,0.4nm,0.7s						
WRA	**Warramunga Arr**	**57.30**	**98**	P	**P**	**07 46 50.1**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=243,slow=7.9,SNR=4.9						
	comp=Z,0.6nm,0.5s						
SNAA	**Sanae**	**60.34**	**201**	LR	LR	08 10 39.4	
	comp=Z,28nm,18.3s,baz=358,slow=34						
DAV	**Davao City (W)**	**61.79**	**65**	LR	LR	08 14 48.0	
	comp=Z,21nm,18.3s,baz=342,slow=37						
QSPA	**South Pole Qui**	**63.70**	**180**	P	**P**	**07 47 32.7**	**0.0**
	comp=Z,1.5nm,1.0s,baz=254,slow=7.4,SNR=2.4						
	comp=Z,1.5nm,1.0s						
VNDA	**Vanda**	**64.39**	**166**	P	**P**	**07 47 37.1**	**+0.2**
	comp=Z,1.1nm,0.9s,baz=326,slow=6.6,SNR=4.8						
	comp=Z,1.1nm,0.9s						
BTK	**Batken**	**66.16**	**359**	P	**P**	**07 47 49.7**	**+0.8**
BTK				IAmb	IAmb	07 47 55.7	
	comp=Z,2.9nm,0.4s						
AAK	**Ala-Archa**	**68.77**	**2**	P	**P**	**07 48 05.7**	**+0.3**
AAK				IAmb	IAmb	07 48 13.6	
	comp=Z,1.5nm,0.5s						
AAK	**Ala-Archa**	**68.77**	**2**	LR	LR	08 15 40.3	
	comp=Z,53nm,19.1s,baz=110,slow=34						
KK31	**Karatay Array**	**69.20**	**359**	P	**P**	**07 48 08.3**	**+0.3**
KK31				IAmb	IAmb	07 48 16.0	
	comp=Z,4.5nm,1.1s						
KKAR	**Karatay Array**	**69.20**	**359**	P	**P**	**07 48 07.9**	**-0.1**
MAKZ	**Makanchi**	**73.47**	**7**	P	**P**	**07 48 33.6**	**-0.1**
MAKZ				IAmb	IAmb	07 48 54.2	
	comp=Z,1.4nm,0.7s						
MKAR	**Makanchi Array**	**73.49**	**7**	P	**P**	**07 48 32.6**	**-1.1**
	comp=Z,0.7nm,0.8s,baz=177,slow=5.6,SNR=6.2						
	comp=Z,0.7nm,0.8s						
BR131	**Keskin Array S**	**74.86**	**330**	P	**P**	**07 48 42.7**	**+0.6**
BRTR	**Keskin Array B**	**74.86**	**330**	P	**P**	**07 48 42.2**	**+0.1**
BRTR	**Keskin Array B**	**74.86**	**330**	P	**P**	**07 48 40.7**	**-1.4**
	comp=Z,0.3nm,0.6s,baz=143,slow=5.7,SNR=3.5						
	comp=Z,0.3nm,0.6s						
AB31	**Akbulak array**	**76.10**	**352**	P	**P**	**07 48 49.3**	**+0.6**
AB31				IAmb	IAmb	07 49 01.1	
	comp=Z,6.1nm,1.5s						
ABKAR	**Akbulak array**	**76.10**	**352**	P	**P**	**07 48 49.2**	**+0.4**
KURBB	**Kurchatov Arra**	**76.94**	**4**	P	**P**	**07 48 53.2**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=196,slow=5.7,SNR=8.1						
	comp=Z,0.7nm,0.8s						
SONM	**Songino Array**	**80.18**	**23**	P	**P**	**07 49 11.6**	**0.0**
	comp=Z,0.5nm,0.5s,baz=208,slow=5.5,SNR=3.6						
SONM				LR	LR	08 22 48.1	
	comp=Z,37nm,21.3s,baz=110,slow=34						
	comp=Z,0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**80.83**	**8**	P	**P**	**07 49 13.2**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=183,slow=6.0,SNR=3.8						
	comp=Z,0.2nm,0.3s						
DBIC	**Dimbokro**	**81.19**	**282**	LR	LR	08 24 08.1	
	comp=Z,26nm,18.0s,baz=146,slow=35						

RSNC 02 07:42:54.9±0.0, **7°N**±1°×**7°4W**±°, **h108**^{km}±1^{km}, **M2.8, mb3.6, ML2.5, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VMM10	**El Carmen**	**0.23**	**279**	P	Pn	07 43 08.9	-1.2
VMM10				S	Sn	07 43 20.6	-1.0
BRJC	**Barrancabermej**	**0.34**	**315**	P	Pn	07 43 09.4	-1.2
BRJC				S	Sn	07 43 21.7	-0.7
BARC	**Barichara**	**0.34**	**113**	P	Pn	07 43 10.3	-0.6
BARC				S	Sn	07 43 22.6	-0.3
VMM09	**Lebrija**	**0.45**	**28**	P	Pn	07 43 10.6	-0.8
VMM09				S	Sn	07 43 23.3	-0.4
VMM07	**Puerto Wilches**	**0.72**	**331**	P	Pn	07 43 12.7	-0.5
VMM07				S	Sn	07 43 26.4	-0.6
EZNC	**La Esperanza**	**0.91**	**12**	P	Pn	07 43 14.0	-1.1
EZNC				S	Sn	07 43 29.4	-0.9
RUSC	**La Rusia**	**0.93**	**154**	P	Pn	07 43 14.7	-1.1
RUSC				S	Sn	07 43 30.5	-0.9
PTBC	**PUERTO BERRIO,**	**0.97**	**259**	P	Pn	07 43 13.2	-2.4
PTBC				S	Sn	07 43 27.6	-3.7
PAMC	**Pamplona, Colo**	**1.00**	**53**	P	Pn	07 43 15.6	-0.8
PAMC				S	Sn	07 43 32.4	-0.2
VMM05	**San Martn**	**1.17**	**357**	P	Pn	07 43 17.1	-0.7
SPBC	**San Pablo de B**	**1.21**	**208**	P	Pn	07 43 16.6	-1.8
SPBC				S	Sn	07 43 34.4	-1.7
ZARC	**Zaragoza, Cauc**	**1.55**	**299**	P	Pn	07 43 21.2	-1.0
ZARC				S	Sn	07 43 42.8	-0.1
TAMC	**Tame, Arauca**	**1.72**	**100**	P	Pn	07 43 23.7	-0.7
TAMC				S	Sn	07 43 46.5	-0.3
AGCC	**Aguachica**	**1.77**	**357**	P	Pn	07 43 23.1	-1.9
AGCC				S	Sn	07 43 46.5	-1.4
NORC	**Norcasia**	**1.79**	**230**	P	Pn	07 43 23.0	-2.2
NORC				S	Sn	07 43 47.5	-0.8
ROSC	**El Rosal**	**2.05**	**204**	P	Pn	07 43 28.7	-0.1
ROSC				S	Sn	07 43 55.9	+1.3
CHIC	**Chingaza**	**2.10**	**186**	P	Pn	07 43 28.9	-0.6
CHIC				S	Sn	07 43 55.0	-0.9
UREC	**San Jos de Ur**	**2.26**	**297**	P	Pn	07 43 28.5	-2.6
UREC				S	Sn	07 43 55.9	-3.0
CVER	**Cruz Verde, Cu**	**2.27**	**195**	P	Pn	07 43 31.7	0.0
CVER				S	Sn	07 44 00.1	+0.3
GUY2C	**Guyana, Caldas**	**2.38**	**231**	P	Pn	07 43 32.4	-0.8
GUY2C				S	Sn	07 44 00.0	-2.5
VILC	**Villavicencio,**	**2.61**	**184**	P	Pn	07 43 34.9	-1.0
VILC				S	Sn	07 44 04.8	-2.5
CBOC	**Ciudad Bolivar**	**2.64**	**251**	P	Pn	07 43 35.8	-0.5
CBOC				S	Sn	07 44 07.9	-0.2
DBBC	**Dabeiba**	**2.71**	**276**	P	Pn	07 43 36.3	-0.8
DBBC				S	Sn	07 44 08.7	-0.8
ANIL	**Santa Ana**	**2.92**	**221**	P	Pn	07 43 40.0	-0.1
ANIL				S	Sn	07 44 16.5	+1.6
ARGC	**Ariguani, Magd**	**3.19**	**347**	P	Pn	07 43 44.5	+1.0
ARGC				S	Sn	07 44 21.4	+0.4
APAC	**Apartado, Choc**	**3.27**	**291**	P	Pn	07 43 43.1	-1.3
APAC				S	Sn	07 44 21.7	-1.0
ORTC	**Ortega, Tolima**	**3.30**	**212**	P	Pn	07 43 44.0	-0.9
ORTC				S	Sn	07 44 23.7	+0.2
PRAC	**Prado**	**3.30**	**205**	P	Pn	07 43 44.0	-0.9
PRAC				S	Sn	07 44 22.8	-0.7
PLMC	**San Jos del P**	**3.31**	**237**	P	Pn	07 43 43.7	-1.4
SJCC	**San Jacinto, C**	**3.56**	**332**	P	Pn	07 43 45.7	-2.7
SJCC				S	Sn	07 44 25.8	-3.9
URMC	**La Uribe, Meta**	**3.57**	**194**	P	Pn	07 43 48.3	-0.3
URMC				S	Sn	07 44 30.6	+0.6
YOTC	**Yotoco, Valle**	**3.93**	**226**	P	Pn	07 43 51.5	-2.0
YOTC				S	Sn	07 44 36.3	-2.5
GUVC	**San Jose del G**	**4.25**	**168**	P	Pn	07 43 55.0	-2.6
GUVC				S	Sn	07 44 43.5	-2.8
CAPC	**Capurgana**	**4.26**	**297**	P	Pn	07 43 54.7	-3.1
CRJC	**Cerrejon, Guaj**	**4.31**	**8**	P	Pn	07 43 56.4	-2.1
CRJC				S	Sn	07 44 44.9	-2.9
MACC	**Macarena, Meta**	**4.57**	**184**	P	Pn	07 43 59.7	-2.2
MACC				S	Sn	07 44 50.6	-3.4
GARC	**Garzon, Huila**	**4.93**	**204**	P	Pn	07 44 05.9	-1.2
GARC				S	Sn	07 45 01.1	-2.0
URIC	**Uribia, Colomb**	**5.16**	**17**	P	Pn	07 44 07.3	-2.6
	8.2nm,1.2s						
URIC				S	Sn	07 45 02.4	-5.9
	8.2nm,1.2s						
FLOC	**Florencia**	**5.54**	**203**	P	Pn	07 44 13.6	-1.6
FLOC				S	Sn	07 45 17.7	0.0

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*HEL **02** 07:43:42.3±0.3, 67°.15N×20°.63E, h0^{km}, ML1.0, Suspected explosion*

UPP 02 07:43:41.7±0.1, **67°.19N×20°.66E, h0**^{km}, **ML2.0, Confirmed Induced event, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.07**	**209**	P	Pg	07 43 43.5	+0.4
DUNU				S	Sg	07 43 44.5	+0.4
RATU	**Laukkuluspa**	**0.76**	**328**	P	Pg	07 43 56.0	-0.3
RATU				S	Sg	07 44 06.1	0.0
KUA	**Kurravaara**	**0.78**	**351**	P	Pg	07 43 56.5	-0.2
SALU	**Saltoluokta**	**0.86**	**284**	P	Pg	07 43 57.9	-0.3
ERTU	**Ertsjaerv**	**0.88**	**136**	P	Pg	07 43 58.0	-0.4
ERTU	**Ertsjaerv**	**0.88**	**136**	PG	Pg	07 43 57.8	-0.6
PAJU	**Pajala**	**0.97**	**99**	P	Pg	07 44 00.1	-0.2
PAJU	**Pajala**	**0.97**	**99**	PG	Pg	07 43 59.6	-0.7
PAJU				SB	Sg	07 44 13.4	+0.5
LANU	**Lannavaara**	**1.00**	**30**	PG	Pg	07 44 01.3	+0.4
HARU	**Harads**	**1.04**	**173**	P	Pg	07 44 00.8	-0.7
KOVU	**Salmi**	**1.06**	**350**	P	Pg	07 44 01.3	-0.7
KLF	**Kolari**	**1.29**	**86**	PG	Pg	07 44 05.5	-0.8
KLF				MSG		07 44 21.7	
	comp=Z,0.8nm,0.2s						
KLF				SG	Sg	07 44 22.9	-0.1
HEF	**Hetta**	**1.67**	**41**	PG	Pb	07 44 12.9	-0.5
HEF				MSG		07 44 33.4	
	comp=Z,0.5nm,0.2s						
HEF				SN	Sg	07 44 36.6	+1.2
KALU	**Kalix**	**1.71**	**140**	P	Pn	07 44 12.9	+0.1
KALU	**Kalix**	**1.71**	**140**	PG	Pn	07 44 13.1	+0.3
	baz=326						
KALU				SN	Sg	07 44 37.5	+0.8
SJUU	**Sjulsmark**	**1.73**	**167**	P	Pn	07 44 13.1	+0.1
KIF	**Kilpisjarvi**	**1.83**	**2**	PG	Pb	07 44 16.2	+0.3
	baz=185						
KIF				MSG		07 44 38.8	
	comp=Z,1.4nm,0.2s						
KIF				SG	Sg	07 44 41.2	+0.9
TOF	**Tornio**	**1.83**	**126**	PG	Pb	07 44 15.3	-0.7
TOF				MSG		07 44 36.7	
	comp=Z,0.8nm,0.2s						
TOF				SG	Sg	07 44 40.5	0.0
RNF	**Rovaniemi**	**2.19**	**103**	PG	Pb	07 44 21.0	-1.1
RNF				SG	Sb	07 44 50.1	+0.4
RANF	**Ranua**	**2.71**	**113**	SG	Sb	07 45 05.3	+0.5
KU2	**Taivalkoski**	**3.38**	**113**	SG	Sb	07 45 23.2	-0.7
KU1	**Kurvinen**	**3.93**	**110**	PG	Pb	07 44 53.0	+1.2
	baz=297						

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*ATH **02** 07:46:31.3, 40°.42N×20°.90E, h7^{km}±2^{km}, ML1.9/7, Manual Solution by A.Fokaefs First location: 2019/06/02 07:47:43, This location: 2019/06/03 04:47:54 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

TIR 02 07:46:28.5, 40°.51N×20°.84E, h3^{km}±2^{km}, **Md2.9**/8, **Ml2.3**/8, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBN	**Korca**	**0.12**	**341**	Pg	Pg	07 46 25.9	-5.1
KBN				Sg	Sg	07 46 32.5	-0.2
KBN				AML	AML	07 46 39.0	
	4.2nm,0.3s						
NEST	**Nestorio**	**0.18**	**120**	Pg	Pg	07 46 27.0	-5.1
NEST				Sg	Sg	07 46 34.8	+0.3
NEST				AML	AML	07 46 38.5	
	2.9nm,0.3s						
NEST				AMd		07 47 23.1	
NEST	**Nestorio**	**0.18**	**120**	P	Pg	07 46 34.1	+2.0
NEST				S	Sg	07 46 36.0	+1.5
PENT	**Pentalofos**	**0.39**	**144**	P	Pb	07 46 37.7	-0.3
PENT				S	Sg	07 46 41.2	+0.3
LSK	**Leskovik**	**0.40**	**207**	Pg	Pg	07 46 34.7	-1.6
LSK				Sg	Sg	07 46 42.3	+0.9
LSK				AML	AML	07 46 49.7	
	1.8nm,0.6s						
LSK				AMd		07 47 27.4	
KPRO	**Kipourio**	**0.68**	**144**	P	Pb	07 46 42.7	-0.4
KZN	**Kozani**	**0.74**	**105**	P	Pb	07 46 44.6	+0.5
SRN	**Sarande**	**0.90**	**226**	Pg	Pg	07 46 43.7	-2.0
SRN				Sg	Sn	07 47 00.8	-0.7
SRN				AML	AML	07 47 08.9	
	0.3nm,0.5s						
SRN				AMd		07 47 30.5	
IGT	**Igoumenitsa**	**1.05**	**202**	Pn	Pb	07 46 49.6	+0.3
IGT				Sn	Sn	07 47 05.4	+0.2
IGT				AMd		07 47 51.5	
IGT	**Igoumenitsa**	**1.05**	**202**	P	Pn	07 46 50.0	-0.1
KEK	**Kerkira**	**1.12**	**226**	P	Pn	07 46 52.6	+1.4
PHP	**Peshkopia**	**1.22**	**346**	Pn	Pb	07 46 52.3	+0.1
PHP				Sn	Sn	07 47 10.1	+0.6
PHP				AML	AML	07 47 20.9	
	0.1nm,0.6s						
PHP				AMd		07 47 54.8	
THL	**Klokotos Trika**	**1.30**	**136**	P	Pb	07 46 54.6	+1.0
TYRN	**Tyrnavos**	**1.33**	**126**	P	Pb	07 46 55.1	+1.0
PUK	**Puka**	**1.69**	**335**	Pn	Pg	07 47 01.4	+0.4
PUK				Sn	Sg	07 47 25.5	+2.6
PUK				AML	AML	07 47 36.2	
	0.1nm,0.4s						
PUK				AMd		07 48 01.4	
LKD2	**Lefkada island**	**1.72**	**185**	Pn	Pg	07 47 02.4	+0.9
LKD2				Sn	Sg	07 47 27.1	+3.3
LKD2				AML	AML	07 47 38.0	
	0.1nm,0.5s						
LKD2				AMd		07 48 02.3	
LKD2	**Lefkada island**	**1.72**	**185**	P	Pg	07 47 01.6	+0.1
HORT	**Hortiatis**	**1.72**	**86**	P	Pb	07 47 00.7	-0.2
SCTE	**Santa Cesarea**	**1.87**	**257**	Pn	Pg	07 47 04.1	-0.2
SCTE				Sn	Sg	07 47 30.3	+1.8
SCTE				AML	AML	07 47 41.3	
	0.2nm,1.1s						
SCTE				AMd		07 48 01.9	
SCTE	**Santa Cesarea**	**1.87**	**257**	P	Pg	07 47 04.2	-0.1

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*ASIES **02** 07:51:23.9, 24°.71N×121°.94E, h65^{km}, ML4.2, Mw3.7, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm;*

M_{rr}3.14; $M_{\theta\theta}$-0.39; $M_{\phi\phi}$-3.23; $M_{r\theta}$0.93; $M_{\theta\phi}$-1.79; $M_{\phi r}$-2.06; Fault plane solution: $M_0$4.30641×10^{21} NP1:ϕ_s48.58000°, δ38.96000°, λ128.98000°. NP2:ϕ_s182.43000°, δ60.74000°, λ63.04000°. Principal axes: T Plg63.5680°, Azm46.3670°; N Plg23.2990°, Azm196.4010°; P Plg11.7830°, Azm291.5550°;

*JMA **02** 07:51:24.0±0.2, 24.°7N±0.°7×122.°0E±0.°5, h63^{km}±3^{km}, MV3.6/14, TAIWAN REGION*

*TAP **02** 07:51:23.9, 24.°71N×121.°94E, h65^{km}, ML4.2, B*

ISC 02 07:51:23.5±1.2, **24.°74N**±0.°03×**121.°98E**±0.°02, **h70**^{km}±5^{km}, **n164, σ1^{s}14**/293, **13C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		**0.11**	**338**	*i* P	**Pn**	**07 51 34.0**	**+0.3**
EGS				*i* S	**Sn**	**07 51 41.0**	**-0.4**
NTC	**Toucheng**	**0.17**	**310**	*i* P	**Pn**	**07 51 34.1**	**+0.2**
NTC				S	**Sn**	**07 51 41.5**	**-0.2**
TWC	**Suao**	**0.18**	**222**	⇑*i*P	**Pn**	**07 51 33.9**	**-0.1**
TWC				*i* S	**Sn**	**07 51 41.0**	**-0.7**
ESAO	**Su ao**	**0.20**	**216**	⇑*i*P	**Pn**	**07 51 34.1**	**-0.1**
ESAO				S	**Sn**	**07 51 41.4**	**-0.5**
ILA	**Ilan**	**0.21**	**277**	*i* P	**Pn**	**07 51 34.4**	**+0.3**
ILA				S	**Sn**	**07 51 42.0**	**+0.1**
NDS	**Dongshan**	**0.26**	**246**	P	**Pn**	**07 51 33.7**	**-0.7**
NDS				S	**Sn**	**07 51 42.0**	**-0.5**
TWB1	**Santiao Chiao**	**0.27**	**2**	⇓*i*P	**Pn**	**07 51 34.4**	**-0.1**
TWB1				*i* S	**Sn**	**07 51 42.0**	**-0.5**
TIPB	**Shuangxi**	**0.27**	**329**	*i* P	**Pn**	**07 51 34.5**	**0.0**
TIPB				*i* S	**Sn**	**07 51 41.9**	**-0.7**
TWE	**Neicheng**	**0.28**	**266**	⇑*i*P	**Pn**	**07 51 34.7**	**+0.2**
TWE				S	**Sn**	**07 51 42.5**	**-0.1**
EWUT	**Wuta**	**0.35**	**212**	⇑*i*P	**Pn**	**07 51 35.4**	**+0.4**
EWUT				*i* S	**Sn**	**07 51 44.2**	**+0.8**
FUSB	**Fushanzhiwuyua**	**0.35**	**273**	⇑*i*P	**Pn**	**07 51 35.3**	**+0.1**
FUSB				*i* S	**Sn**	**07 51 43.0**	**-0.7**
SXI1	**Grass Mountain**	**0.36**	**345**	⇑*i*P	**Pn**	**07 51 35.1**	**-0.1**
SXI1				S	**Sn**	**07 51 43.2**	**-0.6**
NWF	**Wu-fen Shan**	**0.37**	**331**	*i* P	**Pn**	**07 51 35.4**	**0.0**
NWF				*i* S	**Sn**	**07 51 43.5**	**-0.5**
WFSB	**Wu-fen Shan**	**0.37**	**331**	*i* P	**Pn**	**07 51 35.3**	**+0.1**
WFSB				*i* S	**Sn**	**07 51 43.5**	**-0.4**
ENA	**Nanau**	**0.38**	**215**	⇑*i*P	**Pn**	**07 51 35.5**	**+0.3**
ENA				*i* S	**Sn**	**07 51 44.6**	**+0.7**
ENTT	**Nioudou**	**0.39**	**255**	⇑*i*P	**Pn**	**07 51 35.8**	**+0.5**
ENTT				S	**Sn**	**07 51 44.3**	**+0.3**
EOS2	**EOS2**	**0.40**	**144**	P	**Pn**	**07 51 35.9**	**+0.7**
EOS2				*i* S	**Sn**	**07 51 45.3**	**+1.5**
TWA	**Mucha**	**0.43**	**304**	*i* P	**Pn**	**07 51 35.7**	**0.0**
TWA				S	**Sn**	**07 51 44.0**	**-0.7**
NWLT	**Wulai**	**0.43**	**275**	*i* P	**Pn**	**07 51 35.9**	**+0.2**
NWLT				S	**Sn**	**07 51 44.1**	**-0.6**
LATG	**Datong**	**0.46**	**244**	⇑*i*P	**Pn**	**07 51 36.5**	**+0.4**
LATG				S	**Sn**	**07 51 45.7**	**+0.4**
EAHA	**Aohua**	**0.46**	**208**	P	**Pn**	**07 51 36.2**	**+0.2**
EAHA				S	**Sn**	**07 51 45.4**	**+0.3**
NHDH	**Xindian Distri**	**0.47**	**298**	*i* P	**Pn**	**07 51 36.2**	**+0.2**
NHDH				*i* S	**Sn**	**07 51 44.8**	**-0.4**
EHP	**Heping Village**	**0.48**	**207**	P	**Pn**	**07 51 36.5**	**+0.4**
EHP				*e*S	**Sn**	**07 51 46.0**	**+0.5**
TAP	**Taipei**	**0.52**	**305**	*e*P	**Pn**	**07 51 36.4**	**-0.1**
TAP				S	**Sn**	**07 51 45.7**	**-0.3**
EOS3	**EOS3**	**0.55**	**146**	*i* P	**Pn**	**07 51 37.5**	**+0.9**
EOS3				S	**Sn**	**07 51 47.9**	**+1.6**
YHNB	**Yeheng**	**0.55**	**263**	P	**Pn**	**07 51 36.9**	**0.0**
YHNB	**Yeheng**	**0.55**	**263**	*i* P	**Pn**	**07 51 37.0**	**+0.1**
YHNB				S	**Sn**	**07 51 46.7**	**-0.1**
YM08	**YM08**	**0.57**	**322**	*i* P	**Pn**	**07 51 36.8**	**-0.2**
YM08				S	**Sn**	**07 51 45.7**	**-1.2**
ZUZH	**Zhuzihu**	**0.57**	**317**	P	**Pn**	**07 51 37.2**	**+0.1**
ZUZH				*e*S	**Sn**	**07 51 46.4**	**-0.7**
ANP	**Anpu**	**0.61**	**317**	*e*P	**Pn**	**07 51 37.6**	**+0.2**
ANP				*e*S	**Sn**	**07 51 47.1**	**-0.7**
NNSB	**Datong**	**0.62**	**240**	⇑*i*P	**Pn**	**07 51 38.1**	**+0.4**
NNSB				*i* S	**Sn**	**07 51 48.4**	**+0.2**
NNS	**Nan Shan**	**0.63**	**242**	*i* P	**Pn**	**07 51 38.2**	**+0.4**
NNS				S	**Sn**	**07 51 48.5**	**+0.3**
TWY	**Chenhua**	**0.63**	**327**	P	**Pn**	**07 51 38.2**	**+0.5**
TWY				S	**Sn**	**07 51 48.4**	**+0.3**
NTST	**Danshui**	**0.64**	**311**	P	**Pn**	**07 51 38.2**	**+0.5**
NTST				S	**Sn**	**07 51 48.5**	**+0.3**
ETL	**Fush Village**	**0.66**	**209**	P	**Pn**	**07 51 38.1**	**+0.1**
NACB	**Ninganchiao**	**0.66**	**212**	P	**Pn**	**07 51 37.6**	**-0.4**
NACB	**Ninganchiao**	**0.66**	**212**	P	**Pn**	**07 51 37.8**	**-0.2**
NACB				S	**Sn**	**07 51 49.6**	**+0.9**
EOS4	**EOS4**	**0.69**	**153**	P	**Pn**	**07 51 38.2**	**+0.3**
EOS4				S	**Sn**	**07 51 48.5**	**-0.1**
ETLH	**Xiulin Townshi**	**0.70**	**220**	P	**Pn**	**07 51 38.7**	**+0.2**
ETLH				S	**Sn**	**07 51 49.8**	**+0.3**
KSHI	**Guanxi Townshi**	**0.73**	**273**	P	**Pn**	**07 51 39.4**	**+0.7**
KSHI				S	**Sn**	**07 51 50.9**	**+0.9**
TWD	**Chiawan**	**0.74**	**208**	*e*P	**Pn**	**07 51 38.6**	**-0.3**
TWD				S	**Sn**	**07 51 49.7**	**-0.6**
NCU	**National Centr**	**0.75**	**288**	*e*P	**Pn**	**07 51 37.3**	**-1.7**
NCU				S	**Sn**	**07 51 49.1**	**-1.3**
NCUH	**Zhongli**	**0.76**	**288**	P	**Pn**	**07 51 39.5**	**+0.4**
NCUH				S	**Sn**	**07 51 51.4**	**+0.9**
NFF	**Wufeng Townshi**	**0.79**	**262**	*e*P	**Pn**	**07 51 39.8**	**+0.3**
NFF				S	**Sn**	**07 51 51.2**	**-0.1**
FUSS	**Fushou**	**0.83**	**234**	P	**Pn**	**07 51 40.6**	**+0.5**
FUSS				S	**Sn**	**07 51 52.9**	**+0.4**
HWA	**Hwalien**	**0.83**	**204**	*e*P	**Pn**	**07 51 40.3**	**+0.3**
TWT	**Tachien**	**0.88**	**237**	*i* P	**Pn**	**07 51 41.6**	**+0.9**
TWT				S	**Sn**	**07 51 54.3**	**+0.9**
LIOB	**Emei**	**0.88**	**264**	P	**Pn**	**07 51 40.9**	**+0.4**
LIOB				S	**Sn**	**07 51 53.4**	**+0.2**
WHF	**Hehuan Shan**	**0.88**	**228**	*e*P	**Pn**	**07 51 41.3**	**+0.4**
WHF				*e*S	**Sn**	**07 51 53.7**	**-0.1**
ETM	**Tongmen**	**0.89**	**210**	*i* P	**Pn**	**07 51 39.9**	**-0.8**
ETM				*e*S	**Sn**	**07 51 52.5**	**-0.9**
TDCB	**Techi**	**0.89**	**237**	⇑*i*P	**Pn**	**07 51 41.6**	**+0.8**
TDCB				S	**Sn**	**07 51 54.1**	**+0.5**
NSTT	**Nanjuang**	**0.90**	**263**	P	**Pn**	**07 51 41.1**	**+0.4**
NSTT				*e*S	**Sn**	**07 51 53.3**	**-0.2**
SBCB	**Hsinchu**	**0.90**	**273**	P	**Pn**	**07 51 41.3**	**+0.5**
SBCB				S	**Sn**	**07 51 54.0**	**+0.4**
HSN	**Hsinchu**	**0.92**	**274**	*e*P	**Pn**	**07 51 40.8**	**-0.1**
HSN				*e*S	**Sn**	**07 51 53.3**	**-0.6**
JYNG	**Yonagunijimaku**	**0.93**	**108**	*i* P	**Pn**	**07 51 41.3**	**+0.3**
JYNG				S	**Sn**	**07 51 53.8**	**-0.3**
TEYL	**Yanliau Villag**	**0.94**	**202**	*e*P	**Pn**	**07 51 41.2**	**0.0**
YOJ	**Yonaguni jima**	**0.98**	**106**	P	**Pn**	**07 51 41.8**	**+0.1**
YOJ	**Yonaguni jima**	**0.98**	**106**	P	**Pn**	**07 51 41.9**	**+0.2**
YOJ				*e*S	**Sn**	**07 51 55.3**	**0.0**
YOJ	**Yonaguni jima**	**0.98**	**106**	⇓*i*P	**Pn**	**07 51 41.8**	**+0.1**
YOJ				S	**Sn**	**07 51 55.2**	**0.0**
SHUL	**Shoufeng**	**1.02**	**202**	P	**Pn**	**07 51 42.3**	**+0.1**
SHUL				S	**Sn**	**07 51 56.7**	**+0.5**
WHP	**Taichung City**	**1.05**	**244**	⇑*i*P	**Pn**	**07 51 43.9**	**+1.2**
WHP				*i* S	**Sn**	**07 51 57.9**	**+1.0**
ESL	**Shilin**	**1.05**	**208**	*e*P	**Pn**	**07 51 41.4**	**-1.2**
ESL				*e*S	**Sn**	**07 51 55.5**	**-1.3**
OWD	**Renai**	**1.07**	**223**	*i* P	**Pn**	**07 51 43.2**	**+0.2**
OWD				S	**Sn**	**07 51 57.3**	**-0.3**
WUSB	**Renai**	**1.08**	**227**	⇑*i*P	**Pn**	**07 51 43.7**	**+0.5**
WUSB				S	**Sn**	**07 51 57.7**	**-0.1**
NMLH	**Miaoli**	**1.10**	**260**	*e*P	**Pn**	**07 51 44.0**	**+0.8**
NMLH				*i* S	**Sn**	**07 51 58.2**	**+0.2**
TEGC	**Jichi Village**	**1.10**	**201**	P	**Pn**	**07 51 43.4**	**+0.1**
TEGC				*e*S	**Sn**	**07 51 58.1**	**0.0**
WARBT	**Fenglin Townsh**	**1.15**	**208**	*i* P	**Pn**	**07 51 42.5**	**-1.4**
WARBT				*i* S	**Sn**	**07 51 57.3**	**-1.9**
NSY	**Sanyi**	**1.15**	**254**	*i* P	**Pn**	**07 51 44.6**	**+0.7**
NSY				*i* S	**Sn**	**07 52 00.1**	**+0.9**
TWQ1	**Liyutan**	**1.17**	**251**	*e*P	**Pn**	**07 51 44.8**	**+0.7**
TWQ1				*i* S	**Sn**	**07 51 59.7**	**+0.2**
EGFH	**Guangfu**	**1.18**	**205**	P	**Pn**	**07 51 43.4**	**-0.9**
EGFH				*e*S	**Sn**	**07 51 57.9**	**-1.9**
WCS	**Beigang Elemen**	**1.19**	**235**	*i* P	**Pn**	**07 51 45.2**	**+0.9**
WCS				*e*S	**Sn**	**07 52 01.6**	**+1.6**
VWDT	**VWDT**	**1.25**	**218**	P	**Pn**	**07 51 45.6**	**+0.5**
VWDT				S	**Sn**	**07 52 01.6**	**+0.3**
WDJ	**Dajia District**	**1.28**	**252**	P	**Pn**	**07 51 46.3**	**+0.8**
WDJ				S	**Sn**	**07 52 02.8**	**+0.7**
SMLT	**Sun Moon Lake**	**1.30**	**229**	*e*P	**Pn**	**07 51 47.0**	**+1.1**
SMLT				*e*S	**Sn**	**07 52 04.4**	**+1.6**
TYC	**Yuchr**	**1.32**	**231**	P	**Pn**	**07 51 47.2**	**+1.1**
TYC				*e*S	**Sn**	**07 52 04.1**	**+1.1**
SSLB	**Suanglung**	**1.33**	**225**	P	**Pn**	**07 51 47.0**	**+0.7**
SSLB	**Suanglung**	**1.33**	**225**	S	**Sn**	**07 52 06.2**	**+2.8**
SSLB	**Suanglung**	**1.33**	**225**	*e*P	**Pn**	**07 51 46.9**	**+0.7**
SSLB				*e*S	**Sn**	**07 52 04.6**	**+1.2**
HGSD	**Ruisui**	**1.34**	**202**	*e*P	**Pn**	**07 51 46.5**	**+0.1**
HGSD				*e*S	**Sn**	**07 52 03.8**	**+0.2**
EHY	**Hungye**	**1.37**	**206**	*e*P	**Pn**	**07 51 45.3**	**-1.5**
EHYH	**Wanrong**	**1.37**	**205**	*e*P	**Pn**	**07 51 45.8**	**-1.0**
EHYH				*e*S	**Sn**	**07 52 04.1**	**-0.1**
WCHH	**Zhanghua**	**1.45**	**243**	*e*P	**Pn**	**07 51 48.3**	**+0.5**
WCHH				*i* S	**Sn**	**07 52 06.6**	**+0.5**
WNT	**Mingjian**	**1.46**	**234**	*e*P	**Pn**	**07 51 48.5**	**+0.5**
WNT				S	**Sn**	**07 52 07.2**	**+0.9**
WHYT	**Xinyi Township**	**1.46**	**225**	P	**Pn**	**07 51 49.4**	**+1.4**
WHYT				*e*S	**Sn**	**07 52 08.4**	**+2.0**
WJS	**Zhushan**	**1.46**	**232**	*e*P	**Pn**	**07 51 48.8**	**+0.9**
WJS				*e*S	**Sn**	**07 52 07.5**	**+1.2**
WCH1	**Changhua City**	**1.47**	**243**	*e*P	**Pn**	**07 51 48.2**	**+0.2**
WCH1				*e*S	**Sn**	**07 52 07.0**	**+0.5**
YULB	**Yu-li**	**1.48**	**205**	P	**Pn**	**07 51 47.0**	**-1.2**
YULB	**Yu-li**	**1.48**	**205**	*e*P	**Pn**	**07 51 46.7**	**-1.5**
ECBN	**Changbin**	**1.50**	**199**	P	**Pn**	**07 51 47.9**	**-0.5**
ECBN				*e*S	**Sn**	**07 52 05.5**	**-1.7**
EYUL	**Yuli**	**1.51**	**204**	*e*P	**Pn**	**07 51 48.9**	**+0.3**
TWF1	**Yuli**	**1.52**	**204**	*e*P	**Pn**	**07 51 47.3**	**-1.4**
ALS	**Alishan**	**1.63**	**221**	P	**Pn**	**07 51 51.8**	**+1.4**
ALS				S	**Sn**	**07 52 12.6**	**+1.9**
CHKH	**Chenggong**	**1.63**	**199**	*e*P	**Pn**	**07 51 49.6**	**-0.6**
CHKH				S	**Sn**	**07 52 08.6**	**-1.8**
CHN5	**Tsauling**	**1.65**	**226**	P	**Pn**	**07 51 51.4**	**+0.9**
CHN5				S	**Sn**	**07 52 12.4**	**+1.5**
IRIF	**Iriomote-Funau**	**1.65**	**104**	*i* P	**Pn**	**07 51 50.6**	**+0.3**
IRIF				S	**Sn**	**07 52 11.0**	**+0.3**
FULB	**Fuli**	**1.66**	**202**	P	**Pn**	**07 51 50.7**	**+0.1**
FULB				*e*S	**Sn**	**07 52 11.0**	**-0.1**
WDL	**Douliou City**	**1.66**	**232**	*e*P	**Pn**	**07 51 51.4**	**+0.8**
WGK	**Gukeng**	**1.67**	**231**	P	**Pn**	**07 51 51.6**	**+1.0**
WGK				*e*S	**Sn**	**07 52 12.6**	**+1.4**
WDLH	**Douliu**	**1.68**	**232**	*e*P	**Pn**	**07 51 51.7**	**+0.8**
WDLH				*e*S	**Sn**	**07 52 13.2**	**+1.6**
CHKT	**Chengkung**	**1.73**	**199**	P	**Pn**	**07 51 50.4**	**-1.1**
CHKT				*e*S	**Sn**	**07 52 10.3**	**-2.4**
EHD	**Haiduan**	**1.74**	**204**	*e*P	**Pn**	**07 51 50.0**	**-1.6**
EHD				*e*S	**Sn**	**07 52 10.8**	**-2.1**
WTCT	**Ta-ch'eng**	**1.78**	**241**	*e*P	**Pn**	**07 51 52.3**	**+0.2**
WTCT				*e*S	**Sn**	**07 52 13.9**	**+0.1**
ELDTW	**Lidau**	**1.78**	**210**	P	**Pn**	**07 51 52.6**	**+0.3**
ELDTW				*e*S	**Sn**	**07 52 12.8**	**-1.3**
ECS	**Chishang**	**1.78**	**203**	*e*P	**Pn**	**07 51 52.6**	**+0.4**
WTK	**Tuku**	**1.79**	**234**	*i* P	**Pn**	**07 51 53.1**	**+0.8**
WTK				S	**Sn**	**07 52 15.6**	**+1.4**
HATJ	**Hateruma jima**	**1.80**	**112**	P	**Pn**	**07 51 53.6**	**+1.2**
WCKO	**Fanlu**	**1.81**	**224**	*e*P	**Pn**	**07 51 53.5**	**+1.0**
WCKO				*e*S	**Sn**	**07 52 15.7**	**+1.1**
CHN2	**Minshiung**	**1.83**	**229**	*e*P	**Pn**	**07 51 52.5**	**-0.3**
CHN2				*e*S	**Sn**	**07 52 16.9**	**+1.8**
EDH	**Donghe**	**1.87**	**199**	*e*P	**Pn**	**07 51 52.3**	**-1.0**
EDH				*e*S	**Sn**	**07 52 13.7**	**-2.3**
CHN4	**Tsaushan**	**1.88**	**223**	P	**Pn**	**07 51 55.5**	**+2.1**
CHN4				*e*S	**Sn**	**07 52 19.6**	**+3.3**
CHY	**Chiayi**	**1.88**	**229**	P	**Pn**	**07 51 54.3**	**+0.8**
CHY				*e*S	**Sn**	**07 52 17.1**	**+0.7**
TPUB	**Ta-pu**	**1.89**	**221**	P	**Pn**	**07 51 55.3**	**+1.6**
TPUB	**Ta-pu**	**1.89**	**221**	*e*P	**Pn**	**07 51 55.4**	**+1.6**
TPUB				*e*S	**Sn**	**07 52 18.7**	**+2.0**
STYH	**Taoyuan**	**1.91**	**215**	*e*P	**Pn**	**07 51 54.2**	**+0.3**
STYH				*e*S	**Sn**	**07 52 18.4**	**+1.3**
JKRS	**Kuro-shima**	**1.92**	**105**	P	**Pn**	**07 51 54.7**	**+0.7**
JKRS				*e*S	**Sn**	**07 52 17.7**	**+0.5**
WTP	**Ta-pu**	**1.94**	**220**	*e*P	**Pn**	**07 51 55.7**	**+1.3**
WTP				*e*S	**Sn**	**07 52 20.9**	**+3.0**
WSF	**Szhu**	**1.94**	**236**	*e*P	**Pn**	**07 51 54.5**	**+0.1**
WSF				*i* S	**Sn**	**07 52 18.3**	**+0.5**
LONT	**Longtian**	**1.98**	**203**	*e*P	**Pn**	**07 51 53.7**	**-1.3**
LONT				*e*S	**Sn**	**07 52 16.4**	**-2.5**
TWK	**Hsinying**	**2.00**	**223**	*e*P	**Pn**	**07 51 56.8**	**+1.6**
TWK				*e*S	**Sn**	**07 52 22.2**	**+2.8**
JIJ	**Ishigaki jima**	**2.01**	**100**	P	**Pn**	**07 51 55.4**	**+0.2**
JIJ				S	**Sn**	**07 52 19.2**	**-0.2**
WSL	**Shuilin Townsh**	**2.01**	**233**	*e*P	**Pn**	**07 51 55.7**	**+0.5**
WSL				*e*S	**Sn**	**07 52 20.2**	**+0.9**
SNST	**Tainan City**	**2.03**	**222**	*e*P	**Pn**	**07 51 57.1**	**+1.5**
SNST				*e*S	**Sn**	**07 52 21.8**	**+1.8**
CHN1	**Nanshi**	**2.04**	**221**	*e*P	**Pn**	**07 51 57.2**	**+1.5**
CHN1				*e*S	**Sn**	**07 52 22.3**	**+2.0**
ICHU	**Yijhu**	**2.07**	**229**	*e*P	**Pn**	**07 51 56.9**	**+0.8**
ICHU				*e*S	**Sn**	**07 52 22.1**	**+1.1**
TWG	**Pinlang**	**2.08**	**204**	*e*P	**Pn**	**07 51 55.1**	**-1.2**
TWG				*e*S	**Sn**	**07 52 19.2**	**-2.0**
TWGBT	**Beinan**	**2.08**	**203**	P	**Pn**	**07 51 55.3**	**-1.0**
TWGBT	**Beinan**	**2.08**	**203**	*e*P	**Pn**	**07 51 55.0**	**-1.2**
TWGBT				*e*S	**Sn**	**07 52 19.1**	**-2.2**
SGST	**Jiashian**	**2.09**	**218**	*e*P	**Pn**	**07 51 56.9**	**+0.5**
SGST				*e*S	**Sn**	**07 52 22.6**	**+1.2**
LDUT	**Ludao**	**2.11**	**193**	*e*P	**Pn**	**07 51 53.1**	**-3.5**
LDUT				*e*S	**Sn**	**07 52 18.7**	**-3.2**
JISG	**Ishigakijimahi**	**2.13**	**94**	P	**Pn**	**07 51 57.5**	**+0.7**
CHN8	**Yiju**	**2.13**	**230**	*e*P	**Pn**	**07 51 57.6**	**+0.7**
CHN8				S	**Sn**	**07 52 23.5**	**+1.2**
CHN3	**Shinhua**	**2.22**	**222**	*e*P	**Pn**	**07 51 59.0**	**+1.0**
SCLT	**Jiali**	**2.26**	**227**	*e*P	**Pn**	**07 51 59.0**	**+0.4**
SCLT				*e*S	**Sn**	**07 52 26.1**	**+0.7**
SCST	**Cishan**	**2.29**	**217**	*e*P	**Pn**	**07 52 00.9**	**+1.8**
VWUC	**VWUC**	**2.31**	**277**	*e*P	**Pn**	**07 51 58.9**	**-0.4**
MATB	**Ma-tsu**	**2.31**	**308**	*e*P	**Pn**	**07 51 59.0**	**-0.3**
ECL	**Taimali**	**2.33**	**204**	*e*P	**Pn**	**07 51 59.6**	**0.0**
ECL				*e*S	**Sn**	**07 52 25.3**	**-1.9**
SSD	**Sandimen**	**2.34**	**212**	*e*P	**Pn**	**07 52 01.5**	**+1.8**
SSD				*e*S	**Sn**	**07 52 29.1**	**+1.7**
TSCK	**Chigu Township**	**2.35**	**228**	*e*P	**Pn**	**07 51 59.7**	**-0.1**
TSCK				*e*S	**Sn**	**07 52 27.1**	**-0.5**
TSMG	**Majia**	**2.37**	**211**	*e*P	**Pn**	**07 52 03.1**	**+3.0**
TSMG				*e*S	**Sn**	**07 52 30.0**	**+1.9**
TWM1	**Shoushan**	**2.38**	**217**	*e*P	**Pn**	**07 52 03.0**	**+2.6**
MASBT	**Mashibuluo**	**2.45**	**210**	P	**Pn**	**07 52 02.2**	**+0.9**
MASBT				*e*S	**Sn**	**07 52 31.9**	**+1.7**
JTJ	**Tarama**	**2.48**	**92**	P	**Pn**	**07 52 03.2**	**+1.6**
JTJ				*e*S	**Sn**	**07 52 32.5**	**+1.6**
PNG	**Penghu**	**2.50**	**243**	P	**Pn**	**07 52 01.4**	**-0.5**
PNG				*e*S	**Sn**	**07 52 28.9**	**-2.5**
PHUB	**P'eng-hu**	**2.52**	**241**	P	**Pn**	**07 52 01.3**	**-0.8**
PHUB				S	**Sn**	**07 52 28.6**	**-3.1**
EAST	**Anshuo**	**2.57**	**204**	*e*P	**Pn**	**07 52 04.2**	**+1.4**
EAST				*e*S	**Sn**	**07 52 32.7**	**-0.3**
WDGT	**Dungji**	**2.58**	**236**	*e*P	**Pn**	**07 52 02.5**	**-0.5**
WDGT				*e*S	**Sn**	**07 52 31.6**	**-1.7**
TAWH	**Dawu Township**	**2.59**	**203**	*e*P	**Pn**	**07 52 03.9**	**+0.7**
TAWH				*e*S	**Sn**	**07 52 31.7**	**-1.9**
PTMZ	**Houxiangcun**	**2.61**	**277**	*e*P	**Pn**	**07 52 02.7**	**-0.6**
SCZT	**Fangliau**	**2.67**	**208**	*e*P	**Pn**	**07 52 05.8**	**+1.6**
SCZT				*e*S	**Sn**	**07 52 37.4**	**+1.9**
XPSS	**Dashiqiu**	**2.71**	**324**	*e*P	**Pn**	**07 52 04.5**	**-0.3**
SLIU	**Shizi**	**2.74**	**204**	*e*P	**Pn**	**07 52 05.8**	**+0.7**
LYUB	**Lan-yu**	**2.75**	**188**	*e*P	**Pn**	**07 52 04.5**	**-0.9**
LYUB				*e*S	**Sn**	**07 52 32.7**	**-4.8**
VCHM	**Qimei**	**2.79**	**237**	*e*P	**Pn**	**07 52 05.1**	**-0.6**
VCHM				*e*S	**Sn**	**07 52 36.0**	**-2.3**
TWK1	**Hengchun**	**2.99**	**201**	*e*P	**Pn**	**07 52 10.0**	**+1.5**
TWKBT	**Hengchun**	**2.99**	**201**	*e*P	**Pn**	**07 52 09.7**	**+1.2**
TWKBT				*e*S	**Sn**	**07 52 41.3**	**-1.9**
MHZQ	**Yeshan**	**2.99**	**298**	*e*P	**Pn**	**07 52 08.2**	**-0.3**
TSEB	**Hengchuen, Pin**	**3.00**	**200**	*e*P	**Pn**	**07 52 08.8**	**+0.1**
TSEB				*e*S	**Sn**	**07 52 43.3**	**-0.2**
KNM	**Kinmen**	**3.24**	**265**	*e*P	**Pn**	**07 52 13.0**	**+1.0**
KNMB	**Chin-men Tao**	**3.28**	**266**	*e*P	**Pn**	**07 52 11.5**	**-1.0**
AXDP	**Jialang**	**3.65**	**273**	*e*P	**Pn**	**07 52 17.3**	**-0.2**
ZPLA	**Ao Xicun**	**3.94**	**259**	*e*P	**Pn**	**07 52 21.1**	**-0.3**
SXFK	**Yanhouchang**	**4.25**	**294**	*e*P	**Pn**	**07 52 25.4**	**-0.3**
DSXP	**Dongshan**	**4.28**	**257**	*e*P	**Pn**	**07 52 25.9**	**-0.2**

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*DNK **02** 07:52:04.7±0.3, 67.°19N×20.°68E, h0^{km}, ML2.9(UPP), Suspected explosion*

*UPP **02** 07:52:04.3±0.1, 67.°19N×20.°68E, h0^{km}, ML2.9, Confirmed Induced event*

*HEL **02** 07:52:05.0±0.0, 67.°18N×20.°67E, h1^{km}, ML1.7, ML2.9(UPP), Confirmed Induced event*

*IDC **02** 07:52:05.4±0.8, 67.°16N×20.°96E, h0^{km}, mbtmp3.2/5, ML2.5/5, Error ellipse: s-maj=14.7km s-min=7.3km az=104.0*

ISC 02 07:52:03.6±0.7, **67.°18N**±0.°02×**20.°77E**±0.°03, **h0**^{km}, **n47, σ0^{s}88**/72, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.10**	**235**	P	**Pg**	**07 52 06.2**	**+0.8**
DUNU				S	**Sg**	**07 52 07.3**	**+0.8**
DUNU	**Dundret**	**0.10**	**235**	P	**Pg**	**07 52 06.2**	**+0.8**
DUNU				S	**Sg**	**07 52 07.3**	**+0.8**
DUNU	**Dundret**	**0.10**	**235**	*i* P	**Pg**	**07 52 06.2**	**+0.8**
DUNU				*i* S	**Sg**	**07 52 07.3**	**+0.8**
RATU	**Laukkuluspa**	**0.79**	**326**	P	**Pg**	**07 52 18.7**	**-0.1**
RATU				S	**Sg**	**07 52 29.1**	**+0.2**
RATU	**Laukkuluspa**	**0.79**	**326**	P	**Pg**	**07 52 18.7**	**-0.1**
RATU				S	**Sg**	**07 52 29.1**	**+0.2**
RATU	**Laukkuluspa**	**0.79**	**326**	*i* P	**Pg**	**07 52 18.7**	**-0.1**
RATU				*i* S	**Sg**	**07 52 29.1**	**+0.2**
KUA	**Kurravaara**	**0.80**	**348**	P	**Pg**	**07 52 18.9**	**+0.1**
KUA				S	**Sg**	**07 52 29.4**	**+0.3**
KUA	**Kurravaara**	**0.80**	**348**	P	**Pg**	**07 52 18.9**	**+0.1**
KUA				S	**Sg**	**07 52 29.4**	**+0.3**
KUA	**Kurravaara**	**0.80**	**348**	*i* P	**Pg**	**07 52 18.9**	**+0.1**
KUA				*i* S	**Sg**	**07 52 29.4**	**+0.3**
ERTU	**Ertsjaerv**	**0.84**	**137**	P	**Pb**	**07 52 20.6**	**-0.4**
ERTU				S	**Sb**	**07 52 32.4**	**-0.4**
ERTU	**Ertsjaerv**	**0.84**	**137**	P	**Pb**	**07 52 20.6**	**-0.4**
ERTU				S	**Sb**	**07 52 32.4**	**-0.4**
ERTU	**Ertsjaerv**	**0.84**	**137**	*e*P	**Pb**	**07 52 20.6**	**-0.4**
ERTU				*e*S	**Sb**	**07 52 32.4**	**-0.4**
SALU	**Saltoluokta**	**0.90**	**284**	P	**Pg**	**07 52 20.5**	**-0.2**
SALU				S	**Sg**	**07 52 32.1**	**-0.3**
SALU	**Saltoluokta**	**0.90**	**284**	*e*P	**Pg**	**07 52 20.6**	**-0.2**
SALU	**Saltoluokta**	**0.90**	**284**	P	**Pg**	**07 52 20.5**	**-0.2**
SALU				S	**Sg**	**07 52 32.1**	**-0.3**
SALU	**Saltoluokta**	**0.90**	**284**	*i* P	**Pg**	**07 52 20.5**	**-0.2**
SALU				*i* S	**Sg**	**07 52 32.1**	**-0.3**
PAJU	**Pajala**	**0.93**	**98**	P	**Pb**	**07 52 22.5**	**0.0**
PAJU				S	**Sb**	**07 52 35.4**	**-0.1**
PAJU	**Pajala**	**0.93**	**98**	P	**Pb**	**07 52 22.5**	**0.0**
PAJU				S	**Sb**	**07 52 35.4**	**-0.1**
PAJU	**Pajala**	**0.93**	**98**	*e*P	**Pb**	**07 52 22.6**	**0.0**
PAJU				*e*S	**Sb**	**07 52 35.6**	**+0.2**
PAJU				MSG		07 52 37.8	
	comp=Z,12nm,0.1s						
LANU	**Lannavaara**	**0.99**	**28**	*e*PB	**Pb**	**07 52 23.7**	**+0.1**
LANU				*e*SB	**Sb**	**07 52 37.0**	**-0.3**
LANU				MSG		07 52 39.2	
	comp=Z,13nm,0.2s						
HARU	**Harads**	**1.02**	**175**	P	**Pg**	**07 52 23.3**	**+0.3**
HARU	**Harads**	**1.02**	**175**	P	**Pg**	**07 52 23.3**	**+0.3**
HARU	**Harads**	**1.02**	**175**	*e*P	**Pg**	**07 52 23.3**	**+0.3**
KOVU	**Salmi**	**1.08**	**348**	P	**Pg**	**07 52 24.0**	**-0.2**
KOVU	**Salmi**	**1.08**	**348**	P	**Pg**	**07 52 24.0**	**-0.2**
KOVU	**Salmi**	**1.08**	**348**	*e*P	**Pg**	**07 52 24.0**	**-0.2**
KLF	**Kolari**	**1.25**	**86**	*e*PB	**Pn**	**07 52 28.2**	**0.0**
KLF				*e*S	**Sn**	**07 52 45.4**	**-0.3**
KLF				MSG		07 52 49.6	
	comp=Z,3.6nm,0.1s						
HEF	**Hetta**	**1.66**	**40**	*e*P	**Pb**	**07 52 34.9**	**-0.1**
HEF	**Hetta**	**1.66**	**40**	*e*P	**Pb**	**07 52 34.8**	**-0.1**
HEF				*e*S	**Sg**	**07 52 56.6**	**-0.1**
KALU	**Kalix**	**1.68**	**141**	P	**Pg**	**07 52 35.5**	**-0.2**
KALU	**Kalix**	**1.68**	**141**	P	**Pg**	**07 52 35.5**	**-0.2**
KALU	**Kalix**	**1.68**	**141**	*e*P	**Pg**	**07 52 35.4**	**-0.3**
SJUU	**Sjulsmark**	**1.71**	**168**	P	**Pb**	**07 52 35.7**	**-0.1**
SJUU	**Sjulsmark**	**1.71**	**168**	P	**Pb**	**07 52 35.7**	**-0.1**
SJUU	**Sjulsmark**	**1.71**	**168**	*e*P	**Pb**	**07 52 35.7**	**-0.1**
TOF	**Tornio**	**1.80**	**126**	*e*PN	**Pg**	**07 52 37.7**	**-0.2**
KIF	**Kilpisjarvi**	**1.84**	**0**	*e*P	**Pb**	**07 52 38.0**	**0.0**
KTK1	**Kautokeino**	**2.06**	**26**	*e*PG	**Pb**	**07 52 41.8**	**0.0**
RNF	**Rovaniemi**	**2.15**	**103**	*e*P	**Pb**	**07 52 42.6**	**-0.6**
SGF	**Sodankyl**	**2.25**	**81**	*e*P	**Pb**	**07 52 43.8**	**-1.2**
TRO	**Tromso**	**2.56**	**345**	*e*P	**Pn**	**07 52 48.1**	**+1.9**
RANF	**Ranua**	**2.67**	**113**	*e*P	**Pn**	**07 52 49.4**	**+1.7**
ARCES	**ARCESS Array B**	**2.95**	**34**	Pn	**Pn**	**07 52 53.4**	**+1.8**
	comp=Z,0.7nm,0.3s,baz=215,slow=14,SNR=85						
ARCES				Sn	**Sn**	**07 53 29.4**	**+1.8**
	comp=Z,1.5nm,0.3s,baz=217,slow=20,SNR=8.6						
	comp=Z,1.7nm,0.3s						
FINES	**FINESS Array B**	**6.20**	**156**	Pn	**Pn**	**07 53 38.3**	**+2.1**
	comp=Z,0.3nm,0.3s,baz=347,slow=14,SNR=17						
FINES				Sn	**Sn**	**07 54 47.3**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=347,slow=23,SNR=6.8						
FINES				Lg	Lg	07 55 18.9	
	comp=Z,1.2nm,0.3s,baz=344,slow=27,SNR=8.1						
	comp=Z,1.1nm,0.5s						
NOA	**NORSAR Array B**	**7.44**	**219**	Pn	**Pn**	**07 53 54.3**	**+1.1**
	baz=28,slow=11,SNR=5.0						
NOA				Sn	**Sn**	**07 55 13.8**	**-4.4**
	baz=82,slow=14,SNR=3.8						
NOA				Lg	Lg	07 55 54.5	
	comp=Z,0.1nm,0.3s,baz=106,slow=18,SNR=5.7						
	comp=Z,0.1nm,0.3s						
HFS	**Hagfors**	**7.73**	**207**	Pn	**Pn**	**07 53 56.9**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=25,slow=13,SNR=8.2						
HFS				Sn	**Sn**	**07 55 22.6**	**-2.7**
	comp=Z,0.5nm,0.3s,baz=29,slow=22,SNR=7.1						
HFS				Lg	Lg	07 56 02.8	
	comp=Z,0.4nm,0.3s,baz=23,slow=32,SNR=3.0						
	comp=Z,0.5nm,0.3s						
SPITS	**Spitsbergen Ar**	**11.13**	**355**	Pn	**Pn**	**07 54 43.7**	**0.0**
	baz=168,slow=18						
	comp=Z,4.4nm,0.9s						

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*GCG **02** 08:03:36.4±1.7, 14.°01N×93.°97W, h35^{km}±999^{km}, MD3.9*

*MEX **02** 08:03:38.0±0.8, 14.°08N×93.°94W, h15^{km}±60^{km}, MD4.1*

ISC 02 08:03:31.5±3.0, **14.°03N**±0.°08×**93.°98W**±0.°03, **h12**^{km}±22^{km}, **n26, σ2^{s}14**/46, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**1.82**	**24**	*e*P	**Pb**	**08 04 04.6**	**-0.2**
PCIG				*e*S	**Sn**	**08 04 25.4**	**-0.4**
THIG		**1.88**	**62**	*e*P	**Pb**	**08 04 05.6**	**-0.2**
THIG				*e*S	**Sn**	**08 04 27.3**	**+0.2**
PATR	**El Naranjo**	**2.01**	**57**	*e*P	**Pb**	**08 04 07.0**	**-1.1**
PATR				*e*S	**Sn**	**08 04 30.4**	**-0.2**
PAVE	**Pavencul**	**2.09**	**56**	*e*P	**Pb**	**08 04 08.3**	**-1.2**
PAVE				*e*S	**Sn**	**08 04 32.6**	**-0.3**
RTAL	**Retalhuleu**	**2.27**	**77**	*e*P	**Pb**	**08 04 11.7**	**-0.8**
RTAL				*e*S	**Sn**	**08 04 37.0**	**+0.2**
STG8	**El Palmar, Qui**	**2.58**	**80**	*i* P	**Pn**	**08 04 13.4**	**0.0**
HUIG	**Huatulco**	**2.69**	**310**	*e*P	**Pb**	**08 04 17.6**	**-2.0**
HUIG				*e*S	**Sn**	**08 04 45.2**	**-2.1**
HUIG	**Huatulco**	**2.69**	**310**	*i* P	**Pn**	**08 04 17.3**	**+2.6**
HUIG				*i* P	**Sn**	**08 04 44.5**	**-2.8**
HUEH	**Huehuetenango**	**2.72**	**61**	*e*P	**Pb**	**08 04 19.1**	**-1.1**
HUEH				*e*S	**Sn**	**08 04 48.8**	**+0.6**
HUEH	**Huehuetenango**	**2.72**	**61**	*i* P	**Pb**	**08 04 19.1**	**-1.1**
TGIG		**2.86**	**17**	*e*P	**Pb**	**08 04 20.6**	**-2.0**
TGIG				*e*S	**Sn**	**08 04 52.9**	**+1.5**
TGIG		**2.86**	**17**	*i* P	**Pb**	**08 04 20.6**	**-2.0**
TGIG				*i* S	**Sn**	**08 04 53.3**	**+1.9**
TGIG				*i* S	**Sb**	**08 04 54.5**	**-3.1**
CCIG	**Comitan**	**2.86**	**38**	*e*P	**Pb**	**08 04 21.5**	**-1.2**
CCIG				*e*S	**Sn**	**08 04 53.5**	**+1.8**
CCIG	**Comitan**	**2.86**	**38**	*i* P	**Pb**	**08 04 21.6**	**-1.0**
CMIG	**Matias Romero**	**3.17**	**344**	*e*P	**Pn**	**08 04 24.4**	**+3.1**
CMIG				*e*S	**Sn**	**08 04 57.5**	**-1.6**
PEIG	**Puerto Escondi**	**3.64**	**303**	*e*P	**Pn**	**08 04 31.1**	**+3.3**
PEIG				*e*S	**Sn**	**08 05 07.8**	**-2.8**
VHO	**Vista Hermosa**	**4.03**	**319**	*e*P	**Pn**	**08 04 36.9**	**+3.6**
VHO				*e*S	**Sn**	**08 05 21.2**	**+0.7**
NEUV	**Arroyo Zacate**	**4.07**	**335**	*e*P	**Pn**	**08 04 36.9**	**+3.3**
NEUV				*e*S	**Sn**	**08 05 19.6**	**-1.6**
YOIG	**Yosondua**	**4.45**	**310**	*e*P	**Pn**	**08 04 42.7**	**+3.6**
YOIG				*e*S	**Sn**	**08 05 31.3**	**+0.3**
PNIG	**Pinotepa**	**4.65**	**301**	*e*P	**Pn**	**08 04 45.9**	**+4.2**
PNIG				*e*S	**Sn**	**08 05 32.8**	**-2.8**
TXIG	**Tlaxiaco**	**4.86**	**312**	*e*P	Pb	08 04 51.4	-5.5
TXIG				*e*S	**Sn**	**08 05 41.4**	**+0.1**
PETF	**Flores**	**4.89**	**54**	*e*P	**Pn**	**08 04 46.6**	**+1.6**
PETF				*e*S	**Sn**	**08 05 37.7**	**-4.0**
PETF	**Flores**	**4.89**	**54**	*i* S	**Pn**	**08 04 48.1**	**+3.1**
PETF				*i* P	Pb	08 04 48.2	-9.0
TOIG	**Toxpalan**	**5.02**	**324**	*e*P	Pb	08 04 53.8	-5.7
TOIG				*e*P	Pn	08 04 54.0	+7.1
TOIG				*e*S	**Sn**	**08 05 43.3**	**-1.6**
TOIG				*e*S	**Sn**	**08 05 45.9**	**+1.0**
HLIG	**Huajuapan de L**	**5.28**	**316**	*e*P	Pn	08 04 56.0	+5.5

HLIG				*e*S	Sn	08 05 51.9	+0.5
FTIG	Fresnillo de T	5.56	315	*e*P	Pn	08 05 00.9	+6.6
FTIG				*e*S	Sn	08 05 56.1	-2.0

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*GEN **02** 08:11:00.6, 45°.87N×7°.04E, h$8^{km}\pm1^{km}$, Ml1.7*

*LDG **02** 08:11:01.6±0.0, 45°.85N×7°.04E, h2^{km}, Md2.0/2, Ml2.6/31, Error ellipse: s-maj=1.0km s-min=0.7km az=110.0*

*ROM **02** 08:11:01.9±0.2, 45°.83N±0°.01×7°.10E±0°.02, h9^{km}, ML1.6/20, Error ellipse: s-maj=1.8km s-min=0.9km az=312.0*

*STR **02** 08:11:01.5±0.3, 46°N±2°×°±°, h$10^{km}\pm3^{km}$, MLv2.3/28, Error ellipse: s-maj=0.0km s-min=0.0km az=120.9, preliminary*

ZUR 02 08:11:01.8, 45°.88N×7°.04E, h$2^{km}\pm2^{km}$, MLh2.1/91, 31C-7D, Error ellipse: s-maj=4223.3km s-min=720.0km az=308.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRGE	Morge	0.11	170	P	Pg	08 11 04.1	+0.2
MRGE				S	Sg	08 11 05.9	+0.7
MRGE	Morge	0.11	170	P	Pg	08 11 04.1	+0.2
MRGE				S	Sg	08 11 05.8	+0.5
MRGE				AML	AML		
	comp=E,6735µm,0.2s						
MRGE				AML	AML		
	comp=N,3245µm,0.3s						
SEMOS	Emosson Stauma	0.20	340	⇑Pg	Pg	08 11 05.8	+0.1
SEMOS				Sg	Sg	08 11 08.7	+0.2
SMAO	Martigny, Rue	0.23	7	⇑Pg	Pg	08 11 06.4	+0.2
SALAN	Lac Salanfe	0.27	351	⇑Pg	Pg	08 11 07.1	+0.1
OGSI	Sixt	0.27	314	⇑Pg	Pg	08 11 06.8	-0.2
OGSI				Sg	Sg	08 11 10.3	-0.3
OGSI	Sixt	0.27	314	Pg	Pg	08 11 06.8	-0.2
OGSI				Sg	Sg	08 11 10.4	-0.2
FULLY	Reservoir Maze	0.29	14	⇑Pg	Pg	08 11 07.5	+0.2
SAI01	Saillon, Rue d	0.31	20	⇑Pg	Pg	08 11 08.2	+0.4
LAVEY	Lavey les Bain	0.33	359	⇑Pg	Pg	08 11 08.1	0.0
LAVEY				Sg	Sg	08 11 12.3	+0.1
RSL	Roselend	0.34	237	⇑Pg	Pg	08 11 08.1	-0.2
RSL				Sg	Sg	08 11 12.4	-0.4
RSL	Roselend	0.34	237	Pg	Pg	08 11 08.1	-0.3
RSL				Sg	Sg	08 11 12.3	-0.5
RSL	Roselend	0.34	237	P	Pg	08 11 08.1	-0.2
RSL				S	Sg	08 11 12.4	-0.4
RAW4	Former Reservo	0.35	17	⇑Pg	Pg	08 11 08.7	+0.2
ILLEZ	Chalet Vouargn	0.35	349	⇑Pg	Pg	08 11 08.5	0.0
SARC	Ardon Commune,	0.37	25	⇑Pg	Pg	08 11 09.1	+0.2
GRYON	Gryon	0.38	8	⇑Pg	Pg	08 11 09.2	+0.1
VET01	Vtroz, Route	0.38	25	⇑Pg	Pg	08 11 09.2	+0.1
SHER	Hrmence, R	0.40	39	⇑Pg	Pg	08 11 09.6	+0.1
LPL	La Plagne	0.42	211	*e*Pg	Pg	08 11 09.5	-0.3
LPL				*e*Sg	Sg	08 11 14.6	-0.6
	comp=N,55nm,0.3s						
LPG	La Plagne	0.43	208	*e*Pg	Pg	08 11 09.5	-0.5
LPG				*e*Sg	Sg	08 11 14.8	-0.7
	comp=N,95nm,0.2s						
SIOV	Sion-Valere	0.43	32	⇑Pg	Pg	08 11 10.0	0.0
SIOO	Sion-Ophtalmol	0.43	34	Pg	Pg	08 11 10.2	+0.2
MH36	Zermatt, Posit	0.46	76	⇓Pg	Pg	08 11 10.2	-0.3
MH44	Zermatt, Posit	0.46	76	⇓Pg	Pg	08 11 10.2	-0.4
MH44				Sg	Sg	08 11 16.8	+0.3
CIRO	Champorcher	0.46	126	Pg	Pg	08 11 10.6	-0.1
CIRO	Champorcher	0.46	126	Sg	Sg	08 11 16.9	+0.2
CIRO	Champorcher	0.46	126	P	Pg	08 11 10.6	0.0
CIRO				S	Sg	08 11 16.7	0.0
CIRO	Champorcher	0.46	126	P	Pg	08 11 10.6	0.0
CIRO				S	Sg	08 11 16.7	0.0
CIRO				AML	AML		
	comp=E,61µm,0.5s						
CIRO				AML	AML		
	comp=N,76µm,0.1s						
LEO01	Saint Lonard,	0.46	36	⇑Pg	Pg	08 11 10.8	+0.1
AIGLE	Aigle	0.47	353	⇑Pg	Pg	08 11 10.8	0.0
AIGLE	Aigle	0.47	353	Pg	Pg	08 11 10.7	-0.1
AIGLE	Aigle	0.47	353	Sg	Sg	08 11 17.2	+0.3
RAW2	Sanetsch, VS	0.48	24	⇑Pg	Pg	08 11 11.1	+0.1
SAYF2	Ayent-Fortunoz	0.49	33	⇑Pg	Pg	08 11 11.2	0.0
RAW3	Les Diablerets	0.49	11	⇑Pg	Pg	08 11 11.5	+0.2
NVL3	Port Valais, L	0.51	347	⇑Pg	Pg	08 11 11.4	-0.1
SIE01	Sierre, Farmho	0.51	39	⇑Pg	Pg	08 11 11.6	+0.1
VANNI	Vissoie, Val d	0.52	49	⇓Pg	Pg	08 11 11.7	0.0
VANNI				Sg	Sg	08 11 18.3	-0.1
VANNI	Vissoie, Val d	0.52	49	P	Pg	08 11 11.7	0.0
VANNI				S	Sg	08 11 18.3	0.0
NVL1	Lau de Morge,	0.52	340	Pg	Pg	08 11 11.7	0.0
SENIN	Lac Senin/Sane	0.52	21	⇑Pg	Pg	08 11 11.8	0.0
SENIN	Lac Senin/Sane	0.52	21	P	Pg	08 11 11.8	0.0
SENIN				S	Sg	08 11 18.7	+0.1
NVL2	Le Croseau, ST	0.54	343	Pg	Pg	08 11 12.1	0.0
STSW2	Zeuzier, Staus	0.55	30	⇓Pg	Pg	08 11 12.2	0.0
ILL16	Illgraben, For	0.56	45	⇓Pg	Pg	08 11 12.6	+0.2
ILL17	Plaine Madelei	0.56	44	⇑Pg	Pg	08 11 12.5	0.0
ILL14	Mittler Illalp	0.57	46	Pg	Pg	08 11 12.7	0.0
SATI	Passo dei Sala	0.58	90	Pg	Pg	08 11 12.2	-0.7
SATI	Passo dei Sala	0.58	90	Pg	Pg	08 11 12.1	-0.9
SATI	Passo dei Sala	0.58	90	Sg	Sg	08 11 20.2	-0.3
SATI	Passo dei Sala	0.58	90	P	Pg	08 11 12.2	-0.7
SATI				S	Sg	08 11 20.2	-0.3
SATI	Passo dei Sala	0.58	90	P	Pg	08 11 12.2	-0.7
SATI				S	Sg	08 11 19.9	-0.6
SATI				AML	AML		
	comp=N,53µm,1.0s						
SATI				AML	AML		
	comp=N,53µm,1.0s						
SATI				AML	AML		
	comp=E,61µm,0.8s						
ILL12	Sagenschleif I	0.58	45	⇑Pg	Pg	08 11 12.8	-0.2
ILL13	Obere Abschlac	0.59	44	⇑Pg	Pg	08 11 12.9	-0.2
RAW1	Lenk, BE	0.61	27	⇓Pg	Pg	08 11 13.6	0.0
TRAV	Traversella	0.62	126	⇓Pg	Pg	08 11 13.4	-0.2
TRAV	Traversella	0.62	126	Pg	Pg	08 11 13.4	-0.2
TRAV	Traversella	0.62	126	P	Pg	08 11 13.4	-0.1
TRAV				S	Sg	08 11 22.1	+0.5
TRAV	Traversella	0.62	126	P	Pg	08 11 13.4	-0.1
TRAV				S	Sg	08 11 21.7	+0.1
TRAV				AML	AML		
	comp=N,100µm,0.3s						
TRAV				AML	AML		
	comp=E,70µm,0.2s						
TRAV				AML	AML		
	comp=E,70µm,1.8s						
SGRA	Graechen Ausbl	0.64	60	Pg	Pg	08 11 13.9	-0.2
SGRA				Sg	Sg	08 11 22.7	+0.2
EMBD	Embd, Matterta	0.65	58	⇑Pg	Pg	08 11 13.9	-0.4
EMBD	Embd, Matterta	0.65	58	Pg	Pg	08 11 13.9	-0.4
EMBD	Embd, Matterta	0.65	58	Sg	Sg	08 11 22.3	-0.4
EMBD	Embd, Matterta	0.65	58	P	Pg	08 11 13.9	-0.4
EMBD				S	Sg	08 11 22.2	-0.5
MMK	Mattmark	0.67	75	P	Pg	08 11 13.9	-0.7
MMK				S	Sg	08 11 23.2	-0.2
MMK	Mattmark	0.67	75	P	Pg	08 11 13.9	-0.8
SALEV	Sal¨ve	0.68	286	Pg	Pg	08 11 14.8	0.0
OGMO	Fort Saint-Gob	0.71	200	Pg	Pg	08 11 14.7	-0.6
OGMO				Sg	Sg	08 11 24.2	-0.4
OGMO	Fort Saint-Gob	0.71	200	P	Pg	08 11 14.8	-0.5
OGMO				S	Sg	08 11 24.0	-0.6
LAUCH	Lauchernalp	0.74	43	⇑Pg	Pg	08 11 15.7	-0.3
LAUCH	Lauchernalp	0.74	43	P	Pg	08 11 15.8	-0.2
RSP	Reno Superiore	0.74	167	⇑Pg	Pg	08 11 15.5	-0.5
RSP	Reno Superiore	0.74	167	Pg	Pg	08 11 15.5	-0.5
RSP	Reno Superiore	0.74	167	Sg	Sg	08 11 25.0	-0.7
RSP	Reno Superiore	0.74	167	P	Pg	08 11 15.6	-0.5
RSP				S	Sg	08 11 24.8	-0.8
RSP	Reno Superiore	0.74	167	P	Pg	08 11 15.6	-0.4
RSP				AML	AML		
	comp=N,86µm,0.8s						
RSP				AML	AML		
	comp=E,82µm,0.2s						
RSP				AML	AML		
	comp=N,60µm,0.2s						
RSP				AML	AML		
	comp=N,86µm,1.2s						
RSP				AML	AML		
	comp=E,90µm,0.5s						
SAVIG	Le Moulin, Sav	0.76	285	Sg	Sg	08 11 26.7	+0.4
SIMPL	Simplonpass	0.78	62	⇑Pg	Pg	08 11 16.2	-0.5
SIMPL	Simplonpass	0.78	62	P	Pg	08 11 16.2	-0.5
SIMPL				S	Sg	08 11 26.3	-0.5
JAUN	Jaun, Euschels	0.78	13	⇑Pg	Pg	08 11 16.6	-0.1
OGMY	Moye	0.80	271	Pg	Pg	08 11 17.3	+0.2
BNI	Bardonecchia	0.86	197	P	Pg	08 11 17.2	-1.0
BNI				S	Sg	08 11 28.4	-1.0
BNI	Bardonecchia	0.86	197	P	Pg	08 11 17.2	-1.0
BNI				S	Sg	08 11 28.9	-0.5
BNI				AML	AML		
	comp=N,43µm,0.3s						
BNI				AML	AML		
	comp=E,28µm,1.3s						
BNI				AML	AML		
	comp=N,43µm,0.3s						
BNI				AML	AML		
	comp=N,43µm,1.7s						
BNI				AML	AML		
	comp=N,39µm,0.2s						
BNI				AML	AML		
	comp=N,39µm,1.8s						
BNI				AML	AML		
	comp=E,28µm,0.7s						
BNI				AML	AML		
	comp=E,35µm,0.5s						
WIMIS	Wimmis	0.89	27	Pg	Pg	08 11 18.7	-0.1
FIESA	Fiescheralp	0.93	53	Pg	Pg	08 11 19.2	-0.4
RRL	Rocca Remolon	0.97	190	Pg	Pg	08 11 19.5	-0.8
RRL	Rocca Remolon	0.97	190	Sg	Sg	08 11 32.3	-0.6
RRL	Rocca Remolon	0.97	190	P	Pg	08 11 19.7	-0.7
RRL				S	Sg	08 11 32.4	-0.5
RRL				AML	AML		
	comp=E,41µm,0.3s						
RRL				AML	AML		
	comp=N,59µm,0.3s						
OGSM	Saint Maurice	0.97	255	Pg	Pg	08 11 20.3	-0.1
OGSM				Sg	Sg	08 11 33.0	-0.1
CABF	La Chapelle	0.99	319	*e*Pg	Pg	08 11 20.4	-0.3
CABF	La Chapelle	0.99	319	*e*P	Pb	08 11 22.1	+0.5
CABF				*e*Sg	Sg	08 11 33.9	+0.4
	comp=N,44nm,0.3s						
OG35	Corcelles	1.03	280	Pg	Pg	08 11 21.3	-0.2
OG35				Sg	Sg	08 11 35.0	0.0
BHB	Bricherasio	1.05	171	Pg	Pg	08 11 21.2	-0.6
BHB	Bricherasio	1.05	171	P	Pg	08 11 21.4	-0.4
BHB				AML	AML		
	comp=N,50µm,0.9s						
BHB				AML	AML		
	comp=E,42µm,0.2s						
GRN	Grenoble	1.10	236	Pg	Pb	08 11 23.8	+0.1
BRANT	Les Verrieres	1.13	340	Pg	Pg	08 11 23.6	+0.2
MBDF	Montbardon	1.16	189	*e*Pg	Pg	08 11 22.8	-1.2
MBDF				*e*Sg	Sg	08 11 37.3	-1.8
	comp=E,8.7nm,0.2s						
RIVEL	MONT RIVEL	1.17	319	Pg	Pn	08 11 25.3	0.0
ORIF	Oris-en-Rattie	1.26	221	*e*Pg	Pg	08 11 24.2	-1.6
ORIF				*e*Sg	Sg	08 11 40.4	-1.7
	comp=E,46nm,0.3s						
ORIF	Oris-en-Rattie	1.26	221	Pn	Pg	08 11 25.0	-0.8
ORIF	Oris-en-Rattie	1.26	221	P	Pg	08 11 25.1	-0.7
FUSIO	Fusio	1.27	62	P	Pg	08 11 25.2	-0.9
CREF	Crivoux	1.36	193	Pn	Pg	08 11 26.5	-1.2
BNALP	Bannalp	1.39	44	P	Pn	08 11 28.1	-0.2
CHMF	Charmoille	1.40	349	Pn	Pn	08 11 27.9	-0.5
CHMF				Sn	Sb	08 11 47.2	+0.2
JAUF	Jausiers	1.46	188	Pg	Pn	08 11 28.8	-0.5
BOUC	Bouclans	1.47	339	Pn	Pn	08 11 29.1	-0.2
BOUC				Sg	Sn	08 11 49.9	+0.7
FOURG	Fourg	1.49	326	Pg	Pg	08 11 31.0	+0.6
BOURR	Bourrignon	1.52	5	Pn	Pn	08 11 29.7	-0.4
BALST	Balsthal	1.53	17	Pn	Pn	08 11 29.8	-0.4
BALST				Pg	Pg	08 11 31.3	+0.2
BALST	Balsthal	1.53	17	Sg	Sg	08 11 52.6	+1.7
SULZ	Cheisacher	1.81	24	Pg	Pg	08 11 36.5	+0.1
SULZ	Cheisacher	1.81	24	Pn	Pn	08 11 33.3	-0.7
SSB	Saint Sauveur	1.85	252	Pn	Pn	08 11 33.8	-0.8
SSB				Pg	Pg	08 11 36.8	-0.4
ENDD	Endenburg	1.90	14	Pg	Pg	08 11 37.8	-0.4
ENDD	Endenburg	1.90	14	Pn	Pn	08 11 34.1	-1.2
HINF	Hinteralfeld	1.95	356	*e*Pn	Pn	08 11 34.9	-1.0
HINF	Hinteralfeld	1.95	356	*e*P	Pb	08 11 37.5	-0.5
HINF				*e*Sn	Sn	08 11 58.7	-2.2
HINF				*e*Sg	Sg	08 12 03.6	-0.7
	comp=E,8.8nm,0.3s						
VIVF	Saint-Julien-l	1.95	239	*e*P	Pn	08 11 35.4	-0.5
VIVF	Saint-Julien-l	1.95	239	*e*Pg	Pb	08 11 38.4	+0.4
VIVF				*e*Sg	Sb	08 12 02.4	-0.4
	comp=E,30nm,0.3s						
SLE	Schleitheim	2.14	27	Pn	Pn	08 11 37.4	-1.2
SLE	Schleitheim	2.14	27	Pg	Pg	08 11 42.3	-0.4
SMRF	Simiane la Rot	2.16	209	*e*Pg	Pb	08 11 41.0	-0.7
SMRF				*e*Sg	Sb	08 12 08.5	-0.4
	comp=E,3.9nm,0.4s						
KIZ	Kirchzarten	2.17	16	Pn	Pn	08 11 37.5	-1.4
KIZ	Kirchzarten	2.17	16	Pg	Pb	08 11 42.4	+0.7
DAVOX	Davos/Dischmat	2.17	64	AML	AML		
	comp=E,11µm,0.3s						
DAVOX				AML	AML		
	comp=N,19µm,0.4s						
HAU	Haudompre	2.18	348	*e*Pn	Pn	08 11 37.5	-1.6
HAU	Haudompre	2.18	348	*e*Pg	Pb	08 11 41.8	-0.2
HAU				*e*Sg	Sg	08 12 11.3	-0.6
	comp=N,12nm,0.3s						
ECH	Echery	2.34	2	Pn	Pn	08 11 40.2	-1.1
ECH				Pg	Pg	08 11 46.1	-0.6
SMF	Signal de Mont	2.35	290	*e*P	Pn	08 11 41.9	+0.6
SMF	Signal de Mont	2.35	290	*e*Pg	Pb	08 11 45.7	+1.0
SMF				*e*Sg	Sb	08 12 14.7	+0.5
	comp=N,7.9nm,0.2s						
COLF	Collangettes	2.37	263	Pn	Pn	08 11 41.1	-0.6
PLDF	La Plantade	2.38	273	Pn	Pn	08 11 41.3	-0.6
PLDF				Pg	Pg	08 11 47.2	-0.3
LMR	La Mourre	2.57	189	*e*Pg	Pb	08 11 48.6	+0.1
LMR				*e*Sn	Sn	08 12 11.9	-4.3
LMR				*e*Sg	Sb	08 12 20.9	+0.4
	comp=N,1.1nm,0.2s						
LOR	Lormes	2.60	304	*e*P	Pn	08 11 44.5	-0.3
	baz=123						
LOR	Lormes	2.60	304	*e*Pn	Pn	08 11 44.6	-0.2
LOR	Lormes	2.60	304	*e*Pg	Pb	08 11 49.8	+0.8
	baz=126						
LOR				*e*Sn	Sn	08 12 15.1	-1.8
LOR				*e*Sg	Sg	08 12 23.6	-1.5
	comp=N,4.8nm,0.2s						
LOR	Lormes	2.60	304	Pn	Pn	08 11 44.6	-0.2
GUT	Gutenstein	2.62	32	Pn	Pn	08 11 43.6	-1.5
GUT	Gutenstein	2.62	32	Pg	Pg	08 11 50.8	-1.1
SFTF	Sexfontaines	2.70	330	*e*Pg	Pg	08 11 52.5	-1.0
SFTF				*e*Sg	Sg	08 12 26.7	-1.8
	comp=N,4.1nm,0.3s						
AVF	Avril sur Loir	2.71	291	*e*Pn	Pn	08 11 45.5	-0.8
AVF	Avril sur Loir	2.71	291	*e*Pg	Pg	08 11 52.5	-1.2
AVF				*e*Sg	Sb	08 12 25.5	+0.9
	comp=N,1.8nm,0.2s						
SSF	Saint Saulge	2.71	297	*e*P	Pn	08 11 46.5	+0.1
SSF				*e*Sn	Sn	08 12 15.4	-4.3
SSF				*e*Sg	Sb	08 12 26.1	+1.4
	comp=N,3.8nm,0.3s						
LBL	Lubilhac	2.74	258	Pn	Pn	08 11 45.5	-1.3
PAGF	Fort de Pagny	2.83	342	*e*P	Pn	08 11 48.3	+0.4
PAGF	Fort de Pagny	2.83	342	*e*Pg	Pb	08 11 54.3	+1.4
PAGF				*e*Sn	Sn	08 12 19.7	-2.8
PAGF				*e*Sg	Sg	08 12 31.3	-1.2
	comp=N,2.0nm,0.2s						
LASF	Ste Croix	2.88	233	*e*P	Pn	08 11 48.7	0.0
LASF				*e*Sn	Sn	08 12 18.5	-5.5
LASF				*e*Sg	Sb	08 12 30.0	+0.3
	comp=N,2.8nm,0.2s						
MEZF	Maizieres J’vi	2.96	333	*e*Pg	Pg	08 11 57.3	-1.1
MEZF				*e*Sg	Sg	08 12 37.4	+0.7
	comp=N,6.3nm,0.4s						
BGF	Bois d'Agland	2.99	285	*e*Pn	Pn	08 11 48.4	-1.7
BGF	Bois d'Agland	2.99	285	*e*P	Pn	08 11 51.3	+1.2
BGF	Bois d'Agland	2.99	285	*e*Pg	Pb	08 11 56.7	+1.0
BGF				*e*Sg	Sg	08 12 35.3	-2.4
	comp=N,4.1nm,0.2s						
SAVF	Savonnieres en	3.04	335	*e*Pn	Pn	08 11 49.3	-1.5
SAVF	Savonnieres en	3.04	335	*e*Pg	Pb	08 11 57.0	+0.5
SAVF				*e*Sn	Sn	08 12 23.6	-4.1
SAVF				*e*Sn	Sb	08 12 24.5	-9.4
SAVF				*e*Sg	Sg	08 12 37.5	-1.7
	comp=N,2.8nm,0.3s						
SAVF				*e*Sg	Sg	08 12 37.7	-1.5
	comp=N,1.5nm,0.2s						
HYF	Humbligny	3.34	296	*e*Sg	Sg	08 12 46.1	-2.8
	comp=N,59nm,0.3s						
TCF	Toulx Ste Croi	3.38	279	*e*P	Pn	08 11 56.0	+0.4
CAF	Calviac	3.63	257	*e*P	Pn	08 11 58.8	-0.2
CAF				*e*Sg	Sg	08 12 54.9	-3.3
	comp=N,1.4nm,0.2s						
RJF	Les Rejaudoux	3.92	264	*e*Sg	Sg	08 13 04.0	-3.5
	comp=N,3.1nm,0.3s						
MTLF	Montolieu	4.27	235	*e*Sg	Sg	08 13 14.7	-4.2
	comp=N,1.2nm,0.2s						
BAIF	Baives	4.60	337	*e*Sg	Sg	08 13 26.4	-2.9
	comp=N,0.6nm,0.3s						

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*TIR **02** 08:15:55.8, 40°.42N×20°.75E, h0^{km}, Md3.1/8, Ml3.0/8*

*ATH **02** 08:15:56.7, 40°.43N×20°.76E, h$13^{km}\pm2^{km}$, ML2.6/6, Manual Solution by A.Fokaefs First location: 2019/06/02 08:16:55, This location: 2019/06/03 04:58:56 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*

*BEO **02** 08:15:56.3±0.7, 40°.39N×20°.57E, h0^{km}, ML2.6/11*

*SKO **02** 08:15:58.9, 40°.43N×20°.90E, h7^{km}, ML2.7*

*THE **02** 08:15:59.9, 40°N±2°×2°1E±°, h$6^{km}\pm2^{km}$, M2.5/19, MLh2.5/19*

ISC 02 08:15:57.0±1.0, 40°.43N±0°.01×20°.76E±0°.02, h$7^{km}\pm8^{km}$, n82, $\sigma0^{s}94$/117, 2D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBN	Korca	0.20	5	Pg	Pg	08 16 00.5	-0.5
KBN				Sg	Sg	08 16 03.4	-0.3
KBN				AML	AML	08 16 04.6	
	12nm,0.4s						
NEST	Nestorio	0.22	93	Pg	Pg	08 16 01.1	-0.3
NEST				Sg	Sg	08 16 05.0	+0.7
NEST				AML	AML	08 16 07.8	
	17nm,0.3s						
NEST				AMd		08 16 44.2	
NEST	Nestorio	0.22	93	P	Pg	08 16 01.8	+0.4
NEST				S	Sg	08 16 03.4	-0.9
NEST	Nestorio	0.22	93	P	Pg	08 16 01.7	+0.4
NEST				S	Sg	08 16 05.7	+1.4
LSK	Leskovik	0.30	204	Pg	Pg	08 16 02.4	-0.6
LSK				Sg	Sg	08 16 07.4	+0.4
LSK				AML	AML	08 16 12.1	
	13nm,0.4s						
LSK				AMd		08 16 52.1	
PENT	Pentalofos	0.37	129	P	Pg	08 16 04.3	+0.1
PENT				S	Sg	08 16 09.6	+0.6
KPRO	Kipourio	0.66	135	P	Pg	08 16 09.4	-0.3
KPRO	Kipourio	0.66	135	P	Pg	08 16 09.3	-0.3
KPRO				S	Sb	08 16 19.2	-1.1
OHR	Ohrid	0.69	2	⇓*i*Pg	Pb	08 16 10.7	-0.7
OHR				*i* Sg	Sb	08 16 21.3	+0.2
OHR				*e*Lg	Lg	08 16 21.8	
	comp=E,548nm,0.6s						
OHR				*e*Lg	Lg	08 16 23.4	
	comp=N,194nm,0.4s						
OHR	Ohrid	0.69	2	*e*Pg	Pb	08 16 10.8	-0.6
OHR				*e*Sg	Sg	08 16 19.2	0.0
JAN	Janina	0.77	175	P	Pb	08 16 12.3	-0.5
JAN				S	Sg	08 16 22.3	+0.5
KZN	Kozani	0.78	98	P	Pb	08 16 12.2	-0.7
KZN				S	Sb	08 16 24.1	+0.3
SRN	Sarande	0.80	227	Pg	Pg	08 16 12.5	+0.1
SRN				Sg	Sb	08 16 25.0	+0.8
SRN				AML	AML	08 16 28.4	
	comp=N,0.8nm,0.5s						
SRN				AMd		08 17 18.6	
IGT	Igoumenitsa	0.95	201	Pg	Pg	08 16 15.1	-0.2
IGT				Sg	Sn	08 16 29.5	-1.1
IGT				AMd		08 17 24.1	
IGT	Igoumenitsa	0.95	201	*i* Pg	Pb	08 16 15.8	0.0
IGT				*i* Sg	Sn	08 16 31.1	+0.4
IGT	Igoumenitsa	0.95	201	P	Pg	08 16 15.2	0.0
KEK	Kerkira	1.03	226	P	Pn	08 16 17.8	-0.1
KTI	Kastanea	1.03	91	P	Pg	08 16 16.7	-0.1
PHP	Peshkopia	1.28	349	Pn	Pn	08 16 20.5	-1.0
PHP				Sn	Sn	08 16 40.5	+1.5
PHP				AML	AML	08 16 43.1	
	comp=N,0.6nm,0.4s						
PHP				AMd		08 17 32.8	
THL	Klokotos Trika	1.29	131	P	Pn	08 16 20.9	-0.5
THL				S	Sg	08 16 38.1	-0.3
THL	Klokotos Trika	1.29	131	P	Pn	08 16 20.4	-1.1
TYRN	Tyrnavos	1.33	122	P	Pn	08 16 21.9	-0.2
TYRN				S	Sb	08 16 39.1	-0.6
TYRN	Tyrnavos	1.33	122	P	Pn	08 16 21.8	-0.3
TSLK	Tsoukalades, L	1.60	183	P	Pg	08 16 28.0	+0.3
TSLK				S	Sg	08 16 49.6	+1.2
SKO	Skopje	1.63	18	*i* Pg	Pg	08 16 28.4	+0.2
SKO				*i* Sg	Sg	08 16 49.6	+0.3
VAY	Valandovo	1.64	56	P	Pn	08 16 25.9	-0.4
VAY				S	Sn	08 16 47.1	-0.5
VAY	Valandovo	1.64	56	⇓*i*Pg	Pb	08 16 27.1	-0.4
VAY				*i* Sg	Sb	08 16 48.0	-0.4
VAY				*e*Lg	Lg	08 16 51.7	
	comp=N,37nm,0.5s						
VAY				*e*Lg	Lg	08 16 54.6	
	comp=E,53nm,0.7s						
VAY	Valandovo	1.64	56	*e*Pg	Pn	08 16 26.6	+0.3
VAY				*e*Sg	Sg	08 16 53.4	+3.8
LKD2	Lefkada island	1.64	183	Pn	Pb	08 16 27.7	+0.1
LKD2				Sn	Sg	08 16 51.9	+2.3
LKD2				AML	AML	08 16 59.4	
	comp=E,0.4nm,0.7s						
LKD2				AMd		08 17 52.2	
LKD2	Lefkada island	1.64	183	P	Pg	08 16 29.2	+0.8
LKD2				S	Sg	08 16 51.1	+1.5
THE	Thessaloniki	1.69	82	P	Pn	08 16 26.7	-0.3
THE				S	Sn	08 16 48.5	-0.4
THE	Thessaloniki	1.69	82	*i* Pg	Pn	08 16 26.9	-0.1
EVR	Evrytania	1.71	152	P	Pb	08 16 29.0	+0.1
EVR				S	Sg	08 16 51.8	-0.2
NYDR	Nydri-Lefkada	1.71	182	P	Pg	08 16 30.2	+0.4
NYDR				S	Sg	08 16 52.2	+0.3
PUK	Puka	1.74	338	Pn	Pg	08 16 29.8	-0.7
PUK				Sn	Sg	08 16 55.4	+2.3
PUK				AML	AML	08 17 00.4	
	comp=E,0.5nm,0.5s						
PUK				AMd		08 17 42.4	
MAKR	Makrakomi, Fth	1.76	143	P	Pg	08 16 30.0	-0.8
MAKR				S	Sb	08 16 52.0	0.0
KNT	Kendrikon	1.78	65	P	Pn	08 16 28.4	+0.2
KNT				S	Sn	08 16 50.4	-0.8
KNT	Kendrikon	1.78	65	*i* Pn	Pn	08 16 28.4	+0.2
HORT	Hortiatis	1.79	84	P	Pn	08 16 28.2	-0.3
HORT				S	Sn	08 16 51.3	-0.2
SCTE	Santa Cesarea	1.79	259	Pn	Pb	08 16 29.3	-0.9
SCTE				Sn	Sg	08 16 55.2	+0.6
SCTE				AML	AML	08 16 59.8	
	comp=E,0.6nm,0.5s						
SCTE				AMd		08 17 53.4	
AGG	Agios Georgios	1.85	139	P	Pb	08 16 30.2	-1.0
AGG				S	Sb	08 16 54.5	-0.1
PVO	Paravola	1.90	162	P	Pg	08 16 32.7	-0.7
ULC	Ulcinj	1.92	324	*i* Pn	Pg	08 16 32.8	-1.0
FSK	Fiskardo	1.97	185	P	Pb	08 16 33.2	-0.1
BCI	Bajram Curri	2.01	345	P	Pb	08 16 34.3	+0.4
SOH	Sokhos	2.01	78	P	Pn	08 16 31.8	+0.4
SOH				S	Sn	08 16 56.9	0.0
ANX	Ano Chora	2.04	154	P	Pb	08 16 34.5	+0.1
PLG	Polygyros	2.05	91	P	Pn	08 16 32.6	+0.7
DRME	Dracevica, Mon	2.12	326	*e*Pn	Pn	08 16 33.9	+0.9
SRS	Serrai	2.26	71	*i* Pn	Pn	08 16 36.0	+1.2
KKB	Krupnik	2.28	51	*i* Pn	Pb	08 16 38.2	-0.3
PDG	Podgorica	2.30	331	*e*Pn	Pn	08 16 34.3	-1.1
PDG	Podgorica	2.30	331	*e*Pg	Pn	08 16 36.0	+0.6
PDG				*e*Sg	Sb	08 17 08.8	+1.3
BOSS	Bosilegrad	2.44	31	*e*Pn	Pn	08 16 38.3	+1.0
BARS	Barje	2.52	18	*i* Pn	Pn	08 16 38.8	+0.4
BARS	Barje	2.52	18	*e*Pn	Pn	08 16 38.6	+0.2
MMB	Musomishta	2.52	63	*i* Pn	Pb	08 16 42.2	-0.5
HCY	Herceg Novi	2.64	321	*e*Pn	Pn	08 16 39.8	-0.3
SELS	Selova	2.80	5	*e*Pn	Pn	08 16 43.0	+0.6
VTS	Vitosha	2.87	39	*e*Pn	Pb	08 16 47.4	-1.3
SJES	Sjenica	2.89	348	*e*Pn	Pb	08 16 47.0	-2.1
SJES	Sjenica	2.89	348	*e*Pn	Pn	08 16 43.3	-0.4
TREB	Trebinje	2.92	322	*e*Pn	Pn	08 16 41.4	-2.5
BRY	Bratogost	2.98	327	*e*Pn	Pn	08 16 47.4	+2.5
UPM	Unac-Piva	3.10	334	*e*Pn	Pb	08 16 51.2	-1.5

GOCS	**Kraljevo Serbi**	**3.13**	**1**	*e*Pn	**Pn**	**08 16 47.4**	**+0.4**
ZAPS	**Zavoj**	**3.17**	**26**	*e*Pn	**Pn**	**08 16 48.6**	**+1.2**
IVAS	**Ivanjica**	**3.18**	**352**	*e*Pn	**Pn**	**08 16 47.8**	**+0.2**
BOVS	**Bovan**	**3.28**	**12**	*e*Pn	**Pn**	**08 16 49.0**	**+0.1**
STON	**Ston**	**3.35**	**318**	*e*Pn	**Pn**	**08 16 50.0**	**+0.2**
RUDO	**Rudo**	**3.35**	**342**	*e*Pn	**Pn**	**08 16 49.2**	**-0.7**
GRUS	**Gruza**	**3.46**	**359**	*e*Pn	**Pn**	**08 16 53.0**	**+1.7**
ZAGS	**Zajecar**	**3.56**	**17**	*e*Pn	**Pn**	**08 16 53.4**	**+0.7**
BBLS	**Lazi&#263i**	**3.58**	**344**	*e*Pn	**P**	**08 17 02.8**	**+0.8**
BBLS	**Lazi&#263i**	**3.58**	**344**	*e*Pn	**Pn**	**08 16 52.4**	**-0.7**
HAPS	**Han Pijesak,Bl**	**3.90**	**340**	*e*Pn	**Pn**	**08 17 00.4**	**+2.9**
BLY	**Banja Luka**	**5.06**	**330**	*e*Pn	**Pn**	**08 17 14.4**	**+1.0**
A050A	**Klekovaca**	**5.12**	**324**	*e*Pn	**Pn**	**08 17 15.0**	**+0.8**
A051A	**Mrakovica**	**5.39**	**329**	*e*Pn	**Pn**	**08 17 18.3**	**+0.4**
BOJS	**Bojanci**	**6.49**	**323**	*e*Pn	**Pn**	**08 17 32.6**	**-0.3**
CRES	**Cresnjevec Ost**	**6.65**	**326**	*e*Pn	**Pn**	**08 17 34.3**	**-0.8**
CEY	**Cerknica**	**7.05**	**321**	*e*Pn	**Pn**	**08 17 39.6**	**-1.1**

IDC ***02*** *08:22:34.7±0.8, 11°.57S×162°.01E, h0^{km}, mb3.9/8, mbtmp3.9/10, ML4.1/2, MS3.3/10, Error ellipse: s-maj=26.4km s-min=19.7km az=76.0*

NOU ***02*** *08:22:35.3, 11°.54S×162°.26E, h0^{km}, MLv4.5/14, Solomon Islands*

NEIC ***02*** *08:22:36.2±1.9, 11°.5S±0°.1×162°.05E±0°.09, h10^{km}±2^{km}, mb4.3/13, Error ellipse: s-maj=21.0km s-min=9.6km az=34.0*

ISC 02 08:22:35.4±0.5**, 11°.57S**±0°.05×**162°.14E**±0°.07**, h10^{km}, n54, σ1^{s}66**/44**, mb4.0**/13**, MS3.4**/8**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HURO	**Huro Makira**	**1.13**	**348**	P	**Pg**	**08 22 56.4**	**-0.7**
NGOA	**Tingoa Renbel**	**2.04**	**270**	P	**Pn**	**08 23 10.5**	**+0.7**
HNR	**Honiara**	**3.03**	**314**	Pn	**Pn**	**08 23 22.6**	**-0.9**
HNR	**Honiara**	**3.03**	**314**	Pn	**Pn**	**08 23 23.8**	**+0.4**
	37nm,0.3s,baz=199,slow=1.8,SNR=7.7						
HNR				Sn	**Sn**	**08 23 58.6**	**-1.2**
	42nm,0.3s,baz=45,slow=22,SNR=4.5						
HNR				LR	LR	08 24 33.5	
	comp=Z,140nm,19.7s,baz=120,slow=40 135nm,0.5s						
HNR	**Honiara**	**3.03**	**314**	P	**Pn**	**08 23 24.9**	**+1.5**
ALEG	**Aligegeo Malai**	**3.14**	**333**	P	**Pn**	**08 23 27.4**	**+2.4**
ALEG	**Aligegeo Malai**	**3.14**	**333**	S	**Sb**	**08 24 05.7**	**-4.1**
SAVO	**Savo Central**	**3.32**	**316**	P	**Pn**	**08 23 29.1**	**+1.6**
LUES	**Luesalemba Tem**	**3.81**	**77**	P	**Pn**	**08 23 31.8**	**-2.4**
TATA	**Tatamba Isabel**	**3.92**	**324**	P	**Pn**	**08 23 38.6**	**+3.0**
VLAKA	**Lakatoro**	**6.83**	**132**	P	**Pn**	**08 24 16.3**	**+0.7**
DVP	**Devils Point**	**8.46**	**137**	P	**Pn**	**08 24 38.3**	**+0.2**
KOUNC	**Koumac, New Ca**	**9.16**	**167**	P	**Pn**	**08 24 48.4**	**+0.7**
DZM	**Mont Dzumac**	**11.22**	**159**	Pn	**Pn**	**08 25 16.2**	**+0.2**
DZM	**Mont Dzumac**	**11.22**	**159**	Pn	**Pn**	**08 25 17.4**	**+1.3**
	0.9nm,0.3s,baz=347,slow=10,SNR=10						
DZM				Sn	**Sn**	**08 27 15.5**	**-6.1**
	0.3nm,0.3s,baz=308,slow=16,SNR=2.2						
DZM				LR	LR	08 28 33.1	
	comp=Z,256nm,18.5s,baz=16,slow=32 3.2nm,0.4s						
DZM	**Mont Dzumac**	**11.22**	**159**	P	**Pn**	**08 25 17.3**	**+1.3**
YATNC	**Mamie plateau,**	**11.37**	**157**	P	**Pn**	**08 25 19.3**	**+1.3**
CTAO	**Charters Tower**	**17.46**	**239**	P	**Pn**	**08 26 37.7**	**-1.5**
COEN	**Coen**	**18.65**	**261**	P	**P**	**08 26 52.8**	**-0.8**
PATS	**Pohnpei**	**18.68**	**348**	P	**P**	**08 26 52.5**	**-1.3**
ARMA	**Armidale**	**21.14**	**206**	P	**P**	**08 27 19.2**	**-1.5**
ARMA				IAmb	IAmb	08 27 27.3	
	comp=Z,8.0nm,1.1s						
CAN	**Canberra**	**26.48**	**205**	P	**P**	**08 28 13.0**	**0.0**
CAN				IAmb	IAmb	08 28 25.2	
	comp=Z,6.5nm,1.0s						
STKA	**Stephens Creek**	**27.70**	**220**	P	**P**	**08 28 23.6**	**-0.2**
STKA				IAmb	IAmb	08 28 49.0	
	comp=Z,9.3nm,0.9s						
STKA	**Stephens Creek**	**27.70**	**220**	LR	LR	08 38 23.9	
	comp=Z,120nm,19.3s,baz=27,slow=34						
WRA	**Warramunga Arr**	**27.99**	**249**	P	**P**	**08 28 26.5**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=78,slow=9.4,SNR=5.0 comp=Z,1.6nm,0.8s						
ASAR	**Alice Springs**	**29.41**	**242**	P	**P**	**08 28 37.9**	**-1.4**
ASAR	**Alice Springs**	**29.41**	**242**	P	**P**	**08 28 38.6**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=67,slow=9.4,SNR=15						
ASAR				LR	LR	08 38 50.9	
	comp=Z,40nm,19.0s,baz=66,slow=33 comp=Z,1.4nm,0.7s						
TOO	**Toolangi**	**29.89**	**207**	P	**P**	**08 28 42.8**	**-0.5**
TOO				IAmb	IAmb	08 29 02.2	
	comp=Z,4.2nm,1.1s						
H11S2	**WAKE ISLAND Hy**	**30.21**	**9**	T	T	08 59 38.8	
	baz=188,slow=76,SNR=18						
H11S3	**WAKE ISLAND Hy**	**30.21**	**9**	T	T	08 59 41.6	
	baz=188,slow=76,SNR=16						
H11S1	**WAKE ISLAND Hy**	**30.23**	**9**	T	T	08 59 38.5	
	baz=188,slow=76,SNR=16						
H11N1	**WAKE ISLAND Hy**	**31.44**	**9**	T	T	09 01 10.9	
	baz=188,slow=76,SNR=11						
H11N3	**WAKE ISLAND Hy**	**31.45**	**9**	T	T	09 01 12.7	
	baz=188,slow=76,SNR=8.7						
H11N2	**WAKE ISLAND Hy**	**31.46**	**9**	T	T	09 01 11.0	
	baz=188,slow=76,SNR=8.9						
BBOO	**Buckleboo**	**31.93**	**224**	P	**P**	**08 29 01.5**	**+0.1**
BBOO				IAmb	IAmb	08 29 18.0	
	comp=Z,8.1nm,1.1s						
KNRA	**Kununurra**	**32.67**	**259**	P	**P**	**08 29 07.9**	**-0.1**
FITZ	**Fitzroy Crossi**	**35.83**	**255**	P	**P**	**08 29 35.5**	**0.0**
FORT	**Forrest**	**36.87**	**233**	P	**P**	**08 29 44.9**	**+0.7**
VNDA	**Vanda**	**65.94**	**180**	P	**P**	**08 33 23.6**	**+2.3**
VNDA				IAmb	IAmb	08 33 32.6	
	comp=Z,1.7nm,1.1s						
VNDA	**Vanda**	**65.94**	**180**	P	**P**	**08 33 22.4**	**+1.2**
	comp=Z,0.9nm,1.0s,baz=8.5,slow=8.1,SNR=2.9 comp=Z,0.9nm,1.0s						
MA2	**Magadan**	**71.50**	**354**	LR	LR	09 02 04.6	
	comp=Z,12nm,20.8s,baz=98,slow=33						
SONM	**Songino Array**	**77.04**	**325**	P	**P**	**08 34 29.6**	**+0.8**
	comp=Z,1.2nm,0.8s,baz=136,slow=6.7,SNR=7.4						
SONM				LR	LR	09 07 06.3	
	comp=Z,58nm,20.7s,baz=105,slow=35 comp=Z,1.2nm,0.8s						
KDAK	**Kodiak Island**	**78.40**	**23**	LR	LR	09 06 00.6	
	comp=Z,16nm,18.3s,baz=198,slow=33						
QSPA	**South Pole Qui**	**78.43**	**180**	P	**P**	**08 34 37.7**	**+1.4**
QSPA				IAmb	IAmb	08 34 47.0	
	comp=Z,2.6nm,1.0s						
QSPA	**South Pole Qui**	**78.43**	**180**	P	**P**	**08 34 37.5**	**+1.2**
	comp=Z,1.3nm,0.6s,baz=318,slow=1.0,SNR=13 comp=Z,1.3nm,0.6s						
ILAR	**Eielson Array**	**85.16**	**20**	P	**P**	**08 35 12.3**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=239,slow=4.1,SNR=8.8 comp=Z,0.3nm,0.6s						
NVAR	**Mina Array Bea**	**89.08**	**51**	P	**P**	**08 35 32.9**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=238,slow=7.3,SNR=4.0 comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**91.50**	**317**	P	**P**	**08 35 42.2**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=105,slow=5.6,SNR=2.7 comp=Z,0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**91.93**	**325**	LR	LR	09 15 38.4	
	comp=Z,18nm,21.8s,baz=88,slow=35						
NRIK	**Noril'sk**	**95.39**	**340**	LR	LR	09 19 41.4	
	comp=Z,27nm,19.9s,baz=132,slow=36						
SNAA	**Sanae**	**96.33**	**185**	LR	LR	09 15 39.1	
	comp=Z,12nm,20.5s,baz=305,slow=33						
AKASG	**Malin Array Be**	**125.32**	**325**	PKP	**PKPdf**	**08 41 36.5**	**0.0**
	comp=Z,0.7nm,0.6s,baz=65,slow=1.8,SNR=4.7						
KEST	**Kesra**	**145.59**	**319**	PKPbc	**PKPdf**	**08 42 15.2**	**+0.6**
	comp=Z,2.9nm,0.8s,baz=45,slow=4.3,SNR=5.3						
ESDC	**Sonseca Array**	**149.42**	**339**	PKPbc	**PKPbc**	**08 42 25.4**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=21,slow=3.7,SNR=4.9						

TAP 02 08:30:37.2, 24°.67N×121°.00E, h20^{km}±1^{km}, ML1.9, 2D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIOB	**Emei**	**0.03**	**158**	⇓P	Pb	08 30 41.3	+0.5
LIOB				S	Sb	08 30 43.7	+0.4
NSTT	**Nanjuang**	**0.04**	**182**	*i* P	Pb	08 30 41.1	+0.2
NSTT				S	Sb	08 30 44.1	+0.8
NFF	**Wufeng Townshi**	**0.11**	**112**	⇓P	Pb	08 30 42.1	-0.3
NFF				S	Sb	08 30 45.1	-0.8
SBCB	**Hsinchu**	**0.12**	**352**	P	Pb	08 30 42.2	-0.1
SBCB				S	Sb	08 30 44.8	-1.0
KSHI	**Guanxi Townshi**	**0.19**	**57**	P	Pb	08 30 42.3	-0.3
KSHI				*e*S	Sb	08 30 45.6	-0.7
NMLH	**Miaoli**	**0.24**	**235**	P	Pb	08 30 43.7	+0.6
NMLH				S	Sb	08 30 47.9	+0.8
YHNB	**Yeheng**	**0.34**	**91**	*e*P	Pb	08 30 45.8	+1.2
FUSS	**Fushou**	**0.48**	**153**	*i* P	Pb	08 30 47.4	+0.3
FUSS				*e*S	Sb	08 30 53.8	0.0
FUSS	**Fushou**	**0.48**	**153**	P	Pb	08 30 47.4	+0.3
FUSS				S	Sb	08 30 54.1	+0.3
LATG	**Datong**	**0.50**	**106**	*e*P	Pb	08 30 47.2	-0.1
LATG				*i* S	Sb	08 30 55.5	+1.3

TAP 02 08:30:37.8, 24°.04N×121°.60E, h30^{km}±1^{km}, ML1.5, 1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.04**	**356**	P	Pb	08 30 43.1	+0.2
TWD				S	Sb	08 30 47.5	+1.1
HWA	**Hwalien**	**0.06**	**175**	*e*P	Pb	08 30 42.9	-0.1
ETM	**Tongmen**	**0.12**	**235**	*i* P	Pn	08 30 43.6	-0.1
ETM				*e*S	Sn	08 30 48.6	+1.4
ETL	**Fush Village**	**0.12**	**10**	*e*P	Pb	08 30 43.0	-0.4
ETL				*e*S	Sn	08 30 48.6	+1.2
NACB	**Ninganchiao**	**0.14**	**358**	⇓P	Pb	08 30 43.5	0.0
NACB				S	Sn	08 30 47.9	+0.3
ETLH	**Xiulin Townshi**	**0.20**	**328**	P	Pn	08 30 44.7	-0.2
ETLH				S	Sb	08 30 48.9	+0.3
SHUL	**Shoufeng**	**0.25**	**188**	P	Pn	08 30 45.6	+0.1
SHUL				S	Sn	08 30 50.0	-0.3
ESL	**Shilin**	**0.27**	**215**	P	Pb	08 30 45.0	+0.1
ESL				S	Sn	08 30 51.0	+0.2
WARBT	**Fenglin Townsh**	**0.37**	**212**	P	Pn	08 30 47.1	-0.1
WARBT				*e*S	Sb	08 30 52.6	+0.5
OWD	**Renai**	**0.40**	**258**	P	Pb	08 30 46.9	+0.2
OWD				*i* S	Sn	08 30 54.1	-0.1
ENA	**Nanau**	**0.41**	**18**	P	Pn	08 30 48.0	+0.3
ENA				S	Sn	08 30 54.1	-0.3
WUSB	**Renai**	**0.44**	**265**	P	Pn	08 30 48.4	+0.1
WUSB				S	Sn	08 30 55.1	-0.2
LATG	**Datong**	**0.50**	**352**	*i* P	Pn	08 30 48.9	-0.2
LATG				S	Sn	08 30 57.2	+0.4
VWDT	**VWDT**	**0.50**	**236**	*e*P	Pn	08 30 50.1	+1.1
VWDT				*i* S	Sn	08 30 56.8	+0.2
YHNB	**Yeheng**	**0.66**	**342**	*i* P	Pn	08 30 51.3	0.0
YHNB				*e*S	Sb	08 30 59.9	-0.2

TIR ***02*** *08:40:03.0, 40°.43N×20°.83E, h19^{km}, Md3.0/9, Ml3.2/9*

BEO ***02*** *08:40:04.6±0.7, 40°.40N×20°.64E, h0^{km}, ML2.7/12*

PDG ***02*** *08:40:04.8±0.7, 40°.43N×20°.79E, h10^{km}±1^{km}, ML3.1/11, Error ellipse: s-maj=1.0km s-min=1.6km az=0.0*

ATH ***02*** *08:40:04.2, 40°.41N×20°.77E, h8^{km}±2^{km}, ML2.8/9, Manual Solution by A.Fokaefs First location: 2019/06/02 08:41:01, This location: 2019/06/03 05:07:00 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*

THE ***02*** *08:40:07.4, 40°N±1°×2°1E±°, h6^{km}±1^{km}, M2.6/21, MLh2.6/21*

ISC 02 08:40:04.1±0.9**, 40°.42N**±0°.01×**20°.78E**±0°.01**, h6^{km}**±8^{km}**, n121, σ1^{s}13**/177**, 14C-13D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	**Korca**	**0.20**	**2**	Pg	**Pg**	**08 40 07.6**	**-0.5**
KBN				Sg	**Sg**	**08 40 11.4**	**+0.5**
KBN				AML	AML	08 40 12.5	
	29nm,0.3s						
KBN	**Korca**	**0.20**	**2**	⇑*i*Pg	**Pg**	**08 40 07.9**	**-0.3**
KBN				Sg	**Sg**	**08 40 11.7**	**+0.8**
KBN				AML	AML	08 40 14.9	
	15nm,0.6s						
NEST	**Nestorio**	**0.21**	**92**	Pg	**Pg**	**08 40 07.8**	**-0.4**
NEST				Sg	**Sg**	**08 40 11.4**	**+0.4**
NEST				AML	AML	08 40 15.0	
	22nm,0.3s						
NEST				AMd		08 40 53.5	
NEST	**Nestorio**	**0.21**	**92**	Pg	**Pg**	**08 40 08.7**	**+0.5**
NEST				Sg	**Sg**	**08 40 10.2**	**-0.8**
NEST				AML	AML	08 40 15.0	
	22nm,0.3s						
NEST	**Nestorio**	**0.21**	**92**	P	**Pg**	**08 40 09.0**	**+0.7**
NEST				S	**Sg**	**08 40 10.5**	**-0.5**
NEST	**Nestorio**	**0.21**	**92**	P	**Pg**	**08 40 08.8**	**+0.6**
NEST				S	**Sg**	**08 40 12.5**	**+1.4**
LSK	**Leskovik**	**0.30**	**207**	Pg	**Pg**	**08 40 09.9**	**-0.2**
LSK				Sg	**Sg**	**08 40 15.0**	**+1.0**
LSK				AML	AML	08 40 20.7	
	12nm,0.5s						
LSK				AMd		08 40 58.8	
LSK	**Leskovik**	**0.30**	**207**	⇓*i*Pg	**Pg**	**08 40 09.7**	**-0.4**
LSK				Sg	**Sg**	**08 40 14.4**	**+0.3**
LSK				AML	AML	08 40 19.7	
	15nm,0.4s						
PENT	**Pentalofos**	**0.35**	**129**	P	**Pg**	**08 40 11.4**	**+0.4**
KPRO	**Kipourio**	**0.65**	**136**	P	**Pg**	**08 40 16.6**	**0.0**
KPRO				S	**Sb**	**08 40 26.6**	**-0.5**
KPRO	**Kipourio**	**0.65**	**136**	P	**Pg**	**08 40 16.5**	**0.0**
KPRO				S	**Sg**	**08 40 25.4**	**+0.5**
OHR	**Ohrid**	**0.69**	**1**	*e*Pg	**Pg**	**08 40 17.8**	**+0.4**
OHR				*e*Sg	**Sb**	**08 40 28.0**	**-0.4**
MSVA	**Metsovo**	**0.72**	**154**	P	**Pg**	**08 40 18.4**	**+0.4**
JAN	**Janina**	**0.77**	**176**	P	**Pg**	**08 40 19.3**	**+0.5**
JAN				S	**Sg**	**08 40 28.5**	**-0.3**
KZN	**Kozani**	**0.77**	**98**	P	**Pg**	**08 40 19.1**	**+0.3**
KZN				S	**Sb**	**08 40 29.8**	**-0.8**
SRN	**Sarande**	**0.81**	**228**	Pg	**Pg**	**08 40 19.9**	**+0.4**
SRN				Sg	**Sb**	**08 40 32.5**	**+0.9**
SRN				AML	AML	08 40 36.9	
	1.0nm,0.6s						
SRN				AMd		08 41 28.3	
SRN	**Sarande**	**0.81**	**228**	⇓*e*Pn	**Pg**	**08 40 19.8**	**+0.2**
SRN				Sn	**Sb**	**08 40 32.5**	**+0.9**
SRN				AML	AML	08 40 35.5	
	1.1nm,0.4s						
IGT	**Igoumenitsa**	**0.95**	**201**	Pn	**Pg**	**08 40 21.8**	**-0.6**
IGT				Sn	**Sb**	**08 40 36.0**	**+0.2**
IGT				AMd		08 41 40.0	
IGT	**Igoumenitsa**	**0.95**	**201**	⇓*e*Pn	**Pg**	**08 40 21.4**	**-1.0**
IGT				Sn	**Sg**	**08 40 35.4**	**+0.7**
IGT	**Igoumenitsa**	**0.95**	**201**	P	**Pg**	**08 40 22.4**	**+0.1**
VLO	**Vlora**	**0.98**	**273**	⇑*e*Pn	**Pg**	**08 40 21.8**	**-1.1**
VLO				Sn	**Sb**	**08 40 37.2**	**+0.5**
KTI	**Kastanea**	**1.02**	**91**	P	**Pg**	**08 40 23.8**	**+0.1**
KEK	**Kerkira**	**1.03**	**227**	P	**Pg**	**08 40 23.9**	**0.0**
TETR	**Tetrakomo, Epi**	**1.14**	**160**	P	**Pb**	**08 40 26.5**	**+0.2**
THL	**Klokotos Trika**	**1.28**	**132**	P	**Pg**	**08 40 28.5**	**-0.1**
THL				S	**Sn**	**08 40 45.9**	**0.0**
THL	**Klokotos Trika**	**1.28**	**132**	P	**Pn**	**08 40 28.2**	**-0.2**
THL				S	**Sn**	**08 40 45.6**	**-0.3**
PHP	**Peshkopia**	**1.29**	**349**	Pn	**Pn**	**08 40 27.4**	**-1.3**
PHP				Sn	**Sb**	**08 40 45.5**	**-0.1**
PHP				AML	AML	08 40 55.1	
	0.7nm,1.0s						
PHP				AMd		08 41 23.9	
PHP	**Peshkopia**	**1.29**	**349**	Sn	**Sn**	**08 40 46.5**	**+0.2**
PHP				AML	AML	08 40 57.5	
	0.9nm,0.5s						
TYRN	**Tyrnavos**	**1.32**	**122**	P	**Pg**	**08 40 29.4**	**-0.1**
TYRN				S	**Sn**	**08 40 47.1**	**+0.1**
TYRN	**Tyrnavos**	**1.32**	**122**	P	**Pg**	**08 40 29.9**	**+0.4**
VAY	**Valandovo**	**1.63**	**56**	P	**Pb**	**08 40 34.2**	**-0.4**
VAY				S	**Sn**	**08 40 54.2**	**-0.4**
VAY	**Valandovo**	**1.63**	**56**	*e*Pg	**Pg**	**08 40 35.1**	**-0.2**
VAY				*e*Sg	**Sg**	**08 40 59.7**	**+3.2**
LKD2	**Lefkada island**	**1.63**	**183**	Pn	**Pb**	**08 40 34.4**	**-0.3**
LKD2				Sn	**Sg**	**08 40 56.9**	**+0.3**
LKD2				AML	AML	08 41 07.8	
	0.4nm,0.4s						
LKD2				AMd		08 42 00.6	
LKD2	**Lefkada island**	**1.63**	**183**	⇓*e*Pn	**Pn**	**08 40 33.2**	**-0.2**
LKD2				Sn	**Sb**	**08 40 55.6**	**+0.1**
LKD2	**Lefkada island**	**1.63**	**183**	P	**Pg**	**08 40 36.8**	**+1.4**
LKD2				S	**Sg**	**08 40 58.8**	**+2.3**
THE	**Thessaloniki**	**1.68**	**82**	Pn	**Pn**	**08 40 33.7**	**-0.2**
THE				Sn	**Sb**	**08 40 56.9**	**+0.1**
THE				AML	AML	08 41 05.4	
	0.3nm,0.9s						
THE				AMd		08 41 34.7	
THE	**Thessaloniki**	**1.68**	**82**	⇑*e*Pn	**Pn**	**08 40 33.4**	**-0.6**
THE				Sn	**Sb**	**08 40 56.1**	**-0.7**
THE	**Thessaloniki**	**1.68**	**82**	P	**Pn**	**08 40 33.5**	**-0.5**
THE				S	**Sn**	**08 40 55.6**	**-0.2**
EVR	**Evrytania**	**1.70**	**152**	P	**Pb**	**08 40 36.0**	**+0.2**
EVR				S	**Sg**	**08 40 58.3**	**-0.5**
NYDR	**Nydri-Lefkada**	**1.71**	**182**	P	**Pg**	**08 40 37.3**	**+0.5**
NYDR				S	**Sg**	**08 40 59.0**	**0.0**
MAKR	**Makrakomi, Fth**	**1.75**	**143**	P	**Pb**	**08 40 36.4**	**-0.3**
MAKR				S	**Sb**	**08 40 58.7**	**-0.1**
PUK	**Puka**	**1.75**	**338**	Pn	**Pn**	**08 40 35.8**	**+0.7**
PUK				Sn	**Sg**	**08 41 00.1**	**-0.3**
PUK				AML	AML	08 41 07.8	
	1.0nm,0.5s						
PUK				AMd		08 41 47.6	
PUK	**Puka**	**1.75**	**338**	⇑*i*Pn	**Pb**	**08 40 36.2**	**-0.5**
PUK				Sn	**Sg**	**08 41 01.0**	**+0.6**
PUK				AML	AML	08 41 07.8	
	1.0nm,0.5s						
KNT	**Kendrikon**	**1.77**	**65**	P	**Pb**	**08 40 36.3**	**-0.7**
KNT				S	**Sn**	**08 40 56.9**	**-1.2**
HORT	**Hortiatis**	**1.78**	**84**	P	**Pn**	**08 40 35.4**	**0.0**
HORT				S	**Sn**	**08 40 57.6**	**-0.8**
SCTE	**Santa Cesarea**	**1.80**	**260**	Pn	**Pb**	**08 40 37.1**	**-0.4**
SCTE				Sn	**Sg**	**08 41 02.4**	**+0.4**
SCTE				AML	AML	08 41 08.9	
	0.9nm,0.4s						
SCTE				AMd		08 41 57.0	
SCTE	**Santa Cesarea**	**1.80**	**260**	P	**Pb**	**08 40 37.3**	**-0.2**
SCTE				S	**Sg**	**08 41 02.8**	**+0.8**
SCTE	**Santa Cesarea**	**1.80**	**260**	P	**Pn**	**08 40 35.3**	**-0.4**
AGG	**Agios Georgios**	**1.84**	**139**	P	**Pb**	**08 40 37.5**	**-0.7**
AGG				S	**Sb**	**08 41 01.0**	**-0.5**
PDO	**Prodromos**	**1.85**	**170**	P	**Pb**	**08 40 38.7**	**+0.5**
PVO	**Paravola**	**1.89**	**162**	P	**Pg**	**08 40 40.0**	**-0.4**
PVO				S	**Sg**	**08 41 04.0**	**-0.9**
ULC	**Ulcinj**	**1.93**	**324**	P	**Pb**	**08 40 39.2**	**-0.5**
ULC	**Ulcinj**	**1.93**	**324**	⇑*i*Pn	**Pn**	**08 40 38.7**	**+1.2**
ULC				*i* Sn	**Sb**	**08 41 04.6**	**+0.6**
SOH	**Sokhos**	**2.00**	**78**	P	**Pn**	**08 40 38.2**	**-0.2**
SOH				S	**Sn**	**08 41 03.9**	**+0.1**
BCI	**Bajram Curri**	**2.02**	**345**	⇓*e*Pn	**Pb**	**08 40 42.1**	**+0.9**
BCI				Sn	**Sg**	**08 41 08.5**	**-0.4**
BCI	**Bajram Curri**	**2.02**	**345**	P	**Pb**	**08 40 42.0**	**+0.8**
ANX	**Ano Chora**	**2.03**	**154**	P	**Pb**	**08 40 40.8**	**-0.6**
PLG	**Polygyros**	**2.04**	**90**	P	**Pb**	**08 40 40.1**	**-1.4**
DRME	**Dracevica, Mon**	**2.13**	**326**	P	**Pb**	**08 40 42.4**	**-0.8**
DRME	**Dracevica, Mon**	**2.13**	**326**	*e*Pn	**Pn**	**08 40 41.1**	**+0.8**
DRME	**Dracevica, Mon**	**2.13**	**326**	⇑*i*Pn	**Pn**	**08 40 41.7**	**+1.4**
DRME				*i* Sn	**Sb**	**08 41 09.9**	**0.0**
EFP	**Efpalio**	**2.17**	**156**	P	**Pb**	**08 40 42.9**	**-0.9**
NEO	**Neokhori**	**2.19**	**120**	P	**Pn**	**08 40 42.1**	**+1.1**
AXAR	**Agios Charalam**	**2.20**	**138**	P	**Pn**	**08 40 42.2**	**+1.0**
SRS	**Serrai**	**2.25**	**71**	P	**Pn**	**08 40 42.7**	**+0.8**
PDG	**Podgorica**	**2.31**	**331**	*e*Pn	**Pn**	**08 40 44.3**	**+1.6**
PDG	**Podgorica**	**2.31**	**331**	⇓P	**Pb**	**08 40 44.6**	**-1.6**
PDG	**Podgorica**	**2.31**	**331**	*e*Pg	**Pb**	**08 40 44.6**	**-1.6**
PDG				*e*Sg	**Sb**	**08 41 16.2**	**+1.2**
PDG	**Podgorica**	**2.31**	**331**	⇓*i*Pn	**Pn**	**08 40 43.8**	**+1.1**
PDG				*i* Sn	**Sb**	**08 41 14.1**	**-0.9**
BUM	**Brajici-Budva**	**2.35**	**324**	P	**Pn**	**08 40 44.6**	**+1.3**
BUM	**Brajici-Budva**	**2.35**	**324**	⇑*i*Pn	**Pn**	**08 40 44.3**	**+0.9**
BUM				*i* Sn	**Sb**	**08 41 15.2**	**-1.1**
BOSS	**Bosilegrad**	**2.44**	**31**	*e*Pn	**Pn**	**08 40 46.3**	**+1.9**
BARS	**Barje**	**2.52**	**18**	*e*Pn	**Pn**	**08 40 46.1**	**+0.6**
BEY	**Berane**	**2.54**	**345**	P	**Pn**	**08 40 47.8**	**+1.9**
IVA	**Berane**	**2.54**	**345**	⇑*i*Pn	**Pn**	**08 40 48.1**	**+2.2**
IVA				*i* Sn	**Sn**	**08 41 19.2**	**+2.1**
CEME	**Cevo**	**2.54**	**327**	P	**Pn**	**08 40 47.4**	**+1.4**
CEME	**Cevo**	**2.54**	**327**	⇓*i*Pn	**Pn**	**08 40 46.8**	**+0.8**
CEME				*i* Sn	**Sb**	**08 41 19.9**	**-1.8**
KOME	**Kolasin**	**2.61**	**339**	⇓*i*Pn	**Pn**	**08 40 48.7**	**+1.9**
KOME				*i* Sn	**Sn**	**08 41 21.2**	**+2.4**
HCY	**Herceg Novi**	**2.66**	**320**	P	**Pn**	**08 40 47.8**	**+0.3**
HCY	**Herceg Novi**	**2.66**	**320**	*e*Pn	**Pn**	**08 40 46.9**	**-0.5**
HCY	**Herceg Novi**	**2.66**	**320**	⇑*i*Pn	**Pn**	**08 40 48.3**	**+0.9**
HCY				*i* Sn	**Sb**	**08 41 22.9**	**-2.0**
SELS	**Selova**	**2.81**	**5**	*e*Pn	**Pn**	**08 40 51.9**	**+2.3**
NOCI	**Noci**	**2.85**	**279**	P	**Pn**	**08 40 49.2**	**-1.0**
VTS	**Vitosha**	**2.87**	**39**	*e*Pn	**Pn**	**08 40 52.1**	**+1.6**
SJES	**Sjenica**	**2.90**	**348**	*e*Pn	**Pn**	**08 40 53.6**	**+2.7**
SJES	**Sjenica**	**2.90**	**348**	*e*Pn	**Pn**	**08 40 53.6**	**+2.7**
TREB	**Trebinje**	**2.93**	**322**	*e*Pn	**Pn**	**08 40 51.2**	**0.0**
BRY	**Bratogost**	**2.99**	**327**	P	**Pn**	**08 40 54.1**	**+1.9**
BRY	**Bratogost**	**2.99**	**327**	*e*Pn	**Pn**	**08 40 53.1**	**+0.9**
BRY	**Bratogost**	**2.99**	**327**	⇑*i*Pn	**Pn**	**08 40 53.2**	**+1.0**
BRY				*i* Sn	**Sn**	**08 41 30.8**	**+2.3**
PLE	**Pljevlja**	**3.09**	**341**	⇓*i*Pn	**Pn**	**08 40 54.4**	**+0.9**
PLE				*i* Sn	**Sn**	**08 41 33.1**	**+2.4**
MATE	**Matera**	**3.11**	**276**	⇓P	**Pb**	**08 41 00.4**	**+0.6**
UPM	**Unac-Piva**	**3.11**	**334**	P	**Pn**	**08 40 56.5**	**+2.6**
UPM	**Unac-Piva**	**3.11**	**334**	*e*Pn	**Pb**	**08 40 58.3**	**-1.7**
UPM	**Unac-Piva**	**3.11**	**334**	⇓*i*Pn	**Pn**	**08 40 55.7**	**+1.8**
UPM				*i* Sn	**Sn**	**08 41 33.4**	**+1.9**
GOCS	**Kraljevo Serbi**	**3.14**	**1**	*e*Pn	**Pn**	**08 40 55.1**	**+0.9**
ZAPS	**Zavoj**	**3.17**	**25**	*e*Pn	**Pb**	**08 40 57.9**	**-2.9**
IVAS	**Ivanjica**	**3.19**	**352**	*e*Pn	**Pn**	**08 40 56.6**	**+1.8**
BOVS	**Bovan**	**3.29**	**12**	⇑P	**Pn**	**08 40 57.9**	**+1.8**
BOVS	**Bovan**	**3.29**	**12**	*e*Pn	**Pn**	**08 40 56.9**	**+0.8**
TIP	**Timpagrande**	**3.34**	**249**	⇑P	**Pg**	**08 41 06.7**	**-1.4**
RUDO	**Rudo**	**3.36**	**342**	*e*Pn	**Pn**	**08 40 54.9**	**-2.3**
STON	**Ston**	**3.36**	**318**	*e*Pn	**Pn**	**08 40 57.3**	**+0.2**
GRUS	**Gruza**	**3.46**	**359**	*e*Pn	**Pn**	**08 40 59.2**	**+0.6**
ZAGS	**Zajecar**	**3.56**	**17**	*e*Pn	**Pn**	**08 41 01.3**	**+1.5**
BBLS	**Lazi&#263i**	**3.59**	**344**	*e*Pn	**Pn**	**08 41 02.2**	**+1.8**
BBLS	**Lazi&#263i**	**3.59**	**344**	*e*Pn	**Pn**	**08 41 02.4**	**+2.0**
DIVS	**Divibare**	**3.72**	**351**	*e*Pn	**Pn**	**08 41 03.1**	**+0.9**
TRUS	**Trudelj**	**3.81**	**356**	*e*Pn	**Pn**	**08 41 04.7**	**+1.4**
HAPS	**Han Pijesak,Bl**	**3.91**	**340**	*e*Pn	**Pn**	**08 41 05.1**	**+0.4**
SGRT	**San Giovanni R**	**4.03**	**291**	P	**Pn**	**08 41 06.4**	**-0.1**
SGRT				S	**Sn**	**08 41 51.1**	**-2.9**
KUBS	**Kucevo**	**4.04**	**9**	*e*Pn	**Pn**	**08 41 07.2**	**+0.7**
TEKS	**Tekeris**	**4.23**	**348**	*e*Pn	**Pn**	**08 41 09.9**	**+0.8**
BLY	**Banja Luka**	**5.07**	**330**	*e*Pn	**Pn**	**08 41 23.1**	**+2.4**
A050A	**Klekovaca**	**5.13**	**324**	*e*Pn	**Pn**	**08 41 22.4**	**+0.9**
BZS	**Buzias**	**5.23**	**6**	⇑P	**Pn**	**08 41 22.3**	**-0.5**
A051A	**Mrakovica**	**5.40**	**329**	*e*Pn	**Pn**	**08 41 25.4**	**+0.2**
SURR	**Surduc**	**5.42**	**10**	⇑P	**Pn**	**08 41 24.5**	**-0.9**
MORH	**Mrgy, Hungar**	**6.00**	**346**	⇓P	**Pn**	**08 41 32.3**	**-1.0**
BOJS	**Bojanci**	**6.50**	**323**	*e*Pn	**Pn**	**08 41 39.4**	**-0.8**
CRES	**Cresnjevec Ost**	**6.66**	**326**	*e*Pn	**Pn**	**08 41 41.9**	**-0.5**

IDC 02 08:41:35.6±10.0**, 17°.01S×179°.37W, h601^{km}**±133^{km}**, mb2.8**/5**, mbtmp3.7**/5**, Error ellipse: s-maj=51.9km s-min=33.9km az=117.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**44.16**	**253**	P	P	08 48 52.7	-0.1
	0.4nm,0.5s,baz=88,slow=7.9,SNR=9.5 0.4nm,0.5s						
QSPA	**South Pole Qui**	**73.04**	**180**	P	P	08 52 05.4	-0.1
	0.9nm,0.9s,baz=187,slow=5.7,SNR=1.6 0.9nm,0.9s						
NVAR	**Mina Array Bea**	**79.42**	**44**	P	P	08 52 41.1	+0.2
	0.6nm,0.8s,baz=225,slow=9.8,SNR=5.2 0.6nm,0.8s						
ILAR	**Eielson Array**	**85.23**	**13**	P	P	08 53 08.7	-0.6
	0.3nm,0.5s,baz=224,slow=5.2,SNR=5.2 0.3nm,0.5s						
PDAR	**Pinedale Array**	**87.34**	**44**	P	P	08 53 20.4	+0.2
	0.5nm,0.5s,baz=213,slow=4.1,SNR=5.5 0.5nm,0.5s						
BRTR	**Keskin Array B**	**143.50**	**315**	PKP	PKPdf	09 00 02.9	-0.3
	0.3nm,0.4s,baz=56,slow=2.6,SNR=4.9						

TIR ***02*** *08:59:16.5, 40°.50N×20°.80E, h4^{km}±1^{km}, Ml2.5/4*

ATH ***02*** *08:59:17.5, 40°.43N×20°.85E, h6^{km}±2^{km}, ML2.0/6, Manual Solution by A.Fokaefs First location: 2019/06/02 09:00:53, This location: 2019/06/03 05:10:41 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

ISC 02 08:59:16.7±1.0**, 40°.49N**±0°.02×**20°.81E**±0°.02**, h3^{km}**±10^{km}**, n24, σ0^{s}78**/41**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	**Korca**	**0.13**	**352**	Pg	**Pg**	**08 59 18.5**	**-0.9**
KBN				Sg	**Sg**	**08 59 20.2**	**-0.9**

KBN				AML	AML	08 59 23.5	
	6.1nm,0.3s						
KBN	Korca	0.13	352	Pg	Pg	08 59 18.8	-0.5
KBN				Sg	Sg	08 59 21.0	-0.1
KBN				AML	AML	08 59 21.3	
	8.9nm,0.3s						
NEST	Nestorio	0.20	114	Pg	Pg	08 59 20.2	-0.4
NEST				Sg	Sg	08 59 23.4	+0.3
NEST				AML	AML	08 59 28.1	
	4.5nm,0.3s						
NEST				AMd		09 00 15.3	
NEST	Nestorio	0.20	114	Pg	Pg	08 59 21.1	+0.5
NEST				Sg	Sg	08 59 24.8	+1.7
NEST				AML	AML	08 59 27.4	
	5.0nm,0.3s						
NEST				AML	AML	08 59 28.1	
	4.5nm,0.3s						
NEST	Nestorio	0.20	114	P	Pg	08 59 20.9	+0.4
NEST				S	Sg	08 59 23.4	+0.3
LSK	Leskovik	0.38	205	Pg	Pg	08 59 23.4	-0.6
LSK				Sg	Sg	08 59 29.4	+0.4
LSK				AML	AML	08 59 33.1	
	2.7nm,0.5s						
LSK				AMd		09 00 20.2	
LSK	Leskovik	0.38	205	Pg	Pg	08 59 23.5	-0.5
LSK				Sg	Sg	08 59 30.2	+1.3
LSK				AML	AML	08 59 31.8	
	2.2nm,0.5s						
PENT	Pentalofos	0.39	140	P	Pg	08 59 24.1	-0.1
PENT				S	Sg	08 59 28.5	-0.8
KPRO	Kipourio	0.69	142	P	Pg	08 59 29.2	-0.6
KPRO				S	Sg	08 59 37.7	-1.0
KZN	Kozani	0.76	104	P	Pg	08 59 31.0	-0.2
KZN				S	Sg	08 59 41.7	+0.7
SRN	Sarande	0.87	226	Pg	Pg	08 59 33.4	0.0
SRN				Sg	Sb	08 59 46.7	+0.1
SRN				AML	AML	08 59 56.2	
	0.3nm,0.5s						
SRN				AMd		09 00 21.1	
SRN	Sarande	0.87	226	Pg	Pg	08 59 33.3	-0.1
SRN				Sg	Sn	08 59 47.4	-1.7
SRN				AML	AML	08 59 49.8	
	0.3nm,0.4s						
IGT	Igoumenitsa	1.03	201	Pg	Pg	08 59 36.1	-0.3
IGT				Sg	Sb	08 59 51.3	+0.3
IGT				AMd		09 00 45.0	
IGT	Igoumenitsa	1.03	201	Pg	Pb	08 59 36.7	-0.5
IGT				Sg	Sn	08 59 52.6	-0.3
IGT	Igoumenitsa	1.03	201	P	Pb	08 59 36.6	-0.5
KEK	Kerkira	1.10	225	P	Pb	08 59 38.4	0.0
THL	Klokotos Trika	1.31	135	P	Pg	08 59 41.3	-0.5
PUK	Puka	1.69	336	Pn	Pb	08 59 47.9	-0.7
PUK				Sn	Sg	09 00 12.0	+0.8
PUK				AML	AML	09 00 18.8	
	0.1nm,0.3s						
PUK				AMd		09 00 44.3	
PUK	Puka	1.69	336	Pn	Pg	08 59 49.7	+0.5
PUK				Sn	Sg	09 00 13.1	+1.9
LKD2	Lefkada island	1.71	184	Sn	Sg	09 00 12.6	+1.1
LKD2				AML	AML	09 00 23.3	
	0.1nm,0.5s						
KNT	Kendrikon	1.72	66	P	Pn	08 59 48.1	+0.6
SCTE	Santa Cesarea	1.84	258	Pn	Pb	08 59 50.6	-0.4
SCTE				Sn	Sg	09 00 16.8	+1.0
SCTE				AML	AML	09 00 32.4	
	0.2nm,0.8s						
SCTE				AMd		09 00 44.5	
SCTE	Santa Cesarea	1.84	258	P	Pn	08 59 49.8	+0.6
AGG	Agios Georgios	1.88	141	P	Pn	08 59 50.3	+0.6

SNET ***02*** *09:36:39.7±0.8, 13°.08N×89°.50W, h46^{km}, ML3.6*
CATAC ***02*** *09:36:39.2±0.7, 13°N±4°×8°9W±°, h25^{km}±5^{km}, M3.6/27, MLv3.6/27, Error ellipse: s-maj=10.2km s-min=5.3km az=26.2, confirmed*
GCG ***02*** *09:36:40.2±0.8, 13°.11N×89°.60W, h31^{km}±4^{km}, MD3.8*
ISC 02 09:36:39.5±1.8**, 13°.07N**±0°.08×**89°.50W**±0°.05**, h28**^{km}±13^{km}**, n83, σ0ˢ.43**/98**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.46	23	*e*P	Pn	09 36 50.2	0.0
LALI				*e*S	Sn	09 36 57.6	+0.2
LALI	Alcalda de L	0.46	23	*i* P	Pn	09 36 50.2	0.0
LALI				*i* S	Sn	09 36 57.5	+0.2
LALI	Alcalda de L	0.46	23	P	Pn	09 36 50.3	+0.2
JAYA	Jayaque - finc	0.59	5	*e*P	Pn	09 36 51.8	-0.3
JAYA				*e*S	Sn	09 37 00.4	-0.5
JAYA	Jayaque - finc	0.59	5	*i* P	Pn	09 36 51.8	-0.3
JAYA				*i* S	Sn	09 37 00.4	-0.5
JAYA	Jayaque - finc	0.59	5	P	Pn	09 36 51.8	-0.3
PANCS	Alcalda de	0.63	30	*e*P	Pn	09 36 52.3	-0.3
PANCS				*e*S	Sn	09 37 01.7	-0.1
PANCS	Alcalda de	0.63	30	P	Pn	09 36 52.4	-0.3
ITCA	Escuela Especi	0.64	20	*e*P	Pn	09 36 52.5	-0.3
ITCA	Escuela Especi	0.64	20	P	Pb	09 36 52.4	+0.1
LOMA	Loma Larga	0.66	29	*e*P	Pn	09 36 52.9	-0.2
LOMA	Loma Larga	0.66	29	P	Pb	09 36 52.7	+0.1
LOMA	Loma Larga	0.66	29	S	Sn	09 37 03.4	+0.8
PMON	Piamonte	0.67	16	*e*P	Pn	09 36 53.0	-0.2
PMON	Piamonte	0.67	16	P	Pn	09 36 52.9	-0.3
SEMO	Seminario San	0.69	23	P	Pn	09 36 53.2	-0.3
UEES	Universidad Ev	0.70	22	*e*P	Pn	09 36 53.4	-0.2
UEES				*e*S	Sn	09 37 03.3	-0.1
UEES	Universidad Ev	0.70	22	P	Pb	09 36 53.2	0.0
UEES	Universidad Ev	0.70	22	S	Sn	09 37 04.0	+0.6
UTEC	Universidad Te	0.70	25	*e*P	Pb	09 36 53.2	0.0
UTEC				*e*S	Sn	09 37 03.8	+0.4
UTEC	Universidad Te	0.70	25	P	Pb	09 36 53.2	0.0
BOQS	Boqueron	0.70	18	*e*P	Pn	09 36 53.6	-0.2
LFRS	El Faro	0.70	38	*e*P	Pn	09 36 53.5	-0.2
LFRS				*e*S	Sn	09 37 03.4	-0.3
UESS	Universidad de	0.71	24	*e*P	Pn	09 36 53.6	-0.2
UESS				*e*S	Sn	09 37 04.1	+0.2
IGN	Direccin Gen	0.72	27	P	Pb	09 36 53.6	0.0
IGN	Direccin Gen	0.72	27	S	Sn	09 37 04.6	+0.5
UDBS	Universidad Do	0.73	28	*e*P	Pb	09 36 53.9	+0.2
UDBS	Universidad Do	0.73	28	P	Pb	09 36 53.9	+0.2
UDBS	Universidad Do	0.73	28	S	Sn	09 37 04.9	+0.7
CEDA	San Andres	0.74	8	*e*P	Pn	09 36 53.8	-0.3
CEDA	San Andres	0.74	8	P	Pn	09 36 53.9	-0.3
CEDA	San Andres	0.74	8	S	Sn	09 37 04.9	+0.4
CEVE	Cerro Verde	0.77	351	*e*P	Pb	09 36 54.5	0.0
CEVE				*e*S	Sn	09 37 06.6	+1.2
CEVE	Cerro Verde	0.77	351	P	Pb	09 36 54.5	0.0
LFU	La Fuente	0.78	29	*e*P	Pb	09 36 54.7	+0.1
SBLS	San Blas	0.78	351	*e*P	Pb	09 36 54.6	0.0
SNJE	San Jose	0.81	353	*e*P	Pn	09 36 54.9	-0.2
LBRS	Las Brisas	0.81	34	*e*P	Pb	09 36 55.4	+0.4
COEG	Centro de Oper	0.82	48	*e*P	Pn	09 36 54.6	-0.6
COEG	Centro de Oper	0.82	48	P	Pn	09 36 54.8	-0.4
TECO	Alcaldia de Te	0.85	56	*e*P	Pn	09 36 54.8	-0.7
TECO	Alcaldia de Te	0.85	56	P	Pn	09 36 55.0	-0.6
PAVA	Las Pavas	0.85	40	*e*P	Pb	09 36 55.7	0.0
PAVA	Las Pavas	0.85	40	P	Pb	09 36 55.7	0.0
NUBE	Las Nubes	0.88	342	*e*P	Pn	09 36 55.5	-0.6
NUBE				*e*S	Sn	09 37 07.3	-0.6
NUBE	Las Nubes	0.88	342	*i* P	Pn	09 36 55.6	-0.5
NUBE				*i* S	Sb	09 37 07.6	0.0
NUBE	Las Nubes	0.88	342	P	Pn	09 36 55.6	-0.5
UESV	Universidad de	0.90	51	*e*P	Pn	09 36 56.0	-0.3
UESV				*e*S	Sn	09 37 07.5	-0.8
UESV	Universidad de	0.90	51	P	Pn	09 36 56.0	-0.3
UNIC	Universidad Ca	0.91	357	*e*P	Pn	09 36 56.5	0.0
UNIC	Universidad Ca	0.91	357	P	Pb	09 36 56.6	-0.2
ALJI	Alcalda de J	0.95	74	*e*P	Pn	09 36 56.4	-0.5
ALJI	Alcalda de J	0.95	74	S	Sb	09 37 09.5	0.0
ALJI	Alcalda de J	0.95	74	P	Pn	09 36 56.6	-0.3
LOAL	Lomas de Alarc	0.97	344	*e*P	Pb	09 36 57.6	-0.1
LOAL	Lomas de Alarc	0.97	344	P	Pb	09 36 57.9	+0.2
SCLA	Alcaldia de Sa	0.98	50	*e*P	Pn	09 36 57.6	+0.2
SCLA	Alcaldia de Sa	0.98	50	P	Pn	09 36 57.5	0.0
SLOZ	Alcaldia de Sa	0.99	344	*e*P	Pn	09 36 57.5	-0.1
SLOZ	Alcaldia de Sa	0.99	344	P	Pn	09 36 57.7	+0.1
TECA	Tecapa	1.06	66	*e*P	Pn	09 36 58.4	-0.3
PQSS	Presa 15 de Se	1.07	59	*e*P	Pn	09 36 58.0	-0.6
PQSS				*e*S	Sn	09 37 12.3	-0.3
PQSS	Presa 15 de Se	1.07	59	P	Pn	09 36 58.4	-0.2
PACA	Pacayal	1.22	71	*e*P	Pn	09 37 01.1	+0.4
PACA				*e*S	Sn	09 37 16.7	+0.3
PACA	Pacayal	1.22	71	P	Pn	09 37 01.2	+0.4
LCY	Lacayo	1.23	73	*e*P	Pn	09 37 00.9	0.0
RANC	El Ranchito	1.24	73	P	Pn	09 36 58.9	-2.1
VSM	San Miguel	1.25	73	*e*P	Pn	09 37 01.4	+0.1
BLLM	Bellamira	1.29	73	*e*P	Pn	09 37 01.6	0.0
MTO3	Montecristo	1.33	6	*e*P	Pn	09 37 02.3	-0.1
MTO3	Montecristo	1.33	6	*i* P	Pn	09 37 02.4	0.0
MTO3	Montecristo	1.33	6	P	Pn	09 37 02.4	0.0
CAHU	Cacacuatique	1.44	61	*e*P	Pn	09 37 03.7	-0.2
ESQI	Esquipulas	1.50	6	*e*P	Pn	09 37 04.8	+0.2
ESQI	Esquipulas	1.50	6	P	Pn	09 37 05.0	+0.4
LCND	La Caada	1.59	81	*e*P	Pn	09 37 05.7	0.0
LCND	La Caada	1.59	81	P	Pn	09 37 05.8	0.0
CNCH	Conchagua	1.64	82	*e*P	Pn	09 37 06.4	-0.1
CNCH	Conchagua	1.64	82	P	Pn	09 37 06.5	-0.1
CSGN	Cosiguina Volc	1.90	92	P	Pn	09 37 09.7	-0.4
POTN	Potosi Cosigui	1.95	92	P	Pn	09 37 10.3	-0.4
CNGN	Cerro Negro	2.79	101	P	Pn	09 37 21.9	-0.5
COPN	Copaltepe	2.98	107	P	Pn	09 37 26.0	+1.1

RSNC 02 09:39:35.1±0.0**, 7°N**±1°×**7°3W**±°**, h146**^{km}±2^{km}**, M3.1, mB4.8, mb3.7, ML2.9, Mw(mB)4.0, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.27	187	P	Pn	09 39 54.9	-0.5
BARC				S	Sn	09 40 10.2	-0.6
PAMC	Pamplona, Colo	0.65	43	P	Pn	09 39 57.4	-0.1
PAMC				S	Sn	09 40 14.1	-0.3
RUSC	La Rusia	0.96	176	P	Pn	09 39 58.9	-0.9
RUSC				S	Sn	09 40 17.3	-1.2
PTBC	PUERTO BERRIO,	1.34	256	P	Pn	09 40 01.4	-1.3
PTBC				S	Sn	09 40 22.5	-1.2
TAMC	Tame, Arauca	1.41	107	P	Pn	09 40 03.2	-0.3
TAMC				S	Sn	09 40 24.8	-0.4
SPBC	San Pablo de B	1.51	217	P	Pn	09 40 03.9	-0.7
SPBC				S	Sn	09 40 26.3	-0.8
ZARC	Zaragoza, Cauc	1.81	290	P	Pn	09 40 07.6	-0.2
ZARC				S	Sn	09 40 32.8	0.0
NORC	Norcasia	2.14	233	P	Pn	09 40 11.0	-0.7
NORC				S	Sn	09 40 39.5	-0.4
CHIC	Chingaza	2.29	195	P	Pn	09 40 13.3	-0.6
CHIC				S	Sn	09 40 42.5	-1.2
ROSC	El Rosal	2.32	210	P	Pn	09 40 14.6	+0.4
ROSC				S	Sn	09 40 45.8	+1.5
CVER	Cruz Verde, Cu	2.50	202	P	Pn	09 40 16.5	0.0
CVER				S	Sn	09 40 48.7	+0.4
UREC	San Jos de Ur	2.52	291	P	Pn	09 40 14.9	-1.5
UREC				S	Sn	09 40 45.4	-2.7
GUY2C	Guyana, Caldas	2.74	234	P	Pn	09 40 19.5	0.0
GUY2C				S	Sn	09 40 54.5	+0.9
VILC	Villavicencio,	2.78	191	P	Pn	09 40 18.8	-0.9
VILC				S	Sn	09 40 52.8	-1.4
CBOC	Ciudad Bolivar	3.01	251	P	Pn	09 40 22.7	+0.1
CBOC				S	Sn	09 40 58.9	-0.4
ARGC	Ariguani, Magd	3.17	340	P	Pn	09 40 24.6	+0.1
ARGC				S	Sn	09 41 03.6	+0.8
SDV	Santo Domingo	3.20	51	P	Pn	09 40 24.2	-0.9
ANIL	Santa Ana	3.25	224	P	Pn	09 40 26.5	+0.7
ANIL				S	Sn	09 41 04.6	-0.4
APAC	Apartado, Choc	3.56	287	P	Pn	09 40 28.9	-0.6
APAC				S	Sn	09 41 09.7	-1.9
PRAC	Prado	3.57	209	P	Pn	09 40 28.7	-1.1
PRAC				S	Sn	09 41 11.7	-0.4
ORTC	Ortega, Tolima	3.60	216	P	Pn	09 40 29.3	-0.8
ORTC				S	Sn	09 41 13.0	+0.3
SJCC	San Jacinto, C	3.62	326	P	Pn	09 40 28.4	-2.0
SJCC				S	Sn	09 41 10.4	-3.0
URMC	La Uribe, Meta	3.79	199	P	Pn	09 40 31.8	-0.9
URMC				S	Sn	09 41 16.3	-1.0
CRJC	Cerrejon, Guaj	4.14	4	P	Pn	09 40 34.9	-2.3
CRJC				S	Sn	09 41 21.0	-4.5
YOTC	Yotoco, Valle	4.28	228	P	Pn	09 40 37.7	-1.3
GUVC	San Jose del G	4.32	173	P	Pn	09 40 37.7	-1.8
SMRC	Santa Marta, M	4.41	346	P	Pn	09 40 40.2	-0.4
CAPC	Capurgana	4.52	293	P	Pn	09 40 39.5	-2.6
CAPC				S	Sn	09 41 30.5	-3.8
MACC	Macarena, Meta	4.74	188	P	Pn	09 40 41.9	-3.1
MACC				S	Sn	09 41 34.0	-5.5
URIC	Uribia, Colomb	4.95	13	P	Pn	09 40 44.7	-3.0
URIC				S	Sn	09 41 40.6	-3.8
MALC	Bahia Malaga	5.04	236	P	Pn	09 40 49.0	0.0
MALC				S	Sn	09 41 48.1	+1.6
JAMC	Jamundi, Valle	5.04	224	P	Pn	09 40 47.7	-1.6
	6.8nm,0.6s						
JAMC				S	Sn	09 41 47.3	+0.2
	6.8nm,0.6s						
GARC	Garzon, Huila	5.20	207	P	Pn	09 40 49.3	-2.1
GARC				S	Sn	09 41 47.6	-3.2
POPC	Popayan, Colom	5.55	219	P	Pn	09 40 53.9	-2.1
	3.7nm,0.6s						
POPC				S	Sn	09 41 57.8	-1.3
	3.7nm,0.6s						
FLOC	Florencia	5.81	206	P	Pn	09 40 57.5	-1.8
	3.1nm,0.6s						
FLOC				S	Sn	09 42 04.1	-0.9
	3.1nm,0.6s						

NIED ***02*** *09:53:17.9, 47°.15N×153°.94E, h30^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.84; $M_{\theta\theta}$2.49; $M_{\phi\phi}$-1.65; $M_{r\theta}$0.32; $M_{\theta\phi}$-0.30; $M_{\phi r}$1.55; Fault plane solution: $M_0$2.71000×10^{15} NP1: ϕ_s132.00000°, δ61.00000°, λ-26.00000°. NP2: ϕ_s235.00000°, δ68.00000°, λ-149.00000°.*
SKHL ***02*** *09:53:23.6±0.4, 47°.20N×153°.40E, h74^{km}±8^{km}, mb5.4/4, ms4.2/6*
MOS ***02*** *09:53:23.1±1.1, 47°.31N×153°.23E, h72^{km}, mb4.8/29, Error ellipse: s-maj=6.8km s-min=4.8km az=78.7*
IDC ***02*** *09:53:23.9±0.4, 47°.37N×153°.15E, h61^{km}±3^{km}, mb4.0/28, mbtmp4.3/32, MS3.4/29, Error ellipse: s-maj=12.4km s-min=9.2km az=131.0*
NEIC ***02*** *09:53:26.6±1.5, 47°.5N±0°.1×153°.1E±0°.2, h78^{km}±7^{km}, mb4.6/121, Error ellipse: s-maj=19.8km s-min=11.9km az=142.0*
BGR ***02*** *09:53:28.1, 48°.44N×152°.62E, h33^{km}, mb4.6, Ms3.7*
ISC 02 09:53:22.0±0.4**, 47°.32N**±0°.05×**153°.34E**±0°.04**, h46**^{km}±2^{km}**, h46**^{km}**:pP-P, n656, σ1ˢ.41**/666**, mb4.6**/147**, MS3.6**/25**, 43C-13D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	3.83	28	*e*PN	Pn	09 54 20.3	+1.9
SKR				*e*S	Sn	09 55 02.3	+0.1
SKR				pmax	pmax		
	comp=Z,139nm,0.4s						
SKR				smax	smax		
	comp=E,769nm,0.5s						
SKR				smax	smax		
	comp=N,750nm,0.6s						
SKR	Severo-Kuril's	3.83	28	*e*P	Pn	09 54 20.4	+2.0
SKR				AMB	AMB	09 54 25.3	
	comp=N,200nm,0.6s						
SKR				*e*S	Sn	09 55 03.1	+0.9
SKR				A	A	09 55 07.8	
	comp=N,600nm,0.4s						
SKR				A	A	09 55 07.8	
	comp=N,670nm,0.4s						
SKR				AMS	AMS	09 56 04.8	
	comp=N,820nm,17.0s						
SKR				AMS	AMS	09 56 04.8	
	comp=N,660nm,17.0s						
KUR	Kuril'sk	4.33	243	⇑*i*PN	Pn	09 54 27.3	+2.1
KUR				*e*S	Sn	09 55 17.7	+3.4
KUR				pmax	pmax		
	comp=E,70nm,0.7s						
KUR				pmax	pmax		
	comp=Z,381nm,0.7s						
KUR				smax	smax		
	comp=E,508nm,0.6s						
KUR				smax	smax		
	comp=N,418nm,0.8s						
KUR	Kuril'sk	4.33	243	*e*P	Pn	09 54 27.3	+2.1
KUR				AMB	AMB	09 54 29.6	
	comp=N,440nm,0.7s						
KUR				*e*S	Sn	09 55 15.0	+0.7
KUR				A	A	09 55 21.3	
	comp=N,720nm,0.7s						
KUR				A	A	09 55 21.3	
	comp=N,870nm,0.7s						
PAU	Pauzhetka	4.73	27	*e*P	Pn	09 54 32.9	+2.1
PAU				AMB	AMB	09 54 39.0	
	comp=N,70nm,0.3s						
PAU				*e*S	Sn	09 55 24.7	+0.4
PAU				A	A	09 55 29.4	
	comp=N,740nm,0.3s						
PAU				A	A	09 55 29.4	
	comp=N,850nm,0.3s						
PAU				AMS	AMS	09 56 14.2	
	comp=N,910nm,14.0s						
PAU				AMS	AMS	09 56 14.2	
	comp=N,950nm,14.0s						
SHO	Shikotan	5.72	235	*e*PN	Pn	09 54 44.5	+0.2
SHO				*e*S	Sn	09 55 50.0	+1.4
SHO				pmax	pmax		
	comp=Z,77nm,0.4s						
SHO				pmax	pmax		
	comp=N,21nm,0.5s						
SHO				pmax	pmax		
	comp=E,66nm,0.5s						
SHO	Shikotan	5.72	235	*e*P	Pn	09 54 44.5	+0.2
SHO				AMB	AMB	09 54 57.1	
	comp=E,80nm,0.4s						
SHO				*e*S	Sn	09 55 45.6	-3.0
SHO				AMS	AMS	09 55 55.3	
	comp=E,4μm,12.0s						
SHO				AMS	AMS	09 55 55.3	
	comp=E,4μm,12.0s						
YUK	Yuzh-Kuril'sk	6.18	241	*e*PN	Pn	09 54 52.5	+1.9
YUK				*e*S	Sn	09 56 04.1	+4.2
YUK				pmax	pmax		
	comp=Z,203nm,0.3s						
YUK				pmax	pmax		
	comp=N,91nm,0.2s						
YUK				pmax	pmax		
	comp=E,91nm,0.2s						
YUK	Yuzh-Kuril'sk	6.18	241	*e*P	Pn	09 54 52.8	+2.2
YUK				AMB	AMB	09 55 09.4	
	comp=E,200nm,0.3s						
YUK				*e*S	Sn	09 55 57.2	-2.7
YUK				AMS	AMS	09 57 03.6	
	comp=E,2μm,14.0s						
YUK				AMS	AMS	09 57 03.6	
	comp=E,2μm,14.0s						
PEA0B	Petropavlovsk-	6.44	24		Pn	09 54 57.6	+3.5
PEA0B	Petropavlovsk-	6.44	24	*ce*PN	Pn	09 54 57.4	+3.2
PETK	Petropavlovsk-	6.44	24	P	Pn	09 54 56.2	+2.0
	comp=E,10nm,0.7s,baz=208,slow=14,SNR=24						
PETK				S	Sn	09 56 09.5	+3.2
	comp=E,7.8nm,0.6s,baz=218,slow=24,SNR=1.0						
PETK				LR	LR	09 57 26.0	
	comp=E,226nm,21.8s,baz=190,slow=38						
PETK	Petropavlovsk-	6.44	24	PN	Pn	09 54 56.3	+2.1
RUSJ	Misakicho	6.51	243	*e*PN	Pn	09 54 58.0	+2.8
RUSJ				*e*S	Sn	09 56 13.3	+5.3
GLVR	Golovnino	6.55	240	*e*PN	Pn	09 54 57.0	+1.3
GLVR				pmax	pmax		
	comp=Z,190nm,0.5s						
GLVR				pmax	pmax		
	comp=E,111nm,0.3s						
GLVR				pmax	pmax		
	comp=N,164nm,0.4s						
GLVR	Golovnino	6.55	240	*e*P	Pn	09 54 57.0	+1.3
GLVR				AMB	AMB	09 55 15.7	
	comp=N,190nm,0.5s						
PET	Petropavlovsk	6.65	29		Pn	09 55 00.2	+3.1
PET	Petropavlovsk	6.65	29	*e*PN	Pn	09 55 02.8	+5.7
PET				MLR	MLR		
	comp=Z,100nm,14.0s						
PET	Petropavlovsk	6.65	29	*e*P	Pn	09 55 00.8	+3.7
PET				*e*S	Sn	09 56 10.3	-1.2
PET				*e*rx	rx	09 56 33.0	
NMR	Nemuro--Hokkai	6.66	236	*e*PN	Pn	09 54 56.6	-0.6
NMR	Nemuro--Hokkai	6.66	236	*e*P	Pn	09 54 56.7	-0.5
NMR				*e*S	Sn	09 56 08.9	-2.7
YSS	Yuzhno-Sakhali	7.23	271		Pn	09 55 08.8	+3.8
YSS	Yuzhno-Sakhali	7.23	271	α*i*PN	Pn	09 55 09.6	+4.6
YSS				*e*S	Sn	09 56 29.3	+3.7
YSS				pmax	pmax		
	comp=Z,60nm,0.7s						
YSS				pmax	pmax		
	comp=N,70nm,0.6s						
YSS				pmax	pmax		
	comp=E,110nm,0.6s						
YSS				pmax	pmax		
	comp=Z,100nm,2.7s						
YSS				pmax	pmax		
	comp=N,100nm,2.9s						
YSS				pmax	pmax		
	comp=E,200nm,2.9s						
YSS				smax	smax		
	comp=N,40nm,1.1s						
YSS				smax	smax		
	comp=E,50nm,1.0s						
YSS				MLR	MLR		
	comp=N,200nm,16.0s						
YSS				MLR	MLR		
	comp=E,300nm,16.0s						
YSS				MLR	MLR		
	comp=Z,400nm,16.0s						
YSS	Yuzhno-Sakhali	7.23	271	*i* P	Pn	09 55 09.0	+4.0
YSS				*e*S	Sn	09 56 23.9	-1.7
YSS				AMS	AMS	09 57 36.0	
	comp=Z,450nm,14.0s						
YSS				AMS	AMS	09 57 36.0	
	comp=Z,220nm,14.0s						
AKK	Akkeshi	7.38	237	*e*P	Pn	09 55 06.9	-0.2
UGL	Uglegorsk	7.74	287	*e*PN	Pn	09 55 11.5	-0.4
UGL				pmax	pmax		
	comp=Z,140nm,0.8s						
UGL	Uglegorsk	7.74	287	*e*P	Pn	09 55 14.9	+3.0
UGL				AMB	AMB	09 55 17.8	
	comp=Z,100nm,0.6s						
TYV	Tymovskoe	7.86	301	*e*PN	Pn	09 55 17.5	+3.9
TYV				*e*S	Sn	09 56 44.0	+2.9
TYV				pmax	pmax		
	comp=Z,200nm,2.5s						
TYV				pmax	pmax		
	comp=Z,74nm,1.0s						
TYV				smax	smax		
	comp=N,16nm,1.0s						
TYV				smax	smax		
	comp=E,11nm,1.0s						
TYV				smax	smax		
	comp=N,100nm,5.5s						
TYV				smax	smax		
	comp=E,100nm,5.5s						
TYV	Tymovskoe	7.86	301	*e*P	Pn	09 55 16.9	+3.3
TYV				*e*S	Sn	09 56 42.2	+1.1
TYV				AMS	AMS	09 57 03.6	
	comp=E,420nm,14.0s						
TYV				AMS	AMS	09 57 03.6	
	comp=E,750nm,14.0s						
JKA	Kamikawa-asahi	8.16	251		Pn	09 55 22.3	+4.5
ASAJ	Asahikawa	8.17	251	P	Pn	09 55 21.7	+3.8
	comp=E,14nm,0.6s,baz=71,slow=20,SNR=17						
ASAJ				S	Sn	09 56 49.0	+0.2
	comp=E,12nm,0.7s,baz=341,slow=20,SNR=1.1						
ASAJ				LR	LR	09 58 15.6	
	comp=E,288nm,21.2s,baz=26,slow=36						
ASAJ	Asahikawa	8.17	251	PN	Pn	09 55 22.3	+4.4
ERM	Erimo	8.98	238	Pn	Pn	09 55 29.0	0.0
ERM	Erimo	8.98	238	*ce*PN	Pn	09 55 29.2	+0.2
ERM				pmax	pmax		
	comp=Z,56nm,0.7s						
OKH	Okha	9.10	317	*e*P	Pn	09 55 34.8	+4.2
NKL	Nikolayevsk	9.98	310	*e*P	Pn	09 55 45.9	+3.2
JTM	Tenmabayashi	10.97	238	Pn	Pn	09 55 53.8	-2.4
GRNR	Gornyy	11.62	294	⇑*i*PN	Pn	09 56 09.7	+4.6
GRNR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,120nm,12.0s						
GRNR				MLR	MLR		
	comp=N,40nm,11.0s						
GRNR				MLR	MLR		
	comp=Z,180nm,16.0s						
TEY	Ternei	11.82	265	*e*PN	Pn	09 56 15.7	+7.8
MA2	Magadan	12.38	354		Pn	09 56 17.2	+1.9
MA2	Magadan	12.38	354	P	Pn	09 56 17.9	+2.6
	comp=Z,21nm,0.5s,baz=172,slow=12,SNR=29						
MA2				LR	LR	10 01 14.4	
	comp=Z,108nm,18.4s,baz=169,slow=38						
MA2	Magadan	12.38	354	*i* PN	Pn	09 56 16.8	+1.5
SHEM	Shemya Is, Ala	14.38	60	Pn	Pn	09 56 42.2	-0.4
SHEM	Shemya Is, Ala	14.38	60	P	Pn	09 56 42.9	+0.3

	comp=Z,56nm,0.6s,baz=37,slow=0.0,SNR=22						
SHEM				S	Sn	09 59 11.8	-8.7
	comp=Z,26nm,0.6s,baz=312,slow=21,SNR=8.1						
SHEM				LR	LR	10 02 35.7	
	comp=Z,56nm,19.5s,baz=308,slow=38						
SMY	**Shemya**	**14.38**	**60**	Pn	**Pn**	**09 56 42.0**	**-0.6**
SMY	**Shemya**	**14.38**	**60**	P	**Pn**	**09 56 42.0**	**-0.6**
KLR	**Kul'dur**	**14.50**	**286**	P	**P**	**09 56 48.7**	**-1.1**
	comp=Z,9.4nm,0.8s,baz=96,slow=11,SNR=18						
KLR				LR	LR	10 02 31.1	
	comp=Z,225nm,19.1s,baz=98,slow=38						
KLR	**Kul'dur**	**14.50**	**286**	*ce*P	**P**	**09 56 47.3**	**-2.5**
KLR				pmax	pmax		
	comp=Z,11nm,0.8s						
KLR	**Kul'dur**	**14.50**	**286**	*e*P	**Pn**	**09 56 44.8**	**+0.6**
USA0B	**Ussuriysk Arra**	**15.21**	**266**		**Pn**	**09 56 53.0**	**-0.6**
USA0B	**Ussuriysk Arra**	**15.21**	**266**	*i* P	**P**	**09 56 56.2**	**-1.6**
USRK	**Ussuriysk Ar.**	**15.21**	**266**		**Pn**	**09 56 53.9**	**+0.3**
USRK	**Ussuriysk Ar.**	**15.21**	**266**	P	**Pn**	**09 56 54.4**	**+0.8**
	comp=Z,8.6nm,0.6s,baz=74,slow=10,SNR=12						
USRK				LR	LR	10 02 34.9	
	comp=Z,164nm,19.6s,baz=66,slow=36						
MJAR	**Matsushiro Arr**	**15.55**	**232**	P	**Pn**	**09 56 55.8**	**-2.2**
	comp=Z,3.5nm,0.7s,baz=44,slow=12,SNR=20						
MJB9	**Matsu-Tunnel**	**15.55**	**232**		**Pn**	**09 56 56.7**	**-1.3**
MJB9				IAmb	IAmb	09 57 05.1	
	comp=Z,29nm,1.0s						
MAJO	**Matsushiro**	**15.55**	**232**		**Pn**	**09 56 55.5**	**-2.5**
MAJO				IAmb	IAmb	09 57 04.1	
	comp=Z,29nm,0.9s						
MAJO	**Matsushiro**	**15.55**	**232**	P	**Pn**	**09 56 55.5**	**-2.5**
MAJO				pmax	pmax		
	comp=Z,29nm,1.0s						
SEY	**Seymchan**	**15.66**	**358**	P	**P**	**09 57 01.6**	**-1.0**
	comp=Z,3.8nm,0.4s,baz=176,slow=13,SNR=23						
SEY				LR	LR	10 03 10.8	
	comp=Z,100nm,20.2s,baz=190,slow=38						
SEY	**Seymchan**	**15.66**	**358**	*ce*P	**P**	**09 57 01.7**	**-1.0**
SEY				pmax	pmax		
	comp=Z,6.0nm,1.3s						
JGF	**Kuroka**	**16.71**	**231**		**Pn**	**09 57 12.4**	**-0.3**
JGF				IAmb	IAmb	09 57 17.1	
	comp=Z,23nm,0.9s						
MDJ	**Mudanjiang**	**16.71**	**269**		**Pn**	**09 57 08.9**	**-3.8**
MDJ	**Mudanjiang**	**16.71**	**269**	P	**P**	**09 57 16.1**	**+1.6**
MDJ				S	S	10 00 40.7	+14
MDJ				pmax	pmax		
	comp=Z,25nm,0.8s						
MDJ				LR	LR		
	comp=N,120nm,15.1s						
MDJ				LR	LR		
	comp=E,140nm,17.5s						
MDJ				LR	LR		
	comp=Z,240nm,16.5s						
HEH	**HeiHe**	**17.30**	**289**	*e*P	**P**	**09 57 21.8**	**+0.9**
HEH				pmax	pmax		
	comp=Z,21nm,1.1s						
HEH				LR	LR		
	comp=N,140nm,17.4s						
HEH				LR	LR		
	comp=E,210nm,17.6s						
HEH				LR	LR		
	comp=Z,280nm,18.5s						
ZEA	**Zeya**	**17.72**	**301**	*e*P	**P**	**09 57 26.9**	**+1.4**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA				MLR	MLR		
	comp=Z,100nm,11.0s						
ZEA	**Zeya**	**17.72**	**301**	*e*P	**Pn**	**09 57 25.0**	**-0.1**
CN2	**Changchun**	**19.80**	**270**	P	**P**	**09 57 47.1**	**-1.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=N,100nm,14.0s						
CN2				LR	LR		
	comp=E,200nm,14.0s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
YAK	**Yakutsk**	**19.93**	**326**	LR	LR	10 05 16.6	
	comp=Z,110nm,21.3s,baz=124,slow=36						
YAK	**Yakutsk**	**19.93**	**326**	*e*P	**Pn**	**09 57 50.8**	**-0.8**
YAK				*e*S	**Sn**	**10 01 34.0**	**-0.5**
YAK				pmax	pmax		
	comp=Z,21nm,1.0s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.5s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.1s						
YAK				smax	smax		
	comp=E,46nm,3.5s						
YAK				smax	smax		
	comp=N,44nm,3.2s						
KSRS	**Korea Array**	**21.12**	**251**	P	**P**	**09 58 03.5**	**+0.9**
	comp=N,12nm,0.9s,baz=53,slow=10,SNR=20						
KSRS				PcP	**PcP**	**10 02 07.8**	**+0.6**
	comp=N,0.8nm,0.8s,baz=53,slow=1.5,SNR=4.3						
KSRS				LR	LR	10 05 02.8	
	comp=N,71nm,20.9s,baz=155,slow=33						
	comp=N,12nm,0.9s						
KS19	**Wonju Array Si**	**21.12**	**252**	P	**P**	**09 58 03.2**	**+0.4**
KSAR	**Wonju Array Be**	**21.15**	**251**	P	**P**	**09 58 02.1**	**-0.9**
KSAR	**Wonju Array Be**	**21.15**	**251**	P	**P**	**09 58 02.1**	**-0.9**
BILL	**Bilibino**	**21.80**	**13**		**P**	**09 58 10.1**	**+0.3**
BILL	**Bilibino**	**21.80**	**13**	*ce*P	**P**	**09 58 08.4**	**-1.4**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.6s						
INCN	**Inchon**	**21.94**	**253**		**P**	**09 58 11.3**	**-0.2**
INCN				IAmb	IAmb	09 58 14.9	
	comp=Z,26nm,0.8s						
INCN	**Inchon**	**21.94**	**253**	P	**P**	**09 58 11.3**	**-0.2**
INCN				pmax	pmax		
	comp=Z,26nm,0.8s						
SPIA	**Saint Paul Isl**	**24.10**	**52**	P	**P**	**09 58 34.4**	**+1.4**
	baz=262						
P08K	**Saint George I**	**24.41**	**54**	P	**P**	**09 58 36.3**	**+0.5**
P08K	**Saint George I**	**24.41**	**54**	P	**P**	**09 58 37.0**	**+1.2**
	baz=264						
GAMB	**Gambell**	**25.27**	**37**	P	**P**	**09 58 43.9**	**+0.3**
	baz=247						
UNV	**Unalaska Valle**	**26.05**	**61**	P	**P**	**09 58 52.3**	**+1.7**
	baz=273						
XLT	**XiLinHaoTe**	**26.12**	**276**	*e*P	**P**	**09 58 50.9**	**-0.7**
XLT				SS		10 04 27.2	
XLT				pmax	pmax		
	comp=Z,14nm,0.8s						
XLT				LR	LR		
	comp=N,10.0nm,13.8s						
XLT				LR	LR		
	comp=E,100nm,13.9s						
XLT				LR	LR		
	comp=Z,44nm,8.2s						
TIXI	**Tiksi**	**26.97**	**343**	LR	LR	10 09 49.7	
	comp=Z,74nm,21.2s,baz=178,slow=37						
TIXI	**Tiksi**	**26.97**	**343**	*i* P	**P**	**09 58 57.0**	**-1.8**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TNA	**Tin City**	**27.48**	**34**	P	**P**	**09 59 03.3**	**-0.1**
	baz=248						
K13K	**Kusilvak Mount**	**27.77**	**43**	P	**P**	**09 59 06.5**	**+0.4**
	baz=258						
F14K	**Arctic Creek**	**28.06**	**35**	P	**P**	**09 59 08.7**	**+0.1**
	baz=250						
M13K	**Dall Lake**	**28.13**	**46**	P	**P**	**09 59 10.4**	**+1.2**
	baz=262						
ANM	**Nome**	**28.14**	**37**	P	**P**	**09 59 09.6**	**+0.2**
	baz=253						
J14K	**Nanvaranak Lak**	**28.45**	**41**	P	**P**	**09 59 12.9**	**+0.8**
	baz=258						
L14K	**Kuka Creek**	**28.59**	**44**	P	**P**	**09 59 14.5**	**+1.1**
L14K	**Kuka Creek**	**28.59**	**44**	P	**P**	**09 59 14.6**	**+1.3**
	baz=262						
F15K	**North Star Dit**	**28.80**	**35**	P	**P**	**09 59 15.2**	**0.0**
	baz=252						
G15K	**Niukluk**	**28.82**	**37**	P	**P**	**09 59 15.3**	**-0.1**
	baz=254						
M14K	**Bethel**	**28.85**	**46**	P	**P**	**09 59 17.7**	**+2.0**
M14K				IAmb	IAmb	09 59 40.1	
	comp=Z,10nm,1.1s						
M14K	**Bethel**	**28.85**	**46**	P	**P**	**09 59 16.2**	**+0.5**
	baz=263						
N14K	**Kuskokwak Cree**	**28.89**	**47**	P	**P**	**09 59 16.8**	**+0.7**
	baz=265						
O14K	**Tigyukauivet M**	**29.05**	**49**	P	**P**	**09 59 18.6**	**+1.1**
	baz=267						
L15K	**Ungalak Mounta**	**29.21**	**44**	P	**P**	**09 59 20.3**	**+1.4**
	baz=262						
K15K	**Wolf Creek Mou**	**29.28**	**43**	P	**P**	**09 59 20.8**	**+1.2**
	baz=261						
H16K	**Elim**	**29.46**	**38**	P	**P**	**09 59 21.7**	**+0.6**
	baz=256						
M15K	**Kasigluk River**	**29.47**	**46**	P	**P**	**09 59 22.6**	**+1.5**
	baz=265						
C16K	**Lisburne Hills**	**29.49**	**30**	P	**P**	**09 59 21.4**	**+0.1**
	baz=246						
G16K	**Koyuk River**	**29.61**	**36**	P	**P**	**09 59 23.8**	**+1.4**
	baz=255						
H11N2	**WAKE ISLAND Hy**	**29.66**	**153**	T	T	10 31 22.7	
	baz=342,slow=76,SNR=1958						
H11N1	**WAKE ISLAND Hy**	**29.67**	**154**	T	T	10 31 18.4	
	baz=342,slow=76,SNR=2192						
H11N3	**WAKE ISLAND Hy**	**29.67**	**153**	T	T	10 31 25.8	
	baz=342,slow=76,SNR=1736						
N15K	**Kwethluk River**	**29.71**	**47**	P	**P**	**09 59 25.5**	**+2.1**
N15K	**Kwethluk River**	**29.71**	**47**	P	**P**	**09 59 24.5**	**+1.1**
	baz=266						
O15K	**Ungalikthiuk R**	**29.79**	**49**	P	**P**	**09 59 25.8**	**+1.8**
O15K				IAmb	IAmb	09 59 45.2	
	comp=Z,12nm,1.3s						
O15K	**Ungalikthiuk R**	**29.79**	**49**	P	**P**	**09 59 24.7**	**+0.7**
	baz=268						
J16K	**Anvik River**	**29.88**	**41**	P	**P**	**09 59 26.7**	**+1.9**
J16K	**Anvik River**	**29.88**	**41**	P	**P**	**09 59 25.1**	**+0.4**
	baz=260						
I17K	**Unalakleet**	**29.95**	**40**	P	**P**	**09 59 26.1**	**+0.7**
	baz=259						
CHNA	**Chernabura Isl**	**30.02**	**58**	P	**P**	**09 59 27.3**	**+1.1**
	baz=276						
D17K	**Noatak River**	**30.06**	**32**	P	**P**	**09 59 27.3**	**+1.0**
	baz=250						
L16K	**Owhat River**	**30.16**	**44**	P	**P**	**09 59 27.4**	**+0.1**
L16K	**Owhat River**	**30.16**	**44**	P	**P**	**09 59 28.3**	**+1.0**
	baz=264						
NJ2	**Nanjing**	**30.31**	**252**	*e*P	**P**	**09 59 29.4**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
C17K	**DeLong Mountai**	**30.31**	**30**	P	**P**	**09 59 29.5**	**+1.0**
	baz=249						
E17K	**Hotham Inlet**	**30.32**	**33**	P	**P**	**09 59 30.3**	**+1.7**
	baz=252,SNR=5.2						
G17K	**Kiwalik Mounta**	**30.33**	**36**	P	**P**	**09 59 30.0**	**+1.2**
	baz=256						
M16K	**Timber Creek**	**30.34**	**45**	P	**P**	**09 59 29.7**	**+0.8**
M16K				IAmb	IAmb	09 59 31.9	
	comp=Z,8.3nm,1.1s						
M16K	**Timber Creek**	**30.34**	**45**	P	**P**	**09 59 30.7**	**+1.8**
	baz=266						
F17K	**Baldwin Pennin**	**30.34**	**35**	P	**P**	**09 59 29.5**	**+0.7**
	baz=254						
N16K	**Nishlik Lake**	**30.39**	**47**	P	**P**	**09 59 30.8**	**+1.4**
	baz=267						
HHC	**Hu-ho-hao-te**	**30.41**	**273**	*e*P	**P**	**09 59 31.6**	**+1.8**
H17K	**Granite Mounta**	**30.50**	**38**	P	**P**	**09 59 31.3**	**+1.0**
	baz=258						
J17K	**VABM Dome**	**30.57**	**41**	P	**P**	**09 59 31.9**	**+0.9**
J17K	**VABM Dome**	**30.57**	**41**	P	**P**	**09 59 32.4**	**+1.4**
	baz=262						
O16K	**Kokwok River B**	**30.69**	**48**	P	**P**	**09 59 33.0**	**+1.1**
	baz=269						
P16K	**Nushagak River**	**30.73**	**49**	P	**P**	**09 59 33.8**	**+1.5**
	baz=270						
H11S1	**WAKE ISLAND Hy**	**30.75**	**155**	T	T	10 32 43.4	
	baz=342,slow=76,SNR=2982						
H11S3	**WAKE ISLAND Hy**	**30.76**	**155**	T	T	10 32 37.5	
	baz=342,slow=76,SNR=2999						
L17K	**Donlin**	**30.76**	**43**	P	**P**	**09 59 34.1**	**+1.5**
	baz=264						
H11S2	**WAKE ISLAND Hy**	**30.77**	**155**	T	T	10 32 43.3	
	baz=342,slow=76,SNR=2342						
K17K	**Iditarod**	**30.83**	**42**	P	**P**	**09 59 33.3**	**+0.2**
K17K				IAmb	IAmb	09 59 55.6	
	comp=Z,13nm,1.5s						
K17K	**Iditarod**	**30.83**	**42**	P	**P**	**09 59 34.3**	**+1.2**
	baz=263						
ULN	**Ulaanbaatar**	**30.86**	**288**	*i* P	**P**	**09 59 33.0**	**-0.8**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.6s						
E18K	**Tukpahlearik C**	**30.87**	**33**	P	**P**	**09 59 34.4**	**+0.9**
	baz=253						
F18K	**Selawik**	**31.00**	**35**	P	**P**	**09 59 35.4**	**+0.8**
	baz=256						
C18K	**Utukok River**	**31.05**	**30**	P	**P**	**09 59 35.9**	**+0.8**
	baz=251						
M17K	**Holitna River**	**31.10**	**45**		**P**	**09 59 36.1**	**+0.5**
M17K				IAmb	IAmb	09 59 38.6	
	comp=Z,5.9nm,0.8s						
M17K	**Holitna River**	**31.10**	**45**	P	**P**	**09 59 37.0**	**+1.3**
	baz=266,SNR=5.4						
B18K	**Kokolik River**	**31.11**	**29**	P	**P**	**09 59 36.1**	**+0.6**
	baz=249						
N17K	**Nushagak Hills**	**31.18**	**47**	P	**P**	**09 59 37.9**	**+1.6**
	baz=268						
H18K	**Honhosa River**	**31.19**	**38**	P	**P**	**09 59 37.8**	**+1.5**
	baz=259						
O17K	**Koliganek Bris**	**31.20**	**48**	P	**P**	**09 59 37.8**	**+1.4**
	baz=270						
G18K	**Tagagawik**	**31.23**	**36**	P	**P**	**09 59 37.1**	**+0.5**
G18K	**Tagagawik**	**31.23**	**36**	P	**P**	**09 59 38.0**	**+1.3**
	baz=258						
SONM	**Songino Array**	**31.29**	**289**	P	**P**	**09 59 37.6**	**0.0**
	comp=Z,0.6nm,0.6s,baz=66,slow=9.2,SNR=3.9						
SONM				PcP	**PcP**	**10 02 30.3**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=80,slow=3.2,SNR=4.9						
SONM				LR	LR	10 13 14.9	
	comp=Z,101nm,19.0s,baz=91,slow=38						
	comp=Z,0.6nm,0.6s						
L18K	**Granite Mounta**	**31.52**	**43**	P	**P**	**09 59 40.9**	**+1.6**
L18K	**Granite Mounta**	**31.52**	**43**	P	**P**	**09 59 40.5**	**+1.3**
	baz=266						
P17K	**Kvichak River**	**31.53**	**49**	P	**P**	**09 59 41.1**	**+1.7**
	baz=271						
J18K	**Innoko River**	**31.64**	**41**	P	**P**	**09 59 41.3**	**+1.0**
	baz=264						
GCSA	**Galena City Sc**	**31.74**	**39**	P	**P**	**09 59 41.9**	**+0.8**
	baz=262						
C19K	**Lookout Ridge**	**31.76**	**30**	P	**P**	**09 59 42.0**	**+0.7**
	baz=252						
F19K	**Shaleruckik Mo**	**31.78**	**34**	P	**P**	**09 59 42.9**	**+1.4**
F19K	**Shaleruckik Mo**	**31.78**	**34**	P	**P**	**09 59 42.6**	**+1.1**
	baz=257						
N18K	**Kilae Creek**	**31.82**	**46**		**P**	**09 59 44.1**	**+2.2**
N18K				IAmb	IAmb	10 00 00.3	
	comp=Z,12nm,1.3s						
N18K	**Kilae Creek**	**31.82**	**46**	P	**P**	**09 59 43.5**	**+1.5**
	baz=269						
Q17K	**Contact Creek**	**31.84**	**51**	P	**P**	**09 59 43.7**	**+1.4**
	baz=273						
M18K	**Stony River**	**31.88**	**45**	P	**P**	**09 59 43.8**	**+1.3**
	baz=268						
TTA	**Tatalina**	**31.90**	**42**		**P**	**09 59 44.0**	**+1.3**
TTA	**Tatalina**	**31.90**	**42**	P	**P**	**09 59 44.0**	**+1.3**
TTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
TTA	**Tatalina**	**31.90**	**42**	P	**P**	**09 59 43.8**	**+1.1**
	baz=265,SNR=5.3						
G19K	**Purcell Mounta**	**31.91**	**36**	P	**P**	**09 59 43.7**	**+1.1**
G19K	**Purcell Mounta**	**31.91**	**36**	P	**P**	**09 59 43.3**	**+0.7**
	baz=259						
H19K	**Roundabout Mou**	**32.05**	**37**		**P**	**09 59 45.4**	**+1.6**
H19K				IAmb	IAmb	10 00 01.0	
	comp=Z,8.5nm,0.8s						
H19K	**Roundabout Mou**	**32.05**	**37**	P	**P**	**09 59 44.9**	**+1.0**
	baz=261,SNR=7.0						
D19K	**Kuna River**	**32.08**	**31**		**P**	**09 59 45.6**	**+1.5**
D19K				IAmb	IAmb	10 00 00.9	
	comp=Z,12nm,0.8s						
D19K	**Kuna River**	**32.08**	**31**	P	**P**	**09 59 45.3**	**+1.1**
	baz=254,SNR=7.9						
E19K	**Redstone River**	**32.14**	**33**	P	**P**	**09 59 46.3**	**+1.6**
E19K				IAmb	IAmb	10 00 01.7	
	comp=Z,7.2nm,0.8s						
E19K	**Redstone River**	**32.14**	**33**	P	**P**	**09 59 45.5**	**+0.9**
	baz=257,SNR=5.9						
P18K	**Big Mountain,**	**32.15**	**49**		**P**	**09 59 47.0**	**+2.2**
P18K				IAmb	IAmb	09 59 47.8	
	comp=Z,7.5nm,0.9s						
P18K	**Big Mountain,**	**32.15**	**49**	P	**P**	**09 59 46.0**	**+1.1**
	baz=272						
O18K	**Koktuh Hills**	**32.15**	**48**	P	**P**	**09 59 46.2**	**+1.4**
	baz=271						
J19K	**Poorman**	**32.18**	**40**		**P**	**09 59 46.1**	**+1.0**
J19K	**Poorman**	**32.18**	**40**	P	**P**	**09 59 45.9**	**+0.9**
	baz=264,SNR=6.9						
Q18K	**Katmai Hardscr**	**32.29**	**50**	P	**P**	**09 59 47.7**	**+1.5**
	baz=273						
L19K	**White Mountain**	**32.38**	**44**	P	**P**	**09 59 47.5**	**+0.7**
N19K	**Bonanza Creek**	**32.51**	**46**	P	**P**	**09 59 49.0**	**+0.8**
	baz=270						
M19K	**Big River Lodg**	**32.58**	**44**	P	**P**	**09 59 50.0**	**+1.4**
	baz=268						
O19K	**Port Alsworth**	**32.60**	**47**	P	**P**	**09 59 50.7**	**+2.1**
	baz=271						
F20K	**Avaraart Lake**	**32.62**	**34**	P	**P**	**09 59 49.4**	**+0.6**
	baz=259						
R18K	**Karluk**	**32.65**	**52**	P	**P**	**09 59 50.5**	**+1.4**
	baz=275						
D20K	**Etivluk River**	**32.67**	**31**		**P**	**09 59 50.5**	**+1.2**
D20K	**Etivluk River**	**32.67**	**31**	P	**P**	**09 59 50.2**	**+0.8**
	baz=256,SNR=15						
H20K	**Anotleneega Mo**	**32.69**	**37**	P	**P**	**09 59 50.2**	**+0.7**
	baz=262						
E20K	**Nigu River**	**32.71**	**32**	P	**P**	**09 59 50.4**	**+0.7**
	baz=257						
I20K	**Naaghedeneel**	**32.77**	**39**	P	**P**	**09 59 51.2**	**+1.1**
	baz=264						
K20K	**Telida**	**32.81**	**41**	P	**P**	**09 59 53.2**	**+2.6**
K20K	**Telida**	**32.81**	**41**	P	**P**	**09 59 51.9**	**+1.3**
	baz=266						
J20K	**Nowinta River**	**32.84**	**40**	P	**P**	**09 59 52.6**	**+1.7**
J20K	**Nowinta River**	**32.84**	**40**	P	**P**	**09 59 51.1**	**+0.3**
	baz=265						
L20K	**Farewell, AK**	**32.85**	**43**	P	**P**	**09 59 52.0**	**+1.1**
	baz=268						
B20K	**Meade River**	**32.85**	**29**	P	**P**	**09 59 51.5**	**+0.7**
	baz=253						
SII	**Sitkinak Islan**	**32.89**	**54**	P	**P**	**09 59 52.7**	**+1.3**
	baz=277						
P19K	**Oil Pt**	**33.16**	**48**	P	**P**	**09 59 55.7**	**+2.0**
	baz=273						
M20K	**Styx River**	**33.18**	**44**	P	**P**	**09 59 55.1**	**+1.2**
	baz=270						
OHAK	**Old Harbor**	**33.31**	**53**	P	**P**	**09 59 56.0**	**+1.1**
	baz=277						
G21K	**Allakaket**	**33.39**	**36**	P	**P**	**09 59 57.3**	**+1.7**
G21K				IAmb	IAmb	09 59 58.1	
	comp=Z,4.9nm,0.8s						
G21K	**Allakaket**	**33.39**	**36**	P	**P**	**09 59 56.9**	**+1.3**
	baz=262,SNR=7.0						
C21K	**Knifeblade Rid**	**33.42**	**31**	P	**P**	**09 59 56.4**	**+0.6**
	baz=257,SNR=6.5						
O20K	**Slope Mountain**	**33.45**	**47**	P	**P**	**09 59 57.2**	**+1.0**
	baz=273						
F21K	**Alatna River**	**33.51**	**34**	P	**P**	**09 59 56.5**	**-0.1**
F21K	**Alatna River**	**33.51**	**34**	P	**P**	**09 59 57.2**	**+0.5**
	baz=261						
E21K	**Killik River**	**33.55**	**32**	P	**P**	**09 59 56.6**	**-0.4**
E21K				IAmb	IAmb	10 00 13.8	
	comp=Z,8.2nm,1.0s						
E21K	**Killik River**	**33.55**	**32**	P	**P**	**09 59 57.6**	**+0.6**
	baz=259						
H21K	**Melozitna Rive**	**33.57**	**37**	P	**P**	**09 59 58.6**	**+1.4**
H21K	**Melozitna Rive**	**33.57**	**37**	P	**P**	**09 59 57.9**	**+0.8**
	baz=264,SNR=5.9						
B21K	**Ikpikpuk River**	**33.59**	**30**		**P**	**09 59 56.8**	**-0.5**
B21K	**Ikpikpuk River**	**33.59**	**30**	P	**P**	**09 59 58.1**	**+0.8**
	baz=256						
N20K	**Mount Spurr**	**33.62**	**45**	P	**P**	**09 59 58.8**	**+1.1**
	baz=271						
SPCR	**Spurr Chakacha**	**33.62**	**45**	P	**P**	**09 59 58.7**	**+1.0**
	baz=271						
CHUM	**Lake Minchumin**	**33.63**	**41**	P	**P**	**09 59 58.2**	**+0.6**
	baz=267						
KDAK	**Kodiak Island**	**33.63**	**52**	P	**P**	**09 59 57.7**	**-0.1**
KDAK				IAmb	IAmb	10 00 40.6	
	comp=Z,16nm,1.4s						
KDAK	**Kodiak Island**	**33.63**	**52**	LR	LR	10 13 05.2	
	comp=Z,60nm,21.8s,baz=246,slow=35						
KDAK	**Kodiak Island**	**33.63**	**52**	P	**P**	**09 59 57.7**	**-0.1**
KDAK				pmax	pmax		
	comp=Z,16nm,1.4s						
KDAK	**Kodiak Island**	**33.63**	**52**	P	**P**	**09 59 59.3**	**+1.6**
	baz=276						
PPLA	**Purkeypile**	**33.64**	**42**	P	**P**	**09 59 59.3**	**+1.3**
PPLA	**Purkeypile**	**33.64**	**42**	P	**P**	**09 59 58.7**	**+0.7**
	baz=269						
Q20K	**Shuyak Island**	**33.65**	**50**	P	**P**	**09 59 59.4**	**+1.5**
	baz=275						
CAST	**Castle Rocks**	**33.71**	**41**	P	**P**	**10 00 00.1**	**+1.7**
CAST	**Castle Rocks**	**33.71**	**41**	P	**P**	**09 59 59.7**	**+1.3**
	baz=268						
A22K	**Sinclair Lake**	**33.84**	**27**	P	**P**	**10 00 00.7**	**+1.2**
	baz=254						
I21K	**Tanana**	**33.86**	**38**	P	**P**	**10 00 01.3**	**+1.6**
I21K				IAmb	IAmb	10 00 15.1	
	comp=Z,7.3nm,1.2s						
I21K	**Tanana**	**33.86**	**38**	P	**P**	**10 00 01.0**	**+1.3**
	baz=266						
SKT	**Skwentna**	**33.94**	**44**	P	**P**	**10 00 01.8**	**+1.4**
	baz=271						
F22K	**John River**	**34.05**	**34**	P	**P**	**10 00 02.5**	**+1.2**
	baz=262						
D22K	**Ayikyak River**	**34.10**	**32**	P	**P**	**10 00 03.1**	**+1.3**
	baz=259						
B22K	**Teshekpuk Lake**	**34.17**	**29**	P	**P**	**10 00 03.5**	**+1.3**
	baz=257						
H22K	**Ishtalitna Cre**	**34.18**	**37**	P	**P**	**10 00 03.7**	**+1.3**
	baz=265,SNR=5.6						
BPAW	**Bear Paw Mtn.**	**34.22**	**40**	P	**P**	**10 00 03.6**	**+0.8**
BPAW				IAmb	IAmb	10 00 04.5	
	comp=Z,7.9nm,1.2s						
BPAW	**Bear Paw Mtn.**	**34.22**	**40**	P	**P**	**10 00 03.7**	**+0.8**
	baz=268						
KTH	**Kantishna Hill**	**34.23**	**41**	P	**P**	**10 00 04.7**	**+1.7**
KTH				IAmb	IAmb	10 00 06.4	
	comp=Z,6.4nm,0.8s						
G22K	**Bettles**	**34.23**	**35**	P	**P**	**10 00 03.9**	**+1.0**
	baz=264						
E22K	**Anaktuvuk Pass**	**34.29**	**33**		**P**	**10 00 04.9**	**+1.5**
E22K	**Anaktuvuk Pass**	**34.29**	**33**	P	**P**	**10 00 04.3**	**+0.9**
	baz=261,SNR=15						
SUA	**Susitna One**	**34.32**	**45**	P	**P**	**10 00 05.1**	**+1.2**
	baz=272						
GUMO	**Guam**	**34.36**	**195**	LR	LR	10 12 28.8	
	comp=Z,24nm,20.9s,baz=68,slow=33						
MLY	**Manley**	**34.38**	**39**	P	**P**	**10 00 06.0**	**+1.8**
MLY	**Manley**	**34.38**	**39**	P	**P**	**10 00 04.3**	**+0.1**
	baz=267						
BRSE	**Bradley Lake S**	**34.41**	**48**	P	**P**	**10 00 04.9**	**+0.3**
	baz=275						
TRF	**Thorofare Moun**	**34.51**	**41**		**P**	**10 00 07.0**	**+1.4**
TRF				IAmb	IAmb	10 00 24.4	
	comp=Z,4.6nm,1.0s						
TRF	**Thorofare Moun**	**34.51**	**41**	P	**P**	**10 00 05.7**	**+0.1**
	baz=270						
CUT	**Chulitna**	**34.52**	**43**	P	**P**	**10 00 06.7**	**+1.2**
	baz=271						
COLD	**Coldfoot**	**34.78**	**35**	P	**P**	**10 00 09.0**	**+1.4**
COLD				IAmb	IAmb	10 00 09.9	
	comp=Z,6.1nm,0.6s						
COLD	**Coldfoot**	**34.78**	**35**	P	**P**	**10 00 08.3**	**+0.7**
	baz=264,SNR=8.2						
G23K	**Bananza Creek**	**34.80**	**36**		**P**	**10 00 09.2**	**+1.4**
G23K	**Bananza Creek**	**34.80**	**36**	P	**P**	**10 00 08.4**	**+0.6**
	baz=265						
RC01	**Rabbit Creek A**	**34.82**	**45**	P	**P**	**10 00 08.6**	**+0.5**
	baz=274						
D23K	**Nanushuk River**	**34.83**	**32**	P	**P**	**10 00 09.9**	**+1.8**
D23K				IAmb	IAmb	10 00 25.4	
	comp=Z,8.3nm,0.8s						
D23K	**Nanushuk River**	**34.83**	**32**	P	**P**	**10 00 08.9**	**+0.8**
	baz=261						
O22K	**Cooper Landing**	**34.87**	**47**	P	**P**	**10 00 09.7**	**+1.3**
	baz=275						
H23K	**Yukon River**	**34.92**	**37**	P	**P**	**10 00 10.2**	**+1.3**
	baz=267						
I23K	**Minto, Yukon-K**	**34.96**	**38**	P	**P**	**10 00 10.3**	**+1.1**
I23K				IAmb	IAmb	10 00 29.9	
	comp=Z,11nm,1.5s						
I23K	**Minto, Yukon-K**	**34.96**	**38**	P	**P**	**10 00 10.1**	**+0.9**
	baz=268						
C23K	**Itkillik River**	**35.00**	**30**	P	**P**	**10 00 10.3**	**+0.8**
	baz=260						
SEW	**Seward**	**35.03**	**47**	P	**P**	**10 00 11.3**	**+1.4**
	baz=275						
NEA2	**Nenana**	**35.07**	**39**	P	**P**	**10 00 11.7**	**+1.5**
NEA2				IAmb	IAmb	10 00 13.3	
	comp=Z,4.6nm,0.6s						
NEA2	**Nenana**	**35.07**	**39**	P	**P**	**10 00 11.0**	**+0.9**
	baz=269,SNR=6.2						
PMR	**Palmer**	**35.09**	**45**	P	**P**	**10 00 11.6**	**+1.3**
	baz=274						
E23K	**Chandalar**	**35.09**	**33**	P	**P**	**10 00 12.2**	**+1.8**

E23K	Chandalar	35.09	33	P	P	10 00 11.2	+0.8
	baz=264,SNR=9.9						
MCK	McKinley	35.12	41	P	P	10 00 11.7	+1.1
	baz=271						
RND	Reindeer	35.16	41		P	10 00 12.4	+1.4
RND				IAmb	IAmb	10 00 12.7	
	comp=Z,7.9nm,1.2s						
RND	Reindeer	35.16	41	P	P	10 00 12.4	+1.4
RND				pmax	pmax		
	comp=Z,8.0nm,1.2s						
TOLK	Toolik Lake Re	35.18	32		P	10 00 12.9	+1.8
TOLK	Toolik Lake Re	35.18	32	P	P	10 00 11.8	+0.7
	baz=263,SNR=5.7						
WAT1	Susitna Watana	35.31	42	P	P	10 00 13.1	+0.8
	baz=272						
KNK	Knik Glacier	35.42	45	P	P	10 00 14.5	+1.2
	baz=274						
SML	Sawmill	35.46	44	P	P	10 00 14.8	+1.2
SML	Sawmill	35.46	44	P	P	10 00 14.8	+1.2
SML				pmax	pmax		
	comp=Z,42nm,1.5s						
SML	Sawmill	35.46	44	P	P	10 00 14.5	+1.0
	baz=274,SNR=7.6						
E24K	Your Creek	35.52	33	P	P	10 00 14.9	+0.8
E24K	Your Creek	35.52	33	P	P	10 00 15.1	+1.0
	baz=265						
D24K	Happy Valley	35.52	31	P	P	10 00 15.6	+1.6
D24K	Happy Valley	35.52	31	P	P	10 00 14.9	+0.9
	baz=263						
PWL	Port Wells	35.52	46	P	P	10 00 15.0	+1.0
	baz=275						
COLA	College	35.60	39	P	P	10 00 16.4	+1.8
COLA				IAmb	IAmb	10 00 18.0	
	comp=Z,5.2nm,0.7s						
COLA	College	35.60	39	P	P	10 00 16.4	+1.8
COLA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
COLA	College	35.60	39	P	P	10 00 15.6	+0.9
	baz=270						
H24K	Noodor Dome	35.61	37		P	10 00 16.4	+1.5
H24K				IAmb	IAmb	10 00 17.7	
	comp=Z,5.3nm,1.0s						
H24K	Noodor Dome	35.61	37	P	P	10 00 15.9	+1.0
	baz=269,SNR=7.5						
CCB	Clear Creek Bu	35.62	39	P	P	10 00 16.1	+1.3
C24K	Franklin Bluff	35.64	30	P	P	10 00 16.1	+1.1
	baz=262						
WAT6	Susitna Watana	35.69	43	P	P	10 00 16.7	+1.0
	baz=273						
F24K	Squaw Lake	35.70	34		P	10 00 17.1	+1.6
F24K				IAmb	IAmb	10 00 36.8	
	comp=Z,4.4nm,0.7s						
F24K	Squaw Lake	35.70	34	P	P	10 00 16.3	+0.7
	baz=266						
XAN	Xi'an	35.72	265	⇓P	P	10 00 14.6	-1.5
XAN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
M23K	Glacier View	35.74	44	P	P	10 00 17.2	+1.2
	baz=274						
POKR	Poker Plat Res	35.78	38	P	P	10 00 18.2	+2.0
POKR				IAmb	IAmb	10 00 20.0	
	comp=Z,7.4nm,0.8s						
POKR	Poker Plat Res	35.78	38	P	P	10 00 17.6	+1.4
	baz=270						
G24K	Hadweenzic Riv	35.81	36	P	P	10 00 18.8	+2.3
G24K	Hadweenzic Riv	35.81	36	P	P	10 00 17.7	+1.3
	baz=268,SNR=11						
DHY	Denali Highway	35.84	42	P	P	10 00 18.0	+1.1
DHY				IAmb	IAmb	10 00 29.1	
	comp=Z,7.3nm,1.3s						
DHY	Denali Highway	35.84	42	P	P	10 00 18.3	+1.4
	baz=273						
SCM	Sheep Creek Mo	35.93	44	P	P	10 00 19.6	+1.9
SCM	Sheep Creek Mo	35.93	44	P	P	10 00 19.6	+1.9
SCM				pmax	pmax		
	comp=Z,17nm,1.4s						
SCM	Sheep Creek Mo	35.93	44	P	P	10 00 18.8	+1.1
	baz=275						
HDA	Harding Lake	35.99	40	P	P	10 00 19.3	+1.3
HDA	Harding Lake	35.99	40	P	P	10 00 19.2	+1.2
	baz=271,SNR=5.7						
IL31		36.01	39		P	10 00 18.9	+0.7
ILAR	Eielson Array	36.01	39	P	P	10 00 18.6	+0.4
	comp=Z,1.5nm,0.8s,baz=259,slow=9.6,SNR=20						
ILAR				pP	sP	10 00 34.4	-0.6
	comp=Z,1.4nm,0.4s,baz=262,slow=5.5,SNR=7.5						
ILAR				PcP	PcP	10 02 42.2	-1.5
	comp=Z,0.3nm,0.9s,baz=270,slow=3.6,SNR=2.3						
ILAR				LR	LR	10 17 45.1	
	comp=Z,34nm,19.0s,baz=258,slow=40						
	comp=Z,1.5nm,0.8s						
P23K	Montague Islan	36.06	47	P	P	10 00 20.1	+1.3
	baz=277						
GLI	Glacier Island	36.12	46	P	P	10 00 20.1	+0.9
	baz=276						
G25K	Bearman Lake	36.35	36	P	P	10 00 22.0	+0.9
	baz=269						
D25K	Kavik River	36.41	31	P	P	10 00 23.1	+1.6
D25K	Kavik River	36.41	31	P	P	10 00 22.7	+1.1
	baz=265						
M24K	Tolsona, Glenn	36.45	44	P	P	10 00 22.9	+0.9
	baz=275						
H25L	Birch Creek	36.46	37	P	P	10 00 23.0	+1.1
	baz=270						
K24K	Donnelly Dome	36.52	41	P	P	10 00 23.5	+0.8
K24K				IAmb	IAmb	10 00 40.0	
	comp=Z,7.2nm,0.8s						
K24K	Donnelly Dome	36.52	41	P	P	10 00 23.2	+0.6
	baz=273						
F25K	Christian Rive	36.56	34	P	P	10 00 24.4	+1.4
F25K	Christian Rive	36.56	34	P	P	10 00 23.7	+0.8
	baz=268						
PRP	Porcupine Dome	36.58	38		P	10 00 24.9	+1.7
PRP				IAmb	IAmb	10 00 40.2	
	comp=Z,4.5nm,0.7s						
PRP	Porcupine Dome	36.58	38	P	P	10 00 23.7	+0.4
	baz=271,SNR=7.3						
E25K	Arctic Village	36.61	33	P	P	10 00 24.2	+0.9
E25K				IAmb	IAmb	10 00 40.8	
	comp=Z,12nm,1.2s						
E25K	Arctic Village	36.61	33	P	P	10 00 24.5	+1.1
	baz=268						
KLU	Klutina	36.63	45	P	P	10 00 25.4	+1.8
KLU				IAmb	IAmb	10 00 41.4	
	comp=Z,9.3nm,1.2s						
KLU	Klutina	36.63	45	P	P	10 00 24.6	+1.0
	baz=276						
J25K	Salcha River,	36.67	39		P	10 00 23.9	0.0
J25K	Salcha River,	36.67	39	P	P	10 00 25.0	+1.1
	baz=272						
Q23K	Middleton Isla	36.67	48	P	P	10 00 25.7	+1.8
	baz=279						
FYU	Fort Yukon	36.70	36	P	P	10 00 25.3	+1.3
PAX	Paxson	36.71	42	P	P	10 00 25.2	+0.9
	baz=275						
DIV	Divide	36.74	45	P	P	10 00 26.1	+1.6
DIV				IAmb	IAmb	10 00 26.7	
	comp=Z,6.0nm,0.7s						
EYAK	Cordova Ski Ar	36.82	46	P	P	10 00 26.6	+1.5
	baz=278						
HARP	HAARP	36.90	43	P	P	10 00 27.4	+1.5
	baz=276						
RIDG	Independent Ri	36.94	41	P	P	10 00 26.5	+0.3
RIDG				IAmb	IAmb	10 00 51.6	
	comp=Z,8.1nm,1.3s						
RIDG	Independent Ri	36.94	41	P	P	10 00 27.4	+1.2
	baz=274						
BMAR	Burnt Mountain	36.97	35	P	P	10 00 27.4	+1.0
C26K	Camden Bay	36.97	30	P	P	10 00 26.9	+0.6
	baz=266						
F26K	Sheenjek River	37.14	34	P	P	10 00 28.8	+1.0
	baz=270						
N25K	Chitina, Valde	37.24	44	P	P	10 00 30.8	+1.9
	baz=277						
G26K	Porcupine Rive	37.27	35		P	10 00 29.3	+0.4
G26K	Porcupine Rive	37.27	35	P	P	10 00 30.2	+1.3
	baz=271						
SCRK	Sand Creek	37.30	40		P	10 00 30.0	+0.7
SCRK	Sand Creek	37.30	40	P	P	10 00 30.3	+0.9
	baz=274						
BMRM	Bremner River	37.32	45	P	P	10 00 31.5	+2.0
BMRM				IAmb	IAmb	10 00 32.4	
	comp=Z,4.4nm,0.8s						
BMRM	Bremner River	37.32	45	P	P	10 00 30.5	+1.0
	baz=278						
C27K	Jago River	37.37	31	P	P	10 00 30.5	+0.8
	baz=267						
J26L	Joseph Creek	37.45	39	P	P	10 00 31.7	+1.1
	baz=274						
KAIM	Kayak Island	37.56	47	P	P	10 00 33.0	+1.6
	baz=280						
I26K	Coal Creek Min	37.58	38	P	P	10 00 33.5	+2.0
	baz=274						
L26K	Log Cabin Wild	37.67	42	P	P	10 00 33.4	+1.0
	baz=276						
M26K	Nabesna, AK	37.90	43	P	P	10 00 37.0	+2.7
M26K				IAmb	IAmb	10 00 38.0	
	comp=Z,5.3nm,0.9s						
M26K	Nabesna, AK	37.90	43	P	P	10 00 36.3	+1.9
	baz=277,SNR=8.6						
MCARA	McCarthy VSAT	38.02	44	P	P	10 00 36.7	+1.3
	baz=279						
LZH	Lanzhou	38.02	271	*e*P	P	10 00 35.5	-0.3
LZH				pP	sP	10 00 57.4	+4.4
LZH				sP	pwP	10 01 08.3	+18
LZH				pmax	pmax		
	comp=Z,28nm,0.5s						
LZH				LR	LR		
	comp=N,110nm,16.1s						
LZH				LR	LR		
	comp=E,200nm,17.2s						
LZH				LR	LR		
	comp=Z,100nm,16.8s						
CRQM	Cirque	38.06	45	P	P	10 00 37.4	+1.5
CRQE	Cirque	38.09	45	P	P	10 00 37.6	+1.6
	baz=279,SNR=5.3						
E27K	Coleen River	38.10	33	P	P	10 00 36.3	+0.3
	baz=271						
G27K	Doyon Strip	38.12	36	P	P	10 00 37.4	+1.3
	baz=273						
K27K	Chicken	38.14	40	P	P	10 00 37.4	+1.1
K27K				IAmb	IAmb	10 00 38.9	
	comp=Z,6.0nm,0.9s						
K27K	Chicken	38.14	40	P	P	10 00 38.0	+1.8
	baz=276						
H27K	Steamboat Moun	38.20	36		P	10 00 38.3	+1.5
H27K				IAmb	IAmb	10 00 54.5	
	comp=Z,4.7nm,0.7s						
H27K	Steamboat Moun	38.20	36	P	P	10 00 38.4	+1.6
	baz=274						
I27K	Kandik River	38.20	38	P	P	10 00 38.5	+1.6
	baz=274						
D27M	Malcolm River	38.33	32	P	P	10 00 38.8	+1.0
	baz=270						
NRIK	Noril'sk	38.35	329	LR	LR	10 16 45.2	
	comp=Z,28nm,20.1s,baz=110,slow=37						
L27K	Beaver Creek,	38.35	42		P	10 00 40.7	+2.5
L27K				IAmb	IAmb	10 00 41.3	
	comp=Z,4.5nm,0.7s						
L27K	Beaver Creek,	38.35	42	P	P	10 00 39.5	+1.4
	baz=278,SNR=8.7						
BCAR	Beaver Creek A	38.37	42	P	P	10 00 40.1	+1.8
M27K	Edge Creek, AK	38.42	43	P	P	10 00 41.3	+2.5
M27K				IAmb	IAmb	10 00 42.1	
	comp=Z,6.0nm,1.0s						
M27K	Edge Creek, AK	38.42	43	P	P	10 00 40.3	+1.5
	baz=278						
GRNC	Granite Creek	38.74	45	P	P	10 00 43.5	+1.9
GRNC				IAmb	IAmb	10 00 44.4	
	comp=Z,6.9nm,0.8s						
MESA	MESA	38.74	46	P	P	10 00 42.7	+1.1
	baz=281						
F28M	Old Crow	38.77	34	P	P	10 00 43.3	+1.7
F28M				IAmb	IAmb	10 00 44.7	
	comp=Z,5.4nm,0.8s						
F28M	Old Crow	38.77	34	P	P	10 00 42.5	+0.9
	baz=274						
E28M	Babbage River	38.85	33	P	P	10 00 42.9	+0.6
	baz=272						
BVCY	Beaver Creek	38.88	43	P	P	10 00 43.8	+1.2
	baz=279						
CTG	Chitna Glacier	38.90	45	P	P	10 00 44.1	+1.3
	baz=280,SNR=6.9						
CTGM	Chitina Glacie	38.90	45	P	P	10 00 44.7	+1.9
I28M	Miner Creek	38.91	38		P	10 00 44.5	+1.6
I28M				IAmb	IAmb	10 01 00.5	
	comp=Z,5.1nm,0.6s						
I28M	Miner Creek	38.91	38	P	P	10 00 43.7	+0.8
	baz=276,SNR=7.6						
GTA	Gaotai	39.03	278	*e*P	P	10 00 45.5	+1.3
GTA				PcP	PcP	10 02 53.7	+0.2
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				LR	LR		
	comp=N,65nm,16.4s						
GTA				LR	LR		
	comp=E,99nm,16.0s						
GTA				LR	LR		
	comp=Z,100nm,17.8s						
D28M	Stokes Point	39.12	31	P	P	10 00 45.2	+0.9
	baz=272						
YUK3	Moose Creek	39.17	44	P	P	10 00 46.8	+1.6
	baz=280						
DAWY	Dawson	39.31	40	P	P	10 00 47.0	+0.9
	baz=278						
E29M	Blow River	39.47	33		P	10 00 48.2	+0.9
E29M				IAmb	IAmb	10 00 50.5	
	comp=Z,8.6nm,0.9s						
E29M	Blow River	39.47	33	P	P	10 00 48.2	+0.9
	baz=274,SNR=7.9						
H29M	Whitestone	39.47	36	P	P	10 00 48.8	+1.4
	baz=276						
O28M	Mount Upton	39.48	45	P	P	10 00 48.6	+0.7
	baz=282						
G29M	Pine Creek	39.54	35	P	P	10 00 48.3	+0.3
	baz=276						
YUK8	Steele Glacier	39.59	44	P	P	10 00 49.5	+0.7
	baz=281						
PINM	Pinnacle	39.59	46	P	P	10 00 49.9	+1.3
	baz=282						
I29M	Ogilvie Camp,	39.60	38	P	P	10 00 49.1	+0.6
	baz=278,SNR=5.5						
M29M	Somme Creek	39.98	42	P	P	10 00 52.7	+0.9
	baz=281						
L29M	L29M	40.01	41	P	P	10 00 52.9	+0.9
	baz=280,SNR=7.3						
PNL	Peninsula	40.10	47	P	P	10 00 54.2	+1.5
	baz=284						
YUK4	Talbot Arm	40.11	44	P	P	10 00 54.3	+1.3
	baz=282						
EPYK	Eagle Plains	40.12	36	P	P	10 00 53.9	+1.1
	baz=278						
K29M	Barlow Dome	40.16	40	P	P	10 00 54.4	+1.1
K29M	Barlow Dome	40.16	40	P	P	10 00 54.4	+1.1
	baz=280						
G30M	tAoh Zraii Nji	40.24	35	P	P	10 00 54.9	+1.1
	baz=277						
YUK6	Outpost Mounta	40.33	45	P	P	10 00 55.8	+0.9
	baz=283						
F30M	Barrier River	40.33	34	P	P	10 00 55.7	+1.2
	baz=277						
O29M	Mount Kennedy	40.36	46	P	P	10 00 55.9	+0.9
	baz=283						
I30M	Mount Dempster	40.42	38	P	P	10 00 56.0	+0.6
	baz=279,SNR=11						
J30M	Hart River	40.55	39	P	P	10 00 57.7	+1.2
	baz=280						
HYT	Haines Junctio	40.76	45	P	P	10 00 59.1	+0.8
	baz=284						
N30M	Aishikik Lake	40.81	44	P	P	10 00 59.7	+1.1
	baz=283						
P29M	Windy Craggy	40.93	46	P	P	10 01 00.4	+0.8
	baz=285						
G31M	Satah River	41.01	35	P	P	10 01 00.4	+0.3
	baz=279						
CD2	Chengdu	41.08	265	P	P	10 01 01.8	+0.6
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
INK	Inuvik	41.09	33	LR	LR	10 20 57.2	
	comp=Z,36nm,18.3s,baz=256,slow=40						
INK	Inuvik	41.09	33	P	P	10 01 02.6	+1.9
INK				pmax	pmax		
	comp=Z,13nm,1.2s						
INK	Inuvik	41.09	33	P	P	10 01 00.8	+0.1
	baz=278,SNR=5.7						
F31M	Tsiigehtchic	41.13	34	P	P	10 01 01.0	0.0
	baz=279						
H31M	Peel River	41.16	37	P	P	10 01 01.9	+0.5
	baz=280						
P30M	Million Dollar	41.19	45	P	P	10 01 02.9	+1.1
	baz=285						
N31M	Braeburn, Yuko	41.42	43	P	P	10 01 04.1	+0.5
	baz=284						
O30N	Mendenhall	41.45	44	P	P	10 01 04.8	+1.0
	baz=285						
PLBC	Pleasant Camp	41.65	46	P	P	10 01 06.7	+1.2
	baz=286						
M31M	Drury Creek, Y	41.89	42	P	P	10 01 09.2	+1.8
	baz=284,SNR=5.8						
WHY	Whitehorse	42.05	44	P	P	10 01 09.8	+1.0
	baz=286						
FARO	Faro, Yukon	42.36	42	P	P	10 01 12.8	+1.6
	baz=285						
ZALV	Zalesovo Beam	42.40	305	P	P	10 01 11.0	-0.6
	comp=Z,0.7nm,0.5s,baz=81,slow=8.9,SNR=2.7						
ZALV				PcP	PcP	10 03 03.1	-0.9
	comp=Z,1.0nm,0.4s,baz=78,slow=4.1,SNR=5.5						
ZALV				LR	LR	10 19 47.2	
	comp=Z,91nm,20.0s,baz=74,slow=38						
	comp=Z,0.7nm,0.5s						
SIT	Sitka	42.88	50	P	P	10 01 17.3	+1.8
	baz=289						
P32M	Atlin	42.91	46	P	P	10 01 16.8	+1.0
	baz=288						
R32K	Eaglecrest	42.91	48	P	P	10 01 17.0	+1.3
	baz=288,SNR=6.8						
P33M	Teslin, Yukon	43.16	45	P	P	10 01 19.1	+1.3
	baz=288,SNR=6.2						
MMPY	Sheldon Lake,	43.19	41	P	P	10 01 18.9	+0.9
	baz=286						
A36M	Sachs Harbour	43.28	27	P	P	10 01 19.0	+0.5
	baz=282,SNR=13						
Q32M	Nakina River	43.81	46	P	P	10 01 24.1	+0.9
	baz=289						
R33M	Jennings River	44.30	45	P	P	10 01 28.1	+1.0
	baz=290,SNR=5.1						
U33K	Whale Pass	44.35	50	P	P	10 01 28.8	+1.5
	baz=292						
CRAG	Craig	44.59	51	P	P	10 01 30.7	+1.5
	baz=292						
WRAK	Wrangell Islan	44.65	50	P	P	10 01 30.4	+0.8
	baz=292						
S34M	Telegraph Cree	44.73	47	P	P	10 01 31.4	+1.1
	baz=291						
TGTN	Hyland Airport	44.86	42	P	P	10 01 32.4	+1.0
	baz=290						
WMQ	Urumqi	44.86	291	*e*P	P	10 01 33.2	+1.5
WMQ				pmax	pmax		
	comp=Z,53nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,72nm,5.3s						
DLBC	Dease Lake	45.09	46	P	P	10 01 34.7	+1.4
	baz=291						
WTLY	Watson Lake, Y	45.09	44	P	P	10 01 34.3	+1.1
	baz=290						
PZH	PanZhiHua	45.25	261	P	P	10 01 36.1	+1.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.8s						
V35K	Ketchikan	45.44	51	P	P	10 01 37.6	+1.7
	baz=293						
T35M	Bob Quinn	45.51	48	P	P	10 01 38.7	+2.1
	baz=292						
MK31	Makanchi Array	46.82	297	*i* P	P	10 01 45.0	-2.0
MKAR	Makanchi Array	46.82	297	P	P	10 01 46.0	-1.0
	comp=Z,1.1nm,0.7s,baz=69,slow=7.6,SNR=6.5						
MKAR				PcP	PcP	10 03 18.5	-0.9
	comp=Z,1.3nm,0.7s,baz=69,slow=4.0,SNR=5.1						
MKAR				LR	LR	10 22 34.9	
	comp=Z,75nm,18.3s,baz=71,slow=38						
	comp=Z,1.1nm,0.7s						
MKAR	Makanchi Array	46.82	297	*i* P	P	10 01 48.9	+1.9
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	46.82	297	*e*P	P	10 01 48.9	+1.9
KURK	Kurchatov	47.18	303	P	P	10 01 49.0	-0.7
KURK						10 03 20.0	
TOAD	Toad River Com	47.26	44	P	P	10 01 51.8	+1.5
	baz=294,SNR=9.1						
KURBB	Kurchatov Arra	47.27	303	P	P	10 01 49.0	-1.4
	comp=Z,4.1nm,0.9s,baz=67,slow=8.1,SNR=17						
KURBB				PcP	PcP	10 03 20.0	-0.9
	comp=Z,1.5nm,0.8s,baz=66,slow=3.1,SNR=6.2						
KURBB				LR	LR	10 23 02.0	
	comp=Z,115nm,18.2s,baz=162,slow=38						
	comp=Z,4.1nm,0.9s						
BBB	Bella Bella	48.65	53	LR	LR	10 23 45.8	
	comp=Z,14nm,19.3s,baz=258,slow=37						
RES	Resolute Bay	50.25	19	LR	LR	10 24 02.4	
	comp=Z,30nm,22.0s,baz=21,slow=37						
RES	Resolute Bay	50.25	19	P	P	10 02 13.6	+0.7
RES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YKA	Yellowknife Ar	50.38	37	P	P	10 02 15.7	+1.7
	comp=Z,6.9nm,0.8s,baz=303,slow=7.8,SNR=16						
	comp=Z,6.9nm,0.8s						
BVAR	Borovoye Array	50.62	309	P	P	10 02 14.3	-1.6
	comp=Z,0.7nm,0.4s,baz=62,slow=8.4,SNR=4.2						
BVAR				LR	LR	10 25 21.7	
	comp=Z,63nm,19.8s,baz=69,slow=38						
	comp=Z,0.7nm,0.4s						
BRVK	Borovoye	50.66	309	*i* P	P	10 02 15.7	-0.6
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRVK	Borovoye	50.66	309	*e*P	P	10 02 15.7	-0.6
SPITS	Spitsbergen Ar	52.08	350	P	P	10 02 24.9	-1.7
	comp=Z,14nm,1.2s,baz=55,slow=8.7,SNR=9.6						
	comp=Z,14nm,1.2s						
CHTO	Chiang Mai	52.40	256		P	10 02 30.0	+0.3
CHTO	Chiang Mai	52.40	256	P	P	10 02 30.0	+0.3
CHTO				pmax	pmax		
	comp=Z,12nm,0.8s						
CMAR	Chiang Mai Arr	52.65	256		P	10 02 32.3	+0.7
CMAR	Chiang Mai Arr	52.65	256	P	P	10 02 32.7	+1.1
	comp=Z,5.4nm,0.7s,baz=36,slow=7.2,SNR=32						
CMAR				PcP	PcP	10 03 41.1	0.0
	comp=Z,1.0nm,0.7s,baz=47,slow=3.9,SNR=1.4						
	comp=Z,5.4nm,0.7s						
AAK	Ala-Archa	53.72	296	LR	LR	10 26 49.3	
	comp=Z,91nm,18.6s,baz=62,slow=37						
NEEM	North Greenlan	54.58	6	*i* P	P	10 02 42.5	-2.8
NEEM				IAmb	IAmb	10 02 45.3	
	comp=Z,8.5nm,0.7s						
ARTI	Arti	54.80	317	LR	LR	10 28 12.3	
	comp=Z,72nm,18.4s,baz=23,slow=38						
ARTI	Arti	54.80	317	*d i*P	P	10 02 44.7	-2.1
ARTI						10 03 46.6	
ARTI						10 04 48.6	
ARTI				S	S	10 10 21.5	-2.5
ARTI				SS	SS	10 14 05.0	-1.9
ARTI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
DAG	Danmarks Havn	56.08	358	*i* P	P	10 02 54.2	-1.6
BLKN	Baker Lake	56.29	29		P	10 02 57.6	+0.3
KULLO	Kullorsuaq	56.68	9	*i* P	P	10 02 57.5	-2.5
KULLO				IAmb	IAmb	10 03 00.2	
	comp=Z,7.1nm,0.8s						
NEW	Newport	56.71	53	LR	LR	10 30 23.9	
	comp=Z,15nm,18.3s,baz=286,slow=39						
ARCES	ARCESS Array B	57.37	341	P	P	10 03 05.1	+0.1
	comp=Z,1.3nm,0.6s,baz=20,slow=7.8,SNR=5.0						
	comp=Z,1.3nm,0.6s						
KIRV	Kirov	57.41	323	LR	LR	10 29 16.6	
	comp=Z,41nm,18.6s,baz=49,slow=38						
AB31	Akbulak array	58.18	310	P	P	10 03 09.7	-1.2
AKTO	Aktyubinsk	58.46	312	LR	LR	10 30 39.9	
	comp=Z,100nm,19.0s,baz=302,slow=38						
DBG	Daneborg	58.59	358	*i* P	P	10 03 12.2	-1.2
SIMJ	Simiganj	59.43	295		P	10 03 19.0	-0.9
SIMJ				IAmb	IAmb	10 03 23.4	
	comp=Z,4.1nm,0.8s						
SUMG	Summit	60.12	4		P	10 03 24.8	+0.3
SUMG	Summit	60.12	4	P	P	10 03 24.8	+0.3
SUMG				pmax	pmax		
	comp=Z,13nm,1.0s						
SUMG	Summit	60.12	4	*i* P	P	10 03 24.0	-0.5
SUMG				IAmb	IAmb	10 03 25.9	
	comp=Z,13nm,1.0s						
FFC	Flin Flon	60.21	40		P	10 03 26.1	+1.2
FFC				IAmb	IAmb	10 03 42.8	
	comp=Z,5.8nm,0.8s						
FFC	Flin Flon	60.21	40	P	P	10 03 26.1	+1.2
FFC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
FCC	Fort Churchill	60.70	33	P	P	10 03 29.0	+0.9
FCC	Fort Churchill	60.70	33	P	P	10 03 29.0	+0.9
FCC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
EGMT	Eagleton	60.78	50		P	10 03 30.2	+1.2
BOZ	Bozeman (W)	61.32	53	P	P	10 03 34.4	+1.6

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BOZ   Bozeman (W)       61.32  53   P       P        10 03 34.4 +1.6
BOZ                                  pmax    pmax
        comp=Z,7.0nm,0.8s
COEN  Coen              61.67 191   P       P        10 03 36.2 +1.0
NVAR  Mina Array Bea    62.04  63   P       P        10 03 39.0 +1.2
        comp=Z,1.1nm,0.8s,baz=295,slow=6.9,SNR=8.0
NVAR                                pP      sP       10 03 55.6 +0.4
        comp=Z,2.5nm,0.7s,baz=279,slow=7.5,SNR=16
        comp=Z,1.1nm,0.8s
ICESG Greenland Ices    63.51   5 i P       P        10 03 46.3 -0.9
ICESG                               IAmb    IAmb     10 03 48.0
        comp=Z,16nm,0.7s
FINES FINESS Array B    63.59 335   P       P        10 03 46.7 -0.7
        comp=Z,3.5nm,0.5s,baz=30,slow=7.8,SNR=61
FINES                               LR      LR       10 35 25.0
        comp=Z,57nm,19.5s,baz=58,slow=40
        comp=Z,3.5nm,0.5s
DUG   Dugway, Tooele    64.14  58   P       P        10 03 53.7 +2.0
DUG                                 pmax    pmax
        comp=Z,9.0nm,0.9s
PDAR  Pinedale Array    64.29  54           P        10 03 53.6 +0.9
PDAR  Pinedale Array    64.29  54   P       P        10 03 54.1 +1.4
        comp=Z,2.5nm,0.8s,baz=318,slow=2.0,SNR=19
PDAR                                pP      sP       10 04 09.9 -0.1
        comp=Z,5.5nm,0.8s,baz=318,slow=2.0,SNR=17
        comp=Z,2.5nm,0.8s
FRB   Frobisher Bay     64.46  19   P       P        10 03 52.0 -1.1
FRB                                 pmax    pmax
        comp=Z,20nm,1.1s
OBN   Obninsk           64.93 326   LR      LR       10 33 34.7
        comp=Z,59nm,19.8s,baz=106,slow=37
OBN   Obninsk           64.93 326  eP       P        10 03 55.4 -0.9
OBN                                 pmax    pmax
        comp=Z,4.0nm,0.8s
ULM   Lac du Bonnet     65.99  41   P       P        10 04 03.9 +0.6
        comp=Z,2.7nm,0.5s,baz=307,slow=7.0,SNR=6.1
        comp=Z,2.7nm,0.5s
NB2   NORSAR Subarra    67.74 341   P       P        10 04 13.7 -0.6
        comp=Z,1.4nm,0.5s,baz=26,slow=6.5
NB2   NORSAR Subarra    67.74 341   P       P        10 04 11.6 -2.7
NOA   NORSAR Array B    67.74 341   P       P        10 04 14.0 -0.3
        comp=Z,1.6nm,0.5s,baz=28,slow=6.0,SNR=22
        comp=Z,1.6nm,0.5s
NORES NORESS Array B    67.94 341   P       P        10 04 15.0 -0.5
HFS   Hagfors           67.98 340   P       P        10 04 15.3 -0.4
        comp=Z,5.7nm,0.4s,baz=59,slow=5.7,SNR=71
        comp=Z,5.7nm,0.4s
ISCO  Idaho Springs     68.48  54   P       P        10 04 20.0 +0.3
ISCO                                pmax    pmax
        comp=Z,7.0nm,1.2s
WRA   Warramunga Arr    69.10 199   P       P        10 04 22.7 -0.4
        comp=Z,1.9nm,0.7s,baz=18,slow=6.9,SNR=16
WRA                                 pP      pwP      10 04 39.3 +0.4
        comp=Z,1.4nm,0.7s,baz=16,slow=6.7,SNR=4.8
        comp=Z,1.9nm,0.7s
AKT   Akhty             69.75 310  eP       P        10 04 26.7 -0.5
AKT                                e                 10 04 45.2
AKT                                e*SP     PcP      10 04 56.2 +6.5
AKT                                 pmax    pmax
        comp=Z,6.0nm,0.7s
KIV   Kislovodsk        70.51 314  eP       P        10 04 28.2 -3.6
KIV                                 pmax    pmax
        comp=Z,6.0nm,1.1s
KIV                                 MLR     MLR
        comp=Z,35nm,18.0s
KBZ   Khabaz            70.58 314   P       P        10 04 31.6 -0.5
        comp=Z,4.1nm,1.1s,baz=148,slow=2.4,SNR=7.5
        comp=Z,4.1nm,1.1s
AK03  Malin Array Si    71.14 326   P       P        10 04 32.6 -2.8
AK03                                pP      pP       10 04 41.6 -6.3
AKASG Malin Array Be    71.16 326   P       P        10 04 34.4 -1.0
        comp=Z,2.8nm,0.5s,baz=36,slow=6.1,SNR=20
        comp=Z,2.8nm,0.5s
AKBB  Malin Array Si    71.16 326   P       P        10 04 32.7 -2.8
AK04  Malin Array Si    71.16 326   P       P        10 04 32.8 -2.7
AK21  Malin Array Si    71.17 326   P       P        10 04 32.8 -2.7
AK22  Malin Array Si    71.17 326   P       P        10 04 32.8 -2.7
KIEV  Kiev              71.17 326           P        10 04 34.1 -1.5
KIEV                                IAmb    IAmb     10 04 35.6
        comp=Z,3.2nm,0.5s
KIEV  Kiev              71.17 326  ⇑P       P        10 04 34.5 -1.0
KIEV  Kiev              71.17 326  ⇑P       P        10 04 34.5 -1.0
KIEV  Kiev              71.17 326   P       P        10 04 32.7 -2.8
        comp=Z,19nm,1.0s
AK01  Malin Array Si    71.17 326   P       P        10 04 32.9 -2.6
AK11  Malin Array Si    71.20 326   P       P        10 04 33.3 -2.4
AK02  Malin Array Si    71.20 326   P       P        10 04 33.3 -2.4
AK08  Malin Array Si    71.20 326   P       P        10 04 33.3 -2.4
AK18  Malin Array Si    71.20 326   P       P        10 04 33.8 -1.9
AK15  Malin Array Si    71.20 326   P       P        10 04 33.8 -1.9
AK09  Malin Array Si    71.20 326   P       P        10 04 33.7 -2.1
AK20  Malin Array Si    71.21 326   P       P        10 04 33.6 -2.2
AK19  Malin Array Si    71.22 326   P       P        10 04 33.6 -2.3
AK16  Malin Array Si    71.23 326   P       P        10 04 33.7 -2.2
AK10  Malin Array Si    71.23 326   P       P        10 04 33.7 -2.2
AK12  Malin Array Si    71.23 326   P       P        10 04 33.7 -2.2
RNPP9 Sopachiv          71.81 328   P       P        10 04 36.5 -2.8
LUBAR Lubar, Ukraine    72.34 327   P       P        10 04 39.3 -3.3
SCHQ  Schefferville     72.73  23   P       P        10 04 45.5 +0.7
        comp=Z,5.8nm,0.8s,baz=357,slow=5.2,SNR=9.6
SCHQ                                pP      sP       10 05 01.6 -0.8
        comp=Z,6.3nm,0.6s,baz=5.7,slow=5.7,SNR=7.3
        comp=Z,5.8nm,0.8s
ASAR  Alice Springs     72.80 199   P       P        10 04 46.4 +0.8
        comp=Z,4.1nm,0.8s,baz=11,slow=5.1,SNR=52
ASAR                                pP      sP       10 05 02.7 -0.4
        comp=Z,1.6nm,0.6s,baz=14,slow=5.5,SNR=8.3
        comp=Z,4.1nm,0.8s
KOLS  Kolonicke sedl    75.16 329  eP       P        10 04 59.2 +0.1
KOLS                                pmax    pmax
        comp=Z,4.0nm,0.8s
KOLS  Kolonicke sedl    75.16 329  eP       P        10 04 59.2 +0.1
VLDQ  Val d'Or          75.19  32           P        10 04 58.3 -0.9
VLDQ                                IAmb    IAmb     10 04 58.5
        comp=Z,7.8nm,0.7s
BURAR Bucovina Array    75.20 327   P       P        10 04 59.0 -0.6
BURAR                               IAmb    IAmb     10 04 59.6
        comp=Z,3.2nm,0.6s
BURAR Bucovina Array    75.20 327  ⇑P       P        10 04 59.4 -0.1
BURAR Bucovina Array    75.20 327  ⇑P       P        10 04 59.4 -0.1
TESR  Tescani           75.57 325  ⇑P       P        10 05 00.8 -0.7
FLTG  Flechtingen       75.57 337  eP       P        10 05 00.6 -0.8
        comp=Z,6.9nm,0.9s,baz=25,slow=5.7
STEB  Steborice         75.80 332  eP       P        10 05 02.6 -0.2
DIKM  Dikmen            75.81 317  ⇑P       P        10 05 03.5 +0.5
EKA   Eskdalemuir Ar    75.82 346   P       P        10 05 02.3 -0.5
        comp=Z,2.0nm,0.7s,baz=22,slow=5.1,SNR=4.9
        comp=Z,2.0nm,0.7s
DPC   Dobruska-Polom    75.89 333  eP       P        10 05 03.2 -0.1
DPC   Dobruska-Polom    75.89 333  eP       P        10 05 03.2 -0.1
LANS  Liptovska Anna    75.93 331  eP       P        10 05 04.1 +0.5
LANS                                pmax    pmax
        comp=Z,3.0nm,0.9s
LANS  Liptovska Anna    75.93 331  eP       P        10 05 04.1 +0.5
ARCR  ARCALIA           75.96 327  ⇑P       P        10 05 04.1 +0.3
MORC  Moravsky Berou    76.01 332  eP       P        10 05 03.5 -0.5
MORC  Moravsky Berou    76.01 332  ⇓P       P        10 05 04.1  0.0
CLL   Collm             76.01 336  i P      P        10 05 02.9 -1.0
CLL                                 pmax    pmax
        comp=Z,14nm,1.2s
CLL   Collm             76.01 336  eP       P        10 05 03.0 -0.9
        comp=Z,5.3nm,0.7s,baz=25,slow=5.7
CLL   Collm             76.01 336  i P      P        10 05 02.9 -1.0
        comp=Z,14nm,1.2s
VRI   Vrincioaia        76.07 325  ⇓P       P        10 05 04.4  0.0
VRI   Vrincioaia        76.07 325  ⇓P       P        10 05 04.4  0.0
CFR   Carcaliu          76.07 323  ⇑P       P        10 05 04.1 -0.3
PLOR  Plostina          76.11 325  ⇑P       P        10 05 05.4 +0.7
PLOR  Plostina          76.11 325  ⇑P       P        10 05 05.4 +0.7
BRG   Berggiesshubel    76.13 335  eP       P        10 05 03.8 -0.9
        comp=Z,3.5nm,0.9s,baz=25,slow=5.7
TURR  Turia             76.19 325  ⇑P       P        10 05 06.1 +0.9
TPGR  Topolog           76.22 323  ⇓P       P        10 05 05.1 -0.2
CLZ   Clausthal         76.24 337  eP       P        10 05 05.3  0.0
        comp=Z,15nm,1.3s,baz=25,slow=5.7
BISRR Bisoca            76.34 325  ⇓P       P        10 05 06.1 +0.1
DOPR  Dopca             76.51 326  ⇑P       P        10 05 06.9  0.0
UOSS  Minazif           76.66 292           P        10 05 07.2 -0.9
UOSS                                IAmb    IAmb     10 05 08.0
        comp=Z,10nm,0.9s
MLR   Muntele Rosu      76.69 325  ⇑P       P        10 05 07.4 -0.7
MLR   Muntele Rosu      76.69 325  ⇑P       P        10 05 07.4 -0.7
VYHS  Vyhne             76.70 331  eP       P        10 05 07.7 -0.3
VYHS                                pmax    pmax
        comp=Z,9.0nm,1.4s
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VYHS  Vyhne             76.70 331  eP       P        10 05 07.7 -0.3
VYHS                               e                 10 33 14.9
VYHS                               e                 10 33 26.8
VRAC  Vranov            76.72 333  eP       P        10 05 07.8 -0.2
VRAC  Vranov            76.72 333  ⇑P       P        10 05 07.6 -0.4
VRAC  Vranov            76.72 333  ⇑P       P        10 05 07.6 -0.4
ISR   Istrita           76.76 324  ⇑P       P        10 05 08.3 -0.1
ISR   Istrita           76.76 324  ⇑P       P        10 05 08.3 -0.1
MARR  Marisel-Cluj      76.76 327  ⇑P       P        10 05 08.1 -0.3
JAVC  Velka Javorina    76.77 332  eP       P        10 05 08.9 +0.5
TANN  Tannenbergstha    76.96 336  eP       P        10 05 09.0 -0.4
        comp=Z,1.4nm,0.7s,baz=25,slow=5.7
MOX   Moxa              76.99 336   P       P        10 05 09.5  0.0
MOX                                 pmax    pmax
        comp=Z,6.0nm,1.0s
MOX   Moxa              76.99 336  eP       P        10 05 09.1 -0.5
        comp=Z,2.9nm,0.7s,baz=25,slow=5.7
MOX                                eL       L        10 35 07.7
        comp=Z,40nm,18.8s
KRUC  Moravsky          77.00 333  eP       P        10 05 09.2 -0.4
KRUC  Moravsky          77.00 333   P       P        10 05 09.7 +0.1
VOIR                    77.08 325  ⇑P       P        10 05 10.3 +0.1
VOIR                    77.08 325  ⇑P       P        10 05 10.3 +0.1
TX31  Lajitas Ar. Si    77.08  61           P        10 05 11.1 +0.5
TXAR  Lajitas Array     77.08  61   P       P        10 05 11.2 +0.7
        comp=Z,2.1nm,0.6s,baz=300,slow=4.6,SNR=39
TXAR                                pP      sP       10 05 27.9 -0.3
        comp=Z,10nm,0.6s,baz=298,slow=4.4,SNR=38
        comp=Z,2.1nm,0.6s
ARR   Arges             77.30 326  ⇓P       P        10 05 12.0 +0.5
KASTN Kahler Asten      77.33 338  eP       P        10 05 11.2 -0.3
        comp=Z,8.7nm,1.2s,baz=25,slow=5.7
CCM   Cathedral Cave    77.33  47   P       P        10 05 11.9 +0.2
CCM                                 IAmb    IAmb     10 05 12.4
        comp=Z,5.0nm,0.8s
CCM   Cathedral Cave    77.33  47   P       P        10 05 11.9 +0.2
CCM                                 pmax    pmax
        comp=Z,5.0nm,0.9s
LOT   Lotru             77.56 326  ⇑P       P        10 05 12.4 -0.5
KHC   Kasperske Hory    77.79 334  eP       P        10 05 13.8 -0.3
KHC   Kasperske Hory    77.79 334  eP       P        10 05 13.8 -0.3
CKRC  Cesky Krumlov     77.85 334  eP       P        10 05 13.4 -1.0
CKRC  Cesky Krumlov     77.85 334  eP       P        10 05 13.4 -1.0
SURR  Surduc            77.91 327  ⇑P       P        10 05 14.7  0.0
GRF   Grafenberg Arr    77.96 336  eP       P        10 05 14.6 -0.4
        comp=Z,6.5nm,0.6s,baz=25,slow=5.7
GRF                                eL       L        10 38 32.1
        comp=Z,31nm,20.7s
GRFO  Grafenberg        77.96 336   P       P        10 05 15.3 +0.3
GRFO  Grafenberg        77.96 336   P       P        10 05 15.3 +0.3
GRFO                                pmax    pmax
        comp=Z,13nm,1.1s
GZR   Gura Zlata        77.98 327  ⇑P       P        10 05 14.0 -1.2
GZR   Gura Zlata        77.98 327  ⇑P       P        10 05 14.0 -1.2
WET   Wettzell          77.99 335   P       P        10 05 14.8 -0.3
WET                                 pmax    pmax
        comp=Z,8.0nm,1.1s
WET   Wettzell          77.99 335  eP       P        10 05 15.0 -0.2
        comp=Z,7.3nm,1.1s,baz=25,slow=5.7
GERES GERESS Array B    78.01 334   P       P        10 05 14.8 -0.6
        comp=Z,1.3nm,0.6s,baz=34,slow=5.5,SNR=14
        comp=Z,1.3nm,0.6s
BRTR  Keskin Array B    78.08 317   P       P        10 05 16.0  0.0
        comp=Z,1.4nm,0.8s,baz=78,slow=4.3,SNR=9.3
BRTR                                pP      sP       10 05 32.5 -1.1
        comp=Z,0.6nm,0.7s,baz=44,slow=6.6,SNR=3.1
        comp=Z,1.4nm,0.8s
COPA  Copaceanca        78.10 325  ⇑P       P        10 05 15.4 -0.4
CONA  Conrad Observa    78.16 332  eP       P        10 05 16.1 -0.1
        comp=Z,2.0nm,0.7s,SNR=6.0
BZS   Buzias            78.22 328  ⇑P       P        10 05 16.0 -0.4
BZS   Buzias            78.22 328  ⇑P       P        10 05 16.0 -0.4
TNS   Taunus Mts        78.22 338  eP       P        10 05 16.3 -0.2
        comp=Z,9.7nm,1.0s,baz=25,slow=5.7
RONA  Rosalia, Austr    78.23 332  eP       P        10 05 16.5  0.0
        comp=Z,6.0nm,0.9s
ANTO  Ankara            78.36 317  ⇑P       P        10 05 17.1 -0.3
ANTO  Ankara            78.36 317  ⇑P       P        10 05 17.1 -0.3
KIRS  Kirsehir-Merke    78.42 316  ⇓P       P        10 05 18.8 +1.0
MEM   Membach           78.47 339  dP       P        10 05 17.6 -0.2
HERR  Herculane         78.55 327  ⇑P       P        10 05 17.7 -0.5
MOA   Molln             78.73 333  eP       P        10 05 19.3  0.0
        comp=Z,4.3nm,0.9s
PBMO  Poplar Bluff      78.73  47   P       P        10 05 19.3 -0.1
PBMO                                IAmb    IAmb     10 05 37.9
        comp=Z,7.4nm,0.9s
MORH  Mrgy, Hungar      78.75 330  ⇑P       P        10 05 18.2 -1.2
BCLA  Clavier           78.81 340  dP       P        10 05 19.2 -0.4
ARSA  Arzberg           78.87 332  eP       P        10 05 19.8 -0.3
        comp=Z,1.1nm,0.6s
MDVR  Moldovita         78.89 327  ⇑P       P        10 05 18.9 -1.4
BIOA  Bad Ischl, Aus    79.06 334  eP       P        10 05 21.4 +0.3
        comp=Z,2.6nm,0.5s
RJOB  Jochberg          79.27 334  eP       P        10 05 22.2 -0.1
        comp=Z,3.2nm,1.0s,baz=25,slow=5.7
SOKA  Soboth            79.53 332  i P      P        10 05 23.5 -0.2
        comp=Z,9.6nm,1.2s
LESA  Schwarzleotal     79.59 334  eP       P        10 05 24.0 -0.1
        comp=Z,3.4nm,0.6s
WCI   Wyandotte Cave    79.59  44           P        10 05 24.7 +0.6
WCI                                 IAmb    IAmb     10 05 25.2
        comp=Z,9.0nm,0.8s
WCI   Wyandotte Cave    79.59  44   P       P        10 05 24.7 +0.6
WCI                                 pmax    pmax
        comp=Z,9.0nm,0.8s
KBA   Koelnbreinsper    79.70 333  i P      P        10 05 24.9 +0.1
        comp=Z,5.1nm,0.5s,SNR=10.0
BOVS  Bovan             79.88 327  ⇑P       P        10 05 22.8 -2.7
BFO   Black Forest      79.99 337  eP       P        10 05 25.4 -0.7
        comp=Z,7.4nm,0.9s,baz=25,slow=5.7
WATA  Walderalm         79.99 335  eP       P        10 05 26.1 -0.2
        comp=Z,8.2nm,1.1s
WTTA  Wattenberg        80.04 335  eP       P        10 05 26.6  0.0
        comp=Z,3.8nm,0.6s,SNR=7.0
O52A  Adamsville        80.08  40   P       P        10 05 26.9 +0.1
RETA  Reutte            80.09 335  eP       P        10 05 26.5 -0.3
        comp=Z,2.7nm,0.8s
MOTA  Moosalm           80.12 335  i P      P        10 05 26.7 -0.3
        comp=Z,5.5nm,0.8s,SNR=6.7
SQTA  Sankt Quirin      80.20 335  i P      P        10 05 27.1 -0.3
        comp=Z,7.0nm,1.1s,SNR=5.4
ABTA  Abfaltersbach     80.25 334   P       P        10 05 25.2 -2.4
        comp=Z,3.8nm,1.5s
DAVA  Damuels           80.52 336  eP       P        10 05 28.5 -0.7
        comp=Z,6.0nm,0.9s
FETA  Feichten          80.52 335  i P      P        10 05 28.1 -1.1
        comp=Z,2.8nm,1.0s
WVT   Waverly           80.53  46   P       P        10 05 29.4 +0.2
WVT                                 IAmb    IAmb     10 05 30.2
        comp=Z,4.3nm,0.7s
WVT   Waverly           80.53  46   P       P        10 05 29.4 +0.2
WVT                                 pmax    pmax
        comp=Z,4.0nm,0.7s
T50A  Nancy             81.25  43           P        10 05 33.3 +0.2
T50A                                IAmb    IAmb     10 05 33.6
        comp=Z,7.1nm,0.6s
PLAL  Pickwick Lake     81.32  47   P       P        10 05 33.2 -0.2
PLAL                                IAmb    IAmb     10 05 34.0
        comp=Z,5.2nm,0.8s
PDG   Podgorica         81.82 327  ⇓P       P        10 05 34.9 -1.0
SWET  Sewanee           82.18  45   P       P        10 05 37.7 -0.3
MMAI  Mount Meron Ar    82.55 312   P       P        10 05 40.5 +0.4
        comp=Z,7.3nm,0.6s,baz=39,slow=6.8,SNR=11
        comp=Z,7.3nm,0.6s
RAYN  Ar Rayn           84.28 299           P        10 05 49.0 -0.1
RAYN                                IAmb    IAmb     10 05 49.5
        comp=Z,6.8nm,0.8s
RAYN  Ar Rayn           84.28 299   P       P        10 05 49.0 -0.1
RAYN                                pmax    pmax
        comp=Z,7.0nm,0.9s
TIP   Timpagrande       85.58 328  ⇓P       P        10 05 52.4 -3.0
ESDC  Sonseca Array     91.06 343   P       P        10 06 20.0 -1.4
        comp=Z,1.2nm,1.1s,baz=11,slow=4.2,SNR=5.9
        comp=Z,1.2nm,1.1s
KEST  Kesra             91.24 331   P       P        10 06 19.2 -3.2
        comp=Z,2.1nm,0.4s,baz=45,slow=3.4,SNR=5.4
QSPA  South Pole Qui   137.05 180   PKP     PKPdf    10 12 38.5  0.0
        comp=Z,1.2nm,0.8s,baz=309,slow=5.8,SNR=3.9
QSPA                                pPKP    sPKPdf   10 12 56.2 -0.5
        comp=Z,1.3nm,0.8s,baz=11,slow=1.0,SNR=2.3
H03N2 Juan Fernandez   138.60  90   T       T        12 47 31.0
        baz=309,slow=77,SNR=145
H03N1 Juan Fernandez   138.62  90   T       T        12 47 31.0
        baz=309,slow=77,SNR=202
H03N3 Juan Fernandez   138.62  90   T       T        12 47 31.1
        baz=309,slow=77,SNR=154
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BDFB  Brasilia         143.79  36   PKP     PKPab    10 12 49.7 +0.4
        comp=Z,3.9nm,0.9s,baz=332,slow=5.9,SNR=5.5
CPUP  Villa Florida    148.05  60   PKPbc   PKPdf    10 13 01.0 +1.9
        comp=Z,1.1nm,0.8s,baz=167,slow=1.9,SNR=6.8
CPUP                                pPKPbc  sPKPbc   10 13 19.0 -1.4
        comp=Z,1.3nm,0.9s,baz=224,slow=0.8,SNR=4.2
PLCA  Paso Flores      148.10  94   PKPbc   PKPbc    10 13 02.1  0.0
        comp=Z,1.5nm,0.9s,baz=278,slow=7.3,SNR=3.3
SNAA  Sanae            153.14 196   PKPbc   PKPbc    10 13 12.5 -0.6
        comp=Z,1.7nm,0.6s,baz=187,slow=5.6,SNR=12
SNAA                                PKPab   sPKPdf   10 13 24.8 +0.8
        comp=Z,1.8nm,0.6s,baz=179,slow=4.4,SNR=7.0
```

CATAC 02 10:19:43.8±0.6**,11°N**±3°×**8°7W**±°**,h5**^{km}**,M2.7**/11**,**
MLv2.7/11**,Error ellipse: s-maj=8.3km s-min=4.5km**
az=55.5,confirmed,Near coast of Nicaragua

```
Code  Station Name       Δ°   AZ°    Phase ID           Time     Res
                                    Op      ISC       h  m  s    ISC
COPN  Copaltepe          1.19  17   P       Pb       10 20 06.8 -0.1
NANN  Nandasmo           1.21  42   P       Pn       10 20 07.8 +0.4
SAPS  Ciudad Sandino     1.25  25   P       Pn       10 20 07.9  0.0
UNAN  Cigeo UNAN         1.26  32   P       Pn       10 20 08.3 +0.2
UNAN                                S       Sb       10 20 24.7 +0.1
MGAN  Managua            1.30  32   P       Pn       10 20 08.7  0.0
MGAN  Managua            1.30  32   S       Sg       10 20 25.2 -0.5
APQ2  Apoyeque           1.30  28   P       Pn       10 20 08.6 -0.1
APQ2                                S       Sb       10 20 26.0 +0.1
CARN  Rivas              1.41  84   P       Pb       10 20 10.7 +0.1
CARN                                S       Sb       10 20 28.4 -0.6
MOMN  Momotombo          1.42  16   P       Pn       10 20 10.4  0.0
MOMN                                S       Sb       10 20 27.1 -2.2
CNGN  Cerro Negro        1.47  10   P       Pn       10 20 10.7 -0.4
CNGN  Cerro Negro        1.47  10   S       Sn       10 20 29.7 -1.1
CMARA Lajas Hojancha     1.81 124   S       Sn       10 20 36.6 -2.6
BOAB  BOACO BROADBAN1.88       42   P       Pn       10 20 16.5 -0.2
ACON  Acoyapa            1.97  62   P       Pn       10 20 17.8 -0.1
CSGN  Cosiguina Volc     2.02 343   P       Pn       10 20 19.4 +0.7
CSGN                                S       Sn       10 20 42.0 -2.3
CHOHN Orocuina           2.44 355   S       Sn       10 20 54.0 -0.7
CHOHN Orocuina           2.44 355   P       Pn       10 20 25.3 +0.9
LCND  La Caada           2.44 338   P       Pn       10 20 16.7 -7.7
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GII ***02*** *10:36:12.3±0.0,30°.047N±0°.001×34°.498E±0°.001,h12*^{km}*,*
Mws2.2/4,confirmed
JSO ***02*** *10:36:14.7±0.0,30°N±3°×3°5E±°,h14*^{km}*±2*^{km}*,M2.5/16,*
Md3.1/14,Mjma2.8/14,ML2.3/16,MLv2.5/16,MLv2.5/16
ISC 02 10:36:10.8±1.9**,30°.04N**±0°.03×**34°.43E**±0°.08**,h12**^{km}±11^{km}**,**
n43,σ**0.**^{s}**44**/50**,Dead Sea region**

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Code  Station Name       Δ°   AZ°    Phase ID           Time     Res
                                    Op      ISC       h  m  s    ISC
KRMI  Paran Flat         0.27  73   P       Pb       10 36 17.8 +0.2
KRMI  Paran Flat         0.27  73   P       Pb       10 36 17.5 -0.1
KRMI  Paran Flat         0.27  73   S       Sb       10 36 21.9 -0.4
MBRI  Mt Berech          0.49 120   P       Pb       10 36 21.4  0.0
MBRI  Mt Berech          0.49 120   P       Pb       10 36 21.5 +0.2
MBRI  Mt Berech          0.49 120   S       Sb       10 36 28.3 -0.3
HRFI  Mount Harif        0.53  90   P       Pg       10 36 20.5 -0.6
HRFI  Mount Harif        0.53  90   P       Pb       10 36 21.9 -0.1
HRFI  Mount Harif        0.53  90   S       Sg       10 36 28.9 +0.8
SAMR  Samar              0.55 111   P       Pb       10 36 22.3 -0.1
SAMR                                S       Sg       10 36 29.2 +0.3
ELFZ  Elifaz             0.56 115   P       Pb       10 36 22.5 -0.1
ELFZ                                S       Sb       10 36 30.1 -0.5
YTVT  Yotvata            0.57 105   P       Pg       10 36 20.9 -1.0
YTVT                                S       Sg       10 36 30.0 +0.7
BEOR  Beer Ora           0.58 124   P       Pb       10 36 23.2 +0.2
BEOR                                S       Sb       10 36 31.1 -0.1
EIL   Elat               0.58 129   P       Pb       10 36 23.0  0.0
EIL   Elat               0.58 129   P       Pb       10 36 23.0  0.0
EIL   Elat               0.58 129   S       Sb       10 36 31.2 -0.1
PRNI  Paran              0.59  58   P       Pb       10 36 22.9 -0.2
PRNI  Paran              0.59  58   P       Pb       10 36 23.0 -0.1
PRNI  Paran              0.59  58   S       Sb       10 36 31.2 -0.3
AQBJ  Aqaba              0.62 120   P       Pb       10 36 24.1 +0.5
ZUKM  Zukim              0.78  55   P       Pb       10 36 26.2 -0.2
ZUKM                                S       Sg       10 36 36.3 +0.1
ZFRI  Zfri               0.83  51   P       Pb       10 36 27.1  0.0
ZFRI  Zfri               0.83  51   S       Sb       10 36 38.3  0.0
KZIT  Kziot              0.87 358   P       Pn       10 36 28.9  0.0
KZIT  Kziot              0.87 358   S       Sn       10 36 40.7 -0.7
MSPR  Moshav SAPIR       0.87  49   P       Pg       10 36 27.7  0.0
EYHV  Ein Yahav          0.94  48   P       Pg       10 36 28.8  0.0
EYHV                                S       Sg       10 36 41.1 +0.1
IDAN  Idan               1.08  42   P       Pb       10 36 31.2 -0.2
IDAN                                S       Sb       10 36 45.9 +0.4
HSNJ  Maan               1.11  78   P       Pb       10 36 31.8 -0.3
ARADI Arad               1.39  29   P       Pg       10 36 37.1 -0.3
YTIR  Yattir             1.45  24   P       Pb       10 36 37.9 +0.1
YTIR  Yattir             1.45  24   P       Pb       10 36 37.8 +0.1
YTIR  Yattir             1.45  24   S       Sb       10 36 56.6 +0.3
MDBI  Mazsada            1.50  32   P       Pn       10 36 37.7 +0.1
MSBI  Mazada             1.50  32   P       Pn       10 36 38.1 +0.5
LISJ  El Lisan           1.50  37   P       Pb       10 36 38.4 -0.2
AMAZ  Amatzia            1.55  16   P       Pg       10 36 40.3 -0.2
GHAJ  Ghor Haditha       1.60  38   P       Pb       10 36 39.7 -0.6
GHAJ  Ghor Haditha       1.60  38   P       Pb       10 36 39.7 -0.6
DSI   Dead Sea           1.73  28   P       Pn       10 36 41.1 +0.3
DSI   Dead Sea           1.73  28   P       Pn       10 36 41.3 +0.5
SALP  Salfit             2.13  18   P       Pb       10 36 48.7 -0.6
MMLI  Mount Malkishu     2.54  19   P       Pn       10 36 53.5 +1.6
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NEIC ***02*** *10:36:29.7,21°.21S×173°.91W,h10*^{km}
ISC-PP ***02*** *10:36:29,21°.21S×173°.91W,h20*^{km}*,Mwppsm6.3, Moment Tensor Solution. s24 Moment tensor: Scale 10*^{18}*Nm;* M_{rr}*0.17±.18;* $M_{\theta\theta}$*0.21±.29;* $M_{\phi\phi}$*-0.43±.20;* $M_{r\theta}$*0.38±.23;* $M_{\theta\phi}$*0.14±.23;* $M_{\phi r}$*-0.45±.16; Fault plane solution:* M_0*3.76000×10*^{18} *NP1:*ϕ_s*164.90000°,δ51.00000°, λ13.00000°. NP2:*ϕ_s*66.70000°,δ79.90000°,λ140.30000°.*
NEIC ***02*** *10:36:29.7,21°.31S×173°.69W,h18*^{km}*,Moment Tensor Solution. Duration: 5.*^{s}*4 Moment tensor: Scale 10*^{18}*Nm;* M_{rr}*0.95;* $M_{\theta\theta}$*-0.25;* $M_{\phi\phi}$*-0.69;* $M_{r\theta}$*0.80;* $M_{\theta\phi}$*-0.28;* $M_{\phi r}$*0.66; Fault plane solution:* M_0*1.37000×10*^{18} *NP1:* ϕ_s*196.34000°,δ22.31000°,λ64.61000°. NP2:*ϕ_s*43.51000°, δ69.94000°,λ99.98000°. Principal axes: T 1.4498, Plg64.0000°, Azm330.0000°; N -0.1879, Plg9.0000°, Azm220.0000°; P -1.2619, Plg24.0000°, Azm126.0000°;*
NEIC ***02*** *10:36:29.7±1.4,21°.21S±0°.08×173°.91W±0°.09,h10*^{km}*±1*^{km}*, mb5.9/91,Ms_20 6.2/1136,Mwb5.8/109,Mww6.0/41 Error ellipse: s-maj=15.9km s-min=11.5km az=126.0,Moment Tensor Solution. Moment tensor: Scale 10*^{17}*Nm;* M_{rr}*5.61;* $M_{\theta\theta}$*0.06;* $M_{\phi\phi}$*-5.67;* $M_{r\theta}$*2.58;* $M_{\theta\phi}$*-2.90;* $M_{\phi r}$*2.87; Fault plane solution:* M_0*7.42000×10*^{17} *NP1:*ϕ_s*34.36000°, δ61.24000°,λ103.04000°. NP2:*ϕ_s*188.66000°,δ31.35000°, λ67.66000°. Principal axes: T 6.8662, Plg71.0000°, Azm333.0000°; N 1.0113, Plg11.0000°, Azm208.0000°; P -7.8775, Plg15.0000°, Azm115.0000°;*
NEIC ***02*** *10:36:29.7,21°.21S×173°.91W,h18*^{km}
BJI ***02*** *10:36:30.2,21°.21S×173°.84W,h14*^{km}*,mB6.3/78, mb5.7/71,Ms6.0/97,Ms7 5.8/94*
IDC ***02*** *10:36:30.1±0.3,21°.38S×174°.46W,h0*^{km}*,mb5.4/34, mbtmp5.4/36,ML5.6/2,MS5.8/56,Error ellipse: s-maj=14.4km s-min=11.0km az=100.0*
MOS ***02*** *10:36:32.5±1.1,21°.38S×174°.52W,h23*^{km}*,mb5.9/45, MS6.1/35,Error ellipse: s-maj=9.4km s-min=8.0km az=96.9*
GCMT ***02*** *10:36:37.7±0.1,21°.51S×173°.72W,h12*^{km}*,MW6.0/177, Moment Tensor Solution. s152,c332; s177,c651; Duration: 2.*^{s}*4 Moment tensor: Scale 10*^{18}*Nm;* M_{rr}*0.92±.00;* $M_{\theta\theta}$*-0.20±.00;* $M_{\phi\phi}$*-0.71±.00;* $M_{r\theta}$*0.42±.01;* $M_{\theta\phi}$*-0.42±.00;* $M_{\phi r}$*0.66±.01; Best double couple:* M_0*1.21700×10*^{18} *NP1:*ϕ_s*206.00000°,δ25.00000°, λ85.00000°. NP2:*ϕ_s*31.00000°,δ65.00000°,λ92.00000°. Principal axes: T 1.2000, Plg70.0000°, Azm306.0000°; N 0.0330, Plg2.0000°, Azm211.0000°; P -1.2340, Plg20.0000°, Azm120.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
NOU ***02*** *10:36:39.9,21°.56S×174°.30W,h66*^{km}*,ML6.0/125,Tonga Islands*
ISC 02 10:36:33.6±0.3**,21°.45S**±0°.04×**174°.22W**±0°.04**,h21**^{km}±3^{km}**,**

2d 10h

h22^{km}:pP-P,n1873,σ1^{s}92/1694,**mb5.8**/182,**MS6.2**/655,
149C-57D,Tonga Islands

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Code   Station Name        Δ°   AZ°    Phase ID            Time      Res
                                      Op        ISC        h  m  s   ISC
NIUE   Niue               4.67  60              Pn         10 37 33.1  -10
NIUE   Niue               4.67  60    P         Pn         10 37 32.8  -10
NIUE   Niue               4.67  60   ⇑P         Pn         10 37 32.5  -10
AFI    Afiamalu           7.86  18              Pn         10 38 18.4 -8.4
AFI    Afiamalu           7.86  18    P         Pn         10 38 21.3 -5.4
AFI                                   pmax      pmax
       comp=Z,397nm,1.0s
AFI    Afiamalu           7.86  18   ⇑P         Pn         10 38 18.9 -7.9
FUTU   Fugatoga           8.02 332              Pn         10 38 27.4 -1.5
MSVF   Nonsavu            8.18 296              Pn         10 38 35.1 +4.0
MSVF   Nonsavu            8.18 296    P         Pn         10 38 35.1 +4.0
MSVF   Nonsavu            8.18 296   ⇓P         Pn         10 38 35.5 +4.4
RIZ    Raoul Island       8.45 203    P         Pn         10 38 32.2 -2.6
RIZ                                   S         Sn         10 40 07.5 -2.1
RAO    Raoul Island       8.46 203              Pn         10 38 36.0 +1.2
RAO    Raoul Island       8.46 203    Pn        Pn         10 38 33.0 -1.8
       comp=Z,316nm,0.3s,baz=88,slow=9.6,SNR=7.5
RAO                                   Sn        Sn         10 40 08.1 -1.5
       comp=Z,240nm,0.3s,baz=79,slow=23,SNR=5.1
RAO                                   LR        LR         10 41 30.5
       comp=Z,22µm,21.9s,baz=46,slow=36
       comp=Z,599nm,0.3s
RAO    Raoul Island       8.46 203    P         Pn         10 38 36.0 +1.2
RAO    Raoul Island       8.46 203   ⇑P         Pn         10 38 36.0 +1.2
GLKZ   Green Lake         8.46 203    P         Pn         10 38 33.7 -1.3
GLKZ                                  S         Sn         10 40 07.1 -2.7
RAR    Rarotonga         13.46  92    Pn        Pn         10 39 33.4  -10
RAR    Rarotonga         13.46  92    Pn        Pn         10 39 33.1  -10
       comp=Z,34nm,0.3s,baz=250,slow=6.6,SNR=70
RAR                                   Sn        Sn         10 41 48.8  -24
       comp=Z,17nm,0.3s,baz=65,slow=19,SNR=1.4
RAR    Rarotonga         13.46  92   ⇓P         Pn         10 39 31.9  -12
OUZ    Omahuta           17.39 215    P         P          10 40 37.5 +1.4
OUZ    Omahuta           17.39 215   ⇓P         P          10 40 40.3 +4.2
ONTNC  Ouen Toro         17.96 264    P         Pn         10 40 43.0 +0.9
ONTNC  Ouen Toro         17.96 264   ⇑P         P          10 40 44.9 +2.3
DZM    Mont Dzumac       17.98 264              Pn         10 40 43.3 +0.9
DZM    Mont Dzumac       17.98 264    P         Pn         10 40 43.4 +1.0
       comp=Z,143nm,0.9s,baz=87,slow=17,SNR=22
DZM                                   LR        LR         10 45 43.3
       comp=Z,17µm,18.5s,baz=106,slow=31
DZM    Mont Dzumac       17.98 264   ⇑P         P          10 40 44.8 +1.9
URZ    Urewera           18.34 202    P         P          10 40 45.8 -0.8
       comp=Z,4.9nm,0.3s,baz=79,slow=15,SNR=26
URZ                                   S         Sn         10 44 00.9  -10
       comp=Z,20nm,0.6s,baz=227,slow=12,SNR=6.1
       comp=Z,46nm,0.7s
TOZ    Tahuroa Road      18.50 206              P          10 40 48.8 +0.5
BKZ    Black Stump Fm    19.37 202    P         P          10 40 58.5 +0.6
KOUNC  Koumac, New Ca    20.09 269   ⇑P         Pn         10 41 09.2 +1.4
WPHZ   Waipukurau        20.19 201    P         P          10 41 06.7 -0.2
DVHZ   Dannevirke        20.49 201    P         Pn         10 41 14.6 +2.2
MRZ    Mangatainoka R    21.02 202              P          10 41 15.2 -0.6
SNZO   South Karori      21.90 203    P         P          10 41 25.0 -0.3
SNZO   South Karori      21.90 203    P         P          10 41 27.8 +2.6
SNZO   South Karori      21.90 203   ⇑P         P          10 41 29.9 +4.6
PLWZ   Palliser          21.94 202    P         P          10 41 25.9 +0.2
NNZ    Nelson            22.32 205    P         P          10 41 27.2 -2.6
NNZ                                   S         S          10 45 24.9 -9.3
QRZ    Quartz Range      22.35 207    P         P          10 41 29.7 -0.4
MRNZ   Matariki Terra    22.73 206    P         P          10 41 34.3 +0.1
MRNZ   Matariki Terra    22.73 206    P         P          10 41 32.2 -2.0
THZ    Tophouse          22.98 205    P         P          10 41 35.5 -1.3
KHZ    Kahutara          23.29 203    P         P          10 41 39.3 -0.6
KHZ    Kahutara          23.29 203   ⇓P         P          10 41 41.6 +1.8
DSZ    Denniston Nort    23.41 207    P         P          10 41 43.4 +2.2
PPT    Papeete           23.54  85    P         P          10 41 39.8 -2.8
       comp=Z,296nm,1.1s,baz=256,slow=3.7,SNR=13
PPT                                   LR        LR         10 49 22.6
       comp=Z,43µm,18.7s,baz=258,slow=32
PPTF   Pamatai, Papee    23.54  85    P         P          10 41 36.8 -5.8
PPTF                                  IAmb      IAmb       10 41 59.9
       comp=Z,583nm,1.1s
PPTF                                  IAMs_20   IAMs_20    10 49 10.8
       comp=Z,61µm,19.0s
PPTF   Pamatai, Papee    23.54  85   ⇑P         P          10 41 41.0 -1.7
GVZ    Greta Valley S    23.95 204    P         P          10 41 46.0 -0.3
LTZ    Lake Taylor       24.09 205    P         P          10 41 45.7 -2.0
AMCZ   Amberley          24.28 204    P         P          10 41 50.9 +1.6
OXZ    Oxford            24.64 205    P         P          10 41 52.2 -0.5
RPZ    Rata Peaks        25.35 206    P         P          10 41 58.4 -0.6
       comp=Z,76nm,1.0s,baz=347,slow=2.1,SNR=12
RPZ                                   LR        LR         10 52 50.2
       comp=Z,28µm,18.2s,baz=28,slow=39
       comp=Z,76nm,1.0s
JCZ    Jackson Bay       26.60 208    P         P          10 42 12.0 +1.5
ODZ    Otahua Downs      26.63 204   ⇓P         P          10 42 13.2 +2.7
ALEG   Aligegeo Malai    27.26 294    P         P          10 42 19.2 +2.6
HNR    Honiara           27.57 292    LR        LR         10 52 55.9
       comp=Z,15µm,18.5s,baz=128,slow=36
SAVO   Savo Central      27.82 292    P         P          10 42 24.6 +3.0
TATA   Tatamba Isabel    28.20 293    P         P          10 42 27.4 +2.4
XMAS   Kiritimati        28.54  37    P         P          10 42 29.4 +1.4
ARMA   Armidale          31.89 247    P         P          10 42 56.3 -1.3
ARMA                                  IAmb      IAmb       10 43 02.4
       comp=Z,101nm,1.1s
ARMA   Armidale          31.89 247    P         P          10 42 55.0 -2.6
       comp=Z,0.0nmcomp=Z,106nm,1.0s
ARMA   Armidale          31.89 247    P         P          10 42 56.3 -1.3
ARMA   Armidale          31.89 247   ⇓P         P          10 42 56.5 -1.2
EIDS   Eidsvold          32.03 256    P         P          10 42 58.6 -0.2
EIDS                                  IAmb      IAmb       10 43 03.6
       comp=Z,178nm,1.6s
EIDS   Eidsvold          32.03 256    P         P          10 42 59.0 +0.2
       comp=Z,0.0nmcomp=Z,73nm,2.7s
EIDS   Eidsvold          32.03 256    P         P          10 42 59.6 +0.8
EIDS   Eidsvold          32.03 256   ⇑P         P          10 42 57.4 -1.4
NTLH   Newcastle Hard    32.26 242    P         P          10 43 02.8 +2.1
MGCD   Mangrove Creek    32.81 242    P         P          10 43 04.2 -1.4
       comp=Z,62nm,1.1s
SYDH   Sydney Hard Ro    33.23 241    P         P          10 43 11.5 +2.3
RMQ    Roma              34.12 254    P         P          10 43 21.1 +4.0
CNB    Canberra Magne    34.69 239    P         P          10 43 21.6 -0.4
       comp=Z,0.0nmcomp=Z,43nm,1.0s
CNB    Canberra Magne    34.69 239    P         P          10 43 23.4 +1.4
CAN    Canberra          34.98 239    P         P          10 43 23.9 -0.6
CAN    Canberra          34.98 239    P         P          10 43 23.7 -0.7
       comp=Z,0.0nmcomp=Z,49nm,1.4s
CAN    Canberra          34.98 239    P         P          10 43 26.8 +2.3
CAN    Canberra          34.98 239    P         P          10 43 23.9 -0.6
CAN                                   pmax      pmax
       comp=Z,53nm,1.1s
CAN                                   MLR       MLR
       comp=Z,25µm,19.0s
CAN    Canberra          34.98 239   ⇓P         P          10 43 26.5 +2.0
TAOE   Nuku Hiva Isla    35.09  74    IAMs_20   IAMs_20    10 55 52.9
       comp=Z,30µm,19.0s
MILA   Mila              35.29 236    P         P          10 43 29.6 +2.4
TV1H   Townsville Har    36.56 266    P         P          10 43 40.5 +2.4
CTAO   Charters Tower    36.92 265    P         P          10 43 40.3 -0.9
CTAO   Charters Tower    36.92 265    P         P          10 43 40.4 -0.8
CTAO   Charters Tower    36.92 265    P         P          10 43 40.3 -0.9
CTAO                                  pmax      pmax
       comp=Z,131nm,1.5s
CTAO   Charters Tower    36.92 265   ⇓P         P          10 43 40.0 -1.3
CMSA   Cobar Meteorol    37.08 246    P         P          10 43 40.1 -2.4
       comp=Z,0.0nmcomp=Z,191nm,1.1s
CMSA   Cobar Meteorol    37.08 246    P         P          10 43 40.6 -1.9
CORO   Coronation Par    38.12 230    P         P          10 43 52.9 +1.9
QLP    Quilpie           38.17 254    P         P          10 43 51.3 -0.5
QLP    Quilpie           38.17 254   ⇑P         P          10 43 49.4 -2.4
TOO    Toolangi          38.25 236    P         P          10 43 51.8 -0.5
TOO    Toolangi          38.25 236    P         P          10 43 52.4 +0.1
       comp=Z,0.0nmcomp=Z,15nm,1.1s
TOO    Toolangi          38.25 236    P         P          10 43 51.8 -0.5
TOO                                   pmax      pmax
       comp=Z,45nm,1.5s
TOO    Toolangi          38.25 236   ⇓P         P          10 43 52.8 +0.5
MOO    Moorlands         38.42 228    P         P          10 43 53.5 -0.2
       comp=Z,251nm,1.2s
MOO    Moorlands         38.42 228    P         P          10 43 55.2 +1.5
TAU    Tasmania Unive    38.50 227    P         P          10 43 53.6 -0.7
TAU                                   IAmb      IAmb       10 44 00.9
       comp=Z,556nm,1.8s
TAU    Tasmania Unive    38.50 227    P         P          10 43 54.7 +0.4
TAU    Tasmania Unive    38.50 227    P         P          10 43 53.6 -0.7
TAU                                   pmax      pmax
       comp=Z,556nm,1.8s
TAU    Tasmania Unive    38.50 227   ⇑P         P          10 43 56.5 +2.2
PMG    Port Moresby      39.00 282    P         P          10 43 58.6 -0.2
PMG    Port Moresby      39.00 282    P         P          10 43 54.1 -4.7
       comp=Z,133nm,1.0s,baz=123,slow=8.7,SNR=8.5
PMG                                   LR        LR         10 59 04.6
       comp=Z,14µm,18.1s,baz=164,slow=35
PMG    Port Moresby      39.00 282    P         P          10 44 00.6 +1.8
PMG    Port Moresby      39.00 282    P         P          10 44 00.9 +2.1
PMG    Port Moresby      39.00 282    P         P          10 43 58.6 -0.2
PMG                                   pmax      pmax
       comp=Z,125nm,1.0s
PMG                                   MLR       MLR
       comp=Z,20µm,18.0s
PMG    Port Moresby      39.00 282   ⇑P         P          10 43 59.6 +0.8
MTSU   Mount Surprise    39.08 267    P         P          10 43 57.6 -1.9
       comp=Z,45nm,0.8s
MTSU   Mount Surprise    39.08 267    P         P          10 43 58.5 -1.0
GEXS   Deakin Univers    39.31 235    P         P          10 44 02.6 +1.4
STKA   Stephens Creek    40.59 246    P         P          10 44 08.7 -3.2
STKA                                  IAmb      IAmb       10 44 16.0
       comp=Z,329nm,0.9s
STKA   Stephens Creek    40.59 246    P         P          10 44 08.7 -3.2
STKA   Stephens Creek    40.59 246    P         P          10 44 10.0 -1.9
       comp=Z,56nm,1.0s,baz=90,slow=8.7,SNR=20
STKA                                  LR        LR         11 00 14.9
       comp=Z,15µm,19.7s,baz=86,slow=35
       comp=Z,56nm,1.0s
STKA   Stephens Creek    40.59 246    P         P          10 44 09.6 -2.3
STKA   Stephens Creek    40.59 246  i P         P          10 44 09.3 -2.6
ARPS   Mount Arapiles    40.95 238    P         P          10 44 13.0 -1.8
       comp=Z,96nm,1.1s
ARPS   Mount Arapiles    40.95 238    P         P          10 44 13.3 -1.5
COEN   Coen              41.17 273    P         P          10 44 16.0 -0.8
COEN                                  IAmb      IAmb       10 44 21.8
       comp=Z,303nm,1.8s
COEN   Coen              41.17 273    P         P          10 44 15.6 -1.2
COEN   Coen              41.17 273    P         P          10 44 16.6 -0.2
COEN   Coen              41.17 273   ⇓P         P          10 44 16.2 -0.6
MANU   Manus Island      42.07 292    P         P          10 44 22.7 -1.5
HTT    Hallett           42.94 244    P         P          10 44 28.3 -2.9
       comp=Z,48nm,1.1s
HTT    Hallett           42.94 244    P         P          10 44 29.7 -1.5
HTT    Hallett           42.94 244    P         P          10 44 29.4 -1.8
HTT    Hallett           42.94 244   ⇑P         P          10 44 28.8 -2.4
QIS    Mount Isa         43.00 262    P         P          10 44 29.1 -2.7
       comp=Z,0.0nmcomp=Z,48nm,2.5s
QIS    Mount Isa         43.00 262    P         P          10 44 30.5 -1.3
H11S2  WAKE ISLAND Hy    43.87 333    T         T          11 32 25.4
       baz=148,slow=76,SNR=17
H11S3  WAKE ISLAND Hy    43.89 333    T         T          11 32 26.4
       baz=148,slow=76,SNR=11
H11S1  WAKE ISLAND Hy    43.89 333    T         T          11 32 24.3
       baz=148,slow=76,SNR=8.4
WHYH   Whyalla           44.05 244    P         P          10 44 39.2 -0.8
POHA   Pohakuloa         44.85  25    P         P          10 44 49.0 +2.3
H11N3  WAKE ISLAND Hy    44.89 334    P         P          10 44 45.9 -0.7
H11N1  WAKE ISLAND Hy    44.90 334    P         P          10 44 45.9 -0.7
H11N2  WAKE ISLAND Hy    44.91 334    P         P          10 44 46.0 -0.7
BBOO   Buckleboo         45.31 245    P         P          10 44 48.2 -1.9
BBOO                                  IAmb      IAmb       10 44 53.5
       comp=Z,118nm,1.1s
BBOO                                  IAMs_20   IAMs_20    11 02 29.3
       comp=Z,24µm,19.0s
BBOO   Buckleboo         45.31 245    P         P          10 44 46.0 -4.2
BBOO   Buckleboo         45.31 245    P         P          10 44 48.3 -1.9
KIP    Kipapa            45.46  21    P         P          10 44 53.4 +2.2
KIP    Kipapa            45.46  21    P         P          10 44 53.2 +2.0
KIP    Kipapa            45.46  21  i P         P          10 44 46.2 -5.0
KIP                                   pmax      pmax
       comp=Z,211nm,3.5s
KIP                                   MLR       MLR
       comp=Z,3µm,17.0s
JAY    Jayapura          47.70 287    P         P          10 45 10.3 +1.2
       comp=Z,6µmcomp=Z,202nm,1.4s
AS01   Alice Springs     47.70 257    P         P          10 45 07.2 -1.9
AS31   Alice Springs     47.75 257    P         P          10 45 05.5 -4.0
AS31   Alice Springs     47.75 257    P         P          10 45 06.0 -3.4
ASAR   Alice Springs     47.75 257    P         P          10 45 05.7 -3.8
ASAR   Alice Springs     47.75 257    P         P          10 45 07.1 -2.3
       comp=Z,60nm,0.8s,baz=91,slow=7.5,SNR=81
ASAR                                  PcP       PcP        10 46 37.8 -0.7
       comp=Z,7.6nm,0.7s,baz=93,slow=3.7,SNR=4.2
ASAR                                  S         S          10 52 02.2 -2.7
       comp=Z,4.2nm,1.1s,baz=91,slow=14,SNR=6.7
ASAR                                  LR        LR         11 05 51.8
       comp=Z,12µm,18.6s,baz=98,slow=37
       comp=Z,60nm,0.8s
WRAB   Tennant Creek     47.96 262    P         P          10 45 08.4 -2.7
WRAB                                  IAmb      IAmb       10 45 14.5
       comp=Z,137nm,1.1s
WRAB   Tennant Creek     47.96 262  i P         P          10 45 07.7 -3.4
WRAB                                  pmax      pmax
       comp=Z,156nm,1.1s
WRAB                                  MLR       MLR
       comp=Z,19µm,16.0s
WRA    Warramunga Arr    47.97 262    P         P          10 45 08.8 -2.4
       comp=Z,91nm,1.1s,baz=99,slow=7.1,SNR=39
WRA                                   PcP       PcP        10 46 38.8 -0.5
       comp=Z,16nm,0.8s,baz=97,slow=3.5,SNR=4.6
WRA                                   S         S          10 52 06.4 -1.8
       comp=Z,3.0nm,1.2s,baz=98,slow=15,SNR=2.4
       comp=Z,91nm,1.1s
GENI   Genyem            48.14 287    P         P          10 45 13.8 +1.3
GENI   Genyem            48.14 287    P         P          10 45 14.0 +1.5
       comp=Z,7µmcomp=Z,9µmcomp=Z,295nm,2.7s
MIDW   Midway            49.47 356    P         P          10 45 25.1 +2.8
SMPI   Sarmi             49.71 286    P         P          10 45 28.4 +3.8
       comp=Z,7µmcomp=Z,4µmcomp=Z,136nm,2.2s
KDU    Kakadu            51.50 271    P         P          10 45 38.4 +0.3
       comp=Z,0.0nmcomp=Z,100nm,1.7s
KDU    Kakadu            51.50 271    P         P          10 45 39.7 +1.6
KDU    Kakadu            51.50 271   ⇓P         P          10 45 37.9 -0.2
SRPI   Serui, Papua      51.98 285    P         P          10 45 46.8 +5.1
       comp=Z,4µmcomp=Z,4µmcomp=Z,78nm,0.6s
FORT   Forrest           52.17 247    P         P          10 45 40.2 -2.7
FORT                                  IAmb      IAmb       10 45 47.0
       comp=Z,144nm,0.8s
FORT   Forrest           52.17 247    P         P          10 45 39.9 -3.0
FORT   Forrest           52.17 247    P         P          10 45 41.3 -1.6
FORT   Forrest           52.17 247   ⇑P         P          10 45 40.2 -2.7
BAKI   Biak              52.40 286    P         P          10 45 47.7 +2.9
MTN    Manton Dam        52.70 270   ⇓P         P          10 45 46.5 -0.5
GUMO   Guam              53.16 307    LR        LR         11 08 26.3
       comp=Z,3µm,18.0s,baz=131,slow=36
RKPI   Ransiki, Papua    53.99 284    P         P          10 45 59.6 +3.1
       comp=Z,5µmcomp=Z,103nm,1.1s
KNRA   Kununurra         54.12 266    P         P          10 45 54.8 -2.6
KNRA   Kununurra         54.12 266    P         P          10 45 53.8 -3.6
FAKI   Fak Fak           55.16 282    P         P          10 46 02.6 -2.4
FAKI                                  IAmb      IAmb       10 46 09.2
       comp=Z,314nm,1.5s
FAKI   Fak Fak           55.16 282    P         P          10 46 07.5 +2.5
FAKI   Fak Fak           55.16 282    P         P          10 46 05.5 +0.5
       comp=Z,6µmcomp=Z,5µmcomp=Z,139nm,1.6s
FAKI   Fak Fak           55.16 282   ⇑P         P          10 46 02.8 -2.2
FITZ   Fitzroy Crossi    56.40 262    P         P          10 46 12.1 -1.7
FITZ   Fitzroy Crossi    56.40 262    P         P          10 46 12.2 -1.7
       comp=Z,29nm,1.0s,baz=77,slow=3.8,SNR=17
FITZ                                  LR        LR         11 09 54.0
       comp=Z,11µm,18.6s,baz=94,slow=36
       comp=Z,29nm,1.0s
SWI    Sorong            56.91 284    P         P          10 46 15.2 -2.3
       comp=Z,6µmcomp=Z,6µmcomp=Z,322nm,1.2s
SBA    Scott Base        57.19 185    P         P          10 46 18.8 +0.3
SBA                                   IAmb      IAmb       10 46 26.5
       comp=Z,198nm,1.2s
SBA    Scott Base        57.19 185    P         P          10 46 18.8 +0.3
SBA                                   pmax      pmax
       comp=Z,198nm,1.3s
VNDA   Vanda             57.31 186    P         P          10 46 19.3 -0.1
VNDA   Vanda             57.31 186    P         P          10 46 19.9 +0.6
       comp=Z,25nm,1.0s,baz=6.3,slow=7.2,SNR=47
VNDA                                  LR        LR         11 06 26.3
       comp=Z,6µm,20.8s,baz=16,slow=31
       comp=Z,25nm,1.0s
VNDA   Vanda             57.31 186    P         P          10 46 20.0 +0.6
KMBL   Kambalda          57.39 246    P         P          10 46 18.6 -2.1
       comp=Z,0.0nmcomp=Z,77nm,2.6s
KMBL   Kambalda          57.39 246    P         P          10 46 19.4 -1.4
AAI    Ambon             58.57 279    P         P          10 46 30.0 +0.8
       comp=Z,5µmcomp=Z,179nm,1.3s
VA02   Isla de Pascua    58.75 109    IAMs_20   IAMs_20    11 07 35.9
       comp=Z,23µm,19.0s
RPN    Rapa Nui          58.85 109    IAMs_20   IAMs_20    11 05 58.4
       comp=Z,21µm,19.0s
NLAI   Namlea            59.75 279    P         P          10 46 38.6 +1.2
       comp=Z,5µmcomp=Z,4µmcomp=Z,160nm,1.2s
SOEI   Soe               60.06 271    P         P          10 46 38.2 -1.5
SOEI   Soe               60.06 271    P         P          10 46 37.9 -1.8
SOEI   Soe               60.06 271    P         P          10 46 40.7 +1.0
SOEI   Soe               60.06 271    P         P          10 46 41.9 +2.2
       comp=Z,6µmcomp=Z,140nm,0.6s
SOEI   Soe               60.06 271   ⇑P         P          10 46 41.5 +1.9
KLBR   Kellerberrin      60.86 245    P         P          10 46 43.0 -1.7
       comp=Z,179nm,0.8s
KLBR   Kellerberrin      60.86 245    P         P          10 46 44.2 -0.6
PSA00  Pilbara Seismi    60.89 257    P         P          10 46 43.2 -1.9
PSA00                                 IAmb      IAmb       10 46 48.8
       comp=Z,114nm,1.1s
PSA00  Pilbara Seismi    60.89 257    P         P          10 46 41.8 -3.4
PSA00  Pilbara Seismi    60.89 257    P         P          10 46 44.0 -1.1
MEEK   Meekatharra       60.94 251    P         P          10 46 43.6 -1.9
       comp=Z,0.0nmcomp=Z,63nm,2.7s
MEEK   Meekatharra       60.94 251    P         P          10 46 46.1 +0.6
MBWA   Marble Bar        61.09 257    P         P          10 46 45.3 -1.2
MBWA                                  IAmb      IAmb       10 46 50.1
       comp=Z,73nm,0.8s
MBWA   Marble Bar        61.09 257    P         P          10 46 43.6 -2.9
       comp=Z,0.0nmcomp=Z,105nm,1.3s
MBWA   Marble Bar        61.09 257    P         P          10 46 44.9 -1.6
MBWA                                  P         P          10 46 44.9 -1.6
MBWA                                  S         S          10 55 03.0 -1.8
MBWA                                  S         S          10 55 03.0 -1.8
MBWA   Marble Bar        61.09 257    P         P          10 46 46.3 -0.2
MBWA   Marble Bar        61.09 257   ⇓P         P          10 46 44.9 -1.6
RKGY   Rocky Gully       61.09 241    P         P          10 46 42.3 -4.0
NWAO   Narrogin (SRO)    61.10 243    P         P          10 46 45.5 -0.9
NWAO   Narrogin (SRO)    61.10 243    IAMs_20   IAMs_20    11 12 29.3
       comp=Z,12µm,19.0s
NWAO   Narrogin (SRO)    61.10 243    P         P          10 46 45.0 -1.5
       comp=Z,217nm,2.4s
NWAO   Narrogin (SRO)    61.10 243    P         P          10 46 45.6 -0.8
       comp=Z,20nm,1.2s,baz=85,slow=4.5,SNR=7.8
NWAO                                  LR        LR         11 12 50.5
       comp=Z,11µm,18.5s,baz=82,slow=36
       comp=Z,20nm,1.2s
NWAO   Narrogin (SRO)    61.10 243    P         P          10 46 45.1 -1.3
NWAO                                  P         P          10 46 45.1 -1.3
NWAO                                  S         S          10 55 01.5 -3.1
NWAO                                  S         S          10 55 01.5 -3.1
NWAO   Narrogin (SRO)    61.10 243    P         P          10 46 46.4  0.0
NWAO   Narrogin (SRO)    61.10 243    P         P          10 46 46.5  0.0
TNTI   Ternate           61.12 283    P         P          10 46 44.3 -2.5
TNTI   Ternate           61.12 283    P         P          10 46 45.6 -1.1
TNTI   Ternate           61.12 283    P         P          10 46 45.9 -0.8
       comp=Z,4µmcomp=Z,4µmcomp=Z,162nm,1.9s
SANI   Sanana            61.23 280    P         P          10 46 44.7 -2.8
SANI   Sanana            61.23 280    P         P          10 46 46.6 -0.9
SANI   Sanana            61.23 280    P         P          10 46 47.2 -0.3
       comp=Z,6µmcomp=Z,4µmcomp=Z,150nm,1.2s
SANI   Sanana            61.23 280   ⇑P         P          10 46 44.9 -2.6
BLDU   Ballidu           61.90 246    P         P          10 46 49.2 -2.6
       comp=Z,119nm,1.9s
BLDU   Ballidu           61.90 246    P         P          10 46 51.3 -0.5
MUN    Mundaring         62.10 244    P         P          10 46 51.6 -1.6
       comp=Z,0.0nmcomp=Z,158nm,1.7s
MUN    Mundaring         62.10 244    P         P          10 46 53.6 +0.4
MTKN   Mount Kenneth     62.47 244    P         P          10 46 55.3 -0.3
MORW   Morawa            62.73 248    P         P          10 46 56.8 -0.6
MORW                                  IAMs_20   IAMs_20    11 13 36.7
       comp=Z,15µm,19.0s
MORW   Morawa            62.73 248    P         P          10 46 57.0 -0.4
       comp=Z,0.0nmcomp=Z,113nm,1.3s
MORW   Morawa            62.73 248    P         P          10 46 58.4 +0.9
MORW   Morawa            62.73 248   ⇑P         P          10 46 56.5 -1.0
EDFI   Ende, Flores      62.79 271    P         P          10 46 59.5 +1.4
       comp=Z,2µmcomp=Z,49nm,0.9s
H01W1  Cape Leeuwin H    63.36 241    P         P          10 47 07.3 +6.1
       baz=111,slow=9.1,SNR=4.0
H01W2  Cape Leeuwin H    63.37 241    P         P          10 47 03.2 +1.9
       baz=111,slow=9.1,SNR=3.9
H01W3  Cape Leeuwin H    63.38 241    P         P          10 47 04.9 +3.6
       baz=111,slow=9.1,SNR=2.9
SGSI   Sangihe           64.02 285    P         P          10 47 05.5 -0.6
       comp=Z,4µmcomp=Z,227nm,1.3s
JCJ    Chichijima        64.11 317    P         P          10 47 05.1 -1.3
       comp=Z,28nm,0.7s,baz=173,slow=4.1,SNR=4.2
JCJ                                   LR        LR         11 10 21.8
       comp=Z,3µm,21.6s,baz=120,slow=32
       comp=Z,28nm,0.7s
KMSI   Cibinong          64.12 282    P         P          10 47 10.7 +3.9
       comp=Z,5µmcomp=Z,268nm,1.3s
LUWI   Luwuk             64.58 279    P         P          10 47 08.2 -1.6
LUWI   Luwuk             64.58 279    P         P          10 47 06.7 -3.1
LUWI   Luwuk             64.58 279    P         P          10 47 09.6 -0.2
LUWI   Luwuk             64.58 279    P         P          10 47 10.0 +0.2
       comp=Z,4µmcomp=Z,199nm,1.2s
CASY   Casey             64.63 206    P         P          10 47 08.9 -0.3
CASY   Casey             64.63 206   ⇑P         P          10 47 10.4 +1.2
DAV    Davao City (W)    65.48 289    LR        LR         11 14 00.5
       comp=Z,2µm,19.6s,baz=127,slow=34
DAV    Davao City (W)    65.48 289    P         P          10 47 15.7 +0.1
DAV                                   P         P          10 47 15.7 +0.1
DAV    Davao City (W)    65.48 289    P         P          10 47 11.0 -4.7
APSI   Ampana            65.67 279    P         P          10 47 18.9 +2.1
       comp=Z,2µmcomp=Z,139nm,1.4s
GIRL   Giralia           65.70 254    IAMs_20   IAMs_20    11 15 40.0
       comp=Z,22µm,20.0s
GIRL   Giralia           65.70 254    P         P          10 47 17.1 +0.1
       comp=Z,307nm,1.8s
BNSI   Bone              65.78 275    P         P          10 47 22.1 +4.5
       comp=Z,5µmcomp=Z,2µmcomp=Z,55nm,1.4s
KAPI   Kappang           65.89 274    P         P          10 47 17.0 -1.3
       comp=Z,6.2nm,0.8s,baz=54,slow=11,SNR=3.6
KAPI                                  LR        LR         11 15 21.6
       comp=Z,3µm,21.1s,baz=122,slow=36
       comp=Z,6.2nm,0.8s
KAPI   Kappang           65.89 274    P         P          10 47 16.0 -2.3
KAPI                                  P         P          10 47 16.0 -2.3
KAPI                                  S         S          10 56 03.0 -1.7
KAPI                                  S         S          10 56 03.0 -1.7
KAPI   Kappang           65.89 274    P         P          10 47 17.0 -1.3
MRSI   Marisa            65.94 281    P         P          10 47 16.9 -1.7
       comp=Z,5µmcomp=Z,2µmcomp=Z,56nm,1.3s
SPSI   Sidrap Palu       66.25 275    P         P          10 47 24.3 +3.7
PLAI   Plampang          66.41 270    P         P          10 47 20.7 -0.9
PLAI   Plampang          66.41 270    P         P          10 47 23.7 +2.0
       comp=Z,5µmcomp=Z,3µmcomp=Z,104nm,1.1s
TTSI   Tana Toraja       66.54 276    P         P          10 47 27.2 +4.7
TOLI2  Tolitoli          67.26 281    P         P          10 47 24.9 -2.2
TOLI2                                 IAmb      IAmb       10 47 31.7
       comp=Z,178nm,1.5s
TOLI2  Tolitoli          67.26 281    P         P          10 47 26.1 -1.0
TWSI   Taliwang, Sumb    67.27 269    P         P          10 47 29.7 +2.6
       comp=Z,3µmcomp=Z,113nm,1.6s
PCI    Palu              67.33 278    P         P          10 47 29.8 +2.2
       comp=Z,6µmcomp=Z,186nm,1.3s
MPSI   Mapaga            67.76 280    P         P          10 47 29.8 -0.4
       comp=Z,5µmcomp=Z,2µmcomp=Z,68nm,1.2s
QSPA   South Pole Qui    68.62 180    IAMs_20   IAMs_20    11 18 52.9
       comp=Z,14µm,19.0s
QSPA   South Pole Qui    68.62 180    P         P          10 47 34.9  0.0
       comp=Z,73nm,1.0s,baz=339,slow=1.4,SNR=38
QSPA                                  LR        LR         11 13 19.3
       comp=Z,10µm,20.7s,baz=40,slow=32
       comp=Z,73nm,1.0s
JHJ2   Mitsune           69.77 320    P         P          10 47 39.6 -2.7
JHJ2   Mitsune           69.77 320    P         P          10 47 44.3 +2.0
JAGI   Jajag, Banyuwa    69.90 269    P         P          10 47 41.7 -1.9
JAGI                                  IAmb      IAmb       10 47 47.2
       comp=Z,109nm,1.1s
JAGI   Jajag, Banyuwa    69.90 269    P         P          10 47 44.9 +1.3
JAGI   Jajag, Banyuwa    69.90 269    P         P          10 47 47.2 +3.6
       comp=Z,5µmcomp=Z,3µmcomp=Z,106nm,1.5s
GMJI   Gumukmas          70.63 269    P         P          10 47 50.7 +2.7
       comp=Z,67nm,1.1s
JMZ    Minamidaito 2     70.77 309    IAMs_20   IAMs_20    11 11 21.2
       comp=Z,10µm,20.0s
MYLDM  Lahad Datu        70.99 284    P         P          10 47 48.6 -1.6
MYLDM  Lahad Datu        70.99 284    P         P          10 47 51.4 +1.2
MYLDM  Lahad Datu        70.99 284   ⇑P         P          10 47 51.0 +0.8
JSG    Sagara            71.83 320    P         P          10 47 52.1 -2.7
JSG    Sagara            71.83 320    P         P          10 47 56.3 +1.5
GRJI   Gresik            71.99 270    P         P          10 47 57.2 +0.9
JMM    Marumori          72.59 324    P         P          10 47 57.1 -2.2
JMM                                   IAmb      IAmb       10 48 04.7
       comp=Z,148nm,1.3s
JMM                                   IAMs_20   IAMs_20    11 16 44.6
       comp=Z,16µm,20.0s
JMM    Marumori          72.59 324    P         P          10 47 58.6 -0.7
PCJI   Pacitan           72.77 268    P         P          10 48 04.7 +3.8
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	comp=Z,6µmcomp=Z,278nm,1.1s						
JGF	Kuroka	72.96	320	P	P	10 47 58.8	-2.8
JGF				IAmb	IAmb	10 48 07.0	
	comp=Z,239nm,1.6s						
JGF	Kuroka	72.96	320	P	P	10 48 01.2	-0.4
JGF	Kuroka	72.96	320	⇑P	P	10 48 00.9	-0.7
KIWB	Kanaga Island	73.03	358	P	P	10 47 58.1	-3.5
ADK	Adak	73.05	358	P	P	10 47 57.6	-4.1
ADK	Adak	73.05	358	P	P	10 48 02.8	+1.1
ADK	Adak	73.05	358	P	P	10 47 57.6	-4.1
ADK				pmax	pmax		
	comp=Z,410nm,1.5s						
ADK	Adak	73.05	358	⇑P	P	10 48 00.9	-0.7
MJAR	Matsushiro Arr	73.11	322	P	P	10 48 01.2	-1.3
	comp=Z,43nm,0.9s,baz=157,slow=5.5,SNR=45						
MJAR				LR	LR	11 16 16.8	
	comp=Z,4µm,20.2s,baz=115,slow=33						
	comp=Z,43nm,0.9s						
MAJO	Matsushiro	73.11	322	P	P	10 47 59.8	-2.7
MAJO				IAmb	IAmb	10 48 07.8	
	comp=Z,224nm,1.5s						
MAJO	Matsushiro	73.11	322	P	P	10 48 01.6	-0.8
MAJO	Matsushiro	73.11	322	*i* P	P	10 48 00.7	-1.7
MAJO				pmax	pmax		
	comp=Z,145nm,1.4s						
MAJO	Matsushiro	73.11	322	⇑P	P	10 48 01.8	-0.7
MJB9	Matsu-Tunnel	73.12	322	P	P	10 47 59.8	-2.7
MJB9				IAmb	IAmb	10 48 08.7	
	comp=Z,210nm,1.5s						
WOJI	Wonogiri, Jawa	73.12	268	P	P	10 48 07.5	+4.5
	comp=Z,6µmcomp=Z,205nm,2.0s						
ATKA	Atka Island	73.34	0	P	P	10 48 00.1	-3.3
ATKA	Atka Island	73.34	0	P	P	10 48 02.6	-0.7
KKM	Kota Kinabalu	73.42	283	P	P	10 48 02.6	-2.3
KKM				IAmb	IAmb	10 48 10.2	
	comp=Z,260nm,1.7s						
KKM	Kota Kinabalu	73.42	283	P	P	10 48 06.2	+1.3
KKM	Kota Kinabalu	73.42	283	⇑P	P	10 48 03.0	-1.9
JOW	Kunigami	73.51	308	P	P	10 48 02.4	-2.6
	comp=Z,41nm,0.5s,baz=195,slow=20,SNR=5.2						
JOW				LR	LR	11 16 05.0	
	comp=Z,4µm,21.4s,baz=132,slow=32						
	comp=Z,41nm,0.5s						
JOW	Kunigami	73.51	308	P	P	10 48 05.8	+0.8
SMRI	Semarang	73.84	269	P	P	10 48 08.9	+1.6
SMRI	Semarang	73.84	269	P	P	10 48 09.6	+2.3
	comp=Z,42nm,0.9s						
JMN	Monobe	73.86	317	P	P	10 48 07.2	+0.3
JMN	Monobe	73.86	317	⇑P	P	10 48 07.1	+0.2
JSD	Sado	74.12	323	P	P	10 48 08.1	-0.2
JSD	Sado	74.12	323	⇓P	P	10 48 07.5	-0.9
ERM	Erimo	74.44	328	IAMs_20	IAMs_20	11 16 12.5	
	comp=Z,12µm,20.0s						
ERM	Erimo	74.44	328	P	P	10 48 12.6	+2.6
ERM	Erimo	74.44	328	*i* P	P	10 48 05.6	-4.4
ERM				pmax	pmax		
	comp=Z,183nm,3.0s						
ERM				MLR	MLR		
	comp=Z,7µm,19.0s						
JEM	Erimo	74.44	328	P	P	10 48 12.3	+2.3
SHEM	Shemya Is, Ala	74.57	353	P	P	10 48 09.3	-1.2
	comp=Z,244nm,1.1s,baz=58,slow=2.5,SNR=9.7						
SHEM				LR	LR	11 16 58.1	
	comp=Z,9µm,19.9s,baz=168,slow=33						
	comp=Z,244nm,1.1s						
SMY	Shemya	74.57	353	P	P	10 48 07.7	-2.8
SMY				IAmb	IAmb	10 48 15.0	
	comp=Z,222nm,1.1s						
SMY				IAMs_20	IAMs_20	11 17 16.5	
	comp=Z,12µm,20.0s						
SMY	Shemya	74.57	353	P	P	10 48 09.7	-0.9
SMY	Shemya	74.57	353	P	P	10 48 07.7	-2.8
SMY				pmax	pmax		
	comp=Z,222nm,1.1s						
SMY	Shemya	74.57	353	⇓P	P	10 48 09.6	-0.9
JTM	Tenmabayashi	74.57	326	P	P	10 48 08.0	-2.9
JTM	Tenmabayashi	74.57	326	P	P	10 48 13.0	+2.1
YUK	Yuzh-Kuril'sk	74.73	331	*e*P	P	10 48 12.1	+0.4
YUK				*e*		10 50 54.9	
YUK				*e*PPP	PPP	10 52 39.9	
YUK				*e*SS	SS	11 02 31.8	-3.3
YUK				pmax	pmax		
	comp=Z,412nm,3.2s						
YUK				pmax	pmax		
	comp=Z,189nm,1.2s						
KUR	Kuril'sk	74.81	333*c*	*i*P	P	10 48 14.0	+1.9
KUR				*i* S	S	10 57 53.0	+5.4
KUR				pmax	pmax		
	comp=Z,3µm,5.5s						
KUR				pmax	pmax		
	comp=Z,268nm,1.1s						
KUR				MLR	MLR		
	comp=N,5µm,17.0s						
KUR				MLR	MLR		
	comp=Z,8µm,17.0s						
UNV	Unalaska Valle	75.28	5	P	P	10 48 16.5	+1.9
UNV	Unalaska Valle	75.28	5	P	P	10 48 13.1	-1.5
	baz=187,SNR=7.0						
UNV				S	S	10 57 48.9	-3.5
	baz=187						
JNU	Nakatsue	75.42	315	P	P	10 48 13.9	-2.1
JNU				IAmb	IAmb	10 48 21.5	
	comp=Z,212nm,1.3s						
JNU	Nakatsue	75.42	315	P	P	10 48 15.8	-0.3
	comp=Z,57nm,0.9s,baz=75,slow=3.4,SNR=19						
JNU				LR	LR	11 16 54.7	
	comp=Z,2µm,21.2s,baz=116,slow=32						
	comp=Z,57nm,0.9s						
JNU	Nakatsue	75.42	315	P	P	10 48 16.1	+0.1
STKI	Sintang	75.43	276	P	P	10 48 18.7	+2.2
	comp=Z,5µmcomp=Z,69nm,0.6s						
CMJI	Cimerak	75.44	267	P	P	10 48 18.2	+1.6
	comp=Z,4µmcomp=Z,4µmcomp=Z,183nm,1.1s						
AKUT	Akutan	75.63	5	IAMs_20	IAMs_20	11 21 42.7	
	comp=Z,10µm,20.0s						
LVA	Lava Point	75.63	5	IAMs_20	IAMs_20	11 21 33.8	
	comp=Z,10µm,20.0s						
JCJI	Jatiwangi	76.06	268	P	P	10 48 24.4	+4.3
	comp=Z,177nm,1.2s						
ASAJ	Asahikawa	76.29	330	P	P	10 48 21.1	+0.4
	comp=Z,26nm,0.9s,baz=175,slow=7.0,SNR=13						
ASAJ				LR	LR	11 16 42.2	
	comp=Z,6µm,21.3s,baz=156,slow=32						
	comp=Z,26nm,0.9s						
BBJI	Bungbulang	76.30	267	P	P	10 48 23.3	+1.8
SAO	San Andreas Ge	76.36	41	IAMs_20	IAMs_20	11 18 31.5	
	comp=Z,13µm,18.0s						
SAO	San Andreas Ge	76.36	41	⇑P	P	10 48 23.0	+1.8
PMPB	Monarch Peak	76.40	42	IAMs_20	IAMs_20	11 16 05.8	
	comp=Z,12µm,19.0s						
SMAI	San Martin Ant	76.44	158	P	P	10 48 19.3	-2.0
SMAI				IAmb	IAmb	10 48 26.7	
	comp=Z,170nm,1.1s						
SMAI				IAMs_20	IAMs_20	11 23 15.9	
	comp=Z,8µm,18.0s						
SKR	Severo-Kuril’s	76.45	341	*e*P	P	10 48 22.0	+0.7
SKR				*e*		10 51 07.1	
SKR				*e*S	S	10 58 06.1	+0.7
SKR				pmax	pmax		
	comp=Z,2µm,5.8s						
BCW	Bitter Crk WRg	76.48	44	IAMs_20	IAMs_20	11 16 01.8	
	comp=Z,9µm,20.0s						
BBGB	Big Mountain B	76.49	42	IAMs_20	IAMs_20	11 16 38.0	
	comp=Z,13µm,19.0s						
LEM	Lembang	76.55	268	LR	LR	11 21 52.3	
	comp=Z,4µm,20.3s,baz=125,slow=36						
CBX	Cerro Bola	76.72	47	IAMs_20	IAMs_20	11 20 35.1	
	comp=Z,7µm,18.0s						
VTX	Valle De La Tr	76.79	48	IAMs_20	IAMs_20	11 15 10.9	
	comp=Z,9µm,20.0s						
PASC	Pasadena Art C	76.81	45	P	P	10 48 19.4	-4.5
PASC				IAMs_20	IAMs_20	11 20 02.4	
	comp=Z,8µm,18.0s						
TWGBT	Beinan	76.88	301	P	P	10 48 25.0	+0.5
TWG	Pinlang	76.88	301	P	P	10 48 22.3	-2.2
GDXM	Geysers	76.89	39	P	P	10 48 19.4	-4.9
GDXM				IAMs_20	IAMs_20	11 19 46.6	
	comp=Z,12µm,18.0s						
LPIG	La Paz	76.89	57	LR	LR	11 15 32.8	
	comp=Z,18µm,19.3s,baz=228,slow=30						
TKX	Tecate	76.91	47	IAMs_20	IAMs_20	11 28 08.0	
	comp=Z,12µm,21.0s						
SLBS	Sierra La Lagu	76.97	58	P	P	10 48 20.8	-4.3
SLBS				IAmb	IAmb	10 48 30.5	
	comp=Z,129nm,1.9s						
CNBA	Chernabura Isl	76.99	9	IAMs_20	IAMs_20	11 19 02.7	
	comp=Z,16µm,20.0s						
YULB	Yu-li	76.99	302	P	P	10 48 27.8	+2.7
CHNA	Chernabura Isl	77.00	9	P	P	10 48 27.2	+2.8
CHNA	Chernabura Isl	77.00	9	P	P	10 48 23.0	-1.4
	baz=194						
CHNA				S	S	10 58 10.2	-1.1
	baz=194						
KCPM	Cahto Peak	77.02	38	IAMs_20	IAMs_20	11 15 42.1	
	comp=Z,13µm,20.0s						
ESJX	Sierra Juarez	77.03	48	IAMs_20	IAMs_20	11 20 37.3	
	comp=Z,7µm,18.0s						
KSM	Kuching	77.04	277	P	P	10 48 24.1	-1.5
KSM				IAmb	IAmb	10 48 32.8	
	comp=Z,143nm,1.2s						
KSM	Kuching	77.04	277	P	P	10 48 27.6	+2.0
KSM	Kuching	77.04	277	⇑P	P	10 48 25.5	-0.2
XMI	Christmas Isla	77.11	264	P	P	10 48 28.4	+2.4
XMIS	Christmas Isla	77.13	264	P	P	10 48 24.8	-1.3
NACB	Ninganchiao	77.15	303	P	P	10 48 23.5	-2.5
NACB				IAmb	IAmb	10 48 31.3	
	comp=Z,178nm,1.2s						
NACB	Ninganchiao	77.15	303	P	P	10 48 26.3	+0.3
KMPM	Mount Pierce	77.21	37	IAMs_20	IAMs_20	11 15 17.1	
	comp=Z,13µm,20.0s						
SFX	San Felipe	77.24	49	IAMs_20	IAMs_20	11 15 43.9	
	comp=Z,13µm,20.0s						
JTU	Tsushima	77.25	315	P	P	10 48 28.8	+2.5
KMRM	Mail Ridge	77.31	37	IAMs_20	IAMs_20	11 15 19.4	
	comp=Z,15µm,20.0s						
SDPT	Sand Point	77.39	8	IAMs_20	IAMs_20	11 19 34.9	
	comp=Z,10µm,20.0s						
SDPT	Sand Point	77.39	8	P	P	10 48 29.2	+2.7
SDPT	Sand Point	77.39	8	P	P	10 48 25.1	-1.5
	baz=193						
SDPT				S	S	10 58 13.4	-2.2
	baz=193						
SSLB	Suanglung	77.46	302	P	P	10 48 24.6	-3.2
SSLB	Suanglung	77.46	302	P	P	10 48 29.8	+2.0
TPUB	Ta-pu	77.48	301	P	P	10 48 26.4	-1.4
TPUB				IAmb	IAmb	10 48 31.9	
	comp=Z,143nm,1.1s						
TPUB	Ta-pu	77.48	301	P	P	10 48 27.5	-0.4
CCAC	Calif City Air	77.51	44	IAMs_20	IAMs_20	11 15 56.1	
	comp=Z,8µm,19.0s						
ISA	Isabella, Lake	77.53	44	IAMs_20	IAMs_20	11 16 54.5	
	comp=Z,8µm,19.0s						
JCC	Jacoby Creek,	77.53	37	IAMs_20	IAMs_20	11 15 35.7	
	comp=Z,11µm,19.0s						
S12K	Black Hills	77.54	7	IAMs_20	IAMs_20	11 19 44.2	
	comp=Z,12µm,20.0s						
S12K	Black Hills	77.54	7	P	P	10 48 26.0	-1.5
	baz=191						
S12K				S	S	10 58 17.2	-0.1
	baz=191						
YHNB	Yeheng	77.58	303	P	P	10 48 30.9	+2.4
PFO	Pinyon Flats O	77.62	46	IAMs_20	IAMs_20	11 20 34.0	
	comp=Z,8µm,18.0s						
PFO	Pinyon Flats O	77.62	46	LR	LR	11 15 27.5	
	comp=Z,3µm,20.2s,baz=238,slow=30						
PFO	Pinyon Flats O	77.62	46	*e*P	P	10 48 29.3	+0.7
PFO				pmax	pmax		
	comp=Z,59nm,1.1s						
TATO	Taipei	77.64	303	P	P	10 48 29.7	+1.0
KHMM	Horse Mountain	77.74	37	P	P	10 48 23.2	-5.9
KHMM				IAmb	IAmb	10 48 34.5	
	comp=Z,87nm,1.0s						
KHMM				IAMs_20	IAMs_20	11 15 34.1	
	comp=Z,13µm,20.0s						
KRPM	Rodgers	77.77	36	IAMs_20	IAMs_20	11 17 30.9	
	comp=Z,12µm,20.0s						
O02D	Mt. Diablo Mer	77.80	38	IAMs_20	IAMs_20	11 15 59.8	
	comp=Z,16µm,20.0s						
CMB	Columbia Colle	77.82	41	IAMs_20	IAMs_20	11 17 40.2	
	comp=Z,9µm,19.0s						
CMB	Columbia Colle	77.82	41	⇑P	P	10 48 29.0	-0.5
PET	Petropavlovsk	77.82	344	P	P	10 48 31.0	+2.0
PET	Petropavlovsk	77.82	344	*e*P	P	10 48 29.6	+0.6
PET				*e*S	S	10 58 22.4	+2.1
PET				*e*SS	SS	11 03 24.0	+2.4
PET				*e*SSS	SSS	11 06 39.0	
PET				pmax	pmax		
	comp=Z,62nm,1.4s						
PET				pmax	pmax		
	comp=Z,1µm,8.6s						
PET				pmax	pmax		
	comp=Z,2µm,10.1s						
PET				MLR	MLR		
	comp=Z,6µm,17.0s						
P08K	Saint George I	77.85	3	P	P	10 48 27.7	-1.4
	baz=184						
P08K				S	S	10 58 19.5	-0.9
	baz=184						
TPI	Tanjungpandan	77.95	272	P	P	10 48 36.6	+5.9
	comp=Z,5µmcomp=Z,3µmcomp=Z,83nm,1.8s						
AFDM	Forest Hills D	78.05	40	IAMs_20	IAMs_20	11 20 20.4	
	comp=Z,10µm,19.0s						
KRMB	Red Mountain	78.08	36	IAMs_20	IAMs_20	11 16 15.2	
	comp=Z,12µm,20.0s						
PEA0B	Petropavlovsk-	78.15	343	P	P	10 48 28.6	-2.3
PEA0B	Petropavlovsk-	78.15	343*c*	*e*P	P	10 48 30.0	-0.9
PETK	Petropavlovsk-	78.15	343	P	P	10 48 28.0	-2.9
PETK	Petropavlovsk-	78.15	343	P	P	10 48 29.8	-1.1
	comp=Z,45nm,0.7s,baz=109,slow=8.6,SNR=48						
PETK				LR	LR	11 18 25.4	
	comp=Z,8µm,20.6s,baz=157,slow=32						
	comp=Z,45nm,0.7s						
KSXB	Camp Six Broad	78.30	36	P	P	10 48 27.8	-4.4
KSXB				IAmb	IAmb	10 48 41.3	
	comp=Z,95nm,1.2s						
KSXB				IAMs_20	IAMs_20	11 16 21.2	
	comp=Z,14µm,20.0s						
YSS	Yuzhno-Sakhali	78.37	331	IAMs_20	IAMs_20	11 18 06.0	
	comp=Z,9µm,20.0s						
YSS	Yuzhno-Sakhali	78.37	331	P	P	10 48 32.9	+0.7
YSS	Yuzhno-Sakhali	78.37	331α	*i*P	P	10 48 32.3	+0.1
YSS				*e*		10 51 28.6	
YSS				*e*S	S	10 58 27.3	+0.8
YSS				pmax	pmax		
	comp=Z,100nm,1.0s						
YSS				pmax	pmax		
	comp=N,40nm,1.1s						
YSS				pmax	pmax		
	comp=E,60nm,1.3s						
YSS				pmax	pmax		
	comp=Z,1µm,5.4s						
YSS				pmax	pmax		
	comp=N,300nm,3.8s						
YSS				pmax	pmax		
	comp=E,300nm,3.8s						
YSS				smax	smax		
	comp=N,5µm,12.0s						
YSS				smax	smax		
	comp=E,2µm,11.9s						
YSS	Yuzhno-Sakhali	78.37	331	⇑P	P	10 48 32.0	-0.2
KBO	Bosley Butte	78.37	36	IAMs_20	IAMs_20	11 16 53.1	
	comp=Z,15µm,20.0s						
GSC	Goldstone, Bar	78.39	45	IAMs_20	IAMs_20	11 21 28.4	
	comp=Z,10µm,18.0s						
SPIA	Saint Paul Isl	78.39	2	P	P	10 48 34.1	+2.0
SPIA	Saint Paul Isl	78.39	2	P	P	10 48 31.3	-0.8
	baz=184						
CGJI	Cibinong	78.41	267	P	P	10 48 33.9	+0.6
	comp=Z,6µmcomp=Z,238nm,1.4s						
S14K	Fog Glacier	78.42	8	P	P	10 48 30.8	-1.6
	baz=194						
S14K				S	S	10 58 26.4	-0.5
	baz=194						
CHIR	Chirikof Islan	78.58	11	P	P	10 48 31.9	-1.2
	baz=197						
CHGN	Chignik	78.60	9	S	S	10 58 28.3	-0.2
	baz=195						
L02F	Cave Junction	78.67	36	IAMs_20	IAMs_20	11 16 32.8	
	comp=Z,14µm,20.0s						
WAKR	Walker	78.69	41	IAMs_20	IAMs_20	11 18 07.4	
	comp=Z,12µm,19.0s						
KEBM	Edson Butte	78.77	35	IAMs_20	IAMs_20	11 17 23.5	
	comp=Z,16µm,20.0s						
MPK	Martis Peak	78.84	40	IAMs_20	IAMs_20	11 20 28.1	
	comp=Z,11µm,18.0s						
YBH	Yreka Blue Hor	78.88	37	IAMs_20	IAMs_20	11 16 31.4	
	comp=Z,11µm,20.0s						
DSP	Deep Springs	78.90	42	IAMs_20	IAMs_20	11 16 39.7	
	comp=Z,9µm,20.0s						
HSIG		78.96	53	IAMs_20	IAMs_20	11 16 34.5	
	comp=Z,13µm,20.0s						
PNTR	Pine Nut	78.96	40	IAMs_20	IAMs_20	11 20 24.6	
	comp=Z,13µm,18.0s						
113A	Mohawk Valley,	78.98	48	IAMs_20	IAMs_20	11 16 19.9	
	comp=Z,8µm,20.0s						
HATC	Hat Creek Radi	78.98	38	IAMs_20	IAMs_20	11 16 57.0	
	comp=Z,12µm,20.0s						
PMSA	Palmer Station	78.99	156	LR	LR	11 17 19.4	
	comp=Z,6µm,18.5s,baz=231,slow=31						
K02D	Willamette Mer	79.01	35	IAMs_20	IAMs_20	11 17 21.8	
	comp=Z,16µm,20.0s						
GWY	Greenwater Val	79.01	44	IAMs_20	IAMs_20	11 17 44.7	
	comp=Z,8µm,20.0s						
GRAC	Grapevine Rang	79.05	43	IAMs_20	IAMs_20	11 17 34.8	
	comp=Z,10µm,20.0s						
LHV	Little Huntoon	79.11	41	IAMs_20	IAMs_20	11 20 09.3	
	comp=Z,11µm,19.0s						
RYN	Ryan	79.33	41	IAMs_20	IAMs_20	11 18 29.2	
	comp=Z,9µm,19.0s						
NVAR	Mina Array Bea	79.34	41	P	P	10 48 38.8	+0.7
	comp=Z,66nm,1.1s,baz=225,slow=6.6,SNR=48						
NVAR				LR	LR	11 17 37.6	
	comp=Z,9µm,19.1s,baz=232,slow=31						
	comp=Z,66nm,1.1s						
L04D	Klamath Falls	79.43	36	IAMs_20	IAMs_20	11 17 10.0	
	comp=Z,9µm,20.0s						
PAHR	Pah Rah Range	79.48	40	IAMs_20	IAMs_20	11 20 40.4	
	comp=Z,10µm,18.0s						
SII	Sitkinak Islan	79.53	11	IAMs_20	IAMs_20	11 22 20.2	
	comp=Z,15µm,20.0s						
SII	Sitkinak Islan	79.53	11	P	P	10 48 40.8	+2.4
SII	Sitkinak Islan	79.53	11	P	P	10 48 37.5	-1.0
	baz=199						
SII				S	S	10 58 37.2	-1.3
	baz=199						
BBOR	Butler Butte	79.67	36	P	P	10 48 34.7	-5.0
BBOR				IAmb	IAmb	10 48 56.7	
	comp=Z,171nm,1.9s						
TJN	Taejon	79.69	316	P	P	10 48 36.7	-3.1
TJN				IAmb	IAmb	10 48 48.4	
	comp=Z,238nm,1.0s						
TJN				IAMs_20	IAMs_20	11 26 09.1	
	comp=Z,14µm,18.0s						
TJN	Taejon	79.69	316	P	P	10 48 41.2	+1.5
TJN	Taejon	79.69	316	*i* P	P	10 48 37.9	-1.8
TPNV	Topopah Spring	79.74	44	IAMs_20	IAMs_20	11 17 28.0	
	comp=Z,9µm,20.0s						
I03D	Drain, OR	79.86	35	IAMs_20	IAMs_20	11 17 58.3	
	comp=Z,14µm,20.0s						
TEY	Ternei	79.90	327	⇓*e*P	P	10 48 42.6	+1.9
TEY						10 58 43.0	
TEY				pmax	pmax		
	comp=E,100nm,5.1s						
TEY				pmax	pmax		
	comp=N,10.0nm,2.5s						
QZH	Quanzhou	79.90	302	P	P	10 48 40.2	-0.9
QZH				S	S	10 58 47.8	+4.0
QZH				pmax	pmax		
	comp=N,200nm,1.3s						
QZH				pmax	pmax		
	comp=N,2µm,9.9s						
QZH				LR	LR		
	comp=N,2µm,19.2s						
QZH				LR	LR		
	comp=N,4µm,18.9s						
QZH				LR	LR		
	comp=N,4µm,18.9s						
V12A	Nelson	79.93	45	IAMs_20	IAMs_20	11 22 09.1	
	comp=Z,8µm,19.0s						
R16K	Pilot Point	79.94	9	IAMs_20	IAMs_20	11 23 09.4	
	comp=Z,11µm,20.0s						
R16K	Pilot Point	79.94	9	P	P	10 48 39.5	-1.0
	baz=195						
R16K				S	S	10 58 43.9	+1.1
	baz=195						
KSRS	Korea Array	79.97	317	P	P	10 48 40.9	-0.4
	comp=Z,26nm,1.1s,baz=137,slow=4.8,SNR=46						
KSRS				LR	LR	11 20 07.6	
	comp=Z,2µm,20.9s,baz=130,slow=33						
	comp=Z,26nm,1.1s						
KSAR	Wonju Array Be	79.99	317	P	P	10 48 39.5	-1.8
KSAR	Wonju Array Be	79.99	317	P	P	10 48 39.5	-1.8
K04D	Chiloquin, OR	80.00	36	IAMs_20	IAMs_20	11 17 20.2	
	comp=Z,10µm,20.0s						
KS19	Wonju Array Si	80.03	317	P	P	10 48 38.8	-2.8
KS19				IAmb	IAmb	10 48 48.1	
	comp=Z,287nm,1.6s						
J04A	Umpqua Nationa	80.22	36	IAMs_20	IAMs_20	11 18 03.9	
	comp=Z,10µm,20.0s						
Q09A	Carvers	80.28	42	IAMs_20	IAMs_20	11 17 26.4	
	comp=Z,8µm,20.0s						
OHAK	Old Harbor	80.32	11	P	P	10 48 39.6	-3.0
OHAK				IAmb	IAmb	10 48 47.6	
	comp=Z,123nm,1.3s						
OHAK				IAMs_20	IAMs_20	11 22 46.1	
	comp=Z,10µm,20.0s						
OHAK	Old Harbor	80.32	11	P	P	10 48 44.9	+2.3
OHAK	Old Harbor	80.32	11	P	P	10 48 41.4	-1.2
	baz=199						
OHAK				S	S	10 58 45.4	-1.4
	baz=199						
I04A	Tendick Farm,	80.42	35	IAMs_20	IAMs_20	11 18 07.3	
	comp=Z,12µm,20.0s						
R18K	Karluk	80.44	11	P	P	10 48 42.4	-0.9
	baz=198,SNR=65						
R18K				S	S	10 58 46.5	-1.5
	baz=198						
S11A	Rachel	80.47	43	IAMs_20	IAMs_20	11 18 20.4	
	comp=Z,11µm,20.0s						
MG04	Isla Riesco	80.47	143	IAMs_20	IAMs_20	11 16 33.7	
	comp=Z,14µm,21.0s						
LWLI	Liwa	80.49	268	P	P	10 48 46.2	+1.4
MDSI	Maura Dua	80.57	269	P	P	10 48 43.0	-2.0
	comp=Z,4µmcomp=Z,6µmcomp=Z,252nm,1.3s						
PMBI	Palembang	80.57	271	P	P	10 48 45.6	+0.5
PMBI	Palembang	80.57	271	P	P	10 48 45.4	+0.3
	comp=Z,310nm,1.3s						
GO09	Cerro Castillo	80.65	141	IAMs_20	IAMs_20	11 17 39.2	
	comp=Z,14µm,19.0s						
HEBO	Mount Hebo	80.68	34	IAMs_20	IAMs_20	11 18 02.1	
	comp=Z,14µm,20.0s						
MG03	Isla Dawson	80.69	144	IAMs_20	IAMs_20	11 17 09.7	
	comp=Z,10µm,20.0s						
J05D	Fort Rock, OR	80.73	36	IAMs_20	IAMs_20	11 17 42.3	
	comp=Z,11µm,20.0s						
PRN	Pahroc Range	80.78	44	IAMs_20	IAMs_20	11 22 58.6	
	comp=Z,10µm,18.0s						
INCN	Inchon	80.81	316	P	P	10 48 46.4	+0.6
INCN				S	S	10 58 55.1	+2.2
INCN	Inchon	80.81	316	P	P	10 48 47.0	+1.2
TUC	Tucson	80.83	50	IAMs_20	IAMs_20	11 17 44.0	
	comp=Z,13µm,20.0s						
TUC	Tucson	80.83	50	⇑P	P	10 48 47.8	+1.6
Q17K	Contact Creek	80.87	10	P	P	10 48 44.3	-1.4
	baz=197,SNR=97						
Q17K				S	S	10 58 52.2	-0.5
	baz=197						
ACHA	Angle Creek He	80.91	10	P	P	10 48 41.7	-4.1
ACHA				IAMs_20	IAMs_20	11 23 49.7	
	comp=Z,10µm,20.0s						
G03D	McMinnville, O	80.93	34	IAMs_20	IAMs_20	11 18 49.8	
	comp=Z,13µm,20.0s						
KDAK	Kodiak Island	80.98	12	P	P	10 48 42.1	-4.1
KDAK				IAmb	IAmb	10 48 51.3	
	comp=Z,121nm,1.2s						
KDAK	Kodiak Island	80.98	12	IAMs_20	IAMs_20	11 23 24.5	
	comp=Z,10µm,20.0s						
KDAK	Kodiak Island	80.98	12	LR	LR	11 18 18.4	
	comp=Z,10µm,21.9s,baz=206,slow=31						
KDAK	Kodiak Island	80.98	12	*i* P	P	10 48 45.1	-1.0
KDAK				pmax	pmax		
	comp=Z,176nm,1.5s						
KDAK				MLR	MLR		
	comp=Z,12µm,19.0s						
KDAK	Kodiak Island	80.98	12	P	P	10 48 45.0	-1.1
	baz=200						
KDAK				S	S	10 58 52.3	-1.4
	baz=200						
KDAK	Kodiak Island	80.98	12	⇑P	P	10 48 45.5	-0.6
KDAK				⇓P	pP	10 48 48.5	-3.4
SSE	Sheshan	81.03	308	P	P	10 48 45.4	-1.7
SSE				S	S	10 58 59.6	+4.3
SSE				pmax	pmax		
	comp=Z,35nm,1.2s						
SSE				pmax	pmax		
	comp=Z,800nm,10.8s						
SSE				LR	LR		
	comp=Z,670nm,20.9s						
SSE				LR	LR		
	comp=Z,530nm,20.2s						

O14K	Tigyukauivet M	81.11	7	IAMs_20	IAMs_20	11 22 06.7	
	comp=Z,15µm,20.0s						
O14K	Tigyukauivet M	81.11	7	P	P	10 48 46.3	-0.5
	baz=192						
O14K				S	S	10 58 55.6	+0.6
	baz=192						
VLA	Vladivostok	81.13	323	*i* P	P	10 48 46.4	-0.9
VLA				pmax	pmax		
	comp=Z,153nm,2.1s						
Q16K	King Salmon	81.15	9	P	P	10 48 46.1	-0.9
	baz=196,SNR=7.0						
Q16K				S	S	10 58 56.1	+0.8
	baz=196						
MSHR	Mys Shultsa	81.19	322	*i* P	P	10 48 46.7	-0.9
O15K	Ungalikthiuk R	81.20	7	IAMs_20	IAMs_20	11 21 46.9	
	comp=Z,13µm,20.0s						
O15K	Ungalikthiuk R	81.20	7	P	P	10 48 46.1	-1.3
	baz=193,SNR=12						
O15K				S	S	10 58 56.5	+0.5
	baz=193						
PINE	Pine Mountain	81.22	36	IAMs_20	IAMs_20	11 18 47.4	
	comp=Z,12µm,20.0s						
F03A	Seaside	81.27	33	IAMs_20	IAMs_20	11 18 55.8	
	comp=Z,10µm,20.0s						
P16K	Nushagak River	81.30	8	IAMs_20	IAMs_20	11 21 48.3	
	comp=Z,11µm,20.0s						
P16K	Nushagak River	81.30	8	P	P	10 48 47.0	-0.8
	baz=195,SNR=57						
P16K				S	S	10 58 57.0	+0.1
	baz=195						
I05D	Terrebonne, OR	81.36	35	IAMs_20	IAMs_20	11 18 20.2	
	comp=Z,11µm,20.0s						
USHA	Ushuaia	81.37	146	LR	LR	11 18 43.0	
	comp=Z,2µm,18.2s,baz=250,slow=31						
Q18K	Katmai Hardscr	81.38	10	P	P	10 48 47.1	-1.3
	baz=198,SNR=101						
Q18K				S	S	10 58 58.8	+0.7
	baz=198						
TYV	Tymovskoe	81.40	334	*e*P	P	10 48 48.4	-0.1
TYV				*e*S	SKSac	10 59 01.3	-5.2
TYV				pmax	pmax		
	comp=Z,2µm,4.0s						
TYV				pmax	pmax		
	comp=Z,80nm,1.4s						
TYV				smax	smax		
	comp=N,4µm,9.8s						
TYV				smax	smax		
	comp=E,2µm,9.8s						
WVOR	Wild Horse Val	81.64	38	IAMs_20	IAMs_20	11 18 15.5	
	comp=Z,11µm,20.0s						
WVOR	Wild Horse Val	81.64	38	⇑P	P	10 48 50.4	+0.2
F04D	Rainier, OR	81.66	33	IAMs_20	IAMs_20	11 19 18.9	
	comp=Z,10µm,20.0s						
P17K	Kvichak River	81.68	9	P	P	10 48 48.8	-1.0
	baz=196,SNR=90						
P17K				S	SKSac	10 59 02.3	-5.6
	baz=196						
E03A	Lebam	81.69	33	IAMs_20	IAMs_20	11 19 36.9	
	comp=Z,15µm,20.0s						
N14K	Kuskokwak Cree	81.73	6	IAMs_20	IAMs_20	11 22 36.9	
	comp=Z,12µm,20.0s						
N14K	Kuskokwak Cree	81.73	6	P	P	10 48 49.6	-0.5
	baz=192						
N14K				S	SKSac	10 59 02.2	-6.1
	baz=192						
USRK	Ussuriysk Ar.	81.77	324	P	P	10 48 50.0	-0.7
	comp=Z,8.6nm,0.9s,baz=113,slow=4.4,SNR=19						
USRK				LR	LR	11 21 07.8	
	comp=Z,13µm,20.6s,baz=128,slow=33						
	comp=Z,8.6nm,0.9s						
Q20K	Shuyak Island	81.79	11	P	P	10 48 50.0	-0.5
	baz=200,SNR=8.4						
Q20K				S	SKSac	10 59 02.9	-5.9
	baz=200						
SYI	Shuyak Island	81.79	11	IAMs_20	IAMs_20	11 23 52.0	
	comp=Z,8µm,20.0s						
M11K	Mekoryuk	81.80	4	IAMs_20	IAMs_20	11 26 08.2	
	comp=Z,9µm,20.0s						
M11K	Mekoryuk	81.80	4	P	P	10 48 49.5	-1.0
	baz=187,SNR=13						
M11K				S	SKSac	10 59 05.1	-3.7
	baz=187						
MG02	Cerro Sombrero	81.81	144	IAMs_20	IAMs_20	11 21 13.1	
	comp=Z,11µm,18.0s						
O16K	Kokwok River B	81.83	8	P	P	10 48 48.5	-2.2
O16K				IAmb	IAmb	10 48 54.9	
	comp=Z,82nm,1.0s						
O16K				IAMs_20	IAMs_20	11 22 14.3	
	comp=Z,11µm,20.0s						
O16K	Kokwok River B	81.83	8	P	P	10 48 49.1	-1.5
	baz=195,SNR=59						
O16K				S	S	10 59 02.2	-0.2
	baz=195						
MAW	Mawson	81.84	199	P	P	10 48 49.1	-1.7
	comp=Z,13nm,1.2s						
MAW	Mawson	81.84	199	P	P	10 48 50.6	-0.2
	comp=Z,34nm,1.0s,baz=119,slow=5.4,SNR=20						
MAW				LR	LR	11 24 01.4	
	comp=Z,11µm,18.8s,baz=116,slow=35						
	comp=Z,34nm,1.0s						
Q19K	Cape Douglas,	81.87	11	P	P	10 48 47.4	-3.5
Q19K				IAmb	IAmb	10 48 59.7	
	comp=Z,202nm,1.1s						
Q19K				IAMs_20	IAMs_20	11 23 59.1	
	comp=Z,14µm,20.0s						
Q19K	Cape Douglas,	81.87	11	P	P	10 48 49.7	-1.2
	baz=199,SNR=12						
Q19K				S	S	10 59 02.8	-0.1
	baz=199						
P18K	Big Mountain,	82.05	10	IAMs_20	IAMs_20	11 24 35.0	
	comp=Z,12µm,20.0s						
P18K	Big Mountain,	82.05	10	P	P	10 48 50.7	-1.2
	baz=198,SNR=58						
P18K				S	SKSac	10 59 04.8	-5.9
	baz=198						
M13K	Dall Lake	82.05	5	IAMs_20	IAMs_20	11 25 33.5	
	comp=Z,8µm,20.0s						
M13K	Dall Lake	82.05	5	P	P	10 48 51.4	-0.3
	baz=190						
M13K				S	SKSac	10 59 09.3	-1.2
	baz=190						
NLWA	Neilton Lookou	82.12	32	⇑P	P	10 48 54.5	+2.0
O17K	Koliganek Bris	82.14	9	P	P	10 48 51.1	-1.1
	baz=196,SNR=51						
O17K				S	SKSac	10 59 06.7	-4.4
	baz=196						
N15K	Kwethluk River	82.14	7	P	P	10 48 51.8	-0.5
	baz=193,SNR=26						
N15K				S	SKSac	10 59 06.3	-4.9
	baz=193						
WUAZ	Wupatki	82.15	47	⇓P	P	10 48 53.8	+0.6
SPR3	Spring Creek 3	82.17	43	IAMs_20	IAMs_20	11 19 04.3	
	comp=Z,9µm,19.0s						
TPRI	Tanjung Pinang	82.20	274	P	P	10 48 55.0	+1.3
	comp=Z,6µmcomp=Z,199nm,1.3s						
I07A	Izee	82.20	36	IAMs_20	IAMs_20	11 18 50.2	
	comp=Z,11µm,20.0s						
PSUT	Pine Spring	82.20	43	IAMs_20	IAMs_20	11 19 55.2	
	comp=Z,11µm,19.0s						
HKPS	Hong Kong Po S	82.26	297	P	P	10 48 51.2	-2.5
J08A	Circle Bar Ran	82.32	37	IAMs_20	IAMs_20	11 18 57.3	
	comp=Z,12µm,20.0s						
G06A	Carlson Farm,	82.33	35	IAMs_20	IAMs_20	11 19 28.8	
	comp=Z,15µm,20.0s						
KSI	Kapahiang	82.34	269	P	P	10 48 54.0	-0.5
O18K	Koktuh Hills	82.49	10	IAMs_20	IAMs_20	11 24 38.8	
	comp=Z,11µm,20.0s						
O18K	Koktuh Hills	82.49	10	P	P	10 48 52.8	-1.4
	baz=198,SNR=61						
O18K				S	SKSac	10 59 09.5	-4.1
	baz=198						
M14K	Bethel	82.51	6	IAMs_20	IAMs_20	11 23 00.7	
	comp=Z,11µm,20.0s						
M14K	Bethel	82.51	6	P	P	10 48 53.2	-0.9
	baz=191,SNR=63						
M14K				S	SKSac	10 59 09.2	-4.3
	baz=191						
H03S2	Juan Fernandez	82.53	123	T	T	12 21 36.4	
	baz=248,slow=74,SNR=34						
H03S1	Juan Fernandez	82.54	123	T	T	12 21 32.2	
	baz=248,slow=74,SNR=43						
H03S3	Juan Fernandez	82.54	123	T	T	12 21 30.9	
	baz=248,slow=74,SNR=28						
M15K	Kasigluk River	82.59	7	P	P	10 48 53.9	-0.6
	baz=192						
M15K				S	SKSac	10 59 11.1	-3.0
	baz=192						
N16K	Nishlik Lake	82.60	8	P	P	10 48 53.9	-0.7
	baz=194,SNR=51						
N16K				S	S	10 59 13.5	+3.1
	baz=194						
X18A	Snowflake	82.60	49	IAMs_20	IAMs_20	11 18 41.9	
	comp=Z,8µm,20.0s						
P19K	Oil Pt	82.62	11	IAMs_20	IAMs_20	11 24 33.1	
	comp=Z,11µm,20.0s						
P19K	Oil Pt	82.62	11	P	P	10 48 53.8	-1.1
	baz=199						
P19K				S	SKSac	10 59 10.2	-4.3
	baz=199						
ELK	Elko	82.63	41	IAMs_20	IAMs_20	11 20 53.5	
	comp=Z,12µm,19.0s						
ELK	Elko	82.63	41	⇑P	P	10 48 56.8	+1.2
H03N2	Juan Fernandez	82.66	123	T	T	12 21 26.6	
	baz=249,slow=71,SNR=24						
H03N3	Juan Fernandez	82.66	123	T	T	12 21 25.7	
	baz=249,slow=71,SNR=16						
H02S1	DAWSON INLET T	82.67	24	P	P	10 48 57.4	+2.3
	SNR=16						
VA04	Juan Fernndez	82.67	123	IAMs_20	IAMs_20	11 23 50.8	
	comp=Z,9µm,19.0s						
H03N1	Juan Fernandez	82.68	123	T	T	12 21 12.2	
	baz=249,slow=71,SNR=14						
LON	Longmire	82.72	33	IAMs_20	IAMs_20	11 19 45.1	
	comp=Z,8µm,20.0s						
DLV	Lat	82.78	286	P	P	10 48 57.5	+0.6
N17K	Nushagak Hills	82.85	8	IAMs_20	IAMs_20	11 25 11.4	
	comp=Z,9µm,20.0s						
N17K	Nushagak Hills	82.85	8	P	P	10 48 54.8	-1.2
	baz=196,SNR=32						
N17K				S	SKSac	10 59 11.9	-4.0
	baz=196						
CNPM	China Poot	82.86	12	IAMs_20	IAMs_20	11 24 25.3	
	comp=Z,11µm,20.0s						
HOM	Homer	82.91	11	IAMs_20	IAMs_20	11 24 47.5	
	comp=Z,10µm,20.0s						
HOM	Homer	82.91	11	P	P	10 48 55.2	-1.0
	baz=201						
HOM				S	SKSac	10 59 12.6	-3.7
	baz=201						
D05A	Enumclaw	82.92	33	IAMs_20	IAMs_20	11 20 16.4	
	comp=Z,9µm,19.0s						
O19K	Port Alsworth	82.96	10	IAMs_20	IAMs_20	11 24 53.0	
	comp=Z,13µm,20.0s						
O19K	Port Alsworth	82.96	10	P	P	10 48 55.5	-1.0
	baz=198,SNR=42						
O19K				S	SKSac	10 59 14.3	-2.2
	baz=198						
CLRS	Cowichan Lake	82.98	31	IAMs_20	IAMs_20	11 20 25.2	
	comp=Z,14µm,20.0s						
L14K	Kuka Creek	83.03	6	IAMs_20	IAMs_20	11 25 53.3	
	comp=Z,8µm,20.0s						
L14K	Kuka Creek	83.03	6	P	P	10 48 56.8	0.0
	baz=190,SNR=88						
L14K				S	S	10 59 17.7	+3.2
	baz=190						
COYC	Coyhaique	83.03	136	IAMs_20	IAMs_20	11 22 58.7	
	comp=Z,8µm,18.0s						
COYC	Coyhaique	83.03	136	⇑P	P	10 49 00.1	+2.6
M16K	Timber Creek	83.11	7	IAMs_20	IAMs_20	11 23 07.2	
	comp=Z,14µm,20.0s						
M16K	Timber Creek	83.11	7	P	P	10 48 56.8	-0.5
	baz=194,SNR=145						
M16K				S	S	10 59 17.6	+2.1
	baz=194						
O20K	Slope Mountain	83.13	11	P	P	10 48 56.6	-0.9
	baz=200,SNR=6.6						
O20K				S	S	10 59 17.6	+1.7
	baz=200						
MYKOM	Kota Tinggi	83.14	275	P	P	10 48 59.0	+0.4
BRLK	Bradley Lake	83.15	12	IAMs_20	IAMs_20	11 24 42.5	
	comp=Z,10µm,20.0s						
BRSE	Bradley Lake S	83.16	12	P	P	10 48 56.9	-0.7
	baz=202,SNR=46						
BRSE				S	SKSac	10 59 16.8	-1.2
	baz=202						
N18K	Kilae Creek	83.18	9	IAMs_20	IAMs_20	11 25 30.0	
	comp=Z,10µm,20.0s						
N18K	Kilae Creek	83.18	9	P	P	10 48 56.8	-0.9
	baz=197,SNR=15						
N18K				S	SKSac	10 59 17.5	-0.7
	baz=197						
LL07	Hotel Espejo d	83.19	133	IAMs_20	IAMs_20	11 21 47.4	
	comp=Z,12µm,18.0s						
PGC	Sidney	83.19	31	IAMs_20	IAMs_20	11 19 51.6	
	comp=Z,8µm,20.0s						
NJ2	Nanjing	83.23	308	⇓P	P	10 48 58.1	-0.5
NJ2				pmax	pmax		
	comp=Z,99nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,3µm,11.8s						
NJ2				LR	LR		
	comp=Z,2µm,19.0s						
NJ2				LR	LR		
	comp=Z,2µm,20.8s						
NJ2				LR	LR		
	comp=Z,3µm,19.9s						
CBB	Campbell River	83.26	29	IAMs_20	IAMs_20	11 20 35.5	
	comp=Z,10µm,20.0s						
G08A	Pilot Rock	83.27	36	IAMs_20	IAMs_20	11 20 01.6	
	comp=Z,11µm,20.0s						
GZH	Guangzhou	83.28	298	P	P	10 48 59.3	+0.3
GZH				S	SKSac	10 59 21.4	+1.1
GZH				pmax	pmax		
	comp=Z,42nm,1.2s						
GZH				LR	LR		
	comp=Z,2µm,19.6s						
GZH				LR	LR		
	comp=Z,2µm,18.1s						
GZH				LR	LR		
	comp=Z,3µm,19.2s						
MDJ	Mudanjiang	83.36	323	P	P	10 48 59.2	+0.2
MDJ				PP	PP	10 52 08.9	-2.4
MDJ				S	S	10 59 21.6	+2.9
MDJ				SS	SS	11 04 49.7	+4.9
MDJ				pmax	pmax		
	comp=Z,95nm,2.2s						
MDJ				LR	LR		
	comp=Z,7µm,22.0s						
MDJ				LR	LR		
	comp=Z,9µm,20.6s						
MDJ				LR	LR		
	comp=Z,19µm,19.9s						
MDJ	Mudanjiang	83.36	323	P	P	10 49 00.9	+1.9
K13K	Kusilvak Mount	83.45	5	IAMs_20	IAMs_20	11 29 56.6	
	comp=Z,11µm,19.0s						
K13K	Kusilvak Mount	83.45	5	P	P	10 48 58.8	-0.2
	baz=189,SNR=42						
K13K				S	S	10 59 22.3	+3.5
	baz=189						
L15K	Ungalak Mounta	83.47	6	P	P	10 48 58.1	-1.0
	baz=192,SNR=132						
L15K				S	S	10 59 21.4	+2.3
	baz=192						
N19K	Bonanza Creek	83.52	10	IAMs_20	IAMs_20	11 25 31.9	
	comp=Z,13µm,20.0s						
N19K	Bonanza Creek	83.52	10	P	P	10 48 58.2	-1.3
	baz=198,SNR=46						
N19K				S	SKSac	10 59 19.7	-0.8
	baz=198						
BBB	Bella Bella	83.62	27	LR	LR	11 21 48.7	
	comp=Z,4µm,18.6s,baz=228,slow=32						
LTY	Liberty	83.64	33	IAMs_20	IAMs_20	11 20 25.4	
	comp=Z,9µm,20.0s						
EPT	El Paso	83.66	52	IAMs_20	IAMs_20	11 19 35.0	
	comp=Z,12µm,20.0s						
M17K	Holitna River	83.66	8	IAMs_20	IAMs_20	11 26 15.9	
	comp=Z,12µm,20.0s						
M17K	Holitna River	83.66	8	P	P	10 49 00.3	+0.2
	baz=195,SNR=59						
M17K				S	S	10 59 21.9	+0.8
	baz=195						
HAWA	Hanford	83.67	35	⇓P	P	10 49 00.8	+0.3
L16K	Owhat River	83.72	7	IAMs_20	IAMs_20	11 23 26.4	
	comp=Z,13µm,20.0s						
L16K	Owhat River	83.72	7	P	P	10 49 00.6	+0.2
	baz=194,SNR=92						
L16K				S	S	10 59 25.1	+3.5
	baz=194						
SEW	Seward	83.74	12	IAMs_20	IAMs_20	11 25 14.5	
	comp=Z,11µm,20.0s						
SEW	Seward	83.74	12	P	P	10 48 59.6	-0.9
	baz=203,SNR=30						
SEW				S	S	10 59 22.2	+0.3
	baz=203						
Q23K	Middleton Isla	83.78	14	IAMs_20	IAMs_20	11 31 30.3	
	comp=Z,11µm,18.0s						
Q23K	Middleton Isla	83.78	14	P	P	10 48 59.0	-1.7
	baz=206						
Q23K				S	S	10 59 22.8	+0.6
	baz=206						
DUG	Dugway, Tooele	83.81	43	⇑P	P	10 49 02.9	+1.3
BMO	Blue Mountains	83.91	37	IAMs_20	IAMs_20	11 19 37.4	
	comp=Z,11µm,20.0s						
BMO	Blue Mountains	83.91	37	⇓P	P	10 49 01.9	0.0
NKL	Nikolayevsk	83.93	335	*e*P	P	10 48 58.7	-2.9
NKL				*e*S	S	10 59 22.2	-1.8
NKL				pmax	pmax		
	comp=E,40nm,0.8s						
NKL				pmax	pmax		
	comp=N,33nm,1.3s						
NKL				pmax	pmax		
	comp=Z,207nm,1.3s						
NKL				smax	smax		
	comp=E,713nm,4.5s						
NKL				smax	smax		
	comp=N,461nm,6.9s						
SLKM	Skilak Lake	83.97	12	P	P	10 48 58.6	-3.2
M18K	Stony River	83.97	9	P	P	10 49 01.1	-0.6
	baz=197,SNR=37						
M18K				S	S	10 59 24.4	+0.2
	baz=197						
GRNR	Gornyy	84.01	331	⇑*i*P	P	10 49 01.9	-0.3
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CAPN	Captain Cook N	84.04	11	IAMs_20	IAMs_20	11 25 16.4	
	comp=Z,12µm,19.0s						
CAPN	Captain Cook N	84.04	11	S	S	10 59 27.6	+2.8
	baz=201						
O22K	Cooper Landing	84.04	12	IAMs_20	IAMs_20	11 25 16.3	
	comp=Z,9µm,19.0s						
O22K	Cooper Landing	84.04	12	P	P	10 49 01.5	-0.5
	baz=203,SNR=8.4						
O22K				S	S	10 59 23.7	-1.1
	baz=203						
P23K	Montague Islan	84.06	13	IAMs_20	IAMs_20	11 24 59.9	
	comp=Z,14µm,19.0s						
P23K	Montague Islan	84.06	13	P	P	10 49 01.1	-1.1
	baz=205,SNR=15						
P23K				S	S	10 59 25.7	+0.6
	baz=205						
K15K	Wolf Creek Mou	84.07	6	IAMs_20	IAMs_20	11 26 43.9	
	comp=Z,11µm,20.0s						
K15K	Wolf Creek Mou	84.07	6	P	P	10 49 01.1	-1.1
	baz=192,SNR=288						
K15K				S	S	10 59 28.9	+3.7
	baz=192						
LL01	San Ignacio de	84.09	133	IAMs_20	IAMs_20	11 23 49.3	
	comp=Z,8µm,18.0s						
LL01	San Ignacio de	84.09	133	⇑P	P	10 49 06.7	+3.7
BGU	Big Grassy Mou	84.09	42	IAMs_20	IAMs_20	11 21 33.3	
	comp=Z,9µm,19.0s						
PAYG	Puerto Ayora	84.10	88	IAMs_20	IAMs_20	11 18 00.7	
	comp=Z,14µm,20.0s						
LL02	Futaleuf	84.14	134	IAMs_20	IAMs_20	11 19 00.8	
	comp=Z,12µm,19.0s						
CRAG	Craig	84.21	22	P	P	10 49 05.3	+2.3
CRAG	Craig	84.21	22	P	P	10 49 01.2	-1.8
	baz=218,SNR=7.1						
CRAG				S	S	10 59 27.2	+0.4
	baz=218						
N20K	Mount Spurr	84.26	11	P	P	10 49 01.8	-1.4
	baz=200,SNR=35						
N20K				S	S	10 59 26.3	-0.9
	baz=200						
SPCR	Spurr Chakacha	84.26	11	P	P	10 49 02.0	-1.3
	baz=200,SNR=17						
SPCR				S	S	10 59 26.3	-0.9
	baz=200						
L17K	Donlin	84.27	7	P	P	10 49 03.4	+0.2
	baz=195						
L17K				S	S	10 59 31.8	+4.7
	baz=195						
J14K	Nanvaranak Lak	84.34	5	IAMs_20	IAMs_20	11 24 43.2	
	comp=Z,11µm,20.0s						
J14K	Nanvaranak Lak	84.34	5	P	P	10 49 03.0	-0.5
	baz=190						
J14K				S	S	10 59 30.8	+3.0
	baz=190						
MNTX	Cornudas Mount	84.46	53	IAMs_20	IAMs_20	11 20 00.1	
	comp=Z,9µm,20.0s						
MNTX	Cornudas Mount	84.46	53	⇑P	P	10 49 06.2	+1.3
MPU	Maple Canyon	84.46	43	IAMs_20	IAMs_20	11 21 00.0	
	comp=Z,10µm,20.0s						
QIZ	Qiongzhong	84.48	293	P	P	10 49 06.9	+1.6
QIZ				PP	PP	10 52 17.0	-3.9
QIZ				S	SKSac	10 59 30.3	+1.9
QIZ				SS	SS	11 05 09.6	+7.4
QIZ				pmax	pmax		
	comp=Z,29nm,1.6s						
QIZ				pmax	pmax		
	comp=Z,1µm,4.3s						
QIZ				LR	LR		
	comp=Z,1µm,18.6s						
QIZ				LR	LR		
	comp=Z,1µm,19.1s						
QIZ	Qiongzhong	84.48	293	P	P	10 49 07.9	+2.6
E09A	Wood Farm, Sta	84.48	35	IAMs_20	IAMs_20	11 21 14.8	
	comp=Z,14µm,19.0s						
Y22D	IRIS PASSCAL I	84.51	50	IAMs_20	IAMs_20	11 20 13.4	
	comp=Z,11µm,20.0s						
Y22D	IRIS PASSCAL I	84.51	50	P	P	10 49 03.3	-2.0
	baz=240						
Y22D				S	S	10 59 32.9	+1.7
	baz=240						
L18K	Granite Mounta	84.55	8	IAMs_20	IAMs_20	11 29 53.3	
	comp=Z,11µm,19.0s						
L18K	Granite Mounta	84.55	8	P	P	10 49 04.8	+0.1
	baz=196,SNR=110						
L18K				S	S	10 59 33.2	+3.2
	baz=196						
M19K	Big River Lodg	84.57	9	IAMs_20	IAMs_20	11 23 50.8	
	comp=Z,11µm,20.0s						
M19K	Big River Lodg	84.57	9	P	P	10 49 03.6	-1.1
	baz=198,SNR=44						
M19K				S	S	10 59 30.3	+0.1
	baz=198						
LL03	Petrohue	84.59	132	IAMs_20	IAMs_20	11 18 40.5	
	comp=Z,8µm,20.0s						
RC01	Rabbit Creek A	84.60	12	P	P	10 49 04.2	-0.7
	baz=202,SNR=40						
RC01				S	S	10 59 27.5	-3.0
	baz=202						
STLK	Strandline Lak	84.60	11	P	P	10 49 01.3	-3.7
STLK				IAmb	IAmb	10 49 08.9	
	comp=Z,92nm,1.1s						
STLK				IAMs_20	IAMs_20	11 25 55.3	
	comp=Z,8µm,20.0s						
HIN	Hinchinbrook I	84.62	13	IAMs_20	IAMs_20	11 25 05.5	
	comp=Z,13µm,19.0s						
TXAR	Lajitas Array	84.63	56	P	P	10 49 07.5	+1.6
	comp=Z,15nm,1.0s,baz=214,slow=5.1,SNR=63						
TXAR				ScS	S	10 59 47.5	+15
	comp=Z,1.0nm,1.0s,baz=250,slow=5.1,SNR=4.1						
TXAR				PKKPbc	PKKPbc	11 07 16.7	-0.1
	comp=Z,0.8nm,1.1s,baz=24,slow=3.3,SNR=4.2						
TXAR				LR	LR	11 20 18.0	
	comp=Z,7µm,19.6s,baz=232,slow=31						
	comp=Z,15nm,1.0s						
V35K	Ketchikan	84.64	23	P	P	10 49 03.7	-1.5
	baz=219,SNR=10						
V35K				S	S	10 59 31.8	+0.7
	baz=219						
PWL	Port Wells	84.66	12	IAMs_20	IAMs_20	11 26 09.6	
	comp=Z,12µm,20.0s						
PWL	Port Wells	84.66	12	P	P	10 49 04.5	-0.8
	baz=204,SNR=62						
PWL				S	S	10 59 30.2	-0.9
	baz=204						
COCO	West Island	84.66	259	IAMs_20	IAMs_20	11 27 09.5	
	comp=Z,10µm,20.0s						
COCO	West Island	84.66	259	P	P	10 49 05.9	-0.5
KAIM	Kayak Island	84.67	15	P	P	10 49 04.3	-1.0
	baz=207,SNR=26						
KAIM				S	S	10 59 33.1	+1.9
	baz=207						
U33K	Whale Pass	84.72	22	P	P	10 49 05.1	-0.5
	baz=218,SNR=12						
U33K				S	S	10 59 33.7	+1.8
	baz=218						
HVU	Hansel Valley	84.74	41	IAMs_20	IAMs_20	11 23 58.4	
	comp=Z,9µm,19.0s						
SIT	Sitka	84.74	20	P	P	10 49 04.7	-1.0
	baz=216						
SIT				S	S	10 59 33.3	+1.3

	baz=216						
M20K	Styx River	84.75	10	IAMs_20	IAMs_20	11 26 10.4	
	comp=Z,13µm,20.0s						
M20K	Styx River	84.75	10	P	P	10 49 05.1	-0.7
	baz=199						
M20K				S	S	10 59 32.2	0.0
	baz=199						
SUA	Susitna One	84.76	11	IAMs_20	IAMs_20	11 25 50.5	
	comp=Z,12µm,20.0s						
SUA	Susitna One	84.76	11	P	P	10 49 05.2	-0.7
	baz=202,SNR=28						
SUA				S	S	10 59 31.2	-1.1
	baz=202						
L19K	White Mountain	84.77	9	IAMs_20	IAMs_20	11 26 10.0	
	comp=Z,9µm,20.0s						
L19K	White Mountain	84.77	9	P	P	10 49 05.6	-0.2
	baz=198,SNR=39						
L19K				S	S	10 59 31.8	-0.4
	baz=198						
PLID	Pearl Lake	84.78	37	IAMs_20	IAMs_20	11 20 35.6	
	comp=Z,13µm,20.0s						
HLID	Hailey	84.78	39	⇑P	P	10 49 06.0	-0.6
K17K	Iditarod	84.83	7	IAMs_20	IAMs_20	11 24 10.9	
	comp=Z,13µm,20.0s						
K17K	Iditarod	84.83	7	P	P	10 49 06.2	+0.2
	baz=195						
K17K				S	S	10 59 35.6	+2.9
	baz=195						
DL2	Dalian	84.87	315	P	P	10 49 06.2	-0.6
DL2				SKS	SKSac	10 59 27.9	-2.1
DL2				S	S	10 59 34.8	+0.7
DL2				pmax	pmax		
	comp=Z,60nm,1.5s						
DL2				pmax	pmax		
	comp=Z,3µm,5.4s						
DL2				LR	LR		
	comp=Z,3µm,16.6s						
DL2				LR	LR		
	comp=Z,2µm,19.9s						
DL2				LR	LR		
	comp=Z,3µm,19.1s						
JLU	Jordanelle	84.90	43	IAMs_20	IAMs_20	11 21 04.7	
	comp=Z,9µm,19.0s						
EYAK	Cordova Ski Ar	84.92	14	IAMs_20	IAMs_20	11 25 13.4	
	comp=Z,13µm,19.0s						
EYAK	Cordova Ski Ar	84.92	14	P	P	10 49 08.3	+1.8
EYAK	Cordova Ski Ar	84.92	14	P	P	10 49 05.7	-0.8
	baz=206,SNR=19						
EYAK				S	S	10 59 33.4	-0.2
	baz=206						
GLI	Glacier Island	84.93	13	IAMs_20	IAMs_20	11 25 37.8	
	comp=Z,13µm,20.0s						
GLI	Glacier Island	84.93	13	P	P	10 49 06.1	-0.5
	baz=205,SNR=53						
GLI				S	S	10 59 33.0	-0.8
	baz=205						
FID	Port Fidalgo	84.94	13	IAMs_20	IAMs_20	11 25 24.9	
	comp=Z,12µm,20.0s						
GAMB	Gambell	84.97	1	P	P	10 49 06.3	-0.4
	baz=182,SNR=24						
GAMB				S	S	10 59 38.4	+4.4
	baz=182						
MVCO	Mesa Verde	85.02	47	⇑P	P	10 49 09.2	+1.3
SKT	Skwentna	85.10	11	IAMs_20	IAMs_20	11 26 11.7	
	comp=Z,12µm,20.0s						
SKT	Skwentna	85.10	11	P	P	10 49 06.1	-1.3
	baz=201,SNR=26						
SKT				S	S	10 59 33.9	-1.6
	baz=201						
BGLC	Bering Glacier	85.11	15	P	P	10 49 06.8	-0.6
	baz=208						
BGLC				S	S	10 59 39.7	+4.2
	baz=208						
J16K	Anvik River	85.13	6	IAMs_20	IAMs_20	11 27 06.9	
	comp=Z,11µm,20.0s						
J16K	Anvik River	85.13	6	P	P	10 49 07.7	+0.1
	baz=192,SNR=69						
J16K				S	S	10 59 41.5	+5.8
	baz=192						
KNK	Knik Glacier	85.14	12	IAMs_20	IAMs_20	11 25 59.5	
	comp=Z,10µm,19.0s						
KNK	Knik Glacier	85.14	12	P	P	10 49 07.0	-0.7
	baz=204,SNR=37						
KNK				S	S	10 59 35.5	-0.4
	baz=204						
M22K	Willow	85.14	11	IAMs_20	IAMs_20	11 25 51.5	
	comp=Z,8µm,20.0s						
M22K	Willow	85.14	11	P	P	10 49 07.2	-0.4
	baz=202,SNR=46						
M22K				S	S	10 59 37.0	+1.3
	baz=202						
P18A	Preston Nutter	85.14	44	IAMs_20	IAMs_20	11 25 33.0	
	comp=Z,8µm,18.0s						
PMR	Palmer	85.17	12	IAMs_20	IAMs_20	11 26 21.4	
	comp=Z,7µm,19.0s						
PMR	Palmer	85.17	12	P	P	10 49 07.4	-0.3
PMR	Palmer	85.17	12	P	P	10 49 06.7	-1.0
	baz=203,SNR=56						
PMR				S	S	10 59 34.3	-1.9
	baz=203						
KLR	Kul'dur	85.18	328	P	P	10 49 07.6	-0.5
	comp=Z,21nm,1.3s,baz=120,slow=5.7,SNR=16						
KLR				LR	LR	11 23 02.0	
	comp=Z,8µm,20.7s,baz=138,slow=33						
	comp=Z,21nm,1.3s						
KLR	Kul'dur	85.18	328	*ce*P	P	10 49 08.0	-0.1
KLR				pmax	pmax		
	comp=Z,59nm,1.7s						
L20K	Farewell, AK	85.20	9	P	P	10 49 06.8	-1.2
	baz=199						
L20K				S	S	10 59 37.8	+1.4
	baz=199						
S31K	Pelican	85.20	19	P	P	10 49 07.2	-0.8
	baz=215,SNR=7.2						
S31K				S	S	10 59 37.1	+0.6
	baz=215						
TCUT	Toone Canyon	85.22	42	IAMs_20	IAMs_20	11 22 11.0	
	comp=Z,8µm,19.0s						
BKNI	Bangkinang	85.22	272	P	P	10 49 07.9	-1.3
BKNI	Bangkinang	85.22	272	P	P	10 49 05.1	-4.1
BKNI	Bangkinang	85.22	272	P	P	10 49 09.9	+0.7
BKNI	Bangkinang	85.22	272	P	P	10 49 10.1	+0.9
	comp=Z,4µmcomp=Z,5µmcomp=Z,192nm,1.2s						
WRAK	Wrangell Islan	85.23	22	P	P	10 49 06.7	-1.4
	baz=218,SNR=12						
WRAK				S	S	10 59 39.1	+2.3
	baz=218						
WRAK	Wrangell Islan	85.23	22	⇑P	P	10 49 10.5	+2.4
LR05	Currie	85.23	131	IAMs_20	IAMs_20	11 19 09.4	
	comp=Z,10µm,20.0s						
SNY	Shenyang	85.24	318	⇓P	P	10 49 11.9	+3.4
SNY				S	S	10 59 38.3	+0.7
SNY				sS	ScS	10 59 50.9	+3.1
SNY				pmax	pmax		
	comp=Z,75nm,2.6s						
SNY				pmax	pmax		
	comp=Z,2µm,5.5s						
SNY				LR	LR		
	comp=Z,1µm,17.8s						
SNY				LR	LR		
	comp=Z,1µm,16.6s						
SNY				LR	LR		
	comp=Z,2µm,15.2s						
CN2	Changchun	85.24	321	P	P	10 49 07.3	-1.2
CN2				pP	PcP	10 49 12.1	+0.5
CN2				PP	PP	10 52 27.7	+1.1
CN2				S	S	10 59 36.4	-1.2
CN2				pmax	pmax		
	comp=Z,100nm,2.1s						
CN2				pmax	pmax		
	comp=Z,3µm,5.0s						
CN2				LR	LR		
	comp=Z,1µm,19.0s						
CN2				LR	LR		
	comp=Z,5µm,19.0s						
CN2				LR	LR		
	comp=Z,5µm,19.0s						
BNX	BinXian	85.27	323	⇓P	P	10 49 07.4	-1.2
BNX				pP	PcP	10 49 10.5	-1.2
BNX				PP	PP	10 52 25.0	-1.8
BNX				S	S	10 59 37.8	0.0
BNX				pmax	pmax		
	comp=Z,87nm,1.3s						
BNX				pmax	pmax		
	comp=Z,3µm,5.4s						
BNX				LR	LR		
	comp=Z,4µm,21.1s						
BNX				LR	LR		
	comp=Z,8µm,20.6s						
BNX				LR	LR		
	comp=Z,14µm,19.5s						
LLLB	Lillooet	85.27	30	IAMs_20	IAMs_20	11 21 08.7	
	comp=Z,12µm,20.0s						
ANMO	Albuquerque	85.28	50	IAMs_20	IAMs_20	11 20 29.8	
	comp=Z,11µm,20.0s						
ANMO	Albuquerque	85.28	50	IAMs_20	IAMs_20	11 20 29.8	
	comp=Z,10µm,20.0s						
ANMO	Albuquerque	85.28	50	IAMs_20	IAMs_20	11 20 29.8	
	comp=Z,10µm,20.0s						
ANMO	Albuquerque	85.28	50	LR	LR	11 20 51.6	
	comp=Z,14µm,19.8s,baz=355,slow=31						
ANMO	Albuquerque	85.28	50	*i* P	P	10 49 08.8	-0.4
ANMO				pmax	pmax		
	comp=Z,37nm,1.1s						
ANMO	Albuquerque	85.28	50	⇑P	P	10 49 10.7	+1.4
BSUT	Blindstream Ca	85.30	43	IAMs_20	IAMs_20	11 21 56.4	
	comp=Z,8µm,19.0s						
S32K	Killisnoo	85.32	20	P	P	10 49 07.6	-0.9
	baz=216						
S32K				S	S	10 59 40.1	+2.4
	baz=216						
TTA	Tatalina	85.33	8	IAMs_20	IAMs_20	11 26 58.7	
	comp=Z,10µm,20.0s						
TTA	Tatalina	85.33	8	P	P	10 49 08.6	0.0
TTA	Tatalina	85.33	8	P	P	10 49 08.4	-0.2
	baz=197,SNR=92						
TTA				S	S	10 59 40.9	+3.1
	baz=197						
GHO	Glory Hole Cre	85.38	12	IAMs_20	IAMs_20	11 26 27.8	
	comp=Z,8µm,19.0s						
HWUT	Hardware Ranch	85.39	42	IAMs_20	IAMs_20	11 24 32.6	
	comp=Z,10µm,19.0s						
HWUT	Hardware Ranch	85.39	42	⇑P	P	10 49 09.6	-0.1
J17K	VABM Dome	85.40	7	P	P	10 49 08.9	0.0
	baz=194,SNR=80						
J17K				S	S	10 59 41.4	+3.0
	baz=194						
DIV	Divide	85.44	13	IAMs_20	IAMs_20	11 25 33.1	
	comp=Z,10µm,20.0s						
MESA	MESA	85.48	16	P	P	10 49 08.9	-0.7
	baz=210,SNR=51						
MESA				S	S	10 59 42.5	+2.8
	baz=210						
YKU2	Yakutat	85.50	17	IAMs_20	IAMs_20	11 26 45.6	
	comp=Z,7µm,19.0s						
SML	Sawmill	85.53	12	IAMs_20	IAMs_20	11 26 39.7	
	comp=Z,9µm,19.0s						
SML	Sawmill	85.53	12	P	P	10 49 09.0	-0.6
	baz=204,SNR=12						
SML				S	S	10 59 39.9	+0.1
	baz=204						
PPI	Padang Panjang	85.54	271	P	P	10 49 11.8	+1.0
	comp=Z,4µmcomp=Z,3µmcomp=Z,47nm,1.2s						
BMRM	Bremner River	85.55	14	P	P	10 49 09.5	-0.3
	baz=207,SNR=85						
BMRM				S	S	10 59 40.4	+0.4
	baz=207						
M23K	Glacier View	85.63	12	P	P	10 49 09.7	-0.4
	baz=204,SNR=17						
M23K				S	S	10 59 40.9	+0.1
	baz=204						
U35K	Hyder	85.67	23	P	P	10 49 09.5	-0.8
	baz=220						
U35K				S	S	10 59 41.7	+0.6
	baz=220						
MA2	Magadan	85.68	343	IAMs_20	IAMs_20	11 23 31.1	
	comp=Z,11µm,20.0s						
MA2	Magadan	85.68	343	P	P	10 49 09.5	-0.8
	comp=Z,34nm,0.9s,baz=143,slow=5.4,SNR=14						
MA2				LR	LR	11 23 11.1	
	comp=Z,12µm,20.7s,baz=158,slow=33						
	comp=Z,34nm,0.9s						
MA2	Magadan	85.68	343	P	P	10 49 09.4	-1.0
MA2	Magadan	85.68	343	*i* P	P	10 49 06.5	-3.9
MA2				pmax	pmax		
	comp=Z,124nm,1.6s						
MA2				MLR	MLR		
	comp=Z,7µm,19.0s						
CRQE	Cirque	85.71	15	P	P	10 49 10.6	0.0
	baz=209,SNR=56						
CRQE				S	S	10 59 42.2	+0.4
	baz=209						
PNL	Peninsula	85.71	17	P	P	10 49 12.5	+2.0
PNL	Peninsula	85.71	17	P	P	10 49 10.6	0.0
	baz=212,SNR=33						
PNL				S	S	10 59 41.6	0.0
	baz=212						
I17K	Unalakleet	85.71	6	IAMs_20	IAMs_20	11 24 51.3	
	comp=Z,9µm,20.0s						
I17K	Unalakleet	85.71	6	P	P	10 49 10.3	-0.1
	baz=192,SNR=11						
I17K				S	S	10 59 44.4	+3.0
	baz=192						
R31K	City Hall, Gus	85.72	19	P	P	10 49 09.3	-1.2
	baz=215						
R31K				S	S	10 59 44.0	+2.5
	baz=215						
CUT	Chulitna	85.72	11	IAMs_20	IAMs_20	11 26 20.9	
	comp=Z,12µm,20.0s						
CUT	Chulitna	85.72	11	P	P	10 49 09.9	-0.6
	baz=202,SNR=16						
CUT				S	S	10 59 41.8	+0.4
	baz=202						
KLU	Klutina	85.73	13	IAMs_20	IAMs_20	11 25 33.9	
	comp=Z,11µm,20.0s						
KLU	Klutina	85.73	13	P	P	10 49 10.1	-0.6
	baz=206,SNR=67						
KLU				S	S	10 59 41.8	0.0
	baz=206						
J18K	Innoko River	85.75	8	P	P	10 49 07.7	-3.0
J18K				IAmb	IAmb	10 49 16.3	
	comp=Z,159nm,1.2s						
J18K				IAMs_20	IAMs_20	11 24 39.0	
	comp=Z,11µm,20.0s						
J18K	Innoko River	85.75	8	P	P	10 49 10.4	-0.2
	baz=196						
J18K				S	S	10 59 43.5	+1.7
	baz=196						
SCM	Sheep Creek Mo	85.75	12	IAMs_20	IAMs_20	11 25 57.4	
	comp=Z,10µm,20.0s						
SCM	Sheep Creek Mo	85.75	12	P	P	10 49 10.5	-0.3
	baz=205,SNR=43						
SCM				S	S	10 59 42.4	+0.4
	baz=205						
BI05	Punta Hualpn	85.78	128	IAMs_20	IAMs_20	11 24 51.6	
	comp=Z,12µm,18.0s						
PCA	Pinnacle	85.84	16	IAMs_20	IAMs_20	11 24 57.7	
	comp=Z,9µm,19.0s						
PINM	Pinnacle	85.85	16	P	P	10 49 11.1	-0.1
	baz=211,SNR=20						
PINM				S	S	10 59 44.3	+1.2
	baz=211						
PPLA	Purkeypile	85.85	10	P	P	10 49 11.5	+0.1
	baz=200,SNR=11						
PPLA				S	S	10 59 40.1	-3.0
	baz=200						
WHN	Wuhan	85.87	305	⇑*i*P	P	10 49 12.4	+0.4
WHN				pP	pP	10 49 17.7	0.0
WHN				S	S	10 59 46.6	+2.3
WHN				pmax	pmax		
	comp=Z,5µm,13.6s						
WHN				LR	LR		
	comp=Z,7µm,18.7s						
WHN				LR	LR		
	comp=Z,3µm,12.7s						
WHN				LR	LR		
	comp=Z,8µm,17.5s						
BCPM	Bancas Point	85.89	17	IAMs_20	IAMs_20	11 24 38.8	
	comp=Z,7µm,19.0s						
CNSH	ChangSha	85.89	302	P	P	10 49 11.7	-0.5
CNSH				S	S	10 59 47.4	+2.7
CNSH				pmax	pmax		
	comp=Z,2µm,6.1s						
CNSH				LR	LR		
	comp=Z,1µm,24.9s						
CNSH				LR	LR		
	comp=Z,2µm,23.0s						
CNSH				LR	LR		
	comp=Z,3µm,17.8s						
R32K	Eaglecrest	85.98	20	P	P	10 49 11.7	-0.2
	baz=216,SNR=7.6						
R32K				S	S	10 59 45.8	+1.5
	baz=216						
K20K	Telida	86.00	9	P	P	10 49 08.8	-3.1
K20K				IAmb	IAmb	10 49 17.8	
	comp=Z,146nm,1.4s						
K20K				IAMs_20	IAMs_20	11 25 05.6	
	comp=Z,8µm,20.0s						
K20K	Telida	86.00	9	P	P	10 49 11.6	-0.4
	baz=198,SNR=73						
K20K				S	S	10 59 42.8	-1.5
	baz=198						
ANM	Nome	86.01	4	IAMs_20	IAMs_20	11 31 39.5	
	comp=Z,9µm,19.0s						
ANM	Nome	86.01	4	P	P	10 49 11.7	-0.2
	baz=188						
ANM				S	S	10 59 46.9	+2.6
	baz=188						
GRNC	Granite Creek	86.01	15	IAMs_20	IAMs_20	11 25 34.2	
	comp=Z,14µm,20.0s						
JIS	Juneau Island	86.03	20	P	P	10 49 14.6	+2.5
PLCA	Paso Flores	86.04	132	P	P	10 49 13.8	+0.9
	comp=Z,44nm,1.1s,baz=245,slow=7.0,SNR=18						
PLCA				LR	LR	11 19 48.0	
	comp=Z,7µm,19.1s,baz=236,slow=30						
	comp=Z,44nm,1.1s						
PLCA	Paso Flores	86.04	132	*e*P	P	10 49 17.1	+4.1
N25K	Chitina, Valde	86.12	14	IAMs_20	IAMs_20	11 26 02.1	
	comp=Z,12µm,19.0s						
N25K	Chitina, Valde	86.12	14	P	P	10 49 12.1	-0.5
	baz=207,SNR=61						
N25K				S	S	10 59 44.7	-1.0
	baz=207						
NEW	Newport	86.12	34	P	P	10 49 09.1	-3.8
NEW	Newport	86.12	34	LR	LR	11 22 51.6	
	comp=Z,21µm,18.8s,baz=224,slow=32						
NEW	Newport	86.12	34	P	P	10 49 09.1	-3.8
NEW				pmax	pmax		
	comp=Z,73nm,1.9s						
NEW	Newport	86.12	34	⇑P	P	10 49 13.7	+0.8
P29M	Windy Craggy	86.14	18	P	P	10 49 12.8	+0.1
	baz=213,SNR=46						
P29M				S	S	10 59 45.7	-0.1
	baz=213						
M24K	Tolsona, Glenn	86.23	13	IAMs_20	IAMs_20	11 26 10.2	
	comp=Z,9µm,19.0s						
M24K	Tolsona, Glenn	86.23	13	P	P	10 49 13.1	0.0
	baz=206,SNR=57						
M24K				S	S	10 59 45.8	-0.9
	baz=206						
MCARA	McCarthy VSAT	86.28	14	IAMs_20	IAMs_20	11 26 04.3	
	comp=Z,12µm,19.0s						
MCARA	McCarthy VSAT	86.28	14	P	P	10 49 13.2	-0.1
	baz=209,SNR=19						
MCARA				S	S	10 59 47.9	+0.8
	baz=209						
LOGN	Logan Glacier	86.28	16	IAMs_20	IAMs_20	11 25 33.2	
	comp=Z,13µm,19.0s						
H16K	Elim	86.31	5	P	P	10 49 13.3	0.0
	baz=191,SNR=21						
H16K				S	S	10 59 49.8	+2.6
	baz=191						
CTG	Chitna Glacier	86.32	15	P	P	10 49 13.1	-0.5
	baz=210,SNR=47						
CTG				S	S	10 59 48.5	+0.8
	baz=210						
CTGM	Chitina Glacie	86.32	15	IAMs_20	IAMs_20	11 25 44.3	
	comp=Z,11µm,20.0s						
AHID	Auburn Hatcher	86.32	41	⇓P	P	10 49 14.4	+0.2
WAT6	Susitna Watana	86.35	12	P	P	10 49 13.3	-0.5
	baz=204,SNR=104						
WAT6				S	S	10 59 48.3	+0.3
	baz=204						
CAST	Castle Rocks	86.36	10	P	P	10 49 10.1	-3.6
CAST				IAmb	IAmb	10 49 17.4	
	comp=Z,152nm,1.4s						
CAST				IAMs_20	IAMs_20	11 24 47.0	
	comp=Z,13µm,20.0s						
CAST	Castle Rocks	86.36	10	P	P	10 49 12.7	-1.0
	baz=200,SNR=72						
CAST				S	S	10 59 42.1	-5.7
	baz=200						
PLBC	Pleasant Camp	86.39	18	P	P	10 49 13.3	-0.5
	baz=215,SNR=34						
PLBC				S	S	10 59 51.2	+3.1
	baz=215						
J19K	Poorman	86.40	8	P	P	10 49 10.6	-3.2
J19K				IAmb	IAmb	10 49 19.6	
	comp=Z,152nm,1.4s						
J19K				IAMs_20	IAMs_20	11 30 51.1	
	comp=Z,12µm,19.0s						
J19K	Poorman	86.40	8	P	P	10 49 13.7	-0.1
	baz=197,SNR=77						
J19K				S	S	10 59 50.6	+2.5
	baz=197						
T35M	Bob Quinn	86.40	22	P	P	10 49 13.0	-1.0
	baz=220,SNR=9.3						
T35M				S	S	10 59 49.7	+1.3
	baz=220						
WAT1	Susitna Watana	86.42	11	P	P	10 49 13.3	-0.7
	baz=204						
WAT1				S	S	10 59 47.2	-1.3
	baz=204						
O28M	Mount Upton	86.44	16	IAMs_20	IAMs_20	11 25 28.5	
	comp=Z,12µm,20.0s						
O28M	Mount Upton	86.44	16	P	P	10 49 13.9	-0.6
	baz=211,SNR=54						
O28M				S	S	10 59 50.1	+0.9
	baz=211						
O29M	Mount Kennedy	86.47	17	P	P	10 49 13.3	-1.1
	baz=213,SNR=38						
O29M				S	S	10 59 51.2	+2.0
	baz=213						
G15K	Niukluk	86.53	4	P	P	10 49 14.2	-0.2
	baz=189,SNR=43						
G15K				S	S	10 59 48.4	-0.9
	baz=189						
SYO	Syowa Base	86.54	192	⇑*i*P	P	10 49 11.6	-3.1
SYO	Syowa Base	86.54	192	⇓*i*PcP	P	10 49 14.5	-0.2
SYO	Syowa Base	86.54	192	⇑*i*pP	P	10 49 16.0	+1.3
SYO	Syowa Base	86.54	192	⇓*i*sP	P	10 49 18.5	+3.8
TIA	Tai'an	86.54	311	P	P	10 49 15.2	0.0
TIA				sP	pP	10 49 20.5	-0.4
TIA				SKS	SKSac	10 59 43.0	+2.3
TIA				S	S	10 59 52.8	+2.1
TIA				pmax	pmax		
	comp=Z,57nm,1.8s						
TIA				pmax	pmax		
	comp=Z,3µm,6.0s						
TIA				LR	LR		
	comp=Z,2µm,18.0s						
TIA				LR	LR		
	comp=Z,770nm,17.6s						
TIA				LR	LR		
	comp=Z,4µm,22.6s						
CMIG	Matias Romero	86.63	70	LR	LR	11 19 38.7	
	comp=Z,12µm,19.7s,baz=243,slow=30						
GULI	GuiLin	86.69	299	P	P	10 49 16.8	+0.7
GULI				pmax	pmax		
	comp=Z,130nm,1.2s						
GULI				pmax	pmax		
	comp=Z,2µm,7.1s						
GULI				LR	LR		
	comp=Z,630nm,21.5s						
GULI				LR	LR		
	comp=Z,1µm,20.6s						
GULI				LR	LR		
	comp=Z,2µm,18.8s						
TRF	Thorofare Moun	86.69	11	P	P	10 49 14.5	-0.9
	baz=202,SNR=63						
TRF				S	S	10 59 50.5	-0.8
	baz=202						
SKAG	Skagway	86.69	19	P	P	10 49 16.7	+1.4
SKAG	Skagway	86.69	19	P	P	10 49 15.1	-0.2
	baz=216,SNR=17						
SKAG				S	S	10 59 52.7	+1.6
	baz=216						
HARP	HAARP	86.70	13	P	P	10 49 14.6	-0.7
	baz=207,SNR=18						
HARP				S	S	10 59 51.5	+0.3
	baz=207						
MNSI	Mandailing Nat	86.75	272	P	P	10 49 16.0	-0.8
	comp=Z,4µmcomp=Z,148nm,1.7s						
TROLL	Troll, Antarti	86.75	179	⇑P	P	10 49 19.0	+3.1
	comp=Z,3µm,1.0s						
TROLL				⇑S	S	10 59 52.7	+0.6
CHUM	Lake Minchumin	86.76	10	P	P	10 49 13.9	-1.6
	baz=200,SNR=51						
CHUM				S	S	10 59 48.9	-2.7
	baz=200						
P30M	Million Dollar	86.76	18	P	P	10 49 14.8	-1.0
	baz=214						

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P30M                           S        S        10 59 54.6 +2.6
      baz=214
J20K  Nowinta River  86.77   9 IAMs_20  IAMs_20  11 27 53.9
      comp=Z,9µm,20.0s
J20K  Nowinta River  86.77   9 P        P        10 49 14.9 -0.7
      baz=198,SNR=139
J20K                           S        S        10 59 52.9 +1.2
      baz=198
S34M  Telegraph Cree 86.81  21 P        P        10 49 15.3 -0.7
      baz=219,SNR=45
S34M                           S        S        10 59 53.2 +0.9
      baz=219
TPAW  Teton Pass     86.81  41 IAMs_20  IAMs_20  11 25 16.2
      comp=Z,8µm,19.0s
H17K  Granite Mounta 86.82   6 IAMs_20  IAMs_20  11 28 00.6
      comp=Z,10µm,20.0s
H17K  Granite Mounta 86.82   6 P        P        10 49 15.3 -0.6
      baz=193
H17K                           S        S        10 59 53.7 +1.5
      baz=193
FXWY  Fox Creek      86.85  40 IAMs_20  IAMs_20  11 25 36.2
      comp=Z,9µm,19.0s
F14K  Arctic Creek   86.86   3 P        P        10 49 15.7 -0.4
      baz=187,SNR=8.1
F14K                           S        S        10 59 54.9 +2.4
      baz=187
DHY   Denali Highway 86.87  12 IAMs_20  IAMs_20  11 27 03.2
      comp=Z,8µm,19.0s
DHY   Denali Highway 86.87  12 P        P        10 49 15.4 -0.9
      baz=205,SNR=32
DHY                            S        S        10 59 49.9 -3.2
      baz=205
TNA   Tin City       86.87   3 IAMs_20  IAMs_20  11 29 30.3
      comp=Z,7µm,20.0s
TNA   Tin City       86.87   3 P        P        10 49 15.8 -0.2
      baz=186
TNA                            S        S        10 59 56.0 +3.4
      baz=186
DLMT  Dillon         86.89  38 IAMs_20  IAMs_20  11 21 24.3
      comp=Z,9µm,20.0s
RND   Reindeer       86.90  11 IAMs_20  IAMs_20  11 26 46.0
      comp=Z,8µm,20.0s
SNOW  Snow King Moun 86.92  41 IAMs_20  IAMs_20  11 25 29.0
      comp=Z,8µm,19.0s
VNA3  Neumayer Olymp 86.93 175 ⇑P       P        10 49 19.0 +2.4
      comp=Z,40nm,0.8s
VNA3                           ⇓S       SKSac    10 59 46.3 +4.1
SNAA  Sanae          86.93 177 ⇑P       P        10 49 19.4 +2.7
      comp=Z,1µm,1.1s
SNAA                           ⇑S       S        10 59 54.4 +0.8
SNAA  Sanae          86.93 177 IAMs_20  IAMs_20  11 25 20.7
      comp=Z,13µm,19.0s
SNAA  Sanae          86.93 177 P        P        10 49 16.8 +0.2
      comp=Z,65nm,1.1s,baz=186,slow=4.3,SNR=41
SNAA                           LR       LR       11 25 12.4
      comp=Z,11µm,19.9s,baz=194,slow=34
      comp=Z,65nm,1.1s
SNAA  Sanae          86.93 177ceP       P        10 49 16.7  0.0
SNAA                           pmax     pmax
      comp=Z,195nm,2.5s
SNAA                           MLR      MLR
      comp=Z,9µm,18.0s
SNAA  Sanae          86.93 177 ⇓P       P        10 49 15.9 -0.8
GCSA  Galena City Sc 86.96   7 P        P        10 49 16.5  0.0
      baz=196,SNR=38
GCSA                           S        S        10 59 56.3 +2.8
      baz=196
YUK8  Steele Glacier 86.99  16 P        P        10 49 15.7 -1.4
      baz=212,SNR=74
YUK8                           S        S        10 59 54.7 +0.2
      baz=212
G16K  Koyuk River    87.05   5 IAMs_20  IAMs_20  11 26 27.7
      comp=Z,10µm,20.0s
G16K  Koyuk River    87.05   5 P        P        10 49 16.9 -0.1
      baz=191,SNR=24
G16K                           S        S        10 59 57.2 +2.9
      baz=191
YUK6  Outpost Mounta 87.06  17 P        P        10 49 16.2 -1.3
      baz=213,SNR=25
YUK6                           S        S        10 59 54.6 -0.6
      baz=213
LOHW  Long Hollow    87.09  41 IAMs_20  IAMs_20  11 25 43.6
      comp=Z,7µm,19.0s
PAX   Paxson         87.15  13 IAMs_20  IAMs_20  11 26 41.6
      comp=Z,8µm,20.0s
PAX   Paxson         87.15  13 P        P        10 49 16.6 -1.1
      baz=206,SNR=42
PAX                            S        S        10 59 54.1 -1.5
      baz=206
BPAW  Bear Paw Mtn.  87.18  10 IAMs_20  IAMs_20  11 27 47.5
      comp=Z,13µm,20.0s
BPAW  Bear Paw Mtn.  87.18  10 P        P        10 49 16.4 -1.2
      baz=201,SNR=12
BPAW                           S        S        10 59 54.8 -0.9
      baz=201
M26K  Nabesna, AK    87.18  14 P        P        10 49 14.3 -3.4
M26K                           IAmb     IAmb     10 49 23.2
      comp=Z,161nm,1.2s
M26K                           IAMs_20  IAMs_20  11 26 28.2
      comp=Z,11µm,19.0s
M26K  Nabesna, AK    87.18  14 P        P        10 49 17.3 -0.5
      baz=209,SNR=104
M26K                           S        S        10 59 53.7 -2.1
      baz=209
MCK   McKinley       87.18  11 IAMs_20  IAMs_20  11 27 15.5
      comp=Z,8µm,20.0s
MCK   McKinley       87.18  11 P        P        10 49 16.9 -0.8
      baz=203,SNR=84
MCK                            S        S        10 59 54.8 -1.0
      baz=203
H18K  Honhosa River  87.19   7 IAMs_20  IAMs_20  11 25 45.3
      comp=Z,13µm,20.0s
H18K  Honhosa River  87.19   7 P        P        10 49 17.3 -0.4
      baz=194
H18K                           S        S        10 59 53.5 -2.2
      baz=194
F15K  North Star Dit 87.19   4 IAMs_20  IAMs_20  11 28 56.7
      comp=Z,9µm,20.0s
F15K  North Star Dit 87.19   4 P        P        10 49 16.9 -0.8
      baz=189
F15K                           S        S        10 59 54.1 -1.7
      baz=189
HYT   Haines Junctio 87.20  17 P        P        10 49 16.8 -1.1
      baz=214,SNR=48
HYT                            S        S        10 59 56.2 -0.1
      baz=214
BI02  San Fabin de   87.22 128 IAMs_20  IAMs_20  11 27 32.8
      comp=Z,8µm,18.0s
YUK3  Moose Creek    87.23  15 P        P        10 49 17.8 -0.4
      baz=211,SNR=126
YUK3                           S        S        10 59 55.4 -1.3
      baz=211
Q32M  Nakina River   87.25  20 P        P        10 49 17.0 -1.4
      baz=218,SNR=26
Q32M                           S        S        10 59 56.8 -0.1
      baz=218
BW06  Boulder Array  87.27  42 IAMs_20  IAMs_20  11 26 02.4
      comp=Z,7µm,19.0s
PDAR  Pinedale Array 87.27  42 P        P        10 49 19.2 +0.3
      comp=Z,9.5nm,0.9s,baz=219,slow=2.1,SNR=38
PDAR                           PKKPbc   PKKPbc   11 07 10.8 -0.4
      comp=Z,3.3nm,1.2s,baz=100,slow=7.7,SNR=5.1
PDAR                           LR       LR       11 24 22.8
      comp=Z,4µm,18.3s,baz=240,slow=33
      comp=Z,9.5nm,0.9s
P32M  Atlin          87.29  19 P        P        10 49 17.6 -0.8
      baz=217,SNR=26
P32M                           S        S        10 59 56.6 -0.4
      baz=217
G17K  Kiwalik Mounta 87.30   6 P        P        10 49 18.2  0.0
      baz=192,SNR=57
G17K                           S        S        10 59 57.5 +0.7
      baz=192
I20K  Naaghedeneel   87.32   8 IAMs_20  IAMs_20  11 31 38.4
      comp=Z,10µm,19.0s
I20K  Naaghedeneel   87.32   8 P        P        10 49 18.0 -0.3
      baz=198,SNR=39
I20K                           S        S        10 59 58.9 +2.1
      baz=198
YUK4  Talbot Arm     87.33  16 P        P        10 49 18.4 -0.3
      baz=213,SNR=15
SDCO  Great Sand Dun 87.34  48 ⇑P       P        10 49 20.4 +0.9
M27K  Edge Creek, AK 87.40  14 IAMs_20  IAMs_20  11 26 41.9
      comp=Z,13µm,19.0s
M27K  Edge Creek, AK 87.40  14 P        P        10 49 18.4 -0.5
      baz=210,SNR=218
M27K                           S        S        10 59 58.2  0.0
      baz=210
KULM  Kulim          87.40 277 P        P        10 49 18.6 -1.3
KULM  Kulim          87.40 277 P        P        10 49 20.2 +0.3
VNA2  Neumayer--Watz 87.41 176 ⇑P       P        10 49 22.0 +3.0
      comp=Z,43nm,0.9s,baz=197,slow=3.7
VNA2                           ⇑S       SKSac    10 59 47.8 +2.7
      baz=337,slow=8.3
YFT   Old Faithful   87.41  40 IAMs_20  IAMs_20  11 27 58.1
      comp=Z,9µm,18.0s
YHL   Hebgen Lake    87.43  39 IAMs_20  IAMs_20  11 26 14.6
      comp=Z,7µm,19.0s
MENT  Mentasta       87.49  13 IAMs_20  IAMs_20  11 26 49.5
      comp=Z,12µm,20.0s
MENT  Mentasta       87.49  13 P        P        10 49 18.9 -0.3
ML02  Panimavida     87.49 127 IAMs_20  IAMs_20  11 25 35.8
      comp=Z,10µm,18.0s
H17A  Grant Village  87.54  40 IAMs_20  IAMs_20  11 30 12.4
      comp=Z,7µm,18.0s
O30N  Mendenhall     87.54  18 P        P        10 49 19.4 -0.2
      baz=215,SNR=65
O30N                           S        S        11 00 00.3 +0.8
      baz=215
BOZ   Bozeman (W)    87.58  39 IAMs_20  IAMs_20  11 22 35.7
      comp=Z,8µm,20.0s
BOZ   Bozeman (W)    87.58  39 ⇓P       P        10 49 20.8 +0.6
DLBC  Dease Lake     87.59  22 LR       LR       11 21 25.1
      comp=Z,4µm,21.4s,baz=236,slow=31
DLBC  Dease Lake     87.59  22 P        P        10 49 19.0 -0.8
      baz=220,SNR=20
DLBC                           S        S        11 00 00.4 +0.4
      baz=220
VNA1  Neumayer--Stat 87.61 175 ⇑P       P        10 49 23.0 +3.2
      comp=Z,75nm,1.1s
YNM   Yellowstone No 87.64  40 IAMs_20  IAMs_20  11 24 07.2
      comp=Z,6µm,19.0s
L26K  Log Cabin Wild 87.65  14 IAMs_20  IAMs_20  11 27 04.7
      comp=Z,13µm,20.0s
L26K  Log Cabin Wild 87.65  14 P        P        10 49 19.0 -1.0
      baz=208,SNR=77
L26K                           S        S        11 00 01.8 +1.5
      baz=208
BVCY  Beaver Creek   87.69  15 P        P        10 49 20.0 -0.2
      baz=211,SNR=106
BVCY                           S        S        11 00 02.5 +1.8
      baz=211
H19K  Roundabout Mou 87.77   7 IAMs_20  IAMs_20  11 26 12.4
      comp=Z,13µm,20.0s
H19K  Roundabout Mou 87.77   7 P        P        10 49 20.3 -0.1
      baz=196,SNR=72
H19K                           S        S        11 00 05.0 +3.8
      baz=196
T25A  Trinidad       87.80  49 IAMs_20  IAMs_20  11 22 21.5
      comp=Z,7µm,19.0s
WHY   Whitehorse     87.80  18 IAMs_20  IAMs_20  11 32 11.2
      comp=Z,12µm,18.0s
WHY   Whitehorse     87.80  18 P        P        10 49 19.6 -1.3
      baz=216,SNR=35
WHY                            S        S        11 00 04.9 +2.9
      baz=216
N30M  Aishikik Lake  87.84  17 IAMs_20  IAMs_20  11 28 22.3
      comp=Z,6µm,19.0s
N30M  Aishikik Lake  87.84  17 P        P        10 49 19.2 -1.7
      baz=214,SNR=17
N30M                           S        S        11 00 03.1 +0.9
      baz=214
K24K  Donnelly Dome  87.84  12 IAMs_20  IAMs_20  11 27 23.9
      comp=Z,11µm,20.0s
K24K  Donnelly Dome  87.84  12 P        P        10 49 20.2 -0.6
      baz=206,SNR=55
K24K                           S        S        11 00 02.3 +0.2
      baz=206
G18K  Tagagawik      87.88   6 IAMs_20  IAMs_20  11 26 17.6
      comp=Z,11µm,20.0s
G18K  Tagagawik      87.88   6 P        P        10 49 20.9 -0.1
      baz=194
G18K                           S        S        11 00 05.0 +2.7
      baz=194
H20K  Anotleneega Mo 87.93   8 P        P        10 49 19.8 -1.4
      baz=198,SNR=57
H20K                           S        S        11 00 04.8 +1.9
      baz=198
NVL   N'lazarevskaya 87.93 182 eP       P        10 49 23.8 +2.4
NVL                            pmax     pmax
      comp=Z,39nm,1.6s
NEA2  Nenana         87.95  11 P        P        10 49 18.3 -3.1
NEA2                           IAmb     IAmb     10 49 27.4
      comp=Z,52nm,1.1s
NEA2  Nenana         87.95  11 P        P        10 49 19.9 -1.4
      baz=203,SNR=27
NEA2                           S        S        11 00 02.9 -0.2
      baz=203
RIDG  Independent Ri 87.97  13 IAMs_20  IAMs_20  11 27 36.2
      comp=Z,13µm,19.0s
RIDG  Independent Ri 87.97  13 P        P        10 49 20.9 -0.6
      baz=207,SNR=49
RIDG                           S        S        11 00 01.9 -1.5
      baz=207
YMP   Mirror Lake Pl 87.98  40 IAMs_20  IAMs_20  11 26 08.1
      comp=Z,9µm,18.0s
HEH   HeiHe          88.01 327 eP       P        10 49 20.8 -1.1
HEH                            pP       PcP      10 49 24.1 +0.4
HEH                            SKS      SKSac    10 59 51.5 +2.6
HEH                            S        S        11 00 03.6 -0.5
HEH                            pmax     pmax
      comp=Z,63nm,1.5s
HEH                            pmax     pmax
      comp=Z,2µm,5.8s
HEH                            LR       LR
      comp=Z,5µm,20.7s
HEH                            LR       LR
      comp=Z,4µm,19.7s
HEH                            LR       LR
      comp=Z,10µm,21.2s
R33M  Jennings River 88.01  21 P        P        10 49 20.7 -1.2
      baz=219,SNR=55
R33M                           S        S        11 00 03.9 -0.2
      baz=219
WRH   Wood River Hil 88.01  11 P        P        10 49 19.1 -2.5
L27K  Beaver Creek,  88.02  14 IAMs_20  IAMs_20  11 27 12.4
      comp=Z,11µm,19.0s
L27K  Beaver Creek,  88.02  14 P        P        10 49 20.1 -1.6
      baz=210,SNR=74
L27K                           S        S        11 00 05.5 +1.7
      baz=210
I21K  Tanana         88.03   9 P        P        10 49 20.8 -0.9
      baz=200,SNR=36
I21K                           S        S        11 00 03.3 -0.5
      baz=200
DOT   Dot Lake       88.05  13 IAMs_20  IAMs_20  11 27 27.2
      comp=Z,10µm,20.0s
RPSI  Rantau Prapat  88.05 274 P        P        10 49 21.1 -2.0
P33M  Teslin, Yukon  88.06  19 P        P        10 49 21.3 -0.7
      baz=218,SNR=15
P33M                           S        S        11 00 05.1 +0.7
      baz=218
MLY   Manley         88.08  10 IAMs_20  IAMs_20  11 28 26.5
      comp=Z,8µm,20.0s
MLY   Manley         88.08  10 P        P        10 49 20.8 -1.3
      baz=202,SNR=54
MLY                            S        S        11 00 05.0 +0.5
      baz=202
PSI   Prapat         88.09 274 LR       LR       11 30 25.0
      comp=Z,3µm,20.7s,baz=128,slow=37
PSI   Prapat         88.09 274 P        P        10 49 22.0 -1.4
PSI   Prapat         88.09 274 P        P        10 49 21.1 -2.3
PSI                            pmax     pmax
      comp=Z,153nm,1.1s
PSI                            MLR      MLR
      comp=Z,3µm,20.0s
SEY   Seymchan       88.14 345 P        P        10 49 21.6 -0.6
      comp=Z,82nm,0.9s,baz=147,slow=6.4,SNR=41
SEY                            LR       LR       11 25 02.0
      comp=Z,6µm,20.3s,baz=154,slow=33
      comp=Z,82nm,0.9s
SEY   Seymchan       88.14 345ceP       P        10 49 20.7 -1.5
SEY                            pmax     pmax
      comp=Z,104nm,1.3s
SEY                            MLR      MLR
      comp=Z,5µm,19.0s
HDA   Harding Lake   88.16  11 IAMs_20  IAMs_20  11 28 05.4
      comp=Z,7µm,19.0s
HDA   Harding Lake   88.16  11 P        P        10 49 21.5 -0.9
      baz=205,SNR=82
HDA                            S        S        11 00 04.8 -0.3
      baz=205
F17K  Baldwin Pennin 88.17   5 IAMs_20  IAMs_20  11 27 01.3
      comp=Z,9µm,20.0s
F17K  Baldwin Pennin 88.17   5 P        P        10 49 22.3  0.0
      baz=192,SNR=9.7
F17K                           S        S        11 00 06.0 +1.0
      baz=192
N31M  Braeburn, Yuko 88.22  17 P        P        10 49 21.6 -1.1
      baz=215,SNR=29
N31M                           S        S        11 00 05.4 -0.4
      baz=215
VA05  Santo Domingo  88.22 125 IAMs_20  IAMs_20  11 26 19.9
      comp=Z,10µm,18.0s
G19K  Purcell Mounta 88.29   7 IAMs_20  IAMs_20  11 26 19.2
      comp=Z,12µm,20.0s
G19K  Purcell Mounta 88.29   7 P        P        10 49 22.5 -0.4
      baz=196,SNR=74
G19K                           S        S        11 00 07.0 +0.8
      baz=196
M29M  Somme Creek    88.30  16 IAMs_20  IAMs_20  11 26 38.6
      comp=Z,12µm,19.0s
M29M  Somme Creek    88.30  16 P        P        10 49 22.9 -0.3
      baz=213,SNR=60
M29M                           S        S        11 00 10.2 +3.5
      baz=213
BO01  Tunca          88.31 126 IAMs_20  IAMs_20  11 20 42.5
      comp=Z,7µm,20.0s
EFI   East Falkland  88.35 146 i P      P        10 49 21.1 -2.6
EFI                            pmax     pmax
      comp=Z,104nm,1.2s
EFI                            MLR      MLR
      comp=Z,2µm,18.0s
SCRK  Sand Creek     88.36  13 IAMs_20  IAMs_20  11 27 27.3
      comp=Z,10µm,20.0s
SCRK  Sand Creek     88.36  13 P        P        10 49 23.0 -0.4
      baz=208,SNR=83
SCRK                           S        S        11 00 09.6 +2.4
      baz=208
H21K  Melozitna Rive 88.36   9 IAMs_20  IAMs_20  11 29 04.0
      comp=Z,10µm,20.0s
H21K  Melozitna Rive 88.36   9 P        P        10 49 22.9 -0.4
      baz=200,SNR=37
H21K                           S        S        11 00 09.7 +2.7
      baz=200
KVTX  Kingsville     88.38  60 IAMs_20  IAMs_20  11 24 47.2
      comp=Z,6µm,18.0s
MT01  Popeta         88.41 126 IAMs_20  IAMs_20  11 26 34.9
      comp=Z,8µm,18.0s
I23K  Minto, Yukon-K 88.42  10 P        P        10 49 22.3 -1.2
      baz=203,SNR=34
I23K                           S        S        11 00 07.5 +0.1
      baz=203
COLA  College        88.42  11 IAMs_20  IAMs_20  11 27 35.3
      comp=Z,8µm,20.0s
COLA  College        88.42  11 P        P        10 49 23.5  0.0
COLA  College        88.42  11 i P      P        10 49 22.3 -1.2
COLA                           pmax     pmax
      comp=Z,214nm,1.5s
COLA                           MLR      MLR
      comp=Z,9µm,20.0s
COLA  College        88.42  11 P        P        10 49 23.0 -0.5
      baz=204
COLA                           S        S        11 00 08.9 +1.5
      baz=204
COLA  College        88.42  11 ⇓P       P        10 49 21.4 -2.1
F18K  Selawik        88.47   6 P        P        10 49 23.5 -0.2
      baz=193,SNR=10
F18K                           S        S        11 00 09.8 +2.0
      baz=193
IL31                 88.50  11 P        P        10 49 22.0 -1.9
IL31                           IAmb     IAmb     10 49 28.8
      comp=Z,143nm,1.4s
ILAR  Eielson Array  88.50  11 P        P        10 49 21.6 -2.4
ILAR  Eielson Array  88.50  11 P        P        10 49 22.8 -1.1
      comp=Z,35nm,1.1s,baz=217,slow=4.2,SNR=48
ILAR                           PKKPbc   PKKPbc   11 07 08.6 -0.4
      comp=Z,0.6nm,0.9s,baz=338,slow=3.2,SNR=4.8
ILAR                           PKPPKP   P'P'df   11 15 15.3 +5.7
      comp=Z,1.1nm,1.2s,baz=307,slow=4.0,SNR=6.2
      comp=Z,35nm,1.1s
ILAR  Eielson Array  88.50  11 P        P        10 49 21.6 -2.4
MT09  Talagante      88.64 126 IAMs_20  IAMs_20  11 26 33.2
      comp=Z,9µm,18.0s
J25K  Salcha River,  88.65  12 IAMs_20  IAMs_20  11 28 08.1
      comp=Z,9µm,20.0s
J25K  Salcha River,  88.65  12 P        P        10 49 24.1 -0.6
      baz=206,SNR=97
J25K                           S        S        11 00 10.9 +1.2
      baz=206
TSI   Tuntungan      88.68 274 P        P        10 49 28.4 +2.4
      comp=Z,5µmcomp=Z,152nm,2.0s
RLMT  Red Lodge      88.71  40 IAMs_20  IAMs_20  11 26 48.6
      comp=Z,7µm,19.0s
POKR  Poker Plat Res 88.72  11 IAMs_20  IAMs_20  11 27 13.1
      comp=Z,8µm,20.0s
POKR  Poker Plat Res 88.72  11 P        P        10 49 24.3 -0.7
      baz=205,SNR=13
POKR                           S        S        11 00 08.9 -1.5
      baz=205
N32M  Quiet Lake     88.72  19 P        P        10 49 24.6 -0.6
      baz=218
N32M                           S        S        11 00 12.6 +2.0
      baz=218
CCIG  Comitan        88.74  72 IAMs_20  IAMs_20  11 20 15.5
      comp=Z,8µm,20.0s
MT02  Curacav        88.75 125 IAMs_20  IAMs_20  11 23 26.9
      comp=Z,12µm,18.0s
E17K  Hotham Inlet   88.75   5 P        P        10 49 24.4 -0.7
      baz=191,SNR=8.1
E17K                           S        S        11 00 13.6 +3.0
      baz=191
H22K  Ishtalitna Cre 88.79   9 P        P        10 49 25.0 -0.3
      baz=201,SNR=36
H22K                           S        S        11 00 11.2 +0.2
      baz=201
GSI   Gunungsitoli   88.80 272 P        P        10 49 27.8 +1.2
GSI   Gunungsitoli   88.80 272 P        P        10 49 28.1 +1.5
GSI   Gunungsitoli   88.80 272 ⇑P       P        10 49 28.3 +1.7
GSI                            ⇑P       pP       10 49 31.6 -0.8
K27K  Chicken        88.81  14 IAMs_20  IAMs_20  11 27 50.4
      comp=Z,11µm,19.0s
K27K  Chicken        88.81  14 P        P        10 49 24.8 -0.6
      baz=209
K27K                           S        S        11 00 11.7 +0.5
      baz=209
HNS   HongShan       88.81 311 ⇑P       P        10 49 26.8 +0.8
HNS                            SKS      SKSac    10 59 55.5 +1.2
HNS                            SS       SS       11 06 09.1 +3.9
HNS                            pmax     pmax
      comp=Z,2µm,5.9s
HNS                            LR       LR
      comp=Z,2µm,18.0s
HNS                            LR       LR
      comp=Z,2µm,21.2s
HNS                            LR       LR
      comp=Z,3µm,21.4s
BO04  La Punta       88.84 126 IAMs_20  IAMs_20  11 20 49.4
      comp=Z,8µm,20.0s
F19K  Shaleruckik Mo 88.88   6 IAMs_20  IAMs_20  11 26 29.0
      comp=Z,10µm,20.0s
F19K  Shaleruckik Mo 88.88   6 P        P        10 49 25.0 -0.6
      baz=195,SNR=46
F19K                           S        S        11 00 11.7  0.0
      baz=195
J26L  Joseph Creek   88.91  13 IAMs_20  IAMs_20  11 28 06.0
      comp=Z,7µm,19.0s
J26L  Joseph Creek   88.91  13 P        P        10 49 25.9 -0.1
      baz=208,SNR=202
J26L                           S        S        11 00 13.6 +1.3
      baz=208
HUEH  Huehuetenango  88.94  73 IAMs_20  IAMs_20  11 20 28.8
      comp=Z,8µm,20.0s
L29M  L29M           88.94  16 IAMs_20  IAMs_20  11 27 18.7
      comp=Z,13µm,20.0s
L29M  L29M           88.94  16 P        P        10 49 26.1  0.0
      baz=213,SNR=89
L29M                           S        S        11 00 14.7 +2.1
      baz=213
MT05  Renca          89.00 126 IAMs_20  IAMs_20  11 25 35.4
      comp=Z,9µm,18.0s
735A  Kenedy         89.00  59 IAMs_20  IAMs_20  11 22 42.6
      comp=Z,11µm,20.0s
H23K  Yukon River    89.01  10 P        P        10 49 25.9 -0.4
      baz=203,SNR=14
H23K                           S        S        11 00 12.7 -0.4
      baz=203
BJT   Baijiatuau     89.07 314 P        P        10 49 27.5 +0.3
BJI   Beijing        89.07 314 P        P        10 49 26.7 -0.5
BJI                            pmax     pmax
      comp=Z,35nm,2.4s
BJI                            pmax     pmax
      comp=Z,1µm,5.0s
BJI                            LR       LR
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	comp=Z,650nm,22.8s						
BJI				LR	LR		
	comp=Z,690nm,20.4s						
BJI				LR	LR		
	comp=Z,1µm,22.4s						
G21K	**Allakaket**	**89.08**	**8**	IAMs_20	IAMs_20	11 29 35.0	
	comp=Z,9µm,20.0s						
G21K	**Allakaket**	**89.08**	**8**	P	**P**	**10 49 26.3**	**-0.3**
	baz=199,SNR=26						
G21K				S	**S**	**11 00 14.5**	**+0.9**
	baz=199						
LYN	**LuoYang**	**89.11**	**308**	⇑P	**P**	**10 49 28.3**	**+0.8**
LYN				SKS	**SKSac**	**10 59 59.1**	**+2.8**
LYN				S	**S**	**11 00 15.2**	**-0.1**
LYN				sS	sS	11 00 28.0	+2.5
LYN				pmax	pmax		
	comp=Z,120nm,1.3s						
LYN				pmax	pmax		
	comp=Z,3µm,5.2s						
LYN				LR	LR		
	comp=Z,3µm,17.5s						
LYN				LR	LR		
	comp=Z,2µm,22.0s						
LYN				LR	LR		
	comp=Z,5µm,18.9s						
K22A	**Casper**	**89.12**	**43**	IAMs_20	IAMs_20	11 24 13.3	
	comp=Z,9µm,19.0s						
MT03	**Universidad Ad**	**89.12**	**126**	IAMs_20	IAMs_20	11 26 47.9	
	comp=Z,9µm,18.0s						
PEL	**Peldehue**	**89.14**	**125**	IAMs_20	IAMs_20	11 23 30.5	
	comp=Z,11µm,18.0s						
PEL	**Peldehue**	**89.14**	**125**	⇑P	**P**	**10 49 29.9**	**+1.9**
MT16	**CCHEN**	**89.14**	**126**	IAMs_20	IAMs_20	11 26 40.3	
	comp=Z,8µm,18.0s						
M31M	**Drury Creek, Y**	**89.19**	**17**	P	**P**	**10 49 27.0**	**-0.3**
	baz=216,SNR=17						
M31M				S	**S**	**11 00 14.8**	**-0.1**
	baz=216						
E18K	**Tukpahlearik C**	**89.19**	**5**	IAMs_20	IAMs_20	11 27 34.2	
	comp=Z,9µm,20.0s						
E18K	**Tukpahlearik C**	**89.19**	**5**	P	**P**	**10 49 26.8**	**-0.3**
	baz=192,SNR=40						
E18K				S	**S**	**11 00 15.6**	**+1.0**
	baz=192						
MT13	**San Alfonso**	**89.19**	**126**	IAMs_20	IAMs_20	11 21 09.6	
	comp=Z,7µm,20.0s						
LMEL	**Las Melosas**	**89.20**	**126**	IAMs_20	IAMs_20	11 21 12.0	
	comp=Z,9µm,20.0s						
D17K	**Noatak River**	**89.27**	**4**	P	**P**	**10 49 27.7**	**+0.3**
	baz=190,SNR=12						
D17K				S	**S**	**11 00 16.0**	**+0.7**
	baz=190						
WTLY	**Watson Lake, Y**	**89.27**	**21**	P	**P**	**10 49 27.0**	**-0.7**
	baz=221						
WTLY				S	**S**	**11 00 16.1**	**+0.3**
	baz=221						
H24K	**Noodor Dome**	**89.30**	**11**	P	**P**	**10 49 26.1**	**-1.6**
	baz=204						
H24K				S	**S**	**11 00 14.5**	**-1.3**
	baz=204						
F20K	**Avaraart Lake**	**89.31**	**7**	IAMs_20	IAMs_20	11 26 51.4	
	comp=Z,12µm,20.0s						
F20K	**Avaraart Lake**	**89.31**	**7**	P	**P**	**10 49 27.2**	**-0.5**
	baz=197						
F20K				S	**S**	**11 00 15.6**	**-0.1**
	baz=197						
VA03	**San Esteban**	**89.40**	**125**	IAMs_20	IAMs_20	11 24 11.2	
	comp=Z,12µm,19.0s						
PRP	**Porcupine Dome**	**89.43**	**12**	IAMs_20	IAMs_20	11 29 03.9	
	comp=Z,8µm,20.0s						
PRP	**Porcupine Dome**	**89.43**	**12**	P	**P**	**10 49 27.7**	**-0.7**
	baz=206,SNR=107						
PRP				S	**S**	**11 00 15.6**	**-1.7**
	baz=206						
CO06	**Fray Jorge**	**89.44**	**123**	IAMs_20	IAMs_20	11 27 09.0	
	comp=Z,9µm,18.0s						
DAWY	**Dawson**	**89.45**	**15**	IAMs_20	IAMs_20	11 27 56.0	
	comp=Z,8µm,19.0s						
DAWY	**Dawson**	**89.45**	**15**	P	**P**	**10 49 28.3**	**-0.1**
	baz=212,SNR=82						
DAWY				S	**S**	**11 00 17.0**	**-0.2**
	baz=212						
FARO	**Faro, Yukon**	**89.50**	**18**	IAMs_20	IAMs_20	11 29 13.3	
	comp=Z,7µm,19.0s						
FARO	**Faro, Yukon**	**89.50**	**18**	P	**P**	**10 49 28.0**	**-0.7**
	baz=217,SNR=15						
FARO				S	**S**	**11 00 16.3**	**-1.6**
	baz=217						
ENH	**Enshi**	**89.51**	**303**	P	**P**	**10 49 29.9**	**+0.3**
MT08	**Bocatoma Ro**	**89.52**	**126**	IAMs_20	IAMs_20	11 21 21.3	
	comp=Z,8µm,21.0s						
E19K	**Redstone River**	**89.54**	**6**	IAMs_20	IAMs_20	11 27 10.4	
	comp=Z,10µm,20.0s						
E19K	**Redstone River**	**89.54**	**6**	P	**P**	**10 49 28.2**	**-0.5**
	baz=196,SNR=72						
E19K				S	**S**	**11 00 16.7**	**-1.2**
	baz=196						
SRIT	**Nakonsritamara**	**89.58**	**279**	P	**P**	**10 49 30.9**	**+0.7**
TOAD	**Toad River Com**	**89.59**	**23**	P	**P**	**10 49 29.1**	**-0.2**
	baz=224,SNR=138						
TOAD				S	**S**	**11 00 16.5**	**-2.3**
	baz=224						
RDOG	**Red Dog Mine**	**89.63**	**4**	IAMs_20	IAMs_20	11 34 10.1	
	comp=Z,10µm,19.0s						
RDOG	**Red Dog Mine**	**89.63**	**4**	P	**P**	**10 49 29.1**	**-0.1**
	baz=190						
RDOG				S	**S**	**11 00 17.7**	**-1.1**
	baz=190						
LIRD	**Liard River Hi**	**89.68**	**22**	P	**P**	**10 49 29.5**	**-0.1**
	baz=224,SNR=10						
I26K	**Coal Creek Min**	**89.70**	**13**	IAMs_20	IAMs_20	11 28 21.0	
	comp=Z,11µm,20.0s						
I26K	**Coal Creek Min**	**89.70**	**13**	P	**P**	**10 49 29.4**	**-0.2**
	baz=208,SNR=28						
I26K				S	**S**	**11 00 20.2**	**+0.7**
	baz=208						
C16K	**Lisburne Hills**	**89.70**	**3**	IAMs_20	IAMs_20	11 28 14.1	
	comp=Z,9µm,20.0s						
C16K	**Lisburne Hills**	**89.70**	**3**	P	**P**	**10 49 29.4**	**0.0**
	baz=188						
C16K				S	**S**	**11 00 19.0**	**-0.3**
	baz=188						
K29M	**Barlow Dome**	**89.71**	**15**	P	**P**	**10 49 29.1**	**-0.6**
	baz=214,SNR=104						
K29M				S	**S**	**11 00 18.3**	**-1.6**
	baz=214						
CO02	**Combarbal**	**89.72**	**123**	IAMs_20	IAMs_20	11 27 38.3	
	comp=Z,10µm,18.0s						
G22K	**Bettles**	**89.74**	**9**	P	**P**	**10 49 29.8**	**+0.1**
	baz=201						
G22K				S	**S**	**11 00 20.0**	**+0.3**
	baz=201						
F21K	**Alatna River**	**89.75**	**8**	IAMs_20	IAMs_20	11 27 04.8	
	comp=Z,10µm,20.0s						
F21K	**Alatna River**	**89.75**	**8**	P	**P**	**10 49 29.3**	**-0.5**
	baz=199,SNR=8.5						
F21K				S	**S**	**11 00 20.1**	**+0.1**
	baz=199						
G23K	**Bananza Creek**	**89.76**	**9**	IAMs_20	IAMs_20	11 29 49.8	
	comp=Z,8µm,20.0s						
G23K	**Bananza Creek**	**89.76**	**9**	P	**P**	**10 49 29.5**	**-0.4**
	baz=202,SNR=24						
G23K				S	**S**	**11 00 19.1**	**-1.0**
	baz=202						
EGMT	**Eagleton**	**90.00**	**37**	IAMs_20	IAMs_20	11 24 29.5	
	comp=Z,13µm,20.0s						
C17K	**DeLong Mountai**	**90.03**	**4**	P	**P**	**10 49 30.8**	**-0.3**
	baz=190						
C17K				S	**S**	**11 00 21.0**	**-1.5**
	baz=190						
H25L	**Birch Creek**	**90.05**	**11**	P	**P**	**10 49 31.2**	**0.0**
	baz=206,SNR=7.3						
H25L				S	**S**	**11 00 19.9**	**-2.7**
	baz=206						
J29N	**Klondike Camp**	**90.05**	**15**	IAMs_20	IAMs_20	11 28 24.0	
	comp=Z,9µm,19.0s						
J29N	**Klondike Camp**	**90.05**	**15**	P	**P**	**10 49 31.1**	**-0.2**
	baz=213						
J29N				S	**S**	**11 00 22.3**	**-0.7**
	baz=213						
CO05	**La Serena**	**90.07**	**122**	IAMs_20	IAMs_20	11 25 10.5	
	comp=Z,9µm,18.0s						
CO03	**El Pedregal**	**90.11**	**123**	IAMs_20	IAMs_20	11 27 57.8	
	comp=Z,8µm,18.0s						
G24K	**Hadweenzic Riv**	**90.16**	**10**	P	**P**	**10 49 31.1**	**-0.6**
	baz=204,SNR=6.4						
G24K				S	**S**	**11 00 20.4**	**-3.2**
	baz=204						
F22K	**John River**	**90.19**	**8**	P	**P**	**10 49 31.8**	**0.0**
	baz=200						
GYA	**Guiyang**	**90.20**	**298**	⇑P	**P**	**10 49 33.5**	**+0.5**
GYA				PP	**PP**	**10 53 09.8**	**+2.7**
GYA				S	**S**	**11 00 23.7**	**-2.4**
GYA				pmax	pmax		
	comp=Z,27nm,1.3s						
GYA				pmax	pmax		
	comp=Z,2µm,6.5s						
GYA				LR	LR		
	comp=Z,1µm,22.5s						
GYA				LR	LR		
	comp=Z,960nm,16.5s						
GYA				LR	LR		
	comp=Z,2µm,21.9s						
ZEA	**Zeya**	**90.21**	**330**	*e*P	**P**	**10 49 31.5**	**-0.7**
ZEA				*e*SS	SS	11 06 27.9	+3.1
ZEA				pmax	pmax		
	comp=E,300nm,7.8s						
ZEA				pmax	pmax		
	comp=N,300nm,6.1s						
ZEA				pmax	pmax		
	comp=Z,900nm,6.4s						
ZEA				pmax	pmax		
	comp=E,10.0nm,1.4s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,60nm,1.2s						
COLD	**Coldfoot**	**90.21**	**9**	IAMs_20	IAMs_20	11 30 33.8	
	comp=Z,7µm,19.0s						
COLD	**Coldfoot**	**90.21**	**9**	P	**P**	**10 49 32.0**	**+0.1**
	baz=202,SNR=12						
COLD				S	**S**	**11 00 24.1**	**0.0**
	baz=202						
I27K	**Kandik River**	**90.28**	**13**	P	**P**	**10 49 31.7**	**-0.6**
	baz=210,SNR=24						
I27K				S	**S**	**11 00 24.3**	**-0.6**
	baz=210						
GO04	**Tololo Observa**	**90.31**	**123**	IAMs_20	IAMs_20	11 25 36.9	
	comp=Z,10µm,18.0s						
C18K	**Utukok River**	**90.34**	**5**	IAMs_20	IAMs_20	11 30 48.8	
	comp=Z,10µm,20.0s						
C18K	**Utukok River**	**90.34**	**5**	P	**P**	**10 49 32.3**	**-0.2**
	baz=192,SNR=7.3						
C18K				S	**S**	**11 00 23.4**	**-2.1**
	baz=192						
BILL	**Bilibino**	**90.38**	**353**	IAMs_20	IAMs_20	11 26 24.6	
	comp=Z,12µm,20.0s						
BILL	**Bilibino**	**90.38**	**353**	*ce*P	**P**	**10 49 32.5**	**-0.2**
BILL				pmax	pmax		
	comp=Z,138nm,2.9s						
BILL				MLR	MLR		
	comp=Z,10µm,19.0s						
MMPY	**Sheldon Lake,**	**90.41**	**18**	IAMs_20	IAMs_20	11 29 52.3	
	comp=Z,7µm,19.0s						
MMPY	**Sheldon Lake,**	**90.41**	**18**	P	**P**	**10 49 33.1**	**0.0**
	baz=219,SNR=55						
MMPY				S	**S**	**11 00 27.3**	**+1.0**
	baz=219						
E20K	**Nigu River**	**90.42**	**7**	P	**P**	**10 49 33.2**	**+0.3**
	baz=196,SNR=48						
E20K				S	**S**	**11 00 24.7**	**-1.5**
	baz=196						
G25K	**Bearman Lake**	**90.45**	**11**	P	**P**	**10 49 32.8**	**-0.2**
	baz=206						
G25K				S	**S**	**11 00 25.7**	**-0.6**
	baz=206						
D19K	**Kuna River**	**90.46**	**6**	IAMs_20	IAMs_20	11 28 02.7	
	comp=Z,13µm,20.0s						
D19K	**Kuna River**	**90.46**	**6**	P	**P**	**10 49 33.0**	**0.0**
	baz=195,SNR=36						
D19K				S	**S**	**11 00 24.9**	**-1.6**
	baz=195						
TGTN	**Hyland Airport**	**90.50**	**20**	P	**P**	**10 49 33.2**	**-0.3**
	baz=222,SNR=12						
TGTN				S	**S**	**11 00 24.2**	**-2.9**
	baz=222						
I28M	**Miner Creek**	**90.50**	**14**	P	**P**	**10 49 33.3**	**-0.1**
	baz=211,SNR=19						
I28M				S	**S**	**11 00 26.8**	**-0.3**
	baz=211						
SLVN	**Son La**	**90.51**	**293**	P	**P**	**10 49 33.0**	**-1.4**
SLVN				IAmb	IAmb	10 49 42.0	
	comp=Z,162nm,1.5s						
SLVN	**Son La**	**90.51**	**293**	P	**P**	**10 49 34.9**	**+0.5**
TIY	**Taiyuan**	**90.56**	**311**	P	**P**	**10 49 37.8**	**+3.5**
TIY				pmax	pmax		
	comp=Z,39nm,0.6s						
TIY				pmax	pmax		
	comp=Z,1µm,7.6s						
TIY				LR	LR		
	comp=Z,2µm,18.5s						
TIY				LR	LR		
	comp=Z,1µm,17.9s						
TIY				LR	LR		
	comp=Z,2µm,16.5s						
BEAVL	**Fort Liard**	**90.60**	**22**	P	**P**	**10 49 33.3**	**-0.5**
	baz=225						
BEAVL				S	**S**	**11 00 27.1**	**-0.9**
	baz=225						
J30M	**Hart River**	**90.61**	**15**	P	**P**	**10 49 33.5**	**-0.4**
	baz=215,SNR=54						
J30M				S	**S**	**11 00 29.2**	**+1.0**
	baz=215						
WMOK	**Wichita Mounta**	**90.76**	**53**	IAMs_20	IAMs_20	11 23 45.1	
	comp=Z,8µm,20.0s						
I29M	**Ogilvie Camp,**	**90.79**	**14**	IAMs_20	IAMs_20	11 28 30.7	
	comp=Z,9µm,20.0s						
I29M	**Ogilvie Camp,**	**90.79**	**14**	P	**P**	**10 49 34.5**	**-0.2**
	baz=213,SNR=27						
I29M				S	**S**	**11 00 27.2**	**-2.4**
	baz=213						
LHMI	**Lhok Sumawe**	**90.81**	**275**	P	**P**	**10 49 32.8**	**-3.1**
LHMI	**Lhok Sumawe**	**90.81**	**275**	P	**P**	**10 49 37.8**	**+1.9**
LHMI	**Lhok Sumawe**	**90.81**	**275**	P	**P**	**10 49 39.0**	**+3.1**
D20K	**Etivluk River**	**90.82**	**6**	IAMs_20	IAMs_20	11 28 03.2	
	comp=Z,10µm,20.0s						
D20K	**Etivluk River**	**90.82**	**6**	P	**P**	**10 49 34.2**	**-0.6**
	baz=196,SNR=33						
D20K				S	**S**	**11 00 28.0**	**-1.8**
	baz=196						
E22K	**Anaktuvuk Pass**	**90.83**	**8**	IAMs_20	IAMs_20	11 30 23.3	
	comp=Z,11µm,20.0s						
E22K	**Anaktuvuk Pass**	**90.83**	**8**	P	**P**	**10 49 34.6**	**-0.3**
	baz=200,SNR=36						
E22K				S	**S**	**11 00 29.0**	**-1.0**
	baz=200						
F24K	**Squaw Lake**	**90.83**	**10**	P	**P**	**10 49 34.6**	**-0.3**
	baz=204,SNR=12						
F24K				S	**S**	**11 00 29.4**	**-0.5**
	baz=204						
H27K	**Steamboat Moun**	**90.84**	**13**	IAMs_20	IAMs_20	11 29 17.0	
	comp=Z,10µm,19.0s						
H27K	**Steamboat Moun**	**90.84**	**13**	P	**P**	**10 49 34.6**	**-0.3**
	baz=210,SNR=59						
H27K				S	**S**	**11 00 28.9**	**-1.2**
	baz=210						
E21K	**Killik River**	**90.85**	**7**	IAMs_20	IAMs_20	11 28 11.0	
	comp=Z,11µm,20.0s						
E21K	**Killik River**	**90.85**	**7**	P	**P**	**10 49 34.6**	**-0.3**
	baz=198						
E21K				S	**S**	**11 00 27.6**	**-2.4**
	baz=198						
LCO	**Las Campanas**	**90.87**	**122**	IAMs_20	IAMs_20	11 26 01.9	
	comp=Z,11µm,18.0s						
LCO	**Las Campanas**	**90.87**	**122**	⇑P	**P**	**10 49 40.3**	**+3.9**
C19K	**Lookout Ridge**	**90.92**	**5**	IAMs_20	IAMs_20	11 28 42.0	
	comp=Z,12µm,20.0s						
C19K	**Lookout Ridge**	**90.92**	**5**	P	**P**	**10 49 35.1**	**-0.1**
	baz=193,SNR=27						
C19K				S	**S**	**11 00 30.9**	**+0.2**
	baz=193						
KOTAN	**Kotaneelee Air**	**90.92**	**23**	P	**P**	**10 49 34.7**	**-0.7**
	baz=225						
KOTAN				S	**S**	**11 00 26.1**	**-4.8**
	baz=225						
CO01	**Juntas del Tor**	**90.94**	**123**	IAMs_20	IAMs_20	11 26 06.8	
	comp=Z,10µm,18.0s						
MLSI	**Meulaboh, Aceh**	**90.96**	**274**	P	**P**	**10 49 38.2**	**+1.5**
FW14	**Alvarado**	**90.97**	**56**	IAMs_20	IAMs_20	11 23 55.7	
	comp=Z,12µm,20.0s						
PETF	**Flores**	**91.00**	**72**	IAMs_20	IAMs_20	11 21 57.2	
	comp=Z,8µm,20.0s						
B18K	**Kokolik River**	**91.00**	**4**	P	**P**	**10 49 35.4**	**-0.1**
	baz=191,SNR=7.7						
B18K				S	**S**	**11 00 31.8**	**+0.5**
	baz=191						
XLT	**XiLinHaoTe**	**91.01**	**317**	*e*P	**P**	**10 49 38.4**	**+2.1**
XLT				pP	pwP	10 49 46.6	-1.8
XLT				PP	**PP**	**10 53 10.5**	**-2.6**
XLT				SS	SS	11 06 32.2	-4.8
XLT				pmax	pmax		
	comp=Z,35nm,1.3s						
XLT				pmax	pmax		
	comp=Z,1µm,6.1s						
XLT				LR	LR		
	comp=Z,170nm,21.0s						
XLT				LR	LR		
	comp=Z,2µm,19.1s						
XLT				LR	LR		
	comp=Z,2µm,19.0s						
HKT	**Hockley**	**91.02**	**58**	*i* P	**P**	**10 49 38.0**	**+1.5**
HKT				pmax	pmax		
	comp=Z,40nm,1.5s						
HKT				MLR	MLR		
	comp=Z,7µm,17.0s						
G26K	**Porcupine Rive**	**91.03**	**12**	IAMs_20	IAMs_20	11 29 53.2	
	comp=Z,9µm,20.0s						
G26K	**Porcupine Rive**	**91.03**	**12**	P	**P**	**10 49 35.8**	**+0.1**
	baz=208,SNR=28						
G26K				S	**S**	**11 00 33.7**	**+2.1**
	baz=208						
E23K	**Chandalar**	**91.07**	**9**	IAMs_20	IAMs_20	11 31 01.5	
	comp=Z,7µm,19.0s						
E23K	**Chandalar**	**91.07**	**9**	P	**P**	**10 49 35.9**	**-0.1**
	baz=202,SNR=16						
E23K				S	**S**	**11 00 32.0**	**-0.2**
	baz=202						
I30M	**Mount Dempster**	**91.13**	**15**	IAMs_20	IAMs_20	11 28 49.5	
	comp=Z,12µm,20.0s						
I30M	**Mount Dempster**	**91.13**	**15**	P	**P**	**10 49 35.9**	**-0.5**
	baz=215,SNR=87						
I30M				S	**S**	**11 00 34.1**	**+1.1**
	baz=215						
OGNE	**Ogallala**	**91.23**	**46**	IAMs_20	IAMs_20	11 36 49.3	
	comp=Z,6µm,18.0s						
E24K	**Your Creek**	**91.25**	**9**	P	**P**	**10 49 36.8**	**0.0**
	baz=204						
E24K				S	**S**	**11 00 35.3**	**+1.5**
	baz=204						
F25K	**Christian Rive**	**91.27**	**11**	IAMs_20	IAMs_20	11 28 10.7	
	comp=Z,10µm,20.0s						
F25K	**Christian Rive**	**91.27**	**11**	P	**P**	**10 49 37.2**	**+0.3**
	baz=206,SNR=14						
F25K				S	**S**	**11 00 37.3**	**+3.3**
	baz=206						
AC05	**El Transito**	**91.29**	**122**	IAMs_20	IAMs_20	11 26 05.8	
	comp=Z,11µm,18.0s						
G27K	**Doyon Strip**	**91.31**	**12**	P	**P**	**10 49 34.4**	**-2.7**
G27K				IAMs_20	IAMs_20	11 29 33.7	
	comp=Z,11µm,20.0s						
G27K	**Doyon Strip**	**91.31**	**12**	P	**P**	**10 49 37.0**	**-0.1**
	baz=210,SNR=23						
G27K				S	**S**	**11 00 36.0**	**+1.6**
	baz=210						
ZON	**Zonda**	**91.36**	**125**	IAMs_20	IAMs_20	11 23 54.9	
	comp=Z,8µm,18.0s						
RSSD	**Black Hills**	**91.42**	**43**	IAMs_20	IAMs_20	11 27 44.2	
	comp=Z,7µm,18.0s						
D22K	**Ayikyak River**	**91.42**	**8**	IAMs_20	IAMs_20	11 28 30.0	
	comp=Z,12µm,20.0s						
D22K	**Ayikyak River**	**91.42**	**8**	P	**P**	**10 49 37.1**	**-0.4**
	baz=200,SNR=12						
D22K				S	**S**	**11 00 35.6**	**+0.4**
	baz=200						
C21K	**Knifeblade Rid**	**91.44**	**7**	P	**P**	**10 49 37.5**	**-0.1**
	baz=198,SNR=12						
C21K				S	**S**	**11 00 36.7**	**+1.3**
	baz=198						
H29M	**Whitestone**	**91.50**	**14**	P	**P**	**10 49 34.8**	**-3.1**
H29M				IAmb	IAmb	10 49 43.5	
	comp=Z,116nm,1.2s						
H29M				IAMs_20	IAMs_20	11 29 22.4	
	comp=Z,8µm,19.0s						
H29M	**Whitestone**	**91.50**	**14**	P	**P**	**10 49 38.2**	**+0.3**
	baz=213,SNR=48						
H29M				S	**S**	**11 00 35.3**	**-0.7**
	baz=213						
XAN	**Xi'an**	**91.53**	**306**	⇑P	**P**	**10 49 37.6**	**-1.3**
XAN				sP	pP	10 49 44.9	+0.2
XAN				PP	**PP**	**10 53 18.9**	**+1.5**
XAN				SKS	**SKSac**	**11 00 08.0**	**-2.5**
XAN				pmax	pmax		
	comp=Z,120nm,1.6s						
XAN				pmax	pmax		
	comp=Z,2µm,5.4s						
XAN				LR	LR		
	comp=Z,2µm,19.0s						
XAN				LR	LR		
	comp=Z,2µm,19.4s						
XAN				LR	LR		
	comp=Z,2µm,19.9s						
HIA	**Hailar**	**91.55**	**323**	P	**P**	**10 49 40.6**	**+2.0**
TOLK	**Toolik Lake Re**	**91.61**	**9**	P	**P**	**10 49 38.5**	**0.0**
	baz=203,SNR=7.5						
TOLK				S	**S**	**11 00 36.0**	**-1.1**
	baz=203						
F26K	**Sheenjek River**	**91.62**	**11**	IAMs_20	IAMs_20	11 28 43.0	
	comp=Z,7µm,20.0s						
F26K	**Sheenjek River**	**91.62**	**11**	P	**P**	**10 49 38.7**	**+0.2**
	baz=208,SNR=21						
F26K				S	**S**	**11 00 39.4**	**+2.2**
	baz=208						
CFA	**Coronel Fontan**	**91.67**	**125**	LR	LR	11 24 43.8	
	comp=Z,3µm,18.2s,baz=226,slow=32						
E25K	**Arctic Village**	**91.76**	**10**	P	**P**	**10 49 38.7**	**-0.4**
	baz=206,SNR=14						
E25K				S	**S**	**11 00 38.5**	**+0.2**
	baz=206						
D23K	**Nanushuk River**	**91.76**	**8**	IAMs_20	IAMs_20	11 30 53.0	
	comp=Z,9µm,20.0s						
D23K	**Nanushuk River**	**91.76**	**8**	P	**P**	**10 49 38.7**	**-0.4**
	baz=202						
D23K				S	**S**	**11 00 38.6**	**+0.3**
	baz=202						
GO03	**Copiapo**	**91.85**	**120**	IAMs_20	IAMs_20	11 25 01.5	
	comp=Z,8µm,18.0s						
CBKS	**Cedar Bluff**	**91.85**	**49**	IAMs_20	IAMs_20	11 24 41.7	
	comp=Z,11µm,20.0s						
AC06	**Mina Casimiro**	**91.85**	**120**	IAMs_20	IAMs_20	11 21 51.6	
	comp=Z,7µm,20.0s						
A19K	**Wainwright**	**91.88**	**4**	P	**P**	**10 49 39.0**	**-0.6**
	baz=192						
A19K				S	**S**	**11 00 39.7**	**+0.5**
	baz=192						
B21K	**Ikpikpuk River**	**91.90**	**7**	IAMs_20	IAMs_20	11 28 47.8	
	comp=Z,12µm,20.0s						
B21K	**Ikpikpuk River**	**91.90**	**7**	P	**P**	**10 49 39.1**	**-0.5**
	baz=198						
B21K				S	**S**	**11 00 40.7**	**+1.3**
	baz=198						
EPYK	**Eagle Plains**	**92.00**	**14**	IAMs_20	IAMs_20	11 29 47.5	
	comp=Z,9µm,19.0s						
EPYK	**Eagle Plains**	**92.00**	**14**	P	**P**	**10 49 39.2**	**-1.1**
	baz=214,SNR=18						
EPYK				S	**S**	**11 00 41.0**	**+0.4**
	baz=214						
FNO	**Franklin**	**92.01**	**53**	IAMs_20	IAMs_20	11 24 26.1	
	comp=Z,8µm,20.0s						
B20K	**Meade River**	**92.02**	**6**	IAMs_20	IAMs_20	11 29 15.9	
	comp=Z,10µm,20.0s						
B20K	**Meade River**	**92.02**	**6**	P	**P**	**10 49 39.9**	**-0.3**
	baz=196						
B20K				S	**S**	**11 00 41.8**	**+1.3**
	baz=196						
H31M	**Peel River**	**92.10**	**15**	P	**P**	**10 49 39.6**	**-1.1**
	baz=216,SNR=16						
H31M				S	**S**	**11 00 42.4**	**+0.9**
	baz=216						
HERN	**Volcan Telica**	**92.14**	**77**	IAMs_20	IAMs_20	11 23 16.0	
	comp=Z,4µm,19.0s						
G29M	**Pine Creek**	**92.16**	**13**	IAMs_20	IAMs_20	11 29 35.8	
	comp=Z,10µm,19.0s						
G29M	**Pine Creek**	**92.16**	**13**	P	**P**	**10 49 40.2**	**-0.8**
	baz=213,SNR=21						
G29M				S	**S**	**11 00 41.8**	**-0.2**
	baz=213						
AC01	**Pan de Azucar**	**92.16**	**119**	IAMs_20	IAMs_20	11 23 43.8	
	comp=Z,9µm,18.0s						
D24K	**Happy Valley**	**92.19**	**9**	IAMs_20	IAMs_20	11 31 41.3	
	comp=Z,9µm,19.0s						
D24K	**Happy Valley**	**92.19**	**9**	P	**P**	**10 49 40.5**	**-0.5**
	baz=203						
D24K				S	**S**	**11 00 42.5**	**+0.4**
	baz=203						

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TGUH  Tegucigalpa,Un   92.27  76   IAMs_20  IAMs_20  11 22 24.2
      comp=Z,7µm,20.0s
F28M  Old Crow         92.37  12   P        P        10 49 41.2 -0.7
      baz=212,SNR=19
F28M                               S        S        11 00 44.7 +0.9
      baz=212
R32A  Long Quarter,    92.40  50   IAMs_20  IAMs_20  11 27 24.3
      comp=Z,11µm,18.0s
NNA   Nana             92.40 104   IAMs_20  IAMs_20  11 23 12.0
      comp=Z,8µm,19.0s
NNA   Nana             92.40 104   LR       LR       11 23 23.4
      comp=Z,6µm,19.0s,baz=239,slow=30
BSI   Banda Aceh       92.44 275   P        P        10 49 44.2 +0.7
E27K  Coleen River     92.52  12   IAMs_20  IAMs_20  11 31 08.7
      comp=Z,9µm,20.0s
E27K  Coleen River     92.52  12   P        P        10 49 42.0 -0.7
      baz=210,SNR=24
E27K                               S        S        11 00 44.9 -0.3
      baz=210
HHC   Hu-ho-hao-te     92.56 313  eP        P        10 49 44.1 +0.5
HHC                                sP       sP       10 49 52.9 +1.3
HHC                                S        S        11 00 43.5 -3.4
HHC                                sS       sS       11 00 57.0 -0.2
HHC                                pmax     pmax
      comp=Z,44nm,1.3s
HHC                                pmax     pmax
      comp=Z,1µm,5.2s
HHC                                LR       LR
      comp=Z,1µm,21.9s
HHC                                LR       LR
      comp=Z,2µm,21.0s
HHC                                LR       LR
      comp=Z,4µm,21.9s
C23K  Itkillik River   92.58   8   P        P        10 49 42.0 -0.8
      baz=202,SNR=5.7
C23K                               S        S        11 00 43.8 -1.7
      baz=202
G30M  tAoh Zraii Nji   92.61  14   IAMs_20  IAMs_20  11 29 56.9
      comp=Z,8µm,19.0s
G30M  tAoh Zraii Nji   92.61  14   P        P        10 49 41.9 -1.2
      baz=215,SNR=43
G30M                               S        S        11 00 46.8 +0.7
      baz=215
D25K  Kavik River      92.71  10   P        P        10 49 42.5 -1.1
      baz=206
D25K                               S        S        11 00 45.4 -1.5
      baz=206
B22K  Teshekpuk Lake   92.72   7   IAMs_20  IAMs_20  11 29 23.3
      comp=Z,10µm,20.0s
B22K  Teshekpuk Lake   92.72   7   P        P        10 49 42.5 -0.9
      baz=199,SNR=6.8
B22K                               S        S        11 00 45.9 -0.8
      baz=199
C24K  Franklin Bluff   92.73   9   IAMs_20  IAMs_20  11 32 16.6
      comp=Z,8µm,19.0s
C24K  Franklin Bluff   92.73   9   P        P        10 49 43.1 -0.4
      baz=203
C24K                               S        S        11 00 45.5 -1.4
      baz=203
OK052 Battle Ridge R   92.76  52   IAMs_20  IAMs_20  11 25 35.9
      comp=Z,11µm,20.0s
ATAH  Atahualpa        92.80  99   LR       LR       11 23 53.3
      comp=Z,10µm,18.1s,baz=256,slow=31
QUOK  Quay             92.90  52   IAMs_20  IAMs_20  11 31 15.7
      comp=Z,12µm,20.0s
KMI   Kunming          92.94 296   P        P        10 49 45.7 -0.1
KMI                                PP       PP       10 53 31.8 +2.9
KMI                                SKS      SKSac    11 00 18.9 -0.2
KMI                                S        S        11 00 52.6 +1.5
KMI                                pmax     pmax
      comp=Z,1µm,6.6s
KMI                                LR       LR
      comp=Z,2µm,20.1s
KMI                                LR       LR
      comp=Z,4µm,21.3s
KMI                                LR       LR
      comp=Z,5µm,21.6s
PB14  IPOC Station P   92.97 118   IAMs_20  IAMs_20  11 26 45.9
      comp=Z,9µm,18.0s
G31M  Satah River      93.02  15   P        P        10 49 44.0 -0.9
      baz=216,SNR=16
G31M                               S        S        11 00 49.1 -0.4
      baz=216
JTS   Las Juntas de    93.02  80   IAMs_20  IAMs_20  11 27 28.6
      comp=Z,8µm,18.0s
JTS   Las Juntas de    93.02  80   LR       LR       11 24 00.9
      comp=Z,6µm,18.2s,baz=266,slow=31
AC02  Maricunga        93.06 120   IAMs_20  IAMs_20  11 22 59.6
      comp=Z,9µm,20.0s
BOAB  BOACO BROADBAN93.14  78   IAMs_20  IAMs_20  11 26 29.6
      comp=Z,10µm,18.0s
TRQA  Tornquist        93.16 133   IAMs_20  IAMs_20  11 26 06.3
      comp=Z,7µm,18.0s
A22K  Sinclair Lake    93.19   6   P        P        10 49 45.0 -0.5
      baz=198
A22K                               S        S        11 00 51.5 +0.7
      baz=198
F30M  Barrier River    93.23  14   IAMs_20  IAMs_20  11 30 17.1
      comp=Z,7µm,19.0s
F30M  Barrier River    93.23  14   P        P        10 49 45.4 -0.5
      baz=215,SNR=5.9
F30M                               S        S        11 00 51.5 +0.1
      baz=215
E28M  Babbage River    93.28  12   P        P        10 49 45.5 -0.6
      baz=212,SNR=10
E28M                               S        S        11 00 53.2 +1.4
      baz=212
WRGLY Wrigley          93.29  21   P        P        10 49 45.3 -0.9
      baz=226
WRGLY                              S        S        11 00 53.6 +1.6
      baz=226
PB10  IPOC Station P   93.31 117   IAMs_20  IAMs_20  11 25 47.9
      comp=Z,10µm,18.0s
A21K  Barrow           93.33   6   S        S        11 00 53.6 +1.5
      baz=196
GO02  Mina Guanaco     93.41 119   IAMs_20  IAMs_20  11 24 41.6
      comp=Z,11µm,18.0s
C27K  Jago River       93.41  10   IAMs_20  IAMs_20  11 30 54.3
      comp=Z,9µm,20.0s
C27K  Jago River       93.41  10   P        P        10 49 45.6 -1.1
      baz=208,SNR=7.0
C27K                               S        S        11 00 53.4 +0.5
      baz=208
DGMT  Dagmar           93.42  39   IAMs_20  IAMs_20  11 25 54.0
      comp=Z,8µm,20.0s
E29M  Blow River       93.42  13   P        P        10 49 45.9 -0.9
      baz=213,SNR=12
E29M                               S        S        11 00 51.9 -1.1
      baz=213
441A  DeRidder         93.44  58   IAMs_20  IAMs_20  11 31 50.0
      comp=Z,8µm,18.0s
C26K  Camden Bay       93.48  10   P        P        10 49 45.8 -1.1
      baz=207
BTO   Baotou           93.52 312  eP        P        10 49 51.2 +3.2
BTO                                pP       sP       10 49 56.2 +0.2
BTO                                sP       pwP      10 49 58.3 -1.0
BTO                                PP       PP       10 53 40.3 +7.3
BTO                                SKS      SKSac    11 00 23.0 +1.7
BTO                                sS       sS       11 01 11.0 +5.4
BTO                                pmax     pmax
      comp=Z,54nm,2.4s
BTO                                pmax     pmax
      comp=Z,3µm,5.6s
BTO                                LR       LR
      comp=Z,4µm,19.5s
BTO                                LR       LR
      comp=Z,6µm,19.0s
BTO                                LR       LR
      comp=Z,6µm,19.0s
D27M  Malcolm River    93.56  11   IAMs_20  IAMs_20  11 31 43.0
      comp=Z,8µm,19.0s
D27M  Malcolm River    93.56  11   P        P        10 49 46.0 -1.4
      baz=210
D27M                               S        S        11 00 56.0 +1.6
      baz=210
F31M  Tsiigehtchic     93.56  15   IAMs_20  IAMs_20  11 30 24.7
      comp=Z,11µm,19.0s
F31M  Tsiigehtchic     93.56  15   P        P        10 49 46.0 -1.4
      baz=217,SNR=10
F31M                               S        S        11 00 53.5 -0.7
      baz=217
TEIG  Tepich           93.61  70   IAMs_20  IAMs_20  11 25 38.5
      comp=Z,9µm,19.0s
CM31  Chiang Mai Arr   93.77 288   P        P        10 49 50.0 +0.5
CM31                               S        SKSac    11 00 24.6 +1.2
CMAR  Chiang Mai Arr   93.77 288   P        P        10 49 48.8 -0.7
CMAR  Chiang Mai Arr   93.77 288   P        P        10 49 49.8 +0.2
      comp=Z,38nm,1.2s,baz=118,slow=2.5,SNR=46
CMAR                               PKKPbc   PKKPbc   11 06 54.8 +1.3
      comp=Z,1.6nm,0.7s,baz=259,slow=1.1,SNR=7.3
CMAR                               LR       LR       11 34 23.7
      comp=Z,883nm,18.2s,baz=110,slow=37
      comp=Z,38nm,1.2s
PB05  IPOC Station P   93.88 116   IAMs_20  IAMs_20  11 22 47.0
      comp=Z,6µm,20.0s
CHTO  Chiang Mai       93.89 289   P        P        10 49 50.4 +0.3
CHTO                               S        SKSac    11 00 24.6 +0.4
CHTO  Chiang Mai       93.89 289   P        P        10 49 49.8 -0.3
D28M  Stokes Point     94.05  12   P        P        10 49 47.8 -1.8
      baz=213
D28M                               S        S        11 00 56.7 -1.7
      baz=213
PZH   PanZhiHua        94.29 297   P        P        10 49 52.1 +0.2
PZH                                pP       PcP      10 49 55.3 +3.0
PZH                                S        S        11 01 00.2 -2.5
PZH                                pmax     pmax
      comp=Z,60nm,1.5s
PZH                                pmax     pmax
      comp=Z,930nm,6.0s
PZH                                LR       LR
      comp=Z,2µm,19.8s
PZH                                LR       LR
      comp=Z,2µm,20.0s
PZH                                LR       LR
      comp=Z,2µm,20.9s
CD2   Chengdu          94.29 301   P        P        10 49 54.2 +2.5
CD2                                SKS      SKSac    11 00 27.9 +2.0
CD2                                pmax     pmax
      comp=Z,10.0nm,0.8s
CD2                                pmax     pmax
      comp=Z,1µm,7.1s
CD2                                LR       LR
      comp=Z,1µm,17.1s
CD2                                LR       LR
      comp=Z,3µm,17.8s
INK   Inuvik           94.30  14   LR       LR       11 30 15.6
      comp=Z,5µm,18.3s,baz=229,slow=34
INK   Inuvik           94.30  14   P        P        10 49 49.4 -1.4
      baz=217
INK                                S        S        11 01 01.2 +0.6
      baz=217
YAK   Yakutsk          94.34 337   P        P        10 49 47.5 -3.5
YAK                                IAmb     IAmb     10 49 54.8
      comp=Z,48nm,0.8s
YAK   Yakutsk          94.34 337   P        P        10 49 50.4 -0.7
      comp=Z,46nm,0.7s,baz=98,slow=3.5,SNR=12
YAK                                LR       LR       11 27 41.7
      comp=Z,3µm,20.1s,baz=120,slow=33
      comp=Z,46nm,0.7s
YAK   Yakutsk          94.34 337  eP        P        10 49 50.1 -1.0
YAK                               e                  10 53 35.8
YAK                               ePPP      PPP      10 55 41.2
YAK                               eS        SKSac    11 00 17.4 -7.2
YAK                               e*SS      S        11 00 56.3 -5.0
YAK                               eSS       SS       11 07 19.1 -4.7
YAK                               eSSS      SSS      11 10 56.7
YAK                                pmax     pmax
      comp=Z,73nm,1.3s
YAK                                pmax     pmax
      comp=N,8.0nm,1.0s
YAK                                pmax     pmax
      comp=E,15nm,1.3s
YAK                                pmax     pmax
      comp=Z,868nm,6.2s
YAK                                pmax     pmax
      comp=N,211nm,4.6s
YAK                                pmax     pmax
      comp=E,124nm,3.2s
YAK                                smax     smax
      comp=N,952nm,10.9s
YAK                                smax     smax
      comp=E,1µm,10.5s
YAK                                MLR      MLR
      comp=Z,3µm,22.0s
YAK                                MLR      MLR
      comp=N,2µm,20.0s
YAK                                MLR      MLR
      comp=E,2µm,20.0s
PB06  IPOC Station P   94.47 116   IAMs_20  IAMs_20  11 23 05.7
      comp=Z,7µm,20.0s
E28A  Huff             94.64  42   IAMs_20  IAMs_20  11 34 33.5
      comp=Z,5µm,18.0s
Z41A  Richland Creek   94.70  56   IAMs_20  IAMs_20  11 26 16.5
      comp=Z,10µm,20.0s
X40A  Basin Creek Fa   95.14  55   IAMs_20  IAMs_20  11 26 21.1
      comp=Z,10µm,20.0s
OTAV  Otavalo          95.46  92   IAMs_20  IAMs_20  11 23 53.9
      comp=Z,7µm,20.0s
OTAV  Otavalo          95.46  92  eP        P        10 50 02.0 +4.0
AF01  San Pedro de A   95.52 117   IAMs_20  IAMs_20  11 25 41.6
      comp=Z,9µm,18.0s
N35A  Tabor            95.57  48   IAMs_20  IAMs_20  11 26 58.1
      comp=Z,7µm,20.0s
UALR  University of    95.63  55   IAMs_20  IAMs_20  11 26 56.9
      comp=Z,11µm,20.0s
PB11  IPOC Station P   95.64 114   IAMs_20  IAMs_20  11 23 54.6
      comp=Z,8µm,20.0s
MDND  Maddock          95.87  41   IAMs_20  IAMs_20  11 29 34.0
      comp=Z,6µm,19.0s
YKA   Yellowknife Ar   95.93  24   P        P        10 49 58.3  0.0
      comp=Z,5.0nm,1.0s,baz=246,slow=4.3,SNR=11
YKA                                LR       LR       11 30 38.0
      comp=Z,2µm,18.0s,baz=243,slow=34
      comp=Z,5.0nm,1.0s
S39A  Bolivar          95.99  52   IAMs_20  IAMs_20  11 29 35.5
      comp=Z,9µm,18.0s
GO01  Chusmiza         96.08 114   IAMs_20  IAMs_20  11 24 19.1
      comp=Z,10µm,20.0s
VBMS  Vicksburg        96.10  58   IAMs_20  IAMs_20  11 30 04.6
      comp=Z,10µm,19.0s
LZH   Lanzhou          96.17 306   P        P        10 50 03.5 +3.2
LZH                                sP       pwP      10 50 13.0 +1.4
LZH                                SKS      SKSac    11 00 38.1 +2.2
LZH                                S        S        11 01 19.0 +0.2
LZH                                SS       SS       11 07 51.2 -0.1
LZH                                pmax     pmax
      comp=Z,46nm,1.6s
LZH                                pmax     pmax
      comp=Z,870nm,5.8s
LZH                                LR       LR
      comp=Z,2µm,16.5s
LZH                                LR       LR
      comp=Z,2µm,17.9s
LZH                                LR       LR
      comp=Z,3µm,18.6s
CIT   Chita            96.33 324  eP        P        10 49 57.2 -3.3
CIT                               e                  10 53 51.2
CIT                                pmax     pmax
      comp=Z,119nm,2.5s
TNCH  TengChong        96.47 294   P        P        10 50 02.6 +0.6
TNCH                               PP       PP       10 53 57.0 +0.6
TNCH                               S        S        11 01 22.2 +0.3
TNCH                               pmax     pmax
      comp=Z,940nm,5.2s
TNCH                               LR       LR
      comp=Z,840nm,19.0s
TNCH                               LR       LR
      comp=Z,2µm,21.0s
TNCH                               LR       LR
      comp=Z,5µm,20.5s
346A  Big Creek Wild   96.64  59   IAMs_20  IAMs_20  11 30 40.9
      comp=Z,6µm,19.0s
F33A  5 Mile Ranch,    97.11  44   IAMs_20  IAMs_20  11 28 42.8
      comp=Z,8µm,20.0s
N38A  Joes South For   97.23  49   IAMs_20  IAMs_20  11 27 58.0
      comp=Z,8µm,20.0s
BCIP  Isla Barro Col   97.34  83   IAMs_20  IAMs_20  11 26 28.2
      comp=Z,6µm,18.0s
T42A  Van Buren        97.40  53   IAMs_20  IAMs_20  11 28 02.8
      comp=Z,9µm,20.0s
146A  Union            97.40  58   IAMs_20  IAMs_20  11 28 29.1
      comp=Z,8µm,20.0s
Y45A  Yeager Farm, C   97.45  57   IAMs_20  IAMs_20  11 28 02.4
      comp=Z,6µm,20.0s
MET   Memphis--Engin   97.60  55   IAMs_20  IAMs_20  11 28 27.1
      comp=Z,10µm,20.0s
SCIA  State Center     97.66  48   IAMs_20  IAMs_20  11 31 00.3
      comp=Z,7µm,19.0s
I37A  Lemond, Waseca   98.31  46   IAMs_20  IAMs_20  11 29 32.6
      comp=Z,5µm,19.0s
AGMN  Agassiz Nation   98.34  41   IAMs_20  IAMs_20  11 34 24.4
      comp=Z,6µm,18.0s
ULN   Ulaanbaatar      98.41 318   P        P        10 50 07.5 -2.6
ULN   Ulaanbaatar      98.41 318   P        P        10 50 10.4 +0.2
ULN                                S        SKSac    11 00 48.4 +1.5
ULN   Ulaanbaatar      98.41 318 i P        P        10 50 09.5 -0.7
ULN                                pmax     pmax
      comp=Z,19nm,1.3s
ULN                                MLR      MLR
      comp=Z,3µm,19.0s
LPAZ  La Paz           98.42 111   P        Pdif     10 50 13.0 +1.4
      comp=Z,6.3nm,1.2s,baz=267,slow=2.7,SNR=11
LPAZ                               LR       LR       11 28 12.6
      comp=Z,10µm,18.1s,baz=264,slow=31
      comp=Z,6.3nm,1.2s
LPAZ  La Paz           98.42 111  eP        Pdif     10 50 15.8 +4.2
BRAL  Brewton          98.50  60   IAMs_20  IAMs_20  11 30 57.2
      comp=Z,6µm,19.0s
CGM3  Cape Girardeau   98.57  53   IAMs_20  IAMs_20  11 28 38.7
      comp=Z,11µm,20.0s
SONM  Songino Array    98.81 318   P        P        10 50 11.7 -0.2
      comp=Z,2.1nm,1.0s,baz=119,slow=2.7,SNR=8.3
SONM                               LR       LR       11 31 19.0
      comp=Z,2µm,20.5s,baz=114,slow=33
      comp=Z,2.1nm,1.0s
A36M  Sachs Harbour    98.94  14   IAMs_20  IAMs_20  11 33 11.9
      comp=Z,8µm,20.0s
A36M  Sachs Harbour    98.94  14   P        P        10 50 09.4 -2.3
      baz=225
A36M                               S        S        11 01 41.4 +1.0
      baz=225
S44A  Carbondale       99.00  53   IAMs_20  IAMs_20  11 29 01.7
      comp=Z,9µm,19.0s
SIUC  Southern Illin   99.04  53   IAMs_20  IAMs_20  11 28 53.2
      comp=Z,9µm,20.0s
ULM   Lac du Bonnet    99.09  40   P        Pdif     10 50 12.9 +0.1
      comp=Z,5.1nm,1.1s,baz=242,slow=5.3,SNR=4.6
ULM                                LR       LR       11 29 39.9
      comp=Z,9µm,20.1s,baz=251,slow=32
      comp=Z,5.1nm,1.1s
ULM   Lac du Bonnet    99.09  40   P        Pdif     10 50 13.0 +0.1
L40A  Anamosa          99.10  48   IAMs_20  IAMs_20  11 35 42.5
      comp=Z,6µm,18.0s
SOR   Soroa            99.10  69   IAMs_20  IAMs_20  11 29 15.8
      comp=Z,10µm,19.0s
LRAL  Lakeview Retre   99.17  58   IAMs_20  IAMs_20  11 29 44.9
      comp=Z,11µm,20.0s
P43A  Skaggs, Pawnee   99.47  51   IAMs_20  IAMs_20  11 30 30.5
      comp=Z,8µm,19.0s
X48A  Hartselle        99.60  57   IAMs_20  IAMs_20  11 31 55.2
      comp=Z,10µm,19.0s
Y49A  Blount Mountai   99.90  58   IAMs_20  IAMs_20  11 32 28.2
      comp=Z,9µm,19.0s
JFWS  Jewell Farm     100.07  48   IAMs_20  IAMs_20  11 29 20.1
      comp=Z,6µm,20.0s
I40A  Norwalk         100.14  47   IAMs_20  IAMs_20  11 30 16.2
      comp=Z,5µm,20.0s
L42A  Oliver, Polo    100.17  49   IAMs_20  IAMs_20  11 30 16.8
      comp=Z,8µm,19.0s
V48A  Smith Brothers  100.19  56   IAMs_20  IAMs_20  11 29 44.9
      comp=Z,10µm,20.0s
OLIL  Olney           100.21  52   IAMs_20  IAMs_20  11 29 48.1
      comp=Z,11µm,20.0s
GTA   Gaotai          100.32 308  eP        Pdif     10 50 22.2 +3.3
GTA                                sP       pwP      10 50 29.7 -0.5
GTA                                SKS      SKSac    11 00 53.9 -2.9
GTA                                pmax     pmax
      comp=Z,9.0nm,1.9s
GTA                                pmax     pmax
      comp=Z,550nm,9.4s
GTA                                LR       LR
      comp=Z,1µm,21.1s
GTA                                LR       LR
      comp=Z,2µm,20.4s
GTA                                LR       LR
      comp=Z,2µm,20.4s
E38A  The Farm, Brul  100.45  44   IAMs_20  IAMs_20  11 31 53.2
      comp=Z,7µm,19.0s
CLTN  Cedars of Leba  100.69  55   IAMs_20  IAMs_20  11 30 00.9
      comp=Z,7µm,20.0s
FPAL  Fort Paine      100.75  57   IAMs_20  IAMs_20  11 32 58.7
      comp=Z,6µm,18.0s
152A  Waverly Hall    100.86  59   IAMs_20  IAMs_20  11 30 33.8
      comp=Z,6µm,20.0s
EYMN  Ely             100.94  43   IAMs_20  IAMs_20  11 30 29.2
      comp=Z,7µm,20.0s
I42A  Draeger Farm,   101.31  47   IAMs_20  IAMs_20  11 30 50.0
      comp=Z,8µm,20.0s
K43A  Burlington      101.33  49   IAMs_20  IAMs_20  11 31 02.6
      comp=Z,7µm,19.0s
X51A  Calhoun         101.35  57   IAMs_20  IAMs_20  11 30 42.5
      comp=Z,7µm,20.0s
TIGA  Tifton          101.39  61   IAMs_20  IAMs_20  11 39 15.8
      comp=Z,5µm,18.0s
L44A  Lake County Fo  101.46  49   IAMs_20  IAMs_20  11 30 19.0
      comp=Z,8µm,20.0s
SFIN  Lafayette       101.47  51   IAMs_20  IAMs_20  11 30 48.5
      comp=Z,8µm,19.0s
BLO   Bloomington     101.52  52   IAMs_20  IAMs_20  11 30 48.7
      comp=Z,11µm,20.0s
Y52A  Lilburn         101.76  58   IAMs_20  IAMs_20  11 34 31.4
      comp=Z,7µm,18.0s
061Z  Ochoppi         101.90  67   IAMs_20  IAMs_20  11 31 34.8
      comp=Z,8µm,19.0s
154A  Montrose        102.14  60   IAMs_20  IAMs_20  11 31 45.6
      comp=Z,6µm,20.0s
H43A  Windswept, Lux  102.27  47   IAMs_20  IAMs_20  11 36 35.4
      comp=Z,7µm,18.0s
P48A  Milroy          102.41  52   IAMs_20  IAMs_20  11 31 08.4
      comp=Z,10µm,20.0s
456A  Hilliard        102.45  62   IAMs_20  IAMs_20  11 32 15.0
      comp=Z,5µm,20.0s
TBO   Thunder Bay     102.49  43   IAMs_20  IAMs_20  11 34 39.1
      comp=Z,7µm,19.0s
N47A  Urbana          102.64  51   IAMs_20  IAMs_20  11 32 48.4
      comp=Z,9µm,19.0s
TZTN  Tazewell        102.96  56   IAMs_20  IAMs_20  11 33 30.2
      comp=Z,10µm,19.0s
FCC   Fort Churchill  103.13  32   IAMs_20  IAMs_20  11 35 35.9
      comp=Z,7µm,19.0s
I45A  Fountain        103.19  48   IAMs_20  IAMs_20  11 32 03.9
      comp=Z,7µm,19.0s
PAULI Pauline         103.82  58   IAMs_20  IAMs_20  11 36 40.9
      comp=Z,9µm,19.0s
J47A  Sunmer          103.95  49   IAMs_20  IAMs_20  11 34 50.9
      comp=Z,8µm,19.0s
CHIV  Chivirico       104.03  74   IAMs_20  IAMs_20  11 31 45.7
      comp=Z,3µm,20.0s
U54A  Nelsons Funny   104.29  56   IAMs_20  IAMs_20  11 34 21.3
      comp=Z,8µm,19.0s
GLMI  Grayling        104.53  47   IAMs_20  IAMs_20  11 33 06.1
      comp=Z,8µm,19.0s
V55A  Taylorsville    104.58  57   IAMs_20  IAMs_20  11 32 23.0
      comp=Z,9µm,20.0s
CSU   Charleston Sou  104.69  60   IAMs_20  IAMs_20  11 33 41.2
      comp=Z,10µm,20.0s
Y57A  Sumter          104.72  59   IAMs_20  IAMs_20  11 36 22.9
      comp=Z,8µm,18.0s
N51A  Ashland         105.07  52   IAMs_20  IAMs_20  11 35 06.6
      comp=Z,8µm,19.0s
Y58A  Scranton        105.27  59   IAMs_20  IAMs_20  11 34 45.5
      comp=Z,6µm,19.0s
W57A  Gilead          105.35  58   IAMs_20  IAMs_20  11 37 27.4
      comp=Z,9µm,18.0s
U56A  King            105.36  57   IAMs_20  IAMs_20  11 32 56.7
      comp=Z,8µm,20.0s
NMDO  Nuevo Mundo     105.49  74   IAMs_20  IAMs_20  11 32 22.3
      comp=Z,3µm,19.0s
I49A  Point Hope      105.53  49   IAMs_20  IAMs_20  11 32 45.8
      comp=Z,7µm,20.0s
BLA   Blacksburg      105.56  56   IAMs_20  IAMs_20  11 35 10.9
      comp=Z,9µm,19.0s
N53A  Lisbon          106.16  52   IAMs_20  IAMs_20  11 33 33.7
      comp=Z,8µm,20.0s
Y60A  Bolivia         106.46  59   IAMs_20  IAMs_20  11 36 26.0
      comp=Z,5µm,19.0s
W59A  Clinton         106.58  58   IAMs_20  IAMs_20  11 38 24.0
      comp=Z,8µm,19.0s
PALK  Pallekele       106.63 271   IAMs_20  IAMs_20  11 40 02.0
      comp=Z,6µm,20.0s
VILB  Vilhena         106.78 112   IAMs_20  IAMs_20  11 32 44.4
      comp=Z,8µm,19.0s
S57A  Dark Hollow, R  106.83  56   IAMs_20  IAMs_20  11 40 31.4
      comp=Z,9µm,18.0s
ERPA  Erie            107.10  51   IAMs_20  IAMs_20  11 36 37.4
      comp=Z,7µm,18.0s
R58B  Mineral         107.70  56   IAMs_20  IAMs_20  11 36 27.6
      comp=Z,9µm,19.0s
T59A  Double "B" Far  107.72  57   IAMs_20  IAMs_20  11 36 45.1
      comp=Z,8µm,19.0s
RES   Resolute Bay    107.74  16   IAMs_20  IAMs_20  11 38 56.4
      comp=Z,8µm,20.0s
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TRCB	Terra Rica	108.07	124	IAMs_20	IAMs_20	11 39 17.4	
	comp=Z,8µm,18.0s						
SDDR	Presa de Saban	108.35	76	IAMs_20	IAMs_20	11 30 58.3	
	comp=Z,5µm,20.0s						
SDMD	Soldier's Deli	108.82	54	IAMs_20	IAMs_20	11 35 07.1	
	comp=Z,8µm,20.0s						
L56A	Greenwood	108.87	51	IAMs_20	IAMs_20	11 34 58.2	
	comp=Z,9µm,20.0s						
M57A	Sunshine Farm,	109.02	52	IAMs_20	IAMs_20	11 34 55.2	
	comp=Z,9µm,19.0s						
GRTK	Grand Turk	109.20	74	IAMs_20	IAMs_20	11 39 09.8	
	comp=Z,5µm,19.0s						
S61A	Accomac	109.34	56	IAMs_20	IAMs_20	11 37 27.0	
	comp=Z,8µm,19.0s						
PECO	Prince Edward	109.64	50	IAMs_20	IAMs_20	11 35 39.4	
	comp=Z,9µm,20.0s						
R61A	Willards	109.73	56	IAMs_20	IAMs_20	11 35 33.4	
	comp=Z,7µm,20.0s						
BLSP	Bilaspur	109.88	287	eP	PP	10 55 46.7	+10
VAR	Varanasi	109.93	290	eP	PP	10 55 46.4	+10
VLDQ	Val d'Or	110.08	45	IAMs_20	IAMs_20	11 39 21.2	
	comp=Z,9µm,19.0s						
WMQ	Urumqi	110.23	310	ePKP	PKiKP	10 55 01.2	-2.8
WMQ				LR	LR		
	comp=Z,2µm,19.5s						
WMQ				LR	LR		
	comp=Z,1µm,22.3s						
WMQ				LR	LR		
	comp=Z,1µm,23.7s						
EUNU	Eureka	110.60	11	IAMs_20	IAMs_20	11 43 34.4	
	comp=Z,6µm,20.0s						
KAAM	Kaadhehdhoo	111.34	262	IAMs_20	IAMs_20	11 40 52.4	
	comp=Z,7µm,20.0s						
LONY	Lake Ozonia	111.46	49	IAMs_20	IAMs_20	11 37 49.7	
	comp=Z,7µm,19.0s						
SPB	Sao Paulo	111.53	128	IAMs_20	IAMs_20	11 35 28.6	
	comp=Z,7µm,20.0s						
HYB	Hyderabad	111.82	281	ePKiKP	PKiKP	10 55 05.4	-2.3
HYB				ePP	PP	10 55 49.1	-1.6
HYB				eSKSac	SKSac	11 01 47.0	-1.6
ACCN	Adirondack Com	111.91	51	IAMs_20	IAMs_20	11 36 48.8	
	comp=Z,9µm,20.0s						
AGPR	Aguadilla, PR	112.00	78	IAMs_20	IAMs_20	11 37 45.1	
	comp=Z,5µm,19.0s						
VAO	Valinhos	112.23	128	IAMs_20	IAMs_20	11 43 08.9	
	comp=Z,7µm,18.0s						
ZSN	Zaisan	112.76	314	i PKIKP	PKiKP	10 55 07.0	-1.6
ZSN	Zaisan	112.76	314	ePKiKP	PKiKP	10 55 07.0	-1.6
NRIK	Noril'sk	112.78	338	i PKIKP	PKiKP	10 55 06.2	-1.8
NRIK				MLR	MLR		
	comp=Z,3µm,19.0s						
ZALV	Zalesovo Beam	113.46	321	PKiKP	PKiKP	10 55 09.2	-0.4
	comp=Z,8.9nm,0.6s,baz=133,slow=1.4,SNR=18						
JOSI	Joshimath	114.11	295	eP	PP	10 55 54.2	-13
LDAQ	Lac Daran	114.19	46	IAMs_20	IAMs_20	11 42 30.8	
	comp=Z,6µm,19.0s						
TULEG	Thule	114.30	14	IAMs_20	IAMs_20	11 42 10.7	
	comp=Z,6µm,20.0s						
G62A	West of Eustis	114.39	49	IAMs_20	IAMs_20	11 39 03.3	
	comp=Z,8µm,20.0s						
MK31	Makanchi Array	114.43	313	i PKIKP	PKPdf	10 55 12.0	+0.2
MKAR	Makanchi Array	114.43	313	PKiKP	PKPdf	10 55 11.5	-0.3
	comp=Z,5.0nm,0.9s,baz=66,slow=1.5,SNR=13						
MKAR				PKKPbc	PKKPbc	11 05 50.7	-1.4
	comp=Z,0.4nm,0.3s,baz=350,slow=24,SNR=4.1						
LMQ	La Malbaie	114.77	46	IAMs_20	IAMs_20	11 40 37.1	
	comp=Z,6µm,19.0s						
GUNA	GUNA	114.78	288	eP	PP	10 55 55.7	-16
HNLY	HANLEY	115.02	297	eP	PP	10 55 57.5	-16
SABA	Saba	115.30	80	IAMs_20	IAMs_20	11 40 14.9	
	comp=Z,4µm,18.0s						
BDFB	Brasilia	115.64	120	PKKPbc	PKKPbc	11 05 47.2	-0.1
	comp=Z,3.0nm,0.7s,baz=80,slow=5.1,SNR=4.7						
LDR	Lodi Road	115.72	292	eP	PP	10 55 57.8	-20
NPLP	NPLP New Delhi	115.77	292	eP	PP	10 55 57.8	-21
F64A	Sherman	115.98	48	IAMs_20	IAMs_20	11 39 54.3	
	comp=Z,6µm,20.0s						
GNR	GANAUR	116.00	293	eP	PP	10 55 58.7	-21
SEM	Semipalatinsk	116.05	317	ePKIKP	PKPdf	10 55 13.4	-1.7
SEM				MLR	MLR		
	comp=Z,2µm,20.0s						
SEM	Semipalatinsk	116.05	317	ePKP	PKPdf	10 55 13.4	-1.7
SEM				LR	LR	11 44 26.9	
	comp=Z,2µm,19.7s						
SHLS	Shalkode	116.07	309	ePKIKP	PKPdf	10 55 12.9	-2.3
SHLS	Shalkode	116.07	309	ePKP	PKPdf	10 55 12.9	-2.3
KUQ	Kuujjuuaa	116.29	35	IAMs_20	IAMs_20	11 40 08.8	
	comp=Z,8µm,20.0s						
UZB	Uzynbulak	116.39	309	ePKIKP	PKPdf	10 55 13.9	-2.0
UZB	Uzynbulak	116.39	309	ePKP	PKPdf	10 55 13.9	-2.0
RTK	Rohtak	116.50	293	eP	PP	10 55 58.7	-25
KPKS	Kokpek	116.66	309	ePKIKP	PKPdf	10 55 14.4	-1.9
KPKS	Kokpek	116.66	309	ePKP	PKPdf	10 55 14.4	-1.9
SATY	Saty	116.83	308	ePKIKP	PKPdf	10 55 14.8	-1.9
SATY	Saty	116.83	308	ePKP	PKPdf	10 55 14.8	-1.9
TDK	Taldyqorghan	116.98	311	ePKIKP	PKPdf	10 55 14.9	-1.9
TDK				MLR	MLR		
	comp=Z,3µm,18.0s						
TDK	Taldyqorghan	116.98	311	ePKP	PKPdf	10 55 15.0	-1.9
TDK				LR	LR	11 44 48.4	
	comp=Z,3µm,17.8s						
KURK	Kurchatov	117.09	317	IAMs_20	IAMs_20	11 44 26.4	
	comp=Z,5µm,20.0s						
KURK	Kurchatov	117.09	317	P	PKiKP	10 55 17.6	+0.8
KURK	Kurchatov	117.09	317	c iPKIKP	PKPdf	10 55 16.7	-0.1
KURK				pmax	pmax		
	comp=Z,23nm,1.3s						
KURK				MLR	MLR		
	comp=Z,4µm,20.0s						
KURBB	Kurchatov Arra	117.15	317	PKP	PKPdf	10 55 15.7	-1.2
	comp=Z,9.1nm,0.8s,baz=89,slow=1.7,SNR=17						
KURBB				PKKPbc	PKKPab	11 05 44.2	+0.3
	comp=Z,8.9nm,1.1s,baz=276,slow=4.4,SNR=21						
BBSR	BB Station	117.20	64	IAMs_20	IAMs_20	11 41 10.8	
	comp=Z,4µm,19.0s						
BBGH	Gun Hill	117.44	86	IAMs_20	IAMs_20	11 38 46.9	
	comp=Z,4µm,20.0s						
THN	Thein Dam	117.67	296	eP	PP	10 56 01.1	-31
NEEM	North Greenlan	117.79	12	i P	PKPdf	10 55 17.4	-0.4
MDOK	Medeo	117.83	308	ePKIKP	PKPdf	10 55 16.7	-1.9
MDOK				e		10 56 29.4	
MDOK	Medeo	117.83	308	ePKP	PKPdf	10 55 16.8	-1.9
MDOK				ePP	PP	10 56 29.5	-3.2
MDOK				LR	LR	11 45 17.2	
AAA	Alma-Ata	117.93	308	ePKIKP	PKPdf	10 55 16.9	-1.8
AAA	Alma-Ata	117.93	308	ePKP	PKPdf	10 55 17.0	-1.8
AAA				LR	LR	11 45 20.8	
KSH	Kashi	118.34	304	PKP	PKiKP	10 55 23.3	+3.5
KSH				PP	PP	10 56 36.5	+0.2
KSH				AMB	AMB		
	comp=Z,890nm,8.4s						
KSH				LR	LR		
	comp=Z,4µm,19.6s						
KSH				LR	LR		
	comp=Z,2µm,19.2s						
KSH				LR	LR		
	comp=Z,2µm,18.5s						
SRGN	SRI GANGA NAGA	118.82	293	eP	PP	10 56 05.6	-34
FOMA	Nahampoana Res	118.91	223	IAMs_20	IAMs_20	11 46 26.6	
	comp=Z,5µm,19.0s						
BKNR	BIKANER	119.02	291	eP	PP	10 56 04.4	-37
SGDS	Sogindy	119.61	309	ePKP	PKPdf	10 55 20.1	-1.8
SGDS				ePP	PP	10 56 41.5	-3.3
AAK	Ala-Archa	119.67	308	P	PKiKP	10 55 25.1	+2.8
AAK	Ala-Archa	119.67	308	i PKIKP	PKPdf	10 55 21.2	-1.0
AAK	Ala-Archa	119.67	308	PKiKP	PKiKP	10 55 23.9	+1.6
NIL	Nilore	119.89	297	P	PKiKP	10 55 24.2	+1.4
SDBA	SAO DESIDERIO	119.93	119	eP	PKiKP	10 55 27.5	+4.0
BRZS	Berezniki	120.91	316	ePKIKP	PKPdf	10 55 22.7	-1.5
BRZS	Berezniki	120.91	316	ePKP	PKPdf	10 55 22.7	-1.5
VOI	Vohitsoka	121.19	225	IAMs_20	IAMs_20	11 45 30.3	
	comp=Z,4µm,19.0s						
ILULI	Ilulissat	121.42	21	IAMs_20	IAMs_20	11 47 01.7	
	comp=Z,6µm,19.0s						
DZA	Taraz	122.00	308	ePKIKP	PKPdf	10 55 24.7	-1.8
DZA	Taraz	122.00	308	ePKP	PKPdf	10 55 24.8	-1.8
BVAR	Borovoye Array	122.08	320	PKP	PKPdf	10 55 25.0	-1.3
	comp=Z,20nm,0.7s,baz=76,slow=1.3,SNR=25						
BVAR				PKKPbc	PKKPbc	11 05 24.0	-0.5
	comp=Z,0.4nm,0.5s,baz=297,slow=4.3,SNR=4.6						
GRHM	Grahamstown, E	122.14	200	IAMs_20	IAMs_20	11 49 45.3	
	comp=Z,7µm,19.0s						
BRVK	Borovoye	122.14	320	IAMs_20	IAMs_20	11 47 05.1	
	comp=Z,6µm,20.0s						
BRVK	Borovoye	122.14	320	P	PKiKP	10 55 27.0	+0.5
BRVK	Borovoye	122.14	320	i PKIKP	PKPdf	10 55 24.5	-1.9
CMC01	Camacan, BA	122.44	126	eP	PKiKP	10 55 32.6	+4.3
SFJD	Kangerlussuaq	122.48	23	IAMs_20	IAMs_20	11 44 49.5	
	comp=Z,5µm,19.0s						
ABPO	Ambohimpanom	122.88	228	IAMs_20	IAMs_20	11 40 08.3	
	comp=Z,4µm,19.0s						
SPITS	Spitsbergen Ar	123.00	357	PKP	PKPdf	10 55 26.9	-0.6
	comp=Z,46nm,1.0s,baz=90,slow=8.3,SNR=12						
BRLS	Borolday	123.10	308	ePKIKP	PKPdf	10 55 26.9	-1.7
BRLS				e		10 57 06.5	
BRLS	Borolday	123.10	308	ePKP	PKPdf	10 55 27.0	-1.7
BRLS				ePP	PP	10 57 06.5	-2.1
SUMG	Summit	123.22	15	IAMs_20	IAMs_20	11 48 10.4	
	comp=Z,7µm,20.0s						
DAG	Danmarks Havn	123.31	7	i P	PKPdf	10 55 25.3	-2.8
KBL	Kabul	123.45	298	P	PKPdf	10 55 29.6	-0.2
SUR	Sutherland	124.57	195	P	PKPdf	10 55 31.9	-0.3
MSEY	Mahe Island	124.83	248	IAMs_20	IAMs_20	11 47 24.9	
	comp=Z,6µm,19.0s						
ICESG	Greenland Ices	125.03	18	i P	PKPdf	10 55 30.8	-1.2
DBG	Daneborg	125.29	8	i P	PKPdf	10 55 29.8	-2.1
IVI	Ivigtut	125.70	29	IAMs_20	IAMs_20	11 49 11.6	
	comp=Z,5µm,19.0s						
SVE	Sverdlovsk	126.77	326	i PKIKP	PKPdf	10 55 34.8	-0.4
SVE				eSP	SP	11 07 32.0	-0.9
SVE				ePS	PS	11 07 34.2	-2.6
SVE				eSS	SS	11 14 36.5	-0.9
SVE				pmax	pmax		
	comp=Z,46nm,1.1s						
SVE				pmax	pmax		
	comp=Z,7µm,21.0s						
SVE				pmax	pmax		
	comp=E,6µm,21.0s						
BOSA	Boshof	126.79	201	PKP	PKPdf	10 55 36.4	0.0
	comp=E,24nm,1.0s,baz=157,slow=2.4,SNR=14						
NRS	Narsarsuaq	126.94	28	IAMs_20	IAMs_20	11 48 16.5	
	comp=Z,6µm,20.0s						
ANGG	Ammassalik, Gr	127.71	21	IAMs_20	IAMs_20	11 56 55.9	
	comp=Z,6µm,19.0s						
NBPB	Pedra_Branca-C	128.06	116	eP	PKiKP	10 55 42.9	+3.3
ARTI	Arti	128.09	326	i PKIKP	PKPdf	10 55 35.7	-2.0
ARTI						10 57 36.9	
ARTI						11 02 46.7	
ARTI				SP	SP	11 07 42.8	-1.7
ARTI				MLR	MLR		
	comp=Z,8µm,20.0s						
SCO	Scoresbysund	128.29	11	IAMs_20	IAMs_20	11 51 09.6	
	comp=Z,4µm,20.0s						
SCO	Scoresbysund	128.29	11	eP	PKiKP	10 55 38.5	+0.2
NGCH	Negor - Chabah	129.35	286	P	PKiKP	10 55 42.1	+0.3
MAKGR	Makgori	129.52	202	i P	PKiKP	10 55 44.3	+1.9
LVZ	Lovozero	130.19	346	IAMs_20	IAMs_20	11 54 09.5	
	comp=Z,5µm,20.0s						
JLN	Jalan Bani Buh	130.43	281	P	PKiKP	10 55 44.7	+0.7
ARCES	ARCESS Array B	130.45	351	PKP	PKPdf	10 55 41.2	-0.6
	comp=Z,5.6nm,0.7s,baz=8.7,slow=1.6,SNR=14						
APA	Apatity	130.73	346	⇓iPKIKP	PKiKP	10 55 44.1	+0.8
APA				i		10 57 55.0	
APA				pmax	pmax		
	comp=Z,14nm,1.1s						
SKOMA	Sekoma	131.02	202	i P	PKiKP	10 55 47.2	+1.8
WSAR	Wadi Sarin	131.31	283	P	PKiKP	10 55 46.4	+0.5
KIRV	Kirov	131.52	331	i PKIKP	PKPdf	10 55 43.9	-0.2
MHTO	MHTO	131.54	279	P	PKiKP	10 55 46.4	+0.1
	SNR=6.9						
JMDO	Jabal Madar	131.66	281	P	PKPdf	10 55 46.3	+0.8
DQM	DQM	131.74	278	P	PKPdf	10 55 46.2	+0.5
BIDO	Bidbid	131.81	283	P	PKiKP	10 55 47.7	+0.9
SMDO	Samad	131.81	282	P	PKPdf	10 55 46.5	+0.5
BSY	Bisya	132.54	282	P	PKiKP	10 55 48.5	+0.2
HOQ	Hoqain	132.56	283	P	PKiKP	10 55 48.4	0.0
BROLN	Tlhalogang	132.76	208	i P	PKiKP	10 55 51.7	+2.7
BORG	Borgarnes	133.17	16	IAMs_20	IAMs_20	11 58 08.4	
	comp=Z,4µm,20.0s						
ARQ	Araqi	133.24	282	P	PKiKP	10 55 50.0	+0.2
SOHO	SOHO	133.34	283	P	PKiKP	10 55 49.8	0.0
SOHO	SOHO	133.34	283	i PKiKP	PKPdf	10 55 49.1	+0.4
	SNR=6.5						
DMTO	DMTO	133.68	274	P	PKPdf	10 55 49.2	-0.3
MDH	Madha	133.69	285	P	PKPdf	10 55 50.2	+0.9
UOSS	Minazif	133.74	284	P	PKiKP	10 55 50.8	+0.1
UOSS	Minazif	133.74	284	i PKiKP	PKPdf	10 55 49.8	+0.4
	SNR=5.5						
BANOM	Banah	133.75	286	P	PKiKP	10 55 51.1	+0.4
HATD	Hatta, Dubai	133.79	284	P	PKPdf	10 55 50.7	+1.2
	SNR=5.7						
HATD	Hatta, Dubai	133.79	284	i PKiKP	PKPdf	10 55 50.4	+0.9
	SNR=5.9						
MSFE	Esma-Masafi	133.82	285	i PKiKP	PKiKP	10 55 51.2	+0.3
	SNR=6.4						
MASF	Masafi	133.82	285	P	PKiKP	10 55 51.1	+0.2
ASHO	Ashiyiah	133.84	284	P	PKPdf	10 55 49.6	-0.1
	SNR=5.6						
ASHO	Ashiyiah	133.84	284	i PKiKP	PKiKP	10 55 51.4	+0.4
	SNR=6.7						
SHME	Shamm	133.90	286	P	PKiKP	10 55 51.8	+0.8
SHME	Shamm	133.90	286	PKiKP	PKiKP	10 55 51.8	+0.8
ALNE	Al Ain	134.04	283	P	PKiKP	10 55 51.8	+0.5
	SNR=8.0						
ALNE	Al Ain	134.04	283	i PKiKP	PKiKP	10 55 52.0	+0.7
	SNR=6.5						
KLMR	Klimovskoe	134.13	338	ePKIKP	PKPdf	10 55 45.2	-3.8
KLMR				e		10 55 51.0	
KLMR				e		10 58 17.4	
KLMR				SP	SP	11 08 34.4	-1.6
KLMR				SS	SS	11 16 36.8	+30
KLMR				pmax	pmax		
	comp=Z,32nm,1.4s						
NAZ	Nazwa, Dubai	134.23	284	P	PKiKP	10 55 52.0	+0.4
NAZ	Nazwa, Dubai	134.23	284	PKiKP	PKPdf	10 55 50.6	+0.3
FAQ	Al Faqa, Dubai	134.26	284	P	PKPdf	10 55 51.1	+0.7
FAQ	Al Faqa, Dubai	134.26	284	PKiKP	PKPdf	10 55 50.5	+0.1
UMQ	Umm Al-Quwin	134.28	285	P	PKiKP	10 55 52.4	+0.6
RBK	Rabkut	134.32	274	P	PKiKP	10 55 52.3	+0.2
UMZA	Um Al Zommool	134.40	281	P	PKiKP	10 55 52.1	+0.1
ASUD	Al Ashush, Dub	134.49	284	P	PKiKP	10 55 52.8	+0.6
ASUD	Al Ashush, Dub	134.49	284	PKiKP	PKPdf	10 55 52.0	+1.2
DOK	Doka	134.63	275	P	PKPdf	10 55 52.3	+1.1
AJN	Ajban	134.79	284	P	PKiKP	10 55 52.8	0.0
AJN	Ajban	134.79	284	i PKiKP	PKiKP	10 55 54.7	+1.9
	SNR=11						
WHFO	Wadi Hawf	134.81	274	P	PKiKP	10 55 53.5	+0.4
ABTO	Aybut	135.13	273	P	PKiKP	10 55 54.1	+0.4
BELG	Belogornoye	135.45	324	i PKIKP	PKPdf	10 55 49.8	-1.9
MZWR	Madinat Zayed	135.70	282	P	PKPdf	10 55 54.0	+1.0
MZR	Muzera	135.97	281	PKiKP	PKPdf	10 55 54.0	+0.3
QNGWA	Qangwa	136.57	201	i P	PKiKP	10 55 58.0	+1.2
GHWR	Ruwais	136.64	283	P	PKPdf	10 55 56.1	+1.3
JRN	Qarnain Island	136.76	284	P	PKiKP	10 55 57.9	+1.1
LSZ	Lusaka	137.39	213	IAMs_20	IAMs_20	11 58 37.4	
	comp=Z,5µm,20.0s						
LSZ	Lusaka	137.39	213	P	PKiKP	10 55 58.5	0.0
FINES	FINESS Array B	137.62	346	PKhKP	PKPpre	10 55 47.5	
	comp=Z,1.0nm,0.7s,baz=186,slow=15,SNR=1.2						
FINES				PKP	PKPdf	10 55 55.7	+0.3
	comp=Z,7.2nm,0.8s,baz=124,slow=5.5,SNR=7.4						
SLWR	Sila	137.73	283	P	PKPdf	10 55 52.4	-4.4
TSUM	Tsumeb	137.98	197	IAMs_20	IAMs_20	12 01 14.2	
	comp=Z,6µm,18.0s						
TRNA	Turayna	138.23	284	P	PKPdf	10 55 57.3	-0.4
MOS	Moscow	138.37	333	i PKIKP	PKPdf	10 55 56.8	-0.2
MOS				e		10 58 44.2	
MOS				eSS	SS	11 16 57.2	-0.6
MOS				pmax	pmax		
	comp=Z,46nm,1.2s						
MOS				MLR	MLR		
	comp=N,2µm,20.0s						
MOS				MLR	MLR		
	comp=E,3µm,20.0s						
MOS				MLR	MLR		
	comp=Z,3µm,20.0s						
SHMA	Al-Shehemyia	138.53	285	P	PKPdf	10 55 59.5	+1.2
SMRA	Abu-Samra	138.58	283	P	PKPdf	10 55 59.6	+1.3
SAKB	Bahrain	138.93	285	P	PKPdf	10 55 56.4	-2.6
VRH	Novokhopyorsk	139.21	326	i PKIKP	PKPdf	10 55 56.7	-2.0
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VRH				MLR	MLR		
	comp=Z,6µm,21.0s						
MAK	Makhachkala	139.23	312	i P	Pdif	10 53 05.2	-6.4
MAK				i		10 55 55.1	
MAK				ePPP	PPP	11 01 51.6	
MAK				e		11 03 04.8	
MAK				e		11 11 10.9	
MAK				eSS	SS	11 17 08.3	-1.0
MAK				eSSS	SSS	11 22 13.6	
MAK				pmax	pmax		
	comp=Z,148nm,1.1s						
OBN	Obninsk	139.24	333	IAMs_20	IAMs_20	12 04 52.7	
	comp=Z,4µm,20.0s						
OBN	Obninsk	139.24	333	⇓ePKHKP	PKPpre	10 55 52.0	
OBN				e		10 58 51.1	
OBN				pmax	pmax		
	comp=Z,69nm,1.3s						
AKT	Akhty	139.51	309	ePKIKP	PKPdf	10 55 54.0	-5.8
AKT				e		10 58 52.5	
AKT				ePPP	PPP	11 01 55.7	
AKT				pmax	pmax		
	comp=Z,32nm,1.0s						
AKT				MLR	MLR		
	comp=Z,4µm,21.0s						
LPSR	Galich'ya Gora	139.81	329	ePKIKP	PKPdf	10 55 58.2	-1.6
LPSR				pmax	pmax		
	comp=Z,16nm,0.8s						
VSU	Vasula	140.05	343	ePKIKP	PKPdf	10 55 58.7	-1.3
VORR	Voronezh	140.24	328	i PKIKP	PKPdf	10 56 00.6	0.0
VORR				pmax	pmax		
	comp=Z,60nm,1.0s						
VORR				MLR	MLR		
	comp=Z,11µm,22.0s						
NB2	NORSAR Subarra	140.26	356	PKP	PKPdf	10 55 52.9	-7.5
	comp=Z,27nm,1.2s,baz=18,slow=4.3						
NOA	NORSAR Array B	140.26	356	PKhKP	PKPpre	10 55 51.7	
	comp=Z,6.3nm,1.2s,baz=16,slow=4.5,SNR=6.5						
NOA				PKP	PKPdf	10 55 59.8	-0.7
	comp=Z,3.8nm,1.0s,baz=59,slow=1.5,SNR=8.6						
VSR	Storozhevoye	140.53	327	i PKIKP	PKPdf	10 56 02.3	+1.2
VSR				pmax	pmax		
	comp=Z,30nm,1.0s						
VSR				MLR	MLR		
	comp=Z,10µm,24.0s						
KIBK	Kibwezi	140.56	237	PP	PP	10 58 59.2	-2.0
KIBK	Kibwezi	140.56	237	P	PKPdf	10 56 01.8	-0.7
VORD	Divnogorie	140.61	327	i PKIKP	PKiKP	10 56 03.1	-0.7
VORD				pmax	pmax		
	comp=Z,30nm,1.0s						
VORD				MLR	MLR		
	comp=Z,3µm,17.0s						
HFS	Hagfors	140.95	354	PKhKP	PKPpre	10 55 53.9	
	comp=Z,2.9nm,0.9s,baz=226,slow=24,SNR=3.7						
HFS				PKP	PKPdf	10 56 01.1	-0.5
	comp=Z,4.6nm,0.6s,baz=96,slow=1.5,SNR=11						
SHEL	Horse Pasture	141.14	162	IAMs_20	IAMs_20	12 05 31.3	
	comp=Z,3µm,19.0s						
GOF	Gofitskoye	141.44	316	c ePKIKP	PKPdf	10 56 03.4	+0.4
KBD	Kabd	141.50	290	P	PKPdf	10 56 00.3	-3.3
KMBO	Kilima Mbogo	141.93	238	IAMs_20	IAMs_20	12 08 15.4	
	comp=Z,4µm,19.0s						
KMBO	Kilima Mbogo	141.93	238	P	PKPdf	10 56 00.4	-4.8
KMBO	Kilima Mbogo	141.93	238	i PKiKP	PKPdf	10 56 06.1	+1.0
	SNR=8.1						
GNI	Garni	142.07	308	P	PKPdf	10 56 00.7	-3.8
GNI	Garni	142.07	308	i PKIKP	PKPdf	10 56 02.7	-1.8
KBZ	Khabaz	142.09	315	PKP	PKPdf	10 56 01.1	-3.0
	comp=Z,3.2nm,0.9s,baz=93,slow=4.7,SNR=10.0						
KBZ	Khabaz	142.09	315	i PKIKP	PKPdf	10 56 00.5	-3.6
KIV	Kislovodsk	142.14	315	IAMs_20	IAMs_20	12 08 46.5	
	comp=Z,4µm,20.0s						
KIV	Kislovodsk	142.14	315	P	PKPdf	10 56 01.0	-3.4
KIV	Kislovodsk	142.14	315	ePKHKP	PKPpre	10 55 57.3	
KIV				i		10 56 01.3	
KIV				eSS	SS	11 17 32.7	-11
KIV				eSSS	SSS	11 22 55.9	
KIV				pmax	pmax		
	comp=Z,17nm,1.0s						
KIV	Kislovodsk	142.14	315	i PKPdf	PKPdf	10 56 02.9	-1.5
	SNR=9.5						
SHA1	Shidzhatmaz	142.25	315	i PKIKP	PKPdf	10 56 03.1	-1.7
MNK	Minsk	143.01	339	i PKiKP	PKPdf	10 56 04.4	-1.1
	comp=E,14nm,0.7s						
MNK				i PKiKP	PKPdf	10 56 04.4	-1.1
	comp=N,14nm,0.8s						
MNK				i PKiKP	PKPdf	10 56 04.4	-1.1
	comp=Z,51nm,1.0s,baz=36						
MNK				i PP	PP	10 59 11.1	-3.7
MNK				i PPP	PPP	11 02 20.0	
MNK				i SKS	SKSac	11 03 22.7	+1.9
MNK				i SKKS	SKKSdf	11 12 36.0	+3.8
MNK				i SS	SS	11 17 51.4	-0.3
MNK				i SSS	SSS	11 23 12.3	
MNK				i LQ	LQ	11 51 48.4	
MNK				i LRM	MLR	11 59 21.9	
	comp=E,4µm,18.7s						
MNK				i LRM	MLR	11 59 21.9	
	comp=N,2µm,19.6s						
MNK				i LRM	MLR	11 59 21.9	
	comp=Z,6µm,20.7s						
MNK	Minsk	143.01	339	i PKIKP	PKPdf	10 56 04.4	-1.1
MNK				i		10 59 11.0	
MNK				i SS	SS	11 17 51.4	-0.4
MNK				i SSS	SSS	11 23 12.3	
MNK				pmax	pmax		
	comp=N,14nm,0.8s						
MNK				pmax	pmax		
	comp=E,14nm,0.7s						
MNK				pmax	pmax		
	comp=Z,51nm,1.0s						
MNK				MLR	MLR		
	comp=Z,6µm,21.0s						
MNK				MLR	MLR		
	comp=N,2µm,20.0s						
MNK				MLR	MLR		
	comp=E,4µm,19.0s						
NACGM	Naroch	143.05	340	ePKP	PKPdf	10 56 05.9	+0.4
	comp=Z,29nm,1.0s,baz=34						
ATD	Arta Tunnel	143.20	260	P	PKPdf	10 56 07.2	+0.2
RAYN	Ar Rayn	143.32	281	P	PKPab	10 56 03.0	0.0
RAYN	Ar Rayn	143.32	281	⇑PKHKP	PKPpre	10 56 01.6	
RAYN	Ar Rayn	143.32	281	i PKiKP	PKPdf	10 56 07.8	+0.8
	SNR=9.5						
PABE	Paberze	143.37	343	IAMs_20	IAMs_20	12 00 22.8	
	comp=Z,5µm,20.0s						
BORU	Boraas	143.50	354	i P	PKPbc	10 56 03.4	-0.1
ONAU	Onsala	143.82	354	i P	PKPbc	10 56 04.7	+0.3
FABU	Falkenberg	144.13	354	i P	PKPbc	10 56 05.7	+0.4
SOC	Sochi	144.24	316	ePKIKP	PKPab	10 56 04.3	-1.5
SOC				e		10 59 19.3	
SOC				eSSS	SSS	11 23 21.3	
SOC				pmax	pmax		
	comp=Z,17nm,0.7s						
BLEU	Blekinge	144.41	350	i P	PKPab	10 56 06.0	0.0
DEL	Delary	144.52	352	i P	PKPbc	10 56 07.7	+1.1
GURO	Guroymak-BITLI	144.56	307	PKPdf	PKPab	10 56 06.1	-1.3
ASCN	Ascension	144.73	144	IAMs_20	IAMs_20	11 57 15.1	
	comp=Z,5µm,18.0s						
SUW	Suwalki	144.90	342	ePKP	PKPab	10 56 06.3	-1.6
SUW	Suwalki	144.90	342	PKPdf	PKPab	10 56 06.0	-1.9
SUW				IAMs_20	IAMs_20	12 01 10.3	
	comp=Z,6µm,21.0s						
SUW	Suwalki	144.90	342	PKIKP	PKPab	10 56 06.0	-1.9
SUW				MLR	MLR		
	comp=Z,6µm,21.0s						
BJUU	Bjuv	145.01	353	i P	PKPab	10 56 06.8	-1.4
ANN	Anapa	145.08	319	i PKIKP	PKPbc	10 56 08.0	-0.8
LUNU	Lund	145.39	352	i P	PKPbc	10 56 08.5	-1.0
COP	Copenhagen	145.46	353	i P	PKPab	10 56 10.2	+0.3
AK03	Malin Array Si	145.48	334	PKP	PKPdf	10 56 06.1	-3.8
AKASG	Malin Array Be	145.50	333	PKPbc	PKPdf	10 56 07.7	-2.2
	comp=Z,18nm,0.6s,baz=37,slow=3.4,SNR=61						
AKBB	Malin Array Si	145.50	333		PKPdf	10 56 06.6	-3.3
AKBB	Malin Array Si	145.50	333	PKP2	PKPdf	10 56 06.6	-3.3
AK04	Malin Array Si	145.51	334	PKP	PKPdf	10 56 06.1	-3.8
EKA	Eskdalemuir Ar	145.51	9	PKPbc	PKPdf	10 56 09.2	-0.5
	comp=Z,43nm,1.1s,baz=347,slow=3.4,SNR=18						
AK01	Malin Array Si	145.51	333	PKP	PKPdf	10 56 06.1	-3.8
KIEV	Kiev	145.51	333		PKPdf	10 56 07.2	-2.8
KIEV	Kiev	145.51	333	IAMs_20	IAMs_20	12 05 15.3	
	comp=Z,4µm,20.0s						
KIEV	Kiev	145.51	333	⇑P	PKPdf	10 56 08.2	-1.7
KIEV	Kiev	145.51	333	⇑PKP2	PKPdf	10 56 08.2	-1.7
KIEV	Kiev	145.51	333	i PKPab	PKPdf	10 56 07.8	-2.1
	SNR=95						
AK22	Malin Array Si	145.52	334	PKP	PKPdf	10 56 06.0	-3.9
ESK	Eskdalemuir	145.52	9	IAMs_20	IAMs_20	12 03 30.3	
	comp=Z,5µm,20.0s						
ESK	Eskdalemuir	145.52	9	eP	PKPab	10 56 10.6	+0.5
BSD	Bornholm Skovb	145.69	351	i P	PKPdf	10 56 08.9	-1.1
GAL1	Galloway	145.71	11	eP	PKPab	10 56 12.0	+1.1

PCED	Cedros	145.84	52	ePKP	PKiKP	10 56 15.7	+0.7
PCED	Cedros	145.84	52	ePKP	PKiKP	10 56 15.7	+0.7
CALA	Caldeira	145.86	52	ePKP	PKiKP	10 56 15.4	+0.2
CALA	Caldeira	145.86	52	ePKP	PKiKP	10 56 15.4	+0.2
SSRD	Sdr. Stenderup	145.90	356	i P	PKPdf	10 56 10.8	+0.4
HOR	Horta	145.93	52	ePKP	PKiKP	10 56 16.3	+1.1
HOR	Horta	145.93	52	ePKP	PKiKP	10 56 16.3	+1.1
FURI	Furi	145.97	254	IAMs_20	IAMs_20	11 59 59.3	
	comp=Z,3µm,19.0s						
PCAN	Candelaria	146.06	52	ePKP	PKiKP	10 56 16.3	+0.8
PCAN	Candelaria	146.06	52	ePKP	PKiKP	10 56 16.3	+0.8
PICO	Pico	146.09	52	ePKP	PKiKP	10 56 14.9	-0.7
PICO	Pico	146.09	52	ePKP	PKiKP	10 56 14.9	-0.7
LODK	Lodwar	146.13	242	IAMs_20	IAMs_20	12 08 45.0	
	comp=Z,3µm,19.0s						
LODK	Lodwar	146.13	242	P	PKPdf	10 56 12.9	+0.6
ROSA	Rosais	146.15	52	ePKP	PKiKP	10 56 15.0	-0.6
ROSA	Rosais	146.15	52	ePKP	PKiKP	10 56 15.0	-0.6
EDMD	Edmundbyers	146.16	8	eP	PKPab	10 56 13.1	+0.5
RNPP9	Sopachiv	146.24	337	PKP	PKPdf	10 56 07.7	-3.4
KESW	Keswick, Cumbr	146.24	9	eP	PKPab	10 56 13.8	+0.9
PMAN	Manadas	146.29	52	ePKP	PKPab	10 56 15.0	+1.4
PMAN	Manadas	146.29	52	ePKP	PKPab	10 56 15.0	+1.4
WIM	Isle of Man	146.40	11	eP	PKPab	10 56 14.0	+0.4
RGN	Rugen	146.47	352	IAMs_20	IAMs_20	12 02 27.7	
	comp=Z,5µm,21.0s						
RGN	Rugen	146.47	352	ePKPbc	PKPab	10 56 14.7	+1.0
	baz=10.0,slow=2.8						
LUBAR	Lubar, Ukraine	146.70	334	PKP	PKPdf	10 56 08.7	-3.3
GDLE	Glaisdale, N Y	146.71	7	eP	PKPab	10 56 15.1	+0.4
PSBA	Serra de Santa	146.80	51	ePKP	PKiKP	10 56 16.9	-0.1
PSBA	Serra de Santa	146.80	51	ePKP	PKiKP	10 56 16.9	-0.1
PAGU	Agualva, Azore	146.90	51	ePKP	PKiKP	10 56 17.9	+0.7
PAGU	Agualva, Azore	146.90	51	ePKP	PKiKP	10 56 17.9	+0.7
SIM	Simferopol'	146.96	322	ePKP2	PKPbc	10 56 15.4	+0.8
SIM				pmax	pmax		
	comp=Z,321nm,1.5s						
GKP	Gorka Klasztor	147.04	347	ePKP	PKPbc	10 56 15.4	+0.9
R9F13	Warsaw-Wawer	147.06	343	ePKP	PKPbc	10 56 14.3	-0.3
R9F13				ePP	PP	10 59 39.1	+0.3
R9F13				eSKS	SKSdf	11 03 29.1	+9.2
R9F13				e		11 07 29.2	
WPS	Cemaes, Angles	147.15	11	eP	PKPbc	10 56 15.8	+1.0
MBAR	Mbarara	147.22	231	IAMs_20	IAMs_20	12 10 06.7	
	comp=Z,4µm,20.0s						
MBAR	Mbarara	147.22	231	P	PKPbc	10 56 16.2	-0.2
WLF1	Llynfaes	147.27	11	eP	PKPab	10 56 16.5	-0.4
HLG	Helgoland	147.28	358	ePKPbc	PKPbc	10 56 16.2	+1.1
	baz=10.0,slow=2.8						
BSEG	Bad Segeberg	147.39	355	ePKPbc	PKPbc	10 56 15.6	+0.2
	baz=10.0,slow=2.8						
BSEG				eL	L	12 09 37.4	
	comp=Z,4µm,19.6s						
BEL	Belsk	147.51	343	ePKP	PKPdf	10 56 13.9	+0.7
LBWR	Ladybower, Pea	147.59	8	eP	PKPdf	10 56 14.8	+1.4
SORM	Soroca	147.80	331	⇑P	PKPbc	10 56 16.9	+0.1
SORM	Soroca	147.80	331	⇑PKP2	PKPbc	10 56 16.9	+0.1
DIKM	Dikmen	148.05	316	⇓P	PKPdf	10 56 16.2	+1.6
GORT1	Trebel	148.23	354	ePKPdf	PKPdf	10 56 14.1	-0.2
	baz=10.0,slow=1.6						
GORT1				ePKPbc	PKiKP	10 56 19.3	-0.1
	baz=10.0,slow=2.8						
HLM1	Long Mynd	148.28	10	eP	PKPbc	10 56 18.9	+1.0
CWF	Charnwood Fore	148.29	8	eP	PKiKP	10 56 19.5	-0.1
KIS	Kishinev	148.42	329	ePKP2	PKPbc	10 56 19.0	+0.6
KIS				pmax	pmax		
	comp=Z,630nm,2.6s						
RUE	Ruedersdorf	148.42	351	ePKPbc	PKiKP	10 56 19.7	-0.1
	baz=10.0,slow=2.8						
MILM	Milestii Mici	148.48	329	ePKHKP	PKPpre	10 56 15.6	
MILM	Milestii Mici	148.48	329	i PKiKP	PKPbc	10 56 19.3	+0.7
MILM	Milestii Mici	148.48	329	PKPM		10 56 21.0	
	comp=Z,1µm,2.8s						
MILM				i SKSP		11 10 05.0	
MILM				eL	L	11 56 57.0	
MILM				LRM	MLR	12 01 23.0	
	comp=Z,3µm,21.5s						
MILM	Milestii Mici	148.48	329	⇑P	PKPbc	10 56 18.4	-0.2
MILM	Milestii Mici	148.48	329	⇑PKP2	PKPbc	10 56 18.4	-0.2
RETH	Rethem/Aller,	148.65	356	ePKPbc	PKiKP	10 56 20.5	+0.2
	baz=10.0,slow=2.8						
BZK	Bozkurt	148.70	317	⇓P	PKPdf	10 56 16.9	+1.4
MCH1	Michaelchurch	148.76	10	eP	PKPbc	10 56 20.0	+0.8
NRDL	Niedersach Rie	148.84	355	ePKPbc	PKiKP	10 56 20.8	+0.1
	baz=10.0,slow=2.8						
KWP	Kalwaria Pacla	148.84	339	ePKP	PKPdf	10 56 17.9	+2.3
FLTG	Flechtingen	148.89	354	ePKPbc	PKPbc	10 56 20.3	+0.8
	baz=10.0,slow=2.8						
MONM	Monmouth	148.94	10	eP	PKPbc	10 56 20.6	+1.0
STRD	Stroud	149.11	10	eP	PKiKP	10 56 21.3	0.0
PSMN	Pico do Norte,	149.11	53	ePKP	PKPdf	10 56 16.9	+0.6
PSMN	Pico do Norte,	149.11	53	ePKP	PKPdf	10 56 16.9	+0.6
ASSE	Asse, Remlinge	149.15	354	ePKPbc	PKPbc	10 56 21.0	+0.9
	baz=10.0,slow=2.8						
VASR	Vaslui	149.16	330	⇑P	PKiKP	10 56 22.5	+0.9
IBBN	Ibbenburen	149.16	358	ePKPbc	PKiKP	10 56 21.5	+0.1
	baz=10.0,slow=2.8						
PRAR	RASCA	149.32	332	⇓P	PKPbc	10 56 20.6	-0.2
ILGA	Ilgaz	149.35	316	IAMs_20	IAMs_20	12 12 02.1	
	comp=Z,5µm,20.0s						
CIDE	Kastamonu/Cide	149.40	318	⇑P	PKPbc	10 56 20.6	-0.5
CLZ	Clausthal	149.46	354	ePKPdf	PKPdf	10 56 15.4	-1.2
	baz=10.0,slow=1.6						
CLZ				ePKPbc	PKPbc	10 56 20.9	-0.1
	baz=10.0,slow=2.8						
STHS	Stebnicka Huta	149.51	340	ePKHKP	PKPpre	10 56 18.3	
STHS	Stebnicka Huta	149.51	340	ePKP	PKPdf	10 56 18.3	+1.6
KSP	Ksiaz	149.53	347	ePKP	PKPdf	10 56 18.2	+1.6
BURAR	Bucovina Array	149.56	334	⇑P	PKPdf	10 56 18.6	+1.7
BURAR	Bucovina Array	149.56	334	⇑PKHKP	PKPpre	10 56 18.6	
KOLS	Kolonicke sedl	149.59	338	ePKHKP	PKPpre	10 56 18.9	
KOLS				e		10 56 24.0	
KOLS	Kolonicke sedl	149.59	338	ePKP	PKPdf	10 56 18.9	+2.1
KOLS				e		10 56 24.0	
KOLS				e		11 06 38.9	
VLDR	Vladesti	149.60	328	⇑P	PKPbc	10 56 22.3	+0.9
CLL	Collm	149.67	351	IAMs_20	IAMs_20	12 10 13.7	
	comp=Z,4µm,20.0s						
CLL	Collm	149.67	351	ePKHKP	PKPpre	10 56 16.0	
CLL				i		10 56 23.3	
CLL				pmax	pmax		
	comp=Z,77nm,2.0s						
CLL				pmax	pmax		
	comp=Z,154nm,1.4s						
CLL				MLR	MLR		
	comp=Z,4µm,19.8s						
CLL	Collm	149.67	351	ePKPbc	PKPbc	10 56 21.0	-0.4
	baz=10.0,slow=2.8						
CLL				eL	L	12 10 13.9	
	comp=Z,4µm,19.8s						
CLL	Collm	149.67	351	ePKPdf	PKPdf	10 56 16.0	-0.8
CLL				i PKPbc	PKPbc	10 56 18.5	-3.0
	comp=Z,77nm,2.0s						
CLL				i PKiKP	PKPbc	10 56 21.1	-0.4
	comp=Z,75nm,1.6s						
CLL				i PKPab	PKiKP	10 56 23.3	+0.8
	comp=Z,154nm,1.4s						
CLL				ePKPlp		10 56 26.0	
	comp=Z,1µm,21.6s						
CLL				i x	x	10 56 36.8	
CLL				i x	x	10 56 49.3	
	comp=Z,190nm,1.4s						
CLL				ePP	PP	10 59 52.0	-1.9
CLL				eSKSdf	SKSdf	11 03 36.0	+12
CLL				eSKKSac	SKKSac	11 06 48.0	+3.6
CLL				ePSKS		11 10 10.0	
CLL				ePPS	PPS	11 12 42.0	
CLL				ex	x	11 17 12.0	
CLL				eSS	SS	11 19 06.0	-0.9
CLL				eSSS	SSS	11 24 48.0	
CLL				eSSSS		11 28 42.0	
CLL				ex	x	11 30 00.0	
CLL				AMS	AMS	12 09 00.0	
CLL				AMS	AMS	12 10 00.0	
	comp=N,2µm,19.9s						
CLL				AMS	AMS	12 10 00.0	
	comp=E,2µm,19.8s						
CLL				AMS	AMS	12 10 00.0	
	comp=Z,4µm,19.8s						
GHRR		149.77	329	⇑P	PKPdf	10 56 19.1	+2.0
TESR	Tescani	149.78	331	⇓P	PKPdf	10 56 18.1	+1.0
GTTG	Gottingen	149.79	355	ePKPbc	PKPbc	10 56 21.5	-0.2
	baz=10.0,slow=2.8						
NIE	Niedzica	149.80	341	ePKP	PKPdf	10 56 19.1	+2.0
OSTC	Ostas	149.82	347	⇑ePKP	PKPdf	10 56 19.2	+2.1
OSTC				ex	x	11 06 50.1	
OSTC				AMS	AMS	12 12 20.0	
	comp=Z,5µm,19.0s						
OSTC	Ostas	149.82	347	ePKHKP	PKPpre	10 56 19.2	
OSTC				MLR	MLR		
	comp=Z,5µm,19.0s						
CHVC	Chvalec	149.82	347	⇑ePKP	PKPbc	10 56 21.4	-0.5
CHVC				AMS	AMS	12 03 40.0	
	comp=Z,5µm,20.1s						
CHVC	Chvalec	149.82	347	ePKP2	PKPbc	10 56 21.4	-0.5
CHVC				MLR	MLR		
	comp=Z,5µm,20.1s						
UPC	Upice	149.91	347	⇑ePKP	PKPbc	10 56 21.4	-0.7
UPC				AMS	AMS	12 03 50.0	
	comp=Z,5µm,21.3s						
UPC	Upice	149.91	347	ePKP2	PKPbc	10 56 21.4	-0.7
UPC				MLR	MLR		
	comp=Z,5µm,21.3s						
NEUB	Neuenburg	149.94	352	ePKPbc	PKPbc	10 56 21.6	-0.5
	baz=10.0,slow=2.8						
BRG	Berggiesshubel	149.95	350	ePKPdf	PKPdf	10 56 16.1	-1.2
	baz=10.0,slow=1.6						
BRG				ePKPbc	PKPbc	10 56 21.3	-0.9
	baz=10.0,slow=2.8						
BRG	Berggiesshubel	149.95	350	ePKP	PKPdf	10 56 16.5	-0.7
BRG				Amp		10 56 26.9	
	comp=Z,111nm,1.2s						
JURR	Jurilovca	149.95	326	⇑P	PKPbc	10 56 22.6	+0.3
DPC	Dobruska-Polom	149.99	346	⇑ePKP	PKPbc	10 56 21.9	-0.5
DPC				AMS	AMS	12 12 20.0	
	comp=Z,5µm,19.0s						
DPC	Dobruska-Polom	149.99	346	ePKP2	PKPbc	10 56 21.9	-0.5
DPC				MLR	MLR		
	comp=Z,5µm,19.0s						
SCHLR	Schela	149.99	328	⇑P	PKPdf	10 56 19.3	+1.9
OKC	Ostrava-Krasne	150.03	344	AMS	AMS	12 04 20.0	
	comp=Z,5µm,21.1s						
ONER	Baraj Valea Uz	150.03	331	⇑P	PKPdf	10 56 18.1	+0.5
STEB	Steborice	150.04	344	⇑ePKP	PKPbc	10 56 21.0	-1.4
CFR	Carcaliu	150.04	327	⇑P	PKPdf	10 56 17.5	-0.1
CFR	Carcaliu	150.04	327	⇑PKHKP	PKPpre	10 56 17.5	
BUG	Bochum--Univer	150.05	358	ePKPbc	PKPbc	10 56 21.8	-0.5
	baz=10.0,slow=2.8						
BR131	Keskin Array S	150.07	314	P	PKPdf	10 56 20.0	+2.0
	SNR=105						
BRTR	Keskin Array B	150.07	314	PKPbc	PKPbc	10 56 22.1	-1.0
	comp=Z,11nm,1.1s,baz=48,slow=1.8,SNR=12						
BRTR				SKP		10 59 53.0	
	comp=Z,6.5nm,1.2s,baz=63,slow=1.3,SNR=5.9						
TPGR	Topolog	150.13	327	⇑P	PKPdf	10 56 20.8	+3.0
KRLC	Kraliky	150.14	346	⇑ePKP	PKPbc	10 56 21.1	-1.6
KRLC	Kraliky	150.14	346	ePKIKP	PKPbc	10 56 21.1	-1.6
PVCC	Panska Ves	150.17	349	⇑ePKP	PKPbc	10 56 22.6	-0.1
PVCC				AMS	AMS	12 11 10.0	
	comp=Z,4µm,18.8s						
PVCC	Panska Ves	150.17	349	ePKIKP	PKPbc	10 56 22.6	-0.1
PVCC				MLR	MLR		
	comp=Z,4µm,18.8s						
BMR	Baia Mare	150.20	336	⇑P	PKPbc	10 56 23.5	+0.6
BMR	Baia Mare	150.20	336	⇑PKIKP	PKPbc	10 56 23.5	+0.6
VRI	Vrincioaia	150.23	330	⇓P	PKPdf	10 56 20.9	+3.0
VRI	Vrincioaia	150.23	330	⇓PKIKP	PKPdf	10 56 20.9	+3.0
KASTN	Kahler Asten	150.24	357	ePKPdf	PKPdf	10 56 16.9	-0.9
	baz=10.0,slow=1.6						
KASTN				ePKPbc	PKPbc	10 56 22.1	-0.8
	baz=10.0,slow=2.8						
MORC	Moravsky Berou	150.24	345	ePKP	PKPdf	10 56 15.1	-2.7
MORC	Moravsky Berou	150.24	345	⇑P	PKPdf	10 56 18.3	+0.4
MORC	Moravsky Berou	150.24	345	⇑PKIKP	PKPdf	10 56 18.3	+0.4
RICC	Richard	150.24	349	AMS	AMS	12 05 50.0	
	comp=Z,4µm,19.5s						
PLOR	Plostina	150.28	330	⇓P	PKPbc	10 56 21.5	-1.7
PLOR	Plostina	150.28	330	⇓PKIKP	PKPbc	10 56 21.5	-1.7
BEIL	Beino	150.28	303	eP	PKPdf	10 56 19.6	+1.2
HSKC	Hora Svate Kat	150.29	350	AMS	AMS	12 13 40.0	
	comp=Z,5µm,18.5s						
LANS	Liptovska Anna	150.29	342	ePKIKP	PKPdf	10 56 20.6	+2.7
LANS				e		10 56 26.4	
LANS	Liptovska Anna	150.29	342	ePKP	PKPdf	10 56 20.6	+2.7
LANS				e		10 56 26.4	
TIRR	Tirgusor	150.41	326	IAMs_20	IAMs_20	12 06 30.0	
	comp=Z,5µm,20.0s						
TURR	Turia	150.42	331	⇑P	PKPdf	10 56 21.3	+3.1
GRER		150.47	329	⇑P	PKPbc	10 56 23.0	-0.6
OZUR		150.49	331	⇑P	PKPbc	10 56 21.6	-2.1
HARR	Harsova	150.49	327	⇑P	PKPbc	10 56 22.5	-1.1
HARR	Harsova	150.49	327	⇑PKIKP	PKPbc	10 56 22.5	-1.1
UBBA	Unterbreizbach	150.51	355	ePKPbc	PKPbc	10 56 22.9	-0.4
	baz=10.0,slow=2.8						
MOX	Moxa	150.51	352	ePKPdf	PKPdf	10 56 18.9	+0.7
	baz=10.0,slow=1.6						
MOX				ePKPbc	PKiKP	10 56 24.9	+0.6
	baz=10.0,slow=2.8						
MOX				eL	L	12 04 36.5	
	comp=Z,5µm,20.4s						
MAUC	Maruska	150.55	344	⇑ePKP	PKPbc	10 56 22.7	-1.0
HWQ	Hawqa	150.55	302	eP	PKPdf	10 56 20.4	+1.5
ANTO	Ankara	150.56	315	IAMs_20	IAMs_20	12 19 32.6	
	comp=Z,3µm,20.0s						
ANTO	Ankara	150.56	315	P	PKPdf	10 56 20.2	+1.5
ANTO	Ankara	150.56	315	⇓P	PKPdf	10 56 21.0	+2.3
ANTO	Ankara	150.56	315	⇓PKIKP	PKPdf	10 56 21.0	+2.3
TANN	Tannenbergstha	150.62	351	ePKPdf	PKPdf	10 56 18.1	-0.3
	baz=10.0,slow=1.6						
TANN				ePKPbc	sPKPdf	10 56 25.7	-0.3
	baz=10.0,slow=2.8						
PRA	Prague	150.63	349	⇑ePKP	PKPbc	10 56 24.5	+0.7
PRA				AMS	AMS	12 14 00.0	
	comp=Z,5µm,18.4s						
PRA	Prague	150.63	349	ePKIKP	PKPbc	10 56 24.5	+0.7
PRA				MLR	MLR		
	comp=Z,5µm,18.4s						
UCC	Uccle	150.69	2	dPKP	PKPdf	10 56 18.6	+0.2
PRU	Pruhonice	150.69	348	ePKP	PKPbc	10 56 22.1	-1.9
PRU				AMS	AMS	12 06 10.0	
	comp=Z,5µm,20.9s						
PRU	Pruhonice	150.69	348	ePKIKP	PKPbc	10 56 22.1	-1.9
PRU				MLR	MLR		
	comp=Z,5µm,20.9s						
BEBN	Eben Emael	150.72	0	dPKP	PKiKP	10 56 25.8	+1.2
GOPC	GO Pecny, Ondr	150.72	348	AMS	AMS	12 13 50.0	
	comp=Z,6µm,18.9s						
NEHR	Nehoiu	150.76	330	⇑P	PKPbc	10 56 22.7	-1.6
DOPR	Dopca	150.77	331	⇑P	PKPdf	10 56 19.1	+0.4
NKC	Novy Kostel	150.80	351	⇑ePKP	PKPbc	10 56 22.9	-1.4
NKC				AMS	AMS	12 03 50.0	
	comp=Z,5µm,20.7s						
NKC	Novy Kostel	150.80	351	ePKIKP	PKPbc	10 56 22.9	-1.4
NKC				MLR	MLR		
	comp=Z,5µm,20.7s						
MESR	Meseseni	150.84	336	⇑P	PKPdf	10 56 21.5	+2.7
ISR	Istrita	150.87	329	⇑P	PKPdf	10 56 21.7	+2.7
ISR	Istrita	150.87	329	⇑PKIKP	PKPdf	10 56 21.7	+2.7
RCY	Rachaya	150.87	301	eP	PKPdf	10 56 21.0	+1.5
MLR	Muntele Rosu	150.88	330	IAMs_20	IAMs_20	12 10 13.4	
	comp=Z,5µm,20.0s						
MLR	Muntele Rosu	150.88	330	⇑P	PKPdf	10 56 20.0	+0.9
MLR	Muntele Rosu	150.88	330	⇑PKIKP	PKPdf	10 56 20.0	+0.9
BHL	Bhannes	150.90	302	eP	PKPdf	10 56 20.3	+0.9
MEM	Membach	150.90	360	dPKP	PKiKP	10 56 25.2	+0.2
VRAC	Vranov	150.90	345	ePKP	PKPdf	10 56 16.3	-2.5
VRAC	Vranov	150.90	345	⇑P	PKPdf	10 56 22.0	+3.1
VRAC	Vranov	150.90	345	⇑PKIKP	PKPdf	10 56 22.0	+3.1
BTNL	Ternell	150.93	360	dPKP	PKPdf	10 56 22.0	+3.1
BSTI	Sart Tilman	150.93	0	dPKP	PKPdf	10 56 19.9	+1.1
CJR	Cluj-Napoca	150.94	334	⇑P	PKPbc	10 56 23.8	-0.9
CJR	Cluj-Napoca	150.94	334	⇑PKIKP	PKPbc	10 56 23.8	-0.9
QRWL	Qaraoun	150.98	301	eP	PKPdf	10 56 21.9	+2.3
JAVC	Velka Javorina	151.05	344	ePKP	PKPdf	10 56 16.7	-2.5
VYHS	Vyhne	151.06	342	ePKIKP	PKPdf	10 56 20.9	+1.8
VYHS				e		10 56 28.5	
VYHS	Vyhne	151.06	342	ePKP	PKPdf	10 56 20.9	+1.8
VYHS				e		10 56 28.5	
VYHS				e		11 06 42.5	
BCLA	Clavier	151.09	1	dPKP	PKPdf	10 56 21.2	+2.1
MANZ	Manzenberg	151.09	352	ePKPdf	PKPdf	10 56 18.6	-0.5
	baz=10.0,slow=1.6						
MANZ				ePKPbc	sPKPdf	10 56 26.6	-0.2
	baz=10.0,slow=2.8						
PSN	Preselentsi	151.11	325	P	PKPdf	10 56 21.2	+1.9
BGES	Gesves	151.12	1	dPKP	PKPdf	10 56 17.1	-2.1
BHOU	Houvegnez	151.16	360	dPKP	PKPdf	10 56 21.0	+1.8
MARR	Marisel-Cluj	151.16	335	⇑P	PKPbc	10 56 23.6	-1.7
TREC	Trest	151.16	347	⇑ePKP	PKPbc	10 56 23.4	-1.7
TREC				AMS	AMS	12 12 10.0	
	comp=Z,8µm,19.0s						
TREC	Trest	151.16	347	ePKIKP	PKPbc	10 56 23.4	-1.7
TREC				MLR	MLR		
	comp=Z,8µm,19.0s						
KRUC	Moravsky	151.18	345	ePKP	PKPdf	10 56 17.0	-2.3
BMRD	Maredsous	151.20	1	dPKP	PKPdf	10 56 20.0	+0.8
TNS	Taunus Mts	151.21	356	ePKPdf	PKPdf	10 56 18.4	-1.0
	baz=10.0,slow=1.6						
TNS				ePKPbc	sPKPdf	10 56 27.1	+0.1
	baz=10.0,slow=2.8						
TNS				eL	L	12 08 17.8	
	comp=Z,7µm,19.9s						
DRGR		151.23	335	⇑P	PKPdf	10 56 22.6	+3.1
DRGR		151.23	335	⇑PKIKP	PKPdf	10 56 22.6	+3.1
PSZ	Piszkesteto	151.26	340	⇑P	PKPdf	10 56 22.1	+2.6
PSZ	Piszkesteto	151.26	340	⇑PKIKP	PKPdf	10 56 22.1	+2.6
SAHE	Sakarya_HENDEK	151.28	318	⇓P	PKPdf	10 56 22.6	+2.9
ZVC	Zvikov	151.28	349	⇑ePKP	PKPbc	10 56 23.8	-1.6
ZVC				AMS	AMS	12 06 30.0	
	comp=Z,7µm,20.1s						
ROTZ	Rotzenmuhle	151.29	351	ePKPdf	PKPdf	10 56 19.0	-0.4
	baz=10.0,slow=1.6						
ROTZ				ePKPbc	sPKPdf	10 56 27.3	+0.2
	baz=10.0,slow=2.8						
VOIR		151.33	331	⇑P	PKPbc	10 56 24.4	-1.3
VOIR		151.33	331	⇑PKIKP	PKPbc	10 56 24.4	-1.3
MMAI	Mount Meron Ar	151.35	300	PKP	PKPdf	10 56 20.2	+0.1
	comp=Z,1.3nm,0.3s,baz=176,slow=40,SNR=2.1						
MMAI				PKPbc	pPKPdf	10 56 25.2	-0.6
	comp=Z,14nm,0.8s,baz=50,slow=2.6,SNR=14						
SACV	Santiago Islan	151.38	98	IAMs_20	IAMs_20	12 02 25.4	
	comp=Z,4µm,18.0s						
DOU	Dourbes	151.40	2	dPKP	PKPdf	10 56 22.0	+2.5
SMOL	Smolenice	151.43	344	ePKIKP	PKPdf	10 56 22.2	+2.5
SMOL				e		10 56 29.8	
GRA1	Grafenberg Arr	151.49	353	IAMs_20	IAMs_20	12 05 56.5	
	comp=Z,5µm,20.0s						
GRF	Grafenberg Arr	151.49	353	ePKPdf	PKPdf	10 56 18.9	-0.8
	baz=10.0,slow=1.6						
GRF				ePKPbc	sPKPdf	10 56 27.7	+0.3
	baz=10.0,slow=2.8						
GRF				eL	L	12 05 16.4	
	comp=Z,5µm,20.9s						
TNR	Turnu Rosu	151.50	332	⇑P	PKPdf	10 56 23.1	+3.2
TNR	Turnu Rosu	151.50	332	⇑PKIKP	PKPdf	10 56 23.1	+3.2
ARR	Arges	151.57	331	⇓P	PKPdf	10 56 18.8	-1.3
MODS	Modra-Piesok	151.60	344	ePKIKP	PKPdf	10 56 23.4	+3.4
MODS	Modra-Piesok	151.60	344	ePKP	PKPdf	10 56 23.4	+3.4
GHAJ	Ghor Haditha	151.65	296	IAMs_20	IAMs_20	12 09 28.2	
	comp=Z,3µm,20.0s						
KHC	Kasperske Hory	151.69	349	⇑ePKP	PKPdf	10 56 22.6	+2.5
KHC				epPKP	sPKPdf	10 56 30.0	+2.3
KHC				eSKKS		11 06 55.5	
KHC				ex	x	11 10 13.3	
KHC				AMS	AMS	12 10 50.0	
	comp=Z,4µm,19.5s						
KHC	Kasperske Hory	151.69	349	ePKIKP	PKPdf	10 56 22.6	+2.5
KHC				e		10 56 30.0	
KHC				MLR	MLR		
	comp=Z,4µm,19.5s						
KHC	Kasperske Hory	151.69	349	PKP	PKPdf	10 56 16.3	-3.8
WET	Wettzell	151.80	350	ePKPdf	PKPdf	10 56 19.7	-0.5
	baz=10.0,slow=1.6						
WET				ePKPbc	sPKPdf	10 56 28.5	+0.6
	baz=10.0,slow=2.8						
WET				eL	L	12 05 17.4	
	comp=Z,5µm,20.0s						
SRO	Srobarova	151.83	342	ePKIKP	PKPbc	10 56 25.4	-1.3
SRO				e		10 56 32.2	
SRO	Srobarova	151.83	342	ePKP	PKPbc	10 56 25.4	-1.3
SRO				e		10 56 32.2	
WLF	Walferdange	151.85	359	PKP	PKPdf	10 56 17.9	-2.3
WLF	Walferdange	151.85	359	dPKP	PKPdf	10 56 23.4	+3.2
WLF	Walferdange	151.85	359	ePKPbc	PKiKP	10 56 28.3	+1.3
	baz=10.0,slow=2.8						
SILT	Sile	151.85	320	⇑P	PKPbc	10 56 24.6	-2.3
CKRC	Cesky Krumlov	151.86	348	⇑ePKP	PKPdf	10 56 23.6	+3.3
CKRC				AMS	AMS	12 06 50.0	
	comp=Z,6µm,20.3s						
CKRC	Cesky Krumlov	151.86	348	ePKIKP	PKPdf	10 56 23.6	+3.3
CKRC				MLR	MLR		
	comp=Z,6µm,20.3s						
LOT	Lotru	151.88	333	⇑P	PKPdf	10 56 22.5	+1.9
DEV	Deva	151.90	334	⇑P	PKPdf	10 56 23.0	+2.6
DEV	Deva	151.90	334	⇑PKIKP	PKPdf	10 56 23.0	+2.6
GEC2	GERESS Array S	151.95	349	PKPdf	PKPdf	10 56 18.3	-2.3
GEC2	GERESS Array S	151.95	349	ePKPdf	PKPdf	10 56 19.7	-0.9
	baz=10.0,slow=1.6						
GEC2				ePKPbc	pPKPbc	10 56 30.8	-1.9
	baz=10.0,slow=2.8						
GEC2				eL	L	12 10 08.2	
	comp=Z,5µm,20.1s						
GERES	GERESS Array B	151.95	349		PKPdf	10 56 18.4	-2.2
GERES	GERESS Array B	151.95	349	PKP	PKPdf	10 56 19.6	-0.9
	comp=Z,5.0nm,1.1s,baz=23,slow=28,SNR=9.0						
GERES				PKPbc	pPKPdf	10 56 26.1	-0.2
	comp=Z,6.3nm,1.0s,baz=236,slow=0.5,SNR=14						
GERES	GERESS Array B	151.95	349	PKIKP	PKPdf	10 56 18.4	-2.2
BORA	Eskisehir	152.08	317	IAMs_20	IAMs_20	12 12 30.1	
	comp=Z,3µm,20.0s						
SURR	Surduc	152.31	335	⇑P	PKPdf	10 56 23.3	+2.2
GZR	Gura Zlata	152.34	334	⇑P	PKPdf	10 56 23.6	+2.4
GZR	Gura Zlata	152.34	334	⇑PKIKP	PKPdf	10 56 23.6	+2.4
CSS	Mathiatis	152.35	305	IAMs_20	IAMs_20	12 08 58.5	
	comp=Z,4µm,20.0s						
CONA	Conrad Observa	152.37	345	epPKP	PKPdf	10 56 20.8	-0.4
	comp=Z,23nm,1.4s,SNR=12						
CONA				ePP	PP	11 00 06.9	-2.7
	comp=Z,7.6nm,1.4s						
RONA	Rosalia, Austr	152.47	345	epPKP	PKPdf	10 56 21.1	-0.2
	comp=Z,22nm,1.4s,SNR=11						
RONA				ePP	PP	11 00 08.2	-1.9
	comp=Z,4.7nm,1.2s						
STU	Stuttgart	152.61	355	IAMs_20	IAMs_20	12 07 54.5	
	comp=Z,3µm,20.0s						
STU	Stuttgart	152.61	355	ePKPbc	PKiKP	10 56 31.9	+3.2
	baz=10.0,slow=2.8						
BZS	Buzias	152.63	335	⇑P	PKPdf	10 56 21.7	+0.2
BZS	Buzias	152.63	335	⇑PKIKP	PKPdf	10 56 21.7	+0.2
PHSR	Pinarhisar	152.79	323	⇓P	PKiKP	10 56 30.4	+1.2
MOA	Molln	152.79	347	epPKP	PKPdf	10 56 21.1	-0.6
	comp=Z,14nm,1.3s,SNR=7.0						
FUR	Furstenfeldbru	152.99	352	ePKPdf	PKPdf	10 56 23.6	+1.6
	baz=10.0,slow=1.6						
FUR				ePKPbc	sPKPdf	10 56 32.4	+2.8
	baz=10.0,slow=2.8						
FUR				eL	L	12 10 53.4	
	comp=Z,5µm,19.7s						
BIOA	Bad Ischl, Aus	153.07	348	i pPKP	PKPdf	10 56 21.4	-0.8
	comp=Z,12nm,1.1s,SNR=8.6						
BIOA				ePP	PP	11 00 11.2	-2.2
	comp=Z,1.2nm,0.4s						
ARSA	Arzberg	153.08	345	epPKP	PKPdf	10 56 21.6	-0.6
	comp=Z,16nm,2.0s,SNR=7.3						
ARSA				ePP	PP	11 00 10.9	-2.6
	comp=Z,7.6nm,1.2s						
BFO	Black Forest	153.11	356	IAMs_20	IAMs_20	12 07 06.6	
	comp=Z,4µm,20.0s						
BFO	Black Forest	153.11	356	ePKPdf	PKPdf	10 56 23.5	+1.3
	baz=10.0,slow=1.6						
BFO				ePKPbc	sPKPdf	10 56 32.4	+2.6
	baz=10.0,slow=2.8						
BFO				eL	L	12 06 37.0	
	comp=Z,4µm,20.5s						
ISP	Isparta	153.13	313	IAMs_20	IAMs_20	12 19 46.9	
	comp=Z,3µm,20.0s						
MORH	Mrgy, Hungar	153.16	340	⇑P	PKPdf	10 56 22.0	-0.3
RJOB	Jochberg	153.17	349	ePKPdf	PKPdf	10 56 23.2	+0.9
	baz=10.0,slow=1.6						
RJOB				ePKPbc	PKiKP	10 56 32.8	+2.9
	baz=10.0,slow=2.8						
ECH	Echery	153.28	358	IAMs_20	IAMs_20	12 14 39.8	
	comp=Z,5µm,19.0s						
MDVR	Moldovita	153.28	334	⇑P	PKPdf	10 56 25.0	+2.4
LESA	Schwarzleotal	153.50	349	epPKP	PKPdf	10 56 21.6	-1.3
	comp=Z,21nm,1.7s,SNR=9.7						
LESA				ePP	PP	11 00 12.0	-3.9
	comp=Z,7.9nm,1.4s						
MPEP	Malo Peshtene	153.53	330	P	PKPdf	10 56 24.8	+1.9
UBR	Ueberruh	153.60	353	ePKPdf	PKPdf	10 56 23.7	+0.7
	baz=10.0,slow=1.6						
UBR				ePKPbc	PKiKP	10 56 33.5	+2.7

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      baz=10.0,slow=2.8
KBA   Koelnbreinsper  153.71 348 epPKP    PKPdf    10 56 22.4 -0.9
      comp=Z,25nm,1.2s,SNR=11
KBA                               PP      PP       11 00 12.8 -4.5
      comp=Z,16nm,1.8s
RETA  Reutte          153.72 352 epPKP    PKPdf    10 56 23.1 -0.1
      comp=Z,11nm,1.7s
RETA                             ePP      PP       11 00 13.4 -3.7
      comp=Z,4.2nm,1.2s
SOKA  Soboth          153.74 346 epPKP    PKPdf    10 56 22.1 -1.2
      comp=Z,26nm,1.5s,SNR=7.8
SOKA                             ePP      PP       11 00 12.6 -4.7
      comp=Z,4.0nm,0.9s
WATA  Walderalm       153.76 351 epPKP    PKPdf    10 56 22.5 -0.9
      comp=Z,14nm,1.2s,SNR=7.0
WATA                             ePP      PP       11 00 13.3 -4.1
      comp=Z,3.0nm,0.6s
MOTA  Moosalm         153.81 352 epPKP    PKPdf    10 56 23.8 +0.3
      comp=Z,12nm,1.1s,SNR=11
MOTA                             ePP      PP       11 00 14.6 -3.1
      comp=Z,6.3nm,1.4s
WTTA  Wattenberg      153.82 351 epPKP    PKPdf    10 56 22.6 -0.8
      comp=Z,20nm,1.4s,SNR=9.7
WTTA                             ePP      PP       11 00 13.3 -4.5
      comp=Z,9.9nm,1.4s
SQTA  Sankt Quirin    153.92 352 epPKP    PKPdf    10 56 22.8 -0.7
      comp=Z,11nm,1.1s,SNR=8.6
SQTA                             ePP      PP       11 00 14.4 -3.9
      comp=Z,7.4nm,1.2s
KDZ   Kurdzhali       153.99 325  P       PKPdf    10 56 24.5 +0.9
OBKA  Obir            154.01 346 epPKP    PKPdf    10 56 22.4 -1.2
      comp=Z,11nm,1.5s,SNR=6.8
OBKA                             ePP      PP       11 00 14.1 -4.8
      comp=Z,15nm,1.3s
DAVA  Damuels         154.02 354 epPKP    PKPdf    10 56 23.8 +0.1
      comp=Z,13nm,1.7s
DAVA                             ePP      PP       11 00 14.4 -4.5
      comp=Z,12nm,1.3s
MYKA  Terra Mystica   154.08 348 epPKP    PKPdf    10 56 22.5 -1.2
      comp=Z,18nm,1.5s,SNR=7.4
MYKA                             ePP      PP       11 00 13.5 -5.7
      comp=Z,5.5nm,1.1s
ALN   Alexandroupoli  154.11 323  IAMs_20 IAMs_20  12 05 27.1
      comp=Z,4µm,22.0s
FETA  Feichten        154.18 352 epPKP    PKPdf    10 56 24.0  0.0
      comp=Z,21nm,0.9s
FETA                             ePP      PP       11 00 13.7 -6.1
      comp=Z,3.8nm,1.2s
ABTA  Abfaltersbach   154.18 349 epPKP    PKPdf    10 56 22.2 -1.6
      comp=Z,15nm,1.1s,SNR=13
ABTA                             ePP      PP       11 00 15.0 -4.8
      comp=Z,5.5nm,1.1s
BOVS  Bovan           154.22 333 ⇓P       PKPdf    10 56 23.0 -0.9
VTS   Vitosha         154.33 329  P       PKPdf    10 56 25.8 +1.5
PLNA  Plana           154.34 329  P       PKPdf    10 56 25.9 +1.6
LJU   Ljubljana       154.45 346 ePKPdf   PKPdf    10 56 23.4 -0.8
VOJS  Vojsko          154.60 347 ePKPdf   PKPdf    10 56 23.2 -1.2
FUORN Ofenpass-Fuorn  154.63 353  IAMs_20 IAMs_20  12 11 42.3
      comp=Z,4µm,20.0s
BOJS  Bojanci         154.78 344 ePKPdf   PKPdf    10 56 23.8 -0.8
TUE   Stuetta         154.88 354  IAMs_20 IAMs_20  12 11 14.7
      comp=Z,4µm,20.0s
MMB   Musomishta      154.88 327  P       PKPdf    10 56 25.8 +0.9
SSB   Saint Sauveur   156.21   2  IAMs_20 IAMs_20  12 04 34.9
      comp=Z,3µm,20.0s
PDG   Podgorica       156.22 335  IAMs_20 IAMs_20  12 13 48.2
      comp=Z,4µm,19.0s
PGAV  Gavieira, Arco  156.37  27 ePKPdf   PKPdf    10 56 25.2 -1.8
PGAV                             ePKPab   PKPab    10 56 57.4 +2.1
PGAV                             ePP      PP       11 00 53.6  +21
PGAV                             eSS      SS       11 20 24.5 +3.2
PGAV                             eLR      LR       11 56 04.9
PGAV                             i AMs_20          12 03 19.4
      comp=Z,7µm,20.0s
BNI   Bardonecchia    156.45 358  IAMs_20 IAMs_20  12 08 26.7
      comp=Z,4µm,20.0s
PRMA  PARMA           156.45 352  IAMs_20 IAMs_20  12 19 07.7
      comp=Z,4µm,18.0s
KARP  Karpathos       156.61 312  IAMs_20 IAMs_20  12 17 51.0
      comp=Z,3µm,20.0s
PMOZ  Porto Moniz, M  156.68  56 ePKPab   PKPab    10 56 47.4  -10
PMOZ                             ePP      PP       11 00 51.2  +16
PMOZ                             eSS      SS       11 20 29.1 +2.6
PMOZ                             eLR      LR       11 53 41.0
PMOZ                             i AMs_20          12 02 43.8
      comp=Z,3µm,20.0s
PCAB  Cabril          156.69  27 ePKPdf   PKPdf    10 56 30.4 +3.1
PMAR  Madeira         156.93  56 ePKPab   PKPab    10 56 54.2 -3.9
ECAL  Calabor         157.01  24  PKP     PKPdf    10 56 27.6 -0.2
POLO  Lamas de Olo    157.06  27 ePKPdf   PKPdf    10 56 29.8 +1.9
POLO                             ePKPab   PKPab    10 57 00.3 +2.1
PBRG  Braganca        157.13  25 ePKPdf   PKPdf    10 56 30.9 +3.0
PBRG                             ePKPab   PKPab    10 57 00.1 +1.7
PVRL  Vila Real       157.18  27 ePKPdf   PKPdf    10 56 31.0 +3.0
PVRL                             ePKPab   PKPab    10 56 57.8 -0.9
PMPST Porto Santo, M  157.23  55 ePKPab   PKPab    10 56 56.2 -3.1
OSSC  Osservatorio P  157.53 350  IAMs_20 IAMs_20  12 09 47.5
      comp=Z,4µm,20.0s
MVO   Moncorvo        157.56  26 ePKPdf   PKPdf    10 56 30.7 +2.2
MVO                              ePKPab   PKPab    10 57 01.3 +1.0
MVO                              ePP      PP       11 00 59.8  +21
MVO                              eSS      SS       11 20 34.4 +0.5
MVO                              eLR      LR       11 57 04.7
MVO                              i AMs_20          12 04 33.8
      comp=Z,7µm,18.0s
PVIS  Viseu           157.56  28 ePKPdf   PKPdf    10 56 28.1 -0.4
PVIS                             ePKPab   PKPab    10 56 57.7 -2.7
FDMO  Fiordimonte     157.63 346  IAMs_20 IAMs_20  12 13 19.0
      comp=Z,4µm,21.0s
COI   Coimbra         157.74  30 ePKPab   PKPab    10 56 54.6 -6.4
PCAS  Casmilo, Conde  157.82  30 ePKPdf   PKPdf    10 56 30.7 +1.9
PCAS                             ePKPab   PKPab    10 56 57.1 -4.4
MTE   Manteigas       157.97  28 ePKPdf   PKPdf    10 56 31.6 +2.6
MTE                              ePKPab   PKPab    10 56 56.6 -5.6
MTE                              ePP      PP       11 00 41.2 +0.1
MTE                              eSS      SS       11 20 39.3 +0.9
MTE                              eLR      LR       11 57 55.0
MTE                              i AMs_20          12 07 01.9
      comp=Z,8µm,18.0s
CAMP  Campotosto      158.03 345  IAMs_20 IAMs_20  12 22 55.8
      comp=Z,5µm,20.0s
PSBE  So Bento        158.10  31 ePKPdf   PKPdf    10 56 32.0 +2.8
PSBE                             ePKPab   PKPab    10 56 56.5 -6.2
CESX  Cesi            158.15 346  IAMs_20 IAMs_20  12 13 25.7
      comp=Z,5µm,20.0s
KEK   Kerkira         158.21 330  IAMs_20 IAMs_20  12 10 30.4
      comp=Z,5µm,20.0s
CASP  Castiglione de  158.30 350  IAMs_20 IAMs_20  12 11 11.1
      comp=Z,4µm,20.0s
PSARD Sardoal         158.34  30 ePKPdf   PKPdf    10 56 31.5 +2.1
PSARD                            ePKPab   PKPab    10 56 58.5 -5.2
PCBR  Castelo Branco  158.46  29 ePKPdf   PKPdf    10 56 31.5 +1.9
SCTE  Santa Cesarea   158.52 333  IAMs_20 IAMs_20  12 17 37.7
      comp=Z,4µm,20.0s
LIS   Lisbon          158.53  33 ePKPdf   PKPdf    10 56 27.9 -1.8
LIS                               IAMs_20 IAMs_20  12 13 47.9
      comp=Z,7µm,27.4s
CEST  Esterri de Car  158.58   9  IAMs_20 IAMs_20  12 07 37.8
      comp=Z,5µm,20.0s
PMTG  Montargil       158.72  31 ePKPdf   PKPdf    10 56 33.0 +3.1
PMTG                             ePKPab   PKPab    10 56 57.7 -7.7
PMRV  Marv??o         158.83  29 ePKPdf   PKPdf    10 56 31.7 +1.7
PMRV                             ePKPab   PKPab    10 56 58.5 -7.4
PMRV                             ePP      PP       11 00 59.5  +14
PMRV                             eSS      SS       11 20 53.8 +6.3
PMRV                             eLR      LR       11 58 55.5
PMRV                             i AMs_20          12 08 11.4
      comp=Z,5µm,20.0s
ITM   Ithomi          158.99 322  IAMs_20 IAMs_20  12 17 32.1
      comp=Z,4µm,20.0s
PAOL  Paolisi         159.11 341  IAMs_20 IAMs_20  12 13 27.3
      comp=Z,5µm,20.0s
PESTR Estremoz        159.19  31  IAMs_20 IAMs_20  12 00 54.7
      comp=Z,5µm,20.0s
PESTR Estremoz        159.19  31  PKP     PKPdf    10 56 27.3 -3.2
PESTR Estremoz        159.19  31 ePKPdf   PKPdf    10 56 32.7 +2.2
PESTR                            ePKPab   PKPab    10 56 59.9 -7.5
EVO   Evora           159.25  32  PKP     PKPdf    10 56 30.4 -0.1
EVO   Evora           159.25  32 ePKPdf   PKPdf    10 56 33.8 +3.3
EVO                              ePKPab   PKPab    10 56 58.9 -8.8
EBAD  Badajoz         159.55  30  PKP     PKPdf    10 56 27.9 -3.0
PTEO  Sao Teotonio    159.63  35 ePKPdf   PKPdf    10 56 31.9 +0.9
PTEO                             ePKPab   PKPab    10 57 00.4 -9.0
CUC   Castrocucco     159.63 337  IAMs_20 IAMs_20  12 09 24.0
      comp=Z,4µm,21.0s
MESJ  Messejana       159.68  33 ePKPdf   PKPdf    10 56 29.3 -1.7
MESJ                              IAMs_20 IAMs_20  12 07 56.4
      comp=Z,6µm,13.9s
MESJ  Messejana       159.68  33 ePKPdf   PKPdf    10 56 32.5 +1.5
MESJ                             ePKPab   PKPab    10 57 00.4 -9.2
UCM   Universidad Co  159.69  20  PKP     PKPdf    10 56 28.4 -2.6
PBEJ  Beja            159.71  33 ePKPdf   PKPdf    10 56 32.9 +1.8
MORF  Marmelete       159.85  35 ePKPdf   PKPdf    10 56 29.3 -2.0
MORF                              IAMs_20 IAMs_20  12 06 16.9
      comp=Z,7µm,21.4s
MORF  Marmelete       159.85  35 ePKPdf   PKPdf    10 56 34.9 +3.6
MORF                             ePKPab   PKPab    10 56 59.3  -11
PFVI  Vila Bisbo      159.88  36 ePKPab   PKPab    10 56 59.2  -11
PCVE  Castro Verde    159.93  34 ePKPdf   PKPdf    10 56 35.1 +3.7
TIP   Timpagrande     159.98 334  IAMs_20 IAMs_20  12 16 54.0
      comp=Z,3µm,21.0s
PAB   San Pablo       159.99  23 ⇑PKIKP   PKPdf    10 56 31.3 -0.2
PBAR  Barrancos       160.00  31 ePKPdf   PKPdf    10 56 33.9 +2.5
PBAR                             ePKPab   PKPab    10 57 01.1  -10
ESDC  Sonseca Array   160.02  22  PKP     PKPdf    10 56 31.2 -0.3
      comp=Z,5.6nm,1.1s,baz=341,slow=2.9,SNR=12
ESDC                              PKPab   PKPab    10 57 11.1 +0.1
      comp=Z,6.3nm,1.0s,baz=314,slow=4.3,SNR=7.4
ESDC                              PP      PP       11 00 52.1  0.0
      comp=Z,3.5nm,1.1s,baz=343,slow=6.5,SNR=5.5
PVAQ  Vaqueiros       160.26  33  IAMs_20 IAMs_20  12 08 20.4
      comp=Z,4µm,19.0s
PVAQ  Vaqueiros       160.26  33 ePKPdf   PKPdf    10 56 34.2 +2.5
PVAQ                             ePKPab   PKPab    10 57 01.5  -11
PVAQ                             ePP      PP       11 01 16.7  +23
PVAQ                             eLR      LR       11 58 44.2
PVAQ                             i AMs_20          12 09 00.6
      comp=Z,5µm,18.0s
PBDV  Barranco-do-Ve  160.28  34 ePKPab   PKPab    10 57 01.5  -11
CNIL  Conil           161.91  32  PKP     PKPdf    10 56 31.8 -1.6
DBIC  Dimbokro        162.06 143  PKP     PKPdf    10 56 35.8 +1.4
      comp=Z,31nm,1.1s,baz=229,slow=0.9,SNR=12
DBIC                              PKPab   PKPab    10 57 21.0 +0.5
      comp=Z,43nm,1.1s,baz=218,slow=5.4,SNR=8.9
EMAL  Malaga-Limoner  162.35  28  PKP     PKPdf    10 56 33.0 -0.9
TARIF Tarifa          162.41  32  PKP     PKPdf    10 56 32.4 -1.6
AVE   Averroes        163.39  42  PKP     PKPdf    10 56 32.4 -2.7
IFR   Ifrane          164.58  37  PKP     PKPdf    10 56 32.1 -4.3
TIO   Tiouine         164.97  48  PKP     PKPdf    10 56 32.4 -4.4
KEST  Kesra           165.44 348  PKP     PKPdf    10 56 37.4 +0.5
      comp=Z,11nm,1.1s,baz=269,slow=3.1,SNR=8.3
KEST                              PKPab   PKPab    10 57 35.0 +0.1
      comp=Z,4.8nm,0.8s,baz=252,slow=2.0,SNR=4.3
KEST  Kesra           165.44 348  P       PKPdf    10 56 38.6 +1.7
TORD  Torodi Ar. Bea  170.86 154  PKP     PKPdf    10 56 41.9 +0.8
      comp=Z,7.9nm,0.8s,baz=27,slow=3.6,SNR=9.0
TORD                              PKPab   PKPab    10 58 00.9 +1.7
      comp=Z,10.0nm,0.8s,baz=263,slow=3.0,SNR=6.1
TORD                              PP      PP       11 01 49.9 +1.4
      comp=Z,4.2nm,0.5s,baz=166,slow=2.4,SNR=4.1
```

CNRM ***02*** *10:38:01.2, 35.°50N×9.°80W, h88^{km}, ML4.2*

SFS ***02*** *10:38:02.5, 35.°60N×10.°06W, h63^{km}, ML3.4/12, ML3.1/16, MLv2.9/16*

MDD ***02*** *10:38:03.2±1.0, 35.°61N×9.°93W, h42^{km}±50^{km}, mb_Lg3.2/15, Error ellipse: s-maj=7.6km s-min=4.2km az=77.0*

IGIL ***02*** *10:38:04.8, 35.°62N×9.°91W, h31^{km}, ML2.2*

INMG ***02*** *10:38:04.5±1.5, 35.°64N×9.°91W, h31^{km}±10^{km}, ML2.2, Error ellipse: s-maj=8.4km s-min=4.4km az=73.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Mar de Marrocos*

ISC 02 10:38:01.6±1.3**, 35.°57N**±0.°04×**9.°82W**±0.°07**, h72**^{km}±17^{km}**, n80, σ1.^{s}69**/125**, 3C-5D, West of Gibraltar**

```
Code  Station Name     Δ°  AZ°   Phase ID          Time      Res
                                 Op      ISC      h  m  s    ISC
PFVI  Vila Bisbo      1.75  27   Sn      Sn       10 38 49.7 -1.9
PFVI  Vila Bisbo      1.75  27⇓iP      Pn       10 38 30.8 +0.8
PFVI                            eS      Sn       10 38 49.8 -1.8
PFVI                            i AML   AML      10 38 51.8
PFVI                            i AML   AML      10 38 51.8
PFVI                            i AML   AML      10 38 52.1
PFVI  Vila Bisbo      1.75  27   P       Pn       10 38 30.9 +0.8
PFVI  Vila Bisbo      1.75  27   S       Sn       10 38 54.0 +2.5
MORF  Marmelete       1.97  28  eP      Pn       10 38 33.9 +0.9
MORF                            eS      Sn       10 38 55.1 -1.6
MORF                             IAML            10 38 55.4
      comp=N,22nm,0.3s
MORF  Marmelete       1.97  28⇓iP      Pn       10 38 33.9 +0.9
MORF                            eS      Sn       10 38 55.2 -1.6
MORF                            i AML   AML      10 38 56.9
MORF                            i AML   AML      10 38 57.0
MORF                            i AML   AML      10 39 01.6
PTEO  Sao Teotonio    2.16  24  eP      Pn       10 38 36.3 +0.8
PTEO                            eS      Sn       10 39 00.3 -0.9
PTEO                            i AML   AML      10 39 01.5
PTEO                            i AML   AML      10 39 01.7
PTEO                            i AML   AML      10 39 01.8
PBDV  Barranco-do-Ve  2.26  42  eP      Pn       10 38 38.6 +1.7
PBDV                            eS      Sn       10 39 03.1 -0.6
PBDV                            i AML   AML      10 39 07.2
PBDV                            i AML   AML      10 39 08.0
PBDV                            i AML   AML      10 39 08.4
PVAQ  Vaqueiros       2.49  42   Pn      Pn       10 38 41.7 +1.7
PVAQ  Vaqueiros       2.49  42  eP      Pn       10 38 41.7 +1.7
PVAQ                            i AML   AML      10 39 10.8
PVAQ  Vaqueiros       2.49  42   P       Pn       10 38 40.3 +0.4
PVAQ  Vaqueiros       2.49  42   S       Sn       10 39 10.2 +0.8
PCVE  Castro Verde    2.51  34   Pn      Pn       10 38 41.6 +1.5
PCVE                             Sn      Sn       10 39 08.1 -1.6
PCVE  Castro Verde    2.51  34⇓eP      Pn       10 38 41.6 +1.5
PCVE                            eS      Sn       10 39 09.0 -0.7
PCVE                            i AML   AML      10 39 09.9
PCVE                            i AML   AML      10 39 10.9
PCVE                            i AML   AML      10 39 12.8
EXAYA Ayamonte        2.55  49   Sn      Sn       10 39 11.1 +0.4
MESJ  Messejana       2.60  29  eP      Pn       10 38 42.6 +1.1
MESJ                            eS      Sn       10 39 10.5 -1.5
MESJ                             IAML            10 39 13.7
      comp=N,7.3nm,0.1s
MESJ  Messejana       2.60  29⇓iP      Pn       10 38 42.6 +1.1
MESJ                            eS      Sn       10 39 11.6 -0.5
MESJ                            i AML   AML      10 39 12.9
MESJ                            i AML   AML      10 39 13.8
MESJ                            i AML   AML      10 39 13.9
EGRO  El Granado      2.72  43   Pn      Pn       10 38 44.8 +1.8
EGRO                             Sn      Sn       10 39 14.2 -0.5
EGRO  El Granado      2.72  43   Pn      Pn       10 38 44.7 +1.8
EGRO                             Sn      Sn       10 39 14.7 -0.1
EGRO                            i IVmb_Lg        10 39 16.0
PBEJ  Beja            2.91  32⇓iP      Pn       10 38 46.7 +1.1
PBEJ                            eS      Sn       10 39 18.5 -1.0
PBEJ                            i AML   AML      10 39 20.4
PBEJ                            i AML   AML      10 39 20.4
PBEJ                            i AML   AML      10 39 21.0
EVO   Evora           3.29  25   Pn      Pn       10 38 51.4 +0.6
EVO                              Sn      Sn       10 39 25.6 -3.2
EVO   Evora           3.29  25  eP      Pn       10 38 51.7 +0.9
EVO                             eS      Sn       10 39 25.8 -3.0
EVO                             i AML   AML      10 39 26.4
EVO                             i AML   AML      10 39 26.5
EVO                             i AML   AML      10 39 26.5
EMIN  Mina Concepcio  3.35  48   Pn      Pn       10 38 53.2 +1.6
EMIN                             Sn      Sn       10 39 28.7 -1.4
EMIN  Mina Concepcio  3.35  48   Pn      Pn       10 38 53.4 +1.8
EMIN                             Sn      Sn       10 39 29.2 -0.9
EMIN                            i IVmb_Lg        10 39 34.0
ZHG   ZHG             3.37 128   P       Pn       10 38 51.0 -0.9
ZHG   ZHG             3.37 128   S       Sn       10 39 30.5 -0.3
PMAFR Mafra           3.41   7   Pn      Pn       10 38 52.2 -0.1
PMAFR Mafra           3.41   7  eP      Pn       10 38 52.3 -0.1
PMAFR                           eS      Sn       10 39 29.6 -2.0
PMAFR                           i AML   AML      10 39 31.1
PMAFR                           i AML   AML      10 39 33.4
PMAFR                           i AML   AML      10 39 33.6
PBAR  Barrancos       3.42  40   Pn      Pn       10 38 54.0 +1.4
PBAR                             Sn      Sn       10 39 31.3 -0.7
PBAR  Barrancos       3.42  40  eP      Pn       10 38 54.0 +1.4
PBAR                            eS      Sn       10 39 31.0 -1.0
PBAR                            i AML   AML      10 39 32.7
PBAR                            i AML   AML      10 39 33.8
PBAR                            i AML   AML      10 39 34.1
ESPR  Espera          3.46  67   Pn      Pn       10 38 55.4 +2.4
ESPR                             Sn      Sn       10 39 33.4 +0.6
ESPR  Espera          3.46  67   Pn      Pn       10 38 55.5 +2.4
ESPR                             Sn      Sn       10 39 32.9 +0.1
ESPR                            i IVmb_Lg        10 39 37.1
SRHM  Skhour des Reh  3.48 152   P       Pn       10 38 54.3 +0.8
SRHM  Skhour des Reh  3.48 152   S       Sn       10 39 36.4 +3.0
PMTG  Montargil       3.72  19  eP      Pn       10 38 56.9 +0.3
PMTG                            eS      Sn       10 39 36.7 -2.4
PMTG                            i AML   AML      10 39 38.2
PMTG                            i AML   AML      10 39 38.8
PMTG                            i AML   AML      10 39 41.8
PESTR Estremoz        3.74  28   Pn      Pn       10 38 57.4 +0.5
PESTR                            Sn      Sn       10 39 37.3 -2.5
PESTR Estremoz        3.74  28  eP      Pn       10 38 57.8 +0.8
PESTR                           eS      Sn       10 39 38.7 -1.0
PESTR                           i AML   AML      10 39 39.2
PESTR                           i AML   AML      10 39 40.1
PESTR                           i AML   AML      10 39 41.1
PESTR Estremoz        3.74  28   P       Pn       10 38 57.7 +0.7
PESTR Estremoz        3.74  28   S       Sn       10 39 41.5 +1.7
EBAD  Badajoz         3.89  34   Pn      Pn       10 38 59.8 +0.9
EBAD                             Sn      Sn       10 39 41.4 -2.0
EBAD  Badajoz         3.89  34   Pn      Pn       10 38 59.9 +0.9
EBAD                             Sn      Sn       10 39 42.0 -1.3
EBAD                            i IVmb_Lg        10 39 44.6
PSBE  So Bento        4.02  11  eP      Pn       10 39 01.0 +0.2
PSARD Sardoal         4.23  18⇑eP      Pn       10 39 04.3 +0.7
PSARD                           eS      Sn       10 39 49.9 -1.9
PSARD                           i AML   AML      10 39 53.6
PSARD                           i AML   AML      10 39 53.8
PSARD                           i AML   AML      10 39 54.7
PMRV  Marv??o         4.31  26⇑iP      Pn       10 39 05.4 +0.7
PMRV                            eS      Sn       10 39 51.8 -1.8
PMRV                            i AML   AML      10 39 53.2
PMRV                            i AML   AML      10 39 53.9
PMRV                            i AML   AML      10 39 54.0
ECAB  El Cabril       4.33  53   Pn      Pn       10 39 06.8 +1.9
ECAB                             Sn      Sn       10 39 51.6 -2.5
ECAB  El Cabril       4.33  53   Pn      Pn       10 39 06.6 +1.7
ECAB                             Sn      Sn       10 39 51.6 -2.5
ECAB                            i IVmb_Lg        10 39 54.7
IFR   Ifrane          4.38 117   Pn      Pn       10 39 07.9 +2.0
IFR                              Sn      Sn       10 39 53.2 -2.5
LCRM  LCR             4.50 113   P       Pn       10 39 07.0 -0.5
PCAS  Casmilo, Conde  4.59  13  eP      Pn       10 39 09.1 +0.4
PCAS                            eS      Sn       10 39 59.5 -1.2
PCAS                            i AML   AML      10 39 59.8
OUK   Oukaimeden      4.65 159   P       Pn       10 39 08.7 -0.9
OUK   Oukaimeden      4.65 159   S       Sn       10 40 01.6 -0.9
PCBR  Castelo Branco  4.65  23  eP      Pn       10 39 10.5 +1.1
PCBR                            eS      Sn       10 40 00.4 -1.6
PCBR                            i AML   AML      10 40 03.0
PCBR                            i AML   AML      10 40 03.3
EGOR  Sierra Gorda,   4.86  70   Sn      Sn       10 40 07.5 +0.2
EGOR  Sierra Gorda,   4.86  70   Sn      Sn       10 40 06.5 -0.8
EADA  Adamuz          4.94  57   Pn      Pn       10 39 15.6 +2.3
EADA                             Sn      Sn       10 40 07.7 -1.4
EADA  Adamuz          4.94  57   Pn      Pn       10 39 15.4 +2.1
EADA                             Sn      Sn       10 40 07.8 -1.4
EADA                            i IVmb_Lg        10 40 09.9
MD31  MD31            4.98 121   P       Pn       10 39 13.1 -0.9
MD31  MD31            4.98 121   S       Sn       10 40 08.5 -1.8
AKLM  AKL             5.00 100   P       Pn       10 39 12.5 -1.7
TIO   Tiouine         5.10 154   Pn      Pn       10 39 17.9 +2.2
TIO                              Sn      Sn       10 40 11.0 -2.3
TIO   Tiouine         5.10 154   P       Pn       10 39 15.4 -0.3
MDT   Midelt          5.12 121   P       Pn       10 39 15.3 -0.5
MDT   Midelt          5.12 121   S       Sn       10 40 13.0 -0.7
TTIG  Tnine Tigouga,  5.14 167   P       Pn       10 39 14.1 -2.1
OUZM  OUZ             5.31 150   P       Pn       10 39 17.8 -0.7
PVIS  Viseu           5.36  16  eP      Pn       10 39 20.0 +1.0
PVIS                            eS      Sn       10 40 16.7 -2.7
EPLA  Plasencia       5.37  32   Pn      Pn       10 39 20.1 +0.8
EPLA                             Sn      Sn       10 40 17.4 -2.3
EPLA                            i IVmb_Lg        10 43 21.2
PSIM  Granatula de C  5.82  54   Pn      Pn       10 39 26.9 +1.4
PSIM                             Sn      Sn       10 40 29.0 -1.8
EQES  Quesada         5.86  66   Sn      Sn       10 40 29.5 -2.3
PAB   San Pablo       5.88  46   Pn      Pn       10 39 28.0 +1.7
PAB                             i IVmb_Lg        10 39 28.5
PAB                              Sn      Sn       10 40 29.0 -3.3
MVO   Moncorvo        6.00  21  eP      Pn       10 39 28.4 +0.6
POLO  Lamas de Olo    6.01  15  eP      Pn       10 39 28.6 +0.6
POLO                            eS      Sn       10 40 32.7 -2.6
JBK   JBK             6.08 100   P       Pn       10 39 26.1 -3.0
ESDC  Sonseca Array   6.19  47   Pn      Pn       10 39 32.3 +1.9
ESDC                             Sn      Sn       10 40 37.0 -2.9
ESDC                            i IVmb_Lg        10 40 38.2
ESBB  Sonseca Array   6.20  47   Pn      Pn       10 39 31.4 +0.9
ESBB                             Sn      Sn       10 40 37.4 -2.5
ELOB  Lobios          6.44  12   Pn      Pn       10 39 33.7 -0.1
ELOB                             Sn      Sn       10 40 41.6 -4.2
ELOB                            i IVmb_Lg        10 43 43.6
PGAV  Gavieira, Arco  6.50  10  eP      Pn       10 39 34.9 +0.2
GUD   Guadarrama      6.75  40   Pn      Pn       10 39 39.7 +1.6
GUD                              Sn      Sn       10 40 50.8 -2.8
GUD                             i IVmb_Lg        10 44 12.3
ETOR  Torete          8.05  47   Pn      Pn       10 39 57.7 +1.8
ETOR                             Sn      Sn       10 41 21.2 -4.2
ETOR                            i IVmb_Lg        10 45 09.6
JCT   Junction City  73.00 295 ⇑P       P        10 49 25.9 +2.1
```

IDC ***02*** *10:42:32.7±0.7, 44.°60N×141.°37E, h236^{km}±8^{km}, mb3.2/3, mbtmp3.9/7, Error ellipse: s-maj=23.1km s-min=15.7km az=103.0*

SKHL ***02*** *10:42:32.2±0.4, 44.°60N×141.°40E, h236^{km}±9^{km}, mb4.6/4, msha4.6/4*

JMA ***02*** *10:42:32.4±0.3, 44.°6N±1.°0×14 °1E± °, h251^{km}±2^{km}, MV3.4/30, NW OFF HOKKAIDO*

ISC 02 10:42:33.3±0.8**, 44.°55N**±0.°05×**141.°41E**±0.°06**, h245**^{km}±6^{km}**, n29, σ0.^{s}83**/41**, mb3.6**/3**, Hokkaido region**

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Code  Station Name     Δ°  AZ°   Phase ID          Time      Res
                                 Op      ISC      h  m  s    ISC
JYG   Yagishiri       0.13 173   P       Pn       10 43 04.7 -0.3
JSS   Shosan          0.35 115   P       Pn       10 43 05.6 +0.3
JSS                             eS      S        10 43 30.8 +0.6
JRR   Rishiri         0.59 353   P       Pn       10 43 06.0 +0.2
JWK2  Keihoku         0.84  24  i P      Pn       10 43 06.6 -0.2
JWK2                             S       S        10 43 32.5 -0.8
JRBN  Rebuntou        0.90 345   P       Pn       10 43 06.5 -0.6
JSE   Soyaes          0.93  64   P       Pn       10 43 07.0 -0.4
ASAJ  Asahikawa       0.96 117   P       Pn       10 43 07.1 -0.5
      15nm,0.4s,baz=310,slow=3.3,SNR=87
ASAJ                             S       S        10 43 32.3 -2.2
      13nm,0.6s,baz=21,slow=29,SNR=7.1
ASAJ  Asahikawa       0.96 117   P       Pn       10 43 07.4 -0.2
ASAJ                             S       S        10 43 34.1 -0.4
JKK2  Kamakawa 2      1.18 125   P       Pn       10 43 09.0 +0.1
JKK2                             S       S        10 43 37.0 +0.2
JISS  Ishikarishitsu  1.28 180   P       Pn       10 43 10.1 +0.5
JISS                             S       S        10 43 39.0 +1.0
JEW   Eniwo           1.71 179  eP      Pn       10 43 13.2 +0.3
JEW                             eS      S        10 43 44.7 +0.7
JTKR  Abashiri--Toko  1.89 107  eP      Pn       10 43 15.1 +0.8
JNBK  Urakawa-nobuka  2.48 156  eP      Pn       10 43 19.8 -0.2
YSS   Yuzhno-Sakhali  2.58  21  eP      Pn       10 43 20.6 -0.3
YSS                              AMB     AMB      10 43 21.5
      250nm,0.4s
YSS                             eS      S        10 43 58.3 -0.2
YSS                              A       A        10 43 58.7
      80nm,0.6s
YSS                              A       A        10 43 58.7
      60nm,0.6s
JOSM  Okushiri--Mats  2.84 210   P       Pn       10 43 23.0 -0.8
AKK   Akkeshi         2.92 120  eP      Pn       10 43 24.6  0.0
AKK                             eS      S        10 44 04.6 -0.5
JOT   Ohata           3.18 185   P       Pn       10 43 26.2 -1.3
JOMM  Oshimamatsumae  3.20 199   P       Pn       10 43 26.8 -0.9
YUK   Yuzh-Kuril'sk   3.24  98  eP      Pn       10 43 27.9 -0.2
YUK                              AMB     AMB      10 43 28.9
      40nm,0.6s
YUK                             eS      S        10 44 12.5 +1.1
YUK                              A       A        10 44 16.3
      30nm,0.5s
YUK                              A       A        10 44 16.3
      40nm,0.5s
NMR   Nemuro--Hokkai  3.34 109  eP      Pn       10 43 29.3 +0.1
NMR                             eS      S        10 44 11.3 -2.0
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NEM2	Nemuro 2	3.35	109	S	S	10 44 11.6	-2.0
SHO	Shikotan	3.96	98	*e*P	Pn	10 43 36.3	0.0
SHO				AMB	AMB	10 43 40.2	
	30nm,0.6s						
SHO				*e*S	S	10 44 25.6	-0.7
SHO				A	A	10 44 34.0	
	20nm,0.3s						
SHO				A	A	10 44 34.0	
	30nm,0.3s						
USRK	Ussuriysk Ar.	6.76	270	P	Pn	10 44 10.2	-0.7
	5.0nm,0.7s,baz=77,slow=14,SNR=13						
PETK	Petropavlovsk-	13.70	46	P	Pn	10 45 38.4	+0.6
	3.4nm,0.6s,baz=229,slow=8.6,SNR=12						
MA2	Magadan	16.08	17	P	P	10 46 04.9	-0.1
	4.5nm,0.6s,baz=188,slow=14,SNR=5.4						
SEY	Seymchan	19.47	15	P	P	10 46 41.2	-0.4
	3.7nm,0.6s,baz=203,slow=8.0,SNR=19						
KURBB	Kurchatov Arra	41.70	302	P	P	10 49 57.8	-0.2
	0.5nm,0.5s,baz=74,slow=8.7,SNR=4.2						
	0.5nm,0.5s						
WRA	Warramunga Arr	64.50	187	P	P	10 52 44.3	+0.3
	1.4nm,1.1s,baz=8.4,slow=7.6,SNR=1.5						
	1.4nm,1.1s						
ASAR	Alice Springs	68.23	187	P	P	10 53 08.7	+1.1
	0.8nm,0.7s,baz=8.2,slow=4.8,SNR=5.5						
	0.8nm,0.7s						

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*IDC **02** 10:46:47.3±0.6,21°.42S×174°.25W,h0^{km},mb4.4/14, mbtmp4.4/16,ML4.3/2,Error ellipse: s-maj=23.3km s-min=16.2km az=113.0*

*NEIC **02** 10:46:47.4±2.1,21°.5S±0°.1×173°.8W±0°.1,h10^{km}±1^{km}, mb4.8/31,Error ellipse: s-maj=25.8km s-min=18.0km az=133.0*

ISC 02 10:46:47.5±0.5**,21°.50S**±0°.10×**173°.88W**±0°.09**,h10**^{km}**,n64, σ1^{s}.33**/67**,mb4.7**/29**,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.42	58	Pn	Pn	10 47 51.0	-3.7
MSVF	Nonsavu	8.48	295		Pn	10 48 53.6	+3.0
PINNC	Pines Island,	17.35	263	P	P	10 50 51.9	+0.6
PINNC				IAmb	IAmb	10 51 21.4	
	comp=Z,61nm,1.1s						
DZM	Mont Dzumac	18.29	265	P	Pn	10 51 01.7	+0.1
DZM	Mont Dzumac	18.29	265	P	Pn	10 50 58.9	-2.7
	comp=Z,0.5nm,0.3s,baz=78,slow=18,SNR=7.1						
	comp=Z,8.5nm,0.9s						
URZ	Urewera	18.43	203	P	P	10 51 02.8	-0.2
	comp=Z,1.6nm,0.3s,baz=145,slow=2.7,SNR=14						
	comp=Z,18nm,0.6s						
TUWZ	Tuamarina	22.38	205	P	P	10 51 44.7	-1.2
RPZ	Rata Peaks	25.45	206	P	P	10 52 17.0	+1.4
	comp=Z,17nm,0.8s,baz=57,slow=7.0,SNR=3.9						
	comp=Z,17nm,0.8s						
CTAO	Charters Tower	37.23	265	P	P	10 53 57.7	-1.9
TOO	Toolangi	38.49	236	P	P	10 54 09.2	-0.8
TAU	Tasmania Unive	38.71	227	P	P	10 54 10.7	-1.0
STKA	Stephens Creek	40.86	246	P	P	10 54 28.3	-1.5
STKA	Stephens Creek	40.86	246	P	P	10 54 28.8	-1.0
	comp=Z,7.9nm,0.8s,baz=110,slow=11,SNR=9.7						
	comp=Z,7.9nm,0.8s						
AS31	Alice Springs	48.05	257		P	10 55 25.4	-2.1
ASAR	Alice Springs	48.05	257	P	P	10 55 25.4	-2.0
	comp=Z,13nm,0.9s,baz=101,slow=7.4,SNR=49						
ASAR				PcP	PcP	10 56 55.7	+0.4
	comp=Z,1.2nm,0.8s,baz=100,slow=4.4,SNR=1.6						
	comp=Z,13nm,0.9s						
WRA	Warramunga Arr	48.28	262	P	P	10 55 26.6	-2.6
	comp=Z,8.5nm,0.9s,baz=97,slow=7.6,SNR=18						
WRA				PcP	PcP	10 56 56.6	+0.4
	comp=Z,2.2nm,0.9s,baz=102,slow=2.9,SNR=3.2						
	comp=Z,8.5nm,0.9s						
FORT	Forrest	52.45	247	P	P	10 55 58.8	-1.9
FITZ	Fitzroy Crossi	56.71	262	P	P	10 56 30.6	-1.2
VNDA	Vanda	57.30	186	P	P	10 56 36.3	+1.2
VNDA	Vanda	57.30	186	P	P	10 56 37.5	+2.5
	comp=Z,1.3nm,0.8s,baz=24,slow=2.5,SNR=5.0						
	comp=Z,1.3nm,0.8s						
MBWA	Marble Bar	61.39	257	P	P	10 57 02.6	-1.7
MBWA				IAmb	IAmb	10 57 02.9	
	comp=Z,8.5nm,0.9s						
MORW	Morawa	63.01	247	P	P	10 57 14.3	-0.7
MORW				IAmb	IAmb	10 57 18.1	
	comp=Z,7.3nm,1.1s						
QSPA	South Pole Qui	68.58	180	P	P	10 57 50.6	+0.2
QSPA				IAmb	IAmb	10 58 07.5	
	comp=Z,6.8nm,1.1s						
QSPA	South Pole Qui	68.58	180	P	P	10 57 52.4	+2.0
	comp=Z,2.3nm,0.8s,baz=30,slow=2.0,SNR=7.9						
	comp=Z,2.3nm,0.8s						
MJAR	Matsushiro Arr	73.34	321	P	P	10 58 19.7	+0.1
	comp=Z,4.1nm,0.9s,baz=156,slow=5.6,SNR=14						
	comp=Z,4.1nm,0.9s						
MJB9	Matsu-Tunnel	73.35	321	P	P	10 58 19.1	-0.5
MJB9				IAmb	IAmb	10 58 21.6	
	comp=Z,9.7nm,1.0s						
JMN	Monobe	74.11	317	P	P	10 58 24.4	+0.3
PEA0B	Petropavlovsk-	78.28	343	P	P	10 58 46.9	-0.6
PEA0B				IAmb	IAmb	10 58 50.7	
	comp=Z,4.9nm,0.8s						
PETK	Petropavlovsk-	78.28	343	P	P	10 58 46.7	-0.7
PETK	Petropavlovsk-	78.28	343	P	P	10 58 47.8	+0.4
	comp=Z,5.6nm,0.9s,baz=124,slow=8.4,SNR=12						
	comp=Z,5.6nm,0.9s						
NVAR	Mina Array Bea	79.16	41	P	P	10 58 55.1	+2.2
	comp=Z,0.8nm,0.6s,baz=225,slow=7.8,SNR=7.4						
	comp=Z,0.8nm,0.6s						
KSRS	Korea Array	80.22	317	P	P	10 58 58.3	0.0
	comp=Z,2.2nm,0.9s,baz=144,slow=5.7,SNR=8.8						
	comp=Z,2.2nm,0.9s						
M16K	Timber Creek	83.11	7	P	P	10 59 13.7	+0.6
N19K	Bonanza Creek	83.51	9	P	P	10 59 14.6	-0.7
N19K				IAmb	IAmb	10 59 18.2	
	comp=Z,5.5nm,1.1s						
K15K	Wolf Creek Mou	84.08	6	P	P	10 59 19.5	+1.4
L18K	Granite Mounta	84.55	8	P	P	10 59 22.3	+1.8
L18K				IAmb	IAmb	10 59 24.8	
	comp=Z,3.3nm,0.8s						
M19K	Big River Lodg	84.56	9	P	P	10 59 21.1	+0.5
M19K				IAmb	IAmb	10 59 33.2	
	comp=Z,3.3nm,1.0s						
PWL	Port Wells	84.63	12	P	P	10 59 21.5	+0.6
PWL				IAmb	IAmb	10 59 24.2	
	comp=Z,7.0nm,1.0s						
SUA	Susitna One	84.74	11	P	P	10 59 21.4	-0.1
SUA				IAmb	IAmb	10 59 23.2	
	comp=Z,8.2nm,0.9s						
K17K	Iditarod	84.83	7	P	P	10 59 22.5	+0.7
K17K				IAmb	IAmb	10 59 25.0	
	comp=Z,4.0nm,1.1s						
GLI	Glacier Island	84.90	13	P	P	10 59 22.2	0.0
J16K	Anvik River	85.14	6	P	P	10 59 24.1	+0.7
J16K				IAmb	IAmb	10 59 26.5	
	comp=Z,8.5nm,1.1s						
TTA	Tatalina	85.32	8	P	P	10 59 24.6	+0.2
TTA				IAmb	IAmb	10 59 27.1	
	comp=Z,4.9nm,1.1s						
GHO	Glory Hole Cre	85.36	12	P	P	10 59 25.4	+0.8
GHO				IAmb	IAmb	10 59 26.6	
	comp=Z,7.3nm,0.9s						
SCM	Sheep Creek Mo	85.72	12	P	P	10 59 24.1	-2.4
SCM				IAmb	IAmb	10 59 28.6	
	comp=Z,8.5nm,0.9s						
J18K	Innoko River	85.75	8	P	P	10 59 26.0	-0.4
J18K				IAmb	IAmb	10 59 29.1	
	comp=Z,6.7nm,1.1s						
CAST	Castle Rocks	86.35	10	P	P	10 59 29.0	-0.5
SNAA	Sanae	86.87	177	P	P	10 59 33.2	+1.1
	comp=Z,3.0nm,1.0s,baz=261,slow=6.5,SNR=3.5						
	comp=Z,3.0nm,1.0s						
PDAR	Pinedale Array	87.09	42	P	P	10 59 35.4	+1.6
	comp=Z,0.3nm,0.6s,baz=223,slow=4.9,SNR=3.0						
	comp=Z,0.3nm,0.6s						
ILAR	Eielson Array	88.48	11	P	P	10 59 41.0	+1.3
	comp=Z,1.0nm,0.8s,baz=216,slow=5.9,SNR=13						
	comp=Z,1.0nm,0.8s						
CMAR	Chiang Mai Arr	94.08	288	P	P	11 00 08.4	+1.7
	comp=Z,2.3nm,0.8s,baz=127,slow=2.9,SNR=11						
	comp=Z,2.3nm,0.8s						
KURBB	Kurchatov Arra	117.40	317	PKP	PKiKP	11 05 33.5	+0.3
	comp=Z,0.4nm,0.5s,baz=95,slow=1.9,SNR=4.4						
BVAR	Borovoye Array	122.32	320	PKP	PKiKP	11 05 43.1	+0.3
	comp=Z,2.1nm,0.8s,baz=64,slow=3.4,SNR=6.6						
AKASG	Malin Array Be	145.68	334	PKPbc	PKPab	11 06 26.8	+0.1
	comp=Z,6.9nm,0.8s,baz=40,slow=4.2,SNR=32						
CLL	Collm	149.76	351	*i* PKPbc	PKiKP	11 06 38.1	-0.4
	comp=Z,5.0nm,0.9s						
CLL				*i* PKPab	pPKPab	11 06 43.5	-0.1
	comp=Z,6.0nm,1.0s						
DPC	Dobruska-Polom	150.10	347	*e*PKP	PKiKP	11 06 40.4	+1.1
DPC				*e*x	x	11 06 45.6	
BRTR	Keskin Array B	150.33	314	PKPbc	PKiKP	11 06 40.4	0.0
	comp=Z,3.3nm,0.8s,baz=117,slow=2.2,SNR=16						
MLR	Muntele Rosu	151.07	330	PKPbc	PKiKP	11 06 41.5	-0.1
	comp=Z,4.0nm,0.9s,baz=3.7,slow=23,SNR=5.6						
TREC	Trest	151.28	347	*e*PKP	PKiKP	11 06 42.3	+0.5
ZVC	Zvikov	151.39	349	*e*PKP	PKiKP	11 06 43.5	+1.5
KHC	Kasperske Hory	151.79	350	*e*PKP	PKiKP	11 06 43.5	+0.6
KHC				*e*x	x	11 06 53.0	
CKRC	Cesky Krumlov	151.96	348	*e*PKP	PKiKP	11 06 44.3	+1.1
GERES	GERESS Array B	152.05	349	PKPbc	PKiKP	11 06 43.9	+0.4
	comp=Z,1.5nm,0.8s,baz=4.1,slow=1.9,SNR=7.1						
ESDC	Sonseca Array	159.93	23	PKP	PKPdf	11 06 48.0	+0.7
	comp=Z,2.8nm,1.2s,baz=31,slow=1.3,SNR=5.4						

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*IDC **02** 10:52:40.8±0.7,21°.37S×174°.37W,h0^{km},mb4.0/11, mbtmp4.0/12,ML4.4/1,Error ellipse: s-maj=26.6km s-min=18.7km az=119.0*

*NEIC **02** 10:52:41.5±2.0,21°.36S±0°.10×173°.57W±0°.10,h10^{km}±1^{km}, mb4.6/15,Error ellipse: s-maj=18.0km s-min=13.8km az=36.0*

ISC 02 10:52:41.7±0.5**,21°.38S**±0°.10×**173°.9W**±0°.1**,h10**^{km}**,n35, σ1^{s}.46**/36**,mb4.4**/20**,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.37	59	Pn	Pn	10 53 44.2	-3.9
AFI	Afiamalu	7.70	15	Pn	Pn	10 54 32.1	-1.9
URZ	Urewera	18.53	203	P	P	10 56 58.4	+0.1
	1.1nm,0.3s,baz=135,slow=4.3,SNR=8.3						
	10nm,0.7s						
MRZ	Mangatainoka R	21.20	203	P	P	10 57 27.0	-0.4
MRZ				IAmb	IAmb	10 57 43.0	
	comp=Z,15nm,0.9s						
STKA	Stephens Creek	40.90	246	P	P	11 00 21.9	-2.4
	comp=Z,2.5nm,0.8s,baz=85,slow=13,SNR=3.6						
	comp=Z,2.5nm,0.8s						
ASAR	Alice Springs	48.06	257	P	P	11 01 18.2	-3.6
	comp=Z,4.7nm,0.8s,baz=84,slow=7.8,SNR=19						
ASAR				PcP	PcP	11 02 47.2	-2.4
	comp=Z,0.5nm,0.7s,baz=97,slow=4.4,SNR=1.2						
	comp=Z,4.7nm,0.8s						
WRA	Warramunga Arr	48.29	262	P	P	11 01 20.7	-2.8
	comp=Z,3.0nm,0.8s,baz=96,slow=7.6,SNR=14						
WRA				PcP	PcP	11 02 48.3	-2.1
	comp=Z,0.8nm,0.7s,baz=108,slow=3.5,SNR=1.3						
	comp=Z,3.0nm,0.8s						
FORT	Forrest	52.49	247	P	P	11 01 54.2	-0.9
FORT				IAmb	IAmb	11 01 54.4	
	comp=Z,13nm,1.0s						
VNDA	Vanda	57.41	186	P	P	11 02 31.2	+1.2
VNDA	Vanda	57.41	186	P	P	11 02 31.4	+1.4
	comp=Z,0.7nm,0.7s,baz=24,slow=8.7,SNR=3.9						
	comp=Z,0.7nm,0.7s						
MORW	Morawa	63.05	247	P	P	11 03 08.4	-1.0
MORW				IAmb	IAmb	11 03 15.8	
	comp=Z,6.0nm,1.1s						
CASY	Casey	64.83	206	P	P	11 03 21.1	+0.7
CASY				IAmb	IAmb	11 03 50.4	
	comp=Z,9.2nm,1.0s						
QSPA	South Pole Qui	68.70	180	P	P	11 03 45.7	+0.4
QSPA				IAmb	IAmb	11 04 12.4	
	comp=Z,2.6nm,1.1s						
QSPA	South Pole Qui	68.70	180	P	P	11 03 45.9	+0.6
	comp=Z,1.3nm,0.8s,baz=40,slow=1.5,SNR=7.4						
	comp=Z,1.3nm,0.8s						
JSG	Sagara	71.97	320	P	P	11 04 05.4	-0.2
JMM	Marumori	72.72	324	P	P	11 04 12.3	+2.4
MJAR	Matsushiro Arr	73.24	321	P	P	11 04 12.8	-0.4
	comp=Z,2.7nm,0.9s,baz=154,slow=6.0,SNR=8.6						
	comp=Z,2.7nm,0.9s						
JMN	Monobe	74.02	317	P	P	11 04 17.5	-0.3
PETK	Petropavlovsk-	78.17	343	P	P	11 04 41.1	+0.2
	comp=Z,1.0nm,0.7s,baz=110,slow=9.9,SNR=5.0						
	comp=Z,1.0nm,0.7s						
BELA	Belgrano 2	78.17	172	P	P	11 04 40.2	-0.6
NVAR	Mina Array Bea	79.08	41	P	P	11 04 48.6	+2.0
	comp=Z,0.6nm,0.6s,baz=225,slow=7.3,SNR=7.6						
	comp=Z,0.6nm,0.6s						
KSRS	Korea Array	80.13	317	P	P	11 04 52.0	+0.1
	comp=Z,1.4nm,0.9s,baz=143,slow=6.1,SNR=5.8						
	comp=Z,1.4nm,0.9s						
N15K	Kwethluk River	82.03	7	P	P	11 05 01.2	-0.4
M16K	Timber Creek	82.99	7	P	P	11 05 07.2	+0.6
M16K				IAmb	IAmb	11 05 18.8	
	comp=Z,4.1nm,0.9s						
TXAR	Lajitas Array	84.33	56	P	P	11 05 17.3	+2.9
	comp=Z,0.4nm,0.9s,baz=240,slow=4.6,SNR=3.5						
	comp=Z,0.4nm,0.9s						
L18K	Granite Mounta	84.44	8	P	P	11 05 14.8	+0.9
L18K				IAmb	IAmb	11 05 33.9	
	comp=Z,2.8nm,1.1s						
SUA	Susitna One	84.63	11	P	P	11 05 15.4	+0.2
SUA				IAmb	IAmb	11 05 40.6	
	comp=Z,7.2nm,1.1s						
TRF	Thorofare Moun	86.56	10		P	11 05 25.1	+0.3
TRF				IAmb	IAmb	11 05 27.8	
	comp=Z,4.1nm,0.7s						
ILAR	Eielson Array	88.37	11	P	P	11 05 34.6	+1.3
	comp=Z,0.6nm,0.9s,baz=207,slow=5.8,SNR=13						
	comp=Z,0.6nm,0.9s						
CMAR	Chiang Mai Arr	94.04	288	P	P	11 06 02.5	+1.8
	comp=Z,0.7nm,0.3s,baz=128,slow=2.6,SNR=6.9						
BVAR	Borovoye Array	122.22	320	PKP	PKPdf	11 11 36.8	+0.2
	comp=Z,0.3nm,0.4s,baz=75,slow=1.6,SNR=2.9						
AKASG	Malin Array Be	145.57	334	PKPbc	PKPdf	11 12 19.6	-0.5
	comp=Z,0.3nm,0.3s,baz=41,slow=4.0,SNR=7.7						
CLL	Collm	149.65	351	*e*(PKPbc)	PKiKP	11 12 34.0	+1.6
CLL				*i* PKPab	sPKPab	11 12 37.5	-0.2
BRTR	Keskin Array B	150.24	314	PKPbc	PKPbc	11 12 33.0	-0.5
	comp=Z,0.9nm,0.7s,baz=70,slow=3.3,SNR=7.9						
GERES	GERESS Array B	151.93	349	PKPbc	PKPbc	11 12 36.7	-0.3
	comp=Z,0.4nm,0.8s,baz=33,slow=2.3,SNR=4.2						

NOU 02 10:54:52.0,17°.96S×**167°.41E,h9**^{km}**,MLv4.6**/18**,Vanuatu Islands,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.78	73	P	Pg	10 55 06.1	-0.9
DVP	Devils Point	0.78	73	S	Sg	10 55 17.7	+0.6
VLAKA	Lakatoro	1.84	0	P	Pn	10 55 23.0	-0.8
INH	Isangel	2.37	132	P	Pn	10 55 32.0	+0.9
INH	Isangel	2.37	132	P	Sn	10 56 01.3	+1.0
KOUNC	Koumac, New Ca	3.92	228	P	Pn	10 55 51.9	-0.5
YATNC	Mamie plateau,	4.11	187	P	Pn	10 55 54.3	-0.7
DZM	Mont Dzumac	4.19	192	P	Pn	10 55 56.2	0.0
ONTNC	Ouen Toro	4.42	192	P	Pn	10 55 59.2	0.0
OUENC	Ouen Island, N	4.47	187	P	Pn	10 56 00.1	+0.2
LUES	Luesalemba Tem	7.40	349	P	Pn	10 56 39.6	-0.6
ALEG	Aligegeo Malai	11.24	324	P	Pn	10 57 33.8	+0.8

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*JMA **02** 11:20:59.4±1.4,44°N±4°×15°0E±°,h30^{km},MV4.2/14,SE OFF ETOROFU*

*NEIC **02** 11:21:00.7±2.2,43°.82N±0°.10×149°.4E±0°.1,h10^{km}±1^{km}, mb4.4/40,Error ellipse: s-maj=20.1km s-min=11.3km az=135.0*

*SKHL **02** 11:21:02.5±0.2,43°.90N×149°.40E,h42^{km}±3^{km},mb4.9/3*

*MOS **02** 11:21:03.6±1.1,44°.02N×149°.18E,h45^{km},mb4.5/20,Error ellipse: s-maj=7.3km s-min=6.4km az=112.3*

*IDC **02** 11:21:05.1±0.8,44°.07N×149°.25E,h36^{km}±4^{km},mb3.8/24, mbtmp4.0/30,ML3.1/6,Error ellipse: s-maj=16.9km s-min=13.9km az=153.0*

ISC 02 11:21:05.0±0.6**,43°.88N**±0°.05×**149°.22E**±0°.06**,h42**^{km}±4^{km}**, h42**^{km}**:pP-P,n172,**σ**1**^{s}**.26**/191**,mb4.4**/61**,16C-9D,East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.66	325	*e*PN	Pn	11 21 29.1	-2.5
KUR				S	Sn	11 21 51.9	+0.2
KUR				pmax	pmax		
	comp=Z,926nm,0.6s						
KUR				pmax	pmax		
	comp=N,346nm,0.5s						
KUR				pmax	pmax		
	comp=E,213nm,0.3s						
KUR				smax	smax		
	comp=N,532nm,0.5s						
KUR				smax	smax		
	comp=E,1µm,0.5s						
KUR	Kuril'sk	1.66	325	*i* P	Pn	11 21 29.5	-2.1
KUR				AMB	AMB	11 21 33.2	
	comp=E,280nm,0.4s						
KUR				*e*S	Sn	11 21 49.9	-1.8
KUR				A	A	11 21 58.0	
	comp=E,2µm,0.4s						
KUR				A	A	11 21 58.0	
	comp=E,1µm,0.4s						
SHO	Shikotan	1.73	270	*c* *i*PN	Pn	11 21 31.3	-1.2
SHO				*e*S	Sn	11 21 52.4	-0.8
SHO				pmax	pmax		
	comp=Z,39nm,0.4s						
SHO				pmax	pmax		
	comp=E,29nm,0.3s						
SHO				pmax	pmax		
	comp=N,15nm,0.2s						
SHO				smax	smax		
	comp=E,335nm,0.3s						
SHO				smax	smax		
	comp=N,266nm,0.4s						
SHO	Shikotan	1.73	270	*i* P	Pn	11 21 31.4	-1.1
SHO				AMB	AMB	11 21 32.2	
	comp=N,60nm,0.4s						
SHO				*e*S	Sn	11 21 52.9	-0.3
SHO				A	A	11 22 03.4	
	comp=N,510nm,0.5s						
SHO				A	A	11 22 03.4	
	comp=N,230nm,0.5s						
YUK	Yuzh-Kuril'sk	2.43	275	*d* *i*PN	Pn	11 21 41.1	-1.0
YUK				*e*S	Sn	11 22 10.4	-0.1
YUK				pmax	pmax		
	comp=Z,152nm,0.5s						
YUK				pmax	pmax		
	comp=N,87nm,0.5s						
YUK				pmax	pmax		
	comp=E,86nm,0.3s						
YUK				smax	smax		
	comp=E,163nm,0.3s						
YUK				smax	smax		
	comp=N,342nm,0.4s						
YUK	Yuzh-Kuril'sk	2.43	275	*i* P	Pn	11 21 40.8	-1.3
YUK				AMB	AMB	11 21 45.5	
	comp=N,230nm,0.7s						
YUK				*e*S	Sn	11 22 10.5	-0.1
YUK				A	A	11 22 17.1	
	comp=N,400nm,0.6s						
YUK				A	A	11 22 17.1	
	comp=N,430nm,0.6s						
NEM2	Nemuro 2	2.57	260	P	Pn	11 21 42.5	-1.6
NMR	Nemuro--Hokkai	2.58	260	⇑*i*PN	Pn	11 21 42.5	-1.7
NMR				*e*S	Sn	11 22 14.1	-0.3
NMR	Nemuro--Hokkai	2.58	260	*i* P	Pn	11 21 42.7	-1.5
NMR				*e*S	Sn	11 22 14.1	-0.3
GLVR	Golovnino	2.68	268	*e*PN	Pn	11 21 44.8	-0.8
GLVR				*e*S	Sn	11 22 16.1	-0.6
GLVR				pmax	pmax		
	comp=E,33nm,0.3s						
GLVR				pmax	pmax		
	comp=Z,323nm,0.3s						
GLVR				pmax	pmax		
	comp=N,57nm,0.4s						
GLVR				smax	smax		
	comp=E,259nm,0.3s						
GLVR				smax	smax		
	comp=N,424nm,0.4s						
GLVR	Golovnino	2.68	268	*e*P	Pn	11 21 44.8	-0.8
GLVR				AMB	AMB	11 21 45.5	
	comp=N,320nm,0.3s						
GLVR				*e*S	Sn	11 22 16.1	-0.6
GLVR				A	A	11 22 24.1	
	comp=N,420nm,0.4s						
GLVR				A	A	11 22 24.1	
	comp=N,260nm,0.4s						
RUSJ	Misakicho	2.87	276	⇑*e*PN	Pn	11 21 48.1	-0.1
RUSJ				*e*S	Sn	11 22 19.6	-1.9
JRA	Rausu	2.96	273	P	Pn	11 21 49.1	-0.3
JNK	Nakash	3.27	266	*e*P	Pn	11 21 53.1	-0.6
AKK	Akkeshi	3.30	256	*e*P	Pn	11 21 53.5	-0.6
JAK	Akkeshi	3.41	257	P	Pn	11 21 54.7	-0.8
JAK				S	Sn	11 22 35.3	+0.6
JTKR	Abashiri--Toko	3.83	273	P	Pn	11 22 01.6	+0.2
JAR	Ashorobuto	4.00	263	*e*P	Pn	11 22 03.6	-0.1
JOB	Onbets	4.04	258	*e*P	Pn	11 22 03.8	-0.4
JCH	Churui	4.46	256	P	Pn	11 22 10.0	0.0
JCH				*e*S	Sn	11 23 01.6	+0.9
JKA	Kamikawa-asahi	4.78	275		Pn	11 22 14.9	+0.5
ASAJ	Asahikawa	4.78	275	Pn	Pn	11 22 15.2	+0.7
	comp=N,1.0nm,0.3s,baz=73,slow=11,SNR=16						
	comp=N,4.2nm,0.4s						
ERM	Erimo	4.82	249		Pn	11 22 15.8	+0.8
ERM	Erimo	4.82	249	*d* *i*PN	Pn	11 22 16.3	+1.3
JNBK	Urakawa-nobuka	5.00	254	P	Pn	11 22 16.7	-0.7
YSS	Yuzhno-Sakhali	5.49	306	Pn	Pn	11 22 24.9	+0.7
YSS	Yuzhno-Sakhali	5.49	306	*e*PN	Pn	11 22 26.4	+2.3
YSS				*e*S	Sn	11 23 32.7	+6.8
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YSS				smax	smax		
	comp=N,10.0nm,0.9s						
YSS				smax	smax		
	comp=E,20nm,0.8s						
YSS	Yuzhno-Sakhali	5.49	306	*e*P	Pn	11 22 25.0	+0.9
YSS				AMB	AMB	11 22 31.9	
	comp=E,10.0nm,0.8s						
YSS				*e*S	Sn	11 23 26.7	+0.8
YSS				A	A	11 23 35.6	
	comp=E,10.0nm,0.7s						
YSS				A	A	11 23 35.6	
	comp=E,20nm,0.7s						
JANG	Nango	6.71	241	P	Pn	11 22 38.7	-2.3
JANG				S	Sn	11 23 50.7	-5.3
JTH	Tanohata	6.75	237	*e*P	Pn	11 22 39.0	-2.4
JTM	Tenmabayashi	6.78	246		Pn	11 22 41.1	-0.8
SKR	Severo-Kuril's	8.26	32	⇓*i*PN	Pn	11 23 01.5	-0.6
SKR	Severo-Kuril's	8.26	32	*e*P	Pn	11 23 00.9	-1.2
TYV	Tymovskoe	8.28	330	*e*PN	Pn	11 23 15.0	+13
TYV				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TYV	Tymovskoe	8.28	330	*e*P	Pn	11 23 03.5	+1.1
TYV				AMB	AMB	11 23 21.5	
	comp=Z,100nm,0.8s						
TYV				*e*S	Sn	11 24 34.1	-0.4
TYV				A	A	11 24 59.1	
	comp=Z,430nm,1.4s						
JMM	Marumori	8.76	230	Pn	Pn	11 23 07.1	-1.9
TEY	Ternei	9.10	282	*e*PN	Pn	11 23 32.1	+19
JSD	Sado	10.13	239	Pn	Pn	11 23 25.8	-2.0
PEA0B	Petropavlovsk-	10.80	28	Pn	Pn	11 23 34.7	-2.2
PEA0B	Petropavlovsk-	10.80	28	⇓*e*PN	Pn	11 23 35.2	-1.8
PETK	Petropavlovsk-	10.80	28	Pn	Pn	11 23 34.7	-2.2
PETK	Petropavlovsk-	10.80	28	Pn	Pn	11 23 34.6	-2.3
	comp=Z,0.2nm,0.3s,baz=208,slow=14,SNR=8.7						
	comp=Z,2.3nm,0.7s						
MJA0	Matsu Arr-Jizo	11.13	233	*e*PN	Pn	11 23 41.9	+0.4
MJAR	Matsushiro Arr	11.15	233	Pn	Pn	11 23 40.5	-1.3
	comp=Z,0.1nm,0.3s,baz=26,slow=14,SNR=6.2						
MJB9	Matsu-Tunnel	11.15	233	Pn	Pn	11 23 40.8	-1.0
MAJO	Matsushiro	11.15	233	⇑*e*PN	Pn	11 23 41.6	-0.2
JGF	Kuroka	12.30	232	Pn	Pn	11 23 56.6	-0.9
USA0B	Ussuriysk Arra	12.40	277	⇓*e*PN	Pn	11 23 57.5	-1.3
USRK	Ussuriysk Ar.	12.40	277	Pn	Pn	11 23 59.1	+0.2
	comp=Z,0.2nm,0.3s,baz=83,slow=16,SNR=4.5						
	comp=Z,2.5nm,0.7s						
USRK	Ussuriysk Ar.	12.40	277	*e*PN	Pn	11 23 58.8	0.0
USRK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
VLA	Vladivostok	12.61	273	⇑*e*PN	Pn	11 24 01.7	+0.1
KLR	Kul'dur	13.15	300	Pn	Pn	11 24 08.5	-0.5
	comp=Z,0.1nm,0.3s,baz=288,slow=22,SNR=1.6						
	comp=Z,0.4nm,0.4s						
BNX	BinXian	15.59	284	⇑P	Pn	11 24 40.3	-1.3
BNX				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KSRS	Korea Array	17.36	256	P	Pn	11 25 04.2	+0.2
	baz=61,slow=10,SNR=4.7						
	comp=Z,0.8nm,0.8s						
KSRS	Korea Array	17.36	256	*e*P	P	11 25 08.3	+3.4
ZEA	Zeya	17.44	312	⇑*e*P	Pn	11 25 05.3	+0.4
ZEA	Zeya	17.44	312	*e*P	Pn	11 25 01.5	-3.4
SEY	Seymchan	19.18	4	P	P	11 25 22.6	-2.2

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                 comp=Z,0.1nm,0.3s,baz=173,slow=9.7,SNR=7.2
                 comp=Z,2.3nm,0.8s
SEY   Seymchan          19.18   4⇑eP      P       11 25 22.5  -2.2
SEY                                pmax   pmax
                 comp=Z,5.0nm,1.0s
YAK   Yakutsk           21.50 335  P      P       11 25 48.1  -1.7
                 comp=Z,16nm,0.4s,baz=307,slow=3.7,SNR=4.8
                 comp=Z,16nm,0.4s
YAK   Yakutsk           21.50 335 eP      P       11 25 46.7  -3.1
YAK                               eS      S       11 29 43.2  -2.5
YAK                                pmax   pmax
                 comp=Z,20nm,1.0s
YAK                                pmax   pmax
                 comp=N,4.0nm,1.1s
YAK                                pmax   pmax
                 comp=E,5.0nm,1.1s
YAK                                smax   smax
                 comp=N,372nm,13.4s
XLT   XiLinHaoTe        23.80 282 eP      P       11 26 12.7  -1.1
XLT                                pmax   pmax
                 comp=Z,12nm,0.6s
BILL  Bilibino          25.84  15⇑eP      P       11 26 34.8  +2.8
H11N2 WAKE ISLAND Hy    28.26 143  T      T       11 58 00.5
                 baz=333,slow=75,SNR=21
H11N1 WAKE ISLAND Hy    28.27 143  T      T       11 58 03.6
                 baz=333,slow=75,SNR=13
H11N3 WAKE ISLAND Hy    28.28 143  T      T       11 58 12.4
                 baz=333,slow=75,SNR=20
H11S1 WAKE ISLAND Hy    29.26 144  T      T       11 59 11.7
                 baz=333
H11S3 WAKE ISLAND Hy    29.27 144  T      T       11 59 11.7
                 baz=333
H11S2 WAKE ISLAND Hy    29.28 144  T      T       11 59 11.7
                 baz=333
ULN   Ulaanbaatar       29.36 293  P      P       11 27 03.5  -0.4
ULN   Ulaanbaatar       29.36 293⇓iP      P       11 27 04.5  +0.6
ULN                                pmax   pmax
                 comp=Z,4.0nm,0.7s
ULN   Ulaanbaatar       29.36 293 eP      P       11 27 04.5  +0.6
TIXI  Tiksi             29.55 347⇓eP      P       11 27 04.7  -0.5
TIXI                               pmax   pmax
                 comp=Z,2.0nm,0.8s
TIXI  Tiksi             29.55 347 eP      P       11 27 04.7  -0.5
SONM  Songino Array     29.80 293  P      P       11 27 08.1  +0.3
SONM  Songino Array     29.80 293  P      P       11 27 08.3  +0.5
                 comp=Z,2.3nm,0.6s,baz=82,slow=7.8,SNR=17
                 comp=Z,2.3nm,0.6s
O15K  Ungalikthiuk R    34.24  45  P      P       11 27 45.7  -0.8
L16K  Owhat River       34.65  41  P      P       11 27 48.9  -1.0
M16K  Timber Creek      34.82  42  P      P       11 27 52.1  +0.7
LZH   Lanzhou           35.26 273 eP      P       11 27 56.9  +1.2
LZH                                sP     sP      11 28 10.6  +0.6
M17K  Holitna River     35.59  42  P      P       11 27 58.2  +0.2
M17K                               IAmb   IAmb    11 28 34.5
                 comp=Z,8.5nm,1.4s
C19K  Lookout Ridge     36.16  28  P      P       11 28 03.4  +0.4
D19K  Kuna River        36.51  30  P      P       11 28 05.1  -0.8
D19K                               IAmb   IAmb    11 28 08.0
                 comp=Z,4.2nm,0.8s
H19K  Roundabout Mou    36.53  35         P       11 28 06.4  +0.4
H19K                               IAmb   IAmb    11 28 19.0
                 comp=Z,5.0nm,0.8s
E19K  Redstone River    36.59  31  P      P       11 28 07.3  +0.8
E19K                               IAmb   IAmb    11 28 19.4
                 comp=Z,3.4nm,0.6s
GTA   Gaotai            36.74 280 eP      P       11 28 09.5  +1.1
GTA                                pP     pP      11 28 21.0  +2.7
GTA                                pmax   pmax
                 comp=Z,5.0nm,1.1s
D20K  Etivluk River     37.10  29  P      P       11 28 11.1  +0.2
D20K                               IAmb   IAmb    11 28 23.5
                 comp=Z,9.1nm,1.1s
J20K  Nowinta River     37.33  37  P      P       11 28 13.9  +1.1
B21K  Ikpikpuk River    38.00  28  P      P       11 28 19.0  +0.6
B21K                               IAmb   IAmb    11 28 19.2
                 comp=Z,7.7nm,0.9s
D22K  Ayikyak River     38.53  30  P      P       11 28 23.5  +0.5
D22K                               IAmb   IAmb    11 28 24.6
                 comp=Z,3.0nm,0.8s
E22K  Anaktuvuk Pass    38.73  31  P      P       11 28 25.4  +0.7
E22K                               IAmb   IAmb    11 28 37.5
                 comp=Z,5.7nm,0.6s
D23K  Nanushuk River    39.26  30  P      P       11 28 28.9  -0.2
C23K  Itkillik River    39.41  28  P      P       11 28 30.6  +0.3
C23K                               IAmb   IAmb    11 29 02.4
                 comp=Z,11nm,1.3s
SEW   Seward            39.50  44  P      P       11 28 30.6  -0.5
SEW                                IAmb   IAmb    11 28 47.8
                 comp=Z,11nm,1.3s
TOLK  Toolik Lake Re    39.62  30  P      P       11 28 32.5  +0.4
TOLK                               IAmb   IAmb    11 28 50.0
                 comp=Z,12nm,1.5s
SML   Sawmill           39.94  41  P      P       11 28 35.2  +0.3
COLA  College           40.08  36⇑eP      P       11 28 34.9  -1.0
COLA                               pmax   pmax
                 comp=Z,6.0nm,1.9s
ILAR  Eielson Array     40.50  36  P      P       11 28 38.6  -0.7
                 comp=Z,0.4nm,0.7s,baz=269,slow=9.1,SNR=7.5
                 comp=Z,0.4nm,0.7s
D25K  Kavik River       40.83  29  P      P       11 28 42.8  +0.7
D25K                               IAmb   IAmb    11 29 08.3
                 comp=Z,8.5nm,1.2s
M24K  Tolsona, Glenn    40.94  40  P      P       11 28 43.8  +0.7
M24K                               IAmb   IAmb    11 29 24.0
                 comp=Z,14nm,1.4s
C27K  Jago River        41.78  29  P      P       11 28 50.7  +0.8
C27K                               IAmb   IAmb    11 28 57.7
                 comp=Z,13nm,1.1s
PZH   PanZhiHua         41.88 262  P      P       11 28 51.3   0.0
PZH                                pmax   pmax
                 comp=Z,10.0nm,0.7s
PZH                                pmax   pmax
                 comp=Z,100nm,4.8s
ZALV  Zalesovo Beam     42.11 307  P      P       11 28 52.4  -0.3
                 comp=Z,0.5nm,0.3s,baz=84,slow=8.3,SNR=3.3
                 comp=Z,0.5nm,0.3s
CRQM  Cirque            42.54  42  P      P       11 28 57.1  +0.7
CRQM                               IAmb   IAmb    11 29 00.8
                 comp=Z,5.8nm,0.7s
L27K  Beaver Creek,     42.84  39         P       11 28 59.5  +0.9
GRNC  Granite Creek     43.22  42  P      P       11 29 02.6  +0.7
GRNC                               IAmb   IAmb    11 29 03.0
                 comp=Z,5.7nm,0.8s
I28M  Miner Creek       43.39  35  P      P       11 29 04.0  +0.9
I30M  Mount Dempster    44.90  35         P       11 29 15.7  +0.5
I30M                               IAmb   IAmb    11 29 40.9
                 comp=Z,6.2nm,1.3s
HYT   Haines Junctio    45.25  41  P      P       11 29 19.4  +1.5
HYT                                IAmb   IAmb    11 29 32.3
                 comp=Z,5.1nm,0.9s
MK31  Makanchi Array    45.84 298c iP     P       11 29 23.0  +0.2
MKAR  Makanchi Array    45.84 298  P      P       11 29 23.1  +0.3
                 comp=Z,4.7nm,0.7s,baz=76,slow=8.3,SNR=36
                 comp=Z,4.7nm,0.7s
KURK  Kurchatov         46.69 305  P      P       11 29 28.5  -0.8
KURK  Kurchatov         46.69 305ceP      P       11 29 28.7  -0.6
KURK                               pmax   pmax
                 comp=Z,6.0nm,1.1s
KURK  Kurchatov         46.69 305 eP      P       11 29 28.7  -0.6
KURBB Kurchatov Arra    46.78 304  P      P       11 29 29.1  -0.9
                 comp=Z,2.7nm,0.5s,baz=72,slow=8.6,SNR=17
                 comp=Z,2.7nm,0.5s
CMAR  Chiang Mai Arr    49.00 255  P      P       11 29 48.6  +1.0
                 comp=Z,0.3nm,0.3s,baz=49,slow=8.6,SNR=2.0
                 comp=Z,0.3nm,0.3s
BVAR  Borovoye Array    50.57 310  P      P       11 29 59.1   0.0
                 comp=Z,0.5nm,0.3s,baz=67,slow=11,SNR=6.8
                 comp=Z,0.5nm,0.3s
BRVK  Borovoye          50.62 310⇓iP      P       11 29 59.6  +0.2
BRVK                               pmax   pmax
                 comp=Z,2.0nm,0.8s
BRVK  Borovoye          50.62 310 eP      P       11 29 59.6  +0.2
EVN   Everest           51.79 274         P       11 30 09.6  +0.2
AAK   Ala-Archa         52.64 296⇑eP      P       11 30 15.4  +0.5
AAK                                pmax   pmax
                 comp=Z,4.0nm,1.2s
AAK   Ala-Archa         52.64 296 eP      P       11 30 15.4  +0.5
KSH   Kashi             53.20 292  P      P       11 30 24.8  +5.8
KSH                                pmax   pmax
                 comp=Z,6.0nm,0.6s
KSH                                LR     LR
                 comp=N,3µm,17.2s
KSH                                LR     LR
                 comp=E,2µm,17.9s
KSH                                LR     LR
                 comp=Z,1µm,19.9s
YKA   Yellowknife Ar    54.86  34  P      P       11 30 30.1  -0.5
                 comp=Z,1.3nm,0.7s,baz=301,slow=7.9,SNR=3.8
                 comp=Z,1.3nm,0.7s
YKA   Yellowknife Ar    54.86  34 eP      P       11 30 30.4  -0.2
YKA                                pmax   pmax
                 comp=Z,1.0nm,0.7s
SPITS Spitsbergen Ar    54.94 349  P      P       11 30 30.3  -0.7
                 comp=Z,5.3nm,1.2s,baz=44,slow=7.4,SNR=1.0
                 comp=Z,5.3nm,1.2s
KK31  Karatay Array     54.97 299         P       11 30 32.3  +0.6
KK31                               IAmb   IAmb    11 30 32.9
                 comp=Z,4.1nm,0.8s
KK31  Karatay Array     54.97 299  P      P       11 30 32.3  +0.6
KK31                               pmax   pmax
                 comp=Z,4.0nm,0.8s
KKAR  Karatay Array     54.97 299         P       11 30 32.0  +0.2
KKAR  Karatay Array     54.97 299  P      P       11 30 32.3  +0.6
KKAR                               IAmb   IAmb    11 30 32.9
                 comp=Z,4.3nm,0.8s
KKAR  Karatay Array     54.97 299  P      P       11 30 32.3  +0.6
KKAR                               pmax   pmax
                 comp=Z,4.0nm,0.8s
ARTI  Arti              55.37 317c iP     P       11 30 33.6  -0.8
ARTI                                              11 32 35.1
ARTI                               S      S       11 38 15.1  -0.5
ARTI                               SS     SS      11 41 59.2  -0.6
ARTI                               pmax   pmax
                 comp=Z,2.0nm,0.7s
AB31  Akbulak array     58.14 310         P       11 30 54.4  +0.2
ABKAR Akbulak array     58.14 310  P      P       11 30 54.4  +0.2
ARCES ARCESS Array B    59.64 340  P      P       11 31 03.8  -0.4
                 comp=Z,3.1nm,0.9s,baz=37,slow=6.7,SNR=1.6
                 comp=Z,3.1nm,0.9s
ILON  Igloolik, Nuna    61.00  18         P       11 31 13.1  -0.5
KLMR  Klimovskoe        61.12 328 eP      P       11 31 12.5  -1.9
KLMR                               pmax   pmax
                 comp=Z,9.0nm,1.2s
BELG  Belogornoye       62.82 318⇑eP      P       11 31 24.8  -1.2
BELG                               pmax   pmax
                 comp=Z,2.0nm,0.8s
SUMG  Summit            63.72   3         P       11 31 32.4  +0.3
SUMG  Summit            63.72   3  P      P       11 31 32.4  +0.3
SUMG                               pmax   pmax
                 comp=Z,7.0nm,0.9s
WRA   Warramunga Arr    64.96 195  P      P       11 31 41.8  +1.5
                 comp=Z,1.1nm,0.8s,baz=16,slow=7.4,SNR=5.8
                 comp=Z,1.1nm,0.8s
FINES FINESS Array B    65.43 334  P      P       11 31 42.4  -0.6
FINES FINESS Array B    65.43 334  P      P       11 31 42.5  -0.4
                 comp=Z,4.8nm,0.6s,baz=36,slow=7.3,SNR=40
FINES                              pP     pP      11 31 52.8  -0.7
                 comp=Z,5.3nm,0.6s,baz=38,slow=6.3,SNR=8.0
                 comp=Z,4.8nm,0.6s
NVAR  Mina Array Bea    66.24  59  P      P       11 31 48.6  -0.3
                 comp=Z,0.2nm,0.7s,baz=302,slow=5.5,SNR=2.1
                 comp=Z,0.2nm,0.7s
ASAR  Alice Springs     68.67 195  P      P       11 32 06.0  +2.0
                 comp=Z,0.7nm,0.7s,baz=11,slow=6.9,SNR=9.2
                 comp=Z,0.7nm,0.7s
ASAR  Alice Springs     68.67 195  P      P       11 32 06.0  +2.0
PDAR  Pinedale Array    68.67  51  P      P       11 32 04.3  +0.1
                 comp=Z,0.3nm,0.6s,baz=316,slow=5.8,SNR=2.2
                 comp=Z,0.3nm,0.6s
NC405 NORSAR Array S    69.82 340  P      P       11 32 10.7   0.0
NB2   NORSAR Subarra    70.01 340  P      P       11 32 11.3  -0.6
                 comp=Z,0.8nm,0.4s,baz=30,slow=6.5
NB2   NORSAR Subarra    70.01 340  P      P       11 32 10.7  -1.2
NOA   NORSAR Array B    70.01 340  P      P       11 32 11.6  -0.3
                 comp=Z,2.3nm,0.7s,baz=30,slow=6.7,SNR=15
NOA                                pP     pP      11 32 22.8  +0.3
                 comp=Z,1.3nm,0.4s,baz=37,slow=5.9,SNR=9.0
                 comp=Z,2.3nm,0.7s
HFS   Hagfors           70.14 338  P      P       11 32 12.0  -0.6
                 comp=Z,1.9nm,0.4s,baz=41,slow=4.7,SNR=24
HFS                                pP     pP      11 32 23.7  +0.4
                 comp=Z,3.4nm,0.4s,baz=47,slow=6.5,SNR=6.0
                 comp=Z,1.9nm,0.4s
NORES NORESS Array B    70.19 339  P      P       11 32 12.3  -0.6
KIV   Kislovodsk        70.78 313 eP      P       11 32 18.7  +1.7
KIV                                pmax   pmax
                 comp=Z,7.0nm,1.0s
KIV   Kislovodsk        70.78 313 eP      P       11 32 18.0  +1.0
KBZ   Khabaz            70.82 313  P      P       11 32 18.1  +1.1
                 comp=Z,4.4nm,0.8s,baz=57,slow=4.2,SNR=16
KBZ                                pP     pP      11 32 29.6  +1.9
                 comp=Z,5.0nm,0.8s,baz=36,slow=9.8,SNR=5.0
                 comp=Z,4.4nm,0.8s
SHA1  Shidzhatmaz       70.94 313⇑eP      P       11 32 18.9  +0.8
AKASG Malin Array Be    72.35 325  P      P       11 32 25.8  -0.3
                 comp=Z,0.8nm,0.4s,baz=38,slow=6.2,SNR=7.4
AKASG                              pP     pP      11 32 37.6  +1.0
                 comp=Z,2.1nm,0.5s,baz=38,slow=6.0,SNR=4.6
                 comp=Z,0.8nm,0.4s
AKASG Malin Array Be    72.35 325 i P     P       11 32 25.7  -0.4
AKASG                              pmax   pmax
                 comp=Z,1.0nm,0.4s
AKBB  Malin Array Si    72.35 325⇓eP      P       11 32 26.2  +0.1
AKBB                               pmax   pmax
                 comp=Z,9.0nm,1.5s
BUR08 Bucovina Ar. S    76.39 325         P       11 32 50.7  +0.8
BUR08                              IAmb   IAmb    11 33 03.5
                 comp=Z,2.5nm,0.7s
BURAR Bucovina Array    76.40 325         P       11 32 50.3  +0.4
BURAR                              IAmb   IAmb    11 33 03.5
                 comp=Z,3.1nm,0.7s
CLL   Collm             77.88 334 i P     P       11 32 57.5  -0.5
CLL                               i               11 33 09.7
CLL                                pmax   pmax
                 comp=Z,3.0nm,0.7s
CLL   Collm             77.88 334 i P     P       11 32 57.5  -0.5
                 comp=Z,3.0nm,0.7s
CLL                               i PcP   pP      11 33 09.7  +1.1
                 comp=Z,4.0nm,0.7s
EKA   Eskdalemuir Ar    78.42 344  P      P       11 33 01.0  +0.1
                 comp=Z,0.7nm,0.6s,baz=18,slow=5.2,SNR=1.6
EKA                                pP     pP      11 33 12.5  +0.9
                 comp=Z,1.4nm,0.6s,baz=22,slow=5.6,SNR=2.5
                 comp=Z,0.7nm,0.6s
EKA   Eskdalemuir Ar    78.42 344  P      P       11 33 01.0  +0.1
BRTR  Keskin Array B    78.53 315  P      P       11 33 02.5  +0.5
                 comp=Z,0.7nm,0.7s,baz=56,slow=6.1,SNR=5.0
                 comp=Z,0.7nm,0.7s
BRTR  Keskin Array B    78.53 315 eP      P       11 33 04.2  +2.2
BRTR                               pmax   pmax
                 comp=Z,1.0nm,0.7s
KHC   Kasperske Hory    79.56 332 eP      P       11 33 08.0  +0.7
KHC                               ex      x       11 33 19.6
KHC   Kasperske Hory    79.56 332 eP      P       11 33 08.0  +0.7
KHC                               e               11 33 19.6
GERES GERESS Array B    79.76 332  P      P       11 33 08.6  +0.1
                 comp=Z,0.7nm,0.5s,baz=43,slow=6.0,SNR=6.6
GERES                              pP     pP      11 33 18.9  -0.2
                 comp=Z,1.0nm,0.6s,baz=32,slow=7.8,SNR=5.7
                 comp=Z,0.7nm,0.5s
TXAR  Lajitas Array     81.33  58  P      P       11 33 17.6  +0.3
                 comp=Z,0.4nm,0.6s,baz=314,slow=3.7,SNR=9.6
                 comp=Z,0.4nm,0.6s
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SJA 02 11:24:35.4±0.7**,28.°01S×66.°55W,h192**km±4km**,ML3.5,**
MW3.4,Catamarca Province

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Code  Station Name       Δ°   AZ°    Phase ID            Time      Res
                                   Op     ISC         h  m  s      ISC
CYA   Choya              0.79 123 eP      Pn      11 25 03.4  +0.3
CYA                               eS      Sn      11 25 23.1  -1.4
ACLC  CERRO LA CRUZ      1.46 194 eP      Pn      11 25 08.7  +0.5
ACLC                              eS      Sn      11 25 33.2  -0.6
VCA   Vinchina           1.63 243 eP      Pn      11 25 09.9  +0.2
VCA                               eS      Sn      11 25 36.1  -0.4
VCA                                IAML           11 25 37.7
                 comp=Z,231nm,0.3s
AGUA  GUANDACOL          2.25 229 eP      Pn      11 25 16.3  +0.2
AGUA                              eS      Sn      11 25 47.9   0.0
AGUA                               IAML           11 25 47.9
                 comp=Z,149nm,0.4s
AC02  Maricunga          2.57 296 eP      Pn      11 25 21.0  +0.8
AC02                              eS      Sn      11 25 54.8  -0.1
AVFE  Valle Fertil       2.76 196 eP      Pn      11 25 22.3  +0.5
AVFE                              eS      Sn      11 25 56.1  -2.1
AVFE                               IAML           11 26 00.2
                 comp=Z,97nm,0.5s
ACHE  Chepes             3.14 182 eP      Pn      11 25 27.7  +1.2
ACHE                              eS      Sn      11 26 05.8  -0.8
GO03  Copiapo            3.29 276 eP      Pn      11 25 27.8  -0.4
GO03                              eS      Sn      11 26 05.8  -3.6
ACCO  Cerro Coronel      3.38 220 eP      Pn      11 25 34.3  +4.8
ACCO                              eS      Sn      11 26 15.5  +3.6
AC05  El Transito        3.38 255 eP      Pn      11 25 29.7  +0.3
AC05                              eS      Sn      11 26 10.5  -1.1
AC05                               IAML           11 26 13.3
                 comp=Z,66nm,0.6s
SLA   San Lorenzo        3.41  16 eP      Pn      11 25 28.0  -1.8
SLA                               eS      Sn      11 25 56.7   -16
DOCA  Reserva Natura     3.67 216 eP      Pn      11 25 33.2  +0.1
DOCA                              eS      Sn      11 26 17.3  -1.1
DOCA                               IAML           11 26 17.6
                 comp=Z,114nm,2.5s
CO01  Juntas del Tor     3.67 237 eP      Pn      11 25 34.3  +1.2
CO01                              eS      Sn      11 26 19.2  +1.0
CO01                               IAML           11 26 20.4
                 comp=Z,25nm,2.2s
TCA   Tanti              3.73 153 eP      Pn      11 25 34.7  +1.2
TCA                               eS      Sn      11 26 18.5  -0.7
TCA                                IAML           11 26 19.6
                 comp=Z,30nm,0.5s
LCO   Las Campanas       3.79 254 eP      Pn      11 25 34.2  -0.3
LCO                               eS      Sn      11 26 18.7  -2.1
CFA   Coronel Fontan     3.87 202 eP      Pn      11 25 35.8  +0.5
CFA                               eS      Sn      11 26 21.0  -1.4
GO02  Mina Guanaco       3.93 315 eP      Pn      11 25 37.2  +0.8
GO02                              eS      Sn      11 26 30.6  +6.5
ZON   Zonda              3.98 207 eP      Pn      11 25 37.1  +0.4
ZON                               eS      Sn      11 26 17.5  -7.3
ZON                                IAML           11 26 24.6
                 comp=Z,50nm,1.0s
AZAP  Zapla              4.00  20 eP      Pn      11 25 38.2  +1.0
AC04  Llanos de Chal     4.00 266 eP      Pn      11 25 36.0  -0.9
AC04                              eS      Sn      11 26 20.7  -4.4
AC04                               IAML           11 26 31.1
                 comp=Z,51nm,0.3s
AC01  Pan de Azucar      4.06 296 eP      Pn      11 25 37.1  -0.6
AC01                              eS      Sn      11 26 21.3  -5.1
AC01                               IAML           11 26 23.4
                 comp=Z,24nm,0.8s
GO04  Tololo Observa     4.30 239 eP      Pn      11 25 40.4  -0.5
GO04                              eS      Sn      11 26 35.2  +2.9
MRA   San Martin         4.45 171 eP      Pn      11 25 43.7  +1.0
MRA                               eS      Sn      11 26 23.7   -12
MRA                                IAML           11 26 51.9
                 comp=Z,37nm,0.5s
RTLS  Leoncito           4.47 212 eP      Pn      11 25 33.6  -9.4
RTLS                               IAML           11 26 37.3
                 comp=Z,104nm,0.2s
CO03  El Pedregal        4.58 231 eP      Pn      11 25 44.7  +0.4
CO03                              eS      Sn      11 26 38.6  +0.1
CO03                               IAML           11 26 42.1
                 comp=Z,31nm,0.3s
PB14  IPOC Station P     4.83 313 eP      Pn      11 25 47.6  -0.2
PB14                              eS      Sn      11 26 44.8  +0.2
PB14                               IAML           11 26 45.1
                 comp=Z,23nm,2.4s
CO02  Combarbal          5.01 230 eP      Pn      11 25 49.4  -0.5
CO02                               IAML           11 26 47.5
                 comp=Z,30nm,0.4s
ARCO  CERRO ARCO         5.24 203 eP      Pn      11 25 53.7  +0.9
ARCO                               IAML           11 26 57.0
                 comp=Z,37nm,0.2s
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*SKHL **02** 11:29:01.8±0.4,42.°70N×142.°60E,h100km±7km,mb5.9/4,*
msha6.4/4
*MOS **02** 11:29:01.3±0.8,42.°69N×142.°54E,h103km,mb4.5/11,*
Error ellipse: s-maj=7.5km s-min=5.7km az=73.6
*IDC **02** 11:29:02.8±1.3,42.°79N×142.°57E,h98km±8km,mb3.7/20,*
mbtmp4.0/27,Error ellipse: s-maj=16.0km s-min=10.8km
az=138.0
*NEIC **02** 11:29:02.8±1.8,42.°70N±0.°05×142.°6E±0.°1,h99km±5km,*
mb4.3/63,Error ellipse: s-maj=11.5km s-min=6.9km
az=95.0
*JMA **02** 11:29:02.8±0.2,42.°8N±0.°7×142.°6E±0.°9,h87km±2km,*
MV3.7/39,HIDAKA MOUNTAINS REGION
JMA Felt II J1 at HIDAKA MOUNTAINS REGION .
ISC 02 11:29:02.2±0.6**,42.°73N**±0.°04×**142.°56E**±0.°03**,h94**km±5km**,**
n199,σ1.°**22**/232**,mb4.3**/62**,8C-15D,Hokkaido region**

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Code  Station Name       Δ°   AZ°    Phase ID            Time      Res
                                   Op     ISC         h  m  s      ISC
JBT2  Biratori 2         0.15 288 i P     Pn      11 29 15.3  -0.2
JBT2                               S      Sn      11 29 25.1  -0.2
JSHD  Hidakashinhida     0.33 192 i P     Pn      11 29 16.9  +0.7
JFR   Furan              0.43   3⇓iP      Pn      11 29 16.4  -0.4
JNBK  Urakawa-nobuka     0.47 162⇓iP      Pn      11 29 17.9  +0.8
JIAM  Iburiatsuma        0.48 257  P      Pn      11 29 18.1  +0.9
JCH   Churui             0.60 101⇓iP      Pn      11 29 17.4  -0.8
JAB   Ashibetsu          0.81 342⇓iP      Pn      11 29 20.2  +0.1
JAB                               ⇓S      Sn      11 29 33.8  +0.2
JEW   Eniwo              0.82 278 i P     Pn      11 29 20.4  +0.2
JEW                                S      Sn      11 29 33.8   0.0
JEM   Erimo              0.84 148⇓iP      Pn      11 29 21.0  +0.6
ERM   Erimo              0.84 148         Pn      11 29 22.1  +1.7
ERM                                Sn     Sn      11 29 36.7  +2.6
ERM   Erimo              0.84 148cePN     Pn      11 29 21.3  +0.9
ERM                                pmax   pmax
                 comp=Z,1µm,0.5s
JOB   Onbets             0.95  79⇓iP      Pn      11 29 21.6  +0.1
JOB                               ⇓S      Sn      11 29 36.5  +0.3
JISS  Ishikarishitsu     1.00 303⇓iP      Pn      11 29 22.3  +0.2
JISS                             ⇓eS      Sn      11 29 37.3  +0.3
JAR   Ashorobuto         1.05  57 i P     Pn      11 29 22.3  -0.4
JAR                                S      Sn      11 29 37.7  -0.5
JKK2  Kamakawa 2         1.15   7 i P     Pn      11 29 24.1  +0.2
JKK2                               S      Sn      11 29 40.3  +0.1
JNB   Noboribetsu        1.15 257  P      Pn      11 29 23.5  -0.3
JNB                                S      Sn      11 29 40.1  -0.1
JHR   Hokuryu            1.18 329⇓iP      Pn      11 29 24.7  +0.5
JHR                               ⇓S      Sn      11 29 42.3  +1.5
ASAJ  Asahikawa          1.38   1  P      Pn      11 29 27.2  +0.5
                 comp=Z,230nm,0.3s,baz=211,slow=15,SNR=1361
ASAJ                               S      Sn      11 29 44.9  -0.3
                 comp=Z,642nm,0.7s,baz=2.9,slow=27,SNR=32
ASAJ  Asahikawa          1.38   1⇓iP      Pn      11 29 27.1  +0.5
JKA   Kamikawa-asahi     1.38   1         Pn      11 29 27.1  +0.4
JKA                                Sn     Sn      11 29 45.2  +0.1
JMP   Maruseppu          1.40  24 i P     Pn      11 29 27.3  +0.4
JMP                                S      Sn      11 29 46.0  +0.4
JTKR  Abashiri--Toko     1.58  38 i P     Pn      11 29 29.5  +0.4
JAK   Akkeshi            1.59  80 i P     Pn      11 29 28.8  -0.5
AKK   Akkeshi            1.70  80 eP      Pn      11 29 30.2  -0.4
JTM   Tenmabayashi       2.24 210         Pn      11 29 36.9  -0.7
JTM   Tenmabayashi       2.24 210  P      Pn      11 29 37.2  -0.5
JTM   Tenmabayashi       2.24 210  S      Sn      11 30 04.8   0.0
GLVR  Golovnino          2.39  64 ePN     Pn      11 29 40.4  +0.9
GLVR                              eS      Sn      11 30 09.9  +1.7
GLVR                               pmax   pmax
                 comp=Z,429nm,0.1s
GLVR                               smax   smax
                 comp=N,5µm,0.3s
GLVR                               smax   smax
                 comp=E,6µm,0.5s
GLVR  Golovnino          2.39  64 eP      Pn      11 29 40.4  +0.9
GLVR                               AMB    AMB     11 29 44.2
                 comp=E,430nm,0.1s
GLVR                              eS      Sn      11 30 09.3  +1.1
GLVR                               A      A       11 30 12.6
                 comp=E,5µm,0.4s
GLVR                               A      A       11 30 12.6
                 comp=E,6µm,0.4s
RUSJ  Misakicho          2.39  54 ePN     Pn      11 29 40.9  +1.3
RUSJ                              eS      Sn      11 30 13.3  +5.0
NMR   Nemuro--Hokkai     2.41  74 ePN     Pn      11 29 39.2  -0.6
NMR                               eS      Sn      11 30 06.8  -1.9
NMR   Nemuro--Hokkai     2.41  74 eP      Pn      11 29 39.2  -0.6
NMR                               eS      Sn      11 30 07.4  -1.3
YUK   Yuzh-Kuril'sk      2.74  60 ePN     Pn      11 29 45.6  +1.4
YUK                               eS      Sn      11 30 18.7  +2.2
YUK                                pmax   pmax
                 comp=N,290nm,0.2s
YUK                                pmax   pmax
                 comp=E,375nm,0.2s
YUK                                pmax   pmax
                 comp=Z,1µm,0.2s
YUK                                smax   smax
                 comp=N,3µm,0.5s
YUK                                smax   smax
                 comp=E,5µm,0.6s
YUK   Yuzh-Kuril'sk      2.74  60 eP      Pn      11 29 45.3  +1.1
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YUK				AMB	AMB	11 29 47.6	
	comp=E,1µm,0.2s						
YUK				eS	Sn	11 30 17.9	+1.4
YUK				A	A	11 30 24.8	
	comp=E,3µm,0.5s						
YUK				A	A	11 30 24.8	
	comp=E,5µm,0.5s						
SHO	Shikotan	3.32	69	ePN	Pn	11 29 52.5	+0.5
SHO				eS	Sn	11 30 29.5	-1.0
SHO				pmax	pmax		
	comp=N,19nm,0.2s						
SHO				pmax	pmax		
	comp=E,104nm,0.2s						
SHO				pmax	pmax		
	comp=Z,326nm,0.2s						
SHO				smax	smax		
	comp=N,1µm,0.4s						
SHO				smax	smax		
	comp=E,3µm,0.3s						
SHO	Shikotan	3.32	69	eP	Pn	11 29 52.5	+0.5
SHO				AMB	AMB	11 29 53.2	
	comp=E,330nm,0.2s						
SHO				eS	Sn	11 30 30.1	-0.4
SHO				A	A	11 30 36.1	
	comp=E,1µm,0.4s						
SHO				A	A	11 30 36.1	
	comp=E,3µm,0.4s						
YSS	Yuzhno-Sakhali	4.22	2	Pn	Pn	11 30 04.7	+0.5
YSS	Yuzhno-Sakhali	4.22	2	P	Pn	11 30 07.4	+3.2
YSS	Yuzhno-Sakhali	4.22	2	ePN	Pn	11 30 05.8	+1.6
YSS				eS	Sn	11 30 54.7	+2.3
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS	Yuzhno-Sakhali	4.22	2	eP	Pn	11 30 05.4	+1.2
YSS				AMB	AMB	11 30 12.7	
	comp=Z,30nm,0.9s						
YSS				eS	Sn	11 30 53.1	+0.7
YSS				A	A	11 31 23.4	
	comp=Z,160nm,0.3s						
YSS				A	A	11 31 23.4	
	comp=Z,330nm,0.3s						
KUR	Kuril'sk	4.57	55	d iPN	Pn	11 30 10.2	+1.2
KUR				pmax	pmax		
	comp=N,39nm,0.6s						
KUR				pmax	pmax		
	comp=Z,228nm,0.6s						
KUR				pmax	pmax		
	comp=E,43nm,0.3s						
KUR	Kuril'sk	4.57	55	eP	Pn	11 30 10.0	+1.0
KUR				AMB	AMB	11 30 10.6	
	comp=E,230nm,0.4s						
KUR				eS	Sn	11 31 00.8	-0.1
KUR				A	A	11 31 23.4	
	comp=E,160nm,0.3s						
KUR				A	A	11 31 23.4	
	comp=E,330nm,0.3s						
TEY	Ternei	4.88	300	ePN	Pn	11 30 14.5	+1.4
JMM	Marumori	5.04	196		Pn	11 30 13.6	-1.9
JMM	Marumori	5.04	196	P	Pn	11 30 13.4	-2.0
JSD	Sado	5.72	216	P	Pn	11 30 24.9	+0.3
MJB9	Matsu-Tunnel	7.03	210		Pn	11 30 43.5	+1.0
MAJO	Matsushiro	7.03	210		Pn	11 30 42.6	+0.1
MAJO	Matsushiro	7.03	210	P	Pn	11 30 42.8	+0.3
MAJO	Matsushiro	7.03	210	iPN	Pn	11 30 42.2	-0.3
MJAR	Matsushiro Arr	7.03	210	P	Pn	11 30 42.6	+0.1
	comp=E,3.1nm,0.3s,baz=25,slow=13,SNR=18						
USA0B	Ussuriysk Arra	7.83	284		Pn	11 30 55.0	+1.8
USA0B	Ussuriysk Arra	7.83	284	ePN	Pn	11 30 54.1	+0.9
USRK	Ussuriysk Ar.	7.83	284		Pn	11 30 53.6	+0.4
USRK	Ussuriysk Ar.	7.83	284	P	Pn	11 30 55.0	+1.7
	comp=E,14nm,0.8s,baz=90,slow=14,SNR=21						
USRK	Ussuriysk Ar.	7.83	284	PN	Pn	11 30 55.0	+1.7
VLA	Vladivostok	7.84	276	iPN	Pn	11 30 54.7	+1.3
VLA				pmax	pmax		
	comp=Z,33nm,0.7s						
TYV	Tymovskoe	8.13	0	ePN	Pn	11 30 59.6	+2.3
TYV				pmax	pmax		
	comp=Z,9.0nm,0.8s						
JGF	Kuroka	8.19	211		Pn	11 30 57.7	-0.6
JGF	Kuroka	8.19	211	P	Pn	11 30 57.4	-0.8
MSHR	Mys Shultsa	8.41	273	iPN	Pn	11 31 00.2	-0.9
JSG	Sagara	8.74	204	P	Pn	11 31 06.3	+0.6
MDJ	Mudanjiang	9.58	286	Pn	Pn	11 31 18.7	+1.5
JHJ2	Mitsune	9.85	194	P	Pn	11 31 20.1	-0.7
KLR	Kul'dur	9.94	315	P	Pn	11 31 23.6	+1.8
	comp=Z,14nm,0.8s,baz=124,slow=15,SNR=43						
KLR	Kul'dur	9.94	315	cePN	Pn	11 31 21.8	-0.1
KLR				pmax	pmax		
	comp=Z,24nm,1.0s						
KLR	Kul'dur	9.94	315	eP	Pn	11 31 21.8	-0.1
BNX	BinXian	11.28	291	⇑P	Pn	11 31 41.0	+0.8
BNX				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SKR	Severo-Kuril's	12.23	45	iPN	Pn	11 31 53.2	+0.4
SKR	Severo-Kuril's	12.23	45	eP	Pn	11 31 52.5	-0.3
KSRS	Korea Array	12.38	250	P	Pn	11 31 55.8	+0.8
	comp=Z,0.9nm,0.7s,baz=64,slow=12,SNR=6.0						
KSRS				S	Sn	11 34 14.6	+3.7
	comp=Z,4.0nm,1.0s,baz=63,slow=24,SNR=8.1						
JNU	Nakatsue	13.29	228	P	Pn	11 32 08.6	+1.4
	comp=Z,1.3nm,0.6s,baz=152,slow=21,SNR=1.1						
PEA0B	Petropavlovsk-	14.49	39		Pn	11 32 20.7	-1.7
PEA0B	Petropavlovsk-	14.49	39	ceP	Pn	11 32 24.1	+1.7
PETK	Petropavlovsk-	14.49	39	Pn	Pn	11 32 21.1	-1.3
PETK	Petropavlovsk-	14.49	39	P	Pn	11 32 20.6	-1.9
	comp=Z,7.6nm,0.6s,baz=221,slow=9.0,SNR=30						
PETK	Petropavlovsk-	14.49	39	P	Pn	11 32 21.1	-1.3
PET	Petropavlovsk	14.88	41		Pn	11 32 26.9	-0.6
PET	Petropavlovsk	14.88	41	P	Pn	11 32 27.7	+0.2
PET	Petropavlovsk	14.88	41	eP	Pn	11 32 27.9	+0.4
PET				pmax	pmax		
	comp=Z,21nm,0.5s						
ZEA	Zeya	14.97	323	eP	Pn	11 32 29.4	+0.8
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEA	Zeya	14.97	323	eP	Pn	11 32 26.8	-1.8
JCJ	Chichijima	15.60	181	P	Pn	11 32 32.9	-3.9
	comp=Z,10nm,0.5s,baz=287,slow=22,SNR=1.1						
JCJ				S	Sn	11 35 14.8	-14
	comp=Z,17nm,0.5s,baz=294,slow=20,SNR=1.9						
MA2	Magadan	17.61	14	P	P	11 33 00.4	-0.5
MA2	Magadan	17.61	14	P	P	11 33 00.6	-0.3
	comp=Z,4.8nm,0.7s,baz=203,slow=10,SNR=7.1						
SEY	Seymchan	21.04	13	P	P	11 33 37.6	-0.5
	comp=Z,2.2nm,0.5s,baz=193,slow=8.1,SNR=13						
	comp=Z,2.2nm,0.5s						
SEY	Seymchan	21.04	13	ceP	P	11 33 38.3	+0.2
SEY				pmax	pmax		
	comp=Z,6.0nm,2.5s						
SEY	Seymchan	21.04	13	eP	P	11 33 38.3	+0.2
ULN	Ulaanbaatar	25.35	294	iP	P	11 34 18.8	-1.6
ULN				pmax	pmax		
	comp=Z,7.0nm,1.7s						
ULN	Ulaanbaatar	25.35	294	eP	P	11 34 18.8	-1.6
SONM	Songino Array	25.79	294		P	11 34 24.5	+0.2
SONM	Songino Array	25.79	294	P	P	11 34 24.6	+0.2
	comp=Z,1.0nm,0.4s,baz=87,slow=7.1,SNR=16						
	comp=Z,1.0nm,0.4s						
GTA	Gaotai	32.14	279	P	P	11 35 21.9	+1.1
GTA				PP	PnPn	11 36 21.4	-8.6
GTA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
PZH	PanZhiHua	36.89	257	P	P	11 36 03.5	+1.6
PZH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,110nm,5.1s						
GOMU	GeErMu	37.03	276	P	P	11 36 03.2	0.0
GOMU				pmax	pmax		
	comp=Z,8.0nm,0.9s						
M14K	Bethel	37.44	42	P	P	11 36 06.1	+0.2
M14K				IAmb	IAmb	11 36 09.2	
	comp=Z,5.0nm,0.9s						
N14K	Kuskokwak Cree	37.54	43	P	P	11 36 06.7	-0.1
O14K	Tigyukauivet M	37.74	44	P	P	11 36 07.8	-0.7
N15K	Kwethluk River	38.35	43	P	P	11 36 14.9	+1.3
N15K				IAmb	IAmb	11 36 19.1	
	comp=Z,4.7nm,0.8s						
L16K	Owhat River	38.68	40	P	P	11 36 17.2	+0.9
L16K				IAmb	IAmb	11 36 21.9	
	comp=Z,4.7nm,1.1s						
C18K	Utukok River	38.83	29	P	P	11 36 17.4	-0.1
C18K				IAmb	IAmb	11 36 47.9	
	comp=Z,9.8nm,1.3s						
M16K	Timber Creek	38.91	41	P	P	11 36 19.7	+1.4
ZAA0	Zalesovo Array	38.94	307	P	P	11 36 18.7	+0.1
ZAA0				IAmb	IAmb	11 36 20.7	
	comp=Z,2.9nm,0.6s						
ZALV	Zalesovo Beam	38.94	307		P	11 36 17.9	-0.7
ZALV	Zalesovo Beam	38.94	307	P	P	11 36 18.8	+0.2
	comp=Z,2.3nm,0.6s,baz=79,slow=7.7,SNR=8.2						
ZALV				PcP	PcP	11 38 27.1	-0.2
	comp=Z,1.1nm,0.5s,baz=82,slow=4.0,SNR=2.9						
	comp=Z,2.3nm,0.6s						
K17K	Iditarod	39.27	39	P	P	11 36 20.6	-0.6
K17K				IAmb	IAmb	11 36 25.3	
	comp=Z,4.0nm,0.8s						
G18K	Tagagawik	39.35	34	P	P	11 36 21.7	-0.2
H18K	Honhosa River	39.40	35	P	P	11 36 23.2	+0.9
H18K				IAmb	IAmb	11 36 43.1	
	comp=Z,6.0nm,1.4s						
C19K	Lookout Ridge	39.49	29	P	P	11 36 24.1	+1.0
M17K	Holitna River	39.65	41	P	P	11 36 25.8	+1.4
M17K				IAmb	IAmb	11 36 26.5	
	comp=Z,4.9nm,0.8s						
N17K	Nushagak Hills	39.79	42	P	P	11 36 27.1	+1.6
N17K				IAmb	IAmb	11 37 06.5	
	comp=Z,6.8nm,1.5s						
F19K	Shaleruckik Mo	39.81	32	P	P	11 36 25.8	+0.1
F19K				IAmb	IAmb	11 36 48.7	
	comp=Z,5.7nm,1.4s						
D19K	Kuna River	39.91	30	P	P	11 36 25.4	-1.2
D19K				IAmb	IAmb	11 37 02.3	
	comp=Z,8.3nm,1.4s						
L18K	Granite Mounta	40.01	39	P	P	11 36 27.6	+0.2
J18K	Innoko River	40.01	38	P	P	11 36 28.2	+0.8
E19K	Redstone River	40.09	31	P	P	11 36 28.1	+0.1
E19K				IAmb	IAmb	11 36 30.2	
	comp=Z,6.7nm,1.2s						
H19K	Roundabout Mou	40.23	34	P	P	11 36 29.2	+0.1
N18K	Kilae Creek	40.42	42	P	P	11 36 31.5	+0.7
D20K	Etivluk River	40.49	29	P	P	11 36 30.8	-0.5
B20K	Meade River	40.49	27	P	P	11 36 30.6	-0.6
J20K	Nowinta River	41.16	36	P	P	11 36 37.6	+0.7
B21K	Ikpikpuk River	41.31	28	P	P	11 36 37.2	-0.8
B21K				IAmb	IAmb	11 36 44.3	
	comp=Z,5.6nm,1.1s						
IMAR	Indian Mountai	41.36	34	P	P	11 36 38.7	+0.2
E21K	Killik River	41.42	30	P	P	11 36 37.8	-1.1
G21K	Allakaket	41.48	33	P	P	11 36 39.6	+0.2
G21K				IAmb	IAmb	11 36 43.4	
	comp=Z,2.7nm,0.7s						
Q19K	Cape Douglas,	41.69	44	P	P	11 36 41.3	0.0
H21K	Melozitna Rive	41.74	34	P	P	11 36 41.0	-0.6
B22K	Teshekpuk Lake	41.80	27	P	P	11 36 41.6	-0.4
D22K	Ayikyak River	41.93	29	P	P	11 36 42.9	-0.1
D22K				IAmb	IAmb	11 36 53.3	
	comp=Z,6.6nm,1.2s						
MK31	Makanchi Array	42.07	297	ceP	P	11 36 45.1	+0.6
MKAR	Makanchi Array	42.07	297	P	P	11 36 44.8	+0.3
MKAR	Makanchi Array	42.07	297	P	P	11 36 44.6	+0.1
	comp=Z,2.6nm,0.6s,baz=81,slow=9.4,SNR=18						
MKAR				PcP	PcP	11 38 37.6	0.0
	comp=Z,0.8nm,0.8s,baz=74,slow=5.1,SNR=2.4						
	comp=Z,2.6nm,0.6s						
MKAR	Makanchi Array	42.07	297	eP	P	11 36 44.6	+0.1
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PPLA	Purkeypile	42.07	38	P	P	11 36 46.2	+1.7
CAST	Castle Rocks	42.09	38	P	P	11 36 45.0	+0.5
E22K	Anaktuvuk Pass	42.20	31	P	P	11 36 45.5	+0.1
E22K				IAmb	IAmb	11 36 45.9	
	comp=Z,3.9nm,0.8s						
SYI	Shuyak Island	42.37	45	P	P	11 36 46.7	0.0
KDAK	Kodiak Island	42.39	46	P	P	11 36 46.9	0.0
KDAK	Kodiak Island	42.39	46	P	P	11 36 46.9	0.0
KDAK				pmax	pmax		
	comp=Z,14nm,1.3s						
MLY	Manley	42.62	35	P	P	11 36 49.3	+0.5
C23K	Itkillik River	42.72	28	P	P	11 36 49.4	0.0
SUA	Susitna One	42.86	40	P	P	11 36 50.9	0.0
G23K	Bananza Creek	42.87	33	P	P	11 36 50.5	-0.2
G23K				IAmb	IAmb	11 37 15.0	
	comp=Z,5.4nm,1.3s						
TRF	Thorofare Moun	42.90	37	P	P	11 36 51.8	+0.6
TRF				IAmb	IAmb	11 37 25.0	
	comp=Z,5.5nm,1.4s						
KURK	Kurchatov	43.31	304		P	11 36 55.1	+0.7
KURK	Kurchatov	43.31	304	ceP	P	11 36 54.5	+0.1
KURK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KURK	Kurchatov	43.31	304	eP	P	11 36 54.5	+0.1
NEA2	Nenana	43.35	36	P	P	11 36 54.7	+0.1
NEA2				IAmb	IAmb	11 36 56.3	
	comp=Z,3.5nm,0.6s						
KURBB	Kurchatov Arra	43.39	304	P	P	11 36 55.2	+0.2
	comp=Z,6.1nm,0.7s,baz=76,slow=8.7,SNR=38						
KURBB				PcP	PcP	11 38 41.6	-0.2
	comp=Z,0.5nm,0.7s,baz=90,slow=3.8,SNR=3.1						
	comp=Z,6.1nm,0.7s						
GHO	Glory Hole Cre	43.69	40	P	P	11 36 56.2	-1.2
GHO				IAmb	IAmb	11 36 58.4	
	comp=Z,5.9nm,0.8s						
COLA	College	43.85	35	iP	P	11 36 59.0	+0.4
COLA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
IL31		44.28	35		P	11 37 02.0	+0.1
IL31				IAmb	IAmb	11 37 03.1	
	comp=Z,6.7nm,1.4s						
ILAR	Eielson Array	44.28	35	P	P	11 37 02.1	+0.1
	comp=Z,0.8nm,0.5s,baz=259,slow=5.4,SNR=24						
	comp=Z,0.8nm,0.5s						
PRP	Porcupine Dome	44.77	34		P	11 37 06.3	+0.2
PRP				IAmb	IAmb	11 37 08.5	
	comp=Z,5.4nm,1.4s						
SCRK	Sand Creek	45.63	36		P	11 37 12.4	-0.4
SCRK				IAmb	IAmb	11 37 13.4	
	comp=Z,3.4nm,0.5s						
K27K	Chicken	46.45	36	P	P	11 37 19.2	0.0
K27K				IAmb	IAmb	11 37 20.8	
	comp=Z,3.1nm,0.7s						
L27K	Beaver Creek,	46.74	37	P	P	11 37 22.7	+1.2
L27K				IAmb	IAmb	11 37 23.6	
	comp=Z,3.9nm,0.8s						
BCAR	Beaver Creek A	46.76	37	P	P	11 37 21.6	0.0
M27K	Edge Creek, AK	46.86	38	P	P	11 37 23.2	+0.6
M27K				IAmb	IAmb	11 37 25.0	
	comp=Z,8.8nm,1.5s						
I28M	Miner Creek	47.09	34		P	11 37 24.7	+0.5
I28M				IAmb	IAmb	11 37 25.5	
	comp=Z,6.0nm,1.2s						
BVAR	Borovoye Array	47.54	309	P	P	11 37 28.0	+0.2
	comp=Z,1.5nm,0.3s,baz=77,slow=9.8,SNR=12						
BVAR				PcP	PcP	11 38 56.5	+0.2
	comp=Z,1.7nm,0.8s,baz=84,slow=2.9,SNR=2.4						
	comp=Z,1.5nm,0.3s						
I30M	Mount Dempster	48.60	34		P	11 37 36.4	+0.4
I30M				IAmb	IAmb	11 37 38.0	
	comp=Z,4.7nm,0.8s						
HYT	Haines Junctio	49.27	40		P	11 37 42.2	+1.1
N31M	Braeburn, Yuko	49.88	38	P	P	11 37 46.6	+1.0
N31M				IAmb	IAmb	11 37 50.0	
	comp=Z,3.5nm,0.9s						
KKAR	Karatay Array	51.19	297		P	11 37 55.3	-0.5
KKAR	Karatay Array	51.19	297	P	P	11 37 55.3	-0.5
ARTI	Arti	52.88	316	d iP	P	11 38 07.6	-0.4
ARTI						11 40 08.8	
ARTI				S	S	11 45 31.0	+1.5
ARTI				SS	SS	11 49 03.6	-5.3
ARTI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AB31	Akbulak array	55.05	308	P	P	11 38 24.2	+0.3
AB31				IAmb	IAmb	11 38 24.9	
	comp=Z,4.9nm,1.1s						
ABKAR	Akbulak array	55.05	308		P	11 38 24.2	+0.3
SPITS	Spitsbergen Ar	55.12	348	P	P	11 38 23.6	-0.4
	comp=Z,5.6nm,1.0s,baz=52,slow=7.9,SNR=1.6						
	comp=Z,5.6nm,1.0s						
RES	Resolute Bay	56.88	16	P	P	11 38 37.0	+0.6
RES				IAmb	IAmb	11 38 40.1	
	comp=Z,1.9nm,0.6s						
RES	Resolute Bay	56.88	16	P	P	11 38 37.1	+0.6
RES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
YKA	Yellowknife Ar	58.48	32	P	P	11 38 47.9	0.0
	comp=Z,0.8nm,0.8s,baz=306,slow=7.8,SNR=4.2						
	comp=Z,0.8nm,0.8s						
FIA1	FINESS Array S	64.21	331	P	P	11 39 25.9	-0.6
FINES	FINESS Array B	64.21	331	P	P	11 39 25.4	-1.2
FINES	FINESS Array B	64.21	331	P	P	11 39 25.9	-0.6
	comp=Z,1.4nm,0.5s,baz=48,slow=7.2,SNR=20						
	comp=Z,1.4nm,0.5s						
ASAR	Alice Springs	66.55	189	P	P	11 39 42.5	+0.5
	comp=Z,0.4nm,0.6s,baz=5.9,slow=6.7,SNR=6.3						
	comp=Z,0.4nm,0.6s						
KIV	Kislovodsk	67.89	310	eP	P	11 39 48.1	-2.4
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KIV	Kislovodsk	67.89	310	eP	P	11 39 50.5	0.0
KBZ	Khabaz	67.91	310	P	P	11 39 50.5	-0.1
	comp=Z,2.4nm,0.8s,baz=53,slow=6.3,SNR=8.4						
	comp=Z,2.4nm,0.8s						
KBZ	Khabaz	67.91	310	eP	P	11 39 51.5	+1.0
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KBZ	Khabaz	67.91	310	eP	P	11 39 51.5	+1.0
HFS	Hagfors	69.27	335	P	P	11 39 58.5	-0.2
	comp=Z,1.4nm,0.4s,baz=54,slow=7.5,SNR=16						
	comp=Z,1.4nm,0.4s						
NB2	NORSAR Subarra	69.28	337	P	P	11 39 58.1	-0.7
	comp=Z,1.1nm,0.7s,baz=33,slow=6.5						
NOA	NORSAR Array B	69.28	337	P	P	11 39 58.2	-0.7
	comp=Z,1.0nm,0.7s,baz=36,slow=6.1,SNR=5.6						
	comp=Z,1.0nm,0.7s						
AKASG	Malin Array Be	70.35	322	P	P	11 40 05.0	-0.5
	comp=Z,0.8nm,0.5s,baz=46,slow=6.5,SNR=5.6						
	comp=Z,0.8nm,0.5s						
AKASG	Malin Array Be	70.35	322	ceP	P	11 40 06.0	+0.5
NVAR	Mina Array Bea	70.94	55	P	P	11 40 10.2	+0.6
	comp=Z,0.5nm,0.6s,baz=290,slow=5.9,SNR=5.4						
	comp=Z,0.5nm,0.6s						
PDAR	Pinedale Array	73.09	47	P	P	11 40 22.6	+0.1
	comp=Z,0.3nm,0.5s,baz=295,slow=5.6,SNR=4.6						
	comp=Z,0.3nm,0.5s						
BURAR	Bucovina Array	74.40	321	P	P	11 40 30.0	+0.3
ILGA	Ilgaz	74.79	312	P	P	11 40 33.5	+1.2
ILGA				IAmb	IAmb	11 40 33.8	
	comp=Z,4.5nm,0.8s						
BRTR	Keskin Array B	75.75	311	P	P	11 40 37.7	0.0
	comp=Z,0.5nm,0.7s,baz=47,slow=5.0,SNR=4.4						
	comp=Z,0.5nm,0.7s						
BRTR	Keskin Array B	75.75	311	eP	P	11 40 38.0	+0.3
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CLL	Collm	76.60	330	iP	P	11 40 41.9	-0.2
CLL	Collm	76.60	330	iP	P	11 40 41.9	-0.2
GERES	GERESS Array B	78.33	328	P	P	11 40 51.9	-0.1
	comp=Z,0.3nm,0.5s,baz=26,slow=6.1,SNR=2.2						
	comp=Z,0.3nm,0.5s						
FUORN	Ofenpass-Fuorn	81.48	329	P	P	11 41 10.1	+0.8
NRCA	Norcia	83.47	325	P	P	11 41 19.8	+0.4
NRCA				IAmb	IAmb	11 41 29.9	
	comp=Z,6.9nm,1.3s						
TXAR	Lajitas Array	85.98	53	P	P	11 41 32.4	+0.2
	comp=Z,0.3nm,0.6s,baz=304,slow=2.9,SNR=6.4						
	comp=Z,0.3nm,0.6s						

IDC ***02*** *11:46:40.6±1.2, 52˚.94N×35˚.17W, h0^{km}, mb3.5/6, mbtmp3.5/6, Error ellipse: s-maj=51.7km s-min=21.5km az=11.0*

ISC 02 11:46:42.7±1.2**, 52˚.9N**±0˚.3×**35˚.2W**±0˚.1**, h13^{km}, n7,** σ**0^{s}.93**/7**,** **mb3.5**/6**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESDC	Sonseca Array	25.08	109	P	P	11 52 06.5	-0.3
	1.1nm,0.9s,baz=316,slow=9.0,SNR=9.0						
	1.1nm,0.9s						
BRTR	Keskin Array B	47.51	77	P	P	11 55 18.1	+0.6
	1.1nm,0.7s,baz=310,slow=7.1,SNR=8.7						
	1.1nm,0.7s						
PDAR	Pinedale Array	48.81	290	P	P	11 55 27.2	-0.4
	0.5nm,0.6s,baz=47,slow=7.0,SNR=4.3						
	0.5nm,0.6s						
ILAR	Eielson Array	51.45	329	P	P	11 55 47.1	+0.1
	0.4nm,0.9s,baz=61,slow=6.6,SNR=4.2						
	0.4nm,0.9s						
TXAR	Lajitas Array	54.43	273	P	P	11 56 10.3	+0.7
	0.3nm,0.8s,baz=47,slow=7.4,SNR=3.9						
	0.3nm,0.8s						
BVAR	Borovoye Array	57.56	44	P	P	11 56 31.7	+0.1
	0.2nm,0.3s,baz=325,slow=7.2,SNR=1.6						
	0.2nm,0.3s						
ASAR	Alice Springs	149.61	20	PKPbc	PKPbc	12 06 30.2	-1.5
	0.3nm,0.6s,baz=353,slow=2.4,SNR=9.8						

NEIC ***02*** *12:05:22.4±1.8, 8˚.40S±0˚.08×119˚.72E±0˚.08, h168^{km}±6^{km}, mb4.9/17, Error ellipse: s-maj=12.1km s-min=9.7km az=219.0*

DJA ***02*** *12:05:22.7±0.2, 8˚S±2˚×12˚0E±˚, h172^{km}±3^{km}, M4.7/24, mB5.2/11, mb4.8/21, MLv4.8/24, Mw(mB)4.6/11*

IDC ***02*** *12:05:23.9±1.1, 8˚.22S×120˚.00E, h191^{km}±9^{km}, mb3.8/18, mbtmp4.3/21, Error ellipse: s-maj=18.1km s-min=6.7km az=63.0*

ISC 02 12:05:22.4±0.6**, 8˚.37S**±0˚.04×**119˚.79E**±0˚.05**, h174**^{km}±5^{km}**, n153,** σ**1^{s}.40**/169**, mb4.4**/36**, 1C-1D, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WBSI	Waikabubak, Su	1.32	197	P	Pn	12 05 51.3	-0.9
WBSI				S	Sn	12 06 13.1	-2.2
WSI	Waingapu	1.38	159	P	Pn	12 05 52.8	+0.1
WSI				S	Sn	12 06 14.7	-1.6
EDFI	Ende, Flores	1.92	101	P	Pn	12 05 59.7	+1.4
BASI	Baing, Sumba	1.99	157	P	Pn	12 05 59.5	+0.5
BASI				S	Sn	12 06 26.0	-1.4
PLAI	Plampang	2.04	257	P	Pn	12 05 59.9	+0.4
PLAI	Plampang	2.04	257	P	Pn	12 05 59.2	-0.3
PLAI				S	Sn	12 06 26.7	-1.5
BSSI	Bau Bau, Buton	2.32	18	P	Pn	12 06 03.5	+0.8
BSSI				S	Sn	12 06 36.3	+2.3
MMRI	Maumere	2.44	96		Pn	12 06 05.2	+1.2
MMRI	Maumere	2.44	96	P	Pn	12 06 05.7	+1.7
MMRI	Maumere	2.44	96	P	Pn	12 06 05.8	+1.7
TWSI	Taliwang, Sumb	2.90	263	P	Pn	12 06 09.7	+0.2
KAPI	Kappang	3.34	359		Pn	12 06 16.2	+1.3
KAPI	Kappang	3.34	359	P	Pn	12 06 16.5	+1.5
	150nm,0.8s,baz=182,slow=8.4,SNR=56						
KAPI				S	Sn	12 06 56.5	+0.5
	197nm,0.9s,baz=78,slow=21,SNR=8.0						
KAPI	Kappang	3.34	359	P	Pn	12 06 16.3	+1.3
BNSI	Bone	3.96	5	P	Pn	12 06 25.3	+2.5
BBSI	Bau Bau	3.98	44	P	Pn	12 06 24.9	+1.8
BATI	Baumata	4.24	116	P	Pn	12 06 27.9	+1.5
SPSI	Sidrap Palu	4.38	360	P	Pn	12 06 29.9	+1.7
SRBI	Singaraja	4.54	273	P	Pn	12 06 29.2	-1.0
DNP	Denpasar	4.54	266	P	Pn	12 06 30.1	-0.1
SOEI	Soe	4.63	108		Pn	12 06 32.4	+0.8
SOEI	Soe	4.63	108	P	Pn	12 06 32.5	+0.8
SOEI	Soe	4.63	108	P	Pn	12 06 32.2	+0.6
TTSI	Tana Toraja	5.29	0	P	Pn	12 06 42.6	+2.5
	0.3nm119nm,0.9s						
JAGI	Jajag, Banyuwa	5.58	269		Pn	12 06 42.1	-1.8
JAGI	Jajag, Banyuwa	5.58	269	P	Pn	12 06 43.2	-0.6
JAGI	Jajag, Banyuwa	5.58	269	P	Pn	12 06 42.6	-1.2
	1.8nm135nm,0.6s						
KMMI	Kalianget	5.92	282	P	Pn	12 06 49.7	+1.4
	0.5nm145nm,1.2s						
GMJI	Gumukmas	6.28	270	P	Pn	12 06 52.9	-0.1
	0.6nm99nm,0.9s						
GRJI	Gresik	7.39	281	P	Pn	12 07 08.7	+1.0
	254nm,1.1s						
LUWI	Luwuk	7.87	22	Pn	Pn	12 07 15.3	+1.3
LUWI	Luwuk	7.87	22	P	Pn	12 07 17.1	+3.1
NGJI	Ngawi	8.31	276	P	Pn	12 07 18.9	-0.9
	95nm,0.8s						
PCJI	Pacitan	8.52	271	P	Pn	12 07 21.8	-0.9
SANI	Sanana	8.81	45	P	Pn	12 07 28.4	+2.0
	1µm146nm,1.2s						
UGM	Wanagama	9.18	272		Pn	12 07 30.6	-0.9
UGM	Wanagama	9.18	272	P	Pn	12 07 30.8	-0.6
UGM	Wanagama	9.18	272	P	Pn	12 07 30.2	-1.2
	170nm,0.6s						
SMRI	Semarang	9.36	277		Pn	12 07 34.3	+0.7
SMRI	Semarang	9.36	277	P	Pn	12 07 35.6	+1.9
SMRI	Semarang	9.36	277	P	Pn	12 07 36.2	+2.5
TOLI2	Tolitoli	9.47	6		Pn	12 07 35.4	+0.2
FITZ	Fitzroy Crossi	11.22	150	P	Pn	12 07 57.8	-0.1
	34nm,0.7s,baz=333,slow=11,SNR=69						
FITZ				S	Sn	12 09 54.2	-8.3
	28nm,0.4s,baz=208,slow=20,SNR=8.3						
KNRA	Kununurra	11.39	130		Pn	12 07 59.2	-1.0
DRS	Darwin Rock St	11.65	111	P	Pn	12 08 03.4	-0.2

TNTI	Ternate	11.81	40		Pn	12 08 06.2	+0.4
TNTI	Ternate	11.81	40	P	Pn	12 08 07.5	+1.8
	57nm,1.3s						
MTN	Manton Dam	12.00	113		Pn	12 08 07.3	-0.8
MTN	Manton Dam	12.00	113	P	Pn	12 08 07.3	-0.8
BBJI	Bungbulang	12.06	273	P	Pn	12 08 07.3	-1.6
LEM	Lembang	12.16	276	P	Pn	12 08 09.8	-0.6
	78nm,0.8s,baz=34,slow=12,SNR=15						
LEM				S	Sn	12 10 27.6	+2.1
	11nm,0.4s,baz=324,slow=23,SNR=1.9						
MBWA	Marble Bar	12.71	180	Pn	Pn	12 08 16.4	-0.7
MBWA	Marble Bar	12.71	180	P	Pn	12 08 19.5	+2.3
PSA00	Pilbara Seismi	13.12	180		Pn	12 08 22.0	-0.4
PSA00	Pilbara Seismi	13.12	180	P	Pn	12 08 24.4	+2.0
KDU	Kakadu	13.19	110	P	Pn	12 08 22.7	-0.5
FAKI	Fak Fak	13.53	67		Pn	12 08 26.2	-1.4
FAKI	Fak Fak	13.53	67	P	Pn	12 08 26.2	-1.4
FAKI	Fak Fak	13.53	67	P	Pn	12 08 26.5	-1.1
	76nm,1.2s						
SWI	Sorong	13.65	57	P	Pn	12 08 29.5	+0.5
	2μm115nm,1.0s						
CGJI	Cibinong	14.08	276	P	Pn	12 08 34.2	-0.3
GIRL	Giralia	15.16	200	P	P	12 08 49.9	+1.1
GIRL	Giralia	15.16	200	S	S	12 11 38.6	-0.2
WRA	Warramunga Arr	18.18	131	P	P	12 09 22.3	+0.1
	35nm,0.8s,baz=299,slow=12,SNR=7.6						
WRA				S	S	12 12 39.6	-1.7
	27nm,1.0s,baz=310,slow=23,SNR=12						
WRA				ScP	ScP	12 17 04.8	-1.8
	0.9nm,0.8s,baz=314,slow=2.0,SNR=1.2						
WRAB	Tennant Creek	18.19	131	P	P	12 09 22.5	+0.3
MEEK	Meekatharra	18.20	183	P	Pn	12 09 24.0	-0.3
AS31	Alice Springs	20.35	140		P	12 09 45.7	+0.2
ASAR	Alice Springs	20.35	140	P	P	12 09 45.8	+0.2
	21nm,0.4s,baz=312,slow=9.5,SNR=277						
ASAR				S	S	12 13 23.2	-1.0
	6.8nm,0.9s,baz=315,slow=20,SNR=9.7						
ASAR				ScP	ScP	12 17 09.1	-2.5
	1.8nm,0.6s,baz=327,slow=2.5,SNR=5.2						
	21nm,0.4s						
AS01	Alice Springs	20.38	140	P	P	12 09 46.2	+0.4
AS01	Alice Springs	20.38	140	S	S	12 13 27.3	+2.5
MORW	Morawa	20.89	189	P	P	12 09 53.8	+2.7
BLDU	Ballidu	22.32	187	P	P	12 10 06.7	+0.9
BLDU	Ballidu	22.32	187	S	S	12 14 01.3	+3.0
QIS	Mount Isa	22.66	124	P	P	12 10 09.9	+0.8
QIS	Mount Isa	22.66	124	S	S	12 14 05.8	+1.7
KMBL	Kambalda	22.96	175	P	P	12 10 12.6	+0.9
KLBR	Kellerberrin	23.18	184	P	P	12 10 14.1	+0.4
KLBR	Kellerberrin	23.18	184	S	S	12 14 17.0	+4.7
FORT	Forrest	23.59	162		P	12 10 17.0	-0.5
FORT	Forrest	23.59	162	P	P	12 10 18.0	+0.5
COEN	Coen	23.60	106	P	P	12 10 18.2	+0.5
COEN				IAmb	IAmb	12 10 20.4	
	comp=Z,86nm,0.8s						
COEN	Coen	23.60	106	P	P	12 10 18.0	+0.3
MTKN	Mount Kenneth	23.74	189	P	P	12 10 20.8	+2.0
MTSU	Mount Surprise	25.74	115	P	P	12 10 38.6	+1.5
BBOO	Buckleboo	28.61	150		P	12 11 02.9	+0.3
BBOO				IAmb	IAmb	12 11 03.8	
	comp=Z,47nm,0.8s						
BBOO	Buckleboo	28.61	150	P	P	12 11 03.2	+0.7
QLP	Quilpie	29.42	131	P	P	12 11 10.8	+1.0
HTT	Hallett	30.56	147	P	P	12 11 21.8	+2.0
STKA	Stephens Creek	30.95	142		P	12 11 24.3	+1.1
STKA	Stephens Creek	30.95	142	P	P	12 11 23.7	+0.5
	comp=Z,18nm,0.3s,baz=319,slow=8.6,SNR=76						
STKA				ScP	ScP	12 17 39.9	-2.0
	comp=Z,2.4nm,0.7s,baz=353,slow=5.8,SNR=4.9						
STKA	Stephens Creek	30.95	142	P	P	12 11 24.3	+1.1
YHNB	Yeheng	32.88	3		P	12 11 39.2	-0.9
CMSA	Cobar Meteorol	33.35	137	P	P	12 11 45.9	+1.7
CMAR	Chiang Mai Arr	33.67	322	P	P	12 11 47.2	+0.1
	comp=Z,0.5nm,0.3s,baz=129,slow=8.0,SNR=2.0						
CMAR				PcP	PcP	12 14 22.1	-0.9
	comp=Z,0.4nm,0.3s,baz=139,slow=2.4,SNR=4.1						
	comp=Z,0.5nm,0.3s						
ARPS	Mount Arapiles	34.65	148	P	P	12 11 56.3	+1.0
KMI	Kunming	37.21	334	P	P	12 12 19.6	+2.2
KMI				pmax	pmax		
	comp=Z,12nm,1.2s						
TOO	Toolangi	37.23	145	P	P	12 12 19.4	+2.2
TOO				IAmb	IAmb	12 12 21.1	
	comp=Z,13nm,1.1s						
CAN	Canberra	37.86	139	P	P	12 12 22.8	+0.2
CAN				IAmb	IAmb	12 12 49.7	
	comp=Z,65nm,1.6s						
CAN	Canberra	37.86	139	P	P	12 12 24.5	+1.9
PZH	PanZhiHua	38.84	334	P	P	12 12 32.4	+1.5
PZH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,5.3s						
WHN	Wuhan	39.04	353	P	P	12 12 33.0	+0.7
WHN				pmax	pmax		
	comp=Z,32nm,0.8s						
NJ2	Nanjing	40.21	359	*e*P	P	12 12 42.1	+0.2
NJ2				pmax	pmax		
	comp=Z,16nm,0.9s						
CD2	Chengdu	41.97	339	P	P	12 12 56.3	-0.2
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
XAN	Xi'an	43.42	347	⇓P	P	12 13 04.5	-3.6
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,1μm,8.2s						
KSAR	Wonju Array Be	46.20	9	P	P	12 13 29.9	0.0
KSRS	Korea Array	46.22	9	P	P	12 13 28.8	-1.2
	comp=Z,1.2nm,0.8s,baz=179,slow=7.5,SNR=8.3						
KSRS				PcP	PcP	12 15 02.2	-0.6
	comp=Z,1.9nm,0.8s,baz=190,slow=3.4,SNR=7.7						
	comp=Z,1.2nm,0.8s						
LZH	Lanzhou	46.70	342	*e*P	P	12 13 35.0	+1.0
LZH				sP	sP	12 14 36.0	+5.8
VLAKA	Lakatoro	47.09	104	P	P	12 13 39.2	+2.0
MJAR	Matsushiro Arr	47.91	20	P	P	12 13 40.1	-3.2
	comp=Z,1.7nm,0.7s,baz=195,slow=9.1,SNR=5.8						
MJAR				PcP	PcP	12 15 08.2	-0.7
	comp=Z,1.8nm,0.9s,baz=193,slow=5.3,SNR=5.5						
	comp=Z,1.7nm,0.7s						
BJI	Beijing	48.28	356	P	P	12 13 44.9	-1.0
BJI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
HHC	Hu-ho-hao-te	49.56	352	*e*P	P	12 13 58.7	+2.9
HHC				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,180nm,4.5s						
GTA	Gaotai	51.02	340	P	P	12 14 07.9	+1.0
GTA				pP	pwP	12 14 54.3	+4.0
GTA				pmax	pmax		
	comp=Z,15nm,1.2s						
USRK	Ussuriysk Ar.	53.48	11	P	P	12 14 22.3	-2.4
	comp=Z,1.0nm,0.3s,baz=198,slow=6.3,SNR=7.4						
	comp=Z,1.0nm,0.3s						
JCZ	Jackson Bay	55.38	139	P	P	12 14 39.5	+0.9
ODZ	Otahua Downs	56.99	139	P	P	12 14 50.8	+0.9
SONM	Songino Array	57.20	349		P	12 14 50.9	-0.6
SONM				IAmb	IAmb	12 14 52.2	
	comp=Z,8.8nm,1.1s						
SONM	Songino Array	57.20	349	P	P	12 14 50.5	-0.9
	comp=Z,3.5nm,0.7s,baz=171,slow=6.8,SNR=23						
SONM				ScP	ScP	12 19 25.0	-2.3
	comp=Z,0.3nm,0.5s,baz=176,slow=4.3,SNR=2.0						
	comp=Z,3.5nm,0.7s						
MSVF	Nonsavu	57.33	106	P	P	12 14 52.6	-0.2
MSVF				IAmb	IAmb	12 14 55.0	
	comp=Z,18nm,0.9s						
HEH	HeiHe	58.76	6	*e*P	P	12 15 00.6	-1.4
HEH				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BKZ	Black Stump Fm	59.12	131	P	P	12 15 05.8	+1.0
BKZ	Black Stump Fm	59.12	131	P	P	12 15 05.7	+0.8
WMQ	Urumqi	59.54	334	*e*P	P	12 15 09.6	+2.0
WMQ				pmax	pmax		
	comp=Z,50nm,0.9s						
WMQ				LR	LR		
	comp=N,1μm,20.5s						
WMQ				LR	LR		
	comp=E,900nm,17.3s						
WMQ				LR	LR		
	comp=Z,550nm,20.5s						
MKAR	Makanchi Array	64.26	332	P	P	12 15 37.9	-1.1
MKAR	Makanchi Array	64.26	332	P	P	12 15 38.1	-0.9
	comp=Z,1.4nm,0.4s,baz=147,slow=7.2,SNR=21						
	comp=Z,1.4nm,0.4s						
ZAA0	Zalesovo Array	68.74	339		P	12 16 05.9	-1.3
ZAA0				IAmb	IAmb	12 16 07.2	
	comp=Z,17nm,1.4s						
ZALV	Zalesovo Beam	68.74	339		P	12 16 06.1	-1.1
ZALV	Zalesovo Beam	68.74	339	P	P	12 16 05.9	-1.3
	comp=Z,2.9nm,0.3s,baz=148,slow=7.0,SNR=15						
	comp=Z,2.9nm,0.3s						
KURBB	Kurchatov Arra	68.76	333	P	P	12 16 06.0	-1.4
	comp=Z,0.6nm,0.4s,baz=144,slow=5.6,SNR=9.3						
	comp=Z,0.6nm,0.4s						
PETK	Petropavlovsk-	69.19	23	P	P	12 16 09.2	-0.9
	comp=Z,3.4nm,0.7s,baz=173,slow=2.4,SNR=13						
	comp=Z,3.4nm,0.7s						
MAW	Mawson	70.09	200	P	P	12 16 16.2	+0.9
	comp=Z,5.8nm,0.8s,baz=87,slow=7.3,SNR=4.5						
	comp=Z,5.8nm,0.8s						
MA2	Magadan	72.11	16	P	P	12 16 26.9	-0.6
MA2				IAmb	IAmb	12 16 27.6	
	comp=Z,11nm,0.9s						
VNDA	Vanda	72.48	171	P	P	12 16 30.4	+0.9
VNDA	Vanda	72.48	171	P	P	12 16 30.2	+0.7
	comp=Z,1.2nm,0.7s,baz=313,slow=8.0,SNR=7.5						
	comp=Z,1.2nm,0.7s						
BVAR	Borovoye Array	74.12	332	P	P	12 16 38.6	-0.9
	comp=Z,0.6nm,0.4s,baz=141,slow=7.5,SNR=6.8						
	comp=Z,0.6nm,0.4s						
AB31	Akbulak array	77.50	325	P	P	12 16 58.2	-0.5
ABKAR	Akbulak array	77.50	325	P	P	12 16 57.9	-0.8
SYO	Syowa Base	78.72	201	⇑*e*P	P	12 17 05.7	+0.6
AKTO	Aktyubinsk	79.16	325	P	P	12 17 06.5	-1.3
	comp=Z,0.9nm,0.4s,baz=357,slow=4.0,SNR=2.5						
	comp=Z,0.9nm,0.4s						
TIXI	Tiksi	80.08	3	P	P	12 17 11.9	-0.4
NRIK	Noril'sk	80.69	349	P	P	12 17 14.9	-0.7
NRIK	Noril'sk	80.69	349	P	P	12 17 14.4	-1.1
	comp=Z,1.6nm,0.4s,baz=112,slow=5.0,SNR=6.2						
	comp=Z,1.6nm,0.4s						
QSPA	South Pole Qui	81.62	180	P	P	12 17 21.5	+0.6
	comp=Z,2.9nm,1.0s,baz=125,slow=1.3,SNR=6.3						
	comp=Z,2.9nm,1.0s						
KBZ	Khabaz	86.38	315	P	P	12 17 44.3	-0.9
	comp=Z,0.5nm,0.3s,baz=69,slow=3.9,SNR=4.0						
	comp=Z,0.5nm,0.3s						
SNAA	Sanae	91.81	195	P	P	12 18 11.2	+0.9
SNAA				IAmb	IAmb	12 19 01.1	
	comp=Z,22nm,2.0s						
SNAA	Sanae	91.81	195	P	P	12 18 11.6	+1.3
	comp=Z,1.2nm,0.8s,baz=88,slow=4.0,SNR=5.7						
	comp=Z,1.2nm,0.8s						
NVAR	Mina Array Bea	120.02	50	PKP	PKPdf	12 23 51.8	-1.3
	comp=Z,0.7nm,0.7s,baz=280,slow=1.8,SNR=7.0						
Q56A	Snyder Ridge,	145.03	26		PKPbc	12 24 38.0	-1.2
S54A	Dingess, Beckl	145.04	30		PKPbc	12 24 38.2	-1.1
CPCT	Cooper Cave	145.06	36		PKPbc	12 24 37.7	-1.6
TRNY	Table Rock, Ra	145.07	19		PKPbc	12 24 38.0	-1.2
PAL	Palisades	145.30	18		PKPdf	12 24 38.8	-0.9
X51A	Calhoun	145.47	37		PKPdf	12 24 39.4	-0.9
SIV	San Ignacio	155.78	178	PKPab	PKPab	12 25 24.8	+1.0
	comp=Z,0.8nm,0.5s,baz=34,slow=2.5,SNR=4.9						

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*JMA **02** 12:06:42.2±0.1, 43.°1N±0.°5×145.°8E±0.°6, h49^{km}, MV2.7/36, OFF NEMURO PENINSULA*

*SKHL **02** 12:06:43.0±0.6, 43.°10N×145.°80E, h34^{km}±3^{km}, mb4.0/2*

ISC 02 12:06:42.1±1.8**, 43.°05N**±0.°08×**145.°79E**±0.°06**, h46**^{km}±11^{km}**, n14, σ0^{s}37**/26**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.32	354	*i* P	Pn	12 06 51.3	+0.1
NEM2				S	Sn	12 06 57.6	+0.2
NMR	Nemuro--Hokkai	0.33	352	*e*P	Pn	12 06 51.2	0.0
NMR				*e*S	Sn	12 06 57.5	-0.1
JKHN	Kushirohamanak	0.46	275	*i* P	Pn	12 06 52.9	+0.2
JKHN				S	Sn	12 06 60.0	-0.2
AKK	Akkeshi	0.69	268	*e*P	Pn	12 06 55.5	-0.1
AKK				*e*S	Sn	12 07 05.3	-0.1
JAK	Akkeshi	0.80	267	*i* P	Pn	12 06 57.0	-0.1
JAK				S	Sn	12 07 07.8	-0.1
JNSB	Nemuroshibetsu	0.93	322	P	Pn	12 06 58.6	-0.1
JNSB				S	Sn	12 07 11.1	+0.2
JNK	Nakash	0.95	305	*i* P	Pn	12 06 58.8	-0.3
JNK				S	Sn	12 07 10.7	-0.8
YUK	Yuzh-Kuril'sk	0.99	3	*e*P	Pn	12 06 59.5	-0.1
YUK				AMB	AMB	12 07 00.5	
	200nm,0.4s						
YUK				*e*S	Sn	12 07 12.1	-0.4
YUK				A	A	12 07 14.2	
	270nm,0.5s						
YUK				A	A	12 07 14.2	
	330nm,0.5s						
JRA	Rausu	1.01	332	*i* P	Pn	12 07 00.0	+0.1
JRA				S	Sn	12 07 13.0	-0.1
SHO	Shikotan	1.12	42	*e*P	Pn	12 07 01.6	+0.2
SHO				AMB	AMB	12 07 04.5	
	20nm,0.2s						
SHO				*e*S	Sn	12 07 14.9	-0.8
SHO				A	A	12 07 17.7	
	50nm,0.2s						
SHO				A	A	12 07 17.7	
	60nm,0.2s						
JOB	Onbets	1.44	265	*e*P	Pn	12 07 05.8	0.0
JOB				*e*S	Sn	12 07 23.2	-0.3
JAR	Ashorobuto	1.50	280	*i* P	Pn	12 07 06.8	+0.3
JAR				S	Sn	12 07 25.1	+0.3
JTKR	Abashiri--Toko	1.65	305	P	Pn	12 07 09.5	+0.9
KUR	Kuril'sk	2.65	34	*e*S	Sn	12 07 53.7	+0.5

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*TIR **02** 12:14:30.3, 40.°45N×20.°77E, h10^{km}, Md3.0/8, Ml2.5/8*

*ATH **02** 12:14:30.6, 40.°51N×20.°75E, h8^{km}±2^{km}, ML2.2/10, Manual Solution by G.Panopoulou First location: 2019/06/02 12:15:52, This location: 2020/10/14 18:29:18 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 3 km*

ISC 02 12:14:30.9±0.9**, 40.°47N**±0.°02×**20.°78E**±0.°02**, h8**^{km}±7^{km}**, n32, σ0^{s}99**/57**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.15	1	Pg	Pg	12 14 33.4	-0.8
KBN				Sg	Sg	12 14 36.5	+0.2
KBN				AML	AML	12 14 36.8	
	6.7nm,0.2s						
KBN	Korca	0.15	1	Pg	Pg	12 14 34.0	-0.2
KBN				Sg	Sg	12 14 36.4	0.0
KBN				AML	AML	12 14 36.8	
	6.7nm,0.2s						
KBN				AML	AML	12 14 37.1	
	5.1nm,0.2s						
NEST	Nestorio	0.21	106	Pg	Pg	12 14 35.2	0.0
NEST				Sg	Sg	12 14 38.9	+0.7
NEST				AML	AML	12 14 40.0	
	4.3nm,0.2s						
NEST				AMd		12 15 25.0	
NEST	Nestorio	0.21	106	Pg	Pg	12 14 35.8	+0.6
NEST				Sg	Sg	12 14 39.5	+1.4
NEST				AML	AML	12 14 40.0	
	4.3nm,0.2s						
NEST	Nestorio	0.21	106	P	Pg	12 14 35.8	+0.6
NEST				S	Sg	12 14 39.5	+1.4
LSK	Leskovik	0.35	203	Pg	Pg	12 14 37.3	-0.6
LSK				Sg	Sg	12 14 42.4	-0.1
LSK				AML	AML	12 14 46.6	
	3.2nm,0.5s						
LSK				AMd		12 15 38.0	
LSK	Leskovik	0.35	203	Pg	Pg	12 14 37.6	-0.2
LSK				Sg	Sb	12 14 44.0	-1.3
LSK				AML	AML	12 14 46.6	
	3.2nm,0.5s						
PENT	Pentalofos	0.39	135	P	Pg	12 14 38.7	+0.2
PENT				S	Sb	12 14 45.2	-1.2
LMS2	Laimos Florina	0.45	37	P	Pg	12 14 39.5	-0.2
LMS2				S	Sb	12 14 46.6	-1.6
KPRO	Kipourio	0.68	139	P	Pg	12 14 43.8	-0.3
KPRO				S	Sb	12 14 54.7	-0.1
KZN	Kozani	0.77	102	P	Pg	12 14 45.9	+0.1
KZN				S	Sb	12 14 57.9	+0.5
SRN	Sarande	0.84	226	Pn	Pb	12 14 47.1	-0.7
SRN				Sn	Sb	12 14 59.6	+0.4
SRN				AML	AML	12 15 09.8	
	0.3nm,0.5s						
SRN				AMd		12 15 46.9	
SRN	Sarande	0.84	226	Pg	Pb	12 14 47.8	0.0
SRN				Sg	Sn	12 15 00.9	-0.8
SRN				AML	AML	12 15 09.8	
	0.3nm,0.5s						
IGT	Igoumenitsa	1.00	200	Pg	Pg	12 14 48.7	-1.4
IGT				Sg	Sb	12 15 03.8	-0.1
IGT				AMd		12 15 55.2	
IGT	Igoumenitsa	1.00	200	Pg	Pn	12 14 50.6	-0.7
IGT				Sg	Sn	12 15 05.8	+0.2
IGT				AML	AML	12 15 13.8	
	0.1nm,0.4s						
IGT	Igoumenitsa	1.00	200	P	Pn	12 14 50.6	-0.7
IGT				S	Sn	12 15 06.2	+0.6
KEK	Kerkira	1.07	225	P	Pn	12 14 53.4	+1.2
TETR	Tetrakomo, Epi	1.19	161	P	Pg	12 14 54.5	+0.8
TETR				S	Sn	12 15 10.9	+0.5
PHP	Peshkopia	1.24	348	Pn	Pg	12 14 54.3	-0.4
PHP				Sn	Sn	12 15 12.6	+1.0
PHP				AML	AML	12 15 24.3	
	0.1nm,0.5s						
PHP				AMd		12 15 58.0	
PHP	Peshkopia	1.24	348	Pn	Pg	12 14 55.1	+0.4
PHP				Sn	Sn	12 15 13.7	+2.1
PHP				AML	AML	12 15 21.7	
	0.2nm,0.5s						
THL	Klokotos Trika	1.31	133	P	Pn	12 14 54.1	-1.5
TYRN	Tyrnavos	1.35	124	P	Pb	12 14 56.0	-0.4
LKD2	Lefkada island	1.69	183	Pn	Pb	12 15 02.0	-0.2
LKD2				Sn	Sg	12 15 25.5	+0.5
LKD2				AML	AML	12 15 33.3	
	0.1nm,0.6s						
LKD2				AMd		12 16 03.9	
LKD2	Lefkada island	1.69	183	Pn	Pg	12 15 04.0	+0.8
LKD2				Sn	Sg	12 15 27.9	+2.9
LKD2	Lefkada island	1.69	183	P	Pb	12 15 01.8	-0.4
PUK	Puka	1.71	337	Pn	Pg	12 15 02.8	-0.8
PUK				Sn	Sg	12 15 27.2	+1.4
PUK				AML	AML	12 15 36.8	
	0.1nm,2.4s						
PUK				AMd		12 16 11.3	
PUK	Puka	1.71	337	Pn	Pg	12 15 03.7	+0.1
PUK				Sn	Sg	12 15 28.7	+2.9
PUK				AML	AML	12 15 35.9	
	0.2nm,0.5s						
KNT	Kendrikon	1.75	66	P	Pn	12 15 01.1	-0.4
KNT				S	Sn	12 15 23.7	-0.3
MAKR	Makrakomi, Fth	1.79	144	P	Pb	12 15 03.2	-0.8
SCTE	Santa Cesarea	1.82	258	Pn	Pn	12 15 02.2	-0.3
SCTE				Sn	Sg	12 15 30.3	+1.0
SCTE				AML	AML	12 15 37.4	
	0.2nm,0.8s						
SCTE				AMd		12 16 09.5	
AGG	Agios Georgios	1.88	140	P	Pb	12 15 04.2	-1.3
BCI	Bajram Curri	1.97	344	Pn	Pg	12 15 08.4	-0.2

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*NEIC **02** 12:20:29.5±1.1, 35.°10N±0.°01×96.°31W±0.°02, h4^{km}±3^{km}, Error ellipse: s-maj=2.1km s-min=1.6km az=95.0*

NEIC 02 12:20:29.4±1.1**, 35.°09N**±0.°01×**96.°30W**±0.°02**, h5**^{km}±1^{km}**, mb_Lg2.9**/112**, ML2.8**/14**, ML2.9**/24**, Error ellipse: s-maj=3.4km s-min=2.7km az=113.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DEOK	Depew	0.77	348		Pg	12 20 44.2	+0.1
DEOK				Sg	Sg	12 20 54.6	+0.4
DEOK				IAML		12 20 55.0	
	comp=E,535nm,0.4s						
FNO	Franklin	0.92	281		Pg	12 20 46.8	-0.2
FNO				Sg	Sg	12 20 59.2	+0.4
FNO				IAML		12 20 59.6	
	comp=N,467nm,0.4s						
TUL3	Leonard	0.92	27		Pg	12 20 47.0	0.0
TUL3				Sg	Sg	12 20 59.1	+0.1
TUL3				IAML		12 20 59.7	
	comp=N,339nm,0.4s						
OK052	Battle Ridge R	0.99	336		Pg	12 20 47.8	-0.6
OK052				Sg	Sg	12 21 01.4	+0.1
OK052				IAML		12 21 03.8	
	comp=N,333nm,0.4s						
OK052				IAML		12 21 06.3	
	comp=N,342nm,0.2s						
ADOK	Arcadia Dam	1.04	303		Pg	12 20 48.7	-0.6
OK004	Okla Sci Mus	1.05	295		Pg	12 20 49.4	-0.2
OK004					Sg	12 21 03.6	+0.3
QUOK	Quay	1.13	343		Pg	12 20 50.1	-0.9
QUOK					Sg	12 21 05.7	-0.1
OK029	Liberty Lake	1.18	307		Pg	12 20 50.8	-1.2
OK029				IAML		12 21 11.8	
	comp=N,282nm,0.6s						
BCOK	Bluff Creek, N	1.21	298		Pg	12 20 51.9	-0.6
LOOK	Love County	1.31	214		Pn	12 20 54.5	+0.1
X34A	Smith Ranch, M	1.35	249		Pn	12 20 54.7	-0.2
OK051	E0350 and S346	1.48	343		Pn	12 20 55.9	-0.8
RLO	Rose Lookout	1.50	44		Pn	12 20 56.9	0.0
BLOK	Blackwell	1.82	336		Pn	12 21 02.3	+0.9
T35A	Sooner Cattle	1.83	355		Pn	12 21 02.1	+0.6
Z35A	Perchaven, San	1.92	204		Pn	12 21 03.5	+0.7
Z35A				IAmb_Lg		12 21 35.2	
	comp=Z,56nm,0.9s						
CROK	Carrier	1.97	316		Pn	12 21 03.7	+0.3
CSTR	Hydro, Custer	2.03	287		Pn	12 21 04.9	+0.6
U38A	Gravette	2.06	49		Pn	12 21 05.0	+0.3
WMOK	Wichita Mounta	2.07	261		Pn	12 21 05.5	+0.7
KAN13	South Haven SW	2.14	334		Pn	12 21 06.9	+1.0
KAN13				IAmb_Lg		12 21 40.6	
	comp=Z,72nm,0.8s						
GC02	Grant County #	2.17	325		Pn	12 21 07.1	+0.9
WTFS	Witchita Falls	2.22	234		Pn	12 21 08.3	+1.4
WTFS				IAmb_Lg		12 21 40.9	
	comp=Z,38nm,0.7s						
HHAR	Hobbs	2.26	58		Pn	12 21 08.0	+0.5
KAN17	Caldwell West	2.28	329		Pn	12 21 07.6	-0.2
KAN14	Manchester OK	2.30	325		Pn	12 21 08.9	+0.9
KAN09	Caldwell North	2.30	333		Pn	12 21 08.7	+0.6
FW06	Azle	2.35	207		Pn	12 21 10.4	+1.6
FW06				IAmb_Lg		12 21 45.4	
	comp=Z,37nm,0.8s						
TREL	Terrell	2.36	176	IAmb_Lg		12 21 49.4	
	comp=Z,42nm,0.8s						
KAN01	Argonia South	2.37	331		Pn	12 21 10.3	+1.3
KAN01				IAmb_Lg		12 21 45.7	
	comp=Z,33nm,1.0s						
OK038	West end E0370	2.42	306		Pn	12 21 10.4	+0.7
FW03	Perrin-Whitt E	2.51	216	IAmb_Lg		12 21 55.8	
	comp=Z,29nm,0.7s						
FW07	Weatherford	2.68	208	IAmb_Lg		12 21 57.0	
	comp=Z,56nm,1.0s						
ELIS	Ellis County	2.72	292	IAmb_Lg		12 21 57.0	
	comp=Z,49nm,0.7s						
PLPT	Palo Pinto	2.82	217	IAmb_Lg		12 22 04.4	
	comp=Z,33nm,0.8s						
X40A	Basin Creek Fa	2.92	101	IAmb_Lg		12 22 06.7	
	comp=Z,52nm,0.8s						
WLAR	White Oak Lake	2.98	117		Pn	12 21 18.1	+0.7
WLAR				IAmb_Lg		12 22 03.0	
	comp=Z,34nm,0.8s						
SMWD	Samnorwood	3.23	271		Pn	12 21 19.6	-1.2
SMWD				IAmb_Lg		12 22 20.2	
	comp=Z,23nm,0.7s						
UALR	University of	3.27	94	IAmb_Lg		12 22 20.9	
	comp=Z,37nm,0.7s						
FCAR	Ozark Folk Cen	3.50	76		Pn	12 21 24.8	+0.3
FCAR				IAmb_Lg		12 22 20.4	
	comp=Z,22nm,0.7s						
APMT	Aspermont	3.62	242		Pn	12 21 26.0	-0.2
R32A	Long Quarter,	3.85	331	IAmb_Lg		12 22 38.8	
	comp=Z,19nm,0.8s						
MGMO	Mountain Grove	3.86	57		Pn	12 21 29.7	+0.3
MGMO				IAmb_Lg		12 22 35.3	
	comp=Z,39nm,0.8s						
DKNS	Dickens	4.08	251	IAmb_Lg		12 22 48.2	
	comp=Z,18nm,0.8s						
SN07	Snyder 07	4.30	244	IAmb_Lg		12 22 53.9	
	comp=Z,22nm,0.8s						
LCAR	Lake Charles	4.31	75		Pn	12 21 35.5	-0.1
SN05	Snyder 5	4.40	241	IAmb_Lg		12 22 55.9	
	comp=Z,25nm,0.8s						
BRDY	Brady	4.42	212		Pn	12 21 36.7	-0.4
BRDY				IAmb_Lg		12 22 52.2	
	comp=Z,36nm,0.9s						

AMTX	**Amarillo**	4.42	269	IAmb_Lg		12 22 50.4	
	comp=Z,26nm,0.8s						
435B	**Jarrell**	4.43	194	IAmb_Lg		12 22 59.4	
	comp=Z,33nm,0.7s						
T42A	**Van Buren**	4.64	64		Pn	12 21 40.4	+0.2
T42A				IAmb_Lg		12 23 06.7	
	comp=Z,22nm,1.0s						
143A	**Socs Landing,**	4.72	119	IAmb_Lg		12 23 07.6	
	comp=Z,20nm,0.9s						
POST	**Post**	4.76	246	IAmb_Lg		12 23 04.2	
	comp=Z,15nm,0.7s						
CCM	**Cathedral Cave**	5.03	52	IAmb_Lg		12 23 20.3	
	comp=Z,17nm,0.7s						
P38A	**Dawn**	5.04	25	IAmb_Lg		12 23 16.3	
	comp=Z,21nm,0.7s						
PBMO	**Poplar Bluff**	5.05	69		Pn	12 21 45.9	+0.1
PBMO				IAmb_Lg		12 23 14.7	
	comp=Z,25nm,0.8s						
SGCY	**Sterling City**	5.12	233	IAmb_Lg		12 23 23.4	
	comp=Z,31nm,1.0s						
RTBA	**Rita Blanca**	5.40	286	IAmb_Lg		12 23 34.1	
	comp=Z,17nm,0.9s						
JCT	**Junction City**	5.46	214	IAmb_Lg		12 23 35.8	
	comp=Z,26nm,0.7s						
FVM	**French Village**	5.54	57		Pn	12 21 52.8	+0.3
OXF	**Oxford**	5.70	94	IAmb_Lg		12 23 40.9	
	comp=Z,20nm,1.0s						
HALT	**Halls**	5.74	80	IAmb_Lg		12 23 38.0	
	comp=Z,27nm,0.9s						
OZNA	**Ozona**	5.80	226	IAmb_Lg		12 23 38.0	
	comp=Z,14nm,1.1s						
SLM	**Saint Louis**	6.01	52	IAmb_Lg		12 23 43.5	
	comp=Z,21nm,0.8s						
HNDO	**Hondo**	6.09	205	IAmb_Lg		12 23 42.0	
	comp=Z,17nm,0.9s						
S44A	**Carbondale**	6.25	63	IAmb_Lg		12 23 57.3	
	comp=Z,16nm,0.7s						
SIUC	**Southern Illin**	6.29	63	IAmb_Lg		12 24 04.9	
	comp=Z,21nm,0.8s						
KSCO	**Kaye Shedlock'**	6.39	310	IAmb_Lg		12 24 09.5	
	comp=Z,17nm,0.8s						
DRIO	**Del Rio**	6.73	214	IAmb_Lg		12 24 06.4	
	comp=Z,14nm,0.8s						
SAND	**Sanderson**	7.10	225	IAmb_Lg		12 24 28.9	
	comp=Z,16nm,0.8s						
833A	**Chaparral WMA,**	7.24	202	IAmb_Lg		12 24 23.8	
	comp=Z,9.0nm,0.9s						
OGNE	**Ogallala**	7.39	324	IAmb_Lg		12 24 42.6	
	comp=Z,11nm,0.7s						
K30B	**Basset**	8.00	342	IAmb_Lg		12 25 04.8	
	comp=Z,15nm,0.7s						
Q24A	**Divide**	8.06	301	IAmb_Lg		12 24 54.7	
	comp=Z,11nm,0.8s						
BLO	**Bloomington**	8.81	60	IAmb_Lg		12 25 10.6	
	comp=Z,15nm,0.8s						
I37A	**Lemond, Waseca**	9.19	13	IAmb_Lg		12 25 22.3	
	comp=Z,13nm,0.8s						

*TIR **02** 12:26:40.6, 40°.44N×20°.72E, h0^{km}, Md3.0/8, Ml2.3/8*
*ATH **02** 12:26:40.9, 40°.44N×20°.68E, h7^{km}±1^{km}, ML2.2/13, Manual Solution by G.Panopoulou First location: 2019/06/02 12:27:48, This location: 2019/06/02 12:57:17 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
ISC 02 12:26:42.0±1.0, **40°.43N**±0°.02×**20°.74E**±0°.02, **h6**^{km}±9^{km}, **n33**, σ**1^{s}15**/55, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	0.20	11	Pg	**Pg**	**12 26 44.6**	**-1.4**
KBN				S	**Sg**	**12 26 47.5**	**-1.3**
KBN				AML	AML	12 26 52.6	
	3.3nm,0.5s						
KBN	**Korca**	0.20	11	Pg	**Pg**	**12 26 45.8**	**-0.3**
KBN				AML	AML	12 26 49.3	
	4.2nm,0.4s						
KBN				Sg	**Sg**	**12 26 49.8**	**+1.0**
KBN				AML	AML	12 26 52.6	
	3.3nm,0.5s						
NEST	**Nestorio**	0.24	93	Pg	**Pg**	**12 26 46.3**	**-0.4**
NEST				Sg	**Sg**	**12 26 50.8**	**+0.9**
NEST				AML	AML	12 26 51.4	
	2.3nm,0.1s						
NEST				AMd		12 27 41.5	
NEST	**Nestorio**	0.24	93	Pg	**Pg**	**12 26 46.8**	**+0.1**
NEST				Sg	**Sg**	**12 26 50.3**	**+0.4**
NEST				AML	AML	12 26 51.4	
	2.3nm,0.1s						
NEST	**Nestorio**	0.24	93	P	**Pg**	**12 26 46.7**	**+0.1**
NEST				S	**Sg**	**12 26 51.1**	**+1.2**
LSK	**Leskovik**	0.30	201	Pg	**Pg**	**12 26 47.3**	**-0.5**
LSK				Sg	**Sg**	**12 26 51.9**	**+0.1**
LSK				AML	AML	12 26 55.4	
	5.8nm,0.5s						
LSK				AMd		12 27 32.8	
LSK	**Leskovik**	0.30	201	Pg	**Pg**	**12 26 48.1**	**+0.3**
LSK				Sg	**Sb**	**12 26 53.4**	**-1.5**
LSK				AML	AML	12 26 55.4	
	5.8nm,0.5s						
PENT	**Pentalofos**	0.38	127	P	**Pg**	**12 26 49.4**	**0.0**
PENT				S	**Sg**	**12 26 55.4**	**+0.8**
KPRO	**Kipourio**	0.67	134	P	**Pg**	**12 26 54.5**	**-0.5**
KPRO				S	**Sb**	**12 27 04.7**	**-1.0**
JAN	**Janina**	0.77	174	P	**Pg**	**12 26 56.1**	**-0.7**
JAN				S	**Sg**	**12 27 07.1**	**+0.2**
SRN	**Sarande**	0.79	226	Pg	**Pg**	**12 26 57.1**	**+0.1**
SRN				Sg	**Sb**	**12 27 09.5**	**+0.6**
SRN				AML	AML	12 27 12.9	
	0.2nm,0.3s						
SRN				AMd		12 28 04.9	
SRN	**Sarande**	0.79	226	Pg	**Pb**	**12 26 58.2**	**+0.2**
SRN				Sg	**Sn**	**12 27 11.0**	**-0.5**
SRN				AML	AML	12 27 14.3	
	0.1nm,0.3s						
KZN	**Kozani**	0.80	98	P	**Pg**	**12 26 56.5**	**-0.8**
KZN				S	**Sb**	**12 27 09.5**	**+0.1**
IGT	**Igoumenitsa**	0.95	199	Pg	**Pg**	**12 27 00.1**	**0.0**
IGT				Sg	**Sn**	**12 27 14.7**	**-0.9**
IGT				AMd		12 28 10.7	
IGT	**Igoumenitsa**	0.95	199	Pg	**Pb**	**12 27 00.7**	**0.0**
IGT				Sg	**Sn**	**12 27 15.9**	**+0.4**
IGT	**Igoumenitsa**	0.95	199	P	**Pg**	**12 26 59.5**	**-0.7**
IGT				S	**Sg**	**12 27 12.3**	**-0.1**
KEK	**Kerkira**	1.01	226	P	**Pg**	**12 27 00.6**	**-0.9**
TETR	**Tetrakomo, Epi**	1.16	159	P	**Pg**	**12 27 03.5**	**-0.7**
PHP	**Peshkopia**	1.28	350	Pn	**Pn**	**12 27 05.7**	**-0.7**
PHP				Sn	**Sn**	**12 27 23.9**	**+0.1**
PHP				AML	AML	12 27 31.3	
	0.1nm,0.4s						
PHP				AMd		12 28 05.3	
PHP	**Peshkopia**	1.28	350	Pn	**Pg**	**12 27 07.6**	**+1.1**
THL	**Klokotos Trika**	1.30	131	P	**Pn**	**12 27 05.9**	**-0.8**
THL				S	**Sb**	**12 27 23.7**	**-0.2**
TYRN	**Tyrnavos**	1.35	121	P	**Pn**	**12 27 07.1**	**-0.2**
LKD2	**Lefkada island**	1.64	182	Pn	**Pg**	**12 27 12.8**	**-0.5**
LKD2				Sn	**Sg**	**12 27 37.0**	**+2.5**
LKD2				AML	AML	12 27 51.2	
	0.2nm,0.8s						
LKD2				AMd		12 28 30.4	
LKD2	**Lefkada island**	1.64	182	Pn	**Pg**	**12 27 15.2**	**+1.8**
LKD2				Sn	**Sg**	**12 27 39.0**	**+4.5**
LKD2				AML	AML	12 27 51.2	
	0.2nm,0.8s						
LKD2	**Lefkada island**	1.64	182	P	**Pn**	**12 27 10.9**	**-0.4**
PUK	**Puka**	1.73	339	Pn	**Pb**	**12 27 13.9**	**-0.4**
PUK				Sn	**Sg**	**12 27 39.0**	**+1.2**
PUK				AML	AML	12 27 47.0	
	0.1nm,0.5s						
PUK				AMd		12 28 21.1	
PUK	**Puka**	1.73	339	Pn	**Pg**	**12 27 15.9**	**+0.6**
PUK				Sn	**Sg**	**12 27 41.4**	**+3.6**
PUK				AML	AML	12 27 43.9	
	0.2nm,0.7s						
SCTE	**Santa Cesarea**	1.77	259	Pn	**Pb**	**12 27 14.3**	**-0.5**
SCTE				AML	AML	12 27 44.1	
	0.2nm,0.5s						
SCTE				AMd		12 28 29.5	
SCTE	**Santa Cesarea**	1.77	259	P	**Pn**	**12 27 11.4**	**-1.8**
KNT	**Kendrikon**	1.80	65	P	**Pn**	**12 27 13.9**	**+0.4**
AGG	**Agios Georgios**	1.86	138	P	**Pn**	**12 27 14.3**	**-0.2**
PVO	**Paravola**	1.91	161	P	**Pn**	**12 27 15.3**	**+0.3**
ANX	**Ano Chora**	2.05	153	P	**Pn**	**12 27 16.8**	**-0.2**

*NEIC **02** 12:39:17.1±1.0, 35°.10N±0°.01×96°.31W±0°.02, h4^{km}±3^{km}, Error ellipse: s-maj=2.4km s-min=1.6km az=106.0*
NEIC 02 12:39:17.1±1.0, **35°.10N**±0°.01×**96°.33W**±0°.02, **h5**^{km}±1^{km}, **mb_Lg2.0**/14, **ML2.3**/16, **ML2.4**/26, **Error ellipse: s-maj=2.8km s-min=2.7km az=128.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DEOK	**Depew**	0.76	349		Pg	12 39 31.9	+0.2
DEOK				Sg	Sg	12 39 42.3	+0.8
DEOK				IAML		12 39 42.5	
	comp=E,129nm,0.3s						
DEOK				IAML		12 39 45.8	
	comp=N,104nm,0.2s						
FNO	**Franklin**	0.90	281		Pg	12 39 34.5	+0.1
FNO					Sb	12 39 46.8	-0.7
FNO				IAML		12 39 47.1	
	comp=N,132nm,0.3s						
FNO				IAML		12 39 48.4	
	comp=E,90nm,0.1s						
TUL3	**Leonard**	0.92	28		Pg	12 39 34.6	-0.2
TUL3				Sg	Sg	12 39 46.8	0.0
TUL3				IAML		12 39 47.1	
	comp=E,82nm,0.3s						
OK052	**Battle Ridge R**	0.98	337		Pg	12 39 35.3	-0.6
OK052					Sg	12 39 49.1	+0.5
OK052				IAML		12 39 51.5	
	comp=E,116nm,0.3s						
OK052				IAML		12 39 52.8	
	comp=E,114nm,0.2s						
QUOK	**Quay**	1.12	344		Pg	12 39 37.8	-0.8
QUOK					Sg	12 39 53.4	+0.3
QUOK				IAML		12 39 55.8	
	comp=N,107nm,0.2s						
OK029	**Liberty Lake**	1.16	307		Pg	12 39 38.9	-0.5
OK029					Sg	12 39 54.5	+0.2
OK029				IAML		12 39 59.1	
	comp=N,85nm,0.2s						
BCOK	**Bluff Creek, N**	1.19	298		Pg	12 39 39.4	-0.5
BCOK					Sb	12 39 56.0	+0.1
LOOK	**Love County**	1.31	213		Pn	12 39 42.0	-0.1
X34A	**Smith Ranch, M**	1.34	249		Pn	12 39 42.4	0.0
OK051	**E0350 and S346**	1.47	344		Pn	12 39 43.6	-0.6
RLO	**Rose Lookout**	1.50	44		Pn	12 39 44.8	0.0
BLOK	**Blackwell**	1.81	337		Pb	12 39 49.9	-0.9
T35A	**Sooner Cattle**	1.82	355		Pn	12 39 49.6	+0.5
Z35A	**Perchaven, San**	1.92	204		Pn	12 39 50.6	0.0
Z35A				IAmb_Lg		12 40 22.3	
	comp=Z,7.2nm,1.0s						
CROK	**Carrier**	1.95	317		Pn	12 39 51.5	+0.6
WMOK	**Wichita Mounta**	2.05	261		Pn	12 39 53.1	+0.8
KAN13	**South Haven SW**	2.13	334		Pn	12 39 54.1	+0.7
Z38A	**Mt. Pleasant**	2.14	148		Pn	12 39 53.0	-0.6
Z38A				IAmb_Lg		12 40 28.8	
	comp=Z,9.2nm,0.8s						
GC02	**Grant County #**	2.15	325		Pn	12 39 54.4	+0.8
WTFS	**Witchita Falls**	2.21	234		Pn	12 39 54.9	+0.3
MIAR	**Mount Ida**	2.33	103	IAmb_Lg		12 40 35.3	
	comp=Z,6.8nm,0.7s						
X40A	**Basin Creek Fa**	2.94	101	IAmb_Lg		12 40 54.3	
	comp=Z,6.2nm,0.9s						
SMWD	**Samnorwood**	3.21	271	IAmb_Lg		12 41 04.2	
	comp=Z,3.2nm,0.7s						
T25A	**Trinidad**	6.85	290	IAmb_Lg		12 43 09.6	
	comp=Z,5.0nm,0.9s						

*NOU **02** 12:48:54.2, 38°.58S×175°.91E, h170^{km}, MLv3.8/19, North Island, New Zealand*
*WEL **02** 12:48:56.0±1.1, 39°S±8°×17°6E±°, h155^{km}±9^{km}, M3.1/53, ML2.3/7, MLv3.1/53, Error ellipse: s-maj=13.0km s-min=8.6km az=130.8, confirmed*
ISC 02 12:48:51.4±1.6, **38°.49S**±0°.05×**175°.96E**±0°.05, **h191**^{km}±9^{km}, **n148**, σ**1^{s}60**/154, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUTZ	**Kaahu Road**	0.11	268	P	**Pn**	**12 49 17.7**	**+1.3**
GRRZ	**Galatos Road**	0.18	41	P	**Pn**	**12 49 17.7**	**+1.1**
HRRZ	**Handcock Road**	0.27	70	P	**Pn**	**12 49 17.7**	**+1.0**
WATZ	**Wairara**	0.28	218	P	**Pn**	**12 49 18.1**	**+1.4**
HSRZ	**Hossack Road**	0.28	52	P	**Pn**	**12 49 17.9**	**+1.1**
HSRZ				S	**Sn**	**12 49 35.3**	**-1.0**
ALRZ	**Allen Road**	0.31	104	P	**Pn**	**12 49 17.7**	**+0.9**
HLRZ	**Highlands Stat**	0.39	53	P	**Pn**	**12 49 18.5**	**+1.4**
RATZ	**Rangitukua**	0.41	201	P	**Pn**	**12 49 18.3**	**+1.2**
HATZ	**Hinemaiaia**	0.42	165	P	**Pn**	**12 49 18.2**	**+1.1**
RRRZ	**Republican Roa**	0.46	72	P	**Pn**	**12 49 18.2**	**+0.9**
RITZ	**Rihia Road**	0.50	189	P	**Pn**	**12 49 19.0**	**+1.6**
MRHZ	**Matea Rd**	0.50	134	P	**Pn**	**12 49 18.4**	**+1.0**
OMRZ	**Omania**	0.50	41	P	**Pn**	**12 49 18.3**	**+0.8**
KARZ	**Kaharoa**	0.52	26	P	**Pn**	**12 49 18.4**	**+0.9**
KATZ	**Kakaramea**	0.53	203	P	**Pn**	**12 49 19.0**	**+1.4**
MUGZ	**Murupara**	0.64	89	P	**Pn**	**12 49 19.2**	**+1.2**
MUGZ				S	**Sn**	**12 49 36.5**	**-2.0**
KMRZ	**Kaimai**	0.64	359	P	**Pn**	**12 49 19.1**	**+1.0**
NTVZ	**North Tongarir**	0.65	200	P	**Pn**	**12 49 20.0**	**+1.8**
KRVZ	**Karewarewa**	0.66	202	P	**Pn**	**12 49 19.6**	**+1.4**
TMVZ	**Te Maari**	0.66	197	P	**Pn**	**12 49 19.9**	**+1.6**
ETVZ	**East Tongariro**	0.68	197	P	**Pn**	**12 49 19.8**	**+1.5**
WTVZ	**West Tongariro**	0.69	204	P	**Pn**	**12 49 19.9**	**+1.5**
NNVZ	**North Ngauruho**	0.70	202	P	**Pn**	**12 49 20.0**	**+1.5**
TWVZ	**Taurewa**	0.71	215	P	**Pn**	**12 49 19.9**	**+1.5**
OTVZ	**Oturere**	0.71	199	P	**Pn**	**12 49 20.3**	**+1.8**
SNVZ	**South Ngauruho**	0.74	199	P	**Pn**	**12 49 20.2**	**+1.5**
NGZ	**Ngauruhoe**	0.74	202	P	**Pn**	**12 49 20.2**	**+1.5**
MTHZ	**Maungataniwha**	0.78	118	P	**Pn**	**12 49 20.2**	**+1.4**
MTHZ				S	**Sn**	**12 49 38.0**	**-2.0**
COVZ	**Chateau Observ**	0.78	204	P	**Pn**	**12 49 20.4**	**+1.5**
TGRZ	**Tauranga**	0.79	18	P	**Pn**	**12 49 19.8**	**+0.9**
OPRZ	**Ohinepanea**	0.80	36	P	**Pn**	**12 49 19.7**	**+0.8**
BKZ	**Black Stump Fm**	0.80	149	P	**Pn**	**12 49 20.2**	**+1.3**
BKZ	**Black Stump Fm**	0.80	149	P	**Pn**	**12 49 20.3**	**+1.4**
BKZ				S	**Sn**	**12 49 38.1**	**-2.3**
RTZ	**Ruatahuna**	0.81	99	P	**Pn**	**12 49 20.2**	**+1.1**
RTZ				S	**Sn**	**12 49 38.4**	**-2.0**
TUVZ	**Tukino**	0.82	197	P	**Pn**	**12 49 20.8**	**+1.7**
FWVZ	**Far West T-bar**	0.83	202	P	**Pn**	**12 49 20.7**	**+1.4**
TOZ	**Tahuroa Road**	0.83	334	P	**Pn**	**12 49 20.4**	**+1.4**
MAVZ	**Matarangi**	0.84	201	P	**Pn**	**12 49 21.0**	**+1.5**
WHVZ	**Whangaehu Hut**	0.85	200	P	**Pn**	**12 49 21.0**	**+1.6**
HIZ	**Hauiti**	0.86	268	P	**Pn**	**12 49 20.8**	**+1.6**
HIZ	**Hauiti**	0.86	268	P	**Sn**	**12 49 40.4**	**-0.4**
HIZ	**Hauiti**	0.86	268	P	**Pn**	**12 49 20.9**	**+1.6**
TRVZ	**Turoa**	0.87	201	P	**Pn**	**12 49 21.3**	**+1.7**
NMHZ	**Naumai**	0.90	133	P	**Pn**	**12 49 21.9**	**+2.3**
MOVZ	**Moawhango**	0.93	190	P	**Pn**	**12 49 21.2**	**+1.4**
PKVZ	**Pokaka**	0.93	211	P	**Pn**	**12 49 21.4**	**+1.7**
URZ	**Urewera**	0.93	76	P	**Pn**	**12 49 20.3**	**+0.6**
URZ	**Urewera**	0.93	76	P	**Pn**	**12 49 20.3**	**+0.6**
URZ				S	**Sn**	**12 49 38.6**	**-3.0**
MTVZ	**Mangateitei**	0.97	203	P	**Pn**	**12 49 21.8**	**+1.7**
RAHZ	**Arahi**	0.98	116	P	**Pn**	**12 49 22.0**	**+1.9**
KWHZ	**Kaweka Forest**	1.00	159	P	**Pn**	**12 49 22.2**	**+2.0**
MCHZ	**McNeill Hill**	1.12	149	P	**Pn**	**12 49 23.6**	**+2.6**
ARHZ	**Aropaoanui**	1.12	134	P	**Pn**	**12 49 23.3**	**+2.3**
SNGZ	**Shannon Statio**	1.12	106	P	**Pn**	**12 49 22.9**	**+1.9**
VRZ	**Vera Road**	1.13	235	P	**Pn**	**12 49 23.1**	**+2.0**
KRHZ	**Kereru**	1.20	165	P	**Pn**	**12 49 23.7**	**+2.0**
MWZ	**Matawai**	1.24	83	P	**Pn**	**12 49 23.4**	**+1.3**
RIGZ	**Rimuhau**	1.43	99	P	**Pn**	**12 49 26.4**	**+2.7**
PNHZ	**Pukenui**	1.44	173	P	**Pn**	**12 49 25.6**	**+1.9**
KNZ	**Kokohu**	1.44	112	P	**Pn**	**12 49 25.8**	**+2.1**
RUGZ	**Raukumara Rang**	1.45	70	P	**Pn**	**12 49 24.4**	**+0.4**
CKHZ	**Cape Kidnapper**	1.46	144	P	**Pn**	**12 49 26.4**	**+2.6**
WAZ	**Wanganui**	1.48	211	P	**Pn**	**12 49 26.1**	**+2.1**
TKGZ	**Te Karaka**	1.48	89	P	**Pn**	**12 49 26.4**	**+2.3**
KAHZ	**Kahuranaki**	1.49	152	P	**Pn**	**12 49 26.7**	**+2.5**
MKAZ	**Moumakai**	1.52	335	P	**Pn**	**12 49 26.1**	**+1.7**
DREZ	**Durham Road**	1.54	242	P	**Pn**	**12 49 27.2**	**+2.6**
LREZ	**Lake Rotokare**	1.55	231	P	**Pn**	**12 49 27.3**	**+2.6**
TSZ	**Takapari Road**	1.57	180	P	**Pn**	**12 49 26.9**	**+2.0**
HAZ	**Te Kaha**	1.61	64	P	**Pn**	**12 49 25.9**	**+0.6**
WPHZ	**Waipukurau**	1.62	167	P	**Pn**	**12 49 27.5**	**+2.1**
PREZ	**Palmer Road**	1.64	238	P	**Pn**	**12 49 28.2**	**+2.6**
NEZ	**North Egmont**	1.65	241	P	**Pn**	**12 49 28.3**	**+2.6**
MHGZ	**Mahia Peninsul**	1.66	114	P	**Pn**	**12 49 28.2**	**+2.4**
PKE	**Pukeiti**	1.69	245	P	**Pn**	**12 49 28.5**	**+2.4**
PXZ	**Pawanui**	1.69	156	P	**Pn**	**12 49 28.3**	**+2.3**
KHEZ	**Kahui Hut**	1.72	241	P	**Pn**	**12 49 28.5**	**+2.1**
KHEZ	**Kahui Hut**	1.72	241	P	**Pn**	**12 49 28.9**	**+2.5**
ETAZ	**East Tamaki Re**	1.73	332	P	**Pn**	**12 49 28.2**	**+1.7**
KUZ	**Kuaotunu**	1.75	354	P	**Pn**	**12 49 28.1**	**+1.5**
KUZ	**Kuaotunu**	1.75	354	P	**Pn**	**12 49 28.2**	**+1.5**
AWAZ	**Awhitu Peninsu**	1.76	323	P	**Pn**	**12 49 28.6**	**+1.8**
CNGZ	**Carnagh Statio**	1.77	91	P	**Pn**	**12 49 29.0**	**+2.2**
PKGZ	**Pakihiroa**	1.78	70	P	**Pn**	**12 49 28.3**	**+1.4**
OHWZ	**Ohakea**	1.79	196	P	**Pn**	**12 49 29.5**	**+2.5**
NBEZ	**Newall Road No**	1.81	244	P	**Pn**	**12 49 29.6**	**+2.4**
WIAZ	**Waiheke Island**	1.81	339	P	**Pn**	**12 49 29.1**	**+1.8**
DVHZ	**Dannevirke**	1.82	175	P	**Pn**	**12 49 29.1**	**+1.9**
PRHZ	**Porangahau**	1.85	164	P	**Pn**	**12 49 29.9**	**+2.3**
PUZ	**Puketiti**	1.86	78	P	**Pn**	**12 49 29.3**	**+1.6**
POWZ	**Post Office Ro**	1.91	184	P	**Pn**	**12 49 30.0**	**+1.8**
MBAZ	**Motutapu North**	1.91	334	P	**Pn**	**12 49 30.1**	**+1.8**
ANWZ	**Angora Road**	2.01	169	P	**Pn**	**12 49 31.5**	**+2.3**
WMGZ	**Waiomatatini S**	2.05	72	P	**Pn**	**12 49 31.3**	**+1.6**
MXZ	**Matakaoa Point**	2.07	64	P	**Pn**	**12 49 32.5**	**+2.6**
MXZ	**Matakaoa Point**	2.07	64	P	**Pn**	**12 49 32.1**	**+2.1**
MRZ	**Mangatainoka R**	2.19	188	P	**Pn**	**12 49 32.8**	**+1.6**
BFZ	**Birch Farm**	2.20	174	P	**Pn**	**12 49 33.0**	**+1.7**
BFZ	**Birch Farm**	2.20	174	S	**Sn**	**12 50 01.4**	**-1.2**
BFZ	**Birch Farm**	2.20	174	P	**Pn**	**12 49 33.1**	**+1.7**
GRZ	**Great Barrier**	2.27	350	P	**Pn**	**12 49 34.1**	**+2.0**
TIWZ	**Tintock**	2.29	181	P	**Pn**	**12 49 34.1**	**+1.9**
OGWZ	**Otaki Gorge**	2.41	194	P	**Pn**	**12 49 35.3**	**+1.7**
HOWZ	**Holdsworth Sta**	2.43	188	P	**Pn**	**12 49 35.3**	**+1.4**
KIW	**Kapiti Island**	2.51	199	P	**Pn**	**12 49 36.1**	**+1.4**
TMWZ	**Te Maipa**	2.62	181	P	**Pn**	**12 49 37.5**	**+1.5**
MTW	**Mount Morrison**	2.69	187	P	**Pn**	**12 49 38.0**	**+1.2**
CAW	**Cannon Point**	2.71	194	P	**Pn**	**12 49 38.3**	**+1.3**
DUWZ	**D'Urville Isla**	2.80	214	P	**Pn**	**12 49 39.2**	**+1.1**
TRWZ	**Traveller**	2.92	184	P	**Pn**	**12 49 40.8**	**+1.3**
PAWZ	**Paruwai Farm**	2.92	188	P	**Pn**	**12 49 40.6**	**+1.0**
WEL	**Wellington**	2.94	198	P	**Pn**	**12 49 40.9**	**+1.1**
MSWZ	**Moikau Station**	2.98	190	P	**Pn**	**12 49 41.2**	**+1.0**
SNZO	**South Karori**	2.98	198	P	**Pn**	**12 49 41.3**	**+1.1**
SNZO	**South Karori**	2.98	198	S	**Sn**	**12 50 17.1**	**-1.4**
TCW	**Tory Channel**	3.01	205	P	**Pn**	**12 49 41.7**	**+1.1**
BHW	**Baring Head**	3.04	196	P	**Pn**	**12 49 41.9**	**+1.0**
PLWZ	**Palliser**	3.13	190	P	**Pn**	**12 49 43.0**	**+0.9**
TUWZ	**Tuamarina**	3.32	207	P	**Pn**	**12 49 46.0**	**+1.6**
NNZ	**Nelson**	3.37	215	P	**Pn**	**12 49 45.8**	**+0.9**
TKNZ	**Takaka Hill**	3.44	221	P	**Pn**	**12 49 46.3**	**+0.6**
QRZ	**Quartz Range**	3.53	227	P	**Pn**	**12 49 47.4**	**+0.5**
QRZ	**Quartz Range**	3.53	227	S	**Sn**	**12 50 29.6**	**-0.9**
QRZ	**Quartz Range**	3.53	227	P	**Pn**	**12 49 47.3**	**+0.5**
BSWZ	**Blackbirch Sta**	3.60	206	P	**Pn**	**12 49 48.9**	**+1.2**
MRNZ	**Matariki Terra**	3.81	219	P	**Pn**	**12 49 50.8**	**+0.4**
THZ	**Tophouse**	4.02	215	P	**Pn**	**12 49 53.6**	**+0.5**
KHZ	**Kahutara**	4.34	204	P	**Pn**	**12 49 58.2**	**+1.2**
KHZ	**Kahutara**	4.34	204	S	**Sn**	**12 50 48.0**	**-0.6**
KHZ	**Kahutara**	4.34	204	P	**Pn**	**12 49 58.2**	**+1.2**
DSZ	**Denniston Nort**	4.55	223	P	**Pn**	**12 49 59.7**	**-0.1**
GVZ	**Greta Valley S**	5.00	205	P	**Pn**	**12 50 06.3**	**+0.9**
LTZ	**Lake Taylor**	5.13	212	P	**Pn**	**12 50 07.0**	**-0.1**
AMCZ	**Amberley**	5.31	207	P	**Pn**	**12 50 10.2**	**+0.7**
INZ	**Inchbonnie**	5.45	218	P	**Pn**	**12 50 11.1**	**-0.2**
OKCZ	**Okains Bay**	5.67	202	P	**Pn**	**12 50 14.6**	**+0.5**
OXZ	**Oxford**	5.67	210	P	**Pn**	**12 50 13.8**	**-0.4**
MQZ	**McQueen's Vall**	5.78	205	P	**Pn**	**12 50 15.2**	**-0.3**
MHCZ	**Mount Hutt**	6.04	212	P	**Pn**	**12 50 19.0**	**+0.1**
WACZ	**Wakanui South**	6.27	208	P	**Pn**	**12 50 22.2**	**+0.3**
RPZ	**Rata Peaks**	6.40	214	P	**Pn**	**12 50 24.0**	**+0.3**
RPZ	**Rata Peaks**	6.40	214	P	**Pn**	**12 50 24.3**	**+0.6**
ARCZ	**Arundel**	6.54	212	P	**Pn**	**12 50 25.9**	**+0.5**
FOZ	**Fox Glacier**	6.85	221	P	**Pn**	**12 50 29.9**	**+0.4**
TMZ	**Timaru**	6.97	211	P	**Pn**	**12 50 31.3**	**+0.2**
LBZ	**Lake Benmore**	7.32	214	P	**Pn**	**12 50 35.7**	**+0.1**
ODZ	**Otahua Downs**	7.66	210	P	**Pn**	**12 50 40.9**	**+0.8**
JCZ	**Jackson Bay**	7.76	222	P	**Pn**	**12 50 42.3**	**+0.8**

*TIR **02** 12:51:28.5, 40°.43N×20°.69E, h0^{km}, Md3.0/8, Ml2.4/7*
ATH 02 12:51:29.0, 40°.46N×20°.69E, h10^{km}±3^{km}**, ML2.1**/10**, Manual Solution by G.Panopoulou First location: 2019/06/02 12:52:47, This location: 2020/10/14 18:53:23 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	0.18	23	Pg	Pg	12 51 33.5	+0.6
KBN				Sg	Sg	12 51 36.2	+0.6
KBN				AML	AML	12 51 39.5	
	3.6nm,0.2s						
KBN	**Korca**	0.18	23	Pg	Pg	12 51 33.8	+0.9
KBN				Sg	Sg	12 51 37.0	+1.5
KBN				AML	AML	12 51 39.7	
	3.7nm,0.1s						
NEST	**Nestorio**	0.28	99	Pg	Pg	12 51 34.8	+0.2
NEST				Sg	Sg	12 51 37.0	-1.3
NEST				AML	AML	12 51 41.4	
	1.5nm,0.2s						
NEST				AMd		12 52 37.2	
NEST	**Nestorio**	0.28	99	Pg	Pg	12 51 34.9	+0.3
NEST				Sg	Sg	12 51 39.2	+0.9
NEST				AML	AML	12 51 41.4	
	1.5nm,0.2s						
NEST	**Nestorio**	0.28	99	P	Pg	12 51 34.8	+0.2
NEST				S	Sg	12 51 38.7	+0.4
LSK	**Leskovik**	0.32	193	Pg	Pg	12 51 35.1	-0.2
LSK				Sg	Sg	12 51 40.0	+0.5
LSK				AML	AML	12 51 48.9	
	4.1nm,0.6s						
LSK				AMd		12 52 21.6	
LSK	**Leskovik**	0.32	193	Pg	Pg	12 51 34.8	-0.5
LSK				Sg	Sg	12 51 40.1	+0.6
LSK				AML	AML	12 51 43.0	
	5.5nm,0.3s						
PENT	**Pentalofos**	0.43	127	P	Pg	12 51 37.3	-0.1
PENT				S	Sg	12 51 43.7	+0.6
LMS2	**Laimos Florina**	0.51	42	P	Pg	12 51 39.1	+0.2
LMS2				S	Sb	12 51 46.8	-0.9
KPRO	**Kipourio**	0.72	134	P	Pg	12 51 42.2	-0.7
KPRO				S	Sg	12 51 52.8	+0.5
SRN	**Sarande**	0.79	223	Pg	Pb	12 51 44.7	0.0
SRN				Sg	Sn	12 51 56.8	-1.1
SRN				AML	AML	12 52 00.0	
	0.2nm,0.3s						
SRN				AMd		12 52 45.6	
SRN	**Sarande**	0.79	223	Pg	Pb	12 51 45.1	+0.4
SRN				Sg	Sn	12 51 57.2	-0.7
SRN				AML	AML	12 52 00.0	
	0.2nm,0.3s						
JAN	**Janina**	0.81	171	P	Pg	12 51 44.7	+0.1
KZN	**Kozani**	0.84	100	P	Pg	12 51 45.2	0.0
KZN				S	Sg	12 51 56.0	0.0
IGT	**Igoumenitsa**	0.96	197	Pg	Pb	12 51 47.7	-0.1
IGT				Sg	Sn	12 52 02.4	-0.1
IGT				AMd		12 52 58.0	
IGT	**Igoumenitsa**	0.96	197	Pg	Pb	12 51 47.7	-0.1
IGT				Sg	Sn	12 52 02.4	-0.1
IGT	**Igoumenitsa**	0.96	197	P	Pb	12 51 47.8	-0.1
IGT				S	Sg	12 52 00.1	0.0
KEK	**Kerkira**	1.01	223	P	Pn	12 51 49.3	0.0
TETR	**Tetrakomo, Epi**	1.20	158	P	Pg	12 51 52.1	+0.1
PHP	**Peshkopia**	1.24	351	Pn	Pg	12 51 53.7	+0.9
PHP				AMd		12 52 46.8	
PHP	**Peshkopia**	1.24	351	Pn	Pg	12 51 54.6	+1.7
PHP				Sn	Sn	12 52 12.8	+3.4
PHP				AML	AML	12 52 21.9	
	0.2nm,0.4s						
THL	**Klokotos Trika**	1.35	131	P	Pn	12 51 53.9	0.0
THL				S	Sg	12 52 12.5	0.0
TYRN	**Tyrnavos**	1.40	122	P	Pn	12 51 54.0	-0.6
LKD2	**Lefkada island**	1.67	181	Pn	Pg	12 52 00.5	-0.4
LKD2				Sn	Sg	12 52 25.0	+2.4
LKD2				AML	AML	12 52 27.5	
	0.2nm,0.7s						
LKD2				AMd		12 53 14.7	
LKD2	**Lefkada island**	1.67	181	Pn	Pg	12 52 01.6	+0.6
LKD2	**Lefkada island**	1.67	181	P	Pb	12 51 59.7	-0.1
PUK	**Puka**	1.69	339	Pn	Pg	12 52 01.9	+0.4
PUK				Sn	Sg	12 52 27.0	+3.5
PUK				AML	AML	12 52 34.6	
	0.1nm,0.7s						
PUK				AMd		12 53 08.9	

PUK	**Puka**	**1.69**	**339**	Pn	Pg	12 52 03.4	+1.9
SCTE	**Santa Cesarea**	**1.75**	**258**	Pn	Pg	12 52 02.5	0.0
SCTE				Sn	Sg	12 52 26.3	+1.2
SCTE				AML	AML	12 52 32.5	
	0.1nm,0.5s						
SCTE				AMd		12 53 18.1	
PLG	**Polygyros**	**2.10**	**91**	P	Pn	12 52 05.6	+1.3

ROM 02 13:08:41.5±0.1**,46°.205N**±0°.003×**11°.071E**±0°.005**,**
h9^{km},ML1.6/14**,1C,Error ellipse: s-maj=0.4km**
s-min=0.2km az=278.0,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAGG	**Gaggia**	**0.14**	**213**	⇑iP	Pg	13 08 45.3	+0.5
GAGG				S	Sg	13 08 47.7	+0.6
GAGG				AML	AML		
	comp=N,522µm,0.4s						
GAGG				AML	AML		
	comp=E,696µm,0.9s						
GAGG				AML	AML		
	comp=E,520µm,0.4s						
GAGG				AML	AML		
	comp=N,726µm,0.9s						
OZOL	**Ozolo**	**0.20**	**356**	P	Pg	13 08 46.2	+0.5
OZOL				S	Sg	13 08 50.0	+1.4
PANI	**Panarotta**	**0.24**	**130**	P	Pg	13 08 47.1	+0.7
PANI				S	Sg	13 08 51.1	+1.3
PANI				AML	AML		
	comp=E,102µm,1.2s						
PANI				AML	AML		
	comp=N,106µm,1.1s						
LUSI	**Trento, Gardas**	**0.26**	**200**	P	Pg	13 08 47.3	+0.5
LUSI				S	Sb	13 08 52.4	-0.7
LUSI				AML	AML		
	comp=E,258µm,1.4s						
LUSI				AML	AML		
	comp=E,258µm,0.6s						
LUSI				AML	AML		
	comp=N,320µm,0.4s						
APPI	**Appiano**	**0.29**	**22**	P	Pg	13 08 48.2	+0.8
APPI				S	Sb	13 08 53.2	-0.9
KOSI	**Kohlern**	**0.33**	**39**	P	Pg	13 08 49.0	+0.8
KOSI				S	Sb	13 08 54.5	-0.8
DOSS	**Dosso del Somm**	**0.34**	**166**	P	Pg	13 08 48.4	+0.2
DOSS				S	Sb	13 08 54.6	-0.7
DOSS				AML	AML		
	comp=E,122µm,1.3s						
DOSS				AML	AML		
	comp=N,99µm,0.4s						
DOSS				AML	AML		
	comp=E,122µm,0.7s						
CARE	**Lago del Cares**	**0.34**	**310**	P	Pg	13 08 49.0	+0.6
CARE				S	Sg	13 08 53.6	+0.7
ZIAN	**Ziano**	**0.35**	**78**	P	Pg	13 08 49.2	+0.7
ZIAN				S	Sb	13 08 54.6	-1.1
RONC	**Roncone**	**0.39**	**234**	P	Pb	13 08 50.0	-0.7
RONC				S	Sb	13 08 55.8	-1.0
RONC				AML	AML		
	comp=E,87µm,0.2s						
RONC				AML	AML		
	comp=N,152µm,1.0s						
FETA	**Feichten**	**0.85**	**344**	Pg	Pg	13 08 58.2	+0.3
	comp=N,0.1nm,0.1s						
FETA				eSg	Sb	13 09 09.6	-0.5
	comp=N,0.7nm,0.2s						
SQTA	**Sankt Quirin**	**1.02**	**5**	Pg	Pg	13 09 00.7	-0.4
	comp=N,1.0nm,0.2s						
WTTA	**Wattenberg**	**1.13**	**20**	ePg	Pg	13 09 03.2	0.0
	comp=N,0.5nm,0.1s						
ABTA	**Abfaltersbach**	**1.13**	**61**	Pg	Pb	13 09 03.5	+0.1
	comp=N,0.6nm,0.3s						
ABTA				Sg	Sn	13 09 20.3	+0.9
	comp=N,1.6nm,0.3s						
MOTA	**Moosalm**	**1.14**	**1**	ePg	Pg	13 09 03.2	-0.2
	comp=N,0.7nm,0.2s						
WATA	**Walderalm**	**1.18**	**17**	Pg	Pb	13 09 03.7	-0.6
	comp=N,0.4nm,0.1s						
LESA	**Schwarzleotal**	**1.64**	**42**	ePg	Pn	13 09 10.0	-0.6
	comp=N,1.4nm,0.3s						
MYKA	**Terra Mystica**	**1.83**	**76**	Pg	Pg	13 09 16.2	-0.4
	comp=N,0.7nm,0.2s						

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*IDC **02** 13:08:46.2±0.4, 40°.87N×30°.86E, h0^{km}, mb4.2/28, mbtmp4.2/41, ML3.6/11, MS3.7/14, Error ellipse: s-maj=9.3km s-min=6.3km az=43.0*
*MOS **02** 13:08:46.4±1.0, 40°.82N×30°.84E, h11^{km}, mb4.7/25, Error ellipse: s-maj=4.3km s-min=2.9km az=109.1*
*ISK **02** 13:08:47.2, 40°.76N×30°.78E, h9^{km}, ML4.2/22*
*AFAD **02** 13:08:47.4, 40°.75N×30°.76E, h6^{km}±3^{km}, MW4.6*
*NEIC **02** 13:08:47.5±0.8, 40°.78N±0°.04×30°.78E±0°.05, h5^{km}±5^{km}, mb4.5/45, Mwr4.5/19, Error ellipse: s-maj=6.3km s-min=4.4km az=130.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.32; $M_{\theta\theta}$5.35; $M_{\phi\phi}$-4.04; $M_{r\theta}$2.54; $M_{\theta\phi}$-1.29; $M_{\phi r}$-3.03; Fault plane solution: $M_0$6.37000×10^{15} NP1:ϕ_s318.18000°, δ82.44000°, λ-41.06000°. NP2:ϕ_s54.71000°, δ49.37000°, λ-170.02000°. Principal axes: T 6.6834, Plg22.0000°, Azm13.0000°; N -0.6813, Plg48.0000°, Azm130.0000°; P -6.0020, Plg34.0000°, Azm268.0000°;*
*NEIC **02** 13:08:47.7, 40°.78N×30°.79E, h7^{km}*
*MED_RC **02** 13:08:47.0±0.4, 40°.73N×30°.75E, h10^{km}, MW4.4/17, Moment Tensor Solution. Mantle waves: s17,c18; Duration: $1^{s}0$ Moment tensor: Scale 10^{15}Nm; M_{rr}-5.84±.37; $M_{\theta\theta}$5.34±.35; $M_{\phi\phi}$0.50±.45; $M_{r\theta}$-0.52±.86; $M_{\theta\phi}$-0.19±.32; $M_{\phi r}$1.77±1.17; Best double couple: $M_0$5.85000×10^{15} NP1:ϕ_s259.00000°, δ44.00000°, λ-111.00000°. NP2:ϕ_s107.00000°, δ50.00000°, λ-71.00000°. Principal axes: T 5.3800, Plg3.0000°, Azm183.0000°; N 0.9400, Plg14.0000°, Azm274.0000°; P -6.3200, Plg75.0000°, Azm81.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*CFUSG **02** 13:08:48.8, 41°.00N×30°.90E, h5^{km}, mb4.3/8, Southwestern Magtype MSH 4.1 from 5 stations*
*NAO **02** 13:08:48.8, 40°.73N×30°.75E, h10^{km}, mb4.9*
*MCSM **02** 13:08:48.0±0.3, 41°N±2°×3°1E±°, h9^{km}±3^{km}, mb4.7, mB5.1, MLv4.8, Mw(mB)4.4*
*BEO **02** 13:08:57.8±3.1, 41°.23N×29°.98E, h0^{km}, ML4.5/26*
*PRU **02** 13:09:14.3, 42°.14N×29°.58E, h10^{km}, M4.6*

ISC 02 13:08:47.9±0.6**,40°.82N**±0°.02×**30°.78E**±0°.01**,h10**^{km}±3^{km}**,**
n622,σ**1**^{s}**52**/709**,mb4.5**/68**,MS3.7**/7**,66C-67D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAHE	**Sakarya_HENDEK**	**0.06**	**57**	P	**Pg**	**13 08 50.5**	**+0.4**
SAHE				S	**Sg**	**13 08 51.6**	**-0.2**
SAHE				i IAML		13 08 52.0	
	comp=N,59µm,0.5s						
SAHE				i IAML		13 08 52.0	
	comp=E,31nm,0.7s						
SAHE	**Sakarya_HENDEK**	**0.06**	**57**	⇑P	**Pg**	**13 08 50.2**	**+0.1**
BTAS	**Taskesti**	**0.30**	**146**	P	**Pg**	**13 08 52.8**	**-1.1**
BTAS				S	**Sg**	**13 08 54.8**	**-3.1**
BTAS				i IAML		13 08 57.0	
	comp=N,14µm,0.5s						
BTAS				i IAML		13 08 59.0	
	comp=E,7µm,0.6s						
SAUV	**Serdivan-Sakar**	**0.35**	**257**	Pg	**Pg**	**13 08 54.5**	**-0.4**
SAUV				Sg	**Sg**	**13 08 59.9**	**+0.3**
KAYN	**Sakarya, Kayna**	**0.37**	**294**	P	**Pb**	**13 08 56.0**	**-0.5**
KAYN				S	**Sg**	**13 09 00.3**	**+0.4**
KAYN				i IAML		13 09 02.0	
	comp=N,4µm,0.4s						
KAYN				i IAML		13 09 02.0	
	comp=E,3µm,0.7s						
GULT	**Gulveren**	**0.44**	**208**	Pg	**Pg**	**13 08 55.3**	**-1.1**
GULT				Sg	**Sg**	**13 09 01.2**	**-1.0**
MDUB	**Mudurnu**	**0.47**	**137**	Pg	**Pg**	**13 08 56.2**	**-0.8**
MDUB				Sg	**Sg**	**13 09 02.7**	**-0.6**
MDUB	**Mudurnu**	**0.47**	**137**		**Pg**	**13 08 56.2**	**-0.8**
SUSU	**Bolu-G¶ynk-**	**0.48**	**174**	P	**Pg**	**13 08 56.5**	**-0.7**
SUSU				S	**Sg**	**13 09 01.1**	**-2.5**
SUSU				i IAML		13 09 04.0	
	comp=N,2µm,0.7s						
SUSU				i IAML		13 09 04.0	
	comp=E,2µm,0.5s						
GEYV	**SAKARYA_Geyve**	**0.50**	**228**	P	**Pg**	**13 08 57.0**	**-0.6**
GEYV				S	**Sg**	**13 09 02.2**	**-1.9**
GEYV				i IAML		13 09 04.0	
	comp=E,2µm,0.7s						
GEYV				i IAML		13 09 14.0	
	comp=N,2µm,0.8s						
KAND	**Kocaeli-Kandir**	**0.53**	**302**	P	**Pb**	**13 08 59.2**	**0.0**
KAND				S	**Sg**	**13 09 04.4**	**-0.6**
KAND				i IAML		13 09 07.0	
	comp=N,2µm,0.5s						
KAND				i IAML		13 09 07.0	
	comp=E,2µm,0.2s						
GPA	**Golpazari**	**0.64**	**214**	Pg	**Pg**	**13 08 59.0**	**-1.3**
GPA				Sg	**Sg**	**13 09 07.9**	**-0.8**
GPA	**Golpazari**	**0.64**	**214**	P	**Pg**	**13 08 58.7**	**-1.6**
GPA				S	**Sg**	**13 09 07.9**	**-0.8**
BOLU	**Bolu-Merkez-Mu**	**0.68**	**93**	P	**Pg**	**13 09 00.8**	**-0.2**
BOLU				S	**Sg**	**13 09 07.7**	**-2.2**
BOLU				i IAML		13 09 12.0	
	comp=N,1µm,0.5s						
BOLU				i IAML		13 09 17.0	
	comp=E,1µm,0.5s						
HISA	**Bilecik-Osmane**	**0.74**	**242**	P	**Pg**	**13 09 01.4**	**-0.9**
HISA				S	**Sg**	**13 09 11.1**	**-0.9**
HISA				i IAML		13 09 12.0	
	comp=E,1µm,0.7s						
HISA				i IAML		13 09 15.0	
	comp=N,2µm,0.6s						
OSMT	**Osmaniye**	**0.85**	**256**	Pg	**Pg**	**13 09 03.5**	**-0.8**
ADVT	**Abdulvahap**	**0.88**	**245**	Pg	**Pg**	**13 09 04.1**	**-0.8**
ADVT				Sg	**Sg**	**13 09 16.4**	**0.0**
KIBS	**BOLU**	**0.91**	**116**	P	**Pg**	**13 09 05.0**	**-0.4**
KIBS				S	**Sg**	**13 09 14.9**	**-2.2**
KIBS				i IAML		13 09 26.0	
	comp=N,8µm,0.8s						
KIBS				i IAML		13 09 27.0	
	comp=E,1µm,0.8s						
SILT	**Sile**	**0.93**	**292**	Pg	**Pb**	**13 09 05.8**	**-0.2**
SILT	**Sile**	**0.93**	**292**	⇑P	**Pb**	**13 09 06.1**	**+0.1**
CAVI	**Cavuskoy**	**0.94**	**230**	Pg	**Pg**	**13 09 05.1**	**-0.9**
CAVI				Sg	**Sg**	**13 09 18.2**	**-0.1**
BILE	**Bilecik/Merkez**	**0.95**	**227**	P	**Pg**	**13 09 05.9**	**-0.3**
BILE				S	**Sg**	**13 09 16.1**	**-2.6**
BILE				i IAML		13 09 19.0	
	comp=E,7µm,0.8s						
BILE				i IAML		13 09 26.0	
	comp=N,1µm,0.8s						
DEVR	**Zonguldak/Devr**	**0.96**	**70**	P	**Pg**	**13 09 05.5**	**-0.8**
DEVR				S	**Sg**	**13 09 14.4**	**-4.4**
DEVR				i IAML		13 09 23.0	
	comp=E,5µm,0.5s						
DEVR				i IAML		13 09 26.0	
	comp=N,4µm,0.8s						
BORA	**Eskisehir**	**0.97**	**195**		**Pg**	**13 09 05.3**	**-1.2**
BORA	**Eskisehir**	**0.97**	**195**	P	**Pg**	**13 09 05.7**	**-0.8**
BORA				S	**Sg**	**13 09 18.4**	**-0.8**
BORA				i IAML		13 09 22.0	
	comp=N,8µm,1.2s						
BORA				i IAML		13 09 23.0	
	comp=E,8µm,0.2s						
BCAM	**Yenicaga**	**0.97**	**90**	P	**Pg**	**13 09 06.1**	**-0.5**
BCAM				S	**Sg**	**13 09 16.3**	**-3.0**
BCAM				i IAML		13 09 23.0	
	comp=E,4µm,0.4s						
BCAM				i IAML		13 09 24.0	
	comp=N,6µm,0.7s						
AUBOZ	**BOZOYUK**	**1.07**	**213**	P	**Pg**	**13 09 08.2**	**-0.3**
AUBOZ				S	**Sg**	**13 09 20.4**	**-2.0**
AUBOZ				i IAML		13 09 25.0	
	comp=N,1µm,0.7s						
AUBOZ				i IAML		13 09 26.0	
	comp=E,1µm,0.6s						
YLV	**Yalova**	**1.10**	**257**	Pn	**Pg**	**13 09 07.8**	**-1.2**
YLV	**Yalova**	**1.10**	**257**	P	**Pg**	**13 09 08.2**	**-0.8**
KURT	**Yalova, Merkez**	**1.22**	**260**	P	**Pn**	**13 09 10.8**	**-0.1**
KURT				S	**Sb**	**13 09 25.4**	**-1.3**
KURT				i IAML		13 09 31.0	
	comp=N,1µm,0.6s						
SGAZ	**Eskisehir, Sey**	**1.29**	**178**	P	**Pn**	**13 09 11.5**	**-0.4**
SGAZ				S	**Sb**	**13 09 27.8**	**-1.1**
SGAZ				i IAML		13 09 32.0	
	comp=N,5µm,0.5s						
SGAZ				i IAML		13 09 38.0	
	comp=E,6µm,0.6s						
DOMA	**Ktahya-Doman**	**1.32**	**219**	P	**Pn**	**13 09 12.1**	**-0.3**
DOMA				S	**Sb**	**13 09 27.1**	**-2.8**
DOMA				i IAML		13 09 36.0	
	comp=E,6µm,1.0s						
DOMA				i IAML		13 09 41.0	
	comp=N,6µm,0.8s						
CMDR	**Camlidere-ANKA**	**1.33**	**104**	P	**Pg**	**13 09 13.3**	**-0.1**
CMDR				S	**Sb**	**13 09 26.5**	**-3.5**
CMDR				i IAML		13 09 33.0	
	comp=N,6µm,0.5s						
ISK	**Istanbul-Kandi**	**1.33**	**281**	Pn	**Pn**	**13 09 12.4**	**0.0**
ISK	**Istanbul-Kandi**	**1.33**	**281**	P	**Pn**	**13 09 12.3**	**-0.1**
KAVV	**Kandilli-Istan**	**1.33**	**281**	Pn	**Pn**	**13 09 12.1**	**-0.3**
DERS	**Karabk-Eskip**	**1.34**	**88**	P	**Pg**	**13 09 14.0**	**+0.3**
DERS				S	**Sb**	**13 09 30.3**	**-0.1**
DERS				i IAML		13 09 36.0	
	comp=E,7µm,1.3s						
DERS				i IAML		13 09 39.0	
	comp=N,8µm,1.4s						
BTIN	**Bartın**	**1.38**	**53**	P	**Pn**	**13 09 13.0**	**-0.1**
BTIN				S	**Sb**	**13 09 28.7**	**-2.6**
BTIN				i IAML		13 09 36.0	
	comp=N,8µm,0.5s						
BTIN				i IAML		13 09 41.0	
	comp=E,9µm,0.8s						
KLYT	**Kilyos**	**1.39**	**289**	Pn	**Pb**	**13 09 13.7**	**-0.1**
KLYT	**Kilyos**	**1.39**	**289**	⇑P	**Pg**	**13 09 14.7**	**+0.2**
KBUK	**KARABUK-Merkez**	**1.46**	**73**	P	**Pb**	**13 09 14.6**	**-0.4**
KBUK				S	**Sg**	**13 09 34.3**	**-0.4**
KBUK				i IAML		13 09 38.0	
	comp=N,7µm,0.8s						
KBUK				i IAML		13 09 41.0	
	comp=E,4µm,0.7s						
CIFT	**Cifteler, Eski**	**1.47**	**172**	Pn	**Pn**	**13 09 13.8**	**-0.7**
ANDZ	**Kutahya, Merke**	**1.47**	**208**	P	**Pn**	**13 09 14.3**	**-0.2**
ANDZ				S	**Sn**	**13 09 33.2**	**-0.6**
ANDZ				i IAML		13 09 36.0	
	comp=E,5µm,0.8s						
ANDZ				i IAML		13 09 38.0	
	comp=N,4µm,0.7s						
ARMT	**Armutlu**	**1.48**	**261**	Pn	**Pn**	**13 09 14.5**	**-0.1**
SVRH	**Sivrihisar-ESK**	**1.48**	**157**	Pn	**Pn**	**13 09 14.0**	**-0.6**
AUSIV	**SIVRIHISAR**	**1.49**	**157**	P	**Pn**	**13 09 15.2**	**+0.4**
AUSIV				S	**Sn**	**13 09 33.4**	**-1.0**
AUSIV				i IAML		13 09 40.0	
	comp=N,5µm,0.9s						
MDNY	**Mudanya-Bursa**	**1.51**	**253**	Pn	**Pn**	**13 09 14.9**	**-0.1**
KUTH	**Kutahya**	**1.54**	**203**	P	**Pn**	**13 09 16.0**	**+0.6**
KUTH				S	**Sn**	**13 09 34.0**	**-1.5**
KUTH				i IAML		13 09 43.0	
	comp=N,2µm,0.6s						
AUKIR	**Kırka- Seyitga**	**1.55**	**187**	P	**Pn**	**13 09 15.5**	**-0.1**
AUKIR				S	**Sn**	**13 09 35.1**	**-0.7**
AUKIR				i IAML		13 09 39.0	
	comp=E,2µm,0.8s						
AUKIR				i IAML		13 09 40.0	
	comp=N,2µm,0.7s						
BGKT	**Bogazkoy**	**1.56**	**284**	Pn	**Pb**	**13 09 16.2**	**-0.6**
ORLT	**Orhaneli**	**1.63**	**242**	Pn	**Pn**	**13 09 16.4**	**-0.3**
TVSB	**Tavsanli**	**1.70**	**217**	Pn	**Pn**	**13 09 17.3**	**-0.3**
CTKS	**Kestanelik-??a**	**1.77**	**284**	Pn	**Pn**	**13 09 19.0**	**+0.5**
ANTO	**Ankara**	**1.81**	**121**		**Pn**	**13 09 18.9**	**-0.1**
ANTO	**Ankara**	**1.81**	**121**	⇓P	**Pn**	**13 09 19.8**	**+0.7**
ANTO	**Ankara**	**1.81**	**121**	P	**Pn**	**13 09 18.9**	**-0.1**
ANTO	**Ankara**	**1.81**	**121**	Pn	**Pn**	**13 09 19.0**	**-0.1**
ELBA	**Catalca**	**1.81**	**281**	P	**Pb**	**13 09 20.2**	**-0.9**
ELBA				S	**Sn**	**13 09 42.4**	**+0.4**
ELBA				i IAML		13 09 46.0	
	comp=N,1µm,0.7s						
ELBA				i IAML		13 09 47.0	
	comp=E,8µm,0.6s						
EMET	**Ktahya-Emet**	**1.83**	**218**	P	**Pn**	**13 09 20.2**	**+0.8**
EMET				S	**Sn**	**13 09 40.6**	**-2.0**
EMET				i IAML		13 09 49.0	
	comp=N,7µm,0.7s						
EMET				i IAML		13 09 51.0	
	comp=E,5µm,0.7s						
BYAT	**Afyon-Bayat**	**1.88**	**175**	P	**Pn**	**13 09 20.8**	**+0.8**
BYAT				S	**Sn**	**13 09 44.8**	**+1.0**
BYAT				i IAML		13 09 50.0	
	comp=E,7µm,0.9s						
BYAT				i IAML		13 10 03.0	
	comp=N,5µm,0.7s						
CTIK	**Konya-Celtik**	**1.90**	**159**	P	**Pn**	**13 09 20.2**	**-0.2**
CTIK				S	**Sn**	**13 09 44.1**	**-0.3**
CTIK				i IAML		13 09 54.0	
	comp=N,4µm,1.3s						
CTIK				i IAML		13 10 07.0	
	comp=E,4µm,0.7s						
KCTX	**Karacabey (Bur**	**1.93**	**254**	Pn	**Pn**	**13 09 21.1**	**+0.4**
CIDE	**Kastamonu/Cide**	**1.95**	**56**	P	**Pb**	**13 09 22.5**	**-0.9**
CIDE				S	**Sb**	**13 09 47.3**	**-0.3**
CIDE				i IAML		13 09 53.0	
	comp=N,6µm,1.0s						
CIDE				i IAML		13 09 53.0	
	comp=E,4µm,0.7s						
CIDE	**Kastamonu/Cide**	**1.95**	**56**	⇓P	**Pb**	**13 09 22.4**	**-0.9**
SLVT	**Silivri**	**1.99**	**283**	Pn	**Pn**	**13 09 22.1**	**+0.6**
CTYL	**Yalikoy Yolu**	**1.99**	**290**	Pn	**Pn**	**13 09 22.2**	**+0.6**
CTYL	**Yalikoy Yolu**	**1.99**	**290**	⇑P	**Pb**	**13 09 23.3**	**-0.9**
CTYL	**Yalikoy Yolu**	**1.99**	**290**	Pn	**Pn**	**13 09 22.1**	**+0.5**
GDZ	**Gediz**	**2.00**	**210**	P	**Pn**	**13 09 22.0**	**+0.3**
GDZ				S	**Sn**	**13 09 45.2**	**-1.6**
GDZ				i IAML		13 09 53.0	
	comp=E,5µm,1.3s						
GDZ				i IAML		13 10 01.0	
	comp=N,3µm,0.8s						
ELDT	**Eldivan**	**2.04**	**98**	P	**Pb**	**13 09 23.9**	**-1.2**
ELDT				S	**Sn**	**13 09 47.8**	**-0.1**
ELDT				i IAML		13 09 58.0	
	comp=N,3µm,1.2s						
ELDT				i IAML		13 10 00.0	
	comp=E,3µm,1.1s						
DST	**Dursunbey**	**2.05**	**234**	Pn	**Pn**	**13 09 22.3**	**-0.1**
AFYO	**Afyonkarahisar**	**2.06**	**191**	P	**Pn**	**13 09 23.7**	**+1.1**
AFYO				S	**Sb**	**13 09 50.8**	**-0.4**
AFYO				i IAML		13 09 59.0	
	comp=N,7µm,1.0s						
AFYO				i IAML		13 10 02.0	
	comp=E,6µm,0.7s						
KURO	**Afyon-Bolvadin**	**2.08**	**177**	P	**Pn**	**13 09 22.9**	**-0.1**
KURO				S	**Sn**	**13 09 50.5**	**+1.5**
KURO				i IAML		13 09 57.0	
	comp=E,2µm,0.8s						
KURO				i IAML		13 10 00.0	
	comp=N,2µm,0.7s						
BAND	**Balkesir-Ban**	**2.10**	**258**	P	**Pn**	**13 09 23.1**	**+0.2**
BAND				S	**Sn**	**13 09 48.0**	**-1.1**
BAND	**Balkesir-Ban**	**2.10**	**258**	⇑P	**Pn**	**13 09 23.4**	**+0.5**
DURS	**Dursunbey**	**2.15**	**236**	P	**Pn**	**13 09 23.9**	**+0.2**
DURS				S	**Sn**	**13 09 49.9**	**-0.5**
DURS				i IAML		13 09 59.0	
	comp=N,3µm,0.7s						
DURS				i IAML		13 10 08.0	
	comp=E,2µm,0.8s						
GOKD	**Ankara-Kalecik**	**2.19**	**109**	P	**Pn**	**13 09 24.8**	**+0.5**
BBAL	**Bala**	**2.20**	**125**	P	**Pn**	**13 09 25.6**	**+1.1**
BBAL				S	**Sb**	**13 09 56.8**	**+1.7**
BBAL				i IAML		13 10 11.0	
	comp=N,762nm,0.8s						
BBAL				i IAML		13 10 13.0	
	comp=E,1µm,0.9s						
ILGA	**Ilgaz**	**2.23**	**83**		**Pn**	**13 09 25.4**	**+0.3**
ILGA	**Ilgaz**	**2.23**	**83**	P	**Pb**	**13 09 27.0**	**-1.5**
ILGA				S	**Sb**	**13 09 56.5**	**+0.3**
ILGA				i IAML		13 10 13.0	
	comp=E,2µm,0.8s						
ILGA				i IAML		13 10 14.0	
	comp=N,1µm,1.0s						
UCKU	**Afyonkarahisar**	**2.23**	**167**	P	**Pn**	**13 09 25.1**	**+0.1**
UCKU				S	**Sn**	**13 09 52.4**	**-0.3**
UCKU				i IAML		13 10 10.0	
	comp=N,3µm,0.8s						
UCKU				i IAML		13 10 12.0	
	comp=E,2µm,0.8s						
BNAZ	**Uak-Banaz**	**2.25**	**198**	P	**Pn**	**13 09 25.9**	**+0.7**
BNAZ				S	**Sb**	**13 09 56.0**	**-0.5**
BNAZ				i IAML		13 10 05.0	
	comp=E,6µm,0.6s						
BNAZ				i IAML		13 10 08.0	
	comp=N,6µm,0.7s						
EDC	**Edincik**	**2.27**	**259**	P	**Pn**	**13 09 26.8**	**+1.4**
KKUL	**Konya-Kulu**	**2.32**	**134**	P	**Pb**	**13 09 28.6**	**-1.2**
KKUL				S	**Sg**	**13 10 01.0**	**-1.5**
KKUL				i IAML		13 10 09.0	
	comp=N,3µm,1.2s						
KKUL				i IAML		13 10 13.0	
	comp=E,3µm,1.1s						
YENC	**ankr-Yen**	**2.33**	**92**	P	**Pb**	**13 09 28.6**	**-1.3**
VIZE	**Kirklareli, Vi**	**2.35**	**290**	P	**Pn**	**13 09 28.1**	**+1.7**
VIZE				S	**Sn**	**13 09 54.9**	**-0.4**
VIZE				i IAML		13 10 02.0	
	comp=N,5µm,0.7s						
VIZE				i IAML		13 10 02.0	
	comp=E,4µm,0.5s						
BLKS	**Balkesir-Sus**	**2.35**	**247**	P	**Pn**	**13 09 26.7**	**+0.3**
BLKS				S	**Sb**	**13 09 58.8**	**-0.5**
BLKS				i IAML		13 10 05.0	
	comp=N,2µm,1.0s						
BLKS				i IAML		13 10 07.0	
	comp=E,1µm,1.6s						
SEYI	**Kastamonu-Seyd**	**2.38**	**69**	P	**Pn**	**13 09 27.8**	**+0.9**
SEYI				S	**Sb**	**13 10 01.0**	**+0.8**
DEMI	**Demirci**	**2.38**	**223**	P	**Pn**	**13 09 26.7**	**-0.3**
DEMI				S	**Sb**	**13 10 01.0**	**+0.7**
BR106	**Keskin Array S**	**2.42**	**116**	Pn	**Pn**	**13 09 27.7**	**+0.1**
BR105	**Keskin Array S**	**2.43**	**116**	P	**Pn**	**13 09 28.0**	**+0.3**
BKES	**Balkesir-Mer**	**2.44**	**245**	P	**Pn**	**13 09 27.5**	**-0.1**
BKES				S	**Sb**	**13 10 02.4**	**+0.5**
BR131	**Keskin Array S**	**2.44**	**116**		**Pn**	**13 09 27.8**	**-0.1**
BR131	**Keskin Array S**	**2.44**	**116**	P	**Pn**	**13 09 27.8**	**-0.1**
BRTR	**Keskin Array B**	**2.44**	**116**	Pn	**Pn**	**13 09 27.8**	**-0.1**
	16nm,0.3s,baz=288,slow=12,SNR=162						
BRTR				Sn	**Sn**	**13 09 56.9**	**-1.0**
	25nm,0.3s,baz=295,slow=16,SNR=8.3						
	75nm,0.5s						
BRTR	**Keskin Array B**	**2.44**	**116**	i P	**Pn**	**13 09 27.7**	**-0.2**
BRTR				pmax	pmax		
	comp=Z,81nm,0.5s						
KESK	**Krkkale-Ke**	**2.45**	**118**	P	**Pn**	**13 09 28.1**	**+0.2**
BR104	**Keskin Array S**	**2.45**	**116**	P	**Pn**	**13 09 28.3**	**+0.3**
USAK	**Uak-Merkez**	**2.50**	**213**	P	**Pn**	**13 09 30.0**	**+1.4**
USAK				S	**Sn**	**13 10 00.1**	**+0.9**
USAK				i IAML		13 10 14.0	
	comp=Z,1µm,0.9s						
USAK				i IAML		13 10 15.0	
	comp=Z,856nm,0.6s						
KDHN	**Kadinhani**	**2.51**	**155**	P	**Pn**	**13 09 28.9**	**+0.1**
KDHN				S	**Sb**	**13 10 03.7**	**-0.4**
KDHN				i IAML		13 10 12.0	
	comp=Z,976nm,1.1s						
KDHN				i IAML		13 10 23.0	
	comp=Z,879nm,0.8s						
DELI	**KIRIKKALE**	**2.53**	**108**	P	**Pn**	**13 09 29.8**	**+0.7**
DELI				S	**Sn**	**13 10 00.7**	**+0.7**
DELI				i IAML		13 10 10.0	
	comp=Z,378nm,0.9s						
DELI				i IAML		13 10 16.0	
	comp=Z,532nm,0.8s						
AFYN	**Afyon-Dinar-K**	**2.55**	**185**	P	**Pn**	**13 09 30.3**	**+0.9**
AFYN				S	**Sb**	**13 10 05.1**	**-0.1**
AFYN				i IAML		13 10 20.0	
	comp=Z,3µm,1.1s						
AFYN				i IAML		13 10 23.0	
	comp=Z,3µm,1.2s						
YVAC	**Isparta, Yalva**	**2.57**	**172**	P	**Pn**	**13 09 29.8**	**+0.2**
YVAC				S	**Sb**	**13 10 04.0**	**-1.7**
YVAC				i IAML		13 10 14.0	
	comp=Z,1µm,0.9s						
YVAC				i IAML		13 10 15.0	
	comp=Z,1µm,1.0s						
PHSR	**Pinarhisar**	**2.59**	**289**	⇑P	**Pn**	**13 09 30.9**	**+1.1**
KZIL	**AFYON_Kizioren**	**2.60**	**191**	P	**Pn**	**13 09 30.6**	**+0.5**
KZIL				S	**Sg**	**13 10 09.8**	**-1.7**
KZIL				i IAML		13 10 21.0	
	comp=Z,972nm,1.2s						
KZIL				i IAML		13 10 22.0	
	comp=Z,1µm,1.0s						
CBEY	**Konya-Cihanbey**	**2.63**	**143**	P	**Pn**	**13 09 31.4**	**+1.1**
CBEY				S	**Sg**	**13 10 13.4**	**+1.2**
CBEY				i IAML		13 10 25.0	
	comp=Z,2µm,0.8s						
CBEY				i IAML		13 10 26.0	
	comp=Z,1µm,1.1s						
BALY	**Balya**	**2.65**	**247**	P	**Pn**	**13 09 30.9**	**+0.2**
BALY				S	**Sb**	**13 10 06.2**	**-1.7**

BALY				*i* IAML		13 10 17.0	
	comp=Z,3µm,0.9s						
BALY				*i* IAML		13 10 23.0	
	comp=Z,2µm,1.2s						
PASA	Karahalli, USA	2.66	202	P	Pn	13 09 31.4	+0.6
PASA				S	Sb	13 10 08.7	+0.3
PASA				*i* IAML		13 10 20.0	
	comp=Z,785nm,0.8s						
PASA				*i* IAML		13 10 20.0	
	comp=Z,736nm,0.7s						
BZK	Bozkurt	2.68	64		Pn	13 09 31.9	+0.9
BZK	Bozkurt	2.68	64	⇓P	Pn	13 09 32.5	+1.5
SUNG	orum-Sungurl	2.71	102	P	Pn	13 09 33.3	+1.8
SUNG				S	Sb	13 10 10.9	+1.0
SUNG				*i* IAML		13 10 26.0	
	comp=Z,1µm,1.6s						
SUNG				*i* IAML		13 10 27.0	
	comp=Z,988nm,1.1s						
ARMN	Kirklareli, Me	2.73	294	P	Pn	13 09 33.6	+1.9
ARMN				S	Sn	13 10 04.0	-0.8
ARMN				*i* IAML		13 10 22.0	
	comp=Z,3µm,0.9s						
ARMN				*i* IAML		13 10 22.0	
	comp=Z,2µm,0.7s						
SART	Tekirdag	2.74	268	P	Pn	13 09 33.1	+1.2
SART				S	Sb	13 10 10.1	-0.5
SART				*i* IAML		13 10 29.0	
	comp=Z,1µm,0.6s						
SART				*i* IAML		13 10 31.0	
	comp=Z,1µm,0.8s						
STEP	BALIKESIR_Sava	2.76	240	P	Pb	13 09 35.6	-1.6
STEP				S	Sb	13 10 12.6	+1.6
STEP				*i* IAML		13 10 20.0	
	comp=Z,5µm,0.9s						
STEP				*i* IAML		13 10 23.0	
	comp=Z,4µm,1.0s						
AKPI	Kirsehir/Akpin	2.79	117	P	Pn	13 09 33.3	+0.7
DOGA	KONYA_Doganhis	2.79	166	P	Pn	13 09 32.8	+0.1
DOGA				S	Sb	13 10 15.1	+2.8
DOGA				*i* IAML		13 10 28.0	
	comp=Z,893nm,1.0s						
DOGA				*i* IAML		13 10 32.0	
	comp=Z,967nm,0.9s						
KAGI	orum-Kargı	2.82	82	P	Pn	13 09 35.3	+2.4
KAGI				S	Sb	13 10 15.3	+2.6
KAGI				*i* IAML		13 10 26.0	
	comp=Z,498nm,1.9s						
KAGI				*i* IAML		13 10 38.0	
	comp=Z,731nm,1.3s						
MANT	Manisa	2.89	217		Pn	13 09 33.2	-0.9
KIRS	Kirsehir-Merke	2.94	124	⇑P	Pn	13 09 35.2	+0.5
ISP	Isparta	3.00	184		Pn	13 09 34.8	-0.7
ISP	Isparta	3.00	184	*d* *i*P	Pn	13 09 34.6	-0.9
TSMN	Mangalia Port-	3.39	332	⇑P	Pn	13 09 41.4	+0.6
PSN	Preselentsi	3.44	326	P	Pn	13 09 42.6	+1.2
DIKM	Dikmen	3.48	75	⇑P	Pn	13 09 43.4	+1.5
DIKM	Dikmen	3.48	75	P	Pn	13 09 42.7	+0.7
CAVK	Edirne/Enez-Ca	3.51	269	⇓P	Pn	13 09 43.4	+1.1
EZN	Ezine	3.55	255	⇓P	Pn	13 09 43.6	+0.6
EZN	Ezine	3.55	255	P	Pn	13 09 43.5	+0.6
EZN	Ezine	3.55	255	P	Pn	13 09 43.2	+0.3
ALN	Alexandroupoli	3.59	273		Pn	13 09 43.4	-0.2
ALN	Alexandroupoli	3.59	273	P	Pn	13 09 43.4	-0.2
EFOR	EFORIE	3.63	335	⇑P	Pn	13 09 45.5	+1.5
TSCT	Constanta Port	3.69	336	⇑P	Pn	13 09 46.6	+1.7
ICOR	Ion Corvin	3.97	327	⇓P	Pn	13 09 50.3	+1.7
RDO	Rodhopi	3.98	276		Pn	13 09 49.2	+0.3
TIRR	Tirgusor	4.04	335		Pn	13 09 49.9	+0.3
TIRR	Tirgusor	4.04	335	⇑P	Pn	13 09 50.3	+0.6
TIRR	Tirgusor	4.04	335	P	Pn	13 09 50.2	+0.6
TIRR	Tirgusor	4.04	335	P	Pn	13 09 49.8	+0.2
CVDA	Cernavoda	4.06	331	⇓P	Pn	13 09 51.0	+1.1
ELL	Elmali	4.12	190		Pn	13 09 51.5	+0.6
ELL	Elmali	4.12	190	P	Pn	13 09 51.5	+0.6
KDZ	Kurdzhali	4.18	283	P	Pn	13 09 52.4	+0.7
JURR	Jurilovca	4.19	341	⇑P	Pn	13 09 52.1	+0.4
SEV	Sevastopol'	4.29	29	*e*P	Pn	13 09 53.4	+0.3
SEV				*e*S	Sn	13 10 43.0	-0.1
SEV				pmax	pmax		
	comp=Z,92nm,0.5s						
SEV				smax	smax		
	comp=N,93nm,0.5s						
SEV				smax	smax		
	comp=E,191nm,0.4s						
SEV	Sevastopol'	4.29	29	Pm		13 09 58.0	
	comp=Z,92nm,0.5s						
SEV				*e*S	Sn	13 10 43.0	-0.1
SEV				Sm		13 10 46.2	
	comp=N,93nm,0.5s						
SEV				Sm		13 10 46.2	
	comp=E,191nm,0.4s						
BNN	Bunyan	4.37	115		Pn	13 09 55.0	+0.7
TPGR	Topolog	4.39	338	⇓P	Pn	13 09 55.1	+0.5
HARR	Harsova	4.40	332	⇓P	Pn	13 09 56.4	+1.8
HARR	Harsova	4.40	332	P	Pn	13 09 56.4	+1.8
YAL	Yalta	4.43	33	*e*P	Pn	13 09 56.1	+1.1
YAL				*e*S	Sn	13 10 46.3	-0.3
YAL				pmax	pmax		
	comp=Z,263nm,0.4s						
YAL				smax	smax		
	comp=N,245nm,0.5s						
YAL				smax	smax		
	comp=E,506nm,0.6s						
YAL	Yalta	4.43	33	*e*P	Pn	13 09 56.1	+1.1
YAL				Pm		13 09 57.1	
	comp=Z,263nm,0.4s						
YAL				*e*S	Sn	13 10 46.3	-0.3
YAL				Sm		13 10 49.7	
	comp=N,245nm,0.5s						
YAL				Sm		13 10 49.7	
	comp=E,506nm,0.6s						
AMRR	Amara	4.56	327	⇑P	Pn	13 09 58.3	+1.5
AMRR	Amara	4.56	327	P	Pn	13 09 58.3	+1.5
TLCR		4.60	342	⇑P	Pn	13 09 58.2	+0.9
TLCR		4.60	342	P	Pn	13 09 58.2	+0.9
AKAS	Kas	4.67	192		Pn	13 09 59.7	+1.2
LEHL	Lehliu	4.68	323	⇑P	Pn	13 09 59.4	+1.0
ALU	Alushta	4.69	33	*e*P	Pn	13 09 58.6	0.0
ALU				*e*S	Sn	13 10 52.1	-1.0
ALU				pmax	pmax		
	comp=Z,86nm,0.4s						
ALU				smax	smax		
	comp=N,170nm,0.5s						
ALU				smax	smax		
	comp=E,73nm,0.4s						
ALU	Alushta	4.69	33	*e*P	Pn	13 09 58.6	0.0
ALU				Pm		13 10 07.8	
	comp=Z,86nm,0.4s						
ALU				*e*S	Sn	13 10 52.1	-1.0
ALU				Sm		13 10 55.0	
	comp=N,170nm,0.5s						
ALU				Sm		13 10 55.0	
	comp=E,73nm,0.4s						
PLD	Plovdiv	4.72	288	P	Pn	13 09 59.7	+0.6
PLD	Plovdiv	4.72	288	*e*Pn	Pn	13 09 59.7	+0.6
TARU	Tarkhankut	4.73	15	*e*P	Pn	13 10 00.1	+0.9
TARU				Pm		13 10 02.2	
	comp=Z,260nm,0.5s						
TARU				*e*S	Sn	13 10 54.1	0.0
TARU				Sm		13 11 01.0	
	comp=N,186nm,0.4s						
TARU				Sm		13 11 01.0	
	comp=E,93nm,0.4s						
CFR	Carcaliu	4.77	337	⇓P	Pn	13 10 00.2	+0.5
CFR	Carcaliu	4.77	337	P	Pn	13 10 00.2	+0.5
SIM	Simferopol'	4.80	30	*c* *i*P	Pn	13 10 01.5	+1.4
SIM				*e*S	Sn	13 10 56.0	+0.2
SIM				pmax	pmax		
	comp=Z,385nm,0.8s						
SIM				smax	smax		
	comp=E,2µm,1.3s						
SIM				smax	smax		
	comp=N,373nm,0.6s						
SIM	Simferopol'	4.80	30	⇑*e*P	Pn	13 10 01.7	+1.6
SIM				Pm		13 10 02.5	
	comp=Z,706nm,0.2s						
SIM				*e*S	Sn	13 10 56.4	+0.6
SIM				Sm		13 10 59.0	
	comp=N,428nm,0.9s						
SIM				Sm		13 10 59.0	
	comp=E,2µm,1.3s						
DNZ2	Donuzlav2	4.89	21	⇑*e*P	Pn	13 10 05.6	+4.3
DNZ2				Pm		13 10 05.8	
	comp=Z,316nm,0.5s						
PGOR	Pogoanele	4.95	327	⇓P	Pn	13 10 03.6	+1.5
GIUM	Giurgiulesti	5.03	339	⇓P	Pn	13 10 04.7	+1.5
GISR	Galati	5.03	338	⇓P	Pn	13 10 04.6	+1.3
ARG	Arkhangelos	5.04	205		Pn	13 10 04.3	+0.8
ARG	Arkhangelos	5.04	205	P	Pn	13 10 04.3	+0.8
SULR		5.10	321	⇓P	Pn	13 10 05.9	+1.7
SUDU	Sudak	5.12	36	⇑*e*P	Pn	13 10 04.8	+0.3
SUDU				*e*S	Sn	13 11 02.6	-0.9
SUDU				pmax	pmax		
	comp=Z,871nm,0.7s						
SUDU				smax	smax		
	comp=N,427nm,0.4s						
SUDU				smax	smax		
	comp=E,410nm,0.6s						
SUDU	Sudak	5.12	36	⇑*e*P	Pn	13 10 04.8	+0.3
SUDU				Pm		13 10 15.1	
	comp=Z,871nm,0.7s						
SUDU				*e*S	Sn	13 11 02.6	-0.9
SUDU				Sm		13 11 08.6	
	comp=N,427nm,0.4s						
SUDU				Sm		13 11 08.6	
	comp=E,410nm,0.6s						
SCHLR	Schela	5.13	336	⇑P	Pn	13 10 06.1	+1.5
SCHL	Schela	5.15	336	⇑P	Pn	13 10 05.8	+0.8
NEGRR	Negrea	5.17	337	⇑P	Pn	13 10 07.2	+2.0
IZVR	Izvoarele	5.21	336	⇑P	Pn	13 10 07.4	+1.6
SCTR	Scanteiesti	5.26	338	⇓P	Pn	13 10 08.3	+1.8
COPA	Copaceanca	5.28	311	⇓P	Pn	13 10 07.5	+0.7
TUDR		5.29	336	⇑P	Pn	13 10 07.9	+1.1
ISR	Istrita	5.30	326	⇓P	Pn	13 10 09.2	+2.1
ISR	Istrita	5.30	326	P	Pn	13 10 09.2	+2.1
GRER		5.34	330	⇑P	Pn	13 10 09.4	+1.8
PLAR	PLOIESTI	5.38	321	⇑P	Pn	13 10 09.6	+1.4
FEO	Feodosiya	5.39	37	*e*P	Pn	13 10 08.8	+0.6
FEO				*e*S	Sn	13 11 11.7	+1.4
FEO				pmax	pmax		
	comp=Z,112nm,0.3s						
FEO				smax	smax		
	comp=N,262nm,0.6s						
FEO				smax	smax		
	comp=E,117nm,0.5s						
FEO	Feodosiya	5.39	37	*e*P	Pn	13 10 08.8	+0.6
FEO				Pm		13 10 13.2	
	comp=Z,112nm,0.3s						
FEO				*e*S	Sn	13 11 11.7	+1.4
FEO				Sm		13 11 11.9	
	comp=N,262nm,0.6s						
FEO				Sm		13 11 11.9	
	comp=E,117nm,0.5s						
VLDR	Vladesti	5.40	339	⇓P	Pn	13 10 09.6	+1.3
VARL	Varlezi	5.51	338	⇑P	Pn	13 10 11.5	+1.7
APE	Apeiranthos	5.55	229	⇑P	Pn	13 10 11.5	+1.0
APE	Apeiranthos	5.55	229	⇓*e*P	Pn	13 10 10.3	-0.2
BISRR	Bisoca	5.59	329	⇑P	Pn	13 10 12.7	+1.7
COSR	Cosmesti PH	5.63	334	⇓P	Pn	13 10 13.5	+1.9
NEHR	Nehoiu	5.66	326	⇓P	Pn	13 10 14.1	+2.1
HUMR	Humele	5.66	313	⇑P	Pn	13 10 13.2	+1.2
VLAD	Vladila	5.69	306	⇑P	Pn	13 10 12.7	+0.4
PANC	Panciu	5.70	334	⇑P	Pn	13 10 14.5	+1.9
PURM	Purcari	5.75	354	⇑P	Pn	13 10 14.9	+1.8
GHRR		5.79	336	⇑P	Pn	13 10 15.6	+1.9
VRI	Vrincioaia	5.85	331	⇑P	Pn	13 10 15.4	+0.8
VRI	Vrincioaia	5.85	331	P	Pn	13 10 15.3	+0.8
VRI	Vrincioaia	5.85	331	P	Pn	13 10 15.2	+0.7
	comp=E,0.9nmcomp=E,2µmcomp=E,202nm,0.6s						
MLR	Muntele Rosu	5.86	324		Pn	13 10 15.5	+0.7
MLR	Muntele Rosu	5.86	324	Pn	Pn	13 10 15.7	+0.9
	comp=E,5.3nm,0.3s,baz=172,slow=7.1,SNR=27						
MLR				Sn	Sn	13 11 20.4	-1.7
	comp=E,1.7nm,0.3s,baz=145,slow=17,SNR=3.5						
MLR				LR	LR	13 13 15.3	
	comp=E,825nm,18.9s,baz=110,slow=46						
	comp=E,30nm,0.6s						
MLR	Muntele Rosu	5.86	324	⇓P	Pn	13 10 16.4	+1.5
MLR	Muntele Rosu	5.86	324	P	Pn	13 10 16.3	+1.5
MLR	Muntele Rosu	5.86	324	*e*Pn	Pn	13 10 16.2	+1.4
MLR	Muntele Rosu	5.86	324	P	Pn	13 10 15.9	+1.1
	comp=E,0.6nmcomp=E,1µmcomp=E,177nm,0.9s						
PLOR	Plostina	5.86	330	⇓P	Pn	13 10 16.2	+1.4
PLOR	Plostina	5.86	330	P	Pn	13 10 16.2	+1.4
BIR	Birlad	5.91	338	⇑P	Pn	13 10 16.9	+1.5
BIR	Birlad	5.91	338	P	Pn	13 10 16.8	+1.5
VTS	Vitosha	5.93	290	*e*Pn	Pn	13 10 16.7	+0.9
KARP	Karpathos	5.99	210		Pn	13 10 16.7	+0.3
KARP	Karpathos	5.99	210	P	Pn	13 10 17.0	+0.5
	comp=E,0.5nmcomp=E,98nm,1.0s						
MTUR	Matau	6.08	318	⇓P	Pn	13 10 18.4	+0.5
MTUR	Matau	6.08	318	P	Pn	13 10 18.3	+0.5
CSS	Mathiatis	6.18	160		Pn	13 10 18.6	-0.6
CSS	Mathiatis	6.18	160	P	Pn	13 10 19.4	+0.2
	comp=E,0.3nmcomp=E,714nmcomp=E,48nm,0.8s						
VASR	Vaslui	6.21	341	⇓P	Pn	13 10 20.3	+0.8
VAY	Valandovo	6.23	277	*i* Pn	Pn	13 10 21.0	+1.3
VAY	Valandovo	6.23	277	P	Pn	13 10 21.0	+1.3
VAY				pmax	pmax		
	comp=Z,93nm,0.7s						
VAY	Valandovo	6.23	277	*e*Pn	Pn	13 10 20.7	+1.0
VOIR		6.24	320	⇓P	Pn	13 10 21.0	+1.1
VOIR		6.24	320	P	Pn	13 10 21.0	+1.1
VOIR		6.24	320	P	Pn	13 10 20.5	+0.6
	comp=Z,0.4nmcomp=Z,992nmcomp=Z,116nm,0.9s						
MILM	Milestii Mici	6.26	348	⇑*e*P	Pn	13 10 19.0	-1.2
	comp=Z,300nm,0.6s						
MILM				*e*S	Sn	13 11 28.0	-3.8
	comp=Z,900nm,0.9s						
MILM	Milestii Mici	6.26	348	*c* *i*P	Pn	13 10 19.0	-1.2
MILM				*e*S	Sn	13 11 28.0	-3.8
MILM				pmax	pmax		
	comp=Z,300nm,0.6s						
MILM				smax	smax		
	comp=N,900nm,0.9s						
MILM				smax	smax		
	comp=E,500nm,0.5s						
TURR	Turia	6.28	328	⇓P	Pn	13 10 22.3	+1.8
ANN	Anapa	6.30	49	*e*P	Pn	13 10 19.2	-1.6
ANN				*e*S	Sn	13 11 32.2	-0.6
ANN				pmax	pmax		
	comp=Z,140nm,0.8s						
KIS	Kishinev	6.34	348	*e*P	Pn	13 10 18.0	-3.3
	comp=Z,120nm,0.6s						
KIS				*e*S	Sn	13 11 28.0	-5.6
KIS				*e*Lq	LQ	13 11 33.0	
	comp=Z,800nm,0.7s						
KIS	Kishinev	6.34	348	⇑P	Pn	13 10 21.7	+0.4
KIS	Kishinev	6.34	348	*e*P	Pn	13 10 18.0	-3.3
KIS				*e*S	Sn	13 11 28.0	-5.6
KIS				pmax	pmax		
	comp=Z,120nm,0.6s						
KIS	Kishinev	6.34	348	P	Pn	13 10 21.2	-0.1
	comp=Z,1.2nmcomp=Z,3µmcomp=Z,401nm,0.7s						
ONER	Baraj Valea Uz	6.37	331	⇑P	Pn	13 10 23.3	+1.6
ARR	Arges	6.40	317	⇓P	Pn	13 10 23.0	+0.8
OZUR		6.41	327	⇓P	Pn	13 10 23.4	+1.2
TESR	Tescani	6.43	334	⇑P	Pn	13 10 23.1	+0.6
TESR	Tescani	6.43	334	P	Pn	13 10 22.9	+0.3
	comp=Z,0.6nmcomp=Z,2µmcomp=Z,141nm,0.7s						
BOSS	Bosilegrad	6.44	288	*e*Pn	Pn	13 10 25.1	+2.4
BOSR	Bodos	6.44	326	⇓P	Pn	13 10 23.8	+1.1
DOPR	Dopca	6.47	324	⇓P	Pn	13 10 24.3	+1.2
ZAPS	Zavoj	6.54	295	*e*Pn	Pn	13 10 25.5	+1.4
AGG	Agios Georgios	6.74	257	P	Pn	13 10 27.4	+0.6
PUNG	Punghina	6.75	303	⇓P	Pn	13 10 27.8	+0.9
PUNG	Punghina	6.75	303	*e*Pn	Pn	13 10 27.1	+0.2
IASR	Iasi	6.76	341	⇓P	Pn	13 10 28.9	+1.8
SRE	Strehaia	6.77	307	⇓P	Pn	13 10 28.0	+0.8
SRE	Strehaia	6.77	307	P	Pn	13 10 28.0	+0.8
LOT	Lotru	6.91	314	⇓P	Pn	13 10 29.7	+0.5
BARS	Barje	6.99	290	*e*Pn	Pn	13 10 31.1	+0.9
ZAGS	Zajecar	7.01	298	*e*Pn	Pn	13 10 30.5	+0.1
MDB	Medias	7.07	321	⇓P	Pn	13 10 33.1	+1.8
MDB	Medias	7.07	321	P	Pn	13 10 33.1	+1.8
BAL3X	Bal3x, Balta	7.17	354	P	Pn	13 10 31.9	-0.7
SOC	Sochi	7.19	64	*e*P	Pn	13 10 32.2	-0.7
SOC				*e*		13 11 56.0	
SOC				pmax	pmax		
	comp=Z,14nm,0.6s						
SOC				MLR	MLR		
	comp=Z,212nm,15.0s						
IDI	Anoyia	7.21	222	Pn	Pn	13 10 34.7	+1.3
	comp=Z,18nm,1.1s,baz=44,slow=15,SNR=3.1						
BORS2	Bor- Borsko je	7.26	300	*e*Pn	Pn	13 10 33.1	-0.8
TGMR	Targu Mures	7.29	324	⇑P	Pn	13 10 35.2	+0.9
BOVS	Bovan	7.30	296	⇑P	Pn	13 10 35.9	+1.4
BOVS	Bovan	7.30	296	*e*Pn	Pn	13 10 36.1	+1.6
PRAR	RASCA	7.32	335	⇑P	Pn	13 10 36.7	+2.0
HERR	Herculane	7.37	306	⇓P	Pn	13 10 35.6	+0.2
GZR	Gura Zlata	7.43	311	⇑P	Pn	13 10 36.6	+0.2
GZR	Gura Zlata	7.43	311	P	Pn	13 10 36.5	+0.2
GZR	Gura Zlata	7.43	311	*e*Pn	Pn	13 10 36.1	-0.2
SORM	Soroca	7.52	347	P	Pn	13 10 36.3	-1.1
SORM	Soroca	7.52	347	P	Pn	13 10 36.3	-1.1
	comp=Z,0.8nmcomp=Z,2µmcomp=Z,175nm,0.6s						
OHR	Ohrid	7.56	275	*i* Pn	Pn	13 10 40.5	+2.4
OHR	Ohrid	7.56	275	P	Pn	13 10 42.8	+4.7
OHR				pmax	pmax		
	comp=Z,23nm,1.0s						
OHR	Ohrid	7.56	275	*e*Pn	Pn	13 10 39.9	+1.8
SELS	Selova	7.58	292	*e*Pn	Pn	13 10 39.0	+0.6
KUBS	Kucevo	7.62	301	*e*Pn	Pn	13 10 36.5	-2.3
DEV	Deva	7.65	314	⇑P	Pn	13 10 40.4	+1.0
DEV	Deva	7.65	314	P	Pn	13 10 40.3	+1.0
MDVR	Moldovita	7.75	304	⇓P	Pn	13 10 42.4	+1.6
MDVR	Moldovita	7.75	304	*e*Pn	Pn	13 10 41.0	+0.2
ITM	Ithomi	7.79	245		Pn	13 10 42.2	+0.9
GOCS	Kraljevo Serbi	7.85	294	*e*Pn	Pn	13 10 42.5	+0.4
CJR	Cluj-Napoca	7.86	321	⇑P	Pn	13 10 43.4	+1.3
CJR	Cluj-Napoca	7.86	321	P	Pn	13 10 43.4	+1.3
SVIS	Svilajnac	7.86	299	*e*Pn	Pn	13 10 44.0	+1.9
BURAR	Bucovina Array	7.88	331		Pn	13 10 42.2	-0.4
BURAR	Bucovina Array	7.88	331	⇓P	Pn	13 10 44.8	+2.2
BURAR	Bucovina Array	7.88	331	P	Pn	13 10 44.7	+2.2
CBBR	Cluj-Babes-Bol	7.92	321	⇑P	Pn	13 10 44.1	+1.2
SURR	Surduc	8.01	311	⇑P	Pn	13 10 44.1	-0.1
GRUS	Gruza	8.06	296	*e*Pn	Pn	13 10 45.3	+0.4
MARR	Marisel-Cluj	8.06	319	⇓P	Pn	13 10 45.9	+0.9
VRSS	Vrsac	8.16	305	*e*Pn	Pn	13 10 46.0	-0.3
BZS	Buzias	8.23	309	⇓P	Pn	13 10 47.1	-0.1
BZS	Buzias	8.23	309	P	Pn	13 10 47.1	-0.1
BZS	Buzias	8.23	309	*e*Pn	Pn	13 10 46.5	-0.7
TIR	Tirane	8.26	277	*e*Pn	Pn	13 10 48.2	+0.5
DRGR		8.35	318	⇑P	Pn	13 10 50.1	+1.2
DRGR		8.35	318	P	Pn	13 10 50.1	+1.2
DRGR		8.35	318	*e*Pn	Pn	13 10 50.2	+1.2
IVAS	Ivanjica	8.36	293	*e*Pn	Pn	13 10 48.1	-1.0
TRUS	Trudelj	8.38	297	*e*Pn	Pn	13 10 49.7	+0.4
SJES	Sjenica	8.41	290	*e*Pn	Pn	13 10 49.7	-0.1
MESR	Meseseni	8.48	321	⇑P	Pn	13 10 51.0	+0.4
AVAS	Avala Beograd	8.49	301	*e*Pn	Pn	13 10 50.2	-0.6
KSV	Kosov	8.53	333	P	Pn	13 10 49.4	-2.0
BMR	Baia Mare	8.62	325	⇓P	Pn	13 10 53.6	+1.0
BMR	Baia Mare	8.62	325	P	Pn	13 10 53.5	+1.0
RAKU	Rahkiv	8.62	329	P	Pn	13 10 53.5	+0.9
MMAI	Mount Meron Ar	8.62	153	Pn	Pn	13 10 53.1	+0.4
	comp=Z,1.6nm,0.3s,baz=324,slow=14,SNR=2.7						
MMAI				LR	LR	13 14 56.5	
	comp=Z,407nm,19.0s,baz=310,slow=43						
	comp=Z,3.1nm,0.5s						
DIVS	Divibare	8.62	296	*e*Pn	Pn	13 10 53.2	+0.5
PDG	Podgorica	8.78	284		Pn	13 10 55.6	+0.8
PDG	Podgorica	8.78	284	⇓P	Pn	13 10 56.3	+1.5
PDG	Podgorica	8.78	284	*e*Pn	Pn	13 10 57.2	+2.4
HORU	Horodok	8.94	341	P	Pn	13 10 55.7	-1.3
HORU	Horodok	8.94	341	P	Pn	13 10 55.4	-1.6
STNU	Starunia	9.06	333	P	Pn	13 10 58.5	-0.2
TEKS	Tekeris	9.09	298	*e*Pn	Pn	13 10 58.6	-0.4
FRGS	Fruska Gora	9.13	302	*e*Pn	Pn	13 10 59.2	-0.4
KORU	Korolevo	9.14	326	P	Pn	13 10 59.6	-0.1
MEZ	Mezhgor'ye	9.27	329	P	Pn	13 11 00.6	-0.9
SHA1	Shidzhatmaz	9.27	68	⇓*e*P	Pn	13 11 02.6	+0.8
BRIU	Brid	9.33	326	P	Pn	13 11 02.9	+0.6
HAPS	Han Pijesak,Bl	9.34	294	*e*Pn	Pn	13 11 02.7	+0.2
LUBAR	Lubar, Ukraine	9.35	348	P	Pn	13 11 00.7	-1.8
KIV	Kislovodsk	9.35	66		Pn	13 11 02.5	-0.1
KIV	Kislovodsk	9.35	66	*e*P	Pn	13 11 03.4	+0.7
KIV				*e*S	Sn	13 12 50.7	+2.8
KIV				pmax	pmax		
	comp=Z,14nm,1.0s						
KIV	Kislovodsk	9.35	66	P	Pn	13 11 01.9	-0.8
	comp=Z,298nmcomp=Z,25nm,1.0s						
KVAR	Kislovodsk Arr	9.36	66	Pn	Pn	13 11 01.4	-1.3
	baz=270,slow=20						
KVAR				Sn	Sn	13 12 54.0	+5.9
	baz=274,slow=16						
	comp=Z,2.1nm,0.5s						
BERU	Beregovo	9.41	325	P	Pn	13 11 03.3	-0.1
KBZ	Khabaz	9.44	68	Pn	Pn	13 11 03.1	-0.7
	comp=Z,0.3nm,0.3s,baz=252,slow=6.4,SNR=6.2						
KBZ				Sn	Sn	13 12 54.2	+4.4
	comp=Z,0.4nm,0.3s,baz=223,slow=18,SNR=1.1						
KBZ				LR	LR	13 14 57.3	
	comp=Z,253nm,19.0s,baz=272,slow=40						
	comp=Z,1.7nm,0.7s						
KBZ	Khabaz	9.44	68	⇓*e*P	Pn	13 11 05.8	+2.0
MUKU	Mukachevo	9.56	326	P	Pn	13 11 05.5	0.0
HOLU	Holmets	9.75	325	P	Pn	13 11 09.1	+1.1
AK07	Malin Array Si	9.80	354	P	Pn	13 11 07.0	-1.6
AK06	Malin Array Si	9.83	354	P	Pn	13 11 07.5	-1.6
AK10	Malin Array Si	9.84	354	P	Pn	13 11 07.8	-1.5
AK09	Malin Array Si	9.85	354	P	Pn	13 11 07.6	-1.8
AK05	Malin Array Si	9.87	354	P	Pn	13 11 07.8	-1.8
AK13	Malin Array Si	9.87	354	P	Pn	13 11 07.9	-1.7
AK08	Malin Array Si	9.88	354	P	Pn	13 11 07.9	-1.8
AK14	Malin Array Si	9.88	354	P	Pn	13 11 08.0	-1.8
AK12	Malin Array Si	9.89	354	P	Pn	13 11 08.2	-1.8
AK02	Malin Array Si	9.90	354	P	Pn	13 11 08.3	-1.8
AK16	Malin Array Si	9.92	354	P	Pn	13 11 08.6	-1.8
AK11	Malin Array Si	9.93	354	P	Pn	13 11 08.6	-1.8
ASF	Jabal al Asfar	9.93	148	Pn	Pn	13 11 10.3	-0.4
	comp=Z,0.2nm,0.3s,baz=288,slow=3.2,SNR=5.7						
ASF				LR	LR	13 15 48.1	
	comp=Z,312nm,19.2s,baz=7.8,slow=42						
	comp=Z,4.4nm,0.8s						
AK01	Malin Array Si	9.94	354	P	Pn	13 11 08.7	-1.8
GOF	Gofitskoye	9.94	61	*ce*P	Pn	13 10 59.9	-11
KIEV	Kiev	9.94	354		Pn	13 11 08.4	-2.2
KIEV	Kiev	9.94	354	P	Pn	13 11 09.1	-1.5
KIEV				pmax	pmax		
	comp=Z,105nm,0.7s						
KIEV	Kiev	9.94	354	P	Pn	13 11 08.9	-1.7
	comp=Z,3µmcomp=Z,415nm,0.7s						
AK17	Malin Array Si	9.94	354	P	Pn	13 11 08.8	-1.8
AKASG	Malin Array Be	9.94	354		Pn	13 11 08.5	-2.2
AKASG	Malin Array Be	9.94	354	Pn	Pn	13 11 09.0	-1.7
	comp=Z,12nm,0.4s,baz=179,slow=12,SNR=91						
AKASG				Sn	Sn	13 12 54.6	-7.6
	comp=Z,8.6nm,0.3s,baz=176,slow=22,SNR=5.4						
AKASG				LR	LR	13 15 58.3	
	comp=Z,413nm,18.2s,baz=190,slow=44						
AKASG	Malin Array Be	9.94	354	P	Pn	13 11 09.0	-1.7
AKBB	Malin Array Si	9.94	354	*ce*P	Pn	13 11 09.0	-1.7
AKBB	Malin Array Si	9.94	354	P	Pn	13 11 08.9	-1.7
AK15	Malin Array Si	9.95	354	P	Pn	13 11 08.9	-1.8
AK03	Malin Array Si	9.97	354	P	Pn	13 11 09.4	-1.6
AK04	Malin Array Si	9.97	354	P	Pn	13 11 09.4	-1.6
AK18	Malin Array Si	9.98	354	P	Pn	13 11 09.4	-1.7
AK19	Malin Array Si	9.98	353	P	Pn	13 11 09.5	-1.7
AK20	Malin Array Si	10.00	354	P	Pn	13 11 09.8	-1.7
AK23	Malin Array Si	10.01	354	P	Pn	13 11 09.9	-1.7
AK22	Malin Array Si	10.02	354	P	Pn	13 11 09.9	-1.7
AK21	Malin Array Si	10.03	354	P	Pn	13 11 10.2	-1.7
KOLS	Kolonicke sedl	10.11	326	*e*P	Pn	13 11 16.1	+3.1
KOLS	Kolonicke sedl	10.11	326	*e*PN	Pn	13 11 16.1	+3.1
GHAJ	Ghor Haditha	10.25	156		Pn	13 11 15.8	+0.9
MORH	Mrgy, Hungar	10.33	305	⇓P	Pn	13 11 16.1	+0.1
MI28	Mi28,Pidlybu	10.34	349	P	Pn	13 11 14.4	-1.7
PSZ	Piszkesteto	10.54	316		Pn	13 11 19.6	+0.8
PSZ	Piszkesteto	10.54	316	⇓P	Pn	13 11 20.3	+1.4
PSZ	Piszkesteto	10.54	316	P	Pn	13 11 20.3	+1.4
PSZ	Piszkesteto	10.54	316	*e*P	Pn	13 11 23.6	+4.7
GNI	Garni	10.66	89	Pn	Pn	13 11 26.3	+5.6
	comp=Z,0.9nm,0.3s,baz=241,slow=6.1,SNR=14						
GNI	Garni	10.66	89	*c* *i*P	Pn	13 11 27.6	+6.9
MATE	Matera	10.69	274	⇑P	Pn	13 11 21.4	+0.6
TIP	Timpagrande	10.88	266		Pn	13 11 23.9	+0.2
TIP	Timpagrande	10.88	266	P	Pn	13 11 23.9	+0.2
	comp=Z,19nm,1.1s						
STHS	Stebnicka Huta	10.92	325	*e*P	Pn	13 11 25.9	+1.9
STHS	Stebnicka Huta	10.92	325	*e*PN	Pn	13 11 25.9	+1.9
RNPP5	Staryi Chortor	10.95	344	P	Pn	13 11 22.1	-2.4
RNPP8	Varash	11.06	344	P	Pn	13 11 24.0	-1.9
RNPP9	Sopachiv	11.12	344	P	Pn	13 11 24.9	-1.9
NIE	Niedzica	11.34	323	*e*P	Pn	13 11 31.1	+1.2
NIE	Niedzica	11.34	323	P	Pn	13 11 31.6	+1.8
NIE				pmax	pmax		
	comp=Z,19nm,0.9s						

NIE	**Niedzica**	11.34	323	P	Pn	13 11 30.8	+1.0
	comp=Z,19nm,0.9s						
CUC	**Castrocucco**	11.45	271		Pn	13 11 31.3	0.0
VYHS	**Vyhne**	11.45	316	*e*P	Pn	13 11 33.1	+1.8
VYHS	**Vyhne**	11.45	316	*e*PN	Pn	13 11 33.1	+1.8
LANS	**Liptovska Anna**	11.55	320	*e*P	Pn	13 11 35.5	+2.8
LANS	**Liptovska Anna**	11.55	320	*e*PN	Pn	13 11 35.5	+2.8
EIL	**Elat**	11.63	162	Pn	Pn	13 11 33.9	0.0
	comp=Z,0.5nm,0.3s,baz=355,slow=11,SNR=6.7						
EIL				LR	LR	13 17 04.5	
	comp=Z,294nm,18.1s,baz=248,slow=43						
	comp=Z,9.2nm,0.8s						
CEL	**Celeste**	11.78	262	P	Pn	13 11 35.6	-0.3
	comp=Z,37nm,1.2s						
VSR	**Storozhevoye**	11.91	26	*e*P	Pn	13 11 38.0	+0.4
VSR				pmax	pmax		
	comp=Z,20nm,0.9s						
OJC	**Ojcow**	12.14	324	*e*P	Pn	13 11 40.0	-0.7
PAOL	**Paolisi**	12.27	276		Pn	13 11 42.5	-0.1
VORR	**Voronezh**	12.31	25	*e*P	Pn	13 11 41.0	-2.1
VORR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
RONA	**Rosalia, Austr**	12.45	308	*e*Pn	Pn	13 11 45.1	+0.2
	comp=Z,0.6nm,0.5s						
MAUC	**Maruska**	12.51	317	*e*PN	Pn	13 11 51.1	+5.3
MAK	**Makhachkala**	12.65	75	*e*P	Pn	13 11 44.4	-3.3
MAK				*e*S	Sn	13 14 03.7	-4.8
MAK				pmax	pmax		
	comp=Z,136nm,1.0s						
MAK				MLR	MLR		
	comp=Z,581nm,15.0s						
ARSA	**Arzberg**	12.71	305	*e*Pn	Pn	13 11 48.4	-0.2
	comp=Z,0.9nm,0.4s						
INTR	**Introdacqua**	12.73	281		Pn	13 11 49.8	+0.9
AKT	**Akhty**	12.79	81	*e*P	Pn	13 11 54.8	+5.0
AKT				pmax	pmax		
	comp=Z,3.0nm,0.5s						
CONA	**Conrad Observa**	12.81	309	*e*Pn	Pn	13 11 49.8	-0.3
	comp=Z,4.4nm,1.1s						
VRH	**Novokhopyorsk**	12.86	32	*e*P	Pn	13 11 51.2	+0.7
VRH				pmax	pmax		
	comp=Z,49nm,0.8s						
MORC	**Moravsky Berou**	12.91	318	*e*PN	Pn	13 11 52.5	+1.2
MORC	**Moravsky Berou**	12.91	318	⇑P	Pn	13 11 52.4	+1.0
MORC	**Moravsky Berou**	12.91	318	P	Pn	13 11 52.3	+1.0
LPSR	**Galich'ya Gora**	13.03	23	*e*P	Pn	13 11 51.7	-1.2
LPSR				pmax	pmax		
	comp=Z,48nm,0.6s						
OBKA	**Obir**	13.05	301	*e*Pn	Pn	13 11 54.6	+1.3
	comp=Z,1.4nm,0.6s						
KRUC	**Moravsky**	13.09	314	*e*PN	Pn	13 11 54.6	+0.9
AQU	**L'Aquila**	13.11	282	P	Pn	13 11 57.0	+3.0
AQU				pmax	pmax		
	comp=Z,24nm,0.9s						
VRAC	**Vranov**	13.12	315	Pn	Pn	13 11 55.3	+1.2
	comp=Z,0.2nm,0.3s,baz=131,slow=16,SNR=2.3						
VRAC				LR	LR	13 17 14.6	
	comp=Z,183nm,18.8s,baz=128,slow=39						
	comp=Z,1.8nm,0.7s						
VRAC	**Vranov**	13.12	315	*e*PN	Pn	13 11 55.2	+1.0
KRLC	**Kraliky**	13.48	318	*e*PN	Pn	13 12 02.0	+2.9
KRLC	**Kraliky**	13.48	318	*e*P	Pn	13 12 02.0	+2.9
MYKA	**Terra Mystica**	13.68	301	*e*Pn	Pn	13 12 03.3	+1.5
	comp=Z,6.6nm,1.0s						
MOA	**Molln**	13.74	306	*e*Pn	Pn	13 12 02.5	-0.1
	comp=Z,0.7nm,0.5s						
MNK	**Minsk**	13.83	353	*i* P	Pn	13 11 59.4	-4.4
	comp=E,150nm,1.1s						
MNK				*i* P	Pn	13 11 59.4	-4.4
	comp=N,76nm,1.1s						
MNK				*i* P	Pn	13 11 59.4	-4.4
	comp=Z,111nm,0.9s,baz=171						
MNK				*i* PP	PnPn	13 12 06.6	-5.0
MNK				*i* S	Sn	13 14 33.3	-3.9
MNK				*i* SS	SnSn	13 14 46.6	-3.0
MNK				*i* LR	LR	13 17 02.4	
MNK				*i* LRM	MLR	13 17 59.0	
	comp=Z,371nm,16.2s						
MNK	**Minsk**	13.83	353	*i* P	Pn	13 11 59.3	-4.4
MNK				*i* S	Sn	13 14 33.3	-3.9
MNK				pmax	pmax		
	comp=Z,111nm,0.9s						
MNK				pmax	pmax		
	comp=N,76nm,1.1s						
MNK				pmax	pmax		
	comp=E,150nm,1.1s						
MNK				MLR	MLR		
	comp=Z,371nm,16.0s						
DPC	**Dobruska-Polom**	13.88	318	*e*PN	Pn	13 12 07.6	+3.0
DPC	**Dobruska-Polom**	13.88	318	*e*P	Pn	13 12 07.6	+3.0
KBA	**Koelnbreinsper**	14.02	302	*e*Pn	Pn	13 12 08.3	+1.7
	comp=Z,9.7nm,1.3s						
CKRC	**Cesky Krumlov**	14.15	310	*e*PN	P	13 12 13.6	-2.2
CKRC	**Cesky Krumlov**	14.15	310	*e*P	P	13 12 13.6	-2.2
SUW	**Suwalki**	14.15	341	*e*P	Pn	13 12 08.6	+0.4
SUW	**Suwalki**	14.15	341	*e*P	Pn	13 12 06.1	-2.1
KSP	**Ksiaz**	14.21	320	*e*P	Pn	13 12 11.1	+2.1
KSP	**Ksiaz**	14.21	320	P	P	13 12 14.8	-1.6
KSP				pmax	pmax		
	comp=Z,11nm,1.3s						
KSP	**Ksiaz**	14.21	320	P	Pn	13 12 08.5	-0.4
	comp=Z,11nm,1.3s						
NACGM	**Naroch**	14.34	351⇓	*i*P	Pn	13 12 07.4	-3.4
	comp=Z,161nm,1.1s,baz=165						
ABTA	**Abfaltersbach**	14.46	300	*e*Pn	Pn	13 12 13.0	+0.6
	comp=Z,9.8nm,1.3s						
GERES	**GERESS Array B**	14.51	309	Pn	Pn	13 12 12.4	-0.9
	baz=123,slow=13,SNR=4.4						
	comp=Z,0.5nm,0.9s						
LESA	**Schwarzleotal**	14.57	303	*e*Pn	Pn	13 12 16.3	+2.3
	comp=Z,7.7nm,1.5s						
PRU	**Pruhonice**	14.61	314	P	Pn	13 12 17.4	+2.9
PRU				pmax	pmax		
	comp=Z,7.0nm,1.4s						
KHC	**Kasperske Hory**	14.72	310	*e*PN	P	13 12 21.9	-0.3
KHC	**Kasperske Hory**	14.72	310⇑	*e*P	Pn	13 12 18.9	+2.9
IDID	**Didziasalis**	14.75	351	*e*P	Pn	13 12 13.0	-3.4
OBN	**Obninsk**	14.81	13		Pn	13 12 14.4	-2.7
OBN	**Obninsk**	14.81	13	Pn	Pn	13 12 14.7	-2.5
	comp=Z,6.6nm,0.3s,baz=176,slow=18,SNR=6.5						
OBN	**Obninsk**	14.81	13*d*	*i*P	Pn	13 12 14.2	-2.9
OBN				*e*S	Sn	13 15 00.8	-0.3
OBN				pmax	pmax		
	comp=Z,29nm,0.7s						
OBN				MLR	MLR		
	comp=Z,249nm,17.0s						
OBN	**Obninsk**	14.81	13	P	Pn	13 12 14.1	-3.0
	comp=Z,43nm,0.6s						
ISAL	**Salakas**	15.08	350	*e*P	Pn	13 12 17.8	-3.0
WET	**Wettzell**	15.13	309	P	P	13 12 27.7	+0.9
WET				pmax	pmax		
	comp=Z,12nm,1.0s						
WTTA	**Wattenberg**	15.18	301	*e*Pn	Pn	13 12 23.9	+1.6
	comp=Z,9.0nm,1.1s						
WATA	**Walderalm**	15.24	302	*e*Pn	Pn	13 12 25.0	+1.8
	comp=Z,11nm,1.1s						
PABE	**Paberze**	15.37	345	*e*P	Pn	13 12 22.9	-1.7
BRG	**Berggiesshubel**	15.42	316	P	P	13 12 30.8	+0.9
BRG				pmax	pmax		
	comp=Z,5.0nm,1.4s						
BRG	**Berggiesshubel**	15.42	316	*e*P	P	13 12 30.7	+0.9
BRG				Amp		13 12 33.4	
	comp=Z,4.9nm,1.1s						
SQTA	**Sankt Quirin**	15.45	301	*e*Pn	Pn	13 12 27.4	+1.6
	comp=Z,6.3nm,0.9s						
MOTA	**Moosalm**	15.55	301	*e*P	Pn	13 12 29.3	+2.0
	comp=Z,19nm,1.3s						
MOS	**Moscow**	15.60	15	*e*P	Pn	13 12 24.0	-3.5
MOS				*e*S	Sn	13 15 14.9	-5.3
MOS				pmax	pmax		
	comp=Z,89nm,1.1s						
FETA	**Feichten**	15.71	300	*e*Pn	Pn	13 12 30.4	+1.2
	comp=Z,9.4nm,1.0s						
RETA	**Reutte**	15.82	302	*e*Pn	P	13 12 32.5	-1.9
	comp=Z,9.8nm,0.8s						
VSVD	**Vaisvydziai**	15.83	346	*e*P	Pn	13 12 29.6	-0.9
CLL	**Collm**	16.15	316	*e*P	Pn	13 12 35.0	+0.2
CLL				pmax	pmax		
	comp=Z,10.0nm,1.4s						
CLL	**Collm**	16.15	316	P	Pn	13 12 35.0	+0.2
	comp=Z,9.7nm,1.4s						
CLL	**Collm**	16.15	316	*e*P	Pn	13 12 35.0	+0.2
	comp=Z,10.0nm,1.4s						
CLL				*i* sP	P	13 12 38.3	+0.3
	comp=Z,19nm,1.6s						
CLL				*i* PP	PnPn	13 12 45.3	+1.8
CLL				AMS	AMS	13 16 00.0	
	comp=Z,200nm,21.9s						
DAVOX	**Davos/Dischmat**	16.21	299	Pn	Pn	13 12 34.5	-1.2
	comp=Z,0.1nm,0.3s,baz=114,slow=18,SNR=5.2						
	comp=Z,0.5nm,0.4s						
PBUR	**Paburge**	16.29	342	*e*P	Pn	13 12 35.6	-0.8
BELG	**Belogornoye**	16.32	39	Pn	Pn	13 12 35.4	-1.5
	comp=Z,2.2nm,0.3s,baz=246,slow=0.9,SNR=11						
BELG				LR	LR	13 20 26.8	
	comp=Z,201nm,18.2s,baz=236,slow=43						
BELG	**Belogornoye**	16.32	39	*i* P	Pn	13 12 34.6	-2.3
BELG				pmax	pmax		
	comp=Z,11nm,0.8s						
DAVA	**Damuels**	16.34	300	*e*Pn	Pn	13 12 38.6	+1.3
	comp=Z,31nm,1.1s						
MOX	**Moxa**	16.56	313	P	P	13 12 41.6	-0.9
MOX				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KEST	**Kesra**	17.57	260	P	P	13 12 54.8	+1.0
	comp=Z,0.1nm,0.3s,baz=55,slow=11,SNR=12						
	comp=Z,9.9nm,0.9s						
BFO	**Black Forest**	17.63	303		P	13 12 54.5	+0.1
BFO	**Black Forest**	17.63	303	P	P	13 12 54.5	+0.1
BFO				pmax	pmax		
	comp=Z,24nm,1.3s						
BSD	**Bornholm Skovb**	17.75	329	*e*P	P	13 12 55.6	-0.1
BSD	**Bornholm Skovb**	17.75	329	*i* P	Pn	13 12 54.6	-0.3
VSU	**Vasula**	17.85	353*d*	*i*P	Pn	13 12 51.5	-4.5
VSU				pmax	pmax		
	comp=Z,74nm,0.8s						
VSU	**Vasula**	17.85	353	*e*P	Pn	13 12 51.9	-4.1
BNI	**Bardonecchia**	18.13	292	IAmb	IAmb	13 13 10.1	
	comp=Z,31nm,1.2s						
BNI	**Bardonecchia**	18.13	292	P	P	13 13 04.1	+4.0
BNI				pmax	pmax		
	comp=Z,81nm,1.2s						
TNS	**Taunus Mts**	18.20	309	P	Pn	13 12 58.3	-2.2
TNS				pmax	pmax		
	comp=Z,9.0nm,1.6s						
ECH	**Echery**	18.35	302	IAmb	IAmb	13 13 07.6	
	comp=Z,44nm,1.5s						
MTSE	**Matsula**	18.45	348	*e*P	P	13 13 02.8	-0.5
ORIF	**Oris-en-Rattie**	18.68	291	P	Pn	13 13 09.5	+3.0
ORIF				pmax	pmax		
	comp=Z,14nm,1.4s						
LUNU	**Lund**	18.71	328	*i* P	Pn	13 13 07.3	+0.7
BSEG	**Bad Segeberg**	18.99	321	P	Pn	13 13 09.8	-0.2
BSEG				pmax	pmax		
	comp=Z,18nm,1.1s						
DEL	**Delary**	19.15	331	*i* P	P	13 13 09.4	-1.6
WLF	**Walferdange**	19.40	305	*d*P	Pn	13 13 15.2	+0.2
SSB	**Saint Sauveur**	19.65	292	P	Pn	13 13 21.0	+2.9
SSB				pmax	pmax		
	comp=Z,12nm,1.1s						
BHOU	**Houvegnez**	19.71	307	*d*P	Pn	13 13 19.9	+1.2
BTNL	**Ternell**	19.71	308	*d*P	Pn	13 13 22.5	+3.8
MEM	**Membach**	19.79	308	P	Pn	13 13 20.9	+1.3
MEM				pmax	pmax		
	comp=Z,19nm,1.8s						
MEM	**Membach**	19.79	308	*d*P	Pn	13 13 20.6	+0.9
MEF	**Metsahovi**	19.82	351	*e*P	P	13 13 18.1	-0.3
FABU	**Falkenberg**	19.98	330	*i* P	P	13 13 19.3	-0.7
BCLA	**Clavier**	20.15	307	*d*P	Pn	13 13 24.6	+0.6
BGES	**Gesves**	20.27	307	*d*P	Pn	13 13 25.8	+0.4
LOR	**Lormes**	20.34	297	P	Pn	13 13 26.4	+0.2
LOR				pmax	pmax		
	comp=Z,36nm,1.1s						
BORU	**Boraas**	20.42	332	*i* P	P	13 13 23.9	-1.0
BMRD	**Maredsous**	20.44	306	*d*P	Pn	13 13 27.3	0.0
DOU	**Dourbes**	20.49	306	*d*P	Pn	13 13 27.6	-0.2
KLMR	**Klimovskoe**	20.77	12	*e*P	Pn	13 13 41.7	+11
KLMR				pmax	pmax		
	comp=Z,41nm,1.3s						
FIA1	**FINESS Array S**	20.85	354	P	P	13 13 29.4	-0.1
FINES	**FINESS Array B**	20.85	354	P	P	13 13 29.0	-0.5
FINES	**FINESS Array B**	20.85	354	P	P	13 13 28.9	-0.6
	comp=Z,19nm,0.7s,baz=172,slow=10,SNR=32						
FINES				S	S	13 17 09.5	-12
	comp=Z,4.8nm,0.6s,baz=180,slow=16,SNR=4.9						
	comp=Z,19nm,0.7s						
FINES	**FINESS Array B**	20.85	354	*i* P	Pn	13 13 31.8	-0.2
FINES				pmax	pmax		
	comp=Z,34nm,0.7s						
RAF	**Rauma**	20.98	348	*e*P	P	13 13 30.6	-0.2
RAYN	**Ar Rayn**	21.22	140	P	P	13 13 34.3	+0.4
RAYN				IAmb	IAmb	13 13 42.2	
	comp=Z,17nm,1.1s						
RAYN	**Ar Rayn**	21.22	140	P	P	13 13 34.3	+0.4
RAYN				pmax	pmax		
	comp=Z,17nm,1.1s						
AKTO	**Aktyubinsk**	21.23	54	P	P	13 13 33.5	-0.2
	comp=Z,16nm,0.8s,baz=256,slow=13,SNR=10						
	comp=Z,16nm,0.8s						
MTLF	**Montolieu**	21.31	286	P	P	13 13 35.7	+1.1
MTLF				pmax	pmax		
	comp=Z,16nm,1.5s						
KIRV	**Kirov**	21.35	27	P	P	13 13 34.6	-0.3
	comp=Z,24nm,0.6s,baz=228,slow=9.0,SNR=18						
KIRV				LR	LR	13 22 10.2	
	comp=Z,184nm,18.3s,baz=226,slow=38						
	comp=Z,24nm,0.6s						
KIRV	**Kirov**	21.35	27*c*	*i*P	P	13 13 34.3	-0.6
CLF	**Chambon-Foret**	21.52	299	P	P	13 13 36.9	0.0
CLF				IAmb	IAmb	13 13 43.7	
	comp=Z,52nm,1.3s						
KEF	**Keuruu**	21.68	352	*e*P	P	13 13 38.5	+0.1
HFS	**Hagfors**	22.06	337	P	P	13 13 42.3	-0.2
	comp=Z,16nm,0.9s,baz=143,slow=9.9,SNR=15						
HFS				S	S	13 17 45.0	-0.4
	comp=Z,5.7nm,0.8s,baz=132,slow=26,SNR=3.8						
HFS				LR	LR	13 24 09.1	
	comp=Z,231nm,18.5s,baz=146,slow=42						
	comp=Z,16nm,0.9s						
AB31	**Akbulak array**	22.16	58	P	P	13 13 43.4	-0.3
AB31				IAmb	IAmb	13 13 53.8	
	comp=Z,9.6nm,0.8s						
ABKAR	**Akbulak array**	22.16	58	P	P	13 13 43.2	-0.5
HOMB	**Homborsund**	22.49	328	*e*P	P	13 13 47.7	+0.6
VAF	**Ylistaro**	22.78	350	*e*P	P	13 13 50.4	+0.3
OSL	**Oslo**	22.85	334	*e*P	P	13 13 51.2	+0.3
KONO	**Kongsberg**	23.03	332	P	P	13 13 53.4	+0.6
KONO	**Kongsberg**	23.03	332⇓	*i*P	P	13 13 53.7	+0.9
KONO				pmax	pmax		
	comp=Z,45nm,1.1s						
KONO	**Kongsberg**	23.03	332	*e*P	P	13 13 54.1	+1.3
KONO				IAmb	IAmb	13 13 56.9	
	comp=Z,31nm,1.0s						
NC602	**NORSAR Array S**	23.19	336	IAmb	IAmb	13 14 02.1	
	comp=Z,23nm,1.0s						
NC602	**NORSAR Array S**	23.19	336	*e*P	P	13 13 55.5	+1.0
NC602				IAmb	IAmb	13 14 01.8	
	comp=Z,29nm,1.1s						
NB201	**NORSAR Array S**	23.51	336	IAmb	IAmb	13 14 03.5	
	comp=Z,29nm,1.1s						
NB2	**NORSAR Subarra**	23.53	336	P	P	13 13 57.4	-0.5
	comp=Z,29nm,1.1s,baz=141,slow=9.3						
NB2	**NORSAR Subarra**	23.53	336	P	P	13 13 57.4	-0.5
	baz=141,slow=9.3						
NOA	**NORSAR Array B**	23.53	336	P	P	13 13 56.4	-1.4
	comp=Z,3.6nm,0.8s,baz=141,slow=9.8,SNR=18						
NOA				S	S	13 18 12.6	+1.0
	comp=Z,0.4nm,0.7s,baz=139,slow=20,SNR=2.1						
NOA				LR	LR	13 24 45.7	
	comp=Z,257nm,19.3s,baz=145,slow=41						
	comp=Z,3.6nm,0.8s						
NC303	**NORSAR Array S**	23.62	336	IAmb	IAmb	13 14 09.1	
	comp=Z,19nm,0.8s						
ARTI	**Arti**	23.77	40	P	P	13 13 58.7	-1.5
ARTI	**Arti**	23.77	40*c*	*i*P	P	13 13 59.6	-0.6
ARTI						13 14 27.1	
ARTI				S	S	13 18 16.0	+0.7
ARTI				pmax	pmax		
	comp=Z,28nm,2.8s						
NC204	**NORSAR Array S**	23.85	336	IAmb	IAmb	13 14 12.1	
	comp=Z,17nm,0.8s						
SKAR	**Skarslia**	24.22	333	*e*P	P	13 14 05.3	+0.8
SKAR				IAmb	IAmb	13 14 07.0	
	comp=Z,68nm,1.8s						
ODD1	**Odda**	24.30	330	*e*P	P	13 14 06.6	+1.3
OUL	**Oulu**	24.47	355	P	P	13 14 07.0	+0.4
OUL				pmax	pmax		
	comp=Z,27nm,0.7s						
SVE	**Sverdlovsk**	25.07	40	*e*P	P	13 14 13.6	+1.4
SVE				pmax	pmax		
	comp=Z,26nm,1.5s						
MSF	**Maaselka**	25.16	358	P	P	13 14 11.5	-1.4
MSF				pmax	pmax		
	comp=Z,31nm,0.8s						
AKN	**Aaknes**	25.73	334	*e*P	P	13 14 21.8	+3.7
NSS	**Namsos**	26.14	342	*e*P	P	13 14 22.6	+0.9
ESBB	**Sonseca Array**	26.44	279	P	P	13 14 24.5	-0.4
UOSS	**Minazif**	26.44	119	P	P	13 14 24.6	-0.3
UOSS				IAmb	IAmb	13 14 49.1	
	comp=Z,12nm,0.8s						
ESDC	**Sonseca Array**	26.45	279	P	P	13 14 23.7	-1.1
ESDC	**Sonseca Array**	26.45	279	P	P	13 14 25.1	+0.2
	comp=Z,3.1nm,0.9s,baz=76,slow=9.1,SNR=27						
	comp=Z,3.1nm,0.9s						
EKA	**Eskdalemuir Ar**	26.60	315	P	P	13 14 26.3	+0.3
	comp=Z,2.2nm,0.7s,baz=109,slow=10.0,SNR=4.6						
	comp=Z,2.2nm,0.7s						
PAB	**San Pablo**	26.77	279	P	P	13 14 27.8	0.0
PAB				IAmb	IAmb	13 14 36.8	
	comp=Z,10nm,1.1s						
PAB	**San Pablo**	26.77	279	P	P	13 14 27.8	0.0
PAB				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MOR8	**Moi Rana**	27.02	345	*e*P	P	13 14 30.8	+1.1
ARA0	**ARCESS Array S**	28.91	356	*e*P	P	13 14 41.4	-5.2
ARCES	**ARCESS Array B**	28.91	356	P	P	13 14 47.1	+0.6
ARCES	**ARCESS Array B**	28.91	356	P	P	13 14 47.2	+0.6
	comp=Z,12nm,0.7s,baz=170,slow=11,SNR=22						
	comp=Z,12nm,0.7s						
BRVK	**Borovoye**	29.23	52⇑	*e*P	P	13 14 50.0	+0.4
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
BVAR	**Borovoye Array**	29.29	52	P	P	13 14 50.8	+0.7
	comp=Z,0.5nm,0.5s,baz=264,slow=9.6,SNR=3.9						
	comp=Z,0.5nm,0.5s						
KK31	**Karatay Array**	29.44	72	IAmb	IAmb	13 14 56.1	
	comp=Z,9.4nm,1.1s						
KKAR	**Karatay Array**	29.44	72	P	P	13 14 51.6	0.0
KKAR	**Karatay Array**	29.44	72	IAmb	IAmb	13 14 56.1	
	comp=Z,9.8nm,1.1s						
KKAR	**Karatay Array**	29.44	72	P	P	13 14 51.6	0.0
AAK	**Ala-Archa**	32.41	72*d*	*e*P	P	13 15 19.5	+1.6
AAK				pmax	pmax		
	comp=Z,19nm,1.7s						
NRN	**Naryn**	33.77	74	IAmb	IAmb	13 15 34.7	
	comp=Z,14nm,1.4s						
KURBB	**Kurchatov Arra**	34.21	57	P	P	13 15 33.6	+0.3
	comp=Z,3.0nm,0.8s,baz=278,slow=9.2,SNR=4.2						
KURBB				PcP	PcP	13 18 11.2	+1.3
	comp=Z,1.0nm,0.9s,baz=270,slow=3.5,SNR=3.9						
	comp=Z,3.0nm,0.8s						
KURK	**Kurchatov**	34.26	57	P	P	13 15 33.6	-0.1
KURK				IAmb	IAmb	13 15 35.8	
	comp=Z,6.7nm,1.2s						
KURK	**Kurchatov**	34.26	57*d*	*i*P	P	13 15 34.3	+0.5
KURK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
NIL	**Nilore**	34.30	88	P	P	13 15 35.2	+0.9
NIL	**Nilore**	34.30	88	P	P	13 15 35.2	+0.9
NIL				pmax	pmax		
	comp=Z,19nm,0.9s						
MK31	**Makanchi Array**	37.09	63*d*	*i*P	P	13 15 58.9	+0.7
MKAR	**Makanchi Array**	37.09	63	P	P	13 15 58.3	+0.1
MKAR	**Makanchi Array**	37.09	63	P	P	13 15 58.6	+0.4
	comp=Z,5.6nm,0.5s,baz=280,slow=7.0,SNR=33						
MKAR				PcP	PcP	13 18 17.8	-0.7
	comp=Z,0.7nm,0.8s,baz=279,slow=2.8,SNR=1.8						
	comp=Z,5.6nm,0.5s						
MKAR	**Makanchi Array**	37.09	63	*i* P	P	13 15 58.7	+0.5
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
TORD	**Torodi Ar. Bea**	37.51	231	P	P	13 16 01.3	-0.7
	comp=Z,16nm,0.7s,baz=38,slow=9.6,SNR=18						
	comp=Z,16nm,0.7s						
SPITS	**Spitsbergen Ar**	37.93	355	P	P	13 16 04.9	0.0
	comp=Z,7.9nm,1.0s,baz=145,slow=10,SNR=4.8						
	comp=Z,7.9nm,1.0s						
ZALV	**Zalesovo Beam**	37.94	51	P	P	13 16 04.5	-0.7
ZALV	**Zalesovo Beam**	37.94	51	P	P	13 16 05.3	+0.1
	comp=Z,1.0nm,0.4s,baz=272,slow=8.4,SNR=6.2						
	comp=Z,1.0nm,0.4s						
BORG	**Borgarnes**	37.99	327	LR	LR	13 31 58.2	
	comp=Z,118nm,18.8s,baz=134,slow=37						
SCO	**Scoresbysund**	39.85	335	IAmb	IAmb	13 16 26.9	
	comp=Z,14nm,1.0s						
SCO	**Scoresbysund**	39.85	335	*i* P	P	13 16 23.9	+2.9
NRIK	**Noril'sk**	40.86	27	P	P	13 16 27.8	-1.6
	comp=Z,3.9nm,1.0s,baz=263,slow=11,SNR=4.9						
NRIK				PP	PP	13 18 02.6	-0.7
	comp=Z,6.6nm,0.9s,baz=251,slow=9.2,SNR=7.0						
NRIK				LR	LR	13 35 35.4	
	comp=Z,187nm,18.7s,baz=298,slow=40						
	comp=Z,3.9nm,1.0s						
NRIK	**Noril'sk**	40.86	27⇑	*e*P	P	13 16 30.5	+1.2
NRIK				pmax	pmax		
	comp=Z,9.0nm,1.5s						
WMQ	**Urumqi**	41.48	66	*e*P	P	13 16 35.8	+0.9
WMQ				pP	sP	13 16 40.9	+1.2
WMQ				PP	PnPn	13 18 15.4	+0.1
WMQ				PcP	PcP	13 18 34.3	+1.8
WMQ				pmax	pmax		
	comp=Z,28nm,1.1s						
WMQ				LR	LR		
	comp=N,310nm,17.5s						
WMQ				LR	LR		
	comp=E,360nm,19.3s						
WMQ				LR	LR		
	comp=Z,170nm,18.3s						
DAG	**Danmarks Havn**	41.64	345	P	P	13 16 39.3	+3.6
DAG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
DAG	**Danmarks Havn**	41.64	345	*i* P	P	13 16 35.1	-0.6
SUMG	**Summit**	45.42	337	*i* P	P	13 17 07.5	+0.9
ICESG	**Greenland Ices**	45.65	332	*i* P	P	13 17 11.4	+2.9
DBIC	**Dimbokro**	46.54	233	P	P	13 17 14.9	-0.7
	comp=Z,15nm,0.8s,baz=45,slow=8.3,SNR=12						
	comp=Z,15nm,0.8s						
EVN	**Everest**	47.25	87	P	P	13 17 21.5	-0.5
GTA	**Gaotai**	51.53	68	*e*P	P	13 17 54.0	+0.1
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SONM	**Songino Array**	52.54	55	P	P	13 18 01.4	+0.1
SONM				IAmb	IAmb	13 18 05.0	
	comp=Z,5.5nm,1.4s						
SONM	**Songino Array**	52.54	55	P	P	13 18 00.3	-0.9
	comp=Z,0.9nm,0.6s,baz=297,slow=8.0,SNR=6.6						
SONM				PcP	PcP	13 19 12.1	+0.5
	comp=Z,0.5nm,0.5s,baz=254,slow=2.6,SNR=2.0						
	comp=Z,0.9nm,0.6s						
SONM	**Songino Array**	52.54	55	P	P	13 18 01.4	+0.1
SONM				pmax	pmax		
	comp=Z,6.0nm,1.4s						
ULN	**Ulaanbaatar**	52.94	55⇓	*e*P	P	13 18 05.0	+0.7
ULN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TIXI	**Tiksi**	54.28	23	P	P	13 18 14.1	+0.6
TIXI				IAmb	IAmb	13 18 21.6	
	comp=Z,2.8nm,0.9s						
TIXI	**Tiksi**	54.28	23	P	P	13 18 13.3	-0.3
	comp=Z,0.5nm,0.3s,baz=302,slow=9.5,SNR=6.7						
	comp=Z,0.5nm,0.3s						
TIXI	**Tiksi**	54.28	23⇑	*e*P	P	13 18 13.5	0.0
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.9s						
LZH	**Lanzhou**	55.88	69	*e*P	P	13 18 29.3	+3.5
LZH				pP	sP	13 18 33.8	+3.3
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
BTO	**Baotou**	57.99	62	*e*P	P	13 18 40.2	-0.5
BTO				pP	sP	13 18 44.8	-0.6
BTO				sP	pP	13 18 47.2	+3.0
BTO				PP	PP	13 20 50.1	+1.2
BTO				pmax	pmax		
	comp=Z,27nm,0.8s						
BTO				pmax	pmax		
	comp=Z,1µm,17.8s						
HHC	**Hu-ho-hao-te**	58.90	61	*e*P	P	13 18 47.6	+0.5
HHC				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,75nm,5.4s						
PZH	**PanZhiHua**	59.28	80	P	P	13 18 51.4	+1.5
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.8s						

XAN	Xi'an	60.51	69	P	P	13 18 59.2	+1.1
XAN				pmax	pmax		
	comp=Z,12nm,1.0s						
XAN				pmax	pmax		
	comp=Z,620nm,9.2s						
QNGWA	Qangwa	60.70	190	P	P	13 18 59.7	+0.2
QNGWA				IAmb	IAmb	13 19 27.1	
	comp=Z,6.7nm,1.3s						
CMAR	Chiang Mai Arr	61.78	89	P	P	13 19 06.8	-0.1
	comp=Z,0.9nm,0.7s,baz=308,slow=7.7,SNR=7.7						
CMAR				PcP	PcP	13 19 50.2	+2.2
	comp=Z,0.6nm,0.6s,baz=321,slow=4.4,SNR=2.1						
	comp=Z,0.9nm,0.7s						
CMAR	Chiang Mai Arr	61.78	89	*i* P	P	13 19 07.8	+0.9
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SCHQ	Schefferville	61.78	319	P	P	13 19 07.0	+0.6
	comp=Z,1.3nm,0.6s,baz=61,slow=13,SNR=1.9						
	comp=Z,1.3nm,0.6s						
HEH	HeiHe	63.70	45	*e*P	P	13 19 19.1	-0.1
HEH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KOOLE	Kule	64.24	191	P	P	13 19 23.2	+0.1
CN2	Changchun	66.15	52	P	P	13 19 34.8	-0.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BILL	Bilibino	66.44	17	⇑*e*P	P	13 19 36.9	+0.2
BILL				pmax	pmax		
	comp=Z,10.0nm,1.6s						
SEY	Seymchan	66.60	25	P	P	13 19 37.8	0.0
	comp=Z,2.7nm,1.0s,baz=320,slow=8.5,SNR=6.1						
	comp=Z,2.7nm,1.0s						
SEY	Seymchan	66.60	25	⇓*i*P	P	13 19 39.0	+1.1
SEY				pmax	pmax		
	comp=Z,9.0nm,1.5s						
KLR	Kul'dur	66.61	45	⇓*e*P	P	13 19 38.2	+0.1
KLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MA2	Magadan	68.44	28	⇑*e*P	P	13 19 50.6	+1.1
MA2				pmax	pmax		
	comp=Z,19nm,3.2s						
NJ2	Nanjing	68.56	66	*e*P	P	13 19 51.1	+0.4
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BOSA	Boshof	69.27	185	P	P	13 19 55.6	+0.5
	comp=Z,5.4nm,0.8s,baz=15,slow=8.6,SNR=8.9						
	comp=Z,5.4nm,0.8s						
USA0B	Ussuriysk Arra	69.74	49	⇓*e*P	P	13 19 59.9	+2.0
USRK	Ussuriysk Ar.	69.74	49	P	P	13 19 59.1	+1.2
	comp=Z,1.5nm,0.6s,baz=309,slow=5.0,SNR=4.4						
	comp=Z,1.5nm,0.6s						
E29M	Blow River	70.78	356	P	P	13 20 04.6	+0.8
KSRS	Korea Array	71.38	56	P	P	13 20 06.9	-1.1
	comp=Z,0.8nm,0.5s,baz=307,slow=4.7,SNR=6.4						
	comp=Z,0.8nm,0.5s						
E19K	Redstone River	71.88	3		P	13 20 11.2	+0.7
E19K				IAmb	IAmb	13 20 16.8	
	comp=Z,5.1nm,0.9s						
F19K	Shaleruckik Mo	72.48	4	P	P	13 20 14.8	+0.8
F19K				IAmb	IAmb	13 20 45.1	
	comp=Z,6.7nm,1.2s						
G21K	Allakaket	72.95	2	P	P	13 20 17.5	+0.6
G21K				IAmb	IAmb	13 20 26.1	
	comp=Z,5.2nm,1.1s						
YKA	Yellowknife Ar	73.34	344	P	P	13 20 17.7	-1.5
	comp=Z,0.2nm,0.5s,baz=25,slow=6.0,SNR=4.1						
	comp=Z,0.2nm,0.5s						
I30M	Mount Dempster	73.82	354	P	P	13 20 22.3	+0.1
I30M				IAmb	IAmb	13 20 35.1	
	comp=Z,5.6nm,1.2s						
ILAR	Eielson Array	74.73	359	P	P	13 20 25.2	-2.2
	comp=Z,0.2nm,0.6s,baz=355,slow=7.7,SNR=4.5						
	comp=Z,0.2nm,0.6s						
PETK	Petropavlovsk-	75.84	30	LR	LR	13 56 13.3	
	comp=Z,118nm,19.1s,baz=300,slow=38						
ULM	Lac du Bonnet	77.97	328	P	P	13 20 46.8	+0.8
	comp=Z,1.6nm,0.7s,baz=43,slow=7.2,SNR=3.9						
	comp=Z,1.6nm,0.7s						
TXAR	Lajitas Array	98.44	321	P	Pdif	13 22 27.7	+1.2
	comp=Z,0.1nm,0.8s,baz=24,slow=3.3,SNR=1.7						
	comp=Z,0.1nm,0.8s						
ASAR	Alice Springs	114.70	101	PKP	PKPdf	13 27 27.6	-1.0
	comp=Z,0.4nm,0.9s,baz=304,slow=1.9,SNR=1.6						
QSPA	South Pole Qui	130.66	180	PKP	PKPdf	13 27 57.4	-0.5
	comp=Z,1.0nm,0.9s,baz=295,slow=4.5,SNR=7.1						

*SNET **02** 13:09:10.4±1.4, 14°.49N×89°.18W, h5km, ML3.5*

*GCG **02** 13:09:10.6±1.8, 14°.55N×89°.16W, h6km±11km, MD3.8, ML3.1*

*CATAC **02** 13:09:10.3±0.2, 15°N±1°×8°9W±°, h2km±1km, M3.6/25, MLv3.6/25, Error ellipse: s-maj=3.5km s-min=2.2km az=33.1, confirmed*

ISC 02 13:09:09.2±0.9**, 14°.54N**±0°.03×**89°.09W**±0°.02**, h12**km±8km**, n76, σ0s.46**/85**, 7C-15D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESQI	Esquipulas	0.25	274	*e*P	Pg	13 09 14.5	0.0
ESQI				*e*S	Sg	13 09 18.2	+0.2
ESQI	Esquipulas	0.25	274	⇑P	Pg	13 09 14.5	0.0
ESQI	Esquipulas	0.25	274	S	Sg	13 09 17.6	-0.4
MTO3	Montecristo	0.30	242	*i* P	Pg	13 09 15.4	-0.1
MTO3				IAML		13 09 20.4	
	comp=Z,2µm,0.2s						
MTO3	Montecristo	0.30	242	⇑P	Pg	13 09 15.3	-0.1
MTO3	Montecristo	0.30	242	S	Sg	13 09 19.5	-0.1
UNIC	Universidad Ca	0.71	219	⇓P	Pg	13 09 23.0	-0.1
UNIC	Universidad Ca	0.71	219	S	Sg	13 09 32.8	+0.3
CEDA	San Andres	0.79	202	*e*P	Pg	13 09 24.7	+0.1
CEDA	San Andres	0.79	202	⇓P	Pg	13 09 24.6	+0.1
CEDA	San Andres	0.79	202	S	Sb	13 09 35.8	+0.1
BOQS	Boqueron	0.82	193	*e*P	Pb	13 09 25.7	+0.1
UDBS	Universidad Do	0.82	185	P	Pb	13 09 25.6	+0.1
UDBS	Universidad Do	0.82	185	S	Sb	13 09 36.8	+0.2
UEES	Universidad Ev	0.83	190	⇓P	Pb	13 09 25.5	-0.2
UEES	Universidad Ev	0.83	190	S	Sg	13 09 36.6	+0.3
PAVA	Las Pavas	0.84	170	⇓P	Pb	13 09 25.6	-0.1
PAVA	Las Pavas	0.84	170	S	Sb	13 09 37.6	+0.6
SLOZ	Alcaldia de Sa	0.85	233	P	Pg	13 09 25.5	-0.2
SLOZ	Alcaldia de Sa	0.85	233	S	Sb	13 09 37.0	-0.2
PMON	Piamonte	0.85	195	⇓P	Pb	13 09 25.9	-0.1
PMON	Piamonte	0.85	195	S	Sb	13 09 38.3	+0.8
LOAL	Lomas de Alarc	0.86	231	*e*S	Sb	13 09 37.8	+0.1
LOAL	Lomas de Alarc	0.86	231	P	Pb	13 09 25.9	-0.2
LOAL	Lomas de Alarc	0.86	231	S	Sb	13 09 37.5	-0.2
CEVE	Cerro Verde	0.88	216	*e*P	Pb	13 09 26.4	-0.2
CEVE				*e*S	Sb	13 09 39.1	+0.7
CEVE	Cerro Verde	0.88	216	⇓P	Pb	13 09 26.4	-0.2
CEVE	Cerro Verde	0.88	216	S	Sb	13 09 38.9	+0.5
LOMA	Loma Larga	0.90	185	*e*P	Pg	13 09 26.6	0.0
LOMA				*e*S	Sb	13 09 39.7	+1.0
LOMA	Loma Larga	0.90	185	⇓P	Pg	13 09 26.6	0.0
SCLA	Alcaldia de Sa	0.91	157	⇓P	Pn	13 09 27.2	-0.6
SCLA	Alcaldia de Sa	0.91	157	S	Sn	13 09 40.6	-0.2
LFRS	El Faro	0.91	178	*e*P	Pb	13 09 27.3	+0.3
NUBE	Las Nubes	0.92	227	*i* P	Pg	13 09 26.9	-0.2
NUBE				*i* S	Sg	13 09 39.4	+0.2
NUBE	Las Nubes	0.92	227	⇓P	Pg	13 09 26.9	-0.2
PANCS	Alcalda de	0.93	186	S	Sb	13 09 39.8	+0.2
PANCS	Alcalda de	0.93	186	P	Pg	13 09 27.0	-0.2
COEG	Centro de Oper	0.94	168	*e*P	Pn	13 09 27.8	-0.5
COEG				*e*S	Sb	13 09 40.8	+0.9
COEG	Centro de Oper	0.94	168	⇓P	Pb	13 09 27.5	+0.1
UESV	Universidad de	0.95	162	⇑P	Pb	13 09 27.6	+0.1
UESV	Universidad de	0.95	162	S	Sb	13 09 40.9	+0.8
JAYA	Jayaque - finc	0.95	202	*e*P	Pg	13 09 27.5	-0.1
JAYA	Jayaque - finc	0.95	202	*i* P	Pg	13 09 27.5	-0.1
JAYA				*e*S	Sb	13 09 40.5	+0.2
JAYA	Jayaque - finc	0.95	202	⇓P	Pg	13 09 27.5	-0.1
TECO	Alcaldia de Te	1.04	163	⇓P	Pg	13 09 29.2	-0.1
TECO	Alcaldia de Te	1.04	163	S	Sg	13 09 43.4	+0.5
PQSS	Presa 15 de Se	1.05	151	⇓P	Pg	13 09 29.3	0.0
PQSS	Presa 15 de Se	1.05	151	S	Sn	13 09 44.1	-0.1
LALI	Alcalda de L	1.07	192	*e*S	Sg	13 09 44.2	+0.4
LALI	Alcalda de L	1.07	192	*i* P	Pn	13 09 29.9	-0.1
LALI				*e*S	Sn	13 09 45.7	+0.9
LALI				IAML		13 09 46.1	
	comp=E,331nm,0.3s						
LALI	Alcalda de L	1.07	192	⇓P	Pn	13 09 29.9	-0.1
LALI	Alcalda de L	1.07	192	S	Sn	13 09 44.8	-0.1
CAHU	Cacacuatique	1.15	132	*e*P	Pg	13 09 31.5	+0.2
IZABA	Izabal, Puerto	1.28	22	*e*P	Pg	13 09 34.4	+0.6
IZABA	Izabal, Puerto	1.28	22	P	Pg	13 09 34.0	+0.2
IZABA	Izabal, Puerto	1.28	22	S	Sg	13 09 51.4	+1.0
PACA	Pacayal	1.30	145	P	Pg	13 09 33.9	-0.3
PACA	Pacayal	1.30	145	S	Sg	13 09 51.8	+0.6
ALJI	Alcalda de J	1.31	157	P	Pg	13 09 34.7	+0.3
ALJI	Alcalda de J	1.31	157	S	Sg	13 09 52.5	+1.1
RANC	El Ranchito	1.35	145	⇑P	Pn	13 09 32.4	-1.5
RANC	El Ranchito	1.35	145	S	Sb	13 09 51.4	-0.4
BLLM	Bellamira	1.37	143	*e*P	Pg	13 09 35.1	-0.5
CNRM	Centro Naciona	1.39	140	S	Sg	13 09 54.6	+0.7
CNRM	Centro Naciona	1.39	140	P	Pb	13 09 35.2	+0.1
GCG4	OSOP	1.40	272	*i* P	Pg	13 09 36.2	0.0
LCND	La Caada	1.69	136	⇑P	Pb	13 09 40.3	0.0
CNCH	Conchagua	1.75	136	*e*P	Pb	13 09 41.6	+0.2
CNCH	Conchagua	1.75	136	⇑P	Pb	13 09 41.4	+0.1
CNCH	Conchagua	1.75	136	S	Sg	13 10 05.5	-0.1
TGUH	Tegucigalpa,Un	1.82	105	⇑P	Pg	13 09 43.1	-1.1
TGUH				S	Sg	13 10 08.7	+0.8
CHOHN	Orocuina	2.15	119	S	Sg	13 10 17.6	-0.8
CHOHN	Orocuina	2.15	119	⇓P	Pb	13 09 48.2	+0.1
CSGN	Cosiguina Volc	2.15	136	P	Pb	13 09 47.7	-0.5
CSGN				S	Sg	13 10 19.4	+0.9
YUSH	Yuscaran	2.25	105	S	Sg	13 10 21.7	-0.1
YUSH	Yuscaran	2.25	105	P	Pb	13 09 49.8	-0.1

TIR 02 13:17:00.9, 40°.42N×20°.73E, h4km±3km**, Ml2.4**/7**,**
Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.21	12	Pg	Pg	13 17 04.8	-0.2
KBN				Sg	Sg	13 17 07.5	-0.3
KBN				AML	AML	13 17 09.2	
	2.7nm,0.5s						
KBN	Korca	0.21	12	Pg	Pg	13 17 05.3	+0.3
KBN				Sg	Sg	13 17 08.5	+0.7
KBN				AML	AML	13 17 14.2	
	3.0nm,0.4s						
NEST	Nestorio	0.24	91	Pg	Pg	13 17 04.8	-0.8
NEST				Sg	Sg	13 17 08.4	-0.4
NEST				AML	AML	13 17 11.1	
	2.3nm,0.2s						
NEST				AMd		13 18 02.1	
NEST	Nestorio	0.24	91	Pg	Pg	13 17 06.1	+0.5
NEST				Sg	Sg	13 17 10.3	+1.5
NEST				AML	AML	13 17 12.4	
	2.7nm,0.3s						
LSK	Leskovik	0.29	201	Pg	Pg	13 17 05.8	-0.7
LSK				Sg	Sg	13 17 10.6	+0.4
LSK				AML	AML	13 17 14.6	
	2.9nm,0.4s						
LSK				AMd		13 17 57.2	
LSK	Leskovik	0.29	201	Pg	Pg	13 17 06.7	+0.2
LSK				Sg	Sb	13 17 12.5	-1.4
LSK				AML	AML	13 17 15.3	
	4.4nm,0.3s						
SRN	Sarande	0.78	226	Pg	Pg	13 17 15.9	+0.1
SRN				Sg	Sb	13 17 28.0	+0.1
SRN				AML	AML	13 17 34.6	
	0.1nm,0.4s						
SRN				AMd		13 18 19.9	
SRN	Sarande	0.78	226	Pg	Pg	13 17 16.4	+0.6
SRN				Sg	Sb	13 17 27.5	-0.5
SRN				AML	AML	13 17 36.3	
	0.2nm,0.7s						
IGT	Igoumenitsa	0.94	199	Pg	Pg	13 17 18.6	-0.3
IGT				Sg	Sb	13 17 32.5	-0.1
IGT				AML	AML	13 17 37.5	
	0.2nm,0.6s						
IGT				AMd		13 18 32.0	
IGT	Igoumenitsa	0.94	199	Pg	Pn	13 17 20.4	-0.5
IGT				Sg	Sb	13 17 33.4	+0.8
IGT				AML	AML	13 17 37.5	
	0.2nm,0.6s						
PHP	Peshkopia	1.28	350	Pn	Pg	13 17 24.5	-1.0
PHP				Sn	Sn	13 17 43.1	-0.4
PHP				AML	AML	13 17 58.2	
	0.2nm,0.7s						
PHP				AMd		13 18 25.8	
PHP	Peshkopia	1.28	350	Pn	Pg	13 17 25.4	-0.1
PHP				Sn	Sn	13 17 44.7	+1.2
PHP				AML	AML	13 17 58.2	
	0.2nm,0.7s						
LKD2	Lefkada island	1.63	182	Sn	Sg	13 17 53.7	+0.5
LKD2				AML	AML	13 18 04.3	
	0.2nm,0.7s						
PUK	Puka	1.74	339	Pn	Pb	13 17 32.9	-0.6
PUK				Sn	Sg	13 17 57.8	+1.0
PUK				AML	AML	13 18 07.1	
	0.2nm,0.6s						
PUK				AMd		13 18 44.5	
PUK	Puka	1.74	339	Pn	Pg	13 17 34.9	+0.6
PUK				Sn	Sg	13 18 02.0	+5.1
PUK				AML	AML	13 18 04.3	
	0.1nm,0.6s						
SCTE	Santa Cesarea	1.77	259	Pn	Pb	13 17 33.6	-0.3
SCTE				Sn	Sg	13 17 58.9	+1.3
SCTE				AML	AML	13 18 07.2	
	0.2nm,0.7s						
SCTE				AMd		13 18 57.7	

*NEIC **02** 13:28:07.7±2.1, 52°.3N±0°.1×173°.3W±0°.1, h184km±5km, mb4.1/74, ML4.0/14, ML3.7(AEIC), Error ellipse: s-maj=21.9km s-min=10.3km az=159.0*

*IDC **02** 13:28:08.7±3.9, 52°.84N×173°.44W, h170km±37km, mb3.4/6, mbtmp3.9/9, Error ellipse: s-maj=22.4km s-min=16.1km az=161.0*

*AEIC **02** 13:28:10.2±1.9, 52°.5N±0°.1×173°.5W±0°.1, h173km±6km, Error ellipse: s-maj=19.0km s-min=9.6km az=156.0*

ISC 02 13:28:08.0±0.8**, 52°.4N**±0°.1×**173°.32W**±0°.06**, h200**km**, n97, σ1s.84**/66**, mb4.0**/14**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	Atka Island	0.58	249	Pn	Pn	13 28 33.6	-1.7
ATKA				Sn	Sn	13 28 52.3	-4.2
ATKA				IAML		13 28 52.8	
	comp=E,1µm,0.5s						
ATKA				IAML		13 28 52.9	
	comp=N,2µm,0.6s						
GSTR	Great Sitkin T	1.71	260	Pn	Pn	13 28 42.1	-1.6
GSTD	Great Sitkin T	1.77	260		Pn	13 28 42.6	-1.7
GSTD					Sn	13 29 08.1	-4.4
GSCK	Great Sitkin C	1.80	258		Pn	13 28 43.0	-1.4
ADAG	Mount Adagdak	2.07	259		Pn	13 28 46.1	-1.1
ADK	Adak	2.14	257		Pn	13 28 46.5	-1.4
ADK				Sn	Sn	13 29 15.2	-3.8
ADK				IAML		13 29 17.1	
	comp=N,657nm,0.2s						
ADK				IAML		13 29 18.1	
	comp=N,721nm,0.3s						
KIRH	Kanaga Island	2.38	259		Pn	13 28 49.6	-1.0
KIWB	Kanaga Island	2.43	258		Pn	13 28 50.0	-1.0
TAFP	Tanaga Falls P	2.92	262		Pn	13 28 55.7	-0.9
TASE	Tanaga Southea	2.97	261		Pn	13 28 56.6	-0.6
OKWR	Okmok West Rim	3.26	70		Pn	13 29 01.6	+0.9
OKTU	Okmok Mt. Tuli	3.34	71		Pn	13 29 02.2	+0.6
GALAA	Gareloi Lava P	3.43	261		Pn	13 29 02.4	-0.3
UNV	Unalaska Valle	4.35	68		Pn	13 29 14.3	+0.3
LVA	Lava Point	4.71	65	Pn	Pn	13 29 19.7	+1.1
LVA				IAML		13 30 28.9	
	comp=N,102nm,1.1s						
LVA				IAML		13 30 41.6	
	comp=E,78nm,2.2s						
P08K	Saint George I	4.74	26	Pn	Pn	13 29 18.8	-0.1
P08K				IAML		13 31 21.0	
	comp=E,178nm,2.0s						
AKUT	Akutan	4.85	66	Pn	Pn	13 29 21.1	+0.8
AKUT				IAML		13 30 13.8	
	comp=N,68nm,3.0s						
SPIA	Saint Paul Isl	5.09	19	Pn	Pn	13 29 23.3	-0.1
M11K	Mekoryuk	8.91	23	Pn	Pn	13 30 13.6	+0.9
N15K	Kwethluk River	10.68	38	Pn	P	13 30 37.4	-5.3
O16K	Kokwok River B	11.13	44	Pn	P	13 30 43.0	-4.7
M17K	Holitna River	12.47	38	Pn	P	13 31 01.7	-0.8
O18K	Koktuh Hills	12.52	46		P	13 31 00.6	-2.5
N18K	Kilae Creek	12.65	42		P	13 31 02.6	-2.0
KDAK	Kodiak Island	13.01	57	P	Pn	13 31 03.5	-1.8
	comp=N,4.3nm,0.5s,baz=200,slow=3.2,SNR=36						
KDAK				S	Sn	13 33 28.0	-2.2
	comp=N,4.8nm,0.5s,baz=44,slow=17,SNR=8.7						
L18K	Granite Mounta	13.27	36		P	13 31 10.5	-0.9
N19K	Bonanza Creek	13.31	43	Pn	P	13 31 11.6	-0.4
J17K	VABM Dome	13.32	29		P	13 31 14.7	+2.8
L19K	White Mountain	13.92	38		P	13 31 19.8	+1.2
M19K	Big River Lodg	13.94	40		P	13 31 19.5	+0.7
TTA	Tatalina	13.97	34		P	13 31 19.9	+0.7
J18K	Innoko River	14.10	32		P	13 31 22.5	+1.9
CNPM	China Poot	14.22	51	Pn	P	13 31 20.3	-1.6
BRLK	Bradley Lake	14.47	51	Pn	P	13 31 23.7	-1.0
STLK	Strandline Lak	14.77	44	P	P	13 31 29.4	+1.4
SLKM	Skilak Lake	15.05	48		P	13 31 31.1	-0.1
SKT	Skwentna	15.13	42	P	P	13 31 33.9	+1.9
SKT				IAmb	IAmb	13 31 36.5	
	comp=Z,11nm,0.9s						
SEW	Seward	15.26	50	P	P	13 31 32.7	-0.7
SEW				IAmb	IAmb	13 31 33.9	
	comp=Z,6.0nm,0.6s						
PPLA	Purkeypile	15.34	39	IAmb	IAmb	13 31 43.7	
	comp=Z,8.0nm,0.9s						
J20K	Nowinta River	15.42	33	IAmb	IAmb	13 31 39.4	
	comp=Z,7.3nm,1.1s						
M22K	Willow	15.61	44	IAmb	IAmb	13 31 41.5	
	comp=Z,9.4nm,0.8s						
CAST	Castle Rocks	15.68	37		P	13 31 40.3	+2.2
CAST				IAmb	IAmb	13 31 47.8	
	comp=Z,4.9nm,0.6s						
PMR	Palmer	15.97	45		Pn	13 31 42.4	+0.8
PWL	Port Wells	16.05	48	IAmb	IAmb	13 31 48.5	
	comp=Z,4.6nm,0.6s						
GHO	Glory Hole Cre	16.13	45	IAmb	IAmb	13 31 46.6	
	comp=Z,6.2nm,1.0s						
KNK	Knik Glacier	16.19	46	IAmb	IAmb	13 31 46.0	
	comp=Z,7.3nm,0.6s						
TRF	Thorofare Moun	16.37	39	IAmb	IAmb	13 31 51.0	
	comp=Z,8.7nm,1.3s						
BPAW	Bear Paw Mtn.	16.47	36	IAmb	IAmb	13 31 52.5	
	comp=Z,10nm,1.2s						
GLI	Glacier Island	16.62	49	P	Pn	13 31 48.2	-1.2
I21K	Tanana	16.78	32	IAmb	IAmb	13 31 54.0	
	comp=Z,4.9nm,0.7s						
SCM	Sheep Creek Mo	16.85	46	IAmb	IAmb	13 31 55.1	
	comp=Z,8.6nm,1.0s						
FID	Port Fidalgo	16.87	50	IAmb	IAmb	13 31 54.1	
	comp=Z,11nm,0.9s						
RND	Reindeer	16.90	40	IAmb	IAmb	13 31 56.5	
	comp=Z,6.7nm,1.1s						
MCK	McKinley	17.04	39		Pn	13 31 54.4	+0.1
MCK				IAmb	IAmb	13 31 57.3	
	comp=Z,6.3nm,0.9s						
DHY	Denali Highway	17.34	42	IAmb	IAmb	13 32 00.4	
	comp=Z,4.8nm,0.5s						
KLU	Klutina	17.36	48	P	Pn	13 31 56.9	-1.4
KLU				IAmb	IAmb	13 32 00.4	
	comp=Z,7.4nm,0.7s						
NEA2	Nenana	17.44	36	P	Pn	13 31 58.1	-0.9
PETK	Petropavlovsk-	17.51	284	P	Pn	13 32 00.0	0.0
	comp=Z,1.0nm,0.9s,baz=82,slow=15,SNR=2.4						
I23K	Minto, Yukon-K	17.65	34	P	Pn	13 32 02.4	+0.9
I23K				IAmb	IAmb	13 32 06.1	
	comp=Z,5.7nm,0.6s						
WRH	Wood River Hil	17.73	37	IAmb	IAmb	13 32 06.7	
	comp=Z,14nm,1.5s						
BMRM	Bremner River	17.81	50		Pn	13 32 01.9	-1.6
BMRM				IAmb	IAmb	13 32 06.1	
	comp=Z,9.2nm,0.8s						
HMT	Hamilton	17.81	52	IAmb	IAmb	13 32 06.2	
	comp=Z,5.5nm,0.7s						
CCB	Clear Creek Bu	17.93	37	IAmb	IAmb	13 32 05.9	
	comp=Z,3.2nm,0.5s						
PAX	Paxson	18.09	43		Pn	13 32 06.4	-0.4
IL31		18.33	37	IAmb	IAmb	13 32 10.5	
	comp=Z,4.6nm,0.5s						
ILAR	Eielson Array	18.33	37	P	Pn	13 32 06.8	-2.8
	comp=Z,1.1nm,0.4s,baz=220,slow=9.5,SNR=71						
ILAR				S	S	13 35 24.4	-1.3
	comp=Z,0.2nm,0.6s,baz=232,slow=13,SNR=2.1						
G23K	Bananza Creek	18.38	30	IAmb	IAmb	13 32 11.2	
	comp=Z,5.6nm,0.8s						
H24K	Noodor Dome	18.55	34	IAmb	IAmb	13 32 13.0	
	comp=Z,6.5nm,0.8s						
RIDG	Independent Ri	18.66	42	IAmb	IAmb	13 32 13.6	
	comp=Z,7.0nm,0.6s						
MENT	Mentasta	18.82	44	IAmb	IAmb	13 32 33.0	
	comp=Z,3.6nm,0.7s						
PRP	Porcupine Dome	19.20	36		Pn	13 32 16.2	-3.8
CTGM	Chitina Glacie	19.36	51	P	P	13 32 16.2	-2.1
CTGM				IAmb	IAmb	13 32 25.2	
	comp=Z,5.5nm,0.8s						
E24K	Your Creek	19.72	28	IAmb	IAmb	13 32 25.3	
	comp=Z,5.7nm,0.8s						
D23K	Nanushuk River	19.74	24	P	Pn	13 32 23.8	-2.4
TOLK	Toolik Lake Re	19.80	26	IAmb	IAmb	13 32 25.4	
	comp=Z,5.7nm,0.8s						
I26K	Coal Creek Min	19.98	38	IAmb	IAmb	13 32 33.0	
	comp=Z,3.4nm,0.7s						
C23K	Itkillik River	20.39	23		Pn	13 32 30.7	-3.4
I28M	Miner Creek	21.27	39		P	13 32 39.4	+0.8
I28M				IAmb	IAmb	13 32 41.9	
	comp=Z,4.1nm,0.8s						
K29M	Barlow Dome	21.76	44		P	13 32 44.5	+0.9
K29M				IAmb	IAmb	13 32 47.1	
	comp=Z,6.0nm,0.7s						
J30M	Hart River	22.45	43	P	P	13 32 51.5	+1.3
J30M				IAmb	IAmb	13 32 54.0	
	comp=Z,2.8nm,0.6s						
I30M	Mount Dempster	22.61	41		P	13 32 51.5	-0.1
I30M				IAmb	IAmb	13 32 54.7	
	comp=Z,4.2nm,0.6s						
EPYK	Eagle Plains	22.84	38	IAmb	IAmb	13 32 57.0	
	comp=Z,3.6nm,0.6s						
E29M	Blow River	23.20	33		P	13 32 59.4	+2.8
B08A	Colville Reser	33.99	75	IAmb	IAmb	13 34 37.8	
	comp=Z,3.1nm,0.9s						
H11S1	WAKE ISLAND Hy	37.28	212	T	T	14 14 38.5	
	baz=20,slow=74						
H11S2	WAKE ISLAND Hy	37.30	212	T	T	14 14 41.6	
	baz=20,slow=74						
H11S3	WAKE ISLAND Hy	37.30	212	T	T	14 14 42.6	
	baz=20						
NVAR	Mina Array Bea	40.08	88	P	P	13 35 28.1	+4.1
	comp=Z,1.1nm,0.6s,baz=309,slow=7.3,SNR=10						
	comp=Z,1.1nm,0.6s						
PDAR	Pinedale Array	42.76	77	P	P	13 35 49.1	+3.4
	comp=Z,2.2nm,0.8s,baz=304,slow=7.7,SNR=16						
	comp=Z,2.2nm,0.8s						
HHC	Hu-ho-hao-te	50.63	288	*e*P	P	13 36 48.8	+2.2
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,98nm,4.2s						
P40A	Paris	55.04	69	P	P	13 37 19.4	+0.8
TXAR	Lajitas Array	55.16	86	P	P	13 37 23.9	+4.1
	comp=Z,1.4nm,0.6s,baz=318,slow=6.6,SNR=25						
	comp=Z,1.4nm,0.6s						
ARCES	ARCESS Array B	57.59	352	P	P	13 37 37.3	+1.1
	comp=Z,2.0nm,0.8s,baz=14,slow=5.0,SNR=1.7						
	comp=Z,2.0nm,0.8s						
LZH	Lanzhou	58.31	289	*e*P	P	13 37 43.7	+1.8
LZH				sP	sP	13 38 40.6	-7.0
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
WMQ	Urumqi	61.57	306	*e*P	P	13 38 07.3	+3.5
WMQ				LR	LR		
	comp=N,230nm,20.5s						
BVAR	Borovoye Array	62.22	322	P	P	13 38 09.0	+1.0
	comp=N,0.4nm,0.5s,baz=54,slow=7.3,SNR=2.2						
	comp=N,0.4nm,0.5s						
ASAR	Alice Springs	88.61	227	P	P	13 40 42.1	+4.0
	comp=N,0.4nm,0.8s,baz=32,slow=3.2,SNR=4.8						
	comp=N,0.4nm,0.8s						

*IDC **02** 13:46:43.0±2.2, 20°.12S×176°.96W, h0km, mb3.9/7, mbtmp3.9/7, Error ellipse: s-maj=86.9km s-min=27.6km az=144.0*

ISC 02 13:46:48.5±1.9**, 20°.1S**±0°.4×**177°.0W**±0°.3**, h35**km**, n7, σ0s.65**/7**, mb4.0**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.80	244	P	P	13 54 10.7	+0.6
	1.8nm,0.8s,baz=90,slow=17,SNR=2.2						
	1.8nm,0.8s						
ASAR	Alice Springs	45.52	256	P	P	13 55 04.8	-0.2
	1.7nm,0.9s,baz=99,slow=8.0,SNR=12						
	1.7nm,0.9s						

WRA	Warramunga Arr	45.58	261	P	P	13 55 04.7	-0.8
	2.2nm,1.1s,baz=92,slow=7.3,SNR=4.8						
	2.2nm,1.1s						
MJAR	Matsushiro Arr	70.46	323	P	P	13 57 59.9	+0.4
	1.3nm,0.8s,baz=154,slow=5.9,SNR=4.2						
	1.3nm,0.8s						
NVAR	Mina Array Bea	80.10	43	P	P	13 58 54.9	-0.4
	0.6nm,0.8s,baz=246,slow=3.0,SNR=2.2						
	0.6nm,0.8s						
ILAR	Eielson Array	87.73	12	P	P	13 59 33.7	+0.4
	0.4nm,0.9s,baz=204,slow=3.7,SNR=2.9						
	0.4nm,0.9s						
CMAR	Chiang Mai Arr	90.87	289	P	P	13 59 48.6	-0.4
	0.7nm,0.8s,baz=115,slow=4.0,SNR=4.2						
	0.7nm,0.8s						

*IDC **02** 13:51:48.8±0.9, 19°.33N×64°.70W, h0^{km}, mb3.5/8, mbtmp3.8/11, ML3.4/3, Error ellipse: s-maj=22.6km s-min=18.9km az=118.0*

*RSPR **02** 13:51:49.0, 19°.21N×64°.28W, h35^{km}±22^{km}, MD3.4/8*

*OSPL **02** 13:51:53.6±2.2, 19°.28N×64°.71W, h31^{km}±167^{km}, ML3.7*

*NEIC **02** 13:51:54.4±1.3, 19°.06N±0°.04×64°.76W±0°.06, h35^{km}±2^{km}, mb4.2/10, ML3.7/34, Md3.4/8(RSPR), Error ellipse: s-maj=11.5km s-min=4.9km az=241.0*

ISC 02 13:51:50.3±1.9**, 19°.25N**±0°.05×**64°.78W**±0°.04**, h14**^{km}±11^{km}**, n100, σ1^{s}67**/115**, mb3.8**/11**, 7C-7D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUMP	Col San Antoni	1.50	223		Pn	13 52 17.3	+0.5
HUMP				IAML		13 52 40.8	
	comp=N,749nm,0.5s						
HUMP				IAML		13 52 41.5	
	comp=E,786nm,0.5s						
HUMP	Col San Antoni	1.50	223		Sg	13 52 38.6	-0.1
HUMP	Col San Antoni	1.50	223	⇓eP	Pn	13 52 17.4	+0.5
HUMP	Col San Antoni	1.50	223	eS	Sg	13 52 38.6	-0.1
GCPR	Guaynabo City	1.55	233		Pn	13 52 17.7	+0.2
GCPR	Guaynabo City	1.55	233		Sg	13 52 41.2	+0.8
GCPR	Guaynabo City	1.55	233	⇑eP	Pn	13 52 18.2	+0.7
GCPR	Guaynabo City	1.55	233	eS	Sg	13 52 41.2	+0.8
PDPR	Patillas Dam,	1.70	224		Pn	13 52 20.1	+0.5
PDPR	Patillas Dam,	1.70	224	⇓eP	Pn	13 52 20.1	+0.5
PDPR	Patillas Dam,	1.70	224	eS	Sb	13 52 43.2	+0.6
SJG	San Juan	1.73	229		Pn	13 52 20.3	+0.4
SJG				IAML		13 52 54.0	
	comp=E,559nm,0.6s						
SJG	San Juan	1.73	229	Pn	Pn	13 52 20.6	+0.7
	comp=E,15nm,0.3s,baz=50,slow=16,SNR=23						
SJG				Sn	Sb	13 52 43.7	+0.3
	comp=E,92nm,0.3s,baz=66,slow=20,SNR=11						
SJG	San Juan	1.73	229	⇑eP	Pn	13 52 20.6	+0.7
SJG	San Juan	1.73	229	eS	Sb	13 52 44.6	+1.3
SJG	San Juan	1.73	229	eP	Pn	13 52 20.7	+0.7
SJG				eS	Sn	13 52 40.7	-1.0
SJG	San Juan	1.73	229	i P	Pn	13 52 20.6	+0.7
SJG				IAML		13 52 48.6	
	comp=Z,380nm,0.7s						
ECPR	Experimental S	1.77	238	⇑eP	Pn	13 52 21.2	+0.7
ECPR	Experimental S	1.77	238	eS	Sg	13 52 46.9	-0.3
EMPR	Esperanza - Ma	1.83	245		Pn	13 52 22.2	+0.9
EMPR				IAML		13 52 55.2	
	comp=E,1µm,0.8s						
EMPR				IAML		13 53 08.1	
	comp=N,1µm,0.8s						
EMPR	Esperanza - Ma	1.83	245		Sg	13 52 48.7	-0.5
EMPR	Esperanza - Ma	1.83	245	⇓eP	Pn	13 52 22.7	+1.4
EMPR	Esperanza - Ma	1.83	245	eS	Sg	13 52 48.7	-0.5
CELP	Cerrillos	2.07	236		Pn	13 52 25.1	+0.4
CELP				IAML		13 52 58.3	
	comp=N,408nm,0.8s						
CELP	Cerrillos	2.07	236		Sb	13 52 53.4	+0.1
CELP	Cerrillos	2.07	236	⇓eP	Pn	13 52 25.7	+1.0
CELP	Cerrillos	2.07	236	eS	Sb	13 52 53.4	+0.1
AOPR	Arecibo Observ	2.08	245		Pn	13 52 25.5	+0.7
AOPR				IAML		13 53 00.8	
	comp=N,851nm,0.6s						
AOPR	Arecibo Observ	2.08	245		Sb	13 52 55.9	+2.4
AOPR	Arecibo Observ	2.08	245	⇑eP	Pn	13 52 26.1	+1.4
AOPR	Arecibo Observ	2.08	245	eS	Sb	13 52 55.9	+2.4
AOPR	Arecibo Observ	2.08	245	eP	Pn	13 52 25.9	+1.1
AOPR				eS	Sg	13 52 56.1	-1.1
UUPR	Utuado, UPR, P	2.09	242		Pn	13 52 25.7	+0.7
OBIP	Obispado Ponce	2.11	235		Pn	13 52 26.0	+0.8
OBIP				IAML		13 52 59.8	
	comp=E,380nm,0.8s						
OBIP				IAML		13 53 01.8	
	comp=N,348nm,0.6s						
OBIP	Obispado Ponce	2.11	235		Sb	13 52 55.3	+0.9
OBIP	Obispado Ponce	2.11	235	⇑eP	Pn	13 52 26.2	+1.0
OBIP	Obispado Ponce	2.11	235	eS	Sb	13 52 55.3	+0.9
SABA	Saba	2.18	138		Pn	13 52 25.4	-0.8
SABA				IAML		13 53 11.7	
	comp=N,956nm,0.7s						
SABA					PcP	14 00 20.2	-0.1
AGPR	Aguadilla, PR	2.34	251		Pn	13 52 29.2	+0.8
AGPR				IAML		13 53 17.9	
	comp=E,329nm,0.6s						
AGPR				IAML		13 53 23.9	
	comp=N,332nm,0.9s						
AGPR	Aguadilla, PR	2.34	251		Sb	13 53 02.4	+1.3
AGPR	Aguadilla, PR	2.34	251	⇑eP	Pn	13 52 29.8	+1.4
AGPR	Aguadilla, PR	2.34	251	eS	Sb	13 53 02.4	+1.3
AGPR	Aguadilla, PR	2.34	251	i P	Pn	13 52 29.7	+1.4
AGPR				IAML		13 53 20.1	
	comp=Z,164nm,1.4s						
GBPR	Guanica, Bosqu	2.36	238		Pn	13 52 30.8	+2.1
GBPR	Guanica, Bosqu	2.36	238	⇑eP	Pn	13 52 30.8	+2.1
PRSN	Puerto Rico Se	2.47	246		Pn	13 52 31.2	+1.1
PRSN				IAML		13 53 09.3	
	comp=E,660nm,0.3s						
PRSN				IAML		13 53 09.3	
	comp=N,471nm,0.3s						
MLPR	Magueyes Islan	2.50	240	⇓eP	Pn	13 52 32.0	+1.5
MLPR	Magueyes Islan	2.50	240	eS	Sb	13 53 05.7	+0.1
CRPR	Cabo Rojo, PR	2.54	241		Pn	13 52 32.4	+1.3
CRPR	Cabo Rojo, PR	2.54	241		Sb	13 53 07.0	+0.3
CRPR	Cabo Rojo, PR	2.54	241	⇓eP	Pn	13 52 32.5	+1.5
CRPR	Cabo Rojo, PR	2.54	241	eS	Sb	13 53 07.0	+0.3
CRPR	Cabo Rojo, PR	2.54	241	i P	Pn	13 52 32.7	+1.6
CRPR				IAML		13 53 16.3	
	comp=Z,312nm,0.6s						
IDE	Isla Desecheo	2.69	252		Pn	13 52 35.2	+1.9
IDE					Sb	13 53 11.7	+0.5
IDE	Isla Desecheo	2.69	252	⇓eP	Pn	13 52 35.2	+1.9
IDE	Isla Desecheo	2.69	252	eS	Sb	13 53 11.7	+0.5
SKI	Saint Kitts	2.72	134	eP	Pn	13 52 34.7	+1.1
SKI				eS	Sn	13 53 06.9	+0.6
ANWB	Willy Bob	3.25	119	eP	Pn	13 52 42.1	+1.3
MLYT	Lee's Yard	3.52	135	eP	Pb	13 52 49.2	-3.3
ANBD	Bethesda, Anti	3.61	127	eP	Pn	13 52 44.9	-0.9
GDHS	Morne Mazeau,	4.13	135	Pn	Pn	13 52 53.2	+0.2
ABD	La Joyeuse, An	4.18	131	Pn	Pn	13 52 53.4	-0.2
ABD				IAML		13 53 56.0	
	comp=N,147nm,1.4s						
ABD				IAML		13 54 02.2	
	comp=E,223nm,2.0s						
CBE	Ff, Capester	4.38	136	Pn	Pn	13 52 57.1	+0.7
DR12	Loma Pena Alta	4.38	265	Pn	Pn	13 52 57.5	+1.0
TBG	Guadaloupe-3	4.51	138	e	Pn	13 52 58.9	+0.6
GDSD	La Dsirade Is	4.59	129	Pn	Pn	13 52 59.0	-0.4
GDSD				IAML		13 54 06.6	
	comp=N,89nm,1.6s						
GDSD				IAML		13 54 16.2	
	comp=E,63nm,2.3s						
H05N1	Guadeloupe/Mar	4.59	129	Pn	Pn	13 52 58.2	-1.2
H05N1				Sn	Sn	13 53 51.9	-0.7
MAGL	Barre de l'ile	4.68	134	eP	Pn	13 53 01.0	+0.4
H05S1	Guadeloupe/Mar	6.11	141	Pn	Pn	13 53 22.4	+2.3
H05S1				Sn	Sn	13 54 28.4	-1.4
SDDR	Presa de Saban	6.16	269		Pn	13 53 23.0	+2.1
SDDR	Presa de Saban	6.16	269	eP	Pn	13 53 23.1	+2.1
SDDR				i P	Pn	13 53 23.4	+2.4
SDDR				i S	Sn	13 54 33.2	+1.9
SDDR	Presa de Saban	6.16	269	eP	Pn	13 53 23.6	+2.7
SDDR	Presa de Saban	6.16	269	eS	Sn	13 54 31.0	-0.3
SDDR	Presa de Saban	6.16	269	i P	Pn	13 53 23.4	+2.4
SDDR				IAML		13 54 40.0	
	comp=Z,45nm,0.8s						
GRTK	Grand Turk	6.37	292	eP	Pn	13 53 23.6	-0.2
GRTK				i S	Sn	13 54 29.7	-6.6
GRTK	Grand Turk	6.37	292	i P	Pn	13 53 23.3	-0.4
GRTK				eS	Sn	13 54 30.5	-5.8
GRTK				IAML		13 54 32.7	
	comp=Z,24nm,1.4s						
LOBH	Bahia de las A	6.65	259	i P	Pn	13 53 27.1	-0.6
MASC	Masc	8.95	277	eP	Pn	13 53 56.4	-2.8
MASC				eP	Pg	13 53 57.2	-44
MASC				i S	Sn	13 55 32.9	-7.0
PCRV	Puerto La Cruz	9.03	179	Pn	Pn	13 54 01.1	+0.8
	comp=Z,0.4nm,0.3s,baz=3.5,slow=19,SNR=2.2						
PCRV				Sn	Sn	13 55 39.2	-2.6
	comp=Z,0.4nm,0.3s,baz=0.0,slow=20,SNR=1.5						
	comp=Z,7.3nm,0.8s						
QMBU	Quimbuelo	9.50	277	eP	Pn	13 54 03.9	-2.9
QMBU				i S	Sn	13 55 45.0	-8.3
BAUV	El Baul	10.73	198	Pn	Pn	13 54 24.1	+0.5
SDV	Santo Domingo	11.76	210	Pn	Pn	13 54 38.1	+0.1
	comp=Z,2.5nm,0.3s,baz=8.9,slow=19,SNR=4.8						
SDV				Sn	Sn	13 56 47.0	-2.3
	comp=Z,1.1nm,0.3s,baz=355,slow=11,SNR=1.1						
	comp=Z,9.3nm,0.3s						
RUSC	La Rusia	15.55	212	Pn	Pn	13 55 28.5	-1.3
RUSC				IAmb	IAmb	13 55 36.9	
	comp=Z,18nm,0.9s						
ROSC	El Rosal	17.08	214	P	P	13 55 51.9	+0.9
	comp=Z,3.1nm,0.3s,baz=49,slow=19,SNR=5.8						
	comp=Z,11nm,0.5s						
BOAV	Boa Vista	17.27	166		Pn	13 55 51.2	0.0
BRU2	Volcan	20.23	242	P	P	13 56 24.4	-0.9
JTS	Las Juntas de	21.43	248	P	P	13 56 38.6	+0.5
	comp=Z,2.7nm,0.7s,baz=114,slow=20,SNR=2.7						
	comp=Z,2.7nm,0.7s						
OTAV	Otavalo	23.17	217	P	P	13 56 57.5	+0.3
OTAV				IAmb	IAmb	13 57 00.2	
	comp=Z,6.1nm,1.0s						
T50A	Nancy	24.94	319	P	P	13 57 14.6	+1.5
T50A				IAmb	IAmb	13 57 50.5	
	comp=Z,4.2nm,0.9s						
SAML	Samuel	28.07	177	P	P	13 57 41.3	-0.2
SAML				IAmb	IAmb	13 57 42.9	
	comp=Z,5.6nm,0.9s						
LPAZ	La Paz	35.47	186	P	P	13 58 49.8	+2.5
	comp=Z,0.9nm,0.7s,baz=8.2,slow=9.2,SNR=3.8						
	comp=Z,0.9nm,0.7s						
TXAR	Lajitas Array	36.69	293	P	P	13 58 59.6	+2.5
	comp=Z,0.4nm,0.8s,baz=94,slow=7.5,SNR=4.3						
	comp=Z,0.4nm,0.8s						
SDCO	Great Sand Dun	39.88	306	P	P	13 59 25.7	+1.6
PV18	Skein Mesa, Pa	42.61	306	P	P	13 59 47.9	+1.5
PV18				IAmb	IAmb	14 00 01.9	
	comp=Z,3.3nm,0.8s						
PDAR	Pinedale Array	44.31	312	P	P	14 00 00.9	+0.8
	comp=Z,0.4nm,0.5s,baz=112,slow=7.1,SNR=5.8						
	comp=Z,0.4nm,0.5s						
NVAR	Mina Array Bea	49.91	304	P	P	14 00 44.9	+1.0
	comp=Z,0.2nm,0.6s,baz=81,slow=11,SNR=2.3						
	comp=Z,0.2nm,0.6s						
ESDC	Sonseca Array	55.67	55	P	P	14 01 26.4	+0.1
	comp=Z,0.3nm,0.9s,baz=267,slow=7.5,SNR=2.3						
	comp=Z,0.3nm,0.9s						
TORD	Torodi Ar. Bea	63.80	84	P	P	14 02 22.5	-0.1
	comp=Z,0.6nm,0.4s,baz=300,slow=6.3,SNR=4.0						
	comp=Z,0.6nm,0.4s						
ILAR	Eielson Array	69.41	333	P	P	14 02 57.0	-0.5
	comp=Z,0.3nm,0.6s,baz=90,slow=5.4,SNR=6.0						
	comp=Z,0.3nm,0.6s						
Q19K	Cape Douglas,	73.14	327	P	P	14 03 22.0	+1.7

*IDC **02** 13:59:40.4±0.7, 19°.20N×64°.63W, h0^{km}, mb3.8/12, mbtmp4.0/16, ML3.5/4, MS3.3/7, Error ellipse: s-maj=18.1km s-min=13.7km az=82.0*

*RSPR **02** 13:59:43.9, 19°.26N×64°.49W, h66^{km}±13^{km}, MD3.7/13*

*NEIC **02** 13:59:46.9±1.8, 19°.01N±0°.06×64°.64W±0°.07, h35^{km}±2^{km}, mb4.3/24, ML3.9/24, Md3.7/13(RSPR), Error ellipse: s-maj=14.7km s-min=4.0km az=230.0*

ISC 02 13:59:47.0±0.5**, 19°.23N**±0°.05×**64°.73W**±0°.04**, h42**^{km}**, n118, σ1^{s}89**/110**, mb4.1**/24**, MS3.2**/4**, 7C-6D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUMP	Col San Antoni	1.51	225		Pn	14 00 10.6	-1.0
HUMP				IAML		14 00 35.3	
	comp=E,2µm,0.7s						
HUMP				IAML		14 00 38.9	
	comp=N,2µm,0.5s						
HUMP	Col San Antoni	1.51	225	⇓eP	Pn	14 00 10.8	-0.9
HUMP	Col San Antoni	1.51	225	eS	Sn	14 00 31.2	+1.1
GCPR	Guaynabo City	1.57	235	Pn	Pn	14 00 11.0	-1.5
GCPR	Guaynabo City	1.57	235		Sn	14 00 32.7	+1.1
GCPR	Guaynabo City	1.57	235	⇓eP	Pn	14 00 11.3	-1.2
GCPR	Guaynabo City	1.57	235	eS	Sn	14 00 32.7	+1.1
PDPR	Patillas Dam,	1.71	226		Pn	14 00 13.6	-0.9
PDPR	Patillas Dam,	1.71	226	⇑eP	Pn	14 00 13.7	-0.7
PDPR	Patillas Dam,	1.71	226	eS	Sn	14 00 36.0	+0.8
SJG	San Juan	1.74	231		Pn	14 00 13.7	-1.1
SJG				IAML		14 00 42.0	
	comp=N,1µm,0.7s						
SJG				IAML		14 00 44.7	
	comp=N,1µm,0.6s						
SJG	San Juan	1.74	231	Pn	Pn	14 00 13.7	-1.1
	comp=N,24nm,0.3s,baz=45,slow=14,SNR=38						
SJG				Sn	Sn	14 00 37.5	+1.7
	comp=N,132nm,0.3s,baz=53,slow=20,SNR=13						
SJG	San Juan	1.74	231	⇑eP	Pn	14 00 14.0	-0.8
SJG	San Juan	1.74	231	eS	Sn	14 00 38.0	+2.2
SJG	San Juan	1.74	231	eP	Pn	14 00 14.5	-0.3
SJG				eS	Sn	14 00 37.5	+1.7
ECPR	Experimental S	1.79	240	⇑eP	Pn	14 00 14.6	-0.9
ECPR	Experimental S	1.79	240	eS	Sn	14 00 38.8	+1.8
EMPR	Esperanza - Ma	1.86	247	Pn	Pn	14 00 15.7	-0.7
EMPR				IAML		14 01 01.5	
	comp=N,2µm,0.8s						
EMPR	Esperanza - Ma	1.86	247	⇓eP	Pn	14 00 15.8	-0.6
EMPR	Esperanza - Ma	1.86	247	eS	Sn	14 00 41.4	+2.8
CELP	Cerrillos	2.09	237		Pn	14 00 18.9	-0.7
CELP				IAML		14 00 50.8	
	comp=N,627nm,0.5s						
CELP	Cerrillos	2.09	237	⇓eP	Pn	14 00 19.1	-0.5
CELP	Cerrillos	2.09	237	eS	Sn	14 00 46.4	+1.9
AOPR	Arecibo Observ	2.11	246	Pn	Pn	14 00 19.0	-0.9
AOPR	Arecibo Observ	2.11	246		Sn	14 00 47.1	+2.3
AOPR	Arecibo Observ	2.11	246	⇑eP	Pn	14 00 19.1	-0.7
AOPR	Arecibo Observ	2.11	246	eS	Sn	14 00 47.1	+2.3
AOPR	Arecibo Observ	2.11	246	eP	Pn	14 00 19.6	-0.2
AOPR				eS	Sn	14 00 51.5	+6.7
UUPR	Utuado, UPR, P	2.12	243	Pn	Pn	14 00 19.3	-0.7
OBIP	Obispado Ponce	2.13	237		Pn	14 00 19.4	-0.8
OBIP				IAML		14 00 53.5	
	comp=E,1µm,0.6s						
OBIP				IAML		14 00 56.6	
	comp=N,734nm,0.8s						
OBIP	Obispado Ponce	2.13	237		Sn	14 00 47.5	+2.1
OBIP	Obispado Ponce	2.13	237	⇓eP	Pn	14 00 19.6	-0.5
OBIP	Obispado Ponce	2.13	237	eS	Sn	14 00 47.5	+2.1
AGPR	Aguadilla, PR	2.38	252	Pn	Pn	14 00 22.7	-0.8
AGPR				IAML		14 00 59.6	
	comp=N,647nm,0.8s						
AGPR				IAML		14 01 13.7	
	comp=E,594nm,0.7s						
AGPR	Aguadilla, PR	2.38	252		Sn	14 00 53.4	+1.9
AGPR	Aguadilla, PR	2.38	252	⇑eP	Pn	14 00 22.8	-0.7
AGPR	Aguadilla, PR	2.38	252	eS	Sn	14 00 53.4	+1.9
PRSN	Puerto Rico Se	2.50	247	Pn	Pn	14 00 24.5	-0.6
PRSN				IAML		14 01 06.3	
	comp=N,834nm,0.3s						
MLPR	Magueyes Islan	2.52	241	⇓eP	Pn	14 00 25.4	-0.2
MLPR	Magueyes Islan	2.52	241	eS	Sn	14 00 57.3	+2.2
CRPR	Cabo Rojo, PR	2.56	242		Sn	14 00 57.4	+1.4
CRPR	Cabo Rojo, PR	2.56	242		Pn	14 00 25.6	-0.4
CRPR				IAML		14 01 10.7	
	comp=N,463nm,0.7s						
CRPR	Cabo Rojo, PR	2.56	242	⇑eP	Pn	14 00 25.9	-0.1
CRPR	Cabo Rojo, PR	2.56	242	eS	Sn	14 00 57.4	+1.4
SKI	Saint Kitts	2.67	135	eP	Pn	14 00 31.8	+4.2
IDE	Isla Desecheo	2.73	253		Pn	14 00 27.9	-0.5
IDE					Sn	14 01 02.6	+2.4
IDE	Isla Desecheo	2.73	253	⇑eP	Pn	14 00 27.9	-0.5
IDE	Isla Desecheo	2.73	253	eS	Sn	14 01 02.6	+2.4
ANWB	Willy Bob	3.20	119	eP	Pn	14 00 36.0	+1.2
MBFL	Flemmings, Mon	3.44	135	eP	Pn	14 00 33.8	-4.4
MLYT	Lee's Yard	3.47	135	e	Pn	14 00 42.8	+4.2
ANBD	Bethesda, Anti	3.56	127	eP	Pn	14 00 38.5	-1.2
ANBD				eS	Sn	14 01 19.7	-0.8
DR12	Loma Pena Alta	4.42	265	Pn	Pn	14 00 51.1	-0.6
TBG	Guadaloupe-3	4.46	138	eP	Pn	14 00 52.1	-0.1
TBG	Guadaloupe-3	4.46	138	eS	Sn	14 01 48.6	+5.7
H05N1	Guadeloupe/Mar	4.54	129	Pn	Pn	14 00 48.9	-4.4
H05N1				Sn	Sn	14 01 44.2	-0.7
MAGL	Barre de l'ile	4.63	134	eP	Pn	14 00 55.0	+0.5
DSLB	Salisbury	4.92	139	e	Pn	14 01 00.1	+1.7
BANI	BANI	5.39	262		Pn	14 01 04.5	-0.6
H05S1	Guadeloupe/Mar	6.06	141	Pn	Pn	14 01 14.7	+0.6
H05S1				Sn	Sn	14 02 20.8	-1.4
SDDR	Presa de Saban	6.20	269	Pn	Pn	14 01 16.6	+0.5
SDDR	Presa de Saban	6.20	269	eP	Pn	14 01 16.1	-0.1
SDDR				eS	Sn	14 02 26.5	+0.6
SDDR	Presa de Saban	6.20	269	eP	Pn	14 01 16.7	+0.5
GRTK	Grand Turk	6.42	292	i P	Pn	14 01 15.8	-3.2
GRTK				eS	Sn	14 02 22.7	-8.5
PCRV	Puerto La Cruz	9.00	179	Pn	Pn	14 01 52.4	-2.1
	comp=N,0.9nm,0.3s,baz=335,slow=6.3,SNR=7.2						
PCRV				Sn	Sn	14 03 36.5	+1.9
	comp=N,0.6nm,0.3s,baz=352,slow=14,SNR=2.9						
PCRV				LR	LR	14 05 24.9	
	comp=N,173nm,18.1s,slow=38						
	comp=N,14nm,0.9s						
QMBU	Quimbuelo	9.54	278	eP	Pn	14 01 54.3	-7.6
NMDO	Nuevo Mundo	9.74	280	eP	Pn	14 01 56.5	-8.0
GTBY	Guantanamo Bay	9.81	276	eP	Pn	14 02 03.9	-1.7
SDV	Santo Domingo	11.76	210	Pn	Pn	14 02 31.9	-0.6
	comp=N,2.0nm,0.3s,baz=50,slow=10,SNR=9.7						
SDV				Sn	Sn	14 04 38.0	-4.6
	comp=N,0.9nm,0.3s,baz=27,slow=14,SNR=1.5						
SDV				LR	LR	14 07 18.2	
	comp=N,249nm,18.8s,baz=62,slow=39						
	comp=N,6.8nm,0.4s						
SDV	Santo Domingo	11.76	210	eP	Pn	14 02 33.8	+1.3
RUSC	La Rusia	15.55	213		P	14 03 26.6	-1.1
ROSC	El Rosal	17.09	214	P	P	14 03 43.2	-1.4
	comp=N,2.9nm,0.3s,baz=67,slow=15,SNR=7.8						
ROSC				LR	LR	14 10 25.9	
	comp=N,237nm,21.9s,baz=90,slow=38						
	comp=N,17nm,0.6s						
BOAV	Boa Vista	17.23	166	eP	P	14 03 44.0	-1.8
MDP	Montagnes des	18.33	138	P	P	14 03 54.1	-3.8
	comp=N,0.3nm,0.3s,baz=322,slow=12,SNR=4.8						
	comp=N,13nm,1.0s						
JTS	Las Juntas de	21.46	248	P	P	14 04 31.0	-1.0
	comp=N,5.3nm,1.0s,baz=65,slow=17,SNR=4.8						
	comp=N,5.3nm,1.0s						
TEFE	Tefe	22.59	180	eP	P	14 04 43.2	-0.9
OTAV	Otavalo	23.18	217	P	P	14 04 50.6	-0.1
OTAV				IAmb	IAmb	14 04 54.2	
	comp=Z,13nm,1.1s						
OTAV	Otavalo	23.18	217	eP	P	14 04 52.9	+2.2
MAL2	Monte Alegre,	23.52	153	P	P	14 04 53.9	+0.4
LRAL	Lakeview Retre	24.20	309		P	14 05 01.8	+2.1
CZSB	Cruzeiro do Su	27.91	197	eP	P	14 05 35.8	+2.5
SAML	Samuel	28.04	177		P	14 05 34.4	-0.1
SAML	Samuel	28.04	177	eP	P	14 05 34.9	+0.4
SADO	Sadowa	28.16	338	LR	LR	14 17 17.7	
	comp=Z,6.0nm,19.0s,baz=132,slow=38						
VILB	Vilhena	32.28	172	P	P	14 06 12.8	+0.7
VILB	Vilhena	32.28	172	eP	P	14 06 13.5	+1.4
SMTB	Santa Maria do	32.63	147	eP	P	14 06 16.1	+1.0
PTLB	Pontes e Lacer	34.89	171	eP	P	14 06 35.9	+1.2
SIV	San Ignacio	35.18	174	P	P	14 06 34.2	-3.0
	comp=Z,5.9nm,0.9s,baz=0.9,slow=10,SNR=22						
	comp=Z,5.9nm,0.9s						
SCHQ	Schefferville	35.58	358	LR	LR	14 19 04.5	
	comp=Z,46nm,20.2s,baz=256,slow=33						
TXAR	Lajitas Array	36.74	293	P	P	14 06 50.7	0.0
	comp=Z,0.5nm,0.9s,baz=97,slow=10,SNR=4.8						
	comp=Z,0.5nm,0.9s						
BDFB	Brasilia	38.35	153	P	P	14 07 06.4	+2.1
	comp=Z,1.3nm,0.6s,baz=359,slow=12,SNR=5.0						
ULM	Lac du Bonnet	39.63	329	P	P	14 07 12.9	-1.7
	comp=Z,0.9nm,0.4s,baz=120,slow=8.0,SNR=3.9						
	comp=Z,0.9nm,0.4s						
SDCO	Great Sand Dun	39.93	306	P	P	14 07 19.5	+1.8
SDCO				IAmb	IAmb	14 07 24.0	
	comp=Z,3.2nm,0.8s						
PV02	Paradox Valley	42.52	306	IAmb	IAmb	14 07 45.7	
	comp=Z,6.1nm,0.9s						
PV13	Radium Mtn., P	42.57	306	IAmb	IAmb	14 07 53.7	
	comp=Z,9.8nm,1.3s						
PV11	David Mesa, Pa	42.65	306	IAmb	IAmb	14 07 46.4	
	comp=Z,5.3nm,0.8s						
PV18	Skein Mesa, Pa	42.66	306	IAmb	IAmb	14 07 46.1	
	comp=Z,7.7nm,1.0s						
PV16	Nyswonger Mesa	42.68	306	IAmb	IAmb	14 07 46.8	
	comp=Z,5.1nm,1.2s						
PV17	East Wray Mesa	42.71	306	IAmb	IAmb	14 07 46.9	
	comp=Z,3.5nm,0.9s						
PDAR	Pinedale Array	44.36	312	P	P	14 07 54.3	+0.7
PDAR	Pinedale Array	44.36	312	P	P	14 07 53.5	-0.1
	comp=Z,1.2nm,0.8s,baz=108,slow=7.0,SNR=9.5						
	comp=Z,1.2nm,0.8s						
FRB	Frobisher Bay	44.56	358	LR	LR	14 26 01.7	
	comp=Z,74nm,18.4s,baz=120,slow=36						
TPAW	Teton Pass	45.55	313	IAmb	IAmb	14 08 19.6	
	comp=Z,2.5nm,0.9s						
CPUP	Villa Florida	45.85	171		P	14 08 03.5	-1.7
CPUP	Villa Florida	45.85	171	P	P	14 08 03.4	-1.7
	comp=Z,1.4nm,0.9s,baz=285,slow=20,SNR=6.2						
	comp=Z,1.4nm,0.9s						
SPR3	Spring Creek 3	46.97	306		P	14 08 16.7	+2.3
SPR3				IAmb	IAmb	14 08 22.3	
	comp=Z,4.9nm,1.4s						
SFJD	Kangerlussuaq	48.61	7	LR	LR	14 25 27.1	
	comp=Z,29nm,21.9s,baz=192,slow=32						
ITQB	Itaqui	49.24	171		P	14 08 31.8	+0.4
NV11	Mina Array Sit	49.85	304	P	P	14 08 38.7	+2.4
NV11				IAmb	IAmb	14 08 43.2	
	comp=Z,3.4nm,1.0s						
NVAR	Mina Array Bea	49.96	304	P	P	14 08 38.4	+1.1
	comp=Z,0.4nm,0.5s,baz=74,slow=6.9,SNR=4.1						
	comp=Z,0.4nm,0.5s						
CFA	Coronel Fontan	50.65	184	P	P	14 08 40.7	-1.5
	comp=Z,1.2nm,0.6s,baz=11,slow=5.2,SNR=3.6						
	comp=Z,1.2nm,0.6s						
J08A	Circle Bar Ran	50.84	311	IAmb	IAmb	14 08 49.9	
	comp=Z,6.4nm,1.3s						
YKA	Yellowknife Ar	55.07	334	P	P	14 09 14.0	-0.4
	comp=Z,1.1nm,0.7s,baz=117,slow=6.4,SNR=4.5						
	comp=Z,1.1nm,0.7s						
ESDC	Sonseca Array	55.65	55	P	P	14 09 19.2	+0.1
	comp=Z,0.4nm,0.8s,baz=270,slow=6.0,SNR=3.1						
	comp=Z,0.4nm,0.8s						
TORD	Torodi Ar. Bea	63.76	84	P	P	14 10 15.7	+0.5
	comp=Z,0.4nm,0.3s,baz=296,slow=6.5,SNR=2.1						
	comp=Z,0.4nm,0.3s						
ILAR	Eielson Array	69.45	333	P	P	14 10 49.6	-1.0
	comp=Z,0.4nm,0.6s,baz=100,slow=5.4,SNR=10						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	162.10	252	PKPab	PKPab	14 20 31.8	+0.4
	comp=Z,0.3nm,0.6s,baz=94,slow=4.1,SNR=5.1						

*JMA **02** 14:05:04.7±0.2, 23°.7N±0°.8×122°.1E±0°.9, h21^{km}, MV2.4/11, TAIWAN REGION*

*TAP **02** 14:05:05.4, 23°.67N×122°.07E, h32^{km}, ML2.8, D*

ISC 02 14:05:04.4±1.0**, 23°.66N**±0°.02×**122°.09E**±0°.02**, h26**^{km}±10^{km}**, n109, σ0^{s}71**/181**, 20D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEYL	Yanliau Villag	0.49	295	eP	Pb	14 05 14.9	+0.3
TEYL				eS	Sb	14 05 22.2	+0.8
SHUL	Shoufeng	0.50	285	⇓P	Pb	14 05 15.1	+0.5
SHUL				eS	Sn	14 05 23.1	-0.5
TEGC	Jichi Village	0.50	276	eP	Pb	14 05 15.2	+0.5
TEGC				eS	Sn	14 05 23.4	-0.3
EOS4	EOS4	0.51	25	P	Pn	14 05 15.3	-0.4
EOS4				S	Sn	14 05 22.8	-0.5
EGFH	Guangfu	0.60	271	eP	Pb	14 05 16.4	0.0
EGFH				eS	Sb	14 05 25.1	+0.6
TWD	Chiawan	0.61	313	eP	Pb	14 05 16.3	-0.4
TWD				eS	Sb	14 05 24.9	0.0
ESL	Shilin	0.62	285	⇓P	Pb	14 05 16.2	-0.5
ESL				eS	Sb	14 05 25.4	+0.4
ETM	Tongmen	0.62	299	eP	Pb	14 05 16.2	-0.6
ETM				eS	Sb	14 05 25.5	+0.3
HGSD	Ruisui	0.63	255	⇓P	Pb	14 05 16.8	0.0
HGSD				eS	Sb	14 05 25.8	+0.5
WARBT	Fenglin Townsh	0.65	275	⇓P	Pb	14 05 16.8	-0.4
ETL	Fush Village	0.65	320	eP	Pb	14 05 17.2	-0.1
ETL				eS	Sb	14 05 25.8	-0.2
EOS3	EOS3	0.66	19	eP	Pn	14 05 18.2	+0.3

EOS3				*e*S	Sn	14 05 27.4	0.0
ECBN	Changbin	0.68	240	*e*P	Pb	14 05 17.4	-0.2
ECBN				*e*S	Sb	14 05 27.2	+0.6
NACB	Ninganchiao	0.68	319	P	Pb	14 05 17.2	-0.5
NACB	Ninganchiao	0.68	319	⇓P	Pb	14 05 17.2	-0.5
NACB				S	Sb	14 05 26.4	-0.4
EHYH	Wanrong	0.70	257	*e*P	Pb	14 05 18.4	+0.4
EHYH				*e*S	Sb	14 05 28.1	+0.8
EHY	Hungye	0.72	258	⇓P	Pb	14 05 18.4	+0.1
EHY				*e*S	Sb	14 05 27.8	-0.1
EAHA	Aohua	0.74	335	*e*P	Pn	14 05 18.9	-0.3
EAHA				*e*S	Sn	14 05 29.0	-0.6
EOS2	EOS2	0.77	10	*e*P	Pn	14 05 21.2	+1.7
EYUL	Yuli	0.77	246	*e*P	Pb	14 05 19.4	+0.2
YULB	Yu-li	0.77	250	P	Pb	14 05 19.4	+0.2
YULB	Yu-li	0.77	250	⇓*e*P	Pb	14 05 19.2	0.0
YULB				*e*S	Sb	14 05 30.2	+0.9
ETLH	Xiulin Townshi	0.78	315	*e*P	Pb	14 05 18.9	-0.5
ETLH				*e*S	Sb	14 05 29.2	-0.4
CHKH	Chenggong	0.79	234	⇓P	Pb	14 05 19.0	-0.4
CHKH				*e*S	Sb	14 05 29.1	-0.6
TWF1	Yuli	0.79	247	⇓P	Pb	14 05 19.5	0.0
TWF1				*e*S	Sb	14 05 29.9	+0.1
ENA	Nanau	0.83	338	*e*P	Pn	14 05 20.2	-0.2
ENA				*e*S	Sb	14 05 30.5	-0.5
EWUT	Wuta	0.83	340	*e*P	Pn	14 05 20.4	-0.1
EWUT				*e*S	Sn	14 05 31.3	-0.6
FULB	Fuli	0.86	238	*e*P	Pb	14 05 20.2	-0.6
FULB				*e*S	Sb	14 05 32.0	+0.1
CHKT	Chengkung	0.86	230	⇓P	Pn	14 05 20.0	-0.9
CHKT				*e*S	Sb	14 05 30.4	-1.6
VWDT	VWDT	0.87	276	⇓*i*P	Pn	14 05 20.9	0.0
OWD	Renai	0.88	290	P	Pb	14 05 21.0	-0.2
OWD				S	Sb	14 05 32.5	-0.3
WHF	Hehuan Shan	0.89	303	*e*P	Pb	14 05 21.0	-0.6
WHF				*e*S	Sb	14 05 33.0	-0.3
ESAO	Su ao	0.94	346	*e*S	Sn	14 05 34.7	+0.1
WUSB	Renai	0.95	291	⇓P	Pn	14 05 22.1	-0.1
WUSB				*e*S	Sb	14 05 34.2	-0.3
EHD	Haiduan	0.95	238	⇓P	Pn	14 05 21.9	-0.2
EHD				*e*S	Sb	14 05 32.7	-1.9
FUSS	Fushou	0.97	307	⇓P	Pn	14 05 22.4	-0.1
FUSS				*e*S	Sb	14 05 35.0	-0.2
TWC	Suao	0.97	347	*e*P	Pb	14 05 22.6	0.0
TWC				S	Sn	14 05 35.0	-0.3
ECS	Chishang	0.97	235	*e*P	Pn	14 05 22.6	+0.2
ECS				*e*S	Sn	14 05 36.4	+0.9
EDH	Donghe	0.99	227	⇓P	Pn	14 05 21.9	-0.8
EDH				*e*S	Sb	14 05 34.1	-1.5
NNSB	Datong	1.00	320	⇓P	Pn	14 05 22.8	-0.1
NNSB				*e*S	Sb	14 05 35.5	-0.5
LATG	Datong	1.01	330	⇓P	Pn	14 05 22.9	-0.2
LATG				*e*S	Sb	14 05 35.8	-0.6
NNS	Nan Shan	1.01	320	*e*P	Pb	14 05 23.2	-0.3
NNS				*e*S	Sn	14 05 36.5	-0.2
NDS	Dongshan	1.03	341	*e*P	Pn	14 05 23.0	-0.2
TDCB	Techi	1.03	305	*e*P	Pb	14 05 23.6	-0.2
TDCB				*e*S	Sb	14 05 36.7	-0.3
SSLB	Suanglung	1.05	277	P	Pn	14 05 23.2	-0.2
SSLB	Suanglung	1.05	277	*e*P	Pn	14 05 23.4	-0.1
SSLB				*e*S	Sn	14 05 35.4	-1.8
ENTT	Nioudou	1.09	334	*e*P	Pb	14 05 24.3	-0.3
ENTT				*e*S	Sn	14 05 38.0	-0.3
ELDTW	Lidau	1.09	245	⇓P	Pn	14 05 23.8	-0.3
ELDTW				*e*S	Sn	14 05 36.8	-1.6
SMLT	Sun Moon Lake	1.11	282	⇓P	Pn	14 05 24.7	+0.3
SMLT				*e*S	Sn	14 05 39.0	+0.1
JYNG	Yonagunijimaku	1.11	45	*e*S	Sb	14 05 39.1	0.0
TWE	Neicheng	1.12	340	*e*P	Pb	14 05 25.3	+0.1
TWE				*e*S	Sn	14 05 38.5	-0.6
WHYT	Xinyi Township	1.13	272	*e*P	Pb	14 05 25.2	-0.1
WHYT				*e*S	Sn	14 05 39.5	+0.2
LDUT	Ludao	1.13	210	*e*P	Pn	14 05 24.0	-0.6
LDUT				*e*S	Sn	14 05 37.5	-1.7
ILA	Ilan	1.15	344	*e*S	Sb	14 05 40.0	0.0
WCS	Beigang Elemen	1.15	291	*e*P	Pb	14 05 25.4	-0.1
TYC	Yuchr	1.15	283	*e*P	Pn	14 05 25.3	+0.4
TYC				*e*S	Sb	14 05 40.1	-0.2
LONT	Longtian	1.16	230	*e*P	Pn	14 05 24.9	-0.1
LONT				*e*S	Sn	14 05 39.7	-0.2
YOJ	Yonaguni jima	1.16	46	P	Pb	14 05 26.1	+0.2
YOJ	Yonaguni jima	1.16	46	S	Sb	14 05 41.3	+0.7
YOJ	Yonaguni jima	1.16	46	*e*P	Pb	14 05 25.8	-0.1
YOJ				*e*S	Sb	14 05 40.3	-0.3
ALS	Alishan	1.19	263	*e*P	Pb	14 05 26.5	0.0
FUSB	Fushanzhiwuyua	1.19	338	*e*P	Pb	14 05 26.0	-0.3
FUSB				*e*S	Sb	14 05 41.0	-0.4
EGS		1.19	353	*e*P	Pb	14 05 25.7	-0.6
YHNB	Yeheng	1.20	327	P	Pb	14 05 26.2	-0.3
YHNB	Yeheng	1.20	327	S	Sb	14 05 41.6	-0.1
YHNB	Yeheng	1.20	327	P	Pb	14 05 26.0	-0.5
YHNB				*e*S	Sn	14 05 40.0	-1.1
WHP	Taichung City	1.21	301	*e*P	Pb	14 05 27.3	+0.5
WHP				*e*S	Sb	14 05 41.9	-0.2
TTN	Taitung	1.25	224	*e*P	Pn	14 05 26.8	+0.6
TWGBT	Beinan	1.25	228	P	Pn	14 05 25.9	-0.3
TWGBT	Beinan	1.25	228	S	Sn	14 05 42.8	+0.6
TWGBT	Beinan	1.25	228	*e*P	Pn	14 05 25.8	-0.4
TWGBT				*e*S	Sn	14 05 41.5	-0.7
TWG	Pinlang	1.25	228	*e*P	Pn	14 05 25.9	-0.4
TWG				*e*S	Sn	14 05 41.4	-0.8
WJS	Zhushan	1.25	278	*e*P	Pb	14 05 28.0	+0.5
WJS				*e*S	Sb	14 05 44.5	+1.3
CHN5	Tsauling	1.29	268	*e*P	Pb	14 05 28.2	0.0
STYH	Taoyuan	1.30	248	*e*P	Pn	14 05 26.2	-0.7
STYH				*e*S	Sn	14 05 42.9	-0.5
WNT	Mingjian	1.30	280	*e*P	Pb	14 05 28.8	+0.5
NFF	Wufeng Townshi	1.31	318	*e*P	Pb	14 05 28.2	-0.2
NFF				*e*S	Sb	14 05 44.4	-0.5
TIPB	Shuangxi	1.33	350	*e*P	Pb	14 05 28.3	-0.5
TIPB				*e*S	Sn	14 05 43.8	-0.4
WCKO	Fanlu	1.38	261	*e*P	Pb	14 05 29.7	+0.2
WCKO				*e*S	Sn	14 05 46.2	+0.8
TPUB	Ta-pu	1.38	255	P	Pb	14 05 30.0	+0.3
TPUB	Ta-pu	1.38	255	S	Sb	14 05 49.0	+2.1
TPUB	Ta-pu	1.38	255	*e*P	Pb	14 05 29.9	+0.2
TPUB				*e*S	Sb	14 05 47.6	+0.7
NSTT	Nanjuang	1.39	315	*e*P	Pb	14 05 29.4	-0.2
NSTT				*e*S	Sb	14 05 46.8	-0.2
LIOB	Emei	1.39	315	*e*P	Pb	14 05 30.0	+0.3
LIOB				*e*S	Sb	14 05 46.7	-0.3
KSHI	Guanxi Townshi	1.39	323	*e*P	Pb	14 05 30.7	+0.9
KSHI				*e*S	Sb	14 05 49.6	+2.5
CHN4	Tsaushan	1.40	258	*e*P	Pb	14 05 30.4	+0.4
WTP	Ta-pu	1.41	253	⇓P	Pb	14 05 30.2	0.0
TATO	Taipei	1.42	338	P	Pb	14 05 31.0	+0.7
TATO	Taipei	1.42	338	S	Sb	14 05 49.8	+1.8
WDLH	Douliu	1.42	272	*e*P	Pb	14 05 30.9	+0.7
SXI1	Grass Mountain	1.44	352	*e*P	Pb	14 05 30.1	-0.6
SXI1				*e*S	Sn	14 05 47.4	+0.3
ECL	Taimali	1.48	225	*e*P	Pn	14 05 29.2	-0.2
ECL				*e*S	Sn	14 05 47.2	-0.8
SGST	Jiashian	1.50	248	*e*P	Pn	14 05 30.7	+1.1
SGST				*e*S	Sb	14 05 49.9	-0.2
CHN1	Nanshi	1.51	252	*e*P	Pb	14 05 31.7	-0.1
CHN1				*e*S	Sb	14 05 51.5	+1.0
TWK	Hsinying	1.52	255	*e*P	Pb	14 05 31.7	-0.3
SNST	Tainan City	1.52	254	*e*P	Pb	14 05 31.7	-0.3
SSD	Sandimen	1.62	236	*e*P	Pn	14 05 31.8	+0.5
IRIF	Iriomote-Funau	1.65	66	P	Pn	14 05 32.7	+1.0
IRIF				*e*S	Sb	14 05 53.2	-1.3
SCST	Cishan	1.65	243	*e*P	Pb	14 05 34.4	+0.1
SCST				*e*S	Sb	14 05 56.8	+2.1
MASBT	Mashibuluo	1.69	232	*e*P	Pn	14 05 33.3	+1.0
EAST	Anshuo	1.71	222	*e*P	Pn	14 05 32.6	0.0
WSL	Shuilin Townsh	1.71	266	*e*P	Pb	14 05 34.2	-1.0
WSL				*e*S	Sb	14 05 56.1	-0.2
TWM1	Shoushan	1.74	242	*e*P	Pb	14 05 36.3	+0.6
TWM1				*e*S	Sb	14 05 59.8	+2.6
SCZT	Fangliau	1.86	227	*e*P	Pn	14 05 35.7	+1.0
SLIU	Shizi	1.86	220	*e*P	Pn	14 05 34.8	+0.2
JIJ	Ishigaki jima	2.01	69	P	Pn	14 05 37.1	+0.5
JIJ				*e*S	Sn	14 06 01.6	+0.7
JISG	Ishigakijimahi	2.23	65	P	Pn	14 05 40.3	+0.6
JISG				*e*S	Sn	14 06 05.8	-0.6
VWUC	VWUC	2.75	299	*e*P	Pn	14 05 47.3	+0.5
VWUC				*e*S	Sn	14 06 17.8	-1.3
PTMZ	Houxiangcun	3.04	298	*e*P	Pn	14 05 51.5	+0.8
PTMZ				*e*S	Sn	14 06 25.4	-0.9

IDC ***02*** *14:18:40.9±1.6, 30°.74S×178°.35W, h96^{km}±12^{km}, mb3.5/4, mbtmp3.9/5, Error ellipse: s-maj=38.1km s-min=14.0km az=117.0*

ISC 02 14:18:40.5±1.1**, 30°.8S**±0°.1×**178°.3W**±0°.3**, h100^{km}, n9,** σ**0^{s}.65**/11**, mb3.7**/4**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.53	11	P	Pn	14 19 08.3	+1.1
	178nm,0.3s,baz=113,slow=23,SNR=1.2						
RAO				S	Sn	14 19 26.8	-0.5
	421nm,0.3s,baz=180,slow=20,SNR=2.6						
URZ	Urewera	8.40	206	P	Pn	14 20 39.0	-0.3
	14nm,1.1s,baz=360,slow=6.9,SNR=7.0						
URZ				S	Sn	14 22 13.4	+0.9
	4.7nm,0.3s,baz=66,slow=19,SNR=15						
ASAR	Alice Springs	42.88	267	P	P	14 26 29.1	-0.1
	0.3nm,0.3s,baz=108,slow=8.1,SNR=27						
	0.3nm,0.3s						
WRA	Warramunga Arr	43.90	273	P	P	14 26 37.2	-0.2
	0.5nm,0.2s,baz=111,slow=7.3,SNR=6.5						
	0.5nm,0.2s						
NVAR	Mina Array Bea	88.65	43	P	P	14 31 22.0	-0.7
	0.3nm,0.7s,baz=236,slow=4.4,SNR=2.0						
	0.3nm,0.7s						
CMAR	Chiang Mai Arr	93.31	289	P	P	14 31 44.0	-0.5
	0.3nm,0.5s,baz=131,slow=7.9,SNR=1.9						
	0.3nm,0.5s						
FINES	FINESS Array B	145.41	340	PKPbc	PKPbc	14 38 06.4	+0.3
	1.3nm,0.4s,baz=44,slow=4.2,SNR=18						
NOA	NORSAR Array B	149.07	351	PKPbc	PKiKP	14 38 18.0	+0.4
	0.5nm,0.9s,baz=18,slow=2.6,SNR=1.6						
HFS	Hagfors	149.55	348	PKPbc	PKiKP	14 38 18.5	-0.1
	0.4nm,0.4s,baz=31,slow=3.4,SNR=1.5						

TIR ***02*** *14:18:43.8, 40°.49N×20°.77E, h1^{km}±1^{km}, Md2.1/1, Ml2.5/8*

ATH ***02*** *14:18:44.4, 40°.54N×20°.81E, h8^{km}±2^{km}, ML2.3/12, Manual Solution by G.Panopoulou First location: 2019/06/02 14:19:52, This location: 2020/10/14 18:57:12 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*

ISC 02 14:18:44.6±0.9**, 40°.51N**±0°.02×**20°.82E**±0°.03**, h7^{km}**±8^{km}**, n27,** σ**1^{s}.13**/41**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	Korca	0.11	348	Pg	Pg	14 18 46.6	-0.6
KBN				Sg	Sg	14 18 48.8	-0.2
KBN				AML	AML	14 18 49.0	
	9.4nm,0.2s						
KBN				AML	AML	14 18 49.4	
	8.8nm,0.2s						
KBN				AMd		14 19 13.0	
NEST	Nestorio	0.20	119	Pg	Pg	14 18 49.0	+0.3
NEST				Sg	Sg	14 18 52.6	+1.2
NEST				AML	AML	14 18 53.5	
	3.9nm,0.3s						
NEST				AML	AML	14 18 53.5	
	5.5nm,0.3s						
NEST	Nestorio	0.20	119	P	Pg	14 18 48.9	+0.2
NEST				S	Sg	14 18 52.5	+1.0
LSK	Leskovik	0.40	205	Pg	Pg	14 18 51.5	-0.9
LSK				Sg	Sg	14 18 57.1	-0.5
LSK				AML	AML	14 19 04.3	
	2.6nm,0.5s						
LSK				AML	AML	14 19 07.0	
	3.1nm,0.6s						
PENT	Pentalofos	0.40	142	P	Pg	14 18 52.1	-0.3
PENT				S	Sg	14 18 58.9	+1.2
LMS2	Laimos Florina	0.41	37	P	Pg	14 18 52.1	-0.4
LMS2				S	Sg	14 18 57.8	-0.1
KPRO	Kipourio	0.70	143	P	Pg	14 18 57.4	-0.6
KPRO				S	Sb	14 19 08.8	-0.1
KZN	Kozani	0.76	106	P	Pg	14 18 58.7	-0.4
KZN				S	Sg	14 19 10.2	+1.2
SRN	Sarande	0.89	225	Pg	Pg	14 19 01.1	-0.6
SRN				Sg	Sb	14 19 14.8	+0.4
SRN				AML	AML	14 19 17.4	
	0.4nm,0.5s						
SRN				AML	AML	14 19 23.9	
	0.2nm,0.5s						
IGT	Igoumenitsa	1.05	201	Pg	Pb	14 19 04.4	-0.7
IGT				Sg	Sn	14 19 19.8	-0.8
IGT	Igoumenitsa	1.05	201	P	Pg	14 19 03.8	-0.9
TIR	Tirane	1.10	319	Pn	Pn	14 19 07.2	+0.7
TIR				Sn	Sn	14 19 21.5	-0.5
TIR				AML	AML	14 19 29.9	
	0.2nm,0.4s						
TIR				AML	AML	14 19 30.6	
	0.3nm,0.6s						
KEK	Kerkira	1.12	225	P	Pn	14 19 06.3	-0.3
TETR	Tetrakomo, Epi	1.22	163	P	Pn	14 19 08.2	+0.1
THL	Klokotos Trika	1.32	136	P	Pn	14 19 08.6	-0.8
TYRN	Tyrnavos	1.35	126	P	Pn	14 19 09.3	-0.5
PUK	Puka	1.68	336	Pn	Pg	14 19 16.5	-0.3
PUK				Sn	Sg	14 19 41.5	+2.9
PUK				AML	AML	14 19 44.5	
	0.3nm,0.7s						
KNT	Kendrikon	1.71	67	P	Pn	14 19 14.3	-0.5
LKD2	Lefkada island	1.73	184	Pn	Pg	14 19 18.4	+0.7
LKD2				Sn	Sg	14 19 44.3	+4.2
LKD2				AML	AML	14 19 55.9	
	0.2nm,0.5s						
LKD2	Lefkada island	1.73	184	P	Pb	14 19 15.8	-0.9
HORT	Hortiatis	1.74	86	P	Pn	14 19 15.1	-0.2
EVR	Evrytania	1.77	154	P	Pn	14 19 16.4	+0.7
NYDR	Nydri-Lefkada	1.80	183	P	Pb	14 19 17.0	-0.9
AGG	Agios Georgios	1.89	141	P	Pn	14 19 17.5	+0.1
BCI	Bajram Curri	1.94	343	Pn	Pg	14 19 21.8	+0.1
BCI				Sn	Sg	14 19 49.2	+2.4
BCI				AML	AML	14 19 52.6	
	0.2nm,0.8s						
DRME	Dracevica, Mon	2.08	324	Pn	Pb	14 19 21.9	-0.8
ANX	Ano Chora	2.10	156	P	Pn	14 19 20.5	+0.3

NAO ***02*** *14:49:45.5, 39°.23N×25°.74E, h10^{km}, mb4.0*

IDC ***02*** *14:50:05.8±0.9, 40°.52N×20°.85E, h0^{km}, mb3.4/9, mbtmp3.5/16, ML3.1/5, MS2.9/9, Error ellipse: s-maj=13.5km s-min=13.2km az=72.0*

TIR ***02*** *14:50:05.8, 40°.45N×20°.79E, h11^{km}±1^{km}, Ml3.8/11*

BEO ***02*** *14:50:05.4±1.1, 40°.30N×20°.74E, h2^{km}±5^{km}, ML3.5/20*

ATH ***02*** *14:50:06.1, 40°.52N×20°.79E, h6^{km}±1^{km}, ML3.5/30, Manual Solution by G.Panopoulou First location: 2019/06/02 14:51:03, This location: 2020/10/14 19:00:48 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

PDG ***02*** *14:50:06.8±0.7, 40°.46N×20°.81E, h11^{km}±1^{km}, ML3.7/11, Error ellipse: s-maj=0.8km s-min=1.3km az=0.0*

SKO ***02*** *14:50:08.6, 40°.41N×20°.68E, h11^{km}, ML3.5*

THE ***02*** *14:50:09.4, 40°N±2°×2°1E±°, h6^{km}±4^{km}, M3.2/33, MLh3.2/33*

ISC 02 14:50:06.5±0.9**, 40°.43N**±0°.01×**20°.78E**±0°.02**, h7^{km}**±6^{km}**, n244,** σ**1^{s}.37**/301**, mb3.6**/7**, 21C-12D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	Korca	0.19	1	Pg	Pg	14 50 09.7	-0.7
KBN				Sg	Sg	14 50 12.9	-0.1
KBN				AML	AML	14 50 15.0	
	74nm,0.4s						
KBN				AML	AML	14 50 20.2	
	73nm,0.6s						
NEST	Nestorio	0.20	95	Pg	Pg	14 50 10.8	+0.2
NEST				Sg	Sg	14 50 14.1	+0.7
NEST				AML	AML	14 50 17.2	
	49nm,0.5s						
NEST	Nestorio	0.20	95	P	Pg	14 50 10.8	+0.2
NEST	Nestorio	0.20	95	P	Pg	14 50 10.8	+0.2
NEST				S	Sg	14 50 14.7	+1.3
LSK	Leskovik	0.32	206	Pg	Pg	14 50 11.9	-0.9
LSK				Sg	Sg	14 50 17.5	+0.6
LSK				AML	AML	14 50 21.1	
	116nm,0.3s						
LSK				AML	AML	14 50 22.8	
	97nm,0.5s						
PENT	Pentalofos	0.36	131	P	Pg	14 50 13.4	-0.1
PENT				S	Sb	14 50 19.5	-1.7
LMS2	Laimos Florina	0.48	34	P	Pg	14 50 15.6	-0.3
KPRO	Kipourio	0.65	137	P	Pg	14 50 18.3	-0.8
KPRO				S	Sg	14 50 25.3	-2.2
KPRO	Kipourio	0.65	137	P	Pg	14 50 18.4	-0.6
KPRO				S	Sb	14 50 29.4	-0.2
OHR	Ohrid	0.68	1	⇓*i*Pg	Pg	14 50 19.5	0.0
OHR				*i* Sg	Sb	14 50 30.5	+0.2
OHR				*e*Lg	Lg	14 50 36.4	
	comp=E,2μm,0.6s						
OHR				*e*Lg	Lg	14 50 36.8	
	comp=N,2μm,1.1s						
OHR	Ohrid	0.68	1	*e*Pg	Pg	14 50 19.5	0.0
OHR				*e*Sg	Sb	14 50 30.9	+0.6
MSVA	Metsovo	0.73	155	P	Pg	14 50 19.6	-0.9
MSVA				S	Sb	14 50 32.9	+1.0
KZN	Kozani	0.77	99	P	Pb	14 50 21.3	-0.9
KZN				S	Sb	14 50 32.1	-0.7
SRN	Sarande	0.82	228	Pg	Pg	14 50 21.9	-0.2
SRN				Sg	Sb	14 50 34.8	+0.6
SRN				AML	AML	14 50 41.7	
	comp=N,7.1nm,0.9s						
IGT	Igoumenitsa	0.96	201	Pg	Pg	14 50 25.0	-0.1
IGT				Sg	Sn	14 50 39.7	-0.7
IGT	Igoumenitsa	0.96	201	*i* Pg	Pg	14 50 24.9	-0.1
IGT				*i* Sg	Sn	14 50 41.3	+0.9
IGT	Igoumenitsa	0.96	201	P	Pg	14 50 24.9	-0.1
IGT				S	Sn	14 50 40.1	-0.3
VLO	Vlora	0.98	272	Pg	Pn	14 50 26.4	-0.3
VLO				S	Sb	14 50 39.3	+0.3
VLO				AML	AML	14 50 48.4	
	comp=N,15nm,0.7s						
NASA	Naoussa	1.00	78	P	Pg	14 50 25.1	-0.6
NASA				S	Sb	14 50 38.5	-1.0
KTI	Kastanea	1.02	92	P	Pb	14 50 25.9	-0.7
KEK	Kerkira	1.04	227	P	Pn	14 50 27.4	-0.2
TIR	Tirane	1.15	323	Pn	Pg	14 50 28.1	-0.4
TIR				Sn	Sn	14 50 46.0	+1.1
TIR				AML	AML	14 51 03.4	
	comp=N,3.3nm,0.7s						
TIR	Tirane	1.15	323	⇑P	Pg	14 50 28.2	-0.4
TIR	Tirane	1.15	323	*i* Pg	Pg	14 50 28.0	-0.4
TIR				*i* Sg	Sn	14 50 50.5	+5.5
TIR	Tirane	1.15	323	*e*Pg	Pg	14 50 28.2	-0.4
TIR				*e*Sg	Sn	14 50 45.1	+0.1
TIR	Tirane	1.15	323	P	Pg	14 50 27.2	-1.4
TETR	Tetrakomo, Epi	1.15	161	P	Pn	14 50 28.9	-0.2
PRGA	Parga	1.18	194	P	Pn	14 50 30.4	+0.9
PHP	Peshkopia	1.28	348	Pg	Pg	14 50 30.9	0.0
PHP				Sg	Sn	14 50 47.5	-0.7
PHP				AML	AML	14 50 58.2	
	comp=N,4.3nm,1.0s						
THL	Klokotos Trika	1.28	132	P	Pn	14 50 29.9	-0.9
THL				S	Sb	14 50 47.3	-0.4
THL	Klokotos Trika	1.28	132	P	Pn	14 50 30.3	-0.5
THL				S	Sn	14 50 48.6	+0.3
TYRN	Tyrnavos	1.33	123	P	Pn	14 50 31.0	-0.4
TYRN				S	Sb	14 50 47.6	-1.3
TYRN	Tyrnavos	1.33	123	P	Pn	14 50 31.1	-0.3
TYRN				S	Sg	14 50 48.8	-0.3
TSLK	Tsoukalades, L	1.61	184	P	Pg	14 50 37.7	+0.3
TSLK				S	Sg	14 51 00.6	+2.4
TSLK	Tsoukalades, L	1.61	184	P	Pb	14 50 36.5	0.0
SKO	Skopje	1.61	18	⇓*i*Pg	Pg	14 50 36.6	-0.9
SKO				*i* Sg	Sg	14 51 01.1	+2.7
VAY	Valandovo	1.62	56	P	Pb	14 50 35.8	-0.9
VAY				S	Sn	14 50 55.6	-1.0
VAY	Valandovo	1.62	56	*i* Pg	Pb	14 50 36.0	-0.7
VAY				*i* Sg	Sg	14 51 04.9	+6.3
VAY				*e*Lg	Lg	14 51 05.6	
	comp=N,1μm,1.4s						
VAY				*e*Lg	Lg	14 51 08.2	
	comp=E,711nm,0.9s						
VAY	Valandovo	1.62	56	*e*Pg	Pb	14 50 35.8	-0.9
VAY				*e*Sg	Sg	14 51 01.2	+2.7
LKD2	Lefkada island	1.65	183	Pn	Pg	14 50 37.8	-0.2
LKD2				Sn	Sg	14 51 01.6	+2.3
LKD2				AML	AML	14 51 20.3	
	comp=E,3.4nm,0.6s						
LKD2	Lefkada island	1.65	183	P	Pg	14 50 37.6	-0.4
LKD2				S	Sg	14 51 00.2	+0.8
LKD2	Lefkada island	1.65	183	P	Pb	14 50 37.4	+0.2
THE	Thessaloniki	1.68	82	Pn	Pn	14 50 36.0	-0.2
THE	Thessaloniki	1.68	82	P	Pn	14 50 35.6	-0.6
THE				S	Sn	14 50 55.9	-2.0
THE	Thessaloniki	1.68	82	*i* Pg	Pn	14 50 35.9	-0.3
THE				*i* Sg	Sg	14 51 06.5	+6.2
THE	Thessaloniki	1.68	82	P	Pn	14 50 35.2	-0.9
EVR	Evrytania	1.71	152	P	Pb	14 50 38.0	-0.4
EVR				S	Sn	14 50 59.2	+0.2
EVR	Evrytania	1.71	152	P	Pb	14 50 37.9	-0.4
NYDR	Nydri-Lefkada	1.72	182	P	Pg	14 50 38.9	-0.5
NYDR				S	Sg	14 51 01.1	-0.6
NYDR	Nydri-Lefkada	1.72	182	P	Pb	14 50 38.5	+0.1
PUK	Puka	1.74	338	Pn	Pb	14 50 37.8	-1.1
PUK				Sn	Sg	14 51 04.8	+2.3
PUK				AML	AML	14 51 08.5	
	comp=E,5.6nm,0.9s						
MAKR	Makrakomi, Fth	1.76	143	P	Pb	14 50 38.5	-0.6
MAKR				S	Sn	14 50 59.3	-0.7
MAKR	Makrakomi, Fth	1.76	143	P	Pb	14 50 38.3	-0.8
KNT	Kendrikon	1.76	65	P	Pn	14 50 37.0	-0.4
KNT				S	Sn	14 50 59.5	-0.6
KNT	Kendrikon	1.76	65	*i* Pn	Pn	14 50 37.5	+0.1
KNT				*e*Sn	Sg	14 51 07.0	+3.8
KNT	Kendrikon	1.76	65	P	Pn	14 50 37.5	+0.1
HORT	Hortiatis	1.77	84	P	Pn	14 50 37.2	-0.4
HORT				S	Sn	14 50 58.6	-1.9
HORT	Hortiatis	1.77	84	P	Pn	14 50 37.0	-0.7
SCTE	Santa Cesarea	1.81	259	Pn	Pg	14 50 40.3	-0.8
SCTE				Sn	Sg	14 51 06.3	+1.7
SCTE	Santa Cesarea	1.81	259	P	Pn	14 50 37.8	-0.2
AGG	Agios Georgios	1.85	139	P	Pn	14 50 39.3	+0.7
AGG				S	Sn	14 51 01.3	-0.9
AGG	Agios Georgios	1.85	139	P	Pn	14 50 39.3	+0.7
PDO	Prodromos	1.86	170	P	Pb	14 50 40.7	-0.1
PVO	Paravola	1.90	162	P	Pb	14 50 41.5	-0.1
PVO	Paravola	1.90	162	P	Pb	14 50 40.8	-0.7
ULC	Ulcinj	1.92	323	Pn	Pb	14 50 41.0	-0.8
ULC	Ulcinj	1.92	323	⇓*i*Pn	Pb	14 50 40.8	-1.0
ULC				*i* Sn	Sg	14 51 06.8	-1.4
FSK	Fiskardo	1.98	185	P	Pb	14 50 41.6	-1.3
SOH	Sokhos	2.00	78	P	Pn	14 50 40.4	-0.2
SOH	Sokhos	2.00	78	P	Pn	14 50 40.4	-0.2
BCI	Bajram Curri	2.00	345	Pn	Pg	14 50 44.4	-0.6
BCI				Sn	Sg	14 51 13.0	+2.1
BCI				AML	AML	14 51 28.7	
	comp=E,4.0nm,1.3s						
BCI	Bajram Curri	2.00	345	P	Pg	14 50 44.2	-0.8
PLG	Polygyros	2.03	91	P	Pn	14 50 40.5	-0.7
PLG	Polygyros	2.03	91	P	Pn	14 50 40.2	-1.0
ANX	Ano Chora	2.04	154	P	Pb	14 50 42.4	-1.4
DRME	Dracevica, Mon	2.13	326	Pn	Pb	14 50 44.0	-1.3
DRME	Dracevica, Mon	2.13	326	*e*Pn	Pb	14 50 43.5	-1.8
DRME	Dracevica, Mon	2.13	326	⇓*i*Pn	Pn	14 50 43.0	+0.6
DRME				*i* Sn	Sb	14 51 11.9	0.0
EFP	Efpalio	2.19	156	P	Pb	14 50 44.9	-1.4
EFP	Efpalio	2.19	156	P	Pb	14 50 45.0	-1.4
NEO	Neokhori	2.19	120	P	Pn	14 50 43.5	+0.2
NEO	Neokhori	2.19	120	P	Pn	14 50 43.2	-0.2
AXAR	Agios Charalam	2.21	138	P	Pn	14 50 44.1	+0.5
AXAR	Agios Charalam	2.21	138	P	Pn	14 50 44.4	+0.8
DMLN	Damoulianata-K	2.21	188	P	Pn	14 50 44.7	+1.0
SRS	Serrai	2.24	71	P	Pn	14 50 44.0	0.0
SRS	Serrai	2.24	71	*i* Pn	Pn	14 50 44.0	0.0
SRS				*e*Sn	Sg	14 51 17.6	-0.8
SRS	Serrai	2.24	71	P	Pn	14 50 42.9	-1.1
SERG	Sergoula	2.25	154	P	Pn	14 50 44.7	+0.6
SERG	Sergoula	2.25	154	P	Pb	14 50 45.8	-1.6
VLS	Valsamata	2.26	184	P	Pn	14 50 45.2	+1.0
VLS	Valsamata	2.26	184	P	Pn	14 50 45.0	+0.8
KKB	Krupnik	2.26	51	*i* Pn	Pb	14 50 45.5	-2.2
PAIG	Paliouri	2.28	102	P	Pn	14 50 44.2	-0.2
AXS	Araxos	2.28	168	P	Pb	14 50 46.5	-1.5
PDG	Podgorica	2.30	331	*e*Pn	Pn	14 50 45.8	+1.0
PDG	Podgorica	2.30	331	⇑P	Pb	14 50 46.8	-1.6
PDG	Podgorica	2.30	331	*e*Pn	Pn	14 50 45.8	+1.0
PDG				*e*Sg	Sg	14 51 21.2	+0.8
PDG	Podgorica	2.30	331	⇓*i*Pn	Pn	14 50 45.2	+0.4

PDG				*i* Sn	Sb	14 51 16.0	-1.0
PSDA	Pessada-Kefalo	2.32	184	P	Pn	14 50 46.6	+1.5
PSDA	Pessada-Kefalo	2.32	184	P	Pn	14 50 45.9	+0.8
BUM	Brajici-Budva	2.35	323	Pn	Pn	14 50 46.6	+1.1
BUM	Brajici-Budva	2.35	323	⇑*i*Pn	Pn	14 50 46.1	+0.6
BUM				*i* Sn	Sb	14 51 17.6	-0.7
RTZL	Ratzakli, Kefa	2.35	180	P	Pn	14 50 46.7	+1.1
YRMI	Loutra Irminis	2.37	169	P	Pn	14 50 47.3	+1.6
BOSS	Bosilegrad	2.42	31	*e*Pn	Pn	14 50 47.4	+0.9
RLS	Riolos of Patr	2.43	167	P	Pb	14 50 49.4	-1.1
RLS	Riolos of Patr	2.43	167	P	Pn	14 50 48.3	+1.7
OUR	Ouranopolis	2.44	91	P	Pn	14 50 47.1	+0.3
OUR	Ouranopolis	2.44	91	P	Pn	14 50 46.8	0.0
LKR	Lokris	2.47	135	P	Pn	14 50 47.4	+0.2
KOKK	Kokkinochori,	2.48	80	P	Pn	14 50 47.2	-0.1
KOKK	Kokkinochori,	2.48	80	P	Pn	14 50 47.1	-0.1
BARS	Barje	2.50	18	*i* Pn	Pn	14 50 47.6	-0.1
BARS	Barje	2.50	18	*e*Pn	Pn	14 50 47.8	+0.2
MMB	Musomishta	2.51	63	P	Pn	14 50 49.0	+1.3
MMB	Musomishta	2.51	63	*i* Pn	Pb	14 50 49.7	-2.1
IVA	Berane	2.53	345	⇑*i*Pn	Pn	14 50 48.9	+0.9
IVA				*i* Sn	Sb	14 51 21.5	-2.0
CEME	Cevo	2.53	327	⇓*i*Pn	Pn	14 50 48.7	+0.6
CEME				*i* Sn	Sb	14 51 21.5	-2.2
ORTH	Orthonies,Zaky	2.58	182	P	Pn	14 50 48.7	0.0
KOME	Kolasin	2.59	339	⇑*i*Pn	Pn	14 50 50.0	+1.0
KOME				*i* Sn	Sb	14 51 22.8	-2.7
KLV	Kalavryta, Ach	2.61	156	P	Pn	14 50 50.7	+1.6
HCY	Herceg Novi	2.65	320	*e*Pn	Pn	14 50 49.5	-0.1
HCY	Herceg Novi	2.65	320	⇓*i*Pn	Pn	14 50 49.7	+0.1
HCY				*i* Sn	Sn	14 51 23.8	+1.8
AOS	Alonnisos	2.70	117	P	Pn	14 50 50.6	+0.3
LTHK	Lithakia	2.72	179	P	Pb	14 50 53.0	-2.5
SELS	Selova	2.79	5	*e*Pn	Pb	14 50 54.0	-2.8
VTS	Vitosha	2.85	39	*e*Pn	Pn	14 50 53.7	+1.1
SJES	Sjenica	2.89	348	*e*Pn	Pn	14 50 53.5	+0.5
SJES	Sjenica	2.89	348	*e*Pn	Pn	14 50 55.0	+2.0
KAVA	Kavala	2.89	78	P	Pn	14 50 53.9	+0.9
KAVA	Kavala	2.89	78	P	Pn	14 50 52.1	-0.8
TREB	Trebinje	2.92	322	*e*Pn	Pn	14 50 53.2	-0.2
LTK	Loutraki	2.94	144	P	Pn	14 50 54.4	+0.7
BRY	Bratogost	2.98	326	*e*Pn	Pn	14 50 55.4	+1.1
BRY	Bratogost	2.98	326	⇓*i*Pn	Pn	14 50 55.5	+1.1
BRY				*i* Sn	Sb	14 51 33.7	-3.1
THAS	Thassos island	3.00	85	P	Pn	14 50 53.6	-0.9
THAS	Thassos island	3.00	85	P	Pn	14 50 53.3	-1.2
PLE	Pljevlja	3.08	341	⇑*i*Pn	Pn	14 50 56.7	+1.1
PLE				*i* Sn	Sn	14 51 34.1	+1.4
UPM	Unac-Piva	3.10	334	*e*Pn	Pb	14 51 00.0	-2.1
UPM	Unac-Piva	3.10	334	⇑*i*Pn	Pn	14 50 57.2	+1.2
UPM				*i* Sn	Sn	14 51 34.8	+1.3
MATE	Matera	3.12	275	⇓P	Pn	14 50 55.8	-0.2
GOCS	Kraljevo Serbi	3.13	1	*e*Pn	Pn	14 50 58.7	+2.4
ZAPS	Zavoj	3.16	25	*e*Pn	Pn	14 50 57.7	+1.1
IVAS	Ivanjica	3.18	352	*e*Pn	Pn	14 50 58.9	+2.0
BOVS	Bovan	3.27	12	⇑P	Pn	14 50 58.8	+0.6
BOVS	Bovan	3.27	12	*e*Pn	Pn	14 50 57.9	-0.3
RUDO	Rudo	3.35	342	*e*Pn	Pn	14 51 00.0	+0.7
STON	Ston	3.36	318	*e*Pn	Pn	14 50 58.8	-0.5
STON	Ston	3.36	318	*e*Pn	Pn	14 50 59.0	-0.3
PLD	Plovdiv	3.44	59	*e*Pg	Pb	14 51 07.7	-0.1
GRUS	Gruza	3.45	359	*e*Pn	Pn	14 51 01.4	+0.7
ZAGS	Zajecar	3.54	17	*e*Pn	Pn	14 51 03.1	+1.2
BBLS	Lazi&#263i	3.58	344	*e*Pn	Pn	14 51 04.1	+1.6
BBLS	Lazi&#263i	3.58	344	*e*Pn	Pn	14 51 03.7	+1.2
DIVS	Divibare	3.71	351	*e*Pn	Pn	14 51 05.7	+1.4
BORS2	Bor- Borsko je	3.77	14	*e*Pn	Pn	14 51 05.7	+0.7
TRUS	Trudelj	3.80	356	*e*Pn	Pn	14 51 07.4	+2.0
SVIS	Svilajnac	3.84	5	*e*Pn	Pn	14 51 06.8	+0.8
HAPS	Han Pijesak,Bl	3.90	340	*e*Pn	Pn	14 51 08.1	+1.2
HAPS	Han Pijesak,Bl	3.90	340	*e*Pn	Pn	14 51 07.5	+0.6
KUBS	Kucevo	4.03	9	*e*Pn	Pn	14 51 07.0	-1.6
TEKS	Tekeris	4.22	348	*e*Pn	Pn	14 51 11.9	+0.7
TEKS	Tekeris	4.22	348	*e*Pn	Pn	14 51 12.1	+0.9
AVAS	Avala Beograd	4.26	357	*e*Pn	Pn	14 51 13.2	+1.4
EZN	Ezine	4.29	96	⇑P	Pn	14 51 13.8	+1.6
MDVR	Moldovita	4.40	9	⇑P	Pn	14 51 16.7	+2.9
MDVR	Moldovita	4.40	9	*e*Pn	Pn	14 51 14.3	+0.6
HERR	Herculane	4.61	15	⇑P	Pn	14 51 18.3	+1.8
VRSS	Vrsac	4.70	5	*e*Pn	Pn	14 51 17.3	-0.6
FRGS	Fruska Gora	4.78	352	*e*Pn	Pn	14 51 19.6	+0.7
FRGS	Fruska Gora	4.78	352	*e*Pn	Pn	14 51 19.8	+0.9
APE	Apeiranthos	5.00	131	⇑P	Pn	14 51 22.9	+0.9
BLY	Banja Luka	5.07	330	*e*Pn	Pn	14 51 23.1	+0.3
BLY	Banja Luka	5.07	330	*e*Pn	Pn	14 51 23.6	+0.8
GZR	Gura Zlata	5.17	16	⇓P	Pn	14 51 26.1	+1.8
GZR	Gura Zlata	5.17	16	*e*Pn	Pn	14 51 25.6	+1.3
BZS	Buzias	5.22	6	⇑P	Pn	14 51 27.1	+2.2
BZS	Buzias	5.22	6	*e*Pn	Pn	14 51 25.9	+1.0
A051A	Mrakovica	5.39	329	*e*Pn	Pn	14 51 27.0	-0.4
SURR	Surduc	5.41	10	⇑P	Pn	14 51 30.1	+2.5
LOT	Lotru	5.47	23	⇑P	Pn	14 51 30.8	+2.3
VOIR		5.90	31	⇑P	Pn	14 51 37.6	+3.2
MORH	Mrgy, Hungar	5.99	346	⇓P	Pn	14 51 37.1	+1.6
IDI	Anoyia	6.08	146	Pn	Pn	14 51 39.6	+2.8
	comp=E,8.6nm,0.8s,baz=324,slow=19,SNR=2.2						
IDI				Sn	Sn	14 52 49.0	+2.3
	comp=E,0.7nm,0.3s,baz=295,slow=17,SNR=1.8						
IDI				Lg	Lg	14 53 37.7	
	comp=E,0.2nm,0.3s,baz=302,slow=19,SNR=2.1						
MLR	Muntele Rosu	6.31	35	Pn	Pn	14 51 40.8	+0.7
	comp=E,0.2nm,0.3s,baz=239,slow=15,SNR=3.1						
MLR				Sn	Sn	14 52 48.8	-3.7
	comp=E,0.1nm,0.3s,baz=207,slow=11,SNR=2.1						
MLR				Lg	Lg	14 53 30.0	
	comp=E,0.1nm,0.3s,baz=148,slow=9.5,SNR=4.0						
	comp=E,1.3nm,0.7s						
MLR	Muntele Rosu	6.31	35	⇑P	Pn	14 51 42.3	+2.2
MARR	Marisel-Cluj	6.47	14	⇓P	Pn	14 51 44.1	+2.0
BOJS	Bojanci	6.49	323	*e*Pn	Pn	14 51 41.8	-0.6
BOJS	Bojanci	6.49	323	*i* Pn	Pn	14 51 41.8	-0.6
BOJS	Bojanci	6.49	323	*e*Pn	Pn	14 51 41.8	-0.6
CRES	Cresnjevec Ost	6.65	326	*e*Pn	Pn	14 51 44.0	-0.6
GBRS	Gornja Briga	6.72	321	*e*Pn	Pn	14 51 45.4	-0.2
RIY	Rijeka	6.73	319	*e*Pn	Pn	14 51 45.3	-0.4
PLOR	Plostina	6.91	36	⇑P	Pn	14 51 50.7	+2.6
VRI	Vrincioaia	6.95	37	⇑P	Pn	14 51 51.3	+2.6
CEY	Cerknica	7.05	321	*e*Pn	Pn	14 51 49.6	-0.6
CEY	Cerknica	7.05	321	*i* Pn	Pn	14 51 49.6	-0.6
CEY	Cerknica	7.05	321	*e*Pn	Pn	14 51 49.5	-0.6
TPGR	Topolog	7.16	49	⇑P	Pn	14 51 53.5	+1.9
CFR	Carcaliu	7.19	46	⇑P	Pn	14 51 53.5	+1.6
SOKA	Soboth	7.51	328	*e*Pn	Pn	14 51 55.4	-1.0
	comp=E,5.5nm,0.6s						
OBKA	Obir	7.58	325	*e*Pn	Pn	14 51 56.8	-0.6
OBKA	Obir	7.58	325	*e*Pn	Pn	14 51 57.0	-0.4
	comp=E,2.9nm,0.6s						
ARSA	Arzberg	7.80	333	*e*Pn	Pn	14 51 59.7	-0.7
	comp=E,2.2nm,0.5s						
ARSA	Arzberg	7.80	333	*e*Pn	Pn	14 52 00.0	-0.4
RONA	Rosalia, Austr	7.95	338	Pn	Pn	14 52 01.3	-1.2
	comp=E,5.9nm,1.2s						
KECS	Kecovo	8.05	359	*e*PN	Pn	14 52 07.2	+3.4
MYKA	Terra Mystica	8.08	322	*e*Pn	Pn	14 52 02.6	-1.6
	comp=E,1.7nm,0.4s						
VYHS	Vyhne	8.18	351	*e*PN	Pn	14 52 10.5	+4.9
VYHS				*e*SN	Sn	14 53 40.8	+2.6
CONA	Conrad Observa	8.28	336	Pn	Pn	14 52 06.4	-0.7
	comp=E,3.7nm,1.2s						
MODS	Modra-Piesok	8.32	344	*e*PN	Pn	14 52 11.9	+4.3
KBA	Koelnbreinsper	8.55	323	*e*Pn	Pn	14 52 10.0	-0.7
	comp=E,2.9nm,0.5s						
ABTA	Abfaltersbach	8.71	319	*e*Pn	Pn	14 52 11.6	-1.3
	comp=E,2.1nm,0.4s,SNR=6.1						
MOA	Molln	8.77	330	*e*Pn	Pn	14 52 12.7	-0.9
	comp=E,2.6nm,0.4s						
BIOA	Bad Ischl, Aus	8.89	327	*e*Pn	Pn	14 52 14.6	-0.7
	comp=E,2.3nm,0.4s						
LESA	Schwarzleotal	9.11	323	*e*Pn	Pn	14 52 17.4	-1.0
	comp=E,2.1nm,0.4s						
VRAC	Vranov	9.36	343	Pn	Pn	14 52 22.8	+1.1
	comp=E,0.2nm,0.3s,baz=164,slow=11,SNR=5.4						
VRAC				LR	LR	14 56 04.7	
	comp=E,59nm,20.7s,baz=170,slow=39						
	comp=E,2.8nm,0.8s						
WTTA	Wattenberg	9.50	319	*e*Pn	Pn	14 52 22.7	-1.1
	comp=E,4.0nm,0.4s						
WTTA				*e*Sn	Sn	14 54 09.5	-1.3
	comp=E,28nm,1.2s						
WATA	Walderalm	9.57	319	*e*Pn	Pn	14 52 24.2	-0.7
	comp=E,8.7nm,0.5s,SNR=7.5						
SQTA	Sankt Quirin	9.68	318	*e*Pn	Pn	14 52 25.5	-0.8
	comp=E,6.7nm,0.5s,SNR=7.1						
GERES	GERESS Array B	9.80	331	Pn	Pn	14 52 28.1	+0.2
	baz=147,slow=14,SNR=18						
	comp=E,2.2nm,0.9s						
FETA	Feichten	9.81	315	*e*Pn	Pn	14 52 26.7	-1.3
	comp=E,9.5nm,1.0s,SNR=5.3						
MOTA	Moosalm	9.82	318	*e*Pn	Pn	14 52 27.9	-0.3
	comp=E,21nm,1.1s,SNR=9.6						
BRTR	Keskin Array B	9.88	90	Pn	Pn	14 52 30.5	+1.5
	baz=270,slow=8.6,SNR=1.6						
BRTR				LR	LR	14 57 17.7	
	comp=E,85nm,20.0s,baz=312,slow=44						
	comp=E,0.1nm,0.3s						
RETA	Reutte	10.09	318	*e*Pn	Pn	14 52 30.9	-0.9
	comp=E,1.8nm,0.4s						
DAVOX	Davos/Dischmat	10.13	312	Pn	Pn	14 52 31.7	-0.8
	comp=E,4.9nm,0.4s,baz=111,slow=8.6,SNR=21						
DAVOX				Sn	Sn	14 54 26.8	+0.4
	comp=E,0.2nm,0.3s,baz=162,slow=20,SNR=3.0						
DAVOX				LR	LR	14 57 55.2	
	comp=E,85nm,19.3s,baz=80,slow=46						
DAVA	Damuels	10.43	315	*e*Pn	Pn	14 52 36.4	-0.1
	comp=E,4.1nm,0.4s,SNR=5.3						
AKASG	Malin Array Be	11.84	27	LR	LR	14 58 00.9	
	comp=E,75nm,18.9s,baz=237,slow=40						
MMAI	Mount Meron Ar	13.86	118	LR	LR	14 59 26.3	
	comp=E,70nm,20.7s,baz=314,slow=40						
ASF	Jabal al Asfar	15.37	117	LR	LR	15 00 56.9	
	comp=E,43nm,19.2s,baz=5.3,slow=42						
GNI	Garni	18.27	83	LR	LR	15 01 34.7	
	comp=E,28nm,21.0s,baz=274,slow=38						
ESDC	Sonseca Array	18.95	276	P	P	14 54 27.7	-0.4
	baz=83,slow=9.7,SNR=6.9						
	comp=E,1.0nm,1.0s						
HFS	Hagfors	20.21	350	P	P	14 54 40.2	-1.5
	comp=E,1.3nm,0.6s,baz=149,slow=12,SNR=7.8						
HFS				LR	LR	15 04 25.6	
	comp=E,42nm,19.7s,baz=354,slow=43						
	comp=E,1.3nm,0.6s						
FINES	FINESS Array B	21.29	7	P	P	14 54 52.8	-0.5
	comp=E,2.5nm,0.8s,baz=186,slow=8.0,SNR=7.5						
	comp=E,2.5nm,0.8s						
NB2	NORSAR Subarra	21.46	347	P	P	14 54 55.4	+0.2
	comp=Z,5.7nm,1.1s,baz=151,slow=10						
NOA	NORSAR Array B	21.46	347	P	P	14 54 54.3	-0.9
	comp=Z,1.3nm,0.8s,baz=160,slow=9.8,SNR=7.3						
NOA				LR	LR	15 03 15.2	
	comp=Z,20nm,19.2s,baz=30,slow=37						
	comp=Z,1.3nm,0.8s						
MDT	Midelt	21.70	258	P	P	14 54 59.4	+1.2
	comp=Z,2.7nm,1.0s,baz=48,slow=7.8,SNR=4.9						
	comp=Z,2.7nm,1.0s						
EKA	Eskdalemuir Ar	21.75	321	P	P	14 54 59.6	+1.3
	comp=Z,0.6nm,0.4s,baz=122,slow=10.0,SNR=3.8						
	comp=Z,0.6nm,0.4s						
TORD	Torodi Ar. Bea	31.93	217	P	P	14 56 33.2	+0.3
	comp=Z,0.6nm,0.6s,baz=33,slow=8.2,SNR=4.2						
	comp=Z,0.6nm,0.6s						
MKAR	Makanchi Array	43.98	60	P	P	14 58 13.7	-0.6
	comp=Z,0.3nm,0.7s,baz=280,slow=7.3,SNR=2.3						
	comp=Z,0.3nm,0.7s						
ILAR	Eielson Array	74.69	355	P	P	15 01 46.9	+0.6
	comp=Z,0.2nm,1.0s,baz=31,slow=3.7,SNR=2.3						
	comp=Z,0.2nm,1.0s						
TXAR	Lajitas Array	93.56	314	P	P	15 03 24.9	+1.3
	comp=Z,0.2nm,0.6s,baz=43,slow=6.4,SNR=3.6						
	comp=Z,0.2nm,0.6s						
ASAR	Alice Springs	122.19	95	PKP	PKPdf	15 09 01.2	-1.1
	comp=Z,0.4nm,0.8s,baz=302,slow=1.9,SNR=5.6						

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*TIR **02** 15:16:26.0, 40°.47N×20°.76E, h4^{km}±2^{km}, Ml2.6/8*
*ATH **02** 15:16:27.9, 40°.40N×20°.91E, h12^{km}±1^{km}, ML2.3/11, Manual Solution by G.Panopoulou First location: 2019/06/02 15:17:41, This location: 2019/06/02 17:13:09 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*
ISC 02 15:16:26.8±0.9**, 40°.47N**±0°.02×**20°.84E**±0°.03**, h11**^{km}±7^{km}**, n22, σ0^{s}.90**/37**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.16	347	Pg	Pg	15 16 29.8	-0.7
KBN				Sg	Sg	15 16 32.0	-1.0
KBN				AML	AML	15 16 33.4	
	5.5nm,0.3s						
NEST	Nestorio	0.17	107	Pg	Pg	15 16 30.8	+0.2
NEST				Sg	Sg	15 16 34.8	+1.6
NEST				AML	AML	15 16 37.4	
	4.4nm,0.2s						
NEST	Nestorio	0.17	107	P	Pg	15 16 31.1	+0.5
NEST				S	Sg	15 16 34.0	+0.8
PENT	Pentalofos	0.35	139	P	Pg	15 16 33.9	0.0
PENT				S	Sg	15 16 37.7	-0.9
LSK	Leskovik	0.36	210	Pg	Pg	15 16 34.1	+0.1
LSK				Sg	Sg	15 16 38.8	0.0
LSK				AML	AML	15 16 46.3	
	3.7nm,0.5s						
KPRO	Kipourio	0.65	141	P	Pg	15 16 38.9	-0.5
KPRO				S	Sg	15 16 47.5	-0.5
AMYA	Amyntaio	0.68	70	P	Pg	15 16 40.7	+0.8
KZN	Kozani	0.73	102	P	Pb	15 16 41.4	-0.2
KZN				S	Sg	15 16 50.5	-0.1
SRN	Sarande	0.87	228	Pg	Pg	15 16 42.5	-0.9
SRN				Sg	Sb	15 16 55.0	-0.5
SRN				AML	AML	15 16 56.5	
	0.2nm,0.4s						
IGT	Igoumenitsa	1.01	203	Pg	Pg	15 16 45.6	-0.6
IGT				Sg	Sn	15 17 01.3	+0.2
IGT				AML	AML	15 17 05.8	
	0.2nm,0.3s						
IGT	Igoumenitsa	1.01	203	P	Pg	15 16 45.4	-0.8
KEK	Kerkira	1.09	227	P	Pn	15 16 49.1	+1.1
TETR	Tetrakomo, Epi	1.17	163	P	Pb	15 16 48.9	-0.1
TETR				S	Sg	15 17 03.8	-0.7
PHP	Peshkopia	1.25	346	Pg	Pn	15 16 49.5	-0.8
PHP				Sg	Sb	15 17 07.5	+0.8
PHP				AML	AML	15 17 16.1	
	0.1nm,0.4s						
THL	Klokotos Trika	1.28	134	P	Pn	15 16 50.1	-0.4
THL				S	Sb	15 17 06.6	-0.6
TYRN	Tyrnavos	1.31	125	P	Pn	15 16 50.5	-0.5
TYRN				S	Sb	15 17 06.0	-2.2
LKD2	Lefkada island	1.68	185	Pn	Pg	15 17 00.6	+1.6
LKD2				Sn	Sg	15 17 22.7	+1.9
LKD2				AML	AML	15 17 27.5	
	0.2nm,0.6s						
LKD2	Lefkada island	1.68	185	P	Pn	15 16 56.7	+0.6
PUK	Puka	1.73	336	Pn	Pg	15 17 00.2	+0.3
PUK				Sn	Sg	15 17 23.8	+1.4
PUK				AML	AML	15 17 28.4	
	0.4nm,0.6s						
MAKR	Makrakomi, Fth	1.76	145	P	Pn	15 16 58.1	+0.9
AGG	Agios Georgios	1.85	141	P	Pn	15 16 58.6	+0.1
ANX	Ano Chora	2.05	155	P	Pn	15 17 01.7	+0.4

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*NAO **02** 15:34:42.6, 39°.01N×19°.19E, h10^{km}, mb3.7*
*TIR **02** 15:34:53.8, 40°.45N×20°.79E, h19^{km}±1^{km}, Ml4.0/9*
*IDC **02** 15:34:53.7±0.9, 40°.54N×20°.84E, h0^{km}, mb3.6/11, mbtmp3.6/19, ML3.2/6, MS3.2/6, Error ellipse: s-maj=14.3km s-min=13.6km az=176.0*
*BEO **02** 15:34:54.9±1.4, 40°.36N×20°.83E, h6^{km}±5^{km}, ML3.8/22*
*PDG **02** 15:34:54.9±0.8, 40°.47N×20°.80E, h10^{km}±1^{km}, ML3.8/12, Error ellipse: s-maj=0.8km s-min=1.2km az=0.0*
*SKO **02** 15:34:55.3, 40°.41N×20°.76E, h10^{km}, ML3.7*
*ATH **02** 15:34:55.2, 40°.52N×20°.80E, h6^{km}±1^{km}, ML3.8/33, Manual Solution by G.Panopoulou First location: 2019/06/02 15:35:52, This location: 2020/10/14 19:08:50 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
*THE **02** 15:34:57.4, 40°N±1°×2°1E±°, h3^{km}±1^{km}, M3.6/37, MLh3.6/37*
ISC 02 15:34:54.9±0.9**, 40°.46N**±0°.01×**20°.79E**±0°.02**, h7**^{km}±6^{km}**, n239, σ1^{s}.25**/294**, mb3.5**/9**, 39C-11D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.16	0	Pn	Pg	15 34 58.0	-0.2
KBN				Sg	Sg	15 35 00.8	+0.2
KBN				AML	AML	15 35 01.7	
	197nm,0.4s						
KBN				AML	AML	15 35 06.5	
	109nm,0.6s						
NEST	Nestorio	0.21	104	Pg	Pg	15 34 59.3	+0.3
NEST				Sg	Sg	15 35 03.3	+1.3
NEST				AML	AML	15 35 03.9	
	80nm,0.5s						
NEST				AML	AML	15 35 03.9	
	84nm,0.5s						
NEST	Nestorio	0.21	104	P	Pg	15 34 59.5	+0.4
NEST				S	Sg	15 35 00.9	-1.0
NEST	Nestorio	0.21	104	P	Pg	15 34 59.5	+0.4
NEST				S	Sg	15 35 03.4	+1.5
LSK	Leskovik	0.34	204	Pg	Pg	15 35 00.8	-0.9
LSK				Sg	Sg	15 35 06.8	+0.6
LSK				AML	AML	15 35 14.6	
	65nm,0.6s						
PENT	Pentalofos	0.38	135	P	Pg	15 35 02.2	-0.2
PENT				S	Sg	15 35 07.8	+0.5
LMS2	Laimos Florina	0.46	36	P	Pg	15 35 03.4	-0.4
LMS2				S	Sg	15 35 10.2	+0.3
OHR	Ohrid	0.65	1	*i* Pg	Pg	15 35 07.6	+0.2
OHR				*i* Sg	Sn	15 35 36.2	+15
OHR				*e*Lg	Lg	15 35 36.4	
	comp=N,2µm,0.7s						
OHR				*e*Lg	Lg	15 35 36.4	
	comp=E,4µm,0.7s						
OHR	Ohrid	0.65	1	*e*Pg	Pg	15 35 08.0	+0.6
OHR				*e*Sg	Sb	15 35 18.4	+0.6
KPRO	Kipourio	0.67	139	P	Pg	15 35 07.2	-0.7
KPRO				S	Sb	15 35 17.5	-1.1
KPRO	Kipourio	0.67	139	P	Pg	15 35 07.2	-0.7
KPRO				S	Sb	15 35 18.2	-0.3
KZN	Kozani	0.77	102	P	Pg	15 35 09.2	-0.5
KZN				S	Sb	15 35 20.9	-0.4
JAN	Janina	0.81	176	P	Pg	15 35 09.4	-1.0
SRN	Sarande	0.84	226	Pg	Pg	15 35 10.6	-0.4
SRN				Sg	Sb	15 35 23.1	-0.1
SRN				AML	AML	15 35 26.6	
	comp=E,5.7nm,1.0s						
NASA	Naoussa	0.99	80	P	Pb	15 35 14.0	-0.3
NASA				S	Sb	15 35 27.1	-0.4
IGT	Igoumenitsa	0.99	201	Pg	Pg	15 35 13.4	-0.6
IGT				Sg	Sg	15 35 26.9	+0.1
IGT				AML	AML	15 35 51.0	
	comp=E,7.3nm,0.9s						
IGT	Igoumenitsa	0.99	201	P	Pg	15 35 13.5	-0.5
IGT				S	Sn	15 35 29.9	+0.4
KTI	Kastanea	1.02	94	P	Pg	15 35 14.0	-0.4
KEK	Kerkira	1.07	226	P	Pn	15 35 16.6	+0.4
TIR	Tirane	1.13	322	Pn	Pg	15 35 15.3	-1.1
TIR				Sn	Sn	15 35 34.0	+1.3
TIR				AML	AML	15 35 54.9	
	comp=E,7.8nm,0.8s						
TIR	Tirane	1.13	322	⇑P	Pg	15 35 16.7	+0.2
TIR	Tirane	1.13	322	*i* Pg	Pg	15 35 16.3	-0.2
TIR	Tirane	1.13	322	*e*Pg	Pg	15 35 16.3	-0.2
TIR				*e*Sg	Sn	15 35 34.4	+1.7
TIR	Tirane	1.13	322	P	Pg	15 35 15.4	-1.1
TIR				S	Sg	15 35 30.6	-0.6
TETR	Tetrakomo, Epi	1.18	161	P	Pn	15 35 17.9	0.0
TETR				S	Sn	15 35 35.1	+0.9
PHP	Peshkopia	1.25	348	Pg	Pg	15 35 17.6	-1.2
THL	Klokotos Trika	1.30	133	P	Pn	15 35 18.5	-1.0
THL	Klokotos Trika	1.30	133	P	Pn	15 35 18.6	-0.8
THL				S	Sn	15 35 37.4	+0.3
TYRN	Tyrnavos	1.34	124	P	Pn	15 35 19.6	-0.3
TYRN				S	Sn	15 35 38.9	+0.9
TYRN	Tyrnavos	1.34	124	P	Pn	15 35 19.7	-0.2
TYRN				S	Sn	15 35 38.6	+0.6
AMPL	Ampelaki	1.57	168	P	Pb	15 35 24.2	-0.1
SKO	Skopje	1.58	18	*i* Pg	Pg	15 35 25.5	+0.2
VAY	Valandovo	1.60	57	P	Pb	15 35 24.2	-0.6
VAY				S	Sn	15 35 44.0	-0.4
VAY	Valandovo	1.60	57	*i* Pg	Pb	15 35 24.3	-0.4
VAY				*i* Sg	Sg	15 35 48.1	+1.8
VAY				*e*Lg	Lg	15 35 49.4	
	comp=N,753nm,0.7s						
VAY				*e*Lg	Lg	15 35 51.5	
	comp=E,1µm,1.3s						
VAY	Valandovo	1.60	57	*e*Pg	Pb	15 35 24.5	-0.2
VAY				*e*Sg	Sg	15 35 48.1	+1.8
TSLK	Tsoukalades, L	1.64	184	P	Pg	15 35 26.6	+0.3
TSLK				S	Sg	15 35 49.2	+1.6
TSLK	Tsoukalades, L	1.64	184	P	Pg	15 35 25.9	-0.4
THE	Thessaloniki	1.67	84	Pn	Pn	15 35 24.7	+0.2
THE	Thessaloniki	1.67	84	P	Pn	15 35 24.6	+0.2
THE				S	Sn	15 35 45.9	-0.2
THE	Thessaloniki	1.67	84	*i* Pg	Pn	15 35 24.7	+0.2
THE	Thessaloniki	1.67	84	P	Pn	15 35 24.4	-0.1
LKD2	Lefkada island	1.68	183	Pn	Pg	15 35 27.2	+0.2
LKD2				Sn	Sb	15 35 47.4	+0.1
LKD2				AML	AML	15 36 13.0	
	comp=E,5.1nm,0.7s						
LKD2	Lefkada island	1.68	183	P	Pg	15 35 26.9	-0.1
LKD2				S	Sg	15 35 49.4	+0.7
LKD2	Lefkada island	1.68	183	P	Pb	15 35 26.1	+0.1
PUK	Puka	1.71	337	Pn	Pg	15 35 27.7	-0.1
PUK				Sn	Sn	15 35 46.7	-0.7
PUK				AML	AML	15 35 57.0	
	comp=E,12nm,0.8s						
PUK				AML	AML	15 35 57.1	
	comp=E,5.1nm,0.7s						
EVR	Evrytania	1.73	153	P	Pb	15 35 27.4	+0.3
EVR				S	Sb	15 35 49.7	+0.6
EVR	Evrytania	1.73	153	P	Pb	15 35 26.7	-0.4
KNT	Kendrikon	1.75	66	P	Pn	15 35 25.8	+0.2
KNT				S	Sn	15 35 47.3	-0.8
KNT	Kendrikon	1.75	66	*i* Pn	Pn	15 35 25.9	+0.4
KNT	Kendrikon	1.75	66	P	Pn	15 35 25.5	-0.1
NYDR	Nydri-Lefkada	1.75	182	P	Pg	15 35 27.9	-0.5
NYDR				S	Sg	15 35 52.7	+1.6
NYDR	Nydri-Lefkada	1.75	182	P	Pb	15 35 27.1	-0.2
HORT	Hortiatis	1.77	85	P	Pn	15 35 25.8	-0.1
HORT				S	Sb	15 35 49.4	-0.6
HORT	Hortiatis	1.77	85	P	Pn	15 35 25.8	-0.1
MAKR	Makrakomi, Fth	1.78	144	P	Pb	15 35 27.4	-0.4
MAKR				S	Sb	15 35 49.9	-0.5
MAKR	Makrakomi, Fth	1.78	144	P	Pb	15 35 27.4	-0.4
SCTE	Santa Cesarea	1.82	258	P	Pn	15 35 26.8	+0.3
EVGI	Lefkada island	1.84	183	P	Pb	15 35 29.2	+0.3
EVGI				S	Sg	15 35 54.2	0.0
EVGI	Lefkada island	1.84	183	P	Pb	15 35 28.9	0.0
AGG	Agios Georgios	1.87	140	P	Pn	15 35 27.9	+0.6
AGG				S	Sn	15 35 51.9	+0.8
AGG	Agios Georgios	1.87	140	P	Pn	15 35 28.1	+0.8
PDO	Prodromos	1.89	171	P	Pb	15 35 29.7	+0.1
PDO	Prodromos	1.89	171	P	Pb	15 35 29.2	-0.4
ULC	Ulcinj	1.90	323	*i* Pn	Pn	15 35 28.9	+1.3
ULC	Ulcinj	1.90	323	⇓*i*Pn	Pb	15 35 29.4	-0.4
ULC				*i* Sn	Sg	15 35 56.0	+0.2
PVO	Paravola	1.93	163	P	Pb	15 35 30.2	-0.2
PVO				S	Sb	15 35 55.7	+1.0
PVO	Paravola	1.93	163	P	Pb	15 35 29.4	-1.0
BCI	Bajram Curri	1.98	344	Pn	Pg	15 35 32.4	-0.4
BCI				Sn	Sn	15 35 50.9	-2.9
BCI				AML	AML	15 36 21.9	
	comp=E,7.0nm,1.1s						
BCI	Bajram Curri	1.98	344	P	Pb	15 35 31.8	+0.6
BCI				S	Sg	15 35 58.1	-0.3
SOH	Sokhos	1.99	79	P	Pn	15 35 29.4	+0.6
SOH				S	Sn	15 35 54.6	+0.6
SOH	Sokhos	1.99	79	P	Pn	15 35 29.3	+0.4
FSK	Fiskardo	2.01	185	S	Sb	15 35 57.5	+0.6
FSK	Fiskardo	2.01	185	P	Pn	15 35 30.2	+1.1
PLG	Polygyros	2.03	92	P	Pn	15 35 30.1	+0.6
PLG				S	Sn	15 35 56.2	+1.1
PLG	Polygyros	2.03	92	P	Pn	15 35 30.2	+0.7
ANX	Ano Chora	2.06	154	P	Pn	15 35 31.3	+1.3
DRME	Dracevica, Mon	2.10	325	*e*Pn	Pn	15 35 31.9	+1.4
DRME	Dracevica, Mon	2.10	325	⇑*i*Pn	Pb	15 35 32.2	-1.1
DRME				*i* Sn	Sb	15 36 00.7	+1.1
NEO	Neokhori	2.20	121	P	Pn	15 35 32.6	+0.8
EFP	Efpalio	2.21	157	P	Pn	15 35 32.2	+0.3
EFP	Efpalio	2.21	157	P	Pb	15 35 33.7	-1.5
PVY	Plav	2.22	344	⇑*i*Pn	Pn	15 35 33.0	+0.8
PVY				*i* Sn	Sb	15 36 03.3	+0.3
SRS	Serrai	2.23	72	P	Pn	15 35 32.6	+0.3
SRS				S	Sn	15 36 01.0	+1.1
SRS	Serrai	2.23	72	*i* Pn	Pn	15 35 33.1	+0.9

SRS	Serrai	2.23	72	P	Pn	15 35 32.5	+0.3
AXAR	Agios Charalam	2.23	139	P	Pb	15 35 33.9	-1.5
KKB	Krupnik	2.24	51	*i* Pn	Pn	15 35 33.9	+1.5
MESG	Mesagne	2.24	274	P	Pn	15 35 32.2	-0.1
DMLN	Damoulianata-K	2.25	188	P	Pb	15 35 34.5	-1.2
DMLN	Damoulianata-K	2.25	188	P	Pn	15 35 34.0	+1.5
SERG	Sergoula	2.27	154	P	Pn	15 35 33.4	+0.6
SERG	Sergoula	2.27	154	P	Pn	15 35 34.0	+1.2
PDG	Podgorica	2.28	330	⇑*i*Pn	Pn	15 35 34.5	+1.7
PDG	Podgorica	2.28	330	⇑P	Pn	15 35 33.9	+1.1
PDG	Podgorica	2.28	330	*e*Pn	Pn	15 35 34.5	+1.7
PDG	Podgorica	2.28	330	⇑*i*Pn	Pn	15 35 34.7	+1.9
PDG				*i* Sn	Sb	15 36 05.4	+0.8
PDG	Podgorica	2.28	330	P	Pn	15 35 33.0	+0.2
PAIG	Paliouri	2.28	103	P	Pn	15 35 33.1	+0.2
VLS	Valsamata	2.29	184	P	Pn	15 35 34.4	+1.4
VLS	Valsamata	2.29	184	P	Pn	15 35 33.8	+0.8
AXS	Araxos	2.31	168	P	Pn	15 35 34.8	+1.5
UPR	University Cam	2.31	160	P	Pb	15 35 35.8	-1.0
KALE	Kalithea	2.32	153	P	Pn	15 35 34.8	+1.3
BUM	Brajici-Budva	2.32	323	⇓*i*Pn	Pn	15 35 34.2	+0.7
BUM				*i* Sn	Sb	15 36 06.2	+0.2
PSDA	Pessada-Kefalo	2.35	184	P	Pn	15 35 35.2	+1.4
PSDA	Pessada-Kefalo	2.35	184	P	Pn	15 35 35.0	+1.2
RTZL	Ratzakli, Kefa	2.38	180	P	Pn	15 35 35.8	+1.5
BOSS	Bosilegrad	2.40	32	*e*Pn	Pn	15 35 35.3	+0.8
OUR	Ouranopolis	2.44	92	P	Pn	15 35 35.6	+0.5
RLS	Riolos of Patr	2.46	167	P	Pb	15 35 38.0	-1.4
KOKK	Kokkinochori,	2.47	81	P	Pn	15 35 36.1	+0.6
KOKK	Kokkinochori,	2.47	81	P	Pn	15 35 36.2	+0.7
BARS	Barje	2.47	18	*i* Pn	Pn	15 35 36.1	+0.5
BARS				*i* Pn	Pn	15 35 36.2	+0.5
BARS	Barje	2.47	18	*e*Pn	Pn	15 35 36.0	+0.5
MMB	Musomishta	2.49	63	P	Pn	15 35 36.6	+0.8
IVA	Berane	2.50	345	⇓*i*Pn	Pn	15 35 38.1	+2.1
IVA				*i* Sn	Sb	15 36 11.0	0.0
CEME	Cevo	2.51	327	⇑*i*Pn	Pn	15 35 37.4	+1.3
CEME				*i* Sn	Sb	15 36 10.3	-1.1
KOME	Kolasin	2.57	339	⇓*i*Pn	Pn	15 35 38.8	+1.9
KOME				*i* Sn	Sb	15 36 11.7	-1.4
ORTH	Orthonies,Zaky	2.61	182	P	Pn	15 35 39.2	+1.8
HCY	Herceg Novi	2.63	320	⇑*i*Pn	Pn	15 35 38.1	+0.4
HCY	Herceg Novi	2.63	320	⇓*i*Pn	Pn	15 35 38.2	+0.5
HCY				*i* Sn	Sb	15 36 13.3	-1.4
KLV	Kalavryta, Ach	2.64	156	P	Pn	15 35 39.8	+1.9
AOS	Alonnisos	2.71	117	P	Pn	15 35 39.2	+0.4
SELS	Selova	2.76	5	*e*Pn	Pn	15 35 41.0	+1.4
VTS	Vitosha	2.83	40	*e*Pn	Pn	15 35 41.2	+0.6
SJES	Sjenica	2.86	348	⇑*i*Pn	Pn	15 35 43.0	+2.0
SJES	Sjenica	2.86	348	*e*Pn	Pb	15 35 44.4	-1.9
KAVA	Kavala	2.88	78	P	Pn	15 35 41.1	-0.1
KAVA	Kavala	2.88	78	P	Pn	15 35 41.2	+0.1
TREB	Trebinje	2.90	322	⇑*i*Pn	Pn	15 35 41.8	+0.4
BRY	Bratogost	2.96	326	⇑*i*Pn	Pn	15 35 42.9	+0.5
BRY	Bratogost	2.96	326	⇓*i*Pn	Pn	15 35 44.1	+1.7
BRY				*i* Sn	Sb	15 36 21.8	-2.6
VIL2	Platees	2.96	139	P	Pn	15 35 44.4	+2.2
THAS	Thassos island	3.00	86	P	Pn	15 35 42.3	-0.5
THAS	Thassos island	3.00	86	P	Pn	15 35 42.2	-0.5
AMT	Artemida-Makis	3.02	166	P	Pn	15 35 44.7	+1.7
PLE	Pljevlja	3.05	340	⇑*i*Pn	Pn	15 35 44.2	+0.6
PLE				*i* Sn	Sn	15 36 23.2	+2.9
UPM	Unac-Piva	3.08	333	⇑*i*Pn	Pn	15 35 46.0	+2.0
UPM	Unac-Piva	3.08	333	⇓*i*Pn	Pn	15 35 46.4	+2.4
UPM				*i* Sn	Sn	15 36 24.0	+2.9
GOCS	Kraljevo Serbi	3.10	1	*e*Pn	Pn	15 35 45.6	+1.4
MATE	Matera	3.12	275	⇑P	Pn	15 35 45.1	+0.8
ZAPS	Zavoj	3.13	26	*e*Pn	Pn	15 35 45.6	+1.0
IVAS	Ivanjica	3.15	352	*e*Pn	Pn	15 35 47.9	+3.0
BOVS	Bovan	3.24	12	⇓P	Pn	15 35 48.5	+2.4
BOVS	Bovan	3.24	12	*e*Pn	Pn	15 35 46.3	+0.2
RUDO	Rudo	3.32	342	⇑*i*Pn	Pn	15 35 48.8	+1.5
STON	Ston	3.34	317	*e*Pn	Pn	15 35 47.2	-0.2
STON	Ston	3.34	317	*e*Pn	Pn	15 35 48.1	+0.7
TIP	Timpagrande	3.36	249	⇓P	Pn	15 35 49.2	+1.4
TIP	Timpagrande	3.36	249	P	Pn	15 35 48.5	+0.7
GRUS	Gruza	3.42	359	*e*Pn	Pn	15 35 49.5	+0.9
ZAGS	Zajecar	3.52	17	*e*Pn	Pn	15 35 50.2	+0.3
BBLS	Lazi&#263i	3.55	344	⇑*i*Pn	Pn	15 35 51.8	+1.4
BBLS	Lazi&#263i	3.55	344	*e*Pn	Pn	15 35 52.7	+2.3
DIVS	Divibare	3.68	351	*e*Pn	Pn	15 35 54.8	+2.6
BORS2	Bor- Borsko je	3.74	14	*e*Pn	Pn	15 35 53.7	+0.8
TRUS	Trudelj	3.77	356	*e*Pn	Pn	15 35 54.2	+0.9
HAPS	Han Pijesak,Bl	3.87	340	⇑*i*Pn	Pn	15 35 56.3	+1.5
HAPS	Han Pijesak,Bl	3.87	340	*e*Pn	Pn	15 35 56.7	+1.9
KUBS	Kucevo	4.00	9	*e*Pn	Pn	15 35 55.1	-1.4
TEKS	Tekeris	4.19	348	⇑*i*Pn	Pn	15 35 59.7	+0.6
TEKS	Tekeris	4.19	348	*e*Pn	Pn	15 36 00.2	+1.1
AVAS	Avala Beograd	4.23	357	*e*Pn	Pn	15 36 02.1	+2.3
EZN	Ezine	4.29	97	⇑P	Pn	15 36 04.3	+3.7
MDVR	Moldovita	4.37	9	⇑P	Pn	15 36 04.1	+2.4
MDVR	Moldovita	4.37	9	*e*Pn	Pn	15 36 03.6	+2.0
HERR	Herculane	4.58	15	⇑P	Pn	15 36 06.9	+2.5
VRSS	Vrsac	4.67	5	*e*Pn	Pn	15 36 05.6	-0.2
FRGS	Fruska Gora	4.75	352	⇑*i*Pn	Pn	15 36 07.5	+0.7
FRGS	Fruska Gora	4.75	352	*e*Pn	Pn	15 36 07.4	+0.7
APE	Apeiranthos	5.02	131	⇑P	Pn	15 36 14.1	+3.5
BLY	Banja Luka	5.04	329	⇑*i*Pn	Pn	15 36 11.3	+0.5
BLY	Banja Luka	5.04	329	*e*Pn	Pn	15 36 12.4	+1.6
A050A	Klekovaca	5.10	323	⇑*i*Pn	Pn	15 36 12.9	+1.2
GZR	Gura Zlata	5.14	16	⇑P	Pn	15 36 14.5	+2.3
BZS	Buzias	5.19	6	⇑P	Pn	15 36 14.8	+2.0
BZS	Buzias	5.19	6	*e*Pn	Pn	15 36 14.4	+1.6
A051A	Mrakovica	5.37	329	⇑*i*Pn	Pn	15 36 15.9	+0.5
LOT	Lotru	5.44	23	⇓P	Pn	15 36 19.4	+3.0
ARR	Arges	5.66	29	⇓P	Pn	15 36 22.7	+3.4
VAE	Valguarnera	5.79	241	Pn	Pn	15 36 21.9	+0.7
	comp=E,5.7nm,0.6s,baz=70,slow=15,SNR=1.6						
VAE				Sn	Sn	15 37 34.5	+6.5
	comp=E,0.9nm,0.3s,baz=200,slow=22,SNR=1.1						
VOIR		5.87	31	⇑P	Pn	15 36 24.7	+2.4
MORH	Mrgy, Hungar	5.96	346	⇑P	Pn	15 36 24.7	+1.4
IDI	Anoyia	6.10	147	Pn	Pn	15 36 26.1	+0.6
	comp=E,11nm,0.9s,baz=281,slow=4.1,SNR=1.8						
IDI				Sn	Sn	15 37 36.3	+0.8
	comp=E,0.9nm,0.3s,baz=186,slow=23,SNR=1.6						
MLR	Muntele Rosu	6.29	35	Pn	Pn	15 36 27.6	-0.4
	comp=E,0.6nm,0.3s,baz=262,slow=12,SNR=5.8						
MLR				LR	LR	15 39 49.5	
	comp=E,141nm,18.0s,baz=104,slow=48						
	comp=E,2.2nm,0.6s						
MLR	Muntele Rosu	6.29	35	⇑P	Pn	15 36 30.0	+1.9
MARR	Marisel-Cluj	6.44	14	⇑P	Pn	15 36 32.8	+2.7
DOPR	Dopca	6.45	30	⇑P	Pn	15 36 33.4	+3.2
BOJS	Bojanci	6.47	323	⇑*i*Pn	Pn	15 36 29.7	-0.7
BOJS	Bojanci	6.47	323	*e*Pn	Pn	15 36 30.5	+0.1
CRES	Cresnjevec Ost	6.62	326	⇑*i*Pn	Pn	15 36 32.4	-0.2
PLOR	Plostina	6.88	37	⇑P	Pn	15 36 38.3	+2.1
VRI	Vrincioaia	6.93	37	⇑P	Pn	15 36 39.0	+2.2
CEY	Cerknica	7.03	321	⇑*i*Pn	Pn	15 36 37.7	-0.5
CEY	Cerknica	7.03	321	*e*Pn	Pn	15 36 38.5	+0.3
PSZ	Piszkesteto	7.48	355	⇑P	Pn	15 36 46.2	+1.8
SOKA	Soboth	7.48	328	Pn	Pn	15 36 44.6	+0.2
	comp=E,3.0nm,0.5s						
OBKA	Obir	7.55	325	*e*Pn	Pn	15 36 43.9	-1.5
OBKA	Obir	7.55	325	*e*Pn	Pn	15 36 44.7	-0.7
	comp=E,3.6nm,0.5s						
ARSA	Arzberg	7.78	332	*e*Pn	Pn	15 36 48.5	+0.1
	comp=E,1.2nm,0.4s						
ARSA	Arzberg	7.78	332	*e*Pn	Pn	15 36 49.9	+1.5
RONA	Rosalia, Austr	7.92	337	*e*Pn	Pn	15 36 50.4	0.0
	comp=E,0.4nm,0.2s						
KECS	Kecovo	8.02	359	*e*PN	Pn	15 36 56.6	+4.9
MYKA	Terra Mystica	8.05	322	Pn	Pn	15 36 51.5	-0.8
	comp=E,1.8nm,0.5s						
VYHS	Vyhne	8.15	351	*e*PN	Pn	15 37 00.4	+6.9
VYHS				*e*SN	Sn	15 38 29.8	+4.0
CONA	Conrad Observa	8.26	336	*e*Pn	Pn	15 36 54.8	-0.3
	comp=E,0.2nm,0.2s						
KBA	Koelnbreinsper	8.52	323	*e*Pn	Pn	15 36 58.2	-0.5
	comp=E,3.5nm,0.9s						
ABTA	Abfaltersbach	8.68	319	*e*Pn	Pn	15 37 00.2	-0.7
	comp=E,3.7nm,0.9s						
MOA	Molln	8.74	330	*e*Pn	Pn	15 37 01.8	+0.2
	comp=E,0.4nm,0.2s						
MOA	Molln	8.74	330	*e*Pn	Pn	15 37 02.3	+0.7
BIOA	Bad Ischl, Aus	8.87	327	*e*Pn	Pn	15 37 03.9	+0.5
	comp=E,2.1nm,0.6s						
LESA	Schwarzleotal	9.09	323	*e*Pn	Pn	15 37 05.5	-0.9
	comp=E,1.8nm,0.5s						
VRAC	Vranov	9.33	343	Pn	Pn	15 37 09.0	-0.7
	comp=E,0.1nm,0.3s,baz=144,slow=14,SNR=3.4						
VRAC				LR	LR	15 41 11.4	
	comp=E,115nm,18.3s,baz=184,slow=41						
	comp=E,1.3nm,0.6s						
WTTA	Wattenberg	9.47	319	*e*Pn	Pn	15 37 12.1	+0.3
	comp=E,11nm,0.9s						
WATA	Walderalm	9.55	319	*e*Pn	Pn	15 37 12.9	0.0
	comp=E,10nm,0.6s						
SQTA	Sankt Quirin	9.66	317	*e*Pn	Pn	15 37 14.7	+0.4
	comp=E,6.4nm,0.9s						
GERES	GERESS Array B	9.78	331	Pn	Pn	15 37 15.7	-0.2
	baz=140,slow=15,SNR=9.1						
	comp=E,0.6nm,0.6s						
FETA	Feichten	9.79	315	*e*Pn	Pn	15 37 15.4	-0.7
	comp=E,8.5nm,0.9s						
MOTA	Moosalm	9.80	318	*e*Pn	Pn	15 37 15.0	-1.2
	comp=E,10nm,0.9s,SNR=8.6						
BRTR	Keskin Array B	9.88	90	Pn	Pn	15 37 18.1	+0.7
	comp=E,0.1nm,0.3s,baz=270,slow=14,SNR=2.0						
	comp=E,0.1nm,0.4s						
KHC	Kasperske Hory	10.06	332	*e*PN	Pn	15 37 19.5	-0.2
KHC				*e*SN	Sn	15 39 31.6	+19
DAVOX	Davos/Dischmat	10.11	312	Pn	Pn	15 37 20.2	-0.3
	comp=E,0.7nm,0.3s,baz=136,slow=21,SNR=6.6						
DAVOX				LR	LR	15 42 10.6	
	comp=E,125nm,19.4s,baz=79,slow=43						
	comp=E,2.1nm,0.6s						
ZVC	Zvikov	10.11	335	*e*PN	Pn	15 37 22.1	+1.7
DAVA	Damuels	10.41	315	*e*Pn	Pn	15 37 24.0	-0.7
	comp=E,12nm,0.6s						
ASF	Jabal al Asfar	15.38	117	LR	LR	15 45 33.5	
	comp=E,42nm,19.0s,baz=299,slow=42						
ESDC	Sonseca Array	18.95	276	P	P	15 39 15.8	-0.7
	baz=71,slow=10,SNR=8.1						
	comp=E,0.8nm,0.9s						
HFS	Hagfors	20.18	350	P	P	15 39 29.2	-0.5
	comp=E,4.4nm,1.0s,baz=168,slow=10.0,SNR=6.1						
	comp=E,4.4nm,1.0s						
FINES	FINESS Array B	21.26	7	P	P	15 39 40.1	-1.2
	comp=E,2.1nm,0.9s,baz=198,slow=10.0,SNR=5.0						
	comp=E,2.1nm,0.9s						
NB2	NORSAR Subarra	21.43	347	P	P	15 39 42.4	-0.8
	comp=Z,2.8nm,0.9s,baz=164,slow=10						
NOA	NORSAR Array B	21.43	347	P	P	15 39 42.2	-1.0
	comp=Z,1.0nm,0.8s,baz=166,slow=10,SNR=5.3						
NOA				LR	LR	15 49 42.2	
	comp=Z,33nm,20.6s,baz=105,slow=42						
	comp=Z,1.0nm,0.8s						
MDT	Midelt	21.71	257	P	P	15 39 47.3	+0.7
	comp=Z,2.1nm,1.1s,baz=74,slow=11,SNR=3.9						
	comp=Z,2.1nm,1.1s						
EKA	Eskdalemuir Ar	21.73	321	P	P	15 39 46.2	-0.2
	comp=Z,0.8nm,0.6s,baz=108,slow=13,SNR=4.0						
	comp=Z,0.8nm,0.6s						
ARCES	ARCESS Array B	29.24	3	P	P	15 40 55.9	-1.0
	comp=Z,1.9nm,0.9s,baz=182,slow=9.0,SNR=1.3						
	comp=Z,1.9nm,0.9s						
TORD	Torodi Ar. Bea	31.96	217	P	P	15 41 21.6	+0.2
	comp=Z,0.4nm,0.3s,baz=28,slow=10,SNR=2.2						
	comp=Z,0.4nm,0.3s						
SPITS	Spitsbergen Ar	37.87	359	P	P	15 42 12.6	+0.7
	comp=Z,2.5nm,0.9s,baz=156,slow=3.9,SNR=2.0						
	comp=Z,2.5nm,0.9s						
MKAR	Makanchi Array	43.96	60	P	P	15 43 01.6	-0.9
	comp=Z,0.5nm,0.6s,baz=268,slow=6.1,SNR=5.6						
	comp=Z,0.5nm,0.6s						
ZALV	Zalesovo Beam	44.04	50	P	P	15 43 01.7	-1.2
	comp=Z,0.5nm,0.4s,baz=256,slow=5.8,SNR=1.9						
	comp=Z,0.5nm,0.4s						
KDAK	Kodiak Island	81.96	356	LR	LR	16 28 00.5	
	comp=Z,65nm,18.7s,baz=189,slow=39						
TXAR	Lajitas Array	93.54	314	P	P	15 48 12.4	+0.6
	comp=Z,0.3nm,0.7s,baz=90,slow=2.5,SNR=5.2						
	comp=Z,0.3nm,0.7s						

IDC ***02*** *15:43:12.9±0.6, 21°.22S×174°.52W, h0^{km}, mb4.4/16, mbtmp4.4/18, ML3.9/2, MS4.0/39, Error ellipse: s-maj=21.6km s-min=16.6km az=125.0*

BJI ***02*** *15:43:13.9, 20°.94S×173°.94W, h13^{km}, mB5.2/7, mb5.0/34*

NEIC ***02*** *15:43:15.5±2.2, 21°.1S±0°.1×174°.2W±0°.1, h10^{km}±1^{km}, mb4.9/146, Error ellipse: s-maj=19.4km s-min=15.3km az=143.0*

GCMT ***02*** *15:43:17.4±0.4, 21°.62S±0°.04×173°.89W±0°.03, h28^{km}±1^{km}, MW4.9/87, Moment Tensor Solution. s28,c28; s87,c106; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.73±.18; $M_{\theta\theta}$-0.85±.12; $M_{\phi\phi}$-1.88±.11; $M_{r\theta}$1.55±.19; $M_{\theta\phi}$-0.69±.06; $M_{\phi r}$0.82±.15; Best double couple: $M_0$3.00000×10^{16} NP1:ϕ_s197.00000°, δ31.00000°, λ66.00000°. NP2: ϕ_s44.00000°, δ62.00000°, λ103.00000°. Principal axes: T 3.3630, Plg70.0000°, Azm343.0000°; N -0.7220, Plg12.0000°, Azm218.0000°; P -2.6370, Plg16.0000°, Azm124.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 15:43:14.9±0.4, **21°.09S**±0°.08×**174°.33W**±0°.09, **h10**^{km}, **n511**, σ**1**^{s}**.13**/426, **mb4.9**/99, **MS4.0**/38, **12C-2D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	7.55	19	Pn	Pn	15 45 01.1	-4.0
MSVF	Nonsavu	7.93	294		Pn	15 45 18.8	+8.4
RAR	Rarotonga	13.58	93	Pn	Pn	15 46 18.0	-10
	8.3nm,0.3s,baz=236,slow=5.5,SNR=22						
ONTNC	Ouen Toro	17.90	263	P	Pn	15 47 25.5	+1.5
DZM	Mont Dzumac	17.91	263	P	P	15 47 30.0	+5.1
DZM	Mont Dzumac	17.91	263	P	Pn	15 47 19.9	-4.4
	0.1nm,0.3s,baz=153,slow=18,SNR=2.1						
DZM				LR	LR	15 53 25.0	
	comp=Z,616nm,19.6s,baz=96,slow=35						
	7.5nm,1.1s						
HAZ	Te Kaha	17.95	201	P	Pn	15 47 25.5	+0.9
PUZ	Puketiti	18.09	199	P	P	15 47 28.1	+1.4
MWZ	Matawai	18.56	200	P	P	15 47 31.9	0.0
URZ	Urewera	18.64	202	P	P	15 47 29.5	-3.1
	1.0nm,0.3s,baz=350,slow=8.5,SNR=5.9						
	5.2nm,0.7s						
URZ	Urewera	18.64	202	P	P	15 47 33.2	+0.5
BKZ	Black Stump Fm	19.66	202	P	P	15 47 44.9	+0.9
HIZ	Hauiti	19.70	206	P	P	15 47 45.6	+1.2
HIZ				IAmb	IAmb	15 47 54.4	
	comp=Z,115nm,1.6s						
HIZ	Hauiti	19.70	206	P	P	15 47 45.3	+0.9
VRZ	Vera Road	20.27	205	P	Pn	15 47 52.8	+0.3
TSZ	Takapari Road	20.64	202	P	P	15 47 55.2	+0.5
NEZ	North Egmont	20.66	206	P	Pn	15 47 59.4	+2.2
BFZ	Birch Farm	21.11	200	P	P	15 47 58.8	-0.8
MRZ	Mangatainoka R	21.31	202	P	P	15 47 59.2	-2.6
NNZ	Nelson	22.60	205	P	P	15 48 19.2	+3.6
QRZ	Quartz Range	22.62	207	P	P	15 48 18.2	+2.3
MRNZ	Matariki Terra	23.00	205	P	P	15 48 22.3	+2.4
THZ	Tophouse	23.25	205	P	P	15 48 23.7	+1.2
PPT	Papeete	23.61	86	LR	LR	15 56 22.1	
	comp=Z,324nm,18.0s,baz=289,slow=33						
DSZ	Denniston Nort	23.68	207	P	P	15 48 28.0	+1.3
GVZ	Greta Valley S	24.24	203	P	P	15 48 36.1	+4.1
LTZ	Lake Taylor	24.37	204	P	P	15 48 33.6	+0.4
LTZ				IAmb	IAmb	15 48 38.0	
	comp=Z,25nm,0.8s						
LTZ	Lake Taylor	24.37	204	P	P	15 48 34.9	+1.7
INZ	Inchbonnie	24.65	206	P	P	15 48 35.5	-0.1
OXZ	Oxford	24.92	204	P	P	15 48 39.1	+0.9
WVZ	Waitaha Valley	25.23	206	P	P	15 48 41.9	+1.0
RPZ	Rata Peaks	25.63	205	P	P	15 48 46.7	+2.1
FOZ	Fox Glacier	25.99	207	P	P	15 48 48.6	+0.9
LBZ	Lake Benmore	26.54	205	P	P	15 48 54.6	+1.9
JCZ	Jackson Bay	26.87	208	P	P	15 48 57.1	+1.2
HNR	Honiara	27.34	291	LR	LR	15 58 24.8	
	comp=Z,208nm,19.0s,baz=119,slow=34						
WHZ	Wether Hill Ro	28.68	206	P	P	15 49 13.6	+1.6
WHZ	Wether Hill Ro	28.68	206	P	P	15 49 14.0	+2.0
PMG	Port Moresby	38.82	281	LR	LR	16 04 57.1	
	comp=Z,254nm,18.6s,baz=134,slow=34						
STKA	Stephens Creek	40.64	245	P	P	15 50 53.5	-1.8
STKA	Stephens Creek	40.64	245	P	P	15 50 52.6	-2.8
	comp=Z,3.2nm,0.8s,baz=100,slow=9.8,SNR=4.1						
STKA				LR	LR	16 06 51.3	
	comp=Z,178nm,18.6s,baz=54,slow=35						
	comp=Z,3.2nm,0.8s						
COEN	Coen	41.04	273	P	P	15 50 58.1	-0.8
BBOO	Buckleboo	45.37	244	P	P	15 51 30.7	-2.9
JAY	Jayapura	47.49	287	LR	LR	16 11 10.1	
	comp=Z,88nm,19.5s,baz=16,slow=35						
AS31	Alice Springs	47.72	257		P	15 51 49.1	-3.2
ASAR	Alice Springs	47.73	257		P	15 51 48.4	-3.9
ASAR	Alice Springs	47.73	257	P	P	15 51 49.7	-2.6
	comp=Z,7.9nm,0.8s,baz=100,slow=7.5,SNR=57						
ASAR				PcP	PcP	15 53 20.3	-1.2
	comp=Z,2.2nm,0.9s,baz=99,slow=4.6,SNR=4.1						
ASAR				LR	LR	16 11 56.4	
	comp=Z,246nm,18.1s,baz=92,slow=36						
	comp=Z,7.9nm,0.8s						
WRA	Warramunga Arr	47.92	262	P	P	15 51 51.2	-2.6
	comp=Z,7.4nm,1.0s,baz=97,slow=7.6,SNR=9.7						
WRA				PcP	PcP	15 53 19.5	-2.7
	comp=Z,0.6nm,0.3s,baz=106,slow=3.2,SNR=4.8						
	comp=Z,7.4nm,1.0s						
GUMO	Guam	52.86	307	LR	LR	16 11 56.1	
	comp=Z,105nm,21.6s,baz=110,slow=33						
KNRA	Kununurra	54.04	266	P	P	15 52 39.3	-0.6
FITZ	Fitzroy Crossi	56.35	262	P	P	15 52 55.4	-1.1
FITZ	Fitzroy Crossi	56.35	262	LR	LR	16 17 01.1	
	comp=Z,335nm,18.1s,baz=98,slow=36						
SBA	Scott Base	57.53	185	P	P	15 53 05.2	+1.2
SBA				IAmb	IAmb	15 53 19.4	
	comp=Z,13nm,1.2s						
VNDA	Vanda	57.65	186	P	P	15 53 05.3	+0.4
VNDA	Vanda	57.65	186	P	P	15 53 04.5	-0.4
	comp=Z,1.8nm,0.9s,baz=30,slow=7.8,SNR=3.2						
VNDA				LR	LR	16 18 19.5	
	comp=Z,48nm,18.1s,baz=20,slow=37						
	comp=Z,1.8nm,0.9s						
SOEI	Soe	59.95	271	P	P	15 53 21.9	0.0
PSA00	Pilbara Seismi	60.87	256	P	P	15 53 27.5	-0.5
MBWA	Marble Bar	61.07	257	P	P	15 53 27.3	-2.1
CASY	Casey	64.90	206	P	P	15 53 53.9	-0.3
DAV	Davao City (W)	65.27	289	LR	LR	16 21 09.3	
	comp=Z,75nm,18.7s,baz=60,slow=35						
KAPI	Kappang	65.75	274	LR	LR	16 21 55.1	
	comp=Z,48nm,19.6s,baz=97,slow=35						
TOLI2	Tolitoli	67.09	281	P	P	15 54 08.9	-0.2
QSPA	South Pole Qui	68.98	180	P	P	15 54 19.4	-0.9
	comp=Z,4.7nm,1.0s,baz=57,slow=2.7,SNR=9.7						
QSPA				LR	LR	16 20 12.4	
	comp=Z,86nm,20.8s,baz=48,slow=32						
	comp=Z,4.7nm,1.0s						
MJAR	Matsushiro Arr	72.76	322	P	P	15 54 42.8	-0.7
	comp=Z,7.4nm,1.0s,baz=153,slow=5.9,SNR=18						
MJAR				LR	LR	16 26 20.3	
	comp=Z,60nm,18.1s,baz=220,slow=36						
	comp=Z,7.4nm,1.0s						
MJB9	Matsu-Tunnel	72.77	322		P	15 54 43.3	-0.2
MJB9				IAmb	IAmb	15 54 45.7	
	comp=Z,14nm,1.1s						
SHEM	Shemya Is, Ala	74.20	353	LR	LR	16 23 15.7	
	comp=Z,143nm,19.4s,baz=192,slow=32						
UNV	Unalaska Valle	74.93	5	P	P	15 54 57.1	+1.3
	baz=187						
LEM	Lembang	76.45	268	LR	LR	16 29 41.2	
	comp=Z,116nm,18.1s,baz=178,slow=37						
CHNA	Chernabura Isl	76.67	9	P	P	15 55 06.6	+1.0
	baz=194						
LPIG	La Paz	76.79	58	LR	LR	16 24 58.5	
	comp=Z,150nm,18.1s,baz=199,slow=32						
NACB	Ninganchiao	76.87	302	P	P	15 55 06.8	-0.7
SDPT	Sand Point	77.05	8	P	P	15 55 08.9	+1.1
	baz=193						
TPUB	Ta-pu	77.20	301	P	P	15 55 08.2	-1.2
S12K	Black Hills	77.20	7	P	P	15 55 09.8	+1.1
	baz=192						
PFO	Pinyon Flats O	77.45	46	LR	LR	16 23 08.7	
	comp=Z,72nm,19.0s,baz=222,slow=31						
P08K	Saint George I	77.50	3	P	P	15 55 10.9	+0.7
	baz=184						
PEA0B	Petropavlovsk-	77.78	343	P	P	15 55 12.2	+0.2
PEA0B				IAmb	IAmb	15 55 23.9	
	comp=Z,14nm,1.2s						
PETK	Petropavlovsk-	77.78	343	P	P	15 55 12.2	+0.2
	comp=Z,6.0nm,1.1s,baz=113,slow=6.9,SNR=8.0						
	comp=Z,6.0nm,1.1s						
SPIA	Saint Paul Isl	78.04	2	P	P	15 55 13.8	+0.5
	baz=184						
S14K	Fog Glacier	78.08	8	P	P	15 55 14.4	+0.7
	baz=194						
CHIR	Chirikof Islan	78.24	11	P	P	15 55 15.2	+0.8
	baz=198						
WAKR	Walker	78.49	41		P	15 55 17.0	+0.4
DSP	Deep Springs	78.70	43		P	15 55 17.4	0.0
PNTR	Pine Nut	78.76	40		P	15 55 17.4	-0.6
PNTR				IAmb	IAmb	15 55 35.5	
	comp=Z,16nm,1.2s						
HATC	Hat Creek Radi	78.77	38	P	P	15 55 17.6	-0.3
NVAR	Mina Array Bea	79.14	42	P	P	15 55 20.0	-0.1
NVAR	Mina Array Bea	79.14	42	P	P	15 55 21.0	+0.9
	comp=Z,2.9nm,0.8s,baz=226,slow=8.3,SNR=12						
NVAR				LR	LR	16 25 53.6	
	comp=Z,116nm,18.6s,baz=191,slow=32						
	comp=Z,2.9nm,0.8s						
SII	Sitkinak Islan	79.20	11	P	P	15 55 20.5	+0.7
	baz=199						
NV11	Mina Array Sit	79.24	42	P	P	15 55 20.9	+0.3
PMSA	Palmer Station	79.36	156	LR	LR	16 25 41.4	
	comp=Z,54nm,18.2s,baz=254,slow=32						
R16K	Pilot Point	79.61	9	P	P	15 55 22.8	+1.0
	baz=196						
KSRS	Korea Array	79.64	317	P	P	15 55 23.5	+1.0
	comp=Z,5.7nm,1.0s,baz=138,slow=5.9,SNR=25						
	comp=Z,5.7nm,1.0s						
KSAR	Wonju Array Be	79.65	317		P	15 55 22.9	+0.3
KS19	Wonju Array Si	79.70	317	P	P	15 55 22.7	-0.2
OHAK	Old Harbor	79.99	11	P	P	15 55 25.4	+1.5
	baz=200						
R18K	Karluk	80.11	11	P	P	15 55 26.0	+1.5
	baz=199						
J05D	Fort Rock, OR	80.50	36		P	15 55 28.1	+0.8
J05D				IAmb	IAmb	15 55 30.3	
	comp=Z,15nm,1.4s						
Q17K	Contact Creek	80.53	10	P	P	15 55 28.1	+1.1
	baz=197						
KDAK	Kodiak Island	80.65	12	P	P	15 55 28.7	+1.2
KDAK	Kodiak Island	80.65	12	P	P	15 55 28.4	+0.9
	baz=200						
O14K	Tigyukauivet M	80.77	7	P	P	15 55 29.4	+1.3
	baz=192						
O15K	Ungalikthiuk R	80.86	8	P	P	15 55 30.0	+1.4
	baz=194						
P16K	Nushagak River	80.96	8	P	P	15 55 30.3	+1.2
	baz=195						
Q18K	Katmai Hardscr	81.04	10	P	P	15 55 30.6	+0.8
	baz=198						
RADR	Rader Ridge	81.24	33	P	P	15 55 31.8	+0.8
P17K	Kvichak River	81.34	9	P	P	15 55 31.7	+0.6
	baz=197						
N14K	Kuskokwak Cree	81.38	6		P	15 55 32.5	+1.2
N14K	Kuskokwak Cree	81.38	6	P	P	15 55 32.8	+1.4
	baz=192						
USRK	Ussuriysk Ar.	81.42	324	LR	LR	16 29 10.2	
	comp=Z,76nm,18.7s,baz=110,slow=34						
M11K	Mekoryuk	81.45	4	P	P	15 55 32.7	+1.0
	baz=188						
Q20K	Shuyak Island	81.46	11	P	P	15 55 33.1	+1.3
	baz=200						
O16K	Kokwok River B	81.49	8		P	15 55 31.7	-0.3
O16K	Kokwok River B	81.49	8	P	P	15 55 33.0	+1.0
	baz=195						
Q19K	Cape Douglas,	81.54	11	P	P	15 55 32.7	+0.4
	baz=199						
M13K	Dall Lake	81.70	5	P	P	15 55 33.8	+0.8
	baz=190						
P18K	Big Mountain,	81.72	10		P	15 55 33.4	+0.2
P18K				IAmb	IAmb	15 55 34.3	
	comp=Z,18nm,1.2s						
P18K	Big Mountain,	81.72	10	P	P	15 55 33.7	+0.4
	baz=198						
N15K	Kwethluk River	81.80	7	P	P	15 55 34.3	+0.7
	baz=193						
O17K	Koliganek Bris	81.80	9	P	P	15 55 34.6	+1.0
	baz=196						
MAW	Mawson	82.14	199	LR	LR	16 30 34.4	
	comp=Z,111nm,18.9s,baz=82,slow=35						
O18K	Koktuh Hills	82.16	10	P	P	15 55 36.1	+0.6
	baz=198						
M14K	Bethel	82.17	6		P	15 55 36.7	+1.3
M14K				IAmb	IAmb	15 55 38.0	
	comp=Z,17nm,1.1s						
M14K	Bethel	82.17	6	P	P	15 55 36.8	+1.3
	baz=192,SNR=5.2						
M15K	Kasigluk River	82.25	7	P	P	15 55 36.9	+1.0
	baz=193						
N16K	Nishlik Lake	82.26	8	P	P	15 55 37.0	+0.9

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      baz=194
P19K  Oil Pt            82.29  11  P     P     15 55 36.8 +0.5
      baz=200
ELK   Elko              82.43  41  LR    LR    16 28 23.6
      comp=Z,138nm,18.0s,baz=244,slow=33
N17K  Nushagak Hills    82.52   8  P     P     15 55 38.5 +1.2
      baz=196
HOM   Homer             82.58  11  P     P     15 55 38.5 +0.8
      baz=201
O19K  Port Alsworth     82.62  10  P     P     15 55 38.7 +0.9
      baz=199
L14K  Kuka Creek        82.68   6        P     15 55 39.3 +1.2
L14K  Kuka Creek        82.68   6  P     P     15 55 39.2 +1.1
      baz=191,SNR=6.9
M16K  Timber Creek      82.77   7        P     15 55 39.8 +1.1
M16K  Timber Creek      82.77   7  P     P     15 55 39.7 +1.1
      baz=194,SNR=12
O20K  Slope Mountain    82.80  11  P     P     15 55 40.1 +1.2
      baz=200
BRSE  Bradley Lake S    82.83  12  P     P     15 55 39.8 +0.7
      baz=202
N18K  Kilae Creek       82.85   9  P     P     15 55 40.0 +0.9
      baz=197
NJ2   Nanjing           82.92 308 eP     P     15 55 41.0 +0.9
NJ2                                pmax  pmax
      comp=Z,7.0nm,0.5s
MDJ   Mudanjiang        83.01 323  P     P     15 55 42.2 +1.9
MDJ                                pmax  pmax
      comp=Z,8.0nm,1.0s
K13K  Kusilvak Mount    83.10   5  P     P     15 55 41.5 +1.2
      baz=189
L15K  Ungalak Mounta    83.13   6  P     P     15 55 41.1 +0.7
      baz=192,SNR=14
N19K  Bonanza Creek     83.19  10  P     P     15 55 40.8  -0.1
      baz=198,SNR=7.5
M17K  Holitna River     83.32   8        P     15 55 43.2 +1.7
M17K                               IAmb  IAmb  15 55 44.3
      comp=Z,14nm,1.1s
M17K  Holitna River     83.32   8  P     P     15 55 42.5 +0.9
      baz=196
L16K  Owhat River       83.37   7  P     P     15 55 42.9 +1.1
      baz=194,SNR=9.3
SEW   Seward            83.41  12  P     P     15 55 43.1 +1.1
      baz=203
M18K  Stony River       83.63   9  P     P     15 55 43.6 +0.5
      baz=197,SNR=5.6
MFID  Camas Ranch       83.66  39        P     15 55 44.8 +0.9
MFID                               IAmb  IAmb  15 55 59.2
      comp=Z,9.8nm,1.4s
O22K  Cooper Landing    83.71  12  P     P     15 55 43.9 +0.4
      baz=203
K15K  Wolf Creek Mou    83.73   6  P     P     15 55 45.3 +1.7
K15K  Wolf Creek Mou    83.73   6  P     P     15 55 44.9 +1.3
      baz=192,SNR=35
P23K  Montague Islan    83.74  13  P     P     15 55 44.4 +0.7
      baz=205
CRAG  Craig             83.92  22  P     P     15 55 45.3 +0.6
      baz=218
L17K  Donlin            83.92   7  P     P     15 55 46.1 +1.5
      baz=195,SNR=9.5
N20K  Mount Spurr       83.92  11  P     P     15 55 45.0 +0.3
      baz=201
SPCR  Spurr Chakacha    83.92  11  P     P     15 55 45.4 +0.7
      baz=201
J14K  Nanvaranak Lak    84.00   5  P     P     15 55 45.4 +0.5
      baz=190
L18K  Granite Mounta    84.21   8        P     15 55 47.3 +1.2
L18K                               IAmb  IAmb  15 55 49.5
      comp=Z,11nm,1.1s
L18K  Granite Mounta    84.21   8  P     P     15 55 46.8 +0.7
      baz=196,SNR=12
M19K  Big River Lodg    84.24   9  P     P     15 55 46.5 +0.3
M19K  Big River Lodg    84.24   9  P     P     15 55 46.9 +0.6
      baz=198
RC01  Rabbit Creek A    84.27  12  P     P     15 55 46.7 +0.4
      baz=203
PWL   Port Wells        84.33  12  P     P     15 55 46.8 +0.1
      baz=204
KAIM  Kayak Island      84.35  15  P     P     15 55 46.9 +0.1
      baz=208
V35K  Ketchikan         84.35  23  P     P     15 55 47.0 +0.1
      baz=219
M20K  Styx River        84.41  10  P     P     15 55 46.9  -0.3
      baz=200
SUA   Susitna One       84.43  11  IAmb  IAmb  15 55 48.4
      comp=Z,10nm,0.9s
SUA   Susitna One       84.43  11  P     P     15 55 47.1  -0.2
      baz=202,SNR=5.6
U33K  Whale Pass        84.43  22  P     P     15 55 47.0  -0.2
      baz=218
L19K  White Mountain    84.43   9  IAmb  IAmb  15 55 59.5
      comp=Z,6.9nm,1.1s
L19K  White Mountain    84.43   9  P     P     15 55 47.5 +0.3
      baz=198,SNR=5.9
SIT   Sitka             84.44  20  P     P     15 55 47.4 +0.1
      baz=216
K17K  Iditarod          84.49   7  P     P     15 55 47.7 +0.2
      baz=195
TXAR  Lajitas Array     84.52  56  P     P     15 55 48.7 +0.2
      comp=Z,0.7nm,0.9s,baz=239,slow=4.9,SNR=5.8
TXAR                               LR    LR    16 29 52.9
      comp=Z,46nm,18.0s,baz=234,slow=33
      comp=Z,0.7nm,0.9s
EYAK  Cordova Ski Ar    84.60  14  P     P     15 55 47.9  -0.1
      baz=206
GLI   Glacier Island    84.60  13  P     P     15 55 48.3 +0.2
      baz=205
GAMB  Gambell           84.61   1  P     P     15 55 48.7 +0.7
      baz=182
SKT   Skwentna          84.77  11  IAmb  IAmb  15 55 60.0
      comp=Z,8.1nm,1.0s
SKT   Skwentna          84.77  11  P     P     15 55 48.9   0.0
      baz=201
J16K  Anvik River       84.79   6  IAmb  IAmb  15 55 51.5
      comp=Z,11nm,1.1s
J16K  Anvik River       84.79   6  P     P     15 55 49.4 +0.5
      baz=193
M22K  Willow            84.81  11  P     P     15 55 48.8  -0.3
      baz=202
KNK   Knik Glacier      84.81  12  P     P     15 55 49.5 +0.3
      baz=204
KLR   Kul'dur           84.82 328  LR    LR    16 31 02.0
      comp=Z,61nm,19.0s,baz=166,slow=34
PMR   Palmer            84.85  12  IAmb  IAmb  15 55 50.7
      comp=Z,11nm,1.3s
PMR   Palmer            84.85  12  P     P     15 55 49.4 +0.2
      baz=203
L20K  Farewell, AK      84.86   9  P     P     15 55 49.4   0.0
      baz=199
CN2   Changchun         84.89 321  P     P     15 55 51.1 +1.2
CN2                                pmax  pmax
      comp=Z,10.0nm,0.7s
S31K  Pelican           84.89  19  P     P     15 55 49.5   0.0
      baz=215
BNX   BinXian           84.92 323 ⇓P     P     15 55 51.0 +1.0
BNX                                pmax  pmax
      comp=Z,10.0nm,0.8s
WRAK  Wrangell Islan    84.94  22  P     P     15 55 49.8   0.0
      baz=219
TTA   Tatalina          84.99   8  IAmb  IAmb  15 56 03.4
      comp=Z,14nm,1.1s
TTA   Tatalina          84.99   8  P     P     15 55 49.9  -0.1
      baz=197,SNR=16
S32K  Killisnoo         85.02  20  P     P     15 55 50.1  -0.1
      baz=217
J17K  VABM Dome         85.06   7  IAmb  IAmb  15 55 52.8
      comp=Z,11nm,1.1s
J17K  VABM Dome         85.06   7  P     P     15 55 50.8 +0.5
      baz=194,SNR=7.1
DIV   Divide            85.11  13  IAmb  IAmb  15 56 02.8
      comp=Z,10.0nm,1.0s
ANMO  Albuquerque       85.13  50        P     15 55 50.1  -1.5
MESA  MESA              85.17  16  P     P     15 55 51.3 +0.1
      baz=210
SML   Sawmill           85.20  12  P     P     15 55 51.0  -0.1
      baz=204
BMRM  Bremner River     85.23  14  P     P     15 55 51.4 +0.1
      baz=208
MA2   Magadan           85.31 343  P     P     15 55 51.3  -0.4
      comp=Z,0.7nm,0.4s,baz=115,slow=4.3,SNR=3.9
MA2                                LR    LR    16 32 29.9
      comp=Z,66nm,18.6s,baz=166,slow=35
      comp=Z,0.7nm,0.4s
I17K  Unalakleet        85.37   6  P     P     15 55 52.1 +0.3
      baz=193
CRQE  Cirque            85.39  15  P     P     15 55 52.4 +0.2
      baz=209
CUT   Chulitna          85.39  11  P     P     15 55 52.2 +0.3
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      baz=202
PNL   Peninsula         85.40  17  P     P     15 55 52.1  -0.1
      baz=212
KLU   Klutina           85.41  13  P     P     15 55 52.5 +0.3
      baz=206
J18K  Innoko River      85.41   8  P     P     15 55 52.3 +0.2
      baz=196,SNR=15
SCM   Sheep Creek Mo    85.42  12  P     P     15 55 52.5 +0.2
      baz=205
PPLA  Purkeypile        85.52  10  P     P     15 55 52.8   0.0
      baz=200
PINM  Pinnacle          85.53  16  P     P     15 55 52.5  -0.3
      baz=212
ANM   Nome              85.66   4  P     P     15 55 53.3   0.0
      baz=188
K20K  Telida            85.67   9  P     P     15 55 53.4   0.0
      baz=199
R32K  Eaglecrest        85.69  20  P     P     15 55 53.7 +0.1
      baz=217
GRNC  Granite Creek     85.70  15  IAmb  IAmb  15 55 55.7
      comp=Z,10.0nm,1.1s
N25K  Chitina, Valde    85.80  14  IAmb  IAmb  15 56 06.5
      comp=Z,9.3nm,1.0s
N25K  Chitina, Valde    85.80  14  P     P     15 55 53.7  -0.4
      baz=208
P29M  Windy Craggy      85.83  18  IAmb  IAmb  15 55 56.0
      comp=Z,8.4nm,1.1s
P29M  Windy Craggy      85.83  18  P     P     15 55 53.8  -0.4
      baz=214
NEW   Newport           85.89  34  LR    LR    16 30 09.4
      comp=Z,217nm,18.3s,baz=210,slow=33
M24K  Tolsona, Glenn    85.91  13  P     P     15 55 54.5  -0.1
      baz=206,SNR=5.4
MCARA McCarthy VSAT     85.96  15  P     P     15 55 54.6  -0.2
      baz=209
LOGN  Logan Glacier     85.96  16  IAmb  IAmb  15 55 57.5
      comp=Z,7.0nm,0.9s
H16K  Elim              85.97   5  P     P     15 55 54.7  -0.1
      baz=191
CTG   Chitna Glacier    86.00  15  P     P     15 55 54.7  -0.5
      baz=210
CTGM  Chitina Glacie    86.00  15  IAmb  IAmb  15 56 08.1
      comp=Z,9.1nm,1.0s
WAT6  Susitna Watana    86.02  12  P     P     15 55 54.3  -1.0
      baz=205,SNR=13
CAST  Castle Rocks      86.03  10  IAmb  IAmb  15 56 06.0
      comp=Z,8.6nm,1.1s
CAST  Castle Rocks      86.03  10  P     P     15 55 53.8  -1.4
      baz=201,SNR=11
J19K  Poorman           86.06   8  IAmb  IAmb  15 56 08.2
      comp=Z,8.5nm,1.1s
J19K  Poorman           86.06   8  P     P     15 55 55.0  -0.3
      baz=197,SNR=6.1
PLBC  Pleasant Camp     86.08  18  P     P     15 55 54.5  -1.0
      baz=215
WAT1  Susitna Watana    86.09  12  P     P     15 55 55.0  -0.5
      baz=204
T35M  Bob Quinn         86.11  22  P     P     15 55 54.2  -1.5
      baz=220
O28M  Mount Upton       86.13  16  IAmb  IAmb  15 56 08.9
      comp=Z,8.5nm,1.0s
O28M  Mount Upton       86.13  16  P     P     15 55 55.1  -1.0
      baz=212
O29M  Mount Kennedy     86.16  17  P     P     15 55 55.6  -0.4
      baz=213
G15K  Niukluk           86.18   4  P     P     15 55 55.4  -0.4
      baz=190
TIA   Tai'an            86.23 311  P     P     15 55 57.6 +0.8
TIA                                pmax  pmax
      comp=Z,13nm,1.2s
KTH   Kantishna Hill    86.34  10  IAmb  IAmb  15 56 08.0
      comp=Z,8.8nm,1.0s
TRF   Thorofare Moun    86.35  11  IAmb  IAmb  15 56 10.1
      comp=Z,12nm,0.9s
TRF   Thorofare Moun    86.35  11  P     P     15 55 56.3  -0.7
      baz=202,SNR=13
PLCA  Paso Flores       86.36 132  P     P     15 55 57.6  -0.1
      comp=Z,2.0nm,0.8s,baz=241,slow=3.4,SNR=2.9
PLCA                               LR    LR    16 26 57.5
      comp=Z,72nm,19.7s,baz=242,slow=30
      comp=Z,2.0nm,0.8s
HARP  HAARP             86.38  13  P     P     15 55 56.6  -0.3
      baz=207
CHUM  Lake Minchumin    86.43  10  P     P     15 55 56.6  -0.5
      baz=200,SNR=7.2
J20K  Nowinta River     86.43   9  P     P     15 55 57.2 +0.1
      baz=199,SNR=12
P30M  Million Dollar    86.45  18  P     P     15 55 57.1  -0.3
      baz=214
H17K  Granite Mounta    86.47   6  P     P     15 55 58.0 +0.7
      baz=193
F14K  Arctic Creek      86.51   3  P     P     15 55 58.3 +0.8
      baz=187
S34M  Telegraph Cree    86.52  21  P     P     15 55 57.7   0.0
      baz=220
TNA   Tin City          86.52   3  P     P     15 55 58.5 +1.0
      baz=186
DHY   Denali Highway    86.54  12  P     P     15 55 58.2 +0.3
      baz=205
CMIG  Matias Romero     86.61  70  LR    LR    16 28 27.6
      comp=Z,88nm,18.3s,baz=204,slow=31
GCSA  Galena City Sc    86.62   7  P     P     15 55 58.9 +0.9
      baz=196
YUK8  Steele Glacier    86.67  16  P     P     15 55 59.0 +0.3
      baz=212
G16K  Koyuk River       86.70   5  P     P     15 55 58.9 +0.5
      baz=191
YUK6  Outpost Mounta    86.75  17  P     P     15 55 59.3 +0.2
      baz=213
PAX   Paxson            86.83  13  P     P     15 55 59.5 +0.3
      baz=207
BPAW  Bear Paw Mtn.     86.84  10  IAmb  IAmb  15 56 16.6
      comp=Z,8.4nm,1.4s
BPAW  Bear Paw Mtn.     86.84  10  P     P     15 55 59.7 +0.5
      baz=202
F15K  North Star Dit    86.84   4  P     P     15 55 59.8 +0.7
      baz=189
H18K  Honhosa River     86.84   7  P     P     15 55 59.5 +0.4
      baz=195
MCK   McKinley          86.85  11  P     P     15 55 59.0  -0.2
      baz=204,SNR=9.8
M26K  Nabesna, AK       86.86  14  IAmb  IAmb  15 56 01.4
      comp=Z,8.6nm,1.1s
M26K  Nabesna, AK       86.86  14  P     P     15 55 59.3  -0.1
      baz=209,SNR=9.0
HYT   Haines Junctio    86.89  17  P     P     15 55 59.0  -0.6
      baz=214
YUK3  Moose Creek       86.92  15  P     P     15 56 00.1 +0.3
      baz=211,SNR=8.6
Q32M  Nakina River      86.95  20  P     P     15 55 59.5  -0.5
      baz=219
G17K  Kiwalik Mounta    86.95   6  P     P     15 56 00.1 +0.4
      baz=193
I20K  Naaghedeneel      86.98   8  P     P     15 56 00.2 +0.4
      baz=198
P32M  Atlin             86.99  19  P     P     15 55 59.9  -0.1
      baz=217
YUK4  Talbot Arm        87.01  16  P     P     15 56 01.3 +1.0
      baz=213
PDAR  Pinedale Array    87.08  42  P     P     15 56 01.4 +0.3
      comp=Z,0.5nm,0.8s,baz=203,slow=1.1,SNR=4.8
PDAR                               LR    LR    16 32 54.0
      comp=Z,44nm,18.1s,baz=272,slow=34
      comp=Z,0.5nm,0.8s
M27K  Edge Creek, AK    87.08  15  P     P     15 56 01.3 +0.8
      baz=210,SNR=16
TROLL Troll, Antarti    87.11 179 ⇑P     P     15 55 59.5  -1.2
      comp=Z,197nm,1.1s
MENT  Mentasta          87.17  13  IAmb  IAmb  15 56 10.1
      comp=Z,6.2nm,1.1s
O30N  Mendenhall        87.24  18  IAmb  IAmb  15 56 14.1
      comp=Z,5.9nm,0.9s
O30N  Mendenhall        87.24  18  P     P     15 56 01.8 +0.6
      baz=215
SNAA  Sanae             87.29 177  LR    LR    16 34 15.1
      comp=Z,51nm,18.7s,baz=204,slow=35
VNA3  Neumayer Olymp    87.29 175 ⇑P     P     15 56 00.1  -1.4
      comp=Z,2.4nm,0.8s
DLBC  Dease Lake        87.30  22  P     P     15 56 01.8 +0.2
      baz=221
L26K  Log Cabin Wild    87.33  14  IAmb  IAmb  15 56 21.1
      comp=Z,8.2nm,1.3s
L26K  Log Cabin Wild    87.33  14  P     P     15 56 02.3 +0.8
      baz=209
BVCY  Beaver Creek      87.37  15  P     P     15 56 02.6 +0.8
      baz=211,SNR=6.1
H19K  Roundabout Mou    87.43   7  P     P     15 56 02.6 +0.8
      baz=196
WHY   Whitehorse        87.49  18  IAmb  IAmb  15 56 15.6
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      comp=Z,9.5nm,1.0s
WHY   Whitehorse        87.49  18  P     P     15 56 02.4  -0.2
      baz=216
K24K  Donnelly Dome     87.51  12  P     P     15 56 02.8 +0.3
      baz=206,SNR=6.0
N30M  Aishikik Lake     87.53  17  P     P     15 56 02.4  -0.2
      baz=214
G18K  Tagagawik         87.53   6  P     P     15 56 03.1 +0.6
      baz=194
H20K  Anotleneega Mo    87.59   8  P     P     15 56 02.5  -0.2
      baz=198,SNR=6.5
NEA2  Nenana            87.62  11  P     P     15 56 02.6  -0.3
      baz=203
RIDG  Independent Ri    87.64  13  IAmb  IAmb  15 56 15.3
      comp=Z,6.8nm,1.0s
RIDG  Independent Ri    87.64  13  P     P     15 56 02.9  -0.2
      baz=207,SNR=6.9
HEH   HeiHe             87.65 327 eP     P     15 56 04.3 +1.0
HEH                                pmax  pmax
      comp=Z,5.0nm,1.0s
I21K  Tanana            87.70   9  IAmb  IAmb  15 56 15.9
      comp=Z,7.3nm,1.2s
I21K  Tanana            87.70   9  P     P     15 56 03.9 +0.7
      baz=201
L27K  Beaver Creek,     87.70  14  P     P     15 56 03.8 +0.5
      baz=210,SNR=7.0
R33M  Jennings River    87.71  21  IAmb  IAmb  15 56 31.0
      comp=Z,9.2nm,1.4s
R33M  Jennings River    87.71  21  P     P     15 56 03.3  -0.3
      baz=220
BCAR  Beaver Creek A    87.71  14  P     P     15 56 03.8 +0.3
DOT   Dot Lake          87.72  13  IAmb  IAmb  15 56 05.2
      comp=Z,12nm,1.2s
MLY   Manley            87.75  10  IAmb  IAmb  15 56 14.9
      comp=Z,6.7nm,1.3s
MLY   Manley            87.75  10  P     P     15 56 03.7 +0.1
      baz=202,SNR=5.7
P33M  Teslin, Yukon     87.76  19  P     P     15 56 04.2 +0.4
      baz=218
SEY   Seymchan          87.77 345  P     P     15 56 03.4  -0.3
      comp=Z,5.5nm,1.0s,baz=144,slow=5.8,SNR=12
SEY                                LR    LR    16 31 07.6
      comp=Z,66nm,19.5s,baz=168,slow=33
      comp=Z,5.5nm,1.0s
VNA2  Neumayer--Watz    87.77 176 ⇑P     P     15 56 03.3  -0.5
      comp=Z,2.8nm,0.9s,baz=228,slow=1.5
F17K  Baldwin Pennin    87.83   5  P     P     15 56 04.9 +1.1
      baz=192
HDA   Harding Lake      87.83  12  IAmb  IAmb  15 56 05.4
      comp=Z,11nm,1.4s
HDA   Harding Lake      87.83  12  P     P     15 56 04.3 +0.4
      baz=205,SNR=7.1
CCB   Clear Creek Bu    87.89  11  IAmb  IAmb  15 56 17.3
      comp=Z,10.0nm,1.1s
N31M  Braeburn, Yuko    87.91  17  P     P     15 56 04.8 +0.4
      baz=216
G19K  Purcell Mounta    87.94   7  IAmb  IAmb  15 56 17.6
      comp=Z,13nm,1.2s
G19K  Purcell Mounta    87.94   7  P     P     15 56 05.1 +0.7
      baz=196
PSI   Prapat            87.96 274  LR    LR    16 38 05.3
      comp=Z,88nm,18.4s,baz=120,slow=38
M29M  Somme Creek       87.98  16  IAmb  IAmb  15 56 17.4
      comp=Z,4.9nm,1.0s
M29M  Somme Creek       87.98  16  P     P     15 56 04.9 +0.1
      baz=213,SNR=6.1
H21K  Melozitna Rive    88.03   9  IAmb  IAmb  15 56 18.1
      comp=Z,11nm,1.5s
H21K  Melozitna Rive    88.03   9  P     P     15 56 05.5 +0.6
      baz=200
SCRK  Sand Creek        88.03  13  P     P     15 56 05.8 +0.7
      baz=208,SNR=5.4
I23K  Minto, Yukon-K    88.08  10  IAmb  IAmb  15 56 16.9
      comp=Z,6.8nm,1.2s
I23K  Minto, Yukon-K    88.08  10  P     P     15 56 05.4 +0.3
      baz=203
COLA  College           88.09  11  P     P     15 56 05.6 +0.5
      baz=204
F18K  Selawik           88.12   6  P     P     15 56 05.8 +0.6
      baz=194
IL31                    88.17  11  IAmb  IAmb  15 56 18.9
      comp=Z,15nm,1.4s
ILAR  Eielson Array     88.17  11        P     15 56 05.0  -0.6
ILAR  Eielson Array     88.17  11  P     P     15 56 05.8 +0.3
      comp=Z,3.7nm,1.1s,baz=215,slow=5.3,SNR=16
      comp=Z,3.7nm,1.1s
J25K  Salcha River,     88.32  12  IAmb  IAmb  15 56 18.5
      comp=Z,6.7nm,1.1s
J25K  Salcha River,     88.32  12  P     P     15 56 06.8 +0.5
      baz=207,SNR=8.5
POKR  Poker Plat Res    88.39  11  P     P     15 56 07.0 +0.5
      baz=205
E17K  Hotham Inlet      88.41   5  P     P     15 56 07.1 +0.5
      baz=192
N32M  Quiet Lake        88.42  19  P     P     15 56 07.2 +0.3
      baz=218
H22K  Ishtalitna Cre    88.46   9  P     P     15 56 07.4 +0.5
      baz=201
K27K  Chicken           88.48  14  P     P     15 56 07.5 +0.5
      baz=210
HNS   HongShan          88.50 311 ⇓P     P     15 56 09.4 +1.7
HNS                                pmax  pmax
      comp=Z,6.0nm,0.6s
F19K  Shaleruckik Mo    88.54   6  IAmb  IAmb  15 56 08.8
      comp=Z,10nm,1.2s
F19K  Shaleruckik Mo    88.54   6  P     P     15 56 07.9 +0.7
      baz=195
J26L  Joseph Creek      88.58  13  P     P     15 56 07.6   0.0
      baz=208,SNR=22
L29M  L29M              88.63  16  IAmb  IAmb  15 56 20.8
      comp=Z,10nm,1.1s
L29M  L29M              88.63  16  P     P     15 56 08.2 +0.4
      baz=213,SNR=7.9
GSI   Gunungsitoli      88.68 272        P     15 56 09.2 +0.1
G21K  Allakaket         88.74   8  P     P     15 56 08.8 +0.6
      baz=199
LYN   LuoYang           88.81 308  P     P     15 56 11.1 +1.8
LYN                                pmax  pmax
      comp=Z,25nm,1.2s
E18K  Tukpahlearik C    88.84   5  P     P     15 56 09.3 +0.7
      baz=193
M31M  Drury Creek, Y    88.88  18  P     P     15 56 09.8 +0.8
      baz=217
D17K  Noatak River      88.92   4  P     P     15 56 09.5 +0.5
      baz=190
H24K  Noodor Dome       88.97  11  P     P     15 56 09.5 +0.2
      baz=204
F20K  Avaraart Lake     88.97   7  IAmb  IAmb  15 56 21.7
      comp=Z,7.6nm,1.1s
F20K  Avaraart Lake     88.97   7  P     P     15 56 09.8 +0.6
      baz=197
PRP   Porcupine Dome    89.10  12  IAmb  IAmb  15 56 22.4
      comp=Z,8.5nm,1.2s
PRP   Porcupine Dome    89.10  12  P     P     15 56 10.3 +0.3
      baz=207
DAWY  Dawson            89.13  15  IAmb  IAmb  15 56 22.9
      comp=Z,8.0nm,1.0s
DAWY  Dawson            89.13  15  P     P     15 56 11.4 +1.3
      baz=212,SNR=8.9
E19K  Redstone River    89.20   7  P     P     15 56 11.8 +1.5
      baz=196
RDOG  Red Dog Mine      89.28   4  P     P     15 56 11.9 +1.2
      baz=190
TOAD  Toad River Com    89.30  23  P     P     15 56 11.4 +0.4
      baz=225,SNR=10
C16K  Lisburne Hills    89.35   3  P     P     15 56 12.3 +1.3
      baz=188
I26K  Coal Creek Min    89.37  13  IAmb  IAmb  15 56 13.3
      comp=Z,8.4nm,1.3s
I26K  Coal Creek Min    89.37  13  P     P     15 56 11.8 +0.7
      baz=209,SNR=5.9
K29M  Barlow Dome       89.39  15  IAmb  IAmb  15 56 24.4
      comp=Z,11nm,1.1s
K29M  Barlow Dome       89.39  15  P     P     15 56 12.0 +0.5
      baz=214,SNR=9.8
G22K  Bettles           89.40   9  P     P     15 56 12.0 +0.8
      baz=201
F21K  Alatna River      89.41   8  P     P     15 56 11.5 +0.1
      baz=199
G23K  Bananza Creek     89.42   9  P     P     15 56 11.6 +0.2
      baz=202
C17K  DeLong Mountai    89.68   4  P     P     15 56 13.3 +0.7
      baz=190
H25L  Birch Creek       89.72  11  P     P     15 56 13.3 +0.6
      baz=206
G24K  Hadweenzic Riv    89.82  10  P     P     15 56 13.9 +0.7
      baz=205
COLD  Coldfoot          89.88   9  P     P     15 56 14.5 +1.1
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               baz=202
GYA    Guiyang            89.94 298 ⇑P       P         15 56 15.6 +0.7
GYA                                 pmax     pmax
               comp=Z,14nm,0.6s
I27K   Kandik River       89.95  13  P       P         15 56 14.4 +0.4
               baz=210
C18K   Utukok River       90.00   5  P       P         15 56 14.7 +0.6
               baz=192
E20K   Nigu River         90.08   7  P       P         15 56 15.3 +0.8
               baz=197
MMPY   Sheldon Lake,      90.11  18  P       P         15 56 15.5 +0.7
               baz=220
D19K   Kuna River         90.11   6  P       P         15 56 14.9 +0.3
               baz=195
G25K   Bearman Lake       90.12  11  P       P         15 56 15.4 +0.8
               baz=206
I28M   Miner Creek        90.18  14  P       P         15 56 15.4 +0.4
               baz=212
SLVN   Son La             90.27 293  IAmb    IAmb      15 56 30.0
               comp=Z,13nm,1.5s
J30M   Hart River         90.29  15  IAmb    IAmb      15 56 31.7
               comp=Z,8.0nm,1.4s
J30M   Hart River         90.29  15  P       P         15 56 16.4 +0.7
               baz=215
BEAVL  Fort Liard         90.31  22  P       P         15 56 16.2 +0.6
               baz=225
I29M   Ogilvie Camp,      90.47  14  P       P         15 56 17.1 +0.8
               baz=213
D20K   Etivluk River      90.47   6  P       P         15 56 17.1 +0.8
               baz=196
E22K   Anaktuvuk Pass     90.49   8  IAmb    IAmb      15 56 29.4
               comp=Z,8.7nm,1.1s
E22K   Anaktuvuk Pass     90.49   8  P       P         15 56 17.1 +0.7
               baz=201
F24K   Squaw Lake         90.50  10  P       P         15 56 17.0 +0.5
               baz=204
E21K   Killik River       90.51   7  P       P         15 56 16.5  0.0
               baz=199
H27K   Steamboat Moun     90.51  13  IAmb    IAmb      15 56 29.4
               comp=Z,8.2nm,1.2s
H27K   Steamboat Moun     90.51  13  P       P         15 56 17.0 +0.4
               baz=210
C19K   Lookout Ridge      90.57   5  P       P         15 56 17.1 +0.4
               baz=194
B18K   Kokolik River      90.65   4  P       P         15 56 17.6 +0.6
               baz=192
G26K   Porcupine Rive     90.70  12  P       P         15 56 17.9 +0.6
               baz=208
E23K   Chandalar          90.73   9  IAmb    IAmb      15 56 43.1
               comp=Z,10nm,1.2s
E23K   Chandalar          90.73   9  P       P         15 56 18.3 +0.7
               baz=203
I30M   Mount Dempster     90.81  15  IAmb    IAmb      15 56 30.6
               comp=Z,11nm,1.1s
I30M   Mount Dempster     90.81  15  P       P         15 56 18.7 +0.6
               baz=215
E24K   Your Creek         90.92   9  P       P         15 56 19.4 +1.0
               baz=204
F25K   Christian Rive     90.94  11  P       P         15 56 20.0 +1.5
               baz=206
BMAR   Burnt Mountain     90.98  11          P         15 56 19.6 +0.9
G27K   Doyon Strip        90.99  12  P       P         15 56 19.4 +0.7
               baz=210
D22K   Ayikyak River      91.08   8  P       P         15 56 20.4 +1.3
               baz=200
C21K   Knifeblade Rid     91.10   7  P       P         15 56 20.4 +1.3
               baz=198
H29M   Whitestone         91.18  14  IAmb    IAmb      15 56 32.8
               comp=Z,11nm,1.1s
H29M   Whitestone         91.18  14  P       P         15 56 20.4 +0.8
               baz=213
XAN    Xi'an              91.24 306 ⇑P       P         15 56 21.7 +1.0
XAN                                  pP      pwP       15 56 30.2 +4.1
XAN                                  pmax    pmax
               comp=Z,24nm,1.1s
XAN                                  pmax    pmax
               comp=Z,140nm,4.2s
TOLK   Toolik Lake Re     91.28   9  P       P         15 56 21.2 +1.2
               baz=203
F26K   Sheenjek River     91.29  11  IAmb    IAmb      15 56 23.4
               comp=Z,6.7nm,1.1s
F26K   Sheenjek River     91.29  11  P       P         15 56 21.0 +0.8
               baz=208
D23K   Nanushuk River     91.42   8  P       P         15 56 21.6 +0.9
               baz=202
E25K   Arctic Village     91.43  10  IAmb    IAmb      15 56 50.5
               comp=Z,16nm,1.6s
E25K   Arctic Village     91.43  10  P       P         15 56 21.8 +1.1
               baz=207
A19K   Wainwright         91.53   4  P       P         15 56 22.2 +1.2
               baz=192
B21K   Ikpikpuk River     91.56   7  P       P         15 56 22.3 +1.1
               baz=198
B20K   Meade River        91.67   6  P       P         15 56 23.2 +1.5
               baz=196
EPYK   Eagle Plains       91.68  14  P       P         15 56 22.8 +0.8
               baz=215
H31M   Peel River         91.78  15  P       P         15 56 23.8 +1.4
               baz=217
G29M   Pine Creek         91.84  14  P       P         15 56 24.1 +1.5
               baz=213
D24K   Happy Valley       91.86   9  P       P         15 56 23.8 +1.1
               baz=204
F28M   Old Crow           92.04  13  P       P         15 56 24.5 +0.9
               baz=212
E27K   Coleen River       92.19  12  IAmb    IAmb      15 56 27.8
               comp=Z,7.0nm,1.1s
E27K   Coleen River       92.19  12  P       P         15 56 25.8 +1.5
               baz=210
HHC    Hu-ho-hao-te       92.24 313 eP       P         15 56 28.4 +3.1
C23K   Itkillik River     92.24   8  P       P         15 56 26.5 +2.1
               baz=202
G30M   tAoh Zraii Nji     92.29  14  P       P         15 56 26.6 +1.9
               baz=215
B22K   Teshekpuk Lake     92.38   7  P       P         15 56 26.3 +1.3
               baz=199
D25K   Kavik River        92.38  10  P       P         15 56 26.3 +1.2
               baz=206
C24K   Franklin Bluff     92.40   9  P       P         15 56 26.4 +1.3
               baz=204
KMI    Kunming            92.69 296  P       P         15 56 29.4 +1.6
KMI                                  pmax    pmax
               comp=Z,9.0nm,1.2s
G31M   Satah River        92.70  15  P       P         15 56 28.4 +1.8
               baz=217
A22K   Sinclair Lake      92.84   6  P       P         15 56 29.2 +2.1
               baz=198
F30M   Barrier River      92.91  14  P       P         15 56 28.8 +1.2
               baz=216
E28M   Babbage River      92.95  12  IAmb    IAmb      15 56 30.4
               comp=Z,8.3nm,1.2s
E28M   Babbage River      92.95  12  P       P         15 56 29.2 +1.5
               baz=212
ATAH   Atahualpa          92.96  99  LR      LR        16 30 45.9
               comp=Z,83nm,18.5s,baz=235,slow=31
WRGLY  Wrigley            92.99  21  P       P         15 56 29.2 +1.2
               baz=226
JTS    Las Juntas de      93.07  80  LR      LR        16 30 43.7
               comp=Z,47nm,18.7s,baz=226,slow=31
C27K   Jago River         93.08  10  P       P         15 56 29.7 +1.4
               baz=208
E29M   Blow River         93.10  13  P       P         15 56 29.7 +1.2
               baz=214
C26K   Camden Bay         93.14  10  P       P         15 56 30.1 +1.6
               baz=207
D27M   Malcolm River      93.23  11  P       P         15 56 30.4 +1.3
               baz=211
F31M   Tsiigehtchic       93.24  15  P       P         15 56 30.4 +1.4
               baz=217
CM31   Chiang Mai Arr     93.55 288  IAmb    IAmb      15 56 34.7
               comp=Z,9.6nm,1.1s
CMAR   Chiang Mai Arr     93.55 288          P         15 56 31.9 +0.2
CMAR   Chiang Mai Arr     93.55 288  P       P         15 56 32.5 +0.9
               comp=Z,5.1nm,0.9s,baz=117,slow=2.9,SNR=29
CMAR                                 LR      LR        16 37 44.5
               comp=Z,25nm,19.2s,baz=75,slow=35
               comp=Z,5.1nm,0.9s
CHTO   Chiang Mai         93.68 289          P         15 56 32.8 +0.5
CHTO                                 IAmb    IAmb      15 56 34.3
               comp=Z,6.9nm,0.9s
D28M   Stokes Point       93.72  12  P       P         15 56 32.5 +1.3
               baz=213
YAK    Yakutsk            93.97 337  LR      LR        16 44 17.4
               comp=Z,30nm,18.3s,baz=156,slow=39
INK    Inuvik             93.98  14  P       P         15 56 33.9 +1.5
               baz=218
PZH    PanZhiHua          94.03 297  P       P         15 56 35.6 +1.7
PZH                                  pmax    pmax
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               comp=Z,8.0nm,1.0s
PZH                                  pmax    pmax
               comp=Z,110nm,5.3s
LZH    Lanzhou            95.87 306 eP       P         15 56 46.6 +4.5
LZH                                  pP      pwP       15 56 52.8 +5.2
LZH                                  pmax    pmax
               comp=Z,18nm,1.3s
A36M   Sachs Harbour      98.61  14  P       Pdif      15 56 54.4 +1.0
               baz=225
LPAZ   La Paz             98.65 111  LR      LR        16 34 46.0
               comp=Z,99nm,18.3s,baz=241,slow=31
ULM    Lac du Bonnet      98.88  40  LR      LR        16 36 39.5
               comp=Z,144nm,18.6s,baz=250,slow=32
GTA    Gaotai            100.02 308 eP       Pdif      15 57 07.4 +6.7
GTA                                  sP      pwP       15 57 13.8 +7.7
GTA                                  pmax    pmax
               comp=Z,2.0nm,1.2s
BVAR   Borovoye Array    121.74 320  PKP     PKPdf     16 02 07.6 -1.3
               comp=Z,2.1nm,0.9s,baz=90,slow=1.5,SNR=6.6
AK03   Malin Array Si    145.11 334  PKP     PKPbc     16 02 50.9 -1.0
AK23   Malin Array Si    145.13 334  PKP     PKPbc     16 02 50.9 -1.1
AKASG  Malin Array Be    145.13 334  PKPbc   PKPbc     16 02 50.9 -1.1
               comp=Z,7.7nm,0.9s,baz=38,slow=3.4,SNR=32
AKBB   Malin Array Si    145.13 334  PKP     PKPbc     16 02 50.9 -1.1
KIEV   Kiev              145.14 334  PKP     PKPbc     16 02 50.9 -1.1
EKA    Eskdalemuir Ar    145.17   9  PKPbc   PKPbc     16 02 51.0 -1.0
               comp=Z,0.3nm,0.4s,baz=9.1,slow=2.4,SNR=1.9
MI28   Mi28,Pidlybu      145.58 335  PKP     PKPdf     16 02 52.4 -0.8
RNPP9  Sopachiv          145.87 337  PKP     PKPdf     16 02 52.9 -0.8
RNPP8  Varash            145.94 337  PKP     PKPdf     16 02 53.1 -0.7
RNPP1  Kostyukhnivka     145.96 337  PKP     PKPdf     16 02 53.1 -0.8
RNPP5  Staryi Chortor    146.02 337  PKP     PKPdf     16 02 53.2 -0.8
LUBAR  Lubar, Ukraine    146.34 334  PKP     PKPdf     16 02 53.8 -0.8
BSEG   Bad Segeberg      147.02 355 ePKPab   PKPab     16 02 59.2 +0.2
               baz=10,slow=3.7
NE56   Odesa             147.26 327  PKP     PKPdf     16 02 55.4 -0.8
SORM   Soroca            147.44 331  PKP     PKPdf     16 02 55.7 -0.8
RETH   Rethem/Aller,     148.28 356 ePKPab   PKiKP     16 03 03.9 +1.2
               baz=10,slow=3.7
NRDL   Niedersach Rie    148.47 355 ePKPab   PKPab     16 03 05.4 +0.7
               baz=10,slow=3.7
FLTG   Flechtingen       148.52 353 ePKPab   PKiKP     16 03 04.6 +1.4
               baz=10,slow=3.7
ASSE   Asse, Remlinge    148.78 354 ePKPab   PKPab     16 03 06.2 +0.2
               baz=10,slow=3.7
IBBN   Ibbenburen        148.80 358 ePKPab   PKPab     16 03 06.3 +0.1
               baz=10,slow=3.7
OJC    Ojcow             148.86 342 ePKP     PKPbc     16 03 03.6 +0.9
CLZ    Clausthal         149.09 354 ePKPab   PKPab     16 03 07.1 -0.4
               baz=10,slow=3.7
KSP    Ksiaz             149.16 347 ePKP     PKPab     16 03 09.5 +1.8
CLL    Collm             149.30 351 ePKPab   PKPab     16 03 07.9 -0.4
               baz=10,slow=3.7
CLL                                 eL       L         17 20 13.2
               comp=Z,55nm,21.2s
CLL    Collm             149.30 351 ePKPdf   PKPdf     16 03 00.0 +0.6
CLL                                 i PKPbc  sPKPdf    16 03 03.5 +0.9
               comp=Z,14nm,1.3s
CLL                                 i PKPab  PKPab     16 03 07.9 -0.4
               comp=Z,8.0nm,1.1s
CLL                                 i x      x         16 03 15.0
GTTG   Gottingen         149.42 355 ePKPab   PKPab     16 03 09.0 +0.3
               baz=10,slow=3.7
NIE    Niedzica          149.43 341 ePKP     PKPbc     16 03 04.8 +0.6
NEUB   Neuenburg         149.57 352 ePKPab   PKPab     16 03 09.6 +0.3
               baz=10,slow=3.7
BRG    Berggiesshubel    149.58 350 ePKPab   PKPab     16 03 09.1 -0.4
               baz=10,slow=3.7
BRG    Berggiesshubel    149.58 350 ePKP     PKPdf     16 03 02.0 +2.1
BRG                                  Amp               16 03 02.3
               comp=Z,2.3nm,0.9s
BRG    Berggiesshubel    149.58 350  P       PKPbc     16 03 04.9 +0.5
BRG                                  Amp               16 03 06.6
               comp=Z,7.2nm,1.2s
BRG    Berggiesshubel    149.58 350  P       PKPab     16 03 09.5 +0.1
BRG                                  Amp               16 03 11.0
               comp=Z,6.8nm,0.9s
DPC    Dobruska-Polom    149.62 346⇑ePKP     PKPbc     16 03 05.1 +0.5
STEB   Steborice         149.66 344⇑ePKP     PKPbc     16 03 04.8 +0.1
BUG    Bochum--Univer    149.69 358 ePKPab   PKPab     16 03 09.9 +0.1
               baz=10,slow=3.7
BRTR   Keskin Array B    149.75 314  PKPbc   PKPbc     16 03 04.7 -0.8
               comp=Z,3.8nm,1.0s,baz=147,slow=2.5,SNR=20
KRLC   Kraliky           149.77 346⇑ePKP     PKPdf     16 03 03.1 +2.8
MORC   Moravsky Berou    149.87 345 ePKP     PKPbc     16 03 05.8 +0.5
LANS   Liptovska Anna    149.92 342 ePKP     PKiKP     16 03 06.6 +0.3
ASF    Jabal al Asfar    150.09 298  PKPbc   PKPbc     16 03 06.6 +0.2
               comp=Z,3.2nm,0.9s,baz=359,slow=2.9,SNR=4.0
MOX    Moxa              150.14 352 ePKPab   PKPab     16 03 11.5 -0.3
               baz=10,slow=3.7
MOX                                 eL       L         17 20 48.8
               comp=Z,61nm,19.1s
MAUC   Maruska           150.17 344⇑ePKP     PKPbc     16 03 06.9 +0.9
TANN   Tannenbergstha    150.25 351 ePKPab   PKPab     16 03 11.0 -1.3
               baz=10,slow=3.7
VRAC   Vranov            150.53 345 ePKP     PKPbc     16 03 07.1 +0.3
JAVC   Velka Javorina    150.68 344 ePKP     PKPbc     16 03 06.6 -0.7
VYHS   Vyhne             150.69 342 ePKP     PKPbc     16 03 07.6 +0.4
KRUC   Moravsky          150.81 345 ePKP     PKPbc     16 03 07.0 -0.5
TNS    Taunus Mts        150.85 356 ePKPab   PKPab     16 03 15.1 +0.4
               baz=10,slow=3.7
TNS                                 eL       L         17 13 22.7
               comp=Z,54nm,20.5s
ZVC    Zvikov            150.91 349⇑ePKP     PKPbc     16 03 08.3 +0.6
MMAI   Mount Meron Ar    151.08 300  PKPbc   PKPbc     16 03 08.7  0.0
               comp=Z,3.2nm,0.7s,baz=59,slow=5.0,SNR=5.9
GRF    Grafenberg Arr    151.12 353 ePKPab   PKPab     16 03 15.9 +0.1
               baz=10,slow=3.7
GRF                                 eL       L         17 21 06.3
               comp=Z,61nm,18.1s
MODS   Modra-Piesok      151.23 344 ePKP     PKPbc     16 03 08.6 +0.1
KHC    Kasperske Hory    151.32 349⇑ePKP     PKPbc     16 03 08.8 +0.1
CKRC   Cesky Krumlov     151.48 348⇑ePKP     PKPbc     16 03 09.3 +0.2
GERES  GERESS Array B    151.57 349  PKPbc   PKPbc     16 03 09.3 -0.1
               comp=Z,1.7nm,1.0s,baz=27,slow=0.9,SNR=12
BFO    Black Forest      152.74 356 ePKPab   PKPab     16 03 22.4 -0.2
               baz=10,slow=3.7
RJOB   Jochberg          152.80 349 ePKPab   PKPab     16 03 22.4 -0.6
               baz=10,slow=3.7
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TIR 02 15:46:16.2, 40.°46N×20.°78E, h9^{km}±5^{km}, Ml1.9/3,
Greece-Albania border region

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Code   Station Name         Δ°   AZ°   Phase ID          Time       Res
                                       Op      ISC       h  m  s    ISC
KBN    Korca               0.16    2   Pg      Pg        15 46 19.3 -0.4
KBN                                    Sg      Sg        15 46 22.0 -0.1
KBN                                    AML     AML       15 46 23.3
               1.0nm,0.2s
KBN                                    AML     AML       15 46 24.1
               1.0nm,0.2s
KBN    Korca               0.16    2   Pg      Pg        15 46 19.3 -0.4
KBN                                    Sg      Sg        15 46 22.1 -0.1
KBN                                    AML     AML       15 46 23.3
               1.0nm,0.2s
KBN                                    AML     AML       15 46 24.1
               1.0nm,0.2s
NEST   Nestorio            0.21  102   Pg      Pg        15 46 20.5  0.0
NEST                                   Sg      Sg        15 46 24.3 +0.9
NEST                                   AML     AML       15 46 24.8
               0.9nm,0.1s
NEST                                   AML     AML       15 46 26.7
               1.1nm,0.2s
NEST   Nestorio            0.21  102   Pg      Pg        15 46 20.6 +0.1
NEST                                   Sg      Sg        15 46 24.4 +1.0
NEST                                   AML     AML       15 46 26.7
               1.1nm,0.2s
LSK    Leskovik            0.34  204   Pg      Pg        15 46 23.2 +0.3
LSK                                    Sg      Sg        15 46 28.4 +1.0
LSK                                    AML     AML       15 46 31.4
               0.5nm,0.2s
SRN    Sarande             0.83  226   Pg      Pg        15 46 32.2 +0.1
SRN                                    Sg      Sb        15 46 44.5 +0.5
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*IDC **02** 15:57:23.9±1.7, 54.°98N×164.°31E, h0^{km}, mb3.6/2, mbtmp3.5/3, ML2.4/1, MS2.5/2, Error ellipse: s-maj=101.6km s-min=25.2km az=153.0*
*KRSC **02** 15:57:24.9±0.9, 54.°68N×164.°46E, h41^{km}±25^{km}, Ml3.6*
ISC 02 15:57:26.4±0.9**, 54.°88N**±0.°07×**164.°31E**±0.°04**, h27^{km}, n41,**
σ1.^{s}94/44**, Komandorsky Islands region**

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Code   Station Name         Δ°   AZ°   Phase ID          Time       Res
                                       Op      ISC       h  m  s    ISC
BKI    Bering              1.01   71  eP       Pb        15 57 43.6 -1.6
BKI                                   eS       Sn        15 57 56.0 -2.1
MKZ    Mys Kozlova         1.53  259  eP       Pb        15 57 53.1 -1.0
KBTR   Krutoberegovo       1.58  328  eP       Pb        15 57 54.6 -0.3
KBG    Krutoberegovo       1.65  327  eP       Pb        15 57 55.8 -0.4
TUMD   Tumrok D            2.27  280  eP       Pb        15 58 04.6 -2.2
TUMD                                  eS       Sb        15 58 32.2 -2.3
ZLN    Zelenaya            2.30  301  eP       Pb        15 58 06.6 -0.7
BZGR   Bezymyannyi-Gr      2.32  299  eP       Pb        15 58 06.1 -1.5
BZGR                                  eS       Sb        15 58 34.1 -1.7
BZWR   Bezymyannyi-We      2.43  298  eP       Pb        15 58 08.1 -1.5
KMNR   Kamenistaya         2.49  292  eP       Pb        15 58 08.5 -2.0
KMNR                                  eS       Sb        15 58 38.5 -2.2
KIRR   Kirishev            2.51  297  eP       Pb        15 58 09.5 -1.3
KLY    Klyuchi             2.52  306  eP       Pb        15 58 07.5 -3.5
KPT    Kopyto              2.57  297  eP       Pb        15 58 10.4 -1.5
KOZ    Kozyrevsk           2.79  297  eP       Pb        15 58 13.5 -2.0
KII    Karymskiy           2.96  255  eP       Pn        15 58 14.1 +2.4
SPN    Mys Shipunski       3.10  237  eP       Pn        15 58 13.5  0.0
SPN                                   eS       Sn        15 58 47.7 -1.9
ESO    Esso                3.37  290  eP       Pn        15 58 19.9 +2.7
NLC    Nalytchevo          3.39  242  eP       Pn        15 58 18.3 +0.8
SDLR   Sedlovina           3.58  246  eP       Pn        15 58 22.2 +2.0
SMAR   Somma               3.63  246  eP       Pn        15 58 23.2 +2.2
KRER   Koryakskii          3.64  247  eP       Pn        15 58 23.3 +2.2
UGLR   Uglovaya            3.64  245  eP       Pn        15 58 23.1 +2.0
AVH    Avacha              3.66  246  eP       Pn        15 58 23.9 +2.6
KRX    Arik                3.67  248  eP       Pn        15 58 23.5 +2.1
KOK    Koryaka             3.70  247  eP       Pn        15 58 23.8 +1.9
DALK   Dalny               3.77  243  eP       Pn        15 58 24.0 +1.3
PET    Petropavlovsk       3.83  243  eP       Pn        15 58 25.5 +2.0
GNL    Ganaly              3.92  255  eP       Pn        15 58 27.9 +3.0
KRMR   Karymshinskiy       4.20  243  eP       Pn        15 58 30.3 +1.7
KRMR                                  eS       Sn        15 59 17.1 +0.5
RUS    Russkaya            4.23  237  eP       Pn        15 58 30.0 +1.0
PETK   Petropavlovsk-      4.29  248   Pn      Pn        15 58 31.8 +1.9
               1.1nm,0.3s,baz=68,slow=17,SNR=52
PETK                                   Sn      Sn        15 59 20.2 +1.2
               0.4nm,0.3s,baz=58,slow=31,SNR=4.4
PETK                                   LR      LR        16 00 16.1
               comp=Z,51nm,21.6s,baz=25,slow=40
               1.5nm,0.4s
MTVR   Mutnovka            4.36  239  eP       Pn        15 58 32.5 +1.5
GRL    Gorelyy             4.38  240  eP       Pn        15 58 33.2 +2.0
ASAK   Asacha              4.56  239  eP       Pn        15 58 36.2 +2.4
APC    Apacha              4.66  248  eP       Pn        15 58 38.2 +3.2
KDTR   Khodutka, Kamc      4.84  233  eP       Pn        15 58 38.3 +0.9
SHEM   Shemya Is, Ala      6.19  106   LR      LR        16 01 10.8
               comp=Z,48nm,21.0s,baz=293,slow=36
ILAR   Eielson Array      25.77   48   P       P         16 02 55.1 +0.5
               0.9nm,0.7s,baz=259,slow=8.5,SNR=13
               0.9nm,0.7s
H11N2  WAKE ISLAND Hy     35.15  176   T       T         16 42 45.7
               baz=359,slow=74
H11N3  WAKE ISLAND Hy     35.16  176   T       T         16 42 55.1
               baz=359
H11N1  WAKE ISLAND Hy     35.16  176   T       T         16 42 45.9
               baz=359,slow=74
TXAR   Lajitas Array      67.67   71   P       P         16 08 22.7 +1.6
               0.4nm,0.7s,baz=283,slow=3.2,SNR=6.4
               0.4nm,0.7s
```

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*AFAD **02** 16:01:09.2, 41.°19N×43.°85E, h5^{km}±2^{km}, ML2.3*
*NORS **02** 16:01:10.3, 41.°33N×43.°82E, h24^{km}, MPVA3.6*
ISC 02 16:01:08.5±1.2**, 41.°19N**±0.°03×**43.°99E**±0.°03**, h7^{km}**±11^{km}**,**
n19, σ0.^{s}72/38**, Turkey-Georgia-Armenia border region**

```
Code   Station Name         Δ°   AZ°   Phase ID          Time       Res
                                       Op      ISC       h  m  s    ISC
EAK    Akyaka              0.58  210   P       Pb        16 01 21.3 +0.2
EAK                                    S       Sg        16 01 28.3 +1.0
DIGO   Kars                0.90  211   P       Pg        16 01 26.1 +0.3
DIGO                                   S       Sg        16 01 38.3 +0.7
BOZK   Kars-Merkez-Bo      0.97  232   P       Pb        16 01 27.7  0.0
BOZK                                   S       Sg        16 01 39.9 +0.1
EPOS   Posof               1.00  289   P       Pg        16 01 26.6 -1.1
EPOS                                   S       Sg        16 01 40.3 -0.4
IGDI   IGDIR               1.32  177   P       Pn        16 01 33.5 +0.1
IGDI                                   S       Sg        16 01 49.8 -1.2
GUDG   Gudauri             1.33   16  ePg      Pb        16 01 34.7 +0.8
GUDG                                  eSg      Sn        16 01 51.9 +0.2
DAGI   Agillar             1.57  267   P       Pn        16 01 37.3 +0.4
DAGI                                   S       Sn        16 01 57.9 +0.4
LACR   Lac                 1.65    8  ePg      Pn        16 01 38.7 +0.6
LACR                                  eSg      Sn        16 01 58.0 -1.6
DDEM   Demirkent           1.72  261   P       Pb        16 01 40.1 -0.4
DDEM                                   S       Sn        16 02 00.6 -0.5
DDEM                                  i IAML             16 02 06.0
               comp=N,72nm,0.3s
DDEM                                  i IAML             16 02 10.0
               comp=E,38nm,0.5s
DIGR   Digorskoe uzhe      1.74  350  ePg      Pb        16 01 40.4 -0.4
DIGR                                  eSg      Sn        16 02 00.9 -0.8
DBAD   Bademkaya           1.74  265   P       Pn        16 01 40.2 +1.0
DBAD                                   S       Sn        16 02 01.1 -0.6
DBAD                                  i IAML             16 02 04.0
               comp=N,26nm,0.4s
DBAD                                  i IAML             16 02 05.0
               comp=E,35nm,0.5s
EATA   Eleskirt            1.75  221   P       Pn        16 01 39.6  0.0
EATA                                   S       Sg        16 02 05.2 +0.5
DBOC   Borcka              1.76  276   P       Pn        16 01 40.1 +0.7
DBOC                                   S       Sn        16 02 01.6 -0.4
DBOC                                  i IAML             16 02 03.0
               comp=E,46nm,0.5s
KORR   Kora                1.90    2  ePg      Pn        16 01 42.1 +0.8
KORR                                  eSg      Sb        16 02 07.6 +0.2
KMGR   Komgaron            1.98   19  ePg      Pb        16 01 44.6 -0.2
KMGR                                  eSg      Sb        16 02 10.4 +0.6
LSNR   Lesken              2.09  357  ePg      Pn        16 01 45.5 +1.5
LSNR                                  eSg      Sn        16 02 11.0 +0.7
DVE    Vedeno              2.38   41  ePn      Pb        16 01 51.2 -0.5
DVE                                   eSn      Sb        16 02 20.5 -0.7
XNZR   Khunzakh            2.44   55  ePn      Pb        16 01 53.4 +0.6
XNZR                                  eSn      Sb        16 02 22.6 -0.5
GNBR   Gunib               2.53   61  ePn      Pb        16 01 53.9 -0.3
GNBR                                  eSn      Sb        16 02 25.2 -0.3
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*NEIC **02** 16:11:17.0±2.3, 17.°54S±0.°06×70.°7W±0.°1, h121^{km}±10^{km}, mb4.1/6, Error ellipse: s-maj=19.4km s-min=8.5km az=96.0*
*IDC **02** 16:11:25.3±3.1, 17.°62S×69.°85W, h129^{km}±27^{km}, mb3.4/5, mbtmp3.9/7, MS3.0/1, Error ellipse: s-maj=34.4km s-min=24.6km az=47.0*
*VAO **02** 16:11:36.4±2.3, 16.°91S×69.°08W, h142^{km}±7^{km}, mb4.2*
ISC 02 16:11:21.5±0.7**, 17.°74S**±0.°06×**70.°03W**±0.°08**, h117^{km}, n43,**
σ2.^{s}03/42**, mb3.9**/6**, Near coast of Peru**

```
Code   Station Name         Δ°   AZ°   Phase ID          Time       Res
                                       Op      ISC       h  m  s    ISC
PB18   Visviri             0.55   74           Pn        16 11 40.6 +0.6
AP01   Chacalluta          0.69  205           Pn        16 11 38.9 -1.6
AP01                                   Sn      Sn        16 11 52.1 -2.7
PB16   IPOC Station P      0.77  140           Pn        16 11 42.3 +0.5
PB11   IPOC Station P      2.04  170           Pn        16 11 55.8 +0.3
GO01   Chusmiza            2.08  158           Pn        16 11 58.4 +2.2
LPAZ   La Paz              2.32   52           Pn        16 12 02.3 +2.8
LPAZ   La Paz              2.32   52   P       Pn        16 12 01.7 +2.2
               235nm,0.6s,baz=228,slow=12,SNR=775
LPAZ   La Paz              2.32   52  eP       Pn        16 12 02.5 +3.0
TA02   Huaiquique          2.52  182   Pn      Pn        16 12 00.7 -0.7
PB08   IPOC Station P      2.53  161           Pn        16 12 03.2 +1.2
TA01   Diego Aracena       2.81  183           Pn        16 12 04.8 -0.5
PB01   IPOC Station P      3.33  171           Pn        16 12 12.1  0.0
PB09   IPOC Station P      4.10  170           Pn        16 12 23.3 +0.8
PB03   IPOC Station P      4.29  177           Pn        16 12 25.1  0.0
PB06   IPOC Station P      4.96  175           Pn        16 12 33.6 -0.4
PB05   IPOC Station P      5.09  182           Pn        16 12 34.5 -1.2
PB10   IPOC Station P      5.76  185   Pn      Pn        16 12 43.0 -1.7
PB14   IPOC Station P      6.86  183   Pn      Pn        16 12 57.8 -2.1
SIV    San Ignacio         8.75   80   P       Pn        16 13 26.2 +1.0
               11nm,0.4s,baz=265,slow=12,SNR=41
SIV                                    S       Sn        16 15 00.3 -1.9
               1.2nm,0.5s,baz=56,slow=12,SNR=3.3
BBSD   Serra de San D      9.01   88  eP       Pn        16 13 30.0 +1.3
AC02   Maricunga           9.09  175   Pn      Pn        16 13 29.1 -1.1
VILB   Vilhena            10.61   65           Pn        16 13 50.6 +0.3
VILB   Vilhena            10.61   65  eP       Pn        16 13 49.9 -0.5
PTLB   Pontes e Lacer     10.69   79           Pn        16 13 52.0 +0.7
```

PTLB	**Pontes e Lacer**	10.69	79	*e*P	Pn	16 13 51.7	+0.3
SAML	**Samuel**	10.99	38		Pn	16 13 52.1	-3.3
SAML	**Samuel**	10.99	38	*e*P	Pn	16 13 53.3	-2.1
TBTG	**Tabatinga, AM**	13.47	1	*e*P	P	16 14 31.5	-1.6
MT03	**Universidad Ad**	15.69	181	Pn	Pn	16 14 52.1	-4.1
MT03				IAmb	IAmb	16 14 55.2	
	comp=Z,28nm,1.4s						
MT09	**Talagante**	15.99	183	P	Pn	16 14 57.8	-2.1
MT09				IAmb	IAmb	16 15 17.8	
	comp=Z,21nm,1.5s						
SNDB	**Serra Nova Dou**	18.99	75	*e*P	Pn	16 15 35.6	-0.5
ITTB	**Itaituba**	19.30	48	*e*P	Pn	16 15 38.4	-1.4
PLTB	**Pedras Altas**	20.39	136	P	P	16 15 50.6	+1.5
PLTB				IAmb	IAmb	16 15 51.7	
	comp=Z,4.1nm,0.8s						
BDFB	**Brasilia**	21.19	88	LR	LR	16 23 57.9	
	comp=Z,46nm,20.1s,baz=352,slow=36						
TRQA	**Tornquist**	21.44	162	P	P	16 15 58.3	-2.0
TRQA				IAmb	IAmb	16 16 26.1	
	comp=Z,8.5nm,1.4s						
BOAV	**Boa Vista**	22.09	26	P	P	16 16 02.3	-5.1
PAYG	**Puerto Ayora**	26.16	308	P	P	16 16 32.9	-12
TXAR	**Lajitas Array**	56.96	325	P	P	16 20 56.0	+1.0
	comp=Z,0.2nm,0.5s,baz=142,slow=8.3,SNR=3.0						
	comp=Z,0.2nm,0.5s						
DBIC	**Dimbokro**	68.75	75	P	P	16 22 14.9	+1.7
	comp=Z,3.4nm,0.9s,baz=245,slow=7.3,SNR=4.1						
	comp=Z,3.4nm,0.9s						
PDAR	**Pinedale Array**	70.34	330	P	P	16 22 26.3	+3.5
	comp=Z,0.2nm,0.5s,baz=147,slow=7.8,SNR=1.8						
	comp=Z,0.2nm,0.5s						
QSPA	**South Pole Qui**	72.43	180	P	P	16 22 38.1	+3.2
	comp=Z,2.4nm,1.0s,baz=138,slow=3.6,SNR=7.8						
	comp=Z,2.4nm,1.0s						
YKA	**Yellowknife Ar**	87.31	341	P	P	16 23 56.7	+2.0
	comp=Z,0.7nm,0.6s,baz=138,slow=4.6,SNR=3.1						
	comp=Z,0.7nm,0.6s						
TIA	**Tai'an**	160.54	342	PKP	PKPdf	16 30 56.2	-12

MEX ***02*** *16:30:54.3±1.1, 17°.58N×95°.00W, h128km±8km, MD4.2*
GCG ***02*** *16:30:55.2±3.1, 17°.40N×94°.99W, h106km±78km, MD4.6*
ISC 02 16:30:51.8±1.3**, 17°.54N**±0°.04×**95°.03W**±0°.03**, h136**km±9km**,**
n44, σ1s.76/85**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	0.47	163	*i* P	Pn	16 31 12.1	+0.6
CMIG				*i* S	Sn	16 31 25.6	-0.7
TUIG	**Tuzandepetl**	0.76	49	*e*P	Pn	16 31 13.8	+0.5
TUIG				*e*S	Sn	16 31 28.7	-0.9
NEUV	**Arroyo Zacate**	0.76	283	*e*P	Pn	16 31 13.6	+0.3
NEUV				*e*S	Sn	16 31 28.4	-1.2
PMUV	**Sontecomapan**	1.00	355	*e*P	Pn	16 31 15.4	0.0
PMUV				*e*S	Sn	16 31 31.6	-1.9
OXLC	**Oaxaca**	1.67	254	*e*P	Pn	16 31 25.0	+2.5
OXLC				*e*S	Sn	16 31 49.0	+3.0
OXBJ	**Oaxaca**	1.69	254	*e*P	Pn	16 31 23.5	+0.7
OXBJ				*e*S	Sn	16 31 47.2	+0.9
VHO	**Vista Hermosa**	1.70	254	*e*P	Pn	16 31 24.2	+1.4
VHO				*e*S	Sn	16 31 47.9	+1.4
TGIG		1.97	112	*e*P	Pn	16 31 27.2	+1.3
TGIG				*e*S	Sn	16 31 51.5	-0.4
TGIG		1.97	112	*e*P	Pn	16 31 27.0	+1.1
TGIG				*e*S	Sn	16 31 51.3	-0.6
TGBT	**Tuxtla Gutierr**	2.00	112	*e*P	Pn	16 31 27.4	+1.3
TGBT				*e*S	Sn	16 31 52.3	-0.2
TOIG	**Toxpalan**	2.02	286	*e*P	Pn	16 31 27.8	+1.3
TOIG				*e*S	Sn	16 31 52.9	-0.1
HUIG	**Huatulco**	2.05	211	*e*P	Pn	16 31 26.5	-0.2
HUIG				*e*S	Sn	16 31 53.2	-0.3
HUIG	**Huatulco**	2.05	211	*e*P	Pn	16 31 25.8	-0.9
HUIG				*e*S	Sn	16 31 52.4	-1.0
PANG	**Puerto Angel**	2.32	217	*e*P	Pn	16 31 30.9	+0.7
PANG				*e*S	Sn	16 31 59.8	+0.2
TPIG	**Tehuac#an**	2.39	292	*e*P	Pn	16 31 32.5	+1.5
TPIG				*e*S	Sn	16 32 01.1	-0.1
JAUV	**Jalcomulco**	2.48	317	*e*P	Pn	16 31 32.2	+0.1
JAUV				*e*S	Sn	16 32 01.3	-1.7
YOIG	**Yosondua**	2.50	255	*e*P	Pn	16 31 33.4	+0.8
YOIG				*e*S	Sn	16 32 03.8	-0.2
PCIG		2.52	136	*e*P	Pn	16 31 34.2	+1.7
PCIG				*e*S	Sn	16 32 04.4	+0.6
LVIG	**Laguna Verde**	2.54	329	*e*P	Pn	16 31 32.8	0.0
LVIG				*e*S	Sn	16 32 00.3	-4.1
PEIG	**Puerto Escondi**	2.55	233	*e*P	Pn	16 31 31.7	-1.3
PEIG				*e*S	Sn	16 32 04.4	-0.2
TXIG	**Tlaxiaco**	2.63	264	*e*P	Pn	16 31 35.3	+1.0
TXIG				*e*S	Sn	16 32 06.0	-0.9
HLIG	**Huajuapan de L**	2.66	277	*e*P	Pn	16 31 35.8	+1.2
HLIG				*e*S	Sn	16 32 06.5	-1.0
FTIG	**Fresnillo de T**	2.98	277	*e*P	Pn	16 31 40.1	+1.5
FTIG				*e*S	Sn	16 32 13.3	-1.3
CCIG	**Comitan**	3.04	114	*e*P	Pn	16 31 40.4	+1.1
CCIG				*e*S	Sn	16 32 14.1	-1.8
CCIG	**Comitan**	3.04	114	*e*P	Pn	16 31 40.6	+1.3
CCIG				*e*S	Sn	16 32 11.0	-4.9
PNIG	**Pinotepa**	3.18	249	*e*P	Pn	16 31 40.0	-1.0
PNIG				*e*S	Sn	16 32 16.7	-2.3
TLIG	**Tlapa**	3.38	271	*e*P	Pn	16 31 44.7	+1.0
TLIG				*e*S	Sn	16 32 21.8	-2.0
PAVE	**Pavencul**	3.60	130	*e*P	Pn	16 31 48.4	+1.7
PAVE				*e*S	Sn	16 32 29.5	+0.5
PATR	**El Naranjo**	3.60	132	*e*P	Pn	16 31 48.5	+1.7
PATR				*e*S	Sn	16 32 30.4	+1.1
PBCV	**Popocatepetl**	3.65	294	*e*P	Pn	16 31 50.2	+2.7
PBCV				*e*S	Sn	16 32 32.6	+2.1
PPPT	**Popocatepetl**	3.70	293	*e*P	Pn	16 31 51.1	+2.8
PPPT				*e*S	Sn	16 32 35.0	+2.9
PPM	**Popocatepetl**	3.74	294	*e*P	Pn	16 31 52.0	+3.1
PPM				*e*S	Sn	16 32 32.7	-0.2
PBXN	**Popocatepetl**	3.75	293	*e*P	Pn	16 31 51.7	+2.8
PBXN				*e*S	Sn	16 32 34.0	+1.0
CRIG	**Cruz Grande**	4.01	259	*e*P	Pn	16 31 50.9	-0.9
CRIG				*e*S	Sn	16 32 35.6	-2.8
YAIG	**Yautepec**	4.06	289	*e*P	Pn	16 31 54.9	+2.2
YAIG				*e*S	Sn	16 32 39.5	-0.4
PLIG	**Platanillo**	4.34	282	*e*P	Pn	16 31 58.3	+1.9
PLIG				*e*S	Sn	16 32 43.2	-3.3
MEIG	**Mezcala**	4.39	276	*e*P	Pn	16 31 58.6	+1.5
MEIG				*e*S	Sn	16 32 45.7	-2.1
DAIG	**Los Arroyos**	4.45	264	*e*P	Pn	16 31 57.4	-0.3
DAIG				*e*S	Sn	16 32 45.5	-3.4
STG8	**El Palmar, Qui**	4.68	130	*e*P	Pn	16 31 57.9	-3.1
DEIG	**Demacu**	4.68	307	*e*P	Pn	16 32 03.6	+2.5
CAIG	**El Cayaco**	5.03	265	*e*P	Pn	16 32 04.8	-0.7
CAIG				*e*S	Sn	16 33 01.8	-1.0
ARIG	**Puente Sto Nin**	5.12	279	*e*P	Pn	16 32 08.8	+2.2
ARIG				*e*S	Sn	16 33 02.1	-2.9
ZIIG	**Zihuatanejo**	6.14	272	*e*P	Pn	16 32 21.4	+1.1
ZIIG				*e*S	Sn	16 33 29.5	0.0
RPIG	**Rio Verde**	6.36	314	*e*P	Pn	16 32 25.1	+1.8

TIR 02 16:59:44.5, 40°.54N×20°.86E, h10km±2km**, Ml1.7**/3**,**
Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	**Korca**	0.10	329	Pg	Pg	16 59 46.2	-0.9
KBN				Sg	Sg	16 59 48.5	-0.6
KBN				AML	AML	16 59 48.8	
	1.4nm,0.2s						
KBN				AML	AML	16 59 51.1	
	0.9nm,0.3s						
KBN	**Korca**	0.10	329	Pg	Pg	16 59 46.1	-1.0
KBN				Sg	Sg	16 59 48.6	-0.5
KBN				AML	AML	16 59 51.1	
	0.9nm,0.3s						
NEST	**Nestorio**	0.19	130	Pg	Pg	16 59 48.7	+0.2
NEST				Sg	Sg	16 59 51.8	+0.5
NEST				AML	AML	16 59 53.2	
	0.4nm,0.3s						
NEST	**Nestorio**	0.19	130	Pg	Pg	16 59 48.8	+0.3
NEST				Sg	Sg	16 59 52.1	+0.8
NEST				AML	AML	16 59 53.2	
	0.4nm,0.3s						
LSK	**Leskovik**	0.43	207	Pg	Pg	16 59 51.6	-1.4
LSK				Sg	Sg	16 59 57.7	-1.0
LSK				AML	AML	17 00 00.1	
	0.4nm,0.3s						
LSK	**Leskovik**	0.43	207	Pg	Pg	16 59 52.0	-1.0
LSK				Sg	Sg	16 59 58.1	-0.6
LSK				AML	AML	17 00 00.1	
	0.4nm,0.3s						
IGT	**Igoumenitsa**	1.08	202	Pg	Pn	17 00 05.8	+0.1
IGT				Sg	Sn	17 00 21.8	+1.0

GCG 02 17:18:59.7±0.3**, 13°.23N×89°.61W, h50**km±6km**, MD3.5, El**
Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAYA	**Jayaque - finc**	0.45	20	*e*P	Pn	17 19 10.1	-0.4
JAYA				*e*S	Sn	17 19 18.5	+0.2
NUBE	**Las Nubes**	0.69	346	*e*P	Pn	17 19 13.8	+0.3
NUBE				*e*S	Sn	17 19 24.6	+1.2
MTO3	**Montecristo**	1.18	12	*e*P	Pn	17 19 20.6	+0.5

IDC ***02*** *17:31:32.4±10.0, 23°.21S×179°.93W, h492km±136km,*
mb3.5/5, mbtmp4.4/6, Error ellipse: s-maj=80.8km
s-min=26.5km az=4.0
NEIC ***02*** *17:31:36.1±2.0, 23°.9S±0°.2×179°.75W±0°.08, h543km±13km,*
mb4.5/16, Error ellipse: s-maj=27.0km s-min=6.8km
az=163.0
ISC 02 17:31:34.4±0.7**, 23°.6S**±0°.1×**179°.8W**±0°.1**, h532**km**, n25,**
σ1s.76/26**, mb4.3**/13**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	14.89	189	P	P	17 34 45.0	+2.1
	4.6nm,0.4s,baz=34,slow=3.2,SNR=6.1						
URZ				S	S	17 37 18.9	+0.6
	5.6nm,0.7s,baz=62,slow=3.8,SNR=1.4						
SNZO	**South Karori**	18.29	193	P	P	17 35 11.1	-4.5
WKZ	**Wanaka**	23.10	201	P	P	17 35 54.2	-4.9
ARMA	**Armidale**	26.31	249	P	P	17 36 29.9	+2.0
EIDS	**Eidsvold**	26.54	260	P	P	17 36 30.9	+1.1
EIDS				IAmb	IAmb	17 36 49.2	
	comp=Z,7.7nm,1.1s						
PPTF	**Pamatai, Papee**	28.89	84	P	P	17 36 50.1	-0.4
PPTF				IAmb	IAmb	17 37 02.7	
	comp=Z,21nm,1.0s						
CAN	**Canberra**	29.47	239	P	P	17 36 57.4	+2.0
CAN				IAmb	IAmb	17 36 58.4	
	comp=Z,16nm,1.1s						
CTAO	**Charters Tower**	31.65	270	P	P	17 37 15.0	+0.8
TOO	**Toolangi**	32.78	237	P	P	17 37 25.3	+1.6
PMG	**Port Moresby**	34.55	288	P	P	17 37 37.5	-1.3
PMG				IAmb	IAmb	17 37 51.8	
	comp=Z,23nm,1.1s						
STKA	**Stephens Creek**	35.02	248	P	P	17 37 42.9	+0.4
STKA	**Stephens Creek**	35.02	248	P	P	17 37 43.6	+1.1
	comp=Z,4.8nm,0.6s,baz=90,slow=8.4,SNR=9.4						
	comp=Z,4.8nm,0.6s						
COEN	**Coen**	36.23	279	P	P	17 37 53.3	+0.5
COEN				IAmb	IAmb	17 38 01.6	
	comp=Z,14nm,1.1s						
BBOO	**Buckleboo**	39.74	247	P	P	17 38 20.8	-0.3
BBOO				IAmb	IAmb	17 38 22.0	
	comp=Z,7.4nm,0.9s						
AS31	**Alice Springs**	42.27	260	P	P	17 38 41.8	+0.4
AS31				IAmb	IAmb	17 38 42.8	
	comp=Z,3.0nm,0.5s						
ASAR	**Alice Springs**	42.27	260	P	P	17 38 41.2	-0.2
ASAR	**Alice Springs**	42.27	260	P	P	17 38 41.5	+0.1
	comp=Z,5.6nm,0.5s,baz=94,slow=7.4,SNR=112						
	comp=Z,5.6nm,0.5s						
WRA	**Warramunga Arr**	42.61	266	P	P	17 38 43.4	-0.6
	comp=Z,5.6nm,0.5s,baz=92,slow=8.2,SNR=4.9						
	comp=Z,5.6nm,0.5s						
MTN	**Manton Dam**	47.60	274	P	P	17 39 21.7	-0.8
MTN				IAmb	IAmb	17 39 36.8	
	comp=Z,21nm,1.1s						
FITZ	**Fitzroy Crossi**	51.03	265	P	P	17 39 48.2	+0.5
MORW	**Morawa**	57.16	250	P	P	17 40 30.7	-0.1
QSPA	**South Pole Qui**	66.53	180	P	P	17 41 30.1	-1.1
TXAR	**Lajitas Array**	90.10	58	P	P	17 43 39.4	+1.3
	comp=Z,0.6nm,0.8s,baz=244,slow=4.6,SNR=8.0						
	comp=Z,0.6nm,0.8s						
PDAR	**Pinedale Array**	92.32	44	P	P	17 43 48.7	+0.5
	comp=Z,0.3nm,0.6s,baz=244,slow=4.2,SNR=2.6						
	comp=Z,0.3nm,0.6s						
CLL	**Collm**	150.57	344	*i* PKPbc	PKPbc	17 50 25.6	-0.3

DJA 02 17:31:55.6±0.6**, 2°S**±1°×**12°3E**±°**, h16**km±4km**, M4.2**/20**,**
mB4.6/3**, mb4.4**/7**, MLv4.2**/20**, Mw(mB)3.8**/3**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	**Luwuk**	0.90	7	P	Pb	17 32 11.5	-1.3
LUWI				S	Sn	17 32 26.3	+0.1
APSI	**Ampana**	1.45	315	P	Pn	17 32 20.5	-0.6
MRSI	**Marisa**	2.51	343	P	Pn	17 32 35.1	-0.7
MRSI				S	Sn	17 33 06.6	+0.5
KMSI	**Cibinong**	2.82	28	P	Pn	17 32 40.1	0.0
KMSI				S	Sn	17 33 15.1	+1.4
PCI	**Palu**	3.01	290	P	Pn	17 32 44.0	+1.3
PCI				S	Sn	17 33 20.6	+2.1
TTSI	**Tana Toraja**	3.05	249	P	Pn	17 32 42.5	-0.7
TTSI				S	Sn	17 33 18.7	-0.8
SANI	**Sanana**	3.32	92	P	Pn	17 32 45.8	-1.1
SANI				S	Sn	17 33 26.7	+0.7
BBSI	**Bau Bau**	3.52	182	P	Pn	17 32 50.2	+0.4
BBSI				S	Sn	17 33 32.4	+1.2
SPSI	**Sidrap Palu**	3.53	235	P	Pn	17 32 50.6	+0.8
SPSI				S	Sn	17 33 33.0	+1.8
BNSI	**Bone**	3.54	226	P	Pn	17 32 50.0	+0.1
BNSI				S	Sn	17 33 32.8	+1.3
MPSI	**Mapaga**	3.58	309	P	Pn	17 32 50.8	+0.3
NLAI	**Namlea**	4.61	106	P	Pn	17 33 03.8	-0.9
BSSI	**Bau Bau, Buton**	4.71	207	P	Pn	17 33 06.1	+0.1
TNTI	**Ternate**	5.41	60	P	Pn	17 33 15.4	-0.3
TNTI				S	Sn	17 34 18.1	+0.3
MMRI	**Maumere**	6.67	184	P	Pn	17 33 33.2	+0.2
	63nm,1.5s						
EDFI	**Ende, Flores**	6.83	188	P	Pn	17 33 34.9	-0.5
	0.1nm22nm,0.8s						

NEIC ***02*** *17:40:44.0±1.8, 5°.90N±0°.07×126°.90E±0°.08, h39km±8km,*
mb4.4/25, Error ellipse: s-maj=13.3km s-min=8.5km
az=51.0
DJA ***02*** *17:40:44.5±0.8, 6°N±3°×12°7E±°, h11km±7km, M4.7/13,*
mb4.7/13, mB5.1/6, MLv4.8/12, Mw(mB)4.4/6
IDC ***02*** *17:40:49.2±1.4, 5°.78N×126°.30E, h71km±10km, mb3.8/27,*
mbtmp4.1/27, MS3.3/16, Error ellipse: s-maj=25.1km
s-min=10.4km az=72.0
ISC 02 17:40:48.8±0.4**, 5°.89N**±0°.04×**126°.61E**±0°.07**, h71**km**, n98,**
σ1s.80/91**, mb4.3**/47**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	1.56	319		Pn	17 41 10.9	-3.6
DAV				Sn	Sn	17 41 36.3	+2.3
DAV	**Davao City (W)**	1.56	319	P	Pn	17 41 12.0	-2.5
	877nm,0.5s,baz=204,slow=6.5,SNR=49						
DAV				S	Sn	17 41 32.5	-1.5
	2µm,0.6s,baz=290,slow=23,SNR=16						
DAV				LR	LR	17 41 36.2	
	comp=Z,426nm,18.8s,baz=104,slow=32						
DAV	**Davao City (W)**	1.56	319	P	Pn	17 41 11.0	-3.5
SGSI	**Sangihe**	2.44	206	P	Pn	17 41 24.7	-1.7
SGSI				S	Sn	17 41 57.7	+2.5
TNTI	**Ternate**	5.14	171		Pn	17 41 56.8	-6.4
TNTI	**Ternate**	5.14	171	P	Pn	17 42 02.9	-0.3
	830nm63nm,0.8s						
TNTI				S	Sn	17 43 02.8	+1.6
	830nm63nm,0.8s						
MRSI	**Marisa**	7.11	221	P	Pn	17 42 30.3	+0.1
TOLI2	**Tolitoli**	7.50	231		Pn	17 42 32.0	-3.6
LUWI	**Luwuk**	7.88	209	Pn	Pn	17 42 38.1	-2.6
LUWI	**Luwuk**	7.88	209	P	Pn	17 42 41.2	+0.5
	2µm155nm,1.0s						
LUWI				S	Sn	17 44 10.9	+2.5
	2µm155nm,1.0s						
SANI	**Sanana**	7.91	185	P	Pn	17 42 39.5	-1.6
	0.2nm56nm,1.1s						
MYLDM	**Lahad Datu**	8.10	265		Pn	17 42 43.4	-0.3
SWI	**Sorong**	8.16	145	P	Pn	17 42 43.4	-1.1
	21nm,0.8s						
APSI	**Ampana**	8.37	216	P	Pn	17 42 47.7	+0.2
	1µm125nm,0.9s						
MPSI	**Mapaga**	8.68	231	P	Pn	17 42 50.6	-1.0
NLAI	**Namlea**	9.08	177	P	Pn	17 42 55.5	-1.6
	44nm,0.5s						
KKM	**Kota Kinabalu**	10.34	271	Pn	Pn	17 43 12.1	-2.3
FAKI	**Fak Fak**	10.41	147	Pn	Pn	17 43 08.8	-6.4
TTSI	**Tana Toraja**	11.17	218	P	Pn	17 43 27.1	+1.5
	28nm,1.0s						
DLV	**Lat**	18.88	290		Pn	17 45 06.8	+1.8
DLV				IAmb	IAmb	17 45 07.0	
	comp=Z,14nm,0.8s						
GUMO	**Guam**	19.55	66	LR	LR	17 51 19.1	
	comp=Z,66nm,21.8s,baz=153,slow=32						
JOW	**Kunigami**	20.89	4	LR	LR	17 52 26.6	
	comp=Z,125nm,21.7s,baz=306,slow=33						
KNRA	**Kununurra**	21.53	174		P	17 45 31.3	-1.0
UBPT	**Khong Chiam**	22.75	296		P	17 45 43.9	-1.5
UBPT				IAmb	IAmb	17 45 49.6	
	comp=Z,23nm,0.9s						
LEM	**Lembang**	22.77	237	LR	LR	17 55 38.0	
	comp=Z,79nm,21.1s,baz=162,slow=40						
MYKOM	**Kota Tinggi**	23.06	261	P	P	17 45 47.9	-0.7
FITZ	**Fitzroy Crossi**	23.85	182	P	P	17 45 56.0	+0.3
	comp=Z,6.6nm,1.1s,baz=360,slow=15,SNR=2.1						
FITZ				LR	LR	17 55 59.1	
	comp=Z,114nm,19.3s,baz=284,slow=38						
	comp=Z,6.6nm,1.1s						
COEN	**Coen**	25.67	140	P	P	17 46 09.1	-3.2
COEN				IAmb	IAmb	17 46 09.2	
	comp=Z,27nm,1.3s						
KULM	**Kulim**	25.84	270	P	P	17 46 13.7	-0.1
KULM				IAmb	IAmb	17 46 22.0	
	comp=Z,12nm,1.0s						
WRA	**Warramunga Arr**	26.77	164	P	P	17 46 22.7	+0.6
	comp=Z,1.2nm,0.5s,baz=344,slow=11,SNR=9.2						
	comp=Z,1.2nm,0.5s						
SLVN	**Son La**	26.82	307	P	P	17 46 21.7	-1.0
NJ2	**Nanjing**	27.02	345	*e*P	P	17 46 25.5	+1.3
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
PSI	**Prapat**	27.77	265	LR	LR	17 57 52.8	
	comp=Z,86nm,19.1s,baz=77,slow=37						
RPSI	**Rantau Prapat**	27.78	265	P	P	17 46 31.4	0.0
RPSI				IAmb	IAmb	17 46 51.6	
	comp=Z,6.9nm,1.1s						
GSI	**Gunungsitoli**	29.32	262	P	P	17 46 45.3	+0.3
CMAR	**Chiang Mai Arr**	29.73	297		P	17 46 48.4	-0.1
CMAR	**Chiang Mai Arr**	29.73	297	P	P	17 46 47.0	-1.6
	comp=Z,0.7nm,0.4s,baz=101,slow=9.1,SNR=4.6						
CMAR				LR	LR	18 00 24.2	
	comp=Z,28nm,18.4s,baz=120,slow=40						
	comp=Z,0.7nm,0.4s						
CHTO	**Chiang Mai**	29.86	298		P	17 46 48.3	-1.4
CHTO				IAmb	IAmb	17 46 53.7	
	comp=Z,4.4nm,0.8s						
AS31	**Alice Springs**	30.23	167	P	P	17 46 48.2	-4.7
ASAR	**Alice Springs**	30.23	167	P	P	17 46 48.7	-4.2
ASAR	**Alice Springs**	30.23	167	P	P	17 46 51.5	-1.4
	comp=Z,0.8nm,0.9s,baz=351,slow=6.8,SNR=14						
ASAR				PcP	PcP	17 49 54.3	+1.9
	comp=Z,0.9nm,0.6s,baz=346,slow=3.4,SNR=4.1						
	comp=Z,0.8nm,0.9s						
PZH	**PanZhiHua**	31.35	314	P	P	17 47 04.6	+1.7
PZH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,110nm,4.8s						
KSRS	**Korea Array**	31.44	2	P	P	17 47 05.2	+1.8
	comp=Z,0.3nm,0.6s,baz=182,slow=9.9,SNR=11						
	comp=Z,0.3nm,0.6s						
MJAR	**Matsushiro Arr**	32.31	18	LR	LR	17 59 03.9	
	comp=Z,44nm,21.0s,baz=220,slow=34						
XAN	**Xi'an**	32.46	332	P	P	17 47 11.5	-0.9
XAN				pP	pP	17 47 15.8	-13
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,130nm,4.7s						
XAN				LR	LR		
	comp=N,610nm,13.3s						
XAN				LR	LR		
	comp=E,680nm,12.5s						
XAN				LR	LR		
	comp=Z,470nm,13.7s						
HNR	**Honiara**	36.54	114	LR	LR	18 01 45.5	
	comp=Z,29nm,21.9s,baz=52,slow=34						
LZH	**Lanzhou**	36.60	328	*e*P	P	17 47 44.5	-3.9
LZH				pP	pP	17 47 57.6	-7.8
LZH				sP	sP	17 48 04.1	-9.4
LZH				pmax	pmax		
	comp=Z,20nm,0.7s						
HHC	**Hu-ho-hao-te**	37.33	341	*e*P	P	17 47 56.1	+1.7
HHC				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,70nm,4.0s						
USRK	**Ussuriysk Ar.**	38.45	6	LR	LR	18 02 52.7	
	comp=Z,27nm,20.6s,baz=235,slow=34						
STKA	**Stephens Creek**	40.18	160	P	P	17 48 18.7	+0.4
	comp=Z,1.0nm,0.5s,baz=340,slow=11,SNR=5.1						
	comp=Z,1.0nm,0.5s						
ASAJ	**Asahikawa**	40.58	18	LR	LR	18 04 47.0	
	comp=Z,48nm,20.5s,baz=216,slow=35						
LSA	**Lhasa**	40.95	310	P	P	17 48 23.9	-1.3
LSA	**Lhasa**	40.95	310	P	P	17 48 26.5	+1.3
LSA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GTA	**Gaotai**	41.20	328	P	P	17 48 32.0	+5.2
GTA				pP	pP	17 48 41.4	-2.7
GTA				PcP	PcP	17 50 29.4	+4.7
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GOMU	**GeErMu**	41.94	320	P	P	17 48 33.7	+0.6
GOMU				pP	pP	17 48 45.4	-5.0
GOMU				PcP	PcP	17 50 29.2	+1.7
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KLR	**Kul'dur**	43.41	5	LR	LR	18 05 47.7	
	comp=Z,24nm,21.3s,baz=232,slow=34						
EVN	**Everest**	43.64	305		P	17 48 46.9	-0.4
ULN	**Ulaanbaatar**	45.05	341	P	P	17 48 56.6	-1.1
ULN				IAmb	IAmb	17 49 03.9	
	comp=Z,4.5nm,0.9s						
SONM	**Songino Array**	45.23	341	P	P	17 48 57.4	-1.7
SONM	**Songino Array**	45.23	341	P	P	17 48 58.8	-0.3
	comp=Z,0.7nm,0.6s,baz=164,slow=8.6,SNR=7.7						
SONM				PcP	PcP	17 50 41.2	+3.1
	comp=Z,1.3nm,0.7s,baz=143,slow=5.2,SNR=3.6						
	comp=Z,0.7nm,0.6s						
PALK	**Pallekele**	45.61	274	LR	LR	18 08 27.7	
	comp=Z,35nm,18.1s,baz=98,slow=37						
CAN	**Canberra**	46.09	154	P	P	17 49 01.5	-4.5
WMQ	**Urumqi**	50.91	324	*e*P	P	17 49 44.6	+1.7
WMQ				LR	LR		
	comp=Z,68nm,22.9s						
PETK	**Petropavlovsk-**	53.49	23	P	P	17 50 02.9	+1.1
	comp=Z,0.6nm,0.5s,baz=223,slow=5.1,SNR=4.7						
PETK				LR	LR	18 10 08.5	
	comp=Z,14nm,21.7s,baz=224,slow=33						
	comp=Z,0.6nm,0.5s						
MKAR	**Makanchi Array**	55.73	324		P	17 50 17.3	-0.8
MKAR	**Makanchi Array**	55.73	324	P	P	17 50 17.7	-0.5
	comp=Z,1.3nm,0.7s,baz=114,slow=7.2,SNR=12						
MKAR				PcP	PcP	17 51 17.1	+0.4
	comp=Z,2.5nm,0.8s,baz=130,slow=4.3,SNR=4.3						
	comp=Z,1.3nm,0.7s						
MAKZ	**Makanchi**	55.92	324		P	17 50 18.4	-1.1
MAKZ				IAmb	IAmb	17 50 26.3	
	comp=Z,4.2nm,1.0s						
YAK	**Yakutsk**	56.07	2	P	P	17 50 22.6	+2.4
	comp=Z,2.9nm,0.4s,baz=347,slow=0.6,SNR=16						
	comp=Z,2.9nm,0.4s						
MA2	**Magadan**	56.66	14	P	P	17 50 27.3	+2.8
	comp=Z,0.5nm,0.3s,baz=216,slow=6.2,SNR=6.3						
	comp=Z,0.5nm,0.3s						
ZALV	**Zalesovo Beam**	58.62	333	P	P	17 50 35.1	-3.3
ZALV	**Zalesovo Beam**	58.62	333	P	P	17 50 38.0	-0.4
	comp=Z,1.9nm,0.8s,baz=112,slow=6.4,SNR=5.2						
	comp=Z,1.9nm,0.8s						
AAK	**Ala-Archa**	58.70	317	LR	LR	18 17 57.6	
	comp=Z,37nm,18.6s,baz=96,slow=38						
KURK	**Kurchatov**	59.87	327	P	P	17 50 46.2	-0.8
KURBB	**Kurchatov Arra**	59.87	327	P	P	17 50 46.2	-0.8
	comp=Z,3.3nm,0.7s,baz=125,slow=5.8,SNR=35						
	comp=Z,3.3nm,0.7s						
KK31	**Karatay Array**	61.59	316	P	P	17 50 58.3	-0.6
KK31				IAmb	IAmb	17 51 04.6	

	comp=Z,2.2nm,0.8s						
KKAR	**Karatay Array**	**61.59**	**316**	P	**P**	**17 50 58.3**	**-0.7**
KKAR				IAmb	IAmb	17 51 04.6	
	comp=Z,2.3nm,0.8s						
BVAR	**Borovoye Array**	**65.46**	**327**	P	**P**	**17 51 24.1**	**-0.2**
	comp=Z,2.9nm,0.8s,baz=123,slow=11,SNR=15						
	comp=Z,2.9nm,0.8s						
BRVK	**Borovoye**	**65.53**	**327**	P	**P**	**17 51 23.5**	**-1.2**
BRVK				IAmb	IAmb	17 51 54.8	
	comp=Z,3.9nm,0.8s						
TIXI	**Tiksi**	**65.70**	**1**		**P**	**17 51 23.2**	**-2.1**
NRIK	**Noril'sk**	**68.32**	**346**	P	**P**	**17 51 40.9**	**-1.2**
	comp=Z,2.3nm,0.6s,baz=119,slow=8.1,SNR=3.8						
	comp=Z,2.3nm,0.6s						
AB31	**Akbulak array**	**70.42**	**320**		**P**	**17 51 54.7**	**-0.7**
ABKAR	**Akbulak array**	**70.42**	**320**		**P**	**17 51 54.0**	**-1.4**
ARTI	**Arti**	**73.14**	**327**	P	**P**	**17 52 10.1**	**-1.5**
	comp=Z,1.1nm,0.4s,baz=100,slow=5.0,SNR=4.6						
	comp=Z,1.1nm,0.4s						
BELG	**Belogornoye**	**78.64**	**322**	P	**P**	**17 52 42.1**	**-0.8**
	comp=Z,8.0nm,0.7s,baz=117,slow=4.5,SNR=6.7						
	comp=Z,8.0nm,0.7s						
RAYN	**Ar Rayn**	**79.53**	**293**		**P**	**17 52 47.9**	**-0.7**
RAYN				IAmb	IAmb	17 52 53.5	
	comp=Z,4.7nm,0.8s						
KDAK	**Kodiak Island**	**80.14**	**32**	LR	LR	18 22 11.8	
	comp=Z,34nm,21.8s,baz=241,slow=31						
KBZ	**Khabaz**	**81.42**	**313**	P	**P**	**17 52 58.0**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=135,slow=1.4,SNR=3.8						
	comp=Z,1.1nm,0.8s						
H24K	**Noodor Dome**	**82.83**	**24**		**P**	**17 53 05.5**	**+0.4**
H24K				IAmb	IAmb	17 53 19.9	
	comp=Z,3.7nm,0.9s						
ILAR	**Eielson Array**	**83.22**	**26**	P	**P**	**17 53 06.9**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=236,slow=4.2,SNR=11						
	comp=Z,0.5nm,0.5s						
VNDA	**Vanda**	**85.57**	**173**	P	**P**	**17 53 20.0**	**+1.3**
	comp=Z,0.2nm,0.4s,baz=304,slow=7.8,SNR=4.3						
	comp=Z,0.2nm,0.4s						
MMAI	**Mount Meron Ar**	**87.84**	**303**	P	**P**	**17 53 30.8**	**0.0**
	comp=Z,0.7nm,0.5s,baz=93,slow=7.2,SNR=2.4						
	comp=Z,0.7nm,0.5s						
SPITS	**Spitsbergen Ar**	**88.35**	**349**	P	**P**	**17 53 34.1**	**+1.8**
	comp=Z,5.5nm,0.9s,baz=38,slow=5.4,SNR=1.8						
	comp=Z,5.5nm,0.9s						
ARCES	**ARCESS Array B**	**88.39**	**340**	P	**P**	**17 53 33.6**	**+1.0**
	comp=Z,3.7nm,0.9s,baz=100,slow=5.4,SNR=3.9						
	comp=Z,3.7nm,0.9s						
BRTR	**Keskin Array B**	**88.56**	**310**	P	**P**	**17 53 33.2**	**-1.0**
	comp=Z,2.0nm,0.9s,baz=106,slow=5.4,SNR=12						
	comp=Z,2.0nm,0.9s						
FINES	**FINESS Array B**	**89.89**	**332**	P	**P**	**17 53 40.3**	**+0.6**
	comp=Z,2.4nm,0.9s,baz=90,slow=3.8,SNR=6.9						
	comp=Z,2.4nm,0.9s						
AKASG	**Malin Array Be**	**90.15**	**321**	P	**P**	**17 53 41.1**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=78,slow=3.2,SNR=3.5						
	comp=Z,0.2nm,0.3s						
HFS	**Hagfors**	**96.06**	**332**	LR	LR	18 41 20.9	
	comp=Z,26nm,19.5s,baz=50,slow=38						
NOA	**NORSAR Array B**	**96.81**	**334**	P	**P**	**17 54 12.9**	**+1.2**
	comp=Z,0.5nm,0.8s,baz=68,slow=1.4,SNR=2.1						
	comp=Z,0.5nm,0.8s						

IDC 02 17:41:04.3±10.0**,26°.39S**×**179°.73W,h687**^{km}±163^{km}**,**
mb3.0/5**,mbtmp4.1**/5**,Error ellipse: s-maj=258.0km**
s-min=47.1km az=174.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**41.93**	**263**	P	P	17 47 59.8	+0.6
	1.7nm,0.8s,baz=103,slow=7.8,SNR=7.5						
	1.7nm,0.8s						
WRA	**Warramunga Arr**	**42.54**	**269**	P	P	17 48 02.8	-1.1
	2.4nm,0.6s,baz=104,slow=7.8,SNR=4.8						
	2.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**50.92**	**268**	P	P	17 49 07.1	+0.8
	4.2nm,0.9s,baz=111,slow=7.2,SNR=1.6						
	4.2nm,0.9s						
CMAR	**Chiang Mai Arr**	**90.62**	**290**	P	P	17 52 58.7	+1.9
	0.5nm,0.6s,baz=117,slow=6.4,SNR=1.9						
	0.5nm,0.6s						
TXAR	**Lajitas Array**	**91.54**	**58**	P	P	17 53 01.6	+0.7
	0.4nm,0.7s,baz=244,slow=4.6,SNR=5.2						
	0.4nm,0.7s						
HFS	**Hagfors**	**145.03**	**348**	PKPbc	PKPdf	17 59 23.6	-1.7
	0.9nm,0.5s,baz=20,slow=4.7,SNR=8.5						
AKASG	**Malin Array Be**	**147.17**	**325**	PKPbc	PKPbc	17 59 31.8	-0.9
	0.4nm,0.3s,baz=48,slow=4.0,SNR=4.4						

TIR 02 17:43:56.4,40°.44N×**20°.79E,h12**^{km}±1^{km}**,Ml1.7**/3**,**
Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	**Korca**	**0.18**	**359**	Pg	Pg	17 44 00.5	0.0
KBN				Sg	Sg	17 44 03.1	-0.3
KBN				AML	AML	17 44 04.6	
	0.6nm,0.3s						
KBN				AML	AML	17 44 06.6	
	0.4nm,0.4s						
KBN	**Korca**	**0.18**	**359**	Pg	Pg	17 44 00.4	-0.1
KBN				Sg	Sg	17 44 02.9	-0.5
KBN				AML	AML	17 44 04.6	
	0.6nm,0.3s						
NEST	**Nestorio**	**0.20**	**98**	Pg	Pg	17 44 01.2	+0.4
NEST				Sg	Sg	17 44 04.4	+0.6
NEST				AML	AML	17 44 07.4	
	0.7nm,0.3s						
NEST	**Nestorio**	**0.20**	**98**	Pg	Pg	17 44 01.1	+0.4
NEST				Sg	Sg	17 44 04.5	+0.7
NEST				AML	AML	17 44 05.7	
	0.9nm,0.3s						
NEST				AML	AML	17 44 07.4	
	0.7nm,0.3s						
LSK	**Leskovik**	**0.33**	**207**	Pg	Pg	17 44 02.3	-0.7
LSK				Sg	Sg	17 44 08.4	+0.9
LSK				AML	AML	17 44 10.2	
	0.5nm,0.2s						
LSK	**Leskovik**	**0.33**	**207**	Pg	Pg	17 44 02.2	-0.9
LSK				Sg	Sg	17 44 07.9	+0.4
LSK				AML	AML	17 44 10.3	
	0.5nm,0.2s						
SRN	**Sarande**	**0.83**	**227**	Pg	Pn	17 44 13.3	-0.6
SRN				Sg	Sn	17 44 26.0	+0.1
IGT	**Igoumenitsa**	**0.98**	**201**	Pg	Pb	17 44 15.4	+0.2
IGT				Sg	Sn	17 44 30.6	+0.9
IGT	**Igoumenitsa**	**0.98**	**201**	Pg	Pg	17 44 15.1	-0.1
IGT				AML	AML	17 44 30.3	
IGT				Sg	Sn	17 44 30.6	+0.9

BJI ***02*** *17:47:10.2,45°.30N×124°.75E,h12*^{km}*,mB4.3/2,mb4.1/11,*
ML4.4/14,Ms4.0/9,Ms7 3.7/9
IDC ***02*** *17:47:10.7±0.8,45°.26N×124°.68E,h0*^{km}*,mb3.8/8,*
mbtmp3.7/13,ML3.5/4,MS3.3/12,Error ellipse:
s-maj=17.9km s-min=12.1km az=11.0
KEA ***02*** *17:47:18.1,44°.69N×124°.88E,h5*^{km}*,ML4.0/5*
ISC 02 17:47:11.2±0.5**,45°.24N**±0°.03×**124°.75E**±0°.04**,h10**^{km}**,n40,**
σ**2**^{s}**.76**/50**,mb3.8**/8**,MS3.5**/10**,1C,Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CN2	**Changchun**	**1.52**	**161**	Pn	**Pn**	**17 47 38.8**	**+0.4**
CN2				Pg	**Pg**	**17 47 40.6**	**+0.3**
BNX	**BinXian**	**1.93**	**74**	⇑Pn	**Pn**	**17 47 43.8**	**-0.3**
BNX				Sg	**Sg**	**17 48 12.9**	**-0.4**
BNX				smax	smax		
	comp=N,6µm,1.0s						
BNX				smax	smax		
	comp=E,1µm,0.9s						
MDJ	**Mudanjiang**	**3.49**	**98**	Pn	**Pn**	**17 48 07.7**	**+2.1**
MDJ				Pg	**Pg**	**17 48 15.7**	**-2.4**
MDJ				Sg	**Sg**	**17 49 01.7**	**-1.7**
MDJ				smax	smax		
	comp=N,820nm,0.6s						
MDJ				smax	smax		
	comp=E,860nm,0.7s						
SNY	**Shenyang**	**3.51**	**194**	Pn	**Pn**	**17 48 05.6**	**-0.2**
SNY				Pg	**Pg**	**17 48 16.7**	**-1.8**
SNY				Sn	**Sn**	**17 48 46.8**	**-0.6**
SNY				Sg	**Sb**	**17 49 00.8**	**+4.7**
SNY				smax	smax		
	comp=N,680nm,0.6s						
SNY				smax	smax		
	comp=E,950nm,0.6s						
SUJ	**Sinuiju**	**5.13**	**182**	Pg	**Pg**	**17 48 46.3**	**-3.2**
SUJ				Sg	**Sg**	**17 49 51.7**	**-4.2**
SUJ				AML	AML		
	comp=N,219nm,0.4s						
SUJ				AML	AML		
	comp=E,290nm,0.6s						
SUJ				AML	AML		
	comp=Z,231nm,0.4s						
USRK	**Ussuriysk Ar.**	**5.26**	**99**	Pn	**Pn**	**17 48 31.0**	**+1.1**
	comp=Z,2.9nm,0.3s,baz=278,slow=13,SNR=38						
USRK				Pg	**Pg**	**17 48 47.4**	**-4.6**
	comp=Z,7.9nm,0.3s,baz=280,slow=15,SNR=16						
USRK				Lg	Lg	17 49 58.1	
	comp=Z,9.0nm,0.3s,baz=292,slow=20,SNR=5.0						
	comp=Z,5.5nm,0.3s						
HEH	**HeiHe**	**5.33**	**19**	*e*Pn	**Pn**	**17 48 30.0**	**-0.8**
HEH				Sg	**Sg**	**17 49 58.2**	**-4.1**
HEH				smax	smax		
	comp=Z,470nm,1.0s						
HEH				smax	smax		
	comp=Z,850nm,0.7s						
HHU	**Hamhung**	**5.69**	**158**	Pg	**Pg**	**17 48 57.0**	**-3.1**
HHU				Sg	**Sg**	**17 50 10.3**	**-3.4**
HHU				AML	AML		
	comp=N,152nm,0.7s						
HHU				AML	AML		
	comp=E,224nm,0.7s						
HHU				AML	AML		
	comp=Z,92nm,2.0s						
PYS	**Pyongsong**	**6.04**	**172**	Pg	**Pg**	**17 49 03.2**	**-3.6**
PYS				Sg	**Sg**	**17 50 21.1**	**-3.8**
PYS				AML	AML		
	comp=N,377nm,0.4s						
PYS				AML	AML		
	comp=E,735nm,0.9s						
PYS				AML	AML		
	comp=Z,222nm,0.5s						
KLR	**Kul'dur**	**6.22**	**48**	Pn	**Pn**	**17 48 44.2**	**+1.2**
	comp=Z,2.2nm,0.3s,baz=224,slow=14,SNR=25						
KLR				Pg	**Pg**	**17 49 05.5**	**-4.7**
	comp=Z,7.6nm,0.3s,baz=216,slow=16,SNR=6.7						
KLR				Lg	Lg	17 50 28.4	
	comp=Z,17nm,0.3s,baz=340,slow=13,SNR=12						
KLR				LR	LR	17 51 41.6	
	comp=Z,34nm,20.4s,baz=228,slow=43						
	comp=Z,5.1nm,0.3s						
PYAG	**Pyongyang**	**6.22**	**173**	Pg	**Pg**	**17 49 07.2**	**-3.2**
PYAG				Sg	**Sg**	**17 50 28.2**	**-2.8**
PYAG				AML	AML		
	comp=N,92nm,0.6s						
PYAG				AML	AML		
	comp=E,172nm,0.5s						
PYAG				AML	AML		
	comp=Z,70nm,0.5s						
XLT	**XiLinHaoTe**	**6.34**	**261**	*e*Pn	Pn	17 48 50.0	+5.3
XLT				*e*Pg	**Pg**	**17 49 09.2**	**-3.3**
XLT				Sg	**Sg**	**17 50 29.4**	**-5.1**
XLT				smax	smax		
	comp=N,38nm,1.0s						
XLT				smax	smax		
	comp=E,210nm,0.7s						
XLT				LR	LR		
	comp=N,78nm,4.3s						
XLT				LR	LR		
	comp=E,530nm,5.2s						
XLT				LR	LR		
	comp=Z,440nm,5.2s						
DL2	**Dalian**	**6.74**	**201**	*e*Pn	**Pn**	**17 48 48.5**	**-1.6**
DL2				Pg	Pg	17 49 14.9	-5.3
DL2				Sg	**Sg**	**17 50 42.3**	**-5.1**
DL2				smax	smax		
	comp=Z,120nm,0.6s						
DL2				smax	smax		
	comp=Z,160nm,1.1s						
DL2				LR	LR		
	comp=Z,550nm,9.9s						
DL2				LR	LR		
	comp=Z,910nm,9.7s						
DL2				LR	LR		
	comp=Z,330nm,7.7s						
HJU	**Haeju**	**7.22**	**174**	Pg	**Pg**	**17 49 25.2**	**-4.3**
HJU				Sg	**Sg**	**17 51 00.2**	**-2.8**
HJU				AML	AML		
	comp=N,91nm,0.5s						
HJU				AML	AML		
	comp=E,181nm,0.9s						
HJU				AML	AML		
	comp=Z,77nm,0.5s						
KSRS	**Korea Array**	**8.13**	**162**	Pn	**Pn**	**17 49 11.0**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=349,slow=13,SNR=5.7						
KSRS				Pg	Pg	17 49 40.7	-6.2
	comp=Z,3.0nm,0.3s,baz=347,slow=18,SNR=32						
KSRS				Lg	Lg	17 51 28.8	
	comp=Z,6.2nm,0.3s,baz=346,slow=30,SNR=8.8						
KSRS				LR	LR	17 52 07.2	
	comp=Z,103nm,19.8s,baz=320,slow=36						
	comp=Z,0.6nm,0.5s						
HHC	**Hu-ho-hao-te**	**10.60**	**250**	*e*P	**Pn**	**17 49 43.6**	**+0.4**
HHC				*e*S	**Sn**	**17 51 44.8**	**+2.9**
ASAJ	**Asahikawa**	**12.76**	**89**	LR	LR	17 55 21.0	
	comp=Z,143nm,18.2s,baz=338,slow=38						
SONM	**Songino Array**	**12.90**	**288**	Pn	**Pn**	**17 50 14.0**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=83,slow=12,SNR=1.9						
SONM				Sn	**Sn**	**17 52 38.8**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=90,slow=20,SNR=3.0						
SONM				Lg	Lg	17 53 57.4	
	comp=Z,0.6nm,0.3s,baz=95,slow=28,SNR=5.6						
	comp=Z,0.4nm,0.5s						
JNU	**Nakatsue**	**12.99**	**157**	Lg	Lg	17 54 03.1	
	comp=Z,0.1nm,0.3s,baz=122,slow=11,SNR=3.2						
MJAR	**Matsushiro Arr**	**13.37**	**126**	Pn	**Pn**	**17 50 22.1**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=314,slow=12,SNR=2.0						
YAK	**Yakutsk**	**17.07**	**8**	Lg	Lg	17 56 08.9	
	comp=Z,0.6nm,0.3s,baz=289,slow=23,SNR=5.7						
YAK				LR	LR	17 58 06.5	
	comp=Z,181nm,18.1s,baz=184,slow=38						
LZH	**Lanzhou**	**18.26**	**247**	*e*P	**P**	**17 51 25.7**	**+0.7**
LZH				pP	sP	17 51 31.6	+2.4
LZH				pmax	pmax		
	comp=Z,13nm,1.2s						
LZH				LR	LR		
	comp=Z,240nm,12.7s						
LZH				LR	LR		
	comp=Z,260nm,11.0s						
GTA	**Gaotai**	**19.30**	**261**	*e*P	**Pn**	**17 51 39.2**	**+1.9**
GTA				sP	sP	17 51 45.2	+4.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				LR	LR		
	comp=Z,110nm,8.0s						
GTA				LR	LR		
	comp=Z,260nm,12.0s						
GTA				LR	LR		
	comp=Z,310nm,11.3s						
PETK	**Petropavlovsk-**	**22.77**	**58**	P	**P**	**17 52 15.4**	**+1.9**
	comp=Z,1.6nm,0.7s,baz=254,slow=4.0,SNR=5.7						
	comp=Z,1.6nm,0.7s						
WMQ	**Urumqi**	**26.31**	**280**	*e*P	**P**	**17 52 41.9**	**-5.1**
WMQ				LR	LR		
	comp=N,5µm,14.7s						
WMQ				LR	LR		
	comp=E,2µm,13.5s						
WMQ				LR	LR		
	comp=Z,2µm,20.1s						
TIXI	**Tiksi**	**26.57**	**3**	LR	LR	18 04 41.3	
	comp=Z,147nm,19.6s,baz=192,slow=40						
QIZ	**Qiongzhong**	**28.92**	**210**	P	**P**	**17 53 13.1**	**+2.7**
QIZ				S	**S**	**17 58 04.1**	**+3.1**
QIZ				LR	LR		
	comp=Z,210nm,11.6s						
QIZ				LR	LR		
	comp=Z,160nm,15.8s						
MKAR	**Makanchi Array**	**29.27**	**288**	P	**P**	**17 53 13.6**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=92,slow=12,SNR=2.3						
	comp=Z,0.4nm,0.6s						
NRIK	**Noril'sk**	**30.53**	**335**	LR	LR	18 08 02.9	
	comp=Z,42nm,18.4s,baz=134,slow=41						
KURBB	**Kurchatov Arra**	**31.03**	**297**	P	**P**	**17 53 29.3**	**+0.5**
	comp=Z,2.6nm,0.8s,baz=82,slow=9.6,SNR=14						
	comp=Z,2.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**34.26**	**227**	P	**P**	**17 53 58.6**	**+1.2**
	comp=Z,0.8nm,1.0s,baz=39,slow=7.3,SNR=2.4						
	comp=Z,0.8nm,1.0s						
BVAR	**Borovoye Array**	**35.65**	**303**	P	**P**	**17 54 10.0**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=68,slow=12,SNR=2.4						
BVAR				LR	LR	18 10 06.0	
	comp=Z,39nm,18.4s,baz=77,slow=39						
	comp=Z,0.4nm,0.5s						
ILAR	**Eielson Array**	**49.61**	**34**	LR	LR	18 18 10.2	
	comp=Z,20nm,18.3s,baz=44,slow=38						
ARCES	**ARCESS Array B**	**51.50**	**334**	LR	LR	18 22 39.4	
	comp=Z,33nm,18.0s,baz=44,slow=41						
FINES	**FINESS Array B**	**55.29**	**325**	P	**P**	**17 56 44.8**	**+0.5**
	comp=Z,2.1nm,0.9s,baz=76,slow=8.7,SNR=3.5						
	comp=Z,2.1nm,0.9s						
AKASG	**Malin Array Be**	**59.81**	**313**	P	**P**	**17 57 16.5**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=50,slow=7.6,SNR=6.3						
	comp=Z,0.6nm,0.4s						
YKA	**Yellowknife Ar**	**62.64**	**27**	LR	LR	18 28 33.0	
	comp=Z,37nm,19.7s,baz=304,slow=40						
BRTR	**Keskin Array B**	**63.90**	**301**	P	**P**	**17 57 45.4**	**+1.2**
	comp=Z,1.0nm,0.9s,baz=66,slow=7.3,SNR=6.8						
	comp=Z,1.0nm,0.9s						
FRB	**Frobisher Bay**	**70.85**	**6**	LR	LR	18 30 17.4	
	comp=Z,28nm,19.8s,baz=350,slow=36						
NEW	**Newport**	**72.31**	**38**	LR	LR	18 32 49.2	
	comp=Z,26nm,21.4s,baz=183,slow=38						

IDC ***02*** *17:53:56.6±2.0,41°.93S×86°.28W,h0*^{km}*,mb4.3/3,*
mbtmp4.1/5,ML3.8/2,MS3.4/9,Error ellipse: s-maj=66.9km
s-min=35.9km az=4.0
NEIC ***02*** *17:54:01.5±1.3,41°.20S±0°.09×85°.9W±0°.3,h10*^{km}*±2*^{km}*,*
mb4.7/32,Error ellipse: s-maj=36.1km s-min=8.2km
az=112.0
ISC 02 17:54:00.4±0.8**,41°.2S**±0°.1×**86°.0W**±0°.1**,h10**^{km}**,n51,**
σ**1**^{s}**.46**/28**,mb4.7**/16**,MS3.4**/8**,1C-1D,West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**9.29**	**40**	T	T	18 06 14.6	
	baz=214,slow=73,SNR=97						
H03S1	**Juan Fernandez**	**9.30**	**40**	T	T	18 06 19.6	
	baz=214,slow=73,SNR=76						
H03S3	**Juan Fernandez**	**9.31**	**40**	T	T	18 06 12.0	
	baz=214,slow=73,SNR=145						
VA04	**Juan Fernndez**	**9.50**	**39**		**Pn**	**17 56 17.3**	**+0.1**
H03N3	**Juan Fernandez**	**9.61**	**38**	T	T	18 06 36.9	
	baz=203,slow=71						
H03N2	**Juan Fernandez**	**9.62**	**38**	T	T	18 06 36.1	
	baz=203,slow=71						
H03N1	**Juan Fernandez**	**9.62**	**38**	T	T	18 06 41.2	
	baz=203,slow=71						
PLCA	**Paso Flores**	**11.72**	**93**	Pn	**Pn**	**17 56 49.0**	**+1.3**
	0.1nm,0.3s,baz=261,slow=11,SNR=2.8						
PLCA				LR	LR	18 00 35.4	
	comp=Z,112nm,19.8s,baz=242,slow=34						
	1.3nm,0.9s						
BO02	**Sierra Bellavi**	**13.63**	**67**		**Pn**	**17 57 14.0**	**+0.1**
BO01	**Tunca**	**13.64**	**65**		**Pn**	**17 57 13.3**	**-0.6**
MT01	**Popeta**	**13.84**	**63**		**Pn**	**17 57 14.7**	**-1.9**
MT09	**Talagante**	**14.07**	**63**		**Pn**	**17 57 18.4**	**-1.5**
BO04	**La Punta**	**14.20**	**64**		**Pn**	**17 57 21.4**	**-0.2**
MT13	**San Alfonso**	**14.56**	**64**		**Pn**	**17 57 25.9**	**-0.7**
MT08	**Bocatoma Ro**	**14.91**	**64**		**Pn**	**17 57 31.5**	**0.0**
VA03	**San Esteban**	**14.97**	**61**		**Pn**	**17 57 31.7**	**-0.5**
CFA	**Coronel Fontan**	**17.23**	**62**	P	**P**	**17 58 03.8**	**+1.1**
	0.4nm,0.3s,baz=236,slow=13,SNR=8.0						
	1.9nm,0.5s						
CPUP	**Villa Florida**	**27.95**	**67**	LR	LR	18 10 30.9	
	comp=Z,26nm,18.1s,baz=110,slow=35						
SIV	**San Ignacio**	**33.14**	**48**	LR	LR	18 14 09.0	
	comp=Z,34nm,18.9s,baz=228,slow=36						
ATAH	**Atahualpa**	**34.63**	**13**	LR	LR	18 11 20.9	
	comp=Z,83nm,21.4s,baz=224,slow=30						
BDFB	**Brasilia**	**41.55**	**63**	LR	LR	18 18 59.1	
	comp=Z,65nm,18.7s,baz=340,slow=36						
ROSC	**El Rosal**	**47.09**	**16**	LR	LR	18 20 08.9	
	comp=Z,84nm,19.3s,baz=157,slow=33						
QSPA	**South Pole Qui**	**49.00**	**180**	P	**P**	**18 02 48.4**	**+1.4**
VNDA	**Vanda**	**54.61**	**194**	LR	LR	18 22 21.5	
	comp=Z,42nm,20.6s,baz=354,slow=32						
PCRV	**Puerto La Cruz**	**54.83**	**26**	LR	LR	18 26 13.9	
	comp=Z,34nm,18.9s,slow=35						
MDP	**Montagnes des**	**55.30**	**42**	LR	LR	18 25 20.8	
	comp=Z,30nm,19.6s,baz=316,slow=34						
SYO	**Syowa Base**	**62.99**	**161**	⇑*e*P	**P**	**18 04 25.8**	**-1.0**
SYO	**Syowa Base**	**62.99**	**161**	⇓*e*sP	sP	18 04 30.0	+0.7
HNDO	**Hondo**	**71.47**	**348**	P	**P**	**18 05 22.3**	**+1.4**
TXAR	**Lajitas Array**	**72.08**	**344**	P	**P**	**18 05 26.1**	**+1.4**
	2.9nm,0.8s,baz=166,slow=8.2,SNR=33						
	2.9nm,0.8s						
TX31	**Lajitas Ar. Si**	**72.08**	**344**		**P**	**18 05 26.0**	**+1.2**
TX31				IAmb	IAmb	18 05 27.2	
	comp=Z,4.3nm,0.9s						
ALPN	**Alpine**	**73.09**	**344**	P	**P**	**18 05 31.9**	**+1.1**
ALPN				IAmb	IAmb	18 05 33.1	
	comp=Z,6.5nm,0.7s						
OZNA	**Ozona**	**73.14**	**346**		**P**	**18 05 30.6**	**-0.4**
APMT	**Aspermont**	**75.32**	**348**	IAmb	IAmb	18 05 45.6	
	comp=Z,7.1nm,0.9s						
X48A	**Hartselle**	**75.32**	**359**		**P**	**18 05 44.6**	**+1.0**
CPCT	**Cooper Cave**	**76.32**	**1**		**P**	**18 05 50.3**	**+1.0**
CPCT				IAmb	IAmb	18 05 51.1	
	comp=Z,7.0nm,0.9s						
V48A	**Smith Brothers**	**76.60**	**359**	IAmb	IAmb	18 05 52.3	
	comp=Z,4.4nm,0.8s						
CLTN	**Cedars of Leba**	**76.95**	**360**	IAmb	IAmb	18 05 54.4	
	comp=Z,8.1nm,1.3s						
FCAR	**Ozark Folk Cen**	**76.95**	**355**	IAmb	IAmb	18 05 54.7	
	comp=Z,8.6nm,1.5s						
U49A	**Red Boiling Sp**	**77.37**	**0**	P	**P**	**18 05 55.8**	**+0.7**
T47A	**Sharon Grove**	**77.85**	**359**	IAmb	IAmb	18 05 59.2	
	comp=Z,7.0nm,0.8s						
ANMO	**Albuquerque**	**78.10**	**343**		**P**	**18 05 58.8**	**-0.7**
ANMO				IAmb	IAmb	18 06 02.1	
	comp=Z,7.5nm,1.0s						
MGMO	**Mountain Grove**	**78.22**	**355**	IAmb	IAmb	18 06 01.4	
	comp=Z,6.4nm,0.8s						
CCM	**Cathedral Cave**	**79.06**	**356**		**P**	**18 06 02.8**	**-1.6**
CCM				IAmb	IAmb	18 06 06.1	
	comp=Z,8.7nm,0.8s						
PV02	**Paradox Valley**	**81.74**	**342**	IAmb	IAmb	18 06 22.3	
	comp=Z,7.5nm,1.0s						
PV18	**Skein Mesa, Pa**	**81.81**	**342**	IAmb	IAmb	18 06 21.9	
	comp=Z,7.2nm,0.8s						
NVAR	**Mina Array Bea**	**84.58**	**335**	P	**P**	**18 06 34.7**	**+0.9**
	comp=Z,1.8nm,0.7s,baz=146,slow=6.4,SNR=9.3						
	comp=Z,1.8nm,0.7s						
PDAR	**Pinedale Array**	**86.27**	**343**	P	**P**	**18 06 43.5**	**+1.3**
	comp=Z,1.9nm,0.9s,baz=188,slow=4.0,SNR=12						
	comp=Z,1.9nm,0.9s						
MJAR	**Matsushiro Arr**	**145.52**	**277**	PKPbc	**PKPdf**	**18 13 35.5**	**-3.1**
	comp=Z,1.7nm,0.9s,baz=190,slow=6.1,SNR=4.7						
PZH	**PanZhiHua**	**163.96**	**206**	PKP	**PKPdf**	**18 14 05.6**	**+1.5**
KURBB	**Kurchatov Arra**	**165.76**	**44**	PKP	**PKPdf**	**18 14 01.0**	**-3.7**
	comp=Z,0.2nm,0.6s,baz=298,slow=2.6,SNR=2.4						

IDC ***02*** *18:01:25.2±0.6,6°.13N×126°.98E,h0*^{km}*,mb4.0/17,*
mbtmp4.0/17,MS3.4/14,Error ellipse: s-maj=26.1km
s-min=13.8km az=63.0
NEIC ***02*** *18:01:28.1±2.5,5°.81N±0°.04×126°.73E±0°.09,h30*^{km}*±6*^{km}*,*
mb4.5/19,Error ellipse: s-maj=13.7km s-min=6.0km
az=93.0
DJA ***02*** *18:01:32.9±0.5,6°N±3°×12°7E±°,h65*^{km}*±15*^{km}*,M4.5/9,*
mB4.7/1,mb4.3/6,MLv4.5/9,Mw(mB)3.9/1
ISC 02 18:01:33.8±0.5**,5°.93N**±0°.04×**126°.56E**±0°.08**,h71**^{km}**,n70,**
σ**1**^{s}**.92**/62**,mb4.3**/34**,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.50**	**320**		**Pn**	**18 01 54.9**	**-3.9**
DAV				Sn	**Sn**	**18 02 17.8**	**+0.2**
DAV	**Davao City (W)**	**1.50**	**320**	Pn	**Pn**	**18 01 57.5**	**-1.3**
	317nm,0.3s,baz=91,slow=2.3,SNR=72						
DAV				Sn	**Sn**	**18 02 20.2**	**+2.7**
	163nm,0.3s,baz=241,slow=19,SNR=9.5						
DAV	**Davao City (W)**	**1.50**	**320**	P	Pn	18 01 53.0	-5.8
SGSI	**Sangihe**	**2.45**	**205**	P	**Pn**	**18 02 11.7**	**+0.1**
SGSI				S	**Sn**	**18 02 42.9**	**+2.4**
TNTI	**Ternate**	**5.18**	**171**		Pn	18 02 40.8	-8.0
TNTI	**Ternate**	**5.18**	**171**	P	**Pn**	**18 02 48.7**	**-0.2**
	0.3nm39nm,0.8s						
TNTI				S	**Sn**	**18 03 47.8**	**+0.4**
	0.3nm39nm,0.8s						
KMSI	**Cibinong**	**5.90**	**206**	P	Pn	18 03 14.1	+15
MRSI	**Marisa**	**7.11**	**221**	P	**Pn**	**18 03 16.3**	**+1.1**
MRSI				S	**Sn**	**18 04 37.0**	**+2.5**
TOLI2	**Tolitoli**	**7.49**	**231**		**Pn**	**18 03 19.0**	**-1.4**
LUWI	**Luwuk**	**7.88**	**209**	Pn	Pn	18 03 19.6	-6.2
LUWI	**Luwuk**	**7.88**	**209**	P	Pn	18 03 40.5	+15

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SWI   Sorong             8.22 145  P      Pn      18 03 30.2 -0.2
MMRI  Maumere           15.09 197  Pn     Pn      18 05 00.5 -2.6
SOEI  Soe               15.74 188  Pn     Pn      18 05 04.3 -7.3
JAY   Jayapura          16.43 120  LR     LR      18 11 33.3
      comp=Z,146nm,18.7s,baz=339,slow=38
DLV    Lat              18.82 290  P      P       18 05 47.1 -1.0
DLV                                IAmb   IAmb    18 05 52.6
      comp=Z,17nm,0.7s
GUMO  Guam              19.58  66  LR     LR      18 12 07.0
      comp=Z,70nm,21.0s,baz=135,slow=34
KNRA  Kununurra         21.57 174         P       18 06 15.7 -2.0
KNRA                               IAmb   IAmb    18 06 28.2
      comp=Z,29nm,0.9s
MYKOM Kota Tinggi       23.02 261         P       18 06 30.0 -3.1
MYKOM                              IAmb   IAmb    18 06 37.2
      comp=Z,17nm,1.1s
PMG   Port Moresby      25.57 126  LR     LR      18 18 08.4
      comp=Z,47nm,18.4s,baz=20,slow=40
WRA   Warramunga Arr    26.82 164  P      P       18 07 09.6 +1.9
      comp=Z,2.3nm,0.9s,baz=344,slow=10,SNR=6.4
      comp=Z,2.3nm,0.9s
NJ2   Nanjing           26.97 345  eP     P       18 07 08.4 -0.5
NJ2                                pmax   pmax
      comp=Z,11nm,0.6s
PSI   Prapat            27.72 265  LR     LR      18 19 17.3
      comp=Z,72nm,18.7s,baz=36,slow=38
PSA00 Pilbara Seismi    28.11 193  P      P       18 07 15.3 -3.8
PSA00                              IAmb   IAmb    18 07 53.2
      comp=Z,11nm,1.2s
CMAR  Chiang Mai Arr    29.67 297  P      P       18 07 31.5 -1.6
CMAR  Chiang Mai Arr    29.67 297  P      P       18 07 35.0 +2.0
      comp=Z,0.6nm,0.6s,baz=116,slow=6.3,SNR=4.8
CMAR                               LR     LR      18 21 19.8
      comp=Z,52nm,18.8s,baz=115,slow=40
      comp=Z,0.6nm,0.6s
CHTO  Chiang Mai        29.80 298  P      P       18 07 33.8 -0.4
ASAR  Alice Springs     30.27 167  P      P       18 07 37.8 -0.6
      comp=Z,0.4nm,0.8s,baz=343,slow=6.6,SNR=8.4
ASAR                               PcP    PcP     18 10 39.8 +2.3
      comp=Z,0.6nm,0.6s,baz=336,slow=2.4,SNR=7.4
      comp=Z,0.4nm,0.8s
PZH   PanZhiHua         31.28 314  P      P       18 07 49.6 +2.2
PZH                                pmax   pmax
      comp=Z,10.0nm,0.8s
PZH                                pmax   pmax
      comp=Z,100nm,4.7s
KSRS  Korea Array       31.41   2  P      P       18 07 45.5 -2.6
      comp=Z,0.5nm,0.8s,baz=183,slow=9.3,SNR=1.8
      comp=Z,0.5nm,0.8s
MJAR  Matsushiro Arr    32.29  18  P      P       18 07 53.5 -2.5
      comp=Z,0.4nm,0.7s,baz=193,slow=11,SNR=1.7
MJAR                               LR     LR      18 20 12.3
      comp=Z,71nm,21.5s,baz=218,slow=35
      comp=Z,0.4nm,0.7s
XAN   Xi'an             32.40 332  P      P       18 07 58.0 +1.0
XAN                                pmax   pmax
      comp=Z,11nm,0.8s
BJI   Beijing           35.23 346  P      P       18 08 24.1 +2.8
BJI                                pmax   pmax
      comp=Z,4.0nm,0.8s
LZH   Lanzhou           36.55 328  eP     P       18 08 29.1 -3.8
LZH                                sP     pP      18 08 39.1  -11
LZH                                pmax   pmax
      comp=Z,22nm,0.7s
LZH                                LR     LR
      comp=N,150nm,17.5s
LZH                                LR     LR
      comp=E,190nm,17.9s
LZH                                LR     LR
      comp=Z,220nm,18.6s
HHC   Hu-ho-hao-te      37.27 341  eP     P       18 08 39.7 +0.7
STKA  Stephens Creek    40.23 160  P      P       18 09 04.7 +0.9
      comp=Z,1.2nm,0.7s,baz=359,slow=9.1,SNR=4.2
      comp=Z,1.2nm,0.7s
GTA   Gaotai            41.15 328  eP     P       18 09 13.6 +2.3
GTA                                PcP    PcP     18 11 14.0 +4.5
GTA                                pmax   pmax
      comp=Z,3.0nm,1.2s
GTA                                LR     LR
      comp=N,120nm,15.6s
GTA                                LR     LR
      comp=E,120nm,17.4s
GTA                                LR     LR
      comp=Z,160nm,18.2s
HEH   HeiHe             44.18   1  eP     P       18 09 39.7 +4.1
HEH                                pmax   pmax
      comp=Z,3.0nm,1.0s
SONM  Songino Array     45.18 341  P      P       18 09 41.4 -2.3
SONM  Songino Array     45.18 341  P      P       18 09 43.6 -0.1
      comp=Z,0.6nm,0.6s,baz=142,slow=7.5,SNR=3.7
      comp=Z,0.6nm,0.6s
PALK  Pallekele         45.55 274  LR     LR      18 29 36.4
      comp=Z,40nm,18.4s,baz=84,slow=37
WMQ   Urumqi            50.85 324  eP     P       18 10 30.1 +2.6
WMQ                                LR     LR
      comp=Z,56nm,21.1s
PETK  Petropavlovsk-    53.48  23  P      P       18 10 43.8 -3.0
      comp=Z,0.1nm,0.4s,baz=221,slow=11,SNR=1.4
      comp=Z,0.1nm,0.4s
MKAR  Makanchi Array    55.67 324  P      P       18 11 03.6 +0.8
      comp=Z,0.7nm,0.5s,baz=120,slow=7.7,SNR=12
MKAR                               PcP    PcP     18 12 02.6 +1.1
      comp=Z,1.0nm,0.8s,baz=141,slow=3.1,SNR=4.9
      comp=Z,0.7nm,0.5s
YAK   Yakutsk           56.03   2  LR     LR      18 40 27.7
      comp=Z,21nm,18.1s,baz=187,slow=42
NIL   Nilore            56.47 307  P      P       18 11 08.9 +0.2
NIL                                IAmb   IAmb    18 11 12.5
      comp=Z,6.8nm,0.8s
MA2   Magadan           56.63  14  LR     LR      18 35 52.3
      comp=Z,19nm,20.2s,baz=211,slow=37
ZAA0  Zalesovo Array    58.57 333         P       18 11 22.7 -0.3
ZAA0                               IAmb   IAmb    18 11 25.6
      comp=Z,3.2nm,0.9s
ZALV  Zalesovo Beam     58.57 333         P       18 11 22.3 -0.7
ZALV  Zalesovo Beam     58.57 333  P      P       18 11 23.7 +0.7
      comp=Z,3.0nm,0.8s,baz=107,slow=5.0,SNR=11
      comp=Z,3.0nm,0.8s
AAK   Ala-Archa         58.63 317  LR     LR      18 37 59.9
      comp=Z,51nm,20.5s,baz=104,slow=37
KURK  Kurchatov         59.81 327         P       18 11 32.3 +0.6
KURBB Kurchatov Arra    59.81 327  P      P       18 11 32.7 +1.0
      comp=Z,5.9nm,0.9s,baz=126,slow=6.0,SNR=62
      comp=Z,5.9nm,0.9s
KK31  Karatay Array     61.53 316  P      P       18 11 44.0 +0.5
KK31                               IAmb   IAmb    18 11 46.1
      comp=Z,2.9nm,0.9s
KKAR  Karatay Array     61.53 316  P      P       18 11 44.0 +0.5
KKAR                               IAmb   IAmb    18 11 46.1
      comp=Z,3.1nm,0.9s
KKAR  Karatay Array     61.53 316         P       18 11 44.1 +0.5
BVAR  Borovoye Array    65.40 327  P      P       18 12 10.5 +1.6
      comp=Z,5.8nm,0.9s,baz=124,slow=7.5,SNR=24
BVAR                               LR     LR      18 41 09.3
      comp=Z,24nm,18.6s,baz=116,slow=36
      comp=Z,5.8nm,0.9s
BRVK  Borovoye          65.47 327         P       18 12 09.0 -0.4
TIXI  Tiksi             65.66   1  P      P       18 12 11.0 +0.8
TIXI                               IAmb   IAmb    18 12 22.1
      comp=Z,3.2nm,0.9s
TIXI  Tiksi             65.66   1  LR     LR      18 45 41.3
      comp=Z,20nm,18.0s,baz=195,slow=41
NRIK  Noril'sk          68.27 346  P      P       18 12 28.4 +1.6
      comp=Z,1.2nm,0.4s,baz=123,slow=3.9,SNR=4.4
NRIK                               LR     LR      18 46 00.4
      comp=Z,53nm,18.3s,baz=174,slow=39
      comp=Z,1.2nm,0.4s
AB31  Akbulak array     70.36 320         P       18 12 38.6 -1.4
AB31                               IAmb   IAmb    18 12 42.7
      comp=Z,6.2nm,1.1s
ABKAR Akbulak array     70.36 320         P       18 12 39.9 -0.2
J19K  Poorman           79.37  26  P      P       18 13 31.6 -0.2
RAYN  Ar Rayn           79.47 293         P       18 13 30.9 -2.3
RAYN                               IAmb   IAmb    18 13 35.0
      comp=Z,2.9nm,0.9s
ILAR  Eielson Array     83.21  26  P      P       18 13 52.2  0.0
      comp=Z,0.7nm,0.5s,baz=248,slow=5.0,SNR=21
      comp=Z,0.7nm,0.5s
ARCES ARCESS Array B    88.34 340  P      P       18 14 17.6 +0.2
      comp=Z,2.0nm,0.8s,baz=53,slow=6.2,SNR=5.7
      comp=Z,2.0nm,0.8s
BRTR  Keskin Array B    88.50 310  P      P       18 14 19.8 +0.8
      comp=Z,2.3nm,0.9s,baz=108,slow=5.4,SNR=16
      comp=Z,2.3nm,0.9s
FINES FINESS Array B    89.83 332  P      P       18 14 24.3 -0.2
      comp=Z,1.9nm,0.9s,baz=111,slow=6.6,SNR=8.5
      comp=Z,1.9nm,0.9s
NOA   NORSAR Array B    96.75 334  LR     LR      19 02 14.5
      comp=Z,28nm,19.8s,baz=45,slow=38
```

IDC 02 18:08:31.3±2.4**,2°.44N**×**128°.49E,h0^{km},mb3.3**/4**,**
mbtmp3.4/4**,MS3.1**/1**,Error ellipse: s-maj=201.2km**
s-min=23.5km az=69.0,Halmahera

```
Code  Station Name        Δ°   AZ°   Phase ID           Time     Res
                                   Op     ISC       h  m  s    ISC
WRA   Warramunga Arr    22.98 166  P      P       18 13 36.8 -0.9
      0.8nm,0.9s,baz=343,slow=9.2,SNR=1.1
      0.8nm,0.9s
ASAR  Alice Springs     26.48 169  P      P       18 14 09.3 -1.2
      0.4nm,0.9s,baz=342,slow=8.8,SNR=2.1
      0.4nm,0.9s
NWAO  Narrogin (SRO)    36.75 196  LR     LR      18 33 57.6
      comp=Z,29nm,18.6s,baz=72,slow=42
MKAR  Makanchi Array    59.61 325  P      P       18 18 38.0 +0.9
      0.2nm,0.4s,baz=118,slow=7.2,SNR=4.5
      0.2nm,0.4s
KURBB Kurchatov Arra    63.76 327  P      P       18 19 05.3 +0.2
      0.3nm,0.4s,baz=129,slow=6.1,SNR=6.9
      0.3nm,0.4s
```

IDC 02 18:29:12.1±4.1**,5°.99S**×**131°.23E,h0^{km},mb3.5**/1**,**
mbtmp3.4/3**,ML3.6**/2**,Error ellipse: s-maj=288.0km**
s-min=33.3km az=72.0,Banda Sea

```
Code  Station Name        Δ°   AZ°   Phase ID           Time     Res
                                   Op     ISC       h  m  s    ISC
WRA   Warramunga Arr    14.20 168  Pn     Pn      18 32 35.3 +0.7
      0.3nm,0.3s,baz=349,slow=15,SNR=5.7
WRA                                Sn     Sn      18 34 59.7  -13
      0.6nm,0.3s,baz=288,slow=30,SNR=7.6
      0.6nm,0.4s
ASAR  Alice Springs     17.76 172  P      Pn      18 33 20.6 -0.5
      0.1nm,0.3s,baz=345,slow=12,SNR=12
ASAR                               S      Sn      18 36 24.2  -16
      0.3nm,0.4s,baz=344,slow=25,SNR=6.2
      0.2nm,0.4s
MKAR  Makanchi Array    68.06 326  P      P       18 40 13.7 +0.1
      0.2nm,0.4s,baz=111,slow=7.9,SNR=2.4
      0.2nm,0.4s
```

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*KRNET **02** 18:39:14.6±0.1, 39°.38N×72°.71E, h21^{km}, mb3.2*
*SOME **02** 18:39:15.3, 39°.65N×72°.45E, h5^{km}*
*NNC **02** 18:39:20.8±2.2, 39°.86N×72°.36E, h0^{km}, mb3.5, mpv3.1,*
Error ellipse: s-maj=18.4km s-min=10.7km az=179.0
ISC 02 18:39:14.1±1.6**,39°.34N**±0°.08×**72°.78E**±0°.04**,h10^{km},n30,**
σ**1^{s}.95**/49**,26C-11D,Kyrgyzstan**

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Code  Station Name        Δ°   AZ°   Phase ID           Time     Res
                                   Op     ISC       h  m  s    ISC
DRK   Karamyk            0.77 281⇑eP      Pg      18 39 28.1 -0.9
DRK                             ⇑eS       Sg      18 39 38.0 -1.0
SFK   Sufi-Kurgan        0.88  40⇑eP      Pg      18 39 31.1 +0.1
SFK                             ⇑eS       Sg      18 39 43.2 +0.8
OHH   Osh                1.18   0⇑eP      Pb      18 39 35.7 -1.0
OHH                             ⇑eS       Sg      18 39 51.2 -1.0
BTK   Batken             1.67 296⇑eP      Pb      18 39 43.9 -1.1
BTK                             ⇑eS       Sb      18 40 05.5 -0.7
SALK  Salom-Alik         1.74  27⇓eP      Pb      18 39 46.1 -0.1
SALK                            ⇓eS       Sb      18 40 09.1 +1.0
ARSB  Arslanbob          1.99   4⇑eP      Pb      18 39 49.4 -1.0
ARSB                            ⇑eS       Sb      18 40 14.8 -0.5
ARK   Arkit              2.53 346⇑eP      Pn      18 39 56.8 +1.4
ARK                             ⇑eS       Sn      18 40 27.7 +1.4
ARLS  Aral               2.78  25⇑eP      Pn      18 40 00.6 +1.8
ARLS                            ⇑eS       Sn      18 40 34.3 +1.8
AML   Almayashu          2.87  14⇓eP      Pn      18 40 02.0 +1.7
AML                             ⇓eS       Sn      18 40 36.8 +1.7
MNAS  Manas              3.15 356⇑eP      Pn      18 40 05.6 +1.7
MNAS                            ⇑eS       Sn      18 40 42.7 +1.1
UCH   Uchtor             3.17  24⇑eP      Pn      18 40 06.4 +1.9
UCH                             ⇑eS       Sn      18 40 44.2 +1.6
NRN   Naryn              3.23  49⇓eP      Pn      18 40 07.0 +1.9
NRN                             ⇓eS       Sn      18 40 45.3 +1.5
EKS2  Erkin-Say          3.40  13⇓eP      Pn      18 40 09.2 +1.9
EKS2                            ⇓eS       Sn      18 40 49.1 +1.3
MRKS  Merke              3.42   6  Pg     Pb      18 40 13.2 -1.6
      2.3nm,0.4s
MRKS                               Lg     Lg      18 40 56.1
      18nm,0.4s
MRKS  Merke              3.42   6  eP     Pb      18 40 13.2 -1.6
      2.3nm,0.4s
MRKS                               eS     Sb      18 40 56.1 -0.3
      18nm,0.4s
KBK   Karagaybulak       3.70  26⇑eP      Pn      18 40 13.5 +2.1
KBK                             ⇑eS       Sn      18 40 56.5 +1.3
CHMS  Chumysh            3.95  22 ⇓Pn     Pn      18 40 17.7 +3.0
      3.8nm,0.4s
CHMS                              ⇑Lg     Lg      18 41 15.4
      6.5nm,0.6s
KK31  Karatay Array      4.13 336 ⇑Pn     Pn      18 40 20.3 +3.1
      0.7nm,0.2s,baz=149,slow=11,SNR=38
KK31                              ⇑Pg     Pb      18 40 26.0 -0.8
      0.8nm,0.2s,baz=152,slow=12,SNR=8.2
KK31                              ⇓Lg     Lg      18 41 12.2
      11nm,0.6s,baz=152,slow=24,SNR=7.6
KKAR  Karatay Array      4.13 336⇑iP      Pn      18 40 18.7 +1.5
KKAR                            ⇑eS       Sn      18 41 05.6  0.0
TKM2  Tokmak 2           4.16  30 ⇓Pn     Pb      18 40 23.2 -4.4
      1.6nm,0.6s
TKM2                              ⇑Lg     Lg      18 41 24.3
      5.8nm,0.8s
BRLS  Borolday           4.30 330  Pg     Pn      18 40 22.3 +2.7
      0.7nm,0.2s
BRLS                               Lg     Lg      18 41 11.1
      0.6nm,0.3s
BRLS  Borolday           4.30 330  eP     Pn      18 40 22.3 +2.7
      0.7nm,0.2s
BRLS                               eS     Sn      18 41 11.1 +1.3
      0.6nm,0.3s
SGDS  Sogindy            4.34  18  Pg     Pb      18 40 33.7 +3.2
SGDS                               Lg     Lg      18 41 30.7
DGS   Degeres            4.50  29  Pg     Pg      18 40 37.7 -2.6
      1.5nm,0.4s
DGS                                Lg     Lg      18 41 38.0
      6.7nm,0.4s
TNSS  Tian-Shan          4.85  39  Pg     Pg      18 40 44.8 -2.2
      5.0nm,0.5s
TNSS                               Lg     Lg      18 41 49.5
      2.7nm,0.5s
TNSS  Tian-Shan          4.85  39  eP     Pg      18 40 44.8 -2.2
      5.0nm,0.5s
TNSS                               eS     Sg      18 41 49.5 -0.3
      2.7nm,0.5s
MDOK  Medeo              4.99  39  Pg     Pg      18 40 47.4 -2.4
      3.2nm,0.5s
MDOK                               Lg     Lg      18 41 54.0
      2.0nm,0.5s
KTBS  Karatobe           5.26  33  Pg     Pg      18 40 51.9 -2.9
      2.9nm,0.6s
KTBS                               Lg     Lg      18 42 01.6
      6.0nm,0.5s
KPKS  Kokpek             6.06  45  Pg     Pg      18 41 07.4 -2.7
      1.8nm,0.6s
KPKS                               Lg     Lg      18 42 28.3
      3.6nm,0.6s
ARXS  Arharly            6.16  36  Pg     Pg      18 41 08.4 -3.6
      2.5nm,0.8s
ARXS                               Lg     Lg      18 42 31.0
      3.7nm,0.5s
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*IDC **02** 19:05:00.6±0.7, 26°.37S×71°.93E, h0^{km}, mb3.9/15,*
mbtmp3.9/15, MS3.6/19, Error ellipse: s-maj=25.6km
s-min=19.9km az=81.0
ISC 02 19:05:02.3±0.7**,26°.4S**±0°.1×**72°.0E**±0°.2**,h10^{km},n37,**
σ**0^{s}.79**/15**,mb4.0**/15**,MS3.6**/19**,Mid-Indian Ridge**

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Code  Station Name        Δ°   AZ°   Phase ID           Time     Res
                                   Op     ISC       h  m  s    ISC
H08S1 Diego Carcia H    18.65   2  T      T       19 28 32.2
      baz=182,slow=76,SNR=48
H08S2 Diego Garcia H    18.65   2  T      T       19 28 30.5
      baz=182,slow=76,SNR=43
H08S3 Diego Garcia H    18.67   2  T      T       19 28 32.3
      baz=182,slow=76,SNR=50
H04N2 CROZET ISLANDS    25.44 214  T      T       19 36 54.8
      baz=46,slow=74,SNR=1441
H04N1 CROZET ISLANDS    25.45 214  T      T       19 37 00.5
      baz=46,slow=74,SNR=1495
H04N3 CROZET ISLANDS    25.45 214  T      T       19 36 52.0
      baz=46,slow=74,SNR=319
PALK  Pallekele         34.52  15  LR     LR      19 23 05.0
      comp=Z,107nm,21.4s,baz=193,slow=31
H01W2 Cape Leeuwin H    37.04 114  T      T       19 51 29.9
      baz=272,slow=74,SNR=6.1
H01W3 Cape Leeuwin H    37.04 114  T      T       19 51 31.5
      baz=272,slow=74,SNR=6.7
H01W1 Cape Leeuwin H    37.05 114  T      T       19 51 25.8
      baz=272,slow=74,SNR=6.0
PSI   Prapat            39.00  46  LR     LR      19 25 12.3
      comp=Z,104nm,18.7s,baz=239,slow=31
LEM   Lembang           39.11  67  LR     LR      19 24 60.0
      comp=Z,81nm,18.5s,baz=183,slow=31
NWAO  Narrogin (SRO)    39.64 111  LR     LR      19 25 10.9
      comp=Z,74nm,21.0s,baz=268,slow=30
BOSA  Boshof            41.29 256  P      P       19 12 48.8 +0.5
      5.3nm,1.2s,baz=98,slow=7.1,SNR=2.2
BOSA                               LR     LR      19 28 03.8
      comp=Z,105nm,18.2s,baz=111,slow=34
      5.3nm,1.2s
LBTB  Lobatse           41.63 261  LR     LR      19 27 01.1
      comp=Z,120nm,18.2s,baz=116,slow=32
LSZ   Lusaka            42.20 276  LR     LR      19 28 15.7
      comp=Z,77nm,18.5s,baz=101,slow=33
KAPI  Kappang           50.30  74  LR     LR      19 34 29.8
      comp=Z,37nm,18.6s,baz=225,slow=35
TSUM  Tsumeb            50.34 266  LR     LR      19 32 22.5
      comp=Z,80nm,21.1s,baz=88,slow=33
CMAR  Chiang Mai Arr    51.71  33  P      P       19 14 11.3 +1.4
      1.6nm,0.9s,baz=212,slow=7.6,SNR=8.8
CMAR                               LR     LR      19 32 11.3
      comp=Z,22nm,20.9s,baz=210,slow=32
      1.6nm,0.9s
ASAR  Alice Springs     55.71 102  P      P       19 14 40.2 +0.8
      0.7nm,0.8s,baz=253,slow=6.3,SNR=9.0
ASAR                               LR     LR      19 35 44.2
      comp=Z,22nm,19.4s,baz=270,slow=33
      0.7nm,0.8s
WRA   Warramunga Arr    57.23  98  P      P       19 14 49.4 -0.8
      0.7nm,0.6s,baz=254,slow=6.7,SNR=2.1
      0.7nm,0.6s
STKA  Stephens Creek    60.13 113  LR     LR      19 37 10.0
      comp=Z,38nm,20.5s,baz=216,slow=32
DAV   Davao City (W)    61.70  65  LR     LR      19 40 35.6
      comp=Z,27nm,19.9s,baz=284,slow=35
QSPA  South Pole Qui    63.74 180  P      P       19 15 34.1  0.0
      1.6nm,0.9s,baz=258,slow=15,SNR=2.9
      1.6nm,0.9s
VNDA  Vanda             64.41 166  P      P       19 15 37.8 -0.4
      1.7nm,1.0s,baz=276,slow=7.7,SNR=6.7
      1.7nm,1.0s
AAK   Ala-Archa         68.72   2  LR     LR      19 44 14.9
      comp=Z,38nm,19.0s,baz=184,slow=34
PMG   Port Moresby      72.66  92  LR     LR      19 47 34.9
      comp=Z,29nm,18.1s,baz=255,slow=35
MKAR  Makanchi Array    73.44   7  P      P       19 16 33.7 -0.9
      1.2nm,0.8s,baz=189,slow=5.5,SNR=9.0
      1.2nm,0.8s
BRTR  Keskin Array B    74.86 330  P      P       19 16 43.0 -0.2
      0.9nm,0.9s,baz=144,slow=7.1,SNR=6.0
      0.9nm,0.9s
KURBB Kurchatov Arra    76.89   4  P      P       19 16 54.4  0.0
      0.7nm,0.8s,baz=196,slow=6.3,SNR=7.1
      0.7nm,0.8s
BVAR  Borovoye Array    79.09 359  P      P       19 17 05.5 -1.0
      0.3nm,0.4s,baz=142,slow=7.3,SNR=1.9
BVAR                               LR     LR      19 50 28.2
      comp=Z,29nm,19.2s,baz=185,slow=34
      0.3nm,0.4s
SONM  Songino Array     80.11  23  P      P       19 17 11.3 -1.1
      0.7nm,0.7s,baz=193,slow=6.1,SNR=3.9
      0.7nm,0.7s
ZALV  Zalesovo Beam     80.78   8  P      P       19 17 15.2 -0.4
      1.0nm,0.7s,baz=189,slow=7.3,SNR=5.1
      1.0nm,0.7s
DBIC  Dimbokro          81.25 282  LR     LR      19 51 25.5
      comp=Z,43nm,18.9s,baz=178,slow=34
KSRS  Korea Array       82.42  42  P      P       19 17 24.6 -0.2
      0.9nm,0.8s,baz=220,slow=6.5,SNR=6.2
KSRS                               LR     LR      19 51 31.0
      comp=Z,24nm,20.7s,baz=160,slow=34
      0.9nm,0.8s
AKASG Malin Array Be    85.54 334  P      P       19 17 40.7 +0.3
      0.1nm,0.2s,baz=111,slow=4.1,SNR=1.5
      0.1nm,0.2s
MJAR  Matsushiro Arr    88.34  48  P      P       19 17 55.1 +0.8
      0.6nm,0.7s,baz=229,slow=1.8,SNR=2.9
MJAR                               LR     LR      19 54 37.6
      comp=Z,35nm,21.8s,baz=222,slow=34
      0.6nm,0.7s
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*NOU **02** 19:15:39.5, 37°.97S×174°.58E, h32^{km}, MLv4.7/19, North Island, New Zealand*
*WEL **02** 19:15:43.9±0.8, 38°S±7°×17°6E±°, h187^{km}±6^{km}, M3.9/108,*
ML4.2/79, MLv3.9/108, Error ellipse: s-maj=9.1km
s-min=6.9km az=155.7, confirmed
ISC 02 19:15:36.9±1.4**,38°.38S**±0°.06×**175°.76E**±0°.05**,h237^{km}**±8^{km}**,**
n183,σ**2^{s}.56**/195**,North Island**

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Code  Station Name        Δ°   AZ°   Phase ID           Time     Res
                                   Op     ISC       h  m  s    ISC
KUTZ  Kaahu Road         0.12 155  P      Pn      19 16 09.4 +1.8
TLZ   Tolley Road        0.18 287  P      Pn      19 16 09.5 +1.9
TLZ                                S      S       19 16 30.4 -1.3
GRRZ  Galatos Road       0.28  83  P      Pn      19 16 09.5 +1.7
WHTZ  Whakaora           0.32 151  P      Pn      19 16 09.9 +2.0
WATZ  Wairara            0.33 184  P      Pn      19 16 09.8 +2.0
WPRZ  Whakapapatarin     0.34 114  P      Pn      19 16 09.5 +1.7
HSRZ  Hossack Road       0.39  80  P      Pn      19 16 09.7 +1.7
UTU   Utuhina            0.40  59  P      Pn      19 16 09.8 +1.8
HRRZ  Handcock Road      0.41  91  P      Pn      19 16 09.7 +1.7
NGRZ  Ngongotaha         0.44  50  P      Pn      19 16 09.9 +1.7
HLRZ  Highlands Stat     0.48  75  P      Pn      19 16 10.4 +2.1
RATZ  Rangitukua         0.48 179  P      Pn      19 16 10.1 +1.8
ALRZ  Allen Road         0.49 112  P      Pn      19 16 09.7 +1.5
PRRZ  Plateau Road       0.51 103  P      Pn      19 16 09.8 +1.6
KARZ  Kaharoa            0.53  47  P      Pn      19 16 09.9 +1.5
KMRZ  Kaimai             0.55  15  P      Pn      19 16 10.2 +1.6
OMRZ  Omania             0.56  60  P      Pn      19 16 10.0 +1.5
HATZ  Hinemaiaia         0.57 153  P      Pn      19 16 10.3 +1.8
KATZ  Kakaramea          0.59 185  P      Pn      19 16 10.6 +1.9
RRRZ  Republican Roa     0.59  86  P      Pn      19 16 10.2 +1.6
RITZ  Rihia Road         0.60 173  P      Pn      19 16 10.9 +2.3
TARZ  Mount Tarawera     0.60  76  P      Pn      19 16 10.5 +1.8
MKRZ  Makatiti           0.61  67  P      Pn      19 16 10.9 +2.1
LIRZ  Lichensteins R     0.62  53  P      Pn      19 16 10.4 +1.7
TOZ   Tahuroa Road       0.68 342  P      Pn      19 16 10.8 +1.8
TOZ                                S      S       19 16 32.5 -1.6
MRHZ  Matea Rd           0.69 131  P      Pn      19 16 10.6 +1.7
KRVZ  Karewarewa         0.72 187  P      Pn      19 16 11.3 +2.1
NTVZ  North Tongarir     0.72 185  P      Pn      19 16 11.4 +2.2
HIZ   Hauiti             0.72 259  P      Pn      19 16 11.4 +2.3
HIZ                                S      S       19 16 33.9 -0.4
TWVZ  Taurewa            0.73 200  P      Pn      19 16 11.3 +2.1
TMVZ  Te Maari           0.73 183  P      Pn      19 16 11.4 +2.1
TMVZ                               S      S       19 16 32.7 -2.1
WTVZ  West Tongariro     0.74 190  P      Pn      19 16 11.4 +2.1
NNVZ  North Ngauruho     0.76 189  P      Pn      19 16 11.6 +2.2
TGRZ  Tauranga           0.76  31  P      Pn      19 16 10.8 +1.5
OTVZ  Oturere            0.78 185  P      Pn      19 16 11.6 +2.1
OTVZ                               S      S       19 16 33.5 -1.8
MUGZ  Murupara           0.80  97  P      Pn      19 16 10.8 +1.4
NGZ   Ngauruhoe          0.80 189  P      Pn      19 16 11.7 +2.0
SNVZ  South Ngauruho     0.81 187  P      Pn      19 16 11.8 +2.1
SNVZ                               S      S       19 16 34.0 -1.5
EDRZ  Edgecumbe          0.82  71  P      Pn      19 16 11.2 +1.6
MARZ  Manawahe           0.82  61  P      Pn      19 16 11.5 +1.8
OPRZ  Ohinepanea         0.82  50  P      Pn      19 16 11.1 +1.5
OPRZ                               S      S       19 16 32.8 -2.3
COVZ  Chateau Observ     0.83 192  P      Pn      19 16 11.8 +2.1
COVZ                               S      S       19 16 33.8 -1.8
FWVZ  Far West T-bar     0.89 190  P      Pn      19 16 12.2 +2.1
TUVZ  Tukino             0.89 185  P      Pn      19 16 12.4 +2.4
TUVZ                               S      S       19 16 34.2 -2.0
MAVZ  Matarangi          0.90 190  P      Pn      19 16 12.5 +2.2
WHVZ  Whangaehu Hut      0.91 188  P      Pn      19 16 12.5 +2.2
TRVZ  Turoa              0.93 190  P      Pn      19 16 12.8 +2.4
PKVZ  Pokaka             0.96 200  P      Pn      19 16 12.6 +2.3
MTHZ  Maungataniwha      0.97 119  P      Pn      19 16 12.4 +2.1
MTHZ                               S      S       19 16 34.0 -2.6
BKZ   Black Stump Fm     0.97 144  P      Pn      19 16 12.1 +1.7
BKZ   Black Stump Fm     0.97 144  S      S       19 16 35.1 -1.6
BKZ   Black Stump Fm     0.97 144  P      Pn      19 16 12.5 +2.1
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RTZ	Ruatahuna	0.98	104	P	Pn	19 16 12.3	+1.8
RTZ				S	S	19 16 34.5	-2.3
MOVZ	Moawhango	1.02	180	P	Pn	19 16 12.8	+2.1
MTVZ	Mangateitei	1.03	193	P	Pn	19 16 13.1	+2.4
URZ	Urewera	1.07	84	P	Pn	19 16 11.9	+1.0
URZ	Urewera	1.07	84	S	S	19 16 34.2	-3.3
URZ	Urewera	1.07	84	P	Pn	19 16 12.2	+1.4
URZ				S	S	19 16 33.8	-3.7
VRZ	Vera Road	1.08	226	P	Pn	19 16 13.6	+2.6
NMHZ	Naumai	1.09	131	P	Pn	19 16 14.1	+3.0
WHRZ	Whale Island	1.09	62	P	Pn	19 16 13.4	+2.3
KWHZ	Kaweka Forest	1.16	154	P	Pn	19 16 14.2	+2.7
MYRZ	Mayor Island	1.16	19	P	Pn	19 16 13.7	+2.1
RAHZ	Arahi	1.17	118	P	Pn	19 16 14.2	+2.7
MCHZ	McNeill Hill	1.29	146	P	Pn	19 16 15.7	+3.3
SNGZ	Shannon Statio	1.30	108	P	Pn	19 16 15.1	+2.6
RAGZ	Rawiri	1.30	96	P	Pn	19 16 14.8	+2.3
ARHZ	Aropaoanui	1.31	133	P	Pn	19 16 15.5	+3.1
KRHZ	Kereru	1.35	160	P	Pn	19 16 15.5	+2.8
WHHZ	Waihua	1.35	121	P	Pn	19 16 15.6	+2.9
MKAZ	Moumakai	1.36	339	P	Pn	19 16 15.2	+2.3
MWZ	Matawai	1.39	89	P	Pn	19 16 15.1	+2.0
WAZ	Wanganui	1.50	204	P	Pn	19 16 16.9	+3.0
LREZ	Lake Rotokare	1.51	224	P	Pn	19 16 17.5	+3.6
PNHZ	Pukenui	1.57	168	P	Pn	19 16 17.2	+2.8
RUGZ	Raukumara Rang	1.57	75	P	Pn	19 16 15.7	+1.1
ETAZ	East Tamaki Re	1.57	335	P	Pn	19 16 16.9	+2.3
NEZ	North Egmont	1.57	235	P	Pn	19 16 18.1	+3.5
PREZ	Palmer Road	1.58	232	P	Pn	19 16 18.1	+3.5
AWAZ	Awhitu Peninsu	1.59	326	P	Pn	19 16 17.3	+2.7
RIGZ	Rimuhau	1.60	102	P	Pn	19 16 17.6	+2.8
PKE	Pukeiti	1.61	239	P	Pn	19 16 18.2	+3.4
KNZ	Kokohu	1.63	114	P	Pn	19 16 17.7	+2.8
KUZ	Kuaotunu	1.63	359	P	Pn	19 16 17.2	+2.1
CKHZ	Cape Kidnapper	1.64	142	P	Pn	19 16 18.4	+3.4
KHEZ	Kahui Hut	1.64	236	P	Pn	19 16 18.5	+3.4
TKGZ	Te Karaka	1.64	93	P	Pn	19 16 17.7	+2.6
KAHZ	Kahuranaki	1.66	149	P	Pn	19 16 18.6	+3.4
WIAZ	Waiheke Island	1.66	342	P	Pn	19 16 17.8	+2.5
TSZ	Takapari Road	1.68	175	P	Pn	19 16 18.3	+2.9
EPAZ	Eden Park BICE	1.71	331	P	Pn	19 16 18.1	+2.5
HAZ	Te Kaha	1.71	69	P	Pn	19 16 17.1	+1.4
NBEZ	Newall Road No	1.72	239	P	Pn	19 16 19.2	+3.5
WTAZ	Waiatarua	1.73	327	P	Pn	19 16 18.9	+3.0
HBAZ	Herne Bay Bore	1.73	332	P	Pn	19 16 18.5	+2.6
PRGZ	Paritu Road	1.75	109	P	Pn	19 16 18.8	+2.8
MBAZ	Motutapu North	1.75	337	P	Pn	19 16 18.6	+2.5
TWGZ	Tauwhareparae	1.76	84	P	Pn	19 16 18.8	+2.7
WPHZ	Waipukurau	1.76	163	P	Pn	19 16 19.1	+3.0
NMEZ	Namu Road	1.79	234	P	Pn	19 16 19.9	+3.6
MHGZ	Mahia Peninsul	1.85	115	P	Pn	19 16 20.2	+3.4
OHWZ	Ohakea	1.85	191	P	Pn	19 16 20.3	+3.5
PXZ	Pawanui	1.86	153	P	Pn	19 16 19.9	+3.1
PKGZ	Pakihiroa	1.90	75	P	Pn	19 16 19.7	+2.3
CNGZ	Carnagh Statio	1.93	94	P	Pn	19 16 21.0	+3.4
ABAZ	Army Bay	1.93	337	P	Pn	19 16 20.5	+2.9
DVHZ	Dannevirke	1.94	171	P	Pn	19 16 20.4	+2.7
PUZ	Puketiti	1.99	82	P	Pn	19 16 20.5	+2.4
PRHZ	Porangahau	2.00	160	P	Pn	19 16 21.3	+3.1
POWZ	Post Office Ro	2.01	180	P	Pn	19 16 21.0	+2.7
GRZ	Great Barrier	2.14	353	P	Pn	19 16 22.3	+2.7
ANWZ	Angora Road	2.15	165	P	Pn	19 16 22.8	+3.2
WMGZ	Waiomatatini S	2.17	76	P	Pn	19 16 22.4	+2.6
MXZ	Matakaoa Point	2.17	69	P	Pn	19 16 22.7	+2.8
MXZ	Matakaoa Point	2.17	69	P	Pn	19 16 22.5	+2.6
MRZ	Mangatainoka R	2.28	183	P	Pn	19 16 23.6	+2.7
BFZ	Birch Farm	2.33	171	P	Pn	19 16 24.0	+2.6
BFZ	Birch Farm	2.33	171	P	Pn	19 16 24.2	+2.8
TIWZ	Tintock	2.39	178	P	Pn	19 16 24.9	+2.9
OGWZ	Otaki Gorge	2.47	190	P	Pn	19 16 25.8	+2.9
HOWZ	Holdsworth Sta	2.52	184	P	Pn	19 16 25.9	+2.6
CPWZ	Castlepoint	2.55	172	P	Pn	19 16 27.0	+3.4
KIW	Kapiti Island	2.56	195	P	Pn	19 16 26.4	+2.7
WCZ	Waipu Caves	2.69	335	P	Pn	19 16 28.5	+3.3
TMWZ	Te Maipa	2.72	178	P	Pn	19 16 28.1	+2.6
CAW	Cannon Point	2.77	191	P	Pn	19 16 28.8	+2.8
MTW	Mount Morrison	2.78	184	P	Pn	19 16 28.6	+2.5
DUWZ	D'Urville Isla	2.80	210	P	Pn	19 16 29.0	+2.6
WEL	Wellington	3.00	194	P	Pn	19 16 31.3	+2.9
PAWZ	Paruwai Farm	3.01	185	P	Pn	19 16 31.1	+2.5
TRWZ	Traveller	3.01	181	P	Pn	19 16 31.4	+2.7
SNZO	South Karori	3.04	195	P	Pn	19 16 31.3	+2.5
SNZO	South Karori	3.04	195	S	S	19 17 08.8	-1.1
TCW	Tory Channel	3.05	202	P	Pn	19 16 31.9	+2.9
MSWZ	Moikau Station	3.06	187	P	Pn	19 16 31.6	+2.5
BHW	Baring Head	3.10	192	P	Pn	19 16 32.2	+2.7
PLWZ	Palliser	3.21	187	P	Pn	19 16 33.2	+2.4
TUWZ	Tuamarina	3.35	204	P	Pn	19 16 35.9	+3.5
NNZ	Nelson	3.37	212	P	Pn	19 16 35.0	+2.4
TKNZ	Takaka Hill	3.42	218	P	Pn	19 16 35.1	+1.9
QRZ	Quartz Range	3.49	225	P	Pn	19 16 35.9	+1.9
CMWZ	Cape Campbell	3.57	199	P	Pn	19 16 38.5	+3.7
OUZ	Omahuta	3.60	331	P	Pn	19 16 39.5	+4.1
BSWZ	Blackbirch Sta	3.63	203	P	Pn	19 16 38.7	+3.1
MRNZ	Matariki Terra	3.80	217	P	Pn	19 16 39.4	+1.8
THZ	Tophouse	4.03	212	P	Pn	19 16 42.5	+2.1
KHZ	Kahutara	4.37	202	P	Pn	19 16 47.6	+3.2
KHZ	Kahutara	4.37	202	S	S	19 17 36.9	-1.1
KHZ	Kahutara	4.37	202	P	Pn	19 16 47.7	+3.3
DSZ	Denniston Nort	4.53	221	P	Pn	19 16 48.2	+1.8
GVZ	Greta Valley S	5.03	203	P	Pn	19 16 55.1	+2.7
LTZ	Lake Taylor	5.13	210	P	Pn	19 16 55.8	+1.9
AMCZ	Amberley	5.34	205	P	Pn	19 16 59.0	+2.6
INZ	Inchbonnie	5.44	216	P	Pn	19 16 59.5	+1.9
OXZ	Oxford	5.69	209	P	Pn	19 17 02.5	+1.8
OKCZ	Okains Bay	5.71	200	P	Pn	19 17 03.9	+2.8
MQZ	McQueen's Vall	5.81	203	P	Pn	19 17 04.1	+1.8
AKCZ	Akaroa Harbour	5.89	201	P	Pn	19 17 06.1	+2.8
WVZ	Waitaha Valley	6.04	218	P	Pn	19 17 07.8	+2.7
MHCZ	Mount Hutt	6.04	210	P	Pn	19 17 07.3	+2.1
WACZ	Wakanui South	6.29	207	P	Pn	19 17 10.6	+2.3
RPZ	Rata Peaks	6.41	212	P	Pn	19 17 12.2	+2.5
RPZ	Rata Peaks	6.41	212	S	S	19 18 20.9	-3.1
RPZ	Rata Peaks	6.41	212	P	Pn	19 17 11.9	+2.1
GCSZ	Gaunt Creek Bo	6.42	218	P	Pn	19 17 11.3	+1.4
ARCZ	Arundel	6.55	210	P	Pn	19 17 13.5	+2.0
FOZ	Fox Glacier	6.83	219	P	Pn	19 17 17.3	+2.2
TMZ	Timaru	6.98	209	P	Pn	19 17 19.5	+2.5
LBZ	Lake Benmore	7.32	213	P	Pn	19 17 23.5	+2.2
ODZ	Otahua Downs	7.68	208	P	Pn	19 17 28.3	+2.4
ODZ	Otahua Downs	7.68	208	P	Pn	19 17 29.0	+3.2
JCZ	Jackson Bay	7.74	221	P	Pn	19 17 27.6	+0.8
JCZ	Jackson Bay	7.74	221	S	S	19 18 49.4	-5.6
WKZ	Wanaka	8.18	216	P	Pn	19 17 34.8	+2.5
EAZ	Earnscleugh	8.37	213	P	Pn	19 17 37.0	+2.4
HHSZ	Highcliff Hill	8.42	205	P	Pn	19 17 39.6	+4.3
MSZ	Milford Sound	8.60	221	P	Pn	19 17 41.1	+3.5
TUZ	Tuapeka	8.83	209	P	Pn	19 17 44.2	+3.7
SYZ	Scrubby Hill	9.50	209	P	Pn	19 17 53.0	+4.0
SYZ	Scrubby Hill	9.50	209	P	Pn	19 17 53.1	+4.0
APZ	The Paps	10.20	212	P	Pn	19 18 01.6	+3.6
PYZ	Puysegur Point	10.28	218	P	Pn	19 18 02.6	+3.6
PYZ	Puysegur Point	10.28	218	P	P	19 18 03.2	-1.7

UCR ***02*** *19:25:22.3±0.8, 10°46N×84°21W, h113^{km}±3^{km}, MW3.9*
CATAC ***02*** *19:25:24.3±0.4, 10°N±2°×8°4W±°, h90^{km}±4^{km}, M3.3/12, MLv3.3/12, Error ellipse: s-maj=6.2km s-min=3.6km az=46.3, confirmed*
ISC 02 19:25:23.4±1.6**, 10°34N**±0°05×**84°25W**±0°04**, h108**^{km}±8^{km}**, n61,** σ**0§45**/66**, 4C-7D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITAL	Pital	0.11	349	*e*P	Pn	19 25 38.4	-0.1
ITAL				*e*S	Sn	19 25 49.4	-0.3
VPS8	V Poas	0.16	177	*e*P	Pn	19 25 38.9	-0.1
SARA	Sarapiqu	0.25	64	*e*P	Pn	19 25 38.6	-0.2
SARA				*e*S	Sn	19 25 49.9	-0.4
TCS1	Tacares	0.30	189	*e*P	Pn	19 25 39.8	+0.6
SRA1	San Ramn	0.34	222	*e*P	Pn	19 25 39.1	-0.3
HDC	Heredia	0.36	158	*e*P	Pn	19 25 39.4	0.0
HDC	Heredia	0.36	158	⇑P	Pn	19 25 39.5	0.0
HDC				S	Sn	19 25 51.8	+0.3
SOCE	Pocosol	0.36	277	*e*P	Pn	19 25 39.4	+0.1
SOCE				*e*S	Sn	19 25 51.6	+0.4
SOCE	Pocosol	0.36	277	⇓P	Pn	19 25 39.5	+0.2
DOMI	Santo Domingo	0.39	156	*e*P	Pn	19 25 39.9	+0.2
COVE	Coope Vega, Sa	0.40	338	⇓P	Pn	19 25 39.4	-0.1
COVE	Coope Vega, Sa	0.40	338	S	Sn	19 25 51.3	-0.3
SANTA	Santa Ana	0.41	171	*e*P	Pn	19 25 39.5	-0.2
SANTA				*e*S	Sn	19 25 53.4	+1.5
SJS3	Mercedes San J	0.45	154	*e*P	Pn	19 25 40.1	+0.1
ARE1	Arenal 1	0.48	284	*e*P	Pn	19 25 40.4	+0.4
AMPA	Desamparados	0.48	157	*e*P	Pn	19 25 39.9	-0.3
PURI	Puriscal	0.49	187	*e*P	Pn	19 25 40.7	+0.4
TRIO	Tres Rios	0.50	150	*e*P	Pn	19 25 40.9	+0.6
CARI	Cariari	0.51	87	*e*P	Pn	19 25 40.3	+0.2
ARZA	Esparza	0.54	230	*e*P	Pn	19 25 39.9	-0.5
TRT2	Tortugero	0.55	67	*e*P	Pn	19 25 40.1	-0.3
TRT2	Tortugero	0.55	67	⇓P	Pn	19 25 40.2	-0.3
TRT2	Tortugero	0.55	67	S	Sn	19 25 52.9	-0.3
RAFA	San Farael, Vo	0.58	131	*e*P	Pn	19 25 41.5	+0.5
VTR0	Volcan Turrial	0.58	124	*e*P	Pn	19 25 40.9	-0.3
PCAYA	Pacayas	0.60	134	*e*P	Pn	19 25 41.3	+0.2
REPA	Paraso	0.63	144	*e*P	Pn	19 25 41.2	-0.1
LCR2	La Lucha 2	0.64	158	*e*P	Pn	19 25 41.2	-0.2
LCR2	La Lucha 2	0.64	158	⇑P	Pn	19 25 41.3	-0.2
LCR2	La Lucha 2	0.64	158	S	Sn	19 25 55.1	+0.2
ABE2	San Pablo	0.66	163	*e*P	Pn	19 25 41.6	-0.1
JTS	Las Juntas de	0.69	266	*e*P	Pn	19 25 41.5	-0.1
TILA	Tilaran	0.72	280	*e*P	Pn	19 25 42.1	+0.3
BITO	Garabito Jaco	0.81	207	*e*P	Pn	19 25 43.2	+0.6
PAQE	Paquera	0.85	232	*e*P	Pn	19 25 43.7	+0.7
UPAL	Upala	0.93	306	*e*P	Pn	19 25 44.1	+0.3
COLC	Colonia	0.99	289	*e*P	Pn	19 25 44.8	+0.4
NYURE	Nandayure	1.05	251	*e*P	Pn	19 25 44.8	-0.1
VERH	Veragua Rainfo	1.12	111	*e*P	Pn	19 25 45.3	-0.5
NICO	Nicoya	1.20	260	*e*P	Pn	19 25 46.9	+0.3
CMARA	Lajas Hojancha	1.20	255	*e*P	Pn	19 25 46.5	-0.2
CMARA	Lajas Hojancha	1.20	255	S	Sn	19 26 03.5	-0.8
SACU	Santa Cruz	1.31	267	*e*P	Pn	19 25 48.2	+0.3
ELI1	Hacienda Flor	1.32	283	*e*P	Pn	19 25 48.4	+0.4
INDI	Punta indio, G	1.32	249	⇑P	Pn	19 25 47.4	-0.7
INDI	Punta indio, G	1.32	249	S	Sn	19 26 05.3	-1.3
OCHAL	Ojochal	1.37	154	⇓P	Pn	19 25 49.2	+0.6
OCHAL	Ojochal	1.37	154	S	Sn	19 26 08.0	+0.3
DRK0	Durika	1.46	137	*e*P	Pn	19 25 49.5	-0.3
DRK0	Durika	1.46	137	P	Pn	19 25 49.6	-0.3
DRK0	Durika	1.46	137	S	Sn	19 26 09.5	-0.3
CEUA	Cerro Uatsi, L	1.48	119	*e*P	Pn	19 25 51.0	+1.1
CARN	Rivas	1.51	304	P	Pn	19 25 50.3	+0.1
LCRUZ	La Cruz	1.54	298	*e*P	Pn	19 25 51.2	+0.6
BLUN	Bluefields	1.72	16	⇓P	Pn	19 25 53.0	+0.2
CONN	Concepcion	1.82	312	⇑P	Pn	19 25 54.4	+0.3
ACON	Acoyapa	1.85	331	⇓P	Pn	19 25 54.8	+0.3
ALCO	Alturas Coton,	1.96	135	*e*P	Pn	19 25 55.8	-0.3
BRU2	Volcan	2.17	135	P	Pn	19 25 58.9	+0.2
BRU2	Volcan	2.17	135	S	Sn	19 26 25.4	-0.3
BOAB	BOACO BROADBAN	2.51	327	⇓P	Pn	19 26 03.2	+0.2

IDC ***02*** *19:44:35.6±8.3, 22°14S×179°44W, h541^{km}±85^{km}, mb3.1/8, mbtmp4.0/8, Error ellipse: s-maj=47.4km s-min=24.6km az=74.0*
ISC 02 19:44:40.2±1.2**, 22°2S**±0°2×**179°6W**±0°2**, h592**^{km}**, n15,** σ**0§93**/13**, mb3.6**/8**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	35.72	246	P	P	19 50 49.8	-0.6
	2.9nm,0.5s,baz=87,slow=12,SNR=8.4						
	2.9nm,0.5s						
ASAR	Alice Springs	42.69	259	P	P	19 51 46.5	0.0
	3.8nm,0.8s,baz=101,slow=7.8,SNR=34						
ASAR				PcP	PcP	19 53 24.2	-0.3
	0.6nm,0.8s,baz=114,slow=4.2,SNR=1.8						
	3.8nm,0.8s						
WRA	Warramunga Arr	42.91	264	P	P	19 51 47.8	-0.5
	1.1nm,0.3s,baz=98,slow=7.9,SNR=8.6						
	1.1nm,0.3s						
QSPA	South Pole Qui	67.88	180	P	P	19 54 40.7	+0.3
	0.9nm,0.7s,baz=311,slow=1.8,SNR=6.5						
	0.9nm,0.7s						
MJAR	Matsushiro Arr	70.71	325	P	P	19 54 56.6	-0.9
	0.7nm,0.6s,baz=166,slow=4.7,SNR=2.4						
	0.7nm,0.6s						
KSRS	Korea Array	77.18	320	P	P	19 55 34.9	+1.0
	0.3nm,0.4s,baz=106,slow=12,SNR=2.0						
	0.3nm,0.4s						
PETK	Petropavlovsk-	77.54	346	P	P	19 55 35.4	-0.2
	0.7nm,0.5s,baz=214,slow=4.8,SNR=4.2						
	0.7nm,0.5s						
CMAR	Chiang Mai Arr	89.28	290	P	P	19 56 36.8	+2.2
	0.8nm,0.7s,baz=139,slow=3.5,SNR=5.5						
	0.8nm,0.7s						
BVAR	Borovoye Array	119.39	319	PKhKP	PKPpre	20 02 21.7	
	0.7nm,0.4s,baz=106,slow=3.4,SNR=6.2						
HFS	Hagfors	140.95	349	PKhKP	PKPpre	20 02 57.1	
	0.4nm,0.3s,baz=57,slow=3.7,SNR=9.1						
AKASG	Malin Array Be	143.72	329	PKP	PKPbc	20 03 06.7	-0.9
	0.7nm,0.3s,baz=43,slow=3.8,SNR=11						
EKA	Eskdalemuir Ar	146.80	4	PKPbc	PKPbc	20 03 16.3	-0.1
	1.0nm,0.5s,baz=71,slow=3.1,SNR=2.1						
BRTR	Keskin Array B	146.81	309	PKPbc	PKPbc	20 03 16.8	-0.4
	0.4nm,0.6s,baz=129,slow=4.7,SNR=5.1						
MMAI	Mount Meron Ar	147.29	297	PKPbc	PKiKP	20 03 19.1	-1.0
	0.6nm,0.3s,baz=89,slow=9.6,SNR=4.3						
GERES	GERESS Array B	151.37	341	PKPbc	PKPbc	20 03 27.3	-0.5
	0.3nm,0.4s,baz=20,slow=2.0,SNR=3.9						

IDC ***02*** *19:49:24.6±0.8, 32°07S×71°88W, h0^{km}, mb4.2/8, mbtmp4.1/12, ML3.9/3, MS3.6/14, Error ellipse: s-maj=28.4km s-min=16.9km az=108.0*
SJA ***02*** *19:49:27.0±0.7, 32°13S×71°80W, h17^{km}±2^{km}, ML4.5, MW4.5*
NEIC ***02*** *19:49:29.1±1.7, 32°13S±0°04×71°82W±0°07, h27^{km}±4^{km}, mb4.5/8, Mwr4.3/71, Mwr4.4(GUC), Error ellipse: s-maj=8.5km s-min=5.5km az=86.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.52; $M_{\theta\theta}$0.26; $M_{\phi\phi}$-1.78; $M_{r\theta}$-0.74; $M_{\theta\phi}$1.22; $M_{\phi r}$-2.32; Fault plane solution: $M_0$3.19000×10^{15} NP1:ϕ_s304.39000°, δ31.94000°, λ31.65000°. NP2:ϕ_s186.77000°, δ73.88000°, λ117.95000°. Principal axes: T 3.2328, Plg53.0000°, Azm130.0000°; N -0.0846, Plg27.0000°, Azm358.0000°; P -3.1481, Plg24.0000°, Azm256.0000°;*
NEIC ***02*** *19:49:29.3, 32°14S×71°83W, h29^{km}*
GUC ***02*** *19:49:29.7±0.9, 32°15S×71°70W, h30^{km}±6^{km}, ML4.3*
ISC 02 19:49:26.2±1.2**, 32°12S**±0°02×**71°87W**±0°04**, h12**^{km}±7^{km}**, n147,** σ**1§52**/174**, mb4.5**/12**, MS3.7**/10**, 23C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	Catapilco	0.65	132		Pb	19 49 40.3	+0.8
VA06	Catapilco	0.65	132	*e*P	Pn	19 49 40.6	-0.7
VA06				*e*S	Sb	19 49 47.4	-1.2
VA06				IAML		19 49 50.2	
	comp=E,50µm,0.4s						
VA01	Torpederas	0.92	168		Pb	19 49 44.5	+0.4
VA01	Torpederas	0.92	168	*e*P	Pn	19 49 45.5	+0.6
VA01				*e*S	Sn	19 49 57.8	-0.3
VA01	Torpederas	0.92	168	*e*P	Pn	19 49 45.1	+0.2
ROCH	El Roble	1.11	140	⇑*i*P	Pn	19 49 48.1	+0.2
ROCH				⇑*i*P	Pn	19 49 48.0	+0.2
ROCH				*e*S	Sg	19 50 01.0	-1.2
ROCH				*e*S	Sb	19 50 01.2	-0.9
ROCH				IAML		19 50 06.7	
	comp=E,17µm,0.6s						
ROC1	El Roble	1.11	140	*e*P	Pb	19 49 42.3	-5.3
CO02	Combarbal	1.18	39		Pg	19 49 49.3	+0.5
CO02	Combarbal	1.18	39	⇓*i*P	Pg	19 49 49.4	+0.6
CO02	Combarbal	1.18	39	*e*P	Pg	19 49 49.3	+0.5
CO02				*e*S	Sn	19 50 04.8	+0.2
CO02				IAML		19 50 07.1	
	comp=Z,10µm,0.4s						
VA03	San Esteban	1.28	120		Pb	19 49 50.2	-0.1
VA03	San Esteban	1.28	120	⇑*i*P	Pb	19 49 50.3	-0.1
VA03				*e*S	Sb	19 50 05.6	-1.3
VA03				IAML		19 50 14.6	
	comp=N,14µm,0.7s						
VA03	San Esteban	1.28	120	*e*P	Pb	19 49 50.4	-0.1
VA03				*e*S	Sb	19 50 06.2	-0.7
VA03				IAML		19 50 08.1	
	comp=Z,10µm,0.5s						
MT02	Curacav	1.29	152		Pg	19 49 50.8	-0.2
MT02	Curacav	1.29	152	⇑*i*P	Pg	19 49 50.7	-0.2
MT02				*e*S	Sb	19 50 06.4	-0.5
MT02	Curacav	1.29	152	*e*P	Pg	19 49 50.7	-0.2
MT02				*e*S	Sn	19 50 06.8	-0.4
MT02				IAML		19 50 10.3	
	comp=Z,6µm,0.8s						
PEL	Peldehue	1.43	136		Pb	19 49 52.8	0.0
PEL	Peldehue	1.43	136	⇑*i*P	Pb	19 49 52.7	0.0
PEL				*e*S	Sn	19 50 09.9	-0.8
PEL				IAML		19 50 13.2	
	comp=N,7µm,0.3s						
PEL	Peldehue	1.43	136	*e*P	Pb	19 49 52.9	0.0
PEL				*e*S	Sg	19 50 13.1	+1.0
CO06	Fray Jorge	1.46	8		Pn	19 49 53.6	+1.2
CO06	Fray Jorge	1.46	8	⇓*i*P	Pb	19 49 53.7	+0.4
VA05	Santo Domingo	1.54	172		Pb	19 49 54.8	0.0
VA05	Santo Domingo	1.54	172	*e*P	Pb	19 49 55.0	+0.2
VA05				IAML		19 50 20.8	
	comp=E,18µm,0.5s						
MT05	Renca	1.58	143		Pb	19 49 55.0	-0.5
MT05	Renca	1.58	143	⇑*i*P	Pb	19 49 55.4	0.0
MT05				IAML		19 50 20.1	
	comp=E,9µm,0.3s						
MT05	Renca	1.58	143	*e*P	Pb	19 49 55.3	-0.1
MT05				*e*S	Sn	19 50 03.7	-11
MT05				IAML		19 50 28.4	
	comp=Z,5µm,0.7s						
MT10	Hacienda Santa	1.60	136	⇑*i*P	Pb	19 49 55.6	-0.3
MT10				IAML		19 50 23.1	
	comp=E,16µm,0.4s						
CO03	El Pedregal	1.63	38		Pb	19 49 56.5	+0.3
CO03	El Pedregal	1.63	38	⇓*i*P	Pb	19 49 56.5	+0.3
CO03				*e*S	Sn	19 50 16.6	+0.8
CO03				IAML		19 50 20.0	
	comp=E,6µm,0.3s						
CO03	El Pedregal	1.63	38	*e*P	Pb	19 49 56.6	+0.4
CO03				*e*S	Sb	19 50 17.5	+0.7
CO03				IAML		19 50 18.8	
	comp=Z,5µm,0.7s						
MT14	Cerro Cal¡n	1.69	139	⇑*i*P	Pb	19 49 56.9	-0.5
MT14				*e*S	Sb	19 50 17.6	-1.1
MT14				IAML		19 50 32.1	
	comp=E,9µm,0.8s						
MT16	CCHEN	1.73	139		Pb	19 49 57.5	-0.4
MT16	CCHEN	1.73	139	⇑*i*P	Pb	19 49 57.3	-0.5
MT16				*e*S	Sb	19 50 18.6	-0.9
MT16				IAML		19 50 23.9	
	comp=N,5µm,0.8s						
MT03	Universidad Ad	1.78	140		Pb	19 49 58.2	-0.7
MT03	Universidad Ad	1.78	140	⇑*i*P	Pb	19 49 58.6	-0.3
MT03				*e*S	Sb	19 50 20.6	-0.7
MT03				IAML		19 50 23.3	
	comp=E,8µm,0.2s						
MT03	Universidad Ad	1.78	140	*e*P	Pb	19 49 58.7	-0.2
MT03				*e*S	Sg	19 50 22.2	-1.3
MT03				IAML		19 50 26.4	
	comp=Z,5µm,1.2s						
FCH	Farellones	1.79	133	⇑*i*P	Pb	19 49 58.4	-0.8
FCH				IAML		19 50 23.8	
	comp=E,3µm,0.2s						
MT09	Talagante	1.81	156		Pb	19 49 59.1	-0.1
MT09	Talagante	1.81	156	⇑*i*P	Pb	19 49 59.2	-0.1
MT09				IAML		19 50 29.8	
	comp=E,7µm,0.5s						
MT01	Popeta	1.81	164		Pb	19 49 58.8	-0.6
MT01	Popeta	1.81	164	⇑*i*P	Pb	19 49 58.8	-0.6
MT01				IAML		19 50 26.3	
	comp=E,5µm,0.4s						
MT01	Popeta	1.81	164	*e*P	Pb	19 49 58.8	-0.6
MT01				*e*S	Sg	19 50 25.4	+0.9
MT01				IAML		19 50 28.6	
	comp=Z,4µm,0.7s						
MT15	Las Vizcachas	1.86	142	*e*P	Pb	19 49 59.3	-1.0
MT15				IAML		19 50 32.9	
	comp=E,6µm,0.4s						
MT04	Ro Olivares	1.94	132	⇑*i*P	Pb	19 50 00.6	-1.0
MT04				IAML		19 50 36.4	
	comp=N,2µm,0.6s						
MT04	Ro Olivares	1.94	132	*e*P	Pb	19 50 00.8	-0.9
MT04				*e*S	Sb	19 50 26.3	+0.4
MT04				IAML		19 50 34.6	
	comp=Z,2µm,1.1s						
MT08	Bocatoma Ro	2.04	131		Pb	19 50 02.5	-0.8
MT08	Bocatoma Ro	2.04	131	⇑*i*P	Pb	19 50 02.6	-0.8
MT08				IAML		19 50 32.0	
	comp=N,2µm,0.5s						
MT08	Bocatoma Ro	2.04	131	*e*P	Pb	19 50 02.8	-0.6
MT08				*e*S	Sg	19 50 29.6	-2.2
MT08				IAML		19 50 42.7	
	comp=Z,2µm,0.6s						
MT13	San Alfonso	2.09	141	⇑*i*P	Pb	19 50 03.1	-1.1
MT13				IAML		19 50 37.8	
	comp=E,4µm,0.5s						
MT13	San Alfonso	2.09	141	*e*P	Pb	19 50 03.5	-0.6
MT13				*e*S	Sb	19 50 29.2	-1.0
MT13				IAML		19 50 45.6	
	comp=Z,2µm,0.7s						
BO04	La Punta	2.14	151		Pn	19 50 02.5	+0.7
BO04	La Punta	2.14	151	⇑*i*P	Pb	19 50 03.9	-1.1
BO04				IAML		19 50 34.7	
	comp=N,4µm,0.5s						
GO04	Tololo Observa	2.15	25	*e*P	Pn	19 50 03.9	+1.8
GO04	Tololo Observa	2.15	25	*e*P	Pn	19 50 04.0	+1.9
GO04				*e*S	Sn	19 50 27.5	-1.3
RTLS	Leoncito	2.21	82	*e*P	Pb	19 50 06.7	+0.5
RTLS				*e*S	Sb	19 50 31.9	-1.8
RTLS				IAML		19 50 40.4	
	comp=Z,7µm,0.8s						
LMEL	Las Melosas	2.22	141		Pn	19 50 03.2	+0.2
LMEL	Las Melosas	2.22	141	⇑*i*P	Pb	19 50 04.8	-1.5
LMEL				IAML		19 50 42.5	
	comp=N,3µm,0.2s						
LMEL	Las Melosas	2.22	141	*e*P	Pb	19 50 04.9	-1.4
LMEL				*e*S	Sb	19 50 33.1	-0.7
CO05	La Serena	2.26	14	IAML		19 50 45.4	
	comp=E,4µm,0.2s						
BO01	Tunca	2.35	164		Pn	19 50 05.6	+0.9
BO01	Tunca	2.35	164	⇑*i*P	Pn	19 50 06.3	+1.6
BO01				IAML		19 50 48.4	
	comp=E,2µm,0.6s						
BO01	Tunca	2.35	164	*e*P	Pn	19 50 05.7	+1.0
BO01				IAML		19 50 44.0	
	comp=Z,2µm,0.5s						
ARCO	CERRO ARCO	2.58	107	*e*P	Pb	19 50 13.5	+1.0
ARCO				*e*S	Sb	19 50 41.5	-2.8
ARCO				IAML		19 50 49.5	
	comp=Z,3µm,0.7s						
CO01	Juntas del Tor	2.62	36	*e*P	Pb	19 50 11.8	-1.5
CO01				*e*S	Sb	19 50 45.6	0.0
CO01				IAML		19 50 48.0	
	comp=Z,2µm,0.7s						
DOCA	Reserva Natura	2.65	65	*e*P	Pb	19 50 13.4	-0.4
DOCA				*e*S	Sn	19 50 43.6	+2.3
DOCA				IAML		19 50 52.4	
	comp=Z,1µm,0.8s						
AAGR	Agrelo	2.74	111	*e*P	Pb	19 50 15.2	0.0
AAGR				*e*S	Sg	19 50 58.7	+4.5
ZON	Zonda	2.77	79	*e*P	Pn	19 50 10.5	-0.1
ZON				*e*S	Sn	19 50 46.4	+2.4
ZON				IAML		19 51 02.1	
	comp=Z,897nm,0.7s						
BO02	Sierra Bellavi	2.81	161		Pn	19 50 12.7	+1.6
BO02	Sierra Bellavi	2.81	161	*e*P	Pn	19 50 13.4	+2.3
BO02				*e*S	Sb	19 50 48.1	-2.8
BO02				IAML		19 50 59.9	
	comp=Z,3µm,0.6s						
AROD	Rodeo	2.83	47	*e*P	Pb	19 50 16.3	-0.6
ACCO	Cerro Coronel	2.84	58	*e*P	Pb	19 50 15.4	-1.7
ACCO				*e*S	Sb	19 50 54.4	+2.4
SJA	San Juan	2.88	79	*e*P	Pn	19 49 59.9	-12
RTLL	Cerro Villicun	3.00	76	*e*P	Pn	19 50 00.1	-13
RTLL				*e*S	Sb	19 50 53.8	-2.4
ACDV	Cuesta del Vie	3.06	51	*e*P	Pb	19 50 19.1	-1.5
ACDV				*e*S	Sb	19 50 56.8	-1.1
ACDV				IAML		19 51 05.4	
	comp=Z,714nm,1.2s						
AVIZ	Vizcacheras	3.13	116	*e*P	Pn	19 50 15.2	-0.2
AVIZ				*e*S	Sg	19 51 12.9	+6.2
CFA	Coronel Fontan	3.13	81	Pn	Pn	19 50 17.3	+1.9
	comp=Z,27nm,0.3s,baz=244,slow=11,SNR=367						
CFA				Sn	Sn	19 50 50.9	-1.9
	comp=Z,18nm,0.3s,baz=225,slow=11,SNR=6.1						
CFA				LR	LR	19 51 21.9	
	comp=Z,148nm,21.2s,baz=230,slow=37						
	comp=Z,94nm,0.5s						
CFA	Coronel Fontan	3.13	81	*e*P	Pn	19 50 13.9	-1.5

CFA				eS	Sn	19 50 55.5	+2.6
CFA				IAML		19 51 11.2	
	comp=Z,5µm,0.7s						
LCO	Las Campanas	3.26	18		Pn	19 50 18.8	+1.4
LCO	Las Campanas	3.26	18	eP	Pn	19 50 19.1	+1.7
LCO				eS	Sn	19 50 56.5	+0.2
LCO				IAML		19 51 13.5	
	comp=Z,2µm,0.5s						
AC05	El Transito	3.55	23	eP	Pn	19 50 24.2	+2.8
AC05				eS	Sn	19 51 06.9	+3.5
AC05				IAML		19 51 35.0	
	comp=Z,712nm,0.8s						
ML02	Panimavida	3.65	174		Pn	19 50 22.9	+0.4
AGUA	GUANDACOL	3.92	49	eP	Pb	19 50 31.9	-3.4
AGUA				eS	Sg	19 51 31.5	-0.5
AGUA				IAML		19 51 36.9	
	comp=Z,1µm,0.8s						
AC04	Llanos de Chal	3.97	10		Pn	19 50 28.0	+1.1
AC04	Llanos de Chal	3.97	10	eP	Pn	19 50 24.5	-2.3
AC04				eS	Sb	19 51 22.0	-2.0
AC04				IAML		19 51 37.1	
	comp=Z,923nm,0.8s						
AVFE	Valle Fertil	4.04	70	eP	Pn	19 50 31.2	+3.1
AVFE				eS	Sn	19 51 18.3	+2.9
AVFE				IAML		19 51 36.2	
	comp=Z,660nm,0.8s						
ACHE	Chepes	4.54	79	eP	Pn	19 50 38.0	+3.1
ACHE				eS	Sb	19 51 39.2	-1.5
BI02	San Fabin de	4.56	174		Pn	19 50 36.9	+1.8
VCA	Vinchina	4.62	44	eP	Pn	19 50 37.5	+1.4
VCA				eS	Sb	19 51 44.2	+1.0
VCA				IAML		19 52 07.0	
	comp=Z,875nm,1.0s						
GO03	Copiapo	4.73	18		Pn	19 50 40.7	+3.3
GO03	Copiapo	4.73	18	eP	Pn	19 50 35.4	-2.1
GO03				eS	Sn	19 51 35.4	+3.1
ACLC	CERRO LA CRUZ	5.01	59	eP	Pn	19 50 45.4	+3.9
ACLC				eS	Sn	19 51 40.4	+1.0
ACLC				IAML		19 51 53.5	
	comp=Z,338nm,0.7s						
AC02	Maricunga	5.78	25		Pn	19 50 53.6	+1.2
VA04	Juan Fernndez	6.05	254		Pn	19 50 56.9	+1.4
H03N1	Juan Fernandez	6.08	256	T	T	19 57 37.8	
	baz=83,slow=73,SNR=1261						
H03N3	Juan Fernandez	6.09	256	T	T	19 57 32.8	
	baz=83,slow=73,SNR=2820						
H03N2	Juan Fernandez	6.09	256	T	T	19 57 32.0	
	baz=83,slow=73,SNR=1571						
H03S3	Juan Fernandez	6.16	252	T	T	19 57 36.8	
	baz=84,slow=74,SNR=63						
H03S1	Juan Fernandez	6.16	252	T	T	19 57 32.9	
	baz=84,slow=74,SNR=49						
H03S2	Juan Fernandez	6.17	252	T	T	19 57 33.9	
	baz=84,slow=74,SNR=86						
GO02	Mina Guanaco	7.22	17		Pn	19 51 12.1	+0.2
LR05	Currie	8.09	181		Pn	19 51 24.5	+1.0
PLCA	Paso Flores	8.66	173		Pn	19 51 33.3	+1.9
PLCA	Paso Flores	8.66	173	Sn	Sn	19 53 13.6	+4.6
	comp=Z,0.2nm,0.3s,baz=310,slow=6.9,SNR=2.2						
PLCA				LR	LR	19 54 52.7	
	comp=Z,260nm,20.5s,baz=348,slow=38						
TRQA	Tornquist	10.03	129		Pn	19 51 51.2	+1.1
PB08	IPOC Station P	12.18	12		Pn	19 52 18.5	-1.4
ITQB	Itaqui	13.32	83		Pn	19 52 34.6	-0.4
CPUP	Villa Florida	13.94	69	Pn	Pn	19 52 40.8	-2.8
CPUP	Villa Florida	13.94	69	Pn	Pn	19 52 41.7	-1.9
	comp=Z,0.1nm,0.3s,baz=101,slow=11,SNR=4.2						
CPUP				Sn	Sn	19 55 15.4	-2.9
	comp=Z,0.1nm,0.3s,baz=177,slow=9.5,SNR=5.0						
CPUP				LR	LR	19 58 39.8	
	comp=Z,110nm,18.1s,baz=104,slow=40						
	comp=Z,0.2nm,0.3s						
PLTB	Pedras Altas	15.51	94	Pn	Pn	19 53 03.2	-1.7
LPAZ	La Paz	16.13	13	Pn	Pn	19 53 12.8	-0.7
	comp=Z,3.1nm,0.7s,baz=158,slow=11,SNR=0.6						
SIV	San Ignacio	18.82	34	P	P	19 53 45.5	-0.4
	baz=202,slow=10,SNR=17						
SIV				LR	LR	20 01 40.4	
	comp=Z,117nm,18.4s,baz=184,slow=39						
	comp=Z,3.7nm,0.8s						
EFI	East Falkland	22.00	157	P	P	19 54 18.8	-1.4
USHA	Ushuaia	22.83	175	P	P	19 54 29.9	+1.0
	comp=Z,9.9nm,0.9s,baz=313,slow=6.1,SNR=3.8						
USHA				LR	LR	20 04 52.0	
	comp=Z,194nm,18.2s,baz=184,slow=40						
	comp=Z,9.9nm,0.9s						
BDFB	Brasilia	27.20	58	P	P	19 55 10.9	+0.9
BDFB				IAmb	IAmb	19 55 18.5	
	comp=Z,12nm,1.0s						
BDFB	Brasilia	27.20	58	P	P	19 55 09.6	-0.4
	comp=Z,8.5nm,1.0s,baz=247,slow=6.3,SNR=8.2						
BDFB				LR	LR	20 07 21.2	
	comp=Z,333nm,18.4s,baz=221,slow=40						
	comp=Z,8.5nm,1.0s						
PMSA	Palmer Station	33.03	174	LR	LR	20 09 00.7	
	comp=Z,118nm,18.0s,baz=342,slow=36						
BOAV	Boa Vista	35.98	20	P	P	19 56 27.3	+0.2
BOAV				IAmb	IAmb	19 56 54.2	
	comp=Z,11nm,1.5s						
SDV	Santo Domingo	40.80	2	LR	LR	20 14 45.3	
	comp=Z,82nm,21.1s,baz=254,slow=37						
BELA	Belgrano 2	48.70	170	P	P	19 58 10.2	+0.3
BELA				IAmb	IAmb	19 58 12.8	
	comp=Z,6.9nm,1.2s						
VNA3	Neumayer Olymp	51.04	158	⇑P	P	19 58 29.0	+1.2
	comp=Z,6.3nm,0.7s						
VNA2	Neumayer--Watz	51.69	158	⇑P	P	19 58 34.0	+1.4
	comp=Z,5.6nm,0.6s,baz=287,slow=9.6						
SNAA	Sanae	53.27	158	⇑P	P	19 58 45.6	+1.2
	comp=Z,184nm,1.2s						
SNAA	Sanae	53.27	158	P	P	19 58 43.1	-1.3
SNAA				IAmb	IAmb	19 58 47.3	
	comp=Z,5.5nm,0.8s						
SNAA	Sanae	53.27	158	P	P	19 58 45.7	+1.2
	comp=Z,6.2nm,0.9s,baz=282,slow=6.2,SNR=10						
SNAA				LR	LR	20 19 36.5	
	comp=Z,38nm,20.1s,baz=7.5,slow=34						
	comp=Z,6.2nm,0.9s						
TROLL	Troll, Antarti	54.98	159	⇑P	P	19 58 58.3	+1.3
	comp=Z,260nm,0.6s						
QSPA	South Pole Qui	58.11	180	P	P	19 59 19.9	+0.6
QSPA	South Pole Qui	58.11	180	P	P	19 59 19.5	+0.1
	comp=Z,2.9nm,0.8s,baz=217,slow=1.1,SNR=18						
	comp=Z,2.9nm,0.8s						
VNDA	Vanda	65.97	191	P	P	20 00 11.8	0.0
	comp=Z,0.4nm,1.0s,baz=177,slow=2.2,SNR=1.4						
	comp=Z,0.4nm,1.0s						
DBIC	Dimbokro	74.45	72	P	P	20 01 04.3	-0.3
	comp=Z,5.6nm,0.8s,baz=243,slow=5.5,SNR=6.7						
	comp=Z,5.6nm,0.8s						
MAW	Mawson	74.93	164	LR	LR	20 33 24.3	
	comp=Z,62nm,20.4s,baz=236,slow=35						
BOSA	Boshof	80.82	118	P	P	20 01 40.6	+0.3
	comp=Z,2.0nm,0.8s,baz=246,slow=2.7,SNR=4.0						
BOSA				LR	LR	20 34 07.1	
	comp=Z,52nm,18.6s,baz=204,slow=33						
	comp=Z,2.0nm,0.8s						
NVAR	Mina Array Bea	82.43	325	P	P	20 01 48.3	-0.2
	comp=Z,0.6nm,0.7s,baz=161,slow=5.6,SNR=2.2						
	comp=Z,0.6nm,0.7s						
TORD	Torodi Ar. Bea	83.44	70	P	P	20 01 54.1	+0.1
LSZ	Lusaka	90.25	108	LR	LR	20 40 18.6	
	comp=Z,55nm,18.4s,baz=250,slow=34						
MDT	Midelt	90.53	51	LR	LR	20 42 53.0	
	comp=Z,21nm,19.4s,baz=248,slow=36						
ESDC	Sonseca Array	95.17	46	LR	LR	20 41 41.7	
	comp=Z,38nm,21.6s,baz=254,slow=33						
H11S2	WAKE ISLAND Hy	125.92	270	T	T	22 27 32.1	
	baz=118,slow=75,SNR=77						
H11S1	WAKE ISLAND Hy	125.94	270	T	T	22 27 30.5	
	baz=118,slow=75,SNR=84						
H11S3	WAKE ISLAND Hy	125.94	270	T	T	22 27 32.4	
	baz=118,slow=75,SNR=66						
H11N3	WAKE ISLAND Hy	126.29	272	T	T	22 27 56.8	
	baz=116,slow=75,SNR=20						
H11N1	WAKE ISLAND Hy	126.30	272	T	T	22 27 58.4	
	baz=116,slow=75,SNR=7.1						
H11N2	WAKE ISLAND Hy	126.31	272	T	T	22 27 48.6	
	baz=116,slow=75,SNR=50						
BVAR	Borovoye Array	145.79	41	PKPbc	PKPab	20 09 06.0	+0.9
	comp=Z,1.6nm,0.5s,baz=300,slow=2.8,SNR=11						
YAK	Yakutsk	147.01	341	PKPbc	PKPbc	20 09 08.1	+0.1
	comp=Z,6.4nm,0.6s,baz=21,slow=1.7,SNR=5.9						
KURBB	Kurchatov Arra	151.39	41	PKPbc	PKiKP	20 09 20.5	+0.6
	comp=Z,1.3nm,0.7s,baz=298,slow=3.0,SNR=15						
KURBB				PKPab	PKPab	20 09 27.9	+0.1
	comp=Z,1.8nm,0.6s,baz=303,slow=2.9,SNR=6.5						
ZALV	Zalesovo Beam	152.55	30	PKPbc	PKiKP	20 09 23.2	+0.9
	comp=Z,1.2nm,0.4s,baz=309,slow=5.0,SNR=6.9						
ZALV				PKPab	PKPab	20 09 30.4	-2.0
	comp=Z,3.5nm,0.6s,baz=300,slow=4.1,SNR=5.1						
MKAR	Makanchi Array	155.39	46	PKPab	PKPab	20 09 42.7	-2.2
	comp=Z,1.3nm,0.8s,baz=354,slow=1.2,SNR=8.9						

SKHL **02** *19:56:25.5±0.1, 46.°80N×151.°10E, h163^{km}±2^{km}, mb5.3/5, mbv4.6/3, msh5.0/2, msha6.0/5*

MOS **02** *19:56:26.9±1.2, 47.°00N×150.°92E, h181^{km}, mb4.4/25, Error ellipse: s-maj=7.7km s-min=5.5km az=80.7*

NEIC **02** *19:56:28.7±2.2, 47.°12N±0.°10×150.°8E±0.°1, h175^{km}±9^{km}, mb4.3/57, Error ellipse: s-maj=15.4km s-min=11.8km az=142.0*

JMA **02** *19:56:28.3±0.6, 46°N±5°×15°1E±°, h189^{km}, MV4.1/13, KURILE ISLANDS REGION*

IDC **02** *19:56:29.6±1.4, 47.°26N×150.°76E, h180^{km}±12^{km}, mb3.8/25, mbtmp4.2/34, MS3.7/5, Error ellipse: s-maj=15.0km s-min=8.3km az=155.0*

ISC 02 19:56:25.9±0.4**, 46.°85N**±0.°05×**151.°04E**±0.°05**, h166^{km}, h165^{km}:pP-P, n464,** σ1.^{s}27/480**, mb4.3**/90**, 9C-16D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.74	235	ePN	Pn	19 57 12.8	+2.2
KUR				i S	Sn	19 57 48.0	+2.7
KUR				pmax	pmax		
	comp=Z,127nm,0.9s						
KUR				smax	smax		
	comp=N,2µm,1.8s						
KUR				smax	smax		
	comp=E,2µm,1.8s						
KUR				smax	smax		
	comp=N,652nm,0.3s						
KUR				smax	smax		
	comp=E,459nm,0.3s						
KUR	Kuril'sk	2.74	235	eP	Pn	19 57 12.4	+1.8
KUR				AMB	AMB	19 57 17.1	
	comp=E,130nm,0.6s						
KUR				eS	Sn	19 57 49.0	+3.7
KUR				A	A	19 57 51.9	
	comp=E,780nm,0.3s						
KUR				A	A	19 57 51.9	
	comp=E,460nm,0.3s						
KUR				A	A	19 57 59.4	
	comp=E,2µm,1.8s						
KUR				A	A	19 57 59.4	
	comp=E,2µm,1.8s						
SHO	Shikotan	4.20	226	ePN	Pn	19 57 29.6	+0.4
SHO				i S	Sn	19 58 16.0	-2.5
SHO				pmax	pmax		
	comp=N,41nm,0.2s						
SHO				pmax	pmax		
	comp=E,47nm,0.2s						
SHO				pmax	pmax		
	comp=Z,105nm,0.2s						
SHO				smax	smax		
	comp=E,392nm,0.6s						
SHO				smax	smax		
	comp=N,264nm,0.3s						
SHO	Shikotan	4.20	226	eP	Pn	19 57 29.8	+0.6
SHO				AMB	AMB	19 57 30.7	
	comp=N,80nm,0.3s						
SHO				i S	Sn	19 58 16.5	-2.0
SHO				A	A	19 58 18.4	
	comp=N,390nm,0.5s						
SHO				A	A	19 58 18.4	
	comp=N,490nm,0.5s						
YUK	Yuzh-Kuril'sk	4.60	234	c iPN	Pn	19 57 36.0	+1.6
YUK				eS	Sn	19 58 28.4	+0.6
YUK				pmax	pmax		
	comp=N,33nm,0.3s						
YUK				pmax	pmax		
	comp=Z,330nm,0.3s						
YUK				pmax	pmax		
	comp=E,30nm,0.4s						
YUK				smax	smax		
	comp=N,306nm,0.4s						
YUK				smax	smax		
	comp=E,361nm,0.5s						
YUK	Yuzh-Kuril'sk	4.60	234	i P	Pn	19 57 36.3	+1.9
YUK				AMB	AMB	19 57 36.6	
	comp=E,290nm,0.2s						
YUK				eS	Sn	19 58 30.7	+2.9
YUK				A	A	19 58 35.3	
	comp=E,340nm,0.5s						
YUK				A	A	19 58 35.3	
	comp=E,480nm,0.5s						
RUSJ	Misakicho	4.91	238	ePN	Pn	19 57 40.7	+2.3
RUSJ				eS	Sn	19 58 41.1	+6.0
GLVR	Golovnino	4.98	233	ePN	Pn	19 57 40.8	+1.5
GLVR				eS	Sn	19 58 37.0	+0.3
GLVR				pmax	pmax		
	comp=N,11nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,189nm,0.1s						
GLVR				smax	smax		
	comp=N,740nm,0.3s						
GLVR				smax	smax		
	comp=E,262nm,0.3s						
GLVR	Golovnino	4.98	233	eP	Pn	19 57 40.8	+1.5
GLVR				AMB	AMB	19 57 40.9	
	comp=E,190nm,0.1s						
GLVR				eS	Sn	19 58 37.0	+0.3
GLVR				A	A	19 58 46.6	
	comp=E,740nm,0.3s						
GLVR				A	A	19 58 46.6	
	comp=E,260nm,0.3s						
JRA	Rausu	5.08	237	P	Pn	19 57 42.5	+1.8
JRA				eS	Sn	19 58 40.6	+1.6
SKR	Severo-Kuril's	5.10	39	ePN	Pn	19 57 41.6	+0.9
SKR				eS	Sn	19 58 38.7	-0.7
SKR				pmax	pmax		
	comp=Z,19nm,0.6s						
SKR				smax	smax		
	comp=N,47nm,0.2s						
SKR				smax	smax		
	comp=E,50nm,0.2s						
SKR				MLR	MLR		
	comp=Z,100nm,11.0s						
SKR	Severo-Kuril's	5.10	39	eP	Pn	19 57 41.6	+0.9
SKR				AMB	AMB	19 57 42.9	
	comp=Z,20nm,0.6s						
SKR				AMB	AMB	19 57 43.5	
	comp=Z,140nm,2.0s						
SKR				eS	Sn	19 58 41.2	+1.8
SKR				A	A	19 58 42.0	
	comp=Z,200nm,2.5s						
SKR				A	A	19 58 42.0	
	comp=Z,130nm,2.5s						
SKR				A	A	19 58 46.0	
	comp=Z,50nm,0.2s						
SKR				A	A	19 58 46.0	
	comp=Z,50nm,0.2s						
NEM2	Nemuro 2	5.12	229	P	Pn	19 57 40.6	-0.5
NEM2				eS	Sn	19 58 36.1	-3.8
NMR	Nemuro--Hokkai	5.12	229	⇓iPN	Pn	19 57 40.5	-0.6
NMR	Nemuro--Hokkai	5.12	229	i P	Pn	19 57 40.5	-0.6
JNK	Nakash	5.53	236	eP	Pn	19 57 47.9	+1.3
JNK				S	Sn	19 58 50.4	+0.7
YSS	Yuzhno-Sakhali	5.68	274		Pn	19 57 49.2	+0.7
YSS	Yuzhno-Sakhali	5.68	274	ePN	Pn	19 57 51.2	+2.8
YSS				eS	Sn	19 58 56.3	+3.1
YSS				pmax	pmax		
	comp=Z,100nm,4.4s						
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				smax	smax		
	comp=N,10.0nm,1.0s						
YSS				smax	smax		
	comp=E,10.0nm,0.9s						
YSS				smax	smax		
	comp=N,100nm,3.8s						
YSS				smax	smax		
	comp=E,100nm,3.7s						
YSS	Yuzhno-Sakhali	5.68	274	eP	Pn	19 57 49.9	+1.4
YSS				AMB	AMB	19 57 55.7	
	comp=E,100nm,4.4s						
JTKR	Abashiri--Toko	5.79	243	P	Pn	19 57 51.8	+1.9
AKK	Akkeshi	5.83	231	eP	Pn	19 57 50.3	-0.2
JAK	Akkeshi	5.92	232	P	Pn	19 57 51.3	-0.4
JAK				S	Sn	19 58 55.4	-3.6
PAU	Pauzhetka	5.97	37	eP	Pn	19 57 52.1	-0.2
PAU				eS	Sn	19 58 58.8	-1.3
JAR	Ashorobuto	6.25	238	P	Pn	19 57 58.1	+2.1
JAR				S	Sn	19 59 07.4	+0.6
JOB	Onbets	6.46	235	P	Pn	19 57 59.3	+0.5
JOB				S	Sn	19 59 09.1	-2.7
JKA	Kamikawa-asahi	6.53	248		Pn	19 58 02.9	+3.2
JKA	Kamikawa-asahi	6.53	248	eP	Pn	19 58 02.9	+3.2
ASAJ	Asahikawa	6.54	248	P	Pn	19 58 03.1	+3.3
	comp=E,43nm,0.6s,baz=72,slow=12,SNR=105						
ASAJ				S	Sn	19 59 16.4	+2.9
	comp=E,5.7nm,0.5s,baz=150,slow=20,SNR=1.1						
ASAJ	Asahikawa	6.54	248	PN	Pn	19 58 02.9	+3.1
JKK2	Kamakawa 2	6.56	246	P	Pn	19 58 02.7	+2.7
TYV	Tymovskoe	6.84	309	ePN	Pn	19 58 04.9	+1.2
TYV				pmax	pmax		
	comp=Z,200nm,4.8s						
TYV				pmax	pmax		
	comp=Z,8.0nm,1.2s						
TYV	Tymovskoe	6.84	309	eP	Pn	19 58 05.3	+1.6
TYV				AMB	AMB	19 58 05.9	
	comp=Z,200nm,4.8s						
TYV				eS	Sn	19 59 24.5	+3.9
JCH	Churui	6.91	235	P	Pn	19 58 04.5	-0.3
JCH				S	Sn	19 59 18.3	-4.3
ERM	Erimo	7.43	232		Pn	19 58 11.5	-0.1
ERM	Erimo	7.43	232	dePN	Pn	19 58 11.8	+0.2
JNBK	Urakawa-nobuka	7.47	235	P	Pn	19 58 10.8	-1.4
PEA0B	Petropavlovsk-	7.59	32		Pn	19 58 13.4	-0.3
PEA0B	Petropavlovsk-	7.59	32	cePN	Pn	19 58 15.3	+1.6
PETK	Petropavlovsk-	7.59	32		Pn	19 58 13.4	-0.3
PETK	Petropavlovsk-	7.59	32	P	Pn	19 58 14.2	+0.4
	comp=Z,6.5nm,0.6s,baz=208,slow=11,SNR=34						
PETK				S	Sn	19 59 36.3	-2.4
	comp=Z,0.6nm,0.5s,baz=221,slow=7.7,SNR=0.8						
PET	Petropavlovsk	7.89	36	eP	Pn	19 58 17.0	-0.6
JTM	Tenmabayashi	9.41	234		Pn	19 58 35.1	-2.8
JANG	Nango	9.46	230	P	Pn	19 58 35.5	-3.0
JANG				eS	Sn	20 00 13.9	-10
JTH	Tanohata	9.60	227	eP	Pn	19 58 37.0	-3.4
MA2	Magadan	12.75	359	P	Pn	19 59 19.9	-1.2
	comp=Z,2.8nm,0.7s,baz=202,slow=6.5,SNR=5.6						
MA2	Magadan	12.75	359	i PN	Pn	19 59 19.9	-1.2
MA2				pmax	pmax		
	comp=Z,8.0nm,1.4s						
KLR	Kul'dur	13.13	288	P	Pn	19 59 26.6	+0.7
	comp=Z,3.4nm,0.9s,baz=100,slow=13,SNR=8.7						
KLR				LR	LR	20 04 09.0	
	comp=Z,15nm,18.4s,baz=160,slow=36						
KLR	Kul'dur	13.13	288	dePN	P	19 59 28.0	-2.1
KLR				pmax	pmax		
	comp=Z,13nm,1.7s						
KLR	Kul'dur	13.13	288	eP	Pn	19 59 26.1	+0.1
USA0B	Ussuriysk Arra	13.62	266		Pn	19 59 31.6	-0.6
USA0B	Ussuriysk Arra	13.62	266	c iP	P	19 59 33.6	-1.9
USRK	Ussuriysk Ar.	13.62	266	Pn	Pn	19 59 32.1	-0.1
USRK	Ussuriysk Ar.	13.62	266	P	P	19 59 33.7	-1.8
	comp=Z,8.7nm,0.7s,baz=72,slow=12,SNR=11						
MJAR	Matsushiro Arr	14.05	227	P	P	19 59 42.1	+1.7
	comp=Z,2.2nm,0.5s,baz=31,slow=10,SNR=14						
MAJO	Matsushiro	14.05	227	Pn	P	19 59 40.3	-0.1
MAJO	Matsushiro	14.05	227	deP	P	19 59 40.5	+0.1
HEH	HeiHe	16.00	291	eP	P	20 00 02.0	+0.2
HEH				pmax	pmax		
	comp=Z,33nm,0.9s						
SEY	Seymchan	16.14	2	P	Pn	20 00 02.8	-0.4
	comp=Z,5.5nm,0.8s,baz=182,slow=8.7,SNR=19						
SEY	Seymchan	16.14	2	⇑eP	P	20 00 03.3	0.0
SEY				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ZEA	Zeya	16.64	303	eP	Pn	20 00 09.9	+0.5
ZEA				pmax	pmax		
	comp=E,10.0nm,1.0s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA	Zeya	16.64	303	eP	Pn	20 00 09.8	+0.4
KSRS	Korea Array	19.48	250	P	Pn	20 00 42.6	-0.4
	comp=Z,2.5nm,0.8s,baz=46,slow=11,SNR=16						
YAK	Yakutsk	19.49	329		P	20 00 38.7	-1.1
YAK	Yakutsk	19.49	329	P	P	20 00 38.1	-1.7
	comp=Z,13nm,0.3s,baz=103,slow=0.9,SNR=20						
YAK	Yakutsk	19.49	329	eP	P	20 00 39.3	-0.5
YAK				eS	S	20 04 06.9	-3.8
YAK				pmax	pmax		
	comp=Z,110nm,1.0s						
YAK				pmax	pmax		
	comp=N,32nm,1.2s						
YAK				pmax	pmax		
	comp=E,28nm,1.5s						
YAK				smax	smax		
	comp=E,40nm,4.3s						
YAK				smax	smax		
	comp=N,29nm,3.8s						
YAK	Yakutsk	19.49	329	eP	P	20 00 38.7	-1.1
BILL	Bilibino	22.64	15	⇓eP	P	20 01 12.8	+0.3
BILL				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BILL	Bilibino	22.64	15	eP	P	20 01 12.8	+0.3
SPIA	Saint Paul Isl	25.63	52	P	P	20 01 40.0	+0.3
	baz=264						
P08K	Saint George I	25.95	53	P	P	20 01 43.1	+0.5
	baz=266						
NIKH	Nikolski High	26.27	62	P	P	20 01 46.8	+1.2
	baz=274						
GAMB	Gambell	26.59	37	P	P	20 01 48.1	-0.1
	baz=249						
TIK	Tiksi	26.97	345	eP	P	20 01 49.9	-1.7
TIXI	Tiksi	26.99	345		P	20 01 49.5	-2.2
TIXI				IAmb	IAmb	20 01 51.0	
	comp=Z,4.2nm,0.8s						
TIXI	Tiksi	26.99	345	⇓eP	P	20 01 49.9	-1.8
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
UNV	Unalaska Valle	27.64	60	P	P	20 01 58.2	+0.5
	baz=274						
M11K	Mekoryuk	28.18	46	P	P	20 02 02.1	-0.3
	baz=261						
TNA	Tin City	28.75	35	P	P	20 02 06.3	-1.1
	baz=250						
HHC	Hu-ho-hao-te	28.87	273	eP	P	20 02 10.7	+1.8
HHC				pmax	pmax		
	comp=Z,12nm,0.5s						
HHC				pmax	pmax		
	comp=Z,35nm,5.7s						
K13K	Kusilvak Mount	29.18	43	P	P	20 02 11.1	-0.1
	baz=260						
F14K	Arctic Creek	29.35	35	P	P	20 02 12.0	-0.7
	baz=252						
ANM	Nome	29.47	37	P	P	20 02 13.6	-0.2
	baz=255						
M13K	Dall Lake	29.58	46	P	P	20 02 14.8	0.0
	baz=264						
J14K	Nanvaranak Lak	29.84	41	P	P	20 02 16.8	-0.2
	baz=260						
SONM	Songino Array	29.96	289	P	P	20 02 18.0	-0.5
	comp=Z,0.9nm,0.9s,baz=90,slow=8.3,SNR=4.7						
SONM				ScP	ScP	20 08 39.9	-3.0
	comp=Z,0.2nm,0.4s,baz=69,slow=4.8,SNR=1.8						
	comp=Z,0.9nm,0.9s						
H11N2	WAKE ISLAND Hy	30.00	149	T	T	20 34 00.4	
	baz=338,slow=76,SNR=137						
H11N1	WAKE ISLAND Hy	30.01	149	T	T	20 33 59.8	
	baz=338,slow=76,SNR=94						
H11N3	WAKE ISLAND Hy	30.01	149	T	T	20 34 01.6	
	baz=338,slow=76,SNR=138						
L14K	Kuka Creek	30.02	44	P	P	20 02 18.2	-0.4
	baz=263						
F15K	North Star Dit	30.09	35	P	P	20 02 18.6	-0.6
	baz=254						
S12K	Black Hills	30.12	55	P	P	20 02 19.3	-0.3
	baz=274						
G15K	Niukluk	30.13	37	P	P	20 02 18.9	-0.8
	baz=256						
M14K	Bethel	30.30	45	P	P	20 02 20.7	-0.4
	baz=265						
N14K	Kuskokwak Cree	30.36	47	P	P	20 02 21.7	+0.1
	baz=267						
O14K	Tigyukauivet M	30.54	48	P	P	20 02 23.3	+0.1
	baz=268						
L15K	Ungalak Mounta	30.63	44	P	P	20 02 23.8	-0.3
	baz=264						
C16K	Lisburne Hills	30.69	30	P	P	20 02 23.2	-1.3
	baz=249						
K15K	Wolf Creek Mou	30.69	42	P	P	20 02 23.9	-0.7

	baz=263						
H16K	Elim	30.80	38	P	P	20 02 24.7	-0.8
	baz=258						
M15K	Kasigluk River	30.92	46	P	P	20 02 26.7	+0.2
	baz=266						
G16K	Koyuk River	30.92	36	P	P	20 02 25.8	-0.7
	baz=257						
SDPT	Sand Point	31.04	56	P	P	20 02 27.9	+0.2
	baz=275						
H11S1	WAKE ISLAND Hy	31.06	150	T	T	20 35 25.1	
	baz=339,slow=76,SNR=95						
H11S3	WAKE ISLAND Hy	31.07	150	T	T	20 35 12.9	
	baz=339,slow=76,SNR=56						
H11S2	WAKE ISLAND Hy	31.08	150	T	T	20 35 21.0	
	baz=339,slow=76,SNR=64						
N15K	Kwethluk River	31.18	47	P	P	20 02 28.1	-0.8
	baz=268						
J16K	Anvik River	31.26	41	P	P	20 02 28.7	-0.8
	baz=262						
O15K	Ungalikthiuk R	31.28	49	P	P	20 02 29.0	-0.8
	baz=270						
D17K	Noatak River	31.29	32	P	P	20 02 28.1	-1.6
	baz=252						
I17K	Unalakleet	31.31	39	P	P	20 02 29.2	-0.8
	baz=261						
RDOG	Red Dog Mine	31.46	31	P	P	20 02 30.4	-0.9
	baz=252						
S14K	Fog Glacier	31.49	54	P	P	20 02 31.9	+0.2
	baz=274						
C17K	DeLong Mountai	31.51	30	P	P	20 02 30.7	-1.0
	baz=251						
E17K	Hotham Inlet	31.57	33	P	P	20 02 31.1	-1.1
	baz=254						
L16K	Owhat River	31.59	44	P	P	20 02 31.9	-0.5
	baz=266						
CHNA	Chernabura Isl	31.60	57	P	P	20 02 32.9	+0.3
	baz=277						
F17K	Baldwin Pennin	31.62	35	P	P	20 02 31.9	-0.7
	baz=256						
G17K	Kiwalik Mounta	31.64	36	P	P	20 02 32.3	-0.5
	baz=258						
M16K	Timber Creek	31.78	45	P	P	20 02 33.4	-0.7
	baz=267						
H17K	Granite Mounta	31.83	38	P	P	20 02 33.9	-0.6
	baz=260						
N16K	Nishlik Lake	31.85	46	P	P	20 02 33.6	-1.2
	baz=268						
J17K	VABM Dome	31.95	41	P	P	20 02 34.2	-1.4
	baz=263						
E18K	Tukpahlearik C	32.12	33	P	P	20 02 35.5	-1.5
	baz=255						
O16K	Kokwok River B	32.17	48	P	P	20 02 37.0	-0.5
	baz=270						
L17K	Donlin	32.18	43	P	P	20 02 36.4	-1.2
	baz=266						
P16K	Nushagak River	32.22	49	P	P	20 02 37.4	-0.5
	baz=271						
K17K	Iditarod	32.23	42	P	P	20 02 37.2	-0.8
	baz=265						
C18K	Utukok River	32.26	31	P	P	20 02 36.6	-1.7
	baz=253						
B18K	Kokolik River	32.28	29	P	P	20 02 37.1	-1.3
	baz=251						
F18K	Selawik	32.28	35	P	P	20 02 37.1	-1.3
	baz=258						
H18K	Honhosa River	32.52	37	P	P	20 02 39.2	-1.4
	baz=261						
G18K	Tagagawik	32.53	36	P	P	20 02 39.2	-1.4
	baz=260						
M17K	Holitna River	32.54	44	P	P	20 02 40.1	-0.7
	baz=268						
N17K	Nushagak Hills	32.63	46	P	P	20 02 40.1	-1.5
	baz=270						
O17K	Koliganek Bris	32.68	47	P	P	20 02 41.3	-0.6
	baz=271						
A19K	Wainwright	32.80	28	P	P	20 02 41.1	-1.8
	baz=251						
L18K	Granite Mounta	32.94	43	P	P	20 02 43.2	-1.0
	baz=267						
C19K	Lookout Ridge	32.95	30	P	P	20 02 45.1	+0.8
C19K				IAmb	IAmb	20 02 46.3	
	comp=Z,8.4nm,0.9s						
C19K	Lookout Ridge	32.95	30	P	P	20 02 42.5	-1.7
	baz=254						
J18K	Innoko River	33.02	41	P	P	20 02 43.6	-1.3
	baz=266						
P17K	Kvichak River	33.02	49	P	P	20 02 44.1	-0.8
	baz=272						
F19K	Shaleruckik Mo	33.06	34	P	P	20 02 43.5	-1.7
	baz=259						
GCSA	Galena City Sc	33.08	38	P	P	20 02 43.9	-1.5
	baz=263						
N18K	Kilae Creek	33.28	46	P	P	20 02 46.4	-0.8
	baz=270						
TTA	Tatalina	33.29	42	P	P	20 02 47.0	-0.4
	baz=267						
D19K	Kuna River	33.30	31	P	P	20 02 48.4	+1.1
D19K	Kuna River	33.30	31	P	P	20 02 46.7	-0.7
	baz=256						
M18K	Stony River	33.32	44	P	P	20 02 47.0	-0.5
	baz=269						
Q17K	Contact Creek	33.35	50	P	P	20 02 47.5	-0.5
	baz=274						
H19K	Roundabout Mou	33.37	37		P	20 02 49.4	+1.6
H19K				IAmb	IAmb	20 02 51.9	
	comp=Z,6.4nm,1.1s						
H19K	Roundabout Mou	33.37	37	P	P	20 02 46.9	-0.9
	baz=263						
E19K	Redstone River	33.39	33	IAmb	IAmb	20 02 50.6	
	comp=Z,7.0nm,1.1s						
E19K	Redstone River	33.39	33	P	P	20 02 46.5	-1.6
	baz=259						
J19K	Poorman	33.55	40	P	P	20 02 48.6	-0.8
	baz=266						
O18K	Koktuh Hills	33.63	47	P	P	20 02 49.6	-0.6
	baz=272						
P18K	Big Mountain,	33.63	48	P	P	20 02 49.9	-0.4
	baz=273						
CHIR	Chirikof Islan	33.73	55	P	P	20 02 51.2	+0.1
	baz=278						
Q18K	Katmai Hardscr	33.79	49	P	P	20 02 51.1	-0.7
	baz=274						
L19K	White Mountain	33.80	43	P	P	20 02 50.9	-0.7
	baz=269						
D20K	Etivluk River	33.89	31	P	P	20 02 51.6	-0.8
	baz=258						
F20K	Avaraart Lake	33.89	34	P	P	20 02 50.3	-2.1
	baz=261						
E20K	Nigu River	33.94	32	P	P	20 02 51.8	-1.1
	baz=259						
N19K	Bonanza Creek	33.97	46	P	P	20 02 52.5	-0.7
	baz=272						
M19K	Big River Lodg	34.01	44	P	P	20 02 53.2	-0.3
	baz=270						
H20K	Anotleneega Mo	34.01	37	P	P	20 02 52.8	-0.7
	baz=264						
B20K	Meade River	34.02	29	P	P	20 02 55.0	+1.6
B20K	Meade River	34.02	29	P	P	20 02 52.0	-1.4
	baz=255						
I20K	Naaghedeneel	34.11	38	P	P	20 02 53.4	-0.9
	baz=266						
R18K	Karluk	34.17	51	P	P	20 02 54.8	-0.1
	baz=276						
K20K	Telida	34.20	41	P	P	20 02 54.5	-0.6
	baz=268						
J20K	Nowinta River	34.21	40	P	P	20 02 54.6	-0.5
	baz=267						
L20K	Farewell, AK	34.26	43	P	P	20 02 55.4	-0.2
	baz=270						
SII	Sitkinak Islan	34.43	53	P	P	20 02 57.4	+0.2
	baz=278						
Q19K	Cape Douglas,	34.48	49	P	P	20 02 57.0	-0.5
	baz=275						
A21K	Barrow	34.56	27	P	P	20 02 56.8	-1.3
	baz=254						
M20K	Styx River	34.60	44	P	P	20 02 57.6	-1.1
	baz=271						
C21K	Knifeblade Rid	34.63	31	P	P	20 02 57.8	-0.9
	baz=259						
P19K	Oil Pt	34.64	48	P	P	20 02 58.5	-0.5
	baz=274						
G21K	Allakaket	34.69	35	P	P	20 02 58.6	-0.6
	baz=264						
F21K	Alatna River	34.78	34	P	P	20 02 59.4	-0.7
	baz=263						
B21K	Ikpikpuk River	34.78	30		P	20 03 01.6	+1.6
B21K	Ikpikpuk River	34.78	30	P	P	20 02 59.3	-0.7
	baz=258,SNR=10						
E21K	Killik River	34.78	32	P	P	20 02 59.0	-1.2
	baz=261						
OHAK	Old Harbor	34.84	52	P	P	20 03 00.7	+0.1
	baz=278						
H21K	Melozitna Rive	34.89	37	P	P	20 03 00.4	-0.6
	baz=266						
O20K	Slope Mountain	34.91	47	P	P	20 03 01.4	0.0
	baz=274						
A22K	Sinclair Lake	34.98	28	P	P	20 03 01.0	-0.7
	baz=256						
CHUM	Lake Minchumin	35.00	40	P	P	20 03 01.8	-0.1
	baz=269						
PPLA	Purkeypile	35.04	42	P	P	20 03 02.2	-0.3
	baz=270						
N20K	Mount Spurr	35.06	45	P	P	20 03 02.5	-0.1
	baz=273						
CAST	Castle Rocks	35.09	41	P	P	20 03 02.1	-0.7
	baz=270						
KDAK	Kodiak Island	35.15	51	P	P	20 03 03.0	-0.3
	baz=278						
Q20K	Shuyak Island	35.15	49	P	P	20 03 03.3	0.0
	baz=276						
I21K	Tanana	35.20	38	P	P	20 03 03.1	-0.5
	baz=267						
F22K	John River	35.32	34	P	P	20 03 04.7	+0.1
	baz=264						
D22K	Ayikyak River	35.32	31	P	P	20 03 04.1	-0.6
	baz=261						
B22K	Teshekpuk Lake	35.34	29	P	P	20 03 04.0	-0.8
	baz=259						
SKT	Skwentna	35.36	43	P	P	20 03 05.6	+0.6
	baz=272						
HOM	Homer	35.44	47	P	P	20 03 06.2	+0.4
	baz=276						
H22K	Ishtalitna Cre	35.49	37	P	P	20 03 06.4	+0.3
	baz=267						
G22K	Bettles	35.52	35	P	P	20 03 06.5	+0.1
	baz=265						
E22K	Anaktuvuk Pass	35.53	33		P	20 03 08.0	+1.5
E22K				IAmb	IAmb	20 03 09.0	
	comp=Z,6.4nm,0.7s						
E22K	Anaktuvuk Pass	35.53	33	P	P	20 03 06.5	0.0
	baz=263						
BPAW	Bear Paw Mtn.	35.59	40	P	P	20 03 06.4	-0.6
	baz=270						
MLY	Manley	35.72	38	P	P	20 03 07.8	-0.3
	baz=269						
SUA	Susitna One	35.75	44	P	P	20 03 08.0	-0.5
	baz=274						
BRSE	Bradley Lake S	35.89	47	P	P	20 03 09.8	+0.2
	baz=276						
TRF	Thorofare Moun	35.90	41	P	P	20 03 09.0	-0.9
	baz=271						
D23K	Nanushuk River	36.05	31	P	P	20 03 10.6	-0.3
	baz=263						
COLD	Coldfoot	36.05	34	P	P	20 03 10.5	-0.4
	baz=266						
G23K	Bananza Creek	36.09	35		P	20 03 11.8	+0.6
G23K				IAmb	IAmb	20 03 18.6	
	comp=Z,5.9nm,1.2s						
G23K	Bananza Creek	36.09	35	P	P	20 03 10.6	-0.6
	baz=267						
C23K	Itkillik River	36.20	30	P	P	20 03 11.4	-0.7
	baz=262						
H23K	Yukon River	36.24	37	P	P	20 03 12.3	-0.2
	baz=269						
I23K	Minto, Yukon-K	36.30	38	P	P	20 03 12.8	-0.2
	baz=270						
E23K	Chandalar	36.35	33	IAmb	IAmb	20 03 21.4	
	comp=Z,6.7nm,0.9s						
E23K	Chandalar	36.35	33	P	P	20 03 13.0	-0.4
	baz=266,SNR=8.8						
TOLK	Toolik Lake Re	36.42	32	IAmb	IAmb	20 03 16.0	
	comp=Z,6.0nm,0.8s						
TOLK	Toolik Lake Re	36.42	32	P	P	20 03 13.6	-0.4
	baz=265						
NEA2	Nenana	36.42	39	P	P	20 03 13.5	-0.6
	baz=271						
LZH	Lanzhou	36.46	270	*e*P	P	20 03 17.4	+2.4
LZH				sP	sP	20 04 10.3	+2.5
LZH				pmax	pmax		
	comp=Z,11nm,0.9s						
SEW	Seward	36.50	47	P	P	20 03 14.6	-0.1
	baz=277						
MCK	McKinley	36.50	40	P	P	20 03 14.3	-0.4
	baz=272						
PMR	Palmer	36.52	44	P	P	20 03 14.8	-0.1
	baz=275						
WAT1	Susitna Watana	36.71	42	P	P	20 03 16.2	-0.4
	baz=274						
D24K	Happy Valley	36.74	31	IAmb	IAmb	20 03 23.0	
	comp=Z,6.3nm,0.7s						
D24K	Happy Valley	36.74	31	P	P	20 03 16.0	-0.6
	baz=265						
E24K	Your Creek	36.77	33	IAmb	IAmb	20 03 19.9	
	comp=Z,7.8nm,0.8s						
E24K	Your Creek	36.77	33	P	P	20 03 16.1	-0.9
	baz=267						
C24K	Franklin Bluff	36.84	30	P	P	20 03 16.4	-1.1
	baz=264						
KNK	Knik Glacier	36.85	44	P	P	20 03 18.1	+0.3
	baz=276						
SML	Sawmill	36.88	44	P	P	20 03 19.2	+1.2
SML				IAmb	IAmb	20 03 20.3	
	comp=Z,6.2nm,0.7s						
SML	Sawmill	36.88	44	P	P	20 03 19.2	+1.2
SML				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SML	Sawmill	36.88	44	P	P	20 03 18.1	0.0
	baz=275						
H24K	Noodor Dome	36.93	37	P	P	20 03 18.7	+0.3
	baz=270						
COLA	College	36.95	38	*de*P	P	20 03 19.9	+1.5
COLA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
F24K	Squaw Lake	36.97	34	P	P	20 03 17.8	-0.8
	baz=268						
PWL	Port Wells	36.97	45	P	P	20 03 18.4	-0.3
	baz=276						
WAT6	Susitna Watana	37.10	42	P	P	20 03 19.3	-0.6
	baz=275						
G24K	Hadweenzic Riv	37.10	35	IAmb	IAmb	20 03 22.9	
	comp=Z,14nm,1.5s						
G24K	Hadweenzic Riv	37.10	35	P	P	20 03 18.8	-1.0
	baz=270						
POKR	Poker Plat Res	37.12	38	P	P	20 03 19.5	-0.4
	baz=272						
M23K	Glacier View	37.17	44	P	P	20 03 20.6	+0.2
	baz=276						
DHY	Denali Highway	37.23	41	P	P	20 03 21.1	0.0
	baz=274						
HDA	Harding Lake	37.35	39	P	P	20 03 20.9	-0.9
	baz=273						
SCM	Sheep Creek Mo	37.35	43	P	P	20 03 21.4	-0.6
	baz=276						
ILAR	Eielson Array	37.36	39	P	P	20 03 23.1	+1.1
	comp=Z,1.1nm,0.7s,baz=258,slow=7.3,SNR=12						
	comp=Z,1.1nm,0.7s						
P23K	Montague Islan	37.53	46	P	P	20 03 23.3	-0.1
	baz=278						
GTA	Gaotai	37.55	278	P	P	20 03 25.5	+1.5
GTA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GLI	Glacier Island	37.57	45	P	P	20 03 22.9	-0.9
	baz=278						
D25K	Kavik River	37.62	31	P	P	20 03 22.7	-1.4
	baz=267						
G25K	Bearman Lake	37.65	35	P	P	20 03 23.6	-0.7
	baz=271						
H25L	Birch Creek	37.77	36	P	P	20 03 25.0	-0.3
	baz=272						
F25K	Christian Rive	37.83	34	P	P	20 03 25.4	-0.5
	baz=270						
E25K	Arctic Village	37.87	33	P	P	20 03 26.5	+0.2
	baz=269						
M24K	Tolsona, Glenn	37.87	43	P	P	20 03 26.6	+0.3
	baz=277						
K24K	Donnelly Dome	37.90	40	P	P	20 03 27.2	+0.6
	baz=275						
PRP	Porcupine Dome	37.91	37	P	P	20 03 26.0	-0.7
	baz=273						
NRIK	Noril'sk	37.94	329	P	P	20 03 25.2	-1.5
	comp=Z,1.4nm,0.5s,baz=119,slow=5.9,SNR=4.0						
	comp=Z,1.4nm,0.5s						
NRIK	Noril'sk	37.94	329	⇓*e*P	P	20 03 25.6	-1.2
NRIK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
J25K	Salcha River,	38.02	39	P	P	20 03 27.8	+0.2
	baz=274						
KLU	Klutina	38.06	44	P	P	20 03 27.9	0.0
	baz=278						
PAX	Paxson	38.10	41	P	P	20 03 28.3	-0.1
	baz=276						
C26K	Camden Bay	38.17	30	P	P	20 03 28.5	-0.1
	baz=268						
BMAR	Burnt Mountain	38.24	34		P	20 03 31.0	+1.7
EYAK	Cordova Ski Ar	38.27	45	P	P	20 03 29.8	+0.3
	baz=279						
HARP	HAARP	38.31	42	P	P	20 03 30.0	+0.1
	baz=277						
RIDG	Independent Ri	38.31	40	P	P	20 03 30.0	-0.1
	baz=276						
F26K	Sheenjek River	38.40	34	P	P	20 03 30.3	-0.4
	baz=271						
G26K	Porcupine Rive	38.56	35	IAmb	IAmb	20 03 35.5	
	comp=Z,13nm,1.4s						
G26K	Porcupine Rive	38.56	35	P	P	20 03 32.0	0.0
	baz=272						
C27K	Jago River	38.57	31	P	P	20 03 31.8	-0.3
	baz=269						
N25K	Chitina, Valde	38.67	44	P	P	20 03 33.2	+0.1
	baz=278						
SCRK	Sand Creek	38.67	40	P	P	20 03 33.1	0.0
	baz=276						
BMRM	Bremner River	38.76	45	P	P	20 03 33.7	-0.1
	baz=279						
J26L	Joseph Creek	38.81	39	P	P	20 03 33.6	-0.5
	baz=276						
I26K	Coal Creek Min	38.91	38	P	P	20 03 34.8	-0.1
	baz=275						
KAIM	Kayak Island	39.02	46	P	P	20 03 35.9	0.0
	baz=281						
L26K	Log Cabin Wild	39.06	41	P	P	20 03 36.2	0.0
	baz=278						
M26K	Nabesna, AK	39.31	42	P	P	20 03 38.4	+0.1
	baz=279						
E27K	Coleen River	39.35	33	P	P	20 03 38.3	-0.3
	baz=273						
G27K	Doyon Strip	39.41	35	P	P	20 03 39.1	0.0
	baz=275						
MCARA	McCarthy VSAT	39.45	44	P	P	20 03 39.9	+0.4
	baz=280						
CD2	Chengdu	39.47	263	P	P	20 03 41.7	+1.6
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
K27K	Chicken	39.50	40	IAmb	IAmb	20 03 42.7	
	comp=Z,6.4nm,1.1s						
K27K	Chicken	39.50	40	P	P	20 03 39.8	-0.1
	baz=278						
H27K	Steamboat Moun	39.50	36	P	P	20 03 40.3	+0.4
	baz=275						
I27K	Kandik River	39.52	37	P	P	20 03 40.0	0.0
	baz=276						
CRQE	Cirque	39.53	45	P	P	20 03 40.7	+0.5
	baz=281						
D27M	Malcolm River	39.54	31	P	P	20 03 40.4	+0.2
	baz=272						
L27K	Beaver Creek,	39.74	41		P	20 03 42.9	+1.0
L27K	Beaver Creek,	39.74	41	P	P	20 03 42.1	+0.3
	baz=279						
M27K	Edge Creek, AK	39.83	42	P	P	20 03 42.2	-0.5
	baz=280						
F28M	Old Crow	40.04	34	P	P	20 03 44.2	0.0
	baz=275						
E28M	Babbage River	40.09	32	P	P	20 03 44.7	0.0
	baz=274						
GRNC	Granite Creek	40.18	45	P	P	20 03 44.9	-0.8
GRNC				IAmb	IAmb	20 03 49.5	
	comp=Z,4.8nm,0.7s						
I28M	Miner Creek	40.24	37	P	P	20 03 46.2	+0.2
	baz=278						
CTG	Chitna Glacier	40.33	44	P	P	20 03 47.1	+0.3
	baz=282						
D28M	Stokes Point	40.33	31	P	P	20 03 46.0	-0.5
	baz=274						
YUK3	Moose Creek	40.59	43	P	P	20 03 49.2	+0.1
	baz=282						
DAWY	Dawson	40.67	39	P	P	20 03 49.7	+0.3
	baz=280						
E29M	Blow River	40.71	32	P	P	20 03 50.1	+0.4
	baz=276						
H29M	Whitestone	40.78	36	P	P	20 03 51.1	+0.9
	baz=278						
G29M	Pine Creek	40.83	35	IAmb	IAmb	20 03 54.3	
	comp=Z,5.1nm,0.8s						
G29M	Pine Creek	40.83	35	P	P	20 03 50.6	-0.1
	baz=278						
O28M	Mount Upton	40.92	44	P	P	20 03 52.2	+0.3
	baz=283						
I29M	Ogilvie Camp,	40.92	37	P	P	20 03 52.0	+0.4
	baz=279,SNR=6.0						
M29M	Somme Creek	41.38	42	P	P	20 03 55.7	+0.4
	baz=282						
L29M	L29M	41.39	41	P	P	20 03 55.6	+0.2
	baz=282						
ZALV	Zalesovo Beam	41.40	305	P	P	20 03 54.1	-1.4
	comp=Z,1.0nm,0.8s,baz=18,slow=5.2,SNR=3.7						
ZALV				PcP	PcP	20 05 51.0	+0.8
	comp=Z,2.2nm,0.7s,baz=48,slow=2.2,SNR=8.4						
	comp=Z,1.0nm,0.8s						
EPYK	Eagle Plains	41.42	35	IAmb	IAmb	20 03 58.6	
	comp=Z,6.0nm,0.9s						
EPYK	Eagle Plains	41.42	35	P	P	20 03 55.4	-0.1
	baz=279						
G30M	tAoh Zraii Nji	41.52	35		P	20 03 57.3	+1.0
G30M				IAmb	IAmb	20 03 59.2	
	comp=Z,4.5nm,0.8s						
G30M	tAoh Zraii Nji	41.52	35	P	P	20 03 56.3	-0.1
	baz=279						
YUK4	Talbot Arm	41.53	43	P	P	20 03 56.8	+0.1
	baz=283						
PNL	Peninsula	41.56	46	P	P	20 03 57.5	+0.8
	baz=285						
F30M	Barrier River	41.59	34	P	P	20 03 57.1	+0.2
	baz=279,SNR=10						
I30M	Mount Dempster	41.75	37		P	20 03 59.0	+0.6
I30M				IAmb	IAmb	20 04 01.3	
	comp=Z,6.0nm,0.8s						
I30M	Mount Dempster	41.75	37	P	P	20 03 57.9	-0.4
	baz=281,SNR=14						
O29M	Mount Kennedy	41.80	45	P	P	20 03 59.4	+0.5
	baz=285						
J30M	Hart River	41.89	38	P	P	20 03 59.6	+0.1
	baz=282						
HYT	Haines Junctio	42.19	44	P	P	20 04 02.1	+0.1
	baz=285						
N30M	Aishikik Lake	42.23	43	P	P	20 04 02.6	+0.3
	baz=284						
G31M	Satah River	42.29	34	P	P	20 04 02.7	+0.2
	baz=281						
INK	Inuvik	42.33	32		P	20 04 03.4	+0.6
INK				IAmb	IAmb	20 04 05.6	
	comp=Z,8.3nm,1.1s						
INK	Inuvik	42.33	32	P	P	20 04 03.4	+0.6
INK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
INK	Inuvik	42.33	32	P	P	20 04 02.9	0.0
	baz=280						
P29M	Windy Craggy	42.38	46	P	P	20 04 03.7	+0.3
	baz=286						
F31M	Tsiigehtchic	42.40	34	P	P	20 04 03.3	0.0
	baz=281						
H31M	Peel River	42.47	36		P	20 04 06.2	+2.1
H31M	Peel River	42.47	36	P	P	20 04 04.3	+0.2
	baz=282						
GOMU	GeErMu	42.59	277	P	P	20 04 06.1	+0.3
GOMU				pmax	pmax		
	comp=Z,12nm,0.9s						
P30M	Million Dollar	42.63	45	P	P	20 04 05.7	+0.2
	baz=286						
N31M	Braeburn, Yuko	42.83	43	P	P	20 04 06.8	-0.2
	baz=285						
O30N	Mendenhall	42.87	44	P	P	20 04 07.7	+0.3
	baz=286						
PLBC	Pleasant Camp	43.10	45	P	P	20 04 09.6	+0.4
	baz=287						
M31M	Drury Creek, Y	43.28	41	P	P	20 04 11.6	+1.0
	baz=286						
WHY	Whitehorse	43.48	43	P	P	20 04 12.2	-0.1
	baz=287						
PZH	PanZhiHua	43.62	260	P	P	20 04 14.7	+0.8
PZH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,110nm,4.6s						
KMI	Kunming	43.87	258	P	P	20 04 18.2	+2.2

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KMI                                 pmax     pmax
           comp=Z,12nm,0.8s
N32M  Quiet Lake         44.18  42   P        P          20 04 18.3 +0.5
           baz=288
P32M  Atlin              44.35  45   P        P          20 04 20.0 +0.7
           baz=289
SIT   Sitka              44.38  49   P        P          20 04 20.6 +1.3
           baz=290
R32K  Eaglecrest         44.38  47   P        P          20 04 20.4 +1.0
           baz=290
A36M  Sachs Harbour      44.40  26   P        P          20 04 18.9 -0.4
           baz=283
MMPY  Sheldon Lake,      44.56  40   P        P          20 04 21.7 +0.9
           baz=288
P33M  Teslin, Yukon      44.59  44   P        P          20 04 22.1 +1.0
           baz=289
S32K  Killisnoo          44.62  48   P        P          20 04 21.6 +0.3
           baz=290
Q32M  Nakina River       45.26  45   P        P          20 04 26.3 -0.2
           baz=290
MK31  Makanchi Array     45.63 296deP         P          20 04 28.7 -0.7
MKAR  Makanchi Array     45.63 296            P          20 04 28.7 -0.7
MKAR  Makanchi Array     45.63 296   P        P          20 04 28.6 -0.9
           comp=Z,3.9nm,0.6s,baz=68,slow=7.7,SNR=57
MKAR                                 PcP      PcP        20 06 06.0 +1.2
           comp=Z,1.1nm,0.5s,baz=67,slow=2.1,SNR=8.8
           comp=Z,3.9nm,0.6s
MKAR  Makanchi Array     45.63 296 i P        P          20 04 28.8 -0.7
MKAR                                 pmax     pmax
           comp=Z,4.0nm,0.6s
MKAR  Makanchi Array     45.63 296 eP         P          20 04 28.7 -0.7
R33M  Jennings River     45.74  44   P        P          20 04 30.1 -0.2
           baz=291
U33K  Whale Pass         45.85  49   P        P          20 04 31.6 +0.7
           baz=292
CRAG  Craig              46.10  50   P        P          20 04 33.6 +0.7
           baz=293
KURK  Kurchatov          46.12 303            P          20 04 31.7 -1.5
KURK  Kurchatov          46.12 303d iP        P          20 04 32.0 -1.2
KURK                                 pmax     pmax
           comp=Z,5.0nm,0.7s
KURK  Kurchatov          46.12 303 eP         P          20 04 32.0 -1.2
KURBB Kurchatov Arra     46.21 303   P        P          20 04 32.8 -1.1
           comp=Z,3.7nm,0.7s,baz=70,slow=8.6,SNR=23
KURBB                                PcP      PcP        20 06 07.8 +1.2
           comp=Z,1.0nm,0.6s,baz=66,slow=3.4,SNR=6.2
           comp=Z,3.7nm,0.7s
DLBC  Dease Lake         46.54  45   P        P          20 04 37.2 +0.8
           baz=292
V35K  Ketchikan          46.94  50   P        P          20 04 40.1 +0.7
           baz=294
T35M  Bob Quinn          46.99  47   P        P          20 04 40.8 +0.9
           baz=294
BEAVL Fort Liard         48.21  42   P        P          20 04 50.5 +1.2
           baz=294
LSA   Lhasa              48.85 272   P        P          20 04 56.5 +1.4
LSA                                  pmax     pmax
           comp=Z,6.0nm,0.7s
EUNU  Eureka             49.31  11   P        P          20 04 57.7 +0.3
BVAR  Borovoye Array     49.69 309   P        P          20 05 00.1 -0.5
           comp=Z,1.7nm,0.5s,baz=59,slow=7.5,SNR=11
BVAR                                 PcP      PcP        20 06 20.2 +1.0
           comp=Z,2.4nm,0.6s,baz=74,slow=3.1,SNR=8.3
           comp=Z,1.7nm,0.5s
BRVK  Borovoye           49.73 309⇑iP         P          20 05 00.4 -0.5
BRVK                                 pmax     pmax
           comp=Z,7.0nm,1.4s
BRVK  Borovoye           49.73 309 eP         P          20 05 00.4 -0.5
MYLDM Lahad Datu         50.09 224   P        P          20 05 04.2 +0.2
CHTO  Chiang Mai         50.76 255   P        P          20 05 10.8 +1.8
CHTO                                 IAmb     IAmb       20 05 12.1
           comp=Z,5.1nm,0.8s
CHTO  Chiang Mai         50.76 255   P        P          20 05 10.8 +1.8
CHTO                                 pmax     pmax
           comp=Z,5.0nm,0.8s
CMAR  Chiang Mai Arr     51.02 254   P        P          20 05 13.3 +2.4
           comp=Z,1.8nm,0.7s,baz=37,slow=7.1,SNR=16
           comp=Z,1.8nm,0.7s
YKAW3 Yellowknife Wh     51.66  36   P        P          20 05 16.9 +1.8
YKAW3                                IAmb     IAmb       20 05 18.2
           comp=Z,4.4nm,1.0s
BOOM  Boomskoye usch     51.69 294   P        P          20 05 16.2 +0.3
BOOM  Boomskoye usch     51.69 294   P        P          20 05 16.2 +0.3
BOOM                                 pmax     pmax
           comp=Z,17nm,1.1s
YKA   Yellowknife Ar     51.69  36   P        P          20 05 16.4 +1.1
           comp=Z,1.6nm,0.8s,baz=306,slow=7.7,SNR=11
           comp=Z,1.6nm,0.8s
YKA   Yellowknife Ar     51.69  36 i P        P          20 05 16.8 +1.5
YKA                                  pmax     pmax
           comp=Z,2.0nm,0.8s
SPITS Spitsbergen Ar     52.26 349   P        P          20 05 18.0 -1.4
           comp=Z,4.2nm,0.9s,baz=52,slow=8.6,SNR=8.2
           comp=Z,4.2nm,0.9s
AAK   Ala-Archa          52.51 295⇑iP         P          20 05 22.2 +0.3
AAK                                  pmax     pmax
           comp=Z,5.0nm,0.8s
AAK   Ala-Archa          52.51 295 eP         P          20 05 22.3 +0.3
SVE   Sverdlovsk         52.79 316 eP         P          20 05 22.5 -1.0
SVE                                  pmax     pmax
           comp=Z,11nm,0.9s
EVN   Everest            52.90 273            P          20 05 26.9 +1.4
KSH   Kashi              53.30 291   P        P          20 05 32.1 +4.4
KSH                                  pmax     pmax
           comp=Z,5.0nm,0.8s
ARTI  Arti               54.08 317            P          20 05 30.8 -2.2
ARTI  Arti               54.08 317c iP        P          20 05 32.1 -0.8
ARTI                                 *PP      pwP        20 06 13.7 -0.4
ARTI                                                     20 06 35.2
ARTI                                 S        S          20 12 54.6 -1.4
ARTI                                 SS       SS         20 16 35.5 -3.6
ARTI                                 pmax     pmax
           comp=Z,12nm,0.9s
ARSB  Arslanbob          54.17 295   IAmb     IAmb       20 05 35.5
           comp=Z,5.2nm,0.9s
KKAR  Karatay Array      54.70 298            P          20 05 36.0 -1.7
KKAR  Karatay Array      54.70 298   P        P          20 05 36.0 -1.7
POIN  Pond Inlet         56.00  16   IAmb     IAmb       20 05 47.0
           comp=Z,5.5nm,0.8s
LVZ   Lovozero           56.10 336⇓eP         P          20 05 45.3 -2.0
LVZ                                  pmax     pmax
           comp=Z,40nm,0.9s
BTK   Batken             56.25 295   IAmb     IAmb       20 05 50.2
           comp=Z,5.4nm,0.9s
B08A  Colville Reser     56.98  53            P          20 05 54.5 +0.6
B08A                                 IAmb     IAmb       20 05 56.7
           comp=Z,5.6nm,1.1s
AB31  Akbulak array      57.27 309   IAmb     IAmb       20 05 56.5
           comp=Z,8.1nm,1.1s
ABKAR Akbulak array      57.27 309            P          20 05 54.9 -0.9
ABKAR Akbulak array      57.27 309   IAmb     IAmb       20 05 56.5
           comp=Z,8.1nm,1.1s
ARCES ARCESS Array B     57.29 340   P        P          20 05 54.8 -0.8
           comp=Z,3.6nm,0.9s,baz=33,slow=8.5,SNR=8.1
           comp=Z,3.6nm,0.9s
ILON  Igloolik, Nuna     57.78  20            P          20 05 58.7 -0.3
ILON                                 IAmb     IAmb       20 05 59.8
           comp=Z,4.9nm,0.6s
KAPI  Kappang            58.59 217   LR       LR         20 33 20.9
           comp=Z,32nm,18.4s,baz=132,slow=38
KLMR  Klimovskoe         59.28 328 eP         P          20 06 07.5 -2.0
KLMR                                 pmax     pmax
           comp=Z,11nm,0.9s
SUMG  Summit             60.69   3   P        P          20 06 19.3 -0.1
SUMG  Summit             60.69   3   P        P          20 06 19.3 -0.1
SUMG                                 pmax     pmax
           comp=Z,3.0nm,1.0s
MSO   Missoula           60.82  52            P          20 06 22.0 +1.6
MSO                                  IAmb     IAmb       20 06 23.5
           comp=Z,4.8nm,0.8s
BELG  Belogornoye        61.51 317deP         P          20 06 23.7 -1.0
BELG                                 pmax     pmax
           comp=Z,3.0nm,0.8s
FIA1  FINESS Array S     63.34 334   P        P          20 06 35.8 -0.9
FINES FINESS Array B     63.34 334   P        P          20 06 35.6 -1.1
           comp=Z,7.7nm,0.6s,baz=40,slow=6.8,SNR=51
FINES                                PcP      pP         20 07 12.8 -1.7
           comp=Z,1.0nm,0.5s,baz=78,slow=2.8,SNR=3.9
           comp=Z,7.7nm,0.6s
FINES FINESS Array B     63.34 334 i P        P          20 06 35.5 -1.2
FINES                                pmax     pmax
           comp=Z,8.0nm,0.6s
NVAR  Mina Array Bea     63.64  61   P        P          20 06 40.3 +0.9
           comp=Z,1.3nm,0.6s,baz=302,slow=6.1,SNR=6.2
           comp=Z,1.3nm,0.6s
OBN   Obninsk            64.42 325⇓eP         P          20 06 43.3 -0.5
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OBN                                  pmax     pmax
           comp=Z,4.0nm,0.4s
OBN   Obninsk            64.42 325 eP         P          20 06 43.4 -0.4
SFJD  Kangerlussuaq      65.29   9   LR       LR         20 36 19.8
           comp=Z,46nm,21.2s,baz=212,slow=37
PDAR  Pinedale Array     65.83  53            P          20 06 55.2 +1.7
PDAR  Pinedale Array     65.83  53   P        P          20 06 55.6 +2.1
           comp=Z,2.6nm,0.7s,baz=284,slow=1.5,SNR=27
           comp=Z,2.6nm,0.7s
ULM   Lac du Bonnet      67.37  40   P        P          20 07 02.9 +0.1
           comp=Z,2.3nm,0.6s,baz=302,slow=6.7,SNR=4.6
           comp=Z,2.3nm,0.6s
NB2   NORSAR Subarra     67.67 340   P        P          20 07 04.0 -0.5
           comp=Z,4.4nm,0.7s,baz=30,slow=6.5
NB2   NORSAR Subarra     67.67 340   P        P          20 07 05.5 +0.9
NOA   NORSAR Array B     67.67 340   P        P          20 07 04.1 -0.5
           comp=Z,3.0nm,0.7s,baz=29,slow=6.4,SNR=18
           comp=Z,3.0nm,0.7s
NORES NORESS Array B     67.86 340   P        P          20 07 08.7 +3.0
HFS   Hagfors            67.86 339   P        P          20 07 04.7 -1.0
           comp=Z,6.4nm,0.6s,baz=46,slow=6.4,SNR=21
           comp=Z,6.4nm,0.6s
MNK   Minsk              68.18 328 i P        P          20 07 05.0 -2.8
           comp=Z,10.0nm,0.7s,baz=38
MNK                                i pP       pP         20 07 46.3 +0.2
MNK                                i sP       sP         20 08 07.2 +3.6
MNK                                i PP       PP         20 09 36.8 -2.9
MNK                                i PPP      PPP        20 11 18.4
MNK                                i S        S          20 15 52.2 -2.0
MNK                                i sS       sS         20 17 05.3 +3.4
MNK                                i SS       SS         20 20 17.0 -2.0
MNK                                i SSS      SSS        20 23 35.2
MNK                                i LR       LR         20 37 56.8
MNK   Minsk              68.18 328 i P        P          20 07 04.9 -2.8
MNK                                i *PP      pP         20 07 46.3 +0.2
MNK                                i *SP      sP         20 08 07.2 +3.6
MNK                                i                     20 09 36.7
MNK                                i PPP      PPP        20 11 18.4
MNK                                i S        S          20 15 52.1 -2.0
MNK                                i SS       SS         20 20 17.0 -2.0
MNK                                  pmax     pmax
           comp=Z,10.0nm,0.7s
AKT   Akhty              68.83 308 eP         P          20 07 11.4 -0.8
AKT                                  pmax     pmax
           comp=Z,4.0nm,0.8s
KIV   Kislovodsk         69.70 313 eP         P          20 07 18.4 +0.9
KIV                                  pmax     pmax
           comp=Z,8.0nm,1.0s
KBZ   Khabaz             69.76 313   P        P          20 07 17.1 -0.6
           comp=Z,3.4nm,0.7s,baz=30,slow=7.6,SNR=14
           comp=Z,3.4nm,0.7s
KBZ   Khabaz             69.76 313d iP        P          20 07 19.1 +1.4
KBZ                                  pmax     pmax
           comp=Z,5.0nm,0.8s
KBZ   Khabaz             69.76 313 eP         P          20 07 19.1 +1.4
SHA1  Shidzhatmaz        69.87 313⇓eP         P          20 07 19.5 +0.8
AKASG Malin Array Be     70.66 325   P        P          20 07 21.7 -1.4
           comp=Z,2.6nm,0.6s,baz=36,slow=6.3,SNR=16
           comp=Z,2.6nm,0.6s
AKASG Malin Array Be     70.66 325 i P        P          20 07 22.8 -0.3
AKASG                                pmax     pmax
           comp=Z,3.0nm,0.6s
AKBB  Malin Array Si     70.66 325⇑eP         P          20 07 22.9 -0.2
AKBB                                 pmax     pmax
           comp=Z,5.0nm,0.8s
SCHQ  Schefferville      73.76  22   P        P          20 07 41.5 +0.1
           comp=Z,2.9nm,0.6s,baz=9.1,slow=6.9,SNR=4.2
           comp=Z,2.9nm,0.6s
KOLS  Kolonicke sedl     74.74 328 eP         P          20 07 47.9 +0.7
KOLS  Kolonicke sedl     74.74 328 eP         P          20 07 47.9 +0.7
CLL   Collm              75.78 334 eP         P          20 07 53.0  0.0
CLL   Collm              75.78 334 eP         P          20 07 53.0  0.0
EKA   Eskdalemuir Ar     75.89 345   P        P          20 07 53.8 +0.2
           comp=Z,0.7nm,0.4s,baz=21,slow=4.8,SNR=5.1
           comp=Z,0.7nm,0.4s
VYHS  Vyhne              76.33 330 eP         P          20 07 57.6 +1.3
VYHS  Vyhne              76.33 330 eP         P          20 07 57.6 +1.3
MODS  Modra-Piesok       76.97 330 eP         P          20 08 02.0 +2.1
MODS  Modra-Piesok       76.97 330 eP         P          20 08 02.0 +2.1
BR131 Keskin Array S     77.33 315⇓iP         P          20 08 03.0 +0.8
BRTR  Keskin Array B     77.33 315   P        P          20 08 01.9 -0.3
           comp=Z,1.3nm,0.8s,baz=76,slow=4.7,SNR=12
           comp=Z,1.3nm,0.8s
BRTR  Keskin Array B     77.33 315 i P        P          20 08 03.4 +1.2
BRTR                                 pmax     pmax
           comp=Z,1.0nm,0.8s
KHC   Kasperske Hory     77.52 333ceP         P          20 08 04.1 +1.2
KHC                                  pmax     pmax
           comp=Z,8.0nm,0.9s
GERES GERESS Array B     77.73 333   P        P          20 08 03.7 -0.5
           comp=Z,0.8nm,0.6s,baz=34,slow=5.4,SNR=11
           comp=Z,0.8nm,0.6s
CONA  Conrad Observa     77.83 331 eP         P          20 08 06.2 +1.5
           comp=Z,1.2nm,0.6s
RONA  Rosalia, Austr     77.89 331 eP         P          20 08 06.7 +1.7
           comp=Z,1.9nm,0.7s
ARSA  Arzberg            78.54 331 eP         P          20 08 08.9 +0.4
           comp=Z,1.6nm,0.6s
TXAR  Lajitas Array      78.67  59   P        P          20 08 11.8 +2.1
           comp=Z,1.6nm,0.7s,baz=298,slow=4.7,SNR=14
           comp=Z,1.6nm,0.7s
SOKA  Soboth             79.20 331 i P        P          20 08 13.0 +0.7
           comp=Z,1.5nm,0.6s
LESA  Schwarzleotal      79.31 333 i P        P          20 08 13.4 +0.6
           comp=Z,0.3nm,0.2s
KBA   Koelnbreinsper     79.40 332 i P        P          20 08 14.6 +1.1
           comp=Z,2.1nm,0.5s
OBKA  Obir               79.51 331 i P        P          20 08 14.0 +0.1
           comp=Z,0.2nm,0.2s
WATA  Walderalm          79.73 333 eP         P          20 08 15.6 +0.4
           comp=Z,1.3nm,0.5s
WTTA  Wattenberg         79.78 333 eP         P          20 08 15.9 +0.5
           comp=Z,3.4nm,0.5s
MOTA  Moosalm            79.87 334 eP         P          20 08 16.6 +0.7
           comp=Z,3.0nm,1.0s
DAVOX Davos/Dischmat     80.75 334   LR       LR         20 50 34.9
           comp=Z,35nm,18.2s,baz=260,slow=40
RAR   Rarotonga          80.97 134   LR       LR         20 45 58.2
           comp=Z,37nm,18.7s,baz=354,slow=36
MMAI  Mount Meron Ar     81.67 310   P        P          20 08 26.8 +1.1
           comp=Z,1.3nm,0.5s,baz=39,slow=5.4,SNR=5.6
           comp=Z,1.3nm,0.5s
VAE   Valguarnera        87.50 327   LR       LR         20 55 36.7
           comp=Z,93nm,18.4s,baz=128,slow=41
QSPA  South Pole Qui    136.58 180   PKP      PKiKP      20 15 29.1 +0.4
           comp=Z,0.4nm,0.5s,baz=306,slow=1.1,SNR=5.5
BDFB  Brasilia          145.08  33   PKP      PKPab      20 15 44.2 +0.5
           comp=Z,2.1nm,0.6s,baz=252,slow=6.4,SNR=3.7
PLCA  Paso Flores       149.63  94   PKPbc    PKiKP      20 15 57.1 +0.8
           comp=Z,1.9nm,0.9s,baz=281,slow=3.4,SNR=7.6
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NEIC ***02*** *20:01:17.3±2.6, 13°.07N±0°.08×89°.51W±0°.07, $h52^{km}\pm13^{km}$, mb4.3/25, Error ellipse: s-maj=13.7km s-min=7.6km az=221.0*

CATAC ***02*** *20:01:17.6±0.3, 13°N±2°×8°9W±°, $h30^{km}\pm2^{km}$, M4.7/30, MLv4.7/30, Error ellipse: s-maj=5.6km s-min=2.5km az=22.7, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.06; $M_{\theta\theta}$-2.41; $M_{\phi\phi}$0.35; $M_{r\theta}$0.60; $M_{\theta\phi}$0.00; $M_{\phi r}$-1.97; Fault plane solution: $M_0 3.05343\times10^{15}$ NP1: ϕ_s122.09502°, δ62.38469°, λ125.60833°. NP2: ϕ_s245.00827°, δ43.91272°, λ41.93882°. Principal axes: T 3.3942, Plg56.8419°, Azm80.9225°; N -0.8707, Plg31.0584°, Azm283.7310°; P -2.5235, Plg10.4647°, Azm187.3443°; Moment Tensor Solution. Moment tensor: Scale 10^{15} Nm; M_{rr}1.77; $M_{\theta\theta}$-2.19; $M_{\phi\phi}$0.42; $M_{r\theta}$1.03; $M_{\theta\phi}$-1.23; $M_{\phi r}$-2.06; Fault plane solution: $M_0 3.29787\times10^{15}$ NP1: ϕ_s101.89387°, δ60.08546°, λ137.05191°. NP2: ϕ_s216.79500°, δ53.80315°, λ38.16898°. Principal axes: T 3.6778, Plg50.3745°, Azm66.1419°; N -0.9836, Plg39.3793°, Azm253.7128°; P -2.6942, Plg3.7240°, Azm160.6503°; Moment Tensor Solution. Moment tensor: Scale 10^{15} Nm; M_{rr}5.84; $M_{\theta\theta}$-7.21; $M_{\phi\phi}$1.36; $M_{r\theta}$2.18; $M_{\theta\phi}$4.66; $M_{\phi r}$-4.48; Fault plane solution: $M_0 9.51606\times10^{15}$ NP1: ϕ_s140.28503°, δ65.04171°, λ122.74251°. NP2: ϕ_s263.55777°, δ40.30934°, λ40.71247°. Principal axes: T 8.6381, Plg56.8858°, Azm94.7167°; N 1.5626, Plg29.3640°, Azm305.1042°; P -10.2006, Plg13.9363°, Azm207.0784°; confirmed*

SNET ***02*** *20:01:19.4±2.7, 13°.29N×89°.38W, $h37^{km}$, ML4.7*

GCG ***02*** *20:01:19.4±2.5, 13°.30N×89°.49W, $h43^{km}\pm20^{km}$, MD4.3, ML4.6, MW4.0*

ISC 02 20:01:17.9±0.8, **13°.18N**±0°.05×**89°.42W**±0°.03, **$h53^{km}$**$\pm7^{km}$, **n144**, σ**1^{s}.29**/154, **mb4.2**/5, **El Salvador**

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Code  Station Name        Δ°  AZ°      Phase ID            Time     Res
                                     Op       ISC       h  m  s    ISC
LALI  Alcalda de L       0.32  17  eP       Pn         20 01 26.7 -0.8
LALI                               eS       Sn         20 01 34.2 -0.1
LALI  Alcalda de L       0.32  17  i P      Pn         20 01 26.9 -0.6
LALI                               i S      Sn         20 01 34.2 -0.1
LALI                                 IAML              20 01 36.8
           comp=E,8µm,0.3s
LALI  Alcalda de L       0.32  17    P      Pn         20 01 27.0 -0.6
JAYA  Jayaque - finc     0.47 356  eP       Pn         20 01 28.4 -0.8
JAYA  Jayaque - finc     0.47 356  i P      Pn         20 01 28.4 -0.8
JAYA  Jayaque - finc     0.47 356    P      Pn         20 01 28.4 -0.8
JAYA  Jayaque - finc     0.47 356    S      Sn         20 01 36.7 -0.7
PANCS Alcalda de         0.48  28  eP       Pn         20 01 28.7 -0.5
PANCS Alcalda de         0.48  28    P      Pn         20 01 28.8 -0.5
PANCS Alcalda de         0.48  28    S      Sn         20 01 37.2 -0.2
ITCA  Escuela Especi     0.51  15    S      Sn         20 01 37.9  0.0
ITCA  Escuela Especi     0.51  15    P      Pn         20 01 29.0 -0.5
LOMA  Loma Larga         0.52  27    P      Pn         20 01 29.3 -0.4
LOMA  Loma Larga         0.52  27    S      Sn         20 01 38.7 +0.5
PMON  Piamonte           0.53  11    S      Sn         20 01 39.2 +0.6
PMON  Piamonte           0.53  11    P      Pn         20 01 29.3 -0.6
SEMO  Seminario San      0.55  20    P      Pn         20 01 29.7 -0.3
SEMO  Seminario San      0.55  20    S      Sn         20 01 38.9 +0.1
UTEC  Universidad Te     0.56  22    S      Sn         20 01 39.3 +0.4
UTEC  Universidad Te     0.56  22    P      Pn         20 01 29.8 -0.3
LFRS  El Faro            0.56  38  eP       Pn         20 01 29.8 -0.3
UEES  Universidad Ev     0.56  18    P      Pn         20 01 29.9 -0.3
UEES  Universidad Ev     0.56  18    S      Sn         20 01 39.2 +0.2
BOQS  Boqueron           0.56  14  eP       Pn         20 01 29.9 -0.4
IGN   Direccin Gen       0.58  24  eS       Sn         20 01 40.0 +0.6
IGN   Direccin Gen       0.58  24    P      Pn         20 01 30.3 -0.1
IGN   Direccin Gen       0.58  24    S      Sn         20 01 39.7 +0.3
UDBS  Universidad Do     0.59  26  eP       Pn         20 01 30.2 -0.3
UDBS  Universidad Do     0.59  26    S      Sn         20 01 40.1 +0.5
UDBS  Universidad Do     0.59  26    P      Pn         20 01 30.2 -0.3
CEDA  San Andres         0.62   2  eP       Pn         20 01 30.4 -0.4
CEDA                               eS       Sn         20 01 40.5 +0.4
CEDA  San Andres         0.62   2    P      Pn         20 01 30.5 -0.4
LFU   La Fuente          0.63  28  eP       Pn         20 01 31.0 -0.1
LBRS  Las Brisas         0.66  33  eP       Pn         20 01 31.3 -0.1
QUEZ  Alcaldia de Qu     0.66  12  eP       Pn         20 01 31.5 +0.1
CEVE  Cerro Verde        0.67 342  eP       Pn         20 01 31.3 -0.5
CEVE  Cerro Verde        0.67 342    S      Sn         20 01 41.2 -0.4
CEVE  Cerro Verde        0.67 342    P      Pn         20 01 31.2 -0.6
COEG  Centro de Oper     0.68  50  eP       Pn         20 01 31.3 -0.3
COEG                               eS       Sn         20 01 42.0 +0.5
COEG  Centro de Oper     0.68  50    S      Sn         20 01 41.7 +0.2
COEG  Centro de Oper     0.68  50    P      Pn         20 01 31.2 -0.3
SBLS  San Blas           0.68 343  eP       Pn         20 01 31.4 -0.5
PAVA  Las Pavas          0.70  41  eP       Pn         20 01 32.0 +0.1
PAVA  Las Pavas          0.70  41    P      Pn         20 01 32.1 +0.1
PAVA  Las Pavas          0.70  41    S      Sn         20 01 43.4 +1.3
SNJE  San Jose           0.70 345  eP       Pn         20 01 31.6 -0.4
TECO  Alcaldia de Te     0.71  60    P      Pn         20 01 31.3 -0.7
UESV  Universidad de     0.76  54    S      Sn         20 01 43.9 +0.6
UESV  Universidad de     0.76  54    P      Pn         20 01 32.4 -0.2
NUBE  Las Nubes          0.80 334  eP       Pn         20 01 32.4 -0.8
NUBE                               eS       Sn         20 01 43.4 -0.9
NUBE  Las Nubes          0.80 334  i P      Pn         20 01 32.4 -0.8
NUBE                               i S      Sn         20 01 43.0 -1.4
NUBE  Las Nubes          0.80 334    P      Pn         20 01 32.2 -1.1
UNIC  Universidad Ca     0.80 351    P      Pn         20 01 32.8 -0.4
UNIC  Universidad Ca     0.80 351    S      Sn         20 01 45.0 +0.7
ALJI  Alcalda de J       0.83  80    P      Pn         20 01 33.4 -0.1
ALJI  Alcalda de J       0.83  80    S      Sn         20 01 45.5 +0.5
SCLA  Alcaldia de Sa     0.84  52    S      Sn         20 01 46.6 +1.3
SCLA  Alcaldia de Sa     0.84  52    P      Pn         20 01 33.8  0.0
FAME  Alcaldia de Sa     0.88 318    S      Sn         20 01 44.8 -1.2
LOAL  Lomas de Alarc     0.88 336  eP       Pn         20 01 34.0 -0.3
LOAL  Lomas de Alarc     0.88 336    S      Sn         20 01 47.4 +1.2
LOAL  Lomas de Alarc     0.88 336    P      Pn         20 01 34.0 -0.3
SLOZ  Alcaldia de Sa     0.91 337    P      Pn         20 01 34.2 -0.4
SLOZ  Alcaldia de Sa     0.91 337    S      Sn         20 01 47.1 +0.2
PQSS  Presa 15 de Se     0.94  62    S      Sn         20 01 47.9 +0.4
PQSS  Presa 15 de Se     0.94  62    P      Pn         20 01 34.9  0.0
TECA  Tecapa             0.94  71  eP       Pn         20 01 35.1  0.0
PACA  Pacayal            1.10  75  eP       Pn         20 01 38.3 +1.1
PACA                               eS       Sn         20 01 53.3 +1.9
PACA  Pacayal            1.10  75    P      Pn         20 01 37.8 +0.6
PACA  Pacayal            1.10  75    S      Sn         20 01 52.3 +0.8
LCY   Lacayo             1.12  78  eP       Pn         20 01 38.0 +0.6
ESSJ  San Jos, E         1.12 290  i P      Pn         20 01 43.1 +5.8
RANC  El Ranchito        1.12  77    S      Sn         20 01 51.8 -0.3
RANC  El Ranchito        1.12  77    P      Pn         20 01 36.3 -1.2
BLLM  Bellamira          1.18  77  eP       Pn         20 01 38.1  0.0
MTO3  Montecristo        1.21   3           Pn         20 01 38.2 -0.5
MTO3  Montecristo        1.21   3  eP       Pn         20 01 38.3 -0.5
MTO3                               eS       Sn         20 01 53.7 -0.5
MTO3  Montecristo        1.21   3  i P      Pn         20 01 38.3 -0.5
MTO3  Montecristo        1.21   3    P      Pn         20 01 38.3 -0.5
CNRM  Centro Naciona     1.25  76  eP       Pn         20 01 39.7 +0.7
CNRM  Centro Naciona     1.25  76    S      Sn         20 01 57.4 +2.6
CNRM  Centro Naciona     1.25  76    P      Pn         20 01 39.8 +0.7
CAHU  Cacacuatique       1.31  63  eP       Pn         20 01 39.9 -0.2
ESQI  Esquipulas         1.37   3           Pn         20 01 40.7 -0.1
ESQI  Esquipulas         1.37   3  eP       Pn         20 01 40.7 -0.1
ESQI  Esquipulas         1.37   3    P      Pn         20 01 40.7 -0.1
ESQI  Esquipulas         1.37   3    S      Sn         20 01 57.6 -0.3
FG16  Alotenango, Sa     1.52 316  eP       Pn         20 01 47.8 +4.8
FG16                               i S      Sn         20 02 10.7 +9.0
FG16                                 IAML              20 02 15.1
           comp=N,26µm,0.3s
CNCH  Conchagua          1.54  86  eP       Pn         20 01 40.2 -3.0
CNCH                               eP                  20 01 43.6
CNCH                               eS       Sn         20 02 04.3 +2.1
CNCH  Conchagua          1.54  86    P      Pn         20 01 43.4 +0.2
FG8   Yepocapa, Chim     1.54 314  i P      Pn         20 01 47.0 +3.8
FG8                                eS       Sn         20 02 10.1 +7.9
ESSG  Sabana Grande      1.82 311  eP       Pn         20 01 46.1 -0.8
ESSG                               i S      Sn         20 02 07.8 -1.1
ESSG                                 IAML              20 02 14.3
           comp=E,6µm,0.5s
CSGN  Cosiguina Volc     1.82  96    P      Pn         20 01 47.1 +0.1
CSGN                                 S      Sn         20 02 09.9 +1.0
POTN  Potosi Cosigui     1.87  95    P      Pn         20 01 47.7 +0.2
POTN                                 S      Sn         20 02 10.7 +0.8
CHOHN Orocuina           2.22  82    P      Pn         20 01 52.1 -0.3
TGUH  Tegucigalpa,Un     2.26  67           Pn         20 01 52.8 -0.2
TGUH  Tegucigalpa,Un     2.26  67    P      Pn         20 01 52.9  0.0
STG8  El Palmar, Qui     2.26 304  eP       Pn         20 01 57.5 +4.4
           comp=Z,603nm,0.6s
STG8                                 IAML              20 02 40.7
           comp=N,4µm,0.3s
CRIN  San Cristobal      2.36 102           Pn         20 01 54.7 +0.5
CRIN  San Cristobal      2.36 102    P      Pn         20 01 54.9 +0.7
SOKI  Kika Raxquin       2.52 310  i S      Sn         20 02 29.2 +2.6
SOKI                                 IAML              20 02 35.7
           comp=N,4µm,0.5s
HERN  Volcan Telica      2.58 102           Pn         20 01 56.3 -1.1
RTAL  Retalhuleu         2.58 301    Pn     Pn         20 01 53.9 -3.4
RTAL  Retalhuleu         2.58 301    P      Pn         20 01 58.9 +1.6
QUEO  Labor Ovalle       2.64 310  i P      Pn         20 02 01.2 +2.9
QUEO                                 IAML              20 02 42.5
           comp=N,3µm,0.6s
CNGN  Cerro Negro        2.74 104           Pn         20 01 58.4 -1.0
HUEH  Huehuetenango      2.93 317    Pn     Pn         20 02 00.5 -1.8
THIG                     3.25 302  eP       Pn         20 02 08.4 +2.0
           comp=Z,676nm,1.1s
THIG                               eS       Sn         20 02 42.9 -1.0
THIG                                 IAML              20 02 57.0
           comp=N,5µm,0.5s
MGAN  Managua            3.26 108           Pn         20 02 05.2 -1.3
BOAB  BOACO BROADBAN3.73 101                Pn         20 02 12.3 -0.6
PETF  Flores             3.74 353    Pn     Pn         20 02 13.3 +0.2
CCIG  Comitan            4.05 320    Pn     Pn         20 02 17.8 +0.2
CCIG  Comitan            4.05 320  eP       Pn         20 02 20.3 +2.7
           comp=Z,114nm,0.7s
CCIG                                 IAML              20 03 39.6
           comp=E,192nm,0.7s
ACON  Acoyapa            4.31 106           Pn         20 02 18.2 -2.8
ESPN  Las Esperanzas     5.09 101    Pn     Pn         20 02 29.4 -2.3
SOCE  Pocosol            5.46 120    Pn     Pn         20 02 37.2 +0.4
TEIG  Tepich             7.09   9           Pn         20 02 59.7 +0.6
BRU2  Volcan             7.91 123           Pn         20 03 12.7 +2.1
TLIG  Tlapa              9.84 297           Pn         20 03 39.6 +2.7
SOR   Soroa             11.33  32           Pn         20 03 58.8 +1.7
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MOIG	Morelia	13.01	301	Pn	Pn	20 04 21.9	+1.6
ZAIG	Zacatecas	15.72	309	Pn	Pn	20 04 53.4	-2.8
441A	DeRidder	17.83	349	P	P	20 05 24.7	+2.4
441A				IAmb	IAmb	20 05 29.9	
	comp=Z,26nm,1.0s						
FLOC	Florencia	17.85	129	P	P	20 05 22.8	+0.1
FLOC				IAmb	IAmb	20 05 58.3	
	comp=Z,34nm,1.2s						
SDV	Santo Domingo	18.92	101		P	20 05 33.3	-1.4
SDV				IAmb	IAmb	20 05 51.1	
	comp=Z,18nm,1.2s						
VBMS	Vicksburg	18.97	357	P	P	20 05 35.2	+0.3
NATX	Nacogdoches	19.11	346	P	P	20 05 36.4	0.0
NATX				IAmb	IAmb	20 05 47.9	
	comp=Z,21nm,0.8s						
BRDY	Brady	20.06	335	P	P	20 05 46.1	-0.7
BRDY				IAmb	IAmb	20 05 47.6	
	comp=Z,9.8nm,0.7s						
WHTX	Lake Whitney,	20.12	340	P	P	20 05 47.1	-0.4
WHTX				IAmb	IAmb	20 06 01.8	
	comp=Z,20nm,0.8s						
FW14	Alvarado	20.41	341	P	P	20 05 50.3	-0.3
FW14				IAmb	IAmb	20 06 05.2	
	comp=Z,32nm,1.2s						
FW13	Cleburne	20.44	340	P	P	20 05 50.6	-0.4
FW13				IAmb	IAmb	20 06 06.9	
	comp=Z,20nm,1.1s						
TXAR	Lajitas Array	20.81	323	P	P	20 05 54.5	-0.6
BAUV	El Baul	21.39	99	P	P	20 05 58.4	-2.9
MIAR	Mount Ida	21.60	351	P	P	20 06 03.5	+0.1
FCAR	Ozark Folk Cen	22.74	354	P	P	20 06 15.4	-0.1
DKNS	Dickens	22.93	335	P	P	20 06 17.2	-0.4
U49A	Red Boiling Sp	23.46	7	P	P	20 06 21.1	-1.6
PBMO	Poplar Bluff	23.51	358	P	P	20 06 23.5	+0.3
PBMO				IAmb	IAmb	20 06 45.2	
	comp=Z,11nm,1.1s						
S39A	Bolivar	24.65	353	IAmb	IAmb	20 06 49.2	
	comp=Z,9.2nm,1.1s						
ECSD	EROS Data Cent	31.07	350		P	20 07 31.0	+0.1
ECSD				IAmb	IAmb	20 07 32.4	
	comp=Z,7.7nm,0.8s						
SAML	Samuel	34.09	129	P	P	20 07 55.5	-2.2
SNOW	Snow King Moun	35.32	333	P	P	20 08 07.9	-0.4
LOHW	Long Hollow	35.38	333	P	P	20 08 08.4	-0.3
LOHW				IAmb	IAmb	20 08 10.0	
	comp=Z,2.1nm,0.7s						
TPAW	Teton Pass	35.43	333	P	P	20 08 08.6	-0.7
TPAW				IAmb	IAmb	20 08 11.1	
	comp=Z,2.4nm,0.6s						

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*IDC **02** 20:02:25.7±0.8, 1.°21S×127.°29E, h0^{km}, mb3.9/11, mbtmp3.9/14, ML2.9/2, MS3.2/3, Error ellipse: s-maj=31.6km s-min=14.9km az=81.0*

*DJA **02** 20:02:31.8±0.1, 1 °S±1 °×12 °7E± °, h10^{km}, M4.5/24, mB5.1/7, mb4.6/14, MLv4.5/24, Mw(mB)4.5/7*

*NEIC **02** 20:02:32.8±1.9, 1.°07S±0.°06×126.°95E±0.°07, h35^{km}±2^{km}, mb4.4/5, Error ellipse: s-maj=12.4km s-min=9.6km az=246.0*

ISC 02 20:02:32.3±0.5**, 1.°06S**±0.°04×**126.°91E**±0.°05**, h34^{km}, n55, σ2.^{s}42**/57**, mb4.0**/14**, 1C, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANI	Sanana	1.34	223	P	Pn	20 02 54.1	-0.6
SANI				S	Sn	20 03 14.6	+3.3
TNTI	Ternate	1.88	14		Pn	20 03 02.5	+0.5
TNTI	Ternate	1.88	14	P	Pn	20 03 03.1	+1.0
TNTI				S	Sb	20 03 29.6	+0.4
NLAI	Namlea	2.17	175	P	Pn	20 03 06.3	+0.2
AAI	Ambon	2.91	154	P	Pn	20 03 17.8	+1.6
AAI				S	Sn	20 03 53.3	+3.3
MSAI	Masohi	3.04	138	P	Pn	20 03 19.7	+1.7
MSAI				S	Sn	20 03 56.6	+3.4
KMSI	Cibinong	3.35	299	P	Pn	20 03 23.8	+1.6
KMSI				S	Sn	20 04 04.8	+4.0
LUWI	Luwuk	4.13	270		Pn	20 03 33.5	+0.4
LUWI	Luwuk	4.13	270	P	Pn	20 03 33.5	+0.4
SWI	Sorong	4.36	87	P	Pn	20 03 39.2	+3.0
SWI				S	Sn	20 04 30.5	+4.7
SGSI	Sangihe	4.91	344	P	Pn	20 03 47.1	+3.3
KDI	Kendari	5.16	236	P	Pn	20 03 49.2	+2.0
MRSI	Marisa	5.20	287	P	Pn	20 03 50.5	+2.8
APSI	Ampana	5.26	272	P	Pn	20 03 50.0	+1.5
FAKI	Fak Fak	5.65	109		Pn	20 03 54.3	+0.3
FAKI	Fak Fak	5.65	109	P	Pn	20 03 54.1	+0.1
	0.3nm56nm,0.7s						
FAKI				S	Sn	20 05 02.2	+4.5
	0.3nm56nm,0.7s						
BBSI	Bau Bau	6.17	224	P	Pn	20 04 03.7	+2.6
	0.4nm56nm,0.7s						
TOLI2	Tolitoli	6.49	289		Pn	20 04 07.1	+1.5
PCI	Palu	7.07	271	P	Pn	20 04 14.9	+1.4
MPSI	Mapaga	7.14	281	P	Pn	20 04 17.1	+2.6
KMPI	Kaimana, Papua	7.27	111	P	Pn	20 04 18.9	+2.7
RKPI	Ransiki, Papua	7.28	94	P	Pn	20 04 19.5	+3.1
	0.4nm1μm46nm,0.8s						
TTSI	Tana Toraja	7.35	254	P	Pn	20 04 18.8	+1.5
	0.3nm1μm51nm,0.9s						
BNSI	Bone	7.56	244	P	Pn	20 04 22.0	+1.9
	0.1nm20nm,0.6s						
SPSI	Sidrap Palu	7.69	248	P	Pn	20 04 24.4	+2.4
BSSI	Bau Bau, Buton	8.15	232	P	Pn	20 04 30.9	+2.6
	33nm,0.8s						
KAPI	Kappang	8.15	241		Pn	20 04 30.9	+2.6
KAPI	Kappang	8.15	241	Pn	Pn	20 04 31.0	+2.7
	44nm,0.8s,baz=21,slow=4.2,SNR=22						
EDFI	Ende, Flores	9.23	214	P	Pn	20 04 46.8	+3.5
MYLDM	Lahad Datu	10.44	307	Pn	Pn	20 05 02.7	+3.1
MTN	Manton Dam	12.43	160	Pn	Pn	20 05 26.1	-0.9
JAY	Jayapura	13.87	96	LR	LR	20 12 58.4	
	comp=Z,126nm,18.9s,baz=318,slow=47						
FITZ	Fitzroy Crossi	16.98	184	Pn	Pn	20 06 21.8	-5.5
	baz=343,slow=13,SNR=1.6						
	7.1nm,1.2s						
WRA	Warramunga Arr	20.12	159	P	P	20 06 56.8	-6.8
	baz=342,slow=13,SNR=2.3						
	0.3nm,0.5s						
COEN	Coen	20.57	129	P	P	20 07 07.4	-1.1
COEN				IAmb	IAmb	20 07 09.9	
	comp=Z,18nm,0.8s						
PMG	Port Moresby	21.79	113	LR	LR	20 17 33.3	
	comp=Z,89nm,18.2s,baz=307,slow=42						
AS31	Alice Springs	23.47	164		P	20 07 36.4	-2.6
ASAR	Alice Springs	23.47	164	P	P	20 07 33.9	-5.2
ASAR	Alice Springs	23.47	164	P	P	20 07 33.5	-5.6
	comp=Z,2.5nm,0.8s,baz=360,slow=5.3,SNR=18						
	comp=Z,2.5nm,0.8s						
BBOO	Buckleboo	32.73	166	P	P	20 08 59.9	-2.1
BBOO				IAmb	IAmb	20 09 15.3	
	comp=Z,4.9nm,0.8s						
STKA	Stephens Creek	33.64	157	P	P	20 09 09.3	-0.6
STKA	Stephens Creek	33.64	157	P	P	20 09 07.2	-2.8
	comp=Z,7.9nm,0.8s,baz=329,slow=9.8,SNR=9.5						
	comp=Z,7.9nm,0.8s						
PZH	PanZhiHua	36.61	320	PKP	P	20 09 35.7	0.0
KSRS	Korea Array	38.34	1	P	P	20 09 50.0	0.0
	comp=Z,1.2nm,0.6s,baz=176,slow=9.4,SNR=8.6						
	comp=Z,1.2nm,0.6s						
MJAR	Matsushiro Arr	38.86	15	P	P	20 09 51.8	-2.7
	comp=Z,0.9nm,0.5s,baz=191,slow=8.5,SNR=5.0						
MJAR				LR	LR	20 24 09.2	
	comp=Z,23nm,20.7s,baz=217,slow=34						
	comp=Z,0.9nm,0.5s						
USRK	Ussuriysk Ar.	45.29	5	P	P	20 10 45.0	-1.7
	comp=Z,1.6nm,0.7s,baz=158,slow=6.7,SNR=4.1						
	comp=Z,1.6nm,0.7s						
BNX	BinXian	46.60	0	⇑P	P	20 11 04.1	+7.0
BNX				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SONM	Songino Array	51.88	343	P	P	20 11 37.7	+0.1
	comp=Z,0.5nm,0.7s,baz=152,slow=9.6,SNR=2.9						
	comp=Z,0.5nm,0.7s						
PETK	Petropavlovsk-	59.80	21	P	P	20 12 33.7	-0.3
	comp=Z,0.8nm,0.5s,baz=194,slow=4.3,SNR=6.4						
	comp=Z,0.8nm,0.5s						
MKAR	Makanchi Array	61.60	327	P	P	20 12 46.7	+0.2
	comp=Z,0.6nm,0.4s,baz=118,slow=8.2,SNR=12						
	comp=Z,0.6nm,0.4s						
KURBB	Kurchatov Arra	65.87	329	P	P	20 13 15.0	+0.5
	comp=Z,0.5nm,0.5s,baz=126,slow=6.2,SNR=23						
	comp=Z,0.5nm,0.5s						
BVAR	Borovoye Array	71.43	328	P	P	20 13 50.1	+0.9
	comp=Z,0.3nm,0.4s,baz=145,slow=10,SNR=4.0						
	comp=Z,0.3nm,0.4s						
TIXI	Tiksi	72.60	1	P	P	20 13 54.3	-1.5
TIXI				IAmb	IAmb	20 13 56.0	
	comp=Z,1.8nm,0.8s						
QSPA	South Pole Qui	88.88	180	P	P	20 15 23.0	0.0
ILAR	Eielson Array	89.33	25	P	P	20 15 24.9	-0.1
	comp=Z,0.2nm,0.6s,baz=248,slow=6.1,SNR=2.7						
	comp=Z,0.2nm,0.6s						

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*NEIC **02** 20:04:54.8±0.8, 33.°838N±0.°005×117.°09W±0.°02, h14^{km}±6^{km}, Error ellipse: s-maj=2.3km s-min=0.8km az=94.0*

PAS 02 20:04:55.5±0.8**, 33.°840N**±0.°010×**117.°10W**±0.°02**, h11^{km}**±7^{km}**, ML3.1**/209**, ML2.8**/50(NEIC)**, Error ellipse: s-maj=2.3km s-min=1.4km az=89.0, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PEC	Perris	0.07	314		Pg	20 04 59.4	+1.5
BBSC	Beaumont Base	0.13	50		Pg	20 04 58.6	0.0
BBSC					Sg	20 05 01.1	+0.2
HMTC	Hemet	0.15	149		Pg	20 04 59.0	0.0
HMTC					Sg	20 05 01.4	-0.1
CFT	Crafton Hills	0.20	357		Pb	20 05 02.8	+1.6
DGR	Domenigoni Val	0.20	159		Pg	20 04 59.7	-0.1
DGR					Sg	20 05 02.7	-0.1
POB	Polly Butte	0.21	137		Pg	20 04 59.9	-0.1
POB					Sg	20 05 02.9	-0.2
BACC	Bachelor Mtn.	0.23	168		Sg	20 05 03.5	-0.1
RSBC	Riverside Bore	0.23	305		Pg	20 05 00.1	-0.3
RSBC					Sg	20 05 03.3	-0.4
MURC	Murrieta	0.25	199		Sg	20 05 04.5	+0.3
SVD	Seven Oaks Dam	0.27	360		Sg	20 05 04.8	+0.1
RVR	Riverside	0.28	304		Pn	20 05 04.5	-1.1
HLNC	Highland	0.30	340		Pn	20 05 05.9	0.0
CFSC	Central Fire S	0.31	330		Pg	20 05 01.8	0.0
CFSC					Sg	20 05 06.4	+0.5
CLTC	Calectric	0.31	324		Sg	20 05 07.1	+1.1
ELS	Elsinore Mount	0.34	235		Pg	20 05 02.2	-0.1
ELS				IAML		20 05 07.1	
	comp=N,1μm,0.3s						
ELS				IAML		20 05 07.2	
	comp=E,2μm,0.3s						
FON	Fontana	0.38	312		Pg	20 05 02.8	-0.4
FON					Sg	20 05 07.9	-0.4
GVDA	Garner Valley	0.39	116		Pg	20 05 02.9	-0.4
GVDA					Sg	20 05 08.3	-0.3
CRY	Cary Ranch	0.41	132		Sg	20 05 08.8	-0.2
MLSC	Mira Loma	0.42	293		Sg	20 05 09.0	-0.4
DEVC	Devers	0.44	77		Pg	20 05 04.0	-0.2
BBRC	Big Bear Solar	0.45	19		Pg	20 05 03.9	-0.4
BBRC					Sg	20 05 10.1	-0.2
SNDA	J Saunders Pla	0.49	125		Sg	20 05 12.1	+0.3
BZNA	Buzz No.'s Pla	0.50	134		Sg	20 05 11.8	-0.2
CSP	Cedar Springs	0.51	335		Pg	20 05 05.1	-0.3
CSP					Sg	20 05 12.0	-0.2
CHNC	Chino	0.51	288		Pg	20 05 05.2	-0.3
CHNC					Sg	20 05 12.4	+0.2
PLM	Palomar	0.52	158		Sg	20 05 12.5	-0.3
PFO	Pinyon Flats O	0.58	113		Pg	20 05 06.2	-0.6
PFO	Pinyon Flats O	0.58	113		Sg	20 05 13.9	-0.5
EW2	E Wide Canyon	0.58	80		Sg	20 05 14.3	-0.2
XPFO	Pinon Flat	0.58	113		Sg	20 05 14.0	-0.6
SSK	Sunset Peak	0.62	307		Pg	20 05 06.9	-0.7
PMD	Palm Desert	0.63	108		Sg	20 05 15.0	-1.0
BLAC	Blackrock camp	0.63	69		Pg	20 05 07.3	-0.4
BLAC					Sg	20 05 15.7	-0.5
PSRC	Puddingstone R	0.64	293		Sg	20 05 16.1	-0.3
GORC	Green Oak Ranc	0.69	189		Sg	20 05 17.1	-0.9
BREC	Barre Substati	0.74	268		Pb	20 05 10.2	-0.1
BREC					Sg	20 05 18.9	-0.5
MATG	Mataguay Scout	0.74	149		Pg	20 05 09.3	-0.6
MATG					Sg	20 05 19.0	-0.6
VTV	Victorville	0.74	345		Pg	20 05 09.2	-0.8
VTV					Sg	20 05 18.8	-0.9
ADO	Adelanto Recei	0.76	339		Pg	20 05 09.8	-0.5
ADO					Sg	20 05 19.6	-0.7
GTM	Goat Mountain	0.76	53		Pg	20 05 09.3	-1.0
GTM					Sg	20 05 19.1	-1.2
RHC	Rose Hills Cem	0.78	282		Pg	20 05 10.1	-0.4
RHC					Sb	20 05 21.8	+0.1
BORC	Borrego Spring	0.81	135		Pg	20 05 10.4	-0.6
BORC					Sg	20 05 20.6	-0.9
DLAC	Del Amo	0.83	271		Sn	20 05 24.3	-1.1
DPP	Dos Picos Cty	0.85	171		Pg	20 05 10.4	-1.5
DPP					Sg	20 05 21.5	-1.5
JUEM	Julian Eagle M	0.86	151		Pg	20 05 11.2	-1.0
JUEM					Sg	20 05 22.6	-0.9
HOLC	Holcomb Ridge	0.88	315		Pg	20 05 11.3	-1.1
HOLC					Sg	20 05 22.8	-1.0
GVRC	Garvey Reservo	0.88	284		Pg	20 05 11.8	-0.6
GVRC					Sb	20 05 24.3	-0.1
MWC	Mount Wilson	0.89	296		Pg	20 05 11.4	-1.2
MWC					Sg	20 05 23.6	-0.6
CACC	Caltech Cellar	0.90	289		Pg	20 05 11.8	-1.1
GSA	Caltech--GSA	0.91	289		Pg	20 05 11.9	-1.1
GSA					Sg	20 05 24.1	-0.7
CHFC	Chilao Flat St	0.92	303		Pg	20 05 11.8	-1.4
CHFC					Sg	20 05 23.8	-1.4
JNH	Juniper Hills	0.93	311		Pg	20 05 12.1	-1.4
JNH					Sg	20 05 24.3	-1.4
CTCC	Cactus City	0.94	101		Pg	20 05 12.9	-0.7
CTCC					Sg	20 05 25.8	-0.1
CPE	Camp Elliot	0.95	180		Pg	20 05 12.4	-1.4
CPE					Sg	20 05 24.2	-1.9
SLH	Sleepy Hollow	0.95	132		Pg	20 05 13.3	-0.6
SLH					Sb	20 05 26.6	-0.1
PASC	Pasadena Art C	0.96	290		Pg	20 05 12.9	-1.2
PASC				IAML		20 05 27.1	
	comp=N,310nm,0.3s						
PASC				IAML		20 05 27.2	
	comp=E,207nm,0.2s						
PASC	Pasadena Art C	0.96	290		Sg	20 05 25.5	-1.1
EML	El Monte Cty P	0.97	167		Pg	20 05 12.1	-2.0
EML					Sg	20 05 24.8	-2.0
WTT2	Watts, South G	0.97	277		Pb	20 05 14.5	+0.1
WTT2					Sn	20 05 28.9	0.0
FMP	Fort Macarthur	1.00	263		Sg	20 05 26.9	-1.0
RRX	Edison Barstow	1.04	5		Pg	20 05 14.2	-1.2
RRX					Sg	20 05 28.5	-0.4
SBB	Saddle Back Bu	1.04	325		Pg	20 05 14.2	-1.4
SDMC	San Diego Miss	1.05	182		Pb	20 05 14.3	-1.5
SDMC					Sg	20 05 28.0	-1.4
GSC	Goldstone, Bar	1.48	9		Pn	20 05 21.6	-0.5
CBX	Cerro Bola	1.57	166		Pn	20 05 22.6	-0.8
GLA	Glamis	2.05	112		Pn	20 05 29.1	-0.9
GLA				IAML		20 05 55.1	
	comp=E,68nm,0.6s						
GLA				IAML		20 06 04.2	
	comp=N,57nm,0.6s						
ESJX	Sierra Juarez	2.07	152		Pn	20 05 30.2	-0.2
ESJX				IAML		20 06 00.5	
	comp=N,74nm,0.1s						
BLYC	Blythe	2.15	92		Pn	20 05 29.9	-1.4
BLYC				IAML		20 06 06.0	
	comp=N,92nm,0.5s						
BLYC				IAML		20 06 07.3	
	comp=E,70nm,0.7s						
BCW	Bitter Crk WRg	2.21	300		Pn	20 05 31.7	-0.5
BCW				IAML		20 06 08.9	
	comp=N,90nm,0.7s						
GWY	Greenwater Val	2.37	8		Pn	20 05 33.9	-0.6
V12A	Nelson	2.64	44		Pn	20 05 37.7	-0.5
V12A				IAML		20 06 21.0	
	comp=E,30nm,0.6s						
W13A	Hualapai Mount	2.94	64		Pn	20 05 41.3	-1.0
SHPR	Sheep Range	3.10	30		Pn	20 05 44.6	+0.1
TPNV	Topopah Spring	3.18	12		Pn	20 05 46.0	+0.3
DSP	Deep Springs	3.59	349		Pn	20 05 51.9	+0.8
PRN	Pahroc Range	3.93	25		Pn	20 05 56.6	+0.7
PRN				IAML		20 07 06.9	
	comp=N,19nm,0.6s						
PRN				IAML		20 07 11.4	
	comp=E,15nm,0.6s						
LCMT	Little Creek M	4.46	44		Pn	20 06 03.3	0.0
U15A	North Rim	4.71	55	Pn	Pn	20 06 06.8	0.0
U15A				IAML		20 07 29.1	
	comp=E,6.0nm,1.1s						
U15A				IAML		20 07 37.6	
	comp=N,5.4nm,1.0s						
KNB	Kanab	4.71	47	IAML		20 07 26.9	
	comp=E,8.1nm,3.4s						
KNB				IAML		20 07 27.7	
	comp=N,8.2nm,1.2s						

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*BEO **02** 20:27:30.1±0.7, 40.°39N×20.°86E, h0^{km}±3^{km}, ML2.7/12*

*TIR **02** 20:27:31.2, 40.°51N×20.°76E, h9^{km}±2^{km}, Ml3.1/7*

*SKO **02** 20:27:31.6, 40.°46N×20.°85E, h10^{km}, ML2.5*

*ATH **02** 20:27:31.9, 40.°55N×20.°80E, h4^{km}±1^{km}, ML3.0/19, Manual Solution by P.Lantzourakis First location: 2019/06/02 20:28:34, This location: 2021/06/08 21:03:31 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*PDG **02** 20:27:32.2±0.9, 40.°53N×20.°83E, h7^{km}±2^{km}, ML3.0/11, Error ellipse: s-maj=1.1km s-min=1.8km az=0.0*

*THE **02** 20:27:32.9, 41 °N±2 °×2 °1E± °, h0^{km}±1^{km}, M2.9/22, MLh2.9/22*

ISC 02 20:27:31.9±0.9**, 40.°52N**±0.°01×**20.°83E**±0.°02**, h5^{km}**±7^{km}**, n130, σ1.^{s}11**/187**, 7C-5D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	Korca	0.10	342	Pg	Pg	20 27 34.0	-0.2
KBN				Sg	Sg	20 27 35.8	+0.1
KBN				AML	AML	20 27 36.6	
	20nm,0.1s						
KBN				AML	AML	20 27 36.7	
	34nm,0.1s						
KBN	Korca	0.10	342	Pg	Pg	20 27 34.1	-0.2
KBN				Sg	Sg	20 27 36.2	+0.5
KBN				AML	AML	20 27 36.6	
	20nm,0.1s						
KBN				AML	AML	20 27 36.7	
	34nm,0.1s						
NEST	Nestorio	0.20	123	Pg	Pg	20 27 36.4	+0.6
NEST				Sg	Sg	20 27 40.3	+1.8
NEST				AML	AML	20 27 42.1	
	13nm,0.2s						
NEST	Nestorio	0.20	123	Pg	Pg	20 27 36.4	+0.6
NEST				Sg	Sg	20 27 40.0	+1.5
NEST				AML	AML	20 27 42.1	
	13nm,0.2s						
NEST	Nestorio	0.20	123	P	Pg	20 27 36.4	+0.6
NEST				S	Sg	20 27 40.4	+2.0
NEST	Nestorio	0.20	123	P	Pg	20 27 36.4	+0.6
NEST				S	Sg	20 27 39.9	+1.5
LMS2	Laimos Florina	0.39	37	P	Pg	20 27 39.6	+0.1
LMS2				S	Sb	20 27 45.8	-1.9
PENT	Pentalofos	0.40	144	P	Pg	20 27 39.6	-0.2
PENT				S	Sb	20 27 46.5	-1.6
PENT	Pentalofos	0.40	144	P	Pg	20 27 39.5	-0.3
PENT				S	Sg	20 27 46.1	+1.1
LSK	Leskovik	0.41	205	Pg	Pg	20 27 38.3	-1.5
LSK				Sg	Sg	20 27 45.6	+0.3
LSK				AML	AML	20 27 47.6	
	9.1nm,0.2s						
LSK	Leskovik	0.41	205	Pg	Pg	20 27 38.4	-1.5
LSK				Sg	Sg	20 27 45.8	+0.5
LSK				AML	AML	20 27 47.6	
	9.1nm,0.2s						
OHR	Ohrid	0.59	358	S	Sb	20 27 53.2	-0.3
OHR	Ohrid	0.59	358	⇓*i*Pg	Pb	20 27 44.1	-0.6
OHR				*i* Sg	Sb	20 27 53.1	-0.3
OHR				*e*Lg	Lg	20 27 54.2	
	comp=N,272nm,0.6s						
OHR				*e*Lg	Lg	20 27 55.8	
	comp=E,370nm,0.5s						
OHR	Ohrid	0.59	358	*e*Pg	Pb	20 27 43.9	-0.8
OHR				*e*Sg	Sb	20 27 53.3	-0.1
KPRO	Kipourio	0.70	144	P	Pg	20 27 44.7	-0.6
KPRO				S	Sb	20 27 56.9	+0.3
KPRO	Kipourio	0.70	144	P	Pg	20 27 44.6	-0.8
KPRO				S	Sb	20 27 56.3	-0.3
KZN	Kozani	0.75	106	P	Pg	20 27 45.9	-0.5
KZN				S	Sb	20 27 58.3	+0.3
NASA	Naoussa	0.95	83	P	Pb	20 27 50.2	-0.6
NASA				S	Sn	20 28 04.8	-1.0
KTI	Kastanea	0.99	97	P	Pg	20 27 50.9	0.0
VLO	Vlora	1.02	267	Pg	Pg	20 27 51.9	+0.4
VLO				Sg	Sg	20 28 05.4	+0.7
IGT	Igoumenitsa	1.06	201	P	Pg	20 27 51.1	-1.1
IGT				S	Sb	20 28 06.7	-0.2
TIR	Tirane	1.10	319	Pn	Pg	20 27 52.7	-0.4
TIR				Sn	Sg	20 28 07.5	+0.1
TIR				AML	AML	20 28 17.2	
	comp=E,0.7nm,0.6s						
TIR	Tirane	1.10	319	Pn	Pn	20 27 53.9	-0.1
TIR				Sn	Sn	20 28 11.1	+1.5
TIR				AML	AML	20 28 17.8	
	comp=E,0.5nm,0.4s						
TIR	Tirane	1.10	319	*i* Pg	Pn	20 27 54.0	-0.1
TIR				*i* Sg	Sn	20 28 12.0	+2.4
TIR	Tirane	1.10	319	*e*Pn	Pn	20 27 53.6	-0.4
TIR				*e*Sn	Sn	20 28 10.9	+1.3
KEK	Kerkira	1.13	225	P	Pg	20 27 53.8	+0.2
PHP	Peshkopia	1.20	346	Pg	Pg	20 27 54.5	-0.4
PHP				Sg	Sg	20 28 10.0	-0.5
PHP				AML	AML	20 28 15.5	
	comp=E,0.4nm,0.5s						
PHP	Peshkopia	1.20	346	Pn	Pg	20 27 54.5	-0.4
PHP				Sn	Sn	20 28 11.8	-0.3
PHP				AML	AML	20 28 15.5	
	comp=E,0.4nm,0.5s						
TETR	Tetrakomo, Epi	1.23	164	P	Pg	20 27 54.2	-1.2
THL	Klokotos Trika	1.32	136	P	Pn	20 27 56.0	-1.0
THL				S	Sn	20 28 16.4	+1.5
THL	Klokotos Trika	1.32	136	P	Pn	20 27 55.7	-1.3
THL				S	Sn	20 28 16.4	+1.5
TYRN	Tyrnavos	1.35	127	P	Pn	20 27 56.8	-0.6
TYRN				S	Sn	20 28 18.0	+2.4
TYRN	Tyrnavos	1.35	127	P	Pn	20 27 56.4	-0.9
VAY	Valandovo	1.54	58	P	Pg	20 28 00.9	-0.6
VAY				S	Sg	20 28 23.5	+2.1
VAY	Valandovo	1.54	58	*i* Pg	Pg	20 28 00.9	-0.6
VAY				*i* Sg	Sg	20 28 23.3	+1.9
VAY				*e*Lg	Lg	20 28 24.4	
	comp=N,100nm,0.7s						
VAY				*e*Lg	Lg	20 28 25.4	
	comp=E,50nm,0.5s						
VAY	Valandovo	1.54	58	*e*Pn	Pb	20 28 00.7	-0.2
VAY				*e*Sn	Sg	20 28 22.1	+0.7
THE	Thessaloniki	1.63	85	P	Pb	20 28 01.5	-0.9
THE				S	Sg	20 28 23.7	-0.5
THE	Thessaloniki	1.63	85	*i* Pn	Pb	20 28 01.7	-0.8
THE	Thessaloniki	1.63	85	P	Pb	20 28 01.6	-0.9
PUK	Puka	1.67	335	Pn	Pg	20 28 04.5	+0.5
PUK				Sn	Sg	20 28 29.1	+3.4
PUK				AML	AML	20 28 32.0	
	comp=E,0.9nm,0.8s						
PUK	Puka	1.67	335	Pn	Pg	20 28 04.1	+0.1
PUK				Sn	Sg	20 28 29.6	+3.8
PUK				AML	AML	20 28 32.0	
	comp=E,0.9nm,0.8s						
KNT	Kendrikon	1.69	67	P	Pn	20 28 02.3	+0.2
KNT				S	Sg	20 28 25.2	-1.1
KNT	Kendrikon	1.69	67	*i* Pn	Pb	20 28 02.6	-0.9
KNT	Kendrikon	1.69	67	P	Pn	20 28 02.2	0.0
HORT	Hortiatis	1.73	87	P	Pn	20 28 02.8	+0.1
HORT				S	Sb	20 28 26.0	-0.2
HORT	Hortiatis	1.73	87	P	Pn	20 28 02.4	-0.3
LKD2	Lefkada island	1.74	184	P	Pb	20 28 04.8	+0.5
LKD2	Lefkada island	1.74	184	P	Pb	20 28 04.6	+0.3
EVR	Evrytania	1.77	155	P	Pb	20 28 05.1	+0.1
MAKR	Makrakomi, Fth	1.81	146	P	Pb	20 28 05.2	-0.3
MAKR	Makrakomi, Fth	1.81	146	P	Pb	20 28 04.7	-0.8
NYDR	Nydri-Lefkada	1.81	183	P	Pb	20 28 05.7	+0.2
NYDR	Nydri-Lefkada	1.81	183	P	Pb	20 28 05.4	-0.1
SCTE	Santa Cesarea	1.86	257	P	Pn	20 28 03.8	-0.6
ULC	Ulcinj	1.87	321	Pn	Pb	20 28 05.9	-0.7
ULC	Ulcinj	1.87	321	⇑*i*Pn	Pn	20 28 05.4	+0.8
ULC				*i* Sn	Sg	20 28 31.8	-0.2
AGG	Agios Georgios	1.89	142	P	Pn	20 28 05.3	+0.4
AGG				S	Sb	20 28 30.3	-0.6
AGG	Agios Georgios	1.89	142	P	Pn	20 28 05.0	+0.1
EVGI	Lefkada island	1.91	184	P	Pb	20 28 06.6	-0.5
EVGI	Lefkada island	1.91	184	P	Pb	20 28 06.2	-1.0
BCI	Bajram Curri	1.93	343	Pn	Pg	20 28 08.9	+0.1
BCI				Sn	Sg	20 28 36.3	+2.4

BCI				AML	AML	20 28 40.8	
	comp=E,0.7nm,0.7s						
BCI	Bajram Curri	1.93	343	Pg	Pg	20 28 08.7	-0.2
BCI				Sg	Sg	20 28 36.2	+2.3
BCI				AML	AML	20 28 40.8	
	comp=E,0.7nm,0.7s						
PDO	Prodromos	1.94	172	P	Pb	20 28 07.8	0.0
SOH	Sokhos	1.94	80	P	Pn	20 28 06.0	+0.4
PVO	Paravola	1.98	164	P	Pb	20 28 08.9	+0.5
PLG	Polygyros	2.00	93	P	Pb	20 28 07.2	-1.6
PLG				S	Sb	20 28 33.5	-0.5
PLG	Polygyros	2.00	93	P	Pn	20 28 06.7	+0.3
FSK	Fiskardo	2.07	186	P	Pn	20 28 08.0	+0.6
DRME	Dracevica, Mon	2.07	324	Pn	Pb	20 28 09.1	-1.0
DRME	Dracevica, Mon	2.07	324	*e*Pn	Pb	20 28 09.0	-1.0
DRME	Dracevica, Mon	2.07	324	⇓*i*Pn	Pn	20 28 08.2	+0.8
DRME				*i* Sn	Sb	20 28 36.2	+0.1
ANX	Ano Chora	2.10	156	P	Pb	20 28 10.3	-0.3
KKB	Krupnik	2.18	52	*i* Pn	Pb	20 28 10.0	-1.8
SRS	Serrai	2.18	73	P	Pn	20 28 09.1	+0.3
NEO	Neokhori	2.21	123	P	Pn	20 28 09.2	0.0
NEO				S	Sn	20 28 36.5	-0.3
NEO	Neokhori	2.21	123	P	Pn	20 28 08.5	-0.7
PDG	Podgorica	2.24	329	*e*Pn	Pn	20 28 10.3	+0.6
PDG	Podgorica	2.24	329	*e*Pn	Pn	20 28 10.4	+0.7
PDG				*e*Sn	Sb	20 28 40.8	-0.1
PDG	Podgorica	2.24	329	⇓*i*Pn	Pn	20 28 10.6	+0.9
PDG				*i* Sn	Sb	20 28 41.1	+0.2
BUM	Brajici-Budva	2.30	321	⇑*i*Pn	Pn	20 28 11.4	+0.9
BUM				*i* Sn	Sb	20 28 42.1	-0.5
DMLN	Damoulianata-K	2.31	189	P	Pb	20 28 12.2	-1.8
DMLN				S	Sn	20 28 40.6	+1.2
DMLN	Damoulianata-K	2.31	189	P	Pn	20 28 12.1	+1.5
SERG	Sergoula	2.31	155	P	Pb	20 28 12.5	-1.6
BOSS	Bosilegrad	2.33	32	*e*Pn	Pn	20 28 10.9	0.0
VLS	Valsamata	2.35	185	P	Pn	20 28 11.8	+0.6
VLS	Valsamata	2.35	185	P	Pn	20 28 11.6	+0.4
AXS	Araxos	2.36	170	P	Pb	20 28 13.2	-1.7
AXS	Araxos	2.36	170	P	Pb	20 28 13.3	-1.6
BARS	Barje	2.41	18	*i* Pn	Pn	20 28 12.4	+0.4
BARS	Barje	2.41	18	*e*Pn	Pn	20 28 11.9	-0.1
OUR	Ouranopolis	2.41	93	P	Pn	20 28 13.0	+1.0
OUR				S	Sn	20 28 42.7	+0.8
OUR	Ouranopolis	2.41	93	P	Pn	20 28 12.0	0.0
PSDA	Pessada-Kefalo	2.41	185	P	Pn	20 28 12.7	+0.6
KOKK	Kokkinochori,	2.43	82	P	Pn	20 28 12.8	+0.6
KOKK				S	Sn	20 28 43.5	+1.2
BEY	Berane	2.45	344	*i* Pn	Pb	20 28 16.3	-0.2
IVA	Berane	2.45	344	⇑*i*Pn	Pn	20 28 13.5	+0.9
IVA				*i* Sn	Sb	20 28 45.9	-1.1
CEME	Cevo	2.48	325	⇑*i*Pn	Pn	20 28 13.2	+0.2
CEME				*i* Sn	Sb	20 28 46.0	-1.8
KOME	Kolasin	2.52	337	⇑*i*Pn	Pn	20 28 14.7	+1.0
KOME				*i* Sn	Sb	20 28 47.1	-2.1
HCY	Herceg Novi	2.60	318	*e*Pn	Pn	20 28 13.2	-1.5
HCY	Herceg Novi	2.60	318	⇑*i*Pn	Pn	20 28 15.2	+0.5
HCY				*i* Sn	Sb	20 28 48.8	-2.5
SELS	Selova	2.70	4	*e*Pn	Pn	20 28 16.2	+0.2
SELS				*e*Sn	Sb	20 28 52.1	-2.1
VTS	Vitosha	2.76	40	*e*Pn	Pn	20 28 16.7	-0.3
SJES	Sjenica	2.81	347	*e*Pn	Pb	20 28 20.5	-2.1
SJES	Sjenica	2.81	347	*e*Pn	Pn	20 28 18.6	+1.0
SJES				*e*Sn	Sn	20 28 54.0	+2.1
TREB	Trebinje	2.87	320	*e*Pn	Pn	20 28 11.9	-6.5
TREB	Trebinje	2.87	320	*e*Pn	Pn	20 28 18.2	-0.2
BRY	Bratogost	2.93	325	*e*Pn	Pn	20 28 17.5	-1.8
BRY	Bratogost	2.93	325	⇓*i*Pn	Pn	20 28 20.3	+1.0
BRY				*i* Sn	Sn	20 28 57.1	+2.2
PLE	Pljevlja	3.00	339	⇑*i*Pn	Pn	20 28 21.1	+0.8
PLE				*i* Sn	Sn	20 28 59.3	+2.6
UPM	Unac-Piva	3.04	332	⇓*i*Pn	Pn	20 28 21.5	+0.7
UPM				*i* Sn	Sn	20 28 59.7	+2.0
ZAPS	Zavoj	3.06	25	*e*Pn	Pn	20 28 20.5	-0.5
ZAPS				*e*Sn	Sn	20 28 58.4	+0.4
IVAS	Ivanjica	3.09	351	*e*Pn	Pn	20 28 21.8	+0.4
BOVS	Bovan	3.18	12	*e*Pn	Pn	20 28 21.9	-0.6
RUDO	Rudo	3.28	341	*e*Pn	Pn	20 28 23.5	-0.4
STON	Ston	3.32	316	*e*Pn	Pn	20 28 24.2	-0.2
STON	Ston	3.32	316	*e*Pn	Pn	20 28 24.0	-0.4
GRUS	Gruza	3.36	359	*e*Pn	Pn	20 28 26.0	+0.9
ZAGS	Zajecar	3.45	17	*e*Pn	Pn	20 28 25.6	-0.7
BBLS	Lazi&#263i	3.50	343	*e*Pn	Pb	20 28 32.2	-2.2
DIVS	Divibare	3.63	350	*e*Pn	Pn	20 28 30.4	+1.6
HAPS	Han Pijesak,Bl	3.82	339	*e*Pn	Pn	20 28 32.5	+1.0
HAPS	Han Pijesak,Bl	3.82	339	*e*Pn	Pn	20 28 31.7	+0.2
KUBS	Kucevo	3.94	9	*e*Pn	Pn	20 28 31.4	-1.6
TEKS	Tekeris	4.14	347	*e*Pn	Pn	20 28 33.3	-2.4
BLY	Banja Luka	5.01	329	*e*Pn	Pb	20 28 53.7	-6.3
A050A	Klekovaca	5.07	323	*e*Pn	Pn	20 28 49.1	+0.4
A051A	Mrakovica	5.33	329	*e*Pn	Pn	20 28 52.8	+0.6
BOJS	Bojanci	6.44	322	*e*Pn	Pn	20 29 05.9	-1.5
CRES	Cresnjevec Ost	6.59	325	*e*Pn	Pn	20 29 08.9	-0.6
CEY	Cerknica	7.01	320	*e*Pn	Pn	20 29 14.7	-0.5

IDC ***02*** *21:24:04.4±0.7, 22°.07S×173°.74E, h0^{km}, mb4.2/14, mbtmp4.2/15, ML3.3/1, MS4.1/52, Error ellipse: s-maj=25.2km s-min=19.4km az=137.0*

GCMT ***02*** *21:24:08.9±0.2, 21°.86S±0°.01×173°.83E±0°.01, h12^{km}, MW5.0/130, Moment Tensor Solution. s68,c87; s130,c215; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.79±.08; $M_{\theta\theta}$0.15±.09; $M_{\phi\phi}$0.64±.08; $M_{r\theta}$-0.10±.21; $M_{\theta\phi}$4.01±.05; $M_{\phi r}$0.32±.20; Best double couple: $M_0$4.03500×10^{16} NP1:ϕ_s88.00000°,δ85.00000°, λ-3.00000°. NP2:ϕ_s178.00000°,δ87.00000°, λ-175.00000°. Principal axes: T 4.4200, Plg2.0000°, Azm313.0000°; N -0.7690, Plg84.0000°, Azm206.0000°; P -3.6510, Plg6.0000°, Azm43.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***02*** *21:24:09.9±1.5, 22°.1S±0°.1×173°.93E±0°.09, h35^{km}±1^{km}, mb4.9/63 Error ellipse: s-maj=19.0km s-min=13.4km az=152.0*

ISC 02 21:24:09.4±0.4**, 22°.07S**±0°.07×**173°.86E**±0°.08**, h35^{km}, n210,** σ**1^{s}.15**/167**, mb4.9**/52**, MS4.2**/53**, 4C, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	5.84	43	Pn	Pn	21 25 29.8	-3.8
DZM	Mont Dzumac	6.88	269	Pn	Pn	21 25 45.5	-2.5
DZM	Mont Dzumac	6.88	269	Pn	Pn	21 25 45.0	-2.9
	0.6nm,0.3s,baz=52,slow=19,SNR=1.2						
DZM				LR	LR	21 27 50.5	
	comp=Z,537nm,18.1s,baz=104,slow=33						
	6.1nm,0.9s						
RAO	Raoul Island	10.30	136	LR	LR	21 29 51.0	
	comp=Z,4µm,18.9s,baz=320,slow=33						
URZ	Urewera	16.38	171	Pn	P	21 27 58.9	-0.2
	0.8nm,0.3s,baz=55,slow=6.1,SNR=4.0						
URZ				LR	LR	21 32 51.5	
	comp=Z,1µm,21.6s,baz=77,slow=32						
BKZ	Black Stump Fm	17.19	173		P	21 28 07.7	-0.5
HNR	Honiara	18.34	311	P	P	21 28 16.3	-4.7
	48nm,0.6s,baz=180,slow=6.1,SNR=1.7						
HNR				LR	LR	21 34 14.9	
	comp=Z,723nm,20.3s,baz=140,slow=33						
BFZ	Birch Farm	18.67	174	P	P	21 28 23.2	-1.2
BFZ				IAmb	IAmb	21 28 24.7	
	comp=Z,260nm,2.0s						
INZ	Inchbonnie	20.70	185	P	P	21 28 46.1	-0.4
INZ				IAmb	IAmb	21 28 51.1	
	comp=Z,84nm,1.7s						
RPZ	Rata Peaks	21.71	186	LR	LR	21 36 49.2	
	comp=Z,1µm,18.4s,baz=354,slow=35						
RAR	Rarotonga	24.51	93	LR	LR	21 37 02.6	
	comp=Z,367nm,21.6s,baz=264,slow=32						
CTAO	Charters Tower	25.82	269	P	P	21 29 39.0	+1.4
CTAO				IAmb	IAmb	21 29 40.9	
	comp=Z,63nm,1.7s						
PMG	Port Moresby	28.56	292	LR	LR	21 40 04.3	
	comp=Z,544nm,18.7s,baz=114,slow=34						
TOO	Toolangi	28.92	231	P	P	21 30 05.2	-0.1
TOO				IAmb	IAmb	21 30 52.7	
	comp=Z,35nm,1.7s						
STKA	Stephens Creek	30.27	244	P	P	21 30 17.8	+0.5
STKA	Stephens Creek	30.27	244	P	P	21 30 16.6	-0.7
	comp=Z,3.4nm,0.9s,baz=88,slow=11,SNR=5.1						
STKA				LR	LR	21 41 18.4	
	comp=Z,624nm,21.7s,baz=69,slow=34						
	comp=Z,3.4nm,0.9s						
PPT	Papeete	34.63	89	LR	LR	21 41 07.7	
	comp=Z,449nm,21.7s,baz=208,slow=30						
BBOO	Buckleboo	35.05	244	P	P	21 30 58.9	-0.2
AS31	Alice Springs	36.77	260		P	21 31 14.1	+0.1
ASAR	Alice Springs	36.77	260	P	P	21 31 13.2	-0.7
ASAR	Alice Springs	36.77	260	P	P	21 31 13.0	-1.0
	comp=Z,6.2nm,0.9s,baz=83,slow=8.8,SNR=37						
	comp=Z,6.2nm,0.9s						
WRA	Warramunga Arr	36.89	266	P	P	21 31 13.9	-1.1
	comp=Z,4.4nm,0.9s,baz=92,slow=8.6,SNR=9.9						
	comp=Z,4.4nm,0.9s						
JAY	Jayapura	37.62	296	LR	LR	21 46 56.6	
	comp=Z,494nm,18.2s,baz=174,slow=37						
MTN	Manton Dam	41.66	275	P	P	21 31 54.8	0.0
FORT	Forrest	41.69	248	P	P	21 31 54.5	-0.4
FORT				IAmb	IAmb	21 31 56.3	
	comp=Z,26nm,0.7s						
KNRA	Kununurra	43.03	270	P	P	21 32 05.2	-0.7
FITZ	Fitzroy Crossi	45.32	266		P	21 32 24.7	+0.4
FITZ	Fitzroy Crossi	45.32	266	LR	LR	21 51 03.2	
	comp=Z,460nm,18.8s,baz=104,slow=36						
GUMO	Guam	45.44	319	LR	LR	21 49 20.4	
	comp=Z,414nm,21.4s,baz=134,slow=33						
MBWA	Marble Bar	50.11	260		P	21 33 02.0	+0.5
MBWA	Marble Bar	50.11	260	P	P	21 33 00.8	-0.6
MBWA				IAmb	IAmb	21 33 16.4	
	comp=Z,39nm,0.9s						
NWAO	Narrogin (SRO)	50.86	245	P	P	21 33 06.8	-0.2
NWAO				IAmb	IAmb	21 33 08.7	
	comp=Z,14nm,0.8s						
NWAO	Narrogin (SRO)	50.86	245	LR	LR	21 53 22.0	
	comp=Z,598nm,20.7s,baz=92,slow=35						
MORW	Morawa	52.19	250	P	P	21 33 17.5	+0.5
KAPI	Kappang	54.96	280	LR	LR	21 56 22.2	
	comp=Z,127nm,20.9s,baz=122,slow=35						
DAV	Davao City (W)	55.46	296	LR	LR	21 58 30.1	
	comp=Z,92nm,18.1s,baz=90,slow=37						
VNDA	Vanda	55.81	183	LR	LR	21 55 44.3	
	comp=Z,152nm,18.2s,baz=15,slow=34						
TOLI2	Tolitoli	56.64	287	P	P	21 33 50.0	+0.5
TOLI2				IAmb	IAmb	21 33 60.0	
	comp=Z,9.0nm,1.0s						
JCJ	Chichijima	57.69	326	LR	LR	21 54 11.9	
	comp=Z,328nm,21.9s,baz=117,slow=31						
CCD	Concordia, Ant	59.12	193	P	P	21 34 07.4	+0.9
CCD				PcP	PcP	21 34 52.7	-2.1
LEM	Lembang	65.47	273	LR	LR	22 02 37.7	
	comp=Z,229nm,21.2s,baz=153,slow=35						
JOW	Kunigami	65.65	316	LR	LR	21 59 39.7	
	comp=Z,182nm,21.9s,baz=122,slow=33						
MJAR	Matsushiro Arr	67.32	329	P	P	21 35 00.4	-0.5
	comp=Z,0.4nm,0.4s,baz=186,slow=7.2,SNR=5.5						
MJAR				LR	LR	22 00 41.3	
	comp=Z,153nm,21.6s,baz=142,slow=33						
	comp=Z,0.4nm,0.4s						
MAJO	Matsushiro	67.32	329	P	P	21 35 02.6	+1.8
MAJO				IAmb	IAmb	21 35 38.3	
	comp=Z,21nm,1.5s						
QSPA	South Pole Qui	68.00	180		P	21 35 05.4	+0.5
QSPA	South Pole Qui	68.00	180	P	P	21 35 05.2	+0.3
	comp=Z,1.8nm,0.6s,baz=336,slow=0.9,SNR=18						
	comp=Z,1.8nm,0.6s						
JNU	Nakatsue	68.51	322	LR	LR	22 03 00.4	
	comp=Z,43nm,20.0s,baz=124,slow=34						
ASAJ	Asahikawa	71.82	337	LR	LR	22 02 11.3	
	comp=Z,275nm,21.1s,baz=169,slow=32						
KSRS	Korea Array	73.31	323	P	P	21 35 35.9	-1.5
	comp=Z,1.4nm,0.8s,baz=141,slow=6.4,SNR=6.2						
KSRS				LR	LR	22 04 02.4	
	comp=Z,62nm,21.0s,baz=90,slow=33						
	comp=Z,1.4nm,0.8s						
KSAR	Wonju Array Be	73.33	323		P	21 35 38.1	+0.6
SHEM	Shemya Is, Ala	74.48	0	LR	LR	22 04 53.8	
	comp=Z,88nm,19.8s,baz=99,slow=33						
PEA0B	Petropavlovsk-	76.17	350	P	P	21 35 54.2	+0.6
PEA0B				IAmb	IAmb	21 36 17.5	
	comp=Z,20nm,1.2s						
PETK	Petropavlovsk-	76.17	350	P	P	21 35 53.5	0.0
PETK	Petropavlovsk-	76.17	350	P	P	21 35 52.9	-0.7
	comp=Z,2.2nm,0.5s,baz=123,slow=5.5,SNR=8.2						
PETK				LR	LR	22 04 35.6	
	comp=Z,162nm,20.1s,baz=155,slow=32						
	comp=Z,2.2nm,0.5s						
USRK	Ussuriysk Ar.	76.27	330		P	21 35 54.2	-0.2
USRK	Ussuriysk Ar.	76.27	330	P	P	21 35 55.1	+0.7
	comp=Z,3.5nm,0.9s,baz=132,slow=2.8,SNR=5.6						
USRK				LR	LR	22 04 58.7	
	comp=Z,114nm,21.6s,baz=119,slow=32						
	comp=Z,3.5nm,0.9s						
RPSI	Rantau Prapat	77.09	278		P	21 35 59.9	+0.1
RPSI				IAmb	IAmb	21 36 10.7	
	comp=Z,13nm,1.0s						
PSI	Prapat	77.14	278	LR	LR	22 11 09.3	
	comp=Z,127nm,20.6s,baz=132,slow=37						
MAW	Mawson	77.43	202	LR	LR	22 07 28.0	
	comp=Z,130nm,18.0s,baz=83,slow=34						
BELA	Belgrano 2	78.89	174	P	P	21 36 07.9	-0.7
CN2	Changchun	79.16	327	P	P	21 36 13.0	+2.5
CN2				S	S	21 46 07.2	-0.4
CN2				pmax	pmax		
	comp=Z,10.0nm,1.4s						
CN2				LR	LR		
	comp=Z,100nm,17.0s						
CN2				LR	LR		
	comp=Z,100nm,17.0s						
CN2				LR	LR		
	comp=Z,200nm,22.0s						
BNX	BinXian	79.58	329	⇑P	P	21 36 14.6	+1.9
BNX				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BNX				pmax	pmax		
	comp=Z,120nm,6.0s						
KLR	Kul'dur	80.27	334	P	P	21 36 17.6	+1.2
	comp=Z,1.7nm,0.8s,baz=117,slow=4.7,SNR=4.6						
KLR				LR	LR	22 05 20.1	
	comp=Z,92nm,21.6s,baz=156,slow=31						
	comp=Z,1.7nm,0.8s						
LYN	LuoYang	81.04	313	*e*P	P	21 36 23.3	+2.4
LYN				pmax	pmax		
	comp=Z,21nm,0.8s						
LYN				pmax	pmax		
	comp=Z,91nm,6.9s						
LYN				LR	LR		
	comp=Z,190nm,21.0s						
LYN				LR	LR		
	comp=Z,200nm,20.3s						
LYN				LR	LR		
	comp=Z,350nm,21.6s						
PMSA	Palmer Station	82.74	159	P	P	21 36 30.6	+1.2
PMSA	Palmer Station	82.74	159	LR	LR	22 06 07.0	
	comp=Z,80nm,20.0s,baz=239,slow=30						
XAN	Xi'an	83.22	311	P	P	21 36 33.9	+1.5
XAN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SYO	Syowa Base	83.39	195	⇑*e*P	P	21 36 31.0	-1.6
SYO	Syowa Base	83.39	195	⇑*e*PcP	PcP	21 36 36.9	-0.1
KMI	Kunming	83.44	300	P	P	21 36 36.2	+2.3
KMI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MA2	Magadan	83.53	348	LR	LR	22 08 19.3	
	comp=Z,122nm,21.9s,baz=162,slow=32						
CMAR	Chiang Mai Arr	83.60	293	P	P	21 36 34.1	-0.5
CMAR	Chiang Mai Arr	83.60	293	P	P	21 36 35.4	+0.8
	comp=Z,0.6nm,0.7s,baz=121,slow=5.2,SNR=5.0						
CMAR				LR	LR	22 13 59.6	
	comp=Z,30nm,20.5s,baz=130,slow=36						
	comp=Z,0.6nm,0.7s						
CHTO	Chiang Mai	83.75	293	P	P	21 36 35.3	-0.1
CHTO				IAmb	IAmb	21 36 47.5	
	comp=Z,12nm,1.1s						
KDAK	Kodiak Island	84.34	17	LR	LR	22 07 00.1	
	comp=Z,92nm,21.1s,baz=212,slow=30						
N15K	Kwethluk River	84.65	13	P	P	21 36 39.7	+0.6
PZH	PanZhiHua	84.87	301	P	P	21 36 42.3	+1.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.1s						
P18K	Big Mountain,	85.05	15	P	P	21 36 41.7	+0.6
HHC	Hu-ho-hao-te	85.20	318	*e*P	P	21 36 46.0	+3.6
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,150nm,4.4s						
HHC				LR	LR		
	comp=Z,110nm,19.4s						
HHC				LR	LR		
	comp=Z,130nm,22.7s						
HHC				LR	LR		
	comp=Z,340nm,22.7s						
O18K	Koktuh Hills	85.46	15	P	P	21 36 43.7	+0.6
O18K				IAmb	IAmb	21 36 57.6	
	comp=Z,14nm,1.1s						
M16K	Timber Creek	85.67	13	P	P	21 36 45.6	+1.5
M16K				IAmb	IAmb	21 37 02.4	
	comp=Z,12nm,1.1s						
CMB	Columbia Colle	85.89	46	P	P	21 36 46.1	+0.3
TROLL	Troll, Antarti	85.98	183	⇑P	P	21 36 45.5	-0.4
	comp=Z,190nm,0.5s						
K15K	Wolf Creek Mou	86.33	11		P	21 36 48.6	+1.3
K15K				IAmb	IAmb	21 37 03.3	
	comp=Z,14nm,1.2s						
PFO	Pinyon Flats O	86.39	52	LR	LR	22 07 46.0	
	comp=Z,121nm,19.9s,baz=240,slow=30						
SNAA	Sanae	86.48	181	LR	LR	22 13 55.6	
	comp=Z,91nm,18.2s,baz=192,slow=35						
WAKR	Walker	86.78	46	P	P	21 36 49.5	-0.9
WAKR				IAmb	IAmb	21 36 55.1	
	comp=Z,9.3nm,1.3s						
LPIG	La Paz	86.80	63	LR	LR	22 08 59.1	
	comp=Z,85nm,18.5s,baz=212,slow=31						
USHA	Ushuaia	86.84	149	LR	LR	22 12 21.6	
	comp=Z,114nm,18.0s,baz=159,slow=33						
PAHR	Pah Rah Range	87.44	45	P	P	21 36 54.1	+0.6
NVAR	Mina Array Bea	87.50	47	P	P	21 36 56.1	+2.3
	comp=Z,1.5nm,0.9s,baz=217,slow=8.1,SNR=5.5						
NVAR				LR	LR	22 07 35.4	
	comp=Z,171nm,21.3s,baz=218,slow=30						
	comp=Z,1.5nm,0.9s						
L19K	White Mountain	87.59	14	P	P	21 36 54.9	+1.4
L19K				IAmb	IAmb	21 37 10.1	
	comp=Z,9.3nm,1.1s						
LZH	Lanzhou	87.84	310	*e*P	P	21 37 04.5	+9.0
LZH				pP	sP	21 37 21.7	+12
LZH				pmax	pmax		
	comp=Z,14nm,1.2s						
J05D	Fort Rock, OR	88.16	41	P	P	21 36 54.9	-2.0
J05D				IAmb	IAmb	21 37 24.9	
	comp=Z,14nm,1.3s						
TPNV	Topopah Spring	88.17	49	P	P	21 36 56.8	-0.3
J18K	Innoko River	88.33	13	P	P	21 36 57.9	+1.0
PRN	Pahroc Range	89.23	49	P	P	21 37 01.9	-0.1
PRN				IAmb	IAmb	21 37 24.4	
	comp=Z,10.0nm,1.5s						
CAST	Castle Rocks	89.31	15	P	P	21 37 02.5	+0.9
BBB	Bella Bella	89.54	31	LR	LR	22 09 24.6	
	comp=Z,151nm,19.6s,baz=239,slow=30						
I07A	Izee	89.65	41	P	P	21 37 04.6	+0.9
J08A	Circle Bar Ran	89.91	42	P	P	21 37 05.2	+0.2
J08A				IAmb	IAmb	21 37 13.7	
	comp=Z,6.9nm,1.1s						
LCMT	Little Creek M	90.31	50	P	P	21 37 07.1	0.0
X16A	Lo Mia Camp, P	90.45	53	P	P	21 37 07.7	-0.1
X16A				IAmb	IAmb	21 37 13.4	
	comp=Z,6.2nm,1.4s						
PSUT	Pine Spring	90.59	48	P	P	21 37 08.1	-0.3
G08A	Pilot Rock	90.61	41	P	P	21 37 08.7	+0.5
G08A				IAmb	IAmb	21 37 17.3	
	comp=Z,5.4nm,0.9s						
ELK	Elko	90.70	46	P	P	21 37 09.1	+0.2
U15A	North Rim	90.73	51	P	P	21 37 10.3	+1.1
U15A				IAmb	IAmb	21 37 23.3	
	comp=Z,11nm,1.3s						
YAK	Yakutsk	90.91	341	LR	LR	22 16 02.9	
	comp=Z,105nm,18.8s,baz=132,slow=34						
M27K	Edge Creek, AK	91.18	19	P	P	21 37 11.2	+0.7
M27K				IAmb	IAmb	21 37 26.7	
	comp=Z,8.2nm,1.2s						
K24K	Donnelly Dome	91.20	17	P	P	21 37 10.9	+0.4
H03S2	Juan Fernandez	91.23	127	T	T	23 18 25.5	
	baz=241,slow=74,SNR=4.9						
H03S1	Juan Fernandez	91.24	127	T	T	23 18 25.6	
	baz=241,slow=74,SNR=4.5						
H03S3	Juan Fernandez	91.25	127	T	T	23 18 25.0	
	baz=241,slow=74,SNR=7.1						
CCB	Clear Creek Bu	91.37	15	P	P	21 37 10.6	-0.4
HDA	Harding Lake	91.39	16	P	P	21 37 12.3	+1.0
HDA				IAmb	IAmb	21 37 31.1	
	comp=Z,9.1nm,1.4s						
RIDG	Independent Ri	91.41	17	P	P	21 37 10.7	-0.7
RIDG				IAmb	IAmb	21 37 25.7	
	comp=Z,9.0nm,1.2s						
DOT	Dot Lake	91.55	17	P	P	21 37 11.2	-0.8
DOT				IAmb	IAmb	21 37 38.2	
	comp=Z,7.2nm,1.1s						
ILAR	Eielson Array	91.70	16	P	P	21 37 12.8	+0.1
	comp=Z,1.6nm,1.0s,baz=232,slow=6.3,SNR=11						
ILAR				LR	LR	22 12 11.8	
	comp=Z,84nm,20.7s,baz=232,slow=32						
	comp=Z,1.6nm,1.0s						
BCAR	Beaver Creek A	91.75	19	P	P	21 37 12.9	-0.1
SCRK	Sand Creek	91.83	17	P	P	21 37 14.2	+0.8
SCRK				IAmb	IAmb	21 37 32.2	
	comp=Z,5.9nm,1.2s						
J25K	Salcha River,	91.96	16		P	21 37 14.1	+0.1
J25K				IAmb	IAmb	21 37 36.7	
	comp=Z,7.1nm,1.4s						
SONM	Songino Array	92.09	321	P	P	21 37 16.5	+1.4
	comp=Z,0.4nm,0.3s,baz=159,slow=4.6,SNR=3.9						
SONM				LR	LR	22 16 33.6	
	comp=Z,76nm,20.3s,baz=91,slow=34						
	comp=Z,0.4nm,0.3s						
GTA	Gaotai	92.22	312	*e*P	P	21 37 18.2	+2.4
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GTA				LR	LR		
	comp=Z,140nm,17.8s						
GTA				LR	LR		
	comp=Z,130nm,16.4s						
GTA				LR	LR		
	comp=Z,180nm,21.4s						
J26L	Joseph Creek	92.35	17		P	21 37 16.1	+0.3
DLBC	Dease Lake	92.62	26	LR	LR	22 13 27.5	
	comp=Z,130nm,19.0s,baz=270,slow=32						
HVU	Hansel Valley	92.83	46	P	P	21 37 17.5	-1.1
HVU				IAmb	IAmb	21 37 36.4	
	comp=Z,8.2nm,1.6s						
L29M	L29M	92.89	20		P	21 37 18.1	-0.2
L29M				IAmb	IAmb	21 37 23.1	
	comp=Z,9.2nm,1.4s						
I26K	Coal Creek Min	93.09	17		P	21 37 19.3	+0.2
NEW	Newport	93.21	39	LR	LR	22 13 51.7	
	comp=Z,152nm,18.8s,baz=222,slow=32						
DAWY	Dawson	93.21	19	P	P	21 37 20.2	+0.5
DAWY				IAmb	IAmb	21 37 43.3	
	comp=Z,6.8nm,1.4s						
TCUT	Toone Canyon	93.45	47	P	P	21 37 21.3	-0.3
PLCA	Paso Flores	93.53	137	LR	LR	22 10 03.2	
	comp=Z,163nm,21.2s,baz=244,slow=30						
TXAR	Lajitas Array	94.36	60	P	P	21 37 25.6	-0.3
	comp=Z,0.6nm,1.0s,baz=253,slow=3.8,SNR=3.8						
TXAR				LR	LR	22 11 19.9	
	comp=Z,92nm,21.3s,baz=258,slow=30						
	comp=Z,0.6nm,1.0s						
ANMO	Albuquerque	94.39	54	LR	LR	22 11 30.1	
	comp=Z,112nm,21.8s,baz=339,slow=30						
PDAR	Pinedale Array	95.41	46	LR	LR	22 14 23.7	
	comp=Z,83nm,19.4s,baz=230,slow=32						
PALK	Pallekele	95.61	276	LR	LR	22 23 16.7	
	comp=Z,109nm,18.9s,baz=119,slow=37						
RLMT	Red Lodge	96.58	44		P	21 37 35.0	-0.9
CMIG	Matias Romero	97.38	75	LR	LR	22 14 26.3	
	comp=Z,38nm,19.7s,baz=182,slow=31						
INK	Inuvik	97.89	17	LR	LR	22 13 16.8	
	comp=Z,40nm,21.9s,baz=248,slow=30						
TIXI	Tiksi	98.43	347	LR	LR	22 19 53.4	
	comp=Z,78nm,19.2s,baz=174,slow=34						
WMQ	Urumqi	102.29	312	*e*P	Pdif	21 38 03.3	+2.1
WMQ				LR	LR		
	comp=Z,95nm,23.9s						
MKAR	Makanchi Array	106.79	314	Pdiff	Pdif	21 38 24.0	+2.9
	comp=Z,0.3nm,0.8s,baz=100,slow=6.3,SNR=3.7						
BVAR	Borovoye Array	115.36	319	PKP	PKiKP	21 42 46.4	-0.7
	comp=Z,0.2nm,0.4s,baz=114,slow=1.7,SNR=2.4						
ARTI	Arti	122.17	324		PKPdf	21 42 59.6	-0.4
ARCES	ARCESS Array B	128.86	346	PKP	PKPdf	21 43 12.7	+0.1
	comp=Z,4.1nm,1.0s,baz=17,slow=1.3,SNR=3.5						
FINES	FINESS Array B	134.81	339	PKP	PKPdf	21 43 23.6	-0.4
	comp=Z,2.1nm,0.9s,baz=44,slow=5.6,SNR=2.1						
AKASG	Malin Array Be	140.29	325	PKP	PKPdf	21 43 35.3	+0.9
	comp=Z,0.1nm,0.3s,baz=58,slow=2.4,SNR=1.7						
BRTR	Keskin Array B	141.96	307	PKP	PKPdf	21 43 38.9	+0.8

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      comp=Z,0.4nm,0.7s,baz=131,slow=3.3,SNR=4.2
BUR08 Bucovina Ar. S   144.19 323            PKPdf   21 43 41.7  0.0
ISP   Isparta          144.82 305            PKPab   21 43 42.0 -0.1
MLR   Muntele Rosu     144.92 319            PKPdf   21 43 42.9 -0.1
STHS  Stebnicka Huta   145.17 328 ePKP       PKPdf   21 43 45.0 +1.8
BSEG  Bad Segeberg     145.82 343 eL         L       22 45 36.2
      comp=Z,163nm,21.7s
MORC  Moravsky Berou   146.63 332 ePKP       PKPdf   21 43 45.0 -0.7
EKA   Eskdalemuir Ar   146.71 357  PKPbc     PKPab   21 43 48.5 +0.1
      comp=Z,1.8nm,0.6s,baz=12,slow=4.3,SNR=5.2
CLL   Collm            147.23 338 eL         L       22 56 45.2
      comp=Z,122nm,18.1s
JAVC  Velka Javorina   147.24 330 ePKP       PKPdf   21 43 46.4 -0.3
VRAC  Vranov           147.39 332 ePKP       PKPdf   21 43 46.8 -0.1
KRUC  Moravsky         147.66 332 ePKP       PKPdf   21 43 47.2 -0.2
MOX   Moxa             148.27 338 eL         L       22 46 51.9
      comp=Z,122nm,21.8s
RONA  Rosalia, Austr   148.72 330 ePKP       PKPbc   21 43 52.9 -0.1
      comp=Z,3.8nm,1.1s
CONA  Conrad Observa   148.75 331 ePKP       PKPbc   21 43 53.2 +0.1
      comp=Z,16nm,1.8s
KASTN Kahler Asten     148.78 342 ePKPbc     PKPab   21 43 56.7 -0.2
      baz=33,slow=1.8
KHC   Kasperske Hory   148.79 335 ePKP       PKPbc   21 43 53.3 +0.2
ROTZ  Rotzenmuhle      148.79 337 ePKPbc     PKPab   21 43 57.1 +0.2
      baz=33,slow=1.8
BUG   Bochum--Univer   148.88 344 ePKPbc     PKPab   21 43 57.6 +0.5
      baz=33,slow=1.8
GEC2  GERESS Array S   148.97 334  PKPdf     PKPdf   21 43 50.2 +0.6
GEC2  GERESS Array S   148.97 334 ePKPbc     PKPab   21 43 56.9 -0.8
      baz=33,slow=1.8
GEC2                              eL         L       22 48 51.8
      comp=Z,149nm,21.9s
GERES GERESS Array B   148.97 334  PKPbc     PKPbc   21 43 53.1 -0.6
      comp=Z,2.4nm,1.0s,baz=51,slow=4.3,SNR=11
GERES                              PKPab     pPKPdf  21 43 59.7 -0.9
      comp=Z,1.9nm,0.8s,baz=35,slow=3.3,SNR=11
WET   Wettzell         149.05 335 ePKPbc     PKPab   21 43 57.4 -0.6
      baz=33,slow=1.8
WET                               eL         L       22 49 32.6
      comp=Z,145nm,22.0s
TEKS  Tekeris          149.20 323 eP         PKiKP   21 43 55.4 -0.1
GRF   Grafenberg Arr   149.21 338 ePKPbc     PKPab   21 43 59.4 +0.8
      baz=33,slow=1.8
GRF                               eL         L       22 46 33.1
      comp=Z,83nm,21.8s
ARSA  Arzberg          149.40 330 ePKP       PKPbc   21 43 54.4 -0.3
      comp=Z,2.3nm,0.9s
MOA   Molln            149.51 332 ePKiKP     PKiKP   21 43 55.9 -0.2
      comp=Z,3.6nm,1.0s
TNS   Taunus Mts       149.65 341 ePKPbc     PKPab   21 43 58.8 -1.7
      baz=33,slow=1.8
TNS                               eL         L       22 50 48.8
      comp=Z,74nm,20.8s
BBLS  Lazi&#263i       149.69 322 eP         PKPbc   21 43 55.7 +0.1
SJES  Sjenica          149.72 320 eP         PKPab   21 43 59.9 -1.2
HAPS  Han Pijesak,Bl   149.81 323 eP         PKPbc   21 43 56.1 +0.2
RUDO  Rudo             149.86 321 eP         PKPbc   21 43 55.4 -0.5
BIOA  Bad Ischl, Aus   149.90 333 ePKiKP     PKiKP   21 43 57.4 +0.6
      comp=Z,1.5nm,0.5s
SOKA  Soboth           150.05 330 ePKP       PKPbc   21 43 55.9 -0.5
      comp=Z,1.0nm,0.6s
A051A Mrakovica        150.32 326 eP         PKPbc   21 43 56.8 -0.3
BLY   Banja Luka       150.35 325 eP         PKiKP   21 43 58.5 +0.7
OBKA  Obir             150.40 330 ePKiKP     PKiKP   21 43 58.3 +0.3
      comp=Z,2.4nm,0.9s
FUR   Furstenfeldbru   150.46 336 eL         L       22 51 40.9
      comp=Z,88nm,20.4s
KBA   Koelnbreinsper   150.50 332 ePKP       PKPbc   21 43 56.8 -0.8
      comp=Z,2.9nm,0.9s
LESA  Schwarzleotal    150.51 334 ePKP       PKPbc   21 43 57.6 +0.1
      comp=Z,1.5nm,0.5s
PDG   Podgorica        150.63 320  PKPdf     PKPdf   21 43 52.8 +0.4
PDG   Podgorica        150.63 320 eP         PKPbc   21 43 57.8  0.0
MYKA  Terra Mystica    150.72 332 ePKP       PKPbc   21 43 57.3 -0.7
      comp=Z,1.2nm,0.5s
BRY   Bratogost        150.78 321 eP         PKPbc   21 43 58.0 -0.3
WLF   Walferdange      150.79 344 ePKPbc     PKiKP   21 44 01.5 +2.9
      baz=33,slow=1.8
A050A Klekovaca        150.87 325 eP         PKPbc   21 43 57.5 -0.9
PRED  Cave del Predi   150.90 331  PKPdf     PKPdf   21 43 51.9 -0.8
WATA  Walderalm        151.03 335 ePKP       PKPbc   21 43 58.2 -0.6
      comp=Z,6.1nm,1.5s
WTTA  Wattenberg       151.06 335 ePKP       PKPbc   21 43 58.7 -0.2
      comp=Z,8.7nm,0.9s
HCY   Herceg Novi      151.08 320 eP         PKPbc   21 43 58.2 -0.7
ABTA  Abfaltersbach    151.12 333 ePKP       PKPbc   21 43 58.6 -0.4
      comp=Z,1.4nm,0.6s
MOTA  Moosalm          151.21 335 ePKP       PKPbc   21 43 59.1 -0.1
      comp=Z,7.0nm,1.1s
RETA  Reutte           151.22 336 ePKP       PKPbc   21 43 59.4 +0.2
      comp=Z,6.0nm,1.6s
SABO  M.te Sabotino    151.23 331  PKPdf     PKPdf   21 43 53.1 -0.1
SQTA  Sankt Quirin     151.27 335 ePKP       PKPbc   21 43 59.6 +0.3
      comp=Z,5.2nm,0.8s
STON  Ston             151.28 322 eP         PKPbc   21 43 56.8 -2.5
UBR   Ueberruh         151.30 337 ePKPbc     PKiKP   21 44 01.9 +2.1
      baz=33,slow=1.8
BFO   Black Forest     151.35 340 ePKPbc     PKiKP   21 44 02.4 +2.6
      baz=33,slow=1.8
BFO                               eL         L       22 48 19.4
      comp=Z,84nm,21.5s
FETA  Feichten         151.62 335 ePKP       PKPbc   21 43 59.8 -0.4
      comp=Z,2.8nm,0.7s
DAVA  Damuels          151.72 337 ePKP       PKPbc   21 44 00.2 -0.1
      comp=Z,6.5nm,1.3s
CTI   Castel Tesino    152.03 333            PKPab   21 44 09.4 -1.1
FUORN Ofenpass-Fuorn   152.13 335            PKPbc   21 43 59.7 -1.8
ESDC  Sonseca Array    162.35 354  PKPab     PKPab   21 44 55.3 +0.4
      comp=Z,0.9nm,1.2s,baz=354,slow=5.7,SNR=4.7
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*NEIC **02** 21:31:14.6±0.6, 19°.21N±0°.02×155°.479W±0°.005, h39^{km}±3^{km}, Error ellipse: s-maj=3.4km s-min=0.6km az=182.0*

HVO 02 21:31:16.2±0.9**, 19°.19N**±0°.05×**155°.47W**±0°.03**, h32**^{km}±7^{km}**, ML2.4**/21**, ML2.5**/38(NEIC)**, Error ellipse: s-maj=7.7km s-min=3.1km az=151.0, Hawaiian Islands**

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Code  Station Name      Δ°   AZ°   Phase ID          Time      Res
                               Op       ISC       h  m  s    ISC
HTC   Hot Caves         0.08  55          Pb      21 31 21.5 -0.3
HPO   Honuapo           0.13 219          Pb      21 31 21.5 -0.5
HPO                                       Sn      21 31 25.4 -0.1
KHU   Kahuku            0.15 292          Pb      21 31 21.7 -0.8
KHU   Kahuku            0.15 292   IAML           21 31 25.9
      comp=N,288nm,0.2s
KHU                                IAML           21 31 26.0
      comp=E,216nm,0.6s
AIN   Ainahou           0.18   3          Pb      21 31 22.2 -0.5
AIN                                       Sn      21 31 26.5 -0.6
AIN   Ainahou           0.18   3   IAML           21 31 26.7
      comp=E,1µm,0.3s
AIN                                IAML           21 31 27.1
      comp=N,2µm,0.3s
HLP   Hilina Pali       0.18  55          Pb      21 31 22.1 -0.5
HLP   Hilina Pali       0.18  55   IAML           21 31 26.8
      comp=N,540nm,0.6s
HLP                                IAML           21 31 33.0
      comp=E,457nm,1.2s
SDHHI Sand Hill         0.26  40          Pb      21 31 22.5 -1.0
WRMHI West Rim          0.27  36          Pb      21 31 22.6 -1.0
WRMHI                                     Sb      21 31 27.5 -1.2
RIM   Rim               0.28  42          Pb      21 31 22.7 -1.0
RIM                                       Sb      21 31 27.6 -1.2
KKO   Keanakako'i       0.28  43          Pb      21 31 22.8 -1.0
UWE   Uwekahuna         0.28  36          Pb      21 31 22.8 -1.1
UWE                                       Sb      21 31 27.9 -1.0
UWE   Uwekahuna         0.28  36   IAML           21 31 31.5
      comp=N,499nm,0.3s
UWE                                IAML           21 31 35.3
      comp=E,540nm,0.7s
OBL   Observatory Le    0.28  38          Pb      21 31 22.7 -1.1
UWB   Uwekahuna Bluf    0.29  38          Pb      21 31 22.8 -1.2
BYL   Byron's Ledge     0.30  42          Pb      21 31 22.9 -1.1
BYL                                       Sb      21 31 28.1 -1.1
BYL   Byron's Ledge     0.30  42   IAML           21 31 29.2
      comp=N,172nm,0.4s
BYL                                IAML           21 31 34.8
      comp=E,234nm,0.3s
PUH   Pauahi            0.30  52          Pb      21 31 22.9 -1.1
PUH   Pauahi            0.30  52   IAML           21 31 28.1
      comp=E,295nm,0.4s
PUH                                IAML           21 31 28.4
      comp=N,260nm,0.2s
SBLHI Steaming Bluff    0.30  39          Pb      21 31 22.8 -1.2
HATHI Halema‘uma‘u T    0.30  40          Pb      21 31 22.9 -1.2
HATHI                                     Sb      21 31 28.0 -1.4
HATHI Halema‘uma‘u T    0.30  40   IAML           21 31 28.2
      comp=N,239nm,0.6s
HATHI                              IAML           21 31 39.0
      comp=E,256nm,1.0s
MLH   Mauna Loa         0.31  14          Pb      21 31 23.3 -1.0
MLH   Mauna Loa         0.31  14   IAML           21 31 28.7
      comp=E,455nm,0.2s
MLH                                IAML           21 31 29.0
      comp=N,656nm,0.3s
MWH   Mokuaweoweo       0.32 338          Pb      21 31 23.2 -1.4
MWH                                       Sb      21 31 28.6 -1.7
MWH   Mokuaweoweo       0.32 338   IAML           21 31 29.0
      comp=E,507nm,0.4s
MWH                                IAML           21 31 30.1
      comp=N,303nm,0.3s
RSD   Rainshed          0.33  34          Pb      21 31 23.1 -1.3
RSD                                       Sb      21 31 28.4 -1.5
KNHH  Kane Nui o Ham    0.34  56          Pb      21 31 23.4 -1.1
STCH  Steam Cracks      0.38  59          Pb      21 31 23.8 -1.2
STCH                                      Sb      21 31 29.5 -1.6
STCH  Steam Cracks      0.38  59   IAML           21 31 30.1
      comp=N,148nm,0.1s
STCH                               IAML           21 31 32.3
      comp=E,160nm,0.3s
NPOC  North of Pu‘u     0.39  59          Pb      21 31 24.0 -1.3
JCUZ  Jacuzzi           0.40  61          Pb      21 31 24.1 -1.2
HMH   Humu‘ula Sheep    0.41 358          Pb      21 31 24.6 -1.1
HMH   Humu‘ula Sheep    0.41 358   IAML           21 31 31.1
      comp=N,613nm,0.4s
HMH                                IAML           21 31 31.6
      comp=E,377nm,0.2s
JOKA  Jonika Flow       0.50  61          Pb      21 31 25.2 -1.6
CPH   Captain Cook      0.52 305          Pb      21 31 25.1 -1.9
POHA  Pohakuloa         0.57 354          Pb      21 31 26.0 -2.0
POHA  Pohakuloa         0.57 354   IAML           21 31 39.5
      comp=E,141nm,0.5s
HUH   Hualalai          0.60 325          Pb      21 31 26.9 -1.7
HUH   Hualalai          0.60 325   IAML           21 31 46.2
      comp=E,287nm,0.3s
MHA   Mahukona          1.07 338          Pn      21 31 32.9 -2.2
MHA                                       Sn      21 31 45.6 -3.3
HLK   Haleakala         1.72 335          Pn      21 31 42.0 -2.3
HLK                                       Sn      21 32 01.2 -4.1
```

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*NEIC **02** 21:32:58.2±0.8, 19°.471N±0°.008×155°.683W±0°.006, h11^{km}±2^{km}, Error ellipse: s-maj=1.1km s-min=0.8km az=177.0*

HVO 02 21:32:58.2±1.1**, 19°.485N**±0°.008×**155°.693W**±0°.009**, h8**^{km}±2^{km}**, ML2.8**/33**, ML2.9**/36(NEIC)**, Error ellipse: s-maj=1.2km s-min=1.1km az=102.0, Hawaiian Islands**

```
Code  Station Name      Δ°   AZ°   Phase ID          Time      Res
                               Op       ISC       h  m  s    ISC
ALEP  Alea Permanent    0.07  40          Pg      21 33 01.2 +0.7
ALEP                                      Sg      21 33 03.4 +1.2
MWH   Mokuaweoweo       0.09  90          Pg      21 33 01.2 +0.3
MWH                                       Sg      21 33 03.5 +0.7
MWH   Mokuaweoweo       0.09  90   IAML           21 33 03.9
      comp=N,2µm,0.3s
MWH                                IAML           21 33 04.7
      comp=E,2µm,0.5s
CPH   Captain Cook      0.21 271          Pg      21 33 02.7 +0.3
HMH   Humu‘ula Sheep    0.23  59          Pg      21 33 03.4 +0.5
HMH                                       Sg      21 33 07.3 +1.2
HMH   Humu‘ula Sheep    0.23  59   IAML           21 33 09.6
      comp=N,5µm,0.2s
HMH                                IAML           21 33 09.6
      comp=E,8µm,0.4s
HUH   Hualalai          0.24 326          Pg      21 33 04.0 +0.9
HUH                                       Sg      21 33 07.6 +1.2
HUH   Hualalai          0.24 326   IAML           21 33 10.3
      comp=E,4µm,0.3s
HUH                                IAML           21 33 12.0
      comp=N,4µm,0.3s
AIN   Ainahou           0.25 117          Pg      21 33 03.5 +0.3
AIN                                       Sg      21 33 07.1 +0.5
AIN   Ainahou           0.25 117   IAML           21 33 07.7
      comp=E,2µm,0.3s
AIN                                IAML           21 33 08.2
      comp=N,4µm,0.3s
KHU   Kahuku            0.25 163          Pg      21 33 03.5 +0.2
KHU                                       Sg      21 33 07.6 +1.0
KHU   Kahuku            0.25 163   IAML           21 33 07.9
      comp=N,2µm,0.5s
KHU                                IAML           21 33 08.0
      comp=E,1µm,0.4s
MLH   Mauna Loa         0.29  88          Pg      21 33 04.2 +0.2
MLH   Mauna Loa         0.29  88   IAML           21 33 09.9
      comp=E,2µm,0.3s
MLH                                IAML           21 33 11.7
      comp=N,2µm,0.2s
POHA  Pohakuloa         0.31  29          Pg      21 33 04.8 +0.4
POHA                                      Sg      21 33 09.3 +0.8
POHA  Pohakuloa         0.31  29   IAML           21 33 10.5
      comp=N,647nm,0.8s
POHA                               IAML           21 33 13.4
      comp=N,503nm,0.6s
POHA  Pohakuloa         0.31  29   P      Pg      21 33 04.9 +0.5
KKH   Kailua Kona       0.35 299          Pg      21 33 04.9 -0.1
KKH                                       Sg      21 33 10.1 +0.3
HTC   Hot Caves         0.37 131          Pg      21 33 05.2 -0.2
WRMHI West Rim          0.38 102          Pg      21 33 05.5 -0.2
WRMHI                                     Sg      21 33 10.8 +0.2
UWE   Uwekahuna         0.38 100          Pg      21 33 05.7  0.0
UWE                                       Sg      21 33 11.2 +0.5
UWE   Uwekahuna         0.38 100   IAML           21 33 12.8
      comp=N,3µm,0.3s
UWE                                IAML           21 33 12.8
      comp=E,4µm,0.3s
SDHHI Sand Hill         0.39 104          Pg      21 33 05.6 -0.2
OBL   Observatory Le    0.39 100          Pg      21 33 05.7 -0.2
OBL                                       Sg      21 33 12.1 +1.0
RSD   Rainshed          0.39  93          Pn      21 33 11.7 +1.5
UWB   Uwekahuna Bluf    0.40  99          Pg      21 33 05.7 -0.3
UWB                                       Sg      21 33 11.4 +0.2
RIM   Rim               0.41 103          Pg      21 33 05.8 -0.3
RIM                                       Sg      21 33 11.6 +0.1
SBLHI Steaming Bluff    0.41  98          Pg      21 33 05.8 -0.3
SBLHI                                     Sg      21 33 11.7 +0.3
HLP   Hilina Pali       0.41 117          Pg      21 33 06.0 -0.2
HLP                                       Sg      21 33 11.8 +0.2
HLP   Hilina Pali       0.41 117   IAML           21 33 13.3
      comp=E,1µm,0.6s
HLP                                IAML           21 33 20.6
      comp=N,843nm,0.9s
HATHI Halema‘uma‘u T    0.41  99          Pg      21 33 06.0 -0.3
HATHI                                     Sg      21 33 11.7  0.0
HATHI Halema‘uma‘u T    0.41  99   IAML           21 33 16.5
      comp=N,1µm,0.4s
HATHI                              IAML           21 33 18.8
      comp=E,1µm,0.5s
KKO   Keanakako'i       0.41 102          Pg      21 33 06.0 -0.3
KKO                                       Sg      21 33 12.1 +0.4
BYL   Byron's Ledge     0.41 100          Pg      21 33 06.1 -0.2
BYL                                       Sg      21 33 12.1 +0.3
BYL   Byron's Ledge     0.41 100   IAML           21 33 13.1
      comp=E,685nm,1.5s
BYL                                IAML           21 33 21.9
      comp=N,678nm,3.6s
PUH   Pauahi            0.46 104          Pg      21 33 06.8 -0.4
PUH                                       Sg      21 33 13.6 +0.3
PUH   Pauahi            0.46 104   IAML           21 33 14.1
      comp=E,441nm,0.6s
PUH                                IAML           21 33 22.7
      comp=N,426nm,0.8s
KNHH  Kane Nui o Ham    0.51 102          Pg      21 33 07.3 -0.6
STCH  Steam Cracks      0.55 100          Pg      21 33 07.8 -0.9
STCH                                      Sg      21 33 15.2 -0.7
NPOC  North of Pu‘u     0.56  99          Pg      21 33 07.9 -1.1
NPOC                                      Sg      21 33 15.6 -0.7
JCUZ  Jacuzzi           0.57 100          Pg      21 33 08.1 -1.0
JCUZ                                      Sg      21 33 15.8 -0.8
JOKA  Jonika Flow       0.65  94          Sg      21 33 17.9 -1.4
JOKA  Jonika Flow       0.65  94          Pg      21 33 09.3 -1.5
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*SJA **02** 21:50:01.5±0.6, 27°.19S×71°.50W, h36^{km}±6^{km}, ML3.2, MW3.5*

*GUC **02** 21:50:02.9±0.8, 27°.34S×71°.49W, h29^{km}±4^{km}, ML3.3*

ISC 02 21:50:03.1±1.5**, 27°.17S**±0°.04×**71°.59W**±0°.08**, h35**^{km}**, n27, σ2**^{s}**.36**/41**, 3C, Near coast of northern Chile**

```
Code  Station Name      Δ°   AZ°   Phase ID          Time      Res
                               Op       ISC       h  m  s    ISC
AC06  Mina Casimiro     1.12 100⥣iP     Pn      21 50 21.0 -1.2
AC06                            i S      Sn      21 50 34.4 -2.1
AC06                             IAML            21 50 37.4
      comp=N,1µm,0.2s
AC04  Llanos de Chal    1.13 156⥣iP     Pn      21 50 20.2 -2.2
AC04                            i S      Sn      21 50 32.4 -4.3
AC04  Llanos de Chal    1.13 156 eP      Pn      21 50 20.0 -2.4
AC04                             IAML            21 50 36.2
      comp=Z,268nm,0.5s
GO03  Copiapo           1.28 109 eP      Pn      21 50 23.2 -1.3
GO03                             eS      Sn      21 50 38.5 -2.0
GO03                             IAML            21 50 39.7
      comp=N,916nm,0.4s
GO03  Copiapo           1.28 109 eP      Pn      21 50 23.5 -1.0
GO03                             eS      Sn      21 50 39.6 -0.8
AC01  Pan de Azucar     1.35  41 eP      Pn      21 50 25.4 -0.1
AC01                             eS      Sn      21 50 33.4 -8.8
LCO   Las Campanas      2.00 157 eP      Pn      21 50 34.0 -0.6
LCO   Las Campanas      2.00 157 eP      Pn      21 50 34.0 -0.6
LCO                              eS      Sn      21 50 57.7 -0.8
LCO                              IAML            21 51 05.9
      comp=Z,476nm,0.7s
AC05  El Transito       2.03 145⥣iP     Pn      21 50 34.7 -0.2
AC05                            i S      Sn      21 50 58.4 -0.7
AC05                             IAML            21 51 06.1
      comp=E,208nm,0.3s
AC05  El Transito       2.03 145 eP      Pn      21 50 34.8 -0.1
AC05                             eS      Sn      21 51 00.2 +1.1
AC05                             IAML            21 51 17.0
      comp=Z,145nm,0.6s
AC02  Maricunga         2.22  82 eP      Pn      21 50 39.5 +1.6
AC02                             IAML            21 51 13.6
      comp=N,431nm,0.2s
AC02  Maricunga         2.22  82 eP      Pn      21 50 34.8 -3.1
AC02                             eP              21 50 39.6
AC02                             eS      Sn      21 51 06.4 +2.0
AC02                             IAML            21 51 12.6
      comp=Z,222nm,0.3s
GO02  Mina Guanaco      2.69  42 eP      Pn      21 50 45.4 +1.2
GO02                             eS      Sn      21 51 20.7 +5.0
PB14  IPOC Station P    2.75  23 eP      Pn      21 50 44.8 -0.2
PB14                             eS      Sn      21 51 18.5 +1.3
PB14                             IAML            21 51 19.3
      comp=Z,54nm,4.6s
CO05  La Serena         2.75 174 eP      Pn      21 50 43.4 -1.4
CO05                             IAML            21 51 36.9
      comp=N,170nm,0.3s
GO04  Tololo Observa    3.07 167 eP      Pn      21 50 48.7 -0.6
GO04  Tololo Observa    3.07 167 eP      Pn      21 50 48.8 -0.6
GO04                             eS      Sn      21 51 28.4 +3.4
CO01  Juntas del Tor    3.09 155 eP      Pn      21 50 50.3 +0.7
CO01                             eS      Sn      21 51 26.3 +0.8
CO01                             IAML            21 51 49.0
      comp=Z,40nm,3.2s
VCA   Vinchina          3.38 118 eP      Pn      21 50 53.5  0.0
VCA                              eP              21 50 57.9
VCA                              eS      Sn      21 51 48.5  +16
VCA                              IAML            21 51 57.7
      comp=Z,54nm,1.1s
AROD  Rodeo             3.52 149 eP      Pn      21 50 57.9 +2.3
AROD                             eS      Sn      21 51 37.1 +1.0
CO03  El Pedregal       3.74 168 eP      Pn      21 50 57.6 -0.7
CO03                             IAML            21 52 02.1
      comp=E,74nm,0.5s
CO03  El Pedregal       3.74 168 eP      Pn      21 50 57.9 -0.5
CO03                             eS      Sn      21 51 40.4 -0.8
CO03                             IAML            21 52 03.7
      comp=Z,50nm,0.7s
ACCO  Cerro Coronel     4.06 148 eP      Pn      21 51 10.2 +7.1
DOCA  Reserva Natura    4.36 150 eP      Pn      21 51 09.7 +2.5
DOCA                             IAML            21 52 26.1
      comp=Z,38nm,4.5s
ACLC  CERRO LA CRUZ     4.67 120 eP      Pn      21 51 13.4 +2.2
AVFE  Valle Fertil      5.02 135 eP      Pn      21 51 17.6 +1.6
AVFE                             IAML            21 52 17.5
      comp=Z,16nm,3.7s
RTLS  Leoncito          5.03 157 eP      Pn      21 51 18.9 +2.7
RTLS                             eS      Sn      21 52 27.2  +14
RTLS                             IAML            21 52 44.6
      comp=Z,58nm,0.7s
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*IDC **02** 21:52:09.0±1.2, 35°.26N×13°.11E, h0^{km}, mb3.6/11, mbtmp3.5/21, ML3.4/8, MS3.1/4, Error ellipse: s-maj=20.1km s-min=19.1km az=1.0*

ISC 02 21:52:10.7±0.9**, 35°.19N**±0°.09×**13°.29E**±0°.07**, h10**^{km}**, n28, σ1**^{s}**.72**/28**, mb3.6**/9**, Central Mediterranean Sea**

```
Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                Op       ISC       h  m  s    ISC
VAE   Valguarnera        2.46  21  Pn       Pn     21 52 50.9  0.0
      26nm,0.4s,baz=178,slow=16,SNR=25
VAE                                Sn       Sn     21 53 21.0 -0.1
      21nm,0.3s,baz=184,slow=21,SNR=7.5
PGF   Pioggiola          8.07 337 ePg       Pn     21 54 09.7 +1.7
PGF                               eSg       Pb     21 54 20.7  -10
      14nm,0.5s
IDI   Anoyia             9.49  86  Pn       Pn     21 54 28.4 +0.9
      11nm,1.0s,baz=264,slow=12,SNR=6.6
IDI                                Sn       Sn     21 56 12.3 -2.1
      0.6nm,0.3s,baz=347,slow=14,SNR=2.3
LMR   La Mourre          9.68 329 ePn       Pn     21 54 29.4 -0.6
MBDF  Montbardon        10.76 334 eP        Pn     21 54 48.6 +3.8
ORIF  Oris-en-Rattie    11.25 332 eP        Pn     21 54 55.0 +3.5
LPG   La Plagne         11.44 336 eP        Pn     21 54 57.6 +3.3
DAVOX Davos/Dischmat    11.86 349  Pn       Pn     21 54 57.2 -2.8
      0.2nm,0.3s,baz=151,slow=14,SNR=1.7
      0.5nm,0.3s
GERES GERESS Array B    13.65   1  Pn       Pn     21 55 22.8 -1.6
      baz=170,slow=11,SNR=5.5
      0.1nm,0.2s
MLR   Muntele Rosu      14.09  39  Pn       Pn     21 55 30.5 +0.1
      0.1nm,0.3s,baz=258,slow=5.5,SNR=3.4
MLR                                LR       LR     22 01 53.9
      comp=Z,27nm,21.9s,baz=271,slow=41
      1.3nm,0.8s
VRAC  Vranov            14.32   9  LR       LR     22 01 56.8
      comp=Z,29nm,18.9s,baz=279,slow=41
ESDC  Sonseca Array     14.42 293  Pn       Pn     21 55 32.8 -2.1
      0.1nm,0.3s,baz=102,slow=14,SNR=8.4
      0.1nm,0.4s
MDT   Midelt            15.03 266  Pn       Pn     21 55 41.4 -1.8
      0.2nm,0.3s,baz=54,slow=19,SNR=6.6
      0.8nm,0.4s
BRTR  Keskin Array B    16.78  68  Pn       P      21 56 07.5 -0.6
      baz=263,slow=15,SNR=7.0
      1.3nm,1.0s
MMAI  Mount Meron Ar    18.44  90  P        Pn     21 56 28.1 +1.7
      0.5nm,0.3s,baz=336,slow=9.5,SNR=2.0
      0.2nm,0.3s
AKASG Malin Array Be    19.34  32  P        Pn     21 56 37.0 -0.1
      0.3nm,0.3s,baz=229,slow=9.4,SNR=7.5
      0.6nm,0.5s
ASF   Jabal al Asfar    19.87  92  P        Pn     21 56 43.7  0.0
      0.4nm,0.2s,baz=324,slow=9.0,SNR=1.5
      0.4nm,0.2s
EKA   Eskdalemuir Ar    23.12 336  P        P      21 57 15.9 -0.8
      0.6nm,0.6s,baz=215,slow=16,SNR=1.4
      0.6nm,0.6s
KBZ   Khabaz            24.30  61  P        P      21 57 28.7 +0.5
      0.2nm,0.3s,baz=264,slow=18,SNR=1.7
      0.2nm,0.3s
TORD  Torodi Ar. Bea    24.32 208  P        P      21 57 28.0 -0.5
      2.4nm,0.3s,baz=19,slow=10,SNR=1.8
      2.4nm,0.3s
HFS   Hagfors           24.96   0  P        P      21 57 33.4 -0.6
      1.8nm,0.7s,baz=188,slow=9.0,SNR=5.0
      1.8nm,0.7s
NOA   NORSAR Array B    25.91 358  P        P      21 57 40.9 -1.7
      1.1nm,1.0s,baz=173,slow=11,SNR=3.3
      1.1nm,1.0s
FINES FINESS Array B    27.51  13  P        P      21 57 56.0 -1.0
      0.9nm,0.8s,baz=194,slow=17,SNR=1.5
      0.9nm,0.8s
DBIC  Dimbokro          32.93 215  LR       LR     22 11 33.8
      comp=Z,38nm,18.6s,baz=328,slow=35
BVAR  Borovoye Array    43.45  48  P        P      22 00 14.2 +0.5
      0.3nm,0.5s,baz=256,slow=12,SNR=1.5
      0.3nm,0.5s
KURBB Kurchatov Arra    48.65  50  P        P      22 00 54.7 +0.1
      0.4nm,0.6s,baz=277,slow=8.4,SNR=4.6
KURBB                              LR       LR     22 26 12.2
```

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,86nm,21.6s,baz=160,slow=42						
	0.4nm,0.6s						
MKAR	Makanchi Array	51.80	55	P	P	22 01 19.8	+1.2
	0.8nm,0.8s,baz=282,slow=6.1,SNR=8.7						
	0.8nm,0.8s						
SONM	Songino Array	66.80	47	P	P	22 03 03.0	+0.5
	0.5nm,0.7s,baz=270,slow=7.2,SNR=3.2						
	0.5nm,0.7s						

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*SDD **02** 21:54:01.6±1.6, 19°.47N×72°.77W, h15^{km}±999^{km}, MD3.2, ML2.3, MW2.3*

*SSNC **02** 21:54:02.3±1.5, 19°.79N×72°.59W, h0^{km}±8^{km}, MD2.9, ML2.1*

ISC 02 21:54:01.6±1.5**, 19°.62N**±0°.09×**72°.72W**±0°.04**, h17**^{km}±12^{km}**, n12, σ1^{s}.31**/21**, 1C-1D, Haiti region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCDR	Montecristi	1.04	74	ePg	Pb	21 54 21.5	+0.3
MCDR				IAML		21 54 37.2	
	comp=N,159nm,0.1s						
PAPH	Port-au-Prince	1.16	160	eP	Pg	21 54 24.6	+0.6
PAPH				eS	Sn	21 54 41.3	+2.8
PAPH				IAML		21 54 42.7	
	comp=N,39nm,0.2s						
PAPH				IAML		21 54 43.8	
	comp=E,36nm,0.3s						
REDR	Restauracion	1.33	109	ePg	Pn	21 54 20.5	-4.9
REDR				eSg	Sn	21 54 31.7	-11
REDR				IAML		21 54 41.7	
	comp=N,88nm,0.2s						
SDDR	Presa de Saban	1.50	115	eP	Pn	21 54 27.2	-0.4
SDDR				eS	Sn	21 54 45.8	-1.0
SDDR				IAML		21 54 46.0	
	comp=N,9.2nm,0.3s						
SDDR				IAML		21 54 48.3	
	comp=N,7.4nm,0.2s						
SDDR	Presa de Saban	1.50	115	ePg	Pn	21 54 27.2	-0.4
SDDR				eSg	Sn	21 54 46.5	-0.4
SDDR				IAML		21 54 51.2	
	comp=N,13nm,0.8s						
MASC	Masc	1.52	292	eP	Pb	21 54 29.9	+0.5
MASC				eS	Sg	21 54 50.5	-0.3
MASC				IAML		21 54 52.8	
	comp=E,18nm,0.2s						
MASC				IAML		21 54 53.7	
	comp=N,17nm,0.1s						
QMBU	Quimbuelo	2.05	287	eP	Pn	21 54 37.1	+1.8
QMBU				eS	Sb	21 55 03.1	-0.5
QMBU				IAML		21 55 03.6	
	comp=N,26nm,0.3s						
QMBU				IAML		21 55 03.6	
	comp=E,34nm,0.9s						
GTBY	Guantanamo Bay	2.27	278	eP	Pb	21 54 40.5	-1.6
GTBY				eS	Sb	21 55 08.0	-1.9
GTBY				IAML		21 55 10.6	
	comp=E,13nm,0.7s						
GTBY				IAML		21 55 16.7	
	comp=E,8.3nm,1.0s						
GTBY	Guantanamo Bay	2.27	278	⇓ePg	Pb	21 54 40.4	-1.6
GTBY				⇑eSg	Sb	21 55 08.5	-1.4
GTBY				IAML		21 55 42.7	
	comp=N,19nm,2.8s						
NMDO	Nuevo Mundo	2.32	294	eP	Pn	21 54 39.8	+0.8
NMDO				eS	Sn	21 55 08.7	+1.5
NMDO				IAML		21 55 09.2	
	comp=E,4.7nm,0.4s						
NMDO				IAML		21 55 11.3	
	comp=N,5.2nm,0.2s						
PINC	Pinares de May	3.01	287	eP	Pn	21 54 49.2	+0.7
PINC				eS	Sn	21 55 24.5	+0.3
PINC				IAML		21 55 26.3	
	comp=N,4.5nm,0.1s						
PINC				IAML		21 55 26.4	
	comp=E,4.4nm,0.1s						
MARVS	Santiago de Cu	3.02	278	eP	Pn	21 54 49.4	+0.8
MARVS				eS	Sn	21 55 23.8	-0.5
MARVS				IAML		21 55 29.6	
	comp=N,7.9nm,0.4s						
MARVS				IAML		21 55 32.8	
	comp=E,5.4nm,0.6s						

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*IDC **02** 21:59:25.5±3.7, 56°.38S×150°.82E, h0^{km}, mb3.6/4, mbtmp3.7/4, MS3.4/3, Error ellipse: s-maj=356.3km s-min=26.2km az=75.0*

ISC 02 21:59:26.9±3.4**, 56°.4S**±0°.6×**15°1E**±°**, h10**^{km}**, n15, σ0^{s}.47**/6**, mb3.8**/4**, MS3.4**/3**, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	Vanda	21.59	174	P	P	22 04 16.6	+0.2
	0.8nm,0.8s,baz=342,slow=9.4,SNR=4.8						
	0.8nm,0.8s						
URZ	Urewera	25.12	55	LR	LR	22 13 44.6	
	comp=Z,112nm,18.9s,baz=300,slow=34						
STKA	Stephens Creek	25.33	341	P	P	22 04 54.1	+0.4
	1.3nm,0.7s,baz=170,slow=18,SNR=1.8						
	1.3nm,0.7s						
H01W1	Cape Leeuwin H	32.90	295	T	T	22 39 05.2	
	baz=144,slow=75,SNR=28						
H01W2	Cape Leeuwin H	32.91	295	T	T	22 39 04.3	
	baz=144,slow=75,SNR=40						
H01W3	Cape Leeuwin H	32.92	295	T	T	22 39 08.8	
	baz=144,slow=75,SNR=32						
NWAO	Narrogin (SRO)	32.97	301	LR	LR	22 14 44.0	
	comp=Z,57nm,21.4s,baz=146,slow=28						
ASAR	Alice Springs	34.96	332	P	P	22 06 19.3	+0.2
	1.1nm,0.8s,baz=162,slow=9.4,SNR=6.6						
	1.1nm,0.8s						
WRA	Warramunga Arr	38.42	334	P	P	22 06 48.2	-0.3
	1.3nm,0.7s,baz=168,slow=8.5,SNR=5.1						
	1.3nm,0.7s						
KAPI	Kappang	56.87	322	LR	LR	22 31 44.8	
	comp=Z,30nm,20.6s,baz=158,slow=34						
H08S2	Diego Garcia H	77.26	275	T	T	23 33 58.9	
	baz=147,slow=76,SNR=30						
H08S1	Diego Carcia H	77.27	275	T	T	23 34 02.4	
	baz=147,slow=76,SNR=32						
H08S3	Diego Garcia H	77.28	275	T	T	23 34 00.2	
	baz=147,slow=76,SNR=36						
FINES	FINESS Array B	151.81	303	PKPbc	PKiKP	22 19 20.1	-0.5
	1.3nm,0.9s,baz=96,slow=1.9,SNR=3.3						
ARCES	ARCESS Array B	153.02	321	PKPbc	PKiKP	22 19 22.8	-0.2
	1.6nm,0.7s,baz=109,slow=4.9,SNR=4.1						

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*NEIC **02** 22:28:57.3±1.8, 18°.6S±0°.1×177°.7W±0°.2, h528^{km}±9^{km}, mb4.2/25, Error ellipse: s-maj=29.1km s-min=12.8km az=121.0*

*IDC **02** 22:28:58.1±8.5, 18°.79S×177°.88W, h532^{km}±93^{km}, mb3.0/7, mbtmp3.8/7, Error ellipse: s-maj=32.9km s-min=30.0km az=89.0*

ISC 02 22:29:00.2±0.7**, 18°.5S**±0°.2×**178°.1W**±0°.1**, h557**^{km}**, n39, σ0^{s}.94**/38**, mb4.1**/20**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.74	282		P	22 30 18.6	-2.2
FUTU	Fugatoga	4.21	360	P	P	22 30 18.8	-5.5
EIDS	Eidsvold	29.33	251	P	P	22 34 18.7	+0.2
EIDS				IAmb	IAmb	22 34 19.3	
	comp=Z,16nm,1.4s						
COEN	Coen	37.40	271	P	P	22 35 27.7	+1.1
TAU	Tasmania Unive	37.97	223	P	P	22 35 31.9	+1.1
WR8	Warramunga Arr	44.65	260	P	P	22 36 24.8	+0.7
WR8				IAmb	IAmb	22 36 29.5	
	comp=Z,14nm,1.3s						
WB0	Warramunga Arr	44.77	260	P	P	22 36 25.4	+0.4
WB0				IAmb	IAmb	22 36 48.2	
	comp=Z,9.8nm,1.2s						
WRA	Warramunga Arr	44.80	260	P	P	22 36 25.3	0.0
	comp=Z,0.2nm,0.3s,baz=98,slow=7.0,SNR=1.6						
	comp=Z,0.2nm,0.3s						
ASAR	Alice Springs	44.90	255	P	P	22 36 26.5	+0.5
ASAR	Alice Springs	44.90	255	P	P	22 36 27.1	+1.1
	comp=Z,2.1nm,0.5s,baz=89,slow=8.1,SNR=33						
	comp=Z,2.1nm,0.5s						
KNRA	Kununurra	50.72	265	P	P	22 37 10.2	+0.8
QSPA	South Pole Qui	71.52	180	P	P	22 39 23.9	-1.0
QSPA	South Pole Qui	71.52	180	P	P	22 39 23.1	-1.8
	comp=Z,0.2nm,0.3s,baz=18,slow=3.2,SNR=7.6						
	comp=Z,0.2nm,0.3s						
S12K	Black Hills	75.19	9	P	P	22 39 44.6	-1.1
OHAK	Old Harbor	78.28	13	P	P	22 40 02.7	+0.2
O14K	Tigyukauivet M	78.73	9	P	P	22 40 03.8	-1.1
O14K				IAmb	IAmb	22 40 46.0	
	comp=Z,17nm,1.5s						
O15K	Ungalikthiuk R	78.88	9	P	P	22 40 05.0	-0.7
O15K				IAmb	IAmb	22 40 28.0	
	comp=Z,10nm,1.4s						
KDAK	Kodiak Island	78.95	14	P	P	22 40 06.4	+0.4
KDAK				IAmb	IAmb	22 40 41.7	
	comp=Z,20nm,1.4s						
O16K	Kokwok River B	79.56	10	P	P	22 40 08.2	-1.0
SYI	Shuyak Island	79.74	13	P	P	22 40 09.8	-0.4
SYI				IAmb	IAmb	22 40 35.0	
	comp=Z,11nm,1.3s						
N15K	Kwethluk River	79.79	9	P	P	22 40 10.9	+0.4
P18K	Big Mountain,	79.88	12		P	22 40 10.9	-0.1
P18K				IAmb	IAmb	22 40 11.3	
	comp=Z,5.5nm,0.8s						
O18K	Koktuh Hills	80.31	11		P	22 40 13.2	0.0
O18K				IAmb	IAmb	22 40 14.3	
	comp=Z,8.7nm,1.0s						
J05D	Fort Rock, OR	80.64	38	P	P	22 40 14.6	-0.9
K15K	Wolf Creek Mou	81.63	8	P	P	22 40 20.0	0.0
K15K				IAmb	IAmb	22 40 21.8	
	comp=Z,7.7nm,0.9s						
M22K	Willow	83.08	13	P	P	22 40 26.9	-0.3
GHO	Glory Hole Cre	83.35	13	P	P	22 40 29.0	+0.3
GHO				IAmb	IAmb	22 40 29.4	
	comp=Z,5.6nm,0.6s						
K20K	Telida	83.77	11	P	P	22 40 31.3	+0.6
CAST	Castle Rocks	84.19	11		P	22 40 31.7	-1.0
TRF	Thorofare Moun	84.57	12		P	22 40 34.3	-0.5
TRF				IAmb	IAmb	22 40 34.9	
	comp=Z,4.7nm,0.8s						
RND	Reindeer	84.82	13		P	22 40 36.5	+0.6
RND				IAmb	IAmb	22 40 36.6	
	comp=Z,4.4nm,0.8s						
TXAR	Lajitas Array	86.09	57	P	P	22 40 43.8	+0.9
	comp=Z,0.3nm,0.7s,baz=259,slow=3.2,SNR=2.1						
	comp=Z,0.3nm,0.7s						
ILAR	Eielson Array	86.44	13	P	P	22 40 42.8	-0.8
	comp=Z,0.6nm,0.4s,baz=222,slow=5.2,SNR=17						
	comp=Z,0.6nm,0.4s						
PDAR	Pinedale Array	87.61	43	P	P	22 40 51.9	+2.1
	comp=Z,0.2nm,0.5s,baz=320,slow=3.5,SNR=1.9						
	comp=Z,0.2nm,0.5s						
YKA	Yellowknife Ar	94.78	25	P	P	22 41 22.5	+0.4
	comp=Z,0.2nm,0.5s,baz=248,slow=2.2,SNR=2.2						
	comp=Z,0.2nm,0.5s						
BRTR	Keskin Array B	145.43	314	PKPbc	PKPbc	22 47 37.1	+0.3
	comp=Z,0.4nm,0.5s,baz=76,slow=4.9,SNR=4.8						
CLL	Collm	146.14	347	i PKPbc	PKiKP	22 47 39.8	-0.8
	comp=Z,5.0nm,1.0s						
MMAI	Mount Meron Ar	146.73	302	PKPbc	PKiKP	22 47 41.1	-1.4
	comp=Z,0.8nm,0.5s,baz=90,slow=9.2,SNR=2.0						
GERES	GERESS Array B	148.30	345	PKPbc	PKiKP	22 47 45.3	0.0
	comp=Z,0.4nm,0.5s,baz=19,slow=3.8,SNR=5.3						

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*IDC **02** 22:46:17.1±1.8, 35°.94S×178°.51E, h0^{km}, mb4.2/4, mbtmp4.2/5, ML4.5/1, MS3.4/1, Error ellipse: s-maj=44.2km s-min=32.7km az=142.0*

*WEL **02** 22:46:27.6±0.9, 36°S±5°×17°8E±°, h12^{km}, M3.6/23, ML3.8/25, MLv3.6/23, Error ellipse: s-maj=10.1km s-min=4.3km az=58.4, confirmed*

*NOU **02** 22:46:29.1, 36°.69S×178°.06E, h109^{km}, MLv4.2/18, Off E. Coast of N. Island, N.Z.*

*NEIC **02** 22:46:30.9±1.5, 36°.9S±0°.1×178°.1E±0°.1, h92^{km}±7^{km}, mb4.7/14, Error ellipse: s-maj=16.6km s-min=11.5km az=204.0*

ISC 02 22:46:31.5±0.9**, 36°.76S**±0°.07×**178°.09E**±0°.06**, h112**^{km}±6^{km}**, n159, σ2^{s}.02**/166**, mb4.4**/11**, 1C, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	0.82	168		Pn	22 46 47.9	-3.1
MXZ	Matakaoa Point	0.82	168	P	Pn	22 46 49.3	-1.8
MXZ	Matakaoa Point	0.82	168	P	Sn	22 47 03.8	-2.1
MXZ	Matakaoa Point	0.82	168	P	Pn	22 46 48.1	-3.0
MXZ				S	Sn	22 47 03.8	-2.1
HAZ	Te Kaha	1.03	194	P	Pn	22 46 50.7	-2.4
HAZ				S	Sn	22 47 09.2	-0.2
WIZ	White Island	1.05	223	P	Pn	22 46 51.3	-2.0
WIZ				S	Sn	22 47 08.4	-1.5
WMGZ	Waiomatatini S	1.09	166	P	Pn	22 46 53.1	-0.7
WMGZ				S	Sn	22 47 11.4	+0.8
PKGZ	Pakihiroa	1.11	181	P	Pn	22 46 53.4	-0.5
RUGZ	Raukumara Rang	1.25	195	P	Pn	22 46 54.3	-1.3
PUZ	Puketiti	1.32	174	P	Pn	22 46 55.3	-1.0
PUZ				S	Sn	22 47 16.0	+0.9
WHRZ	Whale Island	1.41	219	P	Pn	22 46 57.7	+0.3
WHRZ				S	Sn	22 47 19.9	+2.9
TWGZ	Tauwhareparae	1.42	184	P	Pn	22 46 57.3	-0.2
TWGZ				S	Sn	22 47 20.3	+3.0
MWZ	Matawai	1.64	196	P	Pn	22 46 59.7	-0.4
OPRZ	Ohinepanea	1.64	228	P	Pn	22 46 59.0	-1.0
MARZ	Manawahe	1.67	222	P	Pn	22 47 00.6	+0.2
TKGZ	Te Karaka	1.69	187	P	Pn	22 47 00.3	-0.4
URZ	Urewera	1.69	207	Pn	Pn	22 46 59.9	-0.7
	96nm,0.3s,baz=6.5,slow=2.8,SNR=393						
URZ				Sn	Sn	22 47 23.0	+0.1
	102nm,0.3s,baz=355,slow=22,SNR=32						
	201nm,0.3s						
URZ	Urewera	1.69	207	P	Pn	22 47 00.0	-0.7
URZ	Urewera	1.69	207	P	Pn	22 47 23.8	+23
URZ	Urewera	1.69	207	P	Pn	22 46 60.0	-0.7
EDRZ	Edgecumbe	1.72	218	P	Pn	22 47 01.3	+0.2
CNGZ	Carnagh Statio	1.73	177	P	Pn	22 47 00.7	-0.4
TGRZ	Tauranga	1.75	236	P	Pn	22 47 00.7	-0.7
RAGZ	Rawiri	1.82	197	P	Pn	22 47 02.6	+0.3
LIRZ	Lichensteins R	1.84	227	P	Pn	22 47 03.4	+0.8
KUZ	Kuaotunu	1.91	270	P	Pn	22 47 01.0	-2.3
KUZ	Kuaotunu	1.91	270	S	Sn	22 47 24.7	-2.9
KUZ	Kuaotunu	1.91	270	P	Pn	22 47 01.0	-2.3
OMRZ	Omania	1.92	225	P	Pn	22 47 04.1	+0.5
KARZ	Kaharoa	1.94	229	P	Pn	22 47 03.9	+0.2
TARZ	Mount Tarawera	1.94	220	P	Pn	22 47 04.9	+1.1
RIGZ	Rimuhau	1.96	188	P	Pn	22 47 03.4	-0.7
MUGZ	Murupara	2.01	211	P	Pn	22 47 04.8	+0.1
KMRZ	Kaimai	2.03	237	P	Pn	22 47 04.2	-0.7
HLRZ	Highlands Stat	2.04	222	P	Pn	22 47 06.3	+1.3
RTZ	Ruatahuna	2.05	205		Pn	22 47 02.6	-2.7
RTZ	Ruatahuna	2.05	205	P	Pn	22 47 04.9	-0.4
SNGZ	Shannon Statio	2.11	196	P	Pn	22 47 05.5	-0.4
HSRZ	Hossack Road	2.14	223	P	Pn	22 47 10.5	+4.2
PRGZ	Paritu Road	2.17	184	P	Pn	22 47 05.7	-1.0
GRZ	Great Barrier	2.18	283	P	Pn	22 47 04.2	-2.7
PRRZ	Plateau Road	2.20	217	P	Pn	22 47 07.6	+0.5
GRRZ	Galatos Road	2.24	224	P	Pn	22 47 08.8	+1.2
ALRZ	Allen Road	2.27	217	P	Pn	22 47 08.5	+0.5
KNZ	Kokohu	2.28	188	P	Pn	22 47 06.7	-1.4
TOZ	Tahuroa Road	2.28	244		Pn	22 47 06.1	-2.0
TOZ	Tahuroa Road	2.28	244	P	Pn	22 47 07.4	-0.7
RAHZ	Arahi	2.30	200	P	Pn	22 47 07.9	-0.5
MTHZ	Maungataniwha	2.31	205	P	Pn	22 47 07.9	-0.6
MKAZ	Moumakai	2.37	261	P	Pn	22 47 08.0	-1.3
WIAZ	Waiheke Island	2.38	268	P	Pn	22 47 07.7	-1.6
MHGZ	Mahia Peninsul	2.40	183	P	Pn	22 47 08.5	-1.1
WHHZ	Waihua	2.41	196	P	Pn	22 47 09.2	-0.6
MRHZ	Matea Rd	2.46	212	P	Pn	22 47 10.2	-0.3
KUTZ	Kaahu Road	2.50	226	P	Pn	22 47 11.9	+1.0
ETAZ	East Tamaki Re	2.55	265	P	Pn	22 47 10.5	-1.0
NMHZ	Naumai	2.55	203	P	Pn	22 47 11.3	-0.4
MBAZ	Motutapu North	2.57	269	P	Pn	22 47 10.3	-1.4
TLZ	Tolley Road	2.57	232	P	Pn	22 47 11.9	0.0
ABAZ	Army Bay	2.63	272	P	Pn	22 47 11.1	-1.4
ARHZ	Aropaoanui	2.65	199	P	Pn	22 47 12.0	-0.9
BKZ	Black Stump Fm	2.72	207		Pn	22 47 11.5	-2.3
BKZ	Black Stump Fm	2.72	207	P	Pn	22 47 12.9	-0.9
BKZ	Black Stump Fm	2.72	207	P	Pn	22 47 13.3	-0.5
AWAZ	Awhitu Peninsu	2.78	263	P	Pn	22 47 14.1	-0.5
RATZ	Rangitukua	2.79	220	P	Pn	22 47 15.4	+0.6
RITZ	Rihia Road	2.83	218	P	Pn	22 47 17.1	+1.8
MCHZ	McNeill Hill	2.90	202	P	Pn	22 47 15.0	-1.2
KATZ	Kakaramea	2.92	220	P	Pn	22 47 17.8	+1.3
KWHZ	Kaweka Forest	2.97	206	P	Pn	22 47 15.9	-1.3
TMVZ	Te Maari	3.02	218	P	Pn	22 47 17.7	-0.2
NTVZ	North Tongarir	3.02	219	P	Pn	22 47 17.9	+0.1
ETVZ	East Tongariro	3.03	218	P	Pn	22 47 18.2	+0.2
KRVZ	Karewarewa	3.03	219	P	Pn	22 47 18.5	+0.5
NNVZ	North Ngauruho	3.07	219	P	Pn	22 47 18.6	0.0
OTVZ	Oturere	3.07	218	P	Pn	22 47 18.5	-0.1
WTVZ	West Tongariro	3.08	219	P	Pn	22 47 19.1	+0.5
SNVZ	South Ngauruho	3.10	218	P	Pn	22 47 19.1	+0.1
HIZ	Hauiti	3.11	235	Pn	Pn	22 47 16.1	-2.9
HIZ	Hauiti	3.11	235	P	Pn	22 47 17.5	-1.4
HIZ	Hauiti	3.11	235	P	Pn	22 47 20.3	+1.4
NGZ	Ngauruhoe	3.12	218	P	Pn	22 47 19.6	+0.4
TWVZ	Taurewa	3.12	221	P	Pn	22 47 20.1	+0.9
WCZ	Waipu Caves	3.13	284	P	Pn	22 47 17.2	-2.1
TUVZ	Tukino	3.16	217	P	Pn	22 47 20.6	+0.8
COVZ	Chateau Observ	3.16	219	P	Pn	22 47 22.7	+2.9
KAHZ	Kahuranaki	3.18	197	P	Pn	22 47 18.1	-1.8
KRHZ	Kereru	3.18	205	P	Pn	22 47 17.9	-2.0
FWVZ	Far West T-bar	3.20	218	P	Pn	22 47 20.4	+0.1
WHVZ	Whangaehu Hut	3.20	217	P	Pn	22 47 21.3	+0.9
MAVZ	Matarangi	3.21	218	P	Pn	22 47 21.6	+1.1
MOVZ	Moawhango	3.23	214	P	Pn	22 47 19.5	-1.0
TRVZ	Turoa	3.24	218	P	Pn	22 47 20.7	-0.1
PKVZ	Pokaka	3.33	220	P	Pn	22 47 23.0	+1.0
MTVZ	Mangateitei	3.34	217	P	Pn	22 47 21.9	-0.1
PXZ	Pawanui	3.41	196	P	Pn	22 47 20.1	-2.8
PNHZ	Pukenui	3.48	205	P	Pn	22 47 21.3	-2.7
VRZ	Vera Road	3.54	227	P	Pn	22 47 26.7	+2.0
WPHZ	Waipukurau	3.55	201	P	Pn	22 47 22.3	-2.5
PRHZ	Porangahau	3.69	198	P	Pn	22 47 23.7	-2.9
TSZ	Takapari Road	3.70	206	P	Pn	22 47 24.1	-2.7
DVHZ	Dannevirke	3.84	203	P	Pn	22 47 25.3	-3.4
WAZ	Wanganui	3.86	218	P	Pn	22 47 31.3	+2.3
ANWZ	Angora Road	3.91	198	P	Pn	22 47 26.6	-3.0
OUZ	Omahuta	3.96	291	P	Pn	22 47 28.0	-2.2
OUZ	Omahuta	3.96	291	P	Pn	22 47 27.7	-2.5
PKE	Pukeiti	4.05	232	P	Pn	22 47 35.2	+3.6
POWZ	Post Office Ro	4.06	206	P	Pn	22 47 29.7	-1.9
KHEZ	Kahui Hut	4.10	231	P	Pn	22 47 29.5	-2.7
KHEZ	Kahui Hut	4.10	231	P	Pn	22 47 35.6	+3.4
BFZ	Birch Farm	4.18	200	Pn	Pn	22 47 29.7	-3.4
BFZ	Birch Farm	4.18	200	P	Pn	22 47 29.4	-3.8
BFZ	Birch Farm	4.18	200	P	Pn	22 47 29.7	-3.4
MRZ	Mangatainoka R	4.37	206	Pn	Pn	22 47 32.1	-3.6
TIWZ	Tintock	4.37	203	P	Pn	22 47 32.8	-3.0
OGWZ	Otaki Gorge	4.65	209	P	Pn	22 47 36.6	-2.9
MSWZ	Moikau Station	5.15	205	Pn	Pn	22 47 42.7	-3.6
DUWZ	D'Urville Isla	5.19	218	P	Pn	22 47 44.3	-2.5
SNZO	South Karori	5.25	209	Pn	Pn	22 47 44.3	-3.4
SNZO	South Karori	5.25	209	P	Pn	22 47 44.2	-3.4
TCW	Tory Channel	5.35	213	Pn	Pn	22 47 45.5	-3.4
TUWZ	Tuamarina	5.67	213	Pn	Pn	22 47 49.8	-3.5
NNZ	Nelson	5.77	218	Pn	Pn	22 47 51.4	-3.2
NNZ	Nelson	5.77	218	P	Pn	22 47 52.0	-2.7
TKNZ	Takaka Hill	5.85	222	Pn	Pn	22 47 52.0	-3.8
BSWZ	Blackbirch Sta	5.93	212	Pn	Pn	22 47 53.7	-3.2
QRZ	Quartz Range	5.95	225	P	Pn	22 47 53.9	-3.2
MRNZ	Matariki Terra	6.22	220	Pn	Pn	22 47 57.1	-3.7
THZ	Tophouse	6.42	217	Pn	Pn	22 48 00.5	-3.0
KHZ	Kahutara	6.66	210	P	Pn	22 48 05.0	-1.6
KHZ	Kahutara	6.66	210	P	Pn	22 48 03.4	-3.2
LTZ	Lake Taylor	7.50	215	Pn	Pn	22 48 14.5	-3.6
CTZ	Chatham Island	8.06	152	P	Pn	22 48 26.1	+0.5
RPZ	Rata Peaks	8.79	216	Pn	Pn	22 48 32.2	-3.3
RPZ	Rata Peaks	8.79	216	Pn	Pn	22 48 32.1	-3.4
	0.7nm,0.3s,baz=37,slow=10,SNR=2.0						
RPZ				Sn	Sn	22 50 06.0	-6.7
	1.9nm,0.3s,baz=356,slow=16,SNR=8.7						
RPZ				LR	LR	22 51 57.8	
	comp=Z,227nm,21.9s,baz=73,slow=35						
RPZ	Rata Peaks	8.79	216	P	Pn	22 48 33.7	-1.8
ODZ	Otahua Downs	10.01	212	P	Pn	22 48 49.9	-2.2
JCZ	Jackson Bay	10.18	221	P	Pn	22 48 52.1	-2.4
STKA	Stephens Creek	30.41	268	P	P	22 52 34.4	+1.2
	1.1nm,0.3s,baz=85,slow=11,SNR=3.6						
	1.1nm,0.3s						
AS31	Alice Springs	40.02	276	P	P	22 53 56.5	+0.9
AS31				IAmb	IAmb	22 53 57.5	
	comp=Z,2.5nm,0.5s						
ASAR	Alice Springs	40.02	276	P	P	22 53 55.4	-0.1
ASAR	Alice Springs	40.02	276	P	P	22 53 56.1	+0.6
	comp=Z,3.8nm,0.6s,baz=120,slow=7.9,SNR=53						
	comp=Z,3.8nm,0.6s						
VNDA	Vanda	41.47	185	P	P	22 54 08.0	+1.2
WR8	Warramunga Arr	41.47	282	P	P	22 54 08.5	+1.1
WB2	Warramunga Arr	41.59	282	P	P	22 54 09.5	+1.0
WB2				IAmb	IAmb	22 54 18.1	
	comp=Z,20nm,1.5s						
WRA	Warramunga Arr	41.60	282	P	P	22 54 08.3	-0.3
	comp=Z,1.2nm,0.3s,baz=120,slow=7.7,SNR=13						
	comp=Z,1.2nm,0.3s						
WB0	Warramunga Arr	41.66	282	P	P	22 54 09.0	0.0
WB0				IAmb	IAmb	22 54 11.9	
	comp=Z,6.9nm,1.0s						
CASY	Casey	48.01	210	IAmb	IAmb	22 54 58.9	
	comp=Z,18nm,1.5s						
CASY				P	P	22 54 59.3	+0.6
KNRA	Kununurra	48.38	282	P	P	22 55 01.7	-0.5
KNRA				IAmb	IAmb	22 55 10.0	
	comp=Z,28nm,1.4s						
FITZ	Fitzroy Crossi	49.50	277	P	P	22 55 11.0	+0.3
MORW	Morawa	51.87	259	P	P	22 55 29.3	+0.9
MORW				IAmb	IAmb	22 55 29.9	
	comp=Z,6.7nm,1.0s						
QSPA	South Pole Qui	53.37	180	P	P	22 55 40.5	+1.4
SYO	Syowa Base	70.18	195	⇑eP	P	22 57 31.0	-0.5
GO09	Cerro Castillo	72.86	142	P	P	22 57 48.1	+0.2
GO09				IAmb	IAmb	22 57 52.7	
	comp=Z,40nm,1.5s						
HOPE	Hope Point	84.55	160	P	P	22 58 53.3	+1.6
ATKA	Atka Island	88.85	5	P	P	22 59 16.4	+4.1
S12K	Black Hills	93.65	11	P	P	22 59 36.8	+2.3
NVAR	Mina Array Bea	95.07	45	P	P	22 59 38.3	-3.5
	comp=Z,0.4nm,0.6s,baz=219,slow=5.3,SNR=2.2						
	comp=Z,0.4nm,0.6s						
FINES	FINESS Array B	149.69	333	PKPbc	PKPbc	23 06 05.9	-1.2
	comp=Z,2.0nm,0.8s,baz=57,slow=3.0,SNR=3.9						

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*IDC **02** 23:05:43.0±0.6, 21°.26S×174°.44W, h0^{km}, mb4.4/15, mbtmp4.4/17, ML4.2/2, MS4.0/31, Error ellipse: s-maj=23.3km s-min=15.7km az=120.0*

*NEIC **02** 23:05:45.1±1.4, 21°.13S±0°.10×173°.68W±0°.08, h10^{km}±1^{km}, mb5.0/171, Error ellipse: s-maj=16.8km s-min=12.7km az=172.0*

*NOU **02** 23:05:49.5, 20°.88S×173°.62W, h33^{km}, mb5.0/7, Tonga Islands*

ISC 02 23:05:44.1±0.4**, 21°.22S**±0°.08×**173°.68W**±0°.06**, h10**^{km}**, n305, σ1^{s}.25**/282**, mb4.9**/97**, MS4.1**/29**, 1C-1D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	4.12	60		Pn	23 06 46.5	-0.7
NIUE	Niue	4.12	60	P	Pn	23 06 47.0	-0.2
NIUE	Niue	4.12	60	S	Sn	23 07 32.7	-2.8
LKBA	Tubou, Lakemba	5.67	301	P	Pn	23 07 09.2	+0.7
TAVE	Taveuni	7.40	306	P	Pn	23 07 33.9	+1.6
AFI	Afiamalu	7.49	14		Pn	23 07 32.5	-1.0
DGTI	Dogotuki	7.92	307	P	Pn	23 07 41.4	+2.0
MSVF	Nonsavu	8.53	293		Pn	23 07 48.7	+0.8
MSVF	Nonsavu	8.53	293	P	Pn	23 07 49.6	+1.7
RAO	Raoul Island	8.87	205	LR	LR	23 10 39.9	
	comp=Z,261nm,20.0s,baz=76,slow=35						
RAR	Rarotonga	12.97	92		Pn	23 08 47.4	-1.2
RAR	Rarotonga	12.97	92	Pn	Pn	23 08 47.0	-1.6
	7.1nm,0.3s,baz=236,slow=5.6,SNR=20						
RAR				Sn	Sn	23 11 01.6	-12
	1.2nm,0.3s,baz=127,slow=23,SNR=1.0						
RAR				LR	LR	23 13 44.7	
	comp=Z,525nm,18.1s,baz=290,slow=35						
RAR	Rarotonga	12.97	92	P	Pn	23 08 51.4	+2.8
PINNC	Pines Island,	17.57	262	Pn	Pn	23 09 48.4	-0.8
DZM	Mont Dzumac	18.50	264	P	P	23 10 01.1	+0.5
DZM	Mont Dzumac	18.50	264	P	P	23 09 52.3	-8.3
	0.5nm,0.3s,baz=135,slow=14,SNR=6.4						
	5.0nm,0.9s						
URZ	Urewera	18.75	203	P	P	23 09 59.6	-3.6
	1.3nm,0.3s,baz=294,slow=3.2,SNR=6.7						
	6.7nm,0.6s						
TKNZ	Takaka Hill	22.77	207	P	P	23 10 49.4	+2.7
PPT	Papeete	23.02	85	LR	LR	23 18 50.6	
	comp=Z,405nm,18.1s,baz=278,slow=33						
LTZ	Lake Taylor	24.51	206	P	P	23 11 06.3	+2.5
LTZ				IAmb	IAmb	23 11 08.9	
	comp=Z,60nm,1.5s						

RPZ	Rata Peaks	25.78	206	P	P	23 11 12.8	-2.4
	comp=Z,8.3nm,0.9s,baz=37,slow=10,SNR=2.0						
	comp=Z,8.3nm,0.9s						
FOZ	Fox Glacier	26.16	208	P	P	23 11 19.0	+0.4
LBZ	Lake Benmore	26.69	206	P	P	23 11 24.1	+0.7
LBZ				IAmb	IAmb	23 11 35.1	
	comp=Z,65nm,1.4s						
ODZ	Otahua Downs	27.05	205	P	P	23 11 27.9	+1.3
ODZ				IAmb	IAmb	23 12 08.6	
	comp=Z,62nm,1.5s						
HNR	Honiara	27.95	291	LR	LR	23 21 07.6	
	comp=Z,103nm,20.8s,baz=138,slow=34						
PMG	Port Moresby	39.44	281	LR	LR	23 28 04.0	
	comp=Z,301nm,18.5s,baz=117,slow=35						
STKA	Stephens Creek	41.14	245	P	P	23 13 23.8	-4.9
	comp=Z,5.4nm,0.8s,baz=104,slow=7.0,SNR=6.5						
STKA				LR	LR	23 29 48.9	
	comp=Z,134nm,18.3s,baz=36,slow=36						
	comp=Z,5.4nm,0.8s						
JAY	Jayapura	48.11	286	LR	LR	23 32 14.3	
	comp=Z,67nm,20.6s,baz=238,slow=34						
ASAR	Alice Springs	48.28	257	P	P	23 14 20.4	-5.5
	comp=Z,8.4nm,0.9s,baz=91,slow=8.3,SNR=47						
ASAR				PcP	PcP	23 15 50.6	-2.2
	comp=Z,1.7nm,0.8s,baz=102,slow=3.5,SNR=2.1						
ASAR				LR	LR	23 34 10.3	
	comp=Z,162nm,18.2s,baz=98,slow=36						
	comp=Z,8.4nm,0.9s						
WRA	Warramunga Arr	48.50	262	P	P	23 14 21.5	-6.0
	comp=Z,5.2nm,0.9s,baz=91,slow=5.9,SNR=11						
WRA				PcP	PcP	23 15 49.6	-4.0
	comp=Z,2.4nm,0.9s,baz=100,slow=3.4,SNR=2.0						
WRA				LR	LR	23 34 50.9	
	comp=Z,195nm,18.4s,baz=73,slow=37						
	comp=Z,5.2nm,0.9s						
VNDA	Vanda	57.59	186	P	P	23 15 36.1	+2.4
VNDA	Vanda	57.59	186	P	P	23 15 34.0	+0.3
	comp=Z,1.9nm,1.0s,baz=26,slow=6.9,SNR=8.0						
	comp=Z,1.9nm,1.0s						
VA02	Isla de Pascua	58.36	110	P	P	23 15 41.2	+1.3
KAPI	Kappang	66.36	274	LR	LR	23 44 48.6	
	comp=Z,71nm,18.2s,baz=78,slow=36						
QSPA	South Pole Qui	68.86	180	P	P	23 16 49.2	+0.4
QSPA				IAmb	IAmb	23 17 07.0	
	comp=Z,15nm,1.2s						
QSPA	South Pole Qui	68.86	180	P	P	23 16 48.9	+0.2
	comp=Z,4.0nm,0.9s,baz=36,slow=2.3,SNR=8.3						
	comp=Z,4.0nm,0.9s						
MJAR	Matsushiro Arr	73.24	321	P	P	23 17 14.3	-1.3
	comp=Z,6.8nm,1.0s,baz=157,slow=5.7,SNR=9.8						
	comp=Z,6.8nm,1.0s						
SHEM	Shemya Is, Ala	74.40	352	LR	LR	23 46 16.6	
	comp=Z,109nm,19.3s,baz=320,slow=33						
ASAJ	Asahikawa	76.34	329	LR	LR	23 48 50.2	
	comp=Z,69nm,18.3s,baz=122,slow=34						
LPIG	La Paz	76.35	57	LR	LR	23 47 34.6	
	comp=Z,227nm,18.1s,baz=206,slow=33						
PFO	Pinyon Flats O	77.10	46	LR	LR	23 50 55.9	
	comp=Z,48nm,18.0s,baz=216,slow=35						
PEA0B	Petropavlovsk-	78.07	343	P	P	23 17 42.3	-0.5
PETK	Petropavlovsk-	78.07	343	P	P	23 17 42.4	-0.4
	comp=Z,2.9nm,0.7s,baz=113,slow=7.9,SNR=8.7						
	comp=Z,2.9nm,0.7s						
GMN	Gold Mountain	78.79	43	P	P	23 17 48.4	+0.9
RYN	Ryan	78.83	41	P	P	23 17 46.5	-1.0
RYN				IAmb	IAmb	23 18 13.0	
	comp=Z,15nm,1.4s						
NVAR	Mina Array Bea	78.84	41	P	P	23 17 48.6	+0.9
NVAR	Mina Array Bea	78.84	41	P	P	23 17 50.5	+2.8
	comp=Z,3.8nm,1.0s,baz=222,slow=8.2,SNR=10						
	comp=Z,3.8nm,1.0s						
NV11	Mina Array Sit	78.93	41		P	23 17 49.0	+0.9
MZP	Montezuma Peak	78.96	42	P	P	23 17 47.7	-0.8
PAHR	Pah Rah Range	78.98	40	P	P	23 17 47.7	-0.7
TPH	Tonopah	79.29	42	P	P	23 17 49.9	-0.2
SHPR	Sheep Range	79.66	44	P	P	23 17 51.9	-0.3
W13A	Hualapai Mount	79.69	46	P	P	23 17 51.9	-0.6
KSRS	Korea Array	80.14	317	P	P	23 17 52.0	-2.5
	comp=Z,2.4nm,0.7s,baz=138,slow=5.9,SNR=13						
	comp=Z,2.4nm,0.7s						
KSAR	Wonju Array Be	80.16	317		P	23 17 53.7	-0.9
J05D	Fort Rock, OR	80.24	36	P	P	23 17 55.6	+0.5
PRN	Pahroc Range	80.26	44	P	P	23 17 55.0	-0.4
ACHA	Angle Creek He	80.59	10	P	P	23 17 57.5	+0.9
PINE	Pine Mountain	80.74	36	P	P	23 17 58.8	+0.9
P16K	Nushagak River	80.99	8	P	P	23 17 59.1	+0.5
USHA	Ushuaia	81.29	146	LR	LR	23 52 48.8	
	comp=Z,90nm,18.3s,baz=164,slow=35						
KNB	Kanab	81.49	45	P	P	23 18 02.0	-0.1
O16K	Kokwok River B	81.53	8		P	23 18 01.3	-0.1
M11K	Mekoryuk	81.54	4	P	P	23 18 01.8	+0.4
Q19K	Cape Douglas,	81.55	10	P	P	23 18 02.3	+0.7
Q19K				IAmb	IAmb	23 18 11.0	
	comp=Z,23nm,1.2s						
I07A	Izee	81.72	36	P	P	23 18 02.5	-0.5
I07A				IAmb	IAmb	23 18 25.7	
	comp=Z,19nm,1.7s						
P18K	Big Mountain,	81.73	9		P	23 18 02.3	-0.3
P18K				IAmb	IAmb	23 18 04.9	
	comp=Z,25nm,1.4s						
J08A	Circle Bar Ran	81.83	37		P	23 18 03.7	+0.2
USRK	Ussuriysk Ar.	81.87	324	LR	LR	23 51 29.4	
	comp=Z,109nm,19.2s,baz=138,slow=34						
O18K	Koktuh Hills	82.18	9		P	23 18 04.9	0.0
O18K				IAmb	IAmb	23 18 07.7	
	comp=Z,11nm,1.1s						
M14K	Bethel	82.23	6		P	23 18 05.5	+0.4
D05A	Enumclaw	82.45	33		P	23 18 06.7	+0.2
CNPM	China Poot	82.53	11	P	P	23 18 05.9	-0.8
CNPM				IAmb	IAmb	23 18 11.4	
	comp=Z,15nm,1.0s						
O19K	Port Alsworth	82.64	10	P	P	23 18 08.0	+0.8
L14K	Kuka Creek	82.75	5	P	P	23 18 08.3	+0.6
L14K				IAmb	IAmb	23 18 13.5	
	comp=Z,15nm,0.9s						
G08A	Pilot Rock	82.79	36	P	P	23 18 09.7	+1.1
G08A				IAmb	IAmb	23 18 14.1	
	comp=Z,8.7nm,1.1s						
M16K	Timber Creek	82.81	7		P	23 18 09.3	+1.2
MXC	Moxie City	82.92	34	P	P	23 18 09.5	+0.4
MXC				IAmb	IAmb	23 18 25.0	
	comp=Z,20nm,1.7s						
BBB	Bella Bella	83.19	26	LR	LR	23 51 16.4	
	comp=Z,59nm,18.2s,baz=200,slow=33						
HAWA	Hanford	83.19	34	P	P	23 18 10.5	0.0
HAWA				IAmb	IAmb	23 18 36.2	
	comp=Z,12nm,1.1s						
N19K	Bonanza Creek	83.21	9		P	23 18 10.2	-0.1
N19K				IAmb	IAmb	23 18 14.2	
	comp=Z,9.8nm,1.0s						
M17K	Holitna River	83.36	8		P	23 18 11.5	+0.5
M17K				IAmb	IAmb	23 18 16.6	
	comp=Z,9.4nm,1.0s						
MFID	Camas Ranch	83.38	38	P	P	23 18 11.8	+0.1
WAH2	Wahluke Slope	83.41	34	P	P	23 18 12.2	+0.6
BMO	Blue Mountains	83.42	37	P	P	23 18 11.7	-0.1
L16K	Owhat River	83.42	7		P	23 18 12.5	+1.3
BGU	Big Grassy Mou	83.59	42	P	P	23 18 14.7	+1.9
MYKOM	Kota Tinggi	83.62	274	P	P	23 18 11.4	-2.0
MYKOM				IAmb	IAmb	23 18 12.6	
	comp=Z,10.0nm,0.8s						
SLKM	Skilak Lake	83.64	11	P	P	23 18 13.1	+0.6
K15K	Wolf Creek Mou	83.79	6		P	23 18 14.3	+1.1
TMUT	Trail Mountain	83.82	44	P	P	23 18 13.9	-0.3
TMUT				IAmb	IAmb	23 19 01.4	
	comp=Z,6.5nm,0.9s						
MPU	Maple Canyon	83.95	43	P	P	23 18 15.6	+0.8
TXAR	Lajitas Array	84.08	56	P	P	23 18 18.8	+3.2
	comp=Z,0.6nm,0.9s,baz=214,slow=4.2,SNR=3.6						
TXAR				LR	LR	23 49 18.1	
	comp=Z,67nm,19.7s,baz=236,slow=31						
	comp=Z,0.6nm,0.9s						
HVU	Hansel Valley	84.23	41	P	P	23 18 16.4	+0.3
L18K	Granite Mounta	84.25	8		P	23 18 16.6	+1.2
L18K				IAmb	IAmb	23 18 20.8	
	comp=Z,10nm,0.9s						
M19K	Big River Lodg	84.26	9		P	23 18 15.5	-0.1
RC01	Rabbit Creek A	84.27	11	P	P	23 18 15.7	+0.1
RC01				IAmb	IAmb	23 18 20.0	
	comp=Z,7.1nm,0.8s						
STLK	Strandline Lak	84.28	10	P	P	23 18 15.3	-0.4
STLK				IAmb	IAmb	23 19 29.5	
	comp=Z,7.0nm,0.6s						
HLID	Hailey	84.29	39	P	P	23 18 15.0	-1.4
PLID	Pearl Lake	84.30	37		P	23 18 17.0	+0.6
PLID				IAmb	IAmb	23 18 24.1	
	comp=Z,8.0nm,1.2s						
PWL	Port Wells	84.32	12		P	23 18 16.4	+0.5
M20K	Styx River	84.43	10	P	P	23 18 16.2	-0.3
M20K				IAmb	IAmb	23 18 26.2	
	comp=Z,14nm,1.6s						
SUA	Susitna One	84.43	11	P	P	23 18 17.1	+0.5
SUA				IAmb	IAmb	23 18 18.4	
	comp=Z,8.9nm,0.8s						
L19K	White Mountain	84.46	9	P	P	23 18 17.4	+0.8
K17K	Iditarod	84.53	7	P	P	23 18 17.3	+0.4
K17K				IAmb	IAmb	23 18 41.3	
	comp=Z,9.6nm,1.1s						
B08A	Colville Reser	84.57	33	P	P	23 18 16.9	-0.6
B08A				IAmb	IAmb	23 18 22.4	
	comp=Z,9.6nm,1.4s						
GLI	Glacier Island	84.59	13	P	P	23 18 16.7	-0.5
RAGM	Ragged Mountai	84.67	14	P	P	23 18 18.0	+0.3
RAGM				IAmb	IAmb	23 18 44.0	
	comp=Z,9.2nm,1.1s						
TCUT	Toone Canyon	84.71	42	P	P	23 18 19.0	+0.3
TCUT				IAmb	IAmb	23 18 36.9	
	comp=Z,12nm,1.1s						
HMT	Hamilton	84.72	14	P	P	23 18 19.6	+1.7
HMT				IAmb	IAmb	23 18 22.6	
	comp=Z,13nm,1.1s						
GAMB	Gambell	84.72	1	P	P	23 18 18.6	+0.8
C09A	Chrisman Ranch	84.76	34	P	P	23 18 19.3	+0.9
C09A				IAmb	IAmb	23 18 36.1	
	comp=Z,19nm,1.6s						
SKT	Skwentna	84.78	10	P	P	23 18 18.2	-0.1
SKT				IAmb	IAmb	23 18 21.6	
	comp=Z,9.2nm,1.0s						
PV23	Carpenter Ridg	84.80	45	P	P	23 18 20.1	+0.9
PV23				IAmb	IAmb	23 18 46.3	
	comp=Z,11nm,1.2s						
KNK	Knik Glacier	84.81	12	P	P	23 18 19.5	+1.2
KNK				IAmb	IAmb	23 18 22.9	
	comp=Z,8.1nm,0.8s						
M22K	Willow	84.81	11	P	P	23 18 19.8	+1.5
LLLB	Lillooet	84.82	30	P	P	23 18 20.5	+1.8
J16K	Anvik River	84.85	6		P	23 18 19.1	+0.6
BERG	Berg Lake	84.89	14	P	P	23 18 19.2	+0.4
BERG				IAmb	IAmb	23 18 25.5	
	comp=Z,7.6nm,0.9s						
TTA	Tatalina	85.02	8	P	P	23 18 19.9	+0.5
TTA				IAmb	IAmb	23 18 24.4	
	comp=Z,10.0nm,1.0s						
GHO	Glory Hole Cre	85.05	12	P	P	23 18 20.1	+0.4
DIV	Divide	85.09	13	P	P	23 18 20.0	+0.2
DIV				IAmb	IAmb	23 18 24.4	
	comp=Z,7.7nm,0.8s						
J17K	VABM Dome	85.11	7		P	23 18 20.2	+0.4
J17K				IAmb	IAmb	23 18 25.1	
	comp=Z,9.1nm,0.8s						
MESA	MESA	85.12	15	P	P	23 18 20.6	+0.4
YKU2	Yakutat	85.13	17	P	P	23 18 20.5	+0.6
WAX	Waxell Ridge	85.14	15	P	P	23 18 21.6	+1.5
BMRM	Bremner River	85.20	14		P	23 18 21.0	+0.6
BMRM				IAmb	IAmb	23 18 25.1	
	comp=Z,12nm,1.0s						
KLR	Kul'dur	85.25	328	LR	LR	23 49 37.0	
	comp=Z,80nm,21.9s,baz=156,slow=31						
YAH	Yahtse	85.34	15	P	P	23 18 22.1	+0.8
KLU	Klutina	85.39	13	P	P	23 18 21.1	-0.3
CUT	Chulitna	85.39	11	P	P	23 18 22.0	+0.8
SCM	Sheep Creek Mo	85.41	12	P	P	23 18 22.6	+1.2
TGL	Tana Glacier	85.42	15	P	P	23 18 21.8	+0.3
TGL				IAmb	IAmb	23 18 28.6	
	comp=Z,8.2nm,0.7s						
J18K	Innoko River	85.45	8	P	P	23 18 22.2	+0.7
J18K				IAmb	IAmb	23 18 24.2	
	comp=Z,9.1nm,0.9s						
PCA	Pinnacle	85.48	16	P	P	23 18 23.0	+1.2
PCA				IAmb	IAmb	23 18 29.2	
	comp=Z,19nm,1.3s						
GRNC	Granite Creek	85.66	15	P	P	23 18 22.9	0.0
GRNC				IAmb	IAmb	23 18 27.8	
	comp=Z,13nm,1.0s						
K20K	Telida	85.69	9	P	P	23 18 22.0	-0.7
BESE	Bessie Mountai	85.74	19	P	P	23 18 24.6	+1.5
BESE				IAmb	IAmb	23 18 28.6	
	comp=Z,14nm,1.3s						
P29M	Windy Craggy	85.76	17		P	23 18 23.4	+0.2
N25K	Chitina, Valde	85.77	13		P	23 18 23.4	+0.2
N25K				IAmb	IAmb	23 18 28.1	
	comp=Z,7.3nm,0.9s						
PLCA	Paso Flores	85.83	132	LR	LR	23 48 46.6	
	comp=Z,86nm,19.7s,baz=241,slow=30						
M24K	Tolsona, Glenn	85.89	13	P	P	23 18 25.0	+1.2
LOGN	Logan Glacier	85.92	15	P	P	23 18 24.8	+0.6
LOGN				IAmb	IAmb	23 18 31.3	
	comp=Z,9.8nm,1.0s						
MCARA	McCarthy VSAT	85.93	14	P	P	23 18 24.2	+0.3
MCARA				IAmb	IAmb	23 18 44.2	
	comp=Z,7.7nm,0.9s						
CTGM	Chitina Glacie	85.96	15	P	P	23 18 24.4	+0.1
CTGM				IAmb	IAmb	23 18 29.3	
	comp=Z,8.7nm,0.9s						
CAST	Castle Rocks	86.05	10		P	23 18 24.3	-0.2
O28M	Mount Upton	86.08	16	P	P	23 18 25.4	+0.3
CMIG	Matias Romero	86.09	70	LR	LR	23 48 48.2	
	comp=Z,109nm,19.7s,baz=218,slow=30						
J19K	Poorman	86.09	8		P	23 18 25.6	+0.9
J19K				IAmb	IAmb	23 18 34.2	
	comp=Z,22nm,1.5s						
O29M	Mount Kennedy	86.10	17	P	P	23 18 25.9	+1.0
O29M				IAmb	IAmb	23 18 32.7	
	comp=Z,9.8nm,1.1s						
TRF	Thorofare Moun	86.36	10		P	23 18 26.1	-0.2
S34M	Telegraph Cree	86.41	21	P	P	23 18 26.9	+0.5
J20K	Nowinta River	86.47	8		P	23 18 26.8	+0.3
J20K				IAmb	IAmb	23 18 31.2	
	comp=Z,15nm,1.1s						
DRIO	Del Rio	86.49	57	P	P	23 18 27.0	-0.5
MSO	Missoula	86.49	36	P	P	23 18 26.8	-0.4
H17K	Granite Mounta	86.53	6	P	P	23 18 28.2	+1.3
BPMT	Black Pine Rid	86.53	37	P	P	23 18 27.9	+0.3
DHY	Denali Highway	86.54	12	P	P	23 18 28.1	+1.0
RND	Reindeer	86.57	11		P	23 18 28.1	+0.9
M26K	Nabesna, AK	86.83	14	P	P	23 18 28.6	+0.2
M26K				IAmb	IAmb	23 18 35.1	
	comp=Z,12nm,1.1s						
Q32M	Nakina River	86.86	20	P	P	23 18 29.6	+0.8
Q32M				IAmb	IAmb	23 18 47.8	
	comp=Z,25nm,1.9s						
MCK	McKinley	86.86	11		P	23 18 29.0	+0.5
BPAW	Bear Paw Mtn.	86.86	10	P	P	23 18 28.4	0.0
SYO	Syowa Base	86.87	191	⇓*e*P	P	23 18 27.4	-1.3
SYO	Syowa Base	86.87	191	⇑*e*PcP	PcP	23 18 31.6	+0.7
H18K	Honhosa River	86.90	6	P	P	23 18 29.2	+0.6
H18K				IAmb	IAmb	23 18 33.6	
	comp=Z,9.6nm,1.1s						
M27K	Edge Creek, AK	87.05	14	P	P	23 18 30.5	+0.9
M27K				IAmb	IAmb	23 18 37.3	
	comp=Z,16nm,1.1s						
SNAA	Sanae	87.14	177	LR	LR	23 54 04.4	
	comp=Z,94nm,20.1s,baz=215,slow=33						
MENT	Mentasta	87.15	13	P	P	23 18 30.7	+0.8
MENT				IAmb	IAmb	23 18 35.0	
	comp=Z,7.4nm,0.8s						
O30N	Mendenhall	87.17	17	P	P	23 18 30.3	+0.2
O30N				IAmb	IAmb	23 18 33.8	
	comp=Z,8.2nm,1.2s						
DLBC	Dease Lake	87.19	21	P	P	23 18 30.9	+0.7
DLBC	Dease Lake	87.19	21	P	P	23 18 32.9	+2.6
	comp=Z,5.0nm,1.2s,baz=217,slow=8.3,SNR=5.1						
	comp=Z,5.0nm,1.2s						
UBPT	Khong Chiam	87.19	287	P	P	23 18 30.1	-1.1
L26K	Log Cabin Wild	87.31	13	P	P	23 18 32.1	+1.4
WHY	Whitehorse	87.42	18	P	P	23 18 32.5	+1.1
N30M	Aishikik Lake	87.47	17	P	P	23 18 32.3	+0.7
H19K	Roundabout Mou	87.47	7	P	P	23 18 31.6	+0.2
H19K				IAmb	IAmb	23 18 36.5	
	comp=Z,8.6nm,1.1s						
K24K	Donnelly Dome	87.50	12	P	P	23 18 31.4	-0.2
G18K	Tagagawik	87.59	6	P	P	23 18 32.3	+0.3
G18K				IAmb	IAmb	23 18 35.2	
	comp=Z,6.1nm,1.1s						
R33M	Jennings River	87.61	20		P	23 18 32.0	-0.4
R33M				IAmb	IAmb	23 18 39.6	
	comp=Z,8.0nm,1.3s						
NEA2	Nenana	87.63	10	P	P	23 18 32.9	+0.7
L27K	Beaver Creek,	87.67	14	P	P	23 18 33.7	+1.2
L27K				IAmb	IAmb	23 18 39.2	
	comp=Z,7.4nm,1.2s						
P33M	Teslin, Yukon	87.67	19	P	P	23 18 33.7	+1.1
BCAR	Beaver Creek A	87.68	14	P	P	23 18 33.6	+1.1
WRH	Wood River Hil	87.69	11	P	P	23 18 33.9	+1.5
DOT	Dot Lake	87.71	13	P	P	23 18 33.6	+1.0
DOT				IAmb	IAmb	23 18 37.4	
	comp=Z,6.0nm,0.8s						
I21K	Tanana	87.72	9	P	P	23 18 33.2	+0.6
I21K				IAmb	IAmb	23 18 36.9	
	comp=Z,9.3nm,1.1s						
HDA	Harding Lake	87.83	11	P	P	23 18 33.9	+0.7
N31M	Braeburn, Yuko	87.84	17	P	P	23 18 35.1	+1.8
CCB	Clear Creek Bu	87.90	11		P	23 18 33.9	+0.5
CCB				IAmb	IAmb	23 18 37.5	
	comp=Z,8.6nm,1.1s						
M29M	Somme Creek	87.94	16		P	23 18 34.7	+0.9
M29M				IAmb	IAmb	23 18 39.0	
	comp=Z,5.3nm,0.9s						
G19K	Purcell Mounta	88.00	7	P	P	23 18 34.0	+0.1
G19K				IAmb	IAmb	23 18 37.0	
	comp=Z,6.2nm,0.9s						
SCRK	Sand Creek	88.02	13	P	P	23 18 34.5	+0.3
SCRK				IAmb	IAmb	23 18 39.1	
	comp=Z,5.7nm,0.9s						
SEY	Seymchan	88.04	345	LR	LR	23 53 49.8	
	comp=Z,56nm,20.5s,baz=23,slow=33						
COLA	College	88.10	11	P	P	23 18 35.3	+0.9
DKNS	Dickens	88.16	53	P	P	23 18 36.1	+0.5
DKNS				IAmb	IAmb	23 18 43.1	
	comp=Z,21nm,1.9s						
IL31		88.17	11	P	P	23 18 35.0	+0.2
IL31				IAmb	IAmb	23 18 39.0	
	comp=Z,7.3nm,1.1s						
ILAR	Eielson Array	88.17	11		P	23 18 35.3	+0.5
ILAR	Eielson Array	88.17	11	P	P	23 18 36.2	+1.5
	comp=Z,1.9nm,0.8s,baz=212,slow=5.3,SNR=6.0						
	comp=Z,1.9nm,0.8s						
J25K	Salcha River,	88.31	12	P	P	23 18 35.5	-0.1
J25K				IAmb	IAmb	23 18 40.3	
	comp=Z,7.0nm,1.0s						
POKR	Poker Plat Res	88.39	11	P	P	23 18 35.5	-0.3
POKR				IAmb	IAmb	23 18 40.1	
	comp=Z,6.8nm,1.0s						
K27K	Chicken	88.46	13	P	P	23 18 37.3	+1.2
K27K				IAmb	IAmb	23 18 41.7	
	comp=Z,5.7nm,1.0s						
RPSI	Rantau Prapat	88.53	273	P	P	23 18 35.3	-2.4
RPSI				IAmb	IAmb	23 18 36.3	
	comp=Z,9.3nm,0.9s						
BRDY	Brady	88.56	56	P	P	23 18 37.1	-0.3
BRDY				IAmb	IAmb	23 21 35.6	
	comp=Z,12nm,2.0s						
J26L	Joseph Creek	88.57	13		P	23 18 38.7	+1.9
PSI	Prapat	88.57	274	LR	LR	00 00 28.9	
	comp=Z,55nm,18.2s,baz=154,slow=37						
F19K	Shaleruckik Mo	88.59	6	P	P	23 18 37.1	+0.4
F19K				IAmb	IAmb	23 18 38.9	
	comp=Z,6.4nm,0.9s						
MT05	Renca	88.73	125	P	P	23 18 37.9	-0.5
E18K	Tukpahlearik C	88.91	5	P	P	23 18 38.1	0.0
E18K				IAmb	IAmb	23 18 42.8	
	comp=Z,6.9nm,1.0s						
F20K	Avaraart Lake	89.02	7	P	P	23 18 39.4	+0.7
DAWY	Dawson	89.09	14	P	P	23 18 40.6	+1.4
DAWY				IAmb	IAmb	23 18 44.4	
	comp=Z,8.1nm,1.0s						
PRP	Porcupine Dome	89.10	11		P	23 18 39.5	+0.2
PRP				IAmb	IAmb	23 18 44.6	
	comp=Z,6.3nm,0.9s						
E19K	Redstone River	89.25	6	P	P	23 18 40.5	+0.7
E19K				IAmb	IAmb	23 18 44.5	
	comp=Z,12nm,1.0s						
GSI	Gunungsitoli	89.29	272	P	P	23 18 39.8	-1.5
K29M	Barlow Dome	89.35	15	P	P	23 18 40.6	+0.1
K29M				IAmb	IAmb	23 18 46.0	
	comp=Z,12nm,1.1s						
I26K	Coal Creek Min	89.36	12	P	P	23 18 41.9	+1.5
I26K				IAmb	IAmb	23 18 45.5	
	comp=Z,7.1nm,1.1s						
ENH	Enshi	89.80	303	P	P	23 18 42.5	-0.8
MMPY	Sheldon Lake,	90.03	18		P	23 18 45.1	+1.5
MMPY				IAmb	IAmb	23 18 49.1	
	comp=Z,6.5nm,1.0s						
BMAR	Burnt Mountain	90.99	11	P	P	23 18 48.8	+0.8
NNA	Nana	91.98	104	LR	LR	23 52 32.9	
	comp=Z,78nm,18.6s,baz=229,slow=30						
JTS	Las Juntas de	92.49	80	LR	LR	23 53 12.3	
	comp=Z,67nm,18.1s,baz=251,slow=31						
INK	Inuvik	93.95	14	LR	LR	23 59 07.0	
	comp=Z,74nm,18.4s,baz=254,slow=34						
CMAR	Chiang Mai Arr	94.17	288	P	P	23 19 02.6	-1.2
CMAR	Chiang Mai Arr	94.17	288	P	P	23 19 03.0	-0.7
	comp=Z,5.0nm,1.0s,baz=114,slow=3.2,SNR=18						
CMAR				LR	LR	00 00 43.3	
	comp=Z,17nm,19.0s,baz=125,slow=35						
	comp=Z,5.0nm,1.0s						
CHTO	Chiang Mai	94.29	288	P	P	23 19 03.6	-0.7
CHTO				IAmb	IAmb	23 19 04.7	
	comp=Z,5.9nm,0.8s						
YKA	Yellowknife Ar	95.51	24	P	P	23 19 09.9	+1.0
YKA	Yellowknife Ar	95.51	24	P	P	23 19 10.3	+1.4
	comp=Z,0.3nm,0.7s,baz=240,slow=4.7,SNR=2.6						
YKA				LR	LR	23 54 30.1	
	comp=Z,38nm,21.3s,baz=296,slow=30						
	comp=Z,0.3nm,0.7s						
ECSD	EROS Data Cent	95.54	45	P	P	23 19 10.0	+0.6
ECSD				IAmb	IAmb	23 19 17.1	
	comp=Z,6.8nm,1.2s						
LPAZ	La Paz	98.05	111	LR	LR	23 57 14.1	
	comp=Z,97nm,18.1s,baz=247,slow=31						
ULM	Lac du Bonnet	98.59	39	LR	LR	23 59 38.4	
	comp=Z,102nm,18.9s,baz=292,slow=33						
MKAR	Makanchi Array	114.63	313	PKP	PKPdf	23 24 24.1	-0.5
	comp=Z,0.5nm,0.8s,baz=87,slow=2.0,SNR=4.3						
KURBB	Kurchatov Arra	117.32	317	PKP	PKPdf	23 24 28.8	-0.8
	comp=Z,0.6nm,0.8s,baz=133,slow=1.5,SNR=5.3						
BVAR	Borovoye Array	122.22	320	PKP	PKPdf	23 24 37.9	-1.1
	comp=Z,1.1nm,0.6s,baz=132,slow=2.1,SNR=6.0						
FINES	FINESS Array B	137.52	346	PKP	PKPdf	23 25 09.4	+1.7
	comp=Z,1.8nm,1.0s,baz=340,slow=1.6,SNR=4.1						
EKA	Eskdalemuir Ar	145.20	9	PKPbc	PKPbc	23 25 21.5	+0.3
	comp=Z,1.2nm,0.7s,baz=312,slow=4.5,SNR=1.9						
AK03	Malin Array Si	145.49	334	PKP	PKPbc	23 25 20.9	-1.5
AK23	Malin Array Si	145.50	334	PKP	PKPbc	23 25 20.7	-1.7
AKASG	Malin Array Be	145.51	334	PKPbc	PKPbc	23 25 21.8	-0.6
	comp=Z,4.4nm,0.6s,baz=41,slow=3.9,SNR=27						
AKBB	Malin Array Si	145.51	334	PKP	PKPbc	23 25 20.8	-1.6
AK04	Malin Array Si	145.52	334	PKP	PKPbc	23 25 21.0	-1.4
KIEV	Kiev	145.52	334	PKP	PKPbc	23 25 20.7	-1.7
MI28	Mi28,Pidlybu	145.94	336	PKP	PKPdf	23 25 22.4	-0.7
RNPP9	Sopachiv	146.21	338	PKP	PKPdf	23 25 22.8	-0.7
RNPP8	Varash	146.28	338	PKP	PKPdf	23 25 23.1	-0.6
LUBAR	Lubar, Ukraine	146.71	335	PKP	PKPdf	23 25 24.2	-0.2
BSEG	Bad Segeberg	147.19	356	*e*PKPbc	PKPbc	23 25 28.7	+1.4
	baz=12,slow=3.7						
BSEG				*e*PKPab	sPKPab	23 25 30.8	+1.0
	baz=12,slow=3.7						
BSEG				*e*L	L	00 29 18.7	
	comp=Z,52nm,19.1s						
RUE	Ruedersdorf	148.26	351	*e*PKPab	PKPab	23 25 34.4	+1.1
	baz=12,slow=3.7						
NRDL	Niedersach Rie	148.64	356	*e*PKPbc	PKiKP	23 25 33.6	+0.9
	baz=12,slow=3.7						
NRDL				*e*PKPab	pPKPab	23 25 35.8	+0.5
	baz=12,slow=3.7						
FLTG	Flechtingen	148.71	354	*e*PKPbc	PKiKP	23 25 33.0	+0.2
	baz=12,slow=3.7						
FLTG				*e*PKPab	PKPab	23 25 35.8	+0.7
	baz=12,slow=3.7						
IBBN	Ibbenburen	148.95	358	*e*PKPbc	PKiKP	23 25 35.1	+1.7
	baz=12,slow=3.7						
IBBN				*e*PKPab	sPKPab	23 25 37.7	+0.9
	baz=12,slow=3.7						
OJC	Ojcow	149.16	343	PKP	PKPdf	23 25 28.1	-0.4
KSP	Ksiaz	149.41	348	PKP	PKPdf	23 25 28.1	-0.8
CLL	Collm	149.51	352	PKP	PKPdf	23 25 28.1	-1.0
CLL	Collm	149.51	352	*e*PKPab	PKPab	23 25 39.2	+0.8
	baz=12,slow=3.7						
CLL				*e*L	L	00 40 23.7	
	comp=Z,44nm,19.3s						
CLL	Collm	149.51	352	*e*PKPdf	PKPdf	23 25 28.0	-1.0
CLL				*i* PKPbc	PKPbc	23 25 33.8	+0.3
	comp=Z,9.0nm,1.3s						
CLL				*i* PKPab	PKPab	23 25 38.0	-0.4
	comp=Z,11nm,1.0s						
CLL				*i* x	x	23 25 40.5	

	comp=Z,10.0nm,1.0s						
OSTC	**Ostas**	149.70	347	*e*PKP	PKiKP	23 25 35.4	+0.3
NEUB	**Neuenburg**	149.76	353	*e*PKPbc	PKiKP	23 25 36.0	+0.9
	baz=12,slow=3.7						
UPC	**Upice**	149.79	348	*e*PKP	PKPab	23 25 39.9	+0.4
BRG	**Berggiesshubel**	149.80	350	*e*PKPab	PKPab	23 25 40.5	+0.9
	baz=12,slow=3.7						
BRG	**Berggiesshubel**	149.80	350	*e*P	PKPbc	23 25 35.0	+0.8
BRG				Amp		23 25 38.2	
	comp=Z,4.1nm,0.9s						
BRG	**Berggiesshubel**	149.80	350	P	PKPab	23 25 46.6	+7.1
BRG				Amp		23 25 47.4	
	comp=Z,6.9nm,1.1s						
BUG	**Bochum--Univer**	149.83	359	*e*PKPab	PKPab	23 25 41.2	+1.6
	baz=12,slow=3.7						
HOLU	**Holmets**	149.86	339	PKP	PKPdf	23 25 29.1	-0.5
DPC	**Dobruska-Polom**	149.87	347	*e*PKP	PKPbc	23 25 35.4	+0.9
STEB	**Steborice**	149.94	345	*e*PKP	PKPab	23 25 40.0	-0.2
KRLC	**Kraliky**	150.03	346	*e*PKP	PKPbc	23 25 35.6	+0.7
PVCC	**Panska Ves**	150.03	349	*e*PKP	PKiKP	23 25 36.2	+0.5
MORC	**Moravsky Berou**	150.14	345	*e*PKP	PKPbc	23 25 35.2	0.0
LANS	**Liptovska Anna**	150.22	342	*e*	PKiKP	23 25 37.1	+0.9
BRTR	**Keskin Array B**	150.27	314	PKPbc	PKPbc	23 25 35.0	-1.0
	comp=Z,2.3nm,0.9s,baz=130,slow=2.7,SNR=13						
BR104	**Keskin Array S**	150.27	314	PKP	PKPdf	23 25 29.5	-1.3
UBBA	**Unterbreizbach**	150.32	355	*e*PKPab	PKPab	23 25 43.2	+1.7
	baz=12,slow=3.7						
MOX	**Moxa**	150.34	353	*e*L	L	00 38 54.2	
	comp=Z,78nm,19.2s						
MAUC	**Maruska**	150.45	345	*e*PKP	PKPbc	23 25 36.7	+0.8
JAVC	**Velka Javorina**	150.96	344	*e*PKP	PKiKP	23 25 39.4	+1.6
TNS	**Taunus Mts**	151.01	357	*e*PKPab	PKPab	23 25 46.3	+1.7
	baz=12,slow=3.7						
TNS				*e*L	L	00 37 17.4	
	comp=Z,72nm,20.9s						
KRUC	**Moravsky**	151.07	346	*e*PKP	PKPbc	23 25 37.4	+0.1
ZVC	**Zvikov**	151.15	349	*e*PKP	PKiKP	23 25 38.8	+0.7
GRF	**Grafenberg Arr**	151.32	353	*e*PKPab	PKPab	23 25 46.6	+0.7
	baz=12,slow=3.7						
GRF				*e*L	L	00 38 23.8	
	comp=Z,59nm,18.9s						
MODS	**Modra-Piesok**	151.51	345	*e*	PKiKP	23 25 39.9	+1.0
KHC	**Kasperske Hory**	151.55	350	*e*PKP	PKPbc	23 25 37.4	-1.1
WLF	**Walferdange**	151.61	0	*e*PKPab	PKPab	23 25 49.0	+1.9
	baz=12,slow=3.7						
WET	**Wettzell**	151.65	351	*e*L	L	00 38 19.1	
	comp=Z,58nm,21.1s						
MMAI	**Mount Meron Ar**	151.66	301	PKPbc	PKPbc	23 25 38.3	-1.0
	comp=Z,2.3nm,0.7s,baz=74,slow=4.6,SNR=4.7						
CKRC	**Cesky Krumlov**	151.73	349	*e*PKP	PKPbc	23 25 38.0	-0.9
GERES	**GERESS Array B**	151.81	350	PKPbc	PKPbc	23 25 39.6	+0.5
	comp=Z,1.6nm,0.9s,baz=315,slow=0.4,SNR=9.7						
CONA	**Conrad Observa**	152.26	346	*e*PKP	PKPdf	23 25 36.4	+2.9
	comp=Z,3.6nm,1.1s						
RONA	**Rosalia, Austr**	152.38	345	*e*PKP	PKPdf	23 25 36.6	+3.0
	comp=Z,3.3nm,1.0s						
STU	**Stuttgart**	152.41	356	*e*PKPab	PKPab	23 25 51.2	+0.7
	baz=12,slow=3.7						
MOA	**Molln**	152.67	348	*e*PKP	PKPdf	23 25 38.3	+4.3
	comp=Z,6.3nm,1.6s						
FUR	**Furstenfeldbru**	152.82	353	*e*PKPab	PKPab	23 25 52.6	+0.4
	baz=12,slow=3.7						
FUR				*e*L	L	00 34 06.3	
	comp=Z,61nm,18.6s						
BFO	**Black Forest**	152.90	357	*e*PKPab	PKPab	23 25 53.8	+1.3
	baz=12,slow=3.7						
BFO				*e*L	L	00 43 07.4	
	comp=Z,46nm,18.1s						
BIOA	**Bad Ischl, Aus**	152.93	349	*e*PKP	PKiKP	23 25 44.2	+2.3
	comp=Z,5.6nm,0.8s						
ARSA	**Arzberg**	152.98	346	*e*PKP	PKPbc	23 25 41.2	-0.5
	comp=Z,1.2nm,0.8s						
LESA	**Schwarzleotal**	153.35	350	*e*PKP	PKPab	23 25 55.5	+1.0
	comp=Z,4.4nm,1.2s						
RETA	**Reutte**	153.55	353	*e*PKP	PKPab	23 25 54.1	-1.3
	comp=Z,4.8nm,1.3s						
KBA	**Koelnbreinsper**	153.58	349	*e*PKP	PKPab	23 25 55.3	-0.3
	comp=Z,2.4nm,0.8s						
WATA	**Walderalm**	153.60	352	*e*PKP	PKPab	23 25 56.4	+0.7
	comp=Z,1.6nm,0.8s						
SOKA	**Soboth**	153.63	346	*e*PKP	PKPab	23 25 55.6	-0.1
	comp=Z,6.0nm,1.4s						
MOTA	**Moosalm**	153.65	353	*e*PKP	PKPab	23 25 58.1	+2.1
	comp=Z,9.6nm,1.3s						
SQTA	**Sankt Quirin**	153.76	352	*e*PKP	PKPab	23 25 56.9	+0.5
	comp=Z,7.0nm,1.6s						
DAVA	**Damuels**	153.83	354	*e*PKiKP	PKiKP	23 25 47.4	+3.6
	comp=Z,4.3nm,1.0s						
MYKA	**Terra Mystica**	153.96	348	*e*PKP	PKPab	23 25 59.7	+2.6
	comp=Z,4.2nm,1.0s						
FETA	**Feichten**	154.01	353	*e*PKP	PKPab	23 25 58.5	+1.0
	comp=Z,2.9nm,1.2s						
ABTA	**Abfaltersbach**	154.04	350	*e*PKP	PKPdf	23 25 35.4	-0.7
	comp=Z,1.0nm,0.6s						

IDC ***02*** *23:08:06.6±0.8, 35°.81N×27°.17E, h0^{km}, mb3.9/15, mbtmp3.8/24, ML3.6/10, Error ellipse: s-maj=17.9km s-min=12.8km az=7.0*

GII ***02*** *23:08:07.9±0.0, 35°.737N±0°.002×27°.128E±0°.001, h25^{km}, Mws3.8, confirmed*

ATH ***02*** *23:08:08.6, 35°.78N×27°.19E, h13^{km}±3^{km}, ML3.6/7, Manual Solution by S.Koutrakis First location: 2019/06/02 23:09:24, This location: 2019/06/04 07:36:37 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 4 km*

ISK ***02*** *23:08:08.3, 35°.78N×27°.10E, h8^{km}, ML3.7/21*

HLW ***02*** *23:08:08.1, 36°.03N×27°.11E, h29^{km}±18^{km}, Md3.4, Ml3.5*

NIC ***02*** *23:08:08.2, 35°.78N×27°.12E, h13^{km}, Ml3.7/11*

AFAD ***02*** *23:08:09.9, 35°.76N×27°.28E, h14^{km}±1^{km}, MW3.8*

THE ***02*** *23:08:09.5, 36°N±3°×2°7E±°, h12^{km}±8^{km}, M3.4/16, MLh3.4/16*

ISC 02 23:08:08.9±0.8**, 35°.75N**±0°.02×**27°.17E**±0°.02**, h16**^{km}±5^{km}**, n178,** σ**1^{s}45**/229**, mb3.9**/14**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	0.20	181	Pg	Pg	23 08 13.1	-0.7
KARP				Sg	Sg	23 08 17.4	+0.4
KARP	**Karpathos**	0.20	181	P	Pg	23 08 13.1	-0.7
KARP				S	Sg	23 08 17.3	+0.4
KARP	**Karpathos**	0.20	181	P	Pg	23 08 13.3	-0.5
KARP				S	Sg	23 08 17.2	+0.3
KARP	**Karpathos**	0.20	181	P	Pg	23 08 13.0	-0.7
KARP				S	Sb	23 08 17.7	-0.1
KARP				AML	AML	23 08 18.7	
	63nm,0.8s						
KARP				AML	AML	23 08 20.4	
	83nm,0.7s						
NISR	**Nisiros**	0.86	358	P	Pn	23 08 26.2	-0.1
NISR				S	Sn	23 08 38.0	-0.5
ARG	**Arkhangelos**	0.91	59	Pg	Pn	23 08 26.6	-0.3
ARG				Sg	Sn	23 08 40.1	+0.5
ARG	**Arkhangelos**	0.91	59	P	Pg	23 08 25.4	-1.0
ARG				S	Sn	23 08 39.0	-0.6
ARG	**Arkhangelos**	0.91	59	P	Pg	23 08 25.5	-1.0
ARG				S	Sb	23 08 37.9	-0.1
ARG	**Arkhangelos**	0.91	59	P	Pg	23 08 25.3	-1.0
ARG				S	Sn	23 08 39.8	+0.1
ARG				AML	AML	23 08 42.5	
	11nm,0.7s						
ARG				AML	AML	23 08 45.7	
	13nm,0.5s						
YAZI	**Mula-Dat§a-**	0.96	14	P	Pn	23 08 27.6	0.0
YAZI				S	Sn	23 08 41.2	+0.3
YAZI				*i* IAML		23 08 42.0	
	comp=Z,475nm,0.9s						
ZKR	**Zakros**	1.00	231	Pg	Pg	23 08 27.9	-0.4
ZKR	**Zakros**	1.00	231	P	Pn	23 08 28.3	+0.1
ZKR	**Zakros**	1.00	231	P	Pn	23 08 28.4	+0.2
ZKR				S	Sg	23 08 41.8	+0.4
ZKR	**Zakros**	1.00	231	P	Pb	23 08 27.2	-0.6
ZKR				S	Sg	23 08 41.6	+0.1
ZKR				AML	AML	23 08 52.5	
	11nm,0.8s						
ZKR				AML	AML	23 08 57.2	
	3.8nm,0.8s						
ASTA	**Astypalaia**	1.03	320	P	Pn	23 08 28.1	-0.5
ASTA				S	Sn	23 08 41.7	-1.0
DAT	**Datca**	1.03	19	Pg	Pn	23 08 28.3	-0.4
DAT				Sg	Sn	23 08 43.4	+0.5
DAT	**Datca**	1.03	19	P	Pn	23 08 28.6	-0.2
DAT				S	Sn	23 08 42.6	-0.2
DAT				*i* IAML		23 09 10.0	
	comp=Z,1.0nm,0.5s						
DATC	**Datca-Mugla**	1.08	22	Pg	Pn	23 08 29.5	+0.2
KLNA	**Kalymnos**	1.21	353	P	Pn	23 08 30.2	-1.0
BODT	**Bodrum**	1.31	5	Pn	Pb	23 08 32.3	-0.8
BDRM	**Kayabasi**	1.33	10	P	Pg	23 08 34.9	+0.4
BDRM				S	Sg	23 08 52.5	+0.6
BDRM				*i* IAML		23 09 05.0	
	comp=Z,211nm,0.8s						
TURN	**Turunc**	1.34	40	Pn	Pb	23 08 33.2	-0.4
TURN				Sn	Sg	23 08 53.1	+0.9
TURN	**Turunc**	1.34	40	P	Pb	23 08 33.2	-0.4
TURN				S	Sg	23 08 51.3	-1.0
TURN				*i* IAML		23 09 01.0	
	comp=Z,400nm,1.0s						
THR8	**Santorini-Mono**	1.52	296	P	Pb	23 08 35.6	-0.9
THR6	**Thira Island,**	1.56	293	P	Pb	23 08 36.7	-0.6
THR3	**Thira Island,**	1.57	295	P	Pb	23 08 36.5	-1.0
CMBO	**Columbo, Santo**	1.60	297	P	Pb	23 08 36.8	-1.1
CMBO	**Columbo, Santo**	1.60	297	P	Pn	23 08 36.7	+0.3
CMBO				S	Sb	23 08 58.0	+0.2
DALY	**Dalyan (Mula)**	1.60	48	Pn	Pb	23 08 37.7	-0.4
MLSB	**Milas**	1.62	18	Pn	Pb	23 08 37.8	-0.5
DDIM	**Aydin, Didim**	1.70	2	P	Pg	23 08 41.0	-0.6
DDIM				S	Sg	23 09 08.8	+5.0
DDIM				*i* IAML		23 09 36.0	
	comp=Z,446nm,1.2s						
MULA	**Mugla, Merkez-**	1.77	31	P	Pb	23 08 40.0	-0.9
MULA				S	Sg	23 09 06.0	+0.2
MULA				*i* IAML		23 09 16.0	
	comp=Z,166nm,1.0s						
FETY	**Fethiye**	1.78	60	Pn	Pb	23 08 40.7	-0.5
FETY	**Fethiye**	1.78	60	P	Pg	23 08 42.4	-0.7
FETY				S	Sg	23 09 09.8	+3.5
SABU	**Mula-Dalaman**	1.81	53	P	Pg	23 08 42.0	-1.6
SABU				S	Sg	23 09 06.6	-0.5
SABU				*i* IAML		23 09 24.0	
	comp=Z,297nm,1.1s						
APE	**Apeiranthos**	1.86	315	Pn	Pn	23 08 39.9	-0.2
APE	**Apeiranthos**	1.86	315	P	Pn	23 08 39.9	-0.2
APE				S	Sn	23 09 03.3	-0.1
APE	**Apeiranthos**	1.86	315	P	Pn	23 08 38.0	-2.1
APE	**Apeiranthos**	1.86	315	S	Sn	23 09 00.8	-2.5
APE	**Apeiranthos**	1.86	315	P	Pn	23 08 39.8	-0.3
APE				S	Sn	23 09 02.6	-0.7
IDI	**Anoyia**	1.91	257	Pn	Pn	23 08 41.6	+0.8
IDI	**Anoyia**	1.91	257	P	Pn	23 08 41.6	+0.8
IDI				S	Sb	23 09 06.2	-0.9
IDI	**Anoyia**	1.91	257	Pn	Pn	23 08 41.6	+0.8
	8.0nm,0.3s,baz=23,slow=6.1,SNR=93						
IDI				Sn	Sn	23 09 05.2	+0.6
	27nm,0.3s,baz=56,slow=15,SNR=9.2						
IDI	**Anoyia**	1.91	257	P	Pn	23 08 41.4	+0.6
IDI				S	Sn	23 09 05.8	+1.1
GCAM	**G?zelcaml?**	1.94	2	Pn	Pb	23 08 42.3	-1.6
GCAM	**G?zelcaml?**	1.94	2	P	Pg	23 08 45.4	-0.8
GCAM				S	Sg	23 09 16.0	+4.5
GCAM				*i* IAML		23 09 33.0	
	comp=Z,94nm,1.1s						
AYDN	**Tasoluk**	1.99	17	P	Pg	23 08 45.2	-1.9
AYDN				S	Sb	23 09 07.6	-1.7
AYDN				*i* IAML		23 09 21.0	
	comp=Z,238nm,1.9s						
AKAS	**Kas**	2.04	76	Pn	Pb	23 08 44.5	-1.0
CAME	**Cameli-Denizli**	2.09	55	Pn	Pb	23 08 44.9	-1.6
CAEL	**Denizli, Camel**	2.21	51	P	Pb	23 08 49.0	+0.5
CAEL				S	Sg	23 09 24.5	+4.5
CAEL				*i* IAML		23 09 35.0	
	comp=Z,1µm,1.0s						
TAVA	**DENIZLI_Tavas**	2.21	39	P	Pb	23 08 48.1	-0.4
TAVA				S	Sb	23 09 16.0	+0.2
TAVA				*i* IAML		23 09 26.0	
	comp=Z,139nm,0.8s						
KNIK	**Mula-Seydike**	2.23	60	P	Pb	23 08 48.0	-0.8
KNIK				S	Sg	23 09 28.8	+8.2
KNIK				*i* IAML		23 09 41.0	
	comp=Z,130nm,0.9s						
ESEN	**Aydn-Nazilli**	2.25	25	P	Pn	23 08 46.5	+1.1
ESEN				S	Sn	23 09 12.1	-0.7
ESEN				*i* IAML		23 09 31.0	
	comp=Z,116nm,1.2s						
AYDB	**Zeytinkoy-Aydi**	2.27	15	Pn	Pn	23 08 46.9	+1.2
NAZL	**Nazilli-Aydin**	2.38	22	Pn	Pb	23 08 48.8	-2.6
DNIZ	**Denizli-Tavas-**	2.40	38	P	Pb	23 08 49.4	-2.4
DNIZ				S	Sb	23 09 21.6	+0.5
DNIZ				*i* IAML		23 09 40.0	
	comp=Z,224nm,1.5s						
APMY	**Acipayam-Deniz**	2.43	44	Pn	Pb	23 08 49.7	-2.5
ELL	**Elmali**	2.43	65	Pn	Pb	23 08 50.1	-2.1
IZMR	**zmir-demi**	2.46	15	P	Pb	23 08 50.3	-2.4
IZMR				S	Sg	23 09 29.3	+1.3
IZMR				*i* IAML		23 09 44.0	
	comp=Z,75nm,1.3s						
IMMV	**Iera Moni Meta**	2.61	265	Pn	Pn	23 08 51.6	+1.2
IMMV	**Iera Moni Meta**	2.61	265	P	Pn	23 08 51.6	+1.2
IMMV				S	Sn	23 09 23.1	+1.3
KIRA	**zmir-Kiraz**	2.63	22	P	Pb	23 08 52.8	-2.9
KIRA				S	Sg	23 09 37.8	+4.3
KIRA				*i* IAML		23 09 41.0	
	comp=Z,109nm,1.3s						
GVD	**Gavdhos**	2.68	251	Pn	Pn	23 08 52.6	+1.3
KULA	**Kula-Manisa**	3.00	23	P	Pn	23 08 57.5	+1.6
KARY	**Karystos**	3.16	317	P	Pn	23 08 58.4	+0.5
KTHA	**Kythira Island**	3.37	280	P	Pn	23 09 02.3	+1.5
ISP	**Isparta**	3.40	52	P	Pn	23 09 00.3	-0.9
ISP	**Isparta**	3.40	52	S	Sn	23 09 41.1	-0.1
DION	**Dionisos Attik**	3.48	313	P	Pn	23 09 03.5	+1.1
ATHU	**Athens Univers**	3.50	310	P	Pn	23 09 03.9	+1.3
VLI	**Veliai**	3.55	287	P	Pn	23 09 04.8	+1.5
KYMI	**Kymi, Euboea I**	3.78	320	P	Pn	23 09 07.1	+0.7
VLX	**Vlachokerasia**	4.18	294	P	Pn	23 09 15.5	+3.5
AKMS	**Akamas**	4.29	98	P	Pn	23 09 14.1	+0.7
AKMS				S	Sn	23 10 05.7	+2.6
AKMS				AML	AML	23 10 10.1	
	0.5nm,0.7s						
AKMS				AML	AML	23 10 11.1	
	0.5nm,0.6s						
MATC	**Matruh**	4.39	179	P	Pn	23 09 16.4	+1.5
ITM	**Ithomi**	4.46	290	P	Pn	23 09 19.3	+3.5
ALFC	**Alefka**	4.47	96	P	Pn	23 09 16.5	+0.5
ALFC				S	Sn	23 10 09.5	+1.8
ALFC				AML	AML	23 10 10.4	
	0.3nm,0.7s						
ALFC				AML	AML	23 10 12.0	
	0.4nm,0.7s						
NATA	**Nata**	4.53	101	P	Pn	23 09 17.6	+0.9
NATA				S	Sn	23 10 11.5	+2.5
NATA				AML	AML	23 10 15.2	
	1.0nm,0.7s						
NATA				AML	AML	23 10 18.6	
	0.8nm,0.6s						
SLUM	**Salum**	4.55	202	P	Pn	23 09 19.0	+2.0
SLUM				S	Sn	23 10 09.8	+0.2
KLV	**Kalavryta, Ach**	4.62	301	P	Pn	23 09 20.8	+2.7
TROD	**Troodos**	4.73	98	P	Pn	23 09 20.5	+0.8
TROD				S	Sn	23 10 17.0	+2.8
TROD				AML	AML	23 10 26.2	
	0.2nm,0.5s						
TROD				AML	AML	23 10 27.1	
	0.2nm,0.6s						
NEO	**Neokhori**	4.73	320	P	Pn	23 09 20.9	+1.3
APOL	**The Sanctuary**	4.79	101	P	Pn	23 09 21.0	+0.7
APOL				S	Sn	23 10 18.0	+2.6
APOL				AML	AML	23 10 20.6	
	0.3nm,0.8s						
APOL				AML	AML	23 10 36.6	
	0.2nm,0.7s						
DB3	**El Dabaa**	4.84	166	P	Pn	23 09 22.7	+1.7
DB3				S	Sn	23 10 16.6	-0.2
ASGA	**Asgata**	5.07	99	P	Pn	23 09 25.4	+1.2
ASGA				AML	AML	23 10 34.2	
	0.3nm,1.0s						
ASGA				AML	AML	23 10 38.2	
	0.2nm,1.0s						
CSS	**Mathiatis**	5.10	97	P	Pn	23 09 23.8	-0.8
CSS	**Mathiatis**	5.10	97	S	Sn	23 10 21.9	-1.2
CSS	**Mathiatis**	5.10	97	P	Pn	23 09 25.9	+1.3
CSS				S	Sn	23 10 26.4	+3.3
CSS				AML	AML	23 10 29.3	
	0.2nm,1.2s						
CSS				AML	AML	23 10 29.7	
	0.3nm,0.9s						
MVOU	**Mavrovouni**	5.33	96	P	Pn	23 09 28.5	+0.7
MVOU				S	Sn	23 10 30.9	+2.1
MVOU				AML	AML	23 10 33.3	
	0.1nm,0.7s						
MVOU				AML	AML	23 10 44.3	
	0.1nm,0.8s						
BRTR	**Keskin Array B**	6.48	50	Pn	Pn	23 09 46.1	+2.4
	0.3nm,0.3s,baz=232,slow=16,SNR=14						
BRTR				Sn	Sn	23 10 59.1	+1.7
	0.1nm,0.3s,baz=326,slow=5.3,SNR=4.5						
	0.8nm,0.4s						
SWA2		6.65	193	P	Pn	23 09 48.0	+2.1
HMYD	**Mayadein**	6.68	152	P	Pn	23 09 47.8	+1.5
KOT	**Kottamia**	7.01	145	P	Pn	23 09 53.0	+2.2
KOT				S	Sn	23 11 09.7	-0.5
RYAN	**Fayoum**	7.15	158	P	Pn	23 09 54.5	+1.8
RYAN				S	Sn	23 11 13.4	-0.3
MMA0B	**Mount Meron ar**	7.33	109	P	Pn	23 09 54.0	-1.4
MMA0B	**Mount Meron ar**	7.33	109	S	Sn	23 11 17.7	-0.6
MMAI	**Mount Meron Ar**	7.33	109	Pn	Pn	23 09 54.8	-0.6
	2.5nm,0.3s,baz=308,slow=13,SNR=15						
MMAI				Sn	Sn	23 11 17.6	-0.7
	3.2nm,0.3s,baz=300,slow=27,SNR=7.5						
	1.0nm,0.3s						
GEM	**Giv'at Ha'Em**	7.46	107	P	Pn	23 09 55.9	-1.1
GEM	**Giv'at Ha'Em**	7.46	107	S	Sn	23 11 20.2	-1.1
AMAZ	**Amatzia**	7.71	121	P	Pn	23 09 59.2	-1.3
AMAZ	**Amatzia**	7.71	121	S	Sn	23 11 26.2	-1.3
KZIT	**Kziot**	7.74	127	P	Pn	23 09 59.9	-0.9
KZIT	**Kziot**	7.74	127	S	Sn	23 11 27.2	-1.0
HMDT	**Nahal Hemdat**	7.77	114	P	Pn	23 10 00.6	-0.6
HMDT	**Nahal Hemdat**	7.77	114	S	Sn	23 11 27.2	-1.7
YTIR	**Yattir**	7.95	121	P	Pn	23 10 02.7	-1.1
YTIR	**Yattir**	7.95	121	S	Sn	23 11 32.2	-1.2
DSI	**Dead Sea**	8.02	119	P	Pn	23 10 03.2	-1.4
DSI	**Dead Sea**	8.02	119	S	Sn	23 11 33.9	-1.0
MSBI	**Mazada**	8.14	121	P	Pn	23 10 05.3	-1.0
MSBI	**Mazada**	8.14	121	S	Sn	23 11 37.2	-0.8
KRMI	**Paran Flat**	8.48	129	P	Pn	23 10 09.4	-1.7
KRMI	**Paran Flat**	8.48	129	S	Sn	23 11 44.9	-1.4
PRNI	**Paran**	8.50	127	P	Pn	23 10 10.0	-1.3
PRNI	**Paran**	8.50	127	S	Sn	23 11 45.7	-1.2
HRFI	**Mount Harif**	8.73	129	P	Pn	23 10 13.3	-1.2
HRFI	**Mount Harif**	8.73	129	S	Sn	23 11 51.0	-1.6
MBRI	**Mt Berech**	8.82	130	P	Pn	23 10 14.8	-0.9
MBRI	**Mt Berech**	8.82	130	S	Sn	23 11 53.5	-1.4
ASF	**Jabal al Asfar**	8.84	111	Pn	Pn	23 10 16.2	+0.3
	0.3nm,0.3s,baz=297,slow=2.3,SNR=5.4						
ASF				Sn	Sn	23 11 54.0	-1.2
	0.1nm,0.3s,baz=12,slow=16,SNR=2.0						
	1.0nm,0.4s						
EIL	**Elat**	8.93	131	Pn	Pn	23 10 17.4	+0.2
	1.3nm,0.3s,baz=341,slow=3.6,SNR=12						
EIL				Sn	Sn	23 11 53.5	-4.0
	1.2nm,0.3s,baz=288,slow=4.1,SNR=5.5						
	5.0nm,0.6s						
EIL	**Elat**	8.93	131	P	Pn	23 10 16.2	-1.0
MLR	**Muntele Rosu**	9.77	355	Pn	Pn	23 10 27.5	-1.3
	0.3nm,0.3s,baz=177,slow=18,SNR=4.6						
	1.2nm,0.5s						
HHRG	**Al Ghardaqah**	10.11	146	P	Pn	23 10 36.3	+3.0
VAE	**Valguarnera**	10.40	283	Sn	Sn	23 12 32.0	-1.5
	0.7nm,0.3s,baz=118,slow=7.0,SNR=3.3						
KOLS	**Kolonicke sedl**	13.66	346	*e*P	P	23 11 35.1	+4.6
KOLS				*e*		23 25 39.3	
VYHS	**Vyhne**	14.14	337	*e*P	P	23 11 40.7	+4.8
VYHS				*e*		23 25 37.3	
SOKA	**Soboth**	14.21	324	*e*P	P	23 11 37.4	+0.6
	8.8nm,1.0s,SNR=9.6						
OBKA	**Obir**	14.33	322	*e*P	P	23 11 38.2	+0.1
	3.9nm,1.3s						
STHS	**Stebnicka Huta**	14.33	344	*e*P	P	23 11 41.0	+3.0
ARSA	**Arzberg**	14.40	326	*e*P	Pn	23 11 35.0	+2.9
	2.4nm,1.2s						
RONA	**Rosalia, Austr**	14.42	329	*e*P	P	23 11 37.4	-1.6
	4.7nm,1.2s						
KBZ	**Khabaz**	14.47	52	Pn	Pn	23 11 34.2	+1.3
	0.1nm,0.3s,baz=242,slow=10,SNR=2.0						
	0.4nm,0.4s						
CONA	**Conrad Observa**	14.78	329	*e*P	P	23 11 41.4	-1.7
	2.5nm,1.1s						
MYKA	**Terra Mystica**	14.87	321	*e*P	P	23 11 44.9	+0.9
	0.9nm,0.4s						
AKASG	**Malin Array Be**	15.02	5	Pn	Pn	23 11 40.3	+0.1
	0.5nm,0.3s,baz=196,slow=11,SNR=8.9						
KBA	**Koelnbreinsper**	15.32	322	*e*P	P	23 11 46.7	-2.5
	7.2nm,0.9s						
MOA	**Molln**	15.42	326	*i* P	P	23 11 48.1	-2.0
	6.0nm,1.2s						
KRUC	**Moravsky**	15.48	333	*e*P	P	23 11 51.1	+0.4
ABTA	**Abfaltersbach**	15.53	319	*e*Pn	Pn	23 11 47.3	+0.1
	3.3nm,1.3s						
BIOA	**Bad Ischl, Aus**	15.60	324	*e*P	P	23 11 51.1	-1.0
	3.8nm,0.7s						
VRAC	**Vranov**	15.61	333	Pn	Pn	23 11 49.4	+1.4
	0.2nm,0.3s,baz=153,slow=12,SNR=4.9						
	5.1nm,0.8s						
VRAC	**Vranov**	15.61	333	*e*P	P	23 11 52.6	+0.4
MORC	**Moravsky Berou**	15.68	336	*e*P	P	23 11 53.8	+0.8
LESA	**Schwarzleotal**	15.89	322	*e*P	P	23 11 55.2	-0.3
	2.3nm,0.9s						
CKRC	**Cesky Krumlov**	16.12	328	*e*P	P	23 11 59.5	+1.5
WTTA	**Wattenberg**	16.32	320	*e*P	P	23 12 01.3	+1.0
	6.8nm,1.1s						
WATA	**Walderalm**	16.40	320	*e*Pn	Pn	23 11 59.0	+0.6
	5.7nm,1.0s						
GERES	**GERESS Array B**	16.41	327	Pn	Pn	23 11 59.1	+0.7
	baz=146,slow=11,SNR=23						
	3.1nm,1.0s						
SQTA	**Sankt Quirin**	16.52	319	*e*P	P	23 12 02.7	+0.2
	1.1nm,0.5s						
DPC	**Dobruska-Polom**	16.58	335	*e*P	P	23 12 04.6	+1.6
MOTA	**Moosalm**	16.66	319	*e*P	P	23 12 04.3	+0.3
	4.1nm,1.1s						
FETA	**Feichten**	16.66	318	*e*pP	pP	23 12 05.5	-2.5
	8.2nm,1.2s						
KHC	**Kasperske Hory**	16.68	327	*e*P	P	23 12 06.1	+2.0
RETA	**Reutte**	16.93	319	*e*P	P	23 12 06.6	-0.3
	5.0nm,1.1s						
PRU	**Pruhonice**	16.94	331	*e*P	P	23 12 08.7	+1.8
DAVOX	**Davos/Dischmat**	17.00	316	Pn	P	23 12 07.3	-0.5
	0.1nm,0.3s,baz=100,slow=12,SNR=5.0						
	1.5nm,0.8s						
DAVA	**Damuels**	17.29	317	*e*P	P	23 12 11.1	+0.1
	5.2nm,1.0s						
BRG	**Berggiesshubel**	17.87	332	*e*P	P	23 12 19.6	+2.4
BRG				Amp		23 12 20.7	
	comp=Z,3.5nm,1.0s						
SUW	**Suwalki**	18.47	353	*e*P	Pn	23 12 25.6	+1.7
CLL	**Collm**	18.58	331	*i* P	Pn	23 12 25.2	-0.1
	comp=Z,5.0nm,1.1s						
PABE	**Paberze**	19.88	355	*e*P	Pn	23 12 39.6	-1.2
OBN	**Obninsk**	20.42	16	P	P	23 12 45.2	+0.2
	comp=Z,8.1nm,0.4s,baz=215,slow=12,SNR=3.8						
	comp=Z,8.1nm,0.4s						
MTSE	**Matsula**	23.08	356	*e*P	P	23 13 14.0	+0.5
ESDC	**Sonseca Array**	24.87	288	P	P	23 13 30.6	-0.1
	comp=Z,2.5nm,0.9s,baz=81,slow=10,SNR=23						
	comp=Z,2.5nm,0.9s						
FINES	**FINESS Array B**	25.72	359	P	P	23 13 37.9	-0.2
	comp=Z,3.1nm,0.9s,baz=161,slow=12,SNR=8.8						
	comp=Z,3.1nm,0.9s						
HFS	**Hagfors**	25.91	345	P	P	23 13 39.3	-0.5
	comp=Z,3.1nm,1.0s,baz=168,slow=7.6,SNR=5.6						
	comp=Z,3.1nm,1.0s						
ARCES	**ARCESS Array B**	33.85	359	P	P	23 14 48.8	-1.3
	comp=Z,1.6nm,0.7s,baz=179,slow=7.6,SNR=6.1						
	comp=Z,1.6nm,0.7s						
BVAR	**Borovoye Array**	34.75	47	P	P	23 14 57.5	-0.7
	comp=Z,0.7nm,0.9s,baz=241,slow=4.9,SNR=4.0						
	comp=Z,0.7nm,0.9s						
KURBB	**Kurchatov Arra**	39.47	52	P	P	23 15 39.0	+0.8
	comp=Z,1.8nm,1.0s,baz=278,slow=9.0,SNR=8.6						
KURBB				PcP	PcP	23 17 46.7	+0.9
	comp=Z,0.8nm,0.8s,baz=266,slow=3.7,SNR=6.6						
	comp=Z,1.8nm,1.0s						
MKAR	**Makanchi Array**	42.08	57	P	P	23 16 00.1	+0.2
	comp=Z,0.2nm,0.5s,baz=281,slow=5.3,SNR=4.2						
MKAR				PcP	PcP	23 17 55.2	+0.8
	comp=Z,1.0nm,0.9s,baz=242,slow=3.1,SNR=4.1						
	comp=Z,0.2nm,0.5s						
ZALV	**Zalesovo Beam**	43.41	47	P	P	23 16 10.7	+0.3
	comp=Z,0.4nm,0.4s,baz=262,slow=8.6,SNR=2.1						
	comp=Z,0.4nm,0.4s						
SONM	**Songino Array**	57.84	51	P	P	23 17 57.9	-1.8
	comp=Z,0.4nm,0.4s,baz=271,slow=8.4,SNR=2.8						
	comp=Z,0.4nm,0.4s						

CMAR	Chiang Mai Arr	64.88	85	P	P	23 18 47.7	+0.2
	comp=Z,0.7nm,0.3s,baz=305,slow=4.3,SNR=1.6						
	comp=Z,0.7nm,0.3s						
KSRS	Korea Array	76.62	53	P	P	23 19 58.6	-0.1
	comp=Z,1.5nm,0.8s,baz=301,slow=4.6,SNR=5.8						
	comp=Z,1.5nm,0.8s						
ILAR	Eielson Array	79.70	357	P	P	23 20 15.1	-0.2
	comp=Z,0.3nm,0.7s,baz=349,slow=6.7,SNR=2.4						
	comp=Z,0.3nm,0.7s						
ULM	Lac du Bonnet	80.72	327	P	P	23 20 20.1	-1.0
	comp=Z,2.0nm,0.8s,baz=16,slow=6.9,SNR=3.8						
	comp=Z,2.0nm,0.8s						
MJAR	Matsushiro Arr	83.71	49	P	P	23 20 38.0	+1.0
	comp=Z,0.9nm,0.5s,baz=318,slow=6.5,SNR=3.0						
	comp=Z,0.9nm,0.5s						

*NEIC **02** 23:08:49.4, 69°.52N×144°.59W, h17^{km}*

*AEIC **02** 23:08:49.2±2.5, 69°.50N±0°.04×144°.59W±0°.07, h14^{km}±5^{km}, ML3.7, mb3.8/5(NEIC), ML3.8/136(NEIC), Mwr3.7/32(NEIC), Error ellipse: s-maj=6.2km s-min=3.2km az=197.0*

*NEIC **02** 23:08:50.3±2.3, 69°.60N±0°.04×144°.49W±0°.08, h10^{km}±1^{km}, Error ellipse: s-maj=6.4km s-min=4.4km az=24.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-1.88; M$_{\theta\theta}$-1.85; M$_{\phi\phi}$3.72; M$_{r\theta}$0.90; M$_{\theta\phi}$-2.66; M$_{\phi r}$1.53; Fault plane solution: M$_0$4.54000×10^{14} NP1: φ$_s$196.39000°, δ72.46000°, λ-33.78000°. NP2: φ$_s$297.79000°, δ57.99000°, λ-159.18000°. Principal axes: T 4.9667, Plg9.0000°, Azm250.0000°; N -1.0327, Plg52.0000°, Azm352.0000°; P -3.9341, Plg36.0000°, Azm153.0000°;*

*IDC **02** 23:08:51.3±1.2, 69°.68N×144°.18W, h0^{km}, mb3.6/5, mbtmp3.6/10, ML3.8/4 Error ellipse: s-maj=22.1km s-min=17.6km az=73.0*

ISC 02 23:08:49.1±1.3, **69°.58N**±0°.04×**144°.54W**±0°.02, **h1**^{km}±9^{km}, **n201**, σ1^{s}.**18**/190, **mb3.5**/5, **Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
C27K	Jago River	0.29	80		Pg	23 08 55.8	+1.1
C27K				Sg	Sg	23 09 00.2	+1.7
C26K	Camden Bay	0.37	340		Pb	23 08 58.4	-0.1
C26K					Sb	23 09 04.2	-0.5
C26K	Camden Bay	0.37	340	IAML		23 09 07.2	
	comp=E,4μm,0.5s						
C26K				IAML		23 09 08.4	
	comp=N,4μm,0.7s						
D25K	Kavik River	0.70	249		Pg	23 09 01.6	-0.8
D25K				Sg	Sg	23 09 12.0	+0.6
D27M	Malcolm River	1.31	103		Pn	23 09 13.2	-1.4
D27M				Sn	Sg	23 09 32.0	+1.0
D27M				IAML		23 09 36.2	
	comp=N,2μm,0.6s						
C24K	Franklin Bluff	1.46	278		Pn	23 09 17.0	+0.4
C24K					Sb	23 09 37.0	+0.9
C24K	Franklin Bluff	1.46	278	IAML		23 09 42.7	
	comp=E,1μm,1.1s						
C24K				IAML		23 09 42.7	
	comp=N,1μm,0.8s						
E25K	Arctic Village	1.51	195		Pn	23 09 17.5	+0.2
E25K				Sn	Sn	23 09 37.5	-0.1
E25K				IAML		23 09 39.3	
	comp=E,1μm,0.9s						
D24K	Happy Valley	1.58	256		Pn	23 09 18.1	-0.1
D24K				Sg	Sg	23 09 41.1	+1.4
E27K	Coleen River	1.76	141		Pn	23 09 20.7	0.0
E27K				Sn	Sn	23 09 44.1	+0.3
F26K	Sheenjek River	1.90	175		Pn	23 09 22.9	+0.3
F26K				Sn	Sn	23 09 47.0	-0.1
F26K				IAML		23 09 50.2	
	comp=E,1μm,0.8s						
F25K	Christian Rive	2.03	192		Pn	23 09 24.6	+0.1
F25K				IAML		23 09 55.7	
	comp=N,886nm,1.0s						
F25K				IAML		23 09 56.6	
	comp=E,668nm,0.8s						
F25K	Christian Rive	2.03	192		Sn	23 09 50.4	-0.2
TOLK	Toolik Lake Re	2.03	245		Pn	23 09 24.1	-0.4
TOLK				Sn	Sb	23 09 52.1	-0.5
TOLK				IAML		23 10 00.8	
	comp=E,660nm,0.7s						
E28M	Babbage River	2.04	116		Pn	23 09 25.3	+0.7
E28M				IAML		23 09 58.9	
	comp=N,745nm,0.8s						
E28M				IAML		23 10 06.2	
	comp=E,556nm,0.6s						
E28M	Babbage River	2.04	116		Sb	23 09 52.2	-0.7
D28M	Stokes Point	2.06	94		Pb	23 09 26.2	-1.1
E24K	Your Creek	2.08	225		Pn	23 09 24.4	-0.8
E24K				IAML		23 09 58.8	
	comp=E,580nm,0.7s						
E24K	Your Creek	2.08	225		Sn	23 09 52.2	+0.5
C23K	Itkillik River	2.13	280		Pn	23 09 26.1	+0.2
C23K	Itkillik River	2.13	280	IAML		23 10 06.7	
	comp=E,902nm,0.5s						
BMAR	Burnt Mountain	2.16	180		Pn	23 09 26.2	0.0
D23K	Nanushuk River	2.27	257		Pn	23 09 28.1	+0.4
E23K	Chandalar	2.39	233		Pn	23 09 29.6	+0.1
E23K				IAML		23 10 07.0	
	comp=E,409nm,0.6s						
E23K				IAML		23 10 09.9	
	comp=N,446nm,0.6s						
F24K	Squaw Lake	2.41	212		Pn	23 09 29.6	-0.1
F24K				IAML		23 10 06.3	
	comp=N,557nm,0.7s						
F24K				IAML		23 10 07.4	
	comp=E,436nm,0.6s						
F28M	Old Crow	2.61	137		Pn	23 09 32.3	-0.1
F28M				IAML		23 10 14.0	
	comp=E,426nm,0.6s						
F28M				IAML		23 10 15.3	
	comp=N,395nm,0.5s						
G26K	Porcupine Rive	2.65	174	IAML		23 10 16.1	
	comp=N,510nm,0.6s						
E29M	Blow River	2.67	113		Pn	23 09 34.1	+0.8
G25K	Bearman Lake	2.88	192		Pn	23 09 36.2	+0.1
D22K	Ayikyak River	2.98	260		Pn	23 09 37.7	+0.1
D22K				IAML		23 10 33.2	
	comp=N,417nm,0.7s						
E22K	Anaktuvuk Pass	3.01	245		Pn	23 09 37.9	0.0
FYU	Fort Yukon	3.04	185		Pn	23 09 38.2	0.0
FYU					Pb	23 09 38.4	-5.5
FYU	Fort Yukon	3.04	185	IAML		23 10 31.1	
	comp=E,341nm,1.2s						
FYU				IAML		23 10 32.2	
	comp=N,326nm,0.8s						
G24K	Hadweenzic Riv	3.09	202	IAML		23 10 26.8	
	comp=N,334nm,1.0s						
B22K	Teshekpuk Lake	3.15	288		Pn	23 09 40.0	+0.2
COLD	Coldfoot	3.15	224	IAML		23 10 36.8	
	comp=E,240nm,0.9s						
B21K	Ikpikpuk River	3.53	275		Pn	23 09 45.3	+0.3
B21K				IAML		23 10 56.8	
	comp=N,244nm,0.7s						
B21K				IAML		23 11 04.6	
	comp=E,221nm,1.0s						
G23K	Bananza Creek	3.53	218		Pn	23 09 45.3	+0.1
G23K				IAML		23 10 51.7	
	comp=N,212nm,0.9s						
H27K	Steamboat Moun	3.55	160	IAML		23 10 45.8	
	comp=E,172nm,0.8s						
E21K	Killik River	3.58	256		Pn	23 09 45.6	-0.2
E21K	Killik River	3.58	256	IAML		23 11 04.6	
	comp=E,151nm,0.8s						
E21K				IAML		23 11 06.8	
	comp=N,206nm,0.9s						
G29M	Pine Creek	3.61	135		Pn	23 09 46.0	-0.2
C21K	Knifeblade Rid	3.65	268		Pn	23 09 47.0	+0.3
F30M	Barrier River	3.77	117		Pn	23 09 49.7	+1.4
F30M	Barrier River	3.77	117	IAML		23 11 00.2	
	comp=E,216nm,1.0s						
A22K	Sinclair Lake	3.81	297		Pn	23 09 49.2	+0.3
H24K	Noodor Dome	3.96	200	IAML		23 10 56.0	
	comp=E,141nm,1.1s						
H24K				IAML		23 10 56.9	
	comp=N,172nm,0.9s						
G30M	tAoh Zraii Nji	4.04	126		Pn	23 09 52.8	+0.7
G30M	tAoh Zraii Nji	4.04	126	IAML		23 11 04.4	
	comp=N,166nm,0.9s						
G30M				IAML		23 11 08.2	
	comp=E,123nm,0.9s						
F21K	Alatna River	4.06	239	IAML		23 11 06.1	
	comp=E,162nm,0.9s						
F21K				IAML		23 11 09.0	
	comp=N,119nm,0.7s						
PRP	Porcupine Dome	4.09	186		Pn	23 09 53.1	+0.2
PRP	Porcupine Dome	4.09	186	IAML		23 11 03.1	
	comp=N,108nm,0.9s						
H29M	Whitestone	4.10	142		Pn	23 09 52.0	-0.8
H29M				IAML		23 11 10.8	
	comp=N,145nm,1.3s						
H29M				IAML		23 11 11.3	
	comp=E,157nm,0.9s						
INK	Inuvik	4.17	103		Pn	23 09 54.6	+0.8
INK	Inuvik	4.17	103	Pn	Pn	23 09 54.5	+0.8
	comp=E,1.3nm,0.3s,baz=320,slow=14,SNR=36						
INK				Sn	Sn	23 10 39.3	-3.9
	comp=E,2.4nm,0.3s,baz=286,slow=16,SNR=4.8						
INK				Lg	Lg	23 11 00.4	
	comp=E,6.1nm,0.3s,baz=248,slow=14,SNR=4.3						
	comp=E,3.4nm,0.3s						
H23K	Yukon River	4.22	209		Pn	23 09 54.4	-0.1
I26K	Coal Creek Min	4.32	172	IAML		23 11 10.7	
	comp=E,144nm,0.7s						
EPYK	Eagle Plains	4.36	134		Pn	23 09 56.9	+0.4
B20K	Meade River	4.40	282		Pn	23 09 56.3	-0.6
D20K	Etivluk River	4.40	264		Pn	23 09 56.9	-0.1
D20K				IAML		23 11 29.4	
	comp=N,99nm,1.4s						
D20K				IAML		23 11 30.6	
	comp=E,91nm,1.1s						
E20K	Nigu River	4.41	258		Pn	23 09 58.0	+0.9
I28M	Miner Creek	4.51	155	IAML		23 11 24.2	
	comp=E,105nm,1.4s						
F31M	Tsiigehtchic	4.51	113		Pn	23 09 59.3	+0.8
F31M				IAML		23 11 12.5	
	comp=N,93nm,1.3s						
G21K	Allakaket	4.55	232		Pn	23 09 57.8	-1.3
G21K				IAML		23 11 21.0	
	comp=N,109nm,0.7s						
G21K				IAML		23 11 23.5	
	comp=E,127nm,1.1s						
POKR	Poker Plat Res	4.62	195		Pn	23 09 59.8	-0.2
POKR				IAML		23 11 23.6	
	comp=N,74nm,1.0s						
POKR				IAML		23 11 23.0	
	comp=E,92nm,0.7s						
G31M	Satah River	4.66	120		Pn	23 09 59.6	-0.8
I23K	Minto, Yukon-K	4.82	205		Pn	23 10 02.0	-0.7
I23K				IAML		23 11 23.9	
	comp=E,104nm,0.8s						
F20K	Avaraart Lake	4.86	244		Pn	23 10 03.1	-0.1
F20K				IAML		23 11 37.4	
	comp=N,63nm,1.2s						
F20K				IAML		23 11 48.1	
	comp=E,63nm,0.8s						
I29M	Ogilvie Camp,	4.86	148		Pn	23 10 02.7	-0.6
I29M				IAML		23 11 28.4	
	comp=N,67nm,0.6s						
I29M				IAML		23 11 28.8	
	comp=E,68nm,1.2s						
COLA	College	4.89	197		Pn	23 10 05.3	+1.6
IL31		4.91	192		Pn	23 10 05.1	+1.1
ILAR	Eielson Array	4.91	192		Pn	23 10 04.3	+0.3
ILAR	Eielson Array	4.91	192	Pn	Pn	23 10 05.2	+1.2
	comp=E,3.7nm,0.3s,baz=6.0,slow=12,SNR=92						
ILAR				Sn	Sn	23 10 59.6	-1.8
	comp=E,2.3nm,0.3s,baz=6.4,slow=22,SNR=5.7						
ILAR				Lg	Lg	23 11 18.4	
	comp=E,3.9nm,0.3s,baz=19,slow=27,SNR=7.0						
	comp=E,5.2nm,0.4s						
D19K	Kuna River	4.99	264	IAML		23 11 40.2	
	comp=E,89nm,0.8s						
D19K				IAML		23 11 46.0	
	comp=N,80nm,0.8s						
J25K	Salcha River,	5.00	184		Pn	23 10 03.7	-1.5
J25K				IAML		23 11 36.4	
	comp=E,81nm,1.0s						
H21K	Melozitna Rive	5.04	223	IAML		23 11 36.3	
	comp=E,86nm,1.3s						
H21K				IAML		23 11 36.5	
	comp=N,87nm,1.2s						
E19K	Redstone River	5.12	252		Pn	23 10 07.7	+0.8
E19K	Redstone River	5.12	252	IAML		23 11 41.0	
	comp=N,81nm,0.7s						
E19K				IAML		23 11 41.0	
	comp=E,61nm,1.0s						
MLY	Manley	5.16	211		Pn	23 10 07.3	-0.1
HDA	Harding Lake	5.28	191		Pn	23 10 09.7	+0.7
HDA	Harding Lake	5.28	191	IAML		23 11 36.8	
	comp=E,61nm,0.9s						
HDA				IAML		23 11 51.5	
	comp=N,46nm,0.7s						
WRH	Wood River Hil	5.31	197	IAML		23 11 39.5	
	comp=E,57nm,1.0s						
WRH				IAML		23 11 44.0	
	comp=N,44nm,0.8s						
C19K	Lookout Ridge	5.35	272		Pn	23 10 10.3	+0.3
C19K	Lookout Ridge	5.35	272	IAML		23 12 19.1	
	comp=N,47nm,1.1s						
I30M	Mount Dempster	5.38	140	IAML		23 11 15.5	
	comp=E,59nm,0.7s						
I30M				IAML		23 11 21.8	
	comp=N,47nm,0.5s						
H31M	Peel River	5.42	129		Pn	23 10 10.8	-0.2
SCRK	Sand Creek	5.63	178		Pn	23 10 14.5	+0.5
F19K	Shaleruckik Mo	5.64	247		Pn	23 10 13.9	-0.1
H20K	Anotleneega Mo	5.70	229		Pn	23 10 14.7	-0.1
J29N	Klondike Camp	5.71	151		Pn	23 10 15.9	+0.9
BWN	Browne	5.76	202		Pn	23 10 15.1	-0.5
K24K	Donnelly Dome	5.82	185		Pn	23 10 17.2	+0.7
G19K	Purcell Mounta	5.86	240		Pn	23 10 15.2	-1.8
RIDG	Independent Ri	5.86	181		Pn	23 10 17.7	+0.6
DAWY	Dawson	5.89	157		Pn	23 10 17.7	+0.2
J30M	Hart River	5.95	144		Pn	23 10 18.4	0.0
DOT	Dot Lake	5.96	178		Pn	23 10 18.8	+0.5
C18K	Utukok River	6.03	269		Pn	23 10 19.6	+0.3
BPAW	Bear Paw Mtn.	6.06	208		Pn	23 10 19.7	0.0
MCK	McKinley	6.12	199		Pn	23 10 20.9	+0.3
F18K	Selawik	6.39	249		Pn	23 10 24.2	0.0
RND	Reindeer	6.43	198		Pn	23 10 25.9	+1.0
G18K	Tagagawik	6.50	242		Pn	23 10 25.6	-0.2
KTH	Kantishna Hill	6.56	206		Pn	23 10 27.3	+0.6
TRF	Thorofare Moun	6.56	203		Pn	23 10 26.7	-0.1
L26K	Log Cabin Wild	6.60	175		Pn	23 10 27.4	+0.2
DHY	Denali Highway	6.63	191		Pn	23 10 28.1	+0.5
BCAR	Beaver Creek A	6.63	169		Pn	23 10 27.3	-0.4
PAX	Paxson	6.65	184		Pn	23 10 28.2	+0.4
MENT	Mentasta	6.67	177	Pn	Pn	23 10 28.9	+0.7
A36M	Sachs Harbour	6.80	60		Pn	23 10 29.5	-0.3
RDOG	Red Dog Mine	6.82	266		Pn	23 10 28.6	-1.6
CAST	Castle Rocks	6.87	210		Pn	23 10 31.1	+0.2
H18K	Honhosa River	6.93	237		Pn	23 10 30.9	-0.8
L29M	L29M	6.98	155		Pn	23 10 32.6	+0.2
WAT7	Susitna Watana	6.99	196		Pn	23 10 33.7	+1.1
F17K	Baldwin Pennin	7.01	251		Pn	23 10 31.1	-1.6
WAT6	Susitna Watana	7.14	192		Pn	23 10 34.8	0.0
M26K	Nabesna, AK	7.23	174		Pn	23 10 35.9	0.0
M27K	Edge Creek, AK	7.33	170		Pn	23 10 38.0	+0.8
PPLA	Purkeypile	7.38	208		Pn	23 10 38.2	+0.3
M24K	Tolsona, Glenn	7.53	186	Pn	Pn	23 10 41.1	+1.1
H17K	Granite Mounta	7.54	239		Pn	23 10 40.3	+0.2
WACK	Wrangell Chich	7.62	179		Pn	23 10 42.2	+0.8
SCM	Sheep Creek Mo	7.86	190		Pn	23 10 45.8	+1.3
SML	Sawmill	7.96	193	Pn	Pn	23 10 46.8	+1.0
N25K	Chitina, Valde	8.00	180		Pn	23 10 46.2	-0.3
YUK3	Moose Creek	8.01	166		Pn	23 10 47.3	+0.6
GHO	Glory Hole Cre	8.04	195	Pn	Pn	23 10 46.5	-0.4
TTA	Tatalina	8.10	220	Pn	Pn	23 10 48.9	+1.0
KLU	Klutina	8.14	185	Pn	Pn	23 10 49.7	+1.4
SKT	Skwentna	8.14	204		Pn	23 10 48.8	+0.5
M22K	Willow	8.18	199	Pn	Pn	23 10 48.4	-0.4
PMR	Palmer	8.24	195	Pn	Pn	23 10 50.2	+0.6
MCARA	McCarthy VSAT	8.25	175		Pn	23 10 49.6	-0.2
KNK	Knik Glacier	8.36	193	Pn	Pn	23 10 53.3	+2.1
PTPK	Patty Peak	8.47	173		Pn	23 10 53.5	+0.5
M31M	Drury Creek, Y	8.47	146		Pn	23 10 52.0	-0.8
J17K	VABM Dome	8.48	230		Pn	23 10 51.6	-1.3
DIV	Divide	8.50	184		Pn	23 10 51.9	-1.3
L19K	White Mountain	8.53	215		Pn	23 10 53.0	-0.6
SUA	Susitna One	8.54	200	Pn	Pn	23 10 56.0	+2.1
I17K	Unalakleet	8.55	236	Pn	Pn	23 10 52.3	-1.5
F15K	North Star Dit	8.56	253		Pn	23 10 53.2	-0.9
BMRM	Bremner River	8.64	180		Pn	23 10 57.4	+2.2
STLK	Strandline Lak	8.65	204		Pn	23 10 56.5	+1.2
N30M	Aishikik Lake	8.71	156		Pn	23 10 57.2	+1.1
CTGM	Chitina Glacie	8.75	170		Pn	23 10 57.9	+1.2
RC01	Rabbit Creek A	8.79	197	Pn	Pn	23 11 00.4	+3.3
GLI	Glacier Island	8.80	188	Pn	Pn	23 11 00.9	+3.6
MMPY	Sheldon Lake,	8.80	136		Pn	23 10 57.4	+0.1
K17K	Iditarod	8.84	226	Pn	Pn	23 10 58.6	+0.8
CRQM	Cirque	8.88	176		Pn	23 10 59.9	+1.4
L18K	Granite Mounta	8.88	220		Pn	23 10 58.5	+0.1
N31M	Braeburn, Yuko	8.89	152		Pn	23 10 57.3	-1.3
PWL	Port Wells	8.89	192	Pn	Pn	23 11 00.9	+2.3
FID	Port Fidalgo	8.90	186	Pn	Pn	23 11 00.9	+2.3
LOGN	Logan Glacier	8.91	169		Pn	23 11 00.4	+1.4
GRNC	Granite Creek	8.96	171		Pn	23 11 01.7	+2.1
J16K	Anvik River	8.98	233	Pn	Pn	23 10 59.1	-0.7
O28M	Mount Upton	9.02	166		Pn	23 11 02.5	+1.8
EYAK	Cordova Ski Ar	9.08	184	Pn	Pn	23 11 03.4	+2.3
WAX	Waxell Ridge	9.19	175	Pn	Pn	23 11 06.5	+3.8
RAGM	Ragged Mountai	9.23	180	Pn	Pn	23 11 03.8	+0.6
HIN	Hinchinbrook I	9.25	186	Pn	Pn	23 11 05.5	+1.9
HYT	Haines Junctio	9.26	158		Pn	23 11 04.3	+0.5
HMT	Hamilton	9.28	179	Pn	Pn	23 11 06.6	+2.7
YAH	Yahtse	9.32	171		Pn	23 11 06.6	+1.9
GRIN	Grindle Hills	9.35	176		Pn	23 11 05.3	+0.5
MESA	MESA	9.50	172		Pn	23 11 08.1	+1.1
O30N	Mendenhall	9.51	154		Pn	23 11 07.8	+0.7
SUCK	Suckling Hills	9.55	178	Pn	Pn	23 11 08.6	+1.0
O29M	Mount Kennedy	9.64	162		Pn	23 11 10.6	+1.6
PCA	Pinnacle	9.69	167		Pn	23 11 09.7	+0.2
N19K	Bonanza Creek	9.72	210	Pn	Pn	23 11 12.9	+2.9
WHY	Whitehorse	9.81	151		Pn	23 11 11.2	-0.1
L16K	Owhat River	9.98	225	Pn	Pn	23 11 13.8	+0.3
K15K	Wolf Creek Mou	10.04	232	Pn	Pn	23 11 14.0	-0.2
N18K	Kilae Creek	10.10	214	Pn	Pn	23 11 15.6	+0.4
J14K	Nanvaranak Lak	10.25	237		Pn	23 11 16.7	-0.4
M16K	Timber Creek	10.46	222	Pn	Pn	23 11 18.4	-1.6
CNPM	China Poot	10.48	199	Pn	Pn	23 11 19.2	-1.1
N17K	Nushagak Hills	10.51	216	Pn	Pn	23 11 21.3	+0.7
BESE	Bessie Mountai	11.80	154		Pn	23 11 39.4	+1.0
Q32M	Nakina River	11.88	148		Pn	23 11 40.0	+0.4
KDAK	Kodiak Island	12.35	201	Pn	Pn	23 11 44.8	-0.9
	comp=N,1.2nm,0.9s,baz=20,slow=15,SNR=1.4						
DLBC	Dease Lake	12.81	144	Pn	Pn	23 11 51.1	-1.0
	comp=N,0.4nm,0.3s,baz=17,slow=6.0,SNR=4.7						
DLBC				Lg	Lg	23 15 27.8	
	comp=N,0.1nm,0.3s,baz=222,slow=20,SNR=2.7						
	comp=N,1.0nm,0.4s						
YKAW3	Yellowknife Wh	13.89	106		Pn	23 12 04.2	-2.6
YKA	Yellowknife Ar	13.94	106	Pn	Pn	23 12 04.9	-2.5
	comp=N,0.6nm,0.3s,baz=297,slow=9.8,SNR=20						
YKA				Sn	Sn	23 14 28.5	-14
	comp=N,0.5nm,0.3s,baz=314,slow=24,SNR=5.1						
	comp=N,1.1nm,0.5s						
YKAW1	Yellowknife Wh	13.99	106		Pn	23 12 06.9	-1.2
RES	Resolute Bay	15.61	49	Pn	Pn	23 12 27.3	-2.6
RES				IAmb	IAmb	23 12 38.6	
	comp=Z,3.6nm,0.8s						
RES	Resolute Bay	15.61	49	Pn	Pn	23 12 26.7	-3.3
	comp=Z,0.4nm,0.3s,baz=255,slow=12,SNR=19						
RES				Sn	Sn	23 15 09.1	-14
	comp=Z,0.5nm,0.3s,baz=171,slow=13,SNR=5.4						
BILL	Bilibino	17.47	288		Pn	23 12 52.4	-1.1
BILL				IAmb	IAmb	23 12 56.3	
	comp=Z,3.5nm,0.4s						
BLKN	Baker Lake	19.25	82	P	Pn	23 13 15.1	-0.4
POIN	Pond Inlet	20.74	51	P	P	23 13 30.8	+0.2
POIN				IAmb	IAmb	23 13 58.3	
	comp=Z,4.9nm,1.2s						
ILON	Igloolik, Nuna	21.15	61	P	P	23 13 36.9	+1.8
PDAR	Pinedale Array	32.30	128	P	P	23 15 19.9	+0.5
	comp=Z,0.5nm,0.7s,baz=352,slow=5.2,SNR=5.1						
	comp=Z,0.5nm,0.7s						
TXAR	Lajitas Array	46.52	128	P	P	23 17 20.2	+2.3
	comp=Z,0.2nm,0.6s,baz=354,slow=6.7,SNR=2.4						
	comp=Z,0.2nm,0.6s						
FINES	FINESS Array B	49.10	6	P	P	23 17 37.3	-0.1
	comp=Z,0.9nm,0.8s,baz=18,slow=5.8,SNR=3.7						
	comp=Z,0.9nm,0.8s						
HFS	Hagfors	49.65	14	P	P	23 17 43.8	+2.2
	comp=Z,1.7nm,0.9s,baz=35,slow=5.4,SNR=5.4						
	comp=Z,1.7nm,0.9s						
ESDC	Sonseca Array	67.29	32	P	P	23 19 46.8	+1.7
	comp=Z,0.2nm,0.6s,baz=348,slow=6.0,SNR=2.5						
	comp=Z,0.2nm,0.6s						

*HEL **02** 23:17:25.4±0.2, 67°.76N×20°.14E, h0^{km}, ML1.5, Suspected explosion*

UPP 02 23:17:25.7±0.1, **67°.83N**×**20°.22E**, **h0**^{km}, **ML1.8**, **Unknown, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.14	20	P	Pg	23 17 28.6	+0.3
KUA				S	Sg	23 17 30.5	+0.5
RATU	Laukkuluspa	0.24	269	P	Pg	23 17 30.4	+0.2
RATU				S	Sg	23 17 33.6	+0.3
KOVU	Salmi	0.40	357	P	Pg	23 17 33.4	+0.1
KOVU				S	Sg	23 17 38.7	+0.3
LANU	Lannavaara	0.71	71	PG	Pg	23 17 39.7	+0.5
LANU				SG	Sg	23 17 49.4	+1.0
DUNU	Dundret	0.72	169	P	Pg	23 17 39.3	-0.2
SALU	Saltoluokta	0.80	236	P	Pg	23 17 40.7	-0.2
SALU	Saltoluokta	0.80	236	*e*P	Pg	23 17 40.8	-0.1
KIF	Kilpisjarvi	1.20	10	*e*P	Pg	23 17 48.5	-0.1
KIF	Kilpisjarvi	1.20	10	PG	Pg	23 17 49.0	+0.3
KIF				MSG		23 18 05.1	
	comp=Z,7.3nm,0.2s						
KIF				SG	Sn	23 18 06.3	-0.4
PAJU	Pajala	1.38	124	P	Pg	23 17 51.1	-0.9
PAJU				S	Sg	23 18 09.9	-0.1
PAJU	Pajala	1.38	124	PN	Pg	23 17 51.0	-1.1
	baz=300						
PAJU				SN	Sb	23 18 10.3	-0.2
HEF	Hetta	1.42	64	PG	Pn	23 17 51.9	-0.8
HEF				MSG		23 18 09.7	
	comp=Z,2.9nm,0.2s						
HEF				SG	Sg	23 18 10.6	-0.5
ERTU	Ertsjaerv	1.49	148	P	Pn	23 17 53.1	-0.6
ERTU				S	Sb	23 18 13.7	0.0
ERTU	Ertsjaerv	1.49	148	PN	Pn	23 17 53.1	-0.6
ERTU				SN	Sn	23 18 14.1	+0.2
KLF	Kolari	1.56	111	PN	Pn	23 17 54.3	-0.3
KLF				MSG		23 18 12.1	
	comp=Z,2.9nm,0.2s						
KTK1	Kautokeino	1.63	42	PG	Pn	23 17 55.5	-0.1
KTK1				SN	Sg	23 18 18.9	+0.9
HARU	Harads	1.70	170	P	Pn	23 17 56.8	+0.3
HARU				S	Sg	23 18 20.1	-0.1
TRO	Tromso	1.87	346	PB	Pn	23 17 59.7	+0.8
TRO				SB	Sn	23 18 23.4	+0.2
KALU	Kalix	2.33	146	PG	Pn	23 18 06.4	+1.2
KALU				SN	Sn	23 18 31.0	-3.5
TOF	Tornio	2.39	135	PG	Pb	23 18 07.8	-1.6
	baz=318						
TOF				SN	Sn	23 18 32.2	-3.7
TOF				MSG		23 18 35.1	
	comp=Z,1.3nm,0.2s						
RNF	Rovaniemi	2.57	116	PG	Pb	23 18 10.5	-2.0
RNF				SN	Sn	23 18 35.4	-4.9
ARA0	ARCESS Array S	2.58	46	PB	Pn	23 18 10.5	+1.8
ARA0				SB	Sb	23 18 45.3	+0.2
RAJF	Raja-Jooseppi	3.10	74	SG	Sb	23 19 00.3	+0.5
KEV	Kevo	3.14	49	PB	Pb	23 18 20.6	-1.6
KEV				SG	Sb	23 19 01.3	+0.4

*NEIC **02** 23:36:35.4±1.7, 34°.062N±0°.005×117°.492W±0°.009, h5^{km}±1^{km}, Error ellipse: s-maj=2.1km s-min=1.4km az=226.0*

PAS 02 23:36:36.0±1.5, **34°.053N**±0°.007×**117°.50W**±0°.01, **h3**^{km}±2^{km}, **ML3.2, ML3.1**/79(NEIC), **Error ellipse: s-maj=1.4km s-min=1.1km az=74.0, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSC	Mira Loma	0.07	226		Pg	23 36 34.5	-3.0
MLSC					Sg	23 36 38.9	+0.4
FON	Fontana	0.07	48		Pg	23 36 34.7	-2.9
RVR	Riverside	0.12	119		Pg	23 36 34.2	-4.2
SS2	San Sevaine	0.15	0		Sg	23 36 39.3	-1.9
CHNC	Chino	0.16	250		Pg	23 36 35.1	-4.1
CHNC					Sg	23 36 37.8	-3.4
CLTC	Calectric	0.16	75		Pg	23 36 35.3	-3.9
SBVC	San Bernardino	0.16	77		Pg	23 36 36.2	-3.0
RSBC	Riverside Bore	0.17	119		Pg	23 36 35.0	-4.2

RSBC	**Riverside Bore**	0.17	119		Sg	23 36 41.9	+0.5
RSBC	**Riverside Bore**	0.17	119		Pg	23 36 39.5	+0.2
RSBC					Sg	23 36 42.1	+0.7
CFSC	**Central Fire S**	0.19	74		Pg	23 36 40.1	+0.4
CFSC	**Central Fire S**	0.19	74		Sg	23 36 43.4	+1.1
SSK	**Sunset Peak**	0.22	315		Sg	23 36 40.6	-2.8
HLNC	**Highland**	0.24	74		Pg	23 36 41.2	+0.4
HLNC					Sg	23 36 45.3	+1.3
PSRC	**Puddingstone R**	0.26	279		Sg	23 36 45.2	+0.8
CSP	**Cedar Springs**	0.27	26		Sg	23 36 45.6	+0.7
CFT	**Crafton Hills**	0.32	93		Pg	23 36 42.7	+0.4
CFT					Sg	23 36 46.5	-0.1
PEC	**Perris**	0.33	119		Sg	23 36 47.1	+0.6
SVD	**Seven Oaks Dam**	0.34	81		Sg	23 36 48.4	+1.4
ELS	**Elsinore Mount**	0.41	171	Pg	Pg	23 36 43.7	-0.2
ELS				Sg	Sg	23 36 49.4	+0.2
ELS				IAML		23 36 50.3	
	comp=E,1µm,0.2s						
RHC	**Rose Hills Cem**	0.43	263		Pg	23 36 44.5	+0.3
RHC					Sb	23 36 51.5	-1.6
BBSC	**Beaumont Base**	0.45	107		Pg	23 36 45.0	+0.3
BREC	**Barre Substati**	0.47	239		Sb	23 36 53.8	-0.3
SANC	**Santa Ana**	0.47	223		Pg	23 36 45.8	+0.8
SANC					Sb	23 36 53.2	-1.1
MWC	**Mount Wilson**	0.49	290		Sg	23 36 52.3	+0.3
HOLC	**Holcomb Ridge**	0.49	325		Pg	23 36 45.3	-0.3
HOLC					Sg	23 36 52.1	0.0
ADO	**Adelanto Recei**	0.50	6		Pg	23 36 45.7	+0.1
ADO					Sg	23 36 53.1	+0.9
GVRC	**Garvey Reservo**	0.51	270		Sg	23 36 54.0	+1.4
CHFC	**Chilao Flat St**	0.52	303		Pg	23 36 45.7	-0.3
CHFC					Sg	23 36 52.7	0.0
MURC	**Murrieta**	0.52	150		Pg	23 36 45.8	-0.2
MURC					Sg	23 36 52.7	0.0
CACC	**Caltech Cellar**	0.52	279		Pg	23 36 46.0	0.0
CACC					Sg	23 36 53.3	+0.5
BBRC	**Big Bear Solar**	0.53	66		Pg	23 36 42.0	-4.1
BBRC					Sg	23 36 53.6	+0.7
CRPC	**Caltech Rob'n**	0.53	279		Pg	23 36 46.1	-0.1
CRPC					Sg	23 36 53.5	+0.6
VTV	**Victorville**	0.53	16		Pg	23 36 46.0	-0.2
VTV					Sg	23 36 53.0	0.0
GSA	**Caltech--GSA**	0.53	279		Pg	23 36 46.0	-0.1
GSA					Sg	23 36 53.7	+0.7
DLAC	**Del Amo**	0.54	248		Sb	23 36 56.4	+0.3
HMTC	**Hemet**	0.54	130		Pg	23 36 46.0	-0.3
HMTC					Sg	23 36 53.4	+0.1
JNH	**Juniper Hills**	0.54	317		Pg	23 36 46.1	-0.4
JNH					Sg	23 36 53.2	-0.3
DGR	**Domenigoni Val**	0.57	134		Pg	23 36 46.7	-0.4
DGR					Sg	23 36 54.2	-0.3
PASC	**Pasadena Art C**	0.58	282	Pg	Pg	23 36 46.9	-0.3
PASC				Sg	Sg	23 36 54.6	0.0
PASC				IAML		23 36 55.0	
	comp=N,635nm,0.6s						
PASC				IAML		23 36 55.2	
	comp=E,746nm,0.4s						
BACC	**Bachelor Mtn.**	0.58	139		Pg	23 36 46.7	-0.5
BACC					Sg	23 36 54.4	-0.4
POB	**Polly Butte**	0.60	127		Pg	23 36 47.2	-0.4
POB					Sg	23 36 55.1	-0.3
WTT2	**Watts, South G**	0.64	261		Pb	23 36 49.2	-0.6
WTT2					Sb	23 36 59.2	+0.2
LRRC	**Littlerock Res**	0.64	317		Pg	23 36 48.0	-0.3
LRRC					Sg	23 36 56.7	0.0
GR2C	**Griffith Obs.**	0.67	276		Pg	23 36 48.3	-0.5
GR2C					Sg	23 36 57.0	-0.5
SBB	**Saddle Back Bu**	0.69	337		Pg	23 36 48.9	-0.4
SBB					Sg	23 36 57.9	-0.3
BHPC	**Baldwin Hills**	0.72	265		Sg	23 36 59.5	+0.4
DECC	**Green Verdugo**	0.72	286		Sg	23 36 59.2	+0.1
HLLC	**North Hollywoo**	0.72	280		Pg	23 36 49.3	-0.6
HLLC					Sg	23 36 59.0	-0.3
FMP	**Fort Macarthur**	0.74	243		Sg	23 36 60.0	+0.1
DEVC	**Devers**	0.78	98		Pg	23 36 50.7	-0.2
DEVC					Sg	23 37 01.4	+0.5
GVDA	**Garner Valley**	0.79	119		Sg	23 37 01.1	-0.3
DJJ	**Donna J Jenkin**	0.79	274		Sg	23 37 00.9	-0.6
DJJ	**Donna J Jenkin**	0.79	274		Pg	23 36 50.5	-0.7
DJJ					Sg	23 37 01.2	-0.3
CRY	**Cary Ranch**	0.80	127		Pg	23 36 50.9	-0.5
CRY					Sg	23 37 01.4	-0.4
HYS	**Haystack Butte**	0.81	356		Pg	23 36 51.1	-0.5
HYS					Sg	23 37 01.9	-0.3
RPV	**Rancho Palos V**	0.81	248		Pg	23 36 51.0	-0.6
RPV					Sb	23 37 04.0	-0.1
PLM	**Palomar**	0.88	142		Pg	23 36 52.2	-0.6
PLM					Sg	23 37 03.8	-0.4
BZNA	**Buzz No.'s Pla**	0.89	129		Pg	23 36 52.7	-0.5
BZNA					Sg	23 37 04.3	-0.4
SNDA	**J Saunders Pla**	0.89	124		Pg	23 36 52.9	-0.3
SNDA					Sg	23 37 04.0	-0.8
ALPC	**Antelope**	0.92	314		Pg	23 36 52.8	-0.8
ALPC					Sg	23 37 05.3	-0.1
EW2	**E Wide Canyon**	0.92	97		Pg	23 36 52.7	-0.9
EW2					Sg	23 37 06.2	+0.8
RRX	**Edison Barstow**	0.92	27		Pg	23 36 53.5	-0.2
RRX					Sg	23 37 06.1	+0.4
BLAC	**Blackrock camp**	0.92	89		Pg	23 36 53.4	-0.3
BLAC					Sg	23 37 06.1	+0.4
GORC	**Green Oak Ranc**	0.93	166		Sg	23 37 05.0	-0.7
FRD	**Ford Ranch, An**	0.93	126		Pg	23 36 53.4	-0.5
FRD	**Ford Ranch, An**	0.93	126		Sg	23 37 05.5	-0.5
OAT	**Oat Mountain**	0.97	288		Pb	23 36 55.0	-0.4
OAT					Sb	23 37 08.7	0.0
PFO	**Pinyon Flats O**	0.97	117		Pg	23 36 54.0	-0.6
PFO				Sg	Sg	23 37 07.1	-0.2
PFO	**Pinyon Flats O**	0.97	117		Pg	23 36 53.9	-0.8
PFO					Sg	23 37 06.6	-0.7
XPFO	**Pinon Flat**	0.98	117		Pg	23 36 53.5	-1.2
XPFO					Sg	23 37 06.3	-1.1
GTM	**Goat Mountain**	0.98	75		Pg	23 36 54.1	-0.7
GTM					Sg	23 37 07.0	-0.6
BLCC	**Black Canyon**	0.99	281		Pg	23 36 54.4	-0.6
BLCC					Sg	23 37 07.9	0.0
CIAC	**Catalina I. Ai**	1.00	230		Pg	23 36 54.9	-0.3
CIAC					Sg	23 37 08.7	+0.5
PMD	**Palm Desert**	1.02	113		Pg	23 36 54.5	-1.0
PMD					Sg	23 37 07.7	-1.0
TPO	**Tropico Hills**	1.02	324		Pg	23 36 55.1	-0.5
TPO					Sn	23 37 11.3	-0.8
CCAC	**Calif City Air**	1.18	339	Pg	Pg	23 36 57.8	-0.8
CCAC				Sg	Sg	23 37 13.2	-0.7
CCAC				IAML		23 37 22.1	
	comp=E,428nm,0.8s						
GSC	**Goldstone, Bar**	1.37	25		Pn	23 37 01.7	-0.5
GSC				Sg	Sg	23 37 19.3	-0.8
TJX	**Tijuana**	1.58	166		Pn	23 37 04.4	-0.5
TJX					Sn	23 37 25.6	-0.3
TKX	**Tecate**	1.66	153		Pn	23 37 05.0	-1.0
TKX				IAML		23 37 29.9	
	comp=N,327nm,0.5s						
ISA	**Isabella, Lake**	1.79	334		Pn	23 37 06.9	-1.0
ISA				Sg	Sb	23 37 32.4	-0.1
BCW	**Bitter Crk WRg**	1.81	300		Pn	23 37 07.9	-0.2
BCW				Sg	Sb	23 37 33.3	+0.3
CBX	**Cerro Bola**	1.87	158		Pn	23 37 08.0	-1.0
CBX					Sn	23 37 32.7	-0.5
YUH	**Yuha Desert**	1.93	136		Pn	23 37 10.4	+0.8
YUH				Sg	Sb	23 37 35.8	-0.4
YUH				IAML		23 37 37.4	
	comp=N,132nm,0.7s						
YUH				IAML		23 37 37.9	
	comp=E,103nm,0.6s						
GWY	**Greenwater Val**	2.23	18		Pn	23 37 14.0	-0.1
GWY				IAML		23 37 48.0	
	comp=N,175nm,0.4s						
CCX	**Cicese**	2.29	162		Pn	23 37 14.5	-0.2
CCX				IAML		23 37 43.0	
	comp=N,99nm,0.1s						
CCX				IAML		23 37 50.7	
	comp=E,118nm,0.5s						
ESJX	**Sierra Juarez**	2.42	147		Pn	23 37 17.6	+0.9
ESJX				IAML		23 37 52.1	
	comp=E,110nm,0.7s						
ESJX				IAML		23 37 52.6	
	comp=N,80nm,0.7s						
GLA	**Glamis**	2.45	113		Pn	23 37 16.9	0.0
GLA				IAML		23 37 57.5	
	comp=E,112nm,0.7s						
GLA				IAML		23 38 05.6	
	comp=N,95nm,0.6s						
CPBX	**Cerro Prieto**	2.46	131		Pn	23 37 15.1	-1.9
BLYC	**Blythe**	2.50	96		Pn	23 37 16.0	-1.5
BLYC				Pg	Pb	23 37 22.3	+0.9
BLYC				IAML		23 37 57.0	
	comp=E,131nm,0.9s						
V12A	**Nelson**	2.75	52		Pn	23 37 20.7	-0.3
V12A				IAML		23 38 04.8	
	comp=E,36nm,0.4s						
V12A				IAML		23 38 05.7	
	comp=N,40nm,0.7s						
GRAC	**Grapevine Rang**	2.94	2		Pn	23 37 24.1	+0.4
GRAC				IAML		23 38 14.5	
	comp=N,53nm,0.6s						
GRAC				IAML		23 38 15.6	
	comp=E,46nm,0.8s						
VTX	**Valle De La Tr**	3.02	151	Pn	Pn	23 37 25.1	+0.3
VTX				IAML		23 38 10.4	
	comp=N,41nm,1.3s						
TPNV	**Topopah Spring**	3.06	19		Pn	23 37 26.4	+0.9
TPNV				IAML		23 38 15.3	
	comp=N,53nm,0.5s						
SHPR	**Sheep Range**	3.11	37		Pn	23 37 26.2	+0.2
W13A	**Hualapai Mount**	3.16	70		Pn	23 37 26.3	-0.6
GMN	**Gold Mountain**	3.25	3		Pn	23 37 27.1	-0.9
DSP	**Deep Springs**	3.33	354		Pn	23 37 29.0	+0.1
113A	**Mohawk Valley,**	3.38	111		Pn	23 37 28.9	-0.7
MZP	**Montezuma Peak**	3.64	1		Pn	23 37 32.3	-1.2
Y14A	**Wickenburg**	3.74	90		Pn	23 37 34.0	-0.6
Y14A				IAML		23 38 39.6	
	comp=N,28nm,0.8s						
Y14A				IAML		23 38 43.1	
	comp=E,16nm,0.6s						
BBGB	**Big Mountain B**	3.84	312	Pn	Pn	23 37 35.5	-0.6
BBGB				IAML		23 38 48.2	
	comp=N,45nm,1.1s						
BBGB				IAML		23 38 51.8	
	comp=E,42nm,1.2s						
S11A	**Rachel**	3.86	21		Pn	23 37 35.3	-1.1
PRN	**Pahroc Range**	3.90	30		Pn	23 37 36.8	-0.1
PRN				IAML		23 38 49.9	
	comp=E,34nm,0.5s						
PRN				IAML		23 38 50.1	
	comp=N,33nm,0.5s						
TPH	**Tonopah**	4.02	3	Pg	Pg	23 37 51.6	-1.5
TPH				IAML		23 38 48.0	
	comp=E,37nm,1.5s						
SAO	**San Andreas Ge**	4.21	311	Pn	Pn	23 37 40.9	-0.2
LHV	**Little Huntoon**	4.27	349	Pn	Pn	23 37 42.4	+0.6
LHV				IAML		23 39 07.3	
	comp=E,14nm,2.4s						
LHV				IAML		23 39 31.0	
	comp=N,13nm,3.2s						
WUAZ	**Wupatki**	5.25	72	IAML		23 39 29.3	
	comp=N,8.9nm,0.8s						
WUAZ				IAML		23 39 35.4	
	comp=N,8.2nm,1.6s						

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*ATH **02** 23:47:18.3, 40°.49N×21°.19E, h13^{km}±2^{km}, ML1.2/2, Manual Solution by S.Koutrakis First location: 2019/06/02 23:48:35, This location: 2019/06/04 08:19:23 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 4 km*

TIR 02 23:47:17.0, 40°.40N×20°.74E, h6^{km}±4^{km}, Ml1.7/4**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	0.23	9	Pg	Pg	23 47 21.0	-0.5
KBN				Sg	Sg	23 47 24.7	+0.1
KBN				AML	AML	23 47 24.9	
	0.5nm,0.5s						
KBN	**Korca**	0.23	9	Pg	Pg	23 47 21.1	-0.5
KBN				Sg	Sg	23 47 24.9	+0.3
KBN				AML	AML	23 47 24.9	
	0.5nm,0.5s						
NEST	**Nestorio**	0.24	86	Pg	Pg	23 47 22.0	+0.3
NEST				Sg	Sg	23 47 25.6	+0.7
NEST				AML	AML	23 47 27.8	
	0.5nm,0.3s						
NEST				AML	AML	23 47 28.1	
	0.7nm,0.3s						
NEST	**Nestorio**	0.24	86	Pg	Pg	23 47 21.9	+0.2
NEST				Sg	Sg	23 47 26.0	+1.1
NEST				AML	AML	23 47 28.1	
	0.7nm,0.3s						
NEST	**Nestorio**	0.24	86	P	Pg	23 47 22.1	+0.4
NEST				S	Sg	23 47 24.6	-0.2
LSK	**Leskovik**	0.27	203	Pg	Pg	23 47 22.8	+0.5
LSK				Sg	Sb	23 47 27.6	-1.6
LSK				AML	AML	23 47 31.4	
	0.9nm,0.3s						
LSK				AML	AML	23 47 31.5	
	0.6nm,0.3s						
LSK	**Leskovik**	0.27	203	Pg	Pg	23 47 22.6	+0.3
LSK				Sg	Sg	23 47 27.3	+1.5
LSK				AML	AML	23 47 31.4	
	0.9nm,0.3s						
PENT	**Pentalofos**	0.37	123	P	Pg	23 47 24.4	+0.3
PENT				S	Sg	23 47 29.1	+0.2
KPRO	**Kipourio**	0.65	132	P	Pg	23 47 29.4	-0.1
KPRO				S	Sg	23 47 37.6	-0.4
SRN	**Sarande**	0.77	228	Pg	Pb	23 47 33.2	+0.5
SRN				Sg	Sn	23 47 45.6	-0.6
SRN				AML	AML	23 47 48.1	
SRN	**Sarande**	0.77	228	Pg	Pg	23 47 32.2	+0.5
SRN				Sg	Sb	23 47 43.5	+0.1
IGT	**Igoumenitsa**	0.92	200	Pg	Pn	23 47 36.0	-0.5
IGT				Sg	Sn	23 47 49.9	-0.1
IGT				AML	AML	23 47 54.5	
IGT	**Igoumenitsa**	0.92	200	Pg	Pb	23 47 35.7	+0.4
IGT				Sg	Sb	23 47 47.4	-0.4
IGT				AML	AML	23 47 58.0	
TETR	**Tetrakomo, Epi**	1.13	158	P	Pn	23 47 40.4	+0.9
TETR				S	Sn	23 47 54.9	-0.5
LKD2	**Lefkada island**	1.61	182	Pn	Pg	23 47 49.8	+2.0
PUK	**Puka**	1.76	339	Pn	Pg	23 47 50.8	0.0
PUK				Sn	Sg	23 48 17.1	+3.4
PUK				AML	AML	23 48 21.4	
PUK	**Puka**	1.76	339	Pn	Pg	23 47 50.9	+0.1

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*TRN **02** 23:52:40.2, 10°.99N×62°.31W, h98^{km}, MD3.6, North of the Paria peninsula.*

*FUNV **02** 23:52:41.1, 10°.98N×62°.27W, h98^{km}, MW3.8*

ISC 02 23:52:38.8±1.6**, 10°.99N**±0°.05×**62°.32W**±0°.06**, h112**^{km}±18^{km}**, n27, σ1ˢ.32**/45**, 1C, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRN	**Trinidad (W)**	0.96	110	⇑*i*P	Pn	23 53 00.4	+0.6
TRN				*e*S	Sn	23 53 14.4	-1.3
TPP	**Pointe-a-Pierr**	1.08	128	*e*P	Pn	23 53 02.3	+1.2
GRFF	**Grenada Fort F**	1.20	28	*e*P	Pn	23 53 02.5	+0.1
GRFF				*e*S	Sn	23 53 19.1	-1.1
GRGR	**Grenville**	1.32	30	*e*P	Pn	23 53 03.9	+0.3
GRGR				*e*S	Sn	23 53 21.5	-0.9
TBH	**Brigand Hill**	1.33	112	*e*P	Pn	23 53 04.6	+0.8
TBH				*e*S	Sn	23 53 21.7	-1.1
GRW	**Mount Saint Ca**	1.34	29	*e*P	Pn	23 53 04.8	+0.9
GRSS	**Sisters**	1.48	28	*e*P	Pn	23 53 05.7	+0.1
GRSS				*e*S	Sn	23 53 25.5	-0.3
TPR	**Prospect**	1.53	82	*e*P	Pn	23 53 06.5	+0.3
TPR				*e*S	Sn	23 53 26.3	-0.6
GCMP	**Grenada, Carri**	1.73	30	*e*P	Pn	23 53 08.9	+0.3
GCMP				*e*S	Sn	23 53 30.5	-0.7
SVOC	**Richmond Hill,**	2.41	26	*e*P	Pn	23 53 17.2	0.0
SVOC				*e*S	Sn	23 53 46.2	-0.4
PCRV	**Puerto La Cruz**	2.41	251	*e*P	Pn	23 53 18.5	+1.3
PCRV				*e*S	Sn	23 53 46.5	-0.2
PCRV	**Puerto La Cruz**	2.41	251	*e*P	Pn	23 53 19.4	+2.1
PCRV				*e*S	Sn	23 53 47.1	+0.4
SVT	**Saint Vincent**	2.42	26	*e*P	Pn	23 53 17.2	0.0
SVT				*e*S	Sn	23 53 46.6	-0.1
SVB	**Belmont**	2.50	25	*e*P	Pn	23 53 18.3	-0.1
SVB				*e*S	Sn	23 53 48.1	-0.7
SLAC	**Saint Lucia, A**	3.21	26	*e*P	Pn	23 53 28.3	+0.5
SLAC				*e*S	Sn	23 54 04.9	-0.6
SLBI	**Saint Lucia, B**	3.29	23	*e*P	Pn	23 53 29.2	+0.4
SLBI				*e*S	Sn	23 54 07.1	-0.3
BIM	**Bigot**	3.72	19	*e*P	Pn	23 53 35.1	+0.6
BIM				*e*S	Sn	23 54 16.9	-0.6
SVN	**Savane Anatole**	4.00	16	*e*P	Pn	23 53 38.9	+0.6
DSLB	**Salisbury**	4.51	11	*e*P	Pn	23 53 47.1	+2.0
TACV	**Tcata**	4.70	260	*e*P	Pn	23 53 49.5	+1.8
TACV				*e*S	Sn	23 54 38.9	-2.3
BENV	**Beln**	5.29	259	*e*P	Pn	23 53 57.1	+1.5
BENV				*e*S	Sn	23 54 52.3	-3.1
CACV	**CAICARA DEL OR**	5.37	231	*e*P	Pn	23 53 52.5	-4.3
CACV				*e*S	Sn	23 54 46.5	-11
BAUV	**El Baul**	5.99	251	*e*P	Pn	23 54 05.5	+0.5
BAUV				*e*S	Sn	23 55 09.0	-3.3
BAUV	**El Baul**	5.99	251	*e*P	Pn	23 54 05.5	+0.5
BAUV				*e*S	Sn	23 55 09.7	-2.6
ANBD	**Bethesda, Anti**	6.05	5	*e*P	Pn	23 54 08.7	+2.8
JACV	**Jacura**	6.39	272	*e*P	Pn	23 54 11.9	+1.4
TEPV	**Terepaima**	6.83	262	*e*P	Pn	23 54 16.9	+0.4

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*CATAC **03** 00:00:04.9±0.6, 13°N±3°×8°9W±°, h26^{km}±3^{km}, M3.0/16, MLv3.0/16, Error ellipse: s-maj=7.2km s-min=4.1km az=23.6, confirmed*

*GCG **03** 00:00:05.9±0.3, 13°.11N×89°.53W, h52^{km}±8^{km}, MD3.3*

*SNET **03** 00:00:05.1±1.0, 13°.11N×89°.50W, h59^{km}, ML3.0*

ISC 03 00:00:05.2±2.5**, 13°.01N**±0°.10×**89°.48W**±0°.06**, h33**^{km}±3^{km}**, n50, σ0ˢ.49**/56**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	0.50	18	P	Pb	00 00 15.8	0.0
LALI	**Alcalda de L**	0.50	18	S	Sn	00 00 23.8	+0.3
JAYA	**Jayaque - finc**	0.64	3	*e*P	Pn	00 00 17.8	-0.3
JAYA				*e*S	Sb	00 00 26.5	-0.7
JAYA	**Jayaque - finc**	0.64	3	*i* P	Pn	00 00 17.8	-0.3
JAYA				*e*S	Sb	00 00 27.1	-0.1
JAYA	**Jayaque - finc**	0.64	3	P	Pn	00 00 17.9	-0.3
PANCS	**Alcalda de**	0.67	26	S	Sb	00 00 27.3	-0.3
ITCA	**Escuela Especi**	0.69	17	S	Sb	00 00 28.5	+0.1
LOMA	**Loma Larga**	0.70	25	*e*P	Pn	00 00 18.9	0.0
LOMA				*e*S	Sb	00 00 29.1	+0.4
LOMA	**Loma Larga**	0.70	25	P	Pn	00 00 18.7	-0.2
PMON	**Piamonte**	0.72	13	P	Pn	00 00 18.9	-0.2
PMON	**Piamonte**	0.72	13	S	Sb	00 00 29.2	0.0
LFRS	**El Faro**	0.73	34	*e*P	Pn	00 00 19.2	-0.1
UEES	**Universidad Ev**	0.74	18	S	Sn	00 00 29.6	0.0
UEES	**Universidad Ev**	0.74	18	P	Pn	00 00 19.1	-0.3
BOQS	**Boqueron**	0.75	15	*e*P	Pn	00 00 19.5	-0.1
IGN	**Direccin Gen**	0.76	23	S	Sb	00 00 30.7	+0.4
UDBS	**Universidad Do**	0.77	24	S	Sb	00 00 30.8	+0.3
CEVE	**Cerro Verde**	0.82	350	*e*P	Pn	00 00 20.7	0.0
CEVE				*e*S	Sb	00 00 33.2	+0.9
CEVE	**Cerro Verde**	0.82	350	P	Pn	00 00 20.7	0.0
COEG	**Centro de Oper**	0.84	44	*e*P	Pn	00 00 20.4	-0.3
COEG				*e*S	Sn	00 00 32.0	0.0
COEG	**Centro de Oper**	0.84	44	P	Pn	00 00 20.3	-0.5
TECO	**Alcaldia de Te**	0.86	52	P	Pn	00 00 20.5	-0.5
TECO	**Alcaldia de Te**	0.86	52	S	Sn	00 00 32.3	-0.1
PAVA	**Las Pavas**	0.88	37	P	Pn	00 00 21.3	0.0
PAVA	**Las Pavas**	0.88	37	S	Sb	00 00 33.5	-0.1
UESV	**Universidad de**	0.92	47	S	Sn	00 00 33.8	0.0
UESV	**Universidad de**	0.92	47	P	Pn	00 00 21.6	-0.2
NUBE	**Las Nubes**	0.93	342	*i* P	Pn	00 00 21.9	-0.2
NUBE	**Las Nubes**	0.93	342	P	Pn	00 00 21.9	-0.2
NUBE	**Las Nubes**	0.93	342	S	Sn	00 00 33.7	-0.7
ALJI	**Alcalda de J**	0.94	70	P	Pn	00 00 21.9	-0.1
ALJI	**Alcalda de J**	0.94	70	S	Sn	00 00 34.5	+0.1
UNIC	**Universidad Ca**	0.97	356	S	Sn	00 00 35.5	+0.4
SCLA	**Alcaldia de Sa**	1.00	47	S	Sn	00 00 36.5	+0.4
SCLA	**Alcaldia de Sa**	1.00	47	P	Pn	00 00 23.1	+0.1
SLOZ	**Alcaldia de Sa**	1.05	344	P	Pn	00 00 24.0	+0.3
SLOZ	**Alcaldia de Sa**	1.05	344	S	Sb	00 00 38.3	-0.2
PQSS	**Presa 15 de Se**	1.08	56	P	Pn	00 00 23.8	-0.3
PQSS	**Presa 15 de Se**	1.08	56	S	Sn	00 00 37.6	-0.3
PACA	**Pacayal**	1.21	68	*e*P	Pn	00 00 26.4	+0.4
PACA				*e*S	Sn	00 00 42.0	+0.6
PACA	**Pacayal**	1.21	68	P	Pn	00 00 26.3	+0.4
RANC	**El Ranchito**	1.23	70	S	Sn	00 00 40.4	-1.5
RANC	**El Ranchito**	1.23	70	P	Pn	00 00 24.3	-2.0
BLLM	**Bellamira**	1.28	70	*e*P	Pn	00 00 27.3	+0.4
MTO3	**Montecristo**	1.39	5	*e*P	Pn	00 00 28.5	0.0
MTO3	**Montecristo**	1.39	5	P	Pn	00 00 28.4	0.0
MTO3	**Montecristo**	1.39	5	S	Sn	00 00 45.9	+0.2
ESQI	**Esquipulas**	1.55	5	P	Pn	00 00 30.3	-0.2
CNCH	**Conchagua**	1.62	80	P	Pn	00 00 31.8	+0.2
CNCH	**Conchagua**	1.62	80	S	Sn	00 00 52.5	+1.0

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*NEIC **03** 00:06:42.8±0.8, 50°.07N±0°.08×179°.8W±0°.1, h9^{km}±17^{km}, ML3.2/8, ML2.9(AEIC), Error ellipse: s-maj=12.6km s-min=11.0km az=131.0*

*AEIC **03** 00:06:43.5±1.2, 50°.14N±0°.07×179°.6W±0°.1, h1^{km}±9^{km}, Error ellipse: s-maj=12.8km s-min=8.7km az=125.0*

*IDC **03** 00:06:48.0±3.8, 51°.14N×179°.89E, h0^{km}, mb3.4/4, mbtmp3.5/5, ML3.2/1, Error ellipse: s-maj=87.4km s-min=28.1km az=3.0*

ISC 03 00:06:41.6±1.6**, 50°.0N**±0°.1×**179°.86W**±0°.07**, h10**^{km}**, n22, σ0ˢ.54**/23**, mb3.7**/5**, South of Aleutian Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GASW	**Gareloi Southw**	1.90	19		Pn	00 07 14.2	+0.1
GASW					Sn	00 07 38.6	+0.5
GALAA	**Gareloi Lava P**	1.91	21		Pn	00 07 14.1	0.0
GANO	**Gareloi North**	1.95	20		Pn	00 07 15.1	+0.3
GANE	**Gareloi Northe**	1.96	20		Pn	00 07 15.0	+0.2
TASE	**Tanaga Southea**	2.18	31		Pn	00 07 18.2	+0.3
TAFP	**Tanaga Falls P**	2.25	31		Pn	00 07 19.2	+0.3
TAFP					Sn	00 07 46.4	-0.3
KIWB	**Kanaga Island**	2.54	42		Pn	00 07 22.6	-0.2
KIRH	**Kanaga Island**	2.59	41		Pn	00 07 24.0	+0.4
ADK	**Adak**	2.77	45		Pn	00 07 25.9	0.0
ADK				IAML		00 08 04.1	
	83nm,0.3s						
ADK	**Adak**	2.77	45		Sn	00 07 58.8	-0.6
GSCK	**Great Sitkin C**	3.09	48		Pn	00 07 31.1	+0.6
GSTR	**Great Sitkin T**	3.19	47		Pn	00 07 32.5	+0.6
ATKA	**Atka Island**	4.20	56		Pn	00 07 45.6	-0.1
ATKA				IAML		00 08 39.6	
	comp=N,30nm,0.7s						
SHEM	**Shemya Is, Ala**	4.67	308	Pn	Pn	00 07 52.4	+0.2
SHEM				IAML		00 09 59.2	
	comp=E,29nm,1.1s						
SHEM				IAML		00 10 42.4	
	comp=N,18nm,1.2s						
SMY	**Shemya**	4.67	308	Pn	Pn	00 07 52.6	+0.5
NIKH	**Nikolski High**	7.49	62	Pn	Pn	00 08 30.9	+0.1
PETK	**Petropavlovsk-**	14.29	291	Pn	Pn	00 10 03.6	-0.2
	comp=N,0.6nm,0.3s,baz=91,slow=16,SNR=20						
	comp=N,1.0nm,0.3s						
ILAR	**Eielson Array**	22.76	37	P	P	00 11 42.4	-1.3
	comp=N,0.2nm,0.7s,baz=243,slow=10,SNR=3.0						
	comp=N,0.2nm,0.7s						
YAK	**Yakutsk**	29.85	313	P	P	00 12 48.4	-0.3
	comp=N,16nm,0.4s,baz=73,slow=1.4,SNR=2.4						
YKA	**Yellowknife Ar**	36.69	45	P	P	00 13 49.5	+1.3
	comp=N,1.1nm,0.8s,baz=285,slow=8.9,SNR=6.3						
	comp=N,1.1nm,0.8s						
PDAR	**Pinedale Array**	47.40	70	P	P	00 15 22.8	+6.7
	comp=N,0.3nm,0.6s,baz=309,slow=7.7,SNR=2.6						
	comp=N,0.3nm,0.6s						
SPITS	**Spitsbergen Ar**	51.71	356	P	P	00 15 48.1	-0.1
	comp=N,0.7nm,0.4s,baz=26,slow=7.8,SNR=9.0						
	comp=N,0.7nm,0.4s						

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*IDC **03** 00:14:11.8±1.6, 13°.83S×166°.91E, h0^{km}, mb4.0/4, mbtmp4.0/5, ML4.1/1, Error ellipse: s-maj=53.6km s-min=28.4km az=126.0*

*NOU **03** 00:14:27.8, 14°.68S×167°.44E, h137^{km}, MLv4.6/14, Vanuatu Islands*

ISC 03 00:14:27.5±1.1**, 14°.69S**±0°.09×**167°.4E**±0°.2**, h150**^{km}**, n14, σ0ˢ.90**/15**, mb3.9**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLAKA	**Lakatoro**	1.41	180	P	Pn	00 14 55.7	-0.4
VLAKA	**Lakatoro**	1.41	180	S	Sn	00 15 17.4	-0.7
DVP	**Devils Point**	3.11	167	P	Pn	00 15 14.4	-1.8
LUES	**Luesalemba Tem**	4.26	340	P	Pn	00 15 31.2	0.0
KOUNC	**Koumac, New Ca**	6.56	207	P	Pn	00 16 02.4	+0.8

YATNC	**Mamie plateau,**	**7.35**	**184**	P	**Pn**	**00 16 11.6**	**-0.6**
DZM	**Mont Dzumac**	**7.41**	**187**	Pn	**Pn**	**00 16 13.0**	**0.0**
	2.2nm,0.3s,baz=19,slow=18,SNR=22						
DZM				Sn	**Sn**	**00 17 36.0**	**+0.2**
	0.7nm,0.3s,baz=330,slow=20,SNR=1.6						
	4.6nm,0.3s						
DZM	**Mont Dzumac**	**7.41**	**187**	P	**Pn**	**00 16 13.5**	**+0.5**
OUENC	**Ouen Island, N**	**7.71**	**184**	P	**Pn**	**00 16 18.2**	**+1.2**
STKA	**Stephens Creek**	**29.14**	**230**	P	**P**	**00 20 15.1**	**+0.6**
	1.8nm,0.4s,baz=53,slow=9.1,SNR=6.9						
	1.8nm,0.4s						
WRA	**Warramunga Arr**	**31.99**	**256**	P	**P**	**00 20 38.7**	**-1.0**
	0.7nm,0.3s,baz=78,slow=9.7,SNR=2.3						
	0.7nm,0.3s						
ASAR	**Alice Springs**	**32.83**	**249**	P	**P**	**00 20 46.4**	**-0.7**
	1.0nm,0.4s,baz=76,slow=9.2,SNR=21						
	1.0nm,0.4s						
ILAR	**Eielson Array**	**86.44**	**18**	P	**P**	**00 26 53.5**	**+0.8**
	0.3nm,0.6s,baz=237,slow=3.2,SNR=4.9						
	0.3nm,0.6s						
ARCES	**ARCESS Array B**	**120.25**	**345**	PKP	**PKiKP**	**00 33 01.0**	**+0.8**
	2.8nm,0.9s,baz=64,slow=2.1,SNR=3.9						

IDC ***03*** *00:42:53.1±0.5, 3°.77N×96°.85E, h0km, mb4.0/17, mbtmp4.0/17, MS3.6/36, Error ellipse: s-maj=25.6km s-min=10.6km az=45.0*
NEIC ***03*** *00:42:59.3±2.0, 3°.66N±0°.05×96°.90E±0°.06, h46km±5km, mb4.6/49, Error ellipse: s-maj=8.6km s-min=7.5km az=48.0*
DJA ***03*** *00:42:59.0±0.4, 4°N±2°×9°7E±°, h36km±4km, M4.9/29, mb4.9/29, mB5.3/8, MLv5.1/13, Mw(mB)4.8/8*
ISC 03 00:42:58.3±0.4**, 3°.59N**±0°.05×**96°.89E**±0°.05**, h35**km**, n172,** σ**1ˢ.66**/140**, mb4.4**/66**, MS3.6**/36**, 1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	**1.63**	**2**		**Pn**	**00 43 24.9**	**+0.4**
LHMI	**Lhok Sumawe**	**1.63**	**2**	P	**Pn**	**00 43 24.8**	**+0.4**
LHMI				S	**Sn**	**00 43 47.3**	**+3.1**
TSI	**Tuntungan**	**1.68**	**93**	P	**Pn**	**00 43 27.4**	**+2.3**
PSI	**Prapat**	**2.18**	**111**	Pg	**Pn**	**00 43 34.4**	**+2.2**
	72nm,0.3s,baz=281,slow=12,SNR=136						
PSI				LR	LR	00 44 01.1	
	comp=Z,463nm,18.6s,baz=224,slow=29						
PSI				Lg	Lg	00 44 05.4	
	132nm,0.3s,baz=343,slow=13,SNR=4.3						
RPSI	**Rantau Prapat**	**2.22**	**114**		**Pn**	**00 43 33.7**	**+1.1**
GSI	**Gunungsitoli**	**2.38**	**163**		**Pn**	**00 43 35.8**	**+1.0**
GSI	**Gunungsitoli**	**2.38**	**163**	P	**Pn**	**00 43 36.3**	**+1.5**
MNSI	**Mandailing Nat**	**3.87**	**136**	P	**Pn**	**00 43 57.5**	**+2.2**
KULM	**Kulim**	**4.11**	**66**		**Pn**	**00 43 58.8**	**+0.1**
CMBY	**CAMPBELL BAY**	**4.50**	**319**	*e*P	**Pn**	**00 44 06.8**	**+2.9**
CMBY				*e*S	**Sn**	**00 44 59.6**	**+4.5**
CMBY				IAML		00 45 22.0	
	comp=E,2µm,1.9s						
CMBY				IAML		00 45 33.2	
	comp=N,2µm,1.7s						
BKNI	**Bangkinang**	**5.27**	**128**		**Pn**	**00 44 16.1**	**+1.5**
BKNI	**Bangkinang**	**5.27**	**128**	P	**Pn**	**00 44 16.5**	**+1.9**
PPI	**Padang Panjang**	**5.34**	**139**	P	**Pn**	**00 44 18.4**	**+2.9**
	comp=N,1.0nmcomp=N,1µmcomp=N,119nm,0.8s						
SISI	**Saibi**	**5.36**	**156**	P	**Pn**	**00 44 18.1**	**+2.3**
	comp=N,0.9nmcomp=N,89nm,1.2s						
MYKOM	**Kota Tinggi**	**7.18**	**104**		**Pn**	**00 44 41.5**	**+0.6**
TPRI	**Tanjung Pinang**	**8.08**	**109**	P	**Pn**	**00 44 55.1**	**+1.9**
MNAI	**Manna**	**9.96**	**142**	Pn	**Pn**	**00 45 19.4**	**+0.3**
MNAI	**Manna**	**9.96**	**142**	P	**Pn**	**00 45 20.1**	**+1.1**
PMBI	**Palembang**	**10.20**	**129**	P	**Pn**	**00 45 23.1**	**+0.8**
DGPR	**DIGLIPUR**	**10.29**	**338**	*e*P	**Pn**	**00 45 24.1**	**+0.5**
DGPR				IAmb	IAmb	00 45 37.4	
	comp=Z,42nm,1.3s						
DGPR				*e*S	**Sn**	**00 47 18.2**	**+0.4**
MDSI	**Maura Dua**	**10.84**	**138**	P	**Pn**	**00 45 32.3**	**+1.2**
	comp=Z,45nm,0.8s						
LWLI	**Liwa**	**11.16**	**140**	P	**Pn**	**00 45 37.1**	**+1.6**
KLI	**Kotabumi**	**11.57**	**136**	P	**Pn**	**00 45 42.2**	**+1.1**
BLSI	**Bandar Lampung**	**12.20**	**137**	P	**Pn**	**00 45 50.7**	**+0.9**
UBPT	**Khong Chiam**	**14.36**	**35**		**P**	**00 46 24.8**	**-1.0**
LEM	**Lembang**	**14.90**	**134**	LR	LR	00 53 25.5	
	comp=Z,316nm,18.9s,baz=292,slow=42						
CMAR	**Chiang Mai Arr**	**14.91**	**8**	Pn	**P**	**00 46 32.2**	**+0.3**
	baz=199,slow=12						
CMAR				Lg	Lg	00 50 40.8	
	comp=Z,0.8nm,0.3s,baz=180,slow=19,SNR=4.4						
CMAR				LR	LR	00 52 29.2	
	comp=Z,272nm,19.2s,baz=200,slow=39						
PALK	**Pallekele**	**16.52**	**283**	Pn	**Pn**	**00 46 47.4**	**-0.2**
PALK				IAmb	IAmb	00 46 54.2	
	comp=Z,49nm,1.2s						
PALK	**Pallekele**	**16.52**	**283**	Pn	**P**	**00 46 51.8**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=96,slow=12,SNR=6.7						
PALK				LR	LR	00 52 37.8	
	comp=Z,196nm,20.0s,baz=104,slow=36						
SLVN	**Son La**	**18.91**	**21**	P	**P**	**00 47 13.2**	**-3.0**
MDRS	**Chennai**	**18.95**	**301**	*e*P	**Pn**	**00 47 18.5**	**+1.0**
MDRS				*e*S	**S**	**00 50 49.7**	**-0.3**
QIZ	**Qiongzhong**	**19.89**	**39**	P	**Pn**	**00 47 29.6**	**+0.9**
QIZ				S	**S**	**00 51 09.9**	**+0.8**
QIZ				LR	LR		
	comp=E,390nm,16.3s						
QIZ				LR	LR		
	comp=Z,200nm,15.3s						
RAGD	**RAYAGADA**	**20.35**	**321**	*e*P	**P**	**00 47 32.2**	**+0.4**
RAGD				IAmb	IAmb	00 48 12.9	
	comp=Z,12nm,0.7s						
RAGD				*e*S	**S**	**00 51 18.8**	**+0.6**
KOD	**Kodaikanal**	**20.37**	**290**	*e*P	**P**	**00 47 32.9**	**+0.5**
KOD				IAMb		00 47 36.4	
	comp=Z,37nm,1.4s						
KOD				*e*S	**S**	**00 51 19.0**	**-0.1**
MYLDM	**Lahad Datu**	**21.61**	**85**	P	**P**	**00 47 43.6**	**-1.9**
MYLDM				IAmb	IAmb	00 48 01.9	
	comp=Z,53nm,1.3s						
SRBI	**Singaraja**	**21.65**	**122**	P	**P**	**00 47 47.5**	**+1.6**
	comp=Z,99nm,0.8s						
KOHI	**KOHIMA**	**22.16**	**353**	*e*P	**P**	**00 47 51.9**	**+0.4**
KOHI				IAmb	IAmb	00 48 04.5	
	comp=Z,46nm,1.5s						
KOHI				*e*S	**S**	**00 51 53.8**	**0.0**
PZH	**PanZhiHua**	**23.25**	**11**	P	**P**	**00 48 04.6**	**+1.8**
PZH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,4.8s						
TWSI	**Taliwang, Sumb**	**23.40**	**122**	P	**P**	**00 48 03.8**	**-0.5**
	comp=Z,39nm,1.1s						
ZIRO	**ZIRO**	**23.98**	**353**	*e*P	**P**	**00 48 10.1**	**+0.2**
ZIRO				IAmb	IAmb	00 48 25.2	
	comp=Z,23nm,0.1s						
ZIRO				*e*S	**S**	**00 52 24.4**	**-0.2**
TOLI2	**Tolitoli**	**24.00**	**95**	P	**P**	**00 48 06.2**	**-3.8**
TOLI2				IAmb	IAmb	00 48 17.1	
	comp=Z,28nm,0.9s						
PLAI	**Plampang**	**24.21**	**121**	P	**P**	**00 48 11.4**	**-0.5**
	comp=Z,75nm,0.7s						
KAPI	**Kappang**	**24.39**	**110**	P	**P**	**00 48 13.8**	**+0.3**
KAPI	**Kappang**	**24.39**	**110**	LR	LR	00 58 20.2	
	comp=Z,192nm,18.8s,baz=261,slow=38						
GTOI	**Gorontalo**	**26.27**	**96**	P	**P**	**00 48 31.0**	**+0.4**
	comp=Z,14nm,0.7s						
H08S2	**Diego Garcia H**	**26.78**	**245**	T	T	01 15 45.0	
	baz=68,slow=76,SNR=257						
H08S3	**Diego Garcia H**	**26.78**	**245**	T	T	01 15 50.0	
	baz=68,slow=76,SNR=200						
H08S1	**Diego Carcia H**	**26.80**	**245**	T	T	01 15 48.5	
	baz=68,slow=76,SNR=173						
EDFI	**Ende, Flores**	**27.60**	**116**	P	**P**	**00 48 44.0**	**+1.2**
	comp=Z,17nm,1.1s						
DAV	**Davao City (W)**	**28.77**	**82**	LR	LR	01 02 46.1	
	comp=Z,76nm,18.3s,baz=208,slow=42						
XAN	**Xi'an**	**32.30**	**19**	⇓P	**P**	**00 49 25.0**	**+0.9**
XAN				pP	pP	00 49 34.5	0.0
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
XAN				LR	LR		
	comp=N,320nm,15.2s						
XAN				LR	LR		
	comp=E,460nm,15.8s						
XAN				LR	LR		
	comp=Z,320nm,13.1s						
LZH	**Lanzhou**	**32.97**	**10**	*e*P	**P**	**00 49 32.2**	**+2.2**
LZH				LR	LR		
	comp=E,320nm,17.9s						
LZH				LR	LR		
	comp=Z,150nm,18.2s						
NJ2	**Nanjing**	**35.03**	**34**	*e*P	**P**	**00 49 47.9**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NJ2				LR	LR		
	comp=N,190nm,16.1s						
NJ2				LR	LR		
	comp=E,290nm,15.2s						
NJ2				LR	LR		
	comp=Z,400nm,17.1s						
FITZ	**Fitzroy Crossi**	**35.61**	**128**	LR	LR	01 04 31.0	
	comp=Z,120nm,20.8s,baz=315,slow=36						
GTA	**Gaotai**	**35.75**	**4**	*e*P	**P**	**00 49 58.4**	**+4.4**
GTA				sS	sS	00 55 54.8	+9.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				LR	LR		
	comp=N,85nm,12.7s						
GTA				LR	LR		
	comp=E,140nm,13.4s						
GTA				LR	LR		
	comp=Z,110nm,10.2s						
HHC	**Hu-ho-hao-te**	**39.38**	**18**	*e*P	**P**	**00 50 27.7**	**+3.0**
HHC				pmax	pmax		
	comp=Z,16nm,0.9s						
NWAO	**Narrogin (SRO)**	**41.12**	**154**	LR	LR	01 05 38.8	
	comp=Z,41nm,21.1s,baz=328,slow=33						
H01W3	**Cape Leeuwin H**	**41.57**	**158**	T	T	01 34 17.9	
	baz=333,slow=76,SNR=5.7						
H01W2	**Cape Leeuwin H**	**41.58**	**158**	T	T	01 34 13.3	
	baz=333,slow=76,SNR=5.9						
H01W1	**Cape Leeuwin H**	**41.58**	**158**	T	T	01 34 21.0	
	baz=333,slow=76,SNR=4.8						
DRK	**Karamyk**	**42.35**	**331**	P	**P**	**00 50 47.6**	**-1.9**
SIMJ	**Simiganj**	**43.16**	**328**	P	**P**	**00 50 53.6**	**-2.3**
BTK	**Batken**	**43.28**	**331**	P	**P**	**00 50 53.6**	**-3.2**
WB0	**Warramunga Arr**	**43.55**	**124**		**P**	**00 50 57.9**	**-1.3**
WB0				IAmb	IAmb	00 51 04.5	
	comp=Z,14nm,0.6s						
XLT	**XiLinHaoTe**	**43.58**	**20**	*e*P	**P**	**00 50 57.5**	**-1.6**
XLT				pP	pP	00 51 09.9	+0.3
XLT				pmax	pmax		
	comp=Z,7.0nm,0.5s						
WRA	**Warramunga Arr**	**43.59**	**124**	P	**P**	**00 50 59.9**	**+0.4**
	comp=Z,11nm,0.6s,baz=301,slow=9.4,SNR=38						
WB2	**Warramunga Arr**	**43.60**	**124**	P	**P**	**00 50 59.2**	**-0.3**
AAK	**Ala-Archa**	**43.70**	**336**	P	**P**	**00 50 58.2**	**-2.0**
AAK	**Ala-Archa**	**43.70**	**336**	LR	LR	01 10 59.9	
	comp=Z,105nm,18.3s,baz=153,slow=39						
WR8	**Warramunga Arr**	**43.73**	**124**		**P**	**00 50 60.0**	**-0.6**
SONM	**Songino Array**	**44.83**	**9**	P	**P**	**00 51 08.1**	**-1.0**
SONM	**Songino Array**	**44.83**	**9**	P	**P**	**00 51 09.0**	**0.0**
	comp=Z,0.6nm,0.3s,baz=190,slow=7.3,SNR=2.9						
	comp=Z,0.6nm,0.3s						
MKAR	**Makanchi Array**	**44.86**	**346**	P	**P**	**00 51 05.7**	**-3.5**
MKAR	**Makanchi Array**	**44.86**	**346**	P	**P**	**00 51 07.0**	**-2.2**
	comp=Z,0.4nm,0.3s,baz=154,slow=9.3,SNR=7.5						
MKAR				LR	LR	01 12 10.8	
	comp=Z,47nm,21.7s,baz=150,slow=39						
	comp=Z,0.4nm,0.3s						
MAKZ	**Makanchi**	**44.95**	**346**	P	**P**	**00 51 08.3**	**-1.7**
AS31	**Alice Springs**	**45.10**	**129**		**P**	**00 51 10.9**	**-0.6**
ASAR	**Alice Springs**	**45.10**	**129**	P	**P**	**00 51 10.5**	**-1.0**
ASAR	**Alice Springs**	**45.10**	**129**	P	**P**	**00 51 12.2**	**+0.7**
	comp=Z,4.5nm,0.6s,baz=301,slow=8.1,SNR=18						
ASAR				PcP	**PcP**	**00 52 54.2**	**+2.3**
	comp=Z,1.6nm,0.8s,baz=309,slow=2.8,SNR=4.9						
ASAR				LR	LR	01 09 32.0	
	comp=Z,82nm,22.0s,baz=271,slow=35						
	comp=Z,4.5nm,0.6s						
FORT	**Forrest**	**45.31**	**141**	P	**P**	**00 51 13.0**	**0.0**
KK31	**Karatay Array**	**45.79**	**333**	P	**P**	**00 51 15.8**	**-0.9**
KKAR	**Karatay Array**	**45.79**	**333**	P	**P**	**00 51 14.8**	**-1.9**
KURBB	**Kurchatov Arra**	**49.35**	**345**	P	**P**	**00 51 42.4**	**-1.8**
	comp=Z,0.7nm,0.6s,baz=161,slow=6.7,SNR=4.9						
KURBB				PcP	**PcP**	**00 53 06.5**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=165,slow=6.5,SNR=1.3						
	comp=Z,0.7nm,0.6s						
ZAA0	**Zalesovo Array**	**51.16**	**351**	IAmb	IAmb	00 52 09.0	
	comp=Z,2.8nm,0.7s						
ZALV	**Zalesovo Beam**	**51.16**	**351**	P	**P**	**00 51 57.1**	**-0.7**
	comp=Z,0.8nm,0.4s,baz=155,slow=6.4,SNR=7.6						
ZALV				LR	LR	01 15 25.5	
	comp=Z,37nm,20.8s,baz=179,slow=38						
	comp=Z,0.8nm,0.4s						
RAYN	**Ar Rayn**	**53.38**	**297**		**P**	**00 52 14.7**	**-0.2**
RAYN				IAmb	IAmb	00 52 23.7	
	comp=Z,5.2nm,0.7s						
BVAR	**Borovoye Array**	**53.90**	**341**	P	**P**	**00 52 15.7**	**-2.4**
	comp=Z,0.8nm,0.6s,baz=139,slow=9.9,SNR=4.9						
BVAR				LR	LR	01 19 06.7	
	comp=Z,34nm,18.4s,baz=147,slow=40						
	comp=Z,0.8nm,0.6s						
JTM	**Tenmabayashi**	**54.27**	**41**	P	**P**	**00 52 19.4**	**-1.6**
JTM				IAmb	IAmb	00 52 20.8	
	comp=Z,10nm,1.2s						
VOI	**Vohitsoka**	**55.14**	**240**	P	**P**	**00 52 26.7**	**-1.1**
STKA	**Stephens Creek**	**55.20**	**133**	P	**P**	**00 52 28.3**	**+0.4**
STKA	**Stephens Creek**	**55.20**	**133**	P	**P**	**00 52 29.2**	**+1.3**
	comp=Z,5.6nm,0.7s,baz=300,slow=7.7,SNR=9.0						
STKA				LR	LR	01 20 42.0	
	comp=Z,46nm,18.0s,baz=17,slow=41						
	comp=Z,5.6nm,0.7s						
AB31	**Akbulak array**	**55.27**	**331**	P	**P**	**00 52 27.9**	**-0.2**
AB31				IAmb	IAmb	00 52 40.2	
	comp=Z,2.8nm,0.9s						
ABKAR	**Akbulak array**	**55.27**	**331**	P	**P**	**00 52 27.0**	**-1.1**
ABKAR	**Akbulak array**	**55.27**	**331**	P	**P**	**00 52 27.5**	**-0.7**
ABKAR				IAmb	IAmb	00 52 40.2	
	comp=Z,2.8nm,0.9s						
ASAJ	**Asahikawa**	**56.97**	**38**	LR	LR	01 19 56.4	
	comp=Z,33nm,18.1s,baz=110,slow=39						
GNI	**Garni**	**59.37**	**315**		P	00 53 04.7	+7.2
GNI				IAmb	IAmb	00 53 05.8	
	comp=Z,8.0nm,1.1s						
GNI	**Garni**	**59.37**	**315**	LR	LR	01 20 57.7	
	comp=Z,16nm,19.6s,baz=96,slow=39						
GURO	**Guroymak-BITLI**	**60.72**	**313**	P	**P**	**00 53 05.8**	**-0.9**
GURO				IAmb	IAmb	00 53 12.5	
	comp=Z,6.8nm,1.3s						
ARTI	**Arti**	**60.91**	**337**	LR	LR	01 21 31.4	
	comp=Z,63nm,20.1s,baz=136,slow=38						
MARD	**Mardin**	**61.23**	**311**	P	**P**	**00 53 09.5**	**-0.7**
MARD				IAmb	IAmb	00 53 16.1	
	comp=Z,5.5nm,0.7s						
KBZ	**Khabaz**	**62.08**	**318**	P	**P**	**00 53 14.0**	**-1.6**
	comp=Z,2.1nm,0.9s,baz=122,slow=5.5,SNR=5.2						
	comp=Z,2.1nm,0.9s						
KIV	**Kislovodsk**	**62.31**	**319**		**P**	**00 53 15.0**	**-2.3**
KIV				IAmb	IAmb	00 53 22.8	
	comp=Z,11nm,1.1s						
ASF	**Jabal al Asfar**	**62.85**	**304**	LR	LR	01 23 19.1	
	comp=Z,41nm,18.0s,baz=131,slow=39						
BELG	**Belogornoye**	**63.36**	**329**	LR	LR	01 25 10.6	
	comp=Z,45nm,18.6s,baz=122,slow=40						
H04N2	**CROZET ISLANDS**	**63.58**	**213**	T	T	02 01 17.7	
	baz=52,slow=75,SNR=227						
H04N1	**CROZET ISLANDS**	**63.59**	**213**	T	T	02 01 21.8	
	baz=52,slow=75,SNR=796						
H04N3	**CROZET ISLANDS**	**63.59**	**213**	T	T	02 01 15.7	
	baz=52,slow=75,SNR=208						
GAZ	**Gaziantep**	**63.90**	**310**	P	**P**	**00 53 28.3**	**+0.3**
GAZ				IAmb	IAmb	00 53 35.2	
	comp=Z,6.1nm,1.0s						
H04S1	**CROZET ISLANDS**	**63.93**	**213**	T	T	02 01 53.5	
	baz=51,slow=74,SNR=39						
EIL	**Elat**	**63.94**	**301**	LR	LR	01 21 46.8	
	comp=Z,49nm,18.8s,baz=60,slow=37						
H04S3	**CROZET ISLANDS**	**63.94**	**213**	T	T	02 01 41.6	
	baz=51,slow=74,SNR=56						
H04S2	**CROZET ISLANDS**	**63.95**	**213**	T	T	02 01 45.9	
	baz=51,slow=74,SNR=34						
MMAI	**Mount Meron Ar**	**64.27**	**305**	LR	LR	01 24 27.1	
	comp=Z,33nm,18.5s,baz=130,slow=39						
TOKA	**Tokat**	**65.36**	**313**	P	**P**	**00 53 37.1**	**-0.3**
TOKA				IAmb	IAmb	00 53 53.9	
	comp=Z,3.1nm,0.7s						
BNN	**Bunyan**	**65.40**	**311**	P	**P**	**00 53 35.4**	**-2.4**
NRIK	**Noril'sk**	**65.94**	**356**	P	**P**	**00 53 41.1**	**+0.6**
NRIK	**Noril'sk**	**65.94**	**356**	P	**P**	**00 53 41.0**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=174,slow=9.1,SNR=4.4						
NRIK				LR	LR	01 26 31.6	
	comp=Z,49nm,19.7s,baz=164,slow=40						
	comp=Z,0.7nm,0.4s						
KIRV	**Kirov**	**66.02**	**335**	LR	LR	01 25 32.8	
	comp=Z,31nm,18.5s,baz=134,slow=39						
BR131	**Keskin Array S**	**67.29**	**312**	P	**P**	**00 53 48.1**	**-1.8**
BR131				IAmb	IAmb	00 54 06.3	
	comp=Z,2.4nm,0.8s						
BRTR	**Keskin Array B**	**67.29**	**312**	P	**P**	**00 53 48.5**	**-1.4**
	comp=Z,0.8nm,0.6s,baz=132,slow=6.8,SNR=10						
	comp=Z,0.8nm,0.6s						
ANTO	**Ankara**	**67.95**	**312**	P	**P**	**00 53 51.2**	**-2.8**
ANTO				IAmb	IAmb	00 54 03.5	
	comp=Z,7.5nm,1.3s						
ISP	**Isparta**	**69.21**	**309**	P	**P**	**00 54 00.9**	**-1.1**
ISP				IAmb	IAmb	00 54 13.7	
	comp=Z,5.4nm,1.1s						
MDUB	**Mudurnu**	**69.29**	**312**	P	**P**	**00 54 01.5**	**-0.8**
MA2	**Magadan**	**69.33**	**26**	LR	LR	01 27 28.8	
	comp=Z,38nm,18.3s,baz=232,slow=39						
ELL	**Elmali**	**69.48**	**308**	P	**P**	**00 54 02.4**	**-1.2**
AKAS	**Kas**	**69.62**	**307**	P	**P**	**00 54 04.2**	**-0.3**
TIXI	**Tiksi**	**70.90**	**10**	LR	LR	01 28 29.9	
	comp=Z,46nm,19.2s,baz=198,slow=39						
SEY	**Seymchan**	**71.70**	**23**	LR	LR	01 27 32.4	
	comp=Z,52nm,19.0s,baz=300,slow=37						
AKASG	**Malin Array Be**	**73.19**	**322**	P	**P**	**00 54 23.7**	**-1.8**
	comp=Z,0.3nm,0.4s,baz=91,slow=4.6,SNR=7.0						
	comp=Z,0.3nm,0.4s						
PINNC	**Pines Island,**	**73.55**	**115**	P	**P**	**00 54 27.9**	**-0.4**
RDO	**Rodhopi**	**73.63**	**312**	P	**P**	**00 54 28.4**	**+0.1**
RDO				IAmb	IAmb	00 54 39.9	
	comp=Z,3.6nm,0.8s						
MLR	**Muntele Rosu**	**74.13**	**316**	P	**P**	**00 54 29.9**	**-1.5**
MLR				IAmb	IAmb	00 54 38.2	
	comp=Z,10nm,1.3s						
MLR	**Muntele Rosu**	**74.13**	**316**	LR	LR	01 33 14.8	
	comp=Z,15nm,18.5s,baz=69,slow=41						
BURAR	**Bucovina Array**	**75.04**	**318**	P	**P**	**00 54 36.2**	**-0.4**
BUR08	**Bucovina Ar. S**	**75.05**	**318**	P	**P**	**00 54 36.5**	**-0.2**
BUR08				IAmb	IAmb	00 54 44.3	
	comp=Z,5.4nm,1.2s						
BOSA	**Boshof**	**75.71**	**239**	P	**P**	**00 54 41.7**	**+0.9**
	comp=Z,2.2nm,0.8s,baz=101,slow=4.0,SNR=3.5						
	comp=Z,2.2nm,0.8s						
KOLS	**Kolonicke sedl**	**77.21**	**319**	*e*P	P	00 54 54.6	+5.8
PABE	**Paberze**	**77.41**	**326**	P	**P**	**00 54 47.5**	**-2.2**
PABE				IAmb	IAmb	00 54 55.4	
	comp=Z,16nm,1.1s						
FINES	**FINESS Array B**	**77.75**	**332**	P	**P**	**00 54 49.0**	**-2.5**
FINES	**FINESS Array B**	**77.75**	**332**	P	**P**	**00 54 50.2**	**-1.3**
	comp=Z,1.7nm,0.9s,baz=104,slow=5.9,SNR=1.9						
FINES				LR	LR	01 33 21.2	
	comp=Z,39nm,19.3s,baz=102,slow=39						
	comp=Z,1.7nm,0.9s						
STHS	**Stebnicka Huta**	**77.95**	**320**	*e*P	P	00 55 00.7	+7.8
GRTLG	**Ghanzi**	**78.01**	**247**	P	**P**	**00 54 51.9**	**-2.1**
PSZ	**Piszkesteto**	**78.63**	**318**	P	**P**	**00 54 58.1**	**+1.3**
PSZ				IAmb	IAmb	00 55 05.9	
	comp=Z,10.0nm,1.5s						
VYHS	**Vyhne**	**79.40**	**319**	*e*P	P	00 55 07.4	+6.5
ARCES	**ARCESS Array B**	**80.19**	**340**	P	**P**	**00 55 04.3**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=103,slow=4.2,SNR=4.0						
ARCES				LR	LR	01 33 17.9	
	comp=Z,68nm,21.4s,baz=92,slow=38						
	comp=Z,1.9nm,0.7s						
MORC	**Moravsky Berou**	**80.38**	**320**	P	**P**	**00 55 04.1**	**-2.2**
MORC				IAmb	IAmb	00 55 12.7	
	comp=Z,4.7nm,1.2s						
VRAC	**Vranov**	**80.95**	**319**	LR	LR	01 36 48.9	
	comp=Z,18nm,18.1s,baz=84,slow=40						
CONA	**Conrad Observa**	**81.33**	**318**	*e*pP	pP	00 55 26.0	+3.6
	comp=Z,2.0nm,1.1s						
OBKA	**Obir**	**82.13**	**316**	*e*pP	pP	00 55 30.7	+4.0
	comp=Z,1.5nm,0.6s						
MOA	**Molln**	**82.39**	**318**	*e*pP	pP	00 55 28.2	+0.2
	comp=Z,2.1nm,1.0s						
PRED	**Cave del Predi**	**82.81**	**316**	P	**P**	**00 55 15.9**	**-3.3**
PRED				IAmb	IAmb	00 55 32.3	
	comp=Z,2.8nm,0.8s						
GERES	**GERESS Array B**	**82.82**	**319**	P	**P**	**00 55 18.9**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=102,slow=5.6,SNR=6.7						
	comp=Z,0.2nm,0.6s						
CMWZ	**Cape Campbell**	**82.96**	**133**	P	**P**	**00 55 17.0**	**-2.9**
KBA	**Koelnbreinsper**	**82.98**	**317**	*e*P	**P**	**00 55 21.0**	**+0.7**
	comp=Z,0.9nm,0.4s						
BHW	**Baring Head**	**83.38**	**132**	P	**P**	**00 55 23.0**	**+0.9**
LESA	**Schwarzleotal**	**83.45**	**317**	*e*P	**P**	**00 55 23.0**	**+0.5**
	comp=Z,1.0nm,0.4s						
HFS	**Hagfors**	**83.51**	**330**	P	**P**	**00 55 21.3**	**-1.1**
	comp=Z,0.9nm,0.7s,baz=79,slow=8.0,SNR=5.9						
HFS				LR	LR	01 36 38.4	
	comp=Z,32nm,19.9s,baz=68,slow=39						
	comp=Z,0.9nm,0.7s						
WTTA	**Wattenberg**	**84.15**	**317**	*e*PcP	**P**	**00 55 27.2**	**+1.0**
	comp=Z,1.4nm,0.5s						
WATA	**Walderalm**	**84.19**	**317**	*e*PcP	**P**	**00 55 30.0**	**+3.6**
	comp=Z,2.3nm,0.6s						
SQTA	**Sankt Quirin**	**84.44**	**317**	*e*PcP	**P**	**00 55 28.6**	**+1.0**
	comp=Z,1.1nm,0.4s						
MOTA	**Moosalm**	**84.52**	**317**	*e*PcP	**P**	**00 55 31.0**	**+2.9**
	comp=Z,1.8nm,0.7s						
URZ	**Urewera**	**84.55**	**129**	LR	LR	01 34 53.2	
	comp=Z,118nm,18.4s,baz=71,slow=37						
SPITS	**Spitsbergen Ar**	**84.56**	**348**	LR	LR	01 40 43.7	
	comp=Z,26nm,18.2s,baz=59,slow=41						
RETA	**Reutte**	**84.75**	**317**	*i* P	**P**	**00 55 29.1**	**0.0**
	comp=Z,1.3nm,0.5s						
FETA	**Feichten**	**84.77**	**317**	*e*P	**P**	**00 55 27.8**	**-1.5**
	comp=Z,0.7nm,0.6s						
NOA	**NORSAR Array B**	**84.78**	**331**	LR	LR	01 37 06.4	
	comp=Z,27nm,19.3s,baz=85,slow=38						
DAVA	**Damuels**	**85.35**	**317**	*i* PcP	**P**	**00 55 36.9**	**+4.7**
	comp=Z,4.1nm,0.8s						
VNDA	**Vanda**	**88.22**	**169**	P	**P**	**00 55 47.0**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=327,slow=7.4,SNR=6.3						
VNDA				LR	LR	01 33 00.9	
	comp=Z,36nm,20.4s,baz=7.5,slow=34						
	comp=Z,0.3nm,0.6s						
BORG	**Borgarnes**	**98.41**	**338**	LR	LR	01 43 34.7	
	comp=Z,19nm,19.7s,baz=18,slow=37						
NVAR	**Mina Array Bea**	**127.02**	**35**	PKP	**PKiKP**	**01 02 00.6**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=242,slow=2.5,SNR=4.6						
PDAR	**Pinedale Array**	**128.02**	**25**	PKP	**PKPdf**	**01 02 01.7**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=67,slow=2.3,SNR=3.5						
CPUP	**Villa Florida**	**146.51**	**225**	PKPbc	**PKPdf**	**01 02 35.5**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=68,slow=5.4,SNR=2.2						
CFA	**Coronel Fontan**	**148.82**	**205**	PKPbc	**PKiKP**	**01 02 44.4**	**+0.1**
	comp=Z,1.3nm,0.5s,baz=142,slow=2.3,SNR=6.9						

IDC ***03*** *00:52:23.0±1.0, 67°.10N×21°.00E, h0km, mbtmp2.9/4, ML1.8/3, Error ellipse: s-maj=19.6km s-min=7.1km az=117.0*
ISC 03 00:52:23.5±1.2**, 67°.08N**±0°.08×**20°.83E**±0°.09**, h10**km**, n7,** σ**1ˢ.32**/7**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALU	**Saltoluokta**	**0.95**	**289**	*e*P	**Pg**	**00 52 41.9**	**+0.1**
HEF	**Hetta**	**1.71**	**38**	*e*P	**Pn**	**00 52 52.1**	**-1.3**
I37NO	**I37NO**	**2.17**	**338**	I	I	01 05 16.3	
	baz=158,slow=341,SNR=3.5						
ARCES	**ARCESS Array B**	**3.01**	**33**	Pn	**Pn**	**00 53 10.5**	**-0.7**
	0.1nm,0.3s,baz=216,slow=13,SNR=8.7						
ARCES				Sn	**Sn**	**00 53 49.3**	**+2.0**
	0.7nm,0.3s,baz=211,slow=16,SNR=14						
ARCES				Lg	Lg	00 53 56.8	
	0.4nm,0.3s,baz=216,slow=30,SNR=5.5						
	1.7nm,0.9s						
FINES	**FINESS Array B**	**6.11**	**156**	Pn	**Pn**	**00 53 53.5**	**-0.2**
	1.1nm,0.8s,baz=341,slow=17,SNR=1.6						
FINES				Lg	Lg	00 55 36.3	
	0.4nm,0.3s,baz=342,slow=30,SNR=8.5						
NOA	**NORSAR Array B**	**7.38**	**219**	Pn	**Pn**	**00 54 12.0**	**+0.8**
	baz=35,slow=11,SNR=1.5						
NOA				Lg	Lg	00 56 17.6	
	baz=51,slow=22,SNR=4.5						
	0.9nm,1.0s						
HFS	**Hagfors**	**7.66**	**208**	Pn	**Pn**	**00 54 14.5**	**-0.5**
	0.1nm,0.3s,baz=28,slow=16,SNR=1.7						
HFS				Lg	Lg	00 56 24.7	
	0.2nm,0.3s,baz=26,slow=24,SNR=6.5						
	2.0nm,1.0s						

IDC ***03*** *01:02:15.2±0.8, 21°.36S×174°.36W, h0km, mb4.2/11, mbtmp4.2/12, ML4.5/1, MS3.6/6, Error ellipse: s-maj=30.0km s-min=19.8km az=129.0*
NEIC ***03*** *01:02:17.0±1.9, 21°.2S±0°.1×173°.57W±0°.09, h10km±1km, mb4.8/30, Error ellipse: s-maj=18.8km s-min=14.9km az=175.0*

ISC 03 01:02:18.2±0.5, 21°.34S±0°.08×173°.9W±0°.1, h25^{km}, n299, σ1^s.56/286, mb4.8/32, MS3.8/6, 2D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	4.33	59	Pn	Pn	01 03 19.0	-3.5
AFI	Afiamalu	7.65	15	Pn	Pn	01 04 04.0	-4.2
MSVF	Nonsavu	8.42	294		Pn	01 04 21.4	+2.5
RAO	Raoul Island	8.69	204	LR	LR	01 08 05.4	
	comp=Z,187nm,18.2s,baz=152,slow=41						
RAR	Rarotonga	13.14	92	Pn	Pn	01 05 19.3	-4.0
	8.2nm,0.3s,baz=256,slow=11,SNR=34						
RAR				Sn	Sn	01 07 33.6	-15
	1.1nm,0.3s,baz=340,slow=19,SNR=1.7						
HAZ	Te Kaha	17.89	202	P	Pn	01 06 23.4	-1.9
PUZ	Puketiti	18.01	200	P	P	01 06 29.2	+2.0
DZM	Mont Dzumac	18.31	264	P	Pn	01 06 28.2	-2.6
	6.7nm,0.8s,baz=86,slow=19,SNR=2.4						
MWZ	Matawai	18.49	202	P	Pn	01 06 34.0	+1.2
URZ	Urewera	18.57	203	P	P	01 06 33.1	-0.2
	1.5nm,0.3s,baz=69,slow=1.5,SNR=10						
	8.8nm,0.5s						
URZ	Urewera	18.57	203	P	Pn	01 06 33.8	+0.2
TOZ	Tahuroa Road	18.75	207	P	Pn	01 06 36.6	+0.8
TLZ	Tolley Road	19.24	206	P	Pn	01 06 42.3	+0.5
BKZ	Black Stump Fm	19.60	203	P	P	01 06 43.7	-1.0
BKZ				IAmb	IAmb	01 07 01.6	
	comp=Z,91nm,1.8s						
TMVZ	Te Maari	19.85	205	P	P	01 06 47.9	+0.4
OTVZ	Oturere	19.91	205	P	P	01 06 47.6	-0.5
SNVZ	South Ngauruho	19.94	205	P	P	01 06 48.8	+0.3
TUVZ	Tukino	20.00	204	P	Pn	01 06 50.7	-0.3
WNVZ	Wahianoa	20.07	204	P	P	01 06 48.5	-1.4
PXZ	Pawanui	20.24	201	P	Pn	01 06 55.2	+1.5
BFZ	Birch Farm	21.03	201	P	P	01 07 00.3	+0.1
MRZ	Mangatainoka R	21.25	203	P	P	01 07 02.2	-0.2
NNZ	Nelson	22.57	206	P	P	01 07 19.1	+2.5
QRZ	Quartz Range	22.60	208	P	P	01 07 18.1	+1.2
PPT	Papeete	23.20	85	LR	LR	01 15 23.1	
	comp=Z,188nm,18.0s,baz=270,slow=33						
THZ	Tophouse	23.22	206	P	P	01 07 20.4	-3.1
THZ	Tophouse	23.22	206	P	P	01 07 23.3	-0.1
DSZ	Denniston Nort	23.66	207	P	P	01 07 29.9	+2.1
GVZ	Greta Valley S	24.19	204	P	P	01 07 30.1	-2.6
LTZ	Lake Taylor	24.33	205	P	P	01 07 35.6	+1.6
INZ	Inchbonnie	24.62	207	P	P	01 07 35.0	-1.5
FOZ	Fox Glacier	25.97	208	P	P	01 07 51.8	+3.0
LBZ	Lake Benmore	26.51	206	P	P	01 07 55.6	+1.9
JCZ	Jackson Bay	26.85	208	P	P	01 07 57.7	+0.8
ODZ	Otahua Downs	26.87	205	P	P	01 07 59.5	+2.6
WHZ	Wether Hill Ro	28.66	207	P	P	01 08 14.9	+2.0
STKA	Stephens Creek	40.93	246	P	P	01 09 56.2	-2.6
	comp=Z,2.8nm,0.9s,baz=98,slow=7.1,SNR=4.0						
	comp=Z,2.8nm,0.9s						
ASAR	Alice Springs	48.09	257	P	P	01 10 51.8	-4.4
	comp=Z,11nm,0.4s,baz=103,slow=7.6,SNR=13						
	comp=Z,11nm,0.4s						
WR8	Warramunga Arr	48.16	262	P	P	01 10 53.1	-3.7
WB0	Warramunga Arr	48.30	262	P	P	01 10 54.2	-3.6
WRA	Warramunga Arr	48.31	262	P	P	01 10 53.8	-4.1
	comp=Z,5.5nm,1.1s,baz=95,slow=8.1,SNR=8.6						
WRA				PcP	PcP	01 12 24.6	0.0
	comp=Z,0.8nm,0.6s,baz=92,slow=3.1,SNR=2.3						
	comp=Z,5.5nm,1.1s						
FORT	Forrest	52.52	247	P	P	01 11 27.9	-1.7
FORT				IAmb	IAmb	01 11 43.0	
	comp=Z,14nm,0.8s						
SBA	Scott Base	57.33	185	P	P	01 12 04.0	+0.4
QSPA	South Pole Qui	68.74	180	P	P	01 13 21.4	+1.6
QSPA				IAmb	IAmb	01 15 50.3	
	comp=Z,18nm,1.9s						
QSPA	South Pole Qui	68.74	180	P	P	01 13 21.0	+1.3
	comp=Z,0.8nm,0.5s,baz=3.3,slow=1.2,SNR=7.2						
	comp=Z,0.8nm,0.5s						
MJAR	Matsushiro Arr	73.22	321	P	P	01 13 47.2	0.0
	comp=Z,2.4nm,0.9s,baz=158,slow=5.8,SNR=5.3						
MJAR				LR	LR	01 45 42.8	
	comp=Z,21nm,18.4s,baz=226,slow=36						
	comp=Z,2.4nm,0.9s						
PET	Petropavlovsk	77.80	343	P	P	01 14 15.4	+2.4
	comp=Z,46nm,1.2s						
PETK	Petropavlovsk-	78.14	343	P	P	01 14 14.8	-0.1
	comp=Z,0.9nm,0.5s,baz=99,slow=9.2,SNR=3.9						
	comp=Z,0.9nm,0.5s						
GMN	Gold Mountain	79.00	43	P	P	01 14 18.4	-1.9
NVAR	Mina Array Bea	79.04	41	P	P	01 14 23.3	+2.8
	comp=Z,1.7nm,0.9s,baz=223,slow=9.0,SNR=10						
	comp=Z,1.7nm,0.9s						
NV11	Mina Array Sit	79.13	41	P	P	01 14 20.4	-0.6
KSRS	Korea Array	80.11	317	P	P	01 14 27.5	+1.4
	comp=Z,1.6nm,0.8s,baz=137,slow=6.5,SNR=7.1						
	comp=Z,1.6nm,0.8s						
KSAR	Wonju Array Be	80.13	317	P	P	01 14 26.1	0.0
Q17K	Contact Creek	80.70	10	P	P	01 14 29.8	+0.9
	baz=197						
KDAK	Kodiak Island	80.80	11	P	P	01 14 30.8	+1.5
	baz=200						
O14K	Tigyukauivet M	80.96	7	P	P	01 14 31.2	+1.1
	baz=192						
Q16K	King Salmon	80.98	9	P	P	01 14 31.6	+1.4
	baz=196						
P16K	Nushagak River	81.14	8	P	P	01 14 32.3	+1.3
	baz=195						
Q18K	Katmai Hardscr	81.21	10	P	P	01 14 32.2	+0.6
	baz=197						
P17K	Kvichak River	81.51	9	P	P	01 14 34.2	+1.2
	baz=196						
N14K	Kuskokwak Cree	81.58	6	P	P	01 14 35.1	+1.7
	baz=191						
Q20K	Shuyak Island	81.61	11	P	P	01 14 34.9	+1.3
	baz=200						
O16K	Kokwok River B	81.67	8	P	P	01 14 34.6	+0.7
	baz=194						
Q19K	Cape Douglas,	81.70	10	P	P	01 14 35.1	+1.0
	baz=199						
USRK	Ussuriysk Ar.	81.87	324	LR	LR	01 47 42.0	
	comp=Z,51nm,19.2s,baz=180,slow=33						
P18K	Big Mountain,	81.88	10	P	P	01 14 35.2	+0.2
P18K	Big Mountain,	81.88	10	P	P	01 14 35.8	+0.7
	baz=197						
O17K	Koliganek Bris	81.98	8	P	P	01 14 36.3	+0.8
	baz=195						
N15K	Kwethluk River	81.99	7	P	P	01 14 37.0	+1.4
	baz=193						
O18K	Koktuh Hills	82.33	9	P	P	01 14 37.2	-0.1
O18K				IAmb	IAmb	01 14 40.2	
	comp=Z,12nm,1.2s						
O18K	Koktuh Hills	82.33	9	P	P	01 14 38.5	+1.1
	baz=197						
M14K	Bethel	82.37	6	P	P	01 14 38.5	+1.0
	baz=191						
M15K	Kasigluk River	82.44	6	P	P	01 14 39.4	+1.5
	baz=192,SNR=7.3						
N16K	Nishlik Lake	82.44	7	P	P	01 14 38.7	+0.7
	baz=194						
N17K	Nushagak Hills	82.69	8	P	P	01 14 40.3	+1.1
	baz=195						
L14K	Kuka Creek	82.88	5	P	P	01 14 41.3	+1.1
L14K				IAmb	IAmb	01 14 43.3	
	comp=Z,6.2nm,0.9s						
L14K	Kuka Creek	82.88	5	P	P	01 14 41.2	+1.0
	baz=190						
M16K	Timber Creek	82.95	7	P	P	01 14 41.8	+1.2
M16K				IAmb	IAmb	01 14 44.6	
	comp=Z,12nm,1.1s						
M16K	Timber Creek	82.95	7	P	P	01 14 42.2	+1.7
	baz=194,SNR=9.1						
O20K	Slope Mountain	82.96	11	P	P	01 14 41.5	+0.8
	baz=200						
BRSE	Bradley Lake S	82.98	12	P	P	01 14 41.6	+0.8
	baz=201						
N18K	Kilae Creek	83.02	9	P	P	01 14 42.5	+1.6
	baz=196						
K13K	Kusilvak Mount	83.31	4	P	P	01 14 44.1	+1.7
	baz=188						
L15K	Ungalak Mounta	83.32	6	P	P	01 14 43.9	+1.4
	baz=191,SNR=6.0						
N19K	Bonanza Creek	83.36	9	P	P	01 14 43.9	+1.1
	baz=198						
NJ2	Nanjing	83.41	308	*e*P	P	01 14 49.4	+5.8
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
M17K	Holitna River	83.51	8	P	P	01 14 44.9	+1.4
	baz=195						
L16K	Owhat River	83.56	7	P	P	01 14 45.0	+1.3
	baz=193						
M18K	Stony River	83.81	9	P	P	01 14 46.2	+1.2
	baz=196						
P23K	Montague Islan	83.88	13	P	P	01 14 45.7	+0.3
	baz=204						
K15K	Wolf Creek Mou	83.92	6	P	P	01 14 46.8	+1.3
K15K	Wolf Creek Mou	83.92	6	P	P	01 14 45.9	+0.4
	baz=191,SNR=21						
CRAG	Craig	83.98	22	P	P	01 14 46.4	+0.4
	baz=218						
N20K	Mount Spurr	84.09	10	P	P	01 14 46.8	+0.3
	baz=200						
SPCR	Spurr Chakacha	84.09	10	P	P	01 14 47.1	+0.6
	baz=200						
L17K	Donlin	84.11	7	P	P	01 14 47.8	+1.2
	baz=194,SNR=6.2						
J14K	Nanvaranak Lak	84.20	5	P	P	01 14 48.1	+1.2
	baz=189						
L18K	Granite Mounta	84.39	8	P	P	01 14 48.1	+0.1
L18K	Granite Mounta	84.39	8	P	P	01 14 49.3	+1.3
	baz=196,SNR=6.3						
V35K	Ketchikan	84.41	23	P	P	01 14 48.8	+0.7
	baz=219						
M19K	Big River Lodg	84.41	9	P	P	01 14 48.8	+0.7
	baz=198						
RC01	Rabbit Creek A	84.42	12	P	P	01 14 48.2	+0.1
	baz=202						
KAIM	Kayak Island	84.47	14	P	P	01 14 48.1	-0.3
	baz=207						
PWL	Port Wells	84.48	12	P	P	01 14 48.4	0.0
	baz=204						
SIT	Sitka	84.53	20	P	P	01 14 48.4	-0.3
	baz=216						
M20K	Styx River	84.58	10	P	P	01 14 48.9	-0.1
	baz=199						
SUA	Susitna One	84.58	11	P	P	01 14 49.0	-0.1
SUA				IAmb	IAmb	01 15 02.4	
	comp=Z,6.6nm,1.0s						
SUA	Susitna One	84.58	11	P	P	01 14 48.4	-0.6
	baz=201						
L19K	White Mountain	84.61	9	P	P	01 14 49.3	+0.2
	baz=197						
K17K	Iditarod	84.68	7	P	P	01 14 49.8	+0.5
	baz=194						
EYAK	Cordova Ski Ar	84.73	14	P	P	01 14 49.8	+0.1
	baz=206						
GLI	Glacier Island	84.75	13	P	P	01 14 49.1	-0.7
GLI	Glacier Island	84.75	13	P	P	01 14 50.1	+0.4
	baz=205						
GAMB	Gambell	84.85	1	P	P	01 14 50.8	+0.6
	baz=182						
SKT	Skwentna	84.93	10	P	P	01 14 50.2	-0.5
SKT				IAmb	IAmb	01 14 51.9	
	comp=Z,8.2nm,1.4s						
SKT	Skwentna	84.93	10	P	P	01 14 51.6	+0.9
	baz=200						
KNK	Knik Glacier	84.96	12	P	P	01 14 51.1	+0.2
	baz=203						
S31K	Pelican	84.98	19	P	P	01 14 51.4	+0.4
	baz=215						
J16K	Anvik River	84.99	6	P	P	01 14 51.3	+0.4
	baz=192						
PMR	Palmer	85.00	12	P	P	01 14 51.1	+0.1
	baz=203						
L20K	Farewell, AK	85.03	9	P	P	01 14 51.4	+0.2
	baz=198						
TTA	Tatalina	85.17	8	P	P	01 14 52.1	+0.2
TTA				IAmb	IAmb	01 14 54.6	
	comp=Z,7.5nm,1.1s						
TTA	Tatalina	85.17	8	P	P	01 14 51.6	-0.3
	baz=196						
J17K	VABM Dome	85.25	7	P	P	01 14 52.5	+0.3
	baz=194						
KLR	Kul'dur	85.26	328	LR	LR	01 46 32.1	
	comp=Z,40nm,21.8s,baz=180,slow=31						
MESA	MESA	85.29	15	P	P	01 14 51.9	-0.9
	baz=209						
SML	Sawmill	85.35	12	P	P	01 14 52.8	0.0
	baz=204						
CN2	Changchun	85.36	321	*e*P	P	01 14 53.5	+0.3
BMRM	Bremner River	85.36	14	P	P	01 14 52.9	0.0
	baz=207						
BNX	BinXian	85.37	323	P	P	01 14 55.1	+1.8
BNX				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PNL	Peninsula	85.51	17	P	P	01 14 53.4	-0.3
	baz=212						
KLU	Klutina	85.55	13	P	P	01 14 54.0	+0.2
	baz=206						
SCM	Sheep Creek Mo	85.57	12	P	P	01 14 53.8	-0.2
SCM	Sheep Creek Mo	85.57	12	P	P	01 14 53.9	-0.1
	baz=204						
I17K	Unalakleet	85.57	6	P	P	01 14 54.0	+0.2
	baz=192						
J18K	Innoko River	85.59	8	P	P	01 14 54.3	+0.3
	baz=196,SNR=6.0						
PPLA	Purkeypile	85.69	10	P	P	01 14 54.5	-0.1
	baz=200						
K20K	Telida	85.84	9	P	P	01 14 55.5	+0.4
K20K				IAmb	IAmb	01 14 57.5	
	comp=Z,14nm,1.6s						
K20K	Telida	85.84	9	P	P	01 14 55.9	+0.7
	baz=198						
N25K	Chitina, Valde	85.93	14	P	P	01 14 56.1	+0.4
	baz=207						
M24K	Tolsona, Glenn	86.05	13	P	P	01 14 57.1	+0.8
	baz=205						
CTG	Chitna Glacier	86.12	15	P	P	01 14 57.5	+0.7
	baz=210						
WAT6	Susitna Watana	86.17	12	P	P	01 14 57.5	+0.4
	baz=204,SNR=6.2						
T35M	Bob Quinn	86.17	22	P	P	01 14 58.1	+1.2
	baz=220						
H16K	Elim	86.17	5	P	P	01 14 57.6	+0.8
	baz=190						
PLBC	Pleasant Camp	86.18	18	P	P	01 14 57.0	+0.1
	baz=214						
CAST	Castle Rocks	86.20	10	P	P	01 14 57.1	+0.1
	baz=200,SNR=5.6						
J19K	Poorman	86.24	8	P	P	01 14 57.4	+0.3
J19K				IAmb	IAmb	01 15 04.7	
	comp=Z,8.5nm,1.4s						
J19K	Poorman	86.24	8	P	P	01 14 57.8	+0.7
	baz=197						
O28M	Mount Upton	86.24	16	P	P	01 14 57.4	-0.2
	baz=211						
WAT1	Susitna Watana	86.25	11	P	P	01 14 57.4	+0.2
	baz=203						
O29M	Mount Kennedy	86.26	17	P	P	01 14 57.8	+0.3
	baz=212						
G15K	Niukluk	86.39	4	P	P	01 14 58.5	+0.6
	baz=189						
TRF	Thorofare Moun	86.52	10	P	P	01 14 57.6	-1.1
TRF				IAmb	IAmb	01 15 00.5	
	comp=Z,5.5nm,0.8s						
TRF	Thorofare Moun	86.52	10	P	P	01 14 58.7	-0.1
	baz=202,SNR=5.5						
P30M	Million Dollar	86.56	18	P	P	01 14 59.4	+0.5
	baz=214						
S34M	Telegraph Cree	86.58	21	P	P	01 14 59.3	+0.3
	baz=219						
CHUM	Lake Minchumin	86.60	9	P	P	01 14 59.4	+0.6
	baz=200						
J20K	Nowinta River	86.61	9	P	P	01 14 57.6	-1.3
J20K				IAmb	IAmb	01 15 02.1	
	comp=Z,8.5nm,1.2s						
J20K	Nowinta River	86.61	9	P	P	01 14 59.4	+0.5
	baz=198						
H17K	Granite Mounta	86.67	6	P	P	01 14 59.8	+0.5
	baz=193						
DHY	Denali Highway	86.69	12	P	P	01 15 00.2	+0.6
	baz=204						
SYO	Syowa Base	86.72	191	⇓*e*sP	sP	01 15 06.0	-1.6
RND	Reindeer	86.72	11	P	P	01 14 59.6	0.0
RND				IAmb	IAmb	01 15 02.5	
	comp=Z,7.5nm,0.9s						
YUK6	Outpost Mounta	86.86	16	P	P	01 15 00.4	-0.1
	baz=213						
G16K	Koyuk River	86.91	5	P	P	01 15 01.5	+1.2
	baz=190						
PAX	Paxson	86.97	13	P	P	01 15 01.6	+0.8
	baz=206						
PDAR	Pinedale Array	86.97	42	P	P	01 15 03.6	+2.1
	comp=Z,0.1nm,0.4s,baz=253,slow=7.2,SNR=1.7						
	comp=Z,0.1nm,0.4s						
M26K	Nabesna, AK	86.99	14	P	P	01 15 01.9	+1.0
	baz=208,SNR=5.5						
HYT	Haines Junctio	86.99	17	P	P	01 15 01.5	+0.4
	baz=213						
BPAW	Bear Paw Mtn.	87.01	10	P	P	01 15 02.0	+1.1
	baz=201						
MCK	McKinley	87.01	11	P	P	01 15 00.8	-0.1
MCK				IAmb	IAmb	01 15 03.1	
	comp=Z,11nm,1.2s						
MCK	McKinley	87.01	11	P	P	01 15 02.0	+1.0
	baz=203						
Q32M	Nakina River	87.03	20	P	P	01 15 01.9	+0.6
	baz=218						
YUK3	Moose Creek	87.04	15	P	P	01 15 01.9	+0.5
	baz=211						
H18K	Honhosa River	87.04	6	P	P	01 15 02.6	+1.5
	baz=194						
F15K	North Star Dit	87.06	4	P	P	01 15 02.3	+1.2
	baz=188						
P32M	Atlin	87.08	19	P	P	01 15 02.2	+0.8
	baz=217						
G17K	Kiwalik Mounta	87.16	5	P	P	01 15 03.1	+1.5
	baz=192						
I20K	Naaghedeneel	87.16	8	P	P	01 15 03.0	+1.4
	baz=198						
M27K	Edge Creek, AK	87.20	14	P	P	01 15 02.3	+0.2
M27K				IAmb	IAmb	01 15 05.3	
	comp=Z,5.9nm,1.0s						
M27K	Edge Creek, AK	87.20	14	P	P	01 15 03.3	+1.2
	baz=209,SNR=7.7						
O30N	Mendenhall	87.34	18	P	P	01 15 03.8	+1.2
	baz=215						
DLBC	Dease Lake	87.36	21	P	P	01 15 04.3	+1.5
	baz=220						
L26K	Log Cabin Wild	87.46	13	P	P	01 15 04.7	+1.5
	baz=208						
WHY	Whitehorse	87.59	18	P	P	01 15 04.7	+0.8
	baz=216						
H19K	Roundabout Mou	87.61	7	P	P	01 15 05.2	+1.5
	baz=196						
K24K	Donnelly Dome	87.66	12	P	P	01 15 05.3	+1.2
	baz=206						
G18K	Tagagawik	87.73	6	P	P	01 15 05.5	+1.1
	baz=194						
H20K	Anotleneega Mo	87.77	8	P	P	01 15 05.9	+1.3
	baz=197						
RIDG	Independent Ri	87.79	12	P	P	01 15 05.8	+1.1
	baz=207						
R33M	Jennings River	87.79	20	P	P	01 15 05.7	+0.8
	baz=219						
L27K	Beaver Creek,	87.83	14	P	P	01 15 06.1	+1.1
	baz=209						
P33M	Teslin, Yukon	87.84	19	P	P	01 15 06.0	+0.9
	baz=218						
MLY	Manley	87.92	10	P	P	01 15 07.3	+2.0
	baz=201						
HDA	Harding Lake	87.99	11	P	P	01 15 07.4	+1.8
	baz=205						
N31M	Braeburn, Yuko	88.01	17	P	P	01 15 07.5	+1.7
	baz=215						
F17K	Baldwin Pennin	88.03	5	P	P	01 15 07.7	+2.0
	baz=191						
M29M	Somme Creek	88.10	16	P	P	01 15 07.9	+1.6
	baz=212						
G19K	Purcell Mounta	88.14	7	P	P	01 15 07.6	+1.4
	baz=195						
SCRK	Sand Creek	88.17	13	P	P	01 15 07.7	+1.1
	baz=207						
H21K	Melozitna Rive	88.20	9	P	P	01 15 08.3	+1.7
	baz=199						
I23K	Minto, Yukon-K	88.25	10	P	P	01 15 08.5	+1.7
	baz=202						
ILAR	Eielson Array	88.33	11	P	P	01 15 06.6	-0.6
ILAR	Eielson Array	88.33	11	P	P	01 15 08.3	+1.1
	comp=Z,0.6nm,0.5s,baz=207,slow=5.7,SNR=9.2						
	comp=Z,0.6nm,0.5s						
J25K	Salcha River,	88.47	12	P	P	01 15 09.5	+1.5
	baz=206						
K27K	Chicken	88.62	13	P	P	01 15 10.2	+1.6
	baz=209						
H22K	Ishtalitna Cre	88.63	9	P	P	01 15 10.1	+1.5
	baz=201						
J26L	Joseph Creek	88.72	13	P	P	01 15 10.5	+1.3
	baz=208,SNR=9.0						
F19K	Shaleruckik Mo	88.73	6	P	P	01 15 10.9	+1.9
	baz=195						
L29M	L29M	88.75	15	P	P	01 15 10.4	+1.1
	baz=213						
H23K	Yukon River	88.84	10	P	P	01 15 11.4	+1.8
	baz=202						
G21K	Allakaket	88.92	8	P	P	01 15 11.9	+1.9
	baz=199						
M31M	Drury Creek, Y	88.98	17	P	P	01 15 11.9	+1.5
	baz=216						
E18K	Tukpahlearik C	89.05	5	P	P	01 15 12.6	+2.1
	baz=192						
F20K	Avaraart Lake	89.16	7	P	P	01 15 13.5	+2.4
	baz=196						
PRP	Porcupine Dome	89.25	11	P	P	01 15 12.5	+0.8
	baz=206						
DAWY	Dawson	89.25	14	P	P	01 15 13.1	+1.5
	baz=212						
TOAD	Toad River Com	89.36	23	P	P	01 15 13.9	+1.7
	baz=224						
E19K	Redstone River	89.39	6	P	P	01 15 12.5	+0.3
E19K	Redstone River	89.39	6	P	P	01 15 14.0	+1.8
	baz=195						
K29M	Barlow Dome	89.51	15	P	P	01 15 14.3	+1.4
	baz=213						
I26K	Coal Creek Min	89.52	12	P	P	01 15 15.1	+2.3
	baz=208						
G22K	Bettles	89.58	9	P	P	01 15 14.9	+1.9
	baz=200						
G23K	Bananza Creek	89.59	9	P	P	01 15 15.1	+1.9
	baz=202						
F21K	Alatna River	89.60	8	P	P	01 15 15.5	+2.3
	baz=199						
C17K	DeLong Mountai	89.89	4	P	P	01 15 16.2	+1.7
	baz=190						
I27K	Kandik River	90.09	13	P	P	01 15 17.8	+2.2
	baz=210						
MMPY	Sheldon Lake,	90.20	18	P	P	01 15 17.9	+1.8
	baz=219						
E20K	Nigu River	90.27	6	P	P	01 15 17.9	+1.5
	baz=196						
D19K	Kuna River	90.31	6	P	P	01 15 18.2	+1.7
	baz=194						
I28M	Miner Creek	90.31	13	P	P	01 15 18.2	+1.6
	baz=211						
BEAVL	Fort Liard	90.37	22	P	P	01 15 18.1	+1.2
	baz=224						
J30M	Hart River	90.41	15	P	P	01 15 18.7	+1.6
	baz=214						
I29M	Ogilvie Camp,	90.60	14	P	P	01 15 19.8	+1.9
	baz=213						
H27K	Steamboat Moun	90.66	13	P	P	01 15 20.9	+2.7
	baz=210						
D20K	Etivluk River	90.67	6	P	P	01 15 20.3	+2.2
	baz=196						
E22K	Anaktuvuk Pass	90.67	8	P	P	01 15 20.9	+2.7
	baz=200						
E21K	Killik River	90.70	7	P	P	01 15 20.8	+2.6
	baz=198						
C19K	Lookout Ridge	90.78	5	P	P	01 15 20.7	+2.0
	baz=193						
B18K	Kokolik River	90.86	4	P	P	01 15 20.5	+1.5
	baz=191						
E23K	Chandalar	90.91	9	P	P	01 15 21.6	+2.3
	baz=202						
I30M	Mount Dempster	90.94	15	P	P	01 15 19.6	0.0
I30M	Mount Dempster	90.94	15	P	P	01 15 21.5	+1.9
	baz=214						
E24K	Your Creek	91.09	9	P	P	01 15 22.2	+2.1
	baz=203						
F25K	Christian Rive	91.10	10	P	P	01 15 22.4	+2.2
	baz=206						
XLT	XiLinHaoTe	91.15	317	*e*P	P	01 15 24.2	+3.2
XLT				sP	pwP	01 15 35.4	-0.3
XLT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
H29M	Whitestone	91.31	14	P	P	01 15 23.3	+2.1
	baz=212						
F26K	Sheenjek River	91.45	11	P	P	01 15 23.8	+2.0
	baz=207						
TOLK	Toolik Lake Re	91.45	9	P	P	01 15 23.8	+2.0
	baz=202						
E25K	Arctic Village	91.59	10	P	P	01 15 24.4	+2.0
	baz=206						
D23K	Nanushuk River	91.60	8	P	P	01 15 25.1	+2.7
	baz=201						
XAN	Xi'an	91.73	306	⇓P	P	01 15 25.1	+1.2
XAN				pmax	pmax		
	comp=Z,7.0nm,0.4s						

XAN				LR	LR		
	comp=N,280nm,14.4s						
XAN				LR	LR		
	comp=E,160nm,16.5s						
XAN				LR	LR		
	comp=Z,170nm,19.2s						
EPYK	Eagle Plains	91.81	14	P	P	01 15 25.3	+1.8
	baz=214						
F28M	Old Crow	92.19	12	P	P	01 15 27.4	+2.3
	baz=211						
E27K	Coleen River	92.35	12	P	P	01 15 28.1	+2.2
	baz=210						
G30M	tAoh Zraii Nji	92.43	14	P	P	01 15 28.2	+1.8
	baz=214						
B22K	Teshekpuk Lake	92.57	7	P	P	01 15 29.1	+2.3
	baz=199						
HHC	Hu-ho-hao-te	92.73	313	*e*P	P	01 15 35.3	+6.9
HHC				pmax	pmax		
	comp=Z,20nm,0.7s						
CMAR	Chiang Mai Arr	94.04	288	P	P	01 15 35.3	+0.4
	comp=Z,0.8nm,0.3s,baz=115,slow=4.0,SNR=9.5						
	comp=Z,0.8nm,0.3s						
PZH	PanZhiHua	94.53	297	P	P	01 15 43.7	+6.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,110nm,5.1s						
ULM	Lac du Bonnet	98.79	39	LR	LR	01 56 20.4	
	comp=Z,48nm,18.3s,baz=129,slow=33						
KURBB	Kurchatov Arra	117.29	317	PKP	PKiKP	01 21 00.9	-0.4
	comp=Z,0.1nm,0.4s,baz=30,slow=11,SNR=2.7						
BVAR	Borovoye Array	122.20	320	PKP	PKPdf	01 21 10.2	-0.5
	comp=Z,0.4nm,0.4s,baz=90,slow=3.7,SNR=4.4						
ABKAR	Akbulak array	129.34	317	PKPpre	PKPpre	01 21 06.3	
KOOLE	Kule	133.85	198	PKPdf	PKiKP	01 21 34.9	-0.4
GURO	Guroymak-BITLI	144.75	307	PKPdf	PKPdf	01 21 52.7	-0.6
AKASG	Malin Array Be	145.54	334	PKPbc	PKPab	01 21 54.4	-0.1
	comp=Z,1.2nm,0.4s,baz=38,slow=4.0,SNR=16						
AKBB	Malin Array Si	145.54	334	PKPdf	PKPbc	01 21 53.6	-0.6
MARD	Mardin	146.09	306		PKPab	01 21 57.2	0.0
ARPR	Arapgir-MALATY	147.26	310	PKPbc	PKPbc	01 22 00.1	+0.2
BUR08	Bucovina Ar. S	149.58	334	PKPbc	PKiKP	01 22 06.7	+0.1
MORC	Moravsky Berou	150.22	345	*e*PKP	PKiKP	01 22 08.2	+0.4
BRTR	Keskin Array B	150.23	314	PKPbc	PKiKP	01 22 07.6	-0.7
BRTR	Keskin Array B	150.23	314	PKPbc	PKPbc	01 22 07.2	-0.2
	comp=Z,1.4nm,1.0s,baz=48,slow=2.1,SNR=9.4						
ANTO	Ankara	150.72	315	PKPbc	PKiKP	01 22 09.5	+0.3
VRAC	Vranov	150.88	346	*e*PKP	PKiKP	01 22 09.4	+0.2
VYHS	Vyhne	151.06	342	*e*PKP	PKiKP	01 22 10.9	+1.3
VYHS				*e*		01 22 17.9	
KRUC	Moravsky	151.15	346	*e*PKP	PKiKP	01 22 10.2	+0.5
MDUB	Mudurnu	151.42	318	PKPbc	PKiKP	01 22 10.1	-0.6
MODS	Modra-Piesok	151.58	344	*e*PKP	PKiKP	01 22 13.3	+2.6
MODS				*e*		01 22 20.7	
KHC	Kasperske Hory	151.64	350	*e*PKP	PKiKP	01 22 13.5	+2.7
GERES	GERESS Array B	151.90	349	PKPbc	PKPbc	01 22 10.4	-0.6
	comp=Z,1.0nm,1.0s,baz=321,slow=1.7,SNR=5.3						
CONA	Conrad Observa	152.34	346	*e*PKP	PKPbc	01 22 09.9	-2.2
	comp=Z,3.0nm,1.2s						
RONA	Rosalia, Austr	152.45	345	*e*PKP	PKiKP	01 22 13.9	+1.4
	comp=Z,4.4nm,1.6s						
MOA	Molln	152.75	348	*e*pPKP	PKPab	01 22 22.4	-1.3
	comp=Z,4.2nm,1.2s						
BIOA	Bad Ischl, Aus	153.02	349	*e*PKP	PKPab	01 22 26.4	+1.7
	comp=Z,6.5nm,1.1s						
ARSA	Arzberg	153.06	346	*e*PKP	PKPab	01 22 26.1	+1.2
	comp=Z,2.1nm,1.1s						
LESA	Schwarzleotal	153.44	350	*e*PKP	PKPab	01 22 28.0	+1.4
	comp=Z,1.1nm,0.5s						
RETA	Reutte	153.65	353	*e*PKP	PKPab	01 22 29.9	+2.4
	comp=Z,2.9nm,1.1s						
WATA	Walderalm	153.69	352	*e*pPKP	PKPab	01 22 39.3	+11
	comp=Z,1.3nm,0.5s						
SOKA	Soboth	153.71	346	*i* PKP	PKPab	01 22 28.5	+0.7
	comp=Z,4.9nm,1.3s						
MOTA	Moosalm	153.75	352	*e*pPKP	PKPab	01 22 23.7	-4.4
	comp=Z,2.8nm,1.2s						
WTTA	Wattenberg	153.76	352	*e*pPKiKP	PKPab	01 22 30.9	+2.8
	comp=Z,3.8nm,1.1s						
DAVA	Damuels	153.94	354	*e*pPKP	PKPab	01 22 22.6	-6.2
	comp=Z,1.5nm,0.6s						
OBKA	Obir	153.97	347	*e*pPKP	PKPab	01 22 29.6	+0.7
	comp=Z,2.1nm,1.0s						
MYKA	Terra Mystica	154.04	348	*e*pPKP	PKPab	01 22 29.3	+0.1
	comp=Z,3.1nm,1.0s						
FETA	Feichten	154.11	353	*e*pPKP	PKPab	01 22 24.5	-5.1
	comp=Z,4.1nm,1.2s						
ABTA	Abfaltersbach	154.13	350	*e*PKP	PKPab	01 22 33.0	+3.4
	comp=Z,1.7nm,0.9s						

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*ATH **03** 01:37:18.6, 37°.45N×20°.30E, h13km±2km, ML3.1/10, Manual Solution by A.Agalos First location: 2019/06/03 01:38:17, This location: 2019/06/03 20:43:06 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*

*THE **03** 01:37:19.6, 37°N±2°×2°0E±°, h0km±1km, M2.9/17, MLh2.9/17*

ISC 03 01:37:19.5±1.7**, 37°.46N**±0°.05×**20°.35E**±0°.06**, h7**km±10km**, n48, σ0ˢ.82**/61**, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LTHK	Lithakia	0.46	58	P	Pg	01 37 28.5	+0.1
LTHK				S	Sg	01 37 35.2	+0.8
LTHK	Lithakia	0.46	58	P	Pg	01 37 28.4	+0.1
ORTH	Orthonies,Zaky	0.48	36	P	Pg	01 37 29.2	+0.5
ORTH				S	Sg	01 37 35.4	+0.4
PSDA	Pessada-Kefalo	0.68	16	P	Pg	01 37 32.3	-0.3
PSDA				S	Sb	01 37 42.6	-0.5
PSDA	Pessada-Kefalo	0.68	16	P	Pg	01 37 32.1	-0.4
RTZL	Ratzakli, Kefa	0.70	29	P	Pg	01 37 32.7	-0.2
RTZL				S	Sb	01 37 43.8	0.0
VLS	Valsamata	0.74	15	P	Pg	01 37 33.1	-0.6
VLS				S	Sb	01 37 44.2	-0.8
VLS	Valsamata	0.74	15	P	Pg	01 37 33.2	-0.6
CLEM	Kyllini,Ilia,G	0.76	55	P	Pg	01 37 34.2	+0.2
CLEM				S	Sb	01 37 45.1	-0.3
DMLN	Damoulianata-K	0.77	2	S	Sb	01 37 46.1	+0.2
DMLN	Damoulianata-K	0.77	2	P	Pg	01 37 34.1	-0.3
DMLN				S	Sb	01 37 44.9	-1.1
KTLO	Katakolo	0.79	77	P	Pg	01 37 34.7	0.0
LCHA	Lechaina	0.87	57	P	Pg	01 37 36.4	+0.2
ANDM	Andravida	0.90	54	P	Pg	01 37 36.1	-0.7
FSK	Fiskardo	1.01	10	P	Pg	01 37 38.0	-0.8
FSK				S	Sb	01 37 52.4	-0.3
FSK	Fiskardo	1.01	10	P	Pg	01 37 37.9	-1.0
FSK				S	Sb	01 37 52.2	-0.5
YRMI	Loutra Irminis	1.02	51	P	Pg	01 37 38.5	-0.6
KRES	Krestena	1.02	82	P	Pg	01 37 38.8	-0.3
RLS	Riolos of Patr	1.07	56	P	Pg	01 37 39.4	-0.6
RLS				S	Sn	01 37 55.5	-0.3
RLS	Riolos of Patr	1.07	56	P	Pg	01 37 39.4	-0.6
AMT	Artemida-Makis	1.08	86	P	Pg	01 37 40.0	-0.3
AXS	Araxos	1.09	48	P	Pn	01 37 40.9	-0.2
AXS	Araxos	1.09	48	P	Pg	01 37 39.9	-0.6
EVGI	Lefkada island	1.18	12	P	Pg	01 37 41.4	-0.8
EVGI	Lefkada island	1.18	12	P	Pg	01 37 41.0	-1.2
PYL2	Kinigos	1.23	116	P	Pn	01 37 42.2	-0.9
PYL2				S	Sg	01 37 59.2	0.0
PYL	PYLOS	1.25	117	P	Pn	01 37 42.6	-0.7
PYL	PYLOS	1.25	117	P	Pn	01 37 41.9	-1.4
PYL				S	Sb	01 37 59.7	+0.1
NYDR	Nydri-Lefkada	1.28	12	P	Pn	01 37 43.3	-0.4
NYDR	Nydri-Lefkada	1.28	12	P	Pn	01 37 42.0	-1.7
ITM	Ithomi	1.29	102	P	Pg	01 37 44.5	+0.2
ITM	Ithomi	1.29	102	P	Pn	01 37 43.2	-0.7
LKD2	Lefkada island	1.35	10	P	Pg	01 37 45.9	+0.6
LKD2				S	Sn	01 38 04.7	+1.9
LKD2	Lefkada island	1.35	10	P	Pn	01 37 43.8	-0.9
TSLK	Tsoukalades, L	1.38	10	P	Pg	01 37 46.3	+0.3
TSLK	Tsoukalades, L	1.38	10	P	Pn	01 37 44.4	-0.7
PVO	Paravola	1.48	39	P	Pb	01 37 47.3	0.0
PVO	Paravola	1.48	39	P	Pn	01 37 46.0	-0.5
KLV	Kalavryta, Ach	1.54	67	P	Pb	01 37 48.3	-0.1
KLV	Kalavryta, Ach	1.54	67	P	Pn	01 37 46.4	-1.0
EFP	Efpalio	1.56	52	P	Pb	01 37 48.2	-0.5
EFP	Efpalio	1.56	52	P	Pn	01 37 46.6	-1.0
AMPL	Ampelaki	1.61	25	P	Pn	01 37 48.5	+0.2
SERG	Sergoula	1.65	54	P	Pn	01 37 48.1	-0.7
OBKA	Obir	10.01	336	*i* Pn	Pn	01 39 47.3	+3.5
	0.6nm,0.3s						
SOKA	Soboth	10.02	338	*i* Pn	Pn	01 39 44.5	+0.7
	0.4nm,0.3s						
ABTA	Abfaltersbach	10.95	330	*i* Pn	Pn	01 39 56.7	+0.2
	0.6nm,0.5s						
CONA	Conrad Observa	10.96	344	*e*Pn	Pn	01 39 57.2	+0.5
	0.2nm,0.3s						

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*IDC **03** 01:58:11.9±0.9, 22°.13S×173°.83W, h0km, mb4.0/7, mbtmp4.0/8, ML3.3/1, MS3.1/1, Error ellipse: s-maj=37.5km s-min=24.7km az=149.0*

*NEIC **03** 01:58:16.2±2.6, 21°.3S±0°.1×173°.64W±0°.06, h10km±1km, mb4.7/13, Error ellipse: s-maj=21.7km s-min=10.0km az=177.0*

ISC 03 01:58:16.4±0.7**, 21°.5S**±0°.1×**173°.9W**±0°.1**, h10**km**, n34, σ1ˢ.88**/27**, mb4.5**/13**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.46	57	Pn	Pn	01 59 18.2	-5.9
NIUE				Sn	Sn	02 00 03.3	-13
AFI	Afiamalu	7.86	15		Pn	02 00 04.0	-6.8
MSVF	Nonsavu	8.48	295	Pn	Pn	02 00 20.3	+0.9
RAR	Rarotonga	13.17	91	Pn	Pn	02 01 18.5	-5.0
RAR	Rarotonga	13.17	91	Pn	Pn	02 01 18.8	-4.7
	1.7nm,0.3s,baz=240,slow=11,SNR=6.8						
RAR				LR	LR	02 06 52.4	
	comp=Z,72nm,18.6s,baz=290,slow=40						
	9.4nm,0.5s						
DZM	Mont Dzumac	18.26	265	P	Pn	02 02 32.4	+2.3
DZM	Mont Dzumac	18.26	265	P	Pn	02 02 29.8	-0.3
	9.4nm,0.9s,baz=114,slow=23,SNR=4.3						
MRZ	Mangatainoka R	21.05	203	P	P	02 02 59.2	-1.3
MRZ				IAmb	IAmb	02 03 27.7	
	comp=Z,56nm,1.5s						
TUWZ	Tuamarina	22.33	205		P	02 03 13.3	-0.9
DSZ	Denniston Nort	23.47	208	P	P	02 03 28.7	+2.5
FOZ	Fox Glacier	25.78	208	P	P	02 03 48.7	+1.4
CAN	Canberra	35.18	239	P	P	02 05 09.6	-1.2
BBOO	Buckleboo	45.54	245	P	P	02 06 35.3	-1.2
ASAR	Alice Springs	48.01	257	P	P	02 06 52.5	-3.5
	comp=Z,2.9nm,0.8s,baz=93,slow=7.9,SNR=19						
ASAR				PcP	PcP	02 08 23.5	-0.6
	comp=Z,0.5nm,0.6s,baz=101,slow=4.8,SNR=2.0						
	comp=Z,2.9nm,0.8s						
WR8	Warramunga Arr	48.10	262	P	P	02 06 55.7	-1.0
WR8				IAmb	IAmb	02 07 02.9	
	comp=Z,16nm,1.4s						
WRA	Warramunga Arr	48.25	262	P	P	02 06 54.2	-3.6
	comp=Z,2.3nm,0.8s,baz=91,slow=5.8,SNR=5.2						
	comp=Z,2.3nm,0.8s						
VNDA	Vanda	57.25	186	P	P	02 07 55.5	-8.1
	comp=Z,0.1nm,0.3s,baz=311,slow=11,SNR=0.9						
	comp=Z,0.1nm,0.3s						
QSPA	South Pole Qui	68.54	180	P	P	02 09 19.6	+0.7
NVAR	Mina Array Bea	79.21	41	P	P	02 10 22.2	+0.2
	comp=Z,0.6nm,0.8s,baz=221,slow=8.7,SNR=4.4						
	comp=Z,0.6nm,0.8s						
KSRS	Korea Array	80.23	317	P	P	02 10 26.8	-0.4
	comp=Z,0.6nm,0.4s,baz=125,slow=6.8,SNR=4.7						
	comp=Z,0.6nm,0.4s						
KSAR	Wonju Array Be	80.25	317	P	P	02 10 26.3	-1.1
M16K	Timber Creek	83.15	7	P	P	02 10 42.0	-0.1
M16K				IAmb	IAmb	02 10 45.3	
	comp=Z,6.8nm,1.1s						
K15K	Wolf Creek Mou	84.13	6	P	P	02 10 46.2	-0.9
TRF	Thorofare Moun	86.72	10	P	P	02 10 59.0	-1.2
TRF				IAmb	IAmb	02 10 60.0	
	comp=Z,3.5nm,0.8s						
RND	Reindeer	86.93	11	P	P	02 10 59.9	-1.2
RND				IAmb	IAmb	02 11 20.1	
	comp=Z,5.3nm,1.0s						
M27K	Edge Creek, AK	87.41	14	P	P	02 11 03.4	-0.2
M27K				IAmb	IAmb	02 11 04.7	
	comp=Z,5.5nm,1.1s						
SEY	Seymchan	88.30	345	P	P	02 11 06.5	-1.1
	comp=Z,2.2nm,0.9s,baz=94,slow=14,SNR=5.2						
	comp=Z,2.2nm,0.9s						
ILAR	Eielson Array	88.53	11	P	P	02 11 07.2	-1.5
	comp=Z,0.3nm,0.5s,baz=214,slow=5.7,SNR=4.7						
	comp=Z,0.3nm,0.5s						
AKASG	Malin Array Be	145.71	334	PKPbc	PKPdf	02 17 52.5	-2.4
	comp=Z,0.7nm,0.5s,baz=41,slow=3.8,SNR=9.0						
AKBB	Malin Array Si	145.71	334	PKPdf	PKPdf	02 17 52.8	-2.2
BURAR	Bucovina Array	149.76	334	PKPbc	PKPdf	02 18 05.9	+4.0
BRTR	Keskin Array B	150.34	314	PKPbc	PKPdf	02 18 06.7	+3.5
BRTR	Keskin Array B	150.34	314	PKPbc	PKPdf	02 18 07.3	+4.1
	comp=Z,0.7nm,0.8s,baz=151,slow=2.8,SNR=5.9						
GERES	GERESS Array B	152.09	349	PKPbc	PKPbc	02 18 12.4	+0.3
	comp=Z,0.3nm,0.5s,baz=342,slow=8.4,SNR=3.5						

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*GII **03** 02:06:22.9±0.0, 35°.953N±0°.001×33°.832E±0°.001, h7km, Mws2.9, confirmed*

*ISK **03** 02:06:23.9, 35°.99N×34°.00E, h6km, ML3.1/17*

*AFAD **03** 02:06:23.5, 35°.97N×33°.99E, h19km±3km, ML3.0*

*NIC **03** 02:06:24.7, 35°.87N×34°.02E, h23km±5km, Ml2.4/8*

*JSO **03** 02:06:56.8±3.1, 34°N±24°×3°5E±°, h10km, M2.6/10, MLv2.6/10*

ISC 03 02:06:23.6±1.0**, 35°.94N**±0°.01×**33°.97E**±0°.02**, h10**km±8km**, n97, σ1ˢ.10**/134**, 3D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TISA	Tisan-Mersin	0.32	313	Pg	Pg	02 06 30.3	+0.3
TISA				Sg	Sg	02 06 35.2	+0.9
YESI	Yesilovacik-Me	0.37	314	Pg	Pg	02 06 31.2	+0.4
YESI				Sg	Sg	02 06 36.8	+1.1
IKL	Isikli	0.38	322	Pg	Pg	02 06 31.4	+0.4
IKL				Sg	Sg	02 06 36.6	+0.6
AKK1	Akkuyu-Mersin	0.40	300	Pg	Pb	02 06 32.2	-0.6
AKK1				Sg	Sb	02 06 38.4	-0.7
AKKU	Akkuyu-Mersin	0.40	303	Pg	Pb	02 06 32.3	-0.6
AKKU				Sg	Sb	02 06 38.5	-0.6
GULN	MERSIN_Gulnar	0.42	305	P	Pb	02 06 32.7	-0.5
GULN				S	Sg	02 06 38.3	+0.8
GULN				*i* IAML		02 06 39.0	
	comp=N,1µm,0.4s						
GULN				*i* IAML		02 06 39.0	
	comp=E,1µm,0.5s						
SILI	Silifke-Mersin	0.43	355	Pg	Pg	02 06 31.9	0.0
SILI				Sg	Sg	02 06 37.8	+0.2
EREN	Erenkoy	0.44	158	Pg	Pb	02 06 34.0	+0.5
EREN	Erenkoy	0.44	158	P	Pn	02 06 36.4	+0.4
EREN				S	Sb	02 06 40.4	+0.2
EREN				*i* IAML		02 06 46.0	
	comp=E,1µm,0.5s						
TEPK	Tepekoy-MERSIN	0.45	309	Pg	Pb	02 06 33.0	-0.6
SLFK	Silifke-Mersin	0.45	357	Pg	Pg	02 06 32.1	-0.3
OREN	Orenkoy-Mersin	0.49	303	Pg	Pb	02 06 33.8	-0.6
OREN				Sg	Sb	02 06 41.1	-0.6
YORU	Yoruktepe-Mers	0.51	295	Pg	Pb	02 06 34.3	-0.3
KEBE	Keben-Mersin	0.55	338	Pg	Pg	02 06 34.6	+0.4
KIZK	Mersin	0.56	14	Pg	Pg	02 06 34.1	-0.3
KIZK	Mersin	0.56	14	P	Pg	02 06 34.5	+0.1
KIZK				S	Sg	02 06 41.0	-0.6
BERE	Bereket-Mersin	0.73	304	Pg	Pb	02 06 38.4	-0.1
LFK	Lefkose	0.75	209	Pg	Pn	02 06 39.8	-0.5
BOZY	Bozyazi-Mersin	0.82	282	Pg	Pb	02 06 40.3	+0.3
BOZY				Sg	Sb	02 06 52.3	+1.1
ATHAL	Athalassa	0.93	211	P	Pb	02 06 41.8	0.0
ATHAL				S	Sn	02 06 55.3	-0.7
ATHAL				AML	AML	02 07 21.0	
	1.3nm,0.6s						
ATHAL				AML	AML	02 07 26.8	
	1.7nm,0.7s						
PARAL	Paralimni	0.95	177	⇓*i*P	Pg	02 06 41.7	-0.1
PARAL				S	Sb	02 06 54.8	+0.1
PARAL				AML	AML	02 06 58.5	
	0.3nm,0.5s						
PARAL				AML	AML	02 07 04.1	
	0.2nm,0.5s						
MVOU	Mavrovouni	0.96	197	⇓*i*P	Pg	02 06 41.5	-0.6
MVOU				S	Sg	02 06 54.4	-0.2
MVOU				AML	AML	02 06 59.0	
	0.2nm,0.3s						
MVOU				AML	AML	02 07 02.1	
	0.2nm,0.4s						
MERS	Mersin	1.02	25	Pg	Pg	02 06 42.7	-0.6
AKDN	Akdeniz- Kıbrı	1.04	232	Pn	Pn	02 06 44.3	+0.1
ERMK	Ermenek	1.10	310	P	Pn	02 06 45.3	0.0
ERMK				S	Sn	02 07 01.0	+0.2
CSS	Mathiatis	1.11	208	P	Pg	02 06 43.2	-1.6
CSS				S	Sg	02 06 58.3	-1.0
CSS	Mathiatis	1.11	208	⇓*e*P	Pg	02 06 43.5	-1.4
CSS				S	Sg	02 06 58.4	-0.8
CSS				AML	AML	02 07 10.5	
	0.2nm,0.4s						
CSS				AML	AML	02 07 11.4	
	0.2nm,0.7s						
ASGA	Asgata	1.30	207	P	Pn	02 06 47.2	-0.6
ASGA				S	Sn	02 07 05.4	+0.2
ASGA				AML	AML	02 07 16.7	
	0.2nm,0.7s						
ASGA				AML	AML	02 07 21.1	
	0.2nm,0.7s						
TROD	Troodos	1.34	223	P	Pn	02 06 46.9	-1.7
TROD				S	Sb	02 07 05.9	-0.4
TROD				AML	AML	02 07 12.7	
	0.2nm,0.4s						
TROD				AML	AML	02 07 19.2	
	0.1nm,0.5s						
KRMN	Karaman	1.36	335	Pn	Pg	02 06 49.4	-0.2
ALFC	Alefka	1.37	235	P	Pn	02 06 47.7	-1.1
ALFC				S	Sb	02 07 04.7	-2.2
ALFC				AML	AML	02 07 10.8	
	0.4nm,0.3s						
ALFC				AML	AML	02 07 11.2	
	0.2nm,0.2s						
GAZI	Gazipasa	1.37	283	Pn	Pg	02 06 50.5	+0.6
GAZI	Gazipasa	1.37	283	P	Pg	02 06 50.7	+0.8
GAZI				S	Sg	02 07 08.0	+0.2
KERG	Konya-Eregli	1.48	5	P	Pn	02 06 50.3	-0.1
KERG				S	Sn	02 07 09.1	-0.8
GULE	Gulek	1.49	26	P	Pb	02 06 51.3	-0.1
GULE				S	Sb	02 07 10.5	0.0
GULE				*i* IAML		02 07 19.0	
	comp=E,271nm,0.8s						
ASUZ	Hatay-Arsuz	1.51	76	P	Pb	02 06 51.6	-0.1
ASUZ				S	Sn	02 07 10.0	-0.5
HDMB	Hadim	1.57	311	Pn	Pb	02 06 53.1	+0.2
KARA	Karaisali	1.58	33	Pn	Pn	02 06 52.2	+0.5
AKMS	Akamas	1.62	236	P	Pn	02 06 52.1	-0.2
AKMS				S	Sn	02 07 12.7	-0.6
AKMS				AML	AML	02 07 23.2	
	0.2nm,0.4s						
AKMS				AML	AML	02 07 33.5	
	0.2nm,0.5s						
CEYT	Ceyhan	1.79	53	Pn	Pn	02 06 55.1	+0.6
CMRD	Camardi-Nigde	1.90	25	Pn	Pn	02 06 57.2	+1.0
AKO	Adana	1.93	38	P	Pn	02 06 57.2	+0.7
AKO				S	Sn	02 07 21.6	+0.9
NIDE	Nigde/Merkez-G	2.15	17	P	Pb	02 07 02.2	-0.6
NIDE				S	Sb	02 07 28.3	-1.3
RHAN	Hatay/Reyhanl	2.15	81	P	Pn	02 06 59.7	+0.1
RHAN				S	Sn	02 07 25.5	-0.9
RHAN				*i* IAML		02 07 35.0	
	comp=N,86nm,0.7s						
HASA	Hatay-Hassa-Ha	2.19	68	P	Pn	02 07 00.2	+0.2
HASA				S	Sn	02 07 25.3	-1.9
SEDI	Konya, Seydise	2.33	311	P	Pb	02 07 06.1	+0.2
SEDI				S	Sb	02 07 34.2	-0.6
BSIR	Belisirma, Guz	2.34	6	P	Pb	02 07 05.2	-0.7
KONT	Konya--Tatoy	2.38	328	P	Pb	02 07 07.5	+0.9
KONT				S	Sg	02 07 38.0	-2.0
ALIN	Konya, Altinte	2.51	340	P	Pb	02 07 08.6	-0.3
ALIN				S	Sb	02 07 39.4	-0.5
ANDN	Andirin	2.51	49	P	Pb	02 07 08.1	-0.7
ANDN				S	Sn	02 07 32.6	-2.7
KUZU	Kuzuini	2.64	71	P	Pn	02 07 06.2	-0.1
KUZU				S	Sn	02 07 36.5	-1.9
DOGA	KONYA_Doganhis	2.84	320	P	Pb	02 07 12.5	-2.0
DOGA				S	Sb	02 07 48.6	-0.8
GAZ	Gaziantep	2.88	64	P	Pn	02 07 09.5	-0.2
AVNS	Nevsehir-Avano	2.94	13	P	Pb	02 07 17.4	+1.2
AVNS				S	Sb	02 07 54.5	+2.2
AVNS				*i* IAML		02 08 05.0	
	comp=N,47nm,0.7s						
AKUM	Antalya-Kumluc	2.96	278	P	Pb	02 07 15.0	-1.5
AKUM				S	Sn	02 07 49.2	+2.9
KDHN	Kadinhani	2.97	331	P	Pb	02 07 15.0	-1.7
GEM	Giv'at Ha'Em	3.06	152	P	Pn	02 07 13.4	+1.3
GEM	Giv'at Ha'Em	3.06	152	P	Pn	02 07 12.4	+0.3
GEM	Giv'at Ha'Em	3.06	152	S	Sn	02 07 50.4	+1.6
BUCA	Burdur, Bucak-	3.07	298	P	Pn	02 07 13.8	+1.5
BUCA				S	Sn	02 07 50.6	+1.4
MMC7	Mount Meron ar	3.14	158	P	Pn	02 07 13.5	+0.3
MMA0B	Mount Meron ar	3.15	158	P	Pn	02 07 13.9	+0.5
MMA0B	Mount Meron ar	3.15	158	S	Sn	02 07 51.8	+0.7
KIRS	Kirsehir-Merke	3.19	359	P	Pn	02 07 16.0	+2.1
KKUL	Konya-Kulu	3.33	346	P	Pn	02 07 19.0	+3.1
UCKU	Afyonkarahisar	3.37	324	P	Pb	02 07 20.7	-2.8
OFRI	`Ofer	3.42	166	P	Pn	02 07 17.7	+0.7
OFRI	`Ofer	3.42	166	P	Pn	02 07 17.3	+0.4
OFRI	`Ofer	3.42	166	S	Sn	02 07 58.6	+1.0
MMLI	Mount Malkishu	3.70	161	P	Pn	02 07 21.2	+0.4
MMLI	Mount Malkishu	3.70	161	S	Sn	02 08 05.7	+1.3
SLTI	Sal'it	3.80	166	P	Pn	02 07 24.6	+2.4
SLTI	Sal'it	3.80	166	P	Pn	02 07 22.5	+0.4
SLTI	Sal'it	3.80	166	S	Sn	02 08 08.1	+1.2
QRNJ	Al-Qirein	3.83	159	P	Pn	02 07 25.0	+2.3
HMDT	Nahal Hemdat	3.90	160	P	Pn	02 07 25.5	+1.9
HMDT	Nahal Hemdat	3.90	160	P	Pn	02 07 23.7	+0.1
HMDT	Nahal Hemdat	3.90	160	S	Sn	02 08 10.6	+1.1
SALP	Salfit	3.99	165	P	Pn	02 07 26.7	+1.8
ASF	Jabal al Asfar	4.47	146	P	Pn	02 07 34.3	+2.7
DSI	Dead Sea	4.51	165	P	Pn	02 07 33.8	+1.7
DSI	Dead Sea	4.51	165	P	Pn	02 07 31.9	-0.1
DSI	Dead Sea	4.51	165	S	Sn	02 08 25.3	+0.7
YTIR	Yattir	4.67	168	P	Pn	02 07 34.6	+0.4
YTIR	Yattir	4.67	168	S	Sn	02 08 29.6	+1.2
MSBI	Mazada	4.76	166	P	Pn	02 07 35.8	+0.4
GHAJ	Ghor Haditha	4.81	164	P	Pn	02 07 41.5	+5.4
GHAJ	Ghor Haditha	4.81	164	P	Pn	02 07 36.3	+0.2
GHAJ	Ghor Haditha	4.81	164	S	Sn	02 08 33.4	+1.4
KZIT	Kziot	5.03	176	P	Pn	02 07 39.6	+0.4
KZIT	Kziot	5.03	176	S	Sn	02 08 38.1	+0.6
PRNI	Paran	5.64	171	P	Pn	02 07 49.4	+1.8
PRNI	Paran	5.64	171	P	Pn	02 07 48.0	+0.5
PRNI	Paran	5.64	171	S	Sn	02 08 53.7	+1.2
HRFI	Mount Harif	5.96	171	P	Pn	02 07 52.1	+0.2
MBRI	Mt Berech	6.18	172	P	Pn	02 07 55.6	+0.6
MBRI	Mt Berech	6.18	172	S	Sn	02 09 06.9	+1.0

TIR 03 02:25:56.8, 40°.51N×20°.80E, h7km±12km**, Md2.8**/2**, Ml1.4**/2**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.12	355	Sg	Sg	02 26 01.3	0.0
NEST	Nestorio	0.21	115	Pg	Pg	02 26 01.5	+0.4
NEST				Sg	Sg	02 26 04.9	+1.1
NEST				AML	AML	02 26 09.1	
	0.3nm,0.3s						
NEST				AMd		02 26 49.1	
LSK	Leskovik	0.39	203	Pg	Pg	02 26 04.5	+0.1
LSK				Sg	Sg	02 26 10.6	+1.2
LSK				AML	AML	02 26 17.5	
	0.2nm,0.5s						
LSK				AMd		02 27 04.6	
SRN	Sarande	0.87	225	Sn	Sn	02 26 27.8	-0.7

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*GUC **03** 02:34:34.1±0.8, 35°.07S×72°.43W, h43km±5km, ML3.6*

*NEIC **03** 02:34:35.2±1.8, 35°.00S±0°.05×72°.55W±0°.04, h33km±15km, ML3.7/50, ML3.5(GUC), Error ellipse: s-maj=7.6km s-min=4.5km az=195.0*

ISC 03 02:34:33.1±1.8**, 35°.00S**±0°.04×**72°.56W**±0°.07**, h16**km±10km**, n51, σ0ˢ.98**/65**, 1C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	Hualane	0.52	91	⇓*i*P	Pg	02 34 44.0	+0.5
GO05				*e*S	Sg	02 34 50.3	-0.1
GO05				IAML		02 34 51.3	
	comp=E,19µm,0.2s						
ML02	Panimavida	1.21	129	Pn	Pn	02 34 54.7	-0.6
ML02	Panimavida	1.21	129	⇑*i*P	Pn	02 34 54.8	-0.6
ML02				*e*S	Sb	02 35 09.8	-1.1
BO01	Tunca	1.36	64	Pn	Pn	02 34 57.3	-0.2
BO01	Tunca	1.36	64	*e*P	Pn	02 34 57.2	-0.2
BO01				*e*S	Sn	02 35 15.1	-0.1
BO01				IAML		02 35 19.7	
	comp=E,467nm,0.5s						

BO02	**Sierra Bellavi**	**1.48**	**82**	Pn	**Pn**	**02 34 59.0**	**-0.2**
BO02	**Sierra Bellavi**	**1.48**	**82**	*i* P	**Pn**	**02 34 59.0**	**-0.2**
BO02				*e*S	**Sn**	**02 35 17.3**	**-0.9**
BO02				IAML		02 35 21.8	
	comp=E,4µm,0.4s						
VA05	**Santo Domingo**	**1.55**	**31**	Pn	**Pn**	**02 35 00.2**	**+0.1**
VA05				IAML		02 35 25.6	
	comp=E,1µm,0.3s						
VA05	**Santo Domingo**	**1.55**	**31**	*e*P	**Pn**	**02 34 60.0**	**-0.2**
VA05				*e*S	**Sb**	**02 35 22.5**	**+1.5**
VA05				IAML		02 35 27.8	
	comp=N,2µm,0.5s						
MT01	**Popeta**	**1.57**	**44**	Pn	**Pn**	**02 35 00.9**	**+0.5**
MT01	**Popeta**	**1.57**	**44**	*e*P	**Pn**	**02 35 00.6**	**+0.3**
MT09	**Talagante**	**1.79**	**47**	Pn	**Pn**	**02 35 04.1**	**+0.6**
MT09				IAML		02 35 33.5	
	comp=N,925nm,0.8s						
MT09				IAML		02 35 34.6	
	comp=E,699nm,0.7s						
MT09	**Talagante**	**1.79**	**47**	*e*P	**Pn**	**02 35 04.7**	**+1.2**
MT09				*e*S	**Sn**	**02 35 26.6**	**+0.7**
BO04	**La Punta**	**1.90**	**59**	Pn	**Pn**	**02 35 05.8**	**+0.9**
BO04				IAML		02 35 34.2	
	comp=N,640nm,1.1s						
BO04				IAML		02 35 39.2	
	comp=E,522nm,0.8s						
BO04	**La Punta**	**1.90**	**59**	*e*P	**Pb**	**02 35 07.2**	**-0.3**
BI02	**San Fabin de**	**1.96**	**148**		**Pn**	**02 35 06.3**	**+0.5**
BI02				IAML		02 35 34.0	
	comp=E,734nm,0.4s						
BI02				IAML		02 35 35.6	
	comp=N,698nm,0.6s						
BI02	**San Fabin de**	**1.96**	**148**	*e*P	**Pn**	**02 35 06.7**	**+0.8**
BI02				*e*S	**Sn**	**02 35 30.7**	**+0.5**
BI02				IAML		02 35 36.0	
	comp=N,681nm,0.7s						
MT02	**Curacav**	**2.10**	**35**		**Pn**	**02 35 07.3**	**-0.4**
MT02	**Curacav**	**2.10**	**35**	*e*P	**Pn**	**02 35 07.5**	**-0.2**
MT15	**Las Vizcachas**	**2.20**	**51**	*e*P	**Pb**	**02 35 11.8**	**-0.8**
MT15				*e*S	**Sb**	**02 35 38.6**	**-1.1**
MT05	**Renca**	**2.21**	**44**		**Pn**	**02 35 09.4**	**+0.3**
MT05				IAML		02 35 50.0	
	comp=E,514nm,0.4s						
MT05				IAML		02 35 57.0	
	comp=N,419nm,0.4s						
MT13	**San Alfonso**	**2.26**	**57**	Pn	**Pn**	**02 35 11.7**	**+1.7**
MT13				IAML		02 35 43.8	
	comp=E,598nm,0.3s						
MT13				IAML		02 35 46.9	
	comp=N,586nm,0.4s						
MT13	**San Alfonso**	**2.26**	**57**	*e*P	**Pb**	**02 35 13.3**	**-0.4**
MT13				*e*S	**Sb**	**02 35 42.7**	**+1.2**
LMEL	**Las Melosas**	**2.27**	**60**		**Pn**	**02 35 09.6**	**-0.5**
LMEL				IAML		02 35 46.9	
	comp=N,577nm,0.7s						
LMEL				IAML		02 35 47.8	
	comp=E,494nm,0.7s						
LMEL	**Las Melosas**	**2.27**	**60**	*e*P	**Pb**	**02 35 13.1**	**-0.7**
LMEL				*e*S	**Sb**	**02 35 42.4**	**+0.8**
LMEL				IAML		02 35 47.0	
	comp=N,508nm,0.2s						
MT03	**Universidad Ad**	**2.27**	**49**		**Pn**	**02 35 11.5**	**+1.4**
MT03				IAML		02 35 46.9	
	comp=E,543nm,0.7s						
MT03	**Universidad Ad**	**2.27**	**49**	*e*P	**Pb**	**02 35 12.5**	**-1.3**
MT03				*e*S	**Sb**	**02 35 40.5**	**-1.2**
MT03				IAML		02 35 47.2	
	comp=N,680nm,0.3s						
MT16	**CCHEN**	**2.31**	**48**	Pn	**Pn**	**02 35 11.1**	**+0.6**
MT14	**Cerro Cal¡n**	**2.32**	**47**	*e*P	**Pb**	**02 35 13.5**	**-1.2**
ROCH	**El Roble**	**2.40**	**33**	*e*P	**Pn**	**02 35 12.3**	**+0.3**
MT10	**Hacienda Santa**	**2.41**	**45**	*e*P	**Pn**	**02 35 14.2**	**+2.2**
MT10				*e*S	**Sb**	**02 35 46.9**	**+1.2**
MT10				IAML		02 35 53.7	
	comp=E,728nm,0.5s						
PEL	**Peldehue**	**2.42**	**41**		**Pn**	**02 35 14.0**	**+1.9**
PEL				IAML		02 36 02.3	
	comp=N,252nm,0.7s						
PEL	**Peldehue**	**2.42**	**41**	*e*P	**Pb**	**02 35 14.8**	**-1.6**
MT04	**Ro Olivares**	**2.56**	**52**	*e*P	**Pb**	**02 35 17.7**	**-1.2**
MT04				*e*S	**Sb**	**02 35 50.7**	**+0.4**
MT04				IAML		02 35 55.9	
	comp=N,185nm,0.4s						
MT08	**Bocatoma Ro**	**2.62**	**54**		**Pn**	**02 35 17.4**	**+2.4**
MT08				IAML		02 36 00.8	
	comp=N,309nm,0.5s						
MT08	**Bocatoma Ro**	**2.62**	**54**	*e*P	**Pb**	**02 35 18.9**	**-0.9**
MT08				*e*S	**Sb**	**02 35 53.0**	**+1.1**
MT08				IAML		02 36 00.9	
	comp=N,240nm,0.4s						
VA06	**Catapilco**	**2.65**	**24**	Pn	**Pn**	**02 35 15.1**	**-0.1**
VA06				IAML		02 36 01.8	
	comp=N,215nm,0.6s						
VA06				IAML		02 36 07.5	
	comp=E,247nm,0.6s						
VA06	**Catapilco**	**2.65**	**24**	*e*P	**Pn**	**02 35 15.1**	**-0.1**
CO02	**Combarbal**	**4.01**	**20**	Pn	**Pn**	**02 35 34.1**	**+0.1**
CO02				IAML		02 36 23.3	
	comp=N,92nm,0.3s						
CO02				IAML		02 36 45.4	
	comp=E,145nm,0.7s						
CO06	**Fray Jorge**	**4.39**	**11**	Pn	**Pn**	**02 35 38.1**	**-1.0**
CO06				IAML		02 36 59.0	
	comp=E,44nm,2.2s						
CO03	**El Pedregal**	**4.44**	**21**	Pn	**Pn**	**02 35 40.4**	**+0.4**
CO03				IAML		02 36 58.2	
	comp=E,52nm,1.0s						
CO03				IAML		02 37 01.5	
	comp=N,55nm,0.7s						
LR03	**Panguipulli**	**4.62**	**178**	Pn	**Pn**	**02 35 42.6**	**+0.2**
GO04	**Tololo Observa**	**5.04**	**18**	Pn	**Pn**	**02 35 47.5**	**-0.8**
LR05	**Currie**	**5.24**	**175**	Pn	**Pn**	**02 35 51.9**	**+1.1**
LR05				IAML		02 37 16.5	
	comp=E,60nm,1.6s						
LR05				IAML		02 39 23.9	
	comp=N,56nm,4.2s						
VA04	**Juan Fernndez**	**5.36**	**283**	Pn	**Pn**	**02 35 53.8**	**+1.4**
CO01	**Juntas del Tor**	**5.43**	**23**	Pn	**Pn**	**02 35 54.5**	**+0.9**
PLCA	**Paso Flores**	**5.94**	**165**		**Pn**	**02 36 02.0**	**+1.5**
LCO	**Las Campanas**	**6.18**	**15**	Pn	**Pn**	**02 36 03.3**	**-0.7**
AC05	**El Transito**	**6.45**	**18**	Pn	**Pn**	**02 36 07.5**	**-0.1**
AC04	**Llanos de Chal**	**6.89**	**11**	Pn	**Pn**	**02 36 12.0**	**-1.6**
AC02	**Maricunga**	**8.66**	**21**	Pn	**Pn**	**02 36 37.2**	**-1.0**

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*IDC **03** 02:44:37.4±0.5, 1°.67N×126°.26E, h0^{km}, mb4.3/22,*
mbtmp4.3/24, ML4.0/2, MS3.1/8, Error ellipse:
s-maj=25.0km s-min=10.0km az=73.0
*DJA **03** 02:44:43.6±0.2, 2°N±3°×12°6E±°, h10^{km}, M4.5/12, mB5.0/4,*
mb4.7/4, MLv4.4/12, Mw(mB)4.3/4
*NEIC **03** 02:44:44.9±1.3, 1°.61N±0°.09×126°.46E±0°.07, h45^{km}±6^{km},*
mb4.5/31, Error ellipse: s-maj=14.0km s-min=9.0km
az=205.0
ISC 03 02:44:44.5±0.4, 1°.66N±0°.05×126°.47E±0°.06, h47^{km}, n95,
σ1^s.62/91, mb4.5/41, MS3.2/8, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.25**	**134**		**Pn**	**02 45 05.9**	**+0.3**
TNTI	**Ternate**	**1.25**	**134**	P	**Pn**	**02 45 06.1**	**+0.4**
TNTI				S	**Sn**	**02 45 22.5**	**+1.1**
SGSI	**Sangihe**	**2.23**	**335**	P	**Pn**	**02 45 20.1**	**+1.1**
KMSI	**Cibinong**	**2.71**	**247**	P	**Pn**	**02 45 27.2**	**+1.5**
SANI	**Sanana**	**3.71**	**188**	P	**Pn**	**02 45 40.6**	**+1.2**
LUWI	**Luwuk**	**4.57**	**234**	Pn	**Pn**	**02 45 49.4**	**-1.7**
LUWI	**Luwuk**	**4.57**	**234**	P	**Pn**	**02 45 54.1**	**+2.9**
MRSI	**Marisa**	**4.68**	**256**	P	**Pn**	**02 45 55.3**	**+2.6**
APSI	**Ampana**	**5.46**	**242**	P	**Pn**	**02 46 06.8**	**+3.5**
	2µm130nm,1.1s						
TOLI2	**Tolitoli**	**5.71**	**265**	Pn	**Pn**	**02 46 06.9**	**0.0**
MPSI	**Mapaga**	**6.70**	**259**	P	**Pn**	**02 46 23.7**	**+3.2**
	0.1nm471nm23nm,0.7s						
RKPI	**Ransiki, Papua**	**8.32**	**112**	P	**Pn**	**02 46 44.3**	**+1.6**
MYLDM	**Lahad Datu**	**8.69**	**294**	Pn	**Pn**	**02 46 51.2**	**+3.5**
KAPI	**Kappang**	**9.43**	**225**		**Pn**	**02 46 58.4**	**+0.5**
KAPI	**Kappang**	**9.43**	**225**	Pn	**Pn**	**02 46 57.2**	**-0.7**
	1.7nm,0.3s,baz=63,slow=14,SNR=4.2						
KAPI				Sn	**Sn**	**02 48 43.3**	**+0.6**
	1.0nm,0.3s,baz=145,slow=16,SNR=2.0						
JAY	**Jayapura**	**14.82**	**106**	Pn	**Pn**	**02 48 11.0**	**-0.3**
	0.4nm,0.3s,baz=285,slow=5.4,SNR=3.6						
	3.1nm,0.3s						
MTN	**Manton Dam**	**15.13**	**162**	Pn	**Pn**	**02 48 14.1**	**-1.2**
KSM	**Kuching**	**16.16**	**270**	P	**P**	**02 48 31.0**	**-0.2**
KNRA	**Kununurra**	**17.37**	**173**	Pn	**Pn**	**02 48 42.5**	**-1.2**
KNRA				IAmb	IAmb	02 48 57.2	
	comp=Z,57nm,1.5s						
FITZ	**Fitzroy Crossi**	**19.65**	**182**	P	**P**	**02 49 08.7**	**-0.8**
FITZ	**Fitzroy Crossi**	**19.65**	**182**	P	**P**	**02 49 08.7**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=18,slow=9.7,SNR=8.1						
	comp=Z,3.1nm,0.8s						
WB0	**Warramunga Arr**	**22.66**	**160**	P	**P**	**02 49 41.3**	**-0.8**
WRAB	**Tennant Creek**	**22.80**	**161**	P	**P**	**02 49 43.0**	**-0.5**
WRAB				IAmb	IAmb	02 49 58.6	
	comp=Z,18nm,0.6s						
WRA	**Warramunga Arr**	**22.81**	**161**	P	**P**	**02 49 42.2**	**-1.4**
WRA	**Warramunga Arr**	**22.81**	**161**	P	**P**	**02 49 41.2**	**-2.3**
	comp=Z,17nm,0.7s,baz=340,slow=11,SNR=60						
WRA				PcP	**PcP**	**02 53 34.0**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=314,slow=2.9,SNR=1.9						
	comp=Z,17nm,0.7s						
WR8	**Warramunga Arr**	**22.88**	**160**	P	**P**	**02 49 43.0**	**-1.2**
WR8				IAmb	IAmb	02 49 47.2	
	comp=Z,13nm,0.7s						
PMG	**Port Moresby**	**23.35**	**118**	LR	LR	03 01 15.2	
	comp=Z,50nm,18.6s,baz=322,slow=42						
AS31	**Alice Springs**	**26.19**	**164**	P	**P**	**02 50 13.6**	**-1.3**
ASAR	**Alice Springs**	**26.19**	**164**	P	**P**	**02 50 15.1**	**+0.2**
ASAR	**Alice Springs**	**26.19**	**164**	P	**P**	**02 50 14.7**	**-0.2**
	comp=Z,2.0nm,0.4s,baz=345,slow=7.8,SNR=30						
ASAR				PcP	**PcP**	**02 53 41.4**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=356,slow=2.4,SNR=7.0						
ASAR				S	**S**	**02 54 50.6**	**+6.7**
	comp=Z,1.7nm,0.9s,baz=345,slow=20,SNR=5.6						
	comp=Z,2.0nm,0.4s						
RPSI	**Rantau Prapat**	**27.55**	**273**	P	**P**	**02 50 27.3**	**0.0**
RPSI				IAmb	IAmb	02 50 29.5	
	comp=Z,10nm,1.1s						
PSI	**Prapat**	**27.55**	**273**	P	**P**	**02 50 26.2**	**-1.2**
	comp=Z,5.2nm,0.8s,baz=129,slow=5.5,SNR=6.1						
	comp=Z,5.2nm,0.8s						
NJ2	**Nanjing**	**31.08**	**347**	*e*P	**P**	**02 51 01.7**	**+3.4**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**31.75**	**304**	P	**P**	**02 51 01.4**	**-3.1**
	comp=Z,0.9nm,0.3s,baz=114,slow=7.9,SNR=4.3						
	comp=Z,0.9nm,0.3s						
FORT	**Forrest**	**32.29**	**177**	P	**P**	**02 51 08.9**	**-0.1**
BBOO	**Buckleboo**	**35.46**	**166**	P	**P**	**02 51 36.1**	**-0.4**
KSRS	**Korea Array**	**35.65**	**2**	LR	LR	03 05 01.4	
	comp=Z,7.3nm,19.5s,baz=175,slow=34						
STKA	**Stephens Creek**	**36.30**	**158**	P	**P**	**02 51 42.8**	**-1.0**
STKA	**Stephens Creek**	**36.30**	**158**	P	**P**	**02 51 43.1**	**-0.6**
	comp=Z,1.9nm,0.3s,baz=3.1,slow=7.3,SNR=8.0						
	comp=Z,1.9nm,0.3s						
MJAR	**Matsushiro Arr**	**36.37**	**16**	P	**P**	**02 51 43.6**	**-0.8**
	comp=Z,1.4nm,0.4s,baz=186,slow=9.4,SNR=2.0						
	comp=Z,1.4nm,0.4s						
ARMA	**Armidale**	**39.90**	**145**	P	**P**	**02 52 16.0**	**+1.7**
ARMA				IAmb	IAmb	02 52 25.8	
	comp=Z,8.3nm,1.1s						
LZH	**Lanzhou**	**40.17**	**331**	*e*P	**P**	**02 52 19.2**	**+2.7**
HHC	**Hu-ho-hao-te**	**41.28**	**343**	*e*P	**P**	**02 52 28.5**	**+3.0**
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
USRK	**Ussuriysk Ar.**	**42.65**	**6**	P	**P**	**02 52 37.0**	**+0.6**
	comp=Z,2.0nm,0.7s,baz=206,slow=8.7,SNR=4.1						
	comp=Z,2.0nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**42.83**	**64**	T	T	03 39 50.8	
	baz=252,slow=74						
H11S1	**WAKE ISLAND Hy**	**42.84**	**64**	T	T	03 39 29.7	
	baz=252						
H11S2	**WAKE ISLAND Hy**	**42.84**	**64**	T	T	03 39 37.2	
	baz=252,slow=74						
XLT	**XiLinHaoTe**	**43.07**	**349**	*e*P	**P**	**02 52 42.2**	**+2.2**
XLT				sP	sP	02 53 00.5	+3.0
XLT				pmax	pmax		
	comp=Z,7.0nm,0.7s						
H11N1	**WAKE ISLAND Hy**	**43.40**	**63**	T	T	03 40 19.8	
	baz=251						
H11N2	**WAKE ISLAND Hy**	**43.41**	**63**	T	T	03 40 14.4	
	baz=251						
H11N3	**WAKE ISLAND Hy**	**43.42**	**63**	T	T	03 40 27.7	
	baz=251						
GTA	**Gaotai**	**44.75**	**330**	*e*P	**P**	**02 52 53.5**	**-0.1**
GTA				PcP	**PcP**	**02 54 36.8**	**+1.5**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PALK	**Pallekele**	**45.95**	**278**	LR	LR	03 13 12.8	
	comp=Z,33nm,19.8s,baz=98,slow=38						
EVN	**Everest**	**46.04**	**308**	P	**P**	**02 53 04.1**	**-0.5**
EVN				IAmb	IAmb	02 53 28.5	
	comp=Z,7.9nm,1.4s						
KLR	**Kul'dur**	**47.61**	**5**	P	**P**	**02 53 15.3**	**-0.5**
	comp=Z,0.9nm,0.4s,baz=101,slow=4.1,SNR=4.3						
KLR				LR	LR	03 11 04.7	
	comp=Z,13nm,19.8s,baz=185,slow=33						
	comp=Z,0.9nm,0.4s						
SONM	**Songino Array**	**49.17**	**342**	P	**P**	**02 53 27.2**	**-0.8**
	comp=Z,1.4nm,0.6s,baz=147,slow=8.7,SNR=6.3						
	comp=Z,1.4nm,0.6s						
PETK	**Petropavlovsk-**	**57.44**	**22**	P	**P**	**02 54 28.9**	**+0.5**
PETK	**Petropavlovsk-**	**57.44**	**22**	P	**P**	**02 54 29.3**	**+0.8**
	comp=Z,1.1nm,0.5s,baz=189,slow=5.7,SNR=4.6						
	comp=Z,1.1nm,0.5s						
MKAR	**Makanchi Array**	**59.11**	**326**	P	**P**	**02 54 39.4**	**-1.0**
	comp=Z,2.5nm,0.4s,baz=121,slow=7.9,SNR=34						
MKAR				PcP	**PcP**	**02 55 28.3**	**-0.3**
	comp=Z,1.8nm,0.8s,baz=115,slow=5.1,SNR=5.4						
MKAR				LR	LR	03 23 03.4	
	comp=Z,17nm,18.6s,baz=159,slow=39						
	comp=Z,2.5nm,0.4s						
MAKZ	**Makanchi**	**59.30**	**326**	P	**P**	**02 54 40.9**	**-0.6**
MAKZ				IAmb	IAmb	02 54 43.1	
	comp=Z,4.9nm,1.1s						
KSH	**Kashi**	**59.34**	**316**	P	**P**	**02 54 43.2**	**+1.1**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KDJ	**Kajisay**	**59.73**	**319**	P	**P**	**02 54 45.2**	**+0.3**
KDJ				IAmb	IAmb	02 54 46.7	
	comp=Z,4.2nm,1.0s						
LBZ	**Lake Benmore**	**60.13**	**145**	P	**P**	**02 54 47.1**	**-0.2**
BKZ	**Black Stump Fm**	**61.23**	**137**	P	**P**	**02 54 54.6**	**-0.4**
ZALV	**Zalesovo Beam**	**62.31**	**334**	P	**P**	**02 54 59.1**	**-2.8**
	comp=Z,0.5nm,0.3s,baz=126,slow=9.8,SNR=2.6						
	comp=Z,0.5nm,0.3s						
KURBB	**Kurchatov Arra**	**63.34**	**328**	P	**P**	**02 55 07.7**	**-1.1**
	comp=Z,4.3nm,0.7s,baz=127,slow=6.0,SNR=30						
	comp=Z,4.3nm,0.7s						
KURK	**Kurchatov**	**63.35**	**328**	P	**P**	**02 55 08.5**	**-0.3**
KKAR	**Karatay Array**	**64.58**	**318**	P	**P**	**02 55 16.8**	**-0.3**
BVAR	**Borovoye Array**	**68.91**	**328**	P	**P**	**02 55 43.2**	**-1.3**
	comp=Z,1.0nm,0.4s,baz=138,slow=8.4,SNR=5.1						
	comp=Z,1.0nm,0.4s						
BRVK	**Borovoye**	**68.99**	**328**	P	**P**	**02 55 44.8**	**-0.2**
BRVK				IAmb	IAmb	02 56 03.8	
	comp=Z,3.3nm,0.7s						
NRIK	**Noril'sk**	**72.37**	**346**	P	**P**	**02 56 04.3**	**-0.9**
	comp=Z,3.7nm,0.6s,baz=138,slow=6.8,SNR=8.0						
NRIK				LR	LR	03 32 01.4	
	comp=Z,20nm,18.4s,baz=130,slow=39						
	comp=Z,3.7nm,0.6s						
AB31	**Akbulak array**	**73.59**	**321**	P	**P**	**02 56 12.1**	**-0.8**
ABKAR	**Akbulak array**	**73.59**	**321**	P	**P**	**02 56 12.1**	**-0.7**
L16K	**Owhat River**	**81.02**	**28**	P	**P**	**02 56 52.5**	**-1.7**
VNDA	**Vanda**	**81.42**	**173**	P	**P**	**02 56 56.0**	**+0.1**
VNDA				IAmb	IAmb	02 56 57.1	
	comp=Z,2.1nm,0.6s						
VNDA	**Vanda**	**81.42**	**173**	P	**P**	**02 56 55.3**	**-0.7**
	comp=Z,1.3nm,0.3s,baz=313,slow=6.3,SNR=12						
	comp=Z,1.3nm,0.3s						
MAW	**Mawson**	**81.73**	**200**	P	**P**	**02 56 57.6**	**-0.2**
	comp=Z,5.5nm,0.9s,baz=75,slow=10,SNR=3.8						
	comp=Z,5.5nm,0.9s						
C18K	**Utukok River**	**82.08**	**21**	P	**P**	**02 57 00.8**	**+1.0**
C18K				IAmb	IAmb	02 57 22.7	
	comp=Z,9.7nm,1.4s						
J18K	**Innoko River**	**82.64**	**26**	P	**P**	**02 57 03.1**	**+0.4**
J18K				IAmb	IAmb	02 57 05.0	
	comp=Z,3.3nm,1.1s						
TTA	**Tatalina**	**82.86**	**27**	P	**P**	**02 57 05.3**	**+1.4**
TTA				IAmb	IAmb	02 57 06.2	
	comp=Z,4.5nm,1.2s						
H19K	**Roundabout Mou**	**83.15**	**24**	P	**P**	**02 57 06.8**	**+1.6**
H19K				IAmb	IAmb	02 57 08.1	
	comp=Z,6.6nm,0.8s						
L19K	**White Mountain**	**83.25**	**28**	P	**P**	**02 57 06.7**	**+0.7**
L19K				IAmb	IAmb	02 57 09.0	
	comp=Z,3.3nm,1.1s						
D20K	**Etivluk River**	**83.72**	**21**	P	**P**	**02 57 09.8**	**+1.5**
D20K				IAmb	IAmb	02 57 10.7	
	comp=Z,4.5nm,0.8s						
KDAK	**Kodiak Island**	**83.77**	**32**	LR	LR	03 30 35.5	
	comp=Z,17nm,21.1s,baz=215,slow=33						
KBZ	**Khabaz**	**84.21**	**314**	P	**P**	**02 57 08.7**	**-2.5**
	comp=Z,1.9nm,0.9s,baz=117,slow=2.3,SNR=4.5						
	comp=Z,1.9nm,0.9s						
ASF	**Jabal al Asfar**	**88.77**	**302**	LR	LR	03 44 33.9	
	comp=Z,8.9nm,18.2s,baz=113,slow=41						
BRTR	**Keskin Array B**	**91.14**	**310**	P	**P**	**02 57 42.8**	**-2.1**
	comp=Z,0.4nm,0.8s,baz=77,slow=6.7,SNR=4.4						
	comp=Z,0.4nm,0.8s						
QSPA	**South Pole Qui**	**91.58**	**180**	P	**P**	**02 57 46.4**	**+0.1**
QSPA				IAmb	IAmb	02 57 55.6	
	comp=Z,2.5nm,1.0s						
QSPA	**South Pole Qui**	**91.58**	**180**	P	**P**	**02 57 46.4**	**+0.1**
	comp=Z,1.2nm,0.8s,baz=286,slow=7.1,SNR=8.5						
	comp=Z,1.2nm,0.8s						
ARCES	**ARCESS Array B**	**92.29**	**340**	P	**P**	**02 57 49.5**	**+0.1**
	comp=Z,1.5nm,0.7s,baz=46,slow=5.2,SNR=3.6						
	comp=Z,1.5nm,0.7s						
FINES	**FINESS Array B**	**93.53**	**332**	P	**P**	**02 57 53.2**	**-2.0**
	comp=Z,1.2nm,0.7s,baz=92,slow=7.4,SNR=2.2						
	comp=Z,1.2nm,0.7s						
BELA	**Belgrano 2**	**103.18**	**184**		**Pdif**	**02 58 38.7**	**+0.4**
TRQA	**Tornquist**	**142.95**	**169**	PKPdf	**PKPdf**	**03 04 10.6**	**-3.1**
PLTB	**Pedras Altas**	**150.05**	**180**	PKPbc	**PKiKP**	**03 04 31.1**	**-0.5**
GO02	**Mina Guanaco**	**151.96**	**148**	PKPbc	**PKiKP**	**03 04 37.2**	**+1.1**

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*SNET **03** 02:53:15.2±3.3, 12°.94N×89°.57W, h13^{km}, ML3.0*
*CATAC **03** 02:53:17.4±0.7, 13°N±4°×8°9W±°, h24^{km}±4^{km}, M3.0/13,*
MLv3.0/13, Error ellipse: s-maj=8.4km s-min=5.1km
az=25.0, confirmed
*GCG **03** 02:53:17.6±0.3, 13°.06N×89°.49W, h59^{km}±7^{km}, MD3.6*
ISC 03 02:53:17.3±2.5, 13°.0N±0°.1×89°.50W±0°.07, h24^{km}±13^{km},
n35, σ0^s.38/41, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAYA	**Jayaque - finc**	**0.64**	**5**	*e*P	**Pb**	**02 53 30.5**	**+0.5**
JAYA				*e*S	**Sn**	**02 53 40.5**	**0.0**
JAYA	**Jayaque - finc**	**0.64**	**5**	*e*P	**Pb**	**02 53 30.5**	**+0.5**
JAYA				*i* S	**Sn**	**02 53 40.5**	**0.0**
JAYA	**Jayaque - finc**	**0.64**	**5**	P	**Pb**	**02 53 30.5**	**+0.5**
LOMA	**Loma Larga**	**0.71**	**27**	P	**Pb**	**02 53 31.1**	**0.0**
LOMA	**Loma Larga**	**0.71**	**27**	S	**Sn**	**02 53 42.2**	**+0.1**
PMON	**Piamonte**	**0.72**	**15**	P	**Pb**	**02 53 31.6**	**+0.3**
PMON	**Piamonte**	**0.72**	**15**	S	**Sn**	**02 53 42.8**	**+0.4**
UEES	**Universidad Ev**	**0.75**	**20**	P	**Pb**	**02 53 31.9**	**+0.2**
UEES	**Universidad Ev**	**0.75**	**20**	S	**Sn**	**02 53 42.8**	**-0.3**
CEVE	**Cerro Verde**	**0.82**	**352**	*e*P	**Pn**	**02 53 33.4**	**-0.2**
CEVE	**Cerro Verde**	**0.82**	**352**	P	**Pn**	**02 53 33.4**	**-0.2**
CEVE	**Cerro Verde**	**0.82**	**352**	S	**Sn**	**02 53 46.2**	**+1.1**
COEG	**Centro de Oper**	**0.86**	**45**	*e*P	**Pb**	**02 53 33.3**	**-0.2**
COEG				*e*S	**Sn**	**02 53 45.0**	**-0.7**
COEG	**Centro de Oper**	**0.86**	**45**	P	**Pb**	**02 53 33.4**	**-0.2**
TECO	**Alcaldia de Te**	**0.88**	**53**	P	**Pb**	**02 53 33.2**	**-0.7**
TECO	**Alcaldia de Te**	**0.88**	**53**	S	**Sb**	**02 53 45.2**	**0.0**
PAVA	**Las Pavas**	**0.89**	**38**	*e*P	**Pb**	**02 53 34.2**	**0.0**
PAVA				*e*S	**Sn**	**02 53 46.7**	**+0.2**
PAVA	**Las Pavas**	**0.89**	**38**	P	**Pb**	**02 53 34.2**	**0.0**
NUBE	**Las Nubes**	**0.93**	**343**	P	**Pb**	**02 53 34.5**	**-0.3**
NUBE	**Las Nubes**	**0.93**	**343**	S	**Sb**	**02 53 46.5**	**-0.3**
UESV	**Universidad de**	**0.93**	**48**	P	**Pb**	**02 53 34.5**	**-0.4**
UESV	**Universidad de**	**0.93**	**48**	S	**Sb**	**02 53 47.0**	**+0.1**
UNIC	**Universidad Ca**	**0.97**	**357**	P	**Pb**	**02 53 35.4**	**0.0**
UNIC	**Universidad Ca**	**0.97**	**357**	S	**Sn**	**02 53 48.6**	**+0.2**
SCLA	**Alcaldia de Sa**	**1.02**	**48**	P	**Pn**	**02 53 36.0**	**-0.1**
SCLA	**Alcaldia de Sa**	**1.02**	**48**	S	**Sn**	**02 53 50.4**	**+0.7**
PACA	**Pacayal**	**1.23**	**68**	*e*P	**Pn**	**02 53 39.4**	**+0.3**
PACA				*e*S	**Sb**	**02 53 55.7**	**+0.1**
PACA	**Pacayal**	**1.23**	**68**	P	**Pn**	**02 53 39.5**	**+0.3**
LCY	**Lacayo**	**1.25**	**71**	*e*P	**Pn**	**02 53 39.4**	**+0.2**
BLLM	**Bellamira**	**1.30**	**71**	*e*P	**Pn**	**02 53 40.3**	**+0.3**
MTO3	**Montecristo**	**1.39**	**6**	*e*P	**Pn**	**02 53 41.0**	**-0.4**
MTO3				*e*S	**Sn**	**02 53 58.6**	**-0.4**
MTO3	**Montecristo**	**1.39**	**6**	*i* P	**Pn**	**02 53 40.9**	**-0.4**
MTO3	**Montecristo**	**1.39**	**6**	P	**Pn**	**02 53 41.0**	**-0.4**
CNCH	**Conchagua**	**1.65**	**81**	P	**Pn**	**02 53 44.7**	**-0.1**
CNCH	**Conchagua**	**1.65**	**81**	S	**Sn**	**02 54 05.5**	**+0.2**

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*IDC **03** 02:56:55.0±1.0, 20°.50S×168°.70E, h0^{km}, mb4.0/7,*
mbtmp4.0/7, ML3.0/1, Error ellipse: s-maj=34.9km
s-min=17.0km az=140.0
*NEIC **03** 02:56:59.4±1.5, 20°.7S±0°.1×169°.2E±0°.1, h10^{km}±1^{km},*
mb4.7/11, Error ellipse: s-maj=25.5km s-min=19.1km
az=329.0
ISC 03 02:57:00.5±0.7, 20°.5S±0°.1×169°.2E±0°.1, h31^{km}, n52,
σ1^s.43/46, mb4.2/14, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINNC	**Pines Island,**	**2.61**	**217**		**Pn**	**02 57 40.3**	**-0.3**
DZM	**Mont Dzumac**	**2.96**	**238**	Pn	**Pn**	**02 57 45.2**	**-0.2**
DZM	**Mont Dzumac**	**2.96**	**238**	Pn	Pn	02 57 39.9	-5.6
	2.6nm,0.3s,baz=106,slow=13,SNR=26						
DZM				Lg	Lg	02 58 19.8	
	17nm,0.3s,baz=127,slow=20,SNR=11						
ONTNC	**Ouen Toro**	**3.08**	**234**	Pn	**Pn**	**02 57 46.9**	**0.0**
STKA	**Stephens Creek**	**27.11**	**240**	P	**P**	**03 02 42.5**	**+1.7**
STKA				IAmb	IAmb	03 02 59.6	
	comp=Z,37nm,1.4s						
STKA	**Stephens Creek**	**27.11**	**240**	P	**P**	**03 02 34.8**	**-6.0**
	comp=Z,2.0nm,0.8s,baz=82,slow=12,SNR=4.5						
	comp=Z,2.0nm,0.8s						
BBOO	**Buckleboo**	**31.87**	**241**	P	**P**	**03 03 23.5**	**+0.5**
BBOO				IAmb	IAmb	03 04 01.8	
	comp=Z,25nm,1.4s						
WR8	**Warramunga Arr**	**32.48**	**265**	P	**P**	**03 03 29.1**	**+0.6**
WR8				IAmb	IAmb	03 03 38.4	
	comp=Z,10nm,1.2s						
WB0	**Warramunga Arr**	**32.61**	**265**	P	**P**	**03 03 30.9**	**+1.3**
WB0				IAmb	IAmb	03 03 47.8	
	comp=Z,16nm,1.4s						
WRA	**Warramunga Arr**	**32.64**	**265**	P	P	03 03 24.4	-5.5
	comp=Z,0.3nm,0.3s,baz=96,slow=8.4,SNR=7.3						
	comp=Z,0.3nm,0.3s						
AS31	**Alice Springs**	**32.76**	**258**	P	**P**	**03 03 31.4**	**+0.4**
ASAR	**Alice Springs**	**32.76**	**258**	P	**P**	**03 03 32.6**	**+1.7**
ASAR	**Alice Springs**	**32.76**	**258**	P	P	03 03 25.6	-5.3
	comp=Z,0.6nm,0.7s,baz=94,slow=7.3,SNR=6.3						
	comp=Z,0.6nm,0.7s						
MTN	**Manton Dam**	**37.14**	**276**	P	**P**	**03 04 10.3**	**+1.5**
PPT	**Papeete**	**39.05**	**93**	P	P	03 04 32.6	+7.8
	comp=Z,16nm,0.7s,baz=246,slow=20,SNR=2.1						
FITZ	**Fitzroy Crossi**	**41.05**	**266**	P	**P**	**03 04 43.1**	**+1.7**
NWAO	**Narrogin (SRO)**	**47.56**	**244**	P	**P**	**03 05 34.1**	**+0.7**
VNDA	**Vanda**	**57.15**	**182**	P	**P**	**03 06 44.5**	**+0.7**
VNDA				IAmb	IAmb	03 07 07.1	
	comp=Z,3.8nm,1.4s						
MJAR	**Matsushiro Arr**	**63.85**	**333**	P	**P**	**03 07 30.8**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=178,slow=7.1,SNR=4.5						
QSPA	**South Pole Qui**	**69.53**	**180**	P	**P**	**03 08 06.1**	**-0.1**
QSPA				IAmb	IAmb	03 08 12.1	
	comp=Z,9.7nm,1.5s						
QSPA	**South Pole Qui**	**69.53**	**180**	P	**P**	**03 08 05.5**	**-0.6**
	comp=Z,2.5nm,0.8s,baz=18,slow=1.9,SNR=9.8						
	comp=Z,2.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**78.96**	**294**	P	**P**	**03 08 59.7**	**-2.0**
	comp=Z,0.6nm,0.3s,baz=115,slow=7.2,SNR=1.7						
	comp=Z,0.6nm,0.3s						
BELA	**Belgrano 2**	**80.83**	**175**	P	**P**	**03 09 10.3**	**-0.5**
BELA				IAmb	IAmb	03 09 10.8	
	comp=Z,2.4nm,0.8s						
SONM	**Songino Array**	**88.20**	**323**	P	**P**	**03 09 45.3**	**-3.3**
	comp=Z,0.8nm,0.6s,baz=129,slow=4.1,SNR=1.6						
	comp=Z,0.8nm,0.6s						
NVAR	**Mina Array Bea**	**89.71**	**49**	P	**P**	**03 09 56.7**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=251,slow=6.6,SNR=1.3						
	comp=Z,0.2nm,0.3s						
ARCES	**ARCESS Array B**	**126.29**	**345**	PKP	**PKPdf**	**03 15 58.8**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=72,slow=4.0,SNR=4.9						
DPC	**Dobruska-Polom**	**143.31**	**331**	*e*PKP	PKPbc	03 16 30.1	+1.3
CLL	**Collm**	**144.04**	**334**	*i* (PKPdf)	**PKPab**	**03 16 31.2**	**+0.9**
	comp=Z,4.0nm,0.6s						
HSKC	**Hora Svate Kat**	**144.40**	**333**	*e*PKP	**PKPab**	**03 16 32.6**	**+0.9**
EKA	**Eskdalemuir Ar**	**144.77**	**352**	PKP	**PKPab**	**03 16 32.7**	**-0.1**
	comp=Z,1.2nm,0.4s,baz=358,slow=2.5,SNR=13						
ZVC	**Zvikov**	**144.93**	**331**	*e*PKP	PKPbc	03 16 34.9	+1.2
NKC	**Novy Kostel**	**145.09**	**334**	*e*PKP	**PKPab**	**03 16 35.3**	**+1.0**
RONA	**Rosalia, Austr**	**145.13**	**327**	*e*PKP	**PKPab**	**03 16 35.6**	**+1.1**
	comp=Z,4.0nm,0.6s						

CONA	Conrad Observa	145.19	328	*e*PKP	PKPdf	03 16 36.1	+1.0
	comp=Z,3.8nm,0.8s						
CKRC	Cesky Krumlov	145.32	330	*e*PKP	PKPab	03 16 36.0	+0.9
KHC	Kasperske Hory	145.43	331	*e*PKP	PKPab	03 16 36.8	+1.2
GEC2	GERESS Array S	145.58	331	PKPdf	PKPbc	03 16 36.9	+0.9
GERES	GERESS Array B	145.58	331	PKPdf	PKPab	03 16 37.0	+0.8
GERES	GERESS Array B	145.58	331	PKPbc	PKPdf	03 16 35.9	+0.2
	comp=Z,2.1nm,0.7s,baz=34,slow=2.9,SNR=21						
KBA	Koelnbreinsper	147.01	329	*e*PKP	PKPdf	03 16 40.2	+1.9
	comp=Z,1.5nm,0.6s						
LESA	Schwarzleotal	147.08	330	*i* PKP	PKPbc	03 16 40.7	+0.2
	comp=Z,2.0nm,0.5s						
MYKA	Terra Mystica	147.18	328	*i* PKP	PKPdf	03 16 36.8	-1.7
	comp=Z,1.4nm,0.4s						
ABTA	Abfaltersbach	147.65	329	*e*PKP	PKPdf	03 16 38.1	-1.2
	comp=Z,1.3nm,0.5s						
WATA	Walderalm	147.66	331	*e*PKP	PKPbc	03 16 42.6	+0.5
	comp=Z,1.1nm,0.5s						
WTTA	Wattenberg	147.68	331	*e*PKP	PKPbc	03 16 41.9	-0.3
	comp=Z,1.0nm,0.4s						
MOTA	Moosalm	147.86	331	*i* PKP	PKPbc	03 16 42.9	+0.2
	comp=Z,2.9nm,0.9s						
RETA	Reutte	147.91	332	*e*PKP	PKPdf	03 16 41.1	+1.5
	comp=Z,2.3nm,1.1s						
SQTA	Sankt Quirin	147.91	331	*e*PKP	PKPbc	03 16 42.9	+0.2
	comp=Z,2.2nm,0.5s						
BFO	Black Forest	148.25	335	PKPbc	PKPab	03 16 47.2	+0.6
FETA	Feichten	148.27	331	*e*PKP	PKPdf	03 16 41.3	+0.9
	comp=Z,2.3nm,0.9s						
FUORN	Ofenpass-Fuorn	148.79	331		PKPbc	03 16 45.3	+0.1
ZCCA	Zocca	150.12	328	PKPbc	PKiKP	03 16 49.7	+0.6

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*UCR **03** 03:04:26.9±1.2, 9°.77N×84°.21W, h50^{km}±3^{km}, MW3.6*

*CATAC **03** 03:04:27.8±0.2, 10°N±2°×8°4W±°, h36^{km}±2^{km}, M3.9/19, MLv3.9/19, Error ellipse: s-maj=5.2km s-min=2.5km az=47.6, confirmed*

ISC 03 03:04:28.3±1.2, **9°.77N**±0°.03×**84°.19W**±0°.03, **h42**^{km}±5^{km}, **n129**, σ1^{s}.**10**/134, **Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACOS	Acosta	0.03	44	*e*P	Pn	03 04 34.1	-1.0
PURI	Puriscal	0.14	302	*e*P	Pn	03 04 33.7	-1.9
PICV	PH. Pirrs	0.14	183	*e*P	Pn	03 04 34.3	-1.2
ABE2	San Pablo	0.15	117	*e*P	Pn	03 04 34.6	-1.1
ABE2				*e*S	Sn	03 04 40.9	-0.1
SANTA	Santa Ana	0.16	1	*e*P	Pn	03 04 34.9	-0.8
SANTA				*e*S	Sn	03 04 41.5	+0.7
LCR2	La Lucha 2	0.18	99	*e*P	Pn	03 04 34.8	-1.1
LCR2				*e*S	Sn	03 04 41.5	+0.2
LCR2	La Lucha 2	0.18	99	P	Pn	03 04 35.0	-0.9
PAR1A	Puntarenas Pro	0.19	200	*e*P	Pn	03 04 34.7	-1.0
PITB	Pirrs, San	0.20	124	*e*P	Pn	03 04 34.7	-1.3
RAZU	San Marcos de	0.20	125	*e*P	Pn	03 04 34.8	-1.2
BELE	Belen	0.20	0	*e*P	Pn	03 04 35.2	-0.7
ECI	Escuela Centro	0.21	39	*e*P	Pn	03 04 35.7	-0.4
SJS3	Mercedes San J	0.21	39	*e*P	Pn	03 04 36.7	+0.6
TRIO	Tres Rios	0.23	55	*e*P	Pn	03 04 36.4	+0.1
TRIO				*e*S	Sn	03 04 43.5	+1.6
HDC	Heredia	0.24	18	*e*P	Pn	03 04 35.8	-0.6
HDC				*e*S	Sn	03 04 42.9	+1.0
CORON	Coronado	0.27	42	*e*P	Pn	03 04 36.2	-0.4
PIEC	Cerro El Cedra	0.27	123	*e*P	Pn	03 04 35.5	-1.3
ATEO	Atenas	0.28	317	*e*P	Pn	03 04 36.6	0.0
TCS1	Tacares	0.29	338	*e*P	Pn	03 04 36.1	-0.7
TCS1	Tacares	0.29	338	P	Pn	03 04 36.2	-0.5
TCS1	Tacares	0.29	338	S	Sn	03 04 45.2	+2.5
REPA	Paraso	0.32	80	*e*P	Pn	03 04 36.4	-0.8
QUEP	Quepos	0.34	176	*e*P	Pn	03 04 35.8	-1.4
OROT	Orotina	0.36	293	*e*P	Pn	03 04 36.0	-1.4
PALD	Palmares	0.37	319	*e*P	Pn	03 04 36.5	-1.2
NARAN	Naranjo de Ala	0.37	330	*e*P	Pn	03 04 37.0	-0.6
PCAYA	Pacayas	0.40	69	*e*P	Pn	03 04 37.3	-0.8
VPS8	V Poas	0.41	353	*e*P	Pn	03 04 37.6	-0.7
RAMO	San Ramon	0.42	319	*e*P	Pn	03 04 37.2	-1.0
SRA1	San Ramn	0.42	317	*e*P	Pn	03 04 37.2	-1.1
BITO	Garabito Jaco	0.45	250	*e*P	Pn	03 04 37.5	-1.0
CVTQ	Turrialba Volc	0.47	61	*e*P	Pn	03 04 38.4	-0.8
VTR0	Volcan Turrial	0.49	60	*e*P	Pn	03 04 38.7	-0.7
CVTR	Volcan Turrial	0.49	60	*e*P	Pn	03 04 38.7	-0.6
CVTV	Tajo	0.49	62	*e*P	Pn	03 04 38.6	-0.7
ARZA	Esparza	0.52	295	*e*P	Pn	03 04 37.9	-1.5
ARTO	Ro Cuarto	0.57	357	*e*P	Pn	03 04 39.3	-0.7
PILE	Guapiles	0.59	42	*e*P	Pn	03 04 40.8	+0.5
RESJ	San Isidro (Tu	0.59	64	*e*P	Pn	03 04 39.9	-0.6
ENAS	Puntarenas	0.67	288	*e*P	Pn	03 04 40.3	-1.1
ITAL	Pital	0.68	353	*e*P	Pn	03 04 40.6	-0.9
SARA	Sarapiqu	0.70	14	*e*P	Pn	03 04 41.8	+0.1
PAQE	Paquera	0.74	274	*e*P	Pn	03 04 41.0	-1.2
CARI	Cariari	0.74	37	*e*P	Pn	03 04 41.7	-0.6
SOCE	Pocosol	0.74	325	*e*P	Pn	03 04 41.5	-0.9
SOCE	Pocosol	0.74	325	P	Pn	03 04 41.9	-0.5
SOCE	Pocosol	0.74	325	S	Sn	03 04 53.3	+0.8
IRES	Siquirres	0.75	64	*e*P	Pn	03 04 42.0	-0.3
FORC	Fortuna	0.84	326	*e*P	Pn	03 04 42.9	-0.7
CASO	Castillo	0.85	321	*e*P	Pn	03 04 42.8	-1.1
OCHAL	Ojochal	0.86	141	P	Pn	03 04 42.5	-1.4
OCHAL	Ojochal	0.86	141	S	Sn	03 04 55.5	+0.2
EDPE	Pejibaye, P	0.86	135	*e*P	Pn	03 04 42.9	-1.1
ARE1	Arenal 1	0.86	323	*e*P	Pn	03 04 43.3	-0.7
CEDE	Laguna Cedeo	0.87	325	*e*P	Pn	03 04 43.5	-0.8
TRT2	Tortugero	0.90	30	*e*P	Pn	03 04 43.4	-1.1
TRT2	Tortugero	0.90	30	P	Pn	03 04 43.6	-0.8
TRT2	Tortugero	0.90	30	S	Sn	03 04 57.3	+1.0
CBL1	Cabuya	0.91	259	*e*P	Pn	03 04 42.3	-2.3
JTS	Las Juntas de	0.91	304	*e*P	Pn	03 04 43.4	-1.3
JCR1	Jicaral	0.91	275	*e*P	Pn	03 04 43.1	-1.7
TABAC	Tabacon	0.92	322	*e*P	Pn	03 04 44.1	-0.8
COVE	Coope Vega, Sa	0.96	347	P	Pn	03 04 44.5	-0.9
COVE	Coope Vega, Sa	0.96	347	S	Sn	03 04 57.9	0.0
CHIK	Chiripa	0.97	313	*e*P	Pn	03 04 45.1	-0.5
VERH	Veragua Rainfo	0.99	81	*e*P	Pn	03 04 44.9	-0.9
BURE	Buenos Aires	1.03	125	*e*P	Pn	03 04 45.1	-1.1
TILA	Tilaran	1.04	312	*e*P	Pn	03 04 45.1	-1.3
DRK0	Durika	1.06	118	*e*P	Pn	03 04 45.1	-1.7
DRK0	Durika	1.06	118	P	Pn	03 04 45.3	-1.5
DRK0	Durika	1.06	118	S	Sn	03 04 59.8	-0.7
NYURE	Nandayure	1.07	282	*e*P	Pn	03 04 46.1	-0.8
QUEB	Quebradon, Cot	1.10	321	*e*P	Pn	03 04 46.2	-1.0
INVE	Universidad In	1.11	309	*e*P	Pn	03 04 46.7	-0.7
FIMO	Fila Mora	1.13	133	*e*P	Pn	03 04 47.0	-0.8
CEUA	Cerro Uatsi, L	1.24	97	*e*P	Pn	03 04 49.3	+0.1
CMARA	Lajas Hojancha	1.24	282	*e*P	Pn	03 04 48.9	-0.3
CMARA	Lajas Hojancha	1.24	282	P	Pn	03 04 49.4	+0.2
CMARA	Lajas Hojancha	1.24	282	S	Sn	03 05 06.1	+1.3
EDP2	Potrero Grande	1.25	127	*e*P	Pn	03 04 48.6	-0.7
MOTZ	Rio Naranjo	1.26	316	*e*P	Pn	03 04 48.6	-0.9
PLVR	Palo Verde	1.28	297	*e*P	Pn	03 04 49.3	-0.5
NICO	Nicoya	1.29	286	*e*P	Pn	03 04 49.8	-0.1
INDI	Punta indio, G	1.30	274	P	Pn	03 04 47.9	-2.1
INDI	Punta indio, G	1.30	274	S	Sn	03 05 09.3	+3.2
CUI	Cuipilapa	1.30	313	*e*P	Pn	03 04 56.9	+6.8
COLC	Colonia	1.34	312	*e*P	Pn	03 04 49.9	-0.6
VMAR	Armenia, Volca	1.38	319	*e*P	Pn	03 04 50.1	-1.0
MESS	Mesas	1.38	314	*e*P	Pn	03 04 50.3	-0.9
UPAL	Upala	1.38	324	*e*P	Pn	03 04 50.3	-0.8
EDAD	Golfito	1.50	138	*e*P	Pn	03 04 51.4	-1.3
DELF	Filadelfia	1.50	297	*e*P	Pn	03 04 53.0	+0.3
GPS3	Bodega del ICE	1.52	310	*e*P	Pn	03 04 54.3	+1.3
ALCO	Alturas Coton,	1.57	121	*e*P	Pn	03 04 52.2	-1.5
ALIBA	Liberia Airpor	1.57	302	*e*P	Pn	03 04 53.6	0.0
PEJA	Penjamo Buenos	1.57	315	*e*P	Pn	03 04 53.0	-0.7
BUAI	Buenos Aires	1.57	314	*e*P	Pn	03 04 52.8	-0.9
LAPC	Finca la Perla	1.57	309	*e*P	Pn	03 04 52.8	-1.0
PIRO	Carate, Puerto	1.60	148	*e*P	Pn	03 04 54.1	+0.1
PIRO	Carate, Puerto	1.60	148	P	Pn	03 04 54.4	+0.3
PIRO	Carate, Puerto	1.60	148	S	Sn	03 05 17.2	+3.7
ELI1	Hacienda Flor	1.60	303	*e*P	Pn	03 04 53.8	-0.3
CDITO	Canoas	1.76	132	P	Pn	03 04 57.4	+1.1
BRU2	Volcan	1.77	123	P	Pn	03 04 55.8	-0.7
BRU2	Volcan	1.77	123	S	Sn	03 05 18.1	+0.2
CLLRA	Cordillera,	1.86	123	*e*P	Pn	03 04 56.9	-0.9
LMNES	Limones	2.12	142	*e*P	Pn	03 05 01.0	-0.2
RBALA	Bur	2.20	114	*e*P	Pn	03 05 01.4	-0.8
CGUAY	Guayabal, Coch	2.23	126	*e*P	Pn	03 05 04.3	+1.5
BLUN	Bluefields	2.26	10	P	Pn	03 05 00.5	-2.6
BLUN				S	Sn	03 05 28.7	-1.0
ACON	Acoyapa	2.39	336	*e*P	Pn	03 05 03.7	-1.2
ACON	Acoyapa	2.39	336	P	Pn	03 05 04.2	-0.7
ACON	Acoyapa	2.39	336	S	Sn	03 05 32.2	-0.8
ESPN	Las Esperanzas	2.41	357	*e*P	Pn	03 05 04.0	-1.2
ESPN	Las Esperanzas	2.41	357	P	Pn	03 05 04.2	-1.0
KKNTU	Kakintº	2.53	111	*e*P	Pn	03 05 05.9	-0.9
NADN	Granada	2.67	317	P	Pn	03 05 07.5	-1.3
BOAB	BOACO BROADBAN	3.03	332	P	Pn	03 05 12.7	-1.0
COPN	Copaltepe	3.36	316	P	Pn	03 05 17.6	-0.7
MATN	Matagalpa	3.57	332	P	Pn	03 05 19.6	-1.6
MACN	El Madrono	3.62	318	P	Pn	03 05 22.5	+0.6
CNGA	Al SSO del Vol	3.66	318	P	Pn	03 05 22.7	+0.3
CNGA				S	Sn	03 06 04.9	+0.5
CNGN	Cerro Negro	3.66	318	P	Pn	03 05 22.0	-0.5
HOYN	Al Sur del Vol	3.82	318	P	Pn	03 05 23.6	-1.0
HERN	Volcan Telica	3.83	318	P	Pn	03 05 23.0	-1.9
POLN	Al Sur del Vol	3.85	318	P	Pn	03 05 17.9	-7.1
RCVN	Varillal2	4.27	333	P	Pn	03 05 30.8	-0.1
CHOHN	Orocuina	4.70	322	P	Pn	03 05 37.4	+0.7
YUSH	Yuscaran	4.90	328	P	Pn	03 05 38.9	-0.7

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*IDC **03** 03:08:23.9±2.1, 35°.65S×178°.28E, h218^{km}±17^{km}, mb4.1/8, mbtmp4.7/9, Error ellipse: s-maj=22.0km s-min=13.5km az=44.0*

*NEIC **03** 03:08:29.3±2.6, 36°.3S±0°.1×177°.61E±0°.09, h237^{km}±5^{km}, mb4.6/25, Error ellipse: s-maj=17.1km s-min=10.4km az=193.0*

*NOU **03** 03:08:29.0, 36°.41S×177°.48E, h263^{km}, MLv4.1/14, Off E. Coast of N. Island, N.Z.*

*WEL **03** 03:08:31.2±1.2, 36°S±11°×17°8E±°, h214^{km}±12^{km}, M4.3/76, ML4.7/8, MLv4.3/76, Error ellipse: s-maj=16.4km s-min=8.2km az=37.9, confirmed*

ISC 03 03:08:29.7±0.7, **36°.34S**±0°.06×**177°.70E**±0°.06, **h256**^{km}±5^{km}, **n236**, σ1^{s}.**74**/246, **mb4.6**/27, **6C**, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.32	158		Pn	03 09 06.2	-1.0
MXZ				Sn	S	03 09 33.5	-3.4
MXZ	Matakaoa Point	1.32	158	P	Pn	03 09 06.2	-1.0
MXZ	Matakaoa Point	1.32	158	P	Pn	03 09 06.4	-0.8
MXZ				S	S	03 09 34.5	-2.4
HAZ	Te Kaha	1.42	177	P	Pn	03 09 06.9	-0.9
HAZ				S	S	03 09 35.8	-2.3
PKGZ	Pakihiroa	1.56	169	P	Pn	03 09 08.9	0.0
WMGZ	Waiomatatini S	1.59	159	P	Pn	03 09 08.9	-0.2
WMGZ				S	S	03 09 38.5	-1.9
WHRZ	Whale Island	1.62	201	P	Pn	03 09 10.2	+0.8
RUGZ	Raukumara Rang	1.63	181	P	Pn	03 09 08.3	-1.3
KUZ	Kuaotunu	1.64	255	P	Pn	03 09 08.7	-0.9
KUZ	Kuaotunu	1.64	255	P	Pn	03 09 08.9	-0.7
OPRZ	Ohinepanea	1.76	211	P	Pn	03 09 10.4	-0.1
PUZ	Puketiti	1.79	166	P	Pn	03 09 10.4	-0.3
PUZ				S	S	03 09 41.2	-2.2
GRZ	Great Barrier	1.81	272	P	Pn	03 09 10.0	-0.9
MARZ	Manawahe	1.84	206	P	Pn	03 09 12.1	+0.9
TWGZ	Tauwhareparae	1.85	173	P	Pn	03 09 11.8	+0.4
TWGZ				S	S	03 09 43.6	-0.7
EDRZ	Edgecumbe	1.93	203	P	Pn	03 09 12.7	+0.7
URZ	Urewera	1.98	194	P	Pn	03 09 12.1	-0.2
	332nm,0.4s,baz=348,slow=3.7,SNR=1041						
URZ				S	S	03 09 45.6	-0.5
	312nm,0.3s,baz=358,slow=3.4,SNR=30						
URZ	Urewera	1.98	194	P	Pn	03 09 12.1	-0.2
URZ	Urewera	1.98	194	P	Pn	03 09 11.9	-0.5
URZ				S	S	03 09 45.5	-0.6
MWZ	Matawai	2.00	184	P	Pn	03 09 12.4	-0.2
MWZ				S	S	03 09 45.3	-1.4
KARZ	Kaharoa	2.04	214	P	Pn	03 09 14.8	+1.9
OMRZ	Omania	2.06	210	P	Pn	03 09 14.8	+1.6
TKGZ	Te Karaka	2.10	177	P	Pn	03 09 13.7	+0.2
WIAZ	Waiheke Island	2.11	257	P	Pn	03 09 13.4	-0.2
TARZ	Mount Tarawera	2.12	206	P	Pn	03 09 14.7	+0.9
RAGZ	Rawiri	2.17	186	P	Pn	03 09 14.6	+0.5
MKAZ	Moumakai	2.18	249	P	Pn	03 09 14.4	+0.2
CNGZ	Carnagh Statio	2.18	169	P	Pn	03 09 14.7	+0.5
UTU	Utuhina	2.19	213	P	Pn	03 09 16.1	+1.7
RRRZ	Republican Roa	2.21	205	P	Pn	03 09 14.9	+0.4
TOZ	Tahuroa Road	2.24	231		Pn	03 09 15.4	+0.6
TOZ	Tahuroa Road	2.24	231	P	Pn	03 09 15.8	+1.1
MUGZ	Murupara	2.26	199	P	Pn	03 09 15.0	0.0
HSRZ	Hossack Road	2.29	210	P	Pn	03 09 17.5	+2.2
MBAZ	Motutapu North	2.29	258	P	Pn	03 09 15.4	+0.1
ETAZ	East Tamaki Re	2.31	254	P	Pn	03 09 15.9	+0.4
ABAZ	Army Bay	2.32	263	P	Pn	03 09 15.6	0.0
HRRZ	Handcock Road	2.34	208	P	Pn	03 09 16.9	+1.1
RTZ	Ruatahuna	2.35	194		Pn	03 09 15.2	-0.6
RTZ				Sn	S	03 09 49.6	-2.8
RTZ	Ruatahuna	2.35	194	P	Pn	03 09 15.4	-0.4
RIGZ	Rimuhau	2.37	179	P	Pn	03 09 16.0	0.0
PRRZ	Plateau Road	2.40	205	P	Pn	03 09 17.0	+0.7
EPAZ	Eden Park BICE	2.44	256	P	Pn	03 09 16.9	+0.3
SNGZ	Shannon Statio	2.46	187	P	Pn	03 09 17.0	+0.1
ALRZ	Allen Road	2.47	205	P	Pn	03 09 17.5	+0.5
WPRZ	Whakapapatarin	2.50	209	P	Pn	03 09 18.5	+1.2
AWAZ	Awhitu Peninsu	2.56	253	P	Pn	03 09 18.3	+0.4
WTAZ	Waiatarua	2.58	256	P	Pn	03 09 18.5	+0.4
PRGZ	Paritu Road	2.59	177	P	Pn	03 09 19.0	+0.9
MTHZ	Maungataniwha	2.60	195	P	Pn	03 09 18.2	-0.1
KUTZ	Kaahu Road	2.62	214	P	Pn	03 09 19.1	+0.7
RAHZ	Arahi	2.62	190	P	Pn	03 09 18.9	+0.3
TLZ	Tolley Road	2.63	220	P	Pn	03 09 20.8	+2.2
KNZ	Kokohu	2.68	180	P	Pn	03 09 19.0	0.0
MRHZ	Matea Rd	2.69	202	P	Pn	03 09 19.1	-0.2
WCZ	Waipu Caves	2.74	277	P	Pn	03 09 19.1	-0.7
WHHZ	Waihua	2.76	187	P	Pn	03 09 20.4	+0.4
MHGZ	Mahia Peninsul	2.82	177	P	Pn	03 09 20.9	+0.4
WATZ	Wairara	2.84	213	P	Pn	03 09 22.1	+1.4
NMHZ	Naumai	2.85	194	P	Pn	03 09 21.5	+0.6
RATZ	Rangitukua	2.95	211	P	Pn	03 09 22.7	+0.7
ARHZ	Aropaoanui	2.98	191	P	Pn	03 09 22.5	+0.4
BKZ	Black Stump Fm	2.98	198	Pn	Pn	03 09 20.7	-1.6
BKZ	Black Stump Fm	2.98	198	P	Pn	03 09 21.9	-0.4
BKZ	Black Stump Fm	2.98	198	S	S	03 10 02.8	-1.3
BKZ	Black Stump Fm	2.98	198	P	Pn	03 09 21.8	-0.5
HIZ	Hauiti	3.14	225	Pn	Pn	03 09 24.7	+0.8
HIZ	Hauiti	3.14	225	P	Pn	03 09 20.3	-3.6
HIZ	Hauiti	3.14	225	P	Pn	03 09 25.0	+1.1
NTVZ	North Tongarir	3.19	210	P	Pn	03 09 25.0	+0.4
TMVZ	Te Maari	3.19	209	P	Pn	03 09 25.1	+0.4
KRVZ	Karewarewa	3.20	210	P	Pn	03 09 25.1	+0.4
MCHZ	McNeill Hill	3.20	194	P	Pn	03 09 24.8	+0.2
ETVZ	East Tongariro	3.21	209	P	Pn	03 09 25.0	+0.1
WTVZ	West Tongariro	3.24	210	P	Pn	03 09 25.4	+0.2
NNVZ	North Ngauruho	3.24	210	P	Pn	03 09 25.4	+0.1
KWHZ	Kaweka Forest	3.25	198	P	Pn	03 09 25.1	-0.1
OTVZ	Oturere	3.25	209	P	Pn	03 09 25.4	+0.1
TWVZ	Taurewa	3.27	213	P	Pn	03 09 25.7	+0.3
SNVZ	South Ngauruho	3.28	209	P	Pn	03 09 25.8	+0.1
NGZ	Ngauruhoe	3.29	210	P	Pn	03 09 26.0	+0.3
COVZ	Chateau Observ	3.33	210	P	Pn	03 09 26.5	+0.3
TUVZ	Tukino	3.34	208	P	Pn	03 09 26.2	-0.2
CKHZ	Cape Kidnapper	3.35	188	P	Pn	03 09 26.4	+0.2
FWVZ	Far West T-bar	3.37	210	P	Pn	03 09 26.7	-0.1
MAVZ	Matarangi	3.38	209	P	Pn	03 09 26.7	-0.3
WHVZ	Whangaehu Hut	3.38	209	P	Pn	03 09 26.6	-0.3
TRVZ	Turoa	3.41	209	P	Pn	03 09 27.0	-0.2
WNVZ	Wahianoa	3.42	208	P	Pn	03 09 26.7	-0.5
MOVZ	Moawhango	3.43	206	P	Pn	03 09 26.6	-0.6
KRHZ	Kereru	3.46	197	P	Pn	03 09 26.8	-0.8
PKVZ	Pokaka	3.49	212	P	Pn	03 09 27.7	-0.1
KAHZ	Kahuranaki	3.51	190	P	Pn	03 09 28.0	-0.1
OUZ	Omahuta	3.52	287	P	Pn	03 09 26.8	-1.3
OUZ	Omahuta	3.52	287	P	Pn	03 09 27.0	-1.1
MTVZ	Mangateitei	3.52	209	P	Pn	03 09 28.1	-0.1
PXZ	Pawanui	3.75	190	P	Pn	03 09 30.1	-0.6
PNHZ	Pukenui	3.76	198	P	Pn	03 09 30.0	-0.9
WPHZ	Waipukurau	3.85	195	P	Pn	03 09 31.6	-0.3
TSZ	Takapari Road	3.96	200	P	Pn	03 09 32.2	-1.0
PRHZ	Porangahau	4.01	192	P	Pn	03 09 33.6	-0.1
WAZ	Wanganui	4.03	211	P	Pn	03 09 33.7	-0.3
LREZ	Lake Rotokare	4.07	219	P	Pn	03 09 35.3	+1.0
NEZ	North Egmont	4.09	223	P	Pn	03 09 39.0	+4.3
PKE	Pukeiti	4.10	225	P	Pn	03 09 36.7	+1.9
DVHZ	Dannevirke	4.14	196	P	Pn	03 09 34.0	-1.2
KHEZ	Kahui Hut	4.15	224	P	Pn	03 09 37.0	+1.5
ANWZ	Angora Road	4.23	193	P	Pn	03 09 35.8	-0.5
POWZ	Post Office Ro	4.33	200	P	Pn	03 09 37.0	-0.5
BFZ	Birch Farm	4.49	194	Pn	Pn	03 09 37.8	-1.5
BFZ	Birch Farm	4.49	194	P	Pn	03 09 38.5	-0.9
MRZ	Mangatainoka R	4.63	200	Pn	Pn	03 09 38.6	-2.4
MRZ	Mangatainoka R	4.63	200	P	Pn	03 09 39.3	-1.7
TIWZ	Tintock	4.66	197	P	Pn	03 09 41.4	0.0
HOWZ	Holdsworth Sta	4.87	200	P	Pn	03 09 42.0	-1.9
TMWZ	Te Maipa	4.97	196	P	Pn	03 09 43.6	-1.6
KIW	Kapiti Island	5.02	205	P	Pn	03 09 43.9	-1.9
MTW	Mount Morrison	5.11	199	P	Pn	03 09 45.1	-1.8
TRWZ	Traveller	5.29	197	P	Pn	03 09 47.5	-1.6
PAWZ	Paruwai Farm	5.34	199	P	Pn	03 09 47.7	-2.1
DUWZ	D’Urville Isla	5.35	212	P	Pn	03 09 47.6	-2.2
MSWZ	Moikau Station	5.42	200	Pn	Pn	03 09 47.9	-2.8
MSWZ	Moikau Station	5.42	200	P	Pn	03 09 48.4	-2.3
WEL	Wellington	5.45	204	P	Pn	03 09 48.7	-2.2
BHW	Baring Head	5.53	203	P	Pn	03 09 49.4	-2.5
TCW	Tory Channel	5.55	208	P	Pn	03 09 49.7	-2.6
PLWZ	Palliser	5.56	199	P	Pn	03 09 50.1	-2.3
TUWZ	Tuamarina	5.87	209	Pn	Pn	03 09 54.4	-1.8
TUWZ	Tuamarina	5.87	209	P	Pn	03 09 54.5	-1.6
NNZ	Nelson	5.93	213	P	Pn	03 09 54.0	-2.9
TKNZ	Takaka Hill	5.98	217	P	Pn	03 09 55.9	-1.6
QRZ	Quartz Range	6.04	221	P	Pn	03 09 55.6	-2.7
QRZ	Quartz Range	6.04	221	S	S	03 11 05.3	-4.0
QRZ	Quartz Range	6.04	221	P	Pn	03 09 55.5	-2.8
BSWZ	Blackbirch Sta	6.14	208	P	Pn	03 09 57.7	-1.9
MRNZ	Matariki Terra	6.36	216	P	Pn	03 09 59.3	-3.0
THZ	Tophouse	6.58	213	P	Pn	03 10 02.8	-2.2
KHZ	Kahutara	6.87	207	P	Pn	03 10 06.0	-2.6
KHZ	Kahutara	6.87	207	S	S	03 11 24.7	-3.5
KHZ	Kahutara	6.87	207	P	Pn	03 10 06.2	-2.5
DSZ	Denniston Nort	7.08	219	P	Pn	03 10 08.8	-2.6
GVZ	Greta Valley S	7.54	207	Pn	Pn	03 10 14.4	-2.6
GVZ				Sn	S	03 11 38.8	-4.6
GVZ	Greta Valley S	7.54	207	P	Pn	03 10 15.1	-1.9
LTZ	Lake Taylor	7.68	211	P	Pn	03 10 16.1	-2.8
INZ	Inchbonnie	8.00	215	Pn	Pn	03 10 19.8	-3.1
INZ	Inchbonnie	8.00	215	P	Pn	03 10 20.1	-2.7
OKCZ	Okains Bay	8.19	204	P	Pn	03 10 23.6	-1.6
OXZ	Oxford	8.23	210	P	Pn	03 10 23.3	-2.4
MQZ	McQueen’s Vall	8.31	206	Pn	Pn	03 10 23.2	-3.5
MQZ	McQueen’s Vall	8.31	206	P	Pn	03 10 23.4	-3.4
AKCZ	Akaroa Harbour	8.37	204	P	Pn	03 10 26.5	-1.0
MHCZ	Mount Hutt	8.59	211	P	Pn	03 10 28.1	-2.2
WVZ	Waitaha Valley	8.60	216	P	Pn	03 10 28.2	-2.2
WACZ	Wakanui South	8.82	209	P	Pn	03 10 30.8	-2.4
RPZ	Rata Peaks	8.96	213	Pn	Pn	03 10 32.5	-2.5
RPZ	Rata Peaks	8.96	213	P	Pn	03 10 31.9	-3.0
	12nm,0.5s,baz=316,slow=1.1,SNR=6.2						
RPZ				S	S	03 12 08.6	-7.7
	30nm,0.6s,baz=31,slow=20,SNR=9.7						
RPZ	Rata Peaks	8.96	213	P	Pn	03 10 32.6	-2.3
RPZ	Rata Peaks	8.96	213	P	Pn	03 10 32.7	-2.2
GCSZ	Gaunt Creek Bo	8.98	217	P	Pn	03 10 32.7	-2.6
ARCZ	Arundel	9.09	211	P	Pn	03 10 34.1	-2.5
TMZ	Timaru	9.52	210	P	Pn	03 10 39.2	-2.8
LBZ	Lake Benmore	9.87	213	Pn	Pn	03 10 43.3	-3.1
ODZ	Otahua Downs	10.21	209	Pn	Pn	03 10 48.4	-2.3
ODZ	Otahua Downs	10.21	209	P	Pn	03 10 48.9	-1.7
WKZ	Wanaka	10.74	215	Pn	Pn	03 10 52.9	-4.4
MLZ	Mavora Lakes	11.57	216	Pn	Pn	03 11 05.0	-2.7
WHZ	Wether Hill Ro	12.04	215	Pn	Pn	03 11 10.4	-3.0
DCZ	Deep Cove	12.11	218	Pn	Pn	03 11 13.6	-0.7
ARMA	Armidale	22.52	278		P	03 13 10.5	+2.5
ARMA				IAmb	IAmb	03 13 12.1	
	comp=Z,21nm,1.1s						
TOO	Toolangi	25.70	258	P	P	03 13 38.1	+1.5
STKA	Stephens Creek	30.11	268	P	P	03 14 17.4	+1.7
STKA	Stephens Creek	30.11	268	P	P	03 14 17.6	+1.9
	comp=Z,11nm,0.8s,baz=89,slow=10,SNR=16						
	comp=Z,11nm,0.8s						
BBOO	Buckleboo	34.28	263	P	P	03 14 51.3	-0.6
BBOO				IAmb	IAmb	03 14 54.6	
	comp=Z,22nm,1.2s						
COEN	Coen	38.07	297	P	P	03 15 24.4	+0.3
COEN				IAmb	IAmb	03 15 25.3	
	comp=Z,28nm,0.9s						
AS31	Alice Springs	39.66	276		P	03 15 37.6	+0.5
AS31				IAmb	IAmb	03 15 38.3	
	comp=Z,17nm,0.5s						
ASAR	Alice Springs	39.66	276	P	P	03 15 37.7	+0.5
	comp=Z,33nm,0.5s,baz=118,slow=7.9,SNR=484						
ASAR				PcP	PcP	03 17 37.5	-1.1
	comp=Z,0.6nm,0.5s,baz=106,slow=4.3,SNR=2.6						
ASAR				S	S	03 21 28.7	+7.6
	comp=Z,0.3nm,0.6s,baz=135,slow=12,SNR=1.8						
	comp=Z,33nm,0.5s						
WR8	Warramunga Arr	41.07	281	P	P	03 15 48.9	+0.1
WR8				IAmb	IAmb	03 15 49.5	
	comp=Z,16nm,0.6s						
WB2	Warramunga Arr	41.20	281	P	P	03 15 49.6	-0.1
WRAB	Tennant Creek	41.20	281	P	P	03 15 48.7	-1.1
WRA	Warramunga Arr	41.21	281	P	P	03 15 49.9	+0.1
WRA	Warramunga Arr	41.21	281	P	P	03 15 49.8	0.0
	comp=Z,26nm,0.5s,baz=120,slow=7.7,SNR=159						
WRA				PcP	PcP	03 17 42.5	-1.1
	comp=Z,1.5nm,0.7s,baz=125,slow=2.8,SNR=3.9						
	comp=Z,26nm,0.5s						
WB0	Warramunga Arr	41.26	282	P	P	03 15 50.4	+0.1
FORT	Forrest	41.37	263	P	P	03 15 51.5	+0.5
VNDA	Vanda	41.86	185	P	P	03 15 57.6	+3.3
VNDA	Vanda	41.86	185	P	P	03 15 58.0	+3.7
	comp=Z,2.0nm,0.8s,baz=357,slow=7.5,SNR=11						
	comp=Z,2.0nm,0.8s						
KNRA	Kununurra	47.98	282	P	P	03 16 42.9	-0.2
KNRA				IAmb	IAmb	03 17 02.2	
	comp=Z,47nm,1.4s						
FITZ	Fitzroy Crossi	49.13	277	P	P	03 16 51.4	-0.4
NWAO	Narrogin (SRO)	49.16	255	P	P	03 16 51.0	-0.9
NWAO				IAmb	IAmb	03 16 54.6	
	comp=Z,10nm,0.8s						
MORW	Morawa	51.63	259	P	P	03 17 10.1	-0.4
MORW				IAmb	IAmb	03 17 13.4	
	comp=Z,17nm,1.1s						
PSA00	Pilbara Seismi	52.01	270	P	P	03 17 12.5	-0.8
PSA00				IAmb	IAmb	03 17 30.3	
	comp=Z,41nm,1.4s						
MBWA	Marble Bar	52.30	270	P	P	03 17 15.2	-0.2
MBWA				IAmb	IAmb	03 17 18.9	
	comp=Z,28nm,1.2s						
QSPA	South Pole Qui	53.79	180	P	P	03 17 29.2	+3.4
QSPA				IAmb	IAmb	03 17 30.2	
	comp=Z,10nm,0.7s						
QSPA	South Pole Qui	53.79	180	P	P	03 17 29.4	+3.7
	comp=Z,9.3nm,0.6s,baz=328,slow=0.5,SNR=110						
	comp=Z,9.3nm,0.6s						
BELA	Belgrano 2	64.38	173	P	P	03 18 39.4	+1.5
BELA				IAmb	IAmb	03 18 40.5	
	comp=Z,7.7nm,1.3s						
SMAI	San Martin Ant	65.28	158	P	P	03 18 46.5	+2.9
SMAI				IAmb	IAmb	03 18 56.9	
	comp=Z,15nm,1.5s						
PMSA	Palmer Station	68.33	156	P	P	03 19 02.5	-0.4
TROLL	Troll, Antarti	71.90	182	⇑P	P	03 19 26.0	+1.4
	comp=Z,180nm,0.3s						
SNAA	Sanae	72.29	180	⇑P	P	03 19 28.1	+1.3
	comp=Z,27nm,0.4s						
SNAA	Sanae	72.29	180	P	P	03 19 26.1	-0.7
SNAA	Sanae	72.29	180	P	P	03 19 28.1	+1.3
	comp=Z,1.7nm,0.5s,baz=187,slow=7.0,SNR=15						
	comp=Z,1.7nm,0.5s						
VNA3	Neumayer Olymp	72.59	178	⇑P	P	03 19 30.0	+1.4
	comp=Z,6.8nm,0.4s						
VNA2	Neumayer--Watz	72.98	178	⇑P	P	03 19 32.4	+1.6
	comp=Z,10nm,0.5s,baz=173,slow=5.9						
VNA1	Neumayer--Stat	73.23	178	⇑P	P	03 19 34.4	+2.1
	comp=N,0.9nm,0.3s						
PLCA	Paso Flores	81.02	134	P	P	03 20 18.5	+2.4
MJAR	Matsushiro Arr	81.25	329	P	P	03 20 12.4	-4.7
	comp=N,0.4nm,0.4s,baz=150,slow=11,SNR=4.1						
	comp=N,0.4nm,0.4s						
NJ2	Nanjing	87.52	313	*e*P	P	03 20 50.0	+1.5
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CMAR	Chiang Mai Arr	92.07	291	P	P	03 21 10.8	+0.7
	comp=Z,1.0nm,0.4s,baz=152,slow=2.9,SNR=6.2						
	comp=Z,1.0nm,0.4s						
CN2	Changchun	92.81	325	*e*P	P	03 21 14.8	+2.0
CN2				*e*sP	sP	03 22 43.0	+2.6
BNX	BinXian	93.43	327	⇑P	P	03 21 29.1	+14
BNX				pP	pwP	03 22 19.7	+0.1
BNX				pmax	pmax		
	comp=Z,2.0nm,0.5s						
XAN	Xi'an	94.93	309	P	P	03 21 36.4	+14
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						

PZH	PanZhiHua	94.95	299	P	P	03 21 24.7	+1.5
PZH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,100nm,5.5s						
HHC	Hu-ho-hao-te	97.85	316	*e*P	Pdif	03 21 39.0	+3.0
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LZH	Lanzhou	99.44	308	*e*P	Pdif	03 21 46.5	+3.2
EYMN	Ely	116.38	49	PKPdf	PKiKP	03 26 41.7	-0.6
W57A	Gilead	118.63	66	PKPdf	PKiKP	03 26 46.6	-0.4
MKAR	Makanchi Array	118.75	309	PKP	PKPdf	03 26 44.2	-2.7
	comp=Z,0.7nm,0.8s,baz=119,slow=1.5,SNR=5.4						
FCC	Fort Churchill	119.36	37	PKPdf	PKPdf	03 26 45.6	-2.0
KURBB	Kurchatov Arra	122.46	312	PKP	PKPdf	03 26 51.8	-2.0
	comp=Z,0.9nm,0.5s,baz=114,slow=1.9,SNR=10						
KKAR	Karatay Array	125.20	301	PKPdf	PKiKP	03 26 58.4	-1.3
BVAR	Borovoye Array	127.97	313	PKP	PKPdf	03 27 02.6	-1.7
	comp=Z,0.8nm,0.5s,baz=174,slow=1.5,SNR=5.8						
SPITS	Spitsbergen Ar	137.31	354	PKP	PKPdf	03 27 19.5	-1.8
	comp=Z,4.0nm,1.0s,baz=50,slow=11,SNR=1.6						
ARCES	ARCESS Array B	143.46	344	PKP	PKPbc	03 27 29.2	-1.4
	comp=Z,2.0nm,0.8s,baz=62,slow=2.6,SNR=12						
GEVA	Gevas	144.15	287	PKPdf	PKPdf	03 27 33.7	-1.2
MARD	Mardin	145.72	285	PKPdf	PKPab	03 27 38.6	-0.8
KOPT	Kop Dagi	146.39	289	PKPbc	PKiKP	03 27 41.6	-1.7
MMAI	Mount Meron Ar	148.94	275	PKPbc	PKiKP	03 27 47.0	-1.4
	comp=Z,2.0nm,0.4s,baz=71,slow=7.5,SNR=6.9						
MMAI				PKPab	PKPab	03 27 53.9	+1.6
	comp=Z,2.2nm,0.5s,baz=92,slow=5.1,SNR=5.8						
FIA1	FINESS Array S	149.17	334		PKPbc	03 27 45.4	-1.5
FINES	FINESS Array B	149.17	334	PKPbc	PKPbc	03 27 45.3	-1.6
	comp=Z,3.5nm,0.6s,baz=32,slow=4.0,SNR=27						
DBIC	Dimbokro	150.38	175	PKPbc	PKiKP	03 27 51.1	-0.8
DBIC					PKPab	03 27 58.7	+0.3
DBIC	Dimbokro	150.38	175	PKPbc	PKPbc	03 27 50.5	-0.7
	comp=Z,6.3nm,1.1s,baz=188,slow=3.3,SNR=6.8						
BR131	Keskin Array S	151.61	288	PKPbc	PKPbc	03 27 51.4	-2.2
BRTR	Keskin Array B	151.61	288	PKPbc	PKPbc	03 27 52.2	-1.4
BRTR	Keskin Array B	151.61	288	PKPbc	PKPbc	03 27 52.0	-1.5
	comp=Z,1.1nm,0.5s,baz=153,slow=3.6,SNR=14						
ILGA	Ilgaz	151.63	291	PKPbc	PKiKP	03 27 52.5	-1.4
AKASG	Malin Array Be	153.25	312	PKPbc	PKPbc	03 27 54.9	-1.7
	comp=Z,1.5nm,0.7s,baz=66,slow=2.2,SNR=6.6						
HFS	Hagfors	154.05	342	PKPbc	PKiKP	03 27 56.4	-1.7
	comp=Z,1.5nm,0.8s,baz=48,slow=2.1,SNR=1.7						

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*IDC **03** 03:27:27.1±1.8, 55°.49N×163°.19E, h0^{km}, mb3.5/6, mbtmp3.5/7, ML2.2/1, MS2.9/3, Error ellipse: s-maj=46.4km s-min=22.8km az=143.0*

*KRSC **03** 03:27:28.7±1.1, 55°.14N×163°.50E, h47^{km}±23^{km}, Ml4.0*

ISC 03 03:27:27.3±1.4**, 55°.18N**±0°.04×**163°.50E**±0°.05**, h11**^{km}±10^{km}**, n49, σ1°.86**/51**, mb3.7**/6**, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	1.10	340	*e*P	Pb	03 27 48.8	+0.5
KBTR				*e*S	Sb	03 28 03.3	+0.5
KBG	Krutoberegovo	1.17	338	*e*P	Pb	03 27 49.8	+0.3
KBG				*e*S	Sg	03 28 04.8	-0.1
MKZ	Mys Kozlova	1.20	239	*e*P	Pn	03 27 50.5	+0.5
MKZ				*e*S	Sg	03 28 04.8	-1.0
BKI	Bering	1.42	88	*e*P	Pg	03 27 54.1	-0.3
BKI				*e*S	Sb	03 28 11.1	-0.7
BZGR	Bezymyannyi-Gr	1.77	297	*e*P	Pb	03 27 59.7	0.0
TUMD	Tumrok D	1.78	272	*e*P	Pb	03 27 59.2	-0.7
SMKR	Semkarok	1.81	322	*e*P	Pb	03 28 00.7	+0.1
CIRR	Tsirk	1.82	302	*e*P	Pb	03 28 00.6	-0.1
BZMR	Bezymyannaya	1.87	295	*e*P	Pb	03 28 01.1	-0.4
BZWR	Bezymyannyi-We	1.88	296	*e*P	Pb	03 28 01.6	-0.1
KMNR	Kamenistaya	1.95	289	*e*P	Pb	03 28 02.5	-0.3
KIRR	Kirishev	1.95	295	*e*P	Pb	03 28 02.6	-0.4
KRSR	Krestovskiy	1.96	303	*i* P	Pb	03 28 02.1	-0.9
KLY	Klyuchi	1.97	306	*e*P	Pn	03 28 01.1	+0.5
KLY				*e*S	Sn	03 28 23.9	-1.4
KPT	Kopyto	2.02	294	*e*P	Pb	03 28 03.9	-0.2
KOZ	Kozyrevsk	2.24	295	*e*P	Pb	03 28 06.9	-0.8
SRDR	Sredinnyy	2.42	300	*e*P	Pb	03 28 09.9	-1.0
KII	Karymskiy	2.62	246	*e*P	Pn	03 28 11.7	+2.1
ESO	Esso	2.83	287	*e*P	Pn	03 28 14.3	+1.9
SPN	Mys Shipunski	2.92	226	*e*P	Pn	03 28 13.7	+0.1
SPN				*e*S	Sn	03 28 45.2	-3.5
NLC	Nalytchevo	3.16	232	*e*P	Pn	03 28 19.7	+2.7
SDLR	Sedlovina	3.31	237	*e*P	Pn	03 28 21.7	+2.6
SMAR	Somma	3.36	237	*e*P	Pn	03 28 22.4	+2.5
KRER	Koryakskii	3.36	238	*e*P	Pn	03 28 23.1	+3.2
KRX	Arik	3.38	239	*e*P	Pn	03 28 23.3	+3.3
UGLR	Uglovaya	3.38	236	*e*P	Pn	03 28 22.6	+2.5
AVH	Avacha	3.39	238	*e*P	Pn	03 28 23.1	+3.0
KOK	Koryaka	3.42	238	*e*P	Pn	03 28 23.3	+2.7
DALK	Dalny	3.52	234	*e*P	Pn	03 28 25.5	+3.6
GNL	Ganaly	3.57	248	*e*P	Pn	03 28 25.2	+2.6
KRMR	Karymshinskiy	3.94	236	*e*P	Pn	03 28 30.7	+3.0
KRMR				*e*S	Sn	03 29 15.1	+1.1
PETK	Petropavlovsk-	3.99	241	Pn	Pn	03 28 30.1	+1.7
	0.8nm,0.3s,baz=64,slow=17,SNR=8.6						
PETK				Sn	Sn	03 29 16.8	+1.7
	1.2nm,0.3s,baz=40,slow=14,SNR=4.3						
	1.0nm,0.4s						
RUS	Russkaya	4.04	229	*e*S	Sn	03 29 14.1	-2.1
OSSR	Ossora	4.09	357	*e*P	Pn	03 28 31.5	+1.8
MTVR	Mutnovka	4.15	232	*e*P	Pn	03 28 32.9	+2.2
ASAK	Asacha	4.34	232	*e*P	Pn	03 28 36.3	+3.0
KDTR	Khodutka, Kamc	4.67	226	*e*P	Pn	03 28 39.3	+1.5
MA2	Magadan	8.16	308	LR	LR	03 32 47.6	
	comp=Z,32nm,18.1s,baz=84,slow=41						
MJAR	Matsushiro Arr	25.41	233	P	P	03 32 56.2	+1.5
	1.8nm,0.6s,baz=31,slow=8.1,SNR=6.1						
	1.8nm,0.6s						
ILAR	Eielson Array	25.93	48	P	P	03 32 60.0	+0.8
	0.2nm,0.7s,baz=267,slow=9.4,SNR=5.5						
	0.2nm,0.7s						
SONM	Songino Array	35.39	282	P	P	03 34 24.0	+1.0
	0.6nm,0.5s,baz=65,slow=6.8,SNR=2.1						
	0.6nm,0.5s						
H11N2	WAKE ISLAND Hy	35.48	174	T	T	04 13 38.7	
	baz=358,slow=76,SNR=19						
H11N3	WAKE ISLAND Hy	35.49	174	T	T	04 13 16.1	
	baz=358,slow=76,SNR=18						
H11N1	WAKE ISLAND Hy	35.50	174	T	T	04 13 14.8	
	baz=358,slow=76,SNR=26						
KURBB	Kurchatov Arra	48.43	302	P	P	03 36 08.1	-1.1
	0.3nm,0.4s,baz=54,slow=7.7,SNR=4.6						
	0.3nm,0.4s						
MKAR	Makanchi Array	49.05	296	P	P	03 36 12.6	-1.4
	0.1nm,0.4s,baz=60,slow=8.5,SNR=1.7						
	0.1nm,0.4s						
BVAR	Borovoye Array	50.65	309	P	P	03 36 23.9	-2.2
	0.4nm,0.5s,baz=40,slow=7.1,SNR=2.1						
	0.4nm,0.5s						
AAK	Ala-Archa	55.93	297	LR	LR	04 03 39.5	
	comp=Z,21nm,19.1s,baz=348,slow=39						
FINES	FINESS Array B	58.98	338	LR	LR	04 05 58.5	
	comp=Z,14nm,18.1s,baz=36,slow=39						

RSNC 03 03:29:01.7±0.0**, 6°N**±1°×**7°8W**±°**, h7**^{km}±2^{km}**, M2.8, mb4.8, mB5.3, ML2.4, Mw(mB)4.7, Near west coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOLC	Bahia Solano	0.38	46	P	Pg	03 29 08.6	-0.5
SOLC				S	Sg	03 29 14.2	+0.1
PTAC	Punta Ardita,	1.19	354	P	Pg	03 29 22.7	-1.8
PTAC				S	Sn	03 29 42.8	+1.7
CBOC	Ciudad Bolivar	1.66	93	P	Pn	03 29 28.2	-3.2
CBOC				S	Sn	03 29 50.6	-2.5
DBBC	Dabeiba	1.80	54	P	Pn	03 29 31.2	-2.1
DBBC				S	Sn	03 29 55.3	-1.1
MALC	Bahia Malaga	1.96	170	P	Pn	03 29 34.3	-1.2
MALC				S	Sn	03 29 59.4	-1.0
APAC	Apartado, Choc	2.21	29	P	Pn	03 29 38.4	-0.5
YOTC	Yotoco, Valle	2.37	146	P	Pn	03 29 38.7	-2.5
YOTC				S	Sn	03 30 10.8	+0.2
GUY2C	Guyana, Caldas	2.42	107	P	Pn	03 29 40.5	-1.6
ANIL	Santa Ana	2.70	123	P	Pn	03 29 45.2	-0.6
UREC	San Jos de Ur	2.78	50	P	Pn	03 29 46.3	-0.4
NORC	Norcasia	2.82	98	P	Pn	03 29 45.9	-1.4
AZU	Azuero	3.15	305	P	Pn	03 29 50.2	-1.6
ORTC	Ortega, Tolima	3.17	130	P	Pn	03 29 51.8	-0.3
ZARC	Zaragoza, Cauc	3.19	61	P	Pn	03 29 52.2	-0.1
PTBC	PUERTO BERRIO,	3.26	80	P	Pn	03 29 53.3	0.0
POPC	Popayan, Colom	3.54	164	P	Pn	03 29 56.7	-0.7
PRAC	Prado	3.57	129	P	Pn	03 29 58.7	+1.1
BCIP	Isla Barro Col	3.84	326	P	Pn	03 29 59.8	-1.4

RSNC 03 03:29:54.1±0.0**, 6°N**±1°×**7°2W**±°**, h4**^{km}±4^{km}**, M2.1, ML2.0, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUSC	La Rusia	0.64	256	P	Pg	03 30 05.2	-1.2
RUSC				S	Sg	03 30 13.8	-1.0
TAMC	Tame, Arauca	0.77	60	P	Pg	03 30 07.5	-1.4
TAMC				S	Sg	03 30 18.4	-0.4
BARC	Barichara	0.90	307	P	Pg	03 30 10.3	-1.1
BARC	Barichara	0.90	307	P	Pg	03 30 09.9	-1.5
BARC				S	Sg	03 30 22.0	-1.0
PAMC	Pamplona, Colo	1.30	349	P	Pg	03 30 17.4	-1.7
PAMC	Pamplona, Colo	1.30	349	P	Pg	03 30 16.9	-2.2
PAMC				S	Sg	03 30 34.4	-1.7
PAMC	Pamplona, Colo	1.30	349	P	Pg	03 30 17.0	-2.1
BRJC	Barrancabermej	1.57	306	P	Pn	03 30 22.0	-0.8
BRJC				S	Sn	03 30 43.2	-0.4
SPBC	San Pablo de B	1.65	256	P	Pn	03 30 23.2	-0.8
SPBC				S	Sn	03 30 44.2	-1.5
PTGC	Puerto Gaitan,	1.87	170	P	Pn	03 30 25.6	-1.3
PTGC	Puerto Gaitan,	1.87	170	P	Pn	03 30 25.4	-1.5
PTGC				S	Sn	03 30 49.7	-1.2
CHIC	Chingaza	1.90	222	P	Pn	03 30 26.5	-1.1
CHIC				S	Sb	03 30 53.1	-0.7
PTBC	PUERTO BERRIO,	2.04	284	P	Pn	03 30 29.5	+0.2
PTBC				S	Sn	03 30 55.1	-0.2
VILC	Villavicencio,	2.28	213	P	Pb	03 30 34.4	-1.6
VILC				S	Sg	03 31 08.1	+0.5
ZARC	Zaragoza, Cauc	2.78	301	P	Pb	03 30 42.4	-2.0
ZARC				S	Sn	03 31 14.6	+1.1
GUY2C	Guyana, Caldas	3.00	254	P	Pn	03 30 42.9	-0.1
GUY2C				S	Sb	03 31 23.6	-2.2

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*ASIES **03** 03:40:59.9, 24°.13N×121°.53E, h25^{km}, ML3.6, Mw3.2, Moment Tensor Solution. Moment tensor: Scale 10^{20}Nm; M_{rr}6.42; $M_{\theta\theta}$0.77; $M_{\phi\phi}$-7.33; $M_{r\theta}$-0.82; $M_{\theta\phi}$-1.25; $M_{\phi r}$0.04; Fault plane solution: $M_0$7.06850×10^{20} NP1:ϕ_s0.27000°, δ45.27000°, λ78.17000°. NP2:ϕ_s196.84000°, δ45.95000°, λ101.69000°. Principal axes: T Plg81.6180°, Azm186.2880°; N Plg8.3750°, Azm8.6560°; P Plg0.3410°, Azm278.6050°;*

*TAP **03** 03:40:59.9, 24°.13N×121°.53E, h25^{km}, ML3.6, B*

*JMA **03** 03:40:59.2±0.1, 24°.1N±0°.4×12°1E±°, h26^{km}±1^{km}, MV2.8/12, TAIWAN REGION*

ISC 03 03:41:00.3±0.8**, 24°.13N**±0°.01×**121°.56E**±0°.02**, h25**^{km}±4^{km}**, n130, σ0°.91**/232**, 2C-3D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	Ninganchiao	0.06	36	⇓*i*P	Pb	03 41 04.4	-0.3
NACB				*i* S	Sb	03 41 07.7	0.0
TWD	Chiawan	0.06	145	⇓*i*P	Pb	03 41 04.5	-0.2
TWD				*i* S	Sb	03 41 07.8	+0.2
ETL	Fush Village	0.07	63	*e*P	Pb	03 41 04.6	-0.2
ETL				S	Sb	03 41 08.0	+0.2
ETLH	Xiulin Townshi	0.10	318	⇑*i*P	Pb	03 41 04.9	-0.2
ETLH				S	Sb	03 41 08.1	-0.2
HWA	Hwalien	0.16	164	*i* P	Pb	03 41 05.6	+0.2
HWA				S	Sb	03 41 09.9	+1.0
ETM	Tongmen	0.17	200	*i* P	Pb	03 41 05.3	-0.3
ETM				*i* S	Sb	03 41 09.0	-0.2
EHP	Heping Village	0.25	43	P	Pb	03 41 06.7	+0.1
EHP				*e*S	Sb	03 41 11.0	+0.2
EAHA	Aohua	0.26	39	*e*P	Pb	03 41 06.5	-0.2
EAHA				*e*S	Sb	03 41 11.2	+0.1
TEYL	Yanliau Villag	0.26	172	P	Pb	03 41 06.3	-0.4
TEYL				*e*S	Sb	03 41 11.4	+0.3
WHF	Hehuan Shan	0.27	274	*i* P	Pb	03 41 06.7	-0.5
WHF				S	Sb	03 41 11.3	-0.6
ESL	Shilin	0.33	200	*i* P	Pb	03 41 07.0	-0.8
ESL				S	Sb	03 41 12.8	-0.2
NNSB	Datong	0.34	332	*i* P	Pb	03 41 07.6	-0.4
NNSB				S	Sb	03 41 12.6	-0.6
NNSH	Datong	0.34	332	P	Pb	03 41 07.5	-0.5
NNSH				S	Sb	03 41 12.7	-0.6
SHUL	Shoufeng	0.34	179	*i* P	Pb	03 41 07.8	0.0
SHUL				*e*S	Sb	03 41 14.0	+0.9
ENA	Nanau	0.34	29	*e*P	Pb	03 41 07.7	-0.3
ENA				S	Sb	03 41 13.1	0.0
NNS	Nan Shan	0.35	331	*i* P	Pb	03 41 07.8	-0.4
NNS				*e*S	Sb	03 41 13.2	-0.4
TWT	Tachien	0.37	290	*e*P	Pb	03 41 08.4	-0.1
TWT				*i* S	Sb	03 41 14.0	-0.2
EWUT	Wuta	0.37	32	P	Pb	03 41 08.3	-0.1
EWUT				S	Sb	03 41 13.9	-0.1
TDCB	Techi	0.39	289	⇑*i*P	Pb	03 41 08.4	-0.3
TDCB				*i* S	Sb	03 41 13.8	-0.7
OWD	Renai	0.39	244	P	Pb	03 41 08.5	-0.3
OWD				*i* S	Sb	03 41 14.2	-0.4
LATG	Datong	0.41	356	P	Pb	03 41 08.7	-0.4
LATG				S	Sb	03 41 14.5	-0.5
TEGC	Jichi Village	0.42	182	P	Pb	03 41 08.9	-0.2
WUSB	Renai	0.42	251	P	Pb	03 41 09.0	-0.4
WUSB				S	Sb	03 41 14.8	-0.7
WARBT	Fenglin Townsh	0.44	201	P	Pb	03 41 08.2	-1.2
WARBT				S	Sb	03 41 14.8	-0.9
EGFH	Guangfu	0.47	195	P	Pb	03 41 09.5	-0.5
EGFH				S	Sb	03 41 15.8	-0.9
ENTT	Nioudou	0.51	1	P	Pb	03 41 10.5	-0.2
ENTT				S	Sb	03 41 17.9	+0.2
NDS	Dongshan	0.52	16	*e*P	Pb	03 41 09.8	-1.1
NDS				S	Sb	03 41 17.4	-0.7
VWDT	VWDT	0.53	226	P	Pb	03 41 10.7	-0.3
VWDT				S	Sb	03 41 18.4	+0.1
TWC	Suao	0.55	29	*e*P	Pb	03 41 11.2	-0.1
TWC				*e*S	Sb	03 41 18.6	-0.1
YHNB	Yeheng	0.56	343	⇓*i*P	Pb	03 41 11.2	-0.4
YHNB				S	Sb	03 41 18.5	-0.8
WHP	Taichung City	0.58	285	P	Pb	03 41 11.6	-0.2
WHP				S	Sb	03 41 19.3	-0.5
WCS	Beigang Elemen	0.59	263	*e*P	Pb	03 41 11.7	-0.3
WCS				*e*S	Sb	03 41 20.0	-0.1
TWE	Neicheng	0.60	9	P	Pb	03 41 12.1	-0.1
TWE				S	Sb	03 41 20.2	-0.1
FUSB	Fushanzhiwuyua	0.63	2	P	Pb	03 41 12.6	-0.1
FUSB				*e*S	Sb	03 41 20.5	-0.7
NFF	Wufeng Townshi	0.64	321	*e*P	Pn	03 41 12.8	-1.0
HGSD	Ruisui	0.65	191	*e*P	Pb	03 41 12.1	-0.8
HGSD				*e*S	Sb	03 41 21.6	+0.1
NWLT	Wulai	0.65	355	P	Pb	03 41 12.9	-0.1
NWLT				S	Sb	03 41 20.3	-1.4
SSLB	Suanglung	0.65	239	*e*P	Pb	03 41 12.4	-0.6
SSLB				S	Sb	03 41 20.3	-1.4
SMLT	Sun Moon Lake	0.65	248	P	Pb	03 41 12.6	-0.5
EHY	Hungye	0.66	199	*e*P	Pb	03 41 11.7	-1.4
EHY				*e*S	Sb	03 41 22.1	+0.3
EHYH	Wanrong	0.66	197	P	Pb	03 41 12.8	-0.4
EHYH				*e*S	Sb	03 41 21.1	-0.9
EOS2	EOS2	0.68	65	P	Pn	03 41 14.9	+0.7
TYC	Yuchr	0.68	251	P	Pb	03 41 13.0	-0.5
TYC				S	Sb	03 41 21.9	-0.6
EOS4	EOS4	0.69	90	*e*P	Pb	03 41 13.7	+0.2
EOS4				*e*S	Sn	03 41 23.7	-0.2
EOS3	EOS3	0.71	77	P	Pn	03 41 14.9	+0.4
EOS3				*e*S	Sn	03 41 26.6	+2.0
NSTT	Nanjuang	0.71	315	*e*P	Pn	03 41 14.2	-0.6
NSTT				S	Sb	03 41 23.1	-0.4
LIOB	Emei	0.71	316	P	Pn	03 41 14.3	-0.4
LIOB				*e*S	Sn	03 41 23.6	-1.3
TWQ1	Liyutan	0.75	287	*e*P	Pn	03 41 15.8	+0.5
TWQ1				*e*S	Sn	03 41 26.0	+0.2
YULB	Yu-li	0.77	198	*e*P	Pb	03 41 12.4	-2.6
WHYT	Xinyi Township	0.78	236	P	Pn	03 41 14.9	-0.7
WHYT				*e*S	Sn	03 41 26.1	-0.4
NSY	Sanyi	0.78	292	*e*P	Pn	03 41 15.9	+0.2
NSY				*e*S	Sn	03 41 26.6	-0.1
EGS		0.79	25	*e*P	Pn	03 41 15.9	+0.1
TCU	Taichung	0.81	272	*e*P	Pn	03 41 16.8	+0.8
EYUL	Yuli	0.81	196	*e*P	Pb	03 41 14.4	-1.2
TWF1	Yuli	0.81	197	*e*P	Pb	03 41 14.7	-1.0
NMLH	Miaoli	0.81	300	P	Pn	03 41 16.5	+0.4
NMLH				*e*S	Sn	03 41 27.5	+0.2
ECBN	Changbin	0.81	187	*e*P	Pb	03 41 14.3	-1.4
WJS	Zhushan	0.82	248	P	Pn	03 41 16.5	+0.3
WJS				*e*S	Sn	03 41 28.3	+0.8
NHDH	Xindian Distri	0.83	358	*e*P	Pn	03 41 16.6	+0.3
NHDH				*e*S	Sn	03 41 27.2	-0.7
WNT	Mingjian	0.84	253	*e*P	Pn	03 41 16.7	+0.2
WNT				*e*S	Sn	03 41 28.7	+0.8
SBCB	Hsinchu	0.84	322	P	Pn	03 41 17.2	+0.7
SBCB				S	Sn	03 41 29.9	+1.7
TWA	Mucha	0.85	2	*e*P	Pn	03 41 16.4	-0.2
TWA				*e*S	Sn	03 41 27.8	-0.5
WDJ	Dajia District	0.87	285	P	Pn	03 41 17.6	+0.8
TIPB	Shuangxi	0.87	16	*e*P	Pn	03 41 16.7	-0.3
NCUH	Zhongli	0.90	338	P	Pn	03 41 18.1	+0.7
NCUH				S	Sn	03 41 31.1	+1.5
NCU	National Centr	0.90	338	*e*P	Pb	03 41 16.0	-1.3
NCU				*e*S	Sn	03 41 29.2	-0.4
TAP	Taipei	0.91	357	*e*P	Pn	03 41 18.0	+0.6
TAP				*e*S	Sn	03 41 29.8	+0.1
WCHH	Zhanghua	0.92	267	*e*P	Pn	03 41 17.8	+0.3
WCHH				*e*S	Sn	03 41 31.0	+1.2
ALS	Alishan	0.93	228	*i* P	Pn	03 41 17.8	-0.1
ALS				*e*S	Sn	03 41 30.4	-0.1
WCH1	Changhua City	0.93	267	*e*P	Pn	03 41 18.4	+0.7
WCH1				*e*S	Sn	03 41 31.4	+1.3
CHKH	Chenggong	0.94	189	P	Pn	03 41 16.1	-1.9
CHKH				*e*S	Sn	03 41 30.3	-0.3
FULB	Fuli	0.96	195	*e*P	Pb	03 41 17.8	-0.4
FULB				*e*S	Sn	03 41 32.5	+1.6
TWB1	Santiao Chiao	0.96	24	*e*P	Pb	03 41 18.3	0.0
TWB1				*e*S	Sn	03 41 31.6	+0.6
WFSB	Wu-fen Shan	0.96	12	P	Pb	03 41 19.1	+0.9
WFSB				S	Sn	03 41 31.5	+0.5
CHN5	Tsauling	0.96	237	*e*P	Pb	03 41 18.9	+0.5
CHN5				*i* S	Sn	03 41 32.4	+1.1
SXI1	Grass Mountain	1.00	17	*e*P	Pb	03 41 18.9	-0.1
SXI1				*e*S	Sn	03 41 32.4	+0.2
WGK	Gukeng	1.01	244	*e*P	Pb	03 41 19.7	+0.6
WGK				*e*S	Sn	03 41 33.9	+1.6
EHD	Haiduan	1.03	198	*e*P	Pn	03 41 18.3	-0.8
ZUZH	Zhuzihu	1.03	359	*e*P	Pb	03 41 19.7	+0.2
WDLH	Douliu	1.03	245	*e*P	Pb	03 41 20.0	+0.6
WDLH				*e*S	Sn	03 41 34.2	+1.4
NTST	Danshui	1.04	355	*e*P	Pb	03 41 19.6	+0.1
NTST				*e*S	Sn	03 41 34.8	+1.9
CHKT	Chengkung	1.04	190	*e*P	Pn	03 41 17.2	-2.0
CHKT				*e*S	Sb	03 41 31.8	-1.0
ANP	Anpu	1.05	358	P	Pb	03 41 19.9	0.0
ANP				*e*S	Sn	03 41 34.1	+0.6
YM08	YM08	1.05	2	*e*P	Pb	03 41 19.7	-0.2
YM08				*e*S	Sb	03 41 32.9	-0.4
ELDTW	Lidau	1.06	208	*e*P	Pn	03 41 19.0	-0.6
ELDTW				*e*S	Sb	03 41 32.8	-0.6
ECS	Chishang	1.07	197	*e*P	Pb	03 41 21.7	+1.5
ECS				*e*S	Sn	03 41 36.5	+2.7
WCKO	Fanlu	1.11	232	*e*P	Pb	03 41 21.2	+0.3
WCKO				*e*S	Sb	03 41 36.3	+1.4
TWY	Chenhua	1.14	2	*e*P	Pb	03 41 21.1	-0.3
CHN2	Minshiung	1.16	239	*e*P	Pb	03 41 23.1	+1.5
CHN2				*e*S	Sb	03 41 39.1	+3.0
WTK	Tuku	1.16	248	*e*P	Pb	03 41 21.5	-0.1
WTK				*e*S	Sb	03 41 37.2	+1.0
EDH	Donghe	1.17	192	*e*P	Pn	03 41 19.1	-1.9
EDH				*e*S	Sn	03 41 35.0	-1.2
CHN4	Tsaushan	1.18	229	*e*P	Pb	03 41 22.5	+0.6
CHN4				*e*S	Sb	03 41 38.7	+2.0
TPUB	Ta-pu	1.19	226	*e*P	Pb	03 41 22.5	+0.4
TPUB				*e*S	Sb	03 41 38.5	+1.5
STYH	Taoyuan	1.19	217	*e*P	Pn	03 41 20.1	-1.2
STYH				*e*S	Sb	03 41 37.1	-0.1
CHY	Chiayi	1.21	239	*e*P	Pb	03 41 22.8	+0.3
CHY				*e*S	Sb	03 41 39.1	+1.3
LONT	Longtian	1.28	198	*e*P	Pn	03 41 21.8	-0.8
TWK	Hsinying	1.30	229	*e*P	Pb	03 41 24.3	+0.2
TWK				*e*S	Sb	03 41 41.9	+1.5
JYNG	Yonagunijimaku	1.31	75	*e*S	Sn	03 41 39.6	+0.1
WSF	Szhu	1.32	249	*e*P	Pb	03 41 23.8	-0.5
WSF				*e*S	Sb	03 41 42.1	+1.3
SNST	Tainan City	1.33	227	*e*P	Pb	03 41 24.9	+0.4
SNST				*e*S	Sb	03 41 42.9	+1.8
CHN1	Nanshi	1.33	225	*e*P	Pb	03 41 25.1	+0.5
CHN1				*e*S	Sb	03 41 42.7	+1.5
WSL	Shuilin Townsh	1.36	244	*e*P	Pb	03 41 24.6	-0.4
WSL				*i* S	Sb	03 41 43.9	+1.9
YOJ	Yonaguni jima	1.37	76	*e*P	Pn	03 41 23.7	0.0
YOJ				*e*S	Sn	03 41 41.2	+0.2
SGST	Jiashian	1.37	221	*e*P	Pb	03 41 25.8	+0.5
SGST				*e*S	Sb	03 41 43.3	+0.9
TWG	Pinlang	1.38	199	*e*P	Pn	03 41 23.4	-0.5
TWGBT	Beinan	1.38	199	*e*P	Pn	03 41 22.5	-1.4
ICHU	Yijhu	1.40	237	*e*P	Pb	03 41 25.6	-0.1
ICHU				S	Sb	03 41 44.4	+1.2
LDUT	Ludao	1.45	183	*e*P	Pn	03 41 22.0	-2.9
CHN8	Yiju	1.46	238	*e*P	Pb	03 41 26.2	-0.6
CHN8				*e*S	Sb	03 41 46.3	+1.4
SCST	Cishan	1.58	219	*e*P	Pb	03 41 28.5	-0.2
SCST				*e*S	Sb	03 41 49.7	+1.4
SSD	Sandimen	1.62	212	*e*P	Pb	03 41 28.2	-1.3
SSD				*e*S	Sb	03 41 49.6	+0.1
ECL	Taimali	1.62	200	*e*P	Pb	03 41 28.3	-1.2
TSCK	Chigu Township	1.67	234	*e*P	Pn	03 41 28.2	+0.3
TSCK				*e*S	Sb	03 41 50.7	-0.2
MASBT	Mashibuluo	1.73	210	*e*P	Pb	03 41 30.5	-0.9
MASBT				S	Sb	03 41 51.9	-0.8
EAST	Anshuo	1.86	201	*e*P	Pb	03 41 32.4	-1.1
TAWH	Dawu Township	1.88	199	*e*P	Pn	03 41 32.0	+1.2
PNG	Penghu	1.92	253	*e*P	Pb	03 41 33.4	-1.1
PHUB	P'eng-hu	1.92	252	*e*P	Pn	03 41 31.6	+0.3
PHUB				*e*S	Sn	03 41 55.2	+0.5
WDGT	Dungji	1.94	244	*e*P	Pb	03 41 33.1	-1.9
WDGT				*e*S	Sb	03 41 56.6	-2.2
SCZT	Fangliau	1.95	206	*e*P	Pb	03 41 33.9	-1.2
IRIF	Iriomote-Funau	1.99	84	*e*P	Pn	03 41 32.6	+0.2
IRIF				*e*S	Sn	03 41 56.3	-0.2
HATJ	Hateruma jima	2.05	92	*e*P	Pn	03 41 33.5	+0.3
HATJ				*e*S	Sn	03 41 58.6	+0.6
VWUC	VWUC	2.10	295	*e*P	Pn	03 41 32.8	-1.1
VWUC				*e*S	Sn	03 41 57.5	-1.7
LYUB	Lan-yu	2.12	179	*e*P	Pn	03 41 34.6	+0.5
VCHM	Qimei	2.16	245	*e*P	Pn	03 41 34.8	+0.2
VCHM				*e*S	Sn	03 42 01.6	+1.1
JKRS	Kuro-shima	2.24	87	*e*P	Pn	03 41 36.4	+0.7
JKRS				*e*S	Sn	03 42 03.9	+1.3
TWKBT	Hengchun	2.28	198	*e*P	Pn	03 41 38.2	+1.8
JIJ	Ishigaki jima	2.37	84	*e*P	Pn	03 41 37.5	0.0
JIJ				*e*S	Sn	03 42 05.5	-0.3
JISG	Ishigakijimahi	2.55	79	*e*P	Pn	03 41 40.0	0.0
JISG				*e*S	Sn	03 42 09.5	-0.8
KNMB	Chin-men Tao	2.91	277	*e*P	Pn	03 41 44.2	-0.7

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*NOU **03** 03:41:07.1, 39°.42S×176°.98E, h7^{km}, ML4.0/12, North Island, New Zealand*

*WEL **03** 03:41:08.6±0.4, 39°S±2°×17°7E±°, h18^{km}±3^{km}, M3.6/16, ML4.0/16, MLv3.6/16, Error ellipse: s-maj=3.4km s-min=2.6km az=106.4, confirmed*

ISC 03 03:41:09.3±0.9**, 39°.37S**±0°.02×**176°.92E**±0°.03**, h23**^{km}±5^{km}**, n85, σ0°.63**/97**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NAAS	Napier Airport	0.10	202	P	Pb	03 41 11.9	-1.8
NAAS				S	Sb	03 41 16.8	+0.1
NGHS	Napier Girls H	0.11	183	P	Pb	03 41 13.6	-0.2
NGHS				S	Sb	03 41 18.3	+1.4
ARHZ	Aropaoanui	0.12	28	P	Pb	03 41 13.3	-0.6
ARHZ				S	Sb	03 41 17.6	+0.5
NCDS	Napier Civil D	0.13	196	P	Pb	03 41 13.9	0.0
NCDS				S	Sb	03 41 18.7	+1.5
MCHZ	McNeill Hill	0.19	248	P	Pb	03 41 14.4	-0.3
MCHZ				S	Sb	03 41 19.3	+1.0
NMHZ	Naumai	0.29	342	P	Pb	03 41 15.5	-0.6
CKHZ	Cape Kidnapper	0.31	157	P	Pb	03 41 17.0	+0.7
WHHZ	Waihua	0.38	39	P	Pb	03 41 17.4	-0.1
KWHZ	Kaweka Forest	0.39	262	P	Pb	03 41 17.1	-0.5
KWHZ				S	Sb	03 41 23.9	+0.5
BKZ	Black Stump Fm	0.39	302	P	Pb	03 41 16.5	-1.2
BKZ	Black Stump Fm	0.39	302	P	Pb	03 41 16.8	-0.9
BKZ				S	Sb	03 41 23.3	-0.1

KAHZ	Kahuranaki	0.42	185	P	Pn	03 41 19.0	-0.9
RAHZ	Arahi	0.47	16	P	Pb	03 41 18.6	-0.4
KRHZ	Kereru	0.51	238	P	Pb	03 41 19.2	-0.3
KRHZ				S	Sb	03 41 27.6	+1.1
MTHZ	Maungataniwha	0.52	353	P	Pb	03 41 19.0	-0.8
MTHZ				S	Sb	03 41 27.3	+0.2
WPWS	Waipawa Distri	0.63	204	P	Pb	03 41 21.9	+0.3
PXZ	Pawanui	0.66	184	P	Pb	03 41 22.4	+0.3
MRHZ	Matea Rd	0.67	324	P	Pb	03 41 21.5	-0.8
MRHZ				S	Sb	03 41 30.8	-0.3
SNGZ	Shannon Statio	0.68	29	P	Pb	03 41 22.3	-0.1
KNZ	Kokohu	0.68	59	P	Pb	03 41 22.7	+0.2
RTZ	Ruatahuna	0.76	3	P	Pb	03 41 23.1	-0.8
PNHZ	Pukenui	0.78	226	P	Pb	03 41 24.0	-0.1
PNHZ				S	Sn	03 41 35.6	-0.1
WPHZ	Waipukurau	0.78	208	P	Pn	03 41 24.5	-0.4
MHGZ	Mahia Peninsul	0.80	74	P	Pb	03 41 24.3	-0.1
HATZ	Hinemaiaia	0.81	306	P	Pb	03 41 24.1	-0.5
HATZ				S	Sb	03 41 35.0	-0.1
PRGZ	Paritu Road	0.87	59	P	Pn	03 41 25.9	-0.2
MUGZ	Murupara	0.90	352	P	Pb	03 41 25.4	-0.8
RITZ	Rihia Road	0.92	295	P	Pb	03 41 26.5	0.0
PRHZ	Porangahau	0.92	194	P	Pb	03 41 26.0	-0.5
ALRZ	Allen Road	0.93	331	P	Pb	03 41 26.3	-0.4
RIGZ	Rimuhau	0.93	45	P	Pb	03 41 26.2	-0.6
RAGZ	Rawiri	0.96	24	P	Pb	03 41 27.0	-0.2
PRRZ	Plateau Road	0.97	335	P	Pb	03 41 27.0	-0.3
ETVZ	East Tongariro	0.97	284	P	Pb	03 41 27.1	-0.3
TMVZ	Te Maari	0.98	285	P	Pb	03 41 27.3	-0.4
NTVZ	North Tongarir	1.01	285	P	Pn	03 41 27.7	-0.3
TSZ	Takapari Road	1.01	227	P	Pn	03 41 27.3	-0.7
SNVZ	South Ngauruho	1.01	280	P	Pn	03 41 27.9	-0.2
WNVZ	Wahianoa	1.03	272	P	Pn	03 41 28.1	-0.3
RATZ	Rangitukua	1.03	299	P	Pb	03 41 28.4	0.0
WHTZ	Whakaora	1.03	313	P	Pb	03 41 28.8	+0.3
KATZ	Kakaramea	1.03	292	P	Pn	03 41 28.3	-0.1
KRVZ	Karewarewa	1.03	285	P	Pn	03 41 28.2	-0.2
WHVZ	Whangaehu Hut	1.04	275	P	Pn	03 41 28.4	-0.2
WPRZ	Whakapapatarin	1.04	325	P	Pn	03 41 28.0	-0.4
NNVZ	North Ngauruho	1.04	283	P	Pn	03 41 28.4	-0.2
NGZ	Ngauruhoe	1.04	280	P	Pn	03 41 28.5	-0.1
MAVZ	Matarangi	1.06	275	P	Pn	03 41 28.8	-0.2
WTVZ	West Tongariro	1.07	284	P	Pn	03 41 28.8	-0.1
FWVZ	Far West T-bar	1.07	276	P	Pn	03 41 28.8	-0.2
TRVZ	Turoa	1.07	274	P	Pn	03 41 28.8	-0.2
RRRZ	Republican Roa	1.08	343	P	Pn	03 41 29.0	0.0
COVZ	Chateau Observ	1.08	279	P	Pn	03 41 29.1	0.0
HRRZ	Handcock Road	1.10	333	P	Pb	03 41 29.7	0.0
URZ	Urewera	1.12	8	P	Pn	03 41 29.0	-0.5
URZ	Urewera	1.12	8	S	Sn	03 41 45.4	+1.2
URZ	Urewera	1.12	8	P	Pn	03 41 29.2	-0.3
MTVZ	Mangateitei	1.12	269	P	Pn	03 41 29.8	+0.1
ANWZ	Angora Road	1.14	197	P	Pn	03 41 29.1	-0.7
WATZ	Wairara	1.14	305	P	Pn	03 41 29.5	-0.3
MWZ	Matawai	1.14	25	P	Pn	03 41 29.2	-0.6
TKGZ	Te Karaka	1.18	38	P	Pn	03 41 29.6	-0.7
TARZ	Mount Tarawera	1.18	344	P	Pn	03 41 30.4	0.0
HSRZ	Hossack Road	1.19	333	P	Pb	03 41 30.7	-0.3
TWVZ	Taurewa	1.19	284	P	Pn	03 41 30.4	-0.2
HLRZ	Highlands Stat	1.21	338	P	Pb	03 41 31.7	+0.3
PKVZ	Pokaka	1.23	273	P	Pn	03 41 31.2	+0.2
KUTZ	Kaahu Road	1.23	316	P	Pn	03 41 31.1	+0.1
EDRZ	Edgecumbe	1.27	354	P	Pn	03 41 31.5	-0.2
MKRZ	Makatiti	1.28	344	P	Pb	03 41 33.5	+0.8
UTU	Utuhina	1.32	334	P	Pb	03 41 33.2	-0.2
OMRZ	Omania	1.34	341	P	Pn	03 41 32.5	0.0
POWZ	Post Office Ro	1.35	221	P	Pn	03 41 31.8	-0.9
BFZ	Birch Farm	1.41	201	P	Pn	03 41 32.3	-1.1
BFZ	Birch Farm	1.41	201	P	Pn	03 41 32.3	-1.1
WHRZ	Whale Island	1.52	2	P	Pn	03 41 34.8	-0.1
RUGZ	Raukumara Rang	1.53	23	P	Pn	03 41 34.7	-0.5
MRZ	Mangatainoka R	1.65	218	P	Pn	03 41 35.3	-1.5
HIZ	Hauiti	1.83	297	P	Pn	03 41 39.1	-0.1
HIZ	Hauiti	1.83	297	S	Sb	03 42 04.6	+0.2
MXZ	Matakaoa Point	2.11	31	P	Pn	03 41 42.3	-0.8
KHEZ	Kahui Hut	2.26	271	P	Pn	03 41 46.9	+1.7
QRZ	Quartz Range	3.67	245	P	Pn	03 42 03.6	-0.9
OUZ	Omahuta	4.92	326	P	Pn	03 42 22.4	+0.7
CTZ	Chatham Island	6.52	134	P	Pn	03 42 42.6	-1.0

RSNC 03 03:44:39.6±2.0,**3˚N**±5˚×**8˚2W**±1˚7,**h0^{km},M3.3,mb3.8, mB5.7,ML2.7,Mw(mB)5.2,South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GR1C	Gorgona, Isla	4.16	92	P	Pn	03 45 42.8	-1.6
PAC1	Pacto, Paraso	4.58	129	P	Pn	03 45 49.4	-0.9
PAC1				S	Sn	03 46 44.6	+0.3
OTAV	Otavalo	4.86	127	P	Pn	03 45 54.5	0.0
MALC	Bahia Malaga	5.05	81	P	Pn	03 45 57.3	+0.6
BBAC	Balboa, Cauca	5.21	103	P	Pn	03 45 57.0	-2.0
	5.5nm,0.4s						
GCUF	Volcan Galeras	5.35	111	P	Pn	03 46 02.0	+0.8
	5.3nm,0.6s						
JAMC	Jamundi, Valle	5.65	90	P	Pn	03 46 04.2	-0.9
	3.2nm,0.5s						
POPC	Popayan, Colom	5.68	96	P	Pn	03 46 04.2	-1.4
	2.5nm,0.9s						
POPC				S	Sn	03 47 12.8	+1.1
	2.5nm,0.9s						
YOTC	Yotoco, Valle	6.03	82	P	Pn	03 46 09.5	-0.7
	3.7nm,0.5s						
CBOC	Ciudad Bolivar	6.83	67	P	Pn	03 46 19.5	-1.9
	4.3nm,0.8s						
GUY2C	Guyana, Caldas	7.23	74	P	Pn	03 46 27.9	+0.8

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*SNET **03** 03:47:32.2±1.9,12˚97N×89˚51W,h37^{km},ML3.7*

*CATAC **03** 03:47:33.0±0.5,13˚N±2˚×8˚9W±˚,h25^{km}±2^{km},M3.6/24, MLv3.6/24,Error ellipse: s-maj=5.6km s-min=3.2km az=31.3,confirmed*

*GCG **03** 03:47:34.5±0.5,13˚12N×89˚54W,h46^{km}±9^{km},MD3.9*

ISC 03 03:47:35.9±1.6,**13˚11N**±0˚06×**89˚39W**±0˚04,**h40**^{km}±10^{km},**n72,**σ**1^{s}53**/86,**1D,El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.39	10	eP	Pn	03 47 44.6	-0.6
LALI				eS	Sn	03 47 51.9	+0.2
LALI	Alcalda de L	0.39	10	⇓eP	Pn	03 47 44.4	-0.8
LALI	Alcalda de L	0.39	10	P	Pn	03 47 44.2	-0.9
LALI	Alcalda de L	0.39	10	S	Sn	03 47 53.1	+1.5
JAYA	Jayaque - finc	0.55	354	i P	Pn	03 47 46.0	-1.6
JAYA				eS	Sn	03 47 54.8	-0.8
JAYA	Jayaque - finc	0.55	354	eP	Pn	03 47 45.9	-1.6
JAYA				i S	Sn	03 47 54.7	-0.9
JAYA	Jayaque - finc	0.55	354	P	Pn	03 47 45.7	-1.8
JAYA	Jayaque - finc	0.55	354	S	Sn	03 47 55.6	0.0
ITCA	Escuela Especi	0.57	11	P	Pn	03 47 46.6	-1.1
ITCA	Escuela Especi	0.57	11	S	Sn	03 47 56.7	+0.5
LOMA	Loma Larga	0.58	22	eP	Pn	03 47 47.1	-0.8
LOMA				eS	Sn	03 47 58.0	+1.7
LOMA	Loma Larga	0.58	22	P	Pn	03 47 46.9	-1.0
LFRS	El Faro	0.60	32	eP	Pn	03 47 47.5	-0.7
PMON	Piamonte	0.61	7	P	Pn	03 47 46.9	-1.3
PMON	Piamonte	0.61	7	S	Sn	03 47 58.7	+1.7
SEMO	Seminario San	0.61	15	P	Pn	03 47 47.6	-0.7
SEMO	Seminario San	0.61	15	S	Sn	03 47 58.0	+0.9
UTEC	Universidad Te	0.62	17	P	Pn	03 47 47.5	-0.9
UTEC	Universidad Te	0.62	17	S	Sn	03 47 57.9	+0.7
UEES	Universidad Ev	0.62	14	P	Pn	03 47 47.6	-0.8
UEES	Universidad Ev	0.62	14	S	Sn	03 47 58.4	+1.1
BOQS	Boqueron	0.63	10	eP	Pn	03 47 47.7	-1.0
IGN	Direccin Gen	0.64	20	P	Pn	03 47 48.0	-0.6
IGN	Direccin Gen	0.64	20	S	Sn	03 47 58.7	+1.0
UDBS	Universidad Do	0.65	21	P	Pn	03 47 48.1	-0.6
UDBS	Universidad Do	0.65	21	S	Sn	03 47 59.0	+1.2
CEDA	San Andres	0.69	360	P	Pn	03 47 48.8	-0.6
CEDA	San Andres	0.69	360	S	Sn	03 48 00.5	+1.6
LFU	La Fuente	0.69	23	eP	Pn	03 47 49.0	-0.4
COEG	Centro de Oper	0.71	44	eP	Pn	03 47 48.7	-1.0
COEG				eS	Sn	03 48 00.4	+1.0
COEG	Centro de Oper	0.71	44	P	Pn	03 47 48.6	-1.0
TECO	Alcaldia de Te	0.73	54	P	Pn	03 47 49.0	-0.8
TECO	Alcaldia de Te	0.73	54	S	Sn	03 48 01.0	+1.1
PAVA	Las Pavas	0.75	36	eP	Pn	03 47 49.6	-0.5
PAVA				eS	Sn	03 48 02.1	+1.7
PAVA	Las Pavas	0.75	36	P	Pn	03 47 49.7	-0.5
CEVE	Cerro Verde	0.75	342	eP	Pn	03 47 48.8	-1.6
CEVE	Cerro Verde	0.75	342	P	Pn	03 47 48.7	-1.6
CEVE	Cerro Verde	0.75	342	S	Sn	03 48 02.1	+1.5
UESV	Universidad de	0.79	48	P	Pn	03 47 49.8	-0.8
UESV	Universidad de	0.79	48	S	Sn	03 48 02.4	+1.2
ALJI	Alcalda de J	0.83	75	P	Pn	03 47 50.4	-0.7
ALJI	Alcalda de J	0.83	75	S	Sn	03 48 02.9	+0.7
SCLA	Alcaldia de Sa	0.88	47	P	Pn	03 47 51.2	-0.6
SCLA	Alcaldia de Sa	0.88	47	S	Sn	03 48 05.1	+1.7
NUBE	Las Nubes	0.88	334	i P	Pn	03 47 49.7	-2.2
NUBE				eS	Sn	03 48 02.0	-1.6
NUBE	Las Nubes	0.88	334	eP	Pn	03 47 49.7	-2.2
NUBE				eS	Sn	03 48 02.0	-1.6
NUBE	Las Nubes	0.88	334	P	Pn	03 47 50.0	-2.0
UNIC	Universidad Ca	0.88	350	P	Pn	03 47 50.8	-1.2
UNIC	Universidad Ca	0.88	350	S	Sn	03 48 03.9	+0.3
LOAL	Lomas de Alarc	0.96	337	P	Pn	03 47 52.0	-1.1
LOAL	Lomas de Alarc	0.96	337	S	Sn	03 48 05.9	+0.3
SLOZ	Alcaldia de Sa	0.99	337	P	Pn	03 47 51.9	-1.5
SLOZ	Alcaldia de Sa	0.99	337	S	Sn	03 48 06.5	+0.3
PACA	Pacayal	1.10	71	eP	Pn	03 47 54.6	-0.3
PACA				eS	Sn	03 48 10.4	+1.4
PACA	Pacayal	1.10	71	P	Pn	03 47 54.7	-0.3
RANC	El Ranchito	1.12	73	eP	Pn	03 47 52.4	-2.9
RANC				eS	Sn	03 48 08.7	-0.9
RANC	El Ranchito	1.12	73	P	Pn	03 47 52.3	-3.0
MTO3	Montecristo	1.28	1	eP	Pn	03 47 56.4	-1.2
MTO3	Montecristo	1.28	1	P	Pn	03 47 56.6	-1.0
MTO3	Montecristo	1.28	1	S	Sn	03 48 14.6	+0.9
ESQI	Esquipulas	1.45	2	P	Pn	03 47 58.9	-0.8
ESQI	Esquipulas	1.45	2	S	Sn	03 48 18.6	+1.1
CNCH	Conchagua	1.53	83	P	Pn	03 48 00.2	-0.6
CNCH	Conchagua	1.53	83	S	Sn	03 48 21.3	+1.8
FG16	Alotenango, Sa	1.59	317	i P	Pn	03 48 04.3	+2.6
FG16				eS	Sn	03 48 27.9	+6.7
CSGN	Cosiguina Volc	1.79	94	P	Pn	03 48 03.5	-0.9
CSGN				S	Sn	03 48 26.9	+0.9
POTN	Potosi Cosigui	1.84	93	P	Pn	03 48 04.1	-0.9
POTN				S	Sn	03 48 28.0	+0.9
ESSG	Sabana Grande	1.89	312	i P	Pn	03 48 03.5	-2.2
ESSG				i S	Sn	03 48 25.2	-3.2
TGUH	Tegucigalpa,Un	2.27	65	P	Pn	03 48 11.3	+0.3
STG8	El Palmar, Qui	2.33	305	eP	Pn	03 48 14.5	+2.6
QUEN	Al S del Volca	2.53	101	P	Pn	03 48 13.7	-0.8
MATN	Matagalpa	3.38	93	P	Pn	03 48 24.0	-2.3

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*MDD **03** 03:53:31.4±1.1,32˚61N×16˚80W,h4^{km}±5^{km},Mb4.5/15, M_mb3.9/12,Error ellipse: s-maj=9.1km s-min=4.6km az=49.0*

*INMG **03** 03:53:32.2±1.3,32˚75N×16˚65W,h4^{km},ML2.3,Error ellipse: s-maj=3.2km s-min=2.7km az=82.0, #DIST_RANGE: LOCAL #IPMA_REGION: NE Machico (Madeira)*

ISC 03 03:53:28.4±1.1,**32˚68N**±0˚07×**16˚64W**±0˚04,**h33**^{km}±3^{km},**n20,**σ**1^{s}68**/38,**17C-1D,Madeira Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUL	Funchal	0.21	262	⇑iP	Pn	03 53 36.0	+1.4
FUL				eS	Sb	03 53 39.5	-0.2
FUL				i AML	AML	03 53 39.8	
FUL				i AML	AML	03 53 40.2	
FUL				i AML	AML	03 53 41.0	
PMAR	Madeira	0.23	281	⇓iP	Pb	03 53 35.8	+0.2
PMAR				eS	Sb	03 53 39.1	-1.3
PMAR				i AML	AML	03 53 40.7	
PMAR				i AML	AML	03 53 41.1	
PMAR				i AML	AML	03 53 41.9	
PMPST	Porto Santo, M	0.48	33	⇑iP	Pb	03 53 38.9	+0.2
PMPST				eS	Sb	03 53 44.2	-1.5
PMPST				i AML	AML	03 53 45.4	
PMPST				i AML	AML	03 53 45.5	
PMPST				i AML	AML	03 53 45.6	
PMOZ	Porto Moniz, M	0.49	287	i P	Pb	03 53 39.8	+0.9
PMOZ				eS	Sb	03 53 45.5	-0.6
PMOZ				i AML	AML	03 53 47.1	
PMOZ				i AML	AML	03 53 48.0	
PMOZ				i AML	AML	03 53 51.2	
CPUN	Puntallana, La	4.05	194	P	Pn	03 54 29.8	+1.8
CPUN				⇑iIVmb_VC		03 54 31.3	
	675nm,SNR=1.3						
CPUN				S	Sn	03 55 11.8	-2.5
CGOR	Puntagorda, La	4.06	197	P	Pn	03 54 30.3	+2.1
CGOR				⇑iIVmb_VC		03 54 30.7	
	676nm,SNR=1.3						
CGOR				S	Sn	03 55 12.7	-1.9
TBT	Taburiente	4.13	196	P	Pn	03 54 30.1	+0.8
TBT				⇑iIVmb_VC		03 54 31.4	
	441nm,SNR=1.8						
TBT				S	Sn	03 55 13.8	-2.6
CBRE	Brena Baja,La	4.16	194	P	Pn	03 54 31.0	+1.4
CBRE				⇑iIVmb_VC		03 54 33.8	
	1µm,SNR=1.7						
CBRE				S	Sn	03 55 14.7	-2.4
CVIE	Villa de Mazo,	4.20	194	P	Pn	03 54 30.7	+0.5
CVIE				S	Sn	03 55 16.9	-1.3
MACI	Morro de la Ar	4.42	178	P	Pn	03 54 35.4	+2.1
MACI				⇑iIVmb_VC		03 54 39.8	
	226nm,SNR=0.7						
MACI				S	Sn	03 55 24.5	+0.8
GUIA	Guia de Isora,	4.42	181	P	Pn	03 54 35.0	+1.6
GUIA				⇑iIVmb_VC		03 54 37.0	
	437nm,SNR=0.6						
GUIA				S	Sn	03 55 22.0	-1.7
CCHO	La Orotava (Te	4.44	180	P	Pn	03 54 36.3	+2.7
CCHO				⇑iIVmb_VC		03 54 41.4	
	473nm,SNR=2.2						
CCHO				S	Sn	03 55 24.1	-0.2
CCAN	Las Canadas	4.44	180	P	Pn	03 54 34.8	+1.1
CCAN				⇑iIVmb_VC		03 54 38.4	
	263nm,SNR=0.7						
EGOM	La Gomera	4.53	186	P	Pn	03 54 34.5	-0.1
EGOM				⇑iIVmb_VC		03 54 37.1	
	298nm,SNR=1.0						
EGOM				S	Sn	03 55 24.9	-1.3
CTFS	San Miguel de	4.58	180	P	Pn	03 54 37.4	+2.0
CTFS				⇑iIVmb_VC		03 54 38.6	
	420nm,SNR=0.9						
CTFS				S	Sn	03 55 27.7	+0.3
CFUE	Fuerteventura	4.65	149	P	Pn	03 54 39.0	+2.7
CFUE				⇑iIVmb_VC		03 54 43.2	
	154nm,SNR=1.2						
CFUE				S	Sn	03 55 28.5	-0.5
CLUM	San Bartolome	4.92	170	P	Pn	03 54 42.3	+2.3
CLUM				⇑iIVmb_VC		03 54 43.5	
	626nm,SNR=2.1						
CLUM				S	Sn	03 55 33.7	-2.2
CGIN	Giniginamar, F	4.98	153	P	Pn	03 54 41.2	+0.4
CGIN				⇑iIVmb_VC		03 54 43.5	
	347nm,SNR=0.8						
CGIN				S	Sn	03 55 34.3	-2.9
CCUM	Cumbre, El Hie	5.06	194	P	Pn	03 54 43.0	+1.0
CCUM				⇑iIVmb_VC		03 54 46.1	
	235nm,SNR=1.1						
CCUM				S	Sn	03 55 38.6	-0.8
CJUL	El Julan, El H	5.09	195	P	Pn	03 54 43.4	+1.0
CJUL				⇑iIVmb_VC		03 54 44.7	
	588nm,SNR=1.8						

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*IDC **03** 03:53:44.1±1.2,45˚68S×13˚78W,h0^{km},mb4.0/5, mbtmp3.9/5,MS3.5/14,Error ellipse: s-maj=83.3km s-min=27.4km az=87.0*

ISC 03 03:53:45.6±1.2,**45˚7S**±0˚2×**13˚9W**±0˚5,**h10**^{km},**n19,** σ**0^{s}39**/6,**mb3.9**/5,**MS3.6**/14,**Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	Sanae	26.59	172	LR	LR	04 07 20.0	
	comp=Z,44nm,18.6s,baz=61,slow=31						
PMSA	Palmer Station	33.21	217	LR	LR	04 11 11.8	
	comp=Z,54nm,20.8s,baz=44,slow=32						
BOSA	Boshof	35.12	75	LR	LR	04 12 27.7	
	comp=Z,141nm,19.0s,baz=202,slow=32						
TSUM	Tsumeb	37.02	55	LR	LR	04 12 59.4	
	comp=Z,97nm,18.4s,baz=174,slow=31						
LBTB	Lobatse	37.72	70	LR	LR	04 13 22.4	
	comp=Z,85nm,19.5s,baz=219,slow=31						
BDFB	Brasilia	41.41	305	LR	LR	04 15 13.6	
	comp=Z,92nm,21.8s,baz=139,slow=31						
MAW	Mawson	43.91	147	P	P	04 01 51.7	-0.2
	2.8nm,0.8s,baz=254,slow=17,SNR=2.1						
	2.8nm,0.8s						
QSPA	South Pole Qui	44.58	180	P	P	04 01 57.9	+0.4
	2.0nm,0.9s,baz=217,slow=5.9,SNR=5.6						
	2.0nm,0.9s						
LSZ	Lusaka	46.44	63	LR	LR	04 19 44.1	
	comp=Z,96nm,18.2s,baz=238,slow=34						
DBIC	Dimbokro	52.74	11	LR	LR	04 20 33.4	
	comp=Z,42nm,18.8s,baz=182,slow=30						
VNDA	Vanda	57.04	179	P	P	04 03 30.8	-0.2
	0.6nm,0.7s,baz=177,slow=11,SNR=3.1						
VNDA				LR	LR	04 25 17.6	
	comp=Z,24nm,21.8s,baz=186,slow=33						
	0.6nm,0.7s						
MDT	Midelt	78.58	8	LR	LR	04 35 23.9	
	comp=Z,31nm,21.8s,baz=216,slow=32						
ESDC	Sonseca Array	85.44	8	P	P	04 06 22.7	-0.2
	0.8nm,1.0s,baz=183,slow=4.5,SNR=5.6						
	0.8nm,1.0s						
VAE	Valguarnera	86.61	22	LR	LR	04 40 51.6	
	comp=Z,29nm,19.2s,baz=318,slow=33						
EIL	Elat	87.10	41	LR	LR	04 43 38.9	
	comp=Z,26nm,18.0s,baz=248,slow=34						
ASF	Jabal al Asfar	90.10	41	LR	LR	04 45 06.4	
	comp=Z,21nm,18.9s,baz=235,slow=34						
BRTR	Keskin Array B	95.09	35	P	P	04 07 08.9	+0.4
	0.4nm,0.8s,baz=197,slow=4.5,SNR=2.7						
	0.4nm,0.8s						
CMIG	Matias Romero	95.95	288	LR	LR	04 49 47.9	
	comp=Z,32nm,18.8s,baz=188,slow=35						
ILAR	Eielson Array	148.14	324	PKPbc	PKPbc	04 13 30.2	-0.2
	0.3nm,0.7s,baz=46,slow=2.6,SNR=5.0						

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*IDC **03** 03:54:57.8±1.2,10˚79S×161˚46E,h0^{km},mb3.9/9, mbtmp3.9/10,ML4.1/1,MS3.6/5,Error ellipse: s-maj=30.4km s-min=22.7km az=122.0*

ISC 03 03:55:02.0±1.0,**10˚8S**±0˚1×**161˚4E**±0˚1,**h28**^{km},**n19,** σ**1^{s}39**/11,**mb3.9**/9,**MS3.5**/4,**Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.02	313	Pn	Pn	03 55 33.3	-0.9
	72nm,0.3s,baz=143,slow=12,SNR=8.2						
HNR				Sn	Sn	03 55 59.3	+0.8
	174nm,0.3s,baz=120,slow=19,SNR=7.2						
	230nm,0.4s						
PMG	Port Moresby	14.13	274	LR	LR	04 03 33.3	
	comp=Z,344nm,19.6s,baz=76,slow=36						
WRA	Warramunga Arr	27.62	248	P	P	04 00 48.1	+0.7
	2.4nm,0.8s,baz=76,slow=9.8,SNR=7.6						
WRA				LR	LR	04 10 56.9	
	comp=Z,105nm,19.2s,baz=29,slow=35						
	2.4nm,0.8s						
STKA	Stephens Creek	27.84	218	P	P	04 00 49.3	+0.1
	2.7nm,0.8s,baz=43,slow=13,SNR=3.1						
STKA				LR	LR	04 10 46.0	
	comp=Z,156nm,19.2s,baz=30,slow=34						
	2.7nm,0.8s						
ASAR	Alice Springs	29.16	240	P	P	04 01 01.2	0.0
	0.7nm,0.7s,baz=74,slow=9.3,SNR=6.6						
	0.7nm,0.7s						
H11S2	WAKE ISLAND Hy	29.59	10	T	T	04 31 55.8	
	baz=188,slow=76,SNR=18						
H11S3	WAKE ISLAND Hy	29.59	10	T	T	04 31 47.1	
	baz=188,slow=76,SNR=12						
H11S1	WAKE ISLAND Hy	29.61	10	T	T	04 31 49.0	
	baz=188,slow=76,SNR=13						
H11N1	WAKE ISLAND Hy	30.82	10	T	T	04 33 21.3	
	baz=188,slow=76,SNR=7.7						
H11N3	WAKE ISLAND Hy	30.82	10	T	T	04 33 20.9	
	baz=188,slow=76,SNR=7.4						
H11N2	WAKE ISLAND Hy	30.84	10	T	T	04 33 21.0	
	baz=188,slow=76,SNR=5.5						
FITZ	Fitzroy Crossi	35.36	254	LR	LR	04 15 41.5	
	comp=Z,114nm,19.2s,baz=119,slow=35						
PPT	Papeete	47.86	104	LR	LR	04 20 05.5	
	comp=Z,33nm,18.8s,baz=349,slow=32						
PETK	Petropavlovsk-	63.76	357	P	P	04 05 30.2	-1.0
	1.2nm,0.8s,baz=186,slow=7.3,SNR=2.3						
	1.2nm,0.8s						
SONM	Songino Array	76.03	325	P	P	04 06 48.8	+1.8
	1.3nm,0.7s,baz=155,slow=8.6,SNR=3.6						
	1.3nm,0.7s						
ILAR	Eielson Array	84.69	20	P	P	04 07 35.0	+2.0
	0.4nm,0.9s,baz=259,slow=4.6,SNR=4.4						
	0.4nm,0.9s						
NVAR	Mina Array Bea	89.14	51	P	P	04 07 54.9	-0.6
	0.3nm,0.6s,baz=313,slow=4.0,SNR=2.2						
	0.3nm,0.6s						
MKAR	Makanchi Array	90.48	318	P	P	04 07 59.5	-1.8
	0.4nm,0.5s,baz=104,slow=5.1,SNR=3.8						
	0.4nm,0.5s						
KURBB	Kurchatov Arra	93.82	321	P	P	04 08 15.2	-1.4
	0.1nm,0.3s,baz=119,slow=7.6,SNR=1.9						
	0.1nm,0.3s						

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*SJA **03** 04:22:24.0±0.7,32˚75S×71˚53W,h59^{km}±4^{km},ML4.9, MW4.8*

*NEIC **03** 04:22:25.7±1.6,32˚71S±0˚01×71˚40W±0˚04,h55^{km}±4^{km}, mb4.9/102,Mwr4.7/45,Mwr5.0(GUC),Error ellipse: s-maj=5.5km s-min=1.5km az=74.0,Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.06; $M_{\theta\theta}$-1.13; $M_{\phi\phi}$1.07; $M_{r\theta}$-0.35; $M_{\theta\phi}$0.82; $M_{\phi r}$-0.50; Fault plane solution: $M_0$1.51000×10^{16} NP1:ϕ_s151.39000°, δ69.60000°,λ169.86000°. NP2:ϕ_s244.95000°,δ80.50000°, λ20.69000°. Principal axes: T 1.5758, Plg21.0000°, Azm110.0000°; N -0.1467, Plg67.0000°, Azm269.0000°; P -1.4290, Plg7.0000°, Azm17.0000°;*

*NEIC **03** 04:22:25.7,32˚72S×71˚41W,h58^{km}*

*VAO **03** 04:22:25.3±0.7,32˚69S×71˚23W,h51^{km}±7^{km},mb4.8*

*GUC **03** 04:22:25.9±0.8,32˚74S×71˚40W,h63^{km}±2^{km},ML5.1*

*IDC **03** 04:22:26.2±0.5,32˚70S×71˚48W,h69^{km}±4^{km},mb4.1/14, mbtmp4.5/17,MS3.5/21,Error ellipse: s-maj=11.9km s-min=9.6km az=135.0*

ISC 03 04:22:24.7±0.3,**32˚73S**±0˚02×**71˚47W**±0˚03,**h55**^{km}±2^{km}, **h55^{km}:pP-P,n310,**σ**1^{s}51**/351,**mb5.0**/75,**MS3.6**/17, **16C-16D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	Catapilco	0.22	41		Pn	04 22 34.8	+1.1
VA06				Sn	Sn	04 22 41.6	+1.5
VA06	Catapilco	0.22	41	⇑iP	Pn	04 22 35.2	+1.5
VA06				i S	Sn	04 22 41.6	+1.5
VA01	Torpederas	0.33	207		Pn	04 22 36.2	+1.6
VA01				Sn	Sn	04 22 44.0	+2.3
VA01	Torpederas	0.33	207	⇓iP	Pn	04 22 36.5	+1.9
VA01				i S	Sn	04 22 44.5	+2.8
VA01	Torpederas	0.33	207	eP	Pn	04 22 36.2	+1.6
VA01				IAML		04 22 47.3	
	comp=Z,57µm,0.1s						
ROC1	El Roble	0.45	123	eP	Pn	04 22 36.8	+0.7
ROCH	El Roble	0.45	123	⇑iP	Pn	04 22 37.2	+1.2
ROCH				i S	Sn	04 22 45.5	+1.2
ROCH				IAML		04 22 47.0	
	comp=E,126µm,0.7s						
MT02	Curacav	0.60	153		Pn	04 22 38.6	+1.2
MT02				Sn	Sn	04 22 47.5	+0.8
MT02	Curacav	0.60	153	⇑iP	Pn	04 22 38.7	+1.2
MT02				i S	Sn	04 22 47.7	+0.9
MT02	Curacav	0.60	153	eP	Pn	04 22 38.3	+0.8
MT02				IAML		04 22 49.9	
	comp=Z,17µm,0.3s						
VA03	San Esteban	0.77	93		Pn	04 22 40.4	+0.7
VA03				Sn	Sn	04 22 50.9	+0.2
VA03	San Esteban	0.77	93	⇑iP	Pn	04 22 40.5	+0.8
VA03				i S	Sn	04 22 51.4	+0.7
VA03	San Esteban	0.77	93	eP	Pn	04 22 40.4	+0.7
PEL	Peldehue	0.78	123		Pn	04 22 40.3	+0.6
PEL				Sn	Sn	04 22 51.3	+0.6
PEL	Peldehue	0.78	123	eP	Pn	04 22 39.8	+0.1
PEL				i S	Sn	04 22 51.4	+0.6
PEL				IAML		04 22 52.8	
	comp=N,267µm,0.3s						
PEL	Peldehue	0.78	123	eP	Pn	04 22 40.0	+0.3
MT05	Renca	0.90	138		Pn	04 22 42.2	+0.8
MT05	Renca	0.90	138	⇑iP	Pn	04 22 42.5	+1.1
MT05				eS	Sn	04 22 54.5	+0.9
MT05				IAML		04 22 55.8	
	comp=E,128µm,0.3s						
MT05	Renca	0.90	138	eP	Pn	04 22 42.1	+0.8
MT05				IAML		04 22 58.2	

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      comp=Z,38µm,0.5s
VA05  Santo Domingo    0.94 188       Pn    04 22 43.1 +1.4
VA05  Santo Domingo    0.94 188⇓iP    Pn    04 22 43.0 +1.3
VA05                            iS    Sn    04 22 55.9 +1.7
VA05                             IAML       04 23 02.4
      comp=N,72µm,0.4s
MT10  Hacienda Santa   0.95 125⇑iP    Pn    04 22 43.2 +1.1
MT10                            iS    Sn    04 22 55.5 +0.6
MT14  Cerro Cal¡n      1.03 131⇑iP    Pn    04 22 44.1 +1.1
MT14                            eS    Sn    04 22 57.4 +0.8
MT14                             IAML       04 22 59.2
      comp=E,103µm,0.3s
MT16  CCHEN            1.06 132       Pn    04 22 44.2 +0.8
MT16  CCHEN            1.06 132⇑iP    Pn    04 22 44.5 +1.1
MT16                            iS    Sn    04 22 58.3 +1.1
MT03  Universidad Ad   1.11 134       Pn    04 22 45.0 +0.8
MT03  Universidad Ad   1.11 134⇑iP    Pn    04 22 45.3 +1.2
MT03                            eS    Sn    04 22 59.4 +0.9
MT03                             IAML       04 23 01.4
      comp=N,99µm,0.2s
MT03  Universidad Ad   1.11 134 eP    Pn    04 22 45.0 +0.8
MT03                            eS    Sn    04 22 59.4 +0.9
MT03                             IAML       04 23 01.4
      comp=Z,60µm,0.2s
MT09  Talagante        1.12 159       Pn    04 22 45.7 +1.4
MT09  Talagante        1.12 159⇓iP    Pn    04 22 45.8 +1.4
MT09                            iS    Sn    04 23 00.0 +1.1
MT09                             IAML       04 23 01.3
      comp=N,77µm,0.3s
MT01  Popeta           1.15 171       Pn    04 22 46.0 +1.4
MT01  Popeta           1.15 171⇓iP    Pn    04 22 45.8 +1.2
MT01                            iS    Sn    04 23 00.1 +0.7
MT01                             IAML       04 23 03.6
      comp=E,29µm,0.3s
MT01  Popeta           1.15 171 eP    Pn    04 22 45.7 +1.2
MT01                            eS    Sn    04 23 00.7 +1.4
MT01                             IAML       04 23 04.0
      comp=Z,24µm,0.6s
FCH   Farellones       1.16 122⇑iP    Pn    04 22 45.8 +0.8
FCH                             iS    Sn    04 23 00.6 +0.6
MT15  Las Vizcachas    1.19 137⇑iP    Pn    04 22 46.1 +1.0
MT15                            iS    Sn    04 23 01.2 +0.9
MT15                             IAML       04 23 03.1
      comp=E,131µm,0.4s
MT04  Ro Olivares      1.30 122⇑iP    Pn    04 22 47.9 +1.0
MT04                            eS    Sn    04 23 04.2 +0.8
MT04                             IAML       04 23 05.3
      comp=E,80µm,0.4s
MT04  Ro Olivares      1.30 122 eP    Pn    04 22 47.7 +0.8
MT04                            eS    Sn    04 23 04.2 +0.8
MT04                             IAML       04 23 07.2
      comp=Z,15µm,0.3s
MT08  Bocatoma Ro      1.41 121       Pn    04 22 49.3 +0.9
MT08  Bocatoma Ro      1.41 121⇑iP    Pn    04 22 49.7 +1.4
MT08                            iS    Sn    04 23 07.3 +1.3
MT08  Bocatoma Ro      1.41 121 eP    Pn    04 22 49.5 +1.2
MT08                            eS    Sn    04 23 08.3 +2.3
MT08                             IAML       04 23 11.6
      comp=Z,8µm,0.4s
MT13  San Alfonso      1.42 136       Pn    04 22 49.3 +1.0
MT13  San Alfonso      1.42 136⇑iP    Pn    04 22 49.5 +1.2
MT13                            iS    Sn    04 23 07.1 +1.1
MT13                             IAML       04 23 09.0
      comp=N,57µm,0.3s
MT13  San Alfonso      1.42 136 eP    Pn    04 22 49.3 +1.0
MT13                            eS    Sn    04 23 08.1 +2.1
MT13                             IAML       04 23 16.0
      comp=Z,19µm,0.8s
BO04  La Punta         1.45 151  Pn   Pn    04 22 50.0 +1.3
BO04  La Punta         1.45 151⇑iP    Pn    04 22 49.9 +1.3
BO04                            iS    Sn    04 23 07.7 +1.0
BO04                             IAML       04 23 10.9
      comp=N,52µm,0.3s
LMEL  Las Melosas      1.54 137⇑iP    Pn    04 22 51.3 +1.3
LMEL                            iS    Sn    04 23 10.4 +1.4
LMEL                             IAML       04 23 11.6
      comp=N,94µm,0.4s
LMEL  Las Melosas      1.54 137 eP    Pn    04 22 51.2 +1.3
LMEL                            eS    Sn    04 23 10.9 +1.9
CO02  Combarbal        1.57  15⇓iP    Pn    04 22 51.4 +1.0
CO02                            iS    Sn    04 23 10.4 +0.7
CO02  Combarbal        1.57  15 eP    Pn    04 22 51.4 +1.0
CO02                            eS    Sn    04 23 08.2 -1.5
CO02                             IAML       04 23 13.9
      comp=Z,21µm,0.3s
BO01  Tunca            1.69 169⇓iP    Pn    04 22 53.0 +1.0
BO01                            iS    Sn    04 23 12.6 +0.1
BO01  Tunca            1.69 169 eP    Pn    04 22 52.9 +1.0
BO01                             IAML       04 23 18.7
      comp=Z,10µm,0.5s
CO03  El Pedregal      2.00  20  Pn   Pn    04 22 57.4 +1.2
CO03  El Pedregal      2.00  20⇓iP    Pn    04 22 57.6 +1.4
CO03                            iS    Sn    04 23 21.5 +1.4
CO03                             IAML       04 23 25.4
      comp=E,20µm,0.4s
CO03  El Pedregal      2.00  20 eP    Pn    04 22 57.5 +1.4
CO03                            eS    Sn    04 23 23.5 +3.5
CO03                             IAML       04 23 26.5
      comp=Z,10µm,0.6s
CO06  Fray Jorge       2.05 356  Pn   Pn    04 22 57.4 +0.6
CO06  Fray Jorge       2.05 356⇓iP    Pn    04 22 57.6 +0.7
CO06                            iS    Sn    04 23 20.6 -0.6
RTLS  Leoncito         2.06  64 eP    Pn    04 23 00.0 +2.8
RTLS                            eS    Sn    04 23 26.5 +4.7
RTLS                             IAML       04 23 31.3
      comp=Z,25µm,0.6s
ARCO  CERRO ARCO       2.14  94 eP    Pn    04 23 01.2 +3.1
ARCO                             IAML       04 23 34.6
      comp=Z,5µm,0.4s
BO02  Sierra Bellavi   2.14 165  Pn   Pn    04 22 59.1 +1.0
BO02  Sierra Bellavi   2.14 165⇓iP    Pn    04 22 59.2 +1.1
BO02                            iS    Sn    04 23 24.3 +0.8
BO02                             IAML       04 23 26.4
      comp=N,26µm,0.4s
BO02  Sierra Bellavi   2.14 165 eP    Pn    04 22 59.2 +1.1
BO02                            eS    Sn    04 23 30.2 +6.7
BO02                             IAML       04 23 31.5
      comp=Z,8µm,0.2s
AAGR  Agrelo           2.25 100 eP    Pn    04 23 02.6 +3.0
GO05  Hualane          2.31 189⇓iP    Pn    04 23 00.7 +0.3
GO05                            iS    Sn    04 23 27.4 -0.3
AVIZ  Vizcacheras      2.59 108 eP    Pn    04 23 07.0 +2.8
GO04  Tololo Observa   2.61  13  Pn   Pn    04 23 05.4 +0.8
GO04  Tololo Observa   2.61  13⇓iP    Pn    04 23 05.6 +0.9
GO04                            iS    Sn    04 23 35.2 -0.1
GO04  Tololo Observa   2.61  13 eP    Pn    04 23 05.5 +0.8
GO04                            eS    Sn    04 23 35.8 +0.5
ZON   Zonda            2.64  64 eP    Pn    04 23 07.5 +2.5
ZON                             eS    Sn    04 23 40.2 +4.4
ZON                              IAML       04 23 44.7
      comp=Z,4µm,0.9s
DOCA  Reserva Natura   2.69  49 eP    Pn    04 23 08.6 +2.7
DOCA                            eS    Sn    04 23 41.8 +4.3
DOCA                             IAML       04 23 44.2
      comp=Z,4µm,0.9s
SJA   San Juan         2.74  65 eP    Pn    04 22 57.2 -9.1
SJA                             eS    Sn    04 23 44.0 +5.7
SJA                              IAML       04 23 44.7
      comp=Z,2µm,0.3s
CO05  La Serena        2.81   4  Pn   Pn    04 23 07.8 +0.6
CO05  La Serena        2.81   4 eP    Pn    04 23 07.7 +0.6
RTLL  Cerro Villicun   2.90  62 eP    Pn    04 23 10.6 +2.2
RTLL                            eS    Sn    04 23 45.4 +3.3
ACCO  Cerro Coronel    2.96  44 eP    Pn    04 23 16.6 +7.1
ACCO                            eS    Sn    04 23 39.4 -4.6
CFA   Coronel Fontan   2.96  69  P    Pn    04 23 11.4 +2.1
      comp=Z,82nm,0.3s,baz=226,slow=8.7,SNR=727
CFA                              S    Sn    04 23 46.3 +2.7
      comp=Z,821nm,0.3s,baz=160,slow=16,SNR=13
CFA                              LR   LR    04 24 36.7
      comp=Z,230nm,19.7s,baz=186,slow=44
CFA   Coronel Fontan   2.96  69 eP    Pn    04 23 11.2 +1.9
CFA                             eS    Sn    04 23 46.6 +3.0
CO01  Juntas del Tor   2.98  24  Pn   Pn    04 23 11.6 +1.8
CO01  Juntas del Tor   2.98  24⇓iP    Pn    04 23 11.7 +1.8
CO01  Juntas del Tor   2.98  24 eS    Sn    04 23 47.9 +3.4
CO01                             IAML       04 24 03.4
      comp=Z,5µm,0.5s
ML02  Panimavida       3.03 179 eP    Pn    04 23 11.0 +0.8
ML02                            eS    Sn    04 23 46.3 +1.1
ML02                             IAML       04 24 09.0
      comp=Z,5µm,0.5s
AC05  El Transito      4.01  15 eS    Sn    04 24 11.8 +2.2
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AC05                            IAML        04 24 38.9
      comp=Z,2µm,0.6s
MRA   San Martin       4.86  88 eS    Sn    04 24 32.5 +2.0
MRA                             IAML        04 25 06.5
      comp=Z,1µm,0.7s
VA04  Juan Fernndez    6.24 260 Pn    Pn    04 23 54.9 +0.7
H03N1 Juan Fernandez   6.29 261 P     Pn    04 23 57.1 +2.5
      baz=119,slow=19,SNR=376
H03N1                           T     T     04 30 45.0
      baz=86,slow=73,SNR=212
H03N3 Juan Fernandez   6.30 261 P     Pn    04 23 56.5 +1.7
      baz=119,slow=19,SNR=477
H03N3                           T     T     04 30 46.3
      baz=86,slow=73,SNR=286
H03N2 Juan Fernandez   6.31 262 P     Pn    04 23 57.0 +2.1
      baz=119,slow=19,SNR=306
H03N2                           T     T     04 30 47.5
      baz=86,slow=73,SNR=365
H03S1 Juan Fernandez   6.33 258 P     Pn    04 23 56.4 +1.2
      baz=163,slow=27,SNR=75
H03S1                           T     T     04 30 20.8
      baz=83,slow=75,SNR=240
H03S3 Juan Fernandez   6.33 258 P     Pn    04 23 56.9 +1.7
      baz=163,slow=27,SNR=134
H03S3                           T     T     04 30 19.7
      baz=83,slow=75,SNR=326
H03S2 Juan Fernandez   6.34 258 P     Pn    04 23 56.3 +0.9
      baz=163,slow=27,SNR=132
H03S2                           T     T     04 30 21.0
      baz=83,slow=75,SNR=286
LR04  Corral           7.31 192 Pn    Pn    04 24 06.6 -2.2
PLCA  Paso Flores      8.02 175 P     Pn    04 24 18.8 +0.1
      comp=Z,15nm,0.4s,baz=335,slow=12,SNR=132
PLCA                            LR    LR    04 27 26.8
      comp=Z,493nm,19.2s,baz=344,slow=37
PLCA  Paso Flores      8.02 175 eP    Pn    04 24 19.9 +1.2
TRQA  Tornquist        9.39 127 Pn    Pn    04 24 37.1 -0.3
TRQA  Tornquist        9.39 127 eP    Pn    04 24 37.4  0.0
LL02  Futaleuf        10.45 182 Pn    Pn    04 24 52.8 +0.9
COYC  Coyhaique       12.84 182 Pn    Pn    04 25 26.1 +1.8
ITQB  Itaqui          13.07  80 Pn    Pn    04 25 23.5 -4.1
ITQB  Itaqui          13.07  80 eP    Pn    04 25 23.6 -3.9
CPUP  Villa Florida   13.85  66 P     Pn    04 25 34.1 -4.2
      comp=Z,0.8nm,0.4s,baz=156,slow=8.5,SNR=8.8
CPUP                            S     Sn    04 27 59.5   -11
      comp=Z,4.3nm,0.6s,baz=242,slow=17,SNR=3.0
CPUP                            LR    LR    04 31 53.5
      comp=Z,21nm,20.7s,baz=101,slow=41
CPUP  Villa Florida   13.85  66 eP    Pn    04 25 35.8 -2.6
PB16  IPOC Station P  14.44   7 Pn    Pn    04 25 47.6 +0.9
AY03  Cochrane        14.53 183 Pn    Pn    04 25 46.3 -0.9
PLTB  Pedras Altas    15.15  91 Pn    Pn    04 25 52.1 -3.2
PLTB  Pedras Altas    15.15  91 eP    Pn    04 25 52.4 -2.9
PB18  Visviri         15.18   7 P     P     04 25 58.9 -1.5
CPSB  Cacapava Do Su  15.54  86 eP    Pn    04 25 54.6 -5.8
LPAZ  La Paz          16.64  11 P     P     04 26 15.9 -0.8
LPAZ                            IAmb  IAmb  04 26 16.6
      comp=Z,96nm,0.8s
LPAZ  La Paz          16.64  11 P     Pn    04 26 15.2 +0.2
      comp=Z,100nm,0.7s,baz=183,slow=7.8,SNR=330
LPAZ  La Paz          16.64  11 eP    Pn    04 26 15.5 +0.6
LPAZ  La Paz          16.64  11 P     Pn    04 26 14.8 -0.2
      comp=Z,148nm,0.8s
ITAB  Concordia       17.61  77       P     04 26 26.6 -0.1
CNLB  Canela          17.99  85 eP    Pn    04 26 31.0  0.0
BBSD  Serra de San D  18.32  35 eP    P     04 26 32.4 -2.1
AQDB  Aquidauana      18.62  53 P     P     04 26 37.1 -0.6
AQDB  Aquidauana      18.62  53 eP    P     04 26 37.2 -0.6
PTGB  Pitanga         18.78  70 eP    P     04 26 38.8 -0.8
SIV   San Ignacio     19.14  32 P     P     04 26 41.9 -1.7
      comp=Z,129nm,1.0s,baz=220,slow=11,SNR=133
SIV                             LR    LR    04 35 36.2
      comp=Z,208nm,20.1s,baz=180,slow=41
TRCB  Terra Rica      19.35  64 P     P     04 26 45.3 -0.7
TRCB                            IAmb  IAmb  04 27 08.9
      comp=Z,42nm,0.6s
TRCB  Terra Rica      19.35  64 eP    P     04 26 45.2 -0.7
RPRD  Ribas do Rio P  19.99  57 eP    P     04 26 52.6 -0.2
MG02  Cerro Sombrero  20.11 176 P     Pn    04 26 55.6 -0.4
LDASE Londrina, Braz  20.19  68 eP    P     04 26 53.3 -1.7
PTLB  Pontes e Lacer  20.52  36 P     P     04 26 58.6 +0.1
PTLB  Pontes e Lacer  20.52  36 eP    P     04 26 58.5  0.0
PCMB  Pacaembu        21.08  63 eP    P     04 27 03.0 -1.6
NNA   Nana            21.22 345 P     P     04 27 05.9 -0.2
      comp=Z,11nm,0.8s,baz=204,slow=8.7,SNR=6.7
      comp=Z,11nm,0.8s
FRTB  Fartura         21.44  70 eP    P     04 27 06.1 -2.4
C2SB  Chapadao do Su  21.74  55 eP    P     04 27 14.3 +2.7
SALV  Santo Antonio   22.02  44 eP    P     04 27 13.2 -1.5
VILB  Vilhena         22.22  30 P     P     04 27 16.3 -0.6
VILB  Vilhena         22.22  30 eP    P     04 27 15.6 -1.2
ITRB  Iturama         22.90  61 eP    P     04 27 23.2 -0.8
SPB   Sao Paulo       23.02  73 P     P     04 27 24.4 -0.7
SPB                             IAmb  IAmb  04 27 25.6
      comp=Z,43nm,1.1s
SPB   Sao Paulo       23.02  73 eP    P     04 27 25.3 +0.2
BB19B Bebedouro       23.47  66 eP    P     04 27 27.3 -2.3
VAO   Valinhos        23.68  72 P     P     04 27 29.9 -1.7
ARAG  Araguaiana, MT  24.59  51 eP    P     04 27 38.4 -1.4
SAML  Samuel          24.87  20 P     P     04 27 41.7 -0.6
SAML                            IAmb  IAmb  04 27 44.3
      comp=Z,45nm,0.8s
SAML  Samuel          24.87  20 eP    P     04 27 41.9 -0.4
CZSB  Cruzeiro do Su  24.90 357 P     P     04 27 43.3 +0.7
CZSB  Cruzeiro do Su  24.90 357 eP    P     04 27 43.5 +0.8
CZSB  Cruzeiro do Su  24.90 357 P     P     04 27 43.3 +0.7
      comp=Z,110nm,0.9s
PDRB  Porto dos Gac   25.00  36 eP    P     04 27 42.6 -0.9
CLDB  Colider         26.10  37 eP    P     04 27 55.1 +1.6
PMNB  Patos De Minas  26.54  64 eP    P     04 27 58.2 +0.6
BDFB  Brasilia        27.23  57 P     P     04 28 02.8 -1.0
BDFB                            IAmb  IAmb  04 28 26.6
      comp=Z,28nm,1.3s
BDFB  Brasilia        27.23  57 P     P     04 28 02.7 -1.2
      comp=Z,3.5nm,0.5s,baz=224,slow=7.2,SNR=9.0
      comp=Z,3.5nm,0.5s
SNDB  Serra Nova Dou  27.73  46 eP    P     04 28 07.5 -0.7
TBTG  Tabatinga, AM   28.43   3 P     P     04 28 14.9 +0.5
TBTG  Tabatinga, AM   28.43   3 eP    P     04 28 14.8 +0.5
TBTG  Tabatinga, AM   28.43   3 P     P     04 28 14.5 +0.1
      comp=Z,2µmcomp=Z,206nm,0.8s
DIAM  Diamantina, MG  28.80  67 eP    P     04 28 17.4 -0.5
MCRA  Macar, Loja     29.31 343 P     P     04 28 22.4 +0.2
      comp=Z,9.7nm,1.3s
NPGB  Novo Progresso  29.62  34 eP    P     04 28 23.2 -1.7
TEFE  Tefe            29.76  14 eP    P     04 28 25.8 -0.4
COHC  Cochancay       30.98 345 P     P     04 28 38.8 +1.9
      comp=Z,18nm,1.2s
MACA  Manacapuru-AM   31.10  21 P     P     04 28 37.2 -0.8
MACA                            IAmb  IAmb  04 28 38.0
      comp=Z,21nm,0.6s
MACA  Manacapuru-AM   31.10  21 eP    P     04 28 36.9 -1.1
ITTB  Itaituba        31.82  31 eP    P     04 28 43.0 -1.3
PIAT  Ana Tenorio     32.20 347 P     P     04 28 50.9 +2.7
      comp=Z,13nm,1.0s
PMSA  Palmer Station  32.40 174 LR    LR    04 41 08.3
      comp=Z,106nm,21.8s,baz=346,slow=35
SGC2  Sao Gabriel da  32.68   8 P     P     04 28 50.3 -1.5
      comp=Z,633nmcomp=Z,26nm,1.1s
HOPE  Hope Point      32.77 142 P     P     04 28 52.5 +0.3
PTLC  Puerto Leguiza  32.87 354 P     P     04 28 52.1 -1.5
      comp=Z,48nm,0.9s
OTAV  Otavalo         33.44 347 eP    P     04 29 00.4 +1.4
OTAV  Otavalo         33.44 347 P     P     04 29 00.9 +1.8
      comp=Z,8.9nm,1.4s
FLOC  Florencia       34.35 353 P     P     04 29 07.2 +0.7
FLOC  Florencia       34.35 353 P     P     04 29 08.1 +1.6
      comp=Z,12nm,1.0s
MAL2  Monte Alegre,   34.60  32 P     P     04 29 07.5 -1.0
MACC  Macarena, Meta  34.76 356 P     P     04 29 10.2 +0.3
      comp=Z,17nm,1.1s
BBAC  Balboa, Cauca   34.99 350 P     P     04 29 13.9 +1.7
      comp=Z,29nm,1.3s
POPC  Popayan, Colom  35.42 351 P     P     04 29 17.2 +1.3
      comp=Z,6.8nm,1.1s
URMC  La Uribe, Meta  35.88 355 P     P     04 29 21.5 +1.8
      comp=Z,922nmcomp=Z,66nm,1.0s
PRAC  Prado           36.39 354 P     P     04 29 25.5 +1.6
      comp=Z,31nm,1.4s
BOAV  Boa Vista       36.44  19 P     P     04 29 22.7 -1.6
BOAV                            IAmb  IAmb  04 29 24.6
      comp=Z,12nm,0.8s
BOAV  Boa Vista       36.44  19 eP    P     04 29 23.7 -0.6
BOAV  Boa Vista       36.44  19 P     P     04 29 23.4 -0.9
      comp=Z,19nm,0.8s
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ORTC  Ortega, Tolima  36.61 354 P     P     04 29 27.9 +2.0
      comp=Z,2µmcomp=Z,44nm,1.1s
VILC  Villavicencio,  36.70 356 P     P     04 29 28.5 +1.8
      comp=Z,302nmcomp=Z,43nm,0.8s
PTGC  Puerto Gaitan,  36.73 359 P     P     04 29 26.1 -0.7
      comp=Z,40nm,0.8s
YOTC  Yotoco, Valle   36.80 352 P     P     04 29 27.8 +0.2
      comp=Z,7.0nm,1.7s
CHIC  Chingaza        37.21 356 P     P     04 29 32.3 +0.9
      comp=Z,17nm,1.0s
ROSC  El Rosal        37.46 355 P     P     04 29 34.1 +0.7
      comp=Z,19nm,0.7s,baz=165,slow=8.4,SNR=9.8
      comp=Z,19nm,0.7s
PLMC  San Jos del P   37.70 352 P     P     04 29 37.1 +2.0
RUSC  La Rusia        38.44 357 P     P     04 29 43.2 +1.4
BAUV  El Baul         41.56   5 P     P     04 30 05.9 -1.2
BAUV                            IAmb  IAmb  04 30 07.5
      comp=Z,22nm,0.7s
MDP   Montagnes des   41.65  29 LR    LR    04 48 59.5
      comp=Z,103nm,18.3s,baz=230,slow=38
BELA  Belgrano 2      48.05 170 P     P     04 30 59.1 +1.0
FDF   Fort de France  48.21  13 P     P     04 30 58.0 -2.0
VNA3  Neumayer Olymp  50.36 158⇓P     P     04 31 16.7 +0.9
      comp=Z,15nm,0.5s
OBIP  Obispado Ponce  50.70   6 P     P     04 31 17.8 -1.0
OBIP                            IAmb  IAmb  04 31 50.1
      comp=Z,19nm,1.1s
CELP  Cerrillos       50.73   6 P     P     04 31 18.5 -0.6
CELP                            IAmb  IAmb  04 31 58.5
      comp=Z,15nm,0.8s
VNA2  Neumayer--Watz  51.00 158⇓P     P     04 31 21.5 +0.9
      comp=Z,17nm,0.6s,baz=284,slow=6.6
SNAA  Sanae           52.58 158⇓P     P     04 31 33.1 +0.6
      comp=Z,83nm,0.3s
SNAA  Sanae           52.58 158 P     P     04 31 31.5 -1.0
SNAA                            IAmb  IAmb  04 31 50.4
      comp=Z,14nm,0.8s
SNAA  Sanae           52.58 158 P     P     04 31 32.2 -0.2
      comp=Z,10nm,0.8s,baz=273,slow=6.0,SNR=26
SNAA                            LR    LR    04 52 44.0
      comp=Z,40nm,21.5s,baz=72,slow=34
      comp=Z,10nm,0.8s
TROLL Troll, Antarti  54.29 158⇓P     P     04 31 45.9 +0.8
      comp=Z,659nm,0.7s
TEIG  Tepich          55.05 341 P     P     04 31 51.5 +0.5
SOR   Soroa           56.30 347 P     P     04 31 59.0 -0.9
SOR                             IAmb  IAmb  04 32 00.8
      comp=Z,12nm,0.9s
QSPA  South Pole Qui  57.51 180 P     P     04 32 09.5 +1.3
QSPA                            IAmb  IAmb  04 32 33.8
      comp=Z,13nm,0.8s
QSPA  South Pole Qui  57.51 180 P     P     04 32 08.7 +0.6
      comp=Z,5.5nm,1.0s,baz=153,slow=1.7,SNR=12
QSPA                            pP    pP    04 32 25.7 +2.7
      comp=Z,8.0nm,0.7s,baz=242,slow=2.4,SNR=8.7
      comp=Z,5.5nm,1.0s
VNDA  Vanda           65.44 191 P     P     04 33 01.6 +0.3
      comp=Z,0.2nm,0.4s,baz=129,slow=6.1,SNR=1.5
VNDA                            pP    sP    04 33 20.1 -2.4
      comp=Z,0.9nm,0.7s,baz=135,slow=6.0,SNR=3.7
VNDA                            LR    LR    04 57 51.4
      comp=Z,32nm,20.1s,baz=154,slow=32
      comp=Z,0.2nm,0.4s
833A  Chaparral WMA,  66.26 333 pP    pP    04 33 22.2  0.0
HNDO  Hondo           67.30 334 P     P     04 33 15.1 +1.3
HNDO                            IAmb  IAmb  04 33 38.8
      comp=Z,13nm,0.8s
Z47A  Carrollton      67.42 345 IAmb  IAmb  04 33 38.5
      comp=Z,16nm,1.0s
143A  Socs Landing,   67.74 342 P     P     04 33 17.2 +0.8
143A                            pP    pP    04 33 33.0 +1.4
X51A  Calhoun         68.11 348 P     P     04 33 18.0 -0.7
JCT   Junction City   68.35 334 P     P     04 33 20.9 +0.6
JCT                             IAmb  IAmb  04 33 45.2
      comp=Z,21nm,1.2s
Y45A  Yeager Farm, C  68.39 344 P     P     04 33 19.3 -1.2
Y45A                            pP    pP    04 33 36.5 +0.8
X48A  Hartselle       68.41 346 pP    pP    04 33 35.6 -0.1
W50A  Signal Mountai  68.81 348 P     P     04 33 22.8 -0.3
W50A                            IAmb  IAmb  04 33 47.2
      comp=Z,21nm,1.2s
TXAR  Lajitas Array   68.87 330 P     P     04 33 24.7 +1.0
      comp=Z,1.0nm,0.5s,baz=154,slow=8.4,SNR=17
TXAR                            LR    LR    04 58 17.6
      comp=Z,25nm,19.8s,baz=152,slow=31
      comp=Z,1.0nm,0.5s
TX31  Lajitas Ar. Si  68.87 330 P     P     04 33 23.8 +0.1
TX31                            pP    pP    04 33 38.7  0.0
SWET  Sewanee         68.94 347 IAmb  IAmb  04 33 48.4
      comp=Z,15nm,0.8s
TKL   Tuckaleechee C  69.00 349 LR    LR    05 04 47.7
      comp=Z,24nm,18.2s,baz=162,slow=37
WLAR  White Oak Lake  69.13 341 P     P     04 33 26.0 +0.9
WLAR                            IAmb  IAmb  04 33 50.2
      comp=Z,28nm,1.1s
PLAL  Pickwick Lake   69.14 345 IAmb  IAmb  04 33 49.3
      comp=Z,9.4nm,0.8s
V48A  Smith Brothers  69.61 347 P     P     04 33 27.9 -0.1
V48A                            pP    pP    04 33 43.7 +0.5
V48A                            IAmb  IAmb  04 33 52.7
      comp=Z,28nm,1.1s
MIAR  Mount Ida       70.07 341 IAmb  IAmb  04 33 56.2
      comp=Z,16nm,1.2s
WVT   Waverly         70.19 346 P     P     04 33 31.0 -0.6
WVT                             pP    pP    04 33 47.1 +0.4
MNHN  Monahans        70.26 332 P     P     04 33 32.6 +0.5
UTMT  University of   70.61 345 P     P     04 33 34.5 +0.4
LCAR  Lake Charles    70.88 343 P     P     04 33 35.5 -0.2
LCAR                            pP    pP    04 33 51.2 +0.2
LCAR                            IAmb  IAmb  04 33 52.6
      comp=Z,15nm,0.7s
T47A  Sharon Grove    70.88 347 P     P     04 33 34.8 -0.9
T47A                            IAmb  IAmb  04 33 52.5
      comp=Z,10nm,0.8s
PPT   Papeete         70.91 261 LR    LR    04 58 02.8
      comp=Z,17nm,20.8s,baz=133,slow=30
APMT  Aspermont       71.03 335 IAmb  IAmb  04 34 01.5
      comp=Z,17nm,1.0s
SN07  Snyder 07       71.10 334 P     P     04 33 37.8 +0.6
HHAR  Hobbs           71.80 341 P     P     04 33 41.3  0.0
HHAR                            IAmb  IAmb  04 33 58.4
      comp=Z,11nm,0.8s
FVM   French Village  72.53 344 P     P     04 33 45.6 -0.1
FVM                             IAmb  IAmb  04 34 02.8
      comp=Z,25nm,1.1s
SMWD  Samnorwood      72.68 336 IAmb  IAmb  04 34 11.8
      comp=Z,14nm,0.9s
CCM   Cathedral Cave  72.79 344 P     P     04 33 46.6 -0.5
CCM                             pP    pP    04 34 03.1 +0.7
CCM                             IAmb  IAmb  04 34 04.4
      comp=Z,21nm,0.8s
O49A  Covington       73.52 350 P     P     04 33 50.2 -1.2
O49A                            IAmb  IAmb  04 34 08.2
      comp=Z,22nm,1.1s
P43A  Skaggs, Pawnee  73.92 346 P     P     04 33 53.8  0.0
P43A                            pP    PcP   04 34 08.9 -0.1
P43A                            IAmb  IAmb  04 34 10.6
      comp=Z,20nm,0.9s
MAW   Mawson          74.26 163 P     P     04 33 55.9 +0.4
MAW   Mawson          74.26 163 P     P     04 33 56.0 +0.4
      comp=Z,8.1nm,0.9s,baz=195,slow=7.3,SNR=7.9
MAW                             pP    sP    04 34 15.2 -2.1
      comp=Z,5.3nm,0.8s,baz=225,slow=7.9,SNR=2.6
MAW                             LR    LR    05 07 21.4
      comp=Z,54nm,18.0s,baz=236,slow=36
      comp=Z,8.1nm,0.9s
DBIC  Dimbokro        74.32  71 P     P     04 33 56.3 -0.4
      comp=Z,3.8nm,0.7s,baz=265,slow=4.4,SNR=5.0
DBIC                            LR    LR    05 04 34.3
      comp=Z,28nm,19.4s,baz=174,slow=34
      comp=Z,3.8nm,0.7s
ANMO  Albuquerque     74.90 331 P     P     04 34 00.2 +0.3
ANMO  Albuquerque     74.90 331 P     P     04 34 00.7 +0.8
ANMO                            IAmb  IAmb  04 34 18.3
      comp=Z,5.3nm,1.1s
ANMO  Albuquerque     74.90 331 LR    LR    05 02 36.5
      comp=Z,52nm,18.4s,baz=260,slow=32
X16A  Lo Mia Camp, P  76.63 327 P     P     04 34 10.7 +0.9
X16A                            IAmb  IAmb  04 34 36.0
      comp=Z,9.8nm,1.0s
ALKP  Alkanpan, Nort  77.30 117 IAML        04 34 28.0
      comp=Z,2.4nm,0.5s
BFON  Badsfontein, M  77.43 120 IAML        04 34 29.7
      comp=Z,6.5nm,0.4s
Q24A  Divide          77.89 334 P     P     04 34 17.0 +0.1
Q24A                            IAmb  IAmb  04 34 35.2
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	comp=Z,9.9nm,0.9s						
PV18	Skein Mesa, Pa	78.74	331	P	P	04 34 21.0	-0.4
PV18				pP	pP	04 34 36.9	0.0
PV18				IAmb	IAmb	04 34 39.6	
	comp=Z,14nm,1.2s						
TSUM	Tsumeb	79.10	106	P	P	04 34 23.2	-0.6
TSUM				IAmb	IAmb	04 34 25.1	
	comp=Z,13nm,0.9s						
TSUM	Tsumeb	79.10	106	LR	LR	05 04 35.8	
	comp=Z,37nm,21.9s,baz=239,slow=32						
KOOLE	Kule	79.25	110	P	P	04 34 24.0	-0.7
KOOLE				pP	pP	04 34 38.8	-1.5
KOOLE	Kule	79.25	110	*i* P	P	04 34 24.4	-0.3
K30B	Basset	79.36	339	P	P	04 34 24.2	-0.3
K30B				pP	pP	04 34 41.2	+1.2
KNB	Kanab	79.41	327	P	P	04 34 26.6	+1.6
KNB				pP	pP	04 34 42.1	+1.5
KNB				IAmb	IAmb	04 34 44.0	
	comp=Z,15nm,1.3s						
ECSD	EROS Data Cent	79.49	342	IAmb	IAmb	04 34 42.5	
	comp=Z,22nm,0.8s						
BOSA	Boshof	80.24	118	IAmb	IAmb	04 34 45.2	
	comp=Z,12nm,0.6s						
BOSA	Boshof	80.24	118	P	P	04 34 29.7	-0.2
	comp=Z,6.0nm,0.6s,baz=253,slow=3.2,SNR=14						
BOSA				LR	LR	05 05 39.8	
	comp=Z,35nm,18.6s,baz=202,slow=32						
	comp=Z,6.0nm,0.6s						
Q16A	Castle Valley	80.26	330	P	P	04 34 29.7	+0.1
P18A	Preston Nutter	80.46	331	IAmb	IAmb	04 34 49.3	
	comp=Z,15nm,1.1s						
GRTLG	Ghanzi	80.90	109	P	P	04 34 33.2	-0.4
GRTLG				IAmb	IAmb	04 34 34.5	
	comp=Z,16nm,0.9s						
GRTLG	Ghanzi	80.90	109	*i* P	P	04 34 33.7	+0.1
MAKGR	Makgori	81.37	115	*i* P	P	04 34 36.3	+0.3
GMN	Gold Mountain	81.72	325	P	P	04 34 38.8	+1.3
GMN				pP	pP	04 34 54.0	+1.1
QNGWA	Qangwa	81.83	108	*i* P	P	04 34 38.6	+0.1
RSSD	Black Hills	82.05	337	P	P	04 34 39.3	+0.2
RSSD				pP	pP	04 34 55.6	+1.0
RSSD				IAmb	IAmb	04 34 56.9	
	comp=Z,8.9nm,0.9s						
LBTB	Lobatse	82.40	115	IAmb	IAmb	04 34 41.5	
	comp=Z,8.6nm,0.8s						
LBTB	Lobatse	82.40	115	LR	LR	05 06 33.1	
	comp=Z,18nm,18.7s,baz=207,slow=32						
HWUT	Hardware Ranch	82.67	331	P	P	04 34 42.9	+0.6
PDAR	Pinedale Array	82.85	333	P	P	04 34 43.5	+0.2
PDAR				pP	pP	04 34 59.5	+0.6
PDAR	Pinedale Array	82.85	333	P	P	04 34 43.7	+0.4
	comp=Z,0.2nm,0.3s,baz=196,slow=3.8,SNR=2.7						
PDAR				pP	pP	04 34 59.9	+1.0
	comp=Z,1.6nm,0.9s,baz=134,slow=6.4,SNR=4.9						
	comp=Z,0.2nm,0.3s						
NVAR	Mina Array Bea	83.12	325	P	P	04 34 44.7	-0.1
	comp=Z,0.9nm,0.7s,baz=161,slow=5.8,SNR=7.8						
NVAR				pP	pP	04 35 01.9	+1.5
	comp=Z,3.0nm,0.9s,baz=151,slow=6.2,SNR=11						
	comp=Z,0.9nm,0.7s						
HVU	Hansel Valley	83.31	330	P	P	04 34 46.0	+0.4
TORD	Torodi Ar. Bea	83.33	70	P	P	04 34 45.6	-0.5
	comp=Z,3.9nm,0.7s,baz=257,slow=4.4,SNR=4.3						
	comp=Z,3.9nm,0.7s						
LPHEP	Lephephe	83.49	113	IAmb	IAmb	04 34 47.9	
	comp=Z,11nm,0.9s						
LPHEP	Lephephe	83.49	113	*i* P	P	04 34 46.7	-0.4
ELK	Elko	83.53	328	LR	LR	05 08 02.0	
	comp=Z,25nm,18.6s,baz=156,slow=33						
TPAW	Teton Pass	84.00	332	P	P	04 34 49.9	+0.6
YMR	Madison River	85.00	333	P	P	04 34 55.3	+1.1
YMR				pP	pP	04 35 11.9	+2.1
YMR				IAmb	IAmb	04 35 13.3	
	comp=Z,13nm,0.9s						
MREMI	Moremi	85.15	114	IAmb	IAmb	04 34 56.3	
	comp=Z,15nm,0.9s						
ULM	Lac du Bonnet	85.40	345	P	P	04 34 55.5	-0.3
ULM				IAmb	IAmb	04 35 12.7	
	comp=Z,7.2nm,0.9s						
ULM	Lac du Bonnet	85.40	345	P	P	04 34 55.1	-0.6
	comp=Z,3.2nm,0.8s,baz=174,slow=5.8,SNR=5.5						
ULM				LR	LR	05 14 01.6	
	comp=Z,22nm,18.3s,baz=158,slow=36						
	comp=Z,3.2nm,0.8s						
BROLN	Tlhalogang	85.86	112	*i* P	P	04 34 58.4	-0.7
J08A	Circle Bar Ran	87.07	328	P	P	04 35 05.5	+1.2
J08A				pP	pP	04 35 21.5	+1.5
J08A				IAmb	IAmb	04 35 22.9	
	comp=Z,11nm,0.9s						
PLID	Pearl Lake	87.37	330	P	P	04 35 06.2	+0.3
PLID				pP	pP	04 35 22.7	+1.2
PLID				IAmb	IAmb	04 35 24.0	
	comp=Z,11nm,1.1s						
LSZ	Lusaka	89.75	108	LR	LR	05 12 25.7	
	comp=Z,53nm,20.7s,baz=252,slow=33						
ESDC	Sonseca Array	95.35	46	LR	LR	05 15 55.6	
	comp=Z,19nm,20.2s,baz=216,slow=34						
MODS	Modra-Piesok	112.87	46	*e*PDIFF	Pdif	04 37 01.9	+1.1
NACGM	Naroch	120.60	42	*e*PKiKP	PKiKP	04 41 10.1	+0.4
	comp=Z,4.0nm,0.8s,baz=256						
WRA	Warramunga Arr	122.10	209	PKP	PKPdf	04 41 12.5	-1.3
	comp=Z,0.3nm,0.3s,baz=174,slow=1.7,SNR=4.6						
H11S2	WAKE ISLAND Hy	126.26	270	T	T	07 00 27.0	
	baz=118,slow=75,SNR=741						
H11S1	WAKE ISLAND Hy	126.28	270	T	T	07 00 29.4	
	baz=118,slow=75,SNR=790						
H11S3	WAKE ISLAND Hy	126.28	270	T	T	07 00 29.6	
	baz=118,slow=75,SNR=741						
H11N3	WAKE ISLAND Hy	126.64	271	T	T	07 00 56.7	
	baz=116,slow=76,SNR=159						
H11N1	WAKE ISLAND Hy	126.66	271	T	T	07 00 57.1	
	baz=116,slow=76,SNR=57						
H11N2	WAKE ISLAND Hy	126.66	271	T	T	07 00 56.6	
	baz=116,slow=76,SNR=211						
AB31	Akbulak array	140.51	51	PKPdf	PKiKP	04 41 49.1	-0.9
BVAR	Borovoye Array	146.02	42	PKPbc	PKPab	04 41 58.4	-0.2
	comp=Z,1.7nm,0.7s,baz=294,slow=1.5,SNR=8.6						
BVAR				pPKPbc	sPKPdf	04 42 17.9	-1.4
	comp=Z,4.7nm,0.6s,baz=312,slow=2.5,SNR=7.3						
TOLI2	Tolitoli	146.50	203	PKPdf	PKPdf	04 41 57.8	-1.3
SIMJ	Simiganj	147.54	68	PKPdf	PKPdf	04 41 60.0	-0.3
KKAR	Karatay Array	148.50	60	PKPbc	PKPbc	04 42 04.6	-0.6
KKAR	Karatay Array	148.50	60	PKPbc	PKPbc	04 42 04.8	-0.4
ARSB	Arslanbob	150.51	63	PKPbc	PKPbc	04 42 10.5	+0.2
AAK	Ala-Archa	151.47	60	PKPbc	PKiKP	04 42 12.9	-0.1
KURBB	Kurchatov Arra	151.61	42	PKPbc	PKPbc	04 42 10.3	-2.1
	comp=Z,1.1nm,0.5s,baz=302,slow=2.8,SNR=9.1						
KURBB				PKPab	PKPab	04 42 19.9	-1.4
	comp=Z,1.8nm,0.5s,baz=300,slow=2.9,SNR=11						
NRN	Naryn	152.75	62	PKPbc	PKiKP	04 42 16.0	0.0
ZALV	Zalesovo Beam	152.90	31	PKPdf	PKPdf	04 42 09.1	+1.2
ZALV	Zalesovo Beam	152.90	31	PKP	PKPdf	04 42 08.9	+0.9
	comp=Z,1.7nm,0.5s,baz=325,slow=1.8,SNR=7.9						
ZALV				PKPab	pPKPdf	04 42 25.2	+1.0
	comp=Z,3.2nm,0.6s,baz=336,slow=3.3,SNR=7.0						
MKAR	Makanchi Array	155.56	47	PKPab	PKPab	04 42 37.9	-0.2
	comp=Z,1.0nm,0.7s,baz=295,slow=4.6,SNR=6.3						
MKAR				pPKPab	pPKPab	04 42 55.0	+1.0
	comp=Z,2.1nm,0.6s,baz=300,slow=3.7,SNR=9.7						
GTA	Gaotai	170.29	44	PKPab	PKPab	04 44 01.5	+19
GTA	Gaotai	170.29	44	PKP	PKPdf	04 42 44.2	+18
GTA	Gaotai	170.29	44	pPKP	pPKPdf	04 42 59.8	+17
NJ2	Nanjing	171.25	268	*e*P	PKPdf	04 42 28.2	+1.2
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
PZH	PanZhiHua	171.44	135	PKP	PKPdf	04 42 26.7	-0.8
HHC	Hu-ho-hao-te	171.54	344	*e*P	PKPdf	04 42 29.8	+2.7

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*TRN **03** 04:27:19.9, 10.°93N×62.°29W, h92^{km}, MD3.7, North of the Paria Peninsula.*

*FUNV **03** 04:27:20.0, 10.°93N×62.°22W, h99^{km}, MW3.6*

ISC 03 04:27:18.0±1.6**, 10.°89N**±0.°05×**62.°31W**±0.°06**, h108^{km}**±20^{km}**, n23, σ1.^{s}60**/41**, 1C, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.92	105	*e*P	Pn	04 27 38.7	+0.6
TRN				*e*S	Sn	04 27 51.2	-2.3
TPP	Pointe-a-Pierr	1.02	124	*e*P	Pn	04 27 40.5	+1.3
TPP				*e*S	Sn	04 27 55.4	+0.2
GRFF	Grenada Fort F	1.28	26	*e*P	Pn	04 27 42.2	+0.1
GRFF				*e*S	Sn	04 27 58.8	-1.6
TBH	Brigand Hill	1.28	108	*e*P	Pn	04 27 43.5	+1.3
TBH				*e*S	Sn	04 28 00.8	+0.3
GRGR	Grenville	1.39	27	*e*P	Pn	04 27 43.7	+0.3
GRGR				*e*S	Sn	04 28 01.8	-0.9
GRW	Mount Saint Ca	1.41	27	*e*P	Pn	04 27 45.4	+1.7
GRW				*e*S	Sn	04 28 02.7	-0.5
TPR	Prospect	1.53	79	*e*P	Pn	04 27 45.3	+0.3
TPR				*e*S	Sn	04 28 04.8	-0.8
GRSS	Sisters	1.56	26	*e*P	Pn	04 27 46.2	+0.8
GRSS				*e*S	Sn	04 28 05.5	-0.6
GCMP	Grenada, Carri	1.81	28	*e*P	Pn	04 27 49.1	+0.7
GCMP				*e*S	Sn	04 28 10.3	-1.3
PCRV	Puerto La Cruz	2.40	253	⇑*i*P	Pn	04 27 58.6	+2.5
PCRV				*e*S	Sn	04 28 26.1	+0.9
SVOC	Richmond Hill,	2.49	25	*e*P	Pn	04 27 57.2	+0.1
SVOC				*e*S	Sn	04 28 27.8	+0.5
SVT	Saint Vincent	2.49	25	*e*P	Pn	04 27 57.7	+0.4
SVT				*e*S	Sn	04 28 26.3	-1.1
SVB	Belmont	2.58	23	*e*P	Pn	04 27 59.4	+0.9
SVB				*e*S	Sn	04 28 29.7	+0.1
SLBI	Saint Lucia, B	3.38	23	*e*P	Pn	04 28 09.4	+0.5
SLBI				*e*S	Sn	04 28 46.5	-1.8
BBGH	Gun Hill	3.50	50	*e*P	Pn	04 28 12.1	+1.5
BIM	Bigot	3.80	18	*e*P	Pn	04 28 15.2	+0.5
DSLB	Salisbury	4.60	11	*e*P	Pn	04 28 26.6	+1.2
TACV	Tcata	4.70	261	*e*P	Pn	04 28 28.9	+2.1
TACV				*e*S	Sn	04 29 18.6	-1.7
BENV	Beln	5.29	260	*e*P	Pn	04 28 36.5	+1.7
BENV				*e*S	Sn	04 29 32.5	-2.0
CACV	CAICARA DEL OR	5.33	232	*e*P	Pn	04 28 31.9	-3.3
CACV				*e*S	Sn	04 29 24.6	-11
BAUV	El Baul	5.97	252	*e*P	Pn	04 28 45.1	+1.1
BAUV				*e*S	Sn	04 29 47.7	-3.4
ANBD	Bethesda, Anti	6.14	5	*e*P	Pn	04 28 47.6	+1.3
TEPV	Terepaima	6.83	263	*e*P	Pn	04 28 56.7	+1.0
TEPV				*e*S	Sn	04 30 08.0	-4.2

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*IDC **03** 04:37:11.2±0.9, 56.°01S×27.°25W, h0^{km}, mb4.2/6, mbtmp4.2/7, ML4.0/1, Error ellipse: s-maj=34.1km s-min=21.7km az=73.0*

*NEIC **03** 04:37:23.3±1.2, 56.°23S±0.°09×27.°4W±0.°2, h94^{km}±7^{km}, mb4.5/20, Error ellipse: s-maj=15.1km s-min=10.6km az=132.0*

ISC 03 04:37:24.7±0.5**, 56.°16S**±0.°09×**27.°5W**±0.°1**, h112^{km}, n49, σ0.^{s}77**/48**, mb4.5**/14**, 5D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.49	286	Pn	Pn	04 38 43.3	-0.7
VNA1	Neumayer--Stat	16.76	158	⇓P	P	04 41 12.9	+0.2
	comp=Z,0.3nm,0.2s						
VNA3	Neumayer Olymp	16.95	160	⇓P	Pn	04 41 14.1	-0.5
	comp=Z,0.5nm,0.2s						
VNA2	Neumayer--Watz	17.16	157	⇓P	Pn	04 41 17.8	+0.7
	comp=Z,0.8nm,0.2s,baz=328,slow=9.9						
SNAA	Sanae	18.71	156	⇓P	P	04 41 33.1	-1.0
	comp=Z,7.2nm,0.3s						
SNAA	Sanae	18.71	156	P	P	04 41 32.6	-1.6
SNAA	Sanae	18.71	156	P	P	04 41 32.7	-1.4
	comp=Z,0.5nm,0.3s,baz=302,slow=12,SNR=19						
	comp=Z,4.0nm,0.8s						
TROLL	Troll, Antarti	20.23	153	⇓P	P	04 41 49.2	-1.4
	comp=Z,3.3nm,0.2s						
BELA	Belgrano 2	21.96	184	P	P	04 42 07.5	-1.4
BELA				IAmb	IAmb	04 42 10.4	
	comp=Z,7.6nm,0.6s						
MG02	Cerro Sombrero	24.22	260	P	P	04 42 30.3	-0.3
GO09	Cerro Castillo	26.61	261	P	P	04 42 51.0	-1.4
GO09				IAmb	IAmb	04 42 53.6	
	comp=Z,41nm,1.4s						
PLTB	Pedras Altas	30.45	312	P	P	04 43 26.9	+0.4
PLTB				IAmb	IAmb	04 43 27.3	
	comp=Z,20nm,1.4s						
QSPA	South Pole Qui	34.09	180	P	P	04 43 58.5	+0.2
QSPA				IAmb	IAmb	04 44 00.0	
	comp=Z,5.1nm,0.6s						
CPUP	Villa Florida	36.76	312	P	P	04 44 21.1	-0.1
CPUP	Villa Florida	36.76	312	P	P	04 44 20.5	-0.7
	comp=Z,0.6nm,0.6s,baz=22,slow=6.2,SNR=5.0						
	comp=Z,0.6nm,0.6s						
AC02	Maricunga	41.78	297	P	P	04 45 03.5	+0.1
AC02				IAmb	IAmb	04 45 08.8	
	comp=Z,7.9nm,1.1s						
SBA	Scott Base	45.96	184	P	P	04 45 37.6	+1.9
PB09	IPOC Station P	46.06	301	P	P	04 45 37.6	+0.3
PB03	IPOC Station P	46.09	300	P	P	04 45 37.9	+0.3
BOSA	Boshof	46.16	76	P	P	04 45 37.5	-0.5
BOSA				IAmb	IAmb	04 45 39.7	
	comp=Z,13nm,1.4s						
VNDA	Vanda	46.46	183	P	P	04 45 40.2	+0.6
VNDA	Vanda	46.46	183	P	P	04 45 40.5	+0.9
	comp=Z,2.0nm,0.8s,baz=175,slow=6.3,SNR=9.8						
	comp=Z,2.0nm,0.8s						
PB01	IPOC Station P	46.82	301	P	P	04 45 43.7	+0.5
PTLB	Pontes e Lacer	47.26	316	P	P	04 45 46.4	-0.1
PTLB				IAmb	IAmb	04 45 47.3	
	comp=Z,3.8nm,0.7s						
PB11	IPOC Station P	48.00	302	P	P	04 45 52.9	+0.4
PB16	IPOC Station P	49.16	303	P	P	04 46 02.4	+0.6
PB16				IAmb	IAmb	04 46 35.0	
	comp=Z,9.3nm,1.4s						
LPAZ	La Paz	50.30	306	P	P	04 46 11.1	+0.6
LPAZ				IAmb	IAmb	04 46 12.0	
	comp=Z,3.7nm,0.6s						
LPAZ	La Paz	50.30	306	P	P	04 46 11.3	+0.8
	comp=Z,3.1nm,0.5s,baz=136,slow=4.9,SNR=30						
	comp=Z,3.1nm,0.5s						
MREMI	Moremi	52.16	73	P	P	04 46 24.0	+0.3
MREMI				IAmb	IAmb	04 46 43.7	
	comp=Z,11nm,1.3s						
DBIC	Dimbokro	65.33	25	P	P	04 47 54.4	-0.4
	comp=Z,6.3nm,1.1s,baz=190,slow=5.7,SNR=1.4						
	comp=Z,6.3nm,1.1s						
COHC	Cochancay	67.58	302	P	P	04 48 10.2	+1.1
TORD	Torodi Ar. Bea	73.23	30	P	P	04 48 43.0	-0.4
	comp=Z,1.0nm,0.4s,baz=200,slow=6.3,SNR=14						
	comp=Z,1.0nm,0.4s						
ASAR	Alice Springs	98.94	163	P	P	04 50 53.9	+1.4
	comp=Z,0.4nm,0.6s,baz=194,slow=3.8,SNR=2.6						
	comp=Z,0.4nm,0.6s						
YKA	Yellowknife Ar	136.14	318	PKP	PKPdf	04 56 31.0	-0.2
	comp=Z,0.1nm,0.4s,baz=162,slow=7.3,SNR=4.9						
A36M	Sachs Harbour	144.21	328	PKPdf	PKPbc	04 56 44.3	+0.2
N30M	Aishikik Lake	144.80	308		PKPdf	04 56 47.2	+0.3
H31M	Peel River	145.29	316	PKPdf	PKPbc	04 56 47.8	+0.1
G31M	Satah River	145.63	318	PKPdf	PKPbc	04 56 48.5	-0.1
J30M	Hart River	145.65	314	PKPdf	PKPab	04 56 49.5	0.0
L29M	L29M	145.88	311	PKPdf	PKPbc	04 56 49.8	+0.2
DAWY	Dawson	146.74	312		PKPbc	04 56 51.7	-0.4
M27K	Edge Creek, AK	147.24	308	PKPdf	PKPbc	04 56 53.4	-0.3
F28M	Old Crow	147.91	318	PKPdf	PKPbc	04 56 54.3	-0.9
H27K	Steamboat Moun	148.22	315	PKPbc	PKPbc	04 56 56.0	0.0
HIN	Hinchinbrook I	148.67	303	PKPbc	PKPbc	04 56 57.8	+0.5
BMAR	Burnt Mountain	149.65	317	PKPbc	PKPbc	04 56 60.0	+0.4
ILAR	Eielson Array	150.06	312	PKPbc	PKPbc	04 56 59.4	-1.2
	comp=Z,2.1nm,0.7s,baz=123,slow=2.6,SNR=25						
WRH	Wood River Hil	150.51	311	PKPbc	PKPbc	04 57 01.3	-0.3
RND	Reindeer	150.60	308	PKPbc	PKPbc	04 57 02.0	0.0

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*IDC **03** 05:27:03.7±1.2, 3.°52S×137.°36E, h0^{km}, mb3.7/4, mbtmp3.7/6, ML3.8/2, Error ellipse: s-maj=33.6km s-min=15.5km az=106.0*

ISC 03 05:27:08.8±1.1**, 3.°5S**±0.°1×**137.°3E**±0.°1**, h35^{km}, n6, σ2.^{s}38**/9**, mb3.9**/3**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	3.51	75	Pn	Pn	05 27 59.3	-1.7
	5.2nm,0.3s,baz=198,slow=20,SNR=14						
JAY				Sn	Sn	05 28 43.7	+2.3
	2.9nm,0.3s,baz=162,slow=20,SNR=1.9						
	13nm,0.8s						
WRA	Warramunga Arr	16.65	190	Pn	Pn	05 30 56.2	-3.4
	0.5nm,0.3s,baz=12,slow=12,SNR=5.9						
WRA				Sn	Sn	05 34 06.0	+2.5
	0.1nm,0.3s,baz=8.2,slow=23,SNR=2.9						
	1.1nm,0.7s						
ASAR	Alice Springs	20.37	189	P	P	05 31 42.2	-0.3
	5.3nm,0.7s,baz=12,slow=11,SNR=37						
ASAR				S	S	05 35 31.4	+2.4
	1.9nm,0.9s,baz=15,slow=23,SNR=4.9						
	5.3nm,0.7s						
MKAR	Makanchi Array	69.53	323	P	P	05 38 15.4	+1.3
	0.2nm,0.5s,baz=124,slow=7.2,SNR=2.2						
	0.2nm,0.5s						
QSPA	South Pole Qui	86.50	180	P	P	05 39 47.5	-0.5
	0.5nm,0.7s,baz=58,slow=13,SNR=3.3						
	0.5nm,0.7s						
ILAR	Eielson Array	87.08	25	P	P	05 39 51.0	+0.3
	0.7nm,0.9s,baz=259,slow=5.0,SNR=7.9						
	0.7nm,0.9s						

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*ECX **03** 05:38:04.8±0.3, 29.°89N×114.°15W, h10^{km}±4^{km}, ML4.1*

*MEX **03** 05:38:04.9±0.4, 29.°94N×114.°01W, h8^{km}±6^{km}, MD4.2*

*IDC **03** 05:38:07.2±1.7, 30.°37N×113.°68W, h0^{km}, mb3.7/3, mbtmp3.4/8, ML3.4/5, MS3.5/11, Error ellipse: s-maj=31.7km s-min=10.1km az=37.0*

*NEIC **03** 05:38:08.4±1.3, 30.°19N±0.°05×114.°23W±0.°03, h10^{km}±1^{km}, mb4.2/68, Error ellipse: s-maj=9.5km s-min=3.2km az=14.0*

ISC 03 05:38:05.4±2.3**, 30.°05N**±0.°06×**114.°10W**±0.°04**, h1^{km}**±15^{km}**, n184, σ1.^{s}75**/177**, mb4.1**/22**, MS3.5**/6**, 3C-4D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLGB	San Luis Gonza	0.35	230	⇑*i*P	Pg	05 38 09.3	-2.8
SLGB				*e*S	Sg	05 38 12.7	-3.9
SLGB				IAML		05 38 17.2	
	comp=N,41μm,0.6s						
SFX	San Felipe	1.18	327		Pb	05 38 27.3	-1.3
SFX	San Felipe	1.18	327	⇓*i*P	Pb	05 38 27.3	-1.3
SFX				*e*S	Sn	05 38 44.4	-1.4
SFX				IAML		05 38 48.7	
	comp=E,2μm,1.0s						
SFX				IAML		05 38 57.6	
	comp=N,2μm,0.7s						
SFX	San Felipe	1.18	327	*e*P	Pb	05 38 27.2	-1.3
SFX				*e*S	Sn	05 38 44.2	-1.6
BAHB	Baha de los	1.20	157	⇓*i*P	Pn	05 38 23.2	-6.2
BAHB				*e*S	Sb	05 38 38.2	-6.8
BAHB	Baha de los	1.20	157	*e*P	Pn	05 38 23.4	-6.0
BAHB				*e*S	Sb	05 38 38.1	-6.9
PLIB	Puerto Liberta	1.22	96	⇑*i*P	Pn	05 38 26.2	-3.6
PLIB				*e*S	Sb	05 38 43.5	-2.2
PLIB				IAML		05 38 55.3	
	comp=E,3μm,1.5s						
PPXB	Puerto Peasco	1.34	17	⇓*i*P	Pn	05 38 30.6	-0.7
PPXB				*e*S	Sn	05 38 50.5	+0.7
SPIG	San Pedro Mart	1.54	310	⇓*i*P	Pn	05 38 32.8	-1.6
SPIG				*e*S	Sn	05 38 54.0	-1.2
SPIG				IAML		05 38 58.4	
	comp=E,2μm,0.5s						
SPIG				IAML		05 39 04.6	
	comp=N,2μm,0.7s						
SPIG	San Pedro Mart	1.54	310	*e*P	Pn	05 38 32.4	-2.0
SPIG				*e*S	Sg	05 38 55.5	+0.5
SQX	San Quintin	1.62	289	⇑*e*P	Pn	05 38 32.7	-2.6
SQX				*e*S	Sn	05 38 54.5	-2.3
VTX	Valle De La Tr	1.97	313		Pn	05 38 39.1	-1.0
ESJX	Sierra Juarez	2.51	321		Pn	05 38 46.4	-1.3
CPBX	Cerro Prieto	2.58	337		Pn	05 38 47.5	-0.8
113A	Mohawk Valley,	2.72	6		Pn	05 38 50.0	-0.3
CCX	Cicese	2.85	310		Pn	05 38 51.9	-0.2
HSIG		2.93	110	*e*P	Pn	05 38 50.3	-2.9
YUH	Yuha Desert	3.02	329		Pn	05 38 53.5	-1.0
GLA	Glamis	3.05	348		Pn	05 38 55.1	+0.1
CBX	Cerro Bola	3.15	316		Pn	05 38 55.9	-0.4
CBX	Cerro Bola	3.15	316	*e*P	Pn	05 38 55.7	-0.7
CBX				*e*S	Sn	05 39 36.1	+1.4
SRIG	Santa Rosalia	3.17	149		Pn	05 39 00.9	+4.4
TJIG	Tijuana	3.24	318	*e*P	Pn	05 38 56.5	-1.0
TJIG				*e*S	Sn	05 39 38.2	+1.4
TKX	Tecate	3.30	320	Pn	Pn	05 38 57.7	-0.6
TJX	Tijuana	3.52	315	Pn	Pn	05 39 00.9	-0.5
GUYB	Guaymas	3.55	126	*e*S	Sn	05 39 38.4	-5.9
TUC	Tucson	3.62	51		Pn	05 39 03.2	+0.4
TUC	Tucson	3.62	51	*e*P	Pn	05 39 02.9	+0.1
BLYC	Blythe	3.70	354		Pn	05 39 04.5	+0.7
NZIG	Nacozari, Sono	3.94	84	*e*P	Pn	05 39 00.5	-6.8
NZIG				*e*S	Sn	05 39 48.9	-5.4
Y14A	Wickenburg	3.98	13		Pn	05 39 08.9	+1.2
PFO	Pinyon Flats O	4.08	331		Pn	05 39 08.9	-0.2
PFO	Pinyon Flats O	4.08	331	Pn	Pn	05 39 08.6	-0.5
	comp=N,0.8nm,0.3s,baz=146,slow=12,SNR=8.9						
PFO				LR	LR	05 40 10.6	
	comp=N,165nm,20.3s,baz=122,slow=31						
PFO				Lg	Lg	05 40 15.3	
	comp=N,8.6nm,0.3s,baz=114,slow=20,SNR=10						
	comp=N,1.8nm,0.3s						
319A	Douglas	4.35	71	Pn	Pn	05 39 13.0	+0.1
ELS	Elsinore Mount	4.57	323		Pn	05 39 15.7	-0.1
X16A	Lo Mia Camp, P	4.90	27		Pn	05 39 21.3	+0.9
DUN6	Lazy B Ranch	4.96	59		Pn	05 39 22.6	+1.4
W13A	Hualapai Mount	5.03	2		Pn	05 39 22.1	-0.2
X18A	Snowflake	5.68	37		Pn	05 39 32.9	+1.8
V12A	Nelson	5.69	354		Pn	05 39 33.8	+2.5
GSC	Goldstone, Bar	5.71	337		Pn	05 39 32.9	+1.4
WUAZ	Wupatki	5.91	22		Pn	05 39 37.3	+3.0
CCAC	Calif City Air	6.07	328	Pn	Pn	05 39 33.9	-2.4
GWY	Greenwater Val	6.49	341	Pn	Pn	05 39 45.6	+3.3
SHPR	Sheep Range	6.50	352		Pn	05 39 44.9	+2.5
U15A	North Rim	6.53	13		Pn	05 39 46.7	+3.7
BCW	Bitter Crk WRg	6.63	319		Pn	05 39 45.8	+1.6
EPT	El Paso	6.74	73		Pn	05 39 46.6	+0.9
LPIG	La Paz	6.82	149	LR	LR	05 42 10.9	
	comp=N,379nm,20.2s,baz=9.0,slow=35						
LCMT	Little Creek M	6.98	6		Pn	05 39 52.4	+3.5
KNB	Kanab	7.03	8	Pn	Pn	05 39 53.3	+3.7
SBM	South Baldy	7.05	55		Pn	05 39 51.9	+1.6
TPNV	Topopah Spring	7.11	346		Pn	05 39 53.8	+3.0
Y22D	IRIS PASSCAL I	7.29	55		Pn	05 39 55.1	+1.8
LENM	Lemitar	7.30	54		Pn	05 39 54.8	+1.4
SLBS	Sierra La Lagu	7.34	149	Pn	Pn	05 39 53.9	-0.1
CRNM	Carthage	7.36	56		Pn	05 39 55.7	+1.4
PRN	Pahroc Range	7.38	354		Pn	05 39 58.0	+3.5
GRAC	Grapevine Rang	7.44	339	Pn	Pn	05 39 56.1	+0.9
BNM	Barren Site	7.54	55		Pn	05 39 57.4	+0.7
MNTX	Cornudas Mount	7.67	75		Pn	05 39 59.2	+0.9
S11A	Rachel	7.70	350		Pn	05 40 01.1	+2.2
VHRN	Van Horn	7.90	82		Pn	05 40 02.3	+0.7
DSP	Deep Springs	7.98	337		Pn	05 40 01.3	-1.2
HPIG		8.04	111	Pn	Pn	05 40 06.2	+2.5
ANMO	Albuquerque	8.09	51		Pn	05 40 04.2	0.0
ANMO	Albuquerque	8.09	51		Pn	05 40 05.1	+0.8
ANMO	Albuquerque	8.09	51		Pn	05 40 04.5	+0.3
ANMO	Albuquerque	8.09	51	Pn	Pn	05 40 04.9	+0.6
	comp=N,0.4nm,0.3s,baz=330,slow=12,SNR=24						
ANMO				Sn	Sn	05 41 38.2	+1.8
	comp=N,0.1nm,0.3s,baz=167,slow=13,SNR=1.8						
ANMO				Lg	Lg	05 42 09.2	
	comp=N,0.1nm,0.3s,baz=302,slow=19,SNR=1.8						
MZP	Montezuma Peak	8.10	341	Pn	Pn	05 40 03.4	-1.1
TPH	Tonopah	8.41	343		Pn	05 40 08.6	-0.1
PSUT	Pine Spring	8.46	1		Pn	05 40 08.9	-0.5
MVCO	Mesa Verde	8.53	32		Pn	05 40 09.8	-0.5
MVU	Marysvale	8.57	10		Pn	05 40 09.7	-1.2
PECS	Pecos	8.90	79		Pn	05 40 17.3	+1.9
SPR3	Spring Creek 3	8.93	359		Pn	05 40 15.0	-0.9
NV11	Mina Array Sit	9.01	339	Pn	Pn	05 40 15.1	-1.7
NVAR	Mina Array Bea	9.05	339	Pn	Pn	05 40 16.7	-0.8
	comp=N,0.1nm,0.3s,baz=151,slow=14,SNR=1.7						
NVAR				Lg	Lg	05 42 49.9	
	baz=152,slow=32,SNR=1.2						
	comp=N,0.2nm,0.5s						
ALPN	Alpine	9.05	85		Pn	05 40 18.4	+1.0
TX31	Lajitas Ar. Si	9.10	92		Pn	05 40 18.1	+0.1
TXAR	Lajitas Array	9.10	92		Pn	05 40 18.2	+0.1
TXAR	Lajitas Array	9.10	92	Pn	Pn	05 40 15.9	-2.2
	comp=N,0.2nm,0.3s,baz=272,slow=11,SNR=22						
TXAR				Lg	Lg	05 42 41.0	
	baz=269,slow=11						
	comp=N,2.2nm,0.8s						
CLN7	Carlsbad 7	9.12	72		Pn	05 40 20.9	+2.6
Q16A	Castle Valley	9.16	14	Pn	Pn	05 40 17.3	-1.7
PV13	Radium Mtn., P	9.19	27	Pn	Pn	05 40 18.7	-0.7
PV18	Skein Mesa, Pa	9.23	26	Pn	Pn	05 40 19.4	-0.6
PV17	East Wray Mesa	9.24	26	Pn	Pn	05 40 20.2	+0.1
PV01	Paradox Valley	9.27	28		Pn	05 40 21.5	+1.0
HTMS	Hat Mesa	9.27	72	Pn	Pn	05 40 22.8	+2.3
PV20	West Nyswonger	9.29	26	Pn	Pn	05 40 19.9	-0.8
PV10	Paradox Valley	9.30	25	Pn	Pn	05 40 18.4	-2.5
RYN	Ryan	9.30	338	Pn	Pn	05 40 19.2	-1.7
SRU	San Rafael Swe	9.50	17	Pn	Pn	05 40 22.1	-1.5

CMB	Columbia Colle	9.52	328	Pn	Pn	05 40 21.3	-2.4
TMUT	Trail Mountain	9.52	14	Pn	Pn	05 40 22.3	-1.7
S22A	4UR Ranch, Cre	9.76	36	Pn	Pn	05 40 26.7	-0.6
MNHN	Monahans	9.84	80		Pn	05 40 29.1	+0.9
ODSA	Odessa	10.11	75	Pn	Pn	05 40 33.7	+1.8
MPU	Maple Canyon	10.14	11	Pn	Pn	05 40 30.7	-1.7
DUG	Dugway, Tooele	10.17	6	Pn	Pn	05 40 30.9	-1.9
SAND	Sanderson	10.38	88	Pn	Pn	05 40 36.9	+1.3
ELK	Elko	10.71	355	Pn	Pn	05 40 41.8	+1.6
	comp=N,0.1nm,0.3s,baz=172,slow=13,SNR=5.2						
ELK				LR	LR	05 45 03.2	
	comp=N,258nm,21.1s,baz=185,slow=40						
	comp=N,1.2nm,0.8s						
BSUT	Blindstream Ca	10.81	14		Pn	05 40 39.3	-2.3
O20A	White River Ci	11.14	24	Pn	Pn	05 40 44.5	-1.6
OZNA	Ozona	11.22	82		Pn	05 40 48.7	+1.6
ABTX	Abilene, Hawle	12.62	75		Pn	05 41 08.5	+2.3
PDAR	Pinedale Array	13.20	15		P	05 41 19.1	-5.5
PDAR	Pinedale Array	13.20	15	Pn	Pn	05 41 14.2	0.0
	comp=N,0.1nm,0.3s,baz=186,slow=12,SNR=11						
PDAR				LR	LR	05 46 08.7	
	comp=N,156nm,19.6s,baz=192,slow=38						
	comp=N,0.1nm,0.3s						
J08A	Circle Bar Ran	13.73	346		P	05 41 27.1	-3.2
X34A	Smith Ranch, M	14.48	68		Pn	05 41 34.5	+2.9
H17A	Grant Village	14.59	10	Pn	Pn	05 41 34.5	+1.2
Z35A	Perchaven, San	14.71	73		Pn	05 41 35.6	+0.9
YHH	Holmes Hill	14.93	9	Pn	Pn	05 41 38.0	+0.1
FNO	Franklin	14.99	65	Pn	Pn	05 41 40.6	+2.2
DLMT	Dillon	15.33	4	IAmb	IAmb	05 41 55.7	
	comp=Z,16nm,1.3s						
RLMT	Red Lodge	15.52	13	IAmb	IAmb	05 41 54.4	
	comp=Z,14nm,1.2s						
OK052	Battle Ridge R	15.66	63	P	P	05 41 54.0	+2.4
OK051	E0350 and S346	15.79	61	P	P	05 41 56.4	+3.3
OK051				IAmb	IAmb	05 41 57.8	
	comp=Z,25nm,1.0s						
HKT	Hockley	15.83	86	Pn	Pn	05 41 50.9	+1.4
DEOK	Depew	15.85	64	IAmb	IAmb	05 41 57.6	
	comp=Z,27nm,0.9s						
LNOR	Lincton Mounta	16.13	349	Pn	Pn	05 41 53.0	-0.4
RSSD	Black Hills	16.15	27	P	P	05 41 59.3	+2.0
T35A	Sooner Cattle	16.18	60	P	P	05 41 58.6	+1.2
TUL3	Leonard	16.42	64		Pn	05 41 58.6	+1.3
TUL3				IAmb	IAmb	05 42 04.9	
	comp=Z,16nm,0.8s						
Z38A	Mt. Pleasant	16.58	74		P	05 42 01.1	-0.8
Z38A				IAmb	IAmb	05 42 05.8	
	comp=Z,16nm,0.9s						
MSO	Missoula	16.75	0		Pn	05 42 00.2	-1.2
LYMT	Lyon Mountain	16.95	4	Pn	Pn	05 42 02.4	-1.7
RLO	Rose Lookout	17.09	64		Pn	05 42 06.1	+0.4
RLO				IAmb	IAmb	05 42 11.2	
	comp=Z,16nm,1.1s						
LAO	LASA Array	17.70	18		P	05 42 13.7	-0.6
MIAR	Mount Ida	17.91	70		Pn	05 42 15.7	-0.2
MIAR				IAmb	IAmb	05 42 38.6	
	comp=Z,15nm,1.3s						
LTY	Liberty	17.92	345	Pn	Pn	05 42 13.9	-2.1
HHAR	Hobbs	17.97	64	Pn	Pn	05 42 16.3	-0.3
D05A	Enumclaw	18.17	343	Pn	Pn	05 42 17.0	-2.0
D05A				IAmb	IAmb	05 42 38.7	
	comp=Z,36nm,1.4s						
WLAR	White Oak Lake	18.18	73		P	05 42 20.8	+1.2
WLAR				IAmb	IAmb	05 42 30.2	
	comp=Z,34nm,1.3s						
EGMT	Eagleton	18.25	9	Pn	Pn	05 42 17.8	-2.3
EGMT				IAmb	IAmb	05 42 50.0	
	comp=Z,20nm,1.5s						
NEW	Newport	18.33	354	Pn	Pn	05 42 17.7	-3.3
NEW	Newport	18.33	354	LR	LR	05 50 02.9	
	comp=Z,156nm,18.4s,baz=185,slow=40						
Z41A	Richland Creek	18.40	75	P	P	05 42 23.9	+1.9
Z41A				IAmb	IAmb	05 42 32.8	
	comp=Z,9.1nm,0.9s						
X40A	Basin Creek Fa	18.51	71		P	05 42 23.3	+0.1
B08A	Colville Reser	18.72	349	P	P	05 42 24.6	-0.8
FCAR	Ozark Folk Cen	19.32	67	P	Pn	05 42 33.0	0.0
CCAR	Cane Creek	19.32	73	P	Pn	05 42 34.0	+1.0
ECSD	EROS Data Cent	19.49	41	P	Pn	05 42 34.8	-0.3
ECSD				IAmb	IAmb	05 42 42.2	
	comp=Z,17nm,1.4s						
T42A	Van Buren	20.37	64		Pn	05 42 45.1	-0.4
P40A	Paris	20.38	56	P	Pn	05 42 45.1	-0.6
OXF	Oxford	21.32	72	P	P	05 42 55.2	+1.3
OXF				IAmb	IAmb	05 43 07.5	
	comp=Z,19nm,1.2s						
I37A	Lemond, Waseca	21.53	44	P	P	05 42 57.0	+1.0
I37A				IAmb	IAmb	05 43 22.2	
	comp=Z,18nm,1.2s						
CMIG	Matias Romero	21.79	122	P	P	05 43 01.4	+2.4
	comp=Z,5.4nm,1.0s,baz=321,slow=9.6,SNR=4.0						
	comp=Z,5.4nm,1.0s						
S44A	Carbondale	21.95	63	P	P	05 43 02.0	+1.5
S44A				IAmb	IAmb	05 43 04.0	
	comp=Z,11nm,1.1s						
SIUC	Southern Illin	21.98	63	P	P	05 43 02.6	+1.7
SIUC				IAmb	IAmb	05 43 06.5	
	comp=Z,8.5nm,1.1s						
PLAL	Pickwick Lake	22.46	71	P	P	05 43 07.3	+1.2
PLAL				IAmb	IAmb	05 43 13.8	
	comp=Z,15nm,1.1s						
WVT	Waverly	22.79	68		P	05 43 10.7	+1.2
WVT				IAmb	IAmb	05 43 19.0	
	comp=Z,14nm,1.1s						
USIN	University of	23.23	63	P	P	05 43 15.8	+1.7
LRAL	Lakeview Retre	23.26	76	P	P	05 43 16.2	+1.7
LRAL				IAmb	IAmb	05 43 21.6	
	comp=Z,5.3nm,1.1s						
ULM	Lac du Bonnet	24.39	29	LR	LR	05 53 10.8	
	comp=Z,98nm,18.4s,baz=227,slow=38						
BBB	Bella Bella	24.42	339	LR	LR	05 53 01.9	
	comp=Z,205nm,20.2s,baz=176,slow=37						
FPAL	Fort Paine	24.45	72		P	05 43 27.7	+1.7
FPAL				IAmb	IAmb	05 43 31.4	
	comp=Z,4.3nm,1.0s						
W50A	Signal Mountai	24.73	70	P	P	05 43 31.2	+2.6
152A	Waverly Hall	25.19	76	P	P	05 43 35.2	+2.6
DLBC	Dease Lake	30.42	343	LR	LR	05 59 15.8	
	comp=Z,198nm,18.1s,baz=124,slow=42						
SADO	Sadowa	31.14	52	LR	LR	05 57 20.0	
	comp=Z,16nm,20.4s,baz=192,slow=38						
YKA	Yellowknife Ar	32.45	360	LR	LR	05 58 43.3	
	comp=Z,229nm,18.5s,baz=242,slow=38						
JTS	Las Juntas de	33.52	120	LR	LR	05 59 01.0	
	comp=Z,58nm,20.6s,baz=305,slow=38						
KNK	Knik Glacier	38.64	334	P	P	05 45 32.2	+2.0
SCRK	Sand Creek	38.85	339		P	05 45 34.0	+1.9
ILAR	Eielson Array	40.31	339	P	P	05 45 45.9	+1.8
	comp=Z,1.1nm,0.8s,baz=152,slow=7.3,SNR=12						
	comp=Z,1.1nm,0.8s						
KTH	Kantishna Hill	40.86	336		P	05 45 50.4	+1.7
KTH				IAmb	IAmb	05 45 55.1	
	comp=Z,3.8nm,0.8s						
PPLA	Purkeypile	40.93	334	P	P	05 45 49.5	+0.1
L19K	White Mountain	41.57	333	P	P	05 45 55.3	+0.8
L19K				IAmb	IAmb	05 45 59.1	
	comp=Z,7.3nm,1.4s						
F26K	Sheenjek River	41.66	343	P	P	05 45 55.1	-0.2
F26K				IAmb	IAmb	05 46 04.2	
	comp=Z,11nm,1.4s						
MLY	Manley	41.72	338	P	P	05 45 55.3	-0.4
MLY				IAmb	IAmb	05 46 02.1	
	comp=Z,2.4nm,0.8s						
N17K	Nushagak Hills	41.74	330	P	P	05 45 56.0	+0.1
N17K				IAmb	IAmb	05 46 02.5	
	comp=Z,2.7nm,0.9s						
H23K	Yukon River	41.84	339	P	P	05 45 57.7	+1.0
L18K	Granite Mounta	42.33	332		P	05 46 01.0	+0.3
L18K				IAmb	IAmb	05 46 06.7	
	comp=Z,4.0nm,0.9s						
J20K	Nowinta River	42.38	335		P	05 46 01.2	0.0
J20K				IAmb	IAmb	05 46 07.6	
	comp=Z,6.7nm,1.2s						
J19K	Poorman	42.83	335		P	05 46 05.0	+0.3
J19K				IAmb	IAmb	05 46 11.1	
	comp=Z,4.3nm,1.1s						
J18K	Innoko River	42.97	333	P	P	05 46 05.9	0.0
J18K				IAmb	IAmb	05 46 15.0	
	comp=Z,3.2nm,1.0s						
K17K	Iditarod	43.23	332	P	P	05 46 08.3	+0.3
K17K				IAmb	IAmb	05 46 13.0	
	comp=Z,4.0nm,0.9s						
J16K	Anvik River	44.42	332	P	P	05 46 17.6	0.0
J16K				IAmb	IAmb	05 46 21.4	
	comp=Z,6.8nm,1.2s						
HUMP	Col San Antoni	45.31	94	P	P	05 46 26.5	+1.3
CO05	La Serena	72.27	142	P	P	05 49 33.3	+0.8
NIUE	Niue	72.62	235	P	P	05 49 34.7	-0.2
CO06	Fray Jorge	72.65	142	P	P	05 49 37.0	+2.1
ESDC	Sonseca Array	85.04	47	P	P	05 50 41.7	-1.4
	comp=Z,0.1nm,0.5s,baz=290,slow=3.7,SNR=2.6						
	comp=Z,0.1nm,0.5s						

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*IDC **03** 05:49:26.7±1.3, 40°.44N×20°.82E, h0^{km}, mb3.2/6, mbtmp3.3/11, ML3.4/5, MS2.9/1, Error ellipse: s-maj=18.9km s-min=14.9km az=164.0*

*BEO **03** 05:49:26.5±0.8, 40°.37N×20°.72E, h7^{km}±3^{km}, ML3.5/6*

*ATH **03** 05:49:27.3, 40°.44N×20°.77E, h10^{km}±3^{km}, ML3.6/15, Manual Solution by E.Daskalaki First location: 2019/06/03 05:50:26, This location: 2019/06/03 07:35:04 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 3 km*

*TIR **03** 05:49:27.7, 40°.47N×20°.80E, h5^{km}±2^{km}, Ml3.9/7*

*THE **03** 05:49:28.2, 40°N±1°×2°1E±°, h0^{km}±1^{km}, M3.4/14, MLh3.4/14*

*PDG **03** 05:49:28.0±0.8, 40°.49N×20°.83E, h6^{km}±1^{km}, ML3.6/11, Error ellipse: s-maj=1.0km s-min=1.8km az=0.0*

*SKO **03** 05:49:30.7, 40°.52N×20°.89E, h14^{km}, ML3.4*

ISC 03 05:49:28.2±0.8, **40°.46N**±0°.02×**20°.82E**±0°.02, **h9**^{km}±6^{km}, **n148, σ1^s.39**/197, **mb3.3**/4, **17C-4D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.16	352	Pg	Pg	05 49 30.8	-1.0
KBN				Sg	Sg	05 49 33.6	-0.7
KBN				AML	AML	05 49 34.0	
	70nm,0.4s						
KBN				AML	AML	05 49 42.1	
	79nm,0.5s						
NEST	Nestorio	0.18	105	Pg	Pg	05 49 32.1	-0.1
NEST				Sg	Sg	05 49 36.2	+1.4
NEST				AML	AML	05 49 42.0	
	72nm,0.4s						
NEST				AML	AML	05 49 42.0	
	101nm,0.6s						
NEST	Nestorio	0.18	105	P	Pg	05 49 32.0	-0.1
NEST				S	Sg	05 49 34.9	+0.1
NEST	Nestorio	0.18	105	P	Pg	05 49 32.0	-0.1
NEST				S	Sg	05 49 35.9	+1.1
LSK	Leskovik	0.35	208	Pg	Pg	05 49 33.7	-1.5
LSK				Sg	Sb	05 49 41.4	-1.0
LSK				AML	AML	05 49 47.2	
	89nm,0.5s						
PENT	Pentalofos	0.36	137	P	Pg	05 49 35.0	-0.5
PENT				S	Sg	05 49 39.6	-0.5
PENT	Pentalofos	0.36	137	P	Pg	05 49 34.9	-0.5
PENT				S	Sg	05 49 41.0	+0.8
OHR	Ohrid	0.65	359	P	Pg	05 49 40.4	-0.4
OHR				S	Sb	05 49 51.1	+0.1
OHR	Ohrid	0.65	359	*i* Pg	Pg	05 49 40.6	-0.2
OHR				*i* Sg	Sb	05 49 51.5	+0.6
OHR				*e*Lg	Lg	05 49 52.0	
	comp=N,500nm,0.4s						
OHR				*e*Lg	Lg	05 49 54.3	
	comp=E,4µm,1.0s						
OHR	Ohrid	0.65	359	*e*Pg	Pg	05 49 40.4	-0.4
OHR				*e*Sg	Sb	05 49 51.4	+0.5
KPRO	Kipourio	0.66	140	P	Pg	05 49 40.0	-0.9
KPRO				S	Sb	05 49 50.1	-0.9
KPRO	Kipourio	0.66	140	P	Pg	05 49 39.9	-1.0
KPRO				S	Sg	05 49 49.6	+0.1
KZN	Kozani	0.74	102	P	Pg	05 49 42.0	-0.6
KZN				S	Sg	05 49 52.5	+0.3
KZN	Kozani	0.74	102	P	Pg	05 49 41.1	-1.4
KZN				S	Sg	05 49 50.8	-1.4
MSVA	Metsovo	0.74	158	P	Pg	05 49 42.7	+0.1
JAN	Janina	0.80	178	P	Pg	05 49 43.3	-0.4
JAN	Janina	0.80	178	P	Pg	05 49 42.6	-1.1
SRN	Sarande	0.85	227	Pg	Pg	05 49 43.8	-0.8
SRN				Sg	Sn	05 49 58.1	-0.9
SRN				AML	AML	05 50 04.2	
	comp=E,7.9nm,0.7s						
IGT	Igoumenitsa	1.00	202	Pn	Pg	05 49 46.8	-0.7
IGT				Sg	Sn	05 50 03.6	+1.0
IGT	Igoumenitsa	1.00	202	P	Pg	05 49 47.1	-0.3
IGT				S	Sn	05 50 02.4	-0.2
IGT	Igoumenitsa	1.00	202	*i* Pg	Pb	05 49 47.5	-0.2
IGT				*i* Sg	Sn	05 50 07.6	+5.0
IGT	Igoumenitsa	1.00	202	P	Pg	05 49 46.0	-1.4
VLO	Vlora	1.01	271	Pg	Pb	05 49 47.8	0.0
KEK	Kerkira	1.08	227	P	Pg	05 49 48.1	-0.9
LFKM	Lefkimmi	1.17	210	P	Pg	05 49 50.9	+0.2
THL	Klokotos Trika	1.28	134	P	Pn	05 49 51.8	-0.5
THL				S	Sn	05 50 09.2	-0.4
THL	Klokotos Trika	1.28	134	P	Pn	05 49 50.8	-1.4
THL				S	Sb	05 50 08.1	-1.0
TYRN	Tyrnavos	1.32	124	P	Pb	05 49 53.0	-0.1
TYRN				S	Sg	05 50 11.9	+1.3
TYRN	Tyrnavos	1.32	124	P	Pn	05 49 51.9	-0.9
AMPL	Ampelaki	1.57	169	P	Pb	05 49 57.4	0.0
SKO	Skopje	1.58	17	*i* Pg	Pn	05 49 56.5	+0.2
SKO				*i* Sg	Sg	05 50 20.4	+1.4
VAY	Valandovo	1.58	57	P	Pn	05 49 56.5	+0.2
VAY	Valandovo	1.58	57	*i* Pg	Pn	05 49 56.9	+0.5
VAY				*i* Sg	Sg	05 50 20.9	+1.8
VAY				*e*Lg	Lg	05 50 25.4	
	comp=E,273nm,0.7s						
VAY				*e*Lg	Lg	05 50 26.1	
	comp=N,579nm,0.7s						
VAY	Valandovo	1.58	57	*e*Pg	Pn	05 49 56.8	+0.5
VAY				*e*Sg	Sg	05 50 20.4	+1.3
THE	Thessaloniki	1.65	83	P	Pn	05 49 57.0	-0.2
THE				S	Sb	05 50 18.9	-0.6
THE	Thessaloniki	1.65	83	*i* Pn	Pn	05 49 57.2	0.0
LKD2	Lefkada island	1.68	184	Pn	Pg	05 50 00.5	+0.1
LKD2				Sn	Sg	05 50 28.0	+6.0
LKD2				AML	AML	05 50 36.6	
	comp=N,4.5nm,0.6s						
KNT	Kendrikon	1.73	65	P	Pn	05 49 58.4	0.0
KNT				S	Sb	05 50 21.9	0.0
KNT	Kendrikon	1.73	65	*i* Pn	Pn	05 49 58.5	+0.2
KNT	Kendrikon	1.73	65	P	Pn	05 49 58.1	-0.3
PUK	Puka	1.73	336	Pn	Pb	05 50 00.4	+0.2
PUK				Sn	Sg	05 50 24.3	+0.6
PUK				AML	AML	05 50 35.9	
	comp=N,4.2nm,0.7s						
HORT	Hortiatis	1.74	85	P	Pn	05 49 58.5	-0.2
HORT				S	Sb	05 50 22.0	-0.4
HORT	Hortiatis	1.74	85	P	Pn	05 49 58.3	-0.4
MAKR	Makrakomi, Fth	1.77	145	P	Pn	05 49 59.1	+0.1
AGG	Agios Georgios	1.85	140	P	Pb	05 50 01.0	-1.2
AGG	Agios Georgios	1.85	140	P	Pn	05 50 00.8	+0.7
ULC	Ulcinj	1.91	322	Pn	Pn	05 50 02.1	+1.0
ULC	Ulcinj	1.91	322	*i* Pn	Pb	05 50 02.3	-1.0
ULC	Ulcinj	1.91	322	⇓*i*Pn	Pn	05 50 02.0	+1.0
ULC				*e*Sn	Sg	05 50 29.8	+0.1
SOH	Sokhos	1.96	79	P	Pn	05 50 02.0	+0.3
SOH				S	Sn	05 50 26.9	+0.5
SOH	Sokhos	1.96	79	P	Pn	05 50 02.0	+0.3
BCI	Bajram Curri	1.99	344	Pn	Pg	05 50 05.5	-0.8
BCI				Sn	Sg	05 50 33.3	+1.3
BCI				AML	AML	05 50 41.6	
	comp=N,6.1nm,0.7s						
PLG	Polygyros	2.01	92	P	Pn	05 50 02.9	+0.6
FSK	Fiskardo	2.01	186	P	Pb	05 50 03.6	-1.2
DRME	Dracevica, Mon	2.12	325	*e*Pn	Pn	05 50 04.7	+0.9
DRME	Dracevica, Mon	2.12	325	⇓*i*Pn	Pn	05 50 05.1	+1.3
DRME				*e*Sn	Sb	05 50 34.2	+1.1
NEO	Neokhori	2.18	121	P	Pn	05 50 05.0	+0.4
SRS	Serrai	2.21	72	*i* Pn	Pn	05 50 05.3	+0.3
KKB	Krupnik	2.22	51	*i* Pn	Pn	05 50 06.0	+0.7
PVY	Plav	2.23	343	⇓*i*Pn	Pb	05 50 09.1	+0.4
PVY				*i* Sn	Sb	05 50 36.8	+0.4
VLS	Valsamata	2.29	185	P	Pn	05 50 07.0	+0.9
PDG	Podgorica	2.29	330	*e*Pn	Pn	05 50 05.8	-0.3
PDG	Podgorica	2.29	330	⇑P	Pn	05 50 07.5	+1.4
PDG				⇑S	Sn	05 50 35.6	+1.2
PDG	Podgorica	2.29	330	*e*Pg	Pn	05 50 07.5	+1.4
PDG				*e*Sg	Sg	05 50 40.1	-1.7
PDG	Podgorica	2.29	330	*e*Pn	Pn	05 50 07.2	+1.1
PDG				*i* Sn	Sb	05 50 38.0	-0.1
BUM	Brajici-Budva	2.34	322	⇑*i*Pn	Pn	05 50 07.5	+0.6
BOSS	Bosilegrad	2.39	31	*e*Pn	Pn	05 50 07.4	-0.1
OUR	Ouranopolis	2.42	92	P	Pn	05 50 07.9	+0.1
BARS	Barje	2.47	17	*i* Pn	Pn	05 50 08.7	0.0
BARS	Barje	2.47	17	*e*Pn	Pn	05 50 08.6	0.0
MMB	Musomishta	2.47	63	*i* Pn	Pn	05 50 09.5	+0.8
BEY	Berane	2.51	344	*i* Pn	Pb	05 50 12.8	-0.6
IVA	Berane	2.51	344	*e*Pn	Pn	05 50 10.3	+1.1
IVA				*i* Sn	Sb	05 50 46.3	+1.9
CEME	Cevo	2.53	326	⇑*i*Pn	Pn	05 50 10.1	+0.7
CEME				*e*Sn	Sb	05 50 43.0	-1.9
KOME	Kolasin	2.58	338	*e*Pn	Pn	05 50 12.0	+1.8
KOME				*i* Sn	Sb	05 50 44.8	-1.7
HCY	Herceg Novi	2.64	319	*e*Pn	Pn	05 50 10.3	-0.7
HCY	Herceg Novi	2.64	319	⇑*i*Pn	Pn	05 50 10.8	-0.2
HCY				*i* Sn	Sn	05 50 45.4	+2.2
SELS	Selova	2.77	5	*e*Pn	Pn	05 50 12.8	+0.1
SJES	Sjenica	2.87	348	*e*Pn	Pn	05 50 15.2	+1.0
SJES	Sjenica	2.87	348	*e*Pn	Pn	05 50 16.0	+1.8
SJES				*e*Sn	Sn	05 50 49.5	+0.6
TREB	Trebinje	2.92	321	*e*Pn	Pn	05 50 14.4	-0.3
BRY	Bratogost	2.98	326	*e*Pn	Pn	05 50 15.4	-0.3
BRY	Bratogost	2.98	326	*e*Pn	Pn	05 50 16.9	+1.2
BRY				*i* Sn	Sn	05 50 54.3	+2.7
PLE	Pljevlja	3.06	340	*e*Pn	Pb	05 50 20.0	-2.8
PLE				*e*Sn	Sn	05 50 56.9	+3.3
UPM	Unac-Piva	3.09	333	*e*Pn	Pn	05 50 14.8	-2.5
UPM	Unac-Piva	3.09	333	*e*Pn	Pn	05 50 19.4	+2.1
UPM				*i* Sn	Sn	05 50 56.9	+2.5
MATE	Matera	3.14	275	⇑P	Pn	05 50 18.0	+0.2
IVAS	Ivanjica	3.15	351	*e*Pn	Pn	05 50 17.4	-0.6
BOVS	Bovan	3.24	11	*e*Pn	Pn	05 50 18.9	-0.3
RUDO	Rudo	3.33	342	*e*Pn	Pb	05 50 27.5	0.0
STON	Ston	3.35	317	*e*Pn	Pn	05 50 20.5	-0.2
TIP	Timpagrande	3.38	249	⇑P	Pn	05 50 22.0	+0.8
ZAGS	Zajecar	3.51	17	*e*Pn	Pn	05 50 22.8	-0.1
ZAGS				*e*Sn	Sn	05 51 04.9	+0.4
BBLS	Lazi&#263i	3.56	343	*e*Pn	Pn	05 50 25.3	+1.6
BBLS	Lazi&#263i	3.56	343	*e*Pn	Pn	05 50 23.6	-0.1
DIVS	Divibare	3.69	351	*e*Pn	Pn	05 50 25.4	0.0
DIVS				*e*Sn	Sn	05 51 08.1	-0.9
BORS2	Bor- Borsko je	3.73	13	*e*Pn	Pn	05 50 24.9	-1.1
TRUS	Trudelj	3.77	355	*e*Pn	Pn	05 50 26.4	-0.1
HAPS	Han Pijesak,Bl	3.88	340	*e*Pn	Pn	05 50 29.3	+1.2
KUBS	Kucevo	4.00	9	*e*Pn	Pn	05 50 27.5	-2.1
TEKS	Tekeris	4.20	347	*e*Pn	Pn	05 50 31.6	-0.7
EZN	Ezine	4.27	97	⇑P	Pn	05 50 38.0	+4.7
MDVR	Moldovita	4.37	8	⇑P	Pn	05 50 36.7	+1.9
HERR	Herculane	4.57	14	⇓P	Pn	05 50 39.9	+2.4
FRGS	Fruska Gora	4.75	351	*e*Pn	Pn	05 50 39.5	-0.5
APE	Apeiranthos	5.00	131	⇑P	Pn	05 50 47.2	+3.7
BLY	Banja Luka	5.05	329	*e*Pn	Pn	05 50 45.8	+1.7
A050A	Klekovaca	5.12	323	*e*Pn	Pn	05 50 45.0	-0.1
GZR	Gura Zlata	5.13	16	⇑P	Pn	05 50 47.7	+2.4
BZS	Buzias	5.19	6	⇑P	Pn	05 50 47.0	+1.1
A051A	Mrakovica	5.38	329	*e*Pn	Pn	05 50 46.8	-1.9
VOIR		5.86	31	⇑P	Pn	05 50 58.1	+2.9
MORH	Mrgy, Hungar	5.97	345	⇑P	Pn	05 50 58.3	+1.7
IDI	Anoyia	6.08	147	Pn	Pn	05 51 02.2	+3.8
	comp=N,0.4nm,0.3s,baz=292,slow=16,SNR=1.4						
IDI				Sn	Sn	05 52 10.2	+2.1
	comp=N,1.3nm,0.3s,baz=42,slow=14,SNR=3.5						
MLR	Muntele Rosu	6.28	35	Pn	Pn	05 51 03.4	+2.4
	comp=N,0.6nm,0.3s,baz=314,slow=7.6,SNR=3.6						
MLR				Sn	Sn	05 52 13.3	+0.4
	comp=N,0.2nm,0.3s,baz=255,slow=6.2,SNR=3.5						
	comp=N,1.4nm,0.5s						
MLR	Muntele Rosu	6.28	35	⇑P	Pn	05 51 03.6	+2.6
BOJS	Bojanci	6.48	323	*e*Pn	Pn	05 51 03.0	-0.7
CRES	Cresnjevec Ost	6.64	326	*e*Pn	Pn	05 51 05.2	-0.7
VRI	Vrincioaia	6.92	37	⇑P	Pn	05 51 12.2	+2.5
CEY	Cerknica	7.05	321	*e*Pn	Pn	05 51 10.8	-0.7
TPGR	Topolog	7.12	49	⇑P	Pn	05 51 15.6	+3.1
SOKA	Soboth	7.50	328	*e*Pn	Pn	05 51 17.9	+0.1
	comp=N,1.6nm,0.3s						
OBKA	Obir	7.57	325	*e*Pn	Pn	05 51 18.8	+0.1
OBKA	Obir	7.57	325	*e*Pn	Pn	05 51 19.2	+0.5
	comp=N,1.6nm,0.4s						
ARSA	Arzberg	7.79	332	*e*Pn	Pn	05 51 22.5	+0.8
	comp=N,0.3nm,0.2s						
KECS	Kecovo	8.02	358	*e*PN	Pn	05 51 29.2	+4.3
MYKA	Terra Mystica	8.07	322	*i* Pn	Pn	05 51 24.9	-0.7
	comp=N,2.1nm,0.5s						
VYHS	Vyhne	8.15	351	*e*SN	Sn	05 52 59.0	+0.1
KBA	Koelnbreinsper	8.54	323	*i* Pn	Pn	05 51 32.4	+0.3
	comp=N,0.4nm,0.2s						
MILM	Milestii Mici	8.67	39	*e*P	Pn	05 51 32.6	-1.1
ABTA	Abfaltersbach	8.70	319	*e*Pn	Pn	05 51 35.2	+1.0
	comp=N,1.4nm,0.2s						
BIOA	Bad Ischl, Aus	8.88	327	*i* Pn	Pn	05 51 38.6	+1.9
	comp=N,2.2nm,0.3s						
LESA	Schwarzleotal	9.10	323	*i* Pn	Pn	05 51 40.0	+0.2
	comp=N,2.0nm,0.3s						
WTTA	Wattenberg	9.49	319	*e*Pn	Pn	05 51 45.4	+0.2
	comp=N,1.6nm,0.3s						
WATA	Walderalm	9.57	319	*i* Pn	Pn	05 51 45.8	-0.5
	comp=N,0.2nm,0.1s						
SQTA	Sankt Quirin	9.68	317	*i* Pn	Pn	05 51 49.5	+1.8
	comp=N,3.1nm,0.3s						
GERES	GERESS Array B	9.79	331	Pn	Pn	05 51 50.4	+1.3
	baz=155,slow=16,SNR=7.0						
	comp=N,0.3nm,0.2s						
FETA	Feichten	9.81	315	*i* Pn	Pn	05 51 50.7	+1.2
	comp=N,4.3nm,0.6s						
MOTA	Moosalm	9.82	318	*i* Pn	Pn	05 51 50.2	+0.6
	comp=N,10nm,0.8s						
BRTR	Keskin Array B	9.85	90	Pn	Pn	05 51 51.1	+1.0
	baz=279,slow=9.6,SNR=1.6						
	comp=N,0.2nm,0.4s						
DAVOX	Davos/Dischmat	10.13	312	Pn	Pn	05 51 53.8	-0.2
	comp=N,1.0nm,0.3s,baz=165,slow=18,SNR=6.6						
DAVOX				Sn	Sn	05 53 42.4	-5.4
	comp=N,0.3nm,0.3s,baz=182,slow=22,SNR=1.8						
DAVOX				LR	LR	05 56 27.7	
	comp=N,62nm,18.3s,baz=74,slow=42						
	comp=N,2.0nm,0.4s						
ESDC	Sonseca Array	18.97	276	P	P	05 53 49.2	-0.6
	comp=N,0.1nm,0.3s,baz=86,slow=11,SNR=6.2						
	comp=N,0.6nm,1.0s						
HFS	Hagfors	20.19	350	P	P	05 54 01.7	-1.1
	comp=N,1.4nm,0.8s,baz=166,slow=13,SNR=1.2						
	comp=N,1.4nm,0.8s						
FINES	FINESS Array B	21.26	7	P	P	05 54 12.8	-1.6
	comp=N,0.6nm,0.4s,baz=186,slow=15,SNR=4.1						
	comp=N,0.6nm,0.4s						
NOA	NORSAR Array B	21.44	347	P	P	05 54 15.9	-0.5
	comp=N,0.1nm,0.3s,baz=158,slow=9.8,SNR=4.2						
	comp=N,0.1nm,0.3s						
EKA	Eskdalemuir Ar	21.75	321	P	P	05 54 19.9	+0.2
	comp=N,0.8nm,0.7s,baz=116,slow=10,SNR=3.7						
	comp=N,0.8nm,0.7s						
TORD	Torodi Ar. Bea	31.97	217	P	P	05 55 54.8	+0.2
	comp=N,0.2nm,0.4s,baz=28,slow=9.9,SNR=1.7						
	comp=N,0.2nm,0.4s						
MKAR	Makanchi Array	43.94	60	P	P	05 57 34.7	-0.7
	comp=N,0.4nm,0.7s,baz=281,slow=8.0,SNR=6.1						
	comp=N,0.4nm,0.7s						

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*IDC **03** 05:57:05.1±0.3, 0°.35N×97°.71E, h0^{km}, mb5.3/39, mbtmp5.3/43, ML4.9/4, MS5.7/65, Error ellipse: s-maj=12.5km s-min=9.2km az=66.0*

*MOS **03** 05:57:06.1±0.9, 0°.32N×97°.75E, h17^{km}, mb5.8/71, MS5.8/40, Error ellipse: s-maj=7.0km s-min=4.0km az=108.2*

*BJI **03** 05:57:07.5, 0°.11N×97°.77E, h35^{km}, mB6.1/74, mb5.5/86, Ms6.2/91, Ms7 6.2/56*

*NEIC **03** 05:57:08.7, 0°.34N×97°.70E, h26^{km}*

*NEIC **03** 05:57:08.7, 0°.04N×97°.40E, h26^{km}, Moment Tensor Solution. Duration: 3^s.7 Moment tensor: Scale 10^{17}Nm; M_{rr}4.37; $M_{\theta\theta}$-1.62; $M_{\phi\phi}$-2.74; $M_{r\theta}$4.08; $M_{\theta\phi}$2.86; $M_{\phi r}$-0.46; Fault plane solution: $M_0$6.28000×10^{17} NP1: ϕ_s343.36000°, δ33.69000°, λ133.18000°. NP2: ϕ_s114.92000°, δ66.14000°, λ65.48000°. Principal axes: T 6.5242, Plg61.0000°, Azm348.0000°; N -0.4845, Plg22.0000°, Azm125.0000°; P -6.0397, Plg18.0000°, Azm223.0000°;*

*ISC-PP **03** 05:57:09, 0°.38N×97°.72E, h24^{km}, Mwppsm6.2, Moment Tensor Solution. s51 Moment tensor: Scale 10^{18}Nm; M_{rr}0.09±.17; $M_{\theta\theta}$-0.32±.18; $M_{\phi\phi}$-0.45±.23; $M_{r\theta}$0.47±.13;*

$M_{\theta\phi}$0.07±.17; $M_{\phi r}$0.34±.14; Fault plane solution: $M_0$2.95000×10^{18} NP1:ϕ_s350.90000°,δ39.00000°, λ150.80000°. NP2:ϕ_s104.40000°,δ72.10000°,λ54.80000°.

*IPGP **03** 05:57:09.0, 0.̊35N×97.̊72E, h18^{km}, Mw6.1, Fault plane solution: NP1:ϕ_s333.00000°,δ15.00000°,λ111.00000°. NP2:ϕ_s131.00000°,δ76.00000°,λ85.00000°.*

*NEIC **03** 05:57:09.3, 0.̊35N×97.̊72E, h16^{km}*

*DJA **03** 05:57:09.3±0.4, 0°N±2°×9°8E±°, h18^{km}±3^{km}, M5.7/97, mb5.4/97, mB6.0/74, MLv6.2/18, Mw(mB)5.6/74, MwMwp5.7/76, Mwp5.8/76*

*NEIC **03** 05:57:09.5±1.6, 0.̊38N±0.̊05×97.̊72E±0.̊07, h19^{km}±1^{km}, mb5.6/260, Ms_20 6.1/1028, Mwb6.0/72, Mww5.8/35, Error ellipse: s-maj=12.6km s-min=8.7km az=252.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.65; $M_{\theta\theta}$-0.42; $M_{\phi\phi}$-0.23; $M_{r\theta}$0.59; $M_{\theta\phi}$0.43; $M_{\phi r}$-0.51; Fault plane solution: $M_0$1.06000×10^{18} NP1: ϕ_s306.81000°,δ21.14000°,λ86.92000°. NP2: ϕ_s130.11000°,δ68.89000°,λ91.19000°. Principal axes: T 0.9956, Plg66.0000°, Azm42.0000°; N 0.1192, Plg1.0000°, Azm310.0000°; P -1.1148, Plg24.0000°, Azm219.0000°;*

*GCMT **03** 05:57:11.5±0.1, 0.̊35N±0.̊01×97.̊65E±0.̊01, h14^{km}, MW6.0/147, Moment Tensor Solution. s147,c293; s131,c313; Duration: 2.̊9 Moment tensor: Scale 10^{18} Nm; M_{rr}0.47±.01; $M_{\theta\theta}$-0.23±.01; $M_{\phi\phi}$-0.24±.01; $M_{r\theta}$0.89±.01; $M_{\theta\phi}$0.23±.00; $M_{\phi r}$-0.86±.01; Best double couple: $M_0$1.32800×10^{18} NP1:ϕ_s317.00000°,δ10.00000°, λ93.00000°. NP2:ϕ_s134.00000°,δ80.00000°,λ89.00000°. Principal axes: T 1.3320, Plg55.0000°, Azm43.0000°; N -0.0070, Plg1.0000°, Azm134.0000°; P -1.3250, Plg35.0000°, Azm225.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*BGR **03** 05:57:13.5, 0.̊18N×97.̊14E, h33^{km}, mb5.2, Ms5.7*

ISC 03 05:57:09.8±0.4, **0.̊36N**±0.̊03×**97.̊74E**±0.̊03, **h25**^{km}±2^{km}, **h25**^{km}**:pP-P, n1953,** σ**1.̊57**/1688, **mb5.5**/379, **MS6.1**/607, **102C-34D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.95	350		Pb	05 57 27.9	+0.2
GSI				Sg	Sb	05 57 38.5	-1.3
GSI	Gunungsitoli	0.95	350	P	Pn	05 57 27.2	-0.4
GSI	Gunungsitoli	0.95	350	P	Pb	05 57 27.8	+0.2
GSI	Gunungsitoli	0.95	350	⇑P	Pb	05 57 27.9	+0.2
MNSI	Mandailing Nat	1.89	77	P	Pn	05 57 41.1	+0.6
SISI	Saibi	2.15	141	P	Pn	05 57 43.1	-1.0
RPSI	Rantau Prapat	2.60	27		Pn	05 57 51.4	+1.1
PSI	Prapat	2.70	26	Pn	Pn	05 57 50.9	-0.8
	67nm,0.3s,baz=191,slow=8.9,SNR=128						
PSI				Lg	Lg	05 58 31.1	
	219nm,0.3s,baz=198,slow=20,SNR=8.0						
PSI				LR	LR	05 58 43.2	
	comp=Z,118µm,20.9s,baz=160,slow=37						
	309nm,0.5s						
PSI	Prapat	2.70	26	P	Pn	05 57 51.4	-0.3
PPI	Padang Panjang	2.78	107	P	Pn	05 57 53.3	+0.6
TSI	Tuntungan	3.23	15	P	Pn	05 58 00.4	+1.5
BKNI	Bangkinang	3.30	91		Pn	05 58 00.6	+0.7
BKNI	Bangkinang	3.30	91	P	Pn	05 58 00.5	+0.7
BKNI	Bangkinang	3.30	91	P	Pn	05 58 01.1	+1.2
BKNI	Bangkinang	3.30	91	P	Pn	05 58 00.6	+0.7
MLSI	Meulaboh, Aceh	4.10	341	P	Pn	05 58 10.2	-0.8
LHMI	Lhok Sumawe	4.90	351		Pn	05 58 21.9	0.0
LHMI	Lhok Sumawe	4.90	351	P	Pn	05 58 23.3	+1.4
LHMI	Lhok Sumawe	4.90	351	P	Pn	05 58 22.3	+0.4
LHMI	Lhok Sumawe	4.90	351	⇑P	Pn	05 58 21.8	-0.2
BSI	Banda Aceh	5.66	334	P	Pn	05 58 30.3	-2.0
	9.3nm49µm15µm996nm,1.0s						
KULM	Kulim	5.69	31		Pn	05 58 33.6	+0.8
KULM	Kulim	5.69	31	P	Pn	05 58 33.2	+0.4
KULM	Kulim	5.69	31	⇑P	Pn	05 58 33.7	+0.8
MYKOM	Kota Tinggi	6.27	77		Pn	05 58 41.3	+0.5
MYKOM	Kota Tinggi	6.27	77	P	Pn	05 58 42.3	+1.5
MYKOM	Kota Tinggi	6.27	77	⇑P	Pn	05 58 40.6	-0.2
KSI	Kapahiang	6.28	129	P	Pn	05 58 40.8	-0.1
TPRI	Tanjung Pinang	6.81	85	P	Pn	05 58 50.0	+1.8
	16nm86µm12µm375nm,0.9s						
MNAI	Manna	7.01	132		Pn	05 58 50.7	-0.3
MNAI	Manna	7.01	132	P	Pn	05 58 50.7	-0.3
MNAI	Manna	7.01	132	P	Pn	05 58 50.5	-0.5
PMBI	Palembang	7.75	115	Pn	Pn	05 59 00.3	-0.8
MDSI	Maura Dua	8.04	127	P	Pn	05 59 04.7	-0.3
LWLI	Liwa	8.27	130	P	Pn	05 59 08.0	-0.4
PPBI	Pangkal Pinang	8.76	107	P	Pn	05 59 15.4	+0.4
KASI	Kota Agung	8.93	131	P	Pn	05 59 15.8	-1.5
	4µm407nm,0.7s						
BLSI	Bandar Lampung	9.41	127	P	Pn	05 59 23.0	-0.9
	5µm329nm,0.9s						
TPI	Tanjungpandan	10.38	107	P	Pn	05 59 38.4	+1.2
	23µm4µm296nm,0.9s						
CGJI	Cibinong	10.54	131	P	Pn	05 59 37.1	-2.2
	221nm,0.8s						
SKJI	Sukabumi	11.44	130	P	Pn	05 59 50.1	-1.7
LEM	Lembang	12.17	126	Pn	Pn	06 00 02.1	+0.2
	5.6nm,0.3s,baz=323,slow=20,SNR=4.6						
LEM				LR	LR	06 05 27.8	
	comp=Z,36µm,18.7s,baz=291,slow=41						
	16nm,0.4s						
COCO	West Island	12.50	184		Pn	06 00 04.3	-1.9
COCO	West Island	12.50	184	P	Pn	06 00 08.0	+1.8
COCO	West Island	12.50	184	P	Pn	06 00 04.3	-1.9
COCO	West Island	12.50	184	⇑P	Pn	06 00 04.7	-1.5
JCJI	Jatiwangi	12.52	123	P	Pn	06 00 07.3	+0.8
	13µm339nm,0.8s						
BBJI	Bungbulang	12.57	128	P	Pn	06 00 06.3	-1.0
KSM	Kuching	12.62	85	Pn	Pn	06 00 05.2	-2.6
KSM	Kuching	12.62	85	P	Pn	06 00 08.6	+0.8
KSM	Kuching	12.62	85	⇑P	Pn	06 00 10.1	+2.3
XMIS	Christmas Isla	13.34	144	Pn	Pn	06 00 17.0	-0.7
DGPR	DIGLIPUR	13.60	340	*e*P	Pn	06 00 20.7	-0.5
DGPR				IAmb	IAmb	06 01 09.7	
	comp=Z,164nm,1.2s						
STKI	Sintang	13.74	91	P	Pn	06 00 23.1	-0.1
	comp=Z,27µmcomp=Z,297nm,1.0s						
SMRI	Semarang	14.65	120		Pn	06 00 35.1	-0.6
SMRI	Semarang	14.65	120	P	Pn	06 00 37.2	+1.5
SMRI	Semarang	14.65	120	P	Pn	06 00 35.5	-0.2
	comp=Z,4µmcomp=Z,191nm,0.8s						
UGM	Wanagama	15.16	123	Pn	Pn	06 00 41.1	-1.4
UGM				IAmb	IAmb	06 00 44.2	
	comp=Z,482nm,1.9s						
UGM	Wanagama	15.16	123	P	Pn	06 00 42.0	-0.6
UGM	Wanagama	15.16	123	P	Pn	06 00 40.4	-2.2
	comp=Z,147nm,1.3s						
WOJI	Wonogiri, Jawa	15.46	122	P	Pn	06 00 43.8	-2.6
	comp=Z,145nm,1.3s						
DLV	Lat	15.69	42		Pn	06 00 49.1	-0.5
DLV	Lat	15.69	42	P	P	06 00 51.9	-1.5
DLV	Lat	15.69	42	⇑P	Pn	06 00 50.0	+0.4
NGJI	Ngawi	15.69	120	P	Pn	06 00 49.8	+0.4
	comp=Z,19µmcomp=Z,8µmcomp=Z,337nm,1.1s						
TBJI	Tambak Boyo	15.78	117	P	Pn	06 00 51.1	+0.6
	comp=Z,11µmcomp=Z,5µmcomp=Z,243nm,0.9s						
GRJI	Gresik	16.39	116	P	Pn	06 00 59.5	+1.2
	comp=Z,12µmcomp=Z,4µmcomp=Z,335nm,0.9s						
UBPT	Khong Chiam	16.68	27		Pn	06 01 01.3	-0.7
UBPT	Khong Chiam	16.68	27	P	Pn	06 01 01.9	0.0
KMMI	Kalianget	17.78	115	P	Pn	06 01 15.4	-0.4
	comp=Z,14µmcomp=Z,5µmcomp=Z,164nm,1.0s						
GMJI	Gumukmas	17.85	119	P	Pn	06 01 16.5	-0.1
CM31	Chiang Mai Arr	18.02	4	P	P	06 01 19.7	+0.7
CM31	Chiang Mai Arr	18.02	4	P	Pn	06 01 17.2	-1.5
	SNR=95						
CM31				P	Pn	06 01 17.2	-1.5
	SNR=95						
CM31				S	Sn	06 04 37.7	-1.5
CM31				S	Sn	06 04 37.7	-1.5
CMAR	Chiang Mai Arr	18.02	4	P	Pn	06 01 18.2	-0.5
CMAR	Chiang Mai Arr	18.02	4	P	Pn	06 01 17.7	-1.0
	comp=Z,5.3nm,0.3s,baz=191,slow=11,SNR=80						
CMAR				PcP	PcP	06 05 54.5	+1.3
	comp=Z,2.3nm,0.5s,baz=190,slow=1.5,SNR=4.1						
CMAR				Lg	Lg	06 06 31.9	
	comp=Z,0.5nm,0.3s,baz=184,slow=31,SNR=1.7						
CMAR				LR	LR	06 09 04.7	
	comp=Z,38µm,18.3s,baz=175,slow=40						
	comp=Z,91nm,1.0s						
CMAR	Chiang Mai Arr	18.02	4	P	Pn	06 01 18.2	-0.5
PALK	Pallekele	18.32	292	P	P	06 01 21.8	-0.7
PALK	Pallekele	18.32	292	P	P	06 01 21.6	-0.8
	comp=Z,2.5nm,0.3s,baz=102,slow=10,SNR=16						
PALK				S	Sn	06 04 43.1	-3.6
	comp=Z,45nm,0.7s,baz=204,slow=21,SNR=8.0						
PALK				LR	LR	06 07 41.5	
	comp=Z,37µm,19.5s,baz=110,slow=35						
	comp=Z,69nm,1.0s						
PALK	Pallekele	18.32	292	P	Pn	06 01 25.3	+2.8
PALK				P	Pn	06 01 25.3	+2.8
PALK				S	S	06 04 53.1	+2.2
PALK				S	S	06 04 53.1	+2.2
PALK	Pallekele	18.32	292	*i* P	Pn	06 01 23.4	+0.9
PALK				pmax	pmax		
	comp=Z,140nm,1.1s						
ABJI	Asem Bagus	18.33	117	P	Pn	06 01 23.1	+0.5
	comp=Z,11µmcomp=Z,4µmcomp=Z,181nm,0.9s						
CHTO	Chiang Mai	18.38	4	P	P	06 01 21.9	-1.1
CHTO	Chiang Mai	18.38	4	P	P	06 01 22.2	-0.7
CHTO				S	Sn	06 04 44.7	-3.1
CHTO	Chiang Mai	18.38	4	P	P	06 01 22.6	-0.3
CHTO	Chiang Mai	18.38	4	P	P	06 01 21.9	-1.1
CHTO				pmax	pmax		
	comp=Z,183nm,0.9s						
CHTO	Chiang Mai	18.38	4	⇑P	P	06 01 21.9	-1.1
JAGI	Jajag, Banyuwa	18.56	119	P	P	06 01 24.1	-0.9
JAGI	Jajag, Banyuwa	18.56	119	P	P	06 01 24.6	-0.4
	comp=Z,10µmcomp=Z,122nm,1.1s						
MALK	Mahakanadarawa	18.90	295	P	Pn	06 01 29.3	-0.2
MALK	Mahakanadarawa	18.90	295	⇓p	Pn	06 01 31.4	+1.9
BKB	Balikpapan	19.22	95	P	P	06 01 29.3	-3.0
BKB				IAmb	IAmb	06 01 40.0	
	comp=Z,254nm,0.9s						
KKM	Kota Kinabalu	19.28	73	P	P	06 01 32.7	-0.4
KKM				IAmb	IAmb	06 01 39.5	
	comp=Z,548nm,1.3s						
KKM	Kota Kinabalu	19.28	73	P	Pn	06 01 34.1	-0.1
KKM	Kota Kinabalu	19.28	73	⇑P	P	06 01 33.3	+0.2
TWSI	Taliwang, Sumb	21.11	116	P	P	06 01 52.0	-0.8
	comp=Z,12µmcomp=Z,85nm,0.9s						
MYLDM	Lahad Datu	21.27	77	P	P	06 01 54.5	-0.1
MYLDM				IAMs_20	IAMs_20	06 11 14.0	
	comp=Z,78µm,20.0s						
MYLDM	Lahad Datu	21.27	77	P	P	06 01 57.5	+2.9
MYLDM	Lahad Datu	21.27	77	⇑P	P	06 01 55.1	+0.5
MDRS	Chennai	21.45	307	*e*P	P	06 01 54.6	-1.8
MDRS				IAmb	IAmb	06 02 22.0	
	comp=Z,104nm,0.9s						
MDRS				*e*S	S	06 05 52.9	-0.5
SLVN	Son La	21.70	16	P	P	06 01 58.4	-0.7
SLVN				IAmb	IAmb	06 02 02.6	
	comp=Z,230nm,1.0s						
SLVN	Son La	21.70	16	P	P	06 01 58.5	-0.6
PLAI	Plampang	21.95	115	P	P	06 02 03.0	+1.2
PLAI	Plampang	21.95	115	P	P	06 01 59.3	-2.5
	comp=Z,10µmcomp=Z,77nm,0.9s						
QIZ	Qiongzhong	22.03	32	P	P	06 02 00.7	-2.0
QIZ	Qiongzhong	22.03	32	P	P	06 02 04.0	+1.4
QIZ				pmax	pmax		
	comp=Z,7µm,12.6s						
QIZ				LR	LR		
	comp=Z,37µm,13.3s						
QIZ				LR	LR		
	comp=Z,22µm,13.5s						
QIZ	Qiongzhong	22.03	32	P	P	06 02 04.2	+1.6
PCI	Palu	22.13	93	P	P	06 02 04.8	+1.0
	comp=Z,5µmcomp=Z,275nm,1.3s						
MPSI	Mapaga	22.16	90	P	P	06 02 04.6	+0.5
	comp=Z,4µmcomp=Z,161nm,0.9s						
TRD	Trivandrum	22.23	292	*e*P	P	06 02 03.0	-1.9
TRD				IAmb	IAmb	06 02 27.0	
	comp=Z,104nm,0.4s						
TRD				*e*S	S	06 06 07.4	-1.0
TTSI	Tana Toraja	22.33	99	P	P	06 02 06.8	+0.9
	comp=Z,19µmcomp=Z,4µmcomp=Z,102nm,1.1s						
KOD	Kodaikanal	22.42	297	*e*P	P	06 02 05.1	-2.1
KOD				IAmb	IAmb	06 02 34.5	
	comp=Z,92nm,1.0s						
KOD				*e*S	S	06 06 09.3	-3.3
SPSI	Sidrap Palu	22.43	101	P	P	06 02 07.8	+0.8
	comp=Z,4µmcomp=Z,78nm,1.1s						
KAPI	Kappang	22.62	104	P	P	06 02 08.0	-1.1
KAPI	Kappang	22.62	104	LR	LR	06 12 54.3	
	comp=Z,37µm,18.8s,baz=268,slow=42						
KAPI	Kappang	22.62	104	P	P	06 02 07.3	-1.8
KAPI				S	S	06 06 11.9	-3.8
KAPI	Kappang	22.62	104	P	P	06 02 12.3	+3.2
KAPI	Kappang	22.62	104	P	P	06 02 08.0	-1.1
KAPI				pmax	pmax		
	comp=Z,72nm,0.9s						
KAPI				MLR	MLR		
	comp=Z,30µm,19.0s						
KAPI	Kappang	22.62	104	⇑P	P	06 02 07.3	-1.8
BNSI	Bone	22.84	102	P	P	06 02 12.9	+1.5
	comp=Z,25µmcomp=Z,6µmcomp=Z,172nm,1.4s						
TOLI2	Tolitoli	23.05	88	P	P	06 02 11.8	-1.7
TOLI2				IAmb	IAmb	06 02 16.0	
	comp=Z,146nm,1.0s						
TOLI2	Tolitoli	23.05	88	P	P	06 02 14.5	+0.9
BKSI	Bulukumba	23.05	104	P	P	06 02 14.7	+1.1
	comp=Z,18µmcomp=Z,5µmcomp=Z,198nm,1.0s						
VJD	Vijayawada	23.27	314	*e*P	P	06 02 17.8	+2.1
VJD				IAmb	IAmb	06 03 05.7	
	comp=Z,460nm,1.5s						
VJD				*e*S	S	06 06 23.1	-3.6
RAGD	RAYAGADA	23.42	324	*e*P	P	06 02 18.4	+1.2
RAGD				IAmb	IAmb	06 02 28.6	
	comp=Z,443nm,1.0s						
RAGD				*e*S	S	06 06 28.1	-0.9
BSSI	Bau Bau, Buton	23.61	106	P	P	06 02 18.4	-0.7
	comp=Z,13µmcomp=Z,8µmcomp=Z,354nm,0.9s						
AZL	Aizawl	23.75	348	*e*P	P	06 02 20.7	+0.3
AZL				IAmb	IAmb	06 02 37.0	
	comp=Z,283nm,0.8s						
AZL				*e*S	S	06 06 36.3	+1.8
APSI	Ampana	23.94	93	P	P	06 02 22.8	+0.5
	comp=Z,8µmcomp=Z,293nm,0.9s						
MRSI	Marisa	24.20	90	P	P	06 02 23.6	-1.1
	comp=Z,17µmcomp=Z,6µmcomp=Z,347nm,1.0s						
TNCH	TengChong	24.53	2	⇑P	P	06 02 28.2	+0.4
TNCH				sP	sP	06 02 38.6	+0.3
TNCH				PP	PnPn	06 03 04.9	+5.5
TNCH				S	S	06 06 46.4	-0.8
TNCH				pmax	pmax		
	comp=Z,440nm,1.8s						
TNCH				LR	LR		
	comp=Z,35µm,11.6s						
TNCH				LR	LR		
	comp=Z,28µm,14.4s						
TNCH				LR	LR		
	comp=Z,40µm,19.8s						
IMP	Imphal	24.60	352	*e*P	P	06 02 29.4	+1.1
IMP				*e*S	S	06 06 50.0	+1.8
LUWI	Luwuk	25.07	93	P	P	06 02 30.9	-1.6
LUWI	Luwuk	25.07	93	P	P	06 02 34.9	+2.3
LUWI	Luwuk	25.07	93	P	P	06 02 32.4	-0.2
LUWI	Luwuk	25.07	93	⇑P	P	06 02 31.8	-0.8
KMI	Kunming	25.09	11	⇑P	P	06 02 34.1	+1.3
KMI				S	S	06 06 59.6	+3.4
KMI				pmax	pmax		
	comp=Z,370nm,1.0s						
KMI				pmax	pmax		
	comp=Z,6µm,6.7s						
KMI				LR	LR		
	comp=Z,14µm,17.9s						
JHSG	JHARSUGUGA	25.26	328	*e*P	P	06 02 36.8	+2.7
JHSG				IAmb	IAmb	06 02 44.1	
	comp=Z,300nm,0.8s						
JHSG				*e*S	S	06 06 58.9	+0.3
HYB	Hyderabad	25.37	313	*e*P	P	06 02 35.2	-0.1
HYB				*e*sP	pP	06 02 43.9	+1.3
HYB				IVmB_BB		06 02 46.1	
	comp=Z,1µm,3.2s						
HYB				*e*PcP	PcP	06 06 07.8	+0.1
HYB				*e*S	S	06 07 01.6	+1.0
HYB				IVMs_BB	IVMs_BB	06 11 43.4	
	comp=Z,4µm,18.3s						
KOHI	KOHIMA	25.45	352	*e*P	P	06 02 36.6	+0.5
KOHI				IAmb	IAmb	06 02 43.0	
	comp=Z,1µm,1.1s						
KOHI				*e*S	S	06 07 03.6	+1.7
BBSI	Bau Bau	25.47	104	P	P	06 02 36.1	-0.1
	comp=Z,14µmcomp=Z,5µmcomp=Z,210nm,0.8s						
EDFI	Ende, Flores	25.52	111	P	P	06 02 36.4	-0.4
	comp=Z,54nm,0.8s						
KNTI	KHUNTI	25.61	333	*e*P	P	06 02 41.9	+4.5
KNTI				IAmb	IAmb	06 02 58.7	
	comp=Z,264nm,0.9s						
PZH	PanZhiHua	26.27	8	P	P	06 02 45.8	+2.3
PZH				PP	PnPn	06 03 29.8	+6.7
PZH				S	S	06 07 15.7	+0.9
PZH				pmax	pmax		
	comp=Z,130nm,1.1s						
PZH				pmax	pmax		
	comp=Z,1µm,8.2s						
PZH				LR	LR		
	comp=Z,30µm,16.1s						
PZH				LR	LR		
	comp=Z,28µm,15.9s						
PZH				LR	LR		
	comp=Z,44µm,18.0s						
H08S2	Diego Garcia H	26.40	252	T	T	06 30 08.5	
	baz=73,slow=75						
H08S3	Diego Garcia H	26.41	252	T	T	06 30 01.9	
	baz=73,slow=75						
H08S1	Diego Carcia H	26.42	252	T	T	06 30 02.9	
	baz=73,slow=75						
BLSP	Bilaspur	26.45	326	*e*P	P	06 02 44.1	-0.8
BLSP				IAmb	IAmb	06 02 49.9	
	comp=Z,296nm,1.1s						
BLSP				*e*S	S	06 07 15.9	-1.6
TEZP	TEZPUR	26.53	350	*e*P	P	06 02 46.5	+0.8
TEZP				IAmb	IAmb	06 02 51.9	
	comp=Z,280nm,0.9s						
TGY	Tagaytay City	26.71	58	LR	LR	06 13 14.8	
	comp=Z,13µm,20.9s,baz=220,slow=36						
GZH	Guangzhou	27.21	33	P	P	06 02 56.6	+4.8
GZH				LR	LR		
	comp=Z,24µm,17.1s						
GZH				LR	LR		
	comp=Z,46µm,16.5s						
GZH				LR	LR		
	comp=Z,61µm,14.9s						
GYA	Guiyang	27.33	18	⇑P	P	06 02 53.0	0.0
GYA				sP	sP	06 03 06.6	+3.0
GYA				PP	PnPn	06 03 42.7	+5.2
GYA				S	S	06 07 31.4	-0.1
GYA				pmax	pmax		
	comp=Z,23nm,0.8s						
GYA				pmax	pmax		
	comp=Z,5µm,13.0s						
GYA				LR	LR		
	comp=Z,31µm,15.4s						
GYA				LR	LR		
	comp=Z,40µm,13.4s						
GULI	GuiLin	27.62	25	P	P	06 02 58.5	+3.0
GULI				pmax	pmax		
	comp=Z,40nm,0.9s						
GULI				LR	LR		
	comp=Z,16µm,21.7s						
GULI				LR	LR		
	comp=Z,18µm,18.2s						
GULI				LR	LR		
	comp=Z,10µm,19.6s						
SGSI	Sangihe	27.96	83	P	P	06 03 00.0	+1.3
SZP	Santa	28.13	51	P	P	06 03 01.8	+1.7
GTK	Tadong	28.20	343	*e*P	P	06 03 01.5	+0.6
GTK				IAmb	IAmb	06 03 09.1	
	comp=Z,618nm,1.1s						
GTK				*e*S	S	06 07 46.8	+1.5
SOEI	Soe	28.25	112	P	P	06 02 57.3	-4.1
SANI	Sanana	28.34	95	P	P	06 02 58.5	-3.6
SANI	Sanana	28.34	95	P	P	06 03 02.6	+0.5
	comp=Z,11µmcomp=Z,2µmcomp=Z,97nm,1.0s						
DAV	Davao City (W)	28.55	76	LR	LR	06 15 40.1	
	comp=Z,24µm,20.7s,baz=234,slow=39						
DAV	Davao City (W)	28.55	76	P	P	06 03 02.0	-2.0
EVN	Everest	29.37	340	P	P	06 03 11.5	-0.3
NLAI	Namlea	29.56	97	P	P	06 03 13.5	+0.6
	comp=Z,10µmcomp=Z,4µmcomp=Z,152nm,0.9s						
LSA	Lhasa	29.84	348	P	P	06 03 15.7	0.0
LSA				IAmb	IAmb	06 03 20.7	
	comp=Z,122nm,0.9s						
LSA	Lhasa	29.84	348	P	P	06 03 16.5	+0.8
LSA				S	S	06 08 15.3	+3.7
LSA				pmax	pmax		
	comp=Z,110nm,1.0s						
LSA				LR	LR		
	comp=Z,14µm,24.8s						
LSA				LR	LR		
	comp=Z,22µm,24.8s						
LSA	Lhasa	29.84	348	P	P	06 03 15.7	0.0
LSA				pmax	pmax		
	comp=Z,122nm,0.9s						
LSA				MLR	MLR		
	comp=Z,26µm,22.0s						
NRDN	NARMADA NAGAR	29.91	319	*e*P	P	06 03 17.2	+1.3
NRDN				IAmb	IAmb	06 03 33.0	
	comp=Z,46nm,0.8s						
NRDN				*e*S	S	06 08 12.1	+0.2
BHPL	Bhopal	30.11	320	*e*P	P	06 03 17.2	-0.5
BHPL				IAmb	IAmb	06 03 52.5	
	comp=Z,55nm,1.1s						
BHPL				*e*S	S	06 08 14.9	-0.3
MBWA	Marble Bar	30.32	136	P	P	06 03 19.8	+0.3
MBWA				IAmb	IAmb	06 03 30.4	
	comp=Z,148nm,1.7s						
MBWA	Marble Bar	30.32	136	IAMs_20	IAMs_20	06 16 31.8	
	comp=Z,33µm,21.0s						
PSA00	Pilbara Seismi	30.68	137	P	P	06 03 22.9	+0.3
CD2	Chengdu	30.91	10	P	P	06 03 24.2	-0.5
CD2				PP	PP	06 04 31.5	-3.3
CD2				S	S	06 08 24.1	-3.5
CD2				pmax	pmax		
	comp=Z,90nm,0.8s						
CD2				pmax	pmax		
	comp=Z,3µm,5.1s						
CD2				LR	LR		
	comp=Z,60µm,14.6s						
JHNI	Jhansi	31.09	325	*e*P	P	06 03 25.8	-0.5
JHNI				IAmb	IAmb	06 03 30.5	
	comp=Z,126nm,1.2s						
JHNI				*e*S	S	06 08 30.3	-0.1
GUNA	GUNA	31.20	322	*e*P	P	06 03 27.9	+0.6
GUNA				IAmb	IAmb	06 03 59.9	
	comp=Z,244nm,1.4s						
GUNA				*e*S	S	06 08 32.3	+0.2
KNMB	Chin-men Tao	31.21	38	IAMs_20	IAMs_20	06 17 13.6	
	comp=Z,33µm,18.0s						
CNSH	ChangSha	31.26	26	P	P	06 03 29.4	+1.7
CNSH				S	S	06 08 37.6	+4.7
CNSH				pmax	pmax		
	comp=Z,51nm,2.9s						
CNSH				LR	LR		
	comp=Z,39µm,14.9s						
CNSH				LR	LR		
	comp=Z,15µm,13.0s						
CNSH				LR	LR		
	comp=Z,44µm,14.8s						
QZH	Quanzhou	31.68	38	⇑*i*P	P	06 03 31.4	-0.1
QZH				PP	PnPn	06 04 34.2	-1.6
QZH				S	S	06 08 40.7	+1.0
QZH				pmax	pmax		
	comp=Z,100nm,1.0s						
QZH				pmax	pmax		
	comp=Z,3µm,5.3s						
QZH				LR	LR		
	comp=Z,30µm,14.7s						
ENH	Enshi	31.77	20	P	P	06 03 31.7	-0.6
ENH				IAMs_20	IAMs_20	06 17 53.3	
	comp=Z,32µm,19.0s						
ENH	Enshi	31.77	20	P	P	06 03 33.9	+1.6
TPUB	Ta-pu	31.85	43	P	P	06 03 32.8	-0.2
TPUB				IAmb	IAmb	06 04 05.5	
	comp=Z,108nm,0.9s						
TPUB	Ta-pu	31.85	43	P	P	06 03 36.3	+3.3
YULB	Yu-li	32.36	43	P	P	06 03 36.5	-1.0
YULB				IAmb	IAmb	06 03 48.2	
	comp=Z,196nm,1.7s						
YULB				IAMs_20	IAMs_20	06 17 18.3	
	comp=Z,29µm,20.0s						
YULB	Yu-li	32.36	43	P	P	06 03 41.3	+3.8
SSLB	Suanglung	32.40	42	P	P	06 03 37.1	-0.7
SSLB				IAmb	IAmb	06 03 42.3	
	comp=Z,122nm,1.0s						
SSLB	Suanglung	32.40	42	P	P	06 03 39.8	+2.0
FITZ	Fitzroy Crossi	33.00	125	P	P	06 03 41.9	-1.2
FITZ	Fitzroy Crossi	33.00	125	P	P	06 03 41.1	-2.0
	comp=Z,80nm,0.7s,baz=281,slow=4.4,SNR=51						
FITZ				LR	LR	06 18 36.6	
	comp=Z,22µm,20.7s,baz=301,slow=39						
	comp=Z,80nm,0.7s						
NACB	Ninganchiao	33.09	43	P	P	06 03 42.4	-1.5

NACB				IAmb	IAmb	06 04 02.9	
	comp=Z,83nm,1.2s						
NACB				IAMs_20	IAMs_20	06 16 57.4	
	comp=Z,25µm,20.0s						
NACB	**Ninganchiao**	**33.09**	**43**	P	**P**	**06 03 47.0**	**+3.2**
YHNB	**Yeheng**	**33.27**	**42**	IAMs_20	IAMs_20	06 16 54.4	
	comp=Z,27µm,21.0s						
YHNB	**Yeheng**	**33.27**	**42**	P	**P**	**06 03 47.2**	**+1.6**
LGTI	**Lohaghat**	**33.40**	**332**	*e*P	**P**	**06 03 47.3**	**+0.8**
LGTI				IAmb	IAmb	06 04 16.1	
	comp=Z,219nm,0.9s						
LGTI				*e*S	**S**	**06 09 07.5**	**+1.3**
PTH	**Pithoragarh**	**33.49**	**332**	*e*P	**P**	**06 03 47.9**	**+0.4**
PTH				IAmb	IAmb	06 03 55.3	
	comp=Z,174nm,0.6s						
PTH				*e*S	**S**	**06 09 08.8**	**+0.7**
MEEK	**Meekatharra**	**33.54**	**145**	P	**P**	**06 03 50.2**	**+2.4**
	comp=Z,0.0nmcomp=Z,59nm,2.4s						
MEEK	**Meekatharra**	**33.54**	**145**	P	**P**	**06 03 49.9**	**+2.1**
SWI	**Sorong**	**33.54**	**92**	P	**P**	**06 03 47.3**	**-0.6**
	comp=Z,8µmcomp=Z,2µmcomp=Z,67nm,0.9s						
WHN	**Wuhan**	**33.91**	**26**	⇑P	**P**	**06 03 51.4**	**+0.5**
WHN				PP	**PnPn**	**06 05 05.1**	**+0.9**
WHN				S	**S**	**06 09 17.7**	**+3.5**
WHN				pmax	pmax		
	comp=Z,150nm,0.8s						
MORW	**Morawa**	**34.09**	**151**	P	P	06 04 03.8	+11
MORW	**Morawa**	**34.09**	**151**	P	**P**	**06 03 56.8**	**+4.2**
AJM	**Ajmer**	**34.19**	**321**	*e*P	**P**	**06 03 52.6**	**-0.8**
AJM				IAmb	IAmb	06 04 08.9	
	comp=Z,133nm,1.5s						
AJM				*e*S	**S**	**06 09 18.4**	**-0.3**
KUDL	**Kundal**	**34.31**	**325**	*e*P	**P**	**06 03 54.1**	**-0.3**
KUDL				IAmb	IAmb	06 04 08.9	
	comp=Z,77nm,1.4s						
KUDL				*e*S	**S**	**06 09 20.9**	**+0.4**
SAUI	**Saumlaki**	**34.47**	**105**	IAMs_20	IAMs_20	06 19 59.0	
	comp=Z,23µm,19.0s						
KNRA	**Kununurra**	**34.53**	**119**	P	**P**	**06 03 55.2**	**-1.3**
KNRA				IAmb	IAmb	06 04 05.9	
	comp=Z,131nm,1.8s						
FAKI	**Fak Fak**	**34.65**	**96**	IAmb	IAmb	06 04 05.1	
	comp=Z,80nm,0.9s						
FAKI	**Fak Fak**	**34.65**	**96**	P	**P**	**06 03 59.8**	**+2.2**
FAKI	**Fak Fak**	**34.65**	**96**	P	**P**	**06 03 57.0**	**-0.6**
	comp=Z,8µmcomp=Z,2µmcomp=Z,101nm,1.1s						
FAKI	**Fak Fak**	**34.65**	**96**	⇑P	**P**	**06 03 56.1**	**-1.5**
XAN	**Xi'an**	**35.10**	**16**	⇑P	**P**	**06 04 00.6**	**-0.7**
XAN				pP	pP	06 04 07.6	-1.2
XAN				S	**S**	**06 09 30.2**	**-2.4**
XAN				pmax	pmax		
	comp=Z,580nm,0.9s						
XAN				pmax	pmax		
	comp=Z,4µm,6.6s						
XAN				LR	LR		
	comp=Z,29µm,13.7s						
DDI	**Dehra Dun**	**35.19**	**330**	*e*P	**P**	**06 04 03.0**	**+0.9**
DDI				IAmb	IAmb	06 04 35.1	
	comp=Z,165nm,0.9s						
DDI				*e*S	**S**	**06 09 34.5**	**+0.5**
GOMU	**GeErMu**	**35.76**	**356**	P	**P**	**06 04 07.8**	**+0.5**
GOMU				PP	**PP**	**06 05 31.4**	**+2.6**
GOMU				S	**S**	**06 09 47.9**	**+4.6**
GOMU				pmax	pmax		
	comp=Z,56nm,1.3s						
GOMU				pmax	pmax		
	comp=Z,4µm,6.3s						
GOMU				LR	LR		
	comp=Z,26µm,17.0s						
GOMU				LR	LR		
	comp=Z,14µm,20.5s						
GOMU				LR	LR		
	comp=Z,35µm,18.9s						
LZH	**Lanzhou**	**35.99**	**8**	*e*P	**P**	**06 04 09.3**	**+0.3**
LZH				PP	**PP**	**06 05 35.9**	**+4.7**
LZH				S	**S**	**06 09 46.3**	**-0.2**
LZH				sS	sS	06 10 00.4	+1.3
LZH				pmax	pmax		
	comp=Z,130nm,1.2s						
LZH				pmax	pmax		
	comp=Z,3µm,7.6s						
LZH				LR	LR		
	comp=Z,28µm,18.2s						
LZH				LR	LR		
	comp=Z,28µm,14.8s						
LZH				LR	LR		
	comp=Z,38µm,17.9s						
KLP	**Kalpa**	**36.08**	**331**	*e*P	**P**	**06 04 09.6**	**-0.4**
KLP				IAmb	IAmb	06 04 40.2	
	comp=Z,128nm,0.6s						
KLP				*e*S	**S**	**06 09 48.1**	**-0.1**
RKPI	**Ransiki, Papua**	**36.48**	**93**	P	**P**	**06 04 13.7**	**+0.4**
	comp=Z,6µmcomp=Z,84nm,1.2s						
MUN	**Mundaring**	**36.61**	**153**	P	P	06 04 24.4	+10
MUN	**Mundaring**	**36.61**	**153**	P	**P**	**06 04 17.4**	**+3.3**
LYN	**LuoYang**	**36.70**	**21**	⇑P	**P**	**06 04 15.6**	**+0.7**
LYN				sP	sP	06 04 24.5	-1.0
LYN				PP	**PP**	**06 05 41.9**	**+3.2**
LYN				S	**S**	**06 09 59.2**	**+2.3**
LYN				pmax	pmax		
	comp=Z,410nm,1.0s						
LYN				pmax	pmax		
	comp=Z,5µm,6.9s						
LYN				LR	LR		
	comp=Z,24µm,16.5s						
HNLY	**HANLEY**	**36.77**	**333**	*e*P	**P**	**06 04 15.8**	**-0.4**
HNLY				IAmb	IAmb	06 04 20.4	
	comp=Z,199nm,1.2s						
HNLY				*e*S	**S**	**06 09 58.5**	**-0.7**
KDU	**Kakadu**	**36.81**	**112**	⇑P	**P**	**06 04 13.7**	**-2.4**
KLBR	**Kellerberrin**	**37.01**	**151**	P	**P**	**06 04 20.0**	**+2.4**
	comp=Z,52nm,0.8s						
KLBR	**Kellerberrin**	**37.01**	**151**	P	**P**	**06 04 19.6**	**+2.0**
NJ2	**Nanjing**	**37.30**	**30**	⇑P	**P**	**06 04 20.1**	**+0.1**
NJ2				PP	**PnPn**	**06 05 52.3**	**+6.2**
NJ2				pmax	pmax		
	comp=Z,84nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,3µm,5.3s						
NJ2				LR	LR		
	comp=Z,25µm,16.1s						
DHRM	**DHARAMSHALA**	**37.63**	**330**	*e*P	**P**	**06 04 23.7**	**+0.6**
DHRM				IAmb	IAmb	06 04 51.8	
	comp=Z,824nm,1.7s						
DHRM				*e*S	**S**	**06 10 11.6**	**0.0**
SSE	**Sheshan**	**37.80**	**34**	P	**P**	**06 04 24.8**	**+0.6**
SSE				S	**S**	**06 10 15.8**	**+2.1**
SSE				pmax	pmax		
	comp=Z,84nm,0.8s						
SSE				pmax	pmax		
	comp=Z,1µm,7.0s						
SSE				LR	LR		
	comp=Z,9µm,15.6s						
SSE				LR	LR		
	comp=Z,4µm,16.4s						
NWAO	**Narrogin (SRO)**	**37.87**	**153**	IAMs_20	IAMs_20	06 21 00.5	
	comp=Z,21µm,20.0s						
NWAO	**Narrogin (SRO)**	**37.87**	**153**	LR	LR	06 19 42.5	
	comp=Z,16µm,19.8s,baz=333,slow=36						
NWAO	**Narrogin (SRO)**	**37.87**	**153**	P	**P**	**06 04 28.1**	**+3.3**
THN	**Thein Dam**	**38.07**	**329**	*e*P	**P**	**06 04 26.2**	**-0.3**
THN				IAmb	IAmb	06 04 38.3	
	comp=Z,122nm,0.9s						
THN				*e*S	**S**	**06 10 15.2**	**-2.7**
H01W3	**Cape Leeuwin H**	**38.27**	**158**	T	T	06 44 41.1	
	baz=334,slow=76,SNR=158						
H01W2	**Cape Leeuwin H**	**38.28**	**158**	T	T	06 44 42.1	
	baz=334,slow=76,SNR=97						
H01W1	**Cape Leeuwin H**	**38.28**	**158**	T	T	06 44 42.2	
	baz=334,slow=76,SNR=197						
BAKI	**Biak**	**38.40**	**92**	P	**P**	**06 04 30.1**	**+0.5**
	comp=Z,6µmcomp=Z,2µmcomp=Z,42nm,0.7s						
GTA	**Gaotai**	**38.91**	**3**	P	**P**	**06 04 34.2**	**+0.5**
GTA				PP	**PnPn**	**06 06 08.9**	**+3.4**
GTA				PcP	**PcP**	**06 06 46.1**	**+1.9**
GTA				S	**S**	**06 10 31.0**	**+0.4**
GTA				pmax	pmax		
	comp=Z,3µm,8.2s						
GTA				LR	LR		
	comp=Z,8µm,23.6s						
GTA				LR	LR		
	comp=Z,23µm,18.9s						
GTA				LR	LR		
	comp=Z,19µm,19.6s						
KMBL	**Kambalda**	**38.98**	**146**	P	**P**	**06 04 35.4**	**+1.2**
	comp=Z,98nm,1.0s						
KMBL	**Kambalda**	**38.98**	**146**	P	**P**	**06 04 36.9**	**+2.6**
TIY	**Taiyuan**	**39.56**	**18**	P	**P**	**06 04 39.3**	**+0.2**
TIY				PP	**PnPn**	**06 06 17.9**	**+4.6**
TIY				PcS	**PcS**	**06 10 38.9**	**+2.7**
TIY				pmax	pmax		
	comp=Z,68nm,1.0s						
TIY				pmax	pmax		
	comp=Z,3µm,4.6s						
TIY				LR	LR		
	comp=Z,42µm,15.5s						
TIY				LR	LR		
	comp=Z,8µm,11.6s						
TIY				LR	LR		
	comp=Z,26µm,16.1s						
TIA	**Tai'an**	**39.95**	**25**	P	**P**	**06 04 42.0**	**-0.3**
TIA				PP	**PnPn**	**06 06 23.0**	**+5.1**
TIA				PcS	**PcS**	**06 10 35.1**	**-2.6**
TIA				pmax	pmax		
	comp=Z,65nm,1.0s						
TIA				pmax	pmax		
	comp=Z,4µm,8.3s						
HNS	**HongShan**	**40.05**	**21**	⇑P	**P**	**06 04 43.9**	**+0.9**
HNS				PP	**PnPn**	**06 06 24.2**	**+5.3**
HNS				S	**S**	**06 10 51.4**	**+3.9**
HNS				pmax	pmax		
	comp=Z,260nm,1.0s						
HNS				pmax	pmax		
	comp=Z,5µm,7.6s						
HNS				LR	LR		
	comp=Z,19µm,16.2s						
HNS				LR	LR		
	comp=Z,15µm,16.2s						
HNS				LR	LR		
	comp=Z,25µm,16.7s						
NIL	**Nilore**	**40.31**	**328**	P	**P**	**06 04 44.9**	**-0.4**
NIL				IAmb	IAmb	06 05 24.8	
	comp=Z,88nm,0.8s						
NIL	**Nilore**	**40.31**	**328**	P	**P**	**06 04 44.1**	**-1.2**
NIL	**Nilore**	**40.31**	**328**	P	**P**	**06 04 44.9**	**-0.4**
NIL				pmax	pmax		
	comp=Z,88nm,0.9s						
SMPI	**Sarmi**	**41.03**	**93**	P	**P**	**06 04 51.5**	**0.0**
	comp=Z,7µmcomp=Z,85nm,1.1s						
WB0	**Warramunga Arr**	**41.11**	**121**	IAmb	IAmb	06 04 52.9	
	comp=Z,58nm,0.6s						
WRA	**Warramunga Arr**	**41.14**	**122**	P	**P**	**06 04 51.0**	**-1.3**
WRA	**Warramunga Arr**	**41.14**	**122**	P	**P**	**06 04 50.5**	**-1.8**
	comp=Z,37nm,0.6s,baz=303,slow=9.0,SNR=140						
WRA				PcP	**PcP**	**06 06 51.8**	**+0.2**
	comp=Z,5.8nm,0.8s,baz=304,slow=2.1,SNR=1.9						
WRA				S	**S**	**06 10 55.8**	**-8.5**
	comp=Z,1.2nm,0.9s,baz=314,slow=6.7,SNR=3.0						
WRA				LR	LR	06 24 34.1	
	comp=Z,9µm,20.1s,baz=299,slow=40						
	comp=Z,37nm,0.6s						
WRA	**Warramunga Arr**	**41.14**	**122**	P	**P**	**06 04 51.0**	**-1.3**
WRA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WRAB	**Tennant Creek**	**41.14**	**121**	P	**P**	**06 04 51.7**	**-0.6**
WRAB				IAmb	IAmb	06 04 53.4	
	comp=Z,57nm,0.7s						
WRAB	**Tennant Creek**	**41.14**	**121**	*i* P	**P**	**06 04 51.0**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,54nm,0.6s						
WRAB				MLR	MLR		
	comp=Z,15µm,23.0s						
WR8	**Warramunga Arr**	**41.28**	**121**	IAmb	IAmb	06 04 54.5	
	comp=Z,80nm,0.6s						
BTO	**Baotou**	**41.58**	**14**	*e*P	**P**	**06 04 57.2**	**+1.4**
BTO				pP	**pP**	**06 05 02.9**	**-0.5**
BTO				sP	**sP**	**06 05 06.7**	**+0.2**
BTO				PP	**PnPn**	**06 06 37.4**	**+0.3**
BTO				S	**S**	**06 11 14.2**	**+3.7**
BTO				sS	**sS**	**06 11 24.4**	**+1.2**
BTO				SS	**SS**	**06 14 15.1**	**-1.0**
BTO				pmax	pmax		
	comp=Z,65nm,1.4s						
HHC	**Hu-ho-hao-te**	**42.21**	**16**	⇑*i*P	**P**	**06 05 02.5**	**+1.6**
HHC				sP	sP	06 05 13.0	+1.4
HHC				PP	**PP**	**06 06 42.1**	**+3.2**
HHC				S	**S**	**06 11 20.4**	**+0.6**
HHC				pmax	pmax		
	comp=Z,140nm,1.1s						
HHC				pmax	pmax		
	comp=Z,3µm,5.9s						
HHC				LR	LR		
	comp=Z,17µm,14.4s						
AIS	**Amsterdam Isla**	**42.29**	**204**	IAMs_20	IAMs_20	06 21 21.8	
	comp=Z,23µm,18.0s						
FORT	**Forrest**	**42.29**	**140**	P	**P**	**06 05 02.3**	**+0.8**
FORT				IAmb	IAmb	06 05 29.9	
	comp=Z,103nm,0.7s						
FORT				IAMs_20	IAMs_20	06 23 03.8	
	comp=Z,34µm,21.0s						
FORT	**Forrest**	**42.29**	**140**	P	**P**	**06 05 02.0**	**+0.4**
	comp=Z,0.0nmcomp=Z,166nm,0.9s						
FORT	**Forrest**	**42.29**	**140**	P	**P**	**06 05 03.6**	**+2.0**
FORT	**Forrest**	**42.29**	**140**	⇓P	**P**	**06 05 03.3**	**+1.7**
AS31	**Alice Springs**	**42.46**	**127**	P	**P**	**06 05 02.5**	**-0.7**
AS31	**Alice Springs**	**42.46**	**127**	P	**P**	**06 05 01.9**	**-1.2**
	comp=Z,36nm,0.7s						
ASAR	**Alice Springs**	**42.46**	**127**	P	**P**	**06 05 02.5**	**-0.7**
ASAR	**Alice Springs**	**42.46**	**127**	P	**P**	**06 05 02.1**	**-1.1**
	comp=Z,71nm,0.7s,baz=297,slow=7.6,SNR=211						
ASAR				PcP	**PcP**	**06 06 56.5**	**+0.6**
	comp=Z,6.5nm,0.7s,baz=319,slow=3.3,SNR=2.7						
ASAR				S	**S**	**06 11 18.5**	**-5.4**
	comp=Z,7.5nm,1.2s,baz=296,slow=16,SNR=7.4						
ASAR				LR	LR	06 24 40.2	
	comp=Z,17µm,20.7s,baz=307,slow=39						
	comp=Z,71nm,0.7s						
ASAR	**Alice Springs**	**42.46**	**127**	P	**P**	**06 05 02.5**	**-0.7**
AS01	**Alice Springs**	**42.50**	**127**	P	**P**	**06 05 03.0**	**-0.5**
	comp=Z,118nm,0.8s						
MSEY	**Mahe Island**	**42.51**	**263**	P	**P**	**06 05 05.3**	**+1.6**
MSEY				S	**S**	**06 11 29.4**	**+4.5**
GENI	**Genyem**	**42.52**	**94**	P	**P**	**06 05 05.7**	**+2.0**
BJT	**Baijiatuau**	**42.90**	**21**	IAmb	IAmb	06 05 12.4	
	comp=Z,156nm,1.0s						
BJT	**Baijiatuau**	**42.90**	**21**	P	**P**	**06 05 08.0**	**+1.7**
BJI	**Beijing**	**42.92**	**21**	P	**P**	**06 05 07.5**	**+1.0**
BJI				pmax	pmax		
	comp=Z,72nm,0.9s						
BJI				pmax	pmax		
	comp=Z,2µm,4.8s						
BJI				LR	LR		
	comp=Z,7µm,15.8s						
BJI				LR	LR		
	comp=Z,7µm,14.5s						
BJI				LR	LR		
	comp=Z,9µm,15.6s						
JAY	**Jayapura**	**43.05**	**94**	P	**P**	**06 05 07.8**	**-0.2**
	comp=Z,8µmcomp=Z,957nmcomp=Z,51nm,1.2s						
KBU	**Kabul Universi**	**43.24**	**325**	P	**P**	**06 05 06.8**	**-2.7**
KBL	**Kabul**	**43.31**	**325**	P	**P**	**06 05 10.0**	**-0.1**
KBL	**Kabul**	**43.31**	**325**	P	**P**	**06 05 10.1**	**0.0**
	SNR=7.0						
KBL				P	**P**	**06 05 10.1**	**0.0**
	SNR=7.0						
KBL				S	**S**	**06 11 33.4**	**-3.1**
KBL				S	**S**	**06 11 33.4**	**-3.1**
KBL	**Kabul**	**43.31**	**325**	P	**P**	**06 05 10.0**	**0.0**
KBL				pmax	pmax		
	comp=Z,43nm,1.2s						
KSH	**Kashi**	**43.75**	**335**	P	**P**	**06 05 13.7**	**+0.3**
KSH				sP	sP	06 05 24.8	+0.6
KSH				PP	**PcP**	**06 07 01.8**	**+1.8**
KSH				S	**S**	**06 11 36.9**	**-5.6**
KSH				SS	**SS**	**06 14 55.2**	**-3.6**
KSH				pmax	pmax		
	comp=Z,23nm,1.2s						
KSH				pmax	pmax		
	comp=Z,2µm,11.5s						
KSH				LR	LR		
	comp=Z,16µm,21.0s						
KSH				LR	LR		
	comp=Z,11µm,19.2s						
KSH				LR	LR		
	comp=Z,12µm,19.6s						
DQM	**DQM**	**43.89**	**299**	P	**P**	**06 05 18.0**	**+3.4**
DQM				S	**S**	**06 11 46.9**	**+2.2**
MHTO	**MHTO**	**43.91**	**300**	P	**P**	**06 05 17.9**	**+3.1**
MHTO				P	**P**	**06 05 17.9**	**+3.1**
DL2	**Dalian**	**44.17**	**27**	P	**P**	**06 05 17.6**	**+1.0**
DL2				S	**S**	**06 11 50.8**	**+2.5**
DL2				pmax	pmax		
	comp=Z,110nm,0.7s						
DL2				LR	LR		
	comp=Z,14µm,20.2s						
DL2				LR	LR		
	comp=Z,7µm,18.6s						
DL2				LR	LR		
	comp=Z,18µm,18.1s						
WMQ	**Urumqi**	**44.19**	**350**	⇑P	**P**	**06 05 17.9**	**+1.1**
WMQ				sP	sP	06 05 26.4	-1.1
WMQ				PcP	**PcP**	**06 07 04.2**	**+2.8**
WMQ				S	**S**	**06 11 51.2**	**+2.5**
WMQ				pmax	pmax		
	comp=Z,130nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,3µm,5.9s						
WMQ				LR	LR		
	comp=Z,6µm,23.3s						
WMQ				LR	LR		
	comp=Z,12µm,16.7s						
WMQ				LR	LR		
	comp=Z,11µm,22.3s						
WSAR	**Wadi Sarin**	**44.26**	**304**	LR	LR	06 21 56.2	
	comp=Z,22nm,20.0s,baz=120,slow=34						
WSAR	**Wadi Sarin**	**44.26**	**304**	P	**P**	**06 05 18.9**	**+1.3**
WSAR				S	**S**	**06 11 52.6**	**+2.4**
JMDO	**Jabal Madar**	**44.34**	**302**	P	**P**	**06 05 21.9**	**+3.6**
JMDO				S	**S**	**06 11 53.3**	**+1.9**
SMDO	**Samad**	**44.67**	**303**	P	**P**	**06 05 22.5**	**+1.5**
SMDO				P	**P**	**06 05 22.5**	**+1.5**
SMDO				S	**S**	**06 11 56.3**	**0.0**
SMDO				S	**S**	**06 11 56.3**	**0.0**
BIDO	**Bidbid**	**44.80**	**304**	P	**P**	**06 05 25.3**	**+3.4**
BIDO				P	**P**	**06 05 25.3**	**+3.4**
BIDO				S	**S**	**06 11 58.9**	**+0.9**
BIDO				S	**S**	**06 11 58.9**	**+0.9**
TARG	**Taragay, Kyrgy**	**44.94**	**339**	IAmb	IAmb	06 05 31.5	
	comp=Z,114nm,1.0s						
JTU	**Tsushima**	**45.06**	**38**	P	**P**	**06 05 25.8**	**+2.0**
JTU	**Tsushima**	**45.06**	**38**	⇑P	**P**	**06 05 21.4**	**-2.4**
JNU	**Nakatsue**	**45.08**	**40**	LR	LR	06 24 27.7	
	comp=Z,18µm,21.5s,baz=240,slow=36						
JNU	**Nakatsue**	**45.08**	**40**	P	**P**	**06 05 23.7**	**-0.4**
JNU	**Nakatsue**	**45.08**	**40**	⇑P	**P**	**06 05 23.6**	**-0.5**
TJN	**Taejon**	**45.15**	**34**	P	**P**	**06 05 23.9**	**-0.6**
TJN	**Taejon**	**45.15**	**34**	P	**P**	**06 05 25.5**	**+1.0**
TJN	**Taejon**	**45.15**	**34**	*i* P	**P**	**06 05 23.1**	**-1.4**
BSY	**Bisya**	**45.26**	**302**	P	**P**	**06 05 27.6**	**+2.0**
	SNR=5.6						
BSY				S	**S**	**06 12 07.2**	**+2.5**
DMTO	**DMTO**	**45.47**	**295**	P	**P**	**06 05 30.8**	**+3.5**
DMTO				S	**S**	**06 12 09.2**	**+1.5**
HOQ	**Hoqain**	**45.50**	**303**	P	**P**	**06 05 28.3**	**+0.7**
HOQ				P	**P**	**06 05 28.3**	**+0.7**
HOQ				S	**S**	**06 12 08.7**	**+0.4**
HOQ				S	**S**	**06 12 08.7**	**+0.4**
KDJ	**Kajisay**	**45.52**	**339**	P	**P**	**06 05 28.4**	**+0.8**
KDJ	**Kajisay**	**45.52**	**339**	P	**P**	**06 05 28.4**	**+0.8**
KDJ				pmax	pmax		
	comp=Z,164nm,1.0s						
KDJ				MLR	MLR		
	comp=Z,7µm,20.0s						
INCN	**Inchon**	**45.55**	**33**	IAMs_20	IAMs_20	06 25 41.1	
	comp=Z,23µm,20.0s						
INCN	**Inchon**	**45.55**	**33**	P	**P**	**06 05 26.1**	**-1.6**
INCN	**Inchon**	**45.55**	**33**	P	**P**	**06 05 29.3**	**+1.6**
SHLS	**Shalkode**	**45.65**	**341**	*e*P	**P**	**06 05 27.2**	**-1.3**
SHLS				pmax	pmax		
	comp=Z,80nm,1.1s						
SHLS	**Shalkode**	**45.65**	**341**	*e*P	**P**	**06 05 27.2**	**-1.3**
	comp=Z,80nm,1.1s						
UZB	**Uzynbulak**	**45.78**	**341**	*e*P	**P**	**06 05 29.3**	**-0.3**
UZB				*e*S	**S**	**06 12 13.8**	**+2.0**
UZB				pmax	pmax		
	comp=Z,65nm,1.2s						
UZB	**Uzynbulak**	**45.78**	**341**	*e*P	**P**	**06 05 29.3**	**-0.3**
	comp=Z,64nm,1.2s						
UZB				*e*S	**S**	**06 12 13.9**	**+2.0**
SATY	**Saty**	**45.91**	**340**	*e*P	**P**	**06 05 30.6**	**+0.1**
SATY				*e*S	**S**	**06 12 15.3**	**+1.7**
SATY				pmax	pmax		
	comp=Z,99nm,1.3s						
SATY	**Saty**	**45.91**	**340**	*e*P	**P**	**06 05 30.6**	**+0.1**
	comp=Z,100nm,1.3s						
SATY				*e*S	**S**	**06 12 15.4**	**+1.7**
QIS	**Mount Isa**	**45.92**	**119**	P	**P**	**06 05 30.0**	**-0.9**
	comp=Z,0.0nmcomp=Z,58nm,1.5s						
ULHL	**Ulahol**	**45.97**	**338**	P	**P**	**06 05 31.9**	**+0.7**
	SNR=27						
ZHN	**Zhinishke**	**45.99**	**340**	*e*P	**P**	**06 05 31.3**	**+0.1**
ZHN				pmax	pmax		
	comp=Z,57nm,1.3s						
ZHN	**Zhinishke**	**45.99**	**340**	*e*P	**P**	**06 05 31.3**	**+0.1**
	comp=Z,56nm,1.3s						
ARQ	**Araqi**	**46.06**	**303**	P	**P**	**06 05 36.3**	**+4.3**
ARQ				P	**P**	**06 05 36.3**	**+4.3**
ARQ				S	**S**	**06 12 16.3**	**-0.1**
ARQ				S	**S**	**06 12 16.3**	**-0.1**
RBK	**Rabkut**	**46.08**	**294**	P	**P**	**06 05 35.7**	**+3.5**
RBK				S	**S**	**06 12 18.6**	**+1.9**
KPKS	**Kokpek**	**46.17**	**341**	*e*P	**P**	**06 05 32.3**	**-0.3**
KPKS				*e*S	**S**	**06 12 19.2**	**+1.8**
KPKS	**Kokpek**	**46.17**	**341**	*e*P	**P**	**06 05 32.4**	**-0.3**
KPKS				*e*S	**S**	**06 12 19.2**	**+1.8**
KSAR	**Wonju Array Be**	**46.21**	**34**	P	**P**	**06 05 32.7**	**-0.1**
KSAR	**Wonju Array Be**	**46.21**	**34**	P	**P**	**06 05 32.7**	**-0.1**
KSRS	**Korea Array**	**46.23**	**34**	P	**P**	**06 05 32.4**	**-0.7**
	comp=Z,81nm,0.8s,baz=220,slow=8.7,SNR=68						
KSRS				S	**S**	**06 12 22.0**	**+3.8**
	comp=Z,0.3nm,0.3s,baz=220,slow=23,SNR=1.5						
KSRS				LR	LR	06 27 30.1	
	comp=Z,16µm,18.2s,baz=215,slow=40						
	comp=Z,81nm,0.8s						
KS19	**Wonju Array Si**	**46.24**	**34**	P	**P**	**06 05 33.0**	**-0.1**
BOOM	**Boomskoye usch**	**46.29**	**338**	P	**P**	**06 05 34.3**	**+0.6**
BOOM				IAmb	IAmb	06 06 19.8	
	comp=Z,97nm,1.1s						
BOOM	**Boomskoye usch**	**46.29**	**338**	P	**P**	**06 05 34.3**	**+0.6**
BOOM				pmax	pmax		
	comp=Z,97nm,1.1s						
XLT	**XiLinHaoTe**	**46.33**	**18**	*e*P	**P**	**06 05 34.8**	**+1.0**
XLT				pP	pP	06 05 41.5	0.0
XLT				sP	sP	06 05 45.3	+0.7
XLT				PcP	**PcP**	**06 07 08.3**	**-0.5**
XLT				PP	**PP**	**06 07 25.4**	**+2.4**
XLT				S	**S**	**06 12 21.4**	**+1.7**
XLT				sS	sS	06 12 38.0	+5.5
XLT				ScS	**ScS**	**06 15 20.1**	**-7.6**
XLT				pmax	pmax		
	comp=Z,86nm,1.0s						
XLT				pmax	pmax		
	comp=Z,2µm,6.0s						
XLT				LR	LR		
	comp=Z,13µm,19.6s						
XLT				LR	LR		
	comp=Z,19µm,17.0s						
SIMJ	**Simiganj**	**46.34**	**329**	P	**P**	**06 05 33.0**	**-1.0**
SIMJ				IAmb	IAmb	06 05 48.9	
	comp=Z,91nm,0.9s						
SOHO	**SOHO**	**46.38**	**304**	P	**P**	**06 05 38.5**	**+4.1**
SOHO				S	**S**	**06 12 21.3**	**+0.6**
SOHO	**SOHO**	**46.38**	**304**	*i* P	**P**	**06 05 35.2**	**+0.8**
	SNR=5.9						
TNSS	**Tian-Shan**	**46.40**	**339**	*e*P	**P**	**06 05 34.3**	**-0.4**
TNSS	**Tian-Shan**	**46.40**	**339**	*e*P	**P**	**06 05 34.3**	**-0.4**
MDOK	**Medeo**	**46.47**	**339**	*e*P	**P**	**06 05 34.9**	**-0.1**
MDOK				*e*S	**S**	**06 12 23.9**	**+2.1**
MDOK				MLR	MLR		
	comp=Z,3µm,17.0s						
MDOK	**Medeo**	**46.47**	**339**	*e*P	**P**	**06 05 35.0**	**-0.1**
MDOK				*e*S	**S**	**06 12 23.9**	**+2.1**
MDOK				LR	LR	06 27 06.9	
	comp=Z,3µm,17.1s						
DOK	**Doka**	**46.48**	**296**	P	**P**	**06 05 38.0**	**+2.7**
DOK				P	**P**	**06 05 38.0**	**+2.7**
DOK				S	**S**	**06 12 22.1**	**-0.2**
DOK				S	**S**	**06 12 22.1**	**-0.2**
BTK	**Batken**	**46.50**	**331**	P	**P**	**06 05 36.4**	**+1.1**
BTK	**Batken**	**46.50**	**331**	P	**P**	**06 05 36.4**	**+1.1**
BTK				pmax	pmax		
	comp=Z,161nm,1.2s						
BTK				MLR	MLR		
	comp=Z,8µm,20.0s						

WHFO	Wadi Hawf	46.60	295	P	P	06 05 39.0	+2.8
WHFO				P	P	06 05 39.0	+2.8
WHFO				S	S	06 12 23.5	-0.6
WHFO				S	S	06 12 23.5	-0.6
UCH	Uchtor	46.63	336	P	P	06 05 39.3	+2.6
	SNR=17						
TKM2	Tokmak 2	46.79	338	P	P	06 05 37.9	+0.3
	SNR=107						
TKM2	Tokmak 2	46.79	338	P	P	06 05 38.1	+0.5
KBK	Karagaybulak	46.82	337	P	P	06 05 39.1	+1.3
	SNR=55						
ABTO	Aybut	46.87	294	P	P	06 05 41.5	+3.1
ABTO				S	S	06 12 26.5	-1.6
AML	Almayashu	46.88	335	P	P	06 05 39.5	+0.9
	SNR=64						
UMZA	Um Al Zommool	46.98	301	P	P	06 05 39.6	+0.5
UMZA				S	S	06 12 29.4	+0.1
AAK	Ala-Archa	46.98	337	P	P	06 05 42.1	+3.0
	SNR=14						
AAK	Ala-Archa	46.98	337	P	P	06 05 40.6	+1.6
AAK				IAmb	IAmb	06 06 28.5	
	comp=Z,84nm,1.1s						
AAK	Ala-Archa	46.98	337	P	P	06 05 38.7	-0.3
	comp=Z,7.3nm,0.9s,baz=147,slow=7.1,SNR=22						
AAK				S	S	06 12 29.0	-0.2
	comp=Z,1.2nm,0.4s,baz=180,slow=19,SNR=1.1						
AAK				LR	LR	06 27 07.3	
	comp=Z,10µm,21.6s,baz=148,slow=38						
	comp=Z,7.3nm,0.9s						
AAK	Ala-Archa	46.98	337	P	P	06 05 40.2	+1.2
AAK				P	P	06 05 40.2	+1.2
AAK				S	S	06 12 28.1	-1.1
AAK				S	S	06 12 28.1	-1.1
AAK	Ala-Archa	46.98	337	*i* P	P	06 05 39.7	+0.6
	SNR=22						
AAK	Ala-Archa	46.98	337	⇑P	P	06 05 40.0	+0.9
UOSS	Minazif	46.99	305	P	P	06 05 39.0	-0.2
UOSS				S	S	06 12 30.2	+0.7
UOSS	Minazif	46.99	305	P	P	06 05 39.5	+0.3
HATD	Hatta, Dubai	47.00	304	P	P	06 05 40.5	+1.2
HATD				S	S	06 12 29.0	-0.6
HATD	Hatta, Dubai	47.00	304	P	P	06 05 40.5	+1.2
ALNE	Al Ain	47.00	303	P	P	06 05 40.5	+1.2
	SNR=13						
ALNE				S	S	06 12 30.3	+0.6
ALNE	Al Ain	47.00	303	*i* P	P	06 05 40.7	+1.4
	SNR=12						
ASHO	Ashiyiah	47.00	304	P	P	06 05 41.9	+2.5
ASHO				S	S	06 12 30.7	+1.0
MDH	Madha	47.06	305	P	P	06 05 39.5	-0.2
	SNR=5.2						
MDH				P	P	06 05 39.5	-0.2
	SNR=5.2						
MDH				S	S	06 12 29.5	-1.0
MDH				S	S	06 12 29.5	-1.0
MDH	Madha	47.06	305	*i* P	P	06 05 39.9	+0.2
	SNR=8.3						
COEN	Coen	47.18	109	P	P	06 05 38.1	-2.7
COEN	Coen	47.18	109	P	P	06 05 40.8	0.0
COEN	Coen	47.18	109	⇑P	P	06 05 40.2	-0.6
CHMS	Chumysh	47.19	337	P	P	06 05 43.2	+2.8
	SNR=14						
MSFE	Esma-Masafi	47.20	305	*i* P	P	06 05 41.9	+1.0
	SNR=10						
MASF	Masafi	47.21	305	P	P	06 05 41.3	+0.3
	SNR=7.1						
MASF				S	S	06 12 32.3	-0.4
EKS2	Erkin-Say	47.29	336	P	P	06 05 42.2	+0.8
	SNR=64						
BANOM	Banah	47.33	306	P	P	06 05 42.4	+0.5
BANOM				S	S	06 12 34.8	+0.5
HRA	Herat	47.41	319	P	P	06 05 42.6	+0.1
SNY	Shenyang	47.41	26	⇓P	P	06 05 42.1	0.0
SNY				sP	sP	06 05 52.5	-0.4
SNY				PP	PP	06 07 35.0	+1.3
SNY				S	S	06 12 36.4	+1.6
SNY				pmax	pmax		
	comp=Z,92nm,0.8s						
SNY				pmax	pmax		
	comp=Z,3µm,7.2s						
SNY				LR	LR		
	comp=Z,21µm,17.1s						
SNY				LR	LR		
	comp=Z,22µm,15.5s						
FAQ	Al Faqa, Dubai	47.41	304	P	P	06 05 44.8	+2.3
	SNR=7.4						
FAQ				P	P	06 05 44.8	+2.3
	SNR=7.4						
FAQ				S	S	06 12 37.2	+1.7
FAQ				S	S	06 12 37.2	+1.7
FAQ	Al Faqa, Dubai	47.41	304	P	P	06 05 43.7	+1.2
JMN	Monobe	47.43	42	P	P	06 05 43.2	+0.6
JMN				IAmb	IAmb	06 05 47.1	
	comp=Z,76nm,0.9s						
JMN	Monobe	47.43	42	P	P	06 05 44.6	+2.1
JMN	Monobe	47.43	42	⇑P	P	06 05 42.9	+0.3
NAZ	Nazwa, Dubai	47.45	304	P	P	06 05 43.9	+1.0
NAZ				S	S	06 12 35.9	-0.2
NAZ	Nazwa, Dubai	47.45	304	P	P	06 05 43.8	+1.0
USP	Ospenovka	47.51	337	P	P	06 05 43.9	+0.8
	SNR=131						
SHME	Shamm	47.51	306	P	P	06 05 44.6	+1.3
SHME				S	S	06 12 38.7	+1.9
SHME	Shamm	47.51	306	P	P	06 05 44.5	+1.2
ASUD	Al Ashush, Dub	47.58	304	P	P	06 05 47.5	+3.7
	SNR=12						
ASUD	Al Ashush, Dub	47.58	304	*i* P	P	06 05 45.2	+1.4
	SNR=21						
SGDS	Sogindy	47.62	337	*e*P	P	06 05 43.7	-0.1
TDK	Taldyqorghan	47.64	341	*e*P	P	06 05 43.9	0.0
TDK				pmax	pmax		
	comp=Z,57nm,1.1s						
TDK				MLR	MLR		
	comp=Z,3µm,18.0s						
TDK	Taldyqorghan	47.64	341	*e*P	P	06 05 44.0	0.0
	comp=Z,57nm,1.1s						
TDK				LR	LR	06 27 57.9	
	comp=Z,3µm,18.2s						
UMQ	Umm Al-Quwin	47.68	305	P	P	06 05 46.4	+1.8
UMQ				S	S	06 12 43.0	+3.7
AJN	Ajban	47.84	304	P	P	06 05 49.2	+3.4
AJN				S	S	06 12 41.4	-0.2
SONM	Songino Array	47.88	8	P	P	06 05 46.7	+0.8
SONM	Songino Array	47.88	8	P	P	06 05 45.7	-0.2
	comp=Z,150nm,0.8s,baz=192,slow=8.5,SNR=94						
SONM				PcP	PcP	06 07 14.7	+0.5
	comp=Z,19nm,0.8s,baz=203,slow=2.2,SNR=1.6						
SONM				S	S	06 12 43.8	+2.0
	comp=Z,0.6nm,0.4s,baz=220,slow=20,SNR=1.1						
SONM				LR	LR	06 28 21.5	
	comp=Z,25µm,19.4s,baz=188,slow=39						
	comp=Z,150nm,0.8s						
SONM	Songino Array	47.88	8	P	P	06 05 46.7	+0.8
SONM				pmax	pmax		
	comp=Z,167nm,0.9s						
ULN	Ulaanbaatar	48.00	8	P	P	06 05 47.4	+0.6
ULN	Ulaanbaatar	48.00	8	IAMs_20	IAMs_20	06 28 51.7	
	comp=Z,17µm,19.0s						
ULN	Ulaanbaatar	48.00	8	P	P	06 05 47.6	+0.7
ULN				P	P	06 05 47.6	+0.7
ULN				S	S	06 12 38.3	-5.2
ULN				S	S	06 12 38.3	-5.2
ULN	Ulaanbaatar	48.00	8	*i* P	P	06 05 46.7	-0.2
ULN				pmax	pmax		
	comp=Z,135nm,0.9s						
ULN				MLR	MLR		
	comp=Z,14µm,16.0s						
ULN	Ulaanbaatar	48.00	8	⇑P	P	06 05 47.6	+0.7
MK31	Makanchi Array	48.18	346	*i* P	P	06 05 48.2	+0.1
MKAR	Makanchi Array	48.18	346	P	P	06 05 48.6	+0.4
MKAR	Makanchi Array	48.18	346	P	P	06 05 47.9	-0.3
	comp=Z,193nm,1.0s,baz=155,slow=7.2,SNR=180						
MKAR				S	S	06 12 44.8	-1.0
	comp=Z,2.4nm,1.1s,baz=177,slow=5.8,SNR=1.2						
MKAR				LR	LR	06 29 31.8	
	comp=Z,5µm,19.4s,baz=150,slow=40						
	comp=Z,193nm,1.0s						
MKAR	Makanchi Array	48.18	346	*i* P	P	06 05 48.5	+0.4
MKAR				pmax	pmax		
	comp=Z,192nm,1.0s						
MAKZ	Makanchi	48.27	346	P	P	06 05 49.2	+0.4
MAKZ	Makanchi	48.27	346	P	P	06 05 49.2	+0.4
MAKZ				pmax	pmax		
	comp=Z,114nm,0.9s						
MAKZ				MLR	MLR		
	comp=Z,8µm,22.0s						
MAKZ	Makanchi	48.27	346	⇑P	P	06 05 49.1	+0.2
MZWR	Madinat Zayed	48.46	302	P	P	06 05 54.0	+3.4
MZWR				S	S	06 12 49.6	-0.8
GUMO	Guam	48.47	72	LR	LR	06 28 32.5	
	comp=Z,2µm,19.2s,baz=242,slow=39						
DZA	Taraz	48.51	334	*e*P	P	06 05 50.9	+0.1
DZA				pmax	pmax		
	comp=Z,57nm,1.0s						
DZA	Taraz	48.51	334	*e*P	P	06 05 50.9	+0.1
	comp=Z,57nm,1.0s						
MZR	Muzera	48.52	301	P	P	06 05 55.0	+3.8
	SNR=6.6						
MZR				S	S	06 12 51.3	0.0
MZR	Muzera	48.52	301	P	P	06 05 51.6	+0.4
CHM	Chimkent	48.84	332	*e*P	P	06 05 53.4	+0.2
CHM	Chimkent	48.84	332	*e*P	P	06 05 53.4	+0.2
BBOO	Buckleboo	48.90	136	IAmb	IAmb	06 06 14.6	
	comp=Z,47nm,0.9s						
BBOO	Buckleboo	48.90	136	P	P	06 05 55.9	+2.0
KK31	Karatay Array	49.04	334	P	P	06 05 54.9	+0.1
KK31				IAmb	IAmb	06 05 58.4	
	comp=Z,79nm,1.1s						
KK31	Karatay Array	49.04	334	*i* P	P	06 05 54.6	-0.2
KKAR	Karatay Array	49.04	334	P	P	06 05 54.7	-0.1
KKAR	Karatay Array	49.04	334	P	P	06 05 54.7	-0.1
KKAR	Karatay Array	49.04	334	⇑P	P	06 05 54.8	-0.1
BTLS	Baital	49.19	338	*e*P	P	06 05 55.9	+0.1
BTLS				pmax	pmax		
	comp=Z,48nm,1.2s						
BTLS	Baital	49.19	338	*e*P	P	06 05 56.0	+0.1
	comp=Z,48nm,1.2s						
BRLS	Borolday	49.29	333	*e*P	P	06 05 55.7	-1.0
BRLS	Borolday	49.29	333	*e*P	P	06 05 55.7	-1.0
MTSU	Mount Surprise	49.33	114	P	P	06 05 56.0	-1.4
	comp=Z,34nm,1.0s						
MTSU	Mount Surprise	49.33	114	P	P	06 05 58.7	+1.3
GHWR	Ruwais	49.39	302	P	P	06 06 01.1	+3.4
GHWR				S	S	06 13 02.5	-1.0
JRN	Qarnain Island	49.78	303	P	P	06 06 04.0	+3.3
JRN				S	S	06 13 06.6	-2.2
CN2	Changchun	49.81	26	⇑P	P	06 06 00.2	-0.4
CN2				*e*PP	PP	06 07 56.4	+0.9
CN2				S	S	06 13 08.6	-0.1
CN2				*e*SS	SS	06 16 38.2	-3.5
CN2				pmax	pmax		
	comp=Z,60nm,0.7s						
CN2				pmax	pmax		
	comp=Z,3µm,5.0s						
CN2				LR	LR		
	comp=Z,16µm,15.0s						
CN2				LR	LR		
	comp=Z,18µm,15.0s						
CN2				LR	LR		
	comp=Z,22µm,15.0s						
ZAK	Zakamensk	50.06	5	*e*P	P	06 06 02.4	-0.1
ZAK				pmax	pmax		
	comp=Z,61nm,0.9s						
WHYH	Whyalla	50.09	135	P	P	06 06 06.7	+3.8
	comp=Z,86nm,0.9s						
PMG	Port Moresby	50.14	103	P	P	06 06 03.2	-0.5
PMG	Port Moresby	50.14	103	P	P	06 06 03.2	-0.5
	comp=Z,241nm,0.8s,baz=297,slow=3.6,SNR=36						
	comp=Z,241nm,0.8s						
PMG	Port Moresby	50.14	103	P	P	06 06 04.6	+1.0
PMG	Port Moresby	50.14	103	*i* P	P	06 06 02.4	-1.2
PMG				pmax	pmax		
	comp=Z,264nm,0.9s						
PMG				MLR	MLR		
	comp=Z,7µm,19.0s						
PMG	Port Moresby	50.14	103	⇑P	P	06 06 03.1	-0.5
JCJ	Chichijima	50.26	54	LR	LR	06 29 49.7	
	comp=Z,4µm,18.0s,baz=272,slow=39						
SLWR	Sila	50.44	301	P	P	06 06 09.0	+3.3
SLWR				S	S	06 13 17.5	-0.6
JGF	Kuroka	50.85	42	P	P	06 06 08.8	+0.1
JGF	Kuroka	50.85	42	P	P	06 06 10.1	+1.4
JGF	Kuroka	50.85	42	⇑P	P	06 06 07.6	-1.1
TRNA	Turayna	51.08	302	P	P	06 06 13.7	+3.2
TRNA				S	S	06 13 25.2	-1.8
MOY	Mondy	51.19	3	*e*P	P	06 06 11.8	+0.7
MOY				pmax	pmax		
	comp=Z,179nm,2.4s						
HTT	Hallett	51.25	135	P	P	06 06 12.2	+0.5
	comp=Z,13nm,1.3s						
HTT	Hallett	51.25	135	P	P	06 06 13.8	+2.0
HTT	Hallett	51.25	135	⇓P	P	06 06 13.0	+1.2
HTT	Hallett	51.25	135	⇓P	P	06 06 13.0	+1.2
SMRA	Abu-Samra	51.42	302	P	P	06 06 16.3	+3.3
	SNR=5.4						
SMRA				S	S	06 13 30.6	-1.0
CTAO	Charters Tower	51.65	116	P	P	06 06 15.1	+0.2
CTAO	Charters Tower	51.65	116	IAMs_20	IAMs_20	06 31 08.0	
	comp=Z,16µm,20.0s						
CTAO	Charters Tower	51.65	116	P	P	06 06 15.4	+0.5
CTAO	Charters Tower	51.65	116	P	P	06 06 15.1	+0.2
CTAO				pmax	pmax		
	comp=Z,52nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,16µm,20.0s						
CTAO	Charters Tower	51.65	116	⇑P	P	06 06 14.7	-0.2
SHMA	Al-Shehemyia	51.70	303	P	P	06 06 16.1	+0.9
SHMA				S	S	06 13 33.9	-1.6
MAJO	Matsushiro	51.95	42	P	P	06 06 17.2	+0.3
MAJO	Matsushiro	51.95	42	IAMs_20	IAMs_20	06 31 17.6	
	comp=Z,11µm,19.0s						
MAJO	Matsushiro	51.95	42	P	P	06 06 18.5	+1.6
MAJO	Matsushiro	51.95	42	P	P	06 06 17.2	+0.3
MAJO				pmax	pmax		
	comp=Z,36nm,1.1s						
MAJO				MLR	MLR		
	comp=Z,11µm,19.0s						
MAJO	Matsushiro	51.95	42	⇑P	P	06 06 15.9	-1.0
MJB9	Matsu-Tunnel	51.95	42	P	P	06 06 17.7	+0.8
MJAR	Matsushiro Arr	51.95	42	P	P	06 06 15.7	-1.2
	comp=Z,24nm,0.9s,baz=224,slow=6.6,SNR=29						
MJAR				PcP	PcP	06 07 29.9	+0.6
	comp=Z,17nm,1.0s,baz=246,slow=2.8,SNR=6.2						
MJAR				LR	LR	06 31 12.6	
	comp=Z,10µm,18.1s,baz=230,slow=39						
	comp=Z,24nm,0.9s						
IRK	Irkutsk	51.99	5	*e*P	P	06 06 17.4	+0.5
IRK				pmax	pmax		
	comp=Z,279nm,3.1s						
SEM	Semipalatinsk	52.04	346	*e*P	P	06 06 17.5	-0.1
SEM				pmax	pmax		
	comp=Z,151nm,1.4s						
SEM	Semipalatinsk	52.04	346	*e*P	P	06 06 17.5	-0.1
	comp=Z,151nm,1.4s						
SEM				LR	LR	06 30 58.7	
	comp=Z,3µm,15.9s						
SAKB	Bahrain	52.10	303	P	P	06 06 18.3	+0.1
SAKB				S	S	06 13 39.8	-1.3
QLP	Quilpie	52.14	125	P	P	06 06 18.0	-0.5
	comp=Z,176nm,0.7s						
QLP	Quilpie	52.14	125	P	P	06 06 19.8	+1.3
QLP	Quilpie	52.14	125	⇑P	P	06 06 18.8	+0.3
BNX	BinXian	52.19	26	⇑P	P	06 06 17.3	-1.2
BNX				sP	sP	06 06 29.4	+0.1
BNX				PP	PP	06 08 17.0	-0.1
BNX				pmax	pmax		
	comp=Z,12nm,0.8s						
BNX				pmax	pmax		
	comp=Z,3µm,7.2s						
BNX				LR	LR		
	comp=Z,17µm,16.3s						
HIA	Hailar	52.26	18	IAmb	IAmb	06 06 22.4	
	comp=Z,75nm,1.0s						
HIA	Hailar	52.26	18	P	P	06 06 20.4	+1.4
MDJ	Mudanjiang	52.34	28	P	P	06 06 20.3	+0.7
MDJ				sS	sS	06 14 03.2	+6.7
MDJ				pmax	pmax		
	comp=Z,46nm,1.8s						
MDJ				pmax	pmax		
	comp=Z,5µm,6.7s						
MDJ	Mudanjiang	52.34	28	P	P	06 06 21.4	+1.8
VLA	Vladivostok	52.39	31	*i* P	P	06 06 19.4	-0.6
VLA				pmax	pmax		
	comp=Z,355nm,4.0s						
VLA				MLR	MLR		
	comp=Z,12µm,16.0s						
STKA	Stephens Creek	52.40	132	P	P	06 06 20.5	+0.2
STKA	Stephens Creek	52.40	132	P	P	06 06 20.4	+0.2
	comp=Z,217nm,0.9s						
STKA	Stephens Creek	52.40	132	P	P	06 06 20.3	0.0
	comp=Z,39nm,0.9s,baz=303,slow=7.1,SNR=22						
STKA				LR	LR	06 30 18.4	
	comp=Z,19µm,21.9s,baz=290,slow=38						
	comp=Z,39nm,0.9s						
STKA	Stephens Creek	52.40	132	P	P	06 06 21.5	+1.2
OTUK	Ortayu	52.52	339	P	P	06 06 21.2	+0.2
KURBB	Kurchatov Arra	52.68	345	P	P	06 06 21.5	-0.5
	comp=Z,110nm,1.0s,baz=165,slow=7.0,SNR=131						
KURBB				LR	LR	06 35 00.0	
	comp=Z,6µm,18.0s,baz=158,slow=43						
	comp=Z,110nm,1.0s						
KURK	Kurchatov	52.74	345	P	P	06 06 23.0	+0.6
KURK	Kurchatov	52.74	345	P	P	06 06 22.5	+0.1
KURK				S	S	06 13 46.5	-2.4
KURK	Kurchatov	52.74	345	*ce*P	P	06 06 22.8	+0.4
KURK				pmax	pmax		
	comp=Z,202nm,1.0s						
KURK				MLR	MLR		
	comp=Z,10µm,23.0s						
KURK	Kurchatov	52.74	345	⇑P	P	06 06 22.9	+0.4
JSD	Sado	52.84	40	P	P	06 06 22.9	-0.5
JSD	Sado	52.84	40	⇑P	P	06 06 22.1	-1.3
OPO	Ambohidratompo	53.08	246	LR	LR	06 24 14.2	
	comp=Z,2µm,19.0s,baz=208,slow=31						
ABPO	Ambohimpanom	53.16	246	IAMs_20	IAMs_20	06 25 42.7	
	comp=Z,10µm,18.0s						
CIT	Chita	53.17	12	*e*P	P	06 06 27.0	+1.3
CIT				*e*		06 06 36.8	
CIT				*e*		06 07 40.2	
CIT				*e*		06 08 33.4	
CIT				pmax	pmax		
	comp=Z,531nm,2.7s						
USA0B	Ussuriysk Arra	53.21	30	P	P	06 06 26.3	+0.3
USA0B	Ussuriysk Arra	53.21	30	*i* P	P	06 06 25.6	-0.5
USRK	Ussuriysk Ar.	53.21	30	P	P	06 06 26.3	+0.2
USRK	Ussuriysk Ar.	53.21	30	P	P	06 06 25.9	-0.2
	comp=Z,124nm,0.9s,baz=239,slow=5.8,SNR=59						
USRK				LR	LR	06 32 07.6	
	comp=Z,18µm,18.4s,baz=218,slow=40						
	comp=Z,124nm,0.9s						
USRK	Ussuriysk Ar.	53.21	30	P	P	06 06 26.3	+0.2
BRZS	Berezniki	53.88	340	*e*P	P	06 06 30.9	+0.1
BRZS	Berezniki	53.88	340	*e*P	P	06 06 31.0	+0.1
JMM	Marumori	54.40	42	P	P	06 06 33.0	-1.9
JMM				IAmb	IAmb	06 07 13.6	
	comp=Z,75nm,1.1s						
JMM	Marumori	54.40	42	P	P	06 06 36.6	+1.7
ZAA0	Zalesovo Array	54.47	351	P	P	06 06 35.1	+0.1
ZALV	Zalesovo Beam	54.47	351	P	P	06 06 35.5	+0.4
ZALV	Zalesovo Beam	54.47	351	P	P	06 06 35.4	+0.3
	comp=Z,453nm,0.9s,baz=178,slow=6.5,SNR=132						
ZALV				LR	LR	06 33 05.4	
	comp=Z,7µm,18.6s,baz=167,slow=40						
ZALV	Zalesovo Beam	54.47	351	*i* P	P	06 06 35.5	+0.4
ZALV				pmax	pmax		
	comp=Z,453nm,0.9s						
CMSA	Cobar Meteorol	55.35	130	P	P	06 06 42.4	+0.5
	comp=Z,0.0nmcomp=Z,104nm,1.0s						
CMSA	Cobar Meteorol	55.35	130	P	P	06 06 43.7	+1.8
ATD	Arta Tunnel	55.61	284	LR	LR	06 27 26.0	
	comp=Z,172nm,19.3s,baz=98,slow=33						
ATD	Arta Tunnel	55.61	284	P	P	06 06 46.8	+2.7
	SNR=7.7						
ATD				S	S	06 14 31.9	+3.0
KBD	Kabd	55.62	306	P	P	06 06 44.2	+0.3
KBD				S	S	06 14 26.9	-1.8
RAYN	Ar Rayn	55.63	298	P	P	06 06 44.5	+0.4
RAYN	Ar Rayn	55.63	298	IAMs_20	IAMs_20	06 32 36.3	
	comp=Z,16µm,18.0s						
RAYN	Ar Rayn	55.63	298	P	P	06 06 47.0	+2.9
RAYN				S	S	06 14 27.2	-1.8
RAYN	Ar Rayn	55.63	298	P	P	06 06 44.5	+0.4
RAYN				pmax	pmax		
	comp=Z,21nm,0.9s						
RAYN				MLR	MLR		
	comp=Z,16µm,18.0s						
RAYN	Ar Rayn	55.63	298	*i* P	P	06 06 44.6	+0.5
	SNR=12						
RAYN	Ar Rayn	55.63	298	⇑P	P	06 06 45.0	+0.9
HEH	HeiHe	55.77	23	*e*P	P	06 06 44.6	+0.1
HEH				pP	pP	06 06 50.6	-1.8
HEH				PP	PP	06 08 49.4	+0.2
HEH				S	S	06 14 32.4	+2.6
HEH				ScS	ScS	06 16 25.7	-6.4
HEH				pmax	pmax		
	comp=Z,32nm,0.8s						
HEH				pmax	pmax		
	comp=Z,4µm,6.6s						
HEH				LR	LR		
	comp=Z,3µm,13.8s						
HEH				LR	LR		
	comp=Z,20µm,16.3s						
HEH				LR	LR		
	comp=Z,22µm,16.4s						
TEY	Ternei	56.19	32	*e*P	P	06 06 46.9	-0.7
TEY						06 14 40.2	
JTM	Tenmabayashi	56.19	39	P	P	06 06 49.7	+1.9
JTM	Tenmabayashi	56.19	39	⇑P	P	06 06 45.2	-2.5
KLR	Kul'dur	56.76	26	LR	LR	06 34 40.1	
	comp=Z,22µm,18.6s,baz=231,slow=40						
KLR	Kul'dur	56.76	26	*ce*P	P	06 06 52.0	+0.3
KLR				pmax	pmax		
	comp=Z,89nm,1.0s						
KLR				MLR	MLR		
	comp=Z,9µm,19.0s						
BVAR	Borovoye Array	57.21	341	P	P	06 06 54.2	-0.6
	comp=Z,102nm,0.9s,baz=146,slow=8.6,SNR=90						
BVAR				S	S	06 14 46.9	-2.1
	comp=Z,17nm,0.7s,baz=130,slow=8.0,SNR=4.5						
BVAR				LR	LR	06 35 17.0	
	comp=Z,12µm,20.1s,baz=146,slow=40						
	comp=Z,102nm,0.9s						
BRVK	Borovoye	57.28	341	P	P	06 06 54.7	-0.5
BRVK	Borovoye	57.28	341	IAMs_20	IAMs_20	06 35 16.6	
	comp=Z,13µm,20.0s						
BRVK	Borovoye	57.28	341	P	P	06 06 54.9	-0.4
BRVK				P	P	06 06 54.9	-0.4
BRVK				S	S	06 14 48.1	-1.7
BRVK				S	S	06 14 48.1	-1.7
BRVK	Borovoye	57.28	341	*ce*P	P	06 06 55.0	-0.2
BRVK				pmax	pmax		
	comp=Z,108nm,1.0s						
BRVK				MLR	MLR		
	comp=Z,5µm,22.0s						
BRVK	Borovoye	57.28	341	⇑P	P	06 06 54.6	-0.7
EIDS	Eidsvold	57.49	121	P	P	06 06 57.3	0.0
EIDS				IAmb	IAmb	06 07 00.4	
	comp=Z,34nm,0.8s						
EIDS	Eidsvold	57.49	121	P	P	06 06 56.9	-0.4
	comp=Z,0.0nmcomp=Z,57nm,0.9s						
EIDS	Eidsvold	57.49	121	P	P	06 06 57.8	+0.5
EIDS	Eidsvold	57.49	121	⇑P	P	06 06 57.3	0.0
ERM	Erimo	58.18	39	P	P	06 07 02.1	+0.3
ERM				IAmb	IAmb	06 07 18.5	
	comp=Z,69nm,0.9s						
ERM	Erimo	58.18	39	P	P	06 07 03.0	+1.2
ERM	Erimo	58.18	39	*ce*P	P	06 07 00.2	-1.6
ERM				pmax	pmax		
	comp=Z,34nm,1.0s						
ERM				MLR	MLR		
	comp=Z,4µm,16.0s						
JEM	Erimo	58.18	39	P	P	06 07 03.1	+1.3
AB31	Akbulak array	58.50	332	P	P	06 07 03.3	-0.6
AB31				IAmb	IAmb	06 07 19.1	
	comp=Z,75nm,1.0s						
ABKAR	Akbulak array	58.50	332	P	P	06 07 03.3	-0.7
ABKAR	Akbulak array	58.50	332	⇑P	P	06 07 03.2	-0.7
ZEA	Zeya	58.53	20	*e*P	P	06 07 04.3	+0.3
ZEA				*e*		06 07 05.8	
ZEA				*e*		06 09 15.1	
ZEA				*e*S	S	06 15 06.0	-0.1
ZEA				*e*		06 15 26.5	
ZEA				*e*		06 16 54.3	
ZEA				pmax	pmax		
	comp=E,300nm,7.6s						
ZEA				pmax	pmax		
	comp=N,700nm,6.1s						
ZEA				pmax	pmax		
	comp=Z,1µm,7.1s						
ZEA				pmax	pmax		
	comp=N,20nm,0.9s						
ZEA				pmax	pmax		
	comp=E,20nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,50nm,1.0s						

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ZEA                                   pmax     pmax
       comp=E,200nm,7.1s
ZEA                                   pmax     pmax
       comp=N,500nm,5.1s
ZEA                                   pmax     pmax
       comp=Z,700nm,8.5s
ZEA                                   smax     smax
       comp=E,700nm,7.3s
ZEA                                   smax     smax
       comp=N,800nm,6.8s
BOD    Bodaibo          58.73  10   eP       P        06 07 05.9 +0.6
BOD                                   pmax     pmax
       comp=Z,175nm,1.0s
ASAJ   Asahikawa        59.01  36    LR       LR       06 33 13.8
       comp=Z,9µm,20.1s,baz=242,slow=37
JKA    Kamikawa-asahi   59.01  36    IAMs_20  IAMs_20  06 32 52.3
       comp=Z,10µm,21.0s
CAN    Canberra         59.46 132    IAmb     IAmb     06 07 44.5
       comp=Z,41nm,1.1s
CAN    Canberra         59.46 132    P        P        06 07 12.9 +2.0
ARMA   Armidale         59.61 126    IAmb     IAmb     06 07 18.5
       comp=Z,46nm,1.1s
ARMA                                 IAMs_20  IAMs_20  06 36 53.5
       comp=Z,10µm,20.0s
ARMA   Armidale         59.61 126    P        P        06 07 14.0 +1.9
       comp=Z,0.0nmcomp=Z,58nm,1.1s
ARMA   Armidale         59.61 126    P        P        06 07 14.5 +2.4
ARMA   Armidale         59.61 126  ⇑P        P        06 07 14.3 +2.2
KIBK   Kibwezi          59.74 267    P        P        06 07 12.3 -0.9
KIBK   Kibwezi          59.74 267    P        P        06 07 14.0 +0.7
KIBK   Kibwezi          59.74 267    P        P        06 07 14.7 +1.5
GRNR   Gornyy           59.97  27⇑iP        P        06 07 14.4 +0.4
GRNR                                  pmax     pmax
       comp=Z,10.0nm,0.8s
GRNR                                  MLR      MLR
       comp=N,9µm,16.0s
GRNR                                  MLR      MLR
       comp=E,7µm,16.0s
GRNR                                  MLR      MLR
       comp=Z,18µm,16.0s
AKTO   Aktyubinsk       60.22 332    P        P        06 07 14.0 -1.8
       comp=Z,25nm,1.1s,baz=140,slow=5.6,SNR=31
AKTO                                 PKP2bc            06 36 49.8
       comp=Z,0.6nm,0.4s,baz=181,slow=1.2,SNR=2.0
       comp=Z,25nm,1.1s
KMBO   Kilima Mbogo     60.50 269    P        P        06 07 19.4 +0.7
KMBO                                 S        S        06 15 35.0 +1.5
KMBO   Kilima Mbogo     60.50 269    P        P        06 07 20.7 +2.0
YSS    Yuzhno-Sakhali   60.74  34    P        P        06 07 19.5 +0.1
YSS    Yuzhno-Sakhali   60.74  34    P        P        06 07 21.7 +2.4
YSS    Yuzhno-Sakhali   60.74  34αeP        P        06 07 19.0 -0.3
YSS                                 e*SP     pP       06 07 26.0 -1.3
YSS                                 e                 06 07 59.3
YSS                                 eS       S        06 15 33.4 -1.4
YSS                                 ePPS     PPS      06 15 51.2
YSS                                 eSS      SS       06 19 31.8 -2.1
YSS                                   pmax     pmax
       comp=Z,2µm,5.1s
YSS                                   pmax     pmax
       comp=N,700nm,5.2s
YSS                                   pmax     pmax
       comp=E,900nm,4.0s
YSS                                   pmax     pmax
       comp=E,120nm,0.9s
YSS                                   pmax     pmax
       comp=Z,220nm,0.9s
YSS                                   pmax     pmax
       comp=Z,800nm,9.4s
YSS                                   pmax     pmax
       comp=E,500nm,9.2s
YSS                                   smax     smax
       comp=N,700nm,8.4s
YSS                                   smax     smax
       comp=E,500nm,7.1s
YSS                                   MLR      MLR
       comp=E,11µm,15.0s
YSS                                   MLR      MLR
       comp=Z,8µm,15.0s
YSS                                   MLR      MLR
       comp=N,4µm,16.0s
YSS    Yuzhno-Sakhali   60.74  34  ⇑P        P        06 07 19.7 +0.4
AKT    Akhty            60.86 319   eP       P        06 07 21.5 +1.1
AKT                                 ePPP     PPP      06 10 59.2
AKT                                   pmax     pmax
       comp=Z,43nm,1.2s
YUK    Yuzh-Kuril'sk    60.94  38d iP       P        06 07 20.3 -0.4
YUK                                 i S      S        06 15 41.3 +3.9
YUK                                   pmax     pmax
       comp=Z,242nm,1.0s
H04N2  CROZET ISLANDS   61.39 215    T        T        07 13 46.7
       baz=55,slow=74
H04N1  CROZET ISLANDS   61.40 215    T        T        07 13 48.1
       baz=55,slow=74
H04N3  CROZET ISLANDS   61.41 215    T        T        07 13 46.8
       baz=55,slow=74
UGL    Uglegorsk        61.63  31   eP       P        06 07 20.8 -4.6
UGL                                 eS       S        06 15 39.2 -6.9
UGL                                   smax     smax
       comp=E,2µm,7.0s
UGL                                   smax     smax
       comp=N,2µm,12.0s
UGL                                   MLR      MLR
       comp=N,6µm,15.0s
UGL                                   MLR      MLR
       comp=E,13µm,15.0s
UGL                                   MLR      MLR
       comp=Z,13µm,15.0s
MAK    Makhachkala      61.72 320   eP       P        06 07 22.3 -3.8
MAK                                 e                 06 09 41.4
MAK                                 ePPP     PPP      06 11 13.9
MAK                                 eS       S        06 15 43.6 -3.8
MAK                                 eSS      SS       06 19 42.6 -6.9
MAK                                   pmax     pmax
       comp=Z,119nm,1.0s
MAK                                   MLR      MLR
       comp=Z,4µm,16.0s
H04S1  CROZET ISLANDS   61.72 214    T        T        07 14 10.1
       baz=55,slow=76,SNR=4277
H04S3  CROZET ISLANDS   61.73 214    T        T        07 14 10.8
       baz=55,slow=76,SNR=4232
H04S2  CROZET ISLANDS   61.74 214    T        T        07 14 09.3
       baz=55,slow=76,SNR=1924
GNI    Garni            62.27 316    P        P        06 07 30.3 +0.2
GNI                                  IAmb     IAmb     06 08 21.0
       comp=Z,67nm,1.0s
GNI    Garni            62.27 316    LR       LR       06 36 21.3
       comp=Z,2µm,21.6s,baz=110,slow=38
GNI    Garni            62.27 316    P        P        06 07 30.2 +0.2
GNI                                  S        S        06 15 54.2 -0.7
GNI    Garni            62.27 316  i P        P        06 07 30.4 +0.2
GNI                                   pmax     pmax
       comp=Z,53nm,1.1s
GNI    Garni            62.27 316    P        P        06 07 30.1  0.0
GNI    Garni            62.27 316    P        P        06 07 30.5 +0.4
       comp=Z,1µmcomp=Z,61nm,1.1s
GNI    Garni            62.27 316  ⇑P        P        06 07 30.3 +0.2
LODK   Lodwar           62.41 274    P        P        06 07 33.9 +2.6
SAVO   Savo Central     62.52 100    P        P        06 07 34.0 +2.0
KUR    Kuril'sk         62.78  38c iP       P        06 07 33.0 -0.1
KUR                                  S        S        06 16 00.8 +0.1
KUR                                   pmax     pmax
       comp=Z,3µm,6.7s
KUR                                   MLR      MLR
       comp=N,3µm,18.0s
KUR                                   MLR      MLR
       comp=E,7µm,18.0s
KUR                                   MLR      MLR
       comp=Z,6µm,18.0s
TYV    Tymovskoe        63.02  30   eP       P        06 07 37.2 +2.5
TYV                                 eS       S        06 16 10.4 +6.8
TYV                                   pmax     pmax
       comp=Z,35nm,1.1s
TYV                                   pmax     pmax
       comp=Z,900nm,4.1s
TYV                                   smax     smax
       comp=N,300nm,3.4s
TYV                                   smax     smax
       comp=E,600nm,3.4s
TRLG   Trialeti         63.31 317    P        P        06 07 37.0  0.0
ALEG   Aligegeo Malai   63.35 100    P        P        06 07 37.8 +0.3
GUDG   Gudauri          63.46 318    P        P        06 07 38.4 +0.4
NKL    Nikolayevsk      63.52  27   eP       P        06 07 37.6 -0.3
NKL                                 eS       S        06 16 11.1 +1.5
NKL                                   pmax     pmax
       comp=E,70nm,0.7s
NKL                                   pmax     pmax
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       comp=Z,182nm,0.9s
NKL                                   pmax     pmax
       comp=N,86nm,0.8s
NKL                                   smax     smax
       comp=E,267nm,3.0s
NKL                                   smax     smax
       comp=N,626nm,6.3s
NKL                                   MLR      MLR
       comp=E,36µm,16.0s
NKL                                   MLR      MLR
       comp=N,47µm,15.0s
NKL                                   MLR      MLR
       comp=Z,72µm,15.0s
GURO   Guroymak-BITLI   63.54 314    P        P        06 07 39.0 +0.5
KARS   Kars             63.62 316    P        P        06 07 38.5 -0.5
KARS   Kars             63.62 316    P        P        06 07 38.5 -0.5
KARS                                  pmax     pmax
       comp=Z,248nm,1.2s
KARS                                  MLR      MLR
       comp=Z,5µm,21.0s
SVE    Sverdlovsk       63.66 338deP        P        06 07 38.6 -0.2
SVE                                 e                 06 09 56.0
SVE                                 ePPP     PPP      06 11 27.4
SVE                                 eS       S        06 16 10.3 -1.1
SVE                                 e                 06 17 28.1
SVE                                   pmax     pmax
       comp=Z,147nm,1.1s
SVE                                   pmax     pmax
       comp=Z,6µm,20.0s
MARD   Mardin           63.99 312    P        P        06 07 41.4 -0.2
MARD                                 IAmb     IAmb     06 07 59.5
       comp=Z,51nm,0.8s
ARTI   Arti             64.20 337    P        P        06 07 41.1 -1.2
ARTI                                 IAMs_20  IAMs_20  06 40 18.7
       comp=Z,11µm,20.0s
ARTI   Arti             64.20 337    P        P        06 07 41.5 -0.8
       comp=Z,78nm,1.1s,baz=128,slow=3.6,SNR=42
ARTI                                 LR       LR       06 40 31.2
       comp=Z,5µm,18.4s,baz=132,slow=41
       comp=Z,78nm,1.1s
ARTI   Arti             64.20 337⇑eP        P        06 07 41.9 -0.4
ARTI                                  pmax     pmax
       comp=Z,85nm,1.0s
ARTI                                  MLR      MLR
       comp=Z,11µm,19.8s
KBZ    Khabaz           65.06 319    P        P        06 07 47.9 -0.2
       comp=Z,30nm,1.0s,baz=129,slow=4.5,SNR=46
KBZ                                  S        S        06 16 26.6 -2.5
       comp=Z,6.8nm,0.9s,baz=32,slow=9.5,SNR=1.1
       comp=Z,30nm,1.0s
KBZ    Khabaz           65.06 319ceP        P        06 07 48.3 +0.2
KBZ                                   pmax     pmax
       comp=Z,40nm,1.0s
KOPT   Kop Dagi         65.19 315    P        P        06 07 49.9 +0.3
KOPT                                 IAmb     IAmb     06 09 09.4
       comp=Z,122nm,1.8s
SHA1   Shidzhatmaz      65.22 319  i P        P        06 07 49.2 -0.3
KIV    Kislovodsk       65.29 319    P        P        06 07 50.1 +0.3
KIV    Kislovodsk       65.29 319    P        P        06 07 49.6 -0.3
KIV                                  P        P        06 07 49.6 -0.3
KIV                                  S        S        06 16 30.1 -2.2
KIV                                  S        S        06 16 30.1 -2.2
KIV    Kislovodsk       65.29 319  ⇓P        P        06 07 50.1 +0.3
KIV    Kislovodsk       65.29 319   eP       P        06 07 49.5 -0.3
KIV                                 eS       S        06 16 33.2 +1.0
KIV                                 eSS      SS       06 20 42.9 -2.6
KIV                                   pmax     pmax
       comp=Z,239nm,4.2s
KIV                                   pmax     pmax
       comp=Z,64nm,1.0s
KIV                                   pmax     pmax
       comp=Z,2µm,17.0s
KIV    Kislovodsk       65.29 319  i P        P        06 07 49.9 +0.1
       SNR=15
KIV    Kislovodsk       65.29 319    P        P        06 07 49.9 +0.1
       comp=Z,1µmcomp=Z,64nm,1.1s
GOF    Gofitskoye       65.54 321ceP        P        06 07 50.5 -0.8
GOF                                 eS       S        06 16 34.6 -0.5
YAK    Yakutsk          66.07  16    P        P        06 07 55.0 +0.7
YAK    Yakutsk          66.07  16    S        S        06 16 39.4 -1.4
       comp=Z,21nm,0.4s,baz=331,slow=19,SNR=1.5
YAK                                  LR       LR       06 40 25.4
       comp=Z,13µm,18.5s,baz=212,slow=39
YAK    Yakutsk          66.07  16   eP       P        06 07 53.6 -0.7
YAK                                 e*PP     pP       06 07 59.8 -2.5
YAK                                 e                 06 08 24.0
YAK                                 e                 06 10 19.0
YAK                                 eS       S        06 16 40.5 -0.3
YAK                                 e*SS     sS       06 17 02.9 +8.9
YAK                                 e                 06 17 48.2
YAK                                   pmax     pmax
       comp=Z,213nm,1.2s
YAK                                   pmax     pmax
       comp=N,53nm,1.2s
YAK                                   pmax     pmax
       comp=E,71nm,1.5s
YAK                                   pmax     pmax
       comp=Z,719nm,4.8s
YAK                                   pmax     pmax
       comp=N,415nm,5.5s
YAK                                   pmax     pmax
       comp=E,369nm,7.6s
YAK                                   smax     smax
       comp=N,868nm,5.9s
YAK                                   smax     smax
       comp=E,442nm,5.3s
YAK                                   MLR      MLR
       comp=Z,29µm,25.0s
YAK                                   MLR      MLR
       comp=N,17µm,21.0s
YAK                                   MLR      MLR
       comp=E,19µm,22.0s
YAK    Yakutsk          66.07  16  ⇑P        P        06 07 53.7 -0.6
EIL    Elat             66.36 302    LR       LR       06 37 24.2
       comp=E,15µm,18.2s,baz=104,slow=36
EIL    Elat             66.36 302  ⇑P        P        06 07 58.2 +1.3
ARPR   Arapgir-MALATY   66.42 313    P        P        06 07 55.8 -1.5
ARPR                                 IAmb     IAmb     06 08 42.1
       comp=Z,62nm,1.1s
BELG   Belogornoye      66.55 329    P        P        06 07 57.0 -0.6
       comp=Z,123nm,1.1s,baz=108,slow=3.4,SNR=24
BELG                                 LR       LR       06 41 00.4
       comp=Z,2µm,20.3s,baz=122,slow=40
       comp=Z,123nm,1.1s
BELG   Belogornoye      66.55 329  i P        P        06 07 56.3 -1.3
BELG                                  pmax     pmax
       comp=Z,23nm,1.1s
GAZ    Gaziantep        66.62 311    P        P        06 07 58.6  0.0
GAZ                                  IAmb     IAmb     06 08 11.3
       comp=Z,74nm,1.0s
MMAI   Mount Meron Ar   66.83 306    P        P        06 07 58.7 -1.2
       comp=Z,1.8nm,0.4s,baz=146,slow=6.1,SNR=6.3
MMAI                                 S        S        06 16 53.7 +2.4
       comp=Z,1.0nm,0.3s,baz=86,slow=7.8,SNR=0.9
MMAI                                 LR       LR       06 39 12.7
       comp=Z,4µm,18.2s,baz=106,slow=38
       comp=Z,1.8nm,0.4s
LABN   Labinsk          66.86 319   eP       P        06 08 01.8 +2.0
LABN                                e*PP     pP       06 08 04.9 -2.9
LABN                                eS       S        06 16 55.8 +4.7
LABN                                  pmax     pmax
       comp=Z,43nm,1.0s
MBAR   Mbarara          67.01 269    P        P        06 07 59.5 -2.0
MBAR   Mbarara          67.01 269    P        P        06 08 03.2 +1.7
MBAR                                 S        S        06 16 57.4 +3.1
MBAR   Mbarara          67.01 269  i P        P        06 08 02.0 +0.5
MBAR                                  pmax     pmax
       comp=Z,28nm,1.4s
SOC    Sochi            67.10 318c iP       P        06 07 59.7 -1.6
SOC                                 e                 06 10 28.8
SOC                                 eS       S        06 16 53.5 -0.5
SOC                                 eSS      SS       06 21 13.7 +0.3
SOC                                   pmax     pmax
       comp=Z,58nm,1.0s
SOC                                   MLR      MLR
       comp=Z,2µm,21.0s
ERBR   Yeremizino-Bor   67.45 320   eP       P        06 08 03.0 -0.5
ERBR                                e*PP     pP       06 08 06.2 -5.3
ERBR                                eS       S        06 17 04.9 +6.7
ERBR                                  pmax     pmax
       comp=Z,50nm,0.8s
BNN    Bunyan           68.18 312    P        P        06 08 08.5 +0.1
TOKA   Tokat            68.18 314    IAmb     IAmb     06 08 20.0
       comp=Z,36nm,0.9s
CSS    Mathiatis        69.00 307    IAmb     IAmb     06 08 32.5
       comp=Z,42nm,1.0s
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CSS    Mathiatis        69.00 307  ⇑P        P        06 08 13.4 -0.1
ANN    Anapa            69.08 319   eP       P        06 08 11.9 -1.8
ANN                                 e*PP     pP       06 08 15.5 -6.2
ANN                                 e                 06 08 36.0
ANN                                 e                 06 10 48.5
ANN                                 eS       S        06 17 16.1 -1.5
ANN                                   pmax     pmax
       comp=Z,23nm,1.1s
VRH    Novokhopyorsk    69.11 326   eP       P        06 08 12.8 -1.0
VRH                                   pmax     pmax
       comp=Z,70nm,0.9s
NRIK   Noril'sk         69.20 356    P        P        06 08 13.7 -0.3
NRIK   Noril'sk         69.20 356    P        P        06 08 12.6 -1.4
       comp=Z,92nm,0.9s,baz=157,slow=5.9,SNR=47
NRIK                                 S        S        06 17 15.8 -2.3
       comp=Z,11nm,1.1s,baz=215,slow=9.8,SNR=0.9
NRIK                                 LR       LR       06 41 59.9
       comp=Z,6µm,19.7s,baz=174,slow=39
       comp=Z,92nm,0.9s
NRIK   Noril'sk         69.20 356ceP        P        06 08 13.9 -0.1
NRIK                                  pmax     pmax
       comp=Z,134nm,1.0s
NRIK                                  MLR      MLR
       comp=Z,6µm,17.0s
KIRV   Kirov            69.29 335    P        P        06 08 13.8 -0.9
       comp=Z,58nm,1.0s,baz=174,slow=0.6,SNR=26
KIRV                                 LR       LR       06 41 55.5
       comp=Z,4µm,20.6s,baz=133,slow=39
       comp=Z,58nm,1.0s
KIRV   Kirov            69.29 335ceP        P        06 08 14.5 -0.2
DIKM   Dikmen           69.49 315  ⇑P        P        06 08 17.7 +1.4
KIRS   Kirsehir-Merke   69.69 312  ⇑P        P        06 08 17.8  0.0
BR104  Keskin Array S   70.06 312    P        P        06 08 19.0 -1.1
       comp=Z,147nmcomp=Z,20nm,0.9s
BR131  Keskin Array S   70.07 312    P        P        06 08 19.1 -1.2
BR131  Keskin Array S   70.07 312    P        P        06 08 18.8 -1.3
       SNR=24
BR131                                S        S        06 17 26.9 -2.9
BR131  Keskin Array S   70.07 312  i P        P        06 08 18.9 -1.3
BRTR   Keskin Array B   70.07 312    P        P        06 08 19.0 -1.2
BRTR   Keskin Array B   70.07 312    P        P        06 08 18.9 -1.2
       comp=Z,8.1nm,0.9s,baz=130,slow=6.8,SNR=27
BRTR                                 S        S        06 17 27.6 -2.3
       comp=Z,1.1nm,0.8s,baz=136,slow=8.7,SNR=0.9
       comp=Z,8.1nm,0.9s
BRTR   Keskin Array B   70.07 312    P        P        06 08 19.0 -1.2
BR105  Keskin Array S   70.09 312    P        P        06 08 19.3 -1.0
       comp=Z,190nmcomp=Z,26nm,0.9s
SKR    Severo-Kuril’s   70.22  35   eP       P        06 08 20.7 +0.1
SKR                                 eS       S        06 17 34.5 +3.8
SKR                                   pmax     pmax
       comp=Z,2µm,13.7s
SKR                                   pmax     pmax
       comp=Z,273nm,1.0s
SKR                                   smax     smax
       comp=N,3µm,14.3s
SKR                                   smax     smax
       comp=E,4µm,11.6s
LSZ    Lusaka           70.40 254    IAMs_20  IAMs_20  06 37 29.6
       comp=Z,13µm,18.0s
LSZ    Lusaka           70.40 254    LR       LR       06 34 05.0
       comp=Z,8µm,22.0s,baz=89,slow=32
LSZ    Lusaka           70.40 254    P        P        06 08 25.8 +3.2
LSZ                                  S        S        06 17 34.3  0.0
LSZ    Lusaka           70.40 254    P        P        06 08 25.0 +2.5
DZM    Mont Dzumac      70.45 113    P        P        06 08 23.3 +0.5
DZM                                  IAMs_20  IAMs_20  06 42 38.3
       comp=Z,8µm,19.0s
DZM    Mont Dzumac      70.45 113    LR       LR       06 42 32.0
       comp=Z,9µm,18.7s,baz=284,slow=39
DZM    Mont Dzumac      70.45 113    P        P        06 08 26.7 +3.9
DZM    Mont Dzumac      70.45 113  ⇓P        P        06 08 24.7 +1.9
BZK    Bozkurt          70.48 315  ⇓P        P        06 08 23.8 +1.4
BZK    Bozkurt          70.48 315    P        P        06 08 21.3 -1.1
       comp=Z,2µmcomp=Z,179nm,1.0s
ONTNC  Ouen Toro        70.50 114    IAMs_20  IAMs_20  06 42 58.5
       comp=Z,7µm,19.0s
VSR    Storozhevoye     70.56 325   eP       P        06 08 21.0 -1.7
VSR                                   pmax     pmax
       comp=Z,40nm,1.1s
VLAKA  Lakatoro         70.61 107    P        P        06 08 26.8 +3.2
VORR   Voronezh         70.73 326   eP       P        06 08 22.8 -0.9
VORR                                  pmax     pmax
       comp=Z,60nm,1.2s
ANTO   Ankara           70.74 312    P        P        06 08 23.2 -0.9
ANTO                                 IAmb     IAmb     06 08 34.3
       comp=Z,32nm,0.9s
ANTO   Ankara           70.74 312    P        P        06 08 23.8 -0.4
ANTO                                 S        S        06 17 34.3 -3.1
ANTO   Ankara           70.74 312  ⇓P        P        06 08 25.1 +0.9
ANTO   Ankara           70.74 312    P        P        06 08 25.0 +0.9
ANTO   Ankara           70.74 312    P        P        06 08 23.4 -0.7
       comp=Z,437nmcomp=Z,19nm,1.1s
YATNC  Mamie plateau,   70.86 113    P        P        06 08 27.3 +2.1
OUENC  Ouen Island, N   70.87 114    P        P        06 08 27.6 +2.4
CIDE   Kastamonu/Cide   71.20 314  ⇓P        P        06 08 27.0 +0.2
LPSR   Galich'ya Gora   71.29 327   eP       P        06 08 26.0 -1.1
LPSR                                  pmax     pmax
       comp=Z,86nm,1.3s
SIM    Simferopol'      71.34 318   eP       P        06 08 26.2 -1.4
SIM                                 eS       S        06 17 43.4 -0.7
SIM                                   pmax     pmax
       comp=Z,96nm,1.1s
PINNC  Pines Island,    71.45 114    IAMs_20  IAMs_20  06 39 31.7
       comp=Z,9µm,22.0s
BCK    Bucak            71.77 309    P        P        06 08 28.9 -1.6
MA2    Magadan          71.85  25    P        P        06 08 30.4 +0.1
MA2                                  IAmb     IAmb     06 08 33.7
       comp=Z,41nm,0.7s
MA2                                  IAMs_20  IAMs_20  06 42 03.7
       comp=Z,13µm,19.0s
MA2    Magadan          71.85  25    S        S        06 17 49.8 +0.4
       comp=Z,2.3nm,0.4s,baz=198,slow=20,SNR=1.2
MA2                                  LR       LR       06 42 24.4
       comp=Z,12µm,19.2s,baz=236,slow=38
MA2    Magadan          71.85  25    P        P        06 08 32.4 +2.0
MA2    Magadan          71.85  25  i P        P        06 08 29.9 -0.5
MA2                                   pmax     pmax
       comp=Z,39nm,0.7s
MA2                                   MLR      MLR
       comp=Z,12µm,19.0s
MA2    Magadan          71.85  25    P        P        06 08 30.5 +0.1
       comp=Z,3µmcomp=Z,89nm,1.0s
ISP    Isparta          71.91 310    P        P        06 08 31.0 -0.3
ISP                                  IAmb     IAmb     06 09 06.8
       comp=Z,83nm,1.4s
ISP    Isparta          71.91 310    P        P        06 08 31.0 -0.3
ISP                                   pmax     pmax
       comp=Z,83nm,1.4s
MAW    Mawson           72.03 193    P        P        06 08 31.2 +0.1
       comp=Z,9.5nm,0.7s,baz=59,slow=6.0,SNR=16
MAW                                  LR       LR       06 33 14.7
       comp=Z,7µm,21.7s,baz=36,slow=30
       comp=Z,9.5nm,0.7s
PEA0B  Petropavlovsk-   72.13  33    P        P        06 08 31.6 -0.6
PEA0B                                IAmb     IAmb     06 09 19.2
       comp=Z,47nm,0.9s
PEA0B  Petropavlovsk-   72.13  33ceP        P        06 08 33.6 +1.4
PETK   Petropavlovsk-   72.13  33    P        P        06 08 31.4 -0.8
PETK   Petropavlovsk-   72.13  33    P        P        06 08 31.1 -1.0
       comp=Z,24nm,0.8s,baz=207,slow=1.7,SNR=37
PETK                                 S        S        06 17 54.3 +1.4
       comp=Z,0.5nm,0.4s,baz=175,slow=27,SNR=1.0
PETK                                 LR       LR       06 41 32.2
       comp=Z,6µm,19.6s,baz=235,slow=37
       comp=Z,24nm,0.8s
PETK   Petropavlovsk-   72.13  33    P        P        06 08 31.4 -0.8
SAHE   Sakarya_HENDEK   72.43 313  ⇑P        P        06 08 34.4 +0.1
BORA   Eskisehir        72.48 312    P        P        06 08 34.5 -0.2
BORA                                 IAmb     IAmb     06 09 01.8
       comp=Z,76nm,1.7s
PET    Petropavlovsk    72.62  34    P        P        06 08 35.0 -0.1
PET    Petropavlovsk    72.62  34    P        P        06 08 36.4 +1.3
       comp=Z,712nm,1.1s
PET    Petropavlovsk    72.62  34c iP       P        06 08 35.0 -0.1
PET                                 eS       S        06 17 59.0 +0.6
PET                                   pmax     pmax
       comp=Z,2µm,4.2s
PET                                   pmax     pmax
       comp=Z,194nm,0.7s
PET                                   pmax     pmax
       comp=Z,2µm,17.4s
PET    Petropavlovsk    72.62  34    P        P        06 08 34.9 -0.2
       comp=Z,4µmcomp=Z,177nm,1.1s
MOS    Moscow           73.32 329   eP       P        06 08 36.2 -3.0
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MOS                                   e                06 08 58.2
MOS                                   eS      S        06 18 00.9  -5.4
MOS                                    pmax   pmax
       comp=Z,500nm,2.7s
MOS                                    pmax   pmax
       comp=Z,91nm,1.2s
MOS                                    smax   smax
       comp=N,2µm,5.0s
MOS                                    smax   smax
       comp=E,2µm,5.0s
ARG    Arkhangelos        73.42 308    IAmb   IAmb     06 08 58.9
       comp=Z,51nm,1.0s
ARG    Arkhangelos        73.42 308    P      P        06 08 38.5  -1.7
YLV    Yalova             73.45 312    P      P        06 08 39.1  -1.3
       comp=Z,1µmcomp=Z,82nm,1.2s
LPHEP  Lephephe           73.54 246  i P      P        06 08 38.7  -2.6
OBN    Obninsk            73.61 328    LR     LR       06 45 22.4
       comp=Z,2µm,20.1s,baz=56,slow=39
OBN    Obninsk            73.61 328ceP      P        06 08 40.5  -0.4
OBN                                   e                06 08 54.7
OBN                                   ePPP    PPP      06 13 10.0
OBN                                   i S     SKiKP    06 18 04.6  -5.0
OBN                                   eSS     SS       06 22 56.2  +3.2
OBN                                    pmax   pmax
       comp=Z,84nm,1.3s
ISK    Istanbul-Kandi     73.80 313    P      P        06 08 41.4  -0.9
KLYT   Kilyos             73.86 313    P      P        06 08 43.1  +0.5
TIXI   Tiksi              73.91  10    P      P        06 08 41.0  -1.3
       comp=Z,122nm,0.8s,baz=209,slow=1.9,SNR=83
TIXI                                   S      SKiKP    06 18 09.2  -0.4
       comp=Z,2.4nm,0.3s,baz=280,slow=16,SNR=1.1
TIXI                                   LR     LR       06 46 05.4
       comp=Z,15µm,18.4s,baz=237,slow=40
       comp=Z,122nm,0.8s
TIXI   Tiksi              73.91  10  i P      P        06 08 41.4  -0.9
TIXI                                   pmax   pmax
       comp=Z,210nm,1.1s
TIXI                                   MLR    MLR
       comp=Z,15µm,18.0s
LBTB   Lobatse            74.00 244    LR     LR       06 37 55.5
       comp=Z,5µm,18.0s,baz=84,slow=33
KARP   Karpathos          74.05 307    P      P        06 08 43.7  -0.3
KARP   Karpathos          74.05 307   eP      P        06 08 44.1  +0.2
KARP   Karpathos          74.05 307    P      P        06 08 43.7  -0.3
       comp=Z,2µmcomp=Z,144nm,1.0s
SEY    Seymchan           74.32  23    P      P        06 08 44.0  -0.9
       comp=Z,46nm,0.9s,baz=246,slow=7.5,SNR=23
SEY                                    LR     LR       06 45 56.3
       comp=Z,19µm,18.0s,baz=234,slow=39
       comp=Z,46nm,0.9s
SEY    Seymchan           74.32  23ceP      P        06 08 44.8  -0.1
SEY                                    pmax   pmax
       comp=Z,63nm,1.0s
BAND   Balkesir-Ban       74.34 312  ⇓P      P        06 08 46.8  +1.3
CTYL   Yalikoy Yolu       74.46 313  ⇑P      P        06 08 46.9  +0.7
PURM   Purcari            74.66 318  ⇑P      P        06 08 48.5  +1.3
KLMR   Klimovskoe         74.74 334   eP      P        06 08 45.5  -1.8
KLMR                                  e                06 11 29.4
KLMR                                   S      S        06 18 19.2  -2.8
KLMR                                   SS     SS       06 23 12.7  +2.8
KLMR                                   pmax   pmax
       comp=Z,76nm,1.2s
BOSA   Boshof             74.83 240    P      P        06 08 48.5  -0.3
       comp=Z,8.0nm,1.1s,baz=91,slow=5.9,SNR=4.8
BOSA                                   LR     LR       06 37 29.8
       comp=Z,6µm,19.1s,baz=78,slow=32
       comp=Z,8.0nm,1.1s
PSN    Preselentsi        75.09 315    P      P        06 08 48.5  -1.2
TIRR   Tirgusor           75.10 316  ⇑P      P        06 08 50.9  +1.2
TIRR   Tirgusor           75.10 316    P      P        06 08 50.9  +1.2
TIRR   Tirgusor           75.10 316    P      P        06 08 48.7  -1.1
       comp=Z,854nmcomp=Z,37nm,0.9s
TPGR   Topolog            75.19 317  ⇓P      P        06 08 50.4   0.0
SKOMA  Sekoma             75.44 245  i P      P        06 08 52.6  +0.3
MILM   Milestii Mici      75.46 319⇑iP      P        06 08 50.0  -1.8
       comp=Z,400nm,3.5s
MILM   Milestii Mici      75.46 319   ePP     PP       06 11 48.0  +6.9
MILM                                  eS      S        06 18 25.0  -5.6
       comp=Z,2µm,7.0s
MILM                                  eL      L        06 34 28.0
MILM                                   LRM    MLR      06 51 57.0
       comp=Z,3µm,17.5s
MILM   Milestii Mici      75.46 319  ⇓P      P        06 08 52.0  +0.1
MILM   Milestii Mici      75.46 319c iP      P        06 08 50.0  -1.8
MILM                                  e                06 11 48.0
MILM                                  i S     S        06 18 25.0  -5.6
MILM                                   pmax   pmax
       comp=Z,400nm,3.5s
MILM                                   smax   smax
       comp=N,2µm,7.0s
CFR    Carcaliu           75.47 317  ⇑P      P        06 08 53.5  +1.6
CFR    Carcaliu           75.47 317    P      P        06 08 53.5  +1.6
KIS    Kishinev           75.48 319⇑eP      P        06 08 51.0  -0.9
KIS    Kishinev           75.48 319   ePP     PP       06 11 47.0  +5.7
KIS                                   eS      S        06 18 26.0  -4.8
KIS                                   eL      L        06 34 27.0
KIS                                    LQM             06 50 16.0
       comp=N,1µm,20.0s
KIS                                    LRM    MLR      06 51 56.0
       comp=N,1µm,17.5s
KIS    Kishinev           75.48 319ceP      P        06 08 51.0  -0.9
KIS                                   e                06 09 01.0
KIS                                   e                06 11 47.0
PRD    Provadia           75.49 315    P      P        06 08 51.8  -0.3
PYZ    Puysegur Point     75.81 138    IAMs_20 IAMs_20 06 41 03.7
       comp=Z,7µm,21.0s
IDI    Anoyia             75.83 306    P      P        06 08 55.0  +0.8
IDI    Anoyia             75.83 306    LR     LR       06 45 09.1
       comp=Z,1µm,20.0s,baz=94,slow=38
DCZ    Deep Cove          75.94 137    IAMs_20 IAMs_20 06 41 52.2
       comp=Z,10µm,22.0s
SORM   Soroca             76.09 320  ⇑P      P        06 08 56.6  +1.3
SORM   Soroca             76.09 320    P      P        06 08 56.6  +1.3
SORM   Soroca             76.09 320    P      P        06 08 55.1  -0.2
       comp=Z,2µmcomp=Z,78nm,0.9s
AK09   Malin Array Si     76.19 322    P      P        06 08 55.2  -0.7
AK10   Malin Array Si     76.20 322    P      P        06 08 55.4  -0.6
AKASG  Malin Array Be     76.25 322    P      P        06 08 56.1  -0.1
AKASG                                  IAmb   IAmb     06 11 26.9
       comp=Z,78nm,1.2s
AKASG  Malin Array Be     76.25 322    P      P        06 08 55.1  -1.2
       comp=Z,37nm,1.1s,baz=91,slow=4.6,SNR=55
AKASG                                  S      S        06 18 31.6  -7.5
       comp=Z,0.5nm,0.4s,baz=89,slow=6.0,SNR=1.3
AKASG                                  LR     LR       06 47 01.5
       comp=Z,2µm,18.7s,baz=106,slow=39
       comp=Z,37nm,1.1s
AKASG  Malin Array Be     76.25 322  i P      P        06 08 55.0  -1.2
AKASG                                  pmax   pmax
       comp=Z,25nm,0.9s
AKBB   Malin Array Si     76.25 322    P      P        06 08 55.1  -1.2
AKBB                                   IAmb   IAmb     06 08 59.4
       comp=Z,47nm,1.1s
AKBB   Malin Array Si     76.25 322ceP      P        06 08 55.4  -0.8
AKBB                                   pmax   pmax
       comp=Z,54nm,1.1s
AKBB   Malin Array Si     76.25 322    P      P        06 08 55.0  -1.2
KIEV   Kiev               76.25 322    P      P        06 08 55.1  -1.2
KIEV                                   IAmb   IAmb     06 08 59.5
       comp=Z,46nm,1.1s
KIEV   Kiev               76.25 322  ⇓P      P        06 08 56.7  +0.5
KIEV   Kiev               76.25 322    P      P        06 08 56.7  +0.5
KIEV   Kiev               76.25 322  i P      P        06 08 55.2  -1.0
       SNR=25
KIEV   Kiev               76.25 322    P      P        06 08 54.4  -1.9
       comp=Z,5µmcomp=Z,149nm,0.8s
RDO    Rodhopi            76.41 312    P      P        06 08 57.4   0.0
MLZ    Mavora Lakes       76.57 137    IAMs_20 IAMs_20 06 42 11.0
       comp=Z,12µm,22.0s
WHZ    Wether Hill Ro     76.58 138    IAMs_20 IAMs_20 06 42 12.3
       comp=Z,12µm,22.0s
VRI    Vrincioaia         76.60 317  ⇑P      P        06 08 59.5  +1.1
VRI    Vrincioaia         76.60 317    P      P        06 08 59.4  +1.1
VRI    Vrincioaia         76.60 317    P      P        06 08 57.9  -0.5
       comp=Z,1µmcomp=Z,49nm,0.9s
PLOR   Plostina           76.64 317  ⇓P      P        06 08 59.9  +1.2
PLOR   Plostina           76.64 317    P      P        06 08 59.8  +1.2
KDZ    Kurdzhali          76.66 313    P      P        06 08 55.6  -3.2
JCZ    Jackson Bay        76.72 136    P      P        06 09 00.5  +1.4
TESR   Tescani            76.80 318  ⇓P      P        06 09 00.8  +1.3
KGCAE  Kacgae             76.82 247  i P      P        06 09 01.8  +1.6
MI30   MI30,Zelenitsa     76.89 322    P      P        06 08 59.5  -0.4
       comp=Z,53nm,0.9s
LUBAR  Lubar, Ukraine     76.94 321    P      P        06 08 58.5  -1.6
MI29   MI29, Kamyanyy     77.01 322    P      P        06 09 00.1  -0.5
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       comp=Z,299nm,2.0s
MLR    Muntele Rosu       77.04 317    IAmb   IAmb     06 09 33.3
       comp=Z,58nm,0.9s
MLR    Muntele Rosu       77.04 317    LR     LR       06 49 28.2
       comp=Z,1µm,18.7s,baz=90,slow=41
MLR    Muntele Rosu       77.04 317  ⇑P      P        06 09 01.6  +0.6
MLR    Muntele Rosu       77.04 317    P      P        06 09 01.6  +0.6
MLR    Muntele Rosu       77.04 317    P      P        06 09 00.6  -0.4
       comp=Z,1µmcomp=Z,62nm,1.6s
WKZ    Wanaka             77.06 136    IAMs_20 IAMs_20 06 42 59.9
       comp=Z,13µm,20.0s
MI28   Mi28,Pidlybu       77.26 322    P      P        06 09 00.9  -1.0
FOZ    Fox Glacier        77.32 135    IAMs_20 IAMs_20 06 42 03.9
       comp=Z,14µm,22.0s
QNGWA  Qangwa             77.47 250  i P      P        06 09 05.0  +1.2
DOPR   Dopca              77.53 317  ⇑P      P        06 09 04.8  +1.2
GRTLG  Ghanzi             77.59 248    P      P        06 09 04.6   0.0
GRTLG  Ghanzi             77.59 248  i P      P        06 09 06.6  +2.0
VOIR                      77.65 317  ⇑P      P        06 09 04.4   0.0
VOIR                      77.65 317    P      P        06 09 04.4   0.0
TUZ    Tuapeka            77.74 137    P      P        06 09 05.7  +1.0
LBZ    Lake Benmore       77.77 136    IAMs_20 IAMs_20 06 43 15.7
       comp=Z,10µm,21.0s
LBZ    Lake Benmore       77.77 136    P      P        06 09 05.1  +0.2
MMB    Musomishta         77.81 312    P      P        06 09 02.6  -2.7
WVZ    Waitaha Valley     77.88 134    P      P        06 09 06.8  +1.2
ARR    Arges              77.92 316  ⇓P      P        06 09 06.5  +0.7
BURAR  Bucovina Array     78.01 319    P      P        06 09 06.7  +0.4
BURAR  Bucovina Array     78.01 319  ⇑P      P        06 09 07.5  +1.2
BURAR  Bucovina Array     78.01 319    P      P        06 09 07.5  +1.2
BUR08  Bucovina Ar. S     78.02 319    IAmb   IAmb     06 09 42.2
       comp=Z,38nm,0.8s
MNK    Minsk              78.12 326  i P      P        06 09 05.2  -1.4
       comp=E,29nm,0.8s
MNK                                  i P      P        06 09 05.2  -1.4
       comp=N,50nm,1.0s
MNK                                  i P      P        06 09 05.2  -1.4
       comp=Z,84nm,1.0s,baz=106
MNK                                  i PP     PP       06 12 01.7  -1.6
MNK                                  i PPP    PPP      06 13 49.8
MNK                                  i S      S        06 19 00.1  +0.7
MNK                                  i SS     SS       06 24 03.3  +2.0
MNK                                  i SSS    SSS      06 27 27.7
MNK                                  i LQ     LQ       06 38 05.7
MNK                                  i LRM    MLR      06 47 15.2
       comp=E,6µm,20.3s
MNK    Minsk              78.12 326  i P      P        06 09 05.2  -1.4
MNK                                  i                 06 12 01.6
MNK                                  i PPP    PPP      06 13 49.8
MNK                                  i S      S        06 19 00.0  +0.7
MNK                                  i SS     SS       06 24 03.3  +2.0
MNK                                  i SSS    SSS      06 27 27.6
MNK                                    pmax   pmax
       comp=E,29nm,0.8s
MNK                                    pmax   pmax
       comp=Z,84nm,1.0s
MNK                                    pmax   pmax
       comp=N,50nm,1.0s
MNK                                    MLR    MLR
       comp=E,6µm,20.0s
MPEP   Malo Peshtene      78.15 314    P      P        06 09 05.9  -1.2
PLNA   Plana              78.22 313    P      P        06 09 02.0  -5.6
ODZ    Otahua Downs       78.23 136    IAMs_20 IAMs_20 06 43 49.0
       comp=Z,8µm,20.0s
RPZ    Rata Peaks         78.24 135    IAMs_20 IAMs_20 06 42 34.2
       comp=Z,13µm,22.0s
RPZ    Rata Peaks         78.24 135    LR     LR       06 44 05.1
       comp=Z,11µm,21.6s,baz=274,slow=36
RPZ    Rata Peaks         78.24 135    P      P        06 09 08.0  +0.4
RPZ                                    PcP    PcP      06 09 17.3  +0.3
INZ    Inchbonnie         78.31 134    IAmb   IAmb     06 09 34.2
       comp=Z,80nm,1.0s
INZ    Inchbonnie         78.31 134    P      P        06 09 08.3  +0.3
KKB    Krupnik            78.32 313    P      P        06 09 07.0  -1.1
VTS    Vitosha            78.38 313    P      P        06 09 07.0  -1.6
DSZ    Denniston Nort     78.39 133    P      P        06 09 09.8  +1.3
RNPP5  Staryi Chortor     78.42 322    P      P        06 09 08.9  +0.5
RNPP9  Sopachiv           78.47 323    P      P        06 09 08.3  -0.3
ITM    Ithomi             78.49 308    IAmb   IAmb     06 10 23.2
       comp=Z,68nm,1.3s
OUZ    Omahuta            78.67 126    P      P        06 09 11.8  +1.7
STNU   Starunia           78.71 320    P      P        06 09 10.1   0.0
QRZ    Quartz Range       78.75 132    P      P        06 09 11.4  +0.9
QRZ    Quartz Range       78.75 132    P      P        06 09 11.7  +1.2
RAKU   Rahkiv             78.79 319    P      P        06 09 11.8  +1.3
NACGM  Naroch             78.84 326   eP      P        06 09 12.2  +1.6
       comp=E,20nm,1.0s
OXZ    Oxford             78.86 134    IAMs_20 IAMs_20 06 43 02.8
       comp=Z,13µm,21.0s
CJR    Cluj-Napoca        78.90 318  ⇓P      P        06 09 11.6  +0.4
CJR    Cluj-Napoca        78.90 318    P      P        06 09 11.6  +0.4
LTZ    Lake Taylor        78.92 134    P      P        06 09 12.1  +0.6
BMR    Baia Mare          79.16 319    P      P        06 09 13.1  +0.6
SUR    Sutherland         79.16 237    IAMs_20 IAMs_20 06 41 11.2
       comp=Z,8µm,18.0s
THZ    Tophouse           79.20 133    P      P        06 09 12.2  -0.8
THZ                                    IAmb   IAmb     06 09 39.3
       comp=Z,86nm,1.0s
THZ    Tophouse           79.20 133    P      P        06 09 13.6  +0.6
GZR    Gura Zlata         79.21 316  ⇓P      P        06 09 14.4  +1.4
GZR    Gura Zlata         79.21 316    P      P        06 09 14.4  +1.4
MARR   Marisel-Cluj       79.21 317  ⇑P      P        06 09 13.4  +0.3
MEZ    Mezhgor'ye         79.31 319    P      P        06 09 14.5  +1.1
MQZ    McQueen's Vall     79.37 135    IAMs_20 IAMs_20 06 43 18.3
       comp=Z,9µm,22.0s
MQZ    McQueen's Vall     79.37 135    P      P        06 09 14.6  +0.8
WCZ    Waipu Caves        79.38 127    P      P        06 09 16.2  +2.2
SYO    Syowa Base         79.38 198⇓eP      P        06 09 12.8  -0.5
SYO    Syowa Base         79.38 198⇓ipP     pP       06 09 20.2  -1.1
SYO    Syowa Base         79.38 198⇓ePcP    PcP      06 09 22.0  +0.7
GVZ    Greta Valley S     79.51 134    P      P        06 09 14.4  -0.2
DRGR                      79.51 318    P      P        06 09 14.5  -0.1
BRIU   Brid               79.60 319    P      P        06 09 15.6  +0.7
BOVS   Bovan              79.66 314  ⇑P      P        06 09 15.6  +0.3
SURR   Surduc             79.72 316  ⇓P      P        06 09 17.0  +1.4
KHZ    Kahutara           79.78 133    P      P        06 09 16.2  +0.2
LVZ    Lovozero           79.80 340    IAMs_20 IAMs_20 06 48 34.0
       comp=Z,7µm,22.0s
LVZ    Lovozero           79.80 340    P      P        06 09 16.2  +0.5
BERU   Beregovo           79.83 319    P      P        06 09 17.0  +0.9
VSU    Vasula             79.84 330ceP      P        06 09 15.2  -0.8
VSU                                    pmax   pmax
       comp=Z,38nm,1.0s
MDVR   Moldovita          79.84 315  ⇑P      P        06 09 17.3  +0.9
BZS    Buzias             80.05 316  ⇑P      P        06 09 18.0  +0.5
BZS    Buzias             80.05 316    P      P        06 09 17.9  +0.5
APA    Apatity            80.10 339⇓iP      P        06 09 16.7  -0.5
APA                                    pmax   pmax
       comp=Z,30nm,0.9s
HIZ    Hauiti             80.15 129    IAmb   IAmb     06 09 22.2
       comp=Z,76nm,1.0s
HIZ                                    IAMs_20 IAMs_20 06 46 00.3
       comp=Z,8µm,20.0s
HIZ    Hauiti             80.15 129    P      P        06 09 20.3  +2.2
KOLS   Kolonicke sedl     80.20 320   eP      P        06 09 20.6  +2.4
KOLS                                   pmax   pmax
       comp=Z,63nm,1.1s
KOLS   Kolonicke sedl     80.20 320   eP      P        06 09 20.6  +2.4
WAZ    Wanganui           80.43 130    P      P        06 09 21.7  +2.0
TOZ    Tahuroa Road       80.55 128    IAMs_20 IAMs_20 06 46 36.8
       comp=Z,11µm,20.0s
PABE   Paberze            80.55 326    IAmb   IAmb     06 09 22.8
       comp=Z,98nm,1.1s
PABE   Paberze            80.55 326   eP      P        06 09 20.5  +0.6
KUZ    Kuaotunu           80.59 127    P      P        06 09 21.3  +0.8
BHW    Baring Head        80.59 132    IAMs_20 IAMs_20 06 45 33.8
       comp=Z,12µm,21.0s
PKVZ   Pokaka             80.64 130    P      P        06 09 21.9  +1.0
SUW    Suwalki            80.67 325   eP      P        06 09 20.6  +0.1
SUW    Suwalki            80.67 325    P      P        06 09 20.9  +0.3
SUW    Suwalki            80.67 325    P      P        06 09 20.9  +0.3
SUW    Suwalki            80.67 325   eP      P        06 09 21.2  +0.7
TWVZ   Taurewa            80.68 130    P      P        06 09 23.1  +1.9
COVZ   Chateau Observ     80.78 130    P      P        06 09 22.7  +1.1
TRVZ   Turoa              80.80 130    P      P        06 09 23.3  +1.4
TSUM   Tsumeb             80.82 251    IAMs_20 IAMs_20 06 42 37.7
       comp=Z,7µm,19.0s
TSUM   Tsumeb             80.82 251    LR     LR       06 42 48.8
       comp=Z,6µm,18.4s,baz=102,slow=34
NGZ    Ngauruhoe          80.82 130    P      P        06 09 23.1  +1.2
NNVZ   North Ngauruho     80.83 130    P      P        06 09 24.0  +2.0
WNVZ   Wahianoa           80.84 130    P      P        06 09 22.9  +0.9
OTVZ   Oturere            80.87 130    P      P        06 09 23.6  +1.4
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MSVF   Nonsavu            80.88 108    P      P        06 09 20.1  -2.5
MSVF   Nonsavu            80.88 108    IAMs_20 IAMs_20 06 46 37.8
       comp=Z,6µm,21.0s
MSVF   Nonsavu            80.88 108  i P      P        06 09 22.5   0.0
MSVF                                   MLR    MLR
       comp=Z,5µm,21.0s
ETVZ   East Tongariro     80.90 130    P      P        06 09 22.1  -0.2
STHS   Stebnicka Huta     80.95 320   eP      P        06 09 23.6  +1.4
STHS                                   pmax   pmax
       comp=Z,21nm,1.0s
STHS   Stebnicka Huta     80.95 320   eP      P        06 09 23.6  +1.4
FIA1   FINESS Array S     80.99 332    P      P        06 09 22.1   0.0
FINES  FINESS Array B     80.99 332    P      P        06 09 21.6  -0.5
FINES  FINESS Array B     80.99 332    P      P        06 09 20.7  -1.4
       comp=Z,30nm,1.0s,baz=103,slow=6.1,SNR=30
FINES                                  S      S        06 19 23.9  -5.6
       comp=Z,1.9nm,0.9s,baz=94,slow=14,SNR=1.4
FINES                                  LR     LR       06 49 32.9
       comp=Z,3µm,18.9s,baz=102,slow=39
       comp=Z,30nm,1.0s
FINES  FINESS Array B     80.99 332  i P      P        06 09 21.5  -0.6
FINES                                  pmax   pmax
       comp=Z,30nm,1.0s
MRZ    Mangatainoka R     81.01 131    P      P        06 09 23.8  +1.1
PDG    Podgorica          81.26 313    IAmb   IAmb     06 09 52.0
       comp=Z,37nm,0.9s
KECS   Kecovo             81.29 319   eP      P        06 09 26.0  +2.0
KECS                                   pmax   pmax
       comp=Z,17nm,0.7s
KECS   Kecovo             81.29 319   eP      P        06 09 26.0  +2.0
MTSE   Matsula            81.38 330   eP      P        06 09 25.2  +1.0
MEF    Metsahovi          81.46 331   eP      P        06 09 25.7  +1.1
SHEM   Shemya Is, Ala     81.47  37    LR     LR       06 46 06.8
       comp=Z,2µm,21.0s,baz=284,slow=36
WIN    Windhoek           81.49 247    IAMs_20 IAMs_20 06 42 05.5
       comp=Z,11µm,19.0s
BKZ    Black Stump Fm     81.51 130    IAMs_20 IAMs_20 06 46 23.1
       comp=Z,12µm,21.0s
BKZ    Black Stump Fm     81.51 130    P      P        06 09 26.8  +1.3
BKZ    Black Stump Fm     81.51 130    P      P        06 09 25.7  +0.2
R9F13  Warsaw-Wawer       81.52 323   eP      P        06 09 28.4  +3.3
R9F13                                 eS      SKiKP    06 18 06.6   -16
SCTE   Santa Cesarea      81.56 310    IAmb   IAmb     06 09 47.7
       comp=Z,52nm,1.1s
NIE    Niedzica           81.56 320   eP      P        06 09 25.9  +0.4
NIE    Niedzica           81.56 320    P      P        06 09 26.1  +0.6
       comp=Z,343nmcomp=Z,11nm,1.1s
PSZ    Piszkesteto        81.59 318  ⇑P      P        06 09 26.4  +0.6
PSZ    Piszkesteto        81.59 318    P      P        06 09 26.3  +0.6
PSZ    Piszkesteto        81.59 318   eP      P        06 09 26.5  +0.8
KEF    Keuruu             81.73 333   eP      P        06 09 25.7  -0.3
BILL   Bilibino           81.75  21    P      P        06 09 26.6  +0.6
BILL                                   IAMs_20 IAMs_20 06 49 12.0
       comp=Z,10µm,20.0s
BILL   Bilibino           81.75  21ceP      P        06 09 27.6  +1.6
BILL                                   pmax   pmax
       comp=Z,14nm,1.0s
PBUR   Paburge            81.79 327   eP      P        06 09 27.0  +0.6
RTZ    Ruatahuna          81.82 129    IAMs_20 IAMs_20 06 47 05.3
       comp=Z,11µm,20.0s
RTZ    Ruatahuna          81.82 129    P      P        06 09 27.1   0.0
URZ    Urewera            81.87 129    LR     LR       06 47 21.4
       comp=Z,11µm,20.3s,baz=9.5,slow=37
URZ    Urewera            81.87 129    P      P        06 09 28.2  +0.9
OJC    Ojcow              82.01 321   eP      P        06 09 28.2  +0.4
OJC    Ojcow              82.01 321    P      P        06 09 27.7  -0.1
OJC    Ojcow              82.01 321    P      P        06 09 27.7  -0.1
OJC    Ojcow              82.01 321    P      P        06 09 27.9  +0.1
       comp=Z,766nmcomp=Z,33nm,1.2s
LANS   Liptovska Anna     82.06 320   eP      P        06 09 29.4  +1.3
LANS                                   pmax   pmax
       comp=Z,5.0nm,0.9s
LANS   Liptovska Anna     82.06 320   eP      P        06 09 29.4  +1.3
OUL    Oulu               82.09 336    P      P        06 09 28.1  +0.3
MORH   Mrgy, Hungar       82.19 317  ⇑P      P        06 09 28.9  +0.1
MORH   Mrgy, Hungar       82.19 317    P      P        06 09 27.9  -0.9
       comp=Z,679nmcomp=Z,19nm,2.0s
MWZ    Matawai            82.21 129    P      P        06 09 28.9  -0.3
HAZ    Te Kaha            82.34 128    P      P        06 09 30.3  +0.5
VYHS   Vyhne              82.38 319   eP      P        06 09 29.8   0.0
VYHS                                   pmax   pmax
       comp=Z,22nm,1.3s
VYHS   Vyhne              82.38 319   eP      P        06 09 29.8   0.0
DGTI   Dogotuki           82.42 106    P      P        06 09 32.6  +2.0
VADS   Vadso              82.42 341   eP      P        06 09 30.4  +0.9
SRO    Srobarova          82.63 318   eP      P        06 09 32.8  +1.8
SRO    Srobarova          82.63 318   eP      P        06 09 32.8  +1.8
PUZ    Puketiti           82.75 128    P      P        06 09 32.4  +0.5
TIP    Timpagrande        82.78 309    P      P        06 09 32.2   0.0
TIP    Timpagrande        82.78 309  ⇑P      P        06 09 33.0  +0.9
TIP    Timpagrande        82.78 309    P      P        06 09 32.5  +0.4
       comp=Z,542nmcomp=Z,20nm,1.2s
RAF    Rauma              82.91 332   eP      P        06 09 32.8  +0.7
VAF    Ylistaro           82.94 334   eP      P        06 09 33.6  +1.3
MATE   Matera             82.96 311  ⇑P      P        06 09 34.0  +1.1
MATE   Matera             82.96 311   eP      P        06 09 31.8  -1.1
OKC    Ostrava-Krasne     83.01 320   eP      P        06 09 34.9  +1.9
OKC                                   eS      S        06 19 50.3  -0.5
OKC                                    AMS    AMS      06 57 10.0
       comp=Z,3µm,17.6s
OKC    Ostrava-Krasne     83.01 320   eP      P        06 09 34.9  +1.9
OKC                                   eS      S        06 19 50.3  -0.5
OKC                                    MLR    MLR
       comp=Z,3µm,17.6s
KEV    Kevo               83.07 341    P      P        06 09 33.7  +0.9
KEV                                    IAmb   IAmb     06 09 35.5
       comp=Z,46nm,1.1s
KEV                                    IAMs_20 IAMs_20 06 53 25.3
       comp=Z,5µm,19.0s
KEV    Kevo               83.07 341    P      P        06 09 33.7  +0.9
KEV                                    pmax   pmax
       comp=Z,46nm,1.1s
MPLH   Magyarpolny        83.07 317    P      P        06 09 32.6  -0.8
       comp=Z,2µmcomp=Z,134nm,1.6s
JAVC   Velka Javorina     83.19 319   eP      P        06 09 34.5  +0.5
CEL    Celeste            83.37 308    IAmb   IAmb     06 09 58.6
       comp=Z,34nm,0.9s
CEL    Celeste            83.37 308    P      P        06 09 35.8  +0.6
       comp=Z,1µmcomp=Z,53nm,1.2s
MODS   Modra-Piesok       83.39 319   eP      P        06 09 34.9  -0.1
MODS                                   pmax   pmax
       comp=Z,66nm,1.3s
MODS   Modra-Piesok       83.39 319   eP      P        06 09 34.9  -0.1
MORC   Moravsky Berou     83.39 320   eP      P        06 09 34.3  -0.7
MORC   Moravsky Berou     83.39 320  ⇓P      P        06 09 35.7  +0.6
MORC   Moravsky Berou     83.39 320    P      P        06 09 35.6  +0.6
ARA0   ARCESS Array S     83.50 340   eP      P        06 09 37.0  +1.9
ARA0                                  eP      P        06 09 37.1  +1.9
ARCES  ARCESS Array B     83.50 340    P      P        06 09 35.9  +0.8
ARCES                                  IAmb   IAmb     06 09 38.0
       comp=Z,54nm,1.1s
ARCES  ARCESS Array B     83.50 340    P      P        06 09 34.8  -0.4
       comp=Z,27nm,0.8s,baz=93,slow=4.3,SNR=51
ARCES                                  LR     LR       06 50 38.6
       comp=Z,3µm,19.6s,baz=105,slow=38
       comp=Z,27nm,0.8s
CUC    Castrocucco        83.57 310    P      P        06 09 36.7  +0.5
KOGS   Kog                83.87 317   eP      P        06 09 37.4  -0.1
KOGS                                  ePP     PP       06 12 53.8  +2.8
KOGS                                  eS      SKSac    06 19 56.2  -2.9
KRLC   Kraliky            83.91 320   eP      P        06 09 38.2  +0.5
KRLC                                  eS      SKSac    06 20 00.3  +1.0
KRLC                                   AMS    AMS      06 53 40.0
       comp=Z,3µm,18.6s
KRLC   Kraliky            83.91 320   eP      P        06 09 38.2  +0.5
KRLC                                  eS      SKSac    06 20 00.3  +1.0
KRLC                                   MLR    MLR
       comp=Z,3µm,18.6s
VRAC   Vranov             83.95 319   eP      P        06 09 39.1  +1.2
RONA   Rosalia, Austr     83.97 318   eP      P        06 09 39.0  +0.9
       comp=Z,8.7nm,1.2s
KRUC   Moravsky           84.05 319   eP      P        06 09 39.6  +1.2
KTK1   Kautokeino         84.14 340   eP      P        06 09 38.8  +0.4
DPC    Dobruska-Polom     84.24 320   eP      P        06 09 40.1  +0.7
DPC                                   eS      SKSac    06 20 02.9  +1.5
DPC                                    AMS    AMS      06 53 40.0
       comp=Z,3µm,19.1s
DPC    Dobruska-Polom     84.24 320   eP      P        06 09 40.1  +0.7
DPC                                   eS      SKSac    06 20 02.9  +1.5
DPC                                    MLR    MLR
       comp=Z,3µm,19.1s
DPC    Dobruska-Polom     84.24 320    P      P        06 09 39.1  -0.3
       comp=Z,624nmcomp=Z,17nm,1.1s
CONA   Conrad Observa     84.28 318   eP      P        06 09 41.2  +1.5
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	comp=Z,7.4nm,1.1s						
KSP	**Ksiaz**	**84.31**	**321**	*e*P	**P**	**06 09 39.3**	**-0.3**
OSTC	**Ostas**	**84.33**	**321**	*e*P	**P**	**06 09 41.6**	**+1.8**
OSTC				*e*S	**SKSac**	**06 20 04.0**	**+2.1**
OSTC				AMS	AMS	06 53 50.0	
	comp=Z,4µm,18.5s						
OSTC	**Ostas**	**84.33**	**321**	*e*P	**P**	**06 09 41.6**	**+1.8**
OSTC				*e*S	**SKSac**	**06 20 04.0**	**+2.1**
OSTC				MLR	MLR		
	comp=Z,4µm,18.5s						
HAMF	**Hammerfest**	**84.41**	**341**	*e*P	**P**	**06 09 41.1**	**+1.4**
CHVC	**Chvalec**	**84.43**	**321**	*e*P	**P**	**06 09 40.6**	**+0.3**
CHVC				*e*S	**S**	**06 20 05.3**	**+0.1**
CHVC				AMS	AMS	06 53 50.0	
	comp=Z,4µm,19.1s						
CHVC	**Chvalec**	**84.43**	**321**	*e*P	**P**	**06 09 40.6**	**+0.3**
CHVC				*e*S	**S**	**06 20 05.3**	**+0.1**
CHVC				MLR	MLR		
	comp=Z,4µm,19.1s						
ARSA	**Arzberg**	**84.44**	**317**	*e*P	**P**	**06 09 41.6**	**+1.2**
	comp=Z,22nm,1.3s,SNR=7.7						
UPC	**Upice**	**84.45**	**321**	*e*S	**S**	**06 20 05.9**	**+0.6**
UPC				AMS	AMS	06 53 50.0	
	comp=Z,4µm,18.9s						
BOJS	**Bojanci**	**84.47**	**316**	*i* P	**P**	**06 09 40.4**	**-0.2**
BOJS				*i* S	**SKSac**	**06 20 01.9**	**-1.1**
TREC	**Trest**	**84.67**	**319**	*e*S	**S**	**06 20 07.3**	**-0.2**
TREC				AMS	AMS	06 52 50.0	
	comp=Z,3µm,20.5s						
SOKA	**Soboth**	**84.72**	**317**	*e*P	**P**	**06 09 42.3**	**+0.4**
	comp=Z,13nm,1.4s,SNR=13						
VNDA	**Vanda**	**84.90**	**169**	P	**P**	**06 09 42.8**	**+0.7**
VNDA	**Vanda**	**84.90**	**169**	P	**P**	**06 09 42.1**	**0.0**
	comp=Z,3.0nm,1.0s,baz=307,slow=6.0,SNR=7.7						
VNDA				SKKPbc	SKKPbc	06 31 35.1	+4.4
	comp=Z,0.8nm,0.6s,baz=346,slow=3.5,SNR=6.2						
VNDA				LR	LR	06 42 41.7	
	comp=Z,5µm,20.4s,baz=310,slow=32						
	comp=Z,3.0nm,1.0s						
LJU	**Ljubljana**	**85.02**	**316**	*e*P	**P**	**06 09 43.4**	**0.0**
LJU				*i* S	**SKSac**	**06 20 09.2**	**+2.6**
OBKA	**Obir**	**85.04**	**316**	*i* P	**P**	**06 09 44.7**	**+1.1**
	comp=Z,16nm,1.3s						
INTR	**Introdacqua**	**85.17**	**312**	P	**P**	**06 09 43.3**	**-1.0**
GOPC	**GO Pecny, Ondr**	**85.18**	**320**	*e*P	**P**	**06 09 46.3**	**+2.2**
GOPC				*e*S	**S**	**06 20 12.8**	**+0.2**
GOPC				AMS	AMS	06 54 30.0	
	comp=Z,3µm,19.4s						
GOPC	**GO Pecny, Ondr**	**85.18**	**320**	*e*P	**P**	**06 09 46.3**	**+2.2**
GOPC				*e*S	**S**	**06 20 12.8**	**+0.2**
GOPC				MLR	MLR		
	comp=Z,3µm,19.4s						
RAO	**Raoul Island**	**85.23**	**119**	IAMs_20	IAMs_20	06 50 56.2	
	comp=Z,6µm,21.0s						
RAO	**Raoul Island**	**85.23**	**119**	LR	LR	06 48 48.9	
	comp=Z,3µm,19.9s,baz=236,slow=36						
JETT	**Jettan, Norway**	**85.24**	**340**	*e*P	**P**	**06 09 43.8**	**-0.3**
PRU	**Pruhonice**	**85.34**	**320**	*e*P	**P**	**06 09 46.7**	**+1.8**
PRU				*e*S	**S**	**06 20 14.4**	**+0.3**
PRU				AMS	AMS	06 54 20.0	
	comp=Z,3µm,19.4s						
PRU	**Pruhonice**	**85.34**	**320**	*e*P	**P**	**06 09 46.7**	**+1.8**
PRU				*e*S	**S**	**06 20 14.4**	**+0.3**
PRU				MLR	MLR		
	comp=Z,3µm,19.4s						
MOA	**Molln**	**85.34**	**318**	*e*P	**P**	**06 09 45.3**	**+0.3**
	comp=Z,4.7nm,0.5s						
PVCC	**Panska Ves**	**85.37**	**321**	*e*S	**S**	**06 20 15.3**	**+0.9**
PVCC				AMS	AMS	06 54 30.0	
	comp=Z,3µm,18.7s						
PVCC	**Panska Ves**	**85.37**	**321**	P	**P**	**06 09 45.6**	**+0.6**
CKRC	**Cesky Krumlov**	**85.39**	**319**	*e*P	**P**	**06 09 45.7**	**+0.5**
CKRC				*e*S	**S**	**06 20 13.3**	**-1.5**
CKRC				AMS	AMS	06 59 20.0	
	comp=Z,3µm,18.6s						
CKRC	**Cesky Krumlov**	**85.39**	**319**	*e*P	**P**	**06 09 45.7**	**+0.5**
CKRC				*e*S	**S**	**06 20 13.3**	**-1.5**
CKRC				MLR	MLR		
	comp=Z,3µm,18.6s						
PRA	**Prague**	**85.42**	**320**	*e*S	**S**	**06 20 15.5**	**+0.6**
PRA				AMS	AMS	06 54 30.0	
	comp=Z,3µm,18.6s						
ZVC	**Zvikov**	**85.52**	**319**	*e*S	**S**	**06 20 15.9**	**-0.1**
ZVC				AMS	AMS	06 54 40.0	
	comp=Z,3µm,19.8s						
TRI	**Trieste**	**85.53**	**316**	P	**P**	**06 09 45.3**	**-0.6**
TRI	**Trieste**	**85.53**	**316**	P	**P**	**06 09 45.3**	**-0.6**
TRI				pmax	pmax		
	comp=Z,27nm,1.1s						
AQU	**L'Aquila**	**85.56**	**312**	P	**P**	**06 09 46.2**	**-0.1**
AQU	**L'Aquila**	**85.56**	**312**	P	**P**	**06 09 47.0**	**+0.8**
	comp=Z,885nmcomp=Z,62nm,1.1s						
CAMP	**Campotosto**	**85.57**	**312**	IAmb	IAmb	06 10 19.2	
	comp=Z,59nm,1.3s						
BSD	**Bornholm Skovb**	**85.59**	**325**	*i* P	**P**	**06 09 45.5**	**-0.4**
BSD				IAmb	IAmb	06 09 47.8	
	comp=Z,65nm,1.5s						
HOPEN	**Hopen**	**85.65**	**347**	*e*P	**P**	**06 09 47.8**	**+1.9**
SABO	**M.te Sabotino**	**85.66**	**316**	IAmb	IAmb	06 10 18.8	
	comp=Z,28nm,1.0s						
RICC	**Richard**	**85.67**	**321**	*e*S	**S**	**06 20 16.6**	**-0.8**
RICC				AMS	AMS	06 54 40.0	
	comp=Z,3µm,18.7s						
MYKA	**Terra Mystica**	**85.68**	**317**	*i* PcP	**PcP**	**06 09 48.7**	**-0.9**
	comp=Z,4.3nm,0.7s						
PRED	**Cave del Predi**	**85.72**	**316**	IAmb	IAmb	06 10 19.5	
	comp=Z,35nm,0.9s						
BIOA	**Bad Ischl, Aus**	**85.75**	**318**	*e*P	**P**	**06 09 47.8**	**+0.8**
	comp=Z,9.2nm,1.1s						
TRO	**Tromso**	**85.77**	**340**	*e*P	**P**	**06 09 47.5**	**+0.9**
BRG	**Berggiesshubel**	**85.80**	**321**	*e*P	**P**	**06 09 48.0**	**+0.9**
	comp=Z,12nm,1.0s,baz=93,slow=4.8						
BRG	**Berggiesshubel**	**85.80**	**321**	*e*P	**P**	**06 09 48.2**	**+1.1**
BRG				Amp		06 09 50.7	
	comp=Z,12nm,1.0s						
BRG	**Berggiesshubel**	**85.80**	**321**	S	**S**	**06 20 19.0**	**+0.4**
GEC2	**GERESS Array S**	**85.80**	**319**	P	**P**	**06 09 47.5**	**+0.2**
GEC2				IAmb	IAmb	06 10 25.7	
	comp=Z,57nm,1.4s						
GEC2	**GERESS Array S**	**85.80**	**319**	*e*P	**P**	**06 09 48.6**	**+1.3**
	comp=Z,31nm,1.2s,baz=93,slow=4.8						
GEC2				*e*L	L	06 59 26.8	
	comp=Z,3µm,20.6s						
GERES	**GERESS Array B**	**85.80**	**319**	P	**P**	**06 09 47.1**	**-0.1**
	comp=Z,14nm,1.0s,baz=95,slow=3.2,SNR=43						
	comp=Z,14nm,1.0s						
NRCA	**Norcia**	**85.81**	**313**	P	**P**	**06 09 46.7**	**-0.8**
FDMO	**Fiordimonte**	**85.84**	**313**	P	**P**	**06 09 47.5**	**-0.1**
FDMO				IAmb	IAmb	06 10 31.2	
	comp=Z,47nm,1.4s						
KHC	**Kasperske Hory**	**85.90**	**319**	*e*P	**P**	**06 09 49.4**	**+1.7**
KHC				x	x	06 10 06.0	
KHC				*e*S	**S**	**06 20 19.9**	**+0.1**
KHC				AMS	AMS	06 53 30.0	
	comp=Z,3µm,23.1s						
KHC	**Kasperske Hory**	**85.90**	**319**	*ce*P	**P**	**06 09 49.5**	**+1.7**
KHC				pmax	pmax		
	comp=Z,48nm,2.5s						
KHC	**Kasperske Hory**	**85.90**	**319**	P	**P**	**06 09 48.1**	**+0.4**
	comp=Z,758nmcomp=Z,12nm,1.0s						
KBA	**Koelnbreinsper**	**85.91**	**317**	*e*P	**P**	**06 09 48.4**	**+0.4**
	comp=Z,9.5nm,1.3s						
SBA	**Scott Base**	**86.00**	**169**	P	**P**	**06 09 48.2**	**+0.6**
SBA				IAmb	IAmb	06 10 14.6	
	comp=Z,43nm,1.2s						
SBA	**Scott Base**	**86.00**	**169**	IAMs_20	IAMs_20	06 48 39.6	
	comp=Z,5µm,19.0s						
SBA	**Scott Base**	**86.00**	**169**	P	**P**	**06 09 48.2**	**+0.6**
SBA				pmax	pmax		
	comp=Z,43nm,1.3s						
SBA				MLR	MLR		
	comp=Z,5µm,19.0s						
RUE	**Ruedersdorf**	**86.03**	**322**	*e*P	**P**	**06 09 49.7**	**+1.5**
	comp=Z,105nm,1.4s,baz=93,slow=4.8						
HSKC	**Hora Svate Kat**	**86.10**	**321**	*e*S	**S**	**06 20 21.4**	**-0.2**
HSKC				AMS	AMS	06 56 20.0	
	comp=Z,3µm,17.0s						
RJOB	**Jochberg**	**86.33**	**318**	*e*P	**P**	**06 09 50.9**	**+1.0**
	comp=Z,10nm,1.1s,baz=93,slow=4.8						
WET	**Wettzell**	**86.36**	**319**	*e*P	**P**	**06 09 51.3**	**+1.3**
	comp=Z,21nm,1.2s,baz=93,slow=4.8						
WET				*e*L	L	06 55 37.3	
	comp=Z,3µm,20.9s						
LESA	**Schwarzleotal**	**86.39**	**317**	*e*P	**P**	**06 09 49.6**	**-0.6**
	comp=Z,6.6nm,1.2s						
CLL	**Collm**	**86.42**	**321**	*i* P	**P**	**06 09 51.4**	**+1.2**
CLL				*e*S	**S**	**06 20 23.0**	**-1.6**
CLL				pmax	pmax		
	comp=Z,12nm,1.1s						
CLL				MLR	MLR		
	comp=Z,3µm,19.6s						
CLL	**Collm**	**86.42**	**321**	P	**P**	**06 09 51.0**	**+0.8**
	comp=Z,653nmcomp=Z,14nm,1.0s						
CLL	**Collm**	**86.42**	**321**	*e*P	**P**	**06 09 51.6**	**+1.4**
	comp=Z,11nm,1.0s,baz=93,slow=4.8						
CLL				*e*L	L	06 57 22.5	
	comp=Z,3µm,19.5s						
CLL	**Collm**	**86.42**	**321**	*i* P	**P**	**06 09 51.4**	**+1.2**
	comp=Z,12nm,1.1s						
CLL				*e*x	x	06 10 13.0	
CLL				*e*x	x	06 10 24.0	
CLL				*e*PP	**PP**	**06 13 06.0**	**-5.6**
CLL				*e*(PPP)		06 15 18.0	
CLL				*e*(PPPP)		06 16 48.0	
CLL				*e*S	**S**	**06 20 23.0**	**-1.6**
	comp=N,3µm,27.1s						
CLL				*e*x	x	06 20 58.0	
CLL				*e*PS	**PnS**	**06 21 27.0**	**+2.0**
CLL				*e*PPS	PPS	06 21 48.0	
CLL				*e*x	x	06 25 18.0	
CLL				*e*SS	**SS**	**06 26 06.0**	**+1.2**
CLL				*e*x	x	06 29 06.0	
CLL				*e*SSS	SSS	06 29 40.0	
CLL				*e*SSSS		06 32 42.0	
CLL				AMS	AMS	06 57 00.0	
	comp=Z,3µm,19.6s						
ABTA	**Abfaltersbach**	**86.46**	**317**	*e*P	**P**	**06 09 51.2**	**+0.6**
	comp=Z,5.6nm,0.9s						
NKC	**Novy Kostel**	**86.70**	**320**	*e*S	**S**	**06 20 28.1**	**+0.6**
NKC				AMS	AMS	06 55 20.0	
	comp=Z,3µm,19.6s						
HFS	**Hagfors**	**86.71**	**330**	P	**P**	**06 09 51.5**	**+0.1**
	comp=Z,28nm,1.0s,baz=120,slow=2.1,SNR=22						
HFS				LR	LR	06 52 14.0	
	comp=Z,4µm,20.9s,baz=83,slow=38						
	comp=Z,28nm,1.0s						
FAUS	**Fauske**	**86.76**	**337**	*e*P	**P**	**06 09 52.3**	**+0.8**
ROTZ	**Rotzenmuhle**	**86.83**	**320**	*e*P	**P**	**06 09 53.7**	**+1.5**
	comp=Z,2.2nm,0.9s,baz=93,slow=4.8						
STEI	**Steigen**	**86.84**	**338**	*e*P	**P**	**06 09 51.9**	**+0.1**
MANZ	**Manzenberg**	**86.91**	**320**	*e*P	**P**	**06 09 54.2**	**+1.5**
	comp=Z,5.8nm,1.1s,baz=93,slow=4.8						
MOR8	**Moi Rana**	**86.95**	**336**	*e*P	**P**	**06 09 53.1**	**+0.6**
ADK	**Adak**	**86.98**	**38**	P	**P**	**06 09 52.0**	**-0.9**
ADK				IAmb	IAmb	06 09 55.6	
	comp=Z,45nm,0.8s						
ADK	**Adak**	**86.98**	**38**	P	**P**	**06 09 52.0**	**-0.9**
ADK				pmax	pmax		
	comp=Z,45nm,0.8s						
ADK				MLR	MLR		
	comp=Z,4µm,22.0s						
CTI	**Castel Tesino**	**87.02**	**316**	P	**P**	**06 09 53.1**	**-0.3**
CTI				IAmb	IAmb	06 10 26.4	
	comp=Z,38nm,1.0s						
CTI	**Castel Tesino**	**87.02**	**316**	P	**P**	**06 09 53.1**	**-0.3**
CTI				pmax	pmax		
	comp=Z,38nm,1.0s						
COP	**Copenhagen**	**87.05**	**326**	*i* P	**P**	**06 09 53.5**	**+0.4**
COP				IAmb	IAmb	06 09 54.3	
	comp=Z,30nm,0.6s						
WTTA	**Wattenberg**	**87.08**	**317**	*e*P	**P**	**06 09 53.9**	**+0.1**
	comp=Z,9.9nm,1.2s						
CTZ	**Chatham Island**	**87.09**	**134**	IAMs_20	IAMs_20	06 48 37.6	
	comp=Z,11µm,22.0s						
WATA	**Walderalm**	**87.13**	**317**	*e*P	**P**	**06 09 54.6**	**+0.7**
	comp=Z,6.4nm,0.6s						
MOX	**Moxa**	**87.26**	**321**	*e*P	**P**	**06 09 56.0**	**+1.7**
	comp=Z,15nm,1.4s,baz=93,slow=4.8						
MOX				*e*L	L	06 57 53.2	
	comp=Z,3µm,20.8s						
FUR	**Furstenfeldbru**	**87.37**	**318**	*e*L	L	06 54 54.8	
	comp=Z,3µm,22.0s						
SQTA	**Sankt Quirin**	**87.37**	**317**	*e*P	**P**	**06 09 55.1**	**0.0**
	comp=Z,7.6nm,0.9s						
MOTA	**Moosalm**	**87.45**	**317**	*e*P	**P**	**06 09 55.6**	**+0.1**
	comp=Z,12nm,1.1s						
GRF	**Grafenberg Arr**	**87.47**	**320**	*e*P	**P**	**06 09 56.9**	**+1.5**
	comp=Z,15nm,1.0s,baz=93,slow=4.8						
GRF				*e*L	L	06 56 14.8	
	comp=Z,3µm,20.1s						
LEIR	**Leirfjorden**	**87.49**	**336**	*e*P	**P**	**06 09 56.5**	**+1.5**
FLTG	**Flechtingen**	**87.57**	**322**	*e*P	**P**	**06 09 57.0**	**+1.3**
	comp=Z,32nm,1.5s,baz=93,slow=4.8						
RETA	**Reutte**	**87.69**	**317**	*i* P	**P**	**06 09 56.9**	**+0.4**
	comp=Z,8.9nm,0.9s						
FETA	**Feichten**	**87.69**	**317**	*e*P	**P**	**06 09 56.0**	**-0.7**
	comp=Z,7.1nm,1.1s						
NC405	**NORSAR Array S**	**87.76**	**331**	IAmb	IAmb	06 10 17.8	
	comp=Z,28nm,1.1s						
NC602	**NORSAR Array S**	**87.82**	**331**	P	**P**	**06 09 56.9**	**+0.1**
NC602				IAmb	IAmb	06 10 42.0	
	comp=Z,35nm,1.1s						
NC602	**NORSAR Array S**	**87.82**	**331**	*e*P	**P**	**06 09 56.7**	**0.0**
NORES	**NORESS Array B**	**87.82**	**331**	P	**P**	**06 09 59.1**	**+2.3**
NORES				pmax	pmax		
	comp=Z,5.0nm,1.0s						
VLC	**Villacollemand**	**87.85**	**314**	P	P	06 09 51.5	-5.8
NSS	**Namsos**	**87.85**	**334**	*e*P	**P**	**06 09 58.6**	**+1.8**
SPB2	**Spitsbergen Ar**	**87.87**	**348**	P	**P**	**06 09 56.6**	**-0.1**
SPA0	**Spitsbergen Ar**	**87.88**	**348**	*e*P	**P**	**06 09 57.2**	**+0.4**
SPITS	**Spitsbergen Ar**	**87.88**	**348**	P	**P**	**06 09 55.8**	**-1.0**
	comp=Z,60nm,1.0s,baz=114,slow=8.4,SNR=22						
SPITS				LR	LR	06 55 32.6	
	comp=Z,5µm,21.1s,baz=66,slow=40						
	comp=Z,60nm,1.0s						
HSPB	**Hornsund (broa**	**87.89**	**347**	*e*P	**P**	**06 09 57.6**	**+0.8**
ASSE	**Asse, Remlinge**	**87.91**	**322**	*e*P	**P**	**06 09 58.7**	**+1.4**
	comp=Z,30nm,1.2s,baz=93,slow=4.8						
NC303	**NORSAR Array S**	**87.93**	**331**	P	**P**	**06 09 56.4**	**-0.9**
NC303				IAmb	IAmb	06 10 29.5	
	comp=Z,34nm,1.1s						
NB2	**NORSAR Subarra**	**88.00**	**331**	P	**P**	**06 09 56.6**	**-1.1**
	comp=Z,403nm,3.3s,baz=96,slow=4.6						
NB2	**NORSAR Subarra**	**88.00**	**331**	P	**P**	**06 09 56.6**	**-1.1**
	baz=96,slow=4.6						
NOA	**NORSAR Array B**	**88.00**	**331**	P	**P**	**06 09 56.3**	**-1.4**
	comp=Z,17nm,1.1s,baz=95,slow=4.8,SNR=14						
NOA				PP	**PP**	**06 13 25.4**	**+1.3**
	comp=Z,4.6nm,1.0s,baz=93,slow=7.6,SNR=3.9						
NOA				LR	LR	06 53 14.1	
	comp=Z,3µm,22.0s,baz=95,slow=38						
	comp=Z,17nm,1.1s						
FUORN	**Ofenpass-Fuorn**	**88.00**	**316**	P	**P**	**06 09 58.4**	**+0.1**
FUORN				IAmb	IAmb	06 10 28.7	
	comp=Z,31nm,1.0s						
CLZ	**Clausthal**	**88.09**	**322**	*e*P	**P**	**06 09 59.5**	**+1.2**
	comp=Z,27nm,1.1s,baz=93,slow=4.8						
NAO01	**NORSAR Array S**	**88.15**	**331**	P	**P**	**06 09 57.9**	**-0.5**
NAO01				IAmb	IAmb	06 10 01.3	
	comp=Z,32nm,1.2s						
BSEG	**Bad Segeberg**	**88.19**	**324**	*e*P	**P**	**06 10 00.5**	**+1.9**
	comp=Z,59nm,1.3s,baz=93,slow=4.8						
BSEG				*e*L	L	06 56 31.2	
	comp=Z,3µm,21.0s						
NBO00	**NORSAR Array S**	**88.21**	**331**	P	**P**	**06 09 58.2**	**-0.5**
NBO00				IAmb	IAmb	06 10 41.0	
	comp=Z,32nm,1.1s						
NC204	**NORSAR Array S**	**88.23**	**331**	P	**P**	**06 09 58.5**	**-0.3**
NC204				IAmb	IAmb	06 10 31.7	
	comp=Z,72nm,1.6s						
DAVOX	**Davos/Dischmat**	**88.27**	**317**	LR	LR	06 57 20.1	
	comp=Z,840nm,18.1s,baz=73,slow=41						
NRDL	**Niedersach Rie**	**88.27**	**322**	*e*P	**P**	**06 10 01.0**	**+2.0**
	comp=Z,70nm,1.4s,baz=93,slow=4.8						
DAVA	**Damuels**	**88.28**	**317**	*e*P	**P**	**06 09 59.9**	**+0.4**
	comp=Z,12nm,0.9s						
GTTG	**Gottingen**	**88.33**	**321**	*e*P	**P**	**06 10 00.8**	**+1.5**
	comp=Z,45nm,1.3s,baz=93,slow=4.8						
KEST	**Kesra**	**88.48**	**306**	P	**P**	**06 10 00.3**	**-0.3**
	comp=Z,20nm,1.1s,baz=36,slow=1.3,SNR=19						
KEST				LR	LR	06 54 54.5	
	comp=Z,2µm,18.4s,baz=85,slow=39						
	comp=Z,20nm,1.1s						
VSL	**Villasalto**	**88.50**	**309**	P	**P**	**06 09 59.9**	**-0.6**
VSL				IAmb	IAmb	06 10 39.2	
	comp=Z,37nm,1.2s						
ATKA	**Atka Island**	**88.53**	**38**	P	**P**	**06 10 02.4**	**+2.1**
SSRD	**Sdr. Stenderup**	**88.63**	**325**	*i* P	**P**	**06 10 02.5**	**+1.8**
SSRD				IAmb	IAmb	06 10 03.7	
	comp=Z,41nm,0.8s						
TUE	**Stuetta**	**88.63**	**316**	P	**P**	**06 10 02.4**	**+1.2**
RETH	**Rethem/Aller,**	**88.73**	**323**	*e*P	**P**	**06 10 02.8**	**+1.6**
	comp=Z,30nm,1.2s,baz=93,slow=4.8						
KONO	**Kongsberg**	**88.75**	**329**	*e*P	**P**	**06 10 04.5**	**+3.3**
KBS	**Kingsbay**	**88.84**	**349**	*e*P	**P**	**06 10 03.8**	**+2.6**
KBS				*e*P	**P**	**06 10 03.8**	**+2.6**
KBS	**Kingsbay**	**88.84**	**349**	*i* P	**P**	**06 09 58.5**	**-2.7**
NVL	**N'lazarevskaya**	**88.98**	**199**	*e*P	**P**	**06 10 04.7**	**+2.7**
NVL				*e*S	**S**	**06 20 43.1**	**-5.3**
NVL				pmax	pmax		
	comp=Z,22nm,1.0s						
TNS	**Taunus Mts**	**89.27**	**320**	*e*P	**P**	**06 10 05.7**	**+1.8**
	comp=Z,26nm,1.1s,baz=93,slow=4.8						
TNS				*e*L	L	06 59 05.7	
	comp=Z,3µm,18.6s						
KASTN	**Kahler Asten**	**89.30**	**321**	*e*P	**P**	**06 10 05.3**	**+1.3**
	comp=Z,23nm,1.2s,baz=93,slow=4.8						
BFO	**Black Forest**	**89.34**	**318**	P	**P**	**06 10 03.8**	**-0.5**
BFO	**Black Forest**	**89.34**	**318**	P	**P**	**06 10 03.8**	**-0.5**
BFO				pmax	pmax		
	comp=Z,12nm,0.9s						
GAMB	**Gambell**	**89.93**	**26**	P	**P**	**06 10 05.9**	**-0.7**
	baz=271						
BUG	**Bochum--Univer**	**90.02**	**321**	*e*P	**P**	**06 10 09.2**	**+1.9**
	comp=Z,37nm,1.2s,baz=93,slow=4.8						
SENIN	**Lac Senin/Sane**	**90.05**	**316**	P	**P**	**06 10 06.7**	**-1.1**
SENIN				IAmb	IAmb	06 10 42.4	
	comp=Z,34nm,1.2s						
ECH	**Echery**	**90.12**	**318**	P	**P**	**06 10 07.7**	**-0.2**
ECH	**Echery**	**90.12**	**318**	P	**P**	**06 10 07.7**	**-0.2**
ECH				pmax	pmax		
	comp=Z,17nm,1.1s						
QSPA	**South Pole Qui**	**90.31**	**180**	P	**P**	**06 10 07.9**	**-0.6**
QSPA	**South Pole Qui**	**90.31**	**180**	IAMs_20	IAMs_20	06 45 55.6	
	comp=Z,7µm,20.0s						
QSPA	**South Pole Qui**	**90.31**	**180**	P	**P**	**06 10 08.7**	**+0.2**
	comp=Z,7.1nm,1.0s,baz=290,slow=1.6,SNR=24						
QSPA				LR	LR	06 46 07.7	
	comp=Z,7µm,20.3s,baz=317,slow=33						
	comp=Z,7.1nm,1.0s						
BNI	**Bardonecchia**	**90.50**	**315**	P	**P**	**06 10 09.5**	**-0.4**
BNI	**Bardonecchia**	**90.50**	**315**	P	**P**	**06 10 09.5**	**-0.4**
BNI				pmax	pmax		
	comp=Z,17nm,1.0s						
BTNL	**Ternell**	**90.75**	**320**	*d*P	**P**	**06 10 12.4**	**+1.6**
WLF	**Walferdange**	**90.76**	**319**	P	**P**	**06 10 10.0**	**-0.8**
WLF	**Walferdange**	**90.76**	**319**	P	**P**	**06 10 12.2**	**+1.3**
WLF	**Walferdange**	**90.76**	**319**	P	**P**	**06 10 10.0**	**-0.8**
WLF				pmax	pmax		
	comp=Z,93nm,1.6s						
WLF	**Walferdange**	**90.76**	**319**	*d*P	**P**	**06 10 12.1**	**+1.3**
WLF	**Walferdange**	**90.76**	**319**	*e*P	**P**	**06 10 11.9**	**+1.1**
	comp=Z,18nm,0.9s,baz=93,slow=4.8						
SPIA	**Saint Paul Isl**	**90.80**	**33**	P	**P**	**06 10 09.9**	**-0.9**
	baz=272						
MEM	**Membach**	**90.83**	**320**	*d*P	**P**	**06 10 11.3**	**+0.3**
	comp=Z,15nm,1.0s						
P08K	**Saint George I**	**91.20**	**34**	P	**P**	**06 10 12.2**	**-0.4**
	baz=272						
BCLA	**Clavier**	**91.28**	**320**	*d*P	**P**	**06 10 14.2**	**+1.0**
	comp=Z,8.3nm,1.1s						
BGES	**Gesves**	**91.42**	**320**	*d*P	**P**	**06 10 15.2**	**+1.4**
	comp=Z,9.6nm,1.0s						
TNA	**Tin City**	**91.48**	**25**	IAMs_20	IAMs_20	06 56 38.3	
	comp=Z,5µm,20.0s						
TNA	**Tin City**	**91.48**	**25**	P	**P**	**06 10 13.1**	**-0.6**
	baz=274						
BMRD	**Maredsous**	**91.63**	**320**	*d*P	**P**	**06 10 16.7**	**+1.9**
DOU	**Dourbes**	**91.75**	**320**	*d*P	**P**	**06 10 16.7**	**+1.3**
	comp=Z,10.0nm,1.1s						
NIKH	**Nikolski High**	**91.77**	**37**	P	**P**	**06 10 14.4**	**-1.0**
	baz=273						
TAM	**Tamanrasset**	**91.91**	**293**	IAmb	IAmb	06 10 30.2	
	comp=Z,28nm,0.7s						
TROLL	**Troll, Antarti**	**91.96**	**198**	⇑P	**P**	**06 10 17.3**	**+1.2**
	comp=Z,175nm,0.8s						
TROLL				⇑x	x	06 10 18.2	
	comp=E,131nm,0.7s						
F14K	**Arctic Creek**	**92.15**	**25**	P	**P**	**06 10 16.6**	**-0.3**
	baz=276						
C16K	**Lisburne Hills**	**92.24**	**22**	P	**P**	**06 10 17.3**	**+0.1**
C16K				IAmb	IAmb	06 10 20.6	
	comp=Z,33nm,1.1s						
C16K	**Lisburne Hills**	**92.24**	**22**	P	**P**	**06 10 16.5**	**-0.7**
	baz=277						
MAHO	**Mahon**	**92.44**	**310**	P	**P**	**06 10 18.8**	**0.0**
ANM	**Nome**	**92.64**	**25**	IAMs_20	IAMs_20	06 57 49.3	
	comp=Z,6µm,19.0s						
ANM	**Nome**	**92.64**	**25**	P	**P**	**06 10 18.6**	**-0.6**
	baz=276						
M11K	**Mekoryuk**	**92.69**	**30**	IAMs_20	IAMs_20	06 59 37.8	
	comp=Z,5µm,18.0s						
M11K	**Mekoryuk**	**92.69**	**30**	P	**P**	**06 10 19.2**	**-0.3**
	baz=276						
F15K	**North Star Dit**	**92.81**	**24**	IAmb	IAmb	06 10 24.3	
	comp=Z,20nm,1.0s						
F15K				IAMs_20	IAMs_20	06 57 05.7	
	comp=Z,8µm,19.0s						
F15K	**North Star Dit**	**92.81**	**24**	P	**P**	**06 10 19.2**	**-0.8**
	baz=277						
C17K	**DeLong Mountai**	**93.00**	**21**	P	**P**	**06 10 19.9**	**-0.9**
	baz=279						
UNV	**Unalaska Valle**	**93.12**	**36**	P	**P**	**06 10 20.6**	**-1.0**
	baz=275						
NOR	**Nord**	**93.13**	**352**	*i* P	**P**	**06 10 20.4**	**-0.7**
NOR				IAmb	IAmb	06 10 24.5	
	comp=Z,17nm,0.9s						
D17K	**Noatak River**	**93.16**	**22**	P	**P**	**06 10 21.3**	**-0.2**
	baz=279,SNR=12						
G15K	**Niukluk**	**93.16**	**25**	P	**P**	**06 10 21.4**	**-0.1**
	baz=278						
RDOG	**Red Dog Mine**	**93.17**	**22**	P	**P**	**06 10 21.2**	**-0.3**
	baz=279						
K13K	**Kusilvak Mount**	**93.27**	**28**	IAmb	IAmb	06 10 50.6	
	comp=Z,29nm,1.3s						
K13K				IAMs_20	IAMs_20	06 58 06.0	
	comp=Z,5µm,18.0s						
K13K	**Kusilvak Mount**	**93.27**	**28**	P	**P**	**06 10 21.4**	**-0.8**
	baz=277						
EJON	**La Jonquera**	**93.35**	**312**	P	**P**	**06 10 23.6**	**+0.6**
B18K	**Kokolik River**	**93.35**	**20**	P	**P**	**06 10 22.3**	**-0.1**
	baz=280,SNR=36						
A19K	**Wainwright**	**93.45**	**20**	P	**P**	**06 10 22.0**	**-0.8**
	baz=281,SNR=6.0						
ETOS	**Mallorca**	**93.57**	**310**	P	**P**	**06 10 20.2**	**-3.8**
SNAA	**Sanae**	**93.67**	**198**	IAMs_20	IAMs_20	06 49 44.1	
	comp=Z,4µm,18.0s						
SNAA	**Sanae**	**93.67**	**198**	P	**P**	**06 10 22.9**	**-1.0**
	comp=Z,2.0nm,1.1s,baz=16,slow=9.2,SNR=2.5						
SNAA				LR	LR	06 49 29.5	
	comp=Z,3µm,18.2s,baz=103,slow=34						
	comp=Z,2.0nm,1.1s						
J14K	**Nanvaranak Lak**	**93.68**	**27**	IAmb	IAmb	06 10 52.3	
	comp=Z,29nm,1.2s						
J14K				IAMs_20	IAMs_20	06 58 29.6	
	comp=Z,7µm,19.0s						
J14K	**Nanvaranak Lak**	**93.68**	**27**	P	**P**	**06 10 22.9**	**-1.1**
	baz=278,SNR=6.3						
C18K	**Utukok River**	**93.70**	**21**	IAmb	IAmb	06 10 27.5	
	comp=Z,33nm,1.0s						
C18K	**Utukok River**	**93.70**	**21**	P	**P**	**06 10 23.8**	**-0.3**
	baz=280,SNR=19						
E17K	**Hotham Inlet**	**93.74**	**23**	P	**P**	**06 10 24.2**	**0.0**
	baz=280						
G16K	**Koyuk River**	**93.80**	**24**	IAmb	IAmb	06 10 28.1	
	comp=Z,37nm,1.1s						
G16K	**Koyuk River**	**93.80**	**24**	P	**P**	**06 10 23.9**	**-0.6**
	baz=279,SNR=13						
H16K	**Elim**	**93.97**	**25**	P	**P**	**06 10 24.6**	**-0.7**
	baz=279						
F17K	**Baldwin Pennin**	**94.07**	**23**	P	**P**	**06 10 25.2**	**-0.5**
F17K				IAmb	IAmb	06 10 29.3	
	comp=Z,30nm,0.9s						
F17K				IAMs_20	IAMs_20	06 57 36.9	
	comp=Z,5µm,18.0s						
F17K	**Baldwin Pennin**	**94.07**	**23**	P	**P**	**06 10 25.6**	**-0.1**
	baz=280						
M13K	**Dall Lake**	**94.09**	**29**	IAMs_20	IAMs_20	07 00 28.9	
	comp=Z,5µm,19.0s						
M13K	**Dall Lake**	**94.09**	**29**	P	**P**	**06 10 25.1**	**-0.8**
	baz=278						
E18K	**Tukpahlearik C**	**94.14**	**22**	P	**P**	**06 10 26.0**	**-0.1**
E18K				IAmb	IAmb	06 10 29.8	
	comp=Z,27nm,1.1s						
E18K	**Tukpahlearik C**	**94.14**	**22**	P	**P**	**06 10 26.2**	**+0.2**
	baz=281,SNR=18						
C19K	**Lookout Ridge**	**94.18**	**21**	P	**P**	**06 10 25.4**	**-0.9**
	baz=282,SNR=38						

L14K	Kuka Creek	94.28	28	IAmb	IAmb	06 10 32.2	
	comp=Z,34nm,0.9s						
L14K				IAMs_20	IAMs_20	06 56 54.8	
	comp=Z,5µm,20.0s						
L14K	Kuka Creek	94.28	28	P	P	06 10 26.3	-0.4
	baz=279,SNR=15						
G17K	Kiwalik Mounta	94.49	24	P	P	06 10 27.6	-0.1
	baz=281,SNR=14						
A21K	Barrow	94.64	18	P	P	06 10 27.9	-0.3
	baz=285						
F18K	Selawik	94.67	23	P	P	06 10 27.4	-1.1
	baz=282,SNR=5.9						
K15K	Wolf Creek Mou	94.67	27	IAmb	IAmb	06 10 57.3	
	comp=Z,27nm,1.2s						
K15K				IAMs_20	IAMs_20	06 58 06.0	
	comp=Z,5µm,20.0s						
K15K	Wolf Creek Mou	94.67	27	P	P	06 10 27.6	-1.0
	baz=280,SNR=10						
M14K	Bethel	94.72	29	IAmb	IAmb	06 10 32.7	
	comp=Z,36nm,1.1s						
M14K				IAMs_20	IAMs_20	06 58 26.5	
	comp=Z,4µm,18.0s						
M14K	Bethel	94.72	29	P	P	06 10 28.0	-0.8
	baz=279,SNR=8.2						
EIBI	Ibiza	94.75	309	P	P	06 10 29.0	-0.5
I17K	Unalakleet	94.77	26	IAmb	IAmb	06 10 32.2	
	comp=Z,36nm,1.2s						
I17K				IAMs_20	IAMs_20	06 58 58.4	
	comp=Z,5µm,19.0s						
I17K	Unalakleet	94.77	26	P	P	06 10 28.6	-0.3
	baz=281						
L15K	Ungalak Mounta	94.80	28	P	P	06 10 29.5	+0.3
	baz=280,SNR=17						
B20K	Meade River	94.80	19	P	P	06 10 28.6	-0.4
B20K	Meade River	94.80	19	P	P	06 10 28.7	-0.4
	baz=284						
D19K	Kuna River	94.83	21	P	P	06 10 29.2	-0.1
D19K	Kuna River	94.83	21	P	P	06 10 29.2	-0.1
	baz=283,SNR=32						
H17K	Granite Mounta	94.90	25	IAmb	IAmb	06 10 33.3	
	comp=Z,24nm,0.9s						
H17K				IAMs_20	IAMs_20	06 58 30.8	
	comp=Z,6µm,20.0s						
H17K	Granite Mounta	94.90	25	P	P	06 10 29.2	-0.4
	baz=281,SNR=18						
J16K	Anvik River	94.92	26	P	P	06 10 29.8	+0.1
J16K				IAMs_20	IAMs_20	06 59 34.4	
	comp=Z,6µm,19.0s						
J16K	Anvik River	94.92	26	P	P	06 10 29.6	-0.1
	baz=281,SNR=27						
JMIC	Jan Mayen	94.92	342	LR	LR	06 56 01.1	
	comp=Z,2µm,21.9s,baz=68,slow=37						
N14K	Kuskokwak Cree	94.99	30	IAMs_20	IAMs_20	07 00 07.6	
	comp=Z,5µm,19.0s						
N14K	Kuskokwak Cree	94.99	30	P	P	06 10 29.4	-0.6
	baz=279						
G18K	Tagagawik	95.22	24	IAMs_20	IAMs_20	07 00 08.1	
	comp=Z,8µm,18.0s						
G18K	Tagagawik	95.22	24	P	P	06 10 30.8	-0.3
	baz=283,SNR=9.5						
A22K	Sinclair Lake	95.24	18	P	P	06 10 31.1	+0.1
	baz=286						
O14K	Tigyukauivet M	95.31	30	IAMs_20	IAMs_20	06 58 46.2	
	comp=Z,5µm,18.0s						
O14K	Tigyukauivet M	95.31	30	P	P	06 10 31.5	-0.1
	baz=280						
D20K	Etivluk River	95.32	21	P	P	06 10 31.3	-0.1
	baz=285,SNR=82						
F19K	Shaleruckik Mo	95.35	23	IAmb	IAmb	06 10 34.8	
	comp=Z,29nm,1.1s						
F19K				IAMs_20	IAMs_20	07 00 12.6	
	comp=Z,7µm,18.0s						
F19K	Shaleruckik Mo	95.35	23	P	P	06 10 30.9	-0.7
	baz=284,SNR=21						
M15K	Kasigluk River	95.35	29	P	P	06 10 31.2	-0.5
	baz=280,SNR=22						
E19K	Redstone River	95.41	22	IAmb	IAmb	06 10 35.4	
	comp=Z,31nm,1.0s						
E19K	Redstone River	95.41	22	P	P	06 10 31.5	-0.4
	baz=284,SNR=26						
S12K	Black Hills	95.45	34	P	P	06 10 31.5	-0.8
	baz=279						
H18K	Honhosa River	95.50	24	P	P	06 10 31.6	-0.7
H18K				IAmb	IAmb	06 10 35.1	
	comp=Z,30nm,1.2s						
H18K				IAMs_20	IAMs_20	06 58 40.6	
	comp=Z,7µm,18.0s						
H18K	Honhosa River	95.50	24	P	P	06 10 32.0	-0.3
	baz=283,SNR=16						
DAG	Danmarks Havn	95.53	348	P	P	06 10 30.2	-2.0
DAG	Danmarks Havn	95.53	348	*i* P	P	06 10 30.0	-2.2
DAG				IAmb	IAmb	06 10 35.1	
	comp=Z,20nm,0.9s						
J17K	VABM Dome	95.57	26	P	P	06 10 32.5	-0.1
J17K				IAmb	IAmb	06 10 36.6	
	comp=Z,19nm,0.8s						
J17K				IAMs_20	IAMs_20	06 53 47.7	
	comp=Z,6µm,22.0s						
J17K	VABM Dome	95.57	26	P	P	06 10 32.2	-0.5
	baz=282,SNR=17						
E20K	Nigu River	95.58	21	P	P	06 10 32.4	-0.3
	baz=285,SNR=62						
L16K	Owhat River	95.73	28	P	P	06 10 33.7	+0.3
L16K				IAmb	IAmb	06 10 37.3	
	comp=Z,21nm,1.0s						
L16K				IAMs_20	IAMs_20	06 54 38.1	
	comp=Z,5µm,22.0s						
L16K	Owhat River	95.73	28	P	P	06 10 32.7	-0.8
	baz=282,SNR=19						
N15K	Kwethluk River	95.74	29	IAmb	IAmb	06 11 02.0	
	comp=Z,41nm,1.2s						
N15K				IAMs_20	IAMs_20	06 59 49.3	
	comp=Z,6µm,19.0s						
N15K	Kwethluk River	95.74	29	P	P	06 10 32.8	-0.7
	baz=281,SNR=11						
B21K	Ikpikpuk River	95.76	20	P	P	06 10 32.9	-0.5
	baz=287,SNR=15						
G19K	Purcell Mounta	95.78	23	IAmb	IAmb	06 10 38.0	
	comp=Z,29nm,0.8s						
G19K				IAMs_20	IAMs_20	07 02 35.0	
	comp=Z,5µm,19.0s						
G19K	Purcell Mounta	95.78	23	P	P	06 10 33.0	-0.6
	baz=284,SNR=30						
TORD	Torodi Ar. Bea	95.81	283	P	P	06 10 33.8	-1.0
	comp=Z,0.8nm,0.6s,baz=81,slow=5.9,SNR=4.6						
C21K	Knifeblade Rid	95.83	20	P	P	06 10 33.8	0.0
	baz=286,SNR=19						
EKA	Eskdalemuir Ar	95.91	326	P	P	06 10 33.6	-0.8
	comp=Z,3.1nm,0.8s,baz=96,slow=4.2,SNR=4.9						
	comp=Z,3.1nm,0.8s						
B22K	Teshekpuk Lake	95.94	19	P	P	06 10 33.9	-0.3
	baz=288						
O15K	Ungalikthiuk R	96.06	30	P	P	06 10 34.5	-0.4
O15K				IAmb	IAmb	06 10 39.9	
	comp=Z,24nm,1.0s						
O15K				IAMs_20	IAMs_20	06 59 08.8	
	comp=Z,5µm,19.0s						
O15K	Ungalikthiuk R	96.06	30	P	P	06 10 34.8	-0.2
	baz=281,SNR=9.5						
K17K	Iditarod	96.06	27	P	P	06 10 35.5	+0.5
K17K	Iditarod	96.06	27	P	P	06 10 34.7	-0.2
	baz=283,SNR=34						
F20K	Avaraart Lake	96.08	22	P	P	06 10 35.1	+0.3
F20K	Avaraart Lake	96.08	22	P	P	06 10 34.9	0.0
	baz=285						
M16K	Timber Creek	96.12	28	IAmb	IAmb	06 11 03.6	
	comp=Z,28nm,1.1s						
M16K				IAMs_20	IAMs_20	07 00 05.3	
	comp=Z,5µm,18.0s						
M16K	Timber Creek	96.12	28	P	P	06 10 35.2	0.0
	baz=282,SNR=11						
H19K	Roundabout Mou	96.19	24	IAMs_20	IAMs_20	06 59 02.8	
	comp=Z,7µm,19.0s						
H19K	Roundabout Mou	96.19	24	P	P	06 10 34.9	-0.5
	baz=285,SNR=42						
L17K	Donlin	96.19	27	P	P	06 10 35.2	-0.4
	baz=283,SNR=16						
GCSA	Galena City Sc	96.21	25	P	P	06 10 35.2	-0.3
	baz=284						
N16K	Nishlik Lake	96.32	29	P	P	06 10 36.2	0.0
	baz=282,SNR=30						
E21K	Killik River	96.32	21	P	P	06 10 35.9	-0.2
	baz=287						
SDPT	Sand Point	96.40	34	P	P	06 10 36.3	-0.3
	baz=280						
J18K	Innoko River	96.59	26	IAmb	IAmb	06 10 40.2	
	comp=Z,15nm,0.9s						
J18K				IAMs_20	IAMs_20	07 02 35.6	
	comp=Z,6µm,18.0s						
J18K	Innoko River	96.59	26	P	P	06 10 36.7	-0.6
	baz=284,SNR=25						
D22K	Ayikyak River	96.64	20	IAmb	IAmb	06 11 30.1	
	comp=Z,30nm,1.3s						
D22K	Ayikyak River	96.64	20	P	P	06 10 36.9	-0.5
	baz=288						
CART	Cartagena	96.72	308	P	P	06 10 38.1	-0.3
S14K	Fog Glacier	96.75	33	P	P	06 10 37.6	-0.7
	baz=281						
M17K	Holitna River	96.75	28	IAmb	IAmb	06 10 43.2	
	comp=Z,26nm,0.9s						
M17K				IAMs_20	IAMs_20	07 00 29.1	
	comp=Z,6µm,19.0s						
M17K	Holitna River	96.75	28	P	P	06 10 37.8	-0.3
	baz=283,SNR=16						
H20K	Anotleneega Mo	96.83	24	P	P	06 10 38.4	0.0
	baz=286,SNR=48						
O16K	Kokwok River B	96.84	30	IAmb	IAmb	06 11 04.2	
	comp=Z,20nm,1.1s						
O16K				IAMs_20	IAMs_20	07 02 31.5	
	comp=Z,5µm,18.0s						
O16K	Kokwok River B	96.84	30	P	P	06 10 38.0	-0.5
	baz=282,SNR=7.3						
F21K	Alatna River	96.87	22	P	P	06 10 38.3	-0.2
	baz=288,SNR=39						
L18K	Granite Mounta	96.91	27	P	P	06 10 39.4	+0.6
L18K				IAmb	IAmb	06 11 07.4	
	comp=Z,22nm,1.1s						
L18K	Granite Mounta	96.91	27	P	P	06 10 38.4	-0.4
	baz=284,SNR=16						
J19K	Poorman	96.93	25	P	P	06 10 39.4	+0.6
J19K				IAmb	IAmb	06 10 43.6	
	comp=Z,24nm,0.9s						
J19K				IAMs_20	IAMs_20	06 58 20.4	
	comp=Z,4µm,19.0s						
J19K	Poorman	96.93	25	P	P	06 10 37.9	-0.9
	baz=285,SNR=42						
DBG	Daneborg	96.98	346	*i* P	P	06 10 38.4	-0.5
DBG				IAmb	IAmb	06 10 43.1	
	comp=Z,4.9nm,1.0s						
CHNA	Chernabura Isl	97.00	35	P	P	06 10 38.7	-0.6
	baz=281						
C23K	Itkillik River	97.01	19	IAmb	IAmb	06 10 43.9	
	comp=Z,20nm,0.9s						
P16K	Nushagak River	97.01	30	IAMs_20	IAMs_20	06 59 58.1	
	comp=Z,5µm,20.0s						
P16K	Nushagak River	97.01	30	P	P	06 10 38.9	-0.4
	baz=282						
TTA	Tatalina	97.03	26	IAmb	IAmb	06 11 07.8	
	comp=Z,20nm,1.2s						
TTA				IAMs_20	IAMs_20	07 00 33.3	
	comp=Z,5µm,20.0s						
TTA	Tatalina	97.03	26	P	Pdif	06 10 40.9	+1.4
TTA	Tatalina	97.03	26	P	P	06 10 39.4	0.0
	baz=285,SNR=14						
G21K	Allakaket	97.07	22	IAMs_20	IAMs_20	06 59 41.1	
	comp=Z,7µm,19.0s						
G21K	Allakaket	97.07	22	P	P	06 10 39.2	-0.2
	baz=287,SNR=80						
N17K	Nushagak Hills	97.07	29	IAmb	IAmb	06 11 05.8	
	comp=Z,20nm,1.1s						
N17K				IAMs_20	IAMs_20	07 00 36.6	
	comp=Z,8µm,19.0s						
N17K	Nushagak Hills	97.07	29	P	P	06 10 38.8	-0.8
	baz=283,SNR=12						
E22K	Anaktuvuk Pass	97.18	21	IAmb	IAmb	06 11 05.2	
	comp=Z,22nm,1.2s						
E22K	Anaktuvuk Pass	97.18	21	P	P	06 10 39.0	-1.0
	baz=289						
I20K	Naaghedeneel	97.19	24	P	P	06 10 39.8	-0.1
	baz=286,SNR=16						
F22K	John River	97.26	21	P	P	06 10 40.3	0.0
	baz=289						
D23K	Nanushuk River	97.29	20	P	P	06 10 40.4	0.0
D23K				IAmb	IAmb	06 10 44.3	
	comp=Z,24nm,1.1s						
D23K	Nanushuk River	97.29	20	P	P	06 10 40.0	-0.4
	baz=290						
O17K	Koliganek Bris	97.29	29	P	P	06 10 40.6	0.0
	baz=283,SNR=10						
M18K	Stony River	97.48	28	P	P	06 10 41.2	-0.2
	baz=285,SNR=11						
J20K	Nowinta River	97.50	25	IAmb	IAmb	06 10 45.4	
	comp=Z,19nm,1.1s						
J20K				IAMs_20	IAMs_20	06 57 48.6	
	comp=Z,5µm,20.0s						
J20K	Nowinta River	97.50	25	P	P	06 10 41.2	-0.2
	baz=287,SNR=19						
R16K	Pilot Point	97.55	32	P	P	06 10 41.6	-0.1
	baz=283						
H21K	Melozitna Rive	97.61	23	IAmb	IAmb	06 11 10.6	
	comp=Z,22nm,1.1s						
H21K				IAMs_20	IAMs_20	07 01 43.2	
	comp=Z,7µm,18.0s						
H21K	Melozitna Rive	97.61	23	P	P	06 10 41.7	-0.2
	baz=288,SNR=20						
N18K	Kilae Creek	97.66	28	IAMs_20	IAMs_20	07 01 02.0	
	comp=Z,6µm,19.0s						
N18K	Kilae Creek	97.66	28	P	P	06 10 41.3	-1.0
	baz=285,SNR=7.6						
C24K	Franklin Bluff	97.67	19	P	P	06 10 41.8	-0.3
	baz=292						
G22K	Bettles	97.70	22	P	P	06 10 42.0	-0.2
	baz=289						
L19K	White Mountain	97.75	27	IAmb	IAmb	06 10 47.4	
	comp=Z,14nm,1.0s						
L19K	White Mountain	97.75	27	P	P	06 10 41.8	-0.8
	baz=286,SNR=18						
P17K	Kvichak River	97.75	30	P	P	06 10 41.9	-0.7
	baz=284						
K20K	Telida	97.77	26	IAMs_20	IAMs_20	07 03 23.7	
	comp=Z,5µm,19.0s						
K20K	Telida	97.77	26	P	P	06 10 42.0	-0.7
	baz=286,SNR=42						
Q16K	King Salmon	97.77	31	P	P	06 10 42.1	-0.6
	baz=284						
TOLK	Toolik Lake Re	97.79	20	P	Pdif	06 10 43.0	+0.3
TOLK				IAmb	IAmb	06 10 47.0	
	comp=Z,17nm,1.1s						
TOLK	Toolik Lake Re	97.79	20	P	P	06 10 42.2	-0.5
	baz=291,SNR=8.3						
D24K	Happy Valley	97.85	19	P	P	06 10 42.9	0.0
D24K				IAmb	IAmb	06 10 52.4	
	comp=Z,17nm,1.1s						
D24K	Happy Valley	97.85	19	P	P	06 10 41.9	-1.0
	baz=292						
E23K	Chandalar	97.98	21	IAmb	IAmb	06 11 12.5	
	comp=Z,20nm,1.3s						
E23K	Chandalar	97.98	21	P	P	06 10 42.6	-1.1
	baz=291,SNR=6.0						
M19K	Big River Lodg	98.03	27	P	P	06 10 43.9	0.0
M19K				IAMs_20	IAMs_20	07 01 43.8	
	comp=Z,7µm,18.0s						
M19K	Big River Lodg	98.03	27	P	P	06 10 43.3	-0.6
	baz=286						
COLD	Coldfoot	98.07	21	P	P	06 10 43.1	-0.9
	baz=291						
I21K	Tanana	98.08	24	IAmb	IAmb	06 10 49.4	
	comp=Z,17nm,0.9s						
I21K				IAMs_20	IAMs_20	07 03 54.9	
	comp=Z,7µm,18.0s						
I21K	Tanana	98.08	24	P	P	06 10 43.0	-1.0
	baz=289,SNR=20						
H22K	Ishtalitna Cre	98.09	23	P	P	06 10 43.4	-0.7
	baz=289,SNR=25						
L20K	Farewell, AK	98.10	26	P	P	06 10 42.8	-1.4
	baz=287,SNR=13						
O18K	Koktuh Hills	98.20	29	IAmb	IAmb	06 11 12.9	
	comp=Z,35nm,1.2s						
O18K				IAMs_20	IAMs_20	07 01 11.3	
	comp=Z,6µm,20.0s						
O18K	Koktuh Hills	98.20	29	P	P	06 10 43.2	-1.5
	baz=285						
Q17K	Contact Creek	98.26	31	P	P	06 10 42.9	-2.2
	baz=284						
N19K	Bonanza Creek	98.29	28	P	P	06 10 43.6	-1.5
	baz=286,SNR=27						
P18K	Big Mountain,	98.31	30	IAMs_20	IAMs_20	06 59 32.3	
	comp=Z,5µm,20.0s						
P18K	Big Mountain,	98.31	30	P	P	06 10 43.9	-1.3
	baz=285						
G23K	Bananza Creek	98.32	22	P	P	06 10 43.7	-1.4
	baz=291,SNR=8.6						
CHUM	Lake Minchumin	98.36	25	P	P	06 10 43.9	-1.3
	baz=288,SNR=10						
E24K	Your Creek	98.37	20	P	P	06 10 45.1	-0.3
E24K	Your Creek	98.37	20	P	P	06 10 44.7	-0.6
	baz=292						
O19K	Port Alsworth	98.54	29	IAmb	IAmb	06 11 13.8	
	comp=Z,21nm,1.2s						
O19K				IAMs_20	IAMs_20	07 01 40.3	
	comp=Z,7µm,18.0s						
O19K	Port Alsworth	98.54	29	Pdiff	P	06 10 45.6	-0.5
	baz=286						
ACHA	Angle Creek He	98.56	31	IAMs_20	IAMs_20	07 00 56.1	
	comp=Z,5µm,20.0s						
D25K	Kavik River	98.58	19	IAmb	IAmb	06 11 15.4	
	comp=Z,24nm,1.2s						
D25K	Kavik River	98.58	19	Pdiff	P	06 10 46.1	-0.1
	baz=295						
CAST	Castle Rocks	98.60	25	IAmb	IAmb	06 11 14.6	
	comp=Z,21nm,1.0s						
CAST				IAMs_20	IAMs_20	07 03 51.7	
	comp=Z,4µm,19.0s						
CAST	Castle Rocks	98.60	25	Pdiff	P	06 10 46.2	-0.2
	baz=288						
Q18K	Katmai Hardscr	98.61	30	Pdiff	Pdif	06 10 46.8	+0.1
	baz=285						
M20K	Styx River	98.61	27	IAmb	IAmb	06 11 17.6	
	comp=Z,14nm,1.0s						
M20K	Styx River	98.61	27	Pdiff	P	06 10 46.3	-0.3
	baz=287						
MLY	Manley	98.63	24	IAMs_20	IAMs_20	07 02 16.3	
	comp=Z,5µm,19.0s						
MLY	Manley	98.63	24	Pdiff	P	06 10 46.2	-0.3
	baz=290						
PPLA	Purkeypile	98.72	26	IAMs_20	IAMs_20	06 55 34.9	
	comp=Z,6µm,22.0s						
PPLA	Purkeypile	98.72	26	Pdiff	P	06 10 46.8	-0.3
	baz=288						
ESDC	Sonseca Array	98.78	310	P	P	06 10 45.8	-2.0
	comp=Z,0.4nm,0.6s,baz=67,slow=5.1,SNR=2.4						
ESDC				PP	PP	06 14 40.7	-8.4
	comp=Z,1.6nm,1.0s,baz=64,slow=7.2,SNR=4.7						
ESDC				PKKPbc	PKKPbc	06 27 16.7	-0.1
	comp=Z,0.1nm,0.3s,baz=300,slow=4.2,SNR=4.0						
ESDC				LR	LR	06 58 52.7	
	comp=Z,950nm,20.8s,baz=70,slow=38						
	comp=Z,0.4nm,0.6s						
C26K	Camden Bay	98.79	18	Pdiff	P	06 10 46.7	-0.4
	baz=296						
F24K	Squaw Lake	98.80	21	Pdiff	P	06 10 46.6	-0.6
	baz=293						
H23K	Yukon River	98.82	23	IAMs_20	IAMs_20	07 00 56.3	
	comp=Z,4µm,20.0s						
H23K	Yukon River	98.82	23	Pdiff	P	06 10 47.0	-0.4
	baz=291						
BPAW	Bear Paw Mtn.	98.84	24	P	P	06 10 47.1	-0.4
BPAW				IAmb	IAmb	06 11 15.5	
	comp=Z,26nm,1.2s						
BPAW				IAMs_20	IAMs_20	07 00 55.0	
	comp=Z,6µm,19.0s						
BPAW	Bear Paw Mtn.	98.84	24	Pdiff	P	06 10 46.5	-1.0
	baz=290						
CHIR	Chirikof Islan	99.00	33	Pdiff	P	06 10 47.2	-1.1
	baz=284						
I23K	Minto, Yukon-K	99.14	23	P	Pdif	06 10 47.7	-1.0
I23K				IAmb	IAmb	06 11 23.7	
	comp=Z,19nm,1.6s						
I23K				IAMs_20	IAMs_20	07 02 38.7	
	comp=Z,7µm,18.0s						
I23K	Minto, Yukon-K	99.14	23	Pdiff	Pdif	06 10 48.0	-0.7
	baz=291						
R18K	Karluk	99.18	31	Pdiff	Pdif	06 10 48.0	-1.0
	baz=285						
P19K	Oil Pt	99.22	29	IAMs_20	IAMs_20	07 01 51.2	
	comp=Z,5µm,20.0s						
P19K	Oil Pt	99.22	29	Pdiff	Pdif	06 10 48.7	-0.5
	baz=287						
Q19K	Cape Douglas,	99.22	30	IAMs_20	IAMs_20	07 00 00.4	
	comp=Z,4µm,20.0s						
Q19K	Cape Douglas,	99.22	30	Pdiff	Pdif	06 10 48.3	-1.0
	baz=286						
N20K	Mount Spurr	99.24	27	Pdiff	Pdif	06 10 47.7	-1.7
	baz=288						
G24K	Hadweenzic Riv	99.27	21	Pdiff	Pdif	06 10 49.0	-0.3
	baz=293						
C27K	Jago River	99.29	18	IAMs_20	IAMs_20	07 02 39.5	
	comp=Z,7µm,18.0s						
C27K	Jago River	99.29	18	Pdiff	Pdif	06 10 49.1	-0.2
	baz=297						
SKT	Skwentna	99.30	27	IAMs_20	IAMs_20	07 02 04.3	
	comp=Z,6µm,20.0s						
SKT	Skwentna	99.30	27	Pdiff	Pdif	06 10 48.6	-0.9
	baz=289						
STLK	Strandline Lak	99.32	27	IAmb	IAmb	06 12 40.7	
	comp=Z,10nm,0.5s						
STLK				IAMs_20	IAMs_20	07 01 41.8	
	comp=Z,4µm,20.0s						
TRF	Thorofare Moun	99.35	25	Pdiff	Pdif	06 10 49.1	-0.9
	baz=290						
E25K	Arctic Village	99.36	20	Pdiff	Pdif	06 10 49.0	-0.7
	baz=295						
O20K	Slope Mountain	99.38	29	Pdiff	Pdif	06 10 48.8	-1.2
	baz=287						
H24K	Noodor Dome	99.45	22	IAMs_20	IAMs_20	07 01 60.0	
	comp=Z,7µm,19.0s						
H24K	Noodor Dome	99.45	22	Pdiff	Pdif	06 10 49.6	-0.6
	baz=293						
NEA2	Nenana	99.45	24	IAMs_20	IAMs_20	06 59 23.1	
	comp=Z,6µm,21.0s						
NEA2	Nenana	99.45	24	Pdiff	Pdif	06 10 49.5	-0.6
	baz=291						
F25K	Christian Rive	99.55	20	P	Pdif	06 10 51.2	+0.5
F25K	Christian Rive	99.55	20	Pdiff	Pdif	06 10 49.9	-0.8
	baz=295						
SII	Sitkinak Islan	99.59	32	IAMs_20	IAMs_20	07 00 41.4	
	comp=Z,4µm,20.0s						
SII	Sitkinak Islan	99.59	32	Pdiff	Pdif	06 10 50.4	-0.6
	baz=285						
EUNU	Eureka	99.63	1	Pdif	Pdif	06 10 50.6	-0.2
EUNU				IAmb	IAmb	06 10 54.7	
	comp=Z,15nm,0.9s						
CUT	Chulitna	99.72	26	IAMs_20	IAMs_20	06 56 16.4	
	comp=Z,5µm,22.0s						
CUT	Chulitna	99.72	26	Pdiff	Pdif	06 10 51.3	-0.1
	baz=290						
G25K	Bearman Lake	99.74	21	Pdiff	Pdif	06 10 50.9	-0.5
	baz=294						
MCK	McKinley	99.82	24	IAMs_20	IAMs_20	07 01 34.9	
	comp=Z,7µm,19.0s						
MCK	McKinley	99.82	24	Pdiff	Pdif	06 10 51.3	-0.6
	baz=291						
SUA	Susitna One	99.82	27	IAMs_20	IAMs_20	07 02 15.1	
	comp=Z,5µm,18.0s						
SUA	Susitna One	99.82	27	Pdiff	Pdif	06 10 51.5	-0.5
	baz=289						
COLA	College	99.83	23	IAMs_20	IAMs_20	07 03 10.0	
	comp=Z,5µm,19.0s						
COLA	College	99.83	23	Pdiff	Pdif	06 10 51.3	-0.5
	baz=292						
CAPN	Captain Cook N	99.86	28	IAMs_20	IAMs_20	07 03 05.2	
	comp=Z,4µm,18.0s						
OHAK	Old Harbor	99.88	31	IAMs_20	IAMs_20	07 04 24.0	
	comp=Z,4µm,19.0s						
OHAK	Old Harbor	99.88	31	P	Pdif	06 10 54.3	+2.1
OHAK	Old Harbor	99.88	31	Pdiff	Pdif	06 10 51.2	-0.9
	baz=286						
WRH	Wood River Hil	99.89	24	IAMs_20	IAMs_20	07 01 18.7	
	comp=Z,6µm,19.0s						
POKR	Poker Plat Res	99.90	23	IAMs_20	IAMs_20	07 03 04.9	
	comp=Z,7µm,18.0s						
POKR	Poker Plat Res	99.90	23	Pdiff	Pdif	06 10 51.2	-1.0
	baz=293						
Q20K	Shuyak Island	99.94	30	Pdiff	Pdif	06 10 51.5	-0.9
	baz=287						
CCB	Clear Creek Bu	99.94	23	IAMs_20	IAMs_20	07 03 13.9	
	comp=Z,5µm,19.0s						
RND	Reindeer	99.97	25	IAMs_20	IAMs_20	07 01 31.9	
	comp=Z,5µm,19.0s						
HOM	Homer	99.98	29	IAMs_20	IAMs_20	07 02 26.4	
	comp=Z,5µm,18.0s						
HOM	Homer	99.98	29	Pdiff	Pdif	06 10 51.5	-1.1
	baz=288						
M22K	Willow	100.01	27	Pdiff	Pdif	06 10 51.8	-0.9
	baz=290						
F26K	Sheenjek River	100.03	20	Pdiff	Pdif	06 10 52.2	-0.5
	baz=296						
H25L	Birch Creek	100.05	22	Pdiff	Pdif	06 10 51.7	-1.0
	baz=295						
KDAK	Kodiak Island	100.08	31		Pdif	06 10 54.0	+0.9
KDAK	Kodiak Island	100.08	31	IAMs_20	IAMs_20	07 01 47.3	
	comp=Z,7µm,19.0s						
KDAK	Kodiak Island	100.08	31	S	SKSac	06 21 29.1	-1.1
	comp=Z,4.7nm,1.0s,baz=349,slow=15,SNR=2.4						

KDAK	Kodiak Island	100.08	31	Pdiff	Pdif	06 10 52.1	-1.0
	baz=287						
FIS	Fire Island	100.17	27	IAMs_20	IAMs_20	07 02 19.4	
	comp=Z,5µm,20.0s						
CNPM	China Poot	100.22	29	Pdif	Pdif	06 10 52.1	-1.6
CNPM				IAMs_20	IAMs_20	07 02 42.8	
	comp=Z,7µm,18.0s						
ILAR	Eielson Array	100.25	23	Pdif	Pdif	06 10 52.0	-1.7
ILAR	Eielson Array	100.25	23	P	Pdif	06 10 52.6	-1.1
	comp=Z,1.2nm,0.9s,baz=299,slow=3.9,SNR=12						
ILAR				PP	PP	06 14 56.5	-3.0
	comp=Z,2.0nm,0.9s,baz=314,slow=9.6,SNR=4.1						
ILAR				PKKPbc	PKKPbc	06 27 15.5	+2.1
	comp=Z,0.3nm,0.7s,baz=153,slow=2.3,SNR=4.1						
WAT1	Susitna Watana	100.31	25	Pdiff	Pdif	06 10 52.8	-1.3
	baz=292						
BRLK	Bradley Lake	100.31	29	Pdif	Pdif	06 10 53.2	-1.0
BRLK				IAMs_20	IAMs_20	07 02 28.1	
	comp=Z,5µm,19.0s						
D27M	Malcolm River	100.33	18	IAMs_20	IAMs_20	06 59 52.5	
	comp=Z,8µm,20.0s						
D27M	Malcolm River	100.33	18	Pdiff	Pdif	06 10 52.9	-1.1
	baz=300						
HDA	Harding Lake	100.37	24	Pdif	Pdif	06 10 53.0	-1.3
HDA				IAMs_20	IAMs_20	07 03 27.4	
	comp=Z,5µm,19.0s						
HDA	Harding Lake	100.37	24	Pdiff	Pdif	06 10 53.0	-1.3
	baz=293						
SLKM	Skilak Lake	100.38	28	Pdif	Pdif	06 10 55.4	+0.9
BRSE	Bradley Lake S	100.39	29	Pdiff	Pdif	06 10 53.7	-0.8
	baz=289						
RC01	Rabbit Creek A	100.41	27	IAMs_20	IAMs_20	07 02 44.6	
	comp=Z,6µm,19.0s						
RC01	Rabbit Creek A	100.41	27	Pdiff	Pdif	06 10 55.1	+0.6
	baz=290						
NEEM	North Greenlan	100.43	353	*i* P	Pdif	06 10 53.3	-1.3
NEEM				IAmb	IAmb	06 10 57.4	
	comp=Z,5.5nm,0.8s						
PRP	Porcupine Dome	100.47	22	IAMs_20	IAMs_20	07 02 49.0	
	comp=Z,7µm,20.0s						
PRP	Porcupine Dome	100.47	22	Pdiff	Pdif	06 10 55.1	+0.2
	baz=295						
G26K	Porcupine Rive	100.48	21	Pdiff	Pdif	06 10 55.4	+0.8
	baz=297						
PMR	Palmer	100.51	27	Pdif	Pdif	06 10 56.2	+1.4
PMR	Palmer	100.51	27	P	Pdif	06 10 57.6	+2.7
PMR	Palmer	100.51	27	Pdiff	Pdif	06 10 55.2	+0.4
	baz=291						
O22K	Cooper Landing	100.62	28	Pdiff	Pdif	06 10 55.9	+0.4
	baz=290						
E27K	Coleen River	100.65	19	Pdiff	Pdif	06 10 55.9	+0.5
	baz=299						
DHY	Denali Highway	100.72	25	IAMs_20	IAMs_20	07 02 13.6	
	comp=Z,5µm,20.0s						
DHY	Denali Highway	100.72	25	Pdiff	Pdif	06 10 56.3	+0.2
	baz=293						
WAT6	Susitna Watana	100.75	25	Pdiff	Pdif	06 10 56.1	-0.1
	baz=292						
SML	Sawmill	100.78	26	Pdif	Pdif	06 10 55.3	-0.9
SML	Sawmill	100.78	26	Pdiff	Pdif	06 10 55.8	-0.5
	baz=292						
KNK	Knik Glacier	100.87	27	Pdiff	Pdif	06 10 57.0	+0.4
	baz=291						
SEW	Seward	100.88	28	IAMs_20	IAMs_20	07 03 07.2	
	comp=Z,5µm,18.0s						
SEW	Seward	100.88	28	Pdiff	Pdif	06 10 56.5	0.0
	baz=290						
J25K	Salcha River,	100.91	23	IAMs_20	IAMs_20	07 02 01.6	
	comp=Z,7µm,20.0s						
J25K	Salcha River,	100.91	23	Pdiff	Pdif	06 10 57.0	+0.2
	baz=295						
D28M	Stokes Point	100.97	18	Pdiff	Pdif	06 10 57.0	+0.2
	baz=302						
M23K	Glacier View	101.06	26	Pdiff	Pdif	06 10 57.4	0.0
	baz=292						
K24K	Donnelly Dome	101.09	24	IAMs_20	IAMs_20	07 00 22.3	
	comp=Z,5µm,20.0s						
K24K	Donnelly Dome	101.09	24	Pdiff	Pdif	06 10 57.3	-0.2
	baz=294						
E28M	Babbage River	101.10	18	IAMs_20	IAMs_20	07 02 28.3	
	comp=Z,8µm,21.0s						
E28M	Babbage River	101.10	18	Pdiff	Pdif	06 10 57.2	-0.2
	baz=301						
PWL	Port Wells	101.13	27	IAMs_20	IAMs_20	07 03 42.7	
	comp=Z,6µm,18.0s						
PWL	Port Wells	101.13	27	Pdiff	Pdif	06 10 57.1	-0.7
	baz=291						
SCM	Sheep Creek Mo	101.22	26	Pdiff	Pdif	06 10 58.5	+0.3
	baz=292						
G27K	Doyon Strip	101.30	20	Pdiff	Pdif	06 10 58.5	+0.1
	baz=299						
I26K	Coal Creek Min	101.46	22	IAMs_20	IAMs_20	07 03 30.0	
	comp=Z,8µm,19.0s						
I26K	Coal Creek Min	101.46	22	Pdiff	Pdif	06 10 59.2	+0.1
	baz=297						
RIDG	Independent Ri	101.49	24	IAMs_20	IAMs_20	07 03 01.0	
	comp=Z,4µm,19.0s						
RIDG	Independent Ri	101.49	24	Pdiff	Pdif	06 10 59.1	-0.2
	baz=295						
F28M	Old Crow	101.50	19	Pdiff	Pdif	06 10 59.6	+0.3
	baz=300						
PAX	Paxson	101.56	25	IAMs_20	IAMs_20	06 59 55.8	
	comp=Z,5µm,20.0s						
PAX	Paxson	101.56	25	Pdiff	Pdif	06 10 59.5	-0.2
	baz=294						
M24K	Tolsona, Glenn	101.61	26	IAMs_20	IAMs_20	07 03 50.3	
	comp=Z,5µm,19.0s						
M24K	Tolsona, Glenn	101.61	26	Pdiff	Pdif	06 10 59.5	-0.4
	baz=294						
H27K	Steamboat Moun	101.62	21		Pdif	06 10 59.8	-0.1
H27K				IAMs_20	IAMs_20	07 04 07.2	
	comp=Z,8µm,20.0s						
H27K	Steamboat Moun	101.62	21	Pdiff	Pdif	06 10 60.0	+0.2
	baz=299						
J26L	Joseph Creek	101.67	23	Pdif	Pdif	06 11 00.8	+0.7
J26L	Joseph Creek	101.67	23	Pdiff	Pdif	06 11 00.2	+0.1
	baz=296						
GLI	Glacier Island	101.69	27	IAMs_20	IAMs_20	07 04 02.3	
	comp=Z,6µm,19.0s						
GLI	Glacier Island	101.69	27	Pdiff	Pdif	06 11 00.2	0.0
	baz=292						
E29M	Blow River	101.73	18	IAMs_20	IAMs_20	07 03 40.9	
	comp=Z,6µm,20.0s						
E29M	Blow River	101.73	18	Pdiff	Pdif	06 11 00.0	-0.2
	baz=303						
SCRK	Sand Creek	101.73	23	IAMs_20	IAMs_20	07 02 36.3	
	comp=Z,5µm,19.0s						
SCRK	Sand Creek	101.73	23	Pdiff	Pdif	06 11 00.0	-0.4
	baz=296						
DOT	Dot Lake	101.84	24	IAMs_20	IAMs_20	07 03 41.3	
	comp=Z,4µm,21.0s						
P23K	Montague Islan	101.88	28	IAMs_20	IAMs_20	07 04 27.5	
	comp=Z,7µm,18.0s						
P23K	Montague Islan	101.88	28	Pdiff	Pdif	06 11 01.5	+0.5
	baz=292						
I27K	Kandik River	101.89	21	Pdiff	Pdif	06 11 01.4	+0.3
	baz=298						
HARP	HAARP	101.93	25	Pdiff	Pdif	06 11 01.7	+0.5
	baz=295						
KLU	Klutina	101.97	26	IAMs_20	IAMs_20	07 02 52.7	
	comp=Z,5µm,20.0s						
KLU	Klutina	101.97	26	Pdiff	Pdif	06 11 02.1	+0.6
	baz=294						
HIN	Hinchinbrook I	102.14	27	IAMs_20	IAMs_20	07 05 07.4	
	comp=Z,7µm,18.0s						
SUMG	Summit	102.21	348	IAMs_20	IAMs_20	07 06 32.0	
	comp=Z,5µm,19.0s						
MENT	Mentasta	102.30	24	IAMs_20	IAMs_20	07 03 03.3	
	comp=Z,6µm,18.0s						
MENT	Mentasta	102.30	24	P	Pdif	06 11 04.8	+1.9
MESJ	Messejana	102.35	309	*e*Pdif	Pdif	06 11 05.1	+1.5
MESJ				*e*PP	PP	06 15 17.7	+1.5
L26K	Log Cabin Wild	102.41	24	IAMs_20	IAMs_20	07 02 57.3	
	comp=Z,4µm,19.0s						
L26K	Log Cabin Wild	102.41	24	Pdiff	Pdif	06 11 04.0	+0.6
	baz=296						
EYAK	Cordova Ski Ar	102.42	27	Pdiff	Pdif	06 11 03.7	+0.3
	baz=294						
AVE	Averroes	102.44	304	PKP	PP	06 15 17.3	+0.2
K27K	Chicken	102.46	23	IAMs_20	IAMs_20	07 03 07.5	
	comp=Z,7µm,20.0s						
K27K	Chicken	102.46	23	Pdiff	Pdif	06 11 03.9	+0.4
	baz=298						
G29M	Pine Creek	102.48	20	Pdiff	Pdif	06 11 04.1	+0.5
	baz=302						
N25K	Chitina, Valde	102.50	26	IAMs_20	IAMs_20	07 03 06.8	
	comp=Z,5µm,18.0s						
N25K	Chitina, Valde	102.50	26	Pdiff	Pdif	06 11 03.7	-0.2
	baz=295						
I28M	Miner Creek	102.58	21	Pdiff	Pdif	06 11 04.7	+0.5
	baz=300						
Q23K	Middleton Isla	102.59	28	IAMs_20	IAMs_20	07 04 18.5	
	comp=Z,6µm,19.0s						
Q23K	Middleton Isla	102.59	28	Pdiff	Pdif	06 11 04.6	+0.4
	baz=293						
H29M	Whitestone	102.73	20	Pdiff	Pdif	06 11 04.9	+0.2
	baz=302						
BMRM	Bremner River	102.76	26	IAMs_20	IAMs_20	07 03 19.8	
	comp=Z,5µm,19.0s						
BMRM	Bremner River	102.76	26	Pdiff	Pdif	06 11 05.2	+0.1
	baz=295						
MORF	Marmelete	102.78	308	*e*Pdif	Pdif	06 11 07.1	+1.4
MORF				*e*PP	PP	06 15 21.0	+1.5
A36M	Sachs Harbour	102.80	13	IAMs_20	IAMs_20	07 01 19.0	
	comp=Z,6µm,22.0s						
A36M	Sachs Harbour	102.80	13	Pdiff	Pdif	06 11 04.8	0.0
	baz=316						
TULEG	Thule	102.81	357	IAMs_20	IAMs_20	07 03 39.8	
	comp=Z,5µm,19.0s						
F30M	Barrier River	102.82	18	Pdiff	Pdif	06 11 05.3	+0.2
	baz=304						
M26K	Nabesna, AK	102.83	25	IAMs_20	IAMs_20	07 03 30.5	
	comp=Z,5µm,18.0s						
M26K	Nabesna, AK	102.83	25	Pdiff	Pdif	06 11 05.7	+0.4
	baz=297						
LIS	Lisbon	102.91	310	*e*Pdif	Pdif	06 11 07.4	+1.3
LIS				*e*PP	PP	06 15 21.6	+1.3
L27K	Beaver Creek,	103.01	24	IAMs_20	IAMs_20	07 03 18.1	
	comp=Z,5µm,21.0s						
L27K	Beaver Creek,	103.01	24	Pdiff	Pdif	06 11 06.2	+0.1
	baz=298						
G30M	tAoh Zraii Nji	103.04	19	Pdiff	Pdif	06 11 05.8	-0.3
	baz=304						
SHEL	Horse Pasture	103.06	254	IAMs_20	IAMs_20	06 53 29.2	
	comp=Z,6µm,20.0s						
INK	Inuvik	103.11	17	IAMs_20	IAMs_20	07 06 44.3	
	comp=Z,6µm,18.0s						
INK	Inuvik	103.11	17	Pdiff	Pdif	06 11 06.2	-0.1
	baz=307						
I29M	Ogilvie Camp,	103.21	21	Pdiff	Pdif	06 11 07.0	+0.1
	baz=302						
EPYK	Eagle Plains	103.21	20	IAMs_20	IAMs_20	07 04 40.2	
	comp=Z,6µm,19.0s						
EPYK	Eagle Plains	103.21	20	Pdiff	Pdif	06 11 06.7	-0.2
	baz=303						
MCARA	McCarthy VSAT	103.28	26	IAMs_20	IAMs_20	07 01 08.3	
	comp=Z,4µm,22.0s						
MCARA	McCarthy VSAT	103.28	26	Pdiff	Pdif	06 11 07.7	+0.4
	baz=296						
KAIM	Kayak Island	103.28	27	IAMs_20	IAMs_20	07 05 03.7	
	comp=Z,6µm,18.0s						
KAIM	Kayak Island	103.28	27	Pdiff	Pdif	06 11 07.2	-0.1
	baz=295						
M27K	Edge Creek, AK	103.32	24	IAMs_20	IAMs_20	07 01 09.3	
	comp=Z,6µm,21.0s						
M27K	Edge Creek, AK	103.32	24	Pdiff	Pdif	06 11 08.1	+0.5
	baz=298						
BERG	Berg Lake	103.41	27	IAMs_20	IAMs_20	07 03 51.0	
	comp=Z,6µm,20.0s						
DAWY	Dawson	103.47	22	IAMs_20	IAMs_20	07 04 42.3	
	comp=Z,6µm,19.0s						
DAWY	Dawson	103.47	22	Pdiff	Pdif	06 11 08.3	+0.2
	baz=300						
CRQM	Cirque	103.50	26	IAMs_20	IAMs_20	07 06 56.9	
	comp=Z,5µm,19.0s						
CRQE	Cirque	103.53	26	Pdiff	Pdif	06 11 08.3	-0.2
	baz=296						
F31M	Tsiigehtchic	103.56	18	IAMs_20	IAMs_20	07 02 59.3	
	comp=Z,8µm,22.0s						
F31M	Tsiigehtchic	103.56	18	Pdiff	Pdif	06 11 09.2	+0.9
	baz=306						
TGL	Tana Glacier	103.64	26	IAMs_20	IAMs_20	07 07 01.0	
	comp=Z,5µm,18.0s						
G31M	Satah River	103.70	19	Pdiff	Pdif	06 11 09.3	+0.3
	baz=306						
BVCY	Beaver Creek	103.71	24	Pdiff	Pdif	06 11 09.1	-0.1
	baz=299						
J29N	Klondike Camp	103.72	22	Pdiff	Pdif	06 11 09.8	+0.6
	baz=302						
BGLC	Bering Glacier	103.72	27	Pdiff	Pdif	06 11 09.6	+0.5
	baz=296						
WAX	Waxell Ridge	103.77	26	IAMs_20	IAMs_20	07 04 00.3	
	comp=Z,5µm,18.0s						
I30M	Mount Dempster	103.97	21	Pdiff	Pdif	06 11 10.2	-0.2
	baz=303						
YUK3	Moose Creek	104.18	25	Pdiff	Pdif	06 11 11.3	-0.2
	baz=299						
CTG	Chitna Glacier	104.19	26	Pdiff	Pdif	06 11 11.8	+0.3
	baz=298						
CTGM	Chitina Glacie	104.20	26	IAMs_20	IAMs_20	07 06 14.6	
	comp=Z,5µm,20.0s						
MESA	MESA	104.29	26	IAMs_20	IAMs_20	07 06 10.2	
	comp=Z,5µm,19.0s						
MESA	MESA	104.29	26	Pdiff	Pdif	06 11 12.4	+0.4
	baz=297						
YAH	Yahtse	104.30	26	IAMs_20	IAMs_20	06 59 31.3	
	comp=Z,5µm,21.0s						
K29M	Barlow Dome	104.30	22	IAMs_20	IAMs_20	07 05 09.0	
	comp=Z,7µm,20.0s						
K29M	Barlow Dome	104.30	22	Pdiff	Pdif	06 11 12.1	+0.2
	baz=302						
H31M	Peel River	104.33	20	IAMs_20	IAMs_20	07 04 06.8	
	comp=Z,5µm,20.0s						
H31M	Peel River	104.33	20	Pdiff	Pdif	06 11 11.9	0.0
	baz=306						
J30M	Hart River	104.34	21	IAMs_20	IAMs_20	07 04 15.1	
	comp=Z,8µm,20.0s						
J30M	Hart River	104.34	21	Pdiff	Pdif	06 11 11.9	-0.2
	baz=303						
LOGN	Logan Glacier	104.41	26	IAMs_20	IAMs_20	07 02 41.2	
	comp=Z,4µm,20.0s						
L29M	L29M	104.45	23	IAMs_20	IAMs_20	06 59 54.2	
	comp=Z,4µm,20.0s						
L29M	L29M	104.45	23	Pdiff	Pdif	06 11 12.6	+0.1
	baz=301						
M29M	Somme Creek	104.66	24	IAMs_20	IAMs_20	07 04 27.8	
	comp=Z,7µm,20.0s						
M29M	Somme Creek	104.66	24	Pdiff	Pdif	06 11 13.1	-0.4
	baz=301						
RES	Resolute Bay	104.67	3	IAMs_20	IAMs_20	07 02 09.9	
	comp=Z,4µm,21.0s						
YUK8	Steele Glacier	104.71	25	Pdiff	Pdif	06 11 12.9	-1.1
	baz=299						
O28M	Mount Upton	104.78	25	IAMs_20	IAMs_20	07 07 39.1	
	comp=Z,5µm,19.0s						
O28M	Mount Upton	104.78	25	Pdiff	Pdif	06 11 13.2	-1.1
	baz=299						
PCA	Pinnacle	105.08	26	IAMs_20	IAMs_20	07 02 06.0	
	comp=Z,5µm,22.0s						
PINM	Pinnacle	105.08	26	Pdiff	Pdif	06 11 15.1	-0.3
	baz=299						
YUK4	Talbot Arm	105.15	25	Pdiff	Pdif	06 11 15.7	-0.2
	baz=300						
BCPM	Bancas Point	105.42	26	IAMs_20	IAMs_20	07 02 26.0	
	comp=Z,4µm,20.0s						
YUK6	Outpost Mounta	105.47	25	Pdiff	Pdif	06 11 17.1	-0.2
	baz=301						
PNL	Peninsula	105.66	26	Pdiff	Pdif	06 11 18.5	+0.6
	baz=299						
O29M	Mount Kennedy	105.71	25	IAMs_20	IAMs_20	07 06 14.6	
	comp=Z,5µm,21.0s						
O29M	Mount Kennedy	105.71	25	Pdiff	Pdif	06 11 19.0	+0.7
	baz=300						
N30M	Aishikik Lake	105.73	24	IAMs_20	IAMs_20	07 05 02.1	
	comp=Z,6µm,21.0s						
N30M	Aishikik Lake	105.73	24	Pdiff	Pdif	06 11 18.6	+0.3
	baz=302						
HYT	Haines Junctio	105.89	25	IAMs_20	IAMs_20	07 06 50.4	
	comp=Z,4µm,20.0s						
HYT	Haines Junctio	105.89	25	Pdiff	Pdif	06 11 18.9	-0.2
	baz=301						
N31M	Braeburn, Yuko	106.25	24	IAMs_20	IAMs_20	07 05 35.7	
	comp=Z,5µm,19.0s						
N31M	Braeburn, Yuko	106.25	24	Pdiff	Pdif	06 11 21.1	+0.6
	baz=303						
M31M	Drury Creek, Y	106.39	23	IAMs_20	IAMs_20	07 05 31.5	
	comp=Z,5µm,20.0s						
M31M	Drury Creek, Y	106.39	23	Pdiff	Pdif	06 11 21.3	+0.2
	baz=305						
P29M	Windy Craggy	106.41	26	IAMs_20	IAMs_20	07 05 53.3	
	comp=Z,4µm,20.0s						
P29M	Windy Craggy	106.41	26	Pdiff	Pdif	06 11 21.4	+0.1
	baz=301						
P30M	Million Dollar	106.49	25	Pdiff	Pdif	06 11 21.4	-0.3
	baz=302						
O30N	Mendenhall	106.51	24	IAMs_20	IAMs_20	07 05 27.7	
	comp=Z,5µm,21.0s						
O30N	Mendenhall	106.51	24	Pdiff	Pdif	06 11 21.8	+0.1
	baz=303						
FARO	Faro, Yukon	106.78	22	IAMs_20	IAMs_20	07 06 22.6	
	comp=Z,4µm,21.0s						
FARO	Faro, Yukon	106.78	22	Pdiff	Pdif	06 11 22.6	-0.3
	baz=306						
ANGG	Ammassalik, Gr	106.84	342	IAMs_20	IAMs_20	07 09 11.6	
	comp=Z,4µm,18.0s						
WHY	Whitehorse	107.07	24	Pdiff	Pdif	06 11 23.9	-0.3
	baz=304						
PLBC	Pleasant Camp	107.10	26	Pdiff	Pdif	06 11 24.9	+0.6
	baz=302						
MMPY	Sheldon Lake,	107.32	21	IAMs_20	IAMs_20	07 04 04.0	
	comp=Z,5µm,21.0s						
MMPY	Sheldon Lake,	107.32	21	Pdiff	Pdif	06 11 25.7	+0.4
	baz=308						
ILULI	Ilulissat	107.44	349	IAMs_20	IAMs_20	07 09 10.1	
	comp=Z,5µm,21.0s						
N32M	Quiet Lake	107.51	23	Pdiff	Pdif	06 11 26.1	0.0
	baz=306						
SKAG	Skagway	107.54	25	IAMs_20	IAMs_20	07 06 08.1	
	comp=Z,5µm,19.0s						
SKAG	Skagway	107.54	25	Pdiff	Pdif	06 11 26.6	+0.3
	baz=303						
R31K	City Hall, Gus	107.93	26	Pdiff	Pdif	06 11 28.2	+0.2
	baz=302						
S31K	Pelican	107.95	27	Pdiff	Pdif	06 11 29.2	+1.1
	baz=302						
P32M	Atlin	108.16	25	IAMs_20	IAMs_20	07 01 50.2	
	comp=Z,5µm,21.0s						
P32M	Atlin	108.16	25	Pdiff	Pdif	06 11 27.7	-1.4
	baz=305						
P33M	Teslin, Yukon	108.17	24	IAMs_20	IAMs_20	07 06 37.5	
	comp=Z,5µm,18.0s						
P33M	Teslin, Yukon	108.17	24	Pdiff	Pdif	06 11 29.0	-0.1
	baz=306						
BESE	Bessie Mountai	108.23	26	IAMs_20	IAMs_20	07 08 17.4	
	comp=Z,5µm,20.0s						
R32K	Eaglecrest	108.55	26	IAMs_20	IAMs_20	07 09 14.8	
	comp=Z,5µm,18.0s						
R32K	Eaglecrest	108.55	26	Pdiff	Pdif	06 11 30.7	0.0
	baz=304						
SIT	Sitka	108.85	27	IAMs_20	IAMs_20	07 07 12.8	
	comp=Z,5µm,20.0s						
SIT	Sitka	108.85	27	Pdiff	Pdif	06 11 31.5	-0.6
	baz=302						
S32K	Killisnoo	108.97	27	IAMs_20	IAMs_20	07 07 34.9	
	comp=Z,4µm,21.0s						
S32K	Killisnoo	108.97	27	Pdiff	Pdif	06 11 32.1	-0.5
	baz=303						
TGTN	Hyland Airport	109.11	21	Pdiff	Pdif	06 11 33.3	+0.1
	baz=310						
Q32M	Nakina River	109.13	25	IAMs_20	IAMs_20	07 05 39.9	
	comp=Z,3µm,19.0s						
Q32M	Nakina River	109.13	25	Pdiff	Pdif	06 11 33.4	-0.2
	baz=306						
SFJD	Kangerlussuaq	109.20	347	IAMs_20	IAMs_20	07 08 06.7	
	comp=Z,5µm,20.0s						
R33M	Jennings River	109.41	24	IAMs_20	IAMs_20	07 07 24.2	
	comp=Z,5µm,18.0s						
R33M	Jennings River	109.41	24	Pdiff	Pdif	06 11 34.1	-0.7
	baz=307						
WRGLY	Wrigley	109.58	18	Pdiff	Pdif	06 11 35.4	+0.2
	baz=316						
WTLY	Watson Lake, Y	109.82	23	IAMs_20	IAMs_20	07 05 49.1	
	comp=Z,6µm,22.0s						
WTLY	Watson Lake, Y	109.82	23	Pdiff	Pdif	06 11 36.0	-0.4
	baz=310						
T33K	Petersburg	110.07	27	Pdiff	Pdif	06 11 36.3	-1.2
	baz=305						
S34M	Telegraph Cree	110.23	25	IAMs_20	IAMs_20	07 03 07.1	
	comp=Z,5µm,21.0s						
S34M	Telegraph Cree	110.23	25	Pdiff	Pdif	06 11 37.7	-0.6
	baz=307						
DLBC	Dease Lake	110.38	25	IAMs_20	IAMs_20	07 10 02.0	
	comp=Z,6µm,18.0s						
DLBC	Dease Lake	110.38	25	PP	PP	06 16 10.7	-3.8
	comp=Z,4.0nm,1.1s,baz=353,slow=10,SNR=3.9						
DLBC	Dease Lake	110.38	25	Pdiff	Pdif	06 11 38.9	-0.1
	baz=308						
U33K	Whale Pass	110.39	28	IAMs_20	IAMs_20	07 08 07.5	
	comp=Z,4µm,19.0s						
U33K	Whale Pass	110.39	28	Pdiff	Pdif	06 11 39.1	+0.2
	baz=304						
WRAK	Wrangell Islan	110.57	27	IAMs_20	IAMs_20	07 08 40.3	
	comp=Z,5µm,18.0s						
WRAK	Wrangell Islan	110.57	27	Pdiff	Pdif	06 11 40.1	+0.4
	baz=305						
CRAG	Craig	110.75	28	IAMs_20	IAMs_20	07 08 58.1	
	comp=Z,4µm,18.0s						
CRAG	Craig	110.75	28	Pdiff	Pdif	06 11 40.0	-0.6
	baz=304						
T35M	Bob Quinn	111.17	26	IAMs_20	IAMs_20	07 09 42.1	
	comp=Z,5µm,20.0s						
T35M	Bob Quinn	111.17	26	Pdiff	Pdif	06 11 42.8	+0.3
	baz=307						
BEAVL	Fort Liard	111.18	21	Pdiff	Pdif	06 11 42.4	0.0
	baz=313						
LIRD	Liard River Hi	111.31	22	Pdiff	Pdif	06 11 44.1	+1.0
	baz=312						
V35K	Ketchikan	111.54	28	IAMs_20	IAMs_20	07 09 59.9	
	comp=Z,4µm,20.0s						
V35K	Ketchikan	111.54	28	Pdiff	Pdif	06 11 44.2	+0.2
	baz=305						
KOTAN	Kotaneelee Air	111.58	21	Pdiff	Pdif	06 11 44.9	+0.7
	baz=314						
U35K	Hyder	111.92	27	IAMs_20	IAMs_20	07 09 05.8	
	comp=Z,6µm,19.0s						
U35K	Hyder	111.92	27	Pdiff	Pdif	06 11 46.5	+0.8
	baz=307						
NRS	Narsarsuaq	112.49	342	IAMs_20	IAMs_20	07 10 17.9	
	comp=Z,4µm,20.0s						
MOBC	Moresby Island	112.61	30	IAMs_20	IAMs_20	07 07 35.7	
	comp=Z,3µm,20.0s						
YKA	Yellowknife Ar	112.75	16	PP	PP	06 16 27.1	-4.0
	comp=Z,5.0nm,1.0s,baz=333,slow=8.0,SNR=7.2						
IVI	Ivigtut	113.30	343	IAMs_20	IAMs_20	07 08 32.1	
	comp=Z,5µm,21.0s						
MBO	M'Bour	113.78	286	IAMs_20	IAMs_20	07 05 14.4	
	comp=Z,5µm,18.0s						
PMSA	Palmer Station	114.38	188	IAMs_20	IAMs_20	06 58 53.9	
	comp=Z,6µm,21.0s						
HOPE	Hope Point	114.46	207	IAMs_20	IAMs_20	06 54 22.1	
	comp=Z,5µm,20.0s						
LLLB	Lillooet	119.07	28	IAMs_20	IAMs_20	07 12 53.3	
	comp=Z,4µm,19.0s						
FCC	Fort Churchill	120.31	7		PKPdf	06 15 57.7	-1.0
FCC				IAMs_20	IAMs_20	07 16 24.5	
	comp=Z,6µm,20.0s						
FCC	Fort Churchill	120.31	7	PKIKP	PKPdf	06 15 57.7	-1.0
KUQ	Kuujjuuaa	120.67	352	IAMs_20	IAMs_20	07 14 35.9	
	comp=Z,3µm,20.0s						
B08A	Colville Reser	121.83	28		PKPdf	06 16 01.1	-0.9
B08A				IAMs_20	IAMs_20	07 16 24.3	
	comp=Z,4µm,20.0s						
LTY	Liberty	121.95	30		PKPdf	06 16 00.7	-1.6
LTY				IAMs_20	IAMs_20	07 17 49.6	
	comp=Z,3µm,18.0s						
FFC	Flin Flon	122.75	13		PKPdf	06 16 03.2	-0.3
FFC	Flin Flon	122.75	13	IAMs_20	IAMs_20	07 16 16.3	
	comp=Z,5µm,19.0s						
FFC	Flin Flon	122.75	13	PKIKP	PKPdf	06 16 03.2	-0.3
NEW	Newport	122.93	27	IAMs_20	IAMs_20	07 18 15.2	
	comp=Z,5µm,18.0s						
NEW	Newport	122.93	27	PKP	PKPdf	06 16 02.1	-2.1
	comp=Z,6.7nm,1.0s,baz=275,slow=0.4,SNR=8.8						
D08A	Wollman Farm,	122.95	29	IAMs_20	IAMs_20	07 17 57.9	
	comp=Z,3µm,19.0s						
HAWA	Hanford	123.11	30	IAMs_20	IAMs_20	07 18 24.3	
	comp=Z,4µm,18.0s						
F07A	Phinny Hill Vi	123.25	31	IAMs_20	IAMs_20	07 18 37.1	
	comp=Z,3µm,18.0s						
E08A	Dider Farm, El	123.28	30	IAMs_20	IAMs_20	07 17 28.7	
	comp=Z,3µm,20.0s						
L02F	Cave Junction	123.69	36	IAMs_20	IAMs_20	07 12 20.2	
	comp=Z,3µm,20.0s						
E09A	Wood Farm, Sta	123.71	29	IAMs_20	IAMs_20	07 18 47.0	
	comp=Z,3µm,18.0s						
G08A	Pilot Rock	124.16	31	IAMs_20	IAMs_20	07 19 01.2	
	comp=Z,3µm,19.0s						
J05D	Fort Rock, OR	124.29	34		PKPdf	06 16 06.8	-0.3
L04D	Klamath Falls	124.36	35		PKPdf	06 16 05.9	-1.3
K04D	Chiloquin, OR	124.42	35	PKPdf	PKPdf	06 16 07.3	0.0
I07A	Izee	124.70	32	IAMs_20	IAMs_20	07 19 53.7	
	comp=Z,3µm,18.0s						
EFI	East Falkland	124.95	198	IAMs_20	IAMs_20	07 03 04.9	
	comp=Z,3µm,20.0s						

BMO	Blue Mountains	125.30	30	IAMs_20	IAMs_20	07 18 20.3	
	comp=Z,3µm,22.0s						
O02D	Mt. Diablo Mer	125.33	38	IAMs_20	IAMs_20	07 07 12.0	
	comp=Z,3µm,20.0s						
MSO	Missoula	125.43	26	IAMs_20	IAMs_20	07 18 18.3	
	comp=Z,4µm,19.0s						
J08A	Circle Bar Ran	125.74	32	IAMs_20	IAMs_20	07 20 33.2	
	comp=Z,3µm,19.0s						
PLID	Pearl Lake	125.78	29	IAMs_20	IAMs_20	07 21 35.8	
	comp=Z,3µm,20.0s						
EGMT	Eagleton	126.22	23	IAMs_20	IAMs_20	07 18 57.7	
	comp=Z,4µm,20.0s						
WVOR	Wild Horse Val	126.29	33	IAMs_20	IAMs_20	07 20 52.7	
	comp=Z,3µm,19.0s						
BOZ	Bozeman (W)	127.40	26	IAMs_20	IAMs_20	07 19 00.3	
	comp=Z,4µm,20.0s						
PAHR	Pah Rah Range	127.67	36	IAMs_20	IAMs_20	07 21 00.5	
	comp=Z,2µm,18.0s						
HLID	Hailey	127.67	29	IAMs_20	IAMs_20	07 22 44.9	
	comp=Z,4µm,19.0s						
YHL	Hebgen Lake	128.18	26	IAMs_20	IAMs_20	07 19 27.1	
	comp=Z,3µm,18.0s						
ULM	Lac du Bonnet	128.25	11	PKP	PKPdf	06 16 12.2	-2.0
	comp=Z,8.6nm,0.9s,baz=323,slow=4.3,SNR=10						
YHB	Horse Butte	128.26	26	IAMs_20	IAMs_20	07 19 29.0	
	comp=Z,4µm,19.0s						
YMR	Madison River	128.42	26	IAMs_20	IAMs_20	07 24 05.4	
	comp=Z,3µm,19.0s						
YNM	Yellowstone No	128.49	26	IAMs_20	IAMs_20	07 24 03.2	
	comp=Z,5µm,18.0s						
YNE	Yellowstone No	128.56	25	IAMs_20	IAMs_20	07 21 11.0	
	comp=Z,4µm,20.0s						
LAO	LASA Array	128.65	21	IAMs_20	IAMs_20	07 23 48.8	
	comp=Z,4µm,18.0s						
ICQ	Pointe Anglais	128.66	348	IAMs_20	IAMs_20	07 23 18.3	
	comp=Z,5µm,18.0s						
YMP	Mirror Lake Pl	128.72	25	IAMs_20	IAMs_20	07 20 34.1	
	comp=Z,4µm,19.0s						
RLMT	Red Lodge	128.78	24	IAMs_20	IAMs_20	07 20 37.7	
	comp=Z,4µm,20.0s						
H17A	Grant Village	128.81	26	IAMs_20	IAMs_20	07 19 56.6	
	comp=Z,5µm,19.0s						
RYN	Ryan	128.88	37	IAMs_20	IAMs_20	07 21 49.6	
	comp=Z,3µm,18.0s						
NVAR	Mina Array Bea	129.14	37		PKPdf	06 16 14.6	-2.0
NVAR	Mina Array Bea	129.14	37	PKP	PKPdf	06 16 15.1	-1.5
	comp=Z,4.3nm,0.8s,baz=287,slow=1.6,SNR=22						
EPLO	Experimental L	129.19	10	IAMs_20	IAMs_20	07 20 35.5	
	comp=Z,4µm,19.0s						
FXWY	Fox Creek	129.21	27	IAMs_20	IAMs_20	07 22 15.2	
	comp=Z,5µm,18.0s						
ELK	Elko	129.29	32		PKPdf	06 16 16.3	-0.5
ELK	Elko	129.29	32	PKIKP	PKPdf	06 16 16.3	-0.5
TPAW	Teton Pass	129.35	27	IAMs_20	IAMs_20	07 22 20.1	
	comp=Z,5µm,19.0s						
LOHW	Long Hollow	129.41	27	IAMs_20	IAMs_20	07 19 59.7	
	comp=Z,3µm,20.0s						
SNOW	Snow King Moun	129.47	27	IAMs_20	IAMs_20	07 22 31.2	
	comp=Z,4µm,18.0s						
MDND	Maddock	129.67	15	IAMs_20	IAMs_20	07 20 06.3	
	comp=Z,4µm,20.0s						
HVU	Hansel Valley	129.80	30	IAMs_20	IAMs_20	07 20 34.4	
	comp=Z,3µm,19.0s						
AHID	Auburn Hatcher	129.85	28	IAMs_20	IAMs_20	07 22 38.4	
	comp=Z,5µm,19.0s						
DSP	Deep Springs	130.02	37	IAMs_20	IAMs_20	07 16 50.1	
	comp=Z,3µm,20.0s						
AGMN	Agassiz Nation	130.12	12	IAMs_20	IAMs_20	07 19 44.0	
	comp=Z,5µm,21.0s						
BGU	Big Grassy Mou	130.31	31	IAMs_20	IAMs_20	07 25 44.0	
	comp=Z,3µm,19.0s						
BATG	Bathurst New B	130.49	346	IAMs_20	IAMs_20	07 24 40.7	
	comp=Z,5µm,18.0s						
HWUT	Hardware Ranch	130.53	29	IAMs_20	IAMs_20	07 23 33.4	
	comp=Z,4µm,19.0s						
E28A	Huff	130.53	17	IAMs_20	IAMs_20	07 21 08.4	
	comp=Z,4µm,18.0s						
BW06	Boulder Array	130.55	26	IAMs_20	IAMs_20	07 22 22.8	
	comp=Z,4µm,20.0s						
PDAR	Pinedale Array	130.55	26		PKPdf	06 16 18.2	-0.9
PDAR	Pinedale Array	130.55	26	PKP	PKPdf	06 16 16.0	-3.1
	comp=Z,2.3nm,0.8s,baz=141,slow=1.9,SNR=9.6						
GBN	Guysborough	130.87	341	IAMs_20	IAMs_20	07 20 43.0	
	comp=Z,4µm,21.0s						
LDAQ	Lac Daran	130.92	350	IAMs_20	IAMs_20	07 23 25.0	
	comp=Z,4µm,19.0s						
DUG	Dugway, Tooele	130.96	31	IAMs_20	IAMs_20	07 24 57.2	
	comp=Z,3µm,20.0s						
TCUT	Toone Canyon	130.98	29	IAMs_20	IAMs_20	07 23 49.4	
	comp=Z,4µm,19.0s						
SPR3	Spring Creek 3	131.02	33	IAMs_20	IAMs_20	07 22 47.1	
	comp=Z,3µm,21.0s						
LMQ	La Malbaie	131.16	349	IAMs_20	IAMs_20	07 23 42.3	
	comp=Z,4µm,20.0s						
EYMN	Ely	131.22	8		PKPdf	06 16 19.9	0.0
TPNV	Topopah Spring	131.34	37	IAMs_20	IAMs_20	07 24 36.7	
	comp=Z,3µm,20.0s						
JLU	Jordanelle	131.35	30	IAMs_20	IAMs_20	07 21 42.2	
	comp=Z,4µm,20.0s						
D62A	Allapoint, All	131.36	348	IAMs_20	IAMs_20	07 21 21.5	
	comp=Z,5µm,20.0s						
PSUT	Pine Spring	131.62	33	IAMs_20	IAMs_20	07 22 59.7	
	comp=Z,3µm,20.0s						
RSSD	Black Hills	131.64	21		PKPdf	06 16 19.7	-1.4
RSSD	Black Hills	131.64	21	IAMs_20	IAMs_20	07 15 38.1	
	comp=Z,4µm,22.0s						
RSSD	Black Hills	131.64	21	PKIKP	PKPdf	06 16 19.7	-1.4
RSSD				MLR	MLR		
	comp=Z,4µm,22.0s						
MPU	Maple Canyon	131.70	30	IAMs_20	IAMs_20	07 23 55.6	
	comp=Z,3µm,19.0s						
PRN	Pahroc Range	131.73	35	IAMs_20	IAMs_20	07 24 47.0	
	comp=Z,3µm,18.0s						
BSUT	Blindstream Ca	131.74	29	IAMs_20	IAMs_20	07 22 03.5	
	comp=Z,5µm,20.0s						
E62A	Clayton Lake	131.89	348	IAMs_20	IAMs_20	07 21 55.5	
	comp=Z,5µm,21.0s						
HAL	Halifax	132.22	342	IAMs_20	IAMs_20	07 18 42.6	
	comp=Z,4µm,22.0s						
F64A	Sherman	132.36	347	IAMs_20	IAMs_20	07 22 12.2	
	comp=Z,4µm,21.0s						
E38A	The Farm, Brul	132.52	9	IAMs_20	IAMs_20	07 22 19.5	
	comp=Z,5µm,19.0s						
MVU	Marysvale	132.53	32	IAMs_20	IAMs_20	07 26 04.7	
	comp=Z,3µm,19.0s						
P18A	Preston Nutter	132.69	30	IAMs_20	IAMs_20	07 22 45.7	
	comp=Z,4µm,20.0s						
GGN	Saint George	132.70	345	IAMs_20	IAMs_20	07 26 38.1	
	comp=Z,4µm,19.0s						
Q16A	Castle Valley	132.76	31	IAMs_20	IAMs_20	07 24 51.8	
	comp=Z,4µm,20.0s						
G65A	Princeton	132.80	346	IAMs_20	IAMs_20	07 20 58.8	
	comp=Z,5µm,22.0s						
SRU	San Rafael Swe	132.94	30	IAMs_20	IAMs_20	07 25 07.6	
	comp=Z,3µm,20.0s						
SUSD	Miller	132.98	16	IAMs_20	IAMs_20	07 21 00.1	
	comp=Z,5µm,20.0s						
LCMT	Little Creek M	133.04	34	IAMs_20	IAMs_20	07 23 51.5	
	comp=Z,3µm,20.0s						
TRQ	Mont Tremblant	133.12	353	IAMs_20	IAMs_20	07 22 57.1	
	comp=Z,4µm,21.0s						
PKME	Peaks-Kenny Pk	133.14	347	IAMs_20	IAMs_20	07 25 14.7	
	comp=Z,5µm,20.0s						
O20A	White River Ci	133.25	27	IAMs_20	IAMs_20	07 24 47.2	
	comp=Z,3µm,19.0s						
PFO	Pinyon Flats O	133.37	40		PKPdf	06 16 22.2	-2.3
PFO	Pinyon Flats O	133.37	40	PKIKP	PKPdf	06 16 22.3	-2.3
RCBR	Riachuelo	133.41	262	IAMs_20	IAMs_20	07 12 18.9	
	comp=Z,3µm,20.0s						
E46A	Sault Ste Mari	133.43	2	IAMs_20	IAMs_20	07 23 32.4	
	comp=Z,3µm,18.0s						
G62A	West of Eustis	133.44	349	IAMs_20	IAMs_20	07 20 51.6	
	comp=Z,5µm,21.0s						
SPMN	Marine on St.	133.66	10	IAMs_20	IAMs_20	07 21 58.6	
	comp=Z,5µm,20.0s						
MNTQ	Montreal, Queb	133.70	352	IAMs_20	IAMs_20	07 24 31.4	
	comp=Z,4µm,18.0s						
HMU	Henry Mountain	133.72	31	IAMs_20	IAMs_20	07 25 33.2	
	comp=Z,2µm,19.0s						
WVL	Waterville	133.88	348	IAMs_20	IAMs_20	07 25 33.5	
	comp=Z,5µm,20.0s						
U15A	North Rim	133.99	34	IAMs_20	IAMs_20	07 25 45.7	
	comp=Z,3µm,20.0s						
W13A	Hualapai Mount	134.00	37	IAMs_20	IAMs_20	07 25 19.1	
	comp=Z,3µm,21.0s						
G40A	Rib Lake	134.02	8	IAMs_20	IAMs_20	07 22 59.2	
	comp=Z,4µm,20.0s						
H62A	Milan	134.18	349	IAMs_20	IAMs_20	07 26 25.2	
	comp=Z,4µm,19.0s						
PV11	David Mesa, Pa	134.39	30		PKPdf	06 16 23.3	-3.1
WBO	Williamsburg	134.41	353	IAMs_20	IAMs_20	07 25 01.2	
	comp=Z,4µm,18.0s						
BLYC	Blythe	134.51	39	IAMs_20	IAMs_20	07 28 11.1	
	comp=Z,2µm,20.0s						
LBNH	Lisbon	134.65	350	IAMs_20	IAMs_20	07 29 07.6	
	comp=Z,4µm,18.0s						
ISCO	Idaho Springs	134.69	25	IAMs_20	IAMs_20	07 25 44.2	
	comp=Z,3µm,18.0s						
LONY	Lake Ozonia	134.70	352	IAMs_20	IAMs_20	07 26 57.8	
	comp=Z,3µm,19.0s						
VT1	Waterbury	134.70	350	IAMs_20	IAMs_20	07 25 20.3	
	comp=Z,4µm,19.0s						
I37A	Lemond, Waseca	134.71	11	IAMs_20	IAMs_20	07 22 33.6	
	comp=Z,5µm,21.0s						
I62A	Tamworth	134.89	349	IAMs_20	IAMs_20	07 29 29.0	
	comp=Z,4µm,18.0s						
DELO	Deloro Mine	135.12	355	IAMs_20	IAMs_20	07 24 08.1	
	comp=Z,4µm,20.0s						
OGNE	Ogallala	135.13	21	IAMs_20	IAMs_20	07 23 26.5	
	comp=Z,4µm,20.0s						
WUAZ	Wupatki	135.16	34	IAMs_20	IAMs_20	07 29 05.7	
	comp=Z,2µm,18.0s						
HNH	Hanover	135.23	350	IAMs_20	IAMs_20	07 25 32.0	
	comp=Z,3µm,20.0s						
I40A	Norwalk	135.31	9	IAMs_20	IAMs_20	07 27 15.3	
	comp=Z,4µm,19.0s						
Y14A	Wickenburg	135.32	37	IAMs_20	IAMs_20	07 20 03.3	
	comp=Z,3µm,20.0s						
MVCO	Mesa Verde	135.42	30	IAMs_20	IAMs_20	07 24 14.5	
	comp=Z,3µm,19.0s						
J61A	Chester	135.62	350	IAMs_20	IAMs_20	07 22 32.4	
	comp=Z,3µm,21.0s						
PECO	Prince Edward	135.65	355	IAMs_20	IAMs_20	07 22 17.0	
	comp=Z,4µm,21.0s						
ACCN	Adirondack Com	135.77	351	IAMs_20	IAMs_20	07 28 32.3	
	comp=Z,3µm,18.0s						
S22A	4UR Ranch, Cre	135.82	28	IAMs_20	IAMs_20	07 26 05.0	
	comp=Z,4µm,20.0s						
J59A	Piesco	135.82	352	IAMs_20	IAMs_20	07 26 17.5	
	comp=Z,4µm,18.0s						
X16A	Lo Mia Camp, P	135.91	35	IAMs_20	IAMs_20	07 28 17.7	
	comp=Z,3µm,20.0s						
BGNE	Belgrade	136.00	17	IAMs_20	IAMs_20	07 22 35.1	
	comp=Z,4µm,20.0s						
J57A	Williamstown	136.06	353	IAMs_20	IAMs_20	07 23 35.9	
	comp=Z,4µm,20.0s						
K62A	Royalston	136.23	349	IAMs_20	IAMs_20	07 22 39.4	
	comp=Z,4µm,22.0s						
HRV	Adam Dziewonsk	136.25	349	IAMs_20	IAMs_20	07 28 40.0	
	comp=Z,4µm,19.0s						
WES	Weston	136.32	348	IAMs_20	IAMs_20	07 28 55.9	
	comp=Z,4µm,19.0s						
JFWS	Jewell Farm	136.32	9	IAMs_20	IAMs_20	07 27 53.1	
	comp=Z,4µm,19.0s						
BCX	Boston College	136.34	348	IAMs_20	IAMs_20	07 22 28.3	
	comp=Z,4µm,21.0s						
LL02	Futaleuf	136.35	191	IAMs_20	IAMs_20	07 12 38.2	
	comp=Z,5µm,20.0s						
J55A	Hilton	136.38	355	IAMs_20	IAMs_20	07 23 25.4	
	comp=Z,3µm,21.0s						
TRY	Troy	136.41	351	IAMs_20	IAMs_20	07 22 05.2	
	comp=Z,3µm,21.0s						
SDCO	Great Sand Dun	136.43	27	IAMs_20	IAMs_20	07 25 29.5	
	comp=Z,5µm,20.0s						
L61B	Northampton	136.52	350	IAMs_20	IAMs_20	07 23 08.0	
	comp=Z,4µm,21.0s						
KSCO	Kaye Shedlock’	136.59	23	IAMs_20	IAMs_20	07 24 56.2	
	comp=Z,4µm,18.0s						
SCIA	State Center	136.78	12	IAMs_20	IAMs_20	07 24 42.2	
	comp=Z,5µm,20.0s						
K57A	Scipio Center	136.79	354	IAMs_20	IAMs_20	07 24 16.2	
	comp=Z,4µm,20.0s						
MMNY	Mt. Morris Dam	136.92	355	IAMs_20	IAMs_20	07 23 49.7	
	comp=Z,4µm,21.0s						
L40A	Anamosa	137.00	10	IAMs_20	IAMs_20	07 23 42.1	
	comp=Z,4µm,20.0s						
UCCT	U. Connecticut	137.07	349	IAMs_20	IAMs_20	07 23 14.6	
	comp=Z,3µm,22.0s						
L59A	Walton	137.14	352	IAMs_20	IAMs_20	07 21 17.6	
	comp=Z,4µm,22.0s						
N35A	Tabor	137.20	15	IAMs_20	IAMs_20	07 24 29.8	
	comp=Z,4µm,20.0s						
BINY	Binghamton	137.26	353	IAMs_20	IAMs_20	07 26 43.5	
	comp=Z,4µm,19.0s						
WVNY	West Valley, N	137.30	356	IAMs_20	IAMs_20	07 25 56.6	
	comp=Z,4µm,20.0s						
L42A	Oliver, Polo	137.30	8	IAMs_20	IAMs_20	07 24 31.9	
	comp=Z,4µm,21.0s						
M63A	Gales Ferry	137.41	349	IAMs_20	IAMs_20	07 30 50.7	
	comp=Z,3µm,19.0s						
T25A	Trinidad	137.42	26	IAMs_20	IAMs_20	07 24 01.4	
	comp=Z,2µm,20.0s						
L56A	Greenwood	137.48	355	IAMs_20	IAMs_20	07 25 50.5	
	comp=Z,5µm,20.0s						
ERPA	Erie	137.66	357	IAMs_20	IAMs_20	07 23 23.3	
	comp=Z,2µm,20.0s						
TUC	Tucson	137.79	37	IAMs_20	IAMs_20	07 31 23.6	
	comp=Z,3µm,18.0s						
CBKS	Cedar Bluff	137.84	20	IAMs_20	IAMs_20	07 26 45.0	
	comp=Z,4µm,19.0s						
KSPA	Keystone Colle	137.86	353	IAMs_20	IAMs_20	07 27 03.6	
	comp=Z,3µm,19.0s						
TRNY	Table Rock, Ra	138.05	351	IAMs_20	IAMs_20	07 30 45.5	
	comp=Z,3µm,18.0s						
TRQA	Tornquist	138.10	204	IAMs_20	IAMs_20	07 09 55.3	
	comp=Z,4µm,21.0s						
N62A	Caumsett State	138.13	350	IAMs_20	IAMs_20	07 26 38.7	
	comp=Z,3µm,18.0s						
PAL	Palisades	138.13	351	IAMs_20	IAMs_20	07 27 54.8	
	comp=Z,4µm,20.0s						
ALLY	Alegheny Colle	138.14	358	IAMs_20	IAMs_20	07 23 36.9	
	comp=Z,5µm,20.0s						
ANMO	Albuquerque	138.22	30	IAMs_20	IAMs_20	07 28 04.3	
	comp=Z,3µm,20.0s						
ANMO	Albuquerque	138.22	30	IAMs_20	IAMs_20	07 28 04.3	
	comp=Z,3µm,20.0s						
ANMO	Albuquerque	138.22	30	IAMs_20	IAMs_20	07 28 04.3	
	comp=Z,3µm,20.0s						
M57A	Sunshine Farm,	138.23	354	IAMs_20	IAMs_20	07 26 25.4	
	comp=Z,4µm,21.0s						
N41A	Harden Midland	138.38	10	IAMs_20	IAMs_20	07 25 15.6	
	comp=Z,4µm,21.0s						
M50A	Fremont	138.42	1	IAMs_20	IAMs_20	07 29 51.4	
	comp=Z,4µm,18.0s						
BRNJ	Basking Ridge	138.55	351	IAMs_20	IAMs_20	07 27 33.9	
	comp=Z,4µm,19.0s						
Y22D	IRIS PASSCAL I	138.66	32	IAMs_20	IAMs_20	07 26 12.1	
	comp=Z,3µm,21.0s						
N58A	Sunbury	138.68	354	IAMs_20	IAMs_20	07 26 53.3	
	comp=Z,4µm,19.0s						
LUPA	Lehigh Univers	138.75	352	IAMs_20	IAMs_20	07 26 28.1	
	comp=Z,4µm,20.0s						
HDIL	Hopedale	138.77	8	IAMs_20	IAMs_20	07 26 46.9	
	comp=Z,4µm,19.0s						
VAO	Valinhos	138.98	234	IAMs_20	IAMs_20	07 09 39.0	
	comp=Z,3µm,21.0s						
SSPA	Standing Stone	139.00	355	IAMs_20	IAMs_20	07 26 36.7	
	comp=Z,3µm,19.0s						
SPB	Sao Paulo	139.07	233	IAMs_20	IAMs_20	07 09 39.2	
	comp=Z,3µm,19.0s						
LR05	Currie	139.23	192	IAMs_20	IAMs_20	07 14 46.5	
	comp=Z,5µm,22.0s						
P40A	Paris	139.30	12	IAMs_20	IAMs_20	07 26 37.1	
	comp=Z,4µm,20.0s						
319A	Douglas	139.35	37	IAMs_20	IAMs_20	07 27 46.9	
	comp=Z,3µm,20.0s						
WUPA	West Chester U	139.44	352	IAMs_20	IAMs_20	07 26 57.3	
	comp=Z,3µm,20.0s						
MVL	Millersville	139.47	353	IAMs_20	IAMs_20	07 29 16.1	
	comp=Z,3µm,20.0s						
O48B	Farmland	139.49	3	IAMs_20	IAMs_20	07 25 46.6	
	comp=Z,5µm,20.0s						
P61A	Hammonton	139.57	351	IAMs_20	IAMs_20	07 24 54.9	
	comp=Z,5µm,22.0s						
ACSO	Alum Creek Sta	139.59	1	IAMs_20	IAMs_20	07 29 49.4	
	comp=Z,4µm,20.0s						
P43A	Skaggs, Pawnee	139.64	9	IAMs_20	IAMs_20	07 29 18.8	
	comp=Z,4µm,18.0s						
O52A	Adamsville	139.71	359	IAMs_20	IAMs_20	07 30 56.5	
	comp=Z,3µm,18.0s						
JANB	Januaria	139.77	247	*e*P	PKPdf	06 16 37.7	+1.0
HSIG		139.93	41	IAMs_20	IAMs_20	07 25 56.9	
	comp=Z,2µm,20.0s						
P46A	Rosedale	139.96	6	IAMs_20	IAMs_20	07 26 31.1	
	comp=Z,4µm,18.0s						
P57A	Homestead Farm	140.16	355	IAMs_20	IAMs_20	07 27 30.2	
	comp=Z,5µm,20.0s						
P51A	Williamsport	140.34	1	IAMs_20	IAMs_20	07 28 22.2	
	comp=Z,4µm,20.0s						
BLO	Bloomington	140.46	5	IAMs_20	IAMs_20	07 25 19.5	
	comp=Z,5µm,21.0s						
SLM	Saint Louis	140.50	10	IAMs_20	IAMs_20	07 25 49.8	
	comp=Z,3µm,20.0s						
AMTX	Amarillo	140.51	25	IAMs_20	IAMs_20	07 26 38.3	
	comp=Z,4µm,21.0s						
ITAB	Concordia	140.62	225	IAMs_20	IAMs_20	07 06 47.2	
	comp=Z,3µm,20.0s						
EPT	El Paso	140.65	33	IAMs_20	IAMs_20	07 31 56.0	
	comp=Z,3µm,18.0s						
Q56A	Snyder Ridge,	140.69	356	IAMs_20	IAMs_20	07 25 00.3	
	comp=Z,4µm,21.0s						
Q51A	Peebles	140.79	1	IAMs_20	IAMs_20	07 28 53.1	
	comp=Z,5µm,20.0s						
MSTX	Muleshoe	140.79	27	IAMs_20	IAMs_20	07 29 37.0	
	comp=Z,4µm,18.0s						
CCM	Cathedral Cave	140.88	11	IAMs_20	IAMs_20	07 29 29.9	
	comp=Z,4µm,18.0s						
MNTX	Cornudas Mount	141.32	32	IAMs_20	IAMs_20	07 29 02.5	
	comp=Z,4µm,20.0s						
CBN	Corbin Frederi	141.36	354	IAMs_20	IAMs_20	07 28 21.1	
	comp=Z,5µm,20.0s						
WCI	Wyandotte Cave	141.42	5	IAMs_20	IAMs_20	07 26 59.8	
	comp=Z,5µm,20.0s						
R50A	Paris	141.50	3	IAMs_20	IAMs_20	07 27 51.9	
	comp=Z,4µm,19.0s						
SIUC	Southern Illin	141.57	9	IAMs_20	IAMs_20	07 29 17.0	
	comp=Z,4µm,19.0s						
S44A	Carbondale	141.59	9	IAMs_20	IAMs_20	07 29 07.9	
	comp=Z,4µm,19.0s						
R58B	Mineral	141.65	354	IAMs_20	IAMs_20	07 32 06.8	
	comp=Z,4µm,19.0s						
S61A	Accomac	141.66	352	IAMs_20	IAMs_20	07 24 08.1	
	comp=Z,4µm,22.0s						
U38A	Gravette	141.69	16	IAMs_20	IAMs_20	07 27 46.6	
	comp=Z,4µm,19.0s						
RLO	Rose Lookout	141.77	17	IAMs_20	IAMs_20	07 28 48.6	
	comp=Z,4µm,19.0s						
T42A	Van Buren	141.91	11	IAMs_20	IAMs_20	07 27 05.0	
	comp=Z,4µm,20.0s						
CGM3	Cape Girardeau	141.91	10	IAMs_20	IAMs_20	07 26 31.9	
	comp=Z,3µm,20.0s						
S54A	Dingess, Beckl	142.02	359	IAMs_20	IAMs_20	07 31 24.5	
	comp=Z,4µm,18.0s						
S51A	Beattyville	142.17	2	IAMs_20	IAMs_20	07 31 25.5	
	comp=Z,4µm,18.0s						
VHRN	Van Horn	142.24	33		PKPdf	06 16 39.5	-1.5
PBMO	Poplar Bluff	142.28	11	IAMs_20	IAMs_20	07 29 14.8	
	comp=Z,4µm,20.0s						
PECS	Pecos	142.37	31		PKPdf	06 16 38.2	-3.0
ODSA	Odessa	142.43	29	PKPdf	PKPdf	06 16 40.0	-1.2
PARMO	Parma	142.51	10	IAMs_20	IAMs_20	07 29 52.9	
	comp=Z,4µm,18.0s						
HICK	Hickman	142.72	9	IAMs_20	IAMs_20	07 29 38.4	
	comp=Z,5µm,20.0s						
LCAR	Lake Charles	142.82	12	IAMs_20	IAMs_20	07 28 37.2	
	comp=Z,3µm,19.0s						
BI05	Punta Hualpn	142.83	192	IAMs_20	IAMs_20	07 11 13.8	
	comp=Z,4µm,21.0s						
BDFB	Brasilia	142.95	244	PKP	PKPdf	06 16 40.1	-2.5
	comp=Z,3.5nm,0.6s,baz=133,slow=1.5,SNR=10						
MNHN	Monahans	142.96	30		PKPdf	06 16 39.5	-2.6
GLAT	Glass	142.97	9	IAMs_20	IAMs_20	07 29 43.2	
	comp=Z,4µm,20.0s						
PEBM	Pemiscott Bayo	143.03	10	IAMs_20	IAMs_20	07 30 07.6	
	comp=Z,4µm,20.0s						
LNXT	Lenox	143.10	10	IAMs_20	IAMs_20	07 27 19.6	
	comp=Z,3µm,19.0s						
PCMB	Pacaembu	143.12	233	*e*P	PKPdf	06 16 43.7	+1.1
GNAR	Gosnell	143.14	11	IAMs_20	IAMs_20	07 30 57.7	
	comp=Z,3µm,20.0s						
U49A	Red Boiling Sp	143.17	5	IAMs_20	IAMs_20	07 26 52.0	
	comp=Z,5µm,21.0s						
U54A	Nelsons Funny	143.30	359	IAMs_20	IAMs_20	07 27 18.5	
	comp=Z,4µm,20.0s						
HALT	Halls	143.31	10	IAMs_20	IAMs_20	07 27 25.2	
	comp=Z,3µm,19.0s						
ABTX	Abilene, Hawle	143.32	25	IAMs_20	IAMs_20	07 30 00.5	
	comp=Z,3µm,19.0s						
U56A	King	143.44	357	IAMs_20	IAMs_20	07 32 53.0	
	comp=Z,4µm,18.0s						
BBSR	BB Station	143.46	335	IAMs_20	IAMs_20	07 22 24.7	
	comp=Z,3µm,22.0s						
CLTN	Cedars of Leba	143.53	6		PKPbc	06 16 40.0	-0.1
CLTN				IAMs_20	IAMs_20	07 27 13.8	
	comp=Z,3µm,20.0s						
TRCB	Terra Rica	143.57	230	IAMs_20	IAMs_20	07 18 30.1	
	comp=Z,3µm,19.0s						
FW03	Perrin-Whitt E	143.59	23	IAMs_20	IAMs_20	07 29 36.5	
	comp=Z,4µm,19.0s						
Z35A	Perchaven, San	143.63	21		PKPbc	06 16 40.5	-0.1
V61A	Roper	143.64	352	IAMs_20	IAMs_20	07 31 28.6	
	comp=Z,3µm,19.0s						
UALR	University of	143.79	14		PKPbc	06 16 41.0	+0.1
FW06	Azle	143.84	22		PKPbc	06 16 41.8	+0.6
HDBT	Hernando Brdge	143.93	11	IAMs_20	IAMs_20	07 32 51.4	
	comp=Z,3µm,20.0s						
V55A	Taylorsville	143.96	359		PKPbc	06 16 41.8	+0.3
MET	Memphis--Engin	143.98	11	IAMs_20	IAMs_20	07 31 31.8	
	comp=Z,3µm,20.0s						
FW07	Weatherford	144.00	23	IAMs_20	IAMs_20	07 29 57.3	
	comp=Z,4µm,19.0s						
SLBS	Sierra La Lagu	144.03	46		PKPdf	06 16 43.5	-0.8
SLBS	Sierra La Lagu	144.03	46	IAMs_20	IAMs_20	07 21 30.1	
	comp=Z,2µm,20.0s						
TX31	Lajitas Ar. Si	144.08	33		PKPbc	06 16 42.4	+0.2
TXAR	Lajitas Array	144.08	33		PKPbc	06 16 42.5	+0.4
TXAR	Lajitas Array	144.08	33	PKP	PKPab	06 16 41.7	0.0
	comp=Z,6.5nm,0.7s,baz=276,slow=1.2,SNR=80						
TXAR				SKP		06 20 10.0	
	comp=Z,5.1nm,1.0s,baz=28,slow=5.7,SNR=5.0						
TXAR	Lajitas Array	144.08	33	PKIKP	PKPbc	06 16 42.5	+0.3
V53A	Saluda	144.15	1		PKPbc	06 16 42.4	+0.3
CPCT	Cooper Cave	144.31	3	IAMs_20	IAMs_20	07 31 18.3	
	comp=Z,4µm,19.0s						
SAND	Sanderson	144.40	30		PKPbc	06 16 43.3	+0.2
FW14	Alvarado	144.49	22	IAMs_20	IAMs_20	07 30 22.3	
	comp=Z,4µm,18.0s						
W57A	Gilead	144.61	357		PKPbc	06 16 43.4	-0.1
W57A				IAMs_20	IAMs_20	07 34 05.0	
	comp=Z,3µm,19.0s						
OXF	Oxford	144.67	10		PKPab	06 16 43.1	-0.5
OXF				IAMs_20	IAMs_20	07 28 18.0	
	comp=Z,4µm,20.0s						
OXF	Oxford	144.67	10	PKIKP	PKPab	06 16 43.1	-0.5
KMSC	Kings Mountain	144.67	359		PKPab	06 16 42.8	-0.7
KMSC				IAMs_20	IAMs_20	07 33 57.7	
	comp=Z,4µm,19.0s						
W52A	Murphy	144.69	2	IAMs_20	IAMs_20	07 29 49.4	
	comp=Z,4µm,20.0s						
HPIG		144.73	38		PKPdf	06 16 45.1	-0.5
HPIG				IAMs_20	IAMs_20	07 29 26.6	
	comp=Z,2µm,20.0s						
CPUP	Villa Florida	144.74	221		PKPbc	06 16 44.7	+0.5
CPUP	Villa Florida	144.74	221	PKP	PKPab	06 16 43.8	-0.3
	comp=Z,7.5nm,0.8s,baz=65,slow=4.0,SNR=24						
CCAR	Cane Creek	144.75	14		PKPbc	06 16 44.3	+0.3
SJPY	San Joaquin	144.80	224	*e*P	PKPdf	06 16 45.3	-0.2
PAULI	Pauline	145.00	359	IAMs_20	IAMs_20	07 32 07.4	
	comp=Z,4µm,19.0s						
AAGR	Agrelo	145.08	200	*i* P	PKPdf	06 16 47.8	+1.9
JCT	Junction City	145.08	27	IAMs_20	IAMs_20	07 31 16.5	
	comp=Z,3µm,19.0s						
Z41A	Richland Creek	145.12	16	IAMs_20	IAMs_20	07 28 09.3	
	comp=Z,4µm,21.0s						
BIRD	Birdtown, Kers	145.13	357		PKPbc	06 16 44.6	-0.6
MT08	Bocatoma Ro	145.14	198	IAMs_20	IAMs_20	07 19 58.1	
	comp=Z,4µm,20.0s						
FPAL	Fort Paine	145.14	5	IAMs_20	IAMs_20	07 28 11.3	
	comp=Z,2µm,21.0s						
X58A	Rowland	145.16	356	IAMs_20	IAMs_20	07 31 05.7	
	comp=Z,4µm,20.0s						
Y45A	Yeager Farm, C	145.27	11	IAMs_20	IAMs_20	07 26 04.1	
	comp=Z,4µm,22.0s						
ARCO	CERRO ARCO	145.34	200	*i* P	PKPdf	06 16 48.1	+1.7
MT02	Curacav	145.64	197	IAMs_20	IAMs_20	07 16 35.5	
	comp=Z,3µm,19.0s						
Y49A	Blount Mountai	145.74	6	IAMs_20	IAMs_20	07 29 58.2	
	comp=Z,4µm,19.0s						
TMAB	Tom-Au,PA,Br	145.79	266	*e*P	PKPab	06 16 48.6	+0.3
C2SB	Chapadao do Su	145.82	236	*e*P	PKPab	06 16 48.3	0.0
VA03	San Esteban	145.93	198	IAMs_20	IAMs_20	07 26 11.2	
	comp=Z,5µm,21.0s						
VA03	San Esteban	145.93	198	*i* P	PKPab	06 16 49.7	+1.3

AUSP	Uspallata	146.06	200	*i* P	PKPab	06 16 50.3	+1.2
ARAG	Araguaiana, MT	146.30	242	*e*P	PKPab	06 16 50.6	+0.4
GOGA	Godfrey	146.39	2	PKPdf	PKPdf	06 16 47.8	-0.1
GOGA	Godfrey	146.39	2	IAMs_20	IAMs_20	07 25 17.2	
	comp=Z,4µm,22.0s						
GOGA	Godfrey	146.39	2	PKP2	PKPdf	06 16 47.8	-0.1
RTLS	Leoncito	146.41	200	*i* P	PKPab	06 16 51.2	+0.7
ZON	Zonda	146.42	201	*i* P	PKPdf	06 16 44.2	-3.9
LRAL	Lakeview Retre	146.48	7	IAMs_20	IAMs_20	07 31 46.8	
	comp=Z,4µm,19.0s						
RTLL	Cerro Villicun	146.54	202	*i* P	PKPdf	06 16 42.5	-5.9
146A	Union	146.56	10	PKPbc	PKPbc	06 16 49.2	-0.5
PRPB	Parauapebas	147.11	259	*e*P	PKPab	06 16 53.3	-0.1
SNDB	Serra Nova Dou	147.18	248	*e*P	PKPbc	06 16 51.9	0.0
154A	Montrose	147.19	1	IAMs_20	IAMs_20	07 28 28.6	
	comp=Z,4µm,21.0s						
HKT	Hockley	147.20	22	PKPbc	PKPbc	06 16 51.7	+0.2
HKT	Hockley	147.20	22	PKP2	PKPbc	06 16 51.7	+0.2
AQDB	Aquidauana	147.22	231	IAMs_20	IAMs_20	07 14 29.0	
	comp=Z,4µm,21.0s						
AQDB	Aquidauana	147.22	231	*e*P	PKPbc	06 16 52.1	+0.2
ACCO	Cerro Coronel	147.43	201	*i* P	PKiKP	06 16 56.5	+1.5
250A	Grady	147.61	6	IAMs_20	IAMs_20	07 29 39.8	
	comp=Z,4µm,20.0s						
ACLC	CERRO LA CRUZ	147.62	205	*i* P	PKPbc	06 16 52.0	-1.1
346A	Big Creek Wild	147.69	12	PKPbc	PKPbc	06 16 52.4	-0.5
346A				IAMs_20	IAMs_20	07 37 08.2	
	comp=Z,4µm,18.0s						
CO03	El Pedregal	147.76	199	PKPab	PKiKP	06 16 55.0	-0.3
257A	Skidaway Islan	147.82	358	IAMs_20	IAMs_20	07 27 24.1	
	comp=Z,4µm,22.0s						
ACDV	Cuesta del Vie	147.83	202	*i* P	PKiKP	06 16 54.9	-0.6
CYA	Choya	147.94	208	*i* P	PKPdf	06 16 52.1	+1.3
AROD	Rodeo	147.96	201	*i* P	PKPbc	06 16 54.2	+0.1
AGUA	GUANDACOL	148.20	203	*i* P	PKPbc	06 16 53.9	-0.6
352A	Blakely	148.23	4	PKPbc	PKPbc	06 16 54.3	-0.1
BRAL	Brewton	148.31	8	IAMs_20	IAMs_20	07 31 49.5	
	comp=Z,4µm,18.0s						
GO04	Tololo Observa	148.41	199	IAMs_20	IAMs_20	07 21 51.9	
	comp=Z,3µm,19.0s						
KVTX	Kingsville	148.45	27	IAMs_20	IAMs_20	07 33 50.7	
	comp=Z,3µm,20.0s						
VCA	Vinchina	148.75	204	*i* P	PKiKP	06 16 58.2	+0.8
LCO	Las Campanas	149.44	200	PKPbc	PKPbc	06 16 58.0	+0.1
LCO	Las Campanas	149.44	200	PKP2	PKPbc	06 16 58.0	+0.1
SALV	Santo Antonio	149.58	238	*e*P	PKPdf	06 16 55.7	+2.0
ZAIG	Zacatecas	149.68	39	PKPbc	PKPbc	06 16 57.7	-1.0
ZAIG				IAMs_20	IAMs_20	07 35 09.8	
	comp=Z,4µm,21.0s						
MAL2	Monte Alegre,	151.88	266	PKPbc	PKPbc	06 17 03.1	-0.6
MAL2				IAMs_20	IAMs_20	07 19 56.4	
	comp=Z,3µm,19.0s						
PDRB	Porto dos Gac	152.30	245	*e*P	PKPbc	06 17 01.4	-3.2
NPGB	Novo Progresso	152.36	255	*e*P	PKPdf	06 16 59.8	+1.8
GO02	Mina Guanaco	152.47	205	IAMs_20	IAMs_20	07 22 51.9	
	comp=Z,4µm,19.0s						
PTLB	Pontes e Lacer	152.69	236	*e*P	PKPdf	06 16 59.5	+1.2
MOIG	Morelia	152.78	42	IAMs_20	IAMs_20	07 37 10.2	
	comp=Z,4µm,20.0s						
BBSD	Serra de San D	152.91	231	*e*P	PKPdf	06 17 01.7	+3.0
ANWB	Willy Bob	153.03	313	IAMs_20	IAMs_20	07 38 54.8	
	comp=Z,2µm,20.0s						
ITTB	Itaituba	153.21	261	*e*P	PKPdf	06 17 00.3	+1.0
ABD	La Joyeuse, An	153.55	310	IAMs_20	IAMs_20	07 38 12.8	
	comp=Z,2µm,19.0s						
AF01	San Pedro de A	153.70	210	IAMs_20	IAMs_20	07 22 56.0	
	comp=Z,4µm,20.0s						
CBE	Ff, Capester	153.88	310	IAMs_20	IAMs_20	07 31 31.8	
	comp=Z,2µm,21.0s						
SEUS	St. Eustatius	154.02	314	IAMs_20	IAMs_20	07 38 40.7	
	comp=Z,2µm,19.0s						
TDBA	Terre de Bas,	154.03	309	IAMs_20	IAMs_20	07 39 59.7	
	comp=Z,2µm,20.0s						
SABA	Saba	154.12	315	IAMs_20	IAMs_20	07 24 17.4	
	comp=Z,3µm,22.0s						
UNM	Universidad Na	154.34	39	IAMs_20	IAMs_20	07 36 41.3	
	comp=Z,3µm,22.0s						
BIM	Bigot	154.35	306	IAMs_20	IAMs_20	07 30 59.3	
	comp=Z,2µm,20.0s						
SJG	San Juan	155.75	320	IAMs_20	IAMs_20	07 27 46.9	
	comp=Z,2µm,20.0s						
PB01	IPOC Station P	155.95	210	IAMs_20	IAMs_20	07 22 41.7	
	comp=Z,3µm,20.0s						
TLIG	Tlapa	156.02	41	IAMs_20	IAMs_20	07 32 48.1	
	comp=Z,3µm,21.0s						
SDDR	Presa de Saban	157.96	331	P	PKPab	06 17 39.5	+1.0
NMDO	Nuevo Mundo	158.02	342	IAMs_20	IAMs_20	07 35 57.9	
	comp=Z,4µm,22.0s						
GTBY	Guantanamo Bay	158.66	341	IAMs_20	IAMs_20	07 35 31.7	
	comp=Z,3µm,20.0s						
TEIG	Tepich	158.71	16	IAMs_20	IAMs_20	07 39 38.3	
	comp=Z,3µm,20.0s						
LPAZ	La Paz	158.91	221	PKP	PKPdf	06 17 07.2	-0.2
	comp=Z,2.2nm,1.1s,baz=88,slow=6.2,SNR=4.6						
LPAZ	La Paz	158.91	221	*e*P	PKPdf	06 17 09.2	+1.7
CHIV	Chivirico	158.99	345	IAMs_20	IAMs_20	07 41 57.4	
	comp=Z,4µm,19.0s						
SAML	Samuel	159.18	245	*e*P	PKPdf	06 17 09.5	+2.4
TEFE	Tefe	162.11	260	*e*P	PKPdf	06 17 11.8	+1.6
TBTG	Tabatinga, AM	167.09	253	*e*P	PKPdf	06 17 15.3	+0.7
SJCC	San Jacinto, C	167.61	326	P	PKPdf	06 17 16.7	+1.6
RUSC	La Rusia	168.93	304	P	PKPdf	06 17 27.0	+10
JTS	Las Juntas de	169.08	14	PKPdf	PKPdf	06 17 12.0	-4.0
JTS					PKPab	06 18 26.4	-0.8
JTS	Las Juntas de	169.08	14	PKP2	PKPab	06 18 26.4	-0.8
JTS	Las Juntas de	169.08	14	P	PKPdf	06 17 21.7	+5.7
PTBC	PUERTO BERRIO,	169.62	311	P	PKPdf	06 17 15.0	-1.4
SPBC	San Pablo de B	169.88	306	P	PKPdf	06 17 16.8	+0.2
CHIC	Chingaza	170.14	300	P	PKPdf	06 17 16.6	-0.6
ROSC	El Rosal	170.53	303	PKP	PKPdf	06 17 17.0	-0.4
	comp=Z,3.5nm,0.5s,baz=124,slow=11,SNR=2.1						
ROSC	El Rosal	170.53	303	P	PKPdf	06 17 18.6	+1.2
NORC	Norcasia	170.56	309	P	PKPdf	06 17 16.3	-0.6
CBOC	Ciudad Bolivar	171.22	315	P	PKPdf	06 17 20.4	+3.0
ORTC	Ortega, Tolima	171.81	301	P	PKPdf	06 17 17.4	-0.2
YOTC	Yotoco, Valle	172.68	306	P	PKPdf	06 17 17.1	-1.0
FLOC	Florencia	173.12	286	P	PKPdf	06 17 17.9	-0.2
POPC	Popayan, Colom	173.72	297	P	PKPdf	06 17 19.2	+0.6
OTAV	Otavalo	176.15	279	*e*P	PKPdf	06 17 21.4	+1.8

*BER **03** 05:57:38.8±4.1, 74°.77N×9°.34E, h10^{km}, Mw3.5, ML2.8(NAO), Confirmed Earthquake*
*NAO **03** 05:57:42.3±10.0, 74°.91N×10°.21E, h30^{km}±191^{km}, ML2.9*
*FCIAR **03** 05:57:43.0, 75°.11N×9°.49E, h10^{km}*

ISC 03 05:57:39.6±2.3**, 74°.93N**±0°.08×**10°.1E**±0°.1**, h10**^{km}**, n23, σ1^{s}47**/34**, Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BJO1	Bjornoya	2.40	96	*e*P	Pn	05 58 16.3	-2.5
BJO1				*e*S	Sn	05 58 47.2	-1.0
BJO1	Bjornoya	2.40	96	*e*P	Pn	05 58 19.5	+0.7
BJO1				*e*S	Sn	05 58 45.4	-2.8
BJO1				IAML		05 58 53.2	
	comp=Z,12nm,0.4s						
HSPB	Hornsund (broa	2.47	30	Pn	Pn	05 58 20.2	+0.4
HSPB				Sn	Sn	05 58 49.5	-0.5
HSPB	Hornsund (broa	2.47	30	*e*P	Pn	05 58 19.7	-0.2
HSPB				*e*S	Sn	05 58 48.3	-1.7
HSPB	Hornsund (broa	2.47	30	*e*P	Pn	05 58 20.4	+0.6
HSPB				*e*S	Sn	05 58 49.7	-0.3
BRBB	Barentsburg B	3.33	15	Pn	Pn	05 58 32.0	+0.4
BRBB				Sn	Sn	05 59 11.7	+0.6
BRBB	Barentsburg B	3.33	15	Pn	Pn	05 58 32.0	+0.4
BRBB				Sn	Sn	05 59 11.7	+0.6
SPA0	Spitsbergen Ar	3.58	21	Pn	Pn	05 58 36.4	+1.3
	baz=200,slow=14						
SPA0				Sn	Sn	05 59 17.6	+0.2
	baz=195,slow=28						
SPA0	Spitsbergen Ar	3.58	21	*e*P	Pn	05 58 36.2	+1.1
SPA0				*e*S	Sn	05 59 16.4	-1.0
SPA0	Spitsbergen Ar	3.58	21	*e*P	Pn	05 58 36.7	+1.6
SPA0				*e*S	Sn	05 59 17.6	+0.2
SPA0				IAML		05 59 30.0	
	comp=Z,3.5nm,0.6s						
HOPEN	Hopen	4.02	60	*e*P	Pn	05 58 41.5	+0.4
HOPEN				*e*S	Sn	05 59 27.6	-0.5
HOPEN	Hopen	4.02	60	*e*P	Pn	05 58 43.6	+2.6
HOPEN				*e*S	Sn	05 59 28.6	+0.5
HOPEN				IAML		05 59 33.0	
	comp=Z,5.9nm,0.1s						
KBS	Kingsbay	4.05	5	Pn	Pn	05 58 41.5	+0.1
KBS				Sn	Sn	05 59 27.1	-1.6
KBS	Kingsbay	4.05	5	*e*P	Pn	05 58 40.8	-0.6
JNE	Jan Mayen East	6.67	243	*e*P	Pn	05 59 07.8	-10
JMIC	Jan Mayen	6.72	243	*e*P	Pn	05 59 08.7	-9.5
KIF	Kilpisjarvi	6.80	146	Pn	Pn	05 59 18.6	-0.6
ARA0	ARCESS Array S	7.15	131	Pn	Pn	05 59 25.7	+1.6
	baz=324,slow=11						
ARA0				Sn	Sn	06 00 36.9	-8.4
	baz=330,slow=22						
ARA0	ARCESS Array S	7.15	131	Pn	Pn	05 59 25.7	+1.6
	baz=323,slow=11						
ARA0				Sn	Sn	06 00 38.1	-7.1
	baz=330,slow=22						
KEV	Kevo	7.28	127	Pn	Pn	05 59 24.0	-1.7
KEV				Sn	Sn	06 00 40.1	-8.2
KEV	Kevo	7.28	127	Pn	Pn	05 59 25.3	-0.4
KEV				Sn	Sn	06 00 40.1	-8.2
ZFI2	Zemlya Franca-	9.62	36	*e*P	Pn	05 59 59.4	+1.6
ZFI2				*e*S	Sn	06 01 42.2	-3.5
OMEGA	Omega	9.62	36	*e*P	Pn	05 59 59.4	+1.6
OMEGA				*e*S	Sn	06 01 42.2	-3.6

*ASRS **03** 05:59:09.0±1.6, 54°.39N×86°.80E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 03 05:59:11.7±3.1**, 54°.36N×86°.81E, h0**^{km}**, mbtmp3.2**/2**, ML2.9**/2**, Error ellipse: s-maj=25.0km s-min=17.6km az=52.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.24	251	I	I	06 07 23.9	
	baz=69,slow=318,SNR=6.8						
ZALV	Zalesovo Beam	1.24	251	Pg	Pg	05 59 34.0	-1.4
	2.7nm,0.3s,baz=70,slow=16,SNR=10						
ZALV				Lg	Lg	05 59 52.4	
	2.7nm,0.3s,baz=70,slow=26,SNR=6.4						
KURBB	Kurchatov Arra	6.29	237	Pn	Pn	06 00 47.0	+1.4
	0.3nm,0.3s,baz=55,slow=14,SNR=8.0						
KURBB				Sn	Sn	06 01 56.9	-1.2
	baz=55,slow=32						
KURBB				Lg	Lg	06 02 31.1	
	baz=47,slow=35,SNR=1.2						
	2.1nm,0.2s						
MKAR	Makanchi Array	8.10	203	Pn	Pn	06 01 11.2	+0.6
	0.1nm,0.3s,baz=21,slow=17,SNR=3.7						
	0.1nm,0.3s						

*BEO **03** 06:04:03.6±0.8, 40°.34N×20°.68E, h0^{km}, ML2.8/4*
*TIR **03** 06:04:03.9, 40°.44N×20°.76E, h0^{km}±1^{km}, Ml3.1/9*
*ATH **03** 06:04:04.0, 40°.47N×20°.80E, h14^{km}±3^{km}, ML2.9/8, Manual Solution by E.Daskalaki First location: 2019/06/03 06:05:17, This location: 2019/06/03 06:34:02 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*SKO **03** 06:04:04.7, 40°.48N×20°.67E, h39^{km}, ML2.8*
*PDG **03** 06:04:05.0±0.3, 40°.44N×20°.87E, h9^{km}±1^{km}, ML3.0/9, Error ellipse: s-maj=1.4km s-min=1.2km az=90.0*
*THE **03** 06:04:05.6, 40°N±1°×2°1E±°, h0^{km}±1^{km}, M2.8/16, MLh2.8/16*

ISC 03 06:04:04.8±0.9**, 40°.47N**±0°.01×**20°.79E**±0°.02**, h8**^{km}±7^{km}**, n70, σ1^{s}14**/113**, 1C-4D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	Korca	0.16	358	Pg	Pg	06 04 07.9	-0.3
KBN				Sg	Sg	06 04 10.6	+0.1
KBN				AML	AML	06 04 11.6	
	50nm,0.4s						
NEST	Nestorio	0.20	105	Pg	Pg	06 04 09.0	+0.1
NEST				Sg	Sg	06 04 12.9	+1.1
NEST				AML	AML	06 04 15.1	
	14nm,0.4s						
NEST				AML	AML	06 04 15.2	
	17nm,0.3s						
NEST	Nestorio	0.20	105	P	Pg	06 04 09.0	+0.1
NEST				S	Sg	06 04 11.7	0.0
NEST	Nestorio	0.20	105	P	Pg	06 04 09.1	+0.1
NEST				S	Sg	06 04 12.8	+1.1
LSK	Leskovik	0.35	205	Pg	Pg	06 04 10.7	-0.9
LSK				Sg	Sg	06 04 16.2	-0.1
LSK				AML	AML	06 04 21.5	
	16nm,0.5s						
PENT	Pentalofos	0.38	136	P	Pg	06 04 11.8	-0.4
PENT				S	Sg	06 04 17.2	0.0
PENT	Pentalofos	0.38	136	P	Pg	06 04 11.8	-0.4
PENT				S	Sg	06 04 17.1	-0.1
OHR	Ohrid	0.64	0	P	Pg	06 04 17.6	+0.3
OHR				S	Sb	06 04 28.1	+0.6
OHR	Ohrid	0.64	0	*i* Pg	Pg	06 04 17.8	+0.5
OHR				*i* Sg	Sn	06 04 29.1	-1.6
OHR				*e*Lg	Lg	06 04 29.3	
	comp=E,353nm,0.5s						
OHR				*e*Lg	Lg	06 04 29.4	
	comp=N,347nm,0.4s						
OHR	Ohrid	0.64	0	*e*Pg	Pg	06 04 17.5	+0.3
OHR				*e*Sg	Sn	06 04 29.0	-1.7
KPRO	Kipourio	0.67	139	P	Pg	06 04 17.0	-0.7
KPRO				S	Sb	06 04 28.1	-0.2
KPRO	Kipourio	0.67	139	P	Pg	06 04 17.0	-0.7
KPRO				S	Sg	06 04 26.7	+0.2
KZN	Kozani	0.76	102	P	Pg	06 04 18.9	-0.6
KZN				S	Sb	06 04 30.1	-0.8
KZN	Kozani	0.76	102	P	Pg	06 04 18.9	-0.6
KZN				S	Sg	06 04 29.7	+0.3
JAN	Janina	0.81	177	P	Pb	06 04 21.3	+0.2
JAN				S	Sg	06 04 31.0	+0.1
JAN	Janina	0.81	177	P	Pg	06 04 20.1	-0.3
JAN				S	Sg	06 04 30.9	+0.1
SRN	Sarande	0.84	226	Pg	Pg	06 04 20.6	-0.4
SRN				Sg	Sn	06 04 34.0	-1.5
SRN				AML	AML	06 04 35.6	
	comp=N,1.2nm,0.6s						
VLO	Vlora	0.99	271	Pg	Pn	06 04 25.1	+0.1
IGT	Igoumenitsa	1.00	201	Pg	Pg	06 04 23.4	-0.5
IGT				Sg	Sn	06 04 38.5	-0.8
IGT	Igoumenitsa	1.00	201	P	Pg	06 04 23.6	-0.4
IGT				S	Sn	06 04 39.6	+0.3
IGT	Igoumenitsa	1.00	201	*i* Pg	Pg	06 04 23.6	-0.4
IGT				*i* Sg	Sn	06 04 40.1	+0.7
IGT	Igoumenitsa	1.00	201	P	Pg	06 04 23.2	-0.8
KTI	Kastanea	1.01	94	P	Pb	06 04 24.5	-0.2
KEK	Kerkira	1.07	226	P	Pn	06 04 27.9	+1.8
KEK				S	Sn	06 04 42.6	+1.4
KEK	Kerkira	1.07	226	P	Pg	06 04 24.9	-0.4
TIR	Tirane	1.13	322	Pn	Pn	06 04 26.7	-0.2
TIR				Sn	Sn	06 04 43.9	+1.4
TIR				AML	AML	06 04 51.0	
	comp=N,1.0nm,0.5s						
TETR	Tetrakomo, Epi	1.18	162	P	Pb	06 04 26.6	-0.9
THL	Klokotos Trika	1.30	133	P	Pn	06 04 28.4	-0.8
THL				S	Sg	06 04 48.0	+1.4
THL	Klokotos Trika	1.30	133	P	Pn	06 04 27.8	-1.4
TYRN	Tyrnavos	1.34	124	P	Pg	06 04 30.2	-0.2
TYRN				S	Sg	06 04 49.7	+1.9
TYRN	Tyrnavos	1.34	124	P	Pn	06 04 29.4	-0.3
AMPL	Ampelaki	1.58	168	P	Pg	06 04 36.1	+1.2
AMPL				S	Sg	06 04 58.2	+2.8
VAY	Valandovo	1.59	57	*i* Pg	Pg	06 04 34.7	-0.6
VAY				*i* Sg	Sg	06 04 57.9	+1.9
VAY				*e*Lg	Lg	06 04 58.8	
	comp=E,55nm,0.5s						
VAY				*e*Lg	Lg	06 04 59.3	
	comp=N,103nm,0.5s						
VAY	Valandovo	1.59	57	*e*Pg	Pb	06 04 33.8	-0.7
VAY				*e*Sg	Sg	06 04 58.8	+2.8
TSLK	Tsoukalades, L	1.64	184	P	Pg	06 04 37.9	+1.6
LKD2	Lefkada island	1.68	184	Pn	Pg	06 04 36.9	0.0
LKD2				Sn	Sg	06 05 00.7	+2.0
LKD2				AML	AML	06 05 05.7	
	comp=N,0.8nm,0.4s						
LKD2	Lefkada island	1.68	184	P	Pg	06 04 36.7	-0.2
LKD2	Lefkada island	1.68	184	P	Pb	06 04 35.2	-0.8
PUK	Puka	1.71	337	Pn	Pg	06 04 37.4	-0.2
PUK				Sn	Sg	06 05 02.6	+2.7
PUK				AML	AML	06 05 08.1	
	comp=N,1.2nm,0.4s						
KNT	Kendrikon	1.74	66	P	Pn	06 04 35.7	+0.3
KNT				S	Sb	06 04 58.5	-0.5
KNT	Kendrikon	1.74	66	*i* Pn	Pb	06 04 37.2	+0.2
HORT	Hortiatis	1.76	85	P	Pn	06 04 35.7	0.0
HORT				S	Sb	06 04 59.0	-0.7
SCTE	Santa Cesarea	1.82	258	Pn	Pg	06 04 39.1	-0.6
AGG	Agios Georgios	1.87	140	P	Pb	06 04 37.9	-1.3
ULC	Ulcinj	1.90	322	Pn	Pb	06 04 39.4	-0.2
ULC	Ulcinj	1.90	322	⇑*i*Pn	Pb	06 04 39.5	-0.2
ULC				*i* Sn	Sg	06 05 05.9	+0.1
BCI	Bajram Curri	1.98	344	Pn	Pg	06 04 42.4	-0.2
BCI				Sn	Sg	06 05 11.0	+2.7
BCI				AML	AML	06 05 18.3	
	comp=N,1.2nm,0.5s						
SOH	Sokhos	1.98	79	P	Pn	06 04 39.1	+0.4
FSK	Fiskardo	2.01	185	P	Pb	06 04 41.5	-0.1
DRME	Dracevica, Mon	2.10	325	Pn	Pb	06 04 42.7	-0.5
DRME	Dracevica, Mon	2.10	325	⇓*i*Pn	Pb	06 04 42.3	-0.9
DRME				*i* Sn	Sb	06 05 10.9	+1.5
PDG	Podgorica	2.28	330	*e*Pg	Pb	06 04 46.8	+0.7
PDG				*e*Sg	Sg	06 05 16.3	-1.6
PDG	Podgorica	2.28	330	⇓*i*Pn	Pb	06 04 44.3	-1.8
PDG				*i* Sn	Sb	06 05 15.1	+0.7
BUM	Brajici-Budva	2.32	323	⇓*i*Pn	Pn	06 04 44.8	+1.4
BUM				*e*Sn	Sb	06 05 17.2	+1.3
BARS	Barje	2.47	18	*i* Pn	Pn	06 04 45.9	+0.5
BARS	Barje	2.47	18	*e*Pn	Pn	06 04 45.8	+0.5
BARS				*e*Sn	Sb	06 05 19.2	-0.8
IVA	Berane	2.50	345	*e*Pn	Pb	06 04 48.3	-1.6
IVA				*e*Sn	Sb	06 05 19.9	-0.9
CEME	Cevo	2.51	326	⇓*i*Pn	Pn	06 04 47.5	+1.5
CEME				*i* Sn	Sb	06 05 20.6	-0.6
KOME	Kolasin	2.57	339	*e*Pn	Pb	06 04 49.2	-1.9
KOME				*e*Sn	Sb	06 05 22.7	-0.2
HCY	Herceg Novi	2.63	320	*e*Pn	Pn	06 04 47.9	+0.4
HCY				*e*Sn	Sb	06 05 23.5	-1.0
SELS	Selova	2.76	5	*e*Pn	Pb	06 04 51.8	-2.6
SJES	Sjenica	2.86	348	*e*Pn	Pn	06 04 52.8	+2.0
BRY	Bratogost	2.96	326	*e*Pn	Pn	06 04 54.2	+2.0
BRY				*e*Sn	Sb	06 05 32.4	-1.9
GOCS	Kraljevo Serbi	3.09	1	*e*Sn	Sb	06 05 35.8	-2.3
IVAS	Ivanjica	3.14	351	*e*Pn	Pn	06 04 56.9	+2.2
ZAGS	Zajecar	3.51	17	*e*Pn	Pn	06 04 59.5	-0.1
DIVS	Divibare	3.68	351	*e*Pn	Pn	06 05 04.6	+2.6
KBA	Koelnbreinsper	8.53	323	*i* Pn	Pn	06 06 08.8	+0.1
	comp=N,0.1nm,0.2s						
LESA	Schwarzleotal	9.09	323	*e*Pn	Pn	06 06 16.3	+0.1
	comp=N,0.7nm,0.1s						
FETA	Feichten	9.79	315	*e*Pn	Pn	06 06 25.8	-0.1
	comp=N,0.4nm,0.3s						

*IDC **03** 06:04:33.7±0.4, 0°.42N×97°.78E, h0^{km}, mb5.2/35, mbtmp5.2/38, ML5.0/3, Error ellipse: s-maj=14.9km s-min=10.8km az=64.0*
*MOS **03** 06:04:33.6±0.7, 0°.25N×97°.63E, h17^{km}, mb5.5/86, MS5.6/7, Error ellipse: s-maj=13.3km s-min=8.1km az=107.1*
*BJI **03** 06:04:33.0, 0°.11N×97°.83E, h18^{km}, mB5.6/22, mb5.4/82, Ms5.9/22, Ms7 5.7/18*
*DJA **03** 06:04:35.0±0.5, 0°N±2°×9°8E±°, h17^{km}±3^{km}, M5.7/55, mb5.5/55, mB6.0/6, MLv5.8/17, Mw(mB)5.6/6, MwMwp5.8/3, Mwp5.9/3*
*NEIC **03** 06:04:35.7, 0°.17N×97°.45E, h16^{km}, Moment Tensor Solution. Duration: 1^{s}6 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.05; M$_{\theta\theta}$-1.33; M$_{\phi\phi}$-0.71; M$_{r\theta}$6.46; M$_{\theta\phi}$1.56; M$_{\phi r}$-4.24; Fault plane solution: M$_{0}$8.07000×10^{16} NP1: ϕ_s319.04000°, δ8.64000°, λ105.52000°. NP2: ϕ_s123.36000°, δ81.68000°, λ87.67000°. Principal axes: T 7.8061, Plg53.0000°, Azm31.0000°; N 0.5312, Plg2.0000°, Azm124.0000°; P -8.3372, Plg37.0000°, Azm215.0000°;*
*NEIC **03** 06:04:35.6±1.7, 0°.34N±0°.06×97°.74E±0°.07, h10^{km}±1^{km}, mb5.5/191, Mww5.2/8 Error ellipse: s-maj=12.6km s-min=9.7km az=244.0*
*NEIC **03** 06:04:35.7, 0°.37N×97°.75E, h16^{km}*
*GCMT **03** 06:04:37.6±0.4, 0°.19N±0°.02×97°.66E±0°.03, h12^{km}, MW5.5/66, Moment Tensor Solution. s29,c35; s66,c93; Duration: 1^{s}6 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.16±.05; M$_{\theta\theta}$-0.23±.03; M$_{\phi\phi}$0.06±.04; M$_{r\theta}$1.57±.10; M$_{\theta\phi}$0.37±.02; M$_{\phi r}$-1.05±.10; Best double couple: M$_{0}$1.91500×10^{17} NP1:ϕ_s306.00000°, δ5.00000°, λ92.00000°. NP2:ϕ_s124.00000°, δ85.00000°, λ90.00000°. Principal axes: T 1.7580, Plg50.0000°, Azm34.0000°; N 0.3150, Plg0.0000°, Azm124.0000°; P -2.0730, Plg40.0000°, Azm214.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 06:04:36.6±0.3**, 0°.34N**±0°.03×**97°.76E**±0°.04**, h21**^{km}±3^{km}**, h21**^{km}**:pP-P, n1083, σ1^{s}13**/1048**, mb5.4**/287**, MS5.8**/12**, 57C-27D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	Gunungsitoli	0.97	349	Pn	Pb	06 04 55.8	+1.1
GSI	Gunungsitoli	0.97	349	P	Pb	06 04 55.9	+1.1
GSI	Gunungsitoli	0.97	349	P	Pb	06 04 55.9	+1.1
MNSI	Mandailing Nat	1.88	76	P	Pn	06 05 09.0	+1.5
RPSI	Rantau Prapat	2.61	26	Pn	Pn	06 05 19.5	+1.9
PSI	Prapat	2.71	25	Pn	Pn	06 05 18.9	-0.1
	88nm,0.3s,baz=182,slow=8.9,SNR=109						
PSI				Sn	Sn	06 05 46.2	-5.1
	125nm,0.3s,baz=151,slow=11,SNR=7.9						
PSI	Prapat	2.71	25	P	Pn	06 05 19.6	+0.5
PSI	Prapat	2.71	25	P	Pn	06 05 19.5	+0.5
PPI	Padang Panjang	2.75	107	P	Pn	06 05 21.2	+1.6
TSI	Tuntungan	3.24	14	P	Pn	06 05 28.2	+1.9
BKNI	Bangkinang	3.28	90	Pn	Pn	06 05 28.5	+1.7
BKNI	Bangkinang	3.28	90	P	Pn	06 05 29.0	+2.2
BKNI	Bangkinang	3.28	90	P	Pn	06 05 28.7	+1.9
MLSI	Meulaboh, Aceh	4.13	341	P	Pn	06 05 38.1	-0.4
LHMI	Lhok Sumawe	4.92	351		Pn	06 05 50.0	+0.6
LHMI	Lhok Sumawe	4.92	351	P	Pn	06 05 49.7	+0.3
	11nm711nm,1.3s						
BSI	Banda Aceh	5.68	334	P	Pn	06 05 58.7	-1.2
	2.6nm485nm,1.1s						
KULM	Kulim	5.70	30	Pn	Pn	06 06 01.0	+0.9
KULM	Kulim	5.70	30	P	Pn	06 06 01.0	+0.9
KSI	Kapahiang	6.25	129	P	Pn	06 06 06.7	-1.0
MYKOM	Kota Tinggi	6.26	77		Pn	06 06 09.1	+1.3
MNAI	Manna	6.98	132		Pn	06 06 18.1	+0.3
MNAI	Manna	6.98	132	P	Pn	06 06 19.1	+1.3
MNAI	Manna	6.98	132	P	Pn	06 06 18.3	+0.5
CMBY	CAMPBELL BAY	7.65	330	*e*P	Pn	06 06 29.1	+2.2
CMBY				*e*S	Sn	06 07 58.6	+5.6
PMBI	Palembang	7.72	115	Pn	Pn	06 06 25.8	-2.1
MDSI	Maura Dua	8.01	127	P	Pn	06 06 32.4	+0.6
LWLI	Liwa	8.24	130	P	Pn	06 06 35.5	+0.4
KASI	Kota Agung	8.90	131	P	Pn	06 06 43.6	-0.5
	387nm,0.7s						
BLSI	Bandar Lampung	9.38	127	P	Pn	06 06 50.8	+0.1
TPI	Tanjungpandan	10.36	107	P	Pn	06 07 05.8	+1.7
	211nm,0.8s						
CGJI	Cibinong	10.51	131	P	Pn	06 07 03.5	-2.6
	153nm,0.9s						
SKJI	Sukabumi	11.41	130	P	Pn	06 07 17.5	-1.0
	430nm,0.9s						
LEM	Lembang	12.14	126	Pn	Pn	06 07 29.7	+1.0
	6.6nm,0.3s,baz=276,slow=14,SNR=4.7						
	51nm,0.9s						
COCO	West Island	12.48	184	Pn	Pn	06 07 31.6	-1.5
COCO	West Island	12.48	184	P	Pn	06 07 35.1	+2.0
COCO	West Island	12.48	184	P	Pn	06 07 31.6	-1.5
BBJI	Bungbulang	12.55	128	P	Pn	06 07 34.9	+0.8
SMRI	Semarang	14.63	120		Pn	06 08 01.6	-0.9
SMRI	Semarang	14.63	120	P	Pn	06 08 05.3	+2.8
SMRI	Semarang	14.63	120	P	Pn	06 08 02.3	-0.2
	179nm,0.9s						
UGM	Wanagama	15.14	123	Pn	Pn	06 08 08.1	-1.3
UGM	Wanagama	15.14	123	P	Pn	06 08 06.9	-2.5
	99nm,1.5s						
DLV	Lat	15.69	42		Pn	06 08 15.4	-1.4
DLV				IAmb	IAmb	06 08 22.5	
	comp=Z,189nm,1.0s						
DLV	Lat	15.69	42	P	Pn	06 08 18.8	+2.0
GRJI	Gresik	16.36	116	P	Pn	06 08 25.3	+0.1
	comp=Z,331nm,0.9s						
UBPT	Khong Chiam	16.68	27		Pn	06 08 28.4	-0.9
UBPT	Khong Chiam	16.68	27	P	Pn	06 08 29.6	+0.3
KMMI	Kalianget	17.76	115	P	Pn	06 08 41.3	-1.4

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      comp=Z,288nm,0.9s
GMJI  Gumukmas          17.82 119   P       Pn        06 08 43.7 +0.2
CM31  Chiang Mai Arr    18.04   4           Pn        06 08 45.2 -1.0
CMAR  Chiang Mai Arr    18.04   4   P       Pn        06 08 44.6 -1.6
CMAR  Chiang Mai Arr    18.04   4   P       Pn        06 08 46.0 -0.2
      comp=Z,9.3nm,0.3s,baz=192,slow=11,SNR=46
      comp=Z,53nm,0.8s
CMAR  Chiang Mai Arr    18.04   4 i P       Pn        06 08 46.0 -0.2
CMAR                                pmax    pmax
      comp=Z,47nm,0.5s
ABJI  Asem Bagus        18.31 117   P       Pn        06 08 50.1 +0.6
      comp=Z,166nm,1.0s
PALK  Pallekele         18.35 292           P         06 08 48.2 -1.8
PALK  Pallekele         18.35 292   P       Pn        06 08 51.2 +1.1
      comp=Z,0.6nm,0.3s,baz=115,slow=10,SNR=7.3
PALK                                S       Sn        06 11 57.4  -17
      comp=Z,28nm,0.7s,baz=208,slow=6.0,SNR=7.1
      comp=Z,10nm,0.8s
PALK  Pallekele         18.35 292   P       P         06 08 48.2 -1.8
PALK                                pmax    pmax
      comp=Z,60nm,1.1s
CHTO  Chiang Mai        18.39   4   P       P         06 08 50.0 -0.5
CHTO  Chiang Mai        18.39   4   P       P         06 08 50.3 -0.1
CHTO  Chiang Mai        18.39   4   P       P         06 08 50.0 -0.5
CHTO                                pmax    pmax
      comp=Z,125nm,1.0s
JAGI  Jajag, Banyuwa    18.53 119   P       P         06 08 51.0 -1.0
JAGI  Jajag, Banyuwa    18.53 119   P       P         06 08 50.7 -1.3
BKB   Balikpapan        19.20  95   P       Pn        06 09 02.6 +2.2
BKB   Balikpapan        19.20  95   P       Pn        06 09 00.5 +0.1
      comp=Z,561nm,2.6s
KKM   Kota Kinabalu     19.27  73   P       Pn        06 09 01.2 -0.1
KKM                                 IAmb    IAmb      06 09 02.8
      comp=Z,189nm,0.7s
KKM   Kota Kinabalu     19.27  73   P       Pn        06 09 01.9 +0.6
TWSI  Taliwang, Sumb    21.08 116   P       P         06 09 18.5 -1.3
      comp=Z,96nm,0.9s
MYLDM Lahad Datu        21.26  77   P       P         06 09 22.8 +1.0
MYLDM                               IAmb    IAmb      06 09 34.4
      comp=Z,161nm,0.9s
MYLDM Lahad Datu        21.26  77   P       P         06 09 25.0 +3.3
MDRS  Chennai           21.47 307  eP       P         06 09 24.7 +0.7
MDRS                               eS       S         06 13 23.8 +2.4
SLVN  Son La            21.71  16           P         06 09 26.5  0.0
SLVN                                IAmb    IAmb      06 09 27.9
      comp=Z,267nm,0.9s
SLVN  Son La            21.71  16   P       P         06 09 26.8 +0.3
QIZ   Qiongzhong        22.03  32   P       P         06 09 30.2 +0.2
QIZ   Qiongzhong        22.03  32   P       P         06 09 30.4 +0.4
QIZ                                 pmax    pmax
      comp=Z,50nm,1.7s
MPSI  Mapaga            22.14  90   P       P         06 09 31.6 +0.4
      comp=Z,7µmcomp=Z,112nm,1.3s
SPSI  Sidrap Palu       22.41 101   P       P         06 09 34.5 +0.4
KAPI  Kappang           22.60 104   P       P         06 09 36.6 +0.4
KAPI  Kappang           22.60 104   P       P         06 09 37.3 +1.2
KAPI  Kappang           22.60 104⇓ eP       P         06 09 36.5 +0.4
KAPI                                pmax    pmax
      comp=Z,104nm,1.4s
BNSI  Bone              22.82 102   P       P         06 09 39.1 +0.7
      comp=Z,183nm,1.0s
TOLI2 Tolitoli          23.03  88   P       P         06 09 39.7 -0.9
TOLI2                               IAmb    IAmb      06 09 40.9
      comp=Z,130nm,0.7s
TOLI2 Tolitoli          23.03  88   P       P         06 09 39.9 -0.8
VJD   Vijayawada        23.30 314  eP       P         06 09 45.5 +2.3
VJD                                 IAmb    IAmb      06 09 56.0
      comp=Z,44nm,0.4s
VJD                                eS       S         06 13 57.4 +2.6
RAGD  RAYAGADA          23.45 324  eP       P         06 09 45.9 +1.1
RAGD                                IAmb    IAmb      06 09 53.5
      comp=Z,227nm,1.2s
RAGD                               eS       S         06 13 59.8 +2.6
BSSI  Bau Bau, Buton    23.59 106   P       P         06 09 45.4 -0.8
      comp=Z,170nm,0.8s
AZL   Aizawl            23.77 348  eP       P         06 09 46.0 -1.9
AZL                                 IAmb    IAmb      06 10 04.7
      comp=Z,134nm,1.0s
AZL                                eS       S         06 14 05.2 +2.7
APSI  Ampana            23.92  93   P       P         06 09 49.6 +0.2
      comp=Z,265nm,1.2s
MRSI  Marisa            24.18  90   P       P         06 09 51.4 -0.4
      comp=Z,245nm,0.8s
TNCH  TengChong         24.55   2 ⇓P       P         06 09 57.2 +1.9
TNCH                                pmax    pmax
      comp=Z,300nm,1.0s
IMP   Imphal            24.62 352  eP       P         06 09 56.5 +0.7
IMP                                 IAmb    IAmb      06 10 15.9
      comp=Z,195nm,1.2s
IMP                                eS       S         06 14 19.0 +2.8
LUWI  Luwuk             25.05  93   P       P         06 09 59.5 -0.2
LUWI  Luwuk             25.05  93   P       P         06 10 02.0 +2.3
LUWI  Luwuk             25.05  93   P       P         06 09 59.8 +0.1
      comp=Z,518nm,1.1s
KMI   Kunming           25.10  11 ⇑P       P         06 10 02.2 +1.9
KMI                                 pmax    pmax
      comp=Z,250nm,1.1s
JHSG  JHARSUGUGA        25.29 328  eP       P         06 10 02.2 +0.5
JHSG                                IAmb    IAmb      06 10 07.9
      comp=Z,151nm,1.0s
JHSG                               eS       S         06 14 29.5 +2.8
HYB   Hyderabad         25.40 313  eP       P         06 10 03.5 +0.6
HYB                                epP      pP        06 10 06.1 -3.1
BBSI  Bau Bau           25.44 104   P       P         06 10 04.0 +0.7
      comp=Z,203nm,0.9s
KOHI  KOHIMA            25.48 352  eP       P         06 10 04.8 +1.2
KOHI                                IAmb    IAmb      06 10 12.8
      comp=Z,282nm,0.8s
KOHI                               eS       S         06 14 31.6 +1.6
EDFI  Ende, Flores      25.49 111   P       P         06 10 02.8 -1.1
      comp=Z,49µmcomp=Z,49nm,0.7s
MMRI  Maumere           25.97 111   P       P         06 10 10.6 +2.5
PZH   PanZhiHua         26.29   8   P       P         06 10 11.5 +0.5
PZH                                 pmax    pmax
      comp=Z,100nm,1.2s
PZH                                 pmax    pmax
      comp=Z,230nm,6.3s
H08S2 Diego Garcia H    26.41 252   T       T         06 37 44.8
      baz=73,slow=75,SNR=1001
H08S3 Diego Garcia H    26.42 252   T       T         06 37 27.8
      baz=73,slow=75,SNR=1020
H08S1 Diego Carcia H    26.43 252   T       T         06 37 46.1
      baz=73,slow=75,SNR=1031
HKPS  Hong Kong Po S    27.02  35   P       P         06 10 17.2 -0.2
HKPS                                IAmb    IAmb      06 10 19.3
      comp=Z,103nm,0.8s
GZH   Guangzhou         27.22  33   P       P         06 10 25.5 +6.3
GYA   Guiyang           27.35  18 ⇑P       P         06 10 20.8 +0.3
GYA                                 sP      sP        06 10 32.3 +2.8
GYA                                 pmax    pmax
      comp=Z,90nm,1.0s
GULI  GuiLin            27.64  25   P       P         06 10 23.7 +0.8
GULI                                pmax    pmax
      comp=Z,40nm,1.0s
SZP   Santa             28.13  51   P       P         06 10 26.0 -1.4
GTK   Tadong            28.23 343  eP       P         06 10 28.6 +0.2
GTK                                 IAmb    IAmb      06 10 34.9
      comp=Z,178nm,1.0s
GTK                                eS       S         06 15 16.4 +3.0
PSA00 Pilbara Seismi    30.65 137   P       P         06 10 49.2 -0.5
CD2   Chengdu           30.93  10   P       P         06 10 51.9 -0.3
CD2                                 sP      pP        06 10 59.1 +0.5
CD2                                 pmax    pmax
      comp=Z,70nm,0.9s
CNSH  ChangSha          31.27  26   P       P         06 10 56.0 +0.9
CNSH                                pmax    pmax
      comp=Z,29nm,1.2s
QZH   Quanzhou          31.69  38⇑iP       P         06 10 59.3 +0.4
QZH                                 pmax    pmax
      comp=Z,140nm,0.9s
ENH   Enshi             31.79  20   P       P         06 10 58.5 -1.2
ENH   Enshi             31.79  20   P       P         06 10 59.7  0.0
TPUB  Ta-pu             31.85  43   P       P         06 11 00.5 +0.1
TPUB  Ta-pu             31.85  43   P       P         06 11 01.3 +0.9
YULB  Yu-li             32.37  43   P       P         06 11 05.3 +0.4
YULB                                IAmb    IAmb      06 11 14.5
      comp=Z,32nm,0.8s
YULB  Yu-li             32.37  43   P       P         06 11 05.8 +0.9
SSLB  Suanglung         32.40  42   P       P         06 11 04.9 -0.3
SSLB  Suanglung         32.40  42   P       P         06 11 05.7 +0.5
FITZ  Fitzroy Crossi    32.98 125   P       P         06 11 10.1 -0.2
FITZ  Fitzroy Crossi    32.98 125   P       P         06 11 08.9 -1.4
      comp=Z,13nm,0.8s
FITZ  Fitzroy Crossi    32.98 125   P       P         06 11 10.1 -0.2
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NACB  Ninganchiao       33.09  43   P       P         06 11 10.8 -0.4
NACB                                IAmb    IAmb      06 11 13.3
      comp=Z,88nm,1.2s
NACB  Ninganchiao       33.09  43   P       P         06 11 12.0 +0.8
YHNB  Yeheng            33.28  42   P       P         06 11 14.1 +1.2
WHN   Wuhan             33.92  26 ⇑P       P         06 11 19.4 +1.0
WHN                                 pmax    pmax
      comp=Z,240nm,0.9s
KNRA  Kununurra         34.51 119   P       P         06 11 21.7 -1.9
FAKI  Fak Fak           34.63  96   P       P         06 11 22.8 -1.9
FAKI                                IAmb    IAmb      06 11 24.6
      comp=Z,93nm,1.0s
FAKI  Fak Fak           34.63  96   P       P         06 11 26.7 +1.9
FAKI  Fak Fak           34.63  96   P       P         06 11 23.5 -1.3
      comp=Z,58nm,0.8s
XAN   Xi'an             35.12  16 ⇑P       P         06 11 28.7  0.0
XAN                                 S       S         06 17 00.4 -0.2
XAN                                 pmax    pmax
      comp=Z,910nm,4.4s
GOMU  GeErMu            35.78 356   P       P         06 11 35.2 +0.4
GOMU                                pmax    pmax
      comp=Z,26nm,1.3s
LZH   Lanzhou           36.01   8  eP       P         06 11 37.1 +0.6
LZH                                 sP      pP        06 11 43.9 +0.9
LZH                                 pmax    pmax
      comp=Z,87nm,1.4s
RKPI  Ransiki, Papua    36.46  93   P       P         06 11 40.9 +0.4
      comp=Z,87nm,0.8s
MUN   Mundaring         36.58 153   P       P         06 11 43.6 +2.4
LYN   LuoYang           36.71  21 ⇑P       P         06 11 43.5 +1.2
LYN                                 sP      pP        06 11 50.3 +1.5
LYN                                 S       S         06 17 26.1 +1.3
LYN                                 pmax    pmax
      comp=Z,530nm,0.9s
LYN                                 pmax    pmax
      comp=Z,780nm,3.5s
LYN                                 LR      LR
      comp=Z,24µm,15.8s
KLBR  Kellerberrin      36.98 151   P       P         06 11 51.4 +6.7
KLBR  Kellerberrin      36.98 151   P       P         06 11 46.9 +2.2
NJ2   Nanjing           37.31  30⇑iP       P         06 11 48.1 +0.7
NJ2                                 pmax    pmax
      comp=Z,54nm,1.0s
NWAO  Narrogin (SRO)    37.84 153   P       P         06 11 52.1 +0.1
NWAO  Narrogin (SRO)    37.84 153   P       P         06 11 53.6 +1.6
NWAO  Narrogin (SRO)    37.84 153   P       P         06 11 52.1 +0.1
NWAO                                pmax    pmax
      comp=Z,31nm,0.8s
H01W3 Cape Leeuwin H    38.24 158   T       T         06 52 23.7
      baz=334,slow=76,SNR=17
H01W2 Cape Leeuwin H    38.26 158   T       T         06 52 29.2
      baz=334,slow=76,SNR=19
H01W1 Cape Leeuwin H    38.26 158   T       T         06 52 30.5
      baz=334,slow=76,SNR=15
GTA   Gaotai            38.93   3   P       P         06 12 02.1 +0.9
GTA                                 sP      sP        06 12 10.7 +0.5
GTA                                 PcP     PcP       06 14 13.2 +1.5
GTA                                 ScP     ScP       06 17 58.9 -0.1
GTA                                 pmax    pmax
      comp=Z,45nm,2.0s
KMBL  Kambalda          38.96 146   P       P         06 12 03.3 +1.9
      comp=Z,111nm,0.8s
KMBL  Kambalda          38.96 146   P       P         06 12 03.8 +2.4
JOW   Kunigami          39.43  46   P       P         06 12 04.2 -1.2
TIY   Taiyuan           39.58  18  eP       P         06 12 07.2 +0.7
TIY                                 pmax    pmax
      comp=Z,69nm,0.6s
TIY                                 LR      LR
      comp=Z,4µm,14.5s
TIY                                 LR      LR
      comp=Z,8µm,15.9s
TIY                                 LR      LR
      comp=Z,5µm,14.5s
TIA   Tai'an            39.97  25   P       P         06 12 10.0 +0.3
TIA                                 pmax    pmax
      comp=Z,80nm,1.1s
HNS   HongShan          40.06  21 ⇑P       P         06 12 11.8 +1.4
NIL   Nilore            40.34 328   P       P         06 12 12.1 -0.8
NIL                                 IAmb    IAmb      06 12 13.8
      comp=Z,51nm,0.8s
NIL   Nilore            40.34 328   P       P         06 12 12.1 -0.8
NIL                                 pmax    pmax
      comp=Z,51nm,0.8s
WB0   Warramunga Arr    41.08 121   P       P         06 12 18.6 -0.7
WB0                                 IAmb    IAmb      06 12 19.4
      comp=Z,68nm,0.6s
WRA   Warramunga Arr    41.11 121   P       P         06 12 19.1 -0.4
WRA   Warramunga Arr    41.11 121   P       P         06 12 18.8 -0.7
      comp=Z,48nm,0.7s,baz=298,slow=8.0,SNR=150
WRA                                 S       S         06 18 29.2 -2.4
      comp=Z,4.9nm,1.0s,baz=293,slow=19,SNR=5.2
      comp=Z,48nm,0.7s
WRA   Warramunga Arr    41.11 121   P       P         06 12 19.1 -0.4
WRAB  Tennant Creek     41.12 121   P       P         06 12 19.1 -0.5
WRAB                                IAmb    IAmb      06 12 19.9
      comp=Z,67nm,0.6s
WRAB  Tennant Creek     41.12 121c iP       P         06 12 18.8 -0.7
WRAB                                pmax    pmax
      comp=Z,60nm,0.6s
WR8   Warramunga Arr    41.25 121   P       P         06 12 20.0 -0.7
WR8                                 IAmb    IAmb      06 12 21.0
      comp=Z,85nm,0.6s
BTO   Baotou            41.60  14  eP       P         06 12 24.9 +1.7
BTO                                 pP      pP        06 12 29.4 -0.3
BTO                                 sP      sP        06 12 32.1 -0.2
BTO                                 PP      PnPn      06 14 05.7 +1.2
BTO                                 S       S         06 18 41.2 +2.7
BTO                                 sS      sS        06 18 50.7 +1.5
BTO                                 pmax    pmax
      comp=Z,190nm,1.5s
HHC   Hu-ho-hao-te      42.22  16⇑iP       P         06 12 30.4 +2.0
HHC                                 sP      sP        06 12 37.7 +0.2
HHC                                 S       S         06 18 51.6 +3.9
HHC                                 pmax    pmax
      comp=Z,120nm,0.8s
HHC                                 pmax    pmax
      comp=Z,840nm,6.7s
HHC                                 LR      LR
      comp=Z,14µm,14.6s
FORT  Forrest           42.26 140   P       P         06 12 28.8 +0.1
FORT                                IAmb    IAmb      06 12 53.0
      comp=Z,81nm,0.8s
FORT  Forrest           42.26 140   P       P         06 12 29.8 +1.1
      comp=Z,119nm,0.7s
FORT  Forrest           42.26 140   P       P         06 12 31.0 +2.3
ASAR  Alice Springs     42.44 127   P       P         06 12 30.4 +0.1
      comp=Z,73nm,0.8s,baz=297,slow=7.8,SNR=160
ASAR                                PcP     PcP       06 14 24.0 +0.7
      comp=Z,4.4nm,0.7s,baz=313,slow=1.9,SNR=4.5
ASAR                                S       S         06 18 47.6 -3.6
      comp=Z,3.3nm,0.9s,baz=292,slow=14,SNR=10
      comp=Z,73nm,0.8s
AS31  Alice Springs     42.44 127   P       P         06 12 30.3  0.0
AS31  Alice Springs     42.44 127   P       P         06 12 30.0 -0.3
      comp=Z,32nm,0.9s
AS01  Alice Springs     42.47 127   P       P         06 12 31.1 +0.5
BJT   Baijiatuau        42.91  21   P       P         06 12 34.4 +0.6
BJT   Baijiatuau        42.91  21   P       P         06 12 35.6 +1.8
BJT   Baijiatuau        42.91  21   P       P         06 12 34.4 +0.6
BJT                                 pmax    pmax
      comp=Z,656nm,1.9s
BJI   Beijing           42.93  21   P       P         06 12 35.4 +1.4
BJI                                 pmax    pmax
      comp=Z,70nm,0.8s
JAY   Jayapura          43.03  94   P       P         06 12 34.9 -0.3
      comp=Z,35nm,1.4s
KSH   Kashi             43.78 335   P       P         06 12 43.8 +2.8
KSH                                 pmax    pmax
      comp=Z,16nm,0.7s
KSH                                 LR      LR
      comp=Z,6µm,15.5s
KSH                                 LR      LR
      comp=Z,8µm,17.2s
DL2   Dalian            44.18  27   P       P         06 12 45.0 +1.0
DL2                                 pmax    pmax
      comp=Z,330nm,0.8s
WMQ   Urumqi            44.21 350  eP       P         06 12 46.1 +1.7
WMQ                                 sP      sP        06 12 55.4 +1.9
WMQ                                 pmax    pmax
      comp=Z,55nm,1.3s
WMQ                                 pmax    pmax
      comp=Z,950nm,7.5s
WMQ                                 LR      LR
      comp=Z,7µm,17.7s
WMQ                                 LR      LR
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      comp=Z,13µm,22.5s
WMQ                                 LR      LR
      comp=Z,10µm,24.1s
TARG  Taragay, Kyrgy    44.97 339   P       P         06 12 51.1 +0.2
TARG                                IAmb    IAmb      06 13 14.0
      comp=Z,48nm,1.0s
TARG  Taragay, Kyrgy    44.97 339   P       P         06 12 51.1 +0.2
TARG                                pmax    pmax
      comp=Z,48nm,1.0s
JTU   Tsushima          45.07  38   P       P         06 12 51.8 +0.6
JNU   Nakatsue          45.09  40   P       P         06 12 50.9 -0.6
JNU   Nakatsue          45.09  40   P       P         06 12 51.9 +0.4
TJN   Taejon            45.16  34   P       P         06 12 51.8 -0.1
TJN   Taejon            45.16  34   P       P         06 12 52.1 +0.2
TJN   Taejon            45.16  34   P       P         06 12 51.8 -0.1
TJN                                 pmax    pmax
      comp=Z,299nm,0.9s
PRZ   Przheval'sk       45.42 340   P       P         06 12 54.6 +0.4
PRZ                                 IAmb    IAmb      06 13 22.7
      comp=Z,49nm,1.0s
PRZ   Przheval'sk       45.42 340   P       P         06 12 54.6 +0.4
PRZ                                 pmax    pmax
      comp=Z,49nm,1.0s
KDJ   Kajisay           45.55 339   P       P         06 12 55.9 +0.8
KDJ                                 IAmb    IAmb      06 12 57.9
      comp=Z,79nm,1.0s
KDJ   Kajisay           45.55 339   P       P         06 12 55.9 +0.8
KDJ                                 pmax    pmax
      comp=Z,79nm,1.0s
SHLS  Shalkode          45.67 341  eP       P         06 12 54.8 -1.2
SHLS  Shalkode          45.67 341  eP       P         06 12 54.9 -1.2
UZB   Uzynbulak         45.80 341  eP       P         06 12 56.9 -0.2
UZB   Uzynbulak         45.80 341  eP       P         06 12 56.9 -0.2
QIS   Mount Isa         45.89 119   P       P         06 12 57.8 -0.3
      comp=Z,36nm,1.6s
QIS   Mount Isa         45.89 119   P       P         06 12 58.2 +0.2
SATY  Saty              45.93 340  eP       P         06 12 57.9 -0.2
SATY                               eS       S         06 19 43.4 +1.7
SATY                                pmax    pmax
      comp=Z,37nm,0.9s
SATY  Saty              45.93 340  eP       P         06 12 58.0 -0.2
      comp=Z,37nm,0.9s
SATY                               eS       S         06 19 43.5 +1.7
ULHL  Ulahol            46.00 338   P       P         06 12 59.9 +1.2
      SNR=7.8
ZHN   Zhinishke         46.02 340  eP       P         06 12 58.6 -0.2
ZHN   Zhinishke         46.02 340  eP       P         06 12 58.6 -0.2
KPKS  Kokpek            46.20 341  eP       P         06 12 59.8 -0.3
KPKS  Kokpek            46.20 341  eP       P         06 12 59.9 -0.3
KSAR  Wonju Array Be    46.21  34   P       P         06 12 59.9 -0.4
KSAR  Wonju Array Be    46.21  34   P       P         06 12 59.9 -0.4
KSRS  Korea Array       46.24  34   P       P         06 13 00.6 +0.1
      comp=Z,99nm,0.9s,baz=221,slow=8.8,SNR=193
      comp=Z,99nm,0.9s
KS19  Wonju Array Si    46.24  34   P       P         06 12 59.8 -0.7
BOOM  Boomskoye usch    46.32 338   P       P         06 13 01.6 +0.3
BOOM                                IAmb    IAmb      06 13 16.4
      comp=Z,28nm,1.0s
BOOM  Boomskoye usch    46.32 338   P       P         06 13 01.6 +0.3
BOOM                                pmax    pmax
      comp=Z,29nm,1.0s
XLT   XiLinHaoTe        46.35  18  eP       P         06 13 02.6 +1.3
XLT                                 sP      pP        06 13 09.8 +1.9
XLT                                 PcP     PcP       06 14 37.1 +0.8
XLT                                 pmax    pmax
      comp=Z,79nm,0.9s
XLT                                 pmax    pmax
      comp=Z,590nm,6.8s
SIMJ  Simiganj          46.36 329   P       P         06 13 00.8 -0.8
SIMJ                                IAmb    IAmb      06 13 03.2
      comp=Z,50nm,0.8s
TNSS  Tian-Shan         46.42 339  eP       P         06 13 01.7 -0.6
TNSS  Tian-Shan         46.42 339  eP       P         06 13 01.8 -0.6
MDOK  Medeo             46.49 339  eP       P         06 13 02.3 -0.2
MDOK  Medeo             46.49 339  eP       P         06 13 02.4 -0.2
ARSB  Arslanbob         46.55 334   P       P         06 13 03.8 +0.7
ARSB  Arslanbob         46.55 334   P       P         06 13 03.8 +0.7
ARSB                                pmax    pmax
      comp=Z,120nm,1.0s
DZET  Dzherino          46.57 329   P       P         06 13 01.8 -1.4
DZET                                pmax    pmax
      comp=Z,36nm,0.8s
AAA   Alma-Ata          46.58 339  eP       P         06 13 02.9 -0.2
AAA                                 pmax    pmax
      comp=Z,55nm,0.8s
AAA   Alma-Ata          46.58 339  eP       P         06 13 03.0 -0.2
      comp=Z,55nm,0.8s
UCH   Uchtor            46.66 336   P       P         06 13 06.1 +1.9
      SNR=5.9
TKM2  Tokmak 2          46.82 338   P       P         06 13 06.5 +1.3
      SNR=17
KBK   Karagaybulak      46.84 337   P       P         06 13 07.2 +1.9
      SNR=16
AML   Almayashu         46.91 335   P       P         06 13 07.1 +0.9
      SNR=15
AAK   Ala-Archa         47.01 337   P       P         06 13 07.1 +0.4
AAK                                 IAmb    IAmb      06 13 13.1
      comp=Z,37nm,1.2s
AAK   Ala-Archa         47.01 337c iP       P         06 13 07.9 +1.3
AAK                                 pmax    pmax
      comp=Z,42nm,1.3s
COEN  Coen              47.15 109   P       P         06 13 06.7 -1.3
      comp=Z,35nm,1.0s
COEN  Coen              47.15 109   P       P         06 13 07.5 -0.5
CHMS  Chumysh           47.21 337   P       P         06 13 08.8 +0.8
      SNR=8.7
EKS2  Erkin-Say         47.32 336   P       P         06 13 10.6 +1.7
      SNR=13
SNY   Shenyang          47.41  26 ⇓P       P         06 13 10.0 +0.4
SNY                                 sP      sP        06 13 20.0 +1.3
SNY                                 pmax    pmax
      comp=Z,87nm,0.8s
SNY                                 pmax    pmax
      comp=Z,730nm,6.9s
SNY                                 LR      LR
      comp=Z,21µm,16.7s
SNY                                 LR      LR
      comp=Z,21µm,14.5s
HRA   Herat             47.43 319   P       P         06 13 09.1 -1.0
JMN   Monobe            47.43  42   P       P         06 13 10.0 +0.1
JMN   Monobe            47.43  42   P       P         06 13 10.5 +0.6
USP   Ospenovka         47.54 337   P       P         06 13 11.5 +0.9
      SNR=35
SGDS  Sogindy           47.64 337  eP       P         06 13 11.2 -0.2
TDK   Taldyqorghan      47.66 341  eP       P         06 13 11.5 +0.1
TDK                                 pmax    pmax
      comp=Z,89nm,1.3s
TDK   Taldyqorghan      47.66 341  eP       P         06 13 11.6 +0.1
      comp=Z,89nm,1.3s
SONM  Songino Array     47.90   8   P       P         06 13 14.2 +0.8
SONM  Songino Array     47.90   8   P       P         06 13 14.6 +1.2
      comp=Z,89nm,0.8s,baz=190,slow=9.1,SNR=135
SONM                                PcP     PcP       06 14 42.5 +0.8
      comp=Z,16nm,0.8s,baz=190,slow=3.8,SNR=4.6
      comp=Z,89nm,0.8s
SONM  Songino Array     47.90   8   P       P         06 13 14.2 +0.8
SONM                                pmax    pmax
      comp=Z,106nm,0.9s
ULN   Ulaanbaatar       48.02   8   P       P         06 13 15.1 +0.7
ULN   Ulaanbaatar       48.02   8c iP       P         06 13 15.4 +1.0
ULN                                 pmax    pmax
      comp=Z,91nm,1.0s
MK31  Makanchi Array    48.21 346c iP       P         06 13 16.4 +0.7
MKAR  Makanchi Array    48.21 346   P       P         06 13 16.2 +0.5
MKAR  Makanchi Array    48.21 346   P       P         06 13 16.5 +0.8
      comp=Z,82nm,0.8s,baz=161,slow=8.5,SNR=171
      comp=Z,82nm,0.8s
MAKZ  Makanchi          48.30 346   P       P         06 13 16.9 +0.5
MAKZ                                IAmb    IAmb      06 13 18.2
      comp=Z,58nm,0.8s
MAKZ  Makanchi          48.30 346   P       P         06 13 16.9 +0.5
MAKZ                                pmax    pmax
      comp=Z,58nm,0.9s
DZA   Taraz             48.54 334  eP       P         06 13 18.2 -0.1
DZA                                 pmax    pmax
      comp=Z,26nm,0.7s
DZA   Taraz             48.54 334  eP       P         06 13 18.3 -0.1
      comp=Z,26nm,0.7s
CHM   Chimkent          48.86 332  eP       P         06 13 20.8  0.0
CHM                                 pmax    pmax
      comp=Z,46nm,1.5s
CHM   Chimkent          48.86 332  eP       P         06 13 20.8  0.0
      comp=Z,46nm,1.5s
BBOO  Buckleboo         48.88 136   P       P         06 13 21.9 +0.9
BBOO                                IAmb    IAmb      06 13 32.4
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	comp=Z,28nm,0.9s						
BBOO	Buckleboo	48.88	136	P	P	06 13 22.9	+1.8
KK31	Karatay Array	49.07	334	P	P	06 13 22.0	-0.3
KK31				IAmb	IAmb	06 13 24.3	
	comp=Z,58nm,1.2s						
KK31	Karatay Array	49.07	334	i P	P	06 13 22.4	0.0
KKAR	Karatay Array	49.07	334	P	P	06 13 22.6	+0.2
KKAR				IAmb	IAmb	06 13 24.3	
	comp=Z,61nm,1.2s						
KKAR	Karatay Array	49.07	334	P	P	06 13 22.0	-0.4
KKAR	Karatay Array	49.07	334	P	P	06 13 22.0	-0.4
BTLS	Baital	49.21	338	eP	P	06 13 23.4	0.0
BTLS	Baital	49.21	338	eP	P	06 13 23.4	0.0
MTSU	Mount Surprise	49.30	114	P	P	06 13 24.2	-0.4
	comp=Z,33nm,1.0s						
MTSU	Mount Surprise	49.30	114	P	P	06 13 24.9	+0.3
BRLS	Borolday	49.31	333	eP	P	06 13 23.1	-1.1
BRLS	Borolday	49.31	333	eP	P	06 13 23.2	-1.1
CN2	Changchun	49.82	26	eP	P	06 13 28.0	-0.1
CN2				pmax	pmax		
	comp=Z,70nm,1.0s						
WHYH	Whyalla	50.06	135	P	P	06 13 31.8	+1.8
ZAK	Zakamensk	50.08	5	eP	P	06 13 30.3	+0.3
ZAK				pmax	pmax		
	comp=Z,30nm,1.0s						
PMG	Port Moresby	50.12	103	P	P	06 13 30.7	-0.1
PMG	Port Moresby	50.12	103	P	P	06 13 31.5	+0.7
PMG	Port Moresby	50.12	103	P	P	06 13 31.3	+0.5
PMG	Port Moresby	50.12	103	c iP	P	06 13 30.9	+0.1
PMG				pmax	pmax		
	comp=Z,236nm,0.8s						
JGF	Kuroka	50.85	42	P	P	06 13 35.3	-0.8
JGF				IAmb	IAmb	06 13 44.0	
	comp=Z,37nm,1.1s						
JGF	Kuroka	50.85	42	P	P	06 13 35.2	-0.9
MOY	Mondy	51.21	3	eP	P	06 13 39.5	+0.9
MOY				pmax	pmax		
	comp=Z,50nm,2.2s						
HTT	Hallett	51.22	135	P	P	06 13 40.2	+1.2
	comp=Z,14nm,0.9s						
HTT	Hallett	51.22	135	P	P	06 13 40.9	+2.0
PSTR	Posyet	51.51	31	⇑eP	P	06 13 42.7	+1.9
CTAO	Charters Tower	51.62	116	P	P	06 13 41.9	-0.2
CTAO	Charters Tower	51.62	116	P	P	06 13 43.7	+1.6
CTAO	Charters Tower	51.62	116	P	P	06 13 41.9	-0.2
CTAO				pmax	pmax		
	comp=Z,29nm,0.9s						
MSHR	Mys Shultsa	51.64	31	deP	P	06 13 42.5	+0.7
MSHR				pmax	pmax		
	comp=Z,41nm,0.8s						
MJB9	Matsu-Tunnel	51.95	42	P	P	06 13 44.4	+0.1
MAJO	Matsushiro	51.95	42	P	P	06 13 43.0	-1.3
MAJO	Matsushiro	51.95	42	P	P	06 13 45.2	+0.9
MAJO	Matsushiro	51.95	42	c iP	P	06 13 43.2	-1.1
MAJO				pmax	pmax		
	comp=Z,34nm,1.2s						
MJAR	Matsushiro Arr	51.95	42	P	P	06 13 44.0	-0.3
	comp=Z,21nm,0.9s,baz=222,slow=6.7,SNR=30						
MJAR				PcP	PcP	06 14 57.4	+0.6
	comp=Z,4.7nm,0.8s,baz=237,slow=4.1,SNR=5.1						
	comp=Z,21nm,0.9s						
IRK	Irkutsk	52.01	5	eP	P	06 13 44.8	+0.4
IRK				pmax	pmax		
	comp=Z,422nm,1.4s						
SEM	Semipalatinsk	52.07	346	eP	P	06 13 45.1	0.0
SEM				pmax	pmax		
	comp=Z,41nm,0.8s						
SEM	Semipalatinsk	52.07	346	eP	P	06 13 45.1	0.0
	comp=Z,41nm,0.8s						
QLP	Quilpie	52.12	125	P	P	06 13 46.4	+0.7
	comp=Z,175nm,0.8s						
QLP	Quilpie	52.12	125	P	P	06 13 46.9	+1.2
BNX	BinXian	52.20	26	⇑P	P	06 13 46.3	+0.3
BNX				pP	pP	06 13 50.9	-1.7
BNX				pmax	pmax		
	comp=Z,64nm,0.9s						
HIA	Hailar	52.27	18	IAmb	IAmb	06 13 48.2	
	comp=Z,56nm,0.9s						
HIA	Hailar	52.27	18	P	P	06 13 47.7	+1.2
MDJ	Mudanjiang	52.35	28	P	P	06 13 47.8	+0.8
MDJ				pmax	pmax		
	comp=Z,26nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,730nm,5.2s						
MDJ	Mudanjiang	52.35	28	P	P	06 13 47.4	+0.4
STKA	Stephens Creek	52.37	132	P	P	06 13 47.5	0.0
STKA	Stephens Creek	52.37	132	P	P	06 13 47.8	+0.3
	comp=Z,198nm,0.9s						
STKA	Stephens Creek	52.37	132	P	P	06 13 48.4	+0.9
	comp=Z,20nm,0.8s,baz=301,slow=6.8,SNR=17						
	comp=Z,20nm,0.8s						
STKA	Stephens Creek	52.37	132	P	P	06 13 49.0	+1.5
VLA	Vladivostok	52.40	31	deP	P	06 13 48.5	+1.1
VLA				pmax	pmax		
	comp=Z,80nm,0.9s						
OTUK	Ortayu	52.55	339	P	P	06 13 48.5	0.0
KURBB	Kurchatov Arra	52.70	345	P	P	06 13 50.3	+0.8
	comp=Z,46nm,0.8s,baz=168,slow=7.2,SNR=105						
KURBB				PcP	PcP	06 15 00.2	+1.0
	comp=Z,9.6nm,0.7s,baz=149,slow=3.1,SNR=5.1						
KURBB				S	S	06 21 17.8	+1.6
	comp=Z,0.7nm,0.9s,baz=160,slow=13,SNR=6.3						
	comp=Z,46nm,0.8s						
KURK	Kurchatov	52.76	345	P	P	06 13 50.4	+0.4
KURK	Kurchatov	52.76	345	c iP	P	06 13 50.7	+0.7
KURK				pmax	pmax		
	comp=Z,115nm,1.0s						
JSD	Sado	52.84	40	P	P	06 13 50.2	-0.6
CIT	Chita	53.18	12	eP	P	06 13 54.6	+1.4
CIT				e		06 14 02.8	
CIT				e		06 21 21.2	
CIT				pmax	pmax		
	comp=Z,241nm,2.1s						
USA0B	Ussuriysk Arra	53.22	30	P	P	06 13 53.9	+0.4
USA0B	Ussuriysk Arra	53.22	30	c iP	P	06 13 54.1	+0.6
USRK	Ussuriysk Ar.	53.22	30	P	P	06 13 53.1	-0.4
USRK	Ussuriysk Ar.	53.22	30	P	P	06 13 54.1	+0.6
	comp=Z,108nm,0.8s,baz=230,slow=5.5,SNR=134						
	comp=Z,108nm,0.8s						
USRK	Ussuriysk Ar.	53.22	30	P	P	06 13 53.1	-0.4
BRZS	Berezniki	53.90	340	eP	P	06 13 58.4	0.0
BRZS	Berezniki	53.90	340	eP	P	06 13 58.5	0.0
JMM	Marumori	54.40	42	P	P	06 14 01.9	-0.3
JMM	Marumori	54.40	42	P	P	06 14 02.9	+0.6
ZAA0	Zalesovo Array	54.49	351	P	P	06 14 03.4	+0.8
ZALV	Zalesovo Beam	54.49	351	P	P	06 14 02.9	+0.3
ZALV	Zalesovo Beam	54.49	351	P	P	06 14 03.4	+0.8
	comp=Z,227nm,0.8s,baz=182,slow=5.5,SNR=143						
	comp=Z,227nm,0.8s						
ZALV	Zalesovo Beam	54.49	351	i P	P	06 14 03.4	+0.8
ZALV				pmax	pmax		
	comp=Z,234nm,0.9s						
CMSA	Cobar Meteorol	55.32	130	P	P	06 14 09.6	+0.6
	comp=Z,74nm,0.8s						
RAYN	Ar Rayn	55.65	298	P	P	06 14 12.1	+0.4
RAYN	Ar Rayn	55.65	298	P	P	06 14 12.1	+0.4
RAYN				pmax	pmax		
	comp=Z,19nm,1.0s						
HEH	HeiHe	55.78	23	eP	P	06 14 12.4	+0.4
HEH				pmax	pmax		
	comp=Z,30nm,1.3s						
JTM	Tenmabayashi	56.20	39	P	P	06 14 14.8	-0.4
KLR	Kul'dur	56.77	26	c iP	P	06 14 19.6	+0.5
KLR				pmax	pmax		
	comp=Z,77nm,0.9s						
BVAR	Borovoye Array	57.24	341	P	P	06 14 22.2	-0.1
	comp=Z,51nm,0.8s,baz=142,slow=8.3,SNR=81						
	comp=Z,51nm,0.8s						
BRVK	Borovoye	57.30	341	P	P	06 14 22.6	-0.2
BRVK				IAmb	IAmb	06 14 23.8	
	comp=Z,53nm,1.0s						
BRVK	Borovoye	57.30	341	c iP	P	06 14 22.5	-0.3
BRVK				pmax	pmax		
	comp=Z,59nm,1.0s						
EIDS	Eidsvold	57.46	121	P	P	06 14 24.6	+0.1
EIDS				IAmb	IAmb	06 14 26.2	
	comp=Z,34nm,0.8s						
EIDS	Eidsvold	57.46	121	P	P	06 14 24.7	+0.3
	comp=Z,60nm,0.8s						
ERM	Erimo	58.18	39	P	P	06 14 29.4	+0.2
ERM				IAmb	IAmb	06 14 43.8	
	comp=Z,49nm,1.0s						
ERM	Erimo	58.18	39	P	P	06 14 29.5	+0.3
ERM	Erimo	58.18	39	c iP	P	06 14 29.2	0.0
ERM				pmax	pmax		
	comp=Z,36nm,0.9s						
JEM	Erimo	58.19	39	P	P	06 14 29.4	+0.2
AB31	Akbulak array	58.53	332	P	P	06 14 30.7	-0.8
AB31				IAmb	IAmb	06 14 32.4	
	comp=Z,42nm,0.8s						
AB31	Akbulak array	58.53	332	i P	P	06 14 30.8	-0.7
ABKAR	Akbulak array	58.53	332	P	P	06 14 31.6	+0.2
ZEA	Zeya	58.55	20	eP	P	06 14 31.6	+0.1
ZEA				pmax	pmax		
	comp=E,20nm,0.8s						
ZEA				pmax	pmax		
	comp=N,20nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,30nm,0.9s						
BOD	Bodaibo	58.75	10	eP	P	06 14 33.3	+0.5
BOD				pmax	pmax		
	comp=Z,121nm,1.0s						
ASAJ	Asahikawa	59.01	36	P	P	06 14 34.8	-0.2
ASAJ				pmax	pmax		
	comp=Z,49nm,0.9s						
JKA	Kamikawa-asahi	59.02	36	P	P	06 14 34.8	-0.2
JKA				IAmb	IAmb	06 14 45.6	
	comp=Z,49nm,0.9s						
ARMA	Armidale	59.58	126	P	P	06 14 41.0	+1.6
ARMA				IAmb	IAmb	06 14 42.7	
	comp=Z,40nm,0.9s						
ARMA	Armidale	59.58	126	P	P	06 14 41.2	+1.9
	comp=Z,59nm,1.2s						
ARMA	Armidale	59.58	126	P	P	06 14 40.9	+1.6
KIBK	Kibwezi	59.76	267	P	P	06 14 41.1	+0.3
AKTO	Aktyubinsk	60.25	332	P	P	06 14 42.8	-0.6
	comp=Z,11nm,0.8s,baz=145,slow=4.3,SNR=15						
	comp=Z,11nm,0.8s						
KMBO	Kilima Mbogo	60.52	269	P	P	06 14 47.0	+0.8
KMBO	Kilima Mbogo	60.52	269	P	P	06 14 47.0	+0.8
KMBO				pmax	pmax		
	comp=Z,13nm,1.2s						
YSS	Yuzhno-Sakhali	60.74	34	P	P	06 14 47.1	+0.3
YSS	Yuzhno-Sakhali	60.74	34	P	P	06 14 47.9	+1.1
YSS	Yuzhno-Sakhali	60.74	34	eP	P	06 14 46.7	-0.1
YSS				e		06 14 52.4	
YSS				pmax	pmax		
	comp=Z,400nm,3.4s						
YSS				pmax	pmax		
	comp=Z,220nm,0.8s						
YSS				pmax	pmax		
	comp=N,70nm,0.7s						
YUK	Yuzh-Kuril'sk	60.94	38	⇓eP	P	06 14 49.0	+0.8
H04N2	CROZET ISLANDS	61.38	215	T	T	07 21 12.3	
	baz=55,slow=74,SNR=429						
H04N1	CROZET ISLANDS	61.40	215	T	T	07 21 13.4	
	baz=55,slow=74,SNR=400						
H04N3	CROZET ISLANDS	61.40	215	T	T	07 21 12.4	
	baz=55,slow=74,SNR=440						
H04S1	CROZET ISLANDS	61.71	214	T	T	07 21 34.5	
	baz=55,slow=76,SNR=654						
H04S3	CROZET ISLANDS	61.73	214	T	T	07 21 34.2	
	baz=55,slow=76,SNR=579						
H04S2	CROZET ISLANDS	61.73	214	T	T	07 21 35.5	
	baz=55,slow=76,SNR=511						
MAK	Makhachkala	61.75	320	eP	P	06 14 49.3	-4.3
MAK				e		06 17 08.2	
MAK				eS	S	06 23 10.1	-5.5
MAK				eSS	SS	06 27 13.5	-4.1
MAK				pmax	pmax		
	comp=Z,170nm,1.2s						
MAK				MLR	MLR		
	comp=Z,5µm,16.0s						
GNI	Garni	62.30	316	P	P	06 14 57.5	-0.2
GNI				IAmb	IAmb	06 15 38.0	
	comp=Z,35nm,0.9s						
GNI	Garni	62.30	316	c iP	P	06 14 58.0	+0.3
GNI				pmax	pmax		
	comp=Z,24nm,1.0s						
GEVA	Gevas	62.73	314	P	P	06 15 00.6	+0.1
TYV	Tymovskoe	63.03	30	eP	P	06 15 02.8	+0.7
TYV				pmax	pmax		
	comp=Z,300nm,2.9s						
TYV				pmax	pmax		
	comp=Z,30nm,1.2s						
ALEG	Aligegeo Malai	63.33	100	P	P	06 15 04.2	-0.6
GURO	Guroymak-BITLI	63.56	314	P	P	06 15 05.9	-0.2
SVE	Sverdlovsk	63.69	338	deP	P	06 15 06.4	+0.1
SVE				eS	S	06 23 39.4	-0.1
SVE				pmax	pmax		
	comp=Z,85nm,1.2s						
MARD	Mardin	64.02	312	P	P	06 15 09.5	+0.4
ARTI	Arti	64.23	337	P	P	06 15 08.9	-1.0
ARTI				IAmb	IAmb	06 15 10.5	
	comp=Z,56nm,1.2s						
ARTI	Arti	64.23	337	c iP	P	06 15 09.4	-0.5
ARTI						06 15 39.3	
ARTI						06 17 32.3	
ARTI				S	S	06 23 48.5	+2.3
ARTI				SS	SS	06 27 56.5	+0.6
ARTI				pmax	pmax		
	comp=Z,33nm,0.9s						
NCK	Nalchik	64.53	319	⇓eP	P	06 15 12.9	+0.7
NCK				pmax	pmax		
	comp=Z,15nm,0.4s						
KBZ	Khabaz	65.08	319	P	P	06 15 16.0	+0.3
	comp=Z,21nm,0.8s,baz=132,slow=5.5,SNR=30						
	comp=Z,21nm,0.8s						
KBZ	Khabaz	65.08	319	c iP	P	06 15 15.7	0.0
KBZ				pmax	pmax		
	comp=Z,27nm,0.9s						
KOPT	Kop Dagi	65.22	315	P	P	06 15 17.1	0.0
SHA1	Shidzhatmaz	65.24	319	c iP	P	06 15 17.2	+0.1
KIV	Kislovodsk	65.32	319	P	P	06 15 17.3	-0.1
KIV				IAmb	IAmb	06 15 18.6	
	comp=Z,39nm,0.8s						
KIV	Kislovodsk	65.32	319	⇓P	P	06 15 17.5	+0.1
KIV	Kislovodsk	65.32	319	eP	P	06 15 17.0	-0.4
KIV				pmax	pmax		
	comp=Z,33nm,1.0s						
GOF	Gofitskoye	65.57	321	ceP	P	06 15 18.7	-0.2
YAK	Yakutsk	66.09	16	P	P	06 15 21.6	-0.2
YAK	Yakutsk	66.09	16	P	P	06 15 21.7	-0.1
	comp=Z,167nm,0.8s,baz=219,slow=3.1,SNR=35						
	comp=Z,167nm,0.8s						
YAK	Yakutsk	66.09	16	c iP	P	06 15 21.6	-0.2
YAK				eS	S	06 24 07.5	-1.3
YAK				pmax	pmax		
	comp=Z,60nm,0.9s						
YAK				pmax	pmax		
	comp=N,27nm,0.9s						
YAK				pmax	pmax		
	comp=E,27nm,0.9s						
YAK				smax	smax		
	comp=N,392nm,10.3s						
YAK				smax	smax		
	comp=E,601nm,11.4s						
ARPR	Arapgir-MALATY	66.45	313	IAmb	IAmb	06 16 15.6	
	comp=Z,25nm,1.1s						
BELG	Belogornoye	66.58	329	c iP	P	06 15 24.1	-1.1
BELG				pmax	pmax		
	comp=Z,11nm,0.9s						
GAZ	Gaziantep	66.65	311	P	P	06 15 26.4	+0.3
GAZ				IAmb	IAmb	06 15 28.2	
	comp=Z,32nm,0.9s						
MMAI	Mount Meron Ar	66.86	306	P	P	06 15 27.7	+0.2
	comp=Z,1.1nm,0.3s,baz=91,slow=8.3,SNR=4.1						
	comp=Z,1.1nm,0.3s						
MBAR	Mbarara	67.03	269	P	P	06 15 28.6	-0.4
MBAR	Mbarara	67.03	269	P	P	06 15 28.6	-0.4
MBAR				pmax	pmax		
	comp=Z,17nm,1.3s						
CASY	Casey	67.10	174	P	P	06 15 29.2	+1.0
CASY				IAmb	IAmb	06 15 38.5	
	comp=Z,56nm,1.6s						
SOC	Sochi	67.13	318	eP	P	06 15 26.6	-2.3
SOC				e		06 17 53.2	
SOC				ePPP	PPP	06 19 30.8	
SOC				eS	S	06 24 21.3	-0.8
SOC				eSSS	SSS	06 31 39.8	
SOC				pmax	pmax		
	comp=Z,29nm,0.8s						
SOC				MLR	MLR		
	comp=Z,2µm,17.0s						
BNN	Bunyan	68.20	312	P	P	06 15 35.8	-0.2
TOKA	Tokat	68.21	314	P	P	06 15 36.1	+0.3
TOKA				IAmb	IAmb	06 15 37.4	
	comp=Z,16nm,0.8s						
ANN	Anapa	69.11	319	eP	P	06 15 39.0	-2.3
ANN				e*PP	pP	06 15 42.0	-6.0
ANN				eS	S	06 24 43.4	-2.3
ANN				pmax	pmax		
	comp=Z,16nm,0.7s						
ANN				MLR	MLR		
	comp=Z,2µm,15.0s						
ANN				MLR	MLR		
	comp=E,1µm,14.0s						
ANN				MLR	MLR		
	comp=N,470nm,11.0s						
VRH	Novokhopyorsk	69.14	326	eP	P	06 15 38.8	-2.5
VRH				pmax	pmax		
	comp=Z,30nm,0.9s						
NRIK	Noril'sk	69.22	356	P	P	06 15 40.9	-0.6
NRIK	Noril'sk	69.22	356	P	P	06 15 41.4	-0.1
	comp=Z,36nm,0.8s,baz=162,slow=5.5,SNR=27						
	comp=Z,36nm,0.8s						
NRIK	Noril'sk	69.22	356	c iP	P	06 15 41.4	-0.1
NRIK				pmax	pmax		
	comp=Z,63nm,1.0s						
KIRV	Kirov	69.32	335	P	P	06 15 42.2	-0.1
	comp=Z,38nm,0.8s,baz=100,slow=1.5,SNR=14						
	comp=Z,38nm,0.8s						
KIRV	Kirov	69.32	335	c iP	P	06 15 42.0	-0.3
DIKM	Dikmen	69.52	315	⇓P	P	06 15 43.5	-0.4
KIRS	Kirsehir-Merke	69.72	312	⇓P	P	06 15 45.0	-0.3
BR104	Keskin Array S	70.09	312	P	P	06 15 47.0	-0.7
	comp=Z,89nmcomp=Z,12nm,0.9s						
BR131	Keskin Array S	70.10	312	P	P	06 15 47.0	-0.7
BR131	Keskin Array S	70.10	312	P	P	06 15 47.0	-0.7
BR131				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BRTR	Keskin Array B	70.10	312	P	P	06 15 46.5	-1.2
BRTR	Keskin Array B	70.10	312	P	P	06 15 46.8	-0.9
	comp=Z,6.3nm,0.8s,baz=135,slow=7.2,SNR=27						
	comp=Z,6.3nm,0.8s						
BRTR	Keskin Array B	70.10	312	i P	P	06 15 47.2	-0.5
BRTR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BR105	Keskin Array S	70.11	312	P	P	06 15 46.4	-1.4
	comp=Z,84nmcomp=Z,9.0nm,0.8s						
BR106	Keskin Array S	70.12	312	P	P	06 15 46.8	-1.0
	comp=Z,72nmcomp=Z,9.7nm,0.9s						
SKR	Severo-Kuril’s	70.23	35	eP	P	06 15 49.4	+1.4
SKR				pmax	pmax		
	comp=Z,205nm,1.0s						
VORD	Divnogorie	70.41	325	eP	P	06 15 45.8	-3.4
VORD				pmax	pmax		
	comp=Z,20nm,1.0s						
DZM	Mont Dzumac	70.43	113	P	P	06 15 49.9	-0.1
DZM				IAmb	IAmb	06 15 56.0	
	comp=Z,17nm,0.8s						
ILGA	Ilgaz	70.43	314	P	P	06 15 49.2	-0.6
ILGA				IAmb	IAmb	06 16 25.7	
	comp=Z,55nm,1.0s						
BZK	Bozkurt	70.50	315	P	P	06 15 49.9	0.0
BZK	Bozkurt	70.50	315	⇑P	P	06 15 50.4	+0.5
BZK	Bozkurt	70.50	315	P	P	06 15 49.4	-0.5
	comp=Z,800nmcomp=Z,98nm,0.9s						
VSR	Storozhevoye	70.59	325	eP	P	06 15 46.3	-4.0
VSR				pmax	pmax		
	comp=Z,20nm,0.9s						
VORR	Voronezh	70.76	326	eP	P	06 15 47.0	-4.3
VORR				pmax	pmax		
	comp=Z,30nm,1.0s						
ANTO	Ankara	70.77	312	P	P	06 15 51.2	-0.5
ANTO	Ankara	70.77	312	P	P	06 15 51.2	-0.5
ANTO				pmax	pmax		
	comp=Z,18nm,1.0s						
ANTO	Ankara	70.77	312	P	P	06 15 50.0	-1.7
	comp=Z,265nmcomp=Z,8.1nm,1.5s						
YATNC	Mamie plateau,	70.84	113	P	P	06 15 53.8	+1.4
LPSR	Galich'ya Gora	71.31	327	eP	P	06 15 52.3	-2.3
LPSR				pmax	pmax		
	comp=Z,30nm,0.9s						
SIM	Simferopol'	71.37	318	eP	P	06 15 52.5	-2.7
SIM				eS	S	06 25 04.6	-7.6
SIM				pmax	pmax		
	comp=Z,50nm,1.1s						
SIM				MLR	MLR		
	comp=Z,2µm,16.0s						
MA2	Magadan	71.86	25	P	P	06 15 57.9	0.0
MA2				IAmb	IAmb	06 15 59.0	
	comp=Z,32nm,0.7s						
MA2	Magadan	71.86	25	P	P	06 15 57.3	-0.6
	comp=Z,31nm,0.8s,baz=226,slow=4.5,SNR=18						
	comp=Z,31nm,0.8s						
MA2	Magadan	71.86	25	P	P	06 15 57.8	0.0
MA2	Magadan	71.86	25	c iP	P	06 15 58.3	+0.5
MA2				pmax	pmax		
	comp=Z,32nm,0.7s						
MA2	Magadan	71.86	25	P	P	06 15 57.2	-0.6
	comp=Z,760nmcomp=Z,57nm,0.8s						
ISP	Isparta	71.94	310	eP	P	06 15 59.9	+1.0
MREMI	Moremi	71.99	246	P	P	06 15 59.7	+0.2
MREMI				IAmb	IAmb	06 16 22.5	
	comp=Z,24nm,0.8s						
MAW	Mawson	72.01	193	P	P	06 15 59.7	+1.2
	comp=Z,7.0nm,1.3s						
MAW	Mawson	72.01	193	P	P	06 16 00.6	+2.1
	comp=Z,6.5nm,0.6s,baz=46,slow=5.1,SNR=17						
	comp=Z,6.5nm,0.6s						
MDUB	Mudurnu	72.11	313	P	P	06 15 59.6	-0.2
PEA0B	Petropavlovsk-	72.14	33	P	P	06 15 59.4	-0.2
PEA0B				IAmb	IAmb	06 16 00.5	
	comp=Z,27nm,0.8s						
PEA0B	Petropavlovsk-	72.14	33	c iP	P	06 15 59.8	+0.2
PETK	Petropavlovsk-	72.14	33	P	P	06 15 59.0	-0.6
PETK	Petropavlovsk-	72.14	33	P	P	06 15 59.2	-0.4
	comp=Z,23nm,0.9s,baz=204,slow=3.3,SNR=40						
	comp=Z,23nm,0.9s						
PETK	Petropavlovsk-	72.14	33	P	P	06 15 59.0	-0.6
ELL	Elmali	72.16	309	P	P	06 16 00.0	-0.3
ELL	Elmali	72.16	309	P	P	06 16 00.0	-0.3
ELL				pmax	pmax		
	comp=Z,120nm,1.2s						
BORA	Eskisehir	72.50	312	P	P	06 16 01.4	-0.8
PET	Petropavlovsk	72.63	34	P	P	06 16 01.9	-0.6
PET	Petropavlovsk	72.63	34	P	P	06 16 03.0	+0.5
PET	Petropavlovsk	72.63	34	eP	P	06 16 03.1	+0.5
PET				pmax	pmax		
	comp=Z,144nm,0.6s						
PET	Petropavlovsk	72.63	34	P	P	06 16 02.0	-0.6
	comp=Z,2µmcomp=Z,174nm,1.0s						
MOS	Moscow	73.35	329	eP	P	06 16 04.8	-1.9
MOS				e		06 16 18.5	
MOS				eS	S	06 25 29.2	-5.2
MOS				pmax	pmax		
	comp=Z,58nm,0.9s						
YLV	Yalova	73.47	312	P	P	06 16 07.0	-0.9
	comp=Z,33nm,1.0s						
LPHEP	Lephephe	73.55	246	P	P	06 16 08.5	-0.2
LPHEP	Lephephe	73.55	246	i P	P	06 16 09.7	+0.9
KSANE	Kasane	73.55	251	P	P	06 16 08.8	0.0
OBN	Obninsk	73.64	328	ceP	P	06 16 08.0	-0.4
OBN				e		06 16 23.7	
OBN				e		06 18 52.6	
OBN				ePPP	PPP	06 20 34.4	
OBN				pmax	pmax		
	comp=Z,49nm,1.0s						
OBN				MLR	MLR		
	comp=Z,7µm,18.0s						
TIXI	Tiksi	73.93	10	P	P	06 16 08.8	-1.0
TIXI	Tiksi	73.93	10	P	P	06 16 09.4	-0.4
	comp=Z,89nm,0.8s,baz=234,slow=2.3,SNR=82						
	comp=Z,89nm,0.8s						
TIXI	Tiksi	73.93	10	i P	P	06 16 09.5	-0.4
TIXI				pmax	pmax		
	comp=Z,122nm,1.0s						
LBTB	Lobatse	74.01	244	P	P	06 16 11.0	-0.4
LBTB	Lobatse	74.01	244	P	P	06 16 11.0	-0.4
LBTB				pmax	pmax		
	comp=Z,15nm,1.1s						
KARP	Karpathos	74.08	307	P	P	06 16 11.0	-0.5
KARP				IAmb	IAmb	06 16 12.8	
	comp=Z,57nm,1.0s						
KARP	Karpathos	74.08	307	eP	P	06 16 11.7	+0.2
KARP	Karpathos	74.08	307	P	P	06 16 11.4	-0.1
	comp=Z,71nm,0.9s						
SEY	Seymchan	74.33	23	P	P	06 16 12.7	+0.3
	comp=Z,28nm,0.9s,baz=241,slow=6.3,SNR=44						
	comp=Z,28nm,0.9s						
SEY	Seymchan	74.33	23	c iP	P	06 16 12.5	+0.2
SEY				pmax	pmax		
	comp=Z,49nm,1.1s						
KLMR	Klimovskoe	74.76	334	eP	P	06 16 12.4	-2.5

KLMR				e		06 16 24.2	
KLMR				S	S	06 25 49.1	-1.0
KLMR				pmax	pmax		
	comp=Z,34nm,1.3s						
MAKGR	Makgori	74.83	243	P	P	06 16 16.1	-0.1
BOSA	Boshof	74.84	240	P	P	06 16 17.0	+0.8
	comp=Z,8.2nm,0.9s,baz=106,slow=7.1,SNR=10						
	comp=Z,8.2nm,0.9s						
TIRR	Tirgusor	75.12	316	P	P	06 16 16.8	-0.5
TIRR	Tirgusor	75.12	316	⇓P	P	06 16 17.1	-0.2
TIRR	Tirgusor	75.12	316	P	P	06 16 16.8	-0.5
TIRR				pmax	pmax		
	comp=Z,16nm,0.9s						
TIRR	Tirgusor	75.12	316	P	P	06 16 16.2	-1.1
	comp=Z,23nm,1.3s						
SKOMA	Sekoma	75.45	245	i P	P	06 16 20.2	+0.5
ICOR	Ion Corvin	75.47	316	⇓P	P	06 16 19.4	+0.1
CFR	Carcaliu	75.50	317	⇑P	P	06 16 19.2	-0.3
CFR	Carcaliu	75.50	317	P	P	06 16 19.1	-0.3
SORM	Soroca	76.11	320	⇑P	P	06 16 22.9	-0.1
SORM	Soroca	76.11	320	P	P	06 16 22.8	-0.1
AK09	Malin Array Si	76.21	322	P	P	06 16 22.2	-1.2
AK10	Malin Array Si	76.23	322	P	P	06 16 22.2	-1.3
MSZ	Milford Sound	76.24	136	P	P	06 16 26.1	+2.5
AK08	Malin Array Si	76.24	322	P	P	06 16 22.8	-0.8
AK07	Malin Array Si	76.24	322	P	P	06 16 22.1	-1.5
AK06	Malin Array Si	76.26	322	P	P	06 16 22.6	-1.1
AK05	Malin Array Si	76.26	322	P	P	06 16 22.4	-1.3
AK02	Malin Array Si	76.27	322	P	P	06 16 22.0	-1.8
AKASG	Malin Array Be	76.28	322	P	P	06 16 23.3	-0.5
AKASG	Malin Array Be	76.28	322	P	P	06 16 23.2	-0.6
	comp=Z,11nm,0.8s,baz=91,slow=4.9,SNR=38						
	comp=Z,11nm,0.8s						
AKASG	Malin Array Be	76.28	322	i P	P	06 16 23.2	-0.6
AKASG				pmax	pmax		
	comp=Z,17nm,0.8s						
AKBB	Malin Array Si	76.28	322	P	P	06 16 23.2	-0.6
AKBB				IAmb	IAmb	06 16 24.2	
	comp=Z,21nm,0.8s						
AKBB	Malin Array Si	76.28	322	c iP	P	06 16 23.0	-0.8
AKBB				pmax	pmax		
	comp=Z,23nm,0.8s						
AKBB	Malin Array Si	76.28	322	P	P	06 16 22.0	-1.8
AK01	Malin Array Si	76.28	322	P	P	06 16 22.5	-1.3
KIEV	Kiev	76.28	322	P	P	06 16 23.1	-0.7
KIEV				IAmb	IAmb	06 16 24.2	
	comp=Z,19nm,0.8s						
KIEV	Kiev	76.28	322	⇑P	P	06 16 23.8	0.0
KIEV	Kiev	76.28	322	P	P	06 16 23.1	-0.7
KIEV				pmax	pmax		
	comp=Z,19nm,0.8s						
KIEV	Kiev	76.28	322	P	P	06 16 22.2	-1.6
	comp=Z,126nm,0.9s						
AK12	Malin Array Si	76.30	322	P	P	06 16 22.6	-1.3
AK11	Malin Array Si	76.30	322	P	P	06 16 22.4	-1.5
AK04	Malin Array Si	76.32	322	P	P	06 16 22.5	-1.5
AK14	Malin Array Si	76.33	322	P	P	06 16 22.6	-1.5
WHZ	Wether Hill Ro	76.56	138	P	P	06 16 26.1	+0.6
VRI	Vrincioaia	76.62	317	⇑P	P	06 16 26.7	+0.8
VRI	Vrincioaia	76.62	317	P	P	06 16 26.7	+0.8
PLOR	Plostina	76.67	317	⇑P	P	06 16 27.0	+0.7
PLOR	Plostina	76.67	317	P	P	06 16 26.9	+0.7
JCZ	Jackson Bay	76.69	136	P	P	06 16 27.8	+1.4
APZ	The Paps	76.82	138	P	P	06 16 29.5	+2.4
KGCAE	Kacgae	76.83	247	i P	P	06 16 29.0	+1.3
TESR	Tescani	76.83	318	⇓P	P	06 16 28.0	+0.9
MI30	MI30,Zelenitsa	76.92	322	P	P	06 16 26.1	-1.3
	comp=Z,45nm,1.0s						
LUBAR	Lubar, Ukraine	76.96	321	P	P	06 16 26.2	-1.5
MI29	MI29, Kamyanyy	77.04	322	P	P	06 16 27.3	-0.8
	comp=Z,234nm,1.0s						
MLR	Muntele Rosu	77.07	317	P	P	06 16 28.5	-0.1
MLR				IAmb	IAmb	06 16 30.2	
	comp=Z,32nm,1.0s						
MLR	Muntele Rosu	77.07	317	⇑P	P	06 16 29.8	+1.2
MLR	Muntele Rosu	77.07	317	P	P	06 16 28.5	-0.1
MLR				pmax	pmax		
	comp=Z,32nm,1.0s						
MLR	Muntele Rosu	77.07	317	P	P	06 16 28.5	-0.1
	comp=Z,36nm,1.2s						
MI28	Mi28,Pidlybu	77.29	322	P	P	06 16 28.4	-1.1
PRAR	RASCA	77.31	319	⇓P	P	06 16 29.8	0.0
QNGWA	Qangwa	77.48	250	i P	P	06 16 32.8	+1.4
DOPR	Dopca	77.56	317	⇑P	P	06 16 31.9	+0.7
GRTLG	Ghanzi	77.60	248	i P	P	06 16 33.0	+1.0
HORU	Horodok	77.62	321	P	P	06 16 29.7	-1.7
VOIR		77.67	317	⇓P	P	06 16 31.9	0.0
VOIR		77.67	317	P	P	06 16 31.9	0.0
VOIR		77.67	317	P	P	06 16 30.9	-1.0
	comp=Z,6.9nm,0.8s						
TUZ	Tuapeka	77.71	137	P	P	06 16 33.4	+1.4
LBZ	Lake Benmore	77.74	136	P	P	06 16 32.6	+0.4
WVZ	Waitaha Valley	77.85	134	P	P	06 16 33.7	+0.9
ARR	Arges	77.95	316	⇑P	P	06 16 33.1	-0.4
BURAR	Bucovina Array	78.03	319	P	P	06 16 34.2	+0.3
BURAR				IAmb	IAmb	06 16 36.3	
	comp=Z,29nm,0.8s						
BURAR	Bucovina Array	78.03	319	⇑P	P	06 16 34.8	+0.9
BURAR	Bucovina Array	78.03	319	P	P	06 16 34.7	+0.9
MNK	Minsk	78.14	326	i P	P	06 16 32.0	-2.1
	comp=E,24nm,0.9s						
MNK				i P	P	06 16 32.0	-2.1
	comp=N,39nm,1.0s						
MNK				i P	P	06 16 32.0	-2.1
	comp=Z,48nm,0.9s,baz=106						
MNK				i PP	PP	06 19 28.5	-2.3
MNK				i PPP	PPP	06 21 15.9	
MNK				i S	S	06 26 26.9	-0.6
MNK				i SS	SS	06 31 29.4	-0.1
MNK				i SSS	SSS	06 34 53.6	
MNK				i LQ	LQ	06 45 25.4	
MNK				i LR	LR	06 50 23.4	
MNK				i LRM	MLR	06 52 56.8	
	comp=E,811nm,18.2s						
MNK				i LRM	MLR	06 53 16.6	
	comp=Z,3µm,16.5s						
MNK	Minsk	78.14	326	i P	P	06 16 32.0	-2.1
MNK				i		06 19 28.4	
MNK				i PPP	PPP	06 21 15.9	
MNK				i S	S	06 26 26.8	-0.6
MNK				i SS	SS	06 31 29.3	-0.1
MNK				i SSS	SSS	06 34 53.5	
MNK				pmax	pmax		
	comp=E,24nm,0.9s						
MNK				pmax	pmax		
	comp=Z,48nm,0.9s						
MNK				pmax	pmax		
	comp=N,39nm,1.0s						
MNK				MLR	MLR		
	comp=E,811nm,18.0s						
MNK				MLR	MLR		
	comp=Z,3µm,17.0s						
ODZ	Otahua Downs	78.20	136	P	P	06 16 34.3	-0.4
RPZ	Rata Peaks	78.21	135	P	P	06 16 35.2	+0.4
RPZ	Rata Peaks	78.21	135	P	P	06 16 36.3	+1.4
INZ	Inchbonnie	78.29	134	P	P	06 16 34.8	-0.5
KSV	Kosov	78.29	319	P	P	06 16 33.9	-1.3
DSZ	Denniston Nort	78.36	133	P	P	06 16 36.6	+0.9
RNPP5	Staryi Chortor	78.45	322	P	P	06 16 34.7	-1.3
RNPP9	Sopachiv	78.49	323	P	P	06 16 34.7	-1.5
OUZ	Omahuta	78.64	126	P	P	06 16 37.0	-0.3
QRZ	Quartz Range	78.73	132	P	P	06 16 36.7	-1.1
QRZ				IAmb	IAmb	06 17 09.4	
	comp=Z,65nm,1.0s						
QRZ	Quartz Range	78.73	132	P	P	06 16 39.6	+1.9
STNU	Starunia	78.74	320	P	P	06 16 36.6	-1.1
RAKU	Rahkiv	78.81	319	P	P	06 16 38.0	-0.1
NACGM	Naroch	78.87	326	eP	P	06 16 38.8	+0.7
	comp=Z,34nm,0.9s,baz=106						
LTZ	Lake Taylor	78.90	134	P	P	06 16 39.5	+0.8
THZ	Tophouse	79.17	133	P	P	06 16 41.0	+0.8
GZR	Gura Zlata	79.24	316	⇓P	P	06 16 41.3	+0.7
GZR	Gura Zlata	79.24	316	P	P	06 16 41.2	+0.7
MARR	Marisel-Cluj	79.24	317	⇑P	P	06 16 41.1	+0.6
MEZ	Mezhgor'ye	79.34	319	P	P	06 16 41.3	+0.3
MQZ	McQueen’s Vall	79.34	135	P	P	06 16 43.1	+2.0
WCZ	Waipu Caves	79.35	127	P	P	06 16 43.2	+2.0
SYO	Syowa Base	79.37	198	⇓eP	P	06 16 42.4	+1.8
HERR	Herculane	79.39	316	⇑P	P	06 16 42.0	+0.7
ISAL	Salakas	79.41	327	eP	P	06 16 41.5	+0.4
GVZ	Greta Valley S	79.48	134	P	P	06 16 43.2	+1.4
BRIU	Brid	79.63	319	P	P	06 16 42.9	+0.4
BOVS	Bovan	79.69	314	⇑P	P	06 16 43.2	+0.3
KHZ	Kahutara	79.75	133	P	P	06 16 44.1	+0.9
SURR	Surduc	79.75	316	⇑P	P	06 16 44.3	+1.1
LVZ	Lovozero	79.83	340	P	P	06 16 43.2	0.0
LVZ				IAmb	IAmb	06 16 43.6	
	comp=Z,43nm,1.0s						
LVZ	Lovozero	79.83	340	ceP	P	06 16 42.7	-0.5
LVZ				pmax	pmax		
	comp=Z,55nm,1.0s						
LVZ	Lovozero	79.83	340	P	P	06 16 41.6	-1.6
	comp=Z,59nm,1.5s						
BERU	Beregovo	79.85	319	P	P	06 16 43.5	-0.2
VSU	Vasula	79.87	330	deP	P	06 16 43.0	-0.5
VSU				pmax	pmax		
	comp=Z,20nm,0.8s						
VSU	Vasula	79.87	330	eP	P	06 16 42.8	-0.8
MDVR	Moldovita	79.87	315	⇓P	P	06 16 44.5	+0.5
BZS	Buzias	80.08	316	⇓P	P	06 16 45.0	0.0
BZS	Buzias	80.08	316	P	P	06 16 44.9	0.0
HOLU	Holmets	80.08	319	P	P	06 16 44.9	0.0
APA	Apatity	80.12	339	⇓iP	P	06 16 41.5	-3.2
APA				pmax	pmax		
	comp=Z,13nm,0.8s						
HIZ	Hauiti	80.12	129	P	P	06 16 47.5	+2.1
VRZ	Vera Road	80.14	130	P	P	06 16 46.8	+1.4
MKAZ	Moumakai	80.16	128	P	P	06 16 47.4	+1.8
KOLS	Kolonicke sedl	80.23	320	eP	P	06 16 46.6	+0.8
KOLS				pmax	pmax		
	comp=Z,41nm,0.9s						
KOLS	Kolonicke sedl	80.23	320	eP	P	06 16 46.6	+0.8
WAZ	Wanganui	80.41	130	P	P	06 16 48.6	+1.7
PABE	Paberze	80.58	326	eP	P	06 16 47.2	-0.2
PKVZ	Pokaka	80.61	130	P	P	06 16 49.2	+1.1
TWVZ	Taurewa	80.65	130	P	P	06 16 49.8	+1.4
SUW	Suwalki	80.69	325	eP	P	06 16 48.5	+0.4
VSVD	Vaisvydziai	80.71	327	eP	P	06 16 48.3	+0.1
COVZ	Chateau Observ	80.75	130	P	P	06 16 50.4	+1.5
FWVZ	Far West T-bar	80.77	130	P	P	06 16 50.2	+1.0
TRVZ	Turoa	80.77	130	P	P	06 16 50.6	+1.4
WTVZ	West Tongariro	80.78	130	P	P	06 16 50.6	+1.5
NGZ	Ngauruhoe	80.79	130	P	P	06 16 50.1	+0.9
NNVZ	North Ngauruho	80.80	130	P	P	06 16 50.3	+1.1
WNVZ	Wahianoa	80.81	130	P	P	06 16 50.6	+1.2
OTVZ	Oturere	80.84	130	P	P	06 16 50.9	+1.4
ETVZ	East Tongariro	80.87	130	P	P	06 16 51.3	+1.8
MOVZ	Moawhango	80.94	130	P	P	06 16 50.3	+0.4
STHS	Stebnicka Huta	80.98	320	eP	P	06 16 50.4	+0.6
STHS				pmax	pmax		
	comp=Z,17nm,0.8s						
STHS	Stebnicka Huta	80.98	320	eP	P	06 16 50.4	+0.6
MRZ	Mangatainoka R	80.99	131	P	P	06 16 50.7	+0.7
FIA1	FINESS Array S	81.01	332	P	P	06 16 49.3	-0.3
FIA1				IAmb	IAmb	06 16 50.8	
	comp=Z,46nm,0.8s						
FINES	FINESS Array B	81.01	332	P	P	06 16 49.4	-0.3
FINES	FINESS Array B	81.01	332	P	P	06 16 49.1	-0.5
	comp=Z,16nm,0.8s,baz=104,slow=8.0,SNR=31						
	comp=Z,16nm,0.8s						
FINES	FINESS Array B	81.01	332	i P	P	06 16 49.7	+0.1
FINES				pmax	pmax		
	comp=Z,16nm,0.8s						
TSZ	Takapari Road	81.19	131	P	P	06 16 51.9	+0.8
PDG	Podgorica	81.28	313	⇓P	P	06 16 51.3	-0.2
KECS	Kecovo	81.32	319	eP	P	06 16 52.2	+0.6
KECS				pmax	pmax		
	comp=Z,16nm,0.8s						
KECS	Kecovo	81.32	319	eP	P	06 16 52.2	+0.6
PNHZ	Pukenui	81.35	130	P	P	06 16 52.9	+0.9
MTSE	Matsula	81.41	330	eP	P	06 16 52.1	+0.3
BKZ	Black Stump Fm	81.48	130	P	P	06 16 53.2	+0.5
BKZ	Black Stump Fm	81.48	130	P	P	06 16 53.3	+0.6
MEF	Metsahovi	81.49	331	eP	P	06 16 52.5	+0.3
BFZ	Birch Farm	81.49	131	P	P	06 16 53.5	+0.9
NIE	Niedzica	81.59	320	P	P	06 16 52.9	-0.1
	comp=Z,8.0nm,1.1s						
PSZ	Piszkesteto	81.62	318	⇓P	P	06 16 54.2	+0.8
PSZ	Piszkesteto	81.62	318	P	P	06 16 54.1	+0.8
PSZ	Piszkesteto	81.62	318	eP	P	06 16 54.0	+0.7
MTHZ	Maungataniwha	81.71	129	P	P	06 16 54.8	+0.9
KEF	Keuruu	81.76	333	eP	P	06 16 54.2	+0.6
BILL	Bilibino	81.76	21	⇑eP	P	06 16 52.8	-0.7
BILL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
RTZ	Ruatahuna	81.79	129	P	P	06 16 54.6	+0.2
URZ	Urewera	81.85	129	P	P	06 16 54.4	-0.2
KAHZ	Kahuranaki	81.85	130	P	P	06 16 56.0	+1.3
PXZ	Pawanui	81.87	130	P	P	06 16 55.7	+1.0
OJC	Ojcow	82.04	321	P	P	06 16 54.7	-0.6
	comp=Z,19nm,0.9s						
LANS	Liptovska Anna	82.08	320	eP	P	06 16 56.7	+1.0
LANS				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LANS	Liptovska Anna	82.08	320	eP	P	06 16 56.6	+0.9
SNGZ	Shannon Statio	82.09	129	P	P	06 16 56.3	+0.4
MWZ	Matawai	82.18	129	P	P	06 16 56.6	+0.2
MORH	Mrgy, Hungar	82.22	317	⇑P	P	06 16 56.4	0.0
MORH	Mrgy, Hungar	82.22	317	P	P	06 16 55.9	-0.5
	comp=Z,10.0nm,1.0s						
RUGZ	Raukumara Rang	82.26	128	P	P	06 16 56.4	-0.5
HAZ	Te Kaha	82.32	128	P	P	06 16 57.0	-0.1
VYHS	Vyhne	82.40	319	eP	P	06 16 57.7	+0.4
VYHS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VYHS	Vyhne	82.40	319	eP	P	06 16 57.7	+0.4
VADS	Vadso	82.44	341	eP	P	06 16 57.7	+0.7
TWGZ	Tauwhareparae	82.52	128	P	P	06 16 59.0	+0.8
SRO	Srobarova	82.66	318	eP	P	06 16 59.1	+0.5
SRO				pmax	pmax		
	comp=Z,20nm,0.9s						
SRO	Srobarova	82.66	318	eP	P	06 16 59.1	+0.5
PUZ	Puketiti	82.72	128	P	P	06 17 01.0	+1.8
CNGZ	Carnagh Statio	82.73	129	P	P	06 16 59.8	+0.6
RAF	Rauma	82.94	332	eP	P	06 17 00.1	+0.4
VAF	Ylistaro	82.96	334	eP	P	06 17 00.7	+0.9
MATE	Matera	82.98	311	⇑P	P	06 17 01.5	+1.0
MATE	Matera	82.98	311	eP	P	06 17 00.7	+0.3
MPLH	Magyarpolny	83.09	317	P	P	06 17 00.4	-0.5
	comp=Z,66nm,1.1s						
JAVC	Velka Javorina	83.22	319	eP	P	06 17 02.7	+1.1
CEL	Celeste	83.39	308	P	P	06 17 02.5	-0.2
	comp=Z,37nm,1.2s						
MODS	Modra-Piesok	83.42	319	eP	P	06 17 02.7	+0.1
MODS				pmax	pmax		
	comp=Z,29nm,1.3s						
MODS	Modra-Piesok	83.42	319	eP	P	06 17 02.7	+0.1
MORC	Moravsky Berou	83.42	320	P	P	06 17 02.7	+0.1
MORC	Moravsky Berou	83.42	320	eP	P	06 17 02.7	+0.1
MORC	Moravsky Berou	83.42	320	⇑P	P	06 17 03.1	+0.6
MORC	Moravsky Berou	83.42	320	P	P	06 17 02.7	+0.1
MORC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ARA0	ARCESS Array S	83.53	340	eP	P	06 17 03.4	+0.7
ARCES	ARCESS Array B	83.53	340	P	P	06 17 03.1	+0.5
	comp=Z,16nm,0.8s,baz=103,slow=4.4,SNR=39						
	comp=Z,16nm,0.8s						
KOGS	Kog	83.89	317	eP	P	06 17 05.2	+0.2
KRLC	Kraliky	83.94	320	eP	P	06 17 06.3	+1.0
KRLC	Kraliky	83.94	320	eP	P	06 17 06.3	+1.0
VRAC	Vranov	83.97	319	eP	P	06 17 05.1	-0.3
RONA	Rosalia, Austr	83.99	318	i P	P	06 17 05.5	-0.1
	comp=Z,2.7nm,0.6s						
KRUC	Moravsky	84.08	319	eP	P	06 17 05.4	-0.5
KTK1	Kautokeino	84.17	340	eP	P	06 17 06.4	+0.5
DPC	Dobruska-Polom	84.27	320	eP	P	06 17 08.1	+1.2
DPC	Dobruska-Polom	84.27	320	eP	P	06 17 08.1	+1.2
DPC	Dobruska-Polom	84.27	320	P	P	06 17 07.0	+0.1
	comp=Z,13nm,0.9s						
CONA	Conrad Observa	84.31	318	eP	P	06 17 07.6	+0.3
	comp=Z,3.0nm,0.7s						
KSP	Ksiaz	84.34	321	P	P	06 17 06.8	-0.4
	comp=Z,12nm,1.0s						
OSTC	Ostas	84.36	321	eP	P	06 17 09.2	+1.9
OSTC	Ostas	84.36	321	eP	P	06 17 09.2	+1.9
CHVC	Chvalec	84.46	321	eP	P	06 17 08.9	+1.0
CHVC	Chvalec	84.46	321	eP	P	06 17 08.9	+1.0
ARSA	Arzberg	84.47	317	P	P	06 17 08.4	+0.4
ARSA	Arzberg	84.47	317	eP	P	06 17 08.7	+0.7
	comp=Z,7.4nm,0.8s						
BOJS	Bojanci	84.50	316	i P	P	06 17 08.4	+0.3
SOKA	Soboth	84.75	317	i P	P	06 17 10.4	+0.9
	comp=Z,12nm,0.9s						
VNDA	Vanda	84.88	169	P	P	06 17 10.4	+1.0
VNDA	Vanda	84.88	169	P	P	06 17 11.2	+1.8
	comp=Z,2.7nm,1.1s,baz=309,slow=5.8,SNR=4.9						
	comp=Z,2.7nm,1.1s						
VNDA	Vanda	84.88	169	P	P	06 17 10.4	+1.0
VNDA				pmax	pmax		
	comp=Z,13nm,1.1s						
LJU	Ljubljana	85.05	316	i P	P	06 17 11.2	+0.3
OBKA	Obir	85.07	316	eP	P	06 17 11.9	+0.7
	comp=Z,7.8nm,0.9s						
INTR	Introdacqua	85.20	312	P	P	06 17 11.8	-0.1
INTR				IAmb	IAmb	06 17 34.3	
	comp=Z,89nm,1.8s						
JETT	Jettan, Norway	85.27	340	eP	P	06 17 12.0	+0.5
MOA	Molln	85.37	318	i P	P	06 17 12.6	+0.1
	comp=Z,2.7nm,0.7s						
CKRC	Cesky Krumlov	85.42	319	eP	P	06 17 13.7	+1.0
CKRC	Cesky Krumlov	85.42	319	eP	P	06 17 13.7	+1.0
TRI	Trieste	85.55	316	P	P	06 17 13.0	-0.4
TRI	Trieste	85.55	316	P	P	06 17 13.0	-0.4
TRI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
AQU	L'Aquila	85.59	312	P	P	06 17 14.0	+0.2
	comp=Z,556nmcomp=Z,39nm,1.1s						
HOPEN	Hopen	85.68	347	eP	P	06 17 13.9	+0.5
GUMA	Gualdo di Mace	85.69	313	P	P	06 17 13.7	-0.5
GUMA				IAmb	IAmb	06 17 24.8	
	comp=Z,26nm,0.9s						
MYKA	Terra Mystica	85.70	317	i P	P	06 17 14.8	+0.6
	comp=Z,0.1nm,0.3s						
BIOA	Bad Ischl, Aus	85.78	318	i P	P	06 17 14.1	-0.5
	comp=Z,5.2nm,0.8s						
BRG	Berggiesshubel	85.82	321	eP	P	06 17 15.2	+0.5
BRG				Amp		06 17 15.8	
	comp=Z,5.7nm,0.8s						
BRG	Berggiesshubel	85.82	321	P	P	06 17 24.1	+9.4
BRG				Amp		06 17 25.0	
	comp=Z,4.9nm,1.0s						
GEC2	GERESS Array S	85.82	319	P	P	06 17 14.8	0.0
GERES	GERESS Array B	85.82	319	P	P	06 17 15.1	+0.2
GERES	GERESS Array B	85.82	319	P	P	06 17 15.2	+0.3
	comp=Z,5.6nm,0.8s,baz=99,slow=4.5,SNR=23						
	comp=Z,5.6nm,0.8s						
NRCA	Norcia	85.83	313	P	P	06 17 14.4	-0.5
NRCA				IAmb	IAmb	06 17 31.0	
	comp=Z,23nm,1.1s						
FDMO	Fiordimonte	85.86	313	P	P	06 17 14.9	-0.2
FDMO				IAmb	IAmb	06 17 35.7	
	comp=Z,32nm,1.6s						
KHC	Kasperske Hory	85.93	319	eP	P	06 17 15.8	+0.5
KHC	Kasperske Hory	85.93	319	⇑eP	P	06 17 15.3	0.0
KHC				pmax	pmax		
	comp=Z,11nm,0.9s						
KHC	Kasperske Hory	85.93	319	P	P	06 17 14.6	-0.7
	comp=Z,7.1nm,0.8s						
KBA	Koelnbreinsper	85.94	317	i P	P	06 17 15.1	-0.5
	comp=Z,3.6nm,0.8s						
SBA	Scott Base	85.98	169	P	P	06 17 15.9	+1.0
SBA				IAmb	IAmb	06 17 28.2	
	comp=Z,58nm,1.6s						
SBA	Scott Base	85.98	169	P	P	06 17 15.9	+1.0
SBA				pmax	pmax		
	comp=Z,58nm,1.7s						
LESA	Schwarzleotal	86.41	317	i P	P	06 17 16.7	-1.1
	comp=Z,5.5nm,0.6s						
CLL	Collm	86.45	321	i P	P	06 17 17.5	-0.2
CLL				e		06 17 25.0	
CLL				pmax	pmax		
	comp=Z,12nm,1.2s						
CLL	Collm	86.45	321	i P	P	06 17 17.5	-0.2
	comp=Z,12nm,1.2s						
CLL				ex	x	06 17 25.0	
CLL				ex	x	06 17 32.0	
CLL				ex	x	06 17 39.0	
ABTA	Abfaltersbach	86.49	317	eP	P	06 17 17.1	-1.1
	comp=Z,4.6nm,1.0s						
HFS	Hagfors	86.74	330	P	P	06 17 19.5	+0.5
	comp=Z,12nm,0.8s,baz=159,slow=4.6,SNR=16						
	comp=Z,12nm,0.8s						
FAUS	Fauske	86.78	337	eP	P	06 17 19.5	+0.5
STEI	Steigen	86.86	338	eP	P	06 17 19.9	+0.6
ADK	Adak	86.98	38	P	P	06 17 20.2	-0.1
ADK	Adak	86.98	38	P	P	06 17 20.2	-0.1
ADK				pmax	pmax		
	comp=Z,128nm,1.5s						
CTI	Castel Tesino	87.05	316	P	P	06 17 21.4	+0.5
CTI				IAmb	IAmb	06 17 22.4	
	comp=Z,13nm,0.7s						
CTI	Castel Tesino	87.05	316	P	P	06 17 21.5	+0.5
CTI				pmax	pmax		
	comp=Z,13nm,0.7s						
WTTA	Wattenberg	87.11	317	eP	P	06 17 20.5	-0.8
	comp=Z,9.5nm,0.9s						
WATA	Walderalm	87.16	317	eP	P	06 17 21.3	-0.2
	comp=Z,3.8nm,0.7s						
SQTA	Sankt Quirin	87.40	317	eP	P	06 17 22.0	-0.7
	comp=Z,6.9nm,0.9s						
MOTA	Moosalm	87.48	317	i P	P	06 17 22.6	-0.5
	comp=Z,5.2nm,0.6s						
LEIR	Leirfjorden	87.51	336	eP	P	06 17 23.1	+0.6
LOF	Lofoten	87.52	338	eP	P	06 17 22.6	+0.1
RETA	Reutte	87.72	317	eP	P	06 17 23.3	-0.8
	comp=Z,8.2nm,0.8s						
FETA	Feichten	87.72	317	eP	P	06 17 23.2	-1.0
	comp=Z,4.3nm,0.8s						
NC405	NORSAR Array S	87.78	331	P	P	06 17 23.8	-0.2
NC602	NORSAR Array S	87.85	331	P	P	06 17 24.0	-0.3
NC602				IAmb	IAmb	06 17 25.0	
	comp=Z,13nm,0.9s						
NC602	NORSAR Array S	87.85	331	eP	P	06 17 24.7	+0.4
NORES	NORESS Array B	87.85	331	P	P	06 17 24.2	-0.1
NORES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SPB2	Spitsbergen Ar	87.90	348	P	P	06 17 24.2	-0.1
SPA0	Spitsbergen Ar	87.90	348	eP	P	06 17 24.4	+0.1
SPITS	Spitsbergen Ar	87.90	348	P	P	06 17 24.1	-0.1
	comp=Z,18nm,0.8s,baz=130,slow=14,SNR=11						
	comp=Z,18nm,0.8s						
SPITS	Spitsbergen Ar	87.90	348	P	P	06 17 24.2	-0.1
SPITS				pmax	pmax		
	comp=Z,31nm,1.0s						
HSPB	Hornsund (broa	87.92	347	eP	P	06 17 24.4	+0.1
NB2	NORSAR Subarra	88.02	331	P	P	06 17 24.9	-0.3
	comp=Z,17nm,1.1s,baz=94,slow=4.8						
NB2	NORSAR Subarra	88.02	331	P	P	06 17 24.9	-0.3
	baz=94,slow=4.8						
NOA	NORSAR Array B	88.02	331	P	P	06 17 25.1	-0.1
	comp=Z,5.1nm,0.8s,baz=95,slow=4.8,SNR=14						
NOA				PP	PP	06 20 53.8	+2.1
	comp=Z,1.0nm,0.8s,baz=90,slow=9.8,SNR=3.4						
	comp=Z,5.1nm,0.8s						
FUORN	Ofenpass-Fuorn	88.03	316	P	P	06 17 25.4	-0.5
FUORN				IAmb	IAmb	06 17 50.9	
	comp=Z,33nm,1.2s						
DAVA	Damuels	88.31	317	i P	P	06 17 27.7	+0.7
	comp=Z,11nm,0.8s						
KEST	Kesra	88.51	306	P	P	06 17 29.6	+1.4
	comp=Z,12nm,0.9s,baz=356,slow=0.6,SNR=18						
	comp=Z,12nm,0.9s						
ATKA	Atka Island	88.53	38	P	P	06 17 28.0	+0.3
TUE	Stuetta	88.66	316	P	P	06 17 28.1	-0.6
	comp=Z,29nm,1.2s						
BFO	Black Forest	89.37	318	P	P	06 17 31.8	0.0
BFO	Black Forest	89.37	318	P	P	06 17 31.8	0.0
BFO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GAMB	Gambell	89.94	26	P	P	06 17 34.5	+0.5
	baz=271						
SENIN	Lac Senin/Sane	90.07	316	P	P	06 17 35.5	+0.1
ECH	Echery	90.15	318	P	P	06 17 35.1	-0.4
ECH	Echery	90.15	318	P	P	06 17 35.1	-0.4
ECH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
QSPA	South Pole Qui	90.29	180	P	P	06 17 34.7	-1.1
QSPA				IAmb	IAmb	06 17 47.0	
	comp=Z,45nm,1.6s						
QSPA	South Pole Qui	90.29	180	P	P	06 17 36.9	+1.1
	comp=Z,4.3nm,0.9s,baz=263,slow=2.0,SNR=9.8						
	comp=Z,4.3nm,0.9s						
BTNL	Ternell	90.78	320	dP	P	06 17 38.5	+0.2
	comp=Z,7.0nm,0.9s						
SPIA	Saint Paul Isl	90.80	33	P	P	06 17 39.1	+0.9
SPIA	Saint Paul Isl	90.80	33	P	P	06 17 38.9	+0.7
	baz=272						
P08K	Saint George I	91.21	34	P	P	06 17 40.1	0.0
	baz=272						
BGES	Gesves	91.45	320	dP	P	06 17 41.7	+0.3
	comp=Z,5.8nm,0.9s						
TNA	Tin City	91.49	25	P	P	06 17 41.6	+0.4

	baz=274						
BMRD	Maredsous	91.66	320	dP	P	06 17 43.2	+0.8
	comp=Z,5.6nm,0.9s						
NIKH	Nikolski High	91.78	37	P	P	06 17 43.2	+0.4
	baz=273						
TROLL	Troll, Antarti	91.94	198	⇑P	P	06 17 42.4	-1.0
	comp=Z,65nm,0.5s						
SSB	Saint Sauveur	92.03	315	P	P	06 17 44.3	0.0
SSB	Saint Sauveur	92.03	315	P	P	06 17 44.3	0.0
SSB				pmax	pmax		
	comp=Z,9.0nm,0.9s						
F14K	Arctic Creek	92.16	25	P	P	06 17 45.0	+0.7
	baz=276						
C16K	Lisburne Hills	92.25	22	P	P	06 17 45.1	+0.4
	baz=277						
ANM	Nome	92.65	25	P	P	06 17 47.1	+0.4
	baz=276						
M11K	Mekoryuk	92.70	30	P	P	06 17 47.4	+0.5
	baz=275						
F15K	North Star Dit	92.83	24	P	P	06 17 48.0	+0.5
	baz=277						
C17K	DeLong Mountai	93.02	21	P	P	06 17 48.6	+0.3
	baz=279						
UNV	Unalaska Valle	93.12	36	P	P	06 17 49.6	+0.6
	baz=275						
NOR	Nord	93.15	352	iP	P	06 17 48.8	+0.1
D17K	Noatak River	93.17	22	P	P	06 17 49.8	+0.8
	baz=279						
G15K	Niukluk	93.17	25	P	P	06 17 49.0	0.0
	baz=278						
RDOG	Red Dog Mine	93.18	22	P	P	06 17 49.3	+0.3
	baz=279						
K13K	Kusilvak Mount	93.28	28	P	P	06 17 50.3	+0.7
	baz=277						
B18K	Kokolik River	93.37	20	P	P	06 17 50.7	+0.8
	baz=280						
A19K	Wainwright	93.47	20	P	P	06 17 50.5	+0.2
	baz=281						
J14K	Nanvaranak Lak	93.69	27	IAmb	IAmb	06 17 52.9	
	comp=Z,14nm,1.1s						
J14K	Nanvaranak Lak	93.69	27	P	P	06 17 52.1	+0.7
	baz=278						
C18K	Utukok River	93.71	21	IAmb	IAmb	06 17 53.3	
	comp=Z,22nm,0.9s						
C18K	Utukok River	93.71	21	P	P	06 17 52.1	+0.6
	baz=280,SNR=10						
E17K	Hotham Inlet	93.75	23	P	P	06 17 52.5	+0.9
	baz=280						
G16K	Koyuk River	93.81	24	IAmb	IAmb	06 17 53.9	
	comp=Z,19nm,0.9s						
G16K	Koyuk River	93.81	24	P	P	06 17 52.5	+0.6
	baz=279						
H16K	Elim	93.98	25	P	P	06 17 53.2	+0.5
	baz=279						
F17K	Baldwin Pennin	94.08	23	P	P	06 17 53.8	+0.7
	baz=280						
M13K	Dall Lake	94.10	29	P	P	06 17 54.1	+0.7
	baz=278						
E18K	Tukpahlearik C	94.16	22	IAmb	IAmb	06 17 55.6	
	comp=Z,14nm,0.9s						
E18K	Tukpahlearik C	94.16	22	P	P	06 17 54.3	+0.7
	baz=281,SNR=8.0						
C19K	Lookout Ridge	94.19	21	P	P	06 17 54.9	+1.1
	baz=282,SNR=17						
L14K	Kuka Creek	94.29	28	P	P	06 17 55.5	+1.2
	baz=279,SNR=6.0						
G17K	Kiwalik Mounta	94.50	24	P	P	06 17 56.0	+0.8
	baz=281,SNR=9.7						
K15K	Wolf Creek Mou	94.68	27	P	P	06 17 57.1	+1.1
	baz=280						
F18K	Selawik	94.68	23	P	P	06 17 56.7	+0.8
	baz=282						
M14K	Bethel	94.73	29	P	P	06 17 57.3	+1.1
	baz=279						
I17K	Unalakleet	94.78	26	P	P	06 17 57.6	+1.2
	baz=281						
L15K	Ungalak Mounta	94.81	28	P	P	06 17 57.3	+0.7
	baz=280,SNR=5.6						
B20K	Meade River	94.81	19	P	P	06 17 57.1	+0.7
	baz=284						
D19K	Kuna River	94.85	21	P	P	06 17 57.1	+0.4
D19K	Kuna River	94.85	21	P	P	06 17 57.4	+0.7
	baz=283,SNR=23						
H17K	Granite Mounta	94.91	25	IAmb	IAmb	06 17 59.0	
	comp=Z,17nm,0.8s						
H17K	Granite Mounta	94.91	25	P	P	06 17 57.8	+0.8
	baz=281,SNR=10						
J16K	Anvik River	94.93	26	P	P	06 17 58.4	+1.3
	baz=281,SNR=14						
N14K	Kuskokwak Cree	95.00	30	P	P	06 17 58.6	+1.1
	baz=279,SNR=5.3						
G18K	Tagagawik	95.23	24	P	P	06 17 58.6	+0.1
	baz=283						
A22K	Sinclair Lake	95.26	18	P	P	06 17 59.1	+0.7
	baz=286						
O14K	Tigyukauivet M	95.32	30	P	P	06 17 59.7	+0.7
	baz=280						
D20K	Etivluk River	95.33	21	P	P	06 17 59.7	+0.7
	baz=285,SNR=31						
M15K	Kasigluk River	95.36	29	P	P	06 17 59.8	+0.6
	baz=280,SNR=9.9						
F19K	Shaleruckik Mo	95.36	23	IAmb	IAmb	06 18 00.6	
	comp=Z,15nm,0.8s						
F19K	Shaleruckik Mo	95.36	23	P	P	06 17 59.5	+0.5
	baz=284,SNR=13						
E19K	Redstone River	95.42	22	P	P	06 17 58.9	-0.5
E19K				IAmb	IAmb	06 18 01.1	
	comp=Z,21nm,0.9s						
E19K	Redstone River	95.42	22	P	P	06 17 59.8	+0.5
	baz=284,SNR=15						
S12K	Black Hills	95.46	34	P	P	06 17 59.4	-0.4
	baz=279						
H18K	Honhosa River	95.51	24	IAmb	IAmb	06 18 01.5	
	comp=Z,16nm,0.8s						
H18K	Honhosa River	95.51	24	P	P	06 18 00.2	+0.4
	baz=283,SNR=9.0						
DAG	Danmarks Havn	95.55	348	P	P	06 17 59.3	-0.4
DAG	Danmarks Havn	95.55	348	iP	P	06 17 58.9	-0.9
J17K	VABM Dome	95.58	26	IAmb	IAmb	06 18 02.3	
	comp=Z,13nm,0.8s						
J17K	VABM Dome	95.58	26	P	P	06 18 00.9	+0.8
	baz=282,SNR=9.0						
E20K	Nigu River	95.60	21	P	P	06 18 00.7	+0.5
	baz=285,SNR=24						
L16K	Owhat River	95.74	28	IAmb	IAmb	06 18 03.1	
	comp=Z,14nm,1.0s						
L16K	Owhat River	95.74	28	P	P	06 18 01.7	+0.8
	baz=282,SNR=6.8						
N15K	Kwethluk River	95.75	29	IAmb	IAmb	06 18 03.3	
	comp=Z,24nm,1.1s						
N15K	Kwethluk River	95.75	29	P	P	06 18 01.9	+1.0
	baz=281,SNR=5.6						
B21K	Ikpikpuk River	95.77	20	P	P	06 18 01.7	+0.9
	baz=287,SNR=9.8						
G19K	Purcell Mounta	95.79	23	IAmb	IAmb	06 18 02.9	
	comp=Z,18nm,0.8s						
G19K	Purcell Mounta	95.79	23	P	P	06 18 01.7	+0.6
	baz=284,SNR=15						
TORD	Torodi Ar. Bea	95.83	283	PP	PP	06 22 06.4	+12
	comp=Z,1.4nm,1.0s,baz=93,slow=7.4,SNR=3.8						
C21K	Knifeblade Rid	95.85	20	P	P	06 18 02.2	+1.0
	baz=286,SNR=7.4						
EKA	Eskdalemuir Ar	95.93	326	P	P	06 18 02.2	+0.3
	comp=Z,2.4nm,0.7s,baz=106,slow=4.8,SNR=6.0						
	comp=Z,2.4nm,0.7s						
B22K	Teshekpuk Lake	95.95	19	P	P	06 18 02.2	+0.6
	baz=288						
O15K	Ungalikthiuk R	96.06	30	IAmb	IAmb	06 18 04.3	
	comp=Z,14nm,1.1s						
O15K	Ungalikthiuk R	96.06	30	P	P	06 18 03.0	+0.6
	baz=281						
K17K	Iditarod	96.07	27	P	P	06 18 03.7	+1.3
	baz=283,SNR=15						
F20K	Avaraart Lake	96.09	22	P	P	06 18 02.9	+0.5
F20K	Avaraart Lake	96.09	22	P	P	06 18 03.1	+0.7
	baz=285						
M16K	Timber Creek	96.13	28	P	P	06 18 03.6	+1.0
	baz=282						
H19K	Roundabout Mou	96.20	24	P	P	06 18 04.0	+1.2
	baz=285,SNR=26						
L17K	Donlin	96.20	27	P	P	06 18 04.3	+1.3
	baz=283,SNR=6.7						
GCSA	Galena City Sc	96.22	25	P	P	06 18 03.9	+1.0
	baz=284						
N16K	Nishlik Lake	96.33	29	P	P	06 18 04.8	+1.1
	baz=282,SNR=7.8						
E21K	Killik River	96.34	21	IAmb	IAmb	06 18 05.2	
	comp=Z,24nm,1.0s						
E21K	Killik River	96.34	21	P	P	06 18 04.2	+0.7
	baz=287						
J18K	Innoko River	96.60	26	IAmb	IAmb	06 18 06.6	
	comp=Z,12nm,0.8s						
J18K	Innoko River	96.60	26	P	P	06 18 05.6	+0.8
	baz=284,SNR=15						
D22K	Ayikyak River	96.65	20	IAmb	IAmb	06 18 57.2	
	comp=Z,13nm,1.1s						
D22K	Ayikyak River	96.65	20	P	P	06 18 05.8	+0.9
	baz=288						
S14K	Fog Glacier	96.75	33	P	P	06 18 06.0	+0.2
	baz=281						
M17K	Holitna River	96.76	28	IAmb	IAmb	06 18 08.1	
	comp=Z,13nm,0.9s						
M17K	Holitna River	96.76	28	P	P	06 18 06.6	+1.1
	baz=283						
H20K	Anotleneega Mo	96.84	24	P	P	06 18 06.6	+0.7
	baz=286,SNR=25						
O16K	Kokwok River B	96.85	30	P	P	06 18 06.8	+0.8
	baz=282						
F21K	Alatna River	96.88	22	P	P	06 18 05.8	-0.2
F21K				IAmb	IAmb	06 18 07.6	
	comp=Z,15nm,0.9s						
F21K	Alatna River	96.88	22	P	P	06 18 06.6	+0.6
	baz=288,SNR=12						
L18K	Granite Mounta	96.92	27	IAmb	IAmb	06 18 08.5	
	comp=Z,16nm,1.2s						
L18K	Granite Mounta	96.92	27	P	P	06 18 07.2	+1.0
	baz=284,SNR=5.8						
J19K	Poorman	96.94	25	IAmb	IAmb	06 18 08.5	
	comp=Z,17nm,0.9s						
J19K	Poorman	96.94	25	P	P	06 18 07.2	+0.9
	baz=285,SNR=17						
P16K	Nushagak River	97.02	30	P	Pdif	06 18 07.1	+0.3
	baz=282						
C23K	Itkillik River	97.02	19	P	Pdif	06 18 07.2	+0.6
	baz=291						
TTA	Tatalina	97.04	26	P	P	06 18 06.6	-0.3
TTA	Tatalina	97.04	26	P	Pdif	06 18 07.7	+0.7
	baz=285,SNR=6.9						
G21K	Allakaket	97.08	22	P	Pdif	06 18 07.6	+0.6
	baz=287,SNR=26						
N17K	Nushagak Hills	97.08	29	P	Pdif	06 18 08.1	+1.0
	baz=283						
E22K	Anaktuvuk Pass	97.20	21	P	P	06 18 07.0	-0.5
E22K				IAmb	IAmb	06 18 45.6	
	comp=Z,12nm,1.3s						
E22K	Anaktuvuk Pass	97.20	21	P	Pdif	06 18 08.0	+0.5
	baz=289						
I20K	Naaghedeneel	97.20	24	P	Pdif	06 18 08.3	+0.8
	baz=286,SNR=7.0						
F22K	John River	97.27	21	P	Pdif	06 18 08.5	+0.7
	baz=289						
O17K	Koliganek Bris	97.30	29	P	Pdif	06 18 08.5	+0.5
	baz=283						
D23K	Nanushuk River	97.31	20	P	Pdif	06 18 08.5	+0.6
	baz=290						
M18K	Stony River	97.49	28	P	Pdif	06 18 09.7	+0.8
	baz=285						
J20K	Nowinta River	97.51	25	P	Pdif	06 18 09.6	+0.7
	baz=287,SNR=7.3						
H21K	Melozitna Rive	97.62	23	IAmb	IAmb	06 18 11.5	
	comp=Z,12nm,1.0s						
H21K	Melozitna Rive	97.62	23	P	Pdif	06 18 10.1	+0.7
	baz=288,SNR=8.8						
N18K	Kilae Creek	97.67	28	P	Pdif	06 18 10.4	+0.7
	baz=284						
G22K	Bettles	97.71	22	P	Pdif	06 18 10.4	+0.6
	baz=289						
L19K	White Mountain	97.76	27	P	Pdif	06 18 11.1	+1.0
	baz=286						
P17K	Kvichak River	97.76	30	P	Pdif	06 18 10.9	+0.8
	baz=284						
K20K	Telida	97.78	26	P	Pdif	06 18 11.5	+1.3
	baz=286,SNR=12						
TOLK	Toolik Lake Re	97.80	20	P	Pdif	06 18 11.3	+1.1
	baz=291						
D24K	Happy Valley	97.86	19	P	Pdif	06 18 11.3	+0.9
	baz=292						
E23K	Chandalar	98.00	21	P	Pdif	06 18 11.9	+0.8
	baz=291						
M19K	Big River Lodg	98.04	27	P	Pdif	06 18 12.4	+1.1
	baz=286						
COLD	Coldfoot	98.08	21	P	Pdif	06 18 12.4	+1.0
	baz=291						
I21K	Tanana	98.09	24	IAmb	IAmb	06 18 13.7	
	comp=Z,10.0nm,1.1s						
I21K	Tanana	98.09	24	P	Pdif	06 18 12.4	+0.9
	baz=289,SNR=7.7						
H22K	Ishtalitna Cre	98.10	23	P	Pdif	06 18 12.5	+1.0
	baz=289						
L20K	Farewell, AK	98.11	26	P	Pdif	06 18 12.7	+1.0
	baz=287						
O18K	Koktuh Hills	98.21	29	IAmb	IAmb	06 18 14.2	
	comp=Z,24nm,1.4s						
O18K	Koktuh Hills	98.21	29	P	Pdif	06 18 12.9	+0.8
	baz=285						
Q17K	Contact Creek	98.27	31	P	Pdif	06 18 13.2	+0.6
	baz=284						
N19K	Bonanza Creek	98.30	28	P	Pdif	06 18 13.4	+0.7
N19K				IAmb	IAmb	06 18 14.8	
	comp=Z,15nm,0.9s						
N19K	Bonanza Creek	98.30	28	P	Pdif	06 18 13.6	+0.9
	baz=286,SNR=7.7						
P18K	Big Mountain,	98.32	30	P	Pdif	06 18 13.4	+0.7
	baz=285						
G23K	Bananza Creek	98.33	22	IAmb	IAmb	06 18 25.0	
	comp=Z,8.4nm,1.1s						
G23K	Bananza Creek	98.33	22	P	Pdif	06 18 13.1	+0.5
	baz=291						
CHUM	Lake Minchumin	98.37	25	P	Pdif	06 18 13.6	+0.8
	baz=288						
E24K	Your Creek	98.38	20	IAmb	IAmb	06 22 12.6	
	comp=Z,8.4nm,1.3s						
E24K	Your Creek	98.38	20	P	Pdif	06 18 13.3	+0.5
	baz=292						
O19K	Port Alsworth	98.55	29	P	Pdif	06 18 14.0	+0.4
	baz=286						
D25K	Kavik River	98.59	19	IAmb	IAmb	06 18 18.4	
	comp=Z,9.2nm,0.9s						
D25K	Kavik River	98.59	19	P	Pdif	06 18 14.2	+0.4
	baz=294						
CAST	Castle Rocks	98.61	25	IAmb	IAmb	06 18 15.8	
	comp=Z,21nm,1.4s						
CAST	Castle Rocks	98.61	25	P	Pdif	06 18 14.2	+0.3
	baz=288						
Q18K	Katmai Hardscr	98.62	30	P	P	06 18 14.1	0.0
	baz=285						
M20K	Styx River	98.62	27	P	Pdif	06 18 14.4	+0.3
	baz=287						
MLY	Manley	98.64	24	IAmb	IAmb	06 18 24.7	
	comp=Z,12nm,1.6s						
MLY	Manley	98.64	24	P	Pdif	06 18 14.3	+0.3
	baz=290						
PPLA	Purkeypile	98.73	26	P	Pdif	06 18 15.0	+0.4
	baz=288						
C26K	Camden Bay	98.80	18	P	Pdif	06 18 15.6	+1.1
	baz=296						
F24K	Squaw Lake	98.81	21	P	Pdif	06 18 15.3	+0.6
	baz=293						
H23K	Yukon River	98.83	23	P	Pdif	06 18 15.8	+0.9
	baz=291						
BPAW	Bear Paw Mtn.	98.85	24	P	Pdif	06 18 15.2	+0.2
BPAW				IAmb	IAmb	06 18 16.6	
	comp=Z,21nm,1.4s						
BPAW	Bear Paw Mtn.	98.85	24	P	Pdif	06 18 15.5	+0.6
	baz=289						
CHIR	Chirikof Islan	99.00	33	P	Pdif	06 18 16.2	+0.4
	baz=284						
I23K	Minto, Yukon-K	99.15	23	P	Pdif	06 18 16.6	+0.4
	baz=291						
R18K	Karluk	99.19	31	P	Pdif	06 18 16.4	-0.1
	baz=285						
P19K	Oil Pt	99.22	29	P	Pdif	06 18 16.8	+0.1
	baz=287						
Q19K	Cape Douglas,	99.23	30	P	Pdif	06 18 16.9	+0.1
	baz=286						
SPCR	Spurr Chakacha	99.25	27	P	Pdif	06 18 17.4	+0.6
	baz=288						
N20K	Mount Spurr	99.25	27	P	Pdif	06 18 17.0	+0.2
	baz=288						
G24K	Hadweenzic Riv	99.28	21	P	Pdif	06 18 17.6	+0.8
	baz=293						
C27K	Jago River	99.31	18	P	Pdif	06 18 17.7	+0.9
	baz=297						
SKT	Skwentna	99.31	27	P	Pdif	06 18 17.7	+0.6
	baz=289						
TRF	Thorofare Moun	99.36	25	P	Pdif	06 18 17.5	+0.1
	baz=290						
E25K	Arctic Village	99.37	20	P	Pdif	06 18 17.8	+0.6
	baz=295						
O20K	Slope Mountain	99.39	29	P	Pdif	06 18 17.9	+0.4
	baz=287						
H24K	Noodor Dome	99.46	22	P	Pdif	06 18 18.1	+0.5
	baz=293						
F25K	Christian Rive	99.57	20	P	Pdif	06 18 18.9	+0.8
	baz=295						
EUNU	Eureka	99.65	1	IAmb	IAmb	06 18 19.5	
	comp=Z,7.9nm,0.8s						
G25K	Bearman Lake	99.75	21	P	Pdif	06 18 19.5	+0.6
	baz=294						
MCK	McKinley	99.83	25	P	Pdif	06 18 19.2	-0.1
	baz=291						
SUA	Susitna One	99.83	27	P	Pdif	06 18 19.4	-0.1
	baz=289						
OHAK	Old Harbor	99.89	31	P	Pdif	06 18 19.7	+0.1
	baz=286						
POKR	Poker Plat Res	99.91	23	P	Pdif	06 18 20.0	+0.4
	baz=293						
Q20K	Shuyak Island	99.94	30	P	Pdif	06 18 19.9	0.0
	baz=287						
HOM	Homer	99.99	29	P	Pdif	06 18 20.4	+0.4
	baz=288						
F26K	Sheenjek River	100.04	20	P	Pdif	06 18 21.0	+0.8
	baz=296						
H25L	Birch Creek	100.06	22	P	Pdif	06 18 21.0	+0.8
	baz=295						
KDAK	Kodiak Island	100.09	31	P	Pdif	06 18 21.4	+0.8
	baz=287						
ILAR	Eielson Array	100.26	23	PP	PP	06 22 24.1	-2.8
	comp=Z,1.3nm,0.8s,baz=304,slow=8.6,SNR=6.0						
ILAR				PKKPbc	PKKPdf	06 34 47.0	+1.6
	comp=Z,0.5nm,0.7s,baz=140,slow=3.7,SNR=7.0						
WAT1	Susitna Watana	100.32	25	P	Pdif	06 18 21.8	+0.3
	baz=292						
D27M	Malcolm River	100.34	18	P	Pdif	06 18 22.2	+0.6
	baz=300						
RC01	Rabbit Creek A	100.42	27	P	Pdif	06 18 22.8	+0.9
	baz=290						
PRP	Porcupine Dome	100.48	22	P	Pdif	06 18 22.9	+0.6
	baz=295						
G26K	Porcupine Rive	100.50	21	P	Pdif	06 18 23.4	+1.3
	baz=297						
E27K	Coleen River	100.66	19	P	Pdif	06 18 23.9	+1.0
	baz=299						
DHY	Denali Highway	100.73	25	P	Pdif	06 18 24.1	+0.6
	baz=293						
WAT6	Susitna Watana	100.76	25	P	Pdif	06 18 23.9	+0.2
	baz=292						
SML	Sawmill	100.79	26	P	Pdif	06 18 24.1	+0.4
	baz=292						
KNK	Knik Glacier	100.88	27	P	Pdif	06 18 24.7	+0.6
	baz=291						
SEW	Seward	100.89	28	P	Pdif	06 18 25.0	+1.0
	baz=290						
J25K	Salcha River,	100.92	23	P	Pdif	06 18 24.8	+0.6
	baz=295						
D28M	Stokes Point	100.98	18	P	Pdif	06 18 25.1	+0.9
	baz=302						
M23K	Glacier View	101.07	26	P	Pdif	06 18 25.2	+0.3
	baz=292						
E28M	Babbage River	101.11	18	P	Pdif	06 18 25.8	+0.9
	baz=301						
PWL	Port Wells	101.14	27	P	Pdif	06 18 26.0	+0.8
	baz=291						
SCM	Sheep Creek Mo	101.23	26	P	Pdif	06 18 26.1	+0.4
	baz=292						
G27K	Doyon Strip	101.31	20	P	Pdif	06 18 26.3	+0.5
	baz=299						
I26K	Coal Creek Min	101.47	22	P	Pdif	06 18 27.4	+0.9
	baz=297						
RIDG	Independent Ri	101.50	24	P	Pdif	06 18 27.4	+0.6
	baz=295						
F28M	Old Crow	101.51	19	P	Pdif	06 18 27.5	+0.7
	baz=300						
PAX	Paxson	101.57	25	P	Pdif	06 18 27.6	+0.5
	baz=294						
M24K	Tolsona, Glenn	101.62	26	P	Pdif	06 18 28.1	+0.7
	baz=294						
H27K	Steamboat Moun	101.63	21	P	Pdif	06 18 28.1	+0.8
	baz=299						
J26L	Joseph Creek	101.68	23	P	Pdif	06 18 28.2	+0.6
	baz=296						
GLI	Glacier Island	101.69	27	P	Pdif	06 18 28.2	+0.6
	baz=292						
E29M	Blow River	101.74	18	P	Pdif	06 18 28.2	+0.5
	baz=303						
SCRK	Sand Creek	101.74	23	P	Pdif	06 18 28.5	+0.5
	baz=296						
P23K	Montague Islan	101.89	28	P	Pdif	06 18 29.1	+0.6
	baz=292						
I27K	Kandik River	101.90	21	P	Pdif	06 18 29.4	+0.9
	baz=298						
HARP	HAARP	101.94	25	P	Pdif	06 18 28.9	+0.2
	baz=295						
KLU	Klutina	101.98	26	P	Pdif	06 18 29.2	+0.2
	baz=294						
L26K	Log Cabin Wild	102.42	24	P	Pdif	06 18 31.2	+0.3
	baz=296						
EYAK	Cordova Ski Ar	102.43	27	P	Pdif	06 18 31.3	+0.5
	baz=294						
K27K	Chicken	102.47	23	P	Pdif	06 18 31.8	+0.8
	baz=298						
G29M	Pine Creek	102.50	20	P	Pdif	06 18 31.7	+0.6
	baz=302						
I28M	Miner Creek	102.59	21	P	Pdif	06 18 32.3	+0.7
	baz=300						
H29M	Whitestone	102.74	20	P	Pdif	06 18 32.6	+0.3
	baz=302						
BMRM	Bremner River	102.77	26	P	Pdif	06 18 33.2	+0.6
	baz=295						
A36M	Sachs Harbour	102.82	13	P	Pdif	06 18 33.2	+0.8
	baz=316						
F30M	Barrier River	102.84	18	P	Pdif	06 18 33.4	+0.9
	baz=304						
M26K	Nabesna, AK	102.84	25	P	Pdif	06 18 33.5	+0.7
	baz=297						
L27K	Beaver Creek,	103.02	24	P	Pdif	06 18 34.1	+0.6
	baz=298						
G30M	tAoh Zraii Nji	103.05	19	P	Pdif	06 18 34.5	+0.9
	baz=304						
INK	Inuvik	103.12	17	Pdiff	Pdif	06 18 33.2	-0.6
	comp=Z,2.9nm,0.9s,baz=206,slow=7.6,SNR=3.3						
INK				PP	PP	06 22 47.5	-0.7
	comp=Z,3.6nm,1.1s,baz=314,slow=11,SNR=3.6						
INK	Inuvik	103.12	17	P	Pdif	06 18 34.7	+0.9
	baz=307						
I29M	Ogilvie Camp,	103.22	21	P	Pdif	06 18 35.0	+0.6
	baz=302						
EPYK	Eagle Plains	103.23	20	P	Pdif	06 18 34.8	+0.4
	baz=303						
MCARA	McCarthy VSAT	103.29	26	P	Pdif	06 18 35.3	+0.6
	baz=296						
KAIM	Kayak Island	103.29	27	P	Pdif	06 18 35.7	+0.9
	baz=295						
M27K	Edge Creek, AK	103.33	24	P	Pdif	06 18 35.4	+0.3
	baz=298						
DAWY	Dawson	103.49	22	P	Pdif	06 18 35.8	+0.2
	baz=300						
G31M	Satah River	103.72	19	P	Pdif	06 18 36.8	+0.4
	baz=306						
BGLC	Bering Glacier	103.73	27	P	Pdif	06 18 37.1	+0.4
	baz=296						
I30M	Mount Dempster	103.98	21	P	Pdif	06 18 38.4	+0.5
	baz=303						
CTG	Chitna Glacier	104.20	26	P	Pdif	06 18 39.5	+0.5
	baz=298						
MESA	MESA	104.30	26	P	Pdif	06 18 39.6	+0.1
	baz=297						
K29M	Barlow Dome	104.31	22	P	Pdif	06 18 39.7	+0.3
	baz=302						
H31M	Peel River	104.35	20	P	Pdif	06 18 40.3	+0.9
	baz=306						
J30M	Hart River	104.35	21	P	Pdif	06 18 40.0	+0.5
	baz=303						
L29M	L29M	104.46	23	P	Pdif	06 18 40.5	+0.5
	baz=301						
M29M	Somme Creek	104.67	24	P	Pdif	06 18 41.2	+0.2
	baz=301						
RES	Resolute Bay	104.69	3	Pdiff	Pdif	06 18 41.6	+0.9
	comp=Z,2.8nm,0.8s,baz=359,slow=4.0,SNR=5.4						
YUK8	Steele Glacier	104.72	25	P	Pdif	06 18 40.9	-0.6
	baz=299						
O28M	Mount Upton	104.79	25	P	Pdif	06 18 41.8	0.0
	baz=299						
PINM	Pinnacle	105.09	26	P	PKiKP	06 22 57.9	+0.6
	baz=299						

YUK4	Talbot Arm	105.16	25	P	PKiKP	06 22 57.5	-0.1
	baz=300						
YUK6	Outpost Mounta	105.48	25	P	PKiKP	06 22 58.6	+0.4
	baz=301						
PNL	Peninsula	105.67	26	P	PKiKP	06 22 59.0	+0.7
	baz=299						
O29M	Mount Kennedy	105.72	26	P	PKiKP	06 22 59.1	+0.6
	baz=300						
M31M	Drury Creek, Y	106.41	23	P	PKiKP	06 23 00.5	+0.9
	baz=305						
P29M	Windy Craggy	106.42	26	P	PKiKP	06 22 59.9	+0.2
	baz=301						
P30M	Million Dollar	106.50	25	P	PKiKP	06 23 00.3	+0.4
	baz=302						
O30N	Mendenhall	106.52	24	P	PKiKP	06 23 00.4	+0.4
	baz=303						
FARO	Faro, Yukon	106.79	22	P	PKiKP	06 23 01.0	+0.6
	baz=306						
PLBC	Pleasant Camp	107.11	26	P	PKiKP	06 23 01.6	+0.6
	baz=302						
MMPY	Sheldon Lake,	107.33	21	P	PKiKP	06 23 02.5	+1.1
	baz=308						
N32M	Quiet Lake	107.52	23	P	PKiKP	06 23 02.6	+0.8
	baz=306						
SKAG	Skagway	107.56	25	P	PKiKP	06 23 01.9	+0.2
	baz=303						
S31K	Pelican	107.96	27	P	PKiKP	06 23 03.0	+0.4
	baz=302						
P32M	Atlin	108.17	25	P	PKiKP	06 23 03.4	+0.4
	baz=305						
P33M	Teslin, Yukon	108.18	24	P	PKiKP	06 23 03.7	+0.6
	baz=306						
SIT	Sitka	108.86	27	P	PKiKP	06 23 05.0	+0.8
	baz=302						
S32K	Killisnoo	108.98	27	P	PKiKP	06 23 05.4	+0.9
	baz=303						
R33M	Jennings River	109.42	24	P	PKiKP	06 23 05.7	+0.3
	baz=307						
S34M	Telegraph Cree	110.24	25	P	PKiKP	06 23 07.5	+0.6
	baz=307						
DLBC	Dease Lake	110.39	25	PP	PP	06 23 38.0	-3.9
	comp=Z,1.5nm,0.7s,baz=275,slow=12,SNR=3.7						
DLBC	Dease Lake	110.39	25	P	PKiKP	06 23 07.5	+0.3
	baz=308						
U33K	Whale Pass	110.40	28	P	PKiKP	06 23 07.1	0.0
	baz=304						
WRAK	Wrangell Islan	110.58	27	P	PKiKP	06 23 07.5	0.0
	baz=305						
CRAG	Craig	110.76	28	P	PKiKP	06 23 08.3	+0.4
	baz=304						
T35M	Bob Quinn	111.18	26	P	PKiKP	06 23 09.1	+0.3
	baz=307						
BEAVL	Fort Liard	111.19	21	P	PKiKP	06 23 09.1	+0.4
	baz=313						
YKA	Yellowknife Ar	112.76	16	PP	PP	06 23 54.2	-4.4
	comp=Z,2.5nm,0.9s,baz=330,slow=7.7,SNR=6.3						
YKA				PKKPbc	PKKPdf	06 34 18.3	-3.7
	comp=Z,1.4nm,1.1s,baz=150,slow=4.2,SNR=3.9						
NEW	Newport	122.94	27		PKPdf	06 23 31.7	+0.1
NEW	Newport	122.94	27	PKP	PKPdf	06 23 30.9	-0.7
	comp=Z,2.9nm,0.9s,baz=202,slow=0.8,SNR=4.8						
ULM	Lac du Bonnet	128.27	11	PKP	PKPdf	06 23 41.5	-0.1
	comp=Z,3.7nm,0.7s,baz=293,slow=2.6,SNR=7.0						
NVAR	Mina Array Bea	129.14	37		PKPdf	06 23 43.6	-0.3
NVAR	Mina Array Bea	129.14	37	PKP	PKPdf	06 23 43.9	-0.1
	comp=Z,3.7nm,0.7s,baz=267,slow=2.2,SNR=20						
ELK	Elko	129.30	32	PKP	PKiKP	06 23 44.8	-0.2
	comp=Z,2.5nm,0.6s,baz=308,slow=4.8,SNR=14						
DSP	Deep Springs	130.03	37		PKPdf	06 23 45.7	+0.4
PDAR	Pinedale Array	130.56	26		PKPdf	06 23 45.3	-1.3
PDAR	Pinedale Array	130.56	26	PKP	PKPdf	06 23 45.5	-1.0
	comp=Z,2.0nm,0.7s,baz=153,slow=0.3,SNR=10						
PDAR				PP	PP	06 26 00.6	+0.2
	comp=Z,1.6nm,0.9s,baz=358,slow=4.5,SNR=3.9						
RSSD	Black Hills	131.65	21		PKPdf	06 23 48.9	+0.3
RSSD	Black Hills	131.65	21	PKIKP	PKPdf	06 23 48.9	+0.3
PV10	Paradox Valley	134.26	30	PKPdf	PKPdf	06 23 54.3	+0.6
PV20	West Nyswonger	134.32	30		PKiKP	06 23 54.6	-0.5
ANMO	Albuquerque	138.23	30		PKPdf	06 23 59.0	-2.1
PLCA	Paso Flores	138.42	193	PKP	PKiKP	06 24 02.3	-0.9
	comp=Z,6.0nm,1.2s,baz=255,slow=10,SNR=4.1						
BDFB	Brasilia	142.95	244	PKP	PKPdf	06 24 10.8	+0.8
	comp=Z,1.7nm,0.6s,baz=116,slow=3.6,SNR=3.9						
WVT	Waverly	143.34	8	PKPdf	PKPbc	06 24 06.8	-0.3
WVT	Waverly	143.34	8	PKIKP	PKPbc	06 24 06.8	-0.2
UALR	University of	143.81	14		PKPbc	06 24 08.8	+0.4
SLBS	Sierra La Lagu	144.03	47		PKPdf	06 24 10.7	-1.0
TXAR	Lajitas Array	144.09	33	PKP	PKPbc	06 24 10.4	+0.8
	comp=Z,5.3nm,0.7s,baz=38,slow=0.3,SNR=36						
OZNA	Ozona	144.10	28		PKPbc	06 24 10.6	+1.0
Z38A	Mt. Pleasant	144.49	19		PKPbc	06 24 10.8	+0.2
OXF	Oxford	144.68	10		PKPab	06 24 11.1	+0.1
OXF	Oxford	144.68	10	PKIKP	PKPab	06 24 11.1	+0.1
W52A	Murphy	144.71	2		PKPbc	06 24 11.3	0.0
CPUP	Villa Florida	144.74	221		PKPdf	06 24 12.6	-0.1
CPUP	Villa Florida	144.74	221	PKP	PKPdf	06 24 12.4	-0.3
	comp=Z,5.6nm,1.0s,baz=334,slow=4.6,SNR=17						
CPUP	Villa Florida	144.74	221	PKIKP	PKPdf	06 24 12.6	-0.1
BRDY	Brady	144.76	25		PKPab	06 24 11.5	+0.1
CCAR	Cane Creek	144.77	14		PKPdf	06 24 12.2	-0.4
BG3	Lake Jocassee	144.84	1		PKPab	06 24 11.6	0.0
PAULI	Pauline	145.02	359		PKPab	06 24 11.6	-0.7
X48A	Hartselle	145.10	7		PKPbc	06 24 11.9	-0.6
Z41A	Richland Creek	145.13	16		PKPdf	06 24 13.1	-0.1
237A	Washetta, Mont	145.37	21		PKPbc	06 24 13.4	0.0
VA05	Santo Domingo	145.39	196	PKPbc	PKPab	06 24 13.7	+0.1
146A	Union	146.57	10		PKPab	06 24 17.9	-0.2
154A	Montrose	147.21	1	PKPbc	PKPbc	06 24 19.1	+0.2
456A	Hilliard	149.10	360	PKPbc	PKPbc	06 24 24.7	+0.7
ZAIG	Zacatecas	149.68	39	PKPbc	PKPbc	06 24 24.6	-1.5
656A	Willston	150.46	1	PKPbc	PKiKP	06 24 27.9	-0.2
GO03	Copiapo	150.55	202	PKPbc	PKiKP	06 24 29.1	+0.6
AC06	Mina Casimiro	150.81	202	PKPdf	PKPdf	06 24 20.9	-1.9
AC06				PKPbc	PKiKP	06 24 29.4	+0.4
AC06					pPKPbc	06 24 36.4	+0.9
DWPF	Disney Wildern	151.70	358	PKPdf	PKPdf	06 24 21.9	-2.2
DWPF					PKPbc	06 24 30.2	-0.1
DWPF					pPKPbc	06 24 38.6	+1.2
LPAZ	La Paz	158.91	221	PKP	PKPdf	06 24 37.2	+2.3
	comp=Z,1.0nm,0.8s,baz=259,slow=12,SNR=1.8						

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*SNET **03** 06:16:03.1±2.5, 12.°87N×89.°54W, h39^{km}, ML3.8*
*CATAC **03** 06:16:05.2±0.4, 13°N±2°×8°9W±°, h28^{km}±2^{km}, M3.7/35, MLv3.7/35, Error ellipse: s-maj=4.8km s-min=2.8km az=43.2, confirmed*
*GCG **03** 06:16:06.5±0.6, 13.°14N×89.°44W, h60^{km}±8^{km}, MD4.0*
ISC 03 06:16:05.8±1.4, **13.°01N**±0.°05×**89.°38W**±0.°03, **h25**^{km}±13^{km}, **n94**, σ**1.^{s}12**/114, **El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.48	7	*e*P	Pn	06 16 17.0	-0.1
LALI	Alcalda de L	0.48	7	*e*P	Pn	06 16 16.9	-0.1
LALI	Alcalda de L	0.48	7	P	Pn	06 16 17.0	-0.1
LALI	Alcalda de L	0.48	7	S	Sn	06 16 24.7	0.0
PANCS	Alcalda de	0.63	18	P	Pn	06 16 18.8	-0.5
PANCS	Alcalda de	0.63	18	S	Sn	06 16 28.6	+0.1
JAYA	Jayaque - finc	0.65	354	*e*P	Pn	06 16 18.6	-0.9
JAYA				*e*S	Sn	06 16 28.4	-0.6
JAYA	Jayaque - finc	0.65	354	*e*P	Pn	06 16 18.6	-0.9
JAYA				*i* S	Sn	06 16 28.4	-0.6
JAYA	Jayaque - finc	0.65	354	P	Pn	06 16 18.6	-0.9
LOMA	Loma Larga	0.67	18	*e*P	Pn	06 16 19.3	-0.5
LOMA				*e*S	Sn	06 16 29.9	+0.4
LOMA	Loma Larga	0.67	18	P	Pn	06 16 19.6	-0.2
LOMA	Loma Larga	0.67	18	S	Sn	06 16 30.0	+0.5
ITCA	Escuela Especi	0.67	9	*e*P	Pn	06 16 19.2	-0.6
ITCA				*e*S	Sn	06 16 29.2	-0.3
ITCA	Escuela Especi	0.67	9	P	Pn	06 16 19.1	-0.7
LFRS	El Faro	0.69	27	*i* P	Pn	06 16 19.8	-0.3
PMON	Piamonte	0.70	5	P	Pn	06 16 19.6	-0.7
PMON	Piamonte	0.70	5	S	Sn	06 16 30.3	-0.1
SEMO	Seminario San	0.71	13	P	Pn	06 16 19.6	-0.7
SEMO	Seminario San	0.71	13	S	Sn	06 16 30.3	-0.2
UTEC	Universidad Te	0.71	14	P	Pn	06 16 20.0	-0.3
UTEC	Universidad Te	0.71	14	S	Sn	06 16 30.6	+0.1
UEES	Universidad Ev	0.72	11	P	Pn	06 16 19.7	-0.7
UEES	Universidad Ev	0.72	11	S	Sn	06 16 30.6	-0.1
BOQS	Boqueron	0.73	8	*i* P	Pn	06 16 20.2	-0.5
UDBS	Universidad Do	0.74	18	P	Pn	06 16 20.3	-0.4
UDBS	Universidad Do	0.74	18	S	Sn	06 16 31.5	+0.4
COEG	Centro de Oper	0.78	39	*e*P	Pn	06 16 20.8	-0.5
COEG				*e*S	Sn	06 16 32.4	+0.2
COEG	Centro de Oper	0.78	39	P	Pn	06 16 20.8	-0.5
TECO	Alcaldia de Te	0.79	48	P	Pn	06 16 21.3	0.0
TECO	Alcaldia de Te	0.79	48	S	Sn	06 16 32.3	0.0
CEDA	San Andres	0.79	359	*e*P	Pn	06 16 20.7	-0.7
CEDA				*e*S	Sb	06 16 31.4	+0.1
CEDA	San Andres	0.79	359	P	Pn	06 16 20.8	-0.6
CEDA	San Andres	0.79	359	S	Sn	06 16 33.1	+0.7
PAVA	Las Pavas	0.82	32	*e*P	Pn	06 16 21.6	-0.3
PAVA				*e*S	Sn	06 16 33.8	+0.4
PAVA	Las Pavas	0.82	32	P	Pn	06 16 21.6	-0.3
CEVE	Cerro Verde	0.85	344	*e*P	Pn	06 16 21.5	-0.8
CEVE	Cerro Verde	0.85	344	S	Sn	06 16 33.8	-0.4
CEVE	Cerro Verde	0.85	344	P	Pn	06 16 21.6	-0.8
UESV	Universidad de	0.85	43	P	Pn	06 16 21.8	-0.4
UESV	Universidad de	0.85	43	S	Sn	06 16 34.0	0.0
ALJI	Alcalda de J	0.85	68	*e*P	Pn	06 16 22.2	0.0
ALJI				*e*S	Sn	06 16 34.8	+0.9
ALJI	Alcalda de J	0.85	68	P	Pn	06 16 22.2	0.0
SCLA	Alcaldia de Sa	0.94	43	P	Pn	06 16 23.8	+0.3
SCLA	Alcaldia de Sa	0.94	43	S	Sn	06 16 37.3	+1.2
NUBE	Las Nubes	0.97	337	*e*P	Pb	06 16 22.6	-1.4
NUBE				*e*S	Sb	06 16 35.5	-1.1
NUBE	Las Nubes	0.97	337	*e*P	Pb	06 16 22.6	-1.4
NUBE				*i* S	Sb	06 16 35.3	-1.2
NUBE	Las Nubes	0.97	337	P	Pb	06 16 22.7	-1.4
UNIC	Universidad Ca	0.98	351	P	Pb	06 16 23.3	-0.9
UNIC	Universidad Ca	0.98	351	S	Sn	06 16 37.5	+0.3
PQSS	Presa 15 de Se	1.01	53	P	Pb	06 16 24.5	-0.2
PQSS	Presa 15 de Se	1.01	53	S	Sn	06 16 38.0	+0.3
LOAL	Lomas de Alarc	1.06	339	P	Pn	06 16 24.1	-1.0
LOAL	Lomas de Alarc	1.06	339	S	Sn	06 16 39.1	0.0
SLOZ	Alcaldia de Sa	1.08	339	P	Pn	06 16 24.6	-0.8
SLOZ	Alcaldia de Sa	1.08	339	S	Sn	06 16 39.4	-0.3
PACA	Pacayal	1.13	66	*e*P	Pb	06 16 26.5	-0.2
PACA				*e*S	Sn	06 16 42.0	+1.1
PACA	Pacayal	1.13	66	P	Pb	06 16 26.7	0.0
RANC	El Ranchito	1.15	68	P	Pn	06 16 24.4	-2.0
RANC	El Ranchito	1.15	68	S	Sb	06 16 40.4	-1.2
BLLM	Bellamira	1.20	69	*e*P	Pb	06 16 27.5	-0.4
CNRM	Centro Naciona	1.27	68	P	Pb	06 16 28.4	-0.6
CNRM	Centro Naciona	1.27	68	S	Sb	06 16 46.0	+1.0
MTO3	Montecristo	1.38	1	*i* P	Pn	06 16 28.8	-0.9
MTO3	Montecristo	1.38	1	P	Pn	06 16 29.0	-0.8
MTO3	Montecristo	1.38	1	S	Sn	06 16 46.4	-0.9
CNCH	Conchagua	1.53	80	P	Pn	06 16 31.6	-0.1
CNCH	Conchagua	1.53	80	S	Sn	06 16 51.3	+0.4
ESQI	Esquipulas	1.54	2	P	Pn	06 16 31.2	-0.6
ESQI	Esquipulas	1.54	2	S	Sn	06 16 50.9	-0.2
FG16	Alotenango, Sa	1.67	319	*i* P	Pb	06 16 37.3	+1.3
FG16				*i* S	Sb	06 17 01.7	+5.0
FG8	Yepocapa, Chim	1.69	318	*i* P	Pb	06 16 38.0	+1.6
FG8				*i* S	Sb	06 17 02.5	+5.3
CSGN	Cosiguina Volc	1.78	91	P	Pn	06 16 34.9	-0.2
CSGN				S	Sn	06 16 57.3	+0.4
INTHN	La Esperanza I	1.80	44	P	Pn	06 16 35.3	-0.2
INTHN	La Esperanza I	1.80	44	S	Sn	06 16 58.0	+0.3
POTN	Potosi Cosigui	1.83	90	P	Pn	06 16 35.6	0.0
POTN				S	Sn	06 16 58.8	+0.8
ESSG	Sabana Grande	1.96	314	*i* P	Pn	06 16 36.2	-1.3
ESSG				*i* S	Sn	06 16 59.3	-2.1
CHOHN	Orocuina	2.22	78	P	Pn	06 16 40.6	-0.5
CRIN	San Cristobal	2.30	97	P	Pn	06 16 40.9	-1.3
CRIN	San Cristobal	2.30	97	S	Sn	06 17 11.3	+1.6
TGUH	Tegucigalpa,Un	2.30	63	P	Pn	06 16 42.4	+0.1
PKGN	Cerro Pekin	2.37	98	P	Pn	06 16 42.0	-1.1
STG8	El Palmar, Qui	2.39	307	*i* P	Pb	06 16 47.6	-0.7
QUEN	Al S del Volca	2.50	99	P	Pn	06 16 44.8	-0.2
HERN	Volcan Telica	2.52	99	P	Pn	06 16 44.7	-0.5
HERN	Volcan Telica	2.52	99	S	Sn	06 17 13.2	-2.0
HOYN	Al Sur del Vol	2.53	99	P	Pn	06 16 44.3	-1.0
HOYN				S	Sn	06 17 15.5	+0.2
POLN	Al Sur del Vol	2.53	98	P	Pn	06 16 42.3	-3.0
POLN				S	Sn	06 17 11.9	-3.6
YUSH	Yuscaran	2.64	69	P	Pn	06 16 48.1	+1.1
ILCN	San Idelfonso	2.65	99	P	Pn	06 16 46.5	-0.5
ILCN				S	Sn	06 17 18.8	+0.4
CNGA	Al SSO del Vol	2.67	101	P	Pn	06 16 46.7	-0.5
CNGA				S	Sn	06 17 18.4	-0.3
CNGN	Cerro Negro	2.67	101	P	Pn	06 16 47.3	+0.1
MACN	El Madrono	2.70	101	P	Pn	06 16 46.7	-1.0
COPN	Copaltepe	2.85	107	P	Pn	06 16 50.6	+0.9
RCVN	Varillal2	3.16	79	P	Pn	06 16 54.0	-0.1

IDC 03 06:25:04.5±3.5, **53.°43N**×**87.°47E**, **h0**^{km}, **mbtmp2.4**/2, **ML2.2**/2, **Error ellipse: s-maj=32.7km s-min=17.1km az=60.0**, **Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.66	289	I	I	06 35 20.0	
	baz=107,slow=326,SNR=4.0						
ZALV	Zalesovo Beam	1.66	289	Pg	Pn	06 25 34.3	-0.5
	0.7nm,0.3s,baz=105,slow=14,SNR=4.7						
ZALV				Lg	Lg	06 25 57.3	
	0.8nm,0.3s,baz=109,slow=24,SNR=5.5						
KURBB	Kurchatov Arra	6.19	247	Pn	Pn	06 26 37.4	+0.3
	baz=64,slow=14,SNR=2.2						
	0.2nm,0.5s						
MKAR	Makanchi Array	7.43	209	Pn	Pn	06 26 55.6	+1.4
	0.1nm,0.3s,baz=27,slow=13,SNR=2.0						
	0.1nm,0.3s						

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*BJI **03** 06:26:27.1, 7.°11S×129.°65E, h204^{km}, mB5.2/4, mb4.7/58*
*IDC **03** 06:26:29.1±0.7, 6.°88S×129.°44E, h186^{km}±5^{km}, mb4.7/33, mbtmp5.2/37, Error ellipse: s-maj=12.2km s-min=7.4km az=84.0*
*NEIC **03** 06:26:29.5, 6.°97S×129.°68E, h210^{km}, Moment Tensor Solution. Duration: 2.^{s}1 Moment tensor: Scale 10^{16}Nm; M_{rr}0.81; $M_{\theta\theta}$-5.64; $M_{\phi\phi}$4.83; $M_{r\theta}$4.04; $M_{\theta\phi}$-2.39; $M_{\phi r}$6.64; Fault plane solution: $M_0$9.70000×10^{16} NP1: ϕ_s300.34000°, δ36.54000°, λ174.97000°. NP2: ϕ_s34.39000°, δ87.00000°, λ53.56000°. Principal axes: T 9.7786, Plg37.0000°, Azm273.0000°; N -0.1629, Plg36.0000°, Azm37.0000°; P -9.6157, Plg32.0000°, Azm154.0000°;*
*MOS **03** 06:26:29.2±0.9, 6.°87S×129.°47E, h200^{km}, mb5.1/43 Error ellipse: s-maj=8.9km s-min=4.9km az=118.0*
*DJA **03** 06:26:29.5±0.1, 7°S±1°×13°0E±°, h190^{km}±2^{km}, M5.6/105, mb5.4/105, mB5.9/35, MLv6.1/19, Mw(mB)5.5/35, MwMwp6.6/2, Mwp6.5/2*
*NEIC **03** 06:26:29.5, 6.°87S×129.°48E, h210^{km}*
*NEIC **03** 06:26:30.3±1.6, 6.°86S±0.°07×129.°49E±0.°07, h191^{km}±2^{km}, mb4.9/142, Mww5.3/28, Error ellipse: s-maj=10.5km s-min=9.2km az=59.0*
*GCMT **03** 06:26:31.5±0.2, 6.°93S±0.°01×129.°52E±0.°01, h189^{km}±1^{km}, MW5.4/137, Moment Tensor Solution. s48,c61; s137,c232; Duration: 1.^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}0.01±.03; $M_{\theta\theta}$-1.05±.03; $M_{\phi\phi}$1.04±.03; $M_{r\theta}$0.45±.02; $M_{\theta\phi}$-0.36±.03; $M_{\phi r}$0.84±.02; Best double couple: $M_0$1.45700×10^{17} NP1: ϕ_s304.00000°, δ50.00000°, λ178.00000°. NP2: ϕ_s35.00000°, δ88.00000°, λ40.00000°. Principal axes: T 1.5170, Plg29.0000°, Azm267.0000°; N -0.1160, Plg50.0000°, Azm37.0000°; P -1.3980, Plg26.0000°, Azm162.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 03 06:26:29.6±0.3, **6.°98S**±0.°03×**129.°46E**±0.°04, **h193**^{km}±3^{km}, **h194**^{km}**:pP-P**, **n932**, σ**1.^{s}23**/914, **mb5.0**/173, **13C-4D**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.08	119		Pn	06 27 08.4	-0.2
SAUI				Sn	Sn	06 27 37.4	-1.3
SAUI	Saumlaki	2.08	119	P	Pn	06 27 08.3	-0.2
SAUI	Saumlaki	2.08	119	P	Pn	06 27 08.3	-0.2
SAUI				S	Sn	06 27 37.5	-1.3
BNDI	Bandanaira	2.48	10	P	Pn	06 27 12.9	0.0
BNDI	Bandanaira	2.48	10	P	Pn	06 27 12.5	-0.4
BNDI				S	Sn	06 27 46.7	-0.1
AAI	Ambon	3.51	339	P	Pn	06 27 25.2	+0.1
MSAI	Masohi	3.65	352	P	Pn	06 27 27.3	+0.4
NLAI	Namlea	4.40	328	P	Pn	06 27 37.5	+1.3
FAKI	Fak Fak	4.90	35		Pn	06 27 39.2	-3.5
FAKI	Fak Fak	4.90	35	P	Pn	06 27 38.8	-3.9
KMPI	Kaimana, Papua	5.36	52	P	Pn	06 27 46.2	-2.4
DRS	Darwin Rock St	5.60	165	P	Pn	06 27 50.9	-0.7
DRS	Darwin Rock St	5.60	165	S	Sn	06 28 54.1	-2.3
SOEI	Soe	5.83	241		Pn	06 27 55.4	+0.7
SOEI	Soe	5.83	241	P	Pn	06 27 55.3	+0.6
SOEI	Soe	5.83	241	S	Sn	06 29 00.7	-1.2
SOEI	Soe	5.83	241	P	Pn	06 27 55.3	+0.6
SANI	Sanana	6.00	325	P	Pn	06 27 57.4	+0.6
SANI	Sanana	6.00	325	P	Pn	06 27 57.4	+0.6
	3.3nm8µm1µm,0.7s						
MTN	Manton Dam	6.05	164		Pn	06 27 56.8	-0.8
MTN	Manton Dam	6.05	164	P	Pn	06 27 56.8	-0.8
	comp=Z,3µm,0.5s						
MTN	Manton Dam	6.05	164	P	Pn	06 27 57.0	-0.5
SWI	Sorong	6.34	17	P	Pn	06 27 57.3	-4.0
	comp=Z,14nmcomp=Z,18µmcomp=Z,568nm,0.7s						
KDU	Kakadu	6.40	153	P	Pn	06 28 00.9	-1.2
	comp=Z,609nm,0.6s						
KDU	Kakadu	6.40	153	P	Pn	06 28 01.1	-0.9
BATI	Baumata	6.56	240	P	Pn	06 28 04.7	+0.5
BBSI	Bau Bau	7.01	282	P	Pn	06 28 12.5	+2.5
	comp=Z,4.2nmcomp=Z,16µmcomp=Z,1µm,1.3s						
RKPI	Ransiki, Papua	7.19	41	P	Pn	06 28 10.9	-1.5
MMRI	Maumere	7.34	257		Pn	06 28 15.4	+1.1
MMRI	Maumere	7.34	257	P	Pn	06 28 15.0	+0.6
MMRI	Maumere	7.34	257	P	Pn	06 28 14.9	+0.6
	comp=Z,3.2nmcomp=Z,11µmcomp=Z,987nm,0.7s						
EDFI	Ende, Flores	7.89	257	P	Pn	06 28 21.8	+0.1
	comp=Z,2.3nmcomp=Z,8µmcomp=Z,747nm,0.8s						
TNTI	Ternate	7.98	345		Pn	06 28 21.8	-0.9
TNTI	Ternate	7.98	345	P	Pn	06 28 23.0	+0.3
TNTI	Ternate	7.98	345	P	Pn	06 28 21.6	-1.1
	comp=Z,1.2nmcomp=Z,314nm,0.9s						
SRPI	Serui, Papua	8.46	53	P	Pn	06 28 27.9	-1.0
	comp=Z,6µmcomp=Z,602nm,0.7s						
KNRA	Kununurra	8.67	184		Pn	06 28 30.5	-1.2
KNRA	Kununurra	8.67	184	P	Pn	06 28 30.4	-1.3
	comp=Z,974nm,0.7s						
BAKI	Biak	8.78	49	P	Pn	06 28 32.9	-0.2
LUWI	Luwuk	8.90	311		Pn	06 28 36.5	+1.7
LUWI	Luwuk	8.90	311	P	Pn	06 28 36.2	+1.4
LUWI	Luwuk	8.90	311	P	Pn	06 28 36.7	+1.9
	comp=Z,280nm,1.1s						
BSSI	Bau Bau, Buton	8.95	275	P	Pn	06 28 37.0	+1.6
	comp=Z,5µmcomp=Z,373nm,1.2s						
KMSI	Cibinong	9.28	324	P	Pn	06 28 40.8	+1.1
	comp=Z,12µmcomp=Z,1µm,0.7s						
BASI	Baing, Sumba	9.35	249	P	Pn	06 28 40.3	-0.3
WSI	Waingapu	9.45	253	P	Pn	06 28 40.3	-1.6
BNSI	Bone	9.65	285	P	Pn	06 28 46.0	+1.5
	comp=Z,299nm,0.7s						
WAMI	Wamena	9.71	72	P	Pn	06 28 47.7	+2.4
	comp=Z,1µm,0.7s						
APSI	Ampana	9.85	307	P	Pn	06 28 47.4	+0.3
	comp=Z,4µmcomp=Z,209nm,0.8s						
KAPI	Kappang	9.85	281		Pn	06 28 48.6	+1.5
KAPI	Kappang	9.85	281	P	Pn	06 28 47.8	+0.7
	comp=Z,76nm,0.7s,baz=148,slow=13,SNR=32						
KAPI	Kappang	9.85	281	P	Pn	06 28 49.3	+2.2
KAPI	Kappang	9.85	281	P	Pn	06 28 49.2	+2.1
KAPI	Kappang	9.85	281	*i* P	Pn	06 28 48.8	+1.7
SPSI	Sidrap Palu	10.10	287	P	Pn	06 28 51.2	+0.9
	comp=Z,184nm,0.7s						
WBSI	Waikabubak, Su	10.31	254	P	Pn	06 28 51.4	-1.7
TTSI	Tana Toraja	10.37	292	P	Pn	06 28 56.7	+2.9
	comp=Z,338nm,0.7s						
SMPI	Sarmi	10.47	62	P	Pn	06 28 53.1	-2.1
	comp=Z,207nm,0.8s						
MRSI	Marisa	10.54	314	P	Pn	06 28 58.2	+2.1
	comp=Z,4µmcomp=Z,470nm,0.8s						
MMPI	Merauke	10.93	98	P	Pn	06 29 01.5	+0.4
SGSI	Sangihe	11.30	340	P	Pn	06 29 05.0	-0.8
PCI	Palu	11.33	302	P	P	06 29 09.7	-2.7
	comp=Z,215nm,0.8s						
GENI	Genyem	11.53	68	P	Pn	06 29 09.2	+0.4
GENI	Genyem	11.53	68	S	Sn	06 31 17.2	-0.1
GENI	Genyem	11.53	68	P	Pn	06 29 08.4	-0.4
	comp=Z,265nm,0.7s						
FITZ	Fitzroy Crossi	11.66	198		Pn	06 29 08.2	-2.2
FITZ	Fitzroy Crossi	11.66	198	P	Pn	06 29 08.6	-1.8
FITZ	Fitzroy Crossi	11.66	198	P	Pn	06 29 09.3	-1.1
	comp=Z,113nm,0.3s,baz=22,slow=11,SNR=130						
FITZ				S	Sn	06 31 13.3	-7.0
	comp=Z,466nm,0.6s,baz=100,slow=18,SNR=9.4						
PLAI	Plampang	11.71	260	P	Pn	06 29 08.3	-2.9
	comp=Z,10µmcomp=Z,850nm,0.7s						
TOLI2	Tolitoli	11.81	313		Pn	06 29 14.2	+1.8
TOLI2	Tolitoli	11.81	313	P	Pn	06 29 13.6	+1.2
MPSI	Mapaga	11.99	307	P	P	06 29 17.7	-2.0
JAY	Jayapura	12.05	69	P	Pn	06 29 14.5	-1.1
	comp=Z,111nm,0.9s,baz=211,slow=11,SNR=18						
JAY	Jayapura	12.05	69	P	Pn	06 29 15.3	-0.2
	comp=Z,159nm,0.8s						
TWSI	Taliwang, Sumb	12.58	261	P	Pn	06 29 18.9	-3.3
	comp=Z,561nm,0.7s						
WB0	Warramunga Arr	13.58	160		Pn	06 29 31.4	-3.4
WRAB	Tennant Creek	13.72	160	Pn	Pn	06 29 33.9	-2.6
WRAB	Tennant Creek	13.72	160	*i* P	Pn	06 29 33.3	-3.2
WRA	Warramunga Arr	13.73	160	P	Pn	06 29 33.2	-3.4
	comp=Z,168nm,0.7s,baz=340,slow=13,SNR=338						
WRA				S	Sn	06 32 02.0	-7.8
	comp=Z,93nm,0.6s,baz=331,slow=22,SNR=6.5						
BKB	Balikpapan	13.75	294	P	P	06 29 38.7	-0.6
BKB	Balikpapan	13.75	294	P	P	06 29 39.4	+0.1
	comp=Z,525nm,0.9s						
WR8	Warramunga Arr	13.79	160		Pn	06 29 34.4	-3.0
SMKI	Samarinda	13.84	297	P	P	06 29 40.4	+0.2
	comp=Z,484nm,0.8s						
SRBI	Singaraja	14.16	265	P	Pn	06 29 40.1	-1.9
	comp=Z,207nm,0.7s						
DNP	Denpasar	14.21	262	P	P	06 29 43.9	-0.5
	comp=Z,29µmcomp=Z,537nm,0.5s						
ABJI	Asem Bagus	15.12	266	P	Pn	06 29 53.4	-0.3
	comp=Z,442nm,0.7s						
COEN	Coen	15.16	118	Pn	Pn	06 29 53.6	-0.7
COEN	Coen	15.16	118	P	Pn	06 29 53.6	-0.7
	comp=Z,155nm,0.8s						
COEN	Coen	15.16	118	P	Pn	06 29 54.1	-0.1
JAGI	Jajag, Banyuwa	15.24	263	Pn	Pn	06 29 51.0	-4.3
KMMI	Kalianget	15.38	269	P	P	06 29 58.2	+1.0
	comp=Z,377nm,0.7s						
MYLDM	Lahad Datu	16.30	318	P	Pn	06 30 09.6	+1.6
QIS	Mount Isa	16.70	145	P	Pn	06 30 12.7	0.0
	comp=Z,519nm,0.5s						
QIS	Mount Isa	16.70	145	P	Pn	06 30 12.9	+0.1
GRJI	Gresik	16.85	269	P	Pn	06 30 14.7	0.0
	comp=Z,13µmcomp=Z,1µm,0.7s						
MBWA	Marble Bar	16.95	213	P	Pn	06 30 16.1	+0.3
MBWA	Marble Bar	16.95	213	P	P	06 30 14.8	+0.3
	comp=Z,77nm,0.7s						
MBWA	Marble Bar	16.95	213	P	P	06 30 15.1	+0.6
MBWA				S	S	06 33 15.5	-5.9
MBWA	Marble Bar	16.95	213	P	Pn	06 30 15.9	+0.2
AS31	Alice Springs	17.13	166	P	Pn	06 30 17.9	0.0
AS31	Alice Springs	17.13	166	P	Pn	06 30 18.0	+0.1
	comp=Z,497nm,0.8s						
ASAR	Alice Springs	17.13	166	P	Pn	06 30 17.9	0.0
	comp=Z,902nm,0.7s,baz=338,slow=8.2,SNR=1751						
ASAR				S	S	06 33 20.4	-4.7
	comp=Z,36nm,0.7s,baz=346,slow=21,SNR=6.1						
ASAR				ScP	ScP	06 38 07.2	-0.1
	comp=Z,24nm,0.8s,baz=7.6,slow=2.7,SNR=4.6						
AS01	Alice Springs	17.14	166	P	Pn	06 30 18.0	0.0
PSA00	Pilbara Seismi	17.23	212	P	P	06 30 18.3	+0.8
PSA00	Pilbara Seismi	17.23	212	P	Pn	06 30 19.0	0.0
	comp=Z,174nm,0.5s						
PSA00	Pilbara Seismi	17.23	212	P	Pn	06 30 19.4	+0.4
TBJI	Tambak Boyo	17.48	269	P	P	06 30 20.9	+0.5
	comp=Z,6µmcomp=Z,450nm,0.8s						
PMG	Port Moresby	17.68	99	P	P	06 30 23.4	+0.8
PMG	Port Moresby	17.68	99	P	Pn	06 30 24.6	+0.2
	comp=Z,287nm,0.9s,baz=279,slow=7.3,SNR=32						
PMG				S	S	06 33 32.4	-4.0
	comp=Z,45nm,0.8s,baz=191,slow=23,SNR=4.1						
PMG	Port Moresby	17.68	99	P	P	06 30 23.4	+0.8
PMG	Port Moresby	17.68	99	P	Pn	06 30 25.2	+0.7
PMG	Port Moresby	17.68	99	*i* P	P	06 30 22.1	-0.5
NGJI	Ngawi	17.86	268	P	Pn	06 30 26.4	-0.1
	comp=Z,12µmcomp=Z,278nm,0.8s						
MTSU	Mount Surprise	18.24	129	P	P	06 30 29.8	+1.2
	comp=Z,112nm,0.8s						
MTSU	Mount Surprise	18.24	129	P	Pn	06 30 30.0	-1.0
WOJI	Wonogiri, Jawa	18.40	266	P	P	06 30 31.4	+1.0
	comp=Z,581nm,0.8s						
KKM	Kota Kinabalu	18.49	314	P	P	06 30 31.6	0.0

KKM	Kota Kinabalu	18.49	314	P	P	06 30 32.0	+0.4
MANU	Manus Island	18.51	75	P	P	06 30 32.2	+0.6
UGM	Wanagama	18.80	266	P	P	06 30 35.2	+0.4
UGM	Wanagama	18.80	266	P	P	06 30 34.9	+0.1
UGM	Wanagama	18.80	266	P	P	06 30 34.5	-0.3
	comp=Z,174nm,0.8s						
SMRI	Semarang	18.88	269	P	P	06 30 35.4	-0.1
SMRI	Semarang	18.88	269	P	P	06 30 35.5	-0.1
SMRI	Semarang	18.88	269	P	P	06 30 35.3	-0.3
	comp=Z,193nm,0.7s						
YOGI	Yogyakarta	19.02	266	P	P	06 30 37.2	0.0
	comp=Z,760µmcomp=Z,11µmcomp=Z,135nm,0.7s						
STKI	Sintang	19.25	291	P	Pn	06 30 41.7	-1.3
	comp=Z,115nm,0.9s						
TV1H	Townsville Har	20.81	128	P	P	06 30 57.1	+0.9
CTAO	Charters Tower	20.86	130	P	P	06 30 57.5	+0.7
CTAO	Charters Tower	20.86	130	P	P	06 30 57.8	+1.0
CTAO	Charters Tower	20.86	130	P	P	06 30 57.5	+0.7
KSM	Kuching	20.87	293	P	P	06 30 57.4	+0.4
KSM	Kuching	20.87	293	P	P	06 30 58.5	+1.5
GIRL	Giralia	21.39	222	P	P	06 31 03.9	+1.5
	comp=Z,318nm,0.9s						
GIRL	Giralia	21.39	222	P	P	06 31 04.6	+2.3
LEM	Lembang	21.68	269	P	P	06 31 05.2	-0.5
	comp=Z,100nm,0.7s,baz=61,slow=4.3,SNR=14						
	comp=Z,100nm,0.7s						
LEM	Lembang	21.68	269	P	P	06 31 05.6	0.0
	comp=Z,233nm,0.8s						
MEEK	Meekatharra	22.11	207	P	P	06 31 09.8	+0.2
	comp=Z,70nm,0.6s						
MEEK	Meekatharra	22.11	207	P	P	06 31 10.3	+0.8
CBJI	Citeko	22.46	270	P	P	06 31 13.1	+0.2
	comp=Z,318nm,0.8s						
TGY	Tagaytay City	22.59	338	P	P	06 31 13.6	-0.5
	comp=Z,307nm,0.6s,baz=164,slow=5.8,SNR=4.4						
	comp=Z,307nm,0.6s						
SKJI	Sukabumi	22.73	269	P	P	06 31 14.7	-0.7
	comp=Z,585nm,0.7s						
FORT	Forrest	23.71	183	P	P	06 31 24.9	+0.8
FORT	Forrest	23.71	183	P	P	06 31 24.8	+0.8
	comp=Z,803nm,0.7s						
FORT	Forrest	23.71	183	P	P	06 31 25.1	+1.0
PPBI	Pangkal Pinang	23.73	281	P	P	06 31 25.8	+1.4
XMIS	Christmas Isla	23.78	260	P	P	06 31 25.2	+0.3
QLP	Quilpie	24.04	146	P	P	06 31 27.6	+0.5
	comp=Z,542nm,0.6s						
QLP	Quilpie	24.04	146	P	P	06 31 28.5	+1.4
KASI	Kota Agung	24.85	272	P	P	06 31 35.2	+0.6
	comp=Z,54nm,0.7s						
PMBI	Palembang	24.92	278	P	P	06 31 37.2	+2.0
PMBI	Palembang	24.92	278	P	P	06 31 38.4	+3.2
MDSI	Maura Dua	25.27	274	P	P	06 31 38.3	-0.1
KMBL	Kambalda	25.27	195	P	P	06 31 38.9	+0.7
	comp=Z,103nm,0.6s						
KMBL	Kambalda	25.27	195	P	P	06 31 39.6	+1.3
MORW	Morawa	25.36	208	P	P	06 31 39.9	+0.9
MORW				IAmb	IAmb	06 32 15.6	
	comp=Z,29nm,0.7s						
MORW	Morawa	25.36	208	P	P	06 31 39.5	+0.5
MORW	Morawa	25.36	208	P	P	06 31 39.8	+0.8
TPRI	Tanjung Pinang	26.09	287	P	P	06 31 47.6	+1.8
	comp=Z,157nm,0.7s						
BLDU	Ballidu	26.38	205	P	P	06 31 49.0	+0.8
	comp=Z,32nm,0.9s						
BBOO	Buckleboo	26.42	167	P	P	06 31 49.3	+0.8
BBOO	Buckleboo	26.42	167	P	P	06 31 48.7	+0.1
	comp=Z,170nm,0.6s						
BBOO	Buckleboo	26.42	167	P	P	06 31 49.0	+0.4
GD1S	Gladstone Soft	26.75	131	P	P	06 31 52.7	+1.2
KLBR	Kellerberrin	26.82	203	P	P	06 31 52.8	+0.7
	comp=Z,191nm,0.6s						
KLBR	Kellerberrin	26.82	203	P	P	06 31 53.2	+1.1
WHYH	Whyalla	27.00	165	P	P	06 31 54.5	+0.9
MYKOM	Kota Tinggi	27.00	288	P	P	06 31 54.3	+0.4
MYKOM	Kota Tinggi	27.00	288	P	P	06 31 55.8	+1.9
STKA	Stephens Creek	27.24	157	P	P	06 31 56.4	+0.5
STKA	Stephens Creek	27.24	157	P	P	06 31 56.2	+0.4
	comp=Z,676nm,0.7s						
STKA	Stephens Creek	27.24	157	P	P	06 31 56.4	+0.5
	comp=Z,110nm,0.6s,baz=335,slow=8.7,SNR=153						
	comp=Z,110nm,0.6s						
STKA	Stephens Creek	27.24	157	P	P	06 31 56.3	+0.5
STKA	Stephens Creek	27.24	157	*i* P	P	06 31 56.2	+0.4
EIDS	Eidsvold	27.59	134	P	P	06 31 59.1	0.0
EIDS				IAmb	IAmb	06 32 41.7	
	comp=Z,24nm,1.1s						
EIDS	Eidsvold	27.59	134	P	P	06 31 58.7	-0.4
	comp=Z,15nm,0.7s						
EIDS	Eidsvold	27.59	134	P	P	06 32 00.6	+1.6
HTT	Hallett	27.74	163	P	P	06 32 00.8	+0.5
	comp=Z,18nm,0.6s						
HTT	Hallett	27.74	163	P	P	06 32 01.2	+0.8
MUN	Mundaring	27.77	205	P	P	06 32 01.0	+0.5
	comp=Z,39nm,0.7s						
MUN	Mundaring	27.77	205	P	P	06 32 01.6	+1.0
DLV	Lat	28.08	312	P	P	06 32 05.2	+1.5
NWAO	Narrogin (SRO)	28.20	202	P	P	06 32 05.5	+1.1
NWAO				IAmb	IAmb	06 33 05.0	
	comp=Z,34nm,0.7s						
NWAO	Narrogin (SRO)	28.20	202	P	P	06 32 05.1	+0.6
	comp=Z,53nm,0.6s						
NWAO	Narrogin (SRO)	28.20	202	P	P	06 32 05.4	+1.0
	comp=Z,26nm,0.6s,baz=33,slow=6.8,SNR=35						
	comp=Z,26nm,0.6s						
NWAO	Narrogin (SRO)	28.20	202	P	P	06 32 05.6	+1.1
NWAO	Narrogin (SRO)	28.20	202	P	P	06 32 05.4	+1.0
NWAO	Narrogin (SRO)	28.20	202	P	P	06 32 05.5	+1.1
NWAO	Narrogin (SRO)	28.20	202	P	P	06 32 05.5	+1.1
NWAO				pmax	pmax		
	comp=Z,33nm,0.7s						
CMSA	Cobar Meteorol	28.76	150	P	P	06 32 10.2	+0.8
	comp=Z,152nm,1.3s						
CMSA	Cobar Meteorol	28.76	150	P	P	06 32 10.3	+1.0
BKNI	Bangkinang	29.27	283	P	P	06 32 14.2	+0.2
BKNI	Bangkinang	29.27	283	P	P	06 32 16.2	+2.2
PPI	Padang Panjang	29.70	281	P	P	06 32 18.2	+0.3
	comp=Z,113nm,0.9s						
RKGY	Rocky Gully	29.81	201	P	P	06 32 13.1	-5.5
MNSI	Mandailing Nat	30.80	283	P	P	06 32 27.7	+0.2
	comp=Z,182nm,0.9s						
KULM	Kulim	31.23	292	P	P	06 32 30.5	-0.8
KULM				IAmb	IAmb	06 32 33.9	
	comp=Z,32nm,0.8s						
KULM	Kulim	31.23	292	P	P	06 32 33.3	+2.0
ARMA	Armidale	31.25	141	P	P	06 32 32.7	+1.3
ARMA				IAmb	IAmb	06 32 36.3	
	comp=Z,38nm,0.8s						
ARMA	Armidale	31.25	141	P	P	06 32 32.5	+1.1
	comp=Z,52nm,0.7s						
ARMA	Armidale	31.25	141	P	P	06 32 33.4	+2.0
ARPS	Mount Arapiles	31.73	161	P	P	06 32 36.6	+1.2
	comp=Z,431nm,0.6s						
ARPS	Mount Arapiles	31.73	161	P	P	06 32 36.9	+1.5
RPSI	Rantau Prapat	31.96	286	P	P	06 32 36.7	-1.0
PSI	Prapat	31.99	287	P	P	06 32 39.4	+1.3
PSI	Prapat	31.99	287	P	P	06 32 36.7	-1.4
PSI				pmax	pmax		
	comp=Z,75nm,0.9s						
MGBR	Mount Gambier	32.23	163	P	P	06 32 41.8	+2.1
UBPT	Khong Chiam	32.47	313	P	P	06 32 41.6	-0.5
UBPT	Khong Chiam	32.47	313	P	P	06 32 42.6	+0.5
GSI	Gunungsitoli	32.86	283	P	P	06 32 43.6	-2.0
GSI	Gunungsitoli	32.86	283	P	P	06 32 46.6	+1.0
GSI	Gunungsitoli	32.86	283	P	P	06 32 43.9	-1.7
	comp=Z,147nm,0.9s						
NTLH	Newcastle Hard	33.04	144	P	P	06 32 48.9	+2.0
SYDH	Sydney Hard Ro	33.14	146	P	P	06 32 48.8	+1.1
CAN	Canberra	33.44	150	P	P	06 32 52.2	+1.9
CAN	Canberra	33.44	150	P	P	06 32 51.6	+1.3
	comp=Z,195nm,0.7s						
CAN	Canberra	33.44	150	P	P	06 32 52.0	+1.7
CAN	Canberra	33.44	150	P	P	06 32 52.3	+1.9
CAN				pmax	pmax		
	comp=Z,124nm,0.6s						
CAN	Canberra	33.44	150	P	P	06 32 52.1	+1.8
CNB	Canberra Magne	33.61	150	P	P	06 32 53.7	+1.8
	comp=Z,74nm,0.9s						
CNB	Canberra Magne	33.61	150	P	P	06 32 53.3	+1.4
JOW	Kunigami	33.63	358	P	P	06 32 50.6	-1.4
JOW				IAmb	IAmb	06 32 53.5	
	comp=Z,45nm,0.9s						
JOW	Kunigami	33.63	358	P	P	06 32 52.2	+0.2
	comp=Z,31nm,0.7s,baz=202,slow=9.3,SNR=8.1						
	comp=Z,31nm,0.7s						
WOLH	Wollongong Har	33.70	147	P	P	06 32 54.6	+2.1
TOO	Toolangi	33.76	157	P	P	06 32 54.0	+0.9
TOO				IAmb	IAmb	06 32 56.0	
	comp=Z,27nm,1.1s						
TOO	Toolangi	33.76	157	P	P	06 32 55.4	+2.3
	comp=Z,32nm,2.1s						
TOO	Toolangi	33.76	157	P	P	06 32 54.0	+0.9
TOO				pmax	pmax		
	comp=Z,27nm,1.2s						
LHMI	Lhok Sumawe	34.64	290	P	P	06 33 00.1	-0.8
LHMI	Lhok Sumawe	34.64	290	P	P	06 33 00.6	-0.3
LHMI	Lhok Sumawe	34.64	290	P	P	06 33 00.0	-0.9
	comp=Z,232nm,0.8s						
MLSI	Meulaboh, Aceh	34.83	288	P	P	06 33 00.4	-2.2
	comp=Z,149nm,0.7s						
BSI	Banda Aceh	36.27	289	P	P	06 33 13.0	-1.9
	comp=Z,62nm,0.9s						
SLVN	Son La	37.69	319	P	P	06 33 26.0	-0.7
SLVN	Son La	37.69	319	P	P	06 33 27.3	+0.5
CORO	Coronation Par	37.76	158	P	P	06 33 28.9	+1.9
SANVU	Saraoutou	37.92	106	P	P	06 33 29.5	+0.8
NOUC	Port Laguerre	38.57	117	P	P	06 33 34.6	+0.6
MOO	Moorlands	38.64	159	P	P	06 33 37.3	+2.9
DZM	Mont Dzumac	38.68	117	P	P	06 33 35.8	+0.7
DZM				IAmb	IAmb	06 33 46.5	
	comp=Z,20nm,0.9s						
YATNC	Mamie plateau,	39.08	117	P	P	06 33 40.3	+2.0
CM31	Chiang Mai Arr	39.31	310	P	P	06 33 40.3	+0.1
CM31	Chiang Mai Arr	39.31	310	P	P	06 33 40.5	+0.3
	SNR=20						
CMAR	Chiang Mai Arr	39.31	310	P	P	06 33 39.8	-0.4
CMAR	Chiang Mai Arr	39.31	310	P	P	06 33 40.2	0.0
	comp=Z,42nm,0.7s,baz=138,slow=7.2,SNR=187						
	comp=Z,42nm,0.7s						
CMAR	Chiang Mai Arr	39.31	310	*i* P	P	06 33 40.2	0.0
CMAR				pmax	pmax		
	comp=Z,47nm,0.7s						
CHTO	Chiang Mai	39.52	311	P	P	06 33 41.8	-0.2
CHTO	Chiang Mai	39.52	311	P	P	06 33 41.8	-0.2
CHTO	Chiang Mai	39.52	311	P	P	06 33 42.1	+0.1
CHTO	Chiang Mai	39.52	311	P	P	06 33 41.8	-0.2
CHTO				pmax	pmax		
	comp=Z,75nm,0.7s						
CHTO	Chiang Mai	39.52	311	P	P	06 33 41.9	-0.1
JNU	Nakatsue	39.90	2	P	P	06 33 44.6	-0.3
JNU				IAmb	IAmb	06 34 30.6	
	comp=Z,31nm,1.2s						
JNU	Nakatsue	39.90	2	P	P	06 33 44.0	-0.9
	comp=Z,6.4nm,0.6s,baz=206,slow=6.2,SNR=5.7						
	comp=Z,6.4nm,0.6s						
WHN	Wuhan	40.02	340	⇑P	P	06 33 45.7	-0.2
WHN				pP	pP	06 34 25.1	-0.4
WHN				pmax	pmax		
	comp=Z,92nm,0.7s						
NJ2	Nanjing	40.11	346	*e*P	P	06 33 48.7	+2.1
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
JMN	Monobe	40.70	6	P	P	06 33 51.4	-0.1
JMN				IAmb	IAmb	06 34 32.9	
	comp=Z,83nm,1.7s						
KMI	Kunming	41.17	322	P	P	06 33 55.5	-0.1
KMI				pmax	pmax		
	comp=Z,14nm,1.0s						
PZH	PanZhiHua	42.79	322	P	P	06 34 11.7	+3.1
PZH				pmax	pmax		
	comp=Z,90nm,1.0s						
PZH				pmax	pmax		
	comp=Z,120nm,5.8s						
TJN	Taejon	43.17	358	P	P	06 34 11.5	+0.2
TJN	Taejon	43.17	358	P	P	06 34 11.8	+0.5
TJN	Taejon	43.17	358	P	P	06 34 11.5	+0.2
TJN				pmax	pmax		
	comp=Z,76nm,0.7s						
MAJO	Matsushiro	44.06	10	P	P	06 34 16.9	-1.6
MAJO	Matsushiro	44.06	10	*i* P	P	06 34 17.0	-1.6
MAJO				pmax	pmax		
	comp=Z,11nm,0.8s						
MJAR	Matsushiro Arr	44.06	10	P	P	06 34 16.6	-1.9
	comp=Z,11nm,1.0s,baz=188,slow=8.7,SNR=14						
	comp=Z,11nm,1.0s						
MJB9	Matsu-Tunnel	44.07	10	P	P	06 34 17.9	-0.7
KSAR	Wonju Array Be	44.22	358	P	P	06 34 20.0	+0.4
KSAR	Wonju Array Be	44.22	358	P	P	06 34 20.0	+0.4
KSRS	Korea Array	44.23	358	P	P	06 34 18.9	-0.8
	comp=Z,4.4nm,0.6s,baz=172,slow=8.3,SNR=21						
	comp=Z,4.4nm,0.6s						
KS19	Wonju Array Si	44.28	358	P	P	06 34 20.3	+0.2
LYN	LuoYang	44.32	340	P	P	06 34 19.9	-0.6
LYN				pP	pP	06 35 00.8	-0.3
LYN				pmax	pmax		
	comp=Z,23nm,0.9s						
XAN	Xi'an	45.20	336	⇓P	P	06 34 26.2	-1.4
XAN				pP	pwP	06 35 11.6	-2.6
XAN				S	S	06 40 52.5	-0.2
HNS	HongShan	46.25	344	⇓P	P	06 34 35.2	-0.4
HNS				pmax	pmax		
	comp=Z,42nm,0.9s						
BJT	Baijiatuau	48.35	346	P	P	06 34 51.2	-0.6
BJT				IAmb	IAmb	06 34 52.5	
	comp=Z,29nm,0.7s						
BJT	Baijiatuau	48.35	346	P	P	06 34 52.7	+0.9
BJT	Baijiatuau	48.35	346	P	P	06 34 51.2	-0.6
BJT				pmax	pmax		
	comp=Z,29nm,0.7s						
BJT	Baijiatuau	48.35	346	P	P	06 34 51.2	-0.6
BJT				PcP	PcP	06 36 16.4	+1.0
BJI	Beijing	48.37	346	P	P	06 34 51.0	-0.9
BJI				pP	pP	06 35 32.5	-0.6
BJI				pmax	pmax		
	comp=Z,20nm,0.7s						
LZH	Lanzhou	49.14	332	*e*P	P	06 34 58.0	-0.1
LZH				pP	pP	06 35 39.1	-0.2
LZH				sP	sP	06 36 00.6	+0.3
LZH				pmax	pmax		
	comp=Z,30nm,1.1s						
PSTR	Posyet	49.41	1	*i* P	P	06 35 00.3	+0.5
VLA	Vladivostok	49.91	2	*i* P	P	06 35 03.9	+0.3
VLA				pmax	pmax		
	comp=Z,34nm,0.6s						
MSZ	Milford Sound	50.27	145	P	P	06 35 08.5	+2.1
DCZ	Deep Cove	50.32	146	P	P	06 35 08.7	+2.1
HHC	Hu-ho-hao-te	50.36	342	*e*P	P	06 35 11.4	+4.2
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
JCZ	Jackson Bay	50.42	144	P	P	06 35 09.4	+1.8
JCZ	Jackson Bay	50.42	144	P	P	06 35 10.0	+2.4
BTO	Baotou	50.62	341	*e*P	P	06 35 12.5	+3.4
BTO				pP	pwP	06 35 55.2	-1.3
BTO				sP	sP	06 36 16.2	+4.7
BTO				PP	PP	06 37 12.1	+4.9
BTO				pmax	pmax		
	comp=Z,25nm,0.6s						
BTO				pmax	pmax		
	comp=Z,6µm,12.2s						
PALK	Pallekele	50.65	285	P	P	06 35 09.0	-0.7
PALK				IAmb	IAmb	06 35 13.5	
	comp=Z,26nm,0.8s						
PALK	Pallekele	50.65	285	P	P	06 35 12.2	+2.4
PALK	Pallekele	50.65	285	P	P	06 35 09.0	-0.7
PALK				pmax	pmax		
	comp=Z,26nm,0.8s						
CN2	Changchun	50.67	356	*e*P	P	06 35 08.9	-0.4
FOZ	Fox Glacier	50.73	143	P	P	06 35 11.2	+1.5
FOZ	Fox Glacier	50.73	143	P	P	06 35 10.9	+1.1
MLZ	Mavora Lakes	50.80	145	P	P	06 35 12.0	+1.7
USA0B	Ussuriysk Arra	50.99	2	P	P	06 35 11.3	-0.4
USA0B	Ussuriysk Arra	50.99	2	P	P	06 35 11.3	-0.4
USA0B				pmax	pmax		
	comp=Z,9.0nm,0.9s						
USRK	Ussuriysk Ar.	50.99	2	P	P	06 35 11.7	0.0
USRK	Ussuriysk Ar.	50.99	2	P	P	06 35 11.4	-0.3
	comp=Z,6.6nm,0.5s,baz=180,slow=6.7,SNR=20						
USRK				pP	pP	06 35 52.8	-0.6
	comp=Z,3.0nm,0.7s,baz=180,slow=7.9,SNR=1.5						
	comp=Z,6.6nm,0.5s						
USRK	Ussuriysk Ar.	50.99	2	P	P	06 35 11.7	0.0
DSZ	Denniston Nort	51.02	140	P	P	06 35 13.5	+1.5
WHZ	Wether Hill Ro	51.02	146	P	P	06 35 12.8	+0.9
QRZ	Quartz Range	51.03	138	P	P	06 35 14.4	+2.3
WVZ	Waitaha Valley	51.04	142	P	P	06 35 14.4	+2.3
INZ	Inchbonnie	51.29	141	IAmb	IAmb	06 35 18.1	
	comp=Z,29nm,1.1s						
INZ	Inchbonnie	51.29	141	P	P	06 35 15.2	+1.2
NEZ	North Egmont	51.36	136	P	P	06 35 17.6	+2.9
EAZ	Earnscleugh	51.39	145	P	P	06 35 15.8	+1.1
LBZ	Lake Benmore	51.42	143	IAmb	IAmb	06 35 16.8	
	comp=Z,38nm,0.8s						
LBZ	Lake Benmore	51.42	143	P	P	06 35 16.2	+1.2
KUZ	Kuaotunu	51.45	132	P	P	06 35 17.0	+1.7
HIZ	Hauiti	51.56	135	P	P	06 35 17.1	+1.0
HIZ	Hauiti	51.56	135	P	P	06 35 11.6	-4.5
RPZ	Rata Peaks	51.58	142	P	P	06 35 16.7	+0.5
APZ	The Paps	51.62	147	P	P	06 35 17.7	+1.3
LREZ	Lake Rotokare	51.66	136	P	P	06 35 20.1	+3.3
TOZ	Tahuroa Road	51.69	133	IAmb	IAmb	06 35 20.1	
	comp=Z,19nm,0.9s						
THZ	Tophouse	51.74	139	IAmb	IAmb	06 35 20.7	
	comp=Z,24nm,0.8s						
THZ	Tophouse	51.74	139	P	P	06 35 18.4	+1.0
NNZ	Nelson	51.78	138	P	P	06 35 18.1	+0.5
LSA	Lhasa	51.81	317	P	P	06 35 18.9	+0.2
LSA				IAmb	IAmb	06 35 27.4	
	comp=Z,32nm,0.7s						
LSA	Lhasa	51.81	317	P	P	06 35 18.8	+0.2
LSA				pmax	pmax		
	comp=Z,17nm,0.8s						
LSA	Lhasa	51.81	317	P	P	06 35 18.9	+0.2
LSA				pmax	pmax		
	comp=Z,32nm,0.7s						
LSA	Lhasa	51.81	317	P	P	06 35 19.2	+0.6
LTZ	Lake Taylor	51.84	140	P	P	06 35 19.5	+1.3
TMZ	Timaru	51.91	143	P	P	06 35 19.4	+0.8
DUWZ	D’Urville Isla	51.95	138	P	P	06 35 20.2	+1.3
TLZ	Tolley Road	51.97	134	P	P	06 35 21.8	+2.7
OXZ	Oxford	51.98	141	IAmb	IAmb	06 35 22.9	
	comp=Z,25nm,0.6s						
OXZ	Oxford	51.98	141	P	P	06 35 21.2	+2.1
TUZ	Tuapeka	52.00	145	P	P	06 35 20.3	+1.2
ODZ	Otahua Downs	52.06	144	P	P	06 35 20.7	+1.0
SYZ	Scrubby Hill	52.07	146	P	P	06 35 20.3	+0.6
XLT	XiLinHaoTe	52.07	348	*e*P	P	06 35 19.8	0.0
XLT				pmax	pmax		
	comp=Z,15nm,0.7s						
WAZ	Wanganui	52.19	136	P	P	06 35 22.5	+1.7
TWVZ	Taurewa	52.21	135	P	P	06 35 22.8	+1.8
ASAJ	Asahikawa	52.23	12	P	P	06 35 20.8	0.0
	comp=Z,3.6nm,0.3s,baz=234,slow=17,SNR=4.1						
	comp=Z,3.6nm,0.3s						
PKVZ	Pokaka	52.24	135	P	P	06 35 22.9	+1.7
WTVZ	West Tongariro	52.34	135	P	P	06 35 24.8	+2.8
COVZ	Chateau Observ	52.34	135	P	P	06 35 23.7	+1.8
NNVZ	North Ngauruho	52.36	135	P	P	06 35 24.2	+2.0
NGZ	Ngauruhoe	52.37	135	P	P	06 35 24.1	+1.9
FWVZ	Far West T-bar	52.37	135	P	P	06 35 23.9	+1.6
TCW	Tory Channel	52.37	138	P	P	06 35 22.4	+0.3
MAVZ	Matarangi	52.38	135	P	P	06 35 24.9	+2.4
TRVZ	Turoa	52.38	135	P	P	06 35 24.2	+1.7
WHVZ	Whangaehu Hut	52.41	135	P	P	06 35 24.9	+2.3
OTVZ	Oturere	52.41	135	P	P	06 35 24.7	+2.1
TMVZ	Te Maari	52.42	135	P	P	06 35 25.1	+2.5
GVZ	Greta Valley S	52.42	140	P	P	06 35 23.8	+1.5
ETVZ	East Tongariro	52.43	135	P	P	06 35 24.9	+2.2
WNVZ	Wahianoa	52.43	135	P	P	06 35 24.2	+1.5
KHZ	Kahutara	52.47	139	P	P	06 35 23.7	+1.1
BNX	BinXian	52.51	358	⇑P	P	06 35 22.4	-0.5
BNX				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MQZ	McQueen’s Vall	52.56	141	P	P	06 35 24.6	+1.3
MOVZ	Moawhango	52.58	135	P	P	06 35 24.5	+0.9
KIW	Kapiti Island	52.64	137	P	P	06 35 24.6	+0.6
CAW	Cannon Point	52.85	137	P	P	06 35 25.3	-0.3
BHW	Baring Head	52.86	138	P	P	06 35 25.3	-0.3
BKZ	Black Stump Fm	52.99	135	P	P	06 35 27.7	+1.0
BKZ	Black Stump Fm	52.99	135	P	P	06 35 27.3	+0.6
MRZ	Mangatainoka R	53.00	137	IAmb	IAmb	06 35 27.3	
	comp=Z,49nm,1.1s						
MRZ	Mangatainoka R	53.00	137	P	P	06 35 26.9	+0.2
TSZ	Takapari Road	53.00	136	P	P	06 35 27.4	+0.7
HOWZ	Holdsworth Sta	53.06	137	P	P	06 35 27.0	-0.1
URZ	Urewera	53.07	133	P	P	06 35 28.3	+1.1
URZ	Urewera	53.07	133	P	P	06 35 27.3	+0.2
PNHZ	Pukenui	53.10	136	P	P	06 35 28.0	+0.6
KRHZ	Kereru	53.11	135	P	P	06 35 28.0	+0.5
RTZ	Ruatahuna	53.12	134	P	P	06 35 28.5	+0.8
NMHZ	Naumai	53.19	134	P	P	06 35 29.6	+1.5
PLWZ	Palliser	53.19	138	P	P	06 35 28.0	-0.1
HAZ	Te Kaha	53.36	132	P	P	06 35 29.8	+0.5
MWZ	Matawai	53.40	133	P	P	06 35 30.4	+0.8
BFZ	Birch Farm	53.47	136	P	P	06 35 31.1	+1.0
PXZ	Pawanui	53.61	135	P	P	06 35 31.3	+0.2
MXZ	Matakaoa Point	53.67	132	P	P	06 35 33.2	+1.6
GTA	Gaotai	53.70	332	P	P	06 35 32.2	+0.4
GTA				pP	pP	06 36 13.3	-0.5
GTA				ScP	ScP	06 40 15.2	+0.2
GTA				pmax	pmax		
	comp=Z,18nm,1.1s						
PUZ	Puketiti	53.83	133	P	P	06 35 33.7	+0.9
EVN	Everest	53.87	312	P	P	06 35 33.3	-0.6
EVN				IAmb	IAmb	06 35 46.3	
	comp=Z,45nm,1.1s						
GOMU	GeErMu	53.87	325	P	P	06 35 33.2	-0.3
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
YSS	Yuzhno-Sakhali	54.98	11	*e*P	P	06 35 30.1	-11
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
HYB	Hyderabad	55.82	296	*e*P	P	06 35 47.5	+0.1
HYB				*e*pP	pP	06 36 31.4	+1.8
KLR	Kul'dur	56.01	2	*ce*P	P	06 35 48.4	+0.3
KLR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HEH	HeiHe	57.03	358	*e*P	P	06 35 55.2	0.0
HEH				pmax	pmax		
	comp=Z,17nm,0.8s						
ULN	Ulaanbaatar	58.08	342	P	P	06 36 03.4	+0.5
ULN	Ulaanbaatar	58.08	342	P	P	06 36 03.1	+0.3
ULN	Ulaanbaatar	58.08	342	*i* P	P	06 36 03.2	+0.3
ULN				pmax	pmax		
	comp=Z,32nm,0.6s						
ULN	Ulaanbaatar	58.08	342	P	P	06 36 03.5	+0.7
SONM	Songino Array	58.26	342	P	P	06 36 04.1	+0.1
SONM				IAmb	IAmb	06 36 06.8	
	comp=Z,19nm,0.7s						
SONM	Songino Array	58.26	342	P	P	06 36 04.2	+0.2
	comp=Z,17nm,0.7s,baz=154,slow=6.2,SNR=34						
SONM				pP	pP	06 36 46.0	-0.7
	comp=Z,6.4nm,1.1s,baz=140,slow=9.1,SNR=1.6						
	comp=Z,17nm,0.7s						
DRV	Dumont d’Urvil	60.03	175	P	P	06 36 16.8	+1.1
ZEA	Zeya	60.52	358	*e*P	P	06 36 20.0	+0.8
ZEA				*e*		06 37 09.7	
ZEA				pmax	pmax		
	comp=Z,20nm,0.9s						
CASY	Casey	60.64	189	P	P	06 36 21.4	+1.5
CASY				IAmb	IAmb	06 36 54.4	
	comp=Z,15nm,1.1s						
ZAK	Zakamensk	61.47	341	*e*P	P	06 36 23.5	-2.3
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
WMQ	Urumqi	63.09	327	*e*P	P	06 36 36.9	+0.3
WMQ				PcP	pP	06 37 16.8	-3.2
WMQ				pmax	pmax		
	comp=Z,41nm,0.9s						
WMQ				LR	LR		
	comp=Z,1µm,16.7s						
WMQ				LR	LR		
	comp=Z,2µm,16.7s						
WMQ				LR	LR		
	comp=Z,570nm,20.7s						
MOY	Mondy	63.32	341	*e*P	P	06 36 38.8	+0.8
MOY				pmax	pmax		
	comp=Z,45nm,1.6s						
PEA0B	Petropavlovsk-	64.47	18	P	P	06 36 46.4	+1.0
PEA0B				IAmb	IAmb	06 36 47.9	
	comp=Z,12nm,0.9s						
PEA0B	Petropavlovsk-	64.47	18	P	P	06 36 46.4	+1.0
PEA0B				pmax	pmax		
	comp=Z,12nm,1.0s						
PETK	Petropavlovsk-	64.47	18	P	P	06 36 46.0	+0.6
PETK	Petropavlovsk-	64.47	18	P	P	06 36 45.6	+0.2
	comp=Z,7.8nm,0.8s,baz=193,slow=6.1,SNR=16						
	comp=Z,7.8nm,0.8s						
PETK	Petropavlovsk-	64.47	18	P	P	06 36 46.0	+0.6
NIL	Nilore	66.80	311	P	P	06 37 00.3	-0.4
NIL	Nilore	66.80	311	P	P	06 37 01.1	+0.3
NIL	Nilore	66.80	311	P	P	06 37 00.3	-0.4
NIL				pmax	pmax		
	comp=Z,35nm,0.6s						

NIL	Nilore	66.80	311	P	P	06 37 00.4	-0.4
SHLS	Shalkode	67.38	323	eP	P	06 37 02.8	-1.5
SHLS	Shalkode	67.38	323	eP	P	06 37 02.9	-1.5
TARG	Taragay, Kyrgy	67.61	321	P	P	06 37 06.9	+0.7
TARG	Taragay, Kyrgy	67.61	321	P	P	06 37 06.9	+0.7
TARG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
UZB	Uzynbulak	67.64	322	eP	P	06 37 06.1	+0.1
UZB	Uzynbulak	67.64	322	eP	P	06 37 06.1	+0.1
KSH	Kashi	67.64	318	P	P	06 37 06.7	+0.6
KSH				pmax	pmax		
	comp=Z,19nm,0.7s						
KSH				LR	LR		
	comp=Z,2µm,14.4s						
KSH				LR	LR		
	comp=Z,1µm,13.4s						
KSH				LR	LR		
	comp=Z,2µm,13.4s						
MK31	Makanchi Array	67.92	327	eP	P	06 37 07.6	+0.1
MKAR	Makanchi Array	67.92	327	P	P	06 37 07.5	0.0
	comp=Z,44nm,0.3s,baz=122,slow=7.8,SNR=558						
	comp=Z,44nm,0.3s						
SATY	Saty	67.96	322	eP	P	06 37 08.1	+0.1
SATY				pmax	pmax		
	comp=Z,16nm,0.7s						
SATY	Saty	67.96	322	eP	P	06 37 08.2	+0.1
	comp=Z,16nm,0.7s						
ZHN	Zhinishke	68.00	322	eP	P	06 37 08.2	0.0
ZHN	Zhinishke	68.00	322	eP	P	06 37 08.3	0.0
KPKS	Kokpek	68.02	323	eP	P	06 37 08.4	+0.1
KPKS	Kokpek	68.02	323	eP	P	06 37 08.5	+0.1
MAKZ	Makanchi	68.09	327	P	P	06 37 08.6	0.0
MAKZ	Makanchi	68.09	327	P	P	06 37 08.6	0.0
MAKZ				pmax	pmax		
	comp=Z,56nm,0.5s						
CCD	Concordia, Ant	68.17	182	P	P	06 37 10.5	+1.5
CCD				PcP	PcP	06 37 34.6	+1.1
KDJ	Kajisay	68.22	321	P	P	06 37 09.9	+0.2
KDJ				IAmb	IAmb	06 37 12.9	
	comp=Z,13nm,0.6s						
KDJ	Kajisay	68.22	321	P	P	06 37 09.9	+0.2
KDJ				pmax	pmax		
	comp=Z,13nm,0.6s						
MA2	Magadan	68.49	11	P	P	06 37 11.6	+0.9
MA2				IAmb	IAmb	06 37 13.5	
	comp=Z,11nm,0.7s						
MA2	Magadan	68.49	11	i P	P	06 37 11.6	+0.9
MA2				pmax	pmax		
	comp=Z,13nm,0.8s						
MA2	Magadan	68.49	11	P	P	06 37 11.5	+0.9
	comp=Z,18nm,0.8s						
YAK	Yakutsk	68.81	0	P	P	06 37 13.0	+0.4
YAK	Yakutsk	68.81	0	eP	P	06 37 10.5	-2.1
YAK				eS	S	06 45 56.4	-3.9
YAK				pmax	pmax		
	comp=Z,21nm,0.8s						
YAK				pmax	pmax		
	comp=N,11nm,1.8s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.0s						
YAK				smax	smax		
	comp=N,11nm,1.0s						
YAK				smax	smax		
	comp=E,10.0nm,1.0s						
TNSS	Tian-Shan	68.85	321	eP	P	06 37 13.5	-0.3
TNSS	Tian-Shan	68.85	321	eP	P	06 37 13.6	-0.3
MDOK	Medeo	68.85	322	P	P	06 37 13.7	+0.2
MDOK	Medeo	68.85	322	eP	P	06 37 13.8	+0.2
ARXS	Arharly	68.95	323	eP	P	06 37 14.1	+0.1
AAA	Alma-Ata	68.96	322	eP	P	06 37 14.2	+0.1
AAA				pmax	pmax		
	comp=Z,31nm,0.8s						
AAA	Alma-Ata	68.96	322	eP	P	06 37 14.3	+0.1
	comp=Z,31nm,0.8s						
TDK	Taldyqorghan	69.05	324	eP	P	06 37 14.6	+0.1
TDK				pmax	pmax		
	comp=Z,18nm,0.4s						
TDK	Taldyqorghan	69.05	324	eP	P	06 37 14.7	+0.1
	comp=Z,18nm,0.4s						
BOOM	Boomskoye usch	69.19	320	P	P	06 37 16.1	+0.4
BOOM				IAmb	IAmb	06 37 18.7	
	comp=Z,20nm,0.7s						
BOOM	Boomskoye usch	69.19	320	P	P	06 37 16.1	+0.4
BOOM				pmax	pmax		
	comp=Z,20nm,0.7s						
TKM2	Tokmak 2	69.63	321	P	P	06 37 18.7	+0.3
	SNR=43						
AAK	Ala-Archa	70.18	320	P	P	06 37 22.2	+0.5
	SNR=18						
AAK	Ala-Archa	70.18	320	P	P	06 37 22.4	+0.7
AAK				IAmb	IAmb	06 37 25.0	
	comp=Z,25nm,0.8s						
AAK	Ala-Archa	70.18	320	P	P	06 37 22.9	+1.2
AAK	Ala-Archa	70.18	320	ceP	P	06 37 22.6	+0.9
AAK				pmax	pmax		
	comp=Z,27nm,0.8s						
AAK	Ala-Archa	70.18	320	i P	P	06 37 22.0	+0.3
	SNR=18						
AAK	Ala-Archa	70.18	320	P	P	06 37 22.7	+1.0
AAK				pP	pP	06 38 06.1	+0.3
CHMS	Chumysh	70.20	320	P	P	06 37 22.2	+0.5
	SNR=10						
KBL	Kabul	70.34	310	P	P	06 37 22.8	-0.1
KBL				IAmb	IAmb	06 37 32.2	
	comp=Z,21nm,0.7s						
KBL	Kabul	70.34	310	P	P	06 37 23.5	+0.6
	SNR=7.8						
KBL	Kabul	70.34	310	P	P	06 37 22.8	-0.1
KBL				pmax	pmax		
	comp=Z,21nm,0.7s						
AML	Almayashu	70.44	319	P	P	06 37 24.3	+0.7
	SNR=54						
USP	Ospenovka	70.50	321	P	P	06 37 23.8	+0.3
	SNR=77						
ARSB	Arslanbob	70.52	318	P	P	06 37 24.3	+0.6
ARSB	Arslanbob	70.52	318	P	P	06 37 24.3	+0.6
ARSB				pmax	pmax		
	comp=Z,44nm,0.8s						
EKS2	Erkin-Say	70.65	320	P	P	06 37 25.3	+0.8
	SNR=42						
ZAA0	Zalesovo Array	71.33	334	P	P	06 37 27.4	-0.7
ZAA0				IAmb	IAmb	06 37 28.3	
	comp=Z,36nm,0.8s						
ZALV	Zalesovo Beam	71.33	334	P	P	06 37 27.4	-0.7
ZALV	Zalesovo Beam	71.33	334	P	P	06 37 27.3	-0.9
	comp=Z,40nm,0.7s,baz=113,slow=3.9,SNR=72						
ZALV				S	S	06 46 27.3	-2.6
	comp=Z,2.6nm,0.8s,baz=150,slow=27,SNR=6.6						
	comp=Z,40nm,0.7s						
BTK	Batken	71.39	316	P	P	06 37 29.0	+0.1
BTK				IAmb	IAmb	06 37 31.2	
	comp=Z,29nm,0.9s						
BTK	Batken	71.39	316	P	P	06 37 29.0	+0.1
BTK				pmax	pmax		
	comp=Z,29nm,0.9s						
BTLS	Baital	71.68	322	eP	P	06 37 30.5	+0.1
BTLS	Baital	71.68	322	eP	P	06 37 30.5	+0.1
SEY	Seymchan	71.89	11	ceP	P	06 37 31.8	+0.5
SEY				pmax	pmax		
	comp=Z,29nm,0.8s						
SIMJ	Simiganj	72.05	314	P	P	06 37 32.9	-0.1
KURBB	Kurchatov Arra	72.21	329	P	P	06 37 33.3	-0.1
	comp=Z,41nm,0.7s,baz=128,slow=4.8,SNR=313						
KURBB				pP	pP	06 38 16.7	-1.3
	comp=Z,4.8nm,0.8s,baz=128,slow=5.4,SNR=1.0						
KURBB				S	S	06 46 33.6	-6.6
	comp=Z,0.1nm,0.3s,baz=134,slow=14,SNR=4.6						
	comp=Z,41nm,0.7s						
KURBB	Kurchatov Arra	72.21	329	P	P	06 37 33.2	-0.3
KURK	Kurchatov	72.22	329	P	P	06 37 33.4	-0.1
KURK	Kurchatov	72.22	329	P	P	06 37 33.5	0.0
KURK	Kurchatov	72.22	329	P	P	06 37 33.4	-0.1
KURK				pmax	pmax		
	comp=Z,47nm,0.7s						
DZA	Taraz	72.34	319	eP	P	06 37 34.4	-0.1
DZA				pmax	pmax		
	comp=Z,19nm,0.6s						
DZA	Taraz	72.34	319	eP	P	06 37 34.5	-0.1
	comp=Z,19nm,0.6s						
VNDA	Vanda	72.53	173	P	P	06 37 35.8	+0.9
VNDA	Vanda	72.53	173	P	P	06 37 35.9	+0.9
	comp=Z,9.0nm,0.7s,baz=319,slow=7.2,SNR=46						
VNDA				S	S	06 46 45.0	+1.9
	comp=Z,0.8nm,1.0s,baz=235,slow=4.9,SNR=3.6						
	comp=Z,9.0nm,0.7s						
KK31	Karatay Array	72.97	319	P	P	06 37 38.1	-0.1
KK31				IAmb	IAmb	06 37 41.5	
	comp=Z,28nm,0.9s						
KK31	Karatay Array	72.97	319	i P	P	06 37 38.1	-0.1
KKAR	Karatay Array	72.97	319	P	P	06 37 38.0	-0.2
KKAR	Karatay Array	72.97	319	P	P	06 37 38.0	-0.2
CHM	Chimkent	73.22	318	eP	P	06 37 39.6	0.0
CHM				pmax	pmax		
	comp=Z,36nm,0.9s						
CHM	Chimkent	73.22	318	eP	P	06 37 39.6	0.0
	comp=Z,36nm,0.9s						
BRLS	Borolday	73.38	319	eP	P	06 37 40.5	0.0
BRLS				pmax	pmax		
	comp=Z,31nm,0.8s						
BRLS	Borolday	73.38	319	eP	P	06 37 40.6	0.0
	comp=Z,31nm,0.8s						
SBA	Scott Base	73.42	172	P	P	06 37 42.3	+2.1
SBA	Scott Base	73.42	172	P	P	06 37 42.3	+2.1
SBA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NGCH	Negor - Chabah	73.72	299	P	P	06 37 44.6	+1.7
JLN	Jalan Bani Buh	74.41	295	P	P	06 37 47.5	+0.6
MAW	Mawson	74.77	201	P	P	06 37 49.7	+1.6
	comp=Z,8.0nm,0.6s,baz=79,slow=5.6,SNR=23						
	comp=Z,8.0nm,0.6s						
BRZS	Berezniki	75.00	326	eP	P	06 37 49.8	+0.1
BRZS	Berezniki	75.00	326	eP	P	06 37 49.9	+0.1
WSAR	Wadi Sarin	75.37	296	P	P	06 37 53.4	+1.0
MHTO	MHTO	75.43	294	P	P	06 37 53.1	+0.3
HRA	Herat	75.52	308	P	P	06 37 53.2	-0.2
HRA				IAmb	IAmb	06 37 56.1	
	comp=Z,18nm,0.8s						
JMDO	Jabal Madar	75.64	295	P	P	06 37 55.4	+1.4
SMDO	Samad	75.85	296	P	P	06 37 56.1	+0.8
BIDO	Bidbid	75.89	296	P	P	06 37 56.5	+1.1
	SNR=7.0						
BSY	Bisya	76.54	295	P	P	06 38 00.1	+1.1
HOQ	Hoqain	76.63	296	P	P	06 38 01.2	+1.6
	SNR=9.0						
SOHO	SOHO	77.45	297	P	P	06 38 04.6	+0.4
SOHO	SOHO	77.45	297	P	P	06 38 03.9	-0.2
BVA0	Borovoye Array	77.76	328	P	P	06 38 04.5	-0.7
BVAR	Borovoye Array	77.76	328	P	P	06 38 05.0	-0.2
	comp=Z,50nm,0.8s,baz=126,slow=7.5,SNR=91						
	comp=Z,50nm,0.8s						
BVAR	Borovoye Array	77.76	328	P	P	06 38 05.0	-0.2
BRVK	Borovoye	77.83	328	P	P	06 38 05.4	-0.2
BRVK	Borovoye	77.83	328	P	P	06 38 05.5	0.0
BRVK	Borovoye	77.83	328	ceP	P	06 38 05.6	0.0
BRVK				pmax	pmax		
	comp=Z,47nm,0.8s						
UOSS	Minazif	77.94	297	P	P	06 38 06.8	0.0
UOSS				IAmb	IAmb	06 38 10.5	
	comp=Z,9.7nm,0.6s						
UOSS	Minazif	77.94	297	P	P	06 38 06.6	-0.2
HATD	Hatta, Dubai	77.97	297	P	P	06 38 08.0	+1.0
	SNR=5.7						
HATD	Hatta, Dubai	77.97	297	i P	P	06 38 07.4	+0.4
	SNR=5.7						
ASHO	Ashiyiah	78.00	297	P	P	06 38 08.4	+1.2
ASHO	Ashiyiah	78.00	297	i P	P	06 38 07.6	+0.4
	SNR=8.0						
MSFE	Esma-Masafi	78.07	298	i P	P	06 38 07.7	+0.2
	SNR=14						
MASF	Masafi	78.08	298	P	P	06 38 08.2	+0.6
BANOM	Banah	78.08	298	P	P	06 38 08.7	+1.0
BANOM	Banah	78.08	298	i P	P	06 38 07.6	0.0
	SNR=22						
ALNE	Al Ain	78.13	296	P	P	06 38 08.4	+0.5
	SNR=6.2						
ALNE	Al Ain	78.13	296	i P	P	06 38 07.8	-0.1
	SNR=12						
RBK	Rabkut	78.17	289	P	P	06 38 09.5	+1.2
SHME	Shamm	78.25	298	P	P	06 38 09.1	+0.6
SHME	Shamm	78.25	298	i P	P	06 38 08.8	+0.3
	SNR=8.7						
NAZ	Nazwa, Dubai	78.42	297	P	P	06 38 09.4	-0.1
DOK	Doka	78.46	291	P	P	06 38 09.0	-0.7
TIXI	Tiksi	78.47	360	P	P	06 38 08.3	-0.4
TIXI	Tiksi	78.47	360	i P	P	06 38 08.2	-0.4
TIXI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ASUD	Al Ashush, Dub	78.64	297	P	P	06 38 10.8	+0.2
ASUD	Al Ashush, Dub	78.64	297	i P	P	06 38 10.1	-0.5
	SNR=7.1						
WHFO	Wadi Hawf	78.65	290	P	P	06 38 10.7	-0.2
ABTO	Aybut	78.99	289	P	P	06 38 13.2	+0.4
BILL	Bilibino	79.22	13	i P	P	06 38 15.5	+2.6
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
VOI	Vohitsoka	80.65	249	P	P	06 38 22.5	+0.8
UNV	Unalaska Valle	80.78	33	P	P	06 38 22.0	+0.5
	baz=245						
JRN	Qarnain Island	80.91	297	P	P	06 38 22.7	-0.1
NRIK	Noril'sk	81.41	346	P	P	06 38 24.6	+0.1
NRIK				IAmb	IAmb	06 38 27.7	
	comp=Z,19nm,0.9s						
NRIK	Noril'sk	81.41	346	P	P	06 38 23.9	-0.6
	comp=Z,17nm,0.8s,baz=131,slow=6.4,SNR=19						
NRIK				pP	pP	06 39 08.4	-2.2
	comp=Z,5.1nm,0.8s,baz=144,slow=5.6,SNR=1.5						
NRIK				S	S	06 48 16.1	-3.0
	comp=Z,0.8nm,0.5s,baz=14,slow=21,SNR=7.7						
	comp=Z,17nm,0.8s						
NRIK	Noril'sk	81.41	346	ceP	P	06 38 24.8	+0.3
NRIK				pmax	pmax		
	comp=Z,23nm,0.9s						
SLWR	Sila	81.76	295	P	P	06 38 28.0	+0.7
AB31	Akbulak array	82.16	322	P	P	06 38 28.4	-0.4
AB31				IAmb	IAmb	06 38 30.4	
	comp=Z,40nm,0.8s						
AB31	Akbulak array	82.16	322	i P	P	06 38 28.3	-0.6
ABKAR	Akbulak array	82.16	322	P	P	06 38 28.2	-0.7
TRNA	Turayna	82.32	296	P	P	06 38 30.7	+0.5
SMRA	Abu-Samra	82.67	296	P	P	06 38 31.9	-0.2
SHMA	Al-Shehemyia	82.76	297	P	P	06 38 32.9	+0.4
QSPA	South Pole Qui	83.00	180	P	P	06 38 33.8	+0.7
QSPA				IAmb	IAmb	06 38 45.7	
	comp=Z,25nm,1.4s						
QSPA	South Pole Qui	83.00	180	P	P	06 38 33.0	0.0
	comp=Z,7.4nm,0.5s,baz=321,slow=0.5,SNR=59						
	comp=Z,7.4nm,0.5s						
GAMB	Gambell	83.11	23	P	P	06 38 33.9	+0.5
	baz=239						
SAKB	Bahrain	83.16	297	P	P	06 38 34.9	+0.4
SYO	Syowa Base	83.48	201	⇓iP	P	06 38 36.6	+1.3
SYO	Syowa Base	83.48	201	⇓ePcP	PcP	06 38 39.2	0.0
SYO	Syowa Base	83.48	201	⇑isP	sP	06 39 44.8	+3.2
AKTO	Aktyubinsk	83.73	322	P	P	06 38 36.8	-0.1
	comp=Z,36nm,0.8s,baz=100,slow=5.1,SNR=57						
	comp=Z,36nm,0.8s						
M11K	Mekoryuk	83.76	27	P	P	06 38 37.7	+1.0
	baz=244						
S12K	Black Hills	83.88	32	P	P	06 38 38.1	+0.5
	baz=248						
SVE	Sverdlovsk	84.47	329	eP	P	06 38 40.9	+0.4
SVE				pmax	pmax		
	comp=Z,68nm,1.0s						
SDPT	Sand Point	84.59	33	P	P	06 38 41.2	+0.1
	baz=250						
M13K	Dall Lake	85.06	27	P	P	06 38 44.5	+1.3
	baz=247						
K13K	Kusilvak Mount	85.10	26	P	P	06 38 43.9	+0.4
K13K	Kusilvak Mount	85.10	26	P	P	06 38 44.3	+0.8
	baz=245						
TNA	Tin City	85.40	22	P	P	06 38 45.9	+1.0
	baz=242						
S14K	Fog Glacier	85.41	32	P	P	06 38 46.1	+0.8
	baz=250						
ARTI	Arti	85.48	328	P	P	06 38 44.9	-0.6
ARTI	Arti	85.48	328	P	P	06 38 45.4	-0.2
	comp=Z,47nm,0.7s,baz=115,slow=3.0,SNR=51						
	comp=Z,47nm,0.7s						
ARTI	Arti	85.48	328	⇑eP	P	06 38 45.3	-0.2
ARTI				pmax	pmax		
	comp=Z,53nm,0.8s						
O14K	Tigyukauivet M	85.59	29	P	P	06 38 46.7	+0.7
	baz=249						
N14K	Kuskokwak Cree	85.64	28	P	P	06 38 46.9	+0.8
	baz=248						
L14K	Kuka Creek	85.72	27	IAmb	IAmb	06 38 49.5	
	comp=Z,22nm,1.2s						
L14K	Kuka Creek	85.72	27	P	P	06 38 47.4	+0.8
	baz=247						
M14K	Bethel	85.82	27	IAmb	IAmb	06 38 49.9	
	comp=Z,15nm,0.8s						
M14K	Bethel	85.82	27	P	P	06 38 47.2	+0.1
	baz=248						
J14K	Nanvaranak Lak	85.90	25	P	P	06 38 47.9	+0.5
	baz=246						
ANM	Nome	85.92	23	P	P	06 38 47.9	+0.4
	baz=245						
F14K	Arctic Creek	85.95	22	P	P	06 38 49.0	+1.3
	baz=244						
KBD	Kabd	86.23	300	P	P	06 38 50.1	+0.3
O15K	Ungalikthiuk R	86.26	29	P	P	06 38 49.9	+0.7
	baz=250						
L15K	Ungalak Mounta	86.38	27	P	P	06 38 50.3	+0.5
	baz=248						
M15K	Kasigluk River	86.38	28	P	P	06 38 50.8	+1.0
	baz=249						
N15K	Kwethluk River	86.47	28	P	P	06 38 51.3	+1.0
	baz=250						
K15K	Wolf Creek Mou	86.59	26	IAmb	IAmb	06 38 54.5	
	comp=Z,21nm,1.4s						
K15K	Wolf Creek Mou	86.59	26	P	P	06 38 52.0	+1.2
	baz=248						
G15K	Niukluk	86.62	23	P	P	06 38 52.1	+1.2
	baz=246						
F15K	North Star Dit	86.69	22	P	P	06 38 52.4	+1.2
	baz=245						
P16K	Nushagak River	87.10	30	P	P	06 38 54.1	+0.8
	baz=252						
H16K	Elim	87.19	24	P	P	06 38 55.1	+1.5
	baz=247						
N16K	Nishlik Lake	87.20	28	P	P	06 38 54.9	+1.1
	baz=251						
O16K	Kokwok River B	87.23	29	P	P	06 38 55.2	+1.2
	baz=251						
RAYN	Ar Rayn	87.25	294	P	P	06 38 54.8	-0.1
RAYN	Ar Rayn	87.25	294	P	P	06 38 55.4	+0.5
RAYN	Ar Rayn	87.25	294	P	P	06 38 54.8	-0.1
RAYN				pmax	pmax		
	comp=Z,25nm,0.7s						
RAYN	Ar Rayn	87.25	294	i P	P	06 38 55.0	+0.1
	SNR=44						
L16K	Owhat River	87.29	27	P	P	06 38 55.4	+1.2
	baz=250						
M16K	Timber Creek	87.29	28	IAmb	IAmb	06 38 57.0	
	comp=Z,8.8nm,0.7s						
M16K	Timber Creek	87.29	28	P	P	06 38 55.6	+1.4
	baz=250						
J16K	Anvik River	87.35	25	IAmb	IAmb	06 38 57.1	
	comp=Z,9.1nm,0.8s						
J16K	Anvik River	87.35	25	P	P	06 38 55.2	+0.7
	baz=249						
CHIR	Chirikof Islan	87.36	33	P	P	06 38 55.5	+0.9
	baz=254						
G16K	Koyuk River	87.43	23	P	P	06 38 55.8	+1.0
	baz=247						
I17K	Unalakleet	87.53	25	P	P	06 38 56.7	+1.5
	baz=249						
C16K	Lisburne Hills	87.54	20	P	P	06 38 55.9	+0.6
	baz=244						
O17K	Koliganek Bris	87.77	29	P	P	06 38 56.9	+0.4
	baz=252						
P17K	Kvichak River	87.91	30	P	P	06 38 57.5	+0.3
	baz=253						
Q17K	Contact Creek	87.92	31	P	P	06 38 57.6	+0.2
	baz=253						
N17K	Nushagak Hills	87.96	28	P	P	06 38 57.8	+0.4
	baz=252						
L17K	Donlin	87.96	27	P	P	06 38 57.8	+0.5
	baz=251						
J17K	VABM Dome	88.04	25	P	P	06 38 58.2	+0.5
	baz=250						
D17K	Noatak River	88.07	21	P	P	06 38 58.5	+0.8
	baz=246,SNR=10.0						
ATD	Arta Tunnel	88.08	282	P	P	06 39 00.2	+1.1
	comp=Z,0.6nm,0.7s,baz=171,slow=4.7,SNR=4.8						
M17K	Holitna River	88.11	27	P	P	06 38 58.9	+0.8
	baz=252						
G17K	Kiwalik Mounta	88.13	23	P	P	06 38 58.5	+0.4
	baz=249						
K17K	Iditarod	88.14	26	P	P	06 38 59.1	+0.9
	baz=251						
H17K	Granite Mounta	88.22	24	P	P	06 38 59.0	+0.4
	baz=250						
F17K	Baldwin Pennin	88.25	22	P	P	06 38 59.2	+0.6
	baz=248						
RDOG	Red Dog Mine	88.28	20	P	P	06 38 59.5	+0.8
	baz=247						
E17K	Hotham Inlet	88.28	21	P	P	06 38 59.1	+0.3
	baz=248						
SII	Sitkinak Islan	88.33	33	P	P	06 38 59.8	+0.5
	baz=255						
C17K	DeLong Mountai	88.35	20	P	P	06 38 59.7	+0.6
	baz=246						
R18K	Karluk	88.46	32	P	P	06 39 00.5	+0.7
	baz=255						
Q18K	Katmai Hardscr	88.47	30	P	P	06 39 00.4	+0.4
	baz=254						
P18K	Big Mountain,	88.56	30	P	P	06 39 00.8	+0.4
	baz=254						
N18K	Kilae Creek	88.61	28	P	P	06 39 00.9	+0.4
	baz=253						
L18K	Granite Mounta	88.70	27	P	P	06 39 01.6	+0.8
	baz=252						
O18K	Koktuh Hills	88.70	29	P	P	06 39 01.1	+0.1
	baz=254						
E18K	Tukpahlearik C	88.85	21	P	P	06 39 02.0	+0.6
	baz=249						
M18K	Stony River	88.88	28	P	P	06 39 02.4	+0.8
	baz=253						
H18K	Honhosa River	88.92	24	P	P	06 39 02.6	+0.8
	baz=251						
OHAK	Old Harbor	88.98	32	P	P	06 39 02.7	+0.5
	baz=256						
G18K	Tagagawik	89.05	23	P	P	06 39 02.7	+0.3
	baz=251						
J18K	Innoko River	89.06	26	P	P	06 39 03.3	+0.8
	baz=252						
C18K	Utukok River	89.09	20	P	P	06 39 03.2	+0.6
	baz=248						
B18K	Kokolik River	89.16	19	P	P	06 39 03.7	+0.8
	baz=248						
TTA	Tatalina	89.21	26	P	P	06 39 03.9	+0.6
	baz=253						
Q19K	Cape Douglas,	89.23	30	P	P	06 39 03.6	+0.2
	baz=255						
N19K	Bonanza Creek	89.31	28	P	P	06 39 04.7	+0.8
	baz=254						
KDAK	Kodiak Island	89.49	32	P	P	06 39 05.0	+0.4
	comp=Z,3.3nm,0.6s,baz=185,slow=1.7,SNR=8.3						
	comp=Z,3.3nm,0.6s						
KDAK	Kodiak Island	89.49	32	P	P	06 39 05.3	+0.7
	baz=256						
L19K	White Mountain	89.51	27	IAmb	IAmb	06 40 18.6	
	comp=Z,6.9nm,0.6s						
L19K	White Mountain	89.51	27	P	P	06 39 05.3	+0.6
	baz=254						
P19K	Oil Pt	89.62	30	P	P	06 39 05.6	+0.4
	baz=256						
M19K	Big River Lodg	89.65	27	P	P	06 39 05.9	+0.6
	baz=254						
J19K	Poorman	89.69	25	P	P	06 39 05.2	-0.2
J19K	Poorman	89.69	25	P	P	06 39 06.2	+0.8
	baz=253						
F19K	Shaleruckik Mo	89.69	22	P	P	06 39 06.1	+0.8
	baz=252						
A19K	Wainwright	89.71	19	P	P	06 39 06.3	+1.0
	baz=248						
G19K	Purcell Mounta	89.73	23	P	P	06 39 06.5	+0.9
	baz=252						
Q20K	Shuyak Island	89.78	31	P	P	06 39 06.4	+0.5
	baz=256						
H19K	Roundabout Mou	89.80	24	P	P	06 39 07.1	+1.2
	baz=253						
C19K	Lookout Ridge	89.80	20	IAmb	IAmb	06 39 08.8	
	comp=Z,33nm,1.5s						
C19K	Lookout Ridge	89.80	20	P	P	06 39 07.0	+1.0
	baz=250,SNR=5.8						
O20K	Slope Mountain	90.02	29	P	P	06 39 08.2	+1.0
	baz=256						
L20K	Farewell, AK	90.03	27	P	P	06 39 08.0	+0.9
	baz=255						
E19K	Redstone River	90.08	22	P	P	06 39 07.5	+0.2
	baz=252,SNR=6.9						
D19K	Kuna River	90.10	21	IAmb	IAmb	06 39 09.0	
	comp=Z,8.5nm,0.8s						
D19K	Kuna River	90.10	21	P	P	06 39 07.5	+0.2
	baz=251,SNR=5.6						
K20K	Telida	90.18	26	P	P	06 39 07.7	-0.1

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             baz=255
M20K   Styx River          90.22  28   IAmb     IAmb      06 40 26.2
             comp=Z,6.6nm,0.6s
M20K   Styx River          90.22  28   P        P         06 39 08.1  0.0
             baz=256
J20K   Nowinta River       90.36  25   P        P         06 39 09.0 +0.4
             baz=255
I20K   Naaghedeneel        90.39  25   P        P         06 39 09.2 +0.6
             baz=254
HOM    Homer               90.40  30   P        P         06 39 09.2 +0.4
             baz=257
H20K   Anotleneega Mo      90.41  24   P        P         06 39 09.3 +0.5
             baz=254
GNI    Garni               90.43 310 i P        P         06 39 10.7 +1.0
GNI                                    pmax     pmax
             comp=Z,11nm,0.7s
N20K   Mount Spurr         90.48  28   P        P         06 39 09.3  0.0
             baz=256
SPCR   Spurr Chakacha      90.48  28   P        P         06 39 09.2 -0.1
             baz=256
BELG   Belogornoye         90.52 323   P        P         06 39 08.2 -1.3
             comp=Z,10nm,0.4s,baz=313,slow=2.9,SNR=7.6
             comp=Z,10nm,0.4s
BELG   Belogornoye         90.52 323 i P        P         06 39 08.0 -1.5
BELG                                   pmax     pmax
             comp=Z,6.0nm,1.3s
F20K   Avaraart Lake       90.52  22   P        P         06 39 09.5 +0.3
             baz=253
D20K   Etivluk River       90.69  21   P        P         06 39 10.4 +0.4
             baz=252
E20K   Nigu River          90.70  21   P        P         06 39 10.5 +0.4
             baz=253,SNR=12
KIRV   Kirov               90.74 329   P        P         06 39 10.1 -0.3
             comp=Z,16nm,0.7s,baz=165,slow=5.1,SNR=3.5
             comp=Z,16nm,0.7s
KIRV   Kirov               90.74 329ceP        P         06 39 09.8 -0.6
BRSE   Bradley Lake S      90.86  30   P        P         06 39 11.4 +0.4
             baz=258
PPLA   Purkeypile          90.89  27   P        P         06 39 11.6 +0.4
             baz=256
B20K   Meade River         90.90  19   P        P         06 39 11.5 +0.6
             baz=252
SKT    Skwentna            90.98  28   P        P         06 39 12.2 +0.7
             baz=257
CAST   Castle Rocks        91.06  26   P        P         06 39 12.2 +0.3
             baz=257
CHUM   Lake Minchumin      91.07  26   P        P         06 39 12.9 +1.1
             baz=256
G21K   Allakaket           91.22  23   P        P         06 39 13.1 +0.5
             baz=255
SUA    Susitna One         91.23  28   P        P         06 39 13.1 +0.3
             baz=258
H21K   Melozitna Rive      91.29  24   P        P         06 39 13.1 +0.3
             baz=256
F21K   Alatna River        91.41  22   P        P         06 39 13.4 -0.1
             baz=255
C21K   Knifeblade Rid      91.45  20   P        P         06 39 13.8 +0.2
             baz=254
I21K   Tanana              91.51  24   IAmb     IAmb      06 39 32.8
             comp=Z,13nm,1.8s
I21K   Tanana              91.51  24   P        P         06 39 13.8  0.0
             baz=257
E21K   Killik River        91.55  21   P        P         06 39 14.1 +0.1
             baz=255
SEW    Seward              91.58  30   P        P         06 39 14.8 +0.6
             baz=259
RC01   Rabbit Creek A      91.63  29   P        P         06 39 15.3 +0.7
             baz=259
B21K   Ikpikpuk River      91.64  20   P        P         06 39 14.9 +0.5
             baz=254
BPAW   Bear Paw Mtn.       91.69  26   P        P         06 39 15.4 +0.7
             baz=258
TRF    Thorofare Moun      91.85  26   P        P         06 39 15.8 +0.1
             baz=258
A22K   Sinclair Lake       91.89  19   P        P         06 39 15.9 +0.4
             baz=254
H22K   Ishtalitna Cre      91.92  24   P        P         06 39 16.4 +0.6
             baz=257
F22K   John River          91.97  22   P        P         06 39 16.4 +0.4
             baz=257
MLY    Manley              91.99  25   P        P         06 39 15.8 -0.4
MLY    Manley              91.99  25   P        P         06 39 16.2  0.0
             baz=258,SNR=9.2
PMR    Palmer              92.01  28   P        P         06 39 17.1 +0.9
             baz=259
G22K   Bettles             92.09  23   P        P         06 39 16.9 +0.4
             baz=257
D22K   Ayikyak River       92.11  21   P        P         06 39 16.8 +0.2
             baz=256
B22K   Teshekpuk Lake      92.22  19   P        P         06 39 17.4 +0.4
             baz=256
E22K   Anaktuvuk Pass      92.25  22   P        P         06 39 17.1 -0.2
             baz=257
PWL    Port Wells          92.26  29   P        P         06 39 17.1 -0.3
             baz=260
GURO   Guroymak-BITLI      92.29 308   IAmb     IAmb      06 39 21.0
             comp=Z,12nm,0.7s
KBZ    Khabaz              92.29 314   P        P         06 39 17.5 -0.4
             comp=Z,5.4nm,0.7s,baz=106,slow=5.1,SNR=16
             comp=Z,5.4nm,0.7s
KBZ    Khabaz              92.29 314ceP        P         06 39 18.4 +0.5
KBZ                                    pmax     pmax
             comp=Z,7.0nm,0.8s
KNK    Knik Glacier        92.30  28   P        P         06 39 17.5 -0.1
             baz=260
SHA1   Shidzhatmaz         92.47 314 i P        P         06 39 18.9 -0.2
KIV    Kislovodsk          92.47 314 eP        P         06 39 17.4 -1.5
KIV                                    pmax     pmax
             comp=Z,6.0nm,1.0s
RND    Reindeer            92.48  26   IAmb     IAmb      06 39 19.3
             comp=Z,10nm,0.8s
MCK    McKinley            92.50  26   P        P         06 39 18.5 -0.1
             baz=259
P23K   Montague Islan      92.57  30   P        P         06 39 18.6 -0.2
             baz=261
I23K   Minto, Yukon-K      92.59  25   IAmb     IAmb      06 39 20.6
             comp=Z,7.9nm,0.8s
I23K   Minto, Yukon-K      92.59  25   P        P         06 39 18.6 -0.2
             baz=259,SNR=12
NEA2   Nenana              92.60  25   P        P         06 39 18.7 -0.2
             baz=259
G23K   Bananza Creek       92.62  23   P        P         06 39 19.1 +0.1
             baz=259,SNR=6.2
H23K   Yukon River         92.64  24   P        P         06 39 19.4 +0.3
             baz=259,SNR=5.1
COLD   Coldfoot            92.66  23   P        P         06 39 19.4 +0.3
             baz=258
WAT6   Susitna Watana      92.83  27   P        P         06 39 21.0 +0.7
             baz=260
D23K   Nanushuk River      92.84  21   P        P         06 39 20.6 +0.6
             baz=258
GLI    Glacier Island      92.86  29   P        P         06 39 20.6 +0.3
             baz=261
SCM    Sheep Creek Mo      92.90  28   P        P         06 39 20.3 -0.2
             baz=261
WRH    Wood River Hil      93.00  25   IAmb     IAmb      06 39 21.6
             comp=Z,6.4nm,1.0s
E23K   Chandalar           93.04  22   P        P         06 39 20.7 -0.3
             baz=259
C23K   Itkillik River      93.04  20   P        P         06 39 20.7 -0.1
             baz=258
DHY    Denali Highway      93.08  27   P        P         06 39 21.0 -0.4
DHY                                    IAmb     IAmb      06 39 23.0
             comp=Z,4.8nm,0.8s
DHY    Denali Highway      93.08  27   P        P         06 39 20.8 -0.5
             baz=261,SNR=8.2
CCB    Clear Creek Bu      93.15  25   IAmb     IAmb      06 39 22.6
             comp=Z,13nm,1.2s
TOLK   Toolik Lake Re      93.17  21   P        P         06 39 21.9 +0.3
             baz=259
H24K   Noodor Dome         93.32  24   IAmb     IAmb      06 39 24.2
             comp=Z,5.0nm,0.8s
H24K   Noodor Dome         93.32  24   P        P         06 39 22.8 +0.5
             baz=260,SNR=7.4
POKR   Poker Plat Res      93.38  25   P        P         06 39 22.6 +0.1
             baz=261
E24K   Your Creek          93.46  22   P        P         06 39 22.6 -0.3
             baz=260
EYAK   Cordova Ski Ar      93.47  30   P        P         06 39 23.0  0.0
             baz=262
HDA    Harding Lake        93.48  26   IAmb     IAmb      06 39 23.8
             comp=Z,5.5nm,0.8s
HDA    Harding Lake        93.48  26   P        P         06 39 23.2 +0.3
             baz=261,SNR=7.9
M24K   Tolsona, Glenn      93.48  28   P        P         06 39 23.4 +0.3
             baz=262
KLU    Klutina             93.51  29   P        P         06 39 23.8 +0.5
             baz=262
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D24K   Happy Valley        93.53  21   P        P         06 39 23.5 +0.4
             baz=260
IL31                       93.56  25   P        P         06 39 22.0 -1.2
ILAR   Eielson Array       93.56  25   P        P         06 39 21.5 -1.9
ILAR   Eielson Array       93.56  25   P        P         06 39 21.8 -1.5
             comp=Z,1.8nm,0.7s,baz=256,slow=4.6,SNR=23
ILAR                                   PKKPbc   PKKPdf    06 56 28.6 -0.7
             comp=Z,0.4nm,0.6s,baz=7.7,slow=1.2,SNR=5.8
             comp=Z,1.8nm,0.7s
F24K   Squaw Lake          93.59  22   IAmb     IAmb      06 39 25.9
             comp=Z,5.0nm,0.8s
F24K   Squaw Lake          93.59  22   P        P         06 39 24.0 +0.5
             baz=261
G24K   Hadweenzic Riv      93.62  23   P        P         06 39 24.1 +0.5
             baz=261
C24K   Franklin Bluff      93.67  20   P        P         06 39 24.7 +1.0
             baz=260
K24K   Donnelly Dome       93.90  26   P        P         06 39 25.4 +0.4
             baz=262
PAX    Paxson              93.92  27   P        P         06 39 25.6 +0.5
             baz=262
HARP   HAARP               93.99  28   P        P         06 39 25.7 +0.3
             baz=263
KAIM   Kayak Island        94.04  30   P        P         06 39 26.3 +0.6
             baz=263
TROLL  Troll, Antarti      94.05 194 ⇑P        P         06 39 26.9 +1.2
             comp=Z,102nm,0.4s
BMRM   Bremner River       94.08  29   IAmb     IAmb      06 42 56.0
             comp=Z,6.8nm,1.1s
BMRM   Bremner River       94.08  29   P        P         06 39 26.3 +0.5
             baz=263
N25K   Chitina, Valde      94.16  29   P        P         06 39 26.5 +0.2
             baz=263
G25K   Bearman Lake        94.17  23   P        P         06 39 27.1 +1.0
             baz=262
J25K   Salcha River,       94.18  26   P        P         06 39 24.8 -1.5
J25K   Salcha River,       94.18  26   P        P         06 39 26.3 +0.1
             baz=263
H25L   Birch Creek         94.21  24   P        P         06 39 26.8 +0.6
             baz=262
PRP    Porcupine Dome      94.23  25   P        P         06 39 26.5 -0.1
             baz=263
RIDG   Independent Ri      94.30  26   P        P         06 39 26.5 -0.4
RIDG                                   IAmb     IAmb      06 41 47.5
             comp=Z,6.8nm,0.6s
RIDG   Independent Ri      94.30  26   P        P         06 39 26.6 -0.2
             baz=263,SNR=6.3
D25K   Kavik River         94.42  21   P        P         06 39 27.5 +0.3
             baz=262
F25K   Christian Rive      94.45  23   P        P         06 39 27.6 +0.1
             baz=263
FYU    Fort Yukon          94.48  24   IAmb     IAmb      06 39 29.9
             comp=Z,8.3nm,0.9s
E25K   Arctic Village      94.55  22   P        P         06 39 27.9  0.0
             baz=263
BGLC   Bering Glacier      94.63  30   P        P         06 39 28.3  0.0
             baz=264
DOT    Dot Lake            94.64  27   IAmb     IAmb      06 39 29.9
             comp=Z,5.5nm,0.8s
SCRK   Sand Creek          94.71  26   P        P         06 39 28.9 +0.2
             baz=264
BELA   Belgrano 2          94.81 183   P        P         06 39 29.5 +0.6
BMAR   Burnt Mountain      94.84  23   P        P         06 39 28.7 -0.5
MCARA  McCarthy VSAT       94.88  29   P        P         06 39 29.3 -0.2
             baz=264
L26K   Log Cabin Wild      94.89  27   P        P         06 39 30.0 +0.5
             baz=264
J26L   Joseph Creek        94.94  26   IAmb     IAmb      06 39 31.4
             comp=Z,6.4nm,0.7s
J26L   Joseph Creek        94.94  26   P        P         06 39 29.3 -0.5
             baz=264,SNR=15
F26K   Sheenjek River      95.04  22   P        P         06 39 30.4 +0.3
             baz=264
G26K   Porcupine Rive      95.10  23   P        P         06 39 30.7 +0.4
             baz=264
I26K   Coal Creek Min      95.20  25   IAmb     IAmb      06 43 07.8
             comp=Z,9.2nm,1.4s
I26K   Coal Creek Min      95.20  25   P        P         06 39 31.0 +0.2
             baz=265
MESA   MESA                95.30  30   P        P         06 39 31.2 -0.5
             baz=265
C27K   Jago River          95.39  21   P        P         06 39 32.0 +0.4
             baz=265
VORD   Divnogorie          95.47 321 eP        P         06 39 29.7 -2.6
VORD                                   pmax     pmax
             comp=Z,10.0nm,0.9s
M27K   Edge Creek, AK      95.51  28   P        P         06 39 33.1 +0.6
             baz=266
K27K   Chicken             95.55  26   IAmb     IAmb      06 39 35.3
             comp=Z,7.2nm,0.9s
K27K   Chicken             95.55  26   P        P         06 39 32.6 +0.2
             baz=266
SNAA   Sanae               95.56 194 ⇑P        P         06 39 33.8 +1.3
             comp=Z,28nm,0.5s
SNAA   Sanae               95.56 194   P        P         06 39 33.2 +0.7
             comp=Z,2.0nm,0.7s,baz=176,slow=4.5,SNR=10
             comp=Z,2.0nm,0.7s
VSR    Storozhevoye        95.57 321 eP        P         06 39 29.7 -3.1
VSR                                    pmax     pmax
             comp=Z,10.0nm,0.9s
L27K   Beaver Creek,       95.59  27   IAmb     IAmb      06 39 34.6
             comp=Z,3.8nm,0.8s
L27K   Beaver Creek,       95.59  27   P        P         06 39 32.6 -0.1
             baz=266,SNR=9.4
BCAR   Beaver Creek A      95.61  27   P        P         06 39 33.2 +0.4
CTG    Chitna Glacier      95.66  29   P        P         06 39 33.4 +0.1
             baz=266
ASF    Jabal al Asfar      95.83 302   P        P         06 39 34.9 +0.3
             comp=Z,8.3nm,0.8s,baz=99,slow=3.4,SNR=9.3
             comp=Z,8.3nm,0.8s
I27K   Kandik River        95.86  25   P        P         06 39 34.4 +0.4
             baz=266
G27K   Doyon Strip         95.93  23   P        P         06 39 34.5 +0.4
             baz=266
H27K   Steamboat Moun      95.94  24   IAmb     IAmb      06 39 37.5
             comp=Z,6.8nm,1.3s
H27K   Steamboat Moun      95.94  24   P        P         06 39 34.5 +0.2
             baz=266
GAZ    Gaziantep           95.95 307   IAmb     IAmb      06 39 36.9
             comp=Z,6.3nm,0.8s
KLMR   Klimovskoe          96.01 331 eP        P         06 39 31.0 -3.6
KLMR                                   pmax     pmax
             comp=Z,18nm,1.6s
E27K   Coleen River        96.04  22   P        P         06 39 35.2 +0.5
             baz=266
PINM   Pinnacle            96.14  30   P        P         06 39 35.7 +0.4
             baz=267
O28M   Mount Upton         96.21  30   P        P         06 39 35.3 -0.6
             baz=267
D27M   Malcolm River       96.33  21   P        P         06 39 36.3 +0.4
             baz=267
I28M   Miner Creek         96.55  25   IAmb     IAmb      06 39 39.3
             comp=Z,5.9nm,0.8s
I28M   Miner Creek         96.55  25   P        P         06 39 37.0 -0.1
             baz=268
PNL    Peninsula           96.55  31   P        P         06 39 37.1  0.0
             baz=268
F28M   Old Crow            96.66  23   P        P         06 39 37.4 -0.1
             baz=268
DAWY   Dawson              96.73  26   IAmb     IAmb      06 39 41.1
             comp=Z,15nm,1.6s
DAWY   Dawson              96.73  26   P        P         06 39 37.7 -0.2
             baz=268
E28M   Babbage River       96.82  22   P        P         06 39 39.0 +0.9
             baz=268
YUK4   Talbot Arm          96.99  29   P        P         06 39 39.5 +0.2
             baz=268
O29M   Mount Kennedy       96.99  30   IAmb     IAmb      06 39 46.6
             comp=Z,2.9nm,0.8s
O29M   Mount Kennedy       96.99  30   P        P         06 39 39.4 +0.2
             baz=268
M29M   Somme Creek         97.10  28   P        Pdif      06 39 39.9 +0.2
             baz=269
YUK6   Outpost Mounta      97.11  29   P        Pdif      06 39 40.2 +0.2
             baz=268
MMAI   Mount Meron Ar      97.15 302   P        Pdif      06 39 40.8 +0.2
             comp=Z,0.9nm,0.3s,baz=138,slow=3.9,SNR=4.9
             comp=Z,0.9nm,0.3s
H29M   Whitestone          97.22  24   P        Pdif      06 39 40.3 +0.3
             baz=269
I29M   Ogilvie Camp,       97.23  25   IAmb     IAmb      06 39 42.0
             comp=Z,5.4nm,1.0s
I29M   Ogilvie Camp,       97.23  25   P        Pdif      06 39 40.2 +0.1
             baz=269
L29M   L29M                97.27  27   P        Pdif      06 39 41.1 +0.7
             baz=269
OBN    Obninsk             97.33 325 eP        Pdif      06 39 40.7  0.0
OBN                                  e*PP       pP        06 40 28.7 +1.4
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OBN                                  e*SP       sP        06 40 50.5 +3.5
OBN                                    pmax     pmax
             comp=Z,7.0nm,0.7s
G29M   Pine Creek          97.36  23   P        Pdif      06 39 41.1 +0.4
             baz=270
P29M   Windy Craggy        97.39  31   P        Pdif      06 39 41.5 +0.6
             baz=269
E29M   Blow River          97.42  22   P        Pdif      06 39 41.4 +0.6
             baz=270
HYT    Haines Junctio      97.53  30   P        Pdif      06 39 41.7  0.0
             baz=269
K29M   Barlow Dome         97.55  27   P        Pdif      06 39 42.7 +1.0
             baz=270
N30M   Aishikik Lake       97.74  29   P        Pdif      06 39 43.5 +1.0
             baz=270
P30M   Million Dollar      97.79  30   P        Pdif      06 39 43.0 +0.2
             baz=270
EPYK   Eagle Plains        97.89  24   P        Pdif      06 39 43.8 +0.8
             baz=271
I30M   Mount Dempster      98.04  25   P        Pdif      06 39 43.9 +0.1
             baz=271
J30M   Hart River          98.07  26   P        P         06 39 43.9 -0.1
J30M                                   IAmb     IAmb      06 39 46.2
             comp=Z,3.4nm,0.9s
J30M   Hart River          98.07  26   P        Pdif      06 39 44.3 +0.3
             baz=271
G30M   tAoh Zraii Nji      98.07  23   P        Pdif      06 39 44.4 +0.6
             baz=271
PLBC   Pleasant Camp       98.09  31   P        Pdif      06 39 44.4 +0.4
             baz=270
O30N   Mendenhall          98.22  30   P        Pdif      06 39 45.3 +0.7
             baz=270
F30M   Barrier River       98.22  23   P        Pdif      06 39 44.9 +0.4
             baz=272
N31M   Braeburn, Yuko      98.36  29   P        Pdif      06 39 46.1 +0.8
             baz=271
R31K   City Hall, Gus      98.42  32   P        Pdif      06 39 46.6 +1.2
             baz=270
SIT    Sitka               98.65  33   P        Pdif      06 39 46.9 +0.4
             baz=271
WHY    Whitehorse          98.82  30   P        P         06 39 47.3 -0.1
             baz=272
G31M   Satah River         98.84  23   P        Pdif      06 39 47.5 +0.3
             baz=273
H31M   Peel River          98.87  24   P        Pdif      06 39 48.2 +0.8
             baz=273
BR131  Keskin Array S      98.89 309   P        P         06 39 47.0 -1.2
BR131                                  IAmb     IAmb      06 39 48.8
             comp=Z,2.8nm,0.7s
BR131  Keskin Array S      98.89 309   P        P         06 39 47.0 -1.3
BR131                                  pmax     pmax
             comp=Z,3.0nm,0.7s
BRTR   Keskin Array B      98.89 309   P        P         06 39 46.9 -1.3
BRTR   Keskin Array B      98.89 309   P        P         06 39 46.8 -1.4
             comp=Z,2.0nm,0.7s,baz=133,slow=6.0,SNR=18
BRTR                                   PP       PP        06 43 51.5 -1.1
             comp=Z,1.0nm,0.8s,baz=110,slow=5.5,SNR=4.8
             comp=Z,2.0nm,0.7s
BRTR   Keskin Array B      98.89 309 i P        P         06 39 47.4 -0.8
BRTR                                   pmax     pmax
             comp=Z,2.0nm,0.7s
M31M   Drury Creek, Y      99.00  28   P        Pdif      06 39 48.1  0.0
             baz=272
BOSA   Boshof              99.01 240   P        Pdif      06 39 48.2 -0.9
             comp=Z,3.2nm,0.8s,baz=56,slow=6.4,SNR=6.5
             comp=Z,3.2nm,0.8s
S32K   Killisnoo           99.05  33   P        Pdif      06 39 48.7 +0.4
             baz=271
FARO   Faro, Yukon         99.49  28   P        Pdif      06 39 50.6 +0.3
             baz=273
N32M   Quiet Lake          99.68  29   P        Pdif      06 39 51.5 +0.4
             baz=273
P33M   Teslin, Yukon       99.86  30   P        Pdif      06 39 52.1 +0.1
             baz=273
ARCES  ARCESS Array B     101.37 340   P        Pdif      06 39 57.2 -1.2
             comp=Z,2.4nm,0.7s,baz=78,slow=5.6,SNR=11
SPITS  Spitsbergen Ar     101.44 349   P        Pdif      06 39 57.5 -1.2
             comp=Z,1.1nm,0.5s,baz=97,slow=7.1,SNR=9.0
AKASG  Malin Array Be     101.85 320   P        Pdif      06 39 59.6 -1.3
             comp=Z,2.6nm,0.7s,baz=73,slow=4.6,SNR=9.4
AKASG                                  PKiKP    PKiKP     06 44 22.1 -0.8
             comp=Z,0.4nm,0.5s,baz=56,slow=1.6,SNR=4.6
AKASG  Malin Array Be     101.85 320 i P        Pdif      06 40 01.1 +0.2
AKASG                                  pmax     pmax
             comp=Z,3.0nm,0.7s
AKBB   Malin Array Si     101.85 320 i P        Pdif      06 39 59.1 -1.8
KIEV   Kiev               101.86 320   P        Pdif      06 39 59.4 -1.6
MNK    Minsk              102.37 324 i P        Pdif      06 40 01.6 -1.6
             comp=E,19nm,0.8s
MNK                                  i P        Pdif      06 40 01.6 -1.6
             comp=N,10.0nm,0.9s
MNK                                  i P        Pdif      06 40 01.6 -1.6
             comp=Z,10.0nm,0.8s,baz=85
MNK                                  i pP       pPdif     06 40 51.9 +1.4
MNK                                  i PP       PP        06 44 20.6 +2.5
MNK                                  i PPP      PPP       06 46 30.2
MNK                                  i S        SKSac     06 50 21.6 -2.4
MNK                                  i SS       SS        06 58 41.3 +0.7
MNK                                  i SSS      SSS       07 02 37.6
MNK                                  i LRM      MLR       07 26 36.9
             comp=E,508nm,17.4s
MNK                                  i LRM      MLR       07 27 22.4
             comp=Z,537nm,16.4s
MNK                                  i LRM      MLR       07 27 27.3
             comp=N,548nm,18.0s
MNK    Minsk              102.37 324 i P        Pdif      06 40 01.6 -1.6
MNK                                  i                    06 44 20.5
MNK                                  i PPP      PPP       06 46 30.1
MNK                                  i S        SKSac     06 50 21.6 -2.4
MNK                                  i SS       SS        06 58 41.2 +0.7
MNK                                  i SSS      SSS       07 02 37.5
MNK                                    pmax     pmax
             comp=N,10.0nm,0.9s
MNK                                    pmax     pmax
             comp=Z,10.0nm,0.8s
MNK                                    pmax     pmax
             comp=E,19nm,0.8s
MNK                                    MLR      MLR
             comp=E,508nm,17.0s
MNK                                    MLR      MLR
             comp=Z,537nm,16.0s
MNK                                    MLR      MLR
             comp=N,548nm,18.0s
FINES  FINESS Array B     102.49 331   P        Pdif      06 40 01.7 -1.8
             comp=N,2.0nm,0.9s,baz=94,slow=5.7,SNR=3.8
FINES  FINESS Array B     102.49 331 i P        Pdif      06 40 03.0 -0.5
FINES                                  pmax     pmax
             comp=Z,2.0nm,0.9s
MLR    Muntele Rosu       104.42 315   Pdiff    Pdif      06 40 12.5 -0.2
             comp=Z,2.4nm,0.8s,baz=237,slow=8.0,SNR=4.0
MLR                                    PP       PP        06 44 34.9 +1.1
             comp=Z,6.8nm,0.8s,baz=129,slow=6.5,SNR=8.0
YKA    Yellowknife Ar     107.97  26   PKKPbc   PKKPbc    06 55 47.0 -2.5
             comp=Z,0.5nm,0.6s,baz=108,slow=3.0,SNR=5.4
NOA    NORSAR Array B     109.52 333   Pdiff    Pdif      06 40 33.3 -1.6
             comp=Z,0.9nm,0.8s,baz=69,slow=4.5,SNR=3.4
NVAR   Mina Array Bea     111.70  51   PKiKP    PKiKP     06 44 42.7 +0.7
             comp=Z,0.5nm,0.6s,baz=256,slow=1.6,SNR=4.6
NVAR                                   PKKPbc   PKKPbc    06 55 41.2 +4.1
             comp=Z,0.8nm,0.7s,baz=113,slow=6.2,SNR=6.3
SOKA   Soboth             111.73 318 ePKiKP    PKiKP     06 44 41.5 -0.1
             comp=Z,1.3nm,0.5s
CLL    Collm              111.81 323 i PKIKP    PKiKP     06 44 41.9 +0.4
CLL                                    pmax     pmax
             comp=Z,4.0nm,1.0s
CLL    Collm              111.81 323 i PKiKP    PKiKP     06 44 41.9 +0.4
             comp=Z,4.0nm,1.0s
CLL                                    AMS      AMS       09 38 00.0
             comp=Z,100nm,20.6s
GERES  GERESS Array B     112.06 320   PKiKP    PKiKP     06 44 42.1 -0.1
             comp=Z,2.3nm,0.7s,baz=70,slow=1.6,SNR=14
GERES                                  PP       PP        06 45 31.8 +2.7
             comp=Z,0.3nm,0.5s,baz=57,slow=4.9,SNR=3.6
KBA    Koelnbreinsper     112.75 318 ePKiKP    PKiKP     06 44 45.4 +1.8
             comp=Z,0.8nm,0.5s
LESA   Schwarzleotal      113.10 319 ePKiKP    PKiKP     06 44 43.8 -0.4
             comp=Z,2.7nm,0.8s
ABTA   Abfaltersbach      113.39 318 ePKiKP    PKiKP     06 44 44.7 -0.1
             comp=Z,3.8nm,0.6s
WTTA   Wattenberg         113.83 319 ePKP      PKiKP     06 44 45.4 -0.3
             comp=Z,7.2nm,0.6s
MOTA   Moosalm            114.15 319 ePKP      PKPdf     06 44 46.0 -0.4
             comp=Z,2.9nm,0.5s
FETA   Feichten           114.49 319 ePKP      PKPdf     06 44 46.5 -0.5
             comp=Z,2.5nm,0.9s
DAVA   Damuels            114.96 319 ePKP      PKiKP     06 44 47.2 -0.6
             comp=Z,4.8nm,0.6s
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DAVOX	**Davos/Dischmat**	**115.12**	**319**	PKP	**PKiKP**	**06 44 47.4**	**-0.9**
	comp=Z,2.6nm,0.4s,baz=130,slow=5.8,SNR=5.0						
EGMT	**Eagleton**	**115.50**	**40**		**PKiKP**	**06 44 49.2**	**+0.4**
DUG	**Dugway, Tooele**	**115.56**	**49**		**PKiKP**	**06 44 50.6**	**+1.4**
DUG	**Dugway, Tooele**	**115.56**	**49**	*i* PKIKP	**PKiKP**	**06 44 50.6**	**+1.4**
HWUT	**Hardware Ranch**	**116.14**	**47**		**PKiKP**	**06 44 50.5**	**+0.2**
SENIN	**Lac Senin/Sane**	**116.94**	**319**		**PKPdf**	**06 44 50.3**	**-1.5**
BW06	**Boulder Array**	**117.26**	**45**	PKPdf	**PKPdf**	**06 44 52.5**	**-0.1**
PD31	**Pinedale Array**	**117.26**	**45**		**PKiKP**	**06 44 53.0**	**+0.4**
PDAR	**Pinedale Array**	**117.26**	**45**		**PKPdf**	**06 44 52.5**	**0.0**
PDAR	**Pinedale Array**	**117.26**	**45**	PKP	**PKPdf**	**06 44 52.2**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=266,slow=1.5,SNR=11						
PDAR				PKKPbc	**PKKPbc**	**06 55 18.8**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=120,slow=6.0,SNR=4.5						
SRU	**San Rafael Swe**	**117.53**	**49**		**PKiKP**	**06 44 53.8**	**+0.6**
SRU	**San Rafael Swe**	**117.53**	**49**	PKIKP	**PKiKP**	**06 44 53.8**	**+0.6**
WUAZ	**Wupatki**	**117.68**	**54**		**PKiKP**	**06 44 53.8**	**+0.2**
KEST	**Kesra**	**118.39**	**307**	PKP	**PKiKP**	**06 44 55.0**	**+0.2**
	comp=Z,5.1nm,0.8s,baz=328,slow=3.0,SNR=10						
KEST				PP	**PP**	**06 46 10.9**	**-2.9**
	comp=Z,8.1nm,0.9s,baz=334,slow=2.1,SNR=10.0						
PV10	**Paradox Valley**	**118.84**	**50**		**PKPdf**	**06 44 55.8**	**0.0**
PV05	**Paradox Valley**	**118.87**	**50**		**PKPdf**	**06 44 54.3**	**-1.5**
EKA	**Eskdalemuir Ar**	**118.89**	**331**	PKP	**PKiKP**	**06 44 55.6**	**+0.6**
	comp=Z,0.7nm,0.4s,baz=30,slow=3.1,SNR=3.6						
PV20	**West Nyswonger**	**118.90**	**50**		**PKPdf**	**06 44 55.8**	**0.0**
O20A	**White River Ci**	**118.96**	**48**		**PKPdf**	**06 44 55.6**	**-0.2**
RSSD	**Black Hills**	**120.60**	**42**		**PKPdf**	**06 44 58.8**	**-0.1**
RSSD	**Black Hills**	**120.60**	**42**	PKIKP	**PKPdf**	**06 44 58.8**	**-0.1**
S22A	**4UR Ranch, Cre**	**120.69**	**50**	PKPdf	**PKPdf**	**06 44 59.3**	**-0.1**
ANMO	**Albuquerque**	**121.73**	**53**		**PKiKP**	**06 45 02.2**	**+0.7**
ULM	**Lac du Bonnet**	**122.72**	**33**	PKP	**PKPdf**	**06 45 02.2**	**-0.3**
	comp=Z,2.9nm,0.6s,baz=348,slow=3.3,SNR=6.9						
EPLO	**Experimental L**	**124.20**	**33**		**PKPdf**	**06 45 05.1**	**-0.2**
TX31	**Lajitas Ar. Si**	**125.38**	**59**		**PKiKP**	**06 45 09.3**	**+0.5**
TXAR	**Lajitas Array**	**125.38**	**59**	PKP	**PKiKP**	**06 45 08.7**	**-0.1**
	comp=Z,0.7nm,0.4s,baz=192,slow=3.0,SNR=23						
ECSD	**EROS Data Cent**	**125.62**	**40**		**PKPdf**	**06 45 08.3**	**0.0**
TBO	**Thunder Bay**	**127.08**	**31**		**PKPdf**	**06 45 11.2**	**+0.3**
ESDC	**Sonseca Array**	**127.11**	**315**	PKP	**PKiKP**	**06 45 11.8**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=14,slow=4.4,SNR=6.4						
ESDC				PP	**PP**	**06 47 11.0**	**-1.2**
	comp=Z,1.4nm,1.0s,baz=60,slow=5.1,SNR=5.6						
TORD	**Torodi Ar. Bea**	**128.28**	**281**	PKP	**PKPdf**	**06 45 13.7**	**-0.5**
	comp=Z,5.0nm,0.7s,baz=59,slow=2.0,SNR=29						
BRDY	**Brady**	**128.76**	**55**		**PKiKP**	**06 45 15.4**	**+0.1**
PCAB	**Cabril**	**128.89**	**319**	*e*PKPdf	**PKiKP**	**06 45 16.0**	**+0.7**
PVRL	**Vila Real**	**128.91**	**319**	*e*PKPdf	**PKiKP**	**06 45 15.3**	**-0.1**
POLO	**Lamas de Olo**	**128.91**	**319**	*e*PKPdf	**PKiKP**	**06 45 16.4**	**+1.0**
PGAV	**Gavieira, Arco**	**128.92**	**320**	*e*PKPdf	**PKiKP**	**06 45 16.4**	**+1.0**
PLCA	**Paso Flores**	**129.08**	**160**	PKP	**PKiKP**	**06 45 17.1**	**+1.3**
	comp=Z,1.4nm,0.8s,baz=299,slow=2.2,SNR=4.3						
PLCA				SKPbc	SKPab	06 48 17.6	0.0
	comp=Z,4.8nm,0.8s,baz=230,slow=4.0,SNR=9.4						
MTE	**Manteigas**	**129.23**	**318**	*e*PKPdf	**PKiKP**	**06 45 17.0**	**+0.9**
PCBR	**Castelo Branco**	**129.45**	**317**	*e*PKPdf	**PKiKP**	**06 45 17.7**	**+1.3**
PBAR	**Barrancos**	**129.93**	**315**	*e*PKPdf	**PKiKP**	**06 45 18.3**	**+0.9**
MDT	**Midelt**	**130.28**	**308**	PKP	**PKPdf**	**06 45 18.0**	**+0.4**
	comp=Z,1.4nm,0.4s,baz=98,slow=4.1,SNR=4.2						
MDT				SKPbc	**SKPbc**	**06 48 21.9**	**-0.8**
	comp=Z,3.1nm,0.6s,baz=46,slow=4.3,SNR=9.0						
PMTG	**Montargil**	**130.33**	**317**	*e*PKPdf	**PKiKP**	**06 45 18.8**	**+0.6**
U38A	**Gravette**	**130.45**	**47**		**PKPdf**	**06 45 18.0**	**+0.3**
SCHQ	**Schefferville**	**130.52**	**12**	SKPbc	**SKPbc**	**06 48 21.6**	**-1.2**
	comp=Z,8.1nm,0.8s,baz=335,slow=4.7,SNR=7.7						
PTEO	**Sao Teotonio**	**131.40**	**315**	*e*PKPdf	**PKiKP**	**06 45 21.6**	**+1.2**
CCM	**Cathedral Cave**	**131.93**	**44**		**PKPdf**	**06 45 20.7**	**+0.2**
CCM	**Cathedral Cave**	**131.93**	**44**	PKIKP	**PKPdf**	**06 45 20.7**	**+0.2**
DBIC	**Dimbokro**	**134.65**	**272**	PKP	**PKPdf**	**06 45 26.4**	**+0.1**
	comp=Z,7.2nm,0.8s,baz=122,slow=2.7,SNR=6.5						
DBIC				SKPbc	**SKPbc**	**06 48 36.9**	**-1.5**
	comp=Z,17nm,0.8s,baz=62,slow=3.5,SNR=8.4						
PLAL	**Pickwick Lake**	**135.67**	**46**		**PKPdf**	**06 45 27.7**	**+0.1**
W50A	**Signal Mountai**	**137.49**	**44**		**PKPdf**	**06 45 30.7**	**-0.3**
CFA	**Coronel Fontan**	**138.07**	**157**	SKPbc	**SKPbc**	**06 48 47.8**	**-0.5**
	comp=Z,5.4nm,0.7s,baz=231,slow=5.1,SNR=18						
CPUP	**Villa Florida**	**146.24**	**169**	PKPbc	**PKPab**	**06 45 48.7**	**-0.4**
	comp=Z,1.8nm,0.6s,baz=30,slow=1.5,SNR=17						
CPUP				SKPbc	**SKiKP**	**06 49 08.9**	**-0.2**
	comp=Z,4.8nm,0.9s,baz=46,slow=1.6,SNR=13						
PB11	**IPOC Station P**	**147.44**	**145**		**PKiKP**	**06 45 53.0**	**-0.9**
GO01	**Chusmiza**	**147.77**	**146**		**PKiKP**	**06 45 54.6**	**-0.4**
PB16	**IPOC Station P**	**148.65**	**144**	PKPab	**PKiKP**	**06 45 57.8**	**+0.8**
PB18	**Visviri**	**149.24**	**143**		**PKPbc**	**06 45 55.8**	**-1.2**
LPAZ	**La Paz**	**151.06**	**143**	PKPbc	**PKiKP**	**06 46 02.5**	**+0.5**
	comp=Z,3.5nm,0.4s,baz=352,slow=1.7,SNR=26						
BDFB	**Brasilia**	**157.38**	**186**	PKP	**PKPdf**	**06 46 04.0**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=161,slow=6.6,SNR=3.9						
BDFB	**Brasilia**	**157.38**	**186**	PKIKP	**PKPdf**	**06 46 04.0**	**+0.2**
SAML	**Samuel**	**159.77**	**141**	PKPdf	**PKPdf**	**06 46 05.9**	**-0.6**
SAML					**PKPab**	**06 46 46.0**	**-0.2**
SAML	**Samuel**	**159.77**	**141**	PKP2	**PKPab**	**06 46 46.0**	**-0.2**
SAML						07 46 05.9	

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*JMA **03** 06:44:46.2±0.2, 23°.7N±0°.7×122°.2E±0°.5, h31^{km}±4^{km}, MV3.3/16, TAIWAN REGION*

*TAP **03** 06:44:47.0, 23°.77N×122°.21E, h37^{km}, ML3.9, C*

ISC 03 06:44:46.3±1.1**, 23°.74N**±0°.02×**122°.22E**±0°.02**, h33**^{km}±4^{km}**, n157, σ0^{s}79**/282**, 1C-4D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS4	**EOS4**	**0.39**	**14**	*i* P	**Pb**	**06 44 55.4**	**+0.4**
EOS4				*i* S	**Sn**	**06 45 01.7**	**+0.3**
EOS3	**EOS3**	**0.55**	**10**	⇑*i*P	**Pb**	**06 44 58.0**	**+0.4**
EOS3				*i* S	**Sn**	**06 45 06.3**	**+0.6**
TEYL	**Yanliau Villag**	**0.58**	**283**	*i* P	**Pn**	**06 44 58.2**	**0.0**
TEYL				S	**Sb**	**06 45 06.9**	**+0.6**
SHUL	**Shoufeng**	**0.60**	**275**	*i* P	**Pn**	**06 44 58.6**	**+0.2**
SHUL				S	**Sb**	**06 45 07.4**	**+0.5**
HWA	**Hwalien**	**0.61**	**293**	*i* P	**Pn**	**06 44 58.4**	**-0.2**
HWA				S	**Sb**	**06 45 07.4**	**+0.4**
TEGC	**Jichi Village**	**0.62**	**267**	⇓*i*P	**Pn**	**06 44 58.9**	**+0.2**
TEGC				S	**Sb**	**06 45 07.9**	**+0.5**
TWD	**Chiawan**	**0.66**	**301**	⇓*i*P	**Pn**	**06 44 58.8**	**-0.5**
TWD				S	**Sn**	**06 45 07.5**	**-1.1**
EOS2	**EOS2**	**0.68**	**1**	⇓*i*P	**Pb**	**06 44 59.9**	**+0.2**
EOS2				S	**Sb**	**06 45 09.8**	**+1.0**
ETL	**Fush Village**	**0.69**	**308**	P	**Pn**	**06 44 59.1**	**-0.5**
ETL				S	**Sn**	**06 45 08.3**	**-0.9**
ETM	**Tongmen**	**0.70**	**289**	*i* P	**Pn**	**06 44 59.3**	**-0.5**
ETM				S	**Sn**	**06 45 09.1**	**-0.5**
NACB	**Ninganchiao**	**0.71**	**307**	P	**Pn**	**06 44 59.3**	**-0.8**
NACB	**Ninganchiao**	**0.71**	**307**	⇓*i*P	**Pn**	**06 44 59.5**	**-0.6**
NACB				S	**Sn**	**06 45 09.2**	**-0.7**
ESL	**Shilin**	**0.72**	**276**	*i* P	**Pn**	**06 44 59.6**	**-0.6**
ESL				S	**Sn**	**06 45 09.4**	**-0.7**
EGFH	**Guangfu**	**0.73**	**265**	*e*P	**Pn**	**06 45 00.4**	**+0.2**
EGFH				S	**Sb**	**06 45 10.5**	**+0.2**
EAHA	**Aohua**	**0.73**	**323**	P	**Pn**	**06 45 00.2**	**-0.1**
EAHA				S	**Sb**	**06 45 10.3**	**-0.1**
WARBT	**Fenglin Townsh**	**0.76**	**268**	P	**Pn**	**06 45 00.3**	**-0.4**
WARBT				S	**Sn**	**06 45 10.6**	**-0.5**
HGSD	**Ruisui**	**0.77**	**251**	P	**Pn**	**06 45 00.7**	**-0.1**
HGSD				*e*S	**Sn**	**06 45 10.5**	**-0.7**
EWUT	**Wuta**	**0.81**	**330**	P	**Pn**	**06 45 01.6**	**+0.2**
EWUT				S	**Sb**	**06 45 13.0**	**+0.4**
ENA	**Nanau**	**0.81**	**328**	*i* P	**Pn**	**06 45 01.4**	**0.0**
ENA				S	**Sn**	**06 45 12.4**	**+0.1**
ETLH	**Xiulin Townshi**	**0.82**	**305**	*i* P	**Pn**	**06 45 01.1**	**-0.4**
ETLH				*e*S	**Sn**	**06 45 11.9**	**-0.6**
ECBN	**Changbin**	**0.82**	**239**	P	**Pn**	**06 45 01.9**	**+0.3**
ECBN				S	**Sn**	**06 45 12.3**	**-0.1**
EHYH	**Wanrong**	**0.84**	**253**	*e*P	**Pn**	**06 45 02.3**	**+0.6**
EHYH				S	**Sn**	**06 45 13.3**	**+0.3**
EHY	**Hungye**	**0.85**	**254**	*i* P	**Pn**	**06 45 02.0**	**0.0**
EHY				S	**Sn**	**06 45 13.2**	**-0.2**
ESAO	**Su ao**	**0.90**	**338**	P	**Pn**	**06 45 02.7**	**+0.1**
ESAO				S	**Sn**	**06 45 13.9**	**-0.5**
EYUL	**Yuli**	**0.91**	**245**	*e*P	**Pn**	**06 45 03.3**	**+0.5**
EYUL				S	**Sb**	**06 45 15.7**	**+0.2**
YULB	**Yu-li**	**0.91**	**248**	P	**Pn**	**06 45 03.2**	**+0.4**
YULB	**Yu-li**	**0.91**	**248**	P	**Pn**	**06 45 03.3**	**+0.5**
YULB				S	**Sn**	**06 45 15.2**	**+0.3**
TWC	**Suao**	**0.93**	**339**	P	**Pn**	**06 45 03.2**	**+0.2**
TWC				S	**Sn**	**06 45 14.7**	**-0.5**
TWF1	**Yuli**	**0.93**	**246**	*i* P	**Pn**	**06 45 03.5**	**+0.5**
TWF1				S	**Sn**	**06 45 15.8**	**+0.6**
CHKH	**Chenggong**	**0.93**	**234**	P	**Pn**	**06 45 02.7**	**-0.3**
CHKH				*e*S	**Sn**	**06 45 13.9**	**-1.3**
WHF	**Hehuan Shan**	**0.96**	**295**	*e*P	**Pn**	**06 45 03.6**	**-0.3**
WHF				*e*S	**Sn**	**06 45 16.6**	**0.0**
JYNG	**Yonagunijimaku**	**0.97**	**43**	*e*P	**Pn**	**06 45 04.2**	**+0.6**
JYNG				*e*S	**Sn**	**06 45 16.4**	**+0.1**
OWD	**Renai**	**0.98**	**283**	P	**Pn**	**06 45 03.9**	**+0.1**
OWD				*e*S	**Sn**	**06 45 16.3**	**-0.3**
VWDT	**VWDT**	**0.99**	**271**	*i* P	**Pn**	**06 45 04.3**	**+0.5**
VWDT				S	**Sn**	**06 45 16.6**	**0.0**
NDS	**Dongshan**	**1.00**	**333**	P	**Pn**	**06 45 03.8**	**-0.3**
NDS				*e*S	**Sn**	**06 45 16.7**	**-0.3**
FULB	**Fuli**	**1.00**	**238**	*e*P	**Pn**	**06 45 04.2**	**0.0**
FULB				*e*S	**Sn**	**06 45 17.5**	**+0.4**
CHKT	**Chengkung**	**1.01**	**231**	*e*P	**Pn**	**06 45 03.9**	**-0.3**
CHKT				S	**Sn**	**06 45 16.2**	**-1.0**
LATG	**Datong**	**1.01**	**322**	*i* P	**Pn**	**06 45 04.4**	**+0.1**
LATG				*e*S	**Sn**	**06 45 17.7**	**+0.2**
YOJ	**Yonaguni jima**	**1.02**	**45**	P	**Pn**	**06 45 04.8**	**+0.5**
YOJ	**Yonaguni jima**	**1.02**	**45**	*e*P	**Pn**	**06 45 05.0**	**+0.7**
YOJ				*e*S	**Sn**	**06 45 18.1**	**+0.6**
YOJ	**Yonaguni jima**	**1.02**	**45**	P	**Pn**	**06 45 04.9**	**+0.5**
YOJ				S	**Sn**	**06 45 17.7**	**+0.2**
NNSB	**Datong**	**1.02**	**312**	P	**Pn**	**06 45 04.5**	**+0.1**
NNSB				S	**Sn**	**06 45 17.6**	**-0.2**
WUSB	**Renai**	**1.04**	**284**	*i* P	**Pn**	**06 45 05.0**	**+0.3**
WUSB				*e*S	**Sn**	**06 45 18.7**	**+0.6**
NNS	**Nan Shan**	**1.04**	**312**	P	**Pn**	**06 45 05.0**	**+0.3**
NNS				*e*S	**Sn**	**06 45 18.3**	**+0.2**
ENTT	**Nioudou**	**1.07**	**327**	*e*P	**Pn**	**06 45 05.6**	**+0.5**
ENTT				*e*S	**Sn**	**06 45 19.1**	**+0.2**
TWT	**Tachien**	**1.08**	**298**	*e*P	**Pn**	**06 45 06.0**	**+0.7**
TWT				S	**Sn**	**06 45 19.6**	**+0.4**
TDCB	**Techi**	**1.09**	**298**	P	**Pn**	**06 45 05.8**	**+0.4**
TWE	**Neicheng**	**1.10**	**333**	P	**Pn**	**06 45 05.9**	**+0.6**
TWE				S	**Sn**	**06 45 19.9**	**+0.5**
EHD	**Haiduan**	**1.10**	**238**	P	**Pn**	**06 45 05.6**	**+0.2**
EHD				*e*S	**Sn**	**06 45 19.1**	**-0.3**
ILA	**Ilan**	**1.11**	**337**	*e*P	**Pb**	**06 45 06.5**	**-0.5**
ILA				*i* S	**Sb**	**06 45 20.3**	**-0.7**
ECS	**Chishang**	**1.12**	**235**	P	**Pn**	**06 45 06.3**	**+0.6**
ECS				*e*S	**Sb**	**06 45 21.4**	**0.0**
EGS		**1.13**	**347**	P	**Pb**	**06 45 06.8**	**-0.5**
EGS				S	**Sn**	**06 45 20.2**	**0.0**
EDH	**Donghe**	**1.14**	**228**	P	**Pn**	**06 45 05.5**	**-0.3**
EDH				S	**Sn**	**06 45 19.2**	**-1.1**
SSLB	**Suanglung**	**1.16**	**273**	P	**Pn**	**06 45 06.6**	**+0.4**
SSLB	**Suanglung**	**1.16**	**273**	P	**Pn**	**06 45 06.7**	**+0.4**
SSLB				S	**Sn**	**06 45 21.2**	**+0.2**
FUSB	**Fushanzhiwuyua**	**1.17**	**331**	P	**Pn**	**06 45 06.9**	**+0.5**
FUSB				S	**Sb**	**06 45 22.3**	**-0.5**
YHNB	**Yeheng**	**1.20**	**320**	P	**Pn**	**06 45 07.5**	**+0.6**
YHNB	**Yeheng**	**1.20**	**320**	P	**Pn**	**06 45 07.4**	**+0.6**
YHNB				S	**Sn**	**06 45 22.3**	**+0.2**
SMLT	**Sun Moon Lake**	**1.21**	**277**	*i* P	**Pn**	**06 45 08.0**	**+0.9**
SMLT				S	**Sn**	**06 45 22.2**	**-0.2**
NWLT	**Wulai**	**1.22**	**328**	*e*P	**Pn**	**06 45 07.9**	**+0.8**
NWLT				*i* S	**Sn**	**06 45 22.6**	**+0.1**
ELDTW	**Lidau**	**1.23**	**244**	*e*P	**Pn**	**06 45 07.7**	**+0.4**
ELDTW				*e*S	**Sn**	**06 45 22.1**	**-0.8**
WCS	**Beigang Elemen**	**1.23**	**285**	*e*P	**Pn**	**06 45 08.3**	**+1.0**
WHYT	**Xinyi Township**	**1.25**	**268**	*i* P	**Pn**	**06 45 08.6**	**+1.1**
WHYT				*e*S	**Sn**	**06 45 24.1**	**+0.9**
TYC	**Yuchr**	**1.26**	**278**	*i* P	**Pn**	**06 45 08.5**	**+1.0**
TYC				*e*S	**Sn**	**06 45 23.5**	**+0.2**
LDUT	**Ludao**	**1.27**	**213**	P	**Pn**	**06 45 07.6**	**-0.1**
LDUT				*e*S	**Sn**	**06 45 22.2**	**-1.3**
TIPB	**Shuangxi**	**1.28**	**344**	P	**Pn**	**06 45 08.9**	**+1.1**
TIPB				S	**Sn**	**06 45 24.4**	**+0.5**
TWB1	**Santiao Chiao**	**1.28**	**351**	*e*P	**Pn**	**06 45 08.3**	**+0.4**
TWB1				*e*S	**Sn**	**06 45 23.3**	**-0.6**
WHP	**Taichung City**	**1.28**	**295**	*e*P	**Pb**	**06 45 09.4**	**-0.5**
WHP				*e*S	**Sn**	**06 45 24.8**	**+0.8**
LONT	**Longtian**	**1.30**	**230**	P	**Pn**	**06 45 08.6**	**+0.5**
LONT				*e*S	**Sn**	**06 45 24.8**	**+0.4**
ALS	**Alishan**	**1.31**	**260**	*i* P	**Pb**	**06 45 10.0**	**-0.6**
ALS				*e*S	**Sn**	**06 45 26.1**	**+1.0**
NFF	**Wufeng Townshi**	**1.34**	**312**	*e*P	**Pb**	**06 45 10.7**	**-0.2**
TWA	**Mucha**	**1.36**	**335**	*i* P	**Pb**	**06 45 10.7**	**-0.6**
TWA				*i* S	**Sb**	**06 45 27.6**	**-0.7**
WJS	**Zhushan**	**1.37**	**274**	*e*P	**Pb**	**06 45 11.4**	**+0.1**
WJS				*e*S	**Sb**	**06 45 29.2**	**+0.7**
NHDH	**Xindian Distri**	**1.37**	**333**	*e*P	**Pb**	**06 45 10.7**	**-0.7**
NHDH				*e*S	**Sb**	**06 45 27.5**	**-1.0**
NWF	**Wu-fen Shan**	**1.38**	**343**	*e*P	**Pn**	**06 45 10.4**	**+1.0**
NWF				*e*S	**Sn**	**06 45 27.4**	**+0.8**
SXI1	**Grass Mountain**	**1.38**	**347**	P	**Pn**	**06 45 10.1**	**+0.7**
SXI1				*e*S	**Sn**	**06 45 26.5**	**-0.1**
WFSB	**Wu-fen Shan**	**1.38**	**343**	*e*P	**Pn**	**06 45 10.4**	**+1.1**
WFSB				*e*S	**Sn**	**06 45 26.7**	**+0.2**
TWGBT	**Beinan**	**1.39**	**229**	P	**Pn**	**06 45 09.7**	**+0.3**
TWGBT	**Beinan**	**1.39**	**229**	*e*P	**Pn**	**06 45 09.7**	**+0.3**
TWGBT				*e*S	**Sn**	**06 45 26.4**	**-0.2**
TWG	**Pinlang**	**1.40**	**229**	*e*P	**Pn**	**06 45 09.8**	**+0.3**
TWG				*e*S	**Sn**	**06 45 26.0**	**-0.8**
TATO	**Taipei**	**1.40**	**332**	P	**Pb**	**06 45 11.1**	**-0.7**
TATO	**Taipei**	**1.40**	**332**	S	**Sb**	**06 45 28.8**	**-0.5**
KSHI	**Guanxi Townshi**	**1.40**	**318**	P	**Pb**	**06 45 11.6**	**-0.3**
KSHI				*e*S	**Sb**	**06 45 30.0**	**+0.5**
WNT	**Mingjian**	**1.41**	**276**	*e*P	**Pb**	**06 45 11.8**	**-0.2**
WNT				*e*S	**Sb**	**06 45 29.6**	**-0.1**
CHN5	**Tsauling**	**1.42**	**265**	P	**Pb**	**06 45 11.9**	**-0.4**
CHN5				*i* S	**Sb**	**06 45 29.0**	**-1.0**
LIOB	**Emei**	**1.42**	**310**	P	**Pb**	**06 45 11.8**	**-0.4**
LIOB				*e*S	**Sb**	**06 45 29.2**	**-0.8**
NSTT	**Nanjuang**	**1.42**	**309**	P	**Pb**	**06 45 11.7**	**-0.6**
NSTT				*e*S	**Sn**	**06 45 28.6**	**+1.3**
STYH	**Taoyuan**	**1.44**	**247**	*e*P	**Pn**	**06 45 10.1**	**0.0**
STYH				*e*S	**Sn**	**06 45 27.6**	**-0.2**
TAP	**Taipei**	**1.45**	**334**	*e*S	**Sb**	**06 45 30.1**	**-0.7**
TWQ1	**Liyutan**	**1.45**	**295**	P	**Pb**	**06 45 12.3**	**-0.4**
TWQ1				*e*S	**Sb**	**06 45 30.5**	**-0.4**
TCU	**Taichung**	**1.47**	**286**	*e*P	**Pb**	**06 45 12.9**	**-0.1**
TCU				*e*S	**Sb**	**06 45 31.6**	**+0.3**
HATJ	**Hateruma jima**	**1.49**	**77**	P	**Pn**	**06 45 11.3**	**+0.6**
HATJ				S	**Sn**	**06 45 28.6**	**-0.4**
NSY	**Sanyi**	**1.49**	**297**	*e*P	**Pb**	**06 45 13.8**	**+0.4**
NSY				*e*S	**Sb**	**06 45 32.8**	**+0.8**
IRIF	**Iriomote-Funau**	**1.50**	**67**	P	**Pn**	**06 45 11.8**	**+0.8**
IRIF				*e*S	**Sn**	**06 45 30.1**	**+0.6**
WCKO	**Fanlu**	**1.51**	**259**	*e*P	**Pb**	**06 45 13.7**	**0.0**
WCKO				*e*S	**Sb**	**06 45 32.4**	**-0.2**
WGK	**Gukeng**	**1.52**	**268**	*e*P	**Pb**	**06 45 13.4**	**-0.5**
WGK				*e*S	**Sb**	**06 45 32.6**	**-0.2**
YM01	**YM01**	**1.52**	**337**	*e*P	**Pb**	**06 45 12.8**	**-1.1**
YM01				*e*S	**Sb**	**06 45 31.4**	**-1.5**
TPUB	**Ta-pu**	**1.52**	**254**	P	**Pb**	**06 45 13.5**	**-0.4**
TPUB	**Ta-pu**	**1.52**	**254**	*e*P	**Pb**	**06 45 13.2**	**-0.7**
TPUB				*e*S	**Sb**	**06 45 32.5**	**-0.4**
NMLH	**Miaoli**	**1.52**	**302**	*e*P	**Pb**	**06 45 13.4**	**-0.6**
NMLH				*e*S	**Sb**	**06 45 32.6**	**-0.3**
SBCB	**Hsinchu**	**1.54**	**313**	*e*P	**Pb**	**06 45 13.3**	**-0.9**
SBCB				*e*S	**Sb**	**06 45 33.2**	**-0.1**
WDLH	**Douliu**	**1.54**	**268**	*e*P	**Pb**	**06 45 13.8**	**-0.4**
WDLH				S	**Sb**	**06 45 33.2**	**-0.1**
CHN4	**Tsaushan**	**1.54**	**256**	*e*P	**Pb**	**06 45 14.1**	**-0.2**
CHN4				*e*S	**Sb**	**06 45 34.2**	**+0.8**
NCUH	**Zhongli**	**1.54**	**323**	*e*P	**Pb**	**06 45 13.1**	**-1.1**
NCUH				*e*S	**Sb**	**06 45 32.0**	**-1.4**
ZUZH	**Zhuzihu**	**1.54**	**337**	*i* P	**Pn**	**06 45 12.6**	**+1.1**
ZUZH				*i* S	**Sn**	**06 45 31.3**	**+0.8**
NCU	**National Centr**	**1.54**	**323**	*e*P	**Pn**	**06 45 11.0**	**-0.5**
NCU				*e*S	**Sn**	**06 45 30.5**	**+0.1**
YM08	**YM08**	**1.55**	**339**	*e*P	**Pn**	**06 45 12.4**	**+0.8**
YM08				*e*S	**Sn**	**06 45 30.4**	**-0.2**
WTP	**Ta-pu**	**1.55**	**252**	*e*P	**Pb**	**06 45 13.8**	**-0.7**
WTP				*e*S	**Sb**	**06 45 33.3**	**-0.5**
HSN	**Hsinchu**	**1.55**	**313**	*e*P	**Pn**	**06 45 13.0**	**+1.3**
HSN				*e*S	**Sb**	**06 45 32.4**	**-1.4**
WCHH	**Zhanghua**	**1.56**	**283**	*e*P	**Pb**	**06 45 14.1**	**-0.4**
WCHH				*e*S	**Sb**	**06 45 33.8**	**-0.1**
WCH1	**Changhua City**	**1.56**	**283**	*e*P	**Pb**	**06 45 14.4**	**-0.2**
WCH1				*e*S	**Sb**	**06 45 34.7**	**+0.6**
WDJ	**Dajia District**	**1.56**	**293**	*e*P	**Pb**	**06 45 13.7**	**-0.9**
WDJ				*e*S	**Sb**	**06 45 34.0**	**-0.1**
ANP	**Anpu**	**1.57**	**336**	*e*P	**Pn**	**06 45 12.6**	**+0.6**
NTST	**Danshui**	**1.58**	**334**	*e*P	**Pn**	**06 45 13.1**	**+1.0**
NTST				*e*S	**Sb**	**06 45 33.5**	**-1.0**
TWY	**Chenhua**	**1.63**	**340**	*e*P	**Pn**	**06 45 14.2**	**+1.5**
TWY				*e*S	**Sb**	**06 45 34.2**	**-1.8**
SGST	**Jiashian**	**1.64**	**247**	P	**Pb**	**06 45 15.3**	**-0.6**
SGST				*e*S	**Sb**	**06 45 35.9**	**-0.4**
CHN1	**Nanshi**	**1.65**	**251**	*e*P	**Pb**	**06 45 16.0**	**-0.1**
CHN1				*e*S	**Sb**	**06 45 36.5**	**0.0**
TWK	**Hsinying**	**1.66**	**254**	P	**Pb**	**06 45 15.6**	**-0.6**
TWK				*e*S	**Sb**	**06 45 36.2**	**-0.6**
SNST	**Tainan City**	**1.66**	**252**	P	**Pb**	**06 45 15.8**	**-0.5**
SNST				*e*S	**Sb**	**06 45 36.7**	**-0.2**
CHY	**Chiayi**	**1.66**	**262**	*e*P	**Pb**	**06 45 15.8**	**-0.4**
CHY				*e*S	**Sb**	**06 45 36.3**	**-0.5**
WTK	**Tuku**	**1.68**	**269**	P	**Pb**	**06 45 16.0**	**-0.6**
WTK				*e*S	**Sb**	**06 45 36.9**	**-0.4**
JKRS	**Kuro-shima**	**1.71**	**73**	*e*P	**Pn**	**06 45 14.9**	**+1.1**
JKRS				*e*S	**Sn**	**06 45 35.2**	**+0.6**
SSD	**Sandimen**	**1.76**	**236**	*e*P	**Pn**	**06 45 16.5**	**+2.0**
WTCT	**Ta-ch'eng**	**1.78**	**274**	*e*P	**Pb**	**06 45 16.9**	**-1.3**
WTCT				*e*S	**Sb**	**06 45 40.6**	**+0.4**
SCST	**Cishan**	**1.80**	**242**	*e*P	**Pb**	**06 45 18.1**	**-0.5**
SCST				S	**Sb**	**06 45 42.0**	**+1.2**
LAY	**Lan-yu**	**1.80**	**200**	*e*P	**Pn**	**06 45 15.4**	**+0.3**
ICHU	**Yijhu**	**1.82**	**258**	*e*P	**Pn**	**06 45 17.1**	**+1.9**
ICHU				S	**Sb**	**06 45 40.1**	**-1.2**
LYUB	**Lan-yu**	**1.83**	**199**	*e*P	**Pn**	**06 45 14.4**	**-1.0**
LYUB				*e*S	**Sn**	**06 45 35.5**	**-1.9**
WSF	**Szhu**	**1.83**	**267**	*e*P	**Pb**	**06 45 17.7**	**-1.5**
WSF				*e*S	**Sb**	**06 45 40.2**	**-1.6**
WSL	**Shuilin Townsh**	**1.84**	**264**	P	**Pb**	**06 45 17.9**	**-1.4**
WSL				*i* S	**Sb**	**06 45 40.3**	**-1.6**
MASBT	**Mashibuluo**	**1.84**	**233**	*e*P	**Pn**	**06 45 17.2**	**+1.6**
EAST	**Anshuo**	**1.85**	**223**	*e*P	**Pn**	**06 45 16.1**	**+0.4**
TAWH	**Dawu Township**	**1.85**	**222**	*e*P	**Pn**	**06 45 16.7**	**+0.9**
TAWH				S	**Sn**	**06 45 37.8**	**-0.3**
JIJ	**Ishigaki jima**	**1.87**	**70**	P	**Pn**	**06 45 16.2**	**+0.3**
JIJ				*e*S	**Sn**	**06 45 37.5**	**-0.9**
CHN8	**Yiju**	**1.88**	**258**	*e*P	**Pn**	**06 45 17.5**	**+1.3**
TWM1	**Shoushan**	**1.89**	**241**	*e*P	**Pb**	**06 45 21.3**	**+1.2**
TWM1				*e*S	**Sb**	**06 45 45.6**	**+2.3**
SCLT	**Jiali**	**1.94**	**254**	*e*S	**Sb**	**06 45 44.7**	**-0.1**
SLIU	**Shizi**	**2.00**	**221**	*e*P	**Pn**	**06 45 18.3**	**+0.5**
SCZT	**Fangliau**	**2.00**	**228**	*e*P	**Pb**	**06 45 20.8**	**-1.3**
TSCK	**Chigu Township**	**2.04**	**254**	*e*P	**Pn**	**06 45 20.6**	**+2.3**
TSCK				S	**Sb**	**06 45 45.6**	**-2.2**
JISG	**Ishigakijimahi**	**2.09**	**66**	P	**Pn**	**06 45 19.1**	**+0.1**
JISG				*e*S	**Sn**	**06 45 42.2**	**-1.7**
WSSB	**Gushan**	**2.10**	**239**	*e*P	**Pn**	**06 45 21.4**	**+2.2**
WSSB				*e*S	**Sb**	**06 45 49.3**	**-0.3**
SMST	**Manzhou Townsh**	**2.13**	**217**	*e*P	**Pn**	**06 45 20.4**	**+0.8**
TSEB	**Hengchuen, Pin**	**2.20**	**214**	*e*P	**Pn**	**06 45 22.5**	**+2.0**
TWKBT	**Hengchun**	**2.21**	**216**	*e*P	**Pn**	**06 45 21.9**	**+1.2**
TWKBT				S	**Sn**	**06 45 48.4**	**+1.5**
TWK1	**Hengchun**	**2.21**	**216**	*e*P	**Pn**	**06 45 21.4**	**+0.7**
WDGT	**Dungji**	**2.40**	**259**	*e*P	**Pn**	**06 45 24.5**	**+1.3**
WDGT				*i* S	**Sn**	**06 45 52.3**	**+0.9**
PHUB	**P'eng-hu**	**2.44**	**265**	*e*P	**Pn**	**06 45 25.3**	**+1.5**
PHUB				*e*S	**Sn**	**06 45 53.4**	**+0.9**
JTJ	**Tarama**	**2.44**	**68**	*e*S	**Sn**	**06 45 52.1**	**-0.4**
PNG	**Penghu**	**2.45**	**266**	P	**Pn**	**06 45 25.6**	**+1.7**
PNG				*e*S	**Sn**	**06 45 54.4**	**+1.7**
VCHM	**Qimei**	**2.61**	**259**	*e*P	**Pn**	**06 45 27.6**	**+1.4**
VCHM				*e*S	**Sn**	**06 45 57.3**	**+0.5**
VWUC	**VWUC**	**2.81**	**297**	*e*P	**Pn**	**06 45 29.2**	**+0.2**
JIKM	**Ikemajima**	**3.00**	**66**	*e*S	**Sn**	**06 46 06.0**	**-0.5**
JMJ2	**Miyako jima3**	**3.01**	**70**	*e*S	**Sn**	**06 46 06.5**	**-0.1**
MATB	**Ma-tsu**	**3.16**	**320**	*e*P	**Pn**	**06 45 32.9**	**-0.9**
KNM	**Kinmen**	**3.52**	**282**	*e*P	**Pn**	**06 45 41.2**	**+2.5**
KNMB	**Chin-men Tao**	**3.57**	**282**	*e*P	**Pn**	**06 45 40.2**	**+0.8**

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*TIR **03** 06:45:07.8, 40°.43N×20°.78E, h2^{km}±2^{km}, Ml2.6/5*

*ATH **03** 06:45:10.4, 40°.39N×20°.95E, h6^{km}±1^{km}, ML2.2/8, Manual Solution by G.Panopoulou First location: 2019/06/03 06:46:23, This location: 2019/06/03 16:45:25 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*

ISC 03 06:45:08.7±1.1**, 40°.43N**±0°.03×**20°.83E**±0°.03**, h3**^{km}±11^{km}**, n20, σ0^{s}75**/32**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEST	**Nestorio**	**0.17**	**94**	Pg	**Pg**	**06 45 12.6**	**+0.6**
NEST				Sg	**Sg**	**06 45 15.6**	**+1.4**
NEST				AML	AML	06 45 16.9	
	4.3nm,0.2s						
NEST	**Nestorio**	**0.17**	**94**	P	**Pg**	**06 45 12.6**	**+0.6**
NEST				S	**Sg**	**06 45 14.7**	**+0.5**
KBN	**Korca**	**0.20**	**351**	Pg	**Pg**	**06 45 11.4**	**-1.1**
KBN				Sg	**Sg**	**06 45 13.9**	**-1.2**
KBN				AML	AML	06 45 15.2	
	9.5nm,0.4s						
LSK	**Leskovik**	**0.33**	**212**	Pg	**Pg**	**06 45 14.2**	**-0.8**
LSK				Sg	**Sg**	**06 45 19.3**	**+0.1**
LSK				AML	AML	06 45 24.7	
	4.3nm,0.5s						
PENT	**Pentalofos**	**0.33**	**134**	P	**Pg**	**06 45 15.4**	**+0.3**
PENT				S	**Sg**	**06 45 18.9**	**-0.5**
KPRO	**Kipourio**	**0.63**	**139**	P	**Pg**	**06 45 20.4**	**-0.2**
KPRO				S	**Sg**	**06 45 28.3**	**-0.4**
KZN	**Kozani**	**0.73**	**99**	P	**Pg**	**06 45 22.8**	**+0.1**
KZN				S	**Sg**	**06 45 31.7**	**-0.4**
SRN	**Sarande**	**0.84**	**229**	Pg	**Pg**	**06 45 24.7**	**0.0**
SRN				Sg	**Sb**	**06 45 37.3**	**-0.2**
SRN				AML	AML	06 45 39.9	
	0.3nm,0.5s						
IGT	**Igoumenitsa**	**0.97**	**203**	Pn	**Pg**	**06 45 27.7**	**+0.4**
IGT				Sg	**Sn**	**06 45 42.7**	**-0.8**
KEK	**Kerkira**	**1.06**	**228**	P	**Pn**	**06 45 32.2**	**+1.7**
TETR	**Tetrakomo, Epi**	**1.14**	**162**	P	**Pn**	**06 45 31.2**	**-0.3**
TETR				S	**Sg**	**06 45 44.8**	**-0.3**
THL	**Klokotos Trika**	**1.25**	**133**	P	**Pg**	**06 45 32.0**	**-0.7**
THL				S	**Sg**	**06 45 48.2**	**-0.7**
TYRN	**Tyrnavos**	**1.29**	**123**	P	**Pg**	**06 45 33.1**	**-0.3**
LKD2	**Lefkada island**	**1.64**	**185**	P	**Pg**	**06 45 40.4**	**+0.3**
KNT	**Kendrikon**	**1.73**	**64**	P	**Pb**	**06 45 40.5**	**-0.7**
MAKR	**Makrakomi, Fth**	**1.73**	**144**	P	**Pn**	**06 45 39.8**	**+0.1**
PUK	**Puka**	**1.76**	**337**	Pn	**Pb**	**06 45 41.9**	**+0.2**
PUK				Sg	**Sg**	**06 46 06.6**	**+1.3**
PUK				AML	AML	06 46 10.4	
	0.2nm,0.7s						
ANX	**Ano Chora**	**2.02**	**155**	P	**Pn**	**06 45 44.5**	**+0.8**
BCI	**Bajram Curri**	**2.02**	**344**	Pn	**Pb**	**06 45 46.1**	**+0.1**
DRME	**Dracevica, Mon**	**2.15**	**325**	Pn	**Pn**	**06 45 46.0**	**+0.5**

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*IDC **03** 06:49:30.2±1.9, 23°.65S×67°.07W, h167^{km}±19^{km}, mb3.5/3, mbtmp3.9/8, Error ellipse: s-maj=29.8km s-min=14.7km az=104.0*

*NEIC **03** 06:49:31.5±2.5, 23°.73S±0°.07×67°.2W±0°.1, h193^{km}±10^{km}, mb4.3/10, ML4.0(GUC), Error ellipse: s-maj=14.6km s-min=9.3km az=103.0*

*SJA **03** 06:49:31.1±0.9, 23°.70S×67°.21W, h203^{km}, ML3.7, MW3.7*

*GUC **03** 06:49:32.2±0.7, 23°.71S×67°.40W, h215^{km}±5^{km}, ML4.0*

ISC 03 06:49:31.4±0.6**, 23°.70S**±0°.04×**67°.23W**±0°.04**, h195**^{km}±6^{km}**, n85, σ1^{s}29**/112**, mb4.3**/4**, 6C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALTA		**0.97**	**123**	⇓*i*P	**Pn**	**06 50 01.1**	**+0.1**
SALTA		**0.97**	**123**	*e*P	**Pn**	**06 50 01.1**	**+0.1**
AF01	**San Pedro de A**	**1.15**	**310**		**Pn**	**06 50 03.3**	**+1.1**
AF01				Sn	**S**	**06 50 27.8**	**+2.0**
AF01	**San Pedro de A**	**1.15**	**310**	*e*P	**Pn**	**06 50 03.2**	**+1.1**
AF01				*i* S	**S**	**06 50 27.5**	**+1.7**
AF01				IAML		06 50 29.8	
	comp=E,1µm,0.6s						
AF01	**San Pedro de A**	**1.15**	**310**	*e*P	**Pn**	**06 50 03.4**	**+1.3**
AF01				IAML		06 50 46.2	
	comp=Z,326nm,0.5s						
SLA	**San Lorenzo**	**1.87**	**123**	*e*P	**Pn**	**06 50 09.4**	**+1.0**
SLA				*e*S	**S**	**06 50 38.0**	**+0.8**
AZAP	**Zapla**	**2.05**	**105**	*e*P	**Pn**	**06 50 10.0**	**-0.3**
YJA	**Yavi**	**2.19**	**46**	*e*P	**Pn**	**06 50 12.6**	**+0.5**
YJA				*e*S	**S**	**06 50 43.5**	**-0.2**
PB06	**IPOC Station P**	**2.37**	**294**		**Pn**	**06 50 14.7**	**+1.0**
PB06				Sn	**S**	**06 50 46.5**	**-0.1**
PB06	**IPOC Station P**	**2.37**	**294**	⇑*i*P	**Pn**	**06 50 14.8**	**+1.0**
PB06				*i* S	**S**	**06 50 46.3**	**-0.3**
PB06				IAML		06 50 47.6	
	comp=N,636nm,0.2s						
PB06	**IPOC Station P**	**2.37**	**294**	*e*P	**Pn**	**06 50 14.2**	**+0.4**

PB06				eS	S	06 50 46.9	+0.3
PB06				IAML		06 50 48.8	
	comp=Z,343nm,0.1s						
GO02	Mina Guanaco	2.59	235		Pn	06 50 17.2	+0.8
GO02	Mina Guanaco	2.59	235	⇑iP	Pn	06 50 17.2	+0.8
GO02				iS	S	06 50 51.7	+0.3
GO02				IAML		06 50 53.2	
	comp=N,382nm,0.2s						
GO02	Mina Guanaco	2.59	235	eP	Pn	06 50 17.4	+1.0
GO02				eS	S	06 50 52.4	+0.9
PB09	IPOC Station P	2.66	315		Pn	06 50 18.3	+1.3
PB09				Sn	S	06 50 52.7	+0.3
PB09	IPOC Station P	2.66	315	eP	Pn	06 50 18.3	+1.3
PB09				iS	S	06 50 52.7	+0.3
PB09				IAML		06 50 53.6	
	comp=E,175nm,0.3s						
PB09	IPOC Station P	2.66	315	eP	Pn	06 50 17.8	+0.8
PB09				eS	S	06 50 53.2	+0.8
PB09				IAML		06 50 53.5	
	comp=Z,185nm,0.8s						
PB03	IPOC Station P	2.85	305		Pn	06 50 19.9	+0.6
PB03	IPOC Station P	2.85	305	⇑iP	Pn	06 50 19.9	+0.6
PB03				iS	S	06 50 54.9	-1.5
PB03				IAML		06 50 56.6	
	comp=E,332nm,0.5s						
PB03	IPOC Station P	2.85	305	eP	Pn	06 50 19.3	0.0
PB03				IAML		06 51 00.4	
	comp=Z,288nm,0.3s						
PB05	IPOC Station P	2.86	287		Pn	06 50 19.7	+0.5
PB05	IPOC Station P	2.86	287	⇑iP	Pn	06 50 19.8	+0.5
PB05				eS	S	06 50 55.1	-1.5
PB05				IAML		06 50 59.6	
	comp=E,193nm,0.2s						
PB05	IPOC Station P	2.86	287	eP	Pn	06 50 19.9	+0.6
PB05				eS	S	06 50 55.9	-0.6
PB05				IAML		06 51 01.9	
	comp=Z,167nm,0.3s						
PB14	IPOC Station P	3.04	252		Pn	06 50 21.9	+0.3
PB14	IPOC Station P	3.04	252	⇑iP	Pn	06 50 22.1	+0.5
PB14				iS	S	06 50 59.7	-1.0
PB14				IAML		06 51 01.1	
	comp=E,140nm,0.3s						
PB14	IPOC Station P	3.04	252	eP	Pn	06 50 22.1	+0.5
PB14				eS	S	06 51 00.7	0.0
PB14				IAML		06 51 04.7	
	comp=Z,177nm,0.4s						
PB10	IPOC Station P	3.05	273		Pn	06 50 22.3	+0.8
PB10	IPOC Station P	3.05	273	⇑iP	Pn	06 50 22.3	+0.8
PB10				iS	S	06 50 59.0	-1.5
PB10				IAML		06 51 03.6	
	comp=E,254nm,0.3s						
PB10	IPOC Station P	3.05	273	eP	Pn	06 50 22.2	+0.8
PB10				eS	S	06 51 00.3	-0.2
PB10				IAML		06 51 03.2	
	comp=Z,185nm,0.5s						
PB01	IPOC Station P	3.37	321		Pn	06 50 25.7	+0.3
PB01	IPOC Station P	3.37	321	eP	Pn	06 50 25.7	+0.3
PB01				IAML		06 51 09.2	
	comp=N,114nm,0.4s						
PB01	IPOC Station P	3.37	321	eP	Pn	06 50 17.2	-8.2
PB01				eS	S	06 51 07.4	-0.1
PB01				IAML		06 51 08.0	
	comp=Z,86nm,0.8s						
AC02	Maricunga	3.56	208		Pn	06 50 28.9	+0.8
AC02	Maricunga	3.56	208	eP	Pn	06 50 28.8	+0.8
AC02				eS	S	06 51 16.9	+4.5
AC01	Pan de Azucar	3.91	231		Pn	06 50 31.3	-0.6
AC01	Pan de Azucar	3.91	231	eP	Pn	06 50 31.3	-0.6
AC01				eS	S	06 51 17.8	-1.5
AC01				IAML		06 51 18.6	
	comp=Z,44nm,0.9s						
PB08	IPOC Station P	3.97	333		Pn	06 50 33.8	+0.7
PB08	IPOC Station P	3.97	333	eP	Pn	06 50 34.1	+1.1
PB08				eS	S	06 51 22.4	+1.1
PB08				IAML		06 51 25.2	
	comp=Z,38nm,0.3s						
TA01	Diego Aracena	4.15	318	Pn	Pn	06 50 34.6	-0.3
GO01	Chusmiza	4.41	335		Pn	06 50 39.1	+0.4
GO01	Chusmiza	4.41	335	eP	Pn	06 50 39.6	+0.9
GO01				eS	S	06 51 32.3	+0.8
PB11	IPOC Station P	4.53	330		Pn	06 50 39.4	-0.5
PB11	IPOC Station P	4.53	330	eP	Pn	06 50 39.9	0.0
PB11				eS	S	06 51 31.9	-1.7
PB11				IAML		06 51 32.0	
	comp=Z,36nm,0.2s						
AC06	Mina Casimiro	4.60	217		Pn	06 50 39.7	-0.9
GO03	Copiapo	4.73	214		Pn	06 50 41.3	-0.9
GO03	Copiapo	4.73	214	eP	Pn	06 50 41.5	-0.7
GO03				eS	S	06 51 36.1	-1.9
AC04	Llanos de Chal	5.66	217	Pn	Pn	06 50 52.2	-1.9
PB16	IPOC Station P	5.75	338		Pn	06 50 57.0	+1.1
AC05	El Transito	5.79	207		Pn	06 50 54.7	-1.4
LCO	Las Campanas	6.13	210	Pn	Pn	06 50 58.9	-1.7
PB18	Visviri	6.44	340	Pn	Pn	06 51 03.5	-1.4
CO01	Juntas del Tor	6.75	202	Pn	Pn	06 51 08.4	-0.2
GO04	Tololo Observa	7.19	206	Pn	Pn	06 51 12.0	-2.2
LPAZ	La Paz	7.43	353	Pn	Pn	06 51 16.9	-1.0
LPAZ	La Paz	7.43	353	P	Pn	06 51 17.4	-0.4
	comp=Z,1.2nm,0.4s,baz=170,slow=5.7,SNR=8.8						
LPAZ				S	S	06 52 38.9	-3.3
	comp=Z,1.9nm,0.8s,baz=324,slow=16,SNR=3.8						
CO03	El Pedregal	7.74	203	Pn	Pn	06 51 19.7	-1.7
CFA	Coronel Fontan	7.92	186	P	Pn	06 51 23.0	-0.6
	comp=Z,0.5nm,0.3s,baz=294,slow=8.5,SNR=7.4						
CFA				S	S	06 52 47.6	-5.3
	comp=Z,0.9nm,0.2s,baz=127,slow=21,SNR=7.2						
CO02	Combarbal	8.19	203	Pn	Pn	06 51 25.2	-2.0
VA06	Catapilco	9.52	201	Pn	Pn	06 51 44.3	-0.2
SIV	San Ignacio	9.61	38	P	Pn	06 51 43.1	-2.7
	comp=Z,2.7nm,0.5s,baz=234,slow=9.1,SNR=21						
AQDB	Aquidauana	11.16	76	Pn	Pn	06 52 03.9	-1.9
PTLB	Pontes e Lacer	11.21	44	Pn	Pn	06 52 05.2	-1.2
BO02	Sierra Bellavi	11.47	195	Pn	Pn	06 52 08.5	-1.3
ML02	Panimavida	12.55	196	Pn	Pn	06 52 21.9	-1.4
VILB	Vilhena	12.60	33	Pn	Pn	06 52 24.2	0.0
TRCB	Terra Rica	13.45	89	Pn	Pn	06 52 34.2	-0.7
TRQA	Tornquist	15.00	164	Pn	Pn	06 52 52.4	-1.4
SAML	Samuel	15.18	15		Pn	06 52 55.6	-0.5
PLCA	Paso Flores	17.21	189	P	P	06 53 19.4	+0.5
PLCA	Paso Flores	17.21	189	P	Pn	06 53 20.4	0.0
	comp=Z,1.5nm,0.9s,baz=0.7,slow=8.6,SNR=3.2						
VAO	Valinhos	18.62	92	P	P	06 53 34.1	-0.4
LL06	Loncomilla	19.21	195	P	P	06 53 39.2	-1.4
BDFB	Brasilia	19.78	70	P	P	06 53 47.1	0.0
BDFB				IAmb	IAmb	06 53 47.8	
	comp=Z,11nm,0.8s						
BDFB	Brasilia	19.78	70	P	P	06 53 46.2	-0.9
	comp=Z,9.7nm,0.8s,baz=241,slow=11,SNR=17						
LL02	Futaleuf	19.81	190	P	P	06 53 47.8	+0.8
LL02				IAmb	IAmb	06 54 27.7	
	comp=Z,8.3nm,1.3s						
MACA	Manacapuru-AM	21.38	18	P	P	06 54 02.8	-1.2
MACA				IAmb	IAmb	06 54 23.4	
	comp=Z,12nm,1.2s						
MAL2	Monte Alegre,	24.99	32	P	P	06 54 38.6	+1.2
MAL2				IAmb	IAmb	06 54 40.5	
	comp=Z,5.2nm,0.8s						
SNAA	Sanae	59.70	161	P	P	06 59 16.2	+1.2
SNAA				IAmb	IAmb	06 59 22.0	
	comp=Z,6.2nm,1.3s						
SNAA	Sanae	59.70	161	P	P	06 59 16.5	+1.4
	comp=Z,0.6nm,0.6s,baz=276,slow=10.0,SNR=5.6						
	comp=Z,0.6nm,0.6s						
QSPA	South Pole Qui	66.50	180	P	P	07 00 01.9	+2.0
QSPA				IAmb	IAmb	07 00 04.0	
	comp=Z,12nm,1.4s						
QSPA	South Pole Qui	66.50	180	P	P	07 00 02.5	+2.5
	comp=Z,2.5nm,0.5s,baz=303,slow=1.1,SNR=29						
	comp=Z,2.5nm,0.5s						
TORD	Torodi Ar. Bea	76.66	69	P	P	07 01 02.1	+0.9
	comp=Z,0.4nm,0.4s,baz=261,slow=5.3,SNR=7.1						
	comp=Z,0.4nm,0.4s						
ASAR	Alice Springs	128.63	205	PKP	PKiKP	07 08 17.0	+0.3
	comp=Z,0.2nm,0.5s,baz=119,slow=1.7,SNR=4.2						
WRA	Warramunga Arr	131.79	208	PKP	PKiKP	07 08 24.0	+0.9
	comp=Z,0.3nm,0.5s,baz=162,slow=1.8,SNR=1.4						
MKAR	Makanchi Array	146.43	39	PKPbc	PKiKP	07 08 51.0	-1.2
	comp=Z,0.7nm,0.6s,baz=296,slow=2.9,SNR=6.8						

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*IDC **03** 06:52:11.3±4.1, 15°.36N×90°.67W, h0km, mb3.7/1, mbtmp3.4/3, ML3.4/2, Error ellipse: s-maj=103.9km s-min=29.7km az=14.0*

*GCG **03** 06:52:11.3±2.5, 15°.30N×90°.57W, h1km±6km, MD4.3, ML4.1, MW3.8*

*CATAC **03** 06:52:13.3±0.2, 15°N±1°×9°1W±°, h1km, M4.1/30, MLv4.1/30, Error ellipse: s-maj=3.0km s-min=2.2km az=5.7, confirmed*

*SNET **03** 06:52:13.4±3.7, 15°.36N×90°.71W, h10km, ML4.5*

ISC 03 06:52:11.7±1.1**, 15°.32N**±0°.02×**90°.58W**±0°.02**, h6**km±9km**, n81, σ1.25**/93**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AVCB	Coban	0.22	49	iP	Pg	06 52 15.2	-0.9
AVCB				iS	Sg	06 52 18.6	-0.5
AVCB				IAML		06 52 25.3	
	comp=E,121μm,0.6s						
GCG4	OSOP	0.73	176	iP	Pg	06 52 25.9	+0.1
GCG4				iS	Sg	06 52 36.2	+0.8
GCG4				IAML		06 52 44.4	
	comp=E,7μm,0.6s						
HUEH	Huehuetenango	0.89	270	eP	Pg	06 52 28.0	-0.8
HUEH				eS	Sn	06 52 42.6	-1.7
HUEH	Huehuetenango	0.89	270	eP	Pg	06 52 27.8	-1.0
HUEH				IAML		06 52 55.5	
	comp=E,5μm,0.6s						
HUEH	Huehuetenango	0.89	270	P	Pg	06 52 28.0	-0.8
HUEH	Huehuetenango	0.89	270	S	Sg	06 52 40.1	-0.3
SOKI	Kika Raxquin	0.94	238	eP	Pg	06 52 29.5	-0.2
SOKI				IAML		06 52 57.0	
	comp=N,4μm,0.8s						
ESSG	Sabana Grande	0.96	195	eP	Pg	06 52 30.1	-0.1
ESSG				iS	Sg	06 52 43.5	+0.7
ESSG				IAML		06 52 46.4	
	comp=N,2μm,0.3s						
QUEO	Labor Ovalle	1.01	244	iP	Pg	06 52 30.9	-0.2
QUEO				IAML		06 52 50.1	
	comp=E,5μm,0.8s						
FG16	Alotenango, Sa	1.05	176	iP	Pg	06 52 28.9	-2.9
FG16				iS	Sg	06 52 41.6	-3.8
FG16				IAML		06 52 44.4	
	comp=N,12μm,0.4s						
FG8	Yepocapa, Chim	1.06	179	iP	Pg	06 52 29.7	-2.3
FG8				iS	Sg	06 52 42.4	-3.3
STG8	El Palmar, Qui	1.14	221	iP	Pb	06 52 32.7	-1.3
RTAL	Retalhuleu	1.34	234	P	Pg	06 52 37.6	+0.2
RTAL	Retalhuleu	1.34	234	S	Sg	06 52 56.8	+2.0
ESQI	Esquipulas	1.42	122	eP	Pn	06 52 37.9	-0.2
ESQI				eS	Sg	06 52 58.9	+1.6
ESQI	Esquipulas	1.42	122	P	Pn	06 52 38.1	0.0
MTO3	Montecristo	1.50	128	iP	Pn	06 52 39.1	-0.2
MTO3	Montecristo	1.50	128	P	Pn	06 52 39.2	-0.2
MTO3	Montecristo	1.50	128	S	Sb	06 53 00.2	+0.9
SLOZ	Alcaldia de Sa	1.50	149	P	Pb	06 52 40.0	0.0
SMCA	Catarina	1.52	252	eP	Pb	06 52 40.3	0.0
LOAL	Lomas de Alarc	1.53	149	P	Pb	06 52 40.4	-0.1
LOAL	Lomas de Alarc	1.53	149	S	Sg	06 53 02.0	+1.2
NUBE	Las Nubes	1.61	151	iP	Pn	06 52 41.5	+0.6
NUBE	Las Nubes	1.61	151	P	Pb	06 52 42.1	+0.1
NUBE	Las Nubes	1.61	151	S	Sg	06 53 04.4	+0.9
UNIC	Universidad Ca	1.67	143	P	Pb	06 52 42.6	-0.3
UNIC	Universidad Ca	1.67	143	S	Sg	06 53 06.6	+1.4
THIG		1.68	256	iP	Pg	06 52 44.2	+0.3
THIG				iS	Sg	06 53 08.3	+2.6
THIG				IAML		06 53 14.8	
	comp=N,1μm,0.6s						
PETF	Flores	1.73	23	iP	Pn	06 52 42.1	-0.1
PETF				iS	Sb	06 53 04.9	-0.9
PETF				IAML		06 53 07.2	
	comp=E,10μm,0.5s						
PETF	Flores	1.73	23	P	Pn	06 52 42.4	+0.1
CEVE	Cerro Verde	1.75	148	eP	Pb	06 52 44.6	+0.2
CEVE	Cerro Verde	1.75	148	P	Pb	06 52 44.4	0.0
CEVE	Cerro Verde	1.75	148	S	Sg	06 53 13.5	+5.4
CCIG	Comitan	1.78	303	iP	Pb	06 52 44.8	0.0
CCIG				iS	Sg	06 53 10.4	+1.5
CCIG				IAML		06 53 13.7	
	comp=N,1μm,0.5s						
CCIG	Comitan	1.78	303	P	Pg	06 52 45.4	-0.4
CEDA	San Andres	1.90	143	eP	Pb	06 52 46.5	-0.3
CEDA				eS	Sg	06 53 13.9	+1.2
CEDA	San Andres	1.90	143	P	Pb	06 52 46.5	-0.3
CEDA	San Andres	1.90	143	S	Sg	06 53 14.4	+1.7
IZABA	Izabal, Puerto	1.97	78	P	Pn	06 52 45.7	+0.1
IZABA	Izabal, Puerto	1.97	78	S	Sg	06 53 17.5	+2.6
JAYA	Jayaque - finc	1.99	146	eP	Pb	06 52 48.4	-0.1
JAYA	Jayaque - finc	1.99	146	iP	Pb	06 52 48.2	-0.2
JAYA	Jayaque - finc	1.99	146	P	Pb	06 52 48.3	-0.1
JAYA	Jayaque - finc	1.99	146	S	Sg	06 53 17.4	+1.8
PMON	Piamonte	2.02	142	P	Pb	06 52 48.6	-0.2
PMON	Piamonte	2.02	142	S	Sg	06 53 17.8	+1.2
UEES	Universidad Ev	2.06	141	P	Pb	06 52 49.5	-0.1
UEES	Universidad Ev	2.06	141	S	Sg	06 53 18.2	+0.3
UTEC	Universidad Te	2.09	140	P	Pn	06 52 49.1	+1.7
UDBS	Universidad Do	2.11	139	P	Pb	06 52 50.4	-0.1
UDBS	Universidad Do	2.11	139	S	Sg	06 53 20.5	+0.9
LOMA	Loma Larga	2.16	141	eP	Pb	06 52 51.4	+0.1
LOMA	Loma Larga	2.16	141	P	Pb	06 52 51.6	+0.3
LOMA	Loma Larga	2.16	141	S	Sg	06 53 22.2	+1.2
LALI	Alcalda de L	2.19	146	P	Pn	06 52 49.2	+0.5
LALI	Alcalda de L	2.19	146	S	Sb	06 53 19.8	+0.5
LFRS	El Faro	2.24	139	eP	Pb	06 52 53.0	+0.3
PAVA	Las Pavas	2.26	135	P	Pb	06 52 52.2	-0.7
PAVA	Las Pavas	2.26	135	S	Sg	06 53 24.6	+0.3
COEG	Centro de Oper	2.36	136	eP	Pb	06 52 54.5	-0.2
COEG				eS	Sg	06 53 27.5	-0.1
COEG	Centro de Oper	2.36	136	P	Pb	06 52 54.1	-0.6
SCLA	Alcaldia de Sa	2.41	132	P	Pb	06 52 55.4	-0.2
UESV	Universidad de	2.41	134	P	Pb	06 52 55.3	-0.3
TECO	Alcaldia de Te	2.49	135	P	Pb	06 52 56.1	-0.7
PQSS	Presa 15 de Se	2.58	131	P	Pb	06 52 57.5	-0.9
PQSS	Presa 15 de Se	2.58	131	S	Sg	06 53 34.1	-0.7
INTHN	La Esperanza I	2.60	112	P	Pn	06 52 55.7	+1.2
INTHN	La Esperanza I	2.60	112	S	Sb	06 53 30.9	-0.2
CAHU	Cacacuatique	2.77	124	eP	Pb	06 53 00.9	-0.8
TGIG		2.84	301	iP	Pn	06 52 58.7	+1.1
PACA	Pacayal	2.86	130	P	Pb	06 53 03.8	+0.5
RANC	El Ranchito	2.91	130	P	Pb	06 53 03.4	-0.7
CNCH	Conchagua	3.35	127	P	Pn	06 53 07.5	+2.8
TGUH	Tegucigalpa,Un	3.44	111	P	Pb	06 53 12.9	-0.2
CHOHN	Orocuina	3.79	118	P	Pb	06 53 19.6	+0.5
YUSH	Yuscaran	3.87	110	P	Pn	06 53 12.5	+0.7
CMIG	Matias Romero	4.49	294	Pn	Pn	06 53 20.1	-0.3
	comp=N,1.0nm,0.3s,baz=119,slow=8.4,SNR=4.5						
CMIG				Lg	Lg	06 54 29.6	
	comp=N,14nm,0.3s,baz=55,slow=22,SNR=7.9						
	comp=N,2.4nm,0.3s						
TXAR	Lajitas Array	18.44	321	P	Pn	06 56 29.3	+1.1
	baz=141,slow=8.3,SNR=5.7						
	comp=N,0.3nm,0.6s						
YKA	Yellowknife Ar	50.08	346	P	P	07 01 06.5	-0.6
	comp=N,1.0nm,0.8s,baz=150,slow=6.7,SNR=7.4						
	comp=N,1.0nm,0.8s						
CMAR	Chiang Mai Arr	145.15	344	PKPbc	PKPab	07 11 50.2	-0.4
	comp=N,0.9nm,0.3s,baz=339,slow=2.8,SNR=4.3						

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*ASRS **03** 06:58:49.0±0.7, 54°.12N×86°.45E, h0km, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 03 06:58:50.2±3.2**, 54°.14N×86°.55E, h0**km**, mbtmp2.7**/2**, ML2.5**/2**, Error ellipse: s-maj=26.0km s-min=15.7km az=55.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.04	260	I	I	07 05 25.0	
	baz=80,slow=319,SNR=3.3						
ZALV	Zalesovo Beam	1.04	260	Pg	Pg	06 59 08.8	-1.3
	0.6nm,0.3s,baz=80,slow=18,SNR=6.6						
ZALV				Lg	Lg	06 59 25.4	
	1.2nm,0.3s,baz=77,slow=32,SNR=5.7						
KURBB	Kurchatov Arra	6.04	238	Pn	Pn	07 00 21.1	+0.3
	0.1nm,0.3s,baz=55,slow=14,SNR=4.1						
	0.3nm,0.3s						
MKAR	Makanchi Array	7.84	202	Pn	Pn	07 00 47.1	+1.6
	0.1nm,0.3s,baz=19,slow=12,SNR=1.7						
	0.1nm,0.3s						

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*CATAC **03** 07:00:39.4±0.5, 12°N±4°×8°8W±°, h17km±5km, M3.6/31, MLv3.6/31, Error ellipse: s-maj=8.5km s-min=2.8km az=26.1, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.64; $M_{\theta\theta}$-0.20; $M_{\phi\phi}$-0.44; $M_{r\theta}$-1.20; $M_{\theta\phi}$0.41; $M_{\phi r}$0.29; Fault plane solution: $M_0$1.41821×10^{16} NP1: ϕ_s164.98548°, δ21.08879°, λ142.18226°. NP2: ϕ_s290.89718°, δ77.25450°, λ73.05692°. Principal axes: T 1.4893, Plg54.6616°, Azm180.0261°; N -0.1548, Plg16.5135°, Azm294.7423°; P -1.3345, Plg30.2481°, Azm34.6978°; Moment Tensor Solution. Moment tensor: Scale 10^{16} Nm; M_{rr}0.41; $M_{\theta\theta}$-0.39; $M_{\phi\phi}$-0.02; $M_{r\theta}$-1.29; $M_{\theta\phi}$0.39; $M_{\phi r}$0.38; Fault plane solution: $M_0$1.46196×10^{16} NP1: ϕ_s148.37082°, δ13.31559°, λ131.02060°. NP2: ϕ_s286.57566°, δ79.99313°, λ81.17033°. Principal axes: T 1.3678, Plg54.1907°, Azm185.8849°; N 0.1730, Plg8.6943°, Azm288.1218°; P -1.5408, Plg34.4180°, Azm24.1362°; confirmed*

*IDC **03** 07:00:39.8±2.7, 12°.81N×87°.80W, h0km, mb3.7/3, mbtmp3.7/3, ML2.6/1 Error ellipse: s-maj=122.8km s-min=30.1km az=49.0*

*SNET **03** 07:00:40.0±1.7, 12°.03N×88°.48W, h25km, ML3.1*

ISC 03 07:00:41.1±1.7**, 12°.08N**±0°.06×**88°.42W**±0°.04**, h30**km±13km**, n73, σ1.09**/79**, mb3.5**/3**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	Cosiguina Volc	1.23	43	P	Pn	07 01 02.2	-0.1
ALJI	Alcalda de J	1.25	353	eP	Pn	07 01 02.1	-0.3
ALJI				eS	Sn	07 01 19.3	+1.0
ALJI	Alcalda de J	1.25	353	P	Pn	07 01 02.1	-0.3
ALJI	Alcalda de J	1.25	353	S	Sn	07 01 18.5	+0.2
POTN	Potosi Cosigui	1.28	44	P	Pn	07 01 02.5	-0.4
CNCH	Conchagua	1.32	26	eP	Pn	07 01 03.0	-0.6
CNCH	Conchagua	1.32	26	P	Pn	07 01 03.3	-0.3
RANC	El Ranchito	1.35	6	P	Pn	07 01 01.1	-3.0
BLLM	Bellamira	1.36	8	eP	Pn	07 01 04.1	-0.1
PACA	Pacayal	1.38	4	P	Pn	07 01 04.8	+0.3
CRIN	San Cristobal	1.48	65	P	Pn	07 01 05.7	0.0
TECO	Alcaldia de Te	1.49	347	P	Pn	07 01 05.4	-0.4
PKGN	Cerro Pekin	1.53	67	P	Pn	07 01 05.1	-1.3
PQSS	Presa 15 de Se	1.54	355	P	Pn	07 01 06.4	-0.1
PQSS	Presa 15 de Se	1.54	355	S	Sn	07 01 26.8	+1.3
UESV	Universidad de	1.59	347	P	Pn	07 01 07.5	+0.3
UESV	Universidad de	1.59	347	S	Sb	07 01 29.6	+0.1
COEG	Centro de Oper	1.59	344	eP	Pn	07 01 07.1	-0.3
COEG				eS	Sb	07 01 30.3	+0.6
COEG	Centro de Oper	1.59	344	P	Pn	07 01 07.0	-0.3
COEG	Centro de Oper	1.59	344	S	Sn	07 01 28.6	+1.7
QUEN	Al S del Volca	1.62	72	P	Pn	07 01 07.7	+0.1
SCLA	Alcaldia de Sa	1.64	350	P	Pn	07 01 08.5	+0.6
SCLA	Alcaldia de Sa	1.64	350	S	Sn	07 01 29.8	+1.8
TELN	Telica	1.64	71	P	Pn	07 01 05.3	-2.6
HOYN	Al Sur del Vol	1.64	72	P	Pn	07 01 08.3	+0.4
HERN	Volcan Telica	1.64	71	P	Pn	07 01 07.9	0.0
POLN	Al Sur del Vol	1.67	70	P	Pn	07 01 04.9	-3.4
POLN				S	Sn	07 01 30.9	+2.1
CAHU	Cacacuatique	1.69	7	eP	Pn	07 01 09.5	+0.8
PAVA	Las Pavas	1.70	343	P	Pn	07 01 08.7	-0.1
LOMA	Loma Larga	1.72	335	P	Pn	07 01 09.8	+0.8
LOMA	Loma Larga	1.72	335	S	Sn	07 01 29.6	-0.5
CNGA	Al SSO del Vol	1.73	76	P	Pn	07 01 08.7	-0.5
CNGN	Cerro Negro	1.74	76	P	Pn	07 01 09.7	+0.4
MACN	El Madrono	1.75	77	P	Pn	07 01 09.1	-0.3
ILCN	San Idelfonso	1.76	74	P	Pn	07 01 08.7	-0.8
ILCN				S	Sn	07 01 31.2	+0.4
UDBS	Universidad Do	1.77	336	P	Pn	07 01 10.9	+1.1
COPN	Copaltepe	1.79	87	P	Pn	07 01 09.9	-0.1
PMON	Piamonte	1.84	332	P	Pn	07 01 10.7	0.0
PMON	Piamonte	1.84	332	S	Sn	07 01 33.1	+0.1
JAYA	Jayaque - finc	1.86	328	eP	Pn	07 01 10.9	-0.1
JAYA				eS	Sn	07 01 33.5	-0.1
JAYA	Jayaque - finc	1.86	328	P	Pn	07 01 10.6	-0.4
JAYA	Jayaque - finc	1.86	328	S	Sn	07 01 32.9	-0.6
CHOHN	Orocuina	1.86	41	P	Pn	07 01 10.6	-0.4
MOM2	El Cardon	1.93	79	P	Pn	07 01 07.1	-4.7
SAPS	Ciudad Sandino	1.98	87	P	Pb	07 01 17.0	+0.6
APQ2	Apoyeque	2.06	87	P	Pn	07 01 13.8	+0.2
CRUN	El Crucero	2.08	92	P	Pn	07 01 14.5	+0.5
CEVE	Cerro Verde	2.09	326	P	Pn	07 01 15.1	+0.7
TISN	Laguna Tiscapa	2.11	88	P	Pn	07 01 13.7	-0.6
MGAN	Managua	2.13	88	P	Pn	07 01 13.8	-0.9
LIMN	Finca el Limon	2.23	64	P	Pn	07 01 16.0	-0.2
INTHN	La Esperanza I	2.24	8	P	Pn	07 01 17.1	+0.7
INTHN	La Esperanza I	2.24	8	S	Sb	07 01 47.3	-1.2
NUBE	Las Nubes	2.24	324	P	Pn	07 01 16.4	+0.1
NUBE	Las Nubes	2.24	324	S	Sn	07 01 43.2	+0.1
NANN	Nandasmo	2.26	93	P	Pn	07 01 18.6	+2.2
TGUH	Tegucigalpa,Un	2.26	30	P	Pn	07 01 16.8	+0.3
TGUH				S	Sb	07 01 47.9	-1.1
SLOZ	Alcaldia de Sa	2.34	326	P	Pn	07 01 19.2	+1.6
SLOZ	Alcaldia de Sa	2.34	326	S	Sb	07 01 49.5	-1.8
YUSH	Yuscaran	2.42	39	P	Pn	07 01 19.0	+0.3
YUSH	Yuscaran	2.42	39	S	Sn	07 01 49.1	+1.7
MTO3	Montecristo	2.48	339	P	Pn	07 01 19.7	+0.1
MTO3	Montecristo	2.48	339	S	Sn	07 01 48.7	-0.3
MATN	Matagalpa	2.58	71	P	Pn	07 01 19.9	-1.0
ESQI	Esquipulas	2.62	340	P	Pn	07 01 22.6	+1.1
RCVN	Varillal2	2.64	55	P	Pn	07 01 21.6	-0.1
RCVN	Varillal2	2.64	55	S	Sn	07 01 55.5	+2.7
RCPN	Sur Rio San Ju	2.69	57	P	Pn	07 01 22.0	-0.5
BOAB	BOACO BROADBAN	2.72	82	P	Pn	07 01 22.8	+0.1
JTS	Las Juntas de	3.84	117	Pn	Pn	07 01 39.5	+1.3
	0.5nm,0.3s,baz=291,slow=23,SNR=6.2						
JTS				Sn	Sn	07 02 20.5	-2.0
	1.3nm,0.3s,baz=289,slow=22,SNR=2.1						
TXAR	Lajitas Array	22.27	323	P	P	07 05 37.4	+1.5
	1.3nm,0.7s,baz=144,slow=11,SNR=18						
	1.3nm,0.7s						
ULM	Lac du Bonnet	38.55	352	P	P	07 07 59.0	-2.0
	2.7nm,0.5s,baz=179,slow=8.2,SNR=5.7						
	2.7nm,0.5s						
ILAR	Eielson Array	65.97	336	P	P	07 11 24.2	0.0
	0.3nm,0.9s,baz=112,slow=6.1,SNR=4.8						
	0.3nm,0.9s						

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*ASRS **03** 07:05:43.0±0.9, 53°.58N×87°.76E, h0km, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 03 07:05:45.6±3.0**, 53°.54N×87°.73E, h0**km**, mbtmp2.6**/2**, ML2.3**/2**, Error ellipse: s-maj=27.1km s-min=17.8km az=63.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.78	284	I	I	07 17 10.0	
	0.1nm,0.8s,baz=100,slow=318,SNR=6.5						
ZALV	Zalesovo Beam	1.78	284	Pn	Pn	07 06 17.0	-0.6
	1.5nm,0.3s,baz=102,slow=14,SNR=11						
ZALV				Lg	Lg	07 06 42.4	
	0.6nm,0.3s,baz=105,slow=23,SNR=4.4						
KURBB	Kurchatov Arra	6.38	246	Pn	Pn	07 07 21.0	+0.2
	baz=60,slow=14,SNR=4.4						
KURBB				Lg	Lg	07 09 07.7	
	baz=62,slow=32,SNR=10						
	0.2nm,0.3s						
MKAR	Makanchi Array	7.61	209	Pn	Pn	07 07 39.4	+1.7
	0.1nm,0.3s,baz=27,slow=13,SNR=2.5						
MKAR				Lg	Lg	07 09 46.7	
	baz=24,slow=29,SNR=8.1						
	0.1nm,0.3s						

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*TIR **03** 07:18:27.3, 40°.44N×20°.73E, h18km±1km, Ml2.8/3*

*ATH **03** 07:18:27.8, 40°.45N×20°.71E, h7km±1km, ML2.6/16, Manual Solution by G.Panopoulou First location: 2019/06/03 07:19:36, This location: 2020/10/14 19:37:33 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

ISC 03 07:18:27.6±0.9**, 40°.45N**±0°.03×**20°.72E**±0°.03**, h13**km±7km**, n29, σ0.70**/45**, 2C-2D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBN	Korca	0.18	17	⇑Pg	Pg	07 18 31.9	-0.1
KBN				Sg	Sg	07 18 35.3	+0.4
NEST	Nestorio	0.26	97	⇑Pg	Pg	07 18 33.0	-0.1
NEST				Sg	Sb	07 18 37.6	-1.0
NEST				AML	AML	07 18 37.7	
	6.5nm,0.3s						
NEST	Nestorio	0.26	97	P	Pg	07 18 33.0	-0.1
NEST				S	Sg	07 18 36.9	+0.1

LSK	**Leskovik**	**0.31**	**197**	⇓Pg	**Pg**	**07 18 33.8**	**-0.3**
LSK				Sg	**Sg**	**07 18 39.0**	**+0.7**
LSK				AML	AML	07 18 41.9	
	7.0nm,0.3s						
PENT	**Pentalofos**	**0.41**	**128**	P	**Pg**	**07 18 35.5**	**-0.3**
PENT				S	**Sb**	**07 18 42.6**	**-0.4**
LMS2	**Laimos Florina**	**0.51**	**40**	P	**Pg**	**07 18 37.8**	**+0.2**
LMS2				S	**Sb**	**07 18 45.2**	**-0.5**
KPRO	**Kipourio**	**0.70**	**135**	P	**Pg**	**07 18 40.5**	**-0.7**
KPRO				S	**Sb**	**07 18 51.5**	**+0.3**
MSVA	**Metsovo**	**0.77**	**152**	P	**Pg**	**07 18 41.8**	**-0.7**
SRN	**Sarande**	**0.79**	**224**	⇓Pg	**Pb**	**07 18 43.4**	**+0.2**
SRN				Sg	**Sn**	**07 18 56.4**	**+0.3**
SRN				AML	AML	07 18 57.2	
	0.5nm,0.4s						
JAN	**Janina**	**0.80**	**173**	P	**Pg**	**07 18 42.2**	**-0.9**
JAN				S	**Sb**	**07 18 54.0**	**0.0**
KZN	**Kozani**	**0.82**	**100**	P	**Pg**	**07 18 42.9**	**-0.6**
KZN				S	**Sb**	**07 18 55.2**	**+0.5**
IGT	**Igoumenitsa**	**0.96**	**198**	P	**Pb**	**07 18 46.3**	**+0.2**
KEK	**Kerkira**	**1.02**	**224**	P	**Pb**	**07 18 45.5**	**-1.6**
TETR	**Tetrakomo, Epi**	**1.18**	**159**	P	**Pb**	**07 18 49.4**	**-0.5**
THL	**Klokotos Trika**	**1.33**	**131**	P	**Pn**	**07 18 52.1**	**+0.2**
THL				S	**Sg**	**07 19 10.2**	**-0.4**
TYRN	**Tyrnavos**	**1.38**	**122**	P	**Pb**	**07 18 53.0**	**-0.2**
TYRN				S	**Sg**	**07 19 12.3**	**+0.4**
TSLK	**Tsoukalades, L**	**1.62**	**182**	P	**Pb**	**07 18 57.2**	**-0.2**
LKD2	**Lefkada island**	**1.66**	**182**	P	**Pb**	**07 18 57.8**	**-0.3**
NYDR	**Nydri-Lefkada**	**1.73**	**180**	P	**Pb**	**07 18 58.7**	**-0.6**
EVR	**Evrytania**	**1.75**	**151**	P	**Pb**	**07 18 59.2**	**-0.4**
EVR				S	**Sb**	**07 19 21.2**	**-0.2**
SCTE	**Santa Cesarea**	**1.76**	**258**	P	**Pn**	**07 18 58.6**	**+0.8**
MAKR	**Makrakomi, Fth**	**1.80**	**142**	P	**Pb**	**07 18 59.4**	**-1.0**
KNT	**Kendrikon**	**1.80**	**66**	P	**Pn**	**07 18 58.3**	**-0.1**
HORT	**Hortiatis**	**1.82**	**84**	P	**Pn**	**07 18 59.4**	**+0.6**
HORT				S	**Sb**	**07 19 23.0**	**-0.6**
AGG	**Agios Georgios**	**1.89**	**138**	P	**Pb**	**07 19 01.1**	**-0.9**
AGG				S	**Sb**	**07 19 25.1**	**-0.5**
FSK	**Fiskardo**	**1.99**	**183**	P	**Pb**	**07 19 02.2**	**-1.4**
ANX	**Ano Chora**	**2.07**	**153**	P	**Pn**	**07 19 03.6**	**+1.4**
PLG	**Polygyros**	**2.08**	**91**	P	**Pn**	**07 19 03.2**	**+0.9**
PLG				S	**Sn**	**07 19 29.6**	**+1.5**
DRME	**Dracevica, Mon**	**2.09**	**327**	P	**Pb**	**07 19 04.1**	**-1.2**

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*IDC **03** 07:20:06.5±1.5, 60°.08N×152°.89W, h92^{km}±24^{km}, mb3.6/9, mbtmp4.0/14, Error ellipse: s-maj=29.8km s-min=10.6km az=114.0*

*NEIC **03** 07:20:08.8±0.7, 60°.04N±0°.04×152°.82W±0°.07, h113^{km}±4^{km}, Error ellipse: s-maj=5.1km s-min=5.0km az=176.0*

*AEIC **03** 07:20:09.9±1.2, 60°.00N±0°.03×152°.86W±0°.06, h112^{km}±4^{km}, ML3.6, mb3.9/5(NEIC), ML3.7/200(NEIC), Error ellipse: s-maj=5.1km s-min=4.5km az=158.0*

ISC 03 07:20:08.7±0.6, **60°.00N**±0°.04×**152°.75W**±0°.04, **h119**^{km}±5^{km}, **n202**, σ**0^s.95**/189, **mb3.9**/11, **Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
O20K	**Slope Mountain**	**0.10**	**38**		**Pn**	**07 20 24.6**	**-0.5**
O20K					**Sn**	**07 20 37.0**	**-0.5**
ILS	**Iliamna Low So**	**0.17**	**255**		**Pn**	**07 20 24.4**	**-0.9**
ILS					**Sn**	**07 20 36.7**	**-1.0**
RED	**Redoubt Volcan**	**0.42**	**358**		**Pn**	**07 20 25.4**	**-0.8**
RED				Sn	**Sn**	**07 20 37.6**	**-1.8**
RED				IAML		07 20 38.2	
	comp=E,3µm,0.8s						
RED				IAML		07 20 40.1	
	comp=N,877nm,0.4s						
P19K	**Oil Pt**	**0.43**	**215**		**Pn**	**07 20 25.7**	**-0.5**
P19K					**Sn**	**07 20 38.7**	**-0.7**
P19K				IAML		07 20 39.0	
	comp=N,5µm,0.5s						
RDWB	**Redoubt West**	**0.49**	**355**		**Pn**	**07 20 25.7**	**-1.0**
RDWB					**Sn**	**07 20 38.4**	**-1.9**
RDJH	**Redoubt Jeurge**	**0.59**	**357**		**Pn**	**07 20 26.5**	**-0.9**
DFR	**Drift River**	**0.59**	**3**		**Pn**	**07 20 26.3**	**-1.0**
DFR					**Sn**	**07 20 39.9**	**-1.4**
HOM	**Homer**	**0.66**	**121**		**Pn**	**07 20 27.8**	**+0.2**
HOM				Sn	**Sn**	**07 20 42.2**	**+0.3**
AU22	**Augustine Moun**	**0.70**	**206**		**Pn**	**07 20 27.5**	**-0.5**
AUL	**Augustine Lava**	**0.71**	**210**		**Pn**	**07 20 27.8**	**-0.3**
AUL					**Sn**	**07 20 42.1**	**-0.6**
AUCH	**Augustine Cone**	**0.73**	**209**		**Pn**	**07 20 27.9**	**-0.4**
O19K	**Port Alsworth**	**0.81**	**285**		**Pn**	**07 20 28.0**	**-0.8**
O19K				Sn	**Sn**	**07 20 42.5**	**-1.6**
CNPM	**China Poot**	**0.90**	**121**		**Pn**	**07 20 29.8**	**+0.1**
CNPM				Sn	**Sn**	**07 20 45.6**	**-0.1**
BRLK	**Bradley Lake**	**0.97**	**103**		**Pn**	**07 20 30.4**	**0.0**
BRLK				Sn	**Sn**	**07 20 46.2**	**-0.6**
BRLK				IAML		07 20 47.6	
	comp=E,2µm,0.3s						
BRLK				IAML		07 20 47.7	
	comp=N,3µm,0.4s						
BRSE	**Bradley Lake S**	**1.05**	**104**		**Pn**	**07 20 31.1**	**0.0**
CAPN	**Captain Cook N**	**1.10**	**45**	Pn	**Pn**	**07 20 33.4**	**+1.7**
Q19K	**Cape Douglas,**	**1.17**	**203**		**Pn**	**07 20 31.7**	**-0.7**
Q19K				IAML		07 20 53.6	
	comp=E,1µm,0.6s						
Q19K				IAML		07 21 02.2	
	comp=N,706nm,0.9s						
N19K	**Bonanza Creek**	**1.19**	**314**		**Pn**	**07 20 31.8**	**-0.9**
N19K				IAML		07 20 49.4	
	comp=E,876nm,0.7s						
N19K				IAML		07 20 50.2	
	comp=N,424nm,0.8s						
SPCR	**Spurr Chakacha**	**1.23**	**12**		**Pn**	**07 20 32.6**	**-0.6**
SPCR	**Spurr Chakacha**	**1.23**	**12**		**Pn**	**07 20 32.5**	**-0.6**
O18K	**Koktuh Hills**	**1.25**	**264**		**Pn**	**07 20 32.5**	**-0.7**
O18K				IAML		07 20 50.8	
	comp=E,912nm,0.7s						
SPBG	**Spurr Blockage**	**1.28**	**8**		**Pn**	**07 20 33.4**	**-0.3**
SLKM	**Skilak Lake**	**1.36**	**67**		**Pn**	**07 20 33.8**	**-0.7**
P18K	**Big Mountain,**	**1.40**	**245**		**Pn**	**07 20 34.1**	**-0.8**
SYI	**Shuyak Island**	**1.41**	**172**		**Pn**	**07 20 34.4**	**-0.5**
SYI				IAML		07 20 56.6	
	comp=N,1µm,0.4s						
SYI				IAML		07 20 56.8	
	comp=E,2µm,0.3s						
STLK	**Strandline Lak**	**1.57**	**16**		**Pn**	**07 20 36.5**	**-0.4**
STLK				IAML		07 21 00.8	
	comp=E,415nm,0.6s						
STLK				IAML		07 21 01.9	
	comp=N,418nm,0.4s						
O22K	**Cooper Landing**	**1.58**	**71**		**Pn**	**07 20 37.0**	**-0.1**
SEW	**Seward**	**1.66**	**85**		**Pn**	**07 20 37.2**	**-0.7**
SEW				IAML		07 21 05.2	
	comp=N,581nm,0.4s						
SEW				IAML		07 21 08.2	
	comp=E,473nm,0.4s						
FIS	**Fire Island**	**1.70**	**46**	Pn	**Pn**	**07 20 39.2**	**+0.8**
N18K	**Kilae Creek**	**1.70**	**295**		**Pn**	**07 20 37.7**	**-0.8**
N18K				IAML		07 20 59.5	
	comp=N,276nm,0.7s						
SUA	**Susitna One**	**1.77**	**33**	Pn	**Pn**	**07 20 39.3**	**0.0**
SUA				IAML		07 21 03.8	
	comp=E,2µm,0.9s						
SUA				IAML		07 21 04.5	
	comp=N,1µm,0.7s						
KAHG	**Katmai Hook Gl**	**1.77**	**212**		**Pn**	**07 20 39.3**	**-0.1**
KAHC	**Katmai Hardscr**	**1.78**	**221**		**Pn**	**07 20 39.1**	**-0.4**
RC01	**Rabbit Creek A**	**1.85**	**52**		**Pn**	**07 20 39.9**	**-0.3**
M20K	**Styx River**	**1.90**	**355**		**Pn**	**07 20 40.7**	**-0.2**
P17K	**Kvichak River**	**2.04**	**248**		**Pn**	**07 20 42.5**	**-0.1**
M19K	**Big River Lodg**	**2.07**	**338**		**Pn**	**07 20 42.5**	**-0.5**
SKT	**Skwentna**	**2.07**	**16**		**Pn**	**07 20 42.5**	**-0.5**
SKT				IAML		07 21 11.7	
	comp=E,461nm,0.4s						
SKT				IAML		07 21 12.1	
	comp=N,339nm,0.4s						
KCG	**Knife Ck. Glac**	**2.09**	**217**		**Pn**	**07 20 43.2**	**-0.1**
M18K	**Stony River**	**2.12**	**316**		**Pn**	**07 20 42.7**	**-0.9**
M22K	**Willow**	**2.18**	**35**		**Pn**	**07 20 44.1**	**-0.2**
O17K	**Koliganek Bris**	**2.20**	**266**		**Pn**	**07 20 44.1**	**-0.5**
KDAK	**Kodiak Island**	**2.23**	**178**		**Pn**	**07 20 43.7**	**-1.3**
KDAK				IAML		07 21 12.5	
	comp=N,417nm,0.3s						
KDAK				IAML		07 21 22.0	
	comp=N,344nm,0.6s						
KDAK	**Kodiak Island**	**2.23**	**178**	P	**Pn**	**07 20 43.6**	**-1.3**
	comp=N,147nm,0.4s,baz=22,slow=8.8,SNR=400						
KDAK				S	**Sn**	**07 21 10.7**	**-2.0**
	comp=N,51nm,0.2s,baz=314,slow=4.9,SNR=4.5						
ACHA	**Angle Creek He**	**2.23**	**218**		**Pn**	**07 20 45.0**	**-0.1**
N17K	**Nushagak Hills**	**2.27**	**285**	Pn	**Pn**	**07 20 44.8**	**-0.7**
ANCK	**Angle Creek**	**2.30**	**219**		**Pn**	**07 20 45.9**	**0.0**
PWL	**Port Wells**	**2.35**	**67**	Pn	**Pn**	**07 20 47.0**	**+0.5**
PWL				IAML		07 21 16.8	
	comp=E,710nm,0.3s						
CNTC	**Contact Creek**	**2.38**	**224**		**Pn**	**07 20 46.8**	**-0.2**
PMR	**Palmer**	**2.39**	**46**		**Pn**	**07 20 45.7**	**-1.2**
PMR				IAML		07 21 15.0	
	comp=E,837nm,0.3s						
PMR				IAML		07 21 15.1	
	comp=N,593nm,0.2s						
PMR	**Palmer**	**2.39**	**46**	P	**Pn**	**07 20 45.6**	**-1.3**
PMR	**Palmer**	**2.39**	**46**	S	**Sn**	**07 21 14.0**	**-2.3**
L19K	**White Mountain**	**2.42**	**336**		**Pn**	**07 20 46.8**	**-0.6**
L19K				IAML		07 21 16.6	
	comp=N,160nm,0.8s						
L19K				IAML		07 21 17.0	
	comp=E,130nm,0.8s						
KNK	**Knik Glacier**	**2.54**	**54**		**Pn**	**07 20 47.9**	**-1.1**
L20K	**Farewell, AK**	**2.55**	**348**		**Pn**	**07 20 48.9**	**-0.2**
GHO	**Glory Hole Cre**	**2.58**	**45**		**Pn**	**07 20 48.4**	**-1.1**
R18K	**Karluk**	**2.60**	**201**		**Pn**	**07 20 48.5**	**-1.1**
R18K				IAML		07 21 23.0	
	comp=E,600nm,0.4s						
R18K				IAML		07 21 23.9	
	comp=N,448nm,0.4s						
P23K	**Montague Islan**	**2.69**	**88**		**Pn**	**07 20 51.1**	**+0.2**
P23K				IAML		07 21 23.7	
	comp=E,401nm,0.5s						
P23K				IAML		07 21 24.3	
	comp=N,560nm,0.6s						
CUT	**Chulitna**	**2.69**	**25**		**Pn**	**07 20 50.5**	**-0.4**
M17K	**Holitna River**	**2.70**	**303**		**Pn**	**07 20 50.2**	**-0.8**
M17K				IAML		07 21 25.3	
	comp=E,137nm,0.8s						
M17K				IAML		07 21 38.5	
	comp=N,155nm,0.8s						
O16K	**Kokwok River B**	**2.73**	**264**		**Pn**	**07 20 51.2**	**-0.2**
OHAK	**Old Harbor**	**2.80**	**186**		**Pn**	**07 20 50.9**	**-1.4**
OHAK				IAML		07 21 24.3	
	comp=N,228nm,0.9s						
OHAK				IAML		07 21 24.9	
	comp=E,219nm,0.4s						
OHAK	**Old Harbor**	**2.80**	**186**	P	**Pn**	**07 20 50.7**	**-1.6**
OHAK	**Old Harbor**	**2.80**	**186**	S	**Sn**	**07 21 23.4**	**-2.5**
SML	**Sawmill**	**2.82**	**48**		**Pn**	**07 20 51.5**	**-1.1**
SML				IAML		07 21 24.4	
	comp=N,464nm,0.5s						
SML				IAML		07 21 25.8	
	comp=E,465nm,0.4s						
P16K	**Nushagak River**	**2.84**	**252**		**Pn**	**07 20 53.2**	**+0.4**
P16K				IAML		07 21 28.7	
	comp=N,189nm,0.8s						
P16K				IAML		07 21 28.8	
	comp=E,162nm,0.9s						
PPLA	**Purkeypile**	**2.92**	**5**		**Pn**	**07 20 54.2**	**+0.2**
L18K	**Granite Mounta**	**2.94**	**321**		**Pn**	**07 20 53.4**	**-0.7**
GLI	**Glacier Island**	**2.94**	**70**		**Pn**	**07 20 54.0**	**-0.1**
GLI				IAML		07 21 27.8	
	comp=E,508nm,0.4s						
GLI				IAML		07 21 29.6	
	comp=N,358nm,0.4s						
PLK1	**Peulik 1**	**2.98**	**224**		**Pn**	**07 20 54.9**	**+0.3**
HIN	**Hinchinbrook I**	**3.14**	**80**	IAML		07 21 34.6	
	comp=N,298nm,0.4s						
HIN				IAML		07 21 36.4	
	comp=E,273nm,0.8s						
M16K	**Timber Creek**	**3.24**	**291**		**Pn**	**07 20 57.6**	**-0.4**
Q23K	**Middleton Isla**	**3.29**	**97**		**Pn**	**07 20 58.7**	**-0.1**
Q23K				IAML		07 21 40.9	
	comp=N,121nm,0.7s						
Q23K				IAML		07 21 48.5	
	comp=E,118nm,1.0s						
TTA	**Tatalina**	**3.33**	**333**		**Pn**	**07 20 58.4**	**-1.0**
TTA	**Tatalina**	**3.33**	**333**	P	**Pn**	**07 20 58.3**	**-1.0**
WAT7	**Susitna Watana**	**3.41**	**32**		**Pn**	**07 21 00.1**	**-0.3**
K20K	**Telida**	**3.43**	**350**		**Pn**	**07 21 00.5**	**-0.1**
CAST	**Castle Rocks**	**3.44**	**5**		**Pn**	**07 21 00.3**	**-0.5**
WAT1	**Susitna Watana**	**3.48**	**34**		**Pn**	**07 21 00.7**	**-0.6**
EYAK	**Cordova Ski Ar**	**3.53**	**78**		**Pn**	**07 21 02.0**	**+0.1**
EYAK				IAML		07 21 43.0	
	comp=E,88nm,0.7s						
EYAK				IAML		07 21 43.5	
	comp=N,109nm,0.8s						
EYAK	**Cordova Ski Ar**	**3.53**	**78**	P	**Pn**	**07 21 01.3**	**-0.6**
EYAK	**Cordova Ski Ar**	**3.53**	**78**	S	**Sn**	**07 21 41.8**	**-1.2**
SII	**Sitkinak Islan**	**3.53**	**193**		**Pn**	**07 21 00.6**	**-1.4**
SII				IAML		07 21 42.2	
	comp=E,286nm,0.4s						
SII				IAML		07 21 44.0	
	comp=N,290nm,0.6s						
SII	**Sitkinak Islan**	**3.53**	**193**	P	**Pn**	**07 21 00.5**	**-1.5**
SII	**Sitkinak Islan**	**3.53**	**193**	S	**Sn**	**07 21 40.4**	**-2.8**
DIV	**Divide**	**3.63**	**69**		**Pn**	**07 21 02.7**	**-0.6**
DIV	**Divide**	**3.63**	**69**	IAML		07 21 45.0	
	comp=E,143nm,0.3s						
DIV				IAML		07 21 48.0	
	comp=N,278nm,0.5s						
TRF	**Thorofare Moun**	**3.65**	**18**	IAML		07 21 46.0	
	comp=N,116nm,0.6s						
TRF				IAML		07 22 07.8	
	comp=E,103nm,0.7s						
KTH	**Kantishna Hill**	**3.67**	**13**		**Pn**	**07 21 03.0**	**-0.8**
KTH				IAML		07 21 47.4	
	comp=N,84nm,0.8s						
KTH				IAML		07 21 55.0	
	comp=E,97nm,0.9s						
KLU	**Klutina**	**3.67**	**63**		**Pn**	**07 21 03.0**	**-0.8**
O15K	**Ungalikthiuk R**	**3.69**	**260**		**Pn**	**07 21 04.8**	**+0.7**
K17K	**Iditarod**	**3.82**	**318**	IAML		07 21 51.0	
	comp=N,49nm,1.1s						
K17K				IAML		07 22 06.4	
	comp=E,78nm,1.1s						
RND	**Reindeer**	**3.89**	**27**		**Pn**	**07 21 06.5**	**-0.2**
RND				IAML		07 21 51.6	
	comp=N,81nm,0.6s						
RND				IAML		07 21 52.9	
	comp=E,88nm,0.4s						
CHUM	**Lake Minchumin**	**3.90**	**3**		**Pn**	**07 21 06.2**	**-0.6**
DHY	**Denali Highway**	**4.02**	**37**	IAML		07 21 55.6	
	comp=N,234nm,0.5s						
GOAT	**Goat Mountain**	**4.04**	**78**		**Pn**	**07 21 08.8**	**+0.1**
RAGM	**Ragged Mountai**	**4.05**	**81**		**Pn**	**07 21 09.0**	**+0.1**
BMRM	**Bremner River**	**4.14**	**73**	IAML		07 21 56.7	
	comp=E,117nm,0.3s						
BMRM				IAML		07 22 03.3	
	comp=N,135nm,0.4s						
MCK	**McKinley**	**4.16**	**24**	IAML		07 21 59.4	
	comp=E,86nm,0.4s						
MCK				IAML		07 21 59.6	
	comp=N,87nm,0.5s						
KAIM	**Kayak Island**	**4.19**	**87**		**Pn**	**07 21 10.8**	**+0.1**
KAIM	**Kayak Island**	**4.19**	**87**	IAML		07 22 01.0	
	comp=E,124nm,0.7s						
KAIM				IAML		07 22 05.8	
	comp=N,113nm,0.6s						
BPAW	**Bear Paw Mtn.**	**4.20**	**11**		**Pn**	**07 21 11.0**	**+0.2**
BPAW	**Bear Paw Mtn.**	**4.20**	**11**	IAML		07 21 56.0	
	comp=N,34nm,0.5s						
BPAW				IAML		07 22 33.2	
	comp=E,32nm,0.8s						
HMT	**Hamilton**	**4.25**	**82**	IAML		07 22 01.1	
	comp=N,181nm,0.5s						
N25K	**Chitina, Valde**	**4.30**	**65**		**Pn**	**07 21 11.6**	**-0.7**
N25K	**Chitina, Valde**	**4.30**	**65**	IAML		07 22 01.6	
	comp=E,186nm,0.6s						
N25K				IAML		07 22 01.6	
	comp=N,180nm,0.3s						
ANPB	**Aniakchak Plen**	**4.33**	**225**		**Pn**	**07 21 12.3**	**-0.3**
O14K	**Tigyukauivet M**	**4.39**	**264**		**Pn**	**07 21 14.1**	**+0.8**
BWN	**Browne**	**4.46**	**19**	IAML		07 22 30.5	
	comp=E,87nm,1.0s						
BWN				IAML		07 22 35.9	
	comp=N,102nm,0.7s						
CHIR	**Chirikof Islan**	**4.46**	**201**	IAML		07 22 02.9	
	comp=E,75nm,0.9s						
CHIR				IAML		07 22 03.4	
	comp=N,109nm,0.4s						
CHIR	**Chirikof Islan**	**4.46**	**201**	P	**Pn**	**07 21 12.7**	**-1.7**
N14K	**Kuskokwak Cree**	**4.49**	**273**		**Pn**	**07 21 14.7**	**0.0**
N14K	**Kuskokwak Cree**	**4.49**	**273**	IAML		07 22 47.7	
	comp=N,29nm,0.8s						
N14K				IAML		07 22 51.6	
	comp=E,30nm,1.1s						
SUCK	**Suckling Hills**	**4.50**	**85**		**Pn**	**07 21 15.1**	**+0.2**
SUCK	**Suckling Hills**	**4.50**	**85**	IAML		07 22 07.5	
	comp=E,50nm,0.7s						
SUCK				IAML		07 22 08.4	
	comp=N,60nm,0.5s						
BERG	**Berg Lake**	**4.53**	**81**		**Pn**	**07 21 15.1**	**-0.2**
J17K	**VABM Dome**	**4.55**	**321**		**Pn**	**07 21 14.4**	**-1.0**
J17K	**VABM Dome**	**4.55**	**321**	IAML		07 22 05.7	
	comp=N,27nm,0.9s						
J17K				IAML		07 22 36.3	
	comp=E,38nm,1.1s						
WACK	**Wrangell Chich**	**4.56**	**60**		**Pn**	**07 21 15.1**	**-0.7**
PAX	**Paxson**	**4.59**	**46**	IAML		07 22 06.5	
	comp=N,134nm,0.6s						
PAX				IAML		07 22 08.3	
	comp=E,115nm,0.4s						
WASW	**Wrangell South**	**4.61**	**61**		**Pn**	**07 21 16.2**	**-0.2**
M14K	**Bethel**	**4.63**	**283**		**Pn**	**07 21 16.2**	**-0.3**
GRIN	**Grindle Hills**	**4.72**	**83**		**Pn**	**07 21 17.9**	**0.0**
CRQM	**Cirque**	**4.83**	**77**	IAML		07 22 12.6	
	comp=E,105nm,0.9s						
CRQM				IAML		07 22 14.6	
	comp=N,100nm,0.4s						
K15K	**Wolf Creek Mou**	**4.84**	**302**		**Pn**	**07 21 19.1**	**-0.2**
I20K	**Naaghedeneel**	**4.88**	**351**	IAML		07 22 22.6	
	comp=E,89nm,1.1s						
I20K				IAML		07 23 10.1	
	comp=N,71nm,1.0s						
NEA2	**Nenana**	**4.92**	**19**	IAML		07 22 16.3	
	comp=N,25nm,0.7s						
NEA2				IAML		07 22 17.4	
	comp=E,22nm,0.6s						
TGL	**Tana Glacier**	**4.98**	**77**	IAML		07 22 17.3	
	comp=N,54nm,0.6s						
TGL				IAML		07 22 20.4	
	comp=E,56nm,0.7s						
WRH	**Wood River Hil**	**4.99**	**24**		**Pn**	**07 21 20.6**	**-0.8**
WRH	**Wood River Hil**	**4.99**	**24**	IAML		07 22 16.4	
	comp=E,62nm,0.5s						
WRH				IAML		07 22 16.6	
	comp=N,44nm,0.6s						
L14K	**Kuka Creek**	**5.07**	**290**		**Pn**	**07 21 22.4**	**0.0**
L14K	**Kuka Creek**	**5.07**	**290**	IAML		07 22 37.0	
	comp=N,24nm,1.1s						
VNHG	**Veniaminof 1**	**5.09**	**225**		**Pn**	**07 21 23.3**	**+0.4**
CCB	**Clear Creek Bu**	**5.20**	**24**		**Pn**	**07 21 23.3**	**-0.9**
CCB	**Clear Creek Bu**	**5.20**	**24**	IAML		07 22 21.7	
	comp=N,31nm,0.8s						
CCB				IAML		07 22 23.1	
	comp=E,44nm,0.5s						
I21K	**Tanana**	**5.21**	**4**	IAML		07 23 26.7	
	comp=N,16nm,0.9s						
M26K	**Nabesna, AK**	**5.29**	**59**	IAML		07 22 24.9	
	comp=N,83nm,0.7s						
M26K				IAML		07 22 27.6	
	comp=E,48nm,0.6s						
COLA	**College**	**5.39**	**23**		**Pn**	**07 21 26.4**	**-0.4**
COLA	**College**	**5.39**	**23**	P	**Pn**	**07 21 25.9**	**-0.9**
MESA	**MESA**	**5.41**	**83**		**Pn**	**07 21 27.9**	**+0.7**
ILAR	**Eielson Array**	**5.51**	**27**		**Pn**	**07 21 27.2**	**-1.1**
ILAR	**Eielson Array**	**5.51**	**27**	P	**Pn**	**07 21 27.1**	**-1.3**
	comp=E,24nm,0.4s,baz=214,slow=14,SNR=442						
ILAR				S	**Sn**	**07 22 25.7**	**-4.7**
	comp=E,7.1nm,0.5s,baz=200,slow=16,SNR=5.3						
M27K	**Edge Creek, AK**	**5.76**	**61**		**Pn**	**07 21 31.8**	**-0.1**
H17K	**Granite Mounta**	**5.96**	**329**		**Pn**	**07 21 33.2**	**-1.3**
SAMH	**Samovar Hills**	**6.00**	**84**		**Pn**	**07 21 35.6**	**+0.5**
BCAR	**Beaver Creek A**	**6.08**	**55**		**Pn**	**07 21 35.3**	**-0.8**
YUK2	**White River**	**6.08**	**68**		**Pn**	**07 21 36.4**	**+0.2**
SDPT	**Sand Point**	**6.24**	**225**	P	**Pn**	**07 21 37.3**	**-0.9**
CHNA	**Chernabura Isl**	**6.36**	**218**	P	**Pn**	**07 21 38.6**	**-1.3**
YUK8	**Steele Glacier**	**6.51**	**73**		**Pn**	**07 21 43.2**	**+1.0**
BCPM	**Bancas Point**	**6.58**	**85**		**Pn**	**07 21 43.5**	**+0.5**
G17K	**Kiwalik Mounta**	**6.60**	**330**		**Pn**	**07 21 42.5**	**-0.6**
PNL	**Peninsula**	**6.74**	**87**	P	**Pn**	**07 21 45.2**	**+0.2**
O29M	**Mount Kennedy**	**7.08**	**81**		**Pn**	**07 21 50.6**	**+0.8**
YUK6	**Outpost Mounta**	**7.17**	**76**		**Pn**	**07 21 51.3**	**+0.2**
F19K	**Shaleruckik Mo**	**7.22**	**344**		**Pn**	**07 21 50.8**	**-0.6**
YUK5	**Granite Creek**	**7.42**	**75**		**Pn**	**07 21 54.7**	**+0.3**
P29M	**Windy Craggy**	**7.58**	**86**		**Pn**	**07 21 57.2**	**+0.9**
HYT	**Haines Junctio**	**7.59**	**77**		**Pn**	**07 21 57.0**	**+0.4**
E19K	**Redstone River**	**7.74**	**347**		**Pn**	**07 21 58.0**	**-0.5**
E22K	**Anaktuvuk Pass**	**8.18**	**2**		**Pn**	**07 22 04.7**	**+0.3**
E18K	**Tukpahlearik C**	**8.22**	**338**		**Pn**	**07 22 06.5**	**+1.6**
BMAR	**Burnt Mountain**	**8.28**	**22**		**Pn**	**07 22 03.9**	**-1.9**
PLBC	**Pleasant Camp**	**8.30**	**87**		**Pn**	**07 22 06.7**	**+0.6**
E20K	**Nigu River**	**8.42**	**351**		**Pn**	**07 22 08.2**	**+0.5**
S31K	**Pelican**	**8.77**	**96**		**Pn**	**07 22 12.7**	**+0.3**
TOLK	**Toolik Lake Re**	**8.78**	**8**		**Pn**	**07 22 12.4**	**-0.1**
SKAG	**Skagway**	**8.82**	**86**	P	**Pn**	**07 22 15.0**	**+2.0**
D19K	**Kuna River**	**8.84**	**347**		**Pn**	**07 22 13.4**	**+0.1**
J30M	**Hart River**	**8.91**	**52**		**Pn**	**07 22 15.0**	**+0.6**
D22K	**Ayikyak River**	**8.92**	**0**		**Pn**	**07 22 13.1**	**-1.2**
H29M	**Whitestone**	**9.00**	**40**		**Pn**	**07 22 14.1**	**-1.4**
D23K	**Nanushuk River**	**9.05**	**5**		**Pn**	**07 22 15.7**	**-0.4**
BESE	**Bessie Mountai**	**9.27**	**91**		**Pn**	**07 22 20.0**	**+0.9**
SIT	**Sitka**	**9.57**	**100**		**Pn**	**07 22 22.2**	**-1.0**
SIT	**Sitka**	**9.57**	**100**	P	**Pn**	**07 22 23.1**	**-0.1**
JIS	**Juneau Island**	**9.59**	**92**		**Pn**	**07 22 24.9**	**+1.4**
JIS	**Juneau Island**	**9.59**	**92**	P	**Pn**	**07 22 25.4**	**+1.9**
S32K	**Killisnoo**	**9.78**	**97**		**Pn**	**07 22 26.3**	**+0.3**
C23K	**Itkillik River**	**9.92**	**4**		**Pn**	**07 22 26.5**	**-1.3**
P33M	**Teslin, Yukon**	**9.95**	**80**		**Pn**	**07 22 27.2**	**-1.2**
CRAG	**Craig**	**11.41**	**105**	P	**Pn**	**07 22 48.3**	**+0.4**
DLBC	**Dease Lake**	**11.73**	**88**	P	**Pn**	**07 22 52.6**	**+0.3**
	comp=E,2.3nm,0.3s,baz=278,slow=7.8,SNR=27						
INK	**Inuvik**	**11.76**	**37**	P	**Pn**	**07 22 51.4**	**-1.1**
	comp=E,3.1nm,0.6s,baz=231,slow=13,SNR=7.1						
A36M	**Sachs Harbour**	**16.19**	**31**	Pn	**Pn**	**07 23 49.6**	**+0.7**
A36M				IAmb	IAmb	07 23 55.7	
	comp=Z,11nm,0.8s						
YKAW3	**Yellowknife Wh**	**18.32**	**66**	P	**Pn**	**07 24 15.0**	**+0.3**
YKAW3				IAmb	IAmb	07 24 31.5	
	comp=Z,4.5nm,1.4s						
YKA	**Yellowknife Ar**	**18.34**	**66**	P	**P**	**07 24 14.1**	**+0.6**
YKA	**Yellowknife Ar**	**18.34**	**66**	P	**P**	**07 24 14.7**	**+1.2**
	comp=Z,0.3nm,0.7s,baz=276,slow=16,SNR=7.4						
RES	**Resolute Bay**	**25.24**	**32**	P	**P**	**07 25 24.0**	**+1.0**
RES				IAmb	IAmb	07 25 54.1	
	comp=Z,6.2nm,1.4s						
PEA0B	**Petropavlovsk-**	**27.59**	**278**	P	**P**	**07 25 45.4**	**+1.1**
PETK	**Petropavlovsk-**	**27.59**	**278**	P	**P**	**07 25 43.4**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=68,slow=15,SNR=6.0						
	comp=Z,0.6nm,0.5s						
SPITS	**Spitsbergen Ar**	**41.91**	**3**	P	**P**	**07 27 47.0**	**+0.4**
	comp=Z,2.4nm,0.7s,baz=23,slow=6.6,SNR=6.6						
	comp=Z,2.4nm,0.7s						
KSRS	**Korea Array**	**53.30**	**283**	P	**P**	**07 29 16.4**	**+1.4**
	comp=Z,1.3nm,0.5s,baz=28,slow=7.2,SNR=7.2						
	comp=Z,1.3nm,0.5s						
SONM	**Songino Array**	**54.89**	**306**	P	**P**	**07 29 27.6**	**+1.0**
	comp=Z,1.2nm,0.6s,baz=40,slow=7.8,SNR=3.5						
	comp=Z,1.2nm,0.6s						
ZALV	**Zalesovo Beam**	**57.45**	**324**	P	**P**	**07 29 43.8**	**-0.7**
	comp=Z,1.5nm,0.6s,baz=9.8,slow=9.6,SNR=4.5						
	comp=Z,1.5nm,0.6s						
FINES	**FINESS Array B**	**58.88**	**1**	P	**P**	**07 29 52.7**	**-1.7**
	comp=Z,0.4nm,0.3s,baz=8.5,slow=20,SNR=2.0						
	comp=Z,0.4nm,0.3s						
BVAR	**Borovoye Array**	**62.13**	**332**	P	**P**	**07 30 15.6**	**-0.9**
	comp=Z,1.2nm,0.6s,baz=45,slow=6.7,SNR=5.0						
	comp=Z,1.2nm,0.6s						
KURBB	**Kurchatov Arra**	**62.21**	**326**	P	**P**	**07 30 17.0**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=28,slow=6.6,SNR=7.6						
	comp=Z,0.7nm,0.6s						
MKAR	**Makanchi Array**	**64.51**	**321**	P	**P**	**07 30 32.6**	**+0.3**
MKAR	**Makanchi Array**	**64.51**	**321**	P	**P**	**07 30 31.6**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=41,slow=7.7,SNR=5.8						
	comp=Z,0.5nm,0.5s						
AB31	**Akbulak array**	**67.91**	**338**	P	**P**	**07 30 53.9**	**0.0**
AB31				IAmb	IAmb	07 31 22.4	
	comp=Z,0.8nm,0.9s						
ABKAR	**Akbulak array**	**67.91**	**338**	P	**P**	**07 30 54.3**	**+0.4**

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*IDC **03** 07:27:53.6±1.3, 2°.38N×123°.49E, h0^{km}, mb3.9/6, mbtmp3.9/6, Error ellipse: s-maj=263.0km s-min=18.9km az=64.0*

*DJA **03** 07:28:00.4±0.4, 1°N±4°×12°0E±°, h10^{km}, M4.2/9, MLv4.2/9*

ISC 03 07:27:59.8±1.0, **0°.85N**±0°.08×**120°.19E**±0°.07, **h28**^{km}, **n14**, σ**1^s.86**/17, **mb4.0**/6, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
MPSI	Mapaga	0.58	210	P	Pn	07 28 12.2	-0.1
MPSI				S	Sb	07 28 20.2	+0.7
PCI	Palu	1.78	192	P	Pn	07 28 29.4	+0.7
PCI				S	Sn	07 28 50.6	+0.2
MRSI	Marisa	1.79	102	P	Pn	07 28 29.0	+0.2
MRSI				S	Sn	07 28 49.9	-0.7
APSI	Ampana	2.27	140	P	Pn	07 28 36.4	+0.9
LUWI	Luwuk	3.19	126	P	Pn	07 28 50.3	+2.2
KMSI	Cibinong	3.80	94	P	Pn	07 28 59.0	+2.5
TTSI	Tana Toraja	3.88	185	P	Pn	07 29 00.1	+2.4
SPSI	Sidrap Palu	4.80	185	P	Pn	07 29 12.3	+2.0
WRA	Warramunga Arr	24.89	147	P	P	07 33 16.7	-3.8
	1.8nm,0.7s,baz=337,slow=9.3,SNR=9.2						
	1.8nm,0.7s						
ASAR	Alice Springs	27.77	152	P	P	07 33 43.6	-2.9
	0.7nm,0.7s,baz=341,slow=13,SNR=9.5						
	0.7nm,0.7s						
MKAR	Makanchi Array	56.44	330	P	P	07 37 39.8	+0.7
	1.2nm,0.7s,baz=127,slow=8.7,SNR=10						
	1.2nm,0.7s						
ZALV	Zalesovo Beam	60.41	337	P	P	07 38 05.2	-1.4
	0.6nm,0.3s,baz=134,slow=4.2,SNR=3.9						
	0.6nm,0.3s						
KURBB	Kurchatov Arra	60.85	331	P	P	07 38 10.1	+0.5
	0.9nm,0.7s,baz=139,slow=6.9,SNR=9.8						
	0.9nm,0.7s						
BVAR	Borovoye Array	66.33	330	P	P	07 38 46.2	+0.5
	0.7nm,0.6s,baz=134,slow=6.4,SNR=4.5						
	0.7nm,0.6s						

IDC 03 07:30:12.7±3.8, 53°.70N×88°.09E, h0^{km}, mbtmp2.5/2, ML2.2/2, Error ellipse: s-maj=37.9km s-min=20.9km az=48.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.95	279	I	I	07 42 40.0	
	0.1nm,0.4s,baz=97,slow=294,SNR=9.0						
ZALV	Zalesovo Beam	1.95	279	Pn	Pn	07 30 45.9	-1.2
	0.6nm,0.3s,baz=96,slow=9.5,SNR=4.8						
ZALV				Lg	Lg	07 31 15.1	
	0.9nm,0.3s,baz=99,slow=26,SNR=5.4						
KURBB	Kurchatov Arra	6.64	246	Pn	Pn	07 31 51.8	+0.4
	baz=60,slow=13,SNR=2.1						
	0.3nm,0.4s						
MKAR	Makanchi Array	7.85	211	Pn	Pn	07 32 09.7	+1.6
	0.1nm,0.3s,baz=32,slow=14,SNR=1.5						
	0.1nm,0.3s						

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*ASRS **03** 07:47:31.0±0.9, 53°.68N×86°.77E, h0^{km}, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 03 07:47:31.9±2.8, 53°.75N×87°.04E, h0^{km}, mbtmp2.4/2, ML2.3/2, Error ellipse: s-maj=28.0km s-min=16.1km az=68.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.33	280	I	I	07 56 12.9	
	baz=98,slow=328,SNR=8.0						
ZALV	Zalesovo Beam	1.33	280	Pg	Pg	07 47 55.8	-1.5
	0.7nm,0.3s,baz=98,slow=17,SNR=5.9						
ZALV				Lg	Lg	07 48 15.0	
	0.5nm,0.3s,baz=101,slow=27,SNR=2.1						
KURBB	Kurchatov Arra	6.10	243	Pn	Pn	07 49 03.8	+0.6
	baz=59,slow=13,SNR=2.3						
	0.2nm,0.4s						
MKAR	Makanchi Array	7.60	205	Pn	Pn	07 49 25.3	+1.5
	0.1nm,0.3s,baz=23,slow=15,SNR=10.0						
	0.1nm,0.4s						

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*ASRS **03** 07:50:38.0±0.9, 54°.18N×87°.16E, h0^{km}, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 03 07:50:36.7±3.4, 54°.23N×87°.41E, h0^{km}, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=28.7km s-min=20.2km az=50.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.55	261	I	I	07 59 36.6	
	baz=78,slow=323,SNR=11						
ZALV	Zalesovo Beam	1.55	261	Pg	Pn	07 51 04.4	-1.1
	1.1nm,0.3s,baz=79,slow=16,SNR=4.7						
ZALV				Lg	Lg	07 51 25.4	
	0.6nm,0.3s,baz=82,slow=24,SNR=2.2						
KURBB	Kurchatov Arra	6.52	240	Pn	Pn	07 52 14.4	+0.7
	baz=56,slow=14,SNR=4.1						
KURBB				Lg	Lg	07 54 05.7	
	baz=51,slow=32,SNR=4.4						
	0.7nm,0.6s						
MKAR	Makanchi Array	8.12	206	Pn	Pn	07 52 37.0	+1.2
	0.1nm,0.3s,baz=18,slow=13,SNR=2.4						
MKAR				Lg	Lg	07 54 54.5	
	0.1nm,0.3s,baz=29,slow=36,SNR=1.8						
	0.1nm,0.4s						

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*ASRS **03** 07:54:51.0±0.6, 53°.93N×86°.57E, h0^{km}, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 03 07:54:52.2±2.6, 53°.90N×86°.73E, h0^{km}, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=22.9km s-min=14.0km az=65.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.13	273	I	I	08 02 00.0	
	baz=90,slow=328,SNR=2.7						
ZALV	Zalesovo Beam	1.13	273	Pg	Pg	07 55 13.0	-0.9
	0.6nm,0.3s,baz=94,slow=16,SNR=4.2						
ZALV				Lg	Lg	07 55 29.1	
	0.8nm,0.3s,baz=94,slow=30,SNR=3.9						
KURBB	Kurchatov Arra	6.01	240	Pn	Pn	07 56 23.3	+0.9
	0.1nm,0.3s,baz=57,slow=14,SNR=9.5						
KURBB				Lg	Lg	07 58 03.5	
	baz=59,slow=36,SNR=2.7						
	0.7nm,0.4s						
MKAR	Makanchi Array	7.66	204	Pn	Pn	07 56 46.1	+1.0
	0.1nm,0.3s,baz=27,slow=14,SNR=8.8						
MKAR				Lg	Lg	07 58 56.2	
	baz=27,slow=29,SNR=2.3						
	0.3nm,0.4s						

CATAC 03 07:55:07.0±0.6, 12°N±4°×8°7W±°, h37^{km}±5^{km}, M2.5/9, MLv2.5/9, Error ellipse: s-maj=9.5km s-min=5.2km az=26.0, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIN	San Cristobal	0.54	51	P	Pn	07 55 19.2	+0.8
CRIN	San Cristobal	0.54	51	S	Sn	07 55 29.9	+3.6
PKGN	Cerro Pekin	0.58	58	P	Pn	07 55 18.3	-0.7
PKGN				S	Sn	07 55 28.3	+1.1
CSGN	Cosiguina Volc	0.62	353	P	Pn	07 55 19.7	+0.2
CSGN				S	Sn	07 55 30.5	+2.3
POTN	Potosi Cosigui	0.64	358	P	Pn	07 55 20.0	+0.3
POTN				S	Sn	07 55 30.8	+2.2
QUEN	Al S del Volca	0.66	69	P	Pn	07 55 20.1	+0.1
HOYN	Al Sur del Vol	0.68	70	P	Pn	07 55 20.8	+0.5
HOYN				S	Sn	07 55 44.9	+15
POLN	Al Sur del Vol	0.71	66	P	Pn	07 55 17.7	-3.0
POLN				S	Sn	07 55 29.5	-0.9
ILCN	San Idelfonso	0.79	74	P	Pn	07 55 21.5	-0.2
ILCN				S	Sn	07 55 33.1	+0.8
MACN	El Madrono	0.80	82	P	Pn	07 55 21.7	-0.1
MACN				S	Sn	07 55 33.1	+0.7
CNCH	Conchagua	0.97	339	P	Pn	07 55 24.1	-0.2
CNCH	Conchagua	0.97	339	S	Sn	07 55 38.0	+1.1
CHOHN	Orocuina	1.16	16	P	Pn	07 55 26.9	+0.1
CHOHN	Orocuina	1.16	16	S	Sn	07 55 42.9	+1.5
RANC	El Ranchito	1.33	324	P	Pn	07 55 26.7	-2.4
PACA	Pacayal	1.37	323	P	Pn	07 55 29.8	0.0
PACA	Pacayal	1.37	323	S	Sn	07 55 47.6	+0.9
YUSH	Yuscaran	1.70	21	P	Pn	07 55 34.5	+0.3
YUSH	Yuscaran	1.70	21	S	Sn	07 55 55.6	+0.8

GCG 03 07:55:39.0±0.5, 14°.42N×91°.06W, h88^{km}±5^{km}, MD3.5, ML3.0, MW2.7, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESSG	Sabana Grande	0.23	100	*i* P	Pn	07 55 52.0	+0.1
ESSG				*i* S	Sn	07 56 02.4	+0.8
STG8	El Palmar, Qui	0.28	276	*e*P	Pn	07 55 55.2	+2.7
STG8				*e*S	Sn	07 56 08.4	+6.0
STG8				IAML		07 56 09.4	
	comp=E,558nm,0.2s						
FG8	Yepocapa, Chim	0.51	108	*i* P	Pn	07 55 51.9	-1.9
FG16	Alotenango, Sa	0.55	105	*e*P	Pn	07 55 52.6	-1.6
FG16				IAML		07 56 05.5	
	comp=E,2µm,0.2s						
NUBE	Las Nubes	1.35	112	*i* P	Pn	07 56 03.8	+1.0

MEX 03 07:56:01.2±1.2, 16°.35N×98°.49W, h6^{km}±7^{km}, MD4.1, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.35	83	*e*P	Pg	07 56 07.5	-0.6
PNIG				*e*S	Sg	07 56 12.3	-0.4
CRIG	Cruz Grande	0.72	302	*e*P	Pg	07 56 13.3	-1.9
CRIG				*e*S	Sg	07 56 22.9	-1.7
MGIG	Malinaltepec	0.89	351	*e*P	Pg	07 56 15.6	-2.8
MGIG				*e*S	Sg	07 56 26.4	-3.5
YOIG	Yosondua	1.04	61	*e*P	Pg	07 56 19.0	-2.2
YOIG				*e*S	Sg	07 56 31.8	-2.8
TXIG	Tlaxiaco	1.14	37	*e*P	Pg	07 56 20.2	-2.8
TXIG				*e*S	Sg	07 56 34.2	-3.6
TLIG	Tlapa	1.21	357	*e*P	Pg	07 56 21.2	-3.2
TLIG				*e*S	Sg	07 56 36.0	-4.2
TLIG	Tlapa	1.21	357	P	Pg	07 56 21.2	-3.3
TLIG				S	Sg	07 56 36.3	-3.9
DAIG	Los Arroyos	1.30	301	*e*P	Pn	07 56 22.6	-3.3
DAIG				*e*S	Sb	07 56 39.7	-3.2
PEIG	Puerto Escondi	1.34	105	*e*P	Pn	07 56 22.6	-3.9
PEIG				*e*S	Sb	07 56 39.0	-5.0
FTIG	Fresnillo de T	1.59	12	*e*P	Pn	07 56 27.6	-2.3
FTIG				*e*S	Sn	07 56 47.2	-3.6
HLIG	Huajuapan de L	1.61	24	*e*P	Pn	07 56 27.1	-3.3
HLIG				*e*S	Sn	07 56 47.1	-4.6
VHO	Vista Hermosa	1.83	67	*e*P	Pn	07 56 30.2	-3.2
VHO				*e*S	Sn	07 56 53.2	-3.8
OXBJ	Oaxaca	1.84	67	*e*P	Pn	07 56 32.6	-0.9
OXBJ				*e*S	Sn	07 56 54.3	-2.8
CAIG	El Cayaco	1.84	292	*e*P	Pn	07 56 31.6	-1.8
CAIG				*e*S	Sn	07 56 56.2	-0.7
OXLC	Oaxaca	1.86	67	*e*P	Pn	07 56 33.6	-0.1
OXLC				*e*S	Sn	07 56 54.6	-3.0
MEIG	Mezcala	1.90	326	*e*P	Pn	07 56 32.0	-2.3
MEIG				*e*S	Sn	07 56 57.3	-1.3
TOIG	Toxpalan	2.21	38	*e*P	Pn	07 56 36.7	-1.8
TOIG				*e*S	Sn	07 57 05.0	-1.2
PLIG	Platanillo	2.25	335	*e*P	Pn	07 56 38.4	-0.7
PLIG				*e*S	Sn	07 57 05.6	-1.6
TPIG	Tehuac#an	2.33	27	*e*P	Pb	07 56 42.0	-1.7
TPIG				*e*S	Sn	07 57 09.1	-0.1
HUIG	Huatulco	2.36	104	*e*P	Pn	07 56 40.6	+0.1
HUIG				*e*S	Sn	07 57 08.4	-1.4
YAIG	Yautepec	2.56	348	*e*P	Pn	07 56 43.5	+0.2
YAIG				*e*S	Sn	07 57 15.7	+0.8
PPPT	Popocatepetl	2.61	357	*e*P	Pn	07 56 45.5	+1.0
ARIG	Puente Sto Nin	2.62	318	*e*P	Pn	07 56 44.5	+0.5
ARIG				*e*S	Sb	07 57 19.9	-1.0
PBCV	Popocatepetl	2.62	359	*e*P	Pn	07 56 44.7	+0.2
PPM	Popocatepetl	2.71	357	*e*P	Pn	07 56 46.9	+1.2
PPM				*e*S	Sn	07 57 17.4	-1.6
MAVM	Malinalco, Edo	2.77	340	*e*P	Pn	07 56 45.4	-0.9
AMVM	AMECAMECA	2.78	354	*e*P	Pb	07 56 50.6	-0.9
MPVM	San Francisco	2.88	350	*e*P	Pn	07 56 48.5	+0.7
NEUV	Arroyo Zacate	2.91	62	*e*P	Pn	07 56 46.2	-1.8
NEUV				*e*S	Sn	07 57 20.9	-2.4
TLVM	San Miguel Top	2.92	348	*e*P	Pn	07 56 48.0	-0.5
AOVM	Tlapan	3.01	345	*e*P	Pn	07 56 50.1	+0.3
UNM	Universidad Na	3.04	348	*e*P	Pb	07 56 54.9	-1.0
UNM				*e*S	Sn	07 57 29.2	+2.4
INVM	La Marquesa	3.05	344	*e*P	Pn	07 56 52.1	+1.8
ZIIG	Zihuatanejo	3.11	294	*e*P	Pb	07 56 54.0	-2.9
ZIIG				*e*S	Sb	07 57 32.2	-2.8
PBVM	Pinon	3.13	350	*e*P	Pn	07 56 50.8	-0.2
AZVM	Cuida Lopez Ma	3.31	347	*e*P	Pn	07 56 56.8	+3.0
CMIG	Matias Romero	3.53	77	*e*P	Pb	07 57 02.3	-1.8
CMIG				*e*S	Sn	07 57 37.8	-1.0
LVIG	Laguna Verde	3.89	30	*e*P	Pn	07 57 00.6	-0.9
LVIG				*e*S	Sn	07 57 47.1	-0.5
DEIG	Demacu	3.97	353	*e*P	Pn	07 57 06.5	+3.7
DEIG				*e*S	Sn	07 57 48.0	-1.8
MOIG	Morelia	4.19	323	*e*P	Pn	07 57 10.3	+4.4
MOIG				*e*S	Sn	07 57 55.0	-0.3

PRU 03 07:59:02.8, 50°.46N×16°.93E, h0^{km}, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRLC	Kraliky	0.40	194	*e*PG	Pg	07 59 11.0	+0.6
KRLC				*e*SG	Sg	07 59 14.8	-0.7
	comp=Z,4.3nm,0.2s						
DPC	Dobruska-Polom	0.40	254	*e*PG	Pg	07 59 10.9	+0.4
DPC				*e*SG	Sg	07 59 14.4	-1.4
	comp=Z,5.6nm,0.5s						
OKC	Ostrava-Krasne	1.00	128	*e*SG	Sg	07 59 33.0	-1.9
	comp=Z,6.3nm,0.3s						

VIE 03 07:59:48.5±0.3, 49°.01N×16°.33E, h0^{km}, mb1.2/2, ml1.6/3, Error ellipse: s-maj=2.8km s-min=2.1km az=126.0 32 km N of Laa a.d. Thaya Suspected Mining explosion., Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRUC	Moravsky	0.07	42	*e*PG	Pg	07 59 49.8	0.0
VRAC	Vranov	0.35	30	*e*PG	Pg	07 59 55.0	-0.1
MORC	Moravsky Berou	1.10	46	*e*PG	Pg	08 00 09.4	-0.2
CONA	Conrad Observa	1.13	196	*i* Pg	Pg	08 00 10.0	0.0
	0.7nm,0.1s						
CONA				*i* Sg	Sb	08 00 26.3	+0.2
	0.3nm,0.1s						
MOA	Molln	1.80	231	*i* Pn	Pn	08 00 20.6	-0.1
	0.2nm,0.1s						
MOA				*e*Sn	Sn	08 00 44.2	0.0
	1.5nm,0.2s						

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*ASRS **03** 08:00:26.0±1.0, 54°.20N×86°.40E, h0^{km}, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 03 08:00:27.3±2.8, 54°.19N×86°.48E, h0^{km}, mbtmp2.7/2, ML2.6/2, Error ellipse: s-maj=22.6km s-min=13.3km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.01	257	I	I	08 06 55.0	
	baz=76,slow=330,SNR=3.3						
ZALV	Zalesovo Beam	1.01	257	Pg	Pg	08 00 45.5	-1.2
	1.3nm,0.3s,baz=75,slow=17,SNR=11						
ZALV				Lg	Lg	08 01 01.1	
	3.4nm,0.3s,baz=75,slow=28,SNR=18						
KURBB	Kurchatov Arra	6.04	237	Pn	Pn	08 01 59.3	+1.5
	0.1nm,0.3s,baz=51,slow=13,SNR=4.3						
	0.3nm,0.3s						
MKAR	Makanchi Array	7.88	202	Pn	Pn	08 02 23.8	+0.7
	0.2nm,0.3s,baz=23,slow=11,SNR=7.4						
	0.2nm,0.4s						

IDC 03 08:01:26.0±2.1, 2°.36N×125°.49E, h0^{km}, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=190.3km s-min=28.0km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.81	159	P	P	08 06 40.5	-0.3
	0.8nm,0.4s,baz=338,slow=11,SNR=15						
	0.8nm,0.4s						
ASAR	Alice Springs	27.14	163	P	P	08 07 11.8	+0.7
	0.2nm,0.5s,baz=340,slow=6.6,SNR=4.2						
	0.2nm,0.5s						
MKAR	Makanchi Array	57.98	326	P	P	08 11 20.2	-0.3
	0.2nm,0.4s,baz=114,slow=8.0,SNR=2.8						
	0.2nm,0.4s						

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*ASRS **03** 08:12:25.0±1.5, 53°.77N×91°.05E, h0^{km}, M3.2, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*NNC **03** 08:12:31.2±6.2, 53°.05N×91°.18E, h0^{km}, mb3.4, mpv3.1, Error ellipse: s-maj=45.7km s-min=31.3km az=82.0, Suspected Mining explosion.*

*IDC **03** 08:12:32.0±3.2, 53°.63N×90°.73E, h0^{km}, mbtmp3.2/3, ML2.8/3, Error ellipse: s-maj=26.4km s-min=22.7km az=63.0*

ISC 03 08:12:32.9±3.4, 53°.6N±0°.1×90°.5E±0°.2, h0^{km}, n10, σ1s.53/13, 8C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	3.41	278	I	I	08 34 20.0	
	0.1nm,1.0s,baz=91,slow=324,SNR=32						
ZAA0	Zalesovo Array	3.41	278	⇓Pn	Pb	08 13 31.7	-2.5
	1.1nm,0.7s						
ZAA0				⇓Sn	Sg	08 14 22.5	+0.1
	9.6nm,1.0s						
ZALV	Zalesovo Beam	3.41	278	Pn	Pn	08 13 29.4	+2.1
	1.4nm,0.3s,baz=90,slow=16,SNR=13						
ZALV				Lg	Lg	08 14 23.2	
	0.8nm,0.3s,baz=91,slow=25,SNR=3.6						
	3.5nm,0.4s						
KURK	Kurchatov	7.88	253	⇑Pn	Pn	08 14 30.0	+1.3
	0.7nm,0.8s						
KURK				⇓Sn	Sn	08 16 00.8	+2.4
	6.8nm,1.1s						
KURK				⇑Lg	Lg	08 16 47.0	
	13nm,1.1s						
KURBB	Kurchatov Arra	7.97	253	Pn	Pn	08 14 30.2	+0.3
	0.2nm,0.3s,baz=65,slow=14,SNR=9.3						
KURBB				Sn	Sn	08 16 00.8	+0.1
	0.1nm,0.3s,baz=68,slow=27,SNR=10						
KURBB				Lg	Lg	08 16 49.5	
	baz=66,slow=32,SNR=5.1						
	1.3nm,0.4s						
KURBB	Kurchatov Arra	7.97	253	⇑Pn	Pn	08 14 30.2	+0.3
	2.0nm,0.5s						
KURBB				⇓Sn	Sn	08 16 00.4	-0.3
	18nm,1.1s						
KURBB				⇑Lg	Lg	08 16 47.3	
	12nm,0.7s						
MK31	Makanchi Array	8.62	221	⇑Pn	Pn	08 14 35.0	-3.9
	0.3nm,0.4s,baz=38,slow=12,SNR=4.5						
MK31				⇑Sn	Sn	08 16 15.3	-1.6
	3.1nm,0.8s,baz=45,slow=25,SNR=4.3						
MK31				⇓Lg	Lg	08 17 07.2	
	19nm,1.1s,baz=42,slow=26,SNR=4.0						
MKAR	Makanchi Array	8.62	221	Pn	Pn	08 14 40.0	+1.1
	0.2nm,0.3s,baz=34,slow=14,SNR=7.4						
MKAR				Sn	Sn	08 16 17.7	+0.8
	0.1nm,0.3s,baz=42,slow=24,SNR=7.5						
MKAR				Lg	Lg	08 17 07.0	
	0.1nm,0.3s,baz=36,slow=22,SNR=6.0						
	0.4nm,0.4s						
MAKZ	Makanchi	8.74	222	⇑Sn	Sn	08 16 20.4	+0.8
	3.0nm,0.9s						
MAKZ				⇑Lg	Lg	08 17 07.3	
	7.6nm,1.0s						
SONM	Songino Array	11.58	114	Lg	Lg	08 18 27.2	
	0.2nm,0.3s,baz=303,slow=23,SNR=6.7						

KRSC 03 08:14:17.3±1.5, 50°.48N×160°.16E, h42^{km}±24^{km}, Ml3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	1.86	316	*e*P	Pn	08 14 48.8	+2.1
KDTR				*e*S	Sn	08 15 10.5	+1.5
RUS	Russkaya	2.21	333	*e*P	Pn	08 14 53.8	+2.4
RUS				*e*S	Sn	08 15 19.5	+2.1
MTVR	Mutnovka	2.35	329	*e*P	Pn	08 14 56.3	+2.7
MTVR				*e*S	Sn	08 15 23.8	+2.6
ASAK	Asacha	2.37	324	*e*P	Pn	08 14 56.6	+2.9
GRL	Gorelyy	2.45	329	*e*P	Pn	08 14 58.1	+3.3
SKR	Severo-Kuril's	2.58	276	*e*P	Pn	08 14 57.8	+1.3
SPN	Mys Shipunski	2.62	358	*e*P	Pn	08 15 00.3	+3.3
SPN				*e*S	Sn	08 15 30.2	+2.6
KRMR	Karymshinskiy	2.67	333	*e*S	Sn	08 15 33.6	+4.8
DALK	Dalny	2.70	342	*e*P	Pn	08 15 01.0	+2.9
PET	Petropavlovsk	2.71	340	*e*P	Pn	08 15 00.8	+2.5
NLC	Nalytchevo	2.74	350	*e*P	Pn	08 15 02.8	+4.1
NLC				*e*S	Sn	08 15 34.7	+4.1
UGLR	Uglovaya	2.85	344	*e*P	Pn	08 15 03.8	+3.4
SDLR	Sedlovina	2.91	345	*e*P	Pn	08 15 04.2	+3.0
SMAR	Somma	2.91	344	*e*P	Pn	08 15 05.5	+4.2
AVH	Avacha	2.92	343	*e*P	Pn	08 15 05.1	+3.8
KRER	Koryakskii	2.96	343	*e*P	Pn	08 15 06.5	+4.6
KOK	Koryaka	2.97	342	*e*P	Pn	08 15 05.6	+3.7
KRX	Arik	3.03	343	*e*P	Pn	08 15 06.1	+3.3
APC	Apacha	3.08	324	*e*P	Pn	08 15 06.7	+3.4
APC				*e*S	Sn	08 15 43.2	+4.4
GNL	Ganaly	3.50	338	*e*P	Pn	08 15 13.2	+4.0
KII	Karymskiy	3.59	353	*e*P	Pn	08 15 15.3	+4.9
MKZ	Mys Kozlova	4.19	13	*e*P	Pn	08 15 22.1	+3.5
TUMD	Tumrok D	4.73	2	*e*P	Pn	08 15 30.3	+4.3
KMNR	Kamenistaya	5.28	0	*e*P	Pn	08 15 39.2	+5.5
KPT	Kopyto	5.49	0	*e*P	Pn	08 15 41.7	+5.1
BKI	Bering	5.90	34	*e*P	Pn	08 15 45.6	+3.6
KBTR	Krutoberegovo	5.95	14	*e*P	Pn	08 15 46.8	+4.0

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*SNET **03** 08:23:47.4±1.5, 13°.11N×89°.46W, h52^{km}, ML3.3*

*CATAC **03** 08:23:48.7±0.4, 13°N±3°×8°9W±°, h31^{km}±3^{km}, M3.2/24, MLv3.2/24, Error ellipse: s-maj=7.0km s-min=3.6km az=25.0, confirmed*

*GCG **03** 08:23:49.8±0.7, 13°.28N×89°.47W, h49^{km}±9^{km}, MD3.9*

ISC 03 08:23:48.8±1.9, 13°.1N±0°.1×89°.45W±0°.06, h48^{km}±14^{km}, n60, σ0s.72/66, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.37	20	*e*P	Pn	08 23 58.4	0.0
LALI				*e*S	Sn	08 24 04.9	-0.2
JAYA	Jayaque - finc	0.51	360	*e*P	Pn	08 23 59.7	-0.5
JAYA				*e*S	Sn	08 24 07.8	-0.6
JAYA	Jayaque - finc	0.51	360	*e*P	Pn	08 23 59.7	-0.5
JAYA	Jayaque - finc	0.51	360	P	Pn	08 24 01.7	+1.5
PANCS	Alcalda de	0.54	29	P	Pn	08 24 00.0	-0.4
ITCA	Escuela Especi	0.56	17	P	Pn	08 24 00.4	-0.3
ITCA	Escuela Especi	0.56	17	S	Sn	08 24 09.1	-0.1
LOMA	Loma Larga	0.57	28	*e*P	Pn	08 24 00.6	-0.3
LOMA				*e*S	Sn	08 24 10.2	+0.6
LOMA	Loma Larga	0.57	28	P	Pn	08 24 00.6	-0.3
PMON	Piamonte	0.58	13	P	Pn	08 24 00.7	-0.4
PMON	Piamonte	0.58	13	S	Sn	08 24 10.0	+0.1
SEMO	Seminario San	0.60	21	P	Pn	08 24 00.9	-0.4
SEMO	Seminario San	0.60	21	S	Sn	08 24 10.3	+0.1
UTEC	Universidad Te	0.61	23	P	Pn	08 24 00.9	-0.4
UTEC	Universidad Te	0.61	23	S	Sn	08 24 10.6	+0.3
UEES	Universidad Ev	0.61	19	P	Pn	08 24 01.0	-0.3
UEES	Universidad Ev	0.61	19	S	Sn	08 24 10.6	+0.2
LFRS	El Faro	0.61	38	*e*P	Pn	08 24 01.3	-0.1
LFRS				*e*S	Sn	08 24 10.7	+0.3
BOQS	Boqueron	0.61	15	*e*P	Pn	08 24 01.4	-0.2
UDBS	Universidad Do	0.64	26	P	Pn	08 24 01.6	-0.1
UDBS	Universidad Do	0.64	26	S	Sn	08 24 11.6	+0.6
CEDA	San Andres	0.66	4	P	Pn	08 24 02.0	0.0
CEDA	San Andres	0.66	4	S	Sn	08 24 11.9	+0.4
CEVE	Cerro Verde	0.70	346	*e*P	Pn	08 24 02.5	-0.2
CEVE				*e*S	Sn	08 24 13.2	+0.4
CEVE	Cerro Verde	0.70	346	P	Pn	08 24 02.6	-0.2
COEG	Centro de Oper	0.73	49	*e*P	Pn	08 24 02.5	-0.4
COEG				*e*S	Sn	08 24 13.0	-0.1
COEG	Centro de Oper	0.73	49	P	Pn	08 24 02.5	-0.4
PAVA	Las Pavas	0.76	41	P	Pn	08 24 03.3	0.0
PAVA	Las Pavas	0.76	41	S	Sn	08 24 14.6	+0.8
TECO	Alcaldia de Te	0.76	59	P	Pn	08 24 02.8	-0.4
TECO	Alcaldia de Te	0.76	59	S	Sn	08 24 13.6	-0.1
UESV	Universidad de	0.81	52	P	Pn	08 24 03.9	0.0
UESV	Universidad de	0.81	52	S	Sn	08 24 15.3	+0.3
NUBE	Las Nubes	0.82	337	*e*P	Pn	08 24 03.6	-0.7
NUBE				*e*S	Sn	08 24 14.8	-0.7
NUBE	Las Nubes	0.82	337	*e*P	Pn	08 24 03.6	-0.7
NUBE				*i* S	Sn	08 24 14.8	-0.7
NUBE	Las Nubes	0.82	337	P	Pn	08 24 03.8	-0.4
UNIC	Universidad Ca	0.84	353	P	Pn	08 24 04.4	0.0
UNIC	Universidad Ca	0.84	353	S	Sn	08 24 16.4	+0.6

ALJI	Alcalda de J	0.87	78	P	Pn	08 24 16.2	+11
SCLA	Alcaldia de Sa	0.90	51	P	Pn	08 24 05.2	+0.1
LOAL	Lomas de Alarc	0.91	339	P	Pn	08 24 06.1	+0.7
LOAL	Lomas de Alarc	0.91	339	S	Sn	08 24 18.7	+1.3
SLOZ	Alcaldia de Sa	0.94	340	P	Pn	08 24 06.1	+0.4
SLOZ	Alcaldia de Sa	0.94	340	S	Sn	08 24 18.9	+0.8
PQSS	Presa 15 de Se	0.99	61	P	Pn	08 24 06.2	-0.1
PQSS	Presa 15 de Se	0.99	61	S	Sn	08 24 19.1	-0.1
PACA	Pacayal	1.14	73	eP	Pn	08 24 09.1	+0.7
PACA				eS	Sn	08 24 24.8	+1.7
PACA	Pacayal	1.14	73	P	Pn	08 24 09.5	+1.0
RANC	El Ranchito	1.17	75	P	Pn	08 24 06.9	-2.0
RANC	El Ranchito	1.17	75	S	Sn	08 24 22.1	-1.6
MTO3	Montecristo	1.25	4	i P	Pn	08 24 09.6	-0.5
MTO3	Montecristo	1.25	4	P	Pn	08 24 09.6	-0.5
MTO3	Montecristo	1.25	4	S	Sn	08 24 25.3	-0.6
ESQI	Esquipulas	1.42	4	P	Pn	08 24 12.1	-0.1
FG16	Alotenango, Sa	1.53	318	eP	Pn	08 24 18.9	+5.0
FG16				eS	Sn	08 24 41.9	+9.2
FG8	Yepocapa, Chim	1.55	316	i P	Pn	08 24 19.7	+5.6
FG8				i S	Sn	08 24 42.2	+9.1
CNCH	Conchagua	1.58	85	P	Pn	08 24 15.1	+0.6
CHOHN	Orocuina	2.25	81	P	Pn	08 24 23.6	-0.1
POLN	Al Sur del Vol	2.62	100	P	Pn	08 24 26.3	-2.3
MACN	El Madrono	2.79	104	P	Pn	08 24 32.6	+1.7

*KRSC **03** 08:39:55.1±2.1, 50.°73N×156.°93E, h123^{km}±15^{km}, Ml4.4, Felt [II-III] at Podgornay.*

*NEIC **03** 08:39:56.9±1.4, 50.°95N±0.°09×156.°4E±0.°1, h119^{km}±6^{km}, mb4.3/130, Error ellipse: s-maj=15.2km s-min=10.3km az=138.0*

*MOS **03** 08:39:56.3±1.0, 50.°93N×156.°49E, h134^{km}, mb4.2/19, Error ellipse: s-maj=9.0km s-min=3.6km az=71.3*

*IDC **03** 08:39:58.2±0.9, 51.°02N×156.°41E, h134^{km}±7^{km}, mb3.7/28, mbtmp4.1/36, MS2.7/1, Error ellipse: s-maj=13.5km s-min=8.6km az=158.0*

ISC 03 08:39:56.7±0.5**, 50.°85N**±0.°05×**156.°63E**±0.°05**, h125^{km}**±4^{km}**, h125^{km}:pP-P, n306, σ1.^{s}18**/305**, mb4.2**/97**, 4C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	0.36	242	⇓ iPN	Pn	08 40 14.6	+0.2
SKR				i S	Sn	08 40 27.6	-0.2
SKR				pmax	pmax		
	comp=Z,12μm,0.3s						
SKR				smax	smax		
	comp=E,27μm,0.6s						
SKR				smax	smax		
	comp=N,21μm,0.3s						
SKR	Severo-Kuril's	0.36	242	i P	Pn	08 40 14.6	+0.2
SKR				eS	Sn	08 40 27.5	-0.3
PAU	Pauzhetka	0.63	11	PN	Pn	08 40 16.3	+0.4
PAU				S	Sn	08 40 30.6	+0.1
PAU	Pauzhetka	0.63	11	eP	Pn	08 40 16.4	+0.4
PAU				eS	Sn	08 40 30.7	+0.1
KDTR	Khodutka, Kamc	1.32	43	PN	Pn	08 40 21.6	-0.7
KDTR	Khodutka, Kamc	1.32	43	eP	Pn	08 40 21.7	-0.7
MIPR	Malaya Ipel'ka	1.43	3	PN	Pn	08 40 24.7	+1.2
MIPR				S	Sn	08 40 44.9	+0.9
MIPR	Malaya Ipel'ka	1.43	3	eP	Pn	08 40 24.8	+1.2
MIPR				eS	Sn	08 40 45.0	+0.9
ASAK	Asacha	1.73	27	PN	Pn	08 40 27.8	+0.7
ASAK	Asacha	1.73	27	eP	Pn	08 40 27.8	+0.7
MTVR	Mutnovka	1.90	30	PN	Pn	08 40 30.0	+0.8
MTVR	Mutnovka	1.90	30	eP	Pn	08 40 30.1	+0.8
GRL	Gorelyy	1.93	27	PN	Pn	08 40 30.6	+1.1
GRL	Gorelyy	1.93	27	eP	Pn	08 40 30.6	+1.1
RUS	Russkaya	1.97	36	PN	Pn	08 40 29.5	-0.4
RUS	Russkaya	1.97	36	eP	Pn	08 40 29.5	-0.4
APC	Apacha	2.10	9	PN	Pn	08 40 32.6	+1.1
APC	Apacha	2.10	9	eP	Pn	08 40 32.6	+1.1
KRMR	Karymshinskiy	2.19	25	PN	Pn	08 40 33.6	+1.0
KRMR	Karymshinskiy	2.19	25	eP	Pn	08 40 33.7	+1.0
PEA0B	Petropavlovsk-	2.35	16		Pn	08 40 36.1	+1.3
PEA0B	Petropavlovsk-	2.35	16	i PN	Pn	08 40 33.2	-1.5
PETK	Petropavlovsk-	2.35	16		Pn	08 40 35.5	+0.8
PETK	Petropavlovsk-	2.35	16	P	Pn	08 40 35.7	+0.9
	comp=N,33nm,0.3s,baz=202,slow=13,SNR=4.6						
PETK				S	Sn	08 41 02.1	-1.9
	comp=N,41nm,0.5s,baz=175,slow=14,SNR=8.4						
PETK				LR	LR	08 41 15.1	
	comp=N,158nm,19.8s,baz=58,slow=34						
PET	Petropavlovsk	2.51	29		Pn	08 40 37.2	+0.5
PET				Sn	Sn	08 41 06.9	-0.6
PET	Petropavlovsk	2.51	29	ePN	Pn	08 40 37.0	+0.3
PET				eS	Sn	08 41 07.1	-0.4
PET				smax	smax		
	comp=N,341nm,0.4s						
PET				smax	smax		
	comp=E,296nm,0.6s						
PET	Petropavlovsk	2.51	29	eP	Pn	08 40 37.2	+0.5
DALK	Dalny	2.55	30	PN	Pn	08 40 37.8	+0.7
DALK	Dalny	2.55	30	eP	Pn	08 40 37.9	+0.7
UGLR	Uglovaya	2.72	29	PN	Pn	08 40 40.8	+1.3
UGLR	Uglovaya	2.72	29	eP	Pn	08 40 40.8	+1.3
KOK	Koryaka	2.74	26	PN	Pn	08 40 41.4	+1.7
KOK	Koryaka	2.74	26	eP	Pn	08 40 41.5	+1.7
AVH	Avacha	2.75	28	PN	Pn	08 40 41.4	+1.6
AVH	Avacha	2.75	28	eP	Pn	08 40 41.4	+1.6
SMAR	Somma	2.76	28	PN	Pn	08 40 41.3	+1.2
SMAR	Somma	2.76	28	eP	Pn	08 40 41.4	+1.2
KRER	Koryakskii	2.78	27	PN	Pn	08 40 41.9	+1.5
KRER	Koryakskii	2.78	27	eP	Pn	08 40 41.9	+1.5
SDLR	Sedlovina	2.80	29	PN	Pn	08 40 41.2	+0.7
SDLR	Sedlovina	2.80	29	eP	Pn	08 40 41.2	+0.7
KRX	Arik	2.80	26	PN	Pn	08 40 41.9	+1.3
KRX	Arik	2.80	26	eP	Pn	08 40 42.0	+1.3
NLC	Nalytchevo	2.87	35	PN	Pn	08 40 40.5	-0.7
NLC	Nalytchevo	2.87	35	eP	Pn	08 40 40.5	-0.7
GNL	Ganaly	2.96	15	PN	Pn	08 40 44.0	+1.4
GNL	Ganaly	2.96	15	eP	Pn	08 40 44.1	+1.4
SPN	Mys Shipunski	3.08	42	PN	Pn	08 40 43.6	-0.4
SPN	Mys Shipunski	3.08	42	eP	Pn	08 40 43.7	-0.4
KII	Karymskiy	3.63	27	PN	Pn	08 40 52.9	+1.6
KII	Karymskiy	3.63	27	eP	Pn	08 40 52.9	+1.6
MKZ	Mys Kozlova	4.84	38	PN	Pn	08 41 05.8	-1.5
MKZ	Mys Kozlova	4.84	38	eP	Pn	08 41 05.9	-1.5
TUMD	Tumrok D	4.92	26	PN	Pn	08 41 10.4	+2.0
TUMD	Tumrok D	4.92	26	eP	Pn	08 41 10.5	+2.0
ESO	Esso	5.23	13	PN	Pn	08 41 14.2	+1.6
ESO	Esso	5.23	13	eP	Pn	08 41 14.3	+1.6
KMNR	Kamenistaya	5.37	22	PN	Pn	08 41 15.8	+1.2
KMNR	Kamenistaya	5.37	22	eP	Pn	08 41 15.8	+1.2
KPT	Kopyto	5.55	21	PN	Pn	08 41 18.1	+1.0
KPT	Kopyto	5.55	21	eP	Pn	08 41 18.1	+1.0
BZWR	Bezymyannyi-We	5.62	23	PN	Pn	08 41 19.0	+1.0
BZWR	Bezymyannyi-We	5.62	23	eP	Pn	08 41 19.0	+1.0
BZGR	Bezymyannyi-Gr	5.65	24	PN	Pn	08 41 20.6	+2.3
BZGR	Bezymyannyi-Gr	5.65	24	eP	Pn	08 41 20.7	+2.3
SMKR	Semkarok	6.42	25	PN	Pn	08 41 28.6	-0.1
SMKR	Semkarok	6.42	25	eP	Pn	08 41 28.6	-0.1
KBG	Krutoberegovo	6.51	31	PN	Pn	08 41 29.4	-0.4
KBG	Krutoberegovo	6.51	31	eP	Pn	08 41 29.5	-0.4
KBTR	Krutoberegovo	6.51	32	PN	Pn	08 41 29.4	-0.4
KBTR	Krutoberegovo	6.51	32	eP	Pn	08 41 29.4	-0.4
BKI	Bering	7.12	49	PN	Pn	08 41 36.6	-1.5
BKI	Bering	7.12	49	eP	Pn	08 41 36.6	-1.5
MA2	Magadan	9.36	341	Pn	Pn	08 42 06.9	-1.3
MA2	Magadan	9.36	341	PN	Pn	08 42 06.9	-1.3
SHO	Shikotan	9.64	227	ePN	Pn	08 42 08.4	-3.7
SHO				pmax	pmax		
	comp=Z,8.0nm,0.4s						
SHO				pmax	pmax		
	comp=N,3.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,3.0nm,0.2s						
YSS	Yuzhno-Sakhali	9.93	252	ePN	Pn	08 42 14.1	-1.9
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YUK	Yuzh-Kuril'sk	9.98	231	PN	Pn	08 42 16.8	+0.2
YUK				S	Sn	08 44 06.0	-0.7
YUK				pmax	pmax		
	comp=Z,41nm,0.3s						
NMR	Nemuro--Hokkai	10.54	229	ePN	Pn	08 42 19.2	-5.0
SHEM	Shemya Is, Ala	10.99	73	Pn	Pn	08 42 30.9	+0.9
SHEM	Shemya Is, Ala	10.99	73	P	Pn	08 42 32.1	+2.0
	comp=Z,14nm,0.4s,baz=255,slow=13,SNR=1.4						
SHEM				S	Sn	08 44 25.2	-5.7
	comp=Z,25nm,0.4s,baz=318,slow=23,SNR=11						
SMY	Shemya	10.99	73	Pn	Pn	08 42 31.0	+0.9
SMY	Shemya	10.99	73	PN	Pn	08 42 31.0	+0.9
JKA	Kamikawa-asahi	11.63	240	Pn	Pn	08 42 36.3	-2.4
ASAJ	Asahikawa	11.63	240	P	Pn	08 42 39.9	+1.1
	comp=Z,2.3nm,0.4s,baz=65,slow=14,SNR=5.6						
SEY	Seymchan	12.33	351	P	Pn	08 42 47.3	-0.4
	comp=Z,1.3nm,0.8s,baz=156,slow=7.9,SNR=3.9						
SEY	Seymchan	12.33	351	i PN	Pn	08 42 48.1	+0.4
ERM	Erimo	12.80	232	Pn	Pn	08 42 52.9	-1.2
ERM	Erimo	12.80	232	i PN	Pn	08 42 54.3	+0.2
KLR	Kul'dur	16.04	274	P	P	08 43 36.3	+0.3
	comp=Z,3.7nm,0.7s,baz=82,slow=10,SNR=9.7						
KLR	Kul'dur	16.04	274	i P	P	08 43 35.9	-0.1
KLR				pmax	pmax		
	comp=Z,9.0nm,1.6s						
JMM	Marumori	17.18	227	P	P	08 43 47.5	-1.0
JMM				IAmb	IAmb	08 44 24.7	
	comp=Z,27nm,1.2s						
USRK	Ussuriysk Ar.	17.87	258	P	P	08 43 55.0	-1.1
USRK	Ussuriysk Ar.	17.87	258	P	P	08 43 54.6	-1.5
	comp=Z,2.3nm,0.6s,baz=65,slow=9.2,SNR=5.4						
USRK	Ussuriysk Ar.	17.87	258	P	P	08 43 55.0	-1.1
BILL	Bilibino	17.88	12	P	P	08 43 55.8	-0.3
BILL	Bilibino	17.88	12	i P	P	08 43 55.7	-0.3
BILL				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ZEA	Zeya	18.14	291	i P	Pn	08 43 59.6	-0.7
ATKA	Atka Island	18.16	74	P	P	08 43 59.4	+0.3
ATKA				IAmb	IAmb	08 44 40.2	
	comp=Z,23nm,1.2s						
YAK	Yakutsk	18.47	318	P	P	08 44 02.8	+0.3
YAK	Yakutsk	18.47	318	P	P	08 44 01.4	-1.1
	comp=Z,29nm,0.4s,baz=92,slow=2.9,SNR=9.2						
YAK	Yakutsk	18.47	318	eP	P	08 44 02.5	0.0
YAK				eS	S	08 47 26.0	-0.5
YAK				pmax	pmax		
	comp=Z,44nm,0.8s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.9s						
YAK				smax	smax		
	comp=N,46nm,3.4s						
YAK				smax	smax		
	comp=E,34nm,2.1s						
HEH	HeiHe	18.52	280	eP	Pn	08 44 05.2	+0.3
HEH				pmax	pmax		
	comp=Z,14nm,0.6s						
MDJ	Mudanjiang	19.16	262	P	P	08 44 08.7	-1.5
MDJ				IAmb	IAmb	08 44 10.4	
	comp=Z,11nm,0.7s						
MJA0	Matsu Arr-Jizo	19.45	230	eP	Pn	08 44 15.0	-0.8
MJA0				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MJAR	Matsushiro Arr	19.46	230	P	P	08 44 14.4	+0.8
	comp=Z,1.5nm,0.3s,baz=18,slow=12,SNR=7.5						
MJB9	Matsu-Tunnel	19.46	230	P	P	08 44 13.0	-0.6
MJB9				IAmb	IAmb	08 44 19.2	
	comp=Z,15nm,1.4s						
MAJO	Matsushiro	19.47	230	P	P	08 44 11.9	-1.6
MAJO	Matsushiro	19.47	230	i P	Pn	08 44 15.3	-0.7
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
JGF	Kuroka	20.63	230	P	P	08 44 26.2	+0.1
JGF				IAmb	IAmb	08 44 53.5	
	comp=Z,13nm,1.2s						
GAMB	Gambell	21.16	40	P	P	08 44 32.6	+1.2
GAMB				IAmb	IAmb	08 44 52.5	
	comp=Z,26nm,1.2s						
TIXI	Tiksi	24.32	339		P	08 45 01.0	-1.1
TIXI	Tiksi	24.32	339	i P	P	08 45 02.4	+0.3
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KSRS	Korea Array	24.38	248	P	P	08 45 04.3	+1.3
	comp=Z,1.5nm,0.7s,baz=41,slow=8.9,SNR=6.7						
	comp=Z,1.5nm,0.7s						
J14K	Nanvaranak Lak	24.39	46	P	P	08 45 04.0	+1.2
J14K				IAmb	IAmb	08 45 06.6	
	comp=Z,9.3nm,1.1s						
KSAR	Wonju Array Be	24.41	248	P	P	08 45 01.8	-1.5
KSAR	Wonju Array Be	24.41	248	P	P	08 45 01.8	-1.5
F15K	North Star Dit	24.67	38	P	P	08 45 06.6	+1.2
S12K	Black Hills	24.89	63	P	P	08 45 08.7	+1.2
K15K	Wolf Creek Mou	25.25	47	P	P	08 45 11.8	+1.2
C16K	Lisburne Hills	25.35	32	P	P	08 45 11.9	+0.4
C16K				IAmb	IAmb	08 45 19.6	
	comp=Z,17nm,1.3s						
N15K	Kwethluk River	25.77	52	P	P	08 45 16.6	+1.1
N15K				IAmb	IAmb	08 45 19.4	
	comp=Z,5.3nm,0.8s						
J16K	Anvik River	25.81	45	P	P	08 45 14.9	-0.8
JNU	Nakatsue	25.87	237	P	P	08 45 16.9	+0.2
JNU				IAmb	IAmb	08 45 25.8	
	comp=Z,11nm,1.1s						
L16K	Owhat River	26.15	49	P	P	08 45 19.5	+0.7
F17K	Baldwin Pennin	26.21	38	P	P	08 45 18.6	-0.7
M16K	Timber Creek	26.36	50	P	P	08 45 20.2	-0.5
M16K				IAmb	IAmb	08 45 46.5	
	comp=Z,9.4nm,1.3s						
O16K	Kokwok River B	26.78	53	P	P	08 45 24.8	+0.4
K17K	Iditarod	26.78	46	P	P	08 45 25.0	+0.5
C18K	Utukok River	26.91	33	P	P	08 45 25.8	+0.2
H18K	Honhosa River	27.08	41	P	P	08 45 27.5	+0.4
H18K				IAmb	IAmb	08 45 48.8	
	comp=Z,9.0nm,1.4s						
G18K	Tagagawik	27.10	39	P	P	08 45 27.9	+0.6
N17K	Nushagak Hills	27.22	51	P	P	08 45 29.2	+0.8
C19K	Lookout Ridge	27.61	32	P	P	08 45 32.7	+0.8
C19K				IAmb	IAmb	08 45 39.3	
	comp=Z,10nm,1.4s						
TTA	Tatalina	27.85	46	P	P	08 45 34.5	+0.5
TTA	Tatalina	27.85	46	P	P	08 45 34.6	+0.5
TTA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
N18K	Kilae Creek	27.86	51	P	P	08 45 35.1	+0.9
XLT	XiLinHaoTe	28.04	272	eP	P	08 45 39.2	+3.2
XLT				sP	sP	08 46 18.8	+1.9
XLT				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KDAK	Kodiak Island	29.80	57	P	P	08 45 51.6	+0.3
	comp=Z,2.8nm,0.9s,baz=290,slow=2.8,SNR=8.1						
	comp=Z,2.8nm,0.9s						
NEA2	Nenana	30.98	43	P	P	08 46 02.3	+0.6
NEA2				IAmb	IAmb	08 46 05.3	
	comp=Z,3.1nm,0.7s						
TOLK	Toolik Lake Re	31.04	35	P	P	08 46 02.9	+0.7
TOLK				IAmb	IAmb	08 46 31.8	
	comp=Z,7.8nm,1.4s						
PMR	Palmer	31.09	49	P	P	08 46 03.1	+0.5
PMR	Palmer	31.09	49	P	P	08 46 03.1	+0.5
PMR				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SML	Sawmill	31.45	48	P	P	08 46 06.3	+0.5
SML				IAmb	IAmb	08 46 06.7	
	comp=Z,6.4nm,0.7s						
SML	Sawmill	31.45	48	P	P	08 46 06.3	+0.5
SML				pmax	pmax		
	comp=Z,6.0nm,0.7s						
COLA	College	31.50	42	i P	P	08 46 06.4	+0.2
COLA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CCB	Clear Creek Bu	31.53	43	P	P	08 46 07.0	+0.6
HDA	Harding Lake	31.90	43	P	P	08 46 10.3	+0.5
HDA				IAmb	IAmb	08 46 10.5	
	comp=Z,3.5nm,0.5s						
IL31		31.92	43	P	P	08 46 11.2	+1.4
ILAR	Eielson Array	31.92	43	P	P	08 46 10.4	+0.5
ILAR	Eielson Array	31.92	43	P	P	08 46 08.4	-1.5
	comp=Z,0.9nm,0.7s,baz=258,slow=6.7,SNR=16						
	comp=Z,0.9nm,0.7s						
ILAR	Eielson Array	31.92	43	eP	P	08 46 09.8	-0.1
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
H11N2	WAKE ISLAND Hy	32.10	162	T	T	09 20 07.5	
	baz=348,slow=76,SNR=188						
H11N1	WAKE ISLAND Hy	32.12	162	T	T	09 20 09.3	
	baz=348,slow=76,SNR=230						
H11N3	WAKE ISLAND Hy	32.12	162	T	T	09 20 08.4	
	baz=348,slow=76,SNR=215						
D25K	Kavik River	32.26	34	P	P	08 46 13.5	+0.6
D25K				IAmb	IAmb	08 46 14.2	
	comp=Z,7.0nm,0.7s						
SONM	Songino Array	32.36	285	P	P	08 46 12.4	-1.7
	comp=Z,0.8nm,0.5s,baz=88,slow=9.1,SNR=3.8						
	comp=Z,0.8nm,0.5s						
M24K	Tolsona, Glenn	32.43	47	P	P	08 46 15.8	+1.4
M24K				IAmb	IAmb	08 46 44.4	
	comp=Z,8.9nm,1.2s						
PRP	Porcupine Dome	32.47	41		P	08 46 15.5	+0.7
J25K	Salcha River,	32.58	43		P	08 46 15.3	-0.4
H11S1	WAKE ISLAND Hy	33.25	162	T	T	09 21 33.6	
	baz=348,slow=76,SNR=533						
H11S3	WAKE ISLAND Hy	33.26	162	T	T	09 21 34.5	
	baz=348,slow=76,SNR=1226						
H11S2	WAKE ISLAND Hy	33.27	162	T	T	09 21 35.1	
	baz=348,slow=76,SNR=315						
M26K	Nabesna, AK	33.86	47	P	P	08 46 28.4	+1.5
K27K	Chicken	34.06	44	P	P	08 46 29.2	+0.7
CRQM	Cirque	34.08	50	P	P	08 46 29.9	+1.0
CRQM				IAmb	IAmb	08 46 31.6	
	comp=Z,5.4nm,0.7s						
H27K	Steamboat Moun	34.08	40	P	P	08 46 30.1	+1.4
D27M	Malcolm River	34.18	34	P	P	08 46 30.4	+0.9
L27K	Beaver Creek,	34.30	45		P	08 46 31.9	+1.3
L27K				IAmb	IAmb	08 46 32.7	
	comp=Z,4.7nm,0.8s						
BCAR	Beaver Creek A	34.32	45	P	P	08 46 32.1	+1.3
M27K	Edge Creek, AK	34.39	47	P	P	08 46 33.0	+1.6
M27K				IAmb	IAmb	08 46 33.6	
	comp=Z,4.7nm,1.1s						
F28M	Old Crow	34.64	37	P	P	08 46 34.7	+1.3
GRNC	Granite Creek	34.75	49	P	P	08 46 35.6	+0.8
GRNC				IAmb	IAmb	08 46 36.3	
	comp=Z,3.7nm,0.7s						
YAH	Yahtse	34.83	50	P	P	08 46 37.0	+1.5
YAH				IAmb	IAmb	08 46 39.0	
	comp=Z,8.1nm,0.9s						
CTGM	Chitina Glacie	34.90	49	P	P	08 46 36.7	+0.8
CTGM				IAmb	IAmb	08 46 38.6	
	comp=Z,5.2nm,0.7s						
M29M	Somme Creek	35.93	46	IAmb	IAmb	08 46 46.8	
	comp=Z,3.1nm,0.6s						
L29M	L29M	35.95	45		P	08 46 46.3	+1.6
L29M				IAmb	IAmb	08 46 47.2	
	comp=Z,5.3nm,0.9s						
I30M	Mount Dempster	36.31	41		P	08 46 48.8	+0.9
I30M				IAmb	IAmb	08 46 50.0	
	comp=Z,5.9nm,1.3s						
INK	Inuvik	36.95	35	P	P	08 46 53.0	-0.1
	comp=Z,2.6nm,1.0s,baz=300,slow=7.7,SNR=5.8						
	comp=Z,2.6nm,1.0s						
O30N	Mendenhall	37.44	48	IAmb	IAmb	08 46 59.7	
	comp=Z,4.1nm,0.6s						
M31M	Drury Creek, Y	37.84	46	IAmb	IAmb	08 47 03.2	
	comp=Z,2.8nm,0.8s						
P33M	Teslin, Yukon	39.15	48		P	08 47 12.9	+1.1
DLBC	Dease Lake	41.12	50	P	P	08 47 30.1	+2.1
	comp=Z,2.4nm,0.8s,baz=267,slow=7.1,SNR=5.6						
	comp=Z,2.4nm,0.8s						
ZALV	Zalesovo Beam	42.20	303	P	P	08 47 36.0	-0.7
	comp=Z,0.5nm,0.3s,baz=83,slow=4.5,SNR=1.9						
ZALV				pP	pP	08 48 06.6	+1.9
	comp=Z,1.2nm,0.8s,baz=87,slow=10,SNR=2.3						
	comp=Z,0.5nm,0.3s						
YKA	Yellowknife Ar	46.26	40	P	P	08 48 10.0	+1.1
	comp=Z,1.0nm,0.9s,baz=301,slow=8.1,SNR=5.0						
	comp=Z,1.0nm,0.9s						
KURK	Kurchatov	47.09	302	ceP	P	08 48 15.2	-0.4
KURK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
MK31	Makanchi Array	47.19	296	ceP	P	08 48 16.0	-0.4
MKAR	Makanchi Array	47.19	296		P	08 48 16.0	-0.5
MKAR	Makanchi Array	47.19	296	P	P	08 48 16.0	-0.5
	comp=Z,1.3nm,0.3s,baz=66,slow=7.7,SNR=29						
	comp=Z,1.3nm,0.3s						
KURBB	Kurchatov Arra	47.19	302	P	P	08 48 15.8	-0.5
	comp=Z,2.1nm,0.5s,baz=61,slow=7.3,SNR=14						
KURBB				pP	pP	08 48 45.7	+0.9
	comp=Z,0.6nm,0.4s,baz=62,slow=8.1,SNR=2.2						
	comp=Z,2.1nm,0.5s						
MAKZ	Makanchi	47.36	296	P	P	08 48 17.4	-0.3
MAKZ	Makanchi	47.36	296	P	P	08 48 17.5	-0.3
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SPITS	Spitsbergen Ar	48.98	350	P	P	08 48 28.4	-1.4
	comp=Z,2.5nm,0.8s,baz=57,slow=6.1,SNR=12						
	comp=Z,2.5nm,0.8s						
BVAR	Borovoye Array	50.09	308	P	P	08 48 37.1	-1.4
	comp=Z,3.6nm,0.5s,baz=67,slow=8.4,SNR=14						
BVAR				pP	pP	08 49 07.0	-0.2
	comp=Z,1.4nm,0.5s,baz=66,slow=8.2,SNR=3.2						
	comp=Z,3.6nm,0.5s						
ARTI	Arti	53.68	317	d iP	P	08 49 04.0	-1.0
ARTI				*PP	pP	08 49 33.2	-0.9
ARTI						08 51 05.5	
ARTI				S	S	08 56 26.9	-2.0
ARTI				SS	SKiKP	09 00 04.2	-1.3
ARTI				pmax	pmax		
	comp=Z,5.0nm,1.4s						
AAK	Ala-Archa	54.12	296	ceP	P	08 49 08.9	+0.2
AAK				pmax	pmax		
	comp=Z,7.0nm,2.5s						
ARCES	ARCESS Array B	54.73	341	P	P	08 49 10.6	-1.8
	comp=Z,1.5nm,0.8s,baz=27,slow=8.2,SNR=4.0						
	comp=Z,1.5nm,0.8s						
ARCES	ARCESS Array B	54.73	341	eP	P	08 49 11.5	-0.9
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CHTO	Chiang Mai	55.32	257		P	08 49 18.5	+1.1
CHTO				IAmb	IAmb	08 49 19.8	
	comp=Z,5.7nm,0.8s						
CHTO	Chiang Mai	55.32	257	P	P	08 49 18.5	+1.1
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PLID	Pearl Lake	55.49	59		P	08 49 19.5	+0.9
PLID				IAmb	IAmb	08 49 20.9	
	comp=Z,3.8nm,0.9s						
CM31	Chiang Mai Arr	55.59	256	P	P	08 49 21.2	+1.9
CMAR	Chiang Mai Arr	55.59	256	P	P	08 49 20.3	+1.0
CMAR	Chiang Mai Arr	55.59	256	P	P	08 49 19.2	-0.1
	comp=Z,3.5nm,0.8s,baz=25,slow=7.0,SNR=14						
	comp=Z,3.5nm,0.8s						
CMAR	Chiang Mai Arr	55.59	256	ceP	P	08 49 21.5	+2.2
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WVOR	Wild Horse Val	55.74	63	P	P	08 49 22.1	+1.9
WVOR				IAmb	IAmb	08 49 22.8	
	comp=Z,4.3nm,0.9s						
WVOR	Wild Horse Val	55.74	63	P	P	08 49 22.1	+1.9
WVOR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KK31	Karatay Array	56.08	298	P	P	08 49 21.4	-1.1
KK31	Karatay Array	56.08	298	P	P	08 49 21.4	-1.1
KK31				pmax	pmax		
	comp=Z,2.0nm,1.2s						
KKAR	Karatay Array	56.08	298	P	P	08 49 21.8	-0.7
KKAR	Karatay Array	56.08	298	P	P	08 49 21.8	-0.7
PNTR	Pine Nut	57.37	67	IAmb	IAmb	08 49 35.6	
	comp=Z,3.1nm,0.7s						
BOZ	Bozeman (W)	57.51	56	IAmb	IAmb	08 49 34.8	
	comp=Z,2.5nm,0.7s						
YHH	Holmes Hill	58.45	57	P	P	08 49 41.1	+1.6
NVAR	Mina Array Bea	58.56	67	P	P	08 49 41.8	+1.6
	comp=Z,1.5nm,0.5s,baz=299,slow=7.2,SNR=16						
	comp=Z,1.5nm,0.5s						
ELK	Elko	58.77	63	IAmb	IAmb	08 49 44.0	
	comp=Z,2.3nm,0.9s						
FXWY	Fox Creek	59.13	58	P	P	08 49 44.5	+0.3
FXWY				IAmb	IAmb	08 49 46.9	
	comp=Z,2.2nm,0.8s						
TPAW	Teton Pass	59.27	58	P	P	08 49 47.3	+2.1
TPAW				IAmb	IAmb	08 49 48.3	
	comp=Z,3.2nm,0.7s						
HWUT	Hardware Ranch	60.22	60	IAmb	IAmb	08 49 54.0	
	comp=Z,2.8nm,0.9s						
SPR3	Spring Creek 3	60.46	64	IAmb	IAmb	08 49 56.3	
	comp=Z,2.6nm,0.7s						
DUG	Dugway, Tooele	60.50	62	P	P	08 49 55.0	+1.6
DUG				IAmb	IAmb	08 49 55.9	
	comp=Z,2.7nm,1.0s						
DUG	Dugway, Tooele	60.50	62	P	P	08 49 55.0	+1.6
DUG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BW06	Boulder Array	60.51	58	P	P	08 49 54.9	+1.3
BW06				IAmb	IAmb	08 49 55.7	
	comp=Z,4.0nm,0.8s						
PD31	Pinedale Array	60.51	58	P	P	08 49 54.7	+1.1
PD31				IAmb	IAmb	08 49 55.7	
	comp=Z,4.4nm,0.9s						
PDAR	Pinedale Array	60.51	58		P	08 49 54.7	+1.1

PDAR	Pinedale Array	60.51	58	P	P	08 49 54.9	+1.3
	comp=Z,2.7nm,0.7s,baz=326,slow=2.8,SNR=24						
	comp=Z,2.7nm,0.7s						
GWY	Greenwater Val	61.05	67	P	P	08 49 58.3	+1.1
GWY				IAmb	IAmb	08 49 58.7	
	comp=Z,2.2nm,0.7s						
FINES	FINESS Array B	61.29	335	P	P	08 49 56.7	-1.5
	comp=Z,1.8nm,0.8s,baz=42,slow=8.8,SNR=11						
	comp=Z,1.8nm,0.8s						
BSUT	Blindstream Ca	61.40	60	IAmb	IAmb	08 50 02.3	
	comp=Z,2.9nm,0.9s						
TMUT	Trail Mountain	62.01	61	IAmb	IAmb	08 50 06.5	
	comp=Z,5.1nm,1.1s						
RSSD	Black Hills	62.45	53		P	08 50 07.2	+0.6
RSSD				IAmb	IAmb	08 50 08.2	
	comp=Z,4.5nm,0.7s						
RSSD	Black Hills	62.45	53	P	P	08 50 07.2	+0.6
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.7s						
LCMT	Little Creek M	62.45	65	P	P	08 50 08.4	+1.8
LCMT				IAmb	IAmb	08 50 09.2	
	comp=Z,2.7nm,1.0s						
SRU	San Rafael Swe	62.52	61		P	08 50 08.4	+1.3
SRU				IAmb	IAmb	08 50 09.2	
	comp=Z,4.9nm,0.8s						
SRU	San Rafael Swe	62.52	61	P	P	08 50 08.4	+1.3
SRU				pmax	pmax		
	comp=Z,5.0nm,0.8s						
OBN	Obninsk	63.21	326	eP	P	08 50 10.7	-0.4
OBN				e*PP	pP	08 50 42.2	+1.1
OBN				e		08 50 47.9	
OBN				e		08 52 28.2	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PV23	Carpenter Ridg	63.82	61	P	P	08 50 17.3	+1.6
PV10	Paradox Valley	63.86	61	P	P	08 50 17.7	+1.7
PV22	Blue Mesa, Par	63.89	61	P	P	08 50 17.2	+1.1
PV22				IAmb	IAmb	08 50 18.1	
	comp=Z,3.6nm,0.8s						
PV20	West Nyswonger	63.93	61	P	P	08 50 17.2	+0.8
PV11	David Mesa, Pa	64.01	61	P	P	08 50 18.0	+1.1
ISCO	Idaho Springs	64.71	58	P	P	08 50 20.9	-0.7
ISCO				IAmb	IAmb	08 50 24.1	
	comp=Z,2.5nm,0.9s						
ISCO	Idaho Springs	64.71	58	P	P	08 50 20.9	-0.7
ISCO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MVCO	Mesa Verde	64.99	61	P	P	08 50 24.2	+0.9
MVCO				IAmb	IAmb	08 50 25.5	
	comp=Z,3.7nm,1.0s						
NB2	NORSAR Subarra	65.06	342	P	P	08 50 21.9	-1.2
	comp=Z,0.6nm,0.4s,baz=24,slow=6.5						
NOA	NORSAR Array B	65.06	342	P	P	08 50 22.2	-0.9
	comp=Z,0.5nm,0.5s,baz=28,slow=6.0,SNR=4.5						
	comp=Z,0.5nm,0.5s						
X16A	Lo Mia Camp, P	65.32	65	P	P	08 50 27.0	+1.5
HFS	Hagfors	65.39	341	P	P	08 50 24.5	-0.7
	comp=Z,0.8nm,0.4s,baz=70,slow=4.9,SNR=8.1						
	comp=Z,0.8nm,0.4s						
EYMN	Ely	65.56	43	P	P	08 50 26.9	+0.4
EYMN				IAmb	IAmb	08 50 27.4	
	comp=Z,3.7nm,0.8s						
OGNE	Ogallala	65.76	55	P	P	08 50 29.2	+1.1
X18A	Snowflake	66.10	64	P	P	08 50 31.4	+1.0
ECSD	EROS Data Cent	66.40	49	P	P	08 50 32.4	+0.4
ECSD				IAmb	IAmb	08 50 32.6	
	comp=Z,2.4nm,0.7s						
I37A	Lemond, Waseca	67.71	47	P	P	08 50 41.4	+1.2
I37A				IAmb	IAmb	08 50 41.7	
	comp=Z,5.7nm,0.8s						
ANMO	Albuquerque	67.77	62	P	P	08 50 41.7	+0.7
ANMO	Albuquerque	67.77	62	P	P	08 50 41.7	+0.7
AKASG	Malin Array Be	69.39	327	P	P	08 50 48.7	-1.8
	comp=Z,0.4nm,0.3s,baz=30,slow=6.5,SNR=4.1						
	comp=Z,0.4nm,0.3s						
AKASG	Malin Array Be	69.39	327	eP	P	08 50 48.7	-1.8
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KBZ	Khabaz	69.64	315	P	P	08 50 52.2	0.0
	comp=Z,1.4nm,0.5s,baz=79,slow=6.3,SNR=4.7						
	comp=Z,1.4nm,0.5s						
SMWD	Samnorwood	71.05	58	P	P	08 51 02.2	+1.1
SMWD				IAmb	IAmb	08 51 02.7	
	comp=Z,5.8nm,0.9s						
CLN7	Carlsbad 7	71.12	62	P	P	08 51 02.7	+1.1
MNHN	Monahans	72.52	62	P	P	08 51 10.8	+0.9
MNHN				IAmb	IAmb	08 51 11.4	
	comp=Z,5.7nm,0.6s						
OJC	Ojcow	72.79	333	P	P	08 51 10.8	-0.3
OJC	Ojcow	72.79	333	P	P	08 51 10.8	-0.3
WRA	Warramunga Arr	73.17	202	P	P	08 51 13.5	0.0
	comp=Z,0.3nm,0.4s,baz=19,slow=6.2,SNR=5.1						
	comp=Z,0.3nm,0.4s						
BURAR	Bucovina Array	73.39	328	P	P	08 51 14.1	-0.6
BURAR	Bucovina Array	73.39	328	P	P	08 51 14.1	-0.6
BURAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR	Lajitas Array	73.52	64	P	P	08 51 16.9	+1.1
	comp=Z,2.9nm,0.6s,baz=298,slow=5.1,SNR=54						
	comp=Z,2.9nm,0.6s						
O48B	Farmland	74.43	44	P	P	08 51 20.4	-0.4
O48B				IAmb	IAmb	08 51 21.1	
	comp=Z,5.6nm,0.9s						
FCAR	Ozark Folk Cen	74.64	52	P	P	08 51 22.0	-0.1
PECO	Prince Edward	74.74	37	P	P	08 51 24.1	+1.5
PBMO	Poplar Bluff	74.77	50	P	P	08 51 23.2	+0.4
FW16	Waxahatchie	74.84	57	P	P	08 51 25.9	+2.6
M52A	Chesterland	75.01	41	P	P	08 51 25.3	+1.2
E62A	Clayton Lake	75.07	31	P	P	08 51 25.0	+0.6
MMNY	Mt. Morris Dam	75.41	38	P	P	08 51 26.5	+0.2
L56A	Greenwood	76.05	38	P	P	08 51 30.0	-0.1
H62A	Milan	76.32	33	P	P	08 51 32.1	+0.6
SSFO	Shawnee State	76.57	44	P	P	08 51 33.9	+0.8
AS31	Alice Springs	76.86	201	P	P	08 51 36.2	+1.5
ASAR	Alice Springs	76.86	201	P	P	08 51 36.0	+1.3
	comp=Z,0.5nm,0.7s,baz=11,slow=5.3,SNR=10						
	comp=Z,0.5nm,0.7s						
ASAR	Alice Springs	76.86	201	P	P	08 51 36.0	+1.3
M57A	Sunshine Farm,	76.90	39	P	P	08 51 35.3	+0.5
BRTR	Keskin Array B	76.93	318	P	P	08 51 34.5	-0.7
	comp=Z,0.5nm,0.7s,baz=52,slow=4.8,SNR=3.9						
	comp=Z,0.5nm,0.7s						
L59A	Walton	76.98	37	P	P	08 51 35.5	+0.1
L59A				IAmb	IAmb	08 51 41.6	
	comp=Z,12nm,1.1s						
T50A	Nancy	77.21	46	P	P	08 51 36.8	+0.1
S51A	Beattyville	77.27	45	P	P	08 51 37.1	+0.2
PLAL	Pickwick Lake	77.35	50	P	P	08 51 37.8	+0.4
SWET	Sewanee	78.18	48	P	P	08 51 42.3	+0.2
X48A	Hartselle	78.27	49	P	P	08 51 44.8	+2.2
W50A	Signal Mountai	78.48	48	P	P	08 51 46.8	+3.0
CPCT	Cooper Cave	78.65	47	P	P	08 51 47.2	+2.6
TKL	Tuckaleechee C	78.82	46	P	P	08 51 47.4	+1.8
TKL	Tuckaleechee C	78.82	46	P	P	08 51 47.4	+1.8
TKL				pmax	pmax		
	comp=Z,28nm,0.9s						
RDO	Rodhopi	78.91	325	P	P	08 51 45.8	-0.2
RDO				IAmb	IAmb	08 52 00.0	
	comp=Z,5.5nm,1.1s						
MMAI	Mount Meron Ar	81.76	313	P	P	08 52 01.2	-0.2
	comp=Z,1.1nm,0.3s,baz=302,slow=3.8,SNR=4.1						
	comp=Z,1.1nm,0.3s						
ITM	Ithomi	83.72	325	P	P	08 52 10.3	-1.2
ITM				IAmb	IAmb	08 52 28.4	
	comp=Z,9.1nm,1.2s						
RAYN	Ar Rayn	84.42	301	P	P	08 52 15.6	+0.4
RAYN	Ar Rayn	84.42	301	P	P	08 52 15.6	+0.4
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
FORT	Forrest	85.11	204	P	P	08 52 19.0	+0.8
ESDC	Sonseca Array	88.26	345	P	P	08 52 33.6	-0.2
	comp=Z,0.6nm,0.6s,baz=6.1,slow=4.0,SNR=4.8						
	comp=Z,0.6nm,0.6s						
KEST	Kesra	89.09	334	P	P	08 52 38.6	+0.9
	comp=Z,2.0nm,0.6s,baz=243,slow=4.5,SNR=4.2						
	comp=Z,2.0nm,0.6s						
H03N2	Juan Fernandez	136.38	88	T	T	11 31 17.0	
	baz=313,slow=77,SNR=22						
H03N1	Juan Fernandez	136.40	88	T	T	11 30 56.5	
	baz=313,slow=77,SNR=20						
H03N3	Juan Fernandez	136.40	89	T	T	11 30 58.6	
	baz=313,slow=77,SNR=26						
CPUP	Villa Florida	144.40	59	PKP	PKPab	08 59 16.4	+0.1
	comp=Z,0.7nm,0.9s,baz=305,slow=1.7,SNR=4.3						
PLCA	Paso Flores	146.12	91	PKPbc	PKPbc	08 59 21.6	0.0
	comp=Z,1.6nm,0.7s,baz=320,slow=4.4,SNR=5.8						

MOS **03** *08:42:09.8±1.3, 19°.57S×70°.30W, h44^{km}, mb5.3/31, Error ellipse: s-maj=12.7km s-min=6.6km az=106.8*

SJA **03** *08:42:11.3±0.8, 19°.73S×70°.38W, h78^{km}±4^{km}, ML5.3, MW4.9*

NEIC **03** *08:42:12.5±1.8, 19°.68S±0°.04×70°.50W±0°.06, h47^{km}±4^{km}, mb5.2/257, Mww5.2/18, Mwr5.2(GUC), Error ellipse: s-maj=8.4km s-min=5.5km az=95.0*

VAO **03** *08:42:12.4±0.6, 19°.59S×70°.24W, h56^{km}±4^{km}, mb5.1*

NEIC **03** *08:42:12.6, 19°.65S×70°.45W, h46^{km}*

NEIC **03** *08:42:12.6, 19°.75S×70°.56W, h46^{km}, Moment Tensor Solution. Duration: 2^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.71; $M_{\theta\theta}$-0.72; $M_{\phi\phi}$5.42; $M_{r\theta}$1.87; $M_{\theta\phi}$-4.56; $M_{\phi r}$-4.29; Fault plane solution: $M_0$7.84000×10^{16} NP1: ϕ_s142.97000°, δ27.19000°, λ-102.87000°. NP2: ϕ_s337.37000°, δ63.55000°, λ-83.47000°. Principal axes: T 9.3944, Plg18.0000°, Azm63.0000°; N -3.1082, Plg6.0000°, Azm154.0000°; P -6.2862, Plg71.0000°, Azm261.0000°;*

IDC **03** *08:42:13.2±0.4, 19°.55S×70°.20W, h65^{km}±3^{km}, mb4.5/17, mbtmp4.8/21, MS4.1/33 Error ellipse: s-maj=16.3km s-min=11.0km az=65.0*

BJI **03** *08:42:13.0, 19°.70S×70°.40W, h45^{km}, mB5.5/4, Ms5.3/6, Ms7 4.9/5*

GUC **03** *08:42:13.6±0.7, 19°.64S×70°.42W, h57^{km}±6^{km}, ML5.2*

GCMT **03** *08:42:13.5±0.2, 19°.69S±0°.01×70°.51W±0°.02, h80^{km}±2^{km}, MW5.2/122, Moment Tensor Solution. s61,c76; s122,c188; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.02±.19; $M_{\theta\theta}$-2.43±.16; $M_{\phi\phi}$5.46±.18; $M_{r\theta}$1.72±.10; $M_{\theta\phi}$-3.85±.14; $M_{\phi r}$-4.07±.13; Best double couple: $M_0$6.69200×10^{16} NP1: ϕ_s165.00000°, δ25.00000°, λ-80.00000°. NP2: ϕ_s334.00000°, δ66.00000°, λ-95.00000°. Principal axes: T 8.6940, Plg21.0000°, Azm68.0000°; N -3.9930, Plg4.0000°, Azm336.0000°; P -4.6910, Plg69.0000°, Azm235.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 08:42:11.5±0.4**, 19°.68S**±0°.03×**70°.45W**±0°.04**, h50**^{km}±3^{km}**, h50**^{km}**:pP-P, n507,** σ1^s**75**/459**, mb5.1**/156**, MS4.1**/31**, 8C-8D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA02	Huaiquique	0.66	153	Pn	Pn	08 42 27.0	+2.2
TA02				Sn	Sn	08 42 37.4	+3.1
TA02	Huaiquique	0.66	153	eP	Pn	08 42 27.0	+2.2
TA02				i S	Sn	08 42 37.0	+2.7
TA02	Huaiquique	0.66	153	eP	Pn	08 42 26.9	+2.1
TA02				IAML		08 42 41.9	
	comp=Z,181μm,1.0s						
PX02	IPOC Station P	0.75	18	⇓iP	Pn	08 42 27.0	+1.0
PX02				i S	Sn	08 42 38.1	+1.6
PB11	IPOC Station P	0.75	96		Pn	08 42 27.7	+1.7
PB11				Sn	Sn	08 42 39.2	+2.5
PB11	IPOC Station P	0.75	96	⇑iP	Pn	08 42 27.8	+1.7
PB11				i S	Sn	08 42 38.6	+2.0
PB11				IAML		08 42 39.7	
	comp=E,130μm,0.5s						
PB11	IPOC Station P	0.75	96	eP	Pn	08 42 27.4	+1.4
PB11				IAML		08 42 41.3	
	comp=Z,70μm,0.8s						
TA01	Diego Aracena	0.92	164		Pn	08 42 30.0	+1.8
TA01				Sn	Sn	08 42 42.1	+1.8
TA01	Diego Aracena	0.92	164	eP	Pn	08 42 29.9	+1.8
TA01				i S	Sn	08 42 42.3	+2.0
TA01				IAML		08 42 43.7	
	comp=N,121μm,0.4s						
TA01	Diego Aracena	0.92	164	eP	Pn	08 42 29.9	+1.7
TA01				eS	Sn	08 42 42.9	+2.5
TA01				IAML		08 42 43.2	
	comp=Z,54μm,0.7s						
GO01	Chusmiza	1.18	90		Pn	08 42 34.0	+1.9
GO01	Chusmiza	1.18	90	⇑iP	Pn	08 42 34.0	+1.9
GO01				i S	Sn	08 42 50.0	+2.7
GO01	Chusmiza	1.18	90	eP	Pn	08 42 33.9	+1.9
GO01				eS	Sn	08 42 49.9	+2.5
PB08	IPOC Station P	1.30	111	Pn	Pn	08 42 34.7	+1.0
AP01	Chacalluta	1.30	4		Pn	08 42 35.3	+1.9
AP01	Chacalluta	1.30	4	⇓iP	Pn	08 42 35.3	+1.9
AP01				i S	Sn	08 42 51.1	+1.5
AP01				IAML		08 42 58.8	
	comp=N,64μm,0.4s						
AP01	Chacalluta	1.30	4	eP	Pn	08 42 34.6	+1.2
AP01				eS	Sn	08 42 35.3	-14
AP01				IAML		08 42 58.0	
	comp=Z,34μm,1.1s						
PB16	IPOC Station P	1.60	34		Pn	08 42 39.4	+1.4
PB16	IPOC Station P	1.60	34	eP	Pn	08 42 39.9	+1.9
PB16				i S	Sn	08 42 59.2	+1.3
PB16	IPOC Station P	1.60	34	eP	Pn	08 42 39.9	+1.9
PB16				eS	Sn	08 42 55.4	-2.4
PB16				IAML		08 43 01.0	
	comp=Z,15μm,0.5s						
PB01	IPOC Station P	1.63	147		Pn	08 42 39.0	+1.2
PB01	IPOC Station P	1.63	147	eP	Pn	08 42 39.1	+1.2
PB01				IAML		08 43 02.3	
	comp=N,41μm,0.2s						
PB01	IPOC Station P	1.63	147	eP	Pn	08 42 38.1	+0.3
PB01				IAML		08 43 01.7	
	comp=Z,26μm,0.3s						
PB18	Visviri	2.27	24		Pn	08 42 51.4	+4.3
PB18	Visviri	2.27	24	eP	Pn	08 42 51.1	+4.1
PB09	IPOC Station P	2.39	152		Pn	08 42 50.5	+2.2
PB09	IPOC Station P	2.39	152	eP	Pn	08 42 50.6	+2.2
PB09				IAML		08 43 21.6	
	comp=E,16μm,0.5s						
PB09	IPOC Station P	2.39	152	eP	Pn	08 42 32.8	-16
PB09				eS	Sn	08 43 20.2	+3.6
PB09				IAML		08 43 23.5	
	comp=Z,14μm,0.6s						
PB03	IPOC Station P	2.45	165	Pn	Pn	08 42 50.5	+1.4
PB03	IPOC Station P	2.45	165	⇓iP	Pn	08 42 50.5	+1.4
PB03				i S	Sn	08 43 17.4	-0.5
PB03				IAML		08 43 20.1	
	comp=E,26μm,0.4s						
PB03	IPOC Station P	2.45	165	eP	Pn	08 42 50.5	+1.4
PB03				eS	Sn	08 43 18.6	+0.7
PB03				IAML		08 43 20.1	
	comp=Z,16μm,0.3s						
PB06	IPOC Station P	3.12	165		Pn	08 42 59.0	+0.6
PB06	IPOC Station P	3.12	165	eP	Pn	08 42 59.0	+0.6
PB06	IPOC Station P	3.12	165	eS	Sn	08 43 35.3	+0.8
PB06				IAML		08 43 52.0	
	comp=Z,13μm,0.8s						
PB05	IPOC Station P	3.17	176		Pn	08 42 59.2	+0.1
PB05	IPOC Station P	3.17	176	eP	Pn	08 42 59.1	+0.1
PB05				IAML		08 43 44.9	
	comp=N,6μm,0.8s						
PB05	IPOC Station P	3.17	176	eP	Pn	08 42 59.0	0.0
PB05				eS	Sn	08 43 36.0	+0.4
PB05				IAML		08 43 47.2	
	comp=Z,4μm,0.7s						
PB10	IPOC Station P	3.82	181		Pn	08 43 07.4	-0.4
PB10	IPOC Station P	3.82	181	eP	Pn	08 43 07.4	-0.4
PB10	IPOC Station P	3.82	181	eP	Pn	08 43 07.6	-0.2
PB10				eS	Sn	08 43 48.9	-2.5
PB10				IAML		08 43 52.2	
	comp=Z,3μm,0.3s						
AF01	San Pedro de A	3.88	147	Pn	Pn	08 43 11.4	+2.5
AF01	San Pedro de A	3.88	147	eP	Pn	08 43 11.5	+2.5
AF01				eS	Sn	08 43 56.4	+2.9
LPAZ	La Paz	4.03	34	P	Pn	08 43 15.6	+4.3
	comp=Z,110nm,0.4s,baz=210,slow=2.8,SNR=1682						
LPAZ				S	Sn	08 43 41.8	-16
	comp=Z,427nm,0.8s,baz=86,slow=8.0,SNR=14						
LPAZ	La Paz	4.03	34	eP	Pn	08 43 09.6	-1.7
LPAZ	La Paz	4.03	34	P	Pn	08 43 15.2	+3.9
PB14	IPOC Station P	4.92	180		Pn	08 43 22.4	-0.9
PB14	IPOC Station P	4.92	180	eP	Pn	08 43 22.4	-0.9
PB14				eS	Sn	08 44 15.5	-3.7
PB14				IAML		08 44 18.1	
	comp=Z,3μm,0.5s						
AC01	Pan de Azucar	6.44	181		Pn	08 43 42.1	-1.7
AC02	Maricunga	7.23	171	Pn	Pn	08 43 55.3	+0.3
AC04	Llanos de Chal	8.51	184		Pn	08 44 08.7	-3.4
AC05	El Transito	9.12	179		Pn	08 44 18.8	-1.8
LCO	Las Campanas	9.29	181		Pn	08 44 21.1	-2.0
LCO	Las Campanas	9.29	181	P	Pn	08 44 21.1	-2.0
SIV	San Ignacio	9.65	69	P	Pn	08 44 26.4	-1.5
	comp=Z,79nm,0.6s,baz=257,slow=10.0,SNR=340						
SIV				LR	LR	08 48 42.5	
	comp=Z,4μm,21.1s,baz=286,slow=42						
BBSD	Serra de San D	9.66	77	eP	Pn	08 44 26.6	-1.4
NNA	Nana	9.81	320		Pn	08 44 32.1	+2.0
NNA	Nana	9.81	320	P	Pn	08 44 30.6	+0.6
	comp=Z,52nm,0.8s,baz=130,slow=9.9,SNR=16						
NNA	Nana	9.81	320	ceP	Pn	08 44 31.8	+1.7
NNA				pmax	pmax		
	comp=Z,144nm,1.3s						
NNA	Nana	9.81	320	P	Pn	08 44 30.5	+0.4
	comp=Z,80nm,0.7s						
PTLB	Pontes e Lacer	11.58	70		Pn	08 44 51.8	-2.3
PTLB	Pontes e Lacer	11.58	70	eP	Pn	08 44 52.0	-2.1
VILB	Vilhena	11.89	57		Pn	08 44 57.0	-1.5
VILB	Vilhena	11.89	57	eP	Pn	08 44 57.0	-1.5
CFA	Coronel Fontan	12.04	171	P	Pn	08 44 57.2	-3.2
	comp=Z,10.0nm,0.5s,baz=358,slow=14,SNR=91						
CFA				S	Sn	08 47 04.2	-9.2
	comp=Z,15nm,0.6s,baz=103,slow=19,SNR=5.6						
CZSB	Cruzeiro do Su	12.08	349		Pn	08 44 59.3	-1.7
CZSB	Cruzeiro do Su	12.08	349	eP	Pn	08 45 00.2	-0.8
SAML	Samuel	12.78	34		Pn	08 45 08.7	-1.8
SAML	Samuel	12.78	34	P	Pn	08 45 08.7	-1.8
SAML	Samuel	12.78	34	eP	Pn	08 45 08.3	-2.2
PEL	Peldehue	13.41	181		Pn	08 45 20.1	+1.0
PEL	Peldehue	13.41	181	P	Pn	08 45 20.2	+1.0
CPUP	Villa Florida	13.77	121	P	Pn	08 45 21.9	-2.2
	comp=Z,0.5nm,0.4s,baz=158,slow=12,SNR=9.1						
CPUP				LR	LR	08 51 30.6	
	comp=Z,317nm,21.7s,baz=159,slow=41						
CPUP	Villa Florida	13.77	121	eP	Pn	08 45 23.8	-0.2
AQDB	Aquidauana	13.88	96		Pn	08 45 23.5	-2.1
AQDB	Aquidauana	13.88	96	eP	Pn	08 45 22.8	-2.8
SJPY	San Joaquin	14.29	114	eP	Pn	08 45 30.9	-0.1
SALV	Santo Antonio	14.54	77	eP	Pn	08 45 30.2	-4.3
ATAH	Atahualpa	14.66	327	P	Pn	08 45 36.2	-0.2
	comp=Z,7.2nm,0.8s,baz=139,slow=12,SNR=5.9						
ATAH				LR	LR	08 51 12.3	
	comp=Z,258nm,21.7s,baz=148,slow=37						
BO01	Tunca	14.67	182		Pn	08 45 36.3	+0.3
BO02	Sierra Bellavi	15.06	181		Pn	08 45 42.4	+1.2
BO02				IAmb	IAmb	08 45 49.0	
	comp=Z,83nm,0.7s						
TBTG	Tabatinga, AM	15.41	2	eP	Pn	08 45 43.1	-2.6
TBTG	Tabatinga, AM	15.41	2	P	Pn	08 45 42.4	-3.3
	comp=Z,98nm,0.9s						
H03N1	Juan Fernandez	15.65	207	T	T	09 02 15.9	
	baz=32,slow=73,SNR=132						
H03N2	Juan Fernandez	15.66	207	T	T	09 02 13.8	
	baz=32,slow=73,SNR=31						
H03N3	Juan Fernandez	15.67	207	T	T	09 02 10.7	
	baz=32,slow=73,SNR=205						
RPRD	Ribas do Rio P	15.76	96	eP	Pn	08 45 49.0	-1.2
VA04	Juan Fernndez	15.79	207		Pn	08 45 50.8	+0.3
H03S3	Juan Fernandez	15.98	206	P	Pn	08 45 52.5	-0.2
	baz=20,slow=20,SNR=194						
H03S1	Juan Fernandez	15.99	206	P	Pn	08 45 52.3	-0.6
	baz=20,slow=20,SNR=142						
H03S2	Juan Fernandez	15.99	206	P	Pn	08 45 52.9	0.0
	baz=20,slow=20,SNR=158						
ITQB	Itaqui	16.01	131	eP	Pn	08 45 54.6	+1.2
ML02	Panimavida	16.05	183		Pn	08 45 54.1	+0.3
ML02				IAmb	IAmb	08 45 56.3	
	comp=Z,237nm,1.0s						
CLDB	Colider	16.61	60	eP	Pn	08 46 00.1	-1.0
C2SB	Chapadao do Su	16.66	90	eP	Pn	08 46 01.0	-0.6
TRCB	Terra Rica	16.89	104	P	Pn	08 46 03.1	-1.5
TRCB				IAmb	IAmb	08 46 04.8	
	comp=Z,188nm,0.7s						
TRCB	Terra Rica	16.89	104	eP	Pn	08 46 02.9	-1.7
BI02	San Fabin de	16.94	182	P	Pn	08 46 05.7	+0.6
TEFE	Tefe	17.04	20	eP	Pn	08 46 05.6	-0.9
PTGB	Pitanga	17.74	110	eP	Pn	08 46 13.7	-1.4
MCRA	Macar, Loja	17.82	327	P	P	08 46 16.4	+0.2
	comp=Z,731nmcomp=Z,67nm,1.0s						
PCMB	Pacaembu	18.06	99	eP	P	08 46 17.1	-1.8
LDASE	Londrina, Braz	18.36	105	eP	P	08 46 20.8	-1.3
CPSB	Cacapava Do Su	18.73	128	eP	P	08 46 25.2	-0.9
ITRB	Iturama	18.92	93	eP	P	08 46 27.7	-0.6
MACA	Manacapuru-AM	18.98	31	P	P	08 46 27.8	-1.2
MACA	Manacapuru-AM	18.98	31	eP	P	08 46 27.7	-1.4
COHC	Cochancay	19.15	332	P	Pn	08 46 33.6	+1.5
COHC	Cochancay	19.15	332	P	Pn	08 46 32.8	+0.7
	comp=Z,1μmcomp=Z,40nm,1.2s						
COHC				S	Sn	08 50 27.7	+22
	comp=Z,1μmcomp=Z,40nm,1.2s						
NPGB	Novo Progresso	19.30	51	eP	P	08 46 30.0	-2.4
PLTB	Pedras Altas	19.34	132	P	P	08 46 32.5	-0.3
PLTB	Pedras Altas	19.34	132	eP	P	08 46 31.0	-1.9
SGC2	Sao Gabriel da	19.70	10	P	P	08 46 35.7	-1.2
TRQA	Tornquist	19.74	160	P	P	08 46 37.4	+0.3
TRQA	Tornquist	19.74	160	P	P	08 46 37.4	+0.3
TRQA				pmax	pmax		
	comp=Z,339nm,1.8s						
FRTB	Fartura	19.77	104	eP	P	08 46 36.6	-1.0
SNDB	Serra Nova Dou	19.94	70	eP	P	08 46 37.3	-2.2
PIAT	Ana Tenorio	20.08	337	P	Pn	08 46 43.9	+0.4
	comp=Z,82nm,0.8s						
PTLC	Puerto Leguiza	20.18	347	P	P	08 46 39.3	-2.8
	comp=Z,50nm,0.9s						
CNLB	Canela	20.22	122	eP	P	08 46 40.3	-2.2
LR05	Currie	20.53	183	P	P	08 46 46.6	+1.0
ITTB	Itaituba	20.91	45	eP	P	08 46 47.7	-2.3
PLCA	Paso Flores	20.99	180	P	P	08 46 51.6	+1.0
PLCA				IAmb	IAmb	08 46 52.9	
	comp=Z,150nm,1.4s						
PLCA	Paso Flores	20.99	180	P	P	08 46 51.5	+0.9
	comp=Z,59nm,1.1s,baz=357,slow=12,SNR=43						
PLCA				LR	LR	08 54 32.9	
	comp=Z,383nm,21.0s,baz=4.0,slow=35						
	comp=Z,59nm,1.1s						
PLCA	Paso Flores	20.99	180	eP	P	08 46 51.6	+0.9
IPMB	Ipameri, GO	21.11	89	eP	P	08 46 49.2	-3.0
BONI	La Bonita	21.18	340	P	P	08 46 55.0	+1.9
	comp=Z,928nmcomp=Z,69nm,1.0s						
OTAV	Otavalo	21.29	337	P	P	08 46 58.3	+3.8
OTAV	Otavalo	21.29	337	P	P	08 46 58.3	+3.8
OTAV				pmax	pmax		
	comp=Z,57nm,1.5s						
OTAV	Otavalo	21.29	337	eP	P	08 46 56.0	+1.5
OTAV	Otavalo	21.29	337	P	P	08 46 57.0	+2.5
	comp=Z,22nm,0.7s						
FLF1	Flavio Alfaro-	21.29	333	P	P	08 46 56.3	+2.2
	comp=Z,110nm,0.9s						
PAC1	Pacto, Paraso	21.44	337	P	P	08 46 58.6	+2.8
	comp=Z,1μmcomp=Z,47nm,0.8s						
TULM	Tulcn-Chalpat	21.51	340	P	P	08 46 59.3	+2.4
	comp=Z,1μmcomp=Z,80nm,0.7s						
CMBC	Cumbal	21.73	340	P	P	08 47 04.7	+5.5
FLOC	Florencia	21.74	346	P	P	08 46 59.5	+0.7
FLOC				IAmb	IAmb	08 47 10.8	
	comp=Z,62nm,0.8s						
FLOC	Florencia	21.74	346	P	P	08 46 59.3	+0.4
	comp=Z,1μmcomp=Z,116nm,1.3s						
SPB	Sao Paulo	21.74	104	P	P	08 46 58.3	-0.5
SPB				IAmb	IAmb	08 47 02.8	
	comp=Z,185nm,1.4s						
SPB	Sao Paulo	21.74	104	eP	P	08 46 58.1	-0.7
BDFB	Brasilia	21.75	83	P	P	08 46 56.5	-2.6
BDFB				IAmb	IAmb	08 47 04.4	
	comp=Z,112nm,0.9s						
BDFB	Brasilia	21.75	83	P	P	08 46 56.5	-2.6
	comp=Z,21nm,0.4s,baz=260,slow=12,SNR=32						
BDFB				LR	LR	08 56 16.7	
	comp=Z,1μm,19.3s,baz=271,slow=39						
	comp=Z,21nm,0.4s						
BDFB	Brasilia	21.75	83	P	P	08 46 56.5	-2.6
BDFB				pmax	pmax		
	comp=Z,112nm,0.9s						
GCUF	Volcan Galeras	21.85	341	P	P	08 47 04.1	+3.6
	comp=Z,2μmcomp=Z,105nm,1.0s						
PET01	Itanhaem-SP	21.96	106	eP	P	08 47 01.0	-0.2
VAO	Valinhos	22.12	103	P	P	08 46 60.0	-3.0
VAO				IAmb	IAmb	08 47 16.7	
	comp=Z,78nm,0.8s						
VAO	Valinhos	22.12	103	eP	P	08 47 00.2	-2.8
GARC	Garzon, Huila	22.29	347	P	P	08 47 05.2	+0.2
	comp=Z,1μmcomp=Z,104nm,0.8s						
BBAC	Balboa, Cauca	22.57	342	P	P	08 47 09.3	+1.3
	comp=Z,1μmcomp=Z,137nm,1.0s						
LL01	San Ignacio de	22.69	184	IAmb	IAmb	08 47 11.6	
	comp=Z,118nm,1.1s						
PMNB	Patos De Minas	22.71	91	eP	P	08 47 07.2	-2.2

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POPC  Popayan, Colom   22.91 344  P      P      08 47 13.1 +1.5
      comp=Z,784nmcomp=Z,51nm,1.4s
PARB  Paraibuna        23.37 103 eP      P      08 47 13.1 -2.9
LL02  Futaleuf         23.47 183  P      P      08 47 16.5 -0.1
MAL2  Monte Alegre,    23.69  44  P      P      08 47 16.2 -2.7
ORTC  Ortega, Tolima   23.91 348  P      P      08 47 21.7 +0.8
      comp=Z,1µmcomp=Z,138nm,1.1s
BOAV  Boa Vista        24.00  25  P      P      08 47 21.3 -0.5
BOAV                              IAmb   IAmb   08 47 24.7
      comp=Z,46nm,0.9s
BSCB  Bom Sucesso      24.10  98 eP      P      08 47 21.0 -1.8
PRPB  Parauapebas      24.14  59 eP      P      08 47 21.9 -1.1
SMTB  Santa Maria do   24.59  67 eP      P      08 47 25.5 -1.7
ROSC  El Rosal         24.66 351  P      P      08 47 27.1 -1.1
ROSC  El Rosal         24.66 351  P      P      08 47 28.2  0.0
      comp=Z,6.4nm,0.4s,baz=136,slow=21,SNR=5.2
      comp=Z,6.4nm,0.4s
GUY2C Guyana, Caldas   25.21 348  P      P      08 47 35.4 +2.1
      comp=Z,869nmcomp=Z,48nm,1.1s
VAS01 Vassouras-RJ     25.34 101 eP      P      08 47 33.2 -0.7
DIAM  Diamantina, MG   25.35  91 eP      P      08 47 32.4 -1.8
JANB  Januaria         25.35  84 eP      P      08 47 31.2 -2.9
RUSC  La Rusia         25.54 354  P      P      08 47 36.7 +0.4
RUSC                              IAmb   IAmb   08 48 00.4
      comp=Z,80nm,0.8s
SDBA  SAO DESIDERIO    25.57  77 eP      P      08 47 34.5 -1.6
COYC  Coyhaique        25.86 183  IAmb   IAmb   08 47 59.8
      comp=Z,48nm,1.0s
DUB01 Friburgo-RJ      26.32 100 eP      P      08 47 42.0 -0.9
SJMB  Sao Joao De Ma   27.64  93 eP      P      08 47 53.0 -1.8
APAC  Apartado, Choc   28.06 347  P      P      08 48 01.0 +2.6
      comp=Z,58nm,1.1s
RIB01 Linhares ES      28.32  94 eP      P      08 47 59.3 -1.5
SDV   Santo Domingo    28.39 360  P      P      08 48 00.2 -1.3
SDV   Santo Domingo    28.39 360  LR     LR     09 00 32.5
      comp=Z,373nm,18.4s,baz=194,slow=39
SDV   Santo Domingo    28.39 360 eP      P      08 48 00.8 -0.7
SDV   Santo Domingo    28.39 360  P      P      08 48 00.7 -0.8
      comp=Z,23nm,1.0s
GUA01 Guaratinga, BA   29.26  89 eP      P      08 48 08.0 -1.2
SJCC  San Jacinto, C   29.76 351  P      P      08 48 13.4 -0.1
CMC01 Camacan, BA      29.78  87 eP      P      08 48 12.2 -1.6
PCRV  Puerto La Cruz   30.21  11  LR     LR     09 01 25.5
      comp=Z,1µm,19.5s,slow=38
MDP   Montagnes des    30.22  37  LR     LR     09 00 42.4
      comp=Z,656nm,21.8s,baz=215,slow=37
JTS   Las Juntas de    33.03 333  LR     LR     09 01 55.8
      comp=Z,265nm,21.4s,baz=157,slow=36
NBPB  Pedra_Branca-C   33.15  69 eP      P      08 48 42.0 -1.4
EFI   East Falkland    33.38 166 i P     P      08 48 45.0  0.0
NBAN  Anadia - AL      34.46  78 eP      P      08 48 52.9 -1.9
NBCL  Cascavel-CE      34.91  68 eP      P      08 48 57.7 -0.9
USHA  Ushuaia          35.13 178  LR     LR     09 04 22.8
      comp=Z,248nm,19.6s,baz=4.0,slow=38
RCBR  Riachuelo        36.30  72  P      P      08 49 10.0 -0.7
RCBR  Riachuelo        36.30  72  P      P      08 49 10.0 -0.7
RCBR                              pmax   pmax
      comp=Z,65nm,0.7s
RCBR  Riachuelo        36.30  72 eP      P      08 49 09.9 -0.7
RCBR  Riachuelo        36.30  72  P      P      08 49 09.9 -0.8
TGUH  Tegucigalpa,Un   37.39 332  IAmb   IAmb   08 49 31.1
      comp=Z,33nm,1.2s
OBIP  Obispado Ponce   37.68   6  P      P      08 49 21.9 -0.2
OBIP                              IAmb   IAmb   08 49 28.2
      comp=Z,28nm,0.7s
SJG   San Juan         37.79   7  P      P      08 49 21.6 -1.5
SJG                               IAmb   IAmb   08 49 45.9
      comp=Z,28nm,0.9s
SJG   San Juan         37.79   7  LR     LR     09 05 38.6
      comp=Z,147nm,21.8s,baz=192,slow=37
SJG   San Juan         37.79   7  P      P      08 49 21.6 -1.5
SJG                               pmax   pmax
      comp=Z,28nm,0.9s
AOPR  Arecibo Observ   37.96   6  IAmb   IAmb   08 49 53.4
      comp=Z,24nm,0.8s
GCPR  Guaynabo City    37.99   7  P      P      08 49 23.8 -1.0
GCPR                              IAmb   IAmb   08 50 02.2
      comp=Z,16nm,0.8s
ESQI  Esquipulas       38.77 330  P      P      08 49 33.6 +2.1
ESQI                              IAmb   IAmb   08 49 34.7
      comp=Z,38nm,1.2s
CMIG  Matias Romero    43.72 325  LR     LR     09 08 06.5
      comp=Z,86nm,19.7s,baz=167,slow=36
PMSA  Palmer Station   45.27 176  LR     LR     09 09 19.8
      comp=Z,208nm,18.3s,baz=352,slow=36
SMAI  San Martin Ant   48.49 178  P      P      08 50 49.6 +0.7
SMAI                              IAmb   IAmb   08 50 52.1
      comp=Z,27nm,1.2s
ZAIG  Zacatecas        52.57 322  IAmb   IAmb   08 51 23.4
      comp=Z,18nm,0.8s
HBVL  Hebbronville     53.92 329  IAmb   IAmb   08 51 32.0
      comp=Z,20nm,0.9s
GOGA  Godfrey          54.23 347  P      P      08 51 31.9 -0.4
GOGA                              pmax   pmax
      comp=Z,14nm,1.0s
HKT   Hockley          55.07 333  P      P      08 51 39.0 +0.7
HKT                               IAmb   IAmb   08 51 40.4
      comp=Z,31nm,1.1s
HKT   Hockley          55.07 333  P      P      08 51 39.0 +0.7
HKT   Hockley          55.07 333  P      P      08 51 38.9 +0.5
HKT   Hockley          55.07 333  pmax   pmax
      comp=Z,31nm,1.2s
PAULI Pauline          55.27 349  IAmb   IAmb   08 51 40.9
      comp=Z,27nm,1.1s
MLDN  Muldoon          55.46 332  IAmb   IAmb   08 51 43.3
      comp=Z,36nm,1.1s
KMSC  Kings Mountain   55.49 349  IAmb   IAmb   08 51 42.6
      comp=Z,27nm,1.2s
V58A  Windy Hill, Pi   55.78 351  IAmb   IAmb   08 51 44.6
      comp=Z,27nm,0.9s
V55A  Taylorsville     56.16 349  IAmb   IAmb   08 51 47.6
      comp=Z,21nm,0.9s
U56A  King             56.51 350  IAmb   IAmb   08 51 50.4
      comp=Z,20nm,0.8s
435B  Jarrell          56.55 332  P      P      08 51 49.4 +0.4
435B                              IAmb   IAmb   08 51 50.3
      comp=Z,21nm,0.8s
Z41A  Richland Creek   56.80 338  P      P      08 51 51.4 +0.6
T57A  Hurt             56.98 352  IAmb   IAmb   08 51 53.5
      comp=Z,36nm,1.1s
TREL  Terrell          57.59 334  P      P      08 51 56.9 +0.6
Z38A  Mt. Pleasant     57.62 336  P      P      08 51 57.0 +0.4
S57A  Dark Hollow, R   57.69 352  P      P      08 51 57.2 +0.3
S57A                              IAmb   IAmb   08 51 58.5
      comp=Z,29nm,1.0s
R58B  Mineral          57.76 353  IAmb   IAmb   08 51 59.0
      comp=Z,23nm,1.0s
FW13  Cleburne         57.83 333  IAmb   IAmb   08 51 59.2
      comp=Z,23nm,0.9s
WVT   Waverly          57.89 343  P      P      08 51 56.9 -1.4
WVT   Waverly          57.89 343  P      P      08 51 56.9 -1.4
WVT                               pmax   pmax
      comp=Z,38nm,0.8s
WVT   Waverly          57.89 343  P      P      08 51 56.6 -1.8
WVT                               pP     pP     08 52 08.3 -3.6
T50A  Nancy            58.01 346  P      P      08 51 58.0 -1.2
T50A                              IAmb   IAmb   08 51 59.4
      comp=Z,16nm,0.8s
SAND  Sanderson        58.02 328  P      P      08 51 59.5  0.0
SAND                              IAmb   IAmb   08 52 01.0
      comp=Z,18nm,0.9s
MIAR  Mount Ida        58.24 338  P      P      08 52 00.4 -0.5
MIAR                              pmax   pmax
      comp=Z,31nm,1.0s
TXAR  Lajitas Array    58.32 326  P      P      08 52 01.3 -0.4
      comp=Z,2.7nm,0.7s,baz=141,slow=8.1,SNR=26
      comp=Z,2.7nm,0.7s
R55A  Marlinton        58.36 351  IAmb   IAmb   08 52 03.1
      comp=Z,14nm,0.8s
FW06  Azle             58.41 333  IAmb   IAmb   08 52 05.0
      comp=Z,17nm,0.8s
P57A  Homestead Farm   59.27 353  IAmb   IAmb   08 52 10.1
      comp=Z,18nm,0.9s
WCI   Wyandotte Cave   59.49 346  P      P      08 52 08.1 -1.3
WCI                               IAmb   IAmb   08 52 09.5
      comp=Z,32nm,1.2s
WCI   Wyandotte Cave   59.49 346  P      P      08 52 08.1 -1.3
WCI                               pmax   pmax
      comp=Z,32nm,1.2s
SSPA  Standing Stone   60.40 353  P      P      08 52 16.2 +0.6
WMOK  Wichita Mounta   60.45 333  P      P      08 52 15.6 -0.6
WMOK                              pmax   pmax
      comp=Z,11nm,0.8s
CCM   Cathedral Cave   60.66 341  P      P      08 52 16.5 -1.0
CCM                               IAmb   IAmb   08 52 17.9
      comp=Z,21nm,1.1s
CCM   Cathedral Cave   60.66 341  P      P      08 52 16.5 -1.0
CCM                               pmax   pmax
      comp=Z,21nm,1.1s
CCM   Cathedral Cave   60.66 341  P      P      08 52 16.3 -1.2
CCM                               PcP    PcP    08 53 01.4 +0.1
HRV   Adam Dziewonsk   61.88 359  P      P      08 52 26.2 +0.6
HRV   Adam Dziewonsk   61.88 359  P      P      08 52 26.2 +0.6
HRV                               pmax   pmax
      comp=Z,38nm,1.0s
HSIG                   62.23 320  IAmb   IAmb   08 52 30.3
      comp=Z,32nm,1.7s
VNA3  Neumayer Olymp   62.25 161 ⇓P      P      08 52 28.1 +0.2
      comp=Z,7.3nm,0.7s
KAN08 Anthony NE Sta   62.27 335  P      P      08 52 28.6 +0.3
KAN12 Harper NE Stat   62.34 335  P      P      08 52 28.9 +0.1
K57A  Scipio Center    62.35 355  P      P      08 52 28.7 -0.1
HDIL  Hopedale         62.44 344  P      P      08 52 28.0 -1.4
VNA1  Neumayer--Stat   62.47 161 ⇓P      P      08 52 29.5 +0.2
      comp=Z,16nm,1.0s
MMNY  Mt. Morris Dam   62.48 354  P      P      08 52 29.4 -0.2
ACCN  Adirondack Com   62.82 357  IAmb   IAmb   08 52 33.8
      comp=Z,36nm,1.4s
VNA2  Neumayer--Watz   62.84 161 ⇓P      P      08 52 32.1 +0.4
      comp=Z,9.4nm,0.8s,baz=290,slow=7.4
BBTS  Babate           63.06  61  LR     LR     09 17 41.9
      comp=Z,322nm,21.0s,baz=122,slow=34
CRNM  Carthage         63.56 327  P      P      08 52 36.7 -0.5
PECO  Prince Edward    63.58 355  P      P      08 52 37.6 +0.7
PECO                              IAmb   IAmb   08 53 01.5
      comp=Z,23nm,1.0s
R32A  Long Quarter,    63.59 335  P      P      08 52 37.1  0.0
ANMO  Albuquerque      64.19 328  P      P      08 52 42.0 +0.6
ANMO  Albuquerque      64.19 328 i P     P      08 52 41.6 +0.2
ANMO                              pmax   pmax
      comp=Z,5.0nm,0.9s
ANMO  Albuquerque      64.19 328  P      P      08 52 41.7 +0.2
SNAA  Sanae            64.46 161 ⇓P      P      08 52 42.8 +0.2
      comp=Z,293nm,0.7s
SNAA  Sanae            64.46 161  P      P      08 52 42.8 +0.2
SNAA                              IAmb   IAmb   08 52 44.3
      comp=Z,18nm,0.8s
SNAA  Sanae            64.46 161  P      P      08 52 42.8 +0.2
      comp=Z,13nm,0.7s,baz=276,slow=7.4,SNR=74
SNAA                              LR     LR     09 21 00.4
      comp=Z,96nm,18.2s,baz=270,slow=36
      comp=Z,13nm,0.7s
SNAA  Sanae            64.46 161  P      P      08 52 42.8 +0.2
SNAA                              pmax   pmax
      comp=Z,18nm,0.8s
TUC   Tucson           64.52 323  P      P      08 52 44.2 +0.7
TUC                               IAmb   IAmb   08 52 45.5
      comp=Z,40nm,2.0s
TUC   Tucson           64.52 323  P      P      08 52 44.2 +0.7
TUC                               pmax   pmax
      comp=Z,40nm,2.0s
G65A  Princeton        64.62   2  P      P      08 52 44.6 +1.0
G65A                              IAmb   IAmb   08 52 45.2
      comp=Z,24nm,0.9s
PKME  Peaks-Kenny Pk   64.64   1  P      P      08 52 44.3 +0.5
PKME                              IAmb   IAmb   08 52 45.0
      comp=Z,18nm,0.8s
MNTQ  Montreal, Queb   64.93 358  P      P      08 52 46.0 +0.3
T25A  Trinidad         64.96 330  P      P      08 52 46.7 +0.4
T25A                              IAmb   IAmb   08 52 48.2
      comp=Z,19nm,0.9s
F64A  Sherman          65.26   2  P      P      08 52 48.4 +0.6
F64A                              IAmb   IAmb   08 52 48.9
      comp=Z,21nm,0.7s
TROLL Troll, Antarti   66.18 161 ⇓P      P      08 52 54.3 +0.5
      comp=Z,816nm,0.6s
X16A  Lo Mia Camp, P   66.44 324  IAmb   IAmb   08 52 59.3
      comp=Z,15nm,1.0s
D62A  Allapoint, All   66.46   1  P      P      08 52 55.8 +0.2
D62A                              IAmb   IAmb   08 52 56.7
      comp=Z,24nm,0.7s
S22A  4UR Ranch, Cre   66.59 329  P      P      08 52 57.5 +0.5
113A  Mohawk Valley,   66.59 321  P      P      08 52 56.7  0.0
Q24A  Divide           66.78 331  P      P      08 52 59.0 +0.8
Q24A                              IAmb   IAmb   08 52 60.0
      comp=Z,14nm,0.8s
VTX   Valle De La Tr   66.86 319  IAmb   IAmb   08 53 01.2
      comp=Z,27nm,1.4s
OGNE  Ogallala         67.07 334  IAmb   IAmb   08 53 01.1
      comp=Z,26nm,1.0s
WUAZ  Wupatki          67.22 325  P      P      08 53 02.3 +1.5
WUAZ                              IAmb   IAmb   08 53 03.6
      comp=Z,30nm,0.9s
LDAQ  Lac Daran        67.33 359  P      P      08 53 01.4 +0.2
LDAQ                              IAmb   IAmb   08 53 02.1
      comp=Z,19nm,0.9s
ESJX  Sierra Juarez    67.38 319  IAmb   IAmb   08 53 04.8
      comp=Z,21nm,1.4s
ISCO  Idaho Springs    67.66 331  P      P      08 53 04.1 +0.3
ISCO                              pmax   pmax
      comp=Z,19nm,0.9s
PV01  Paradox Valley   67.75 328  IAmb   IAmb   08 53 06.5
      comp=Z,26nm,0.9s
YUH   Yuha Desert      67.81 319  IAmb   IAmb   08 53 07.3
      comp=Z,19nm,1.1s
PV02  Paradox Valley   67.88 328  IAmb   IAmb   08 53 07.2
      comp=Z,38nm,1.2s
PV13  Radium Mtn., P   67.89 328  IAmb   IAmb   08 53 07.1
      comp=Z,24nm,0.9s
PV05  Paradox Valley   67.97 328  IAmb   IAmb   08 53 07.4
      comp=Z,23nm,1.1s
PV07  Paradox Valley   68.02 328  IAmb   IAmb   08 53 08.0
      comp=Z,62nm,2.0s
CBX   Cerro Bola       68.03 319  IAmb   IAmb   08 53 08.9
      comp=Z,22nm,0.9s
PV16  Nyswonger Mesa   68.05 328  P      P      08 53 06.1  0.0
PV16                              IAmb   IAmb   08 53 08.2
      comp=Z,36nm,1.7s
PV20  West Nyswonger   68.10 328  IAmb   IAmb   08 53 08.4
      comp=Z,40nm,1.5s
PV04  Paradox Valley   68.11 328  IAmb   IAmb   08 53 08.7
      comp=Z,39nm,1.7s
PV22  Blue Mesa, Par   68.16 328  IAmb   IAmb   08 53 09.5
      comp=Z,14nm,0.8s
PV10  Paradox Valley   68.17 328  P      P      08 53 06.7 -0.2
PV10                              IAmb   IAmb   08 53 08.4
      comp=Z,29nm,1.1s
TKX   Tecate           68.17 319  IAmb   IAmb   08 53 09.5
      comp=Z,18nm,0.9s
PV23  Carpenter Ridg   68.21 328  IAmb   IAmb   08 53 09.2
      comp=Z,17nm,1.0s
PV21  Cone Mtn., Par   68.28 328  P      P      08 53 08.6 +1.0
PV21                              IAmb   IAmb   08 53 09.5
      comp=Z,33nm,1.7s
U15A  North Rim        68.39 325  P      P      08 53 09.9 +1.5
U15A                              IAmb   IAmb   08 53 11.3
      comp=Z,26nm,0.9s
E38A  The Farm, Brul   68.68 345  P      P      08 53 09.2 -0.4
PFO   Pinyon Flats O   68.80 320  P      P      08 53 12.2 +1.5
PFO   Pinyon Flats O   68.80 320 i P     P      08 53 11.8 +1.0
PFO                               pmax   pmax
      comp=Z,20nm,0.9s
NVL   N'lazarevskaya   69.04 159 eP      P      08 53 13.3 +1.7
NVL                               pmax   pmax
      comp=Z,16nm,0.8s
O20A  White River Ci   69.15 330  IAmb   IAmb   08 53 15.0
      comp=Z,22nm,1.0s
V12A  Nelson           69.32 323  IAmb   IAmb   08 53 16.5
      comp=Z,24nm,1.2s
DBIC  Dimbokro         69.62  75  P      P      08 53 14.9 -1.2
DBIC                              IAmb   IAmb   08 53 23.6
      comp=Z,30nm,0.8s
DBIC  Dimbokro         69.62  75  P      P      08 53 14.4 -1.7
      comp=Z,16nm,0.7s,baz=257,slow=6.5,SNR=14
DBIC                              LR     LR     09 22 02.6
      comp=Z,274nm,21.4s,baz=268,slow=34
      comp=Z,16nm,0.7s
DBIC  Dimbokro         69.62  75  P      P      08 53 15.0 -1.2
DBIC                              pmax   pmax
      comp=Z,30nm,0.8s
DBIC  Dimbokro         69.62  75  P      P      08 53 14.6 -1.6
Q16A  Castle Valley    69.65 327  IAmb   IAmb   08 53 19.2
      comp=Z,24nm,0.9s
P18A  Preston Nutter   69.73 328  IAmb   IAmb   08 53 19.0
      comp=Z,33nm,0.8s
GSC   Goldstone, Bar   70.16 321  IAmb   IAmb   08 53 22.0
      comp=Z,33nm,1.5s
QSPA  South Pole Qui   70.50 180  P      P      08 53 21.6 +0.8
      comp=Z,8.7nm,0.5s,baz=178,slow=0.8,SNR=151
QSPA                              LR     LR     09 25 35.7
      comp=Z,46nm,19.0s,baz=188,slow=37
      comp=Z,8.7nm,0.5s
QSPA  South Pole Qui   70.50 180  P      P      08 53 21.7 +0.8
RSSD  Black Hills      70.54 335  P      P      08 53 21.7 +0.3
RSSD  Black Hills      70.54 335  P      P      08 53 21.7 +0.3
RSSD                              pmax   pmax
      comp=Z,14nm,1.1s
BSUT  Blindstream Ca   70.68 328  IAmb   IAmb   08 53 24.9
      comp=Z,30nm,0.9s
GWY   Greenwater Val   70.69 322  IAmb   IAmb   08 53 24.9
      comp=Z,20nm,0.8s
PSUT  Pine Spring      70.78 325  P      P      08 53 24.3 +1.3
PSUT                              IAmb   IAmb   08 53 25.7
      comp=Z,29nm,0.8s
CCAC  Calif City Air   70.78 320  IAmb   IAmb   08 53 25.5
      comp=Z,19nm,0.7s
TPNV  Topopah Spring   70.98 323  IAmb   IAmb   08 53 27.3
      comp=Z,31nm,1.2s
JLU   Jordanelle       71.07 328  IAmb   IAmb   08 53 27.1
      comp=Z,33nm,0.9s
SPR3  Spring Creek 3   71.37 325  P      P      08 53 27.5 +0.8
SPR3                              IAmb   IAmb   08 53 29.0
      comp=Z,19nm,0.9s
TCUT  Toone Canyon     71.44 329  IAmb   IAmb   08 53 29.0
      comp=Z,21nm,0.8s
DUG   Dugway, Tooele   71.45 327  IAmb   IAmb   08 53 29.5
      comp=Z,30nm,0.9s
DUG   Dugway, Tooele   71.45 327  P      P      08 53 28.3 +1.4
DUG                               pmax   pmax
      comp=Z,34nm,1.0s
BCW   Bitter Crk WRg   71.49 319  IAmb   IAmb   08 53 30.1
      comp=Z,23nm,1.0s
PD31  Pinedale Array   71.82 331  P      P      08 53 29.0 -0.3
PDAR  Pinedale Array   71.82 331  P      P      08 53 29.6 +0.4
PDAR  Pinedale Array   71.82 331  P      P      08 53 28.8 -0.4
      comp=Z,2.7nm,0.8s,baz=140,slow=7.2,SNR=20
PDAR                              pP     PcP    08 53 47.0 -0.9
      comp=Z,1.3nm,0.6s,baz=115,slow=7.0,SNR=4.1
      comp=Z,2.7nm,0.8s
BGU   Big Grassy Mou   72.10 327  P      P      08 53 31.6 +0.7
ULM   Lac du Bonnet    73.16 343  P      P      08 53 35.5 -1.2
      comp=Z,7.7nm,0.6s,baz=150,slow=6.9,SNR=15
ULM                               LR     LR     09 27 58.8
      comp=Z,79nm,22.0s,baz=206,slow=38
      comp=Z,7.7nm,0.6s
LHV   Little Huntoon   73.17 322  IAmb   IAmb   08 53 40.1
      comp=Z,18nm,0.9s
NVAR  Mina Array Bea   73.18 323  P      P      08 53 38.2 +0.9
      comp=Z,7.4nm,0.8s,baz=153,slow=6.4,SNR=46
NVAR                              pP     PcP    08 53 55.7 +2.0
      comp=Z,1.0nm,0.7s,baz=129,slow=4.0,SNR=2.6
      comp=Z,7.4nm,0.8s
PMPB  Monarch Peak     73.18 319  P      P      08 53 39.2 +1.9
RLMT  Red Lodge        73.54 332  P      P      08 53 40.7 +1.4
RLMT                              IAmb   IAmb   08 53 41.3
      comp=Z,32nm,1.4s
BBGB  Big Mountain B   73.56 320  IAmb   IAmb   08 53 45.1
      comp=Z,26nm,0.8s
YMP   Mirror Lake Pl   73.63 332  P      P      08 53 41.2 +1.2
YNE   Yellowstone No   73.77 332  P      P      08 53 41.2 +0.4
YNR   Norris Junctio   73.85 331  P      P      08 53 41.8 +0.6
YMR   Madison River    73.94 331  IAmb   IAmb   08 53 45.2
      comp=Z,33nm,1.1s
YHB   Horse Butte      74.11 331  IAmb   IAmb   08 53 45.3
      comp=Z,23nm,0.9s
CMB   Columbia Colle   74.13 321  P      P      08 53 42.5 -0.2
CMB   Columbia Colle   74.13 321  P      P      08 53 42.5 -0.2
CMB                               pmax   pmax
      comp=Z,7.0nm,1.1s
YHL   Hebgen Lake      74.18 331  IAmb   IAmb   08 53 46.8
      comp=Z,27nm,1.1s
GCMT  Greycliff        74.24 333  P      P      08 53 43.8 +0.5
SCHQ  Schefferville    74.27   2  P      P      08 53 42.0 -1.1
      comp=Z,5.0nm,0.6s,baz=208,slow=6.2,SNR=6.6
SCHQ                              LR     LR     09 28 04.5
      comp=Z,60nm,19.5s,baz=163,slow=37
      comp=Z,5.0nm,0.6s
PNTR  Pine Nut         74.37 322  IAmb   IAmb   08 53 47.2
      comp=Z,16nm,0.8s
PAHR  Pah Rah Range    74.66 323  IAmb   IAmb   08 53 48.8
      comp=Z,33nm,0.9s
DLMT  Dillon           75.22 331  P      P      08 53 49.7 +0.7
MFID  Camas Ranch      75.34 328  IAmb   IAmb   08 53 52.4
      comp=Z,28nm,1.1s
LRM   Limekiln Ridge   75.50 331  P      P      08 53 50.9 +0.2
ORV   Oroville         75.78 322  IAmb   IAmb   08 53 54.9
      comp=Z,28nm,1.0s
WVOR  Wild Horse Val   76.11 325  P      P      08 53 55.2 +1.1
WVOR                              pmax   pmax
      comp=Z,5.0nm,1.0s
HATC  Hat Creek Radi   76.58 323  IAmb   IAmb   08 53 58.9
      comp=Z,26nm,1.1s
BMO   Blue Mountains   77.11 328  P      P      08 54 00.5 +0.8
BMO                               IAmb   IAmb   08 54 01.7
      comp=Z,15nm,0.9s
BMO   Blue Mountains   77.11 328  P      P      08 54 00.5 +0.8
BMO                               pmax   pmax
      comp=Z,15nm,0.9s
TORD  Torodi Ar. Bea   78.12  71  P      P      08 54 04.0 -1.9
      comp=Z,17nm,0.6s,baz=254,slow=5.1,SNR=122
TORD                              LR     LR     09 26 57.8
      comp=Z,365nm,20.5s,baz=278,slow=34
      comp=Z,17nm,0.6s
PINE  Pine Mountain    78.27 325  IAmb   IAmb   08 54 09.1
      comp=Z,23nm,1.2s
VNDA  Vanda            78.38 190  P      P      08 54 07.8 +1.6
VNDA  Vanda            78.38 190  P      P      08 54 08.0 +1.7
      comp=Z,6.3nm,0.8s,baz=120,slow=6.1,SNR=38
      comp=Z,6.3nm,0.8s
VNDA  Vanda            78.38 190  P      P      08 54 08.0 +1.7
J04A  Umpqua Nationa   78.54 324  IAmb   IAmb   08 54 09.4
      comp=Z,18nm,0.9s
SYO   Syowa Base       78.70 160⇑eP      P      08 54 09.1 +1.0
I05D  Terrebonne, OR   78.85 325  IAmb   IAmb   08 54 11.9
      comp=Z,36nm,1.3s
HAWA  Hanford          79.31 328  IAmb   IAmb   08 54 14.2
      comp=Z,19nm,1.0s
NEW   Newport          79.46 330  P      P      08 54 13.3 +0.8
NEW                               pmax   pmax
      comp=Z,4.0nm,1.3s
HOOD  Mount Hood Mea   79.67 326  P      P      08 54 14.7 +0.9
MXC   Moxie City       79.82 328  P      P      08 54 16.1 +1.6
G04A  Mulino           80.03 326  IAmb   IAmb   08 54 17.6
      comp=Z,18nm,0.8s
FCC   Fort Churchill   80.55 348  P      P      08 54 18.0  0.0
FCC   Fort Churchill   80.55 348  P      P      08 54 18.0  0.0
FCC                               pmax   pmax
      comp=Z,6.0nm,0.8s
SUR   Sutherland       80.74 121  P      P      08 54 21.2 +1.1
SUR                               IAmb   IAmb   08 54 39.5
      comp=Z,32nm,1.4s
PFVI  Vila Bisbo       80.98  45 ePcP    PcP    08 54 32.2 +5.0
MORF  Marmelete        81.19  45 eP      P      08 54 20.9 -1.2
MORF                             i Amb          08 54 30.8
      comp=Z,43nm,2.0s
MORF                             ePcP    pP     08 54 34.3 -2.2
PTEO  Sao Teotonio     81.28  45 eP      P      08 54 26.0 +3.6
PTEO                             ePcP    pP     08 54 34.9 -1.9
PTEO                             i Amb          08 54 36.5
      comp=Z,109nm,1.8s
E03A  Lebam            81.48 326  IAmb   IAmb   08 54 25.6
      comp=Z,26nm,1.0s
PBDV  Barranco-do-Ve   81.64  46 eP      P      08 54 24.3 -0.2
PBDV                             ePcP    pP     08 54 37.2 -1.7
PBDV                             i Amb          08 54 37.9
      comp=Z,70nm,1.6s
MDT   Midelt           81.71  51  LR     LR     09 29 42.1
      comp=Z,75nm,20.6s,baz=249,slow=35
MESJ  Messejana        81.77  45 eP      P      08 54 25.6 +0.5
MESJ                             i Amb          08 54 29.9
      comp=Z,24nm,1.7s
MESJ                             ePcP    pP     08 54 36.8 -2.6
PCVE  Castro Verde     81.78  45 eP      P      08 54 25.5 +0.3
PCVE                             i Amb          08 54 27.5
      comp=Z,21nm,2.0s
PCVE                             ePcP    pP     08 54 37.5 -2.1
PVAQ  Vaqueiros        81.87  46 ePcP    PcP    08 54 37.6 +6.4
TSUM  Tsumeb           81.95 107  P      P      08 54 26.7  0.0
TSUM  Tsumeb           81.95 107  LR     LR     09 27 26.0
      comp=Z,102nm,21.9s,baz=336,slow=33
PBEJ  Beja             82.11  45 eP      P      08 54 27.5 +0.6
PBEJ                             i Amb          08 54 32.3
      comp=Z,13nm,1.6s
PBEJ                             ePcP    pP     08 54 38.3 -2.9
EVO   Evora            82.28  45 ePcP    PcP    08 54 39.8 +6.8
PMTG  Montargil        82.43  44 eP      P      08 54 29.3 +0.8
PMTG                             i Amb          08 54 38.9
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	comp=Z,18nm,2.2s						
PMTG				*e*PcP	**pP**	**08 54 40.1**	**-2.7**
RAR	**Rarotonga**	**82.49**	**250**	LR	LR	09 21 58.1	
	comp=Z,73nm,20.9s,baz=104,slow=29						
IVI	**Ivigtut**	**82.57**	**11**	*i* P	**P**	**08 54 27.6**	**-1.1**
IVI				IAmb	IAmb	08 54 29.9	
	comp=Z,32nm,0.8s						
PBAR	**Barrancos**	**82.74**	**45**	*e*P	**P**	**08 54 30.3**	**+0.2**
PBAR				*i* Amb		08 54 34.2	
	comp=Z,17nm,1.9s						
PBAR				*e*PcP	**pP**	**08 54 41.6**	**-2.8**
PSARD	**Sardoal**	**82.76**	**44**	*e*PcP	**PcP**	**08 54 41.9**	**+6.8**
NRS	**Narsarsuaq**	**83.04**	**12**	*i* P	**P**	**08 54 31.6**	**+0.5**
NRS				IAmb	IAmb	08 54 31.9	
	comp=Z,17nm,1.0s						
PVIS	**Viseu**	**83.53**	**43**	*e*PcP	**PcP**	**08 54 45.8**	**+7.4**
MTE	**Manteigas**	**83.59**	**43**	*e*P	**P**	**08 54 34.5**	**-0.1**
MTE				*i* Amb		08 54 35.5	
	comp=Z,16nm,1.8s						
MTE				*e*PcP	**pP**	**08 54 47.5**	**-1.4**
POLO	**Lamas de Olo**	**83.95**	**42**	*e*PcP	**P**	**08 54 36.1**	**-0.4**
PCAB	**Cabril**	**83.99**	**42**	*e*P	**P**	**08 54 35.9**	**-0.7**
PCAB				*i* Amb		08 54 49.4	
	comp=Z,24nm,1.5s						
MVO	**Moncorvo**	**84.33**	**43**	*e*P	**P**	**08 54 38.4**	**+0.1**
MVO				*i* Amb		08 54 40.5	
	comp=Z,20nm,1.4s						
MVO				*e*PcP	**pP**	**08 54 49.8**	**-2.9**
GRTLG	**Ghanzi**	**84.51**	**111**	P	**P**	**08 54 39.9**	**+0.1**
GRTLG				IAmb	IAmb	08 54 40.4	
	comp=Z,12nm,0.7s						
NUUK	**Nuuk**	**84.84**	**8**	*i* P	**P**	**08 54 39.6**	**-0.7**
NUUK				IAmb	IAmb	08 54 42.0	
	comp=Z,13nm,0.8s						
PBRG	**Braganca**	**84.85**	**42**	*e*P	**P**	**08 54 40.5**	**-0.4**
PBRG				*i* Amb		08 54 43.4	
	comp=Z,12nm,1.5s						
PBRG				*e*PcP	**pP**	**08 54 50.9**	**-4.4**
PAB	**San Pablo**	**85.24**	**45**	P	**P**	**08 54 42.6**	**-0.4**
PAB				XP	**pP**	**08 54 55.0**	**-2.4**
PAB				pmax	pmax		
	comp=Z,11nm,1.0s						
TAM	**Tamanrasset**	**85.30**	**64**	P	**P**	**08 54 43.8**	**0.0**
TAM	**Tamanrasset**	**85.30**	**64**	P	**P**	**08 54 43.8**	**0.0**
TAM				pmax	pmax		
	comp=Z,29nm,0.9s						
ESDC	**Sonseca Array**	**85.57**	**45**	P	**P**	**08 54 44.5**	**-0.1**
ESDC	**Sonseca Array**	**85.57**	**45**	P	**P**	**08 54 43.4**	**-1.1**
	comp=Z,3.6nm,1.0s,baz=247,slow=5.8,SNR=17						
ESDC				LR	LR	09 29 27.6	
	comp=Z,93nm,21.8s,baz=218,slow=33						
	comp=Z,3.6nm,1.0s						
ESBB	**Sonseca Array**	**85.57**	**45**	IAmb	IAmb	08 54 57.8	
	comp=Z,12nm,1.1s						
BOSA	**Boshof**	**85.58**	**119**	P	**P**	**08 54 44.0**	**-1.1**
	comp=Z,3.3nm,0.6s,baz=272,slow=4.0,SNR=9.5						
BOSA				LR	LR	09 29 41.8	
	comp=Z,193nm,20.6s,baz=218,slow=33						
	comp=Z,3.3nm,0.6s						
MAKGR	**Makgori**	**86.14**	**116**	P	**P**	**08 54 48.3**	**+0.3**
MAKGR				IAmb	IAmb	08 55 05.3	
	comp=Z,9.2nm,0.8s						
MAW	**Mawson**	**86.48**	**164**	P	**P**	**08 54 48.5**	**0.0**
	comp=Z,2.6nm,1.5s						
MAW	**Mawson**	**86.48**	**164**	P	**P**	**08 54 48.6**	**+0.1**
	comp=Z,3.9nm,0.6s,baz=211,slow=5.7,SNR=13						
MAW				LR	LR	09 35 13.2	
	comp=Z,110nm,18.6s,baz=240,slow=37						
	comp=Z,3.9nm,0.6s						
LBTB	**Lobatse**	**87.09**	**115**	LR	LR	09 31 15.0	
	comp=Z,124nm,19.7s,baz=230,slow=34						
SFJD	**Kangerlussuaq**	**87.67**	**8**	LR	LR	09 33 37.1	
	comp=Z,72nm,21.2s,baz=212,slow=35						
YKA	**Yellowknife Ar**	**89.00**	**341**	P	**P**	**08 55 00.1**	**-0.4**
	comp=Z,11nm,0.8s,baz=136,slow=4.2,SNR=68						
YKA				pP	**pP**	**08 55 17.9**	**+3.0**
	comp=Z,6.8nm,0.6s,baz=138,slow=4.2,SNR=10						
	comp=Z,11nm,0.8s						
ICESG	**Greenland Ices**	**91.25**	**11**	*i* P	**P**	**08 55 08.5**	**-2.9**
ICESG				IAmb	IAmb	08 55 12.3	
	comp=Z,21nm,0.9s						
DLBC	**Dease Lake**	**91.93**	**333**	IAmb	IAmb	08 55 15.9	
	comp=Z,9.0nm,1.1s						
LSZ	**Lusaka**	**92.80**	**107**	LR	LR	09 34 52.4	
	comp=Z,124nm,21.7s,baz=163,slow=34						
URZ	**Urewera**	**94.40**	**227**	LR	LR	09 27 53.9	
	comp=Z,166nm,20.3s,baz=260,slow=29						
SUMG	**Summit**	**94.50**	**9**	P	**P**	**08 55 25.2**	**-1.1**
SUMG				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SUMG	**Summit**	**94.50**	**9**	*i* P	**P**	**08 55 26.0**	**-0.3**
SUMG				IAmb	IAmb	08 55 28.2	
	comp=Z,8.1nm,0.9s						
DAVOX	**Davos/Dischmat**	**97.72**	**43**	LR	LR	09 37 53.9	
	comp=Z,60nm,21.7s,baz=261,slow=34						
VAE	**Valguarnera**	**97.80**	**53**	LR	LR	09 40 47.0	
	comp=Z,86nm,20.8s,baz=300,slow=36						
JMIC	**Jan Mayen**	**99.84**	**17**	LR	LR	09 37 23.4	
	comp=Z,21nm,21.9s,baz=290,slow=33						
ILAR	**Eielson Array**	**101.99**	**335**	PP	**PP**	**09 00 08.7**	**-3.0**
	comp=Z,0.4nm,0.9s,baz=108,slow=5.7,SNR=4.3						
ARCES	**ARCESS Array B**	**110.35**	**22**	PKKPbc	PKKPbc	09 11 38.0	-2.6
	comp=Z,1.4nm,0.5s,baz=88,slow=3.7,SNR=12						
BRTR	**Keskin Array B**	**112.95**	**54**	PKiKP	**PKiKP**	**09 00 42.9**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=204,slow=2.9,SNR=5.8						
BRTR				PP	**PP**	**09 01 33.1**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=258,slow=4.9,SNR=4.5						
OBN	**Obninsk**	**115.62**	**38**	*i* PKIKP	**PKiKP**	**09 00 47.6**	**-0.2**
OBN				*e*		09 01 51.6	
OBN				*e*PPP	PPP	09 04 13.8	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KBZ	**Khabaz**	**120.08**	**50**	PKP	**PKPdf**	**09 00 56.2**	**-0.5**
	comp=Z,5.0nm,0.8s,baz=216,slow=2.9,SNR=13						
KBZ	**Khabaz**	**120.08**	**50**	*e*PKIKP	**PKiKP**	**09 00 57.2**	**+0.4**
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
STKA	**Stephens Creek**	**120.24**	**211**	PKP	**PKPdf**	**09 00 57.0**	**-0.7**
	comp=Z,3.3nm,0.7s,baz=95,slow=3.5,SNR=5.7						
STKA	**Stephens Creek**	**120.24**	**211**	*e*PKIKP	**PKPdf**	**09 00 57.6**	**0.0**
STKA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
RAYN	**Ar Rayn**	**120.75**	**74**		**PKiKP**	**09 00 59.0**	**+0.1**
RAYN	**Ar Rayn**	**120.75**	**74**	PKIKP	**PKiKP**	**09 00 59.0**	**+0.1**
H11S2	**WAKE ISLAND Hy**	**126.20**	**279**	T	T	11 20 18.7	
	baz=101,slow=75,SNR=1873						
H11S1	**WAKE ISLAND Hy**	**126.20**	**279**	T	T	11 20 23.7	
	baz=101,slow=75,SNR=1172						
H11S3	**WAKE ISLAND Hy**	**126.22**	**279**	T	T	11 20 35.4	
	baz=101,slow=75,SNR=1007						
H11N3	**WAKE ISLAND Hy**	**126.23**	**280**	T	T	11 20 26.4	
	baz=101,slow=74,SNR=1269						
H11N2	**WAKE ISLAND Hy**	**126.25**	**280**	T	T	11 20 29.3	
	baz=101,slow=74,SNR=1022						
H11N1	**WAKE ISLAND Hy**	**126.25**	**280**	T	T	11 20 42.2	
	baz=101,slow=74,SNR=458						
CTAO	**Charters Tower**	**126.57**	**224**	PKPdf	**PKiKP**	**09 01 10.4**	**-0.1**
CTAO	**Charters Tower**	**126.57**	**224**	PKIKP	**PKiKP**	**09 01 10.4**	**-0.1**
FORT	**Forrest**	**126.77**	**200**	PKPdf	**PKPdf**	**09 01 09.9**	**-0.2**
FORT	**Forrest**	**126.77**	**200**	P	**PKPdf**	**09 01 09.4**	**-0.8**
ARTI	**Arti**	**127.36**	**33**	*i* PKIKP	**PKiKP**	**09 01 11.1**	**+0.2**
ARTI						09 03 13.0	
ARTI						09 08 16.6	
ARTI				SS	SS	09 20 17.5	+0.9
SEY	**Seymchan**	**127.86**	**337**	*i* PKIKP	**PKPdf**	**09 01 11.2**	**+0.1**
NRIK	**Noril'sk**	**128.54**	**10**	*i* PKIKP	**PKPdf**	**09 01 12.5**	**+0.3**
PETK	**Petropavlovsk-**	**130.25**	**324**	PKPdf	**PKPdf**	**09 01 15.8**	**-0.2**
PETK	**Petropavlovsk-**	**130.25**	**324**	PKP	**PKPdf**	**09 01 16.4**	**+0.4**
	comp=Z,2.7nm,0.8s,baz=90,slow=6.1,SNR=8.8						
PETK				pPKP	**sPKPdf**	**09 01 34.6**	**-1.6**
	comp=Z,1.3nm,0.7s,baz=108,slow=4.8,SNR=3.5						
QIS	**Mount Isa**	**130.35**	**218**	P	**PKPdf**	**09 01 15.9**	**-1.3**
ABKAR	**Akbulak array**	**130.76**	**41**	PKPdf	**PKiKP**	**09 01 17.8**	**-0.1**
ABKAR	**Akbulak array**	**130.76**	**41**	PKPdf	**PKPdf**	**09 01 17.2**	**+0.2**
AS31	**Alice Springs**	**130.81**	**210**	PKPdf	**PKPdf**	**09 01 17.6**	**-0.5**
AS31	**Alice Springs**	**130.81**	**210**	P	**PKPdf**	**09 01 17.6**	**-0.5**
ASAR	**Alice Springs**	**130.81**	**210**	PKhKP	PKPpre	09 01 08.0	
	comp=Z,0.5nm,0.7s,baz=88,slow=0.3,SNR=4.5						
ASAR				PKP	**PKPdf**	**09 01 17.2**	**-0.8**
	comp=Z,4.4nm,0.6s,baz=136,slow=2.0,SNR=34						
ASAR				pPKP	pPKPdf	09 01 35.1	+2.2
	comp=Z,3.8nm,0.8s,baz=150,slow=2.1,SNR=7.2						
WRA	**Warramunga Arr**	**133.74**	**213**	PKPdf	**PKPdf**	**09 01 22.8**	**-0.8**
WRA	**Warramunga Arr**	**133.74**	**213**	PKhKP	PKPpre	09 01 10.3	
	comp=Z,0.5nm,0.5s,baz=138,slow=1.6,SNR=8.1						
WRA				PKP	**PKPdf**	**09 01 22.6**	**-1.0**
	comp=Z,7.0nm,0.7s,baz=155,slow=1.8,SNR=53						
WRA				pPKP	sPKPdf	09 01 43.0	-0.8
	comp=Z,3.6nm,0.6s,baz=143,slow=1.6,SNR=6.2						
WRA	**Warramunga Arr**	**133.74**	**213**	PKIKP	**PKPdf**	**09 01 22.8**	**-0.8**
WB0	**Warramunga Arr**	**133.85**	**213**		**PKPdf**	**09 01 24.1**	**+0.2**
BRVK	**Borovoye**	**135.01**	**33**	*c i*PKIKP	**PKiKP**	**09 01 26.3**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BVAR	**Borovoye Array**	**135.08**	**33**	PKP	**PKPdf**	**09 01 24.9**	**-0.2**
	comp=Z,3.2nm,0.7s,baz=281,slow=2.4,SNR=15						
BVAR				pPKP	**pPKPdf**	**09 01 43.4**	**+3.5**
	comp=Z,2.1nm,0.7s,baz=285,slow=2.2,SNR=4.4						
KURK	**Kurchatov**	**140.56**	**31**	*c i*PKIKP	**PKiKP**	**09 01 37.1**	**-0.7**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KURBB	**Kurchatov Arra**	**140.57**	**31**	PKhKP	PKPpre	09 01 28.4	
	comp=Z,1.4nm,0.6s,baz=303,slow=2.8,SNR=12						
KURBB				PKP	**PKPdf**	**09 01 35.3**	**0.0**
	comp=Z,2.1nm,0.8s,baz=301,slow=2.8,SNR=10						
KURBB				pPKP	pPKPdf	09 01 53.3	+3.2
	comp=Z,1.2nm,0.6s,baz=306,slow=2.9,SNR=3.8						
KURBB				PP	**PP**	**09 04 36.5**	**+1.9**
	comp=Z,0.3nm,0.4s,baz=311,slow=7.3,SNR=4.1						
ZALV	**Zalesovo Beam**	**140.89**	**23**	PKhKP	PKPpre	09 01 28.4	
	comp=Z,3.2nm,0.7s,baz=305,slow=5.2,SNR=9.1						
ZALV				PKP	**PKPdf**	**09 01 36.1**	**+0.4**
	comp=Z,11nm,0.7s,baz=302,slow=3.3,SNR=19						
ZALV				pPKP	sPKPdf	09 01 54.1	-1.7
	comp=Z,6.6nm,0.6s,baz=332,slow=3.8,SNR=4.8						
MTN	**Manton Dam**	**141.32**	**215**	P	**PKPdf**	**09 01 32.8**	**-4.9**
AAK	**Ala-Archa**	**142.66**	**44**	*c i*PKIKP	**PKiKP**	**09 01 44.5**	**+1.9**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARLS	**Aral**	**142.90**	**46**	PKIKP	**PKPdf**	**09 01 38.9**	**-1.0**
KDJ	**Kajisay**	**144.66**	**44**	PKPdf	**PKPdf**	**09 01 43.1**	**+0.1**
KDJ	**Kajisay**	**144.66**	**44**	PKIKP	**PKPdf**	**09 01 43.1**	**+0.1**
MAKZ	**Makanchi**	**144.79**	**33**	PKPdf	PKPbc	09 01 41.9	-0.1
MAKZ	**Makanchi**	**144.79**	**33**	PKIKP	PKPbc	09 01 41.9	-0.1
NIL	**Nilore**	**144.90**	**59**	PKIKP	**PKPab**	**09 01 42.3**	**-0.4**
MKAR	**Makanchi Array**	**144.96**	**33**	PKPbc	PKPbc	09 01 42.5	-0.1
MKAR	**Makanchi Array**	**144.96**	**33**	PKP	**PKPab**	**09 01 42.1**	**-0.5**
	comp=Z,30nm,0.7s,baz=325,slow=4.1,SNR=234						
MKAR				pPKP	**pPKPdf**	**09 02 00.3**	**+2.2**
	comp=Z,7.0nm,0.8s,baz=314,slow=3.8,SNR=4.5						
MKAR	**Makanchi Array**	**144.96**	**33**	PKIKP	PKPbc	09 01 42.5	0.0
KSH	**Kashi**	**145.03**	**48**	PKP	**PKPdf**	**09 01 43.4**	**-0.3**
KSH				sPKP		09 02 00.8	
TARG	**Taragay, Kyrgy**	**145.26**	**44**	PKPbc	**PKPdf**	**09 01 45.3**	**+0.9**
TARG	**Taragay, Kyrgy**	**145.26**	**44**	PKIKP	**PKPdf**	**09 01 45.3**	**+0.9**
PRZ	**Przheval'sk**	**145.26**	**42**	PKIKP	**PKPdf**	**09 01 45.4**	**+1.3**
KLR	**Kul'dur**	**145.56**	**334**	*c i*PKIKP	**PKPdf**	**09 01 44.0**	**-0.1**
KLR				pmax	pmax		
	comp=Z,35nm,1.7s						
HEH	**HeiHe**	**146.35**	**339**	*e*PKPbc	**PKPdf**	**09 01 46.0**	**+0.6**
HEH				AMB	AMB		
	comp=Z,140nm,5.1s						
MOY	**Mondy**	**147.38**	**10**	*e*PKP2	**PKPbc**	**09 01 48.9**	**-0.8**
MOY				pmax	pmax		
	comp=Z,35nm,1.7s						
FAKI	**Fak Fak**	**148.35**	**227**	PKPbc	**PKPbc**	**09 01 52.2**	**-1.1**
ZAK	**Zakamensk**	**148.96**	**8**	*e*PKP2	**PKPbc**	**09 01 53.7**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,14nm,1.3s						
USRK	**Ussuriysk Ar.**	**149.21**	**328**	PKPbc	**PKPbc**	**09 01 54.9**	**+0.3**
USRK	**Ussuriysk Ar.**	**149.21**	**328**	PKPbc	**PKPbc**	**09 01 54.3**	**-0.3**
	comp=Z,4.4nm,0.6s,baz=45,slow=1.6,SNR=13						
USRK				pPKPbc	**pPKPab**	**09 02 13.1**	**-0.6**
	comp=Z,6.5nm,0.6s,baz=6.1,slow=1.7,SNR=7.2						
USRK	**Ussuriysk Ar.**	**149.21**	**328**	PKP2	**PKPbc**	**09 01 54.9**	**+0.3**
WMQ	**Urumqi**	**149.77**	**32**	*e*PKPbc	**PKiKP**	**09 01 56.6**	**-0.5**
MJA0	**Matsu Arr-Jizo**	**149.78**	**310**	*e*PKP2	**PKPbc**	**09 01 55.9**	**-0.4**
MJA0				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MJAR	**Matsushiro Arr**	**149.81**	**310**	PKPbc	**PKPbc**	**09 01 56.0**	**-0.4**
	comp=Z,10nm,0.9s,baz=76,slow=1.3,SNR=21						
MJAR				pPKPbc	**pPKPab**	**09 02 15.0**	**-1.4**
	comp=Z,3.2nm,0.7s,baz=104,slow=1.7,SNR=4.3						
MJAR	**Matsushiro Arr**	**149.81**	**310**	PKP2	**PKPbc**	**09 01 56.0**	**-0.4**
MAJO	**Matsushiro**	**149.81**	**310**	PKPbc	**PKPbc**	**09 01 56.6**	**+0.2**
MAJO	**Matsushiro**	**149.81**	**310**	PKP2	**PKPbc**	**09 01 56.6**	**+0.2**
MJB9	**Matsu-Tunnel**	**149.81**	**310**	PKPbc	**PKiKP**	**09 01 57.2**	**-0.1**
BNX	**BinXian**	**150.12**	**334**	PKPbc	**PKPbc**	**09 01 56.8**	**0.0**
HYB	**Hyderabad**	**150.54**	**89**	*e*PKPdf	**PKPdf**	**09 01 53.1**	**-0.2**
HYB				*e*PKiKP	**PKiKP**	**09 01 59.8**	**+0.4**
SONM	**Songino Array**	**151.80**	**5**	PKPdf	**PKPdf**	**09 01 54.7**	**+0.2**
SONM				PKPbc	**PKPbc**	**09 02 00.6**	**-0.3**
SONM				PKPab	**PKPab**	**09 02 09.5**	**-0.4**
SONM	**Songino Array**	**151.80**	**5**	PKP	**PKPdf**	**09 01 54.7**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=288,slow=0.7,SNR=5.3						
SONM				PKPbc	**PKPbc**	**09 02 00.4**	**-0.5**
	comp=Z,13nm,0.9s,baz=319,slow=1.5,SNR=36						
SONM				PKPab	**PKPab**	**09 02 09.0**	**-0.8**
	comp=Z,6.1nm,0.7s,baz=328,slow=3.4,SNR=10.0						
SONM				pPKPbc	**pPKPbc**	**09 02 18.6**	**+2.9**
	comp=Z,8.6nm,0.5s,baz=324,slow=2.4,SNR=10						
SONM	**Songino Array**	**151.80**	**5**	PKIKP	**PKPdf**	**09 01 54.7**	**+0.2**
SONM						09 02 09.5	
KSRS	**Korea Array**	**156.12**	**322**	PKP	**PKPdf**	**09 02 00.8**	**+0.2**
	comp=Z,1.5nm,0.6s,baz=64,slow=1.1,SNR=8.4						
GTA	**Gaotai**	**158.62**	**21**	PKP	**PKPdf**	**09 02 04.4**	**+0.4**
GTA				pPKP	pPKPdf	09 02 21.6	+2.7
GTA				PKPab	**PKPab**	**09 02 37.5**	**-1.7**
GTA				LR	LR		
	comp=Z,230nm,18.9s						
GTA				LR	LR		
	comp=Z,200nm,20.0s						
GTA				LR	LR		
	comp=Z,140nm,18.9s						
HHC	**Hu-ho-hao-te**	**158.83**	**356**	*e*P	**PKPdf**	**09 02 11.1**	**+7.0**
GOMU	**GeErMu**	**159.06**	**35**	PKP	**PKPdf**	**09 02 06.2**	**+1.3**
GOMU				pPKP	pPKPdf	09 02 23.2	+3.4
RPSI	**Rantau Prapat**	**160.18**	**147**	PKPdf	**PKPdf**	**09 02 05.5**	**-0.8**
RPSI				PKPab	**PKPab**	**09 02 46.6**	**+0.1**
PSI	**Prapat**	**160.27**	**147**	PKIKP	**PKPdf**	**09 02 05.5**	**-1.1**
PSI						09 02 46.6	
LZH	**Lanzhou**	**162.90**	**16**	*e*PKP	**PKPdf**	**09 02 15.4**	**+6.7**
NJ2	**Nanjing**	**165.11**	**328**	*e*PKP	**PKPdf**	**09 02 15.9**	**+5.3**
XAN	**Xi'an**	**165.69**	**2**	PKP	**PKPdf**	**09 02 11.6**	**+0.5**
XAN				pPKP	sPKPdf	09 02 30.3	-1.1
CMAR	**Chiang Mai Arr**	**169.90**	**95**	PKPdf	**PKPdf**	**09 02 13.8**	**-0.7**
CMAR				PKPab	**PKPab**	**09 03 28.3**	**-1.1**
CMAR	**Chiang Mai Arr**	**169.90**	**95**	PKP	**PKPdf**	**09 02 14.0**	**-0.5**
	comp=Z,2.0nm,0.8s,baz=270,slow=1.9,SNR=8.2						
CMAR				pPKP	**pPKPdf**	**09 02 31.9**	**+2.6**
	comp=Z,1.0nm,0.4s,baz=255,slow=1.5,SNR=2.0						
CMAR				PKPab	**PKPab**	**09 03 28.9**	**-0.5**
	comp=Z,1.3nm,0.5s,baz=258,slow=6.0,SNR=6.8						
PZH	**PanZhiHua**	**170.11**	**45**	PKP	**PKPdf**	**09 02 17.8**	**+3.3**

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*IDC **03** 08:50:17.0±3.7, 54°.20N×87°.43E, h0^{km}, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=33.0km s-min=20.3km az=43.0*

ASRS 03 08:50:16.0±1.3**, 54°.16N×87°.15E, h0**^{km}**, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.39**	**262**	I	I	08 59 44.1	
	0.1nm,0.8s,baz=82,slow=323,SNR=4.8						
ZALV	**Zalesovo Beam**	**1.39**	**262**	Pg	Pb	08 50 43.6	+0.8
	2.4nm,0.3s,baz=78,slow=16,SNR=18						
ZALV				Lg	Lg	08 51 06.9	
	2.8nm,0.3s,baz=79,slow=26,SNR=10						
KURBB	**Kurchatov Arra**	**6.35**	**240**	Pn	Pn	08 51 55.1	+4.3
	0.1nm,0.3s,baz=52,slow=13,SNR=2.2						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**8.00**	**205**	Pn	Pn	08 52 17.1	+3.6
	0.1nm,0.3s,baz=27,slow=14,SNR=2.1						
	0.1nm,0.3s						

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*IDC **03** 09:02:17.8±1.9, 30°.01N×113°.97W, h0^{km}, mb3.5/1, mbtmp3.4/8, ML3.6/7, MS3.3/10, Error ellipse: s-maj=30.8km s-min=10.8km az=36.0*

*NEIC **03** 09:02:17.8±2.2, 29°.90N±0°.07×114°.31W±0°.08, h10^{km}±2^{km}, mb4.1/8, Error ellipse: s-maj=14.3km s-min=9.7km az=219.0*

*ECX **03** 09:02:17.1±0.4, 29°.91N×114°.14W, h7^{km}±5^{km}, ML3.9*

ISC 03 09:02:16.0±1.4**, 29°.90N**±0°.05×**114°.09W**±0°.04**, h3**^{km}±12^{km}**, n59, σ1^{s}.90**/62**, MS3.5**/4**, 5C-5D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLGB	**San Luis Gonza**	**0.28**	**257**	⇑*i*P	**Pg**	**09 02 21.8**	**+0.4**
SLGB				*e*S	**Sg**	**09 02 25.2**	**+0.1**
BAHB	**Baha de los**	**1.05**	**154**		**Pg**	**09 02 35.5**	**-0.7**
BAHB	**Baha de los**	**1.05**	**154**	⇓*e*P	**Pg**	**09 02 35.6**	**-0.6**
BAHB				*e*S	**Sb**	**09 02 51.0**	**-0.2**
PLIB	**Puerto Liberta**	**1.21**	**89**	⇑*i*P	**Pb**	**09 02 38.4**	**-1.3**
SFX	**San Felipe**	**1.31**	**330**		**Pn**	**09 02 39.5**	**-1.9**
SFX	**San Felipe**	**1.31**	**330**	⇓*i*P	**Pn**	**09 02 39.4**	**-1.9**
SFX				*e*S	**Sb**	**09 02 56.3**	**-2.4**
SFX				IAML		09 03 09.9	
	comp=E,1μm,1.4s						
PPXB	**Puerto Peasco**	**1.49**	**15**	⇓*i*P	**Pn**	**09 02 42.6**	**-1.1**
PPXB				*e*S	**Sb**	**09 03 02.9**	**-0.8**
SPIG	**San Pedro Mart**	**1.65**	**314**	⇑*e*P	**Pn**	**09 02 45.0**	**-1.3**
SPIG				*e*S	**Sn**	**09 03 06.5**	**-1.7**
SPIG				IAML		09 03 16.7	
	comp=N,753nm,0.7s						
SPIG				IAML		09 03 18.9	
	comp=E,983nm,0.6s						
SQX	**San Quintin**	**1.69**	**294**	⇑*e*P	**Pn**	**09 02 44.9**	**-1.5**
SQX				*e*S	**Sn**	**09 03 07.0**	**-1.6**
ECBX	**El Chinero**	**1.78**	**332**	⇓*i*P	**Pn**	**09 02 45.8**	**-1.9**
ECBX				*e*S	**Sn**	**09 03 09.3**	**-1.5**
SFQB	**San Francisqui**	**1.83**	**144**	*e*P	**Pb**	**09 02 49.4**	**-0.8**
VTX	**Valle De La Tr**	**2.09**	**316**		**Pn**	**09 02 51.7**	**-0.3**
VTX	**Valle De La Tr**	**2.09**	**316**	*e*P	**Pn**	**09 02 51.3**	**-0.8**
SV2X	**San Vicente**	**2.34**	**308**	⇑*i*P	**Pn**	**09 02 54.8**	**-0.7**
SV2X				IAML		09 03 33.4	
	comp=E,509nm,0.7s						
SJX	**San Joaquin**	**2.46**	**320**	⇓*e*P	**Pb**	**09 02 58.6**	**-2.4**
ESJX	**Sierra Juarez**	**2.64**	**323**		**Pn**	**09 02 58.6**	**-1.1**
HSIG		**2.88**	**107**		**Pn**	**09 03 02.6**	**-0.2**
HSIG		**2.88**	**107**	*e*P	**Pn**	**09 03 01.6**	**-1.2**
113A	**Mohawk Valley,**	**2.88**	**5**		**Pn**	**09 03 02.8**	**0.0**
YUH	**Yuha Desert**	**3.16**	**331**		**Pn**	**09 03 05.9**	**-0.8**
GLA	**Glamis**	**3.21**	**349**		**Pn**	**09 03 05.7**	**-1.8**
CBX	**Cerro Bola**	**3.27**	**318**		**Pn**	**09 03 08.1**	**-0.3**
TKX	**Tecate**	**3.43**	**322**		**Pn**	**09 03 10.4**	**-0.1**
TUC	**Tucson**	**3.72**	**49**		**Pn**	**09 03 16.1**	**+1.6**
BLYC	**Blythe**	**3.86**	**355**		**Pn**	**09 03 17.0**	**+0.6**
NZIG	**Nacozari, Sono**	**3.96**	**82**		**Pb**	**09 03 24.7**	**-1.9**
NZIG					**Sb**	**09 04 12.4**	**-2.5**
Y14A	**Wickenburg**	**4.13**	**13**		**Pn**	**09 03 20.7**	**+0.5**
PFO	**Pinyon Flats O**	**4.22**	**332**	Pn	**Pn**	**09 03 21.3**	**-0.1**
	comp=E,0.7nm,0.3s,baz=143,slow=12,SNR=8.8						
PFO				Pg	**Pb**	**09 03 32.8**	**+1.8**
	comp=E,0.3nm,0.3s,baz=168,slow=12,SNR=4.3						
PFO				Lg	Lg	09 04 30.0	
	comp=E,5.2nm,0.3s,baz=254,slow=19,SNR=7.5						
PFO				LR	LR	09 04 49.4	
	comp=E,184nm,21.9s,baz=126,slow=36						
	comp=E,1.6nm,0.4s						
319A	**Douglas**	**4.40**	**69**		**Pn**	**09 03 25.1**	**+1.2**
ELS	**Elsinore Mount**	**4.70**	**324**		**Pn**	**09 03 28.3**	**+0.4**
X16A	**Lo Mia Camp, P**	**5.04**	**26**		**Pn**	**09 03 34.3**	**+1.6**
X18A	**Snowflake**	**5.80**	**36**		**Pn**	**09 03 44.9**	**+1.7**
V12A	**Nelson**	**5.85**	**354**		**Pn**	**09 03 45.5**	**+1.7**
WUAZ	**Wupatki**	**6.05**	**22**		**Pn**	**09 03 49.5**	**+2.9**
SHPR	**Sheep Range**	**6.65**	**353**		**Pn**	**09 03 57.4**	**+2.5**
LPIG	**La Paz**	**6.68**	**149**	Pn	Pn	09 03 59.8	+4.6
	comp=E,2.6nm,0.3s,baz=358,slow=5.8,SNR=2.2						
	comp=E,32nm,0.8s						
SLBS	**Sierra La Lagu**	**7.21**	**148**		**Pn**	**09 04 05.9**	**+3.5**
ANMO	**Albuquerque**	**8.18**	**50**	Pn	**Pn**	**09 04 17.1**	**+1.2**
	comp=E,0.3nm,0.3s,baz=319,slow=12,SNR=6.5						
ANMO				LR	LR	09 07 05.8	
	comp=E,126nm,21.8s,baz=12,slow=36						
	comp=E,0.8nm,0.4s						
PSUT	**Pine Spring**	**8.62**	**1**		**Pn**	**09 04 23.8**	**+1.9**
PECS	**Pecos**	**8.93**	**78**		**Pn**	**09 04 29.3**	**+3.2**
TXAR	**Lajitas Array**	**9.09**	**91**		**Pn**	**09 04 30.8**	**+2.5**
TXAR	**Lajitas Array**	**9.09**	**91**	Pn	**Pn**	**09 04 29.2**	**+0.9**
	comp=E,0.4nm,0.3s,baz=262,slow=14,SNR=20						
TXAR				LR	LR	09 07 01.3	
	comp=E,33nm,20.8s,baz=296,slow=32						
TXAR				Lg	Lg	09 07 04.2	
	comp=E,0.3nm,0.3s,baz=272,slow=34,SNR=7.6						
	comp=E,2.4nm,0.8s						
NVAR	**Mina Array Bea**	**9.20**	**339**	Pn	**Pn**	**09 04 33.4**	**+3.5**
	comp=E,0.1nm,0.3s,baz=160,slow=14,SNR=5.7						
NVAR				LR	LR	09 07 47.4	
	comp=E,152nm,21.0s,baz=169,slow=36						
	comp=E,0.3nm,0.8s						
MNHN	**Monahans**	**9.87**	**79**		**Pn**	**09 04 42.0**	**+3.0**
P18A	**Preston Nutter**	**10.21**	**17**		**Pn**	**09 04 44.7**	**+0.9**
SAND	**Sanderson**	**10.38**	**87**		**Pn**	**09 04 49.1**	**+3.1**
ELK	**Elko**	**10.87**	**355**	Pn	**Pn**	**09 04 55.7**	**+3.0**
	comp=E,0.1nm,0.3s,baz=189,slow=7.7,SNR=5.1						
ELK				LR	LR	09 09 15.9	
	comp=E,182nm,20.7s,baz=160,slow=39						
	comp=E,1.1nm,0.8s						
OZNA	**Ozona**	**11.24**	**82**		**Pn**	**09 05 01.1**	**+3.3**
PDAR	**Pinedale Array**	**13.35**	**15**	Pn	**Pn**	**09 05 30.6**	**+4.0**
	comp=E,0.1nm,0.3s,baz=188,slow=10,SNR=7.7						
PDAR				LR	LR	09 10 29.4	
	comp=E,200nm,19.0s,baz=190,slow=37						
	comp=E,1.1nm,0.8s						
YMP	**Mirror Lake Pl**	**15.14**	**11**	Pn	**Pn**	**09 05 51.0**	**-0.2**
YMP				IAmb	IAmb	09 06 00.9	
	comp=Z,11nm,1.3s						
PLID	**Pearl Lake**	**15.24**	**355**	Pn	**P**	**09 05 54.5**	**-3.0**
YNE	**Yellowstone No**	**15.43**	**11**	IAmb	IAmb	09 06 04.3	
	comp=Z,17nm,1.4s						
DLMT	**Dillon**	**15.48**	**4**	P	**P**	**09 05 59.9**	**-0.2**
DLMT				IAmb	IAmb	09 06 03.0	
	comp=Z,11nm,1.4s						
HKT	**Hockley**	**15.83**	**85**	Pn	**P**	**09 06 02.0**	**-1.8**
BBB	**Bella Bella**	**24.57**	**339**	LR	LR	09 17 13.7	
	comp=Z,149nm,20.0s,baz=216,slow=37						
ILAR	**Eielson Array**	**40.46**	**339**	P	**P**	**09 09 58.4**	**+2.8**
	comp=Z,0.6nm,0.9s,baz=153,slow=7.2,SNR=4.7						
	comp=Z,0.6nm,0.9s						
SJG	**San Juan**	**45.05**	**94**	LR	LR	09 32 48.8	
	comp=Z,30nm,20.4s,baz=298,slow=41						
SDV	**Santo Domingo**	**45.66**	**108**	LR	LR	09 33 10.4	
	comp=Z,50nm,18.0s,baz=252,slow=41						
SPITS	**Spitsbergen Ar**	**68.34**	**10**	LR	LR	09 44 53.0	
	comp=Z,53nm,18.4s,baz=225,slow=38						

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*NEIC **03** 09:14:37.7±0.8, 19°.20N±0°.03×155°.47W±0°.04, h44^{km}±4^{km}, Error ellipse: s-maj=5.9km s-min=3.5km az=131.0*

HVO 03 09:14:37.8±0.7**, 19°.14N**±0°.04×**155°.43W**±0°.04**, h48**^{km}±4^{km}**, ML2.2**/20**, ML2.6**/38(NEIC)**, Error ellipse: s-maj=7.9km s-min=3.8km az=138.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HTC	**Hot Caves**	**0.10**	**18**		Pn	09 14 45.1	-0.3
HLP	**Hilina Pali**	**0.20**	**37**		Pn	09 14 46.5	+0.5
HLP				IAML		09 15 01.2	
	comp=N,564nm,1.0s						
KHU	**Kahuku**	**0.20**	**302**		Pn	09 14 45.3	-1.0
KHU	**Kahuku**	**0.20**	**302**		Sn	09 14 50.8	-1.5
AIN	**Ainahou**	**0.23**	**354**		Pn	09 14 45.7	-0.7
AIN					Sn	09 14 51.5	-1.0
AIN	**Ainahou**	**0.23**	**354**	IAML		09 14 53.3	
	comp=E,699nm,0.9s						
AIN				IAML		09 14 54.0	
	comp=N,1μm,0.5s						
SDHHI	**Sand Hill**	**0.28**	**28**		Pn	09 14 45.8	-1.0
SDHHI					Sn	09 14 51.8	-1.3
WRMHI	**West Rim**	**0.30**	**25**		Pn	09 14 45.7	-1.2
WRMHI					Sn	09 14 52.2	-1.1
KKO	**Keanakako'i**	**0.30**	**31**		Pn	09 14 46.1	-0.8
KKO					Sn	09 14 51.6	-1.8
OBL	**Observatory Le**	**0.31**	**27**		Pn	09 14 45.8	-1.2
OBL					Sn	09 14 52.7	-0.9
PUH	**Pauahi**	**0.31**	**41**		Pn	09 14 47.3	+0.3
PUH					Sn	09 14 52.4	-1.2
PUH	**Pauahi**	**0.31**	**41**	IAML		09 14 53.4	
	comp=E,237nm,0.8s						
PUH				IAML		09 14 59.4	
	comp=N,310nm,1.1s						
UWE	**Uwekahuna**	**0.31**	**25**		Pn	09 14 46.3	-0.7
UWE					Sn	09 14 52.4	-1.2
UWE	**Uwekahuna**	**0.31**	**25**	IAML		09 15 01.2	
	comp=N,474nm,2.5s						
BYL	**Byron's Ledge**	**0.32**	**31**		Pn	09 14 45.8	-1.3
BYL					Sn	09 14 52.3	-1.3
BYL	**Byron's Ledge**	**0.32**	**31**	IAML		09 15 05.7	
	comp=E,427nm,1.3s						

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATHI	**Halema‘uma‘u T**	**0.33**	**30**		Pn	09 14 46.3	-0.8
HATHI	**Halema‘uma‘u T**	**0.33**	**30**	IAML		09 14 55.8	
	comp=N,306nm,1.2s						
HATHI				IAML		09 15 05.8	
	comp=E,385nm,1.0s						
SBLHI	**Steaming Bluff**	**0.33**	**28**		Pn	09 14 45.7	-1.4
SBLHI					Sn	09 14 52.6	-1.2
KNHH	**Kane Nui o Ham**	**0.35**	**46**		Pn	09 14 46.2	-1.1
RSD	**Rainshed**	**0.35**	**24**		Pn	09 14 46.4	-1.1
RSD					Sn	09 14 52.8	-1.5
MLH	**Mauna Loa**	**0.36**	**7**		Pn	09 14 46.6	-1.0
MLH					Sn	09 14 53.4	-1.2
MLH	**Mauna Loa**	**0.36**	**7**	IAML		09 14 54.5	
	comp=E,301nm,1.1s						
MLH				IAML		09 15 08.2	
	comp=N,299nm,1.4s						
MWH	**Mokuaweoweo**	**0.38**	**336**		Pn	09 14 46.7	-1.4
MWH					Sn	09 14 53.5	-1.9
MWH	**Mokuaweoweo**	**0.38**	**336**	IAML		09 14 55.2	
	comp=N,345nm,1.1s						
MWH				IAML		09 14 58.1	
	comp=E,442nm,0.8s						
STCH	**Steam Cracks**	**0.38**	**50**		Pn	09 14 46.5	-1.2
STCH					Sn	09 14 53.1	-1.6
STCH	**Steam Cracks**	**0.38**	**50**	IAML		09 14 54.1	
	comp=E,193nm,0.6s						
STCH				IAML		09 14 58.1	
	comp=N,232nm,0.8s						
NPOC	**North of Pu‘u**	**0.40**	**50**		Pn	09 14 46.4	-1.4
NPOC					Sn	09 14 53.8	-1.2
JCUZ	**Jacuzzi**	**0.40**	**52**		Pn	09 14 46.9	-0.9
JCUZ					Sn	09 14 53.7	-1.3
ALEP	**Alea Permanent**	**0.45**	**334**		Pn	09 14 47.3	-1.4
ALEP					Sn	09 14 54.8	-1.7
HMH	**Humu‘ula Sheep**	**0.47**	**354**		Pn	09 14 47.8	-1.0
HMH					Sn	09 14 55.2	-1.6
HMH	**Humu‘ula Sheep**	**0.47**	**354**	IAML		09 14 56.5	
	comp=N,270nm,0.9s						
HMH				IAML		09 14 57.3	
	comp=E,793nm,0.8s						
JOKA	**Jonika Flow**	**0.50**	**54**		Pn	09 14 48.1	-0.9
CPH	**Captain Cook**	**0.58**	**307**		Pn	09 14 50.3	+0.4
POHA	**Pohakuloa**	**0.62**	**351**	Pn	Pn	09 14 48.9	-1.8
POHA				IAML		09 15 05.6	
	comp=E,259nm,0.8s						
POHA				IAML		09 15 13.3	
	comp=E,165nm,1.8s						
HUH	**Hualalai**	**0.66**	**325**	Pn	Pn	09 14 50.4	-0.9
HUH				IAML		09 15 13.4	
	comp=N,232nm,0.5s						
MHA	**Mahukona**	**1.14**	**337**	Pn	Pn	09 14 56.1	-1.2

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*ASRS **03** 09:15:19.0±0.9, 53°.56N×86°.89E, h0km, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 03 09:15:20.9±2.9**, 53°.61N×86°.96E, h0km, mbtmp2.7**/2**, ML2.4**/2**, Error ellipse: s-maj=28.4km s-min=16.1km az=65.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.31**	**286**	I	I	09 23 30.0	
	baz=105,slow=314,SNR=4.8						
ZALV	**Zalesovo Beam**	**1.31**	**286**	Pg	Pg	09 15 44.5	-1.6
	1.1nm,0.3s,baz=107,slow=12,SNR=18						
ZALV				Lg	Lg	09 16 03.3	
	1.5nm,0.3s,baz=108,slow=27,SNR=9.3						
KURBB	**Kurchatov Arra**	**5.99**	**243**	Pn	Pn	09 16 52.1	+1.4
	baz=62,slow=14,SNR=2.2						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**7.45**	**206**	Pn	Pn	09 17 12.0	+1.3
	0.1nm,0.3s,baz=26,slow=14,SNR=5.1						
	0.2nm,0.4s						

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*NEIC **03** 09:17:58.6±0.7, 19°.20N±0°.07×155°.45W±0°.07, h29km±15km, Error ellipse: s-maj=13.6km s-min=3.9km az=140.0*

HVO 03 09:17:58.9±0.3**, 19°.15N**±0°.08×**155°.42W**±0°.07**, h28**km±9km**, ML2.2**/6**, ML2.5**/22(NEIC)**, Error ellipse: s-maj=14.0km s-min=3.6km az=140.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HTC	**Hot Caves**	**0.09**	**11**		Pb	09 18 03.8	-0.2
HLP	**Hilina Pali**	**0.18**	**35**		Pb	09 18 04.7	-0.1
HLP				IAML		09 18 11.8	
	comp=E,666nm,0.7s						
HLP				IAML		09 18 12.1	
	comp=N,618nm,0.9s						
KHU	**Kahuku**	**0.21**	**298**		Sb	09 18 08.8	-0.8
KHU				IAML		09 18 10.4	
	comp=E,594nm,1.0s						
KHU				IAML		09 18 10.7	
	comp=N,647nm,0.7s						
KHU	**Kahuku**	**0.21**	**298**		Pb	09 18 04.5	-0.8
AIN	**Ainahou**	**0.23**	**350**		Sb	09 18 09.1	-0.7
AIN	**Ainahou**	**0.23**	**350**		Pb	09 18 04.7	-0.7
AIN				IAML		09 18 11.2	
	comp=E,751nm,0.6s						
AIN				IAML		09 18 11.9	
	comp=N,998nm,0.6s						
SDHHI	**Sand Hill**	**0.27**	**26**		Pb	09 18 05.0	-0.8
WRMHI	**West Rim**	**0.28**	**23**		Pb	09 18 05.2	-0.9
KKO	**Keanakako'i**	**0.29**	**30**		Pb	09 18 05.3	-0.9
PUH	**Pauahi**	**0.29**	**40**		Pb	09 18 05.2	-1.0
PUH	**Pauahi**	**0.29**	**40**	IAML		09 18 10.2	
	comp=E,273nm,0.6s						
PUH				IAML		09 18 10.8	
	comp=N,451nm,1.7s						
OBL	**Observatory Le**	**0.30**	**25**		Pb	09 18 05.3	-1.0
UWE	**Uwekahuna**	**0.30**	**23**		Pb	09 18 05.3	-0.9
UWE					Sb	09 18 10.2	-1.2
UWE	**Uwekahuna**	**0.30**	**23**	IAML		09 18 10.6	
	comp=E,786nm,1.6s						
UWE				IAML		09 18 10.6	
	comp=N,702nm,0.8s						
KNHH	**Kane Nui o Ham**	**0.33**	**45**		Pb	09 18 05.6	-1.1
MLH	**Mauna Loa**	**0.35**	**5**		Pb	09 18 06.1	-1.0
MLH	**Mauna Loa**	**0.35**	**5**	IAML		09 18 20.4	
	comp=N,396nm,0.8s						
STCH	**Steam Cracks**	**0.36**	**49**		Pb	09 18 05.9	-1.3
STCH	**Steam Cracks**	**0.36**	**49**	IAML		09 18 11.7	
	comp=N,339nm,0.7s						
STCH				IAML		09 18 12.1	
	comp=E,247nm,1.1s						
MWH	**Mokuaweoweo**	**0.38**	**333**		Pb	09 18 06.8	-0.9
MWH					Sb	09 18 12.8	-1.0
MWH	**Mokuaweoweo**	**0.38**	**333**	IAML		09 18 13.1	
	comp=E,540nm,0.9s						
MWH				IAML		09 18 13.4	
	comp=N,368nm,0.7s						
NPOC	**North of Pu‘u**	**0.38**	**50**		Pb	09 18 06.2	-1.2
NPOC					Sb	09 18 11.2	-2.0
HMH	**Humu‘ula Sheep**	**0.46**	**352**		Pb	09 18 07.7	-1.1
HMH	**Humu‘ula Sheep**	**0.46**	**352**	IAML		09 18 15.8	
	comp=E,493nm,0.6s						
HMH				IAML		09 18 18.9	
	comp=N,352nm,3.6s						

IDC 03 09:24:03.5±1.8**, 54°.70N×83°.77E, h0km, mbtmp2.8**/3**, ML2.5**/3**, Error ellipse: s-maj=17.8km s-min=10.6km az=18.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.97**	**140**	I	I	09 29 30.0	
	baz=318,slow=325,SNR=8.8						
ZALV	**Zalesovo Beam**	**0.97**	**140**	Pg	Pg	09 24 21.4	-0.5
	3.7nm,0.3s,baz=324,slow=15,SNR=20						
ZALV				Lg	Lg	09 24 35.5	
	1.8nm,0.3s,baz=317,slow=12,SNR=7.0						
KURBB	**Kurchatov Arra**	**5.18**	**220**	Pn	Pn	09 25 21.9	-0.2
	0.1nm,0.3s,baz=45,slow=13,SNR=4.6						
KURBB				Lg	Lg	09 26 49.6	
	0.1nm,0.3s,baz=43,slow=30,SNR=5.7						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.97**	**187**	Pn	Pn	09 26 01.1	+0.6
	0.1nm,0.3s,baz=7.7,slow=12,SNR=2.6						
MKAR				Lg	Lg	09 28 19.9	
	0.1nm,0.3s,baz=0.0,slow=28,SNR=2.4						
	0.1nm,0.3s						
BVAR	**Borovoye Array**	**8.09**	**264**	Pn	Pn	09 26 01.1	-1.0
	0.1nm,0.3s,baz=66,slow=14,SNR=5.3						
	0.8nm,0.3s						

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*ASRS **03** 09:36:56.0±0.6, 54°.68N×83°.63E, h0km, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 03 09:36:56.0±1.9**, 54°.69N×83°.72E, h0km, mbtmp3.0**/2**, ML2.6**/2**, Error ellipse: s-maj=17.2km s-min=11.3km az=16.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.98**	**139**	I	I	09 42 24.8	
	0.1nm,0.8s,baz=319,slow=321,SNR=18						
ZALV	**Zalesovo Beam**	**0.98**	**139**	Pg	Pg	09 37 14.1	-0.6
	3.0nm,0.3s,baz=319,slow=19,SNR=20						
ZALV				Lg	Lg	09 37 28.4	
	9.6nm,0.3s,baz=316,slow=27,SNR=17						
KURBB	**Kurchatov Arra**	**5.15**	**220**	Lg	Lg	09 39 42.0	
	baz=43,slow=32						
MKAR	**Makanchi Array**	**7.96**	**187**	Pn	Pn	09 38 53.8	+1.0
	0.1nm,0.3s,baz=6.1,slow=12,SNR=4.1						
MKAR				Lg	Lg	09 41 10.3	
	0.1nm,0.3s,baz=13,slow=25,SNR=5.1						
	0.3nm,0.4s						
BVAR	**Borovoye Array**	**8.06**	**264**	Pn	Pn	09 38 52.9	-1.3
	baz=66,slow=13,SNR=3.8						
	0.9nm,0.5s						

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*IDC **03** 09:42:50.8±0.7, 12°.24N×123°.72E, h0km, mb4.0/11, mbtmp4.0/12, ML4.4/1, MS3.6/28, Error ellipse: s-maj=27.6km s-min=15.0km az=72.0*

*NEIC **03** 09:42:55.2±0.9, 12°.34N±0°.05×123°.7E±0°.1, h25km±6km, mb4.6/16, Error ellipse: s-maj=16.9km s-min=7.1km az=76.0*

ISC 03 09:42:53.0±0.6**, 12°.33N**±0°.08×**123°.81E**±0°.10**, h14**km**, n59, σ0s.87**/34**, mb4.4**/19**, MS3.6**/25**, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**3.31**	**303**	Pn	**Pn**	**09 43 44.0**	**-0.5**
	40nm,0.3s,baz=321,slow=10,SNR=3.5						
TGY				LR	LR	09 45 20.2	
	comp=Z,699nm,19.0s,baz=201,slow=46						
	157nm,0.4s						
DAV	**Davao City (W)**	**5.51**	**161**	Pn	**Pn**	**09 44 15.1**	**+0.3**
MYLDM	**Lahad Datu**	**8.83**	**217**	Pn	**Pn**	**09 45 01.6**	**+1.3**
YULB	**Yu-li**	**11.26**	**348**	Pn	**Pn**	**09 45 33.7**	**0.0**
JOW	**Kunigami**	**15.03**	**16**	LR	LR	09 52 29.0	
	comp=Z,174nm,19.1s,baz=242,slow=38						
KAPI	**Kappang**	**17.69**	**193**	LR	LR	09 54 04.7	
	comp=Z,149nm,21.3s,baz=35,slow=38						
GUMO	**Guam**	**20.56**	**84**	LR	LR	09 53 42.3	
	comp=Z,104nm,22.0s,baz=230,slow=32						
JNU	**Nakatsue**	**21.69**	**16**	LR	LR	09 55 29.9	
	comp=Z,75nm,21.9s,baz=166,slow=35						
CMAR	**Chiang Mai Arr**	**24.72**	**287**	P	**P**	**09 48 14.0**	**-0.2**
	1.0nm,0.4s,baz=105,slow=7.9,SNR=6.9						
CMAR				LR	LR	09 58 29.6	
	comp=Z,97nm,18.8s,baz=110,slow=38						
	1.0nm,0.4s						
KSRS	**Korea Array**	**25.29**	**8**	P	**P**	**09 48 19.8**	**+0.7**
	1.2nm,0.7s,baz=189,slow=10,SNR=5.1						
KSRS				LR	LR	09 58 25.0	
	comp=Z,85nm,20.1s,baz=190,slow=37						
	1.2nm,0.7s						
PSI	**Prapat**	**26.39**	**251**	LR	LR	09 59 54.4	
	comp=Z,135nm,18.2s,baz=80,slow=39						
USRK	**Ussuriysk Ar.**	**32.53**	**11**	P	**P**	**09 49 23.9**	**+0.4**
	3.3nm,0.8s,baz=216,slow=9.4,SNR=4.1						
	3.3nm,0.8s						
WB0	**Warramunga Arr**	**33.55**	**162**	P	**P**	**09 49 31.4**	**-1.4**
WB0				IAmb	IAmb	09 49 32.5	
	comp=Z,11nm,1.1s						
WRA	**Warramunga Arr**	**33.70**	**162**	P	**P**	**09 49 33.0**	**-1.0**
WRA	**Warramunga Arr**	**33.70**	**162**	P	**P**	**09 49 32.5**	**-1.6**
	comp=Z,2.3nm,0.6s,baz=342,slow=9.1,SNR=15						
	comp=Z,2.3nm,0.6s						
WR8	**Warramunga Arr**	**33.76**	**162**	P	**P**	**09 49 33.2**	**-1.4**
AS31	**Alice Springs**	**37.11**	**165**	P	**P**	**09 50 03.1**	**-0.2**
ASAR	**Alice Springs**	**37.11**	**165**	P	**P**	**09 50 03.1**	**-0.2**
ASAR	**Alice Springs**	**37.11**	**165**	P	**P**	**09 50 03.0**	**-0.3**
	comp=Z,3.9nm,0.6s,baz=342,slow=6.3,SNR=34						
	comp=Z,3.9nm,0.6s						
HNR	**Honiara**	**41.91**	**119**	LR	LR	10 04 56.9	
	comp=Z,110nm,21.1s,baz=298,slow=32						
NWAO	**Narrogin (SRO)**	**45.43**	**188**	LR	LR	10 14 24.1	
	comp=Z,33nm,18.1s,baz=126,slow=42						
BBOO	**Buckleboo**	**46.38**	**166**	P	**P**	**09 51 19.4**	**+0.4**
STKA	**Stephens Creek**	**47.14**	**159**	P	**P**	**09 51 25.4**	**+0.4**
STKA	**Stephens Creek**	**47.14**	**159**	P	**P**	**09 51 25.1**	**+0.1**
	comp=Z,3.5nm,0.9s,baz=321,slow=5.9,SNR=5.3						
	comp=Z,3.5nm,0.9s						
PETK	**Petropavlovsk-**	**48.83**	**27**	P	**P**	**09 51 38.3**	**+0.4**
PETK	**Petropavlovsk-**	**48.83**	**27**	P	**P**	**09 51 38.7**	**+0.8**
	comp=Z,2.0nm,0.9s,baz=122,slow=1.9,SNR=5.4						
	comp=Z,2.0nm,0.9s						
MKAR	**Makanchi Array**	**48.94**	**323**	P	**P**	**09 51 38.1**	**-0.8**
MKAR	**Makanchi Array**	**48.94**	**323**	P	**P**	**09 51 39.0**	**+0.1**
	comp=Z,1.2nm,0.8s,baz=114,slow=8.8,SNR=10						
	comp=Z,1.2nm,0.8s						
YAK	**Yakutsk**	**49.81**	**4**	LR	LR	10 12 58.5	
	comp=Z,51nm,18.6s,baz=264,slow=36						
AAK	**Ala-Archa**	**52.17**	**315**	LR	LR	10 15 09.2	
	comp=Z,68nm,20.5s,baz=98,slow=37						
KURBB	**Kurchatov Arra**	**53.02**	**325**	P	**P**	**09 52 08.7**	**-0.8**
	comp=Z,0.5nm,0.4s,baz=121,slow=7.7,SNR=8.5						
KURBB				LR	LR	10 13 14.0	
	comp=Z,59nm,21.3s,baz=172,slow=34						
	comp=Z,0.5nm,0.4s						
DZM	**Mont Dzumac**	**54.01**	**129**	LR	LR	10 15 34.8	
	comp=Z,29nm,18.1s,baz=33,slow=36						
TIXI	**Tiksi**	**59.37**	**2**	LR	LR	10 19 49.4	
	comp=Z,87nm,20.1s,baz=194,slow=37						
NRIK	**Noril'sk**	**61.45**	**346**	LR	LR	10 22 02.8	
	comp=Z,65nm,18.5s,baz=156,slow=38						
AB31	**Akbulak array**	**63.75**	**319**	P	**P**	**09 53 24.4**	**-0.1**
ABKAR	**Akbulak array**	**63.75**	**319**	P	**P**	**09 53 24.4**	**-0.1**
AKTO	**Aktyubinsk**	**65.21**	**320**	LR	LR	10 24 19.0	
	comp=Z,45nm,18.1s,baz=114,slow=38						
KIRV	**Kirov**	**71.43**	**328**	LR	LR	10 25 19.7	
	comp=Z,32nm,19.3s,baz=101,slow=36						
BELG	**Belogornoye**	**71.90**	**321**	LR	LR	10 26 45.7	
	comp=Z,34nm,20.2s,baz=72,slow=37						
GNI	**Garni**	**73.84**	**308**	LR	LR	10 29 54.8	
	comp=Z,25nm,20.9s,baz=73,slow=38						
H19K	**Roundabout Mou**	**74.61**	**25**	P	**P**	**09 54 32.4**	**+0.9**
H19K				IAmb	IAmb	09 54 37.1	
	comp=Z,3.4nm,0.8s						
O18K	**Koktuh Hills**	**74.91**	**31**	P	**P**	**09 54 33.9**	**+0.5**
O18K				IAmb	IAmb	09 54 39.2	
	comp=Z,4.3nm,0.8s						
KBZ	**Khabaz**	**75.05**	**312**	LR	LR	10 33 00.2	
	comp=Z,28nm,19.1s,baz=60,slow=40						
CAST	**Castle Rocks**	**76.43**	**27**	P	**P**	**09 54 42.3**	**+0.2**
CAST				IAmb	IAmb	09 54 47.1	
	comp=Z,3.7nm,0.8s						
BPAW	**Bear Paw Mtn.**	**76.91**	**27**	P	**P**	**09 54 44.7**	**0.0**
BPAW				IAmb	IAmb	09 54 50.2	
	comp=Z,4.3nm,0.8s						
C23K	**Itkillik River**	**76.99**	**21**	P	**P**	**09 54 45.3**	**+0.2**
C23K				IAmb	IAmb	09 54 49.4	
	comp=Z,13nm,1.2s						
TOLK	**Toolik Lake Re**	**77.38**	**22**	P	**P**	**09 54 47.9**	**+0.6**
TOLK				IAmb	IAmb	09 55 15.0	
	comp=Z,7.1nm,1.2s						
ILAR	**Eielson Array**	**78.66**	**26**	P	**P**	**09 54 56.9**	**+2.4**
	comp=Z,0.4nm,0.8s,baz=264,slow=4.5,SNR=6.4						
	comp=Z,0.4nm,0.8s						
BMAR	**Burnt Mountain**	**79.33**	**23**	P	**P**	**09 54 59.5**	**+1.4**
F28M	**Old Crow**	**81.10**	**23**	IAmb	IAmb	09 55 13.3	
	comp=Z,4.0nm,0.8s						
SPITS	**Spitsbergen Ar**	**81.54**	**349**	LR	LR	10 35 49.6	
	comp=Z,42nm,18.8s,baz=46,slow=39						
HFS	**Hagfors**	**89.11**	**332**	LR	LR	10 38 04.8	
	comp=Z,29nm,18.2s,baz=42,slow=37						
NOA	**NORSAR Array B**	**89.85**	**333**	LR	LR	10 39 50.5	
	comp=Z,30nm,18.7s,baz=75,slow=38						
RES	**Resolute Bay**	**89.89**	**10**	LR	LR	10 37 25.4	
	comp=Z,29nm,20.2s,baz=28,slow=36						
YKA	**Yellowknife Ar**	**92.85**	**23**	P	**P**	**09 56 04.0**	**-1.2**
	comp=Z,0.2nm,0.7s,baz=311,slow=5.9,SNR=5.4						
	comp=Z,0.2nm,0.7s						
DAVOX	**Davos/Dischmat**	**96.79**	**321**	LR	LR	10 42 55.5	
	comp=Z,35nm,18.8s,baz=79,slow=37						
LSZ	**Lusaka**	**98.50**	**256**	LR	LR	10 36 17.9	
	comp=Z,42nm,20.5s,baz=116,slow=33						
BORG	**Borgarnes**	**98.76**	**346**	LR	LR	10 43 50.5	
	comp=Z,18nm,20.4s,baz=30,slow=37						
PLCA	**Paso Flores**	**149.02**	**159**	PKPbc	**PKPbc**	**10 02 40.2**	**-0.9**
	comp=Z,1.0nm,0.9s,baz=238,slow=15,SNR=3.3						

IDC 03 09:50:14.8±2.9**, 53°.66N×86°.93E, h0km, mbtmp2.6**/2**, ML2.1**/1**, Error ellipse: s-maj=28.0km s-min=16.2km az=70.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.28**	**284**	I	I	09 58 28.4	
	baz=102,slow=312,SNR=5.2						
ZALV	**Zalesovo Beam**	**1.28**	**284**	Pg	Pg	09 50 38.0	-1.3
	0.3nm,0.3s,baz=105,slow=17,SNR=8.1						
ZALV				Lg	Lg	09 50 56.8	
	0.7nm,0.3s,baz=105,slow=32,SNR=3.9						
KURBB	**Kurchatov Arra**	**6.00**	**243**	Pn	Pn	09 51 45.4	+0.7
	0.1nm,0.3s,baz=60,slow=14,SNR=3.1						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**7.49**	**205**	Pn	Pn	09 52 06.8	+1.5
	0.2nm,0.4s,baz=21,slow=13,SNR=4.5						

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*NEIC **03** 09:50:54.5±0.6, 48°.27N±0°.02×113°.10W±0°.03, h5km±1km, ML2.5/14, ML2.9/17(BUT), Error ellipse: s-maj=3.5km s-min=3.2km az=252.0*

BUT 03 09:50:54.0±0.6**, 48°.28N**±0°.02×**113°.11W**±0°.03**, h-3**km±2km**, Error ellipse: s-maj=3.1km s-min=2.7km az=83.0, Montana**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLMT	**Seeley Lake**	**1.07**	**194**		Pg	09 51 14.6	0.0
HSPGA	**Hill Springs,**	**1.14**	**342**		Pg	09 51 15.6	-0.2
HSPGA					Sb	09 51 32.1	+0.2
OVMT	**Ovando**	**1.22**	**176**		Pg	09 51 17.1	-0.3
MKRVA	**Milk River, Al**	**1.23**	**45**		Pg	09 51 17.3	-0.4
MKRVA					Sg	09 51 34.0	+0.4
CHMT	**Chamberlain Mo**	**1.37**	**184**		Pg	09 51 19.6	-0.7
LYMT	**Lyon Mountain**	**1.43**	**157**		Pg	09 51 21.1	-0.3
BHMT	**Big Hole Peak**	**1.47**	**242**		Pb	09 51 22.4	0.0
LDM	**Libby Dam**	**1.48**	**277**		Pg	09 51 22.4	0.0
NDMT	**Ninemile Divid**	**1.53**	**229**		Pn	09 51 23.0	+0.2
ALMT	**Alberton, Mont**	**1.54**	**216**		Pn	09 51 22.9	-0.1
MSO	**Missoula**	**1.56**	**201**		Pn	09 51 23.4	+0.2
MSO	**Missoula**	**1.56**	**201**	IAML		09 51 49.6	
	45nm,0.5s						
BEMT	**Mount Belmont**	**1.62**	**161**		Pg	09 51 26.2	+1.1
HRY	**Holter Researc**	**1.80**	**151**		Pb	09 51 27.2	-0.7
MKMT	**Mink Peak**	**1.80**	**230**		Pn	09 51 27.2	+0.7
BPMT	**Black Pine Rid**	**1.86**	**187**		Pb	09 51 28.9	-0.2
VCMT	**Victor**	**1.98**	**202**		Pn	09 51 29.9	+1.0
EGMT	**Eagleton**	**2.26**	**95**		Pn	09 51 33.5	+0.8
EGMT	**Eagleton**	**2.26**	**95**	IAML		09 52 10.2	
	53nm,0.5s						
LRM	**Limekiln Ridge**	**2.50**	**169**		Pn	09 51 37.1	+0.9
HBMT	**Mount Humbug**	**2.52**	**172**		Pn	09 51 36.8	+0.3
NEW	**Newport**	**2.68**	**271**		Pn	09 51 37.9	-0.6
NEW	**Newport**	**2.68**	**271**		Pn	09 51 38.4	-0.1
NEW				IAML		09 52 21.1	
	17nm,0.8s						
NEW				IAML		09 52 32.5	
	9.2nm,1.0s						
BOZ	**Bozeman (W)**	**2.87**	**159**		Pn	09 51 42.0	+0.7
BOZ	**Bozeman (W)**	**2.87**	**159**	IAML		09 52 26.4	
	13nm,0.3s						
DLMT	**Dillon**	**2.94**	**173**	IAML		09 52 28.5	
	22nm,0.9s						
DLMT				IAML		09 52 31.2	
	17nm,0.7s						
MCMT	**McKenzie Canyo**	**3.46**	**177**		Pn	09 51 50.6	+1.1
YHL	**Hebgen Lake**	**3.68**	**158**		Pn	09 51 53.7	+1.2
YHB	**Horse Butte**	**3.77**	**159**	Pn	Pn	09 51 54.7	+1.1
YHB				IAML		09 52 54.3	
	comp=E,9.2nm,0.5s						
YHB				IAML		09 53 00.9	
	comp=N,11nm,0.5s						
YHH	**Holmes Hill**	**3.83**	**155**		Pn	09 51 55.7	+1.2

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*KRNET **03** 09:57:01.1±0.1, 42°.38N×78°.72E, h10km, mb2.3*

*SOME **03** 09:57:01.4, 42°.43N×78°.67E, h10km*

*NNC **03** 09:57:03.5±2.8, 42°.54N×78°.65E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=21.7km s-min=8.4km az=141.0*

ISC 03 09:57:00.9±1.6**, 42°.42N**±0°.05×**78°.70E**±0°.06**, h12**km±9km**, n12, σ0s.82**/23**, 8C-2D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.23**	**285**	⇓*i*P	**Pg**	**09 57 06.2**	**+0.3**
PRZ				⇓*i*S	**Sg**	**09 57 10.2**	**+0.9**
TARG	**Taragay, Kyrgy**	**0.96**	**224**	⇑*i*P	**Pg**	**09 57 19.2**	**-0.3**
TARG				⇑*i*S	**Sg**	**09 57 32.1**	**0.0**
KPKS	**Kokpek**	**1.04**	**359**	P	**Pg**	**09 57 20.6**	**-0.5**
	0.2nm,0.1s						
KPKS				S	**Sg**	**09 57 34.0**	**-0.7**
	3.4nm,0.3s						
KDJ	**Kajisay**	**1.16**	**256**	⇑*i*P	**Pb**	**09 57 23.0**	**-0.1**
KDJ				⇑*i*S	**Sn**	**09 57 39.0**	**-0.1**
TNSS	**Tian-Shan**	**1.43**	**296**	P	**Pb**	**09 57 27.8**	**0.0**
	1.6nm,0.1s						
TNSS				S	**Sn**	**09 57 46.4**	**+0.4**
	0.9nm,0.1s						
TNSS	**Tian-Shan**	**1.43**	**296**	*e*P	**Pb**	**09 57 27.8**	**0.0**
	1.6nm,0.1s						
TNSS				*e*S	**Sn**	**09 57 46.4**	**+0.4**
	0.9nm,0.1s						
BLB	**Baldybastay**	**1.68**	**355**	P	**Pb**	**09 57 32.4**	**+0.5**
	2.9nm,0.1s						
BLB				S	**Sg**	**09 57 54.3**	**-0.7**
	3.6nm,0.3s						
KNOS	**Konyrlen**	**1.97**	**10**	P	**Pb**	**09 57 36.2**	**-0.5**
	0.7nm,0.1s						
KNOS				S	**Sn**	**09 58 00.7**	**+1.8**
	1.3nm,0.1s						
BOOM	**Boomskoye usch**	**2.04**	**273**	⇑*i*P	**Pb**	**09 57 38.3**	**+0.2**
BOOM				⇑*i*S	**Sg**	**09 58 05.5**	**-1.1**
KST	**Kastek**	**2.11**	**288**	Pg	**Pb**	**09 57 39.9**	**+0.7**
	2.4nm,0.2s						
KST				Lg	Lg	09 58 06.9	
	3.3nm,0.3s						
KST	**Kastek**	**2.11**	**288**	*e*P	**Pb**	**09 57 39.9**	**+0.7**
	2.4nm,0.2s						
KST				*e*S	**Sg**	**09 58 07.2**	**-1.5**
	3.3nm,0.3s						
TKM2	**Tokmak 2**	**2.34**	**283**	⇑Pn	**Pb**	**09 57 44.0**	**+0.8**
	1.1nm,0.6s						
TKM2				⇑Sn	**Sg**	**09 58 15.0**	**-1.2**
	2.7nm,0.6s						

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*SJA **03** 10:07:53.6±0.4, 36°.44S×72°.58W, h40km±14km, ML3.7, MW3.6*

*GUC **03** 10:08:02.6±0.8, 36°.84S×72°.09W, h69km±4km, ML3.7*

ISC 03 10:08:02.5±1.5**, 36°.82S**±0°.04×**72°.14W**±0°.04**, h71**km±14km**, n15, σ1s.44**/24**, 1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BI02	**San Fabin de**	**0.71**	**78**	⇓*i*P	**Pn**	**10 08 17.0**	**-0.7**
BI02				*i* S	**Sn**	**10 08 28.0**	**-0.9**
BI02				IAML		10 08 28.7	
	comp=N,3µm,0.3s						
BI02	**San Fabin de**	**0.71**	**78**	*e*P	**Pn**	**10 08 16.9**	**-0.8**
BI02				*e*S	**Sn**	**10 08 28.3**	**-0.6**
BI02				IAML		10 08 28.8	
	comp=Z,2µm,0.2s						
CCSP	**San Pedro de C**	**0.78**	**268**	*e*P	**Pn**	**10 08 18.6**	**+0.2**
CCSP				*e*S	**Sn**	**10 08 30.9**	**+0.7**
CCSP				IAML		10 08 34.4	
	comp=E,8µm,0.3s						
BI05	**Punta Hualpn**	**0.85**	**274**	*e*P	**Pn**	**10 08 19.3**	**+0.1**
BI05				*e*S	**Sn**	**10 08 32.1**	**+0.6**
BI05				IAML		10 08 35.3	
	comp=N,4µm,0.1s						
ML02	**Panimavida**	**1.20**	**29**	*e*P	**Pn**	**10 08 23.5**	**-0.1**
ML02				*i* S	**Sn**	**10 08 39.4**	**0.0**
ML02				IAML		10 08 40.6	
	comp=N,2µm,0.3s						
CANA	**Caviahue**	**1.37**	**142**	*e*P	**Pn**	**10 08 25.3**	**-0.7**

CANA				eS	Sn	10 08 48.6	+5.0
GO05	Hualane	1.81	5	eP	Pn	10 08 32.1	+0.4
GO05				i S	Sn	10 08 53.6	-0.2
GO05				IAML		10 09 01.0	
	comp=E,817nm,0.4s						
LC01	Cunco	2.09	174	eP	Pn	10 08 34.9	-0.5
LC01				i S	Sn	10 08 59.0	-1.5
LC01				IAML		10 09 00.2	
	comp=E,931nm,0.2s						
BO02	Sierra Bellavi	2.30	29	eP	Pn	10 08 38.7	+0.4
BO02				i S	Sn	10 09 05.3	-0.3
BO01	Tunca	2.57	20	eP	Pn	10 08 41.7	-0.2
BO01				IAML		10 09 17.9	
	comp=E,296nm,0.3s						
GO06	Curarrehue	2.81	169	eP	Pn	10 08 45.7	+0.4
LR03	Panguipulli	2.82	183	eP	Pn	10 08 44.7	-0.5
LR04	Corral	3.22	198	eP	Pn	10 08 47.8	-2.9
LR04				IAML		10 09 45.2	
	comp=Z,119nm,0.2s						
LR05	Currie	3.41	178	eP	Pn	10 08 52.9	-0.4
LR05				IAML		10 09 43.5	
	comp=E,125nm,0.6s						
PLCA	Paso Flores	4.10	163	eP	Pn	10 09 03.6	+0.7
PLCA				eS	Sn	10 10 00.3	+11

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*NEIC **03** 10:36:27.1±2.0, 21°.3S±0°.1×173°.7W±0°.1, h10^{km}±1^{km}, mb4.8/18, Error ellipse: s-maj=19.5km s-min=16.9km az=49.0*

*IDC **03** 10:36:27.6±0.6, 21°.50S×174°.25W, h0^{km}, mb4.3/13, mbtmp4.3/14, ML4.6/1, MS3.7/22, Error ellipse: s-maj=24.3km s-min=17.6km az=114.0*

ISC 03 10:36:30.4±0.5**, 21°.38S**±0°.09×**173°.93W**±0°.10**, h25**^{km}**, n72, σ1^{s}51**/54**, mb4.6**/21**, MS3.9**/20**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.40	59	Pn	Pn	10 37 31.1	-4.6
AFI	Afiamalu	7.71	16	Pn	Pn	10 38 17.3	-3.9
MSVF	Nonsavu	8.39	294	LR	LR	10 41 18.1	
	comp=Z,730nm,21.9s,baz=134,slow=36						
RAR	Rarotonga	13.20	92	Pn	Pn	10 39 30.7	-5.5
	8.1nm,0.3s,baz=280,slow=9.1,SNR=44						
RAR				Sn	Sn	10 41 47.2	-15
	1.7nm,0.3s,baz=74,slow=23,SNR=1.9						
RAR				LR	LR	10 45 30.4	
	comp=Z,135nm,18.4s,baz=282,slow=40						
DZM	Mont Dzumac	18.25	264	P	P	10 40 43.6	+1.4
DZM	Mont Dzumac	18.25	264	P	P	10 40 41.5	-0.7
	8.7nm,0.7s,baz=48,slow=23,SNR=6.7						
URZ	Urewera	18.51	203	P	Pn	10 40 44.1	-1.0
	1.9nm,0.3s,baz=91,slow=4.4,SNR=12						
	21nm,0.6s						
MRZ	Mangatainoka R	21.19	203	P	P	10 41 14.2	+0.3
MRZ				IAmb	IAmb	10 41 14.9	
	comp=Z,26nm,1.1s						
PPT	Papeete	23.26	85	LR	LR	10 49 07.6	
	comp=Z,189nm,19.0s,baz=286,slow=32						
LTZ	Lake Taylor	24.27	205	P	P	10 41 43.1	-2.5
LTZ				IAmb	IAmb	10 41 53.3	
	comp=Z,19nm,0.8s						
HNR	Honiara	27.79	291	LR	LR	10 52 54.0	
	comp=Z,75nm,21.0s,baz=280,slow=36						
ARMA	Armidale	32.16	247	P	P	10 42 55.7	-0.7
ARMA				IAmb	IAmb	10 43 23.4	
	comp=Z,16nm,1.1s						
CTAO	Charters Tower	37.19	265	P	P	10 43 39.0	-0.8
TOO	Toolangi	38.51	236	P	P	10 43 51.0	+0.2
TOO				IAmb	IAmb	10 44 11.7	
	comp=Z,13nm,1.3s						
TAU	Tasmania Unive	38.75	227	P	P	10 43 54.0	+1.3
PMG	Port Moresby	39.25	282	LR	LR	10 58 02.8	
	comp=Z,100nm,18.1s,baz=316,slow=33						
STKA	Stephens Creek	40.86	246	P	P	10 44 09.6	-0.9
STKA				IAmb	IAmb	10 44 18.0	
	comp=Z,40nm,1.0s						
STKA	Stephens Creek	40.86	246	P	P	10 44 08.7	-1.8
	comp=Z,5.7nm,0.8s,baz=95,slow=11,SNR=7.2						
STKA				LR	LR	11 00 08.5	
	comp=Z,120nm,18.7s,baz=35,slow=35						
	comp=Z,5.7nm,0.8s						
COEN	Coen	41.43	273	P	P	10 44 15.4	+0.1
COEN				IAmb	IAmb	10 44 25.7	
	comp=Z,39nm,1.4s						
BBOO	Buckleboo	45.59	245	P	P	10 44 47.1	-1.5
BBOO				IAmb	IAmb	10 45 03.1	
	comp=Z,30nm,1.4s						
AS31	Alice Springs	48.02	257	P	P	10 45 06.5	-1.4
ASAR	Alice Springs	48.02	257	P	P	10 45 06.3	-1.5
ASAR	Alice Springs	48.02	257	P	P	10 45 06.1	-1.8
	comp=Z,8.0nm,0.8s,baz=102,slow=7.6,SNR=76						
ASAR				LR	LR	11 05 05.3	
	comp=Z,97nm,18.8s,baz=90,slow=36						
	comp=Z,8.0nm,0.8s						
WR8	Warramunga Arr	48.10	262	P	P	10 45 07.0	-1.4
WR8				IAmb	IAmb	10 45 07.6	
	comp=Z,10nm,1.1s						
WB0	Warramunga Arr	48.23	262	P	P	10 45 08.3	-1.2
WB0				IAmb	IAmb	10 45 25.4	
	comp=Z,21nm,1.2s						
WRA	Warramunga Arr	48.25	262	P	P	10 45 07.0	-2.6
	comp=Z,5.8nm,0.8s,baz=100,slow=6.9,SNR=27						
	comp=Z,5.8nm,0.8s						
GUMO	Guam	53.33	307	LR	LR	11 05 44.5	
	comp=Z,30nm,21.1s,baz=90,slow=33						
KNRA	Kununurra	54.39	266	P	P	10 45 55.0	-0.6
FITZ	Fitzroy Crossi	56.68	262	P	P	10 46 12.1	0.0
VNDA	Vanda	57.41	186	P	P	10 46 15.2	-1.2
	comp=Z,0.9nm,0.7s,baz=332,slow=3.6,SNR=5.3						
VNDA				LR	LR	11 10 14.1	
	comp=Z,27nm,18.1s,baz=3.0,slow=35						
	comp=Z,0.9nm,0.7s						
MBWA	Marble Bar	61.37	257	P	P	10 46 44.1	-0.6
NWAO	Narrogin (SRO)	61.38	243	LR	LR	11 12 26.4	
	comp=Z,88nm,18.3s,baz=318,slow=35						
MORW	Morawa	63.01	247	P	P	10 46 55.6	0.0
QSPA	South Pole Qui	68.69	180	P	P	10 47 33.4	+1.7
QSPA				IAmb	IAmb	10 47 48.1	
	comp=Z,5.3nm,1.1s						
QSPA	South Pole Qui	68.69	180	P	P	10 47 32.8	+1.1
	comp=Z,1.7nm,0.8s,baz=25,slow=0.3,SNR=11						
	comp=Z,1.7nm,0.8s						
MJAR	Matsushiro Arr	73.22	321	P	P	10 47 59.7	+0.3
	comp=Z,2.8nm,0.8s,baz=157,slow=5.6,SNR=5.5						
	comp=Z,2.8nm,0.8s						
PETK	Petropavlovsk-	78.16	343	P	P	10 48 28.6	+1.4
	comp=Z,4.3nm,0.8s,baz=110,slow=8.6,SNR=12						
	comp=Z,4.3nm,0.8s						
PMSA	Palmer Station	78.95	156	LR	LR	11 19 04.2	
	comp=Z,41nm,18.3s,baz=210,slow=32						
NVAR	Mina Array Bea	79.11	41	P	P	10 48 35.8	+2.7
	comp=Z,1.3nm,0.7s,baz=222,slow=8.2,SNR=11						
	comp=Z,1.3nm,0.7s						
KSRS	Korea Array	80.10	317	P	P	10 48 39.4	+1.2
	comp=Z,1.6nm,0.8s,baz=141,slow=6.4,SNR=6.5						
	comp=Z,1.6nm,0.8s						
MAW	Mawson	82.00	199	LR	LR	11 24 52.1	
	comp=Z,51nm,18.1s,baz=162,slow=36						
TXAR	Lajitas Array	84.36	56	P	P	10 49 03.2	+2.4
	comp=Z,1.0nm,1.2s,baz=212,slow=4.4,SNR=3.7						
	comp=Z,1.0nm,1.2s						
ANMO	Albuquerque	85.03	50	LR	LR	11 23 22.8	
	comp=Z,51nm,18.0s,baz=352,slow=33						
KLR	Kul'dur	85.26	328	LR	LR	11 22 57.6	
	comp=Z,41nm,20.3s,baz=169,slow=33						
MA2	Magadan	85.69	343	LR	LR	11 23 27.5	
	comp=Z,65nm,20.4s,baz=168,slow=33						
PLCA	Paso Flores	85.89	132	LR	LR	11 18 04.8	
	comp=Z,52nm,20.2s,baz=238,slow=29						
CMIG	Matias Romero	86.36	70	LR	LR	11 19 34.1	
	comp=Z,52nm,20.2s,baz=197,slow=30						
SNAA	Sanae	86.99	177	P	P	10 49 14.0	+0.8
	comp=Z,1.9nm,0.9s,baz=160,slow=5.1,SNR=3.7						
SNAA				LR	LR	11 25 17.2	
	comp=Z,50nm,19.8s,baz=78,slow=34						
	comp=Z,1.9nm,0.9s						
ILAR	Eielson Array	88.38	11	P	P	10 49 21.4	+1.8
	comp=Z,0.6nm,0.5s,baz=209,slow=5.3,SNR=19						
	comp=Z,0.6nm,0.5s						
NNA	Nana	92.16	104	LR	LR	11 20 16.9	
	comp=Z,40nm,22.0s,baz=240,slow=28						
ATAH	Atahualpa	92.55	99	LR	LR	11 24 06.6	
	comp=Z,50nm,18.2s,baz=254,slow=31						
JTS	Las Juntas de	92.75	80	LR	LR	11 22 56.0	
	comp=Z,44nm,20.0s,baz=283,slow=30						
CMAR	Chiang Mai Arr	94.00	288	P	P	10 49 48.0	+1.2
	comp=Z,1.6nm,0.8s,baz=136,slow=3.1,SNR=9.6						
	comp=Z,1.6nm,0.8s						
LPAZ	La Paz	98.20	111	LR	LR	11 26 28.1	
	comp=Z,57nm,18.9s,baz=270,slow=30						
MKAR	Makanchi Array	114.58	313	PKP	PKiKP	10 55 08.7	+0.3
	comp=Z,0.3nm,0.7s,baz=186,slow=1.2,SNR=4.2						
BVAR	Borovoye Array	122.20	320	PKP	PKiKP	10 55 23.4	+0.5
	comp=Z,2.1nm,0.8s,baz=4.1,slow=2.1,SNR=5.1						
AK03	Malin Array Si	145.54	334	PKP	PKiKP	10 56 07.7	-2.5
AKASG	Malin Array Be	145.55	334	PKPbc	PKPab	10 56 06.8	+0.2
	comp=Z,2.0nm,0.5s,baz=40,slow=4.4,SNR=21						
AKBB	Malin Array Si	145.55	334	PKP	PKPab	10 56 07.1	+0.4
AK04	Malin Array Si	145.56	334	PKP	PKPab	10 56 07.0	+0.3
KIEV	Kiev	145.57	334	PKP	PKPab	10 56 07.2	+0.5
AK01	Malin Array Si	145.57	334	PKP	PKPab	10 56 07.4	+0.7
AK22	Malin Array Si	145.57	334	PKP	PKPab	10 56 07.1	+0.4
AK08	Malin Array Si	145.59	334	PKP	PKPab	10 56 07.2	+0.4
AK11	Malin Array Si	145.59	334	PKP	PKPab	10 56 06.9	+0.1
AK02	Malin Array Si	145.60	334	PKP	PKPab	10 56 07.1	+0.3
AK18	Malin Array Si	145.60	334	PKP	PKPab	10 56 07.3	+0.5
RNPP9	Sopachiv	146.27	338	PKP	PKiKP	10 56 09.6	-2.1
LUBAR	Lubar, Ukraine	146.76	334	PKP	PKPab	10 56 09.9	-1.4
CLL	Collm	149.64	351	ePKPbc	PKiKP	10 56 19.0	+0.3
BRTR	Keskin Array B	150.22	314	PKPbc	PKiKP	10 56 21.0	+0.6
	comp=Z,2.6nm,0.8s,baz=126,slow=3.4,SNR=18						
GERES	GERESS Array B	151.93	349	PKPbc	PKiKP	10 56 24.8	+1.2
	comp=Z,0.5nm,0.2s,baz=39,slow=0.9,SNR=7.0						

STR 03 10:51:50.6±0.5**, 43°N**±3°×°±°**, h0**^{km}**, MLv1.0**/7**, Error ellipse: s-maj=0.0km s-min=0.0km az=37.4, preliminary, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYLO	Lourdes	0.04	4	Pg	Pg	10 51 51.4	0.0
PYLO				Sg	Sg	10 51 52.3	+0.3
LABF	Labassere	0.09	96	Pg	Pg	10 51 52.3	-0.1
LABF				Sg	Sg	10 51 54.0	+0.4
VIEF	Viey	0.18	162	Pg	Pg	10 51 54.2	+0.1
VIEF				Sg	Sg	10 51 57.6	+1.1
REYF	Montagne du Re	0.25	273	Pg	Pg	10 51 55.0	-0.4
REYF				Sg	Sg	10 51 59.6	+0.9
ECHI	Chisagues Biel	0.43	155	Pg	Pg	10 51 59.1	+0.2
ECHI				Sg	Sg	10 52 05.1	+0.6
CANF	Canfranc	0.45	229	Sg	Sg	10 52 06.3	+1.2
ATE	Arette	0.48	274	Pg	Pg	10 52 00.3	+0.5
MTLF	Montolieu	1.68	80	Pg	Pg	10 52 27.9	+5.0
MTLF				Sg	Sg	10 52 50.6	+5.9

STR 03 10:51:55.7±0.7**, 45°N**±2°×°±°**, h0**^{km}**, MLv2.0**/9**, Error ellipse: s-maj=0.0km s-min=0.0km az=96.6, preliminary, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEUC	Leucamp	0.38	144	Pg	Pg	10 52 02.4	-0.6
LEUC				Sg	Sg	10 52 07.9	-0.1
FRNF	Fournols	0.39	36	Pg	Pg	10 52 02.7	-0.4
FRNF				Sg	Sg	10 52 08.3	+0.1
LBL	Lubilhac	0.73	77	Pg	Pg	10 52 09.0	-0.7
LBL				Sg	Sg	10 52 20.3	+1.2
CFF	Clermont-Ferra	0.92	41	Pg	Pg	10 52 12.4	-1.1
MONQ	Montcuq	1.02	227	Pg	Pg	10 52 15.0	-0.4
MONQ				Sg	Sg	10 52 27.7	-0.9
MONQ	Montcuq	1.02	227	Pg	Pg	10 52 15.0	-0.3
COLF	Collangettes	1.12	66	Pg	Pg	10 52 16.3	-0.9
COLF				Sg	Sg	10 52 31.7	+0.1
AGO	Saint Agoulin	1.16	32	Pg	Pg	10 52 17.6	-0.4
AGO				Sg	Sg	10 52 33.7	+0.6
LAJAS	L'Hospitalet-d	1.30	147	Pn	Pg	10 52 20.3	-0.5
LAJAS				Sg	Sb	10 52 38.1	-0.4
PLDF	La Plantade	1.32	47	Pn	Pg	10 52 19.8	-1.3
PLDF				Sg	Sg	10 52 38.3	+0.1

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*SJA **03** 11:09:48.3±0.8, 20°.52S×68°.96W, h107^{km}±6^{km}, ML3.2, MW3.5*

*GUC **03** 11:09:49.6±0.9, 20°.50S×69°.01W, h99^{km}±4^{km}, ML3.1*

ISC 03 11:09:51.4±1.6**, 20°.52S**±0°.03×**69°.03W**±0°.08**, h91**^{km}±10^{km}**, n20, σ1^{s}03**/37**, 3C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.40	343	⇓iP	Pn	11 10 05.5	-0.5
PB08				eS	Sn	11 10 17.4	+0.5
PB08				IAML		11 10 18.2	
	comp=E,3μm,0.2s						
PX03	IPOC Station P	0.57	282	eP	Pn	11 10 05.7	-1.3
PX03				eS	Sn	11 10 19.3	+0.6
PX03				IAML		11 10 19.8	
	comp=Z,3μm,0.2s						
PB01	IPOC Station P	0.67	219	⇑iP	Pn	11 10 07.4	-0.6
PB01				eS	Sn	11 10 20.9	+0.7
PB01				IAML		11 10 23.9	
	comp=N,800nm,0.2s						
PB01	IPOC Station P	0.67	219	eP	Pn	11 10 07.3	-0.6
PB01				eS	Sn	11 10 21.4	+1.2
PB01				IAML		11 10 23.6	
	comp=Z,489nm,0.2s						
GO01	Chusmiza	0.86	350	⇓iP	Pn	11 10 09.3	-1.0
GO01				eS	Sn	11 10 24.4	+0.1
GO01	Chusmiza	0.86	350	eP	Pn	11 10 09.2	-1.0
GO01				eS	Sn	11 10 25.1	+0.8
GO01				eS		11 10 26.2	
GO01				IAML		11 10 27.5	
	comp=Z,968nm,0.1s						
PB11	IPOC Station P	0.96	322	⇓iP	Pn	11 10 10.1	-0.9
PB11				eS	Sn	11 10 25.9	+0.3
PB11	IPOC Station P	0.96	322	eP	Pn	11 10 10.0	-0.9
PB11				eS	Sn	11 10 26.1	+0.6
PB11				IAML		11 10 26.3	
	comp=Z,1μm,0.2s						
TA02	Huaiquique	1.06	283	eP	Pn	11 10 10.9	-1.0
TA01	Diego Aracena	1.08	268	⇑iP	Pn	11 10 11.3	-0.8
TA01				eS	Sn	11 10 27.9	+0.3
TA01				IAML		11 10 34.0	
	comp=N,338nm,0.3s						
TA01	Diego Aracena	1.08	268	eP	Pn	11 10 11.5	-0.6
TA01				eS	Sn	11 10 29.6	+1.9
TA01				IAML		11 10 33.4	
	comp=Z,186nm,0.3s						
PB09	IPOC Station P	1.28	189	⇑iP	Pn	11 10 14.2	-0.6
PB09				eS	Sn	11 10 33.2	+1.0
PB09	IPOC Station P	1.28	189	eP	Pn	11 10 13.7	-1.0
PB09				eS	Sn	11 10 34.4	+2.1
PB09				IAML		11 10 34.4	
	comp=Z,222nm,0.5s						
PB03	IPOC Station P	1.66	204	eP	Pn	11 10 18.5	-1.0
PB03				IAML		11 10 49.2	
	comp=E,150nm,0.5s						
PB03	IPOC Station P	1.66	204	eP	Pn	11 10 18.6	-0.9
PB03				eS	Sn	11 10 41.0	+0.3
PB03				IAML		11 10 47.7	
	comp=Z,168nm,0.3s						
PB16	IPOC Station P	2.22	348	eP	Pn	11 10 27.0	-0.2
PB16				eS	Sn	11 10 55.2	+0.8
PB16	IPOC Station P	2.22	348	eP	Pn	11 10 26.4	-0.8
PB16				eS	Sn	11 10 56.6	+2.2
PB16				IAML		11 10 58.8	
	comp=Z,61nm,0.4s						
PB06	IPOC Station P	2.23	193	eP	Pn	11 10 26.4	-0.5
PB06				IAML		11 10 59.5	
	comp=N,102nm,0.5s						
PB06	IPOC Station P	2.23	193	eP	Pn	11 10 26.2	-0.7
PB06				eS	Sn	11 10 53.2	-0.7
PB06				IAML		11 11 01.1	
	comp=Z,131nm,0.8s						
PB05	IPOC Station P	2.56	205	eP	Pn	11 10 30.2	-1.0
PB05				eS	Sn	11 11 03.2	+1.5
PB05				IAML		11 11 12.8	
	comp=Z,81nm,0.5s						

IDC 03 11:21:22.9±2.2**, 18°.12S×178°.11W, h585**^{km}±25^{km}**, mb2.9**/4**, mbtmp3.9**/5**, Error ellipse: s-maj=42.8km s-min=26.7km az=178.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.67	275	P	P	11 22 45.1	0.0
	29nm,0.6s,baz=130,slow=16,SNR=3.5						
WRA	Warramunga Arr	44.87	260	P	P	11 28 46.3	-0.3
	0.8nm,0.5s,baz=95,slow=7.4,SNR=21						
	0.8nm,0.5s						
ASAR	Alice Springs	45.00	254	P	P	11 28 47.5	0.0
	3.3nm,0.7s,baz=92,slow=8.2,SNR=56						
	3.3nm,0.7s						
QSPA	South Pole Qui	71.94	180	P	P	11 31 47.8	+0.1
	1.3nm,1.0s,baz=63,slow=14,SNR=8.4						
	1.3nm,1.0s						
TXAR	Lajitas Array	85.87	58	P	P	11 33 01.9	-0.1
	0.2nm,0.7s,baz=241,slow=5.7,SNR=3.7						
	0.2nm,0.7s						

DNK 03 11:22:17.5±1.6**, 56°.18N×14°.41E, h0**^{km}**, ML2.5, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DEL	Delary	0.42	315	e	Pg	11 22 24.3	-1.3
	baz=131,slow=22						
DEL				P	Pb	11 22 25.0	-2.8
DEL				i P	Pn	11 22 25.1	-5.7
DEL				i S	Sg	11 22 30.5	-0.6
DEL				S	Sb	11 22 30.6	-4.1
DEL				IAML		11 22 46.6	
	comp=Z,218nm,4.8s						
LUNU	Lund	0.77	225	P	Pg	11 22 31.3	-1.0
BJUU	Bjuv	0.78	263	i P	Pg	11 22 31.0	-1.5
BJUU				P	Pb	11 22 31.4	-2.6
BJUU				S	Sg	11 22 41.5	-1.1
BJUU				eS	Sb	11 22 46.2	+1.1
BLEU	Blekinge	0.79	80	P	Pg	11 22 32.9	+0.2
BLEU				eS	Sn	11 22 48.1	-0.3
VXJU	Vaexsjoe	0.80	21	P	Pg	11 22 32.7	-0.1
VXJU				S	Sg	11 22 43.5	+0.3
FABU	Falkenberg	1.25	312	P	Pg	11 22 39.8	-1.6
OSKU	Oskarshamn	1.38	42	P	Pg	11 22 43.0	-1.0
EKSU	Eksjoe	1.48	19	P	Pn	11 22 44.7	-0.7
BORU	Boraas	1.72	329	P	Pn	11 22 47.9	-0.7
ONAU	Onsala	1.84	313	P	Pn	11 22 50.0	-0.3

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*SNET **03** 11:24:54.3±1.2, 12°.99N×89°.53W, h39^{km}, ML3.2*

*CATAC **03** 11:24:54.3±0.6, 13°N±3°×8°9W±°, h23^{km}±3^{km}, M3.2/18, MLv3.2/18, Error ellipse: s-maj=6.7km s-min=4.0km az=31.0, confirmed*

*GCG **03** 11:24:56.2±0.3, 13°.16N×89°.56W, h52^{km}±6^{km}, MD3.9*

ISC 03 11:24:52.4±2.2**, 12°.9N**±0°.1×**89°.54W**±0°.07**, h21**^{km}±4^{km}**, n53, σ0^{s}61**/61**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	0.74	7	eP	Pn	11 25 07.7	-0.2
JAYA				eS	Sb	11 25 16.7	+0.3
JAYA	Jayaque - finc	0.74	7	eP	Pn	11 25 07.6	-0.2
JAYA				eS	Sb	11 25 16.4	0.0
JAYA	Jayaque - finc	0.74	7	P	Pn	11 25 07.8	0.0
JAYA	Jayaque - finc	0.74	7	S	Sb	11 25 15.7	-0.7
LOMA	Loma Larga	0.81	27	eP	Pn	11 25 08.9	+0.2
LOMA				eS	Sn	11 25 19.4	-0.8
LOMA	Loma Larga	0.81	27	P	Pn	11 25 08.6	-0.1
LOMA	Loma Larga	0.81	27	S	Sb	11 25 18.6	+0.2
PMON	Piamonte	0.82	16	P	Pn	11 25 08.7	-0.2
PMON	Piamonte	0.82	16	S	Sn	11 25 20.0	-0.5
LFRS	El Faro	0.84	34	eP	Pn	11 25 09.3	+0.1
UEES	Universidad Ev	0.85	20	P	Pn	11 25 09.4	+0.2
UEES	Universidad Ev	0.85	20	S	Sb	11 25 19.7	+0.2
BOQS	Boqueron	0.85	18	eP	Pn	11 25 09.4	0.0
UDBS	Universidad Do	0.88	25	P	Pn	11 25 10.0	+0.4
UDBS	Universidad Do	0.88	25	S	Sb	11 25 20.8	+0.5
CEVE	Cerro Verde	0.91	355	eP	Pn	11 25 10.5	+0.3
CEVE				eS	Sn	11 25 22.2	-0.6
CEVE	Cerro Verde	0.91	355	P	Pn	11 25 10.8	+0.6
COEG	Centro de Oper	0.95	43	eP	Pn	11 25 10.7	+0.1
COEG				eS	Sb	11 25 22.4	0.0
COEG	Centro de Oper	0.95	43	P	Pn	11 25 10.7	+0.1
TECO	Alcaldia de Te	0.96	50	P	Pn	11 25 11.0	+0.2
TECO	Alcaldia de Te	0.96	50	S	Sb	11 25 22.8	+0.1
PAVA	Las Pavas	0.98	37	P	Pn	11 25 11.6	+0.4
PAVA	Las Pavas	0.98	37	S	Sn	11 25 24.2	-0.3
NUBE	Las Nubes	1.00	347	eP	Pb	11 25 11.4	+0.2
NUBE				eS	Sb	11 25 23.5	-0.6
NUBE	Las Nubes	1.00	347	eP	Pb	11 25 11.4	+0.2
NUBE				i S	Sb	11 25 23.4	-0.6
NUBE	Las Nubes	1.00	347	P	Pb	11 25 11.2	0.0
UESV	Universidad de	1.02	46	P	Pn	11 25 11.9	+0.2
UESV	Universidad de	1.02	46	S	Sb	11 25 24.2	-0.3
ALJI	Alcalda de J	1.03	67	P	Pb	11 25 11.4	-0.2
UNIC	Universidad Ca	1.06	360	P	Pn	11 25 12.4	+0.3
UNIC	Universidad Ca	1.06	360	S	Sb	11 25 25.6	+0.1
SCLA	Alcaldia de Sa	1.11	45	P	Pb	11 25 13.6	+0.6
SCLA	Alcaldia de Sa	1.11	45	S	Sn	11 25 29.3	+1.8
SLOZ	Alcaldia de Sa	1.12	348	P	Pb	11 25 13.9	+0.7
SLOZ	Alcaldia de Sa	1.12	348	S	Sn	11 25 28.3	+0.4
PQSS	Presa 15 de Se	1.19	54	P	Pn	11 25 14.1	+0.3
PQSS	Presa 15 de Se	1.19	54	S	Sb	11 25 28.7	-0.5
PACA	Pacayal	1.31	65	eP	Pb	11 25 16.9	+0.5
PACA				eS	Sb	11 25 33.0	+0.2
PACA	Pacayal	1.31	65	P	Pb	11 25 17.2	+0.8
PACA	Pacayal	1.31	65	S	Sn	11 25 32.7	+0.2
RANC	El Ranchito	1.32	67	P	Pn	11 25 14.6	-1.3
RANC	El Ranchito	1.32	67	S	Sn	11 25 31.3	-1.7
BLLM	Bellamira	1.37	68	eP	Pb	11 25 17.7	+0.2
CNRM	Centro Naciona	1.45	67	P	Pn	11 25 15.9	-1.5
MTO3	Montecristo	1.48	7	i P	Pn	11 25 18.1	0.0
MTO3	Montecristo	1.48	7	P	Pn	11 25 18.3	+0.2
MTO3	Montecristo	1.48	7	S	Sn	11 25 35.7	-1.2
ESQI	Esquipulas	1.64	7	P	Pn	11 25 20.7	+0.5
ESQI	Esquipulas	1.64	7	S	Sn	11 25 39.9	-0.9
CNCH	Conchagua	1.70	78	P	Pn	11 25 22.2	+1.1
CNCH	Conchagua	1.70	78	S	Sb	11 25 43.4	-0.7
INTHN	La Esperanza I	1.97	45	P	Pn	11 25 25.3	+0.5
CHOHN	Orocuina	2.39	76	P	Pn	11 25 31.3	+0.8

IDC 03 11:43:42.0±2.0**, 2°.75N×128°.33E, h0**^{km}**, mb3.5**/4**, mbtmp3.5**/4**, Error ellipse: s-maj=156.8km s-min=22.2km az=68.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.31	166	P	P	11 48 52.1	+0.2
	0.3nm,0.3s,baz=344,slow=10,SNR=6.3						
	0.3nm,0.3s						
ASAR	Alice Springs	26.81	169	P	P	11 49 23.6	-0.6
	0.3nm,0.6s,baz=358,slow=7.6,SNR=9.5						
	0.3nm,0.6s						
MKAR	Makanchi Array	59.27	325	P	P	11 53 46.5	+1.0
	0.3nm,0.4s,baz=120,slow=8.5,SNR=3.7						
	0.3nm,0.4s						
KURBB	Kurchatov Arra	63.42	327	P	P	11 54 13.1	-0.4
	0.4nm,0.4s,baz=126,slow=6.2,SNR=5.6						
	0.4nm,0.4s						

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*IDC **03** 11:48:54.7±3.1, 43°.17N×130°.04E, h0^{km}, mbtmp2.7/1, ML2.6/1, Error ellipse: s-maj=28.8km s-min=19.2km az=125.0*

*SKHL **03** 11:48:55.2±0.5, 43°.20N×129°.90E, h12^{km}±5^{km}*

ISC 03 11:48:58.0±1.6**, 43°.01N**±0°.06×**130°.09E**±0°.09**, h10**^{km}**, n7, σ3^{s}25**/9**, Priamurye-Northeastern China border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSTR	Posyet	0.64	124	ePg	Pg	11 49 10.7	+0.3
PSTR				AMB	AMB	11 49 11.4	
	40nm,0.2s						
PSTR				eSg	Sb	11 49 21.6	+1.4
PSTR				A	A	11 49 23.3	
	110nm,0.3s						
GRTR	Gornotajezhnoj	1.66	65	ePn	Pn	11 49 25.4	-1.8
GRTR				ePg	Pb	11 49 26.5	-2.2
GRTR				AMB	AMB	11 49 26.7	
	40nm,0.2s						
GRTR				eSg	Sn	11 49 48.9	+0.4
GRTR				A	A	11 49 52.0	
	30nm,0.2s						
I45RU	USSURIYSK INFR	1.81	48	I	I	12 00 00.0	
	baz=234,slow=321,SNR=4.0						
USRK	Ussuriysk Ar.	1.82	49	Pn	Pn	11 49 26.6	-2.8
	7.0nm,0.3s,baz=236,slow=15,SNR=120						
USRK				Lg	Lg	11 49 49.9	

	10.0nm,0.3s,baz=236,slow=29,SNR=18						
TEY	**Ternei**	**5.11**	**64**	*e*Sg	**Sb**	**11 51 34.7**	**+5.8**
KSRS	**Korea Array**	**5.79**	**197**	Pn	**Pn**	**11 50 24.0**	**0.0**
	0.2nm,0.3s,baz=12,slow=12,SNR=2.0						
	0.3nm,0.4s						
KLR	**Kul'dur**	**6.32**	**10**	*e*Sg	**Sb**	**11 52 07.3**	**+3.5**

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*IDC **03** 12:07:01.5±1.9, 37°.38N×142°.24E, h0km, mb3.5/3, mbtmp3.5/6, ML3.1/3, Error ellipse: s-maj=35.2km s-min=28.4km az=91.0*

*JMA **03** 12:07:06.7±0.2, 37°.4N±0°.4×141°.9E±0°.9, h35km±3km, MV3.9/40, E OFF FUKUSHIMA PREF*

ISC 03 12:07:04.7±3.3**, 37°.44N**±0°.05×**142°.02E**±0°.07**, h14**km±22km**, n24, σ1s.25**/28**, mb3.5**/3**, 4D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.92**	**266**	*i* P	**Pb**	**12 07 22.4**	**0.0**
JFK				S	**Sb**	**12 07 33.2**	**-1.3**
JMST	**Minamisoumatoc**	**0.94**	**288**	*i* P	**Pb**	**12 07 23.0**	**+0.1**
JMST				*e*S	**Sb**	**12 07 34.2**	**-1.0**
JIKH	**Ishinomakikobu**	**0.97**	**333**	⇓*i*P	**Pn**	**12 07 23.9**	**-0.1**
JIKH				⇓S	**Sb**	**12 07 35.8**	**-0.3**
ONAJ	**Iwakimizuishiy**	**1.03**	**251**	*i* P	**Pb**	**12 07 23.9**	**-0.6**
ONAJ				S	**Sb**	**12 07 35.9**	**-2.0**
JMM	**Marumori**	**1.06**	**294**	*i* P	**Pn**	**12 07 24.9**	**-0.3**
JMM				*e*S	**Sb**	**12 07 37.5**	**-1.2**
JIO	**Ouri**	**1.14**	**332**	⇓*i*P	**Pb**	**12 07 26.5**	**+0.3**
JIO				⇓S	**Sb**	**12 07 39.9**	**-1.0**
JOTO	**OTAMA OYAMA**	**1.35**	**275**	*i* P	**Pb**	**12 07 29.6**	**-0.2**
JOTO				S	**Sn**	**12 07 45.9**	**-1.0**
JOU	**Okura**	**1.41**	**311**	*i* P	**Pb**	**12 07 31.0**	**+0.1**
JOU				S	**Sn**	**12 07 48.1**	**-0.5**
JMK	**Ichinoseki**	**1.63**	**338**	P	**Pb**	**12 07 33.9**	**-0.7**
JYS	**Shirataka**	**1.73**	**297**	P	**Pb**	**12 07 35.9**	**-0.4**
JYS				S	**Sn**	**12 07 57.4**	**+1.0**
JFY	**Yanaizu**	**1.84**	**270**	P	**Pn**	**12 07 36.4**	**+0.4**
JYK	**Kaneyama**	**1.97**	**319**	P	**Pn**	**12 07 38.7**	**+1.0**
MJAR	**Matsushiro Arr**	**3.18**	**255**	Pn	**Pn**	**12 07 55.0**	**+0.7**
	0.9nm,0.3s,baz=78,slow=13,SNR=12						
MJAR				Sn	**Sn**	**12 08 35.6**	**+3.5**
	0.7nm,0.3s,baz=74,slow=14,SNR=5.6						
	3.6nm,0.3s						
ASAJ	**Asahikawa**	**6.68**	**4**	Pn	**Pn**	**12 08 43.2**	**+0.8**
	0.4nm,0.3s,baz=222,slow=13,SNR=5.8						
	1.0nm,0.3s						
KSRS	**Korea Array**	**11.21**	**274**	Pn	**Pn**	**12 09 47.5**	**+3.0**
	0.2nm,0.3s,baz=86,slow=15,SNR=4.2						
	1.1nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**27.95**	**122**	T	T	12 42 09.7	
	baz=315,slow=75,SNR=27						
H11N1	**WAKE ISLAND Hy**	**27.96**	**122**	T	T	12 42 08.7	
	baz=315,slow=75,SNR=22						
H11N3	**WAKE ISLAND Hy**	**27.97**	**122**	T	T	12 42 15.5	
	baz=315,slow=75,SNR=26						
H11S1	**WAKE ISLAND Hy**	**28.68**	**124**	T	T	12 43 23.8	
	baz=316,slow=76,SNR=15						
H11S3	**WAKE ISLAND Hy**	**28.68**	**124**	T	T	12 43 19.1	
	baz=316,slow=76,SNR=15						
H11S2	**WAKE ISLAND Hy**	**28.70**	**124**	T	T	12 43 19.2	
	baz=316,slow=76,SNR=12						
MKAR	**Makanchi Array**	**44.31**	**302**	P	**P**	**12 15 13.8**	**-0.4**
	0.5nm,0.7s,baz=88,slow=10,SNR=5.2						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**46.13**	**308**	P	**P**	**12 15 28.0**	**-0.5**
	0.5nm,0.5s,baz=82,slow=8.0,SNR=6.1						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**57.53**	**189**	P	**P**	**12 16 52.7**	**-1.1**
	0.2nm,0.4s,baz=7.8,slow=7.7,SNR=4.5						
	0.2nm,0.4s						

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*NEIC **03** 12:21:26.7±1.1, 4°.2N±0°.2×123°.1E±0°.2, h563km±13km, mb4.8/10, Error ellipse: s-maj=40.4km s-min=16.6km az=55.0*

*IDC **03** 12:21:27.1±2.8, 4°.39N×123°.50E, h576km±31km, mb3.2/8, mbtmp4.1/8, Error ellipse: s-maj=266.2km s-min=12.3km az=64.0*

ISC 03 12:21:25.3±0.7**, 4°.3N**±0°.1×**123°.1E**±0°.2**, h550**km**, n28, σ1s.12**/30**, mb4.0**/13**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOLI2	**Tolitoli**	**3.90**	**216**	P	**P**	**12 22 47.5**	**+1.0**
LUWI	**Luwuk**	**5.29**	**183**	P	**P**	**12 22 58.6**	**+0.9**
TNTI	**Ternate**	**5.51**	**129**	P	**P**	**12 23 01.3**	**+1.7**
KKM	**Kota Kinabalu**	**7.07**	**285**	P	**P**	**12 23 15.1**	**+0.9**
TATO	**Taipei**	**20.64**	**356**	S	**S**	**12 28 42.7**	**-0.2**
WB0	**Warramunga Arr**	**26.35**	**155**	P	**P**	**12 26 17.4**	**-0.7**
WRAB	**Tennant Creek**	**26.48**	**156**	P	**P**	**12 26 17.2**	**-2.0**
WRA	**Warramunga Arr**	**26.48**	**156**	P	**P**	**12 26 17.8**	**-1.5**
WRA	**Warramunga Arr**	**26.48**	**156**	P	**P**	**12 26 18.8**	**-0.5**
	2.1nm,0.4s,baz=336,slow=9.6,SNR=31						
	2.1nm,0.4s						
WR8	**Warramunga Arr**	**26.56**	**155**	P	**P**	**12 26 19.3**	**-0.7**
AS31	**Alice Springs**	**29.71**	**160**	P	**P**	**12 26 47.3**	**-0.1**
ASAR	**Alice Springs**	**29.71**	**160**	P	**P**	**12 26 47.4**	**-0.1**
	1.3nm,0.5s,baz=341,slow=7.1,SNR=62						
ASAR				ScP	**ScP**	**12 32 20.9**	**-3.4**
	0.7nm,0.8s,baz=342,slow=3.1,SNR=8.0						
	1.3nm,0.5s						
BBOO	**Buckleboo**	**38.88**	**162**	P	**P**	**12 28 04.0**	**0.0**
BBOO				IAmb	IAmb	12 28 33.9	
	comp=Z,60nm,1.6s						
STKA	**Stephens Creek**	**40.04**	**155**	P	**P**	**12 28 13.1**	**-0.1**
STKA				IAmb	IAmb	12 29 18.3	
	comp=Z,85nm,1.6s						
STKA	**Stephens Creek**	**40.04**	**155**	P	**P**	**12 28 13.5**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=340,slow=12,SNR=1.5						
	comp=Z,1.3nm,0.7s						
EVN	**Everest**	**41.78**	**308**	P	**P**	**12 28 27.8**	**-0.1**
EVN				IAmb	IAmb	12 28 29.6	
	comp=Z,3.4nm,0.7s						
CAN	**Canberra**	**46.30**	**150**	P	**P**	**12 29 03.5**	**+1.5**
CAN				IAmb	IAmb	12 29 17.7	
	comp=Z,86nm,1.6s						
MK31	**Makanchi Array**	**55.08**	**327**	P	**P**	**12 30 06.5**	**+0.9**
MKAR	**Makanchi Array**	**55.08**	**327**	P	**P**	**12 30 06.2**	**+0.6**
MKAR	**Makanchi Array**	**55.08**	**327**	P	**P**	**12 30 06.6**	**+1.0**
	comp=Z,1.7nm,0.3s,baz=125,slow=7.6,SNR=31						
MKAR				PcP	**PcP**	**12 30 58.2**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=127,slow=4.2,SNR=6.0						
	comp=Z,1.7nm,0.3s						
ZALV	**Zalesovo Beam**	**58.50**	**335**	P	**P**	**12 30 29.7**	**+0.8**
	comp=Z,0.9nm,0.5s,baz=119,slow=5.1,SNR=2.6						
	comp=Z,0.9nm,0.5s						
KURBB	**Kurchatov Arra**	**59.36**	**329**	P	**P**	**12 30 35.2**	**+0.5**
	comp=Z,1.8nm,0.7s,baz=133,slow=6.5,SNR=18						
	comp=Z,1.8nm,0.7s						
KURK	**Kurchatov**	**59.36**	**329**	P	**P**	**12 30 35.3**	**+0.5**
KURK				IAmb	IAmb	12 30 35.7	
	comp=Z,3.8nm,0.5s						
BVAR	**Borovoye Array**	**64.91**	**328**	P	**P**	**12 31 10.9**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=94,slow=5.8,SNR=2.3						
	comp=Z,0.5nm,0.4s						
FINES	**FINESS Array B**	**89.63**	**332**	P	**P**	**12 33 23.4**	**-1.1**
	comp=Z,2.1nm,1.0s,baz=45,slow=7.2,SNR=3.7						
	comp=Z,2.1nm,1.0s						
NC405	**NORSAR Array S**	**96.42**	**333**		**P**	**12 33 55.2**	**-0.3**
NC405				IAmb	IAmb	12 33 57.4	
	comp=Z,30nm,1.0s						
NC303	**NORSAR Array S**	**96.53**	**333**	P	**P**	**12 33 56.5**	**+0.5**
NC204	**NORSAR Array S**	**96.79**	**333**		**P**	**12 33 55.9**	**-1.4**

IDC 03 12:39:12.8±12.0**, 5°.77S**×**128°.93E, h273**km±140km**, mb2.9**/2**, mbtmp3.6**/5**, Error ellipse: s-maj=82.2km s-min=46.8km az=42.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.67**	**194**	P	Pn	12 42 04.4	+0.3
	4.3nm,0.9s,baz=15,slow=7.7,SNR=11						
FITZ				S	S	12 44 23.2	-1.7
	1.5nm,0.3s,baz=220,slow=15,SNR=1.7						
WRA	**Warramunga Arr**	**15.04**	**160**	P	P	12 42 32.0	+0.2
	1.2nm,1.0s,baz=340,slow=12,SNR=4.9						
ASAR	**Alice Springs**	**18.43**	**165**	P	P	12 43 08.9	+0.2
	0.4nm,0.4s,baz=346,slow=11,SNR=9.0						
MKAR	**Makanchi Array**	**66.62**	**327**	P	P	12 49 34.2	0.0
	0.3nm,0.3s,baz=114,slow=7.5,SNR=4.3						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**70.92**	**329**	P	P	12 50 00.5	0.0
	0.2nm,0.4s,baz=137,slow=5.8,SNR=2.2						
	0.2nm,0.4s						

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*SNET **03** 12:43:47.1±0.6, 13°.24N×89°.42W, h52km±5km, ML3.0*

*GCG **03** 12:43:47.6±0.3, 13°.43N×89°.36W, h63km±34km, MD3.8, ML3.3*

*CATAC **03** 12:43:48.0±1.0, 13°N±7°×8°9W±°, h24km±5km, M2.9/7, MLv2.9/7, Error ellipse: s-maj=16.7km s-min=5.9km az=30.6, confirmed*

ISC 03 12:43:48.8±1.8**, 13°.4N**±0°.1×**89°.33W**±0°.06**, h66**km**, n25, σ2s.43**/31**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.13**	**4**	*e*P	**Pn**	**12 43 56.1**	**-2.5**
LALI				*e*S	**Sn**	**12 44 03.0**	**-2.8**
JAYA	**Jayaque - finc**	**0.32**	**339**	*e*P	**Pn**	**12 43 57.5**	**-2.4**
JAYA				IAML		12 44 07.1	
	comp=Z,567nm,0.2s						
JAYA	**Jayaque - finc**	**0.32**	**339**	*i* P	**Pn**	**12 43 57.5**	**-2.4**
JAYA	**Jayaque - finc**	**0.32**	**339**	P	**Pn**	**12 43 57.5**	**-2.4**
PMON	**Piamonte**	**0.36**	**3**	*e*P	**Pn**	**12 43 58.4**	**-1.7**
PMON				*e*S	**Sn**	**12 44 07.7**	**-0.6**
PMON	**Piamonte**	**0.36**	**3**	P	**Pn**	**12 43 58.4**	**-1.7**
LFRS	**El Faro**	**0.38**	**44**	*e*P	**Pn**	**12 43 59.0**	**-1.2**
LFRS				*e*S	**Sn**	**12 44 08.2**	**-0.4**
BOQS	**Boqueron**	**0.38**	**8**	*e*P	**Pn**	**12 43 59.2**	**-1.3**
COEG	**Centro de Oper**	**0.51**	**59**	P	**Pn**	**12 44 00.3**	**-1.2**
PAVA	**Las Pavas**	**0.52**	**47**	P	**Pn**	**12 44 01.2**	**-0.5**
CEVE	**Cerro Verde**	**0.55**	**329**	*e*P	**Pn**	**12 44 00.3**	**-1.7**
CEVE				IAML		12 44 12.4	
	comp=Z,920nm,0.2s						
CEVE	**Cerro Verde**	**0.55**	**329**	P	**Pn**	**12 44 00.1**	**-1.9**
CEVE	**Cerro Verde**	**0.55**	**329**	S	**Sn**	**12 44 11.1**	**-0.6**
TECO	**Alcaldia de Te**	**0.57**	**71**	*e*P	**Pn**	**12 44 00.5**	**-1.4**
NUBE	**Las Nubes**	**0.70**	**321**	*e*P	**Pn**	**12 44 01.7**	**-1.8**
NUBE				*e*S	**Sn**	**12 44 12.7**	**-1.7**
NUBE	**Las Nubes**	**0.70**	**321**	*i* P	**Pn**	**12 44 01.8**	**-1.8**
NUBE				*e*S	**Sn**	**12 44 12.6**	**-1.7**
NUBE	**Las Nubes**	**0.70**	**321**	P	**Pn**	**12 44 01.4**	**-2.1**
PQSS	**Presa 15 de Se**	**0.80**	**70**	P	**Pn**	**12 44 04.1**	**-0.4**
PQSS	**Presa 15 de Se**	**0.80**	**70**	S	**Sn**	**12 44 17.0**	**+0.8**
PACA	**Pacayal**	**0.99**	**83**	*e*P	**Pn**	**12 44 06.9**	**-0.1**
PACA	**Pacayal**	**0.99**	**83**	P	**Pn**	**12 44 09.9**	**+2.8**
PACA	**Pacayal**	**0.99**	**83**	S	**Sn**	**12 44 22.3**	**+1.7**
MTO3	**Montecristo**	**1.04**	**358**	P	**Pn**	**12 44 07.5**	**-0.3**
MTO3	**Montecristo**	**1.04**	**358**	S	**Sn**	**12 44 23.2**	**+1.3**
FG16	**Alotenango, Sa**	**1.47**	**309**	*i* P	**Pn**	**12 44 16.8**	**+3.4**
FG16				*i* S	**Sn**	**12 44 40.3**	**+8.4**
FG16				IAML		12 44 50.4	
	comp=E,414nm,0.3s						

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*NEIC **03** 12:46:39.6±0.8, 35°.26N±0°.01×97°.759W±0°.009, h5km±2km, Error ellipse: s-maj=2.0km s-min=0.5km az=150.0*

NEIC 03 12:46:39.5±0.9**, 35°.26N**±0°.01×**97°.75W**±0°.01**, h5**km±2km**, mb_Lg2.4**/7**, ML2.1**/34**, ML2.2**/10**, Error ellipse: s-maj=1.9km s-min=1.7km az=156.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCOK	**Bluff Creek, N**	**0.41**	**16**		Pg	12 46 48.3	+0.8
BCOK					Sg	12 46 54.0	+1.0
OK029	**Liberty Lake**	**0.59**	**24**		Pg	12 46 51.3	+0.4
OK029					Sg	12 46 59.5	+0.9
OK029				IAML		12 47 05.3	
	76nm,0.5s						
OK029				IAML		12 47 08.2	
	70nm,0.4s						
X34A	**Smith Ranch, M**	**0.66**	**186**		Pg	12 46 52.8	+0.6
X34A					Sb	12 47 02.7	-0.3
X34A				IAML		12 47 03.3	
	comp=N,92nm,0.4s						
WMOK	**Wichita Mounta**	**0.99**	**239**		Pg	12 46 57.6	-1.0
OK052	**Battle Ridge R**	**1.07**	**46**		Pg	12 46 59.9	-0.1
OK052					Sg	12 47 14.2	+0.4
OK052				IAML		12 47 19.2	
	comp=N,71nm,0.3s						
DEOK	**Depew**	**1.18**	**60**		Pg	12 47 01.9	-0.2
DEOK					Sg	12 47 17.4	0.0
DEOK				IAML		12 47 25.1	
	comp=N,33nm,0.3s						
DEOK				IAML		12 47 27.5	
	comp=E,33nm,0.3s						
QUOK	**Quay**	**1.25**	**43**		Pg	12 47 02.7	-0.7
QUOK					Sb	12 47 19.9	0.0
CROK	**Carrier**	**1.26**	**351**		Pg	12 47 02.8	-0.8
CROK					Sb	12 47 20.2	-0.1
OK051	**E0350 and S346**	**1.45**	**31**		Pn	12 47 06.1	-0.4
OK038	**West end E0370**	**1.46**	**327**		Pn	12 47 06.2	-0.4
GC02	**Grant County #**	**1.59**	**357**		Pn	12 47 08.3	-0.1
NOKA	**Waynoka**	**1.67**	**325**		Pn	12 47 09.6	+0.1
T35A	**Sooner Cattle**	**1.94**	**31**		Pn	12 47 12.9	-0.2
FW03	**Perrin-Whitt E**	**2.23**	**187**	IAmb_Lg		12 47 55.9	
	comp=Z,8.8nm,0.7s						
SN07	**Snyder 07**	**3.38**	**231**	IAmb_Lg		12 48 33.5	
	comp=Z,2.5nm,0.7s						
JCT	**Junction City**	**5.07**	**200**	IAmb_Lg		12 49 31.8	
	comp=Z,4.4nm,0.8s						
MLDN	**Muldoon**	**5.49**	**174**	IAmb_Lg		12 49 36.2	
	comp=Z,17nm,0.9s						
N41A	**Harden Midland**	**7.70**	**43**	IAmb_Lg		12 50 48.2	
	comp=Z,14nm,0.9s						

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*SJA **03** 12:52:36.6±0.6, 21°.98S×68°.64W, h135km, ML3.7, MW3.6*

*GUC **03** 12:52:37.5±0.8, 21°.94S×68°.68W, h136km±3km, ML3.7*

ISC 03 12:52:37.4±1.4**, 21°.98S**±0°.03×**68°.66W**±0°.04**, h130**km±9km**, n32, σ1s.44**/58**, 7C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.57**	**289**	⇑*e*P	**Pn**	**12 52 57.2**	**+0.1**
PB09				*e*S	**Sn**	**12 53 12.3**	**+0.4**
PB09	**IPOC Station P**	**0.57**	**289**	*e*P	**Pn**	**12 52 57.2**	**+0.1**
PB09				*e*S	**Sn**	**12 53 06.4**	**-5.5**
PB09				IAML		12 53 13.6	
	comp=Z,840nm,0.2s						
PB03	**IPOC Station P**	**1.01**	**266**	⇑*e*P	**Pn**	**12 53 00.9**	**+0.3**
PB03				*e*S	**Sn**	**12 53 18.6**	**+0.4**
PB03				IAML		12 53 20.0	
	comp=E,2μm,0.1s						
PB03	**IPOC Station P**	**1.01**	**266**	*e*P	**Pn**	**12 53 00.9**	**+0.3**
PB03				*e*S	**Sn**	**12 53 19.2**	**+1.0**
PB03				IAML		12 53 19.9	
	comp=Z,2μm,0.1s						
AF01	**San Pedro de A**	**1.06**	**155**	*e*P	**Pn**	**12 53 01.5**	**+0.3**
AF01				*e*S	**Sn**	**12 53 20.1**	**+0.8**
AF01	**San Pedro de A**	**1.06**	**155**	*e*P	**Pn**	**12 53 01.5**	**+0.3**
AF01				*e*S	**Sn**	**12 53 20.0**	**+0.6**
AF01				IAML		12 53 42.7	
	comp=Z,639nm,1.0s						
PB06	**IPOC Station P**	**1.11**	**229**	⇑*e*P	**Pn**	**12 53 02.2**	**+0.7**
PB06				*e*S	**Sn**	**12 53 20.5**	**+0.7**
PB06				IAML		12 53 21.7	
	comp=N,2μm,0.4s						
PB06	**IPOC Station P**	**1.11**	**229**	*e*P	**Pn**	**12 53 02.2**	**+0.7**
PB06				*e*S	**Sn**	**12 53 21.1**	**+1.3**
PB06				IAML		12 53 21.7	
	comp=Z,1μm,0.3s						
PB01	**IPOC Station P**	**1.21**	**320**	⇑*e*P	**Pn**	**12 53 02.2**	**-0.2**
PB01				*e*S	**Sn**	**12 53 21.3**	**-0.2**
PB01				IAML		12 53 23.0	
	comp=N,2μm,0.2s						
PB01	**IPOC Station P**	**1.21**	**320**	*e*P	**Pn**	**12 53 02.2**	**-0.2**
PB01				*e*S	**Sn**	**12 53 22.4**	**+0.9**
PB01				IAML		12 53 23.7	
	comp=Z,1μm,0.1s						
PB05	**IPOC Station P**	**1.67**	**238**	⇑*e*P	**Pn**	**12 53 08.1**	**+0.6**
PB05				*e*S	**Sn**	**12 53 31.0**	**+0.5**
PB05				IAML		12 53 36.2	
	comp=E,467nm,0.4s						
PB05	**IPOC Station P**	**1.67**	**238**	*e*P	**Pn**	**12 53 08.2**	**+0.6**
PB05				*e*S	**Sn**	**12 53 31.5**	**+0.9**
PB05				IAML		12 53 32.5	
	comp=Z,576nm,0.4s						
PX03	**IPOC Station P**	**1.81**	**330**	*e*P	**Pn**	**12 53 08.4**	**-0.9**
PX03				*e*S	**Sn**	**12 53 32.8**	**-0.7**
PB08	**IPOC Station P**	**1.89**	**346**	⇑*e*P	**Pn**	**12 53 10.8**	**+0.4**
PB08				*e*S	**Sn**	**12 53 35.4**	**-0.2**
PB08				IAML		12 53 37.5	
	comp=E,857nm,0.2s						
TA01	**Diego Aracena**	**2.00**	**315**	*e*P	**Pn**	**12 53 11.2**	**-0.1**
TA01				*e*S	**Sn**	**12 53 36.6**	**-0.7**
TA01				IAML		12 53 38.7	
	comp=E,897nm,0.2s						
TA01	**Diego Aracena**	**2.00**	**315**	*e*P	**Pn**	**12 53 11.3**	**-0.1**
TA01				*e*S	**Sn**	**12 53 38.2**	**+0.9**
TA01				IAML		12 53 39.7	
	comp=Z,245nm,0.2s						
TA02	**Huaiquique**	**2.19**	**321**	*e*P	**Pn**	**12 53 13.0**	**-0.6**
TA02				*e*S	**Sn**	**12 53 40.4**	**-1.0**
TA02	**Huaiquique**	**2.19**	**321**	*e*P	**Pn**	**12 53 13.1**	**-0.6**
TA02				*e*S	**Sn**	**12 53 42.4**	**+0.9**
TA02				IAML		12 53 45.8	
	comp=Z,501nm,0.1s						
PB10	**IPOC Station P**	**2.32**	**229**	*e*P	**Pn**	**12 53 15.9**	**+0.6**
PB10				*e*S	**Sn**	**12 53 43.6**	**-0.9**
PB10	**IPOC Station P**	**2.32**	**229**	*e*P	**Pn**	**12 53 16.2**	**+0.9**
PB10				*e*S	**Sn**	**12 53 43.1**	**-1.3**
GO01	**Chusmiza**	**2.35**	**348**	*e*P	**Pn**	**12 53 16.6**	**+0.3**
GO01				*e*S	**Sn**	**12 53 46.0**	**0.0**
GO01	**Chusmiza**	**2.35**	**348**	*e*P	**Pn**	**12 53 16.8**	**+0.6**
PB11	**IPOC Station P**	**2.40**	**337**	⇑*e*P	**Pn**	**12 53 15.9**	**-0.5**
PB11				*e*S	**Sn**	**12 53 45.5**	**-1.0**
PB11	**IPOC Station P**	**2.40**	**337**	*e*P	**Pn**	**12 53 15.8**	**-0.7**
PB11				*e*S	**Sn**	**12 53 46.8**	**+0.3**
PB11				IAML		12 53 51.1	
	comp=Z,364nm,0.3s						
YJA	**Yavi**	**2.92**	**94**	*e*P	**Pn**	**12 53 24.5**	**+1.1**
YJA				*e*S	**Sn**	**12 53 55.4**	**-3.5**
PB14	**IPOC Station P**	**3.08**	**211**	*e*P	**Pn**	**12 53 26.5**	**+1.1**
PB14				*e*S	**Sn**	**12 53 56.5**	**-5.9**
PB14	**IPOC Station P**	**3.08**	**211**	*e*P	**Pn**	**12 53 26.0**	**+0.7**
PB14				*e*S	Sn	12 53 51.3	-11
SALTA		**3.09**	**137**	*e*P	**Pn**	**12 53 26.9**	**+1.2**
SALTA		**3.09**	**137**	*e*P	**Pn**	**12 53 27.2**	**+1.5**
GO02	**Mina Guanaco**	**3.28**	**195**	*e*P	**Pn**	**12 53 28.0**	**+0.1**
GO02				*e*S	Sn	12 53 56.0	-11
PB16	**IPOC Station P**	**3.71**	**347**	*e*P	**Pn**	**12 53 34.4**	**+0.4**
PB16				*e*S	**Sn**	**12 54 20.2**	**+2.6**
AZAP	**Zapla**	**3.99**	**125**	*e*P	**Pn**	**12 53 37.6**	**+0.4**

IDC 03 12:56:12.3±8.6**, 5°.22S**×**150°.44E, h71**km±61km**, mb3.7**/2**, mbtmp4.1**/3**, ML2.1**/1**, Error ellipse: s-maj=119.7km s-min=55.9km az=119.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.28**	**218**	P	Pn	12 57 28.7	-0.1
	4.2nm,0.3s,baz=38,slow=5.9,SNR=13						
PMG				S	Sn	12 58 29.5	+1.2
	38nm,0.7s,baz=85,slow=22,SNR=6.6						
	12nm,0.3s						
WRA	**Warramunga Arr**	**21.44**	**226**	P	P	13 00 54.8	-0.1
	3.8nm,0.6s,baz=52,slow=10,SNR=43						
	3.8nm,0.6s						
ASAR	**Alice Springs**	**24.30**	**219**	P	P	13 01 22.9	-0.4
	1.9nm,0.5s,baz=52,slow=8.7,SNR=43						
	1.9nm,0.5s						
TORD	**Torodi Ar. Bea**	**148.19**	**287**	PKPbc	PKPbc	13 15 51.1	-0.1
	1.8nm,0.4s,baz=67,slow=2.4,SNR=2.5						

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*NNC **03** 13:11:56.0±0.7, 49°.96N×78°.49E, h0km, mb2.8, mpv2.4, Error ellipse: s-maj=17.2km s-min=3.2km az=85.0, Suspected Mining explosion.*

*IDC **03** 13:11:58.0±1.0, 50°.04N×78°.70E, h0km, mbtmp2.4/2, ML1.9/2, Error ellipse: s-maj=11.5km s-min=6.6km az=64.0*

ISC 03 13:11:57.9±1.9**, 50°.00N**±0°.07×**78°.6E**±0°.2**, h0**km**, n15, σ0s.88**/26**, 14C-8D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.58**	**355**	⇑P	**Pg**	**13 12 08.2**	**-0.9**
KUR07				⇓S	**Sg**	**13 12 17.4**	**+0.8**
KUR06	**Kurchatov Arra**	**0.60**	**356**	⇑P	**Pg**	**13 12 08.6**	**-0.8**
KUR06				⇓S	**Sg**	**13 12 18.3**	**+1.1**
KUR14	**Kurchatov Arra**	**0.61**	**0**	⇓P	**Pg**	**13 12 08.1**	**-1.5**
KUR14				⇑S	**Sg**	**13 12 17.8**	**+0.2**
KUR15	**Kurchatov Arra**	**0.62**	**358**	⇓P	**Pg**	**13 12 08.6**	**-1.1**
KUR15				⇑S	**Sg**	**13 12 18.2**	**+0.5**
KURBB	**Kurchatov Arra**	**0.62**	**357**	Pg	**Pg**	**13 12 09.0**	**-0.9**
	0.9nm,0.3s,baz=167,slow=18,SNR=57						
KURBB				Lg	Lg	13 12 18.8	
	1.1nm,0.3s,baz=170,slow=32,SNR=18						
KURBB	**Kurchatov Arra**	**0.62**	**357**	⇑P	**Pg**	**13 12 08.9**	**-0.9**
	7.9nm,0.3s						
KURBB				⇑S	**Sg**	**13 12 18.5**	**+0.6**
	26nm,0.7s						
KUR16	**Kurchatov Arra**	**0.63**	**355**	⇑P	**Pg**	**13 12 09.0**	**-0.9**
KUR16				⇑S	**Sg**	**13 12 18.8**	**+0.8**
KUR17	**Kurchatov Arra**	**0.63**	**353**	⇓P	**Pg**	**13 12 09.3**	**-0.7**
KUR17				⇑S	**Sg**	**13 12 19.4**	**+1.1**
KUR05	**Kurchatov Arra**	**0.64**	**357**	⇑P	**Pg**	**13 12 09.2**	**-1.0**
KUR05				⇑S	**Sg**	**13 12 19.0**	**+0.5**
KUR04	**Kurchatov Arra**	**0.66**	**357**	⇓P	**Pg**	**13 12 09.8**	**-0.8**
KUR04				⇓S	**Sg**	**13 12 19.8**	**+0.7**
KURK	**Kurchatov**	**0.71**	**2**	⇑P	**Pg**	**13 12 10.6**	**-1.0**
	2.0nm,0.4s						
KURK				⇑S	**Sg**	**13 12 21.2**	**+0.4**
	16nm,0.7s						
MK31	**Makanchi Array**	**4.05**	**141**	Pn	**Pn**	**13 13 01.3**	**+0.2**
	0.1nm,0.1s,baz=319,slow=9.9,SNR=24						
MK31				⇓Pg	**Pb**	**13 13 11.3**	**+1.2**
	0.2nm,0.2s,baz=302,slow=21,SNR=5.1						
MK31				⇑Lg	Lg	13 14 03.7	
	2.8nm,0.5s,baz=329,slow=25,SNR=16						
MKAR	**Makanchi Array**	**4.05**	**141**	Pn	**Pn**	**13 13 01.1**	**0.0**
	0.1nm,0.3s,baz=325,slow=10,SNR=13						
MKAR				Pg	**Pb**	**13 13 09.3**	**-0.7**
	0.3nm,0.3s,baz=325,slow=15,SNR=8.3						
MKAR				Lg	Lg	13 14 03.9	
	0.9nm,0.3s,baz=327,slow=27,SNR=14						
	0.1nm,0.3s						
I46RU	**ZALESOVO INFRA**	**5.51**	**42**	I	I	13 50 50.0	
	baz=227,slow=309,SNR=12						
ZALV	**Zalesovo Beam**	**5.51**	**42**	Pn	**Pn**	**13 13 21.5**	**+0.3**
	0.1nm,0.3s,baz=230,slow=15,SNR=2.2						
	0.4nm,0.3s						

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*MEX **03** 13:42:41.3±0.5, 13°.97N×92°.43W, h14km±38km, MD4.0*

*GCG **03** 13:42:41.7±0.4, 14°.11N×92°.10W, h3km±9km, MD4.1*

ISC 03 13:42:32.4±3.4**, 13°.6N**±0°.1×**92°.42W**±0°.08**, h10**km±16km**, n11, σ2s.61**/15**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**1.13**	**38**	*e*P	**Pg**	**13 42 55.7**	**+1.6**
RTAL				*e*S	**Sg**	**13 43 06.7**	**-2.1**
THIG		**1.27**	**7**	*e*P	**Pn**	**13 42 55.5**	**-0.7**
THIG				*e*S	Sg	13 43 07.8	-5.7
STG8	**El Palmar, Qui**	**1.31**	**52**	*e*P	**Pn**	**13 42 58.3**	**+1.3**
STG8				*i* S	**Sg**	**13 43 11.4**	**-3.3**
ESSG	**Sabana Grande**	**1.71**	**64**	*i* P	**Pn**	**13 43 05.3**	**+3.0**
FG8	**Yepocapa, Chim**	**1.90**	**71**	*i* P	**Pn**	**13 43 04.4**	**-0.6**
FG8				*i* S	Sn	13 43 21.4	-7.7
FG16	**Alotenango, Sa**	**1.96**	**71**	*i* P	**Pn**	**13 43 05.5**	**-0.3**
FG16				*i* S	Sn	13 43 24.1	-6.4
PCIG		**2.20**	**339**	*e*P	**Pn**	**13 43 10.2**	**+1.2**
PCIG				*e*S	Sn	13 43 31.2	-5.0
CCIG	**Comitan**	**2.65**	**6**	*e*P	**Pn**	**13 43 19.3**	**+4.0**
CCIG				*e*S	**Sn**	**13 43 46.9**	**-0.6**
CCIG	**Comitan**	**2.65**	**6**	*i* P	**Pn**	**13 43 19.1**	**+3.8**
TGIG		**3.20**	**348**	*e*P	**Pn**	**13 43 24.8**	**+2.0**
TGIG				*e*S	Sn	13 43 56.6	-4.4
CMIG	**Matias Romero**	**4.18**	**326**	*e*P	**Pn**	**13 43 35.8**	**-0.4**
CMIG				*e*S	**Sn**	**13 44 22.3**	**-2.9**

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*IDC **03** 14:00:16.2±2.1, 22°.86N×12°.07W, h0km, mb3.9/5, mbtmp3.8/9, ML3.8/4, Error ellipse: s-maj=59.5km s-min=25.9km az=89.0*

ISC 03 14:00:16.8±1.9**, 22°.8N**±0°.1×**12°.1W**±0°.3**, h10**km**, n11, σ1s.13**/11**, mb4.0**/5**, Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDT	**Midelt**	**11.99**	**32**	Pn	**Pn**	**14 03 07.4**	**-0.5**
	0.1nm,0.3s,baz=202,slow=19,SNR=2.5						
	1.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**16.24**	**124**	Pn	**Pn**	**14 04 04.3**	**-0.9**

	0.7nm,0.3s,baz=318,slow=13,SNR=5.0						
	1.4nm,0.5s						
DBIC	**Dimbokro**	**17.48**	**155**	P	**Pn**	**14 04 20.3**	**-0.4**
	0.6nm,0.3s,baz=346,slow=12,SNR=5.2						
	2.5nm,0.5s						
ESDC	**Sonseca Array**	**18.21**	**20**	P	**Pn**	**14 04 27.7**	**-2.0**
	0.1nm,0.3s,baz=200,slow=12,SNR=4.2						
	0.4nm,0.8s						
KEST	**Kesra**	**22.67**	**51**	P	**P**	**14 05 18.1**	**-0.3**
	1.9nm,0.6s,baz=221,slow=3.2,SNR=5.1						
	1.9nm,0.6s						
HFS	**Hagfors**	**41.48**	**19**	P	**P**	**14 08 03.1**	**-0.6**
	1.9nm,0.5s,baz=214,slow=10,SNR=9.3						
	1.9nm,0.5s						
BRTR	**Keskin Array B**	**42.12**	**55**	P	**P**	**14 08 11.2**	**+1.7**
	0.5nm,0.7s,baz=246,slow=8.9,SNR=5.0						
	0.5nm,0.7s						
FINES	**FINESS Array B**	**46.67**	**24**	P	**P**	**14 08 45.2**	**-0.1**
	1.6nm,0.6s,baz=234,slow=6.6,SNR=8.6						
	1.6nm,0.6s						
MKAR	**Makanchi Array**	**76.64**	**45**	P	**P**	**14 12 09.0**	**+1.1**
	0.6nm,0.5s,baz=285,slow=5.7,SNR=9.5						
	0.6nm,0.5s						
WRA	**Warramunga Arr**	**148.66**	**91**	PKPbc	**PKPbc**	**14 20 05.4**	**+0.4**
	0.6nm,0.6s,baz=298,slow=2.6,SNR=2.0						
ASAR	**Alice Springs**	**148.79**	**98**	PKPbc	**PKiKP**	**14 20 06.5**	**-0.2**
	0.7nm,0.6s,baz=291,slow=2.1,SNR=13						

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*NEIC **03** 14:01:56.2±1.2, 63°.28N±0°.01×151°.13W±0°.04, h12^{km}, Error ellipse: s-maj=2.3km s-min=2.1km az=84.0*

*AEIC **03** 14:01:56.3±1.3, 63°.27N±0°.01×151°.17W±0°.03, h6^{km}±6^{km}, ML3.3, ML3.5/252(NEIC), Error ellipse: s-maj=2.1km s-min=2.0km az=183.0*

ISC 03 14:01:56.3±0.8**, 63°.29N**±0°.03×**151°.17W**±0°.02**, h10**^{km}**, n144, σ0^s.90**/80**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KTH	**Kantishna Hill**	**0.29**	**22**		**Pg**	**14 02 02.5**	**+0.3**
KTH				IAML		14 02 07.8	
	comp=N,6µm,0.3s						
TRF	**Thorofare Moun**	**0.43**	**67**		**Pg**	**14 02 04.9**	**+0.1**
TRF	**Thorofare Moun**	**0.43**	**67**		**Sg**	**14 02 10.7**	**+0.3**
CAST	**Castle Rocks**	**0.43**	**288**		**Pg**	**14 02 04.8**	**-0.1**
PPLA	**Purkeypile**	**0.61**	**230**		**Pg**	**14 02 07.7**	**-0.4**
PPLA				IAML		14 02 17.2	
	comp=N,4µm,0.6s						
PPLA				IAML		14 02 17.4	
	comp=E,2µm,0.5s						
PPLA	**Purkeypile**	**0.61**	**230**		**Sg**	**14 02 16.0**	**-0.1**
CHUM	**Lake Minchumin**	**0.79**	**320**		**Pg**	**14 02 11.7**	**+0.2**
CHUM					**Sb**	**14 02 23.2**	**+0.3**
BPAW	**Bear Paw Mtn.**	**0.82**	**6**		**Pg**	**14 02 11.9**	**-0.2**
BPAW				IAML		14 02 26.9	
	comp=N,1µm,0.7s						
BPAW				IAML		14 02 26.9	
	comp=E,2µm,0.4s						
CUT	**Chulitna**	**0.98**	**155**		**Pg**	**14 02 14.7**	**-0.4**
CUT	**Chulitna**	**0.98**	**155**		**Sb**	**14 02 27.8**	**-0.4**
RND	**Reindeer**	**1.05**	**82**		**Pg**	**14 02 15.6**	**-0.9**
MCK	**McKinley**	**1.10**	**65**		**Pg**	**14 02 16.6**	**-0.8**
MCK	**McKinley**	**1.10**	**65**		**Sn**	**14 02 32.6**	**-0.4**
WAT7	**Susitna Watana**	**1.15**	**112**		**Pb**	**14 02 17.4**	**-0.9**
BWN	**Browne**	**1.17**	**40**		**Pn**	**14 02 18.9**	**+0.1**
BWN				IAML		14 02 41.1	
	comp=N,816nm,1.0s						
BWN				IAML		14 02 41.7	
	comp=E,658nm,0.5s						
K20K	**Telida**	**1.31**	**274**		**Pn**	**14 02 20.2**	**-0.5**
K20K				IAML		14 02 40.2	
	comp=N,1µm,0.7s						
K20K				IAML		14 02 40.5	
	comp=E,888nm,0.8s						
SKT	**Skwentna**	**1.32**	**187**		**Pn**	**14 02 20.3**	**-0.5**
SKT				IAML		14 02 40.2	
	comp=N,814nm,0.7s						
SKT				IAML		14 02 41.5	
	comp=E,756nm,0.3s						
L20K	**Farewell, AK**	**1.48**	**238**		**Pn**	**14 02 23.2**	**+0.1**
L20K					**Sg**	**14 02 43.8**	**-0.2**
J20K	**Nowinta River**	**1.60**	**305**		**Pn**	**14 02 24.6**	**0.0**
J20K				IAML		14 02 48.5	
	comp=N,723nm,0.7s						
NEA2	**Nenana**	**1.61**	**34**		**Pn**	**14 02 23.8**	**-0.9**
M22K	**Willow**	**1.61**	**162**		**Pn**	**14 02 24.7**	**-0.1**
M22K	**Willow**	**1.61**	**162**		**Sb**	**14 02 46.8**	**+0.3**
M20K	**Styx River**	**1.68**	**214**		**Pn**	**14 02 25.9**	**+0.1**
DHY	**Denali Highway**	**1.73**	**95**		**Pn**	**14 02 26.5**	**-0.1**
DHY				IAML		14 02 51.7	
	comp=E,337nm,0.4s						
DHY				IAML		14 02 53.9	
	comp=N,348nm,0.6s						
MLY	**Manley**	**1.76**	**6**		**Pn**	**14 02 26.6**	**-0.3**
MLY				IAML		14 02 52.9	
	comp=E,302nm,0.5s						
MLY				IAML		14 02 53.0	
	comp=N,364nm,0.4s						
WRH	**Wood River Hil**	**1.81**	**47**		**Pn**	**14 02 26.9**	**-0.6**
STLK	**Strandline Lak**	**1.82**	**190**		**Pn**	**14 02 27.8**	**+0.1**
STLK				IAML		14 02 54.1	
	comp=E,652nm,0.6s						
STLK				IAML		14 02 55.3	
	comp=N,440nm,0.2s						
SUA	**Susitna One**	**1.84**	**174**		**Pn**	**14 02 28.3**	**+0.2**
GHO	**Glory Hole Cre**	**1.84**	**145**		**Pn**	**14 02 27.1**	**-1.0**
GHO				IAML		14 03 02.8	
	comp=E,590nm,0.5s						
I21K	**Tanana**	**1.94**	**350**		**Pn**	**14 02 29.3**	**+0.1**
I21K				IAML		14 02 58.1	
	comp=E,415nm,0.6s						
I21K				IAML		14 03 00.0	
	comp=N,375nm,0.5s						
PMR	**Palmer**	**1.95**	**150**		**Pn**	**14 02 29.3**	**-0.1**
PMR				IAML		14 02 59.3	
	comp=N,434nm,0.5s						
PMR	**Palmer**	**1.95**	**150**	P	**Pn**	**14 02 29.9**	**+0.6**
SML	**Sawmill**	**1.98**	**137**		**Pn**	**14 02 29.5**	**-0.4**
SML				IAML		14 02 59.7	
	comp=E,541nm,0.7s						
SML				IAML		14 03 05.1	
	comp=N,395nm,0.6s						
CCB	**Clear Creek Bu**	**2.02**	**46**		**Pn**	**14 02 29.5**	**-0.9**
CCB				IAML		14 03 00.6	
	comp=N,242nm,0.3s						
L19K	**White Mountain**	**2.03**	**239**		**Pn**	**14 02 30.2**	**-0.3**
L19K	**White Mountain**	**2.03**	**239**	IAML		14 03 02.4	
	comp=E,461nm,0.5s						
I23K	**Minto, Yukon-K**	**2.03**	**22**		**Pn**	**14 02 29.8**	**-0.7**
I23K				IAML		14 03 01.2	
	comp=N,377nm,0.6s						
I23K				IAML		14 03 04.7	
	comp=E,324nm,0.8s						
J19K	**Poorman**	**2.11**	**292**	IAML		14 03 03.8	
	comp=N,446nm,0.4s						
J19K				IAML		14 03 11.8	
	comp=E,416nm,0.7s						
COLA	**College**	**2.16**	**41**		**Pn**	**14 02 33.2**	**+1.0**
COLA	**College**	**2.16**	**41**	P	Pn	14 02 24.1	-8.2
HDA	**Harding Lake**	**2.18**	**57**		**Pn**	**14 02 34.1**	**+1.5**
HDA	**Harding Lake**	**2.18**	**57**	IAML		14 03 08.4	
	comp=E,242nm,0.3s						
HDA				IAML		14 03 08.5	
	comp=N,294nm,0.3s						
TTA	**Tatalina**	**2.23**	**263**		**Pn**	**14 02 33.7**	**+0.4**
TTA	**Tatalina**	**2.23**	**263**	IAML		14 03 06.7	
	comp=N,397nm,0.8s						
TTA				IAML		14 03 07.3	
	comp=E,260nm,0.5s						
TTA	**Tatalina**	**2.23**	**263**	P	**Pn**	**14 02 33.1**	**-0.3**
KNK	**Knik Glacier**	**2.27**	**145**	IAML		14 03 13.7	
	comp=N,336nm,0.5s						
RC01	**Rabbit Creek A**	**2.30**	**162**		**Pn**	**14 02 35.1**	**+0.8**
RC01	**Rabbit Creek A**	**2.30**	**162**	IAML		14 03 06.9	
	comp=N,214nm,0.4s						
RC01				IAML		14 03 11.6	
	comp=E,232nm,0.5s						
IL31		**2.40**	**50**		**Pn**	**14 02 35.1**	**-0.5**
H21K	**Melozitna Rive**	**2.48**	**344**	IAML		14 03 15.3	
	comp=N,206nm,0.6s						
J18K	**Innoko River**	**2.50**	**277**	IAML		14 03 17.4	
	comp=N,292nm,0.8s						
J18K				IAML		14 03 21.2	
	comp=E,180nm,0.8s						
PAX	**Paxson**	**2.61**	**94**	IAML		14 03 18.4	
	comp=N,148nm,0.4s						
L18K	**Granite Mounta**	**2.76**	**250**		**Pn**	**14 02 40.3**	**-0.2**
L18K	**Granite Mounta**	**2.76**	**250**	IAML		14 03 26.0	
	comp=N,213nm,0.5s						
L18K				IAML		14 03 32.5	
	comp=E,148nm,0.5s						
PWL	**Port Wells**	**2.78**	**150**		**Pn**	**14 02 42.2**	**+1.4**
PWL	**Port Wells**	**2.78**	**150**	IAML		14 03 26.3	
	comp=E,236nm,1.0s						
SLKM	**Skilak Lake**	**2.82**	**170**		**Pn**	**14 02 42.1**	**+0.6**
SLKM	**Skilak Lake**	**2.82**	**170**	IAML		14 03 22.0	
	comp=N,243nm,0.5s						
SLKM				IAML		14 03 23.8	
	comp=E,199nm,0.5s						
RIDG	**Independent Ri**	**2.87**	**78**	IAML		14 03 29.4	
	comp=N,174nm,0.7s						
RIDG				IAML		14 03 38.4	
	comp=E,161nm,0.8s						
J25K	**Salcha River,**	**2.88**	**60**	IAML		14 03 31.9	
	comp=E,104nm,0.6s						
O22K	**Cooper Landing**	**2.90**	**166**		**Pn**	**14 02 43.7**	**+1.3**
N19K	**Bonanza Creek**	**2.93**	**214**	IAML		14 03 34.7	
	comp=N,148nm,0.8s						
N19K				IAML		14 03 35.5	
	comp=E,168nm,0.8s						
KLU	**Klutina**	**3.03**	**124**	IAML		14 03 29.2	
	comp=E,122nm,0.8s						
KLU				IAML		14 03 30.1	
	comp=N,154nm,0.5s						
DOT	**Dot Lake**	**3.21**	**80**		**Pn**	**14 02 47.7**	**+0.9**
DOT	**Dot Lake**	**3.21**	**80**	IAML		14 03 41.3	
	comp=N,110nm,0.8s						
H19K	**Roundabout Mou**	**3.21**	**317**	IAML		14 03 42.2	
	comp=E,116nm,0.7s						
H19K				IAML		14 03 45.5	
	comp=N,108nm,1.0s						
O20K	**Slope Mountain**	**3.29**	**193**		**Pn**	**14 02 49.1**	**+1.2**
SEW	**Seward**	**3.30**	**165**		**Pn**	**14 02 49.9**	**+2.0**
SEW	**Seward**	**3.30**	**165**	IAML		14 03 37.4	
	comp=N,79nm,0.7s						
SEW				IAML		14 03 37.5	
	comp=E,108nm,0.6s						
PRP	**Porcupine Dome**	**3.32**	**45**		**Pn**	**14 02 48.4**	**0.0**
PRP	**Porcupine Dome**	**3.32**	**45**	IAML		14 03 49.9	
	comp=N,70nm,0.6s						
DIV	**Divide**	**3.33**	**128**	IAML		14 03 42.9	
	comp=N,110nm,0.5s						
FID	**Port Fidalgo**	**3.37**	**137**		**Pn**	**14 02 49.9**	**+0.9**
FID	**Port Fidalgo**	**3.37**	**137**	IAML		14 03 33.6	
	comp=N,142nm,0.6s						
G21K	**Allakaket**	**3.39**	**344**	IAML		14 03 53.8	
	comp=N,106nm,0.6s						
MENT	**Mentasta**	**3.40**	**93**	IAML		14 03 54.3	
	comp=N,126nm,1.0s						
WACK	**Wrangell Chich**	**3.42**	**109**		**Pn**	**14 02 51.7**	**+1.9**
N18K	**Kilae Creek**	**3.44**	**223**		**Pn**	**14 02 49.8**	**-0.1**
N18K	**Kilae Creek**	**3.44**	**223**	IAML		14 03 50.6	
	comp=N,110nm,0.7s						
N18K				IAML		14 03 53.2	
	comp=E,98nm,0.9s						
G23K	**Bananza Creek**	**3.47**	**8**	IAML		14 03 47.0	
	comp=E,67nm,0.6s						
N25K	**Chitina, Valde**	**3.49**	**116**		**Pn**	**14 02 51.3**	**+0.7**
N25K	**Chitina, Valde**	**3.49**	**116**	IAML		14 03 44.9	
	comp=N,74nm,1.0s						
N25K				IAML		14 03 46.5	
	comp=E,62nm,0.8s						
BRLK	**Bradley Lake**	**3.54**	**178**	IAML		14 03 49.2	
	comp=E,78nm,0.4s						
L26K	**Log Cabin Wild**	**3.56**	**91**	IAML		14 03 55.2	
	comp=N,123nm,0.4s						
BRSE	**Bradley Lake S**	**3.56**	**177**		**Pn**	**14 02 52.9**	**+1.3**
J17K	**VABM Dome**	**3.57**	**275**	IAML		14 03 53.3	
	comp=N,108nm,1.1s						
J17K				IAML		14 03 56.6	
	comp=E,112nm,0.6s						
J26L	**Joseph Creek**	**3.58**	**67**	IAML		14 03 52.1	
	comp=N,73nm,0.6s						
EYAK	**Cordova Ski Ar**	**3.75**	**135**	IAML		14 03 53.9	
	comp=N,58nm,0.7s						
EYAK				IAML		14 03 54.0	
	comp=E,60nm,0.7s						
EYAK	**Cordova Ski Ar**	**3.75**	**135**	P	**Pn**	**14 02 55.7**	**+1.5**
P23K	**Montague Islan**	**3.76**	**150**	IAML		14 03 53.6	
	comp=N,92nm,0.7s						
CNPM	**China Poot**	**3.77**	**181**		**Pn**	**14 02 55.8**	**+1.3**
CNPM	**China Poot**	**3.77**	**181**	IAML		14 03 48.2	
	comp=E,62nm,0.6s						
CNPM				IAML		14 03 49.3	
	comp=N,59nm,0.4s						
P19K	**Oil Pt**	**3.78**	**196**		**Pn**	**14 02 55.9**	**+1.3**
P19K	**Oil Pt**	**3.78**	**196**	IAML		14 03 57.8	
	comp=N,83nm,1.0s						
P19K				IAML		14 04 05.7	
	comp=E,96nm,0.8s						
G19K	**Purcell Mounta**	**3.83**	**321**		**Pn**	**14 02 56.0**	**+0.8**
G19K	**Purcell Mounta**	**3.83**	**321**	IAML		14 04 01.4	
	comp=N,50nm,0.7s						
M26K	**Nabesna, AK**	**3.85**	**100**		**Pn**	**14 02 55.5**	**-0.1**
M26K	**Nabesna, AK**	**3.85**	**100**	IAML		14 04 05.6	
	comp=E,64nm,0.7s						
BMRM	**Bremner River**	**3.86**	**124**	IAML		14 03 59.8	
	comp=E,78nm,1.0s						
O18K	**Koktuh Hills**	**3.95**	**211**	IAML		14 04 05.0	
	comp=E,64nm,0.8s						
O18K				IAML		14 04 16.6	
	comp=N,63nm,0.6s						
N17K	**Nushagak Hills**	**3.97**	**229**	IAML		14 04 10.3	
	comp=E,97nm,0.8s						
I26K	**Coal Creek Min**	**4.04**	**56**	IAML		14 04 10.2	
	comp=N,83nm,0.7s						
I26K				IAML		14 04 16.8	
	comp=E,69nm,0.8s						
K27K	**Chicken**	**4.12**	**76**	IAML		14 04 10.6	
	comp=N,45nm,1.1s						
FYU	**Fort Yukon**	**4.15**	**35**	IAML		14 04 15.4	
	comp=N,45nm,0.9s						
L16K	**Owhat River**	**4.16**	**251**		**Pn**	**14 02 59.4**	**-0.4**
L16K	**Owhat River**	**4.16**	**251**	IAML		14 04 09.2	
	comp=N,77nm,0.5s						
L16K				IAML		14 04 15.3	
	comp=E,53nm,0.5s						
H17K	**Granite Mounta**	**4.18**	**297**	IAML		14 04 16.8	
	comp=E,66nm,1.1s						
F20K	**Avaraart Lake**	**4.24**	**335**	IAML		14 04 14.1	
	comp=E,49nm,0.6s						
MCARA	**McCarthy VSAT**	**4.25**	**113**		**Pn**	**14 03 02.9**	**+1.8**
MCARA	**McCarthy VSAT**	**4.25**	**113**	IAML		14 03 58.4	
	comp=E,73nm,0.9s						
J16K	**Anvik River**	**4.26**	**274**	IAML		14 04 13.3	
	comp=E,54nm,0.8s						
J16K				IAML		14 04 15.9	
	comp=N,54nm,0.6s						
I17K	**Unalakleet**	**4.30**	**282**	IAML		14 04 13.9	
	comp=E,38nm,0.8s						
M16K	**Timber Creek**	**4.30**	**242**	IAML		14 04 15.7	
	comp=N,70nm,0.6s						
M16K				IAML		14 04 22.2	
	comp=E,63nm,1.0s						
M27K	**Edge Creek, AK**	**4.36**	**98**		**Pn**	**14 03 04.0**	**+1.4**
M27K	**Edge Creek, AK**	**4.36**	**98**	IAML		14 04 25.2	
	comp=N,46nm,0.9s						
M27K				IAML		14 04 31.9	
	comp=E,34nm,1.1s						
F24K	**Squaw Lake**	**4.47**	**16**	IAML		14 04 16.2	
	comp=E,30nm,0.6s						
F19K	**Shaleruckik Mo**	**4.53**	**325**	IAML		14 04 29.8	
	comp=E,33nm,0.8s						
CRQM	**Cirque**	**4.55**	**120**	IAML		14 04 19.6	
	comp=E,45nm,1.0s						
CRQM				IAML		14 04 27.6	
	comp=N,55nm,1.0s						
BERG	**Berg Lake**	**4.58**	**126**		**Pn**	**14 03 07.0**	**+1.5**
TGL	**Tana Glacier**	**4.67**	**119**	IAML		14 04 20.4	
	comp=N,51nm,0.9s						
TGL				IAML		14 04 30.7	
	comp=E,45nm,0.8s						
I27K	**Kandik River**	**4.75**	**56**		**Pn**	**14 03 09.1**	**+1.2**
GRIN	**Grindle Hills**	**4.79**	**125**		**Pn**	**14 03 09.1**	**+0.6**
BVCY	**Beaver Creek**	**4.80**	**96**		**Pn**	**14 03 09.5**	**+0.9**
G26K	**Porcupine Rive**	**4.82**	**37**	IAML		14 04 34.6	
	comp=N,32nm,0.8s						
G26K				IAML		14 04 47.0	
	comp=E,31nm,1.1s						
E23K	**Chandalar**	**4.84**	**7**	IAML		14 04 31.8	
	comp=E,30nm,0.8s						
E23K				IAML		14 04 32.0	
	comp=N,26nm,1.1s						
K15K	**Wolf Creek Mou**	**4.86**	**263**	IAML		14 04 30.1	
	comp=N,34nm,1.0s						
K15K				IAML		14 04 32.0	
	comp=E,27nm,0.9s						
E19K	**Redstone River**	**4.89**	**331**	IAML		14 04 39.2	
	comp=E,33nm,0.8s						
E19K				IAML		14 04 43.9	
	comp=N,38nm,0.7s						
F25K	**Christian Rive**	**4.90**	**26**		**Pn**	**14 03 10.2**	**+0.2**
E24K	**Your Creek**	**4.94**	**12**	IAML		14 04 40.1	
	comp=E,22nm,1.1s						
E24K				IAML		14 04 44.1	
	comp=N,22nm,1.0s						
O16K	**Kokwok River B**	**4.97**	**225**	IAML		14 04 35.8	
	comp=N,41nm,0.8s						
H27K	**Steamboat Moun**	**5.07**	**50**	IAML		14 04 47.5	
	comp=N,22nm,0.8s						
H27K				IAML		14 05 00.5	
	comp=E,28nm,1.1s						
CTGM	**Chitina Glacie**	**5.17**	**112**	IAML		14 04 44.0	
	comp=N,18nm,0.8s						
YUK3	**Moose Creek**	**5.18**	**102**		**Pn**	**14 03 15.5**	**+1.4**
E21K	**Killik River**	**5.30**	**349**	IAML		14 04 45.3	
	comp=N,18nm,1.1s						
E21K				IAML		14 04 48.0	
	comp=E,24nm,0.8s						
I28M	**Miner Creek**	**5.34**	**61**	IAML		14 04 58.4	
	comp=E,24nm,0.9s						
I28M				IAML		14 04 59.5	
	comp=N,19nm,0.9s						
E25K	**Arctic Village**	**5.38**	**23**		**Pn**	**14 03 17.1**	**+0.7**
YUK8	**Steele Glacier**	**5.69**	**106**		**Pn**	**14 03 22.7**	**+1.7**
OHAK	**Old Harbor**	**6.17**	**191**	P	**Pn**	**14 03 29.4**	**+2.0**
H29M	**Whitestone**	**6.21**	**56**		**Pn**	**14 03 28.6**	**+0.7**
D25K	**Kavik River**	**6.36**	**16**		**Pn**	**14 03 31.0**	**+1.0**
F28M	**Old Crow**	**6.40**	**42**		**Pn**	**14 03 30.4**	**-0.1**
PNL	**Peninsula**	**6.70**	**117**	P	**Pn**	**14 03 36.4**	**+1.7**
P29M	**Windy Craggy**	**7.40**	**114**		**Pn**	**14 03 45.5**	**+1.3**
JIS	**Juneau Island**	**9.61**	**114**	P	**Pn**	**14 04 15.5**	**+1.1**

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*IDC **03** 14:02:03.6±2.7, 6°.30S×102°.92E, h0^{km}, mb3.6/5, mbtmp3.6/6, ML4.1/1, MS3.6/6, Error ellipse: s-maj=96.2km s-min=21.4km az=49.0*

*DJA **03** 14:02:12.9±1.0, 6°S±5°×10°3E±°, h24^{km}±12^{km}, M4.3/10, mB5.2/1, mb4.4/3, MLv4.2/10, Mw(mB)4.5/1*

ISC 03 14:02:04.8±1.3**, 6°.43S**±0°.08×**102°.66E**±0°.10**, h10**^{km}**, n27, σ1^s.79**/20**, mb3.6**/5**, MS3.7**/6**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LWLI	**Liwa**	**1.98**	**45**	P	**Pb**	**14 02 41.4**	**+0.3**
LWLI				S	**Sn**	**14 03 01.9**	**-1.6**
MNAI	**Manna**	**2.08**	**8**	S	**Sb**	**14 03 07.7**	**-0.9**
MDSI	**Maura Dua**	**2.46**	**38**	P	**Pn**	**14 02 47.7**	**+2.7**
KSI	**Kapahiang**	**2.76**	**359**	P	**Pb**	**14 02 55.0**	**+0.6**
CGJI	**Cibinong**	**3.02**	**94**	P	**Pn**	**14 02 54.8**	**+2.0**
CGJI				S	**Sn**	**14 03 28.8**	**-0.3**
SKJI	**Sukabumi**	**3.92**	**99**	P	**Pn**	**14 03 08.6**	**+3.5**
CNJI	**Cibinong**	**4.53**	**101**	P	**Pn**	**14 03 15.0**	**+1.5**
CNJI				S	**Sn**	**14 04 05.8**	**-0.4**
LEM	**Lembang**	**4.95**	**95**	Pn	**Pn**	**14 03 17.0**	**-2.4**
	8.4nm,0.3s,baz=310,slow=20,SNR=5.3						
	8.6nm,0.3s						
CMJI	**Cimerak**	**5.90**	**104**	P	**Pn**	**14 03 34.0**	**+1.6**
CMJI				S	**Sn**	**14 04 39.9**	**-0.3**
PPI	**Padang Panjang**	**6.35**	**339**	P	Pn	14 03 45.5	+7.0
	0.1nm12nm,0.8s						
UGM	**Wanagama**	**7.94**	**101**	P	**Pn**	**14 04 02.8**	**+2.3**
UGM				S	**Sn**	**14 05 30.6**	**+0.1**
CMAR	**Chiang Mai Arr**	**25.00**	**352**	P	**P**	**14 07 26.9**	**-2.1**
	1.3nm,0.9s,baz=189,slow=8.5,SNR=8.0						
	1.3nm,0.9s						
H08S2	**Diego Garcia H**	**29.96**	**266**	T	T	14 39 25.8	
	baz=88,SNR=4.9						
H08S3	**Diego Garcia H**	**29.96**	**266**	T	T	14 39 26.2	
	baz=88,slow=74,SNR=6.3						
H08S1	**Diego Carcia H**	**29.98**	**266**	T	T	14 39 22.4	
	baz=88,slow=74,SNR=3.3						
WRA	**Warramunga Arr**	**33.56**	**117**	P	**P**	**14 08 43.6**	**-1.8**
	0.6nm,0.8s,baz=290,slow=9.5,SNR=2.4						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**34.57**	**123**	P	**P**	**14 08 52.8**	**-1.3**
	0.2nm,0.6s,baz=294,slow=7.9,SNR=7.4						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**55.99**	**343**	P	**P**	**14 11 43.9**	**+0.3**
	0.2nm,0.4s,baz=145,slow=8.8,SNR=1.6						
MKAR				LR	LR	14 37 46.9	
	comp=Z,63nm,19.3s,baz=69,slow=38						
	0.2nm,0.4s						
H04N2	**CROZET ISLANDS**	**58.93**	**219**	T	T	15 16 19.4	
	baz=62						
H04N1	**CROZET ISLANDS**	**58.95**	**219**	T	T	15 16 16.7	
	baz=62						
H04N3	**CROZET ISLANDS**	**58.95**	**219**	T	T	15 16 22.1	
	baz=62						
KURBB	**Kurchatov Arra**	**60.53**	**343**	LR	LR	14 42 19.9	
	comp=Z,69nm,18.5s,baz=174,slow=40						
ZALV	**Zalesovo Beam**	**62.00**	**348**	P	**P**	**14 12 26.3**	**+1.2**
	0.6nm,0.3s,baz=153,slow=9.7,SNR=3.7						
	0.6nm,0.3s						
AKTO	**Aktyubinsk**	**68.49**	**331**	LR	LR	14 47 53.7	
	comp=Z,31nm,19.0s,baz=143,slow=40						
BELG	**Belogornoye**	**74.86**	**329**	LR	LR	14 51 10.8	
	comp=Z,41nm,21.4s,baz=124,slow=39						
KIRV	**Kirov**	**77.48**	**335**	LR	LR	14 52 38.8	
	comp=Z,32nm,18.0s,baz=86,slow=39						
OBN	**Obninsk**	**81.93**	**328**	LR	LR	14 55 29.3	
	comp=Z,40nm,19.5s,baz=24,slow=39						

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*TIR **03** 14:22:13.6, 40°.51N×20°.95E, h24^{km}±1^{km}, Md2.9/5, Ml2.3/6*

*ATH **03** 14:22:18.0, 40°.49N×20°.85E, h6^{km}±1^{km}, ML1.7/7, Manual Solution by G.Panopoulou First location: 2019/06/03 14:23:33, This location: 2020/10/14 19:41:59 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 0 km*

ISC 03 14:22:15.7±0.9**, 40°.58N**±0°.03×**20°.85E**±0°.03**, h5**^{km}±7^{km}**, n19, σ1^s.64**/28**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KBN	**Korca**	**0.07**	**316**	Pg	**Pg**	**14 22 14.9**	**-2.4**
KBN				Sg	**Sg**	**14 22 20.9**	**+2.4**
KBN				AML	AML	14 22 22.8	
	2.0nm,0.2s						
NEST	**Nestorio**	**0.22**	**136**	Pg	**Pg**	**14 22 16.7**	**-3.3**
NEST				Sg	**Sg**	**14 22 20.2**	**-2.8**
NEST				AML	AML	14 22 26.6	
	1.9nm,0.3s						
NEST				AMd		14 23 12.0	
NEST	**Nestorio**	**0.22**	**136**	P	**Pb**	**14 22 21.7**	**+1.6**
NEST				S	**Sg**	**14 22 24.3**	**+1.3**
PENT	**Pentalofos**	**0.44**	**150**	P	**Pb**	**14 22 26.0**	**0.0**
FNA	**Florina**	**0.45**	**63**	P	**Pn**	**14 22 27.6**	**-1.3**
LSK	**Leskovik**	**0.47**	**204**	Pg	Pg	14 22 19.3	-5.4
LSK				Sg	**Sg**	**14 22 29.0**	**-1.7**
LSK				AML	AML	14 22 34.1	
	1.6nm,0.2s						
LSK				AMd		14 23 18.4	
KPRO	**Kipourio**	**0.74**	**147**	P	**Pn**	**14 22 31.0**	**-1.8**
KZN	**Kozani**	**0.76**	**111**	P	**Pn**	**14 22 32.8**	**-0.3**
SRN	**Sarande**	**0.95**	**223**	Pg	**Pg**	**14 22 32.6**	**-1.3**
SRN				Sg	**Sg**	**14 22 46.9**	**+0.7**
SRN				AML	AML	14 22 49.5	
	0.2nm,0.6s						
SRN				AMd		14 23 17.5	
IGT	**Igoumenitsa**	**1.11**	**201**	Sn	**Sg**	**14 22 50.0**	**-1.5**
IGT	**Igoumenitsa**	**1.11**	**201**	P	**Pn**	**14 22 37.8**	**-0.1**
PHP	**Peshkopia**	**1.15**	**345**	Pn	**Pb**	**14 22 36.5**	**-1.6**
PHP				Sn	**Sb**	**14 22 54.1**	**+0.9**
PHP				AMd		14 23 45.9	
KEK	**Kerkira**	**1.18**	**223**	P	**Pg**	**14 22 39.9**	**+1.7**
KEK				S	**Sg**	**14 22 54.3**	**+0.8**
TETR	**Tetrakomo, Epi**	**1.27**	**165**	P	**Pg**	**14 22 41.1**	**+1.0**
THL	**Klokotos Trika**	**1.35**	**138**	P	**Pg**	**14 22 42.7**	**+1.2**
THL				S	**Sg**	**14 22 58.7**	**-0.3**
TYRN	**Tyrnavos**	**1.37**	**129**	P	**Pg**	**14 22 43.2**	**+1.3**
TYRN				S	**Sg**	**14 22 60.0**	**+0.3**
PUK	**Puka**	**1.63**	**334**	Pn	**Pn**	**14 22 45.7**	**+0.6**
PUK				Sn	**Sb**	**14 23 09.3**	**+2.2**
PUK				AML	AML	14 23 16.4	
	0.1nm,0.9s						

PUK				AMd		14 24 01.6	
KNT	**Kendrikon**	**1.66**	**69**	P	**Pg**	**14 22 48.4**	**+0.8**
SCTE	**Santa Cesarea**	**1.89**	**255**	Sn	**Sb**	**14 23 14.7**	**+0.2**
SCTE				AML	AML	14 23 23.6	
	0.2nm,1.1s						

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*TIR **03** 14:33:31.6, 40°.51N×20°.79E, h21^{km}±2^{km}, Md3.0/7, Ml2.7/7*
*ATH **03** 14:33:33.8, 40°.44N×20°.90E, h14^{km}±1^{km}, ML2.1/9, Manual Solution by G.Panopoulou First location: 2019/06/03 14:34:36, This location: 2019/06/03 15:42:03 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
ISC 03 14:33:32.5±0.9**, 40°.50N**±0°.02×**20°.84E**±0°.02**, h7**^{km}±8^{km}**, n22, σ0^{s}89**/35**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	**0.13**	**344**	Pg	**Pg**	**14 33 35.0**	**-0.3**
KBN				Sg	**Sg**	**14 33 36.6**	**-0.7**
KBN				AML	AML	14 33 38.5	
	6.9nm,0.4s						
NEST	**Nestorio**	**0.18**	**117**	Pg	**Pg**	**14 33 37.1**	**+0.9**
NEST				Sg	**Sg**	**14 33 38.4**	**-0.3**
NEST				AML	AML	14 33 41.5	
	4.9nm,0.2s						
NEST				AMd		14 34 24.7	
NEST	**Nestorio**	**0.18**	**117**	P	**Pg**	**14 33 37.3**	**+1.2**
NEST				S	**Sg**	**14 33 40.0**	**+1.4**
PENT	**Pentalofos**	**0.38**	**142**	P	**Pg**	**14 33 40.4**	**+0.6**
PENT				S	**Sg**	**14 33 44.8**	**0.0**
LSK	**Leskovik**	**0.39**	**208**	Pg	**Pg**	**14 33 39.6**	**-0.5**
LSK				Sg	**Sg**	**14 33 44.4**	**-0.8**
LSK				AML	AML	14 33 49.3	
	2.9nm,0.3s						
LSK				AMd		14 34 40.7	
FNA	**Florina**	**0.50**	**55**	P	**Pg**	**14 33 42.8**	**+0.7**
FNA				S	**Sb**	**14 33 51.0**	**-0.2**
KPRO	**Kipourio**	**0.67**	**143**	P	**Pg**	**14 33 45.2**	**-0.3**
KPRO				S	**Sg**	**14 33 54.7**	**+0.5**
KZN	**Kozani**	**0.74**	**105**	P	**Pg**	**14 33 47.0**	**+0.4**
KZN				S	**Sg**	**14 33 56.5**	**+0.2**
SRN	**Sarande**	**0.89**	**226**	Pg	**Pb**	**14 33 48.9**	**-1.3**
SRN				Sg	**Sb**	**14 34 01.6**	**-0.7**
SRN				AML	AML	14 34 05.2	
	0.2nm,0.6s						
SRN				AMd		14 34 50.6	
IGT	**Igoumenitsa**	**1.04**	**202**	Pg	**Pb**	**14 33 51.7**	**-1.0**
IGT				Sg	**Sg**	**14 34 07.0**	**+1.2**
IGT				AMd		14 35 02.4	
IGT	**Igoumenitsa**	**1.04**	**202**	P	**Pb**	**14 33 52.8**	**+0.1**
KEK	**Kerkira**	**1.12**	**226**	P	**Pg**	**14 33 55.2**	**+1.3**
TIR	**Tirane**	**1.12**	**319**	P	**Pg**	**14 33 56.1**	**+2.1**
PHP	**Peshkopia**	**1.23**	**346**	Pn	**Pn**	**14 33 54.5**	**-1.6**
PHP				Sn	**Sb**	**14 34 11.5**	**-0.5**
PHP				AML	AML	14 34 16.4	
	0.1nm,0.6s						
PHP				AMd		14 34 58.7	
THL	**Klokotos Trika**	**1.30**	**135**	P	**Pn**	**14 33 55.9**	**-1.1**
KNT	**Kendrikon**	**1.70**	**66**	P	**Pb**	**14 34 03.4**	**-0.7**
PUK	**Puka**	**1.70**	**336**	Pn	**Pn**	**14 34 02.8**	**+0.2**
PUK				Sn	**Sb**	**14 34 26.2**	**+0.4**
PUK				AML	AML	14 34 36.1	
	0.3nm,0.8s						
PUK				AMd		14 35 19.5	
HORT	**Hortiatis**	**1.73**	**86**	P	**Pn**	**14 34 03.0**	**0.0**
SCTE	**Santa Cesarea**	**1.86**	**258**	Pn	**Pn**	**14 34 05.2**	**+0.4**
SCTE				Sn	**Sn**	**14 34 28.7**	**+0.2**
SCTE				AML	AML	14 34 40.4	
	0.2nm,0.6s						
SCTE				AMd		14 35 22.4	
SCTE	**Santa Cesarea**	**1.86**	**258**	P	**Pn**	**14 34 06.0**	**+1.2**
SOH	**Sokhos**	**1.94**	**80**	P	**Pn**	**14 34 06.6**	**+0.6**
PLG	**Polygyros**	**2.00**	**93**	P	**Pn**	**14 34 06.8**	**+0.1**

UCR 03 14:38:59.0±1.3**, 9°.22N**×**84°.81W, h23**^{km}±6^{km}**, MW3.7, 6C, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBL1	**Cabuya**	**0.46**	**323**	⇑*i*P	Pb	14 39 07.9	-0.5
CBL1				*e*S	Sb	14 39 15.3	+0.5
PAR1A	**Puntarenas Pro**	**0.67**	**56**	⇑*i*P	Pb	14 39 11.4	-0.6
JCR1	**Jicaral**	**0.69**	**335**	*e*P	Pb	14 39 11.2	-1.2
PICV	**PH. Pirrs**	**0.73**	**57**	*e*P	Pb	14 39 12.8	-0.3
NYURE	**Nandayure**	**0.88**	**331**	*e*P	Pb	14 39 14.6	-1.1
ABE2	**San Pablo**	**0.89**	**57**	*e*P	Pb	14 39 15.1	-0.9
PIEC	**Cerro El Cedra**	**0.93**	**65**	⇑*i*P	Pb	14 39 16.0	-0.7
LCR2	**La Lucha 2**	**0.95**	**57**	⇑*i*P	Pb	14 39 15.6	-1.3
JTS	**Las Juntas de**	**1.07**	**353**	⇑*e*P	Pn	14 39 17.4	-1.2
VPS8	**V Poas**	**1.10**	**31**	*e*P	Pn	14 39 18.9	-0.5
VPL2	**V. Platanar**	**1.16**	**22**	*e*P	Pn	14 39 19.6	-0.3
VPL2				*e*S	Sn	14 39 36.1	+0.9
ARE1	**Arenal 1**	**1.23**	**4**	⇑*e*P	Pn	14 39 20.8	-0.1
SAJE	**San Jernim**	**1.29**	**85**	*e*P	Pn	14 39 21.2	-0.6
CVTV	**Tajo**	**1.30**	**53**	*e*P	Pn	14 39 22.4	+0.3
VTCV	**VTCV, Calle Va**	**1.31**	**55**	*e*P	Pn	14 39 21.8	-0.3
ABRB	**Las Abras (San**	**1.33**	**54**	*e*P	Pn	14 39 22.4	0.0
TIMP	**Tierras Morena**	**1.36**	**351**	*e*P	Pn	14 39 22.7	-0.1
QUEB	**Quebradon, Cot**	**1.39**	**357**	*e*P	Pb	14 39 23.8	-0.6
FIMO	**Fila Mora**	**1.46**	**99**	*e*P	Pn	14 39 24.5	+0.4
VMAR	**Armenia, Volca**	**1.61**	**349**	*e*P	Pn	14 39 26.5	+0.5
LAPC	**Finca la Perla**	**1.65**	**338**	*e*P	Pn	14 39 27.2	+0.6
TRT2	**Tortugero**	**1.70**	**39**	*e*P	Pn	14 39 27.8	+0.6
ALCO	**Alturas Coton,**	**1.97**	**98**	*e*P	Pn	14 39 31.1	-0.1
KKNTU	**Kakintº**	**2.99**	**97**	*e*P	Pn	14 39 42.7	-2.4

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*KRNET **03** 14:51:12.6±0.1, 40°.57N×77°.33E, h17^{km}, mb3.1*
*SOME **03** 14:51:12.8, 40°.52N×77°.40E, h15^{km}*
*NNC **03** 14:51:13.9±1.2, 40°.61N×77°.40E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=8.1km s-min=4.9km az=172.0*
ISC 03 14:51:15.1±1.4**, 40°.63N**±0°.06×**77°.38E**±0°.04**, h10**^{km}**, n45, σ1^{s}38**/71**, 22C-23D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRN	**Naryn**	**1.31**	**308**	⇑*i*P	**Pn**	**14 51 37.8**	**-2.0**
NRN				⇑*i*S	**Sb**	**14 51 56.2**	**-0.9**
KDJ	**Kajisay**	**1.50**	**354**	⇓*i*P	**Pn**	**14 51 41.9**	**-0.4**
KDJ				⇓*i*S	**Sg**	**14 52 03.6**	**+0.1**
ULHL	**Ulahol**	**1.82**	**332**	⇑*i*P	**Pn**	**14 51 47.2**	**+0.5**
ULHL				⇑*i*S	**Sb**	**14 52 12.6**	**+0.9**
PRZ	**Przheval'sk**	**2.00**	**22**	⇓*e*P	**Pb**	**14 51 50.6**	**-1.1**
PRZ				⇓*e*S	**Sg**	**14 52 18.7**	**-0.7**
BOOM	**Boomskoye usch**	**2.15**	**330**	⇑*e*P	**Pn**	**14 51 52.1**	**+1.0**
BOOM				⇑*i*S	**Sb**	**14 52 21.2**	**+0.3**
TNSS	**Tian-Shan**	**2.42**	**352**	Pg	**Pb**	**14 51 58.9**	**-0.1**
	11nm,0.3s						
TNSS				Lg	Lg	14 52 32.9	
	9.7nm,0.4s						
TNSS	**Tian-Shan**	**2.42**	**352**	*e*P	**Pb**	**14 51 58.9**	**-0.1**
	11nm,0.3s						
TNSS				*e*S	**Sg**	**14 52 32.9**	**-0.1**
	9.7nm,0.4s						
MDOK	**Medeo**	**2.54**	**355**	⇓Pg	**Pb**	**14 52 00.5**	**-0.3**
	5.7nm,0.4s						
MDOK				Pg	**Pg**	**14 52 01.0**	**-2.8**
	5.8nm,0.5s						
MDOK				⇓Lg	Lg	14 52 35.8	
	14nm,0.6s						
MDOK				Lg	Lg	14 52 36.3	
	14nm,0.5s						
SATY	**Saty**	**2.54**	**17**	Pg	**Pb**	**14 52 01.0**	**+0.1**
	4.3nm,0.3s						
SATY				Lg	Lg	14 52 36.3	
	11nm,0.3s						
MTBS	**Maitube**	**2.59**	**344**	Pg	**Pb**	**14 52 01.6**	**-0.1**
	4.2nm,0.3s						
MTBS				Lg	Lg	14 52 37.3	
	8.1nm,0.2s						
MTBS	**Maitube**	**2.59**	**344**	*e*P	**Pb**	**14 52 01.6**	**-0.1**
	4.2nm,0.3s						
MTBS				*e*S	**Sg**	**14 52 37.3**	**-1.2**
	8.1nm,0.2s						
ARLS	**Aral**	**2.61**	**299**	⇑*e*P	**Pn**	**14 51 58.2**	**+0.7**
ARLS				⇑*e*S	**Sn**	**14 52 30.9**	**+1.6**
KST	**Kastek**	**2.63**	**337**	Pg	**Pb**	**14 52 02.4**	**0.0**
	3.0nm,0.3s						
KST				Lg	Lg	14 52 38.5	
	20nm,0.3s						
KST	**Kastek**	**2.63**	**337**	*e*P	**Pb**	**14 52 02.4**	**0.0**
	3.2nm,0.3s						
KST				*e*S	**Sg**	**14 52 38.5**	**-1.1**
	20nm,0.3s						
TKM2	**Tokmak 2**	**2.65**	**330**	⇑Pg	**Pg**	**14 52 06.5**	**+0.7**
	1.5nm,0.3s						
TKM2				⇓Lg	Lg	14 52 38.8	
	13nm,0.6s						
TKM2	**Tokmak 2**	**2.65**	**330**	⇓*i*P	**Pn**	**14 51 59.1**	**+1.1**
TKM2				⇓*i*S	**Sb**	**14 52 33.1**	**-2.2**
ZHN	**Zhinishke**	**2.65**	**17**	Pg	**Pb**	**14 52 03.3**	**+0.6**
	6.9nm,0.2s						
ZHN				Lg	Lg	14 52 40.1	
	42nm,0.4s						
ZHN	**Zhinishke**	**2.65**	**17**	*e*P	**Pb**	**14 52 03.3**	**+0.6**
	6.9nm,0.2s						
ZHN				*e*S	**Sg**	**14 52 40.1**	**-0.2**
	42nm,0.4s						
UCH	**Uchtor**	**2.68**	**307**	⇓*i*P	**Pn**	**14 51 59.3**	**+0.6**
UCH				⇓*i*S	**Sn**	**14 52 33.4**	**+2.0**
SALK	**Salom-Alik**	**2.71**	**276**	⇑*i*P	**Pn**	**14 51 58.8**	**-0.1**
SALK				⇑*i*S	**Sn**	**14 52 32.8**	**+0.9**
KBK	**Karagaybulak**	**2.72**	**319**	⇓*i*P	**Pn**	**14 51 59.8**	**+0.8**
KBK				⇓*i*S	**Sn**	**14 52 34.4**	**+2.3**
UZB	**Uzynbulak**	**2.80**	**25**	Pg	**Pb**	**14 52 05.1**	**-0.1**
	3.1nm,0.3s						
UZB				Lg	Lg	14 52 43.1	
	9.7nm,0.3s						
AAK	**Ala-Archa**	**2.95**	**314**	⇓Pg	**Pb**	**14 52 08.1**	**+0.4**
	0.7nm,0.4s						
AAK				⇓Lg	Lg	14 52 47.8	
	5.1nm,0.7s						
AAK	**Ala-Archa**	**2.95**	**314**	⇓*i*P	**Pn**	**14 52 02.8**	**+0.7**
AAK				⇓*i*S	**Sn**	**14 52 39.7**	**+2.1**
SHLS	**Shalkode**	**2.96**	**31**	Pg	**Pg**	**14 52 11.0**	**-0.8**
	7.2nm,0.2s						
SHLS				Lg	Lg	14 52 53.1	
	14nm,0.6s						
SHLS	**Shalkode**	**2.96**	**31**	*e*P	**Pg**	**14 52 11.0**	**-0.8**
	7.2nm,0.2s						
SHLS				*e*S	**Sg**	**14 52 53.1**	**+2.9**
	14nm,0.6s						
KPKS	**Kokpek**	**2.99**	**19**	Pg	**Pb**	**14 52 08.5**	**-0.1**
	2.5nm,0.6s						
KPKS				Lg	Lg	14 52 49.2	
	17nm,0.4s						
SFK	**Sufi-Kurgan**	**3.03**	**259**	⇑*e*P	**Pn**	**14 52 03.5**	**+0.2**
SFK				⇑*e*S	**Sn**	**14 52 40.0**	**+0.3**
CHMS	**Chumysh**	**3.07**	**321**	⇑Pg	**Pb**	**14 52 09.9**	**0.0**
	3.5nm,0.6s						
CHMS				⇓Lg	Lg	14 52 51.3	
	6.7nm,0.5s						
CHMS	**Chumysh**	**3.07**	**321**	⇓*i*P	**Pn**	**14 52 04.7**	**+1.0**
CHMS				⇓*i*S	**Sn**	**14 52 42.7**	**+2.1**
PDGK	**Podgornoye**	**3.12**	**30**	⇑Pg	**Pb**	**14 52 10.5**	**-0.2**
	6.6nm,0.5s						
PDGK				⇓Lg	Lg	14 52 51.4	
	14nm,0.6s						
AML	**Almayashu**	**3.15**	**300**	⇑*i*P	**Pn**	**14 52 05.6**	**+0.5**
AML				⇑*i*S	**Sn**	**14 52 44.4**	**+1.4**
KUU	**Kurty**	**3.35**	**347**	Pg	**Pb**	**14 52 15.2**	**+0.6**
	1.6nm,0.1s						
KUU				Lg	Lg	14 53 01.1	
	9.2nm,0.4s						
KUU	**Kurty**	**3.35**	**347**	*e*P	**Pb**	**14 52 15.2**	**+0.6**
	1.6nm,0.1s						
KUU				*e*S	**Sg**	**14 53 01.1**	**-1.5**
	9.2nm,0.4s						
EKS2	**Erkin-Say**	**3.38**	**308**	⇓*i*P	**Pn**	**14 52 08.6**	**+0.6**
EKS2				⇓*i*S	**Sn**	**14 52 49.8**	**+1.7**
USP	**Ospenovka**	**3.40**	**322**	⇑*i*P	**Pn**	**14 52 09.2**	**+1.0**
USP				⇑*i*S	**Sn**	**14 52 50.6**	**+2.0**
SGDS	**Sogindy**	**3.48**	**325**	Pg	**Pb**	**14 52 17.5**	**+0.7**
	1.9nm,0.2s						
SGDS				Lg	Lg	14 53 05.1	
	2.7nm,0.1s						
MRKS	**Merke**	**3.76**	**306**	Pg	**Pb**	**14 52 22.3**	**+0.7**
	0.5nm,0.1s						
MRKS				Lg	Lg	14 53 12.8	
	10.0nm,0.3s						
MRKS	**Merke**	**3.76**	**306**	*e*P	**Pb**	**14 52 22.2**	**+0.7**
	0.5nm,0.1s						
MRKS				*e*S	**Sg**	**14 53 12.8**	**-3.0**
	10.0nm,0.3s						
MNAS	**Manas**	**4.10**	**298**	⇑*i*P	**Pn**	**14 52 18.6**	**+0.7**
MNAS				⇑*i*S	**Sn**	**14 53 06.7**	**+0.7**
DJR	**Jarkent**	**4.11**	**25**	Pg	**Pb**	**14 52 28.4**	**+0.9**
	1.9nm,0.6s						
DJR				Lg	Lg	14 53 23.2	
	6.1nm,0.5s						
DJR	**Jarkent**	**4.11**	**25**	*e*P	**Pb**	**14 52 28.4**	**+0.9**
	1.9nm,0.6s						
DJR				*e*S	**Sg**	**14 53 23.2**	**-3.7**
	6.1nm,0.5s						
BTLS	**Baital**	**5.04**	**332**	Pg	**Pb**	**14 52 45.9**	**+2.6**
	1.2nm,0.4s						
BTLS				Lg	Lg	14 53 52.9	
	3.8nm,0.7s						
BTLS	**Baital**	**5.04**	**332**	*e*P	**Pb**	**14 52 45.9**	**+2.6**
	1.2nm,0.4s						
BTLS				*e*S	**Sg**	**14 53 52.9**	**-4.0**
	3.8nm,0.7s						
KK31	**Karatay Array**	**5.69**	**298**	⇑Lg	Lg	14 54 13.2	
	1.1nm,0.5s,baz=110,slow=28,SNR=7.1						

NNC 03 15:02:00.5±2.5**, 36°.78N**×**71°.05E, h103**^{km}±46^{km}**, mb3.1, mpv3.5, 5C-2D, Error ellipse: s-maj=28.0km s-min=16.9km az=134.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.33**	**356**	P	Pn	15 03 31.5	+0.3
	2.6nm,0.2s,baz=177,slow=12,SNR=112						
KK31				⇓S	Sn	15 04 42.5	+0.5
	2.5nm,0.3s,baz=45,slow=39,SNR=4.2						
AAK	**Ala-Archa**	**6.42**	**23**	⇑P	Pn	15 03 32.6	0.0
	0.4nm,0.4s						
AAK				⇑S	Sn	15 04 45.1	+0.6
	2.5nm,0.6s						
TKM2	**Tokmak 2**	**7.06**	**28**	⇑P	Pn	15 03 41.1	-0.2
	3.9nm,0.6s						
TKM2				⇑S	Sn	15 05 00.7	+0.7
	3.6nm,0.7s						
AB31	**Akbulak array**	**14.86**	**331**	⇓P	Pn	15 05 23.5	-1.6
	1.0nm,0.5s,baz=127,slow=20,SNR=22						
AKTO	**Aktyubinsk**	**16.56**	**330**	⇑P	P	15 05 47.7	+0.6
	1.3nm,0.8s						

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*KRSC **03** 15:02:24.3±1.0, 53°.12N×160°.07E, h62^{km}±10^{km}, Ml4.4, Felt [II] at cape Shipunskiy, Petropavlovsk.*
*IDC **03** 15:02:25.9±0.9, 53°.53N×159°.90E, h62^{km}±7^{km}, mb3.4/10, mbtmp3.8/13, MS2.5/1, Error ellipse: s-maj=23.5km s-min=7.9km az=158.0*
*MOS **03** 15:02:25.4±0.6, 53°.11N×159°.99E, h60^{km}, mb4.1/5, Error ellipse: s-maj=4.6km s-min=1.1km az=10.6*
*NEIC **03** 15:02:26.9±1.3, 53°.1N±0°.1×159°.88E±0°.07, h57^{km}±8^{km}, mb4.0/9, Error ellipse: s-maj=21.0km s-min=5.6km az=172.0*
ISC 03 15:02:25.7±0.6**, 53°.17N**±0°.04×**159°.98E**±0°.04**, h56**^{km}±4^{km}**, h56**^{km}**:pP-P, n150, σ1^{s}69**/173**, mb3.8**/18**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.07**	**162**	PN	**Pn**	**15 02 35.1**	**+0.9**
SPN				S	**Sn**	**15 02 41.3**	**+1.1**
SPN	**Mys Shipunski**	**0.07**	**162**	*e*P	**Pn**	**15 02 35.1**	**+0.9**
SPN				*e*S	**Sn**	**15 02 41.3**	**+1.1**
NLC	**Nalytchevo**	**0.39**	**271**	PN	**Pn**	**15 02 36.9**	**+0.8**
NLC				S	**Sn**	**15 02 44.7**	**+1.1**
NLC	**Nalytchevo**	**0.39**	**271**	*e*P	**Pn**	**15 02 36.9**	**+0.8**
NLC				*e*S	**Sn**	**15 02 44.8**	**+1.1**
SDLR	**Sedlovina**	**0.67**	**280**	PN	**Pn**	**15 02 40.1**	**+0.6**
SDLR	**Sedlovina**	**0.67**	**280**	*i* P	**Pn**	**15 02 40.2**	**+0.6**
UGLR	**Uglovaya**	**0.70**	**274**	PN	**Pn**	**15 02 40.8**	**+1.0**
UGLR	**Uglovaya**	**0.70**	**274**	*i* P	**Pn**	**15 02 40.9**	**+1.0**
SMAR	**Somma**	**0.72**	**278**	PN	**Pn**	**15 02 40.7**	**+0.5**
SMAR	**Somma**	**0.72**	**278**	*e*P	**Pn**	**15 02 40.7**	**+0.5**
DALK	**Dalny**	**0.76**	**260**	PN	**Pn**	**15 02 40.9**	**+0.5**
DALK				S	**Sn**	**15 02 51.5**	**+0.4**
DALK	**Dalny**	**0.76**	**260**	*e*P	**Pn**	**15 02 41.0**	**+0.5**
DALK				*e*S	**Sn**	**15 02 51.6**	**+0.4**
KRER	**Koryakskii**	**0.76**	**281**	PN	**Pn**	**15 02 41.6**	**+1.0**
KRER	**Koryakskii**	**0.76**	**281**	*e*P	**Pn**	**15 02 41.6**	**+1.0**
AVH	**Avacha**	**0.76**	**278**	PN	**Pn**	**15 02 41.5**	**+1.0**
AVH	**Avacha**	**0.76**	**278**	*i* P	**Pn**	**15 02 41.6**	**+1.0**
PET	**Petropavlovsk**	**0.82**	**260**		**Pn**	**15 02 41.7**	**+0.5**
PET				Sn	**Sn**	**15 02 52.3**	**-0.2**
PET	**Petropavlovsk**	**0.82**	**260**	*i* PN	**Pn**	**15 02 41.7**	**+0.5**
PET	**Petropavlovsk**	**0.82**	**260**	*e*P	**Pn**	**15 02 41.8**	**+0.6**
PET				*e*S	**Sn**	**15 02 53.1**	**+0.6**
KOK	**Koryaka**	**0.82**	**279**	PN	**Pn**	**15 02 42.2**	**+0.9**
KOK	**Koryaka**	**0.82**	**279**	*i* P	**Pn**	**15 02 42.2**	**+0.9**
KRX	**Arik**	**0.82**	**284**	PN	**Pn**	**15 02 42.0**	**+0.6**
KRX	**Arik**	**0.82**	**284**	*i* P	**Pn**	**15 02 42.0**	**+0.6**
INSR	**Institute**	**0.84**	**264**	PN	**Pn**	**15 02 42.1**	**+0.6**
INSR				S	**Sn**	**15 02 53.7**	**+0.7**
INSR	**Institute**	**0.84**	**264**	*e*P	**Pn**	**15 02 42.1**	**+0.6**
INSR				*e*S	**Sn**	**15 02 53.7**	**+0.7**
KII	**Karymskiy**	**0.93**	**340**	PN	**Pn**	**15 02 43.6**	**+0.9**
KII	**Karymskiy**	**0.93**	**340**	*e*P	**Pn**	**15 02 43.7**	**+0.9**
RUS	**Russkaya**	**1.16**	**231**	PN	**Pn**	**15 02 46.0**	**+0.3**
RUS				S	**Sn**	**15 03 00.6**	**+0.1**
RUS	**Russkaya**	**1.16**	**231**	*e*P	**Pn**	**15 02 46.1**	**+0.3**
RUS				*e*S	**Sn**	**15 03 00.7**	**+0.1**
KRMR	**Karymshinskiy**	**1.17**	**254**	PN	**Pn**	**15 02 46.5**	**+0.7**
KRMR				S	**Sn**	**15 03 00.8**	**0.0**
KRMR	**Karymshinskiy**	**1.17**	**254**	*e*P	**Pn**	**15 02 46.6**	**+0.7**
KRMR				*e*S	**Sn**	**15 03 00.9**	**0.0**
MTVR	**Mutnovka**	**1.29**	**239**	PN	**Pn**	**15 02 48.5**	**+0.9**
MTVR	**Mutnovka**	**1.29**	**239**	*i* P	**Pn**	**15 02 48.5**	**+0.9**
GRL	**Gorelyy**	**1.31**	**243**	PN	**Pn**	**15 02 49.1**	**+1.2**
GRL				S	**Sn**	**15 03 06.0**	**+1.6**
GRL	**Gorelyy**	**1.31**	**243**	*i* P	**Pn**	**15 02 49.1**	**+1.2**
GRL				*e*S	**Sn**	**15 03 06.0**	**+1.6**
GNL	**Ganaly**	**1.33**	**294**	PN	**Pn**	**15 02 49.0**	**+0.9**
GNL	**Ganaly**	**1.33**	**294**	*e*P	**Pn**	**15 02 49.1**	**+0.9**
PEA0B	**Petropavlovsk-**	**1.38**	**268**		**Pn**	**15 02 49.8**	**+1.1**
PEA0B	**Petropavlovsk-**	**1.38**	**268**	*i* PN	**Pn**	**15 02 49.9**	**+1.2**
PETK	**Petropavlovsk-**	**1.38**	**268**		**Pn**	**15 02 48.8**	**+0.1**
PETK	**Petropavlovsk-**	**1.38**	**268**	P	**Pn**	**15 02 49.1**	**+0.5**
	392nm,0.5s,baz=89,slow=17,SNR=610						
PETK				S	**Sn**	**15 03 06.7**	**+0.9**
	363nm,0.3s,baz=82,slow=39,SNR=19						
ASAK	**Asacha**	**1.49**	**239**	PN	**Pn**	**15 02 51.5**	**+1.3**
ASAK	**Asacha**	**1.49**	**239**	*i* P	**Pn**	**15 02 51.6**	**+1.3**
APC	**Apacha**	**1.72**	**263**	PN	**Pn**	**15 02 54.8**	**+1.5**
APC				S	**Sn**	**15 03 16.0**	**+1.8**
APC	**Apacha**	**1.72**	**263**	*i* P	**Pn**	**15 02 54.8**	**+1.5**
APC				*e*S	**Sn**	**15 03 16.0**	**+1.8**
MKZ	**Mys Kozlova**	**1.73**	**36**	PN	**Pn**	**15 02 53.9**	**+0.5**
MKZ	**Mys Kozlova**	**1.73**	**36**	*e*P	**Pn**	**15 02 54.0**	**+0.5**
KDTR	**Khodutka, Kamc**	**1.79**	**221**	PN	**Pn**	**15 02 54.9**	**+0.7**
KDTR				S	**Sn**	**15 03 17.0**	**+1.2**
KDTR	**Khodutka, Kamc**	**1.79**	**221**	*i* P	**Pn**	**15 02 55.0**	**+0.7**
KDTR				*e*S	**Sn**	**15 03 17.1**	**+1.2**
TUMD	**Tumrok D**	**2.05**	**7**	PN	**Pn**	**15 02 59.2**	**+1.4**
TUMD				S	**Sn**	**15 03 23.1**	**+0.8**
TUMD	**Tumrok D**	**2.05**	**7**	*e*P	**Pn**	**15 02 59.3**	**+1.4**
TUMD				*e*S	**Sn**	**15 03 23.1**	**+0.8**
MIPR	**Malaya Ipel'ka**	**2.16**	**247**	PN	**Pn**	**15 03 01.0**	**+1.8**
MIPR	**Malaya Ipel'ka**	**2.16**	**247**	*e*P	**Pn**	**15 03 01.1**	**+1.8**
PAU	**Pauzhetka**	**2.59**	**230**	PN	**Pn**	**15 03 07.2**	**+2.1**
PAU	**Pauzhetka**	**2.59**	**230**	*e*P	**Pn**	**15 03 07.2**	**+2.1**
KMNR	**Kamenistaya**	**2.60**	**3**	PN	**Pn**	**15 03 07.6**	**+2.3**
KMNR	**Kamenistaya**	**2.60**	**3**	*e*P	**Pn**	**15 03 07.6**	**+2.3**
BZMR	**Bezymyannaya**	**2.79**	**6**	PN	**Pn**	**15 03 10.7**	**+2.7**
BZMR	**Bezymyannaya**	**2.79**	**6**	*e*P	**Pn**	**15 03 10.7**	**+2.7**
KIRR	**Kirishev**	**2.80**	**4**	PN	**Pn**	**15 03 10.1**	**+2.0**
KIRR	**Kirishev**	**2.80**	**4**	*e*P	**Pn**	**15 03 10.1**	**+2.0**
KPT	**Kopyto**	**2.81**	**3**	PN	**Pn**	**15 03 10.5**	**+2.3**
KPT	**Kopyto**	**2.81**	**3**	*e*P	**Pn**	**15 03 10.6**	**+2.3**
BZGR	**Bezymyannyi-Gr**	**2.81**	**8**	PN	**Pn**	**15 03 10.6**	**+2.4**
BZGR	**Bezymyannyi-Gr**	**2.81**	**8**	*e*P	**Pn**	**15 03 10.6**	**+2.4**
BZWR	**Bezymyannyi-We**	**2.82**	**6**	PN	**Pn**	**15 03 10.8**	**+2.4**
BZWR	**Bezymyannyi-We**	**2.82**	**6**	*e*P	**Pn**	**15 03 10.8**	**+2.4**
ESO	**Esso**	**2.86**	**345**	PN	**Pn**	**15 03 10.4**	**+1.5**
ESO	**Esso**	**2.86**	**345**	*e*P	**Pn**	**15 03 10.4**	**+1.5**
ZLN	**Zelenaya**	**2.89**	**9**	PN	**Pn**	**15 03 12.6**	**+3.2**
ZLN	**Zelenaya**	**2.89**	**9**	*e*P	**Pn**	**15 03 12.6**	**+3.2**
KOZ	**Kozyrevsk**	**2.90**	**359**	PN	**Pn**	**15 03 11.6**	**+2.2**
KOZ	**Kozyrevsk**	**2.90**	**359**	*e*P	**Pn**	**15 03 11.6**	**+2.2**
LGNR	**Loginova**	**2.95**	**8**	PN	**Pn**	**15 03 13.6**	**+3.3**
LGNR	**Loginova**	**2.95**	**8**	*e*P	**Pn**	**15 03 13.7**	**+3.3**
CIRR	**Tsirk**	**2.99**	**8**	PN	**Pn**	**15 03 13.6**	**+2.9**
CIRR	**Tsirk**	**2.99**	**8**	*e*P	**Pn**	**15 03 13.6**	**+2.9**
KRSR	**Krestovskiy**	**3.07**	**6**	PN	**Pn**	**15 03 14.0**	**+2.1**
KRSR	**Krestovskiy**	**3.07**	**6**	*e*P	**Pn**	**15 03 14.0**	**+2.1**
SRDR	**Sredinnyy**	**3.16**	**357**	PN	**Pn**	**15 03 14.2**	**+1.2**
SRDR	**Sredinnyy**	**3.16**	**357**	*e*P	**Pn**	**15 03 14.3**	**+1.2**
KLY	**Klyuchi**	**3.17**	**7**	PN	**Pn**	**15 03 15.4**	**+2.3**
KLY	**Klyuchi**	**3.17**	**7**	*e*P	**Pn**	**15 03 15.5**	**+2.3**
SKR	**Severo-Kuril's**	**3.45**	**225**	*e*PN	**Pn**	**15 03 18.7**	**+1.8**
SKR				*e*S	**Sn**	**15 03 57.3**	**+0.7**
SKR				pmax	pmax		
	comp=Z,57nm,0.5s						
SKR				smax	smax		
	comp=N,231nm,0.8s						
SKR				smax	smax		
	comp=E,314nm,0.6s						
SKR	**Severo-Kuril's**	**3.45**	**225**	*e*P	**Pn**	**15 03 18.3**	**+1.3**
KBTR	**Krutoberegovo**	**3.46**	**27**	PN	**Pn**	**15 03 19.4**	**+2.4**
KBTR	**Krutoberegovo**	**3.46**	**27**	*e*P	**Pn**	**15 03 19.5**	**+2.4**
KBG	**Krutoberegovo**	**3.47**	**26**	PN	**Pn**	**15 03 19.5**	**+2.3**
KBG	**Krutoberegovo**	**3.47**	**26**	*e*P	**Pn**	**15 03 19.5**	**+2.3**
SMKR	**Semkarok**	**3.53**	**13**	PN	**Pn**	**15 03 20.4**	**+2.4**
SMKR	**Semkarok**	**3.53**	**13**	*e*P	**Pn**	**15 03 20.5**	**+2.4**
BKI	**Bering**	**4.07**	**58**	PN	**Pn**	**15 03 26.2**	**+0.9**
BKI	**Bering**	**4.07**	**58**	*e*P	**Pn**	**15 03 26.2**	**+0.9**
BKI				*e*S	**Sn**	**15 04 08.5**	**-3.0**
MA2	**Magadan**	**8.20**	**325**	LR	LR	15 08 14.3	
	comp=E,29nm,18.7s,baz=128,slow=44						
MA2	**Magadan**	**8.20**	**325**	*i* PN	**Pn**	**15 04 19.1**	**-2.9**
SHEM	**Shemya Is, Ala**	**8.54**	**87**	Pn	**Pn**	**15 04 28.4**	**+1.8**
SHEM	**Shemya Is, Ala**	**8.54**	**87**	P	**Pn**	**15 04 27.9**	**+1.3**
	comp=E,13nm,0.3s,baz=302,slow=8.1,SNR=4.8						
SMY	**Shemya**	**8.54**	**87**	Pn	**Pn**	**15 04 28.4**	**+1.8**
SMY	**Shemya**	**8.54**	**87**	PN	**Pn**	**15 04 28.4**	**+1.8**
SEY	**Seymchan**	**10.58**	**341**	*i* PN	**Pn**	**15 04 52.6**	**-1.8**
SEY				pmax	pmax		
	comp=Z,1.0nm,1.1s						
KUR	**Kuril'sk**	**11.21**	**230**	*i* PN	**Pn**	**15 05 05.3**	**+2.3**
SHO	**Shikotan**	**12.73**	**228**	*e*PN	**Pn**	**15 05 20.1**	**-3.7**
SHO				pmax	pmax		
	comp=Z,8.0nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**13.05**	**231**	*e*PN	**Pn**	**15 05 27.7**	**-0.5**
YUK				pmax	pmax		
	comp=N,79nm,0.5s						
YUK				pmax	pmax		
	comp=Z,96nm,0.5s						
NMR	**Nemuro--Hokkai**	**13.62**	**230**	*e*P	**Pn**	**15 05 31.3**	**-4.7**
JKA	**Kamikawa-asahi**	**14.60**	**239**	Pn	**Pn**	**15 05 49.8**	**+0.9**
ASAJ	**Asahikawa**	**14.60**	**239**	P	**P**	**15 05 51.5**	**-2.5**
	comp=Z,14nm,0.9s,baz=79,slow=11,SNR=15						
ASAJ	**Asahikawa**	**14.60**	**239**	P	**Pn**	**15 05 49.8**	**+0.8**
BILL	**Bilibino**	**15.22**	**9**	P	**P**	**15 06 02.1**	**+1.3**
ERM	**Erimo**	**15.87**	**232**		**Pn**	**15 06 03.5**	**-1.8**
ERM	**Erimo**	**15.87**	**232**	*i* P	**Pn**	**15 06 05.5**	**+0.2**
KLR	**Kul'dur**	**18.07**	**269**	P	**Pn**	**15 06 32.9**	**+0.3**
	comp=Z,1.1nm,0.5s,baz=65,slow=12,SNR=6.8						
YAK	**Yakutsk**	**18.34**	**311**	*i* P	**Pn**	**15 06 36.9**	**+1.2**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HEH	**HeiHe**	**20.30**	**275**	*e*P	**P**	**15 06 54.1**	**-2.5**
HEH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**20.43**	**255**	P	**P**	**15 06 58.6**	**+0.4**
	comp=Z,4.5nm,0.8s,baz=33,slow=10,SNR=5.5						
	comp=Z,4.5nm,0.8s						
MJA0	**Matsu Arr-Jizo**	**22.52**	**231**	*e*P	**P**	**15 07 21.6**	**+0.9**
MJA0				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MJB9	**Matsu-Tunnel**	**22.54**	**231**	P	**P**	**15 07 21.8**	**+0.9**
MJB9				IAmb	IAmb	15 07 24.7	
	comp=Z,11nm,0.7s						
MAJO	**Matsushiro**	**22.54**	**231**	P	**P**	**15 07 21.0**	**+0.1**
MAJO	**Matsushiro**	**22.54**	**231**	P	**P**	**15 07 21.0**	**+0.1**
MAJO				pmax	pmax		
	comp=Z,12nm,0.8s						
MJAR	**Matsushiro Arr**	**22.54**	**231**	P	**P**	**15 07 21.7**	**+0.7**
	comp=Z,6.6nm,0.8s,baz=23,slow=11,SNR=15						
	comp=Z,6.6nm,0.8s						

TIXI	Tiksi	22.98	335	*i* P	P	15 07 23.9	-1.3
TIXI				pmax	pmax		
	comp=Z,4.0nm,2.0s						
C19K	Lookout Ridge	24.53	34	P	P	15 07 41.4	+1.7
C19K				IAmb	IAmb	15 07 55.8	
	comp=Z,3.1nm,0.9s						
TTA	Tatalina	24.75	49	P	P	15 07 43.5	+1.7
TTA	Tatalina	24.75	49	P	P	15 07 43.5	+1.7
TTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
KSRS	Korea Array	27.18	248	P	P	15 08 04.7	+0.9
	comp=Z,0.9nm,0.7s,baz=37,slow=11,SNR=5.3						
	comp=Z,0.9nm,0.7s						
KSRS	Korea Array	27.18	248	*e*P	P	15 08 08.5	+4.7
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR	Eielson Array	28.81	45	P	P	15 08 16.9	-1.1
	comp=Z,0.2nm,0.6s,baz=271,slow=9.5,SNR=2.6						
	comp=Z,0.2nm,0.6s						
O29M	Mount Kennedy	33.30	53		S	15 14 15.7	+1.5
H11N2	WAKE ISLAND Hy	33.80	168	T	T	15 44 44.9	
	baz=353,slow=76,SNR=119						
H11N3	WAKE ISLAND Hy	33.82	168	T	T	15 44 43.7	
	baz=353,slow=76,SNR=117						
H11N1	WAKE ISLAND Hy	33.82	168	T	T	15 44 52.6	
	baz=353,slow=76,SNR=153						
H11S1	WAKE ISLAND Hy	34.98	169	T	T	15 46 18.6	
	baz=352,slow=76,SNR=29						
H11S3	WAKE ISLAND Hy	35.00	169	T	T	15 46 19.5	
	baz=352,slow=76,SNR=60						
H11S2	WAKE ISLAND Hy	35.00	169	T	T	15 46 20.5	
	baz=352,slow=76,SNR=10						
EUNU	Eureka	41.89	14	P	P	15 10 10.8	+0.9
EUNU				IAmb	IAmb	15 10 12.9	
	comp=Z,2.0nm,0.9s						
KURK	Kurchatov	47.64	302	P	P	15 10 53.3	-2.6
KURK				*PP	pP	15 11 08.3	-2.3
KURBB	Kurchatov Arra	47.74	302	P	P	15 10 53.3	-3.3
	comp=Z,0.6nm,0.5s,baz=59,slow=7.4,SNR=8.7						
KURBB				pP	pP	15 11 08.3	-3.1
	comp=Z,0.6nm,0.7s,baz=59,slow=7.7,SNR=4.4						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	48.06	296	P	P	15 10 59.0	-0.3
MKAR	Makanchi Array	48.06	296	P	P	15 10 57.8	-1.5
	comp=Z,0.3nm,0.5s,baz=55,slow=7.2,SNR=4.6						
MKAR				pP	pP	15 11 12.0	-2.0
	comp=Z,0.2nm,0.5s,baz=53,slow=5.6,SNR=2.6						
	comp=Z,0.3nm,0.5s						
MKAR	Makanchi Array	48.06	296	*e*P	P	15 10 59.3	0.0
BVAR	Borovoye Array	50.29	308	P	P	15 11 13.3	-2.9
	comp=Z,0.4nm,0.4s,baz=48,slow=11,SNR=3.4						
	comp=Z,0.4nm,0.4s						
OBN	Obninsk	62.42	327	*e*P	P	15 12 40.4	-1.9
OBN				*e*		15 12 54.4	
OBN				*e**PP	pP	15 13 00.8	+3.2
OBN				*e*		15 13 21.1	
OBN				*e*		15 14 57.9	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TX31	Lajitas Ar. Si	70.67	67	P	P	15 13 37.1	+1.6
TX31				IAmb	IAmb	15 13 44.8	
	comp=Z,3.6nm,1.4s						
TXAR	Lajitas Array	70.67	67	P	P	15 13 36.8	+1.3
TXAR	Lajitas Array	70.67	67	P	P	15 13 35.5	0.0
	comp=Z,0.4nm,0.5s,baz=288,slow=4.2,SNR=5.7						
TXAR				pP	pP	15 13 51.7	+0.9
	comp=Z,0.3nm,0.5s,baz=289,slow=5.2,SNR=3.4						
	comp=Z,0.4nm,0.5s						
WRA	Warramunga Arr	76.12	205	P	P	15 14 07.3	-0.1
	comp=Z,0.3nm,0.5s,baz=17,slow=5.9,SNR=2.1						
	comp=Z,0.3nm,0.5s						
AS31	Alice Springs	79.80	204	P	P	15 14 27.7	0.0
AS31				IAmb	IAmb	15 14 48.6	
	comp=Z,1.6nm,1.3s						
ASAR	Alice Springs	79.80	204	P	P	15 14 27.9	+0.2
ASAR	Alice Springs	79.80	204	P	P	15 14 28.5	+0.8
	comp=Z,0.3nm,0.5s,baz=15,slow=5.0,SNR=12						
	comp=Z,0.3nm,0.5s						
ASAR	Alice Springs	79.80	204	P	P	15 14 28.0	+0.2
PLCA	Paso Flores	144.08	91	PKP	PKPdf	15 21 53.2	-1.2
	comp=Z,1.5nm,1.0s,baz=310,slow=6.6,SNR=3.0						

IDC 03 15:12:00.9±2.1**,22°.71S**×**112°.43W,h0^{km},mb3.6**/1**,**
mbtmp3.6/1**,Error ellipse: s-maj=133.0km**
s-min=83.1km az=127.0,Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03N2	Juan Fernandez	31.30	117	T	T	15 51 15.8	
	baz=286,slow=75,SNR=8.6						
H03N3	Juan Fernandez	31.32	117	T	T	15 51 15.4	
	baz=286,slow=75,SNR=10						
H03N1	Juan Fernandez	31.32	117	T	T	15 51 17.7	
	baz=286,slow=75,SNR=11						
YKA	Yellowknife Ar	84.92	359	P	P	15 24 37.9	+0.6
	0.4nm,0.8s,baz=186,slow=4.9,SNR=5.6						
	0.4nm,0.8s						
BRTR	Keskin Array B	146.64	52	PKPbc	PKPbc	15 31 44.4	-0.5
	0.3nm,0.4s,baz=265,slow=1.4,SNR=3.8						
CMAR	Chiang Mai Arr	150.36	268	PKPbc	PKPbc	15 31 55.4	+0.3
	0.4nm,0.3s,baz=233,slow=1.3,SNR=5.4						
KURBB	Kurchatov Arra	150.85	346	PKPbc	PKPbc	15 31 54.2	-1.0
	0.5nm,0.8s,baz=33,slow=1.8,SNR=4.7						
MKAR	Makanchi Array	153.19	337	PKPbc	PKPbc	15 31 59.6	-1.1
	0.3nm,0.7s,baz=36,slow=5.4,SNR=3.9						

NEIC ***03*** *15:30:48.6±0.6,2°.96N±0°.05×127°.9E±0°.1,h158^{km}±9^{km},*
mb4.3/10,Error ellipse: s-maj=18.7km s-min=7.1km
az=100.0
DJA ***03*** *15:30:48.3±0.5,3°N±3°×12°8E±°,h145^{km}±4^{km},M4.2/14,*
mB5.0/2,mb4.1/6,MLv4.2/14,Mw(mB)4.3/2
IDC ***03*** *15:30:49.7±6.2,2°.91N×127°.89E,h173^{km}±60^{km},mb3.4/7,*
mbtmp4.0/8,MS3.3/2,Error ellipse: s-maj=44.3km
s-min=14.3km az=73.0
ISC 03 15:30:47.2±0.6**,3°.00N**±0°.07×**127°.97E**±0°.07**,h150^{km},n36,**
σ**0^{s}.81**/38**,mb4.0**/12**,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.29	195		Pn	15 31 26.6	+0.8
TNTI				Sn	Sn	15 31 56.6	+1.1
TNTI	Ternate	2.29	195	P	Pn	15 31 27.3	+1.5
SGSI	Sangihe	2.53	286	P	Pn	15 31 29.3	+0.6
SGSI				S	Sn	15 32 01.4	+0.7
KMSI	Cibinong	4.65	239	P	Pn	15 31 56.5	+0.4
SWI	Sorong	5.05	139	P	Pn	15 32 02.0	+0.6
	0.1nm15nm,1.4s						
SWI				S	Sn	15 33 01.0	+1.8
	0.1nm15nm,1.4s						
SANI	Sanana	5.39	202	P	Pn	15 32 04.8	-1.0
NLAI	Namlea	6.25	188	P	Pn	15 32 16.6	-0.8
	0.2nm30nm,0.6s						
LUWI	Luwuk	6.56	232	Pn	Pn	15 32 21.4	-0.1
LUWI	Luwuk	6.56	232	P	Pn	15 32 22.5	+1.0
	0.3nm2μm24nm,0.9s						
FAKI	Fak Fak	7.27	144	Pn	Pn	15 32 31.9	+0.9
FAKI	Fak Fak	7.27	144	P	Pn	15 32 32.3	+1.4
	0.1nm24nm,1.0s						
APSI	Ampana	7.41	239	P	Pn	15 32 33.4	+0.6
TOLI2	Tolitoli	7.42	256		Pn	15 32 33.4	+0.5
JAY	Jayapura	13.86	113	P	P	15 34 01.5	+0.5
	10nm,0.6s,baz=268,slow=8.0,SNR=9.5						
MTN	Manton Dam	16.05	169		Pn	15 34 24.4	-0.2
WB0	Warramunga Arr	23.49	165	P	P	15 35 43.0	-0.5
WB0				IAmb	IAmb	15 36 09.7	
	comp=Z,11nm,1.1s						
WRA	Warramunga Arr	23.64	165	P	P	15 35 44.8	-0.1
	comp=Z,2.3nm,0.6s,baz=345,slow=10,SNR=20						
	comp=Z,2.3nm,0.6s						
WR8	Warramunga Arr	23.70	165	P	P	15 35 45.1	-0.3
WR8				IAmb	IAmb	15 36 19.1	
	comp=Z,18nm,1.4s						
ASAR	Alice Springs	27.13	168	P	P	15 36 15.8	-0.6
	comp=Z,0.3nm,0.5s,baz=352,slow=7.6,SNR=8.1						
ASAR				PcP	PcP	15 39 33.6	+0.2
	comp=Z,0.5nm,0.6s,baz=354,slow=2.2,SNR=12						
	comp=Z,0.3nm,0.5s						
PSI	Prapat	29.01	270	LR	LR	15 48 11.2	
	comp=Z,79nm,21.1s,baz=100,slow=36						
JNU	Nakatsue	30.09	5	LR	LR	15 48 46.2	
	comp=Z,55nm,20.7s,baz=155,slow=36						
STKA	Stephens Creek	37.02	161	P	P	15 37 42.2	-0.3
STKA				IAmb	IAmb	15 37 50.8	
	comp=Z,14nm,0.9s						
STKA	Stephens Creek	37.02	161	P	P	15 37 41.9	-0.7
	comp=Z,1.8nm,0.4s,baz=339,slow=9.2,SNR=8.0						
	comp=Z,1.8nm,0.4s						
PETK	Petropavlovsk-	55.65	21	P	P	15 40 07.0	-0.5
PETK	Petropavlovsk-	55.65	21	P	P	15 40 07.5	0.0
	comp=Z,0.6nm,0.6s,baz=201,slow=7.7,SNR=4.1						
	comp=Z,0.6nm,0.6s						
MKAR	Makanchi Array	58.86	325	P	P	15 40 30.7	+0.5
MKAR	Makanchi Array	58.86	325	P	P	15 40 30.9	+0.7
	comp=Z,0.7nm,0.4s,baz=124,slow=8.1,SNR=16						
	comp=Z,0.7nm,0.4s						
MAKZ	Makanchi	59.05	325	P	P	15 40 32.3	+0.8
OXZ	Oxford	60.78	144	P	P	15 40 41.5	-1.8
KURBB	Kurchatov Arra	63.02	327	P	P	15 40 58.0	-0.1
	comp=Z,1.1nm,0.6s,baz=128,slow=6.0,SNR=15						
	comp=Z,1.1nm,0.6s						
KURK	Kurchatov	63.02	327	P	P	15 40 58.4	+0.2
KKAR	Karatay Array	64.61	317	P	P	15 41 08.7	0.0
D19K	Kuna River	81.36	21	P	P	15 42 47.6	+0.8
D19K				IAmb	IAmb	15 43 30.7	
	comp=Z,6.0nm,1.4s						
D20K	Etivluk River	81.94	21	P	P	15 42 50.5	+0.6
D20K				IAmb	IAmb	15 43 21.4	
	comp=Z,8.5nm,1.5s						
VNDA	Vanda	82.55	173	P	P	15 42 52.1	-0.7
	comp=Z,1.0nm,0.9s,baz=317,slow=7.9,SNR=3.6						
	comp=Z,1.0nm,0.9s						
SML	Sawmill	84.39	28	P	P	15 43 02.5	0.0
SML				IAmb	IAmb	15 43 33.5	
	comp=Z,4.0nm,1.0s						

SDD ***03*** *16:03:14.0±1.4,19°.61N×70°.53W,h23^{km}±9^{km},MD3.2,*
ML2.6,MW3.2
OSPL ***03*** *16:03:16.5±2.0,19°.51N×70°.63W,h0^{km}±18^{km},ML2.4*
ISC 03 16:03:11.5±1.4**,19°.61N**±0°.04×**70°.51W**±0°.05**,h4^{km}**±13^{km}**,**
n14,σ**0^{s}.53**/23**,4C,Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SC01	Santiago de lo	0.27	228	⇑*e*Pg	Pb	16 03 19.8	+0.9
SC01				*e*Sg	Sb	16 03 24.4	+0.4
SC01				IAML		16 03 26.5	
	comp=N,294nm,0.2s						
SC01	Santiago de lo	0.27	228	*i* P	Pb	16 03 19.7	+0.7
SC01				IAML		16 03 29.3	
	comp=Z,286nm,0.2s						
DR08	Loma La Naviza	0.80	144	*e*Pg	Pn	16 03 28.9	-0.7
DR08				*e*Sg	Sb	16 03 39.8	+0.7
DR08				IAML		16 03 52.5	
	comp=N,883nm,0.2s						
ABDR	Alto Bandera	0.80	188	*e*Pg	Pb	16 03 27.9	-0.3
ABDR				⇑*e*Sg	Sb	16 03 38.8	-0.7
ABDR				IAML		16 03 38.9	
	comp=N,269nm,0.3s						
SDDR	Presa de Saban	0.96	230	*e*Pg	Pg	16 03 30.2	+0.3
SDDR				IAML		16 03 45.0	
	comp=N,67nm,0.5s						
SDDR	Presa de Saban	0.96	230	*i* P	Pg	16 03 30.0	+0.1
SDDR				*e*S	Sg	16 03 41.3	-1.1
SDDR				IAML		16 03 43.1	
	comp=Z,92nm,0.3s						
MCDR	Montecristi	1.11	285	*e*Pg	Pg	16 03 32.4	-0.5
MCDR				*e*Sg	Sb	16 03 48.3	+0.1
MCDR				IAML		16 03 55.2	
	comp=N,198nm,0.3s						
BANI	BANI	1.22	173	*e*Pg	Pn	16 03 35.8	+0.3
BANI				*e*Sg	Sg	16 03 50.9	+0.1
BANI				IAML		16 03 52.4	
	comp=N,190nm,0.6s						
LODU1	El Espartillar	1.54	216	*i* P	Pg	16 03 41.4	+0.3
LODU1				IAML		16 04 02.0	
	comp=Z,105nm,1.0s						
PODR	Polo	1.61	207	*e*Pg	Pb	16 03 41.9	0.0
PODR				⇑*e*Sg	Sn	16 04 02.0	-0.2
PODR				IAML		16 04 06.5	
	comp=N,43nm,0.7s						
PODR	Polo	1.61	207	*i* P	Pb	16 03 42.1	+0.2
JIDR	Jimani	1.68	229	⇑*e*Pg	Pb	16 03 43.0	-0.1
JIDR				*e*Sg	Sb	16 04 04.5	-0.1
JIDR				IAML		16 04 05.5	
	comp=N,89nm,0.7s						
GRTK	Grand Turk	1.98	343	*i* P	Pg	16 03 49.2	-0.2
GRTK				*e*S	Sg	16 04 15.6	+0.5
GRTK				IAML		16 04 17.8	
	comp=Z,29nm,1.4s						
LOBH	Bahia de las A	2.04	212	*i* P	Pb	16 03 49.6	+0.5
LOBH				IAML		16 04 22.0	
	comp=Z,62nm,1.5s						

IDC ***03*** *16:17:11.2±1.3,7°.09N×72°.17W,h0^{km},mb3.1/1,*
mbtmp3.5/4,ML2.7/3,Error ellipse: s-maj=48.4km
s-min=13.1km az=134.0
RSNC ***03*** *16:17:15.6±0.0,7°N±1°×7°2W±°,h7^{km}±3^{km},M3.2,ML3.0*
ISC 03 16:17:11.4±1.4**,7°.05N**±0°.03×**72°.08W**±0°.03**,h3^{km}**±10^{km}**,**
n30,σ**1^{s}.93**/53**,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAMC	Tame, Arauca	0.68	155	P	Pn	16 17 28.5	+0.5
TAMC				S	Sn	16 17 39.0	-0.1
PAMC	Pamplona, Colo	0.68	295	P	Pb	16 17 25.4	-0.8
PAMC				S	Sg	16 17 32.5	-0.8
BARC	Barichara	1.19	247	P	Pg	16 17 34.9	+0.7
RUSC	La Rusia	1.52	221	P	Pg	16 17 41.5	+0.8
RUSC				S	Sb	16 18 00.8	+0.2
BRJC	Barrancabermej	1.65	267	P	Pg	16 17 43.6	+0.4
BRJC				S	Sg	16 18 04.0	-0.6
SDV	Santo Domingo	2.32	38	Pn	Pb	16 17 53.2	-0.8
	18nm,0.3s,baz=198,slow=7.6,SNR=12						
SDV				Lg	Lg	16 18 25.8	
	77nm,0.3s,baz=334,slow=14,SNR=19						
	30nm,0.3s						
SDV	Santo Domingo	2.32	38	P	Pb	16 17 54.0	-0.1
SDV				S	Sb	16 18 22.4	-0.8
PTBC	PUERTO BERRIO,	2.41	258	P	Pn	16 17 52.9	+1.0
PTBC				S	Sb	16 18 24.2	-1.6
SPBC	San Pablo de B	2.42	235	P	Pb	16 17 54.7	-1.0
SPBC				S	Sb	16 18 26.0	0.0
ZARC	Zaragoza, Cauc	2.79	279	P	Pn	16 17 58.8	+1.7
ZARC				S	Sn	16 18 32.0	+0.7
PTGC	Puerto Gaitan,	2.83	181	P	Pn	16 17 59.9	+2.2
PTGC				S	Sn	16 18 33.5	+1.1
CHIC	Chingaza	2.91	214	P	Pn	16 18 02.0	+2.9
CHIC				S	Sn	16 18 35.2	+0.3
ROSC	El Rosal	3.13	226	Pn	Pn	16 18 02.5	+0.4
	7.0nm,0.3s,baz=262,slow=23,SNR=4.3						
ROSC				Lg	Lg	16 18 51.6	
	10nm,0.3s,baz=183,slow=21,SNR=3.8						
	9.1nm,0.3s						
ROSC	El Rosal	3.13	226	P	Pb	16 18 06.3	-1.7
NORC	Norcasia	3.14	242	P	Pn	16 18 03.6	+1.6
NORC				S	Sb	16 18 45.0	-1.8
VILC	Villavicencio,	3.33	209	P	Pn	16 18 06.3	+1.6
VILC				S	Sb	16 18 49.0	-3.4
ARGC	Ariguani, Magd	3.52	323	P	Pb	16 18 12.3	-2.1
ARGC				S	Sn	16 18 51.4	+2.2
GUY2C	Guyana, Caldas	3.74	241	P	Pn	16 18 12.4	+1.9
GUY2C				S	Sb	16 19 00.9	-3.4
CRJC	Cerrejon, Guaj	4.02	349	P	Pn	16 18 17.3	+3.2
CRJC				S	Sn	16 19 01.0	-0.8
CBOC	Ciudad Bolivar	4.08	253	P	Pn	16 18 18.7	+3.7
CBOC				S	Sb	16 19 15.5	+1.5
SJCC	San Jacinto, C	4.17	313	P	Pn	16 18 18.3	+2.2
SJCC				S	Sn	16 19 07.5	+2.0
ANIL	Santa Ana	4.17	233	P	Pn	16 18 18.7	+2.4
ANIL				S	Sn	16 19 05.0	-0.8
PRAC	Prado	4.33	220	P	Pn	16 18 20.1	+1.7
PRAC				S	Sn	16 19 11.7	+2.2
ORTC	Ortega, Tolima	4.43	225	P	Pn	16 18 21.6	+1.8
ORTC				S	Sn	16 19 15.6	+3.6
APAC	Apartado, Choc	4.54	281	P	Pn	16 18 23.9	+2.7
APAC				S	Sn	16 19 17.6	+3.1
URIC	Uribia, Colomb	4.62	1	P	Pn	16 18 21.8	-0.5
URIC				S	Sn	16 19 13.0	-3.5
PCRV	Puerto La Cruz	7.99	67	Pn	Pn	16 19 11.3	+2.7
	0.4nm,0.3s,baz=92,slow=16,SNR=1.3						
PCRV				Sn	Sn	16 20 40.4	+0.8
	0.6nm,0.3s,baz=260,slow=5.2,SNR=1.8						
	3.2nm,0.6s						
TXAR	Lajitas Array	37.09	311	P	P	16 24 23.2	-0.2
	0.1nm,0.4s,baz=116,slow=8.0,SNR=2.3						
	0.1nm,0.4s						
ASAR	Alice Springs	150.08	234	PKPbc	PKPbc	16 37 03.2	-1.5
	0.3nm,0.5s,baz=117,slow=3.3,SNR=4.2						
WRA	Warramunga Arr	151.35	241	PKPbc	PKPbc	16 37 06.1	-1.6
	0.5nm,0.8s,baz=104,slow=4.5,SNR=1.9						

CATAC ***03*** *17:10:14.7±0.6,13°N±3°×8°9W±°,h26^{km}±4^{km},M3.6/15,*
MLv3.6/15,Error ellipse: s-maj=7.7km s-min=4.8km
az=31.8,confirmed
SNET ***03*** *17:10:16.9±0.9,13°.10N×89°.45W,h55^{km},ML3.5*
GCG ***03*** *17:10:17.5±0.9,13°.09N×89°.53W,h45^{km}±22^{km},MD3.8,*
ML3.5
ISC 03 17:10:14.8±1.8**,12°.90N**±0°.07×**89°.45W**±0°.04**,h29^{km}**±12^{km}**,**
n59,σ**0^{s}.75**/65**,7C-1D,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.60	12	*e*P	Pb	17 10 27.6	+0.8
LALI				*e*S	Sb	17 10 35.1	+0.2
LALI	Alcalda de L	0.60	12	*i* P	Pb	17 10 27.6	+0.8
LALI	Alcalda de L	0.60	12	P	Pb	17 10 27.6	+0.8
JAYA	Jayaque - finc	0.75	360	⇑*e*P	Pb	17 10 29.4	0.0
JAYA				*e*S	Sb	17 10 38.5	-0.9
JAYA	Jayaque - finc	0.75	360	*i* P	Pb	17 10 29.4	0.0
JAYA				*i* S	Sb	17 10 38.3	-1.1
JAYA	Jayaque - finc	0.75	360	P	Pb	17 10 29.5	0.0
PANCS	Alcalda de	0.75	20	P	Pb	17 10 29.5	0.0
PANCS	Alcalda de	0.75	20	S	Sb	17 10 38.9	-0.5
ITCA	Escuela Especi	0.79	12	P	Pb	17 10 30.2	+0.2
ITCA	Escuela Especi	0.79	12	S	Sb	17 10 40.3	0.0
LOMA	Loma Larga	0.79	20	*e*P	Pb	17 10 30.1	+0.1
LOMA	Loma Larga	0.79	20	P	Pb	17 10 30.3	+0.2
LOMA	Loma Larga	0.79	20	S	Sb	17 10 40.7	+0.3
LFRS	El Faro	0.81	27	⇓*i*P	Pn	17 10 30.6	+0.1
LFRS				*e*S	Sb	17 10 40.2	-0.9
PMON	Piamonte	0.82	9	⇑*e*P	Pn	17 10 30.4	-0.1
PMON	Piamonte	0.82	9	P	Pn	17 10 30.4	-0.1
PMON	Piamonte	0.82	9	S	Sb	17 10 41.3	0.0
BOQS	Boqueron	0.84	11	⇑*e*P	Pn	17 10 31.1	+0.1
PIC2	El Picacho	0.86	12	*e*P	Pn	17 10 31.3	+0.1
COEG	Centro de Oper	0.90	38	*e*P	Pn	17 10 31.7	0.0
COEG	Centro de Oper	0.90	38	P	Pn	17 10 31.8	+0.2
COEG	Centro de Oper	0.90	38	S	Sb	17 10 43.6	0.0
LFU	La Fuente	0.90	21	*e*P	Pn	17 10 32.1	+0.4
TECO	Alcaldia de Te	0.91	46	*e*P	Pn	17 10 31.8	+0.1
TECO	Alcaldia de Te	0.91	46	P	Pn	17 10 31.8	+0.1
TECO	Alcaldia de Te	0.91	46	S	Sb	17 10 43.2	-0.5
LBRS	Las Brisas	0.92	25	*e*P	Pn	17 10 32.4	+0.5
CEVE	Cerro Verde	0.94	349	*e*P	Pn	17 10 32.2	-0.1
CEVE	Cerro Verde	0.94	349	P	Pn	17 10 32.1	-0.1
CEVE	Cerro Verde	0.94	349	S	Sb	17 10 44.6	-0.2
PAVA	Las Pavas	0.95	31	*e*P	Pn	17 10 32.6	+0.3
PAVA	Las Pavas	0.95	31	P	Pn	17 10 32.6	+0.3
PAVA	Las Pavas	0.95	31	S	Sn	17 10 45.0	+0.1
SBLS	San Blas	0.95	350	⇑*e*P	Pn	17 10 32.3	-0.2
UESV	Universidad de	0.97	41	P	Pn	17 10 32.9	+0.3
UESV	Universidad de	0.97	41	S	Sn	17 10 45.1	-0.4
SNJE	San Jose	0.97	351	⇑*e*P	Pn	17 10 32.6	-0.2
NUBE	Las Nubes	1.05	342	⇑*e*P	Pn	17 10 33.4	-0.3
NUBE	Las Nubes	1.05	342	*i* P	Pn	17 10 33.4	-0.3
NUBE				*i* S	Sn	17 10 46.2	-1.3
NUBE	Las Nubes	1.05	342	P	Pn	17 10 33.2	-0.5
TECA	Tecapa	1.09	57	*e*P	Pn	17 10 35.3	+1.0
PACA	Pacayal	1.23	63	*e*P	Pn	17 10 37.3	+1.1
PACA	Pacayal	1.23	63	P	Pb	17 10 37.6	+0.1
PACA	Pacayal	1.23	63	S	Sn	17 10 52.8	+0.8
LCY	Lacayo	1.24	65	*e*P	Pn	17 10 37.5	+1.2
RANC	El Ranchito	1.25	65	P	Pn	17 10 35.1	-1.4
RANC	El Ranchito	1.25	65	S	Sn	17 10 50.9	-1.5
BLLM	Bellamira	1.29	65	*e*P	Pb	17 10 38.4	-0.2
MTO3	Montecristo	1.49	3	⇑*e*P	Pn	17 10 40.0	+0.1
MTO3	Montecristo	1.49	3	*i* P	Pn	17 10 40.0	+0.1
MTO3	Montecristo	1.49	3	P	Pn	17 10 40.1	+0.1
MTO3	Montecristo	1.49	3	S	Sn	17 10 58.4	-0.1
CNCH	Conchagua	1.61	76	*e*P	Pn	17 10 42.6	+1.1
CNCH	Conchagua	1.61	76	P	Pn	17 10 42.6	+1.1
CNCH	Conchagua	1.61	76	S	Sn	17 11 02.6	+1.1
ESQI	Esquipulas	1.65	4	P	Pn	17 10 42.4	+0.4
CSGN	Cosiguina Volc	1.84	87	P	Pn	17 10 41.1	-3.5
CSGN				S	Sn	17 11 08.0	+1.0
POTN	Potosi Cosigui	1.89	87	P	Pn	17 10 42.0	-3.2
STG8	El Palmar, Qui	2.41	310	*e*P	Pb	17 10 57.9	+0.3
STG8				*e*S	Sb	17 11 28.6	+1.5
STG8				IAML		17 11 31.3	
	comp=N,205nm,0.2s						

IDC ***03*** *17:15:58.3±0.9,36°.83N×142°.08E,h0^{km},mb3.8/14,*
mbtmp3.8/20,ML3.3/6,MS3.4/15,Error ellipse:
s-maj=20.2km s-min=18.2km az=109.0
NIED ***03*** *17:16:01.0,36°.76N×142°.07E,h43^{km},MW4.1,Moment*
Tensor Solution.   s3   Moment tensor: Scale 10^{15}Nm;
M$_{rr}$0.43; M$_{\theta\theta}$0.11; M$_{\phi\phi}$-0.55; M$_{r\theta}$0.72; M$_{\theta\phi}$-0.31; M$_{\phi r}$1.40;
Fault plane solution: M$_{0}$1.67000×10^{15} NP1:
ϕ_s190.00000°,δ10.00000°,λ73.00000°.   NP2:ϕ_s27.00000°,
δ80.00000°,λ93.00000°.
JMA ***03*** *17:16:01.0±0.3,36°.8N±0°.8×14°2E±°,h43^{km},MV3.9/33,E*
OFF FUKUSHIMA PREF
NEIC ***03*** *17:16:04.2±0.8,37°.06N±0°.08×141°.9E±0°.1,h28^{km}±8^{km},*
mb4.3/10,Error ellipse: s-maj=15.0km s-min=10.5km
az=124.0
ISC 03 17:16:01.5±0.7**,36°.91N**±0°.06×**142°.01E**±0°.06**,h19^{km},n68,**
σ**1^{s}.52**/58**,mb4.1**/23**,MS3.5**/10**,4D,Off east coast of**
Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.99	282	⇓P	Pg	17 16 19.8	-0.9
JFK	Kawauchi	1.01	297	P	Pg	17 16 20.5	-0.8
JFFD	Fukushimafurud	1.17	279	P	Pn	17 16 22.1	-0.7
JHO	Hitachi	1.19	256	P	Pn	17 16 21.7	-1.5
JHYU	Hitachinakayam	1.27	244	⇓P	Pn	17 16 22.9	-1.4
JHYU				⇓*e*S	Sn	17 16 40.3	-0.5
JMM	Marumori	1.36	315		Pb	17 16 25.0	-1.3
JMM	Marumori	1.36	315	⇓P	Pg	17 16 26.1	-1.6
JOTO	OTAMA OYAMA	1.49	297	P	Pb	17 16 28.4	-0.1
JOTO				*e*S	Sb	17 16 48.1	+1.1
JIO	Ouri	1.63	342	P	Pg	17 16 30.3	-2.6
JOU	Okura	1.81	324	P	Pb	17 16 33.5	-0.5
JFY	Yanaizu	1.91	286	P	Pb	17 16 34.2	-1.4
JAG	Ashikaga	2.11	258	*e*P	Pn	17 16 34.7	-1.1
MJAR	Matsushiro Arr	3.07	264	Pn	Pn	17 16 50.0	+1.0
	2.6nm,0.3s,baz=96,slow=10,SNR=141						
MJAR				Sn	Sb	17 17 31.0	-1.7
	1.1nm,0.3s,baz=304,slow=24,SNR=5.1						
MJAR				LR	LR	17 18 18.3	
	comp=Z,500nm,18.7s,baz=158,slow=45						
	38nm,0.5s						
MAJO	Matsushiro	3.07	264		Pn	17 16 49.7	+0.7
MJB9	Matsu-Tunnel	3.08	264		Pn	17 16 49.9	+0.8
JSG	Sagara	3.82	235	Pn	Pn	17 17 00.5	+1.2
JTM	Tenmabayashi	3.94	350	Pn	Pn	17 17 00.1	-0.8
JGF	Kuroka	3.98	252		Pn	17 17 02.4	+0.9
ERM	Erimo	5.18	10		Pn	17 17 18.0	+0.1
JKA	Kamikawa-asahi	7.22	3		Pn	17 17 45.1	-0.8
ASAJ	Asahikawa	7.22	3	Pn	Pn	17 17 46.6	+0.7
	1.2nm,0.3s,baz=221,slow=10,SNR=16						
	3.7nm,0.5s						
JMN	Monobe	7.36	247	Pn	Pn	17 17 48.1	+0.2
JNU	Nakatsue	9.88	251	Pn	Pn	17 18 22.9	+0.5
	0.3nm,0.3s,baz=64,slow=4.0,SNR=3.6						
JNU				LR	LR	17 22 30.7	
	comp=Z,157nm,18.1s,baz=16,slow=40						
	6.8nm,1.0s						
USRK	Ussuriysk Ar.	10.54	317	Pn	Pn	17 18 33.0	+1.5
	0.2nm,0.3s,baz=140,slow=14,SNR=7.7						
USRK				LR	LR	17 22 23.8	
	comp=Z,180nm,19.6s,baz=149,slow=36						
	1.0nm,0.6s						
KSRS	Korea Array	11.25	277	Pn	Pn	17 18 42.4	+1.2
	0.1nm,0.3s,baz=76,slow=16,SNR=4.8						
KSRS				LR	LR	17 22 56.4	
	comp=Z,202nm,18.8s,baz=80,slow=37						
	0.5nm,0.3s						
KLR	Kul'dur	14.40	332	LR	LR	17 24 57.8	
	comp=Z,135nm,18.6s,baz=156,slow=37						
PETK	Petropavlovsk-	19.56	29	P	Pn	17 20 28.9	-0.5
	0.1nm,0.3s,baz=198,slow=14,SNR=4.3						
PETK				LR	LR	17 28 11.0	
	comp=Z,23nm,20.3s,baz=174,slow=37						

	2.0nm,0.9s						
XLT	XiLinHaoTe	20.89	298	*e*P	P	17 20 41.2	-1.4
XLT				sP	pwP	17 20 50.6	+2.9
XLT				PP	PnPn	17 21 08.9	+7.7
XLT				pmax	pmax		
	comp=Z,12nm,0.8s						
XLT				pmax	pmax		
	comp=Z,68nm,3.2s						
XLT				LR	LR		
	comp=N,12nm,16.2s						
XLT				LR	LR		
	comp=E,180nm,18.3s						
XLT				LR	LR		
	comp=Z,160nm,19.6s						
MA2	Magadan	23.38	11	LR	LR	17 31 48.6	
	comp=Z,24nm,18.1s,baz=186,slow=40						
HHC	Hu-ho-hao-te	23.96	289	*e*P	P	17 21 15.4	+0.7
HHC				pmax	pmax		
	comp=Z,18nm,0.7s						
YAK	Yakutsk	26.30	347	LR	LR	17 32 20.8	
	comp=Z,63nm,18.5s,baz=142,slow=37						
H11N2	WAKE ISLAND Hy	27.68	121	T	T	17 50 45.6	
	baz=314,slow=75,SNR=27						
H11N1	WAKE ISLAND Hy	27.68	121	T	T	17 50 43.8	
	baz=314,slow=75,SNR=30						
H11N3	WAKE ISLAND Hy	27.69	121	T	T	17 50 46.6	
	baz=314,slow=75,SNR=27						
ENH	Enshi	27.80	266		P	17 21 46.1	-3.3
ULN	Ulaanbaatar	27.82	304	P	P	17 21 46.8	-2.8
SONM	Songino Array	28.25	304		P	17 21 53.0	-0.5
SONM				IAmb	IAmb	17 21 55.3	
	comp=Z,3.7nm,0.8s						
SONM	Songino Array	28.25	304	P	P	17 21 53.7	+0.3
	comp=Z,5.0nm,0.8s,baz=105,slow=8.9,SNR=18						
	comp=Z,5.0nm,0.8s						
H11S1	WAKE ISLAND Hy	28.39	124	T	T	17 51 59.0	
	baz=315,slow=75,SNR=17						
H11S3	WAKE ISLAND Hy	28.39	124	T	T	17 51 37.9	
	baz=315,slow=75,SNR=18						
H11S2	WAKE ISLAND Hy	28.41	124	T	T	17 51 53.8	
	baz=315,slow=75,SNR=16						
GTA	Gaotai	33.05	287	*e*P	P	17 22 36.7	+0.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
TIXI	Tiksi	35.47	353	LR	LR	17 38 46.0	
	comp=Z,31nm,18.6s,baz=191,slow=38						
PZH	PanZhiHua	35.56	265	P	P	17 22 59.8	+2.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.7s						
GOMU	GeErMu	37.61	284	P	P	17 23 15.7	+0.3
GOMU				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CMAR	Chiang Mai Arr	41.92	256	P	P	17 23 51.2	+0.2
	comp=Z,0.4nm,0.3s,baz=52,slow=8.2,SNR=2.0						
	comp=Z,0.4nm,0.3s						
ZAA0	Zalesovo Array	42.35	312		P	17 23 54.1	0.0
ZALV	Zalesovo Beam	42.35	312		P	17 23 53.7	-0.4
ZALV	Zalesovo Beam	42.35	312	P	P	17 23 54.1	+0.1
	comp=Z,1.5nm,0.6s,baz=97,slow=9.3,SNR=9.5						
ZALV				LR	LR	17 42 23.3	
	comp=Z,76nm,18.1s,baz=95,slow=37						
	comp=Z,1.5nm,0.6s						
NRIK	Noril'sk	43.58	335	LR	LR	17 43 14.2	
	comp=Z,68nm,18.2s,baz=98,slow=38						
MKAR	Makanchi Array	44.59	302	P	P	17 24 12.7	+0.4
	comp=Z,1.3nm,0.8s,baz=87,slow=9.9,SNR=12						
MKAR				LR	LR	17 43 23.4	
	comp=Z,35nm,18.0s,baz=80,slow=37						
	comp=Z,1.3nm,0.8s						
MAKZ	Makanchi	44.80	302		P	17 24 13.7	-0.2
MAKZ				IAmb	IAmb	17 24 27.5	
	comp=Z,3.0nm,1.0s						
KURK	Kurchatov	46.38	308		P	17 24 26.5	+0.1
KURK				IAmb	IAmb	17 24 37.6	
	comp=Z,4.9nm,0.9s						
KURBB	Kurchatov Arra	46.45	308	P	P	17 24 27.1	+0.2
	comp=Z,1.9nm,0.8s,baz=83,slow=8.3,SNR=14						
	comp=Z,1.9nm,0.8s						
ILAR	Eielson Array	49.35	32	P	P	17 24 49.2	+0.1
	comp=Z,0.5nm,0.7s,baz=267,slow=7.0,SNR=6.6						
	comp=Z,0.5nm,0.7s						
AAK	Ala-Archa	50.97	299	LR	LR	17 47 54.2	
	comp=Z,105nm,19.1s,baz=82,slow=38						
BVAR	Borovoye Array	51.01	312	P	P	17 25 02.0	+0.1
	comp=Z,0.6nm,0.5s,baz=81,slow=9.2,SNR=4.4						
BVAR				LR	LR	17 47 52.1	
	comp=Z,60nm,18.6s,baz=93,slow=37						
	comp=Z,0.6nm,0.5s						
SIMJ	Simiganj	56.26	296		P	17 25 40.8	0.0
WRA	Warramunga Arr	57.00	189	P	P	17 25 46.2	+0.2
	comp=Z,0.6nm,0.8s,baz=3.9,slow=7.4,SNR=5.7						
WRA				LR	LR	17 49 16.0	
	comp=Z,195nm,21.8s,baz=34,slow=35						
	comp=Z,0.6nm,0.8s						
AB31	Akbulak array	58.38	310	IAmb	IAmb	17 25 56.3	
	comp=Z,1.8nm,0.8s						
ABKAR	Akbulak array	58.38	310	IAmb	IAmb	17 25 56.3	
	comp=Z,1.9nm,0.8s						
ASAR	Alice Springs	60.73	189	P	P	17 26 10.1	-1.7
	comp=Z,0.4nm,0.8s,baz=23,slow=7.6,SNR=5.4						
	comp=Z,0.4nm,0.8s						
KBZ	Khabaz	71.34	311	P	P	17 27 20.1	+0.2
	comp=Z,1.5nm,0.8s,baz=182,slow=0.9,SNR=4.4						
	comp=Z,1.5nm,0.8s						
AKASG	Malin Array Be	74.69	323	P	P	17 27 39.7	+0.1
	comp=Z,1.2nm,0.6s,baz=49,slow=6.4,SNR=8.1						
	comp=Z,1.2nm,0.6s						
BRTR	Keskin Array B	79.29	312	P	P	17 28 06.7	+0.8
	comp=Z,0.6nm,0.9s,baz=131,slow=5.1,SNR=4.4						
	comp=Z,0.6nm,0.9s						
SDCO	Great Sand Dun	83.03	48	P	P	17 28 27.2	+1.2
SDCO				IAmb	IAmb	17 28 31.2	
	comp=Z,4.2nm,1.1s						
GERES	GERESS Array B	83.07	329	P	P	17 28 25.9	+0.2
	comp=Z,0.2nm,0.4s,baz=326,slow=6.4,SNR=3.6						
	comp=Z,0.2nm,0.4s						
TXAR	Lajitas Array	89.82	53	P	P	17 28 59.8	+0.5
	comp=Z,0.2nm,0.6s,baz=330,slow=5.0,SNR=2.4						
	comp=Z,0.2nm,0.6s						

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*BJI **03** 17:24:32.8, 37°.20S×179°.79E, h14^{km}, mB5.5/7, mb4.7/9, Ms4.8/5, Ms7 4.7/5*

*MOS **03** 17:24:34.8±0.8, 37°.18S×178°.98E, h12^{km}, mb5.2/10, Error ellipse: s-maj=14.5km s-min=13.4km az=119.5*

*IDC **03** 17:24:34.0±0.6, 36°.81S×179°.14E, h0^{km}, mb4.7/10, mbtmp4.7/11, ML5.1/1, MS3.9/27, Error ellipse: s-maj=23.5km s-min=18.6km az=81.0*

*NEIC **03** 17:24:35.4±1.5, 37°.04S±0°.10×179°.2E±0°.1, h10^{km}±1^{km}, mb5.3/26, Error ellipse: s-maj=16.4km s-min=13.8km az=8.0*

*WEL **03** 17:24:38.7±0.9, 37°S±4°×17°9E±°, h12^{km}, M4.9/23, ML5.1/23, MLv4.9/23, Error ellipse: s-maj=8.4km s-min=4.8km az=93.2, confirmed*

*WEL **03** 17:24:38.3, 37°.05S×179°.25E, h20^{km}, ML5.2, Mw4.6, Moment Tensor Solution. s4 Moment tensor: Scale 10^{15} Nm; M_{rr}-4.40; $M_{\theta\theta}$-1.45; $M_{\phi\phi}$5.85; $M_{r\theta}$3.29; $M_{\theta\phi}$0.51; $M_{\phi r}$7.32; Fault plane solution: $M_0$9.59000×10^{15} NP1: ϕ_s202.00000°, δ75.00000°, λ-77.00000°. NP2: ϕ_s341.00000°, δ20.00000°, λ-130.00000°. Principal axes: T -9.1674, Plg29.0000°, Azm282.0000°; N -0.8416, Plg13.0000°, Azm18.0000°; P 10.0090, Plg58.0000°, Azm130.0000°; Stations used: WIZ OPRZ KUZ GRZ OBLIQUE FAULTING*

*NOU **03** 17:24:40.3, 37°.36S×179°.14E, h44^{km}, mb5.3/26, Off E. Coast of N. Island, N.Z.*

ISC 03 17:24:40.4±1.0, **37°.23S**±0°.05×**179°.13E**±0°.06, **h47**^{km}±8^{km}, **n408**, σ**1^{s}88**/414, **mb5.2**/40, **MS4.0**/27, **9C-1D, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	0.73	243		Pn	17 24 53.4	-1.0
MXZ	Matakaoa Point	0.73	243	P	Pn	17 24 53.4	-1.0
MXZ	Matakaoa Point	0.73	243	P	Pn	17 24 53.4	-1.0
MXZ				S	Sn	17 25 03.7	-0.9
WMGZ	Waiomatatini S	0.81	224	P	Pn	17 24 56.7	+1.2
WMGZ				S	Sn	17 25 10.3	+3.8
PKGZ	Pakihiroa	1.04	233	P	Pn	17 24 59.7	+1.0
PKGZ				S	Sn	17 25 15.7	+3.5
PUZ	Puketiti	1.08	219	P	Pn	17 25 00.3	+1.1
PUZ				S	Sn	17 25 17.1	+4.0
HAZ	Te Kaha	1.19	244	P	Pn	17 25 00.2	-0.4
HAZ				S	Sn	17 25 19.6	+3.9
TWGZ	Tauwhareparae	1.31	224	P	Pn	17 25 03.5	+1.2
TWGZ				S	Sn	17 25 23.0	+4.3
RUGZ	Raukumara Rang	1.36	237	P	Pn	17 25 04.3	+1.2
CNGZ	Carnagh Statio	1.45	210	P	Pn	17 25 05.6	+1.5
WIZ	White Island	1.57	259	P	Pn	17 25 04.7	-1.1
TKGZ	Te Karaka	1.57	220	P	Pn	17 25 06.6	+0.7
TKGZ				S	Sn	17 25 28.6	+3.6
WSRZ	White Island S	1.58	259	P	Pn	17 25 06.6	+0.6
WSRZ				S	Sn	17 25 26.8	+1.6
MWZ	Matawai	1.68	229	P	Pn	17 25 08.1	+0.8
MWZ				S	Sn	17 25 30.5	+2.8
WHRZ	Whale Island	1.82	249	P	Pn	17 25 10.3	+1.0
RIGZ	Rimuhau	1.82	216	P	Pn	17 25 09.9	+0.6
RAGZ	Rawiri	1.85	227	P	Pn	17 25 10.8	+1.0
URZ	Urewera	1.90	237	Pn	Pn	17 25 11.4	+1.1
	573nm,0.3s,baz=341,slow=4.5,SNR=2064						
URZ				Sn	Sn	17 25 35.1	+2.1
	1μm,0.3s,baz=317,slow=23,SNR=28						
	1μm,0.3s						
URZ	Urewera	1.90	237	P	Pn	17 25 11.6	+1.3
URZ	Urewera	1.90	237	P	Pn	17 25 11.4	+1.1
PRGZ	Paritu Road	1.95	210	P	Pn	17 25 11.7	+0.6
EDRZ	Edgecumbe	2.09	245	P	Pn	17 25 14.1	+1.1
MARZ	Manawahe	2.09	248	P	Pn	17 25 13.7	+0.8
SNGZ	Shannon Statio	2.09	222	P	Pn	17 25 13.5	+0.5
KNZ	Kokohu	2.12	212	P	Pn	17 25 13.4	0.0
OPRZ	Ohinepanea	2.13	253	P	Pn	17 25 13.7	+0.2
MHGZ	Mahia Peninsul	2.14	206	P	Pn	17 25 14.3	+0.6
RTZ	Ruatahuna	2.19	230		Pn	17 25 15.1	+0.8
RTZ	Ruatahuna	2.19	230	P	Pn	17 25 15.3	+0.9
MUGZ	Murupara	2.24	236	P	Pn	17 25 15.8	+0.8
MKRZ	Makatiti	2.30	246	P	Pn	17 25 17.7	+1.8
MYRZ	Mayor Island	2.31	268	P	Pn	17 25 15.4	-0.5
TARZ	Mount Tarawera	2.31	244	P	Pn	17 25 17.3	+1.3
LIRZ	Lichensteins R	2.31	250	P	Pn	17 25 17.3	+1.3
RAHZ	Arahi	2.33	223	P	Pn	17 25 16.8	+0.5
TGRZ	Tauranga	2.33	257	P	Pn	17 25 16.3	+0.1
RRRZ	Republican Roa	2.35	241	P	Pn	17 25 17.6	+1.1
OMRZ	Omania	2.35	247	P	Pn	17 25 18.1	+1.5
WHHZ	Waihua	2.37	218	P	Pn	17 25 17.6	+0.8
KARZ	Kaharoa	2.42	250	P	Pn	17 25 18.4	+0.9
MTHZ	Maungataniwha	2.42	227	P	Pn	17 25 18.6	+1.0
HLRZ	Highlands Stat	2.42	244	P	Pn	17 25 19.0	+1.5
NGRZ	Ngongotaha	2.49	249	P	Pn	17 25 19.9	+1.5
PRRZ	Plateau Road	2.51	239	P	Pn	17 25 19.4	+0.7
UTU	Utuhina	2.51	247	P	Pn	17 25 21.0	+2.3
HSRZ	Hossack Road	2.53	244	P	Pn	17 25 20.5	+1.6
HRRZ	Handcock Road	2.53	242	P	Pn	17 25 20.3	+1.2
ALRZ	Allen Road	2.57	238	P	Pn	17 25 20.4	+0.8
KMRZ	Kaimai	2.61	255	P	Pn	17 25 20.5	+0.4
NMHZ	Naumai	2.61	224	P	Pn	17 25 20.9	+0.8
ARHZ	Aropaoanui	2.63	219	P	Pn	17 25 20.8	+0.4
GRRZ	Galatos Road	2.64	244	P	Pn	17 25 22.1	+1.6
MRHZ	Matea Rd	2.67	232	P	Pn	17 25 21.6	+0.7
WPRZ	Whakapapatarin	2.67	240	P	Pn	17 25 22.2	+1.2
KUZ	Kuaotunu	2.77	279	P	Pn	17 25 20.5	-1.8
KUZ	Kuaotunu	2.77	279	P	Pn	17 25 20.7	-1.6
BKZ	Black Stump Fm	2.83	226		Pn	17 25 23.3	+0.1
BKZ	Black Stump Fm	2.83	226	P	Pn	17 25 23.7	+0.5
BKZ	Black Stump Fm	2.83	226	P	Pn	17 25 23.5	+0.3
WHTZ	Whakaora	2.89	239	P	Pn	17 25 26.3	+2.3
KUTZ	Kaahu Road	2.90	243	P	Pn	17 25 25.2	+1.1
CKHZ	Cape Kidnapper	2.91	213	P	Pn	17 25 23.8	-0.3
HATZ	Hinemaiaia	2.91	234	P	Pn	17 25 24.9	+0.7
MCHZ	McNeill Hill	2.92	220	P	Pn	17 25 24.5	+0.2
TOZ	Tahuroa Road	2.93	259		Pn	17 25 23.4	-1.0
TOZ	Tahuroa Road	2.93	259	P	Pn	17 25 24.0	-0.4
TLZ	Tolley Road	3.05	248	P	Pn	17 25 27.1	+1.0
KWHZ	Kaweka Forest	3.05	223	P	Pn	17 25 26.1	-0.1
WATZ	Wairara	3.06	240	P	Pn	17 25 28.1	+1.8
KAHZ	Kahuranaki	3.11	214	P	Pn	17 25 26.3	-0.6
KAHZ				S	Sn	17 26 04.5	+1.7
GRZ	Great Barrier	3.11	287	P	Pn	17 25 25.6	-1.3
RATZ	Rangitukua	3.11	237	P	Pn	17 25 28.1	+1.1
RITZ	Rihia Road	3.11	235	P	Pn	17 25 27.9	+1.0
MKAZ	Moumakai	3.17	271	P	Pn	17 25 27.0	-0.8
KATZ	Kakaramea	3.22	236	P	Pn	17 25 30.1	+1.5
WIAZ	Waiheke Island	3.23	277	P	Pn	17 25 27.8	-0.7
KRHZ	Kereru	3.24	221	P	Pn	17 25 28.0	-0.7
KRHZ				S	Sn	17 26 06.6	+0.6
TMVZ	Te Maari	3.29	234	P	Pn	17 25 29.8	+0.3
TMVZ				S	Sn	17 26 07.6	+0.2
ETVZ	East Tongariro	3.29	234	P	Pn	17 25 29.9	+0.3
ETVZ				S	Sn	17 26 07.7	+0.1
NTVZ	North Tongarir	3.30	235	P	Pn	17 25 30.2	+0.6
NTVZ				S	Sn	17 26 08.7	+1.1
PXZ	Pawanui	3.31	212	P	Pn	17 25 28.2	-1.5
KRVZ	Karewarewa	3.32	235	P	Pn	17 25 30.5	+0.6
OTVZ	Oturere	3.34	234	P	Pn	17 25 30.7	+0.5
NNVZ	North Ngauruho	3.35	235	P	Pn	17 25 31.0	+0.6
WTVZ	West Tongariro	3.36	235	P	Pn	17 25 31.3	+0.8
SNVZ	South Ngauruho	3.37	234	P	Pn	17 25 31.1	+0.5
ETAZ	East Tamaki Re	3.37	274	P	Pn	17 25 30.4	-0.1
NGZ	Ngauruhoe	3.39	234	P	Pn	17 25 31.4	+0.5
KBAZ	Karaka Road Bo	3.39	271	P	Pn	17 25 32.0	+1.2
KBAZ				S	Sn	17 26 10.7	+1.0
TUVZ	Tukino	3.41	232	P	Pn	17 25 31.5	+0.3
MBAZ	Motutapu North	3.42	277	P	Pn	17 25 30.8	-0.3
MOVZ	Moawhango	3.43	230	P	Pn	17 25 31.2	-0.1
TWVZ	Taurewa	3.44	237	P	Pn	17 25 32.4	+0.9
COVZ	Chateau Observ	3.44	234	P	Pn	17 25 31.8	+0.3
WHVZ	Whangaehu Hut	3.46	233	P	Pn	17 25 32.1	+0.2
FWVZ	Far West T-bar	3.46	233	P	Pn	17 25 32.3	+0.3
MAVZ	Matarangi	3.46	233	P	Pn	17 25 32.4	+0.4
WNVZ	Wahianoa	3.48	232	P	Pn	17 25 32.1	0.0
TRVZ	Turoa	3.49	233	P	Pn	17 25 32.8	+0.4
ABAZ	Army Bay	3.50	279	P	Pn	17 25 32.2	-0.1
WPHZ	Waipukurau	3.52	216	P	Pn	17 25 31.6	-1.0
PNHZ	Pukenui	3.52	220	P	Pn	17 25 31.3	-1.4
EPAZ	Eden Park BICE	3.53	275	P	Pn	17 25 33.7	+1.1
HBAZ	Herne Bay Bore	3.54	275	P	Pn	17 25 33.9	+1.1
AWAZ	Awhitu Peninsu	3.59	271	P	Pn	17 25 33.4	-0.1
MTVZ	Mangateitei	3.59	232	P	Pn	17 25 33.4	-0.2
PRHZ	Porangahau	3.60	212	P	Pn	17 25 32.1	-1.6
HIZ	Hauiti	3.61	248		Pn	17 25 35.1	+1.2
HIZ	Hauiti	3.61	248	P	Pn	17 25 34.9	+1.1
HIZ	Hauiti	3.61	248	P	Pn	17 25 35.5	+1.6
PKVZ	Pokaka	3.62	234	P	Pn	17 25 34.6	+0.7
WTAZ	Waiatarua	3.66	273	P	Pn	17 25 34.5	+0.1
TSZ	Takapari Road	3.75	220	P	Pn	17 25 34.1	-1.7
ANWZ	Angora Road	3.83	212	P	Pn	17 25 35.5	-1.3
DVHZ	Dannevirke	3.84	216	P	Pn	17 25 35.5	-1.5
VRZ	Vera Road	3.93	240	P	Pn	17 25 39.3	+1.2
WCZ	Waipu Caves	4.06	287	P	Pn	17 25 39.6	-0.4
POWZ	Post Office Ro	4.10	219	P	Pn	17 25 39.2	-1.3
BFZ	Birch Farm	4.11	212		Pn	17 25 38.0	-2.7
BFZ	Birch Farm	4.11	212	P	Pn	17 25 38.6	-2.1
BFZ	Birch Farm	4.11	212	P	Pn	17 25 38.4	-2.3
WAZ	Wanganui	4.11	231	P	Pn	17 25 41.1	+0.4
OHWZ	Ohakea	4.21	224	P	Pn	17 25 41.9	0.0
CPWZ	Castlepoint	4.32	211	P	Pn	17 25 42.0	-1.5
LREZ	Lake Rotokare	4.33	238	P	Pn	17 25 44.7	+1.1
DREZ	Durham Road	4.34	242	P	Pn	17 25 46.8	+2.9
TIWZ	Tintock	4.35	215	P	Pn	17 25 42.5	-1.4
MRZ	Mangatainoka R	4.40	218		Pn	17 25 42.2	-2.4
MRZ	Mangatainoka R	4.40	218	P	Pn	17 25 42.2	-2.4
PREZ	Palmer Road	4.44	240	P	Pn	17 25 47.7	+2.5
NEZ	North Egmont	4.45	241	P	Pn	17 25 47.9	+2.5
PKE	Pukeiti	4.50	243	P	Pn	17 25 48.7	+2.7
KHEZ	Kahui Hut	4.52	241	P	Pn	17 25 48.7	+2.4
KHEZ	Kahui Hut	4.52	241	P	Pn	17 25 48.5	+2.2
NBEZ	Newall Road No	4.61	242	P	Pn	17 25 50.0	+2.4
HOWZ	Holdsworth Sta	4.61	216	P	Pn	17 25 44.9	-2.7
TMWZ	Te Maipa	4.61	212	P	Pn	17 25 44.5	-3.1
NMEZ	Namu Road	4.67	241	P	Pn	17 25 52.5	+4.2
OGWZ	Otaki Gorge	4.72	220	P	Pn	17 25 46.5	-2.5
MTW	Mount Morrison	4.83	215	P	Pn	17 25 47.4	-3.0
KIW	Kapiti Island	4.89	221	P	Pn	17 25 49.6	-1.8
OUZ	Omahuta	4.90	293	P	Pn	17 25 52.1	+0.6
OUZ	Omahuta	4.90	293	P	Pn	17 25 51.2	-0.3
TRWZ	Traveller	4.94	212	P	Pn	17 25 48.4	-3.6
CAW	Cannon Point	4.99	218	P	Pn	17 25 50.1	-2.6
PAWZ	Paruwai Farm	5.04	214	P	Pn	17 25 50.5	-3.0
MSWZ	Moikau Station	5.15	215		Pn	17 25 51.0	-3.8
MSWZ	Moikau Station	5.15	215	P	Pn	17 25 51.4	-3.5
PLWZ	Palliser	5.27	214		Pn	17 25 52.4	-4.2
PLWZ	Palliser	5.27	214	P	Pn	17 25 52.7	-3.8
WEL	Wellington	5.27	219	P	Pn	17 25 54.3	-2.3
WEL	Wellington	5.27	219	P	Pn	17 25 54.3	-2.3
BHW	Baring Head	5.32	217		Pn	17 25 53.4	-3.8
BHW	Baring Head	5.32	217	P	Pn	17 25 54.3	-2.9
SNZO	South Karori	5.32	219		Pn	17 25 53.7	-3.6
DUWZ	D'Urville Isla	5.40	227	P	Pn	17 25 56.4	-1.9
TCW	Tory Channel	5.47	222		Pn	17 25 56.4	-2.9
TCW	Tory Channel	5.47	222	P	Pn	17 25 56.3	-3.0
TUWZ	Tuamarina	5.81	222		Pn	17 26 00.3	-3.6
TUWZ	Tuamarina	5.81	222	P	Pn	17 26 00.9	-2.9
CMWZ	Cape Campbell	5.90	219		Pn	17 26 00.7	-4.4
NNZ	Nelson	5.98	227		Pn	17 26 03.3	-3.0
NNZ	Nelson	5.98	227	P	Pn	17 26 04.0	-2.3
BSWZ	Blackbirch Sta	6.04	221		Pn	17 26 03.9	-3.2
BSWZ	Blackbirch Sta	6.04	221	P	Pn	17 26 04.1	-3.1
TKNZ	Takaka Hill	6.11	230		Pn	17 26 04.2	-4.0
TKNZ	Takaka Hill	6.11	230	P	Pn	17 26 05.2	-2.9
QRZ	Quartz Range	6.26	233	P	Pn	17 26 08.7	-1.5
QRZ	Quartz Range	6.26	233	P	Pn	17 26 07.6	-2.6
MRNZ	Matariki Terra	6.46	228		Pn	17 26 09.9	-2.9
MRNZ	Matariki Terra	6.46	228	P	Pn	17 26 09.8	-3.1
THZ	Tophouse	6.60	225		Pn	17 26 11.3	-3.6
THZ	Tophouse	6.60	225	P	Pn	17 26 11.3	-3.6
KHZ	Kahutara	6.73	218		Pn	17 26 12.3	-4.2
KHZ	Kahutara	6.73	218	P	Pn	17 26 13.2	-3.3
KHZ	Kahutara	6.73	218	P	Pn	17 26 12.1	-4.5
DSZ	Denniston Nort	7.24	229	P	Pn	17 26 20.1	-3.5
CTZ	Chatham Island	7.26	155		Pn	17 26 23.6	-0.1
CTZ	Chatham Island	7.26	155	P	Pn	17 26 23.4	-0.4
GVZ	Greta Valley S	7.39	217		Pn	17 26 22.3	-3.3
GVZ	Greta Valley S	7.39	217	P	Pn	17 26 22.5	-3.1
LTZ	Lake Taylor	7.64	221		Pn	17 26 25.1	-4.0
LTZ	Lake Taylor	7.64	221	P	Pn	17 26 24.8	-4.3
AMCZ	Amberley	7.73	218	P	Pn	17 26 27.3	-3.0
OKCZ	Okains Bay	7.96	214	P	Pn	17 26 29.3	-4.2
INZ	Inchbonnie	8.05	225		Pn	17 26 30.8	-3.8
INZ	Inchbonnie	8.05	225	P	Pn	17 26 30.6	-4.1
MQZ	McQueen's Vall	8.13	215		Pn	17 26 31.3	-4.5
MQZ	McQueen's Vall	8.13	215	P	Pn	17 26 30.7	-5.0
AKCZ	Akaroa Harbour	8.14	214	P	Pn	17 26 31.9	-4.0
OXZ	Oxford	8.15	219		Pn	17 26 32.5	-3.5
RPZ	Rata Peaks	8.93	221	Pn	Pn	17 26 43.6	-3.1
	5.7nm,0.3s,baz=273,slow=1.3,SNR=28						
RPZ				Sn	Sn	17 28 17.2	-8.7
	48nm,0.3s,baz=121,slow=22,SNR=22						
RPZ	Rata Peaks	8.93	221	P	Pn	17 26 43.8	-2.9
LBZ	Lake Benmore	9.84	221		Pn	17 26 55.2	-4.0
ODZ	Otahua Downs	10.09	217	P	Pn	17 26 57.8	-4.7
DZM	Mont Dzumac	18.68	320	LR	LR	17 34 56.3	
	comp=Z,1μm,18.8s,baz=142,slow=34						
MSVF	Nonsavu	19.45	357	LR	LR	17 34 50.5	
	comp=Z,563nm,20.6s,baz=186,slow=32						
MSVF	Nonsavu	19.45	357	*i* P	Pn	17 29 03.9	-0.8
MSVF				pmax	pmax		
	comp=Z,6.0nm,0.5s						
RAR	Rarotonga	24.29	55	LR	LR	17 37 18.6	
	comp=Z,91nm,20.5s,baz=220,slow=32						
CAN	Canberra	24.32	265	P	P	17 29 53.9	+0.2
CAN				pmax	pmax		
	comp=Z,41nm,2.3s						
AFI	Afiamalu	24.61	22	P	P	17 29 47.3	-9.1
AFI				pmax	pmax		
	comp=Z,57nm,1.4s						
MOO	Moorlands	24.98	248	P	P	17 29 59.9	+0.3
	comp=Z,81nm,1.2s						
CMSA	Cobar Meteorol	28.08	272	P	P	17 30 28.8	+1.3
CMSA	Cobar Meteorol	28.08	272	P	P	17 30 28.6	+1.0
STKA	Stephens Creek	31.23	269		P	17 30 55.1	-0.4
STKA				IAmb	IAmb	17 30 57.2	
	comp=Z,60nm,0.8s						
STKA	Stephens Creek	31.23	269	P	P	17 30 56.0	+0.5
	comp=Z,63nm,1.3s						
STKA	Stephens Creek	31.23	269	P	P	17 30 55.7	+0.3
	comp=Z,11nm,0.8s,baz=100,slow=11,SNR=15						
STKA				LR	LR	17 43 56.5	
	comp=Z,220nm,19.3s,baz=67,slow=37						
	comp=Z,11nm,0.8s						
STKA	Stephens Creek	31.23	269	P	P	17 30 56.6	+1.1
STKA	Stephens Creek	31.23	269	*i* P	P	17 30 56.1	+0.6
QLP	Quilpie	31.31	280	P	P	17 30 56.3	+0.1
	comp=Z,55nm,0.9s						
QLP	Quilpie	31.31	280	P	P	17 30 57.3	+1.1
CTAO	Charters Tower	33.31	292		P	17 31 12.6	-1.2
CTAO				IAmb	IAmb	17 31 15.2	
	comp=Z,41nm,1.4s						
CTAO	Charters Tower	33.31	292	P	P	17 31 14.4	+0.6
CTAO	Charters Tower	33.31	292	P	P	17 31 12.6	-1.2
CTAO				pmax	pmax		
	comp=Z,41nm,1.5s						
PPT	Papeete	33.76	63	LR	LR	17 41 23.8	
	comp=Z,92nm,20.8s,baz=216,slow=30						
WHYH	Whyalla	34.05	264	P	P	17 31 21.0	+1.0
QIS	Mount Isa	38.07	285	P	P	17 31 53.9	-0.8
	comp=Z,57nm,1.0s						
QIS	Mount Isa	38.07	285	P	P	17 31 55.3	+0.7
COEN	Coen	39.50	296		P	17 32 06.3	-0.3
COEN				IAmb	IAmb	17 32 07.5	
	comp=Z,72nm,0.8s						
COEN	Coen	39.50	296	P	P	17 32 06.0	-0.6
	comp=Z,114nm,1.0s						
COEN	Coen	39.50	296	P	P	17 32 06.9	+0.3
PMG	Port Moresby	40.01	306	LR	LR	17 47 32.7	
	comp=Z,196nm,18.1s,baz=148,slow=35						
AS01	Alice Springs	40.86	276	P	P	17 32 17.6	-0.3
AS31	Alice Springs	40.90	276		P	17 32 17.4	-0.8
AS31	Alice Springs	40.90	276	P	P	17 32 17.7	-0.4
	comp=Z,30nm,0.6s						
AS12	Alice Springs	40.90	276	P	P	17 32 18.0	-0.2
	comp=Z,79nm,0.8s						
ASAR	Alice Springs	40.90	276		P	17 32 17.1	-1.0
ASAR	Alice Springs	40.90	276	P	P	17 32 17.6	-0.6
	comp=Z,44nm,0.6s,baz=119,slow=8.1,SNR=1008						
ASAR				PcP	PcP	17 34 18.1	-0.1
	comp=Z,1.9nm,0.7s,baz=125,slow=3.9,SNR=3.7						
ASAR				S	S	17 38 22.9	-3.7
	comp=Z,1.1nm,0.8s,baz=122,slow=15,SNR=6.9						
ASAR				LR	LR	17 48 26.6	
	comp=Z,127nm,21.2s,baz=92,slow=35						
	comp=Z,44nm,0.6s						
VNDA	Vanda	41.08	186	LR	LR	17 46 30.3	
	comp=Z,89nm,18.7s,baz=12,slow=32						
RABL	Rabaul	41.13	317	P	P	17 32 19.7	-0.4
WR8	Warramunga Arr	42.38	281		P	17 32 29.4	-0.9
FORT	Forrest	42.40	263		P	17 32 29.2	-1.1
FORT				IAmb	IAmb	17 32 30.8	
	comp=Z,52nm,0.7s						
FORT	Forrest	42.40	263	P	P	17 32 29.7	-0.7
	comp=Z,83nm,0.6s						
FORT	Forrest	42.40	263	P	P	17 32 30.1	-0.3
WRAB	Tennant Creek	42.51	281		P	17 32 30.0	-1.4
WRAB	Tennant Creek	42.51	281	*i* P	P	17 32 30.2	-1.1
WRAB				pmax	pmax		
	comp=Z,38nm,0.6s						
WRA	Warramunga Arr	42.51	281	P	P	17 32 29.6	-1.8
WRA	Warramunga Arr	42.51	281	P	P	17 32 30.6	-0.7
	comp=Z,41nm,0.6s,baz=121,slow=7.7,SNR=191						
WRA				PcP	PcP	17 34 24.1	+0.6
	comp=Z,4.6nm,0.7s,baz=124,slow=3.4,SNR=7.0						
	comp=Z,41nm,0.6s						
WB0	Warramunga Arr	42.56	281		P	17 32 31.0	-0.8
MANU	Manus Island	45.61	313	P	P	17 32 55.8	-0.4
MANU				IAmb	IAmb	17 33 34.7	
	comp=Z,62nm,1.4s						
KMBL	Kambalda	47.04	259	P	P	17 33 06.1	-1.2
	comp=Z,19nm,1.4s						
CASY	Casey	48.02	210	P	P	17 33 15.3	+0.9
CASY				IAmb	IAmb	17 33 34.7	
	comp=Z,46nm,1.9s						
MTN	Manton Dam	49.16	287	P	P	17 33 22.7	-1.1
KNRA	Kununurra	49.29	282	P	P	17 33 24.1	-0.7
KNRA				IAmb	IAmb	17 34 50.9	
	comp=Z,81nm,1.6s						
KNRA	Kununurra	49.29	282	P	P	17 33 24.1	-0.7
	comp=Z,40nm,2.2s						
NWAO	Narrogin (SRO)	50.05	255	P	P	17 33 29.6	-0.8
NWAO				IAmb	IAmb	17 33 36.6	
	comp=Z,74nm,1.8s						
NWAO	Narrogin (SRO)	50.05	255	LR	LR	17 54 35.4	
	comp=Z,117nm,18.0s,baz=82,slow=36						
NWAO	Narrogin (SRO)	50.05	255	P	P	17 33 29.6	-0.8
NWAO				pmax	pmax		
	comp=Z,75nm,1.8s						
KLBR	Kellerberrin	50.18	257	P	P	17 33 30.4	-1.0

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      comp=Z,87nm,0.5s
KLBR  Kellerberrin      50.18 257    P        P        17 33 31.1  -0.3
FITZ  Fitzroy Crossi    50.38 277    P        P        17 33 32.7  -0.4
      comp=Z,18nm,0.7s
FITZ  Fitzroy Crossi    50.38 277    LR       LR       17 54 02.6
      comp=Z,146nm,20.1s,baz=116,slow=35
FITZ  Fitzroy Crossi    50.38 277    P        P        17 33 32.7  -0.4
MUN   Mundaring         51.22 256    P        P        17 33 38.4  -0.9
      comp=Z,38nm,0.6s
MUN   Mundaring         51.22 256    P        P        17 33 38.7  -0.6
BLDU  Ballidu           51.40 258    P        P        17 33 38.6  -2.1
MEEK  Meekatharra       51.66 263    P        P        17 33 41.0  -1.7
      comp=Z,21nm,0.6s
MEEK  Meekatharra       51.66 263    P        P        17 33 41.3  -1.4
MORW  Morawa            52.59 259    P        P        17 33 47.8  -1.7
MORW  Morawa            52.59 259    P        P        17 33 48.3  -1.2
      comp=Z,19nm,0.6s
QSPA  South Pole Qui    52.89 180             P        17 33 55.8  +4.4
QSPA                                 IAmb     IAmb     17 34 08.4
      comp=Z,23nm,0.8s
QSPA  South Pole Qui    52.89 180    P        P        17 33 55.8  +4.4
      comp=Z,4.1nm,0.6s,baz=303,slow=0.4,SNR=53
QSPA                                 LR       LR       17 54 19.1
      comp=Z,126nm,18.6s,baz=46,slow=34
      comp=Z,4.1nm,0.6s
MBWA  Marble Bar        53.45 270    P        P        17 33 53.3  -2.7
MBWA                                 IAmb     IAmb     17 33 55.4
      comp=Z,19nm,0.8s
FAKI  Fak Fak           54.88 297    P        P        17 34 04.6  -1.8
FAKI                                 IAmb     IAmb     17 34 45.2
      comp=Z,86nm,1.6s
SOEI  Soe               56.34 284    P        P        17 34 15.7  -1.3
SWI   Sorong            57.02 298    P        P        17 34 21.5  -0.1
      comp=Z,368nmcomp=Z,46nm,0.8s
GIRL  Giralia           57.08 265    P        P        17 34 21.0  -1.0
MMRI  Maumere           58.60 284    P        P        17 34 31.9  -0.9
GUMO  Guam              59.95 321    LR       LR       17 57 07.7
      comp=Z,49nm,21.4s,baz=118,slow=33
KAPI  Kappang           62.78 285    LR       LR       18 03 17.0
      comp=Z,95nm,18.7s,baz=101,slow=37
MAW   Mawson            65.09 202    P        P        17 35 18.8  +3.2
      comp=Z,6.8nm,0.9s,baz=156,slow=9.5,SNR=7.2
MAW                                  LR       LR       18 03 01.9
      comp=Z,132nm,18.9s,baz=104,slow=35
      comp=Z,6.8nm,0.9s
MPSI  Mapaga            66.12 290    P        P        17 35 24.0  +0.9
      comp=Z,15nm,1.0s
DAV   Davao City (W)    66.61 300    LR       LR       18 03 23.1
      comp=Z,22nm,22.0s,baz=78,slow=35
PMSA  Palmer Station    67.04 155    LR       LR       18 02 05.4
      comp=Z,115nm,18.0s,baz=238,slow=33
SYO   Syowa Base        69.93 194⇓ eP     P        17 35 47.8  +1.7
TROLL Troll, Antarti    71.03 181  ⇑P     P        17 36 04.0  +11
      comp=Z,232nm,0.5s
LEM   Lembang           71.19 276    LR       LR       18 09 07.6
      comp=Z,108nm,18.4s,baz=162,slow=38
SNAA  Sanae             71.39 179    P        P        17 35 57.6  +2.5
      comp=Z,1.7nm,0.9s,baz=214,slow=10,SNR=7.4
SNAA                                 LR       LR       18 05 41.4
      comp=Z,75nm,18.4s,baz=257,slow=34
      comp=Z,1.7nm,0.9s
SNAA  Sanae             71.39 179  i P        P        17 35 55.4  +0.3
SNAA                                 pmax     pmax
      comp=Z,13nm,1.8s
KKM   Kota Kinabalu     72.64 292    P        P        17 36 02.3  -1.1
KKM                                  IAmb     IAmb     17 36 03.3
      comp=Z,14nm,0.5s
PLCA  Paso Flores       79.57 134    LR       LR       18 05 16.0
      comp=Z,33nm,21.4s,baz=232,slow=31
SSLB  Suanglung         81.73 308    IAmb     IAmb     17 37 54.3
      comp=Z,56nm,1.8s
PSI   Prapat            83.89 278    LR       LR       18 15 04.4
      comp=Z,113nm,21.0s,baz=99,slow=36
ASAJ  Asahikawa         87.48 335    LR       LR       18 11 02.2
      comp=Z,49nm,20.3s,baz=171,slow=32
KSRS  Korea Array       88.10 322    P        P        17 37 25.5  -0.2
      comp=Z,2.1nm,0.8s,baz=138,slow=5.4,SNR=12
      comp=Z,2.1nm,0.8s
KSAR  Wonju Array Be    88.11 322    P        P        17 37 25.0  -0.7
KSAR  Wonju Array Be    88.11 322    P        P        17 37 25.0  -0.7
NJ2   Nanjing           88.98 312  eP         P        17 37 31.0  +1.0
NJ2                                  pmax     pmax
      comp=Z,3.0nm,0.5s
YSS   Yuzhno-Sakhali    89.93 336  eP         P        17 37 35.1  +1.1
YSS                                eS         S        17 48 29.5  +6.9
YSS                                ePS        PnS      17 49 39.5  +4.5
YSS                                  pmax     pmax
      comp=Z,10.0nm,1.0s
YSS                                  MLR      MLR
      comp=Z,100nm,15.0s
USRK  Ussuriysk Ar.     91.61 328    P        P        17 37 42.6  +0.7
      comp=Z,1.7nm,0.7s,baz=43,slow=2.6,SNR=4.1
      comp=Z,1.7nm,0.7s
PETK  Petropavlovsk-    91.88 347    P        P        17 37 41.9  -1.1
PETK  Petropavlovsk-    91.88 347    P        P        17 37 42.0  -0.9
      comp=Z,2.8nm,0.7s,baz=130,slow=4.4,SNR=12
PETK                                 LR       LR       18 13 46.2
      comp=Z,64nm,20.2s,baz=193,slow=32
      comp=Z,2.8nm,0.7s
CM31  Chiang Mai Arr    93.47 290    P        P        17 37 50.5  -0.7
CMAR  Chiang Mai Arr    93.47 290    P        P        17 37 50.4  -0.8
CMAR  Chiang Mai Arr    93.47 290    P        P        17 37 51.1  -0.1
      comp=Z,2.9nm,0.7s,baz=146,slow=3.5,SNR=20
CMAR                                 PP       PP       17 41 32.8  -3.5
      comp=Z,0.6nm,0.9s,baz=134,slow=7.3,SNR=4.7
CMAR                                 LR       LR       18 21 31.8
      comp=Z,22nm,21.7s,baz=175,slow=37
      comp=Z,2.9nm,0.7s
CMAR  Chiang Mai Arr    93.47 290ceP          P        17 37 51.2   0.0
CMAR                                 pmax     pmax
      comp=Z,3.0nm,0.6s
NNA   Nana              93.72 108    LR       LR       18 11 38.7
      comp=Z,51nm,19.1s,baz=231,slow=30
NNA   Nana              93.72 108  i P        P        17 37 53.9  +1.3
NNA                                  pmax     pmax
      comp=Z,57nm,1.4s
CN2   Changchun         94.20 324  eP         P        17 37 55.2  +1.3
CN2                                  pP       pP       17 38 05.6  -1.6
CN2                                eS         S        17 49 02.2  +1.0
CN2                                  LR       LR
      comp=Z,90nm,14.0s
CN2                                  LR       LR
      comp=Z,100nm,14.0s
CN2                                  LR       LR
      comp=Z,90nm,16.0s
ATAH  Atahualpa         95.55 103    LR       LR       18 11 10.8
      comp=Z,76nm,21.5s,baz=230,slow=29
PZH   PanZhiHua         96.39 298    P        P        17 38 06.7  +2.2
PZH                                  pmax     pmax
      comp=Z,6.0nm,0.7s
PZH                                  pmax     pmax
      comp=Z,100nm,4.2s
XAN   Xi'an             96.39 308    P        P        17 38 06.3  +2.1
XAN                                  pmax     pmax
      comp=Z,4.0nm,0.6s
CPUP  Villa Florida     97.47 131    LR       LR       18 15 04.1
      comp=Z,33nm,19.9s,baz=84,slow=31
XLT   XiLinHaoTe        98.91 319  eP         Pdif     17 38 16.4  +1.0
XLT                                  sP       pwP      17 38 31.4  +0.3
MA2   Magadan           99.28 346    LR       LR       18 16 15.4
      comp=Z,79nm,21.5s,baz=168,slow=31
HHC   Hu-ho-hao-te      99.29 315  eP         Pdif     17 38 18.2  +1.0
HHC                                  pmax     pmax
      comp=Z,42nm,5.1s
LZH   Lanzhou          100.90 307  eP         Pdif     17 38 27.8  +3.2
ILAR  Eielson Array    105.11  14    PKiKP    PKiKP    17 42 58.0  +1.5
      comp=Z,0.3nm,0.5s,baz=286,slow=1.7,SNR=4.1
YKA   Yellowknife Ar   112.61  27    PP       PP       17 43 57.6  -1.1
      comp=Z,0.1nm,0.3s,baz=252,slow=7.4,SNR=5.3
WMQ   Urumqi           115.48 307  ePKP       PKiKP    17 43 17.2  +0.4
P53A  Whipple          118.90  61             pPKPdf   17 43 35.7  -1.5
MK31  Makanchi Array   120.20 308c iPKIKP     PKPdf    17 43 25.2  -0.5
MKAR  Makanchi Array   120.20 308             PKPdf    17 43 24.6  -1.2
MKAR  Makanchi Array   120.20 308    PKP      PKPdf    17 43 25.2  -0.5
      comp=Z,2.3nm,0.8s,baz=177,slow=1.3,SNR=21
MAKZ  Makanchi         120.41 308             PKPdf    17 43 24.6  -1.5
MAKZ  Makanchi         120.41 308    PKIKP    PKPdf    17 43 24.6  -1.5
SHLS  Shalkode         120.58 303  ePKIKP     PKPdf    17 43 25.3  -1.4
SHLS                               e                   17 44 50.4
SHLS  Shalkode         120.58 303  ePKP       PKPdf    17 43 25.3  -1.4
SHLS                               ePP        PP       17 44 50.5  -4.6
BLKN  Baker Lake       120.74  30             PKiKP    17 43 26.2   0.0
UZB   Uzynbulak        120.87 303  ePKIKP     PKPdf    17 43 26.3  -1.0
UZB                                e                   17 44 54.3
UZB   Uzynbulak        120.87 303  ePKP       PKPdf    17 43 26.3  -1.0
UZB                                ePP        PP       17 44 54.4  -2.7
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KPKS  Kokpek           121.22 303  ePKIKP     PKPdf    17 43 27.1  -0.8
KPKS  Kokpek           121.22 303  ePKP       PKPdf    17 43 27.1  -0.8
SATY  Saty             121.25 303  ePKIKP     PKPdf    17 43 27.1  -0.9
SATY  Saty             121.25 303  ePKP       PKPdf    17 43 27.2  -0.9
ZALV  Zalesovo Beam    121.43 316             PKPdf    17 43 26.5  -1.3
ZALV  Zalesovo Beam    121.43 316    PKP      PKPdf    17 43 27.1  -0.6
      comp=Z,1.0nm,0.4s,baz=119,slow=1.9,SNR=7.5
KSH   Kashi            121.49 298    PKP      PKiKP    17 43 28.9  +0.2
TDK   Taldyqorghan     122.00 305  ePKIKP     PKPdf    17 43 28.5  -0.7
TDK   Taldyqorghan     122.00 305  ePKP       PKPdf    17 43 28.6  -0.7
MDOK  Medeo            122.20 302  ePKIKP     PKPdf    17 43 28.8  -1.1
MDOK  Medeo            122.20 302  ePKP       PKPdf    17 43 28.9  -1.1
AAK   Ala-Archa        123.74 301c iPKIKP     PKiKP    17 43 33.8  +0.7
AAK                                  pmax     pmax
      comp=Z,5.0nm,2.5s
KURK  Kurchatov        123.89 311             PKPdf    17 43 31.3  -1.3
KURK  Kurchatov        123.89 311c iPKIKP     PKPdf    17 43 32.4  -0.2
KURK                                 pmax     pmax
      comp=Z,10.0nm,1.0s
KURBB Kurchatov Arra   123.92 311    PKP      PKPdf    17 43 32.0  -0.7
      comp=Z,3.7nm,0.5s,baz=116,slow=1.9,SNR=32
SGDS  Sogindy          123.95 302  ePKP       PKPdf    17 43 32.3  -0.8
KBL   Kabul            124.49 290             PKPdf    17 43 34.1  -0.4
KBL   Kabul            124.49 290    PKIKP    PKPdf    17 43 34.2  -0.4
NRIK  Noril'sk         124.82 334             PKPdf    17 43 33.6  -0.3
NRIK  Noril'sk         124.82 334    PKP      PKiKP    17 43 34.1  -0.1
      comp=Z,12nm,0.7s,baz=102,slow=2.3,SNR=31
NRIK  Noril'sk         124.82 334c iPKIKP     PKiKP    17 43 34.2   0.0
BTLS  Baital           124.90 303  ePKIKP     PKPdf    17 43 34.1  -0.6
BTLS  Baital           124.90 303  ePKP       PKPdf    17 43 34.2  -0.6
KKAR  Karatay Array    126.64 300             PKPdf    17 43 37.6  -0.6
KKAR  Karatay Array    126.64 300    PKIKP    PKPdf    17 43 37.6  -0.6
BRLS  Borolday         127.09 300  ePKIKP     PKPdf    17 43 38.3  -0.7
BRLS  Borolday         127.09 300  ePKP       PKPdf    17 43 38.4  -0.7
BRZS  Berezniki        127.30 309  ePKIKP     PKPdf    17 43 38.7  -0.5
BRZS                               e                   17 45 37.9
BRZS  Berezniki        127.30 309  ePKP       PKPdf    17 43 38.8  -0.5
BRZS                               ePP        PP       17 45 37.9  -2.0
KMBO  Kilima Mbogo     128.02 232             PKiKP    17 43 44.5  +1.8
KMBO  Kilima Mbogo     128.02 232    PKIKP    PKiKP    17 43 44.5  +1.8
BVAR  Borovoye Array   129.42 312    PKP      PKPdf    17 43 42.5  -0.6
      comp=Z,0.9nm,0.6s,baz=118,slow=1.5,SNR=4.2
BRVK  Borovoye         129.49 312             PKPdf    17 43 41.7  -1.6
BRVK  Borovoye         129.49 312c iPKIKP     PKiKP    17 43 43.6  -0.4
BRVK                                 pmax     pmax
      comp=Z,9.0nm,1.7s
ARTI  Arti             136.69 316             PKPdf    17 43 55.1  -1.6
ARTI  Arti             136.69 316  i PKIKP    PKiKP    17 43 57.7  -0.8
ARTI                                                   17 46 36.3
SPITS Spitsbergen Ar   138.31 355    PKP      PKPdf    17 43 58.2  -1.0
      comp=Z,5.5nm,0.6s,baz=81,slow=5.5,SNR=16
ARA0  ARCESS Array S   144.63 344  ePKPdf     PKPdf    17 44 10.0  -0.6
ARCES ARCESS Array B   144.63 344    PKP      PKPbc    17 44 09.4  -0.2
      comp=Z,2.9nm,0.5s,baz=22,slow=2.8,SNR=46
SCO   Scoresbysund     144.86  12             PKPdf    17 44 10.8  -0.2
SCO   Scoresbysund     144.86  12    PKIKP    PKPdf    17 44 10.8  -0.2
KLMR  Klimovskoe       145.38 326  ePKHKP     PKPpre   17 44 08.9
KLMR                                 pmax     pmax
      comp=Z,34nm,1.2s
KTK1  Kautokeino       145.54 345  ePKPbc     PKPbc    17 44 12.3  -0.1
TRO   Tromso           145.82 348  ePKPdf     PKPbc    17 44 13.3  +0.1
KBZ   Khabaz           146.39 295    PKPbc    PKPdf    17 44 14.8  +0.4
      comp=Z,2.8nm,0.9s,baz=59,slow=5.0,SNR=4.8
KIV   Kislovodsk       146.56 295  i PKP2     PKiKP    17 44 18.7  -0.6
KIV                                  pmax     pmax
      comp=Z,5.0nm,1.0s
KIV                                  pmax     pmax
      comp=Z,45nm,25.0s
VRH   Novokhopyorsk    146.93 309  ePKIKP     PKPdf    17 44 13.9  -1.2
VRH                                  pmax     pmax
      comp=Z,10.0nm,0.8s
STEI  Steigen          147.95 349  ePKPbc     PKPbc    17 44 19.7  +0.3
LPSR  Galich'ya Gora   148.37 312  ePKIKP     PKPdf    17 44 18.6  +1.2
LPSR                                 pmax     pmax
      comp=Z,10.0nm,1.0s
VORR  Voronezh         148.40 310  ePKIKP     PKPdf    17 44 16.3  -1.2
VORR                                 pmax     pmax
      comp=Z,20nm,0.9s
FAUS  Fauske           148.44 348  e          PKPbc    17 44 20.9  +0.3
VORD  Divnogorie       148.48 309  ePKIKP     PKPdf    17 44 17.0  -0.6
VORD                                 pmax     pmax
      comp=Z,7.0nm,0.9s
VSR   Storozhevoye     148.51 309  ePKHKP     PKPpre   17 44 16.0
VSR                                  pmax     pmax
      comp=Z,9.0nm,0.8s
OBN   Obninsk          149.00 317  ePKIKP     PKPdf    17 44 18.9  +0.6
OBN                                e                   17 47 56.0
OBN                                ePPP       PPP      17 51 14.2
OBN                                  pmax     pmax
      comp=Z,11nm,1.2s
VAGH  Vaagaholmen      149.36 349  epPKPdf    PKPbc    17 44 22.6  -0.4
DBIC  Dimbokro         149.36 172    PKPbc    PKPbc    17 44 24.9  +0.3
      comp=Z,5.4nm,0.8s,baz=252,slow=6.9,SNR=3.9
DBIC                                 PKPab    PKPab    17 44 31.4  +2.1
      comp=Z,7.6nm,0.8s,baz=152,slow=4.0,SNR=8.1
KONS  Konsvik          149.60 349  ePKPbc     PKPbc    17 44 23.9  +0.3
STOK  Stokkvaagen      149.77 349  ePKPbc     PKPbc    17 44 24.2  +0.2
LEIR  Leirfjorden      149.96 349  ePKPbc     PKPbc    17 44 24.8  +0.3
MMAI  Mount Meron Ar   150.15 273    PKPbc    PKiKP    17 44 27.1  +0.1
      comp=Z,6.2nm,0.5s,baz=88,slow=6.3,SNR=15
FINES FINESS Array B   150.49 334             PKPdf    17 44 20.5   0.0
FINES FINESS Array B   150.49 334    PKPbc    PKPbc    17 44 25.6  -0.3
      comp=Z,7.0nm,0.5s,baz=320,slow=8.5,SNR=12
FINES FINESS Array B   150.49 334    PKIKP    PKPdf    17 44 20.5   0.0
NSS   Namsos           151.61 348  ePKPbc     PKiKP    17 44 28.6  -0.3
VSU   Vasula           152.17 329c iPKIKP     PKPbc    17 44 29.4  -0.5
VSU                                  pmax     pmax
      comp=Z,72nm,1.7s
CSS   Mathiatis        152.36 276             PKPdf    17 44 23.4  -0.9
BR131 Keskin Array S   152.97 286             PKPbc    17 44 30.9  -1.7
BR131 Keskin Array S   152.97 286    PKIKP    PKPbc    17 44 30.9  -1.7
BRTR  Keskin Array B   152.97 286             PKPbc    17 44 30.8  -1.7
BRTR  Keskin Array B   152.97 286    PKP      PKPdf    17 44 24.9  -0.3
      comp=Z,0.4nm,0.9s,baz=122,slow=4.7,SNR=4.5
BRTR                                 PKPbc    PKPbc    17 44 31.9  -0.7
      comp=Z,2.5nm,0.7s,baz=135,slow=4.1,SNR=18
BRTR                                 PKPab    PKPab    17 44 42.8  -1.2
      comp=Z,1.8nm,0.8s,baz=145,slow=5.0,SNR=6.9
ILGA  Ilgaz            153.01 289             PKPbc    17 44 31.8  -0.9
MNK   Minsk            153.83 320  i PKiKP    PKPbc    17 44 31.6  -2.1
      comp=E,10.0nm,0.9s
MNK                                i PKiKP    PKPbc    17 44 31.6  -2.1
      comp=N,14nm,0.9s
MNK                                i PKiKP    PKPbc    17 44 31.6  -2.1
      comp=Z,17nm,0.9s,baz=61
MNK                                i PP       PP       17 48 18.3  -3.4
MNK                                i SKS      SKSdf    17 51 31.1  +2.6
MNK                                i PPP      PPP      17 51 46.7
MNK                                i SS       SS       18 07 53.2  -1.9
MNK                                i SSS      SSS      18 13 48.4
MNK                                i LQ       LQ       18 44 52.3
MNK                                i LR       LR       18 56 44.2
MNK   Minsk            153.83 320  i PKIKP    PKPbc    17 44 31.5  -2.1
MNK                                i                   17 48 18.3
MNK                                i                   17 51 31.0
MNK                                i SS       SS       18 07 53.2  -1.9
MNK                                i SSS      SSS      18 13 48.4
MNK                                  pmax     pmax
      comp=N,14nm,0.9s
MNK                                  pmax     pmax
      comp=Z,17nm,0.9s
MNK                                  pmax     pmax
      comp=E,10.0nm,0.9s
NACGM Naroch           154.18 322  ePKiKP     PKiKP    17 44 34.8  +0.4
      comp=Z,13nm,0.9s,baz=58
AKASG Malin Array Be   154.70 312    PKP      PKPdf    17 44 25.9  -1.1
      comp=Z,0.2nm,0.3s,baz=77,slow=1.0,SNR=4.1
AKASG                                PKPbc    PKPbc    17 44 34.5  -1.1
      comp=Z,0.8nm,0.3s,baz=57,slow=2.9,SNR=8.2
AKASG                                PKPab    pPKPbc   17 44 48.8  -0.7
      comp=Z,2.0nm,0.7s,baz=63,slow=2.8,SNR=6.1
AKBB  Malin Array Si   154.70 312c iPKIKP     PKiKP    17 44 36.3  +0.6
NC303 NORSAR Array S   154.78 346             PKPbc    17 44 35.2  -0.3
NB2   NORSAR Subarra   154.98 346    PKP      PKiKP    17 44 36.1  +0.1
      comp=Z,2.9nm,0.6s,baz=17,slow=2.6
NB2   NORSAR Subarra   154.98 346    PKP      PKiKP    17 44 36.1  +0.1
      baz=17,slow=2.6
NOA   NORSAR Array B   154.98 346    PKPbc    PKiKP    17 44 36.2  +0.2
      comp=Z,4.2nm,0.8s,baz=32,slow=2.1,SNR=10
NC602 NORSAR Array S   155.19 345    PKPbc    PKPdf    17 44 34.4  +6.9
NC602 NORSAR Array S   155.19 345  ePKPbc     PKPdf    17 44 36.6  +9.1
HFS   Hagfors          155.26 342    PKPbc    PKPdf    17 44 36.3  +8.8
      comp=Z,6.7nm,0.7s,baz=64,slow=3.4,SNR=10
CLL   Collm            162.82 329  ePKP2      PKPab    17 45 25.0  -0.9
```

```
CLL   Collm            162.82 329  ePKPab     PKPab    17 45 25.0  -0.9
GERES GERESS Array B   164.28 322    PKPab    PKPab    17 45 32.7  +0.1
      comp=Z,0.4nm,0.5s,baz=29,slow=3.0,SNR=5.2
ESDC  Sonseca Array    176.56  44    PKP      PKPdf    17 44 47.1  +1.9
      comp=Z,0.9nm,1.0s,baz=334,slow=2.3,SNR=5.6
ESDC                                 PKPab    PKPab    17 46 27.3  +0.1
      comp=Z,0.8nm,0.8s,baz=330,slow=4.4,SNR=5.4
```

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*NEIC **03** 17:46:40.1±1.4, 17°.6S±0°.1×175°.18W±0°.07, h207^{km}±10^{km}, mb4.5/21, Error ellipse: s-maj=17.9km s-min=5.2km az=209.0*

*IDC **03** 17:46:45.5±3.1, 17°.83S×175°.39W, h252^{km}±29^{km}, mb3.8/8, mbtmp4.4/8, Error ellipse: s-maj=22.9km s-min=15.8km az=127.0*

ISC 03 17:46:39.4±0.5, **17°.68S**±0°.08×**175°.21W**±0°.08, **h200**^{km}, **n40**, σ**1^{s}06**/40, **mb4.4**/19, **Tonga Islands**

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Code  Station Name       Δ°  AZ°     Phase ID             Time      Res
                                     Op       ISC       h  m  s    ISC
FUTU  Fugatoga           4.37 320    Pn       Pn       17 47 44.7  -1.2
AFI   Afiamalu           4.99  42             Pn       17 47 54.9  +1.0
AFI                                           Sn       17 48 49.4  -3.1
NIUE  Niue               5.20 106    Pn       Pn       17 47 56.5  +0.1
NIUE                                 Sn       Sn       17 48 57.1   0.0
MSVF  Nonsavu            6.43 268             Pn       17 48 20.8  +8.4
MXZ   Matakaoa Point    20.61 195    P        P        17 51 02.9  -0.4
TOZ   Tahuroa Road      21.58 200    P        P        17 51 13.1  -0.3
TOZ                                  IAmb     IAmb     17 51 15.7
      comp=Z,14nm,1.0s
URZ   Urewera           21.58 197    P        P        17 51 12.7  -0.7
      comp=Z,18nm,0.4s,baz=54,slow=1.5,SNR=50
      comp=Z,18nm,0.4s
EIDS  Eidsvold          32.22 250    P        P        17 52 48.8  -0.2
EIDS                                 IAmb     IAmb     17 53 28.8
      comp=Z,13nm,1.2s
ARMA  Armidale          32.71 241    P        P        17 52 53.5  +0.1
ARMA                                 IAmb     IAmb     17 53 29.0
      comp=Z,34nm,1.4s
CTAO  Charters Tower    36.49 260    P        P        17 53 25.6  -0.3
CTAO                                 IAmb     IAmb     17 54 09.1
      comp=Z,13nm,1.2s
TOO   Toolangi          39.70 232    P        P        17 53 52.0  -0.4
TOO                                  IAmb     IAmb     17 54 15.0
      comp=Z,21nm,1.4s
COEN  Coen              40.16 269    P        P        17 53 57.2  +0.8
COEN                                 IAmb     IAmb     17 54 13.0
      comp=Z,39nm,1.5s
STKA  Stephens Creek    41.42 242    P        P        17 54 06.6  +0.1
STKA  Stephens Creek    41.42 242    P        P        17 54 05.8  -0.7
      comp=Z,5.2nm,0.6s,baz=92,slow=10.0,SNR=16
      comp=Z,5.2nm,0.6s
BBOO  Buckleboo         46.19 241    P        P        17 54 43.9  -0.6
BBOO                                 IAmb     IAmb     17 54 44.5
      comp=Z,12nm,0.6s
WR8   Warramunga Arr    47.52 259    P        P        17 54 54.3  -0.6
WR8                                  IAmb     IAmb     17 54 56.4
      comp=Z,18nm,1.4s
WB0   Warramunga Arr    47.64 259    P        P        17 54 55.2  -0.7
WB0                                  IAmb     IAmb     17 55 00.5
      comp=Z,25nm,1.4s
WRA   Warramunga Arr    47.67 259    P        P        17 54 55.6  -0.5
WRA   Warramunga Arr    47.67 259    P        P        17 54 55.7  -0.5
      comp=Z,4.0nm,0.4s,baz=98,slow=6.5,SNR=38
      comp=Z,4.0nm,0.4s
AS31  Alice Springs     47.79 254             P        17 54 56.9  -0.1
ASAR  Alice Springs     47.79 254             P        17 54 56.7  -0.3
ASAR  Alice Springs     47.79 254    P        P        17 54 56.9  -0.2
      comp=Z,21nm,0.7s,baz=93,slow=7.3,SNR=391
ASAR                                 S        S        18 01 32.4  -6.1
      comp=Z,0.6nm,0.7s,baz=91,slow=16,SNR=7.0
      comp=Z,21nm,0.7s
MTN   Manton Dam        51.86 267    P        P        17 55 26.8  -0.9
KNRA  Kununurra         53.55 263    P        P        17 55 39.1  -0.9
KNRA                                 IAmb     IAmb     17 55 40.0
      comp=Z,42nm,1.4s
FITZ  Fitzroy Crossi    56.07 260    P        P        17 55 58.0  -0.2
SBA   Scott Base        60.86 184    P        P        17 56 31.3  +1.1
PSA00 Pilbara Seismi    60.92 255    P        P        17 56 30.9  -0.7
VNDA  Vanda             60.95 186    P        P        17 56 31.1  +0.2
VNDA  Vanda             60.95 186    P        P        17 56 31.2  +0.4
      comp=Z,1.8nm,0.7s,baz=9.1,slow=5.4,SNR=11
      comp=Z,1.8nm,0.7s
MBWA  Marble Bar        61.09 255    P        P        17 56 31.9  -0.8
QSPA  South Pole Qui    72.38 180    P        P        17 57 43.1  -0.4
QSPA                                 IAmb     IAmb     17 57 44.0
      comp=Z,7.3nm,1.1s
PETK  Petropavlovsk-    74.28 343    P        P        17 57 55.0  +0.5
      comp=Z,0.7nm,0.6s,baz=98,slow=7.8,SNR=4.3
      comp=Z,0.7nm,0.6s
ILAR  Eielson Array     85.01  12    P        P        17 58 52.1  +0.2
      comp=Z,0.2nm,0.5s,baz=230,slow=6.8,SNR=4.7
      comp=Z,0.2nm,0.5s
MAW   Mawson            85.09 199    P        P        17 58 51.3  -1.1
      comp=Z,3.9nm,0.8s,baz=150,slow=5.9,SNR=4.5
      comp=Z,3.9nm,0.8s
BVAR  Borovoye Array   118.59 321    PKP      PKPdf    18 05 01.8  -1.5
      comp=Z,0.6nm,0.4s,baz=93,slow=3.1,SNR=3.7
ARCES ARCESS Array B   126.60 351    PKP      PKPdf    18 05 17.9  -0.3
      comp=Z,2.0nm,0.9s,baz=309,slow=4.1,SNR=4.1
CLL   Collm            145.82 351  i PKPbc    PKPdf    18 05 55.5  +1.4
      comp=Z,4.0nm,0.9s
BRTR  Keskin Array B   146.74 317    PKPbc    PKPdf    18 05 58.2  +2.0
      comp=Z,0.9nm,0.7s,baz=140,slow=4.2,SNR=6.7
GERES GERESS Array B   148.08 349    PKPbc    PKPdf    18 06 01.4  +3.3
      comp=Z,0.1nm,0.3s,baz=48,slow=4.0,SNR=5.1
MMAI  Mount Meron Ar   148.55 305    PKPbc    PKPbc    18 06 03.9  +0.7
      comp=Z,2.0nm,0.6s,baz=39,slow=5.5,SNR=1.9
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*FCIAR **03** 17:55:42.0, 81°.02N×0°.53W, h10^{km}, station OMEGA has station magnitude of 3.80 station ZFI2 has station magnitude of 3.80*

*DNK **03** 17:55:43.7±7.0, 80°.68N×2°.14W, h10^{km}, ML3.1*

*KOLA **03** 17:55:44.1, 81°.34N×0°.67E, h0^{km}, ML3.1, Error ellipse: s-maj=181.8km s-min=57.3km az=30.0, Arctic Ocean,Knipovich ridge, north*

*IDC **03** 17:55:45.7±0.6, 80°.65N×2°.65W, h0^{km}, mb3.7/20, mbtmp3.8/23, ML4.9/2, MS3.4/32, Error ellipse: s-maj=17.0km s-min=11.4km az=44.0*

*NEIC **03** 17:55:45.8±2.7, 80°.3N±0°.1×2°.8W±0°.5, h10^{km}±1^{km}, mb4.4/37, Error ellipse: s-maj=21.6km s-min=12.6km az=13.0*

*BER **03** 17:55:46.3±4.0, 80°.83N×2°.15W, h15^{km}±23^{km}, Mw4.5, ML4.2(NAO), Confirmed Earthquake*

ISC 03 17:55:45.4±0.4, **80°.54N**±0°.04×**2°.71W**±0°.04, **h10**^{km}, **n156**, σ**3^{s}08**/166, **mb4.2**/37, **MS3.5**/29, **6C**, **North of Svalbard**

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Code  Station Name       Δ°  AZ°     Phase ID             Time      Res
                                     Op       ISC       h  m  s    ISC
NOR   Nord               2.42 303    Pn       Pn       17 56 23.1  -1.8
NOR                                  Sn       Sn       17 56 49.2  -5.4
NOR   Nord               2.42 303⇑ iP         Pn       17 56 23.4  -1.5
      comp=Z,48nm,0.3s
NOR                                  IAML              17 56 23.9
      comp=Z,48nm,0.3s
NOR                                  Sn       Sn       17 56 49.2  -5.4
NOR   Nord               2.42 303⇑ iP         Pn       17 56 23.5  -1.5
KBS   Kingsbay           3.08 114             Pn       17 56 31.9  -2.0
KBS   Kingsbay           3.08 114    Pn       Pn       17 56 33.1  -0.8
KBS                                  Sn       Sn       17 57 05.5  -5.2
KBS   Kingsbay           3.08 114    P        Pn       17 56 30.6  -3.4
KBS                                  S        Sn       17 57 05.3  -5.3
KBS   Kingsbay           3.08 114  eP         Pn       17 56 33.1  -0.8
KBS                                eS         Sn       17 57 05.2  -5.5
KBS                                  IAML              17 57 11.3
      comp=Z,56nm,0.5s
KBS   Kingsbay           3.08 114⇑ iP         Pn       17 56 33.1  -0.8
KBS                                i S        Sn       17 57 05.2  -5.5
BRBB  Barentsburg B      3.98 119    Pn       Pn       17 56 46.8  +0.5
BRBB                                 Sn       Sn       17 57 31.8  -1.0
BRBB  Barentsburg B      3.98 119    P        Pn       17 56 46.6  +0.4
BRBB                                 S        Sn       17 57 29.3  -3.5
BRBB  Barentsburg B      3.98 119    Pn       Pn       17 56 46.8  +0.5
BRBB                               eS         Sn       17 57 29.4  -3.4
BRBA  Barentsburg A      4.00 120    Pn       Pn       17 56 47.2  +0.5
BRBA                                 Sn       Sn       17 57 31.4  -2.1
BRBA  Barentsburg A      4.00 120    Pn       Pn       17 56 47.2  +0.5
BRBA                               eS         Sn       17 57 31.7  -1.8
BRBA                                 IAML              17 57 37.9
      comp=Z,40nm,0.8s
SPA0  Spitsbergen Ar     4.24 114    Pn       Pn       17 56 49.5  -0.4
      baz=315,slow=7.9
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SPA0				Sn	**Sn**	**17 57 34.2**	**-5.1**
	baz=328,slow=12						
SPA0	**Spitsbergen Ar**	**4.24**	**114**	*e*P	**Pn**	**17 56 49.6**	**-0.4**
SPA0				*e*S	**Sn**	**17 57 35.8**	**-3.5**
SPA0	**Spitsbergen Ar**	**4.24**	**114**	Pn	**Pn**	**17 56 49.5**	**-0.4**
	baz=315,slow=7.9						
SPA0				*e*S	**Sn**	**17 57 34.6**	**-4.6**
SPA0				IAML		17 57 56.0	
	comp=Z,35nm,0.7s						
SPITS	**Spitsbergen Ar**	**4.24**	**114**	Pn	**Pn**	**17 56 49.5**	**-0.4**
	baz=321,slow=6.5						
SPITS				Sn	**Sn**	**17 57 34.7**	**-4.6**
	baz=340,slow=26						
	comp=Z,147nm,0.4s						
SPITS	**Spitsbergen Ar**	**4.24**	**114**	P	**Pn**	**17 56 47.4**	**-2.5**
SPITS				S	**Sn**	**17 57 34.8**	**-4.5**
SPB2	**Spitsbergen Ar**	**4.24**	**114**		**Pn**	**17 56 49.1**	**-0.9**
DAG	**Danmarks Havn**	**4.90**	**228**	*i* P	**Pn**	**17 56 60.0**	**+1.0**
DAG				IAML		17 57 00.7	
	comp=Z,76nm,0.3s						
DAG				*e*S	**Sn**	**17 57 52.6**	**-3.0**
DAG	**Danmarks Havn**	**4.90**	**228**	⇑*i*P	**Pn**	**17 57 00.1**	**+1.2**
DAG				*i* S	**Sn**	**17 57 53.0**	**-2.6**
DAG				IAML		17 57 57.2	
	comp=Z,149nm,0.3s						
HSPB	**Hornsund (broa**	**5.00**	**126**	Pn	**Pn**	**17 57 01.0**	**+0.6**
HSPB				Sn	**Sn**	**17 57 55.8**	**-2.3**
HSPB	**Hornsund (broa**	**5.00**	**126**	*e*P	**Pn**	**17 57 00.8**	**+0.4**
HSPB				*e*S	**Sn**	**17 57 55.6**	**-2.5**
HSPB	**Hornsund (broa**	**5.00**	**126**	⇑*i*P	**Pn**	**17 57 01.2**	**+0.8**
HSPB				*e*S	**Sn**	**17 57 55.6**	**-2.5**
HSPB				IAML		17 58 00.0	
	comp=Z,25nm,0.5s						
HOPEN	**Hopen**	**6.76**	**112**	Pn	**Pn**	**17 57 23.1**	**-1.4**
HOPEN				Sn	**Sn**	**17 58 35.6**	**-5.8**
HOPEN	**Hopen**	**6.76**	**112**	*e*P	**Pn**	**17 57 22.3**	**-2.2**
HOPEN				*e*S	**Sn**	**17 58 34.6**	**-6.8**
HOPEN	**Hopen**	**6.76**	**112**	*e*P	**Pn**	**17 57 23.4**	**-1.1**
HOPEN				*e*S	**Sn**	**17 58 36.1**	**-5.3**
HOPEN				IAML		17 58 37.5	
	comp=Z,13nm,0.3s						
DBG	**Daneborg**	**7.28**	**220**	Pn	**Pn**	**17 57 32.7**	**+1.1**
DBG				Sn	**Sn**	**17 58 50.5**	**-3.7**
DBG	**Daneborg**	**7.28**	**220**	*e*P	**Pn**	**17 57 32.2**	**+0.5**
DBG				*e*S	**Sn**	**17 58 49.9**	**-4.2**
DBG	**Daneborg**	**7.28**	**220**	*i* P	**Pn**	**17 57 32.5**	**+0.9**
DBG				*i* S	**Sn**	**17 58 48.8**	**-5.4**
DBG				IAML		17 58 55.2	
	comp=Z,45nm,0.3s						
BJO1	**Bjornoya**	**7.59**	**131**	Pn	**Pn**	**17 57 37.1**	**+1.2**
BJO1				Sn	**Sn**	**17 58 57.4**	**-4.3**
BJO1	**Bjornoya**	**7.59**	**131**	*e*P	**Pn**	**17 57 33.7**	**-2.1**
BJO1				*e*S	**Sn**	**17 58 57.8**	**-3.9**
BJO1	**Bjornoya**	**7.59**	**131**	*e*P	**Pn**	**17 57 36.8**	**+0.9**
BJO1				*e*S	**Sn**	**17 59 00.4**	**-1.4**
ZFI2	**Zemlya Franca-**	**7.96**	**63**	*e*P	**Pn**	**17 57 37.9**	**-3.1**
ZFI2				*e*S	Sn	17 58 57.8	-13
	comp=Z,25nm,0.9s						
OMEGA	**Omega**	**7.99**	**63**	*e*P	**Pn**	**17 57 37.5**	**-3.7**
OMEGA				*e*S	Sn	17 58 57.8	-14
	comp=Z,25nm,0.8s						
NEEM	**North Greenlan**	**9.47**	**276**	*i* P	**Pn**	**17 58 00.7**	**-1.1**
NEEM				IAML		17 58 03.1	
	comp=Z,90nm,0.5s						
NEEM	**North Greenlan**	**9.47**	**276**	*i* P	**Pn**	**17 57 59.2**	**-2.7**
NEEM				*e*S	Sn	17 59 39.8	-8.5
NEEM				IAML		17 59 46.9	
	comp=Z,26nm,0.3s						
JNW	**Jan Mayen West**	**9.66**	**191**	*e*P	**Pn**	**17 58 07.8**	**+3.7**
JNW				*e*S	**Sn**	**17 59 49.9**	**-2.6**
JNW				IAML		17 59 57.2	
	comp=Z,23nm,0.5s						
JNE	**Jan Mayen East**	**9.69**	**191**	*e*P	**Pn**	**17 58 08.9**	**+4.3**
JNE				*e*S	**Sn**	**17 59 48.6**	**-4.7**
JNE				IAML		18 00 01.2	
	comp=Z,22nm,0.6s						
JMIC	**Jan Mayen**	**9.70**	**191**	Pn	**Pn**	**17 58 09.2**	**+4.4**
JMIC				Sn	**Sn**	**17 59 54.2**	**+0.7**
JMIC	**Jan Mayen**	**9.70**	**191**	Pn	**Pn**	**17 58 07.4**	**+2.6**
	comp=Z,7.6nm,0.3s,baz=84,slow=2.1,SNR=14						
JMIC				Sn	**Sn**	**17 59 53.9**	**+0.3**
	comp=Z,5.8nm,0.3s,baz=168,slow=14,SNR=1.8						
	comp=Z,33nm,0.7s						
JMIC	**Jan Mayen**	**9.70**	**191**	Pn	**Pn**	**17 58 09.2**	**+4.4**
JMIC				Sn	**Sn**	**17 59 54.2**	**+0.7**
JMI	**Jan Mayen**	**9.77**	**192**	Pn	Pn	17 58 11.1	+5.4
JMI	**Jan Mayen**	**9.77**	**192**	*e*P	**Pn**	**17 58 09.0**	**+3.4**
SCO	**Scoresbysund**	**11.08**	**215**	Pn	**Pn**	**17 58 24.2**	**+0.6**
SCO	**Scoresbysund**	**11.08**	**215**	*e*P	**Pn**	**17 58 26.7**	**+3.1**
SUMG	**Summit**	**11.23**	**245**		**Pn**	**17 58 24.1**	**-1.9**
SUMG	**Summit**	**11.23**	**245**	*i* P	**Pn**	**17 58 25.7**	**-0.3**
SUMG				IAmb	IAmb	17 58 26.7	
	comp=Z,94nm,0.6s						
SUMG	**Summit**	**11.23**	**245**	*i* P	**Pn**	**17 58 25.5**	**-0.5**
SUMG				*e*		18 00 20.7	
KULLO	**Kullorsuaq**	**12.59**	**272**	*i* P	Pn	17 58 40.2	-4.0
KULLO				IAML		17 58 42.6	
	comp=Z,406nm,0.3s						
KULLO	**Kullorsuaq**	**12.59**	**272**	⇑*i*P	Pn	17 58 39.5	-4.7
KULLO				*e*		18 00 52.7	
VADS	**Vadso**	**12.92**	**126**	Pn	**Pn**	**17 58 49.1**	**+0.4**
VADS				Sn	**Sn**	**18 01 05.0**	**-7.2**
VADS	**Vadso**	**12.92**	**126**	*e*P	**Pn**	**17 58 48.9**	**+0.2**
VADS				*e*		18 01 01.5	
VADS				IAML		18 01 13.8	
	comp=Z,3.1nm,0.9s						
KIF	**Kilpisjarvi**	**12.93**	**140**	*e*P	**Pn**	**17 58 50.5**	**+1.6**
KEV	**Kevo**	**12.95**	**130**	Pn	**Pn**	**17 58 50.6**	**+1.5**
KEV	**Kevo**	**12.95**	**130**	Pn	**Pn**	**17 58 50.6**	**+1.5**
ARA0	**ARCESS Array S**	**12.97**	**132**	Pn	**Pn**	**17 58 52.0**	**+2.6**
	baz=351,slow=12						
ARA0				Sn	**Sn**	**18 01 08.9**	**-4.6**
	baz=356,slow=22						
ARA0	**ARCESS Array S**	**12.97**	**132**	Pn	**Pn**	**17 58 52.0**	**+2.6**
	baz=351,slow=12						
ARA0				Sn	**Sn**	**18 01 08.9**	**-4.6**
	baz=356,slow=22						
ARCES	**ARCESS Array B**	**12.97**	**132**		**Pn**	**17 58 46.5**	**-2.9**
ARCES	**ARCESS Array B**	**12.97**	**132**	Pn	**Pn**	**17 58 50.0**	**+0.6**
	comp=Z,4.3nm,0.7s,baz=353,slow=11,SNR=14						
ARCES				Sn	**Sn**	**18 01 04.8**	**-8.7**
	baz=354,slow=22,SNR=1.2						
ARCES				LR	LR	18 03 34.5	
	comp=Z,76nm,20.3s,baz=302,slow=36						
TULEG	**Thule**	**12.98**	**287**	Pn	Pn	17 58 42.7	-6.8
TULEG	**Thule**	**12.98**	**287**	*i* P	Pn	17 58 44.1	-5.4
TULEG				IAML		17 58 44.7	
	comp=Z,169nm,0.5s						
EUNU	**Eureka**	**13.01**	**310**	Pn	Pn	17 58 45.9	-4.1
KTK1	**Kautokeino**	**13.20**	**136**	*e*P	**Pn**	**17 58 56.8**	**+4.3**
HEF	**Hetta**	**13.82**	**137**	Pn	**Pn**	**17 59 03.7**	**+2.7**
HEF	**Hetta**	**13.82**	**137**	Pn	**Pn**	**17 59 03.7**	**+2.7**
UPNV	**Upernavik**	**13.87**	**266**	*i* P	Pn	17 58 57.0	-4.7
UPNV	**Upernavik**	**13.87**	**266**	*i*	Pn	17 58 56.8	-4.9
ICESG	**Greenland Ices**	**14.54**	**239**	*i* P	**Pn**	**17 59 09.9**	**-1.3**
ICESG	**Greenland Ices**	**14.54**	**239**	*i* P	**Pn**	**17 59 09.4**	**-1.8**
UMMG	**Uummannaq**	**15.03**	**257**	*i* P	**Pn**	**17 59 13.0**	**-4.4**
UMMG	**Uummannaq**	**15.03**	**257**	*i* P	**Pn**	**17 59 12.0**	**-5.4**
POIN	**Pond Inlet**	**17.51**	**286**	Pn	Pn	17 59 42.1	-7.1
POIN				IAmb	IAmb	17 59 46.9	
	comp=Z,17nm,0.7s						
SFJD	**Kangerlussuaq**	**18.11**	**250**	Pn	**Pn**	**17 59 51.4**	**-5.2**
SFJD				IAmb	IAmb	17 59 57.3	
	comp=Z,24nm,0.8s						
SFJD	**Kangerlussuaq**	**18.11**	**250**	P	**Pn**	**17 59 52.3**	**-4.3**
	comp=Z,16nm,0.4s,baz=19,slow=13,SNR=21						
SFJD				S	Sn	18 03 01.1	-17
	comp=Z,8.4nm,0.4s,baz=160,slow=6.6,SNR=5.6						
SFJD				LR	LR	18 06 53.4	
	comp=Z,149nm,20.8s,baz=44,slow=37						
SFJD	**Kangerlussuaq**	**18.11**	**250**	*i* P	**Pn**	**17 59 52.5**	**-4.1**
SFJD	**Kangerlussuaq**	**18.11**	**250**	*i* P	**Pn**	**17 59 52.0**	**-4.6**
RES	**Resolute Bay**	**18.37**	**303**	P	**P**	**17 59 53.5**	**-6.2**
RES	**Resolute Bay**	**18.37**	**303**	P	**P**	**17 59 54.0**	**-5.6**
	comp=Z,13nm,0.8s,baz=31,slow=12,SNR=54						
NB2	**NORSAR Subarra**	**20.00**	**160**	P	**Pn**	**18 00 22.3**	**+2.9**
	comp=Z,1.3nm,0.6s,baz=347,slow=7.4						
NOA	**NORSAR Array B**	**20.00**	**160**	P	**P**	**18 00 19.1**	**+1.4**
	comp=Z,0.9nm,0.7s,baz=349,slow=11,SNR=3.7						
NOA				LR	LR	18 07 02.5	
	comp=Z,39nm,18.4s,baz=355,slow=34						
	comp=Z,0.9nm,0.7s						
LSH	**Leshukonskoye**	**20.16**	**112**	*e*P	**P**	**18 00 19.1**	**-0.3**
FINES	**FINESS Array B**	**20.84**	**139**	P	Pn	18 00 29.9	+0.8
	comp=Z,3.6nm,0.9s,baz=348,slow=8.6,SNR=5.5						
FINES				LR	LR	18 08 19.8	
	comp=Z,37nm,20.5s,baz=20,slow=36						
	comp=Z,3.6nm,0.9s						
ILON	**Igloolik, Nuna**	**21.05**	**284**	P	**P**	**18 00 26.3**	**-2.6**
HFS	**Hagfors**	**21.05**	**157**	P	**P**	**18 00 32.5**	**+3.4**
	slow=7.9						
HFS	**Hagfors**	**21.05**	**157**	P	**P**	**18 00 31.9**	**+2.9**
	comp=Z,12nm,0.9s,baz=11,slow=9.1,SNR=11						
HFS				LR	LR	18 07 04.8	
	comp=Z,59nm,20.4s,baz=6.5,slow=32						
	comp=Z,12nm,0.9s						
HFS	**Hagfors**	**21.05**	**157**	P	**P**	**18 00 32.5**	**+3.4**
	slow=7.9						
NRIK	**Noril'sk**	**22.82**	**66**		**P**	**18 00 48.4**	**+0.5**
NRIK	**Noril'sk**	**22.82**	**66**	P	**P**	**18 00 49.0**	**+1.1**
	comp=Z,5.1nm,0.8s,baz=352,slow=8.6,SNR=8.2						
NRIK				LR	LR	18 10 40.6	
	comp=Z,99nm,20.3s,baz=349,slow=39						
	comp=Z,5.1nm,0.8s						
KLMR	**Klimovskoe**	**23.08**	**123**	*e*P	**P**	**18 00 51.4**	**+0.8**
FRB	**Frobisher Bay**	**24.02**	**266**	LR	LR	18 10 49.9	
	comp=Z,82nm,18.3s,baz=25,slow=38						
ESK	**Eskdalemuir**	**25.34**	**181**	P	**P**	**18 01 07.9**	**-4.0**
TIXI	**Tiksi**	**25.76**	**33**		**P**	**18 01 10.3**	**-5.2**
KIRV	**Kirov**	**26.71**	**113**	LR	LR	18 13 04.2	
	comp=Z,104nm,20.5s,baz=353,slow=39						
NACGM	**Naroch**	**27.34**	**142**	*e*P	**P**	**18 01 33.9**	**+3.9**
	comp=Z,5.0nm,0.8s,baz=351						
BLKN	**Baker Lake**	**27.93**	**292**		**P**	**18 01 35.8**	**+0.7**
F28M	**Old Crow**	**30.17**	**329**	P	**P**	**18 01 55.9**	**+0.8**
F28M				IAmb	IAmb	18 02 04.9	
	comp=Z,4.0nm,0.9s						
ARTI	**Arti**	**30.22**	**105**	LR	LR	18 15 11.7	
	comp=Z,46nm,20.9s,baz=350,slow=39						
G29M	**Pine Creek**	**30.70**	**327**	P	**P**	**18 02 02.2**	**+2.5**
G29M				IAmb	IAmb	18 02 09.3	
	comp=Z,8.5nm,1.1s						
COLD	**Coldfoot**	**31.34**	**336**	P	**P**	**18 02 09.6**	**+4.2**
COLD				IAmb	IAmb	18 02 15.8	
	comp=Z,5.7nm,1.2s						
H29M	**Whitestone**	**31.41**	**327**	P	**P**	**18 02 08.8**	**+2.9**
H29M				IAmb	IAmb	18 02 15.3	
	comp=Z,3.9nm,1.0s						
F21K	**Alatna River**	**31.55**	**339**	P	**P**	**18 02 10.8**	**+3.5**
AKASG	**Malin Array Be**	**31.74**	**140**	P	**P**	**18 02 10.9**	**+1.9**
	comp=Z,0.4nm,0.6s,baz=343,slow=9.0,SNR=2.0						
AKASG				LR	LR	18 16 02.9	
	comp=Z,16nm,19.1s,baz=348,slow=38						
	comp=Z,0.4nm,0.6s						
AKBB	**Malin Array Si**	**31.74**	**140**	P	P	18 02 04.0	-5.0
AKBB				IAmb	IAmb	18 02 06.5	
	comp=Z,11nm,1.5s						
KIEV	**Kiev**	**31.75**	**140**	P	**P**	**18 02 05.1**	**-3.9**
KIEV				IAmb	IAmb	18 02 06.5	
	comp=Z,9.6nm,1.5s						
I30M	**Mount Dempster**	**32.20**	**325**		**P**	**18 02 15.7**	**+2.7**
I30M				IAmb	IAmb	18 02 22.8	
	comp=Z,3.6nm,0.8s						
SCHQ	**Schefferville**	**32.20**	**258**	LR	LR	18 15 49.5	
	comp=Z,58nm,18.5s,baz=82,slow=37						
I29M	**Ogilvie Camp,**	**32.24**	**327**	P	**P**	**18 02 16.4**	**+3.1**
I29M				IAmb	IAmb	18 02 22.3	
	comp=Z,5.8nm,1.0s						
GERES	**GERESS Array B**	**32.30**	**160**	P	**P**	**18 02 17.3**	**+3.2**
	comp=Z,0.6nm,0.7s,baz=12,slow=8.7,SNR=5.5						
	comp=Z,0.6nm,0.7s						
I28M	**Miner Creek**	**32.30**	**328**		pP	18 02 20.8	+4.7
YKA	**Yellowknife Ar**	**32.35**	**306**	P	**P**	**18 02 15.3**	**+1.1**
	comp=Z,1.3nm,1.1s,baz=21,slow=9.8,SNR=5.0						
YKA				LR	LR	18 15 07.1	
	comp=Z,136nm,18.0s,baz=321,slow=36						
	comp=Z,1.3nm,1.1s						
BELG	**Belogornoye**	**32.43**	**118**	LR	LR	18 14 26.8	
	comp=Z,53nm,21.9s,baz=326,slow=34						
I26K	**Coal Creek Min**	**32.72**	**330**	IAmb	IAmb	18 02 28.4	
	comp=Z,7.3nm,1.1s						
J30M	**Hart River**	**32.83**	**325**	P	**P**	**18 02 21.4**	**+2.8**
J30M				IAmb	IAmb	18 02 28.3	
	comp=Z,4.8nm,1.0s						
FCC	**Fort Churchill**	**32.90**	**286**	P	**P**	**18 02 19.0**	**-0.1**
FCC				IAmb	IAmb	18 02 30.7	
	comp=Z,4.7nm,1.1s						
ILAR	**Eielson Array**	**33.54**	**333**	P	**P**	**18 02 26.2**	**+1.6**
	comp=Z,0.7nm,0.8s,baz=2.3,slow=9.0,SNR=5.8						
	comp=Z,0.7nm,0.8s						
DAWY	**Dawson**	**33.61**	**327**	P	**P**	**18 02 26.5**	**+1.1**
K29M	**Barlow Dome**	**33.66**	**325**		**P**	**18 02 29.7**	**+3.8**
K29M				IAmb	IAmb	18 02 36.1	
	comp=Z,4.9nm,1.1s						
HDA	**Harding Lake**	**33.90**	**333**	P	**P**	**18 02 29.6**	**+1.9**
HDA				IAmb	IAmb	18 02 38.1	
	comp=Z,6.1nm,0.9s						
MMPY	**Sheldon Lake,**	**34.23**	**320**		**P**	**18 02 31.6**	**+0.8**
MMPY				IAmb	IAmb	18 02 42.0	
	comp=Z,7.7nm,1.2s						
L29M	**L29M**	**34.44**	**326**	P	**P**	**18 02 35.0**	**+2.5**
M29M	**Somme Creek**	**35.12**	**326**		**P**	**18 02 40.3**	**+1.8**
BVAR	**Borovoye Array**	**35.41**	**94**	P	**P**	**18 02 43.5**	**+2.5**
	comp=Z,0.4nm,0.5s,baz=5.6,slow=7.6,SNR=3.8						
BVAR				PP	**PnPn**	**18 03 54.0**	**-5.1**
	comp=Z,0.4nm,0.3s,baz=340,slow=16,SNR=3.9						
BVAR				LR	LR	18 21 15.7	
	comp=Z,43nm,18.7s,baz=336,slow=43						
	comp=Z,0.4nm,0.5s						
AKTO	**Aktyubinsk**	**35.91**	**108**	LR	LR	18 18 37.9	
	comp=Z,64nm,20.4s,baz=230,slow=38						
ZALV	**Zalesovo Beam**	**36.90**	**80**	P	**P**	**18 02 55.2**	**+1.6**
	comp=Z,0.3nm,0.3s,baz=330,slow=17,SNR=4.3						
ZALV				LR	LR	18 20 02.9	
	comp=Z,63nm,21.4s,baz=357,slow=40						
	comp=Z,0.3nm,0.3s						
DLBC	**Dease Lake**	**38.19**	**317**	LR	LR	18 19 17.5	
	comp=Z,67nm,18.9s,baz=254,slow=37						
KURK	**Kurchatov**	**39.00**	**87**		**P**	**18 03 12.9**	**+1.6**
KURK				IAmb	IAmb	18 03 23.3	
	comp=Z,6.9nm,1.1s						
KURBB	**Kurchatov Arra**	**39.08**	**87**	P	**P**	**18 03 14.6**	**+2.6**
	comp=Z,1.6nm,0.9s,baz=341,slow=7.9,SNR=18						
KURBB				PcP	**PcP**	**18 05 22.4**	**+0.9**
	comp=Z,0.8nm,0.9s,baz=339,slow=3.8,SNR=5.7						
KURBB				LR	LR	18 22 49.1	
	comp=Z,85nm,19.7s,baz=159,slow=42						
	comp=Z,1.6nm,0.9s						
KBZ	**Khabaz**	**40.25**	**127**	P	**P**	**18 03 24.1**	**+2.3**
	comp=Z,1.5nm,0.9s,baz=8.3,slow=5.5,SNR=4.7						
KBZ				LR	LR	18 22 05.3	
	comp=Z,35nm,19.1s,baz=4.0,slow=39						
	comp=Z,1.5nm,0.9s						
KDAK	**Kodiak Island**	**40.88**	**336**	P	**P**	**18 03 27.5**	**+0.7**
	comp=Z,2.7nm,0.7s,baz=8.7,slow=6.3,SNR=5.2						
	comp=Z,2.7nm,0.7s						
ESDC	**Sonseca Array**	**40.99**	**181**	P	**P**	**18 03 30.8**	**+2.7**
	comp=Z,0.5nm,0.6s,baz=358,slow=8.1,SNR=6.3						
	comp=Z,0.5nm,0.6s						
ULM	**Lac du Bonnet**	**41.38**	**284**	LR	LR	18 20 59.5	
	comp=Z,132nm,18.7s,baz=320,slow=37						
BRTR	**Keskin Array B**	**43.06**	**138**	P	**P**	**18 03 48.7**	**+3.6**
	comp=Z,0.8nm,0.8s,baz=355,slow=6.7,SNR=7.0						
	comp=Z,0.8nm,0.8s						
MAKZ	**Makanchi**	**43.34**	**85**		**P**	**18 03 48.8**	**+1.6**
MKAR	**Makanchi Array**	**43.41**	**85**	P	**P**	**18 03 49.6**	**+1.9**
MKAR	**Makanchi Array**	**43.41**	**85**	P	**P**	**18 03 50.0**	**+2.3**
	comp=Z,0.7nm,0.7s,baz=345,slow=8.4,SNR=10						
MKAR				LR	LR	18 25 07.3	
	comp=Z,52nm,18.5s,baz=93,slow=41						
	comp=Z,0.7nm,0.7s						
SADO	**Sadowa**	**43.96**	**266**	LR	LR	18 22 43.4	
	comp=Z,87nm,19.5s,baz=174,slow=37						
GNI	**Garni**	**44.01**	**126**	LR	LR	18 22 22.1	
	comp=Z,25nm,18.3s,baz=8.0,slow=36						
PETK	**Petropavlovsk-**	**46.15**	**16**	P	**P**	**18 04 09.4**	**0.0**
	comp=Z,0.9nm,0.9s,baz=354,slow=12,SNR=3.9						
	comp=Z,0.9nm,0.9s						
AAK	**Ala-Archa**	**46.16**	**94**	LR	LR	18 26 21.3	
	comp=Z,76nm,18.1s,baz=346,slow=40						
SONM	**Songino Array**	**46.19**	**62**	LR	LR	18 24 25.9	
	comp=Z,108nm,21.7s,baz=52,slow=37						
NEW	**Newport**	**46.53**	**303**	LR	LR	18 23 38.1	
	comp=Z,100nm,21.3s,baz=344,slow=36						
FXWY	**Fox Creek**	**50.18**	**296**	P	**P**	**18 04 41.8**	**+0.9**
FXWY				IAmb	IAmb	18 04 52.6	
	comp=Z,5.5nm,1.1s						
PDAR	**Pinedale Array**	**50.81**	**295**		**P**	**18 04 46.6**	**+0.9**
PDAR	**Pinedale Array**	**50.81**	**295**	P	**P**	**18 04 48.2**	**+2.5**
	comp=Z,0.3nm,0.4s,baz=35,slow=5.4,SNR=5.8						
	comp=Z,0.3nm,0.4s						
XLT	**XiLinHaoTe**	**51.40**	**54**	*e*P	**P**	**18 04 49.5**	**-0.5**
XLT				sP	pwP	18 04 56.4	0.0
XLT				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GTA	**Gaotai**	**53.43**	**70**	*e*P	**P**	**18 05 06.5**	**+1.4**
GTA				sP	pwP	18 05 14.6	+3.1
GTA				pmax	pmax		
	comp=Z,5.0nm,1.5s						
TKL	**Tuckaleechee C**	**53.61**	**268**	LR	LR	18 27 50.4	
	comp=Z,66nm,19.4s,baz=1.0,slow=36						
NVAR	**Mina Array Bea**	**56.34**	**302**	LR	LR	18 30 11.2	
	comp=Z,67nm,19.0s,baz=315,slow=37						
PFO	**Pinyon Flats O**	**60.81**	**299**	LR	LR	18 32 53.2	
	comp=Z,51nm,19.2s,baz=161,slow=37						
TXAR	**Lajitas Array**	**63.05**	**286**	P	**P**	**18 06 14.1**	**+1.6**
	comp=Z,0.6nm,0.8s,baz=34,slow=4.9,SNR=5.7						
TXAR				PcP	**PcP**	**18 06 51.5**	**+1.4**
	comp=Z,0.6nm,0.7s,baz=38,slow=2.2,SNR=4.5						
	comp=Z,0.6nm,0.8s						
LPIG	**La Paz**	**69.22**	**291**	LR	LR	18 37 36.0	
	comp=Z,52nm,19.9s,baz=67,slow=36						
CMIG	**Matias Romero**	**73.62**	**275**	LR	LR	18 42 58.3	
	comp=Z,49nm,18.3s,baz=4.5,slow=38						
CMAR	**Chiang Mai Arr**	**73.82**	**75**	P	**P**	**18 07 20.5**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=341,slow=8.5,SNR=6.5						
	comp=Z,0.7nm,0.8s						
PCRV	**Puerto La Cruz**	**75.53**	**244**	LR	LR	18 38 00.6	
	comp=Z,36nm,21.6s,slow=34						
ASAR	**Alice Springs**	**120.26**	**47**	PKP	**PKPdf**	**18 14 35.5**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=342,slow=2.3,SNR=8.4						

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*IDC **03** 18:05:24.4±1.5, 63.°22N×151.°08W, h110^{km}±13^{km}, mb3.7/20, mbtmp4.0/25, MS3.4/3, Error ellipse: s-maj=13.9km s-min=12.4km az=68.0*

*AEIC **03** 18:05:26.0±1.1, 63.°09N±0.°04×150.°82W±0.°08, h127^{km}±4^{km}, ML3.6, mb4.4/24(NEIC), ML3.8/274(NEIC), Mwr3.8/26(SLM), Error ellipse: s-maj=6.1km s-min=4.5km az=209.0*

*NEIC **03** 18:05:25.5±0.8, 63.°10N±0.°04×150.°84W±0.°08, h129^{km}, Error ellipse: s-maj=5.7km s-min=5.1km az=202.0*

*NEIC **03** 18:05:25, 63.°09N×150.°82W, h118^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}4.33; $M_{\theta\theta}$-0.98; $M_{\phi\phi}$-3.35; $M_{r\theta}$3.80; $M_{\theta\phi}$-2.28; $M_{\phi r}$2.75; Fault plane solution: $M_0$6.53000×10^{14} NP1:ϕ_s47.00000°, δ69.00000°, λ103.00000°. NP2:ϕ_s195.00000°, δ25.00000°, λ60.00000°. Principal axes: T 6.5301, Plg64.0000°, Azm339.0000°; N 0.0038, Plg12.0000°, Azm223.0000°; P -6.5339, Plg22.0000°, Azm128.0000°;*

ISC 03 18:05:25.5±0.4**, 63.°10N**±0.°04×**150.°83W**±0.°04**, h127**^{km}**, n246, σ0.s94**/198**, mb4.3**/34**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TRF	**Thorofare Moun**	**0.43**	**34**		**Pn**	**18 05 44.6**	**+0.7**
TRF					**Sn**	**18 05 58.9**	**+0.9**
TRF	**Thorofare Moun**	**0.43**	**34**	IAML		18 05 59.7	
	comp=N,4μm,0.7s						
KTH	**Kantishna Hill**	**0.46**	**355**		**Pn**	**18 05 44.5**	**+0.4**
KTH				IAML		18 05 58.7	
	comp=E,5μm,0.9s						
KTH				IAML		18 05 58.9	
	comp=N,4μm,0.6s						
KTH	**Kantishna Hill**	**0.46**	**355**		**Sn**	**18 05 58.3**	**+0.2**
PPLA	**Purkeypile**	**0.65**	**253**		**Pn**	**18 05 45.8**	**+0.5**
PPLA				IAML		18 06 01.3	
	comp=E,3μm,0.9s						
PPLA				IAML		18 06 02.1	
	comp=N,2μm,1.1s						
PPLA	**Purkeypile**	**0.65**	**253**		**Sn**	**18 06 00.9**	**+0.6**
CAST	**Castle Rocks**	**0.65**	**300**		**Pn**	**18 05 45.3**	**+0.2**
CAST				IAML		18 06 00.5	
	comp=E,2μm,1.0s						
CAST				IAML		18 06 00.6	
	comp=N,2μm,0.7s						
CAST	**Castle Rocks**	**0.65**	**300**		**Sn**	**18 05 59.8**	**-0.4**
CUT	**Chulitna**	**0.74**	**159**		**Pn**	**18 05 46.4**	**+0.7**
CUT					**Sn**	**18 06 02.0**	**+0.9**
WAT7	**Susitna Watana**	**0.94**	**105**		**Pn**	**18 05 47.9**	**+0.3**
WAT7					**Sn**	**18 06 04.9**	**+0.4**
RND	**Reindeer**	**0.95**	**70**		**Pn**	**18 05 47.9**	**+0.3**
RND				IAML		18 06 07.2	
	comp=N,1μm,0.4s						
RND				IAML		18 06 07.8	
	comp=E,1μm,0.3s						
RND	**Reindeer**	**0.95**	**70**		**Sn**	**18 06 04.6**	**+0.1**
BPAW	**Bear Paw Mtn.**	**1.01**	**356**		**Pn**	**18 05 48.3**	**+0.2**
BPAW				IAML		18 06 05.5	
	comp=N,1μm,0.7s						
BPAW				IAML		18 06 06.0	
	comp=E,1μm,0.6s						
BPAW	**Bear Paw Mtn.**	**1.01**	**356**		**Sn**	**18 06 05.1**	**-0.3**
CHUM	**Lake Minchumin**	**1.03**	**320**		**Pn**	**18 05 48.9**	**+0.5**
MCK	**McKinley**	**1.06**	**52**		**Pn**	**18 05 49.2**	**+0.5**
MCK				IAML		18 06 08.1	
	comp=E,1μm,0.3s						
MCK				IAML		18 06 08.1	
	comp=N,2μm,0.5s						
MCK	**McKinley**	**1.06**	**52**		**Sn**	**18 06 06.4**	**0.0**
SKT	**Skwentna**	**1.17**	**197**		**Pn**	**18 05 50.0**	**+0.3**
BWN	**Browne**	**1.24**	**29**		**Pn**	**18 05 51.5**	**+1.1**
BWN				IAML		18 06 11.0	
	comp=N,1μm,0.8s						
BWN				IAML		18 06 19.6	
	comp=E,823nm,1.0s						
M22K	**Willow**	**1.39**	**166**		**Pn**	**18 05 52.4**	**+0.4**
M22K	**Willow**	**1.39**	**166**		**Sn**	**18 06 12.9**	**+0.7**
K20K	**Telida**	**1.49**	**282**		**Pn**	**18 05 53.4**	**+0.2**
K20K				IAML		18 06 16.1	
	comp=E,432nm,0.8s						
WAT6	**Susitna Watana**	**1.51**	**109**		**Pn**	**18 05 53.5**	**-0.1**
L20K	**Farewell, AK**	**1.53**	**248**		**Pn**	**18 05 54.0**	**+0.2**
DHY	**Denali Highway**	**1.57**	**89**		**Pn**	**18 05 54.6**	**+0.3**
GHO	**Glory Hole Cre**	**1.60**	**145**		**Pn**	**18 05 55.0**	**+0.5**
GHO	**Glory Hole Cre**	**1.60**	**145**		**Sn**	**18 06 17.5**	**+0.9**
M20K	**Styx River**	**1.62**	**222**		**Pn**	**18 05 54.9**	**+0.1**
M20K				IAML		18 06 19.1	
	comp=N,693nm,0.6s						
M20K				IAML		18 06 19.6	
	comp=E,571nm,0.6s						
SUA	**Susitna One**	**1.64**	**179**		**Pn**	**18 05 55.2**	**+0.1**
SUA				IAML		18 06 19.0	
	comp=E,1μm,0.4s						
SUA				IAML		18 06 21.4	
	comp=N,1μm,0.5s						
STLK	**Strandline Lak**	**1.67**	**197**		**Pn**	**18 05 55.5**	**+0.1**
STLK				IAML		18 06 20.2	
	comp=E,2μm,0.4s						
STLK				IAML		18 06 21.6	
	comp=N,2μm,0.3s						
NEA2	**Nenana**	**1.69**	**27**		**Pn**	**18 05 55.5**	**0.0**
NEA2				IAML		18 06 18.4	
	comp=E,433nm,0.5s						
NEA2				IAML		18 06 18.8	
	comp=N,298nm,0.8s						
PMR	**Palmer**	**1.71**	**152**		**Pn**	**18 05 55.7**	**+0.1**
PMR				IAML		18 06 19.0	
	comp=E,2μm,0.3s						
PMR				IAML		18 06 26.3	
	comp=N,2μm,0.5s						
PMR	**Palmer**	**1.71**	**152**	P	Pn	18 05 50.0	-5.6
SML	**Sawmill**	**1.74**	**137**		**Pn**	**18 05 56.1**	**0.0**
J20K	**Nowinta River**	**1.84**	**308**		**Pn**	**18 05 57.4**	**+0.2**
WRH	**Wood River Hil**	**1.84**	**40**		**Pn**	**18 05 57.5**	**+0.3**
MLY	**Manley**	**1.94**	**1**		**Pn**	**18 05 58.6**	**+0.1**
FIS	**Fire Island**	**1.98**	**171**		**Pn**	**18 06 00.3**	**+1.4**
SPBG	**Spurr Blockage**	**1.98**	**202**		**Pn**	**18 06 00.0**	**+0.9**
KNK	**Knik Glacier**	**2.02**	**146**		**Pn**	**18 05 59.4**	**-0.1**
M19K	**Big River Lodg**	**2.04**	**236**		**Pn**	**18 05 59.9**	**+0.2**
CCB	**Clear Creek Bu**	**2.05**	**39**		**Pn**	**18 05 60.0**	**+0.2**
CCB				IAML		18 06 26.5	
	comp=E,272nm,0.6s						
L19K	**White Mountain**	**2.07**	**246**		**Pn**	**18 06 00.3**	**+0.1**
L19K				IAML		18 06 27.9	
	comp=E,351nm,0.8s						
L19K				IAML		18 06 36.1	
	comp=N,220nm,0.7s						
I21K	**Tanana**	**2.15**	**347**	IAML		18 06 29.8	
	comp=N,302nm,1.0s						
I23K	**Minto, Yukon-K**	**2.16**	**17**		**Pn**	**18 06 01.4**	**+0.3**
I23K				IAML		18 06 29.1	
	comp=N,249nm,1.0s						
I23K				IAML		18 06 29.7	
	comp=E,226nm,0.8s						

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HDA   Harding Lake     2.17  51            Pn       18 06 01.4 +0.1
HDA                               IAML              18 06 30.2
      comp=N,696nm,0.5s
HDA                               IAML              18 06 33.6
      comp=E,774nm,0.3s
COLA  College          2.21  35            Pn       18 06 02.3 +0.5
COLA                              IAML              18 06 48.0
      comp=E,494nm,0.5s
COLA                              IAML              18 06 48.3
      comp=E,430nm,0.6s
COLA  College          2.21  35   P        Pn       18 06 02.0 +0.2
I20K  Naaghedeneel     2.35 318            Pn       18 06 03.8 +0.3
I20K                              IAML              18 06 34.1
      comp=N,614nm,0.8s
I20K                              IAML              18 07 01.1
      comp=E,444nm,0.8s
TTA   Tatalina         2.37 268   IAML              18 06 33.8
      comp=E,209nm,0.7s
TTA                               IAML              18 06 34.0
      comp=N,173nm,0.4s
TTA   Tatalina         2.37 268   P        Pn       18 06 04.0 +0.1
TTA   Tatalina         2.37 268   S        Sn       18 06 33.3 -0.1
K24K  Donnelly Dome    2.38  70   IAML              18 06 41.1
      comp=N,709nm,0.5s
K24K                              IAML              18 06 41.2
      comp=E,947nm,0.4s
IL31                   2.42  44            Pn       18 06 04.4  0.0
ILAR  Eielson Array    2.42  44   P        Pn       18 06 04.4  0.0
      comp=E,33nm,0.4s,baz=228,slow=12,SNR=342
ILAR                              S        Sn       18 06 32.6 -1.8
      comp=E,50nm,0.7s,baz=236,slow=16,SNR=8.3
PAX   Paxson           2.44  91            Pn       18 06 05.2 +0.3
PAX                               IAML              18 06 43.0
      comp=N,774nm,0.5s
SLKM  Skilak Lake      2.61 173            Pn       18 06 07.3 +0.4
SLKM                              IAML              18 06 40.8
      comp=E,911nm,0.3s
SLKM                              IAML              18 06 41.2
      comp=N,701nm,0.4s
O22K  Cooper Landing   2.68 168            Pn       18 06 08.3 +0.6
J18K  Innoko River     2.69 281   IAML              18 06 41.5
      comp=E,157nm,1.0s
J18K                              IAML              18 06 59.6
      comp=N,134nm,0.7s
H21K  Melozitna Rive   2.71 342            Pn       18 06 08.2 +0.1
H21K                              IAML              18 06 42.5
      comp=N,132nm,0.7s
RIDG  Independent Ri   2.77  74   IAML              18 06 47.4
      comp=N,336nm,0.6s
RIDG                              IAML              18 06 49.9
      comp=E,368nm,0.5s
KLU   Klutina          2.80 123            Pn       18 06 08.8 -0.6
RED   Redoubt Volcan   2.84 200   IAML              18 06 53.5
      comp=N,146nm,0.6s
RED                               IAML              18 07 19.8
      comp=E,218nm,1.0s
L18K  Granite Mounta   2.84 255   IAML              18 06 43.7
      comp=N,134nm,1.0s
L18K                              IAML              18 06 43.9
      comp=E,180nm,0.8s
J25K  Salcha River,    2.86  55   IAML              18 06 45.2
      comp=E,354nm,0.6s
J25K                              IAML              18 06 49.0
      comp=N,303nm,0.6s
N19K  Bonanza Creek    2.87 219            Pn       18 06 10.8 +0.5
N19K                              IAML              18 06 48.9
      comp=N,123nm,0.7s
SEW   Seward           3.07 167   IAML              18 06 50.4
      comp=N,619nm,0.9s
DIV   Divide           3.09 127            Pn       18 06 12.1 -1.1
DOT   Dot Lake         3.10  77   IAML              18 06 53.1
      comp=E,263nm,0.7s
DOT                               IAML              18 06 54.2
      comp=N,358nm,0.4s
FID   Port Fidalgo     3.13 137            Pn       18 06 12.9 -0.7
O20K  Slope Mountain   3.15 197            Pn       18 06 15.0 +1.2
SCRK  Sand Creek       3.19  71            Pn       18 06 14.3 -0.2
SCRK                              IAML              18 06 57.7
      comp=N,226nm,0.6s
SCRK                              IAML              18 06 58.7
      comp=E,189nm,0.7s
MENT  Mentasta         3.25  90            Pn       18 06 15.4 +0.3
MENT  Mentasta         3.25  90   IAML              18 07 07.1
      comp=N,499nm,0.5s
MENT  Mentasta         3.25  90   P        Pn       18 06 15.4 +0.3
MENT  Mentasta         3.25  90   S        Sn       18 06 54.7 +1.2
WAZA  Wrangell Mount   3.25 105            Pn       18 06 15.6 +0.1
N25K  Chitina, Valde   3.27 114   IAML              18 06 55.5
      comp=E,537nm,0.5s
WASW  Wrangell South   3.30 108            Pn       18 06 16.1  0.0
ILS   Iliamna Low So   3.33 200            Pn       18 06 17.0 +0.7
PRP   Porcupine Dome   3.35  41            Pn       18 06 16.6  0.0
PRP                               IAML              18 07 01.0
      comp=N,79nm,0.6s
O19K  Port Alsworth    3.35 211   IAML              18 06 57.2
      comp=N,443nm,0.5s
O19K                              IAML              18 06 59.0
      comp=E,412nm,0.4s
L26K  Log Cabin Wild   3.41  88            Pn       18 06 17.5 +0.3
L26K  Log Cabin Wild   3.41  88   IAML              18 07 12.9
      comp=E,461nm,0.4s
K17K  Iditarod         3.44 267   IAML              18 07 13.8
      comp=E,104nm,0.8s
K17K                              IAML              18 07 20.2
      comp=N,97nm,1.1s
H19K  Roundabout Mou   3.46 317            Pn       18 06 17.7 -0.1
EYAK  Cordova Ski Ar   3.51 134            Pn       18 06 18.5 -0.1
EYAK                              IAML              18 07 02.6
      comp=N,265nm,0.5s
EYAK                              IAML              18 07 02.9
      comp=E,412nm,0.5s
EYAK  Cordova Ski Ar   3.51 134   P        Pn       18 06 18.3 -0.3
EYAK  Cordova Ski Ar   3.51 134   S        Sn       18 06 58.0 -1.6
J26L  Joseph Creek     3.52  63   IAML              18 07 04.1
      comp=E,296nm,0.9s
J26L                              IAML              18 07 05.6
      comp=N,272nm,0.5s
M17K  Holitna River    3.53 244            Pn       18 06 18.4 -0.4
M17K                              IAML              18 07 22.8
      comp=N,114nm,0.7s
M17K                              IAML              18 07 46.3
      comp=E,120nm,0.8s
G21K  Allakaket        3.62 343            Pn       18 06 20.3 +0.3
P19K  Oil Pt           3.65 200   IAML              18 07 05.8
      comp=N,247nm,0.5s
P19K                              IAML              18 07 07.0
      comp=E,311nm,0.6s
G23K  Bananza Creek    3.65   5   IAML              18 07 03.1
      comp=E,100nm,1.1s
M26K  Nabesna, AK      3.67  97   IAML              18 07 21.9
      comp=E,236nm,0.5s
M26K                              IAML              18 07 26.9
      comp=N,252nm,0.5s
J17K  VABM Dome        3.74 278            Pn       18 06 21.6  0.0
H25L  Birch Creek      3.84  32            Pn       18 06 23.4 +0.5
G22K  Bettles          3.85 356            Pn       18 06 23.4 +0.4
O18K  Koktuh Hills     3.87 215            Pn       18 06 23.8 +0.4
O18K                              IAML              18 07 01.7
      comp=N,62nm,0.7s
O18K                              IAML              18 07 09.1
      comp=E,56nm,1.3s
G24K  Hadweenzic Riv   3.89  20            Pn       18 06 23.9 +0.3
G24K  Hadweenzic Riv   3.89  20   IAML              18 07 10.0
      comp=N,59nm,0.9s
H18K  Honhosa River    3.90 305            Pn       18 06 24.1 +0.4
AUCH  Augustine Cone   3.96 200            Pn       18 06 25.7 +1.1
N17K  Nushagak Hills   3.97 232   IAML              18 07 37.9
      comp=N,52nm,0.6s
N17K                              IAML              18 07 53.9
      comp=E,53nm,0.8s
I26K  Coal Creek Min   4.02  53   IAML              18 07 13.7
      comp=E,93nm,0.7s
I26K                              IAML              18 07 15.1
      comp=N,130nm,1.0s
K27K  Chicken          4.02  73            Pn       18 06 25.4 +0.1
K27K  Chicken          4.02  73   IAML              18 07 15.5
      comp=E,132nm,0.6s
K27K                              IAML              18 07 15.7
      comp=N,214nm,0.6s
MCARA McCarthy VSAT    4.04 112            Pn       18 06 25.7 +0.2
L27K  Beaver Creek,    4.09  86   IAML              18 07 19.9
      comp=E,48nm,0.5s
L27K                              IAML              18 07 37.3
      comp=N,62nm,0.8s
BCAR  Beaver Creek A   4.11  86            Pn       18 06 25.9 -0.6
COLD  Coldfoot         4.16   3            Pn       18 06 27.3 +0.2
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HMT   Hamilton         4.17 129            Pn       18 06 26.8 -0.6
M27K  Edge Creek, AK   4.18  96   IAML              18 07 39.1
      comp=E,90nm,0.8s
M27K                              IAML              18 07 42.2
      comp=N,77nm,1.0s
FYU   Fort Yukon       4.22  32   IAML              18 07 46.0
      comp=N,46nm,1.4s
FYU                               IAML              18 07 55.8
      comp=E,58nm,0.6s
L16K  Owhat River      4.26 255   IAML              18 07 18.9
      comp=N,62nm,1.1s
Q23K  Middleton Isla   4.27 148            Pn       18 06 28.8 +0.2
Q23K  Middleton Isla   4.27 148   IAML              18 07 19.2
      comp=E,170nm,0.6s
Q23K                              IAML              18 07 20.7
      comp=N,175nm,0.7s
P18K  Big Mountain,    4.28 212   IAML              18 07 18.7
      comp=E,58nm,0.9s
F21K  Alatna River     4.29 346   IAML              18 07 19.6
      comp=N,70nm,0.8s
F21K                              IAML              18 07 19.6
      comp=E,47nm,1.0s
M16K  Timber Creek     4.36 245   IAML              18 07 19.4
      comp=E,44nm,0.7s
M16K                              IAML              18 07 58.8
      comp=N,42nm,0.9s
Q19K  Cape Douglas,    4.40 199   IAML              18 07 31.7
      comp=N,155nm,0.9s
Q19K                              IAML              18 07 34.5
      comp=E,229nm,0.8s
KAIM  Kayak Island     4.42 133            Pn       18 06 29.7 -0.9
KAIM  Kayak Island     4.42 133   IAML              18 07 26.2
      comp=N,145nm,0.4s
KAIM                              IAML              18 07 27.7
      comp=E,132nm,0.4s
TGL   Tana Glacier     4.45 118            Pn       18 06 30.6 -0.5
TGL                               IAML              18 07 42.5
      comp=N,204nm,0.5s
TGL                               IAML              18 07 51.6
      comp=E,219nm,0.7s
F20K  Avaraart Lake    4.48 335            Pn       18 06 31.7 +0.4
F20K                              IAML              18 07 23.0
      comp=E,34nm,1.0s
F20K                              IAML              18 07 23.1
      comp=N,40nm,1.0s
I17K  Unalakleet       4.49 285   IAML              18 07 23.9
      comp=E,44nm,0.9s
SUCK  Suckling Hills   4.53 129   IAML              18 07 56.1
      comp=E,182nm,0.7s
SYI   Shuyak Island    4.57 190   IAML              18 07 25.3
      comp=E,198nm,0.4s
SYI                               IAML              18 07 25.9
      comp=N,181nm,0.3s
F19K  Shaleruckik Mo   4.77 325            Pn       18 06 35.0 -0.2
G26K  Porcupine Rive   4.88  35            Pn       18 06 36.6 -0.1
G26K  Porcupine Rive   4.88  35   IAML              18 08 16.4
      comp=N,34nm,1.2s
G26K                              IAML              18 08 22.7
      comp=E,32nm,0.7s
GRNC  Granite Creek    4.90 115   IAML              18 07 55.0
      comp=E,68nm,0.7s
GRNC                              IAML              18 07 59.0
      comp=N,95nm,0.7s
CTGM  Chitina Glacie   4.96 111   IAML              18 08 03.2
      comp=N,75nm,0.9s
CTGM                              IAML              18 08 03.8
      comp=E,50nm,0.9s
O16K  Kokwok River B   4.96 228   IAML              18 08 12.2
      comp=E,29nm,0.9s
O16K                              IAML              18 08 15.5
      comp=N,24nm,0.7s
BMAR  Burnt Mountain   5.08  28            Pn       18 06 39.0 -0.5
H27K  Steamboat Moun   5.08  48   IAML              18 07 38.2
      comp=N,26nm,1.1s
E24K  Your Creek       5.09  10   IAML              18 07 38.7
      comp=N,24nm,0.8s
YAH   Yahtse           5.11 118   IAML              18 08 03.4
      comp=N,106nm,0.9s
YAH                               IAML              18 08 05.4
      comp=E,93nm,0.9s
E19K  Redstone River   5.14 331            Pn       18 06 40.7 +0.5
E19K  Redstone River   5.14 331   IAML              18 07 54.9
      comp=E,24nm,0.9s
LOGN  Logan Glacier    5.17 112   IAML              18 08 02.7
      comp=N,63nm,0.9s
LOGN                              IAML              18 08 05.5
      comp=E,72nm,0.7s
DAWY  Dawson           5.20  74            Pn       18 06 40.9 -0.2
DAWY                              IAML              18 07 58.3
      comp=N,47nm,0.7s
DAWY                              IAML              18 08 01.9
      comp=E,40nm,0.5s
I28M  Miner Creek      5.30  59   IAML              18 07 45.2
      comp=N,35nm,0.6s
I28M                              IAML              18 08 00.7
      comp=E,34nm,0.7s
N15K  Kwethluk River   5.30 241   IAML              18 08 19.7
      comp=E,47nm,0.8s
N15K                              IAML              18 08 26.0
      comp=N,34nm,1.0s
P16K  Nushagak River   5.36 224            Pn       18 06 43.6 +0.5
P16K  Nushagak River   5.36 224   IAML              18 08 24.5
      comp=E,103nm,1.1s
ACHA  Angle Creek He   5.38 206            Pn       18 06 44.3 +0.7
KDAK  Kodiak Island    5.40 190            Pn       18 06 41.6 -2.2
KDAK  Kodiak Island    5.40 190   P        Pn       18 06 42.7 -1.1
      comp=E,7.5nm,0.3s,baz=40,slow=4.6,SNR=89
KDAK                              S        Sn       18 07 40.2 -4.5
      comp=E,61nm,0.5s,baz=64,slow=2.2,SNR=10
ANCK  Angle Creek      5.42 207            Pn       18 06 44.9 +0.8
CNTC  Contact Creek    5.45 209            Pn       18 06 45.2 +0.7
E21K  Killik River     5.52 348            Pn       18 06 46.6 +1.3
G16K  Koyuk River      5.53 300            Pn       18 06 45.7 +0.3
F17K  Baldwin Pennin   5.58 312            Pn       18 06 46.6 +0.5
TOLK  Toolik Lake Re   5.59   5            Pn       18 06 48.2 +1.9
E20K  Nigu River       5.63 339            Pn       18 06 47.9 +1.0
M14K  Bethel           5.76 251            Pn       18 06 49.1 +0.5
L14K  Kuka Creek       5.82 258            Pn       18 06 49.6 +0.3
D22K  Ayikyak River    5.86 353            Pn       18 06 50.4 +0.5
PCA   Pinnacle         5.87 116            Pn       18 06 50.4 +0.3
D23K  Nanushuk River   5.90   1            Pn       18 06 50.6 +0.3
OHAK  Old Harbor       6.02 193            Pn       18 06 50.0 -2.0
OHAK  Old Harbor       6.02 193   P        Pn       18 06 49.9 -2.2
G15K  Niukluk          6.10 294            Pn       18 06 53.2 +0.1
D20K  Etivluk River    6.12 340            Pn       18 06 53.9 +0.6
PLBL  Peulik Blue Cr   6.17 211            Pn       18 06 54.3 +0.2
D19K  Kuna River       6.19 334            Pn       18 06 54.8 +0.4
C21K  Knifeblade Rid   6.29 347            Pn       18 06 56.4 +0.8
E27K  Coleen River     6.37  33            Pn       18 06 56.5 -0.3
O29M  Mount Kennedy    6.46 110            Pn       18 06 58.0 -0.2
PNL   Peninsula        6.48 117   P        Pn       18 06 57.8 -0.4
D25K  Kavik River      6.50  14            Pn       18 06 59.8 +1.2
K13K  Kusilvak Mount   6.51 266            Pn       18 06 58.9 +0.3
F15K  North Star Dit   6.53 300            Pn       18 06 59.3 +0.4
N30M  Aishikik Lake    6.62  98            Pn       18 06 60.0 -0.2
G29M  Pine Creek       6.63  49            Pn       18 07 01.0 +0.7
I30M  Mount Dempster   6.67  65            Pn       18 07 00.3 -0.6
SII   Sitkinak Islan   6.77 196   P        Pn       18 06 59.8 -2.4
C27K  Jago River       7.15  20            Pn       18 07 06.9 -0.3
F14K  Arctic Creek     7.15 296            Pn       18 07 07.9 +0.7
P30M  Million Dollar   7.25 108            Pn       18 07 08.6 -0.1
O30N  Mendenhall       7.33 102            Pn       18 07 09.7 -0.1
B22K  Teshekpuk Lake   7.35 353            Pn       18 07 10.2 +0.4
B20K  Meade River      7.38 343            Pn       18 07 10.2  0.0
C17K  DeLong Mountai   7.40 322            Pn       18 07 10.8 +0.2
E29M  Blow River       7.51  39            Pn       18 07 12.4 +0.3
B18K  Kokolik River    7.68 330            Pn       18 07 14.1 -0.3
CHIR  Chirikof Islan   7.69 201   P        Pn       18 07 12.2 -2.4
TNA   Tin City         7.82 296            Pn       18 07 16.6 +0.4
A22K  Sinclair Lake    8.10 350            Pn       18 07 19.6 -0.4
INK   Inuvik           8.82  46   P        Pn       18 07 28.2 -1.4
      comp=E,1.6nm,0.6s,baz=260,slow=9.2,SNR=4.3
BESE  Bessie Mountai   9.01 113            Pn       18 07 31.6 -0.7
SIT   Sitka            9.81 121            Pn       18 07 42.9 -0.2
SIT   Sitka            9.81 121   P        Pn       18 07 43.5 +0.4
Q32M  Nakina River     9.90 106            Pn       18 07 43.5 -0.9
DLBC  Dease Lake      11.16 105   P        Pn       18 08 01.5 +0.2
      comp=E,2.2nm,0.5s,baz=278,slow=8.8,SNR=5.7
DLBC                              S        Sn       18 10 01.3 -2.8
      comp=E,4.4nm,0.7s,baz=140,slow=15,SNR=4.9
YKA   Yellowknife Ar  16.44  76   P        Pn       18 09 08.0 -0.3
      comp=E,0.9nm,0.7s,baz=292,slow=14,SNR=10
RES   Resolute Bay    22.14  36   P        P        18 10 10.8 +0.6
      comp=E,2.7nm,0.4s,baz=246,slow=17,SNR=28
      comp=E,2.7nm,0.4s
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PETK  Petropavlovsk-  28.20 273   P        P        18 11 05.3 -0.4
      comp=E,0.2nm,0.5s,baz=64,slow=13,SNR=1.3
      comp=E,0.2nm,0.5s
TIXI  Tiksi           29.66 321   LR       LR       18 24 03.6
      comp=E,53nm,20.6s,baz=174,slow=38
PDAR  Pinedale Array  31.32 111   P        P        18 11 35.8 +2.2
      comp=E,0.9nm,0.7s,baz=317,slow=6.3,SNR=6.2
      comp=E,0.9nm,0.7s
NVAR  Mina Array Bea  31.52 126   P        P        18 11 37.7 +2.3
      comp=E,1.2nm,0.6s,baz=313,slow=11,SNR=6.7
      comp=E,1.2nm,0.6s
P18A  Preston Nutter  33.64 115   P        P        18 11 56.3 +2.4
P18A                              IAmb     IAmb     18 12 03.3
      comp=Z,4.4nm,0.7s
SRU   San Rafael Swe  33.96 116            P        18 11 56.5 -0.2
SRU                               IAmb     IAmb     18 12 19.9
      comp=Z,4.3nm,0.8s
LCMT  Little Creek M  34.68 121   P        P        18 12 05.4 +2.6
KNB   Kanab           34.84 120   P        P        18 12 06.9 +2.7
KNB                               IAmb     IAmb     18 12 07.4
      comp=Z,3.6nm,0.8s
PV10  Paradox Valley  35.20 115   P        P        18 12 09.1 +1.7
PV02  Paradox Valley  35.47 114            pP       18 12 34.8 -2.9
TKX   Tecate          37.37 129            pP       18 12 54.5 +0.6
SPITS Spitsbergen Ar  38.75   4   P        P        18 12 36.4 -0.1
      comp=Z,3.1nm,0.3s,baz=18,slow=5.7,SNR=45
      comp=Z,3.1nm,0.3s
SPB2  Spitsbergen Ar  38.75   4   P        P        18 12 36.8 +0.2
DBG   Daneborg        39.07  19 i P        P        18 12 37.3 -2.0
NRIK  Noril'sk        41.59 333   P        P        18 13 00.7 +0.7
      comp=Z,2.2nm,0.4s,baz=53,slow=2.2,SNR=3.8
      comp=Z,2.2nm,0.4s
TXAR  Lajitas Array   45.24 116   P        P        18 13 31.9 +2.0
      comp=Z,0.7nm,0.7s,baz=331,slow=5.7,SNR=7.6
      comp=Z,0.7nm,0.7s
ARCES ARCESS Array B  47.62   2   P        P        18 13 47.1 -0.8
      comp=Z,1.1nm,0.4s,baz=358,slow=7.7,SNR=19
ARCES                             PcP      PcP      18 15 17.3 +2.0
      comp=Z,1.9nm,0.9s,baz=10,slow=3.6,SNR=3.6
      comp=Z,1.1nm,0.4s
KSRS  Korea Array     53.53 282   P        P        18 14 32.7 +0.1
      comp=Z,1.2nm,0.6s,baz=29,slow=6.7,SNR=6.8
      comp=Z,1.2nm,0.6s
SONM  Songino Array   53.82 306   P        P        18 14 35.5 +0.7
      comp=Z,0.9nm,0.5s,baz=8.7,slow=2.0,SNR=4.6
      comp=Z,0.9nm,0.5s
NOA   NORSAR Array B  55.44  10   P        P        18 14 45.1 -0.9
      comp=Z,0.6nm,0.7s,baz=352,slow=6.8,SNR=3.3
      comp=Z,0.6nm,0.7s
ZAA0  Zalesovo Array  55.49 324   P        P        18 14 44.9 -1.5
ZAA0                              IAmb     IAmb     18 14 46.6
      comp=Z,3.7nm,0.6s
ZALV  Zalesovo Beam   55.49 324   P        P        18 14 44.6 -1.9
ZALV  Zalesovo Beam   55.49 324   P        P        18 14 46.1 -0.4
      comp=Z,2.9nm,0.5s,baz=24,slow=8.1,SNR=15
      comp=Z,2.9nm,0.5s
FINES FINESS Array B  55.76   2   P        P        18 14 47.2 -1.0
      comp=Z,0.9nm,0.6s,baz=6.0,slow=7.9,SNR=9.8
      comp=Z,0.9nm,0.6s
HFS   Hagfors         56.53   9   P        P        18 14 53.4 -0.3
      comp=Z,1.0nm,0.4s,baz=355,slow=4.8,SNR=11
      comp=Z,1.0nm,0.4s
ARTI  Arti            58.72 341   P        P        18 15 08.7 -0.5
BRVK  Borovoye        59.79 333   P        P        18 15 15.6 -1.0
BRVK                              IAmb     IAmb     18 15 16.8
      comp=Z,3.3nm,1.1s
BVAR  Borovoye Array  59.80 333   P        P        18 15 16.3 -0.4
      comp=Z,3.5nm,0.5s,baz=48,slow=7.7,SNR=25
      comp=Z,3.5nm,0.5s
KURK  Kurchatov       60.04 326   P        P        18 15 17.9 -0.4
KURK                              IAmb     IAmb     18 15 18.0
      comp=Z,2.5nm,0.6s
KURBB Kurchatov Arra  60.15 326   P        P        18 15 18.4 -0.6
      comp=Z,2.1nm,0.6s,baz=29,slow=7.0,SNR=24
KURBB                             LR       LR       18 44 00.6
      comp=Z,36nm,19.6s,baz=175,slow=39
      comp=Z,2.1nm,0.6s
MKAR  Makanchi Array  62.65 322   P        P        18 15 35.2 -0.7
MKAR  Makanchi Array  62.65 322   P        P        18 15 34.9 -1.0
      comp=Z,2.2nm,0.4s,baz=37,slow=6.7,SNR=43
      comp=Z,2.2nm,0.4s
MAKZ  Makanchi        62.72 322   P        P        18 15 35.8 -0.6
MAKZ                              IAmb     IAmb     18 15 36.3
      comp=Z,2.7nm,0.6s
GTA   Gaotai          63.49 305   P        P        18 15 42.0 +0.2
GTA                               pmax     pmax
      comp=Z,7.0nm,0.8s
AB31  Akbulak array   65.38 338   P        P        18 15 53.4 -0.3
AB31                              IAmb     IAmb     18 15 54.2
      comp=Z,3.1nm,0.8s
ABKAR Akbulak array   65.38 338   P        P        18 15 53.4 -0.3
ABKAR                             IAmb     IAmb     18 15 54.2
      comp=Z,3.1nm,0.8s
AKASG Malin Array Be  66.55 360   P        P        18 16 00.6 -0.6
      comp=Z,1.6nm,0.4s,baz=3.2,slow=6.1,SNR=12
      comp=Z,1.6nm,0.4s
AKBB  Malin Array Si  66.55 360   P        P        18 16 00.6 -0.5
AKBB                              IAmb     IAmb     18 16 16.4
      comp=Z,13nm,1.4s
KIEV  Kiev            66.55 360   P        P        18 16 00.5 -0.6
KIEV                              IAmb     IAmb     18 16 16.4
      comp=Z,12nm,1.5s
KKAR  Karatay Array   69.13 329   P        P        18 16 16.7 -0.8
KKAR  Karatay Array   69.13 329   IAmb     IAmb     18 16 17.8
      comp=Z,2.7nm,0.9s
KSH   Kashi           71.12 323   P        P        18 16 32.7 +2.9
KSH                               pmax     pmax
      comp=Z,3.0nm,0.9s
KIV   Kislovodsk      72.75 350   P        P        18 16 38.0 -1.4
KBZ   Khabaz          72.96 350   P        P        18 16 40.7 +0.2
      comp=Z,0.7nm,0.4s,baz=304,slow=10,SNR=3.0
      comp=Z,0.7nm,0.4s
SIMJ  Simiganj        73.71 328            P        18 16 45.0 -0.1
SIMJ                              IAmb     IAmb     18 16 45.7
      comp=Z,4.8nm,0.9s
CMAR  Chiang Mai Arr  82.48 296   P        P        18 17 33.5 -0.1
      comp=Z,0.6nm,0.7s,baz=2.7,slow=7.0,SNR=5.2
      comp=Z,0.6nm,0.7s
KAPI  Kappang         94.17 267   LR       LR       19 07 20.7
      comp=Z,14nm,18.3s,baz=24,slow=40
BOSA  Boshof         145.42   6   PKPbc    PKPab    18 24 49.3 +1.0
      comp=Z,3.9nm,1.1s,baz=6.0,slow=5.6,SNR=5.3
```

IDC ***03*** *18:09:04.3±1.1, 27°.54N×101°.41E, $h0^{km}$, mb3.6/6, mbtmp3.6/6, MS3.4/2, Error ellipse: s-maj=33.2km s-min=17.9km az=75.0*

ISC 03 18:09:06.5±1.5**, 27°.5N**±0°.2×**101°.3E**±0°.3**, $h16^{km}$, n9, σ0ˢ.72**/6**, mb3.5**/5**, Sichuan**

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Code  Station Name       Δ°  AZ°   Phase ID          Time      Res
                                   Op       ISC      h  m  s   ISC
CMAR  Chiang Mai Arr   9.24 194   Pg       Pn       18 11 54.7 +36
      0.2nm,0.3s,baz=2.2,slow=16,SNR=13
CMAR                              Lg       Lg       18 14 03.7
      0.1nm,0.3s,baz=1.1,slow=30,SNR=7.7
SONM  Songino Array   20.71  10   P        P        18 13 47.0 +0.8
      1.0nm,0.7s,baz=187,slow=6.7,SNR=1.6
      1.0nm,0.7s
MKAR  Makanchi Array  24.44 327   P        P        18 14 24.1 -0.4
      0.5nm,0.6s,baz=123,slow=13,SNR=7.9
      0.5nm,0.6s
KSRS  Korea Array     24.47  59   P        P        18 14 24.1 -0.6
      0.7nm,0.6s,baz=247,slow=9.4,SNR=4.9
      0.7nm,0.6s
KURBB Kurchatov Arra  28.91 329   P        P        18 15 04.4 -0.2
      0.3nm,0.8s,baz=143,slow=8.6,SNR=5.9
      0.3nm,0.8s
YAK   Yakutsk         39.35  21   LR       LR       18 34 06.6
      comp=Z,57nm,18.4s,baz=166,slow=38
WRA   Warramunga Arr  56.94 142   P        P        18 18 51.1 -0.2
      3.0nm,0.8s,baz=330,slow=7.9,SNR=17
      3.0nm,0.8s
SHEM  Shemya Is, Ala  58.37  43   LR       LR       18 46 59.8
      comp=Z,28nm,19.1s,baz=336,slow=39
ASAR  Alice Springs   59.77 145   P        P        18 19 11.5 +0.5
      0.7nm,0.7s,baz=325,slow=7.0,SNR=10
      0.7nm,0.7s
```

AFAD ***03*** *18:13:07.8, 39°.29N×27°.72E, $h14^{km}$, MW3.7*

ISK ***03*** *18:13:07.8, 39°.30N×27°.71E, $h7^{km}$, ML3.8/54*

MCSM ***03*** *18:13:08.5±1.5, 39°N±4°×2°8E±°, $h10^{km}\pm12^{km}$, mb4.1, MLv3.7*

SOF ***03*** *18:13:09.5, 39°.42N±0°.05×27°.60E±0°.04, $h10^{km}\pm31^{km}$, MD3.7/7*

ATH ***03*** *18:13:09.1, 39°.23N×27°.67E, $h14^{km}\pm3^{km}$, ML3.3/19,* *Manual Solution by A.Andreou First location: 2019/06/03 18:14:33, This location: 2019/06/03 18:40:01 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

*THE **03** 18:13:10.3, 39°N±2°×2°8E±°, h24^{km}±17^{km}, M3.5/11, MLh3.5/11*

ISC 03 18:13:08.2±0.8**, 39.°27N**±0.°01×**27.°71E**±0.°01**, h12**^{km}±5^{km}**, n185, σ0.s79**/230**, 10C-16D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STEP	BALIKESIR_Sava	0.10	5	P	Pg	18 13 10.9	-0.3
STEP				S	Sg	18 13 13.1	-0.3
SOMA	Soma-Manisa	0.18	229	Pg	Pg	18 13 12.3	0.0
SOMA				Sg	Sg	18 13 15.5	+0.4
AKHS	Akhisar	0.40	168	P	Pg	18 13 16.4	+0.1
AKHS				S	Sb	18 13 22.4	-1.0
BALY	Balya	0.47	352	P	Pg	18 13 17.4	-0.1
BALY				S	Sg	18 13 23.5	-0.3
BKES	Balkesir-Mer	0.49	20	P	Pg	18 13 17.5	-0.4
BKES				S	Sg	18 13 24.3	-0.1
GORD	Gordes-Manisa	0.52	135	Pg	Pb	18 13 18.7	-0.5
GORD				Sg	Sb	18 13 26.4	-0.3
BUHA	Balikesir, Bur	0.54	295	P	Pg	18 13 18.6	-0.2
BUHA				S	Sg	18 13 24.9	-1.1
ZEDA	zmir-Bergama	0.58	238	P	Pb	18 13 19.8	-0.5
ZEDA				S	Sg	18 13 26.3	-0.8
GOMA	Golmarmara-Man	0.59	164	Pg	Pg	18 13 19.8	+0.1
GOMA				Sg	Sb	18 13 28.8	+0.1
YAYO	Edremit-Balk	0.60	305	Pg	Pg	18 13 19.7	-0.2
BLKS	Balkesir-Sus	0.63	18	P	Pg	18 13 19.9	-0.7
BLKS				S	Sg	18 13 27.8	-1.2
DKL	Dikili	0.66	252	Pg	Pg	18 13 21.1	+0.1
DKL				Sg	Sb	18 13 31.3	+0.7
DKL	Dikili	0.66	252	P	Pb	18 13 21.2	-0.3
DKL				S	Sg	18 13 29.5	-0.1
IZMD	zmir-Dikili-	0.67	245	P	Pg	18 13 21.4	+0.1
IZMD				S	Sg	18 13 30.1	-0.1
DURS	Dursunbey	0.68	61	P	Pg	18 13 20.8	-0.6
DURS				S	Sg	18 13 29.7	-0.7
YENI	Yenice-Canakka	0.75	332	Pg	Pg	18 13 22.5	-0.4
YENI				Sg	Sg	18 13 32.4	-0.4
CAND	Candarli	0.77	246	Pg	Pb	18 13 23.3	-0.3
GONE	Gonen-Balikesi	0.77	359	Pg	Pg	18 13 22.8	-0.4
DST	Dursunbey	0.78	65	Pg	Pg	18 13 22.8	-0.6
DST				Sg	Sg	18 13 34.1	+0.5
AYVA	Ayvalik	0.79	273	P	Pb	18 13 23.6	-0.2
AYVA				S	Sb	18 13 35.4	+0.8
DEMI	Demirci	0.82	106	P	Pg	18 13 24.0	0.0
CANM	Can-anakkale	0.89	326	Pg	Pg	18 13 25.2	-0.3
SMAA	Simav-Kutahya	1.00	99	Pg	Pn	18 13 28.3	+0.1
SIMA	Simav-Kutahya	1.01	100	Pg	Pn	18 13 28.3	0.0
BAYC	CANAKKALE_Bayr	1.01	298	P	Pg	18 13 27.1	-0.7
BAYC				S	Sb	18 13 41.0	+0.1
MANT	Manisa	1.02	139	P	Pg	18 13 27.8	-0.3
MANT				S	Sg	18 13 40.3	-1.1
BLCB	Balcova	1.03	211	Pg	Pg	18 13 27.4	-0.6
BLCB	Balcova	1.03	211	P	Pg	18 13 27.6	-0.5
BLCB				S	Sb	18 13 41.4	+0.1
ODEM	Odemis-Izmir	1.04	164	Pg	Pb	18 13 28.3	+0.2
KULA	Kula-Manisa	1.06	135	Pg	Pg	18 13 28.4	-0.3
EDC	Edincik	1.08	6	Pg	Pg	18 13 28.2	-0.8
KCTX	Karacabey (Bur	1.11	27	Pn	Pg	18 13 29.5	-0.1
PRK	Paraskevi	1.11	269	P	Pg	18 13 29.4	-0.3
PRK				S	Sg	18 13 43.5	-0.8
PRK	Paraskevi	1.11	269	P	Pb	18 13 29.7	+0.3
PRK				S	Sb	18 13 44.5	+0.6
BAND	Balkesir-Ban	1.12	15	P	Pg	18 13 29.1	-0.8
BAND				S	Sg	18 13 42.8	-1.7
EZNE	Ezine-Canakkal	1.14	295	Pn	Pg	18 13 29.8	-0.5
IZMR	zmir-demi	1.15	170	P	Pg	18 13 29.9	-0.5
IZMR				S	Sg	18 13 44.1	-1.3
KRBG	Karabiga-Canak	1.16	344	Pn	Pg	18 13 30.0	-0.6
USAK	Uak-Merkez	1.16	118	P	Pg	18 13 30.3	-0.4
USAK				S	Sg	18 13 44.5	-1.3
KARB	zmir-Karabur	1.18	239	P	Pg	18 13 29.9	-1.0
KARB				S	Sb	18 13 46.1	+0.4
ORLT	Orhaneli	1.20	50	Pn	Pg	18 13 30.8	-0.5
EZN	Ezine	1.20	298	Pn	Pb	18 13 30.8	-0.1
EZN	Ezine	1.20	298	P	Pb	18 13 30.6	-0.3
EZN				S	Sg	18 13 46.5	-0.5
EZN	Ezine	1.20	298	⇓P	Pb	18 13 30.7	-0.3
EZN				⇑S	Sb	18 13 46.9	+0.5
EZN	Ezine	1.20	298	P	Pb	18 13 30.5	-0.4
KIRA	zmir-Kiraz	1.20	153	P	Pg	18 13 30.8	-0.6
KIRA				S	Sg	18 13 46.0	-1.1
SHAP	Saphane-Kutahy	1.20	101	Pn	Pn	18 13 31.4	+0.4
GPNR	Gulpinar-Canak	1.23	279	Pn	Pb	18 13 31.4	0.0
KOCA	Canakkale, Ayv	1.24	281	P	Pb	18 13 31.1	-0.4
EMET	Ktahya-Emet	1.26	85	P	Pn	18 13 32.0	+0.4
EMET				S	Sg	18 13 47.9	-0.8
URLA	Izmir	1.26	224	P	Pn	18 13 31.0	-0.7
COMU	Canakkale	1.26	311	Pn	Pn	18 13 31.9	+0.2
CNKL	anakkale-Mer	1.29	308	P	Pn	18 13 31.9	-0.1
CNKL				S	Sb	18 13 48.5	-0.5
LPK	Lapseki	1.32	327	Pn	Pn	18 13 32.6	+0.2
MRMT	Marmara Adasi	1.33	356	Pn	Pn	18 13 32.9	+0.2
AYDB	Zeytinkoy-Aydi	1.33	174	Pn	Pn	18 13 32.6	-0.1
GEDZ	Gediz	1.34	99	Pn	Pg	18 13 33.8	-0.3
GMLD	Gumuldur	1.35	208	Pn	Pg	18 13 34.0	-0.1
TVSB	Tavsanli	1.37	82	Pn	Pb	18 13 34.1	+0.2
NAZL	Nazilli-Aydin	1.39	160	Pn	Pn	18 13 33.7	+0.3
GDZ	Gediz	1.39	97	P	Pn	18 13 33.7	+0.2
GDZ				S	Sb	18 13 51.9	-0.1
BOZC	Bozcaada	1.40	294	Pn	Pn	18 13 33.4	-0.1
BOZC	Bozcaada	1.40	294	P	Pn	18 13 33.5	-0.1
BOZC				S	Sb	18 13 50.4	-1.7
ECEA	Canakkale, Ece	1.41	304	P	Pn	18 13 34.1	+0.4
ECEA				S	Sb	18 13 51.0	-1.4
MDNY	Mudanya-Bursa	1.42	39	Pn	Pn	18 13 33.9	+0.1
SIGR	SIGRI	1.44	268	Pn	Pb	18 13 34.9	0.0
SIGR	SIGRI	1.44	268	S	Sn	18 13 52.2	-0.6
SIGR	SIGRI	1.44	268	P	Pn	18 13 34.5	+0.4
SIGR				S	Sn	18 13 52.7	-0.2
EAG2	Marmaro, Chios	1.45	240	P	Pn	18 13 34.1	0.0
EAG2				S	Sn	18 13 52.1	-0.9
CESE	eme	1.45	230	Pn	Pb	18 13 34.9	-0.2
RKY	Sarkoy-Tekirda	1.47	344	Pn	Pn	18 13 34.6	0.0
GELI	Tayfur-Gelibol	1.47	320	Pn	Pn	18 13 34.6	+0.1
SART	Tekirdag	1.47	344	P	Pn	18 13 34.4	-0.2
SART				S	Sn	18 13 52.9	-0.9
ESEN	Aydn-Nazilli	1.56	161	P	Pn	18 13 35.3	-0.4
CHOS	Chios island	1.56	236	Pn	Pb	18 13 36.9	-0.2
CHOS	Chios island	1.56	236	P	Pn	18 13 35.3	-0.6
CHOS				S	Sn	18 13 54.8	-1.4
CHOS	Chios island	1.56	236	P	Pn	18 13 36.0	+0.1
ARMT	Armutlu	1.57	34	Pn	Pn	18 13 36.7	+0.8
GCAM	G?zelcaml?	1.61	193	Pn	Pb	18 13 37.9	0.0
GCAM	G?zelcaml?	1.61	193	P	Pn	18 13 36.4	-0.1
AYDN	Tasoluk	1.61	175	P	Pn	18 13 36.1	-0.5
DOMA	Ktahya-Doman	1.62	71	P	Pn	18 13 36.8	+0.1
GOAD	anakkale-G¶	1.65	303	P	Pn	18 13 37.0	0.0
GADA	Gvkgeada	1.67	304	Pn	Pn	18 13 37.8	+0.6
GADA	Gvkgeada	1.67	304	P	Pn	18 13 37.5	+0.2
GADA				S	Sn	18 13 58.2	-0.4
PASA	Karahalli, USA	1.67	123	P	Pn	18 13 37.6	+0.2
ERIK	Erikli-Kesan	1.67	327	Pn	Pn	18 13 37.6	+0.3
KHL	Karahalli	1.71	123	Pn	Pn	18 13 38.5	+0.6
ANDZ	Kutahya, Merke	1.71	81	P	Pn	18 13 38.3	+0.3
TKR	Tekirdag	1.72	356	Pn	Pn	18 13 38.6	+0.6
KESN	Edirne-Kesan	1.74	333	P	Pn	18 13 38.4	-0.2
KURT	Yalova, Merkez	1.75	41	P	Pn	18 13 37.6	-0.8
ENZZ	Sultanice-Enez	1.80	318	Pn	Pn	18 13 39.6	+0.6
YLV	Yalova	1.82	44	Pn	Pn	18 13 39.5	+0.1
YLV	Yalova	1.82	44	P	Pn	18 13 38.7	-0.7
CAVK	Edirne/Enez-Ca	1.85	321	⇑P	Pn	18 13 40.3	+0.6
CAVK				⇓S	Sb	18 14 05.2	+0.3
CRLT	Corlu	1.85	1	Pn	Pn	18 13 40.2	+0.4
ENEZ	Enez	1.89	321	Pn	Pn	18 13 41.0	+0.8
ADVT	Abdulvahap	1.95	53	Pn	Pn	18 13 41.6	+0.5
MLSB	Milas	1.98	178	Pn	Pn	18 13 41.1	-0.4
SLVT	Silivri	1.99	11	Pn	Pn	18 13 42.1	+0.4
UKOP	Uzunkopru-Edir	2.03	336	Pn	Pn	18 13 43.1	+0.9
CTKS	Kestanelik-??a	2.05	17	Pn	Pn	18 13 42.8	+0.3
SMTH	Samothraki Isl	2.06	306	P	Pn	18 13 42.8	+0.1
SMTH	Samothraki Isl	2.06	306	P	Pn	18 13 43.2	+0.5
ALN	Alexandroupoli	2.06	322	Pn	Pn	18 13 42.9	+0.2
ALN	Alexandroupoli	2.06	322	P	Pn	18 13 42.8	+0.2
ALN				S	Sn	18 14 09.5	+1.2
KAVV	Kandilli-Istan	2.07	30	Pn	Pn	18 13 42.5	-0.2
ISK	Istanbul-Kandi	2.07	30	Pn	Pn	18 13 42.8	+0.1
BGKT	Bogazkoy	2.07	23	Pn	Pn	18 13 43.6	+0.8
ALEX	Alexandroupoli	2.10	319	P	Pb	18 13 45.6	-0.6
EFSA	Agios Efstrati	2.12	278	P	Pn	18 13 44.4	+1.0
YKAV	Yalikavak-Bodr	2.17	189	Pn	Pn	18 13 45.1	+0.9
APMY	Acipayam-Deniz	2.19	145	Pn	Pn	18 13 44.7	+0.2
KLYT	Kilyos	2.23	27	⇑S	Sb	18 14 16.0	+0.1
KLYT	Kilyos	2.23	27	P	Pn	18 13 44.2	-0.7
BODT	Bodrum	2.23	188	Pn	Pn	18 13 46.3	+1.3
PHSR	Pinarhisar	2.36	357	⇑P	Pn	18 13 48.9	+2.1
RDO	Rodhopi	2.50	319	P	Pn	18 13 49.2	+0.5
RDO	Rodhopi	2.50	319	P	Pn	18 13 49.8	+1.1
ISP	Isparta	2.64	122	P	Pn	18 13 51.1	+0.4
THAS	Thassos island	2.66	301	P	Pn	18 13 50.6	-0.2
THAS	Thassos island	2.66	301	P	Pn	18 13 50.5	-0.3
XANC	Avdira	2.71	310	P	Pn	18 13 52.4	+0.8
APE	Apeiranthos	2.79	219	⇑P	Pn	18 13 51.0	-1.7
APE	Apeiranthos	2.79	219	P	Pn	18 13 52.1	-0.6
KARY	Karystos	2.84	245	P	Pn	18 13 54.6	+1.2
KYMI	Kymi, Euboea I	2.88	258	P	Pn	18 13 55.1	+1.1
KDZ	Kurdzhali	2.97	323	*i* P	Pn	18 13 55.8	+0.7
KDZ				*i* S	Sn	18 14 30.0	-0.6
KDZ	Kurdzhali	2.97	323	P	Pn	18 13 55.5	+0.3
KAVA	Kavala	2.99	306	P	Pn	18 13 55.7	+0.2
KVLA	Kavala	3.04	304	P	Pn	18 13 56.6	+0.5
OUR	Ouranopolis	3.06	291	P	Pn	18 13 57.0	+0.7
ELL	Elmali	3.06	145	P	Pn	18 13 58.1	+1.6
ARG	Arkhangelos	3.07	174	P	Pn	18 13 56.9	+0.4
ARG	Arkhangelos	3.07	174	P	Pn	18 13 56.8	+0.4
DION	Dionisos Attik	3.19	249	P	Pn	18 13 58.1	0.0
DIM	Dimitrovgrad	3.21	330	*i* P	Pn	18 13 59.2	+0.8
KOKK	Kokkinochori,	3.24	300	P	Pn	18 13 59.0	+0.2
KOKK	Kokkinochori,	3.24	300	P	Pn	18 13 59.0	+0.2
RZN	Rozhen	3.31	318	*i* P	Pn	18 14 00.0	0.0
RZN				*i* S	Sn	18 14 38.8	-0.6
JMB	Yambol	3.34	345	*i* P	Pn	18 14 00.2	0.0
JMB				*i* S	Sn	18 14 39.8	+0.1
PLG	Polygyros	3.46	290	P	Pn	18 14 02.7	+0.8
NEO	Neokhori	3.48	272	P	Pn	18 14 03.0	+0.8
VIL2	Platees	3.63	254	P	Pn	18 14 04.6	+0.4
PLD	Plovdiv	3.65	323	*i* P	Pn	18 14 05.6	+1.2
KARP	Karpathos	3.75	187	P	Pn	18 14 06.2	+0.4
KARP	Karpathos	3.75	187	P	Pn	18 14 06.8	+0.9
MMB	Musomishta	3.78	308	*i* P	Pn	18 14 07.8	+1.5
MMB				*i* S	Sn	18 14 51.5	+0.8
HORT	Hortiatis	3.78	292	P	Pn	18 14 07.2	+0.8
PRD	Provadia	3.89	357	*i* P	Pn	18 14 09.4	+1.6
KNT	Kendrikon	4.14	299	P	Pn	18 14 12.2	+1.0
TYRN	Tyrnavos	4.26	278	P	Pn	18 14 13.8	+1.0
THL	Klokotos Trika	4.42	276	P	Pn	18 14 16.1	+1.0
BR105	Keskin Array S	4.59	83	P	Pn	18 14 18.6	+1.0
BR106	Keskin Array S	4.59	82	P	Pn	18 14 18.5	+0.9
BR104	Keskin Array S	4.61	83	P	Pn	18 14 18.4	+0.6
KIRS	Kirsehir-Merke	4.83	90	⇓P	Pn	18 14 22.5	+1.7
TIRR	Tirgusor	5.21	6	P	Pn	18 14 25.2	-0.7
	0.1nm15nm,0.8s						
HARR	Harsova	5.42	2	⇓P	Pn	18 14 31.1	+2.3
BOVS	Bovan	6.27	316	⇑P	Pn	18 14 41.1	+0.6
MLR	Muntele Rosu	6.35	349	⇓P	Pn	18 14 43.8	+2.1
VOIR		6.47	343	⇓P	Pn	18 14 45.0	+1.7
PLOR	Plostina	6.62	354	⇑P	Pn	18 14 47.5	+2.2
VRI	Vrincioaia	6.63	354	⇑P	Pn	18 14 48.0	+2.6
LOT	Lotru	6.82	336	⇑P	Pn	18 14 49.0	+0.8
HERR	Herculane	6.85	327	⇓P	Pn	18 14 49.8	+1.4
TURR	Turia	6.89	350	⇓P	Pn	18 14 50.7	+1.6
DOPR	Dopca	6.91	346	⇑P	Pn	18 14 50.3	+1.0
MDVR	Moldovita	7.08	323	⇓P	Pn	18 14 52.3	+0.6
GZR	Gura Zlata	7.12	331	⇓P	Pn	18 14 53.1	+0.8
ONER	Baraj Valea Uz	7.12	353	⇓P	Pn	18 14 54.1	+1.9
TESR	Tescani	7.28	354	⇓P	Pn	18 14 55.0	+0.8
TESR	Tescani	7.28	354	P	Pn	18 14 54.2	-0.1
	0.1nm11nm,0.5s						
SURR	Surduc	7.68	329	⇓P	Pn	18 15 00.5	+0.7
BZS	Buzias	7.77	327	⇓P	Pn	18 15 01.1	0.0
MARR	Marisel-Cluj	8.13	337	⇓P	Pn	18 15 08.1	+2.1
BURAR	Bucovina Array	8.53	349	⇓P	Pn	18 15 14.1	+2.4
SORM	Soroca	8.87	3	P	Pn	18 15 15.4	-0.7
	3.3nm,1.8s						
MORH	Mrgy, Hungar	9.62	319	P	Pn	18 15 26.1	-0.3
	3.3nm,0.5s						
MUKU	Mukachevo	9.86	340	P	Pn	18 15 30.1	+0.4
KIEV	Kiev	11.47	5	P	Pn	18 15 53.1	+1.4
	23nm,1.9s						
AK21	Malin Array Si	11.54	4	P	Pn	18 15 53.2	+0.5
RNPP1	Kostyukhnivka	12.15	354	P	Pn	18 16 00.6	-0.4
KSP	Ksiaz	14.08	329	P	Pn	18 16 28.6	+1.2

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*CNRM **03** 18:15:55.4, 35.°47N×9.°88W, h30^{km}*

*SFS **03** 18:15:58.9, 35.°53N×10.°01W, h60^{km}, mb4.4/7, mB5.1/4, ML4.5/20, ML4.5/24, MLv4.3/24, Mw(mB)4.5/4*

*MDD **03** 18:15:58.2±0.2, 35.°52N×9.°97W, h32^{km}, mb_Lg4.3/38, Error ellipse: s-maj=2.8km s-min=1.7km az=124.0*

*IGIL **03** 18:16:00.2, 35.°67N×9.°97W, h21^{km}, ML3.9*

*INMG **03** 18:16:00.0±1.9, 35.°58N×9.°96W, h35^{km}, ML3.8, Error ellipse: s-maj=4.2km s-min=2.5km az=91.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Mar de Marrocos*

ISC 03 18:15:56.3±1.3**, 35.°54N**±0.°04×**9.°91W**±0.°06**, h35**^{km}**, n170, σ2.s33**/225**, 9C, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	1.82	28	⇑*i*P	Pn	18 16 27.5	+2.4
PFVI				*e*S	Sn	18 16 47.6	+0.7
PFVI				*i* AML	AML	18 16 48.7	
PFVI				*i* AML	AML	18 16 49.1	
PFVI				*i* AML	AML	18 16 50.2	
MORF	Marmelete	2.04	30	*e*P	Pn	18 16 30.6	+2.5
MORF				*e*S	Sn	18 16 52.7	+0.3
MORF				IAML		18 16 53.0	
	comp=N,759nm,0.2s						
MORF	Marmelete	2.04	30	⇑*i*P	Pn	18 16 30.7	+2.5
MORF				*e*S	Sn	18 16 52.9	+0.6
MORF				*i* AML	AML	18 16 54.4	
MORF				*i* AML	AML	18 16 55.3	
MORF				*i* AML	AML	18 16 55.3	
PTEO	Sao Teotonio	2.22	25	⇑*i*P	Pn	18 16 32.9	+2.2
PTEO				*e*S	Sn	18 16 57.2	+0.3
PTEO				*i* AML	AML	18 16 59.2	
PTEO				*i* AML	AML	18 16 59.4	
PTEO				*i* AML	AML	18 16 59.4	
PBDV	Barranco-do-Ve	2.33	43	⇑*i*P	Pn	18 16 35.3	+3.1
PBDV				*e*S	Sn	18 17 00.8	+1.1
PBDV				*i* AML	AML	18 17 01.9	
PBDV				*i* AML	AML	18 17 02.2	
PBDV				*i* AML	AML	18 17 06.4	
PVAQ	Vaqueiros	2.57	43	Pn	Pn	18 16 38.4	+3.0
PVAQ	Vaqueiros	2.57	43	⇑*i*P	Pn	18 16 38.5	+3.0
PVAQ				*e*S	Sn	18 17 06.3	+0.8
PVAQ				*i* AML	AML	18 17 08.1	
PVAQ				*i* AML	AML	18 17 08.2	
PVAQ				*i* AML	AML	18 17 08.5	
PVAQ	Vaqueiros	2.57	43	P	Pn	18 16 37.5	+2.1
PCVE	Castro Verde	2.58	35	Pn	Pn	18 16 38.4	+2.8
PCVE				Sn	Sn	18 17 06.1	+0.4
PCVE	Castro Verde	2.58	35	⇑*i*P	Pn	18 16 38.4	+2.8
PCVE				*e*S	Sn	18 17 06.6	+1.0
PCVE				*i* AML	AML	18 17 08.3	
PCVE				*i* AML	AML	18 17 09.1	
PCVE				*i* AML	AML	18 17 10.8	
EXAYA	Ayamonte	2.63	50	Pn	Pn	18 16 39.3	+3.1
EXAYA				Sn	Sn	18 17 08.1	+1.1
MESJ	Messejana	2.67	30	*e*P	Pn	18 16 39.3	+2.5
MESJ				*e*S	Sn	18 17 08.0	+0.1
MESJ				IAML		18 17 11.2	
	comp=N,307nm,0.2s						
MESJ	Messejana	2.67	30	⇑*i*P	Pn	18 16 39.3	+2.5
MESJ				*e*S	Sn	18 17 08.8	+0.8
MESJ				*i* AML	AML	18 17 10.7	
MESJ				*i* AML	AML	18 17 10.9	
MESJ				*i* AML	AML	18 17 11.4	
EGRO	El Granado	2.79	44	Pn	Pn	18 16 41.5	+3.0
EGRO				Sn	Sn	18 17 11.1	+0.1
EGRO	El Granado	2.79	44	Pn	Pn	18 16 41.5	+3.0
EGRO				Sn	Sn	18 17 11.4	+0.4
EGRO				*i* IVmb_Lg		18 17 13.2	
PNCL	Nicolau / Gran	2.80	23	*e*P	Pn	18 16 51.1	+13
PNCL				*e*S	Sn	18 17 29.8	+19
PNCL				*i* AML	AML	18 17 32.0	
PNCL				*i* AML	AML	18 17 32.6	
PNCL				*i* AML	AML	18 17 34.3	
RTC	Rabat Centre	2.95	121	Sn	Sn	18 17 14.5	-0.4
RTC				Pn	Pn	18 16 43.3	+2.6
RTC	Rabat Centre	2.95	121	P	Pn	18 16 39.6	-1.1
RTC	Rabat Centre	2.95	121	S	Sn	18 17 13.8	-1.1
PBEJ	Beja	2.98	33	*e*P	Pn	18 16 43.4	+2.3
PBEJ				*e*S	Sn	18 17 15.7	+0.2
PBEJ				*i* AML	AML	18 17 18.0	
PBEJ				*i* AML	AML	18 17 18.3	
PBEJ				*i* AML	AML	18 17 18.3	
ARNO	Arenosillo	3.00	58	Sn	Sn	18 17 17.3	+1.2
ARNO				Pn	Pn	18 16 44.7	+3.4
AVE	Averroes	3.04	137	Pn	Pn	18 16 44.9	+3.0
AVE				Sn	Sn	18 17 18.4	+1.3
AVE	Averroes	3.04	137	P	Pn	18 16 40.7	-1.2
AVE	Averroes	3.04	137	S	Sn	18 17 16.9	-0.3
LIS	Lisbon	3.23	11	*e*P	Pn	18 16 46.7	+2.2
LIS				*e*S	Sn	18 17 20.5	-1.3
LIS				IAML		18 17 25.8	
	comp=N,790nm,0.4s						
LIS	Lisbon	3.23	11	*e*P	Pn	18 16 47.1	+2.6
LIS				*e*S	Sn	18 17 21.0	-0.8
LIS				*i* AML	AML	18 17 24.4	
LIS				*i* AML	AML	18 17 24.7	
LIS				*i* AML	AML	18 17 25.6	
CNIL	Conil	3.24	74	Pn	Pn	18 16 48.3	+3.7
CPS	Cap Spartel	3.27	84	P	Pn	18 16 44.9	-0.2
CPS	Cap Spartel	3.27	84	S	Sn	18 17 22.8	0.0
EVO	Evora	3.35	26	Pn	Pn	18 16 48.1	+1.9
EVO				Sn	Sn	18 17 24.0	-0.8
EVO	Evora	3.35	26	*e*P	Pn	18 16 48.1	+1.9
EVO				*e*S	Sn	18 17 24.3	-0.5
EVO				*i* AML	AML	18 17 26.5	
EVO				*i* AML	AML	18 17 26.6	
EVO				*i* AML	AML	18 17 26.6	
ZHG	ZHG	3.41	127	P	Pn	18 16 48.3	+1.2
EMIN	Mina Concepcio	3.43	49	Pn	Pn	18 16 49.8	+2.5
EMIN				Sn	Sn	18 17 26.0	-0.6
EMIN	Mina Concepcio	3.43	49	Pn	Pn	18 16 49.7	+2.5
EMIN				Sn	Sn	18 17 26.2	-0.4
EMIN				*i* IVmb_Lg		18 17 29.0	
PMAFR	Mafra	3.45	8	Pn	Pn	18 16 48.8	+1.2
PMAFR				Sn	Sn	18 17 25.9	-1.3
PMAFR	Mafra	3.45	8	*e*P	Pn	18 16 48.8	+1.2
PMAFR				*e*S	Sn	18 17 27.6	+0.4
PMAFR				*i* AML	AML	18 17 29.7	
PMAFR				*i* AML	AML	18 17 29.9	
PMAFR				*i* AML	AML	18 17 31.0	
SRHM	Skhour des Reh	3.49	151	P	Pn	18 16 49.2	+1.1
SRHM	Skhour des Reh	3.49	151	S	Sn	18 17 29.9	+1.7
PBAR	Barrancos	3.50	40	Pn	Pn	18 16 50.7	+2.5
PBAR				Sn	Sn	18 17 28.7	+0.3
PBAR	Barrancos	3.50	40	⇑*e*P	Pn	18 16 50.7	+2.5
PBAR				*e*S	Sn	18 17 28.4	0.0
PBAR				*i* AML	AML	18 17 31.5	
PBAR				*i* AML	AML	18 17 32.8	
PBAR				*i* AML	AML	18 17 32.8	
ESPR	Espera	3.54	67	Pn	Pn	18 16 51.6	+2.8
ESPR				Sn	Sn	18 17 29.9	+0.6
ESPR	Espera	3.54	67	Pn	Pn	18 16 51.6	+2.8
ESPR				Sn	Sn	18 17 30.0	+0.6
TARIF	Tarifa	3.56	81	Pn	Pn	18 16 53.3	+4.2
SMIR	Smir Dam	3.69	86	P	Pn	18 16 52.1	+1.2
SMIR	Smir Dam	3.69	86	S	Sn	18 17 32.2	-1.0
ECEU	Ceuta	3.71	83	Sn	Sn	18 17 32.8	-0.7
ECEU				Pn	Pn	18 16 54.8	+3.7
ECEU	Ceuta	3.71	83	Sn	Sn	18 17 32.4	-1.1
PMTG	Montargil	3.77	20	*e*P	Pn	18 16 53.6	+1.6
PMTG				*e*S	Sn	18 17 34.4	-0.7
PMTG				*i* AML	AML	18 17 37.2	
PMTG				*i* AML	AML	18 17 37.2	
PMTG				*i* AML	AML	18 17 37.6	
PESTR	Estremoz	3.81	28	Pn	Pn	18 16 54.1	+1.7
PESTR				Sn	Sn	18 17 34.9	-1.1
PESTR	Estremoz	3.81	28	*e*P	Pn	18 16 54.1	+1.7
PESTR				*e*S	Sn	18 17 35.4	-0.6
PESTR				*i* AML	AML	18 17 37.1	
PESTR				*i* AML	AML	18 17 37.3	
PESTR				*i* AML	AML	18 17 38.5	
PESTR	Estremoz	3.81	28	P	Pn	18 16 53.4	+1.0
EAH	EAH	3.89	176	P	Pn	18 16 52.5	-1.1
EAH	EAH	3.89	176	S	Sn	18 17 36.6	-1.4
EBAD	Badajoz	3.96	35	Pn	Pn	18 16 56.5	+2.0
EBAD				Sn	Sn	18 17 39.2	-0.5
EBAD	Badajoz	3.96	35	Pn	Pn	18 16 56.6	+2.0
EBAD				Sn	Sn	18 17 38.1	-1.6
EBAD				*i* IVmb_Lg		18 17 41.5	
PSBE	So Bento	4.07	12	*e*P	Pn	18 16 57.6	+1.6
PSBE				*e*S	Sn	18 17 40.4	-2.1
PSBE				*i* AML	AML	18 17 45.0	
PSBE				*i* AML	AML	18 17 45.8	
PSBE				*i* AML	AML	18 17 47.2	
PSARD	Sardoal	4.29	18	⇑*i*P	Pn	18 17 00.9	+1.8
PSARD				*e*S	Sn	18 17 46.2	-1.7
PSARD				*i* AML	AML	18 17 49.2	
PSARD				*i* AML	AML	18 17 49.5	
PSARD				*i* AML	AML	18 17 49.8	
EMIJ	Mijas	4.29	75	Pn	Pn	18 17 01.5	+2.4
EMIJ	Mijas	4.29	75	Pn	Pn	18 17 01.5	+2.4
EMIJ				Sn	Sn	18 17 42.1	-5.8
PMRV	Marv??o	4.37	27	*e*P	Pn	18 17 02.0	+1.8
PMRV				*e*S	Sn	18 17 48.6	-1.3
PMRV				*i* AML	AML	18 17 51.1	
PMRV				*i* AML	AML	18 17 51.1	
PMRV				*i* AML	AML	18 17 51.2	
ECAB	El Cabril	4.41	54	Pn	Pn	18 17 03.1	+2.4
ECAB				Sn	Sn	18 17 49.0	-1.8
ECAB	El Cabril	4.41	54	Pn	Pn	18 17 03.3	+2.6
ECAB				Sn	Sn	18 17 49.0	-1.8
ECAB				*i* IVmb_Lg		18 17 52.6	
EXCBR	El Cabril	4.41	54	Pn	Pn	18 17 03.5	+2.7
EXCBR				Sn	Sn	18 17 49.1	-1.7
IFR	Ifrane	4.43	116	Pn	Pn	18 17 03.4	+2.2
IFR				Sn	Sn	18 17 49.2	-2.5
LCRM	LCR	4.56	112	P	Pn	18 17 03.9	+0.9
LCRM	LCR	4.56	112	S	Sn	18 17 53.2	-1.6
EMAL	Malaga-Limoner	4.60	73	Pn	Pn	18 17 06.2	+2.9
EMAL				Sn	Sn	18 17 55.1	-0.5
OUK	Oukaimeden	4.64	158	P	Pn	18 17 03.0	-1.3
PCAS	Casmilo, Conde	4.64	14	*e*P	Pn	18 17 05.4	+1.5
PCAS				*e*S	Sn	18 17 55.1	-1.5
PCAS				*i* AML	AML	18 17 58.6	
PCAS				*i* AML	AML	18 17 59.4	
PCAS				*i* AML	AML	18 18 00.4	
PCBR	Castelo Branco	4.71	23	*e*P	Pn	18 17 06.7	+1.9
PCBR				*e*S	Sn	18 17 56.3	-1.9
PCBR				*i* AML	AML	18 17 59.4	
PCBR				*i* AML	AML	18 17 59.5	
PCBR				*i* AML	AML	18 18 00.7	
CZD	Col de Zad	4.74	120	P	Pn	18 17 06.0	+0.4
CZD	Col de Zad	4.74	120	S	Sn	18 17 57.4	-2.1
COI	Coimbra	4.81	14	*e*S	Sn	18 17 58.9	-1.8
COI				*i* AML	AML	18 18 01.8	
COI				*i* AML	AML	18 18 03.2	
COI				*i* AML	AML	18 18 03.7	
PALE	Palemas	4.89	92	P	Pn	18 17 07.3	-0.1
CGR	Cap Guir	4.89	180	P	Pn	18 17 06.2	-1.2
CGR	Cap Guir	4.89	180	S	Sn	18 17 60.0	-2.8
EGOR	Sierra Gorda,	4.94	70	Pn	Pn	18 17 11.2	+3.0
EGOR	Sierra Gorda,	4.94	70	Pn	Pn	18 17 11.2	+3.0
EGOR				Sn	Sn	18 18 02.1	-2.1
EGOR				*i* IVmb_Lg		18 18 10.6	
EADA	Adamuz	5.02	57	Pn	Pn	18 17 11.7	+2.6
EADA				Sn	Sn	18 18 04.4	-1.6
EADA	Adamuz	5.02	57	Pn	Pn	18 17 11.7	+2.6
EADA				Sn	Sn	18 18 04.3	-1.6
EADA				*i* IVmb_Lg		18 18 08.6	
MD31	MD31	5.03	120	P	Pn	18 17 10.2	+0.8
MD31	MD31	5.03	120	S	Sn	18 18 05.0	-1.4
AKLM	AKL	5.07	100	P	Pn	18 17 12.2	+2.3
AKLM	AKL	5.07	100	S	Sn	18 18 03.1	-4.1
TIO	Tiouine	5.11	153	Pn	Pn	18 17 12.1	+1.6
TIO				Sn	Sn	18 18 06.6	-1.7
TIO	Tiouine	5.11	153	P	Pn	18 17 10.1	-0.3
TIO	Tiouine	5.11	153	S	Sn	18 18 07.2	-1.1

TTIG	Tnine Tigouga,	5.13	166	P	Pn	18 17 08.3	-2.5
MDT	Midelt	5.17	120	P	Pn	18 17 12.4	+1.2
MDT	Midelt	5.17	120	S	Sn	18 18 08.0	-1.7
MTE	Manteigas	5.20	20	eP	Pn	18 17 13.3	+1.6
MTE				eS	Sn	18 18 08.6	-1.8
MTE				i AML	AML	18 18 10.8	
MTE				i AML	AML	18 18 12.8	
MTE				i AML	AML	18 18 13.6	
OUZM	OUZ	5.32	149	P	Pn	18 17 13.4	0.0
OUZM	OUZ	5.32	149	S	Sn	18 18 11.1	-2.3
PVIS	Viseu	5.41	16	eP	Pn	18 17 15.6	+1.1
PVIS				eS	Sn	18 18 13.2	-2.4
EPLA	Plasencia	5.44	33	Pn	Pn	18 17 17.0	+2.0
EPLA				Sn	Sn	18 18 13.3	-3.1
EQTA	Presa de Quent	5.48	70	Sn	Sn	18 18 14.5	-2.8
EQUE	Quentar	5.48	70	Pn	Pn	18 17 19.7	+4.2
EQUE				Sn	Sn	18 18 14.8	-2.6
GOLM	Goulmima	5.63	131	P	Pn	18 17 17.3	-0.4
GOLM	Goulmima	5.63	131	S	Sn	18 18 20.5	-0.7
GOG	Mont Gurugu	5.66	91	P	Pn	18 17 17.4	-0.6
GOG	Mont Gurugu	5.66	91	S	Sn	18 18 17.9	-3.9
E0803	Jimena (Jaen)	5.66	64	Pn	Pn	18 17 20.5	+2.6
E0803				Sn	Sn	18 18 18.8	-3.0
PTO	Porto	5.69	10	eP	Pn	18 17 17.2	-1.0
PTO				eS	Sn	18 18 17.0	-5.3
WMELI	Melilla	5.69	90	Sn	Sn	18 18 19.1	-3.2
PSIM	Granatula de C	5.91	54	Pn	Pn	18 17 23.9	+2.5
PSIM				Sn	Sn	18 18 24.7	-3.1
EQES	Quesada	5.95	66	Pn	Pn	18 17 24.5	+2.6
EQES				Sn	Sn	18 18 27.2	-1.7
EQES				i IVmb_Lg		18 18 33.0	
PAB	San Pablo	5.96	46	Pn	Pn	18 17 24.1	+2.0
PAB				Sn	Sn	18 18 26.4	-2.8
PAB				i IVmb_Lg		18 18 27.6	
TZRR	Tazzarine	5.98	141	P	Pn	18 17 21.3	-1.1
TZRR	Tazzarine	5.98	141	S	Sn	18 18 27.5	-2.1
PVRL	Vila Real	5.98	16	eP	Pn	18 17 23.6	+1.2
PVRL				eS	Sn	18 18 26.6	-3.0
PVRL				i AML	AML	18 18 30.2	
PVRL				i AML	AML	18 18 30.7	
PVRL				i AML	AML	18 18 31.2	
MVO	Moncorvo	6.06	21	eP	Pn	18 17 24.7	+1.3
MVO				eS	Sn	18 18 28.9	-2.7
MVO				i AML	AML	18 18 31.9	
MVO				i AML	AML	18 18 32.4	
MVO				i AML	AML	18 18 33.5	
POLO	Lamas de Olo	6.06	15	eP	Pn	18 17 24.4	+0.9
POLO				eS	Sn	18 18 27.9	-3.7
POLO				i AML	AML	18 18 31.2	
POLO				i AML	AML	18 18 32.1	
POLO				i AML	AML	18 18 33.4	
JBK	JBK	6.15	99	P	Pn	18 17 24.5	-0.4
JBK	JBK	6.15	99	S	Sn	18 18 29.3	-4.8
TAF	Taforalt	6.18	95	P	Pn	18 17 25.2	0.0
TAF	Taforalt	6.18	95	S	Sn	18 18 33.0	-1.7
ESDC	Sonseca Array	6.27	47	Pn	Pn	18 17 28.2	+1.9
ESDC				i IVmb_Lg		18 17 29.5	
ESDC				Sn	Sn	18 18 33.6	-3.2
ARF	Arif	6.27	129	P	Pn	18 17 25.4	-1.0
ARF	Arif	6.27	129	S	Sn	18 18 35.9	-1.0
ESBB	Sonseca Array	6.27	47	Pn	Pn	18 17 28.3	+1.9
ESBB				i IVmb_Lg		18 17 29.5	
ESBB				Sn	Sn	18 18 33.1	-3.7
PCAB	Cabril	6.34	13	eP	Pn	18 17 28.4	+1.2
PCAB				eS	Sn	18 18 34.8	-3.6
PCAB				i AML	AML	18 18 38.5	
PCAB				i AML	AML	18 18 39.4	
PCAB				i AML	AML	18 18 39.5	
ENIJ	Nijar	6.39	75	Sn	Sn	18 18 37.6	-2.0
ENIJ	Nijar	6.39	75	Sn	Sn	18 18 37.1	-2.6
PMAR	Madeira	6.45	246	P	Pn	18 17 27.4	-1.5
ELOB	Lobios	6.48	12	Pn	Pn	18 17 30.1	+0.8
ELOB				Sn	Sn	18 18 37.2	-4.9
ELOB				i IVmb_Lg		18 18 41.9	
ZGR	Zagora	6.50	145	P	Pn	18 17 29.4	-0.1
ZGR	Zagora	6.50	145	S	Sn	18 18 42.1	-0.4
PGAV	Gavieira, Arco	6.55	11	eP	Pn	18 17 31.4	+1.2
PGAV				eS	Sn	18 18 40.0	-3.6
PGAV				i AML	AML	18 18 43.9	
PGAV				i AML	AML	18 18 44.1	
PGAV				i AML	AML	18 18 45.0	
PMOZ	Porto Moniz, M	6.62	248	Pn	Pn	18 17 31.6	+0.5
PMOZ				Sn	Sn	18 18 38.3	-7.1
PMOZ	Porto Moniz, M	6.62	248	P	Pn	18 17 28.6	-2.6
PMOZ	Porto Moniz, M	6.62	248	S	Sn	18 18 41.8	-3.6
EZAM	Zamans	6.67	8	Pn	Pn	18 17 32.7	+0.9
EZAM				Sn	Sn	18 18 43.3	-3.2
EZAM				i IVmb_Lg		18 18 46.4	
PBRG	Braganca	6.73	21	eP	Pn	18 17 34.5	+1.9
PBRG				eS	Sn	18 18 44.5	-3.6
PBRG				i AML	AML	18 18 48.2	
PBRG				i AML	AML	18 18 49.2	
PBRG				i AML	AML	18 18 49.3	
GUD	Guadarrama	6.83	40	Pn	Pn	18 17 35.6	+1.6
GUD				Sn	Sn	18 18 47.0	-3.6
GUD				i IVmb_Lg		18 18 52.5	
ECAL	Calabor	6.86	20	Pn	Pn	18 17 35.6	+1.2
ECAL				Sn	Sn	18 18 47.5	-3.8
ECAL	Calabor	6.86	20	Pn	Pn	18 17 35.8	+1.3
ECAL				Pg		18 17 45.1	
ECAL				Sn	Sn	18 18 48.9	-2.3
ECAL				i IVmb_Lg		18 18 52.6	
EZAR	Zarzadilla de	7.00	68	Pn	Pn	18 17 39.0	+2.5
EZAR				Sn	Sn	18 18 51.5	-3.4
EZAR				i IVmb_Lg		18 18 56.4	
EFAM	Famara	7.08	207	Sn	Sn	18 18 50.4	-6.4
UCM	Universidad Co	7.10	46	Pn	Pn	18 17 40.3	+2.6
UCM				Sn	Sn	18 18 54.6	-2.6
EAGO	Agolada(Pontev	7.39	10	Pn	Pn	18 17 42.6	+0.9
EAGO				Sn	Sn	18 18 59.9	-4.4
EAGO				i IVmb_Lg		18 19 04.1	
EMAZ	Mazaricos	7.44	5	Pn	Pn	18 17 42.1	-0.2
EMAZ				Sn	Sn	18 18 58.8	-6.6
CART	Cartagena	7.46	71	Pn	Pn	18 17 44.2	+1.7
CART				Sn	Sn	18 19 00.8	-5.1
CART	Cartagena	7.46	71	P	Pn	18 17 41.5	-1.0
CART	Cartagena	7.46	71	S	Sn	18 19 02.1	-3.7
CFUE	Fuerteventura	7.67	208	Sn	Sn	18 19 04.3	-7.0
EVIV	Cofrentes, Val	7.93	59	Pn	Pn	18 17 51.0	+1.9
EVIV				Sn	Sn	18 19 13.2	-4.2
EVIV				i IVmb_Lg		18 19 21.1	
CFTV	Fuerteventura	7.94	208	Pn	Pn	18 17 46.0	-3.3
CFTV				Sn	Sn	18 19 10.8	-7.0
FIGM	Figuig	7.96	113	P	Pn	18 17 47.6	-2.0
EPON	Pontenova	8.07	15	Pn	Pn	18 17 52.0	+1.0
EPON				Sn	Sn	18 19 17.5	-3.4
EPON				i IVmb_Lg		18 19 20.7	
CGIN	Giniginamar, F	8.12	207	Sn	Sn	18 19 14.8	-7.5
ETOR	Torete	8.13	47	Pn	Pn	18 17 54.4	+2.5
ETOR				Sn	Sn	18 19 18.7	-3.8
ETOR				i IVmb_Lg		18 19 24.3	
ECHE	Chera	8.17	58	Pn	Pn	18 17 55.0	+2.6
ECHE				Sn	Sn	18 19 20.9	-2.7
ECHE	Chera	8.17	58	Pn	Pn	18 17 54.8	+2.3
ECHE				Sn	Sn	18 19 20.5	-3.1
EBEN2	Beniarda presa	8.37	65	Sn	Sn	18 19 23.7	-4.8
E0901	Celadas (Terue	8.51	52	Pn	Pn	18 18 00.9	+3.8
E0901				Sn	Sn	18 19 28.6	-3.3
EARI	Arriondas	8.56	24	Pn	Pn	18 18 01.0	+3.2
EARI				Sn	Sn	18 19 28.1	-5.0
EMOS	Mosqueruela	8.88	54	Pn	Pn	18 18 05.9	+3.7
EMOS				Sn	Sn	18 19 36.0	-5.0
EMOS				i IVmb_Lg		18 19 43.3	
CLUM	San Bartolome	9.12	214	Sn	Sn	18 19 38.7	-8.1
ELAN	Lanestosa	9.17	31	Pn	Pn	18 18 08.7	+2.5
ELAN				Sn	Sn	18 19 42.2	-5.8
CNOR	Icod de los Vi	9.20	220	Sn	Sn	18 19 42.3	-6.8
CCHO	La Orotava (Te	9.28	220	Sn	Sn	18 19 41.0	-10
CMIR	El Paso, La Pa	9.59	227	Sn	Sn	18 19 45.2	-13
EGOM	La Gomera	9.62	222	Sn	Sn	18 19 48.7	-10
ESAC	San Caprasio	9.62	47	Pn	Pn	18 18 13.5	+1.1
ESAC				Sn	Sn	18 19 43.0	-16
TBT	Taburiente	9.63	227	Sn	Sn	18 19 45.2	-14
CVIE	Villa de Mazo,	9.64	226	Sn	Sn	18 19 49.5	-10
ERTA	Horta de San J	9.70	53	Pn	Pn	18 18 17.0	+3.6
ERTA				Sn	Sn	18 19 55.9	-5.3
EALK	Alkurruntz	10.05	38	Pn	Pn	18 18 20.1	+1.8
EALK				Sn	Sn	18 20 04.3	-5.5
EPOB	Poblet	10.39	53	Pn	Pn	18 18 25.2	+2.4
EPOB				Sn	Sn	18 20 12.8	-5.2
ECHI	Chisagues Biel	10.59	45	Pn	Pn	18 18 28.7	+3.0
ECHI				Sn	Sn	18 20 17.2	-5.9

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*IDC **03** 18:25:09.8±2.7, 33°.61N×140°.13E, h140km±28km, mb2.9/4, mbtmp3.3/6, MS3.0/1, Error ellipse: s-maj=51.3km s-min=25.0km az=66.0*

*JMA **03** 18:25:10.7±0.2, 33°.6N±0°.4×139°.8E±0°.9, h115km±1km, MV2.6/28, NEAR MIYAKEJIMA ISLAND*

ISC 03 18:25:09.4±1.0, **33°.51N**±0°.06×**139°.8E**±0°.1, **h123**km, **n23**, σ**1ˢ06**/22, **mb3.2**/4, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	0.40	172	P	Pn	18 25 28.0	+0.9
JMKN	Mikurajimanish	0.41	340	i P	Pn	18 25 27.1	-0.1
JHCJ	Hachijojimakas	0.44	175	eP	Pn	18 25 28.4	+1.0
JHCJ				eS	Sn	18 25 41.9	+1.0
JMYK	Miyake Tsubota	0.57	343	P	Pn	18 25 28.3	+0.2
JKO	Kozu shima	0.85	323	eP	Pn	18 25 30.6	+0.3
JSKK	Shikinejimakit	0.94	331	eP	Pn	18 25 31.5	+0.4
JIM2	Oshima 3	1.23	348	eP	Pn	18 25 34.3	+0.1
JIZS	Izushimoda	1.41	329	eP	Pn	18 25 36.5	+0.5
JIZS				eS	Sn	18 25 56.4	+0.2
BSO3	Boso 3	1.43	26	P	Pn	18 25 36.5	+0.5
BSO1	Boso 1	1.53	41	eP	Pn	18 25 37.3	+0.5
KTJ3	Kamata3	1.53	338	eP	Pn	18 25 37.5	+0.1
BSO4	Boso 4	1.55	18	P	Pn	18 25 38.3	+0.8
JOD2	Odawara 2	1.83	343	P	Pn	18 25 41.5	+0.5
MJAR	Matsushiro Arr	3.28	338	P	Pn	18 26 01.3	+1.8
	0.8nm,0.4s,baz=157,slow=16,SNR=7.9						
MJAR				S	Sn	18 26 40.3	+2.1
	2.1nm,0.5s,baz=164,slow=14,SNR=5.0						
ASAJ	Asahikawa	10.82	11	P	Pn	18 27 38.1	-2.7
	2.8nm,0.8s,baz=201,slow=8.6,SNR=5.5						
JOW	Kunigami	11.95	239	LR	LR	18 32 15.7	
	comp=Z,70nm,21.5s,baz=89,slow=35						
H11N2	WAKE ISLAND Hy	27.78	113	T	T	18 59 53.5	
	baz=306,slow=75,SNR=8.7						
H11N1	WAKE ISLAND Hy	27.78	113	T	T	18 59 53.9	
	baz=306,slow=75,SNR=4.5						
H11N3	WAKE ISLAND Hy	27.79	113	T	T	18 59 55.5	
	baz=306,slow=75,SNR=5.5						
MKAR	Makanchi Array	44.93	305	P	P	18 33 12.4	+0.5
	0.2nm,0.7s,baz=95,slow=10,SNR=1.9 0.2nm,0.7s						
KURBB	Kurchatov Arra	47.17	310	P	P	18 33 28.8	-0.5
	0.1nm,0.4s,baz=91,slow=9.3,SNR=2.1 0.1nm,0.4s						
WRA	Warramunga Arr	53.40	186	P	P	18 34 15.3	-1.2
	0.3nm,0.3s,baz=14,slow=8.0,SNR=1.8 0.3nm,0.3s						
ASAR	Alice Springs	57.13	186	P	P	18 34 43.0	-0.2
	0.2nm,0.5s,baz=20,slow=10,SNR=5.4 0.2nm,0.5s						

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*GCG **03** 18:26:45.1±0.9, 14°.60N×92°.39W, h63km±11km, MD3.7, ML3.5*

*MEX **03** 18:26:45.5±0.4, 14°.69N×92°.43W, h77km±5km, MD4.0*

ISC 03 18:26:39.8±1.8, **14°.4N**±0°.1×**92°.45W**±0°.08, **h88**km±12km, **n17**, σ**2ˢ52**/30, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.56	18	eP	Pn	18 26 55.7	+0.8
THIG				eS	Sn	18 27 03.8	-2.3
SMCA	Catarina	0.60	37	eP	Pn	18 26 56.3	+1.1
SMCA				eS	Sn	18 27 05.4	-1.3
SMCA				IAML		18 27 06.8	
	comp=N,7µm,0.1s						
RTAL	Retalhuleu	0.74	78	eP	Pn	18 27 00.0	+3.4
RTAL				eS	Sn	18 27 11.2	+2.1
PATR	El Naranjo	0.77	15	eP	Pn	18 26 57.1	0.0
PATR				eS	Sn	18 27 06.8	-3.1
CHUJ	Union Juarez	0.79	24	eP	Pn	18 26 57.5	+0.2
CHUJ				eS	Sn	18 27 07.8	-2.6
PAVE	Pavencul	0.86	18	eP	Pn	18 26 58.3	+0.3
PAVE				eS	Sn	18 27 08.9	-2.7
QUEO	Labor Ovalle	1.03	61	i S	Sn	18 27 17.5	+2.4
STG8	El Palmar, Qui	1.06	86	eP	Pn	18 27 00.9	+0.5
STG8				eS	Sn	18 27 13.6	-2.1
STG8				IAML		18 27 15.7	
	comp=E,3µm,0.1s						
SOKI	Kika Raxquin	1.10	66	i S	Sn	18 27 20.3	+3.4
SOKI				IAML		18 27 23.7	
	comp=N,396nm,0.5s						
HUEH	Huehuetenango	1.31	44	eP	Pn	18 27 08.9	+5.5
HUEH				eS	Sn	18 27 22.9	+1.8
PCIG		1.52	331	eP	Pn	18 27 06.8	+1.0
PCIG				eS	Sn	18 27 22.6	-2.7
FG8	Yepocapa, Chim	1.83	93	eP	Pn	18 27 09.5	-0.4
FG8				i S	Sn	18 27 28.2	-4.5
FG16	Alotenango, Sa	1.88	93	i P	Pn	18 27 10.6	0.0
FG16				i S	Sn	18 27 30.1	-3.8
FG16				IAML		18 27 36.6	
	comp=E,1µm,0.2s						
CCIG	Comitan	1.92	9	eP	Pn	18 27 12.0	+0.8
CCIG				eS	Sn	18 27 35.4	+0.5
TGIG		2.48	345	eP	Pn	18 27 20.2	+1.8
TGIG				eS	Sn	18 27 44.6	-3.4
CMIG	Matias Romero	3.58	319	eP	Pn	18 27 35.5	+2.3
CMIG				eS	Sn	18 28 11.1	-3.4
NEUV	Arroyo Zacate	4.63	316	eP	Pn	18 27 51.2	+3.8
NEUV				eS	Sn	18 28 32.6	-7.4

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*JMA **03** 18:27:39.9±0.1, 24°.2N±0°.3×123°.7E±0°.3, h19km±1km, MV2.8/16, NEAR ISHIGAKIJIMA ISLAND*

ISC 03 18:27:39.8±1.0, **24°.17N**±0°.05×**123°.69E**±0°.03, **h19**km±2km, **n18**, σ**0ˢ83**/29, **Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.15	138	P	Pg	18 27 44.2	+0.1
HATJ				S	Sg	18 27 47.5	+0.4
IRIF	Iriomote-Funau	0.17	11	P	Pg	18 27 44.2	-0.2
IRIF				S	Sg	18 27 47.4	-0.1
JKRS	Kuro-shima	0.29	77	P	Pg	18 27 46.5	+0.2
JKRS				S	Sb	18 27 51.5	+0.5
JIJ	Ishigaki jima	0.45	65	P	Pg	18 27 48.7	-0.4
JIJ				S	Sg	18 27 55.0	-0.3
YOJ	Yonaguni jima	0.69	295	P	Pb	18 27 53.0	-0.3
YOJ	Yonaguni jima	0.69	295	P	Pb	18 27 53.1	-0.1
YOJ				S	Sg	18 28 02.4	-0.3
JISG	Ishigakijimahi	0.70	53	i P	Pb	18 27 53.0	-0.5
JISG				S	Sb	18 28 02.5	-0.2
JYNG	Yonagunijimaku	0.74	293	i P	Pb	18 27 53.7	-0.4
JYNG				S	Sg	18 28 03.9	-0.3
JTJ	Tarama	1.03	63	P	Pb	18 27 59.0	-0.2
JTJ				S	Sn	18 28 12.9	-0.4
JIRB	Irabujima	1.50	64	eP	Pn	18 28 05.7	-0.1
JIRB				eS	Sn	18 28 24.7	-0.1
JMJ2	Miyako jima3	1.59	69	P	Pn	18 28 07.6	+0.5
JMJ2				eS	Sb	18 28 28.2	-0.3
JIKM	Ikemajima	1.60	62	eP	Pn	18 28 07.8	+0.6
JOGS	Gusukube	1.67	69	eP	Pn	18 28 09.0	+0.9
JOGS				eS	Sb	18 28 31.5	+0.8
NACB	Ninganchiao	1.92	271	P	Pn	18 28 12.2	+0.6
YHNB	Yeheng	2.17	284	P	Pn	18 28 16.3	+1.2
YULB	Yu-li	2.33	251	P	Pn	18 28 17.1	-0.1
TWGBT	Beinan	2.75	241	P	Pb	18 28 26.5	-2.0
TPUB	Ta-pu	2.94	254	P	Pn	18 28 28.4	+2.8

IDC 03 18:48:54.8±62.0, **16°.84S**×**178°.94W**, **h0**km, **mb4.2**/3, **mbtmp4.2**/3, **Error ellipse: s-maj=1135.0km s-min=171.9km az=77.0**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.71	240	P	P	18 56 21.4	+0.7
	2.0nm,0.7s,baz=95,slow=11,SNR=2.3 2.0nm,0.7s						
WRA	Warramunga Arr	44.34	259	P	P	18 57 06.7	-0.4
	1.0nm,0.7s,baz=94,slow=8.5,SNR=6.3 1.0nm,0.7s						
ASAR	Alice Springs	44.60	253	P	P	18 57 08.8	-0.4
	7.0nm,0.6s,baz=89,slow=7.8,SNR=201 7.0nm,0.6s						

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*SOME **03** 18:57:34.6, 40°.78N×82°.82E, h15km*

*NNC **03** 18:57:37.8±3.2, 41°.24N×83°.17E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=25.2km s-min=17.7km az=163.0*

ISC 03 18:57:36.3±2.5, **41°.2N**±0°.1×**83°.22E**±0°.08, **h10**km, **n24**, σ**2ˢ87**/35, **8C-6D**, **Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	3.41	306	Pg	Pb	18 58 37.9	+1.0
	26nm,0.5s						
SHLS				Lg	Lg	18 59 16.3	
	82nm,0.7s						
SHLS	Shalkode	3.41	306	eP	Pn	18 58 33.5	+3.8
	22nm,0.3s						
SHLS				eS	Sb	18 59 16.3	-2.2
	82nm,0.5s						
PDGK	Podgornoye	3.49	309	⇑Pn	Pn	18 58 29.1	-1.8
	3.4nm,0.8s						
PDGK				⇓Pg	Pb	18 58 41.2	+2.9
	15nm,0.5s						
PDGK				⇓Lg	Lg	18 59 28.8	
	20nm,0.5s						
UZB	Uzynbulak	3.68	303	Pg	Pg	18 58 45.7	-1.1
	17nm,0.5s						
UZB				Lg	Lg	18 59 29.4	
	45nm,0.4s						
DJR	Jarkent	4.03	322	Pg	Pg	18 58 57.4	+3.9
	9.6nm,0.8s						
DJR				Lg	Lg	18 59 49.6	
	14nm,0.6s						
DJR	Jarkent	4.03	322	eP	Pg	18 58 51.0	-2.4
	9.6nm,0.8s						
DJR				eS	Sg	18 59 46.5	+0.9
	14nm,0.6s						
SATY	Saty	4.04	299	Pg	Pg	18 58 52.5	-1.1
	8.3nm,0.5s						
SATY				Lg	Lg	18 59 41.1	
	34nm,0.9s						
KPKS	Kokpek	4.06	306	Pg	Pg	18 58 52.8	-1.2
	9.4nm,1.0s						
KPKS				Lg	Lg	18 59 41.8	
	61nm,0.5s						
ZHN	Zhinishke	4.07	301	Pg	Pg	18 58 53.4	-0.8
	12nm,0.6s						
ZHN				Lg	Lg	18 59 42.5	
	38nm,0.3s						
ZHN	Zhinishke	4.07	301	eP	Pb	18 58 48.4	+0.3
	12nm,0.6s						
ZHN				eS	Sg	18 59 42.5	-4.4
	38nm,0.3s						
KNOS	Konyrlen	4.34	318	Pg	Pg	18 58 59.0	-0.4
	13nm,0.8s						
KNOS				Lg	Lg	18 59 51.8	
	3.1nm,0.1s						
MDOK	Medeo	4.99	295	⇑Pn	Pn	18 58 49.7	-1.8
	1.4nm,0.4s						
MDOK				Pg	Pb	18 59 07.7	+3.9
	4.6nm,0.4s						
MDOK				Pg	Pg	18 59 09.5	-2.4
	3.8nm,0.5s						
MDOK				Lg	Lg	19 00 10.2	
	15nm,0.8s						
MDOK				Lg	Lg	19 00 13.4	
	11nm,0.6s						
TNSS	Tian-Shan	5.01	294	Pg	Pg	18 59 09.3	-3.1
	3.7nm,0.4s						
TNSS				Lg	Lg	19 00 10.0	
	8.1nm,0.8s						
TNSS	Tian-Shan	5.01	294	eP	Pb	18 59 04.7	+0.3
	3.7nm,0.4s						
TNSS				eS	Sb	19 00 10.0	+5.1
	8.1nm,0.8s						
MTBS	Maitube	5.41	293	Pg	Pg	18 59 18.1	-1.7
	2.7nm,1.1s						
MTBS				Lg	Lg	19 00 25.4	
	7.9nm,0.3s						
MTBS	Maitube	5.41	293	eP	Pb	18 59 15.4	+4.5
	2.7nm,1.1s						
MTBS				eS	Sg	19 00 28.1	-1.7
	7.9nm,0.3s						
MK31	Makanchi Array	5.64	353	⇓Pn	Pn	18 59 00.4	+0.2
	0.1nm,0.3s,baz=188,slow=11,SNR=24						
MK31				⇑Pg	Pg	18 59 22.5	-1.7
	0.8nm,0.5s,baz=174,slow=15,SNR=8.6						
MK31				⇑Lg	Lg	19 00 38.2	
	4.5nm,0.5s,baz=173,slow=29,SNR=4.4						
MAKZ	Makanchi	5.68	351	⇑Pn	Pn	18 58 59.8	-1.0
	0.3nm,0.3s						
MAKZ				⇓Pg	Pb	18 59 14.2	-1.3
	1.0nm,0.5s						
MAKZ				⇓Sn	Sn	19 00 08.4	+2.4
	2.1nm,0.4s						
MAKZ				⇓Lg	Lg	19 00 38.0	
	6.0nm,0.6s						
KST	Kastek	5.70	291	Pg	Pb	18 59 21.0	+5.0
	5.9nm,0.8s						
KST				Lg	Lg	19 00 30.1	
	25nm,0.5s						
KST	Kastek	5.70	291	eP	Pb	18 59 17.7	+1.7
	5.9nm,0.8s						
KST				eS	Sg	19 00 32.5	-6.9
	25nm,0.5s						
KUU	Kurty	5.75	300	Pg	Pg	18 59 22.6	-3.9
	3.0nm,0.1s						
KUU				Lg	Lg	19 00 32.2	
	19nm,0.8s						
TKM2	Tokmak 2	5.93	289	⇑Pn	Pn	18 59 04.7	+0.3
	0.2nm,0.2s						
TKM2				⇑Sn	Sn	19 00 16.6	+4.1
	3.8nm,0.5s						
TKM2				⇑Lg	Lg	19 00 40.8	
	9.9nm,0.7s						
SGDS	Sogindy	6.75	292	Pg	Pg	18 59 42.9	-2.7
	1.6nm,0.7s						
SGDS				Lg	Lg	19 01 07.3	
	5.2nm,0.7s						
MRKS	Merke	7.61	285	Pg	Pg	18 59 57.4	-4.5
	1.7nm,0.3s						
MRKS				Lg	Lg	19 01 32.1	
	3.3nm,0.3s						

IDC 03 18:59:55.2±1.2, **21°.80S**×**174°.84W**, **h0**km, **mb3.7**/4, **mbtmp3.7**/4, **MS3.4**/2, **Error ellipse: s-maj=51.8km s-min=32.6km az=152.0**, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	7.82	300	LR	LR	19 04 45.0	
	comp=Z,156nm,19.8s,baz=117,slow=37						
ASAR	Alice Springs	47.10	257	P	P	19 08 29.3	-0.1
	0.5nm,0.7s,baz=100,slow=7.4,SNR=9.1 0.5nm,0.7s						
WRA	Warramunga Arr	47.35	263	P	P	19 08 32.1	+0.8
	0.3nm,0.4s,baz=101,slow=7.0,SNR=2.4 0.3nm,0.4s						
QSPA	South Pole Qui	68.28	180	P	P	19 10 58.0	+0.1
	1.1nm,1.0s,baz=18,slow=4.3,SNR=1.6 1.1nm,1.0s						
NVAR	Mina Array Bea	79.98	42	P	P	19 12 07.6	+0.9
	0.7nm,0.7s,baz=216,slow=8.0,SNR=5.2 0.7nm,0.7s						
CMIG	Matias Romero	87.30	71	LR	LR	19 47 13.6	
	comp=Z,25nm,18.1s,baz=177,slow=32						
BRTR	Keskin Array B	149.88	313	PKPbc	PKPdf	19 19 45.4	+2.4
	0.4nm,0.9s,baz=90,slow=4.0,SNR=4.1						

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*IDC **03** 19:05:23.6±2.8, 38°.35N×26°.61W, h0km, mb3.5/6, mbtmp3.5/7, ML3.8/1, MS3.1/10, Error ellipse: s-maj=92.0km s-min=32.1km az=173.0*

*INMG **03** 19:05:26.6±1.1, 38°.28N×26°.81W, h5km±4km, ML3.7, Error ellipse: s-maj=3.3km s-min=1.3km az=34.0, #DIST_RANGE: LOCAL #IPMA_REGION: SE Terceira (Castromar)*

*SVSA **03** 19:05:26.6±1.1, 38°.28N×26°.81W, h5km±4km, ML3.7(INMG), Error ellipse: s-maj=3.3km s-min=1.3km az=34.0, #DIST_RANGE: LOCAL #IPMA_REGION: SE Terceira (Castromar)*

ISC 03 19:05:22.7±1.1, **38°.18N**±0°.04×**26°.87W**±0°.02, **h11**km±8km, **n86**, σ**1ˢ48**/129, **mb3.6**/6, **MS3.1**/8, **Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADH	Angra Heroismo	0.55	329	eP	Pg	19 05 33.6	0.0
ADH				eS	Sg	19 05 40.4	-0.4
ADH				i IAML		19 05 41.2	

ADH				*i* IAML		19 05 41.3	
ADH				*i* IAML		19 05 42.8	
ADH	Angra Heroismo	0.55	329	*e*P	Pg	19 05 33.6	0.0
ADH				*e*S	Sg	19 05 40.4	-0.4
ADH				*i* IAML		19 05 41.2	
ADH				*i* IAML		19 05 41.3	
ADH				*i* IAML		19 05 42.8	
ADH	Angra Heroismo	0.55	329	*e*P	Pg	19 05 33.6	0.0
ADH				*e*S	Sg	19 05 40.4	-0.4
ADH				*i* AML	AML	19 05 41.2	
ADH				*i* AML	AML	19 05 41.3	
ADH				*i* AML	AML	19 05 42.8	
PSCM	Serra do Cume	0.55	340	*e*P	Pb	19 05 34.8	+0.4
PSCM				*e*S	Sg	19 05 41.5	+0.6
PSCM				*i* IAML		19 05 41.9	
PSCM				*i* IAML		19 05 42.7	
PSCM				*i* IAML		19 05 46.8	
PSCM	Serra do Cume	0.55	340	*e*P	Pb	19 05 34.8	+0.4
PSCM				*e*S	Sg	19 05 41.5	+0.6
PSCM				*i* IAML		19 05 41.9	
PSCM				*i* IAML		19 05 42.7	
PSCM				*i* IAML		19 05 46.8	
PSCM	Serra do Cume	0.55	340	*e*P	Pb	19 05 34.8	+0.4
PSCM				*e*S	Sg	19 05 41.5	+0.6
PSCM				*i* AML	AML	19 05 41.9	
PSCM				*i* AML	AML	19 05 42.7	
PSCM				*i* AML	AML	19 05 46.8	
PAGU	Agualva, Azore	0.64	338	*e*P	Pb	19 05 36.1	+0.3
PAGU				*e*S	Sg	19 05 43.5	0.0
PAGU				*i* IAML		19 05 44.4	
PAGU				*i* IAML		19 05 44.6	
PAGU				*i* IAML		19 05 45.3	
PAGU	Agualva, Azore	0.64	338	*e*P	Pb	19 05 36.1	+0.3
PAGU				*e*S	Sg	19 05 43.5	0.0
PAGU				*i* IAML		19 05 44.4	
PAGU				*i* IAML		19 05 44.6	
PAGU				*i* IAML		19 05 45.3	
PAGU	Agualva, Azore	0.64	338	*e*P	Pb	19 05 36.1	+0.3
PAGU				*e*S	Sg	19 05 43.5	0.0
PAGU				*i* AML	AML	19 05 44.4	
PAGU				*i* AML	AML	19 05 44.6	
PAGU				*i* AML	AML	19 05 45.3	
PSBA	Serra de Santa	0.69	329	*e*P	Pb	19 05 36.9	+0.2
PSBA				*e*S	Sg	19 05 45.2	+0.1
PSBA				*i* IAML		19 05 46.0	
PSBA				*i* IAML		19 05 46.1	
PSBA				*i* IAML		19 05 46.2	
PSBA	Serra de Santa	0.69	329	*e*P	Pb	19 05 36.9	+0.2
PSBA				*e*S	Sg	19 05 45.2	+0.1
PSBA				*i* IAML		19 05 46.0	
PSBA				*i* IAML		19 05 46.1	
PSBA				*i* IAML		19 05 46.2	
PSBA	Serra de Santa	0.69	329	*e*P	Pb	19 05 36.9	+0.2
PSBA				*e*S	Sg	19 05 45.2	+0.1
PSBA				*i* AML	AML	19 05 46.0	
PSBA				*i* AML	AML	19 05 46.1	
PSBA				*i* AML	AML	19 05 46.2	
PMOS	Mosteiros	0.88	109	*e*P	Pn	19 05 45.2	+4.2
PMOS	Mosteiros	0.88	109	*e*P	Pn	19 05 45.2	+4.2
PSET	Sete Cidades	0.98	111	*e*P	Pb	19 05 42.0	+0.3
PSET				*e*S	Sg	19 05 53.7	-0.6
PSET				*i* IAML		19 05 58.4	
PSET				*i* IAML		19 05 60.0	
PSET				*i* IAML		19 06 00.4	
PSET	Sete Cidades	0.98	111	*e*P	Pb	19 05 42.0	+0.3
PSET				*e*S	Sg	19 05 53.7	-0.6
PSET				*i* IAML		19 05 58.4	
PSET				*i* IAML		19 05 60.0	
PSET				*i* IAML		19 06 00.4	
PSET	Sete Cidades	0.98	111	*e*P	Pb	19 05 42.0	+0.3
PSET				*e*S	Sg	19 05 53.7	-0.6
PSET				*i* AML	AML	19 05 58.4	
PSET				*i* AML	AML	19 05 60.0	
PSET				*i* AML	AML	19 06 00.4	
PID	Ribeirinha	1.01	285	*e*S	Sg	19 05 55.0	-0.4
PID				*i* IAML		19 05 55.9	
PID				*i* IAML		19 05 56.1	
PID				*i* IAML		19 05 56.1	
PID	Ribeirinha	1.01	285	*e*S	Sg	19 05 55.0	-0.4
PID				*i* IAML		19 05 55.9	
PID				*i* IAML		19 05 56.1	
PID				*i* IAML		19 05 56.1	
PID	Ribeirinha	1.01	285	*e*S	Sg	19 05 55.0	-0.4
PID				*i* AML	AML	19 05 55.9	
PID				*i* AML	AML	19 05 56.1	
PID				*i* AML	AML	19 05 56.1	
PMAN	Manadas	1.06	296	*e*P	Pb	19 05 43.0	0.0
PMAN				*e*S	Sb	19 05 55.4	-1.4
PMAN				*i* IAML		19 05 58.5	
PMAN				*i* IAML		19 06 01.6	
PMAN				*i* IAML		19 06 02.7	
PMAN	Manadas	1.06	296	*e*P	Pb	19 05 43.0	0.0
PMAN				*e*S	Sb	19 05 55.4	-1.4
PMAN				*i* IAML		19 05 58.5	
PMAN				*i* IAML		19 06 01.6	
PMAN				*i* IAML		19 06 02.7	
PMAN	Manadas	1.06	296	*e*P	Pb	19 05 43.0	0.0
PMAN				*e*S	Sb	19 05 55.4	-1.4
PMAN				*i* AML	AML	19 05 58.5	
PMAN				*i* AML	AML	19 06 01.6	
PMAN				*i* AML	AML	19 06 02.7	
PPNO	Prainha do Nor	1.13	285	*e*P	Pn	19 05 44.6	+0.1
PPNO				*e*S	Sb	19 05 57.8	-1.2
PPNO				*i* IAML		19 05 59.0	
PPNO				*i* IAML		19 05 59.5	
PPNO	Prainha do Nor	1.13	285	*e*P	Pn	19 05 44.6	+0.1
PPNO				*e*S	Sb	19 05 57.8	-1.2
PPNO				*i* IAML		19 05 59.0	
PPNO				*i* IAML		19 05 59.5	
PPNO	Prainha do Nor	1.13	285	*e*P	Pn	19 05 44.6	+0.1
PPNO				*e*S	Sb	19 05 57.8	-1.2
PPNO				*i* AML	AML	19 05 59.0	
PPNO				*i* AML	AML	19 05 59.5	
CMLA	Cha da Macela	1.15	111	*e*P	Pb	19 05 44.4	-0.1
CMLA				*e*S	Sb	19 05 57.9	-1.4
CMLA				*i* IAML		19 05 59.8	
CMLA				*i* IAML		19 06 00.8	
CMLA				*i* IAML		19 06 02.3	
CMLA	Cha da Macela	1.15	111	*e*P	Pb	19 05 44.4	-0.1
CMLA				*e*S	Sb	19 05 57.9	-1.4
CMLA				*i* IAML		19 05 59.8	
CMLA				*i* IAML		19 06 00.8	
CMLA				*i* IAML		19 06 02.3	
CMLA	Cha da Macela	1.15	111	*e*P	Pb	19 05 44.4	-0.1
CMLA				*e*S	Sb	19 05 57.9	-1.4
CMLA				*i* AML	AML	19 05 59.8	
CMLA				*i* AML	AML	19 06 00.8	
CMLA				*i* AML	AML	19 06 02.3	
PCALD	Caldeiras da R	1.16	109	*e*P	Pb	19 05 44.5	-0.2
PCALD				*e*S	Sb	19 05 57.9	-1.9
PCALD	Caldeiras da R	1.16	109	*e*P	Pb	19 05 44.5	-0.2
PCALD				*e*S	Sb	19 05 57.9	-1.9
ROSA	Rosais	1.20	297	*e*P	Pn	19 05 45.3	-0.1
ROSA				*e*S	Sb	19 05 59.2	-1.8
ROSA				*i* IAML		19 06 01.0	
ROSA				*i* IAML		19 06 01.4	
ROSA				*i* IAML		19 06 01.7	
ROSA	Rosais	1.20	297	*e*P	Pn	19 05 45.3	-0.1
ROSA				*e*S	Sb	19 05 59.2	-1.8
ROSA				*i* IAML		19 06 01.0	
ROSA				*i* IAML		19 06 01.4	
ROSA				*i* IAML		19 06 01.7	
ROSA	Rosais	1.20	297	*e*P	Pn	19 05 45.3	-0.1
ROSA				*e*S	Sb	19 05 59.2	-1.8
ROSA				*i* AML	AML	19 06 01.0	
ROSA				*i* AML	AML	19 06 01.4	
ROSA				*i* AML	AML	19 06 01.7	
PGRA	Graciosa	1.21	315	*e*P	Sb	19 05 58.1	-3.3
PGRA	Graciosa	1.21	315	*e*P	Sb	19 05 58.1	-3.3
SRBC	Serra Branca	1.25	313	*e*S	Sb	19 05 59.2	-3.3
SRBC				*i* IAML		19 05 59.4	
SRBC				*i* IAML		19 05 59.5	
SRBC				*i* IAML		19 06 00.5	
SRBC	Serra Branca	1.25	313	*e*S	Sb	19 05 59.2	-3.3
SRBC				*i* IAML		19 05 59.4	
SRBC				*i* IAML		19 05 59.5	
SRBC				*i* IAML		19 06 00.5	
SRBC	Serra Branca	1.25	313	*e*S	Sb	19 05 59.2	-3.3
SRBC				*i* AML	AML	19 05 59.4	
SRBC				*i* AML	AML	19 05 59.5	
SRBC				*i* AML	AML	19 06 00.5	
PGRON	Lagoa das Cont	1.25	109	*e*P	Pn	19 05 46.0	-0.2
PGRON				*e*S	Sb	19 06 00.2	-2.3
PGRON				*i* IAML		19 06 02.7	
PGRON				*i* IAML		19 06 05.9	
PGRON	Lagoa das Cont	1.25	109	*e*P	Pn	19 05 46.0	-0.2
PGRON				*e*S	Sb	19 06 00.2	-2.3
PGRON				*i* IAML		19 06 02.7	
PGRON				*i* IAML		19 06 05.9	
PGRON	Lagoa das Cont	1.25	109	*e*P	Pn	19 05 46.0	-0.2
PGRON				*e*S	Sb	19 06 00.2	-2.3
PGRON				*i* AML	AML	19 06 02.7	
PGRON				*i* AML	AML	19 06 05.9	
PICO	Pico	1.26	285	*e*P	Pb	19 05 46.7	+0.2
PICO				*e*S	Sb	19 06 01.4	-1.4
PICO				*i* IAML		19 06 02.6	
PICO				*i* IAML		19 06 02.7	
PICO				*i* IAML		19 06 02.8	
PICO	Pico	1.26	285	*e*P	Pb	19 05 46.7	+0.2
PICO				*e*S	Sb	19 06 01.4	-1.4
PICO				*i* IAML		19 06 02.6	
PICO				*i* IAML		19 06 02.7	
PICO				*i* IAML		19 06 02.8	
PICO	Pico	1.26	285	*e*P	Pb	19 05 46.7	+0.2
PICO				*e*S	Sb	19 06 01.4	-1.4
PICO				*i* AML	AML	19 06 02.6	
PICO				*i* AML	AML	19 06 02.7	
PICO				*i* AML	AML	19 06 02.8	
PCAN	Candelaria	1.30	283	*e*P	Pb	19 05 47.3	+0.2
PCAN				*e*S	Sb	19 06 02.5	-1.3
PCAN				*i* IAML		19 06 03.6	
PCAN				*i* IAML		19 06 03.7	
PCAN				*i* IAML		19 06 03.9	
PCAN	Candelaria	1.30	283	*e*P	Pb	19 05 47.3	+0.2
PCAN				*e*S	Sb	19 06 02.5	-1.3
PCAN				*i* IAML		19 06 03.6	
PCAN				*i* IAML		19 06 03.7	
PCAN				*i* IAML		19 06 03.9	
PCAN	Candelaria	1.30	283	*e*P	Pb	19 05 47.3	+0.2
PCAN				*e*S	Sb	19 06 02.5	-1.3
PCAN				*i* AML	AML	19 06 03.6	
PCAN				*i* AML	AML	19 06 03.7	
PCAN				*i* AML	AML	19 06 03.9	
BART	Pico Bartolome	1.41	106	*e*P	Pn	19 05 47.6	-0.7
BART				*e*S	Sn	19 06 03.6	-3.2
BART				*i* IAML		19 06 05.2	
BART				*i* IAML		19 06 05.2	
BART				*i* IAML		19 06 05.3	
BART	Pico Bartolome	1.41	106	*e*P	Pn	19 05 47.6	-0.7
BART				*e*S	Sn	19 06 03.6	-3.2
BART				*i* IAML		19 06 05.2	
BART				*i* IAML		19 06 05.2	
BART				*i* IAML		19 06 05.3	
BART	Pico Bartolome	1.41	106	*e*P	Pn	19 05 47.6	-0.7
BART				*e*S	Sn	19 06 03.6	-3.2
BART				*i* AML	AML	19 06 05.2	
BART				*i* AML	AML	19 06 05.2	
BART				*i* AML	AML	19 06 05.3	
HOR	Horta	1.42	285	*e*P	Pn	19 05 48.2	-0.2
HOR				*e*S	Sn	19 06 04.9	-2.2
HOR				*i* IAML		19 06 06.4	
HOR				*i* IAML		19 06 06.7	
HOR				*i* IAML		19 06 07.2	
HOR	Horta	1.42	285	*e*P	Pn	19 05 48.2	-0.2
HOR				*e*S	Sn	19 06 04.9	-2.2
HOR				*i* IAML		19 06 06.4	
HOR				*i* IAML		19 06 06.7	
HOR				*i* IAML		19 06 07.2	
HOR	Horta	1.42	285	*e*P	Pn	19 05 48.2	-0.2
HOR				*e*S	Sn	19 06 04.9	-2.2
HOR				*i* AML	AML	19 06 06.4	
HOR				*i* AML	AML	19 06 06.7	
HOR				*i* AML	AML	19 06 07.2	
PFCBR	Castelo Branco	1.49	284	*e*P	Pn	19 05 49.5	+0.2
PFCBR				*e*S	Sn	19 06 07.0	-1.7
PFCBR				*i* IAML		19 06 07.9	
PFCBR				*i* IAML		19 06 08.0	
PFCBR				*i* IAML		19 06 08.1	
PFCBR	Castelo Branco	1.49	284	*e*P	Pn	19 05 49.5	+0.2
PFCBR				*e*S	Sn	19 06 07.0	-1.7
PFCBR				*i* IAML		19 06 07.9	
PFCBR				*i* IAML		19 06 08.0	
PFCBR				*i* IAML		19 06 08.1	
PFCBR	Castelo Branco	1.49	284	*e*P	Pn	19 05 49.5	+0.2
PFCBR				*e*S	Sn	19 06 07.0	-1.7
PFCBR				*i* AML	AML	19 06 07.9	
PFCBR				*i* AML	AML	19 06 08.0	
PFCBR				*i* AML	AML	19 06 08.1	
CALA	Caldeira	1.49	286	*e*P	Pn	19 05 49.5	+0.1
CALA				*e*S	Sn	19 06 07.0	-1.9
CALA				*i* IAML		19 06 08.2	
CALA				*i* IAML		19 06 08.3	
CALA				*i* IAML		19 06 08.8	
CALA	Caldeira	1.49	286	*e*P	Pn	19 05 49.5	+0.1
CALA				*e*S	Sn	19 06 07.0	-1.9
CALA				*i* IAML		19 06 08.2	
CALA				*i* IAML		19 06 08.3	
CALA				*i* IAML		19 06 08.8	
CALA	Caldeira	1.49	286	*e*P	Pn	19 05 49.5	+0.1
CALA				*e*S	Sn	19 06 07.0	-1.9
CALA				*i* AML	AML	19 06 08.2	
CALA				*i* AML	AML	19 06 08.3	
CALA				*i* AML	AML	19 06 08.8	
PCED	Cedros	1.50	288	*e*P	Pn	19 05 49.4	-0.1
PCED				*e*S	Sn	19 06 07.0	-2.1
PCED				*i* IAML		19 06 07.7	
PCED				*i* IAML		19 06 08.4	
PCED				*i* IAML		19 06 09.3	
PCED	Cedros	1.50	288	*e*P	Pn	19 05 49.4	-0.1
PCED				*e*S	Sn	19 06 07.0	-2.1
PCED				*i* IAML		19 06 07.7	
PCED				*i* IAML		19 06 08.4	
PCED				*i* IAML		19 06 09.3	
PCED	Cedros	1.50	288	*e*P	Pn	19 05 49.4	-0.1
PCED				*e*S	Sn	19 06 07.0	-2.1
PCED				*i* AML	AML	19 06 07.7	
PCED				*i* AML	AML	19 06 08.4	
PCED				*i* AML	AML	19 06 09.3	
PSMN	Pico do Norte,	1.86	129	*e*P	Pn	19 05 54.8	+0.4
PSMN				*e*S	Sn	19 06 15.3	-2.6
PSMN				*i* IAML		19 06 15.7	
PSMN				*i* IAML		19 06 18.0	
PSMN				*i* IAML		19 06 18.2	
PSMN	Pico do Norte,	1.86	129	*e*P	Pn	19 05 54.8	+0.4
PSMN				*e*S	Sn	19 06 15.3	-2.6
PSMN				*i* IAML		19 06 15.7	
PSMN				*i* IAML		19 06 18.0	
PSMN				*i* IAML		19 06 18.2	
PSMN	Pico do Norte,	1.86	129	*e*P	Pn	19 05 54.8	+0.4
PSMN				*e*S	Sn	19 06 15.3	-2.6
PSMN				*i* AML	AML	19 06 15.7	
PSMN				*i* AML	AML	19 06 18.0	
PSMN				*i* AML	AML	19 06 18.2	
ESDC	Sonseca Array	17.89	78	P	P	19 09 31.9	-0.2
	0.1nm,0.3s,baz=290,slow=13,SNR=4.1						
ESDC				LR	LR	19 15 29.7	
	comp=Z,49nm,19.1s,baz=284,slow=34						
	0.4nm,0.7s						
MDT	Midelt	18.89	100	LR	LR	19 14 21.8	
	comp=Z,18nm,20.6s,baz=352,slow=29						
DAVOX	Davos/Dischmat	28.22	60	LR	LR	19 20 58.4	
	comp=Z,33nm,19.3s,baz=65,slow=33						
VAE	Valguarnera	32.43	78	LR	LR	19 23 35.6	
	comp=Z,44nm,20.9s,baz=178,slow=34						
NOA	NORSAR Array B	32.90	34	LR	LR	19 24 00.7	
	comp=Z,28nm,18.3s,baz=245,slow=34						
HFS	Hagfors	33.64	36	LR	LR	19 24 31.3	
	comp=Z,24nm,18.2s,baz=166,slow=34						
AKASG	Malin Array Be	41.01	54	LR	LR	19 29 00.3	
	comp=Z,28nm,19.3s,baz=304,slow=35						
ARCES	ARCESS Array B	41.80	25	P	P	19 13 12.2	+0.3
	1.7nm,0.9s,baz=226,slow=7.5,SNR=3.6						
	1.7nm,0.9s						
BRTR	Keskin Array B	46.29	68	P	P	19 13 48.4	0.0
	0.1nm,0.4s,baz=311,slow=9.3,SNR=1.8						
	0.1nm,0.4s						
H10N2	ASCENSION HYDR	47.20	163	T	T	20 04 18.3	
	baz=347,slow=75,SNR=20						
H10N3	ASCENSION HYDR	47.21	163	T	T	20 04 19.0	
	baz=347,slow=75,SNR=18						
H10N1	ASCENSION HYDR	47.22	163	T	T	20 04 19.7	
	baz=347,slow=75,SNR=19						
H10S3	ASCENSION HYDR	48.25	164	T	T	20 05 37.4	
	baz=346,slow=74,SNR=47						
H10S2	ASCENSION HYDR	48.26	164	T	T	20 05 38.1	
	baz=234,slow=74,SNR=56						
BELG	Belogornoye	52.01	49	LR	LR	19 35 11.7	
	comp=Z,33nm,20.6s,baz=263,slow=35						
TXAR	Lajitas Array	62.79	287	P	P	19 15 52.1	+3.8
	0.3nm,0.8s,baz=43,slow=6.8,SNR=2.4						
	0.3nm,0.8s						
KURBB	Kurchatov Arra	70.05	41	P	P	19 16 35.2	+0.9
	0.5nm,0.8s,baz=309,slow=6.0,SNR=4.1						
	0.5nm,0.8s						
ZALV	Zalesovo Beam	71.08	35	P	P	19 16 42.8	+2.3
	0.3nm,0.3s,baz=301,slow=17,SNR=1.8						
ZALV				LR	LR	19 49 26.3	
	comp=Z,18nm,18.5s,baz=40,slow=37						
	0.3nm,0.3s						
AAK	Ala-Archa	72.49	49	LR	LR	19 49 12.9	
	comp=Z,23nm,19.2s,baz=26,slow=36						
MKAR	Makanchi Array	74.36	42	P	P	19 17 01.5	+1.2
	0.3nm,0.7s,baz=299,slow=5.0,SNR=3.0						
	0.3nm,0.7s						

IDC 03 19:08:50.7±4.9**,6°.77S×142°.08E,h0**^{km}**,mb3.4**/1**,**
mbtmp3.6/3**,ML3.6**/2**,Error ellipse: s-maj=163.2km**
s-min=36.3km az=97.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.10	209	Pn	Pn	19 12 23.6	-1.9
	0.2nm,0.3s,baz=29,slow=13,SNR=5.1						
	0.4nm,0.5s						
ASAR	Alice Springs	18.55	204	P	P	19 13 09.1	-0.1
	0.4nm,0.3s,baz=33,slow=9.8,SNR=63						
	1.9nm,0.6s						
MKAR	Makanchi Array	75.03	322	P	P	19 20 34.7	+0.4
	0.4nm,0.9s,baz=116,slow=6.6,SNR=2.4						
	0.4nm,0.9s						

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*MOS **03** 19:10:12.1±1.6,54°.80N×111°.69E,h9^{km},mb3.5/1,Error*
ellipse: s-maj=15.8km s-min=9.8km az=73.5
*BYKL **03** 19:10:12.4±0.2,54°.87N×111°.68E,h7^{km}±3^{km}*
*IDC **03** 19:10:16.1±7.7,54°.75N×111°.32E,h0^{km},mb2.9/2,*
mbtmp3.1/5,ML2.9/3,MS2.8/1,Error ellipse:
s-maj=107.7km s-min=32.9km az=88.0
ISC 03 19:10:12.7±0.7**,54°.88N**±0°.02×**111°.83E**±0°.02**,h10**^{km}**,n53,**
σ2^{s}.33/103**,6C-3D,Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YLYR	Ulyunkhan	0.38	269	⇓*i*Pg	Pg	19 10 18.0	-2.3
	214nm,0.3s						
YLYR				⇓*i*Pg	Pg	19 10 18.0	-2.3
	2µm,0.3s						
YLYR				⇑*i*Pg	Pg	19 10 18.0	-2.3
	2µm,0.3s						
YLYR				*e*Sg	Sg	19 10 22.4	-3.0
YLYR				Pmax			
	1µm,0.3s						
YLYR				Smax			
	4µm,0.4s						
YLYR	Ulyunkhan	0.38	269	⇑*i*PG	Pg	19 10 18.0	-2.3
YLYR				*e*		19 10 21.6	
YLYR				pmax	pmax		
	comp=Z,1µm,0.3s						
YLYR				smax	smax		
	comp=N,4µm,0.4s						
KMO	Kumora	1.07	341	⇑*i*Pg	Pg	19 10 31.2	-2.0
KMO				*e*Sg	Sg	19 10 45.5	-1.6
KMO				Pmax			
	comp=N,218nm,0.4s						
KMO				Smax			
	comp=N,449nm,1.0s						
KMO	Kumora	1.07	341	⇑*i*PG	Pg	19 10 31.2	-2.0
KMO				*e*		19 10 44.1	
KMO				pmax	pmax		
	comp=Z,219nm,0.4s						
KMO				smax	smax		
	comp=N,450nm,1.0s						
UKT	Uakit	1.20	59	⇑*i*Pg	Pb	19 10 34.9	-0.6
UKT				*e*Sg	Sn	19 10 52.3	+0.3
UKT				*e*		19 10 57.5	
UKT				Pmax			
	comp=N,101nm,0.4s						
UKT				max			
	comp=N,315nm,0.4s						
UKT	Uakit	1.20	59	⇑*i*PG	Pb	19 10 34.8	-0.7
UKT				*e*		19 10 52.1	
UKT				pmax	pmax		
	comp=Z,14nm,0.1s						
UKT				smax	smax		
	comp=N,242nm,0.2s						
YOAB	Uoyan, Buryati	1.26	357	*e*Pg	Pn	19 10 35.6	-0.8
YOAB				*e*Pb	Pg	19 10 37.6	+0.7
YOAB				*e*Sg	Sg	19 10 53.1	-0.2
YOAB				max			
	comp=N,81nm,0.2s						
YOAB				Smax			
	comp=N,606nm,0.6s						
NIZB	Nizh Angarsk	1.58	305	*e*Pg	Pn	19 10 40.2	-0.6
NIZB				*e*Pb	Pb	19 10 41.5	-0.5
NIZB				*e*Sg	Sn	19 11 00.7	-0.5
NIZB				max			
	comp=N,84nm,0.3s						
NIZB				Smax			
	comp=N,251nm,0.3s						
SVKR	Severomuysk	1.58	38	*e*Pg	Pg	19 10 43.2	+0.2
SVKR				*e*Sg	Sg	19 11 04.8	+1.3
SVKR				*e*		19 11 08.1	
SVKR				Pmax			
	comp=N,158nm,0.3s						
SVKR				max			
	comp=N,993nm,0.6s						
SVKR	Severomuysk	1.58	38	*e*PN	Pg	19 10 43.1	+0.1
SVKR				*e*		19 11 05.7	
SVKR				pmax	pmax		
	comp=Z,154nm,0.5s						
SVKR				smax	smax		
	comp=E,1µm,0.6s						
SYVR	Suvo	1.63	222	*e*Pg	Pn	19 10 40.9	-0.6
SYVR				*e*Sg	Sn	19 11 01.9	-0.6
SYVR				Pmax			
	comp=E,118nm,0.7s						
SYVR				Smax			
	comp=E,512nm,0.3s						
SYVR	Suvo	1.63	222	*e*PG	Pn	19 10 40.8	-0.7
SYVR				*e*		19 11 02.3	
SYVR				pmax	pmax		
	comp=Z,118nm,0.6s						
SYVR				smax	smax		
	comp=E,527nm,0.5s						
MXMB	Maximikha	2.44	229	*e*Pn	Pn	19 10 52.9	+0.4
MXMB				*e*Pg	Pb	19 10 55.2	-1.4
MXMB				*e*Sg	Sb	19 11 27.2	+0.6
NLYR	Nelyaty	2.72	52	*e*Pn	Pn	19 10 58.3	+1.8
NLYR				*e*Pg	Pb	19 11 02.4	+0.9
NLYR				*e*Sn	Sb	19 11 32.1	-2.8
NLYR				*e*Sg	Sg	19 11 39.9	-0.2
NLYR				Pmax			
	comp=E,29nm,0.6s						
NLYR				Smax			
	comp=E,270nm,1.6s						
OGRR	Ongureny	2.78	245	*e*Pn	Pn	19 10 56.8	-0.4
OGRR				*e*Pg	Pb	19 11 00.8	-1.6
OGRR				*e*Sn	Sn	19 11 30.0	-0.8
OGRR				*e*Sg	Sb	19 11 36.4	0.0
OGRR				Pmax			
	comp=E,25nm,0.4s						
OGRR				Smax			
	comp=E,186nm,0.3s						
OGRR	Ongureny	2.78	245	⇓*i*PN	Pn	19 10 56.8	-0.4
OGRR				*e*		19 11 01.2	
OGRR				*e*		19 11 35.2	
OGRR				pmax	pmax		
	comp=Z,24nm,0.5s						
OGRR				smax	smax		
	comp=E,198nm,0.8s						
GORB	Goryachinsk	2.83	229	*e*Pn	Pn	19 10 57.4	-0.5
GORB				*e*Pg	Pb	19 11 02.3	-1.0
GORB				*e*Sg	Sb	19 11 38.4	+0.5
CIT	Chita	3.05	160	*e*Pn	Pn	19 11 01.3	+0.3

CIT				ePg	Pb	19 11 07.2	+0.2
CIT				e		19 11 41.5	
CIT				eSg	Sg	19 11 47.2	-3.3
CIT				Pmax			
	comp=E,31nm,0.3s						
CIT				Smax			
	comp=E,475nm,0.2s						
CIT	Chita	3.05	160	ePN	Pn	19 11 01.1	+0.1
CIT				e		19 11 07.7	
CIT				eS	Sn	19 11 37.8	+0.3
CIT				e		19 11 46.5	
CIT				pmax	pmax		
	comp=Z,41nm,0.5s						
CIT				smax	smax		
	comp=E,609nm,0.6s						
KELR	Kotokel	3.08	228	ePn	Pn	19 11 00.9	-0.4
KELR				ePg	Pb	19 11 06.8	-0.7
KELR				eSg	Sb	19 11 46.4	+1.4
BOD	Bodaibo	3.18	21	ePg	Pb	19 11 09.5	+0.2
BOD				e		19 11 45.0	
BOD				eSg	Sg	19 11 51.5	-3.3
BOD				Pmax			
	comp=E,17nm,0.5s						
BOD				Smax			
	comp=E,79nm,0.4s						
BOD	Bodaibo	3.18	21	ePN	Pb	19 11 09.2	-0.1
BOD				e		19 11 51.0	
BOD				pmax	pmax		
	comp=Z,15nm,0.4s						
BOD				smax	smax		
	comp=N,79nm,0.4s						
ZRHB	Zarechye	3.63	232	ePg	Pb	19 11 16.1	-0.8
ZRHB				eSg	Sb	19 12 03.0	+2.1
ZRHB				Pmax			
	comp=N,13nm,0.3s						
ZRHB				Smax			
	comp=N,285nm,0.6s						
TRG	Tyrgan	3.88	239	ePn	Pn	19 11 11.1	-1.3
TRG				ePg	Pb	19 11 20.7	-0.5
TRG				eSn	Sn	19 11 57.0	-1.1
TRG				eSg	Sb	19 12 10.0	+1.8
TRG				Pmax			
	comp=N,9.0nm,0.4s						
TRG				Smax			
	comp=N,83nm,0.4s						
UUDB	Ulan-Yde	3.92	221	ePn	Pn	19 11 12.6	-0.3
UUDB				ePg	Pb	19 11 21.3	-0.5
UUDB				eSg	Sb	19 12 13.1	+3.8
UUDB				Pmax			
	comp=N,23nm,0.5s						
UUDB				Smax			
	comp=N,129nm,0.6s						
CRS	Chara	4.15	58	ePn	Pn	19 11 18.4	+2.3
CRS				ePg	Pb	19 11 27.9	+2.1
CRS				eSg	Sg	19 12 23.1	-2.8
CRS				Pmax			
	comp=N,24nm,0.9s						
CRS				Smax			
	comp=N,64nm,1.5s						
CRS	Chara	4.15	58	ePN	Pg	19 11 30.5	-1.7
CRS				e		19 12 23.7	
CRS				pmax	pmax		
	comp=Z,27nm,0.8s						
CRS				smax	smax		
	comp=E,54nm,0.6s						
KAB	Kabansk	4.20	230	ePg	Pb	19 11 26.8	+0.2
KAB				eSg	Sb	19 12 20.1	+2.8
KAB				Smax			
	comp=E,231nm,1.1s						
STDB	Stepnoy Dvoret	4.24	232	ePg	Pb	19 11 26.9	-0.5
STDB				eSg	Sb	19 12 22.8	+4.2
HRMR	Khuramsha	4.38	224	ePn	Pn	19 11 19.0	-0.3
HRMR				ePg	Pb	19 11 30.1	+0.4
HRMR				eSg	Sb	19 12 26.9	+4.3
HRMR				Pmax			
	comp=E,14nm,0.5s						
HRMR				Smax			
	comp=E,80nm,0.7s						
VTMR	Vitim	4.59	5	ePg	Pb	19 11 35.7	+2.5
VTMR				eSg	Sg	19 12 35.9	-3.9
TUP	Tupik	4.74	92	ePn	Pn	19 11 25.5	+1.2
TUP				e		19 11 27.1	
TUP				ePg	Pb	19 11 38.3	+2.4
TUP				eSn	Sn	19 12 19.9	+0.7
TUP				eSg	Sg	19 12 42.1	-2.7
TUP				Pmax			
	comp=E,8.0nm,0.2s						
TUP				Smax			
	comp=E,144nm,0.4s						
TUP	Tupik	4.74	92	ePN	Pn	19 11 25.4	+1.2
TUP				eS	Sn	19 12 19.7	+0.5
TUP				eS	Sg	19 12 41.9	-2.9
TUP				smax	smax		
	comp=N,124nm,0.7s						
BGT	Bolshoye Golou	4.77	236	ePg	Pb	19 11 36.0	-0.4
BGT				eSg	Sb	19 12 36.4	+2.5
BGT				Pmax			
	comp=N,10.0nm,0.2s						
BGT				Smax			
	comp=N,48nm,0.7s						
KHNR	Khani	5.02	63	eSg	Sg	19 12 50.4	-3.4
LSTR	Listvyanka	5.16	237	ePn	Pn	19 11 29.7	-0.3
LSTR				ePg	Pb	19 11 42.9	-0.1
LSTR				eSg	Sb	19 12 49.0	+4.0
LSTR				Pmax			
	comp=N,8.0nm,0.8s						
LSTR				Smax			
	comp=N,36nm,1.0s						
KPC	Khapcheranga	5.20	176	ePn	Pn	19 11 30.1	-0.5
KPC				ePg	Pb	19 11 45.9	+2.2
KPC				eSg	Sg	19 12 53.1	-6.4
KPC				Pmax			
	comp=N,7.0nm,0.5s						
KPC				Smax			
	comp=N,134nm,0.8s						
IRK	Irkutsk	5.22	243	eSg	Sb	19 12 50.5	+3.7
IRK				Smax			
	comp=N,143nm,0.5s						
IVK	Ivanovka	5.41	238	ePg	Pb	19 11 48.7	+1.5
IVK				eSg	Sb	19 12 58.1	+6.0
IVK				Pmax			
	comp=N,9.0nm,0.5s						
IVK				Smax			
	comp=N,74nm,1.2s						
TLY	Talaya	5.86	240	ePg	Pb	19 11 55.4	+0.4
TLY				eSg	Sb	19 13 10.2	+5.0
TLY				Pmax			
	comp=N,6.0nm,0.5s						
TLY				Smax			
	comp=N,19nm,0.6s						
ARS	Arshan	6.36	246	ePg	Pb	19 12 04.2	+0.8
ARS				eSg	Sb	19 13 25.1	+5.6
ARS				Pmax			
	comp=N,5.0nm,0.1s						
ARS				Smax			
	comp=N,94nm,0.7s						
ZAK	Zakamensk	6.88	233	eSg	Sb	19 13 43.5	+9.0
ZAK				Smax			
	comp=N,14nm,0.5s						
MOY	Mondy	7.25	248	ePn	Pn	19 11 58.7	0.0
MOY				ePg	Pb	19 12 21.0	+2.4
MOY				e		19 12 25.6	
MOY				e		19 13 20.6	
MOY				eSg	Sb	19 13 52.9	+7.8
MOY				max			
	comp=N,7.0nm,0.8s						
MOY				Smax			
	comp=N,39nm,1.1s						
ORL	Orlik	7.51	257	ePn	Pn	19 12 02.9	+0.6
ORL				ePg	Pb	19 12 25.4	+2.4
ORL				eSg	Sb	19 14 02.0	+9.4
ORL				Pmax			
	comp=N,7.0nm,0.7s						
ORL				Smax			
	comp=N,45nm,1.1s						
CLNS	Chul'man	7.61	70	eSg	Sg	19 14 10.2	-6.5
SONM	Songino Array	7.83	208	Pn	Pn	19 12 07.0	+0.3
	comp=N,0.8nm,0.3s,baz=20,slow=13,SNR=6.7						
SONM				Lg	Lg	19 14 17.9	
	comp=N,1.3nm,0.3s,baz=22,slow=25,SNR=8.8						
	comp=N,1.1nm,0.2s						
KLR	Kul'dur	13.48	107	Lg	Lg	19 17 21.1	
	comp=N,0.1nm,0.3s,baz=33,slow=19,SNR=5.9						
ZALV	Zalesovo Beam	15.72	278	Pn	Pn	19 13 53.2	-0.7
	comp=N,0.1nm,0.3s,baz=61,slow=12,SNR=4.2						
	comp=N,0.7nm,0.6s						
MKAR	Makanchi Array	20.21	259	P	Pn	19 14 49.0	-0.4
	baz=53,slow=7.4,SNR=2.0						
	comp=N,0.1nm,0.5s						
KURK	Kurchatov	20.39	272	P	Pn	19 14 52.4	+1.0
KURBB	Kurchatov Arra	20.48	272	P	Pn	19 14 52.4	-0.1
	comp=N,0.3nm,0.8s,baz=69,slow=13,SNR=3.4						
	comp=N,0.3nm,0.8s						
BVAR	Borovoye Array	24.20	283	P	P	19 15 32.1	+2.9
	comp=N,0.3nm,0.4s,baz=52,slow=9.3,SNR=3.9						
	comp=N,0.3nm,0.4s						
PETK	Petropavlovsk-	26.66	75	LR	LR	19 26 50.2	
	comp=N,18nm,18.7s,baz=108,slow=37						

*TAP **03** 19:12:15.7, 24.°75N×122.°86E, h135km, ML2.6, C*
*JMA **03** 19:12:16.2±0.3, 25.°N±3.°×122.°9E±0.°9, h129km±2km, MV2.1/13, NW OFF ISHIGAKIJIMA IS*
ISC 03 19:12:15.7±1.6**, 24.°76N**±0.°06×**122.°88E**±0.°03**, h133**km±9km**, n69, σ0.s72**/123**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.32	169	eP	Pn	19 12 34.4	+0.2
JYNG				eS	Sn	19 12 48.4	+0.2
YOJ	Yonaguni jima	0.32	158	eP	Pn	19 12 34.5	+0.2
YOJ	Yonaguni jima	0.32	158	P	Pn	19 12 34.4	+0.2
YOJ				S	Sn	19 12 48.4	+0.1
EOS2	EOS2	0.68	240	eP	Pn	19 12 36.1	+0.1
EOS2				eS	Sn	19 12 51.9	+0.5
EOS3	EOS3	0.69	227	eP	Pn	19 12 36.6	+0.5
EOS3				eS	Sn	19 12 52.4	+0.8
EOS4	EOS4	0.82	219	eP	Pn	19 12 37.3	+0.5
EOS4				eS	Sn	19 12 53.6	+0.7
IRIF	Iriomote-Funau	0.89	119	P	Pn	19 12 38.1	+0.3
IRIF				eS	Sn	19 12 54.2	-0.4
TWC	Suao	0.95	261	eP	Pn	19 12 39.0	+0.6
TWC				eS	Sn	19 12 54.6	-0.9
TIPB	Shuangxi	0.98	283	eP	Pn	19 12 38.6	-0.1
TIPB				eS	Sn	19 12 54.9	-1.2
ENA	Nanau	1.09	252	eP	Pn	19 12 39.4	-0.2
ENA				eS	Sn	19 12 57.3	-0.5
HATJ	Hateruma jima	1.10	129	eP	Pn	19 12 40.7	+0.9
TWE	Neicheng	1.10	268	eP	Pn	19 12 39.4	-0.4
JKRS	Kuro-shima	1.16	117	eP	Pn	19 12 41.1	+0.8
JKRS				eS	Sn	19 12 59.1	0.0
FUSB	Fushanzhiwuyua	1.17	270	P	Pn	19 12 40.5	-0.1
FUSB				eS	Sn	19 12 59.2	-0.3
ENTT	Nioudou	1.20	264	eP	Pn	19 12 41.3	+0.5
ENTT				eS	Sn	19 13 00.1	+0.2
JIJ	Ishigaki jima	1.22	109	eP	Pn	19 12 41.3	+0.3
JIJ				S	Sn	19 12 59.1	-1.1
YM01	YM01	1.25	288	eP	Pn	19 12 41.2	0.0
YM01				eS	Sn	19 13 00.0	-0.7
LATG	Datong	1.25	260	P	Pn	19 12 41.8	+0.4
LATG				S	Sn	19 13 00.8	-0.1
TATO	Taipei	1.28	280	eP	Pn	19 12 42.5	+0.9
ETL	Fush Village	1.29	243	eP	Pn	19 12 43.4	+1.6
ETL				eS	Sn	19 13 00.8	-0.8
NACB	Ninganchiao	1.31	244	eP	Pn	19 12 42.1	+0.2
NACB				eS	Sn	19 13 00.4	-1.4
JISG	Ishigakijimahi	1.32	97	P	Pn	19 12 42.1	+0.1
JISG				eS	Sn	19 13 01.0	-1.0
TWD	Chiawan	1.35	240	eP	Pn	19 12 43.2	+0.9
TWD				eS	Sn	19 13 01.9	-0.7
YHNB	Yeheng	1.37	266	i P	Pn	19 12 42.9	+0.3
YHNB				i S	Sn	19 13 02.6	-0.5
ETLH	Xiulin Townshi	1.39	247	eP	Pn	19 12 43.0	+0.1
ETLH				eS	Sn	19 13 02.6	-0.9
HWA	Hwalien	1.40	236	eP	Pn	19 12 43.9	+1.0
NNSB	Datong	1.40	257	eP	Pn	19 12 43.4	+0.4
NNSB				S	Sn	19 13 03.2	-0.6
NNSH	Datong	1.40	257	eP	Pn	19 12 43.1	+0.1
NNSH				eS	Sn	19 13 03.8	0.0
TEYL	Yanliau Villag	1.47	233	eP	Pn	19 12 43.8	+0.2
TEYL				eS	Sn	19 13 04.5	-0.4
ETM	Tongmen	1.49	238	eP	Pn	19 12 43.7	-0.2
ETM				S	Sn	19 13 04.2	-1.1
SHUL	Shoufeng	1.54	231	eP	Pn	19 12 44.9	+0.5
SHUL				eS	Sn	19 13 07.3	+0.9
KSHI	Guanxi Townshi	1.55	271	eP	Pn	19 12 44.9	+0.4
KSHI				eS	Sn	19 13 06.3	-0.1
FUSS	Fushou	1.57	251	P	Pn	19 12 45.6	+0.5
FUSS				S	Sn	19 13 07.2	-0.3
WHF	Hehuan Shan	1.59	248	eP	Pn	19 12 45.5	0.0
WHF				eS	Sn	19 13 07.2	-1.0
NFF	Wufeng Townshi	1.60	266	eP	Pn	19 12 45.4	+0.1
NFF				eS	Sn	19 13 07.0	-0.8
TEGC	Jichi Village	1.61	230	eP	Pn	19 12 45.7	+0.5
TEGC				eS	Sn	19 13 07.6	-0.1
ESL	Shilin	1.62	235	eP	Pn	19 12 45.2	-0.1
ESL				eS	Sn	19 13 06.9	-1.1
JTJ	Tarama	1.67	94	eS	Sn	19 13 07.9	-0.9
LIOB	Emei	1.70	266	eP	Pn	19 12 46.4	+0.2
LIOB				S	Sn	19 13 08.9	-0.7
NSTT	Nanjuang	1.71	266	eP	Pn	19 12 46.5	+0.2
NSTT				eS	Sn	19 13 09.1	-0.8
WARBT	Fenglin Townsh	1.71	233	P	Pn	19 12 46.1	-0.3
WARBT				S	Sn	19 13 08.4	-1.4
OWD	Renai	1.75	243	eP	Pn	19 12 47.3	+0.3
OWD				eS	Sn	19 13 10.1	-0.7
WUSB	Renai	1.78	245	P	Pn	19 12 47.8	+0.5
WUSB				S	Sn	19 13 10.8	-0.6
WHP	Taichung City	1.82	255	eP	Pn	19 12 48.7	+0.9
WHP				eS	Sn	19 13 12.3	0.0
HGSD	Ruisui	1.83	227	eP	Pn	19 12 48.9	+1.1
HGSD				eS	Sn	19 13 11.8	-0.5
VWDT	VWDT	1.88	238	eP	Pn	19 12 49.2	+0.9
VWDT				eS	Sn	19 13 12.8	-0.5
EHYH	Wanrong	1.89	228	eP	Pn	19 12 48.8	+0.3
EHY	Hungye	1.89	229	eP	Pn	19 12 49.4	+0.8
DPDB	Guoxing	1.92	248	eP	Pn	19 12 50.3	+1.4
ECBN	Changbin	1.94	222	eP	Pn	19 12 49.7	+0.5
ECBN				eS	Sn	19 13 14.3	-0.4
YULB	Yu-li	1.99	227	eP	Pn	19 12 49.4	-0.3
YULB				S	Sn	19 13 14.4	-1.2
SMLT	Sun Moon Lake	2.00	245	eP	Pn	19 12 50.7	+0.7
SMLT				eS	Sn	19 13 16.5	+0.3
SSLB	Suanglung	2.00	241	eP	Pn	19 12 51.0	+1.1
TWF1	Yuli	2.01	226	eP	Pn	19 12 50.6	+0.6
TWF1				eS	Sn	19 13 15.2	-1.0
TYC	Yuchr	2.03	246	eP	Pn	19 12 51.3	+1.1
TYC				eS	Sn	19 13 16.7	+0.1
CHKH	Chenggong	2.07	221	eP	Pn	19 12 51.5	+0.9
FULB	Fuli	2.13	223	eP	Pn	19 12 51.4	0.0
FULB				eS	Sn	19 13 18.6	-0.1
WHYT	Xinyi Township	2.13	241	eP	Pn	19 12 52.5	+1.1
WHYT				eS	Sn	19 13 20.0	+1.2
CHKT	Chengkung	2.16	220	eP	Pn	19 12 51.8	0.0
CHKT				eS	Sn	19 13 18.1	-1.3
JMJ	Miyako jima 2	2.20	88	eP	Pn	19 12 52.7	+0.5
JMJ				eS	Sn	19 13 19.8	-0.4
EHD	Haiduan	2.22	224	eP	Pn	19 12 52.8	+0.3
EHD				eS	Sn	19 13 19.2	-1.5
JMJ2	Miyako jima3	2.23	90	eP	Pn	19 12 53.5	+0.9
ALS	Alishan	2.27	237	eP	Pn	19 12 54.3	+0.9
ALS				eS	Sn	19 13 21.7	-0.5
EDH	Donghe	2.29	219	eP	Pn	19 12 53.1	-0.3
EDH				eS	Sn	19 13 21.0	-1.3
CHN5	Tsauling	2.32	240	eP	Pn	19 12 55.0	+1.1
LDUT	Ludao	2.45	212	eP	Pn	19 12 54.8	-0.6
LDUT				eS	Sn	19 13 24.3	-1.5
CHN4	Tsaushan	2.52	237	eP	Pn	19 12 56.9	+0.7
CHN4				eS	Sn	19 13 28.0	+0.6
TWGBT	Beinan	2.54	221	eP	Pn	19 12 57.0	+0.4
TWG	Pinlang	2.54	221	eP	Pn	19 12 57.8	+1.3

*NEIC **03** 19:37:01.0±1.9, 23.°8S±0.°1×179.°7W±0.°2, h463km±11km, mb4.5/25, Error ellipse: s-maj=23.7km s-min=18.1km az=133.0*
*IDC **03** 19:37:03.7±2.9, 23.°91S×179.°82W, h490km±32km, mb3.5/7, mbtmp4.3/8, Error ellipse: s-maj=40.6km s-min=19.1km az=161.0*
ISC 03 19:37:05.3±0.7**, 24.°04S**±0.°08×**179.°9W**±0.°1**, h518**km**, n43, σ1.s34**/44**, mb4.5**/18**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.49	162	P	P	19 38 32.2	-5.3
RAO				S	S	19 39 33.5	-20
MSVF	Nonsavu	6.56	343	P	P	19 38 47.1	-1.0
NIUE	Niue	10.50	64		P	19 39 20.4	-7.7
PINNC	Pines Island,	11.72	274	P	P	19 39 37.4	-3.6
URZ	Urewera	14.41	190	P	P	19 40 09.4	+0.5
	5.1nm,0.5s,baz=331,slow=3.4,SNR=8.0						
URZ				S	S	19 42 40.2	-0.1
	4.5nm,0.4s,baz=155,slow=20,SNR=8.6						
BKZ	Black Stump Fm	15.39	191	P	P	19 40 19.0	-0.3
BKZ				IAmb	IAmb	19 40 42.2	
	comp=Z,36nm,1.5s						
BKZ				S	S	19 42 54.8	-4.2
MRZ	Mangatainoka R	17.01	192	P	P	19 40 35.0	-0.5
MSWZ	Moikau Station	17.80	192	P	P	19 40 39.9	-2.9
ARMA	Armidale	26.07	250	P	P	19 41 58.7	+1.3
ARMA				IAmb	IAmb	19 42 00.6	
	comp=Z,12nm,0.8s						
EIDS	Eidsvold	26.39	261	P	P	19 42 01.6	+1.5
EIDS				IAmb	IAmb	19 42 02.0	
	comp=Z,11nm,0.7s						
CTAO	Charters Tower	31.58	270	P	P	19 42 46.7	+1.3
TOO	Toolangi	32.46	237	P	P	19 42 54.2	+1.5
PMG	Port Moresby	34.63	289	P	P	19 43 11.5	+0.3
PMG				IAmb	IAmb	19 43 12.2	
	comp=Z,18nm,0.8s						
STKA	Stephens Creek	34.77	248	P	P	19 43 13.8	+1.6
STKA				IAmb	IAmb	19 43 14.3	
	comp=Z,34nm,1.4s						
STKA	Stephens Creek	34.77	248	P	P	19 43 13.6	+1.4
	comp=Z,2.0nm,0.5s,baz=87,slow=10,SNR=9.2						
	comp=Z,2.0nm,0.5s						
COEN	Coen	36.24	279	P	P	19 43 25.8	+1.2
COEN				IAmb	IAmb	19 43 53.1	
	comp=Z,31nm,1.4s						
BBOO	Buckleboo	39.48	247	P	P	19 43 51.2	+0.2
BBOO				IAmb	IAmb	19 44 24.0	
	comp=Z,29nm,1.4s						
AS31	Alice Springs	42.11	261	P	P	19 44 12.5	+0.5
ASAR	Alice Springs	42.11	261	P	P	19 44 12.3	+0.2
ASAR	Alice Springs	42.11	261	P	P	19 44 12.7	+0.7
	comp=Z,9.5nm,0.8s,baz=95,slow=7.6,SNR=87						
ASAR				ScP	ScP	19 48 58.8	+2.9
	comp=Z,1.3nm,0.9s,baz=105,slow=3.9,SNR=5.5						
	comp=Z,9.5nm,0.8s						
WR8	Warramunga Arr	42.35	266		P	19 44 13.7	-0.2
WR8				IAmb	IAmb	19 44 15.0	
	comp=Z,12nm,0.6s						
WB0	Warramunga Arr	42.49	267		P	19 44 15.2	+0.1
WRA	Warramunga Arr	42.50	266	P	P	19 44 15.3	+0.2
WRA	Warramunga Arr	42.50	266	P	P	19 44 15.2	+0.2
	comp=Z,16nm,0.5s,baz=98,slow=8.4,SNR=112						
	comp=Z,16nm,0.5s						
FORT	Forrest	46.36	250	P	P	19 44 44.9	+0.2
MTN	Manton Dam	47.57	274	P	P	19 44 54.0	-0.1
KNRA	Kununurra	48.79	270	P	P	19 45 03.9	+0.7
KNRA				IAmb	IAmb	19 45 25.9	
	comp=Z,24nm,1.1s						
FITZ	Fitzroy Crossi	50.92	266	P	P	19 45 19.9	+1.1
MBWA	Marble Bar	55.45	260	P	P	19 45 50.7	-0.3
MBWA				IAmb	IAmb	19 46 29.5	
	comp=Z,30nm,1.1s						
MORW	Morawa	56.92	250	P	P	19 46 01.5	+0.3
MORW				IAmb	IAmb	19 46 25.7	
	comp=Z,28nm,1.4s						
CASY	Casey	60.03	206	P	P	19 46 22.1	+0.7
TOLI2	Tolitoli	62.71	285	P	P	19 46 39.6	-0.3
UGM	Wanagama	68.21	271	P	P	19 47 13.6	-0.9
KSM	Kuching	72.23	280	P	P	19 47 38.3	0.0
KSM				IAmb	IAmb	19 48 14.4	
	comp=Z,19nm,1.2s						
ADK	Adak	75.64	2	P	P	19 47 55.9	-0.8
ADK				IAmb	IAmb	19 48 15.2	
	comp=Z,28nm,1.4s						
NVAR	Mina Array Bea	84.78	44	P	P	19 48 44.9	-0.2
	comp=Z,0.4nm,0.6s,baz=209,slow=6.6,SNR=3.7						
	comp=Z,0.4nm,0.6s						
CMAR	Chiang Mai Arr	89.67	290	P	P	19 49 10.4	+2.1
	comp=Z,0.8nm,0.8s,baz=140,slow=3.9,SNR=5.9						
	comp=Z,0.8nm,0.8s						
TXAR	Lajitas Array	90.42	58	P	P	19 49 12.3	+0.7
	comp=Z,1.0nm,0.7s,baz=210,slow=6.3,SNR=14						
	comp=Z,1.0nm,0.7s						
PDAR	Pinedale Array	92.72	44	P	P	19 49 21.9	-0.3
	comp=Z,0.2nm,0.5s,baz=276,slow=6.9,SNR=2.4						
	comp=Z,0.2nm,0.5s						
AKASG	Malin Array Be	145.14	327	PKPbc	PKPdf	19 55 43.2	-0.1
	comp=Z,0.1nm,0.3s,baz=46,slow=4.1,SNR=4.3						
BRTR	Keskin Array B	147.74	307	PKPbc	PKiKP	19 55 52.9	-0.5
	comp=Z,0.6nm,0.6s,baz=80,slow=4.3,SNR=5.9						
MMAI	Mount Meron Ar	147.85	294	PKPbc	PKiKP	19 55 53.2	-0.6
	comp=Z,0.2nm,0.3s,baz=91,slow=5.8,SNR=4.8						
BEHE	Becsehely	153.91	333		PKPab	19 56 21.1	-0.5

*SDD **03** 19:37:18.1±1.4, 19.°02N×67.°85W, h11km±123km, MD3.5, ML2.3, MW3.0*
*RSPR **03** 19:37:21.4, 19.°00N×67.°84W, h57km±8km, MD2.5/7*
*NEIC **03** 19:37:22.0±2.1, 18.°86N±0.°07×67.°83W±0.°03, h35km±2km, ML2.4/20, Md2.5/7(RSPR), Error ellipse: s-maj=12.9km s-min=3.1km az=199.0*
ISC 03 19:37:16.2±1.4**, 19.°07N**±0.°07×**67.°84W**±0.°03**, h7**km±10km**, n54, σ0.s82**/61**, 9C-7D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.76	223	ePg	Pg	19 37 31.2	+0.5
PCDR				eSg	Sg	19 37 40.7	+0.1
PCDR				IAML		19 37 41.0	
	comp=N,263nm,0.3s						
IDE	Isla Desecheo	0.76	153		Pg	19 37 31.0	+0.2
IDE					Sg	19 37 40.4	-0.3
IDE	Isla Desecheo	0.76	153⇓	eP	Pg	19 37 31.0	+0.2
AGPR	Aguadilla, PR	0.91	131		Pn	19 37 35.8	+0.4
AGPR					Sn	19 37 48.4	-0.5
AGPR	Aguadilla, PR	0.91	131	IAML		19 37 50.3	
	comp=E,118nm,0.3s						
AGPR				IAML		19 37 50.3	
	comp=N,91nm,0.3s						
AGPR	Aguadilla, PR	0.91	131⇓	eP	Pn	19 37 35.8	+0.4
AGPR	Aguadilla, PR	0.91	131	eS	Sn	19 37 48.4	-0.5
AGPR	Aguadilla, PR	0.91	131	IAML		19 37 50.2	
	comp=N,88nm,0.2s						
AGPR				IAML		19 37 50.3	
	comp=E,99nm,0.2s						
PRSN	Puerto Rico Se	1.07	142	Pn	Pn	19 37 38.0	+0.3
PRSN				IAML		19 37 52.8	
	comp=N,169nm,0.1s						
LSP	Las Mesas	1.14	141		Pn	19 37 39.6	+1.0
LSP					Sn	19 37 55.1	+0.6
LSP	Las Mesas	1.14	141⇓	eP	Pn	19 37 39.6	+1.0
LSP	Las Mesas	1.14	141	eS	Sn	19 37 55.1	+0.6
MIDR	Miches	1.15	266	ePg	Pb	19 37 39.0	+0.5
MIDR				eSg	Sg	19 37 54.5	+1.2
MIDR				IAML		19 37 55.9	
	comp=N,46nm,0.4s						
MIDR				IAML		19 37 56.0	
	comp=E,44nm,0.2s						
AOPR	Arecibo Observ	1.25	125		Pg	19 37 41.2	+0.9
AOPR					Sn	19 37 57.1	-0.2
AOPR	Arecibo Observ	1.25	125⇓	eP	Pg	19 37 41.2	+0.9
AOPR	Arecibo Observ	1.25	125	eS	Sn	19 37 57.1	-0.2
AOPR	Arecibo Observ	1.25	125⇑	ePg	Pg	19 37 41.0	+0.8
AOPR				IAML		19 38 01.4	
	comp=N,69nm,0.3s						
AOPR				IAML		19 38 01.5	
	comp=N,65nm,0.9s						
AOPR				IAML		19 38 04.2	
	comp=E,102nm,0.2s						
CRPR	Cabo Rojo, PR	1.26	147		Pg	19 37 40.8	+0.4
CRPR	Cabo Rojo, PR	1.26	147		Sb	19 37 56.2	-0.5
CRPR	Cabo Rojo, PR	1.26	147	IAML		19 37 54.0	
	comp=N,25nm,2.3s						
CRPR	Cabo Rojo, PR	1.26	147⇓	eP	Pg	19 37 40.8	+0.4
CRPR	Cabo Rojo, PR	1.26	147	eS	Sb	19 37 56.2	-0.5
CRPR	Cabo Rojo, PR	1.26	147	ePg	Pn	19 37 40.1	-0.1
CRPR				IAML		19 38 03.3	
	comp=E,33nm,0.6s						
CRPR				IAML		19 38 12.9	
	comp=N,24nm,1.9s						
MLPR	Magueyes Islan	1.32	145⇑	eP	Pb	19 37 41.6	+0.1
MLPR	Magueyes Islan	1.32	145	eS	Sb	19 37 57.5	-1.1
UUPR	Utuado, UPR, P	1.33	127		Pg	19 37 42.4	+0.6
UUPR					Sb	19 37 58.2	-0.6

UUPR	Utuado, UPR, P	1.33	127	⇓eP	Pg	19 37 42.4	+0.6
UUPR	Utuado, UPR, P	1.33	127	eS	Sb	19 37 58.2	-0.6
EMPR	Esperanza - Ma	1.37	115		Pg	19 37 42.7	+0.2
EMPR					Sn	19 38 00.1	-0.1
EMPR	Esperanza - Ma	1.37	115	IAML		19 38 02.2	
	comp=E,125nm,1.1s						
EMPR				IAML		19 38 02.4	
	comp=N,104nm,1.5s						
EMPR	Esperanza - Ma	1.37	115	⇑eP	Pg	19 37 42.7	+0.2
EMPR	Esperanza - Ma	1.37	115	eS	Sn	19 38 00.1	-0.1
GBPR	Guanica, Bosqu	1.41	140		Pg	19 37 43.5	+0.2
GBPR	Guanica, Bosqu	1.41	140	⇓eP	Pg	19 37 43.5	+0.2
DR12	Loma Pena Alta	1.49	260	Pn	Pn	19 37 43.5	0.0
HATOM	Hato Mayor del	1.49	260	ePg	Pn	19 37 43.4	-0.1
HATOM				eSg	Sb	19 38 03.7	+0.2
HATOM				IAML		19 38 04.2	
	comp=N,38nm,0.6s						
HATOM				IAML		19 38 04.2	
	comp=N,39nm,0.6s						
HATOM				IAML		19 38 07.3	
	comp=E,27nm,0.8s						
CELP	Cerrillos	1.55	129		Pb	19 37 45.5	+0.3
CELP					Sn	19 38 04.2	-0.4
CELP	Cerrillos	1.55	129	⇑eP	Pb	19 37 45.5	+0.3
CELP	Cerrillos	1.55	129	eS	Sn	19 38 04.2	-0.4
CELP	Cerrillos	1.55	129	ePg	Pb	19 37 45.4	+0.3
CELP				⇑eSg	Sg	19 38 05.6	-0.4
CELP				IAML		19 38 07.1	
	comp=E,46nm,0.5s						
CELP				IAML		19 38 07.4	
	comp=N,45nm,0.2s						
CELP				IAML		19 38 07.5	
	comp=N,45nm,0.2s						
OBIP	Obispado Ponce	1.55	131		Pb	19 37 45.6	+0.3
OBIP					Sb	19 38 04.6	-0.5
OBIP	Obispado Ponce	1.55	131	IAML		19 38 07.5	
	comp=N,43nm,0.5s						
OBIP	Obispado Ponce	1.55	131	⇑eP	Pb	19 37 45.6	+0.3
OBIP	Obispado Ponce	1.55	131	eS	Sb	19 38 04.6	-0.5
ECPR	Experimental S	1.58	118	⇑eP	Pn	19 37 44.2	-0.5
ECPR	Experimental S	1.58	118	eS	Sg	19 38 06.7	-0.4
PDPR	Patillas Dam,	2.01	121	Pn	Pn	19 37 51.1	+0.4
PDPR	Patillas Dam,	2.01	121	⇑eP	Pn	19 37 51.9	+1.3
PDPR	Patillas Dam,	2.01	121	eS	Sn	19 38 16.4	+0.3
BANI	BANI	2.48	255	Pn	Pn	19 37 56.8	-0.5
ABDR	Alto Bandera	2.66	265	eSg	Sg	19 38 40.4	-1.2
ABDR				IAML		19 38 44.8	
	comp=N,29nm,0.6s						
ABDR				IAML		19 38 46.4	
	comp=E,26nm,0.7s						
SDDR	Presa de Saban	3.27	269		Pb	19 38 12.5	-2.1
SDDR	Presa de Saban	3.27	269	⇑eP	Pb	19 38 12.5	-2.1
SDDR	Presa de Saban	3.27	269	eS	Sn	19 38 50.8	+3.6

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*OSPL **03** 19:40:53.1±0.6, 18°.57N×72°.58W, h13^{km}±4^{km}, ML2.0*

*SDD **03** 19:40:53.6±2.2, 18°.48N×72°.54W, h23^{km}±62^{km}, MD3.2, ML1.7*

ISC 03 19:40:53.2±1.3**, 18°.60N**±0°.07×**72°.48W**±0°.06**, h27**^{km}±9^{km}**, n9, σ1^{s}.59**/14**, 1C, Haiti region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAPH	Port-au-Prince	0.19	114	i P	Pb	19 40 58.7	-0.2
PAPH				eS	Sb	19 41 02.2	-0.7
PAPH				IAML		19 41 03.0	
	comp=Z,142nm,0.3s						
JIDR	Jimani	0.61	100	ePg	Pb	19 41 05.3	0.0
JIDR				eSg	Sb	19 41 15.1	+1.6
JIDR				IAML		19 41 17.8	
	comp=N,25nm,0.3s						
JIDR				IAML		19 41 21.0	
	comp=E,44nm,0.2s						
LODU1	El Espartillar	0.99	104	i P	Pb	19 41 11.7	0.0
LODU1				IAML		19 41 28.7	
	comp=Z,54nm,2.5s						
LOBH	Bahia de las A	1.09	132	i P	Pn	19 41 12.7	0.0
LOBH				eS	Sb	19 41 27.8	+0.7
LOBH				IAML		19 41 29.1	
	comp=Z,80nm,1.2s						
REDR	Restauracion	1.17	61	⇑ePg	Pn	19 41 12.5	-1.4
REDR				eSg	Sn	19 41 27.2	-1.8
REDR				IAML		19 41 33.8	
	comp=N,23nm,0.2s						
SDDR	Presa de Saban	1.19	71	ePg	Pb	19 41 15.0	-0.1
SDDR				eSg	Sb	19 41 34.0	+3.7
SDDR				IAML		19 41 38.5	
	comp=E,10nm,0.5s						
SDDR				IAML		19 41 39.1	
	comp=N,12nm,1.6s						
SDDR	Presa de Saban	1.19	71	i P	Pb	19 41 15.1	-0.1
SDDR				IAML		19 41 36.7	
	comp=Z,5.9nm,1.0s						
PODR	Polo	1.22	111	ePg	Pn	19 41 14.7	0.0
PODR				IAML		19 41 47.8	
	comp=E,28nm,0.8s						
GTBY	Guantanamo Bay	2.81	298	eSg	Sb	19 42 18.4	+1.7

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*NEIC **03** 19:49:45.8±1.6, 24°.11S±0°.07×67°.0W±0°.1, h182^{km}±9^{km}, mb4.2/2, ML4.1(GUC), Error ellipse: s-maj=18.8km s-min=9.7km az=95.0*

*IDC **03** 19:49:45.5±1.6, 24°.11S×67°.09W, h156^{km}±18^{km}, mb3.3/1, mbtmp4.0/6, Error ellipse: s-maj=28.2km s-min=13.4km az=99.0*

*SJA **03** 19:49:46.7±0.6, 24°.10S×67°.15W, h189^{km}±6^{km}, ML3.8, MW3.7*

*GUC **03** 19:49:48.0±0.6, 24°.06S×67°.17W, h185^{km}±5^{km}, ML4.0*

ISC 03 19:49:46.7±0.8**, 24°.09S**±0°.04×**67°.18W**±0°.04**, h188**^{km}±8^{km}**, n66, σ1^{s}.22**/97**, 7C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALTA		0.78	100	⇓eP	Pn	19 50 15.0	+0.6
SALTA				eS	Sn	19 50 36.3	+0.6
SALTA		0.78	100	eP	Pn	19 50 02.9	-12
SALTA				eP		19 50 15.0	
SALTA				eP		19 50 15.0	
AF01	San Pedro de A	1.46	321	Pn	Pn	19 50 19.0	-0.3
AF01	San Pedro de A	1.46	321	eP	Pn	19 50 22.7	+3.3
AF01				eS	Sn	19 50 44.0	-0.6
SLA	San Lorenzo	1.65	113	⇓eP	Pn	19 50 21.9	+0.9
SLA				eS	Sn	19 50 47.7	+0.1
SLA	San Lorenzo	1.65	113	eP	Pn	19 50 22.2	+1.2
SLA				eS	Sn	19 50 48.6	+1.0
AZAP	Zapla	1.94	94	eP	Pn	19 50 24.3	+0.3
FSA	Cafayete	2.29	152	eP	Pn	19 50 28.3	+0.6
FSA				eS	Sn	19 50 57.8	-2.0
GO02	Mina Guanaco	2.44	243		Pn	19 50 31.0	+1.4
GO02				Sn	Sn	19 51 03.2	+0.4
GO02	Mina Guanaco	2.44	243	⇑eP	Pn	19 50 31.0	+1.4
GO02				eS	Sn	19 51 04.1	+1.3
GO02	Mina Guanaco	2.44	243	eP	Pn	19 50 19.2	-10
YJA	Yavi	2.44	39	eP	Pn	19 50 30.2	+0.4
YJA				eS	Sn	19 51 03.0	-0.2
YJA	Yavi	2.44	39	eP	Pn	19 50 30.7	+1.0
YJA				eS	Sn	19 51 01.5	-1.7
ASTB	Santa Barbara	2.50	87	eP	Pn	19 50 16.4	-14
PB06	IPOC Station P	2.59	302		Pn	19 50 32.5	+1.3
PB06	IPOC Station P	2.59	302	⇑eP	Pn	19 50 32.5	+1.3
PB06				eS	Sn	19 51 05.4	-0.3
PB06				IAML		19 51 07.0	
	comp=N,457nm,0.2s						
PB06	IPOC Station P	2.59	302	eP	Pn	19 50 32.3	+1.1
PB06				eS	Sn	19 51 06.0	+0.3
PB06				IAML		19 51 11.0	
	comp=Z,226nm,0.2s						
ALOL	LOMAS DE OLMED	2.94	85	eP	Pn	19 50 35.4	+0.3
PB09	IPOC Station P	2.97	320		Pn	19 50 37.2	+1.6
PB09				Sn	Sn	19 51 13.5	-0.2
PB09	IPOC Station P	2.97	320	eP	Pn	19 50 37.1	+1.5
PB09				eS	Sn	19 51 14.0	+0.3
PB09				IAML		19 51 15.2	
	comp=E,214nm,0.2s						
PB09	IPOC Station P	2.97	320	eP	Pn	19 50 37.3	+1.6
PB09				eS	Sn	19 51 13.0	-0.7
PB09				IAML		19 51 15.0	
	comp=Z,172nm,0.3s						
PB14	IPOC Station P	2.99	259		Pn	19 50 36.3	+0.3
PB14	IPOC Station P	2.99	259	⇑eP	Pn	19 50 36.8	+0.8
PB14				eS	Sn	19 51 13.1	-1.2
PB14				IAML		19 51 16.7	
	comp=E,238nm,0.3s						
PB14	IPOC Station P	2.99	259	eP	Pn	19 50 36.9	+1.0
PB14				eS	Sn	19 51 13.9	-0.4
PB14				IAML		19 51 15.8	
	comp=Z,286nm,0.4s						
PB05	IPOC Station P	3.04	293		Pn	19 50 37.1	+0.7
PB05	IPOC Station P	3.04	293	⇑eP	Pn	19 50 37.4	+1.0
PB05				eS	Sn	19 51 13.5	-1.5
PB05				IAML		19 51 19.9	
	comp=N,166nm,0.3s						
PB05	IPOC Station P	3.04	293	eP	Pn	19 50 37.4	+1.0
PB05				eS	Sn	19 51 13.4	-1.5
PB05				IAML		19 51 17.3	
	comp=Z,104nm,0.6s						
PB03	IPOC Station P	3.12	310		Pn	19 50 38.1	+0.7
PB03	IPOC Station P	3.12	310	⇑eP	Pn	19 50 38.4	+1.0
PB03				eS	Sn	19 51 15.7	-1.2
PB03				IAML		19 51 19.7	
	comp=E,372nm,0.2s						
PB03	IPOC Station P	3.12	310	eP	Pn	19 50 38.4	+1.0
PB03				eS	Sn	19 51 16.4	-0.5
PB03				IAML		19 51 20.2	
	comp=Z,344nm,0.3s						
PB10	IPOC Station P	3.14	280		Pn	19 50 38.4	+0.9
PB10	IPOC Station P	3.14	280	⇑eP	Pn	19 50 38.9	+1.4
PB10				eS	Sn	19 51 17.1	0.0
PB10				IAML		19 51 18.6	
	comp=N,326nm,0.2s						
PB10	IPOC Station P	3.14	280	eP	Pn	19 50 38.9	+1.4
PB10				eS	Sn	19 51 17.6	+0.5
PB10				IAML		19 51 18.9	
	comp=Z,239nm,0.3s						
AC02	Maricunga	3.25	212		Pn	19 50 40.1	+0.8
AC02	Maricunga	3.25	212	⇑eP	Pn	19 50 40.7	+1.4
AC02				eS	Sn	19 51 21.7	+1.2
AC02	Maricunga	3.25	212	eP	Pn	19 50 40.4	+1.1
AC02				eS	Sn	19 51 19.0	-1.4
PB01	IPOC Station P	3.71	324		Pn	19 50 44.3	-0.3
PB01	IPOC Station P	3.71	324	eP	Pn	19 50 44.9	+0.4
PB01				eS	Sn	19 51 29.2	-0.6
PB01				IAML		19 51 30.7	
	comp=Z,137nm,0.2s						
AC01	Pan de Azucar	3.72	236		Pn	19 50 44.5	0.0
AC01	Pan de Azucar	3.72	236	eP	Pn	19 50 44.6	0.0
AC01				eS	Sn	19 51 28.0	-1.9
AC01				IAML		19 51 30.3	
	comp=Z,143nm,0.2s						
PB08	IPOC Station P	4.33	335		Pn	19 50 53.5	+0.7
PB08	IPOC Station P	4.33	335	eP	Pn	19 50 53.7	+0.9
PB08				eS	Sn	19 51 44.4	-0.1
PB08				IAML		19 51 45.5	
	comp=Z,75nm,0.5s						
AC06	Mina Casimiro	4.34	221		Pn	19 50 51.7	-0.6
GO03	Copiapo	4.45	218		Pn	19 50 53.4	-0.4
GO03	Copiapo	4.45	218	eP	Pn	19 50 53.6	-0.2
GO03				eS	Sn	19 51 44.8	-1.7
TA01	Diego Aracena	4.47	321	eP	Pn	19 50 55.8	+1.7
TA01				eS	Sn	19 51 46.0	-1.1
TA01				IAML		19 51 48.6	
	comp=Z,40nm,0.9s						
GO01	Chusmiza	4.78	337		Pn	19 50 58.6	0.0
GO01	Chusmiza	4.78	337	eP	Pn	19 50 58.5	0.0
GO01				eS	Sn	19 51 55.5	+0.6
PB11	IPOC Station P	4.88	331		Pn	19 50 58.5	-1.0
PB11	IPOC Station P	4.88	331	eP	Pn	19 50 58.8	-0.8
PB11				eS	Sn	19 51 54.0	-2.8
PB11				IAML		19 51 56.2	
	comp=Z,68nm,0.4s						
ACLC	CERRO LA CRUZ	5.32	178	eP	Pn	19 51 05.5	+0.3
ACLC				eS	Sn	19 51 49.4	-18
AC04	Llanos de Chal	5.39	220	Pn	Pn	19 51 06.4	+0.5
AC04	Llanos de Chal	5.39	220	eP	Pn	19 51 06.8	+0.9
AC04				eS	Sn	19 52 06.4	-1.9
AC04				IAML		19 52 13.3	
	comp=Z,66nm,0.5s						
AC05	El Transito	5.48	210		Pn	19 51 06.5	-0.6
LCO	Las Campanas	5.83	212		Pn	19 51 10.4	-1.5
PB16	IPOC Station P	6.12	339		Pn	19 51 15.4	-0.6
CO01	Juntas del Tor	6.42	203		Pn	19 51 20.0	+0.5
CFA	Coronel Fontan	7.55	187	P	Pn	19 51 33.9	-0.1
	comp=Z,2.4nm,0.3s,baz=28,slow=15,SNR=23						
CFA				S	Sn	19 52 54.6	-4.6
	comp=Z,2.4nm,0.5s,baz=256,slow=21,SNR=4.1						
LPAZ	La Paz	7.81	353	P	Pn	19 51 38.9	+0.7
	comp=Z,16nm,0.4s,baz=148,slow=7.6,SNR=61						
LPAZ				S	Sn	19 53 04.2	-2.3
	comp=Z,1.1nm,0.4s,baz=307,slow=19,SNR=1.5						
CPUP	Villa Florida	9.20	106	P	Pn	19 51 54.6	-1.0
	comp=Z,0.4nm,0.2s,baz=273,slow=7.3,SNR=3.7						
SIV	San Ignacio	9.89	37	P	Pn	19 52 02.6	-2.1
	comp=Z,3.4nm,0.4s,baz=212,slow=13,SNR=17						
SAML	Samuel	15.53	15		Pn	19 53 15.0	-1.0
SAML				IAmb	IAmb	19 53 16.6	
	comp=Z,9.9nm,1.4s						
BDFB	Brasilia	19.87	69		P	19 54 03.7	-0.1
BDFB				IAmb	IAmb	19 54 04.3	
	comp=Z,9.3nm,0.6s						
BDFB	Brasilia	19.87	69	P	P	19 54 03.8	0.0
	comp=Z,9.2nm,0.6s,baz=255,slow=9.3,SNR=14						
QSPA	South Pole Qui	66.12	180	P	P	20 00 15.6	+2.0
	comp=Z,0.8nm,0.8s,baz=139,slow=4.4,SNR=12						
	comp=Z,0.8nm,0.8s						
MKAR	Makanchi Array	146.69	39	PKPbc	PKPab	20 09 08.0	+0.1
	comp=Z,0.5nm,0.6s,baz=287,slow=3.1,SNR=7.7						

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*IDC **03** 20:34:18.1±2.0, 4°.54N×125°.06E, h0^{km}, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=200.3km s-min=25.8km az=64.0*

*DJA **03** 20:34:37.5±1.0, 5°N±7°×12°6E±°, h144^{km}±6^{km}, M3.9/7, mb4.2/1, MLv3.8/7*

ISC 03 20:34:35.0±1.0**, 4°.72N**±0°.07×**125°.7E**±0°.1**, h176**^{km}**, n8, σ3^{s}.28**/11**, mb3.5**/4**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.03	188	P	Pn	20 35 00.4	-2.2
SGSI				S	Sn	20 35 18.0	-6.0
DAV	Davao City (W)	2.34	358	Sn	Sn	20 35 43.1	-4.2
	48nm,0.3s,baz=105,slow=23,SNR=6.3						
TNTI	Ternate	4.27	157	P	Pn	20 35 38.7	-0.8
TNTI				S	Sn	20 36 27.3	-2.7
MRSI	Marisa	5.62	222	P	Pn	20 35 56.9	-0.2
MRSI				S	Sn	20 36 59.6	-2.0
WRA	Warramunga Arr	25.95	161	P	P	20 39 53.2	+1.9
	0.5nm,0.4s,baz=340,slow=10,SNR=7.5						
	0.5nm,0.4s						
ASAR	Alice Springs	29.33	164	P	P	20 40 22.2	+0.8
	0.4nm,0.5s,baz=342,slow=7.1,SNR=14						
	0.4nm,0.5s						
STKA	Stephens Creek	39.43	158	P	P	20 41 50.9	+2.9
	1.1nm,0.7s,baz=316,slow=9.9,SNR=3.7						
	1.1nm,0.7s						
MKAR	Makanchi Array	56.15	325	P	P	20 43 58.1	+1.8
	0.1nm,0.4s,baz=119,slow=7.4,SNR=4.6						
	0.1nm,0.4s						

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*NEIC **03** 21:01:36.8±2.0, 19°.9S±0°.2×169°.7E±0°.1, h246^{km}±9^{km}, mb4.2/12, Error ellipse: s-maj=36.2km s-min=4.9km az=155.0*

*IDC **03** 21:01:37.2±3.0, 20°.20S×169°.76E, h260^{km}±20^{km}, mb3.5/6, mbtmp4.1/7, Error ellipse: s-maj=41.2km s-min=27.2km az=123.0*

*NOU **03** 21:02:30.6, 22°.11S×166°.83E, h0^{km}, MLv1.8/4, New Caledonia*

ISC 03 21:01:35.9±0.7**, 20°.1S**±0°.1×**169°.8E**±0°.1**, h250**^{km}**, n36, σ0^{s}.86**/36**, mb4.1**/10**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PINNC	Pines Island,	3.35	221		Pn	21 02 33.3	+1.0
YATNC	Mamie plateau,	3.37	234	P	Pn	21 02 32.3	-0.2
OUENC	Ouen Island, N	3.62	230	P	Pn	21 02 36.5	+1.2
DZM	Mont Dzumac	3.72	237	Pn	Pn	21 02 37.6	+0.9
DZM	Mont Dzumac	3.72	237	P	Pn	21 02 37.9	+1.3
	44nm,0.6s,baz=64,slow=21,SNR=60						
DZM				S	S	21 03 24.4	-0.3
	24nm,1.0s,baz=336,slow=22,SNR=1.9						
DZM	Mont Dzumac	3.72	237	P	Pn	21 02 37.5	+0.9
ONTNC	Ouen Toro	3.84	234	Pn	Pn	21 02 38.2	+0.3
ONTNC	Ouen Toro	3.84	234	P	Pn	21 02 38.4	+0.5
MSVF	Nonsavu	8.13	75	Pn	Pn	21 03 32.1	+1.1
EIDS	Eidsvold	18.06	250	P	P	21 05 30.3	+1.0
EIDS				IAmb	IAmb	21 05 42.2	
	comp=Z,8.2nm,1.0s						
ARMA	Armidale	19.38	234	P	P	21 05 44.4	+0.9
ARMA				IAmb	IAmb	21 05 48.0	
	comp=Z,6.2nm,0.8s						
STKA	Stephens Creek	27.87	239	P	P	21 07 03.0	+0.2
STKA	Stephens Creek	27.87	239	P	P	21 07 03.0	+0.2
	comp=Z,2.8nm,0.7s,baz=101,slow=9.6,SNR=7.0						
	comp=Z,2.8nm,0.7s						
WR8	Warramunga Arr	33.15	264	P	P	21 07 48.3	-0.9
WR8				IAmb	IAmb	21 08 06.7	
	comp=Z,6.6nm,1.1s						
WB0	Warramunga Arr	33.27	264	P	P	21 07 49.7	-0.6
WB0				IAmb	IAmb	21 08 09.4	
	comp=Z,4.8nm,0.8s						
WRA	Warramunga Arr	33.30	264	P	P	21 07 50.1	-0.5
WRA	Warramunga Arr	33.30	264	P	P	21 07 49.8	-0.7
	comp=Z,0.4nm,0.3s,baz=93,slow=9.0,SNR=9.7						
	comp=Z,0.4nm,0.3s						
AS31	Alice Springs	33.46	257	P	P	21 07 51.2	-0.8
AS31				IAmb	IAmb	21 07 52.2	
	comp=Z,3.6nm,0.4s						
ASAR	Alice Springs	33.46	257	P	P	21 07 50.8	-1.2
ASAR	Alice Springs	33.46	257	P	P	21 07 51.6	-0.3
	comp=Z,4.6nm,0.4s,baz=91,slow=8.7,SNR=103						
	comp=Z,4.6nm,0.4s						
JGF	Kuroka	63.35	331	P	P	21 11 39.6	+0.8
MJAR	Matsushiro Arr	63.75	332	P	P	21 11 41.5	+0.2
	comp=Z,1.3nm,0.7s,baz=167,slow=7.2,SNR=5.6						
	comp=Z,1.3nm,0.7s						
ADK	Adak	72.62	9	P	P	21 12 34.9	-1.0
ADK				IAmb	IAmb	21 13 00.9	
	comp=Z,7.0nm,1.1s						
ATKA	Atka Island	73.32	10	P	P	21 12 39.6	-0.3
SONM	Songino Array	88.22	323	P	P	21 13 59.8	+1.0
SONM	Songino Array	88.22	323	P	P	21 13 59.0	+0.1
	comp=Z,0.6nm,0.7s,baz=133,slow=19,SNR=3.6						
	comp=Z,0.6nm,0.7s						
SNAA	Sanae	88.35	182	P	P	21 13 57.4	-1.7
	comp=Z,0.4nm,0.4s,baz=184,slow=0.8,SNR=2.1						
	comp=Z,0.4nm,0.4s						
MCARA	McCarthy VSAT	89.51	21	P	P	21 14 04.1	-0.3
J59A	Piesco	122.04	51	PKPdf	PKPdf	21 19 59.1	-1.7
ANGG	Ammassalik, Gr	131.06	15	PKPdf	PKPdf	21 20 18.1	+0.9
MLR	Muntele Rosu	140.95	319	PKPdf	PKPdf	21 20 35.8	-0.6
CLL	Collm	143.91	335	i PKPdf	PKPab	21 20 39.4	+0.3
GERES	GERESS Array B	145.49	332	PKPbc	PKPdf	21 20 45.0	+0.7
	comp=Z,1.0nm,0.6s,baz=31,slow=3.4,SNR=10						
IDI	Anoyia	145.65	304	PKPdf	PKPdf	21 20 45.1	+0.2
ITM	Ithomi	147.28	308	PKPdf	PKPdf	21 20 48.3	+0.8
FUORN	Ofenpass-Fuorn	148.69	332	PKPbc	PKPbc	21 20 53.5	-0.4

IDC 03 21:04:54.4±2.2**, 6°.80S**×**130°.38E, h0**^{km}**, mb3.7**/1**, mbtmp3.9**/4**, ML4.1**/3**, Error ellipse: s-maj=90.2km s-min=28.0km az=78.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	12.14	202	Pn	Pn	21 07 50.5	+1.8
	1.1nm,0.3s,baz=30,slow=10.0,SNR=38						
FITZ				Sn	Sn	21 09 58.5	-6.4
	0.7nm,0.3s,baz=336,slow=16,SNR=1.7						
	2.3nm,0.3s						
WRA	Warramunga Arr	13.61	164	Pn	Pn	21 08 07.5	-1.3
	1.0nm,0.3s,baz=343,slow=13,SNR=18						
WRA				Sn	Sn	21 10 30.4	-11
	0.9nm,0.3s,baz=342,slow=21,SNR=6.2						
	1.0nm,0.3s						
ASAR	Alice Springs	17.11	169	P	Pn	21 08 54.5	-0.5
	0.7nm,0.3s,baz=345,slow=8.3,SNR=21						
ASAR				S	Sn	21 11 56.8	-9.3
	0.3nm,0.4s,baz=1.2,slow=27,SNR=4.6						
	1.3nm,0.5s						
MKAR	Makanchi Array	68.27	327	P	P	21 15 57.1	0.0
	0.3nm,0.4s,baz=122,slow=7.8,SNR=7.6						
	0.3nm,0.4s						

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*IDC **03** 21:17:44.1±1.0, 30°.83N×139°.08E, h276^{km}±14^{km}, mb3.3/11, mbtmp4.0/17, Error ellipse: s-maj=27.2km s-min=14.7km az=58.0*

ISC 03 21:17:44.9±0.8**, 30°.8N**±0°.1×**139°.1E**±0°.1**, h300**^{km}**, n17, σ1^{s}.49**/18**, mb3.6**/11**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	4.53	143	P	Pn	21 18 56.2	-0.8
	65nm,0.4s,baz=356,slow=21,SNR=7.7						
JCJ				S	S	21 19 54.1	-1.0
	84nm,0.4s,baz=274,slow=21,SNR=7.3						
MJAR	Matsushiro Arr	5.82	353	P	Pn	21 19 09.6	-2.3
	0.5nm,0.3s,baz=155,slow=9.4,SNR=2.2						
JNU	Nakatsue	7.39	291	P	Pn	21 19 28.2	-2.8
	2.0nm,0.3s,baz=82,slow=22,SNR=1.6						
KSRS	Korea Array	11.43	309	P	P	21 20 21.0	-1.3
	1.8nm,0.6s,baz=117,slow=13,SNR=7.6						
USRK	Ussuriysk Ar.	14.55	339	P	Pn	21 20 57.0	-0.8
	6.1nm,0.6s,baz=148,slow=11,SNR=16						
KLR	Kul'dur	19.28	345	P	P	21 21 47.2	-0.7
	2.2nm,0.6s,baz=143,slow=4.4,SNR=7.8						
SONM	Songino Array	30.23	314	P	P	21 23 29.3	+1.0
	0.6nm,0.4s,baz=116,slow=8.6,SNR=5.3						
	0.6nm,0.4s						
CMAR	Chiang Mai Arr	38.33	261	P	P	21 24 38.0	+0.4
	0.3nm,0.5s,baz=63,slow=9.2,SNR=1.9						
	0.3nm,0.5s						
ZALV	Zalesovo Beam	44.98	317	P	P	21 25 29.9	-0.8
	0.5nm,0.3s,baz=106,slow=7.9,SNR=2.5						
	0.5nm,0.3s						
MKAR	Makanchi Array	46.10	307	P	P	21 25 40.5	+0.9
	1.1nm,0.6s,baz=81,slow=11,SNR=14						
	1.1nm,0.6s						
KURBB	Kurchatov Arra	48.58	312	P	P	21 25 59.0	+0.6
	1.1nm,0.3s,baz=92,slow=9.6,SNR=18						
	1.1nm,0.3s						
BVAR	Borovoye Array	53.55	316	P	P	21 26 36.1	+1.0
	1.6nm,0.5s,baz=98,slow=7.8,SNR=12						
	1.6nm,0.5s						
ARCES	ARCESS Array B	69.20	340	P	P	21 28 20.6	+1.6
	2.7nm,0.9s,baz=54,slow=8.2,SNR=4.1						
	2.7nm,0.9s						
FINES	FINESS Array B	73.48	333	P	P	21 28 45.6	+1.0
	1.0nm,0.4s,baz=55,slow=6.3,SNR=12						
	1.0nm,0.4s						
KBZ	Khabaz	73.57	311	P	P	21 28 47.1	+1.7
	1.2nm,0.7s,baz=99,slow=5.5,SNR=4.2						
	1.2nm,0.7s						
AKASG	Malin Array Be	78.09	322	P	P	21 29 11.8	+1.0
	0.9nm,0.5s,baz=54,slow=5.4,SNR=6.7						
	0.9nm,0.5s						
BRTR	Keskin Array B	81.56	311	P	P	21 29 31.8	+2.1
	0.6nm,0.6s,baz=98,slow=5.6,SNR=5.1						
	0.6nm,0.6s						

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*SJA **03** 21:31:08.0±0.7, 32°.14S×72°.09W, h40^{km}±5^{km}, ML3.3, MW3.5*

*GUC **03** 21:31:10.1±0.7, 32°.14S×71°.75W, h25^{km}±1^{km}, ML3.3*

ISC 03 21:31:05.7±1.3**, 32°.14S**±0°.02×**71°.88W**±0°.04**, h6**^{km}±10^{km}**, n58, σ1^{s}.06**/104**, 12C-5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	Catapilco	0.65	131	⇓eP	Pn	21 31 21.4	-0.1
VA06				eS	Sb	21 31 29.7	+0.9
VA06				IAML		21 31 31.1	
	comp=E,4µm,0.4s						
VA01	Torpederas	0.91	168	eP	Pn	21 31 26.3	+1.3
VA01				eS	Sn	21 31 38.5	+0.1
VA01				IAML		21 31 41.3	
	comp=E,1µm,0.2s						
VA01	Torpederas	0.91	168	eP	Pn	21 31 26.1	+1.0
VA01				eS	Sn	21 31 39.5	+1.1
ROCH	El Roble	1.11	139	⇓eP	Pn	21 31 28.8	+0.8
ROCH				eS	Sn	21 31 43.0	-0.8
ROCH				IAML		21 31 43.7	
	comp=N,1µm,0.4s						
ROC1	El Roble	1.11	139	eP	Pn	21 31 28.8	+0.7
CO02	Combarbal	1.19	39	⇓eP	Pn	21 31 30.1	+0.9
CO02				eS	Sn	21 31 45.4	-0.3
CO02				IAML		21 31 46.6	
	comp=E,3µm,0.3s						
CO02	Combarbal	1.19	39	eP	Pn	21 31 30.1	+0.9
CO02				IAML		21 31 49.7	
	comp=Z,715nm,0.1s						

MT02	Curacav	1.28	151	eP	Pg	21 31 31.6	+1.3
MT02				eS	Sn	21 31 47.5	-0.3
MT02	Curacav	1.28	151	eP	Pg	21 31 31.6	+1.3
MT02				IAML		21 31 50.2	
	comp=Z,324nm,0.3s						
VA03	San Esteban	1.28	119	⇓eP	Pb	21 31 31.2	+0.8
VA03				eS	Sb	21 31 47.2	0.0
VA03				IAML		21 31 50.0	
	comp=E,2µm,0.2s						
VA03	San Esteban	1.28	119	eP	Pb	21 31 31.2	+0.8
VA03				IAML		21 31 51.0	
	comp=Z,749nm,0.2s						
PEL	Peldehue	1.42	135	eP	Pg	21 31 33.4	+0.4
PEL				eS	Sg	21 31 51.5	0.0
PEL				IAML		21 31 55.8	
	comp=N,628nm,0.3s						
PEL	Peldehue	1.42	135	eP	Pg	21 31 33.7	+0.7
CO06	Fray Jorge	1.47	8	eP	Pg	21 31 34.1	+0.1
CO06				IAML		21 31 58.6	
	comp=E,485nm,0.6s						
VA05	Santo Domingo	1.53	172	eP	Pg	21 31 35.6	+0.5
VA05				eS	Sg	21 31 56.3	+1.3
VA05				IAML		21 32 04.5	
	comp=E,1µm,0.3s						
MT05	Renca	1.58	143	eP	Pg	21 31 36.4	+0.4
MT05				eS	Sg	21 31 56.4	0.0
MT05				IAML		21 31 59.3	
	comp=E,1µm,0.2s						
MT05	Renca	1.58	143	eP	Pg	21 31 36.5	+0.4
MT05				IAML		21 31 59.1	
	comp=Z,384nm,0.2s						
MT10	Hacienda Santa	1.60	135	⇑eP	Pg	21 31 36.5	+0.1
MT10				eS	Sb	21 31 56.5	+0.1
CO03	El Pedregal	1.65	38	eP	Pg	21 31 37.5	+0.2
CO03				eS	Sb	21 31 57.9	+0.3
CO03				IAML		21 32 00.1	
	comp=E,626nm,0.1s						
CO03	El Pedregal	1.65	38	eP	Pg	21 31 37.7	+0.4
CO03				eS	Sg	21 31 58.0	-0.6
CO03				IAML		21 32 01.9	
	comp=Z,412nm,0.5s						
MT14	Cerro Cal¡n	1.69	138	⇑eP	Pg	21 31 38.0	-0.1
MT14				eS	Sb	21 31 59.4	+0.5
MT14				IAML		21 32 05.1	
	comp=N,706nm,0.3s						
MT16	CCHEN	1.72	139	⇑eP	Pg	21 31 38.5	-0.3
MT16				eS	Sb	21 31 59.9	+0.2
MT16				IAML		21 32 08.8	
	comp=N,262nm,0.4s						
MT03	Universidad Ad	1.78	140	⇑eP	Pb	21 31 39.2	+0.4
MT03				eS	Sg	21 32 02.1	-0.8
MT03				IAML		21 32 03.2	
	comp=E,1µm,0.2s						
MT03	Universidad Ad	1.78	140	eP	Pg	21 31 39.6	-0.2
MT03				IAML		21 32 07.4	
	comp=Z,435nm,0.1s						
FCH	Farellones	1.79	132	⇑eP	Pb	21 31 39.3	+0.2
FCH				eS	Sg	21 32 02.6	-0.7
FCH				IAML		21 32 04.9	
	comp=E,640nm,0.3s						
MT09	Talagante	1.80	156	⇑eP	Pg	21 31 39.9	-0.3
MT09				eS	Sg	21 32 03.4	-0.2
MT09				IAML		21 32 12.4	
	comp=N,613nm,0.4s						
MT01	Popeta	1.80	163	⇑eP	Pb	21 31 39.3	+0.1
MT01				eS	Sb	21 32 02.7	+0.7
MT01				IAML		21 32 04.6	
	comp=E,294nm,0.2s						
MT01	Popeta	1.80	163	eP	Pb	21 31 39.2	+0.1
MT01				IAML		21 32 08.4	
	comp=Z,269nm,0.6s						
MT15	Las Vizcachas	1.86	142	eP	Pb	21 31 40.6	+0.4
MT15				eS	Sb	21 32 04.1	+0.3
MT15				IAML		21 32 12.2	
	comp=N,739nm,0.2s						
MT04	Ro Olivares	1.94	131	⇑eP	Pb	21 31 41.7	+0.1
MT04				eS	Sb	21 32 06.0	-0.1
MT04				IAML		21 32 07.8	
	comp=E,317nm,0.3s						
MT04	Ro Olivares	1.94	131	eP	Pb	21 31 41.9	+0.3
MT04				eS	Sg	21 32 07.6	-0.4
MT04				IAML		21 32 13.0	
	comp=Z,134nm,0.1s						
MT12	Pirque	1.94	145	⇑eP	Pb	21 31 41.7	0.0
MT12				eS	Sb	21 32 06.8	+0.6
MT12				IAML		21 32 12.1	
	comp=N,672nm,0.3s						
MT08	Bocatoma Ro	2.04	130	⇑eP	Pb	21 31 43.5	+0.2
MT08				eS	Sb	21 32 09.5	+0.4
MT08				IAML		21 32 17.0	
	comp=E,188nm,0.7s						
MT08	Bocatoma Ro	2.04	130	eP	Pb	21 31 43.8	+0.4
MT08				eS	Sg	21 32 11.2	-0.1
MT08				IAML		21 32 16.5	
	comp=Z,105nm,0.5s						
MT13	San Alfonso	2.09	141	⇓eP	Pb	21 31 44.1	-0.1
MT13				eS	Sb	21 32 09.8	-0.5
MT13				IAML		21 32 11.7	
	comp=N,438nm,0.5s						
MT13	San Alfonso	2.09	141	eP	Pb	21 31 44.4	+0.2
MT13				eS	Sn	21 32 04.7	-3.1
MT13				IAML		21 32 12.5	
	comp=Z,228nm,0.3s						
BO04	La Punta	2.13	150	⇑eP	Pb	21 31 44.5	-0.3
BO04				eS	Sb	21 32 11.8	+0.2
BO04				IAML		21 32 17.8	
	comp=E,302nm,0.5s						
GO04	Tololo Observa	2.17	26	eP	Pb	21 31 44.5	-1.1
GO04				eS	Sb	21 32 13.3	+0.6
GO04	Tololo Observa	2.17	26	eP	Pb	21 31 44.6	-0.9
GO04				eS	Sn	21 32 09.2	-0.7
LMEL	Las Melosas	2.21	141	⇑eP	Pb	21 31 45.8	-0.5
LMEL				eS	Sb	21 32 13.5	-0.5
LMEL				IAML		21 32 21.4	
	comp=N,449nm,0.1s						
LMEL	Las Melosas	2.21	141	eP	Pb	21 31 45.9	-0.3
LMEL				eS	Sb	21 32 15.0	+1.0
RTLS	Leoncito	2.22	82	eP	Pg	21 31 47.8	-0.5
RTLS				IAML		21 32 20.3	
	comp=Z,392nm,0.5s						
BO01	Tunca	2.34	164	eP	Pb	21 31 46.9	-1.6
BO01				eS	Sb	21 32 16.1	-1.5
BO01				IAML		21 32 29.0	
	comp=N,98nm,0.4s						
BO01	Tunca	2.34	164	eP	Pb	21 31 46.8	-1.6
BO01				eS	Sn	21 32 13.5	-0.5
BO01				IAML		21 32 27.0	
	comp=Z,125nm,0.3s						
ARCO	CERRO ARCO	2.59	107	eP	Pg	21 31 54.1	-1.2
ARCO				eP	Pb	21 31 54.3	+1.7
ARCO				eS	Sb	21 32 22.5	-2.3
ARCO				IAML		21 32 34.3	
	comp=Z,96nm,0.5s						
CO01	Juntas del Tor	2.64	36	eP	Pb	21 31 52.2	-1.4
CO01				eS	Sn	21 32 21.8	+0.1
CO01				IAML		21 32 29.4	
	comp=Z,139nm,0.2s						
DOCA	Reserva Natura	2.66	64	eP	Pb	21 31 54.3	+0.2
DOCA				IAML		21 32 30.8	
	comp=Z,92nm,4.8s						
AAGR	Agrelo	2.74	111	eP	Pb	21 31 56.3	+1.0
AAGR				eS	Sg	21 32 34.6	+0.7
ZON	Zonda	2.79	79	eP	Pb	21 31 56.1	+0.1
ZON				eS	Sb	21 32 32.5	+2.1
ZON				IAML		21 32 45.0	
	comp=Z,45nm,0.8s						
BO02	Sierra Bellavi	2.80	161	eP	Pb	21 31 53.8	-2.5
BO02				eS	Sb	21 32 28.1	-2.8
BO02	Sierra Bellavi	2.80	161	eP	Pb	21 31 53.8	-2.5
BO02				eS	Sb	21 32 30.6	-0.3
BO02				IAML		21 32 40.7	
	comp=Z,174nm,0.3s						
AROD	Rodeo	2.85	47	eP	Pb	21 31 56.6	-0.6
AROD				eS	Sb	21 32 30.2	-2.2
ACCO	Cerro Coronel	2.86	58	eP	Pg	21 32 01.6	+1.0
ACCO				eS	Sg	21 32 36.2	-1.4
RTLL	Cerro Villicun	3.01	75	eP	Pb	21 31 58.2	-1.6
RTLL				eS	Sb	21 32 34.8	-2.0
ACDV	Cuesta del Vie	3.07	51	eP	Pb	21 32 01.0	+0.1
ACDV				eS	Sb	21 32 37.6	-1.1
ACDV				IAML		21 32 44.1	
	comp=Z,44nm,0.4s						
CFA	Coronel Fontan	3.14	81	eP	Pb	21 32 00.1	-1.9
CFA				eS	Sg	21 32 47.5	+0.8
LCO	Las Campanas	3.28	18	eS	Sn	21 32 39.7	+2.3
AC05	El Transito	3.57	23	eS	Sn	21 32 46.7	+2.3

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*UPP **03** 22:10:16.7±0.1, 67°.19N×20°.65E, h0^{km}, ML3.2, Unknown*

*IDC **03** 22:10:17.1±0.7, 67°.16N×20°.92E, h0^{km}, mb3.5/1, mbtmp3.3/7, ML2.9/6, Error ellipse: s-maj=12.7km s-min=6.0km az=111.0*

*DNK **03** 22:10:17.1±0.5, 67°.18N×20°.65E, h0^{km}, ML3.2(UPP), Explosion*

*HEL **03** 22:10:17.4±0.0, 67°.18N×20°.65E, h1^{km}, ML2.7, ML3.2(UPP), Confirmed Induced event*

ISC 03 22:10:15.1±0.6**, 67°.19N**±0°.02×**20°.77E**±0°.02**, h0^{km}, n48, σ1^{s}.06**/80**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	Dundret	0.10	231	P	Pg	22 10 18.4	+1.4
DUNU				S	Sg	22 10 19.5	+1.2
DUNU	Dundret	0.10	231	P	Pg	22 10 18.4	+1.4
DUNU				S	Sg	22 10 19.5	+1.2
DUNU	Dundret	0.10	231	iP	Pg	22 10 18.4	+1.4
DUNU				iS	Sg	22 10 19.5	+1.2
MASU	Masugnsbyn	0.55	60	P	Pb	22 10 28.1	+0.5
MASU				S	Sb	22 10 36.3	+0.2
MASU	Masugnsbyn	0.55	60	P	Pb	22 10 28.1	+0.5
MASU				S	Sb	22 10 36.3	+0.2
MASU	Masugnsbyn	0.55	60	iP	Pb	22 10 28.1	+0.5
MASU				iS	Sb	22 10 36.3	+0.2
RATU	Laukkuluspa	0.79	325	P	Pg	22 10 30.9	+0.8
RATU				S	Sg	22 10 40.9	+0.6
RATU	Laukkuluspa	0.79	325	P	Pg	22 10 30.9	+0.8
RATU				S	Sg	22 10 40.9	+0.6
RATU	Laukkuluspa	0.79	325	iP	Pg	22 10 30.9	+0.8
RATU				iS	Sg	22 10 40.9	+0.6
ERTU	Ertsjaerv	0.85	138	P	Pb	22 10 32.9	+0.2
ERTU				S	Sb	22 10 44.6	+0.1
ERTU	Ertsjaerv	0.85	138	P	Pb	22 10 32.9	+0.2
ERTU				S	Sb	22 10 44.6	+0.1
ERTU	Ertsjaerv	0.85	138	eP	Pb	22 10 32.8	+0.2
ERTU				eS	Sb	22 10 44.6	+0.1
SALU	Saltoluokta	0.90	284	P	Pg	22 10 32.7	+0.4
SALU				S	Sg	22 10 44.2	+0.3
SALU	Saltoluokta	0.90	284	eP	Pg	22 10 32.8	+0.4
SALU	Saltoluokta	0.90	284	P	Pg	22 10 32.7	+0.4
SALU				S	Sg	22 10 44.2	+0.3
SALU	Saltoluokta	0.90	284	iP	Pg	22 10 32.7	+0.4
SALU				iS	Sg	22 10 44.2	+0.3
PAJU	Pajala	0.93	99	P	Pb	22 10 34.8	+0.6
PAJU				S	Sb	22 10 48.1	+1.1
PAJU	Pajala	0.93	99	P	Pb	22 10 34.8	+0.6
PAJU				S	Sb	22 10 48.1	+1.1
PAJU	Pajala	0.93	99	eP	Pb	22 10 34.8	+0.6
PAJU				eS	Sb	22 10 46.9	-0.1
HARU	Harads	1.03	175	P	Pb	22 10 35.6	-0.1
HARU				S	Sb	22 10 49.9	+0.1
HARU	Harads	1.03	175	P	Pb	22 10 35.6	-0.1
HARU				S	Sb	22 10 49.9	+0.1
HARU	Harads	1.03	175	eP	Pb	22 10 35.6	-0.1
HARU				eS	Sb	22 10 49.9	+0.1
KOVU	Salmi	1.07	348	P	Pg	22 10 36.2	+0.6
KOVU				S	Sb	22 10 50.9	-0.1
KOVU	Salmi	1.07	348	P	Pg	22 10 36.2	+0.6
KOVU				S	Sb	22 10 50.9	-0.1
KOVU	Salmi	1.07	348	eP	Pg	22 10 36.2	+0.6
KOVU				eS	Sb	22 10 50.9	-0.1
KLF	Kolari	1.25	86	eP	Pn	22 10 40.4	+0.7
KLF				eS	Sb	22 10 56.4	+0.4
HEF	Hetta	1.65	40	eP	Pg	22 10 47.1	+0.4
HEF	Hetta	1.65	40	eP	Pg	22 10 46.9	+0.3
HEF				eS	Sn	22 11 07.5	+0.4
HEF				MSG		22 11 12.6	
	comp=Z,34nm,0.2s						
KALU	Kalix	1.69	141	P	Pg	22 10 47.6	+0.2
KALU	Kalix	1.69	141	P	Pg	22 10 47.6	+0.2
KALU	Kalix	1.69	141	eP	Pg	22 10 47.6	+0.2
KALU				eS	Sg	22 11 09.4	+0.2
KALU				MSG		22 11 14.4	
	comp=Z,29nm,0.2s						
SJUU	Sjulsmark	1.72	168	P	Pb	22 10 47.8	+0.4
SJUU	Sjulsmark	1.72	168	P	Pb	22 10 47.8	+0.4
SJUU	Sjulsmark	1.72	168	eP	Pb	22 10 47.8	+0.4
TOF	Tornio	1.80	126	eP	Pg	22 10 49.9	+0.3
TOF				eS	Sg	22 11 13.2	+0.3
TOF				MSG		22 11 16.1	
	comp=Z,100nm,0.3s						
KIF	Kilpisjarvi	1.83	0	eP	Pg	22 10 50.2	+0.2
KIF				eS	Sg	22 11 14.2	+0.4
KIF				MSG		22 11 17.5	
	comp=Z,105nm,0.2s						
RNF	Rovaniemi	2.15	103	eP	Pb	22 10 55.1	+0.3
RNF				eS	Sb	22 11 22.7	+0.8
RNF				MSG		22 11 26.7	
	comp=Z,86nm,0.3s						
SGF	Sodankyl	2.25	81	MSG		22 11 28.9	
	comp=Z,33nm,0.2s						
TRO	Tromso	2.55	345	eP	Pn	22 11 00.0	+2.4
TRO				eS	Sb	22 11 32.8	-0.7
ARCES	ARCESS Array B	2.94	34	Pn	Pn	22 11 05.0	+2.0
	comp=Z,1.0nm,0.3s,baz=217,slow=14,SNR=96						
ARCES				Sn	Sb	22 11 42.8	-2.0
	comp=Z,2.4nm,0.3s,baz=217,slow=20,SNR=10						
ARCES				Lg	Lg	22 11 47.3	
	comp=Z,4.0nm,0.3s,baz=214,slow=28,SNR=7.0						
	comp=Z,7.1nm,0.4s						
VAF	Ylistaro	4.24	168	MSG		22 12 32.5	
	comp=Z,13nm,0.3s						
RMF	Romuvaara	4.81	124	MSG		22 12 50.2	
	comp=Z,12nm,0.4s						
FINES	FINESS Array B	6.21	156	Pn	Pn	22 11 50.2	+2.4
	comp=Z,0.9nm,0.3s,baz=346,slow=12,SNR=40						
FINES				Sn	Sn	22 12 59.4	0.0
	comp=Z,0.7nm,0.3s,baz=343,slow=18,SNR=3.3						
FINES				Lg	Lg	22 13 30.4	
	comp=Z,3.0nm,0.3s,baz=345,slow=26,SNR=12						
	comp=Z,2.7nm,0.4s						
NOA	NORSAR Array B	7.44	219	Pn	Pn	22 12 06.3	+1.5
	baz=26,slow=11,SNR=7.2						
NOA				Sn	Sn	22 13 26.5	-3.4
	comp=Z,0.1nm,0.3s,baz=309,slow=20,SNR=6.8						
	comp=Z,0.2nm,0.4s						
HFS	Hagfors	7.74	207	Pn	Pn	22 12 08.4	-0.5
	comp=Z,0.5nm,0.3s,baz=24,slow=12,SNR=14						
HFS				Sn	Sn	22 13 34.2	-2.9
	comp=Z,1.0nm,0.3s,baz=27,slow=24,SNR=9.1						
	comp=Z,1.0nm,0.3s						
SPITS	Spitsbergen Ar	11.12	355	Pn	Pn	22 12 55.7	+0.6
	baz=171,slow=13						
	comp=Z,0.7nm,0.4s						
AKASG	Malin Array Be	17.07	161	Pn	Pn	22 14 10.2	-4.6
	comp=Z,0.4nm,0.3s,baz=346,slow=13,SNR=2.8						
	comp=Z,0.2nm,0.3s						
BVAR	Borovoye Array	27.57	96	P	P	22 16 03.3	-0.1
	comp=Z,0.3nm,0.5s,baz=308,slow=7.2,SNR=2.7						
	comp=Z,0.3nm,0.5s						

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*IDC **03** 22:18:12.7±2.0, 4°.01S×151°.50E, h0^{km}, mb3.7/4, mbtmp3.7/4, MS3.1/8, Error ellipse: s-maj=67.0km s-min=29.2km az=120.0*

ISC 03 22:18:15.8±1.6**, 4°.1S**±0°.3×**151°.6E**±0°.3**, h21^{km}, n14, σ2^{s}.65**/7**, mb3.6**/4**, MS3.1**/6**, 3C, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	6.86	220	LR	LR	22 22 18.1	
	comp=Z,86nm,18.0s,baz=73,slow=36						
HNR	Honiara	9.85	123	LR	LR	22 24 59.6	
	comp=Z,127nm,19.4s,baz=318,slow=41						
WRA	Warramunga Arr	23.03	225	P	P	22 23 18.7	-1.1
	1.8nm,1.0s,baz=45,slow=11,SNR=4.8						
	1.8nm,1.0s						
ASAR	Alice Springs	25.88	220	P	P	22 23 46.9	+0.6
	1.4nm,0.8s,baz=58,slow=8.4,SNR=9.8						
ASAR				LR	LR	22 33 59.5	
	comp=Z,44nm,21.3s,baz=92,slow=37						
	1.4nm,0.8s						
NWAO	Narrogin (SRO)	43.03	224	LR	LR	22 44 01.0	
	comp=Z,46nm,19.0s,baz=262,slow=36						
KLR	Kul'dur	55.85	344	LR	LR	22 53 08.7	
	comp=Z,9.4nm,18.0s,baz=160,slow=38						
CMAR	Chiang Mai Arr	56.49	295	P	P	22 27 57.1	+0.4
	0.6nm,0.3s,baz=106,slow=6.3,SNR=4.3						
	0.6nm,0.3s						
PPT	Papeete	59.09	108	LR	LR	22 48 34.2	
	comp=Z,17nm,21.2s,baz=168,slow=31						
YAK	Yakutsk	68.06	349	LR	LR	22 59 16.4	
	comp=Z,12nm,19.1s,baz=196,slow=36						
ILAR	Eielson Array	81.98	22	P	P	22 30 33.4	-0.4
	0.3nm,0.7s,baz=227,slow=5.9,SNR=4.1						
	0.3nm,0.7s						
PDAR	Pinedale Array	99.27	47	LR	LR	23 08 33.3	
	comp=Z,12nm,21.2s,baz=156,slow=30						
VNA3	Neumayer Olymp	103.79	186	⇑P	Pdif	22 32 17.6	+1.7
	comp=Z,1.4nm,0.2s						
VNA2	Neumayer--Watz	103.83	187	⇑P	Pdif	22 32 19.6	+3.5
	comp=Z,1.7nm,0.2s,baz=324,slow=13						
VNA1	Neumayer--Stat	104.19	187	⇑P	Pdif	22 32 14.4	-3.3
	comp=Z,0.4nm,0.2s						

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*IDC **03** 22:26:41.0±1.3, 2°.84S×142°.27E, h0^{km}, mb3.7/5, mbtmp3.8/5, Error ellipse: s-maj=26.8km s-min=16.7km az=7.0*

ISC 03 22:26:46.4±1.4**, 2°.9S**±0°.2×**142°.1E**±0°.2**, h35^{km}, n6, σ1^{s}.16**/6**, mb3.8**/5**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	1.48	283	Pg	Pn	22 27 09.8	-0.7
	4.3nm,0.3s,baz=141,slow=9.9,SNR=23						
JAY				Lg	Lg	22 27 31.2	
	9.8nm,0.3s,baz=237,slow=8.0,SNR=8.0						
FITZ	Fitzroy Crossi	22.16	226	P	P	22 31 39.7	+0.1
	3.4nm,0.7s,baz=60,slow=16,SNR=1.9						
	3.4nm,0.7s						
ASAR	Alice Springs	22.17	200	P	P	22 31 39.6	0.0
	0.8nm,0.6s,baz=29,slow=12,SNR=7.7						
	0.8nm,0.6s						
MKAR	Makanchi Array	72.02	321	P	P	22 38 07.8	+0.9
	0.6nm,0.7s,baz=111,slow=6.6,SNR=6.8						
	0.6nm,0.7s						
BVAR	Borovoye Array	81.40	325	P	P	22 39 00.7	+1.0
	1.6nm,0.9s,baz=108,slow=8.0,SNR=7.3						
	1.6nm,0.9s						
ILAR	Eielson Array	84.55	24	P	P	22 39 14.5	-1.3
	0.6nm,0.8s,baz=267,slow=5.1,SNR=3.9						
	0.6nm,0.8s						

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*NOU **03** 22:37:01.2, 20°.63S×177°.39W, h486^{km}, mb4.6/38, Fiji Islands Region*

*NEIC **03** 22:37:01.1±2.5, 20°.6S±0°.1×177°.6W±0°.1, h460^{km}±6^{km}, mb4.6/51, Error ellipse: s-maj=17.8km s-min=14.1km az=113.0*

*IDC **03** 22:37:03.1±0.8, 20°.69S×177°.69W, h482^{km}±8^{km}, mb3.8/19, mbtmp4.6/21, Error ellipse: s-maj=13.3km s-min=11.1km az=119.0*

ISC 03 22:37:03.9±0.4**, 20°.60S**±0°.06×**177°.66W**±0°.07**, h500^{km}, n167, σ1^{s}.18**/170**, mb4.5**/44**, 3D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKBA	Tubou, Lakemba	2.60	335	P	P	22 38 09.7	-2.6
LKBA	Tubou, Lakemba	2.60	335	S	S	22 39 03.8	-4.0
TAVE	Taveuni	4.42	331	P	P	22 38 24.2	-1.7
TAVE	Taveuni	4.42	331	S	S	22 39 31.0	-1.6
DGTI	Dogotuki	4.94	330	P	P	22 38 28.5	-1.9
DGTI	Dogotuki	4.94	330	S	S	22 39 39.5	-1.4
MSVF	Nonsavu	4.96	304		P	22 38 27.8	-2.9
MSVF	Nonsavu	4.96	304	P	P	22 38 28.8	-1.8
MSVF	Nonsavu	4.96	304	P	S	22 39 42.5	+1.2
YSA	Yasawairara	5.95	310	P	P	22 38 38.1	-1.7
YSA	Yasawairara	5.95	310	S	S	22 39 58.4	+0.2
AFI	Afiamalu	8.71	41	P	P	22 39 01.6	-6.2
PINNC	Pines Island,	13.99	259	P	P	22 40 03.7	+0.2
DZM	Mont Dzumac	14.88	262	P	P	22 40 12.8	-0.2
DZM	Mont Dzumac	14.88	262	P	P	22 40 12.3	-0.7
	9.7nm,0.8s,baz=89,slow=20,SNR=6.1						
KUZ	Kuaotunu	17.09	198	P	P	22 40 35.1	-0.5
MXZ	Matakaoa Point	17.26	191	P	P	22 40 35.4	-1.8
TOZ	Tahuroa Road	18.07	198	P	P	22 40 44.6	-0.1
URZ	Urewera	18.17	193	P	P	22 40 42.9	-2.7
	13nm,0.6s,baz=358,slow=3.0,SNR=10.0						
URZ				S	S	22 43 42.8	-3.7
	14nm,0.6s,baz=285,slow=21,SNR=12						
URZ	Urewera	18.17	193	P	P	22 40 43.1	-2.5
URZ	Urewera	18.17	193	S	S	22 43 45.6	-0.9
BKZ	Black Stump Fm	19.17	194	P	P	22 40 51.8	-3.1
BKZ				IAmb	IAmb	22 41 14.1	
	comp=Z,22nm,1.3s						
BFZ	Birch Farm	20.68	193	P	P	22 41 06.0	-2.5
TCW	Tory Channel	21.66	197	P	P	22 41 15.8	-1.5
QRZ	Quartz Range	21.82	200	P	P	22 41 17.7	-1.1
QRZ	Quartz Range	21.82	200	P	P	22 41 18.5	-0.3
QRZ	Quartz Range	21.82	200	S	S	22 44 44.7	-0.4
DSZ	Denniston Nort	22.89	201	P	P	22 41 26.5	-1.9
KHZ	Kahutara	22.98	197	P	P	22 41 28.8	-0.3
JCZ	Jackson Bay	25.98	203	P	P	22 41 54.6	-1.4
WHZ	Wether Hill Ro	27.86	202	P	P	22 42 12.1	-0.2
WHZ				IAmb	IAmb	22 42 17.6	
	comp=Z,61nm,1.4s						
EIDS	Eidsvold	29.12	255	P	P	22 42 23.5	-0.2
EIDS				IAmb	IAmb	22 42 24.4	
	comp=Z,14nm,0.7s						
ARMA	Armidale	29.31	244	P	P	22 42 25.8	+0.4
ARMA				IAmb	IAmb	22 42 26.7	
	comp=Z,21nm,0.8s						
ARMA	Armidale	29.31	244	P	P	22 42 25.9	+0.5
ARMA	Armidale	29.31	244	S	S	22 46 45.6	+2.5
CNB	Canberra Magne	32.43	236	P	P	22 42 52.3	+0.1
CTAO	Charters Tower	33.80	264	P	P	22 43 03.9	+0.1
CTAO	Charters Tower	33.80	264	P	P	22 43 04.2	+0.3
CMSA	Cobar Meteorol	34.52	244	P	P	22 43 09.7	-0.1
QLP	Quilpie	35.33	253	P	P	22 43 16.6	0.0
TOO	Toolangi	36.09	234	P	P	22 43 22.4	-0.5
COEN	Coen	37.91	274	P	P	22 43 37.6	-0.5
COEN				IAmb	IAmb	22 43 40.7	
	comp=Z,14nm,0.9s						
COEN	Coen	37.91	274	P	P	22 43 39.1	+1.1
STKA	Stephens Creek	38.03	244	P	P	22 43 38.5	-0.4
STKA	Stephens Creek	38.03	244	P	P	22 43 39.1	+0.3
	comp=Z,18nm,0.8s,baz=94,slow=8.9,SNR=26						
	comp=Z,18nm,0.8s						
QIS	Mount Isa	39.92	262	P	P	22 43 54.1	-0.3
HTT	Hallett	40.46	242	P	P	22 43 58.9	+0.3
BBOO	Buckleboo	42.78	244	P	P	22 44 16.2	-0.7
BBOO				IAmb	IAmb	22 44 17.3	
	comp=Z,35nm,0.8s						
BBOO	Buckleboo	42.78	244	P	P	22 44 16.9	-0.1
JAY	Jayapura	44.38	288	P	P	22 44 30.2	+0.5
	comp=Z,25nm,0.6s,baz=93,slow=2.0,SNR=15						
	comp=Z,25nm,0.6s						
WR8	Warramunga Arr	44.75	262	P	P	22 44 31.3	-1.1
WR8				IAmb	IAmb	22 44 33.3	
	comp=Z,16nm,0.8s						
AS01	Alice Springs	44.76	257	P	P	22 44 32.4	-0.1
AS31	Alice Springs	44.80	257	P	P	22 44 32.4	-0.4
AS31				IAmb	IAmb	22 44 33.9	
	comp=Z,21nm,1.1s						
ASAR	Alice Springs	44.80	257	P	P	22 44 32.6	-0.2
	comp=Z,53nm,0.8s,baz=87,slow=8.4,SNR=289						
ASAR				PcP	pP	22 46 04.8	+0.4
	comp=Z,2.8nm,0.7s,baz=98,slow=3.9,SNR=5.0						
ASAR				S	S	22 50 33.4	0.0
	comp=Z,2.1nm,1.0s,baz=90,slow=16,SNR=5.7						
	comp=Z,53nm,0.8s						
WB0	Warramunga Arr	44.88	262	P	P	22 44 32.5	-1.0
WRA	Warramunga Arr	44.90	262	P	P	22 44 32.5	-1.1
WRA	Warramunga Arr	44.90	262	P	P	22 44 33.2	-0.4
	comp=Z,27nm,0.9s,baz=94,slow=5.1,SNR=89						
	comp=Z,27nm,0.9s						
KDU	Kakadu	48.27	271	P	P	22 44 59.2	0.0
MTN	Manton Dam	49.48	271	P	P	22 45 08.0	-0.2
MTN	Manton Dam	49.48	271	P	P	22 45 08.2	0.0
FORT	Forrest	49.54	247	P	P	22 45 07.7	-0.7
FORT	Forrest	49.54	247	P	P	22 45 08.0	-0.5
KNRA	Kununurra	50.97	266	P	P	22 45 18.8	-0.3
KNRA				IAmb	IAmb	22 45 19.9	
	comp=Z,34nm,0.7s						
FAKI	Fak Fak	51.83	283	P	P	22 45 25.2	-0.2
FAKI				IAmb	IAmb	22 45 26.5	
	comp=Z,39nm,1.2s						
FITZ	Fitzroy Crossi	53.33	262	P	P	22 45 36.5	+0.5
FITZ	Fitzroy Crossi	53.33	262	P	P	22 45 36.0	-0.1
	comp=Z,8.5nm,0.6s,baz=144,slow=4.1,SNR=14						

	comp=Z,8.5nm,0.6s						
SOEI	Soe	56.82	272	P	P	22 46 02.4	+1.7
SOEI	Soe	56.82	272	P	P	22 46 00.6	-0.1
SBA	Scott Base	57.79	184	P	P	22 46 08.2	+2.1
TNTI	Ternate	57.79	285	P	P	22 46 08.0	+0.8
TNTI				IAmb	IAmb	22 46 09.4	
	comp=Z,37nm,1.1s						
VNDA	Vanda	57.84	185	P	P	22 46 07.4	+0.9
VNDA	Vanda	57.84	185	P	P	22 46 06.5	0.0
	comp=Z,2.4nm,0.8s,baz=321,slow=6.9,SNR=9.0						
	comp=Z,2.4nm,0.8s						
PSA00	Pilbara Seismi	57.95	257	P	P	22 46 07.8	-0.5
PSA00				IAmb	IAmb	22 46 09.3	
	comp=Z,20nm,0.8s						
MBWA	Marble Bar	58.14	257	P	P	22 46 08.7	-0.8
MBWA				IAmb	IAmb	22 46 10.1	
	comp=Z,29nm,0.9s						
MEEK	Meekatharra	58.18	251	P	P	22 46 09.0	-0.8
KLBR	Kellerberrin	58.30	245	P	P	22 46 10.1	-0.4
BLDU	Ballidu	59.30	246	P	P	22 46 16.9	-0.3
MORW	Morawa	60.08	248	P	P	22 46 22.3	-0.2
MORW				IAmb	IAmb	22 46 34.8	
	comp=Z,26nm,1.4s						
MORW	Morawa	60.08	248	P	P	22 46 22.3	-0.2
GIRL	Giralia	62.83	254	P	P	22 46 40.9	+0.3
TOLI2	Tolitoli	63.94	282	P	P	22 46 48.4	+0.6
TOLI2				IAmb	IAmb	22 46 49.0	
	comp=Z,13nm,0.9s						
CASY	Casey	64.01	205	P	P	22 46 47.1	-0.2
CASY				IAmb	IAmb	22 46 48.5	
	comp=Z,19nm,1.2s						
QSPA	South Pole Qui	69.47	180	P	P	22 47 22.4	+1.2
QSPA				IAmb	IAmb	22 47 23.5	
	comp=Z,16nm,0.8s						
QSPA	South Pole Qui	69.47	180	P	P	22 47 22.5	+1.2
	comp=Z,12nm,0.7s,baz=10,slow=0.6,SNR=87						
	comp=Z,12nm,0.7s						
KKM	Kota Kinabalu	70.09	285	P	P	22 47 26.5	+0.6
KKM				IAmb	IAmb	22 47 27.8	
	comp=Z,18nm,0.8s						
UGM	Wanagama	70.28	269	P	P	22 47 26.9	0.0
MJAR	Matsushiro Arr	70.48	323	P	P	22 47 28.6	+0.9
	comp=Z,4.9nm,0.7s,baz=158,slow=5.4,SNR=19						
	comp=Z,4.9nm,0.7s						
ERM	Erimo	72.07	330	P	P	22 47 36.7	-0.1
ERM				IAmb	IAmb	22 47 51.6	
	comp=Z,17nm,1.1s						
LEM	Lembang	73.35	269	P	P	22 47 45.9	+0.8
	comp=Z,28nm,0.8s,baz=178,slow=23,SNR=5.2						
	comp=Z,28nm,0.8s						
JKA	Kamikawa-asahi	73.97	331	P	P	22 47 50.1	+2.4
JKA				IAmb	IAmb	22 47 51.7	
	comp=Z,16nm,1.0s						
SSLB	Suanglung	74.29	303	P	P	22 47 49.9	-0.1
SSLB				IAmb	IAmb	22 47 51.5	
	comp=Z,22nm,1.3s						
TPUB	Ta-pu	74.30	303	P	P	22 47 49.5	-0.6
TPUB				IAmb	IAmb	22 47 50.5	
	comp=Z,24nm,0.8s						
PETK	Petropavlovsk-	76.45	345	P	P	22 48 01.7	+0.3
	comp=Z,2.3nm,0.7s,baz=141,slow=5.7,SNR=6.3						
	comp=Z,2.3nm,0.7s						
KSRS	Korea Array	77.17	318	P	P	22 48 07.3	+1.6
	comp=Z,1.8nm,0.8s,baz=137,slow=6.9,SNR=6.6						
	comp=Z,1.8nm,0.8s						
SMAI	San Martin Ant	78.40	159	P	P	22 48 13.1	+1.3
SMAI				IAmb	IAmb	22 48 14.3	
	comp=Z,7.0nm,0.9s						
USRK	Ussuriysk Ar.	79.23	326	P	P	22 48 19.0	+2.4
	comp=Z,6.3nm,0.8s,baz=145,slow=3.7,SNR=13						
	comp=Z,6.3nm,0.8s						
BELA	Belgrano 2	79.42	173	P	P	22 48 17.6	+0.4
BELA				IAmb	IAmb	22 48 18.3	
	comp=Z,6.5nm,0.8s						
NVAR	Mina Array Bea	80.88	43	P	P	22 48 27.5	+1.8
	comp=Z,2.1nm,0.9s,baz=220,slow=8.1,SNR=5.9						
	comp=Z,2.1nm,0.9s						
MAW	Mawson	81.58	200	P	P	22 48 28.9	+0.4
	comp=Z,3.4nm,0.7s,baz=143,slow=10.0,SNR=6.3						
	comp=Z,3.4nm,0.7s						
J05D	Fort Rock, OR	81.99	38	P	P	22 48 33.0	+1.8
O18K	Koktuh Hills	82.24	11	P	P	22 48 31.3	-0.6
M16K	Timber Creek	82.73	9	P	P	22 48 36.2	+1.9
M16K				IAmb	IAmb	22 48 37.4	
	comp=Z,14nm,1.4s						
U15A	North Rim	83.80	48	P	P	22 48 43.1	+2.5
KULM	Kulim	84.10	278	P	P	22 48 42.6	+0.3
KULM				IAmb	IAmb	22 48 44.5	
	comp=Z,11nm,1.1s						
SUA	Susitna One	84.59	13	P	P	22 48 44.2	+0.5
TRF	Thorofare Moun	86.48	12	P	P	22 48 52.9	0.0
TXAR	Lajitas Array	86.84	57	P	P	22 48 57.7	+2.4
	comp=Z,0.9nm,0.8s,baz=219,slow=6.0,SNR=11						
TXAR				pP	pP	22 50 43.9	-1.3
	comp=Z,0.3nm,0.9s,baz=246,slow=5.0,SNR=3.0						
	comp=Z,0.9nm,0.8s						
SNAA	Sanae	87.90	178	P	P	22 48 59.3	-0.2
	comp=Z,1.7nm,0.8s,baz=257,slow=8.3,SNR=3.9						
	comp=Z,1.7nm,0.8s						
CCB	Clear Creek Bu	88.05	12	P	P	22 49 00.0	+0.1
ILAR	Eielson Array	88.34	13	P	P	22 49 00.8	-0.6
	comp=Z,1.8nm,1.1s,baz=228,slow=4.9,SNR=4.6						
ILAR				pP	pP	22 50 48.8	-3.1
	comp=Z,0.3nm,0.7s,baz=206,slow=6.0,SNR=2.2						
	comp=Z,1.8nm,1.1s						
PDAR	Pinedale Array	88.82	43	P	P	22 49 05.7	+1.3
	comp=Z,0.8nm,0.7s,baz=222,slow=2.0,SNR=5.2						
	comp=Z,0.8nm,0.7s						
J26L	Joseph Creek	88.83	14	P	P	22 49 04.3	+0.6
CMAR	Chiang Mai Arr	90.45	289	P	P	22 49 13.4	+1.2
CMAR	Chiang Mai Arr	90.45	289	P	P	22 49 14.8	+2.6
	comp=Z,1.2nm,0.3s,baz=124,slow=3.0,SNR=17						
	comp=Z,1.2nm,0.3s						
CHTO	Chiang Mai	90.58	290	P	P	22 49 13.5	+0.7
CHTO				IAmb	IAmb	22 49 15.8	
	comp=Z,6.7nm,1.2s						
LAO	LASA Array	92.78	41	P	P	22 49 21.7	-0.6
ZALV	Zalesovo Beam	110.77	321	PKiKP	PKiKP	22 54 38.1	-1.1
	comp=Z,0.6nm,0.5s,baz=222,slow=2.0,SNR=3.6						
MKAR	Makanchi Array	111.50	313	PKiKP	PKiKP	22 54 41.0	0.0
	comp=Z,0.5nm,0.6s,baz=208,slow=1.1,SNR=7.5						
KURBB	Kurchatov Arra	114.34	317	PKP	PKiKP	22 54 45.9	-0.3
	comp=Z,0.8nm,0.7s,baz=84,slow=2.1,SNR=7.0						
BVAR	Borovoye Array	119.36	320	PKP	PKiKP	22 54 55.9	+0.1
	comp=Z,1.7nm,0.5s,baz=81,slow=2.0,SNR=15						
KKAR	Karatay Array	119.56	309	PKPdf	PKiKP	22 54 55.6	-1.0
AKTO	Aktyubinsk	127.35	318	PKP	PKiKP	22 55 12.2	+0.5
	comp=Z,1.1nm,0.6s,baz=72,slow=9.6,SNR=3.9						
ARCES	ARCESS Array B	129.08	350	PKPdf	PKiKP	22 55 13.6	-1.1
ARCES	ARCESS Array B	129.08	350	PKP	PKiKP	22 55 14.3	-0.4
	comp=Z,1.2nm,0.9s,baz=328,slow=4.3,SNR=5.7						
KOOLE	Kule	133.30	203	PKPdf	PKiKP	22 55 23.5	-1.3
FINES	FINESS Array B	135.96	344	PKP	PKiKP	22 55 28.4	-0.4
	comp=Z,1.1nm,0.8s,baz=347,slow=7.8,SNR=3.4						
HFS	Hagfors	139.69	351	PKhKP	PKPpre	22 55 28.2	
	comp=Z,0.8nm,0.5s,baz=54,slow=7.5,SNR=5.3						
AKASG	Malin Array Be	143.26	331	PKhKP	PKPpre	22 55 38.5	
	comp=Z,3.1nm,0.6s,baz=44,slow=4.4,SNR=22						
LODK	Lodwar	143.59	246	PKPdf	PKPdf	22 55 42.0	-0.4
ARPR	Arapgir-MALATY	144.05	309	PKPbc	PKPdf	22 55 43.3	+0.7
MBAR	Mbarara	145.12	236	PKPbc	PKiKP	22 55 47.1	-2.2
GAZ	Gaziantep	145.53	306	PKPbc	PKPab	22 55 47.4	-0.2
BNN	Bunyan	145.94	310	PKPbc	PKPab	22 55 48.1	-1.2
ASF	Jabal al Asfar	147.10	298	PKPbc	PKiKP	22 55 51.0	-1.7
	comp=Z,3.4nm,0.8s,baz=175,slow=2.5,SNR=8.2						
BR131	Keskin Array S	147.14	312	PKPbc	PKPbc	22 55 50.4	-0.4
BRTR	Keskin Array B	147.14	312	PKPbc	PKPbc	22 55 50.6	-0.3
BRTR	Keskin Array B	147.14	312	PKPbc	PKiKP	22 55 51.1	-1.5
	comp=Z,1.7nm,0.7s,baz=128,slow=4.3,SNR=16						
BRTR				pPKPbc	pPKPdf	22 57 45.5	-0.6
	comp=Z,0.7nm,1.0s,baz=46,slow=5.3,SNR=3.7						
BUR08	Bucovina Ar. S	147.29	331	PKPbc	PKiKP	22 55 51.6	-1.1
BURAR	Bucovina Array	147.31	331	PKPbc	PKiKP	22 55 51.3	-1.4
MMAI	Mount Meron Ar	148.14	300	PKPbc	PKiKP	22 55 54.4	-0.4
	comp=Z,2.4nm,0.5s,baz=74,slow=4.4,SNR=8.2						
CLL	Collm	148.23	347	PKPbc	PKiKP	22 55 52.8	-1.5
CLL	Collm	148.23	347	⇓*i*PKPbc	PKiKP	22 55 53.9	-0.4
	comp=Z,12nm,0.8s						
LANS	Liptovska Anna	148.39	338	*e*PKP	PKiKP	22 55 55.7	+0.9
BRG	Berggiesshubel	148.44	346	*i* PKP	PKiKP	22 55 54.9	+0.1
BRG				Amp		22 55 55.6	
	comp=Z,4.0nm,0.8s						
MDUB	Mudurnu	148.44	315	PKPbc	PKiKP	22 55 54.5	-0.7
MORC	Moravsky Berou	148.48	341	*e*PKP	PKiKP	22 55 54.5	-0.4
MLR	Muntele Rosu	148.48	327	PKPbc	PKiKP	22 55 54.6	-0.6
	comp=Z,2.1nm,0.7s,baz=158,slow=4.4,SNR=5.7						
VYHS	Vyhne	149.17	338	*e*PKP	PKiKP	22 55 56.7	+0.3
VYHS				*e*		22 56 03.3	
VRAC	Vranov	149.18	342	PKPbc	PKiKP	22 55 55.8	-0.6
	comp=Z,2.6nm,0.9s,baz=254,slow=20,SNR=3.8						
VRAC	Vranov	149.18	342	*e*PKP	PKiKP	22 55 56.6	+0.3
EIL	Elat	149.21	294	PKPbc	PKiKP	22 55 56.7	-0.3
	comp=Z,8.0nm,1.0s,baz=223,slow=2.4,SNR=4.5						
JAVC	Velka Javorina	149.24	340	*e*PKP	PKiKP	22 55 58.0	+1.4
KRUC	Moravsky	149.46	342	*e*PKP	PKiKP	22 55 57.4	+0.5
MODS	Modra-Piesok	149.79	340	*e*PKP	PKiKP	22 55 58.5	+0.8
BTNL	Ternell	149.93	355	*d*PKP	PKiKP	22 55 57.9	0.0
ISP	Isparta	150.17	311	PKPbc	PKiKP	22 55 57.7	-1.2
GERES	GERESS Array B	150.38	345	PKPbc	PKiKP	22 55 58.6	-0.4
GERES	GERESS Array B	150.38	345	PKPbc	PKiKP	22 55 59.1	+0.2
	comp=Z,2.0nm,0.8s,baz=48,slow=2.0,SNR=13						
CONA	Conrad Observa	150.63	341	*i* PKP	PKiKP	22 56 00.2	+0.7
	comp=Z,1.5nm,0.5s						
RONA	Rosalia, Austr	150.70	341	*i* PKP	PKiKP	22 56 00.3	+0.7
	comp=Z,3.9nm,0.6s						
WLF	Walferdange	150.84	355	*d*PKP	PKiKP	22 56 00.4	+0.6
MOA	Molln	151.16	343	*i* PKP	PKiKP	22 56 00.9	+0.4
	comp=Z,0.6nm,0.4s						
MANT	Manisa	151.20	314	PKPbc	PKiKP	22 56 00.8	-0.4
SOKA	Soboth	152.00	341	*i* PKP	PKiKP	22 56 02.4	0.0
	comp=Z,0.2nm,0.2s						
KBA	Koelnbreinsper	152.11	344	*i* PKP	PKiKP	22 56 02.8	+0.1
	comp=Z,0.3nm,0.2s						
WTTA	Wattenberg	152.35	346	*i* PKP	PKiKP	22 56 03.6	+0.5
	comp=Z,0.9nm,0.3s						
ABTA	Abfaltersbach	152.63	345	*i* PKP	PKiKP	22 56 03.6	0.0
	comp=Z,2.5nm,0.6s						

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*IDC **03** 22:38:04.5±2.1, 3°.33S×128°.69E, h0^{km}, mb3.9/3, mbtmp3.9/5, ML3.9/2, Error ellipse: s-maj=91.1km s-min=23.4km az=67.0*

*DJA **03** 22:38:35.9±1.0, 4°S±17°×12°8E±°, h245^{km}±5^{km}, M3.5/7, MLv3.5/7*

ISC 03 22:38:32.1±0.9**, 4°.4S**±0°.1×**127°.80E**±0°.08**, h250^{km}, n10,** σ**1ˢ.67**/14**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	0.79	30	P	Pn	22 39 08.9	+2.8
AAI				S	S	22 39 33.8	+1.0
NLAI	Namlea	1.33	328	P	Pn	22 39 11.8	+2.6
NLAI				S	S	22 39 40.5	+2.1
MSAI	Masohi	1.52	48	P	Pn	22 39 11.8	+1.3
MSAI				S	S	22 39 41.2	+0.4
SANI	Sanana	2.94	322	P	Pn	22 39 23.8	-0.1
FAKI	Fak Fak	4.67	72	P	Pn	22 39 45.3	+1.5
FAKI				S	S	22 40 39.7	-1.2
FITZ	Fitzroy Crossi	13.80	189	Pn	Pn	22 41 37.8	-0.1
	0.4nm,0.3s,baz=356,slow=5.1,SNR=7.3						
	2.7nm,0.6s						
WRA	Warramunga Arr	16.73	158	P	P	22 42 10.6	-0.4
	0.4nm,0.3s,baz=339,slow=11,SNR=9.5						
	1.1nm,0.5s						
ASAR	Alice Springs	20.06	164	P	P	22 42 46.7	-0.2
	1.3nm,0.3s,baz=345,slow=10,SNR=25						
	1.3nm,0.3s						
CMAR	Chiang Mai Arr	36.38	309	P	P	22 45 12.0	-1.0
	1.3nm,0.3s,baz=125,slow=7.6,SNR=4.2						
	1.3nm,0.3s						
MKAR	Makanchi Array	64.85	327	P	P	22 48 42.7	-1.8
	0.3nm,0.4s,baz=120,slow=7.4,SNR=4.6						
	0.3nm,0.4s						

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*IDC **03** 22:49:17.4±0.9, 23°.42N×44°.86W, h0^{km}, mb3.9/16, mbtmp3.9/16, MS3.2/12, Error ellipse: s-maj=28.2km s-min=18.8km az=172.0*

*NEIC **03** 22:49:20.0±1.5, 23°.5N±0°.1×44°.9W±0°.1, h10^{km}±1^{km}, mb4.4/29, Error ellipse: s-maj=25.7km s-min=18.7km az=157.0*

ISC 03 22:49:19.9±0.6**, 23°.4N**±0°.1×**44°.85W**±0°.09**, h15^{km}, n64,** σ**1ˢ.02**/51**, mb4.3**/29**, MS3.2**/13**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJG	San Juan	20.59	259	LR	LR	23 00 36.1	
	comp=Z,32nm,19.8s,baz=79,slow=33						
BAUV	El Baul	26.45	241	P	P	22 54 57.6	+1.0
RUSC	La Rusia	32.28	242		P	22 55 49.3	+0.4
TKL	Tuckaleechee C	35.77	299	LR	LR	23 08 19.3	
	comp=Z,37nm,19.3s,baz=85,slow=32						
ESDC	Sonseca Array	38.07	55	LR	LR	23 08 36.3	
	comp=Z,39nm,19.4s,baz=211,slow=30						
OTAV	Otavalo	39.93	240	P	P	22 56 53.5	-0.9
DBIC	Dimbokro	41.87	107	P	P	22 57 09.8	-0.1
	3.0nm,0.7s,baz=260,slow=9.0,SNR=3.7						
DBIC				LR	LR	23 11 46.4	
	comp=Z,33nm,18.3s,baz=46,slow=32						
	3.0nm,0.7s						
CCM	Cathedral Cave	42.04	301	P	P	22 57 10.9	-0.1
CCM				IAmb	IAmb	22 57 12.2	
	comp=Z,6.1nm,0.9s						
H10N3	ASCENSION HYDR	42.95	133	T	T	23 42 42.5	
	baz=317,slow=75,SNR=47						
H10N2	ASCENSION HYDR	42.95	133	T	T	23 42 42.3	
	baz=317,slow=75,SNR=49						
H10N1	ASCENSION HYDR	42.97	133	T	T	23 42 57.1	
	baz=317,slow=75,SNR=58						
H10S3	ASCENSION HYDR	43.66	134	T	T	23 43 36.4	
	baz=317,slow=74,SNR=53						
H10S2	ASCENSION HYDR	43.68	134	T	T	23 43 37.7	
	baz=263,slow=74,SNR=66						
BORG	Borgarnes	44.09	14	LR	LR	23 11 55.6	
	comp=Z,29nm,19.8s,baz=335,slow=31						
CLF	Chambon-Foret	44.56	45	P	P	22 57 32.1	+0.9
TORD	Torodi Ar. Bea	45.19	95	P	P	22 57 36.3	-0.4
LPAZ	La Paz	45.55	212	P	P	22 57 39.6	-0.5
LPAZ				IAmb	IAmb	22 57 40.8	
	comp=Z,5.7nm,1.4s						
LPAZ	La Paz	45.55	212	P	P	22 57 39.5	-0.5
	comp=Z,1.3nm,0.9s,baz=32,slow=10.0,SNR=4.4						
	comp=Z,1.3nm,0.9s						
KEST	Kesra	48.17	62	P	P	22 58 00.3	+0.4
KEST	Kesra	48.17	62	P	P	22 58 00.6	+0.7
	comp=Z,4.6nm,0.8s,baz=270,slow=1.4,SNR=9.7						
	comp=Z,4.6nm,0.8s						
VSL	Villasalto	48.26	57	P	P	22 58 00.7	+0.3
APMT	Aspermont	49.14	295	P	P	22 58 07.2	-0.1
APMT				IAmb	IAmb	22 58 14.5	
	comp=Z,4.6nm,0.9s						
OZNA	Ozona	50.18	291	P	P	22 58 14.9	-0.4
OZNA				IAmb	IAmb	22 58 16.0	
	comp=Z,3.8nm,0.8s						
POST	Post	50.31	294	P	P	22 58 16.0	-0.3
POST				IAmb	IAmb	22 58 16.9	
	comp=Z,6.3nm,0.8s						
AMTX	Amarillo	50.35	297	P	P	22 58 16.2	-0.3
AMTX				IAmb	IAmb	22 58 17.5	
	comp=Z,8.9nm,1.1s						
PRED	Cave del Predi	51.82	49	P	P	22 58 26.3	-1.1
GERES	GERESS Array B	52.18	46	P	P	22 58 29.0	-1.1
	comp=Z,0.4nm,0.8s,baz=326,slow=3.6,SNR=3.8						
	comp=Z,0.4nm,0.8s						
TXAR	Lajitas Array	52.56	290	P	P	22 58 32.1	-1.2
TXAR	Lajitas Array	52.56	290	P	P	22 58 32.2	-1.0
	comp=Z,0.7nm,0.8s,baz=99,slow=7.7,SNR=5.5						
	comp=Z,0.7nm,0.8s						
NOA	NORSAR Array B	53.51	30	P	P	22 58 39.3	-0.3
	comp=Z,1.3nm,0.9s,baz=249,slow=7.7,SNR=3.5						
NOA				LR	LR	23 17 26.7	
	comp=Z,22nm,20.8s,baz=250,slow=32						
	comp=Z,1.3nm,0.9s						
ANMO	Albuquerque	54.26	297	LR	LR	23 18 49.0	
	comp=Z,28nm,21.1s,baz=223,slow=33						
HFS	Hagfors	54.41	32	P	P	22 58 46.3	+0.1
	comp=Z,3.8nm,0.7s,baz=262,slow=10,SNR=7.0						
HFS				LR	LR	23 17 10.5	
	comp=Z,21nm,22.0s,baz=250,slow=31						
	comp=Z,3.8nm,0.7s						
BW06	Boulder Array	56.20	307	P	P	22 58 59.1	-0.6
BW06				IAmb	IAmb	22 59 07.7	
	comp=Z,3.8nm,1.1s						
PD31	Pinedale Array	56.20	307	P	P	22 58 59.2	-0.5
PDAR	Pinedale Array	56.20	307	P	P	22 58 59.1	-0.6
PDAR	Pinedale Array	56.20	307	P	P	22 58 59.5	-0.2
	comp=Z,0.4nm,0.4s,baz=90,slow=8.9,SNR=7.1						
PDAR				LR	LR	23 20 30.8	
	comp=Z,22nm,20.4s,baz=116,slow=33						
	comp=Z,0.4nm,0.4s						
P18A	Preston Nutter	56.88	303	P	P	22 59 04.6	-0.1
P18A				IAmb	IAmb	22 59 20.2	
	comp=Z,3.0nm,0.9s						
YKA	Yellowknife Ar	60.16	330	P	P	22 59 26.5	-0.3
	comp=Z,0.6nm,0.9s,baz=86,slow=7.5,SNR=4.1						
	comp=Z,0.6nm,0.9s						
ELK	Elko	60.58	305	P	P	22 59 30.0	-0.4
ELK				IAmb	IAmb	22 59 31.7	
	comp=Z,2.6nm,0.9s						
ELK	Elko	60.58	305	LR	LR	23 25 27.0	
	comp=Z,27nm,18.0s,baz=134,slow=36						
FINES	FINESS Array B	60.61	31	P	P	22 59 27.7	-2.1
	comp=Z,2.2nm,0.9s,baz=237,slow=9.8,SNR=3.9						
FINES				LR	LR	23 22 30.6	
	comp=Z,27nm,18.4s,baz=220,slow=33						
	comp=Z,2.2nm,0.9s						
MFID	Camas Ranch	60.74	308	P	P	22 59 31.4	+0.2
MFID				IAmb	IAmb	22 59 33.0	
	comp=Z,3.3nm,0.9s						
AKASG	Malin Array Be	62.28	44	P	P	22 59 40.0	-1.3
	comp=Z,0.6nm,0.6s,baz=278,slow=5.8,SNR=2.3						
	comp=Z,0.6nm,0.6s						
YBH	Yreka Blue Hor	66.01	307	LR	LR	23 27 34.9	
	comp=Z,604nm,21.8s,baz=142,slow=35						
BRTR	Keskin Array B	66.87	55	P	P	23 00 11.6	-0.1
BRTR	Keskin Array B	66.87	55	P	P	23 00 11.1	-0.6
	comp=Z,0.9nm,0.9s,baz=262,slow=6.1,SNR=5.0						
	comp=Z,0.9nm,0.9s						
KHMM	Horse Mountain	66.93	306	P	P	23 00 13.0	+0.9
G31M	Satah River	68.48	335	P	P	23 00 22.9	+1.7
H29M	Whitestone	70.23	335	P	P	23 00 33.0	+0.9
H29M				IAmb	IAmb	23 00 37.2	
	comp=Z,4.6nm,1.3s						
F28M	Old Crow	70.48	336	P	P	23 00 35.0	+1.4
F28M				IAmb	IAmb	23 00 37.5	
	comp=Z,4.7nm,1.1s						
F26K	Sheenjek River	72.03	337	P	P	23 00 45.2	+2.2
F26K				IAmb	IAmb	23 01 08.6	
	comp=Z,3.6nm,1.2s						
BCAR	Beaver Creek A	72.47	332	P	P	23 00 44.0	-1.7
DOT	Dot Lake	73.27	333	P	P	23 00 51.4	+1.0
DOT				IAmb	IAmb	23 00 53.5	
	comp=Z,3.7nm,1.0s						
IL31		74.05	334	P	P	23 00 55.3	+0.4
ILAR	Eielson Array	74.05	334	P	P	23 00 56.0	+1.0
ILAR	Eielson Array	74.05	334	P	P	23 00 56.0	+1.0
	comp=Z,1.3nm,0.8s,baz=72,slow=4.6,SNR=14						
	comp=Z,1.3nm,0.8s						
H23K	Yukon River	74.69	336	P	P	23 01 00.4	+1.7
GNI	Garni	75.00	53	P	P	23 01 02.4	+1.2
	comp=Z,2.2nm,0.7s,baz=184,slow=4.7,SNR=3.1						
	comp=Z,2.2nm,0.7s						
G21K	Allakaket	75.86	337	P	P	23 01 06.4	+1.0
ABKAR	Akbulak array	81.68	40	P	P	23 01 38.0	+0.4
LBTB	Lobatse	83.52	121	LR	LR	23 32 37.7	
	comp=Z,24nm,19.4s,baz=168,slow=31						
BVAR	Borovoye Array	85.51	33	P	P	23 01 57.9	+0.6
	comp=Z,0.7nm,0.6s,baz=323,slow=2.2,SNR=5.6						
	comp=Z,0.7nm,0.6s						
KURBB	Kurchatov Arra	91.00	32	P	P	23 02 24.0	+0.5
	comp=Z,0.6nm,0.8s,baz=310,slow=5.2,SNR=6.1						
	comp=Z,0.6nm,0.8s						
VNDA	Vanda	124.34	187	PKPdf	PKiKP	23 08 20.5	+2.9

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*NEIC **03** 23:07:23.9±1.6, 38°.68N±0°.02×117°.23W±0°.03, h8^{km}±4^{km}, Error ellipse: s-maj=3.1km s-min=2.4km az=62.0*

REN 03 23:07:24.1±2.2**, 38°.677N**±0°.010×**117°.24W**±0°.02**, h8^{km}**±**8^{km}, ML2.5**/3**, ML1.9**/40(NEIC)**, Error ellipse: s-maj=2.1km s-min=1.1km az=58.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
Q09A	Carvers	0.16	17		Pg	23 07 27.7	0.0
Q09A					Sg	23 07 30.4	+0.3
Q09A				IAML		23 07 32.5	
	comp=E,491nm,0.6s						
TPH	Tonopah	0.60	179		Pg	23 07 35.7	-0.1
TPH					Sg	23 07 43.9	+0.2
NV11	Mina Array Sit	0.76	251		Pg	23 07 38.6	-0.2
NV11	Mina Array Sit	0.76	251		Sg	23 07 48.8	+0.1
NVAR	Mina Array Bea	0.87	254		Pg	23 07 39.8	-1.1
NV08	Mina Array Sit	0.89	252		Pg	23 07 40.9	-0.3
NV09	Mina Array Sit	0.89	255		Pg	23 07 41.0	-0.2
MZP	Montezuma Peak	0.98	187		Pg	23 07 42.6	-0.4
RYN	Ryan	1.00	268		Pg	23 07 43.3	-0.1
LHV	Little Huntoon	1.08	247		Pg	23 07 44.9	0.0
LHV					Sb	23 07 59.7	+0.5
LHV	Little Huntoon	1.08	247	IAML		23 08 01.0	
	comp=E,39nm,0.5s						
R11B	Troy Canyon, C	1.34	104		Pn	23 07 48.4	-0.9
R11B				IAML		23 08 06.9	
	comp=N,21nm,0.4s						
R11B				IAML		23 08 07.8	
	comp=E,21nm,0.3s						
GMN	Gold Mountain	1.38	181		Pb	23 07 50.2	0.0
GMN	Gold Mountain	1.38	181	IAML		23 08 11.8	
	comp=N,15nm,0.6s						
BENR	Benton	1.42	228		Pb	23 07 51.1	+0.1
DSP	Deep Springs	1.43	204		Pb	23 07 51.0	+0.1
MGNR	McGee Canyon	1.43	233		Pb	23 07 51.4	+0.1
LCH	Last Change Ra	1.48	193		Pb	23 07 52.2	+0.3
POCCA	Poleta Canyon	1.55	212		Pb	23 07 53.3	+0.2
SGV	South Grapevin	1.70	174		Pn	23 07 54.2	0.0
WAKR	Walker	1.73	265		Pn	23 07 53.9	-0.7
WAKR					Sg	23 08 20.4	+0.6
WAKR				IAML		23 08 21.8	
	comp=E,9.1nm,0.7s						
PNTR	Pine Nut	1.89	283		Pn	23 07 56.4	-0.5
PNTR				IAML		23 08 28.8	
	comp=N,8.3nm,1.6s						
PNTR				IAML		23 08 29.0	
	comp=E,12nm,1.1s						
TPNV	Topopah Spring	1.90	155		Pn	23 07 56.3	-0.6
NSP	Numbskull Pass	2.11	157		Pn	23 07 59.8	0.0
PRN	Pahroc Range	2.15	126		Pn	23 08 00.1	-0.2
SPR3	Spring Creek 3	2.29	81		Pn	23 08 02.1	-0.4
SPR3	Spring Creek 3	2.29	81	IAML		23 08 39.1	
	comp=N,5.5nm,0.4s						
SPR3				IAML		23 08 39.8	
	comp=E,5.5nm,0.5s						
AMDNV	Amargosa	2.35	161		Pn	23 08 03.5	+0.6
GWY	Greenwater Val	2.53	169		Pb	23 08 10.9	+1.1
GWY				IAML		23 08 25.9	
	comp=N,4.5nm,2.0s						
GWY				IAML		23 09 06.5	
	comp=E,4.8nm,1.9s						
ELK	Elko	2.58	36		Pn	23 08 06.1	-0.2
ELK	Elko	2.58	36	IAML		23 08 44.4	
	comp=E,6.3nm,0.6s						
ELK				IAML		23 08 46.4	
	comp=E,7.6nm,0.4s						
PSUT	Pine Spring	2.66	92		Pg	23 08 13.8	-1.2
PSUT				IAML		23 08 49.0	
	comp=E,5.1nm,0.5s						
PSUT				IAML		23 08 49.1	
	comp=N,6.4nm,0.4s						
SHPR	Sheep Range	2.73	142		Pg	23 08 16.2	-0.2

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*NEIC **03** 23:34:13.3±0.9, 19°.36N±0°.02×155°.122W±0°.006, h5^{km}±1^{km}, Error ellipse: s-maj=2.7km s-min=2.3km az=169.0*

HVO 03 23:34:12.7±0.8**, 19°.34N**±0°.02×**155°.11W**±0°.01**, h6^{km}**±2^{km}**, ML2.5**/38**, ML2.7**/42(NEIC)**, Error ellipse: s-maj=3.1km s-min=0.8km az=155.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCUZ	Jacuzzi	0.04	12		Pg	23 34 14.6	+0.4
JCUZ					Sg	23 34 15.8	+0.7
STCH	Steam Cracks	0.04	342		Pg	23 34 14.5	+0.4
STCH				Sg	Sg	23 34 15.8	+0.6
STCH				IAML		23 34 16.2	
	comp=E,4μm,0.2s						
STCH				IAML		23 34 16.2	
	comp=N,5μm,0.3s						
NPOC	North of Pu‘u	0.05	1		Pg	23 34 14.7	+0.4
NPOC					Sg	23 34 16.1	+0.8
KNHH	Kane Nui o Ham	0.07	303		Pg	23 34 14.9	+0.4
PUH	Pauahi	0.10	287		Pg	23 34 15.4	+0.4
PUH				IAML		23 34 17.9	
	comp=N,3μm,0.5s						
JOKA	Jonika Flow	0.14	48		Pg	23 34 15.7	+0.2
JOKA				Sg	Sg	23 34 17.9	+0.4

KKO	Keanakako'i	0.16	290		Pg	23 34 16.2	+0.3
KKO					Sg	23 34 18.6	+0.5
BYL	Byron's Ledge	0.16	296		Pg	23 34 16.2	+0.3
BYL				IAML		23 34 19.3	
	comp=N,1µm,0.4s						
BYL				IAML		23 34 19.3	
	comp=E,2µm,0.3s						
HATHI	Halema‘uma‘u T	0.16	299		Pg	23 34 16.3	+0.2
HATHI				Sg	Sg	23 34 18.9	+0.5
RIM	Rim	0.16	289		Pg	23 34 16.3	+0.3
SBLHI	Steaming Bluff	0.17	299		Pg	23 34 16.4	+0.2
SBLHI					Sg	23 34 19.5	+1.0
UWB	Uwekahuna Bluf	0.18	297		Pg	23 34 16.5	+0.2
UWB					Sg	23 34 19.6	+0.8
OBL	Observatory Le	0.18	294		Pg	23 34 16.6	+0.3
OBL					Sg	23 34 20.4	+1.6
SDHHI	Sand Hill	0.18	285		Pg	23 34 16.6	+0.2
SDHHI					Sg	23 34 19.6	+0.8
UWE	Uwekahuna	0.19	294		Pg	23 34 16.0	-0.5
UWE				Sg	Sg	23 34 18.2	-0.8
WRMHI	West Rim	0.19	289		Pg	23 34 16.7	+0.2
WRMHI					Sg	23 34 20.1	+1.0
HLP	Hilina Pali	0.19	256		Pg	23 34 17.0	+0.4
HLP				Sg	Sg	23 34 20.3	+1.1
HLP				IAML		23 34 21.5	
	comp=N,2µm,0.3s						
RSD	Rainshed	0.20	307		Pg	23 34 16.9	+0.2
HTC	Hot Caves	0.29	249		Pg	23 34 19.3	+0.9
MLH	Mauna Loa	0.30	300		Pg	23 34 18.9	+0.2
AIN	Ainahou	0.33	275		Pg	23 34 19.7	+0.5
AIN	Ainahou	0.33	275		Sb	23 34 25.7	-1.0
HMH	Humu‘ula Sheep	0.44	306		Pg	23 34 20.5	-0.7
HMH	Humu‘ula Sheep	0.44	306		Sg	23 34 28.2	+1.2
MWH	Mokuaweoweo	0.48	287		Pg	23 34 21.9	-0.2
MWH				IAML		23 34 36.4	
	comp=N,660nm,0.6s						
MWH	Mokuaweoweo	0.48	287		Sg	23 34 28.4	0.0
KHU	Kahuku	0.49	259		Pg	23 34 22.0	-0.1
KHU				IAML		23 34 34.1	
	comp=N,662nm,0.8s						
KHU				IAML		23 34 34.5	
	comp=E,739nm,0.4s						
KHU	Kahuku	0.49	259		Sg	23 34 29.0	+0.5
ALEP	Alea Permanent	0.54	291		Pg	23 34 22.8	-0.4
ALEP					Sg	23 34 30.3	0.0
POHA	Pohakuloa	0.57	316		Pg	23 34 22.7	-1.1
POHA				IAML		23 34 32.2	
	comp=E,507nm,0.4s						
POHA				IAML		23 34 36.5	
	comp=E,498nm,0.5s						
POHA	Pohakuloa	0.57	316		Sg	23 34 30.6	-0.7
HUH	Hualalai	0.76	297		Pg	23 34 26.6	-0.8
CPH	Captain Cook	0.78	281		Pg	23 34 26.4	-1.2
HPAH	Hawaii Prepara	0.88	321		Pg	23 34 27.8	-1.8
HPAH				IAML		23 34 46.3	
	comp=N,205nm,0.5s						
HPAH				IAML		23 34 46.3	
	comp=E,266nm,0.5s						
KKH	Kailua Kona	0.91	290	Pg	Pg	23 34 30.3	+0.1

SNET ***03*** *23:40:16.9±0.9, 13.°29N×90.°28W, h28^{km}±4^{km}, ML3.4*

CATAC ***03*** *23:40:16.2±0.7, 13°N±4°×9°0W±°, h12^{km}±4^{km}, M3.1/13, MLv3.1/13, Error ellipse: s-maj=9.0km s-min=7.7km az=133.0, confirmed*

GCG ***03*** *23:40:17.3±0.8, 13.°41N×90.°33W, h40^{km}±77^{km}, MD3.7, ML3.2*

ISC 03 23:40:19.3±1.8**, 13.°41N**±0.°07×**90.°11W**±0.°05**, h12**^{km}±11^{km}**, n35,** σ**0.**^{s}**93**/42**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAME	Alcaldia de Sa	0.44	12	P	Pg	23 40 28.9	+0.9
NUBE	Las Nubes	0.58	33	*e*P	Pg	23 40 31.4	+0.7
NUBE				*e*S	Sn	23 40 43.4	+0.2
NUBE	Las Nubes	0.58	33	*i* P	Pg	23 40 31.5	+0.7
NUBE				*i* S	Sn	23 40 43.3	+0.2
NUBE	Las Nubes	0.58	33	P	Pg	23 40 31.6	+0.8
NUBE	Las Nubes	0.58	33	S	Sn	23 40 42.7	-0.5
CEVE	Cerro Verde	0.63	48	*e*P	Pg	23 40 32.7	+1.2
CEVE				*e*S	Sn	23 40 45.2	+0.8
CEVE				IAML		23 40 46.7	
	comp=Z,1µm,0.2s						
CEVE	Cerro Verde	0.63	48	P	Pg	23 40 32.7	+1.2
LOAL	Lomas de Alarc	0.67	28	*e*P	Pg	23 40 32.9	+0.6
LOAL	Lomas de Alarc	0.67	28	P	Pg	23 40 32.8	+0.6
LOAL	Lomas de Alarc	0.67	28	S	Sn	23 40 45.3	+0.2
JAYA	Jayaque - finc	0.69	69	*e*P	Pg	23 40 33.0	+0.4
JAYA				*e*S	Sn	23 40 45.5	-0.2
JAYA				IAML		23 40 46.5	
	comp=Z,1µm,0.2s						
JAYA	Jayaque - finc	0.69	69	*e*P	Pg	23 40 33.1	+0.4
JAYA				*e*S	Sb	23 40 44.8	+2.0
JAYA	Jayaque - finc	0.69	69	P	Pg	23 40 33.2	+0.6
SLOZ	Alcaldia de Sa	0.69	27	P	Pg	23 40 33.1	+0.4
SLOZ	Alcaldia de Sa	0.69	27	S	Sn	23 40 45.6	0.0
CEDA	San Andres	0.80	60	S	Sn	23 40 49.0	+0.7
CEDA	San Andres	0.80	60	P	Pg	23 40 35.0	+0.3
PMON	Piamonte	0.83	69	*e*P	Pg	23 40 35.6	+0.3
PMON	Piamonte	0.83	69	P	Pg	23 40 35.4	+0.1
PMON	Piamonte	0.83	69	S	Sn	23 40 49.9	+0.8
UEES	Universidad Ev	0.90	70	P	Pg	23 40 36.7	0.0
UEES	Universidad Ev	0.90	70	S	Sn	23 40 51.1	+0.3
LOMA	Loma Larga	0.94	75	*e*P	Pg	23 40 37.7	+0.2
LOMA	Loma Larga	0.94	75	P	Pg	23 40 37.1	-0.4
FG16	Alotenango, Sa	0.94	336	*e*P	Pg	23 40 38.0	+0.5
FG16				IAML		23 40 56.3	
	comp=N,1µm,0.2s						
LFRS	El Faro	1.04	78	*e*P	Pb	23 40 38.8	-0.5
COEG	Centro de Oper	1.21	80	P	Pb	23 40 40.9	-1.3
MTO3	Montecristo	1.22	36	*e*P	Pb	23 40 40.9	-1.6
MTO3				*e*S	Sn	23 41 00.8	+1.7
MTO3	Montecristo	1.22	36	*i* P	Pb	23 40 40.9	-1.6
MTO3	Montecristo	1.22	36	P	Pb	23 40 40.9	-1.6
ESQI	Esquipulas	1.36	33	P	Pn	23 40 43.1	-1.2
SCLA	Alcaldia de Sa	1.37	78	P	Pn	23 40 43.3	-1.0
STG8	El Palmar, Qui	1.59	311	*i* P	Pn	23 40 47.0	-0.5
STG8				*i* S	Sn	23 41 09.5	+1.4
STG8				IAML		23 41 14.9	
	comp=E,163nm,0.1s						
PACA	Pacayal	1.74	88	P	Pn	23 40 49.8	+0.4
PACA	Pacayal	1.74	88	S	Sn	23 41 13.0	+1.4

IDC ***03*** *23:47:47.8±0.7, 41.°00N×145.°01E, h0^{km}, mb4.0/23, mbtmp4.0/29, ML3.4/6, MS3.1/15, Error ellipse: s-maj=16.6km s-min=15.4km az=142.0*

NEIC ***03*** *23:47:50.6±1.3, 41.°01N±0.°07×144.°9E±0.°1, h10^{km}±2^{km}, mb4.3/71, Mwr3.9/10, Error ellipse: s-maj=13.8km s-min=11.0km az=80.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}4.06; $M_{\theta\theta}$-7.52; $M_{\phi\phi}$3.46; $M_{r\theta}$-2.45; $M_{\theta\phi}$-1.32; $M_{\phi r}$-3.96; Fault plane solution: $M_0$8.12000×10^{14} NP1:ϕ_s229.96000°,δ69.35000°,λ48.56000°. NP2:ϕ_s118.18000°,δ45.45000°,λ150.33000°. Principal axes: T 7.7872, Plg48.0000°, Azm95.0000°; N 0.6262, Plg38.0000°, Azm247.0000°; P -8.4134, Plg14.0000°, Azm349.0000°;*

NIED ***03*** *23:47:50.0, 41.°06N×145.°12E, h62^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.17; $M_{\theta\theta}$0.07; $M_{\phi\phi}$1.11; $M_{r\theta}$-0.37; $M_{\theta\phi}$-0.42; $M_{\phi r}$-0.49; Fault plane solution: $M_0$1.36000×10^{15} NP1: ϕ_s142.00000°,δ41.00000°,λ-122.00000°. NP2:ϕ_s1.00000°,δ56.00000°,λ-66.00000°.*

JMA ***03*** *23:47:50.0±0.3, 41°N±1°×14°5E±°, h62^{km}±2^{km}, MV4.4/38, FAR SE OFF HOKKAIDO*

NEIC ***03*** *23:47:50.7, 41.°01N×144.°88E, h10^{km}*

MOS ***03*** *23:47:55.1±1.0, 41.°44N×144.°88E, h45^{km}, mb4.6/18, Error ellipse: s-maj=9.6km s-min=5.7km az=97.3*

ISC 03 23:47:48.1±2.6**, 41.°05N**±0.°05×**145.°07E**±0.°05**, h1**^{km}±16^{km}**, n411,** σ**1.**^{s}**39**/423**, mb4.2**/71**, MS3.0**/9**, 12C, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERM	Erimo	1.73	304		Pn	23 48 19.1	-0.2
ERM				Sn	Sn	23 48 39.3	-2.7
ERM	Erimo	1.73	304	P	Pn	23 48 19.1	-0.2
ERM						23 48 39.3	
JEM	Erimo	1.73	304	*e*P	Pn	23 48 18.6	-0.7
JEM				*e*S	Sn	23 48 39.1	-2.9
JTHR	Tokachihiroo	1.82	314	S	Sn	23 48 41.4	-2.8
JAK	Akkeshi	1.96	352	P	Pn	23 48 21.6	-0.9
JAK				*e*S	Sn	23 48 44.5	-3.2
JCH	Churui	2.02	321	P	Pn	23 48 22.8	-0.5
JCH				*e*S	Sn	23 48 45.6	-3.5
JKHN	Kushirohamanak	2.03	2	P	Pn	23 48 22.8	-0.6
JKHN				S	Sn	23 48 46.3	-3.2
JOB	Onbets	2.07	334	*e*P	Pn	23 48 23.6	-0.4
JOB				*e*S	Sn	23 48 47.6	-2.7
JNBK	Urakawa-nobuka	2.13	306	*e*P	Pn	23 48 25.2	+0.4
JNBK				*e*S	Sn	23 48 50.5	-1.4
NEM2	Nemuro 2	2.36	12	*e*P	Pn	23 48 27.0	-1.0
NEM2				*e*S	Sn	23 48 53.4	-4.2
NMR	Nemuro--Hokkai	2.37	12	*e*P	Pn	23 48 26.9	-1.1
NMR				*e*S	Sn	23 48 53.4	-4.3
JSHD	Hidakashinhida	2.38	306	*e*P	Pn	23 48 29.0	+0.8
JSHD				*e*S	Sn	23 48 57.5	-0.5
JAR	Ashorobuto	2.44	337	P	Pn	23 48 28.1	-1.0
JAR				*e*S	Sn	23 48 55.8	-3.8
JNK	Nakash	2.54	354	*i* P	Pn	23 48 29.2	-1.4
JNK				S	Sn	23 48 57.3	-4.8
JBT2	Biratori 2	2.66	311	*e*P	Pn	23 48 31.5	-0.5
JBT2				*e*S	Sn	23 49 03.9	-1.0
GLVR	Golovnino	2.70	7	*e*P	Pn	23 48 33.2	+0.5
GLVR				*e*S	Sn	23 49 02.2	-3.8
GLVR				pmax	pmax		
	comp=Z,139nm,0.2s						
GLVR				smax	smax		
	comp=E,2µm,0.3s						
GLVR				smax	smax		
	comp=N,1µm,0.2s						
JANG	Nango	2.79	257	P	Pn	23 48 32.4	-1.5
JANG				S	Sn	23 49 02.3	-5.9
JFR	Furan	2.80	320	P	Pn	23 48 33.8	-0.3
JFR				*e*S	Sn	23 49 05.3	-3.3
JRA	Rausu	2.88	1	*e*P	Pn	23 48 34.2	-1.0
JRA				*e*S	Sn	23 49 05.9	-4.5
YUK	Yuzh-Kuril'sk	3.04	11	*e*P	Pn	23 48 37.7	+0.4
YUK				*i* S	Sn	23 49 09.4	-4.8
YUK				pmax	pmax		
	comp=N,95nm,0.2s						
YUK				pmax	pmax		
	comp=Z,337nm,0.2s						
YUK				smax	smax		
	comp=N,3µm,0.2s						
YUK				smax	smax		
	comp=E,2µm,0.2s						
JTKR	Abashiri--Toko	3.04	344	*e*P	Pn	23 48 37.1	-0.2
JTKR				*e*S	Sn	23 49 11.7	-2.6
JTM	Tenmabayashi	3.05	266		Pn	23 48 36.7	-0.7
JTM				Sn	Sn	23 49 10.7	-3.8
RUSJ	Misakicho	3.05	2	*e*P	Pn	23 48 37.4	-0.1
RUSJ				*e*S	Sn	23 49 11.6	-3.0
SHO	Shikotan	3.10	24	⇑*i*P	Pn	23 48 38.2	+0.1
SHO				*i* S	Sn	23 49 11.7	-4.1
SHO				pmax	pmax		
	comp=E,26nm,0.2s						
SHO				pmax	pmax		
	comp=Z,57nm,0.2s						
SHO				pmax	pmax		
	comp=N,36nm,0.1s						
SHO				smax	smax		
	comp=N,690nm,0.2s						
SHO				smax	smax		
	comp=E,472nm,0.2s						
JKA	Kamikawa-asahi	3.56	330		Pn	23 48 45.4	+0.8
ASAJ	Asahikawa	3.57	330	Pn	Pn	23 48 44.6	+0.1
	comp=E,7.1nm,0.3s,baz=134,slow=6.0,SNR=12						
ASAJ				Sn	Sn	23 49 25.6	-1.7
	comp=E,6.2nm,0.3s,baz=150,slow=32,SNR=7.5						
	comp=E,14nm,0.3s						
ASAJ	Asahikawa	3.57	330	P	Pn	23 48 45.4	+0.8
JMM	Marumori	4.59	228		Pn	23 48 56.5	-2.2
KUR	Kuril'sk	4.65	25	P	Pn	23 48 59.9	+0.5
KUR				*e*S	Sn	23 49 49.9	-4.1
KUR				pmax	pmax		
	comp=Z,118nm,0.5s						
KUR				smax	smax		
	comp=N,652nm,0.3s						
KUR				smax	smax		
	comp=E,176nm,0.2s						
YSS	Yuzhno-Sakhali	6.13	345	*e*P	Pn	23 49 16.7	-3.1
YSS				MLR	MLR		
	comp=Z,300nm,13.0s						
YSS				MLR	MLR		
	comp=N,200nm,14.0s						
MJAR	Matsushiro Arr	7.00	232	Pn	Pn	23 49 30.6	-1.2
	comp=N,0.1nm,0.3s,baz=40,slow=10.0,SNR=12						
MJAR				Sn	Sn	23 50 49.9	-2.2
	comp=N,0.2nm,0.3s,baz=332,slow=17,SNR=1.9						
	comp=N,2.2nm,0.5s						
MJB9	Matsu-Tunnel	7.00	232	Pn	Pn	23 49 30.8	-1.0
MAJO	Matsushiro	7.00	232		Pn	23 49 30.7	-1.1
MAJO	Matsushiro	7.00	232	*i* P	Pn	23 49 31.4	-0.4
JGF	Kuroka	8.15	231		Pn	23 49 47.3	-0.3
USA0B	Ussuriysk Arra	10.14	292		Pn	23 50 15.0	+0.2
USA0B	Ussuriysk Arra	10.14	292	*i* P	Pn	23 50 16.0	+1.2
USRK	Ussuriysk Ar.	10.14	292	Pn	Pn	23 50 15.5	+0.7
USRK	Ussuriysk Ar.	10.14	292	Pn	Pn	23 50 15.9	+1.1
	comp=N,0.2nm,0.3s,baz=94,slow=15,SNR=3.7						
USRK				LR	LR	23 54 25.7	
	comp=N,97nm,18.9s,baz=70,slow=39						
	comp=N,3.3nm,0.8s						
KLR	Kul'dur	12.45	316	Pn	Pn	23 50 46.0	-0.3
	comp=N,0.2nm,0.3s,baz=126,slow=14,SNR=4.5						
KLR				LR	LR	23 56 18.5	
	comp=N,48nm,18.1s,baz=130,slow=41						
	comp=N,0.7nm,0.5s						
KSRS	Korea Array	13.77	260	Pn	Pn	23 51 04.4	0.0
	comp=N,0.3nm,0.3s,baz=63,slow=14,SNR=2.2						
KSRS				LR	LR	23 55 58.0	
	comp=N,68nm,19.6s,baz=70,slow=36						
	comp=N,0.3nm,0.3s						
JNU	Nakatsue	13.81	240	LR	LR	23 56 53.3	
	comp=N,88nm,19.1s,baz=356,slow=40						
PEA0B	Petropavlovsk-	14.78	31	*ce*P	Pn	23 51 17.9	-0.3
PETK	Petropavlovsk-	14.78	31	Pn	Pn	23 51 17.4	-0.8
	comp=N,0.3nm,0.3s,baz=177,slow=11,SNR=4.2						
PETK				LR	LR	23 56 24.7	
	comp=N,52nm,22.0s,baz=225,slow=35						
	comp=N,0.9nm,0.4s						
MA2	Magadan	18.88	9	LR	LR	00 00 55.6	
	comp=N,50nm,18.3s,baz=277,slow=42						
SEY	Seymchan	22.34	9	*ce*P	P	23 52 47.3	+0.2
SEY				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SHEM	Shemya Is, Ala	22.85	49	LR	LR	00 01 42.7	
	comp=Z,17nm,21.1s,baz=222,slow=36						
ULN	Ulaanbaatar	27.76	297	*i* P	P	23 53 39.2	+0.7
ULN				pmax	pmax		
	comp=Z,9.0nm,1.3s						
SONM	Songino Array	28.21	297	P	P	23 53 41.6	-0.8
	comp=Z,0.9nm,0.4s,baz=101,slow=7.7,SNR=5.0						
	comp=Z,0.9nm,0.4s						
H11N2	WAKE ISLAND Hy	28.25	132	T	T	00 23 17.1	
	baz=324						
H11N1	WAKE ISLAND Hy	28.26	132	T	T	00 23 16.0	
	baz=324						
H11N3	WAKE ISLAND Hy	28.26	132	T	T	00 23 18.4	
	baz=324						
H11S1	WAKE ISLAND Hy	29.12	134	T	T	00 24 22.9	
	baz=325						
H11S3	WAKE ISLAND Hy	29.13	134	T	T	00 24 19.8	
	baz=325						
H11S2	WAKE ISLAND Hy	29.14	134	T	T	00 24 21.5	
	baz=325						
TIXI	Tiksi	31.72	350	LR	LR	00 08 35.1	
	comp=Z,30nm,19.6s,baz=192,slow=39						
SPIA	Saint Paul Isl	32.69	45	P	P	23 54 21.5	-0.2
	baz=260						
P08K	Saint George I	32.98	46	P	P	23 54 23.9	-0.3
	baz=262						
NIKH	Nikolski High	33.03	53	P	P	23 54 25.2	+0.5
	baz=268						
GAMB	Gambell	33.80	33	P	P	23 54 31.8	+0.5
	baz=249						
GTA	Gaotai	34.30	282	*e*P	P	23 54 37.1	+1.0
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
UNV	Unalaska Valle	34.47	52	P	P	23 54 38.0	+0.7
	baz=268						
M11K	Mekoryuk	35.35	40	P	P	23 54 45.8	+1.1
	baz=259						
TNA	Tin City	35.95	31	P	P	23 54 50.5	+0.7
	baz=251						
K13K	Kusilvak Mount	36.38	38	P	P	23 54 53.7	+0.1
	baz=259						
F14K	Arctic Creek	36.55	32	P	P	23 54 55.9	+0.9
	baz=252						
M13K	Dall Lake	36.75	41	P	P	23 54 57.2	+0.5
	baz=262						
J14K	Nanvaranak Lak	37.05	37	P	P	23 54 59.7	+0.5
	baz=259						
S12K	Black Hills	37.08	48	P	P	23 55 00.2	+0.6
	baz=270						
L14K	Kuka Creek	37.21	39	P	P	23 55 01.2	+0.6
	baz=262						
F15K	North Star Dit	37.29	32	P	P	23 55 01.8	+0.5
	baz=254						
G15K	Niukluk	37.34	33	P	P	23 55 02.6	+0.9
	baz=256						
M14K	Bethel	37.48	40	P	P	23 55 03.8	+0.9
	baz=263						
N14K	Kuskokwak Cree	37.52	41	P	P	23 55 04.5	+1.3
	baz=264						
O14K	Tigyukauivet M	37.67	43	P	P	23 55 05.4	+0.9
	baz=266						
L15K	Ungalak Mounta	37.82	39	P	P	23 55 06.5	+0.6
	baz=262						
C16K	Lisburne Hills	37.84	28	P	P	23 55 06.5	+0.7
	baz=250						
K15K	Wolf Creek Mou	37.89	38	P	P	23 55 07.3	+0.8
	baz=261						
SDPT	Sand Point	37.98	49	P	P	23 55 07.9	+0.7
	baz=271						
H16K	Elim	38.01	34	P	P	23 55 08.6	+1.3
	baz=258						
M15K	Kasigluk River	38.09	40	P	P	23 55 08.8	+0.7
	baz=264						
G16K	Koyuk River	38.13	33	P	P	23 55 09.4	+1.1
	baz=257						
N15K	Kwethluk River	38.34	41	P	P	23 55 11.5	+1.3
	baz=266						
O15K	Ungalikthiuk R	38.40	43	P	P	23 55 11.0	+0.3
	baz=267						
D17K	Noatak River	38.46	29	P	P	23 55 11.9	+0.8
	baz=253						
J16K	Anvik River	38.47	36	P	P	23 55 11.8	+0.6
	baz=261						
S14K	Fog Glacier	38.49	48	P	P	23 55 11.9	+0.3
	baz=271						
CHNA	Chernabura Isl	38.51	50	P	P	23 55 11.7	0.0
	baz=273						
I17K	Unalakleet	38.53	35	P	P	23 55 11.5	-0.2
	baz=260						
C17K	DeLong Mountai	38.66	28	P	P	23 55 13.1	+0.3
	baz=252						
E17K	Hotham Inlet	38.76	30	P	P	23 55 13.9	+0.3
	baz=255						
L16K	Owhat River	38.78	39	P	P	23 55 14.0	+0.1
	baz=264						
F17K	Baldwin Pennin	38.82	31	P	P	23 55 14.7	+0.6
	baz=257						
G17K	Kiwalik Mounta	38.85	33	P	P	23 55 15.2	+0.8
	baz=258						
M16K	Timber Creek	38.96	40	P	P	23 55 16.8	+1.4
	baz=266						
N16K	Nishlik Lake	39.02	41	P	P	23 55 17.1	+1.2
	baz=266						
H17K	Granite Mounta	39.05	34	P	P	23 55 16.3	+0.2
	baz=260						
GOMU	GeErMu	39.12	280	P	P	23 55 17.1	-0.4
GOMU				pmax	pmax		
	comp=Z,16nm,0.8s						
J17K	VABM Dome	39.16	36	P	P	23 55 16.5	-0.6
	baz=262						
E18K	Tukpahlearik C	39.30	30	P	P	23 55 17.9	-0.3
	baz=256						
O16K	Kokwok River B	39.31	42	P	P	23 55 19.1	+0.8
	baz=268						
P16K	Nushagak River	39.34	43	P	P	23 55 18.5	-0.1
	baz=269						
L17K	Donlin	39.38	38	P	P	23 55 19.0	+0.1
	baz=265						
B18K	Kokolik River	39.41	27	P	P	23 55 18.3	-0.8
	baz=252						
C18K	Utukok River	39.41	28	P	P	23 55 18.9	-0.3
	baz=254						
K17K	Iditarod	39.43	37	P	P	23 55 19.5	+0.2
	baz=264						
F18K	Selawik	39.48	31	P	P	23 55 19.9	+0.3
	baz=258						
M17K	Holitna River	39.73	39	P	P	23 55 24.1	+2.4
M17K				IAmb	IAmb	23 55 24.9	
	comp=Z,6.3nm,0.7s						
M17K	Holitna River	39.73	39	P	P	23 55 22.3	+0.5
	baz=266						
H18K	Honhosa River	39.73	33	P	P	23 55 22.0	+0.1
	baz=261						
G18K	Tagagawik	39.74	32	P	P	23 55 23.8	+1.9
G18K				IAmb	IAmb	23 55 24.2	
	comp=Z,3.6nm,0.7s						
G18K	Tagagawik	39.74	32	P	P	23 55 21.8	-0.1
	baz=260						
N17K	Nushagak Hills	39.80	41	P	P	23 55 24.8	+2.3
N17K				IAmb	IAmb	23 55 25.6	
	comp=Z,6.1nm,1.1s						
N17K	Nushagak Hills	39.80	41	P	P	23 55 22.8	+0.4
	baz=268						
O17K	Koliganek Bris	39.82	42	P	P	23 55 22.3	-0.2
	baz=269						
A19K	Wainwright	39.91	25	P	P	23 55 23.2	0.0
	baz=252						
C19K	Lookout Ridge	40.09	27	P	P	23 55 26.9	+2.0
C19K	Lookout Ridge	40.09	27	P	P	23 55 24.8	-0.1
	baz=255						
L18K	Granite Mounta	40.14	38	P	P	23 55 27.5	+2.3
L18K				IAmb	IAmb	23 55 28.5	
	comp=Z,4.7nm,1.1s						
L18K	Granite Mounta	40.14	38	P	P	23 55 24.8	-0.4
	baz=266						
P17K	Kvichak River	40.15	43	P	P	23 55 25.4	+0.1
	baz=270						
J18K	Innoko River	40.23	36	P	P	23 55 27.9	+1.9
J18K	Innoko River	40.23	36	P	P	23 55 26.0	0.0
	baz=265						
F19K	Shaleruckik Mo	40.26	31	P	P	23 55 27.6	+1.5
F19K	Shaleruckik Mo	40.26	31	P	P	23 55 25.6	-0.5
	baz=260						
GCSA	Galena City Sc	40.30	34	P	P	23 55 25.7	-0.7
	baz=263						
G19K	Purcell Mounta	40.41	32	P	P	23 55 29.2	+1.8
G19K	Purcell Mounta	40.41	32	P	P	23 55 27.1	-0.3
	baz=261						
N18K	Kilae Creek	40.45	41	P	P	23 55 30.3	+2.5
N18K				IAmb	IAmb	23 55 31.1	
	comp=Z,4.9nm,0.8s						
N18K	Kilae Creek	40.45	41	P	P	23 55 27.6	-0.2
	baz=269						
Q17K	Contact Creek	40.45	44	P	P	23 55 27.9	-0.1
	baz=272						
D19K	Kuna River	40.47	28	P	P	23 55 27.5	-0.4
	baz=257,SNR=8.6						
M18K	Stony River	40.50	39	P	P	23 55 28.2	-0.1
	baz=268						
E19K	Redstone River	40.58	30	P	P	23 55 28.6	-0.3
	baz=260,SNR=8.8						
H19K	Roundabout Mou	40.58	33	P	P	23 55 28.5	-0.3
	baz=262,SNR=12						
CHIR	Chirikof Islan	40.71	48	P	P	23 55 30.0	0.0
	baz=275						
J19K	Poorman	40.76	35	P	P	23 55 30.4	0.0
	baz=265,SNR=6.5						
P18K	Big Mountain,	40.77	43	P	P	23 55 32.4	+1.9
P18K				IAmb	IAmb	23 55 47.1	
	comp=Z,4.2nm,1.1s						
P18K	Big Mountain,	40.77	43	P	P	23 55 30.4	-0.1
	baz=271						
O18K	Koktuh Hills	40.77	42	P	P	23 55 33.1	+2.6
O18K				IAmb	IAmb	23 55 35.8	
	comp=Z,3.0nm,0.7s						
O18K	Koktuh Hills	40.77	42	P	P	23 55 30.1	-0.4
	baz=270						
Q18K	Katmai Hardscr	40.90	44	P	P	23 55 31.5	-0.2
	baz=272						
NRIK	Noril'sk	40.91	333	P	P	23 55 31.1	-0.3
	comp=Z,0.8nm,0.3s,baz=105,slow=9.1,SNR=3.6						
	comp=Z,0.8nm,0.3s						
NRIK	Noril'sk	40.91	333	*ce*P	P	23 55 33.0	+1.5
L19K	White Mountain	40.99	38	P	P	23 55 32.7	+0.4
	baz=268						

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D20K  Etivluk River      41.05  28   P      P      23 55 33.3 +0.6
      baz=259
F20K  Avaraart Lake      41.09  31   P      P      23 55 34.6 +1.7
F20K  Avaraart Lake      41.09  31   P      P      23 55 33.5 +0.6
      baz=261
E20K  Nigu River         41.12  29   P      P      23 55 33.3  0.0
      baz=260
N19K  Bonanza Creek      41.14  40   P      P      23 55 35.5 +1.9
N19K                                 IAmb   IAmb   23 55 37.5
      comp=Z,3.8nm,1.0s
N19K  Bonanza Creek      41.14  40   P      P      23 55 33.7 +0.1
      baz=270
B20K  Meade River        41.14  26   P      P      23 55 35.4 +2.1
B20K                                 IAmb   IAmb   23 55 39.3
      comp=Z,6.4nm,1.1s
B20K  Meade River        41.14  26   P      P      23 55 33.9 +0.5
      baz=257
M19K  Big River Lodg     41.20  39   P      P      23 55 36.4 +2.4
M19K  Big River Lodg     41.20  39   P      P      23 55 34.2 +0.2
      baz=269
H20K  Anotleneega Mo     41.23  33   P      P      23 55 34.9 +0.8
      baz=264
R18K  Karluk             41.24  45   P      P      23 55 33.7 -0.6
      baz=274
I20K  Naaghedeneel       41.33  34   P      P      23 55 34.2 -0.8
      baz=265
K20K  Telida             41.41  37   P      P      23 55 36.1 +0.4
      baz=267
J20K  Nowinta River      41.42  35   P      P      23 55 36.4 +0.7
      baz=266,SNR=5.9
ZALV  Zalesovo Beam      41.45 309   P      P      23 55 35.2 -1.0
      comp=Z,1.0nm,0.6s,baz=78,slow=7.9,SNR=5.3
ZALV                                 PcP    PcP    23 57 33.5 -0.4
      comp=Z,1.0nm,0.5s,baz=79,slow=3.1,SNR=3.2
ZALV                                 LR     LR     00 13 24.1
      comp=Z,17nm,20.5s,baz=88,slow=37
      comp=Z,1.0nm,0.6s
SII   Sitkinak Islan     41.46  47   P      P      23 55 36.8 +0.6
      baz=275
L20K  Farewell, AK       41.46  38   P      P      23 55 37.0 +0.9
      baz=268
Q19K  Cape Douglas,      41.60  43   P      P      23 55 38.6 +1.2
Q19K  Cape Douglas,      41.60  43   P      P      23 55 38.4 +1.1
      baz=273
C21K  Knifeblade Rid     41.78  28   P      P      23 55 39.2 +0.5
      baz=260
M20K  Styx River         41.80  39   P      P      23 55 41.2 +2.2
M20K  Styx River         41.80  39   P      P      23 55 38.2 -0.8
      baz=270
G21K  Allakaket          41.89  32   P      P      23 55 39.0 -0.6
      baz=264,SNR=6.3
OHAK  Old Harbor         41.89  46   P      P      23 55 39.3 -0.4
      baz=275
B21K  Ikpikpuk River     41.93  27   P      P      23 55 41.6 +1.8
B21K                                 IAmb   IAmb   23 55 42.6
      comp=Z,3.3nm,0.7s
B21K  Ikpikpuk River     41.93  27   P      P      23 55 40.1 +0.3
      baz=260
E21K  Killik River       41.96  29   P      P      23 55 41.0 +0.8
      baz=262,SNR=5.4
F21K  Alatna River       41.98  31   P      P      23 55 42.2 +1.9
F21K  Alatna River       41.98  31   P      P      23 55 40.7 +0.3
      baz=263
O20K  Slope Mountain     42.07  41   P      P      23 55 41.7 +0.5
      baz=272
A22K  Sinclair Lake      42.08  25   P      P      23 55 41.8 +0.7
      baz=258
H21K  Melozitna Rive     42.10  33   P      P      23 55 42.2 +0.8
      baz=266
KDAK  Kodiak Island      42.23  45   P      P      23 55 43.4 +1.0
KDAK                                 IAmb   IAmb   23 55 43.9
      comp=Z,8.3nm,0.8s
KDAK  Kodiak Island      42.23  45   LR     LR     00 15 24.6
      comp=Z,14nm,18.5s,baz=241,slow=39
KDAK  Kodiak Island      42.23  45   P      P      23 55 43.4 +1.0
KDAK                                 pmax   pmax
      comp=Z,8.0nm,0.8s
KDAK  Kodiak Island      42.23  45   P      P      23 55 42.9 +0.5
      baz=275
N20K  Mount Spurr        42.24  40   P      P      23 55 43.3 +0.7
      baz=271
PPLA  Purkeypile         42.25  37   P      P      23 55 44.8 +2.1
PPLA                                 IAmb   IAmb   23 56 03.6
      comp=Z,5.8nm,1.1s
PPLA  Purkeypile         42.25  37   P      P      23 55 43.3 +0.6
      baz=269
Q20K  Shuyak Island      42.26  44   P      P      23 55 43.3 +0.6
      baz=274
SYI   Shuyak Island      42.27  44   P      P      23 55 43.6 +0.9
CAST  Castle Rocks       42.30  36   P      P      23 55 43.1  0.0
      baz=269,SNR=6.7
I21K  Tanana             42.41  34   P      P      23 55 44.1 +0.3
      baz=267
B22K  Teshekpuk Lake     42.46  26   P      P      23 55 45.0 +0.9
B22K  Teshekpuk Lake     42.46  26   P      P      23 55 44.9 +0.7
      baz=260
D22K  Ayikyak River      42.49  28   P      P      23 55 44.7 +0.2
      baz=262,SNR=5.1
F22K  John River         42.51  30   P      P      23 55 45.2 +0.6
      baz=264
SKT   Skwentna           42.55  39   P      P      23 55 46.1 +1.1
      baz=271
HOM   Homer              42.58  42   P      P      23 55 46.2 +0.9
      baz=273
H22K  Ishtalitna Cre     42.70  33   P      P      23 55 47.0 +0.8
      baz=267
E22K  Anaktuvuk Pass     42.72  30   P      P      23 55 47.3 +1.0
      baz=264,SNR=15
G22K  Bettles            42.72  31   P      P      23 55 47.8 +1.5
      baz=266
BPAW  Bear Paw Mtn.      42.80  35   P      P      23 55 48.6 +1.5
BPAW  Bear Paw Mtn.      42.80  35   P      P      23 55 47.9 +0.8
      baz=269
MLY   Manley             42.93  34   P      P      23 55 50.3 +2.1
MLY   Manley             42.93  34   P      P      23 55 48.1 -0.1
      baz=268,SNR=6.2
SUA   Susitna One        42.94  39   P      P      23 55 48.7 +0.4
      baz=272
BRSE  Bradley Lake S     43.03  42   P      P      23 55 50.2 +1.2
      baz=274
TRF   Thorofare Moun     43.11  36   P      P      23 55 52.4 +2.6
TRF   Thorofare Moun     43.11  36   P      P      23 55 50.1 +0.4
      baz=270
CUT   Chulitna           43.14  38   P      P      23 55 50.6 +0.9
      baz=272
D23K  Nanushuk River     43.22  28   P      P      23 55 52.2 +1.8
D23K                                 IAmb   IAmb   23 55 55.4
      comp=Z,5.8nm,1.1s
D23K  Nanushuk River     43.22  28   P      P      23 55 50.9 +0.5
      baz=264
COLD  Coldfoot           43.25  31   P      P      23 55 52.5 +1.9
COLD                                 IAmb   IAmb   23 55 53.8
      comp=Z,4.2nm,1.2s
COLD  Coldfoot           43.25  31   P      P      23 55 51.1 +0.4
      baz=267
G23K  Bananza Creek      43.29  32   P      P      23 55 53.0 +2.0
G23K  Bananza Creek      43.29  32   P      P      23 55 51.7 +0.6
      baz=267
C23K  Itkillik River     43.34  27   P      P      23 55 51.9 +0.6
C23K  Itkillik River     43.34  27   P      P      23 55 52.1 +0.8
      baz=263
RC01  Rabbit Creek A     43.45  40   P      P      23 55 53.2 +0.9
RC01                                 IAmb   IAmb   23 55 54.5
      comp=Z,6.7nm,0.8s
RC01  Rabbit Creek A     43.45  40   P      P      23 55 53.2 +0.9
      baz=274
H23K  Yukon River        43.45  33   P      P      23 55 53.9 +1.6
H23K                                 IAmb   IAmb   23 55 55.6
      comp=Z,5.1nm,0.8s
H23K  Yukon River        43.45  33   P      P      23 55 53.5 +1.2
      baz=269,SNR=7.4
I23K  Minto, Yukon-K     43.52  34   P      P      23 55 53.1 +0.4
I23K  Minto, Yukon-K     43.52  34   P      P      23 55 54.1 +1.3
      baz=270
E23K  Chandalar          43.53  30   P      P      23 55 54.0 +1.0
E23K  Chandalar          43.53  30   P      P      23 55 53.9 +0.9
      baz=266,SNR=9.2
TOLK  Toolik Lake Re     43.59  29   P      P      23 55 55.1 +1.7
TOLK                                 IAmb   IAmb   23 55 56.2
      comp=Z,5.3nm,0.7s
TOLK  Toolik Lake Re     43.59  29   P      P      23 55 54.6 +1.2
      baz=266
SEW   Seward             43.66  41   P      P      23 55 54.6 +0.6
      baz=275
MCK   McKinley           43.71  36   P      P      23 55 56.6 +2.2
MCK                                  IAmb   IAmb   23 55 57.4
      comp=Z,2.9nm,0.7s
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MCK   McKinley           43.71  36   P      P      23 55 56.6 +2.2
MCK                                  pmax   pmax
      comp=Z,3.0nm,0.7s
MCK   McKinley           43.71  36   P      P      23 55 55.2 +0.8
      baz=271
GHO   Glory Hole Cre     43.80  39   P      P      23 55 56.3 +1.1
GHO                                  IAmb   IAmb   23 55 57.2
      comp=Z,5.5nm,0.8s
D24K  Happy Valley       43.90  28   P      P      23 55 58.1 +2.3
D24K  Happy Valley       43.90  28   P      P      23 55 56.4 +0.5
      baz=266
WAT1  Susitna Watana     43.91  37   P      P      23 55 56.8 +0.7
      baz=273
E24K  Your Creek         43.95  30   P      P      23 55 56.9 +0.6
      baz=267,SNR=9.4
C24K  Franklin Bluff     43.99  27   P      P      23 55 57.4 +0.9
      baz=265
KNK   Knik Glacier       44.04  39   P      P      23 55 57.9 +0.8
      baz=274
WRH   Wood River Hil     44.07  35   P      P      23 55 58.0 +0.8
SML   Sawmill            44.08  39   P      P      23 55 57.8 +0.4
      baz=274
H24K  Noodor Dome        44.14  33   P      P      23 55 58.8 +0.9
      baz=270,SNR=5.3
F24K  Squaw Lake         44.16  31   P      P      23 55 59.8 +1.8
F24K                                 IAmb   IAmb   23 56 02.4
      comp=Z,2.4nm,0.8s
F24K  Squaw Lake         44.16  31   P      P      23 55 58.7 +0.7
      baz=268
CCB   Clear Creek Bu     44.19  35          P      23 56 00.1 +1.9
WAT6  Susitna Watana     44.30  38   P      P      23 55 59.7 +0.4
      baz=274
G24K  Hadweenzic Riv     44.31  32          P      23 56 01.0 +1.9
G24K                                 IAmb   IAmb   23 56 02.5
      comp=Z,4.7nm,0.9s
G24K  Hadweenzic Riv     44.31  32   P      P      23 56 00.1 +1.0
      baz=270
POKR  Poker Plat Res     44.33  34   P      P      23 56 01.4 +2.0
POKR  Poker Plat Res     44.33  34   P      P      23 56 00.2 +0.9
      baz=271
M23K  Glacier View       44.36  39   P      P      23 56 00.5 +0.9
      baz=274
DHY   Denali Highway     44.44  37   P      P      23 56 01.4 +0.9
      baz=274,SNR=5.3
MK31  Makanchi Array     44.52 299ceP      P      23 56 01.6 +0.5
MKAR  Makanchi Array     44.52 299   P      P      23 56 00.7 -0.4
      comp=Z,1.2nm,0.8s,baz=83,slow=9.6,SNR=12
      comp=Z,1.2nm,0.8s
MKAR  Makanchi Array     44.52 299 i P      P      23 56 01.2  0.0
MKAR                                 pmax   pmax
      comp=Z,1.0nm,0.8s
SCM   Sheep Creek Mo     44.55  39   P      P      23 56 02.6 +1.4
SCM                                  IAmb   IAmb   23 56 14.7
      comp=Z,5.8nm,1.0s
SCM   Sheep Creek Mo     44.55  39   P      P      23 56 02.6 +1.4
SCM                                  pmax   pmax
      comp=Z,6.0nm,1.0s
SCM   Sheep Creek Mo     44.55  39   P      P      23 56 02.0 +0.8
      baz=275
HDA   Harding Lake       44.56  35   P      P      23 56 02.8 +1.6
HDA                                  IAmb   IAmb   23 56 03.3
      comp=Z,4.1nm,0.8s
HDA   Harding Lake       44.56  35   P      P      23 56 02.2 +1.0
      baz=272
ILAR  Eielson Array      44.58  34   P      P      23 56 02.4 +1.1
ILAR  Eielson Array      44.58  34   P      P      23 56 01.9 +0.6
      comp=Z,1.8nm,0.7s,baz=261,slow=6.7,SNR=25
      comp=Z,1.8nm,0.7s
ILAR  Eielson Array      44.58  34   P      P      23 56 02.4 +1.1
P23K  Montague Islan     44.69  41   P      P      23 56 04.5 +2.3
MAKZ  Makanchi           44.72 299          P      23 56 02.1 -0.7
MAKZ                                 IAmb   IAmb   23 56 12.8
      comp=Z,3.2nm,0.9s
MAKZ  Makanchi           44.72 299   P      P      23 56 02.1 -0.7
MAKZ                                 pmax   pmax
      comp=Z,3.0nm,1.0s
GLI   Glacier Island     44.75  40   P      P      23 56 04.1 +1.4
GLI                                  IAmb   IAmb   23 56 15.7
      comp=Z,4.9nm,0.9s
GLI   Glacier Island     44.75  40   P      P      23 56 02.9 +0.2
      baz=276
D25K  Kavik River        44.78  28   P      P      23 56 04.7 +1.8
D25K  Kavik River        44.78  28   P      P      23 56 03.5 +0.5
      baz=268
G25K  Bearman Lake       44.85  32   P      P      23 56 04.7 +1.2
      baz=271
H25L  Birch Creek        44.97  32   P      P      23 56 05.0 +0.5
      baz=272
F25K  Christian Rive     45.02  30   P      P      23 56 07.5 +2.5
F25K                                 IAmb   IAmb   23 56 08.2
      comp=Z,2.9nm,0.8s
F25K  Christian Rive     45.02  30   P      P      23 56 05.6 +0.6
      baz=270
E25K  Arctic Village     45.05  30   P      P      23 56 06.2 +1.1
      baz=270
M24K  Tolsona, Glenn     45.07  38   P      P      23 56 07.2 +1.9
M24K  Tolsona, Glenn     45.07  38   P      P      23 56 06.0 +0.7
      baz=276
HIN   Hinchinbrook I     45.09  41   P      P      23 56 06.8 +1.3
K24K  Donnelly Dome      45.11  36   P      P      23 56 06.4 +0.8
      baz=274
PRP   Porcupine Dome     45.12  33   P      P      23 56 06.6 +0.8
      baz=273
J25K  Salcha River,      45.23  35   P      P      23 56 07.0 +0.3
      baz=274
KLU   Klutina            45.25  39   P      P      23 56 08.3 +1.4
      baz=276,SNR=5.6
Q23K  Middleton Isla     45.29  42   P      P      23 56 08.8 +1.8
      baz=278
CMAR  Chiang Mai Arr     45.30 254   LR     LR     00 14 46.9
      comp=Z,9.2nm,21.4s,baz=65,slow=36
PAX   Paxson             45.31  37   P      P      23 56 09.0 +1.6
      baz=275
BMAR  Burnt Mountain     45.43  31   P      P      23 56 11.0 +2.9
EYAK  Cordova Ski Ar     45.44  40   P      P      23 56 10.0 +1.8
      baz=277
HARP  HAARP              45.51  38   P      P      23 56 10.3 +1.5
      baz=276
RIDG  Independent Ri     45.53  36   P      P      23 56 09.8 +0.8
RIDG                                 IAmb   IAmb   23 56 24.8
      comp=Z,2.5nm,1.1s
RIDG  Independent Ri     45.53  36   P      P      23 56 10.1 +1.1
      baz=275
F26K  Sheenjek River     45.59  30   P      P      23 56 10.6 +1.2
      baz=272
C27K  Jago River         45.73  28   P      P      23 56 12.6 +2.2
C27K  Jago River         45.73  28   P      P      23 56 12.2 +1.8
      baz=270
G26K  Porcupine Rive     45.76  31   P      P      23 56 11.9 +1.2
      baz=273
KURK  Kurchatov          45.81 306ceP      P      23 56 11.8 +0.5
KURK                                 pmax   pmax
      comp=Z,3.0nm,1.3s
N25K  Chitina, Valde     45.86  39   P      P      23 56 12.9 +1.2
      baz=277
DOT   Dot Lake           45.88  36   P      P      23 56 12.6 +0.8
DOT                                  IAmb   IAmb   23 56 13.2
      comp=Z,1.9nm,0.8s
KURBB Kurchatov Arra     45.88 306   P      P      23 56 11.4 -0.5
      comp=Z,1.8nm,0.5s,baz=76,slow=8.8,SNR=12
      comp=Z,1.8nm,0.5s
SCRK  Sand Creek         45.88  36   P      P      23 56 13.2 +1.3
      baz=276,SNR=6.5
BMRM  Bremner River      45.94  40   P      P      23 56 13.8 +1.5
      baz=278
J26L  Joseph Creek       46.02  35   P      P      23 56 14.4 +1.5
      baz=275
I26K  Coal Creek Min     46.12  34   P      P      23 56 15.2 +1.6
      baz=275
L26K  Log Cabin Wild     46.27  37   P      P      23 56 15.7 +0.9
L26K  Log Cabin Wild     46.27  37   P      P      23 56 16.6 +1.8
      baz=277
M26K  Nabesna, AK        46.51  38   P      P      23 56 18.5 +1.7
M26K                                 IAmb   IAmb   23 56 20.0
      comp=Z,4.8nm,1.0s
M26K  Nabesna, AK        46.51  38   P      P      23 56 18.4 +1.7
      baz=278
E27K  Coleen River       46.53  30   P      P      23 56 19.3 +2.5
E27K  Coleen River       46.53  30   P      P      23 56 18.5 +1.6
      baz=274
G27K  Doyon Strip        46.61  31   P      P      23 56 18.6 +1.2
      baz=275
MCARA McCarthy VSAT      46.64  39   P      P      23 56 18.8 +1.0
      baz=279
D27M  Malcolm River      46.70  28   P      P      23 56 18.9 +0.7
      baz=273
CRQE  Cirque             46.71  40   P      P      23 56 19.6 +1.2
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      baz=279
H27K  Steamboat Moun     46.71  32   P      P      23 56 19.1 +0.8
      baz=276,SNR=5.4
K27K  Chicken            46.72  35   P      P      23 56 20.1 +1.8
      baz=277
I27K  Kandik River       46.74  33   P      P      23 56 19.9 +1.4
      baz=276
WAX   Waxell Ridge       46.88  40   P      P      23 56 22.4 +2.7
L27K  Beaver Creek,      46.95  37   P      P      23 56 21.4 +1.2
      baz=278,SNR=7.1
M27K  Edge Creek, AK     47.03  38   P      P      23 56 22.6 +1.6
      baz=279
F28M  Old Crow           47.23  30   P      P      23 56 24.3 +2.0
F28M                                 IAmb   IAmb   23 56 25.1
      comp=Z,3.3nm,0.8s
F28M  Old Crow           47.23  30   P      P      23 56 23.5 +1.3
      baz=276
E28M  Babbage River      47.27  29   P      P      23 56 23.7 +1.2
      baz=275
MESA  MESA               47.36  41   P      P      23 56 24.5 +0.9
      baz=281
I28M  Miner Creek        47.45  33   P      P      23 56 25.1 +1.0
      baz=278,SNR=11
CTG   Chitna Glacier     47.52  39   P      P      23 56 25.2 +0.5
      baz=280
YUK3  Moose Creek        47.79  38   P      P      23 56 27.5 +0.6
      baz=280
DAWY  Dawson             47.88  35   P      P      23 56 28.6 +1.2
      baz=279
E29M  Blow River         47.89  29   P      P      23 56 28.0 +0.7
      baz=277,SNR=6.5
H29M  Whitestone         47.98  32   P      P      23 56 30.4 +2.3
H29M                                 IAmb   IAmb   23 56 45.4
      comp=Z,3.3nm,1.0s
H29M  Whitestone         47.98  32   P      P      23 56 30.0 +1.8
      baz=278
G29M  Pine Creek         48.02  31   P      P      23 56 30.9 +2.5
G29M  Pine Creek         48.02  31   P      P      23 56 29.0 +0.6
      baz=278,SNR=5.2
O28M  Mount Upton        48.11  39   P      P      23 56 29.9 +0.4
      baz=282
I29M  Ogilvie Camp,      48.14  33   P      P      23 56 30.5 +1.1
      baz=279,SNR=7.7
PINM  Pinnacle           48.21  40   P      P      23 56 31.3 +1.2
      baz=282
M29M  Somme Creek        48.59  37   P      P      23 56 33.9 +0.9
      baz=282
L29M  L29M               48.60  36   P      P      23 56 33.4 +0.4
      baz=281,SNR=5.9
EPYK  Eagle Plains       48.62  32   P      P      23 56 34.9 +1.9
EPYK  Eagle Plains       48.62  32   P      P      23 56 35.0 +1.9
      baz=280
G30M  tAoh Zraii Nji     48.72  31   P      P      23 56 35.3 +1.5
      baz=279
YUK4  Talbot Arm         48.72  39   P      P      23 56 36.1 +1.9
      baz=282
PNL   Peninsula          48.73  41   P      P      23 56 35.8 +1.8
      baz=283
K29M  Barlow Dome        48.73  35   P      P      23 56 35.1 +1.0
      baz=281,SNR=5.7
F30M  Barrier River      48.78  30   P      P      23 56 35.8 +1.6
      baz=279
YUK6  Outpost Mounta     48.95  39   P      P      23 56 37.0 +1.1
      baz=283
I30M  Mount Dempster     48.96  33   P      P      23 56 37.0 +1.2
      baz=281,SNR=13
O29M  Mount Kennedy      48.99  40   P      P      23 56 37.2 +1.1
      baz=283
J30M  Hart River         49.10  34   P      P      23 56 38.6 +1.7
J30M                                 IAmb   IAmb   23 56 44.1
      comp=Z,1.7nm,0.8s
J30M  Hart River         49.10  34   P      P      23 56 37.7 +0.8
      baz=281
HYT   Haines Junctio     49.38  39   P      P      23 56 40.1 +1.0
      baz=284,SNR=12
N30M  Aishikik Lake      49.43  38   P      P      23 56 41.0 +1.7
      baz=283
G31M  Satah River        49.48  31   P      P      23 56 41.4 +1.8
G31M                                 IAmb   IAmb   23 56 41.6
      comp=Z,2.2nm,0.6s
G31M  Satah River        49.48  31   P      P      23 56 41.3 +1.8
      baz=281
INK   Inuvik             49.50  29   P      P      23 56 41.5 +1.8
INK                                  IAmb   IAmb   23 56 41.8
      comp=Z,3.4nm,0.7s
INK   Inuvik             49.50  29   P      P      23 56 41.5 +1.8
INK                                  pmax   pmax
      comp=Z,3.0nm,0.7s
INK   Inuvik             49.50  29   P      P      23 56 41.4 +1.8
      baz=281
KDJ   Kajisay            49.54 295   P      P      23 56 41.6 +1.0
KDJ                                  IAmb   IAmb   23 56 49.4
      comp=Z,2.7nm,1.0s
KDJ   Kajisay            49.54 295   P      P      23 56 41.6 +1.0
KDJ                                  pmax   pmax
      comp=Z,3.0nm,1.0s
P29M  Windy Craggy       49.55  41   P      P      23 56 41.9 +1.6
      baz=284,SNR=5.0
F31M  Tsiigehtchic       49.59  30   P      P      23 56 40.8 +0.5
      baz=281
H31M  Peel River         49.68  32   P      P      23 56 42.0 +0.9
      baz=282
N31M  Braeburn, Yuko     50.03  38   P      P      23 56 45.1 +1.2
      baz=284
BVAR  Borovoye Array     50.05 311   P      P      23 56 43.5 -0.6
      comp=Z,0.9nm,0.4s,baz=74,slow=9.5,SNR=5.0
      comp=Z,0.9nm,0.4s
O30N  Mendenhall         50.07  39   P      P      23 56 45.3 +1.1
      baz=285
BRVK  Borovoye           50.10 311ceP      P      23 56 46.3 +1.8
BRVK                                 pmax   pmax
      comp=Z,2.0nm,0.6s
PLBC  Pleasant Camp      50.28  41   P      P      23 56 46.9 +1.2
      baz=286
M31M  Drury Creek, Y     50.49  37   P      P      23 56 48.5 +1.1
      baz=285
WHY   Whitehorse         50.67  39   P      P      23 56 49.7 +0.9
      baz=286
S31K  Pelican            50.76  42   P      P      23 56 50.6 +1.2
      baz=287
AAK   Ala-Archa          51.16 297   LR     LR     00 20 44.2
      comp=Z,44nm,18.1s,baz=109,slow=39
N32M  Quiet Lake         51.38  38   P      P      23 56 55.4 +1.3
      baz=287
A36M  Sachs Harbour      51.46  23   P      P      23 56 55.0 +0.6
      baz=285
SIT   Sitka              51.50  43   P      P      23 56 55.3 +0.4
      baz=288
ARSB  Arslanbob          52.73 296   P      P      23 57 05.0 +0.4
ARSB  Arslanbob          52.73 296   P      P      23 57 05.0 +0.4
ARSB                                 pmax   pmax
      comp=Z,5.0nm,0.8s
ARTI  Arti               55.39 318c iP      P      23 57 24.5 +1.0
ARTI                                               23 59 23.9
ARTI                                 S      S      00 05 11.1 +2.4
ARTI                                 SS     SS     00 08 51.2 -1.3
ARTI                                 pmax   pmax
      comp=Z,8.0nm,1.8s
SIMJ  Simiganj           56.66 295          P      23 57 32.2 -0.9
SPITS Spitsbergen Ar     57.13 349   P      P      23 57 36.0 +0.2
      comp=Z,3.4nm,0.9s,baz=90,slow=5.8,SNR=0.8
      comp=Z,3.4nm,0.9s
SPITS Spitsbergen Ar     57.13 349   P      P      23 57 36.0 +0.2
YKA   Yellowknife Ar     58.90  32   P      P      23 57 49.0 +0.7
      comp=Z,0.7nm,0.9s,baz=304,slow=7.5,SNR=5.9
      comp=Z,0.7nm,0.9s
YKA   Yellowknife Ar     58.90  32ceP      P      23 57 49.2 +0.9
ARCES ARCESS Array B     61.24 340   P      P      23 58 04.3  0.0
      comp=Z,1.8nm,0.8s,baz=35,slow=6.5,SNR=4.3
      comp=Z,1.8nm,0.8s
WRA   Warramunga Arr     61.50 192   P      P      23 58 05.5 -1.1
      comp=Z,3.3nm,0.8s,baz=8.0,slow=7.0,SNR=11
      comp=Z,3.3nm,0.8s
WRA   Warramunga Arr     61.50 192 i P      P      23 58 06.0 -0.5
WRA                                  pmax   pmax
      comp=Z,2.0nm,0.6s
ASAR  Alice Springs      65.22 191   P      P      23 58 30.9 -0.2
      comp=Z,0.6nm,0.6s,baz=16,slow=6.5,SNR=5.8
      comp=Z,0.6nm,0.6s
FINES FINESS Array B     66.57 333   P      P      23 58 39.2 -0.2
      comp=Z,3.6nm,0.8s,baz=43,slow=5.9,SNR=19
      comp=Z,3.6nm,0.8s
FINES FINESS Array B     66.57 333 i P      P      23 58 39.5 +0.1
FINES                                pmax   pmax
      comp=Z,4.0nm,0.8s
OBN   Obninsk            66.57 324 e P      P      23 58 39.8 +0.3
OBN                                  pmax   pmax
      comp=Z,7.0nm,1.2s
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NVAR	Mina Array Bea	70.34	56	P	P	23 59 04.4	+0.7
	comp=Z,0.9nm,0.6s,baz=327,slow=9.3,SNR=5.0						
	comp=Z,0.9nm,0.6s						
KIV	Kislovodsk	70.41	312	*e*P	P	23 59 04.6	+0.7
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KBZ	Khabaz	70.43	311	P	P	23 59 04.5	+0.7
	comp=Z,4.3nm,0.8s,baz=76,slow=4.2,SNR=14						
	comp=Z,4.3nm,0.8s						
KBZ	Khabaz	70.43	311	*ce*P	P	23 59 05.4	+1.6
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NB2	NORSAR Subarra	71.55	338	P	P	23 59 10.3	-0.2
	comp=Z,1.2nm,1.0s,baz=33,slow=6.5						
NOA	NORSAR Array B	71.55	338	P	P	23 59 10.3	-0.2
	comp=Z,1.7nm,0.8s,baz=35,slow=6.0,SNR=4.8						
NOA				LR	LR	00 35 29.1	
	comp=Z,12nm,18.6s,baz=260,slow=40						
	comp=Z,1.7nm,0.8s						
GNI	Garni	71.57	307	LR	LR	00 35 19.0	
	comp=Z,15nm,18.4s,baz=104,slow=40						
HFS	Hagfors	71.57	337	P	P	23 59 10.4	-0.1
	comp=Z,0.9nm,0.5s,baz=36,slow=7.7,SNR=8.0						
	comp=Z,0.9nm,0.5s						
AKASG	Malin Array Be	72.83	323	P	P	23 59 17.8	-0.4
	comp=Z,1.0nm,0.4s,baz=44,slow=6.5,SNR=13						
	comp=Z,1.0nm,0.4s						
AKBB	Malin Array Si	72.83	323	P	P	23 59 18.1	-0.1
AKBB				IAmb	IAmb	23 59 19.7	
	comp=Z,4.9nm,1.1s						
AKBB	Malin Array Si	72.83	323	*ce*P	P	23 59 17.5	-0.7
AKBB				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PDAR	Pinedale Array	72.84	48	P	P	23 59 17.8	-1.0
	comp=Z,0.4nm,0.5s,baz=305,slow=6.3,SNR=2.1						
	comp=Z,0.4nm,0.5s						
KIEV	Kiev	72.84	323	P	P	23 59 18.0	-0.3
KIEV				IAmb	IAmb	23 59 18.4	
	comp=Z,1.9nm,0.7s						
KIEV	Kiev	72.84	323	P	P	23 59 18.0	-0.3
KIEV				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRTR	Keskin Array B	78.27	313	P	P	23 59 50.4	+0.5
	comp=Z,0.6nm,0.7s,baz=91,slow=3.3,SNR=5.1						
	comp=Z,0.6nm,0.7s						
MORC	Moravsky Berou	78.50	328	*e*P	P	23 59 51.6	+0.8
CLL	Collm	78.98	332	*i* P	P	23 59 53.2	-0.1
CLL	Collm	78.98	332	*i* P	P	23 59 53.2	-0.1
VYHS	Vyhne	78.98	327	*e*P	P	23 59 54.5	+1.1
VYHS	Vyhne	78.98	327	*e*P	P	23 59 54.5	+1.1
VRAC	Vranov	79.24	329	*e*P	P	23 59 56.0	+1.1
KRUC	Moravsky	79.52	329	*e*P	P	23 59 57.4	+1.1
KHC	Kasperske Hory	80.55	330	*ce*P	P	00 00 03.2	+1.2
KHC				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GERES	GERESS Array B	80.74	330	P	P	00 00 03.1	0.0
	comp=Z,0.4nm,0.5s,baz=34,slow=5.6,SNR=4.7						
	comp=Z,0.4nm,0.5s						
MMAI	Mount Meron Ar	81.90	307	P	P	00 00 09.7	+0.2
	comp=Z,1.8nm,0.8s,baz=36,slow=7.5,SNR=2.6						
	comp=Z,1.8nm,0.8s						
EIL	Elat	84.50	305	LR	LR	00 44 56.8	
	comp=Z,27nm,18.1s,baz=252,slow=41						
TXAR	Lajitas Array	85.44	55	P	P	00 00 28.0	+0.3
	comp=Z,0.8nm,0.8s,baz=318,slow=4.5,SNR=4.2						
	comp=Z,0.8nm,0.8s						

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*ISK **03** 23:48:20.8, 41°.74N×42°.08E, h3^{km}, ML2.3/8*
*AFAD **03** 23:48:22.8, 41°.69N×42°.09E, h10^{km}±4^{km}, ML2.3*
*NORS **03** 23:48:22.2, 41°.89N×42°.19E, h11^{km}, MPVA3.2*
ISC 03 23:48:22.2±1.1**, 41°.75N**±0°.03×**42°.04E**±0°.03**, h14**^{km}±9^{km}**,**
n32, σ0^{s}.82/51**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBOC	Borcka	0.49	215	P	Pg	23 48 31.9	0.0
DBOC				*i* IAML		23 48 40.0	
	comp=E,424nm,0.4s						
DBOC				S	Sb	23 48 40.3	+0.5
EPOS	Posof	0.57	115	P	Pg	23 48 32.7	-0.8
EPOS				S	Sg	23 48 40.4	-0.7
HOPA	Hopa-Artvin	0.57	231	Pg	Pg	23 48 32.9	-0.6
HOPA				Sg	Sg	23 48 42.3	+1.2
DAGI	Agillar	0.68	188	P	Pg	23 48 35.7	+0.2
DAGI				S	Sb	23 48 45.0	-0.2
DAGI				*i* IAML		23 48 46.0	
	comp=N,119nm,0.6s						
DAGI				*i* IAML		23 48 46.0	
	comp=E,138nm,0.6s						
AHAN	Ardahan-Merkez	0.73	143	P	Pb	23 48 36.7	-0.1
DBAD	Bademkaya	0.78	200	P	Pg	23 48 37.0	-0.3
DBAD				S	Sg	23 48 47.5	0.0
DBAD				*i* IAML		23 48 50.0	
	comp=E,195nm,0.3s						
DBAD				*i* IAML		23 48 51.0	
	comp=N,117nm,0.4s						
DDEM	Demirkent	0.89	194	P	Pg	23 48 38.9	-0.4
DDEM				S	Sg	23 48 50.5	-0.4
GOLE	Ardahan-G¶le	1.01	155	P	Pb	23 48 41.7	+0.2
GOLE				S	Sn	23 48 56.2	+0.1
AKH	Akhalkalaki	1.14	107	Pn	Pg	23 48 42.8	-1.4
AKH				Sn	Sb	23 48 58.4	-0.2
CHOM	Cayeli-Rize	1.16	236	Pn	Pb	23 48 43.2	-0.9
SENK	Senkaya-Erzuru	1.21	169	Pn	Pb	23 48 44.7	-0.3
BOZK	Kars-Merkez-Bo	1.36	148	P	Pg	23 48 48.6	+0.3
BOZK				S	Sg	23 49 08.0	+2.0
KARS	Kars	1.37	145	Pn	Pb	23 48 47.7	0.0
IZDR	Rize	1.47	230	P	Pn	23 48 47.0	-1.4
IZDR				S	Sn	23 49 06.4	-1.0
EAK	Akyaka	1.59	131	P	Pn	23 48 50.6	+0.5
DIGR	Digorskoe uzhe	1.62	44	*e*Pg	Pn	23 48 49.6	-0.9
DIGR				*e*Sg	Sn	23 49 10.7	-0.6
KRIK	Erzurum-spir	1.64	211	P	Pb	23 48 52.8	+0.4
KRIK				S	Sg	23 49 15.4	+0.2
HOMI	Horasan	1.71	183	P	Pg	23 48 54.6	-0.4
HOMI				*i* IAML		23 49 24.0	
	comp=N,34nm,0.4s						
HOMI				*i* IAML		23 49 26.0	
	comp=E,48nm,0.4s						
KOPR	Koprukoy-ERZUR	1.76	185	Pn	Pb	23 48 54.6	+0.2
KTUT	Trabzon	1.87	247	Pn	Pn	23 48 55.4	+1.6
MACK	Trabzon	1.89	245	P	Pn	23 48 52.4	-1.7
MACK				S	Sn	23 49 17.4	-0.3
EMRE	Erzurum,Aziziy	1.90	205	P	Pb	23 48 56.9	+0.1
EMRE				*i* IAML		23 49 28.0	
	comp=N,21nm,0.9s						
EMRE				*i* IAML		23 49 31.0	
	comp=E,21nm,1.1s						
ERZM	Erzurum	1.91	196	P	Pb	23 48 57.5	+0.5
GUDG	Gudauri	1.95	68	*e*Pg	Pb	23 48 57.7	+0.1
GUDG				*e*Sg	Sb	23 49 21.8	-0.1
LACR	Lac	1.99	57	*e*Pg	Pn	23 48 56.2	+0.6
LACR				*e*Sg	Sb	23 49 22.0	-0.9
KORR	Kora	2.01	48	*e*Pg	Pn	23 48 57.1	+1.4
KORR				*e*Sg	Sb	23 49 23.7	+0.3
BAYB	BAYBURT	2.01	223	P	Pn	23 48 57.0	+1.1
BAYB				*i* IAML		23 49 26.0	
	comp=E,36nm,0.4s						
BAYB				*i* IAML		23 49 29.0	
	comp=N,27nm,0.4s						
LSNR	Lesken	2.02	40	*e*Pg	Pn	23 48 56.9	+1.1
LSNR				*e*Sg	Sb	23 49 23.4	-0.3
SHA1	Shidzhatmaz	2.04	13	*e*Pg	Pn	23 48 57.7	+1.4
SHA1				*e*Sg	Sb	23 49 24.6	+0.1
KOPT	Kop Dagi	2.09	215	P	Pb	23 48 59.9	-0.2
KOPT				*i* IAML		23 49 33.0	
	comp=N,14nm,0.7s						
STDR	Stavd-Durt	2.20	42	*e*Pg	Pn	23 48 59.0	+0.6
STDR				*e*Sg	Sb	23 49 29.1	+0.1
KIV	Kislovodsk	2.25	12	Pn	Pn	23 49 00.5	+1.4

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*PRE **03** 23:49:55.4±1.0, 27°.05S×26°.80E, h2^{km}, ML2.8*
*BGSI **03** 23:50:05.0±1.4, 26°.77S×26°.66E, h36^{km}±22^{km}, ML3.0*
ISC 03 23:49:56.6±1.2**, 26°.96S**±0°.03×**26°.75E**±0°.04**, h17**^{km}±9^{km}**,**
n41, σ2^{s}.15/80**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRYS	Parys	0.55	87	*e*P	Pg	23 50 06.1	-1.5
PRYS				*e*S	Sg	23 50 13.1	-1.8
PRYS				IAML		23 50 19.4	
	comp=Z,288nm,0.4s						
WDLM	Western Deep L	0.80	49	*e*P	Pg	23 50 12.2	-0.1
WDLM				*e*S	Sb	23 50 22.9	-0.1
WDLM				IAML		23 50 30.8	
	comp=Z,535nm,0.2s						
SWZ	Schweizer	1.28	260	*e*P	Pb	23 50 21.3	+0.9
SWZ				*e*S	Sn	23 50 38.0	+1.2
SWZ				IAML		23 50 42.0	
	comp=Z,379nm,0.2s						
HRAO	HartRAO	1.36	38	*e*P	Pg	23 50 22.9	+0.1
HRAO				*e*S	Sg	23 50 41.5	+1.0
HRAO				IAML		23 50 44.7	
	comp=Z,191nm,0.4s						
SNKL	Senekal, Frees	1.59	146	*e*P	Pn	23 50 24.7	+0.5
SNKL				*e*S	Sn	23 50 44.5	0.0
SNKL				IAML		23 50 50.2	
	comp=Z,182nm,0.6s						
MAKGR	Makgori	2.09	303	*i* P	Pb	23 50 34.5	+0.3
MAKGR				*i* S	Sn	23 50 56.0	-0.7
MAKGR				IAML		23 51 04.9	
	comp=E,502nm,0.2s						
BOSA	Boshof	2.11	218	*e*P	Pn	23 50 32.9	+1.6
BOSA				*e*S	Sn	23 50 58.6	+1.4
BOSA				IAML		23 51 03.9	
	comp=Z,64nm,0.3s						
BOSA	Boshof	2.11	218	*i* P	Pn	23 50 33.8	+2.5
BOSA				*i* S	Sn	23 50 57.4	+0.2
LBTB	Lobatse	2.20	332	*e*P	Pb	23 50 35.2	-0.8
LBTB				*e*S	Sb	23 51 04.2	+1.3
LBTB				IAML		23 51 07.3	
	comp=Z,175nm,0.5s						
LBTB	Lobatse	2.20	332	*i* P	Pb	23 50 36.4	+0.4
LBTB				*i* S	Sb	23 51 03.0	0.0
NWCL	Newcastle	2.90	106	*e*P	Pn	23 50 43.0	+0.8
NWCL				*e*S	Sn	23 51 16.4	-0.3
NWCL				IAML		23 51 27.5	
	comp=Z,82nm,0.4s						
CRLN	Carolina, Mapu	3.09	73	*e*P	Pn	23 50 45.3	+0.6
CRLN				*e*S	Sn	23 51 22.6	+1.2
CRLN				IAML		23 51 38.1	
	comp=Z,16nm,0.2s						
LEPH	Lephalale, Lim	3.23	17	*e*P	Pn	23 50 48.7	+2.0
LEPH				*e*S	Sb	23 51 28.1	-4.6
LEPH				IAML		23 51 44.2	
	comp=Z,41nm,0.3s						
SKOMA	Sekoma	3.52	313	*i* P	Pn	23 50 53.9	+3.3
SKOMA				*i* S	Sn	23 51 30.1	-1.9
SKOMA				IAML		23 52 00.5	
	comp=E,64nm,0.5s						
LPHEP	Lephephe	3.67	347	*i* P	Pn	23 50 56.1	+3.4
LPHEP				IAML		23 51 56.2	
	comp=E,42nm,0.1s						
PHPEN	Phepeng	3.80	292	*i* P	Pn	23 50 57.4	+3.0
PHPEN				*i* S	Sn	23 51 37.3	-1.5
PILG	Pilgrimsrest,	4.10	61	*e*P	Pn	23 51 00.2	+1.5
PILG				*e*S	Sn	23 51 47.1	+0.8
PILG				IAML		23 52 08.2	
	comp=Z,36nm,0.4s						
PMBG	Pietermaritzbu	4.18	128	*e*P	Pn	23 50 59.5	-0.2
PMBG				*e*S	Sn	23 51 47.3	-0.8
PMBG				IAML		23 52 09.1	
	comp=Z,24nm,0.3s						
MREMI	Moremi	4.42	8	*i* P	Pn	23 51 06.4	+3.4
MREMI				*i* S	Sn	23 51 51.3	-2.7
MREMI				IAML		23 52 17.4	
	comp=E,187nm,0.4s						
POGA	Pongola	4.43	96	*e*P	Pn	23 51 03.5	+0.4
POGA				*e*S	Sn	23 51 53.3	-1.1
POGA				IAML		23 52 15.2	
	comp=Z,37nm,0.4s						
ALKP	Alkanpan, Nort	4.95	232	*e*P	Pn	23 51 11.1	+0.8
ALKP				*e*S	Sn	23 52 06.6	-0.7
ALKP				IAML		23 52 32.2	
	comp=Z,23nm,0.5s						
UPI	Upington	5.07	253	*e*P	Pn	23 51 13.1	+1.1
UPI				*e*S	Sn	23 52 11.2	+1.0
UPI				IAML		23 52 37.1	
	comp=Z,28nm,0.4s						
KEIM	Keimoes	5.41	250	*e*P	Pn	23 51 18.1	+1.5
KEIM				*e*S	Sn	23 52 18.6	+0.2
KEIM				IAML		23 52 48.7	
	comp=Z,20nm,0.4s						
MUSN	Musina, Limpop	5.45	32	*e*P	Pn	23 51 18.9	+1.8
MUSN				*e*S	Sn	23 52 19.8	+0.4
MUSN				IAML		23 52 51.2	
	comp=Z,14nm,0.6s						
MUSN	Musina, Limpop	5.45	32	*i* P	Pn	23 51 19.5	+2.4
MUSN				*i* S	Sn	23 52 19.7	+0.4
BFON	Badsfontein, M	5.51	208	*e*P	Pn	23 51 19.2	+1.1
BFON				*e*S	Sn	23 52 20.3	-0.8
BFON				IAML		23 53 01.9	
	comp=Z,23nm,0.5s						
GRAF	Camdeboo Natio	5.65	200	*e*P	Pn	23 51 21.2	+1.2
GRAF				*e*S	Sn	23 52 23.2	-1.3
GRAF				IAML		23 53 01.1	
	comp=Z,16nm,0.7s						
KGCAE	Kacgae	5.81	314	*i* P	Pn	23 51 25.3	+3.2
KGCAE				*i* S	Sn	23 52 24.2	-4.2
KGCAE				IAML		23 53 01.1	
	comp=E,38nm,0.6s						
BROLN	Tlhalogang	5.86	5	*i* P	Pn	23 51 25.3	+2.5
BROLN				*i* S	Sn	23 52 24.1	-5.6
BROLN				IAML		23 53 01.0	
	comp=E,22nm,0.5s						
BRAK	Brakfontein	5.87	214	*e*P	Pn	23 51 24.3	+1.5
BRAK				*e*S	Sn	23 52 28.1	-1.6
BRAK				IAML		23 53 06.4	
	comp=Z,10.0nm,0.6s						
ROOI	Rooidraai Farm	6.18	206	*e*P	Pn	23 51 28.4	+1.3
ROOI				*e*S	Sn	23 52 35.3	-2.1
ROOI				IAML		23 53 20.5	
	comp=Z,9.4nm,0.5s						
GRHM	Grahamstown, E	6.30	183	*e*P	Pn	23 51 28.6	-0.3
GRHM				*e*S	Sn	23 52 37.6	-2.9
GRHM				IAML		23 53 16.6	
	comp=Z,5.6nm,0.7s						
SOOWA	Sowa	6.39	356	*i* P	Pn	23 51 33.2	+3.2
SOOWA				IAML		23 53 17.8	
	comp=E,60nm,0.4s						
GRAN	Grantham	6.65	216	*e*P	Pn	23 51 34.8	+1.2
GRAN				*e*S	Sn	23 52 46.8	-2.3
GRAN				IAML		23 53 28.8	
	comp=Z,10nm,0.6s						
FRAZ	Fraserburg	6.80	222	*e*P	Pn	23 51 37.0	+1.3
FRAZ				*e*S	Sn	23 52 50.1	-2.7
FRAZ				IAML		23 53 35.2	
	comp=Z,7.1nm,0.5s						
BLWY	Bulawayo	7.00	14	*i* P	Pn	23 51 40.2	+1.7
BLWY				*i* S	Sn	23 52 55.7	-2.2
MERW	Merweville	7.28	217	*e*P	Pn	23 51 43.9	+1.5
MERW				*e*S	Sn	23 53 01.8	-2.9
MERW				IAML		23 53 22.1	
	comp=Z,6.9nm,0.8s						
SUR	Sutherland	7.47	222	*e*P	Pn	23 51 45.9	+0.9
SUR				*e*S	Sn	23 53 07.2	-2.3
SUR				IAML		23 53 53.9	
	comp=Z,6.3nm,0.7s						
GRTLG	Ghanzi	7.52	317	*i* P	Pn	23 51 46.1	+0.5
GRTLG				*i* S	Sn	23 53 02.7	-8.0
GRTLG				IAML		23 54 03.0	
	comp=E,11nm,0.4s						
KOMG	Komaggas	8.64	249	*e*P	Pn	23 52 02.6	+1.8
KOMG				*e*S	Sn	23 53 35.7	-2.2
KOMG				IAML		23 54 34.2	
	comp=Z,7.7nm,0.4s						
PRTV	Porterville,We	9.00	226	*e*P	Pn	23 52 07.3	+1.4
PRTV				*e*S	Sn	23 53 43.6	-3.4
PRTV				IAML		23 54 44.6	
	comp=Z,7.0nm,0.6s						

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*CATAC **04** 00:14:00.3±0.7, 10°N±3°×8°6W±°, h2^{km}±4^{km}, M3.1/9, MLv3.1/9, Error ellipse: s-maj=9.5km s-min=5.3km az=60.5, confirmed*
*UCR **04** 00:14:01.2±0.6, 10°.33N×86°.32W, h18^{km}±4^{km}, MW3.8*
ISC 04 00:14:02.3±1.8**, 10°.30N**±0°.06×**86°.28W**±0°.07**, h26**^{km}±15^{km}**,**
n35, σ0^{s}.81/39**, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DELF	Filadelfia	0.72	78	*e*P	Pn	00 14 16.2	-0.6
DELF				*e*S	Sn	00 14 26.7	-0.5
ALIBA	Liberia Airpor	0.77	68	*e*P	Pn	00 14 17.3	-0.2
ALIBA				*e*S	Sn	00 14 29.4	+1.0
ELI1	Hacienda Flor	0.79	64	*e*P	Pn	00 14 17.9	+0.1
INDI	Punta indio, G	0.88	120	P	Pn	00 14 18.3	-0.6
INDI	Punta indio, G	0.88	120	S	Sb	00 14 29.7	-0.5
CMARA	Lajas Hojancha	0.88	108	S	Sn	00 14 31.0	-0.2
CMARA	Lajas Hojancha	0.88	108	P	Pb	00 14 19.6	+0.6
LAPC	Finca la Perla	0.95	61	*e*P	Pn	00 14 19.2	-0.8
LCRUZ	La Cruz	1.00	39	*e*P	Pn	00 14 20.2	-0.5
GPS2	Hotel Rincn d	1.01	64	*e*P	Pn	00 14 20.4	-0.5
VRLE	La Escondida,	1.02	62	*e*P	Pn	00 14 20.2	-0.8
PG27	Guanacaste Pro	1.02	59	*e*P	Pn	00 14 20.4	-0.6
GPS1	Guardaparques	1.02	63	*e*P	Pn	00 14 20.5	-0.6
BUAI	Buenos Aires	1.09	58	*e*P	Pb	00 14 21.9	-0.6
CUI	Cuipilapa	1.15	72	*e*P	Pb	00 14 28.1	+4.6
MESS	Mesas	1.15	68	*e*P	Pn	00 14 22.4	-0.4
CARN	Rivas	1.15	40	*e*P	Pn	00 14 22.5	-0.2
CARN	Rivas	1.15	40	P	Pn	00 14 22.6	-0.2
CARN				S	Sb	00 14 39.8	+1.8
INVE	Universidad In	1.21	82	*e*P	Pn	00 14 23.4	-0.1
VMAR	Armenia, Volca	1.25	66	*e*P	Pb	00 14 24.3	-0.9
JTS	Las Juntas de	1.30	90	*e*P	Pn	00 14 24.6	-0.2
TENO	El Achiote	1.34	72	*e*P	Pn	00 14 24.8	-0.6
QUEB	Quebradon, Cot	1.39	77	*e*P	Pn	00 14 26.4	+0.3
ARE1	Arenal 1	1.54	84	*e*P	Pb	00 14 28.9	-1.2
VARE2	V. Arenal	1.54	84	*e*P	Pb	00 14 29.0	-1.2
SOCE	Pocosol	1.63	87	P	Pb	00 14 31.4	-0.3
SOCE	Pocosol	1.63	87	S	Sb	00 14 53.4	+1.5
NANN	Nandasmo	1.63	5	P	Pb	00 14 30.2	-1.6
COPN	Copaltepe	1.89	351	P	Pn	00 14 33.8	+0.8
ACON	Acoyapa	1.98	33	*e*P	Pn	00 14 33.9	-0.2
MOM2	El Cardon	2.13	354	P	Pn	00 14 37.0	+0.7
MOM2				S	Sb	00 15 06.4	+0.2
MACN	El Madrono	2.19	350	P	Pn	00 14 37.7	+0.6
MACN				S	Sn	00 15 03.3	0.0
BOAB	BOACO BROADBAN	2.22	16	P	Pn	00 14 37.4	0.0
BOAB	BOACO BROADBAN	2.22	16	S	Sb	00 15 09.3	+0.6
TRT2	Tortugero	2.51	84	P	Pn	00 14 43.2	+1.8

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*IDC **04** 00:17:49.0±1.2, 7°.44N×72°.31W, h0^{km}, mb3.5/3, mbtmp3.7/6, ML3.0/3, Error ellipse: s-maj=27.7km s-min=13.4km az=137.0*
*RSNC **04** 00:17:50.1±0.0, 7°N±1°×7°2W±°, h0^{km}±2^{km}, M3.3, mb3.9, ML3.0*
ISC 04 00:17:48.2±1.5**, 7°.12N**±0°.03×**72°.09W**±0°.03**, h3**^{km}±11^{km}**,**
n35, σ1^{s}.68/63**, mb3.6**/3**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAMC	Pamplona, Colo	0.65	290	P	Pg	00 18 00.9	+0.3
PAMC				S	Sg	00 18 08.8	-0.3
TAMC	Tame, Arauca	0.74	157	P	Pb	00 18 04.0	+0.2
TAMC				S	Sb	00 18 14.4	+0.1
BARC	Barichara	1.21	244	P	Pb	00 18 10.4	-1.5
BARC				S	Sn	00 18 29.6	+0.4
RUSC	La Rusia	1.57	219	P	Pn	00 18 16.9	-0.5
RUSC				S	Sn	00 18 35.5	-3.0
BRJC	Barrancabermej	1.65	265	P	Pn	00 18 18.7	+0.6
BRJC				S	Sn	00 18 39.6	-0.3
SDV	Santo Domingo	2.27	39	Pn	Pn	00 18 27.1	+0.2
	28nm,0.3s,baz=189,slow=5.4,SNR=18						
SDV				Pg	Pb	00 18 29.4	-0.6
	55nm,0.3s,baz=178,slow=8.7,SNR=26						
SDV				Lg	Lg	00 18 59.6	
	103nm,0.3s,baz=304,slow=14,SNR=19						
	61nm,0.3s						
SDV	Santo Domingo	2.27	39	P	Pb	00 18 29.0	-1.0
SDV				S	Sb	00 18 59.2	+0.6
PTBC	PUERTO BERRIO,	2.42	256	P	Pn	00 18 28.1	-0.7
PTBC				S	Sb	00 19 01.7	-1.1
SPBC	San Pablo de B	2.45	234	P	Pn	00 18 30.1	+0.9
SPBC				S	Sn	00 19 01.4	+1.6
ZARC	Zaragoza, Cauc	2.77	278	P	Pn	00 18 33.6	0.0
ZARC				S	Sn	00 19 06.8	-0.9
PTGC	Puerto Gaitan,	2.90	181	P	Pn	00 18 34.2	-1.1
PTGC				S	Sn	00 19 10.7	-0.1
CHIC	Chingaza	2.96	214	P	Pn	00 18 36.8	+0.2
CHIC				S	Sn	00 19 13.0	+0.1
NORC	Norcasia	3.17	241	P	Pn	00 18 37.8	-1.3
NORC				S	Sn	00 19 16.4	-1.0
ROSC	El Rosal	3.17	225	Pn	Pn	00 18 41.9	+2.5
	9.5nm,0.3s,baz=148,slow=1.3,SNR=15						
ROSC				Sn	Sb	00 19 21.7	-3.0
	18nm,0.3s,baz=216,slow=23,SNR=5.8						
	20nm,0.3s						
ROSC	El Rosal	3.17	225	P	Pn	00 18 42.1	+2.7
ROSC				S	Sb	00 19 27.5	+2.8
CVER	Cruz Verde, Cu	3.25	218	P	Pn	00 18 36.5	-4.1
CVER				S	Sb	00 19 28.7	+1.6
VILC	Villavicencio,	3.39	208	P	Pn	00 18 41.7	-0.5
ARGC	Ariguani, Magd	3.46	322	P	Pn	00 18 43.1	+0.1
ARGC				S	Sn	00 19 26.8	+2.2
UREC	San Jos de Ur	3.48	281	P	Pn	00 18 44.4	+1.2
UREC				S	Sn	00 19 25.6	+0.6
GUY2C	Guyana, Caldas	3.76	240	P	Pn	00 18 48.3	+0.7
GUY2C				S	Sn	00 19 32.7	0.0
CRJC	Cerrejon, Guaj	3.96	349	P	Pn	00 18 50.4	+0.5
CRJC				S	Sn	00 19 36.9	0.0
CBOC	Ciudad Bolivar	4.09	253	P	Pn	00 18 53.6	+1.7
SJCC	San Jacinto, C	4.12	312	P	Pn	00 18 53.7	+1.5
SJCC				S	Sn	00 19 43.0	+2.0
ANIL	Santa Ana	4.21	232	P	Pn	00 18 54.2	+0.6
ANIL				S	Sn	00 19 43.8	+0.4
PRAC	Prado	4.38	220	P	Pn	00 18 55.9	+0.1
PRAC				S	Sn	00 19 49.3	+1.9
ORTC	Ortega, Tolima	4.48	225	P	Pn	00 18 56.8	-0.3
ORTC				S	Sn	00 19 50.3	+0.5
APAC	Apartado, Choc	4.52	280	P	Pn	00 18 59.6	+2.0
APAC				S	Sn	00 19 51.8	+1.0
SMRC	Santa Marta, M	4.54	332	P	Pn	00 19 00.2	+2.3
SMRC				S	Sn	00 19 46.9	-4.3
URIC	Uribia, Colomb	4.55	1	P	Pn	00 18 56.7	-1.4
URIC				S	Sn	00 19 49.4	-2.2
FLOC	Florencia	6.55	213	P	Pn	00 19 25.0	-0.5
	12nm,0.7s						
PCRV	Puerto La Cruz	7.97	67	Pn	Pn	00 19 46.6	+1.6
	1.8nm,0.3s,baz=247,slow=7.7,SNR=11						
PCRV				Sn	Sn	00 21 15.9	+0.1
	1.3nm,0.3s,baz=291,slow=14,SNR=1.8						
	7.9nm,0.6s						
BOAV	Boa Vista	12.44	112	P	Pn	00 20 45.5	-0.8
LPAZ	La Paz	23.58	170	P	P	00 23 06.2	+5.2
	1.1nm,0.7s,baz=349,slow=8.8,SNR=4.5						
	1.1nm,0.7s						
TXAR	Lajitas Array	37.04	311	P	P	00 24 58.4	-1.3
	0.2nm,0.4s,baz=120,slow=8.3,SNR=4.1						
	0.2nm,0.4s						
YKA	Yellowknife Ar	63.34	339	P	P	00 28 16.7	-1.8
	0.4nm,0.7s,baz=131,slow=6.3,SNR=6.5						
	0.4nm,0.7s						

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*NOU **04** 00:31:17.6, 36°.70S×179°.19E, h126^{km}, MLv4.6/12, Off E. Coast of N. Island, N.Z.*
*WEL **04** 00:31:25.8±1.9, 37°S±12°×17°8E±1°3, h12^{km}, M4.2/80, ML4.3/16, MLv4.2/80, Error ellipse: s-maj=21.6km s-min=6.4km az=48.0, confirmed*
*IDC **04** 00:31:26.2±4.8, 37°.28S×178°.75E, h103^{km}±40^{km}, mb4.0/4, mbtmp4.3/5, Error ellipse: s-maj=66.0km s-min=39.7km az=5.0*
ISC 04 00:31:27.1±0.9**, 36°.94S**±0°.07×**178°.31E**±0°.07**, h100**^{km}**,**
n138, σ1^{s}.63/143**, mb4.3**/4**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.62	180	P	Pn	00 31 41.8	-2.0
MXZ	Matakaoa Point	0.62	180	P	Pn	00 31 41.1	-2.7
MXZ				S	Sn	00 31 52.7	-3.6
WMGZ	Waiomatatini S	0.88	174	P	Pn	00 31 46.0	-0.3
WMGZ				S	Sn	00 32 03.8	+3.2
HAZ	Te Kaha	0.91	207	P	Pn	00 31 44.2	-2.3
PKGZ	Pakihiroa	0.94	191	P	Pn	00 31 46.7	-0.1
WIZ	White Island	1.06	236	P	Pn	00 31 45.9	-2.3
WSRZ	White Island S	1.07	237	P	Pn	00 31 46.3	-2.0
PUZ	Puketiti	1.13	182	P	Pn	00 31 48.6	-0.4
PUZ				S	Sn	00 32 09.2	+3.8
RUGZ	Raukumara Rang	1.14	206	P	Pn	00 31 48.1	-1.0
TWGZ	Tauwhareparae	1.26	192	P	Pn	00 31 50.6	+0.2
WHRZ	Whale Island	1.40	229	P	Pn	00 31 51.2	-0.9
MWZ	Matawai	1.52	204	P	Pn	00 31 53.5	-0.1
TKGZ	Te Karaka	1.54	194	P	Pn	00 31 54.4	+0.7
CNGZ	Carnagh Statio	1.54	183	P	Pn	00 31 54.6	+0.8
URZ	Urewera	1.62	215	P	Pn	00 31 54.5	-0.3

	173nm,0.3s,baz=355,slow=4.9,SNR=1047						
URZ				S	Sn	00 32 15.6	-0.3
	966nm,0.4s,baz=218,slow=21,SNR=7.8						
URZ	Urewera	1.62	215	P	Pn	00 31 54.4	-0.3
URZ	Urewera	1.62	215	P	Pn	00 31 54.5	-0.3
OPRZ	Ohinepanea	1.66	237	P	Pn	00 31 54.4	-0.9
MARZ	Manawahe	1.66	231	P	Pn	00 31 54.7	-0.7
MYRZ	Mayor Island	1.68	258	P	Pn	00 31 54.4	-1.2
RAGZ	Rawiri	1.70	204	P	Pn	00 31 56.9	+1.0
TGRZ	Tauranga	1.81	244	P	Pn	00 31 56.6	-0.6
RIGZ	Rimuhau	1.81	194	P	Pn	00 31 57.4	+0.2
LIRZ	Lichensteins R	1.86	235	P	Pn	00 31 57.6	-0.2
MKRZ	Makatiti	1.89	230	P	Pn	00 31 59.6	+1.4
OMRZ	Omania	1.93	232	P	Pn	00 31 59.0	+0.3
TARZ	Mount Tarawera	1.93	227	P	Pn	00 31 59.1	+0.3
KARZ	Kaharoa	1.96	236	P	Pn	00 31 59.1	-0.1
RTZ	Ruatahuna	1.97	212	P	Pn	00 31 59.4	+0.1
SNGZ	Shannon Statio	1.99	202	P	Pn	00 32 00.2	+0.6
RRRZ	Republican Roa	1.99	225	P	Pn	00 31 58.6	-1.0
PRGZ	Paritu Road	2.00	189	P	Pn	00 31 59.7	0.0
HLRZ	Highlands Stat	2.03	229	P	Pn	00 32 00.6	+0.6
UTU	Utuhina	2.08	233	P	Pn	00 32 01.9	+1.2
KUZ	Kuaotunu	2.08	275	P	Pn	00 31 58.9	-1.8
KMRZ	Kaimai	2.09	244	P	Pn	00 32 00.5	-0.3
HSRZ	Hossack Road	2.13	230	P	Pn	00 32 02.3	+1.0
KNZ	Kokohu	2.13	193	P	Pn	00 32 00.8	-0.6
PRRZ	Plateau Road	2.17	224	P	Pn	00 32 02.3	+0.5
RAHZ	Arahi	2.19	206	P	Pn	00 32 02.8	+0.6
MHGZ	Mahia Peninsul	2.23	188	P	Pn	00 32 02.5	-0.1
MTHZ	Maungataniwha	2.23	211	P	Pn	00 32 03.1	+0.4
GRRZ	Galatos Road	2.24	230	P	Pn	00 32 03.6	+0.8
ALRZ	Allen Road	2.24	223	P	Pn	00 32 03.3	+0.5
WHHZ	Waihua	2.29	201	P	Pn	00 32 04.1	+0.7
WPRZ	Whakapapatarin	2.32	227	P	Pn	00 32 04.7	+1.0
TOZ	Tahuroa Road	2.37	250	P	Pn	00 32 04.1	-0.3
GRZ	Great Barrier	2.39	286	P	Pn	00 32 02.9	-1.9
MRHZ	Matea Rd	2.41	218	P	Pn	00 32 05.2	+0.2
NMHZ	Naumai	2.45	208	P	Pn	00 32 06.3	+0.6
KUTZ	Kaahu Road	2.50	231	P	Pn	00 32 07.0	+0.9
MKAZ	Moumakai	2.52	265	P	Pn	00 32 05.8	-0.7
WHTZ	Whakaora	2.53	227	P	Pn	00 32 08.5	+1.9
ARHZ	Aropaoanui	2.54	204	P	Pn	00 32 07.1	+0.4
WIAZ	Waiheke Island	2.55	272	P	Pn	00 32 05.9	-0.9
TLZ	Tolley Road	2.60	237	P	Pn	00 32 07.8	+0.3
BKZ	Black Stump Fm	2.64	212	P	Pn	00 32 07.9	-0.2
BKZ	Black Stump Fm	2.64	212	P	Pn	00 32 08.1	0.0
WATZ	Wairara	2.69	228	P	Pn	00 32 09.8	+1.1
ETAZ	East Tamaki Re	2.71	269	P	Pn	00 32 08.4	-0.4
MBAZ	Motutapu North	2.74	273	P	Pn	00 32 08.6	-0.7
RATZ	Rangitukua	2.77	225	P	Pn	00 32 11.4	+1.5
MCHZ	McNeill Hill	2.80	206	P	Pn	00 32 10.1	0.0
RITZ	Rihia Road	2.80	223	P	Pn	00 32 11.9	+1.7
ABAZ	Army Bay	2.81	276	P	Pn	00 32 09.7	-0.6
EPAZ	Eden Park BICE	2.86	270	P	Pn	00 32 10.9	+0.1
CKHZ	Cape Kidnapper	2.88	199	P	Pn	00 32 10.5	-0.6
KWHZ	Kaweka Forest	2.89	210	P	Pn	00 32 11.5	+0.2
KATZ	Kakaramea	2.89	225	P	Pn	00 32 14.8	+3.3
AWAZ	Awhitu Peninsu	2.93	267	P	Pn	00 32 11.8	-0.1
TMVZ	Te Maari	2.99	223	P	Pn	00 32 13.9	+1.2
NTVZ	North Tongarir	2.99	223	P	Pn	00 32 14.2	+1.4
WTAZ	Waiatarua	2.99	269	P	Pn	00 32 12.7	0.0
ETVZ	East Tongariro	3.00	222	P	Pn	00 32 13.9	+1.0
KRVZ	Karewarewa	3.01	224	P	Pn	00 32 14.6	+1.6
OTVZ	Oturere	3.04	222	P	Pn	00 32 14.8	+1.3
NNVZ	North Ngauruho	3.05	223	P	Pn	00 32 15.2	+1.6
WTVZ	West Tongariro	3.05	224	P	Pn	00 32 15.2	+1.7
KAHZ	Kahuranaki	3.06	201	P	Pn	00 32 12.9	-0.8
SNVZ	South Ngauruho	3.07	222	P	Pn	00 32 15.5	+1.6
NGZ	Ngauruhoe	3.09	223	P	Pn	00 32 15.5	+1.5
KRHZ	Kereru	3.10	209	P	Pn	00 32 13.0	-1.1
TWVZ	Taurewa	3.10	226	P	Pn	00 32 15.9	+1.6
TUVZ	Tukino	3.12	221	P	Pn	00 32 16.8	+2.2
COVZ	Chateau Observ	3.13	223	P	Pn	00 32 17.1	+2.4
HIZ	Hauiti	3.15	239	P	Pn	00 32 15.8	+1.0
HIZ	Hauiti	3.15	239	P	Pn	00 32 15.8	+1.0
FWVZ	Far West T-bar	3.17	222	P	Pn	00 32 16.4	+1.1
WHVZ	Whangaehu Hut	3.17	222	P	Pn	00 32 16.4	+1.1
MAVZ	Matarangi	3.17	222	P	Pn	00 32 16.6	+1.2
MOVZ	Moawhango	3.18	219	P	Pn	00 32 15.6	+0.3
WNVZ	Wahianoa	3.20	221	P	Pn	00 32 16.7	+1.1
TRVZ	Turoa	3.20	222	P	Pn	00 32 16.9	+1.1
MTVZ	Mangateitei	3.31	222	P	Pn	00 32 18.4	+1.4
PKVZ	Pokaka	3.31	224	P	Pn	00 32 19.0	+2.1
WCZ	Waipu Caves	3.35	286	P	Pn	00 32 16.3	-1.1
PNHZ	Pukenui	3.40	209	P	Pn	00 32 16.7	-1.5
WPHZ	Waipukurau	3.44	205	P	Pn	00 32 18.0	-0.8
VRZ	Vera Road	3.55	231	P	Pn	00 32 22.3	+2.2
TSZ	Takapari Road	3.61	210	P	Pn	00 32 20.2	-0.9
DVHZ	Dannevirke	3.75	206	P	Pn	00 32 21.7	-1.1
ANWZ	Angora Road	3.79	202	P	Pn	00 32 22.4	-1.0
WAZ	Wanganui	3.83	222	P	Pn	00 32 26.7	+2.7
DREZ	Durham Road	3.94	234	P	Pn	00 32 29.1	+3.7
LREZ	Lake Rotokare	3.97	230	P	Pn	00 32 29.3	+3.5
OHWZ	Ohakea	4.01	215	P	Pn	00 32 28.6	+2.2
NEZ	North Egmont	4.05	234	P	Pn	00 32 30.4	+3.4
BFZ	Birch Farm	4.07	203	P	Pn	00 32 24.5	-2.6
PKE	Pukeiti	4.08	235	P	Pn	00 32 30.9	+3.6
KHEZ	Kahui Hut	4.12	234	P	Pn	00 32 31.3	+3.4
OUZ	Omahuta	4.18	293	P	Pn	00 32 27.5	-1.2
OUZ	Omahuta	4.18	293	P	Pn	00 32 27.5	-1.2
NBEZ	Newall Road No	4.20	235	P	Pn	00 32 33.0	+4.1
TIWZ	Tintock	4.27	206	P	Pn	00 32 28.9	-1.0
NMEZ	Namu Road	4.27	233	P	Pn	00 32 33.9	+4.1
OGWZ	Otaki Gorge	4.58	211	P	Pn	00 32 33.5	-0.5
DUWZ	D'Urville Isla	5.15	220	P	Pn	00 32 41.4	-0.5
SNZO	South Karori	5.18	212	P	Pn	00 32 41.1	-1.1
NNZ	Nelson	5.74	220	P	Pn	00 32 49.3	-0.4
TKNZ	Takaka Hill	5.83	224	P	Pn	00 32 50.9	-0.1
QRZ	Quartz Range	5.94	228	P	Pn	00 32 52.5	0.0
QRZ	Quartz Range	5.94	228	P	Pn	00 32 51.8	-0.7
THZ	Tophouse	6.38	219	P	Pn	00 32 57.3	-1.2
KHZ	Kahutara	6.59	212	P	Pn	00 32 59.7	-1.5
CTZ	Chatham Island	7.81	152	P	Pn	00 33 19.3	+1.4
RPZ	Rata Peaks	8.74	217	P	Pn	00 33 28.7	-1.8
	6.4nm,0.4s,baz=53,slow=3.6,SNR=8.4						
RPZ				S	Sn	00 35 00.5	-6.7
	27nm,0.5s,baz=23,slow=20,SNR=15						
RPZ	Rata Peaks	8.74	217	P	Pn	00 33 28.6	-1.9
ODZ	Otahua Downs	9.95	213	P	Pn	00 33 45.6	-1.3
JCZ	Jackson Bay	10.16	223	P	Pn	00 33 49.7	-0.2
ASAR	Alice Springs	40.21	276	P	P	00 38 55.9	+1.9
	4.3nm,0.5s,baz=120,slow=8.0,SNR=35						
	4.3nm,0.5s						
WRA	Warramunga Arr	41.81	282	P	P	00 39 08.9	+1.8
	1.1nm,0.4s,baz=120,slow=8.1,SNR=9.2						
	1.1nm,0.4s						
KSRS	Korea Array	87.47	322	P	P	00 44 04.4	+1.2
	1.0nm,0.7s,baz=151,slow=5.1,SNR=4.7						
	1.0nm,0.7s						
CMAR	Chiang Mai Arr	92.75	291	P	P	00 44 29.9	+1.6
	0.9nm,0.3s,baz=115,slow=4.0,SNR=4.2						
	0.9nm,0.3s						
KURBB	Kurchatov Arra	123.23	311	PKP	PKPdf	00 50 10.6	-0.9
	0.1nm,0.5s,baz=123,slow=1.6,SNR=5.0						
ARCES	ARCESS Array B	144.18	344	PKP	PKPdf	00 50 48.3	-1.7
	0.8nm,0.6s,baz=49,slow=3.7,SNR=4.1						
MMAI	Mount Meron Ar	149.48	274	PKPbc	PKiKP	00 51 05.1	-0.7
	0.4nm,0.4s,baz=74,slow=6.2,SNR=4.4						
FINES	FINESS Array B	149.93	333	PKPbc	PKPbc	00 51 04.0	-0.7
	1.1nm,0.5s,baz=26,slow=4.3,SNR=12						
BRTR	Keskin Array B	152.25	287	PKPbc	PKPbc	00 51 10.2	-0.9
	0.2nm,0.4s,baz=108,slow=6.8,SNR=5.0						

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*IDC **04** 00:32:58.9±1.3, 43°.53N×89°.50E, h0^{km}, mb3.8/3, mbtmp3.5/8, ML2.6/5, MS2.7/1, Error ellipse: s-maj=30.2km s-min=13.9km az=41.0*

*NNC **04** 00:33:03.1±3.2, 43°.81N×89°.40E, h18^{km}±17^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=21.9km s-min=19.5km az=77.0*

ISC 04 00:33:03.8±1.1, **43°.7N**±0°.1×**89°.49E**±0°.08, **h35**^{km}, **n14**, σ**1ˢ.24**/20, **mb3.8**/3, **8C-6D**, **Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	Makanchi Array	5.94	304	⇓Pn	Pn	00 34 29.7	+0.6
	1.0nm,0.4s,baz=109,slow=14,SNR=48						
MK31				Sn	Sn	00 35 37.0	+1.2
	3.8nm,0.5s,baz=110,slow=22,SNR=5.8						
MK31				⇑Lg	Lg	00 36 09.7	
	9.6nm,0.6s,baz=116,slow=28,SNR=4.5						
MKAR	Makanchi Array	5.94	304	Pn	Pn	00 34 29.6	+0.4
	0.4nm,0.3s,baz=109,slow=13,SNR=22						
MKAR				Sn	Sn	00 35 36.4	+0.5
	1.8nm,0.3s,baz=110,slow=24,SNR=5.1						
MKAR				Lg	Lg	00 36 10.4	
	1.7nm,0.3s,baz=113,slow=25,SNR=4.6						
	0.7nm,0.4s						
MAKZ	Makanchi	6.13	303	⇑Pn	Pn	00 34 32.6	+0.8
	0.7nm,0.3s						
MAKZ				⇑Sn	Sn	00 35 41.7	+0.9
	10nm,0.8s						
MAKZ				⇓Lg	Lg	00 36 13.4	
	16nm,1.0s						
PDGK	Podgornoye	7.28	270	⇓Pn	Pn	00 34 47.3	-0.3
	2.8nm,0.6s						
PDGK				⇑Sn	Sn	00 36 08.6	-0.5
	7.9nm,0.7s						
PDGK				⇓Lg	Lg	00 36 53.1	
	9.6nm,0.9s						
KURBB	Kurchatov Arra	10.16	317	Pn	Pn	00 35 27.2	+0.3
	0.1nm,0.3s,baz=273,slow=20,SNR=12						
KURBB				Sn	Sn	00 37 18.3	-1.2
	0.1nm,0.3s,baz=123,slow=23,SNR=5.8						
KURBB				Lg	Lg	00 38 25.5	
	baz=124,slow=30,SNR=2.0						
	0.3nm,0.3s						
KURBB	Kurchatov Arra	10.16	317	⇑Pn	Pn	00 35 24.6	-2.4
	0.5nm,0.3s						
KURBB				⇑Sn	Sn	00 37 17.7	-1.8
	3.0nm,0.5s						
KURBB				⇑Lg	Lg	00 38 19.6	
	6.8nm,0.7s						
KURK	Kurchatov	10.17	317	⇑Pn	Pn	00 35 25.9	-1.3
	0.2nm,0.3s						
KURK				⇓Sn	Sn	00 37 18.2	-1.6
	1.4nm,0.6s						
KURK				⇓Lg	Lg	00 38 19.6	
	6.1nm,0.9s						
ZALV	Zalesovo Beam	10.69	345	Pn	Pn	00 35 35.5	+1.3
	baz=161,slow=13,SNR=1.9						
ZALV				Lg	Lg	00 38 43.9	
	baz=168,slow=29						
	0.6nm,0.4s						
SONM	Songino Array	12.50	65	Pn	Pn	00 35 58.9	-0.2
	baz=238,slow=8.3,SNR=1.7						
SONM				Lg	Lg	00 39 38.0	
	0.2nm,0.3s,baz=265,slow=32,SNR=3.3						
	0.3nm,0.5s						
BVAR	Borovoye Array	15.70	313	Pn	Pn	00 36 40.7	-1.3
	baz=118,slow=12,SNR=3.8						
	0.2nm,0.5s						
NRIK	Noril'sk	25.70	358	P	P	00 38 32.1	+1.9
	1.4nm,0.5s,baz=172,slow=8.2,SNR=5.7						
	1.4nm,0.5s						
NOA	NORSAR Array B	47.67	320	LR	LR	01 00 52.1	
	comp=Z,7.8nm,19.3s,baz=45,slow=35						
WRA	Warramunga Arr	75.52	137	P	P	00 44 43.9	-0.7
	0.8nm,0.8s,baz=324,slow=6.0,SNR=2.4						
	0.8nm,0.8s						
ASAR	Alice Springs	78.47	139	P	P	00 45 00.9	-0.2
	0.3nm,0.6s,baz=325,slow=5.5,SNR=4.1						
	0.3nm,0.6s						

DJA 04 00:35:29.7±0.3, **0°S**±2°×**12°0E**±°, **h10**^{km}, **M4.3**/13, **mB4.7**/1, **mb4.7**/1, **MLv4.1**/13, **Mw(mB)3.9**/1, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPSI	Mapaga	0.43	16	P	Pg	00 35 37.9	-0.3
MPSI				S	Sg	00 35 44.3	+0.4
PCI	Palu	0.82	176	P	Pg	00 35 43.4	-2.2
PCI				S	Sg	00 35 56.6	+0.3
APSI	Ampana	2.04	114	P	Pn	00 36 03.9	-0.3
MRSI	Marisa	2.23	76	P	Pn	00 36 06.6	-0.1
MRSI				S	Sn	00 36 34.7	+0.3
TTSI	Tana Toraja	2.95	179	P	Pn	00 36 16.9	+0.3
TTSI				S	Sn	00 36 52.7	+0.7
BKB	Balikpapan	3.11	248	P	Pn	00 36 18.0	-0.9
LUWI	Luwuk	3.14	108	P	Pn	00 36 19.4	+0.1
LUWI				S	Sn	00 36 59.3	+2.4
SPSI	Sidrap Palu	3.86	180	P	Pn	00 36 29.4	+0.2
KMSI	Cibinong	4.25	81	P	Pn	00 36 34.6	0.0
BNSI	Bone	4.30	176	P	Pn	00 36 37.1	+1.8

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*GCG **04** 01:06:00.9±1.4, 13°.33N×90°.48W, h17^{km}±8^{km}, MD4.1, ML3.8, MW3.4*

*CATAC **04** 01:06:00.2±0.8, 13°N±4°×9°0W±°, h11^{km}±5^{km}, M3.8/16, MLv3.8/16, Error ellipse: s-maj=8.9km s-min=7.8km az=12.0, confirmed*

*SNET **04** 01:06:06.4±4.9, 13°.58N×90°.32W, h38^{km}, ML3.7*

ISC 04 01:06:01.5±2.0, **13°.21N**±0°.08×**90°.34W**±0°.06, **h12**^{km}±10^{km}, **n45**, σ**1ˢ.12**/49, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAME	Alcaldia de Sa	0.70	26	P	Pg	01 06 15.2	+0.1
NUBE	Las Nubes	0.87	38	*i* P	Pg	01 06 18.1	-0.3
NUBE	Las Nubes	0.87	38	P	Pg	01 06 18.0	-0.4
NUBE	Las Nubes	0.87	38	S	Sg	01 06 28.7	-1.2
CEVE	Cerro Verde	0.92	48	*e*P	Pg	01 06 19.5	+0.1
CEVE				*e*S	Sn	01 06 33.4	-0.4
CEVE	Cerro Verde	0.92	48	S	Sn	01 06 32.7	-1.1
CEVE	Cerro Verde	0.92	48	P	Pg	01 06 19.5	+0.1
LOAL	Lomas de Alarc	0.95	35	*e*P	Pg	01 06 19.4	-0.4
LOAL	Lomas de Alarc	0.95	35	P	Pg	01 06 19.7	-0.2
JAYA	Jayaque - finc	0.97	63	*e*P	Pg	01 06 20.1	-0.2
JAYA				*e*S	Sb	01 06 33.6	+0.6
JAYA	Jayaque - finc	0.97	63	*i* P	Pg	01 06 20.0	-0.2
JAYA				*i* S	Sb	01 06 33.5	+0.4
JAYA	Jayaque - finc	0.97	63	P	Pg	01 06 20.0	-0.2
SLOZ	Alcaldia de Sa	0.97	33	S	Sn	01 06 33.8	-0.8
SLOZ	Alcaldia de Sa	0.97	33	P	Pg	01 06 19.9	-0.3
LALI	Alcalda de L	1.02	74	*e*P	Pb	01 06 20.7	-0.4
LALI				*e*S	Sn	01 06 36.0	+0.1
LALI	Alcalda de L	1.02	74	*i* P	Pb	01 06 21.0	-0.1
LALI				*i* S	Sg	01 06 35.2	+0.6
LALI	Alcalda de L	1.02	74	P	Sn	01 06 34.7	-1.2
FG16	Alotenango, Sa	1.07	351	*i* P	Pb	01 06 22.8	+0.8
FG16				IAML		01 06 53.2	
	comp=N,13μm,0.2s						
UNIC	Universidad Ca	1.08	45	P	Pb	01 06 21.6	-0.6
CEDA	San Andres	1.09	57	*e*S	Sn	01 06 37.5	0.0
CEDA	San Andres	1.09	57	P	Sn	01 06 38.4	+0.9
PMON	Piamonte	1.11	63	P	Pb	01 06 22.3	-0.3
UEES	Universidad Ev	1.18	65	P	Sn	01 06 41.1	+1.3
PANCS	Alcalda de	1.19	70	P	Sn	01 06 40.0	-0.1
LFRS	El Faro	1.30	72	*e*P	Pn	01 06 25.3	-0.3
GCG4	OSOP	1.38	352	IAML		01 06 42.2	
	comp=E,1μm,0.2s						
PAVA	Las Pavas	1.45	70	P	Pn	01 06 28.3	+0.7
COEG	Centro de Oper	1.47	74	*e*P	Pn	01 06 27.8	-0.1
COEG	Centro de Oper	1.47	74	P	Pn	01 06 28.0	+0.1
MTO3	Montecristo	1.51	39	*i* P	Pn	01 06 28.2	-0.4
MTO3	Montecristo	1.51	39	P	Pn	01 06 28.2	-0.4
MTO3	Montecristo	1.51	39	S	Sb	01 06 48.6	-0.3
TECO	Alcaldia de Te	1.55	78	P	Pn	01 06 28.6	-0.3
UESV	Universidad de	1.56	74	P	Pn	01 06 29.6	+0.5
STG8	El Palmar, Qui	1.58	321	*e*P	Pn	01 06 30.7	+1.2
STG8				IAML		01 06 57.8	
	comp=N,1μm,0.2s						
SCLA	Alcaldia de Sa	1.64	73	P	Pn	01 06 28.9	-1.2
ESQI	Esquipulas	1.65	36	*e*P	Pn	01 06 30.1	-0.3
ESQI				*e*S	Sb	01 06 52.8	+0.1
ESQI	Esquipulas	1.65	36	P	Pg	01 06 38.0	+4.7
RTAL	Retalhuleu	1.86	315	P	Pg	01 06 45.3	+8.2
SOKI	Kika Raxquin	1.91	327	*e*P	Pn	01 06 31.3	-2.8
PACA	Pacayal	1.97	82	P	Pn	01 06 36.0	+1.2
RANC	El Ranchito	2.00	83	P	Pn	01 06 32.5	-2.8
CNCH	Conchagua	2.44	88	P	Pn	01 06 41.6	+0.4
CSGN	Cosiguina Volc	2.71	95	P	Pn	01 06 46.2	+1.2
POLN	Al Sur del Vol	3.48	99	P	Pn	01 06 54.5	-1.0

IDC 04 01:14:24.0±1.1, **55°.30S**×**29°.99W**, **h0**^{km}, **mb3.8**/4, **mbtmp3.9**/4, **Error ellipse: s-maj=47.3km s-min=24.9km az=73.0**, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	Sanae	20.09	155	P	Pn	01 19 00.1	-0.4
	1.9nm,0.9s,baz=316,slow=13,SNR=4.5						
	1.9nm,0.9s						
QSPA	South Pole Qui	34.96	180	P	P	01 21 17.0	-0.5
	1.1nm,0.7s,baz=178,slow=12,SNR=9.7						
	1.1nm,0.7s						
LPAZ	La Paz	48.65	308	P	P	01 23 10.9	+0.6
	2.5nm,0.7s,baz=164,slow=5.0,SNR=11						
	2.5nm,0.7s						
H10N1	ASCENSION HYDR	48.91	21	T	T	02 16 13.3	
	baz=190						
H10N3	ASCENSION HYDR	48.91	21	T	T	02 16 11.7	
	baz=190,slow=74						
H10N2	ASCENSION HYDR	48.92	21	T	T	02 16 11.1	
	baz=190,slow=74						
TORD	Torodi Ar. Bea	73.22	32	P	P	01 25 56.8	+0.1
	0.8nm,0.7s,baz=199,slow=5.8,SNR=5.2						
	0.8nm,0.7s						
ILAR	Eielson Array	148.44	313	PKPbc	PKPbc	01 34 09.5	-1.4
	1.7nm,0.7s,baz=115,slow=2.0,SNR=16						

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*NEIC **04** 01:15:38.6±2.0, 21°.5S±0°.1×174°.12W±0°.10, h10^{km}±1^{km}, mb5.1/216, Mww5.2/13, Error ellipse: s-maj=19.7km s-min=15.2km az=190.0*

*NEIC **04** 01:15:38.7, 21°.39S×173°.94W, h20^{km}, Moment Tensor Solution. Duration: 2ˢ.0 Moment tensor: Scale 10^{16}Nm; M_{rr}6.89; $M_{\theta\theta}$-1.73; $M_{\phi\phi}$-5.15; $M_{r\theta}$-2.37; $M_{\theta\phi}$-1.07; $M_{\phi r}$-3.24; Fault plane solution: $M_0$7.47000×10^{16} NP1: ϕ_s10.76000°, δ29.51000°, λ76.73000°. NP2: ϕ_s205.92000°, δ61.35000°, λ97.40000°. Principal axes: T 8.1309, Plg73.0000°, Azm134.0000°; N -1.5853, Plg6.0000°, Azm22.0000°; P -6.5456, Plg16.0000°, Azm290.0000°;*

*BJI **04** 01:15:38.9, 20°.92S×174°.12W, h13^{km}, mB5.3/24, mb5.0/26, Ms5.0/26, Ms7 4.7/27*

*NEIC **04** 01:15:38.7, 21°.49S×174°.16W, h20^{km}*

*IDC **04** 01:15:40.6±4.0, 21°.45S×174°.43W, h26^{km}±26^{km}, mb4.2/18, mbtmp4.4/19, ML5.1/2, MS4.5/36, Error ellipse: s-maj=19.3km s-min=13.3km az=120.0*

*GCMT **04** 01:15:41.6±0.1, 21°.54S±0°.01×173°.93W±0°.01, h14^{km}, MW5.1/138, Moment Tensor Solution. s85,c123; s138,c224; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.32±.14; $M_{\theta\theta}$-0.45±.10; $M_{\phi\phi}$-4.87±.10; $M_{r\theta}$1.45±.23; $M_{\theta\phi}$-2.35±.07; $M_{\phi r}$2.53±.20; Best double couple: $M_0$6.31800×10^{16} NP1: ϕ_s200.00000°, δ31.00000°, λ84.00000°. NP2: ϕ_s27.00000°, δ59.00000°, λ94.00000°. Principal axes: T 6.0430, Plg76.0000°, Azm307.0000°; N 0.5480, Plg3.0000°, Azm205.0000°; P -6.5920, Plg14.0000°, Azm114.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 01:15:38.1±0.4, **21°.48S**±0°.06×**174°.26W**±0°.08, **h10**^{km}, **n582**, σ**1ˢ.43**/489, **mb5.1**/134, **MS4.7**/57, **28C-6D**, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	4.71	60		Pn	01 16 41.0	-8.3
MSVF	Nonsavu	8.15	296		Pn	01 17 38.1	+1.5
MSVF	Nonsavu	8.15	296	Pn	Pn	01 17 41.6	+5.0
	1.2nm,0.3s,baz=129,slow=9.2,SNR=19						
MSVF				LR	LR	01 20 30.6	
	comp=Z,9μm,18.5s,baz=73,slow=36						
RAO	Raoul Island	8.41	202	Pn	Pn	01 17 39.5	-0.6
	141nm,0.3s,baz=272,slow=23,SNR=4.2						
RAO				Sn	Sn	01 19 12.3	-2.9
	61nm,0.3s,baz=91,slow=21,SNR=7.3						
RAO				LR	LR	01 20 34.7	
	comp=Z,909nm,21.9s,baz=50,slow=35						
RAR	Rarotonga	13.50	91	Pn	Pn	01 18 41.0	-8.7
RAR	Rarotonga	13.50	91	Pn	Pn	01 18 40.7	-9.1
	5.7nm,0.3s,baz=263,slow=10,SNR=20						
RAR				Sn	Sn	01 20 58.2	-22
	2.4nm,0.3s,baz=97,slow=23,SNR=1.5						
RAR				LR	LR	01 24 33.2	
	comp=Z,2μm,18.3s,baz=234,slow=39						
PINNC	Pines Island,	17.00	263		P	01 19 39.0	+1.1
MXZ	Matakaoa Point	17.27	200	P	P	01 19 45.2	+4.4
DZM	Mont Dzumac	17.94	265		P	01 19 50.7	+2.2
DZM	Mont Dzumac	17.94	265	P	P	01 19 50.1	+1.6
	30nm,0.8s,baz=79,slow=17,SNR=18						
URZ	Urewera	18.30	202	P	P	01 19 53.1	+0.9
	1.1nm,0.3s,baz=228,slow=2.8,SNR=7.2						
URZ				S	Sn	01 23 00.4	-16
	2.3nm,0.4s,baz=107,slow=19,SNR=1.2						
	8.1nm,0.6s						
RTZ	Ruatahuna	18.67	202	P	Pn	01 19 57.8	+1.2
BKZ	Black Stump Fm	19.33	202		Pn	01 20 04.7	+0.1
BFZ	Birch Farm	20.77	201	P	Pn	01 20 22.8	+1.2
MRZ	Mangatainoka R	20.98	202	P	P	01 20 22.1	+0.7
PPT	Papeete	23.57	85	LR	LR	01 28 37.3	
	comp=Z,1μm,18.2s,baz=261,slow=33						
LTZ	Lake Taylor	24.05	205		P	01 20 53.0	-0.5
LTZ				IAmb	IAmb	01 21 13.1	
	comp=Z,40nm,1.1s						
INZ	Inchbonnie	24.33	206	P	P	01 20 55.3	-0.7
INZ				IAmb	IAmb	01 21 06.9	
	comp=Z,49nm,1.0s						
OXZ	Oxford	24.60	205	P	P	01 21 02.3	+3.8
OXZ				IAmb	IAmb	01 21 08.7	
	comp=Z,28nm,0.7s						
RPZ	Rata Peaks	25.31	205	P	P	01 21 05.0	+0.1
RPZ	Rata Peaks	25.31	205	LR	LR	01 30 38.1	
	comp=Z,1μm,18.4s,baz=24,slow=36						
FOZ	Fox Glacier	25.68	207	P	P	01 21 07.5	-0.7
HNR	Honiara	27.55	292	LR	LR	01 30 32.7	
	comp=Z,400nm,20.0s,baz=146,slow=33						
MLZ	Mavora Lakes	27.87	207	P	P	01 21 32.1	+4.0
DCZ	Deep Cove	28.37	208	P	P	01 21 35.4	+3.0
ARMA	Armidale	31.84	247	P	P	01 22 03.2	-0.3
EIDS	Eidsvold	31.99	256	P	P	01 22 05.3	+0.6
EIDS				IAmb	IAmb	01 22 56.9	
	comp=Z,34nm,1.5s						
CTAO	Charters Tower	36.88	265	P	P	01 22 45.3	-1.8
CTAO				IAmb	IAmb	01 22 53.5	
	comp=Z,67nm,1.9s						
TOO	Toolangi	38.20	236	P	P	01 22 58.5	+0.3
PMG	Port Moresby	38.97	282	LR	LR	01 37 56.9	
	comp=Z,2μm,18.0s,baz=132,slow=34						
STKA	Stephens Creek	40.55	246	P	P	01 23 16.8	-0.9
	comp=Z,10.0nm,0.8s,baz=94,slow=11,SNR=9.7						
STKA				LR	LR	01 39 39.2	
	comp=Z,680nm,18.1s,baz=81,slow=36						
	comp=Z,10.0nm,0.8s						
COEN	Coen	41.13	273	P	P	01 23 22.2	-0.6
COEN				IAmb	IAmb	01 23 24.3	
	comp=Z,70nm,1.6s						
JAY	Jayapura	47.67	287	LR	LR	01 43 07.8	
	comp=Z,169nm,19.7s,baz=192,slow=35						
AS31	Alice Springs	47.70	257		P	01 24 13.9	-1.4
ASAR	Alice Springs	47.71	257		P	01 24 14.4	-0.9
ASAR	Alice Springs	47.71	257	P	P	01 24 13.0	-2.3
	comp=Z,14nm,0.9s,baz=92,slow=8.0,SNR=50						
ASAR				PcP	PcP	01 25 44.7	0.0
	comp=Z,1.8nm,0.9s,baz=87,slow=3.6,SNR=1.5						
ASAR				S	S	01 31 08.3	-3.5
	comp=Z,0.6nm,0.7s,baz=81,slow=15,SNR=5.4						
	comp=Z,14nm,0.9s						
WR8	Warramunga Arr	47.78	262	P	P	01 24 14.7	-1.2
WR8				IAmb	IAmb	01 24 25.9	
	comp=Z,16nm,1.1s						
WB0	Warramunga Arr	47.92	262	P	P	01 24 15.4	-1.6
WB0				IAmb	IAmb	01 24 20.3	
	comp=Z,9.8nm,0.7s						
WRA	Warramunga Arr	47.93	262	P	P	01 24 15.3	-1.9
WRA	Warramunga Arr	47.93	262	P	P	01 24 14.9	-2.3
	comp=Z,8.7nm,0.8s,baz=97,slow=8.2,SNR=17						
WRA				PcP	PcP	01 25 45.8	+0.3
	comp=Z,2.1nm,0.8s,baz=94,slow=3.0,SNR=2.6						
	comp=Z,8.7nm,0.8s						
FORT	Forrest	52.13	247		P	01 24 47.6	-1.2
FORT				IAmb	IAmb	01 24 49.4	
	comp=Z,19nm,0.8s						
GUMO	Guam	53.15	307	LR	LR	01 46 16.3	
	comp=Z,222nm,19.1s,baz=109,slow=35						
KNRA	Kununurra	54.08	266	P	P	01 25 03.2	-0.2
FITZ	Fitzroy Crossi	56.36	262	P	P	01 25 18.5	-1.3
	comp=Z,6.1nm,1.0s,baz=94,slow=4.2,SNR=2.1						
	comp=Z,6.1nm,1.0s						
SBA	Scott Base	57.15	185		P	01 25 27.5	+3.0
VNDA	Vanda	57.27	186		P	01 25 27.8	+2.3
VNDA	Vanda	57.27	186	P	P	01 25 26.6	+1.2
	comp=Z,2.5nm,0.8s,baz=354,slow=6.5,SNR=9.7						
	comp=Z,2.5nm,0.8s						

MBWA	Marble Bar	61.05	257	P	P	01 25 51.1	-1.4
JCJ	Chichijima	64.11	317	LR	LR	01 49 25.0	
	comp=Z,269nm,20.9s,baz=152,slow=32						
CASY	Casey	64.59	206		P	01 26 16.7	+1.5
CASY				IAmb	IAmb	01 26 25.3	
	comp=Z,13nm,1.1s						
TOLI2	Tolitoli	67.23	281	P	P	01 26 33.0	-0.1
TOLI2				IAmb	IAmb	01 26 38.3	
	comp=Z,14nm,1.2s						
QSPA	South Pole Qui	68.59	180	P	P	01 26 41.6	+0.5
QSPA				IAmb	IAmb	01 26 52.7	
	comp=Z,11nm,1.0s						
QSPA	South Pole Qui	68.59	180	P	P	01 26 40.9	-0.2
	comp=Z,3.3nm,0.8s,baz=33,slow=1.3,SNR=9.9						
	comp=Z,3.3nm,0.8s						
MJAR	Matsushiro Arr	73.11	322	P	P	01 27 08.2	-0.6
	comp=Z,4.4nm,0.7s,baz=159,slow=5.5,SNR=11						
MJAR				LR	LR	01 59 21.4	
	comp=Z,196nm,18.1s,baz=148,slow=36						
	comp=Z,4.4nm,0.7s						
ATKA	Atka Island	73.37	0	P	P	01 27 11.6	+1.8
JOW	Kunigami	73.50	308	LR	LR	01 54 57.4	
	comp=Z,75nm,21.7s,baz=288,slow=32						
SHEM	Shemya Is, Ala	74.59	353	LR	LR	01 56 11.7	
	comp=Z,379nm,19.4s,baz=154,slow=33						
JNU	Nakatsue	75.42	315	LR	LR	01 52 36.6	
	comp=Z,145nm,21.3s,baz=134,slow=29						
LPIG	La Paz	76.94	57	LR	LR	01 56 55.4	
	comp=Z,464nm,18.2s,baz=203,slow=32						
CNBA	Chernabura Isl	77.03	9	P	P	01 27 31.9	+1.0
PFO	Pinyon Flats O	77.67	46	LR	LR	01 59 42.0	
	comp=Z,252nm,18.0s,baz=238,slow=34						
PETK	Petropavlovsk-	78.17	343		P	01 27 37.8	+0.4
PETK	Petropavlovsk-	78.17	343	P	P	01 27 36.7	-0.6
	comp=Z,4.0nm,0.7s,baz=134,slow=6.4,SNR=12						
PETK				LR	LR	01 57 30.8	
	comp=Z,243nm,20.4s,baz=160,slow=32						
	comp=Z,4.0nm,0.7s						
WAKR	Walker	78.74	41	P	P	01 27 41.9	+0.8
WAKR				IAmb	IAmb	01 28 11.4	
	comp=Z,28nm,1.7s						
PNTR	Pine Nut	79.01	40		P	01 27 43.2	+0.6
LHV	Little Huntoon	79.15	42	P	P	01 27 44.3	+1.2
GMN	Gold Mountain	79.35	43	P	P	01 27 45.5	+0.9
RYN	Ryan	79.37	41	P	P	01 27 45.5	+0.9
RYN				IAmb	IAmb	01 28 10.3	
	comp=Z,24nm,1.6s						
NVAR	Mina Array Bea	79.39	41	P	P	01 27 44.1	-0.6
NVAR	Mina Array Bea	79.39	41	P	P	01 27 44.5	-0.2
	comp=Z,1.4nm,0.7s,baz=221,slow=7.8,SNR=10						
	comp=Z,1.4nm,0.7s						
NV11	Mina Array Sit	79.48	42		P	01 27 45.2	+0.1
PAHR	Pah Rah Range	79.53	40	P	P	01 27 45.7	+0.4
SII	Sitkinak Islan	79.56	11	P	P	01 27 43.4	-1.6
	baz=199						
TPNV	Topopah Spring	79.78	44	P	P	01 27 47.7	+0.9
TPH	Tonopah	79.84	42	P	P	01 27 48.0	+0.9
TPH				IAmb	IAmb	01 28 08.0	
	comp=Z,22nm,0.9s						
QZH	Quanzhou	79.89	302	P	P	01 27 48.2	+0.8
QZH				S	S	01 37 55.2	+4.0
QZH				pmax	pmax		
	comp=Z,200nm,9.3s						
QZH				LR	LR		
	comp=Z,200nm,14.8s						
QZH				LR	LR		
	comp=Z,220nm,16.5s						
QZH				LR	LR		
	comp=Z,370nm,19.9s						
KSRS	Korea Array	79.97	317	P	P	01 27 47.0	-0.5
	comp=Z,2.3nm,0.8s,baz=136,slow=6.1,SNR=8.5						
KSRS				LR	LR	01 59 01.5	
	comp=Z,98nm,20.0s,baz=160,slow=33						
	comp=Z,2.3nm,0.8s						
V12A	Nelson	79.98	45	P	P	01 27 48.9	+1.1
KSAR	Wonju Array Be	79.98	317		P	01 27 47.2	-0.5
Y14A	Wickenburg	80.21	48	P	P	01 27 50.5	+1.4
SHPR	Sheep Range	80.23	45	P	P	01 27 49.8	+0.6
J04A	Umpqua Nationa	80.26	36	P	P	01 27 50.9	+1.6
J04A				IAmb	IAmb	01 29 57.2	
	comp=Z,17nm,0.7s						
OHAK	Old Harbor	80.36	11	P	P	01 27 47.3	-1.9
	baz=200						
I04A	Tendick Farm,	80.47	35	P	P	01 27 50.1	-0.1
I04A				IAmb	IAmb	01 28 13.4	
	comp=Z,26nm,1.5s						
R18K	Karluk	80.47	11	P	P	01 27 47.4	-2.3
	baz=199						
S11A	Rachel	80.52	43	P	P	01 27 51.7	+0.9
S11A				IAmb	IAmb	01 29 39.4	
	comp=Z,42nm,2.0s						
COR	Corvallis	80.53	34	P	P	01 27 51.7	+1.3
J05D	Fort Rock, OR	80.77	36	P	P	01 27 53.2	+1.2
PRN	Pahroc Range	80.82	44	P	P	01 27 52.7	+0.3
Q17K	Contact Creek	80.90	10	P	P	01 27 49.5	-2.7
	baz=197						
ACHA	Angle Creek He	80.94	10	P	P	01 27 51.6	-0.8
KDAK	Kodiak Island	81.01	12	P	P	01 27 50.9	-1.8
	baz=200						
O14K	Tigyukauivet M	81.15	7	P	P	01 27 51.7	-1.7
	baz=192						
O15K	Ungalikthiuk R	81.24	7	P	P	01 27 50.9	-2.9
	baz=194						
PINE	Pine Mountain	81.27	36	P	P	01 27 55.0	+0.3
PINE				IAmb	IAmb	01 28 00.3	
	comp=Z,23nm,1.4s						
P16K	Nushagak River	81.33	8	P	P	01 27 52.0	-2.4
	baz=195						
Q18K	Katmai Hardscr	81.41	10	P	P	01 27 53.7	-1.2
	baz=198						
X16A	Lo Mia Camp, P	81.55	48	P	P	01 27 55.3	-1.0
WVOR	Wild Horse Val	81.69	38	P	P	01 27 56.8	-0.1
P17K	Kvichak River	81.71	9	P	P	01 27 55.3	-1.0
	baz=197						
E03A	Lebam	81.73	33	P	P	01 27 58.2	+1.4
E03A				IAmb	IAmb	01 29 58.4	
	comp=Z,18nm,1.0s						
N14K	Kuskokwak Cree	81.76	6	P	P	01 27 54.1	-2.4
	baz=192						
USA0B	Ussuriysk Arra	81.77	324	P	P	01 27 57.3	+0.2
USA0B				IAmb	IAmb	01 28 15.2	
	comp=Z,46nm,2.0s						
USRK	Ussuriysk Ar.	81.77	324	P	P	01 27 57.0	-0.1
USRK	Ussuriysk Ar.	81.77	324	P	P	01 27 57.2	+0.2
	comp=Z,2.0nm,0.6s,baz=129,slow=7.6,SNR=5.7						
USRK				LR	LR	02 01 34.9	
	comp=Z,381nm,19.2s,baz=134,slow=34						
	comp=Z,2.0nm,0.6s						
LCMT	Little Creek M	81.78	45	P	P	01 27 57.2	-0.2
MAW	Mawson	81.80	199	P	P	01 27 56.6	-0.4
	comp=Z,3.4nm,0.7s,baz=99,slow=3.9,SNR=7.7						
	comp=Z,3.4nm,0.7s						
Q20K	Shuyak Island	81.83	11	P	P	01 27 54.6	-2.4
	baz=201						
M11K	Mekoryuk	81.83	4	P	P	01 27 54.8	-2.1
	baz=188						
O16K	Kokwok River B	81.86	8		P	01 27 57.4	+0.3
O16K				IAmb	IAmb	01 27 58.0	
	comp=Z,13nm,1.1s						
O16K	Kokwok River B	81.86	8	P	P	01 27 55.3	-1.8
	baz=195						
HOOD	Mount Hood Mea	81.89	34	P	P	01 27 58.7	+0.8
HOOD				IAmb	IAmb	01 28 42.3	
	comp=Z,16nm,1.3s						
Q19K	Cape Douglas,	81.90	11	P	P	01 27 57.2	-0.3
Q19K	Cape Douglas,	81.90	11	P	P	01 27 56.3	-1.1
	baz=199						
U15A	North Rim	82.08	46	P	P	01 27 59.6	+0.4
M13K	Dall Lake	82.08	5	P	P	01 27 57.0	-1.3
	baz=190						
P18K	Big Mountain,	82.08	10		P	01 27 57.9	-0.5
P18K				IAmb	IAmb	01 28 12.7	
	comp=Z,16nm,1.1s						
P18K	Big Mountain,	82.08	10	P	P	01 27 56.7	-1.7
	baz=198						
O17K	Koliganek Bris	82.17	9	P	P	01 27 57.2	-1.6
	baz=196						
N15K	Kwethluk River	82.17	7	P	P	01 27 56.6	-2.2
	baz=193						
I07A	Izee	82.24	36	P	P	01 28 00.3	+0.6
J08A	Circle Bar Ran	82.36	37		P	01 28 00.1	-0.2
O18K	Koktuh Hills	82.53	10	P	P	01 27 58.9	-1.7
	baz=198						
M14K	Bethel	82.55	6	P	P	01 28 01.0	+0.3
M14K				IAmb	IAmb	01 28 16.2	
	comp=Z,18nm,0.9s						
M14K	Bethel	82.55	6	P	P	01 27 59.5	-1.2
	baz=192						
M15K	Kasigluk River	82.62	7	P	P	01 27 59.5	-1.6
	baz=193,SNR=5.8						
N16K	Nishlik Lake	82.63	8	P	P	01 28 00.1	-1.1
	baz=195						
P19K	Oil Pt	82.66	11	P	P	01 28 02.1	+0.8
P19K	Oil Pt	82.66	11	P	P	01 27 59.5	-1.9
	baz=200						
ELK	Elko	82.67	41		P	01 28 02.1	-0.1
ELK	Elko	82.67	41	LR	LR	02 02 11.8	
	comp=Z,406nm,18.1s,baz=239,slow=34						
H03N2	Juan Fernandez	82.68	123	T	T	03 00 24.8	
	baz=249,slow=71,SNR=22						
H03N3	Juan Fernandez	82.68	123	T	T	03 00 26.9	
	baz=249,slow=71,SNR=21						
H03N1	Juan Fernandez	82.69	123	T	T	03 00 32.7	
	baz=249,slow=71,SNR=17						
LON	Longmire	82.76	33	P	P	01 28 01.9	-0.3
LON				IAmb	IAmb	01 28 07.5	
	comp=Z,20nm,1.8s						
N17K	Nushagak Hills	82.89	8	P	P	01 28 01.1	-1.4
	baz=196						
CNPM	China Poot	82.90	12	P	P	01 28 01.8	-0.8
HOM	Homer	82.95	11	P	P	01 28 01.8	-1.0
	baz=201						
D05A	Enumclaw	82.96	33	P	P	01 28 02.6	-0.6
O19K	Port Alsworth	82.99	10	P	P	01 28 03.3	+0.3
O19K	Port Alsworth	82.99	10	P	P	01 28 01.7	-1.3
	baz=199						
L14K	Kuka Creek	83.06	6	IAmb	IAmb	01 28 11.8	
	comp=Z,19nm,1.0s						
L14K	Kuka Creek	83.06	6	P	P	01 28 01.9	-1.4
	baz=191						
M16K	Timber Creek	83.14	7		P	01 28 03.2	-0.6
M16K	Timber Creek	83.14	7	P	P	01 28 02.6	-1.2
	baz=194,SNR=9.3						
O20K	Slope Mountain	83.17	11	P	P	01 28 02.7	-1.4
	baz=200						
BRLK	Bradley Lake	83.19	12	P	P	01 28 04.2	+0.1
BRSE	Bradley Lake S	83.19	12	P	P	01 28 02.5	-1.6
	baz=202						
N18K	Kilae Creek	83.22	9	P	P	01 28 05.2	+1.0
N18K	Kilae Creek	83.22	9	P	P	01 28 02.4	-1.9
	baz=197						
NJ2	Nanjing	83.22	308	*e*P	P	01 28 09.1	+4.2
NJ2				sS	sS	01 38 39.1	+11
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,160nm,10.4s						
NJ2				LR	LR		
	comp=Z,220nm,19.9s						
NJ2				LR	LR		
	comp=Z,250nm,15.2s						
NJ2				LR	LR		
	comp=Z,380nm,18.4s						
MVU	Marysvale	83.29	44		P	01 28 05.6	+0.1
G08A	Pilot Rock	83.31	36		P	01 28 06.1	+0.9
G08A				IAmb	IAmb	01 28 35.3	
	comp=Z,21nm,1.5s						
MDJ	Mudanjiang	83.36	323	P	P	01 28 06.5	+1.2
MDJ				PP	PP	01 31 19.0	+1.5
MDJ				S	S	01 38 31.7	+5.4
MDJ				pmax	pmax		
	comp=Z,15nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,230nm,6.9s						
MDJ				LR	LR		
	comp=Z,250nm,17.9s						
MDJ				LR	LR		
	comp=Z,300nm,22.0s						
MDJ				LR	LR		
	comp=Z,540nm,21.3s						
MXC	Moxie City	83.43	34	P	P	01 28 05.5	-0.1
RED	Redoubt Volcan	83.46	11	P	P	01 28 05.7	+0.1
K13K	Kusilvak Mount	83.48	5	P	P	01 28 04.4	-1.1
	baz=189						
L15K	Ungalak Mounta	83.50	6	P	P	01 28 04.7	-0.9
	baz=192,SNR=9.5						
N19K	Bonanza Creek	83.56	10	IAmb	IAmb	01 28 11.3	
	comp=Z,17nm,1.3s						
N19K	Bonanza Creek	83.56	10	P	P	01 28 05.2	-0.8
	baz=199						
M17K	Holitna River	83.70	8		P	01 28 07.2	+0.6
M17K				IAmb	IAmb	01 28 28.1	
	comp=Z,13nm,0.8s						
M17K	Holitna River	83.70	8	P	P	01 28 06.3	-0.4
	baz=196						
HAWA	Hanford	83.71	35	P	P	01 28 07.9	+0.8
HAWA				IAmb	IAmb	01 28 23.0	
	comp=Z,11nm,1.1s						
L16K	Owhat River	83.75	7	IAmb	IAmb	01 28 22.6	
	comp=Z,18nm,1.1s						
L16K	Owhat River	83.75	7	P	P	01 28 06.5	-0.3
	baz=194						
SEW	Seward	83.78	12	P	P	01 28 06.4	-0.7
	baz=203						
Q23K	Middleton Isla	83.81	14	P	P	01 28 07.2	-0.1
	baz=206						
MFID	Camas Ranch	83.92	39	P	P	01 28 08.8	+0.4
MFID				IAmb	IAmb	01 28 38.2	
	comp=Z,12nm,1.4s						
WAH2	Wahluke Slope	83.93	34	P	P	01 28 07.8	-0.4
WAH2				IAmb	IAmb	01 28 10.3	
	comp=Z,10nm,1.1s						
HMU	Henry Mountain	83.94	45	P	P	01 28 07.9	-1.0
BMO	Blue Mountains	83.95	37	P	P	01 28 08.3	-0.2
SLKM	Skilak Lake	84.00	12	P	P	01 28 08.4	+0.1
M18K	Stony River	84.00	9	P	P	01 28 07.5	-0.7
	baz=197						
LNOR	Lincton Mounta	84.05	36	P	P	01 28 09.2	+0.2
P23K	Montague Islan	84.10	13	P	P	01 28 08.2	-0.6
	baz=205						
K15K	Wolf Creek Mou	84.10	6		P	01 28 09.2	+0.5
K15K	Wolf Creek Mou	84.10	6	P	P	01 28 08.7	0.0
	baz=192,SNR=13						
CRAG	Craig	84.25	22	P	P	01 28 08.8	-0.8
	baz=218						
N20K	Mount Spurr	84.29	11	P	P	01 28 08.9	-0.9
	baz=201						
SPCR	Spurr Chakacha	84.29	11	P	P	01 28 08.4	-1.4
	baz=201						
L17K	Donlin	84.30	7	P	P	01 28 08.7	-1.1
	baz=195,SNR=9.6						
J14K	Nanvaranak Lak	84.37	5	P	P	01 28 09.2	-0.8
	baz=190						
TMUT	Trail Mountain	84.38	44	P	P	01 28 10.4	-0.7
TMUT				IAmb	IAmb	01 28 41.7	
	comp=Z,9.4nm,1.1s						
QIZ	Qiongzhong	84.46	293	P	P	01 28 12.5	+1.0
QIZ				S	S	01 38 40.4	+2.0
QIZ				pmax	pmax		
	comp=Z,130nm,6.5s						
QIZ				LR	LR		
	comp=Z,150nm,13.3s						
QIZ				LR	LR		
	comp=Z,210nm,20.2s						
L18K	Granite Mounta	84.58	8		P	01 28 11.1	-0.1
L18K				IAmb	IAmb	01 28 26.9	
	comp=Z,8.9nm,1.1s						
L18K	Granite Mounta	84.58	8	P	P	01 28 10.5	-0.6
	baz=196						
M19K	Big River Lodg	84.61	9	IAmb	IAmb	01 28 16.1	
	comp=Z,26nm,1.6s						
M19K	Big River Lodg	84.61	9	P	P	01 28 10.8	-0.5
	baz=199						
RC01	Rabbit Creek A	84.63	12	P	P	01 28 10.9	-0.5
	baz=203						
STLK	Strandline Lak	84.64	11	IAmb	IAmb	01 28 15.6	
	comp=Z,15nm,1.4s						
TXAR	Lajitas Array	84.67	56	P	P	01 28 12.7	+0.2
	comp=Z,0.3nm,0.3s,baz=296,slow=5.5,SNR=1.4						
TXAR				LR	LR	01 59 25.7	
	comp=Z,148nm,19.8s,baz=234,slow=31						
	comp=Z,0.3nm,0.3s						
V35K	Ketchikan	84.68	23	P	P	01 28 11.0	-0.8
	baz=219						
PWL	Port Wells	84.69	12	P	P	01 28 10.9	-0.9
	baz=204						
KAIM	Kayak Island	84.70	15	P	P	01 28 10.9	-0.9
	baz=208						
SRU	San Rafael Swe	84.72	44	IAmb	IAmb	01 28 24.3	
	comp=Z,9.7nm,0.7s						
U33K	Whale Pass	84.76	22	P	P	01 28 11.8	-0.3
	baz=218						
M20K	Styx River	84.78	10	IAmb	IAmb	01 28 16.9	
	comp=Z,12nm,1.4s						
M20K	Styx River	84.78	10	P	P	01 28 10.9	-1.4
	baz=200						
SIT	Sitka	84.78	20	P	P	01 28 11.0	-1.2
	baz=216						
SUA	Susitna One	84.79	11	IAmb	IAmb	01 28 19.4	
	comp=Z,11nm,0.9s						
SUA	Susitna One	84.79	11	P	P	01 28 11.0	-1.3
	baz=202						
L19K	White Mountain	84.80	9	P	P	01 28 11.3	-1.0
	baz=198						
K17K	Iditarod	84.86	7	P	P	01 28 11.6	-1.0
	baz=195						
DL2	Dalian	84.87	315	P	P	01 28 11.1	-2.0
DL2				pmax	pmax		
	comp=Z,27nm,1.1s						
DL2				pmax	pmax		
	comp=Z,220nm,8.6s						
DL2				LR	LR		
	comp=Z,260nm,20.5s						
DL2				LR	LR		
	comp=Z,280nm,18.7s						
DL2				LR	LR		
	comp=Z,420nm,20.2s						
JLU	Jordanelle	84.95	43	P	P	01 28 13.5	-0.4
JLU				IAmb	IAmb	01 28 21.4	
	comp=Z,16nm,1.8s						
EYAK	Cordova Ski Ar	84.95	14	P	P	01 28 12.2	-0.8
	baz=207						
GLI	Glacier Island	84.96	13	IAmb	IAmb	01 28 20.2	
	comp=Z,15nm,0.9s						
GLI	Glacier Island	84.96	13	P	P	01 28 12.2	-0.9
	baz=205						
GAMB	Gambell	85.00	1	P	P	01 28 12.0	-1.2
	baz=182						
SKT	Skwentna	85.14	11	IAmb	IAmb	01 28 35.0	
	comp=Z,10nm,1.2s						
SKT	Skwentna	85.14	11	P	P	01 28 11.5	-2.5
	baz=201						
J16K	Anvik River	85.17	6	IAmb	IAmb	01 28 29.7	
	comp=Z,12nm,1.0s						
J16K	Anvik River	85.17	6	P	P	01 28 11.6	-2.5
	baz=193						
KNK	Knik Glacier	85.17	12	IAmb	IAmb	01 28 21.5	
	comp=Z,12nm,0.9s						
KNK	Knik Glacier	85.17	12	P	P	01 28 12.7	-1.4
	baz=204						
KLR	Kul'dur	85.18	328	LR	LR	02 01 24.7	
	comp=Z,155nm,21.4s,baz=165,slow=32						
L20K	Farewell, AK	85.23	9	P	P	01 28 12.7	-1.7
	baz=199						
S31K	Pelican	85.24	19	P	P	01 28 12.8	-1.7
	baz=215						
CN2	Changchun	85.24	321	*e*P	P	01 28 15.3	+0.4
CN2				*e*sP	pwP	01 28 22.0	-0.3
CN2				*e*S	SKSac	01 38 43.4	+3.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,100nm,14.0s						
CN2				LR	LR		
	comp=Z,100nm,14.0s						
CN2				LR	LR		
	comp=Z,100nm,15.0s						
BNX	BinXian	85.27	323	⇑P	P	01 28 15.7	+0.7
BNX				sP	pwP	01 28 20.2	-2.2
BNX				S	SKSac	01 38 42.3	+2.4
BNX				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BNX				pmax	pmax		
	comp=Z,200nm,7.0s						
BNX				LR	LR		
	comp=Z,220nm,19.3s						
BNX				LR	LR		
	comp=Z,250nm,17.9s						
BNX				LR	LR		
	comp=Z,380nm,19.2s						
WRAK	Wrangell Islan	85.27	22	P	P	01 28 13.0	-1.7
	baz=219						
ANMO	Albuquerque	85.33	50		P	01 28 15.2	-0.6
ANMO				IAmb	IAmb	01 28 22.6	
	comp=Z,14nm,1.6s						
ANMO	Albuquerque	85.33	50	IAmb	IAmb	01 28 22.7	
	comp=Z,12nm,1.4s						
ANMO	Albuquerque	85.33	50	LR	LR	02 02 52.6	
	comp=Z,441nm,18.0s,baz=346,slow=33						
PV18	Skein Mesa, Pa	85.33	46		P	01 28 15.7	-0.1
S32K	Killisnoo	85.36	20	P	P	01 28 12.9	-2.2
	baz=217						
GHO	Glory Hole Cre	85.42	12	IAmb	IAmb	01 28 22.8	
	comp=Z,15nm,1.0s						
J17K	VABM Dome	85.44	7	IAmb	IAmb	01 28 31.5	
	comp=Z,9.6nm,1.0s						
J17K	VABM Dome	85.44	7	P	P	01 28 14.3	-1.1
	baz=194						
DIV	Divide	85.47	13	IAmb	IAmb	01 28 23.1	
	comp=Z,13nm,1.0s						
MESA	MESA	85.52	16	P	P	01 28 14.3	-1.8
	baz=210						
SML	Sawmill	85.56	12	P	P	01 28 15.4	-0.7
SML				IAmb	IAmb	01 28 21.3	
	comp=Z,23nm,1.5s						
SML	Sawmill	85.56	12	P	P	01 28 14.9	-1.3
	baz=204						
BMRM	Bremner River	85.58	14	IAmb	IAmb	01 28 23.9	
	comp=Z,18nm,1.0s						
BMRM	Bremner River	85.58	14	P	P	01 28 15.6	-0.7
	baz=208						
MA2	Magadan	85.70	343	LR	LR	02 02 05.9	
	comp=Z,301nm,20.6s,baz=164,slow=32						
YAH	Yahtse	85.73	16	P	P	01 28 17.0	-0.3
CRQM	Cirque	85.74	15	P	P	01 28 17.7	+0.5
CRQM				IAmb	IAmb	01 28 29.9	
	comp=Z,19nm,1.2s						
CRQE	Cirque	85.74	15	P	P	01 28 15.0	-2.1
	baz=209						
I17K	Unalakleet	85.75	6	P	P	01 28 15.0	-1.9
	baz=193						
PNL	Peninsula	85.75	17	P	P	01 28 15.1	-2.0
	baz=212						
CUT	Chulitna	85.75	11	P	P	01 28 17.3	+0.3
KLU	Klutina	85.77	13	IAmb	IAmb	01 28 22.4	
	comp=Z,14nm,1.3s						
KLU	Klutina	85.77	13	P	P	01 28 15.1	-2.1
	baz=206						
J18K	Innoko River	85.78	8	IAmb	IAmb	01 28 33.0	
	comp=Z,15nm,1.1s						
J18K	Innoko River	85.78	8	P	P	01 28 16.2	-1.0
	baz=196,SNR=12						
SCM	Sheep Creek Mo	85.78	12	IAmb	IAmb	01 28 24.7	
	comp=Z,16nm,1.1s						
SCM	Sheep Creek Mo	85.78	12	P	P	01 28 15.2	-2.1
	baz=205						
WHN	Wuhan	85.86	305	P	P	01 28 17.7	-0.6
WHN				S	SKSac	01 38 45.4	+1.1
WHN				pmax	pmax		
	comp=Z,610nm,10.4s						
PINM	Pinnacle	85.88	16	P	P	01 28 16.4	-1.4
	baz=212						
PPLA	Purkeypile	85.89	10	P	P	01 28 15.9	-2.0
	baz=201						
R32K	Eaglecrest	86.02	20	P	P	01 28 17.5	-0.9
	baz=217						
K20K	Telida	86.04	9	P	P	01 28 17.0	-1.4
	baz=199						
ANM	Nome	86.04	4	P	P	01 28 17.0	-1.4
	baz=188						
PLCA	Paso Flores	86.04	132	LR	LR	02 02 40.2	
	comp=Z,292nm,18.2s,baz=205,slow=33						
GRNC	Granite Creek	86.05	15	IAmb	IAmb	01 28 34.1	
	comp=Z,22nm,1.1s						
N25K	Chitina, Valde	86.15	14	IAmb	IAmb	01 28 34.9	
	comp=Z,13nm,1.1s						
N25K	Chitina, Valde	86.15	14	P	P	01 28 17.3	-1.8
	baz=208						
NEW	Newport	86.17	34	LR	LR	02 02 07.2	
	comp=Z,902nm,18.6s,baz=205,slow=32						
P29M	Windy Craggy	86.17	18	IAmb	IAmb	01 28 25.2	
	comp=Z,27nm,1.5s						
P29M	Windy Craggy	86.17	18	P	P	01 28 17.3	-1.9
	baz=214						
M24K	Tolsona, Glenn	86.27	13	P	P	01 28 17.9	-1.8
	baz=206						
MCARA	McCarthy VSAT	86.31	14	P	P	01 28 17.8	-2.0
	baz=209						
LOGN	Logan Glacier	86.32	16	IAmb	IAmb	01 28 27.8	

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            comp=Z,17nm,1.1s
H16K  Elim              86.34   5  P      P      01 28 18.2 -1.7
            baz=191
CTG   Chitna Glacier    86.35  15  P      P      01 28 18.1 -2.1
            baz=211
CTGM  Chitina Glacie    86.36  15  IAmb   IAmb   01 28 27.9
            comp=Z,13nm,1.0s
WAT6  Susitna Watana    86.38  12  P      P      01 28 18.1 -2.2
            baz=205,SNR=11
CAST  Castle Rocks      86.40  10  P      P      01 28 17.9 -2.3
            baz=201
PLBC  Pleasant Camp     86.42  18  P      P      01 28 19.6 -0.8
            baz=215
J19K  Poorman           86.43   8  IAmb   IAmb   01 28 26.4
            comp=Z,18nm,1.4s
J19K  Poorman           86.43   8  P      P      01 28 18.7 -1.7
            baz=197
T35M  Bob Quinn         86.44  22  P      P      01 28 19.2 -1.3
            baz=220
WAT1  Susitna Watana    86.46  12  P      P      01 28 19.3 -1.3
            baz=204
O28M  Mount Upton       86.48  16  IAmb   IAmb   01 28 26.5
            comp=Z,18nm,1.4s
O28M  Mount Upton       86.48  16  P      P      01 28 19.7 -1.3
            baz=212
O29M  Mount Kennedy     86.50  17  IAmb   IAmb   01 28 29.2
            comp=Z,15nm,1.2s
O29M  Mount Kennedy     86.50  17  P      P      01 28 20.1 -0.8
            baz=213
SYO   Syowa Base        86.51 192⇑ePcP   PcP    01 28 23.8 +0.5
SYO   Syowa Base        86.51 192⇓esP    sP     01 28 25.4 +2.0
TIA   Tai'an            86.54 311  P      P      01 28 20.7 -0.8
TIA                                pmax   pmax
            comp=Z,4.0nm,0.5s
G15K  Niukluk           86.56   4  P      P      01 28 20.0 -0.9
            baz=190
CMIG  Matias Romero     86.68  70  LR     LR     01 58 54.0
            comp=Z,305nm,19.0s,baz=200,slow=30
TRF   Thorofare Moun    86.72  11         P      01 28 21.2 -0.8
TRF                                IAmb   IAmb   01 28 36.2
            comp=Z,17nm,1.0s
TRF   Thorofare Moun    86.72  11  P      P      01 28 20.7 -1.3
            baz=202,SNR=7.9
SKAG  Skagway           86.73  19  P      P      01 28 22.2 +0.3
SKAG                               IAmb   IAmb   01 28 52.5
            comp=Z,18nm,1.0s
HARP  HAARP             86.74  13  P      P      01 28 19.6 -2.3
            baz=207
UBPT  Khong Chiam       86.76 288         P      01 28 21.4 -1.6
P30M  Million Dollar    86.80  18  P      P      01 28 20.3 -2.0
            baz=214
J20K  Nowinta River     86.81   9  IAmb   IAmb   01 28 37.9
            comp=Z,22nm,1.2s
J20K  Nowinta River     86.81   9  P      P      01 28 20.7 -1.4
            baz=199,SNR=14
S34M  Telegraph Cree    86.85  21  P      P      01 28 21.1 -1.4
            baz=220
H17K  Granite Mounta    86.85   6  IAmb   IAmb   01 28 28.8
            comp=Z,21nm,1.4s
H17K  Granite Mounta    86.85   6  P      P      01 28 20.2 -2.1
            baz=194
F14K  Arctic Creek      86.89   3  P      P      01 28 21.2 -1.3
            baz=188
VNA3  Neumayer Olymp    86.90 175 ⇑P      P      01 28 26.2 +3.4
            comp=Z,4.5nm,0.8s
SNAA  Sanae             86.90 177 ⇑P      P      01 28 24.2 +1.3
            comp=Z,43nm,0.8s
SNAA  Sanae             86.90 177  P      P      01 28 23.5 +0.6
            comp=Z,2.4nm,0.9s,baz=160,slow=4.1,SNR=4.5
            comp=Z,2.4nm,0.9s
TNA   Tin City          86.90   3  P      P      01 28 21.4 -1.2
            baz=186
DHY   Denali Highway    86.90  12  IAmb   IAmb   01 28 28.0
            comp=Z,20nm,1.5s
DHY   Denali Highway    86.90  12  P      P      01 28 21.7 -1.2
            baz=205,SNR=5.9
GCSA  Galena City Sc    87.00   7  P      P      01 28 22.4 -0.6
            baz=196
YUK8  Steele Glacier    87.02  16  P      P      01 28 21.9 -1.7
            baz=212
G16K  Koyuk River       87.08   5  P      P      01 28 22.7 -0.8
            baz=191
YUK6  Outpost Mounta    87.10  17  P      P      01 28 23.5 -0.4
            baz=213
PAX   Paxson            87.19  13  P      P      01 28 22.6 -1.6
            baz=207
BPAW  Bear Paw Mtn.     87.21  10  P      P      01 28 22.7 -1.5
            baz=202
M26K  Nabesna, AK       87.22  14  IAmb   IAmb   01 28 37.2
            comp=Z,18nm,1.2s
M26K  Nabesna, AK       87.22  14  P      P      01 28 23.0 -1.3
            baz=209
MCK   McKinley          87.22  11  P      P      01 28 22.7 -1.5
            baz=204
H18K  Honhosa River     87.22   7  P      P      01 28 23.0 -1.2
            baz=195
F15K  North Star Dit    87.22   4  P      P      01 28 22.2 -2.0
            baz=189
HYT   Haines Junctio    87.23  17  IAmb   IAmb   01 28 32.7
            comp=Z,17nm,1.3s
HYT   Haines Junctio    87.23  17  P      P      01 28 23.1 -1.4
            baz=214
YUK3  Moose Creek       87.27  15  P      P      01 28 22.8 -2.0
            baz=211,SNR=13
Q32M  Nakina River      87.29  20  P      P      01 28 23.4 -1.5
            baz=219
PDAR  Pinedale Array    87.32  42  P      P      01 28 25.2 -0.3
            comp=Z,0.3nm,0.4s,baz=261,slow=5.1,SNR=1.8
PDAR                               LR     LR     02 01 19.5
            comp=Z,159nm,18.9s,baz=241,slow=31
            comp=Z,0.3nm,0.4s
P32M  Atlin             87.33  19  P      P      01 28 23.3 -1.6
            baz=217
G17K  Kiwalik Mounta    87.33   6  P      P      01 28 23.0 -1.7
            baz=193
I20K  Naaghedeneel      87.35   8  P      P      01 28 23.6 -1.2
            baz=198
YUK4  Talbot Arm        87.36  16  P      P      01 28 24.2 -1.0
            baz=213
KULM  Kulim             87.37 277         P      01 28 25.5 -0.6
M27K  Edge Creek, AK    87.43  14  P      P      01 28 24.3 -1.1
            baz=210,SNR=20
MENT  Mentasta          87.53  13  IAmb   IAmb   01 28 33.7
            comp=Z,9.9nm,1.1s
O30N  Mendenhall        87.58  18  IAmb   IAmb   01 28 34.4
            comp=Z,14nm,1.2s
O30N  Mendenhall        87.58  18  P      P      01 28 24.6 -1.5
            baz=215
DLBC  Dease Lake        87.63  22  LR     LR     02 00 40.7
            comp=Z,153nm,20.6s,baz=211,slow=31
DLBC  Dease Lake        87.63  22  P      P      01 28 25.0 -1.4
            baz=221
L26K  Log Cabin Wild    87.69  14  IAmb   IAmb   01 28 41.9
            comp=Z,9.3nm,1.1s
L26K  Log Cabin Wild    87.69  14  P      P      01 28 25.8 -0.7
            baz=209
BVCY  Beaver Creek      87.72  15  P      P      01 28 25.7 -1.0
            baz=211
H19K  Roundabout Mou    87.80   7  P      P      01 28 26.3 -0.6
            baz=197
WHY   Whitehorse        87.84  18         P      01 28 27.8 +0.4
WHY   Whitehorse        87.84  18  P      P      01 28 26.5 -0.9
            baz=216
K24K  Donnelly Dome     87.87  12  P      P      01 28 26.4 -1.0
            baz=206
N30M  Aishihik Lake     87.87  17  IAmb   IAmb   01 28 33.4
            comp=Z,13nm,1.6s
N30M  Aishihik Lake     87.87  17  P      P      01 28 26.4 -1.1
            baz=214
G18K  Tagagawik         87.91   6  IAmb   IAmb   01 28 32.8
            comp=Z,16nm,1.6s
G18K  Tagagawik         87.91   6  P      P      01 28 26.5 -1.0
            baz=195
H20K  Anotleneega Mo    87.96   8  P      P      01 28 26.8 -1.0
            baz=198
NEA2  Nenana            87.99  11  P      P      01 28 26.6 -1.2
            baz=204
RIDG  Independent Ri    88.00  13  P      P      01 28 27.3 -0.8
            baz=207
HEH   HeiHe             88.01 327 eP      P      01 28 28.5 +0.2
HEH                                LR     LR
            comp=Z,280nm,12.6s
HEH                                LR     LR
            comp=Z,200nm,10.5s
HEH                                LR     LR
            comp=Z,130nm,13.4s
RPSI  Rantau Prapat     88.02 274         P      01 28 28.6 -0.7
RPSI                               IAmb   IAmb   01 28 35.5
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            comp=Z,13nm,0.9s
R33M  Jennings River    88.05  21  IAmb   IAmb   01 28 36.9
            comp=Z,13nm,1.4s
R33M  Jennings River    88.05  21  P      P      01 28 27.0 -1.4
            baz=220
L27K  Beaver Creek,     88.06  14  IAmb   IAmb   01 28 34.0
            comp=Z,9.7nm,1.4s
L27K  Beaver Creek,     88.06  14  P      P      01 28 27.3 -1.0
            baz=210
I21K  Tanana            88.07   9  P      P      01 28 27.1 -1.1
            baz=201
BCAR  Beaver Creek A    88.07  14  P      P      01 28 28.3 -0.1
DOT   Dot Lake          88.08  13  IAmb   IAmb   01 28 36.1
            comp=Z,12nm,1.1s
P33M  Teslin, Yukon     88.10  19  P      P      01 28 26.8 -1.8
            baz=218
MLY   Manley            88.12  10  IAmb   IAmb   01 28 40.2
            comp=Z,13nm,1.6s
MLY   Manley            88.12  10  P      P      01 28 26.5 -2.0
            baz=202
SEY   Seymchan          88.16 345  LR     LR     02 03 44.7
            comp=Z,155nm,20.5s,baz=166,slow=33
HDA   Harding Lake      88.20  11  IAmb   IAmb   01 28 36.2
            comp=Z,15nm,1.2s
HDA   Harding Lake      88.20  11  P      P      01 28 27.6 -1.2
            baz=205
F17K  Baldwin Pennin    88.20   5  P      P      01 28 27.9 -0.9
            baz=192
N31M  Braeburn, Yuko    88.26  17  P      P      01 28 28.2 -1.1
            baz=216
G19K  Purcell Mounta    88.32   7  P      P      01 28 27.9 -1.5
            baz=196
M29M  Somme Creek       88.34  16  P      P      01 28 27.8 -1.9
            baz=213
SCRK  Sand Creek        88.39  13  IAmb   IAmb   01 28 35.6
            comp=Z,21nm,1.6s
SCRK  Sand Creek        88.39  13  P      P      01 28 28.4 -1.6
            baz=208
H21K  Melozitna Rive    88.40   9  IAmb   IAmb   01 28 35.7
            comp=Z,23nm,1.8s
H21K  Melozitna Rive    88.40   9  P      P      01 28 28.5 -1.3
            baz=200,SNR=6.5
I23K  Minto, Yukon-K    88.45  10  P      P      01 28 28.8 -1.2
            baz=203
F18K  Selawik           88.50   6  P      P      01 28 27.2 -3.0
            baz=194
IL31                    88.54  11  IAmb   IAmb   01 28 35.6
            comp=Z,18nm,1.4s
ILAR  Eielson Array     88.54  11         P      01 28 30.2 -0.3
ILAR  Eielson Array     88.54  11  P      P      01 28 29.5 -0.9
            comp=Z,1.4nm,1.0s,baz=221,slow=4.5,SNR=9.6
            comp=Z,1.4nm,1.0s
J25K  Salcha River,     88.68  12  IAmb   IAmb   01 28 38.9
            comp=Z,8.4nm,1.1s
J25K  Salcha River,     88.68  12  P      P      01 28 29.4 -1.8
            baz=207,SNR=8.9
POKR  Poker Plat Res    88.75  11  P      P      01 28 29.2 -2.3
            baz=205
GSI   Gunungsitoli      88.77 272         P      01 28 32.8  0.0
E17K  Hotham Inlet      88.78   5  P      P      01 28 29.4 -2.2
            baz=192
HNS   HongShan          88.81 311 eP      P      01 28 34.9 +2.5
HNS                                SKS    SKSac  01 39 04.3 +2.3
HNS                                pmax   pmax
            comp=Z,190nm,9.0s
HNS                                LR     LR
            comp=Z,180nm,19.1s
HNS                                LR     LR
            comp=Z,140nm,19.1s
HNS                                LR     LR
            comp=Z,180nm,19.1s
H22K  Ishtalitna Cre    88.83   9  P      P      01 28 30.0 -1.9
            baz=201
K27K  Chicken           88.84  14  IAmb   IAmb   01 28 38.2
            comp=Z,17nm,1.4s
K27K  Chicken           88.84  14  P      P      01 28 30.4 -1.5
            baz=210
F19K  Shaleruckik Mo    88.91   6  IAmb   IAmb   01 28 47.0
            comp=Z,11nm,1.1s
F19K  Shaleruckik Mo    88.91   6  P      P      01 28 30.7 -1.5
            baz=195
J26L  Joseph Creek      88.94  13  P      P      01 28 30.9 -1.6
            baz=208,SNR=31
L29M  L29M              88.98  16  P      P      01 28 31.0 -1.6
            baz=213,SNR=12
H23K  Yukon River       89.05  10  P      P      01 28 31.9 -1.0
            baz=203
LYN   LuoYang           89.10 308  P      P      01 28 34.9 +1.1
LYN                                SKS    SKSac  01 39 06.1 +2.2
LYN                                S      ScS    01 39 27.7 -0.2
LYN                                pmax   pmax
            comp=Z,19nm,1.2s
LYN                                pmax   pmax
            comp=Z,250nm,5.8s
LYN                                LR     LR
            comp=Z,300nm,17.6s
LYN                                LR     LR
            comp=Z,220nm,13.5s
LYN                                LR     LR
            comp=Z,350nm,20.8s
G21K  Allakaket         89.11   8  P      P      01 28 32.0 -1.2
            baz=199
E18K  Tukpahlearik C    89.22   5  P      P      01 28 32.9 -0.7
            baz=193
M31M  Drury Creek, Y    89.22  17  P      P      01 28 32.4 -1.4
            baz=217
D17K  Noatak River      89.30   4  P      P      01 28 32.4 -1.6
            baz=190
H24K  Noodor Dome       89.33  11  P      P      01 28 32.2 -2.0
            baz=205
F20K  Avaraart Lake     89.35   7  P      P      01 28 32.7 -1.5
            baz=197
PRP   Porcupine Dome    89.46  12  P      P      01 28 33.2 -1.8
            baz=207
DAWY  Dawson            89.48  15  IAmb   IAmb   01 28 40.9
            comp=Z,16nm,1.4s
DAWY  Dawson            89.48  15  P      P      01 28 33.2 -1.8
            baz=212
E19K  Redstone River    89.57   6  IAmb   IAmb   01 28 50.9
            comp=Z,12nm,0.9s
E19K  Redstone River    89.57   6  P      P      01 28 33.3 -2.0
            baz=196
I26K  Coal Creek Min    89.74  13  IAmb   IAmb   01 28 42.0
            comp=Z,29nm,1.7s
I26K  Coal Creek Min    89.74  13  P      P      01 28 33.9 -2.2
            baz=209
K29M  Barlow Dome       89.75  15  IAmb   IAmb   01 28 44.6
            comp=Z,13nm,1.1s
K29M  Barlow Dome       89.75  15  P      P      01 28 34.4 -1.9
            baz=214,SNR=8.3
G22K  Bettles           89.77   9  P      P      01 28 35.0 -1.2
            baz=201
F21K  Alatna River      89.79   8  IAmb   IAmb   01 28 41.6
            comp=Z,15nm,1.7s
F21K  Alatna River      89.79   8  P      P      01 28 34.2 -2.1
            baz=199
G23K  Bananza Creek     89.79   9  IAmb   IAmb   01 28 42.2
            comp=Z,20nm,1.7s
G23K  Bananza Creek     89.79   9  P      P      01 28 34.8 -1.6
            baz=203
C17K  DeLong Mountai    90.06   4  P      P      01 28 35.9 -1.7
            baz=190
GYA   Guiyang           90.18 298  P      P      01 28 41.1 +1.8
GYA                                SKS    SKSac  01 39 09.9 -1.0
GYA                                S      S      01 39 32.6 -0.9
GYA                                LR     LR
            comp=Z,280nm,20.1s
G24K  Hadweenzic Riv    90.19  10  P      P      01 28 36.1 -2.1
            baz=205
F22K  John River        90.23   8  P      P      01 28 36.8 -1.5
            baz=201
COLD  Coldfoot          90.25   9  P      P      01 28 36.4 -2.0
            baz=202
I27K  Kandik River      90.31  13  P      P      01 28 36.5 -2.3
            baz=210
C18K  Utukok River      90.38   5  P      P      01 28 36.9 -2.2
            baz=192
MMPY  Sheldon Lake,     90.45  18  IAmb   IAmb   01 28 47.9
            comp=Z,13nm,1.3s
MMPY  Sheldon Lake,     90.45  18  P      P      01 28 37.2 -2.3
            baz=220
E20K  Nigu River        90.46   7  P      P      01 28 37.6 -1.8
            baz=197
SLVN  Son La            90.48 293  IAmb   IAmb   01 28 43.2
            comp=Z,14nm,1.5s
D19K  Kuna River        90.49   6  P      P      01 28 37.4 -2.2
            baz=195
I28M  Miner Creek       90.54  14  P      P      01 28 37.8 -2.1
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            baz=212
BEAVL Fort Liard        90.64  22  P      P      01 28 38.1 -2.3
            baz=225
J30M  Hart River        90.65  15  IAmb   IAmb   01 28 46.4
            comp=Z,25nm,1.8s
J30M  Hart River        90.65  15  P      P      01 28 38.4 -2.1
            baz=215,SNR=5.2
I29M  Ogilvie Camp,     90.83  14  IAmb   IAmb   01 28 54.5
            comp=Z,10.0nm,1.3s
I29M  Ogilvie Camp,     90.83  14  P      P      01 28 39.1 -2.2
            baz=213
D20K  Etivluk River     90.85   6  IAmb   IAmb   01 28 56.9
            comp=Z,18nm,1.4s
D20K  Etivluk River     90.85   6  P      P      01 28 38.9 -2.4
            baz=196
E22K  Anaktuvuk Pass    90.87   8  IAmb   IAmb   01 28 47.0
            comp=Z,13nm,1.4s
E22K  Anaktuvuk Pass    90.87   8  P      P      01 28 39.1 -2.3
            baz=201
F24K  Squaw Lake        90.87  10  P      P      01 28 39.5 -1.9
            baz=204
H27K  Steamboat Moun    90.88  13  IAmb   IAmb   01 28 48.3
            comp=Z,16nm,1.4s
H27K  Steamboat Moun    90.88  13  P      P      01 28 39.3 -2.1
            baz=210
E21K  Killik River      90.88   7  P      P      01 28 39.1 -2.3
            baz=199
C19K  Lookout Ridge     90.95   5  IAmb   IAmb   01 28 56.9
            comp=Z,9.8nm,1.0s
C19K  Lookout Ridge     90.95   5  P      P      01 28 39.7 -2.1
            baz=194
KOTAN Kotaneelee Air    90.96  23  P      P      01 28 39.5 -2.4
            baz=226
B18K  Kokolik River     91.03   4  P      P      01 28 39.9 -2.1
            baz=192
G26K  Porcupine Rive    91.06  12  IAmb   IAmb   01 28 57.9
            comp=Z,17nm,1.4s
G26K  Porcupine Rive    91.06  12  P      P      01 28 40.5 -1.7
            baz=208
E23K  Chandalar         91.10   9  P      P      01 28 40.5 -2.0
            baz=203
I30M  Mount Dempster    91.17  15  IAmb   IAmb   01 28 59.0
            comp=Z,10.0nm,1.1s
I30M  Mount Dempster    91.17  15  P      P      01 28 42.0 -0.9
            baz=215,SNR=11
E24K  Your Creek        91.29   9  P      P      01 28 42.0 -1.3
            baz=204
F25K  Christian Rive    91.31  11  P      P      01 28 42.0 -1.4
            baz=207
BMAR  Burnt Mountain    91.35  11         P      01 28 43.0 -0.6
G27K  Doyon Strip       91.35  12  P      P      01 28 42.7 -0.9
            baz=210
D22K  Ayikyak River     91.46   8  P      P      01 28 43.2 -0.9
            baz=200
C21K  Knifeblade Rid    91.47   7  P      P      01 28 43.8 -0.3
            baz=198
XAN   Xi'an             91.52 306 ⇑P      P      01 28 44.4 -0.8
XAN                                SKS    SKSac  01 39 18.2 +0.1
XAN                                S      S      01 39 41.7 -3.6
XAN                                SS     SS     01 45 50.0 -2.1
XAN                                pmax   pmax
            comp=Z,16nm,1.5s
XAN                                pmax   pmax
            comp=Z,230nm,5.8s
H29M  Whitestone        91.54  14  P      P      01 28 43.9 -0.6
            baz=213
TOLK  Toolik Lake Re    91.65   9  P      P      01 28 45.0  0.0
            baz=203
F26K  Sheenjek River    91.66  11  P      P      01 28 44.7 -0.4
            baz=208
E25K  Arctic Village    91.79  10  P      P      01 28 45.7  0.0
            baz=207
D23K  Nanushuk River    91.80   8  P      P      01 28 45.4 -0.2
            baz=202
A19K  Wainwright        91.91   4  P      P      01 28 45.9 -0.2
            baz=192
B21K  Ikpikpuk River    91.94   7  P      P      01 28 45.7 -0.5
            baz=198
EPYK  Eagle Plains      92.03  14  P      P      01 28 47.0 +0.2
EPYK  Eagle Plains      92.03  14  P      P      01 28 46.3 -0.5
            baz=215
B20K  Meade River       92.05   6  P      P      01 28 46.0 -0.7
            baz=196
H31M  Peel River        92.14  15  P      P      01 28 46.6 -0.7
            baz=217
G29M  Pine Creek        92.19  13  P      P      01 28 46.7 -0.8
            baz=214
F28M  Old Crow          92.40  13  P      P      01 28 48.1 -0.4
            baz=212
NNA   Nana              92.43 104  LR     LR     02 02 28.1
            comp=Z,299nm,19.0s,baz=182,slow=30
HHC   Hu-ho-hao-te      92.56 313 eP      P      01 28 52.2 +2.3
HHC                                pmax   pmax
            comp=Z,8.0nm,0.9s
HHC                                pmax   pmax
            comp=Z,47nm,4.1s
HHC                                LR     LR
            comp=Z,110nm,15.1s
HHC                                LR     LR
            comp=Z,150nm,15.1s
HHC                                LR     LR
            comp=Z,200nm,21.0s
E27K  Coleen River      92.56  12  P      P      01 28 49.5 +0.3
E27K                               IAmb   IAmb   01 29 03.3
            comp=Z,13nm,1.2s
E27K  Coleen River      92.56  12  P      P      01 28 48.6 -0.6
            baz=210
C23K  Itkillik River    92.62   8  P      P      01 28 49.5 +0.2
            baz=202
G30M  tAoh Zraii Nji    92.65  14  P      P      01 28 49.4 -0.3
            baz=215
D25K  Kavik River       92.75  10  P      P      01 28 48.7 -1.3
            baz=206
B22K  Teshekpuk Lake    92.75   7  P      P      01 28 49.2 -0.7
            baz=200
C24K  Franklin Bluff    92.77   9  P      P      01 28 48.9 -1.1
            baz=204
KMI   Kunming           92.92 296  P      P      01 28 50.9 -1.2
KMI                                SKS    SKSac  01 39 23.6 -3.1
KMI                                pmax   pmax
            comp=Z,140nm,5.5s
KMI                                LR     LR
            comp=Z,170nm,16.9s
KMI                                LR     LR
            comp=Z,270nm,18.4s
KMI                                LR     LR
            comp=Z,250nm,17.2s
G31M  Satah River       93.06  15  P      P      01 28 51.0 -0.4
            baz=217
JTS   Las Juntas de     93.06  80  LR     LR     02 03 25.4
            comp=Z,290nm,18.1s,baz=232,slow=31
A22K  Sinclair Lake     93.22   6  P      P      01 28 51.0 -1.1
            baz=198
F30M  Barrier River     93.27  14  P      P      01 28 51.6 -0.8
            baz=216
E28M  Babbage River     93.31  12  P      P      01 28 51.4 -1.3
            baz=212
D27M  Malcolm River     93.59  11  P      P      01 28 53.7 -0.2
            baz=211
CMAR  Chiang Mai Arr    93.74 288  P      P      01 28 55.0 -0.7
CMAR  Chiang Mai Arr    93.74 288  P      P      01 28 55.6 -0.1
            comp=Z,2.3nm,0.5s,baz=122,slow=2.7,SNR=14
CMAR                               LR     LR     02 10 28.1
            comp=Z,67nm,18.9s,baz=180,slow=35
            comp=Z,2.3nm,0.5s
CHTO  Chiang Mai        93.87 289         P      01 28 56.7 +0.3
CHTO                               IAmb   IAmb   01 28 59.8
            comp=Z,6.9nm,0.8s
PZH   PanZhiHua         94.27 297  P      P      01 29 00.6 +2.4
YKA   Yellowknife Ar    95.97  24  P      P      01 29 04.7 -0.2
            comp=Z,0.2nm,0.6s,baz=247,slow=4.0,SNR=4.3
YKA                                LR     LR     02 10 39.3
            comp=Z,109nm,18.1s,baz=240,slow=34
            comp=Z,0.2nm,0.6s
LZH   Lanzhou           96.16 306 eP      P      01 29 06.7 +0.1
LZH                                pmax   pmax
            comp=Z,15nm,1.2s
ULM   Lac du Bonnet     99.13  40  LR     LR     02 09 15.6
            comp=Z,496nm,19.3s,baz=271,slow=32
WMQ   Urumqi           110.22 310 ePKP    PKiKP  01 34 11.2 +0.8
WMQ                                LR     LR
            comp=Z,240nm,21.5s
MKAR  Makanchi Array   114.42 313  PKP    PKiKP  01 34 19.3 +1.0
            comp=Z,0.3nm,0.6s,baz=92,slow=1.2,SNR=2.2
KURBB Kurchatov Arra   117.14 317  PKP    PKiKP  01 34 22.7 -0.6
            comp=Z,0.2nm,0.3s,baz=100,slow=1.9,SNR=5.5
BVAR  Borovoye Array   122.08 320  PKP    PKPdf  01 34 32.2 -0.6
            comp=Z,0.6nm,0.3s,baz=88,slow=4.8,SNR=3.4
```

ARCES	ARCESS Array B	130.47	351	PKP	PKiKP	01 34 48.3	-0.9
	comp=Z,1.7nm,0.8s,baz=58,slow=3.0,SNR=5.4						
FINES	FINESS Array B	137.64	346	PKhKP	PKPpre	01 34 56.8	
	comp=Z,2.5nm,0.9s,baz=158,slow=12,SNR=1.8						
NOA	NORSAR Array B	140.29	356	PKP	PKiKP	01 35 08.5	-0.9
	comp=Z,1.2nm,0.9s,baz=344,slow=1.9,SNR=2.9						
SUW	Suwalki	144.92	342	*e*PKP	PKPab	01 35 13.5	-0.9
AKASG	Malin Array Be	145.51	333		PKPbc	01 35 15.1	-1.3
AKASG	Malin Array Be	145.51	333	PKPbc	PKPbc	01 35 14.8	-1.6
	comp=Z,3.8nm,0.8s,baz=37,slow=4.2,SNR=25						
KIEV	Kiev	145.52	333		PKPdf	01 35 15.4	-0.9
KIEV	Kiev	145.52	333	⇑P	PKPdf	01 35 15.4	-0.9
KIEV	Kiev	145.52	333	PKP	PKPdf	01 35 15.5	-0.9
AK15	Malin Array Si	145.56	334	PKP	PKPbc	01 35 15.8	-0.7
AK10	Malin Array Si	145.57	333	PKP	PKPbc	01 35 15.9	-0.7
AK05	Malin Array Si	145.58	333	PKP	PKPdf	01 35 15.7	-0.8
AK17	Malin Array Si	145.59	334	PKP	PKPdf	01 35 15.6	-0.9
AK14	Malin Array Si	145.61	333	PKP	PKPdf	01 35 15.9	-0.6
MARD	Mardin	145.87	305		PKPbc	01 35 17.6	-0.6
RNPP8	Varash	146.32	337	PKP	PKPab	01 35 18.6	-1.1
BSEG	Bad Segeberg	147.41	355	*e*L	L	02 48 54.9	
	comp=Z,195nm,18.8s						
SORM	Soroca	147.81	331	⇑P	PKPbc	01 35 23.1	-0.1
ASSE	Asse, Remlinge	149.17	354	*e*PKPab	PKPab	01 35 30.5	-0.3
	baz=11,slow=1.6						
OJC	Ojcow	149.25	342	*e*PKP	PKPab	01 35 31.3	-0.1
STHS	Stebnicka Huta	149.53	340	*e*PKP	PKPdf	01 35 22.3	-0.8
STHS				*e*		01 35 28.9	
STHS				*e*		01 35 33.8	
KSP	Ksiaz	149.55	347	*e*PKP	PKiKP	01 35 28.0	-0.7
BURAR	Bucovina Array	149.56	334		PKiKP	01 35 28.3	-0.7
BURAR	Bucovina Array	149.56	334	⇑P	PKiKP	01 35 29.1	+0.1
KOLS	Kolonicke sedl	149.60	338	*e*PKP	PKPab	01 35 30.6	-2.2
KOLS				*e*		01 35 35.6	
CLL	Collm	149.70	351	*e*L	L	02 53 41.2	
	comp=Z,145nm,18.6s						
CLL	Collm	149.70	351	*i* PKPbc	PKPbc	01 35 27.5	-0.4
	comp=Z,40nm,2.2s						
CLL				*i* PKPab	PKPab	01 35 32.8	-0.3
	comp=Z,26nm,1.7s						
CLL				*e*PKPlp		01 35 35.0	
	comp=Z,100nm,22.8s						
CLL				*i* x	x	01 35 38.4	
	comp=Z,11nm,1.0s						
CLL				*e*(PP)		01 38 53.0	
CLL				*e*x	x	01 39 43.0	
CLL				*e*x	x	01 44 24.0	
CLL				*e*SKKSac	SKKSac	01 46 00.0	+7.8
CLL				*e*x	x	01 46 31.0	
CLL				*e*x	x	01 49 04.0	
CLL				*e*x	x	01 52 21.0	
CLL				*e*SS	SS	01 58 15.0	+0.3
CLL				*e*SSS	SSS	02 03 52.0	
CLL				*e*SSSS		02 07 48.0	
CLL				*e*x	x	02 08 54.0	
CLL				AMS	AMS	02 50 00.0	
	comp=N,100nm,19.6s						
CLL				AMS	AMS	02 50 00.0	
	comp=E,100nm,19.5s						
CLL				AMS	AMS	02 53 00.0	
	comp=Z,100nm,18.6s						
NIE	Niedzica	149.82	341	*e*PKP	PKPbc	01 35 27.4	-0.9
OSTC	Ostas	149.84	347	⇑*e*PKP	PKiKP	01 35 29.4	+0.1
UPC	Upice	149.93	347	AMS	AMS	02 48 30.0	
	comp=Z,200nm,22.5s						
BRG	Berggiesshubel	149.97	350	*e*PKP	PKiKP	01 35 28.7	-0.8
BRG				Amp		01 35 30.8	
	comp=Z,8.0nm,1.2s						
BRG	Berggiesshubel	149.97	350	P	PKPab	01 35 35.8	+1.6
BRG				Amp		01 35 37.2	
	comp=Z,7.7nm,1.0s						
BRG	Berggiesshubel	149.97	350	P	PKPab	01 35 41.3	+7.0
BRG				Amp		01 35 42.4	
	comp=Z,6.1nm,0.9s						
DPC	Dobruska-Polom	150.01	346	⇑*e*PKP	PKiKP	01 35 29.5	-0.2
DPC				AMS	AMS	02 52 50.0	
	comp=Z,200nm,14.7s						
CFR	Carcaliu	150.05	327	⇑P	PKPbc	01 35 28.2	-0.8
STEB	Steborice	150.05	344	⇑*e*PKP	PKiKP	01 35 30.3	+0.5
BRTR	Keskin Array B	150.07	314		PKiKP	01 35 29.4	-0.9
BRTR	Keskin Array B	150.07	314	PKPbc	PKPbc	01 35 28.1	-1.3
	comp=Z,1.3nm,0.8s,baz=145,slow=3.8,SNR=12						
KIRS	Kirsehir-Merke	150.16	312	⇑P	PKiKP	01 35 29.9	-0.6
KRLC	Kraliky	150.16	346	⇑*e*PKP	PKiKP	01 35 29.6	-0.4
VRI	Vrincioaia	150.24	330	⇑P	PKPbc	01 35 27.2	-2.2
MORC	Moravsky Berou	150.26	345	*e*PKP	PKPbc	01 35 28.6	-0.8
KASTN	Kahler Asten	150.26	357	*e*PKPab	PKPab	01 35 35.0	-0.4
	baz=11,slow=3.6						
LANS	Liptovska Anna	150.31	342	*e*PKP	PKiKP	01 35 32.1	+1.7
HSKC	Hora Svate Kat	150.31	350	AMS	AMS	02 54 00.0	
	comp=Z,200nm,18.5s						
HARR	Harsova	150.50	327	⇑P	PKiKP	01 35 31.6	+0.8
MOX	Moxa	150.53	352	*e*L	L	02 48 42.5	
	comp=Z,229nm,18.7s						
ANTO	Ankara	150.56	315	⇓P	PKPdf	01 35 26.2	+1.1
MAUC	Maruska	150.56	344	⇑*e*PKP	PKiKP	01 35 30.9	0.0
PRA	Prague	150.66	349	AMS	AMS	02 55 00.0	
	comp=Z,300nm,21.1s						
PRU	Pruhonice	150.71	348	⇑*e*PKP	PKiKP	01 35 31.4	+0.3
PRU				AMS	AMS	02 53 40.0	
	comp=Z,200nm,13.5s						
MLR	Muntele Rosu	150.88	330	⇑P	PKiKP	01 35 31.8	0.0
VRAC	Vranov	150.92	345	*e*PKP	PKiKP	01 35 31.1	-0.5
BTNL	Ternell	150.95	359	*d*PKP	PKPab	01 35 35.6	-2.8
JAVC	Velka Javorina	151.07	344	*e*PKP	PKiKP	01 35 31.5	-0.5
VYHS	Vyhne	151.08	342	*e*PKP	PKPdf	01 35 27.0	+1.4
VYHS				*e*		01 35 32.3	
VYHS				*e*		01 35 36.8	
MANZ	Manzenberg	151.11	351	*e*PKPab	PKPab	01 35 36.9	-2.1
	baz=11,slow=3.6						
BGES	Gesves	151.15	1	*d*PKPdf	PKPdf	01 35 26.6	+1.1
TREC	Trest	151.18	347	AMS	AMS	02 54 30.0	
	comp=Z,300nm,16.9s						
KRUC	Moravsky	151.20	345	*e*PKP	PKPbc	01 35 31.0	-0.6
TNS	Taunus Mts	151.24	356	*e*L	L	02 47 34.5	
	comp=Z,203nm,19.5s						
PSZ	Piszkesteto	151.27	340	⇑P	PKiKP	01 35 34.1	+1.6
ZVC	Zvikov	151.31	348	⇑*e*PKP	PKiKP	01 35 32.6	+0.2
ZVC				AMS	AMS	02 51 40.0	
	comp=Z,200nm,14.2s						
VOIR		151.33	331	⇑P	PKiKP	01 35 33.2	+0.5
MMAI	Mount Meron Ar	151.34	300	PKPbc	PKiKP	01 35 33.2	+0.2
	comp=Z,6.7nm,1.0s,baz=103,slow=3.7,SNR=4.8						
GRF	Grafenberg Arr	151.52	353	*e*PKPab	PKPab	01 35 38.7	-2.0
	baz=11,slow=3.6						
GRF				*e*L	L	02 43 51.2	
	comp=Z,146nm,21.4s						
ARR	Arges	151.57	331	⇑P	PKiKP	01 35 33.8	+0.6
MODS	Modra-Piesok	151.62	344	*e*PKP	PKPdf	01 35 26.8	+0.4
MODS				*e*		01 35 33.2	
MODS				*e*		01 35 37.9	
KHC	Kasperske Hory	151.71	349	⇑*e*PKP	PKiKP	01 35 33.5	+0.2
KHC				AMS	AMS	02 59 20.0	
	comp=Z,200nm,19.1s						
WET	Wettzell	151.82	350	*e*L	L	02 43 23.2	
	comp=Z,152nm,20.6s						
SRO	Srobarova	151.84	342	*e*PKP	PKPbc	01 35 31.2	-1.9
SRO				*e*		01 35 39.7	
WLF	Walferdange	151.88	359	*d*PKP	PKPab	01 35 40.6	-1.6
CKRC	Cesky Krumlov	151.88	348	⇑*e*PKP	PKiKP	01 35 33.5	-0.1
CKRC				AMS	AMS	02 46 00.0	
	comp=Z,200nm,23.0s						
GEC2	GERESS Array S	151.97	349	*e*L	L	02 49 44.4	
	comp=Z,184nm,19.2s						
GERES	GERESS Array B	151.97	349	PKPbc	PKiKP	01 35 33.3	-0.6
	comp=Z,1.3nm,0.8s,baz=333,slow=1.5,SNR=9.6						
SURR	Surduc	152.32	335	⇑P	PKiKP	01 35 34.3	-0.3
GZR	Gura Zlata	152.35	334	⇑P	PKPbc	01 35 32.6	-1.8
CONA	Conrad Observa	152.39	345	*e*PKP	PKPdf	01 35 25.4	-2.2
	comp=Z,11nm,2.0s						
RONA	Rosalia, Austr	152.49	344	*e*PKP	PKPdf	01 35 25.0	-2.8
	comp=Z,4.0nm,0.9s						
BZS	Buzias	152.64	335	⇑P	PKiKP	01 35 35.2	0.0
MOA	Molln	152.81	347	*e*PKP	PKPdf	01 35 25.5	-2.7
	comp=Z,2.8nm,1.1s						
FUR	Furstenfeldbru	153.01	352	*e*L	L	02 48 06.9	
	comp=Z,170nm,19.2s						
BIOA	Bad Ischl, Aus	153.09	348	*e*PKP	PKPdf	01 35 26.4	-2.2
	comp=Z,3.5nm,1.1s						
BFO	Black Forest	153.13	356	*e*L	L	02 52 54.2	
	comp=Z,129nm,19.5s						
MORH	Mrgy, Hungar	153.18	340	⇓P	PKPbc	01 35 33.4	-2.7
LESA	Schwarzleotal	153.52	349	*e*PKP	PKPdf	01 35 27.9	-1.4
	comp=Z,4.4nm,1.5s						
RETA	Reutte	153.74	352	*i* PKP	PKPdf	01 35 28.9	-0.8
	comp=Z,2.3nm,1.0s						
SOKA	Soboth	153.75	345	*e*PKP	PKPdf	01 35 30.8	+1.1
	comp=Z,7.5nm,1.6s						
MOTA	Moosalm	153.84	352	*i* PKP	PKPdf	01 35 29.6	-0.3
	comp=Z,2.8nm,0.9s						
WTTA	Wattenberg	153.84	351	*e*pPKP	pPKPdf	01 35 31.7	-0.3
	comp=Z,4.5nm,0.9s						
OBKA	Obir	154.03	346	*e*PKP	PKPdf	01 35 31.0	+0.9
	comp=Z,3.6nm,1.4s						
DAVA	Damuels	154.04	354	*e*PKP	PKPdf	01 35 31.1	+0.9
	comp=Z,7.9nm,1.2s						
ABTA	Abfaltersbach	154.20	349	*e*PKP	PKPdf	01 35 31.2	+0.9
	comp=Z,4.9nm,1.1s						
FETA	Feichten	154.20	352	*e*pPKP	pPKPdf	01 35 32.3	-0.1
	comp=Z,8.7nm,1.3s						
TORD	Torodi Ar. Bea	170.85	154	PKPab	PKPab	01 37 04.2	-1.3
	comp=Z,0.7nm,0.8s,baz=227,slow=3.4,SNR=1.5						

IDC ***04*** *01:24:08.8±0.8, 39°.42S×78°.06E, h0^{km}, mb4.2/9, mbtmp4.2/9, Error ellipse: s-maj=27.2km s-min=20.5km az=107.0*

GCMT ***04*** *01:24:10.9±0.3, 39°.48S±0°.04×77°.84E±0°.04, h17^{km}±1^{km}, MW5.0/93, Moment Tensor Solution. s13,c14; s93,c113; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.02±.28; $M_{\theta\theta}$0.67±.15; $M_{\phi\phi}$2.36±.19; $M_{r\theta}$-0.86±.43; $M_{\theta\phi}$-1.23±.10; $M_{\phi r}$1.63±.44; Best double couple: $M_0$3.53200×10^{16} NP1:ϕ_s332.00000°,δ29.00000°,λ-90.00000°. NP2: ϕ_s152.00000°,δ61.00000°,λ-90.00000°. Principal axes: T 3.5250, Plg16.0000°, Azm242.0000°; N 0.0190, Plg0.0000°, Azm152.0000°; P -3.5390, Plg74.0000°, Azm62.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***04*** *01:24:10.9±1.4, 39°.31S±0°.04×78°.1E±0°.1, h10^{km}±1^{km}, mb4.9/42 Error ellipse: s-maj=19.3km s-min=6.4km az=266.0*

ISC 04 01:24:10.6±0.5**, 39°.35S**±0°.08×**77°.98E**±0°.10**, h10^{km}, n82, σ1^{s}48**/77**, mb4.8**/36**, MS4.5**/4**, 1C-1D, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIS	Amsterdam Isla	1.58	348	Pn	Pn	01 24 36.0	-2.6
H04N2	CROZET ISLANDS	20.34	242	T	T	01 49 53.1	
	baz=79,slow=75,SNR=335						
H04N1	CROZET ISLANDS	20.35	242	T	T	01 49 51.9	
	baz=79,slow=75,SNR=471						
H04N3	CROZET ISLANDS	20.35	242	T	T	01 49 49.6	
	baz=79,slow=75,SNR=476						
H01W2	Cape Leeuwin H	29.05	93	T	T	02 00 23.9	
	baz=250,slow=74,SNR=464						
H01W3	Cape Leeuwin H	29.05	93	T	T	02 00 24.4	
	baz=250,slow=74,SNR=401						
H01W1	Cape Leeuwin H	29.06	93	T	T	02 00 25.2	
	baz=250,slow=74,SNR=330						
MAW	Mawson	29.53	192	P	P	01 30 13.7	-1.1
	4.4nm,1.0s,baz=35,slow=12,SNR=3.7						
	4.4nm,1.0s						
FOMA	Nahampoana Res	29.73	290	P	P	01 30 16.1	-0.9
H08S2	Diego Garcia H	31.95	350	T	T	02 04 08.0	
	baz=172,slow=76,SNR=17						
H08S1	Diego Carcia H	31.95	350	T	T	02 04 15.1	
	baz=172,slow=76,SNR=18						
H08S3	Diego Garcia H	31.96	350	T	T	02 04 20.2	
	baz=172,slow=76,SNR=8.5						
SYO	Syowa Base	36.09	202	⇑*e*P	P	01 31 12.1	0.0
PSA00	Pilbara Seismi	39.80	76	P	P	01 31 43.4	-0.6
PSA00				IAmb	IAmb	01 31 48.5	
	comp=Z,48nm,1.9s						
BOSA	Boshof	44.46	267	P	P	01 32 22.7	+0.6
	comp=Z,1.6nm,0.9s,baz=58,slow=7.9,SNR=2.0						
	comp=Z,1.6nm,0.9s						
RPSI	Rantau Prapat	46.06	30	P	P	01 32 34.4	-0.4
RPSI				IAmb	IAmb	01 32 57.1	
	comp=Z,19nm,1.8s						
MAKGR	Makgori	46.18	270		P	01 32 36.3	+0.4
MAKGR				IAmb	IAmb	01 32 37.6	
	comp=Z,26nm,1.4s						
LPHEP	Lephephe	46.64	274	P	P	01 32 39.3	-0.1
LPHEP				IAmb	IAmb	01 32 41.7	
	comp=Z,22nm,1.2s						
KULM	Kulim	49.11	31	P	P	01 32 57.1	-1.2
KULM				IAmb	IAmb	01 33 00.7	
	comp=Z,16nm,1.4s						
PHDHD	Phuduhudu	49.42	277	P	P	01 33 01.3	+0.4
PHDHD				IAmb	IAmb	01 33 11.3	
	comp=Z,13nm,1.2s						
ASAR	Alice Springs	49.43	89	P	P	01 32 59.9	-1.1
	comp=Z,3.6nm,1.1s,baz=235,slow=6.8,SNR=12						
	comp=Z,3.6nm,1.1s						
AS31	Alice Springs	49.43	89	P	P	01 33 00.2	-0.8
LSZ	Lusaka	49.57	284	P	P	01 33 02.6	+0.4
LSZ				IAmb	IAmb	01 33 04.8	
	comp=Z,20nm,1.4s						
KGCAE	Kacgae	49.74	272	P	P	01 33 03.7	+0.3
LKGWB	Lokgwabe	49.84	270	P	P	01 33 01.3	-2.8
KNRA	Kununurra	50.08	77	P	P	01 33 05.2	-0.6
KSANE	Kasane	50.33	280	P	P	01 33 09.0	+1.1
KSANE				IAmb	IAmb	01 33 10.5	
	comp=Z,42nm,2.0s						
VNDA	Vanda	50.63	164	P	P	01 33 08.9	-0.3
VNDA				IAmb	IAmb	01 33 11.0	
	comp=Z,28nm,1.8s						
VNDA	Vanda	50.63	164	P	P	01 33 08.4	-0.9
	comp=Z,3.3nm,1.1s,baz=278,slow=9.3,SNR=7.8						
	comp=Z,3.3nm,1.1s						
QSPA	South Pole Qui	50.81	180	P	P	01 33 10.4	-0.6
QSPA				IAmb	IAmb	01 33 12.6	
	comp=Z,24nm,1.3s						
QSPA	South Pole Qui	50.81	180	P	P	01 33 10.2	-0.8
	comp=Z,8.6nm,1.1s,baz=310,slow=3.1,SNR=9.2						
	comp=Z,8.6nm,1.1s						
KOOLE	Kule	51.23	271	P	P	01 33 14.0	-0.7
KOOLE				IAmb	IAmb	01 34 51.7	
	comp=Z,32nm,1.9s						
SBA	Scott Base	51.64	164	P	P	01 33 16.8	-0.1
SBA				IAmb	IAmb	01 33 31.0	
	comp=Z,19nm,1.5s						
SRIT	Nakonsritamara	51.75	28	P	P	01 33 17.9	-0.5
WRA	Warramunga Arr	51.82	85	P	P	01 33 18.5	-0.4
WRA	Warramunga Arr	51.82	85	P	P	01 33 18.3	-0.7
	comp=Z,5.9nm,0.8s,baz=235,slow=7.3,SNR=15						
	comp=Z,5.9nm,0.8s						
WR8	Warramunga Arr	51.93	85	P	P	01 33 20.0	+0.1
WR8				IAmb	IAmb	01 33 20.7	
	comp=Z,16nm,1.1s						
WB0	Warramunga Arr	51.96	85	P	P	01 33 18.6	-1.4
WB0				IAmb	IAmb	01 33 20.3	
	comp=Z,30nm,1.2s						
QNGWA	Qangwa	52.39	275	P	P	01 33 22.4	-0.9
QNGWA				IAmb	IAmb	01 33 26.2	
	comp=Z,17nm,1.4s						
XAUDM	Khaudum	52.83	276	P	P	01 33 27.3	+0.7
XAUDM				IAmb	IAmb	01 33 29.7	
	comp=Z,28nm,1.4s						
KMBO	Kilima Mbogo	53.14	305	P	P	01 33 30.0	+0.9
DLV	Lat	58.40	36	P	P	01 34 04.8	-1.8
CMAR	Chiang Mai Arr	60.75	23	P	P	01 34 21.9	-0.7
CMAR	Chiang Mai Arr	60.75	23	P	P	01 34 23.4	+0.8
	comp=Z,0.5nm,0.3s,baz=212,slow=6.2,SNR=8.0						
	comp=Z,0.5nm,0.3s						
CHTO	Chiang Mai	61.09	23	P	P	01 34 24.1	-0.8
CHTO				IAmb	IAmb	01 34 26.1	
	comp=Z,20nm,1.9s						
SLVN	Son La	65.06	27	P	P	01 34 50.6	-0.7
TNCH	TengChong	66.86	20	*e*P	P	01 35 07.2	+4.3
EVN	Everest	67.46	8	P	P	01 35 07.1	-0.1
EVN				IAmb	IAmb	01 35 08.9	
	comp=Z,16nm,1.5s						
PZH	PanZhiHua	69.17	23	P	P	01 35 20.7	+3.3
RAYN	Ar Rayn	69.52	328	P	P	01 35 19.5	0.0
LSA	Lhasa	69.78	12	P	P	01 35 21.6	+0.1
KBL	Kabul	73.98	352	P	P	01 35 45.9	-0.4
XAN	Xi'an	78.44	26	⇓P	P	01 36 09.2	-2.3
XAN				S	S	01 46 04.0	-3.3
XAN				ScS	SKSac	01 46 25.8	-0.3
XAN				pmax	pmax		
	comp=Z,11nm,1.4s						
XAN				pmax	pmax		
	comp=Z,150nm,6.1s						
KSH	Kashi	78.51	358	P	P	01 36 09.9	-1.9
KSH				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KSH				LR	LR		
	comp=Z,200nm,15.5s						
KSH				LR	LR		
	comp=Z,170nm,14.1s						
KSH				LR	LR		
	comp=Z,190nm,16.1s						
LZH	Lanzhou	78.76	21	*e*P	P	01 36 14.7	+1.3
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
LZH				LR	LR		
	comp=Z,160nm,18.2s						
LZH				LR	LR		
	comp=Z,220nm,17.5s						
LZH				LR	LR		
	comp=Z,170nm,17.5s						
BTK	Batken	79.30	354	P	P	01 36 16.6	+0.5
ARSB	Arslanbob	80.42	356	P	P	01 36 22.1	-0.1
NRN	Naryn	80.42	358	P	P	01 36 22.4	-0.1
NJ2	Nanjing	80.54	34	*e*P	P	01 36 25.8	+2.9
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
GTA	Gaotai	80.89	17	P	P	01 36 24.9	+0.1
GTA				SS	SS	01 51 47.8	-0.2
GTA				pmax	pmax		
	comp=Z,5.0nm,1.5s						
GTA				LR	LR		
	comp=Z,140nm,15.3s						
GTA				LR	LR		
	comp=Z,110nm,15.6s						
GTA				LR	LR		
	comp=Z,220nm,20.0s						
BOOM	Boomskoye usch	81.48	358	P	P	01 36 27.1	-0.8
AAK	Ala-Archa	81.67	357	P	P	01 36 28.4	-0.5
KK31	Karatay Array	82.35	354	P	P	01 36 31.1	-1.2
KK31				IAmb	IAmb	01 36 34.8	
	comp=Z,11nm,1.4s						
KKAR	Karatay Array	82.35	354	P	P	01 36 31.8	-0.5
KKAR				IAmb	IAmb	01 36 34.8	
	comp=Z,11nm,1.4s						
WMQ	Urumqi	83.25	7	*e*P	P	01 36 37.1	+0.1
WMQ				pP	PcP	01 36 42.0	+0.5
WMQ				pmax	pmax		
	comp=Z,31nm,0.7s						
WMQ				LR	LR		
	comp=Z,160nm,24.0s						
GEVA	Gevas	83.67	333		P	01 36 39.6	+0.2
BTO	Baotou	84.78	24	*e*P	P	01 36 47.7	+2.8
BTO				pP	pwP	01 36 52.9	+2.8
BTO				sP	sP	01 36 54.7	+6.1
BTO				pmax	pmax		
	comp=Z,17nm,1.0s						
BTO				pmax	pmax		
	comp=Z,140nm,10.4s						
HHC	Hu-ho-hao-te	85.49	25	*e*P	P	01 36 50.5	+2.0
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,49nm,4.5s						
MKAR	Makanchi Array	85.85	3	P	P	01 36 48.4	-1.6
MKAR	Makanchi Array	85.85	3	P	P	01 36 49.6	-0.4
	comp=Z,0.9nm,0.9s,baz=176,slow=7.3,SNR=7.9						
	comp=Z,0.9nm,0.9s						
KURBB	Kurchatov Arra	89.59	0	P	P	01 37 07.2	-0.6
	comp=Z,1.5nm,1.2s,baz=184,slow=4.4,SNR=4.9						
	comp=Z,1.5nm,1.2s						
KURK	Kurchatov	89.69	0	P	P	01 37 07.6	-0.6
KURK				IAmb	IAmb	01 37 42.5	
	comp=Z,11nm,1.9s						
RES	Resolute Bay	144.41	357		PKPdf	01 43 44.9	-0.8
POIN	Pond Inlet	144.53	348	PKPdf	PKPab	01 43 44.5	0.0
H27K	Steamboat Moun	145.06	27		PKPbc	01 43 46.4	-0.2
SCRK	Sand Creek	145.19	31		PKPbc	01 43 46.9	-0.3
BMRM	Bremner River	146.07	36	PKPdf	PKPbc	01 43 49.8	-0.2
H29M	Whitestone	146.15	26	PKPdf	PKPdf	01 43 48.7	-0.3
BCAR	Beaver Creek A	146.47	32		PKPdf	01 43 49.6	-0.1
J30M	Hart River	147.79	27		PKPbc	01 43 54.8	-0.1
ILON	Igloolik, Nuna	148.03	347	PKPdf	PKPdf	01 43 53.0	+1.0
P33M	Teslin, Yukon	151.61	33		PKPbc	01 44 03.2	-1.2

IDC ***04*** *01:30:53.7±0.8, 39°.34S×77°.92E, h0^{km}, mb4.2/9, mbtmp4.2/9, MS4.2/19, Error ellipse: s-maj=26.3km s-min=20.4km az=108.0*

NEIC ***04*** *01:30:57.0±1.2, 39°.19S±0°.08×78°.1E±0°.1, h10^{km}±1^{km}, mb4.7/31, Error ellipse: s-maj=19.9km s-min=13.6km az=255.0*

GCMT ***04*** *01:30:58.0±0.3, 39°.35S±0°.03×77°.70E±0°.04, h18^{km}±1^{km}, MW5.0/91, Moment Tensor Solution. s28,c31; s91,c113; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.24±.22; $M_{\theta\theta}$1.18±.14; $M_{\phi\phi}$2.06±.15; $M_{r\theta}$-0.33±.33; $M_{\theta\phi}$-0.77±.08; $M_{\phi r}$2.33±.33; Best double couple: $M_0$3.69600×10^{16} NP1:ϕ_s325.00000°,δ27.00000°,λ-106.00000°. NP2: ϕ_s163.00000°,δ65.00000°,λ-82.00000°. Principal axes: T 3.2730, Plg19.0000°, Azm247.0000°; N 0.8460, Plg7.0000°, Azm339.0000°; P -4.1190, Plg69.0000°, Azm89.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 01:30:55.9±0.6**, 39°.26S**±0°.09×**78°.1E**±0°.1**, h10^{km}, n66, σ1^{s}14**/43**, mb4.7**/25**, MS4.2**/19**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIS	Amsterdam Isla	1.51	344	Pn	Pn	01 31 21.3	-1.7
H04N2	CROZET ISLANDS	20.46	242	T	T	01 56 35.7	
	baz=79,slow=75,SNR=178						
H04N1	CROZET ISLANDS	20.48	242	T	T	01 56 37.6	
	baz=79,slow=75,SNR=190						
H04N3	CROZET ISLANDS	20.48	242	T	T	01 56 34.5	
	baz=79,slow=75,SNR=74						
H01W2	Cape Leeuwin H	28.95	93	T	T	02 07 09.8	
	baz=250,slow=74,SNR=163						
H01W3	Cape Leeuwin H	28.96	93	T	T	02 07 10.9	
	baz=250,slow=74,SNR=219						
H01W1	Cape Leeuwin H	28.97	93	T	T	02 07 20.7	
	baz=250,slow=74,SNR=214						
MAW	Mawson	29.64	192	P	P	01 36 59.3	-1.7
	2.8nm,0.9s,baz=21,slow=13,SNR=2.0						
MAW				LR	LR	01 46 31.7	
	comp=Z,387nm,18.8s,baz=26,slow=32						
	2.8nm,0.9s						
H08S2	Diego Garcia H	31.87	349	T	T	02 10 56.5	
	baz=172,slow=76,SNR=9.5						
H08S1	Diego Carcia H	31.88	349	T	T	02 11 04.7	
	baz=172,slow=76,SNR=9.1						
H08S3	Diego Garcia H	31.89	349	T	T	02 10 56.1	
	baz=172,slow=76,SNR=9.9						
NWAO	Narrogin (SRO)	32.07	91	P	P	01 37 21.5	-1.4
NWAO	Narrogin (SRO)	32.07	91	LR	LR	01 47 18.9	
	comp=Z,684nm,20.6s,baz=242,slow=31						
OPO	Ambohidratompo	33.76	299	LR	LR	01 48 07.1	
	comp=Z,110nm,21.8s,baz=360,slow=31						
LEM	Lembang	41.81	47	LR	LR	01 52 36.4	
	comp=Z,388nm,21.3s,baz=218,slow=31						
UGM	Wanagama	42.66	52	P	P	01 38 52.6	-0.2
BOSA	Boshof	44.55	267	P	P	01 39 08.7	+0.5
BOSA	Boshof	44.55	267	P	P	01 39 06.2	-1.9
	1.0nm,0.7s,baz=141,slow=12,SNR=4.1						
BOSA				LR	LR	01 54 00.5	
	comp=Z,324nm,19.4s,baz=170,slow=31						
	1.0nm,0.7s						
PSI	Prapat	46.03	30	LR	LR	01 55 13.1	
	comp=Z,427nm,19.0s,baz=154,slow=32						
LBTB	Lobatse	46.06	272	LR	LR	01 55 14.5	
	comp=Z,428nm,19.0s,baz=129,slow=32						
MAKGR	Makgori	46.28	270	P	P	01 39 22.2	+0.4
MAKGR				IAmb	IAmb	01 39 28.7	
	comp=Z,11nm,1.1s						
PALK	Pallekele	46.35	4	LR	LR	01 54 59.1	
	comp=Z,277nm,19.2s,baz=182,slow=31						
LPHEP	Lephephe	46.73	274		P	01 39 25.4	+0.1
LPHEP				IAmb	IAmb	01 39 32.8	
	comp=Z,9.4nm,0.9s						
KDWAN	Kaudwane	47.65	273	P	P	01 39 33.4	+0.9
KDWAN				IAmb	IAmb	01 39 40.3	
	comp=Z,9.0nm,1.0s						
ASAR	Alice Springs	49.34	89		P	01 39 45.7	+0.2
ASAR	Alice Springs	49.34	89	P	P	01 39 45.5	0.0
	comp=Z,2.3nm,0.9s,baz=232,slow=6.5,SNR=14						
	comp=Z,2.3nm,0.9s						
LSZ	Lusaka	49.64	284		P	01 39 48.3	+0.3
LSZ				IAmb	IAmb	01 39 56.2	
	comp=Z,8.9nm,0.9s						

LSZ	Lusaka	49.64	284	LR	LR	01 57 19.8	
	comp=Z,193nm,20.8s,baz=141,slow=32						
LKGWB	Lokgwabe	49.93	270	P	P	01 39 46.8	-3.3
KNRA	Kununurra	49.96	77	P	P	01 39 50.4	+0.1
KSANE	Kasane	50.41	279	P	P	01 39 54.3	+0.5
KSANE				IAmb	IAmb	01 39 55.7	
	comp=Z,9.1nm,0.9s						
SNAA	Sanae	50.47	204	P	P	01 39 54.4	+0.9
SNAA	Sanae	50.47	204	LR	LR	01 56 51.3	
	comp=Z,180nm,21.7s,baz=102,slow=31						
VNDA	Vanda	50.69	164		P	01 39 57.2	+2.3
VNDA	Vanda	50.69	164	P	P	01 39 54.1	-0.9
	comp=Z,1.7nm,1.0s,baz=259,slow=7.4,SNR=4.6						
	comp=Z,1.7nm,1.0s						
QSPA	South Pole Qui	50.91	180		P	01 39 56.3	-0.6
QSPA				IAmb	IAmb	01 39 59.3	
	comp=Z,12nm,1.1s						
QSPA	South Pole Qui	50.91	180	P	P	01 39 55.8	-1.1
	comp=Z,5.3nm,0.9s,baz=280,slow=4.2,SNR=12						
QSPA				LR	LR	01 59 00.5	
	comp=Z,483nm,19.5s,baz=336,slow=33						
	comp=Z,5.3nm,0.9s						
KOOLE	Kule	51.32	271	P	P	01 40 00.6	0.0
KOOLE				IAmb	IAmb	01 40 01.5	
	comp=Z,23nm,1.5s						
GRTLG	Ghanzi	51.42	273		P	01 40 01.7	+0.3
GRTLG				IAmb	IAmb	01 40 06.7	
	comp=Z,7.5nm,1.1s						
SBA	Scott Base	51.70	164	P	P	01 40 04.0	+1.4
WRA	Warramunga Arr	51.72	85	P	P	01 40 05.1	+1.7
WRA	Warramunga Arr	51.72	85	P	P	01 40 03.9	+0.4
	comp=Z,8.8nm,0.9s,baz=234,slow=7.3,SNR=20						
WRA				LR	LR	01 58 55.5	
	comp=Z,463nm,21.2s,baz=239,slow=32						
	comp=Z,8.8nm,0.9s						
WR8	Warramunga Arr	51.83	85	P	P	01 40 05.6	+1.3
WR8				IAmb	IAmb	01 40 10.1	
	comp=Z,14nm,1.1s						
WB0	Warramunga Arr	51.86	85	P	P	01 40 04.8	+0.3
QNGWA	Qangwa	52.48	275		P	01 40 09.7	+0.4
QNGWA				IAmb	IAmb	01 40 17.6	
	comp=Z,7.1nm,0.9s						
XAUDM	Khaudum	52.92	276		P	01 40 13.8	+1.2
XAUDM				IAmb	IAmb	01 40 14.9	
	comp=Z,14nm,1.1s						
TSUM	Tsumeb	55.45	273	LR	LR	02 00 51.4	
	comp=Z,434nm,19.5s,baz=141,slow=32						
CMAR	Chiang Mai Arr	60.63	23	P	P	01 41 06.9	-0.1
CMAR	Chiang Mai Arr	60.63	23	P	P	01 41 08.0	+1.0
	comp=Z,1.4nm,0.4s,baz=216,slow=7.0,SNR=10						
	comp=Z,1.4nm,0.4s						
EVN	Everest	67.36	8		P	01 41 51.5	-0.3
EVN				IAmb	IAmb	01 41 58.2	
	comp=Z,8.4nm,1.2s						
PMG	Port Moresby	67.91	84	LR	LR	02 11 25.3	
	comp=Z,200nm,18.0s,baz=240,slow=36						
PMSA	Palmer Station	72.14	196	LR	LR	02 12 28.4	
	comp=Z,317nm,18.0s,baz=171,slow=35						
BTK	Batken	79.22	354		P	01 43 02.0	+1.1
ARSB	Arslanbob	80.33	356	P	P	01 43 08.4	+1.4
ARSB				IAmb	IAmb	01 43 13.1	
	comp=Z,11nm,1.2s						
AAK	Ala-Archa	81.58	357	P	P	01 43 14.7	+1.0
RAO	Raoul Island	81.81	121	LR	LR	02 12 53.3	
	comp=Z,60nm,18.1s,baz=106,slow=31						
KK31	Karatay Array	82.27	354	P	P	01 43 18.0	+1.0
KK31				IAmb	IAmb	01 43 20.1	
	comp=Z,9.7nm,1.4s						
KKAR	Karatay Array	82.27	354		P	01 43 17.7	+0.7
KKAR	Karatay Array	82.27	354	P	P	01 43 18.3	+1.3
KKAR				IAmb	IAmb	01 43 20.1	
	comp=Z,10nm,1.4s						
MKAR	Makanchi Array	85.75	3		P	01 43 34.6	-0.2
MKAR	Makanchi Array	85.75	3	P	P	01 43 34.4	-0.4
	comp=Z,2.6nm,0.8s,baz=160,slow=7.5,SNR=10						
MKAR				LR	LR	02 19 14.6	
	comp=Z,110nm,21.1s,baz=90,slow=34						
	comp=Z,2.6nm,0.8s						
MAKZ	Makanchi	85.75	3	P	P	01 43 35.3	+0.5
MAKZ				IAmb	IAmb	01 43 39.8	
	comp=Z,4.5nm,1.1s						
ARPR	Arapgir-MALATY	86.06	330	P	P	01 43 37.9	+1.2
ARPR				IAmb	IAmb	01 43 44.1	
	comp=Z,11nm,1.4s						
MSVF	Nonsavu	86.39	110	LR	LR	02 14 07.6	
	comp=Z,76nm,21.3s,baz=186,slow=30						
KURBB	Kurchatov Arra	89.50	0	P	P	01 43 52.0	-0.6
	comp=Z,1.4nm,1.0s,baz=193,slow=5.2,SNR=6.9						
	comp=Z,1.4nm,1.0s						
RAR	Rarotonga	99.12	127	LR	LR	02 19 32.7	
	comp=Z,52nm,21.5s,baz=188,slow=29						

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*IDC **04** 01:41:23.9±1.1, 39°.29S×78°.29E, h0^{km}, mb4.1/6, mbtmp4.1/6, MS3.7/3, Error ellipse: s-maj=32.7km s-min=27.5km az=159.0*

ISC 04 01:41:25.4±1.0**, 39°.3S**±0°.2×**78°.3E**±0°.2**, h10**^{km}**, n20,** $\sigma1^{s}.00$/6**, mb4.1**/6**, MS3.8**/3**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H04N2	CROZET ISLANDS	20.60	242	T	T	02 06 54.1	
	baz=78,slow=75,SNR=313						
H04N1	CROZET ISLANDS	20.61	242	T	T	02 06 54.1	
	baz=78,slow=75,SNR=334						
H04N3	CROZET ISLANDS	20.61	242	T	T	02 06 52.9	
	baz=78,slow=75,SNR=350						
H04S1	CROZET ISLANDS	20.65	240	T	T	02 07 39.1	
	baz=232,slow=75,SNR=6.6						
H04S2	CROZET ISLANDS	20.67	240	T	T	02 07 28.1	
	baz=232,slow=75,SNR=9.9						
H04S3	CROZET ISLANDS	20.67	240	T	T	02 07 31.7	
	baz=232,slow=75,SNR=11						
H01W2	Cape Leeuwin H	28.77	93	T	T	02 17 47.2	
	baz=250,slow=74,SNR=147						
H01W3	Cape Leeuwin H	28.77	92	T	T	02 17 40.2	
	baz=250,slow=74,SNR=148						
H01W1	Cape Leeuwin H	28.78	93	T	T	02 17 41.3	
	baz=250,slow=74,SNR=154						
H08S2	Diego Garcia H	31.96	349	T	T	02 21 26.3	
	baz=173,slow=76,SNR=12						
H08S1	Diego Carcia H	31.96	349	T	T	02 21 20.3	
	baz=173,slow=76,SNR=13						
H08S3	Diego Garcia H	31.98	349	T	T	02 21 27.6	
	baz=173,slow=76,SNR=16						
BOSA	Boshof	44.74	267	P	P	01 49 39.8	+0.7
	3.3nm,1.0s,baz=110,slow=5.1,SNR=3.1						
BOSA				LR	LR	02 04 19.4	
	comp=Z,67nm,21.7s,baz=194,slow=31						
	3.3nm,1.0s						
LBTB	Lobatse	46.25	272	LR	LR	02 05 43.1	
	comp=Z,91nm,18.1s,baz=150,slow=32						
ASAR	Alice Springs	49.15	89	P	P	01 50 13.8	+0.2
	1.4nm,0.9s,baz=233,slow=6.4,SNR=9.0						
	1.4nm,0.9s						
QSPA	South Pole Qui	50.85	180	P	P	01 50 25.6	-0.5
	1.8nm,0.9s,baz=294,slow=5.9,SNR=5.1						
	1.8nm,0.9s						
STKA	Stephens Creek	51.05	102	LR	LR	02 08 59.1	
	comp=Z,95nm,19.7s,baz=358,slow=32						
WRA	Warramunga Arr	51.53	85	P	P	01 50 32.5	+0.8
	2.9nm,0.7s,baz=235,slow=7.2,SNR=11						
	2.9nm,0.7s						
CMAR	Chiang Mai Arr	60.61	23	P	P	01 51 36.7	+0.3
	0.7nm,0.3s,baz=208,slow=6.4,SNR=4.7						
	0.7nm,0.3s						
MKAR	Makanchi Array	85.80	3	P	P	01 54 03.3	-1.2
	1.0nm,0.8s,baz=176,slow=5.8,SNR=6.2						
	1.0nm,0.8s						

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*CATAC **04** 01:41:46.5±0.9, 13°N±5°×8°9W±°, h22^{km}±6^{km}, M3.7/26, MLv3.7/26, Error ellipse: s-maj=12.3km s-min=5.5km az=34.6, confirmed*

*GCG **04** 01:41:47.6±1.3, 13°.06N×89°.61W, h26^{km}±6^{km}, MD3.9, ML3.3*

*SNET **04** 01:41:50.4±9.1, 13°.99N×89°.53W, h42^{km}, ML3.7*

ISC 04 01:41:47.4±1.7**, 13°.02N**±0°.07×**89°.49W**±0°.06**, h33**^{km}±5^{km}**,** **n53,** $\sigma0^{s}.54$/58**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.49	20	eP	Pn	01 41 58.2	0.0
LALI				eS	Sn	01 42 06.1	+0.5
LALI	Alcalda de L	0.49	20	i P	Pn	01 41 58.2	0.0
LALI				i S	Sn	01 42 05.5	-0.1
LALI				IAML		01 42 06.9	
	comp=E,1μm,0.3s						
LALI	Alcalda de L	0.49	20	P	Pn	01 41 58.2	0.0
JAYA	Jayaque - finc	0.63	4	i P	Pn	01 41 59.9	-0.2
JAYA				i S	Sb	01 42 08.8	-0.3
JAYA	Jayaque - finc	0.63	4	P	Pn	01 41 60.0	-0.2
PANCS	Alcalda de	0.66	27	P	Pn	01 42 00.2	-0.3
ITCA	Escuela Especi	0.68	18	P	Pn	01 42 00.7	-0.2
LOMA	Loma Larga	0.69	27	S	Sn	01 42 11.4	+0.7
LOMA	Loma Larga	0.69	27	P	Pn	01 42 00.9	-0.2
PMON	Piamonte	0.71	14	P	Pn	01 42 01.0	-0.2
LFRS	El Faro	0.73	35	eP	Pn	01 42 01.4	-0.1
UTEC	Universidad Te	0.73	23	P	Pn	01 42 00.5	-1.1
UEES	Universidad Ev	0.73	19	eP	Pn	01 42 01.4	-0.2
UEES	Universidad Ev	0.73	19	P	Pn	01 42 01.0	-0.5
UEES	Universidad Ev	0.73	19	S	Sb	01 42 11.9	+0.2
BOQS	Boqueron	0.74	16	i P	Pn	01 42 01.6	-0.1
IGN	Direccin Gen	0.76	24	P	Pn	01 42 01.8	-0.1
UDBS	Universidad Do	0.77	25	P	Pn	01 42 01.9	0.0
CEDA	San Andres	0.78	7	S	Sb	01 42 14.1	+1.0
CEDA	San Andres	0.78	7	P	Pn	01 42 01.9	-0.3
CEVE	Cerro Verde	0.81	351	eP	Pn	01 42 02.6	-0.2
CEVE				eS	Sb	01 42 14.5	+0.3
CEVE	Cerro Verde	0.81	351	P	Pn	01 42 02.8	0.0
SBLS	San Blas	0.82	351	eP	Pn	01 42 02.9	0.0
COEG	Centro de Oper	0.84	45	P	Pn	01 42 02.7	-0.3
TECO	Alcaldia de Te	0.86	53	P	Pn	01 42 02.7	-0.5
SNVI	San Vicente	0.87	47	eP	Pn	01 42 03.3	-0.1
PAVA	Las Pavas	0.88	38	P	Pn	01 42 03.6	+0.1
UESV	Universidad de	0.92	48	eP	Pn	01 42 03.7	-0.3
UESV	Universidad de	0.92	48	P	Pn	01 42 03.7	-0.3
NUBE	Las Nubes	0.92	342	i P	Pn	01 42 03.7	-0.4
NUBE				i S	Sn	01 42 16.2	-0.2
NUBE	Las Nubes	0.92	342	P	Pn	01 42 03.8	-0.4
ALJI	Alcalda de J	0.95	71	P	Pn	01 42 04.4	0.0
UNIC	Universidad Ca	0.96	357	P	Pn	01 42 04.7	+0.1
FAME	Alcaldia de Sa	0.96	328	P	Pn	01 42 04.2	-0.4
SCLA	Alcaldia de Sa	1.00	47	P	Pn	01 42 05.3	0.0
LOAL	Lomas de Alarc	1.01	344	P	Pb	01 42 06.0	-0.5
SLOZ	Alcaldia de Sa	1.04	344	P	Pn	01 42 05.8	0.0
PQSS	Presa 15 de Se	1.09	56	P	Sn	01 42 19.8	-0.5
PACA	Pacayal	1.22	68	eP	Pn	01 42 08.9	+0.6
PACA	Pacayal	1.22	68	P	Pn	01 42 08.6	+0.3
LCY	Lacayo	1.23	71	eP	Pn	01 42 08.7	+0.3
RANC	El Ranchito	1.24	70	P	Pn	01 42 06.0	-2.5
MTO3	Montecristo	1.38	5	i P	Pn	01 42 10.5	0.0
MTO3	Montecristo	1.38	5	P	Pn	01 42 10.6	0.0
ESQI	Esquipulas	1.54	5	P	Pn	01 42 13.1	+0.4
CNCH	Conchagua	1.63	81	P	Pn	01 42 14.1	+0.2
CSGN	Cosiguina Volc	1.88	91	P	Pn	01 42 17.3	0.0
POTN	Potosi Cosigui	1.93	90	P	Pn	01 42 18.5	+0.6
STG8	El Palmar, Qui	2.30	308	i P	Pb	01 42 28.5	+0.1
STG8				IAML		01 43 12.0	
	comp=E,217nm,0.3s						
POLN	Al Sur del Vol	2.64	98	P	Pn	01 42 26.4	-1.3
CNGA	Al SSO del Vol	2.77	101	P	Pn	01 42 29.4	-0.2
CNGN	Cerro Negro	2.77	100	P	Pn	01 42 29.5	-0.1
COPN	Copaltepe	2.95	106	P	Pn	01 42 32.9	+0.9

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*NEIC **04** 01:44:20.9±1.6, 38°.85N±0°.01×122°.74W±0°.02, h5^{km}±1^{km}, Error ellipse: s-maj=2.5km s-min=2.4km az=262.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.79; $M_{\theta\theta}$0.35; $M_{\phi\phi}$0.44; $M_{r\theta}$0.57; $M_{\theta\phi}$0.58; $M_{\phi r}$-0.01; Fault plane solution: $M_0$1.07000×10^{15} NP1:ϕ_s18.77000°, δ38.76000°, λ-130.88000°. NP2:ϕ_s246.76000°, δ61.75000°, λ-62.28000°. Principal axes: T 1.0649, Plg13.0000°, Azm317.0000°; N 0.0067, Plg24.0000°, Azm53.0000°; P -1.0716, Plg62.0000°, Azm202.0000°;*

*NEIC **04** 01:44:21.4, 38°.84N×122°.80W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-6.35; $M_{\theta\theta}$1.16; $M_{\phi\phi}$5.20; $M_{r\theta}$-2.41; $M_{\theta\phi}$5.55; $M_{\phi r}$-0.86; Fault plane solution: $M_0$8.47000×10^{14} NP1:ϕ_s195.93000°, δ40.62000°, λ-118.68000°. NP2:ϕ_s51.70000°, δ55.17000°, λ-67.63000°. Principal axes: T 9.3637, Plg8.0000°, Azm126.0000°; N -2.2454, Plg18.0000°, Azm218.0000°; P -7.1184, Plg70.0000°, Azm14.0000°;*

*NEIC **04** 01:44:21.3, 38°.83N×122°.80W, h3^{km}*

*NEIC **04** 01:44:21.4, 38°.84N×122°.80W, h2^{km}*

*NCEDC **04** 01:44:21.3±1.7, 38°.83N±0°.01×122°.80W±0°.02, h3^{km}±2^{km}, Mwr3.9/3, ML3.4/86(NEIC), Mwr4.0/39(NEIC), Error ellipse: s-maj=2.1km s-min=1.5km az=74.0*

*IDC **04** 01:44:25.6±2.5, 38°.59N×122°.33W, h0^{km}, mb3.0/1, mbtmp3.5/6, ML3.9/4, Error ellipse: s-maj=29.4km s-min=18.1km az=98.0*

ISC 04 01:44:21.3±0.8**, 38°.81N**±0°.02×**122°.79W**±0°.02**, h5**^{km}±5^{km}**,** **n155,** $\sigma0^{s}.90$/152**, Northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GDXM	Geysers	0.01	225	Pg	Pg	01 44 22.1	-0.2
GDXM				Sg	Sg	01 44 22.7	-0.3
GGPM	Geyser Peak	0.07	222		Pg	01 44 23.2	+0.4
GSGM	Seigler Mounta	0.08	49		Pg	01 44 23.4	+0.4
GBGM	Boggs Mountain	0.08	90		Pg	01 44 23.6	+0.5
GAXM	Alexander Vall	0.11	167		Pg	01 44 24.0	+0.5
GAXM					Sg	01 44 26.0	+1.1
GRTM	Round Top Moun	0.15	36		Pg	01 44 24.4	0.0
GRTM					Sg	01 44 26.8	+0.4
NHSM	Mount Saint He	0.21	140		Pg	01 44 26.0	+0.6
NMTM	Middletown	0.27	92		Pg	01 44 27.2	+0.8
MNRC	McLaughlin Min	0.28	76		Pg	01 44 27.5	+0.8
MNRC	McLaughlin Min	0.28	76	IAML		01 44 35.3	
	comp=E,5μm,0.6s						
MNRC				IAML		01 44 36.5	
	comp=N,13μm,0.8s						
GHGM	Hogback Ridge	0.32	355		Pg	01 44 27.4	0.0
GSNM	Snow Mountain	0.34	292		Pg	01 44 28.2	+0.3
GHCM	House Creek	0.38	237		Pg	01 44 29.6	+0.9
OAKV	Oakville Exper	0.48	142		Pg	01 44 31.3	+0.7
CVS	Carmenet Viney	0.53	151		Pg	01 44 32.3	+0.7
CVS	Carmenet Viney	0.53	151	IAML		01 44 40.9	
	comp=E,5μm,0.4s						
CVS				IAML		01 44 41.3	
	comp=N,6μm,0.3s						
GGUM	Gualala	0.56	275		Pg	01 44 32.5	+0.5
GWRM	Wonder Ranch	0.56	315		Pg	01 44 32.1	0.0
QRDG	Quail Ridge Na	0.60	123		Pb	01 44 33.9	-0.5
GFC	Funks Creek	0.64	37		Pn	01 44 35.8	-1.2
MCCM	Marconi Confer	0.67	186		Pb	01 44 35.2	-0.3
MCCM				Sg	Sb	01 44 44.4	-0.7
MCCM				IAML		01 44 52.2	
	comp=N,2μm,0.8s						
NGVM		0.70	140		Pg	01 44 35.2	+0.6
NADM	Allendale	0.73	119		Pn	01 44 37.3	-0.9
RUSS	Russell Ranch	0.77	110		Pn	01 44 37.9	-0.9
NOLM	Olema	0.77	180		Pb	01 44 36.9	-0.3
GCK	Clark Valley	0.78	20		Pn	01 44 38.0	-1.0
DCMP	DeCamp, Califo	0.78	327		Pg	01 44 36.2	0.0
DCMP	DeCamp, Califo	0.78	327	IAML		01 44 42.6	
	comp=E,116nm,1.9s						
DCMP				IAML		01 45 00.2	
	comp=N,489nm,1.3s						
GTC	Three Chop Rid	0.84	315		Pg	01 44 37.4	+0.1
NLHM	Lake Herman	0.86	144		Pb	01 44 38.2	-0.4
OSUM	Sutter Buttes	0.86	58		Pg	01 44 37.8	0.0
PINL	Point Pinole R	0.87	158		Pb	01 44 38.7	-0.1
CPMM	Point Molate	0.91	161		Pg	01 44 38.9	+0.1
JEPS	Jepson Natural	0.94	126		Pn	01 44 40.6	-0.5
C024	33rd St Richmo	0.94	158		Pb	01 44 40.0	-0.1
CPIM	Pinole Ridge	0.94	151		Pg	01 44 39.6	+0.3
GVV	Valley View	0.96	5		Pb	01 44 40.6	0.0
CTAM	Taylor	0.99	142		Pb	01 44 40.9	-0.1
BRK	Berkeley--Havi	1.03	156		Pg	01 44 40.5	-0.5
VAK	Adit at Lawren	1.03	156		Pb	01 44 41.4	-0.1
BL67	Building 67, L	1.03	156		Pg	01 44 40.8	-0.2
CVPM	Vollmer Peak	1.03	154		Pg	01 44 41.2	+0.2
C031	McGee Avenue B	1.03	157		Pb	01 44 41.5	-0.1
BKS	Berkeley--Byer	1.03	155		Pg	01 44 40.5	-0.6
JPRM	Presidio of Sa	1.05	166		Pg	01 44 41.6	+0.3
CYBM	Yerba Buena Is	1.06	161		Pg	01 44 41.1	-0.5
KCPM	Cahto Peak	1.07	325		Pg	01 44 41.4	-0.4
KCPM					Sn	01 44 58.3	-0.1
KCPM				IAML		01 45 12.0	
	comp=N,1μm,1.2s						
OSTM	Stimpson Lane	1.08	59		Pg	01 44 41.2	-0.7
GROM	Round Mountain	1.10	5		Pn	01 44 43.0	-0.5
J061	Lakeshore Driv	1.11	168		Pn	01 44 43.8	+0.4
KBNM	Bluenose Ridge	1.12	344		Pb	01 44 43.1	-0.2
BDM	Black Diamond	1.12	140		Pb	01 44 42.0	-1.2
FARB	Farallon Islan	1.13	189		Pb	01 44 42.7	-0.6
FARB	Farallon Islan	1.13	189	IAML		01 45 02.5	
	comp=N,443nm,0.9s						
FARB				IAML		01 45 05.2	
	comp=E,1μm,1.6s						
KIPM	Iron Peak	1.13	332		Pn	01 44 44.0	0.0
CRPB	Russellman Par	1.14	142		Pb	01 44 42.9	-0.5
BGC	Bolinger Road	1.15	150		Pb	01 44 42.4	-1.2
JSBM	San Bruno Moun	1.17	165		Pb	01 44 43.0	-1.0
JMGM	Milagra Ridge	1.20	168		Pb	01 44 43.4	-1.1
SFRE	Sierra Foothil	1.22	68		Pn	01 44 43.1	-2.0
OGOM	Van Goodin Ran	1.24	47		Pn	01 44 43.4	-1.8
ORV	Oroville	1.24	53		Pn	01 44 43.7	-1.7
SAC	San Andreas	1.26	167		Pn	01 44 44.2	-1.4
CMOB	Morgan Territo	1.27	142		Pn	01 44 44.5	-1.2
JCPM	Coyote Point	1.28	163		Pn	01 44 45.5	-0.3
JCHM	Cahill Ridge	1.33	166		Pn	01 44 45.2	-1.4
CBSNC	Byron Hot Spri	1.34	137		Pn	01 44 45.5	-1.2
O02D	Mt. Diablo Mer	1.36	360		Pn	01 44 45.6	-1.5
O02D				IAML		01 44 53.0	
	comp=N,358nm,0.7s						
CNIC	Niles Canyon	1.37	151		Pn	01 44 45.5	-1.5
CBZL	Buffer Zone	1.40	143		Pn	01 44 46.8	-0.8
CVLM	Vallecito	1.40	147		Pn	01 44 46.6	-0.9
AFDM	Forest Hills D	1.42	84		Pn	01 44 46.0	-1.9
WENL	Wente Vineyard	1.44	145		Pn	01 44 47.3	-0.8
JRSC	Jasper Ridge	1.47	163		Pn	01 44 46.7	-1.8
LTCM	Tuscan Springs	1.48	20		Pn	01 44 47.4	-1.3
JSFB	Stanford Teles	1.49	161		Pn	01 44 47.8	-0.9
LBPM	Beegum Peak	1.50	357		Pb	01 44 49.7	0.0
BGH	Bear Gulch	1.51	166		Pn	01 44 47.7	-1.3
JFP	Foothills Park	1.53	162		Pn	01 44 47.8	-1.5
CSTL	Corral Hollow	1.55	139		Pn	01 44 48.4	-1.2
BRIC	Briceland Vine	1.56	327		Pn	01 44 49.2	-0.4
CALM	Calaveras Res.	1.57	150		Pn	01 44 48.4	-1.4
JBMM	Black Mountain	1.57	161		Pn	01 44 49.0	-1.0
KMRM	Mail Ridge	1.58	333		Pn	01 44 49.5	-0.5
KMRM				IAML		01 44 57.0	
	comp=N,592nm,0.9s						
JSJM	St Joseph	1.58	159		Pn	01 44 48.4	-1.5
CMLM	Mount Lewis	1.61	146		Pn	01 44 48.8	-1.6
JPSM		1.65	168		Pn	01 44 50.0	-0.9
LCMM	Colby Mountain	1.65	36		Pn	01 44 50.3	-0.8
WELL	Weller Preserv	1.66	102		Pn	01 44 49.9	-1.2
O03E	Paynes Creek	1.66	27		Pn	01 44 50.1	-1.1
MHC	Mount Hamilton	1.73	148		Pn	01 44 50.9	-1.2
JJOM	Saint Joseph’s	1.73	158		Pn	01 44 51.2	-0.8
ARN	Arnold Ranch	1.77	146		Pn	01 44 51.6	-1.0
CCOB	Coe Ranch Numb	1.78	150		Pn	01 44 52.3	-0.5
CADM	Anderson Res.	1.89	151		Pn	01 44 53.3	-0.9
KMPM	Mount Pierce	1.90	328		Pn	01 44 53.5	-1.0
KMPM				IAML		01 45 05.4	
	comp=E,437nm,1.0s						
KMPM				IAML		01 45 07.0	
	comp=N,416nm,0.7s						
WEAV	Weaverville	1.94	356		Pg	01 44 59.5	+1.1
LRDM	Redding Peak	1.94	31		Pn	01 44 54.7	-0.3
GHS	Gilroy Hot Spr	2.02	148		Pn	01 44 54.7	-1.3
JELB	Ellicott, Sant	2.03	158		Pn	01 44 55.5	-0.7
CMB	Columbia Colle	2.04	112		Pn	01 44 55.9	-0.5
CMB	Columbia Colle	2.04	112	IAML		01 45 28.7	
	comp=N,164nm,1.2s						
CMB				IAML		01 45 28.8	
	comp=E,147nm,0.7s						
LSHM	Sage Hen Hill	2.06	16		Pn	01 44 57.5	+0.8
CDC	Canada Road	2.06	150		Pn	01 44 55.5	-1.1
HCOM	Corn Cob Canyo	2.10	156		Pn	01 44 56.8	-0.4
HPCM	Pacheco Lake	2.12	145		Pn	01 44 56.5	-1.0
HFEM	San Felipe	2.13	149		Pn	01 44 56.7	-0.9
SLD	San Luis Dam	2.13	144		Pn	01 44 56.6	-1.0
PACP	Pacheco Peak	2.16	146		Pn	01 44 57.4	-0.6
PACP	Pacheco Peak	2.16	146	IAML		01 45 14.9	
	comp=N,397nm,0.7s						
PACP				IAML		01 45 38.8	
	comp=E,313nm,0.7s						
HTUM	Tustin Road	2.18	155		Pn	01 44 56.7	-1.5
KHMM	Horse Mountain	2.18	341		Pn	01 44 58.0	-0.5
KHMM				IAML		01 45 12.5	
	comp=E,228nm,0.9s						
KHMM				IAML		01 45 18.0	
	comp=N,201nm,1.4s						
MPK	Martis Peak	2.20	77		Pn	01 44 59.5	+0.8
MPK				IAML		01 45 16.6	
	comp=E,395nm,0.9s						
JCC	Jacoby Creek,	2.22	335		Pn	01 44 59.2	+0.5
JCC				IAML		01 45 56.5	
	comp=E,140nm,3.0s						
JCC				IAML		01 46 00.6	
	comp=N,204nm,2.0s						
HATC	Hat Creek Radi	2.25	27		Pb	01 45 00.6	-1.8
HATC	Hat Creek Radi	2.25	27	IAML		01 45 54.2	
	comp=N,133nm,2.4s						
HATC				IAML		01 46 06.4	
	comp=E,240nm,2.5s						
FRP	Fremont Peak	2.30	153		Pn	01 44 58.1	-1.9
LBCM	Butte Creek Ri	2.30	28		Pn	01 44 59.9	-0.2
SAO	San Andreas Ge	2.31	152		Pn	01 44 58.4	-1.5
PEAR	Peavine Mounta	2.33	69		Pn	01 45 01.0	+0.5
MYLM	Yosemite Lake	2.35	127		Pn	01 44 59.7	-0.8
BSRM	Salinas Radio	2.37	155		Pn	01 44 59.7	-1.2
BUCR	Buckhorn Ranch	2.37	118		Pn	01 45 00.6	-0.3
PNTR	Pine Nut	2.50	83		Pn	01 45 02.9	0.0
BJCM	Johnson Can.	2.52	154		Pn	01 45 01.0	-1.9
BBGB	Big Mountain B	2.63	148		Pn	01 45 04.8	+0.4
WAKR	Walker	2.64	96		Pn	01 45 05.4	+0.6
WAKR				IAML		01 45 48.2	
	comp=E,212nm,0.8s						
WAKR				IAML		01 45 57.9	
	comp=N,133nm,0.9s						
PAHR	Pah Rah Range	2.79	70		Pn	01 45 06.8	+0.1
PAHR				IAML		01 46 02.8	
	comp=N,90nm,1.3s						
PAHR				IAML		01 46 14.9	
	comp=E,82nm,1.3s						
KRMB	Red Mountain	2.84	343		Pn	01 45 07.2	-0.2
YBH	Yreka Blue Hor	2.92	1		Pn	01 45 08.0	-0.5
PMPB	Monarch Peak	3.04	148		Pn	01 45 09.5	-0.6
PMPB				IAML		01 46 27.5	
	comp=E,170nm,1.9s						
PMPB				IAML		01 46 28.4	
	comp=N,184nm,1.8s						
KSXB	Camp Six Broad	3.13	345		Pn	01 45 11.5	+0.2
KSXB				IAML		01 46 25.3	
	comp=N,60nm,2.7s						
RYN	Ryan	3.34	92		Pn	01 45 14.4	+0.1
RYN				IAML		01 46 12.9	
	comp=N,83nm,1.6s						
RYN				IAML		01 46 13.0	
	comp=E,89nm,1.5s						
LHV	Little Huntoon	3.41	98		Pn	01 45 15.7	+0.6
L04D	Klamath Falls	3.42	6	Pn	Pn	01 45 15.7	+0.3
L04D				IAML		01 46 34.9	
	comp=E,75nm,2.2s						
NVAR	Mina Array Bea	3.53	95		Pn	01 45 16.8	-0.2
NVAR	Mina Array Bea	3.53	95	Pn	Pn	01 45 17.5	+0.5
	comp=E,2.9nm,0.3s,baz=269,slow=15,SNR=70						
	comp=E,6.8nm,0.6s						
NV11	Mina Array Sit	3.65	95		Pn	01 45 18.2	-0.4
NV11				IAML		01 46 22.3	
	comp=E,99nm,1.8s						
NV11				IAML		01 46 34.9	
	comp=N,91nm,1.3s						
K04D	Chiloquin, OR	3.89	11		Pn	01 45 22.1	+0.3
K04D				IAML		01 46 53.8	
	comp=E,72nm,1.8s						
K04D				IAML		01 47 07.2	
	comp=N,76nm,1.3s						
DSP	Deep Springs	4.06	109	Pn	Pn	01 45 24.0	-0.1
DSP				IAML		01 46 39.2	
	comp=N,50nm,1.6s						
DSP				IAML		01 46 53.3	
	comp=E,34nm,1.6s						
BBOR	Butler Butte	4.07	1	Pn	Pn	01 45 23.7	-0.7
TPH	Tonopah	4.43	98		Pn	01 45 29.9	+0.6
J04A	Umpqua Nationa	4.45	6	Pn	Pn	01 45 28.8	-0.8
J05D	Fort Rock, OR	4.62	14		Pn	01 45 31.3	-0.6
J05D				IAML		01 47 29.3	
	comp=N,17nm,2.6s						
J05D				IAML		01 47 34.4	
	comp=E,20nm,2.3s						
ISA	Isabella, Lake	4.66	131		Pn	01 45 34.1	+1.6

ISA				IAML		01 46 46.5	
	comp=E,46nm,0.9s						
ISA				IAML		01 46 54.6	
	comp=N,24nm,1.2s						
GSC	**Goldstone, Bar**	5.93	124		Pn	01 45 50.1	+0.3
PASC	**Pasadena Art C**	5.93	140		Pn	01 45 50.4	+0.6
ELK	**Elko**	6.12	69	Pn	Pn	01 45 54.5	+1.8
	comp=N,4.0nm,0.8s,baz=257,slow=12,SNR=15						
ELK				Sn	Sn	01 47 02.1	-1.1
	comp=N,0.1nm,0.3s,baz=225,slow=16,SNR=0.7						
SPR3	**Spring Creek 3**	6.60	86		Pn	01 46 00.5	+1.3
PFO	**Pinyon Flats O**	7.29	134		Pn	01 46 08.7	+0.2
PFO	**Pinyon Flats O**	7.29	134	Pn	Pn	01 46 08.2	-0.3
	comp=N,0.6nm,0.3s,baz=319,slow=11,SNR=7.2						
	comp=N,1.8nm,0.4s						
LCMT	**Little Creek M**	7.75	100	Pn	Pn	01 46 15.2	+0.2
PDAR	**Pinedale Array**	10.78	64	Pn	Pn	01 47 01.5	+5.1
	comp=N,0.3nm,0.3s,baz=249,slow=12,SNR=12						
	comp=N,2.9nm,0.9s						
TXAR	**Lajitas Array**	18.42	115	P	Pn	01 48 39.0	+1.5
	comp=N,0.1nm,0.3s,baz=302,slow=13,SNR=4.4						
	comp=N,1.4nm,0.7s						
YKA	**Yellowknife Ar**	24.23	9	P	P	01 49 45.5	+6.7
	comp=N,0.4nm,1.0s,baz=199,slow=9.2,SNR=3.2						
	comp=N,0.4nm,1.0s						

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*CATAC **04** 01:51:55.6±1.4, 12°N±6°×8°8W±°, h26^{km}±12^{km}, M3.1/7, MLv3.1/7, Error ellipse: s-maj=17.2km s-min=9.7km az=47.7, confirmed*

*SNET **04** 01:51:58.6±1.1, 13°.04N×87°.70W, h96^{km}±21^{km}, ML3.0*

ISC 04 01:51:56.5±2.4, **12°.7N**±0°.3×**87°.7W**±0°.2, **h91**^{km}±36^{km}, **n15**, σ**0^{s}71**/20, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	0.34	25	P	Pn	01 52 09.9	-0.5
POTN	**Potosi Cosigui**	0.38	30	P	Pn	01 52 10.3	-0.3
POTN				S	Sn	01 52 20.8	-0.2
CNCH	**Conchagua**	0.62	348	*e*P	Pn	01 52 12.5	0.0
CNCH				*e*S	Sn	01 52 24.1	-0.4
CNCH				*e*S		01 52 24.9	
CNCH	**Conchagua**	0.62	348	P	Pn	01 52 12.5	0.0
CNCH	**Conchagua**	0.62	348	S	Sn	01 52 25.9	+1.4
CRIN	**San Cristobal**	0.64	87	S	Sn	01 52 25.8	+1.1
CRIN	**San Cristobal**	0.64	87	P	Pn	01 52 13.2	+0.5
QUEN	**Al S del Volca**	0.84	95	P	Pn	01 52 14.6	+0.1
POLN	**Al Sur del Vol**	0.87	91	P	Pn	01 52 13.8	-1.1
CNGA	**Al SSO del Vol**	0.99	100	P	Pn	01 52 16.4	+0.2
CNGN	**Cerro Negro**	1.00	99	P	Pn	01 52 16.3	0.0
PACA	**Pacayal**	1.00	323	*e*P	Pn	01 52 17.2	+0.8
PACA				*e*S	Sn	01 52 30.6	-0.8
TECA	**Tecapa**	1.13	317	*e*P	Pn	01 52 17.8	-0.2
TECA				*e*S	Sn	01 52 33.6	-0.6
COPN	**Copaltepe**	1.19	114	P	Pn	01 52 18.2	-0.3
JAYA	**Jayaque - finc**	1.96	300	*e*P	Pn	01 52 29.1	+0.7
JAYA				*e*S	Sn	01 52 52.1	-0.7
JAYA				IAML		01 52 54.2	
	comp=Z,104nm,0.2s						

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*IDC **04** 02:02:19.0±1.6, 6°.01S×147°.38E, h107^{km}±14^{km}, mb3.6/6, mbtmp4.0/9, MS3.7/1, Error ellipse: s-maj=24.4km s-min=10.4km az=108.0*

*NEIC **04** 02:02:20.5±1.6, 5°.95S±0°.09×147°.40E±0°.10, h100^{km}±7^{km}, mb4.4/16, Error ellipse: s-maj=15.7km s-min=10.7km az=131.0*

ISC 04 02:02:19.2±0.5, **5°.96S**±0°.07×**147°.37E**±0°.08, **h100**^{km}, **n36**, σ**1^{s}32**/38, **mb4.2**/9, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	3.43	183		Pn	02 03 10.4	-0.4
PMG	**Port Moresby**	3.43	183	P	Pn	02 03 10.5	-0.2
	80nm,0.5s,baz=37,slow=5.7,SNR=21						
PMG				S	Sn	02 03 49.4	-1.1
	145nm,0.4s,baz=340,slow=12,SNR=8.5						
RABL	**Rabaul**	5.09	70		Pn	02 03 33.1	0.0
JAY	**Jayapura**	7.47	297	P	Pn	02 04 07.0	+1.4
	5.0nm,0.4s,baz=151,slow=6.8,SNR=3.8						
COEN	**Coen**	8.96	207	Pn	Pn	02 04 26.0	+0.2
HNR	**Honiara**	12.93	106	Pn	Pn	02 05 20.7	+1.4
CTAO	**Charters Tower**	14.09	184	Pn	Pn	02 05 36.6	+2.3
MTN	**Manton Dam**	17.41	246		Pn	02 06 17.3	+1.4
WB0	**Warramunga Arr**	18.64	221	P	P	02 06 30.3	+1.0
WB0				IAmb	IAmb	02 07 00.3	
	comp=Z,30nm,1.5s						
WR0	**Warramunga Arr**	18.68	221	P	P	02 06 30.6	+0.9
WR0				IAmb	IAmb	02 06 35.4	
	comp=Z,29nm,1.4s						
WR8	**Warramunga Arr**	18.71	221	P	P	02 06 30.4	+0.4
WR8				IAmb	IAmb	02 06 31.7	
	comp=Z,22nm,1.4s						
WB2	**Warramunga Arr**	18.80	221	P	P	02 06 32.3	+1.3
WB2				IAmb	IAmb	02 06 56.1	
	comp=Z,28nm,1.4s						
WRA	**Warramunga Arr**	18.80	221	P	P	02 06 30.6	-0.4
WRA	**Warramunga Arr**	18.80	221	P	P	02 06 30.9	-0.1
	comp=Z,2.2nm,0.4s,baz=42,slow=11,SNR=25						
WRA				S	S	02 09 55.0	-4.8
	comp=Z,1.4nm,0.8s,baz=39,slow=19,SNR=3.6						
EIDS	**Eidsvold**	19.62	170	P	Pn	02 06 41.6	-0.6
KNRA	**Kununurra**	20.65	241	P	P	02 06 51.5	+0.5
KNRA				IAmb	IAmb	02 07 30.2	
	comp=Z,29nm,1.2s						
AS31	**Alice Springs**	21.86	215	P	P	02 07 04.5	+0.5
ASAR	**Alice Springs**	21.86	215	P	P	02 07 04.1	+0.2
ASAR	**Alice Springs**	21.86	215	P	P	02 07 04.6	+0.6
	comp=Z,11nm,0.7s,baz=28,slow=12,SNR=62						
ASAR				S	S	02 11 00.4	+0.7
	comp=Z,3.1nm,0.9s,baz=34,slow=20,SNR=6.7						
	comp=Z,11nm,0.7s						
FITZ	**Fitzroy Crossi**	24.40	238	P	P	02 07 29.5	+1.1
FITZ				IAmb	IAmb	02 07 32.1	
	comp=Z,8.9nm,0.6s						
DZM	**Mont Dzumac**	24.42	133	P	P	02 07 28.6	-0.1
DZM				IAmb	IAmb	02 07 40.9	
	comp=Z,29nm,1.4s						
BBOO	**Buckleboo**	28.72	200	P	P	02 08 08.7	+1.5
MBWA	**Marble Bar**	30.74	238	P	P	02 08 25.9	+0.8
PSA00	**Pilbara Seismi**	30.82	237	P	P	02 08 26.4	+0.5
URZ	**Urewera**	41.97	144	LR	LR	02 26 21.5	
	comp=Z,79nm,18.3s,baz=206,slow=34						
USRK	**Ussuriysk Ar.**	51.82	346	P	P	02 11 16.5	-0.4
	comp=Z,1.2nm,0.5s,baz=180,slow=6.4,SNR=1.7						
	comp=Z,1.2nm,0.5s						
PETK	**Petropavlovsk-**	59.49	7	P	P	02 12 10.9	-0.7
	comp=Z,1.6nm,0.8s,baz=134,slow=6.4,SNR=4.3						
	comp=Z,1.6nm,0.8s						
VNDA	**Vanda**	71.93	177	P	P	02 13 31.1	-0.1
	comp=Z,0.4nm,0.7s,baz=347,slow=5.9,SNR=5.2						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	77.70	320	P	P	02 14 04.8	-0.3
	comp=Z,0.3nm,0.4s,baz=111,slow=7.4,SNR=3.0						
	comp=Z,0.3nm,0.4s						
MLY	**Manley**	83.94	22	P	P	02 14 38.4	+0.5
QSPA	**South Pole Qui**	84.01	180	P	P	02 14 38.3	-0.1
QSPA				IAmb	IAmb	02 15 06.4	
	comp=Z,3.8nm,0.7s						
ILAR	**Eielson Array**	85.30	23	P	P	02 14 41.9	-2.8
	comp=Z,1.3nm,0.9s,baz=254,slow=5.1,SNR=13						
	comp=Z,1.3nm,0.9s						
PLCA	**Paso Flores**	121.95	147	PKP	PKPdf	02 21 02.0	-0.4
	comp=Z,3.8nm,1.2s,baz=270,slow=4.0,SNR=2.1						
GERES	**GERESS Array B**	122.08	326	PKP	PKPdf	02 21 00.7	-1.7
	comp=Z,0.3nm,0.5s,baz=90,slow=2.7,SNR=4.1						
LPAZ	**La Paz**	138.50	123	PKP	PKPdf	02 21 33.8	-1.2
	comp=Z,0.8nm,0.5s,baz=213,slow=2.5,SNR=3.9						
TORD	**Torodi Ar. Bea**	145.44	284	PKPbc	PKPdf	02 21 45.4	-1.2
	comp=Z,0.6nm,0.5s,baz=64,slow=4.3,SNR=13						

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*IDC **04** 02:04:15.4±1.8, 15°.58S×71°.54W, h78^{km}±17^{km}, mb3.8/5, mbtmp4.0/9, MS3.6/5, Error ellipse: s-maj=23.7km s-min=13.4km az=31.0*

*NEIC **04** 02:04:15.8±1.4, 15°.78S±0°.09×71°.6W±0°.1, h91^{km}±10^{km}, mb4.2/14, Error ellipse: s-maj=17.7km s-min=12.9km az=96.0*

ISC 04 02:04:16.0±0.5, **15°.76S**±0°.07×**71°.60W**±0°.07, **h100**^{km}, **n39**, σ**1^{s}29**/38, **mb3.9**/7, **Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB18	**Visviri**	2.72	132	Pn	Pn	02 04 58.5	0.0
PB16	**IPOC Station P**	3.25	142		Pn	02 05 05.0	-0.6
LPAZ	**La Paz**	3.37	99	Pn	Pn	02 05 06.7	-0.6
LPAZ	**La Paz**	3.37	99	P	Pn	02 05 08.0	+0.8
	8.2nm,0.8s,baz=273,slow=9.4,SNR=22						
LPAZ				LR	LR	02 06 24.8	
	comp=Z,209nm,18.7s,baz=290,slow=39						
PB11	**IPOC Station P**	4.38	155	Pn	Pn	02 05 17.6	-2.9
GO01	**Chusmiza**	4.51	150	Pn	Pn	02 05 22.5	0.0
PB08	**IPOC Station P**	4.94	152	Pn	Pn	02 05 26.1	-2.1
TA01	**Diego Aracena**	4.96	164	Pn	Pn	02 05 26.4	-1.8
NNA	**Nana**	6.33	306		Pn	02 05 46.5	-0.3
NNA	**Nana**	6.33	306	P	Pn	02 05 45.2	-1.6
	11nm,0.5s,baz=168,slow=11,SNR=7.6						
NNA				S	Sn	02 06 56.3	-1.5
	17nm,0.6s,baz=54,slow=23,SNR=2.1						
SIV	**San Ignacio**	10.13	93	P	Pn	02 06 36.8	-1.7
	5.0nm,0.7s,baz=272,slow=11,SNR=22						
SIV				S	Sn	02 08 27.7	-2.6
	1.7nm,0.8s,baz=352,slow=9.4,SNR=1.5						
SIV				LR	LR	02 11 14.5	
	comp=Z,408nm,18.8s,baz=290,slow=42						
CO02	**Combarbal**	15.38	178	Pn	Pn	02 07 47.7	+0.1
CO02				IAmb	IAmb	02 07 50.8	
	comp=Z,29nm,1.3s						
CFA	**Coronel Fontan**	16.07	170	P	P	02 07 57.8	+0.2
	comp=Z,4.2nm,0.8s,baz=343,slow=12,SNR=12						
MT01	**Popeta**	18.03	179	P	P	02 08 19.4	+0.2
MT01				IAmb	IAmb	02 08 23.0	
	comp=Z,22nm,1.2s						
ITQB	**Itaqui**	19.52	138	Pn	Pn	02 08 37.4	-0.3
ITQB				IAmb	IAmb	02 08 41.9	
	comp=Z,20nm,1.1s						
BOAV	**Boa Vista**	21.11	32	P	P	02 08 52.1	-0.6
ITAB	**Concordia**	21.37	126	P	P	02 08 54.3	-1.2
RUSC	**La Rusia**	21.57	356	P	P	02 08 57.8	-0.2
BDFB	**Brasilia**	22.70	93	P	P	02 09 09.9	+0.3
	comp=Z,2.6nm,0.8s,baz=286,slow=14,SNR=3.5						
	comp=Z,2.6nm,0.8s						
PLTB	**Pedras Altas**	22.85	137	P	P	02 09 10.5	-0.4
TRQA	**Tornquist**	23.77	161	P	P	02 09 20.2	+0.9
TRQA				IAmb	IAmb	02 09 32.0	
	comp=Z,7.4nm,1.3s						
BAUV	**El Baul**	24.80	8	P	P	02 09 28.8	0.0
PLCA	**Paso Flores**	24.90	178	P	P	02 09 30.3	+0.7
PLCA				IAmb	IAmb	02 09 33.9	
	comp=Z,15nm,1.4s						
PLCA	**Paso Flores**	24.90	178	P	P	02 09 32.0	+2.4
	comp=Z,7.5nm,1.1s,baz=332,slow=10,SNR=5.4						
	comp=Z,7.5nm,1.1s						
PCRV	**Puerto La Cruz**	26.68	15	LR	LR	02 20 49.6	
	comp=Z,307nm,19.5s,slow=38						
JTS	**Las Juntas de**	29.07	332	LR	LR	02 22 02.9	
	comp=Z,93nm,18.6s,baz=168,slow=37						
RCBR	**Riachuelo**	36.37	78	P	P	02 11 10.1	-0.8
SNAA	**Sanae**	68.50	162	P	P	02 15 07.9	+0.6
SNAA				IAmb	IAmb	02 15 13.6	
	comp=Z,6.9nm,1.3s						
SNAA	**Sanae**	68.50	162	P	P	02 15 10.7	+3.5
	comp=Z,2.7nm,0.9s,baz=276,slow=5.2,SNR=7.5						
	comp=Z,2.7nm,0.9s						
QSPA	**South Pole Qui**	74.40	180	P	P	02 15 43.1	+0.2
QSPA				IAmb	IAmb	02 15 50.4	
	comp=Z,5.6nm,1.4s						
TORD	**Torodi Ar. Bea**	77.95	73	P	P	02 16 04.3	+0.6
TORD				IAmb	IAmb	02 16 06.6	
	comp=Z,1.2nm,0.8s						
TORD	**Torodi Ar. Bea**	77.95	73	P	P	02 16 05.0	+1.3
	comp=Z,1.4nm,0.7s,baz=267,slow=5.4,SNR=8.0						
	comp=Z,1.4nm,0.7s						
FRB	**Frobisher Bay**	79.29	1	LR	LR	02 55 05.7	
	comp=Z,45nm,19.0s,baz=334,slow=39						
YKA	**Yellowknife Ar**	84.96	341	P	P	02 16 39.9	+0.3
	comp=Z,0.9nm,0.9s,baz=139,slow=4.7,SNR=9.2						
	comp=Z,0.9nm,0.9s						
ZALV	**Zalesovo Beam**	137.68	21	PKP	PKiKP	02 23 30.8	+0.6
	comp=Z,1.0nm,0.7s,baz=333,slow=0.6,SNR=3.6						
KURBB	**Kurchatov Arra**	137.73	28	PKP	PKiKP	02 23 31.1	+0.7
	comp=Z,0.3nm,0.5s,baz=299,slow=1.9,SNR=1.8						
MJAR	**Matsushiro Arr**	146.40	314	PKPbc	PKPab	02 23 46.9	+0.1
	comp=Z,3.7nm,1.0s,baz=65,slow=5.8,SNR=8.4						
SONM	**Songino Array**	147.98	3	PKPbc	PKiKP	02 23 51.8	+0.1
	comp=Z,2.6nm,0.7s,baz=305,slow=1.5,SNR=11						
KSRS	**Korea Array**	152.34	325	PKPbc	PKiKP	02 24 01.9	+1.0
	comp=Z,1.3nm,0.6s,baz=332,slow=1.3,SNR=5.6						

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*NOU **04** 02:21:26.9, 37°.90S×176°.79E, h207^{km}, MLv4.3/18, North Island, New Zealand*

*IDC **04** 02:21:27.3±0.8, 37°.39S×176°.85E, h171^{km}±5^{km}, mb3.7/7, mbtmp4.2/7, Error ellipse: s-maj=31.2km s-min=17.3km az=57.0*

*NEIC **04** 02:21:29.9±1.4, 37°.98S±0°.06×176°.45E±0°.07, h188^{km}±5^{km}, mb4.4/10, Error ellipse: s-maj=9.6km s-min=7.0km az=142.0*

*WEL **04** 02:21:30.7±0.8, 38°S±5°×17°7E±°, h171^{km}±5^{km}, M3.7/24, ML3.4/7, MLv3.7/24, Error ellipse: s-maj=6.9km s-min=5.4km az=29.4, confirmed*

ISC 04 02:21:29.0±0.6, **37°.89S**±0°.04×**176°.61E**±0°.04, **h196**^{km}±4^{km}, **n248**, σ**1^{s}34**/273, **mb4.0**/13, **3C**, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPRZ	**Ohinepanea**	0.06	317	P	Pn	02 21 54.0	-0.6
OPRZ				S	S	02 22 12.0	-2.4
MARZ	**Manawahe**	0.11	151	P	Pn	02 21 54.5	-0.2
MARZ				S	S	02 22 13.0	-1.7
LIRZ	**Lichensteins R**	0.21	238	P	Pn	02 21 54.7	-0.1
EDRZ	**Edgecumbe**	0.24	155	P	Pn	02 21 54.6	-0.3
MKRZ	**Makatiti**	0.27	204	P	Pn	02 21 55.7	+0.7
OMRZ	**Omania**	0.29	221	P	Pn	02 21 54.9	0.0
OMRZ				S	S	02 22 14.8	-0.4
WHRZ	**Whale Island**	0.29	83	P	Pn	02 21 54.7	-0.3
KARZ	**Kaharoa**	0.32	246	P	Pn	02 21 55.0	-0.1
TGRZ	**Tauranga**	0.32	300	P	Pn	02 21 54.8	-0.2
TGRZ				S	S	02 22 13.5	-1.6
TARZ	**Mount Tarawera**	0.35	193	P	Pn	02 21 55.4	+0.2
NGRZ	**Ngongotaha**	0.40	238	P	Pn	02 21 55.6	+0.3
HLRZ	**Highlands Stat**	0.41	209	P	Pn	02 21 55.6	+0.3
UTU	**Utuhina**	0.43	229	P	Pn	02 21 55.8	+0.5
RRRZ	**Republican Roa**	0.45	189	P	Pn	02 21 55.5	+0.1
RRRZ				S	S	02 22 14.1	-2.0
HSRZ	**Hossack Road**	0.51	214	P	Pn	02 21 56.1	+0.5
KMRZ	**Kaimai**	0.53	275	P	Pn	02 21 55.8	0.0
URZ	**Urewera**	0.54	133	P	Pn	02 21 55.2	-0.5
	2µm,0.4s,baz=344,slow=3.1,SNR=2179						
URZ				S	S	02 22 13.7	-2.8
	1µm,0.4s,baz=229,slow=21,SNR=44						
URZ	**Urewera**	0.54	133	P	Pn	02 21 55.1	-0.5
URZ	**Urewera**	0.54	133	P	Pn	02 21 55.2	-0.5
URZ				S	S	02 22 13.5	-2.9
HRRZ	**Handcock Road**	0.56	207	P	Pn	02 21 56.2	+0.3
WSRZ	**White Island S**	0.58	51	P	Pn	02 21 55.1	-0.9
WIZ	**White Island**	0.59	52	P	Pn	02 21 55.1	-0.9
WIZ				S	S	02 22 13.7	-2.9
MUGZ	**Murupara**	0.60	168	P	Pn	02 21 55.9	-0.1
MUGZ				S	S	02 22 14.9	-2.2
GRRZ	**Galatos Road**	0.60	221	P	Pn	02 21 56.6	+0.5
PRRZ	**Plateau Road**	0.63	196	P	Pn	02 21 56.4	+0.2
PRRZ				S	S	02 22 15.6	-1.7
MYRZ	**Mayor Island**	0.68	334	P	Pn	02 21 56.0	-0.5
MYRZ				S	S	02 22 16.7	-0.9
ALRZ	**Allen Road**	0.70	197	P	Pn	02 21 56.7	+0.2
WPRZ	**Whakapapatarin**	0.72	209	P	Pn	02 21 57.1	+0.5
RTZ	**Ruatahuna**	0.78	158		Pn	02 21 57.2	+0.2
RTZ				Sn	S	02 22 17.2	-1.7
RTZ	**Ruatahuna**	0.78	158	P	Pn	02 21 57.2	+0.2
RTZ				S	S	02 22 17.1	-1.7
RUGZ	**Raukumara Rang**	0.85	95	P	Pn	02 21 56.1	-1.4
RUGZ				S	S	02 22 16.2	-3.2
MWZ	**Matawai**	0.85	122	P	Pn	02 21 57.1	-0.3
MWZ				S	S	02 22 17.5	-1.8
KUTZ	**Kaahu Road**	0.86	226	P	Pn	02 21 58.1	+0.7
RAGZ	**Rawiri**	0.88	134	P	Pn	02 21 57.9	+0.4
RAGZ				S	S	02 22 18.8	-1.0
TOZ	**Tahuroa Road**	0.89	280		Pn	02 21 57.7	+0.2
TOZ				Sn	S	02 22 17.5	-2.1
TOZ	**Tahuroa Road**	0.89	280	P	Pn	02 21 57.7	+0.2
TOZ				S	S	02 22 18.9	-0.7
WHTZ	**Whakaora**	0.93	213	P	Pn	02 21 58.9	+1.0
HAZ	**Te Kaha**	0.94	82	P	Pn	02 21 56.8	-1.0
HAZ				S	S	02 22 16.8	-3.3
TLZ	**Tolley Road**	0.95	242	P	Pn	02 21 58.9	+0.9
TLZ				S	S	02 22 20.4	0.0
MRHZ	**Matea Rd**	0.95	189	P	Pn	02 21 58.5	+0.5
MRHZ				S	S	02 22 18.9	-1.8
MTHZ	**Maungataniwha**	0.98	169	P	Pn	02 21 58.7	+0.6
MTHZ				S	S	02 22 20.0	-0.9
SNGZ	**Shannon Statio**	1.06	147	P	Pn	02 21 59.6	+0.9
SNGZ				S	S	02 22 20.3	-1.5
WATZ	**Wairara**	1.07	220	P	Pn	02 21 59.6	+0.8
RAHZ	**Arahi**	1.09	160	P	Pn	02 22 00.0	+1.1
RAHZ				S	S	02 22 21.9	-0.4
TKGZ	**Te Karaka**	1.12	120	P	Pn	02 21 59.6	+0.5
TKGZ				S	S	02 22 21.0	-1.5
TWGZ	**Tauwhareparae**	1.12	105	P	Pn	02 21 59.4	+0.2
TWGZ				S	S	02 22 23.3	+0.8
PKGZ	**Pakihiroa**	1.16	89	P	Pn	02 21 59.2	-0.3
PKGZ				S	S	02 22 20.8	-2.3
RATZ	**Rangitukua**	1.18	214	P	Pn	02 22 00.4	+0.8
NMHZ	**Naumai**	1.21	173	P	Pn	02 22 01.3	+1.4
RIGZ	**Rimuhau**	1.22	132	P	Pn	02 22 00.9	+1.0
RITZ	**Rihia Road**	1.23	208	P	Pn	02 22 01.2	+1.1
BKZ	**Black Stump Fm**	1.28	184		Pn	02 22 00.8	+0.3
BKZ				Sn	S	02 22 22.7	-2.3
BKZ	**Black Stump Fm**	1.28	184	P	Pn	02 22 00.7	+0.3
BKZ	**Black Stump Fm**	1.28	184	S	S	02 22 24.0	-1.0
BKZ	**Black Stump Fm**	1.28	184	P	Pn	02 22 01.0	+0.6
WHHZ	**Waihua**	1.28	158	P	Pn	02 22 01.6	+1.3
KATZ	**Kakaramea**	1.30	213	P	Pn	02 22 01.9	+1.2
PUZ	**Puketiti**	1.31	98	P	Pn	02 22 00.4	-0.3
PUZ				P	Pn	02 22 00.4	-0.3
KUZ	**Kuaotunu**	1.34	328	P	Pn	02 21 59.7	-1.3
KUZ	**Kuaotunu**	1.34	328	P	Pn	02 22 00.1	-0.9
MXZ	**Matakaoa Point**	1.39	77		Pn	02 22 00.6	-0.7
MXZ	**Matakaoa Point**	1.39	77	P	Pn	02 22 00.5	-0.7
MXZ	**Matakaoa Point**	1.39	77	S	S	02 22 23.9	-2.3
MXZ	**Matakaoa Point**	1.39	77	P	Pn	02 22 00.8	-0.5
CNGZ	**Carnagh Statio**	1.39	116	P	Pn	02 22 02.5	+1.2
MKAZ	**Moumakai**	1.39	304	P	Pn	02 22 01.3	-0.1
ARHZ	**Aropaoanui**	1.40	168	P	Pn	02 22 02.9	+1.5
KNZ	**Kokohu**	1.41	144	P	Pn	02 22 02.4	+1.0
NTVZ	**North Tongarir**	1.41	211	P	Pn	02 22 02.6	+1.0
TMVZ	**Te Maari**	1.41	210	P	Pn	02 22 02.4	+0.8
KRVZ	**Karewarewa**	1.42	212	P	Pn	02 22 02.4	+0.7
ETVZ	**East Tongariro**	1.43	209	P	Pn	02 22 02.7	+0.9
WMGZ	**Waiomatatini S**	1.43	88	P	Pn	02 22 01.5	-0.1
PRGZ	**Paritu Road**	1.44	136	P	Pn	02 22 02.5	+0.8
WTVZ	**West Tongariro**	1.46	213	P	Pn	02 22 02.8	+0.8
NNVZ	**North Ngauruho**	1.46	212	P	Pn	02 22 03.1	+1.0
OTVZ	**Oturere**	1.47	210	P	Pn	02 22 03.5	+1.3
TWVZ	**Taurewa**	1.50	218	P	Pn	02 22 03.2	+0.9
SNVZ	**South Ngauruho**	1.50	210	P	Pn	02 22 03.5	+1.1
NGZ	**Ngauruhoe**	1.51	211	P	Pn	02 22 03.4	+0.9
HIZ	**Hauiti**	1.52	245	Pn	Pn	02 22 03.5	+1.2
HIZ				Sn	S	02 22 26.7	-1.6
HIZ	**Hauiti**	1.52	245	P	Pn	02 22 03.4	+1.0
HIZ	**Hauiti**	1.52	245	S	S	02 22 30.4	+2.1
HIZ	**Hauiti**	1.52	245	P	Pn	02 22 03.6	+1.2
KWHZ	**Kaweka Forest**	1.54	185	P	Pn	02 22 03.8	+1.2
COVZ	**Chateau Observ**	1.55	212	P	Pn	02 22 03.5	+0.7
MCHZ	**McNeill Hill**	1.55	178	P	Pn	02 22 04.3	+1.6
TUVZ	**Tukino**	1.57	208	P	Pn	02 22 04.1	+1.1
KBAZ	**Karaka Road Bo**	1.58	300	P	Pn	02 22 03.3	+0.3
FWVZ	**Far West T-bar**	1.59	211	P	Pn	02 22 04.0	+0.6
MAVZ	**Matarangi**	1.60	211	P	Pn	02 22 04.3	+0.8
WHVZ	**Whangaehu Hut**	1.60	210	P	Pn	02 22 04.3	+0.8
WIAZ	**Waiheke Island**	1.61	313	P	Pn	02 22 03.1	-0.2
MHGZ	**Mahia Peninsul**	1.62	141	P	Pn	02 22 04.6	+1.2
ETAZ	**East Tamaki Re**	1.63	304	P	Pn	02 22 03.6	0.0
TRVZ	**Turoa**	1.63	210	P	Pn	02 22 04.5	+0.8
WNVZ	**Wahianoa**	1.64	209	P	Pn	02 22 04.7	+0.9
MOVZ	**Moawhango**	1.66	204	P	Pn	02 22 04.3	+0.5
PKVZ	**Pokaka**	1.71	215	P	Pn	02 22 05.3	+1.0
MTVZ	**Mangateitei**	1.74	211	P	Pn	02 22 05.6	+1.0
KRHZ	**Kereru**	1.76	186	P	Pn	02 22 05.7	+0.9
MBAZ	**Motutapu North**	1.77	309	P	Pn	02 22 04.9	+0.1
AWAZ	**Awhitu Peninsu**	1.77	297	P	Pn	02 22 04.8	0.0
EPAZ	**Eden Park BICE**	1.80	304	P	Pn	02 22 05.1	0.0
CKHZ	**Cape Kidnapper**	1.80	168	P	Pn	02 22 06.5	+1.4
HBAZ	**Herne Bay Bore**	1.82	304	P	Pn	02 22 05.3	0.0
GRZ	**Great Barrier**	1.88	330	P	Pn	02 22 05.3	-0.7
WTAZ	**Waiatarua**	1.88	300	P	Pn	02 22 06.1	+0.1
VRZ	**Vera Road**	1.90	229	P	Pn	02 22 07.6	+1.5
KAHZ	**Kahuranaki**	1.91	174	P	Pn	02 22 07.7	+1.5
ABAZ	**Army Bay**	1.92	312	P	Pn	02 22 06.4	+0.1
PNHZ	**Pukenui**	2.04	189	P	Pn	02 22 08.2	+0.6
PXZ	**Pawanui**	2.15	175	P	Pn	02 22 09.5	+0.9
WPHZ	**Waipukurau**	2.17	183	P	Pn	02 22 09.8	+0.8
TSZ	**Takapari Road**	2.22	193	P	Pn	02 22 10.2	+0.6
WAZ	**Wanganui**	2.25	214	P	Pn	02 22 10.9	+1.1
DREZ	**Durham Road**	2.29	235	P	Pn	02 22 12.3	+2.1
LREZ	**Lake Rotokare**	2.33	227	P	Pn	02 22 12.4	+1.8
PRHZ	**Porangahau**	2.37	180	P	Pn	02 22 11.9	+0.7
NEZ	**North Egmont**	2.40	234	P	Pn	02 22 13.6	+2.0
PREZ	**Palmer Road**	2.41	232	P	Pn	02 22 13.5	+2.0
DVHZ	**Dannevirke**	2.43	188	P	Pn	02 22 12.2	+0.4
PKE	**Pukeiti**	2.43	237	P	Pn	02 22 13.8	+1.9
KHEZ	**Kahui Hut**	2.47	235	P	Pn	02 22 14.0	+1.7
KHEZ	**Kahui Hut**	2.47	235	P	Pn	02 22 48.9	+37
KHEZ	**Kahui Hut**	2.47	235	P	Pn	02 22 14.1	+1.8
OHWZ	**Ohakea**	2.52	203	P	Pn	02 22 14.1	+1.3
NBEZ	**Newall Road No**	2.55	237	P	Pn	02 22 15.0	+1.9
ANWZ	**Angora Road**	2.57	182	P	Pn	02 22 14.1	+0.8
POWZ	**Post Office Ro**	2.58	194	P	Pn	02 22 14.1	+0.7
NMEZ	**Namu Road**	2.62	234	P	Pn	02 22 15.6	+1.6
WCZ	**Waipu Caves**	2.66	316	P	Pn	02 22 14.4	0.0
BFZ	**Birch Farm**	2.80	186		Pn	02 22 16.1	+0.1
BFZ	**Birch Farm**	2.80	186	P	Pn	02 22 16.0	0.0
BFZ	**Birch Farm**	2.80	186	P	Pn	02 22 16.2	+0.3
MRZ	**Mangatainoka R**	2.88	196		Pn	02 22 16.8	-0.1
MRZ	**Mangatainoka R**	2.88	196	P	Pn	02 22 17.0	+0.1
TIWZ	**Tintock**	2.94	191	P	Pn	02 22 17.9	+0.3
CPWZ	**Castlepoint**	3.03	186	P	Pn	02 22 19.5	+0.8
HOWZ	**Holdsworth Sta**	3.12	195	P	Pn	02 22 19.5	-0.2
OGWZ	**Otaki Gorge**	3.13	200	P	Pn	02 22 19.9	0.0
KIW	**Kapiti Island**	3.25	203	P	Pn	02 22 21.0	-0.3
TMWZ	**Te Maipa**	3.26	190	P	Pn	02 22 21.4	-0.1
MTW	**Mount Morrison**	3.37	194	P	Pn	02 22 22.3	-0.5
CAW	**Cannon Point**	3.43	200	P	Pn	02 22 23.1	-0.3
TRWZ	**Traveller**	3.57	191	P	Pn	02 22 24.8	-0.5
DUWZ	**D’Urville Isla**	3.58	215	P	Pn	02 22 24.7	-0.7
OUZ	**Omahuta**	3.60	317	P	Pn	02 22 25.4	-0.3
OUZ	**Omahuta**	3.60	317	P	Pn	02 22 25.7	+0.1
PAWZ	**Paruwai Farm**	3.60	194	P	Pn	02 22 25.0	-0.7
MSWZ	**Moikau Station**	3.67	196		Pn	02 22 25.6	-0.9
MSWZ	**Moikau Station**	3.67	196	P	Pn	02 22 25.7	-0.9
WEL	**Wellington**	3.67	202	P	Pn	02 22 26.0	-0.4
SNZO	**South Karori**	3.72	203		Pn	02 22 25.9	-1.1
SNZO	**South Karori**	3.72	203	P	Pn	02 22 26.0	-1.0
BHW	**Baring Head**	3.76	200		Pn	02 22 26.7	-0.8
BHW	**Baring Head**	3.76	200	P	Pn	02 22 26.7	-0.8
TCW	**Tory Channel**	3.77	208		Pn	02 22 27.0	-0.7
TCW	**Tory Channel**	3.77	208	P	Pn	02 22 27.0	-0.7
PLWZ	**Palliser**	3.82	195		Pn	02 22 27.1	-1.2
PLWZ	**Palliser**	3.82	195	P	Pn	02 22 27.4	-1.0
TUWZ	**Tuamarina**	4.09	209		Pn	02 22 31.0	-0.6
TUWZ	**Tuamarina**	4.09	209	P	Pn	02 22 31.0	-0.6
NNZ	**Nelson**	4.16	216	Pn	Pn	02 22 31.3	-1.1
NNZ	**Nelson**	4.16	216	P	Pn	02 22 31.4	-1.1
TKNZ	**Takaka Hill**	4.22	221		Pn	02 22 31.5	-1.9
TKNZ	**Takaka Hill**	4.22	221	P	Pn	02 22 31.8	-1.5
CMWZ	**Cape Campbell**	4.27	205	Pn	Pn	02 22 33.5	-0.4
CMWZ	**Cape Campbell**	4.27	205	P	Pn	02 22 33.8	-0.1
QRZ	**Quartz Range**	4.31	226	Pn	Pn	02 22 32.9	-1.5
QRZ	**Quartz Range**	4.31	226	P	Pn	02 22 32.7	-1.7
QRZ	**Quartz Range**	4.31	226	P	Pn	02 22 32.7	-1.7
BSWZ	**Blackbirch Sta**	4.36	208		Pn	02 22 34.5	-0.6
BSWZ	**Blackbirch Sta**	4.36	208	P	Pn	02 22 34.4	-0.6
MRNZ	**Matariki Terra**	4.59	219		Pn	02 22 36.3	-1.7
MRNZ	**Matariki Terra**	4.59	219	P	Pn	02 22 36.5	-1.6
THZ	**Tophouse**	4.80	215		Pn	02 22 39.6	-1.2
THZ	**Tophouse**	4.80	215	P	Pn	02 22 39.5	-1.2
KHZ	**Kahutara**	5.09	207		Pn	02 22 43.5	-0.9
KHZ	**Kahutara**	5.09	207	P	Pn	02 22 43.3	-1.1
KHZ	**Kahutara**	5.09	207	P	Pn	02 22 43.5	-0.9
DSZ	**Denniston Nort**	5.34	222	Pn	Pn	02 22 46.4	-1.2
DSZ	**Denniston Nort**	5.34	222	P	Pn	02 22 45.8	-1.8
GVZ	**Greta Valley S**	5.76	207	Pn	Pn	02 22 51.8	-1.1
GVZ	**Greta Valley S**	5.76	207	P	Pn	02 22 51.6	-1.3
LTZ	**Lake Taylor**	5.90	213	Pn	Pn	02 22 53.4	-1.5
LTZ	**Lake Taylor**	5.90	213	P	Pn	02 22 52.9	-1.9

AMCZ	Amberley	6.08	208	Pn	Pn	02 22 55.7	-1.3
AMCZ	Amberley	6.08	208	P	Pn	02 22 55.5	-1.5
OKCZ	Okains Bay	6.42	204	P	Pn	02 23 00.4	-1.1
OXZ	Oxford	6.45	211		Pn	02 22 59.6	-2.2
OXZ	Oxford	6.45	211	P	Pn	02 22 59.7	-2.2
MQZ	McQueen's Vall	6.54	206	Pn	Pn	02 23 00.7	-2.4
MQZ	McQueen's Vall	6.54	206	P	Pn	02 23 00.6	-2.4
AKCZ	Akaroa Harbour	6.60	204	P	Pn	02 23 02.6	-1.3
MHCZ	Mount Hutt	6.81	213	P	Pn	02 23 04.8	-1.9
WVZ	Waitaha Valley	6.84	219	P	Pn	02 23 05.8	-1.2
WACZ	Wakanui South	7.04	209	P	Pn	02 23 07.7	-1.8
RPZ	Rata Peaks	7.18	214	P	Pn	02 23 09.8	-1.6
	8.2nm,0.3s,baz=41,slow=1.0,SNR=18						
RPZ				S	S	02 24 25.6	-7.2
	34nm,0.3s,baz=130,slow=24,SNR=19						
RPZ	Rata Peaks	7.18	214	P	Pn	02 23 09.9	-1.6
RPZ	Rata Peaks	7.18	214	P	Pn	02 23 09.9	-1.6
GCSZ	Gaunt Creek Bo	7.22	219	P	Pn	02 23 11.0	-1.0
ARCZ	Arundel	7.31	212	P	Pn	02 23 11.3	-1.9
FOZ	Fox Glacier	7.64	220	Pn	Pn	02 23 16.2	-1.2
FOZ	Fox Glacier	7.64	220	P	Pn	02 23 15.7	-1.7
TMZ	Timaru	7.74	211	P	Pn	02 23 17.0	-1.8
LBZ	Lake Benmore	8.10	215	Pn	Pn	02 23 21.8	-1.6
LBZ	Lake Benmore	8.10	215	P	Pn	02 23 21.7	-1.7
ODZ	Otahua Downs	8.43	210	Pn	Pn	02 23 26.4	-1.3
ODZ	Otahua Downs	8.43	210	P	Pn	02 23 26.4	-1.3
ODZ	Otahua Downs	8.43	210	P	Pn	02 23 26.4	-1.3
JCZ	Jackson Bay	8.55	221	P	Pn	02 23 26.8	-2.6
JCZ	Jackson Bay	8.55	221	P	Pn	02 23 26.7	-2.7
WKZ	Wanaka	8.97	217	Pn	Pn	02 23 33.1	-1.8
ONTNC	Ouen Toro	17.82	328	P	Pn	02 25 23.9	-1.3
ONTNC				IAmb	IAmb	02 25 49.8	
	comp=Z,41nm,1.2s						
DZM	Mont Dzumac	18.04	328		Pn	02 25 27.1	-0.6
DZM	Mont Dzumac	18.04	328	P	Pn	02 25 27.2	-0.6
	comp=Z,6.9nm,0.5s,baz=153,slow=14,SNR=11						
ASAR	Alice Springs	39.00	279	P	P	02 28 35.9	-0.6
ASAR	Alice Springs	39.00	279	P	P	02 28 38.0	+1.5
	comp=Z,0.8nm,0.5s,baz=125,slow=8.6,SNR=8.3						
	comp=Z,0.8nm,0.5s						
FORT	Forrest	40.34	265	P	P	02 28 48.2	+0.7
FORT				IAmb	IAmb	02 29 30.1	
	comp=Z,13nm,0.9s						
WR8	Warramunga Arr	40.57	284	P	P	02 28 49.5	0.0
WR8				IAmb	IAmb	02 29 20.0	
	comp=Z,13nm,1.3s						
WB2	Warramunga Arr	40.69	284	P	P	02 28 51.5	+1.0
WB2				IAmb	IAmb	02 29 21.3	
	comp=Z,20nm,1.4s						
WRA	Warramunga Arr	40.70	284	P	P	02 28 51.4	+0.8
	comp=Z,0.9nm,0.3s,baz=120,slow=8.6,SNR=10						
	comp=Z,0.9nm,0.3s						
WB0	Warramunga Arr	40.76	284	P	P	02 28 52.1	+1.0
WB0				IAmb	IAmb	02 29 19.8	
	comp=Z,14nm,1.2s						
QSPA	South Pole Qui	52.23	180	P	P	02 30 24.9	+5.2
QSPA	South Pole Qui	52.23	180	P	P	02 30 25.2	+5.5
	comp=Z,2.2nm,0.6s,baz=245,slow=0.8,SNR=16						
QSPA				PcP	sP	02 31 31.3	+6.0
	comp=Z,2.1nm,0.9s,baz=20,slow=1.9,SNR=3.5						
	comp=Z,2.2nm,0.6s						
FAKI	Fak Fak	53.42	300	P	P	02 30 28.5	-0.4
RSD	Rainshed	62.88	30	P	P	02 31 35.8	+1.3
TROLL	Troll, Antarti	70.32	182	⇑P	P	02 32 24.7	+3.8
	comp=Z,138nm,0.8s						
SNAA	Sanae	70.74	180	⇑P	P	02 32 26.8	+3.5
	comp=Z,13nm,0.3s						
SNAA	Sanae	70.74	180	P	P	02 32 27.1	+3.8
SNAA				IAmb	IAmb	02 32 42.7	
	comp=Z,9.8nm,1.5s						
SNAA	Sanae	70.74	180	P	P	02 32 26.6	+3.3
	comp=Z,0.5nm,0.3s,baz=219,slow=6.5,SNR=11						
	comp=Z,0.5nm,0.3s						
VNA3	Neumayer Olymp	71.08	178	⇑P	P	02 32 28.8	+3.5
	comp=Z,1.2nm,0.4s						
PAF	Port-aux-Franc	71.54	221	P	P	02 32 29.8	+1.5
KSRS	Korea Array	87.40	323	P	P	02 33 54.5	+0.7
	comp=Z,0.7nm,0.6s,baz=144,slow=6.6,SNR=5.0						
	comp=Z,0.7nm,0.6s						
CMAR	Chiang Mai Arr	91.84	292	P	P	02 34 17.2	+2.3
	comp=Z,1.0nm,0.3s,baz=148,slow=2.7,SNR=6.0						
	comp=Z,1.0nm,0.3s						
PETK	Petropavlovsk-	92.10	349	P	P	02 34 14.9	-0.5
	comp=Z,1.0nm,0.6s,baz=182,slow=6.5,SNR=2.5						
	comp=Z,1.0nm,0.6s						
HHC	Hu-ho-hao-te	98.35	316	*e*P	Pdif	02 34 46.2	+1.9
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,79nm,4.5s						
KURBB	Kurchatov Arra	122.84	311	PKP	PKiKP	02 40 00.7	-0.5
	comp=Z,0.3nm,0.3s,baz=109,slow=1.6,SNR=5.9						
NRIK	Noril'sk	124.55	334	PKP	PKiKP	02 40 02.4	-1.6
	comp=Z,2.0nm,0.6s,baz=97,slow=1.9,SNR=4.0						
ARCES	ARCESS Array B	144.70	343	PKP	PKPdf	02 40 40.8	-0.4
	comp=Z,4.4nm,0.6s,baz=51,slow=3.1,SNR=36						
MMAI	Mount Meron Ar	148.19	273	PKPbc	PKPab	02 40 52.9	-2.5
	comp=Z,0.4nm,0.4s,baz=185,slow=3.1,SNR=3.8						
DBIC	Dimbokro	148.89	177	PKPbc	PKPab	02 40 56.0	-2.4
	comp=Z,6.8nm,0.5s,baz=200,slow=3.3,SNR=7.3						
FINES	FINESS Array B	150.15	332	PKPbc	PKiKP	02 40 55.6	-0.7
	comp=Z,3.2nm,0.6s,baz=40,slow=3.1,SNR=16						
BRTR	Keskin Array B	151.22	285	PKPbc	PKiKP	02 40 58.9	-0.6
	comp=Z,0.2nm,0.4s,baz=164,slow=5.0,SNR=3.7						
AKASG	Malin Array Be	153.61	310	PKPbc	PKiKP	02 41 02.8	-1.0
	comp=Z,0.3nm,0.4s,baz=77,slow=1.7,SNR=4.4						
NOA	NORSAR Array B	155.08	343	PKP	PKPdf	02 40 58.2	+0.6
	comp=Z,0.6nm,0.8s,baz=40,slow=4.7,SNR=3.3						
HFS	Hagfors	155.23	339	PKP	PKPdf	02 40 58.7	+0.9
	comp=Z,1.4nm,0.8s,baz=337,slow=6.4,SNR=5.0						

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*NEIC **04** 02:23:58.4±1.0, 35°.266N±0°.008×97°.754W±0°.010, h4^{km}±2^{km}, ML1.7/3, ML1.6/31, Error ellipse: s-maj=1.2km s-min=1.2km az=105.0*

NEIC 04 02:23:59.7±2.7**, 35°.292N**±0°.010×**97°.830W**±0°.010**, h7^{km}±1^{km}, Error ellipse: s-maj=1.4km s-min=1.2km az=174.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNO	Franklin	0.35	96	Pg	Pg	02 24 05.5	-1.1
FNO				Sg	Sg	02 24 09.1	-2.2
OK004	Okla Sci Mus	0.37	51		Pg	02 24 06.0	-0.9
BCOK	Bluff Creek, N	0.41	26		Pg	02 24 07.1	-0.5
OK029	Liberty Lake	0.59	31	Pg	Pg	02 24 10.2	-0.9
OK029				Sg	Sg	02 24 18.4	-0.4
OK029				IAML		02 24 18.5	
	35nm,0.4s						
OK029				IAML		02 24 21.3	
	28nm,0.4s						
X34A	Smith Ranch, M	0.69	180	Pg	Pg	02 24 11.5	-1.4
X34A				Sg	Sg	02 24 21.7	-0.2
X34A				IAML		02 24 21.9	
	comp=N,49nm,0.4s						
X34A				IAML		02 24 25.6	
	comp=E,22nm,0.4s						
CSTR	Hydro, Custer	0.79	297		Pg	02 24 14.9	+0.1
CSTR					Sb	02 24 26.6	-0.1
WMOK	Wichita Mounta	0.96	235	Pg	Pg	02 24 16.2	-1.9
WMOK					Sg	02 24 30.1	-0.3
CROK	Carrier	1.22	354	Pg	Pg	02 24 21.5	-1.6
QUOK	Quay	1.27	46	Pg	Pn	02 24 21.0	-2.9
OK038	West end E0370	1.40	328		Pn	02 24 25.3	-0.4
OK051	E0350 and S346	1.46	33		Pn	02 24 26.0	-0.5
WTFS	Witchita Falls	1.61	199		Pn	02 24 27.3	-1.2
TUL3	Leonard	1.77	69		Pn	02 24 29.5	-1.3
SMWD	Samnorwood	1.98	265	Pn	Pn	02 24 34.3	+0.5

KRSC 04 02:37:16.2±0.9**, 56°.00N×164°.28E, h15^{km}±15^{km}, Ml3.7, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.84	285	*e*P	Pb	02 37 32.1	-0.4
KBTR				*e*S	Sg	02 37 42.9	-0.7
KBG	Krutoberegovo	0.92	287	*e*P	Pb	02 37 32.9	-0.9
KBG				*e*S	Sb	02 37 44.6	-1.2
BKI	Bering	1.25	129	*i* P	Pb	02 37 39.7	+0.3
BKI				*e*S	Sg	02 37 56.2	-0.3
SMKR	Semkarok	1.67	292	*e*P	Pn	02 37 44.9	0.0
ZLN	Zelenaya	1.95	272	*e*P	Pb	02 37 50.8	-0.7
CIRR	Tsirk	1.98	275	*e*P	Pn	02 37 50.5	+1.2
BZGR	Bezymyannyi-Gr	2.01	270	*e*P	Pb	02 37 51.7	-0.9
MKZ	Mys Kozlova	2.05	226	*e*P	Pb	02 37 52.4	-0.7
MKZ				*e*S	Sb	02 38 17.6	-0.8
KRSR	Krestovskiy	2.09	278	*e*P	Pn	02 37 51.6	+0.9
BZWR	Bezymyannyi-We	2.12	271	*e*P	Pb	02 37 53.3	-1.2
KIRR	Kirishev	2.21	270	*e*P	Pb	02 37 54.6	-1.3
KPT	Kopyto	2.28	271	*e*P	Pb	02 37 55.6	-1.4
KMNR	Kamenistaya	2.29	266	*e*P	Pb	02 37 56.2	-1.1
TUMD	Tumrok D	2.34	252	*e*P	Pb	02 37 56.9	-1.2
TUMD				*e*S	Sb	02 38 26.0	-0.8
KOZ	Kozyrevsk	2.47	273	*e*P	Pb	02 37 58.6	-1.7
SRDR	Sredinnyy	2.57	279	*e*P	Pn	02 37 59.2	+1.9
ESO	Esso	3.14	271	*e*P	Pn	02 38 08.0	+2.9
KII	Karymskiy	3.41	237	*e*P	Pb	02 38 12.8	-3.4
SDLR	Sedlovina	4.15	231	*e*P	Pn	02 38 22.4	+3.3
SMAR	Somma	4.20	232	*e*P	Pn	02 38 23.0	+3.2
AVH	Avacha	4.23	232	*e*P	Pn	02 38 23.6	+3.6
UGLR	Uglovaya	4.23	231	*e*P	Pn	02 38 24.0	+3.9
KOK	Koryaka	4.25	233	*e*P	Pn	02 38 25.4	+4.9
GNL	Ganaly	4.33	240	*e*P	Pn	02 38 25.3	+3.8
RUS	Russkaya	4.92	226	*e*P	Pn	02 38 33.2	+3.7
GRL	Gorelyy	5.01	229	*e*P	Pn	02 38 35.0	+4.0
MTVR	Mutnovka	5.02	228	*e*P	Pn	02 38 35.1	+4.1
ASAK	Asacha	5.21	229	*e*P	Pn	02 38 37.4	+3.8
KDTR	Khodutka, Kamc	5.57	224	*e*P	Pn	02 38 41.5	+3.1

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*IDC **04** 02:50:39.2±2.1, 50°.47N×159°.86E, h0^{km}, mb3.8/6, mbtmp3.7/7, ML2.4/1, MS2.8/3, Error ellipse: s-maj=49.0km s-min=23.3km az=15.0*

*KRSC **04** 02:50:40.3±1.6, 50°.55N×160°.14E, h46^{km}±24^{km}, Ml3.8*

*NEIC **04** 02:50:41.1±0.9, 50°.5N±0°.1×159°.8E±0°.1, h10^{km}±1^{km}, mb4.1/22, Error ellipse: s-maj=18.9km s-min=14.2km az=194.0*

ISC 04 02:50:44.4±0.8**, 50°.51N**±0°.07×**159°.94E**±0°.06**, h35^{km}, n67,** σ1^{s}**11**/73**, mb4.0**/18**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	1.75	319	*e*P	Pn	02 51 11.0	-1.2
KDTR				*e*S	Sn	02 51 32.4	-0.9
RUS	Russkaya	2.12	336	*e*P	Pn	02 51 15.8	-1.5
RUS				*e*S	Sn	02 51 41.4	-1.0
PAU	Pauzhetka	2.20	297	*e*P	Pn	02 51 18.2	-0.2
MTVR	Mutnovka	2.26	332	*e*P	Pn	02 51 18.2	-1.1
MTVR				*e*S	Sn	02 51 45.6	-0.4
ASAK	Asacha	2.27	326	*e*P	Pn	02 51 18.3	-1.1
GRL	Gorelyy	2.35	331	*e*P	Pn	02 51 20.4	-0.2
SKR	Severo-Kuril's	2.44	275	*e*P	Pn	02 51 20.0	-1.7
KRMR	Karymshinskiy	2.58	335	*e*S	Sn	02 51 53.5	-0.2
SPN	Mys Shipunski	2.59	1	*e*P	Pn	02 51 22.2	-1.6
SPN				*e*S	Sn	02 51 52.0	-2.0
DALK	Dalny	2.63	344	*e*P	Pn	02 51 23.1	-1.2
DALK				*e*S	Sn	02 51 53.8	-1.2
PET	Petropavlovsk	2.64	343	Pn	Pn	02 51 23.6	-0.9
PET	Petropavlovsk	2.64	343	*e*S	Sn	02 51 54.0	-1.2
MIPR	Malaya Ipel'ka	2.67	313	*e*P	Pn	02 51 24.3	-0.5
NLC	Nalytchevo	2.69	352	*e*P	Pn	02 51 24.9	-0.2
UGLR	Uglovaya	2.79	346	*e*P	Pn	02 51 26.8	+0.2
SMAR	Somma	2.84	346	*e*P	Pn	02 51 27.9	+0.4
SDLR	Sedlovina	2.85	347	*e*P	Pn	02 51 26.5	-0.9
AVH	Avacha	2.86	345	*e*P	Pn	02 51 28.1	+0.6
KRER	Koryakskii	2.89	346	*e*P	Pn	02 51 28.2	+0.1
KOK	Koryaka	2.90	344	*e*P	Pn	02 51 27.0	-1.1
PEA0B	Petropavlovsk-	2.95	333		Pn	02 51 26.6	-2.1
PETK	Petropavlovsk-	2.95	333	Pn	Pn	02 51 27.5	-1.2
	2.8nm,0.3s,baz=134,slow=16,SNR=20						
PETK				Sn	Sn	02 52 04.0	+1.2
	2.8nm,0.3s,baz=118,slow=26,SNR=5.5						
PETK				LR	LR	02 52 50.0	
	comp=Z,81nm,21.7s,baz=120,slow=44						
	10nm,0.6s						
KRX	Arik	2.96	345	*e*P	Pn	02 51 29.0	0.0
APC	Apacha	2.97	325	*e*P	Pn	02 51 29.4	+0.4
APC				*e*S	Sn	02 52 05.7	+2.3
GNL	Ganaly	3.42	340	*e*P	Pn	02 51 35.7	+0.4
KII	Karymskiy	3.54	355	*e*P	Pn	02 51 36.7	-0.2
MKZ	Mys Kozlova	4.20	14	*e*P	Pn	02 51 44.0	-1.8
TUMD	Tumrok D	4.71	3	*e*P	Pn	02 51 52.4	-0.5
TUMD				*e*S	Sn	02 52 44.5	-1.7
KMNR	Kamenistaya	5.26	2	*e*P	Pn	02 52 00.9	+0.4
KPT	Kopyto	5.47	2	*e*P	Pn	02 52 03.1	-0.3
BKI	Bering	5.95	36	*e*P	Pn	02 52 07.3	-2.5
KBTR	Krutoberegovo	5.96	16	*e*P	Pn	02 52 09.2	-0.8
SHEM	Shemya Is, Ala	9.09	70	Pn	Pn	02 52 51.7	-1.1
SMY	Shemya	9.09	70	Pn	Pn	02 52 51.7	-1.1
MA2	Magadan	10.49	334	LR	LR	02 57 05.4	
	comp=Z,43nm,19.7s,baz=138,slow=37						
USA0B	Ussuriysk Arra	19.89	262	P	P	02 55 10.3	-2.2
TIXI	Tiksi	25.41	338	P	P	02 56 08.0	-0.2
TIXI	Tiksi	25.41	338	LR	LR	03 06 10.7	
	comp=Z,39nm,19.1s,baz=16,slow=37						
K17K	Iditarod	25.50	45	P	P	02 56 08.6	-0.5
K17K				IAmb	IAmb	02 56 32.7	
	comp=Z,4.0nm,1.1s						
N17K	Nushagak Hills	25.80	51	P	P	02 56 12.7	+1.0
N17K				IAmb	IAmb	02 56 16.9	
	comp=Z,4.0nm,1.1s						
G18K	Tagagawik	26.05	38	P	P	02 56 14.9	+0.9
C18K	Utukok River	26.07	32	P	P	02 56 15.1	+0.9
C18K				IAmb	IAmb	02 56 19.3	
	comp=Z,4.0nm,1.1s						
L18K	Granite Mounta	26.18	47	P	P	02 56 16.8	+1.6
L18K				IAmb	IAmb	02 56 40.6	
	comp=Z,4.6nm,1.2s						
N18K	Kilae Creek	26.44	50	P	P	02 56 18.9	+1.3
N18K				IAmb	IAmb	02 56 27.8	
	comp=Z,5.9nm,1.2s						
O18K	Koktuh Hills	26.76	52	P	P	02 56 21.4	+0.9
O18K				IAmb	IAmb	02 57 04.0	
	comp=Z,5.5nm,1.2s						
H19K	Roundabout Mou	26.84	40	P	P	02 56 20.6	-0.5
J19K	Poorman	26.90	43	P	P	02 56 22.9	+1.2
J19K				IAmb	IAmb	02 56 49.2	
	comp=Z,6.4nm,1.5s						
J20K	Nowinta River	27.57	43	P	P	02 56 28.1	+0.4
J20K				IAmb	IAmb	02 56 29.3	
	comp=Z,4.7nm,1.3s						
B20K	Meade River	27.93	30	P	P	02 56 31.5	+0.8
G21K	Allakaket	28.22	38	P	P	02 56 34.6	+1.1
H21K	Melozitna Rive	28.35	40	P	P	02 56 35.6	+1.0
CNPM	China Poot	28.79	53	P	P	02 56 39.9	+1.3
NEA2	Nenana	29.80	42	P	P	02 56 48.5	+1.0
NEA2				IAmb	IAmb	02 56 49.7	
	comp=Z,2.8nm,0.6s						
SML	Sawmill	30.10	48	P	P	02 56 50.9	+0.7
SML				IAmb	IAmb	02 56 52.7	
	comp=Z,4.9nm,0.8s						
C24K	Franklin Bluff	30.64	32	P	P	02 56 56.0	+1.1
ILAR	Eielson Array	30.75	42	P	P	02 56 56.1	+0.2
	comp=Z,0.9nm,0.7s,baz=247,slow=7.7,SNR=15						
	comp=Z,0.9nm,0.7s						
K27K	Chicken	32.85	43	P	P	02 57 15.5	+1.2
K27K				IAmb	IAmb	02 57 16.1	
	comp=Z,3.1nm,0.9s						
YKA	Yellowknife Ar	45.16	41	P	P	02 58 57.8	+0.7
	comp=Z,0.5nm,0.8s,baz=300,slow=8.1,SNR=5.2						
	comp=Z,0.5nm,0.8s						
KURBB	Kurchatov Arra	49.15	304	P	P	02 59 28.4	+0.1
	comp=Z,0.9nm,0.7s,baz=64,slow=8.0,SNR=5.4						
	comp=Z,0.9nm,0.7s						
MKAR	Makanchi Array	49.23	298	P	P	02 59 29.0	-0.1
BVAR	Borovoye Array	51.95	310	P	P	02 59 48.9	-0.5
	comp=Z,1.1nm,0.6s,baz=45,slow=6.3,SNR=3.0						
	comp=Z,1.1nm,0.6s						
MZP	Montezuma Peak	57.77	68	P	P	03 00 32.3	+0.1
MZP				IAmb	IAmb	03 00 35.5	
	comp=Z,1.3nm,0.7s						
PDAR	Pinedale Array	58.90	59	P	P	03 00 40.9	+1.0
	comp=Z,0.9nm,0.8s,baz=329,slow=2.6,SNR=6.0						
	comp=Z,0.9nm,0.8s						
ABKAR	Akbulak array	59.42	311	P	P	03 00 42.9	-0.2
CPRX	Cap Rock	68.92	64	P	P	03 01 48.3	+2.5
TXAR	Lajitas Array	71.75	66	P	P	03 02 03.2	+0.1
	comp=Z,0.9nm,0.6s,baz=290,slow=4.8,SNR=7.0						
	comp=Z,0.9nm,0.6s						
WB0	Warramunga Arr	73.52	205	P	P	03 02 13.3	-0.1

IDC 04 02:53:01.1±2.2**, 5°.70S×130°.88E, h0^{km}, mb4.0**/2**, mbtmp3.9**/5**, ML4.0**/3**, MS3.2**/2**, Error ellipse: s-maj=110.1km s-min=25.5km az=78.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	11.10	273	LR	LR	03 00 00.3	
	comp=Z,50nm,18.3s,baz=82,slow=38						
FITZ	Fitzroy Crossi	13.34	202	Pn	Pn	02 56 11.1	-0.8
	0.6nm,0.3s,baz=29,slow=11,SNR=16						
FITZ				Sn	Sn	02 58 20.9	-20
	1.1nm,0.3s,baz=241,slow=16,SNR=7.8						
	1.5nm,0.3s						
WRA	Warramunga Arr	14.55	167	Pn	Pn	02 56 29.0	+0.5
	0.7nm,0.3s,baz=349,slow=11,SNR=6.8						
WRA				Sn	Sn	02 58 54.2	-16
	0.9nm,0.3s,baz=337,slow=21,SNR=9.2						
	0.5nm,0.5s						
ASAR	Alice Springs	18.10	171	P	Pn	02 57 14.2	0.0
	0.7nm,0.3s,baz=350,slow=10,SNR=35						
ASAR				S	Sn	03 00 23.6	-13
	0.5nm,0.5s,baz=352,slow=28,SNR=5.1						
	2.0nm,0.5s						
SONM	Songino Array	57.50	341	LR	LR	03 30 00.7	
	comp=Z,38nm,19.1s,baz=122,slow=39						
MKAR	Makanchi Array	67.63	326	P	P	03 04 00.3	+0.4
	1.8nm,0.6s,baz=122,slow=8.2,SNR=18						
	1.8nm,0.6s						
KURBB	Kurchatov Arra	71.87	328	P	P	03 04 25.4	-0.5
	0.4nm,0.6s,baz=124,slow=4.6,SNR=5.0						
	0.4nm,0.6s						

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*IDC **04** 03:02:32.6±0.7, 50°.48N×159°.89E, h0^{km}, mb4.0/19, mbtmp4.0/23, ML3.6/3, MS2.8/4, Error ellipse: s-maj=17.8km s-min=13.5km az=161.0*

*KRSC **04** 03:02:33.7±2.1, 50°.52N×160°.04E, h63^{km}±39^{km}, Ml4.4*

*NEIC **04** 03:02:35.3±1.1, 50°.60N±0°.09×159°.9E±0°.1, h10^{km}±1^{km}, mb4.4/47, Error ellipse: s-maj=16.3km s-min=10.7km az=196.0*

*MOS **04** 03:02:37.8±0.9, 50°.64N×159°.82E, h49^{km}, mb4.6/12, Error ellipse: s-maj=10.3km s-min=3.5km az=97.3*

ISC 04 03:02:38.6±1.2**, 50°.56N**±0°.06×**159°.92E**±0°.05**, h40^{km}**±10^{km}**, n168,** σ1^{s}**13**/150**, mb4.3**/52**, 5C, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	1.71	318	PN	Pn	03 03 04.0	-1.7
KDTR				S	Sn	03 03 25.6	-0.7
KDTR	Khodutka, Kamc	1.71	318	*e*P	Pn	03 03 04.1	-1.7
KDTR				*e*S	Sn	03 03 25.6	-0.7
RUS	Russkaya	2.07	335	PN	Pn	03 03 09.0	-1.8
RUS				S	Sn	03 03 34.4	-0.9
RUS	Russkaya	2.07	335	*e*P	Pn	03 03 09.1	-1.8
RUS				*e*S	Sn	03 03 34.4	-0.9
PAU	Pauzhetka	2.16	296	PN	Pn	03 03 10.8	-1.2
PAU				S	Sn	03 03 36.7	-0.8
PAU	Pauzhetka	2.16	296	*e*P	Pn	03 03 10.8	-1.2
PAU				*e*S	Sn	03 03 36.8	-0.8
MTVR	Mutnovka	2.21	331	PN	Pn	03 03 11.5	-1.4
MTVR				S	Sn	03 03 38.8	-0.2
MTVR	Mutnovka	2.21	331	*e*P	Pn	03 03 11.5	-1.4
MTVR				*e*S	Sn	03 03 38.9	-0.2
ASAK	Asacha	2.22	326	PN	Pn	03 03 11.9	-1.0
ASAK				S	Sn	03 03 39.4	+0.3
ASAK	Asacha	2.22	326	*e*P	Pn	03 03 12.0	-1.0
ASAK				*e*S	Sn	03 03 39.4	+0.3
SKR	Severo-Kuril's	2.42	274	PN	Pn	03 03 13.2	-2.4
SKR				S	Sn	03 03 41.0	-3.0
SKR	Severo-Kuril's	2.42	274	*e*P	Pn	03 03 13.3	-2.4
SKR				*e*S	Sn	03 03 41.0	-3.0
KRMR	Karymshinskiy	2.53	335	PN	Pn	03 03 16.0	-1.1
KRMR				S	Sn	03 03 46.9	+0.2
KRMR	Karymshinskiy	2.53	335	*e*P	Pn	03 03 16.0	-1.1
KRMR				*e*S	Sn	03 03 47.0	+0.2
SPN	Mys Shipunski	2.54	1	PN	Pn	03 03 15.5	-1.8
SPN				S	Sn	03 03 45.1	-1.9
SPN	Mys Shipunski	2.54	1	*e*P	Pn	03 03 15.6	-1.8
SPN				*e*S	Sn	03 03 45.2	-1.9
DALK	Dalny	2.58	344	PN	Pn	03 03 16.4	-1.3
DALK				S	Sn	03 03 47.1	-0.7
DALK	Dalny	2.58	344	*e*P	Pn	03 03 16.5	-1.3
DALK				*e*S	Sn	03 03 47.1	-0.7
PET	Petropavlovsk	2.59	343	Pn	Pn	03 03 16.2	-1.7
PET					Sn	03 03 47.4	-0.7
PET	Petropavlovsk	2.59	343	*i* PN	Pn	03 03 16.4	-1.5
PET	Petropavlovsk	2.59	343	*e*P	Pn	03 03 16.5	-1.4
PET				*e*S	Sn	03 03 47.5	-0.7
MIPR	Malaya Ipel'ka	2.62	312	PN	Pn	03 03 17.8	-0.6
MIPR	Malaya Ipel'ka	2.62	312	*e*P	Pn	03 03 17.8	-0.6
NLC	Nalytchevo	2.64	353	PN	Pn	03 03 17.4	-1.1
NLC				S	Sn	03 03 49.4	+0.1
NLC	Nalytchevo	2.64	353	*e*P	Pn	03 03 17.5	-1.1
NLC				*e*S	Sn	03 03 49.5	+0.1
UGLR	Uglovaya	2.74	346	PN	Pn	03 03 18.9	-1.2
UGLR	Uglovaya	2.74	346	*e*P	Pn	03 03 18.9	-1.2
SDLR	Sedlovina	2.80	347	PN	Pn	03 03 19.5	-1.4
SDLR	Sedlovina	2.80	347	*e*P	Pn	03 03 19.5	-1.4
AVH	Avacha	2.81	345	PN	Pn	03 03 20.7	-0.3
AVH	Avacha	2.81	345	*e*P	Pn	03 03 20.8	-0.3
KRER	Koryakskii	2.84	346	PN	Pn	03 03 21.1	-0.5
KRER	Koryakskii	2.84	346	*e*P	Pn	03 03 21.1	-0.5
KOK	Koryaka	2.85	344	PN	Pn	03 03 20.8	-0.8
KOK	Koryaka	2.85	344	*e*P	Pn	03 03 20.8	-0.8
PEA0B	Petropavlovsk-	2.90	333		Pn	03 03 21.9	-0.3
PEA0B	Petropavlovsk-	2.90	333	*ce*PN	Pn	03 03 21.8	-0.4
PETK	Petropavlovsk-	2.90	333		Pn	03 03 20.3	-1.9
PETK	Petropavlovsk-	2.90	333	Pn	Pn	03 03 21.1	-1.1
	6.0nm,0.3s,baz=136,slow=16,SNR=52						
PETK				Sn	Sn	03 03 56.5	+0.7
	9.1nm,0.3s,baz=298,slow=16,SNR=8.4						
	22nm,0.6s						
KRX	Arik	2.91	345	PN	Pn	03 03 21.3	-1.1
KRX	Arik	2.91	345	*e*P	Pn	03 03 21.4	-1.1
APC	Apacha	2.92	325	PN	Pn	03 03 22.0	-0.5
APC	Apacha	2.92	325	*e*P	Pn	03 03 22.1	-0.5
GNL	Ganaly	3.37	340	PN	Pn	03 03 28.2	-0.5
GNL	Ganaly	3.37	340	*e*P	Pn	03 03 28.3	-0.5
KII	Karymskiy	3.50	355	PN	Pn	03 03 29.9	-0.5
KII				S	Sn	03 04 10.5	0.0
KII	Karymskiy	3.50	355	*e*P	Pn	03 03 29.9	-0.5
KII				*e*S	Sn	03 04 10.6	0.0
MKZ	Mys Kozlova	4.15	15	PN	Pn	03 03 37.3	-2.0
MKZ				S	Sn	03 04 23.7	-2.9
MKZ	Mys Kozlova	4.15	15	*e*P	Pn	03 03 37.4	-2.0
MKZ				*e*S	Sn	03 04 23.8	-2.9
TUMD	Tumrok D	4.66	3	PN	Pn	03 03 45.7	-0.7
TUMD				S	Sn	03 04 37.7	-1.5
TUMD	Tumrok D	4.66	3	*e*P	Pn	03 03 45.7	-0.7
TUMD				*e*S	Sn	03 04 37.7	-1.5
KMNR	Kamenistaya	5.21	2	PN	Pn	03 03 54.5	+0.5
KMNR	Kamenistaya	5.21	2	*e*P	Pn	03 03 54.6	+0.5
BZMR	Bezymyannaya	5.40	3	PN	Pn	03 03 57.1	+0.5
BZMR	Bezymyannaya	5.40	3	*e*P	Pn	03 03 57.1	+0.5
KIRR	Kirishev	5.41	3	PN	Pn	03 03 57.1	+0.3
KIRR	Kirishev	5.41	3	*e*P	Pn	03 03 57.1	+0.3
BZGR	Bezymyannyi-Gr	5.41	5	PN	Pn	03 03 56.9	+0.2
BZGR	Bezymyannyi-Gr	5.41	5	*e*P	Pn	03 03 56.9	+0.2
KPT	Kopyto	5.42	2	PN	Pn	03 03 57.1	+0.3
KPT	Kopyto	5.42	2	*e*P	Pn	03 03 57.2	+0.3
ESO	Esso	5.43	353	PN	Pn	03 03 57.0	+0.2
ESO	Esso	5.43	353	*e*P	Pn	03 03 57.1	+0.2
BZWR	Bezymyannyi-We	5.43	3	PN	Pn	03 03 57.9	+0.9
BZWR	Bezymyannyi-We	5.43	3	*e*P	Pn	03 03 57.9	+0.9
KOZ	Kozyrevsk	5.51	360	PN	Pn	03 03 58.8	+0.8
KOZ	Kozyrevsk	5.51	360	*e*P	Pn	03 03 58.8	+0.8
KBTR	Krutoberegovo	5.92	16	PN	Pn	03 04 02.1	-1.5
KBTR	Krutoberegovo	5.92	16	*e*P	Pn	03 04 02.2	-1.5
KBTR				*e*S	Sn	03 05 07.4	-2.6
BKI	Bering	5.92	36	PN	Pn	03 04 00.8	-2.8
BKI	Bering	5.92	36	*e*P	Pn	03 04 00.9	-2.8
BKI				*e*S	Sn	03 05 02.7	-7.4
SMKR	Semkarok	6.11	8	PN	Pn	03 04 05.8	-0.4
SMKR	Semkarok	6.11	8	*e*P	Pn	03 04 05.8	-0.4
SHEM	Shemya Is, Ala	9.08	71	Pn	Pn	03 04 45.0	-2.0
	4.6nm,0.3s,baz=244,slow=8.3,SNR=4.3						
SHEM				Sn	Sn	03 06 18.0	-10
	4.2nm,0.3s,baz=194,slow=24,SNR=8.1						
	38nm,0.6s						
MA2	Magadan	10.44	333	LR	LR	03 09 59.4	
	comp=Z,28nm,18.1s,baz=142,slow=43						
ERM	Erimo	14.37	240	*i* P	Pn	03 06 00.4	+1.2
BILL	Bilibino	17.81	8	P	Pn	03 06 43.0	-0.1
BILL	Bilibino	17.81	8	*i* P	Pn	03 06 45.0	+2.0
KLR	Kul'dur	18.16	277	P	P	03 06 46.5	-0.9

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             0.1nm,0.3s,baz=62,slow=10,SNR=5.7
KLR                                  LR      LR      03 14 24.9
             comp=Z,32nm,19.4s,baz=48,slow=39
             1.5nm,0.7s
KLR    Kul'dur           18.16 277  iP       P       03 06 48.2 +0.9
KLR                                  pmax    pmax
             comp=Z,7.0nm,2.5s
USRK   Ussuriysk Ar.     19.88 262   P       P       03 07 04.9 -1.3
             comp=Z,0.6nm,0.5s,baz=83,slow=12,SNR=1.8
YAK    Yakutsk           20.11 316   LR      LR      03 14 48.9
             comp=Z,26nm,20.5s,baz=45,slow=36
YAK    Yakutsk           20.11 316  eP       P       03 07 06.7 -1.9
YAK                                 eS       S       03 10 49.0 -3.0
YAK                                 e                03 11 20.7
YAK                                 e                03 18 34.9
YAK                                  pmax    pmax
             comp=Z,22nm,0.9s
YAK                                  pmax    pmax
             comp=E,4.0nm,1.1s
YAK                                  smax    smax
             comp=N,18nm,2.2s
ZEA    Zeya              20.20 292  iP       P       03 07 09.2 -0.4
MJA0   Matsu Arr-Jizo    20.94 236  eP       P       03 07 20.4 +2.6
MJA0                                 pmax    pmax
             comp=Z,2.0nm,0.8s
MJAR   Matsushiro Arr    20.96 236   P       P       03 07 18.1 +0.1
             comp=Z,1.2nm,0.7s,baz=47,slow=6.9,SNR=5.2
             comp=Z,1.2nm,0.7s
TIXI   Tiksi             25.36 338           P       03 08 01.9 +0.5
TIXI   Tiksi             25.36 338   P       P       03 08 01.9 +0.5
             comp=Z,14nm,0.6s,baz=134,slow=6.4,SNR=29
TIXI                                 LR      LR      03 17 50.0
             comp=Z,26nm,19.8s,baz=29,slow=36
             comp=Z,14nm,0.6s
TIXI   Tiksi             25.36 338  iP       P       03 08 01.2 -0.2
TIXI                                 pmax    pmax
             comp=Z,18nm,0.8s
M17K   Holitna River     25.72  49   P       P       03 08 05.2 +0.4
M17K                                 IAmb    IAmb    03 08 08.0
             comp=Z,7.3nm,0.8s
KSRS   Korea Array       26.25 252   P       P       03 08 10.3 +0.6
             comp=Z,1.3nm,0.8s,baz=47,slow=9.3,SNR=4.3
             comp=Z,1.3nm,0.8s
KSRS   Korea Array       26.25 252  eP       P       03 08 14.5 +4.8
KSRS                                 pmax    pmax
             comp=Z,1.0nm,0.8s
G19K   Purcell Mounta    26.70  38   P       P       03 08 13.4 -0.2
H19K   Roundabout Mou    26.81  40           P       03 08 14.1 -0.4
H19K                                 IAmb    IAmb    03 08 15.9
             comp=Z,5.1nm,0.9s
J19K   Poorman           26.88  43   P       P       03 08 15.5 +0.3
J20K   Nowinta River     27.54  43   P       P       03 08 21.6 +0.5
G21K   Allakaket         28.20  38   P       P       03 08 26.9 -0.1
G21K                                 IAmb    IAmb    03 08 49.6
             comp=Z,7.4nm,1.5s
H21K   Melozitna Rive    28.33  40   P       P       03 08 28.9 +0.7
H21K                                 IAmb    IAmb    03 08 29.6
             comp=Z,3.9nm,0.8s
I21K   Tanana            28.60  41   P       P       03 08 31.7 +1.2
MLY    Manley            29.10  41   P       P       03 08 36.0 +0.9
NEA2   Nenana            29.78  42   P       P       03 08 41.8 +0.8
NEA2                                 IAmb    IAmb    03 08 43.0
             comp=Z,5.0nm,0.6s
E23K   Chandalar         29.97  35   P       P       03 08 43.6 +0.8
E23K                                 IAmb    IAmb    03 09 16.7
             comp=Z,11nm,1.5s
SML    Sawmill           30.08  48   P       P       03 08 44.1 +0.4
WRH    Wood River Hil    30.20  43   P       P       03 08 45.5 +0.8
WRH                                  IAmb    IAmb    03 08 46.6
             comp=Z,3.4nm,0.8s
CCB    Clear Creek Bu    30.33  42           P       03 08 46.5 +0.7
E24K   Your Creek        30.39  36   P       P       03 08 46.9 +0.5
E24K                                 IAmb    IAmb    03 08 48.1
             comp=Z,3.2nm,0.8s
POKR   Poker Plat Res    30.51  41   P       P       03 08 47.9 +0.4
G24K   Hadweenzic Riv    30.61  38           P       03 08 49.4 +1.1
G24K                                 IAmb    IAmb    03 08 50.2
             comp=Z,4.5nm,0.8s
HDA    Harding Lake      30.69  43   P       P       03 08 49.6 +0.6
HDA                                  IAmb    IAmb    03 08 50.2
             comp=Z,3.2nm,0.5s
IL31                     30.73  42   P       P       03 08 49.8 +0.5
IL31                                 IAmb    IAmb    03 08 50.0
             comp=Z,2.2nm,0.6s
ILAR   Eielson Array     30.73  42   P       P       03 08 49.4  0.0
             comp=Z,1.7nm,0.7s,baz=250,slow=7.9,SNR=28
             comp=Z,1.7nm,0.7s
K24K   Donnelly Dome     31.20  44   P       P       03 08 53.8 +0.2
K24K                                 IAmb    IAmb    03 08 54.5
             comp=Z,5.6nm,0.8s
PRP    Porcupine Dome    31.32  41           P       03 08 55.3 +0.5
PRP                                  IAmb    IAmb    03 08 56.2
             comp=Z,3.8nm,0.9s
RIDG   Independent Ri    31.62  44   P       P       03 08 57.5 +0.2
RIDG                                 IAmb    IAmb    03 08 58.2
             comp=Z,7.6nm,1.1s
DOT    Dot Lake          31.97  44   P       P       03 09 00.6 +0.2
DOT                                  IAmb    IAmb    03 09 00.9
             comp=Z,2.4nm,0.6s
SCRK   Sand Creek        31.99  44           P       03 09 01.1 +0.4
SCRK                                 IAmb    IAmb    03 09 01.5
             comp=Z,2.3nm,0.7s
G26K   Porcupine Rive    32.08  38   P       P       03 09 02.5 +1.2
K27K   Chicken           32.83  44   P       P       03 09 08.2 +0.4
K27K                                 IAmb    IAmb    03 09 09.3
             comp=Z,5.6nm,0.8s
H27K   Steamboat Moun    32.97  39   P       P       03 09 08.9 -0.2
L27K   Beaver Creek,     33.02  45           P       03 09 10.2 +0.6
L27K                                 IAmb    IAmb    03 09 11.7
             comp=Z,4.9nm,0.8s
BCAR   Beaver Creek A    33.04  45   P       P       03 09 10.4 +0.7
I28M   Miner Creek       33.66  41   P       P       03 09 15.3 +0.1
DAWY   Dawson            34.00  43   P       P       03 09 18.2 +0.1
DAWY                                 IAmb    IAmb    03 09 21.3
             comp=Z,2.7nm,0.7s
G29M   Pine Creek        34.35  38   P       P       03 09 22.8 +1.8
G29M                                 IAmb    IAmb    03 09 24.0
             comp=Z,5.9nm,0.9s
L29M   L29M              34.68  45           P       03 09 25.5 +1.5
L29M                                 IAmb    IAmb    03 09 26.4
             comp=Z,5.9nm,0.8s
K29M   Barlow Dome       34.85  44   P       P       03 09 26.3 +0.7
EPYK   Eagle Plains      34.91  39   P       P       03 09 26.9 +1.0
MMPY   Sheldon Lake,     37.87  45   P       P       03 09 52.6 +1.5
YKA    Yellowknife Ar    45.13  41   P       P       03 10 50.6  0.0
             comp=Z,1.1nm,0.9s,baz=300,slow=8.4,SNR=11
             comp=Z,1.1nm,0.9s
YKA    Yellowknife Ar    45.13  41  eP       P       03 10 51.2 +0.7
YKA                                  pmax    pmax
             comp=Z,1.0nm,0.9s
KURK   Kurchatov         49.01 304           P       03 11 20.4 -0.5
KURK   Kurchatov         49.01 304ceP        P       03 11 21.1 +0.1
KURK                                 pmax    pmax
             comp=Z,3.0nm,0.6s
KURBB  Kurchatov Arra    49.11 304   P       P       03 11 21.2 -0.5
             comp=Z,2.3nm,0.6s,baz=62,slow=7.9,SNR=14
             comp=Z,2.3nm,0.6s
MK31   Makanchi Array    49.19 298  iP       P       03 11 22.4  0.0
MKAR   Makanchi Array    49.19 298   P       P       03 11 22.2 -0.2
             comp=Z,0.8nm,0.6s,baz=46,slow=7.0,SNR=7.0
             comp=Z,0.8nm,0.6s
SPITS  Spitsbergen Ar    49.62 351   P       P       03 11 25.4 +0.1
             comp=Z,5.0nm,0.8s,baz=36,slow=7.2,SNR=5.9
             comp=Z,5.0nm,0.8s
BVAR   Borovoye Array    51.91 310   P       P       03 11 42.5 -0.3
             comp=Z,3.4nm,0.6s,baz=55,slow=8.1,SNR=13
             comp=Z,3.4nm,0.6s
BRVK   Borovoye          51.94 310ceP        P       03 11 42.9 -0.1
BRVK                                 pmax    pmax
             comp=Z,3.0nm,0.7s
ARTI   Arti              55.31 318c iP       P       03 12 08.0 +0.4
ARTI                                 S       S       03 19 48.4  0.0
ARTI                                 SS      SS      03 23 30.1 -2.2
ARTI                                 pmax    pmax
             comp=Z,14nm,2.8s
ARCES  ARCESS Array B    55.67 342   P       P       03 12 10.5 +0.5
             comp=Z,1.8nm,0.9s,baz=38,slow=10,SNR=2.1
             comp=Z,1.8nm,0.9s
AAK    Ala-Archa         56.13 298ceP        P       03 12 14.9 +1.0
AAK                                  pmax    pmax
             comp=Z,2.0nm,1.0s
NVAR   Mina Array Bea    56.75  68   P       P       03 12 19.4 +0.9
             comp=Z,0.5nm,0.5s,baz=312,slow=7.0,SNR=1.4
             comp=Z,0.5nm,0.5s
KSH    Kashi             57.31 294   P       P       03 12 26.4 +4.1
KSH                                  pmax    pmax
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             comp=Z,3.0nm,0.6s
BW06   Boulder Array     58.88  59   P       P       03 12 34.1 +0.7
BW06                                 IAmb    IAmb    03 12 35.4
             comp=Z,2.8nm,1.0s
PD31   Pinedale Array    58.88  59   P       P       03 12 34.0 +0.6
PD31                                 IAmb    IAmb    03 12 35.4
             comp=Z,2.3nm,0.9s
PDAR   Pinedale Array    58.88  59   P       P       03 12 34.2 +0.8
PDAR   Pinedale Array    58.88  59   P       P       03 12 34.0 +0.6
             comp=Z,1.2nm,0.7s,baz=320,slow=3.9,SNR=11
             comp=Z,1.2nm,0.7s
AB31   Akbulak array     59.37 311           P       03 12 36.2 -0.2
AB31                                 IAmb    IAmb    03 12 37.3
             comp=Z,3.7nm,1.1s
ABKAR  Akbulak array     59.37 311   P       P       03 12 36.4  0.0
ABKAR                                IAmb    IAmb    03 12 37.3
             comp=Z,3.8nm,1.1s
BTK    Batken            59.91 298           P       03 12 40.8 +0.5
BTK    Batken            59.91 298   P       P       03 12 40.8 +0.5
BTK                                  pmax    pmax
             comp=Z,6.0nm,0.9s
RSSD   Black Hills       60.93  55           P       03 12 47.9 +0.5
RSSD   Black Hills       60.93  55   P       P       03 12 47.9 +0.5
RSSD                                 pmax    pmax
             comp=Z,5.0nm,0.7s
SIMJ   Simiganj          61.89 297           P       03 12 54.2 +0.4
PV18   Skein Mesa, Pa    62.32  63           P       03 12 56.6 -0.2
NIL    Nilore            62.89 291           P       03 13 01.2 +0.7
NIL    Nilore            62.89 291   P       P       03 13 01.2 +0.7
NIL                                  pmax    pmax
             comp=Z,8.0nm,1.0s
HFS    Hagfors           66.33 342   P       P       03 13 23.6 +1.1
             comp=Z,1.4nm,0.8s,baz=61,slow=8.9,SNR=1.7
             comp=Z,1.4nm,0.8s
AKASG  Malin Array Be    70.73 329   P       P       03 13 49.4 -0.6
             comp=Z,0.5nm,0.5s,baz=31,slow=6.6,SNR=1.9
             comp=Z,0.5nm,0.5s
AKBB   Malin Array Si    70.73 329  iP       P       03 13 49.9 -0.2
AKBB                                 pmax    pmax
             comp=Z,1.0nm,0.3s
KIV    Kislovodsk        71.22 317  eP       P       03 13 51.1 -2.2
KIV                                  pmax    pmax
             comp=Z,3.0nm,1.0s
KBZ    Khabaz            71.31 317   P       P       03 13 53.8 +0.2
             comp=Z,1.1nm,0.6s,baz=92,slow=6.3,SNR=4.0
             comp=Z,1.1nm,0.6s
KBZ    Khabaz            71.31 317  eP       P       03 13 53.8 +0.2
KBZ                                  pmax    pmax
             comp=Z,8.0nm,2.2s
TXAR   Lajitas Array     71.75  66   P       P       03 13 57.4 +0.7
             comp=Z,1.6nm,0.5s,baz=297,slow=4.4,SNR=18
             comp=Z,1.6nm,0.5s
WRA    Warramunga Arr    73.73 205   P       P       03 14 06.8 -1.4
             comp=Z,1.0nm,0.7s,baz=16,slow=6.0,SNR=4.3
             comp=Z,1.0nm,0.7s
ASAR   Alice Springs     77.40 204   P       P       03 14 28.2 -1.0
             comp=Z,0.5nm,0.6s,baz=17,slow=5.6,SNR=6.0
             comp=Z,0.5nm,0.6s
ASAR   Alice Springs     77.40 204  eP       P       03 14 27.4 -1.8
ASAR                                 pmax    pmax
             comp=Z,1.0nm,0.6s
ESDC   Sonseca Array     89.04 348   P       P       03 15 29.1 -0.1
             comp=Z,0.5nm,0.7s,baz=11,slow=3.3,SNR=3.6
             comp=Z,0.5nm,0.7s
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*AEIC **04** 03:10:32.1±1.0, 53°.09N±0°.06×167°.08W±0°.03, h26^{km}±7^{km}, Error ellipse: s-maj=9.0km s-min=1.2km az=162.0*

NEIC 04 03:10:32.8±1.2**, 53°.11N**±0°.06×**167°.08W**±0°.07**, h35**^{km}±2^{km}**, ML3.2**/12**, ML2.9**(AEIC)**, Error ellipse: s-maj=12.6km s-min=3.1km az=146.0, Fox Islands**

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Code   Station Name       Δ°   AZ°   Phase ID        Time      Res
                                     Op     ISC      h  m  s   ISC
OKFG   Magazine Ridge     0.58 301          Pn       03 10 44.2 -0.4
OKFG                                        Sn       03 10 53.2 +0.3
OKTU   Okmok Mt. Tuli     0.64 296          Pn       03 10 45.1 -0.4
MGOD   Makushin Gods      0.69  10          Pn       03 10 45.6 -0.6
MGOD                                        Sn       03 10 55.8  0.0
MAPS   Pakushin South     0.70   7          Pn       03 10 45.8 -0.5
MAPS                                        Sn       03 10 56.1 +0.2
OKNC   Okmok New Cone     0.71 299          Pn       03 10 46.2 -0.3
OKNC                                        Sn       03 10 56.3  0.0
MREP   Makushin Rep't     0.73  16          Pn       03 10 46.3 -0.4
MREP                                        Sn       03 10 56.3 -0.3
OKSP   Okmok Steeple      0.74 281          Pn       03 10 46.1 -0.8
OKSP                                        Sn       03 10 56.5 -0.4
UNV    Unalaska Valle     0.81  25          Pn       03 10 46.7 -1.1
UNV    Unalaska Valle     0.81  25          Sn       03 10 57.9 -0.6
MTBL   Makushin Table     0.89  15          Pn       03 10 48.9 -0.1
MTBL                                        Sn       03 11 01.0 +0.3
NIKH   Nikolski High      1.08 263          Pn       03 10 50.7 -0.8
NIKH                                 IAML            03 11 05.2
             comp=N,584nm,0.8s
NIKH                                 IAML            03 11 07.1
             comp=E,531nm,0.6s
AKMO   Akutan Morgan      1.17  33          Pn       03 10 52.6 -0.1
ZRO    Akutan Zero        1.18  33          Pn       03 10 52.9 +0.1
AKRB   Akutan Reef Bi     1.18  30          Pn       03 10 52.9  0.0
AKBBA  Akutan Broad B     1.20  34          Pn       03 10 52.7 -0.5
LVA    Lava Point         1.22  30          Pn       03 10 53.6 +0.2
LVA    Lava Point         1.22  30   IAML            03 11 20.1
             comp=E,390nm,0.4s
AKGG   Akutan Green G     1.27  30          Pn       03 10 54.3 +0.3
AKUT   Akutan             1.29  37          Pn       03 10 53.8 -0.5
AKUT   Akutan             1.29  37   IAML            03 11 13.3
             comp=E,246nm,0.4s
WEBT   Westdahl Beart     2.02  42          Pn       03 11 05.3 +0.8
ISLZ   Isanotski Laza     2.57  50          Pn       03 11 13.2 +1.2
P08K   Saint George I     3.78 339   Pn     Pn       03 11 29.4 +1.0
P08K                                 IAML            03 13 39.5
             comp=E,36nm,1.1s
S12K   Black Hills        3.92  46   Pn     Pn       03 11 32.0 +1.6
S12K                                 IAML            03 12 41.6
             comp=N,34nm,0.8s
ATKA   Atka Island        4.43 261   Pn     Pn       03 11 38.7 +1.3
SPIA   Saint Paul Isl     4.46 337   Pn     Pn       03 11 37.5 -0.4
CNBA   Chernabura Isl     4.74  66   Pn     Pn       03 11 41.2 -0.5
O14K   Tigyukauivet M     6.96  25   Pn     Pn       03 12 14.3 +2.2
M11K   Mekoryuk           7.31   3   Pn     Pn       03 12 17.4 +0.6
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*SJA **04** 03:15:59.8±0.8, 21°.78S×68°.77W, h132^{km}±6^{km}, ML4.3, MW4.1*

*VAO **04** 03:16:00.4±0.6, 21°.68S×68°.49W, h89^{km}±5^{km}, mb4.7*

*NEIC **04** 03:16:01.8±2.0, 21°.77S±0°.04×68°.74W±0°.06, h120^{km}±5^{km}, mb4.5/82, Mwr4.3(GUC), Error ellipse: s-maj=8.6km s-min=5.9km az=75.0*

*GUC **04** 03:16:02.5±0.7, 21°.76S×68°.77W, h118^{km}±3^{km}, ML4.4*

*IDC **04** 03:16:26.5±1.7, 19°.43S×67°.63W, h269^{km}±15^{km}, mb3.4/7, mbtmp4.1/11, Error ellipse: s-maj=22.7km s-min=13.9km az=15.0*

ISC 04 03:16:00.5±0.6**, 21°.78S**±0°.03×**68°.64W**±0°.04**, h116**^{km}±5^{km}**, n206,** σ**1**^{s}**40**/237**, mb4.5**/44**, Chile-Bolivia border region**

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Code   Station Name       Δ°   AZ°   Phase ID        Time      Res
                                     Op     ISC      h  m  s   ISC
PB09   IPOC Station P     0.56 268          Pn       03 16 19.0 +0.4
PB09                                 Sn     Sn       03 16 32.7 +0.5
PB09   IPOC Station P     0.56 268  eP      Pn       03 16 19.6 +1.0
PB09                                iS      Sn       03 16 33.1 +0.9
PB09   IPOC Station P     0.56 268  eP      Pn       03 16 18.8 +0.3
PB09                                 IAML            03 16 34.9
             comp=Z,11µm,0.3s
PB03   IPOC Station P     1.07 255          Pn       03 16 23.4 +0.4
PB03                                 Sn     Sn       03 16 39.8 -0.3
PB03   IPOC Station P     1.07 255  eP      Pn       03 16 23.6 +0.6
PB03                                iS      Sn       03 16 40.0  0.0
PB03                                 IAML            03 16 40.9
             comp=E,16µm,0.2s
PB03   IPOC Station P     1.07 255  eP      Pn       03 16 23.5 +0.4
PB03                                eS      Sn       03 16 40.1  0.0
PB03                                 IAML            03 16 40.9
             comp=Z,13µm,0.2s
PB01   IPOC Station P     1.07 313          Pn       03 16 23.5 +0.5
PB01                                 Sn     Sn       03 16 40.4 +0.3
PB01   IPOC Station P     1.07 313  eP      Pn       03 16 23.6 +0.5
PB01                                iS      Sn       03 16 40.4 +0.3
PB01                                 IAML            03 16 41.9
             comp=N,13µm,0.2s
PB01   IPOC Station P     1.07 313  eP      Pn       03 16 23.5 +0.5
PB01                                eS      Sn       03 16 41.3 +1.2
PB01                                 IAML            03 16 42.2
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             comp=Z,5µm,0.4s
AF01   San Pedro de A     1.24 160          Pn       03 16 27.4 +2.3
AF01                                 Sn     Sn       03 16 45.9 +2.2
AF01   San Pedro de A     1.24 160  eP      Pn       03 16 27.5 +2.4
AF01                                iS      Sn       03 16 47.1 +3.4
AF01                                 IAML            03 17 00.5
             comp=N,8µm,0.9s
AF01   San Pedro de A     1.24 160  eP      Pn       03 16 22.9 -2.2
AF01                                eS      Sn       03 16 27.6  -16
AF01                                 IAML            03 16 50.3
             comp=Z,3µm,0.7s
PB06   IPOC Station P     1.26 223          Pn       03 16 25.6 +0.4
PB06                                 Sn     Sn       03 16 44.2 +0.4
PB06   IPOC Station P     1.26 223  eP      Pn       03 16 25.9 +0.8
PB06                                iS      Sn       03 16 44.6 +0.8
PB06                                 IAML            03 16 45.3
             comp=E,12µm,0.3s
PB06   IPOC Station P     1.26 223  eP      Pn       03 16 26.0 +0.8
PB06                                eS      Sn       03 16 44.9 +1.1
PB06                                 IAML            03 16 46.3
             comp=Z,8µm,0.1s
PB08   IPOC Station P     1.70 344          Pn       03 16 32.0 +1.5
PB08                                 Sn     Sn       03 16 54.3 +1.1
PB08   IPOC Station P     1.70 344  eP      Pn       03 16 32.0 +1.5
PB08                                iS      Sn       03 16 54.6 +1.4
PB08                                 IAML            03 16 55.7
             comp=E,5µm,0.2s
PB08   IPOC Station P     1.70 344  eP      Pn       03 16 31.9 +1.5
PB08                                eS      Sn       03 16 55.2 +2.0
PB08                                 IAML            03 16 56.4
             comp=Z,2µm,0.3s
PB05   IPOC Station P     1.80 233          Pn       03 16 31.3  0.0
PB05                                 Sn     Sn       03 16 54.1 -0.7
PB05   IPOC Station P     1.80 233  eP      Pn       03 16 31.7 +0.4
PB05                                iS      Sn       03 16 54.2 -0.7
PB05                                 IAML            03 16 55.6
             comp=E,3µm,0.3s
PB05   IPOC Station P     1.80 233  eP      Pn       03 16 31.6 +0.2
PB05                                eS      Sn       03 16 54.7 -0.2
PB05                                 IAML            03 16 57.6
             comp=Z,2µm,0.2s
TA01   Diego Aracena      1.88 310          Pn       03 16 31.9 -0.4
TA01                                 Sn     Sn       03 16 55.4 -1.0
TA01   Diego Aracena      1.88 310  eP      Pn       03 16 31.8 -0.4
TA01                                iS      Sn       03 16 55.2 -1.2
TA01                                 IAML            03 16 57.1
             comp=E,2µm,0.3s
TA01   Diego Aracena      1.88 310  eP      Pn       03 16 32.0 -0.1
TA01                                eS      Sn       03 16 56.4  0.0
TA01                                 IAML            03 17 00.1
             comp=Z,1µm,0.3s
TA02   Huaiquique         2.05 317          Pn       03 16 33.7 -0.6
TA02                                 Sn     Sn       03 16 59.8 -0.4
TA02   Huaiquique         2.05 317  eP      Pn       03 16 34.2 -0.2
TA02                                iS      Sn       03 16 58.9 -1.3
TA02   Huaiquique         2.05 317  eP      Pn       03 16 34.0 -0.4
TA02                                eS      Sn       03 17 00.8 +0.6
TA02                                 IAML            03 17 02.9
             comp=Z,1µm,0.2s
GO01   Chusmiza           2.16 346          Pn       03 16 37.2 +0.8
GO01   Chusmiza           2.16 346  eP      Pn       03 16 37.5 +1.2
GO01                                iS      Sn       03 17 04.3 +0.7
GO01   Chusmiza           2.16 346  eP      Pn       03 16 37.1 +0.8
GO01                                eS      Sn       03 16 59.8 -3.8
PB11   IPOC Station P     2.22 335          Pn       03 16 36.7  0.0
PB11   IPOC Station P     2.22 335  eP      Pn       03 16 36.7  0.0
PB11                                iS      Sn       03 17 03.8 -0.7
PB11   IPOC Station P     2.22 335  eP      Pn       03 16 36.8 +0.1
PB11                                eS      Sn       03 17 04.4  0.0
PB11                                 IAML            03 17 06.3
             comp=Z,2µm,0.2s
PB10   IPOC Station P     2.47 225          Pn       03 16 39.2 -0.5
PB10   IPOC Station P     2.47 225  eP      Pn       03 16 40.1 +0.3
PB10                                eS      Sn       03 17 06.6 -3.3
PB10                                 IAML            03 17 29.2
             comp=Z,581nm,0.7s
YJA    Yavi               2.93  98  eP      Pn       03 16 46.6 +0.4
SALTA                     3.23 139  eP      Pn       03 16 48.2 -1.9
PB14   IPOC Station P     3.27 209          Pn       03 16 50.1 -0.4
PB14   IPOC Station P     3.27 209  eP      Pn       03 16 50.3 -0.1
PB14                                eS      Sn       03 17 15.5  -13
PB14                                 IAML            03 17 21.5
             comp=Z,1µm,0.5s
GO02   Mina Guanaco       3.48 194          Pn       03 16 53.5 +0.2
GO02   Mina Guanaco       3.48 194  eP      Pn       03 16 53.1 -0.2
GO02                                eS      Sn       03 17 35.7 +1.6
PB16   IPOC Station P     3.52 346          Pn       03 16 54.0 -0.1
PB16   IPOC Station P     3.52 346  eP      Pn       03 16 55.1 +1.0
PB16                                eS      Sn       03 17 23.1  -12
PB16                                 IAML            03 17 44.1
             comp=Z,223nm,0.3s
AZAP   Zapla              4.10 127  eP      Pn       03 17 04.1 +2.6
SLA    San Lorenzo        4.11 136  eP      Pn       03 17 05.2 +3.6
PB18   Visviri            4.24 349          Pn       03 17 04.8 +1.0
AC01   Pan de Azucar      4.70 202          Pn       03 17 07.9 -1.6
AC01   Pan de Azucar      4.70 202  eP      Pn       03 17 07.8 -1.6
AC01                                eS      Sn       03 17 60.0 -3.0
AC01                                 IAML            03 18 03.0
             comp=Z,212nm,0.6s
FSA    Cafayete           4.95 151  eP      Pn       03 17 10.1 -2.8
FSA                                 eS      Sn       03 17 52.9  -16
AC02   Maricunga          5.05 185          Pn       03 17 14.5 -0.1
AC02   Maricunga          5.05 185  eP      Pn       03 17 15.1 +0.5
AC02                                eS      Sn       03 17 57.3  -15
AC02                                 IAML            03 18 51.5
             comp=Z,166nm,0.6s
LPAZ   La Paz             5.48   5          Pn       03 17 21.1 +0.6
LPAZ   La Paz             5.48   5   P      Pn       03 17 22.4 +1.9
             comp=Z,11nm,0.3s,baz=183,slow=3.5,SNR=114
LPAZ   La Paz             5.48   5  eP      Pn       03 17 17.8 -2.7
AC06   Mina Casimiro      5.77 195          Pn       03 17 21.3 -2.5
GO03   Copiapo            5.97 194          Pn       03 17 24.6 -1.9
AC04   Llanos de Chal     6.77 199   Pn     Pn       03 17 33.6 -3.6
AC05   El Transito        7.18 192          Pn       03 17 40.8 -2.2
LCO    Las Campanas       7.44 194          Pn       03 17 43.2 -3.3
CO01   Juntas del Tor     8.27 189          Pn       03 17 56.0 -1.8
GO04   Tololo Observa     8.58 193   Pn     Pn       03 17 58.5 -3.5
BBSD   Serra de San D     8.85  60  eP      Pn       03 18 03.6 -1.8
SIV    San Ignacio        9.19  53   P      Pn       03 18 08.2 -2.0
             comp=Z,27nm,0.7s,baz=238,slow=12,SNR=111
SIV                                  S      Sn       03 19 37.9  -14
             comp=Z,2.7nm,0.5s,baz=306,slow=21,SNR=7.8
CO03   El Pedregal        9.21 191          Pn       03 18 06.5 -3.9
MURT   Porto Murtinho    10.26  91  eP      Pn       03 18 22.9 -1.6
PTLB   Pontes e Lacer    10.99  57          Pn       03 18 33.5 -0.9
PTLB   Pontes e Lacer    10.99  57  eP      Pn       03 18 32.1 -2.3
PTLB                                eS      Sn       03 20 28.6 -6.8
CPUP   Villa Florida     11.29 116   Pn     Pn       03 18 37.4 -0.9
CPUP   Villa Florida     11.29 116  eP      Pn       03 18 36.5 -1.8
VILB   Vilhena           11.91  44          Pn       03 18 46.2 -0.5
VILB   Vilhena           11.91  44  eP      Pn       03 18 46.0 -0.7
SJPY   San Joaquin       11.95 108  eP      Pn       03 18 46.3 -0.9
AQDB   Aquidauana        12.15  86          Pn       03 18 50.2 +0.4
AQDB   Aquidauana        12.15  86  eP      Pn       03 18 47.9 -1.9
NNA    Nana              12.50 320   P      P        03 19 03.3 +1.9
             comp=Z,8.8nm,0.6s,baz=135,slow=7.1,SNR=4.1
ITQB   Itaqui            13.38 128  eP      Pn       03 19 03.7 -2.0
SALV   Santo Antonio     13.58  67  eP      Pn       03 19 06.9 -1.5
SAML   Samuel            13.79  23  eP      Pn       03 19 09.6 -1.6
RPRD   Ribas do Rio P    14.00  87  eP      Pn       03 19 12.8 -1.0
CZSB   Cruzeiro do Su    14.51 344   P      P        03 19 24.7 +1.0
CZSB   Cruzeiro do Su    14.51 344  eP      Pn       03 19 20.1 -0.3
TRCB   Terra Rica        14.85  97   P      P        03 19 29.1 +1.5
TRCB   Terra Rica        14.85  97  eP      Pn       03 19 25.0 +0.3
BI02   San Fabin de      15.01 188   Pn     Pn       03 19 27.0 +0.3
C2SB   Chapadao do Su    15.13  81  eP      Pn       03 19 27.3 -0.9
PDRB   Porto dos Gac     15.23  50  eP      Pn       03 19 28.3 -1.2
PTGB   Pitanga           15.51 104  eP      P        03 19 34.2 -0.7
ITAB   Concordia         15.97 113   P      P        03 19 39.8 -0.1
ITAB                                 IAmb   IAmb     03 19 41.9
             comp=Z,37nm,0.7s
ITAB   Concordia         15.97 113  eP      P        03 19 39.6 -0.3
CPSB   Cacapava Do Su    16.12 125  eP      Pn       03 19 40.0 -0.4
PCMB   Pacaembu          16.16  93  eP      Pn       03 19 40.5 -0.5
LDASE  Londrina, Braz    16.27  99  eP      Pn       03 19 41.8 -0.5
CLDB   Colider           16.40  51  eP      Pn       03 19 42.6 -1.4
PLTB   Pedras Altas      16.69 130   Pn     Pn       03 19 47.0 -0.4
PLTB   Pedras Altas      16.69 130  eP      P        03 19 47.9 +0.1
ARAG   Araguaiana, MT    17.04  72  eP      P        03 19 52.3 +0.6
TRQA   Tornquist         17.21 162   P      Pn       03 19 54.4 +0.6
TRQA   Tornquist         17.21 162  eP      Pn       03 19 56.0 +2.3
ITRB   Iturama           17.23  86  eP      Pn       03 19 54.8 +0.7
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TBTG	Tabatinga, AM	17.53	356	P	Pn	03 19 58.6	+0.8
TBTG	Tabatinga, AM	17.53	356	*e*P	Pn	03 19 58.6	+0.8
FRTB	Fartura	17.69	99	*e*P	Pn	03 19 59.8	+0.1
TEFE	Tefe	18.57	13	*e*P	P	03 20 08.1	-0.4
PLCA	Paso Flores	18.97	184	P	Pn	03 20 14.2	-0.5
PLCA	Paso Flores	18.97	184	P	Pn	03 20 54.4	+40
	comp=Z,1.4nm,0.6s,baz=0.8,slow=12,SNR=3.7						
	comp=Z,1.4nm,0.6s						
PLCA	Paso Flores	18.97	184	*e*P	Pn	03 20 14.8	+0.1
SNDB	Serra Nova Dou	19.23	62	*e*P	P	03 20 15.2	-0.6
NPGB	Novo Progresso	19.47	43	*e*P	P	03 20 16.6	-1.8
IPMB	Ipameri, GO	19.58	82	*e*P	P	03 20 19.4	-0.1
PET01	Itanhaem-SP	19.82	101	*e*P	P	03 20 22.8	+0.7
MACA	Manacapuru-AM	20.06	24		P	03 20 23.7	-1.0
MACA	Manacapuru-AM	20.06	24	*e*P	P	03 20 23.3	-1.4
VAO	Valinhos	20.08	98		P	03 20 25.0	-0.1
VAO	Valinhos	20.08	98	*e*P	P	03 20 24.9	-0.1
BDFB	Brasilia	20.46	76	P	P	03 20 28.2	-0.9
	comp=Z,5.5nm,0.4s,baz=232,slow=9.7,SNR=16						
PMNB	Patos De Minas	21.09	85	*e*P	P	03 20 35.7	-0.2
ITTB	Itaituba	21.36	38	*e*P	P	03 20 37.4	-1.3
BSCB	Bom Sucesso	22.24	92	*e*P	P	03 20 48.5	+0.5
DIAM	Diamantina, MG	23.70	86	*e*P	P	03 21 02.6	+0.5
OTAV	Otavalo	23.88	335	*e*P	P	03 21 07.0	+3.0
JANB	Januaria	24.01	78	*e*P	P	03 21 04.0	-0.8
MAL2	Monte Alegre,	24.16	38	P	P	03 21 07.1	+1.0
MAL2				IAmb	IAmb	03 21 08.1	
	comp=Z,21nm,0.8s						
FLOC	Florencia	24.21	343		P	03 21 07.2	+0.7
FLOC				IAmb	IAmb	03 21 09.6	
	comp=Z,25nm,1.2s						
SDBA	SAO DESIDERIO	24.50	72	*e*P	P	03 21 08.9	-0.3
BOAV	Boa Vista	25.30	19		P	03 21 16.6	+0.2
BOAV				IAmb	IAmb	03 21 18.1	
	comp=Z,7.9nm,0.7s						
RUSC	La Rusia	27.84	351		P	03 21 39.8	+0.1
RUSC				IAmb	IAmb	03 22 11.0	
	comp=Z,9.4nm,0.9s						
BAUV	El Baul	30.54	1		P	03 22 02.7	-0.3
CRPR	Cabo Rojo, PR	39.57	2	P	P	03 23 18.9	-1.5
OBIP	Obispado Ponce	39.63	3	P	P	03 23 20.2	-0.7
PDPR	Patillas Dam,	39.63	4	P	P	03 23 19.2	-1.8
PDPR				IAmb	IAmb	03 23 20.1	
	comp=Z,11nm,0.7s						
CELP	Cerrillos	39.66	3		P	03 23 20.1	-1.1
SJG	San Juan	39.72	4	P	P	03 23 19.7	-1.9
DR12	Loma Pena Alta	40.32	359	P	P	03 23 25.0	-1.8
SDDR	Presa de Saban	40.59	356	P	P	03 23 29.0	0.0
SDDR				IAmb	IAmb	03 23 39.0	
	comp=Z,12nm,1.4s						
MTO3	Montecristo	41.30	329	P	P	03 23 36.4	+1.4
MTO3				IAmb	IAmb	03 23 37.8	
	comp=Z,6.4nm,0.8s						
TEIG	Tepich	45.95	334	P	P	03 24 12.3	+0.4
SOR	Soroa	46.46	342	P	P	03 24 16.0	+0.1
SOR				IAmb	IAmb	03 24 54.2	
	comp=Z,11nm,1.1s						
X48A	Hartselle	58.59	342	P	P	03 25 45.2	0.0
X48A				IAmb	IAmb	03 25 46.1	
	comp=Z,6.0nm,0.7s						
V53A	Saluda	58.69	347	P	P	03 25 46.4	+0.5
V53A				IAmb	IAmb	03 25 53.4	
	comp=Z,8.1nm,1.3s						
Y45A	Yeager Farm, C	58.81	340	P	P	03 25 46.1	-0.6
W50A	Signal Mountai	58.83	344	P	P	03 25 45.7	-1.2
W50A				IAmb	IAmb	03 25 48.0	
	comp=Z,4.4nm,0.7s						
TKL	Tuckaleechee C	58.90	346	P	P	03 25 47.3	+0.1
TKL				IAmb	IAmb	03 25 48.2	
	comp=Z,5.9nm,0.9s						
HNDO	Hondo	58.93	329	P	P	03 25 47.1	-0.5
SWET	Sewanee	59.01	344	P	P	03 25 48.2	+0.1
T57A	Hurt	59.31	350	P	P	03 25 50.7	+0.6
PLAL	Pickwick Lake	59.39	341	P	P	03 25 48.8	-1.8
PLAL				IAmb	IAmb	03 25 51.2	
	comp=Z,4.7nm,1.1s						
BLA	Blacksburg	59.72	349	P	P	03 25 52.9	0.0
RCRC	Randolf Colleg	59.74	350	P	P	03 25 53.8	+0.8
WLAR	White Oak Lake	59.89	336		P	03 25 55.7	+1.6
S57A	Dark Hollow, R	60.01	351	P	P	03 25 55.9	+1.0
WVT	Waverly	60.39	342		P	03 25 57.3	-0.2
WVT				IAmb	IAmb	03 25 57.9	
	comp=Z,6.1nm,0.7s						
T47A	Sharon Grove	60.99	343		P	03 26 01.1	-0.5
T47A				IAmb	IAmb	03 26 02.5	
	comp=Z,9.3nm,1.0s						
TXAR	Lajitas Array	61.00	325	P	P	03 26 02.2	+0.3
	comp=Z,0.3nm,0.4s,baz=147,slow=7.4,SNR=4.6						
	comp=Z,0.3nm,0.4s						
Q56A	Snyder Ridge,	61.30	351	P	P	03 26 05.2	+1.6
T45A	Paducah	61.45	342	P	P	03 26 04.3	-0.3
Q54A	Coxs Mills	61.51	349	P	P	03 26 05.8	+0.8
Q54A				IAmb	IAmb	03 26 12.8	
	comp=Z,4.3nm,0.7s						
P57A	Homestead Farm	61.57	352	P	P	03 26 07.3	+1.9
P57A				IAmb	IAmb	03 26 07.6	
	comp=Z,6.1nm,0.6s						
WUPA	West Chester U	61.73	354	P	P	03 26 07.4	+0.9
WUPA				IAmb	IAmb	03 26 07.4	
	comp=Z,5.3nm,1.2s						
ALPN	Alpine	61.81	326	P	P	03 26 08.2	+0.9
MVL	Millersville	61.88	353	P	P	03 26 07.9	+0.5
MVL				IAmb	IAmb	03 26 34.5	
	comp=Z,14nm,1.4s						
MCWV	Mont Chateau	62.01	350	P	P	03 26 09.8	+1.5
VHRN	Van Horn	62.84	325		P	03 26 13.8	-0.4
VHRN				IAmb	IAmb	03 26 15.8	
	comp=Z,3.5nm,0.6s						
MNTX	Cornudas Mount	63.77	325	P	P	03 26 20.8	+0.6
DBIC	Dimbokro	68.58	73	P	P	03 26 51.5	+0.3
DBIC				IAmb	IAmb	03 26 57.8	
	comp=Z,12nm,1.1s						
DBIC	Dimbokro	68.58	73	P	P	03 26 51.5	+0.3
	comp=Z,5.0nm,0.8s,baz=256,slow=7.3,SNR=4.5						
	comp=Z,5.0nm,0.8s						
SDCO	Great Sand Dun	68.61	329	P	P	03 26 53.0	+1.6
BATG	Bathurst New B	68.77	2	P	P	03 26 52.7	+0.9
BATG				IAmb	IAmb	03 26 53.2	
	comp=Z,14nm,0.9s						
VLDQ	Val d'Or	70.02	354	P	P	03 27 00.4	+1.0
VLDQ				IAmb	IAmb	03 27 00.8	
	comp=Z,5.2nm,0.6s						
U15A	North Rim	71.08	324		P	03 27 06.3	-0.2
U15A				IAmb	IAmb	03 27 10.2	
	comp=Z,4.7nm,1.0s						
LCMT	Little Creek M	72.02	324	P	P	03 27 12.2	+0.2
SRU	San Rafael Swe	72.14	327		P	03 27 14.0	+1.3
SRU				IAmb	IAmb	03 27 15.5	
	comp=Z,6.3nm,0.8s						
P18A	Preston Nutter	72.40	327	P	P	03 27 14.6	+0.2
P18A				IAmb	IAmb	03 27 17.5	
	comp=Z,6.4nm,0.9s						
MVU	Marysvale	72.56	325	P	P	03 27 17.9	+2.6
MVU				IAmb	IAmb	03 27 18.7	
	comp=Z,6.2nm,0.9s						
BSUT	Blindstream Ca	73.34	328	P	P	03 27 20.5	+0.5
BSUT				IAmb	IAmb	03 27 23.1	
	comp=Z,4.3nm,0.8s						
GWY	Greenwater Val	73.38	321		P	03 27 21.1	+1.1
MPU	Maple Canyon	73.39	327	P	P	03 27 21.5	+1.5
MPU				IAmb	IAmb	03 27 23.2	
	comp=Z,3.9nm,0.9s						
PSUT	Pine Spring	73.46	325	P	P	03 27 22.9	+2.4
PSUT				IAmb	IAmb	03 27 23.9	
	comp=Z,3.9nm,0.7s						
TPNV	Topopah Spring	73.67	322	P	P	03 27 22.6	+0.9
JLU	Jordanelle	73.74	327	P	P	03 27 22.1	-0.1
JLU				IAmb	IAmb	03 27 25.2	
	comp=Z,4.0nm,0.6s						
SPR3	Spring Creek 3	74.05	325		P	03 27 24.0	-0.1
DUG	Dugway, Tooele	74.13	326	P	P	03 27 23.3	-0.9
R11B	Troy Canyon, C	74.28	323	P	P	03 27 25.8	+0.6
PDAR	Pinedale Array	74.47	330	P	P	03 27 27.8	+1.4
	comp=Z,0.3nm,0.3s,baz=132,slow=6.2,SNR=4.9						
	comp=Z,0.3nm,0.3s						
GMN	Gold Mountain	74.49	322	P	P	03 27 28.8	+2.2
LOHW	Long Hollow	75.61	330	P	P	03 27 34.6	+1.7
TPAW	Teton Pass	75.68	330	P	P	03 27 32.7	-0.6
NVAR	Mina Array Bea	75.86	322	P	P	03 27 36.6	+2.2
	comp=Z,0.7nm,0.6s,baz=162,slow=6.9,SNR=6.9						
	comp=Z,0.7nm,0.6s						
YNE	Yellowstone No	76.42	331	P	P	03 27 38.6	+1.2
YNE				IAmb	IAmb	03 27 40.3	
	comp=Z,7.6nm,0.9s						
YHH	Holmes Hill	76.63	331		P	03 27 41.2	+2.6
YHL	Hebgen Lake	76.83	330		P	03 27 41.0	+1.2
YHL				IAmb	IAmb	03 27 44.1	
	comp=Z,5.8nm,1.3s						
TORD	Torodi Ar. Bea	77.22	70		P	03 27 42.5	+0.3
TORD	Torodi Ar. Bea	77.22	70	P	P	03 27 42.4	+0.2
	comp=Z,1.3nm,0.4s,baz=261,slow=4.5,SNR=5.0						
	comp=Z,1.3nm,0.4s						
PAHR	Pah Rah Range	77.35	322		P	03 27 43.2	+0.6
PAHR				IAmb	IAmb	03 27 46.0	
	comp=Z,6.8nm,0.8s						
HLID	Hailey	77.41	328		P	03 27 44.5	+1.6
HLID				IAmb	IAmb	03 27 46.4	
	comp=Z,5.9nm,0.8s						
PLID	Pearl Lake	79.30	328		P	03 27 55.0	+1.6
PLID				IAmb	IAmb	03 27 56.1	
	comp=Z,6.1nm,0.8s						
I07A	Izee	80.38	325	P	P	03 27 59.1	0.0
J05D	Fort Rock, OR	80.78	324	P	P	03 28 02.7	+1.5
J05D				IAmb	IAmb	03 28 04.1	
	comp=Z,8.0nm,1.1s						
PINE	Pine Mountain	80.95	325	P	P	03 28 04.5	+2.3
PINE				IAmb	IAmb	03 28 05.5	
	comp=Z,7.5nm,0.7s						
YKAW1	Yellowknife Wh	91.48	341		P	03 28 54.5	+1.2
YKAW1				IAmb	IAmb	03 28 55.1	
	comp=Z,3.3nm,0.8s						
YKA	Yellowknife Ar	91.53	340	P	P	03 28 54.6	+1.2
YKA	Yellowknife Ar	91.53	340	P	P	03 28 54.5	+1.0
	comp=Z,1.6nm,0.7s,baz=134,slow=3.9,SNR=38						
	comp=Z,1.6nm,0.7s						
YKAW3	Yellowknife Wh	91.58	341		P	03 28 54.6	+0.8
YKAW3				IAmb	IAmb	03 28 55.6	
	comp=Z,3.3nm,0.7s						
KURBB	Kurchatov Arra	141.43	34	PKhKP	PKPpre	03 35 14.4	
	comp=Z,0.3nm,0.5s,baz=304,slow=2.0,SNR=4.7						
KURBB				PKP	PKiKP	03 35 19.5	-0.9
	comp=Z,0.4nm,0.6s,baz=302,slow=2.0,SNR=3.1						
ZALV	Zalesovo Beam	142.10	25	PKhKP	PKPpre	03 35 15.6	
	comp=Z,1.1nm,0.6s,baz=323,slow=2.2,SNR=4.4						
MKAR	Makanchi Array	145.71	36	PKP	PKPab	03 35 26.8	+0.5
	comp=Z,1.7nm,0.6s,baz=321,slow=4.1,SNR=17						
MJAR	Matsushiro Arr	152.44	308	PKP	PKiKP	03 35 43.8	+0.2
	comp=Z,1.6nm,0.9s,baz=88,slow=3.8,SNR=4.4						

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*CATAC **04** 03:20:47.4±1.2, 13°N±5°×8°9W±°, h17^{km}±11^{km}, M3.1/11, MLv3.1/11, Error ellipse: s-maj=11.3km s-min=9.7km az=9.1, confirmed*

*GCG **04** 03:20:49.9±0.4, 13°.07N×89°.56W, h57^{km}±8^{km}, MD3.6, ML3.5*

*SNET **04** 03:20:50.2±0.8, 13°.06N×89°.43W, h48^{km}±14^{km}, ML2.8*

ISC 04 03:20:45.7±2.2, **12°.92N**±0°.08×**89°.47W**±0°.06, **h12**^{km}±10^{km}, **n34**, σ**1ˢ.03**/40, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	0.73	1	*e*P	Pn	03 21 02.5	+0.4
JAYA				*e*S	Sn	03 21 12.0	-1.3
JAYA				IAML		03 21 13.2	
	comp=Z,344nm,0.2s						
JAYA	Jayaque - finc	0.73	1	*i* P	Pn	03 21 02.5	+0.4
JAYA				*i* S	Sn	03 21 12.6	-0.7
JAYA	Jayaque - finc	0.73	1	P	Pn	03 21 02.6	+0.6
LOMA	Loma Larga	0.78	22	P	Pn	03 21 03.3	+0.6
PMON	Piamonte	0.80	11	P	Pn	03 21 03.6	+0.6
LFRS	El Faro	0.81	29	*e*P	Pn	03 21 03.6	+0.6
UEES	Universidad Ev	0.82	15	P	Sg	03 21 14.7	+2.1
COEG	Centro de Oper	0.90	39	*e*P	Pn	03 21 04.8	+0.5
COEG				*e*S	Sn	03 21 16.0	-1.3
COEG	Centro de Oper	0.90	39	P	Sg	03 21 17.0	+1.9
TECO	Alcaldia de Te	0.91	47	P	Pg	03 21 02.6	-0.7
CEVE	Cerro Verde	0.92	350	*e*P	Pn	03 21 05.6	+0.9
CEVE				*e*S	Sn	03 21 17.9	-0.1
CEVE				IAML		03 21 19.0	
	comp=Z,353nm,0.2s						
CEVE	Cerro Verde	0.92	350	P	Pn	03 21 05.6	+0.9
SBLS	San Blas	0.93	351	*e*P	Pn	03 21 05.6	+0.7
PAVA	Las Pavas	0.94	33	*e*S	Sn	03 21 17.6	-0.8
PAVA	Las Pavas	0.94	33	S	Sn	03 21 18.0	-0.4
PAVA	Las Pavas	0.94	33	P	Pn	03 21 05.6	+0.6
SNJE	San Jose	0.96	352	*e*S	Sn	03 21 18.8	0.0
UESV	Universidad de	0.97	43	*e*P	Pn	03 21 05.5	+0.2
NUBE	Las Nubes	1.03	343	*e*P	Pn	03 21 06.6	+0.5
NUBE				*e*S	Sb	03 21 19.2	+0.1
NUBE	Las Nubes	1.03	343	*i* P	Pn	03 21 06.7	+0.5
NUBE				*i* S	Sb	03 21 19.4	+0.4
NUBE	Las Nubes	1.03	343	P	Pn	03 21 06.7	+0.6
SCLA	Alcaldia de Sa	1.06	43	*e*P	Pn	03 21 08.0	+1.6
SCLA	Alcaldia de Sa	1.06	43	P	Pn	03 21 07.5	+1.0
FAME	Alcaldia de Sa	1.06	330	P	Sg	03 21 19.9	-0.3
PACA	Pacayal	1.24	64	*e*P	Pn	03 21 10.7	+1.7
PACA				*e*S	Sn	03 21 26.0	+0.3
PACA	Pacayal	1.24	64	P	Pn	03 21 10.8	+1.7
PACA	Pacayal	1.24	64	S	Sn	03 21 25.7	0.0
RANC	El Ranchito	1.26	66	P	Sg	03 21 23.3	-3.0
MTO3	Montecristo	1.48	4	*e*S	Sb	03 21 31.1	-1.0
MTO3	Montecristo	1.48	4	*i* P	Pb	03 21 13.2	-0.1
MTO3	Montecristo	1.48	4	P	Pb	03 21 13.2	-0.1
CNCH	Conchagua	1.63	77	P	Pb	03 21 16.0	+0.2
MAS3	Al N del Volca	3.33	105	P	Pn	03 21 38.2	+0.4
TGIG		5.22	318	IAML		03 21 44.1	
	comp=E,28nm,0.4s						

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*IDC **04** 03:27:35.0±0.7, 1°.04N×127°.96E, h0^{km}, mb4.3/12, mbtmp4.2/13, ML3.4/1, MS3.1/4, Error ellipse: s-maj=45.9km s-min=13.3km az=77.0*

*NEIC **04** 03:27:37.5±0.9, 1°.00N±0°.09×127°.86E±0°.06, h10^{km}±1^{km}, mb4.3/14, Error ellipse: s-maj=15.6km s-min=8.6km az=335.0*

*DJA **04** 03:27:38.2±0.2, 1°N±2°×12°8E±°, h10^{km}, M4.2/16, mB5.0/2, mb4.5/8, MLv4.1/16, Mw(mB)4.3/2*

ISC 04 03:27:36.7±0.5, **1°.01N**±0°.06×**127°.95E**±0°.06, **h10**^{km}, **n52**, σ**1ˢ.71**/51, **mb4.3**/19, **MS3.1**/4, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TNTI	Ternate	0.63	248		Pg	03 27 48.0	-0.9
TNTI	Ternate	0.63	248	P	Pg	03 27 47.8	-1.1
SGSI	Sangihe	3.59	318	P	Pn	03 28 32.3	-0.2
SANI	Sanana	3.62	213	P	Pn	03 28 31.9	-1.0
SWI	Sorong	3.80	119	P	Pn	03 28 36.3	+0.9
SWI				S	Sn	03 29 21.8	+1.6
KMSI	Cibinong	3.99	264	P	Pn	03 28 41.8	+3.8
NLAI	Namlea	4.31	191	P	Pn	03 28 42.7	+0.3
MSAI	Masohi	4.44	167	P	Pn	03 28 46.0	+1.8
AAI	Ambon	4.67	177	P	Pn	03 28 49.4	+2.0
FAKI	Fak Fak	5.81	132	Pn	Pn	03 29 04.2	+1.2
FAKI	Fak Fak	5.81	132	P	Pn	03 29 04.0	+1.0
	0.1nm24nm,1.0s						
MRSI	Marisa	6.03	265	P	Pn	03 29 10.1	+4.1
	0.1nm24nm,0.7s						
APSI	Ampana	6.58	253	P	Pn	03 29 16.3	+2.7
	0.2nm866nm52nm,1.1s						
KDI	Kendari	7.26	227	P	Pn	03 29 25.0	+2.0
MPSI	Mapaga	8.07	265	P	Pn	03 29 37.6	+3.4
	8.0nm,0.7s						
BAKI	Biak	8.45	105	P	Pn	03 29 41.8	+2.5
	35nm,0.7s						
TTSI	Tana Toraja	9.07	244	P	Pn	03 29 49.9	+2.1
	867nm35nm,0.7s						
BNSI	Bone	9.50	235	P	Pn	03 29 56.8	+3.1
SPSI	Sidrap Palu	9.55	239	P	Pn	03 29 58.6	+4.2
FITZ	Fitzroy Crossi	19.13	187		P	03 32 00.3	+0.2
FITZ	Fitzroy Crossi	19.13	187	P	P	03 32 00.5	+0.4
	0.1nm,0.3s,baz=18,slow=13,SNR=1.7						
	4.0nm,0.9s						
WB0	Warramunga Arr	21.60	163	P	P	03 32 26.8	-0.2
WB0				IAmb	IAmb	03 32 33.3	
	comp=Z,7.0nm,0.7s						
WRA	Warramunga Arr	21.75	164	P	P	03 32 28.0	-0.6
WRA	Warramunga Arr	21.75	164	P	P	03 32 28.6	0.0
	comp=Z,3.3nm,0.5s,baz=342,slow=11,SNR=22						
	comp=Z,3.3nm,0.5s						
WR8	Warramunga Arr	21.81	163	P	P	03 32 29.6	+0.3
WR8				IAmb	IAmb	03 32 34.5	
	comp=Z,28nm,1.5s						
BLSI	Bandar Lampung	23.54	254	P	P	03 32 43.5	-4.0
AS31	Alice Springs	25.20	167	P	P	03 33 02.8	0.0
ASAR	Alice Springs	25.20	167	P	P	03 33 02.9	0.0
ASAR	Alice Springs	25.20	167	P	P	03 33 02.4	-0.4
	comp=Z,5.9nm,0.8s,baz=344,slow=8.6,SNR=28						
	comp=Z,5.9nm,0.8s						
JOW	Kunigami	25.67	1	LR	LR	03 42 22.1	
	comp=Z,82nm,21.6s,baz=256,slow=35						
BBOO	Buckleboo	34.50	168	P	P	03 34 25.4	+0.2
STKA	Stephens Creek	35.17	160	P	P	03 34 31.9	+0.8
	comp=Z,4.2nm,0.5s,baz=347,slow=8.2,SNR=8.5						
	comp=Z,4.2nm,0.5s						
KSRS	Korea Array	36.26	360	P	P	03 34 40.9	+0.7
	comp=Z,1.8nm,0.6s,baz=180,slow=9.2,SNR=9.0						
	comp=Z,1.8nm,0.6s						
MJAR	Matsushiro Arr	36.61	14	P	P	03 34 41.8	-1.5
	comp=Z,3.4nm,0.8s,baz=187,slow=9.6,SNR=11						
MJAR				LR	LR	03 47 54.4	
	comp=Z,12nm,21.7s,baz=198,slow=33						
	comp=Z,3.4nm,0.8s						
ARMA	Armidale	38.55	146	P	P	03 34 59.8	-0.1
ARMA				IAmb	IAmb	03 35 00.3	
	comp=Z,18nm,1.3s						
TOO	Toolangi	41.68	159	P	P	03 35 26.4	+0.7
TOO				IAmb	IAmb	03 35 29.7	
	comp=Z,6.4nm,1.1s						
USRK	Ussuriysk Ar.	43.15	4	P	P	03 35 37.2	-0.3
	comp=Z,1.8nm,0.8s,baz=200,slow=7.3,SNR=3.3						
USRK				LR	LR	03 54 33.7	
	comp=Z,27nm,18.8s,baz=195,slow=38						
	comp=Z,1.8nm,0.8s						
EVN	Everest	47.59	308	P	P	03 36 14.9	+1.0
KLR	Kul'dur	48.15	3	LR	LR	03 55 58.8	
	comp=Z,20nm,19.0s,baz=292,slow=35						
SONM	Songino Array	50.24	341	P	P	03 36 33.4	+0.2
SONM				IAmb	IAmb	03 36 34.5	
	comp=Z,1.6nm,0.7s						
SONM	Songino Array	50.24	341	P	P	03 36 33.4	+0.2
	comp=Z,2.4nm,0.8s,baz=155,slow=9.1,SNR=7.4						
	comp=Z,2.4nm,0.8s						
MKAR	Makanchi Array	60.47	326	P	P	03 37 46.9	0.0
MKAR	Makanchi Array	60.47	326	P	P	03 37 46.6	-0.2
	comp=Z,1.3nm,0.4s,baz=110,slow=7.9,SNR=19						
	comp=Z,1.3nm,0.4s						
MAKZ	Makanchi	60.65	325	P	P	03 37 45.7	-2.4
MAKZ				IAmb	IAmb	03 37 50.0	
	comp=Z,3.3nm,0.8s						
KURBB	Kurchatov Arra	64.67	328	P	P	03 38 14.7	-0.1
	comp=Z,4.9nm,0.8s,baz=126,slow=6.0,SNR=46						
	comp=Z,4.9nm,0.8s						
BVAR	Borovoye Array	70.25	327	P	P	03 38 49.8	-0.3
	comp=Z,4.3nm,0.8s,baz=118,slow=8.6,SNR=18						
	comp=Z,4.3nm,0.8s						
AB31	Akbulak array	75.01	321	P	P	03 39 17.8	-0.7
AB31				IAmb	IAmb	03 39 18.9	
	comp=Z,2.5nm,1.0s						
ABKAR	Akbulak array	75.01	321	P	P	03 39 17.7	-0.8
ABKAR	Akbulak array	75.01	321	P	P	03 39 17.8	-0.7
ABKAR				IAmb	IAmb	03 39 18.9	
	comp=Z,2.5nm,1.0s						
VNDA	Vanda	80.60	173	P	P	03 39 48.6	-0.5
	comp=Z,0.6nm,0.8s,baz=308,slow=6.2,SNR=2.5						
	comp=Z,0.6nm,0.8s						
QSPA	South Pole Qui	90.94	180	P	P	03 40 40.2	-0.6
ARCES	ARCESS Array B	93.40	340	P	P	03 40 50.2	-1.7
	comp=Z,1.6nm,0.7s,baz=60,slow=5.4,SNR=4.8						
	comp=Z,1.6nm,0.7s						

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*NOU **04** 03:38:11.5, 37°.46S×177°.33E, h6^{km}, MLv3.3/6, Off E. Coast of N. Island, N.Z.*

*WEL **04** 03:38:12.6±0.7, 37°S±5°×17°7E±°, h5^{km}±4^{km}, M3.3/19, ML3.7/19, MLv3.3/19, Error ellipse: s-maj=6.2km s-min=3.0km az=8.3, confirmed*

ISC 04 03:38:12.6±1.0, **37°.47S**±0°.04×**177°.34E**±0°.03, **h17**^{km}±6^{km}, **n77**, σ**0ˢ.82**/84, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WIZ	White Island	0.14	243	P	Pg	03 38 16.4	-0.1
WIZ				S	Sg	03 38 18.9	-0.2
WSRZ	White Island S	0.14	248	P	Pg	03 38 16.7	+0.2
HAZ	Te Kaha	0.46	130	P	Pg	03 38 21.0	-0.7
HAZ				S	Sg	03 38 27.5	-0.5
WHRZ	Whale Island	0.48	217	P	Pb	03 38 22.7	+0.1
WHRZ				S	Sb	03 38 30.6	+1.1
RUGZ	Raukumara Rang	0.56	152	P	Pg	03 38 23.1	-0.8
RUGZ				S	Sg	03 38 30.7	-0.8
PKGZ	Pakihiroa	0.71	124	P	Pg	03 38 25.7	-0.8
OPRZ	Ohinepanea	0.73	239	P	Pb	03 38 27.0	+0.2
OPRZ				S	Sb	03 38 37.0	+0.5
MARZ	Manawahe	0.74	225	P	Pb	03 38 27.3	+0.3
MXZ	Matakaoa Point	0.77	97	P	Pg	03 38 26.7	-1.0
MXZ	Matakaoa Point	0.77	97	P	Pg	03 38 26.7	-1.0
EDRZ	Edgecumbe	0.80	217	P	Pb	03 38 28.3	+0.3
EDRZ				S	Sb	03 38 39.0	+0.4
URZ	Urewera	0.81	193	P	Pg	03 38 27.5	-0.9
URZ	Urewera	0.81	193	P	Pg	03 38 27.7	-0.7
URZ				S	Sb	03 38 39.2	+0.3
TWGZ	Tauwhareparae	0.87	145	P	Pb	03 38 29.5	+0.3
MWZ	Matawai	0.88	170	P	Pg	03 38 28.9	-0.8
MYRZ	Mayor Island	0.90	282	P	Pg	03 38 29.8	-0.1
TGRZ	Tauranga	0.90	253	P	Pb	03 38 30.1	+0.4
PUZ	Puketiti	0.94	130	P	Pb	03 38 31.1	+0.6
OMRZ	Omania	1.00	230	P	Pn	03 38 32.6	+0.7
TARZ	Mount Tarawera	1.01	220	P	Pn	03 38 32.9	+0.8
KARZ	Kaharoa	1.03	237	P	Pb	03 38 32.7	+0.8
RAGZ	Rawiri	1.03	177	P	Pg	03 38 31.8	-0.7
TKGZ	Te Karaka	1.05	158	P	Pb	03 38 32.9	+0.6
RRRZ	Republican Roa	1.09	217	P	Pn	03 38 34.1	+1.0
MUGZ	Murupara	1.10	204	P	Pg	03 38 32.6	-1.3
HLRZ	Highlands Stat	1.11	225	P	Pg	03 38 33.4	-0.6
RTZ	Ruatahuna	1.18	194	P	Pg	03 38 33.8	-1.6
CNGZ	Carnagh Statio	1.23	146	P	Pn	03 38 37.3	+2.4
PRRZ	Plateau Road	1.27	216	P	Pn	03 38 35.8	+0.1
RIGZ	Rimuhau	1.28	165	P	Pb	03 38 37.1	+0.8
SNGZ	Shannon Statio	1.31	180	P	Pn	03 38 36.3	+0.1
ALRZ	Allen Road	1.35	215	P	Pg	03 38 38.1	-0.5
MTHZ	Maungataniwha	1.44	196	P	Pn	03 38 38.5	+0.6
RAHZ	Arahi	1.46	188	P	Pn	03 38 38.1	-0.1
KUZ	Kuaotunu	1.48	299	P	Pn	03 38 37.5	-0.9
KUZ	Kuaotunu	1.48	299	P	Pn	03 38 37.7	-0.7
PRGZ	Paritu Road	1.52	164	P	Pg	03 38 40.9	-0.8
MRHZ	Matea Rd	1.55	208	P	Pb	03 38 41.3	+0.5
KNZ	Kokohu	1.57	171	P	Pn	03 38 40.8	+1.1
WHHZ	Waihua	1.61	183	P	Pb	03 38 41.6	-0.2
NMHZ	Naumai	1.68	194	P	Pn	03 38 42.5	+1.2
MHGZ	Mahia Peninsul	1.74	165	P	Pn	03 38 43.1	+1.1
MKAZ	Moumakai	1.77	281	P	Pn	03 38 42.3	-0.1
ARHZ	Aropaoanui	1.81	188	P	Pb	03 38 44.8	-0.6
BKZ	Black Stump Fm	1.82	201	P	Pn	03 38 42.8	-0.4
BKZ	Black Stump Fm	1.82	201	P	Pn	03 38 43.1	-0.1
WIAZ	Waiheke Island	1.89	290	P	Pn	03 38 44.3	+0.3
RITZ	Rihia Road	1.91	217	P	Pg	03 38 48.6	-0.6
GRZ	Great Barrier	1.94	308	P	Pn	03 38 44.4	-0.3
ETAZ	East Tamaki Re	1.99	284	P	Pn	03 38 45.7	+0.3
MCHZ	McNeill Hill	2.04	194	P	Pb	03 38 49.8	+0.7
MBAZ	Motutapu North	2.07	289	P	Pn	03 38 46.8	+0.3
KWHZ	Kaweka Forest	2.08	200	P	Pn	03 38 47.5	+0.7
NTVZ	North Tongarir	2.09	218	P	Pb	03 38 51.2	+1.0
TMVZ	Te Maari	2.09	218	P	Pb	03 38 49.2	-0.9
ETVZ	East Tongariro	2.10	217	P	Pb	03 38 50.3	0.0
NNVZ	North Ngauruho	2.15	219	P	Pb	03 38 51.9	+0.8
OTVZ	Oturere	2.15	217	P	Pb	03 38 51.6	+0.5
WTVZ	West Tongariro	2.15	219	P	Pg	03 38 52.5	-1.3
SNVZ	South Ngauruho	2.18	217	P	Pb	03 38 52.0	+0.4
NGZ	Ngauruhoe	2.19	218	P	Pb	03 38 52.2	+0.5
AWAZ	Awhitu Peninsu	2.19	280	P	Pn	03 38 48.9	+0.7
TWVZ	Taurewa	2.19	222	P	Pb	03 38 53.1	+1.3
HIZ	Hauiti	2.22	241	P	Pn	03 38 49.2	+0.5
COVZ	Chateau Observ	2.23	219	P	Pb	03 38 53.8	+1.3
WHVZ	Whangaehu Hut	2.28	217	P	Pb	03 38 53.2	-0.2
KRHZ	Kereru	2.30	199	P	Pn	03 38 50.8	+1.1
MOVZ	Moawhango	2.30	212	P	Pn	03 38 50.7	+0.9
WNVZ	Wahianoa	2.31	216	P	Pb	03 38 53.3	-0.6
KAHZ	Kahuranaki	2.35	189	P	Pn	03 38 51.3	+0.8
PXZ	Pawanui	2.59	188	P	Pb	03 38 57.1	-1.4
PNHZ	Pukenui	2.60	200	P	Pn	03 38 54.5	+0.6
TSZ	Takapari Road	2.80	202	P	Pn	03 38 57.4	+0.7
WCZ	Waipu Caves	2.85	301	P	Pn	03 38 57.6	+0.4
WAZ	Wanganui	2.94	218	P	Pb	03 39 02.4	-2.1
OUZ	Omahuta	3.76	305	P	Pn	03 39 10.5	+0.7
OUZ	Omahuta	3.76	305	P	Pn	03 39 10.7	+0.9

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*IDC **04** 03:46:24.9±1.3, 15°.52S×173°.83W, h0^{km}, mb4.0/5,* *mbtmp4.0/5,MS3.1/3,Error ellipse: s-maj=38.2km s-min=35.6km az=118.0*

ISC 04 03:46:37.3±1.2**,15.°6S**±0.°2×**174.°0W**±0.°3**,h94^{km},n14, σ0^{s}92**/6**,mb4.1**/5**,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	7.93	253	LR	LR	03 50 38.8	
	comp=Z,109nm,20.5s,baz=72,slow=31						
RAR	Rarotonga	14.59	115	LR	LR	03 53 37.9	
	comp=Z,133nm,22.0s,baz=248,slow=30						
H11S2	WAKE ISLAND Hy	38.85	330	T	T	04 35 30.2	
	baz=149,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	38.87	330	T	T	04 35 10.7	
	baz=149,slow=76,SNR=8.5						
H11S1	WAKE ISLAND Hy	38.87	330	T	T	04 35 29.5	
	baz=149,slow=76,SNR=7.6						
H11N3	WAKE ISLAND Hy	39.81	331	T	T	04 36 40.9	
	baz=149,slow=76,SNR=8.2						
H11N1	WAKE ISLAND Hy	39.82	331	T	T	04 36 36.0	
	baz=149,slow=76,SNR=6.6						
H11N2	WAKE ISLAND Hy	39.83	331	T	T	04 36 38.2	
	baz=149,slow=76,SNR=7.3						
WRA	Warramunga Arr	49.26	257	P	P	03 55 16.8	-0.1
	0.6nm,0.5s,baz=92,slow=6.8,SNR=14 0.6nm,0.5s						
ASAR	Alice Springs	49.52	252	P	P	03 55 19.4	+0.5
	1.2nm,0.5s,baz=89,slow=7.9,SNR=15 1.2nm,0.5s						
VNDA	Vanda	63.12	186	P	P	03 56 54.9	+0.3
	2.5nm,1.1s,baz=16,slow=7.3,SNR=4.7						
VNDA				LR	LR	04 23 51.3	
	comp=Z,11nm,18.4s,baz=112,slow=36 2.5nm,1.1s						
QSPA	South Pole Qui	74.45	180	P	P	03 58 04.9	-0.3
	3.1nm,1.0s,baz=113,slow=5.2,SNR=5.9 3.1nm,1.0s						
YKA	Yellowknife Ar	90.50	24	P	P	03 59 28.8	+0.6
	0.4nm,0.9s,baz=241,slow=3.9,SNR=4.6 0.4nm,0.9s						
BRTR	Keskin Array B	145.96	320	PKPbc	PKPdf	04 06 04.4	-1.4
	0.7nm,0.8s,baz=5.7,slow=1.4,SNR=3.7						

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*SNET **04** 04:30:13.9±0.9,12.°93N×89.°38W,h33^{km}±4^{km},ML2.3*
*GCG **04** 04:30:15.1±0.4,13.°09N×89.°52W,h68^{km}±6^{km},MD3.6*
*CATAC **04** 04:30:15.3±1.0,13°N±6°×8°9W±°,h31^{km}±6^{km},M2.6/7, MLv2.6/7,Error ellipse: s-maj=13.5km s-min=7.9km az=16.2,confirmed*

ISC 04 04:30:14.2±3.2**,12.°9N**±0.°2×**89.°41W**±0.°08**,h43^{km},n31, σ1^{s}34**/34**,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.57	9	*e*S	Sn	04 30 33.9	-0.5
LALI	Alcalda de L	0.57	9	P	Pn	04 30 26.6	+0.6
LALI	Alcalda de L	0.57	9	S	Sn	04 30 34.4	0.0
JAYA	Jayaque - finc	0.73	357	*e*P	Pn	04 30 27.9	-0.3
JAYA				*e*S	Sn	04 30 38.6	+0.2
JAYA	Jayaque - finc	0.73	357	*i* P	Pn	04 30 28.3	0.0
JAYA				*i* S	Sn	04 30 38.8	+0.5
JAYA	Jayaque - finc	0.73	357	P	Pn	04 30 28.2	0.0
JAYA	Jayaque - finc	0.73	357	S	Sn	04 30 37.8	-0.6
LOMA	Loma Larga	0.75	18	P	Pn	04 30 28.9	+0.4
LOMA	Loma Larga	0.75	18	S	Sn	04 30 38.9	0.0
LFRS	El Faro	0.77	26	*e*P	Pn	04 30 28.5	-0.3
PMON	Piamonte	0.79	7	S	Sn	04 30 40.1	+0.3
PMON	Piamonte	0.79	7	P	Pn	04 30 29.3	+0.2
UEES	Universidad Ev	0.81	12	P	Sn	04 30 40.1	0.0
COEG	Centro de Oper	0.86	36	*e*P	Pn	04 30 30.0	0.0
COEG				*e*S	Sn	04 30 41.5	0.0
COEG	Centro de Oper	0.86	36	P	Pn	04 30 31.1	+1.1
TECO	Alcaldia de Te	0.86	45	P	Pn	04 30 30.0	+0.1
TECO	Alcaldia de Te	0.86	45	S	Sn	04 30 41.3	-0.1
PAVA	Las Pavas	0.91	30	P	Pn	04 30 30.9	+0.2
PAVA	Las Pavas	0.91	30	S	Sn	04 30 43.0	+0.3
CEVE	Cerro Verde	0.92	347	*e*P	Pn	04 30 30.7	-0.3
CEVE				IAML		04 30 45.2	
	comp=Z,80nm,0.3s						
CEVE	Cerro Verde	0.92	347	S	Sn	04 30 42.1	-1.2
CEVE	Cerro Verde	0.92	347	P	Pn	04 30 32.5	+1.5
SCLA	Alcaldia de Sa	1.02	40	P	Pn	04 30 31.8	-0.3
SCLA	Alcaldia de Sa	1.02	40	S	Sn	04 30 46.5	+1.3
NUBE	Las Nubes	1.04	340	*i* P	Pn	04 30 32.3	-0.2
NUBE				*i* S	Sn	04 30 45.4	-0.5
NUBE	Las Nubes	1.04	340	P	Pn	04 30 27.7	-4.8
PACA	Pacayal	1.19	63	P	Sn	04 30 43.3	-6.2
PACA	Pacayal	1.19	63	S	Sn	04 30 50.6	+1.1
RANC	El Ranchito	1.20	65	S	Sn	04 30 48.7	-1.2
RANC	El Ranchito	1.20	65	P	Pn	04 30 37.1	+2.4
MTO3	Montecristo	1.47	2	*i* P	Pn	04 30 38.4	0.0

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*NEIC **04** 04:34:02.0±0.6,33.°951N±0.°006×116.°83W±0.°02, h18^{km}±1^{km},Error ellipse: s-maj=2.2km s-min=0.9km az=81.0*

PAS 04 04:34:02.6±0.8**,33.°956N**±0.°010×**116.°82W**±0.°01**, h15^{km}**±1^{km}**,ML3.2,ML2.9**/54(NEIC)**,Error ellipse: s-maj=1.4km s-min=1.2km az=213.0,Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBSC	Beaumont Base	0.14	255		Pg	04 34 06.4	0.0
DEVC	Devers	0.20	96		Pg	04 34 07.3	0.0
DEVC					Sg	04 34 10.9	+0.4
SVD	Seven Oaks Dam	0.27	303		Pg	04 34 08.1	-0.3
POB	Polly Butte	0.28	197		Pg	04 34 08.5	-0.1
PEC	Perris	0.29	257		Pg	04 34 08.4	-0.3
HMTC	Hemet	0.29	211		Pg	04 34 08.4	-0.2
GVDA	Garner Valley	0.31	157		Pg	04 34 08.7	-0.5
GVDA					Sg	04 34 13.2	-0.4
BBRC	Big Bear Solar	0.32	345		Pg	04 34 08.9	-0.4
BBRC					Sg	04 34 13.7	-0.2
DGR	Domenigoni Val	0.34	207		Pg	04 34 09.3	-0.3
EW2	E Wide Canyon	0.34	92		Pg	04 34 09.4	-0.3
HLNC	Highland	0.37	297		Pg	04 34 09.8	-0.3
BLAC	Blackrock camp	0.38	72		Pg	04 34 09.9	-0.4
BLAC					Sg	04 34 15.3	-0.3
BACC	Bachelor Mtn.	0.39	208		Pg	04 34 10.0	-0.4
CRY	Cary Ranch	0.40	170		Pg	04 34 10.4	-0.2
CFSC	Central Fire S	0.41	291		Pg	04 34 10.6	-0.2
RSBC	Riverside Bore	0.42	272		Pg	04 34 10.5	-0.5
RSBC	Riverside Bore	0.42	272		Pg	04 34 10.6	-0.4
CLTC	Calectric	0.43	289		Pg	04 34 10.6	-0.6
CLTC					Sb	04 34 18.2	0.0
SNDA	J Saunders Pla	0.44	156		Pg	04 34 11.1	-0.3
SNDA					Sg	04 34 17.5	+0.1
PFO	Pinyon Flats O	0.46	138		Pg	04 34 11.1	-0.7
PFO				Sg	Sg	04 34 17.3	-0.7
PFO				IAML		04 34 18.3	
	920nm,0.3s						
PFO				IAML		04 34 18.9	
	849nm,0.5s						
PFO	Pinyon Flats O	0.46	138		Pg	04 34 11.2	-0.6
RVR	Riverside	0.46	275		Pg	04 34 11.2	-0.6
XPFO	Pinon Flat	0.46	138		Pg	04 34 11.2	-0.6
MURC	Murrieta	0.47	221		Pg	04 34 11.4	-0.5
BZNA	Buzz No.'s Pla	0.48	164		Pg	04 34 11.9	-0.3
BZNA					Sg	04 34 18.6	-0.1
PMD	Palm Desert	0.48	130		Pg	04 34 11.5	-0.6
FRD	Ford Ranch, An	0.49	158		Pg	04 34 12.0	-0.4
FRD	Ford Ranch, An	0.49	158		Pg	04 34 12.1	-0.4
FRD					Sg	04 34 19.0	-0.1
GTM	Goat Mountain	0.51	49		Pg	04 34 11.8	-0.9
FON	Fontana	0.53	286		Pg	04 34 12.6	-0.5
CSP	Cedar Springs	0.56	308		Pg	04 34 13.1	-0.6
ELS	Elsinore Mount	0.59	239	Pg	Pg	04 34 13.3	-0.9
ELS				Sg	Sg	04 34 21.3	-0.8
ELS				IAML		04 34 21.5	
	comp=N,1µm,0.4s						
PLM	Palomar	0.60	183		Pg	04 34 13.9	-0.6
SS2	San Sevaine	0.61	294		Pg	04 34 14.1	-0.5
MLSC	Mira Loma	0.62	275		Pg	04 34 13.8	-0.9
MLSC					Sg	04 34 22.3	-0.6
TPC	Twentynine Pal	0.66	77		Pg	04 34 14.7	-0.8
CHNC	Chino	0.71	274		Pg	04 34 15.2	-1.2
VTV	Victorville	0.73	325		Pg	04 34 16.0	-0.9
BFSC	Mount Baldy Ra	0.75	292		Pg	04 34 16.2	-1.0
CTCC	Cactus City	0.76	113		Pg	04 34 16.5	-0.7
BORC	Borrego Spring	0.77	154		Pg	04 34 16.7	-0.8
SSK	Sunset Peak	0.77	290		Pg	04 34 16.7	-0.8
MATG	Mataguay Scout	0.77	169		Pg	04 34 16.9	-0.7
ADO	Adelanto Recei	0.78	320		Pg	04 34 17.1	-0.6
PSRC	Puddingstone R	0.83	280		Pg	04 34 17.6	-1.1
CTW	Cottonwood Mou	0.84	109		Pb	04 34 17.9	-1.0
GORC	Green Oak Ranc	0.87	203		Pb	04 34 17.8	-1.5
GORC					Sb	04 34 29.3	-1.5
JUEM	Julian Eagle M	0.89	168		Pb	04 34 18.9	-1.0
SLH	Sleepy Hollow	0.90	148		Pb	04 34 19.3	-0.5
SANC	Santa Ana	0.92	255		Pb	04 34 19.3	-0.9
RRX	Edison Barstow	0.93	351		Pb	04 34 19.7	-0.7
DPP	Dos Picos Cty	0.96	186		Pb	04 34 19.4	-1.6
HEC	Hector,Ludlow	0.96	25		Pb	04 34 20.1	-0.9
SALN	Salton City	0.97	134		Pb	04 34 20.4	-0.7
MWC	Mount Wilson	1.06	285		Pb	04 34 21.4	-1.3
EML	El Monte Cty P	1.06	181		Pb	04 34 21.1	-1.6
CHFC	Chilao Flat St	1.07	291		Pb	04 34 21.4	-1.4
GVRC	Garvey Reservo	1.08	275		Pb	04 34 21.9	-1.1
BOMB	Bombay Beach	1.09	123		Pb	04 34 21.5	-1.6
CPE	Camp Elliot	1.09	193		Pb	04 34 21.6	-1.5
PASC	Pasadena Art C	1.15	281		Pn	04 34 22.8	-1.3
PASC				IAML		04 34 41.1	
	comp=N,180nm,0.3s						
GSC	Goldstone, Bar	1.34	1		Pn	04 34 26.0	-0.9
GSC				IAML		04 34 47.4	
	comp=E,154nm,0.4s						
TKX	Tecate	1.40	173		Pn	04 34 26.9	-0.6
TJX	Tijuana	1.46	188	Pn	Pn	04 34 27.5	-0.8
YUH	Yuha Desert	1.51	150		Pn	04 34 27.4	-1.6
YUH				IAML		04 34 51.1	
	comp=E,135nm,0.1s						
YUH				IAML		04 34 51.9	
	comp=N,116nm,0.3s						
CCAC	Calif City Air	1.55	321		Pn	04 34 28.8	-0.9
CBX	Cerro Bola	1.64	175		Pn	04 34 30.7	-0.3
CBX				IAML		04 34 55.8	
	comp=N,228nm,0.5s						
GLA	Glamis	1.90	118	Pn	Pn	04 34 33.2	-1.2
GLA				IAML		04 35 06.2	
	comp=N,98nm,0.5s						
BLYC	Blythe	1.92	95	Pn	Pn	04 34 32.8	-1.9
BLYC				IAML		04 35 04.1	
	comp=E,94nm,0.5s						
BLYC				IAML		04 35 06.9	
	comp=N,103nm,0.4s						
ESJX	Sierra Juarez	2.08	159		Pn	04 34 36.6	-0.4
ESJX				IAML		04 35 07.5	
	comp=N,102nm,0.1s						
ESJX				IAML		04 35 07.7	
	comp=E,160nm,0.1s						
GWY	Greenwater Val	2.23	3		Pn	04 34 38.4	-0.7
GWY				IAML		04 35 15.9	
	comp=E,103nm,0.4s						
GWY				IAML		04 35 17.0	
	comp=N,95nm,0.3s						
BCW	Bitter Crk WRg	2.35	295		Pn	04 34 40.5	-0.3
BCW				IAML		04 35 18.9	
	comp=E,77nm,0.8s						
BCW				IAML		04 35 20.8	
	comp=N,110nm,1.1s						
V12A	Nelson	2.40	42		Pn	04 34 40.6	-0.8
V12A				IAML		04 35 19.5	
	comp=E,64nm,0.4s						
V12A				IAML		04 35 20.1	
	comp=N,58nm,0.5s						
W13A	Hualapai Mount	2.68	64		Pn	04 34 44.2	-1.1
W13A				IAML		04 35 15.5	
	comp=E,34nm,0.2s						
113A	Mohawk Valley,	2.82	114	Pn	Pn	04 34 45.1	-1.9
SHPR	Sheep Range	2.88	28		Pn	04 34 47.9	-0.2
TPNV	Topopah Spring	3.02	9		Pn	04 34 50.1	0.0
TPNV				IAML		04 35 39.4	
	comp=E,25nm,0.5s						
TPNV				IAML		04 35 39.8	
	comp=E,35nm,0.4s						
GRAC	Grapevine Rang	3.07	352		Pn	04 34 50.6	+0.1
GRAC				IAML		04 35 46.9	
	comp=N,26nm,0.6s						
Y14A	Wickenburg	3.17	89		Pn	04 34 50.9	-1.1
Y14A				IAML		04 35 44.5	
	comp=N,35nm,0.3s						
GMN	Gold Mountain	3.36	354		Pn	04 34 55.1	+0.4
DSP	Deep Springs	3.53	345		Pn	04 34 57.3	+0.4
PRN	Pahroc Range	3.73	22		Pn	04 35 00.2	+0.4
MZP	Montezuma Peak	3.76	353	Pn	Pn	04 35 00.2	-0.1
S11A	Rachel	3.78	13	Pn	Pn	04 35 00.8	+0.3
LCMT	Little Creek M	4.22	43		Pn	04 35 06.4	-0.1
U15A	North Rim	4.46	55		Pn	04 35 10.1	+0.2
KNB	Kanab	4.47	46		Pn	04 35 10.1	+0.1
LHV	Little Huntoon	4.50	343	Pn	Pn	04 35 08.9	-1.2
R11B	Troy Canyon, C	4.50	13	Pn	Pn	04 35 08.8	-1.6
NV11	Mina Array Sit	4.59	347	Pn	Pn	04 35 11.6	0.0
WUAZ	Wupatki	4.75	69	Pn	Pn	04 35 13.4	-0.4
WUAZ				IAML		04 36 34.4	
	comp=N,11nm,0.4s						
WUAZ				IAML		04 36 37.8	
	comp=N,9.4nm,0.5s						
RYN	Ryan	4.86	344	Pn	Pn	04 35 15.0	-0.3
PSUT	Pine Spring	5.16	27	Pn	Pn	04 35 18.3	-1.1
SPR3	Spring Creek 3	5.42	21	Pn	Pn	04 35 22.3	-0.8

JMA 04 04:38:30.7±0.1**,38.°3N**±0.°3×**142.°0E**±0.°6**,h42^{km},MV2.5**/32**, E OFF MIYAGI PREF,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.38	271	*i* P	Pn	04 38 39.9	-0.1
JIKH				S	Sn	04 38 46.2	-0.4
JIO	Ouri	0.49	287	P	Pn	04 38 41.3	-0.1
JIO				S	Sn	04 38 48.9	-0.1
JKMT	Kesennumamotoy	0.62	324	*i* P	Pn	04 38 43.2	+0.1
JKMT				S	Sn	04 38 51.9	-0.1
OFUJ	Ofunato	0.80	344	P	Pn	04 38 45.5	-0.1
OFUJ				S	Sn	04 38 55.7	-0.6
JMK	Ichinoseki	0.86	319	P	Pn	04 38 46.6	+0.3
JMK				S	Sn	04 38 57.9	+0.2
JOU	Okura	1.01	274	P	Pn	04 38 48.7	+0.3
JOU				S	Sn	04 39 01.8	+0.3
JMM	Marumori	1.01	245	*e*P	Pn	04 38 47.6	-0.8
JMM				S	Sn	04 39 00.6	-0.9
JOM	Ohasama	1.27	336	P	Pn	04 38 52.5	+0.6
JOM				*e*S	Sn	04 39 08.9	+1.0

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*BGR **04** 04:38:35.1,29.°58N×139.°73E,h33^{km},mb6.1,mB_BB6.6, Ms5.6*
*NIED **04** 04:39:15.9,29.°06N×139.°66E,h445^{km},MW6.3,Moment Tensor Solution. s3 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.88; M$_{\theta\theta}$0.49; M$_{\phi\phi}$0.40; M$_{r\theta}$0.19; M$_{\theta\phi}$-0.82; M$_{\phi r}$-3.20; Fault plane solution: M$_0$3.39000×10^{18} NP1: φ$_s$108.00000°,δ16.00000°,λ-154.00000°. NP2: φ$_s$353.00000°,δ83.00000°,λ-76.00000°.*
*JMA **04** 04:39:15.9±0.2,29.°1N±0.°7×14°0E±°,h445^{km}±3^{km}, MD6.2/44,MW6.4/44,NEAR TORISHIMA IS*
JMA Felt IV J1 at NEAR TORISHIMA IS .
*NEIC **04** 04:39:17.0±1.7,29.°07N±0.°07×139.°29E±0.°09, h422^{km}±1^{km},mb6.3/878,Mwb6.4/101,Mww6.4/75,Error ellipse: s-maj=13.5km s-min=11.9km az=68.0,Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.17; M$_{\theta\theta}$0.17; M$_{\phi\phi}$0.00; M$_{r\theta}$0.73; M$_{\theta\phi}$-1.36; M$_{\phi r}$-4.92; Fault plane solution: M$_0$5.16000×10^{18} NP1:φ$_s$87.79000°, δ15.00000°,λ-174.18000°. NP2:φ$_s$352.17000°, δ88.50000°,λ-75.07000°. Principal axes: T 5.2661, Plg42.0000°, Azm68.0000°; N -0.2228, Plg15.0000°, Azm172.0000°; P -5.0432, Plg45.0000°, Azm277.0000°;*
*MOS **04** 04:39:16.0±0.7,29.°06N×139.°25E,h436^{km},mb6.3/89, MS5.4/10 Error ellipse: s-maj=6.7km s-min=3.7km az=109.3*
*BJI **04** 04:39:16.4,29.°05N×139.°30E,h430^{km},mB6.5/78, mb6.2/96*
*NEIC **04** 04:39:17,29.°07N×139.°31E,h440^{km}*
*IPGP **04** 04:39:17.0,29.°06N×139.°29E,h439^{km},Mw6.4,Fault plane solution: NP1:φ$_s$98.00000°,δ12.00000°, λ-161.00000°. NP2:φ$_s$350.00000°,δ86.00000°, λ-79.00000°.*
*NEIC **04** 04:39:17,29.°07N×139.°53E,h440^{km},Moment Tensor Solution. Duration: 7^{s}7 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.41; M$_{\theta\theta}$0.71; M$_{\phi\phi}$-0.31; M$_{r\theta}$0.82; M$_{\theta\phi}$-1.04; M$_{\phi r}$-4.32; Fault plane solution: M$_0$4.55000×10^{18} NP1:φ$_s$85.03000°, δ14.90000°,λ-172.19000°. NP2:φ$_s$347.48000°, δ88.00000°,λ-75.23000°. Principal axes: T 4.4267, Plg41.0000°, Azm64.0000°; N 0.2515, Plg15.0000°, Azm167.0000°; P -4.6782, Plg45.0000°, Azm272.0000°;*
*NEIC **04** 04:39:17.7,29.°06N×139.°30E,h433^{km}*
*IDC **04** 04:39:18.5±0.4,29.°11N×139.°21E,h446^{km}±3^{km},mb5.6/48, mbtmp6.4/55,Error ellipse: s-maj=5.5km s-min=3.8km az=94.0*
*GCMT **04** 04:39:19.0±0.1,29.°08N×139.°17E,h439^{km},MW6.4/178, Moment Tensor Solution. s178,c461; s163,c270; Duration: 3^{s}9 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.46±.01; M$_{\theta\theta}$0.69±.02; M$_{\phi\phi}$-0.23±.02; M$_{r\theta}$0.82±.02; M$_{\theta\phi}$-0.98±.02; M$_{\phi r}$-4.80±.02; Best double couple: M$_0$4.99800×10^{18} NP1:φ$_s$87.00000°,δ13.00000°, λ-171.00000°. NP2:φ$_s$349.00000°,δ88.00000°, λ-77.00000°. Principal axes: T 4.8490, Plg42.0000°, Azm67.0000°; N 0.2980, Plg13.0000°, Azm168.0000°; P -5.1470, Plg46.0000°, Azm271.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*

ISC 04 04:39:17.3±0.2**,29.°07N**±0.°02×**139.°28E**±0.°02**,h437^{km}**±1^{km}**, h437^{km}:pP-P,n3067,σ1^{s}59**/3493**,mb6.2**/766**,123C-184D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.23	127	⇓P	P	04 40 22.5	-2.7
CBIJ				⇓*e*S	S	04 41 15.2	-5.1
CBIJ	Chichi jima	3.23	127	A	A	04 40 22.5	
	comp=N,981nm,0.8s,comp=E,955nm,4.9s						
JCJ	Chichijima	3.23	127		P	04 40 22.5	-2.6
JCJ				S	S	04 41 14.3	-5.9
JCJ	Chichijima	3.23	127	P	P	04 40 21.2	-4.0
	comp=E,88µm,0.8s,baz=149,slow=3.1,SNR=2014						
JCJ				S	S	04 41 12.3	-7.9
	comp=E,131µm,0.5s,baz=90,slow=22,SNR=15						
JCJ	Chichijima	3.23	127	P	P	04 40 23.3	-1.9
JAOM	Aogashimamukai	3.41	7	A	A	04 40 26.1	
	comp=N,300nm,2.2s,comp=E,443nm,1.2s						
JAOM	Aogashimamukai	3.41	7	⇓P	P	04 40 26.8	+0.3
JHH2	Haha-jima-NKT2	3.53	133	⇓P	P	04 40 25.0	-2.6
JHH2				⇓S	S	04 41 20.3	-4.4
JHH2	Haha-jima-NKT2	3.53	133	A	A	04 40 25.0	
	comp=N,1µm,1.0s,comp=E,2µm,0.6s						
JHCJ	Hachijojimakas	4.02	6	⇓P	P	04 40 31.7	0.0
JHCJ				⇓*e*S	S	04 41 28.2	-4.1
JHCJ	Hachijojimakas	4.02	6	A	A	04 40 31.7	
	comp=N,113nm,4.6s,comp=E,175nm,1.7s						
JHJ2	Mitsune	4.06	6		P	04 40 31.5	-0.5
JHJ2				S	S	04 41 30.8	-2.1
JHJ2	Mitsune	4.06	6	P	P	04 40 31.9	0.0
JHJ2	Mitsune	4.06	6	⇓*e*P	P	04 40 31.6	-0.3
JHJ2				⇓*e*S	S	04 41 31.2	-1.7
JHJ2	Mitsune	4.06	6	A	A	04 40 31.6	
	comp=N,192nm,2.3s,comp=E,241nm,9.2s						
JHJ2	Mitsune	4.06	6	⇓P	P	04 40 32.0	0.0
JMKN	Mikurajimanish	4.82	3	A	A	04 40 38.9	
	comp=N,99nm,6.0s,comp=E,119nm,6.7s						
JMYK	Miyake Tsubota	4.98	3	A	A	04 40 40.6	
	comp=N,105nm,2.5s,comp=E,118nm,6.3s						
TTO1	TONANKAI O.B.S	5.02	335	P	P	04 40 42.9	+2.2
JKO	Kozu shima	5.11	359	A	A	04 40 42.0	
	comp=N,90nm,2.9s,comp=E,131nm,5.0s						
JSKK	Shikinejimakit	5.25	359	A	A	04 40 43.4	
	comp=N,71nm,2.6s,comp=E,112nm,2.1s						
JWKM	Wakayamakushim	5.31	326	A	A	04 40 45.8	
	comp=N,71nm,6.3s,comp=E,54nm,8.5s						
JTHY	Toshimahigashi	5.44	0	A	A	04 40 45.3	
	comp=N,93nm,5.8s,comp=E,147nm,5.8s						
JMMH	Miemihama	5.49	330	A	A	04 40 47.4	
	comp=N,34nm,6.1s,comp=E,35nm,5.5s						
JIM2	Oshima 3	5.63	1	A	A	04 40 47.2	
	comp=N,114nm,1.6s,comp=E,159nm,5.7s						
JIM2	Oshima 3	5.63	1	P	P	04 40 46.8	-0.4
JIZS	Izushimoda	5.64	357	A	A	04 40 47.6	
	comp=N,42nm,2.7s,comp=E,34nm,7.8s						
JIZS	Izushimoda	5.64	357	P	P	04 40 47.3	0.0
JSG	Sagara	5.67	351	P	P	04 40 48.4	+0.8
JSG	Sagara	5.67	351	P	P	04 40 49.8	+2.3
JSG	Sagara	5.67	351	A	A	04 40 48.2	
	comp=N,64nm,5.7s,comp=E,55nm,6.0s						
JTNC	Tanabenakahech	5.68	327	P	P	04 40 49.3	+1.6
JTNC	Tanabenakahech	5.68	327	A	A	04 40 49.3	
	comp=N,55nm,5.6s,comp=E,35nm,6.4s						
JIE	Ise	5.74	338	P	P	04 40 50.0	+1.7
JIE				S	S	04 42 05.1	+2.3
JIE	Ise	5.74	338	A	A	04 40 50.0	
	comp=N,56nm,4.0s,comp=E,53nm,5.4s						
BSO1	Boso 1	5.75	14	⇓P	P	04 40 47.5	-0.3
JKN2	Miekihoku	5.76	334	P	P	04 40 50.0	+1.6
JKN2	Miekihoku	5.76	334	A	A	04 40 50.0	
	comp=N,44nm,3.0s,comp=E,39nm,5.9s						
JKKS	Kakegawashinom	5.77	349	A	A	04 40 49.3	
	comp=N,75nm,4.8s,comp=E,67nm,6.2s						
BSO3	Boso 3	5.81	10	P	P	04 40 48.1	-0.6
JWM	Minabe	5.83	326	A	A	04 40 51.2	
	comp=N,80nm,5.6s,comp=E,27nm,5.8s						
JAA	Atsumi	5.84	342	A	A	04 40 50.4	
	comp=N,39nm,5.1s,comp=E,44nm,4.7s						
JHMK	Hamakita	5.88	348	P	P	04 40 50.6	+1.0
JHTM	Izuhatsuma	5.88	358	A	A	04 40 49.9	
	comp=N,143nm,1.5s,comp=E,118nm,1.6s						
HMMJ	Hamamatsu 2	5.92	347	P	P	04 40 51.3	+1.2
HMMJ	Hamamatsu 2	5.92	347	A	A	04 40 51.3	
	comp=N,32nm,4.5s,comp=E,28nm,4.9s						
JNTK	Naratenkawa	5.94	332	A	A	04 40 52.0	
	comp=N,52nm,5.0s,comp=E,32nm,5.1s						
TATJ	Tateyama 2	5.97	5	A	A	04 40 50.4	
	comp=N,154nm,2.7s,comp=E,160nm,1.8s						
JWY	Kouya	6.02	329	A	A	04 40 53.0	
	comp=N,95nm,5.8s,comp=E,41nm,5.1s						
JSSY	Shinshiroyabe	6.02	346	A	A	04 40 52.1	
	comp=N,32nm,4.7s,comp=E,35nm,5.4s						
SHZ3	Shizuoka 3	6.05	352	A	A	04 40 52.1	
	comp=N,19nm,4.8s,comp=E,30nm,8.2s						
SHZ3	Shizuoka 3	6.05	352	P	P	04 40 52.2	+0.6
JKUC	kamogawauchiur	6.12	7	A	A	04 40 51.9	
	comp=N,84nm,4.9s,comp=E,112nm,6.5s						
TSUJ	Tsu 2	6.13	337	A	A	04 40 53.7	
	comp=N,78nm,5.3s,comp=E,47nm,2.9s						
TSUJ	Tsu 2	6.13	337	P	P	04 40 54.4	+2.2
JFNN	Fujinakano	6.13	355	A	A	04 40 52.6	
	comp=N,36nm,3.6s,comp=E,45nm,7.1s						
JYO	Yokosk	6.15	3	A	A	04 40 52.4	
	comp=N,95nm,7.1s,comp=E,88nm,1.4s						
MRT2	Murotomisaki 2	6.15	316	A	A	04 40 55.1	
	comp=N,65nm,4.9s,comp=E,88nm,4.5s,comp=Z,45nm,4.9s						
JOD2	Odawara 2	6.18	359	P	P	04 40 52.5	-0.4
JOD2	Odawara 2	6.18	359	A	A	04 40 52.5	
	comp=N,30nm,5.2s,comp=E,29nm,6.3s						
JAI	Aioi	6.26	320	A	A	04 40 56.0	
	comp=N,72nm,5.2s,comp=E,56nm,4.4s						
JAI	Aioi	6.26	320	P	P	04 40 56.0	+2.4
JHE	Heguri	6.35	332	A	A	04 40 56.4	
	comp=N,84nm,4.8s,comp=E,20nm,5.5s						
JHE	Heguri	6.35	332	P	P	04 40 56.5	+1.9
JNY	Yasuok	6.39	350	A	A	04 40 55.8	
	comp=N,36nm,4.7s,comp=E,20nm,3.9s						
JAO	Obara	6.41	345	P	P	04 40 56.8	+1.5
JAO				*e*S	S	04 42 16.2	+0.5
JAO	Obara	6.41	345	A	A	04 40 56.8	
	comp=N,49nm,4.7s,comp=E,25nm,5.1s						
JYN	Shimob	6.44	355	A	A	04 40 56.0	
	comp=N,18nm,5.6s,comp=E,31nm,6.5s						
JSGW	Sagamiharawaka	6.52	359	A	A	04 40 56.5	
	comp=N,25nm,2.6s,comp=E,17nm,4.1s						
JEG	Eigenji	6.53	339	P	P	04 40 59.2	+2.5
JEG				*e*S	S	04 42 19.6	+1.8
JEG	Eigenji	6.53	339	A	A	04 40 59.2	
	comp=N,59nm,4.6s,comp=E,64nm,5.0s						
JMN	Monobe	6.55	317		P	04 40 58.9	+1.9
JMN	Monobe	6.55	317	P	P	04 40 59.6	+2.6
JMN	Monobe	6.55	317	A	A	04 40 59.2	
	comp=N,88nm,4.9s,comp=E,59nm,4.7s						
JMN	Monobe	6.55	317	P	P	04 40 59.4	+2.5
JMN	Monobe	6.55	317	⇑P	P	04 40 59.2	+2.3
JICN	Ichinomiyachia	6.55	342	A	A	04 40 57.9	
	comp=N,67nm,2.7s,comp=E,63nm,4.1s						
JAWN	Awajishima-nag	6.56	327	A	A	04 40 58.9	
	comp=N,65nm,4.9s,comp=E,73nm,5.2s						

TOK	Tokyo	6.61	3	A	A	04 40 57.3	
	comp=N,130nm,1.3s,comp=E,111nm,1.4s						
JMAF	Mimaanabuki	6.61	320	A	A	04 40 59.7	
	comp=N,68nm,6.6s,comp=E,63nm,4.1s						
JSMT	Sammumatsuo	6.63	8	A	A	04 40 57.2	
	comp=N,104nm,6.1s,comp=E,154nm,7.9s						
JKHR	Kochiharuno	6.64	313	A	A	04 41 00.3	
	comp=N,74nm,5.4s,comp=E,81nm,4.7s						
JGF	Kuroka	6.71	346		P	04 40 58.8	+0.1
JGF	Kuroka	6.71	346	P	P	04 41 00.0	+1.3
JGF	Kuroka	6.71	346	A	A	04 40 59.4	
	comp=N,34nm,4.2s,comp=E,24nm,5.8s						
JGF	Kuroka	6.71	346	⇑P	P	04 40 59.4	+0.7
JTO	Tosashimizu	6.72	306	P	P	04 41 01.1	+2.4
JTO				eS	S	04 42 24.2	+2.5
JTO	Tosashimizu	6.72	306	A	A	04 41 01.1	
	comp=N,42nm,6.3s,comp=E,94nm,4.5s						
JMIK	Miki	6.75	329	A	A	04 41 00.9	
	comp=N,74nm,4.0s,comp=E,41nm,4.3s						
JKU	Kubokawa	6.80	310	A	A	04 41 02.2	
	comp=N,56nm,6.0s,comp=E,102nm,4.6s						
JKU	Kubokawa	6.80	310	P	P	04 41 01.9	+2.3
JYTA	Yamagatataniai	6.85	342	A	A	04 41 01.1	
	comp=N,44nm,4.0s,comp=E,27nm,3.7s						
JYTA	Yamagatataniai	6.85	342	P	P	04 41 01.6	+1.6
JNT	Takato	6.86	352	A	A	04 41 00.6	
	comp=N,29nm,4.3s,comp=E,16nm,8.5s						
JRY	Ryogami san	6.94	357	eP	P	04 41 00.5	-0.5
JRY	Ryogami san	6.94	357	A	A	04 41 00.5	
	comp=N,37nm,2.4s,comp=E,35nm,4.5s						
JIHU	Itakohorinouch	6.96	8	A	A	04 41 00.7	
	comp=N,148nm,1.2s,comp=E,130nm,2.2s						
JJS	Sakaide	6.98	321	A	A	04 41 03.7	
	comp=N,62nm,6.3s,comp=E,88nm,5.9s						
JKS	Kasai	7.00	329	A	A	04 41 03.5	
	comp=N,65nm,5.1s,comp=E,38nm,4.8s						
JWT	Wachi	7.01	333	A	A	04 41 03.5	
	comp=N,73nm,5.0s,comp=E,49nm,4.1s						
JWT	Wachi	7.01	333	P	P	04 41 03.4	+1.6
JFM	Mihama	7.02	337	A	A	04 41 03.3	
	comp=N,71nm,4.3s,comp=E,29nm,5.4s						
UWA2	Uwa jima 2	7.04	308	A	A	04 41 04.9	
	comp=N,67nm,4.9s,comp=E,108nm,4.3s						
UWA2	Uwa jima 2	7.04	308	P	P	04 41 04.7	+2.5
JET	Tanbara	7.10	313	A	A	04 41 05.3	
	comp=N,79nm,4.9s,comp=E,105nm,4.6s						
JET	Tanbara	7.10	313	P	P	04 41 05.3	+2.5
JYT	Yasato	7.18	6	A	A	04 41 03.3	
	comp=N,27nm,1.4s,comp=E,36nm,0.4s						
JAD	Aida	7.29	325	A	A	04 41 06.9	
	comp=N,63nm,5.7s,comp=E,45nm,4.6s						
JAD	Aida	7.29	325	P	P	04 41 06.6	+1.8
JNKG	Nichinankitago	7.30	293	A	A	04 41 08.2	
	comp=N,153nm,4.2s,comp=E,201nm,3.6s						
JGN	Niukaw	7.33	347	A	A	04 41 06.0	
	comp=N,25nm,5.6s,comp=E,9.0nm,4.7s						
JHYU	Hitachinakayam	7.34	8	A	A	04 41 04.8	
	comp=N,97nm,5.2s,comp=E,79nm,3.0s						
JAG	Ashikaga	7.34	1	P	P	04 41 03.5	-1.8
JAG				eS	S	04 42 27.5	-6.3
JAG	Ashikaga	7.34	1	A	A	04 41 03.5	
	comp=N,36nm,1.6s,comp=E,36nm,2.4s						
JNA	Nagahama	7.34	309	A	A	04 41 08.1	
	comp=N,70nm,4.6s,comp=E,102nm,4.3s						
JNA	Nagahama	7.34	309	P	P	04 41 08.1	+2.7
JNAR	Kushima--Naru	7.34	291	A	A	04 41 08.7	
	comp=N,132nm,4.4s,comp=E,159nm,3.8s						
JSKE	Saikikamae	7.35	302	A	A	04 41 08.4	
	comp=N,32nm,3.9s,comp=E,62nm,3.7s						
JTN	Tanegashima 3	7.38	284	A	A	04 41 09.2	
	comp=N,140nm,5.2s,comp=E,128nm,4.4s						
JTN	Tanegashima 3	7.38	284	P	P	04 41 08.5	+2.7
JNG	Nsakai	7.39	353	A	A	04 41 06.3	
	comp=N,22nm,5.2s,comp=E,18nm,3.0s						
JHHC	Hyugahichiya	7.39	299	A	A	04 41 08.9	
	comp=N,70nm,4.8s,comp=E,37nm,5.6s						
JMTN	Minamitane	7.41	282	A	A	04 41 09.5	
	comp=N,199nm,4.9s,comp=E,144nm,5.6s						
JMTN	Minamitane	7.41	282	P	P	04 41 08.9	+2.7
JTSN	Tsuno	7.41	297	A	A	04 41 09.3	
	comp=N,102nm,4.1s,comp=E,76nm,3.5s						
JKY	Yasaka	7.43	333	A	A	04 41 08.1	
	comp=N,109nm,4.1s,comp=E,30nm,4.6s						
JKY	Yasaka	7.43	333	⇓P	P	04 41 08.0	+1.6
JGK	Kuni	7.49	356	A	A	04 41 07.3	
	comp=N,20nm,5.5s,comp=E,24nm,4.9s						
MJAR	Matsushiro Arr	7.51	353	P	P	04 41 06.3	-0.9
	comp=E,325nm,0.4s,baz=171,slow=11,SNR=483						
MJAR				S	S	04 42 32.8	-4.3
	comp=E,1µm,1.0s,baz=172,slow=16,SNR=10						
MJAR				ScP	ScP	04 49 48.6	+0.4
	comp=E,130nm,0.9s,baz=182,slow=1.6,SNR=21						
MAJO	Matsushiro	7.51	353		P	04 41 06.4	-0.8
MAJO	Matsushiro	7.51	353	P	P	04 41 07.0	-0.2
MAJO	Matsushiro	7.51	353	i P	P	04 41 06.4	-0.8
MAJO	Matsushiro	7.51	353	P	P	04 41 06.3	-0.8
MAJO				S	S	04 42 35.5	-1.6
MAJO	Matsushiro	7.51	353	⇑P	P	04 41 06.6	-0.6
MAT	Matsushiro	7.51	353	P	P	04 41 06.6	-0.6
MJB9	Matsu-Tunnel	7.51	353	P	P	04 41 06.9	-0.3
JTSR	Tashiro 2	7.54	288	A	A	04 41 10.9	
	comp=N,106nm,5.1s,comp=E,94nm,4.3s						
JKSM	Kasumi	7.58	330	A	A	04 41 09.8	
	comp=N,100nm,4.5s,comp=E,22nm,2.7s						
JKSM	Kasumi	7.58	330	P	P	04 41 09.5	+1.6
JUS	Usuki	7.59	304	A	A	04 41 11.1	
	comp=N,45nm,5.1s,comp=E,90nm,4.3s						
JHO	Hitachi	7.60	8	A	A	04 41 07.7	
	comp=N,67nm,5.4s,comp=E,43nm,5.1s						
JKIT	Kitakata	7.60	300	A	A	04 41 11.4	
	comp=N,75nm,4.3s,comp=E,65nm,4.3s						
JKG	Kaga	7.61	342	A	A	04 41 09.4	
	comp=N,72nm,4.9s,comp=E,23nm,4.5s						
JTZ	Takazaki	7.61	294	A	A	04 41 11.6	
	comp=N,109nm,5.0s,comp=E,128nm,4.9s						
JTZ	Takazaki	7.61	294	P	P	04 41 11.4	+3.1
JJG	Jouge	7.62	318	A	A	04 41 10.8	
	comp=N,149nm,5.4s,comp=E,118nm,5.4s						
JKT	Katashina	7.68	360	A	A	04 41 09.1	
	comp=N,27nm,0.4s,comp=E,37nm,1.2s						
JTT	Ttatey	7.69	348	A	A	04 41 10.0	
	comp=N,17nm,2.5s,comp=E,27nm,2.5s						
JYAK	Yakushimahirau	7.72	281	A	A	04 41 13.0	
	comp=N,97nm,6.6s,comp=E,97nm,4.3s						
JYAK	Yakushimahirau	7.72	281	P	P	04 41 11.9	+2.3
JKDJ	Kitadaitoujima	7.74	248	A	A	04 41 12.9	
	comp=N,220nm,5.7s,comp=E,586nm,4.8s						
JKR	Kurayoshi	7.81	325	A	A	04 41 12.6	
	comp=N,115nm,5.3s,comp=E,42nm,6.8s						
JMZ	Minamidaito 2	7.85	248		P	04 41 11.7	+0.7
JMZ	Minamidaito 2	7.85	248	P	P	04 41 13.5	+2.4
JMZ	Minamidaito 2	7.85	248	P	P	04 41 12.8	+1.7
JMZ				eS	S	04 42 45.9	+1.7
JMZ	Minamidaito 2	7.85	248	A	A	04 41 12.8	
	comp=N,356nm,3.8s,comp=E,362nm,8.4s						
JMZ	Minamidaito 2	7.85	248	⇑P	P	04 41 12.8	+1.7
JHS	Saijyo	7.89	320	⇓P	P	04 41 13.6	+2.2
JHS				⇓eS	S	04 42 48.1	+3.2
JHS	Saijyo	7.89	320	A	A	04 41 13.6	
	comp=N,60nm,4.5s,comp=E,99nm,4.7s						
JSB	Shiboa	7.90	4	A	A	04 41 11.3	
	comp=N,94nm,3.4s,comp=E,94nm,3.8s						
JBEP	Beppuamama	7.97	304	A	A	04 41 15.2	
	comp=N,164nm,4.6s,comp=E,78nm,5.5s						
JSU	Suzuyama	8.01	290	A	A	04 41 16.1	
	comp=N,56nm,6.9s,comp=E,79nm,6.2s						
JKI	Kunimi	8.01	307	A	A	04 41 15.6	
	comp=N,153nm,3.6s,comp=E,180nm,4.0s						
JKC	Kuchinoerabu	8.02	282	A	A	04 41 16.3	
	comp=N,90nm,5.6s,comp=E,136nm,5.1s						
JKD	Kudamatsu	8.04	310	A	A	04 41 15.8	
	comp=N,101nm,3.9s,comp=E,214nm,5.1s						
JIU3	Izumi3	8.06	298	A	A	04 41 16.5	
	comp=N,147nm,4.3s,comp=E,180nm,5.7s						
JHT	Toyohira	8.07	315	A	A	04 41 15.9	
	comp=N,102nm,4.9s,comp=E,106nm,4.9s						
JJN	Nakama	8.07	354	A	A	04 41 13.8	
	comp=N,21nm,3.8s,comp=E,18nm,4.8s						
JFFD	Fukushimafurud	8.07	7	A	A	04 41 12.9	
	comp=N,88nm,3.1s,comp=E,57nm,6.5s						
JZO	Okuchi	8.08	294	A	A	04 41 16.8	
	comp=N,86nm,6.3s,comp=E,118nm,7.7s						
JJH	Hakui	8.11	346	A	A	04 41 14.8	
	comp=N,17nm,6.2s,comp=E,16nm,5.0s						
ONAJ	Iwakimizuishiy	8.11	9	A	A	04 41 13.3	
	comp=N,54nm,3.3s,comp=E,55nm,3.8s						
JUON	Uonuma	8.12	359	A	A	04 41 14.0	
	comp=N,20nm,5.4s,comp=E,20nm,3.2s						
JZK	Kikaishima	8.21	267	A	A	04 41 18.5	
	comp=N,155nm,4.3s,comp=E,520nm,4.4s						
JNN	Nakanoshima	8.24	278	A	A	04 41 18.8	
	comp=N,129nm,6.5s,comp=E,236nm,8.2s						
JNU	Nakatsue	8.26	301		P	04 41 17.3	+2.0
JNU	Nakatsue	8.26	301	P	P	04 41 16.9	+1.5
	comp=E,3µm,1.1s,baz=102,slow=5.8,SNR=184						
JNU				S	S	04 42 47.3	-5.0
	comp=E,309nm,0.8s,baz=57,slow=14,SNR=0.8						
JNU				ScP	ScP	04 49 49.4	+0.3
	comp=E,58nm,0.9s,baz=68,slow=3.2,SNR=4.7						
JNU	Nakatsue	8.26	301	P	P	04 41 18.2	+2.9
JNU	Nakatsue	8.26	301	A	A	04 41 18.6	
	comp=N,85nm,4.7s,comp=E,117nm,5.9s						
JGT2	ShimaneMisato	8.29	318	A	A	04 41 18.2	
	comp=N,116nm,4.5s,comp=E,153nm,4.7s						
JGT2	ShimaneMisato	8.29	318	⇓P	P	04 41 17.7	+2.1
JHIK	Hikimi	8.29	313	A	A	04 41 18.5	
	comp=N,158nm,5.0s,comp=E,137nm,5.3s						
JNM	Ikuma	8.31	322	A	A	04 41 18.3	
	comp=N,108nm,4.7s,comp=E,89nm,6.1s						
JFY	Yanaizu	8.32	2	A	A	04 41 16.1	
	comp=N,25nm,3.1s,comp=E,34nm,2.6s						
JFY	Yanaizu	8.32	2	P	P	04 41 15.6	-0.4
JFK	Kawauchi	8.38	9	A	A	04 41 16.3	
	comp=N,46nm,2.9s,comp=E,68nm,5.4s						
JISK	Izumosakaura	8.41	321	A	A	04 41 19.4	
	comp=N,120nm,4.8s,comp=E,109nm,5.5s						
JTA	Tamana	8.45	300	A	A	04 41 20.8	
	comp=N,85nm,5.2s,comp=E,151nm,6.4s						
JIZZ	Izumozaki	8.46	357	A	A	04 41 17.9	
	comp=N,42nm,5.8s,comp=E,48nm,4.9s						
JSZ	Suzu	8.51	350	A	A	04 41 19.0	
	comp=N,11nm,5.7s,comp=E,11nm,2.7s						
JSZ	Suzu	8.51	350	P	P	04 41 17.3	-0.6
JOTO	OTAMA OYAMA	8.52	6	A	A	04 41 17.9	
	comp=N,122nm,1.8s,comp=E,106nm,3.4s						
JAM	Amami Oshima	8.52	268	A	A	04 41 21.9	
	comp=N,87nm,4.0s,comp=E,160nm,4.4s						
JAM	Amami Oshima	8.52	268	P	P	04 41 21.0	+2.8
JHD	Hondo	8.56	296	A	A	04 41 22.1	
	comp=N,176nm,3.8s,comp=E,119nm,9.0s						
JFA	Akaike	8.60	305	A	A	04 41 22.3	
	comp=N,66nm,4.2s,comp=E,81nm,6.7s						
JSJ	Shimokoshiki	8.66	290	P	P	04 41 21.7	+2.0
JSJ				eS	S	04 43 03.8	+3.4
JSJ	Shimokoshiki	8.66	290	A	A	04 41 21.7	
	comp=N,121nm,5.6s,comp=E,115nm,4.9s						
JTY	Toyota	8.71	309	A	A	04 41 23.3	
	comp=N,68nm,7.1s,comp=E,146nm,6.2s						
JNS	Sasagawa	8.73	0	A	A	04 41 20.7	
	comp=N,21nm,2.6s,comp=E,21nm,1.6s						
JMST	Minamisoumatoc	8.74	8	A	A	04 41 20.2	
	comp=N,89nm,1.3s,comp=E,65nm,4.5s						
JFI	Itaya	8.76	302	A	A	04 41 24.2	
	comp=N,48nm,5.7s,comp=E,128nm,7.0s						
JOI	OKI	8.81	326	A	A	04 41 23.7	
	comp=N,23nm,4.8s,comp=E,31nm,8.4s						
JTAJ	Takarajima	8.81	273	A	A	04 41 25.2	
	comp=N,57nm,4.8s,comp=E,122nm,10.3s						
JTAJ	Takarajima	8.81	273	P	P	04 41 23.1	+1.7
JMM	Marumori	8.87	8		P	04 41 22.6	+0.8
JMM	Marumori	8.87	8	P	P	04 41 22.0	+0.2
JMM	Marumori	8.87	8	A	A	04 41 21.7	
	comp=N,42nm,2.0s,comp=E,54nm,1.2s						
JMM	Marumori	8.87	8	P	P	04 41 22.1	+0.2
NGSJ	Nagasakinomoza	8.89	296	A	A	04 41 25.8	
	comp=N,141nm,4.5s,comp=E,131nm,6.5s						
JAMN	Amaminishikomi	8.91	267	A	A	04 41 26.3	
	comp=N,78nm,5.4s,comp=E,198nm,4.6s						
JUR	Ureshino	8.95	299	A	A	04 41 26.4	
	comp=N,93nm,5.1s,comp=E,149nm,6.0s						
JHGM	Hagimishima	8.96	312	A	A	04 41 26.0	
	comp=N,140nm,6.6s,comp=E,232nm,5.8s						
JHGM	Hagimishima	8.96	312	P	P	04 41 25.4	+2.5
JHG	Hegura jima	8.98	348	A	A	04 41 24.3	
	comp=N,10.0nm,4.2s,comp=E,11nm,4.6s						
JSD	Sado	8.99	355	P	P	04 41 22.0	-1.1
JSD	Sado	8.99	355	P	P	04 41 22.1	-1.0
JSD	Sado	8.99	355	⇑P	P	04 41 22.1	-1.1
JYS	Shirataka	9.15	4	A	A	04 41 25.2	
	comp=N,65nm,1.2s,comp=E,54nm,1.1s						
JTK	Tokunoshima	9.18	264	A	A	04 41 29.3	
	comp=N,73nm,7.7s,comp=E,176nm,5.5s						
JTK	Tokunoshima	9.18	264	P	P	04 41 28.8	+3.3
JOU	Okura	9.35	7	P	P	04 41 27.9	+0.8
JAW	Awa shima	9.37	360	A	A	04 41 27.9	
	comp=N,21nm,4.2s,comp=E,26nm,2.8s						
JAW	Awa shima	9.37	360	P	P	04 41 27.1	-0.1
JII	Iki	9.42	302	A	A	04 41 31.5	
	comp=N,81nm,4.7s,comp=E,157nm,5.5s						
JII	Iki	9.42	302	P	P	04 41 31.1	+3.1
JYA	Atsumi	9.51	2	A	A	04 41 29.3	
	comp=N,47nm,2.0s,comp=E,44nm,1.2s						
JIO	Ouri	9.52	10	P	P	04 41 29.5	+0.5
JOKE	Okinoerabujima	9.60	262	A	A	04 41 34.0	
	comp=N,94nm,3.1s,comp=E,140nm,7.1s						
JOKE	Okinoerabujima	9.60	262	P	P	04 41 33.1	+3.0
JFU	Fukue jima 2	9.73	294	A	A	04 41 35.3	
	comp=N,54nm,4.5s,comp=E,107nm,7.9s						
JYRO	Yoronjima	9.78	261	A	A	04 41 36.0	
	comp=N,117nm,4.6s,comp=E,94nm,9.0s						
JYK	Kaneyama	9.87	5	P	P	04 41 33.7	+0.9
JTSM	Tsushimamitsus	9.93	304	A	A	04 41 37.2	
	comp=N,34nm,3.1s,comp=E,72nm,7.2s						
JOW	Kunigami	9.98	260	P	P	04 41 36.5	+2.3
JOW	Kunigami	9.98	260	P	P	04 41 35.9	+1.6
	comp=E,1µm,0.4s,baz=97,slow=8.6,SNR=171						
JOW				S	S	04 43 23.6	-3.6
	comp=E,1µm,1.2s,baz=220,slow=30,SNR=9.5						
JOW				ScP	ScP	04 49 52.0	+0.9
	comp=E,396nm,0.9s,baz=221,slow=1.9,SNR=24						
JOW	Kunigami	9.98	260	P	P	04 41 36.7	+2.4
JOW	Kunigami	9.98	260	A	A	04 41 38.3	
	comp=N,92nm,4.9s,comp=E,114nm,6.6s						
JOW	Kunigami	9.98	260	P	P	04 41 37.4	+3.1
JOW	Kunigami	9.98	260	⇑P	P	04 41 37.0	+2.8
JMK	Ichinoseki	9.99	9	A	A	04 41 34.3	
	comp=N,36nm,1.8s,comp=E,43nm,2.7s						
JTU	Tsushima	10.01	305	P	P	04 41 36.9	+2.5
JTU	Tsushima	10.01	305	A	A	04 41 38.1	
	comp=N,41nm,3.5s,comp=E,69nm,6.8s						
JTU	Tsushima	10.01	305	P	P	04 41 36.7	+2.3
JIH	Iheya	10.20	261	A	A	04 41 40.7	
	comp=N,120nm,3.8s,comp=E,153nm,4.4s						
JIH	Iheya	10.20	261	P	P	04 41 39.5	+2.9
JNTH	Nagotoyohara	10.29	258	A	A	04 41 41.7	
	comp=N,41nm,7.3s,comp=E,102nm,5.8s						
JOM	Ohasama	10.51	9	P	P	04 41 40.6	+0.7
JJT3	Tamagusuku3	10.60	257	A	A	04 41 45.2	
	comp=N,130nm,3.5s,comp=E,245nm,5.4s						
JAGN	Aguni-jima	10.94	260	A	A	04 41 49.0	
	comp=N,150nm,3.1s,comp=E,159nm,8.5s						
JAGN	Aguni-jima	10.94	260	P	P	04 41 47.3	+2.6
JKE	Kume jima 2	11.40	259	A	A	04 41 54.1	
	comp=N,100nm,2.6s,comp=E,114nm,6.1s						
JANG	Nango	11.43	9	P	P	04 41 50.4	+0.5
JTM	Tenmabayashi	11.78	7	P	P	04 41 54.0	+0.2
JTM	Tenmabayashi	11.78	7	P	P	04 41 54.7	+0.9
JTM	Tenmabayashi	11.78	7	P	P	04 41 54.8	+1.1
JTM	Tenmabayashi	11.78	7	⇑P	P	04 41 54.6	+0.9
JOT	Ohata	12.37	6	A	A	04 42 01.0	
	comp=N,15nm,5.0s,comp=E,19nm,8.7s						
JOT	Ohata	12.37	6	P	P	04 42 01.2	+1.1
TJN	Taejon	12.39	309	P	P	04 42 00.8	+0.4
TJN	Taejon	12.39	309	P	P	04 42 01.5	+1.1
TJN	Taejon	12.39	309	d iP	P	04 42 01.0	+0.6
JSR	Shiriuchi	12.47	4	P	P	04 42 02.5	+1.3
KSRS	Korea Array	12.65	314	P	P	04 42 04.0	+0.7
	comp=E,926nm,1.0s,baz=132,slow=10,SNR=823						
KSRS				S	S	04 44 19.7	-0.6
	comp=E,36nm,0.9s,baz=116,slow=19,SNR=1.4						
KSRS				ScP	ScP	04 49 55.8	+1.1
	comp=E,260nm,0.9s,baz=150,slow=1.3,SNR=57						
KSRS				P3KPbc		05 17 30.8	
	comp=E,2.1nm,1.1s,baz=8.5,slow=2.5,SNR=4.0						
KSAR	Wonju Array Be	12.67	314	P	P	04 42 03.7	+0.3
KSAR	Wonju Array Be	12.67	314	P	P	04 42 03.7	+0.3
KS19	Wonju Array Si	12.71	314	P	P	04 42 04.0	+0.1
JKB	Kayabe	12.87	6	P	P	04 42 06.7	+1.2
JOSM	Okushiri--Mats	12.99	1	A	A	04 42 08.0	
	comp=N,14nm,8.4s,comp=E,21nm,5.7s						
JOSM	Okushiri--Mats	12.99	1	P	P	04 42 08.1	+1.3
JOGS	Gusukube	13.10	254	A	A	04 42 12.4	
	comp=N,294nm,3.3s,comp=E,299nm,3.5s						
JIKM	Ikemajima	13.17	255	A	A	04 42 13.2	
	comp=N,216nm,4.4s,comp=E,246nm,3.3s						
JMJ2	Miyako jima3	13.17	254	A	A	04 42 13.2	
	comp=N,240nm,3.6s,comp=E,246nm,4.0s						
JMJ	Miyako jima 2	13.17	255	P	P	04 42 11.6	+2.5
JIRB	Irabujima	13.27	255	A	A	04 42 14.3	
	comp=N,134nm,4.1s,comp=E,196nm,4.2s						
ERM	Erimo	13.30	13	P	P	04 42 11.4	+1.3
ERM	Erimo	13.30	13	P	P	04 42 11.7	+1.5
ERM	Erimo	13.30	13	c iP	P	04 42 11.7	+1.5
ERM	Erimo	13.30	13	P	P	04 42 11.6	+1.5
ERM				S	S	04 44 32.6	-0.4
JEM	Erimo	13.30	13	P	P	04 42 11.6	+1.4
JEM	Erimo	13.30	13	P	P	04 42 11.6	+1.4
JNB	Noboribetsu	13.45	6	P	P	04 42 12.7	+0.9
JNBK	Urakawa-nobuka	13.48	11	P	P	04 42 13.7	+1.5
INCN	Inchon	13.49	312		P	04 42 12.1	-0.2
INCN	Inchon	13.49	312	P	P	04 42 12.2	-0.2
INCN				P	P	04 42 12.2	-0.2
INCN				S	S	04 44 33.5	-3.6
INCN				S	S	04 44 33.5	-3.6
INCN	Inchon	13.49	312	P	P	04 42 12.7	+0.3
INCN	Inchon	13.49	312	P	P	04 42 12.1	-0.2
INCN	Inchon	13.49	312	⇓P	P	04 42 12.2	-0.2
JSH	Shimam	13.56	2	P	P	04 42 14.2	+1.2
JTJ	Tarama	13.74	255	A	A	04 42 19.1	
	comp=N,79nm,3.1s,comp=E,134nm,3.7s						
JEW	Eniwo	13.86	7	P	P	04 42 17.3	+1.1
JBT2	Biratori 2	13.91	9	P	P	04 42 18.0	+1.2
JCH	Churui	13.91	13	A	A	04 42 17.1	
	comp=N,20nm,3.3s,comp=E,21nm,7.5s						
JCH	Churui	13.91	13	P	P	04 42 18.3	+1.5
JISG	Ishigakijimahi	14.09	255	A	A	04 42 22.8	
	comp=N,35nm,4.8s,comp=E,57nm,4.5s						
JISS	Ishikarishitsu	14.28	6	P	P	04 42 22.2	+1.4
JOB	Onbets	14.29	14	P	P	04 42 22.4	+1.6
JSK	Shakotan	14.29	4	P	P	04 42 22.0	+1.2
JIJ	Ishigaki jima	14.31	254	A	A	04 42 25.1	
	comp=N,43nm,3.9s,comp=E,64nm,4.3s						
JIJ	Ishigaki jima	14.31	254	P	P	04 42 22.4	+1.0
JFR	Furan	14.32	10	P	P	04 42 22.5	+1.3
JKRS	Kuro-shima	14.47	254	A	A	04 42 26.8	
	comp=N,145nm,3.5s,comp=E,216nm,5.3s						
JAK	Akkeshi	14.57	16	P	P	04 42 25.1	+1.3
JAB	Ashibetsu	14.60	9	P	P	04 42 26.2	+2.0
JAR	Ashorobuto	14.65	13	P	P	04 42 25.9	+1.1
IRIF	Iriomote-Funau	14.67	255	A	A	04 42 28.8	
	comp=N,46nm,4.1s,comp=E,68nm,6.1s						
HATJ	Hateruma jima	14.71	254	A	A	04 42 29.3	
	comp=N,115nm,3.9s,comp=E,137nm,4.9s						
HATJ	Hateruma jima	14.71	254	P	P	04 42 26.9	+1.2
JKHN	Kushirohamanak	14.77	17	P	P	04 42 27.3	+1.4
JHR	Hokuryu	14.78	7	A	A	04 42 26.4	
	comp=N,16nm,3.1s,comp=E,47nm,7.9s						
JHR	Hokuryu	14.78	7	P	P	04 42 28.2	+2.1
MSHR	Mys Shultsa	14.99	336	d iP	P	04 42 28.2	-0.2
JKK2	Kamakawa 2	15.04	10	P	P	04 42 30.2	+1.3
JNK	Nakash	15.13	15	P	P	04 42 30.6	+0.7
NEM2	Nemuro 2	15.18	18	A	A	04 42 29.9	
	comp=N,10.0nm,6.4s,comp=E,20nm,6.7s						
NEM2	Nemuro 2	15.18	18	P	P	04 42 31.1	+0.7
PSTR	Posyet	15.18	335	d iP	P	04 42 30.8	+0.3
VLA	Vladivostok	15.23	339	c iP	P	04 42 32.2	+1.2
YOJ	Yonaguni jima	15.23	256	P	P	04 42 31.3	0.0
YOJ	Yonaguni jima	15.23	256	P	P	04 42 31.5	+0.2
YOJ	Yonaguni jima	15.23	256	P	P	04 42 31.3	0.0
YOJ	Yonaguni jima	15.23	256	⇓P	P	04 42 31.1	-0.1
ASAJ	Asahikawa	15.25	9	P	P	04 42 32.6	+1.4
	comp=E,706nm,0.9s,baz=217,slow=11,SNR=168						
ASAJ				S	S	04 45 10.5	-0.9
	comp=E,175nm,0.8s,baz=359,slow=29,SNR=6.9						
ASAJ				ScP	ScP	04 49 59.6	+0.6
	comp=E,330nm,1.0s,baz=256,slow=3.2,SNR=14						
ASAJ	Asahikawa	15.25	9	P	P	04 42 32.8	+1.6
JKA	Kamikawa-asahi	15.25	9	P	P	04 42 31.8	+0.6
JMP	Maruseppu	15.26	11	P	P	04 42 33.3	+2.0
JYNG	Yonagunijimaku	15.29	256	P	P	04 42 32.0	+0.1
JTKR	Abashiri--Toko	15.33	13	A	A	04 42 31.7	
	comp=N,9.0nm,3.9s,comp=E,21nm,6.7s						
JTKR	Abashiri--Toko	15.33	13	P	P	04 42 33.4	+1.4
JSS	Shosan	15.44	7	P	P	04 42 35.0	+1.9
JRA	Rausu	15.56	16	P	P	04 42 35.8	+1.4
SSE	Sheshan	15.79	282	P	P	04 42 36.5	-0.6
SSE				S	S	04 45 21.2	-1.1
SSE				pmax	pmax		
	comp=E,300nm,1.0s						
SSE				pmax	pmax		
	comp=E,5µm,3.7s						
YUK	Yuzh-Kuril'sk	15.84	18	c iP	P	04 42 38.4	+1.0
YUK				i S	S	04 45 22.8	0.0
YUK				pmax	pmax		
	comp=Z,8µm,1.0s						
YUK				pmax	pmax		
	comp=N,2µm,0.6s						
YUK				pmax	pmax		
	comp=E,4µm,0.7s						
TEY	Ternei	16.08	353	⇑eP	P	04 42 40.9	+0.9
TEY						04 45 21.9	
TEY				pmax	pmax		
	comp=N,60nm,0.9s						
TEY				pmax	pmax		
	comp=Z,70nm,0.8s						
TEY				pmax	pmax		
	comp=Z,2µm,3.8s						
TEY				pmax	pmax		
	comp=E,300nm,4.2s						
TEY				pmax	pmax		
	comp=N,1µm,3.7s						
TEY				MLR	MLR		
	comp=E,4µm,11.0s						
TEY				MLR	MLR		
	comp=Z,9µm,16.0s						
USA0B	Ussuriysk Arra	16.18	341	P	P	04 42 41.7	+0.6
USA0B	Ussuriysk Arra	16.18	341	d iP	P	04 42 41.8	+0.6
USRK	Ussuriysk Ar.	16.18	341	P	P	04 42 41.8	+0.7
	comp=Z,1µm,0.8s,baz=157,slow=10,SNR=563						
USRK				S	S	04 45 31.4	+1.8
	comp=Z,108nm,1.0s,baz=150,slow=16,SNR=4.8						
USRK				ScP	ScP	04 50 01.0	+0.2
	comp=Z,74nm,1.0s,baz=246,slow=3.6,SNR=7.1						
I45RU	USSURIYSK INFR	16.19	341	P	P	04 42 41.5	+0.4
	baz=174,slow=12,SNR=2.9						
GUMO	Guam	16.25	160	P	P	04 42 43.2	+1.1
	comp=Z,3µm,0.7s,baz=190,slow=4.2,SNR=56						
GUMO				S	S	04 45 33.9	+2.3
	comp=Z,620nm,0.8s,baz=25,slow=21,SNR=7.9						
JWK2	Keihoku	16.35	7	P	P	04 42 44.7	+1.9
TATO	Taipei	16.37	260	P	P	04 42 42.4	-0.9
TATO	Taipei	16.37	260	P	P	04 42 43.1	-0.2
TATO				P	P	04 42 43.1	-0.2
TATO				S	S	04 45 30.0	-3.7
TATO				S	S	04 45 30.0	-3.7
TATO	Taipei	16.37	260	P	P	04 42 43.5	+0.2
NACB	Ninganchiao	16.54	257	P	P	04 42 43.3	-1.9
NACB	Ninganchiao	16.54	257	P	P	04 42 44.4	-0.8
YHNB	Yeheng	16.56	259	P	P	04 42 44.9	-0.6
YULB	Yu-li	17.09	255	P	P	04 42 50.3	-0.7
YULB	Yu-li	17.09	255	P	P	04 42 50.7	-0.3
SSLB	Suanglung	17.23	256	P	P	04 42 51.5	-1.0
SSLB	Suanglung	17.23	256	P	P	04 42 52.4	-0.1
MDJ	Mudanjiang	17.33	336	P	P	04 42 52.7	-0.5
MDJ	Mudanjiang	17.33	336	P	P	04 42 53.6	+0.4
MDJ				S	S	04 45 51.6	+0.1
MDJ				ScP	ScP	04 50 04.0	+0.9
MDJ				ScS	ScS	04 53 43.1	-0.2
MDJ				pmax	pmax		
	comp=Z,1µm,1.2s						
MDJ	Mudanjiang	17.33	336	P	P	04 42 53.3	+0.1
TWGBT	Beinan	17.50	253	P	P	04 42 55.0	-0.4
TWG	Pinlang	17.51	253	P	P	04 42 54.0	-1.4
KUR	Kuril'sk	17.51	21	c iP	P	04 42 54.8	-0.3
KUR				i S	S	04 45 54.7	-0.1
KUR				pmax	pmax		
	comp=Z,25µm,4.6s						
KUR				pmax	pmax		
	comp=Z,490nm,0.4s						
DL2	Dalian	17.60	309	P	P	04 42 54.6	-1.5
DL2				sP	sP	04 44 47.9	-0.8
DL2				S	S	04 45 53.6	-3.0
DL2				ScP	ScP	04 50 04.0	+0.2
DL2				ScS	ScS	04 53 42.1	-2.2
DL2				pmax	pmax		

	comp=Z,1μm,1.3s						
DL2				pmax	pmax		
	comp=Z,2μm,9.8s						
TPUB	Ta-pu	17.69	255	P	P	04 42 55.8	-1.5
TPUB	Ta-pu	17.69	255	P	P	04 42 57.6	+0.2
NJ2	Nanjing	17.84	285	⇓iP	P	04 42 57.2	-1.6
NJ2				sP	sP	04 44 46.1	-5.1
NJ2				S	S	04 45 57.6	-3.6
NJ2				ScP	ScP	04 50 05.2	+0.7
NJ2				ScS	ScS	04 53 45.2	-0.1
NJ2				pmax	pmax		
	comp=Z,750nm,1.7s						
NJ2				pmax	pmax		
	comp=Z,19μm,6.2s						
SNY	Shenyang	18.01	319	⇓P	P	04 43 00.0	-0.4
SNY				sP	sP	04 44 53.3	+0.1
SNY				S	S	04 46 02.3	-1.6
SNY				ScP	ScP	04 50 03.3	-1.3
SNY				ScS	ScS	04 53 47.1	+1.6
SNY				pmax	pmax		
	comp=Z,2μm,1.3s						
SNY				pmax	pmax		
	comp=Z,16μm,3.8s						
YSS	Yuzhno-Sakhali	18.06	8	P	P	04 43 00.6	-0.2
YSS	Yuzhno-Sakhali	18.06	8	P	P	04 43 01.3	+0.4
YSS	Yuzhno-Sakhali	18.06	8	αeP	P	04 43 01.0	+0.2
YSS				eS	S	04 46 04.1	-0.5
YSS				pmax	pmax		
	comp=Z,9μm,6.6s						
YSS				pmax	pmax		
	comp=N,5μm,3.4s						
YSS				pmax	pmax		
	comp=E,4μm,4.4s						
YSS				pmax	pmax		
	comp=Z,610nm,0.8s						
YSS				smax	smax		
	comp=N,680nm,1.2s						
YSS				smax	smax		
	comp=E,860nm,1.1s						
YSS				smax	smax		
	comp=N,20μm,8.0s						
YSS				smax	smax		
	comp=E,43μm,13.4s						
YSS	Yuzhno-Sakhali	18.06	8	⇑P	P	04 43 01.1	+0.2
CN2	Changchun	18.40	327	⇓P	P	04 43 04.5	+0.2
CN2				esP	sP	04 44 55.0	-2.8
CN2				eS	S	04 46 07.6	-2.9
CN2				pmax	pmax		
	comp=E,400nm,1.2s						
CN2				pmax	pmax		
	comp=E,14μm,3.0s						
QZH	Quanzhou	18.88	262	⇓iP	P	04 43 08.0	-1.2
QZH				S	S	04 46 16.1	-2.7
QZH				ScP	ScP	04 50 07.4	+0.5
QZH				ScS	ScS	04 53 50.4	+1.5
QZH				pmax	pmax		
	comp=E,2μm,0.6s						
QZH				pmax	pmax		
	comp=E,26μm,6.1s						
BNX	BinXian	19.09	334	⇓P	P	04 43 11.2	+0.3
BNX				sP	sP	04 45 04.6	-1.0
BNX				S	S	04 46 19.7	-2.0
BNX				ScS	ScS	04 53 45.9	-3.0
BNX				pmax	pmax		
	comp=E,840nm,1.0s						
BNX				pmax	pmax		
	comp=E,19μm,6.5s						
KNMB	Chin-men Tao	19.20	261	P	P	04 43 11.4	-0.8
TIA	Tai'an	19.95	297	P	P	04 43 18.6	-0.3
TIA				sP	sP	04 45 14.5	-0.2
TIA				S	S	04 46 29.1	-6.8
TIA				PcP	PcP	04 47 16.3	+1.4
TIA				ScP	ScP	04 50 10.3	+1.1
TIA				ScS	ScS	04 53 51.4	-0.8
TIA				pmax	pmax		
	comp=E,2μm,0.8s						
TIA				pmax	pmax		
	comp=E,29μm,3.5s						
UGL	Uglegorsk	20.10	5	⇑iP	P	04 43 15.7	-4.3
UGL				eS	S	04 46 31.7	-6.2
UGL				pmax	pmax		
	comp=Z,10μm,2.0s						
UGL				pmax	pmax		
	comp=Z,3μm,1.1s						
UGL				smax	smax		
	comp=E,28μm,6.2s						
UGL				smax	smax		
	comp=N,8μm,4.2s						
KLR	Kul'dur	20.94	346	P	P	04 43 28.6	+0.8
	comp=N,282nm,0.6s,baz=159,slow=10.0,SNR=328						
KLR				S	S	04 46 53.2	+1.6
	comp=N,109nm,1.2s,baz=59,slow=22,SNR=11						
KLR				ScP	ScP	04 50 11.7	+0.4
	comp=N,187nm,0.9s,baz=186,slow=3.9,SNR=22						
	comp=N,282nm,0.6s						
KLR	Kul'dur	20.94	346	d iP	P	04 43 28.4	+0.7
KLR				pmax	pmax		
	comp=Z,562nm,1.3s						
WHN	Wuhan	21.67	280	⇓iP	P	04 43 35.2	+0.6
WHN				sP	sP	04 45 35.2	+1.1
WHN				S	S	04 47 04.4	+0.7
WHN				ScP	ScP	04 50 14.6	+1.1
WHN				ScS	ScS	04 53 58.9	+0.4
WHN				pmax	pmax		
	comp=Z,5μm,0.8s						
WHN				pmax	pmax		
	comp=Z,60μm,3.9s						
GRNR	Gornyy	21.78	355	⇓iP	P	04 43 36.3	+0.9
GRNR				eS	S	04 47 11.4	+6.4
GRNR				pmax	pmax		
	comp=N,60nm,1.0s						
GRNR				pmax	pmax		
	comp=E,20nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,100nm,1.2s						
GRNR				smax	smax		
	comp=N,20nm,0.9s						
GRNR				MLR	MLR		
	comp=E,6μm,13.0s						
GRNR				MLR	MLR		
	comp=N,3μm,14.0s						
GRNR				MLR	MLR		
	comp=Z,4μm,15.0s						
BJT	Baijiatuau	21.89	306	P	P	04 43 35.8	-0.7
BJT	Baijiatuau	21.89	306	P	P	04 43 36.2	-0.2
BJT	Baijiatuau	21.89	306	P	P	04 43 35.8	-0.7
BJI	Beijing	21.89	306	P	P	04 43 35.6	-0.9
BJI				sP	sP	04 45 37.9	+1.8
BJI				S	S	04 47 05.0	-1.9
BJI				ScP	ScP	04 50 15.4	+1.5
BJI				ScS	ScS	04 53 56.3	-2.7
BJI				pmax	pmax		
	comp=Z,470nm,1.1s						
BJI				pmax	pmax		
	comp=Z,6μm,4.7s						
TYV	Tymovskoe	21.92	6	eP	P	04 43 37.9	+1.3
TYV				eS	S	04 47 06.7	-0.4
TYV				pmax	pmax		
	comp=Z,771nm,0.9s						
TYV				pmax	pmax		
	comp=Z,6μm,4.4s						
TYV				smax	smax		
	comp=N,4μm,3.4s						
TYV				smax	smax		
	comp=E,9μm,3.4s						
TYV				smax	smax		
	comp=N,114nm,1.4s						
TYV				smax	smax		
	comp=E,118nm,1.4s						
HNS	HongShan	22.12	298	⇓P	P	04 43 38.7	+0.1
HNS				sP	sP	04 45 39.4	+1.0
HNS				S	S	04 47 10.0	-0.7
HNS				PcP	PcP	04 47 21.4	+2.2
HNS				ScP	ScP	04 50 15.5	+1.0
HNS				ScS	ScS	04 54 01.4	+1.5
HNS				pmax	pmax		
	comp=E,1μm,1.4s						
TGY	Tagaytay City	22.59	233	P	P	04 43 44.0	+0.8
	comp=E,10μm,0.9s,baz=9.3,slow=1.0,SNR=146						
TGY				ScP	ScP	04 50 17.5	+1.3
	comp=E,708nm,0.9s,baz=307,slow=5.1,SNR=4.9						
HEH	HeiHe	22.99	340	⇓iP	P	04 43 47.2	+0.9
HEH				S	S	04 47 25.1	+1.0
HEH				ScP	ScP	04 50 16.2	-0.3
HEH				ScS	ScS	04 54 00.1	-2.7
HEH				pmax	pmax		
	comp=E,1μm,1.2s						
HEH				pmax	pmax		
	comp=E,4μm,7.9s						
CNSH	ChangSha	23.13	274	P	P	04 43 48.3	+0.5
CNSH				sP	sP	04 45 48.8	-2.1
CNSH				S	S	04 47 29.1	+2.2
CNSH				pmax	pmax		
	comp=E,630nm,1.9s						
LYN	LuoYang	23.40	290	⇓iP	P	04 43 50.1	-0.1
LYN				sP	sP	04 45 54.2	+0.5
LYN				PcP	PcP	04 47 24.1	+2.2
LYN				S	S	04 47 30.9	0.0
LYN				ScP	ScP	04 50 18.7	+0.7
LYN				ScS	ScS	04 54 04.2	-0.8
LYN				pmax	pmax		
	comp=E,2μm,1.0s						
LYN				pmax	pmax		
	comp=E,19μm,8.6s						
HKC	Hong Kong Obse	23.58	259	⇑P	P	04 43 53.0	+1.1
HKPS	Hong Kong Po S	23.62	259	P	P	04 43 52.5	+0.2
XLT	XiLinHaoTe	23.70	315	eP	P	04 43 52.3	-0.6
XLT				S	S	04 47 37.3	+1.6
XLT				ScP	ScP	04 50 17.8	-1.0
XLT				pmax	pmax		
	comp=E,7μm,11.3s						
TIY	Taiyuan	23.95	298	eP	P	04 43 55.9	+0.7
TIY				sP	sP	04 45 59.5	-1.1
TIY				S	S	04 47 40.2	+0.4
TIY				pmax	pmax		
	comp=E,300nm,1.3s						
TIY				pmax	pmax		
	comp=E,13μm,4.4s						
GZH	Guangzhou	24.02	262	P	P	04 43 52.1	-3.7
GZH				S	S	04 47 35.1	-5.8
GZH				pmax	pmax		
	comp=E,7μm,3.6s						
NKL	Nikolayevsk	24.08	2	eP	P	04 43 54.4	-1.6
NKL				eS	S	04 47 40.9	-0.3
NKL				pmax	pmax		
	comp=N,1μm,0.9s						
NKL				pmax	pmax		
	comp=E,2μm,0.9s						
NKL				pmax	pmax		
	comp=Z,6μm,0.9s						
NKL				smax	smax		
	comp=E,2μm,1.8s						
NKL				smax	smax		
	comp=N,4μm,2.6s						
NKL				MLR	MLR		
	comp=E,10μm,13.0s						
NKL				MLR	MLR		
	comp=N,8μm,15.0s						
NKL				MLR	MLR		
	comp=Z,13μm,16.0s						
MCO	Taipa Grande	24.18	259	P	P	04 43 57.0	-0.3
SKR	Severo-Kuril's	25.05	26	eP	P	04 44 04.9	+0.3
SKR				eS	S	04 47 56.8	+0.4
SKR				pmax	pmax		
	comp=Z,7μm,3.9s						
SKR				MLR	MLR		
	comp=Z,9μm,15.0s						
HIA	Hailar	25.09	329	P	P	04 44 05.0	0.0
HIA	Hailar	25.09	329	P	P	04 44 05.6	+0.5
HIA	Hailar	25.09	329	P	P	04 44 05.1	0.0
DAV	Davao City (W)	25.41	213	P	P	04 44 08.4	+0.1
DAV	Davao City (W)	25.41	213	P	P	04 44 08.5	+0.2
	comp=Z,365nm,0.5s,baz=54,slow=3.3,SNR=34						
DAV				ScP	ScP	04 50 25.0	+1.1
	comp=Z,522nm,0.7s,baz=279,slow=3.0,SNR=4.8						
	comp=Z,365nm,0.5s						
DAV	Davao City (W)	25.41	213	P	P	04 44 07.2	-1.2
DAV				P	P	04 44 07.2	-1.2
DAV	Davao City (W)	25.41	213	P	P	04 44 08.8	+0.5
DAV	Davao City (W)	25.41	213	P	P	04 44 08.2	-0.2
DAV	Davao City (W)	25.41	213	P	P	04 44 06.0	-2.3
HHC	Hu-ho-hao-te	25.47	305	⇓iP	P	04 44 09.0	+0.3
HHC				sP	sP	04 46 15.5	0.0
HHC				S	S	04 48 03.2	-0.4
HHC				pmax	pmax		
	comp=Z,950nm,1.1s						
HHC				pmax	pmax		
	comp=Z,5μm,8.8s						
ENH	Enshi	25.88	280	P	P	04 44 12.6	+0.2
ENH	Enshi	25.88	280	P	P	04 44 12.8	+0.4
GULI	GuiLin	25.96	269	P	P	04 44 14.8	+1.7
GULI				sP	sP	04 46 17.7	-1.2
GULI				S	S	04 48 14.5	+2.9
GULI				ScP	SS	04 50 22.2	-1.6
GULI				pmax	pmax		
	comp=Z,760nm,1.5s						
GULI				pmax	pmax		
	comp=Z,10μm,3.4s						
ZEA	Zeya	26.18	344	eP	P	04 44 15.6	+1.0
ZEA				e*SP	sP	04 46 18.2	-2.6
ZEA				eS	S	04 48 14.1	0.0
ZEA				e		04 54 18.5	
ZEA				pmax	pmax		
	comp=N,500nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,1μm,1.7s						
ZEA				pmax	pmax		
	comp=E,160nm,0.5s						
ZEA				pmax	pmax		
	comp=N,250nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,490nm,0.6s						
ZEA				smax	smax		
	comp=N,4μm,10.1s						
ZEA				smax	smax		
	comp=E,6μm,10.8s						
XAN	Xi'an	26.29	289	P	P	04 44 16.1	+0.1
XAN				sP	sP	04 46 22.2	+0.4
XAN				S	S	04 48 14.6	-1.9
XAN				pmax	pmax		
	comp=E,2μm,0.6s						
XAN				pmax	pmax		
	comp=E,4μm,4.6s						
BTO	Baotou	26.51	304	⇓iP	P	04 44 19.5	+1.6
BTO				sP	sP	04 46 28.1	+4.1
BTO				S	S	04 48 30.6	+11
BTO				pmax	pmax		
	comp=E,580nm,1.1s						
BTO				pmax	pmax		
	comp=E,24μm,8.3s						
WAKE	Wake Island	26.75	105	P	P	04 44 20.2	+0.1
H11N2	WAKE ISLAND Hy	26.76	104	P	P	04 44 20.4	+0.4
	baz=269,slow=9.0,SNR=183						
H11N1	WAKE ISLAND Hy	26.76	104	P	P	04 44 20.0	0.0
	baz=269,slow=9.0,SNR=283						
H11N3	WAKE ISLAND Hy	26.78	104	P	P	04 44 20.6	+0.4
	baz=269,slow=9.0,SNR=224						
H11S3	WAKE ISLAND Hy	27.14	107	P	P	04 44 23.8	+0.5
	baz=262,slow=6.1,SNR=115						
H11S1	WAKE ISLAND Hy	27.14	107	P	P	04 44 24.2	+0.8
	baz=262,slow=6.1,SNR=135						
H11S2	WAKE ISLAND Hy	27.15	107	P	P	04 44 24.0	+0.5
	baz=262,slow=6.1,SNR=119						
PEA0B	Petropavlovsk-	27.58	24	P	P	04 44 26.9	-0.2
PEA0B	Petropavlovsk-	27.58	24	c iP	P	04 44 27.5	+0.5
PETK	Petropavlovsk-	27.58	24	P	P	04 44 27.9	+0.9
PETK	Petropavlovsk-	27.58	24	P	P	04 44 27.0	0.0
	comp=E,213nm,0.9s,baz=200,slow=7.5,SNR=174						
PETK				ScP	ScP	04 50 28.8	-1.0
	comp=E,198nm,1.0s,baz=139,slow=1.7,SNR=15						
	comp=E,213nm,0.9s						
PETK	Petropavlovsk-	27.58	24	P	P	04 44 28.0	+0.9
PET	Petropavlovsk	27.86	25	P	P	04 44 29.8	+0.3
PET				IAmb	IAmb	04 44 33.0	
	comp=Z,2μm,1.3s						
PET	Petropavlovsk	27.86	25	P	P	04 44 30.0	+0.6
PET	Petropavlovsk	27.86	25	⇑iP	P	04 44 30.2	+0.7
PET				eS	S	04 48 41.1	+0.5
PET				pmax	pmax		
	comp=Z,3μm,5.6s						
PET				pmax	pmax		
	comp=Z,7μm,3.9s						
PET				pmax	pmax		
	comp=Z,2μm,1.3s						
PET				MLR	MLR		
	comp=Z,4μm,20.0s						
PET	Petropavlovsk	27.86	25	P	P	04 44 29.8	+0.3
	comp=Z,18μmcomp=Z,2μm,1.3s						
PET				pP	pP	04 45 45.3	+0.9
	comp=Z,18μmcomp=Z,2μm,1.3s						
PET	Petropavlovsk	27.86	25	⇑P	P	04 44 30.1	+0.6
SGSI	Sangihe	28.42	210	P	P	04 44 35.1	+0.2
	comp=Z,17μmcomp=Z,1μm,0.7s						
PATS	Pohnpei	28.49	137	P	P	04 44 34.5	-1.0
PATS				IAmb	IAmb	04 44 36.4	
	comp=Z,983nm,0.9s						
PATS	Pohnpei	28.49	137	P	P	04 44 35.1	-0.3
	comp=Z,0.0nmcomp=Z,1μm,1.1s						
PATS	Pohnpei	28.49	137	P	P	04 44 35.2	-0.3
QIZ	Qiongzhong	28.61	256	P	P	04 44 37.8	+1.2
QIZ	Qiongzhong	28.61	256	P	P	04 44 38.0	+1.5
QIZ				pP	PP	04 45 52.4	-0.2
QIZ				sP	sP	04 46 43.6	+0.2
QIZ				PcP	PcP	04 47 36.0	+1.6
QIZ				S	S	04 48 54.7	+1.6
QIZ				ScP	ScP	04 50 34.8	+1.2
QIZ				ScS	ScS	04 54 29.9	+1.7
QIZ				pmax	pmax		
	comp=Z,760nm,1.4s						
QIZ				pmax	pmax		
	comp=Z,10μm,3.0s						
QIZ	Qiongzhong	28.61	256	P	P	04 44 38.0	+1.5
GYA	Guiyang	28.93	273	⇓P	P	04 44 39.5	+0.1
GYA				pP	PP	04 45 57.0	+0.9
GYA				sP	sP	04 46 48.4	+2.6
GYA				PcP	PcP	04 47 37.4	+2.1
GYA				S	S	04 48 57.8	-0.4
GYA				ScP	ScP	04 50 36.1	+1.4
GYA				sS	sS	04 51 18.2	-2.0
GYA				ScS	ScS	04 54 28.6	-1.2
GYA				pmax	pmax		
	comp=Z,2μm,1.4s						
CIT	Chita	29.85	327	eP	P	04 44 47.8	+0.8
CIT				e		04 47 00.8	
CIT				e		04 47 39.2	
CIT				eS	S	04 49 13.2	+1.5
CIT				pmax	pmax		
	comp=Z,3μm,1.4s						
BAKI	Biak	30.24	186	P	P	04 44 51.3	+0.5
TNTI	Ternate	30.35	204	P	P	04 44 51.6	-0.1
TNTI				IAmb	IAmb	04 44 53.5	
	comp=Z,2μm,1.3s						
TNTI	Ternate	30.35	204	P	P	04 44 52.1	+0.4
TNTI	Ternate	30.35	204	P	P	04 44 51.3	-0.4
	comp=Z,19μmcomp=Z,1μm,1.6s						
TNTI	Ternate	30.35	204	⇓P	P	04 44 51.6	-0.1
LZH	Lanzhou	30.55	292	⇓P	P	04 44 53.7	+0.3
LZH				pP	PP	04 46 13.3	-0.4
LZH				sP	sP	04 47 01.7	+1.4
LZH				PcP	PcP	04 47 42.1	+2.6
LZH				S	S	04 49 22.3	-0.9
LZH				ScP	ScP	04 50 42.0	+2.1
LZH				PcS	PcS	04 51 25.0	+1.0
LZH				sS	sS	04 51 45.2	-0.5
LZH				ScS	ScS	04 54 37.6	+0.2
LZH				pmax	pmax		
	comp=Z,1μm,1.0s						
LZH				pmax	pmax		
	comp=Z,11μm,5.0s						
SWI	Sorong	30.73	196	P	P	04 44 55.6	+0.6
	comp=Z,9μmcomp=Z,12μmcomp=Z,848nm,1.3s						
CD2	Chengdu	30.74	282	⇓P	P	04 44 55.3	+0.2
CD2				pP	pP	04 46 13.6	+2.0
CD2				sP	sP	04 47 02.1	+0.3
CD2				S	S	04 49 23.7	-2.4
CD2				ScP	ScP	04 50 42.5	+2.0
CD2				sS	sS	04 51 48.3	-0.4
CD2				SS	SS	04 52 02.5	+1.9
CD2				pmax	pmax		
	comp=Z,2μm,1.0s						
CD2				pmax	pmax		
	comp=Z,18μm,5.3s						
RKPI	Ransiki, Papua	30.79	190	P	P	04 44 55.4	-0.2
MYLDM	Lahad Datu	30.85	224	P	P	04 44 57.7	+1.6
MYLDM	Lahad Datu	30.85	224	P	P	04 44 58.2	+2.2
MYLDM	Lahad Datu	30.85	224	⇓P	P	04 44 58.0	+2.0
SMPI	Sarmi	30.89	181	P	P	04 44 56.7	+0.4
SRPI	Serui, Papua	30.90	186	P	P	04 44 57.8	+1.3
ULN	Ulaanbaatar	31.13	316	P	P	04 44 58.9	+0.6
ULN				IAmb	IAmb	04 45 01.8	
	comp=Z,1μm,1.2s						
ULN	Ulaanbaatar	31.13	316	P	P	04 44 59.2	+0.9
ULN				P	P	04 44 59.2	+0.9
ULN				S	S	04 49 31.5	-0.3
ULN				S	S	04 49 31.5	-0.3
ULN	Ulaanbaatar	31.13	316	d iP	P	04 44 59.3	+1.0
ULN				pmax	pmax		
	comp=Z,2μm,1.3s						
ULN	Ulaanbaatar	31.13	316	⇑P	P	04 44 56.9	-1.4
ULN	Ulaanbaatar	31.13	316	P	P	04 44 59.2	+0.9
ULN				PcP	PcP	04 47 41.3	+0.5
ULN				ScP	ScP	04 50 42.2	+0.6
JAY	Jayapura	31.43	177	P	P	04 45 01.5	+0.4
	comp=Z,191nm,0.8s,baz=315,slow=4.7,SNR=49						
JAY				PcP	PcP	04 47 42.0	+0.1
	comp=Z,93nm,0.9s,baz=275,slow=3.2,SNR=3.9						
JAY				S	S	04 49 34.9	-2.0
	comp=Z,83nm,1.1s,baz=109,slow=18,SNR=6.2						
JAY				ScP	ScP	04 50 42.6	-0.3
	comp=Z,91nm,0.9s,baz=284,slow=3.3,SNR=5.5						
	comp=Z,191nm,0.8s						
JAY	Jayapura	31.43	177	P	P	04 45 01.6	+0.4
GENI	Genyem	31.49	178	P	P	04 45 03.3	+1.7
GENI	Genyem	31.49	178	P	P	04 45 04.0	+2.4
	comp=Z,9μmcomp=Z,826nm,0.9s						
GENI	Genyem	31.49	178	⇓P	P	04 45 02.2	+0.6
MA2	Magadan	31.50	11	P	P	04 45 01.8	+0.6
MA2				IAmb	IAmb	04 45 04.5	
	comp=Z,1μm,0.8s						
MA2	Magadan	31.50	11	P	P	04 45 01.1	0.0
	comp=Z,950nm,0.8s,baz=191,slow=7.4,SNR=445						
MA2				S	S	04 49 34.7	-2.2
	comp=Z,58nm,1.1s,baz=311,slow=22,SNR=7.4						
MA2				P3KPbc		05 16 28.0	
	comp=Z,31nm,0.7s,baz=47,slow=4.3,SNR=24						
	comp=Z,950nm,0.8s						
MA2	Magadan	31.50	11	P	P	04 45 01.3	+0.2
MA2	Magadan	31.50	11	c iP	P	04 45 01.7	+0.6
MA2				pmax	pmax		
	comp=Z,1μm,0.9s						
MA2	Magadan	31.50	11	P	P	04 45 01.6	+0.5
	comp=Z,16μmcomp=Z,2μm,0.9s						
MA2	Magadan	31.50	11	⇑P	P	04 45 01.6	+0.5
MA2	Magadan	31.50	11	P	P	04 45 01.9	+0.8
MA2				ScP	ScP	04 50 42.2	-0.2
SONM	Songino Array	31.52	316	P	P	04 45 01.8	+0.2
SONM	Songino Array	31.52	316	P	P	04 45 02.2	+0.6
	comp=Z,440nm,1.0s,baz=128,slow=9.3,SNR=12						
SONM				PcP	PcP	04 47 42.6	+0.8
	comp=Z,25nm,0.5s,baz=128,slow=2.3,SNR=6.0						
SONM				ScP	ScP	04 50 43.1	+0.2
	comp=Z,113nm,0.8s,baz=142,slow=3.0,SNR=12						
SONM				P3KPbc		05 16 30.9	
	comp=Z,14nm,0.9s,baz=274,slow=4.4,SNR=34						
	comp=Z,440nm,1.0s						
KKM	Kota Kinabalu	31.61	228	P	P	04 45 03.8	+1.0
KKM				IAmb	IAmb	04 45 05.8	
	comp=Z,2μm,1.2s						
KKM	Kota Kinabalu	31.61	228	P	P	04 45 03.9	+1.1
KKM	Kota Kinabalu	31.61	228	⇓P	P	04 45 03.6	+0.8
KMSI	Cibinong	31.88	210	P	P	04 45 05.7	+0.8
FAKI	Fak Fak	32.51	193	P	P	04 45 09.9	-0.4
FAKI	Fak Fak	32.51	193	P	P	04 45 10.4	0.0
FAKI	Fak Fak	32.51	193	P	P	04 45 10.3	-0.1
FAKI	Fak Fak	32.51	193	⇓P	P	04 45 10.0	-0.4
KMI	Kunming	32.68	272	⇓P	P	04 45 12.8	+0.8
KMI				pP	pP	04 46 31.7	+2.5
KMI				PP	PP	04 46 43.0	+5.6
KMI				sP	sP	04 47 21.0	+1.8
KMI				PcP	PcP	04 47 47.7	+2.1
KMI				S	S	04 49 56.9	+0.5
KMI				ScP	ScP	04 50 48.6	+1.2
KMI				sS	sS	04 52 20.2	+0.5
KMI				ScS	ScS	04 54 47.9	-0.9
KMI				pmax	pmax		
	comp=Z,1μm,1.7s						
KMI				pmax	pmax		
	comp=Z,14μm,6.5s						
KMI	Kunming	32.68	272	P	P	04 45 13.5	+1.4
KMI				PcP	PcP	04 47 44.9	-0.7
KMI				ScP	ScP	04 50 48.9	+1.5
SLVN	Son La	32.83	265	P	P	04 45 13.8	+0.7
SLVN				IAmb	IAmb	04 45 16.2	

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      comp=Z,1µm,0.9s
SLVN  Son La           32.83 265  P        P        04 45 13.5 +0.4
MRSI  Marisa           32.90 213  P        P        04 45 14.5 +0.8
      comp=Z,17µmcomp=Z,37µmcomp=Z,3µm,1.6s
TOLI2 Tolitoli         32.93 216  P        P        04 45 13.1 -0.8
TOLI2                             IAmb     IAmb     04 45 15.4
      comp=Z,818nm,0.8s
TOLI2 Tolitoli         32.93 216  P        P        04 45 13.4 -0.5
KMPI  Kaimana, Papua   32.98 190  P        P        04 45 14.9 +0.6
      comp=Z,583nm,0.7s
DLV    Lat             33.35 246  P        P        04 45 18.0 +0.2
DLV                               IAmb     IAmb     04 45 20.4
      comp=Z,4µm,1.9s
DLV    Lat             33.35 246  P        P        04 45 17.9 +0.2
DLV    Lat             33.35 246 ⇓P        P        04 45 18.5 +0.7
SANI  Sanana           33.46 205  P        P        04 45 13.4 -5.1
SANI                              S        S        04 50 00.2 -7.8
SANI  Sanana           33.46 205  P        P        04 45 17.4 -1.0
SANI  Sanana           33.46 205  P        P        04 45 17.6 -0.8
SANI  Sanana           33.46 205 ⇓P        P        04 45 17.1 -1.4
YAK   Yakutsk          33.57 352  P        P        04 45 18.1 -0.6
YAK   Yakutsk          33.57 352  P        P        04 45 18.2 -0.6
      comp=Z,252nm,0.5s,baz=158,slow=6.3,SNR=60
      comp=Z,252nm,0.5s
YAK   Yakutsk          33.57 352d iP       P        04 45 18.4 -0.4
YAK                              e*PP      pP       04 46 36.2 -0.6
YAK                              e                  04 46 48.5
YAK                              e                  04 47 47.0
YAK                              eS        S        04 50 09.4 +0.9
YAK                              e*SS      sS       04 52 32.5 +0.4
YAK                              eSS       SS       04 53 02.6 +5.4
YAK                              e                  04 54 46.6
YAK                               pmax     pmax
      comp=Z,405nm,0.9s
YAK                               pmax     pmax
      comp=N,203nm,1.2s
YAK                               pmax     pmax
      comp=Z,350nm,1.5s
YAK                               pmax     pmax
      comp=N,174nm,1.3s
YAK                               smax     smax
      comp=E,5µm,1.8s
YAK                               smax     smax
      comp=N,3µm,1.5s
YAK   Yakutsk          33.57 352 ⇓P        P        04 45 18.5 -0.2
BOD   Bodaibo          33.70 336 eP        P        04 45 20.0 +0.1
BOD                               pmax     pmax
      comp=Z,1µm,1.6s
MSAI  Masohi           33.73 199  P        P        04 45 22.7 +2.0
      comp=Z,11µmcomp=Z,30µmcomp=Z,2µm,1.6s
LUWI  Luwuk            33.85 211  P        P        04 45 20.5 -1.3
LUWI                              IAmb     IAmb     04 45 22.6
      comp=Z,1µm,1.1s
LUWI  Luwuk            33.85 211  P        P        04 45 16.1 -5.7
LUWI                              S        S        04 50 03.0  -11
LUWI  Luwuk            33.85 211  P        P        04 45 20.3 -1.5
LUWI  Luwuk            33.85 211  P        P        04 45 21.3 -0.5
      comp=Z,22µmcomp=Z,1µm,0.5s
LUWI  Luwuk            33.85 211 ⇓P        P        04 45 19.3 -2.5
GTA   Gaotai           33.98 298  P        P        04 45 23.4 +0.6
GTA                               PP       PP       04 46 54.5 +3.2
GTA                               PcP      PcP      04 47 49.6 +0.7
GTA                               S        S        04 50 14.2 -1.5
GTA                               ScP      ScP      04 50 51.9 +0.2
GTA                               SS       SS       04 53 04.7 -2.2
GTA                               ScS      ScS      04 54 53.8 -1.2
GTA                               pmax     pmax
      comp=Z,2µm,1.2s
GTA                               pmax     pmax
      comp=Z,11µm,10.3s
MPSI  Mapaga           34.04 216  P        P        04 45 23.3 -0.1
NLAI  Namlea           34.18 202  P        P        04 45 25.2 +0.6
      comp=Z,9µmcomp=Z,17µmcomp=Z,1µm,1.0s
AAI   Ambon            34.26 200  P        P        04 45 26.0 +0.8
      comp=Z,11µmcomp=Z,18µmcomp=Z,2µm,1.6s
ZAK   Zakamensk        34.44 318 eP        P        04 45 26.5  0.0
ZAK                              e                  04 54 56.1
ZAK                               pmax     pmax
      comp=Z,816nm,1.2s
BNDI  Bandanaira       34.59 197  P        P        04 45 29.1 +1.1
      comp=Z,20µmcomp=Z,1µm,1.0s
IRK   Irkutsk          34.71 322 eP        P        04 45 29.1 +0.5
IRK                              eS        S        04 50 25.9 -0.2
IRK                              e                  04 54 53.7
IRK                               pmax     pmax
      comp=Z,1µm,2.4s
SMY   Shemya           34.84  37  P        P        04 45 30.2 +0.6
SMY   Shemya           34.84  37  P        P        04 45 30.8 +1.2
SMY   Shemya           34.84  37  P        P        04 45 30.2 +0.6
SMY                               pmax     pmax
      comp=Z,3µm,1.1s
SMY   Shemya           34.84  37 ⇑P        P        04 45 31.2 +1.6
SEY   Seymchan         34.93  10  P        P        04 45 30.4 +0.2
      comp=Z,320nm,0.8s,baz=200,slow=7.3,SNR=618
SEY                               S        S        04 50 24.4 -4.7
      comp=Z,11nm,0.7s,baz=345,slow=20,SNR=1.3
SEY                               ScP      ScP      04 50 54.4  0.0
      comp=Z,153nm,1.0s,baz=217,slow=2.6,SNR=10
SEY                               P3KPbc            05 16 12.4
      comp=Z,6.6nm,0.6s,baz=48,slow=2.4,SNR=10
      comp=Z,320nm,0.8s
SEY   Seymchan         34.93  10c iP       P        04 45 30.9 +0.6
SEY                               pmax     pmax
      comp=Z,1µm,1.7s
PCI   Palu             35.13 215  P        P        04 45 32.5 -0.1
      comp=Z,11µmcomp=Z,34µmcomp=Z,3µm,1.2s
RABL  Rabaul           35.31 157  P        P        04 45 33.1 -1.0
SMKI  Samarinda        36.15 220  P        P        04 45 43.7 +2.6
      comp=Z,21µmcomp=Z,23µmcomp=Z,1µm,1.4s
MOY   Mondy            36.28 319 eP        P        04 45 41.6 -0.3
MOY                               pmax     pmax
      comp=Z,712nm,1.6s
TNCH  TengChong        36.40 273 ⇓P        P        04 45 44.2 +0.9
TNCH                              pP       pP       04 47 03.9 +1.9
TNCH                              PP       PP       04 47 20.9 +2.6
TNCH                              sP       sP       04 47 51.8 +0.1
TNCH                              PcP      PcP      04 47 58.1 +1.6
TNCH                              S        S        04 50 54.8 +2.2
TNCH                              ScP      ScP      04 51 02.0 +1.2
TNCH                              sS       sS       04 53 17.2 -0.6
TNCH                              SS       SS       04 53 50.3 -4.8
TNCH                              ScS      ScS      04 55 10.4 +1.5
TNCH                              pmax     pmax
      comp=Z,2µm,1.7s
TNCH                              pmax     pmax
      comp=Z,17µm,4.0s
KDI   Kendari          36.53 209  P        P        04 45 44.3 +0.1
TTSI  Tana Toraja      36.99 214  P        P        04 45 48.3 +0.2
BKB   Balikpapan       36.99 219  P        P        04 45 47.6 -0.5
BKB                               IAmb     IAmb     04 45 50.6
      comp=Z,1µm,0.8s
BKB   Balikpapan       36.99 219  P        P        04 45 49.1 +1.0
BKB   Balikpapan       36.99 219  P        P        04 45 47.9 -0.2
      comp=Z,22µmcomp=Z,27µmcomp=Z,2µm,1.2s
BKB   Balikpapan       36.99 219 ⇓P        P        04 45 49.1 +1.0
SPSI  Sidrap Palu      37.81 213  P        P        04 45 54.8 -0.1
      comp=Z,13µmcomp=Z,10µmcomp=Z,1µm,0.8s
GOMU  GeErMu           37.85 293  P        P        04 45 56.3 +0.8
GOMU                              PP       PP       04 47 32.8 -1.1
GOMU                              PcP      PcP      04 48 01.9 +0.9
GOMU                              S        S        04 51 13.5 -1.0
GOMU                              pmax     pmax
      comp=Z,3µm,0.9s
GOMU                              pmax     pmax
      comp=Z,23µm,6.1s
MIDW  Midway           37.90  80  P        P        04 45 56.5 +1.1
MIDW                              IAmb     IAmb     04 45 58.2
      comp=Z,2µm,0.9s
MIDW  Midway           37.90  80  P        P        04 45 56.1 +0.7
MIDW  Midway           37.90  80 ⇑P        P        04 45 56.3 +0.8
MIDW  Midway           37.90  80  P        P        04 45 56.3 +0.8
MIDW                              ScP      ScP      04 51 06.7 +0.5
BBSI  Bau Bau          37.93 208  P        P        04 45 58.1 +2.3
      comp=Z,14µmcomp=Z,22µmcomp=Z,1µm,1.2s
BNSI  Bone             38.03 212  P        P        04 45 57.5 +0.8
      comp=Z,14µmcomp=Z,22µmcomp=Z,1µm,1.2s
CHTO  Chiang Mai       38.09 264  P        P        04 45 57.4 +0.2
CHTO                              IAmb     IAmb     04 45 59.6
      comp=Z,869nm,0.8s
CHTO  Chiang Mai       38.09 264  P        P        04 45 57.5 +0.3
CHTO                              P        P        04 45 57.5 +0.3
CHTO  Chiang Mai       38.09 264  P        P        04 45 57.2  0.0
CHTO  Chiang Mai       38.09 264  P        P        04 45 57.4 +0.2
CHTO                              pmax     pmax
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      comp=Z,869nm,0.9s
CHTO  Chiang Mai       38.09 264  P        P        04 45 57.5 +0.3
CHTO                              S        S        04 51 16.6 -1.0
CHTO  Chiang Mai       38.09 264 ⇓P        P        04 45 57.5 +0.3
CHTO  Chiang Mai       38.09 264 ⇓P        P        04 45 57.7 +0.5
CHTO                              PcP      PcP      04 48 02.9 +1.3
CHTO                              ScP      ScP      04 51 08.6 +1.6
CM31  Chiang Mai Arr   38.23 263  P        P        04 45 58.6 +0.3
CM31                              IAmb     IAmb     04 46 00.2
      comp=Z,2µm,1.9s
CMAR  Chiang Mai Arr   38.23 263  P        P        04 45 58.0 -0.4
CMAR  Chiang Mai Arr   38.23 263  P        P        04 45 59.0 +0.7
      comp=Z,150nm,0.7s,baz=53,slow=7.3,SNR=282
CMAR                              PcP      PcP      04 48 04.0 +1.9
      comp=Z,147nm,0.7s,baz=47,slow=1.6,SNR=20
CMAR                              ScP      ScP      04 51 08.6 +1.0
      comp=Z,131nm,0.9s,baz=59,slow=2.1,SNR=18
CMAR                              P3KPbc            05 15 59.2
      comp=Z,10nm,0.6s,baz=253,slow=5.0,SNR=37
CMAR                              PKP2ab            05 19 58.5
      comp=Z,1.5nm,0.3s,baz=252,slow=3.8,SNR=5.2
CMAR                              P4KPbc            05 24 10.2
      comp=Z,0.6nm,0.3s,baz=43,slow=3.6,SNR=4.4
      comp=Z,150nm,0.7s
CMAR  Chiang Mai Arr   38.23 263 i P       P        04 45 59.0 +0.7
CMAR                              pmax     pmax
      comp=Z,165nm,0.7s
KAPI  Kappang          38.74 212  P        P        04 46 02.4 -0.1
KAPI                              IAmb     IAmb     04 46 05.0
      comp=Z,804nm,0.9s
KAPI  Kappang          38.74 212  P        P        04 46 02.8 +0.4
      comp=Z,747nm,0.9s,baz=22,slow=3.0,SNR=152
KAPI                              PcP      PcP      04 48 05.4 +1.8
      comp=Z,419nm,0.7s,baz=36,slow=5.0,SNR=8.2
      comp=Z,747nm,0.9s
KAPI  Kappang          38.74 212  P        P        04 46 03.3 +0.8
KAPI                              P        P        04 46 03.3 +0.8
KAPI                              S        S        04 51 25.6 -1.6
KAPI                              S        S        04 51 25.6 -1.6
KAPI  Kappang          38.74 212  P        P        04 46 02.4 -0.1
KAPI  Kappang          38.74 212d iP       P        04 46 02.9 +0.4
KAPI                              pmax     pmax
      comp=Z,802nm,0.9s
KAPI  Kappang          38.74 212  P        P        04 46 02.5 +0.1
KAPI                              S        S        04 51 26.6 -0.6
KAPI  Kappang          38.74 212 ⇓P        P        04 46 02.7 +0.2
KAPI  Kappang          38.74 212  P        P        04 46 03.0 +0.6
KAPI                              PcP      PcP      04 48 05.1 +1.5
KAPI                              ScP      ScP      04 51 10.2 +0.7
KSM   Kuching          38.92 230  P        P        04 46 04.8 +0.8
KSM   Kuching          38.92 230  P        P        04 46 04.8 +0.8
PMG   Port Moresby     39.00 168  P        P        04 46 04.2 -0.3
PMG   Port Moresby     39.00 168  P        P        04 46 04.7 +0.1
PMG   Port Moresby     39.00 168  P        P        04 46 04.2 -0.3
PMG                               pmax     pmax
      comp=Z,376nm,1.3s
PMG   Port Moresby     39.00 168 ⇑P        P        04 46 04.6 +0.1
STKI  Sintang          39.20 228  P        P        04 46 07.1 +0.8
      comp=Z,19µmcomp=Z,26µmcomp=Z,2µm,1.3s
BSSI  Bau Bau, Buton   39.40 210  P        P        04 46 08.6 +0.7
      comp=Z,11µmcomp=Z,12µmcomp=Z,627nm,0.7s
ADK   Adak             39.70  42  P        P        04 46 09.8  0.0
ADK   Adak             39.70  42  P        P        04 46 09.8  0.0
ADK                               pmax     pmax
      comp=Z,3µm,1.2s
ADK   Adak             39.70  42 ⇑P        P        04 46 10.2 +0.4
ADK                               ScP      ScP      04 51 12.4 -0.3
ZIRO  ZIRO             39.84 279  IAmb     IAmb     04 46 14.4
      comp=Z,1µm,0.5s
ZIRO                             eP        P        04 46 14.5 +2.9
KOHI  KOHIMA           40.06 276 eP        P        04 46 16.0 +2.7
KOHI                              IAmb     IAmb     04 46 17.3
      comp=Z,606nm,1.6s
IMP   Imphal           40.44 275 eP        P        04 46 19.2 +2.8
IMP                               IAmb     IAmb     04 46 22.1
      comp=Z,462nm,1.2s
MMRI  Maumere          40.93 206  P        P        04 46 18.7 -1.4
MMRI                              IAmb     IAmb     04 46 21.8
      comp=Z,1µm,1.0s
MMRI  Maumere          40.93 206  P        P        04 46 20.4 +0.2
MMRI  Maumere          40.93 206  P        P        04 46 20.0 -0.2
      comp=Z,15µmcomp=Z,21µmcomp=Z,1µm,1.0s
MMRI  Maumere          40.93 206 ⇓P        P        04 46 19.8 -0.4
SOEI  Soe              41.23 203  P        P        04 46 21.5 -1.2
SOEI                              IAmb     IAmb     04 46 41.5
      comp=Z,2µm,1.2s
SOEI  Soe              41.23 203  P        P        04 46 17.0 -5.7
SOEI                              S        S        04 51 57.2 -6.7
SOEI  Soe              41.23 203  P        P        04 46 22.4 -0.3
SOEI  Soe              41.23 203  P        P        04 46 23.8 +1.1
      comp=Z,13µmcomp=Z,15µmcomp=Z,765nm,0.9s
SOEI  Soe              41.23 203 ⇓P        P        04 46 21.9 -0.8
EDFI  Ende, Flores     41.25 207  P        P        04 46 21.9 -0.9
ATKA  Atka Island      41.27  43  P        P        04 46 21.9 -0.5
ATKA  Atka Island      41.27  43  P        P        04 46 21.9 -0.5
LSA   Lhasa            41.70 283  P        P        04 46 27.5 +0.7
LSA   Lhasa            41.70 283  P        P        04 46 28.4 +1.6
LSA                               S        S        04 52 08.8 -2.5
LSA                               pmax     pmax
      comp=Z,210nm,0.9s
LSA   Lhasa            41.70 283  P        P        04 46 27.5 +0.7
LSA                               pmax     pmax
      comp=Z,162nm,0.7s
LSA   Lhasa            41.70 283  P        P        04 46 28.4 +1.6
BATI  Baumata          41.85 203  P        P        04 46 29.5 +1.9
      comp=Z,11µmcomp=Z,18µmcomp=Z,1µm,1.1s
KDU   Kakadu           42.03 190  P        P        04 46 28.5 -0.4
      comp=Z,0.0nmcomp=Z,296nm,0.7s
KDU   Kakadu           42.03 190  P        P        04 46 28.7 -0.2
DRS   Darwin Rock St   42.04 192  P        P        04 46 28.8 -0.2
BILL  Bilibino         42.16  15  P        P        04 46 29.5 +0.2
BILL                              IAmb     IAmb     04 46 33.4
      comp=Z,2µm,1.1s
BILL  Bilibino         42.16  15c iP       P        04 46 29.9 +0.6
BILL                              pmax     pmax
      comp=Z,3µm,1.0s
BILL  Bilibino         42.16  15  P        P        04 46 30.1 +0.7
BILL                              PcP      PcP      04 48 15.2 +1.2
BILL                              ScP      ScP      04 51 21.8 -0.4
TATA  Tatamba Isabel   42.17 149  P        P        04 46 29.7 -0.4
MTN   Manton Dam       42.40 192  P        P        04 46 30.9 -1.0
MTN   Manton Dam       42.40 192  P        P        04 46 31.6 -0.3
      comp=Z,0.0nmcomp=Z,782nm,1.5s
MTN   Manton Dam       42.40 192  P        P        04 46 31.4 -0.5
SRIT  Nakonsritamara   42.43 249  P        P        04 46 33.0 +0.9
SRIT                              IAmb     IAmb     04 46 35.4
      comp=Z,1µm,0.9s
SRIT  Nakonsritamara   42.43 249  P        P        04 46 33.1 +0.9
WSI   Waingapu         42.64 208  P        P        04 46 35.2 +1.4
      comp=Z,8µmcomp=Z,13µmcomp=Z,660nm,1.0s
SAVO  Savo Central     42.85 149  P        P        04 46 34.8 -0.7
ALEG  Aligegeo Malai   42.90 148  P        P        04 46 35.7 -0.1
COEN  Coen             42.94 174  P        P        04 46 36.5 +0.4
COEN  Coen             42.94 174  P        P        04 46 37.2 +1.0
      comp=Z,758nm,0.8s
COEN  Coen             42.94 174  P        P        04 46 36.8 +0.7
WBSI  Waikabubak, Su   43.00 209  P        P        04 46 35.9 -0.8
      comp=Z,7µmcomp=Z,332nm,0.7s
PLAI  Plampang         43.01 212  P        P        04 46 35.3 -1.4
PLAI  Plampang         43.01 212  P        P        04 46 35.7 -1.0
      comp=Z,10µmcomp=Z,18µmcomp=Z,2µm,1.3s
TIXI  Tiksi            43.02 355  P        P        04 46 35.9 -0.1
TIXI  Tiksi            43.02 355  P        P        04 46 36.0 +0.1
      comp=Z,200nm,0.7s,baz=161,slow=5.8,SNR=218
TIXI                              ScP      ScP      04 51 25.1 -0.5
      comp=Z,128nm,0.9s,baz=160,slow=1.3,SNR=9.6
TIXI                              S        S        04 52 25.7 -2.4
      comp=Z,34nm,1.0s,baz=106,slow=20,SNR=8.2
TIXI                              P3KPbc            05 15 38.6
      comp=Z,1.4nm,0.4s,baz=33,slow=5.1,SNR=3.2
      comp=Z,200nm,0.7s
TIXI  Tiksi            43.02 355 i P       P        04 46 36.3 +0.3
TIXI                              pmax     pmax
      comp=Z,312nm,0.9s
TIXI  Tiksi            43.02 355  P        P        04 46 36.1 +0.2
TIXI                              ScP      ScP      04 51 24.0 -1.6
BASI  Baing, Sumba     43.03 208  P        P        04 46 37.3 +0.5
      comp=Z,9µmcomp=Z,733nm,1.3s
AGT   Agartala         43.07 275 eP        P        04 46 40.3 +3.1
AGT                               IAmb     IAmb     04 46 40.8
      comp=Z,2µm,0.9s
BRDH  Bariadhala       43.10 273  P        P        04 46 38.1 +0.7
      comp=Z,1µm,0.6s,baz=74,slow=6.9,SNR=32
BRDH                              PcP      PcP      04 48 20.0 +2.1
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      comp=Z,815nm,0.7s,baz=85,slow=6.1,SNR=7.7
      comp=Z,1µm,0.6s
BWJI  Bawean           43.14 221  P        P        04 46 38.1 +0.3
      comp=Z,14µmcomp=Z,30µmcomp=Z,2µm,1.5s
HNR   Honiara          43.16 149  P        P        04 46 37.9 +0.1
HNR   Honiara          43.16 149  P        P        04 46 37.9 +0.1
HNR                               pmax     pmax
      comp=Z,674nm,0.9s
WMQ   Urumqi           43.34 304 ⇓P        P        04 46 39.8 +0.7
WMQ                               pP       pP       04 48 03.8 +2.7
WMQ                               PcP      PcP      04 48 20.5 +2.0
WMQ                               PP       PP       04 48 31.8 +2.1
WMQ                               ScP      ScP      04 51 28.2 +0.6
WMQ                               S        S        04 52 34.4 +0.5
WMQ                               sS       sS       04 55 06.2 +2.9
WMQ                               ScS      ScS      04 55 48.1 -1.7
WMQ                               pmax     pmax
      comp=Z,1µm,1.5s
WMQ                               pmax     pmax
      comp=Z,9µm,4.9s
WMQ   Urumqi           43.34 304  P        P        04 46 40.0 +0.9
WMQ                               PcP      PcP      04 48 20.0 +1.5
WMQ                               ScP      ScP      04 51 28.2 +0.6
TWSI  Taliwang, Sumb   43.35 213  P        P        04 46 38.3 -1.1
      comp=Z,10µmcomp=Z,15µmcomp=Z,2µm,1.0s
KMMI  Kalianget        43.40 218  P        P        04 46 39.8  0.0
      comp=Z,16µmcomp=Z,22µmcomp=Z,2µm,1.4s
KULM  Kulim            43.51 245  P        P        04 46 41.4 +0.7
KULM                              IAmb     IAmb     04 46 43.4
      comp=Z,1µm,0.8s
KULM  Kulim            43.51 245  P        P        04 46 41.0 +0.3
SRBI  Singaraja        43.62 216  P        P        04 46 42.2 +0.7
      comp=Z,38µmcomp=Z,2µm,1.0s
TPI   Tanjungpandan    43.82 229  P        P        04 46 43.2 +0.1
      comp=Z,19µmcomp=Z,20µmcomp=Z,1µm,1.6s
GRJI  Gresik           44.11 220  P        P        04 46 46.4 +1.0
      comp=Z,14µmcomp=Z,30µmcomp=Z,2µm,1.5s
DNP   Denpasar         44.12 215  P        P        04 46 46.2 +0.8
TBJI  Tambak Boyo      44.39 221  P        P        04 46 45.2 -2.3
      comp=Z,16µmcomp=Z,32µmcomp=Z,3µm,1.3s
PPBI  Pangkal Pinang   44.41 231  P        P        04 46 48.4 +0.7
JAGI  Jajag, Banyuwa   44.49 217  P        P        04 46 46.8 -1.5
JAGI                              IAmb     IAmb     04 46 49.4
      comp=Z,1µm,1.0s
JAGI  Jajag, Banyuwa   44.49 217  P        P        04 46 47.1 -1.2
JAGI  Jajag, Banyuwa   44.49 217  P        P        04 46 47.5 -0.8
      comp=Z,14µmcomp=Z,13µmcomp=Z,1µm,1.1s
NIKH  Nikolski High    44.61  43  P        P        04 46 48.6 -0.2
NIKH  Nikolski High    44.61  43  P        P        04 46 48.2 -0.6
NIKH  Nikolski High    44.61  43  P        P        04 46 48.7 -0.1
      baz=259,SNR=253
NIKH                              S        S        04 52 50.6 -0.9
      baz=259
GMJI  Gumukmas         44.70 218  P        P        04 46 49.1 -0.9
SPIA  Saint Paul Isl   44.86  37  P        P        04 46 51.4 +0.8
SPIA                              IAmb     IAmb     04 46 54.2
      comp=Z,2µm,1.1s
SPIA  Saint Paul Isl   44.86  37  P        P        04 46 51.0 +0.4
SPIA  Saint Paul Isl   44.86  37  P        P        04 46 51.4 +0.8
      baz=253,SNR=69
SPIA                              S        S        04 52 56.1 +1.2
      baz=253
HURO  Huro Makira      44.96 148  P        P        04 46 50.5 -1.4
NGJI  Ngawi            45.06 221  P        P        04 46 54.3 +1.6
      comp=Z,18µmcomp=Z,18µmcomp=Z,1µm,0.9s
P08K  Saint George I   45.07  37  P        P        04 46 53.0 +0.8
P08K                              IAmb     IAmb     04 46 55.7
      comp=Z,2µm,1.1s
P08K  Saint George I   45.07  37  P        P        04 46 53.0 +0.8
      baz=254,SNR=27
P08K                              S        S        04 52 58.8 +1.0
      baz=254
NGOA  Tingoa Renbel    45.10 151  P        P        04 46 52.8 -0.2
SMRI  Semarang         45.39 222  P        P        04 46 55.8 +0.4
SMRI                              IAmb     IAmb     04 46 57.8
      comp=Z,833nm,0.8s
SMRI  Semarang         45.39 222  P        P        04 46 55.8 +0.4
SMRI  Semarang         45.39 222  P        P        04 46 56.0 +0.7
      comp=Z,12µmcomp=Z,1µm,0.9s
ZSN   Zaisan           45.51 309 eP        P        04 46 56.3 +0.4
ZSN                              eS        S        04 53 05.7 +1.2
ZSN                               pmax     pmax
      comp=Z,793nm,1.1s
ZSN   Zaisan           45.51 309 eP        P        04 46 56.3 +0.4
      comp=Z,793nm,1.1s
ZSN                              eS        S        04 53 05.8 +1.2
KNRA  Kununurra        45.63 194  P        P        04 46 57.0  0.0
KNRA  Kununurra        45.63 194  P        P        04 46 57.0  0.0
      comp=Z,0.0nmcomp=Z,638nm,1.5s
DGPR  DIGLIPUR         45.73 260  IAmb     IAmb     04 46 59.9
      comp=Z,1µm,1.0s
DGPR                             eP        P        04 47 01.1 +3.2
WOJI  Wonogiri, Jawa   45.75 221  P        P        04 46 57.3 -0.7
      comp=Z,14µmcomp=Z,13µmcomp=Z,566nm,1.3s
PCJI  Pacitan          45.89 220  P        P        04 46 57.8 -1.3
      comp=Z,12µmcomp=Z,15µmcomp=Z,1µm,1.0s
PMBI  Palembang        45.90 232  P        P        04 46 59.8 +0.6
PMBI  Palembang        45.90 232  P        P        04 47 01.4 +2.2
PMBI  Palembang        45.90 232  P        P        04 47 01.6 +2.4
      comp=Z,20µmcomp=Z,36µmcomp=Z,3µm,1.4s
UGM   Wanagama         46.04 221  P        P        04 46 59.4 -0.9
UGM                               IAmb     IAmb     04 47 01.4
      comp=Z,3µm,1.2s
UGM   Wanagama         46.04 221  P        P        04 46 59.7 -0.6
UGM   Wanagama         46.04 221  P        P        04 46 59.5 -0.9
      comp=Z,14µmcomp=Z,29µmcomp=Z,2µm,1.5s
YOGI  Yogyakarta       46.09 222  P        P        04 47 00.5 -0.2
      comp=Z,30µmcomp=Z,3µm,1.1s
UNV   Unalaska Valle   46.16  42  P        P        04 46 59.6 -1.1
UNV   Unalaska Valle   46.16  42  P        P        04 46 59.5 -1.1
      baz=260,SNR=74
UNV                               S        S        04 53 10.7 -2.6
      baz=260
TSI   Tuntungan        46.24 244  P        P        04 47 03.0 +1.1
      comp=Z,25µmcomp=Z,1µm,1.1s
ZAA0  Zalesovo Array   46.32 318  P        P        04 47 01.6 -0.3
ZALV  Zalesovo Beam    46.32 318  P        P        04 47 01.4 -0.5
      comp=Z,296nm,0.8s,baz=101,slow=7.7,SNR=314
ZALV                              PcP      PcP      04 48 29.2 +0.6
      comp=Z,150nm,0.5s,baz=98,slow=3.0,SNR=9.2
ZALV                              ScP      ScP      04 51 38.7 -0.9
      comp=Z,94nm,0.7s,baz=115,slow=4.4,SNR=6.4
ZALV                              P4KPbc            05 24 41.1
      comp=Z,3.7nm,0.5s,baz=101,slow=4.7,SNR=10
      comp=Z,296nm,0.8s
BKNI  Bangkinang       46.34 239  P        P        04 47 03.2 +0.5
BKNI                              IAmb     IAmb     04 47 05.4
      comp=Z,2µm,1.2s
BKNI  Bangkinang       46.34 239  P        P        04 46 58.1 -4.5
BKNI  Bangkinang       46.34 239  P        P        04 47 03.5 +0.8
BKNI  Bangkinang       46.34 239  P        P        04 47 04.3 +1.6
      comp=Z,18µmcomp=Z,30µmcomp=Z,2µm,1.6s
PSI   Prapat           46.39 243  P        P        04 47 03.6 +0.4
      comp=Z,759nm,0.9s,baz=36,slow=6.6,SNR=380
PSI                               PcP      PcP      04 48 31.0 +1.3
      comp=Z,466nm,0.8s,baz=11,slow=3.5,SNR=12
PSI                               ScP      ScP      04 51 42.3 +1.6
      comp=Z,169nm,0.8s,baz=32,slow=2.5,SNR=8.8
PSI                               S        S        04 53 17.1 -0.6
      comp=Z,25nm,1.1s,baz=200,slow=20,SNR=5.5
      comp=Z,759nm,0.9s
PSI   Prapat           46.39 243  P        P        04 47 03.2 +0.1
RPSI  Rantau Prapat    46.45 243  P        P        04 47 03.7 +0.2
RPSI                              IAmb     IAmb     04 47 05.5
      comp=Z,1µm,1.2s
LVA   Lava Point       46.49  41  P        P        04 47 02.0 -1.2
LVA                               IAmb     IAmb     04 47 07.0
      comp=Z,1µm,0.8s
LHMI  Lhok Sumawe      46.51 248  P        P        04 47 05.7 +1.8
LHMI  Lhok Sumawe      46.51 248  P        P        04 47 06.2 +2.3
      comp=Z,31µmcomp=Z,2µm,1.5s
GAMB  Gambell          46.52  28  P        P        04 47 04.2 +1.0
GAMB  Gambell          46.52  28  P        P        04 47 04.3 +1.1
      baz=246,SNR=43
GAMB                              S        S        04 53 20.4 +2.4
      baz=246
AKUT  Akutan           46.63  42  P        P        04 47 03.6 -0.7
AKUT                              IAmb     IAmb     04 47 09.5
      comp=Z,1µm,0.8s
AKUT  Akutan           46.63  42  P        P        04 47 03.5 -0.8
LEM   Lembang          46.93 226  P        P        04 47 07.7 +0.4
      comp=Z,3µm,0.7s,baz=58,slow=6.5,SNR=370
      comp=Z,3µm,0.7s
LEM   Lembang          46.93 226  P        P        04 47 07.8 +0.4
TNG   Tangerang        47.05 227  P        P        04 47 09.4 +1.4
      comp=Z,3µm,1.8s
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LUES	Luesalemba Tem	47.13	143	P	P	04 47 08.4	-0.2
MNSI	Mandailing Nat	47.14	241	P	P	04 47 09.1	+0.4
	comp=Z,16µmcomp=Z,19µmcomp=Z,2µm,1.5s						
CMJI	Cimerak	47.17	224	P	P	04 47 07.1	-1.8
	comp=Z,10µmcomp=Z,495nm,0.8s						
MTSU	Mount Surprise	47.18	173	P	P	04 47 09.8	+0.9
	comp=Z,73nm,0.7s						
MTSU	Mount Surprise	47.18	173	P	P	04 47 09.5	+0.6
MK31	Makanchi Array	47.24	308	eP	P	04 47 09.2	+0.1
MKAR	Makanchi Array	47.24	308	P	P	04 47 09.2	+0.1
MKAR	Makanchi Array	47.24	308	P	P	04 47 09.3	+0.2
	comp=Z,387nm,0.5s,baz=85,slow=9.8,SNR=1576						
MKAR				PcP	PcP	04 48 32.5	+0.4
	comp=Z,334nm,1.0s,baz=95,slow=4.1,SNR=9.5						
MKAR				ScP	ScP	04 51 43.2	-0.4
	comp=Z,223nm,1.0s,baz=84,slow=5.2,SNR=9.5						
MKAR				P3KPbc		05 15 22.1	
	comp=Z,1.3nm,0.8s,baz=245,slow=2.6,SNR=4.4						
MKAR				P4KPbc		05 24 46.4	
	comp=Z,2.3nm,0.8s,baz=79,slow=5.2,SNR=14						
	comp=Z,387nm,0.5s						
MKAR	Makanchi Array	47.24	308	i P	P	04 47 09.3	+0.2
MKAR				pmax	pmax		
	comp=Z,391nm,0.5s						
PPI	Padang Panjang	47.34	239	P	P	04 47 10.6	+0.4
	comp=Z,19µmcomp=Z,18µmcomp=Z,646nm,1.0s						
BLSI	Bandar Lampung	47.36	229	P	P	04 47 09.7	-0.7
BBJI	Bungbulang	47.41	225	P	P	04 47 09.1	-1.7
MDSI	Maura Dua	47.43	231	P	P	04 47 11.1	+0.2
MAKZ	Makanchi	47.46	308	P	P	04 47 11.0	+0.2
MAKZ				IAmb	IAmb	04 47 14.2	
	comp=Z,712nm,0.8s						
MAKZ	Makanchi	47.46	308	P	P	04 47 11.4	+0.6
MAKZ	Makanchi	47.46	308	P	P	04 47 11.3	+0.5
MAKZ				PcP	PcP	04 48 33.5	+0.6
MAKZ				ScP	ScP	04 51 42.7	-1.9
CNJI	Cibinong	47.61	226	P	P	04 47 10.3	-1.9
	comp=Z,410nm,0.9s						
BSI	Banda Aceh	47.70	249	P	P	04 47 11.6	-1.4
SKJI	Sukabumi	47.74	226	P	P	04 47 11.3	-1.9
	comp=Z,11µmcomp=Z,16µmcomp=Z,2µm,0.8s						
M11K	Mekoryuk	47.79	33	P	P	04 47 14.2	+1.3
M11K				IAmb	IAmb	04 47 17.3	
	comp=Z,2µm,1.4s						
M11K	Mekoryuk	47.79	33	P	P	04 47 14.5	+1.6
	baz=254,SNR=24						
M11K				S	S	04 53 39.7	+3.9
	baz=254						
LWLI	Liwa	47.90	231	P	P	04 47 14.4	-0.2
	comp=Z,15µmcomp=Z,18µmcomp=Z,3µm,0.9s						
KSI	Kapahiang	47.93	233	P	P	04 47 15.4	+0.6
	comp=Z,31µmcomp=Z,2µm,0.9s						
CMBY	CAMPBELL BAY	47.99	252	eP	P	04 47 17.7	+2.6
CMBY				IAML		04 47 19.9	
	comp=Z,907nm,0.7s						
CGJI	Cibinong	47.99	228	P	P	04 47 12.7	-2.4
	comp=Z,477nm,0.8s						
MNAI	Manna	48.18	232	P	P	04 47 15.9	-0.7
MNAI	Manna	48.18	232	P	P	04 47 16.6	0.0
MNAI	Manna	48.18	232	P	P	04 47 16.4	-0.2
	comp=Z,3µm,1.4s						
GSI	Gunungsitoli	48.37	243	P	P	04 47 18.1	+0.1
GSI	Gunungsitoli	48.37	243	P	P	04 47 18.0	0.0
GSI	Gunungsitoli	48.37	243	P	P	04 47 17.6	-0.4
JOHN	Johnston Islan	48.39	93	P	P	04 47 18.4	+0.3
JOHN	Johnston Islan	48.39	93	P	P	04 47 18.9	+0.8
JOHN	Johnston Islan	48.39	93	P	P	04 47 19.1	+1.0
KNTI	KHUNTI	48.53	276	eP	P	04 47 20.9	+1.7
TV1H	Townsville Har	48.59	171	P	P	04 47 20.3	+0.8
FITZ	Fitzroy Crossi	48.70	197	P	P	04 47 20.1	-0.3
FITZ	Fitzroy Crossi	48.70	197	P	P	04 47 20.7	+0.3
	comp=Z,141nm,1.3s						
FITZ	Fitzroy Crossi	48.70	197	P	P	04 47 20.6	+0.3
	comp=Z,304nm,0.7s,baz=17,slow=8.2,SNR=268						
FITZ				PcP	PcP	04 48 39.5	+1.8
	comp=Z,61nm,0.6s,baz=177,slow=6.3,SNR=3.5						
FITZ				ScP	ScP	04 51 50.6	+0.6
	comp=Z,180nm,0.9s,baz=39,slow=2.5,SNR=6.4						
FITZ				S	S	04 53 47.6	-1.9
	comp=Z,44nm,1.0s,baz=112,slow=21,SNR=8.3						
	comp=Z,304nm,0.7s						
FITZ	Fitzroy Crossi	48.70	197	P	P	04 47 20.9	+0.6
TNA	Tin City	48.72	26	P	P	04 47 20.7	+0.9
TNA	Tin City	48.72	26	P	P	04 47 21.1	+1.3
	baz=248,SNR=122						
TNA				S	S	04 53 50.7	+2.2
	baz=248						
WB0	Warramunga Arr	48.78	186	P	P	04 47 20.1	-0.8
WB9	Warramunga Arr	48.80	186	P	P	04 47 20.8	-0.3
WB8	Warramunga Arr	48.83	186	P	P	04 47 21.0	-0.3
K13K	Kusilvak Mount	48.93	31	P	P	04 47 22.9	+1.5
K13K				IAmb	IAmb	04 47 25.7	
	comp=Z,1µm,0.9s						
K13K	Kusilvak Mount	48.93	31	P	P	04 47 23.0	+1.5
	baz=254,SNR=164						
K13K				S	S	04 53 53.9	+2.3
	baz=254						
WRAB	Tennant Creek	48.95	186	P	P	04 47 21.8	-0.3
WRAB	Tennant Creek	48.95	186	d iP	P	04 47 21.9	-0.3
WRAB				pmax	pmax		
	comp=Z,742nm,1.4s						
WR8	Warramunga Arr	48.95	186	P	P	04 47 21.9	-0.3
WRA	Warramunga Arr	48.96	186	P	P	04 47 21.8	-0.4
WRA	Warramunga Arr	48.96	186	P	P	04 47 21.3	-0.9
	comp=Z,300nm,0.5s,baz=2.5,slow=7.7,SNR=620						
WRA				PcP	PcP	04 48 40.5	+1.9
	comp=Z,302nm,0.8s,baz=356,slow=3.8,SNR=14						
WRA				ScP	ScP	04 51 51.3	+0.1
	comp=Z,151nm,0.7s,baz=0.3,slow=4.5,SNR=12						
WRA				S	S	04 53 48.7	-4.2
	comp=Z,46nm,0.8s,baz=8.7,slow=13,SNR=6.9						
WRA				P4KPbc		05 24 54.2	
	comp=Z,9.5nm,0.7s,baz=0.1,slow=4.8,SNR=73						
	comp=Z,300nm,0.5s						
S12K	Black Hills	48.99	40	P	P	04 47 20.9	-1.2
S12K	Black Hills	48.99	40	P	P	04 47 20.9	-1.2
	baz=262,SNR=22						
S12K				S	S	04 53 49.6	-3.0
	baz=262						
M13K	Dall Lake	49.17	34	P	P	04 47 24.6	+1.4
M13K				IAmb	IAmb	04 47 27.7	
	comp=Z,1µm,1.1s						
M13K	Dall Lake	49.17	34	P	P	04 47 25.1	+1.9
	baz=257,SNR=108						
M13K				S	S	04 53 58.8	+4.0
	baz=257						
F14K	Arctic Creek	49.31	27	P	P	04 47 25.9	+1.7
	baz=250,SNR=276						
F14K				S	S	04 53 59.9	+3.2
	baz=250						
PDGK	Podgornoye	49.31	304	P	P	04 47 24.6	-0.3
CTAO	Charters Tower	49.33	171	P	P	04 47 23.8	-1.2
QIS	Mount Isa	49.34	180	P	P	04 47 25.1	0.0
	comp=Z,396nm,0.9s						
QIS	Mount Isa	49.34	180	P	P	04 47 24.9	-0.2
SHLS	Shalkode	49.34	304	d iP	P	04 47 23.0	-2.1
SHLS				eS	S	04 53 54.8	-3.3
SHLS				pmax	pmax		
	comp=Z,600nm,0.9s						
SHLS	Shalkode	49.34	304	⇓iP	P	04 47 23.0	-2.1
	comp=Z,600nm,0.9s						
SHLS				eS	S	04 53 54.9	-3.3
ANM	Nome	49.39	28	P	P	04 47 26.0	+1.1
ANM				IAmb	IAmb	04 47 29.0	
	comp=Z,2µm,1.5s						
ANM	Nome	49.39	28	P	P	04 47 26.0	+1.1
ANM				pmax	pmax		
	comp=Z,2µm,1.5s						
ANM	Nome	49.39	28	P	P	04 47 26.4	+1.5
	baz=252,SNR=68						
ANM				S	S	04 54 01.2	+3.4
	baz=252						
J14K	Nanvaranak Lak	49.64	31	P	P	04 47 28.1	+1.4
J14K				IAmb	IAmb	04 47 30.8	
	comp=Z,1µm,1.0s						
J14K	Nanvaranak Lak	49.64	31	P	P	04 47 28.0	+1.3
	baz=255,SNR=243						
J14K				S	S	04 54 03.4	+2.2
	baz=255						
UZB	Uzynbulak	49.67	304	d iP	P	04 47 27.6	+0.1
UZB				eS	S	04 54 03.3	+0.7
UZB	Uzynbulak	49.67	304	⇓iP	P	04 47 27.7	+0.1
UZB				eS	S	04 54 03.3	+0.7
L14K	Kuka Creek	49.69	32	P	P	04 47 28.5	+1.3
L14K				IAmb	IAmb	04 47 31.6	
	comp=Z,2µm,1.1s						
L14K	Kuka Creek	49.69	32	P	P	04 47 28.8	+1.7
	baz=257,SNR=449						
L14K				S	S	04 54 05.4	+3.4
	baz=257						
WUS	Wushi	49.70	301	P	P	04 47 28.1	+0.4
WUS	Wushi	49.70	301	P	P	04 47 28.5	+0.8
WUS				ScP	ScP	04 51 54.5	+0.1
KURK	Kurchatov	49.77	313	P	P	04 47 27.8	-0.2
KURK				IAmb	IAmb	04 47 30.4	
	comp=Z,2µm,0.8s						
KURK	Kurchatov	49.77	313	P	P	04 47 28.2	+0.3
KURK				P	P	04 47 28.2	+0.3
KURK	Kurchatov	49.77	313	ceP	P	04 47 27.7	-0.2
KURK				pmax	pmax		
	comp=Z,2µm,1.0s						
KURK	Kurchatov	49.77	313	P	P	04 47 27.9	0.0
KURBB	Kurchatov Arra	49.83	313	P	P	04 47 28.2	-0.1
	comp=Z,1µm,0.5s,baz=91,slow=8.2,SNR=2159						
KURBB				PcP	PcP	04 48 42.5	+1.1
	comp=Z,62nm,0.7s,baz=96,slow=2.3,SNR=4.0						
KURBB				S	S	04 54 02.3	-2.0
	comp=Z,22nm,1.0s,baz=86,slow=10,SNR=4.6						
KURBB				P4KPbc		05 24 58.1	
	comp=Z,1.8nm,0.2s,baz=95,slow=4.2,SNR=5.1						
	comp=Z,1µm,0.5s						
KURBB	Kurchatov Arra	49.83	313	P	P	04 47 28.0	-0.4
SDPT	Sand Point	49.84	40	P	P	04 47 27.7	-0.7
SDPT				IAmb	IAmb	04 47 30.2	
	comp=Z,1µm,0.8s						
SDPT	Sand Point	49.84	40	P	P	04 47 27.5	-0.9
SDPT	Sand Point	49.84	40	P	P	04 47 27.9	-0.5
	baz=264,SNR=43						
SDPT				S	S	04 54 02.0	-2.3
	baz=264						
N14K	Kuskokwak Cree	49.88	34	P	P	04 47 29.8	+1.3
N14K	Kuskokwak Cree	49.88	34	P	P	04 47 29.9	+1.4
	baz=259,SNR=343						
N14K				S	S	04 54 05.9	+1.3
	baz=259						
NRIK	Noril'sk	49.88	339	P	P	04 47 28.8	+0.4
NRIK	Noril'sk	49.88	339	P	P	04 47 28.8	+0.4
	comp=Z,335nm,0.8s,baz=113,slow=8.1,SNR=299						
NRIK				ScP	ScP	04 51 54.0	-0.4
	comp=Z,337nm,0.9s,baz=108,slow=4.6,SNR=9.5						
NRIK				S	S	04 54 02.5	-1.9
	comp=Z,45nm,1.0s,baz=219,slow=23,SNR=17						
NRIK				P4KPbc		05 24 57.1	
	comp=Z,1.6nm,0.5s,baz=116,slow=4.5,SNR=4.2						
	comp=Z,335nm,0.8s						
NRIK	Noril'sk	49.88	339	d iP	P	04 47 28.7	+0.2
NRIK				pmax	pmax		
	comp=Z,986nm,1.3s						
KPKS	Kokpek	49.89	304	d iP	P	04 47 29.3	+0.2
KPKS	Kokpek	49.89	304	⇓iP	P	04 47 29.4	+0.2
M14K	Bethel	49.91	33	P	P	04 47 30.1	+1.4
M14K				IAmb	IAmb	04 47 32.9	
	comp=Z,2µm,0.9s						
M14K	Bethel	49.91	33	P	P	04 47 30.3	+1.5
	baz=258,SNR=260						
M14K				S	S	04 54 08.1	+3.1
	baz=258						
O14K	Tigyukauivet M	49.97	35	P	P	04 47 30.2	+1.0
O14K				IAmb	IAmb	04 47 33.4	
	comp=Z,2µm,0.9s						
O14K	Tigyukauivet M	49.97	35	P	P	04 47 30.4	+1.2
	baz=260,SNR=318						
O14K				S	S	04 54 06.8	+1.0
	baz=260						
TDK	Taldyqorghan	49.99	306	eP	P	04 47 30.0	+0.3
TDK				pmax	pmax		
	comp=Z,1µm,1.3s						
TDK	Taldyqorghan	49.99	306	eP	P	04 47 30.1	+0.3
	comp=Z,1µm,1.3s						
F15K	North Star Dit	50.05	27	P	P	04 47 31.1	+1.4
F15K				IAmb	IAmb	04 47 33.9	
	comp=Z,1µm,0.9s						
F15K	North Star Dit	50.05	27	P	P	04 47 31.4	+1.6
	baz=251,SNR=358						
F15K				S	S	04 54 09.4	+2.7
	baz=251						
G15K	Niukluk	50.07	28	P	P	04 47 31.2	+1.3
	baz=252						
G15K				S	S	04 54 09.0	+2.0
	baz=252						
ZHN	Zhinishke	50.09	304	eP	P	04 47 30.8	+0.2
ZHN	Zhinishke	50.09	304	eP	P	04 47 30.9	+0.2
SATY	Saty	50.12	303	eP	P	04 47 31.1	+0.2
SATY				eS	S	04 54 09.5	+0.7
SATY	Saty	50.12	303	eP	P	04 47 31.1	+0.2
SATY				eS	S	04 54 09.6	+0.7
JHSG	JHARSUGUGA	50.28	275	eP	P	04 47 35.4	+3.3
JHSG				IAmb	IAmb	04 47 35.9	
	comp=Z,896nm,0.9s						
CHNA	Chernabura Isl	50.30	41	P	P	04 47 31.2	-0.6
CHNA	Chernabura Isl	50.30	41	P	P	04 47 31.8	0.0
	baz=265,SNR=181						
CHNA				S	S	04 54 09.3	-1.2
	baz=265						
CNBA	Chernabura Isl	50.30	41	P	P	04 47 31.8	0.0
CNBA				IAmb	IAmb	04 47 34.8	
	comp=Z,1µm,0.9s						
L15K	Ungalak Mounta	50.33	32	P	P	04 47 32.9	+1.0
	baz=258,SNR=245						
L15K				S	S	04 54 12.9	+2.2
	baz=258						
K15K	Wolf Creek Mou	50.44	31	P	P	04 47 33.9	+1.2
K15K				IAmb	IAmb	04 47 37.0	
	comp=Z,921nm,0.9s						
K15K	Wolf Creek Mou	50.44	31	P	P	04 47 34.3	+1.6
	baz=257,SNR=482						
K15K				S	S	04 54 14.6	+2.3
	baz=257						
S14K	Fog Glacier	50.46	39	P	P	04 47 32.4	-0.7
	baz=264,SNR=23						
S14K				S	S	04 54 11.8	-1.0
	baz=264						
M15K	Kasigluk River	50.51	34	P	P	04 47 34.3	+1.0
	baz=259,SNR=324						
M15K				S	S	04 54 14.5	+1.3
	baz=259						
C16K	Lisburne Hills	50.67	23	P	P	04 47 35.2	+0.9
C16K				IAmb	IAmb	04 47 37.7	
	comp=Z,1µm,0.9s						
C16K	Lisburne Hills	50.67	23	P	P	04 47 35.1	+0.9
	baz=249,SNR=287						
C16K				S	S	04 54 16.9	+1.7
	baz=249						
O15K	Ungalikthiuk R	50.68	36	P	P	04 47 35.8	+1.3
O15K	Ungalikthiuk R	50.68	36	P	P	04 47 35.6	+1.1
	baz=261,SNR=751						
O15K				S	S	04 54 17.2	+1.5
	baz=261						
TARG	Taragay, Kyrgy	50.70	302	P	P	04 47 36.4	+0.9
TARG				IAmb	IAmb	04 47 39.1	
	comp=Z,1µm,1.1s						
TARG	Taragay, Kyrgy	50.70	302	P	P	04 47 36.4	+0.9
TARG				pmax	pmax		
	comp=Z,1µm,1.1s						
H16K	Elim	50.70	28	P	P	04 47 35.5	+0.9
	baz=255,SNR=418						
H16K				S	S	04 54 17.9	+2.2
	baz=255						
N15K	Kwethluk River	50.71	34	P	P	04 47 36.0	+1.2
N15K				IAmb	IAmb	04 47 38.7	
	comp=Z,2µm,0.8s						
N15K	Kwethluk River	50.71	34	P	P	04 47 36.1	+1.4
	baz=260,SNR=843						
N15K				S	S	04 54 16.5	+0.5
	baz=260						
ALBI	Allahabad	50.83	280	IAmb	IAmb	04 47 38.2	
	comp=Z,982nm,0.4s						
ALBI				eP	P	04 47 39.4	+3.2
G16K	Koyuk River	50.86	27	P	P	04 47 36.5	+0.7
G16K	Koyuk River	50.86	27	P	P	04 47 36.4	+0.7
	baz=254,SNR=122						
G16K				S	S	04 54 19.6	+1.8
	baz=254						
XMI	Christmas Isla	50.93	224	P	P	04 47 36.1	-0.9
XMIS	Christmas Isla	50.98	225	P	P	04 47 35.8	-1.5
XMIS	Christmas Isla	50.98	225	P	P	04 47 36.3	-1.0
PTH	Pithoragarh	51.00	286	IAmb	IAmb	04 47 40.2	
	comp=Z,2µm,0.7s						
PTH				eP	P	04 47 40.6	+3.0
LGTI	Lohaghat	51.00	286	IAmb	IAmb	04 47 41.2	
	comp=Z,833nm,0.7s						
LGTI				eP	P	04 47 41.8	+4.5
J16K	Anvik River	51.08	30	P	P	04 47 38.4	+1.1
J16K	Anvik River	51.08	30	P	P	04 47 38.8	+1.5
	baz=257,SNR=252						
J16K				S	S	04 54 24.0	+3.2
	baz=257						
CHGN	Chignik	51.09	39	S	S	04 54 17.6	-3.6
	baz=265						
MDOK	Medeo	51.10	304	eP	P	04 47 38.2	+0.1
MDOK				eS	S	04 54 23.0	+0.8
MDOK	Medeo	51.10	304	eP	P	04 47 38.3	+0.1
MDOK				eS	S	04 54 23.1	+0.8
KDJ	Kajisay	51.12	302	P	P	04 47 38.6	+0.4
KDJ	Kajisay	51.12	302	P	P	04 47 38.6	+0.4
KDJ				pmax	pmax		
	comp=Z,653nm,1.1s						
KNDC	Almaty	51.16	304	P	P	04 47 39.0	+0.6
I17K	Unalakleet	51.17	29	P	P	04 47 39.5	+1.5
I17K				IAmb	IAmb	04 47 42.2	
	comp=Z,1µm,0.8s						
I17K	Unalakleet	51.17	29	P	P	04 47 39.6	+1.6
	baz=257,SNR=459						
I17K				S	S	04 54 24.7	+2.6
	baz=257						
TNSS	Tian-Shan	51.19	304	eP	P	04 47 38.9	-0.1
TNSS	Tian-Shan	51.19	304	eP	P	04 47 38.9	-0.1
AAA	Alma-Ata	51.20	304	eP	P	04 47 38.9	+0.2
AAA				pmax	pmax		
	comp=Z,1µm,0.7s						
AAA	Alma-Ata	51.20	304	eP	P	04 47 38.9	+0.2
	comp=Z,1µm,0.7s						
HNLY	HANLEY	51.26	290	eP	P	04 47 42.5	+2.6
HNLY				IAmb	IAmb	04 47 43.9	
	comp=Z,1µm,1.2s						
D17K	Noatak River	51.27	24	P	P	04 47 40.1	+1.4
	baz=251,SNR=556						
D17K				S	S	04 54 26.3	+3.0
	baz=251						
L16K	Owhat River	51.27	32	P	P	04 47 39.7	+0.9
L16K				IAmb	IAmb	04 47 42.6	
	comp=Z,2µm,1.4s						
L16K	Owhat River	51.27	32	P	P	04 47 39.8	+0.9
	baz=260,SNR=468						
L16K				S	S	04 54 25.7	+2.2
	baz=260						
JOSI	Joshimath	51.30	287	eP	P	04 47 42.9	+3.1
M16K	Timber Creek	51.40	33	P	P	04 47 40.6	+0.8
M16K				IAmb	IAmb	04 47 43.7	
	comp=Z,2µm,1.1s						
M16K	Timber Creek	51.40	33	P	P	04 47 41.0	+1.3
	baz=261,SNR=674						
M16K				S	S	04 54 26.6	+1.3
	baz=261						
N16K	Nishlik Lake	51.41	34	P	P	04 47 41.4	+1.5
	baz=261,SNR=1000						
N16K				S	S	04 54 27.2	+1.8
	baz=261						
RDOG	Red Dog Mine	51.45	24	P	P	04 47 41.2	+1.2
RDOG				IAmb	IAmb	04 47 43.9	
	comp=Z,2µm,1.0s						
RDOG	Red Dog Mine	51.45	24	P	P	04 47 41.3	+1.3
	baz=251,SNR=167						
RDOG				S	S	04 54 27.3	+1.5
	baz=251						
RAGD	RAYAGADA	51.46	272	eP	P	04 47 44.2	+3.3
C17K	DeLong Mountai	51.49	23	P	P	04 47 41.5	+1.2
	baz=251,SNR=315						
C17K				S	S	04 54 27.6	+1.2
	baz=251						
KUU	Kurty	51.55	305	eP	P	04 47 41.5	+0.3
KUU				pmax	pmax		
	comp=Z,1µm,0.7s						
KUU	Kurty	51.55	305	eP	P	04 47 41.5	+0.3
	comp=Z,1µm,0.7s						
E17K	Hotham Inlet	51.55	25	P	P	04 47 42.0	+1.3
	baz=253,SNR=126						
E17K				S	S	04 54 29.1	+2.1
	baz=253						
G17K	Kiwalik Mounta	51.58	27	P	P	04 47 42.2	+1.3
	baz=256,SNR=819						
G17K				S	S	04 54 29.9	+2.4
	baz=256						
BLSP	Bilaspur	51.58	276	eP	P	04 47 44.7	+3.0
BLSP				IAmb	IAmb	04 47 45.0	
	comp=Z,677nm,1.1s						
F17K	Baldwin Pennin	51.59	26	P	P	04 47 42.5	+1.5
F17K				IAmb	IAmb	04 47 45.0	
	comp=Z,1µm,0.8s						
F17K	Baldwin Pennin	51.59	26	P	P	04 47 42.5	+1.5
	baz=254,SNR=183						
F17K				S	S	04 54 30.3	+2.7
	baz=254						
P16K	Nushagak River	51.60	36	P	P	04 47 42.3	+1.1
P16K	Nushagak River	51.60	36	P	P	04 47 42.7	+1.5
	baz=263,SNR=346						
P16K				S	S	04 54 30.3	+2.3
	baz=263						
O16K	Kokwok River B	51.62	35	P	P	04 47 42.5	+1.2
O16K				IAmb	IAmb	04 47 45.1	
	comp=Z,2µm,0.9s						
O16K	Kokwok River B	51.62	35	P	P	04 47 42.5	+1.2
	baz=263,SNR=850						
O16K				S	S	04 54 30.7	+2.5
	baz=263						
R16K	Pilot Point	51.67	38	P	P	04 47 41.6	-0.1
R16K				IAmb	IAmb	04 47 44.0	
	comp=Z,1µm,0.8s						
R16K	Pilot Point	51.67	38	P	P	04 47 41.6	-0.1
	baz=265,SNR=9.2						
R16K				S	S	04 54 28.3	-0.6
	baz=265						
H17K	Granite Mounta	51.74	28	P	P	04 47 43.3	+1.1
H17K				IAmb	IAmb	04 47 46.2	
	comp=Z,1µm,0.9s						
H17K	Granite Mounta	51.74	28	P	P	04 47 43.6	+1.4
	baz=257,SNR=587						
H17K				S	S	04 54 32.8	+3.0
	baz=257						
J17K	VABM Dome	51.77	30	P	P	04 47 43.8	+1.4
J17K				IAmb	IAmb	04 47 46.7	
	comp=Z,2µm,0.8s						
J17K	VABM Dome	51.77	30	P	P	04 47 44.2	+1.7
	baz=259,SNR=990						
J17K				S	S	04 54 33.6	+3.3
	baz=259						
ULHL	Ulahol	51.79	303	P	P	04 47 44.2	+1.0
	SNR=109						
ULHL	Ulahol	51.79	303	P	ScP	04 52 03.6	0.0
	SNR=5.1						
SANVU	Saraoutou	51.83	145	P	P	04 47 43.8	+0.3
SANVU				ScP	ScP	04 52 04.4	+0.8
L17K	Donlin	51.90	32	P	P	04 47 45.1	+1.7
	baz=260,SNR=1000						
L17K				S	S	04 54 34.4	+2.5
	baz=260						
BOOM	Boomskoye usch	51.99	303	P	P	04 47 45.1	+0.5
BOOM				IAmb	IAmb	04 47 47.7	
	comp=Z,2µm,1.4s						
BOOM	Boomskoye usch	51.99	303	P	P	04 47 45.1	+0.5
BOOM				pmax	pmax		
	comp=Z,2µm,1.4s						
K17K	Iditarod	51.99	31	P	P	04 47 45.6	+1.7
K17K				IAmb	IAmb	04 47 48.5	
	comp=Z,2µm,0.8s						
K17K	Iditarod	51.99	31	P	P	04 47 45.8	+1.7
	baz=260,SNR=1000						
K17K				S	S	04 54 36.8	+3.6
	baz=260						
NRN	Naryn	52.08	302	P	P	04 47 46.0	+0.6
NRN	Naryn	52.08	302	P	P	04 47 46.0	+0.6
NRN				pmax	pmax		
	comp=Z,772nm,1.1s						
E18K	Tukpahlearik C	52.10	25	P	P	04 47 46.1	+1.4
E18K				IAmb	IAmb	04 47 48.9	
	comp=Z,2µm,1.3s						
E18K	Tukpahlearik C	52.10	25	P	P	04 47 46.2	+1.5
	baz=254,SNR=397						
E18K				S	S	04 54 37.1	+2.5
	baz=254						
O17K	Koliganek Bris	52.15	35	P	P	04 47 46.4	+1.3
	baz=263,SNR=679						
O17K				S	S	04 54 37.1	+1.8
	baz=263						
KLP	Kalpa	52.15	289	eP	P	04 47 48.9	+2.8
M17K	Holitna River	52.19	33	P	P	04 47 46.9	+1.4
M17K	Holitna River	52.19	33	P	P	04 47 47.4	+1.9
	baz=262,SNR=1000						

M17K				S	S	04 54 38.5	+2.6
	baz=262						
TKM2	Tokmak 2	52.19	304	P	P	04 47 47.1	+1.0
	SNR=874						
TKM2	Tokmak 2	52.19	304	P	ScP	04 52 04.7	-0.5
	SNR=5.7						
TKM2	Tokmak 2	52.19	304	P	P	04 47 46.7	+0.6
N17K	Nushagak Hills	52.19	34	P	P	04 47 46.8	+1.3
N17K				IAmb	IAmb	04 47 49.9	
	comp=Z,3µm,1.1s						
N17K	Nushagak Hills	52.19	34	P	P	04 47 47.3	+1.8
	baz=263,SNR=1000						
N17K				S	S	04 54 39.4	+3.4
	baz=263						
C18K	Utukok River	52.24	24	P	P	04 47 46.8	+0.9
C18K				IAmb	IAmb	04 47 49.3	
	comp=Z,1µm,1.2s						
C18K	Utukok River	52.24	24	P	P	04 47 46.6	+0.9
	baz=253,SNR=516						
C18K				S	S	04 54 37.2	+0.7
	baz=253						
F18K	Selawik	52.25	26	P	P	04 47 47.0	+1.3
	baz=256,SNR=523						
F18K				S	S	04 54 38.7	+2.2
	baz=256						
B18K	Kokolik River	52.25	23	P	P	04 47 47.5	+1.7
	baz=251,SNR=769						
B18K				S	S	04 54 38.8	+2.2
	baz=251						
Q16K	King Salmon	52.26	36	P	P	04 47 46.4	+0.5
	baz=265,SNR=22						
Q16K				S	S	04 54 38.7	+1.9
	baz=265						
KSH	Kashi	52.37	299	P	P	04 47 51.3	+3.9
KSH				pP	pwP	04 49 16.5	-2.8
KSH				PP	PP	04 49 55.0	+3.5
KSH				ScP	ScP	04 52 08.6	+2.6
KSH				PcS	PcS	04 52 54.0	+3.4
KSH				S	S	04 54 45.8	+6.5
KSH				ScS	ScS	04 56 52.2	+1.4
KSH				pmax	pmax		
	comp=Z,1µm,0.8s						
KSH				pmax	pmax		
	comp=Z,7µm,5.7s						
P17K	Kvichak River	52.42	36	P	P	04 47 48.4	+1.3
	baz=264,SNR=136						
P17K				S	S	04 54 41.0	+2.1
	baz=264						
H18K	Honhosa River	52.43	28	P	P	04 47 48.0	+0.8
H18K				IAmb	IAmb	04 47 50.8	
	comp=Z,2µm,0.9s						
H18K	Honhosa River	52.43	28	P	P	04 47 48.3	+1.1
	baz=258,SNR=885						
H18K				S	S	04 54 40.0	+0.9
	baz=258						
G18K	Tagagawik	52.47	27	P	P	04 47 48.5	+1.0
G18K				IAmb	IAmb	04 47 51.7	
	comp=Z,3µm,1.1s						
G18K	Tagagawik	52.47	27	P	P	04 47 48.5	+1.0
	baz=257,SNR=1000						
G18K				S	S	04 54 40.6	+1.0
	baz=257						
VLAKA	Lakatoro	52.50	145	P	P	04 47 48.1	-0.2
DDI	Dehra Dun	52.61	287	*e*P	P	04 47 52.4	+3.2
Q17K	Contact Creek	52.62	37	P	P	04 47 48.1	-0.7
	baz=266,SNR=481						
Q17K				S	S	04 54 39.1	-2.9
	baz=266						
CHIR	Chirikof Islan	52.62	40	P	P	04 47 49.4	+0.7
CHIR	Chirikof Islan	52.62	40	P	P	04 47 49.2	+0.5
CHIR	Chirikof Islan	52.62	40	P	P	04 47 49.6	+0.9
	baz=268,SNR=87						
CHIR				S	S	04 54 43.6	+1.7
	baz=268						
AS16	Alice Springs	52.65	186	P	P	04 47 49.6	+0.2
	comp=Z,228nm,0.7s						
L18K	Granite Mounta	52.66	32	P	P	04 47 50.2	+1.4
L18K				IAmb	IAmb	04 47 53.4	
	comp=Z,1µm,1.0s						
L18K	Granite Mounta	52.66	32	P	P	04 47 50.7	+1.9
	baz=262,SNR=1000						
L18K				S	S	04 54 45.0	+2.9
	baz=262						
AS01	Alice Springs	52.68	186	P	P	04 47 49.1	-0.4
AS31	Alice Springs	52.68	186	P	P	04 47 49.5	0.0
AS31	Alice Springs	52.68	186	P	P	04 47 49.6	0.0
	comp=Z,0.0nmcomp=Z,130nm,0.6s						
ASAR	Alice Springs	52.68	186	P	P	04 47 49.4	-0.1
ASAR	Alice Springs	52.68	186	P	P	04 47 49.3	-0.3
	comp=Z,85nm,0.7s,baz=1.1,slow=6.3,SNR=590						
ASAR				PcP	PcP	04 48 54.4	+1.9
	comp=Z,232nm,0.9s,baz=9.3,slow=4.1,SNR=18						
ASAR				ScP	ScP	04 52 07.3	+0.1
	comp=Z,45nm,0.6s,baz=1.1,slow=4.4,SNR=6.1						
ASAR				S	S	04 54 41.0	-2.4
	comp=Z,36nm,1.0s,baz=350,slow=11,SNR=8.3						
ASAR				ScS	ScS	04 56 55.8	+3.0
	comp=Z,36nm,1.1s,baz=4.6,slow=4.7,SNR=6.1						
ASAR				PKPPKP	P'P'df	05 18 09.3	+1.8
	comp=Z,11nm,1.1s,baz=139,slow=3.0,SNR=4.2						
ASAR				P4KPbc		05 25 10.6	
	comp=Z,16nm,0.8s,baz=8.9,slow=4.6,SNR=84						
	comp=Z,85nm,0.7s						
KBK	Karagaybulak	52.70	303	P	P	04 47 50.5	+0.8
	SNR=461						
KBK	Karagaybulak	52.70	303	P	ScP	04 52 07.1	-0.3
	SNR=8.6						
A19K	Wainwright	52.76	22	P	P	04 47 51.2	+1.8
	baz=252,SNR=76						
A19K				S	S	04 54 44.9	+1.7
	baz=252						
CHMS	Chumysh	52.80	304	P	P	04 47 50.8	+0.6
	SNR=135						
CHMS	Chumysh	52.80	304	P	ScP	04 52 07.3	-0.4
	SNR=14						
SGDS	Sogindy	52.83	304	*e*P	P	04 47 50.8	+0.3
J18K	Innoko River	52.83	30	P	P	04 47 50.9	+0.9
J18K	Innoko River	52.83	30	P	P	04 47 51.0	+0.9
	baz=261,SNR=505						
J18K				S	S	04 54 46.5	+2.1
	baz=261						
N18K	Kilae Creek	52.84	34	P	P	04 47 51.4	+1.1
N18K	Kilae Creek	52.84	34	P	P	04 47 51.8	+1.6
	baz=264,SNR=1000						
N18K				S	S	04 54 48.3	+3.6
	baz=264						
FRU1	Bishkek	52.91	304	P	P	04 47 51.5	+0.4
FRU1				IAmb	IAmb	04 47 54.2	
	comp=Z,767nm,0.8s						
FRU1	Bishkek	52.91	304	P	P	04 47 51.5	+0.4
FRU1				pmax	pmax		
	comp=Z,767nm,0.8s						
ACHA	Angle Creek He	52.91	37	P	P	04 47 50.3	-0.6
C19K	Lookout Ridge	52.93	23	P	P	04 47 51.9	+1.1
C19K				IAmb	IAmb	04 47 54.8	
	comp=Z,3µm,1.2s						
C19K	Lookout Ridge	52.93	23	P	P	04 47 52.2	+1.5
	baz=254,SNR=1000						
C19K				S	S	04 54 47.5	+1.8
	baz=254						
USP	Ospenovka	52.95	304	P	P	04 47 51.8	+0.5
	SNR=394						
USP	Ospenovka	52.95	304	P	ScP	04 52 08.4	0.0
	SNR=7.9						
M18K	Stony River	52.97	33	P	P	04 47 52.7	+1.6
	baz=263,SNR=1000						
M18K				S	S	04 54 49.2	+2.9
	baz=263						
GCSA	Galena City Sc	52.98	29	P	P	04 47 51.7	+0.6
	baz=260,SNR=56						
GCSA				S	S	04 54 47.6	+1.3
	baz=260						
F19K	Shaleruckik Mo	53.03	26	P	P	04 47 52.0	+0.6
F19K	Shaleruckik Mo	53.03	26	P	P	04 47 52.0	+0.6
	baz=257,SNR=494						
F19K				S	S	04 54 47.7	+0.8
	baz=257						
AAK	Ala-Archa	53.03	303	P	P	04 47 53.0	+0.9
	SNR=41						
AAK	Ala-Archa	53.03	303	P	P	04 47 52.4	+0.3
AAK	Ala-Archa	53.03	303	P	P	04 47 52.7	+0.6
	comp=Z,308nm,0.6s,baz=110,slow=5.6,SNR=322						
AAK				PcP	PcP	04 48 54.3	+0.4
	comp=Z,208nm,0.9s,baz=209,slow=4.5,SNR=5.0						
AAK				ScP	ScP	04 52 08.6	-0.3
	comp=Z,184nm,0.9s,baz=133,slow=3.4,SNR=9.6						
AAK				S	S	04 54 45.7	-2.3
	comp=Z,9.5nm,0.8s,baz=25,slow=13,SNR=1.4						
	comp=Z,308nm,0.6s						
AAK	Ala-Archa	53.03	303	P	P	04 47 52.8	+0.7
AAK				P	P	04 47 52.8	+0.7
AAK				S	S	04 54 47.7	-0.4
AAK				S	S	04 54 47.7	-0.4
AAK	Ala-Archa	53.03	303	*d i*P	P	04 47 52.7	+0.6
AAK				pmax	pmax		
	comp=Z,337nm,0.7s						
AAK	Ala-Archa	53.03	303	*i* P	P	04 47 52.6	+0.6
	SNR=49						
AAK	Ala-Archa	53.03	303	P	P	04 47 52.4	+0.3
AAK				S	S	04 54 49.0	+0.9
AAK	Ala-Archa	53.03	303	P	P	04 47 52.6	+0.6
AAK				PcP	PcP	04 48 54.0	+0.1
AAK				ScP	ScP	04 52 08.6	-0.3
P18K	Big Mountain,	53.05	36	P	P	04 47 52.4	+0.6
P18K				IAmb	IAmb	04 47 53.8	
	comp=Z,2µm,0.9s						
P18K	Big Mountain,	53.05	36	P	P	04 47 52.4	+0.6
	baz=265,SNR=943						
P18K				S	S	04 54 48.9	+1.4
	baz=265						
BTLS	Baital	53.07	306	*d i*P	P	04 47 52.4	+0.3
BTLS				pmax	pmax		
	comp=Z,388nm,0.5s						
BTLS	Baital	53.07	306	⇓*i*P	P	04 47 52.5	+0.3
	comp=Z,388nm,0.5s						
UCH	Uchtor	53.07	303	P	P	04 47 54.1	+1.3
	SNR=170						
UCH	Uchtor	53.07	303	P	ScP	04 52 09.5	+0.1
	SNR=11						
O18K	Koktuh Hills	53.10	35	P	P	04 47 53.4	+1.3
O18K	Koktuh Hills	53.10	35	P	P	04 47 53.4	+1.3
	baz=265,SNR=1000						
O18K				S	S	04 54 51.5	+3.4
	baz=265						
Q18K	Katmai Hardscr	53.11	37	P	P	04 47 51.7	-0.6
	baz=266,SNR=517						
Q18K				S	S	04 54 46.5	-2.0
	baz=266						
G19K	Purcell Mounta	53.15	27	P	P	04 47 53.0	+0.7
G19K				IAmb	IAmb	04 47 55.8	
	comp=Z,1µm,1.1s						
G19K	Purcell Mounta	53.15	27	P	P	04 47 53.2	+0.8
	baz=258,SNR=793						
G19K				S	S	04 54 50.2	+1.6
	baz=258						
RK1H	Rockhampton Ha	53.26	167	P	P	04 47 53.8	+0.2
D19K	Kuna River	53.29	24	P	P	04 47 54.3	+0.9
D19K				IAmb	IAmb	04 47 56.9	
	comp=Z,2µm,0.8s						
D19K	Kuna River	53.29	24	P	P	04 47 54.4	+1.1
	baz=256,SNR=1000						
D19K				S	S	04 54 51.5	+1.1
	baz=256						
H19K	Roundabout Mou	53.29	28	P	P	04 47 54.8	+1.5
H19K	Roundabout Mou	53.29	28	P	P	04 47 54.8	+1.5
	baz=260,SNR=1000						
H19K				S	S	04 54 52.9	+2.5
	baz=260						
R18K	Karluk	53.34	38	P	P	04 47 53.3	-0.5
	baz=267						
R18K				S	S	04 54 49.0	-2.3
	baz=267						
E19K	Redstone River	53.37	25	P	P	04 47 55.0	+1.1
E19K				IAmb	IAmb	04 47 57.7	
	comp=Z,1µm,0.7s						
E19K	Redstone River	53.37	25	P	P	04 47 55.3	+1.4
	baz=257,SNR=1000						
E19K				S	S	04 54 52.9	+1.4
	baz=257						
MBWA	Marble Bar	53.38	203	P	P	04 47 54.6	+0.1
MBWA	Marble Bar	53.38	203	P	P	04 47 54.9	+0.3
	comp=Z,1µm,0.9s						
MBWA	Marble Bar	53.38	203	P	P	04 47 54.8	+0.3
MBWA	Marble Bar	53.38	203	P	P	04 47 54.7	+0.2
MBWA				S	S	04 54 51.0	-1.6
MBWA	Marble Bar	53.38	203	P	P	04 47 54.9	+0.3
J19K	Poorman	53.39	30	P	P	04 47 55.1	+1.0
J19K				IAmb	IAmb	04 47 57.8	
	comp=Z,1µm,0.8s						
J19K	Poorman	53.39	30	P	P	04 47 55.3	+1.2
	baz=262,SNR=1000						
J19K				S	S	04 54 53.1	+1.2
	baz=262						
SII	Sitkinak Islan	53.45	39	P	P	04 47 55.2	+0.5
SII	Sitkinak Islan	53.45	39	P	P	04 47 54.7	0.0
SII	Sitkinak Islan	53.45	39	P	P	04 47 55.2	+0.5
	baz=268,SNR=157						
SII				S	S	04 54 53.8	+0.8
	baz=268						
L19K	White Mountain	53.50	32	P	P	04 47 56.4	+1.4
L19K				IAmb	IAmb	04 47 59.0	
	comp=Z,1µm,1.1s						
L19K	White Mountain	53.50	32	P	P	04 47 56.4	+1.4
	baz=264,SNR=793						
L19K				S	S	04 54 55.5	+2.1
	baz=264						
N19K	Bonanza Creek	53.54	34	P	P	04 47 56.6	+1.3
N19K	Bonanza Creek	53.54	34	P	P	04 47 56.7	+1.3
	baz=265,SNR=766						
N19K				S	S	04 54 56.7	+2.5
	baz=265						
EKS2	Erkin-Say	53.55	303	P	P	04 47 56.6	+0.8
	SNR=27						
EKS2	Erkin-Say	53.55	303	P	ScP	04 52 11.0	-0.1
	SNR=6.7						
O19K	Port Alsworth	53.57	35	P	P	04 47 56.7	+1.2
O19K				IAmb	IAmb	04 47 59.4	
	comp=Z,2µm,1.0s						
O19K	Port Alsworth	53.57	35	P	P	04 47 56.8	+1.4
	baz=266,SNR=461						
O19K				S	S	04 54 58.0	+3.7
	baz=266						
DHRM	DHARAMSHALA	53.58	290	IAmb	IAmb	04 47 58.3	
	comp=Z,1µm,0.9s						
DHRM				*e*P	P	04 47 59.3	+3.0
BRZS	Berezniki	53.59	313	*e*P	P	04 47 56.0	+0.3
BRZS	Berezniki	53.59	313	*e*P	P	04 47 56.1	+0.3
JHNI	Jhansi	53.59	282	IAmb	IAmb	04 47 56.7	
	comp=Z,2µm,0.6s						
JHNI				*e*P	P	04 47 59.0	+2.8
PSAD1	Pilbara Seismi	53.62	203	P	P	04 47 56.6	+0.3
	comp=Z,2µm,1.4s						
FUNA	Funafuti	53.64	128	P	P	04 47 57.3	+0.8
AML	Almayashu	53.69	303	P	P	04 47 58.4	+1.3
	SNR=1158						
AML	Almayashu	53.69	303	P	ScP	04 52 12.3	+0.2
	SNR=13						
M19K	Big River Lodg	53.69	33	P	P	04 47 57.8	+1.5
M19K				IAmb	IAmb	04 48 00.5	
	comp=Z,2µm,1.2s						
M19K	Big River Lodg	53.69	33	P	P	04 47 58.0	+1.7
	baz=264						
M19K				S	S	04 54 58.6	+2.6
	baz=264						
BHK	Bhakra	53.69	289	*e*P	P	04 47 57.1	+0.2
PSA00	Pilbara Seismi	53.72	203	P	P	04 47 56.6	-0.4
PSA00	Pilbara Seismi	53.72	203	P	P	04 47 56.7	-0.3
PSA00				IAmb	IAmb	04 47 58.8	
	comp=Z,778nm,0.8s						
PSA00	Pilbara Seismi	53.72	203	P	P	04 47 57.2	+0.3
	comp=Z,1µm,1.3s						
PSA00	Pilbara Seismi	53.72	203	P	P	04 47 57.1	+0.1
JMIU	JAMIA UNIVERSI	53.73	286	IAmb	IAmb	04 47 59.1	
	comp=Z,2µm,0.7s						
JMIU				*e*P	P	04 48 00.4	+3.3
KKR	Kurukshetra	53.74	287	*e*P	P	04 48 00.5	+3.3
NDI	New Delhi	53.76	286	IAmb	IAmb	04 47 59.4	
	comp=Z,1µm,0.7s						
NDI				*e*P	P	04 48 00.5	+3.2
LDR	Lodi Road	53.79	286	IAmb	IAmb	04 47 59.4	
	comp=Z,2µm,0.7s						
LDR				*e*P	P	04 48 00.7	+3.2
NPLP	NPLP New Delhi	53.81	286	IAmb	IAmb	04 47 59.7	
	comp=Z,1µm,0.8s						
NPLP				*e*P	P	04 48 01.0	+3.3
GD1S	Gladstone Soft	53.83	166	P	P	04 47 58.2	+0.5
Q19K	Cape Douglas,	53.84	36	P	P	04 47 56.9	-0.4
Q19K				IAmb	IAmb	04 47 58.9	
	comp=Z,3µm,1.4s						
Q19K	Cape Douglas,	53.84	36	P	P	04 47 57.0	-0.4
	baz=267,SNR=250						
Q19K				S	S	04 54 55.1	-2.9
	baz=267						
F20K	Avaraart Lake	53.86	26	P	P	04 47 58.6	+1.2
F20K	Avaraart Lake	53.86	26	P	P	04 47 58.7	+1.2
	baz=259						
F20K				S	S	04 54 58.4	+0.4
	baz=259						
D20K	Etivluk River	53.88	24	P	P	04 47 58.8	+1.3
	baz=257,SNR=1000						
D20K				S	S	04 54 58.8	+0.6
	baz=257						
AYAN	Aya Nagar	53.89	286	*e*P	P	04 48 01.6	+3.4
E20K	Nigu River	53.93	25	P	P	04 47 59.2	+1.2
	baz=258,SNR=997						
E20K				S	S	04 54 59.4	+0.4
	baz=258						
H20K	Anotleneega Mo	53.93	28	P	P	04 47 59.4	+1.5
	baz=261,SNR=1000						
H20K				S	S	04 55 01.4	+2.4
	baz=261						
OTUK	Ortayu	53.94	310	P	P	04 47 58.7	+0.4
OHAK	Old Harbor	53.96	38	P	P	04 47 57.9	-0.3
OHAK	Old Harbor	53.96	38	P	P	04 47 58.4	+0.2
	baz=269,SNR=222						
OHAK				S	S	04 54 59.3	-0.2
	baz=269						
L20K	Farewell, AK	53.99	32	P	P	04 47 59.8	+1.3
	baz=264,SNR=683						
L20K				S	S	04 55 02.4	+2.5
	baz=264						
B20K	Meade River	53.99	22	IAmb	IAmb	04 48 01.9	
	comp=Z,1µm,0.6s						
B20K	Meade River	53.99	22	P	P	04 47 59.5	+1.3
	baz=256,SNR=325						
B20K				S	S	04 55 00.7	+1.1
	baz=256						
BHGR	Bahadurgarh	53.99	286	IAmb	IAmb	04 48 01.8	
	comp=Z,3µm,0.7s						
BHGR				*e*P	P	04 48 02.2	+3.3
K20K	Telida	53.99	31	IAmb	IAmb	04 48 01.4	
	comp=Z,2µm,0.9s						
K20K	Telida	53.99	31	P	P	04 48 00.1	+1.7
	baz=264,SNR=1000						
K20K				S	S	04 55 03.5	+3.6
	baz=264						
SONA	Sohna	54.00	285	IAmb	IAmb	04 48 01.0	
	comp=Z,3µm,1.1s						
SONA				*e*P	P	04 48 02.4	+3.5
I20K	Naaghedeneel	54.00	29	P	P	04 48 00.1	+1.8
	baz=262,SNR=1000						
I20K				S	S	04 55 04.1	+4.3
	baz=262						
THN	Thein Dam	54.01	291	IAmb	IAmb	04 48 01.2	
	comp=Z,2µm,0.8s						
THN				*e*P	P	04 48 01.8	+2.7
J20K	Nowinta River	54.06	30	P	P	04 48 00.5	+1.6
	baz=263,SNR=1000						
J20K				S	S	04 55 03.4	+2.7
	baz=263						
P19K	Oil Pt	54.09	35	IAmb	IAmb	04 48 01.5	
	comp=Z,2µm,1.2s						
P19K	Oil Pt	54.09	35	P	P	04 47 59.4	+0.3
	baz=267,SNR=236						
P19K				S	S	04 54 59.7	-1.6
	baz=267						
M20K	Styx River	54.28	33	P	P	04 48 02.0	+1.4
	baz=265,SNR=435						
M20K				S	S	04 55 07.5	+3.6
	baz=265						
ARSB	Arslanbob	54.34	302	IAmb	IAmb	04 48 04.7	
	comp=Z,2µm,1.2s						
KDAK	Kodiak Island	54.35	38	P	P	04 48 01.5	+0.4
KDAK				IAmb	IAmb	04 48 03.8	
	comp=Z,2µm,0.9s						
KDAK	Kodiak Island	54.35	38	ScP	ScP	04 52 13.8	-0.2
	comp=Z,221nm,1.1s,baz=61,slow=0.5,SNR=9.4						
KDAK				S	S	04 55 05.5	+0.8
	comp=Z,23nm,0.9s,baz=9.1,slow=19,SNR=7.7						
KDAK	Kodiak Island	54.35	38	*c i*P	P	04 48 01.4	+0.4
KDAK				pmax	pmax		
	comp=Z,4µm,1.0s						
KDAK	Kodiak Island	54.35	38	P	P	04 48 01.3	+0.3
	baz=269						
KDAK				S	S	04 55 03.8	-0.9
	baz=269						
KDAK	Kodiak Island	54.35	38	P	P	04 48 01.2	+0.3
KDAK				PcP	PcP	04 48 58.9	+0.5
KDAK				ScP	ScP	04 52 14.8	+0.7
RED	Redoubt Volcan	54.36	34	IAmb	IAmb	04 48 04.1	
	comp=Z,1µm,1.1s						
O20K	Slope Mountain	54.41	35	P	P	04 48 01.6	0.0
	baz=267,SNR=145						
O20K				S	S	04 55 04.8	-0.9
	baz=267						
Q20K	Shuyak Island	54.48	37	P	P	04 48 01.9	0.0
	baz=268,SNR=383						
Q20K				S	S	04 55 04.1	-2.2
	baz=268						
A21K	Barrow	54.50	21	P	P	04 48 03.0	+1.2
	baz=255,SNR=46						
A21K				S	S	04 55 07.7	+1.5
	baz=255						
KUDL	Kundal	54.53	285	IAmb	IAmb	04 48 04.9	
	comp=Z,1µm,0.8s						
KUDL				*e*P	P	04 48 06.2	+3.4
NGP	Nagpur	54.61	276	IAmb	IAmb	04 48 05.9	
	comp=Z,1µm,1.1s						
NGP				*e*P	P	04 48 06.7	+3.2
JMU	Jammu	54.61	291	*e*P	P	04 48 06.8	+3.6
C21K	Knifeblade Rid	54.62	24	P	P	04 48 04.1	+1.4
	baz=259,SNR=541						
C21K				S	S	04 55 08.8	+0.9
	baz=259						
G21K	Allakaket	54.64	27	IAmb	IAmb	04 48 06.8	
	comp=Z,1µm,0.9s						
G21K	Allakaket	54.64	27	P	P	04 48 04.3	+1.3
	baz=262,SNR=1000						
G21K				S	S	04 55 10.4	+2.0
	baz=262						
N20K	Mount Spurr	54.68	34	P	P	04 48 04.5	+1.1
	baz=267						
N20K				S	S	04 55 10.9	+1.8
	baz=267						
SPCR	Spurr Chakacha	54.68	34	P	P	04 48 04.4	+1.0
	baz=267,SNR=425						
SPCR				S	S	04 55 10.0	+0.9
	baz=267						
F21K	Alatna River	54.76	26	P	P	04 48 04.6	+0.8
	baz=261,SNR=833						
F21K				S	S	04 55 11.4	+1.6
	baz=261						
B21K	Ikpikpuk River	54.77	23	IAmb	IAmb	04 48 08.1	
	comp=Z,2µm,0.9s						
B21K	Ikpikpuk River	54.77	23	P	P	04 48 05.1	+1.4
	baz=258,SNR=788						
B21K				S	S	04 55 10.7	+0.9
	baz=258						
E21K	Killik River	54.77	25	IAmb	IAmb	04 48 07.4	
	comp=Z,1µm,0.8s						
E21K	Killik River	54.77	25	P	P	04 48 04.8	+0.9
	baz=260						
E21K				S	S	04 55 10.2	+0.2
	baz=260						
PPLA	Purkeypile	54.80	31	IAmb	IAmb	04 48 08.5	
	comp=Z,2µm,1.1s						
PPLA	Purkeypile	54.80	31	P	P	04 48 05.8	+1.4
	baz=266,SNR=457						
PPLA				S	S	04 55 13.7	+2.9
	baz=266						
H21K	Melozitna Rive	54.81	28	P	P	04 48 05.9	+1.7
	baz=263,SNR=1000						
H21K				S	S	04 55 14.1	+3.5
	baz=263						
CHUM	Lake Minchumin	54.83	30	P	P	04 48 05.9	+1.7
	baz=265,SNR=342						
CHUM				S	S	04 55 13.9	+3.1
	baz=265						
BVA0	Borovoye Array	54.85	316	*i* P	P	04 48 04.1	-0.6
BVAR	Borovoye Array	54.85	316	P	P	04 48 04.8	+0.1
	comp=Z,764nm,0.6s,baz=89,slow=8.7,SNR=1222						
BVAR				PcP	PcP	04 49 01.1	+0.6
	comp=Z,187nm,0.6s,baz=106,slow=3.0,SNR=6.2						
BVAR				ScP	ScP	04 52 16.1	-0.4
	comp=Z,116nm,0.9s,baz=104,slow=4.7,SNR=4.6						
BVAR				S	S	04 55 10.8	-0.8
	comp=Z,99nm,1.1s,baz=91,slow=13,SNR=7.6						
BVAR				PKPPKP	P'P'df	05 18 07.7	-2.1
	comp=Z,4.3nm,0.8s,baz=265,slow=4.7,SNR=5.8						
BVAR				P4KPbc		05 25 19.3	
	comp=Z,6.1nm,0.6s,baz=88,slow=4.7,SNR=17						

	comp=Z,764nm,0.6s					
CAST	**Castle Rocks**	**54.89**	**31**	IAmb	IAmb	04 48 08.8
	comp=Z,2µm,0.9s					
CAST	**Castle Rocks**	**54.89**	**31**	P	**P**	**04 48 06.1 +1.4**
	baz=265,SNR=1000					
CAST				S	**S**	**04 55 14.1 +2.3**
	baz=265					
HOM	**Homer**	**54.89**	**35**	P	**P**	**04 48 04.5 -0.3**
	baz=268,SNR=34					
HOM				S	**S**	**04 55 09.5 -2.2**
	baz=268					
GUNA	**GUNA**	**54.89**	**281**	IAmb	IAmb	04 48 06.9
	comp=Z,1µm,0.8s					
GUNA				*e*P	**P**	**04 48 08.7 +3.3**
KOUNC	**Koumac, New Ca**	**54.91**	**151**	P	**P**	**04 48 06.0 +0.6**
BRVK	**Borovoye**	**54.92**	**316**	P	**P**	**04 48 05.3 +0.1**
BRVK				IAmb	IAmb	04 48 07.9
	comp=Z,1µm,0.9s					
BRVK	**Borovoye**	**54.92**	**316**	P	**P**	**04 48 05.7 +0.6**
BRVK				P	**P**	**04 48 05.7 +0.6**
BRVK				S	**S**	**04 55 09.8 -2.6**
BRVK				S	**S**	**04 55 09.8 -2.6**
BRVK	**Borovoye**	**54.92**	**316**	*d* *i*P	**P**	**04 48 05.2 +0.1**
BRVK				pmax	pmax	
	comp=Z,2µm,1.0s					
BRVK	**Borovoye**	**54.92**	**316**	P	**P**	**04 48 05.8 +0.6**
BRVK				PcP	**PcP**	**04 48 59.8 -0.9**
BRVK				ScP	**ScP**	**04 52 16.4 -0.3**
A22K	**Sinclair Lake**	**54.94**	**21**	P	**P**	**04 48 06.5 +1.6**
	baz=257,SNR=183					
A22K				S	**S**	**04 55 13.9 +1.9**
	baz=257					
VJD	**Vijayawada**	**54.99**	**270**	IAmb	IAmb	04 48 09.3
	comp=Z,1µm,1.4s					
VJD				*e*P	**P**	**04 48 09.6 +3.5**
KEKH	**Kekaha**	**54.99**	**82**	IAmb	IAmb	04 48 09.7
	comp=Z,3µm,1.4s					
SKT	**Skwentna**	**55.05**	**33**	IAmb	IAmb	04 48 08.9
	comp=Z,2µm,1.5s					
SKT	**Skwentna**	**55.05**	**33**	P	**P**	**04 48 06.3 +0.4**
	baz=267,SNR=727					
SKT				S	**S**	**04 55 14.9 +1.1**
	baz=267					
CNPM	**China Poot**	**55.09**	**36**	IAmb	IAmb	04 48 08.6
	comp=Z,2µm,1.2s					
I21K	**Tanana**	**55.10**	**29**	IAmb	IAmb	04 48 10.5
	comp=Z,3µm,1.3s					
I21K	**Tanana**	**55.10**	**29**	P	**P**	**04 48 07.8 +1.7**
	baz=264,SNR=1000					
I21K				S	**S**	**04 55 17.5 +3.2**
	baz=264					
CAPN	**Captain Cook N**	**55.17**	**34**	IAmb	IAmb	04 48 10.2
	comp=Z,1µm,1.0s					
CAPN	**Captain Cook N**	**55.17**	**34**	P	**P**	**04 48 07.5 +0.8**
	baz=268,SNR=7.4					
CAPN				S	**S**	**04 55 16.9 +1.5**
	baz=268					
BRLK	**Bradley Lake**	**55.28**	**35**	IAmb	IAmb	04 48 09.6
	comp=Z,2µm,1.4s					
BHPL	**Bhopal**	**55.28**	**279**	IAmb	IAmb	04 48 10.0
	comp=Z,933nm,0.7s					
BHPL				*e*P	**P**	**04 48 11.5 +3.2**
F22K	**John River**	**55.30**	**26**	P	**P**	**04 48 09.0 +1.5**
	baz=262					
F22K				S	**S**	**04 55 19.2 +2.3**
	baz=262					
EIDS	**Eidsvold**	**55.30**	**167**	P	**P**	**04 48 08.5 +0.4**
	comp=Z,0.0nmcomp=Z,311nm,0.9s					
EIDS	**Eidsvold**	**55.30**	**167**	P	**P**	**04 48 08.2 +0.1**
B22K	**Teshekpuk Lake**	**55.31**	**22**	IAmb	IAmb	04 48 11.2
	comp=Z,1µm,1.1s					
B22K	**Teshekpuk Lake**	**55.31**	**22**	P	**P**	**04 48 08.7 +1.2**
	baz=259,SNR=198					
B22K				S	**S**	**04 55 18.2 +1.3**
	baz=259					
D22K	**Ayikyak River**	**55.31**	**24**	IAmb	IAmb	04 48 11.6
	comp=Z,1µm,0.8s					
D22K	**Ayikyak River**	**55.31**	**24**	P	**P**	**04 48 09.2 +1.5**
	baz=261,SNR=871					
D22K				S	**S**	**04 55 17.6 +0.5**
	baz=261					
BRSE	**Bradley Lake S**	**55.35**	**35**	P	**P**	**04 48 07.5 -0.6**
	baz=269,SNR=300					
BRSE				S	**S**	**04 55 15.3 -2.5**
	baz=269					
SUA	**Susitna One**	**55.40**	**33**	IAmb	IAmb	04 48 11.5
	comp=Z,833nm,0.8s					
SUA	**Susitna One**	**55.40**	**33**	P	**P**	**04 48 08.3 -0.1**
	baz=268,SNR=1000					
SUA				S	**S**	**04 55 17.6 -1.0**
	baz=268					
H22K	**Ishtalitna Cre**	**55.42**	**28**	P	**P**	**04 48 10.2 +1.8**
	baz=264,SNR=1000					
H22K				S	**S**	**04 55 22.3 +3.7**
	baz=264					
BPAW	**Bear Paw Mtn.**	**55.43**	**30**	IAmb	IAmb	04 48 12.4
	comp=Z,1µm,0.8s					
BPAW	**Bear Paw Mtn.**	**55.43**	**30**	P	**P**	**04 48 09.8 +1.3**
	baz=266,SNR=1000					
BPAW				S	**S**	**04 55 21.5 +2.7**
	baz=266					
G22K	**Bettles**	**55.48**	**27**	P	**P**	**04 48 10.1 +1.2**
	baz=263					
G22K				S	**S**	**04 55 21.0 +1.8**
	baz=263					
E22K	**Anaktuvuk Pass**	**55.52**	**25**	IAmb	IAmb	04 48 13.1
	comp=Z,2µm,1.1s					
E22K	**Anaktuvuk Pass**	**55.52**	**25**	P	**P**	**04 48 10.5 +1.4**
	baz=262,SNR=1000					
E22K				S	**S**	**04 55 20.4 +0.6**
	baz=262					
QLP	**Quilpie**	**55.54**	**175**	P	**P**	**04 48 09.8 +0.1**
	comp=Z,630nm,0.9s					
QLP	**Quilpie**	**55.54**	**175**	P	**P**	**04 48 09.8 +0.1**
MLY	**Manley**	**55.61**	**29**	IAmb	IAmb	04 48 13.8
	comp=Z,1µm,1.1s					
MLY	**Manley**	**55.61**	**29**	P	**P**	**04 48 11.2 +1.4**
	baz=265,SNR=1000					
MLY				S	**S**	**04 55 23.9 +2.7**
	baz=265					
SLKM	**Skilak Lake**	**55.62**	**34**	IAmb	IAmb	04 48 12.7
	comp=Z,3µm,1.8s					
FIS	**Fire Island**	**55.64**	**34**	IAmb	IAmb	04 48 13.3
	comp=Z,1µm,0.8s					
CUT	**Chulitna**	**55.66**	**32**	IAmb	IAmb	04 48 13.0
	comp=Z,1µm,0.7s					
CUT	**Chulitna**	**55.66**	**32**	P	**P**	**04 48 10.3 +0.1**
	baz=268,SNR=199					
CUT				S	**S**	**04 55 21.1 -0.5**
	baz=268					
NRDN	**NARMADA NAGAR**	**55.69**	**279**	IAmb	IAmb	04 48 18.4
	comp=Z,925nm,0.8s					
TRF	**Thorofare Moun**	**55.70**	**31**	P	**P**	**04 48 11.0 +0.4**
	baz=267,SNR=495					
TRF				S	**S**	**04 55 23.4 +0.8**
	baz=267					
M22K	**Willow**	**55.70**	**33**	P	**P**	**04 48 10.1 -0.3**
	baz=268,SNR=321					
M22K				S	**S**	**04 55 21.7 -0.6**
	baz=268					
NIL	**Nilore**	**55.72**	**293**	P	**P**	**04 48 12.1 +1.0**
NIL				IAmb	IAmb	04 48 15.3
	comp=Z,1µm,0.8s					
NIL	**Nilore**	**55.72**	**293**	P	**P**	**04 48 12.1 +1.0**
NIL				pmax	pmax	
	comp=Z,1µm,0.8s					
NIL	**Nilore**	**55.72**	**293**	P	**P**	**04 48 12.1 +1.0**
KK31	**Karatay Array**	**55.85**	**304**	*i* P	**P**	**04 48 12.3 +0.4**
KKAR	**Karatay Array**	**55.85**	**304**	P	**P**	**04 48 12.9 +1.0**
KKAR	**Karatay Array**	**55.85**	**304**	IAmb	IAmb	04 48 14.8
	comp=Z,2µm,0.8s					
KKAR	**Karatay Array**	**55.85**	**304**	P	**P**	**04 48 12.9 +1.0**
O22K	**Cooper Landing**	**55.87**	**34**	IAmb	IAmb	04 48 21.4
	comp=Z,1µm,0.7s					
O22K	**Cooper Landing**	**55.87**	**34**	P	**P**	**04 48 11.6 0.0**
	baz=269,SNR=104					
O22K				S	**S**	**04 55 22.6 -1.9**
	baz=269					
RC01	**Rabbit Creek A**	**55.87**	**34**	P	**P**	**04 48 11.6 -0.1**
	baz=269,SNR=315					
RC01				S	**S**	**04 55 23.0 -1.6**
	baz=269					
SEW	**Seward**	**56.00**	**35**	IAmb	IAmb	04 48 14.7
	comp=Z,772nm,0.8s					
SEW	**Seward**	**56.00**	**35**	P	**P**	**04 48 12.6 0.0**
	baz=270,SNR=149					
SEW				S	**S**	**04 55 24.9 -1.3**
	baz=270					
COLD	**Coldfoot**	**56.02**	**26**	P	**P**	**04 48 13.9 +1.3**
	baz=264,SNR=700					
COLD				S	**S**	**04 55 28.7 +2.4**
	baz=264					
D23K	**Nanushuk River**	**56.04**	**24**	IAmb	IAmb	04 48 17.0
	comp=Z,2µm,0.9s					
D23K	**Nanushuk River**	**56.04**	**24**	P	**P**	**04 48 14.5 +1.8**
	baz=263,SNR=784					
D23K				S	**S**	**04 55 28.6 +2.0**
	baz=263					
G23K	**Bananza Creek**	**56.04**	**27**	IAmb	IAmb	04 48 16.9
	comp=Z,1µm,1.0s					
G23K	**Bananza Creek**	**56.04**	**27**	P	**P**	**04 48 14.5 +1.7**
	baz=265,SNR=1000					
G23K				S	**S**	**04 55 29.5 +2.7**
	baz=265					
H23K	**Yukon River**	**56.17**	**28**	IAmb	IAmb	04 48 18.1
	comp=Z,1µm,1.1s					
H23K	**Yukon River**	**56.17**	**28**	P	**P**	**04 48 15.3 +1.7**
	baz=266,SNR=1000					
H23K				S	**S**	**04 55 32.6 +4.2**
	baz=266					
PMR	**Palmer**	**56.17**	**33**	IAmb	IAmb	04 48 16.4
	comp=Z,953nm,0.8s					
PMR	**Palmer**	**56.17**	**33**	P	**P**	**04 48 13.2 -0.5**
PMR	**Palmer**	**56.17**	**33**	P	**P**	**04 48 13.8 +0.1**
	baz=269,SNR=772					
PMR				S	**S**	**04 55 27.8 -0.6**
	baz=269					
C23K	**Itkillik River**	**56.18**	**23**	IAmb	IAmb	04 48 17.5
	comp=Z,2µm,0.9s					
C23K	**Itkillik River**	**56.18**	**23**	P	**P**	**04 48 14.9 +1.3**
	baz=262,SNR=429					
C23K				S	**S**	**04 55 29.8 +1.6**
	baz=262					
I23K	**Minto, Yukon-K**	**56.20**	**29**	IAmb	IAmb	04 48 17.7
	comp=Z,1µm,1.1s					
I23K	**Minto, Yukon-K**	**56.20**	**29**	P	**P**	**04 48 15.0 +1.2**
	baz=267,SNR=1000					
I23K				S	**S**	**04 55 31.4 +2.7**
	baz=267					
GHO	**Glory Hole Cre**	**56.27**	**33**	IAmb	IAmb	04 48 18.5
	comp=Z,1µm,0.8s					
NEA2	**Nenana**	**56.29**	**29**	IAmb	IAmb	04 48 18.1
	comp=Z,2µm,1.0s					
NEA2	**Nenana**	**56.29**	**29**	P	**P**	**04 48 15.4 +0.9**
	baz=267,SNR=1000					
NEA2				S	**S**	**04 55 32.0 +2.0**
	baz=267					
MCK	**McKinley**	**56.32**	**31**	P	**P**	**04 48 15.1 +0.4**
	baz=268,SNR=1000					
MCK				S	**S**	**04 55 29.6 -0.7**
	baz=268					
E23K	**Chandalar**	**56.33**	**25**	IAmb	IAmb	04 48 21.4
	comp=Z,1µm,1.1s					
E23K	**Chandalar**	**56.33**	**25**	P	**P**	**04 48 16.5 +1.7**
	baz=264					
E23K				S	**S**	**04 55 32.3 +1.8**
	baz=264					
INH	**Isangel**	**56.34**	**145**	P	**P**	**04 48 15.7 +0.3**
BRLS	**Borolday**	**56.35**	**304**	*d* *i*P	**P**	**04 48 16.7 +1.3**
BRLS	**Borolday**	**56.35**	**304**	⇓ *i*P	**P**	**04 48 16.8 +1.3**
TOLK	**Toolik Lake Re**	**56.40**	**25**	IAmb	IAmb	04 48 19.2
	comp=Z,2µm,1.2s					
TOLK	**Toolik Lake Re**	**56.40**	**25**	P	**P**	**04 48 16.6 +1.2**
	baz=264,SNR=548					
TOLK				S	**S**	**04 55 32.8 +1.4**
	baz=264					
HYB	**Hyderabad**	**56.46**	**272**	*e*P	**P**	**04 48 17.3 +0.7**
HYB				IVmB_BB		04 48 17.8
	comp=Z,9µm,2.6s					
HYB				*e*pP	**pP**	**04 49 44.0 -0.2**
HYB				*e*PP	**PP**	**04 50 28.4 +0.3**
WAT1	**Susitna Watana**	**56.47**	**32**	P	**P**	**04 48 15.9 +0.1**
	baz=269					
WAT1				S	**S**	**04 55 32.1 -0.3**
	baz=269					
KNK	**Knik Glacier**	**56.49**	**33**	IAmb	IAmb	04 48 18.9
	comp=Z,2µm,0.8s					
KNK	**Knik Glacier**	**56.49**	**33**	P	**P**	**04 48 16.4 +0.4**
	baz=270,SNR=784					
KNK				S	**S**	**04 55 32.8 +0.1**
	baz=270					
AKL	**Akola**	**56.54**	**277**	IAmb	IAmb	04 48 19.9
	comp=Z,1µm,0.5s					
AKL				*e*P	**P**	**04 48 20.3 +3.3**
PWL	**Port Wells**	**56.55**	**34**	IAmb	IAmb	04 48 20.8
	comp=Z,1µm,0.9s					
PWL	**Port Wells**	**56.55**	**34**	P	**P**	**04 48 16.6 +0.1**
	baz=270,SNR=332					
PWL				S	**S**	**04 55 33.6 +0.1**
	baz=270					
SML	**Sawmill**	**56.55**	**33**	P	**P**	**04 48 16.9 +0.5**
	baz=270,SNR=1000					
SML				S	**S**	**04 55 33.9 +0.4**
	baz=270					
AJM	**Ajmer**	**56.60**	**284**	IAmb	IAmb	04 48 19.6
	comp=Z,1µm,1.3s					
AJM				*e*P	**P**	**04 48 20.9 +3.5**
CHM	**Chimkent**	**56.65**	**304**	*e*P	**P**	**04 48 17.7 +0.3**
CHM				pmax	pmax	
	comp=Z,863nm,0.7s					
CHM	**Chimkent**	**56.65**	**304**	*e*P	**P**	**04 48 17.8 +0.3**
	comp=Z,863nm,0.7s					
KIP	**Kipapa**	**56.66**	**82**	P	**P**	**04 48 18.5 +0.6**
KIP				IAmb	IAmb	04 48 20.8
	comp=Z,844nm,0.8s					
KIP	**Kipapa**	**56.66**	**82**	P	**P**	**04 48 18.7 +0.9**
KIP	**Kipapa**	**56.66**	**82**	*c* *i*P	**P**	**04 48 19.0 +1.2**
KIP				pmax	pmax	
	comp=Z,390nm,1.0s					
KIP	**Kipapa**	**56.66**	**82**	P	**P**	**04 48 19.0 +1.2**
HON	**Honolulu**	**56.71**	**82**	IAmb	IAmb	04 48 21.2
	comp=Z,835nm,0.9s					
D24K	**Happy Valley**	**56.72**	**24**	P	**P**	**04 48 19.0 +1.5**
	baz=264,SNR=1000					
D24K				S	**S**	**04 55 36.7 +1.4**
	baz=264					
E24K	**Your Creek**	**56.75**	**25**	IAmb	IAmb	04 48 21.4
	comp=Z,735nm,0.8s					
E24K	**Your Creek**	**56.75**	**25**	P	**P**	**04 48 19.4 +1.6**
	baz=265					
E24K				S	**S**	**04 55 38.2 +2.2**
	baz=265					
GIRL	**Giralia**	**56.79**	**208**	IAmb	IAmb	04 48 21.4
	comp=Z,1µm,1.1s					
GIRL	**Giralia**	**56.79**	**208**	P	**P**	**04 48 19.1 +0.6**
	comp=Z,0.0nmcomp=Z,1µm,1.6s					
GIRL	**Giralia**	**56.79**	**208**	P	**P**	**04 48 19.2 +0.7**
MDRS	**Chennai**	**56.80**	**267**	IAML		04 48 22.2
	comp=Z,768nm,1.2s					
MDRS				*e*P	**P**	**04 48 22.8 +4.0**
C24K	**Franklin Bluff**	**56.82**	**23**	P	**P**	**04 48 19.3 +1.2**
	baz=264					
C24K				S	**S**	**04 55 37.7 +1.1**
	baz=264					
COLA	**College**	**56.83**	**29**	P	**P**	**04 48 18.5 +0.3**
COLA				IAmb	IAmb	04 48 22.4
	comp=Z,930nm,0.8s					
COLA	**College**	**56.83**	**29**	P	**P**	**04 48 18.0 -0.2**
COLA	**College**	**56.83**	**29**	P	**P**	**04 48 18.6 +0.4**
COLA	**College**	**56.83**	**29**	P	**P**	**04 48 18.6 +0.4**
	baz=268					
COLA				S	**S**	**04 55 38.0 +1.2**
	baz=268					
COLA	**College**	**56.83**	**29**	P	**P**	**04 48 18.4 +0.3**
COLA				S	**S**	**04 55 37.6 +0.8**
COLA	**College**	**56.83**	**29**	P	**P**	**04 48 18.5 +0.3**
WAT6	**Susitna Watana**	**56.84**	**32**	P	**P**	**04 48 19.0 +0.4**
	baz=270,SNR=1000					
WAT6				S	**S**	**04 55 37.9 +0.5**
	baz=270					
M23K	**Glacier View**	**56.84**	**33**	P	**P**	**04 48 18.8 +0.4**
	baz=270,SNR=762					
M23K				S	**S**	**04 55 37.9 +0.7**
	baz=270					
H24K	**Noodor Dome**	**56.85**	**28**	IAmb	IAmb	04 48 22.5
	comp=Z,1µm,1.1s					
H24K	**Noodor Dome**	**56.85**	**28**	P	**P**	**04 48 20.0 +1.5**
	baz=268,SNR=1000					
H24K				S	**S**	**04 55 40.4 +3.1**
	baz=268					
F24K	**Squaw Lake**	**56.94**	**26**	IAmb	IAmb	04 48 23.0
	comp=Z,841nm,0.7s					
F24K	**Squaw Lake**	**56.94**	**26**	P	**P**	**04 48 20.7 +1.7**
	baz=266,SNR=1000					
F24K				S	**S**	**04 55 41.2 +2.9**
	baz=266					
DHY	**Denali Highway**	**57.01**	**31**	P	**P**	**04 48 19.9 +0.2**
	baz=270,SNR=394					
DHY				S	**S**	**04 55 40.0 +0.5**
	baz=270					
POKR	**Poker Plat Res**	**57.01**	**29**	IAmb	IAmb	04 48 23.5
	comp=Z,1µm,0.8s					
POKR	**Poker Plat Res**	**57.01**	**29**	P	**P**	**04 48 20.2 +0.6**
	baz=268,SNR=337					
POKR				S	**S**	**04 55 40.1 +0.8**
	baz=268					
SCM	**Sheep Creek Mo**	**57.03**	**33**	P	**P**	**04 48 20.5 +0.7**
	baz=271,SNR=1000					
SCM				S	**S**	**04 55 40.6 +0.9**
	baz=271					
P23K	**Montague Islan**	**57.03**	**35**	IAmb	IAmb	04 48 23.1
	comp=Z,2µm,0.9s					
P23K	**Montague Islan**	**57.03**	**35**	P	**P**	**04 48 20.5 +0.8**
	baz=272,SNR=281					
P23K				S	**S**	**04 55 42.0 +2.4**
	baz=272					
G24K	**Hadweenzic Riv**	**57.05**	**27**	IAmb	IAmb	04 48 24.1
	comp=Z,2µm,1.1s					
G24K	**Hadweenzic Riv**	**57.05**	**27**	P	**P**	**04 48 21.5 +1.7**
	baz=267,SNR=1000					
G24K				S	**S**	**04 55 43.4 +3.6**
	baz=267					
GLI	**Glacier Island**	**57.16**	**34**	IAmb	IAmb	04 48 23.4
	comp=Z,1µm,0.8s					
GLI	**Glacier Island**	**57.16**	**34**	P	**P**	**04 48 20.9 +0.3**
	baz=271,SNR=417					
GLI				S	**S**	**04 55 42.3 +1.0**
	baz=271					
DZM	**Mont Dzumac**	**57.19**	**150**	P	**P**	**04 48 22.1 +0.7**
DZM	**Mont Dzumac**	**57.19**	**150**	⇑P	**P**	**04 48 22.7 +1.3**
HDA	**Harding Lake**	**57.21**	**30**	IAmb	IAmb	04 48 23.1
	comp=Z,969nm,0.7s					
HDA	**Harding Lake**	**57.21**	**30**	P	**P**	**04 48 20.6 -0.2**
	baz=269,SNR=900					
HDA				S	**S**	**04 55 40.7 -1.0**
	baz=269					
IL31		**57.24**	**29**	IAmb	IAmb	04 48 23.3
	comp=Z,2µm,1.4s					
ILAR	**Eielson Array**	**57.24**	**29**	P	**P**	**04 48 20.9 -0.1**
ILAR	**Eielson Array**	**57.24**	**29**	P	**P**	**04 48 20.5 -0.6**
	comp=Z,796nm,1.1s,baz=265,slow=5.1,SNR=1454					
ILAR				PcP	**PcP**	**04 49 09.6 0.0**
	comp=Z,54nm,0.8s,baz=299,slow=4.9,SNR=4.6					
ILAR				ScP	**ScP**	**04 52 25.8 -1.0**
	comp=Z,16nm,0.6s,baz=256,slow=3.9,SNR=7.0					
ILAR				S	**S**	**04 55 40.6 -1.5**
	comp=Z,14nm,1.3s,baz=254,slow=3.6,SNR=3.5					
ILAR				P4KPbc		05 25 27.0
	comp=Z,3.4nm,1.1s,baz=267,slow=4.5,SNR=17					
	comp=Z,796nm,1.1s					
BKNR	**BIKANER**	**57.27**	**286**	IAmb	IAmb	04 48 23.4
	comp=Z,2µm,0.8s					
BKNR				*e*P	**P**	**04 48 25.0 +3.1**
YATNC	**Mamie plateau,**	**57.38**	**149**	P	**P**	**04 48 23.4 +0.8**
ONTNC	**Ouen Toro**	**57.40**	**150**	P	**P**	**04 48 22.8 +0.1**
FID	**Port Fidalgo**	**57.47**	**34**	IAmb	IAmb	04 48 25.6
	comp=Z,879nm,1.0s					
HIN	**Hinchinbrook I**	**57.47**	**35**	IAmb	IAmb	04 48 26.0
	comp=Z,1µm,0.9s					
M24K	**Tolsona, Glenn**	**57.57**	**32**	IAmb	IAmb	04 48 27.1
	comp=Z,1µm,0.8s					
M24K	**Tolsona, Glenn**	**57.57**	**32**	P	**P**	**04 48 24.6 +1.1**
	baz=271,SNR=383					
M24K				S	**S**	**04 55 49.9 +3.3**
	baz=271					
Q23K	**Middleton Isla**	**57.59**	**36**	IAmb	IAmb	04 48 27.1
	comp=Z,2µm,1.0s					
Q23K	**Middleton Isla**	**57.59**	**36**	P	**P**	**04 48 24.7 +1.1**
	baz=273					
Q23K				S	**S**	**04 55 49.8 +3.1**
	baz=273					
G25K	**Bearman Lake**	**57.60**	**27**	P	**P**	**04 48 25.3 +1.8**
	baz=268,SNR=352					
G25K				S	**S**	**04 55 51.4 +4.7**
	baz=268					
D25K	**Kavik River**	**57.61**	**24**	IAmb	IAmb	04 48 27.4
	comp=Z,1µm,0.7s					
D25K	**Kavik River**	**57.61**	**24**	P	**P**	**04 48 24.8 +1.2**
	baz=267,SNR=569					
D25K				S	**S**	**04 55 48.1 +1.3**
	baz=267					
OUENC	**Ouen Island, N**	**57.67**	**150**	P	**P**	**04 48 25.7 +1.2**
H25L	**Birch Creek**	**57.71**	**28**	P	**P**	**04 48 25.9 +1.6**
	baz=269,SNR=602					
H25L				S	**S**	**04 55 52.4 +4.3**
	baz=269					
KLU	**Klutina**	**57.71**	**33**	IAmb	IAmb	04 48 28.2
	comp=Z,1µm,1.0s					
KLU	**Klutina**	**57.71**	**33**	P	**P**	**04 48 25.2 +0.7**
	baz=272,SNR=838					
KLU				S	**S**	**04 55 50.0 +1.5**
	baz=272					
K24K	**Donnelly Dome**	**57.72**	**30**	IAmb	IAmb	04 48 26.4
	comp=Z,845nm,0.8s					
K24K	**Donnelly Dome**	**57.72**	**30**	P	**P**	**04 48 24.6 +0.1**
	baz=271,SNR=471					
K24K				S	**S**	**04 55 48.7 +0.2**
	baz=271					
DIV	**Divide**	**57.80**	**34**	IAmb	IAmb	04 48 27.9
	comp=Z,2µm,1.5s					
F25K	**Christian Rive**	**57.80**	**26**	IAmb	IAmb	04 48 29.5
	comp=Z,1µm,1.1s					
F25K	**Christian Rive**	**57.80**	**26**	P	**P**	**04 48 27.0 +2.0**
	baz=268,SNR=1000					
F25K				S	**S**	**04 55 53.6 +4.2**
	baz=268					
PRP	**Porcupine Dome**	**57.82**	**28**	P	**P**	**04 48 24.7 -0.5**
	baz=270,SNR=607					
PRP				S	**S**	**04 55 50.2 +0.3**
	baz=270					
EYAK	**Cordova Ski Ar**	**57.83**	**34**	P	**P**	**04 48 25.4 +0.2**
EYAK	**Cordova Ski Ar**	**57.83**	**34**	P	**P**	**04 48 25.9 +0.7**
	baz=273,SNR=287					
EYAK				S	**S**	**04 55 52.2 +2.3**
	baz=273					
E25K	**Arctic Village**	**57.85**	**25**	IAmb	IAmb	04 48 29.6
	comp=Z,1µm,0.9s					
E25K	**Arctic Village**	**57.85**	**25**	P	**P**	**04 48 27.1 +1.8**
	baz=268,SNR=836					
E25K				S	**S**	**04 55 53.7 +3.7**
	baz=268					
SIMJ	**Simiganj**	**57.85**	**299**	P	**P**	**04 48 26.3 +0.4**
SIMJ				IAmb	IAmb	04 48 28.7
	comp=Z,1µm,0.8s					
SIMJ	**Simiganj**	**57.85**	**299**	P	**P**	**04 48 26.8 +0.8**
SIMJ				ScP	**ScP**	**04 52 29.0 -1.2**
PAX	**Paxson**	**57.88**	**31**	IAmb	IAmb	04 48 28.4
	comp=Z,1µm,0.8s					
PAX	**Paxson**	**57.88**	**31**	P	**P**	**04 48 26.4 +0.8**
	baz=272,SNR=1000					
PAX				S	**S**	**04 55 51.1 +0.5**
	baz=272					
J25K	**Salcha River,**	**57.89**	**29**	P	**P**	**04 48 24.7 -1.0**
	baz=271,SNR=443					
J25K				S	**S**	**04 55 49.3 -1.4**
	baz=271					
COCO	**West Island**	**57.98**	**231**	P	**P**	**04 48 27.6 +0.8**
COCO	**West Island**	**57.98**	**231**	P	**P**	**04 48 27.1 +0.3**
COCO				P	**P**	**04 48 27.1 +0.3**
COCO	**West Island**	**57.98**	**231**	P	**P**	**04 48 27.6 +0.8**
COCO	**West Island**	**57.98**	**231**	P	**P**	**04 48 27.6 +0.8**
COCO				pmax	pmax	
	comp=Z,4µm,1.7s					
HARP	**HAARP**	**58.04**	**32**	P	**P**	**04 48 27.9 +1.3**
	baz=272,SNR=902					
HARP				S	**S**	**04 55 54.1 +1.6**
	baz=272					
PINNC	**Pines Island,**	**58.11**	**149**	P	**P**	**04 48 29.6 +2.1**
RIDG	**Independent Ri**	**58.13**	**31**	IAmb	IAmb	04 48 31.1
	comp=Z,1µm,1.0s					
RIDG	**Independent Ri**	**58.13**	**31**	P	**P**	**04 48 27.6 +0.2**
	baz=272,SNR=1000					
RIDG				S	**S**	**04 55 53.4 -0.4**
	baz=272					
C26K	**Camden Bay**	**58.15**	**23**	P	**P**	**04 48 29.4 +2.2**
	baz=268					
C26K				S	**S**	**04 55 55.2 +1.5**
	baz=268					
BMAR	**Burnt Mountain**	**58.21**	**26**	P	**P**	**04 48 29.5 +1.8**
N25K	**Chitina, Valde**	**58.34**	**33**	P	**P**	**04 48 29.7 +1.0**
	baz=273,SNR=322					

N25K				S	S	04 55 58.1	+1.6
	baz=273						
BMRM	Bremner River	58.37	34	P	P	04 48 29.8	+0.9
	baz=274,SNR=1000						
BMRM				S	S	04 55 58.3	+1.4
	baz=274						
RAGM	Ragged Mountai	58.38	34	IAmb	IAmb	04 48 32.5	
	comp=Z,1µm,1.1s						
F26K	Sheenjek River	58.38	26	IAmb	IAmb	04 48 33.5	
	comp=Z,1µm,1.1s						
F26K	Sheenjek River	58.38	26	P	P	04 48 31.0	+2.1
	baz=270,SNR=1000						
F26K				S	S	04 56 01.4	+4.6
	baz=270						
HLK	Haleakala	58.44	82	IAmb	IAmb	04 48 34.1	
	comp=Z,2µm,0.9s						
DOT	Dot Lake	58.49	31	IAmb	IAmb	04 48 32.5	
	comp=Z,2µm,0.8s						
SCRK	Sand Creek	58.51	30	IAmb	IAmb	04 48 32.8	
	comp=Z,1µm,0.7s						
SCRK	Sand Creek	58.51	30	P	P	04 48 30.4	+0.4
	baz=272,SNR=1000						
SCRK				S	S	04 55 59.2	+0.5
	baz=272						
GC1S	Gold Coast 1 S	58.51	165	P	P	04 48 30.6	+0.4
G26K	Porcupine Rive	58.52	27	IAmb	IAmb	04 48 34.3	
	comp=Z,2µm,1.3s						
G26K	Porcupine Rive	58.52	27	P	P	04 48 31.5	+1.7
	baz=271,SNR=505						
G26K				S	S	04 56 02.6	+4.2
	baz=271						
KAIM	Kayak Island	58.54	35	P	P	04 48 31.3	+1.3
	baz=274,SNR=159						
KAIM				S	S	04 56 01.9	+3.0
	baz=274						
C27K	Jago River	58.56	24	IAmb	IAmb	04 48 34.5	
	comp=Z,2µm,0.9s						
C27K	Jago River	58.56	24	P	P	04 48 31.7	+1.6
	baz=269,SNR=504						
C27K				S	S	04 56 01.0	+2.0
	baz=269						
HMT	Hamilton	58.58	35	IAmb	IAmb	04 48 33.8	
	comp=Z,1µm,1.0s						
YSA	Yasawairara	58.64	136	P	P	04 48 33.2	+1.9
J26L	Joseph Creek	58.67	30	P	P	04 48 31.2	+0.2
	baz=272,SNR=1000						
J26L				S	S	04 56 00.9	+0.2
	baz=272						
MENT	Mentasta	58.68	31	IAmb	IAmb	04 48 38.0	
	comp=Z,803nm,0.5s						
MENT	Mentasta	58.68	31	P	P	04 48 31.5	+0.5
MALK	Mahakanadarawa	58.69	262	P	P	04 48 29.7	-2.1
KBU	Kabul Universi	58.79	295	P	P	04 48 27.8	-4.6
I26K	Coal Creek Min	58.81	29	P	P	04 48 31.4	-0.5
	baz=272,SNR=437						
I26K				S	S	04 56 03.0	+0.7
	baz=272						
MEEK	Meekatharra	58.83	202	P	P	04 48 32.0	-0.4
	comp=Z,0.0nmcomp=Z,307nm,2.6s						
MEEK	Meekatharra	58.83	202	P	P	04 48 32.3	-0.1
L26K	Log Cabin Wild	58.84	31	IAmb	IAmb	04 48 35.7	
	comp=Z,2µm,1.3s						
L26K	Log Cabin Wild	58.84	31	P	P	04 48 33.4	+1.3
	baz=273,SNR=840						
L26K				S	S	04 56 05.6	+2.9
	baz=273						
SUCK	Suckling Hills	58.85	35	IAmb	IAmb	04 48 35.9	
	comp=Z,2µm,1.0s						
KBL	Kabul	58.86	295	P	P	04 48 33.0	+0.1
KBL				IAmb	IAmb	04 48 35.5	
	comp=Z,2µm,1.4s						
KBL	Kabul	58.86	295	P	P	04 48 33.3	+0.4
	SNR=544						
KBL				P	P	04 48 33.3	+0.4
	SNR=544						
KBL				S	S	04 56 03.2	-1.1
KBL				S	S	04 56 03.2	-1.1
KBL	Kabul	58.86	295	P	P	04 48 33.0	+0.1
KBL				pmax	pmax		
	comp=Z,2µm,1.4s						
M26K	Nabesna, AK	59.04	32	IAmb	IAmb	04 48 36.4	
	comp=Z,1µm,1.1s						
M26K	Nabesna, AK	59.04	32	P	P	04 48 34.4	+0.9
	baz=274,SNR=1000						
M26K				S	S	04 56 07.8	+2.4
	baz=274						
BGLC	Bering Glacier	59.09	35	P	P	04 48 35.5	+1.8
	baz=275,SNR=21						
BGLC				S	S	04 56 07.8	+2.0
	baz=275						
PALK	Pallekele	59.10	261	P	P	04 48 35.1	+0.6
PALK	Pallekele	59.10	261	P	P	04 48 35.2	+0.6
	comp=Z,261nm,1.2s,baz=56,slow=7.0,SNR=47						
	comp=Z,261nm,1.2s						
PALK	Pallekele	59.10	261	P	P	04 48 35.5	+0.9
PALK				P	P	04 48 35.5	+0.9
PALK				S	S	04 56 06.3	-1.2
PALK	Pallekele	59.10	261	d iP	P	04 48 35.3	+0.7
PALK				pmax	pmax		
	comp=Z,1µm,1.5s						
PALK	Pallekele	59.10	261	P	P	04 48 34.9	+0.3
PALK				S	S	04 56 06.9	-0.5
PALK	Pallekele	59.10	261	P	P	04 48 35.2	+0.6
PALK				PcP	PcP	04 49 19.5	+1.5
MCARA	McCarthy VSAT	59.11	33	P	P	04 48 34.9	+1.0
	baz=275,SNR=809						
MCARA				S	S	04 56 06.9	+0.7
	baz=275						
CRQE	Cirque	59.13	34	P	P	04 48 35.0	+0.8
	baz=275,SNR=1000						
CRQE				S	S	04 56 07.8	+1.2
	baz=275						
HPAH	Hawaii Prepara	59.19	83	IAmb	IAmb	04 48 38.6	
	comp=Z,1µm,0.8s						
HUH	Hualalai	59.21	83	IAmb	IAmb	04 48 59.0	
	comp=Z,711nm,0.9s						
TGL	Tana Glacier	59.25	34	IAmb	IAmb	04 48 38.2	
	comp=Z,2µm,1.0s						
E27K	Coleen River	59.33	25	IAmb	IAmb	04 48 39.5	
	comp=Z,856nm,0.8s						
E27K	Coleen River	59.33	25	P	P	04 48 36.9	+1.6
	baz=272,SNR=552						
E27K				S	S	04 56 12.0	+3.1
	baz=272						
K27K	Chicken	59.35	30	P	P	04 48 36.6	+1.2
	baz=274						
K27K				S	S	04 56 10.9	+1.9
	baz=274						
G27K	Doyon Strip	59.36	27	P	P	04 48 36.9	+1.3
	baz=273,SNR=402						
G27K				S	S	04 56 12.7	+3.4
	baz=273						
POHA	Pohakuloa	59.44	83	P	P	04 48 38.4	+1.3
POHA	Pohakuloa	59.44	83	P	P	04 48 38.3	+1.3
I27K	Kandik River	59.44	28	P	P	04 48 36.9	+0.8
	baz=273,SNR=1000						
I27K				S	S	04 56 12.4	+2.0
	baz=273						
H27K	Steamboat Moun	59.44	28	P	P	04 48 37.7	+1.6
	baz=273,SNR=1000						
H27K				S	S	04 56 14.6	+4.3
	baz=273						
MWH	Mokuaweoweo	59.49	83	IAmb	IAmb	04 48 40.7	
	comp=Z,2µm,0.9s						
L27K	Beaver Creek,	59.53	31	IAmb	IAmb	04 48 40.3	
	comp=Z,776nm,0.9s						
L27K	Beaver Creek,	59.53	31	P	P	04 48 37.8	+1.0
	baz=275,SNR=1000						
L27K				S	S	04 56 14.1	+2.6
	baz=275						
D27M	Malcolm River	59.53	24	IAmb	IAmb	04 48 40.7	
	comp=Z,1µm,0.8s						
D27M	Malcolm River	59.53	24	P	P	04 48 38.2	+1.5
	baz=272,SNR=234						
D27M				S	S	04 56 13.6	+2.2
	baz=272						
BCAR	Beaver Creek A	59.55	31	P	P	04 48 38.1	+1.2
BCAR				PcP	PcP	04 49 19.6	+0.7
M27K	Edge Creek, AK	59.57	32	IAmb	IAmb	04 48 41.1	
	comp=Z,1µm,0.9s						
M27K	Edge Creek, AK	59.57	32	P	P	04 48 38.2	+1.1
	baz=275						
M27K				S	S	04 56 14.3	+2.1
	baz=275						
FUTU	Fugatoga	59.60	130	IAmb	IAmb	04 48 41.0	
	comp=Z,842nm,0.9s						
FUTU	Fugatoga	59.60	130	P	P	04 48 39.4	+1.5
FUTU	Fugatoga	59.60	130	P	P	04 48 39.3	+1.5
FUTU				PcP	PcP	04 49 16.3	-3.5
JASL	Jaisalmer	59.62	286	IAmb	IAmb	04 48 39.8	
	comp=Z,2µm,0.6s						
JASL				eP	P	04 48 41.4	+3.5
DGTI	Dogotuki	59.68	134	P	P	04 48 40.1	+1.8
MSVF	Nonsavu	59.72	136	P	P	04 48 40.8	+2.1
MSVF	Nonsavu	59.72	136	P	P	04 48 40.4	+1.7
MSVF	Nonsavu	59.72	136	P	P	04 48 40.8	+2.1
MSVF				pmax	pmax		
	comp=Z,267nm,0.9s						
MSVF	Nonsavu	59.72	136	P	P	04 48 40.9	+2.1
MESA	MESA	59.74	35	IAmb	IAmb	04 48 41.9	
	comp=Z,997nm,0.9s						
MESA	MESA	59.74	35	P	P	04 48 39.3	+0.9
	baz=276,SNR=162						
MESA				S	S	04 56 15.8	+1.2
	baz=276						
UWE	Uwekahuna	59.78	83	IAmb	IAmb	04 48 56.4	
	comp=Z,1µm,0.9s						
GRNC	Granite Creek	59.78	34	IAmb	IAmb	04 48 41.9	
	comp=Z,2µm,1.0s						
HATHI	Halema‘uma‘u T	59.81	83	IAmb	IAmb	04 48 52.3	
	comp=Z,874nm,0.8s						
BYL	Byron's Ledge	59.81	83	IAmb	IAmb	04 48 49.7	
	comp=Z,834nm,0.8s						
CTG	Chitna Glacier	59.96	34	P	P	04 48 40.6	+0.8
	baz=276,SNR=422						
CTG				S	S	04 56 17.8	+0.6
	baz=276						
CTGM	Chitina Glacie	59.96	34	IAmb	IAmb	04 48 43.2	
	comp=Z,942nm,1.0s						
F28M	Old Crow	60.01	26	IAmb	IAmb	04 48 44.0	
	comp=Z,935nm,0.9s						
F28M	Old Crow	60.01	26	P	P	04 48 41.5	+1.6
	baz=274,SNR=1000						
F28M				S	S	04 56 20.9	+3.5
	baz=274						
BVCY	Beaver Creek	60.03	32	P	P	04 48 41.1	+1.0
	baz=276,SNR=693						
BVCY				S	S	04 56 19.4	+1.5
	baz=276						
E28M	Babbage River	60.08	25	IAmb	IAmb	04 48 44.5	
	comp=Z,2µm,0.9s						
E28M	Babbage River	60.08	25	P	P	04 48 42.0	+1.7
	baz=274,SNR=784						
E28M				S	S	04 56 20.8	+2.6
	baz=274						
SVE	Sverdlovsk	60.10	322	c iP	P	04 48 41.0	+0.4
SVE				e		04 50 53.4	
SVE				i S	S	04 56 18.3	-0.4
SVE				e		04 57 41.9	
SVE				eSS	SS	05 00 19.5	-4.7
SVE				pmax	pmax		
	comp=Z,1µm,0.9s						
POO	Poona	60.13	276	IAmb	IAmb	04 48 43.5	
	comp=Z,1µm,0.9s						
POO				eP	P	04 48 44.8	+3.4
I28M	Miner Creek	60.15	28	IAmb	IAmb	04 48 44.1	
	comp=Z,853nm,0.8s						
I28M	Miner Creek	60.15	28	P	P	04 48 42.0	+1.1
	baz=275,SNR=1000						
I28M				S	S	04 56 21.8	+2.4
	baz=275						
TAVE	Taveuni	60.21	134	P	P	04 48 43.7	+1.8
YUK3	Moose Creek	60.29	33	P	P	04 48 42.9	+0.8
	baz=277,SNR=1000						
YUK3				S	S	04 56 23.0	+1.5
	baz=277						
ARMA	Armidale	60.31	168	P	P	04 48 43.1	+0.6
	comp=Z,165nm,0.9s						
ARMA	Armidale	60.31	168	P	P	04 48 42.9	+0.4
D28M	Stokes Point	60.32	24	P	P	04 48 43.2	+1.4
	baz=274,SNR=83						
D28M				S	S	04 56 24.0	+3.0
	baz=274						
KAD	Karad	60.33	274	eP	P	04 48 46.0	+3.2
FORT	Forrest	60.47	191	IAmb	IAmb	04 48 45.3	
	comp=Z,1µm,0.8s						
FORT	Forrest	60.47	191	P	P	04 48 43.7	+0.4
	comp=Z,0.0nmcomp=Z,2µm,0.7s						
FORT	Forrest	60.47	191	P	P	04 48 43.5	+0.2
KOD	Kodaikanal	60.51	265	eP	P	04 48 47.5	+3.2
KOD				IAmb	IAmb	04 48 47.9	
	comp=Z,513nm,0.6s						
DAWY	Dawson	60.52	30	P	P	04 48 44.3	+0.9
	baz=276,SNR=707						
DAWY				S	S	04 56 26.5	+2.5
	baz=276						
O28M	Mount Upton	60.54	34	IAmb	IAmb	04 48 47.4	
	comp=Z,1µm,1.1s						
O28M	Mount Upton	60.54	34	P	P	04 48 44.8	+1.0
	baz=277,SNR=856						
O28M				S	S	04 56 26.6	+1.8
	baz=277						
CMSA	Cobar Meteorol	60.58	174	P	P	04 48 44.8	+0.8
	comp=Z,248nm,1.2s						
CMSA	Cobar Meteorol	60.58	174	P	P	04 48 44.7	+0.7
PINM	Pinnacle	60.60	35	P	P	04 48 44.9	+1.0
	baz=278,SNR=403						
PINM				S	S	04 56 27.0	+1.9
	baz=278						
STKA	Stephens Creek	60.65	178	IAmb	IAmb	04 48 46.3	
	comp=Z,753nm,0.8s						
STKA	Stephens Creek	60.65	178	P	P	04 48 45.0	+0.5
	comp=Z,1µm,0.8s						
STKA	Stephens Creek	60.65	178	P	P	04 48 45.2	+0.7
	comp=Z,159nm,0.7s,baz=346,slow=7.3,SNR=242						
STKA				ScP	ScP	04 52 42.0	-0.1
	comp=Z,50nm,0.8s,baz=359,slow=7.0,SNR=3.1						
STKA				S	S	04 56 23.8	-2.3
	comp=Z,60nm,1.1s,baz=129,slow=18,SNR=11						
	comp=Z,159nm,0.7s						
STKA	Stephens Creek	60.65	178	P	P	04 48 44.7	+0.2
YUK8	Steele Glacier	60.68	33	P	P	04 48 45.7	+1.0
	baz=277,SNR=1000						
YUK8				S	S	04 56 28.6	+2.1
	baz=277						
E29M	Blow River	60.70	25	IAmb	IAmb	04 48 48.2	
	comp=Z,620nm,0.7s						
E29M	Blow River	60.70	25	P	P	04 48 45.6	+1.2
	baz=275,SNR=606						
E29M				S	S	04 56 29.0	+3.1
	baz=275						
H29M	Whitestone	60.72	27	IAmb	IAmb	04 48 48.6	
	comp=Z,1µm,1.1s						
H29M	Whitestone	60.72	27	P	P	04 48 45.9	+1.3
	baz=276,SNR=614						
H29M				S	S	04 56 30.0	+3.7
	baz=276						
G29M	Pine Creek	60.79	27	P	P	04 48 46.8	+1.8
	baz=276,SNR=1000						
G29M				S	S	04 56 30.4	+3.3
	baz=276						
I29M	Ogilvie Camp,	60.84	28	IAmb	IAmb	04 48 49.0	
	comp=Z,1µm,1.1s						
I29M	Ogilvie Camp,	60.84	28	P	P	04 48 46.4	+1.0
	baz=276,SNR=1000						
I29M				S	S	04 56 29.4	+1.6
	baz=276						
YKU2	Yakutat	60.97	35	P	P	04 48 48.3	+2.0
J29N	Klondike Camp	60.98	29	IAmb	IAmb	04 48 50.2	
	comp=Z,1µm,0.8s						
J29N	Klondike Camp	60.98	29	P	P	04 48 47.8	+1.3
	baz=277,SNR=115						
J29N				S	S	04 56 32.3	+2.5
	baz=277						
PNL	Peninsula	61.09	35	P	P	04 48 47.4	+0.2
PNL	Peninsula	61.09	35	P	P	04 48 48.2	+1.0
	baz=279,SNR=291						
PNL				S	S	04 56 32.7	+1.6
	baz=279						
M29M	Somme Creek	61.14	32	IAmb	IAmb	04 48 51.6	
	comp=Z,1µm,1.0s						
M29M	Somme Creek	61.14	32	P	P	04 48 49.2	+1.6
	baz=278,SNR=1000						
M29M				S	S	04 56 33.8	+2.0
	baz=278						
L29M	L29M	61.20	31	P	P	04 48 49.7	+1.8
	baz=278,SNR=1000						
L29M				S	S	04 56 36.4	+4.0
	baz=278						
YUK4	Talbot Arm	61.21	33	P	P	04 48 49.7	+1.6
	baz=278,SNR=1000						
K29M	Barlow Dome	61.37	30	IAmb	IAmb	04 48 52.9	
	comp=Z,1µm,0.9s						
K29M	Barlow Dome	61.37	30	P	P	04 48 50.4	+1.4
	baz=278,SNR=1000						
K29M				S	S	04 56 37.3	+2.6
	baz=278						
EPYK	Eagle Plains	61.37	27	P	P	04 48 50.1	+1.2
	baz=277,SNR=1000						
EPYK				S	S	04 56 35.9	+1.5
	baz=277						
ARTI	Arti	61.40	321	P	P	04 48 49.3	+0.1
ARTI	Arti	61.40	321	S	S	04 56 32.3	-2.7
	comp=Z,36nm,1.2s,baz=315,slow=20,SNR=6.1						
ARTI	Arti	61.40	321	d iP	P	04 48 49.0	-0.2
ARTI						04 49 26.6	
ARTI				*PP	pP	04 50 18.6	-0.2
ARTI						04 51 05.5	
ARTI				S	S	04 56 34.4	-0.6
ARTI						04 57 52.6	
ARTI				SSS	SSS	05 03 45.3	
ARTI				pmax	pmax		
	comp=Z,1µm,0.6s						
ARTI	Arti	61.40	321	⇓P	P	04 48 49.1	-0.1
ARTI				ScP	ScP	04 52 43.1	-2.2
O29M	Mount Kennedy	61.40	34	P	P	04 48 51.0	+1.6
	baz=279,SNR=1000						
O29M				S	S	04 56 38.6	+3.4
	baz=279						
YUK6	Outpost Mounta	61.40	33	P	P	04 48 51.0	+1.5
	baz=279,SNR=592						
YUK6				S	S	04 56 38.9	+3.5
	baz=279						
G30M	tAoh Zraii Nji	61.48	26	P	P	04 48 50.5	+0.8
	baz=277,SNR=1000						
G30M				S	S	04 56 37.0	+1.1
	baz=277						
F30M	Barrier River	61.57	26	P	P	04 48 51.4	+1.2
	baz=277,SNR=1000						
F30M				S	S	04 56 38.6	+1.8
	baz=277						
BBOO	Buckleboo	61.62	183	P	P	04 48 51.2	+0.3
	comp=Z,0.0nmcomp=Z,279nm,1.6s						
BBOO	Buckleboo	61.62	183	P	P	04 48 51.2	+0.3
I30M	Mount Dempster	61.66	28	IAmb	IAmb	04 48 54.0	
	comp=Z,1µm,1.0s						
I30M	Mount Dempster	61.66	28	P	P	04 48 51.9	+1.0
	baz=278,SNR=1000						
I30M				S	S	04 56 40.3	+2.0
	baz=278						
TRD	Trivandrum	61.75	264	IAmb	IAmb	04 48 54.1	
	comp=Z,596nm,1.1s						
TRD				eP	P	04 48 55.7	+3.4
OMEGA	Omega	61.76	349	eP	P	04 48 51.3	+0.1
ZFI2	Zemlya Franca-	61.77	349	eP	P	04 48 51.3	0.0
J30M	Hart River	61.78	29	P	P	04 48 52.8	+1.1
	baz=279,SNR=691						
J30M				S	S	04 56 41.6	+1.9
	baz=279						
WHYH	Whyalla	61.78	182	P	P	04 48 52.5	+0.6
HYT	Haines Junctio	61.84	33	IAmb	IAmb	04 48 56.8	
	comp=Z,1µm,1.0s						
HYT	Haines Junctio	61.84	33	P	P	04 48 53.7	+1.5
	baz=280,SNR=1000						
HYT				S	S	04 56 41.7	+1.1
	baz=280						
AB31	Akbulak array	61.88	313	IAmb	IAmb	04 48 54.9	
	comp=Z,924nm,0.7s						
AB31	Akbulak array	61.88	313	i P	P	04 48 52.4	-0.1
ABKAR	Akbulak array	61.88	313	P	P	04 48 53.1	+0.5
ABKAR	Akbulak array	61.88	313	IAmb	IAmb	04 48 54.9	
	comp=Z,929nm,0.7s						
PTPS	Port Pirie	61.91	181	P	P	04 48 54.1	+1.3
P29M	Windy Craggy	61.92	35	IAmb	IAmb	04 48 56.9	
	comp=Z,2µm,1.0s						
P29M	Windy Craggy	61.92	35	P	P	04 48 54.3	+1.6
	baz=280,SNR=775						
P29M				S	S	04 56 44.0	+2.4
	baz=280						
MORW	Morawa	61.93	203	P	P	04 48 53.0	-0.1
	comp=Z,0.0nmcomp=Z,387nm,1.7s						
MORW	Morawa	61.93	203	P	P	04 48 52.9	-0.1
N30M	Aishikik Lake	61.93	33	IAmb	IAmb	04 48 56.6	
	comp=Z,1µm,1.1s						
N30M	Aishikik Lake	61.93	33	P	P	04 48 54.0	+1.2
	baz=280,SNR=987						
N30M				S	S	04 56 44.5	+2.9
	baz=280						
BHUJ	Bhuj	61.96	282	IAmb	IAmb	04 48 56.4	
	comp=Z,1µm,0.8s						
BHUJ				eP	P	04 48 57.0	+3.6
LKBA	Tubou, Lakemba	62.04	134	P	P	04 48 55.4	+1.5
HTT	Hallett	62.16	180	P	P	04 48 55.5	+1.0
	comp=Z,68nm,1.2s						
HTT	Hallett	62.16	180	P	P	04 48 55.0	+0.5
HTT	Hallett	62.16	180	P	P	04 48 54.8	+0.3
P30M	Million Dollar	62.22	34	P	P	04 48 56.2	+1.6
	baz=280						
P30M				S	S	04 56 47.0	+1.8
	baz=280						
G31M	Satah River	62.25	26	IAmb	IAmb	04 48 57.6	
	comp=Z,962nm,0.9s						
G31M	Satah River	62.25	26	P	P	04 48 55.1	+0.5
	baz=279,SNR=738						
G31M				S	S	04 56 45.8	+0.6
	baz=279						
INK	Inuvik	62.31	25	IAmb	IAmb	04 48 57.8	
	comp=Z,539nm,0.8s						
INK	Inuvik	62.31	25	S	S	04 56 42.5	-3.5
	comp=Z,16nm,1.1s,baz=306,slow=11,SNR=3.6						
INK	Inuvik	62.31	25	P	P	04 48 55.2	+0.2
INK	Inuvik	62.31	25	P	P	04 48 55.5	+0.5
	baz=279,SNR=514						
INK				S	S	04 56 46.2	+0.3
	baz=279						
KMBL	Kambalda	62.34	197	P	P	04 48 55.3	-0.3
	comp=Z,0.0nmcomp=Z,295nm,1.9s						
KMBL	Kambalda	62.34	197	P	P	04 48 55.4	-0.3
F31M	Tsiigehtchic	62.37	26	IAmb	IAmb	04 48 57.7	
	comp=Z,538nm,0.8s						
F31M	Tsiigehtchic	62.37	26	P	P	04 48 55.6	+0.2
	baz=279,SNR=178						
F31M				S	S	04 56 46.3	-0.3
	baz=279						
H31M	Peel River	62.41	28	P	P	04 48 56.6	+0.9
	baz=280,SNR=1000						
H31M				S	S	04 56 48.7	+1.5
	baz=280						
O30N	Mendenhall	62.53	33	IAmb	IAmb	04 49 00.3	
	comp=Z,928nm,1.1s						
O30N	Mendenhall	62.53	33	P	P	04 48 57.8	+1.1
	baz=281,SNR=624						
O30N				S	S	04 56 50.6	+1.7
	baz=281						
N31M	Braeburn, Yuko	62.54	33	P	P	04 48 58.2	+1.5
	baz=281,SNR=1000						
N31M				S	S	04 56 51.5	+2.5
	baz=281						
PLBC	Pleasant Camp	62.64	35	P	P	04 48 58.7	+1.4
	baz=281,SNR=1000						
PLBC				S	S	04 56 53.6	+3.3
	baz=281						
AKTO	Aktyubinsk	62.83	315	S	S	04 56 50.4	-2.5
	comp=Z,64nm,1.1s,baz=205,slow=19,SNR=8.1						
AKTO	Aktyubinsk	62.83	315	P	P	04 48 57.8	-0.9
MGCD	Mangrove Creek	62.95	169	P	P	04 49 00.6	+1.0
	comp=Z,197nm,1.0s						
MGCD	Mangrove Creek	62.95	169	P	P	04 49 01.0	+1.5
S31K	Pelican	63.02	37	IAmb	IAmb	04 49 03.5	
	comp=Z,879nm,1.1s						
S31K	Pelican	63.02	37	P	P	04 49 00.9	+1.2
	baz=282,SNR=140						
S31K				S	S	04 56 56.8	+2.0
	baz=282						
M31M	Drury Creek, Y	63.05	32	IAmb	IAmb	04 49 03.5	
	comp=Z,1µm,0.8s						
M31M	Drury Creek, Y	63.05	32	P	P	04 49 01.1	+1.1
	baz=282,SNR=1000						
M31M				S	S	04 56 57.3	+2.0
	baz=282						
LHI	Lord Howe Isla	63.12	161	P	P	04 49 01.8	+1.0
	comp=Z,450nm,1.5s						
BLDU	Ballidu	63.13	202	P	P	04 49 00.8	-0.1
	comp=Z,493nm,1.8s						
BLDU	Ballidu	63.13	202	P	P	04 49 00.6	-0.2
WHY	Whitehorse	63.13	33	P	P	04 49 01.9	+1.3
	baz=282,SNR=1000						
WHY				S	S	04 56 59.2	+2.7
	baz=282						
SKAG	Skagway	63.16	35	IAmb	IAmb	04 49 04.6	
	comp=Z,1µm,1.1s						

SKAG	Skagway	63.16	35	P	P	04 49 01.6	+0.9
SKAG	Skagway	63.16	35	P	P	04 49 02.1	+1.4
	baz=282,SNR=192						
SKAG				S	S	04 56 58.9	+2.3
	baz=282						
R31K	City Hall, Gus	63.17	36	P	P	04 49 01.8	+1.1
	baz=282,SNR=9.2						
R31K				S	S	04 56 59.2	+2.5
	baz=282						
SYDH	Sydney Hard Ro	63.42	169	P	P	04 49 04.1	+1.5
FARO	Faro, Yukon	63.52	32	IAmb	IAmb	04 49 06.6	
	comp=Z,759nm,0.9s						
FARO	Faro, Yukon	63.52	32	P	P	04 49 04.0	+0.9
	baz=282,SNR=1000						
FARO				S	S	04 57 02.8	+1.7
	baz=282						
RIV	Riverview	63.56	169	P	P	04 49 04.3	+0.8
	comp=Z,296nm,1.0s						
BESE	Bessie Mountai	63.59	36	IAmb	IAmb	04 49 07.3	
	comp=Z,1µm,1.0s						
GHSS	Government Hou	63.65	181	P	P	04 49 05.4	+1.4
SIT	Sitka	63.69	37	IAmb	IAmb	04 49 07.4	
	comp=Z,483nm,1.0s						
SIT	Sitka	63.69	37	P	P	04 49 04.9	+0.8
SIT	Sitka	63.69	37	P	P	04 49 05.5	+1.4
SIT	Sitka	63.69	37	P	P	04 49 05.3	+1.2
	baz=283,SNR=72						
SIT				S	S	04 57 06.1	+3.0
	baz=283						
KLBR	Kellerberrin	63.70	200	P	P	04 49 04.6	+0.1
	comp=Z,256nm,0.9s						
KLBR	Kellerberrin	63.70	200	P	P	04 49 04.1	-0.4
AFI	Afiamalu	63.71	125	P	P	04 49 05.2	+0.2
AFI				IAmb	IAmb	04 49 06.9	
	comp=Z,739nm,1.0s						
AFI	Afiamalu	63.71	125	P	P	04 49 05.6	+0.6
AFI	Afiamalu	63.71	125	P	P	04 49 05.2	+0.2
AFI				pmax	pmax		
	comp=Z,739nm,1.0s						
AFI	Afiamalu	63.71	125	P	P	04 49 05.8	+0.8
R32K	Eaglecrest	63.83	36	IAmb	IAmb	04 49 09.0	
	comp=Z,664nm,0.9s						
R32K	Eaglecrest	63.83	36	P	P	04 49 06.4	+1.4
	baz=283,SNR=364						
R32K				S	S	04 57 07.8	+3.0
	baz=283						
N32M	Quiet Lake	63.88	33	IAmb	IAmb	04 49 08.8	
	comp=Z,686nm,0.8s						
N32M	Quiet Lake	63.88	33	P	P	04 49 06.4	+1.0
	baz=283						
N32M				S	S	04 57 06.5	+1.0
	baz=283						
JIS	Juneau Island	63.90	36	P	P	04 49 06.1	+0.7
P32M	Atlin	63.94	34	IAmb	IAmb	04 49 09.4	
	comp=Z,825nm,1.1s						
P32M	Atlin	63.94	34	P	P	04 49 06.8	+1.0
	baz=283,SNR=570						
P32M				S	S	04 57 08.8	+2.6
	baz=283						
NFK	Norfolk Island	63.95	152	P	P	04 49 07.0	+0.9
	comp=Z,249nm,0.9s						
S32K	Killisnoo	63.99	37	IAmb	IAmb	04 49 09.7	
	comp=Z,689nm,1.0s						
S32K	Killisnoo	63.99	37	P	P	04 49 07.2	+1.2
	baz=284,SNR=172						
S32K				S	S	04 57 09.4	+2.7
	baz=284						
P33M	Teslin, Yukon	64.23	34	IAmb	IAmb	04 49 10.7	
	comp=Z,777nm,1.1s						
P33M	Teslin, Yukon	64.23	34	P	P	04 49 08.7	+1.0
	baz=284,SNR=628						
P33M				S	S	04 57 12.3	+2.5
	baz=284						
HRA	Herat	64.27	297	IAmb	IAmb	04 49 11.6	
	comp=Z,1µm,0.9s						
A36M	Sachs Harbour	64.32	20	IAmb	IAmb	04 49 10.0	
	comp=Z,967nm,0.9s						
A36M	Sachs Harbour	64.32	20	P	P	04 49 08.9	+1.0
	baz=285,SNR=304						
A36M				S	S	04 57 12.3	+2.0
	baz=285						
MMPY	Sheldon Lake,	64.38	31	IAmb	IAmb	04 49 11.9	
	comp=Z,525nm,1.1s						
MMPY	Sheldon Lake,	64.38	31	P	P	04 49 09.7	+1.2
	baz=284,SNR=514						
MMPY				S	S	04 57 15.2	+3.7
	baz=284						
MUN	Mundaring	64.55	202	P	P	04 49 09.9	0.0
	comp=Z,0.0nmcomp=Z,235nm,1.9s						
MUN	Mundaring	64.55	202	P	P	04 49 10.1	+0.2
MTKN	Mount Kenneth	64.65	202	P	P	04 49 12.1	+1.6
	comp=Z,333nm,0.8s						
MTKN	Mount Kenneth	64.65	202	P	P	04 49 12.4	+1.9
CAN	Canberra	64.70	171	P	P	04 49 11.9	+1.1
	comp=Z,258nm,1.0s						
CAN	Canberra	64.70	171	P	P	04 49 11.9	+1.1
CAN	Canberra	64.70	171	P	P	04 49 12.2	+1.4
CAN	Canberra	64.70	171	P	P	04 49 11.9	+1.1
CNB	Canberra Magne	64.74	171	P	P	04 49 12.0	+0.9
	comp=Z,116nm,0.9s						
CNB	Canberra Magne	64.74	171	P	P	04 49 12.0	+0.9
Q32M	Nakina River	64.81	35	IAmb	IAmb	04 49 15.0	
	comp=Z,1µm,1.6s						
Q32M	Nakina River	64.81	35	P	P	04 49 12.8	+1.3
	baz=285,SNR=225						
Q32M				S	S	04 57 19.0	+1.9
	baz=285						
T33K	Petersburg	65.01	37	P	P	04 49 13.8	+1.3
	baz=285,SNR=21						
T33K				S	S	04 57 21.4	+2.3
	baz=285						
NWAO	Narrogin (SRO)	65.11	200	P	P	04 49 13.4	0.0
NWAO	Narrogin (SRO)	65.11	200	P	P	04 49 13.7	+0.3
	comp=Z,820nm,1.6s						
NWAO	Narrogin (SRO)	65.11	200	S	S	04 57 19.6	-1.2
	comp=Z,15nm,0.9s,baz=129,slow=21,SNR=9.7						
NWAO	Narrogin (SRO)	65.11	200	P	P	04 49 13.7	+0.3
NWAO	Narrogin (SRO)	65.11	200	P	P	04 49 13.4	0.0
NWAO	Narrogin (SRO)	65.11	200	P	P	04 49 13.4	0.0
U33K	Whale Pass	65.11	38	IAmb	IAmb	04 49 17.0	
	comp=Z,911nm,1.0s						
U33K	Whale Pass	65.11	38	P	P	04 49 14.5	+1.4
	baz=285,SNR=273						
U33K				S	S	04 57 23.1	+2.8
	baz=285						
CRAG	Craig	65.28	39	IAmb	IAmb	04 49 18.1	
	comp=Z,1µm,1.2s						
CRAG	Craig	65.28	39	P	P	04 49 14.8	+0.5
CRAG	Craig	65.28	39	P	P	04 49 15.5	+1.3
	baz=286,SNR=145						
CRAG				S	S	04 57 26.1	+3.8
	baz=286						
MNCY	Minicoy	65.29	266	*e*P	P	04 49 17.3	+2.3
MNCY				IAmb	IAmb	04 51 29.3	
	comp=Z,1µm,0.8s						
R33M	Jennings River	65.34	34	P	P	04 49 15.5	+0.7
R33M				IAmb	IAmb	04 49 18.9	
	comp=Z,493nm,1.1s						
R33M	Jennings River	65.34	34	P	P	04 49 16.1	+1.3
	baz=286,SNR=518						
R33M				S	S	04 57 25.7	+2.3
	baz=286						
WRAK	Wrangell Islan	65.44	38	IAmb	IAmb	04 49 19.1	
	comp=Z,773nm,1.1s						
WRAK	Wrangell Islan	65.44	38	P	P	04 49 16.4	+1.2
	baz=286,SNR=271						
WRAK				S	S	04 57 27.4	+3.1
	baz=286						
ARPS	Mount Arapiles	65.53	178	P	P	04 49 16.7	+0.7
	comp=Z,666nm,0.8s						
ARPS	Mount Arapiles	65.53	178	P	P	04 49 16.5	+0.5
KIRV	Kirov	65.62	325	S	S	04 57 24.1	-2.2
	comp=Z,36nm,0.8s,baz=92,slow=23,SNR=10.0						
KIRV	Kirov	65.62	325*d*	*i*P	P	04 49 16.5	+0.2
S34M	Telegraph Cree	65.67	36	IAmb	IAmb	04 49 20.8	
	comp=Z,642nm,0.9s						
S34M	Telegraph Cree	65.67	36	P	P	04 49 18.1	+1.4
	baz=286,SNR=462						
S34M				S	S	04 57 29.9	+2.9
	baz=286						
XMAS	Kiritimati	65.76	102	P	P	04 49 18.1	+0.1
XMAS	Kiritimati	65.76	102	P	P	04 49 18.7	+0.7
XMAS	Kiritimati	65.76	102	P	P	04 49 19.1	+1.1
HMDM	Hanimaadhoo	65.86	264	P	P	04 49 20.1	+1.4
	SNR=18						
TGTN	Hyland Airport	66.03	32	P	P	04 49 20.3	+1.3
	baz=287,SNR=381						
TGTN				S	S	04 57 32.7	+1.4
	baz=287						
DLBC	Dease Lake	66.08	35	IAmb	IAmb	04 49 23.5	
	comp=Z,1µm,1.2s						
DLBC	Dease Lake	66.08	35	P	P	04 49 20.8	+1.4
	comp=Z,872nm,1.2s,baz=293,slow=6.0,SNR=438						
DLBC				S	S	04 57 31.7	-0.3
	comp=Z,5.2nm,1.0s,baz=296,slow=8.0,SNR=1.7						
	comp=Z,872nm,1.2s						
DLBC	Dease Lake	66.08	35	P	P	04 49 20.8	+1.4
	baz=287,SNR=433						
DLBC				S	S	04 57 34.7	+2.6
	baz=287						
V35K	Ketchikan	66.14	39	P	P	04 49 20.4	+0.7
	baz=287,SNR=97						
V35K				S	S	04 57 34.8	+2.1
	baz=287						
WTLY	Watson Lake, Y	66.19	33	P	P	04 49 20.7	+0.7
WTLY				IAmb	IAmb	04 49 23.8	
	comp=Z,993nm,1.0s						
WTLY	Watson Lake, Y	66.19	33	P	P	04 49 21.3	+1.3
	baz=287,SNR=7.2						
WTLY				S	S	04 57 34.8	+1.6
	baz=287						
H02S1	DAWSON INLET T	66.28	41	P	P	04 49 21.1	+0.4
	SNR=4640						
T35M	Bob Quinn	66.39	37	IAmb	IAmb	04 49 25.4	
	comp=Z,822nm,1.0s						
T35M	Bob Quinn	66.39	37	P	P	04 49 22.8	+1.5
	baz=287						
T35M				S	S	04 57 38.8	+3.1
	baz=287						
MILA	Mila	66.42	171	P	P	04 49 22.6	+0.9
	comp=Z,91nm,1.0s						
TOO	Toolangi	66.55	175	P	P	04 49 23.5	+1.1
	comp=Z,119nm,1.0s						
MOBC	Moresby Island	66.59	41	IAmb	IAmb	04 49 25.1	
	comp=Z,666nm,1.0s						
RKGY	Rocky Gully	66.75	200	P	P	04 49 24.5	+0.8
	comp=Z,229nm,1.4s						
U35K	Hyder	66.83	38	P	P	04 49 24.6	+0.6
U35K				IAmb	IAmb	04 49 36.0	
	comp=Z,722nm,0.8s						
U35K	Hyder	66.83	38	P	P	04 49 25.0	+1.1
	baz=288,SNR=15						
U35K				S	S	04 57 42.4	+1.6
	baz=288						
GEXS	Deakin Univers	67.08	176	P	P	04 49 27.7	+2.1
HG4B	Hotspring	67.30	42	IAmb	IAmb	04 49 29.8	
	comp=Z,715nm,0.9s						
HOPEN	Hopen	67.33	347	*e*P	P	04 49 27.9	+1.1
HOPEN				IVmB_BB		04 49 29.1	
	comp=Z,3µm,1.4s						
HOPEN				*e*		04 51 45.5	
HOPEN				*e*S	S	04 57 48.9	+2.7
WRGLY	Wrigley	67.62	29	P	P	04 49 29.7	+1.0
WRGLY				IAmb	IAmb	04 49 32.2	
	comp=Z,669nm,0.9s						
WRGLY	Wrigley	67.62	29	P	P	04 49 29.7	+1.0
	baz=290,SNR=24						
WRGLY				S	S	04 57 49.9	+0.1
	baz=290						
LIRD	Liard River Hi	67.71	33	P	P	04 49 30.8	+1.4
	baz=289,SNR=355						
LIRD				S	S	04 57 52.2	+1.0
	baz=289						
BEAVL	Fort Liard	67.94	32	P	P	04 49 31.9	+1.1
	baz=290,SNR=169						
BEAVL				S	S	04 57 54.1	+0.3
	baz=290						
SPA0	Spitsbergen Ar	67.98	349	*e*P	P	04 49 31.7	+1.0
SPA0				IVmB_BB		04 49 32.7	
	comp=Z,1µm,2.5s						
SPA0				*e*pP	pwP	04 51 05.0	-0.9
SPA0				*e*S	S	04 57 55.4	+1.5
SPITS	Spitsbergen Ar	67.98	349	P	P	04 49 31.8	+1.0
	comp=Z,63nm,0.6s,baz=93,slow=8.8,SNR=86						
	comp=Z,63nm,0.6s						
SPITS	Spitsbergen Ar	67.98	349	P	P	04 49 31.9	+1.1
SPITS				pmax	pmax		
	comp=Z,186nm,1.1s						
ALE	Alert	68.14	3	P	P	04 49 33.1	+1.4
KBS	Kingsbay	68.19	350	P	P	04 49 32.6	+0.6
KBS	Kingsbay	68.19	350	*i* P	P	04 49 32.7	+0.7
KBS				pmax	pmax		
	comp=Z,347nm,1.6s						
KBS	Kingsbay	68.19	350	*e*P	P	04 49 34.3	+2.3
KBS				IVmB_BB		04 49 36.8	
	comp=Z,1µm,0.7s						
KBS				*e*pP	pP	04 51 05.3	+0.6
KBS				*e*S	S	04 57 58.6	+2.4
EUNU	Eureka	68.31	8	IAmb	IAmb	04 49 35.9	
	comp=Z,333nm,0.7s						
TOAD	Toad River Com	68.32	34	P	P	04 49 34.0	+0.8
	baz=290,SNR=564						
TOAD				S	S	04 57 58.1	-0.3
	baz=290						
NGCH	Negor - Chabah	68.37	288	P	P	04 49 36.0	+2.0
	SNR=17						
KOTAN	Kotaneelee Air	68.44	32	P	P	04 49 34.7	+0.8
	baz=291,SNR=30						
KOTAN				S	S	04 58 01.3	+1.7
	baz=291						
BELG	Belogornoye	68.50	319	S	S	04 57 58.5	-2.0
	comp=Z,116nm,1.1s,baz=129,slow=22,SNR=11						
BELG	Belogornoye	68.50	319*d*	*i*P	P	04 49 34.2	-0.1
BELG				pmax	pmax		
	comp=Z,546nm,0.9s						
NIUE	Niue	68.51	128	P	P	04 49 35.3	+0.4
NIUE	Niue	68.51	128	P	P	04 49 36.4	+1.5
	comp=Z,2µm,1.0s						
NIUE	Niue	68.51	128	P	P	04 49 36.5	+1.6
LVZ	Lovozero	68.67	337	P	P	04 49 35.7	+0.5
LVZ	Lovozero	68.67	337*d*	*i*P	P	04 49 35.0	-0.2
LVZ				pmax	pmax		
	comp=Z,348nm,1.2s						
LVZ	Lovozero	68.67	337	P	P	04 49 35.2	0.0
	comp=Z,330nm,1.2s						
LVZ	Lovozero	68.67	337	P	P	04 49 35.5	+0.3
HSPB	Hornsund (broa	68.86	348	*e*P	P	04 49 36.9	+0.9
HSPB				*e*S	S	04 58 04.5	+0.6
NOR	Nord	68.87	356	*i* P	P	04 49 37.4	+1.2
NOR				IAmb	IAmb	04 49 38.7	
	comp=Z,344nm,1.7s						
BBB	Bella Bella	69.12	41	P	P	04 49 38.2	+0.1
BBB				IAmb	IAmb	04 49 41.2	
	comp=Z,835nm,1.1s						
BBB	Bella Bella	69.12	41	P	P	04 49 38.6	+0.5
	comp=Z,484nm,1.0s,baz=304,slow=7.1,SNR=44						
	comp=Z,484nm,1.0s						
KAAM	Kaadhehdhoo	69.13	258	P	P	04 49 39.5	+0.7
KAAM	Kaadhehdhoo	69.13	258	P	P	04 49 40.4	+1.5
APA	Apatity	69.24	337⇑	*i*P	P	04 49 37.4	-1.2
APA				*i*		04 50 05.7	
APA				*i* *PP	pP	04 51 09.0	-2.1
APA				*i*		04 52 16.0	
APA				*i* PPP	PPP	04 54 00.0	
APA				*i* S	S	04 58 07.0	-1.6
APA				*i*		04 58 43.0	
APA				*i* SSS	SSS	05 05 57.0	
APA				pmax	pmax		
	comp=Z,424nm,1.0s						
APA				MLR	MLR		
	comp=Z,3µm,15.0s						
VADS	Vadso	69.38	340	*e*P	P	04 49 40.1	+0.8
VADS				IVmB_BB		04 49 41.4	
	comp=Z,5µm,1.5s						
VADS				*e*S	S	04 58 10.6	+0.4
VADS				*e*		05 00 49.3	
KLMR	Klimovskoe	69.58	329*c*	*i*P	P	04 49 38.1	-2.6
KLMR				PPP	PPP	04 54 04.8	
KLMR				S	S	04 58 10.4	-2.4
KLMR				*e*		04 58 50.2	
KLMR				pmax	pmax		
	comp=Z,1µm,1.4s						
BJO1	Bjornoya	69.70	346	*e*P	P	04 49 40.8	-0.4
BJO1				*e*		04 51 59.6	
BJO1				*e*S	S	04 58 12.8	-0.9
GLAD	Gladstone	70.17	173	P	P	04 49 45.3	+0.9
KEV	Kevo	70.27	340	P	P	04 49 45.3	+0.6
KEV				IAmb	IAmb	04 49 47.6	
	comp=Z,402nm,0.7s						
KEV	Kevo	70.27	340	P	P	04 49 45.3	+0.6
KEV				pmax	pmax		
	comp=Z,402nm,0.7s						
KEV	Kevo	70.27	340	P	P	04 49 45.0	+0.3
KEV				S	S	04 58 20.0	-0.3
KEV	Kevo	70.27	340	P	P	04 49 45.2	+0.5
CORO	Coronation Par	70.54	174	P	P	04 49 47.6	+1.0
RES	Resolute Bay	70.74	13	P	P	04 49 48.0	+0.6
RES				IAmb	IAmb	04 49 50.6	
	comp=Z,503nm,0.8s						
RES	Resolute Bay	70.74	13	P	P	04 49 48.0	+0.6
RES				pmax	pmax		
	comp=Z,503nm,0.9s						
HAMF	Hammerfest	70.76	341	*e*P	P	04 49 48.1	+0.5
HAMF				IVmB_BB		04 49 49.0	
	comp=Z,3µm,1.7s						
HAMF				*e*S	S	04 58 26.7	+0.8
ARA0	ARCESS Array S	70.83	340	*e*P	P	04 49 48.8	+0.7
ARA0				IVmB_BB		04 49 49.9	
	comp=Z,5µm,1.6s						
ARCES	ARCESS Array B	70.83	340	P	P	04 49 48.6	+0.5
ARCES				IAmb	IAmb	04 49 51.1	
	comp=Z,417nm,0.8s						
ARCES	ARCESS Array B	70.83	340	P	P	04 49 48.6	+0.5
	comp=Z,265nm,0.6s,baz=68,slow=8.1,SNR=985						
ARCES				S	S	04 58 25.7	-1.2
	comp=Z,41nm,1.2s,baz=51,slow=9.6,SNR=10						
	comp=Z,265nm,0.6s						
RAO	Raoul Island	70.95	141	P	P	04 49 49.0	-0.4
RAO				IAmb	IAmb	04 49 51.1	
	comp=Z,990nm,0.9s						
RAO	Raoul Island	70.95	141	P	P	04 49 49.9	+0.6
RAO	Raoul Island	70.95	141	P	P	04 49 49.0	-0.4
RAO				pmax	pmax		
	comp=Z,990nm,0.9s						
JLN	Jalan Bani Buh	71.10	285	P	P	04 49 51.2	+0.7
	SNR=52						
MOO	Moorlands	71.53	174	P	P	04 49 53.4	+0.9
	comp=Z,0.0nmcomp=Z,217nm,1.0s						
MOO	Moorlands	71.53	174	P	P	04 49 53.6	+1.2
CBB	Campbell River	71.54	43	P	P	04 49 53.0	+0.4
MSF	Maaselka	71.55	336	P	P	04 49 52.8	+0.4
YKAW3	Yellowknife Wh	71.59	28	IAmb	IAmb	04 49 55.4	
	comp=Z,505nm,0.9s						
BIDO	Bidbid	71.61	287	P	P	04 49 55.0	+1.4
	SNR=75						
BIDO				S	S	04 58 36.6	-0.6
SGF	Sodankyl	71.62	338	P	P	04 49 53.4	+0.7
YKA	Yellowknife Ar	71.62	28	P	P	04 49 53.1	+0.3
YKA	Yellowknife Ar	71.62	28	P	P	04 49 52.8	-0.1
	comp=Z,295nm,0.7s,baz=300,slow=6.4,SNR=2027						
YKA				PKPPKP	P'P'df	05 17 39.0	-3.7
	comp=Z,5.5nm,0.9s,baz=112,slow=1.8,SNR=9.2						
	comp=Z,295nm,0.7s						
YKA	Yellowknife Ar	71.62	28	*i* P	P	04 49 52.7	-0.1
YKA				pmax	pmax		
	comp=Z,288nm,0.7s						
YKAW1	Yellowknife Wh	71.68	28	IAmb	IAmb	04 49 55.9	
	comp=Z,718nm,0.8s						
KTK1	Kautokeino	71.80	340	*e*P	P	04 49 54.2	+0.5
KTK1				IVmB_BB		04 49 55.7	
	comp=Z,3µm,1.1s						
KTK1				*e*sP	sP	04 52 14.0	+0.9
KTK1				*e*S	S	04 58 37.7	-0.1
SMDO	Samad	71.87	287	P	P	04 49 56.0	+0.8
	SNR=7.5						
SMDO				S	S	04 58 38.9	-1.4
TAU	Tasmania Unive	72.00	174	P	P	04 49 55.8	+0.6
TAU	Tasmania Unive	72.00	174	P	P	04 49 56.1	+0.9
TAU	Tasmania Unive	72.00	174	P	P	04 49 55.8	+0.6
TAU				pmax	pmax		
	comp=Z,247nm,0.7s						
MAK	Makhachkala	72.04	310*c*	*i*P	P	04 49 55.0	-0.7
MAK				*e**PP	pP	04 51 26.7	-2.2
MAK				*e**SP	sP	04 52 11.2	-3.4
MAK				*e*		04 52 41.5	
MAK				*e*PPP	PPP	04 54 27.6	
MAK				*e*S	S	04 58 40.1	-1.3
MAK				*e*SS	SS	05 03 32.3	+3.7
MAK				*e*SSS	SSS	05 06 48.4	
MAK				pmax	pmax		
	comp=Z,1µm,1.0s						
MAK				MLR	MLR		
	comp=Z,7µm,13.0s						
JMDO	Jabal Madar	72.11	286	P	P	04 49 57.1	+0.6
	SNR=58						
JMDO				S	S	04 58 41.1	-1.8
BANOM	Banah	72.15	290	P	P	04 49 58.0	+1.3
BANOM				S	S	04 58 43.1	-0.2
BANOM	Banah	72.15	290	*i* P	P	04 49 57.5	+0.9
	SNR=321						
SHME	Shamm	72.23	290	P	P	04 49 58.6	+1.5
	SNR=181						
SHME				S	S	04 58 44.3	+0.2
SHME	Shamm	72.23	290	*i* P	P	04 49 57.9	+0.9
	SNR=677						
HOQ	Hoqain	72.27	287	P	P	04 49 58.3	+0.9
	SNR=218						
HOQ				S	S	04 58 42.7	-2.0
JETT	Jettan, Norway	72.30	341	*e*P	P	04 49 57.8	+1.0
JETT				IVmB_BB		04 49 58.6	
	comp=Z,5µm,1.6s						
JETT				*e*sP	sP	04 52 17.7	+1.4
JETT				*e*S	S	04 58 44.2	+0.7
VRH	Novokhopyorsk	72.35	319	*e*P	P	04 49 55.7	-1.6
VRH				*e*S	S	04 58 39.0	-5.5
VRH				pmax	pmax		
	comp=Z,1µm,0.6s						
VRH				smax	smax		
	comp=N,4µm,7.5s						
MDH	Madha	72.41	290	P	P	04 49 58.0	-0.1
	SNR=94						
MDH				S	S	04 58 42.3	-3.8
MDH	Madha	72.41	290	*i* P	P	04 49 57.8	-0.3
	SNR=7.6						
AKT	Akhty	72.47	308*d*	*i*P	P	04 49 58.6	+0.2
AKT				*e*		04 50 17.2	
AKT				*e**PP	pP	04 51 33.8	+2.1
AKT				*e**SP	sP	04 52 19.9	+2.5
AKT				*e*		04 52 49.5	
AKT				*i* PPP	PPP	04 54 32.0	
AKT				*e*S	SKiKP	04 58 44.1	-2.1
AKT				*e*		04 59 21.1	
AKT				pmax	pmax		
	comp=Z,3µm,1.0s						
AKT				pmax	pmax		
	comp=Z,3µm,0.8s						
AKT				pmax	pmax		
	comp=E,578nm,0.6s						
AKT				pmax	pmax		
	comp=N,627nm,1.0s						
AKT				smax	smax		
	comp=E,3µm,3.6s						
AKT				smax	smax		
	comp=N,4µm,3.8s						
AKT				MLR	MLR		
	comp=N,1µm,15.0s						
AKT				MLR	MLR		
	comp=E,2µm,15.0s						
AKT				MLR	MLR		
	comp=Z,2µm,16.0s						
MASF	Masafi	72.49	290	P	P	04 49 59.8	+1.1
	SNR=246						
MASF				S	S	04 58 48.5	+1.4
MSFE	Esma-Masafi	72.50	290	*i* P	P	04 49 59.3	+0.6
	SNR=680						
WCZ	Waipu Caves	72.60	151	P	P	04 50 00.7	+1.9
MOS	Moscow	72.63	325	*e*P	P	04 49 51.2	-7.6
MOS				*e**PP	pP	04 51 27.3	-4.9
MOS				*e*		04 59 18.7	
MOS				pmax	pmax		
	comp=Z,2µm,1.1s						
MOS				pmax	pmax		
	comp=Z,1µm,1.1s						
MOS				pmax	pmax		
	comp=N,700nm,1.0s						
MOS				pmax	pmax		
	comp=E,700nm,1.1s						
MOS				pmax	pmax		
	comp=N,611nm,0.9s						
MOS				pmax	pmax		
	comp=E,696nm,1.2s						
MOS				MLR	MLR		
	comp=Z,3µm,17.0s						
UOSS	Minazif	72.63	289	P	P	04 49 59.2	-0.2
UOSS				IAmb	IAmb	04 50 02.5	
	comp=Z,802nm,1.0s						
UOSS	Minazif	72.63	289	P	P	04 50 00.0	+0.6
UOSS				S	SKiKP	04 58 46.3	-0.5

UOSS	**Minazif**	**72.63**	**289**	i P	**P**	**04 49 59.5**	**0.0**
	SNR=106						
UOSS	**Minazif**	**72.63**	**289**	P	**P**	**04 49 59.3**	**-0.2**
UOSS				S	**SKiKP**	**04 58 47.3**	**+0.6**
TRO	**Tromso**	**72.67**	**342**	eP	**P**	**04 49 59.4**	**+0.6**
TRO				IVmB_BB		04 50 00.2	
	comp=Z,4µm,1.6s						
TRO				esP	**sP**	**04 52 18.2**	**-0.2**
SOHO	**SOHO**	**72.69**	**288**	P	**P**	**04 50 00.8**	**+1.0**
SOHO				S	**S**	**04 58 48.5**	**-0.7**
SOHO	**SOHO**	**72.69**	**288**	i P	**P**	**04 50 00.0**	**+0.2**
	SNR=133						
BSY	**Bisya**	**72.71**	**287**	P	**P**	**04 50 01.0**	**+1.0**
	SNR=234						
HATD	**Hatta, Dubai**	**72.74**	**289**	P	**P**	**04 50 00.9**	**+0.8**
	SNR=402						
HATD				S	**S**	**04 58 49.2**	**-0.7**
HATD	**Hatta, Dubai**	**72.74**	**289**	i P	**P**	**04 50 00.9**	**+0.8**
	SNR=894						
CLRS	**Cowichan Lake**	**72.76**	**43**	IAmb	IAmb	04 50 03.1	
	comp=Z,739nm,0.9s						
MHTO	**MHTO**	**72.80**	**285**	P	**P**	**04 50 01.0**	**+0.5**
	SNR=134						
UMQ	**Umm Al-Quwin**	**72.84**	**290**	P	**P**	**04 50 02.1**	**+1.5**
	SNR=21						
UMQ				S	**S**	**04 58 52.1**	**+1.2**
UMQ	**Umm Al-Quwin**	**72.84**	**290**	i P	**P**	**04 50 01.9**	**+1.3**
	SNR=32						
LKRN	**Lenkeran, Azer**	**72.84**	**305**	P	**P**	**04 50 01.2**	**+0.8**
ASHO	**Ashiyiah**	**72.86**	**289**	P	**P**	**04 50 01.8**	**+0.9**
	SNR=267						
ASHO				S	**S**	**04 58 49.5**	**-1.7**
ASHO				S	**SKiKP**	**04 58 49.9**	**+2.8**
ASHO	**Ashiyiah**	**72.86**	**289**	i P	**P**	**04 50 01.3**	**+0.5**
	SNR=463						
SEKA	**Sheki**	**72.95**	**308**	P	**P**	**04 50 01.4**	**+0.3**
ARQ	**Araqi**	**73.03**	**288**	P	**P**	**04 50 03.0**	**+1.1**
	SNR=337						
ARQ				S	**SKiKP**	**04 58 50.1**	**+2.7**
NAZ	**Nazwa, Dubai**	**73.06**	**289**	P	**P**	**04 50 02.1**	**+0.2**
	SNR=155						
NAZ	**Nazwa, Dubai**	**73.06**	**289**	i P	**P**	**04 50 02.4**	**+0.4**
	SNR=221						
OUL	**Oulu**	**73.10**	**336**	P	**P**	**04 50 01.8**	**+0.4**
MNGR	**Mingechevir, A**	**73.20**	**308**	P	**P**	**04 50 03.4**	**+1.0**
TULEG	**Thule**	**73.20**	**7**	i P	**P**	**04 50 01.7**	**-0.1**
TULEG				IAmb	IAmb	04 50 04.4	
	comp=Z,387nm,0.8s						
FAQ	**Al Faqa, Dubai**	**73.22**	**289**	P	**P**	**04 50 03.5**	**+0.7**
	SNR=235						
FAQ				S	**S**	**04 58 52.7**	**-2.4**
FAQ	**Al Faqa, Dubai**	**73.22**	**289**	i P	**P**	**04 50 03.1**	**+0.3**
	SNR=129						
PGC	**Sidney**	**73.24**	**43**	IAmb	IAmb	04 50 06.2	
	comp=Z,971nm,0.9s						
LPSR	**Galich'ya Gora**	**73.32**	**321**	eP	**P**	**04 50 01.9**	**-1.0**
LPSR				eS	**SKiKP**	**04 58 50.5**	**+3.5**
LPSR				pmax	pmax		
	comp=Z,2µm,0.9s						
LPSR				smax	smax		
	comp=N,4µm,8.5s						
LLLB	**Lillooet**	**73.33**	**41**	IAmb	IAmb	04 50 06.1	
	comp=Z,1µm,1.3s						
GRZ	**Great Barrier**	**73.34**	**150**	P	**P**	**04 50 04.6**	**+1.5**
ABAZ	**Army Bay**	**73.37**	**151**	P	**P**	**04 50 05.4**	**+2.2**
ALNE	**Al Ain**	**73.37**	**289**	P	**P**	**04 50 04.6**	**+0.8**
	SNR=322						
ALNE				S	**S**	**04 58 55.3**	**-1.6**
ALNE	**Al Ain**	**73.37**	**289**	i P	**P**	**04 50 04.2**	**+0.5**
	SNR=293						
OBN	**Obninsk**	**73.44**	**324**	P	**P**	**04 50 03.8**	**+0.3**
OBN	**Obninsk**	**73.44**	**324**	S	**S**	**04 58 55.1**	**-1.4**
	comp=Z,24nm,0.4s,baz=2.1,slow=23,SNR=9.9						
OBN	**Obninsk**	**73.44**	**324**	⇑P	**P**	**04 50 04.2**	**+0.7**
OBN	**Obninsk**	**73.44**	**324**	d iP	**P**	**04 50 03.5**	**0.0**
OBN				e		04 50 16.7	
OBN				e*PP	**pwP**	**04 51 40.5**	**-2.2**
OBN				e		04 52 57.9	
OBN				ePPP	PPP	04 54 37.4	
OBN				i S	**SKiKP**	**04 58 49.2**	**+2.1**
OBN				pmax	pmax		
	comp=Z,1µm,0.9s						
OBN	**Obninsk**	**73.44**	**324**	P	**P**	**04 50 03.5**	**0.0**
	comp=Z,16µmcomp=Z,1µm,1.2s						
ASUD	**Al Ashush, Dub**	**73.48**	**289**	P	**P**	**04 50 05.4**	**+1.0**
	SNR=84						
ASUD				S	**S**	**04 58 57.7**	**-0.4**
ASUD	**Al Ashush, Dub**	**73.48**	**289**	i P	**P**	**04 50 04.9**	**+0.5**
	SNR=369						
DAG	**Danmarks Havn**	**73.53**	**355**	P	**P**	**04 50 02.2**	**-1.4**
DAG	**Danmarks Havn**	**73.53**	**355**	P	**P**	**04 50 03.4**	**-0.3**
DAG	**Danmarks Havn**	**73.53**	**355**	i P	**P**	**04 50 03.8**	**+0.1**
DAG				IAmb	IAmb	04 50 07.7	
	comp=Z,135nm,0.9s						
MBAZ	**Motutapu North**	**73.54**	**151**	P	**P**	**04 50 06.0**	**+1.8**
WTAZ	**Waiatarua**	**73.54**	**151**	P	**P**	**04 50 06.6**	**+2.4**
NEEM	**North Greenlan**	**73.55**	**2**	i P	**P**	**04 50 04.8**	**+0.6**
NEEM				IAmb	IAmb	04 50 08.4	
	comp=Z,412nm,0.9s						
VORR	**Voronezh**	**73.57**	**320**	eP	**P**	**04 50 03.8**	**-0.5**
VORR				eS	**S**	**04 58 54.3**	**-3.8**
VORR				pmax	pmax		
	comp=Z,1µm,0.8s						
VORR				smax	smax		
	comp=N,590nm,4.2s						
WIAZ	**Waiheke Island**	**73.66**	**151**	P	**P**	**04 50 06.9**	**+1.9**
AWAZ	**Awhitu Peninsu**	**73.68**	**151**	P	**P**	**04 50 07.0**	**+1.9**
GANJ	**Ganja**	**73.78**	**308**	P	**P**	**04 50 06.7**	**+0.8**
VSR	**Storozhevoye**	**73.79**	**320**	eP	**P**	**04 50 04.3**	**-1.3**
VSR				eS	**S**	**04 58 55.2**	**-5.4**
VSR				pmax	pmax		
	comp=Z,2µm,1.0s						
VSR				smax	smax		
	comp=N,4µm,8.2s						
AJN	**Ajban**	**73.80**	**289**	P	**P**	**04 50 06.7**	**+0.6**
	SNR=102						
AJN				S	**S**	**04 58 59.4**	**-2.1**
AJN	**Ajban**	**73.80**	**289**	i P	**P**	**04 50 06.3**	**+0.2**
	SNR=162						
VORD	**Divnogorie**	**73.83**	**320**	eP	**P**	**04 50 05.3**	**-0.5**
VORD				eS	**S**	**04 58 55.2**	**-5.8**
VORD				pmax	pmax		
	comp=Z,940nm,0.8s						
VORD				smax	smax		
	comp=N,640nm,3.7s						
H08S3	**Diego Garcia H**	**73.85**	**252**	P	**P**	**04 50 07.3**	**+1.1**
	baz=28,slow=8.6,SNR=37						
H08S2	**Diego Garcia H**	**73.85**	**252**	P	**P**	**04 50 07.5**	**+1.3**
	baz=28,slow=8.6,SNR=38						
H08S1	**Diego Carcia H**	**73.86**	**252**	P	**P**	**04 50 07.5**	**+1.2**
	baz=28,slow=8.6,SNR=33						
KUZ	**Kuaotunu**	**73.87**	**150**	P	**P**	**04 50 07.2**	**+1.1**
KUZ	**Kuaotunu**	**73.87**	**150**	P	**P**	**04 50 07.4**	**+1.3**
MKAZ	**Moumakai**	**73.94**	**151**	P	**P**	**04 50 08.1**	**+1.6**
GOF	**Gofitskoye**	**74.12**	**313**	d iP	**P**	**04 50 08.0**	**+0.3**
GOF				eS	**S**	**04 59 02.9**	**-1.6**
PUL	**Pulkovo**	**74.16**	**330**	d iP	**P**	**04 50 07.8**	**+0.3**
PUL				pmax	pmax		
	comp=Z,862nm,0.8s						
GUDG	**Gudauri**	**74.28**	**310**	P	**P**	**04 50 09.7**	**+0.8**
NCK	**Nalchik**	**74.43**	**311**	d iP	**P**	**04 50 09.9**	**+0.4**
NCK				pmax	pmax		
	comp=Z,572nm,0.8s						
UMZA	**Um Al Zommool**	**74.43**	**288**	P	**P**	**04 50 09.7**	**-0.1**
UMZA				S	**S**	**04 59 05.7**	**-2.9**
MYRZ	**Mayor Island**	**74.55**	**150**	P	**P**	**04 50 12.9**	**+2.9**
TOZ	**Tahuroa Road**	**74.61**	**151**	P	**P**	**04 50 11.9**	**+1.6**
D05A	**Enumclaw**	**74.76**	**44**	IAmb	IAmb	04 50 15.5	
	comp=Z,952nm,0.9s						
KBZ	**Khabaz**	**74.79**	**312**	P	**P**	**04 50 12.1**	**+0.6**
	comp=Z,1µm,0.8s,baz=90,slow=3.2,SNR=990						
KBZ				S	**S**	**04 59 10.5**	**-1.2**
	comp=Z,22nm,1.0s,baz=351,slow=23,SNR=9.2						
	comp=Z,1µm,0.8s						
KBZ	**Khabaz**	**74.79**	**312**	d iP	**P**	**04 50 12.0**	**+0.6**
KBZ				pmax	pmax		
	comp=Z,2µm,0.9s						
STEI	**Steigen**	**74.79**	**341**	eP	**P**	**04 50 11.6**	**+0.6**
STEI				IVmB_BB		04 50 13.3	
	comp=Z,6µm,1.7s						
STEI				eS	**S**	**04 59 09.9**	**-1.0**
KIV	**Kislovodsk**	**74.83**	**312**	P	**P**	**04 50 12.3**	**+0.5**
KIV	**Kislovodsk**	**74.83**	**312**	P	**P**	**04 50 11.9**	**+0.1**
KIV	**Kislovodsk**	**74.83**	**312**	P	**P**	**04 50 12.7**	**+0.8**
KIV				S	**S**	**04 59 10.4**	**-2.0**
KIV	**Kislovodsk**	**74.83**	**312**	⇓P	**P**	**04 50 12.9**	**+1.1**
KIV	**Kislovodsk**	**74.83**	**312**	eP	**P**	**04 50 12.6**	**+0.8**
KIV				e*PP	**pP**	**04 51 46.3**	**+0.5**
KIV				e		04 53 06.8	
KIV				ePPP	PPP	04 54 55.5	
KIV				eS	**S**	**04 59 11.8**	**-0.6**
KIV				eSS	**SS**	**05 04 11.8**	**+1.0**
KIV				eSSS	SSS	05 07 37.8	
KIV				pmax	pmax		
	comp=Z,1µm,3.4s						
KIV				pmax	pmax		
	comp=Z,2µm,1.1s						
KIV				pmax	pmax		
	comp=Z,3µm,18.0s						
KIV	**Kislovodsk**	**74.83**	**312**	i P	**P**	**04 50 12.5**	**+0.7**
	SNR=355						
KIV	**Kislovodsk**	**74.83**	**312**	P	**P**	**04 50 12.3**	**+0.5**
KIV				S	**S**	**04 59 10.9**	**-1.6**
KIV	**Kislovodsk**	**74.83**	**312**	P	**P**	**04 50 12.1**	**+0.3**
	comp=Z,17µmcomp=Z,2µm,1.1s						
KMRZ	**Kaimai**	**74.89**	**151**	P	**P**	**04 50 13.7**	**+1.7**
TRLG	**Trialeti**	**74.93**	**309**	P	**P**	**04 50 13.1**	**+0.6**
SHA1	**Shidzhatmaz**	**74.94**	**312**	d iP	**P**	**04 50 13.2**	**+0.6**
NAX	**Nakhchivan**	**74.98**	**307**	P	**P**	**04 50 13.5**	**+0.8**
HIZ	**Hauiti**	**75.00**	**152**	IAmb	IAmb	04 50 15.2	
	comp=Z,438nm,0.9s						
HIZ	**Hauiti**	**75.00**	**152**	P	**P**	**04 50 14.4**	**+1.9**
FINES	**FINESS Array B**	**75.04**	**333**	P	**P**	**04 50 12.4**	**0.0**
	comp=Z,318nm,0.5s,baz=68,slow=4.8,SNR=910						
FINES				S	**S**	**04 59 12.1**	**-1.7**
	comp=Z,107nm,1.1s,baz=64,slow=13,SNR=13						
	comp=Z,318nm,0.5s						
FINES	**FINESS Array B**	**75.04**	**333**	i P	**P**	**04 50 12.5**	**0.0**
FINES				pmax	pmax		
	comp=Z,316nm,0.5s						
MZWR	**Madinat Zayed**	**75.05**	**289**	P	**P**	**04 50 13.4**	**+0.1**
MZWR				S	**S**	**04 59 10.9**	**-4.4**
LON	**Longmire**	**75.07**	**45**	IAmb	IAmb	04 50 16.4	
	comp=Z,899nm,1.4s						
COR	**Corvallis**	**75.09**	**47**	P	**P**	**04 50 15.3**	**+2.2**
COR	**Corvallis**	**75.09**	**47**	P	**P**	**04 50 15.3**	**+2.2**
COR				pmax	pmax		
	comp=Z,3µm,1.1s						
GNI	**Garni**	**75.09**	**308**	P	**P**	**04 50 14.6**	**+1.2**
GNI	**Garni**	**75.09**	**308**	P	**P**	**04 50 14.2**	**+0.7**
GNI	**Garni**	**75.09**	**308**	S	**S**	**04 59 14.6**	**-0.9**
	comp=Z,4.6nm,0.5s,baz=96,slow=23,SNR=1.5						
GNI	**Garni**	**75.09**	**308**	P	**P**	**04 50 15.0**	**+1.6**
GNI				S	**S**	**04 59 15.3**	**-0.2**
GNI	**Garni**	**75.09**	**308**	d iP	**P**	**04 50 14.6**	**+1.2**
GNI				pmax	pmax		
	comp=Z,1µm,1.0s						
KEF	**Keuruu**	**75.11**	**334**	eP	**P**	**04 50 12.2**	**-0.6**
TLZ	**Tolley Road**	**75.13**	**151**	P	**P**	**04 50 15.3**	**+2.0**
LOF	**Lofoten**	**75.13**	**342**	eP	**P**	**04 50 13.6**	**+0.7**
LOF				IVmB_BB		04 50 13.8	
	comp=Z,2µm,2.9s						
LOF				esP	**sP**	**04 52 33.0**	**0.0**
FAUS	**Fauske**	**75.14**	**341**	eP	**P**	**04 50 13.7**	**+0.7**
FAUS				IVmB_BB		04 50 14.4	
	comp=Z,5µm,1.5s						
FAUS				eS	**S**	**04 59 14.2**	**-0.6**
OPRZ	**Ohinepanea**	**75.16**	**150**	P	**P**	**04 50 14.8**	**+1.4**
OMRZ	**Omania**	**75.30**	**151**	P	**P**	**04 50 16.0**	**+1.8**
KHEZ	**Kahui Hut**	**75.32**	**153**	P	**P**	**04 50 16.7**	**+2.3**
NEZ	**North Egmont**	**75.33**	**153**	P	**P**	**04 50 17.7**	**+3.2**
KUTZ	**Kaahu Road**	**75.38**	**151**	P	**P**	**04 50 16.6**	**+1.9**
JRN	**Qarnain Island**	**75.39**	**291**	P	P	04 50 08.6	-6.6
	SNR=139						
VAF	**Ylistaro**	**75.43**	**335**	eP	**P**	**04 50 14.7**	**0.0**
ERBR	**Yeremizino-Bor**	**75.46**	**314**	d iP	**P**	**04 50 15.9**	**+0.7**
ERBR				i *PP	**pP**	**04 51 50.5**	**+1.1**
ERBR				i S	**S**	**04 59 17.2**	**-1.8**
ERBR				pmax	pmax		
	comp=Z,2µm,1.1s						
ERBR				pmax	pmax		
	comp=N,92nm,1.0s						
ERBR				smax	smax		
	comp=N,4µm,4.4s						
ERBR				smax	smax		
	comp=E,8µm,7.4s						
VRZ	**Vera Road**	**75.48**	**152**	P	**P**	**04 50 16.7**	**+1.5**
TASB	**TASBURUN-IGDIR**	**75.51**	**308**	P	**P**	**04 50 16.8**	**+1.1**
LREZ	**Lake Rotokare**	**75.62**	**153**	P	**P**	**04 50 18.4**	**+2.5**
HAZ	**Te Kaha**	**75.62**	**149**	P	**P**	**04 50 15.5**	**-0.5**
PRRZ	**Plateau Road**	**75.63**	**151**	P	**P**	**04 50 16.5**	**+0.4**
RATZ	**Rangitukua**	**75.68**	**151**	P	**P**	**04 50 18.0**	**+1.6**
MXZ	**Matakaoa Point**	**75.70**	**149**	P	**P**	**04 50 16.1**	**-0.4**
MXZ	**Matakaoa Point**	**75.70**	**149**	P	**P**	**04 50 16.0**	**-0.4**
MZR	**Muzera**	**75.71**	**289**	P	**P**	**04 50 17.7**	**+0.7**
	SNR=250						
MZR				S	**S**	**04 59 20.7**	**-1.8**
MZR	**Muzera**	**75.71**	**289**	i P	**P**	**04 50 17.2**	**+0.2**
	SNR=440						
TWVZ	**Taurewa**	**75.71**	**152**	P	**P**	**04 50 17.9**	**+1.3**
KATZ	**Kakaramea**	**75.74**	**151**	P	**P**	**04 50 19.2**	**+2.4**
URZ	**Urewera**	**75.74**	**150**	P	**P**	**04 50 16.1**	**-0.6**
RUGZ	**Raukumara Rang**	**75.75**	**150**	P	**P**	**04 50 15.9**	**-1.0**
LABN	**Labinsk**	**75.79**	**313**	eP	**P**	**04 50 17.5**	**+0.4**
LABN				ePPP	PPP	04 54 59.8	
LABN				eS	**S**	**04 59 22.3**	**-0.3**
LABN				pmax	pmax		
	comp=N,108nm,2.5s						
LABN				pmax	pmax		
	comp=E,457nm,2.8s						
LABN				pmax	pmax		
	comp=Z,6µm,3.3s						
LABN				pmax	pmax		
	comp=N,9.0nm,0.6s						
LABN				pmax	pmax		
	comp=Z,678nm,1.1s						
LABN				pmax	pmax		
	comp=E,21nm,0.6s						
LABN				smax	smax		
	comp=N,13µm,8.8s						
LABN				smax	smax		
	comp=E,8µm,9.5s						
GHWR	**Ruwais**	**75.79**	**290**	P	**P**	**04 50 17.7**	**+0.2**
GHWR				S	**S**	**04 59 19.2**	**-4.1**
WTVZ	**West Tongariro**	**75.81**	**152**	P	**P**	**04 50 18.1**	**+0.9**
NNVZ	**North Ngauruho**	**75.84**	**152**	P	**P**	**04 50 18.5**	**+1.1**
PKGZ	**Pakihiroa**	**75.85**	**149**	P	**P**	**04 50 17.2**	**-0.1**
PKVZ	**Pokaka**	**75.86**	**152**	P	**P**	**04 50 18.4**	**+1.0**
TMVZ	**Te Maari**	**75.86**	**152**	P	**P**	**04 50 18.3**	**+0.8**
COVZ	**Chateau Observ**	**75.86**	**152**	P	**P**	**04 50 18.3**	**+0.8**
NGZ	**Ngauruhoe**	**75.87**	**152**	P	**P**	**04 50 18.2**	**+0.6**
ETVZ	**East Tongariro**	**75.88**	**152**	P	**P**	**04 50 18.3**	**+0.7**
FWVZ	**Far West T-bar**	**75.92**	**152**	P	**P**	**04 50 18.7**	**+0.8**
MAVZ	**Matarangi**	**75.93**	**152**	P	**P**	**04 50 19.0**	**+0.9**
TRVZ	**Turoa**	**75.95**	**152**	P	**P**	**04 50 18.9**	**+0.8**
WMGZ	**Waiomatatini S**	**75.96**	**149**	P	**P**	**04 50 18.2**	**+0.3**
RTZ	**Ruatahuna**	**75.98**	**150**	IAmb	IAmb	04 50 18.7	
	comp=Z,549nm,0.9s						
RTZ	**Ruatahuna**	**75.98**	**150**	P	**P**	**04 50 17.7**	**-0.4**
MWZ	**Matawai**	**75.99**	**150**	P	**P**	**04 50 17.6**	**-0.5**
DBG	**Daneborg**	**76.00**	**354**	i P	**P**	**04 50 18.4**	**+0.8**
DBG				IAmb	IAmb	04 50 19.8	
	comp=Z,72nm,0.9s						
L02F	**Cave Junction**	**76.00**	**50**	IAmb	IAmb	04 50 22.2	
	comp=Z,838nm,1.0s						
KHAM	**Kharkiv**	**76.00**	**320**	P	**P**	**04 50 18.6**	**+0.4**
KARS	**Kars**	**76.02**	**309**	P	**P**	**04 50 19.9**	**+1.3**
KRMB	**Red Mountain**	**76.04**	**50**	IAmb	IAmb	04 50 22.7	
	comp=Z,923nm,1.1s						
KULLO	**Kullorsuaq**	**76.05**	**4**	i P	**P**	**04 50 18.2**	**+0.3**
KULLO				IAmb	IAmb	04 50 20.5	
	comp=Z,531nm,0.9s						
TWGZ	**Tauwhareparae**	**76.06**	**149**	P	**P**	**04 50 18.7**	**+0.2**
QRZ	**Quartz Range**	**76.07**	**155**	P	**P**	**04 50 19.0**	**+0.6**
RAGZ	**Rawiri**	**76.07**	**150**	P	**P**	**04 50 19.4**	**+0.8**
PUZ	**Puketiti**	**76.09**	**149**	P	**P**	**04 50 18.5**	**-0.2**
MTHZ	**Maungataniwha**	**76.12**	**151**	P	**P**	**04 50 19.2**	**+0.3**
VAGH	**Vaagaholmen**	**76.17**	**341**	eP	**P**	**04 50 19.0**	**+0.3**
VAGH				IVmB_BB		04 50 20.1	
	comp=Z,3µm,1.6s						
VAGH				esP	**sP**	**04 52 40.1**	**+0.9**
VAGH				eS	**S**	**04 59 24.7**	**-1.2**
MOR8	**Moi Rana**	**76.20**	**340**	eP	**P**	**04 50 18.2**	**-0.8**
MOR8				IVmB_BB		04 50 19.2	
	comp=Z,6µm,1.6s						
MOR8				eS	**S**	**04 59 24.3**	**-2.1**
TKGZ	**Te Karaka**	**76.22**	**150**	P	**P**	**04 50 19.6**	**+0.3**
BKZ	**Black Stump Fm**	**76.23**	**151**	P	**P**	**04 50 18.8**	**-0.7**
BKZ	**Black Stump Fm**	**76.23**	**151**	P	**P**	**04 50 19.5**	**0.0**
BBOR	**Butler Butte**	**76.25**	**49**	IAmb	IAmb	04 50 30.0	
	comp=Z,415nm,0.9s						
SNGZ	**Shannon Statio**	**76.28**	**150**	P	**P**	**04 50 19.6**	**-0.1**
RAHZ	**Arahi**	**76.28**	**151**	P	**P**	**04 50 20.0**	**+0.3**
NMHZ	**Naumai**	**76.31**	**151**	P	**P**	**04 50 20.7**	**+0.8**
KONS	**Konsvik**	**76.37**	**341**	eP	**P**	**04 50 20.0**	**+0.2**
RIGZ	**Rimuhau**	**76.40**	**150**	P	**P**	**04 50 20.3**	**-0.1**
TKNZ	**Takaka Hill**	**76.41**	**154**	P	**P**	**04 50 20.7**	**+0.3**
CNGZ	**Carnagh Statio**	**76.41**	**150**	P	**P**	**04 50 21.3**	**+0.9**
MEF	**Metsahovi**	**76.41**	**332**	eP	**P**	**04 50 19.7**	**-0.5**
KWHZ	**Kaweka Forest**	**76.42**	**151**	P	**P**	**04 50 20.8**	**+0.3**
VSU	**Vasula**	**76.42**	**330**	d iP	**P**	**04 50 19.6**	**-0.6**
VSU				pmax	pmax		
	comp=Z,2µm,1.3s						
VSU	**Vasula**	**76.42**	**330**	eP	**P**	**04 50 19.2**	**-1.0**
WHHZ	**Waihua**	**76.48**	**151**	P	**P**	**04 50 21.5**	**+0.7**
G06A	**Carlson Farm,**	**76.48**	**46**	IAmb	IAmb	04 50 24.8	
	comp=Z,1µm,1.1s						
STOK	**Stokkvaagen**	**76.52**	**340**	eP	**P**	**04 50 21.0**	**+0.4**
STOK				IVmB_BB		04 51 54.0	
	comp=Z,4µm,4.3s						
STOK				eS	**S**	**04 59 28.9**	**-0.7**
ARHZ	**Aropaoanui**	**76.53**	**151**	P	**P**	**04 50 21.4**	**+0.3**
SHMA	**Al-Shehemyia**	**76.53**	**292**	P	**P**	**04 50 21.9**	**+0.3**
	SNR=145						
SENK	**Senkaya-Erzuru**	**76.55**	**309**	P	**P**	**04 50 22.6**	**+1.0**
MCHZ	**McNeill Hill**	**76.55**	**151**	P	**P**	**04 50 22.5**	**+1.3**
DUWZ	**D’Urville Isla**	**76.58**	**154**	P	**P**	**04 50 21.6**	**+0.3**
KRHZ	**Kereru**	**76.58**	**151**	P	**P**	**04 50 21.3**	**0.0**
DSZ	**Denniston Nort**	**76.60**	**156**	P	**P**	**04 50 21.1**	**-0.3**
DSZ	**Denniston Nort**	**76.60**	**156**	P	**P**	**04 50 21.2**	**-0.2**
KNZ	**Kokohu**	**76.62**	**150**	P	**P**	**04 50 21.2**	**-0.3**
HAWA	**Hanford**	**76.63**	**44**	IAmb	IAmb	04 50 24.8	
	comp=Z,771nm,0.9s						
LEIR	**Leirfjorden**	**76.64**	**340**	eP	**P**	**04 50 21.6**	**+0.3**
LEIR				IVmB_BB		04 50 22.7	
	comp=Z,3µm,1.2s						
LEIR				eS	**S**	**04 59 32.6**	**+1.6**
MRNZ	**Matariki Terra**	**76.65**	**155**	P	**P**	**04 50 21.3**	**-0.4**
VANB	**Van**	**76.71**	**307**	P	**P**	**04 50 23.2**	**+0.8**
SLWR	**Sila**	**76.72**	**290**	P	**P**	**04 50 22.9**	**+0.3**
SLWR				S	**S**	**04 59 29.2**	**-4.1**
NNZ	**Nelson**	**76.73**	**154**	IAmb	IAmb	04 50 22.8	
	comp=Z,412nm,0.9s						
NNZ	**Nelson**	**76.73**	**154**	P	**P**	**04 50 21.9**	**-0.1**
NNZ	**Nelson**	**76.73**	**154**	P	**P**	**04 50 22.0**	**-0.1**
PNHZ	**Pukenui**	**76.74**	**152**	P	**P**	**04 50 22.4**	**+0.1**
YBH	**Yreka Blue Hor**	**76.75**	**50**	IAmb	IAmb	04 50 26.5	
	comp=Z,582nm,0.8s						
KMRM	**Mail Ridge**	**76.76**	**51**	IAmb	IAmb	04 50 26.7	
	comp=Z,798nm,0.9s						
TSZ	**Takapari Road**	**76.76**	**152**	P	**P**	**04 50 22.2**	**-0.2**
VSLR	**Vesyoloye**	**76.77**	**312**	d iP	**P**	**04 50 23.0**	**+0.5**
VSLR				pmax	pmax		
	comp=Z,3µm,1.1s						
DMTO	**DMTO**	**76.78**	**283**	P	**P**	**04 50 23.4**	**+0.3**
	SNR=12						
DMTO				S	**S**	**04 59 29.1**	**-5.0**
TRNA	**Turayna**	**76.82**	**291**	P	**P**	**04 50 23.0**	**-0.1**
	SNR=93						
SAKB	**Bahrain**	**76.83**	**292**	P	**P**	**04 50 23.3**	**+0.2**
SAKB				S	**S**	**04 59 29.8**	**-4.6**
MHGZ	**Mahia Peninsul**	**76.83**	**150**	P	**P**	**04 50 23.4**	**+0.7**
SOC	**Sochi**	**76.92**	**313**	eP	**P**	**04 50 20.7**	**-2.6**
SOC				e*PP	**pP**	**04 51 56.4**	**-1.6**
SOC				e*SP	**sP**	**04 52 43.9**	**+0.5**
SOC				e		04 53 22.5	
SOC				ePPP	PPP	04 55 12.3	
SOC				i S	**S**	**04 59 31.1**	**-3.6**
SOC				eSSS	SSS	05 08 04.5	
SOC				pmax	pmax		
	comp=Z,752nm,0.7s						
KAHZ	**Kahuranaki**	**76.92**	**151**	P	**P**	**04 50 23.8**	**+0.6**
RAF	**Rauma**	**76.98**	**334**	eP	**P**	**04 50 23.1**	**-0.2**
THZ	**Tophouse**	**77.02**	**155**	P	**P**	**04 50 23.2**	**-0.6**
THZ	**Tophouse**	**77.02**	**155**	P	**P**	**04 50 23.0**	**-0.8**
MLAZ	**Malazgirt-MUS**	**77.05**	**308**	P	**P**	**04 50 25.4**	**+1.0**
TCW	**Tory Channel**	**77.06**	**154**	P	**P**	**04 50 23.6**	**-0.3**
DOK	**Doka**	**77.08**	**284**	P	**P**	**04 50 25.0**	**+0.3**
	SNR=50						
MRZ	**Mangatainoka R**	**77.11**	**152**	P	**P**	**04 50 24.0**	**-0.3**
PXZ	**Pawanui**	**77.11**	**151**	P	**P**	**04 50 24.5**	**+0.3**
AKDM	**Akdamar-Van**	**77.12**	**307**	P	**P**	**04 50 25.2**	**+0.4**
RAR	**Rarotonga**	**77.13**	**123**	P	**P**	**04 50 25.9**	**+1.2**
RAR	**Rarotonga**	**77.13**	**123**	P	**P**	**04 50 26.2**	**+1.5**
RAR	**Rarotonga**	**77.13**	**123**	P	**P**	**04 50 25.9**	**+1.2**
RAR				pmax	pmax		
	comp=Z,205nm,1.0s						
SMRA	**Abu-Samra**	**77.13**	**291**	P	**P**	**04 50 25.0**	**+0.1**
	SNR=169						
YPT	**Yellepit**	**77.14**	**44**	IAmb	IAmb	04 50 28.2	
	comp=Z,1µm,1.0s						
KOPR	**Koprukoy-ERZUR**	**77.14**	**309**	P	**P**	**04 50 25.9**	**+1.0**
NEW	**Newport**	**77.17**	**42**	P	**P**	**04 50 25.4**	**+0.8**
	comp=Z,1µm,0.9s,baz=298,slow=4.9,SNR=853						
NEW				S	**S**	**04 59 37.3**	**-0.1**
	comp=Z,12nm,1.1s,baz=84,slow=18,SNR=11						
	comp=Z,1µm,0.9s						
SNZO	**South Karori**	**77.32**	**153**	P	**P**	**04 50 24.8**	**-0.5**
SNZO	**South Karori**	**77.32**	**153**	P	**P**	**04 50 24.7**	**-0.5**
SNZO	**South Karori**	**77.32**	**153**	P	**P**	**04 50 24.4**	**-0.9**
SNZO				S	**S**	**04 59 34.3**	**-4.4**
INZ	**Inchbonnie**	**77.33**	**156**	P	**P**	**04 50 24.7**	**-0.6**
INZ				pP	**pP**	**04 52 00.1**	**-0.4**
BSWZ	**Blackbirch Sta**	**77.34**	**154**	P	**P**	**04 50 25.1**	**-0.3**
CHOM	**Cayeli-Rize**	**77.38**	**310**	P	**P**	**04 50 26.4**	**+0.5**
WVZ	**Waitaha Valley**	**77.39**	**157**	P	**P**	**04 50 24.8**	**-0.9**
WVZ	**Waitaha Valley**	**77.39**	**157**	P	**P**	**04 50 24.9**	**-0.7**
ILON	**Igloolik, Nuna**	**77.40**	**14**	IAmb	IAmb	04 50 28.1	
	comp=Z,602nm,0.8s						
BFZ	**Birch Farm**	**77.40**	**152**	P	**P**	**04 50 25.5**	**-0.3**
BFZ	**Birch Farm**	**77.40**	**152**	P	**P**	**04 50 25.9**	**+0.1**
O02D	**Mt. Diablo Mer**	**77.41**	**51**	IAmb	IAmb	04 50 29.7	
	comp=Z,801nm,0.8s						
BLKN	**Baker Lake**	**77.42**	**22**	IAmb	IAmb	04 50 28.2	
	comp=Z,896nm,1.0s						
GCSZ	**Gaunt Creek Bo**	**77.47**	**157**	P	**P**	**04 50 26.4**	**+0.4**
BHW	**Baring Head**	**77.47**	**153**	P	**P**	**04 50 25.6**	**-0.5**
FOZ	**Fox Glacier**	**77.49**	**158**	P	**P**	**04 50 26.2**	**+0.1**
CMWZ	**Cape Campbell**	**77.50**	**154**	P	**P**	**04 50 26.4**	**+0.1**
G08A	**Pilot Rock**	**77.50**	**45**	IAmb	IAmb	04 50 29.7	
	comp=Z,558nm,0.9s						
RBK	**Rabkut**	**77.51**	**283**	P	**P**	**04 50 27.0**	**-0.1**
	SNR=33						
RBK				S	**S**	**04 59 38.4**	**-3.6**
MTSE	**Matsula**	**77.53**	**331**	eP	**P**	**04 50 26.7**	**+0.4**
JNW	**Jan Mayen West**	**77.60**	**350**	IVmB_BB		04 50 53.9	
	comp=Z,2µm,1.5s						
JNW				epP	pP	04 52 03.0	+0.7
JNW				esP	sP	04 52 47.4	-0.5
JNW				eS	**S**	**04 59 42.8**	**+1.8**
JCZ	**Jackson Bay**	**77.64**	**159**	P	**P**	**04 50 27.4**	**+0.3**
JCZ	**Jackson Bay**	**77.64**	**159**	P	**P**	**04 50 27.5**	**+0.4**
LNOR	**Lincton Mounta**	**77.64**	**44**	IAmb	IAmb	04 50 31.3	
	comp=Z,2µm,1.7s						
LTZ	**Lake Taylor**	**77.67**	**156**	P	**P**	**04 50 27.0**	**-0.3**
GURO	**Guroymak-BITLI**	**77.68**	**307**	P	**P**	**04 50 28.7**	**+0.9**
GURO	**Guroymak-BITLI**	**77.68**	**307**	IAmb	IAmb	04 50 31.1	
	comp=Z,827nm,0.9s						
KBD	**Kabd**	**77.69**	**297**	P	**P**	**04 50 28.0**	**+0.1**
KBD				S	**S**	**04 59 39.7**	**-3.7**
I07A	**Izee**	**77.74**	**46**	IAmb	IAmb	04 50 31.6	
	comp=Z,533nm,0.9s						
ANN	**Anapa**	**77.79**	**315**	d iP	**P**	**04 50 28.0**	**0.0**
ANN				e*PP	**pP**	**04 52 02.5**	**-0.5**
ANN				e		04 53 28.7	
ANN				ePPP	PPP	04 55 19.4	
ANN				eS	**S**	**04 59 41.3**	**-2.6**
ANN				pmax	pmax		
	comp=Z,2µm,1.1s						
ANN				pmax	pmax		
	comp=N,381nm,1.1s						
ANN				pmax	pmax		
	comp=E,245nm,1.0s						
ANN				smax	smax		
	comp=E,3µm,3.7s						
ANN				smax	smax		
	comp=Z,1µm,3.9s						
ANN				smax	smax		
	comp=N,3µm,3.3s						
VRTB	**Varto-Mus**	**77.80**	**308**	P	**P**	**04 50 29.7**	**+1.3**
KHZ	**Kahutara**	**77.82**	**155**	P	**P**	**04 50 27.0**	**-1.0**

KHZ				pP	**pP**	**04 52 04.3**	**+0.9**
KHZ	**Kahutara**	**77.82**	**155**	P	**P**	**04 50 27.1**	**-1.0**
KHZ	**Kahutara**	**77.82**	**155**	P	**P**	**04 50 27.2**	**-0.8**
UPNV	**Upernavik**	**77.87**	**5**	*i* P	**P**	**04 50 27.3**	**-0.7**
UPNV				IAmb	IAmb	04 50 30.5	
	comp=Z,331nm,0.8s						
MSZ	**Milford Sound**	**77.91**	**160**	P	**P**	**04 50 29.3**	**+0.9**
GDXM	**Geysers**	**78.03**	**52**	IAmb	IAmb	04 50 33.6	
	comp=Z,935nm,1.1s						
KOPT	**Kop Dagi**	**78.06**	**309**	IAmb	IAmb	04 50 33.7	
	comp=Z,1µm,1.2s						
RPZ	**Rata Peaks**	**78.06**	**157**	S	**S**	**04 59 44.2**	**-2.3**
	comp=Z,31nm,0.9s,baz=27,slow=22,SNR=5.2						
RPZ	**Rata Peaks**	**78.06**	**157**	P	**P**	**04 50 29.2**	**-0.1**
RPZ	**Rata Peaks**	**78.06**	**157**	P	**P**	**04 50 29.2**	**-0.1**
OXZ	**Oxford**	**78.07**	**156**	P	**P**	**04 50 29.0**	**-0.4**
NSS	**Namsos**	**78.09**	**339**	*e*P	**P**	**04 50 29.4**	**+0.1**
NSS				IVmB_BB		04 50 29.9	
	comp=Z,4µm,1.7s						
NSS				*e*S	**S**	**04 59 46.1**	**-0.3**
MNK	**Minsk**	**78.09**	**326**	*i* P	**P**	**04 50 30.6**	**+1.1**
	comp=E,487nm,1.2s						
MNK				*i* P	**P**	**04 50 30.6**	**+1.1**
	comp=N,456nm,1.1s						
MNK				*i* P	**P**	**04 50 30.6**	**+1.1**
	comp=Z,948nm,0.9s,baz=57						
MNK				*i* pP	**pP**	**04 52 05.5**	**+0.8**
MNK				*i* PP	**PP**	**04 53 33.9**	**+1.2**
MNK				*i* PPP	PPP	04 55 22.9	
MNK				*i* S	**S**	**04 59 45.6**	**-1.2**
MNK				*i* SS	**SS**	**05 05 03.4**	**+4.5**
MNK				*i* SSS	SSS	05 08 30.9	
MNK	**Minsk**	**78.09**	**326**	*i* P	**P**	**04 50 30.5**	**+1.1**
MNK				*i* *PP	**pP**	**04 52 05.4**	**+0.8**
MNK				*i*		04 53 33.8	
MNK				*i* PPP	PPP	04 55 22.8	
MNK				*i* S	**S**	**04 59 45.6**	**-1.2**
MNK				*i* SS	**SS**	**05 05 03.3**	**+4.5**
MNK				*i* SSS	SSS	05 08 30.8	
MNK				pmax	pmax		
	comp=Z,948nm,0.9s						
MNK				pmax	pmax		
	comp=N,456nm,1.1s						
MNK				pmax	pmax		
	comp=E,487nm,1.2s						
KTUT	**Trabzon**	**78.09**	**310**	P	**P**	**04 50 28.8**	**-1.0**
GVZ	**Greta Valley S**	**78.11**	**155**	P	**P**	**04 50 29.3**	**-0.2**
GVZ	**Greta Valley S**	**78.11**	**155**	P	**P**	**04 50 29.4**	**-0.2**
AMCZ	**Amberley**	**78.16**	**156**	P	**P**	**04 50 30.3**	**+0.5**
ARCZ	**Arundel**	**78.31**	**157**	P	**P**	**04 50 30.2**	**-0.5**
ISAL	**Salakas**	**78.33**	**328**	*e*P	**P**	**04 50 32.2**	**+1.5**
LBZ	**Lake Benmore**	**78.37**	**158**	P	**P**	**04 50 31.1**	**+0.2**
DCZ	**Deep Cove**	**78.39**	**160**	P	**P**	**04 50 31.0**	**0.0**
NACGM	**Naroch**	**78.40**	**327**	⇑*i*P	**P**	**04 50 31.3**	**+0.2**
	comp=E,285nm,1.2s						
BNGB	**Bingl**	**78.41**	**308**	P	**P**	**04 50 32.7**	**+1.0**
SVAN	**Silvan-Diyarba**	**78.44**	**307**	P	**P**	**04 50 32.2**	**+0.4**
MLZ	**Mavora Lakes**	**78.59**	**160**	P	**P**	**04 50 32.2**	**0.0**
MQZ	**McQueen’s Vall**	**78.62**	**156**	P	**P**	**04 50 32.3**	**0.0**
SUMG	**Summit**	**78.62**	**359**	P	**P**	**04 50 33.1**	**+0.6**
SUMG	**Summit**	**78.62**	**359**	*i* P	**P**	**04 50 33.7**	**+1.2**
SUMG				IAmb	IAmb	04 50 35.5	
	comp=Z,247nm,0.9s						
TMZ	**Timaru**	**78.64**	**157**	P	**P**	**04 50 32.7**	**+0.3**
BMO	**Blue Mountains**	**78.74**	**45**	IAmb	IAmb	04 50 36.8	
	comp=Z,837nm,0.9s						
ESPY	**Espiye-Giresun**	**78.82**	**311**	P	**P**	**04 50 33.3**	**-0.5**
SLIT	**Slitere, Latvi**	**78.83**	**331**	*e*P	**P**	**04 50 32.5**	**-0.9**
PYZ	**Puysegur Point**	**78.89**	**161**	P	**P**	**04 50 34.3**	**+0.6**
WHZ	**Wether Hill Ro**	**79.02**	**160**	P	**P**	**04 50 34.1**	**-0.3**
WVOR	**Wild Horse Val**	**79.09**	**47**	IAmb	IAmb	04 50 38.9	
	comp=Z,664nm,0.9s						
WVOR	**Wild Horse Val**	**79.09**	**47**	P	**P**	**04 50 36.2**	**+0.9**
VSVD	**Vaisvydziai**	**79.10**	**329**	*e*P	**P**	**04 50 35.1**	**+0.3**
ODZ	**Otahua Downs**	**79.10**	**158**	P	**P**	**04 50 35.6**	**+0.8**
AFDM	**Forest Hills D**	**79.22**	**51**	IAmb	IAmb	04 50 39.2	
	comp=Z,993nm,1.3s						
PABE	**Paberze**	**79.36**	**328**	*e*P	**P**	**04 50 36.1**	**-0.2**
AK03	**Malin Array Si**	**79.49**	**323**	P	**P**	**04 50 37.2**	**+0.1**
AKASG	**Malin Array Be**	**79.51**	**323**	P	**P**	**04 50 36.5**	**-0.7**
AKASG				IAmb	IAmb	04 50 39.3	
	comp=Z,609nm,0.9s						
AKASG	**Malin Array Be**	**79.51**	**323**	P	**P**	**04 50 36.8**	**-0.4**
	comp=Z,238nm,0.7s,baz=51,slow=5.4,SNR=746						
AKASG				S	**S**	**04 59 56.1**	**-5.5**
	comp=Z,5.9nm,1.0s,baz=52,slow=8.1,SNR=4.1						
AKASG				PKKPbc	**PKKPbc**	**05 09 21.6**	**-0.8**
	comp=Z,1.2nm,0.4s,baz=255,slow=2.4,SNR=7.5						
	comp=Z,238nm,0.7s						
AKASG	**Malin Array Be**	**79.51**	**323**	*i* P	**P**	**04 50 36.7**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,253nm,0.7s						
AKBB	**Malin Array Si**	**79.51**	**323**	IAmb	IAmb	04 50 39.3	
	comp=Z,603nm,0.8s						
AKBB	**Malin Array Si**	**79.51**	**323**	*d* *i*P	**P**	**04 50 36.7**	**-0.4**
AKBB				pmax	pmax		
	comp=Z,710nm,0.8s						
AKBB	**Malin Array Si**	**79.51**	**323**	P	**P**	**04 50 36.9**	**-0.2**
KIEV	**Kiev**	**79.52**	**323**	P	**P**	**04 50 37.2**	**0.0**
KIEV				IAmb	IAmb	04 50 39.3	
	comp=Z,541nm,0.8s						
KIEV	**Kiev**	**79.52**	**323**	⇑P	**P**	**04 50 37.6**	**+0.4**
KIEV	**Kiev**	**79.52**	**323**	P	**P**	**04 50 37.6**	**+0.4**
KIEV	**Kiev**	**79.52**	**323**	*i* P	**P**	**04 50 36.9**	**-0.3**
	SNR=40						
ILIC	**ilic-Erzincan**	**79.63**	**309**	P	**P**	**04 50 39.3**	**+1.0**
SVRC	**Sivrice-ELAZID**	**79.65**	**308**	P	**P**	**04 50 39.5**	**+1.1**
SIM	**Simferopol'**	**79.76**	**316**	*de*P	**P**	**04 50 38.8**	**+0.1**
SIM				*e*		04 53 46.0	
SIM				*e*PPP	PPP	04 55 40.0	
SIM				*e*S	**S**	**05 00 03.0**	**-1.6**
SCO	**Scoresbysund**	**79.83**	**354**	*i* P	**P**	**04 50 39.3**	**+0.8**
SCO				IAmb	IAmb	04 50 41.5	
	comp=Z,272nm,1.1s						
HHSZ	**Highcliff Hill**	**79.83**	**158**	P	**P**	**04 50 40.2**	**+1.4**
APZ	**The Paps**	**79.88**	**160**	P	**P**	**04 50 39.4**	**+0.4**
PAHR	**Pah Rah Range**	**79.93**	**50**	IAmb	IAmb	04 50 43.0	
	comp=Z,1µm,1.0s						
SAO	**San Andreas Ge**	**79.94**	**54**	IAmb	IAmb	04 50 42.9	
	comp=Z,756nm,1.1s						
SAO	**San Andreas Ge**	**79.94**	**54**	P	**P**	**04 50 40.1**	**+0.4**
SYZ	**Scrubby Hill**	**79.96**	**160**	P	**P**	**04 50 40.0**	**+0.7**
SYZ	**Scrubby Hill**	**79.96**	**160**	P	**P**	**04 50 39.4**	**0.0**
PBUR	**Paburge**	**79.97**	**330**	*e*P	**P**	**04 50 39.2**	**-0.3**
RSDY	**Resadiye-TOKAT**	**80.00**	**311**	P	**P**	**04 50 40.7**	**+0.6**
CMB	**Columbia Colle**	**80.06**	**52**	P	**P**	**04 50 41.0**	**+0.5**
MI28	**Mi28,Pidlybu**	**80.20**	**323**	P	**P**	**04 50 40.7**	**-0.1**
UMMG	**Uummannaq**	**80.21**	**4**	*i* P	**P**	**04 50 40.3**	**-0.2**
UMMG				IAmb	IAmb	04 50 42.5	
	comp=Z,161nm,1.0s						
SVSK	**Karacayir**	**80.46**	**310**	P	**P**	**04 50 43.5**	**+1.1**
WAKR	**Walker**	**80.49**	**51**	IAmb	IAmb	04 50 46.4	
	comp=Z,795nm,0.9s						
TOKT	**Tokat**	**80.56**	**311**	P	**P**	**04 50 43.7**	**+0.7**
HFS	**Hagfors**	**80.59**	**336**	P	**P**	**04 50 42.6**	**-0.1**
	comp=Z,226nm,0.6s,baz=83,slow=3.6,SNR=403						
HFS				S	**S**	**05 00 09.5**	**-3.0**
	comp=Z,26nm,0.9s,baz=78,slow=11,SNR=4.7						
HFS				PKKPbc	**PKKPbc**	**05 09 19.1**	**-1.3**
	comp=Z,5.3nm,0.7s,baz=172,slow=3.0,SNR=8.4						
	comp=Z,226nm,0.6s						
NC405	**NORSAR Array S**	**80.60**	**337**	IAmb	IAmb	04 50 44.9	
	comp=Z,581nm,0.8s						
TOKA	**Tokat**	**80.60**	**311**	IAmb	IAmb	04 50 46.4	
	comp=Z,439nm,0.9s						
SUW	**Suwalki**	**80.62**	**328**	*e*P	**P**	**04 50 42.8**	**-0.1**
SUW				*e*S	**S**	**05 00 09.8**	**-3.3**
SUW	**Suwalki**	**80.62**	**328**	*e*P	**P**	**04 50 42.3**	**-0.6**
NC303	**NORSAR Array S**	**80.63**	**337**	IAmb	IAmb	04 50 45.1	
	comp=Z,727nm,1.1s						
PMPB	**Monarch Peak**	**80.66**	**54**	IAmb	IAmb	04 50 51.4	
	comp=Z,662nm,1.0s						
LUBAR	**Lubar, Ukraine**	**80.72**	**322**	P	**P**	**04 50 43.1**	**-0.5**
DIKM	**Dikmen**	**80.73**	**313**	P	**P**	**04 50 44.4**	**+0.6**
DIKM	**Dikmen**	**80.73**	**313**	⇓P	**P**	**04 50 44.8**	**+1.0**
DIKM	**Dikmen**	**80.73**	**313**	P	**P**	**04 50 44.2**	**+0.4**
	comp=Z,8µmcomp=Z,546nm,1.0s						
NB201	**NORSAR Array S**	**80.79**	**337**	IAmb	IAmb	04 50 45.8	
	comp=Z,404nm,0.7s						
DOMB	**Dombas**	**80.80**	**339**	*e*P	**P**	**04 50 44.7**	**+0.9**
DOMB				IVmB_BB		04 50 45.0	
	comp=Z,4µm,1.6s						
DOMB				*e*pP	**pP**	**04 52 21.5**	**+1.4**
DOMB				*e*sP	**sP**	**04 53 05.1**	**-0.4**
DOMB				*e*S	**S**	**05 00 14.1**	**-0.6**
DARE	**Darende-Malaty**	**80.80**	**309**	P	**P**	**04 50 46.1**	**+1.7**
NC204	**NORSAR Array S**	**80.80**	**337**	IAmb	IAmb	04 50 46.0	
	comp=Z,576nm,0.8s						
NB2	**NORSAR Subarra**	**80.82**	**337**	P	**P**	**04 50 43.5**	**-0.4**
	comp=Z,443nm,0.9s,baz=45,slow=5.3						
NB2				PP	**PP**	**04 53 55.7**	**+0.9**
	comp=Z,687nm,3.3s,baz=28,slow=7.9						
NB2				S	**S**	**05 00 12.0**	**-3.0**
	comp=Z,42nm,0.8s,baz=30,slow=6.5						
NB2				PKKP	**PKKPbc**	**05 09 17.9**	**-2.0**
	comp=Z,1.3nm,0.7s,baz=212,slow=2.2						
NB2				P'P'		05 19 59.5	
	comp=Z,1.1nm,0.9s,baz=246,slow=3.6						
NB2	**NORSAR Subarra**	**80.82**	**337**	P	**P**	**04 50 43.7**	**-0.2**
NB2				pmax	pmax		
	comp=Z,320nm,1.3s						
NB2	**NORSAR Subarra**	**80.82**	**337**	P	**P**	**04 50 43.5**	**-0.4**
	baz=45,slow=5.3						
NOA	**NORSAR Array B**	**80.82**	**337**	P	**P**	**04 50 43.3**	**-0.6**
	comp=Z,137nm,0.6s,baz=45,slow=5.1,SNR=419						
NOA				PP	**PP**	**04 53 55.4**	**+0.5**
	comp=Z,18nm,0.9s,baz=43,slow=5.3,SNR=3.9						
NOA				S	**S**	**05 00 13.0**	**-1.9**
	comp=Z,14nm,1.0s,baz=50,slow=9.6,SNR=5.2						
NOA				PKKPbc	**PKKPbc**	**05 09 18.2**	**-1.7**
	comp=Z,2.2nm,0.8s,baz=231,slow=2.2,SNR=5.0						
	comp=Z,137nm,0.6s						
BAL3X	**Bal3x, Balta**	**80.82**	**320**	P	**P**	**04 50 44.6**	**+0.5**
RNPP9	**Sopachiv**	**80.84**	**324**	P	**P**	**04 50 44.2**	**0.0**
MOL	**Molde**	**80.88**	**340**	*e*P	**P**	**04 50 44.8**	**+0.7**
MOL				*e*S	**S**	**05 00 16.8**	**+1.4**
RNPP2	**Kostyukhnivka**	**80.89**	**324**	P	**P**	**04 50 44.7**	**+0.3**
RNPP8	**Varash**	**80.90**	**324**	P	**P**	**04 50 44.6**	**+0.1**
NC602	**NORSAR Array S**	**80.93**	**337**	*e*P	**P**	**04 50 44.1**	**-0.4**
NC602				*e*S	**S**	**05 00 13.1**	**-2.8**
NORES	**NORESS Array B**	**80.93**	**337**	P	**P**	**04 50 44.3**	**-0.1**
RYN	**Ryan**	**81.05**	**51**	IAmb	IAmb	04 50 49.2	
	comp=Z,816nm,0.9s						
HLID	**Hailey**	**81.19**	**45**	IAmb	IAmb	04 50 48.9	
	comp=Z,446nm,0.9s						
NVAR	**Mina Array Bea**	**81.30**	**51**	P	**P**	**04 50 48.4**	**+1.3**
NVAR	**Mina Array Bea**	**81.30**	**51**	P	**P**	**04 50 48.0**	**+0.9**
	comp=Z,939nm,0.7s,baz=289,slow=5.7,SNR=2540						
NVAR				S	**SKSac**	**05 00 22.4**	**-2.0**
	comp=Z,3.5nm,1.0s,baz=13,slow=3.2,SNR=2.0						
NVAR				PKKPbc	**PKKPbc**	**05 09 18.6**	**+0.4**
	comp=Z,5.0nm,0.7s,baz=144,slow=2.2,SNR=13						
AKN	**Aaknes**	**81.34**	**339**	*e*P	**P**	**04 50 47.1**	**+0.5**
AKN				*e*S	**S**	**05 00 20.6**	**+0.5**
BZK	**Bozkurt**	**81.38**	**313**	P	**P**	**04 50 47.2**	**+0.1**
BZK	**Bozkurt**	**81.38**	**313**	⇓P	**P**	**04 50 47.9**	**+0.8**
NV11	**Mina Array Sit**	**81.39**	**51**	IAmb	IAmb	04 50 50.9	
	comp=Z,509nm,0.9s						
FFC	**Flin Flon**	**81.40**	**31**	P	**P**	**04 50 47.3**	**+0.3**
FFC				IAmb	IAmb	04 50 49.6	
	comp=Z,588nm,1.1s						
FFC	**Flin Flon**	**81.40**	**31**	P	**P**	**04 50 47.3**	**+0.3**
FFC				pmax	pmax		
	comp=Z,588nm,1.1s						
SORM	**Soroca**	**81.41**	**321**	⇓P	**P**	**04 50 47.0**	**-0.2**
SORM	**Soroca**	**81.41**	**321**	P	**P**	**04 50 46.9**	**-0.2**
PURM	**Purcari**	**81.44**	**319**	⇑P	**P**	**04 50 48.0**	**+0.7**
PURM	**Purcari**	**81.44**	**319**	P	**P**	**04 50 47.3**	**-0.1**
	comp=Z,29µmcomp=Z,3µm,1.1s						
GAZ	**Gaziantep**	**81.69**	**308**	P	**P**	**04 50 49.9**	**+0.9**
ILULI	**Ilulissat**	**81.72**	**4**	*i* P	**P**	**04 50 47.3**	**-1.1**
ILULI				IAmb	IAmb	04 50 50.8	
	comp=Z,210nm,1.0s						
YOZ	**Yozgat**	**81.72**	**311**	P	**P**	**04 50 49.5**	**+0.3**
KMRS	**Kahramanmaras**	**81.73**	**308**	P	**P**	**04 50 49.9**	**+0.8**
BNN	**Bunyan**	**81.77**	**310**	P	**P**	**04 50 50.2**	**+0.8**
BOZ	**Bozeman (W)**	**81.77**	**42**	IAmb	IAmb	04 50 52.1	
	comp=Z,803nm,1.4s						
KIS	**Kishinev**	**81.78**	**320**	⇓*i*P	**P**	**04 50 49.0**	**-0.1**
	comp=Z,1µm,1.3s						
KIS				*e*pP	**pP**	**04 52 23.0**	**-2.3**
KIS				*e*sP	**sP**	**04 53 06.0**	**-4.3**
KIS	**Kishinev**	**81.78**	**320**	*e*PP	PP	04 54 05.0	+1.9
KIS				*i* S	**S**	**05 00 22.0**	**-3.1**
	comp=Z,3µm,9.3s						
KIS	**Kishinev**	**81.78**	**320**	⇑P	**P**	**04 50 49.3**	**+0.2**
KIS	**Kishinev**	**81.78**	**320**	*d* *i*P	**P**	**04 50 49.0**	**-0.1**
KIS				*e*		04 54 05.0	
KIS				*i*		05 00 19.0	
KIS				pmax	pmax		
	comp=Z,1µm,1.3s						
KIS				pmax	pmax		
	comp=Z,3µm,9.3s						
KIS				MLR	MLR		
	comp=Z,1µm,15.0s						
OSL	**Oslo**	**81.78**	**337**	*e*P	**P**	**04 50 49.1**	**+0.2**
MILM	**Milestii Mici**	**81.83**	**320**	⇓*i*P	**P**	**04 50 48.6**	**-0.8**
	comp=Z,2µm,1.4s						
MILM				*i* pP	**pP**	**04 52 23.0**	**-2.5**
MILM				*i* sP	**sP**	**04 53 11.0**	**+0.5**
MILM	**Milestii Mici**	**81.83**	**320**	*i* PP	PP	04 54 05.0	+1.6
MILM				*i* S	**S**	**05 00 22.0**	**-3.6**
MILM				*e*sS	sS	05 03 07.0	-13
MILM	**Milestii Mici**	**81.83**	**320**	⇑P	**P**	**04 50 49.3**	**-0.1**
MILM	**Milestii Mici**	**81.83**	**320**	*d* *i*P	**P**	**04 50 48.6**	**-0.8**
MILM				*i*		04 54 05.0	
MILM				*i* S	**S**	**05 00 22.0**	**-3.6**
MILM				pmax	pmax		
	comp=Z,2µm,1.4s						
MILM				MLR	MLR		
	comp=Z,2µm,15.0s						
Q09A	**Carvers**	**81.85**	**50**	IAmb	IAmb	04 50 53.3	
	comp=Z,1µm,1.0s						
CORM	**Corum**	**81.89**	**312**	P	**P**	**04 50 50.9**	**+0.9**
FCC	**Fort Churchill**	**81.94**	**25**	IAmb	IAmb	04 50 51.9	
	comp=Z,513nm,1.1s						
RAYN	**Ar Rayn**	**82.02**	**292**	P	**P**	**04 50 51.4**	**+0.6**
RAYN	**Ar Rayn**	**82.02**	**292**	P	**P**	**04 50 52.1**	**+1.2**
RAYN				S	**S**	**05 00 26.2**	**-2.2**
RAYN	**Ar Rayn**	**82.02**	**292**	P	**P**	**04 50 52.0**	**+1.2**
RAYN	**Ar Rayn**	**82.02**	**292**	*i* P	**P**	**04 50 51.6**	**+0.7**
	SNR=461						
SKAR	**Skarslia**	**82.06**	**338**	*e*P	**P**	**04 50 51.4**	**+1.1**
SKAR				*e*S	**SKSac**	**05 00 27.7**	**-0.5**
CIDE	**Kastamonu/Cide**	**82.09**	**314**	⇑P	**P**	**04 50 51.2**	**+0.4**
ICESG	**Greenland Ices**	**82.13**	**360**	*i* P	**P**	**04 50 51.2**	**+0.3**
ICESG				IAmb	IAmb	04 50 53.7	
	comp=Z,286nm,0.8s						
ELK	**Elko**	**82.14**	**48**	P	**P**	**04 50 52.6**	**+1.1**
	comp=Z,408nm,0.8s,baz=309,slow=4.9,SNR=1151						
ELK				PP	**PP**	**04 54 05.9**	**-0.6**
	comp=Z,32nm,1.0s,baz=333,slow=3.5,SNR=3.6						
	comp=Z,408nm,0.8s						
KMPD	**K-Podol'skiy**	**82.20**	**322**	P	**PcP**	**04 50 51.5**	**-3.8**
KMPD				P	**P**	**04 50 51.3**	**+0.1**
KURC	**Kurucasile-Bar**	**82.24**	**314**	P	**P**	**04 50 51.6**	**0.0**
MZP	**Montezuma Peak**	**82.29**	**51**	IAmb	IAmb	04 50 55.5	
	comp=Z,973nm,1.2s						
DRBR	**Darabani**	**82.32**	**321**	⇓P	**P**	**04 50 51.8**	**-0.1**
CANT	**Cankiri**	**82.33**	**312**	P	**P**	**04 50 52.7**	**+0.5**
HYA	**Hoyanger**	**82.37**	**339**	*e*P	**P**	**04 50 52.3**	**+0.5**
HYA				*e*S	**S**	**05 00 29.9**	**-0.5**
IASR	**Iasi**	**82.38**	**320**	⇓P	**P**	**04 50 52.8**	**+0.6**
FOO	**Floro**	**82.39**	**340**	*e*P	**P**	**04 50 53.6**	**+1.8**
FOO				*e*S	**S**	**05 00 30.1**	**-0.5**
KONO	**Kongsberg**	**82.39**	**337**	P	**P**	**04 50 51.9**	**0.0**
KONO	**Kongsberg**	**82.39**	**337**	*d* *i*P	**P**	**04 50 52.3**	**+0.4**
KONO				pmax	pmax		
	comp=Z,231nm,1.5s						
KONO	**Kongsberg**	**82.39**	**337**	*e*P	**P**	**04 50 51.7**	**-0.2**
KONO				*e*S	**SKSac**	**05 00 28.2**	**-2.0**
YHL	**Hebgen Lake**	**82.44**	**43**	IAmb	IAmb	04 50 56.9	
	comp=Z,1µm,1.0s						
VASR	**Vaslui**	**82.57**	**320**	⇑P	**P**	**04 50 54.1**	**+0.9**
ISA	**Isabella, Lake**	**82.57**	**53**	IAmb	IAmb	04 50 56.0	
	comp=Z,592nm,1.1s						
GMN	**Gold Mountain**	**82.58**	**51**	IAmb	IAmb	04 50 57.1	
	comp=Z,1µm,1.1s						
R9F13	**Warsaw-Wawer**	**82.70**	**327**	*e*P	**P**	**04 50 53.7**	**0.0**
	comp=Z,19nm,0.6s						
R9F13				*e*PP	**PP**	**04 54 10.3**	**0.0**
R9F13				*e*SKS	**SKSac**	**05 00 31.2**	**-1.3**
R9F13				*e*S	**S**	**05 00 34.3**	**+0.2**
SOEG	**Soedalen**	**82.78**	**356**	*i* P	**P**	**04 50 53.7**	**0.0**
SOEG				IAmb	IAmb	04 50 55.7	
	comp=Z,146nm,1.2s						
CEYT	**Ceyhan**	**82.78**	**308**	P	**P**	**04 50 55.3**	**+0.9**
BR131	**Keskin Array S**	**82.78**	**312**	P	**P**	**04 50 54.5**	**-0.1**
BR131	**Keskin Array S**	**82.78**	**312**	IAmb	IAmb	04 50 57.7	
	comp=Z,920nm,0.9s						
BR131	**Keskin Array S**	**82.78**	**312**	S	**SKSac**	**05 00 31.4**	**-2.5**
BR131	**Keskin Array S**	**82.78**	**312**	*d* *i*P	**P**	**04 50 54.5**	**-0.1**
BRTR	**Keskin Array B**	**82.78**	**312**	P	**P**	**04 50 55.3**	**+0.7**
BRTR	**Keskin Array B**	**82.78**	**312**	P	**P**	**04 50 54.5**	**-0.1**
	comp=Z,627nm,1.0s,baz=110,slow=3.8,SNR=574						
BRTR				S	**SKSac**	**05 00 33.5**	**-0.4**
	comp=Z,6.2nm,1.0s,baz=112,slow=1.4,SNR=3.0						
BRTR				PKKPbc	**PKKPbc**	**05 09 15.2**	**+0.4**
	comp=Z,5.0nm,0.6s,baz=205,slow=4.0,SNR=22						
	comp=Z,627nm,1.0s						
BRTR	**Keskin Array B**	**82.78**	**312**	*i* P	**P**	**04 50 54.5**	**-0.1**
BRTR				pmax	pmax		
	comp=Z,640nm,1.0s						
BR105	**Keskin Array S**	**82.80**	**312**	P	**P**	**04 50 54.9**	**+0.2**
	comp=Z,6µmcomp=Z,862nm,1.0s						
TAHT	**Tahtakopru-Hat**	**82.80**	**308**	P	**P**	**04 50 55.0**	**+0.4**
TLCR		**82.80**	**318**	⇑P	**P**	**04 50 55.1**	**+0.7**
TLCR		**82.80**	**318**	P	**P**	**04 50 55.0**	**+0.7**
PPT	**Papeete**	**82.83**	**115**	P	**P**	**04 50 56.9**	**+2.0**
	comp=Z,456nm,0.9s,baz=343,slow=3.9,SNR=28						
	comp=Z,456nm,0.9s						
PPTF	**Pamatai, Papee**	**82.85**	**115**	IAmb	IAmb	04 51 00.7	
	comp=Z,443nm,0.9s						
PPTF	**Pamatai, Papee**	**82.85**	**115**	P	**P**	**04 50 56.8**	**+1.7**
VLDR	**Vladesti**	**82.86**	**319**	⇑P	**P**	**04 50 55.6**	**+1.0**
SUE	**Sulen**	**82.89**	**340**	*e*P	**P**	**04 50 55.5**	**+1.0**
SUE				*e*S	**SKSac**	**05 00 32.0**	**-1.4**
KIRS	**Kirsehir-Merke**	**82.91**	**311**	⇑P	**P**	**04 50 55.8**	**+0.6**
KAMT	**Kaman**	**82.92**	**311**	P	**P**	**04 50 54.9**	**-0.4**
CMRD	**Camardi-Nigde**	**82.96**	**309**	P	**P**	**04 50 56.2**	**+0.7**
VARL	**Varlezi**	**82.96**	**319**	⇑P	**P**	**04 50 56.3**	**+1.2**
GIUM	**Giurgiulesti**	**82.99**	**319**	⇑P	**P**	**04 50 56.3**	**+1.1**
JURR	**Jurilovca**	**83.00**	**318**	⇑P	**P**	**04 50 56.2**	**+0.8**
SCTR	**Scanteiesti**	**83.00**	**319**	⇓P	**P**	**04 50 56.0**	**+0.7**
PRAR	**RASCA**	**83.03**	**321**	⇑P	**P**	**04 50 56.0**	**+0.5**
YNE	**Yellowstone No**	**83.05**	**42**	IAmb	IAmb	04 50 59.6	
	comp=Z,601nm,0.9s						
GULA	**Gulagac**	**83.11**	**310**	P	**P**	**04 50 56.5**	**+0.3**
BEL	**Belsk**	**83.11**	**327**	*e*P	**P**	**04 50 56.1**	**+0.3**
BEL				*e*S	**S**	**05 00 36.2**	**-2.0**
GHRR		**83.12**	**319**	⇓P	**P**	**04 50 57.0**	**+1.1**
KARA	**Karaisali**	**83.12**	**309**	P	**P**	**04 50 56.5**	**+0.3**
NEGRR	**Negrea**	**83.15**	**319**	⇑P	**P**	**04 50 57.4**	**+1.3**
STNU	**Starunia**	**83.16**	**323**	P	**P**	**04 50 56.2**	**+0.1**
R11B	**Troy Canyon, C**	**83.17**	**50**	IAmb	IAmb	04 51 00.0	
	comp=Z,788nm,0.9s						
ODD1	**Odda**	**83.19**	**338**	*e*P	**P**	**04 50 56.2**	**+0.1**
ODD1				*e*S	**SKSac**	**05 00 35.8**	**+0.3**
CFR	**Carcaliu**	**83.20**	**318**	⇓P	**P**	**04 50 56.4**	**0.0**
CFR	**Carcaliu**	**83.20**	**318**	P	**P**	**04 50 56.3**	**0.0**
ASK	**Askoy**	**83.20**	**339**	*e*P	**P**	**04 50 56.6**	**+0.5**
ASK				*e*S	**S**	**05 00 37.1**	**-1.6**
IZVR	**Izvoarele**	**83.21**	**319**	⇑P	**P**	**04 50 57.6**	**+1.2**
SCHLR	**Schela**	**83.21**	**319**	⇑P	**P**	**04 50 57.1**	**+0.7**
TPGR	**Topolog**	**83.22**	**318**	⇑P	**P**	**04 50 57.3**	**+0.8**
TUDR		**83.24**	**319**	⇑P	**P**	**04 50 57.7**	**+1.2**
BER	**Bergen**	**83.24**	**339**	*e*P	**P**	**04 50 57.4**	**+1.2**
BER				*e*S	**SKSac**	**05 00 35.9**	**+0.3**
SERE	**Sereflikochisa**	**83.24**	**311**	P	**P**	**04 50 56.8**	**-0.1**
ANTO	**Ankara**	**83.26**	**312**	P	**P**	**04 50 57.0**	**+0.1**
ANTO	**Ankara**	**83.26**	**312**	P	**P**	**04 50 57.0**	**+0.1**
ANTO				IAmb	IAmb	04 50 59.7	
	comp=Z,2µm,1.6s						
ANTO	**Ankara**	**83.26**	**312**	P	**P**	**04 50 57.4**	**+0.4**
ANTO				S	**SKSac**	**05 00 34.8**	**-2.1**
ANTO	**Ankara**	**83.26**	**312**	⇓P	**P**	**04 50 57.3**	**+0.4**
ANTO	**Ankara**	**83.26**	**312**	P	**P**	**04 50 57.3**	**+0.4**
ANTO	**Ankara**	**83.26**	**312**	P	**P**	**04 50 57.0**	**+0.1**
ANTO				S	**S**	**05 00 39.6**	**-0.7**
ANTO	**Ankara**	**83.26**	**312**	P	**P**	**04 50 57.0**	**+0.1**
	comp=Z,5µmcomp=Z,329nm,1.3s						
LOD	**Lodumlu**	**83.27**	**312**	P	**P**	**04 50 57.1**	**+0.2**
TESR	**Tescani**	**83.29**	**320**	⇑P	**P**	**04 50 57.4**	**+0.6**
AFSR	**Afar-Bala (An**	**83.30**	**312**	P	**P**	**04 50 57.1**	**-0.1**
TPAW	**Teton Pass**	**83.34**	**44**	IAmb	IAmb	04 51 01.5	
	comp=Z,654nm,0.8s						
BUR08	**Bucovina Ar. S**	**83.42**	**322**	IAmb	IAmb	04 51 00.3	
	comp=Z,410nm,1.0s						
BURAR	**Bucovina Array**	**83.43**	**322**	P	**P**	**04 50 58.2**	**+0.6**
BURAR				IAmb	IAmb	04 51 00.7	
	comp=Z,359nm,0.8s						
BURAR	**Bucovina Array**	**83.43**	**322**	⇓P	**P**	**04 50 57.9**	**+0.2**
BURAR	**Bucovina Array**	**83.43**	**322**	P	**P**	**04 50 57.8**	**+0.2**
TIRR	**Tirgusor**	**83.45**	**318**	P	**P**	**04 50 57.6**	**0.0**
TIRR	**Tirgusor**	**83.45**	**318**	IAmb	IAmb	04 51 00.3	
	comp=Z,461nm,1.1s						
TIRR	**Tirgusor**	**83.45**	**318**	⇓P	**P**	**04 50 58.0**	**+0.4**
TIRR	**Tirgusor**	**83.45**	**318**	P	**P**	**04 50 58.0**	**+0.4**
BGU	**Big Grassy Mou**	**83.46**	**47**	IAmb	IAmb	04 51 01.6	
	comp=Z,474nm,0.7s						
SNOW	**Snow King Moun**	**83.47**	**44**	IAmb	IAmb	04 51 02.0	
	comp=Z,657nm,0.8s						
LOHW	**Long Hollow**	**83.48**	**43**	IAmb	IAmb	04 51 01.9	
	comp=Z,459nm,0.9s						
PASC	**Pasadena Art C**	**83.53**	**55**	IAmb	IAmb	04 51 01.2	
	comp=Z,866nm,0.9s						
ONER	**Baraj Valea Uz**	**83.53**	**320**	⇑P	**P**	**04 50 59.0**	**+1.0**
EFOR	**EFORIE**	**83.53**	**317**	⇑P	**P**	**04 50 59.2**	**+1.2**
KULU	**Kulu**	**83.56**	**311**	P	**P**	**04 50 58.5**	**0.0**
BSD	**Bornholm Skovb**	**83.59**	**331**	P	**P**	**04 50 57.0**	**-1.1**
BSD	**Bornholm Skovb**	**83.59**	**331**	*e*P	**P**	**04 50 57.3**	**-0.8**
BSD	**Bornholm Skovb**	**83.59**	**331**	*i* P	**P**	**04 50 57.0**	**-1.1**
BSD				IAmb	IAmb	04 50 59.4	
	comp=Z,495nm,0.9s						
HARR	**Harsova**	**83.60**	**318**	⇓P	**P**	**04 50 58.6**	**+0.2**
HARR	**Harsova**	**83.60**	**318**	P	**P**	**04 50 58.6**	**+0.2**
MFTR	**Murfatlar**	**83.60**	**317**	⇓P	**P**	**04 50 59.6**	**+1.2**
BLS5	**Blasjo**	**83.62**	**338**	*e*P	**P**	**04 50 59.3**	**+1.1**
BLS5				*e*S	**SKSac**	**05 00 38.7**	**+0.4**
VRI	**Vrincioaia**	**83.62**	**320**	P	**P**	**04 50 58.5**	**0.0**
VRI	**Vrincioaia**	**83.62**	**320**	⇑P	**P**	**04 50 59.7**	**+1.1**
VRI	**Vrincioaia**	**83.62**	**320**	P	**P**	**04 50 59.6**	**+1.1**
VRI	**Vrincioaia**	**83.62**	**320**	P	**P**	**04 50 58.7**	**+0.2**
	comp=Z,10µmcomp=Z,567nm,1.6s						
AHID	**Auburn Hatcher**	**83.66**	**44**	IAmb	IAmb	04 51 02.5	
	comp=Z,640nm,0.8s						
SPR3	**Spring Creek 3**	**83.66**	**49**	IAmb	IAmb	04 51 02.5	
	comp=Z,809nm,1.1s						
SULT	**Sultanhani-AKS**	**83.67**	**310**	P	**P**	**04 50 58.9**	**-0.1**
PLOR	**Plostina**	**83.67**	**320**	⇑P	**P**	**04 51 00.2**	**+1.4**
PLOR	**Plostina**	**83.67**	**320**	P	**P**	**04 51 00.2**	**+1.4**
MERS	**Mersin**	**83.69**	**309**	P	**P**	**04 50 58.6**	**-0.5**
FKH	**Fakeheh**	**83.73**	**306**	*e*P	**P**	**04 50 59.7**	**+0.3**
YESY	**Yesilyurt**	**83.74**	**310**	P	**P**	**04 50 58.9**	**-0.5**
BEIL	**Beino**	**83.74**	**306**	*e*P	**P**	**04 50 59.7**	**+0.3**
GRER		**83.76**	**319**	⇓P	**P**	**04 51 00.6**	**+1.4**
HOMB	**Homborsund**	**83.79**	**336**	*e*P	**P**	**04 50 58.7**	**-0.3**
HOMB				*e*pP	**pwP**	**04 52 38.7**	**-1.3**
HOMB				*e*sP	**sP**	**04 53 23.2**	**+2.0**
HOMB				*e*S	**SKSac**	**05 00 39.9**	**+0.7**
BISRR	**Bisoca**	**83.81**	**319**	⇑P	**P**	**04 51 00.9**	**+1.4**
GKP	**Gorka Klasztor**	**83.83**	**329**	*e*P	**P**	**04 50 59.0**	**-0.4**
GKP				*e*S	**S**	**05 00 42.7**	**-2.5**
GKP	**Gorka Klasztor**	**83.83**	**329**	*e*P	**P**	**04 50 58.5**	**-0.9**
OVD	**Ostervraa, Den**	**83.88**	**335**	*i* P	**P**	**04 50 59.5**	**0.0**
OVD				IAmb	IAmb	04 51 01.0	
	comp=Z,553nm,0.8s						
CHBY	**Cihanbeyli**	**83.88**	**311**	P	**P**	**04 50 59.5**	**-0.6**
TURR	**Turia**	**83.91**	**320**	⇑P	**P**	**04 51 01.4**	**+1.5**
SFJD	**Kangerlussuaq**	**83.94**	**4**	P	**P**	**04 51 00.1**	**+0.5**
SFJD				IAmb	IAmb	04 51 02.2	
	comp=Z,291nm,0.8s						
SFJD	**Kangerlussuaq**	**83.94**	**4**	P	**P**	**04 51 00.1**	**+0.5**
SFJD				pmax	pmax		
	comp=Z,291nm,0.8s						
SFJD	**Kangerlussuaq**	**83.94**	**4**	P	**P**	**04 50 59.7**	**+0.1**
SFJD				S	**S**	**05 00 43.4**	**-2.4**
SFJD	**Kangerlussuaq**	**83.94**	**4**	*i* P	**P**	**04 50 58.2**	**-1.4**
SFJD				IAmb	IAmb	04 51 02.0	
	comp=Z,276nm,0.7s						
MDUB	**Mudurnu**	**83.96**	**313**	P	**P**	**04 51 00.1**	**-0.3**
SAHE	**Sakarya_HENDEK**	**83.97**	**314**	⇑P	**P**	**04 50 59.9**	**-0.4**
AMRR	**Amara**	**84.00**	**318**	⇓P	**P**	**04 51 00.9**	**+0.6**
AMRR	**Amara**	**84.00**	**318**	P	**P**	**04 51 00.9**	**+0.6**
ICOR	**Ion Corvin**	**84.00**	**318**	⇓P	**P**	**04 51 00.9**	**+0.5**
OZUR		**84.01**	**320**	⇑P	**P**	**04 51 01.6**	**+1.1**
PGOR	**Pogoanele**	**84.03**	**319**	⇑P	**P**	**04 51 02.0**	**+1.5**
HWQ	**Hawqa**	**84.04**	**306**	*e*P	**P**	**04 51 00.8**	**-0.2**
BOSR	**Bodos**	**84.10**	**320**	⇑P	**P**	**04 51 02.2**	**+1.3**
KIZK	**Mersin**	**84.15**	**309**	P	**P**	**04 51 00.7**	**-0.6**

ISR	Istrita	84.16	319	⇑P	P	04 51 02.4	+1.1
ISR	Istrita	84.16	319	P	P	04 51 02.4	+1.1
KMY	Karmoy	84.17	338	eP	P	04 51 01.4	+0.5
KMY				eS	SKSac	05 00 41.7	0.0
SNART	Snartemo	84.19	337	eP	P	04 51 01.4	+0.4
KOLS	Kolonicke sedl	84.19	324	eP	P	04 51 01.4	+0.1
KOLS				pmax	pmax		
	comp=Z,73nm,1.3s						
KOLS	Kolonicke sedl	84.19	324	eP	P	04 51 01.4	+0.1
KOLS				ePP	PP	04 54 24.3	+1.8
COP	Copenhagen	84.20	333	i P	P	04 51 00.9	-0.2
COP				IAmb	IAmb	04 51 03.6	
	comp=Z,686nm,0.7s						
ARCR	ARCALIA	84.22	321	⇓P	P	04 51 02.4	+1.0
LAO	LASA Array	84.22	39	IAmb	IAmb	04 51 04.9	
	comp=Z,612nm,0.9s						
PSUT	Pine Spring	84.22	49	IAmb	IAmb	04 51 05.1	
	comp=Z,536nm,0.8s						
DGMT	Dagmar	84.23	37	IAmb	IAmb	04 51 04.3	
	comp=Z,620nm,0.9s						
MLR	Muntele Rosu	84.28	320	P	P	04 51 01.4	-0.6
MLR	Muntele Rosu	84.28	320	S	SKSac	05 00 41.3	-2.0
	comp=Z,47nm,1.1s,baz=266,slow=23,SNR=8.8						
MLR	Muntele Rosu	84.28	320	⇑P	P	04 51 02.2	+0.2
MLR	Muntele Rosu	84.28	320	P	P	04 51 02.2	+0.2
ZAHL	Zahle	84.30	306	eP	P	04 51 02.5	+0.2
SVRH	Sivrihisar-ESK	84.31	312	P	P	04 51 01.3	-0.9
DOPR	Dopca	84.31	320	⇓P	P	04 51 02.8	+0.9
BMR	Baia Mare	84.32	322	⇓P	P	04 51 02.5	+0.6
BMR	Baia Mare	84.32	322	P	P	04 51 02.5	+0.6
ELS	Elsinore Mount	84.34	55	IAmb	IAmb	04 51 04.9	
	comp=Z,718nm,0.8s						
SILI	Silifke-Mersin	84.36	309	P	P	04 51 01.6	-0.7
SAUV	Serdivan-Sakar	84.36	314	P	P	04 51 01.6	-0.7
LEHL	Lehliu	84.37	318	⇑P	P	04 51 03.3	+1.0
KIZT	Kizilcal	84.39	312	P	P	04 51 02.9	+0.3
STHS	Stebnicka Huta	84.42	325	eP	P	04 51 02.1	-0.3
STHS				pmax	pmax		
	comp=Z,57nm,1.0s						
STHS	Stebnicka Huta	84.42	325	eP	P	04 51 02.1	-0.3
GULT	Gulveren	84.42	313	P	P	04 51 02.0	-0.7
SHPR	Sheep Range	84.43	51	IAmb	IAmb	04 51 06.4	
	comp=Z,458nm,0.9s						
LADK	Ladik-KONYA	84.43	311	P	P	04 51 02.1	-0.7
ASF	Jabal al Asfar	84.44	304	S	SKSac	05 00 43.7	-1.0
	comp=Z,2.2nm,0.7s,baz=188,slow=22,SNR=1.2						
BHL	Bhannes	84.44	306	eP	P	04 51 02.5	-0.4
KEBE	Keben-Mersin	84.46	309	P	P	04 51 02.6	-0.4
RCY	Rachaya	84.52	305	eP	P	04 51 03.3	-0.1
SILT	Sile	84.56	314	P	P	04 51 02.6	-0.6
SILT	Sile	84.56	314	⇓P	P	04 51 03.4	+0.1
KONT	Konya--Tatoy	84.57	311	P	P	04 51 02.7	-0.7
SULR		84.58	319	⇑P	P	04 51 03.4	+0.1
BW06	Boulder Array	84.59	44	IAmb	IAmb	04 51 06.5	
	comp=Z,831nm,1.1s						
PD31	Pinedale Array	84.59	44	IAmb	IAmb	04 51 06.5	
	comp=Z,830nm,1.1s						
PDAR	Pinedale Array	84.59	44	P	P	04 51 04.2	+0.5
PDAR	Pinedale Array	84.59	44	P	P	04 51 03.9	+0.2
	comp=Z,447nm,1.0s,baz=318,slow=2.0,SNR=762						
PDAR				PP	PP	04 54 26.3	+0.1
	comp=Z,88nm,1.0s,baz=316,slow=6.2,SNR=8.6						
PDAR				S	SKSac	05 00 43.1	-2.5
	comp=Z,1.5nm,0.8s,baz=116,slow=13,SNR=1.3						
PDAR				PKKPbc	PKKPbc	05 09 08.9	-2.0
	comp=Z,2.2nm,0.7s,baz=112,slow=4.5,SNR=7.6						
PDAR				PKPPKP	P'P'df	05 17 12.9	-6.6
	comp=Z,1.6nm,0.9s,baz=140,slow=1.2,SNR=3.8						
	comp=Z,447nm,1.0s						
DQRL	Deir Qamar	84.61	306	eP	P	04 51 03.9	+0.1
QRWL	Qaraoun	84.61	305	eP	P	04 51 03.6	-0.1
OJC	Ojcow	84.62	326	eP	P	04 51 03.3	-0.1
OJC				eS	S	05 00 50.3	-2.9
EREN	Erenkoy	84.63	308	P	P	04 51 03.2	-0.5
RGN	Rugen	84.64	332	IAmb	IAmb	04 51 06.2	
	comp=Z,837nm,1.4s						
CIFT	Cifteler, Eski	84.66	312	P	P	04 51 02.6	-1.3
SHBL	Chebaa	84.67	305	eP	P	04 51 04.2	0.0
AKKU	Akkuyu-Mersin	84.73	309	P	P	04 51 03.4	-0.8
MDB	Medias	84.77	321	⇑P	P	04 51 05.6	+1.3
MDB	Medias	84.77	321	P	P	04 51 05.5	+1.3
VOIR		84.82	320	⇑P	P	04 51 04.7	+0.2
VOIR		84.82	320	P	P	04 51 04.7	+0.2
CBBR	Cluj-Babes-Bol	84.85	322	⇑P	P	04 51 05.2	+0.6
BERE	Bereket-Mersin	84.85	309	P	P	04 51 04.6	-0.4
MPU	Maple Canyon	84.85	47	IAmb	IAmb	04 51 08.4	
	comp=Z,607nm,0.9s						
CJR	Cluj-Napoca	84.86	321	⇑P	P	04 51 05.1	+0.4
CJR	Cluj-Napoca	84.86	321	P	P	04 51 05.0	+0.4
KLYT	Kilyos	84.88	315	P	P	04 51 03.8	-1.0
KLYT	Kilyos	84.88	315	⇑P	P	04 51 04.9	+0.1
NIE	Niedzica	84.89	325	eP	P	04 51 05.1	+0.3
NIE				eS	SKSac	05 00 46.1	-0.6
ADVT	Abdulvahap	84.91	314	P	P	04 51 04.2	-0.8
FRB	Frobisher Bay	84.92	12	PKPPKP		05 17 13.9	
	comp=Z,8.9nm,0.8s,baz=182,slow=3.6,SNR=9.3						
FRB	Frobisher Bay	84.92	12	P	P	04 51 04.6	+0.1
MESR	Meseseni	84.94	322	⇑P	P	04 51 05.1	+0.2
MTUR	Matau	84.94	320	⇑P	P	04 51 05.6	+0.4
MTUR	Matau	84.94	320	P	P	04 51 05.5	+0.4
CAVI	Cavuskoy	84.97	314	P	P	04 51 04.9	-0.4
ISK	Istanbul-Kandi	84.98	315	P	P	04 51 04.4	-0.9
ISK	Istanbul-Kandi	84.98	315	P	P	04 51 03.8	-1.5
ISK	Istanbul-Kandi	84.98	315	P	P	04 51 04.6	-0.7
KAVV	Kandilli-Istan	84.98	315	P	P	04 51 04.1	-1.2
HDMB	Hadim	85.02	310	P	P	04 51 04.4	-1.5
PFO	Pinyon Flats O	85.05	54	P	P	04 51 06.9	+0.9
PFO	Pinyon Flats O	85.05	54	P	P	04 51 06.5	+0.5
	comp=Z,1µm,0.7s,baz=307,slow=4.6,SNR=1496						
PFO				PP	PP	04 54 30.1	+0.1
	comp=Z,67nm,1.1s,baz=293,slow=7.1,SNR=4.8						
PFO				S	SKSac	05 00 46.9	-1.6
	comp=Z,4.8nm,1.1s,baz=60,slow=22,SNR=13						
PFO	Pinyon Flats O	85.05	54	c iP	P	04 51 06.8	+0.9
YLV	Yalova	85.06	314	P	P	04 51 04.9	-0.9
MMAI	Mount Meron Ar	85.08	305	P	P	04 51 06.2	+0.1
	comp=Z,653nm,1.0s,baz=44,slow=5.0,SNR=227						
MMAI				S	SKSac	05 00 48.6	0.0
	comp=Z,0.6nm,0.3s,baz=168,slow=41,SNR=1.4						
MMAI				PKKPbc	PKKPbc	05 09 09.9	+0.7
	comp=Z,2.4nm,0.6s,baz=251,slow=5.2,SNR=4.2						
	comp=Z,653nm,1.0s						
BGKT	Bogazkoy	85.09	315	P	P	04 51 04.9	-0.9
ARR	Arges	85.10	320	⇑P	P	04 51 06.8	+0.9
BSUT	Blindstream Ca	85.11	46	IAmb	IAmb	04 51 10.2	
	comp=Z,885nm,1.4s						
TNR	Turnu Rosu	85.13	320	⇑P	P	04 51 07.2	+1.2
TNR	Turnu Rosu	85.13	320	P	P	04 51 07.2	+1.2
MARR	Marisel-Cluj	85.14	322	⇓P	P	04 51 06.1	0.0
LFK	Lefkose	85.21	308	P	P	04 51 06.1	-0.5
SEYD	Seydisehir-KON	85.22	310	P	P	04 51 05.9	-0.8
CTYL	Yalikoy Yolu	85.22	315	P	P	04 51 05.9	-0.6
CTYL	Yalikoy Yolu	85.22	315	⇓P	P	04 51 06.3	-0.2
BORG	Borgarnes	85.27	352	P	P	04 51 07.0	+0.8
BORG	Borgarnes	85.27	352	P	P	04 51 07.0	+0.8
BORG				pmax	pmax		
	comp=Z,222nm,1.4s						
DRGR		85.29	322	P	P	04 51 06.6	-0.2
DRGR		85.29	322	⇓P	P	04 51 06.8	-0.1
DRGR		85.29	322	P	P	04 51 06.7	-0.1
MVU	Marysvale	85.32	48	IAmb	IAmb	04 51 11.1	
	comp=Z,774nm,1.0s						
MMLI	Mount Malkishu	85.37	305	P	P	04 51 07.5	+0.1
LRW	Lerwick	85.38	341	eP	P	04 51 07.2	+0.4
LRW				IAmb	IAmb	04 51 09.7	
	comp=Z,126nm,0.9s						
ARMT	Armutlu	85.39	314	P	P	04 51 06.3	-1.0
HUMR	Humele	85.40	319	⇓P	P	04 51 07.0	-0.3
SLVT	Silivri	85.41	315	P	P	04 51 07.2	-0.2
SHUT	Suhut-Afyon	85.43	312	P	P	04 51 07.2	-0.5
SSRD	Sdr. Stenderup	85.45	334	i P	P	04 51 07.1	-0.1
SSRD				IAmb	IAmb	04 51 09.5	
	comp=Z,282nm,1.0s						
LCMT	Little Creek M	85.45	50	IAmb	IAmb	04 51 11.4	
	comp=Z,737nm,0.9s						
LANS	Liptovska Anna	85.48	325	eP	P	04 51 08.3	+0.6
LANS				pmax	pmax		
	comp=Z,112nm,1.8s						
LANS	Liptovska Anna	85.48	325	eP	P	04 51 08.3	+0.6
LANS				ePP	PP	04 54 31.8	-1.0
MDNY	Mudanya-Bursa	85.48	314	P	P	04 51 07.0	-0.8
COPA	Copaceanca	85.50	319	⇑P	P	04 51 07.6	-0.2
GAZI	Gazipasa	85.53	309	P	P	04 51 06.9	-1.2
LOT	Lotru	85.53	320	P	P	04 51 07.5	-0.6
LOT	Lotru	85.53	320	⇑P	P	04 51 08.3	+0.3
SZH	Strazhitsa	85.58	318	P	P	04 51 07.4	-0.8
UJAP	Al Uja	85.59	304	P	P	04 51 08.3	-0.1
ANGG	Ammassalik, Gr	85.59	359	i P	P	04 51 07.2	-0.6
ANGG				IAmb	IAmb	04 51 08.5	
	comp=Z,174nm,1.3s						
BORR	Bors	85.60	323	⇑P	P	04 51 09.5	+1.3
PHSR	Pinarhisar	85.60	316	P	P	04 51 08.1	-0.2
PHSR	Pinarhisar	85.60	316	⇑P	P	04 51 08.8	+0.5
TVSB	Tavsanli	85.64	313	P	P	04 51 08.1	-0.6
OKC	Ostrava-Krasne	85.68	326	eP	P	04 51 08.9	+0.4
OKC	Ostrava-Krasne	85.68	326	eP	P	04 51 08.9	+0.4
ISOG	Isortoq, Green	85.68	359	i P	P	04 51 07.5	-0.7
ISOG				IAmb	IAmb	04 51 09.3	
	comp=Z,168nm,1.1s						
CRLT	Corlu	85.76	315	P	P	04 51 09.2	+0.1
STEB	Steborice	85.80	326	eP	P	04 51 09.5	+0.4
GHAJ	Ghor Haditha	85.86	304	IAmb	IAmb	04 51 11.8	
	comp=Z,627nm,0.9s						
ISP	Isparta	85.86	311	P	P	04 51 08.4	-1.4
ISP	Isparta	85.86	311	eP	P	04 51 08.6	-1.2
KSP	Ksiaz	85.89	328	eP	P	04 51 09.6	0.0
KSP				eS	SKSac	05 00 51.2	-1.7
KSP	Ksiaz	85.89	328	P	P	04 51 09.3	-0.3
RUE	Ruedersdorf	85.90	330	eP	P	04 51 08.6	-0.9
YUH	Yuha Desert	85.94	55	IAmb	IAmb	04 51 13.3	
	comp=Z,791nm,0.9s						
EDRB	Edirne	85.95	316	P	P	04 51 09.7	-0.3
EDRB	Edirne	85.95	316	P	P	04 51 09.4	-0.7
P18A	Preston Nutter	85.95	46	IAmb	IAmb	04 51 14.1	
	comp=Z,2µm,1.9s						
BAND	Balkesir-Ban	85.98	314	⇑P	P	04 51 09.8	-0.5
BCK	Bucak	86.01	311	P	P	04 51 08.3	-2.2
BCK	Bucak	86.01	311	P	P	04 51 08.3	-2.2
MORC	Moravsky Berou	86.02	326	⇓iP	P	04 51 09.9	-0.3
MORC				epP	pP	04 52 47.8	+0.2
MORC				ePP	PP	04 54 36.0	-1.1
MORC				eSKS	SKSac	05 00 52.5	-1.2
MORC				e		05 32 25.1	
MORC	Moravsky Berou	86.02	326	⇓P	P	04 51 10.2	0.0
MORC	Moravsky Berou	86.02	326	P	P	04 51 10.2	0.0
VLAD	Vladila	86.05	319	⇑P	P	04 51 10.6	+0.1
W13A	Hualapai Mount	86.06	52	IAmb	IAmb	04 51 14.2	
	comp=Z,479nm,1.4s						
PSZ	Piszkesteto	86.06	324	IAmb	IAmb	04 51 13.4	
	comp=Z,497nm,1.3s						
PSZ	Piszkesteto	86.06	324	⇑P	P	04 51 10.8	+0.2
PSZ	Piszkesteto	86.06	324	P	P	04 51 10.7	+0.2
PSZ	Piszkesteto	86.06	324	eP	P	04 51 10.0	-0.5
SRU	San Rafael Swe	86.07	47	IAmb	IAmb	04 51 13.4	
	comp=Z,716nm,1.4s						
TAOE	Nuku Hiva Isla	86.11	102	IAmb	IAmb	04 51 14.6	
	comp=Z,396nm,0.9s						
TAOE	Nuku Hiva Isla	86.11	102	P	P	04 51 12.5	+1.2
BASM	Basmaki-Afyon	86.11	312	P	P	04 51 09.5	-1.5
GZR	Gura Zlata	86.12	321	⇑P	P	04 51 10.7	-0.2
GZR	Gura Zlata	86.12	321	P	P	04 51 10.6	-0.2
OSTC	Ostas	86.12	328	eP	P	04 51 10.7	0.0
OSTC	Ostas	86.12	328	eP	P	04 51 10.7	0.0
EDC	Edincik	86.14	315	P	P	04 51 10.3	-0.6
EDC	Edincik	86.14	315	P	P	04 51 10.4	-0.5
SIMA	Simav-Kutahya	86.15	313	P	P	04 51 10.3	-0.9
MAUC	Maruska	86.15	326	eP	P	04 51 11.1	+0.2
MAUC				eSKS	SKSac	05 00 53.4	-1.1
CHVC	Chvalec	86.18	328	eP	P	04 51 11.0	0.0
CHVC	Chvalec	86.18	328	eP	P	04 51 11.0	0.0
KRLC	Kraliky	86.18	327	eP	P	04 51 11.0	0.0
KRLC				epP	pP	04 52 47.2	-1.3
KRLC	Kraliky	86.18	327	eP	P	04 51 11.0	0.0
DPC	Dobruska-Polom	86.21	327	eP	P	04 51 11.6	+0.4
DPC				AMS	AMS	05 36 40.0	
	comp=Z,3µm,14.5s						
DPC	Dobruska-Polom	86.21	327	eP	P	04 51 11.6	+0.4
DPC				MLR	MLR		
	comp=Z,3µm,14.5s						
VYHS	Vyhne	86.22	325	eP	P	04 51 11.2	0.0
VYHS	Vyhne	86.22	325	eP	P	04 51 11.2	0.0
SURR	Surduc	86.25	321	⇓P	P	04 51 11.0	-0.4
UPC	Upice	86.25	328	eP	P	04 51 11.5	+0.2
UPC				eSKS	SKSac	05 00 52.4	-2.6
UPC	Upice	86.25	328	eP	P	04 51 11.5	+0.2
UPC				e		05 00 52.4	
ESJX	Sierra Juarez	86.26	55	P	P	04 51 12.9	+1.0
BSEG	Bad Segeberg	86.31	333	eP	P	04 51 11.3	-0.1
	comp=Z,62nm,0.7s,baz=43,slow=4.7						
BSEG				eL	L	05 35 18.6	
	comp=Z,3µm,18.5s						
SRE	Strehaia	86.33	320	⇑P	P	04 51 12.6	+0.8
SRE	Strehaia	86.33	320	P	P	04 51 12.6	+0.8
RKY	Sarkoy-Tekirda	86.36	315	P	P	04 51 11.4	-0.7
U15A	North Rim	86.41	50	IAmb	IAmb	04 51 17.4	
	comp=Z,391nm,0.9s						
KORT	Korkueli	86.43	311	P	P	04 51 11.9	-0.7
K22A	Casper	86.47	42	IAmb	IAmb	04 51 16.9	
	comp=Z,555nm,0.9s						
CPBX	Cerro Prieto	86.50	55	IAmb	IAmb	04 51 16.2	
	comp=Z,668nm,0.9s						
JAVC	Velka Javorina	86.56	326	⇓iP	P	04 51 13.7	+0.8
JAVC				eSKS	SKSac	05 00 57.3	+0.2
JAVC				e		05 32 56.1	
GORT1	Trebel	86.59	331	eP	P	04 51 12.9	+0.1
	comp=Z,287nm,1.4s,baz=43,slow=4.7						
HMU	Henry Mountain	86.59	48	IAmb	IAmb	04 51 16.6	
	comp=Z,1µm,1.5s						
BZS	Buzias	86.61	321	P	P	04 51 12.2	-0.9
BZS	Buzias	86.61	321	⇓P	P	04 51 12.7	-0.4
BZS	Buzias	86.61	321	P	P	04 51 12.7	-0.4
HERR	Herculane	86.64	321	⇑P	P	04 51 12.9	-0.3
NUUK	Nuuk	86.66	5	i P	P	04 51 12.2	-0.7
NUUK				IAmb	IAmb	04 51 14.9	
	comp=Z,94nm,1.0s						
KULA	Kula-Manisa	86.68	313	P	P	04 51 12.6	-1.1
KULA	Kula-Manisa	86.68	313	P	P	04 51 12.4	-1.3
VTX	Valle De La Tr	86.70	56	IAmb	IAmb	04 51 17.2	
	comp=Z,489nm,0.9s						
PUNG	Punghina	86.72	320	⇑P	P	04 51 14.0	+0.4
ERIK	Erikli-Kesan	86.78	315	P	P	04 51 13.4	-0.6
VRAC	Vranov	86.79	327	S	SKSac	05 00 57.1	-1.3
	comp=Z,2.8nm,0.5s,baz=242,slow=16,SNR=1.3						
VRAC	Vranov	86.79	327	⇓iP	P	04 51 13.7	-0.2
VRAC				epP	pP	04 52 52.1	+0.6
VRAC				ePP	PP	04 54 41.3	-1.9
VRAC				eSKS	SKSac	05 00 57.8	-0.6
VRAC				e		05 32 53.6	
VRAC	Vranov	86.79	327	⇑P	P	04 51 14.4	+0.5
VRAC	Vranov	86.79	327	P	P	04 51 14.4	+0.5
BUD	Budapest	86.79	324	P	P	04 51 13.4	-0.5
LPK	Lapseki	86.81	315	P	P	04 51 13.3	-0.8
MSEY	Mahe Island	86.84	263	P	P	04 51 15.2	+0.4
MSEY				IAmb	IAmb	04 51 17.3	
	comp=Z,561nm,0.9s						
MSEY	Mahe Island	86.84	263	P	P	04 51 15.2	+0.4
MSEY				S	SKSac	05 00 58.9	-0.9
MSEY	Mahe Island	86.84	263	P	P	04 51 15.2	+0.4
MSEY				pmax	pmax		
	comp=Z,561nm,0.9s						
MSEY	Mahe Island	86.84	263	i P	P	04 51 15.4	+0.7
	SNR=42						
APMY	Acipayam-Deniz	86.86	312	P	P	04 51 13.1	-1.4
ELL	Elmali	86.86	311	P	P	04 51 13.4	-1.2
ELL	Elmali	86.86	311	IAmb	IAmb	04 51 18.4	
	comp=Z,532nm,0.7s						
PVCC	Panska Ves	86.91	328	eP	P	04 51 14.4	0.0
PVCC				eSKS	SKSac	05 00 56.4	-2.6
PVCC	Panska Ves	86.91	328	eP	P	04 51 14.4	0.0
PVCC				e		05 00 56.4	
SMOL	Smolenice	86.91	326	eP	P	04 51 14.6	+0.1
SMOL				pmax	pmax		
	comp=Z,47nm,1.1s						
O20A	White River Ci	86.92	45	IAmb	IAmb	04 51 17.4	
	comp=Z,511nm,1.0s						
KDZ	Kurdzhali	86.93	317	P	P	04 51 14.3	-0.4
KDZ	Kurdzhali	86.93	317	P	P	04 51 13.9	-0.8
ALN	Alexandroupoli	86.94	316	P	P	04 51 13.8	-0.9
ALN	Alexandroupoli	86.94	316	P	P	04 51 13.7	-1.0
ALN	Alexandroupoli	86.94	316	P	P	04 51 13.7	-1.0
SRO	Srobarova	86.94	325	eP	P	04 51 14.8	+0.2
SRO				pmax	pmax		
	comp=Z,220nm,0.1s						
SRO	Srobarova	86.94	325	eP	P	04 51 14.8	+0.2
BRG	Berggiesshubel	86.95	329	eP	P	04 51 14.4	-0.2
	comp=Z,96nm,0.8s,baz=43,slow=4.7						
BRG				eL	L	05 38 34.6	
	comp=Z,2µm,19.1s						
BRG	Berggiesshubel	86.95	329	⇓iP	P	04 51 14.1	-0.5
BRG				Amp		04 51 16.5	
	comp=Z,185nm,1.0s						
BRG	Berggiesshubel	86.95	329	pP	pP	04 52 54.0	+1.8
BRG	Berggiesshubel	86.95	329	sP	sP	04 53 41.0	+3.9
BRG				PP	PP	04 54 44.8	+0.3
BRG				Amp		04 54 45.2	
	comp=Z,44nm,1.0s						
BRG	Berggiesshubel	86.95	329	S	S	05 01 14.0	-1.5
BRG	Berggiesshubel	86.95	329	sS	sS	05 04 08.0	-2.5
BRG	Berggiesshubel	86.95	329	SS	SS	05 07 07.0	-1.9
ENEZ	Enez	86.97	316	P	P	04 51 14.1	-0.7
GELI	Tayfur-Gelibol	86.97	315	P	P	04 51 14.1	-0.8
PLD	Plovdiv	86.97	317	P	P	04 51 14.7	-0.1
PLD	Plovdiv	86.97	317	P	P	04 51 14.3	-0.5
CAVK	Edirne/Enez-Ca	86.98	316	⇑P	P	04 51 14.6	-0.3
RSSD	Black Hills	87.01	40	P	P	04 51 15.8	+0.5
RSSD	Black Hills	87.01	40	P	P	04 51 15.8	+0.5
RSSD				pmax	pmax		
	comp=Z,2µm,1.9s						
BANR	Banloc	87.03	322	⇑P	P	04 51 15.8	+0.8
KRUC	Moravsky	87.05	326	⇓iP	P	04 51 14.6	-0.5
KRUC				epP	pP	04 52 53.3	+0.6
KRUC				ePP	PP	04 54 42.1	-3.2
KRUC				eSKS	SKSac	05 00 59.1	-0.8
KRUC				e		05 33 02.3	
YAYO	Edremit-Balk	87.06	314	P	P	04 51 14.3	-1.0
CLL	Collm	87.07	330	⇓iP	P	04 51 14.4	-0.7
CLL				e*SP	sP	04 53 38.0	+0.4
CLL				e		05 00 58.0	
CLL				eS	SKKSac	05 01 13.0	+2.6
CLL				pmax	pmax		
	comp=Z,449nm,1.4s						
CLL	Collm	87.07	330	eP	P	04 51 14.7	-0.4
	comp=Z,424nm,1.2s,baz=43,slow=4.7						
CLL				eL	L	05 34 09.1	
	comp=Z,3µm,19.4s						
CLL	Collm	87.07	330	⇓iP	P	04 51 14.4	-0.7
	comp=Z,449nm,1.4s						
CLL				epP	pP	04 52 53.0	+0.1
CLL				esP	sP	04 53 38.0	+0.4
CLL				ePP	PP	04 54 49.0	+3.7
CLL				epPP		04 56 06.0	
CLL				esPP		04 56 56.0	
CLL				eSKSac	SKSac	05 00 58.0	-1.9
CLL				eS	SKKSac	05 01 13.0	+2.6
	comp=N,3µm,26.3s						
CLL				eS	SKKSac	05 01 13.0	+2.6
	comp=E,4µm,29.1s						
CLL				esS	sS	05 04 09.0	-2.5
CLL				eSS	SS	05 07 08.0	-2.5
CLL				esSS		05 09 40.0	
CLL				eSSS	SSS	05 10 45.0	
CLL				eSSSS		05 13 50.0	
CLL				AMS	AMS	05 33 00.0	
	comp=Z,3µm,19.5s						
MODS	Modra-Piesok	87.08	326	eP	P	04 51 15.1	-0.2
MODS				pmax	pmax		
	comp=Z,146nm,1.1s						
MODS	Modra-Piesok	87.08	326	eP	P	04 51 15.1	-0.2
MODS				ePP	PP	04 54 47.1	+1.5
HLG	Helgoland	87.09	334	eP	P	04 51 15.1	0.0
	baz=43,slow=4.7						
MDVR	Moldovita	87.09	321	⇑P	P	04 51 15.3	-0.1
RDO	Rodhopi	87.10	316	P	P	04 51 14.7	-0.8
RDO	Rodhopi	87.10	316	P	P	04 51 14.3	-1.1
FLTG	Flechtingen	87.10	331	eP	P	04 51 14.6	-0.6
	comp=Z,67nm,0.7s,baz=43,slow=4.7						
RICC	Richard	87.11	329	eP	P	04 51 15.9	+0.6
EIL	Elat	87.16	302	P	P	04 51 15.1	-0.9
ULM	Lac du Bonnet	87.17	32	IAmb	IAmb	04 51 17.9	
	comp=Z,317nm,0.9s						
ULM	Lac du Bonnet	87.17	32	P	P	04 51 15.4	-0.2
	comp=Z,217nm,0.7s,baz=311,slow=5.8,SNR=174						
ULM				S	SKSac	05 00 57.2	-3.3
	comp=Z,4.8nm,0.9s,baz=159,slow=21,SNR=1.4						
ULM				PKKPbc	PKKPbc	05 09 04.5	-0.4
	comp=Z,20nm,0.7s,baz=142,slow=3.1,SNR=18						
ULM				SKKPbc	SKKPbc	05 11 58.5	+1.3
	comp=Z,13nm,0.8s,baz=115,slow=2.5,SNR=11						
	comp=Z,217nm,0.7s						
ULM	Lac du Bonnet	87.17	32	c iP	P	04 51 15.6	0.0
GOPC	GO Pecny, Ondr	87.23	328	eP	P	04 51 15.8	-0.2
GOPC	GO Pecny, Ondr	87.23	328	eP	P	04 51 15.8	-0.2
E28A	Huff	87.27	37	IAmb	IAmb	04 51 18.8	
	comp=Z,471nm,0.8s						
PRA	Prague	87.29	328	eP	P	04 51 16.1	-0.1
PRA				epP	pP	04 52 53.6	-0.3
PRA	Prague	87.29	328	eP	P	04 51 16.1	-0.1
PRA				e*PP	pP	04 52 53.6	-0.3
PRU	Pruhonice	87.30	328	eP	P	04 51 15.4	-0.8
PRU				AMS	AMS	05 37 20.0	
	comp=Z,4µm,14.5s						
PRU	Pruhonice	87.30	328	eP	P	04 51 15.4	-0.8
PRU				MLR	MLR		
	comp=Z,4µm,14.5s						
Y14A	Wickenburg	87.30	52	IAmb	IAmb	04 51 19.4	
	comp=Z,302nm,0.8s						
TREC	Trest	87.33	327	eP	P	04 51 16.5	+0.1
TREC	Trest	87.33	327	eP	P	04 51 16.5	+0.1
AKAS	Kas	87.36	310	P	P	04 51 14.9	-2.1
HSKC	Hora Svate Kat	87.37	329	eP	P	04 51 16.2	-0.4
PV21	Cone Mtn., Par	87.38	47	IAmb	IAmb	04 51 20.5	
	comp=Z,356nm,1.0s						
EZN	Ezine	87.40	315	P	P	04 51 16.1	-0.8
EZN	Ezine	87.40	315	⇓P	P	04 51 16.5	-0.5
EZN	Ezine	87.40	315	P	P	04 51 16.4	-0.5
113A	Mohawk Valley,	87.41	54	IAmb	IAmb	04 51 19.8	
	comp=Z,415nm,0.9s						
GADA	Gvkgeada	87.44	315	P	P	04 51 16.3	-0.8
NRDL	Niedersach Rie	87.46	332	eP	P	04 51 16.6	-0.2
	comp=Z,102nm,1.2s,baz=43,slow=4.7						
FETY	Fethiye	87.47	311	P	P	04 51 15.9	-1.5
DKL	Dikili	87.48	314	P	P	04 51 16.3	-1.0
ASSE	Asse, Remlinge	87.49	331	eP	P	04 51 16.7	-0.2
	comp=Z,61nm,1.1s,baz=43,slow=4.7						
AYDB	Zeytinkoy-Aydi	87.50	313	P	P	04 51 17.0	-0.6
SMTH	Samothraki Isl	87.50	316	P	P	04 51 15.5	-1.9
PV04	Paradox Valley	87.52	47	IAmb	IAmb	04 51 21.4	
	comp=Z,863nm,1.4s						
BIGH	Upper Bighouse	87.52	342	eP	P	04 51 17.3	+0.2
BIGH				IAmb	IAmb	04 51 19.8	
	comp=Z,59nm,0.7s						
PV17	East Wray Mesa	87.55	47	IAmb	IAmb	04 51 21.2	
	comp=Z,741nm,1.0s						
BOZC	Bozcaada	87.56	315	P	P	04 51 16.4	-1.3
PV16	Nyswonger Mesa	87.56	47	IAmb	IAmb	04 51 20.8	
	comp=Z,433nm,1.0s						
SFX	San Felipe	87.56	56	P	P	04 51 18.9	+1.0
SFX				IAmb	IAmb	04 51 21.2	
	comp=Z,936nm,1.3s						
SFX					pP	04 52 55.6	-0.2
PV05	Paradox Valley	87.58	47	IAmb	IAmb	04 51 21.4	
	comp=Z,597nm,1.1s						
RETH	Rethem/Aller,	87.58	332	eP	P	04 51 17.2	-0.3
	comp=Z,210nm,1.3s,baz=43,slow=4.7						
PV11	David Mesa, Pa	87.59	47	IAmb	IAmb	04 51 20.9	
	comp=Z,589nm,1.0s						
PV18	Skein Mesa, Pa	87.60	47	IAmb	IAmb	04 51 21.4	
	comp=Z,817nm,1.0s						
PV03	Paradox Valley	87.64	47	IAmb	IAmb	04 51 21.5	
	comp=Z,568nm,1.1s						
DALY	Dalyan (Mula)	87.65	311	P	P	04 51 17.1	-1.0
PV13	Radium Mtn., P	87.71	47	IAmb	IAmb	04 51 21.3	
	comp=Z,344nm,0.8s						
PV02	Paradox Valley	87.73	47	IAmb	IAmb	04 51 21.5	
	comp=Z,465nm,0.9s						
PRK	Paraskevi	87.77	314	P	P	04 51 17.3	-1.4
BLCB	Balcova	87.79	313	P	P	04 51 17.8	-1.0
ROCAM	Rodrigues Isla	87.80	246	IAmb	IAmb	04 51 21.3	
	comp=Z,380nm,0.8s						
BOVS	Bovan	87.81	320	⇑P	P	04 51 18.4	-0.4
MORH	Mrgy, Hungar	87.82	323	⇑P	P	04 51 18.5	-0.2
ZVC	Zvikov	87.84	328	eP	P	04 51 17.7	-1.1
FRGS	Fruska Gora	87.89	322	⇓iP	P	04 51 18.6	-0.5
SOP	Sopron	87.91	325	P	P	04 51 19.1	0.0
THAS	Thassos island	87.92	316	P	P	04 51 17.8	-1.5
MMB	Musomishta	87.93	317	P	P	04 51 18.0	-1.4
TANN	Tannenbergstha	87.94	329	eP	P	04 51 19.2	-0.2
	comp=Z,312nm,1.6s,baz=43,slow=4.7						
TURN	Turunc	87.95	311	P	P	04 51 18.8	-0.7

MLSB	Milas	87.95	312	P	P	04 51 19.1	-0.5
RONA	Rosalia, Austr	88.02	325	i P	P	04 51 19.7	0.0
	comp=Z,270nm,1.1s,SNR=116						
RONA				i SKKP		05 11 56.5	
	comp=Z,4.8nm,1.1s						
SIGR	SIGRI	88.05	314	P	P	04 51 19.0	-1.0
SIGR	SIGRI	88.05	314	P	P	04 51 18.5	-1.4
AIS	Amsterdam Isla	88.07	224	IAmb	IAmb	04 51 22.1	
	comp=Z,965nm,1.7s						
GCAM	G?zelcaml?	88.07	313	P	P	04 51 19.5	-0.6
NKC	Novy Kostel	88.08	329	eP	P	04 51 18.4	-1.5
NKC	Novy Kostel	88.08	329	eP	P	04 51 18.4	-1.5
CONA	Conrad Observa	88.08	326	i P	P	04 51 20.1	0.0
	comp=Z,323nm,1.2s,SNR=169						
CONA				ePP	PP	04 54 53.4	-0.2
	comp=Z,48nm,1.1s						
CONA				ePKKP	PKKPbc	05 09 02.1	-0.7
	comp=Z,4.6nm,1.1s						
CONA				i SKKP		05 11 55.7	
	comp=Z,6.5nm,0.8s						
MCD	Coleburn Disti	88.11	341	eP	P	04 51 19.6	-0.2
MCD				IAmb	IAmb	04 51 22.4	
	comp=Z,121nm,0.6s						
MOX	Moxa	88.16	330	eP	P	04 51 20.1	-0.1
	comp=Z,35nm,0.8s,baz=43,slow=4.7						
MOX				eL	L	05 28 42.6	
	comp=Z,1µm,21.0s						
LINV	Loch Inver, As	88.17	342	eP	P	04 51 20.4	+0.3
LINV				IAmb	IAmb	04 51 22.7	
	comp=Z,59nm,0.8s						
GTTG	Gottingen	88.21	331	eP	P	04 51 20.7	+0.2
	comp=Z,41nm,0.7s,baz=43,slow=4.7						
CKRC	Cesky Krumlov	88.22	327	eP	P	04 51 19.6	-1.0
CKRC				epP	pP	04 52 57.2	-1.3
CKRC				ex	x	04 53 42.6	
CKRC				ePP	PP	04 54 54.9	+0.4
CKRC				eSKS	SKSac	05 01 05.9	-1.0
CKRC	Cesky Krumlov	88.22	327	eP	P	04 51 19.6	-1.0
CKRC				e*PP	pP	04 52 57.2	-1.3
CKRC				e		04 53 42.6	
CKRC				e		04 54 54.9	
CKRC				e		05 01 05.9	
KOKK	Kokkinochori,	88.22	317	P	P	04 51 19.5	-1.3
SRS	Serrai	88.28	317	P	P	04 51 19.9	-1.2
SRS	Serrai	88.28	317	P	P	04 51 19.6	-1.5
KHC	Kasperske Hory	88.34	328	eP	P	04 51 21.1	-0.1
KHC				esP	sP	04 53 42.1	-2.1
KHC				ePP	PP	04 54 55.1	-0.4
KHC				eSKS	SKSac	05 01 05.8	-1.9
KHC				AMS	AMS	05 37 50.0	
	comp=Z,4µm,14.7s						
KHC	Kasperske Hory	88.34	328	d iP	P	04 51 20.8	-0.4
KHC				pmax	pmax		
	comp=Z,351nm,0.9s						
ARG	Arkhangelos	88.35	311	P	P	04 51 19.9	-1.5
ARG	Arkhangelos	88.35	311	IAmb	IAmb	04 51 24.8	
	comp=Z,530nm,1.3s						
ARG	Arkhangelos	88.35	311	P	P	04 51 20.0	-1.5
ARG	Arkhangelos	88.35	311	P	P	04 51 20.9	-0.5
BODT	Bodrum	88.39	312	P	P	04 51 20.5	-1.2
BODT	Bodrum	88.39	312	P	P	04 51 20.0	-1.7
MANZ	Manzenberg	88.41	329	eP	P	04 51 21.5	0.0
	comp=Z,77nm,1.4s,baz=43,slow=4.7						
CHOS	Chios island	88.42	314	P	P	04 51 20.8	-1.0
CHOS	Chios island	88.42	314	P	P	04 51 20.7	-1.1
TEKS	Tekeris	88.44	322	⇓iP	P	04 51 20.7	-1.0
MVCO	Mesa Verde	88.47	48	IAmb	IAmb	04 51 25.6	
	comp=Z,619nm,1.6s						
GEC2	GERESS Array S	88.49	327	eP	P	04 51 21.6	-0.4
	comp=Z,65nm,0.8s,baz=43,slow=4.7						
GEC2				eL	L	05 40 17.5	
	comp=Z,2µm,18.3s						
GERES	GERESS Array B	88.49	327	P	P	04 51 21.7	-0.3
GERES	GERESS Array B	88.49	327	P	P	04 51 21.1	-0.8
	comp=Z,70nm,0.8s,baz=41,slow=4.3,SNR=244						
GERES				PKKP	PKKPdf	05 08 54.4	-0.1
	comp=Z,1.2nm,0.8s,baz=112,slow=2.6,SNR=4.2						
GERES				PKKPbc	PKKPbc	05 09 01.0	-0.9
	comp=Z,2.7nm,0.7s,baz=222,slow=1.8,SNR=10						
GERES				SKKPbc	SKKPbc	05 11 55.2	+0.8
	comp=Z,5.1nm,0.8s,baz=215,slow=1.6,SNR=9.9						
	comp=Z,70nm,0.8s						
GERES	GERESS Array B	88.49	327	P	P	04 51 21.7	-0.3
ROTZ	Rotzenmuhle	88.52	329	eP	P	04 51 22.2	+0.2
	comp=Z,31nm,0.9s,baz=43,slow=4.7						
AGMN	Agassiz Nation	88.53	33	IAmb	IAmb	04 51 24.3	
	comp=Z,329nm,0.9s						
OUR	Ouranopolis	88.53	316	P	P	04 51 21.3	-0.9
OUR	Ouranopolis	88.53	316	P	P	04 51 20.6	-1.6
EPLO	Experimental L	88.56	31	IAmb	IAmb	04 51 24.5	
	comp=Z,692nm,0.9s						
IBBN	Ibbenburen	88.56	333	eP	P	04 51 21.9	-0.2
	comp=Z,205nm,0.7s,baz=43,slow=4.7						
WET	Wettzell	88.66	328	eP	P	04 51 22.6	0.0
	comp=Z,66nm,1.0s,baz=43,slow=4.7						
WET				eL	L	05 34 02.7	
	comp=Z,3µm,18.2s						
KNT	Kendrikon	88.67	317	P	P	04 51 21.9	-1.0
KNT	Kendrikon	88.67	317	P	P	04 51 22.0	-0.8
ARSA	Arzberg	88.71	325	i P	P	04 51 22.6	-0.4
	comp=Z,228nm,1.2s,SNR=102						
ARSA				i PP	PP	04 54 57.2	-1.3
	comp=Z,25nm,1.1s						
ARSA				i PKKP	PKKPbc	05 09 00.9	-0.3
	comp=Z,9.0nm,0.8s						
ARSA				i SKKP		05 11 55.4	
	comp=Z,6.1nm,0.7s						
ISCO	Idaho Springs	88.74	44	P	P	04 51 24.6	+1.0
VAY	Valandovo	88.76	318	P	P	04 51 22.2	-1.0
VAY	Valandovo	88.76	318	i P	P	04 51 22.8	-0.5
PLG	Polygyros	88.83	317	P	P	04 51 22.3	-1.3
KOGS	Kog	88.90	325	eP	P	04 51 22.9	-0.9
KOGS				eSKSac	SKSac	05 01 07.0	-3.9
KOGS				i ScS	SKKSac	05 01 26.5	+2.2
HORT	Hortiatis	88.90	317	P	P	04 51 22.5	-1.5
HORT	Hortiatis	88.90	317	P	P	04 51 22.2	-1.8
MOA	Molln	88.92	327	i P	P	04 51 23.6	-0.3
	comp=Z,222nm,1.2s,SNR=92						
MOA				i PP	PP	04 54 58.9	-1.2
	comp=Z,32nm,1.1s						
BBLS	Lazi&#263i	88.95	321	⇓iP	P	04 51 23.6	-0.6
THE	Thessaloniki	88.96	317	P	P	04 51 22.3	-1.8
PAIG	Paliouri	88.96	316	P	P	04 51 23.0	-1.3
KPL	Plockton	88.99	342	⇑eP	P	04 51 24.4	+0.4
KPL				IAmb	IAmb	04 51 27.4	
	comp=Z,122nm,0.7s						
GRA1	Grafenberg Arr	89.02	329	IAmb	IAmb	04 51 27.3	
	comp=Z,593nm,1.3s						
GRF	Grafenberg Arr	89.02	329	eP	P	04 51 24.6	+0.3
	comp=Z,221nm,0.9s,baz=43,slow=4.7						
GRF				eL	L	05 29 28.5	
	comp=Z,2µm,18.2s						
GRFO	Grafenberg	89.02	329	P	P	04 51 24.2	-0.1
GRFO				IAmb	IAmb	04 51 27.2	
	comp=Z,552nm,1.3s						
GRFO	Grafenberg	89.02	329	P	P	04 51 24.2	-0.1
GRFO				pmax	pmax		
	comp=Z,552nm,1.3s						
SJES	Sjenica	89.02	320	⇓iP	P	04 51 24.2	-0.4
HAPS	Han Pijesak,Bl	89.05	322	⇓iP	P	04 51 24.5	-0.2
DOB	Doboj	89.08	322	eP	P	04 51 25.4	+0.7
GRG	Griva	89.09	317	P	P	04 51 23.6	-1.3
KASTN	Kahler Asten	89.12	332	eP	P	04 51 24.4	-0.4
	comp=Z,28nm,0.6s,baz=43,slow=4.7						
RUDO	Rudo	89.13	321	eP	P	04 51 24.1	-0.8
AOS	Alonnisos	89.30	315	P	P	04 51 24.3	-1.5
PLE	Pljevlja	89.30	321	⇓iP	P	04 51 26.0	+0.1
IVA	Berane	89.32	320	⇓iP	P	04 51 25.8	-0.2
INVG	Invergeldie, C	89.32	341	eP	P	04 51 25.2	-0.3
INVG				IAmb	IAmb	04 51 28.1	
	comp=Z,27nm,0.6s						
BIOA	Bad Ischl, Aus	89.33	327	i P	P	04 51 25.4	-0.4
	comp=Z,330nm,1.1s,SNR=130						
ESY	Stoneypath	89.33	340	⇑eP	P	04 51 25.6	0.0
SOKA	Soboth	89.35	325	i P	P	04 51 25.3	-0.7
	comp=Z,418nm,1.1s,SNR=321						
SOKA				i PP	PP	04 55 02.0	-1.6
	comp=Z,44nm,1.3s						
SOKA				ePKKP	PKKPbc	05 08 58.6	-1.2
	comp=Z,2.8nm,0.8s						
SOKA				i SKKP		05 11 53.4	
	comp=Z,4.2nm,0.9s						
KARP	Karpathos	89.37	311	P	P	04 51 24.9	-1.4
KARP	Karpathos	89.37	311	P	P	04 51 24.1	-2.2
KARP	Karpathos	89.37	311	eP	P	04 51 24.7	-1.6
BUG	Bochum--Univer	89.41	332	eP	P	04 51 25.6	-0.4
	comp=Z,86nm,0.8s,baz=43,slow=4.7						
KYMI	Kymi, Euboea I	89.49	315	P	P	04 51 24.9	-1.8
A051A	Mrakovica	89.53	323	⇓iP	P	04 51 26.0	-0.9
APE	Apeiranthos	89.53	313	P	P	04 51 24.2	-2.8
APE	Apeiranthos	89.53	313	P	P	04 51 24.1	-2.9
APE	Apeiranthos	89.53	313	P	P	04 51 24.8	-2.2
KOME	Kolasin	89.55	320	⇓iP	P	04 51 26.6	-0.4
BCI	Bajram Curri	89.55	320	P	P	04 51 25.4	-1.5
BLY	Banja Luka	89.56	323	⇓iP	P	04 51 26.4	-0.5
GCIS	Gornji Cirnik	89.61	324	i P	P	04 51 26.3	-0.8
KTI	Kastanea	89.61	317	P	P	04 51 25.7	-1.7
NEO	Neokhori	89.62	316	P	P	04 51 24.5	-2.8
KARY	Karystos	89.65	314	P	P	04 51 25.5	-1.9
UPM	Unac-Piva	89.66	321	eP	P	04 51 26.4	-1.2
UPM	Unac-Piva	89.66	321	⇓iP	P	04 51 26.5	-1.2
RJOB	Jochberg	89.70	327	eP	P	04 51 27.7	+0.1
	comp=Z,261nm,0.9s,baz=43,slow=4.7						
OBKA	Obir	89.71	325	⇓iP	P	04 51 26.6	-1.1
OBKA	Obir	89.71	325	i P	P	04 51 26.7	-1.1
	comp=Z,130nm,1.0s,SNR=77						
OBKA				i PP	PP	04 55 04.7	-1.7
	comp=Z,81nm,1.5s						
OBKA				i PKKP	PKKPbc	05 08 58.4	-0.4
	comp=Z,8.1nm,1.0s						
OBKA				i SKKP		05 11 52.8	
	comp=Z,5.9nm,0.8s						
CRES	Cresnjevec Ost	89.72	324	⇓iP	P	04 51 26.8	-0.9
TUC	Tucson	89.75	53	P	P	04 51 28.9	+0.7
TUC	Tucson	89.75	53	P	P	04 51 28.9	+0.7
TUC				pmax	pmax		
	comp=Z,226nm,1.0s						
FNA	Florina	89.80	318	P	P	04 51 26.4	-1.9
TNS	Taunus Mts	89.84	331	eP	P	04 51 28.0	-0.1
	comp=Z,48nm,0.7s,baz=43,slow=4.7						
TNS				eL	L	05 36 01.9	
	comp=Z,3µm,18.1s						
LAWE	Loch Awe, Argy	89.86	341	eP	P	04 51 27.8	-0.2
LAWE				IAmb	IAmb	04 51 30.3	
	comp=Z,46nm,0.9s						
KBA	Koelnbreinsper	89.90	326	i P	P	04 51 27.6	-1.0
	comp=Z,156nm,1.2s,SNR=104						
KBA				i PP	PP	04 55 05.8	-2.2
	comp=Z,27nm,1.1s						
KBA				i PKKP	PKKPbc	05 08 57.4	-1.1
	comp=Z,4.9nm,1.1s						
OHR	Ohrid	89.93	318	P	P	04 51 28.0	-0.8
OHR	Ohrid	89.93	318	i P	P	04 51 28.2	-0.6
DION	Dionisos Attik	89.94	315	P	P	04 51 26.1	-2.8
PDG	Podgorica	89.97	320	P	P	04 51 27.7	-1.1
PDG	Podgorica	89.97	320	⇓iP	P	04 51 27.8	-1.1
PDG	Podgorica	89.97	320	⇑P	P	04 51 28.6	-0.2
PDG	Podgorica	89.97	320	⇓iP	P	04 51 28.1	-0.7
TYRN	Tyrnavos	89.97	317	P	P	04 51 26.5	-2.4
LESA	Schwarzleotal	89.98	327	i P	P	04 51 28.2	-0.7
	comp=Z,406nm,1.4s,SNR=151						
LESA				i PP	PP	04 55 06.3	-2.2
	comp=Z,55nm,1.2s						
LESA				i PKKP	PKKPbc	05 08 57.1	-1.1
	comp=Z,9.4nm,0.5s						
PGBU	Glenifferbraes	89.98	341	⇑eP	P	04 51 28.7	+0.1
PGBU				IAmb	IAmb	04 51 31.0	
	comp=Z,212nm,0.9s						
EKA	Eskdalemuir Ar	89.99	340	P	P	04 51 28.3	-0.4
PTL	Penteli	90.00	315	P	P	04 51 26.1	-3.1
ATD	Arta Tunnel	90.01	283	S	SKSac	05 01 19.8	+1.3
GDLE	Glaisdale, N Y	90.01	338	⇑eP	P	04 51 28.8	0.0
GDLE				IAmb	IAmb	04 51 31.9	
	comp=Z,49nm,0.7s						
ESK	Eskdalemuir	90.02	340	P	P	04 51 28.9	+0.1
ESK	Eskdalemuir	90.02	340	⇑eP	P	04 51 28.6	-0.2
ESK				IAmb	IAmb	04 51 32.4	
	comp=Z,41nm,0.8s						
ESK	Eskdalemuir	90.02	340	P	P	04 51 28.9	+0.1
ESK				pmax	pmax		
	comp=Z,419nm,1.8s						
F33A	5 Mile Ranch,	90.02	35	IAmb	IAmb	04 51 31.9	
	comp=Z,398nm,0.9s						
EDMD	Edmundbyers	90.04	339	⇑eP	P	04 51 28.6	-0.3
EDMD				IAmb	IAmb	04 51 30.9	
	comp=Z,39nm,0.7s						
LJU	Ljubljana	90.04	325	i P	P	04 51 28.1	-1.0
LJU				i PP	PP	04 55 10.3	+1.4
LJU				eSKSac	SKSac	05 01 13.6	-4.0
LJU				eSP	SP	05 02 51.7	-1.3
BOJS	Bojanci	90.05	324	⇓iP	P	04 51 28.4	-0.8
BOJS	Bojanci	90.05	324	i P	P	04 51 28.6	-0.6
BOJS				ePP	PP	04 55 09.8	+0.9
BOJS				eSKSac	SKSac	05 01 14.9	-2.8
BOJS				i ScS	SKKSac	05 01 38.1	+5.2
BRY	Bratogost	90.06	321	eP	P	04 51 28.1	-1.3
BRY	Bratogost	90.06	321	⇓iP	P	04 51 28.1	-1.3
SDCO	Great Sand Dun	90.06	46	IAmb	IAmb	04 51 33.2	
	comp=Z,351nm,0.8s						
MYKA	Terra Mystica	90.07	326	i P	P	04 51 28.0	-1.3
	comp=Z,163nm,1.1s,SNR=76						
MYKA				i PP	PP	04 55 07.4	-1.8
	comp=Z,58nm,1.6s						
MYKA				ePKKP	PKKPbc	05 08 57.1	-0.8
MYKA				i SKKP		05 11 52.2	
	comp=Z,4.6nm,0.5s						
CEME	Cevo	90.08	320	⇓iP	P	04 51 28.6	-0.8
A050A	Klekovaca	90.08	323	⇓iP	P	04 51 28.8	-0.7
ATHU	Athens Univers	90.10	314	P	P	04 51 26.9	-2.7
FUR	Furstenfeldbru	90.10	328	eP	P	04 51 29.8	+0.4
	comp=Z,303nm,0.8s,baz=43,slow=4.7						
FUR				eL	L	05 36 10.0	
	comp=Z,2µm,18.4s						
KUQ	Kuujjuuaa	90.11	14	P	P	04 51 28.9	-0.2
KUQ				pP	pP	04 53 06.9	-1.2
ATH	Athens Observa	90.14	315	P	P	04 51 26.7	-3.0
CRNS	Crni Vrh	90.15	325	i P	P	04 51 28.3	-1.4
CRNS				eSKSac	SKSac	05 01 13.7	-4.6
VLY	Voula,Athens	90.16	314	P	P	04 51 22.8	-7.1
DRME	Dracevica, Mon	90.16	320	⇓iP	P	04 51 28.5	-1.3
DRME	Dracevica, Mon	90.16	320	⇓iP	P	04 51 28.7	-1.1
THL	Klokotos Trika	90.19	317	P	P	04 51 27.2	-2.8
NEST	Nestorio	90.23	318	P	P	04 51 28.6	-1.6
ZKR	Zakros	90.25	311	P	P	04 51 29.3	-1.0
BUM	Brajici-Budva	90.25	320	⇓iP	P	04 51 29.2	-1.1
VILL	Villia	90.27	315	P	P	04 51 27.5	-2.9
ULC	Ulcinj	90.28	320	⇓iP	P	04 51 29.2	-1.1
TREB	Trebinje	90.28	321	eP	P	04 51 29.1	-1.2
AXAR	Agios Charalam	90.30	316	P	P	04 51 28.0	-2.5
CEY	Cerknica	90.31	325	⇓iP	P	04 51 29.3	-1.1
CADS	Cadrg	90.31	326	i P	P	04 51 28.6	-1.8
TIR	Tirane	90.32	319	P	P	04 51 29.8	-0.7
TIR	Tirane	90.32	319	⇑P	P	04 51 30.1	-0.4
TIR	Tirane	90.32	319	P	P	04 51 30.1	-0.4
KPRO	Kipourio	90.34	317	P	P	04 51 28.2	-2.5
AGG	Agios Georgios	90.34	316	P	P	04 51 28.4	-2.3
AGG	Agios Georgios	90.34	316	P	P	04 51 28.0	-2.7
HCY	Herceg Novi	90.38	321	eP	P	04 51 29.7	-1.0
HCY	Herceg Novi	90.38	321	⇓iP	P	04 51 29.8	-1.0
MAKR	Makrakomi, Fth	90.47	316	P	P	04 51 29.1	-2.1
NEWG	New Galloway	90.50	340	⇑eP	P	04 51 30.6	-0.4
NEWG				IAmb	IAmb	04 51 33.1	
	comp=Z,45nm,0.7s						
BTNL	Ternell	90.53	332	dP	P	04 51 30.5	-0.8
	comp=Z,47nm,1.2s						
STON	Ston	90.54	321	⇓iP	P	04 51 30.1	-1.3
ABTA	Abfaltersbach	90.54	327	i P	P	04 51 29.9	-1.7
	comp=Z,322nm,1.0s,SNR=185						
ABTA				i PP	PP	04 55 12.8	-0.1
	comp=Z,25nm,1.3s						
ABTA				i PKKP	PKKPbc	05 08 55.2	-1.6
	comp=Z,4.0nm,0.6s						
ABTA				eSKKP		05 11 50.1	
	comp=Z,4.2nm,0.9s						
SABO	M.te Sabotino	90.55	325	IAmb	IAmb	04 51 32.2	
	comp=Z,302nm,1.0s						
BEBN	Eben Emael	90.55	333	dP	P	04 51 30.5	-0.8
	comp=Z,90nm,1.1s						
BEBN				dPP	PP	04 55 13.3	+0.6
MEM	Membach	90.56	332	dP	P	04 51 30.7	-0.7
	comp=Z,54nm,1.2s						
WATA	Walderalm	90.56	327	i P	P	04 51 30.7	-1.0
	comp=Z,187nm,1.2s,SNR=53						
WATA				i PP	PP	04 55 11.6	-1.5
	comp=Z,60nm,1.2s						
LTK	Loutraki	90.57	315	P	P	04 51 28.7	-3.0
WTTA	Wattenberg	90.59	327	i P	P	04 51 31.0	-0.8
	comp=Z,295nm,1.3s,SNR=79						
WTTA				i PP	PP	04 55 11.9	-1.5
	comp=Z,62nm,1.3s						
WTTA				i SKKP		05 11 50.5	
	comp=Z,5.9nm,0.8s						
STU	Stuttgart	90.60	330	IAmb	IAmb	04 51 33.5	
	comp=Z,302nm,1.0s						
STU	Stuttgart	90.60	330	P	P	04 51 30.9	-0.7
STU	Stuttgart	90.60	330	eP	P	04 51 31.0	-0.7
STU	Stuttgart	90.60	330	eP	P	04 51 31.7	+0.1
	comp=Z,1µm,1.2s,baz=43,slow=4.7						
KESW	Keswick, Cumbr	90.61	339	eP	P	04 51 31.4	-0.1
KESW				IAmb	IAmb	04 51 33.9	
	comp=Z,126nm,1.3s						
LMK	Market Rasen	90.65	337	eP	P	04 51 30.8	-1.0
LMK				IAmb	IAmb	04 51 33.3	
	comp=Z,212nm,0.7s						
HPK	Haverah Park	90.66	338	eP	P	04 51 32.0	+0.2
HPK				IAmb	IAmb	04 51 34.2	
	comp=Z,138nm,0.6s						
EVR	Evrytania	90.72	316	P	P	04 51 31.9	-0.6
BHOU	Houvegnez	90.76	332	dP	P	04 51 32.0	-0.4
BHOU				dx	x	04 51 54.5	
BHOU				dPP	PP	04 55 15.7	+1.3
BSTI	Sart Tilman	90.76	333	dP	P	04 51 31.9	-0.4
	comp=Z,13nm,1.0s						
BSTI				dPP	PP	04 55 13.9	-0.4
MOTA	Moosalm	90.78	328	i P	P	04 51 31.7	-1.0
	comp=Z,134nm,0.8s,SNR=100						
MOTA				i PP	PP	04 55 12.9	-1.9
	comp=Z,37nm,1.2s						
MOTA				i PKKP	PKKPbc	05 08 56.2	-0.2
	comp=Z,3.9nm,0.8s						
MOTA				i SKKP		05 11 52.3	
	comp=Z,4.6nm,0.7s						
STAL	STALIGIAL	90.79	326	IAmb	IAmb	04 51 33.6	
	comp=Z,309nm,1.0s						
SQTA	Sankt Quirin	90.82	328	i P	P	04 51 31.9	-0.9
	comp=Z,209nm,1.3s,SNR=48						
SQTA				i PKKP	PKKPbc	05 08 55.4	-0.7
	comp=Z,7.4nm,0.9s						
SQTA				i SKKP		05 11 49.7	
	comp=Z,4.3nm,0.8s						
EYMN	Ely	90.83	31	IAmb	IAmb	04 51 35.4	
	comp=Z,599nm,1.2s						
RETA	Reutte	90.83	328	i P	P	04 51 32.2	-0.7
	comp=Z,349nm,1.4s,SNR=58						
RETA				i PP	PP	04 55 15.1	0.0
	comp=Z,28nm,1.3s						
KALE	Kalithea	90.85	316	P	P	04 51 30.7	-2.4
KRND	KRANIDI	90.85	314	P	P	04 51 29.3	-3.7
GAL1	Galloway	90.86	340	⇑eP	P	04 51 32.4	-0.2
GAL1				IAmb	IAmb	04 51 34.8	
	comp=Z,78nm,0.7s						
SERG	Sergoula	90.89	316	P	P	04 51 30.8	-2.5
WACR	West Acre	90.92	336	eP	P	04 51 33.2	+0.2
WACR				IAmb	IAmb	04 51 35.0	
	comp=Z,155nm,0.7s						
EFP	Efpalio	90.97	316	P	P	04 51 31.3	-2.3
BCLA	Clavier	90.99	333	dP	P	04 51 32.9	-0.5
	comp=Z,60nm,1.2s						
BCLA				dx	x	04 51 55.2	
BCLA				dPP	PP	04 55 15.6	-0.5
UBR	Ueberruh	90.99	328	eP	P	04 51 33.3	-0.3
	comp=Z,65nm,0.7s,baz=43,slow=4.7						
IDI	Anoyia	91.02	312	P	P	04 51 31.8	-2.1
IDI	Anoyia	91.02	312	P	P	04 51 31.1	-2.8
IDI	Anoyia	91.02	312	P	P	04 51 31.1	-2.8
IDI	Anoyia	91.02	312	S	SKSac	05 01 17.0	-6.7
	comp=Z,36nm,0.9s,baz=8.8,slow=3.7,SNR=7.9						
KSCO	Kaye Shedlock'	91.04	43	IAmb	IAmb	04 51 36.4	
	comp=Z,604nm,1.3s						
KLV	Kalavryta, Ach	91.06	315	P	P	04 51 31.7	-2.4
UCC	Uccle	91.07	333	dP	P	04 51 33.0	-0.8
CLGH	Cloghs, Cushen	91.08	341	eP	P	04 51 34.2	+0.5
CLGH				IAmb	IAmb	04 51 36.7	
	comp=Z,2.7nm,0.6s						
PVO	Paravola	91.08	316	P	P	04 51 32.4	-1.7
BGES	Gesves	91.11	333	dP	P	04 51 33.4	-0.6
	comp=Z,57nm,1.2s						
BGES				dx	x	04 51 52.5	
ANMO	Albuquerque	91.14	49	P	P	04 51 35.3	+0.6
ANMO	Albuquerque	91.14	49	P	P	04 51 35.7	+1.0
	comp=Z,993nm,1.1s,baz=50,slow=6.0,SNR=708						
ANMO				PP	PP	04 55 16.3	-1.9
	comp=Z,64nm,1.3s,baz=54,slow=9.5,SNR=6.8						
	comp=Z,993nm,1.1s						
LBWR	Ladybower, Pea	91.16	338	eP	P	04 51 34.1	0.0
LBWR				IAmb	IAmb	04 51 38.6	
	comp=Z,147nm,0.9s						
FETA	Feichten	91.19	328	i P	P	04 51 33.9	-0.8
	comp=Z,288nm,1.1s,SNR=146						
FETA				i PP	PP	04 55 16.0	-2.0
	comp=Z,36nm,1.3s						
FETA				i PKKP	PKKPbc	05 08 55.4	0.0
	comp=Z,6.5nm,0.8s						
FETA				i SKKP		05 11 49.7	
	comp=Z,4.6nm,0.8s						
IGT	Igoumenitsa	91.22	317	P	P	04 51 32.8	-1.9
WLF	Walferdange	91.23	332	IAmb	IAmb	04 51 37.5	
	comp=Z,497nm,1.4s						
WLF	Walferdange	91.23	332	P	P	04 51 32.9	-1.6
WLF	Walferdange	91.23	332	P	P	04 51 34.4	-0.2
WLF	Walferdange	91.23	332	dP	P	04 51 34.3	-0.2
	comp=Z,138nm,1.3s						
WLF	Walferdange	91.23	332	eP	P	04 51 34.8	+0.3
	comp=Z,342nm,1.2s,baz=43,slow=4.7						
TBO	Thunder Bay	91.23	30	IAmb	IAmb	04 51 37.4	
	comp=Z,1µm,1.9s						
BMRD	Maredsous	91.30	333	dP	P	04 51 34.2	-0.7
	comp=Z,84nm,1.2s						
BMRD				dx	x	04 51 57.3	
PDO	Prodromos	91.30	316	P	P	04 51 33.7	-1.4
ELMS	Elmsett, Ipswi	91.31	336	eP	P	04 51 34.3	-0.5
ELMS				IAmb	IAmb	04 51 36.7	
	comp=Z,108nm,0.7s						
ECSD	EROS Data Cent	91.31	37	IAmb	IAmb	04 51 37.5	
	comp=Z,346nm,1.1s						
BFO	Black Forest	91.31	330	P	P	04 51 34.2	-0.8
BFO				IAmb	IAmb	04 51 36.5	
	comp=Z,203nm,0.7s						
BFO	Black Forest	91.31	330	P	P	04 51 34.2	-0.8
BFO				pmax	pmax		
	comp=Z,203nm,0.7s						
BFO	Black Forest	91.31	330	eP	P	04 51 34.7	-0.3
	comp=Z,756nm,1.3s,baz=43,slow=4.7						
IOMK	Kirk Michael	91.33	340	eP	P	04 51 34.5	-0.3
IOMK				IAmb	IAmb	04 51 38.3	
	comp=Z,24nm,0.8s						
Y22D	IRIS PASSCAL I	91.36	49	IAmb	IAmb	04 51 39.5	
	comp=Z,445nm,0.8s						
Y22D	IRIS PASSCAL I	91.36	49	P	P	04 51 36.9	+1.2
	baz=307						
Y22D				S	S	05 01 59.0	+2.3
	baz=307						
DAVA	Damuels	91.39	328	i P	P	04 51 34.9	-0.7
	comp=Z,516nm,1.2s,SNR=170						
DAVA				i PKKP	PKKPbc	05 08 55.0	+0.1
	comp=Z,11nm,1.3s						
DAVA				eSKKP		05 11 49.4	
	comp=Z,12nm,1.0s						
VLI	Veliai	91.40	314	P	P	04 51 32.3	-3.2
KEK	Kerkira	91.42	318	P	P	04 51 36.4	+0.8
WIM	Isle of Man	91.46	340	⇑eP	P	04 51 36.0	+0.5
RLS	Riolos of Patr	91.47	316	P	P	04 51 34.6	-1.3
TSLK	Tsoukalades, L	91.48	317	P	P	04 51 35.2	-0.7
IDGL	Inch Island, C	91.48	342	P	P	04 51 35.6	+0.1
HSIG		91.50	56	P	P	04 51 37.1	+0.9
HSIG				IAmb	IAmb	04 51 39.6	
	comp=Z,534nm,1.0s						
HSIG					pP	04 53 14.2	-0.5
LKD2	Lefkada island	91.50	317	P	P	04 51 34.7	-1.3
LKD2	Lefkada island	91.50	317	P	P	04 51 34.7	-1.3
IMMV	Iera Moni Meta	91.50	312	P	P	04 51 34.6	-1.5
IMMV	Iera Moni Meta	91.50	312	P	P	04 51 34.6	-1.5
SRIG	Santa Rosalia	91.50	58	IAmb	IAmb	04 51 39.0	
	comp=Z,483nm,1.2s						
NYDR	Nydri-Lefkada	91.52	317	P	P	04 51 34.5	-1.6
DOU	Dourbes	91.53	333	dP	P	04 51 35.1	-0.8
	comp=Z,43nm,1.3s						
DOU				dPP	PP	04 55 19.7	-0.6
CWF	Charnwood Fore	91.58	337	eP	P	04 51 35.4	-0.6
CWF				IAmb	IAmb	04 51 38.0	
	comp=Z,113nm,0.7s						
STNC	Stoke	91.58	338	eP	P	04 51 36.1	0.0
STNC				IAmb	IAmb	04 51 40.4	
	comp=Z,48nm,0.7s						

EVGI	Lefkada island	91.61	317	P	P	04 51 34.9	-1.6
SLE	Schleitheim	91.66	329	P	P	04 51 35.6	-1.0
FUORN	Ofenpass-Fuorn	91.70	328	IAmb	IAmb	04 51 39.1	
	comp=Z,477nm,0.9s						
ITM	Ithomi	91.74	315	P	P	04 51 35.6	-1.6
ITM	Ithomi	91.74	315	IAmb	IAmb	04 51 38.7	
	comp=Z,774nm,1.3s						
ITM	Ithomi	91.74	315	P	P	04 51 35.5	-1.6
DAVOX	Davos/Dischmat	91.76	328	S	SKSac	05 01 22.1	-5.6
	comp=Z,3.1nm,0.6s,baz=143,slow=12,SNR=1.3						
E38A	The Farm, Brul	91.78	32	IAmb	IAmb	04 51 39.3	
	comp=Z,278nm,0.8s						
GVD	Gavdhos	91.81	312	P	P	04 51 36.1	-1.4
GVD	Gavdhos	91.81	312	P	P	04 51 36.5	-1.1
ECH	Echery	91.91	330	P	P	04 51 36.9	-0.9
VLS	Valsamata	91.93	316	P	P	04 51 36.7	-1.4
TEOL	Teolo	91.94	326	IAmb	IAmb	04 51 39.4	
	comp=Z,366nm,1.2s						
PSDA	Pessada-Kefalo	91.97	316	P	P	04 51 36.3	-1.8
WME	Myndd Eilian	91.99	339	eP	P	04 51 37.7	-0.3
WME				IAmb	IAmb	04 51 40.2	
	comp=Z,71nm,0.6s						
DMLN	Damoulianata-K	92.02	316	P	P	04 51 37.0	-1.5
PYL	PYLOS	92.04	315	P	P	04 51 35.8	-2.7
WPS	Cemaes, Angles	92.05	339	eP	P	04 51 37.8	-0.4
WPS				IAmb	IAmb	04 51 41.5	
	comp=Z,29nm,0.7s						
ILTH	Belurgan, Co L	92.06	341	P	P	04 51 38.2	0.0
FOEL	Foel Wylfa	92.08	338	⇑eP	P	04 51 38.6	+0.2
FOEL				IAmb	IAmb	04 51 40.7	
	comp=Z,79nm,0.7s						
LTHK	Lithakia	92.08	316	P	P	04 51 36.7	-2.0
WLF1	Llynfaes	92.11	339	eP	P	04 51 38.3	-0.2
WLF1				IAmb	IAmb	04 51 40.6	
	comp=Z,118nm,0.6s						
SPMN	Marine on St.	92.19	34	IAmb	IAmb	04 51 41.5	
	comp=Z,272nm,0.8s						
LLW	Llanuwychllyn	92.26	339	⇑eP	P	04 51 39.0	-0.2
HLM1	Long Mynd	92.28	338	⇑eP	P	04 51 39.1	-0.2
HLM1				IAmb	IAmb	04 51 41.3	
	comp=Z,27nm,1.0s						
SGRT	San Giovanni R	92.36	321	IAmb	IAmb	04 51 41.4	
	comp=Z,231nm,1.0s						
HMNX	Herstmonceux	92.54	335	eP	P	04 51 40.8	+0.3
HMNX				IAmb	IAmb	04 51 43.0	
	comp=Z,240nm,0.7s						
MATE	Matera	92.58	320	P	P	04 51 39.9	-1.0
MATE	Matera	92.58	320	⇑P	P	04 51 40.6	-0.3
MATE	Matera	92.58	320	eP	P	04 51 39.9	-1.0
STRD	Stroud	92.67	337	⇑eP	P	04 51 40.9	-0.2
STRD				IAmb	IAmb	04 51 42.6	
	comp=Z,122nm,1.0s						
GUMA	Gualdo di Mace	92.74	324	IAmb	IAmb	04 51 43.8	
	comp=Z,377nm,1.3s						
DSB	Dublin	92.75	340	P	P	04 51 41.5	0.0
DSB				pP	pP	04 53 20.1	-0.1
DSB	Dublin	92.75	340	P	P	04 51 40.4	-1.1
MONM	Monmouth	92.83	338	⇑eP	P	04 51 41.5	-0.3
MONM				IAmb	IAmb	04 51 44.2	
	comp=Z,56nm,0.8s						
FDMO	Fiordimonte	92.89	324	IAmb	IAmb	04 51 44.5	
	comp=Z,274nm,1.0s						
CBKS	Cedar Bluff	92.89	42	IAmb	IAmb	04 51 44.6	
	comp=Z,302nm,0.8s						
EPT	El Paso	93.01	51	IAmb	IAmb	04 51 47.6	
	comp=Z,195nm,1.0s						
MURB	Monte Urbino	93.02	324	IAmb	IAmb	04 51 46.3	
	comp=Z,292nm,1.3s						
PRMA	PARMA	93.04	326	IAmb	IAmb	04 51 45.2	
	comp=Z,381nm,1.3s						
AQU	L'Aquila	93.20	323	P	P	04 51 43.2	-0.7
AQU	L'Aquila	93.20	323	P	P	04 51 44.9	+1.1
G40A	Rib Lake	93.41	33	IAmb	IAmb	04 51 47.1	
	comp=Z,227nm,0.8s						
VLC	Villacollemand	93.44	326	P	P	04 51 43.2	-1.7
VLC				PP	PP	04 55 26.3	-9.1
IGLA	Glengowla, Co	93.46	342	P	P	04 51 45.2	+0.6
SCHQ	Schefferville	93.47	15	P	P	04 51 44.8	+0.1
	comp=Z,95nm,1.0s,baz=0.3,slow=4.3,SNR=47						
SCHQ				S	SKSac	05 01 31.8	-4.6
	comp=Z,7.5nm,1.1s,baz=93,slow=16,SNR=1.3						
SCHQ				SKKPbc	SKKPbc	05 11 42.7	-0.1
	comp=Z,19nm,0.8s,baz=124,slow=2.9,SNR=13						
	comp=Z,95nm,1.0s						
TIP	Timpagrande	93.54	319	IAmb	IAmb	04 51 47.7	
	comp=Z,341nm,1.4s						
TIP	Timpagrande	93.54	319	⇑P	P	04 51 45.8	+0.3
IWEX	Carrickbyrne,	93.63	340	P	P	04 51 45.5	0.0
R32A	Long Quarter,	93.75	42	IAmb	IAmb	04 51 48.6	
	comp=Z,681nm,1.8s						
N35A	Tabor	93.82	38	IAmb	IAmb	04 51 50.5	
	comp=Z,271nm,0.8s						
MNTX	Cornudas Mount	93.82	51	IAmb	IAmb	04 51 49.6	
	comp=Z,227nm,0.9s						
CLF	Chambon-Foret	94.11	333	IAmb	IAmb	04 51 49.9	
	comp=Z,191nm,0.8s						
MSTX	Muleshoe	94.14	47	IAmb	IAmb	04 51 51.0	
	comp=Z,425nm,1.7s						
I40A	Norwalk	94.23	34	IAmb	IAmb	04 51 50.1	
	comp=Z,310nm,1.4s						
AMTX	Amarillo	94.25	46	IAmb	IAmb	04 51 51.5	
	comp=Z,354nm,1.1s						
SCIA	State Center	94.37	36	IAmb	IAmb	04 51 52.0	
	comp=Z,337nm,1.1s						
CLNB	Carlsbad	94.48	49	P	P	04 51 50.2	+0.3
CLNB				pP	pP	04 53 28.0	-0.9
BNI	Bardonecchia	94.54	328	P	P	04 51 49.1	-0.9
VHRN	Van Horn	94.64	51	IAmb	IAmb	04 51 53.7	
	comp=Z,217nm,0.9s						
RER	Riviere de l'E	94.67	249	IAmb	IAmb	04 51 52.6	
	comp=Z,190nm,0.9s						
LPIG	La Paz	94.75	59	P	P	04 51 52.5	+1.4
	comp=Z,111nm,0.6s,baz=357,slow=3.4,SNR=17						
LPIG				PP	PP	04 55 46.1	-0.1
	comp=Z,45nm,0.7s,baz=19,slow=2.9,SNR=4.6						
LPIG				S	SKSac	05 01 42.8	-1.3
	comp=Z,8.3nm,0.4s,baz=358,slow=4.3,SNR=1.4						
	comp=Z,111nm,0.6s						
JSA	Saint Aubin	94.84	336	eP	P	04 51 51.3	+0.3
JSA				IAmb	IAmb	04 51 53.5	
	comp=Z,36nm,0.7s						
FURI	Furi	94.87	283	P	P	04 51 52.9	+0.6
FURI				IAmb	IAmb	04 51 55.8	
	comp=Z,631nm,1.8s						
ELIS	Ellis County	94.89	44	P	P	04 51 52.5	+0.8
ELIS				IAmb	IAmb	04 51 54.2	
	comp=Z,269nm,1.2s						
ELIS				pP	pP	04 53 30.1	-0.6
SMWD	Samnorwood	95.01	45	IAmb	IAmb	04 51 54.7	
	comp=Z,152nm,1.0s						
PECS	Pecos	95.04	50	IAmb	IAmb	04 51 56.1	
	comp=Z,111nm,0.7s						
I42A	Draeger Farm,	95.05	33	IAmb	IAmb	04 51 54.4	
	comp=Z,152nm,0.7s						
N38A	Joes South For	95.16	37	IAmb	IAmb	04 51 55.1	
	comp=Z,170nm,0.8s						
E46A	Sault Ste Mari	95.19	29	IAmb	IAmb	04 51 54.6	
	comp=Z,298nm,1.3s						
SLBS	Sierra La Lagu	95.26	59	P	P	04 51 54.6	+1.0
SLBS				IAmb	IAmb	04 51 58.6	
	comp=Z,155nm,0.9s						
SLBS				pP	pP	04 53 32.0	-0.3
KAN13	South Haven SW	95.42	42	IAmb	IAmb	04 55 50.3	
	comp=Z,322nm,1.7s						
ODSA	Odessa	95.45	49	IAmb	IAmb	04 51 58.3	
	comp=Z,197nm,1.3s						
DKNS	Dickens	95.52	47	IAmb	IAmb	04 51 58.4	
	comp=Z,127nm,0.8s						
POST	Post	95.53	47	P	P	04 51 54.8	+0.1
POST					pP	04 53 33.3	-0.4
CSTR	Hydro, Custer	95.61	44	P	P	04 51 55.0	+0.1
CSTR					pP	04 53 34.1	0.0
MNHN	Monahans	95.80	49	IAmb	IAmb	04 52 00.1	
	comp=Z,211nm,1.5s						
ALPN	Alpine	95.81	51	IAmb	IAmb	04 51 60.0	
	comp=Z,121nm,0.7s						
P38A	Dawn	95.83	38	IAmb	IAmb	04 51 58.1	
	comp=Z,150nm,0.7s						
SBV	Sambava	95.87	258	P	P	04 51 56.1	-0.2
SN07	Snyder 07	95.91	47	P	P	04 51 55.9	-0.4
SN07					pP	04 53 33.4	-2.0
SN07				IAmb	IAmb	04 55 54.1	
	comp=Z,185nm,1.3s						
SN05	Snyder 5	96.05	47	P	P	04 51 56.4	-0.6
SN05					pP	04 53 35.4	-0.6
SN05				IAmb	IAmb	04 55 55.7	
	comp=Z,221nm,1.5s						
L42A	Oliver, Polo	96.10	34	IAmb	IAmb	04 51 58.8	
	comp=Z,130nm,0.9s						
WMOK	Wichita Mounta	96.16	45	P	P	04 51 57.0	-0.4
WMOK					pP	04 53 36.1	-0.5
WMOK	Wichita Mounta	96.16	45	P	P	04 51 57.0	-0.4
WMOK				*PP	pP	04 53 36.1	-0.5
WMOK				pmax	pmax		
	comp=Z,75nm,1.2s						
I45A	Fountain	96.18	31	IAmb	IAmb	04 51 59.7	
	comp=Z,150nm,0.8s						
APMT	Aspermont	96.25	46	IAmb	IAmb	04 55 57.1	
	comp=Z,310nm,1.4s						
OK029	Liberty Lake	96.25	43	P	P	04 51 57.9	+0.1
OK029				IAmb	IAmb	04 52 01.7	
	comp=Z,133nm,0.8s						
OK029					pP	04 53 36.9	-0.1
GLMI	Grayling	96.28	30	P	P	04 51 58.0	+0.3
GLMI				IAmb	IAmb	04 51 59.2	
	comp=Z,186nm,0.9s						
GLMI					pP	04 53 35.9	-1.2
TXAR	Lajitas Array	96.44	51	P	P	04 51 59.8	+0.9
TXAR	Lajitas Array	96.44	51	P	P	04 51 59.5	+0.7
	comp=Z,425nm,1.1s,baz=287,slow=2.6,SNR=696						
TXAR				PP	PP	04 55 57.0	-2.0
	comp=Z,28nm,0.9s,baz=289,slow=3.8,SNR=5.1						
TXAR				S	SKSac	05 01 54.0	+0.9
	comp=Z,6.8nm,1.1s,baz=234,slow=4.3,SNR=6.6						
TXAR				PKKP	PKKPbc	05 08 41.1	0.0
	comp=Z,1.6nm,0.6s,baz=128,slow=5.4,SNR=5.9						
TXAR				SKKPbc	SKKPbc	05 11 39.8	+3.8
	comp=Z,1.9nm,0.8s,baz=144,slow=4.8,SNR=4.1						
TXAR	Lajitas Array	96.44	51	P	P	04 51 59.8	+0.9
QUOK	Quay	96.44	42	P	P	04 51 57.5	-1.1
QUOK					pP	04 53 36.5	-1.4
N41A	Harden Midland	96.46	36	IAmb	IAmb	04 52 00.8	
	comp=Z,149nm,0.9s						
HPIG		96.50	54	P	P	04 51 59.3	0.0
HPIG					pP	04 53 36.9	-1.4
P40A	Paris	96.70	37	IAmb	IAmb	04 52 02.0	
	comp=Z,130nm,0.8s						
DEOK	Depew	96.79	43	P	P	04 51 59.4	-0.8
DEOK					pP	04 53 39.9	+0.5
L44A	Lake County Fo	96.83	33	IAmb	IAmb	04 52 01.7	
	comp=Z,177nm,1.1s						
WTFS	Witchita Falls	97.00	45	P	P	04 52 01.1	-0.1
WTFS					pP	04 53 39.4	-1.0
ABTX	Abilene, Hawle	97.01	47	P	P	04 52 00.9	-0.4
ABTX					pP	04 53 39.0	-1.5
ABTX				IAmb	IAmb	04 56 02.2	
	comp=Z,290nm,1.5s						
WDD	Wied Dalam	97.11	318	IAmb	IAmb	04 52 02.8	
	comp=Z,161nm,0.9s						
HQIL	Hanson Quary C	97.14	34	IAmb	IAmb	04 52 03.9	
	comp=Z,150nm,1.2s						
H06S1	SOCORRO T	97.25	64	P	Pdif	04 52 04.2	+1.6
	SNR=5.8						
M44A	Midewin, Midew	97.36	34	IAmb	IAmb	04 52 04.9	
	comp=Z,160nm,1.0s						
HDIL	Hopedale	97.37	35	IAmb	IAmb	04 52 04.9	
	comp=Z,191nm,0.9s						
RLO	Rose Lookout	97.43	42	P	P	04 52 03.0	-0.1
RLO					pP	04 53 42.1	-0.2
CASY	Casey	97.56	191	P	Pdif	04 52 03.2	+0.6
L46A	Eue Claire	97.72	32	IAmb	IAmb	04 52 06.3	
	comp=Z,90nm,0.8s						
PLPT	Palo Pinto	97.72	46	IAmb	IAmb	04 56 08.4	
	comp=Z,139nm,1.2s						
BUKO	Buck Lake	97.92	26	P	P	04 52 04.0	-1.0
BUKO					pP	04 53 44.2	-0.4
P43A	Skaggs, Pawnee	97.94	36	IAmb	IAmb	04 52 07.4	
	comp=Z,79nm,0.8s						
HHAR	Hobbs	97.98	41	P	P	04 52 04.5	-1.0
Z35A	Perchaven, San	98.04	45	P	P	04 52 05.4	-0.4
Z35A				IAmb	IAmb	04 52 11.1	
	comp=Z,112nm,0.8s						
Z35A					pP	04 53 44.2	-1.0
FW06	Azle	98.09	45	P	P	04 52 05.8	-0.2
FW07	Weatherford	98.13	46	P	P	04 52 06.0	-0.2
FW07				IAmb	IAmb	04 56 11.0	
	comp=Z,170nm,1.5s						
CPAL	Palau Saverder	98.27	329	eP	P	04 52 04.7	-1.9
CPAL				epP	pP	04 53 47.7	+2.1
CPAL				esP	sP	04 54 32.6	+2.5
CPAL				ePP	PP	04 56 09.4	-2.8
CPAL				eS	SKSac	05 02 01.6	-0.1
CPAL				eSP	SP	05 04 21.9	-0.8
CPAL				ePS	PS	05 05 22.3	+3.2
CPAL				eSS	SS	05 09 33.7	-16
EJON	La Jonquera	98.29	329	P	P	04 52 04.9	-1.9
EJON				PP	PP	04 56 02.1	-10
CBEU	Beuda	98.53	329	eP	Pdif	04 52 08.6	+0.7
CBEU				esP	sP	04 54 31.4	-0.1
CBEU				ePP	PP	04 56 12.2	-2.0
CBEU				eS	SKSac	05 02 02.8	-0.4
CBEU				eSP	SP	05 04 25.8	+0.1
CBEU				ePS	PS	05 05 14.3	-7.7
CBEU				eSS	SS	05 09 42.3	-11
SADO	Sadowa	98.59	27	P	P	04 52 07.5	-0.5
	comp=Z,16nm,0.9s,baz=334,slow=3.4,SNR=7.9						
SADO				PP	PP	04 56 12.1	-2.4
	comp=Z,31nm,1.1s,baz=335,slow=6.1,SNR=5.2						
	comp=Z,16nm,0.9s						
WHTX	Lake Whitney,	98.81	46	pP	pP	04 53 47.3	-1.3
CFON	Fontmartina	99.04	329	eP	Pdif	04 52 03.6	-6.6
CFON				epP	pwP	04 53 52.4	-1.1
CFON				esP	sP	04 54 32.6	-1.2
CFON				ePP	PP	04 56 15.8	-2.3
CFON				eS	SKSac	05 02 03.8	-1.9
CFON				eSP	SP	05 04 30.2	-0.8
CFON				ePS	PS	05 05 16.7	-11
CFON				eSS	SS	05 09 43.8	-17
CSOR	Sort	99.12	330	eP	Pdif	04 52 08.1	-2.5
CSOR				epP	pP	04 53 47.4	-2.3
CSOR				esP	sP	04 54 36.7	+2.6
CSOR				ePP	PP	04 56 16.3	-2.4
CSOR				eS	SKSac	05 02 04.0	-2.2
CSOR				eSP	SP	05 04 32.2	+0.2
CSOR				ePS	PS	05 05 25.3	-3.0
CSOR				eSS	SS	05 10 06.0	+4.4
CTRE	Tremp	99.32	330	eP	Pdif	04 52 11.7	+0.2
CTRE				epP	pwP	04 53 56.9	+2.0
CTRE				esP	sP	04 54 37.3	+2.2
CTRE				ePP	PP	04 56 17.7	-2.6
CTRE				eS	SKSac	05 02 08.4	+1.2
CTRE				eSP	SP	05 04 33.2	-0.9
CTRE				ePS	PS	05 05 34.8	+4.4
CTRE				eSS	SS	05 10 08.9	+4.6
MAHO	Mahon	99.64	327	PP	PP	04 56 14.4	-8.2
KEST	Kesra	100.15	321	P	Pdif	04 52 15.2	-0.1
	comp=Z,18nm,1.0s,baz=136,slow=2.0,SNR=20						
KEST				S	SKSac	05 02 09.2	-2.2
	comp=Z,8.8nm,0.8s,baz=166,slow=23,SNR=8.3						
ETOS	Mallorca	100.44	327	PP	PP	04 56 24.6	-4.0
CMAH	Djebel Manchou	100.54	322	P	Pdif	04 52 15.8	-1.1
BATG	Bathurst New B	100.65	17		Pdif	04 52 17.6	+0.5
CAEH	'Ain El Ouahch	100.72	323	P	Pdif	04 52 17.2	-0.5
ABSA	Djebel Ababsia	100.77	322	P	Pdif	04 52 25.0	+7.0
KIBK	Kibwezi	100.95	273	PP	PKiKP	04 56 18.4	-24
KIBK	Kibwezi	100.95	273	P	Pdif	04 52 19.6	+0.4
	SNR=8.7						
KMBO	Kilima Mbogo	101.06	275	P	Pdif	04 52 20.3	+0.5
KMBO				S	SKSac	05 02 16.9	+0.2
KMBO	Kilima Mbogo	101.06	275	i P	Pdif	04 52 20.0	+0.1
	SNR=33						
CASM	Ain Smara	101.30	323	P	Pdif	04 52 19.1	-1.2
DFRA	Djebel Bou Aff	101.41	323	P	Pdif	04 52 21.1	+0.2
EIBI	Ibiza	101.72	328	PP	PP	04 56 30.7	-7.3
ECHE	Chera	102.31	330	PP	PP	04 56 35.8	-6.7
ECAL	Calabor	102.69	335	PP	PP	04 56 35.8	-9.4
UCM	Universidad Co	102.70	332	PP	PKiKP	04 56 38.9	-5.7
PBRG	Braganca	102.81	335	ePdif	Pdif	04 52 27.0	+0.1
PBRG				ePP	PP	04 56 47.7	+1.6
PBRG				i tx	tx	04 59 08.8	
PGAV	Gavieira, Arco	103.23	336	ePdif	Pdif	04 52 29.5	+0.6
PGAV				ePP	PP	04 56 51.1	+1.9
PGAV				i tx	tx	04 59 10.4	
PCAB	Cabril	103.37	335	ePdif	Pdif	04 52 15.3	-14
PCAB				i tx	tx	05 00 00.7	
MVO	Moncorvo	103.47	334	ePdif	Pdif	04 52 30.6	+0.6
MVO				ePP	PP	04 56 51.4	+0.5
MVO				i tx	tx	04 59 14.2	
ESDC	Sonseca Array	103.53	332	Pdiff	Pdif	04 52 29.5	-0.7
	comp=Z,2.8nm,0.8s,baz=31,slow=3.4,SNR=16						
ESDC				PKKPbc	PKKPbc	05 08 21.2	-0.5
	comp=Z,1.4nm,0.8s,baz=243,slow=2.9,SNR=5.2						
ESDC				PKKPab	PKKPab	05 08 44.3	
	comp=Z,4.1nm,0.9s,baz=223,slow=4.2,SNR=10						
POLO	Lamas de Olo	103.58	335	ePdif	Pdif	04 52 31.4	+1.0
POLO				ePP	PP	04 56 54.4	+2.7
POLO				i tx	tx	04 59 13.9	
TKL	Tuckaleechee C	103.91	35	Pdiff	Pdif	04 52 31.6	-0.3
	comp=Z,22nm,0.8s,baz=177,slow=2.2,SNR=33						
TKL				PP	PP	04 56 54.9	+0.6
	comp=Z,83nm,1.3s,baz=306,slow=5.1,SNR=8.8						
CART	Cartagena	103.97	328	PP	PKiKP	04 56 43.0	-3.9
PVIS	Viseu	104.19	335	ePdif	Pdif	04 52 33.9	+0.8
PVIS				ePP	PP	04 56 59.1	+2.9
PVIS				i tx	tx	04 59 18.7	
MTE	Manteigas	104.33	334	ePdif	Pdif	04 52 35.2	+1.5
MTE				ePP	PP	04 57 00.4	+3.2
MTE				i tx	tx	04 59 18.8	
PCBR	Castelo Branco	104.79	334	ePP	PP	04 56 59.5	-1.0
COI	Coimbra	104.82	335	ePdif	Pdif	04 52 38.6	+2.8
COI				ePP	PP	04 57 02.6	+1.9
COI				i tx	tx	04 59 21.3	
PCAS	Casmilo, Conde	104.99	335	ePdif	Pdif	04 52 37.6	+1.0
PCAS				ePP	PP	04 57 04.1	+2.1
PCAS				i tx	tx	04 59 21.3	
PMRV	Marv??o	105.11	334	ePdif	Pdif	04 52 36.2	-0.9
PMRV				ePP	PP	04 57 01.9	-1.0
PMRV				i tx	tx	04 59 24.7	
PSARD	Sardoal	105.26	334	ePP	PP	04 57 07.2	+3.2
PSARD				i tx	tx	04 59 27.4	
PSBE	So Bento	105.57	335	ePP	PP	04 57 08.6	+2.4
PSBE				i tx	tx	04 59 29.5	
PESTR	Estremoz	105.68	334	ePdif	Pdif	04 52 40.4	+0.7
PESTR				ePP	PP	04 57 05.7	-1.4
PESTR				i tx	tx	04 59 25.6	
PMTG	Montargil	105.75	334	ePdif	Pdif	04 52 42.2	+2.3
PMTG				ePP	PP	04 57 07.3	-0.2
PMTG				i tx	tx	04 59 30.4	
PBAR	Barrancos	106.06	333	ePdif	Pdif	04 52 39.0	-2.4
PBAR				ePP	PP	04 57 10.7	+0.9
PBAR				i tx	tx	04 59 21.8	
EVO	Evora	106.13	334	ePdif	Pdif	04 52 43.1	+1.4
EVO				ePP	PP	04 57 14.0	+3.7
EVO				i tx	tx	04 59 33.6	
EMAL	Malaga-Limoner	106.18	330	PP	PP	04 57 04.4	-6.3
LIS	Lisbon	106.40	335	ePP	PP	04 57 13.9	+1.6
LIS	Lisbon	106.40	335	ePP	PP	04 57 17.8	+5.5
LIS				i tx	tx	04 59 34.4	
PBEJ	Beja	106.52	333	ePdif	Pdif	04 52 49.6	+6.2
PBEJ				ePP	PP	04 57 15.7	+2.5
MESJ	Messejana	106.81	334	ePdif	Pdif	04 52 45.2	+0.5
MESJ				ePP	PP	04 57 16.7	+1.4
MESJ	Messejana	106.81	334	ePdif	Pdif	04 52 45.5	+0.8
MESJ				ePP	PP	04 57 15.5	+0.1
MESJ				i tx	tx	04 59 34.8	
PCVE	Castro Verde	106.92	333	ePdif	Pdif	04 52 49.5	+4.3
PCVE				ePP	PP	04 57 19.1	+3.0
PCVE				i tx	tx	04 59 38.7	
PVAQ	Vaqueiros	107.00	333	ePP	PP	04 57 19.8	+3.1
PVAQ				i tx	tx	04 59 38.6	
VNDA	Vanda	107.21	175	Pdiff	Pdif	04 52 48.8	+3.4
	comp=Z,2.3nm,0.7s,baz=318,slow=4.6,SNR=9.5						
VNDA				PKiKP	PKiKP	04 56 52.5	+0.9
	comp=Z,3.0nm,0.8s,baz=318,slow=1.9,SNR=3.1						
PBDV	Barranco-do-Ve	107.22	333	ePdif	Pdif	04 52 48.9	+2.3
PBDV				ePP	PP	04 57 22.4	+4.1
PBDV				i tx	tx	04 59 42.3	
PTEO	Sao Teotonio	107.27	334	ePdif	Pdif	04 52 48.9	+2.1
PTEO				ePP	PP	04 57 21.0	+2.4
PTEO				i tx	tx	04 59 42.0	
MORF	Marmelete	107.45	334	ePP	PP	04 57 21.5	+1.5
MORF	Marmelete	107.45	334	ePP	PP	04 57 18.7	-1.2
MORF				i tx	tx	04 59 43.3	
PFVI	Vila Bisbo	107.67	334	ePdif	Pdif	04 52 49.9	+1.4
PFVI				ePP	PP	04 57 24.5	+3.0
PFVI				i tx	tx	04 59 38.3	
CMIG	Matias Romero	110.43	56	PKiKP	PKiKP	04 57 00.0	+0.6
	comp=Z,12nm,0.9s,baz=351,slow=2.7,SNR=5.8						
CMIG				SKP		04 59 51.9	
	comp=Z,41nm,0.8s,baz=328,slow=2.7,SNR=17						
CMIG				PKKPbc	PKKPbc	05 07 59.4	-0.4
	comp=Z,7.8nm,0.7s,baz=66,slow=1.9,SNR=11						
CMIG				PKKPab	PKKPab	05 08 13.0	-1.2
	comp=Z,21nm,0.8s,baz=93,slow=3.1,SNR=18						
MAW	Mawson	111.57	204	P	Pdif	04 53 07.2	+2.3
MAW	Mawson	111.57	204	Pdiff	Pdif	04 53 07.0	+2.1
	comp=Z,8.1nm,0.7s,baz=86,slow=7.2,SNR=15						
MAW				PKiKP	PKiKP	04 57 01.1	+1.1
	comp=Z,22nm,1.0s,baz=128,slow=2.6,SNR=17						
MAW				PP	PP	04 57 49.9	-0.2
	comp=Z,39nm,1.1s,baz=68,slow=9.8,SNR=8.9						
MAW				SKP		04 59 52.5	
	comp=Z,27nm,0.8s,baz=54,slow=1.7,SNR=7.8						
MAW				PKKPbc	PKKPbc	05 07 56.0	-1.3
	comp=Z,19nm,1.1s,baz=294,slow=4.0,SNR=9.4						
MAW				PKKPab	PKKPab	05 08 04.7	+0.3
	comp=Z,18nm,1.0s,baz=308,slow=2.3,SNR=6.7						
TIO	Tiouine	112.36	329	PP	PP	04 57 50.4	-4.9
PMPST	Porto Santo, M	114.01	338	ePP	PP	04 58 03.1	-3.4
PMPST				i tx	tx	05 00 29.7	
PMAR	Madeira	114.53	338	ePdif	Pdif	04 53 19.5	+0.1
PMAR				ePP	PP	04 58 10.7	+0.4
PMAR				i tx	tx	05 00 30.2	
PMOZ	Porto Moniz, M	114.53	338	ePP	PP	04 58 06.9	-3.3
PMOZ				i tx	tx	05 00 32.3	
FUL	Funchal	114.59	338	i tx	tx	04 58 15.5	
LSZ	Lusaka	115.50	266		PKPdf	04 57 09.1	-0.2
LSZ	Lusaka	115.50	266	P	PKiKP	04 57 10.6	+1.3
LSZ	Lusaka	115.50	266	PKIKP	PKPdf	04 57 09.1	-0.2
LSZ	Lusaka	115.50	266	i P	PKiKP	04 57 10.9	+1.7
MUSN	Musina, Limpop	116.86	258	i P	PKiKP	04 57 12.2	+0.6
BLWY	Bulawayo	117.11	261	i P	PKiKP	04 57 13.2	+0.8
BROLN	Tlhalogang	118.58	261	i P	PKiKP	04 57 16.2	+1.1
QSPA	South Pole Qui	118.83	180		PKiKP	04 57 14.3	+0.1
QSPA	South Pole Qui	118.83	180	PKP	PKPdf	04 57 13.0	-1.1
	comp=Z,106nm,0.8s,baz=288,slow=0.6,SNR=83						
QSPA				SKP		05 00 06.1	
	comp=Z,110nm,0.7s,baz=265,slow=1.3,SNR=15						
QSPA				PKKPbc	PKKPab	05 07 31.2	-1.3
	comp=Z,7.8nm,0.7s,baz=226,slow=1.0,SNR=6.4						
MREMI	Moremi	119.04	259	i P	PKiKP	04 57 17.2	+1.2
KSANE	Kasane	119.19	265	i P	PKiKP	04 57 17.9	+1.5
BOAB	BOACO BROADBAN	120.11	53	PKP	PKPdf	04 57 14.1	-4.0
SYO	Syowa Base	120.26	204	⇓ePdiff	Pdif	04 53 49.0	+5.4
SYO	Syowa Base	120.26	204	⇓ePKPdf	PKiKP	04 57 17.7	+0.9
SYO	Syowa Base	120.26	204	⇓ePP	PP	04 58 55.0	+4.9
LPHEP	Lephephe	120.69	259	i P	PKiKP	04 57 20.1	+0.9
ACON	Acoyapa	120.79	53	eP	PKPdf	04 57 19.0	-0.4
ESPN	Las Esperanzas	121.24	52	eP	PKPdf	04 57 19.3	-0.9
TORD	Torodi Ar. Bea	121.36	310		PKPdf	04 57 19.7	-0.8
TORD	Torodi Ar. Bea	121.36	310	PKP	PKPdf	04 57 20.3	-0.2
	comp=Z,49nm,0.9s,baz=12,slow=3.7,SNR=46						
TORD				SKP		05 00 14.9	
	comp=Z,43nm,0.9s,baz=26,slow=3.5,SNR=6.1						
TORD				PKKPbc	PKKPbc	05 07 21.9	-0.5
	comp=Z,30nm,0.7s,baz=242,slow=2.4,SNR=18						
BUAI	Buenos Aires	121.44	54	eP	PKPdf	04 57 19.8	-0.9
LAPC	Finca la Perla	121.44	54	eP	PKPdf	04 57 19.2	-1.5
ALIBA	Liberia Airpor	121.48	54	eP	PKPdf	04 57 20.6	-0.1
MESS	Mesas	121.63	54	eP	PKPdf	04 57 18.5	-2.6
VMAR	Armenia, Volca	121.64	54	eP	PKPdf	04 57 19.6	-1.5
HORNC	Hornillas	121.66	54	eP	PKPdf	04 57 19.3	-1.9
COLC	Colonia	121.67	54	eP	PKPdf	04 57 19.9	-1.2
BLUN	Bluefields	121.73	52	eP	PKPdf	04 57 20.7	-0.5
MOTZ	Rio Naranjo	121.75	54	eP	PKPdf	04 57 20.5	-0.8
PLVR	Palo Verde	121.79	54	eP	PKPdf	04 57 21.1	-0.5
TENO	El Achiote	121.81	54	eP	PKPdf	04 57 20.5	-0.9
TIMP	Tierras Morena	121.86	54	eP	PKPdf	04 57 20.5	-1.1
NICO	Nicoya	121.86	55	eP	PKiKP	04 57 21.8	+0.1
CMARA	Lajas Hojancha	121.96	55	eP	PKPdf	04 57 21.4	-0.3
NYURE	Nandayure	122.10	55	eP	PKiKP	04 57 22.0	-0.1
JTS	Las Juntas de	122.11	54		PKPdf	04 57 21.3	-0.7
JTS	Las Juntas de	122.11	54	PKP	PKPdf	04 57 21.5	-0.5
	comp=Z,37nm,0.5s,baz=162,slow=1.6,SNR=35						
JTS				SKP		05 00 14.8	
	comp=Z,132nm,0.9s,baz=309,slow=3.3,SNR=16						
JTS				PKKPbc	PKKPbc	05 07 19.5	-0.1
	comp=Z,18nm,0.8s,baz=309,slow=2.3,SNR=9.7						
JTS	Las Juntas de	122.11	54	eP	PKPdf	04 57 21.3	-0.7
JUNT	Juntas	122.11	54	eP	PKPdf	04 57 21.6	-0.4

CEDE	Laguna Cedeo	122.15	54	eP	PKPdf	04 57 21.0	-1.1
ARE1	Arenal 1	122.16	54	eP	PKPdf	04 57 21.4	-0.6
JCR1	Jicaral	122.30	55	eP	PKiKP	04 57 22.6	0.0
GMARE	Gumare	122.42	264	i P	PKiKP	04 57 24.4	+1.8
MAKGR	Makgori	122.43	256	i P	PKiKP	04 57 23.2	+0.6
SKOMA	Sekoma	122.74	258	i P	PKiKP	04 57 24.1	+0.9
TRT2	Tortugero	122.78	53	eP	PKPdf	04 57 22.0	-1.2
XAUDM	Khaudum	122.81	266	i P	PKiKP	04 57 25.4	+1.9
BELE	Belen	122.87	54	eP	PKiKP	04 57 23.8	0.0
HDC	Heredia	122.90	54	eP	PKiKP	04 57 23.8	-0.1
BOSA	Boshof	122.93	253	PKP	PKiKP	04 57 23.5	0.0
	comp=Z,54nm,0.8s,baz=79,slow=1.5,SNR=54						
BOSA				PKKPbc	PKKPbc	05 07 16.5	+0.1
	comp=Z,50nm,1.0s,baz=263,slow=2.9,SNR=25						
BOSA	Boshof	122.93	253	i P	PKiKP	04 57 24.4	+0.9
BOSA	Boshof	122.93	253	PKP	PKiKP	04 57 24.6	+1.2
PILE	Guapiles	122.98	53	eP	PKiKP	04 57 24.5	+0.6
CVIMO	Finca Echandi	123.01	54	eP	PKPdf	04 57 23.2	-0.7
ACOS	Acosta	123.01	54	eP	PKiKP	04 57 24.3	+0.2
PAR1A	Puntarenas Pro	123.08	54	eP	PKiKP	04 57 24.5	+0.4
PICV	PH. Pirrs	123.10	54	eP	PKiKP	04 57 24.6	+0.4
CVTR	Volcan Turrial	123.14	53	eP	PKPdf	04 57 24.1	-0.3
VTLA	Turrialba Volc	123.14	53	eP	PKPdf	04 57 23.9	-0.5
VTR0	Volcan Turrial	123.14	53	eP	PKPdf	04 57 24.0	-0.4
CVTQ	Turrialba Volc	123.14	53	eP	PKPdf	04 57 23.9	-0.5
ABE2	San Pablo	123.15	54	eP	PKPdf	04 57 24.4	+0.1
LCR2	La Lucha 2	123.16	54	eP	PKPdf	04 57 22.7	-1.5
ABRB	Las Abras (San	123.18	53	eP	PKPdf	04 57 24.4	+0.1
VTCV	VTCV, Calle Va	123.19	53	eP	PKPdf	04 57 23.8	-0.5
RESJ	San Isidro (Tu	123.21	53	eP	PKiKP	04 57 24.5	+0.1
PIEC	Cerro El Cedra	123.28	54	eP	PKPdf	04 57 24.6	+0.1
QNGWA	Qangwa	123.34	265	i P	PKiKP	04 57 26.2	+1.7
KGCAE	Kacgae	123.65	261	i P	PKiKP	04 57 26.9	+1.9
SAJE	San Jernim	123.78	54	eP	PKPdf	04 57 25.4	+0.1
EDPE	Pejibaye, P	123.87	54	eP	PKiKP	04 57 25.6	-0.1
PHPEN	Phepeng	123.98	257	i P	PKiKP	04 57 26.4	+0.8
GRTLG	Ghanzi	123.98	263	i P	PKiKP	04 57 27.3	+1.6
CEUA	Cerro Uatsi, L	123.99	53	eP	PKiKP	04 57 26.3	+0.3
FIMO	Fila Mora	124.14	54	eP	PKiKP	04 57 26.7	+0.4
EDAD	Golfito	124.51	54	eP	PKiKP	04 57 27.7	+0.7
ALCO	Alturas Coton,	124.54	54	eP	PKPdf	04 57 26.1	-0.7
NELY	Ciudad Neily	124.67	54	eP	PKiKP	04 57 28.2	+1.0
SCZRO	Santa Cruz, Re	124.80	54	eP	PKiKP	04 57 28.0	+0.4
CLLRA	Cordillera,	124.83	54	eP	PKPdf	04 57 27.0	-0.4
BQTLY	Boquete Panama	124.93	53	eP	PKPdf	04 57 27.7	+0.1
KKNTU	Kakintº	125.33	53	eP	PKPdf	04 57 24.9	-3.3
KOOLE	Kule	125.44	261	i P	PKiKP	04 57 30.1	+1.4
RMDIO	Remedios, Chir	125.75	53	eP	PKiKP	04 57 29.6	+0.2
ISECA	Islas Secas	125.78	54	eP	PKPdf	04 57 28.6	-0.4
CVEJO	Cerro Viej	125.90	53	eP	PKPdf	04 57 29.1	-0.2
TSUM	Tsumeb	126.35	267	i P	PKPdf	04 57 30.1	0.0
BCIP	Isla Barro Col	126.45	51	eP	PKPdf	04 57 28.8	-1.4
AOPR	Arecibo Observ	126.58	31	eP	PKPdf	04 57 28.6	-1.8
ZANG	Zanguenga, Cho	126.58	51	eP	PKPdf	04 57 29.1	-1.4
CAZU	Cerro Azul, Pa	126.69	50	eP	PKPdf	04 57 29.0	-1.9
SJG	San Juan	127.06	31	PKP	PKPdf	04 57 30.1	-1.2
	comp=Z,31nm,0.6s,baz=62,slow=0.9,SNR=21						
AZU	Azuero	127.14	52	eP	PKPdf	04 57 30.5	-1.1
SKI	Saint Kitts	129.20	28	eP	PKPdf	04 57 29.6	-5.9
NVL	N'lazarevskaya	129.23	200	ePKIKP	PKPdf	04 57 34.0	+0.2
NVL				pmax	pmax		
	comp=Z,113nm,0.8s						
ANWB	Willy Bob	129.28	26	eP	PKPdf	04 57 28.8	-6.7
ANBD	Bethesda, Anti	129.85	27	eP	PKPdf	04 57 36.3	-0.3
MBFL	Flemmings, Mon	129.94	27	eP	PKPdf	04 57 36.4	-0.5
MLYT	Lee's Yard	129.98	27	eP	PKPdf	04 57 36.4	-0.6
DBIC	Dimbokro	130.46	310	PKhKP	PKPpre	04 57 21.3	
	comp=Z,3.3nm,0.5s,baz=71,slow=3.1,SNR=5.8						
DBIC				PKP	PKPdf	04 57 37.4	-0.5
	comp=Z,35nm,0.6s,baz=76,slow=2.2,SNR=17						
DBIC				SKPbc	SKPbc	05 00 19.2	-0.8
	comp=Z,446nm,1.0s,baz=52,slow=3.7,SNR=30						
DBIC	Dimbokro	130.46	310	PKP	PKPdf	04 57 37.9	0.0
H05N1	Guadeloupe/Mar	130.79	26	PKP	PKPdf	04 57 38.5	0.0
	SNR=20						
TROLL	Troll, Antarti	131.11	196	⇑Pdiff	PKiKP	04 57 39.0	+0.4
	comp=Z,6µm,0.7s						
DWS	Wesley	131.37	27	eP	PKPdf	04 57 32.6	-6.9
DSLB	Salisbury	131.44	27	eP	PKPdf	04 57 37.0	-2.7
MDN	Morne-Daniel	131.56	27	eP	PKPdf	04 57 39.0	-0.9
DLPL	La Plaine	131.61	27	eP	PKPdf	04 57 33.3	-6.8
SVN	Savane Anatole	132.09	27	eP	PKPdf	04 57 40.4	-0.6
BIM	Bigot	132.42	27	eP	PKPdf	04 57 41.8	+0.2
SDV	Santo Domingo	132.50	42		PKPdf	04 57 41.9	-0.1
SDV	Santo Domingo	132.50	42	SKPbc	SKPbc	05 00 26.9	-0.6
	comp=Z,418nm,0.8s,baz=319,slow=2.2,SNR=23						
SDV	Santo Domingo	132.50	42	PKP	PKPdf	04 57 42.2	+0.2
SNAA	Sanae	132.62	195	⇑Pdiff	PKiKP	04 57 41.4	-0.2
	comp=Z,1µm,0.8s						
SNAA	Sanae	132.62	195	PKhKP	PKPpre	04 57 25.0	
	comp=Z,20nm,0.7s,baz=213,slow=6.5,SNR=50						
SNAA				PKP	PKPdf	04 57 40.3	-0.1
	comp=Z,43nm,0.8s,baz=170,slow=2.0,SNR=17						
SNAA				SKPbc	SKPbc	05 00 25.4	-0.5
	comp=Z,384nm,0.7s,baz=176,slow=3.7,SNR=62						
SLBI	Saint Lucia, B	132.90	27	eP	PKPdf	04 57 43.0	+0.5
ROSC	El Rosal	133.32	49	PKhKP	PKPpre	04 57 31.6	
	comp=Z,31nm,1.0s,baz=307,slow=22,SNR=11						
ROSC				PKP	PKPdf	04 57 41.9	-1.9
	comp=Z,33nm,0.8s,baz=90,slow=4.0,SNR=11						
ROSC				SKPbc	SKPbc	05 00 29.2	-1.3
	comp=Z,130nm,1.0s,baz=335,slow=8.9,SNR=7.6						
SVB	Belmont	133.47	28	eP	PKPdf	04 57 38.9	-4.7
SVT	Saint Vincent	133.56	28	eP	PKPdf	04 57 36.3	-7.4
OTAV	Otavalo	133.66	58	PKP	PKPdf	04 57 44.9	+0.3
BAUV	El Baul	133.93	39	eP	PKPdf	04 57 40.6	-3.9
VNA2	Neumayer--Watz	134.18	195	⇑Pdiff	PKPdf	04 57 43.5	+0.3
	comp=Z,135nm,0.6s,baz=127,slow=1.5						
BBGH	Gun Hill	134.26	26	eP	PKPdf	04 57 45.5	+0.5
VNA3	Neumayer Olymp	134.42	194	⇑Pdiff	PKPdf	04 57 44.3	+0.6
	comp=Z,112nm,0.8s						
VNA1	Neumayer--Stat	134.58	195	⇑Pdiff	PKiKP	04 57 44.8	-0.6
	comp=Z,137nm,1.0s						
PCRV	Puerto La Cruz	134.67	34	PKhKP	PKPpre	04 57 33.8	
	comp=Z,8.3nm,0.6s,baz=334,slow=2.5,SNR=8.9						
PCRV				PKP	PKPdf	04 57 44.4	-1.5
	comp=Z,24nm,0.6s,baz=297,slow=1.4,SNR=14						
PCRV				SKPbc	SKPbc	05 00 32.9	-1.5
	comp=Z,56nm,0.6s,baz=37,slow=4.7,SNR=3.4						
TPR	Prospect	135.54	29	eP	PKPdf	04 57 47.7	+0.2
TRN	Trinidad (W)	135.75	30	eP	PKPdf	04 57 47.6	-0.2
TPP	Pointe-a-Pierr	136.03	30	eP	PKPdf	04 57 40.8	-7.5
TBH	Brigand Hill	136.05	30	eP	PKPdf	04 57 48.5	+0.1
ATAH	Atahualpa	138.35	66	PKhKP	PKPpre	04 57 44.1	
	comp=Z,30nm,0.7s,baz=292,slow=0.5,SNR=14						
ATAH				PKP	PKiKP	04 57 54.6	-0.8
	comp=Z,89nm,0.9s,baz=356,slow=2.4,SNR=12						
ATAH				SKPbc	SKPbc	05 00 45.5	-0.3
	comp=Z,305nm,1.0s,baz=308,slow=2.7,SNR=16						
PMSA	Palmer Station	141.37	164	PKhKP	PKPpre	04 57 50.4	
	comp=Z,22nm,0.8s,baz=133,slow=0.8,SNR=5.1						
PMSA				SKPbc	SKPbc	05 00 50.3	-1.3
	comp=Z,53nm,0.9s,baz=99,slow=5.6,SNR=4.6						
SGC2	Sao Gabriel da	141.85	46	PKP	PKPdf	04 57 54.1	-4.9
NNA	Nana	142.34	71		PKPpre	04 57 55.1	
NNA	Nana	142.34	71	PKhKP	PKPpre	04 57 55.2	
	comp=Z,263nm,0.6s,baz=310,slow=4.4,SNR=85						
NNA				SKPbc	SKPbc	05 00 55.3	-0.4
	comp=Z,317nm,0.9s,baz=321,slow=5.6,SNR=17						
NNA	Nana	142.34	71	PKIKP	PKPdf	04 57 55.1	-4.7
TBTG	Tabatinga, AM	142.88	54	PKP	PKPdf	04 57 55.5	-5.2
CZSB	Cruzeiro do Su	143.18	61	PKP	PKPab	04 57 57.9	-0.8
BOAV	Boa Vista	143.41	35		PKPab	04 57 59.3	-0.2
BOAV	Boa Vista	143.41	35	PKP	PKPab	04 57 58.8	-0.7
MDP	Montagnes des	144.15	21	SKPbc	SKPbc	05 01 00.3	+0.2
	comp=Z,348nm,1.0s,baz=352,slow=2.1,SNR=16						
TEFE	Tefe	145.91	46	PKP	PKPdf	04 58 06.1	+0.1
MG04	Isla Riesco	147.15	145		PKiKP	04 58 11.2	-0.5
H03N2	Juan Fernandez	147.17	107	PKPbc	PKPbc	04 58 10.0	-0.2
	baz=168,slow=16,SNR=10						
H03N3	Juan Fernandez	147.18	107	PKPbc	PKPbc	04 58 10.1	-0.1
	baz=168,slow=16,SNR=16						
H03N1	Juan Fernandez	147.19	107	PKPbc	PKPbc	04 58 09.9	-0.2
	baz=168,slow=16,SNR=8.3						
H03S2	Juan Fernandez	147.19	108	PKPbc	PKPab	04 58 13.3	0.0
	SNR=5.9						
H03S3	Juan Fernandez	147.20	108	PKPbc	PKiKP	04 58 12.5	+0.5
	SNR=5.7						
H03S1	Juan Fernandez	147.21	108	PKPbc	PKiKP	04 58 11.7	-0.4
	SNR=8.1						
USHA	Ushuaia	147.42	150	PKPbc	PKPdf	04 58 08.1	+0.9
	comp=Z,14nm,0.7s,baz=324,slow=6.3,SNR=3.0						
USHA				SKPbc	SKPbc	05 01 05.6	-0.4
	comp=Z,179nm,0.8s,baz=223,slow=1.9,SNR=8.6						
ASCN	Ascension	147.49	305		PKPdf	04 58 09.8	+1.1
H10N2	ASCENSION HYDR	147.50	305	PKPbc	PKiKP	04 58 13.9	+0.7
	baz=68,slow=2.7,SNR=5.8						
H10N1	ASCENSION HYDR	147.51	305	PKPbc	PKiKP	04 58 13.3	+0.1
	baz=68,slow=2.7,SNR=7.0						
H10N3	ASCENSION HYDR	147.52	305	PKPbc	PKiKP	04 58 14.0	+0.7
	baz=68,slow=2.7,SNR=7.9						
MACA	Manacapuru-AM	148.00	40	PKP	PKPdf	04 58 09.6	+0.1
H10S2	ASCENSION HYDR	148.39	304	PKPbc	PKiKP	04 58 15.2	+0.1
	baz=233,slow=74,SNR=11						
H10S3	ASCENSION HYDR	148.40	304	PKPbc	PKiKP	04 58 15.4	+0.2
	baz=347,slow=74,SNR=7.2						
LABB	L¡brea	149.44	55	PKP	PKPdf	04 58 11.8	0.0
MAL2	Monte Alegre,	150.20	28	PKP	PKPdf	04 58 13.8	+0.8
SAML	Samuel	150.93	51		PKPdf	04 58 13.9	-0.2
SAML	Samuel	150.93	51	PKIKP	PKPdf	04 58 13.9	-0.2
ITTB	Itaituba	151.60	33	PKP	PKPdf	04 58 15.6	+0.5
LPAZ	La Paz	151.77	69	PKP	PKPdf	04 58 16.6	+0.6
	comp=Z,30nm,0.9s,baz=356,slow=3.0,SNR=74						
LPAZ				PKPbc	PKiKP	04 58 23.4	+0.3
	comp=Z,423nm,0.9s,baz=354,slow=2.7,SNR=148						
LPAZ				PKPab	PKPab	04 58 33.4	-0.4
	comp=Z,369nm,1.0s,baz=324,slow=5.7,SNR=15						
LPAZ	La Paz	151.77	69	PKP	PKPdf	04 58 16.6	+0.6
ATM1	UHE Belo Monte	152.13	25	PKP	PKPdf	04 58 16.5	+0.6
BMO1	UHE Belo Monte	152.18	24	PKP	PKPdf	04 58 16.2	+0.2
BMO2	UHE Belo Monte	152.27	25	PKP	PKPdf	04 58 16.6	+0.5
TMAB	Tom-Au,PA,Br	152.54	16	PKP	PKPdf	04 58 17.4	+0.9
PB08	IPOC Station P	152.72	77	PKP	PKPdf	04 58 14.4	-2.7
PLCA	Paso Flores	153.04	124	PKP	PKPdf	04 58 17.7	+1.2
	comp=Z,9.5nm,0.9s,baz=250,slow=1.2,SNR=15						
PLCA				PKPbc	PKiKP	04 58 24.9	+0.6
	comp=Z,53nm,0.6s,baz=236,slow=2.6,SNR=64						
PLCA				PKPab	PKPab	04 58 39.2	+1.4
	comp=Z,208nm,0.9s,baz=235,slow=4.8,SNR=29						
PLCA	Paso Flores	153.04	124	i P	PKPdf	04 58 16.2	-0.3
CANA	Caviahue	153.30	117	i P	PKPdf	04 58 17.6	+0.5
BI02	San Fabin de	153.32	114	i P	PKPbc	04 58 24.9	-0.1
ROC1	El Roble	153.79	106	i P	PKPdf	04 58 16.4	-1.7
LCO	Las Campanas	153.82	97		PKPdf	04 58 17.0	-1.3
LCO	Las Campanas	153.82	97	PKIKP	PKPdf	04 58 17.0	-1.3
EFI	East Falkland	153.97	155	PKPdf	PKPdf	04 58 19.0	+1.7
EFI	East Falkland	153.97	155	PKIKP	PKPdf	04 58 19.0	+1.7
GO03	Copiapo	154.01	94	i P	PKPdf	04 58 18.3	0.0
GO02	Mina Guanaco	154.04	88	i P	PKPdf	04 58 18.8	+0.1
PEL	Peldehue	154.07	107	i P	PKPdf	04 58 14.3	-3.9
NPGB	Novo Progresso	154.11	35	PKP	PKPdf	04 58 18.9	+0.1
VA03	San Esteban	154.19	106	i P	PKPdf	04 58 17.2	-1.3
HOPE	Hope Point	154.62	186	PKPdf	PKPdf	04 58 17.6	-0.5
HOPE	Hope Point	154.62	186	PKIKP	PKPdf	04 58 17.6	-0.5
AC02	Maricunga	154.83	92	i P	PKPdf	04 58 21.0	+1.0
AROD	Rodeo	155.00	100	i P	PKPdf	04 58 19.8	-0.2
AUSP	Uspallata	155.17	104	i P	PKPdf	04 58 20.5	+0.5
RTLS	Leoncito	155.24	103	i P	PKPdf	04 58 19.2	-1.0
ACDV	Cuesta del Vie	155.31	100	i P	PKPdf	04 58 20.2	+0.1
ACCO	Cerro Coronel	155.39	101	i P	PKPdf	04 58 24.7	+4.3
NBPS	Pedro II - PI	155.45	2	PKP	PKPdf	04 58 20.6	-0.1
ARCO	CERRO ARCO	155.55	106	i P	PKPdf	04 58 19.7	-0.7
AAGR	Agrelo	155.63	107	i P	PKPdf	04 58 20.8	+0.4
PRPB	Parauapebas	155.66	22	PKP	PKPdf	04 58 21.2	+0.3
ZON	Zonda	155.76	103	i P	PKPdf	04 58 20.0	-0.5
AGUA	GUANDACOL	155.79	98	i P	PKPdf	04 58 21.2	+0.5
VILB	Vilhena	155.82	53	PKP	PKPdf	04 58 21.7	+0.7
RTLL	Cerro Villicun	155.93	102	i P	PKPdf	04 58 14.0	-6.8
CFA	Coronel Fontan	156.14	103	PKP	PKPdf	04 58 20.8	-0.2
	comp=Z,5.5nm,0.9s,baz=286,slow=3.0,SNR=15						
CFA				PKPab	PKPab	04 58 51.9	+0.5
	comp=Z,82nm,0.8s,baz=278,slow=3.0,SNR=6.4						
NBBC	Barra do Corda	156.19	11	PKP	PKPdf	04 58 20.8	-0.8
RCBR	Riachuelo	156.44	348	PKPdf	PKPdf	04 58 21.9	0.0
RCBR					PKPab	04 58 52.3	-0.5
RCBR	Riachuelo	156.44	348	PKIKP	PKPdf	04 58 21.9	0.0
NBPA	Parau_RN	156.56	351	PKP	PKPdf	04 58 22.6	+0.5
SALTA		156.62	84	i P	PKPdf	04 58 23.6	+1.2
YJA	Yavi	156.64	79	i P	PKPdf	04 58 24.3	+1.9
PAL01	Palmeiras do T	156.78	17	PKP	PKPdf	04 58 22.8	+0.5
PAL2	UHE Estreito -	156.94	17	PKP	PKPdf	04 58 23.2	+0.6
CLDB	Colider	157.06	41	PKP	PKPdf	04 58 23.1	+0.5
PDRB	Porto dos Gac	157.09	44	PKP	PKPdf	04 58 23.1	+0.5
ACLC	CERRO LA CRUZ	157.12	97	i P	PKPdf	04 58 22.1	-0.4
SIV	San Ignacio	157.19	60	PKP	PKPdf	04 58 23.5	+0.8
	comp=Z,25nm,0.9s,baz=325,slow=0.3,SNR=66						
SIV				PKPab	PKPab	04 58 55.7	-0.5
	comp=Z,202nm,1.0s,baz=251,slow=9.4,SNR=7.5						
FSA	Cafayete	157.43	89	i P	PKPdf	04 58 22.2	-0.8
SLA	San Lorenzo	157.49	85	i P	PKPdf	04 58 23.2	+0.1
AZAP	Zapla	157.73	83	i P	PKPdf	04 58 23.0	-0.5
CYA	Choya	158.01	94	i P	PKPdf	04 58 23.1	-0.3
PTLB	Pontes e Lacer	158.27	55	PKP	PKPdf	04 58 24.6	+0.6
SMTB	Santa Maria do	158.89	19	PKP	PKPdf	04 58 25.5	+0.6
LAJE	UHE Lajeado	159.72	22	PKP	PKPdf	04 58 25.9	+0.1
MAS01	UHE Manso	160.16	48	PKP	PKPdf	04 58 27.1	+0.9
TRQA	Tornquist	160.18	122		PKPdf	04 58 25.0	-0.6
TRQA	Tornquist	160.18	122	PKIKP	PKPdf	04 58 25.0	-0.6
TRQA	Tornquist	160.18	122	PKP	PKPdf	04 58 25.1	-0.6
NBAN	Anadia - AL	160.26	347	PKP	PKPdf	04 58 26.0	-0.4
SNDB	Serra Nova Dou	160.34	32	PKP	PKPdf	04 58 27.0	+0.5
SALV	Santo Antonio	160.97	50	PKP	PKPdf	04 58 27.7	+0.6
SSV2	Sao Salvador	162.42	25	PKP	PKPdf	04 58 29.3	+0.7
CAN3	Cana Brava	162.62	25	PKP	PKPdf	04 58 29.2	+0.4
SDBA	SAO DESIDERIO	162.97	14	PKP	PKPdf	04 58 29.5	+0.3
ARAG	Araguaiana, MT	163.22	40	PKP	PKPdf	04 58 30.5	+1.2
AQDB	Aquidauana	163.94	61	PKP	PKPdf	04 58 30.3	+0.4
CPUP	Villa Florida	165.04	83	PKP	PKPdf	04 58 31.0	+0.4
	comp=Z,7.4nm,0.9s,baz=196,slow=1.9,SNR=32						
CPUP				PKPab	PKPab	04 59 30.6	+0.2
	comp=Z,100nm,1.0s,baz=148,slow=4.1,SNR=64						
BDFB	Brasilia	165.04	28	PKP	PKPdf	04 58 31.8	+0.7
	comp=Z,27nm,0.9s,baz=6.6,slow=2.3,SNR=27						
BDFB				PKPab	PKPab	04 59 30.1	-0.3
	comp=Z,51nm,0.8s,baz=283,slow=5.1,SNR=16						
BDFB	Brasilia	165.04	28	PKP	PKPdf	04 58 31.8	+0.7
ANA01	Lindo Horizont	165.53	0	PKP	PKPdf	04 58 31.0	-0.4
JANB	Januaria	165.67	14	PKP	PKPdf	04 58 31.8	+0.3
NBIT	Itapeh - BA	165.88	355	PKP	PKPdf	04 58 32.5	+0.9
ITQB	Itaqui	166.12	96	PKP	PKPdf	04 58 31.9	+0.5
CMC01	Camacan, BA	166.31	355	PKP	PKPdf	04 58 32.4	+0.5
BAT2	UHE Batalha	166.80	29	PKP	PKPdf	04 58 32.9	+0.5
ITU3	Corumbazu	166.88	36	PKP	PKPdf	04 58 33.4	+1.0
IPMB	Ipameri, GO	167.01	33	PKP	PKPdf	04 58 31.8	-0.7
ITRB	Iturama	167.20	45	PKP	PKPdf	04 58 32.7	+0.2
GUA01	Guaratinga, BA	167.55	356	PKP	PKPdf	04 58 33.6	+0.7
TRCB	Terra Rica	167.60	62	PKP	PKPdf	04 58 33.3	+0.5
JQT1	Jequitai-MG	167.76	17	PKP	PKPdf	04 58 33.2	+0.2
PCMB	Pacaembu	167.92	54	PKP	PKPdf	04 58 34.0	+1.0
CAR01	Carai MG	168.04	3	PKP	PKPdf	04 58 34.4	+1.1
PMNB	Patos De Minas	168.29	28	PKP	PKPdf	04 58 34.2	+0.8
PLTB	Pedras Altas	168.56	107	PKPdf	PKPdf	04 58 32.7	-0.4
PLTB					PKPab	04 59 46.1	+0.2
PLTB	Pedras Altas	168.56	107	PKP	PKPdf	04 58 33.8	+0.6
CPSB	Cacapava Do Su	168.86	100	PKP	PKPdf	04 58 34.0	+0.6
PTGB	Pitanga	168.99	69	PKP	PKPdf	04 58 34.8	+1.1
SJMB	Sao Joao De Ma	169.67	2	PKP	PKPdf	04 58 34.6	+0.4
ITAB	Concordia	169.76	82	PKP	PKPdf	04 58 34.5	+0.6
FRTB	Fartura	170.23	56	PKP	PKPdf	04 58 35.6	+1.2
VABB	Valinhos	171.75	44	PKP	PKPdf	04 58 35.7	+0.4
PET01	Itanhaem-SP	172.45	52	PKP	PKPdf	04 58 36.9	+1.5

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*SJA **04** 04:42:45.1±0.8, 32°.26S×72°.02W, h32^{km}, ML3.5, MW3.6*
*GUC **04** 04:42:48.4±0.5, 32°.15S×71°.72W, h19^{km}±2^{km}, ML3.3*
ISC 04 04:42:45.0±1.8**, 32°.18S**±0°.02×**71°.92W**±0°.07**, h10**^{km}±14^{km}**,**
n28, σ0^{s}.91/53**, 6C-8D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	Catapilco	0.65	126	eP	Pb	04 42 59.3	+0.8
VA06				eS	Sb	04 43 06.8	-0.8
VA06				IAML		04 43 08.5	
	comp=E,3µm,0.5s						
VA01	Torpederas	0.87	165	eP	Pn	04 43 04.2	+0.8
VA01				eS	Sn	04 43 16.1	-0.1
ROC1	El Roble	1.10	136	eP	Pn	04 43 06.8	0.0
ROC1				eS	Sn	04 43 22.3	+0.1
ROCH	El Roble	1.10	136	⇓eP	Pn	04 43 06.8	0.0
ROCH				eS	Sb	04 43 20.6	-0.3
ROCH				IAML		04 43 23.6	
	comp=N,2µm,0.3s						
CO02	Combarbal	1.25	39	⇓eP	Pn	04 43 08.5	-0.2
CO02				eS	Sb	04 43 23.4	-1.6
MT02	Curacav	1.26	149	⇓eP	Pg	04 43 09.5	+0.2
MT02				eS	Sb	04 43 25.3	0.0
VA03	San Esteban	1.29	117	⇓eP	Pn	04 43 09.0	-0.3
VA03				eS	Sb	04 43 24.6	-1.7
VA03				IAML		04 43 28.5	
	comp=N,2µm,0.5s						
VA03	San Esteban	1.29	117	eP	Pn	04 43 09.1	-0.3
VA03				eS	Sn	04 43 27.2	+0.5
VA03				IAML		04 43 31.4	
	comp=Z,833nm,0.3s						
PEL	Peldehue	1.42	133	⇓eP	Pb	04 43 11.5	-0.2
PEL				eS	Sn	04 43 29.1	-0.6
PEL				IAML		04 43 31.4	
	comp=N,1µm,0.4s						
PEL	Peldehue	1.42	133	eP	Pb	04 43 11.4	-0.2
PEL				eS	Sn	04 43 29.6	-0.2
CO06	Fray Jorge	1.52	9	⇓eP	Pn	04 43 12.6	+0.2
CO06				eS	Sb	04 43 33.1	+0.4
CO06				IAML		04 43 37.6	
	comp=N,637nm,0.2s						
MT05	Renca	1.56	141	⇑eP	Pb	04 43 14.2	0.0
MT05				eS	Sb	04 43 34.1	+0.1
MT05				IAML		04 43 38.0	
	comp=E,1µm,0.2s						
MT10	Hacienda Santa	1.59	133	⇓eP	Pb	04 43 14.3	-0.4
MT10				eS	Sb	04 43 34.3	-0.7
MT14	Cerro Cal¡n	1.68	137	⇑eP	Pb	04 43 15.9	-0.2
MT14				eS	Sb	04 43 36.6	-0.8
MT14				IAML		04 43 42.8	
	comp=E,1µm,0.4s						
CO03	El Pedregal	1.70	38	⇓eP	Pn	04 43 15.6	+0.7
CO03				eS	Sn	04 43 36.2	-0.6
CO03				IAML		04 43 42.5	
	comp=E,1µm,0.4s						
CO03	El Pedregal	1.70	38	eP	Pb	04 43 15.7	-0.7
CO03				IAML		04 43 44.3	
	comp=Z,238nm,0.7s						
MT16	CCHEN	1.71	137	⇑eP	Pb	04 43 16.3	-0.3
MT16				eS	Sb	04 43 37.7	-0.6
MT16				IAML		04 43 43.6	
	comp=N,380nm,0.8s						
MT03	Universidad Ad	1.77	138	⇑eP	Pb	04 43 17.1	-0.5
MT03				eS	Sb	04 43 39.3	-0.6
MT03				IAML		04 43 46.5	
	comp=E,1µm,0.4s						
FCH	Farellones	1.79	130	eP	Pn	04 43 17.1	+0.8
FCH				eS	Sn	04 43 38.9	-0.4
FCH				IAML		04 43 41.8	
	comp=E,578nm,0.2s						
MT04	Ro Olivares	1.94	130	⇑eP	Pb	04 43 19.6	-1.0
MT04				eS	Sb	04 43 43.4	-1.5
MT04				IAML		04 43 46.5	
	comp=E,395nm,0.8s						
MT08	Bocatoma Ro	2.04	129	⇑eP	Pb	04 43 21.5	-0.8
MT08				eS	Sb	04 43 46.5	-1.4
MT08				IAML		04 43 50.4	
	comp=N,215nm,0.5s						
AUSP	Uspallata	2.15	92	eP	Pb	04 43 24.1	-0.1
AUSP				eS	Sb	04 43 51.0	0.0
GO04	Tololo Observa	2.22	26	eP	Pn	04 43 22.9	+0.7
GO04				eS	Sb	04 43 52.2	-0.8
RTLS	Leoncito	2.26	81	eP	Pb	04 43 25.8	-0.3
RTLS				eS	Sb	04 43 54.5	+0.2
RTLS				IAML		04 43 57.8	
	comp=Z,675nm,0.5s						
CO05	La Serena	2.33	15	eP	Pb	04 43 26.6	-0.5
CO05				eS	Sb	04 43 55.3	-0.6
CO05				IAML		04 44 01.4	
	comp=E,464nm,0.7s						
CO01	Juntas del Tor	2.70	36	eP	Pb	04 43 31.8	-1.8
CO01				eS	Sn	04 44 02.1	+0.5
CO01				IAML		04 44 09.3	
	comp=N,220nm,0.2s						
ACLC	CERRO LA CRUZ	5.08	59	eP	Pn	04 44 04.3	+2.9
ACLC				IAML		04 45 40.0	
	comp=Z,14nm,0.8s						
CYA	Choya	6.47	56	eP	Pn	04 44 23.2	+2.8
CYA				IAML		04 45 43.1	
	comp=Z,8.0nm,0.5s						

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*GCG **04** 04:44:00.6±2.5, 15°.27N×92°.16W, h151^{km}±15^{km}, MD4.1,*
ML3.8, MW3.0
*MEX **04** 04:44:02.8±0.7, 15°.18N×92°.21W, h152^{km}±6^{km}, MD4.1*
ISC 04 04:44:00.0±1.0**, 15°.22N**±0°.04×**92°.34W**±0°.03**, h158**^{km}±5^{km}**,**
n43, σ2^{s}.69/63**, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PATR	El Naranjo	0.15	135	eP	Pn	04 44 21.6	+0.1
PATR				eS	Sn	04 44 36.2	-1.6
PAVE	Pavencul	0.16	100	eP	Pn	04 44 22.0	+0.5
PAVE				eS	Sn	04 44 37.0	-0.7
THIG		0.32	166	eP	Pn	04 44 22.1	+0.5
THIG				eS	Sn	04 44 38.0	0.0
THIG		0.32	166	i P	Pn	04 44 22.1	+0.5
THIG				i S	Sn	04 44 38.0	0.0
THIG				IAML		04 44 38.6	
	comp=N,2µm,0.4s						
SMCA	Catarina	0.45	144	eP	Pn	04 44 21.7	-0.4
SMCA				e		04 44 23.2	
SMCA				i S	Sn	04 44 36.8	-2.1
SMCA				IAML		04 44 40.2	
	comp=E,570nm,0.3s						
HUEH	Huehuetenango	0.82	83	eP	Pn	04 44 24.3	-0.1
HUEH				eS	Sn	04 44 40.8	-2.2
HUEH	Huehuetenango	0.82	83	i P	Pn	04 44 24.3	-0.1
HUEH				IAML		04 44 24.5	
	comp=Z,1µm,0.2s						
RTAL	Retalhuleu	0.94	138	eP	Pn	04 44 25.1	0.0
RTAL				eS	Sn	04 44 42.4	-1.8
PCIG		0.97	300	eP	Pn	04 44 27.6	+2.3
PCIG				eS	Sn	04 44 46.2	+1.6
SOKI	Kika Raxquin	0.99	114	i P	Pn	04 44 26.4	+0.4
SOKI				i S	Sn	04 44 46.5	+0.8
SOKI				IAML		04 44 58.0	
	comp=N,450nm,0.7s						
CCIG	Comitan	1.07	11	eP	Pn	04 44 28.1	+1.7
CCIG				eS	Sn	04 44 46.6	0.0
CCIG	Comitan	1.07	11	i P	Pn	04 44 28.1	+1.7
CCIG				i S	Sn	04 44 46.7	0.0
CCIG				IAML		04 44 48.0	
	comp=N,1µm,0.4s						
STG8	El Palmar, Qui	1.23	129	i P	Pn	04 44 24.6	-3.2
STG8				IAML		04 44 48.3	
	comp=E,1µm,0.2s						
TGIG		1.72	334	eP	Pn	04 44 34.7	+2.1
TGIG				eS	Sn	04 44 58.4	+0.8
TGIG		1.72	334	i P	Pn	04 44 34.8	+2.2
TGIG				i S	Sn	04 44 57.8	+0.2
TGIG				IAML		04 45 02.2	
	comp=E,238nm,0.6s						
AVCB	Coban	1.89	82	i S	Sn	04 44 57.6	-3.4
AVCB				IAML		04 45 06.7	
	comp=E,2µm,0.6s						
FG16	Alotenango, Sa	2.01	118	IAML		04 45 10.4	
	comp=N,1µm,0.2s						
PETF	Flores	2.92	54	eP	Pn	04 44 43.7	-2.9
PETF				eS	Sn	04 45 16.4	-6.4
PETF	Flores	2.92	54	i P	Pn	04 44 43.7	-2.9
PETF				IAML		04 45 24.0	
	comp=E,261nm,0.6s						
HUIG	Huatulco	3.67	279	eP	Pn	04 44 58.4	+2.2
HUIG				eS	Sn	04 45 38.2	-1.7
HUIG	Huatulco	3.67	279	i P	Pn	04 44 58.6	+2.3
HUIG				i S	Sn	04 45 37.5	-2.4
SCIG	Sabancuy	3.88	16	eP	Pn	04 45 00.8	+1.8
SCIG				eS	Sn	04 45 41.3	-3.7
NEUV	Arroyo Zacate	4.14	307	eP	Pn	04 45 05.8	+3.5
NEUV				eS	Sn	04 45 50.5	-0.3
PMUV	Sontecomapan	4.24	322	eS	Sn	04 45 49.5	-3.9
VHO	Vista Hermosa	4.60	294	eP	Pn	04 45 11.9	+3.4
VHO				eS	Sn	04 45 59.1	-2.9
PEIG	Puerto Escondi	4.69	280	eP	Pn	04 45 12.5	+2.9
PEIG				eS	Sn	04 46 00.7	-3.2
YOIG	Yosondua	5.26	289	eP	Pn	04 45 21.9	+4.6
YOIG				eS	Sn	04 46 16.9	-0.7
TOIG	Toxpalan	5.35	303	eP	Pn	04 45 23.2	+4.8
TOIG				eS	Sn	04 46 20.5	+0.9
TXIG	Tlaxiaco	5.59	292	eP	Pn	04 45 26.9	+5.2
TXIG				eS	Sn	04 46 25.2	-0.2
PNIG	Pinotepa	5.69	283	eP	Pn	04 45 26.6	+3.9
PNIG				eS	Sn	04 46 24.6	-2.8

TPIG	Tehuac#an	5.76	304	*e*S	Sn	04 46 27.5	-1.9
JAUV	Jalcomulco	5.93	315	*e*P	Pn	04 45 27.9	+2.0
JAUV				*e*S	Sn	04 46 30.7	-2.5
FTIG	Fresnillo de T	6.16	296	*e*P	Pn	04 45 34.6	+5.5
FTIG				*e*S	Sn	04 46 39.3	+0.4
MGIG	Malinaltepec	6.37	289	*e*P	Pn	04 45 34.9	+3.0
MGIG				*e*S	Sn	04 46 40.5	-3.3
TLIG	Tlapa	6.41	292	*e*P	Pn	04 45 38.1	+5.7
TLIG				*e*S	Sn	04 46 43.8	-1.0
CRIG	Cruz Grande	6.70	284	*e*P	Pn	04 45 40.4	+4.3
CRIG				*e*S	Sn	04 46 46.8	-4.7
CXUV	Coxquihui	7.02	315	*e*P	Pn	04 45 43.0	+2.6
CXUV				*e*S	Sn	04 46 53.1	-6.1
PPPT	Popocatepetl	7.07	303	*e*P	Pn	04 45 47.4	+5.9
PBXN	Popocatepetl	7.11	303	*e*P	Pn	04 45 49.3	+7.2
PPM	Popocatepetl	7.12	303	*e*P	Pn	04 45 48.7	+6.5
YAIG	Yautepec	7.38	300	*e*P	Pn	04 45 51.7	+6.4
YAIG				*e*S	Sn	04 47 01.8	-6.2
MEIG	Mezcala	7.48	292	*e*P	Pn	04 45 52.9	+6.3
PLIG	Platanillo	7.54	296	*e*P	Pn	04 45 53.9	+6.4

MEX 04 04:59:56.0±0.6**, 16°.87N**×**98°.79W, h43**^{km}±6^{km}**, MD4.0,**
Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIG	Cruz Grande	0.36	248	*e*P	Pn	05 00 03.5	-1.7
CRIG				*e*S	Sn	05 00 10.3	-1.3
MGIG	Malinaltepec	0.39	22	*e*P	Pn	05 00 03.5	-2.2
MGIG				*e*S	Sn	05 00 10.6	-1.9
TLIG	Tlapa	0.72	17	*e*P	Pn	05 00 08.1	-1.9
TLIG				*e*S	Sn	05 00 18.3	-1.6
PNIG	Pinotepa	0.79	127	*e*P	Pn	05 00 08.8	-1.9
PNIG				*e*S	Sn	05 00 19.1	-2.4
DAIG	Los Arroyos	0.84	280	*e*P	Pn	05 00 09.6	-1.8
DAIG				*e*S	Sn	05 00 20.8	-1.9
HMTT	Tlapaneco	0.95	13	*e*P	Pn	05 00 11.1	-1.9
HMTT				*e*S	Sn	05 00 23.3	-2.2
VNTA	La Mica	0.99	273	*e*P	Pn	05 00 11.1	-2.4
VNTA				*e*S	Sn	05 00 24.0	-2.3
TXIG	Tlaxiaco	1.04	68	*e*P	Pn	05 00 13.0	-1.5
TXIG				*e*S	Sn	05 00 26.3	-1.8
ACP2	Acapulco	1.05	270	*e*P	Pn	05 00 12.3	-2.1
ACP2				*e*S	Sn	05 00 24.8	-3.1
YOIG	Yosondua	1.19	90	*e*P	Pn	05 00 15.0	-1.4
YOIG				*e*S	Sn	05 00 29.8	-1.7
FTIG	Fresnillo de T	1.21	31	*e*P	Pn	05 00 14.9	-1.7
FTIG				*e*S	Sn	05 00 29.5	-2.3
MEIG	Mezcala	1.32	323	*e*P	Pn	05 00 16.8	-1.3
MEIG				*e*S	Sn	05 00 33.3	-1.2
HLIG	Huajuapan de L	1.34	44	*e*P	Pn	05 00 16.8	-1.6
HLIG				*e*S	Sn	05 00 33.0	-2.1
CAIG	El Cayaco	1.43	277	*e*P	Pn	05 00 17.6	-1.9
CAIG				*e*S	Sn	05 00 34.3	-2.8
PLIG	Platanillo	1.66	336	*e*P	Pn	05 00 21.4	-1.4
PLIG				*e*S	Sn	05 00 41.0	-2.0
PEIG	Puerto Escondi	1.79	119	*e*P	Pn	05 00 23.1	-1.5
PEIG				*e*S	Sn	05 00 42.8	-3.4
VHO	Vista Hermosa	1.97	84	*e*P	Pn	05 00 25.4	-1.8
VHO				*e*S	Sn	05 00 49.3	-1.5
OXBJ	Oaxaca	1.98	84	*e*S	Sn	05 00 47.6	-3.4
YAIG	Yautepec	2.00	352	*e*P	Pn	05 00 26.5	-1.0
YAIG				*e*S	Sn	05 00 53.2	+1.8
OXLC	Oaxaca	2.00	84	*e*S	Sn	05 00 46.6	-4.9
TOIG	Toxpalan	2.04	53	*e*P	Pn	05 00 26.5	-1.5
TOIG				*e*S	Sn	05 00 51.0	-1.4
TPIG	Tehuac#an	2.05	41	*e*P	Pn	05 00 25.8	-2.5
TPIG				*e*S	Sn	05 00 51.6	-1.1
PPPT	Popocatepetl	2.10	4	*e*P	Pn	05 00 28.7	-0.5
PBCV	Popocatepetl	2.12	6	*e*P	Pn	05 00 27.5	-1.7
PBXN	Popocatepetl	2.13	3	*e*P	Pn	05 00 29.1	-0.5
PBXN				*e*P		05 00 31.6	
PPM	Popocatepetl	2.19	4	*e*P	Pn	05 00 29.5	-0.9
PPM				*e*S	Sn	05 01 02.4	+5.8
ZIIG	Zihuatanejo	2.66	286	*e*P	Pn	05 00 35.6	-0.9
ZIIG				*e*S	Sn	05 01 04.1	-3.4
HUIG	Huatulco	2.79	113	*e*P	Pn	05 00 37.4	-0.9
HUIG				*e*S	Sn	05 01 06.6	-4.1
NEUV	Arroyo Zacate	2.97	73	*e*P	Pn	05 00 39.6	-1.1
NEUV				*e*S	Sn	05 01 13.2	-1.9
JAUV	Jalcomulco	3.12	37	*e*P	Pn	05 00 39.9	-2.8
JAUV				*e*S	Sn	05 01 22.3	+3.5
CXUV	Coxquihui	3.48	19	*e*P	Pn	05 00 43.4	-4.3
CXUV				*e*S	Sn	05 01 31.3	+3.7
MMIG	Aquila	4.57	289	*e*P	Pn	05 01 02.3	-0.4
MMIG				*e*S	Sn	05 01 47.2	-7.3
CJM	Chamela	6.50	295	*e*P	Pn	05 01 29.5	+0.4

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*SNET **04** 05:39:19.9±1.2, 13°.13N×89°.55W, h54^{km}±17^{km}, ML3.4*
*CATAC **04** 05:39:19.8±0.5, 13°N±3°×9°0W±°, h28^{km}±2^{km}, M3.4/24, MLv3.4/24, Error ellipse: s-maj=6.1km s-min=3.5km az=23.1, confirmed*
*GCG **04** 05:39:20.5±0.9, 13°.14N×89°.69W, h34^{km}±7^{km}, MD3.6*
ISC 04 05:39:14.6±2.0**, 12°.84N**±0°.08×**89°.58W**±0°.05**, h14**^{km}±10^{km}**,**
n71, σ1^{s}**23**/78**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.69	21	*e*P	Pn	05 39 30.6	+0.6
LALI	Alcalda de L	0.69	21	*i* P	Pn	05 39 30.6	+0.6
LALI	Alcalda de L	0.69	21	P	Pb	05 39 30.5	+2.0
LALI	Alcalda de L	0.69	21	S	Sb	05 39 39.1	+1.2
JAYA	Jayaque - finc	0.82	9	*e*P	Pb	05 39 32.5	+1.7
JAYA				*e*S	Sg	05 39 41.3	-0.2
JAYA	Jayaque - finc	0.82	9	*i* P	Pb	05 39 32.2	+1.5
JAYA				*i* S	Sg	05 39 40.6	-0.9
JAYA	Jayaque - finc	0.82	9	P	Pb	05 39 32.3	+1.5
PANCS	Alcalda de	0.86	27	P	Pn	05 39 34.2	+1.8
PANCS	Alcalda de	0.86	27	S	Sg	05 39 42.0	-0.7
ITCA	Escuela Especi	0.88	19	P	Pb	05 39 33.1	+1.4
ITCA	Escuela Especi	0.88	19	S	Sg	05 39 42.3	-1.0
LOMA	Loma Larga	0.89	26	S	Sg	05 39 43.6	-0.2
LOMA	Loma Larga	0.89	26	P	Pb	05 39 33.3	+1.3
PMON	Piamonte	0.91	16	P	Pb	05 39 33.3	+1.1
SEMO	Seminario San	0.93	22	P	Pb	05 39 33.8	+1.3
SEMO	Seminario San	0.93	22	S	Sg	05 39 44.0	-0.7
LFRS	El Faro	0.93	33	*e*P	Pn	05 39 34.4	+1.0
UTEC	Universidad Te	0.93	23	P	Pb	05 39 34.2	+1.5
UTEC	Universidad Te	0.93	23	S	Sg	05 39 44.1	-0.9
UEES	Universidad Ev	0.93	21	P	Pn	05 39 34.5	+1.1
UEES	Universidad Ev	0.93	21	S	Sg	05 39 44.3	-0.7
BOQS	Boqueron	0.94	18	*e*P	Pg	05 39 33.4	+0.6
IGN	Direccin Gen	0.96	24	P	Pb	05 39 34.0	+1.0
IGN	Direccin Gen	0.96	24	S	Sg	05 39 44.7	-1.0
UDBS	Universidad Do	0.96	25	P	Pn	05 39 35.0	+1.2
UDBS	Universidad Do	0.96	25	S	Sg	05 39 45.2	-0.8
CEDA	San Andres	0.97	10	*e*P	Pg	05 39 34.0	+0.4
CEDA	San Andres	0.97	10	P	Pb	05 39 34.4	+1.1
CEDA	San Andres	0.97	10	S	Sg	05 39 45.1	-1.2
CEVE	Cerro Verde	0.98	357	*e*P	Pg	05 39 34.7	+0.9
CEVE				*e*S	Sg	05 39 45.8	-0.8
CEVE				IAML		05 39 50.9	
	comp=Z,1μm,0.3s						
CEVE	Cerro Verde	0.98	357	P	Pg	05 39 34.7	+0.9
LFU	La Fuente	1.01	26	*e*S	Sg	05 39 46.8	-0.6
COEG	Centro de Oper	1.03	41	*e*P	Pb	05 39 35.2	+1.0
COEG				*e*S	Sg	05 39 47.0	-1.1
COEG				IAML		05 39 48.3	
	comp=Z,1μm,0.2s						
COEG	Centro de Oper	1.03	41	P	Pb	05 39 35.3	+1.0
TECO	Alcaldia de Te	1.04	48	P	Pn	05 39 35.7	+0.9
TECO	Alcaldia de Te	1.04	48	S	Sb	05 39 48.1	+0.1
PAVA	Las Pavas	1.07	36	P	Pb	05 39 36.1	+1.1
PAVA	Las Pavas	1.07	36	S	Sg	05 39 48.5	-0.9
NUBE	Las Nubes	1.08	349	*i* P	Pg	05 39 35.6	+0.1
NUBE				*i* S	Sg	05 39 46.2	-3.4
NUBE	Las Nubes	1.08	349	P	Pg	05 39 36.0	+0.5
NUBE	Las Nubes	1.08	349	S	Sg	05 39 48.0	-1.5
FAME	Alcaldia de Sa	1.09	337	P	Pg	05 39 35.9	+0.3
FAME	Alcaldia de Sa	1.09	337	S	Sg	05 39 48.1	-1.7
ALJI	Alcalda de J	1.09	64	P	Pn	05 39 37.4	+1.9
ALJI	Alcalda de J	1.09	64	S	Sb	05 39 50.1	+0.6
UESV	Universidad de	1.10	44	P	Pn	05 39 36.6	+0.9
UESV	Universidad de	1.10	44	S	Sg	05 39 48.8	-1.6
UNIC	Universidad Ca	1.14	1	P	Pg	05 39 36.8	+0.2
UNIC	Universidad Ca	1.14	1	S	Sg	05 39 49.6	-1.9
LOAL	Lomas de Alarc	1.17	350	P	Pg	05 39 36.9	-0.3
LOAL	Lomas de Alarc	1.17	350	S	Sg	05 39 51.4	-1.1
SCLA	Alcaldia de Sa	1.19	44	P	Pn	05 39 38.4	+1.5
SCLA	Alcaldia de Sa	1.19	44	S	Sb	05 39 52.3	-0.1
SLOZ	Alcaldia de Sa	1.20	350	P	Pg	05 39 37.7	0.0
SLOZ	Alcaldia de Sa	1.20	350	S	Sg	05 39 51.6	-1.8
PQSS	Presa 15 de Se	1.26	52	P	Pn	05 39 39.2	+1.4
PQSS	Presa 15 de Se	1.26	52	S	Sg	05 39 53.5	-1.9
PACA	Pacayal	1.37	63	P	Pg	05 39 41.7	+0.6
PACA	Pacayal	1.37	63	S	Sg	05 39 57.0	-2.0
RANC	El Ranchito	1.39	65	P	Pn	05 39 39.3	-0.4
RANC	El Ranchito	1.39	65	S	Sb	05 39 55.6	-2.5
BLLM	Bellamira	1.44	65	*e*P	Pg	05 39 42.3	+0.1
MTO3	Montecristo	1.57	8	*i* P	Pn	05 39 42.4	+0.3
MTO3	Montecristo	1.57	8	P	Pn	05 39 42.5	+0.3
MTO3	Montecristo	1.57	8	S	Sn	05 39 59.8	-2.7
ESQI	Esquipulas	1.73	8	*e*P	Pn	05 39 44.7	+0.4
ESQI	Esquipulas	1.73	8	P	Pn	05 39 44.9	+0.5
ESQI	Esquipulas	1.73	8	S	Sn	05 40 04.6	-1.6
CNCH	Conchagua	1.75	75	*e*P	Pn	05 39 44.1	-0.6
CNCH				*e*P	Pb	05 39 47.2	+0.5
CNCH				*e*S	Sb	05 40 08.7	+0.1
CNCH	Conchagua	1.75	75	P	Pb	05 39 47.3	+0.7
CHOHN	Orocuina	2.44	75	P	Pn	05 39 56.0	+1.8

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*IDC **04** 05:39:33.4±2.8, 32°.74N×139°.81E, h0^{km}, mb3.6/4, mbtmp3.5/5, ML2.5/1, Error ellipse: s-maj=109.8km s-min=21.3km az=73.0*
*JMA **04** 05:39:33.0±0.3, 33°.4N±0°.9×14°1E±°, h60^{km}, MV3.3/11, E OFF HACHIJOJIMA ISLAND*
ISC 04 05:39:33.6±1.4**, 33°.32N**±0°.08×**141°.5E**±0°.1**, h41**^{km}**, n13,**
σ**0**^{s}**88**/16**, mb3.7**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	Boso 1	1.39	343	P	Pn	05 39 55.7	-0.3
JHJ2	Mitsune	1.40	262	P	Pn	05 39 57.0	+0.4
JHCJ	Hachijojimakas	1.42	260	P	Pn	05 39 57.0	+0.1
JMKN	Mikurajimanish	1.66	291	P	Pn	05 39 59.8	-0.5
JMKN				*e*S	Sn	05 40 20.5	+0.1
BSO3	Boso 3	1.68	332	P	Pn	05 39 59.9	-0.3
BSO4	Boso 4	1.91	331	P	Pn	05 40 03.5	-0.1
JIM2	Oshima 3	2.19	310	P	Pn	05 40 07.3	-0.3
KTJ3	Kamata3	2.56	310	P	Pn	05 40 12.3	-0.2
KTJ3				*e*S	Sn	05 40 41.7	-0.7
MJAR	Matsushiro Arr	4.18	321	Pn	Pn	05 40 36.8	+1.9
	0.3nm,0.3s,baz=157,slow=13,SNR=6.1						
MJAR				Sn	Sn	05 41 23.7	+1.2
	0.3nm,0.3s,baz=130,slow=17,SNR=6.1						
	2.2nm,0.3s						
MKAR	Makanchi Array	46.21	305	P	P	05 47 52.7	-1.8
	0.2nm,0.5s,baz=90,slow=9.0,SNR=2.3						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	48.38	311	P	P	05 48 12.0	+0.7
	0.4nm,0.4s,baz=86,slow=7.6,SNR=6.6						
	0.4nm,0.4s						
WRA	Warramunga Arr	53.40	188	P	P	05 48 49.4	+0.1
	0.6nm,0.4s,baz=5.6,slow=7.4,SNR=7.6						
	0.6nm,0.4s						
ASAR	Alice Springs	57.12	188	P	P	05 49 16.4	+0.3
	0.2nm,0.3s,baz=358,slow=5.3,SNR=4.2						
	0.2nm,0.3s						

WEL 04 05:53:42.9±1.4**, 38°S**±3°×**17°6E**±°**, h7**^{km}±7^{km}**, M1.8**/7**,**
ML2.2/7**, MLv1.8**/7**, Error ellipse: s-maj=3.9km**
s-min=3.3km az=110.5, confirmed, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WPRZ	Whakapapatarin	0.07	200	P	Pg	05 53 45.2	+0.5
WPRZ	Whakapapatarin	0.07	200	S	Sg	05 53 47.0	+1.1
HRRZ	Handcock Road	0.10	47	P	Pg	05 53 45.6	+0.4
HRRZ	Handcock Road	0.10	47	S	Sg	05 53 47.9	+1.2
GRRZ	Galatos Road	0.12	329	P	Pg	05 53 46.1	+0.5
HSRZ	Hossack Road	0.15	16	P	Pg	05 53 46.7	+0.6
HSRZ	Hossack Road	0.15	16	S	Sg	05 53 49.6	+1.4
ALRZ	Allen Road	0.16	131	P	Pg	05 53 49.1	+2.9
ALRZ	Allen Road	0.16	131	P	Pg	05 53 47.2	+1.0
ALRZ				S	Sg	05 53 49.8	+1.4
PRRZ	Plateau Road	0.16	105	P	Pg	05 53 47.1	+0.8
PRRZ	Plateau Road	0.16	105	S	Sg	05 53 49.9	+1.3
HLRZ	Highlands Stat	0.24	32	P	Pg	05 53 50.0	+2.3
HLRZ	Highlands Stat	0.24	32	P	Pg	05 53 48.5	+0.8
UTU	Utuhina	0.28	0	P	Pg	05 53 49.2	+0.8
UTU				S	Sb	05 53 54.0	-1.3
KUTZ	Kaahu Road	0.29	264	P	Pg	05 53 49.3	+0.7
KUTZ				S	Sg	05 53 53.9	+1.4

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*NOU **04** 05:53:49.6, 39°.15S×178°.95E, h38^{km}, MLv4.3/16, Off E. Coast of N. Island, N.Z.*
*IDC **04** 05:53:49.7±1.1, 38°.70S×178°.61E, h0^{km}, mb4.1/3, mbtmp4.1/3, Error ellipse: s-maj=43.9km s-min=21.4km az=28.0*
*WEL **04** 05:53:52.5±0.8, 39°S±4°×17°9E±°, h33^{km}±6^{km}, M4.1/72, ML4.4/16, MLv4.1/72, Error ellipse: s-maj=7.9km s-min=5.1km az=100.6, confirmed*
ISC 04 05:53:48.5±1.9**, 39°.08S**±0°.04×**178°.79E**±0°.06**, h14**^{km}±10^{km}**,**
n131, σ1^{s}**45**/134**, mb4.0**/3**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MHGZ	Mahia Peninsul	0.69	264	P	Pn	05 54 04.9	+1.1
MHGZ				S	Sn	05 54 15.1	+0.7
GKBS	Kaiti Beach	0.71	304	P	Pn	05 54 03.9	-0.3
PRGZ	Paritu Road	0.72	282	P	Pn	05 54 04.4	+0.1
PRGZ				S	Sb	05 54 13.6	+1.0
CNGZ	Carnagh Statio	0.75	323	P	Pn	05 54 04.4	-0.3
TBAS	Tolaga Bay Are	0.80	332	P	Pn	05 54 05.6	+0.2
TBAS				S	Sn	05 54 17.5	+0.4
KNZ	Kokohu	0.87	273	P	Pn	05 54 06.6	+0.3
KNZ				S	Sg	05 54 16.9	+0.2
SNGZ	Shannon Statio	1.17	284	P	Pn	05 54 10.6	+0.1
SNGZ				S	Sb	05 54 23.5	-2.0
WHHZ	Waihua	1.21	270	P	Pg	05 54 12.1	+0.4
RAGZ	Rawiri	1.22	298	P	Pn	05 54 11.0	-0.3
RAGZ				S	Sb	05 54 24.2	-2.9
MWZ	Matawai	1.23	307	P	Pn	05 54 10.9	-0.5
MWZ				S	Sb	05 54 24.0	-3.5
RAHZ	Arahi	1.33	276	P	Pb	05 54 13.5	+0.2
RAHZ				S	Sb	05 54 28.8	-1.5
ARHZ	Aropaoanui	1.40	262	P	Pg	05 54 15.3	-0.2
RUGZ	Raukumara Rang	1.41	322	P	Pn	05 54 13.4	-0.5
CKHZ	Cape Kidnapper	1.45	246	P	Pb	05 54 15.8	+0.6
RTZ	Ruatahuna	1.48	288	P	Pn	05 54 15.0	+0.1
MTHZ	Maungataniwha	1.53	278	P	Pn	05 54 16.0	+0.5
HAZ	Te Kaha	1.54	329	P	Pn	05 54 15.3	-0.2
NMHZ	Naumai	1.54	269	P	Pb	05 54 17.1	+0.3
URZ	Urewera	1.55	301	Pn	Pn	05 54 15.4	-0.3
	92nm,0.3s,baz=323,slow=4.4,SNR=126						
URZ				Sn	Sn	05 54 33.5	-2.0
	304nm,0.3s,baz=46,slow=21,SNR=15						
URZ	Urewera	1.55	301	P	Pb	05 54 16.2	-0.7
URZ	Urewera	1.55	301	P	Pn	05 54 15.4	-0.3
MXZ	Matakaoa Point	1.56	346	P	Pb	05 54 16.5	-0.7
MXZ	Matakaoa Point	1.56	346	P	Pb	05 54 16.5	-0.7
KAHZ	Kahuranaki	1.64	244	P	Pb	05 54 18.6	0.0
MCHZ	McNeill Hill	1.66	257	P	Pb	05 54 19.0	+0.1
MUGZ	Murupara	1.69	290	P	Pn	05 54 18.0	+0.4
PXZ	Pawanui	1.77	237	P	Pn	05 54 19.9	+1.3
BKZ	Black Stump Fm	1.79	267	P	Pn	05 54 19.8	+0.8
BKZ	Black Stump Fm	1.79	267	P	Pn	05 54 20.0	+1.0
MRHZ	Matea Rd	1.86	277	P	Pb	05 54 21.5	-0.9
KWHZ	Kaweka Forest	1.87	259	P	Pn	05 54 21.4	+1.3
WHRZ	Whale Island	1.87	310	P	Pn	05 54 21.0	+0.8
EDRZ	Edgecumbe	1.88	301	P	Pn	05 54 20.7	+0.5
RRRZ	Republican Roa	1.92	292	P	Pb	05 54 22.5	-0.9
KRHZ	Kereru	1.96	253	P	Pn	05 54 22.6	+1.3
TARZ	Mount Tarawera	1.97	295	P	Pb	05 54 23.0	-1.3
MARZ	Manawahe	1.98	303	P	Pn	05 54 22.4	+0.7
WIZ	White Island	2.00	320	P	Pn	05 54 21.7	-0.1
PRHZ	Porangahau	2.04	234	P	Pn	05 54 23.5	+1.1
MKRZ	Makatiti	2.04	297	P	Pg	05 54 28.4	+0.7
WPHZ	Waipukurau	2.06	241	P	Pn	05 54 24.1	+1.4
OMRZ	Omania	2.13	296	P	Pn	05 54 24.1	+0.4
OPRZ	Ohinepanea	2.14	304	P	Pn	05 54 23.4	-0.4
PNHZ	Pukenui	2.17	247	P	Pn	05 54 25.5	+1.3
UTU	Utuhina	2.22	293	P	Pb	05 54 27.4	-1.0
ANWZ	Angora Road	2.25	232	P	Pn	05 54 26.5	+1.1
KARZ	Kaharoa	2.26	297	P	Pn	05 54 25.5	0.0
RITZ	Rihia Road	2.28	272	P	Pn	05 54 27.6	+1.8
RATZ	Rangitukua	2.36	274	P	Pb	05 54 29.7	-1.1
DVHZ	Dannevirke	2.36	238	P	Pn	05 54 27.9	+1.0
MOVZ	Moawhango	2.38	261	P	Pn	05 54 29.1	+1.9
KUTZ	Kaahu Road	2.39	283	P	Pn	05 54 28.0	+0.8
TSZ	Takapari Road	2.39	245	P	Pn	05 54 28.3	+0.9
ETVZ	East Tongariro	2.39	268	P	Pn	05 54 29.2	+1.8
TGRZ	Tauranga	2.40	303	P	Pn	05 54 27.4	0.0
TMVZ	Te Maari	2.40	268	P	Pn	05 54 29.1	+1.6
KATZ	Kakaramea	2.41	272	P	Pn	05 54 29.4	+1.8
WATZ	Wairara	2.41	278	P	Pb	05 54 31.1	-0.6
NTVZ	North Tongarir	2.42	269	P	Pn	05 54 29.6	+1.8
OTVZ	Oturere	2.43	267	P	Pb	05 54 32.0	-0.1
TUVZ	Tukino	2.44	265	P	Pb	05 54 31.0	-1.3
KRVZ	Karewarewa	2.45	269	P	Pn	05 54 29.8	+1.6
SNVZ	South Ngauruho	2.45	267	P	Pn	05 54 30.4	+2.1
NNVZ	North Ngauruho	2.47	268	P	Pn	05 54 30.6	+2.1
NGZ	Ngauruhoe	2.48	267	P	Pn	05 54 30.3	+1.7
WTVZ	West Tongariro	2.49	268	P	Pn	05 54 30.5	+1.8
WNVZ	Wahianoa	2.49	263	P	Pn	05 54 30.5	+1.8
WHVZ	Whangaehu Hut	2.49	264	P	Pn	05 54 30.6	+1.7
MAVZ	Matarangi	2.51	265	P	Pn	05 54 31.0	+1.7
FWVZ	Far West T-bar	2.52	265	P	Pn	05 54 30.8	+1.5
COVZ	Chateau Observ	2.52	266	P	Pn	05 54 30.9	+1.7
BFZ	Birch Farm	2.53	230	P	Pn	05 54 29.5	+0.4
BFZ	Birch Farm	2.53	230	S	Sn	05 54 59.4	-0.3
BFZ	Birch Farm	2.53	230	P	Pn	05 54 29.6	+0.4
TRVZ	Turoa	2.53	264	P	Pn	05 54 31.0	+1.7
MTVZ	Mangateitei	2.59	262	P	Pn	05 54 31.9	+1.8
TWVZ	Taurewa	2.61	269	P	Pn	05 54 31.5	+1.2
TLZ	Tolley Road	2.65	285	P	Pn	05 54 31.2	+0.3
POWZ	Post Office Ro	2.67	240	P	Pn	05 54 32.5	+1.4
PKVZ	Pokaka	2.68	264	P	Pn	05 54 33.2	+1.8
CPWZ	Castlepoint	2.70	227	P	Pn	05 54 32.1	+0.6
TIWZ	Tintock	2.80	232	P	Pn	05 54 33.7	+0.7
OHWZ	Ohakea	2.91	246	P	Pn	05 54 36.5	+2.2
TOZ	Tahuroa Road	2.91	297	P	Pn	05 54 34.3	-0.1
MRZ	Mangatainoka R	2.93	236	P	Pn	05 54 35.3	+0.6
TMWZ	Te Maipa	3.00	227	P	Pn	05 54 35.5	-0.3
WAZ	Wanganui	3.02	256	P	Pn	05 54 38.4	+2.4
HOWZ	Holdsworth Sta	3.10	233	P	Pn	05 54 37.3	+0.3
HIZ	Hauiti	3.12	279	P	Pn	05 54 38.8	+1.5
HIZ	Hauiti	3.12	279	P	Pn	05 54 39.1	+1.7
VRZ	Vera Road	3.13	268	P	Pn	05 54 39.4	+1.9
MTW	Mount Morrison	3.26	229	P	Pn	05 54 38.9	-0.4
OGWZ	Otaki Gorge	3.28	237	P	Pn	05 54 39.9	+0.4
KUZ	Kuaotunu	3.36	313	P	Pn	05 54 40.0	-0.6
KUZ	Kuaotunu	3.36	313	P	Pn	05 54 39.8	-0.8
LREZ	Lake Rotokare	3.42	262	P	Pn	05 54 44.0	+2.5
KIW	Kapiti Island	3.47	238	P	Pn	05 54 42.7	+0.5
MKAZ	Moumakai	3.47	303	P	Pn	05 54 42.2	0.0
DREZ	Durham Road	3.57	267	P	Pn	05 54 46.2	+2.7
PREZ	Palmer Road	3.60	264	P	Pn	05 54 46.7	+2.7
NEZ	North Egmont	3.65	266	P	Pn	05 54 47.1	+2.5
ETAZ	East Tamaki Re	3.71	304	P	Pn	05 54 46.0	+0.6
KHEZ	Kahui Hut	3.71	265	P	Pn	05 54 47.8	+2.3
KHEZ	Kahui Hut	3.71	265	P	Pn	05 54 48.2	+2.6
PKE	Pukeiti	3.73	267	P	Pn	05 54 48.5	+2.7
SNZO	South Karori	3.84	233	P	Pn	05 54 46.7	-0.4
AWAZ	Awhitu Peninsu	3.84	300	P	Pn	05 54 47.8	+0.6
MBAZ	Motutapu North	3.84	306	P	Pn	05 54 48.0	+0.8
GRZ	Great Barrier	3.87	316	P	Pn	05 54 46.9	-0.6
TCW	Tory Channel	4.06	237	P	Pn	05 54 50.0	-0.2
QRZ	Quartz Range	5.11	248	P	Pn	05 55 03.5	-1.2
KHZ	Kahutara	5.19	228	P	Pn	05 55 04.2	-1.6
OUZ	Omahuta	5.66	311	P	Pn	05 55 13.9	+1.7
RPZ	Rata Peaks	7.43	229	Pn	Pn	05 55 35.4	-1.1
	1.9nm,0.3s,baz=218,slow=1.5,SNR=12						
RPZ				Sn	Sn	05 56 53.3	-7.3
	11nm,0.3s,baz=357,slow=20,SNR=27						
RPZ	Rata Peaks	7.43	229	P	Pn	05 55 36.3	-0.2
ODZ	Otahua Downs	8.49	223	P	Pn	05 55 50.3	-0.8
JCZ	Jackson Bay	9.00	233	P	Pn	05 55 57.3	-0.8
SYZ	Scrubby Hill	10.28	220	P	Pn	05 56 16.1	+0.6
ASAR	Alice Springs	40.86	279	P	P	06 01 31.1	+0.9
	3.2nm,0.7s,baz=124,slow=8.3,SNR=24						
	3.2nm,0.7s						
WRA	Warramunga Arr	42.64	283	P	P	06 01 45.7	+1.0
	1.4nm,0.7s,baz=124,slow=7.3,SNR=8.9						
	1.4nm,0.7s						
QSPA	South Pole Qui	51.05	180	P	P	06 02 56.8	+6.7
	1.7nm,0.9s,baz=56,slow=12,SNR=7.7						
	1.7nm,0.9s						
H03S2	Juan Fernandez	77.87	124	T	T	07 31 35.8	
	baz=229,slow=74,SNR=150						
H03S1	Juan Fernandez	77.88	124	T	T	07 31 37.0	
	baz=229,slow=74,SNR=94						
H03S3	Juan Fernandez	77.89	124	T	T	07 31 36.0	
	baz=229,slow=74,SNR=100						
H03N3	Juan Fernandez	78.11	123	T	T	07 31 49.0	
	baz=233,slow=72,SNR=151						
H03N2	Juan Fernandez	78.12	123	T	T	07 31 47.5	
	baz=233,slow=72,SNR=148						
H03N1	Juan Fernandez	78.13	123	T	T	07 31 47.2	
	baz=233,slow=72,SNR=125						
KURBB	Kurchatov Arra	124.91	310	PKP	PKiKP	06 12 48.8	+1.0
	0.6nm,0.4s,baz=114,slow=2.1,SNR=5.0						
ARCES	ARCESS Array B	146.33	343	PKPbc	PKiKP	06 13 30.4	-0.3
	3.2nm,0.6s,baz=35,slow=2.6,SNR=17						
FINES	FINESS Array B	152.00	332	PKPbc	PKiKP	06 13 44.9	+2.3
	1.6nm,0.6s,baz=46,slow=4.0,SNR=10.0						
BRTR	Keskin Array B	153.16	283	PKPbc	PKiKP	06 13 48.4	+2.4
	0.8nm,0.8s,baz=89,slow=3.6,SNR=5.9						

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*RSNC **04** 05:54:28.8±0.0, 5°N±1°×7°8W±°, h33^{km}±8^{km}, M3.6, mb3.9, ML3.2*
*UPA **04** 05:54:29.5±1.0, 5°.22N×78°.38W, h0^{km}±48^{km}, MW5.0*
*VAO **04** 05:54:33.8±0.8, 4°.54N×77°.63W, h0^{km}, mb4.4*
*IDC **04** 05:54:36.5±2.3, 5°.03N×77°.96W, h76^{km}±22^{km}, mb3.4/10, mbtmp3.9/14, Error ellipse: s-maj=20.2km s-min=13.5km az=49.0*
ISC 04 05:54:27.7±4.1**, 4°.99N**±0°.03×**78°.24W**±0°.03**, h9**^{km}±26^{km}**,**
n82, σ2^{s}**44**/118**, mb3.7**/10**, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MALC	Bahia Malaga	1.32	137	P	Pn	05 54 50.7	-1.6
MALC				S	Sb	05 55 07.5	-2.2
SOLC	Bahia Solano	1.48	34	P	Pn	05 54 52.0	-2.6
SOLC				S	Sn	05 55 08.5	-5.6
PLMC	San Jos del P	1.95	92	P	Pn	05 54 58.7	-2.4
PLMC				S	Sn	05 55 20.3	-5.4
GR1C	Gorgona, Isla	1.97	178	P	Pn	05 54 58.5	-2.8
GR1C				S	Sn	05 55 20.7	-5.5
YOTC	Yotoco, Valle	2.13	118	P	Pn	05 55 01.7	-1.9
YOTC				S	Sn	05 55 25.2	-5.2
PTAC	Punta Ardita,	2.19	11	P	Pn	05 55 02.8	-1.5
PTAC				S	Sn	05 55 24.4	-7.1
JAMC	Jamundi, Valle	2.35	138	P	Pn	05 55 05.1	-1.6
JAMC				S	Sn	05 55 32.2	-3.7
CBOC	Ciudad Bolivar	2.38	68	P	Pn	05 55 04.6	-2.5
CBOC				S	Sn	05 55 30.4	-6.1
NIZA	Niza - Manizal	2.76	88	P	Pn	05 55 11.3	-1.1
NIZA				S	Sn	05 55 45.9	-0.1
DBBC	Dabeiba	2.85	45	P	Pn	05 55 13.4	-0.1
DBBC				S	Sn	05 55 44.9	-3.2
ANIL	Santa Ana	2.87	100	P	Pn	05 55 12.8	-1.1
ANIL				S	Sn	05 55 46.3	-2.4
GUY2C	Guyana, Caldas	2.87	85	P	Pn	05 55 12.9	-1.2
GUY2C				S	Sn	05 55 46.1	-2.9
POPC	Popayan, Colom	2.89	147	P	Pn	05 55 12.5	-1.6
POPC				S	Sn	05 55 44.4	-4.7
BBAC	Balboa, Cauca	3.11	161	P	Pn	05 55 14.9	-2.2
BBAC				S	Sn	05 55 50.0	-4.5
ORTC	Ortega, Tolima	3.17	110	P	Pn	05 55 18.1	+0.3
ORTC				S	Sn	05 55 55.2	-0.6
APAC	Apartado, Choc	3.33	30	P	Pn	05 55 20.3	+0.3
APAC				S	Sn	05 55 57.0	-2.7
NORC	Norcasia	3.40	80	P	Pn	05 55 21.6	+0.5
NORC				S	Sn	05 55 58.8	-2.8
AZU	Azuero	3.44	324	P	Pn	05 55 19.6	-1.9
AZU				S	Sn	05 56 00.0	-2.5
AZU	Azuero	3.44	324	*e*P	Pn	05 55 20.2	-1.4
AZU				*e*S	Sn	05 55 59.4	-3.1
CACAO	El Cacao, Vera	3.50	312	P	Pn	05 55 20.7	-1.7
CACAO				S	Sn	05 56 00.0	-4.0
CACAO	El Cacao, Vera	3.50	312	*e*P	Pn	05 55 20.9	-1.5
CACAO				*e*S	Sn	05 56 00.7	-3.3
PRAC	Prado	3.57	111	P	Pn	05 55 23.6	+0.2
PRAC				S	Sn	05 56 04.2	-1.6
BETC	Betania	3.61	129	P	Pn	05 55 25.3	+1.4

CRUC	La Cruz	3.63	159	P	Pn	05 55 25.0	+0.5
CRUC				S	Sn	05 56 05.7	-2.0
CHIT3	Chitre	3.66	324	*e*P	Pn	05 55 23.7	-0.8
CHIT3				*e*S	Sn	05 56 04.0	-3.8
GCUF	Volcan Galeras	3.84	167	P	Pn	05 55 28.5	+1.0
GCUF				S	Sn	05 56 10.4	-2.6
UREC	San Jos de Ur	3.84	44	P	Pn	05 55 28.3	+1.2
UREC				S	Sn	05 56 10.9	-1.5
GARC	Garzon, Huila	3.90	135	P	Pn	05 55 29.5	+1.4
GARC				S	Sn	05 56 13.8	-0.4
ROSC	El Rosal	3.91	92	P	Pn	05 55 30.6	+2.3
	62nm,0.6s,baz=236,slow=7.1,SNR=36						
ROSC				S	Sn	05 56 14.3	-0.2
	31nm,0.5s,baz=320,slow=22,SNR=1.3						
ROSC	El Rosal	3.91	92	P	Pn	05 55 30.2	+1.9
GMAL	Guarumal, Vera	4.06	313	P	Pn	05 55 30.7	+0.7
GMAL	Guarumal, Vera	4.06	313	*e*P	Pn	05 55 29.4	-0.6
GMAL				*e*S	Sn	05 56 15.8	-1.9
PTBC	PUERTO BERRIO,	4.07	68	P	Pn	05 55 31.0	+0.8
PTBC				S	Sn	05 56 17.7	-0.2
UPA	Univ. de Panam	4.17	342	*e*P	Pn	05 55 30.5	-1.0
UPA				*e*S	Sn	05 56 16.4	-4.1
CVER	Cruz Verde, Cu	4.18	96	P	Pn	05 55 34.2	+2.1
SPBC	San Pablo de B	4.20	81	P	Pn	05 55 32.9	+0.8
URMC	La Uribe, Meta	4.22	114	P	Pn	05 55 32.4	+0.1
CHPO	Chepo, Panama	4.25	348	*e*P	Pn	05 55 32.2	-0.4
CHPO				*e*S	Sn	05 56 18.9	-3.4
FLOC	Florencia	4.25	143	P	Pn	05 55 33.8	+1.1
BCIP	Isla Barro Col	4.45	339	P	Pn	05 55 33.8	-1.5
BCIP				S	Sn	05 56 25.8	-1.4
CHIC	Chingaza	4.50	94	P	Pn	05 55 38.4	+1.9
VILC	Villavicencio,	4.61	101	P	Pn	05 55 38.9	+1.1
OTAV	Otavalo	4.72	183	*e*P	Pn	05 55 39.6	+0.1
OTAV	Otavalo	4.72	183	P	Pn	05 55 39.4	-0.2
OTAV				S	Sn	05 56 31.4	-3.3
PAC1	Pacto, Paraso	4.72	187	P	Pn	05 55 38.5	-0.8
PAC1				S	Sn	05 56 28.9	-5.4
RUSC	La Rusia	5.21	80	P	Pn	05 55 46.9	+0.6
MACC	Macarena, Meta	5.21	123	P	Pn	05 55 46.1	+0.2
MACC				S	Sn	05 56 43.6	-2.6
BARC	Barichara	5.28	72	P	Pn	05 55 48.3	+1.3
SJCC	San Jacinto, C	5.74	32	P	Pn	05 55 52.8	-0.5
SJCC				S	Sn	05 56 56.0	-3.4
SDV	Santo Domingo	8.48	62	P	Pn	05 56 33.4	+2.4
	11nm,0.3s,baz=233,slow=18,SNR=5.8						
SDV				S	Sn	05 58 01.8	-5.3
	5.8nm,0.3s,baz=22,slow=7.5,SNR=1.4						
JTS	Las Juntas de	8.49	309	P	Pn	05 56 38.8	+7.9
	2.6nm,0.5s,baz=86,slow=15,SNR=3.9						
TBTG	Tabatinga, AM	12.34	137	*e*P	Pn	05 57 20.4	-3.3
CZSB	Cruzeiro do Su	13.79	156	*e*P	Pn	05 57 42.0	-1.4
TEFE	Tefe	16.00	122	*e*P	Pn	05 58 11.4	-1.7
NNA	Nana	16.92	175	P	P	05 58 29.1	+2.1
	16nm,0.4s,baz=354,slow=11,SNR=8.9						
BOAV	Boa Vista	17.86	98	*e*P	Pn	05 58 33.9	-2.8
MACA	Manacapuru-AM	19.32	114	*e*P	P	05 58 51.8	-1.5
SAML	Samuel	20.42	133	*e*P	P	05 59 04.9	-0.5
LPAZ	La Paz	23.38	155	P	P	05 59 37.7	+0.1
	1.6nm,0.7s,baz=320,slow=7.9,SNR=8.2						
	1.6nm,0.7s						
LPAZ	La Paz	23.38	155	*e*P	P	05 59 38.2	+0.6
ITTB	Itaituba	24.32	112	*e*P	P	05 59 44.4	-1.6
VILB	Vilhena	25.27	135	*e*P	P	05 59 55.0	+0.3
NPGB	Novo Progresso	25.77	117	*e*P	P	06 00 01.4	+2.2
PDRB	Porto dos Gac	27.02	128	*e*P	P	06 00 09.7	-0.7
ARAG	Araguaiana, MT	33.27	129	*e*P	P	06 01 06.3	+0.5
MURT	Porto Murtinho	33.31	143	*e*P	P	06 01 07.0	+0.9
AQDB	Aquidauana	33.62	140	*e*P	P	06 01 09.2	+0.5
TXAR	Lajitas Array	34.13	318	P	P	06 01 16.9	+3.7
	0.3nm,0.9s,baz=124,slow=11,SNR=3.9						
TXAR				PcP	PcP	06 03 51.0	+0.4
	0.5nm,0.8s,baz=114,slow=3.5,SNR=5.2						
	0.3nm,0.9s						
BDFB	Brasilia	36.27	125	P	P	06 01 32.3	+0.5
	3.7nm,0.8s,baz=268,slow=8.3,SNR=5.9						
	3.7nm,0.8s						
SDBA	SAO DESIDERIO	37.37	118	*e*P	P	06 01 42.6	+1.4
PCMB	Pacaembu	37.38	136	*e*P	P	06 01 42.3	+1.2
IPMB	Ipameri, GO	37.40	128	*e*P	P	06 01 43.1	+1.7
DIAM	Diamantina, MG	41.19	125	*e*P	P	06 02 14.9	+1.7
PLCA	Paso Flores	46.04	172	P	P	06 02 52.5	+0.7
	1.7nm,0.8s,baz=338,slow=8.0,SNR=3.8						
	1.7nm,0.8s						
PDAR	Pinedale Array	46.75	328	P	P	06 03 00.1	+2.5
	0.2nm,0.5s,baz=145,slow=8.3,SNR=1.9						
	0.2nm,0.5s						
ULM	Lac du Bonnet	47.49	345	P	P	06 03 05.2	+2.3
	1.1nm,0.6s,baz=146,slow=7.3,SNR=1.6						
	1.1nm,0.6s						
NVAR	Mina Array Bea	49.29	318	P	P	06 03 18.7	+1.3
	0.6nm,0.7s,baz=133,slow=9.1,SNR=4.9						
	0.6nm,0.7s						
YKA	Yellowknife Ar	63.32	342	P	P	06 04 56.6	-0.2
	0.6nm,0.7s,baz=133,slow=6.2,SNR=12						
	0.6nm,0.7s						
ESDC	Sonseca Array	74.73	50	P	P	06 06 07.0	-1.3
	0.6nm,0.6s,baz=246,slow=5.2,SNR=2.6						
	0.6nm,0.6s						
ILAR	Eielson Array	76.50	336	P	P	06 06 18.6	+0.8
	0.2nm,0.7s,baz=125,slow=3.8,SNR=5.2						
	0.2nm,0.7s						
ASAR	Alice Springs	143.89	236	PKP	PKPbc	06 14 01.6	-0.6
	1.5nm,0.8s,baz=122,slow=3.8,SNR=8.7						
WRA	Warramunga Arr	144.99	242	PKPbc	PKPbc	06 14 05.2	-0.5
	4.9nm,1.1s,baz=103,slow=3.3,SNR=9.0						

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*ASRS **04** 06:00:17.0±0.5, 54°.11N×86°.42E, h0^{km}, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 04 06:00:20.9±3.0**, 54°.10N×86°.38E, h0**^{km}**, mbtmp3.2**/2**, ML2.7**/2**, Error ellipse: s-maj=24.3km s-min=15.1km az=48.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.93	261	I	I	06 07 00.0	
	baz=81,slow=328,SNR=3.4						
ZALV	Zalesovo Beam	0.94	261	Pg	Pg	06 00 37.9	-0.9
	0.9nm,0.3s,baz=81,slow=18,SNR=7.8						
ZALV				Lg	Lg	06 00 52.1	
	0.9nm,0.3s,baz=77,slow=27,SNR=6.1						
KURBB	Kurchatov Arra	5.94	237	Pn	Pn	06 01 50.8	+0.9
	0.1nm,0.3s,baz=54,slow=13,SNR=3.0						
	2.3nm,0.2s						
MKAR	Makanchi Array	7.77	201	Pn	Pn	06 02 16.3	+1.2
	0.1nm,0.3s,baz=25,slow=14,SNR=4.8						
	0.1nm,0.2s						

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*IDC **04** 06:24:29.4±0.5, 16°.89S×173°.22E, h0^{km}, mb4.8/20, mbtmp4.8/22, ML5.6/1, MS4.4/38, Error ellipse: s-maj=17.5km s-min=14.0km az=122.0*

*MOS **04** 06:24:30.6±0.9, 16°.88S×173°.19E, h12^{km}, mb5.3/34, Error ellipse: s-maj=11.0km s-min=9.6km az=113.0*

*NEIC **04** 06:24:32.5±2.5, 16°.85S±0°.06×173°.25E±0°.08, h10^{km}±1^{km}, mb5.2/319, Mww5.3/17, Error ellipse: s-maj=16.9km s-min=3.3km az=127.0*

*NEIC **04** 06:24:32.5, 16°.86S×173°.15E, h14^{km}, Moment Tensor Solution. Duration: 2^{s}6 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.04; $M_{\theta\theta}$0.73; $M_{\phi\phi}$0.31; $M_{r\theta}$-0.72; $M_{\theta\phi}$-0.34; $M_{\phi r}$-0.47; Fault plane solution: $M_0$1.31000×10^{17} NP1: ϕ_s314.00000°, δ35.33000°, λ-50.34000°. NP2: ϕ_s88.53000°, δ63.57000°, λ-114.34000°. Principal axes: T 1.0351, Plg15.0000°, Azm196.0000°; N 0.4337, Plg22.0000°, Azm100.0000°; P -1.4688, Plg63.0000°, Azm318.0000°;*

*BJI **04** 06:24:32.3, 16°.39S×173°.19E, h10^{km}, mB5.4/26, mb5.1/57, Ms4.7/8, Ms7 4.4/10*

*NEIC **04** 06:24:32.5, 16°.86S×173°.26E, h14^{km}*

*GCMT **04** 06:24:34.5±0.2, 16°.84S±0°.01×173°.16E±0°.02, h18^{km}, MW5.4/127, Moment Tensor Solution. s69,c88; s127,c213; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.47±.05; $M_{\theta\theta}$1.13±.04; $M_{\phi\phi}$0.34±.03; $M_{r\theta}$0.14±.07; $M_{\theta\phi}$-0.46±.02; $M_{\phi r}$0.37±.09; Best double couple: $M_0$1.45000×10^{17} NP1: ϕ_s282.00000°, δ46.00000°, λ-108.00000°. NP2: ϕ_s127.00000°, δ47.00000°, λ-72.00000°. Principal axes: T 1.3400, Plg1.0000°, Azm205.0000°; N 0.2230, Plg13.0000°, Azm295.0000°; P -1.5610, Plg77.0000°, Azm112.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 06:24:33.5±0.9**, 16°.95S**±0°.06×**173°.31E**±0°.07**, h25**^{km}±6^{km}**, n685, σ0^{s}83**/517**, mb5.2**/208**, MS4.5**/41**, 15C-29D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.59	100		Pn	06 25 43.1	+1.7
MSVF	Nonsavu	4.59	100	Pn	Pn	06 25 42.7	+1.2
	9.0nm,0.3s,baz=280,slow=15,SNR=31						
	33nm,0.5s						
MSVF	Nonsavu	4.59	100	P	Pn	06 25 43.2	+1.7
PINNC	Pines Island,	7.88	223		Pn	06 26 28.4	+1.7
DZM	Mont Dzumac	8.23	231		Pn	06 26 32.6	+1.0
DZM	Mont Dzumac	8.23	231	Pn	Pn	06 26 31.5	-0.1
	96nm,1.2s,baz=53,slow=20,SNR=30						
ONTNC	Ouen Toro	8.37	229		Pn	06 26 34.1	+0.7
NFK	Norfolk Island	13.01	201	P	Pn	06 27 36.7	-0.1
	comp=Z,276nm,1.2s						
RAO	Raoul Island	14.65	148	LR	LR	06 32 28.5	
	comp=Z,1µm,21.3s,baz=310,slow=32						
HNR	Honiara	15.00	298	LR	LR	06 33 12.0	
	comp=Z,320nm,18.5s,baz=138,slow=35						
TOZ	Tahuroa Road	20.79	175	P	Pn	06 29 15.3	0.0
URZ	Urewera	21.49	172	P	P	06 29 22.0	+1.7
	comp=Z,13nm,0.9s,baz=76,slow=7.4,SNR=5.2						
URZ				LR	LR	06 35 56.3	
	comp=Z,2µm,19.2s,baz=77,slow=32						
	comp=Z,13nm,0.9s						
RTZ	Ruatahuna	21.82	172	P	P	06 29 26.7	+2.7
EIDS	Eidsvold	22.33	244		P	06 29 29.9	+0.3
EIDS	Eidsvold	22.33	244	P	P	06 29 28.9	-0.7
	comp=Z,32nm,1.0s						
ARMA	Armidale	23.90	232	P	P	06 29 45.0	-0.6
	comp=Z,69nm,2.0s						
TCW	Tory Channel	24.19	178		P	06 29 49.0	+1.1
PMG	Port Moresby	26.52	283	LR	LR	06 39 28.4	
	comp=Z,574nm,18.4s,baz=40,slow=34						
PMG	Port Moresby	26.52	283	*i* P	P	06 30 09.4	0.0
PMG				pmax	pmax		
	comp=Z,32nm,1.0s						
RPZ	Rata Peaks	26.74	184	LR	LR	06 39 34.9	
	comp=Z,2µm,20.4s,baz=10,slow=34						
MTSU	Mount Surprise	27.66	263	P	P	06 30 24.5	+4.8
CNB	Canberra Magne	28.10	225	P	P	06 30 24.1	+0.6
	comp=Z,68nm,1.5s						
CMSA	Cobar Meteorol	28.96	235	P	P	06 30 30.3	-0.9
	comp=Z,23nm,1.6s						
TOO	Toolangi	31.95	224	P	P	06 30 57.0	-0.5
	comp=Z,11nm,2.9s						
TOO	Toolangi	31.95	224	P	P	06 30 58.6	+1.1
TOO				pmax	pmax		
	comp=Z,13nm,1.2s						
QIS	Mount Isa	32.08	258	P	P	06 31 04.4	+5.5
STKA	Stephens Creek	32.33	237		P	06 31 01.3	+0.4
STKA	Stephens Creek	32.33	237	P	P	06 31 00.6	-0.3
	comp=Z,109nm,1.2s						
STKA	Stephens Creek	32.33	237	P	P	06 31 01.0	+0.1
	comp=Z,14nm,0.9s,baz=63,slow=8.9,SNR=18						
STKA				LR	LR	06 43 21.0	
	comp=Z,1µm,19.3s,baz=70,slow=35						
	comp=Z,14nm,0.9s						
STKA	Stephens Creek	32.33	237	*i* P	P	06 31 01.4	+0.5
ARPS	Mount Arapiles	34.09	228	P	P	06 31 14.9	-1.2
	comp=Z,94nm,0.9s						
HTT	Hallett	34.98	235	P	P	06 31 23.5	-0.5
	comp=Z,8.0nm,1.5s						
PPT	Papeete	35.41	97	LR	LR	06 42 15.2	
	comp=Z,106nm,20.0s,baz=232,slow=30						
H11N1	WAKE ISLAND Hy	36.98	350	T	T	07 10 44.5	
	baz=169,slow=76						
H11N3	WAKE ISLAND Hy	36.98	350	T	T	07 10 45.6	
	baz=169,slow=76						
WB0	Warramunga Arr	36.99	260		P	06 31 40.1	-1.3
H11N2	WAKE ISLAND Hy	37.00	350	T	T	07 10 46.3	
	baz=169,slow=76						
WRA	Warramunga Arr	37.03	259	P	P	06 31 39.5	-2.2
WRA	Warramunga Arr	37.03	259	P	P	06 31 39.0	-2.7
	comp=Z,6.2nm,0.9s,baz=89,slow=8.2,SNR=20						
WRA				PcP	PcP	06 34 01.3	-1.1
	comp=Z,3.6nm,1.0s,baz=82,slow=1.8,SNR=3.8						
WRA				LR	LR	06 45 07.7	
	comp=Z,366nm,21.2s,baz=88,slow=34						
	comp=Z,6.2nm,0.9s						
WRA	Warramunga Arr	37.03	259	*ce*P	P	06 31 41.5	-0.2
WRA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BBOO	Buckleboo	37.08	238		P	06 31 41.1	-0.8
BBOO				IAmb	IAmb	06 31 49.4	
	comp=Z,53nm,1.1s						
BBOO	Buckleboo	37.08	238	P	P	06 31 39.6	-2.4
	comp=Z,52nm,1.2s						
SMPI	Sarmi	37.12	290	P	P	06 31 41.5	-1.0
	comp=Z,44nm,1.4s						
AS31	Alice Springs	37.46	253		P	06 31 44.5	-0.9
AS31	Alice Springs	37.46	253	P	P	06 31 44.0	-1.3
	comp=Z,22nm,1.0s						
ASAR	Alice Springs	37.47	253		P	06 31 44.1	-1.3
ASAR					PcP	06 34 03.0	-0.7
ASAR	Alice Springs	37.47	253	P	P	06 31 44.0	-1.3
	comp=Z,38nm,0.8s,baz=83,slow=8.6,SNR=156						
ASAR				PcP	PcP	06 34 02.6	-1.1
	comp=Z,5.6nm,0.9s,baz=86,slow=3.0,SNR=6.0						
ASAR				LR	LR	06 46 23.2	
	comp=Z,676nm,20.2s,baz=89,slow=35						
	comp=Z,38nm,0.8s						
BAKI	Biak	39.81	289	P	P	06 32 04.7	-0.4
RKPI	Ransiki, Papua	41.43	288	P	P	06 32 19.1	+0.6
	comp=Z,67nm,1.3s						
FAKI	Fak Fak	42.66	285	P	P	06 32 28.2	-0.4
	comp=Z,57nm,1.3s						
KNRA	Kununurra	42.70	265	P	P	06 32 29.7	+0.8
	comp=Z,34nm,1.4s						
FORT	Forrest	43.33	243		P	06 32 33.0	-0.7
FORT				IAmb	IAmb	06 32 36.9	
	comp=Z,42nm,0.9s						
FORT	Forrest	43.33	243	P	P	06 32 32.3	-1.4
	comp=Z,50nm,1.0s						
SWI	Sorong	44.36	287	P	P	06 32 41.2	-1.1
	comp=Z,52nm,1.1s						
AAI	Ambon	46.17	281	P	P	06 32 59.1	+2.5
	comp=Z,63nm,1.5s						
SOEI	Soe	48.15	272	P	P	06 33 13.5	+1.3
	comp=Z,104nm,1.3s						
BATI	Baumata	48.62	271	P	P	06 33 17.6	+1.9
KMBL	Kambalda	48.66	243	P	P	06 33 17.3	+1.5
	comp=Z,30nm,1.4s						
NWAO	Narrogin (SRO)	52.70	241	P	P	06 33 43.7	-2.6
NWAO	Narrogin (SRO)	52.70	241	LR	LR	06 56 37.7	
	comp=Z,1µm,18.3s,baz=97,slow=37						
BLDU	Ballidu	53.05	244	P	P	06 33 53.9	+5.0
VNDA	Vanda	60.86	183		P	06 34 44.0	+0.5
VNDA	Vanda	60.86	183	LR	LR	06 56 31.4	
	comp=Z,673nm,21.4s,baz=25,slow=32						
VNDA	Vanda	60.86	183	P	P	06 34 44.0	+0.5
VNDA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
JGF	Kuroka	62.39	327		P	06 34 53.9	-0.5
JGF				IAmb	IAmb	06 34 60.0	
	comp=Z,29nm,1.4s						
MJAR	Matsushiro Arr	62.69	329	P	P	06 34 55.7	-0.7
	comp=Z,21nm,1.0s,baz=158,slow=6.7,SNR=36						
	comp=Z,21nm,1.0s						
MAJO	Matsushiro	62.69	329		P	06 34 56.3	-0.1
MAJO	Matsushiro	62.69	329	P	P	06 34 56.3	-0.1
MAJO				pmax	pmax		
	comp=Z,36nm,1.1s						
MJB9	Matsu-Tunnel	62.70	329	P	P	06 34 56.3	-0.1
CASY	Casey	63.76	204		P	06 35 02.7	-0.3
CASY				IAmb	IAmb	06 35 06.2	
	comp=Z,15nm,1.0s						
JNU	Nakatsue	64.20	321	LR	LR	07 00 29.2	
	comp=Z,64nm,19.8s,baz=128,slow=34						
KSRS	Korea Array	68.94	323	P	P	06 35 35.2	-1.3
	comp=Z,3.5nm,1.0s,baz=140,slow=6.4,SNR=14						
KSRS				LR	LR	07 02 41.5	
	comp=Z,58nm,20.0s,baz=105,slow=33						
	comp=Z,3.5nm,1.0s						
KSAR	Wonju Array Be	68.95	323		P	06 35 37.1	+0.5
KSAR	Wonju Array Be	68.95	323	P	P	06 35 37.1	+0.5
YSS	Yuzhno-Sakhali	69.30	338		P	06 35 39.3	+0.7
YSS				IAmb	IAmb	06 35 41.6	
	comp=Z,23nm,0.9s						
YSS	Yuzhno-Sakhali	69.30	338	*e*P	P	06 35 39.2	+0.6
YSS				*e*S	S	06 44 40.8	-2.7
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS				pmax	pmax		
	comp=N,300nm,6.3s						
SHEM	Shemya Is, Ala	69.39	1	LR	LR	06 59 25.3	
	comp=N,161nm,21.6s,baz=130,slow=30						
ATKA	Atka Island	69.72	8		P	06 35 40.9	-0.1
MSHR	Mys Shultsa	70.81	328	*i* P	P	06 35 47.8	-0.2
MSHR				pmax	pmax		
	comp=Z,29nm,1.2s						
MSHR				MLR	MLR		
	comp=Z,130nm,18.0s						
PEA0B	Petropavlovsk-	71.06	350	*ce*P	P	06 35 49.3	0.0
PETK	Petropavlovsk-	71.06	350		P	06 35 48.9	-0.4
PETK	Petropavlovsk-	71.06	350	P	P	06 35 48.5	-0.7
	comp=Z,22nm,1.0s,baz=116,slow=6.8,SNR=28						
PETK				LR	LR	07 02 11.4	
	comp=Z,420nm,19.3s,baz=149,slow=32						
	comp=Z,22nm,1.0s						
PETK	Petropavlovsk-	71.06	350	P	P	06 35 48.9	-0.4
NIKH	Nikolski High	71.33	11	P	P	06 35 50.1	-0.8
	baz=198						
NJ2	Nanjing	71.37	313	*e*P	P	06 35 52.4	+0.8
NJ2				pmax	pmax		
	comp=Z,22nm,0.7s						
USA0B	Ussuriysk Arra	71.60	330	IAmb	IAmb	06 35 54.7	
	comp=Z,27nm,1.1s						
USRK	Ussuriysk Ar.	71.60	330	P	P	06 35 53.3	+0.6
USRK	Ussuriysk Ar.	71.60	330	P	P	06 35 52.8	0.0
	comp=Z,10nm,0.9s,baz=139,slow=5.0,SNR=21						
USRK				LR	LR	07 03 32.1	
	comp=Z,131nm,20.9s,baz=123,slow=33						
	comp=Z,10nm,0.9s						
USRK	Ussuriysk Ar.	71.60	330	P	P	06 35 53.3	+0.6
UNV	Unalaska Valle	72.61	12	P	P	06 35 57.8	-0.8
	baz=200						
TYV	Tymovskoe	72.69	340	*e*P	P	06 35 59.9	+0.8
TYV				pmax	pmax		
	comp=Z,23nm,1.2s						
TYV				pmax	pmax		
	comp=Z,100nm,2.2s						
MDJ	Mudanjiang	73.07	329	IAmb	IAmb	06 36 03.5	
	comp=Z,32nm,1.0s						
MDJ	Mudanjiang	73.07	329	P	P	06 36 02.3	+0.8
MDJ				pmax	pmax		
	comp=Z,36nm,0.9s						
QSPA	South Pole Qui	73.09	180	P	P	06 36 00.6	-1.0
	comp=Z,16nm,1.1s,baz=49,slow=1.4,SNR=13						
QSPA				LR	LR	07 04 06.0	
	comp=Z,271nm,20.7s,baz=46,slow=32						
	comp=Z,16nm,1.1s						
WHN	Wuhan	73.79	310	P	P	06 36 07.0	+1.0
WHN				pmax	pmax		
	comp=Z,64nm,0.9s						
P08K	Saint George I	74.67	10	P	P	06 36 09.4	-1.2
	baz=197						
GRNR	Gornyy	74.80	337	⇓*i*P	P	06 36 12.8	+1.3
GRNR				pmax	pmax		
	comp=Z,40nm,0.9s						
TIA	Tai'an	74.91	316	P	P	06 36 13.3	+0.8
TIA				pmax	pmax		
	comp=Z,14nm,1.0s						
BNX	BinXian	74.96	329	⇓P	P	06 36 12.4	-0.1
BNX				pmax	pmax		
	comp=Z,20nm,0.9s						
KULM	Kulim	75.08	280	IAmb	IAmb	06 36 21.4	
	comp=Z,26nm,1.3s						
SPIA	Saint Paul Isl	75.12	9	P	P	06 36 12.3	-0.9
	baz=196						
CHNA	Chernabura Isl	75.13	16	P	P	06 36 12.7	-0.6
	baz=207						
S12K	Black Hills	75.31	14	P	P	06 36 13.7	-0.6
	baz=204						
SDPT	Sand Point	75.37	15	P	P	06 36 14.2	-0.4
	baz=206						
KLR	Kul'dur	75.49	333	LR	LR	07 03 54.0	
	comp=Z,210nm,21.7s,baz=134,slow=31						
KLR	Kul'dur	75.49	333	*ce*P	P	06 36 15.5	0.0
KLR				pmax	pmax		
	comp=Z,24nm,1.7s						
KLR				MLR	MLR		
	comp=Z,96nm,16.0s						
PSI	Prapat	75.92	277	P	P	06 36 17.5	-1.4
PSI				pmax	pmax		
	comp=Z,14nm,1.3s						
S14K	Fog Glacier	76.44	15	P	P	06 36 20.2	-0.7
	baz=207						
CHIR	Chirikof Islan	77.09	17	P	P	06 36 24.7	+0.3
	baz=210						
SRIT	Nakonsritamara	77.14	283		P	06 36 26.6	+0.9
HNS	HongShan	77.19	316	⇓P	P	06 36 26.7	+1.3
HNS				pmax	pmax		
	comp=Z,24nm,1.5s						
LYN	LuoYang	77.22	312	⇓P	P	06 36 26.6	+1.0
LYN				S	S	06 46 15.7	+1.8
LYN				pmax	pmax		
	comp=Z,71nm,1.2s						
LYN				pmax	pmax		
	comp=Z,420nm,10.2s						
BJI	Beijing	77.70	319	P	P	06 36 29.1	+0.9
BJI				PcP	PcP	06 36 39.6	+1.4
BJI				S	S	06 46 21.1	+2.2
BJI				pmax	pmax		
	comp=Z,10.0nm,1.7s						
BJI				pmax	pmax		
	comp=Z,110nm,3.9s						
BJI				LR	LR		
	comp=Z,89nm,17.7s						
BJI				LR	LR		
	comp=Z,75nm,12.8s						
BJI				LR	LR		
	comp=Z,100nm,20.6s						
GYA	Guiyang	77.78	303	P	P	06 36 28.7	-0.4
GYA				pmax	pmax		
	comp=Z,21nm,0.9s						
SLVN	Son La	77.93	297		P	06 36 31.0	+1.0
SLVN				IAmb	IAmb	06 36 36.1	
	comp=Z,47nm,1.7s						
SII	Sitkinak Islan	78.14	18	P	P	06 36 30.1	-0.2
	baz=212						
HEH	HeiHe	78.15	332	*e*P	P	06 36 31.0	+0.5
HEH				pmax	pmax		
	comp=Z,23nm,1.1s						
MA2	Magadan	78.44	349		P	06 36 31.3	-0.6
MA2				IAmb	IAmb	06 36 32.5	
	comp=Z,26nm,1.2s						
MA2	Magadan	78.44	349	LR	LR	07 06 02.3	
	comp=Z,276nm,20.8s,baz=167,slow=32						
MA2	Magadan	78.44	349	*i* P	P	06 36 31.5	-0.4
MA2				pmax	pmax		
	comp=Z,15nm,1.0s						
O14K	Tigyukauivet M	78.73	13	P	P	06 36 33.0	-0.5
	baz=205						
M11K	Mekoryuk	78.83	10	P	P	06 36 34.1	+0.1
	baz=200						
R18K	Karluk	78.92	17	P	P	06 36 34.5	0.0
	baz=211						
OHAK	Old Harbor	78.96	18	IAmb	IAmb	06 36 36.3	
	comp=Z,35nm,1.2s						
OHAK	Old Harbor	78.96	18	P	P	06 36 35.1	+0.3
	baz=212						
O15K	Ungalikthiuk R	78.98	14	P	P	06 36 35.1	+0.3
	baz=206						
Q17K	Contact Creek	79.14	16	P	P	06 36 35.5	-0.3
	baz=210						
N14K	Kuskokwak Cree	79.25	13	P	P	06 36 36.2	-0.1
	baz=204						
P16K	Nushagak River	79.28	15	P	P	06 36 36.3	-0.1
	baz=208						
M13K	Dall Lake	79.37	12	P	P	06 36 37.5	+0.6
	baz=203						
XAN	Xi'an	79.51	310	⇓P	P	06 36 39.3	+0.9
XAN				pP	pP	06 36 42.4	-3.2
XAN				S	S	06 46 37.8	-0.9
XAN				pmax	pmax		
	comp=Z,43nm,1.3s						
XAN				pmax	pmax		
	comp=Z,310nm,10.8s						
KDAK	Kodiak Island	79.64	18		P	06 36 38.4	-0.1
KDAK	Kodiak Island	79.64	18	P	P	06 36 37.7	-0.7
	comp=Z,12nm,0.9s,baz=198,slow=2.4,SNR=9.4						
KDAK				LR	LR	07 05 19.4	
	comp=Z,530nm,21.2s,baz=183,slow=31						
	comp=Z,12nm,0.9s						
KDAK	Kodiak Island	79.64	18	P	P	06 36 38.4	-0.1
KDAK				pmax	pmax		
	comp=Z,20nm,1.0s						
KDAK	Kodiak Island	79.64	18	P	P	06 36 38.7	+0.3
	baz=213						

Q18K	Katmai Hardscr	79.70	16	P	P	06 36 38.5	-0.5
	baz=211						
O16K	Kokwok River B	79.75	14	P	P	06 36 38.1	-1.0
	baz=208						
P17K	Kvichak River	79.81	15	P	P	06 36 38.7	-0.6
	baz=209						
N15K	Kwethluk River	79.81	13	P	P	06 36 39.9	+0.5
	baz=206,SNR=11						
M14K	Bethel	79.95	12	P	P	06 36 40.0	-0.1
	baz=204						
XLT	XiLinHaoTe	79.97	322	*e*P	P	06 36 41.3	+0.6
XLT				pP	pP	06 36 45.0	-2.9
XLT				sP	PcP	06 36 48.4	+0.3
XLT				pmax	pmax		
	comp=Z,24nm,1.0s						
O17K	Koliganek Bris	80.15	15	P	P	06 36 40.4	-0.7
	baz=209						
M15K	Kasigluk River	80.16	13	P	P	06 36 41.3	+0.1
	baz=205						
P18K	Big Mountain,	80.28	16	IAmb	IAmb	06 36 42.7	
	comp=Z,24nm,1.1s						
P18K	Big Mountain,	80.28	16	P	P	06 36 41.6	-0.4
	baz=210						
Q19K	Cape Douglas,	80.31	17	IAmb	IAmb	06 36 43.2	
	comp=Z,37nm,1.0s						
Q19K	Cape Douglas,	80.31	17	P	P	06 36 42.0	-0.2
	baz=212						
L14K	Kuka Creek	80.36	11	P	P	06 36 42.3	+0.1
	baz=203						
N16K	Nishlik Lake	80.38	14	P	P	06 36 42.5	0.0
	baz=207						
Q20K	Shuyak Island	80.39	17	P	P	06 36 42.6	+0.1
	baz=213						
KMI	Kunming	80.43	300	P	P	06 36 45.3	+1.5
KMI				pmax	pmax		
	comp=Z,25nm,1.7s						
KMI				pmax	pmax		
	comp=Z,150nm,3.7s						
K13K	Kusilvak Mount	80.55	10	P	P	06 36 44.0	+0.8
	baz=201						
O18K	Koktuh Hills	80.69	15	P	P	06 36 44.2	+0.1
	baz=210						
ZEA	Zeya	80.71	334	*e*P	P	06 36 45.6	+1.2
ZEA				pmax	pmax		
	comp=Z,30nm,1.1s						
N17K	Nushagak Hills	80.79	14	P	P	06 36 44.8	+0.1
	baz=209						
M16K	Timber Creek	80.83	13	IAmb	IAmb	06 36 47.3	
	comp=Z,38nm,1.4s						
M16K	Timber Creek	80.83	13	P	P	06 36 45.8	+0.9
	baz=207,SNR=5.9						
L15K	Ungalak Mounta	80.89	12	P	P	06 36 45.0	-0.2
	baz=204						
P19K	Oil Pt	81.04	16	P	P	06 36 45.6	-0.4
P19K				IAmb	IAmb	06 36 47.2	
	comp=Z,41nm,1.4s						
P19K	Oil Pt	81.04	16	P	P	06 36 45.5	-0.5
	baz=212						
HHC	Hu-ho-hao-te	81.09	317	⇑*i*P	P	06 36 48.3	+1.4
HHC				pmax	pmax		
	comp=Z,25nm,1.2s						
HHC				pmax	pmax		
	comp=Z,63nm,5.3s						
CMAR	Chiang Mai Arr	81.17	292		P	06 36 49.0	+1.4
CMAR	Chiang Mai Arr	81.17	292	P	P	06 36 48.8	+1.2
	comp=Z,14nm,0.8s,baz=121,slow=3.7,SNR=57						
	comp=Z,14nm,0.8s						
CMAR	Chiang Mai Arr	81.17	292	*ce*P	P	06 36 49.4	+1.8
CMAR				pmax	pmax		
	comp=Z,16nm,0.9s						
O19K	Port Alsworth	81.21	16	IAmb	IAmb	06 36 47.9	
	comp=Z,41nm,1.3s						
O19K	Port Alsworth	81.21	16	P	P	06 36 46.2	-0.6
	baz=211						
N18K	Kilae Creek	81.24	15	P	P	06 36 47.5	+0.4
	baz=210						
CHTO	Chiang Mai	81.29	293	P	P	06 36 49.2	+0.9
CHTO				pmax	pmax		
	comp=Z,41nm,1.2s						
SEY	Seymchan	81.30	350	LR	LR	07 06 59.6	
	comp=Z,635nm,21.8s,baz=146,slow=31						
SEY	Seymchan	81.30	350	*ce*P	P	06 36 46.5	-0.8
SEY				pmax	pmax		
	comp=Z,45nm,1.7s						
GAMB	Gambell	81.31	7	P	P	06 36 47.5	+0.2
	baz=195						
L16K	Owhat River	81.33	13	P	P	06 36 48.3	+0.8
	baz=206						
K15K	Wolf Creek Mou	81.45	12	IAmb	IAmb	06 36 50.2	
	comp=Z,33nm,1.1s						
K15K	Wolf Creek Mou	81.45	12	P	P	06 36 48.5	+0.4
	baz=204,SNR=7.0						
HOM	Homer	81.48	17	P	P	06 36 48.8	+0.4
	baz=214						
CNPM	China Poot	81.49	17	IAmb	IAmb	06 36 49.3	
	comp=Z,26nm,1.1s						
J14K	Nanvaranak Lak	81.50	11	P	P	06 36 48.7	+0.4
	baz=202						
M17K	Holitna River	81.50	14	P	P	06 36 49.2	+0.8
	baz=208						
O20K	Slope Mountain	81.57	16	P	P	06 36 48.6	-0.2
	baz=213						
N19K	Bonanza Creek	81.70	15	P	P	06 36 49.1	-0.5
	baz=211						
BRLK	Bradley Lake	81.79	17	IAmb	IAmb	06 36 51.3	
	comp=Z,33nm,1.0s						
PZH	PanZhiHua	81.81	301	P	P	06 36 51.8	+0.8
BRSE	Bradley Lake S	81.81	17	P	P	06 36 50.7	+0.6
	baz=215						
M18K	Stony River	81.96	14	P	P	06 36 51.6	+0.8
	baz=210,SNR=18						
L17K	Donlin	81.97	13	P	P	06 36 52.2	+1.4
	baz=207						
BTO	Baotou	81.97	317	*e*P	P	06 36 53.2	+1.7
BTO				pP	PcP	06 36 57.2	+0.2
BTO				sP	sP	06 37 00.2	-1.1
BTO				pmax	pmax		
	comp=Z,41nm,1.5s						
BTO				pmax	pmax		
	comp=Z,450nm,9.2s						
MAW	Mawson	81.97	201	P	P	06 36 51.7	+0.7
	comp=Z,4.3nm,1.0s,baz=89,slow=7.1,SNR=4.1						
MAW				LR	LR	07 07 43.4	
	comp=Z,197nm,22.0s,baz=127,slow=32						
	comp=Z,4.3nm,1.0s						
L18K	Granite Mounta	82.40	14	IAmb	IAmb	06 36 55.6	
	comp=Z,35nm,1.1s						
L18K	Granite Mounta	82.40	14	P	P	06 36 54.2	+1.1
	baz=209,SNR=20						
SEW	Seward	82.48	18	P	P	06 36 53.6	+0.1
	baz=216						
K17K	Iditarod	82.48	13	IAmb	IAmb	06 36 55.9	
	comp=Z,38nm,1.3s						
K17K	Iditarod	82.48	13	P	P	06 36 54.6	+1.0
	baz=207,SNR=7.1						
J16K	Anvik River	82.53	12	IAmb	IAmb	06 36 56.1	
	comp=Z,21nm,1.0s						
J16K	Anvik River	82.53	12	P	P	06 36 54.8	+1.0
	baz=205,SNR=7.1						
N20K	Mount Spurr	82.62	16	P	P	06 36 53.6	-0.8
	baz=213,SNR=6.4						
SPCR	Spurr Chakacha	82.62	16	P	P	06 36 53.8	-0.6
	baz=213						
M19K	Big River Lodg	82.66	15	P	P	06 36 54.4	-0.2
	baz=211						
ORV	Oroville	82.72	45	IAmb	IAmb	06 36 57.3	
	comp=Z,16nm,1.2s						
L19K	White Mountain	82.79	14	P	P	06 36 56.0	+0.9
	baz=211,SNR=59						
ANM	Nome	82.90	9	P	P	06 36 55.3	-0.3
	baz=201						
J17K	VABM Dome	82.93	12	IAmb	IAmb	06 36 58.1	
	comp=Z,31nm,1.2s						
J17K	VABM Dome	82.93	12	P	P	06 36 57.0	+1.2
	baz=207,SNR=11						
M20K	Styx River	82.96	15	P	P	06 36 56.2	+0.1
	baz=212						
YBH	Yreka Blue Hor	82.99	43	IAmb	IAmb	06 36 59.3	
	comp=Z,25nm,1.1s						
P23K	Montague Islan	83.01	19	P	P	06 36 56.1	-0.2
	baz=218						
ISA	Isabella, Lake	83.05	50	IAmb	IAmb	06 36 59.5	
	comp=Z,36nm,1.3s						
I17K	Unalakleet	83.06	11	P	P	06 36 57.7	+1.2
	baz=205						
RC01	Rabbit Creek A	83.20	17	P	P	06 36 57.2	-0.1
	baz=216,SNR=9.5						
SUA	Susitna One	83.23	16	IAmb	IAmb	06 36 58.5	
	comp=Z,22nm,1.0s						
SUA	Susitna One	83.23	16	P	P	06 36 57.3	-0.3
	baz=214,SNR=9.8						
VTX	Valle De La Tr	83.25	54	IAmb	IAmb	06 37 00.8	
	comp=Z,33nm,1.4s						
L20K	Farewell, AK	83.28	15	P	P	06 36 58.3	+0.6
	baz=212,SNR=35						
ESJX	Sierra Juarez	83.38	54	IAmb	IAmb	06 37 01.6	
	comp=Z,25nm,1.4s						
PWL	Port Wells	83.42	18	P	P	06 36 58.3	-0.1
	baz=217,SNR=7.1						
SKT	Skwentna	83.45	16	P	P	06 36 57.4	-1.2
	baz=214						
H16K	Elim	83.47	10	P	P	06 36 59.5	+0.9
	baz=204						
TNA	Tin City	83.48	8	P	P	06 36 58.9	+0.3
	baz=198						
J18K	Innoko River	83.49	13	P	P	06 36 59.5	+0.8
	baz=209,SNR=30						
G15K	Niukluk	83.51	9	P	P	06 36 59.4	+0.6
	baz=202						
BBOR	Butler Butte	83.58	42	IAmb	IAmb	06 37 02.0	
	comp=Z,30nm,1.4s						
HIN	Hinchinbrook I	83.60	19	IAmb	IAmb	06 37 00.4	
	comp=Z,28nm,1.1s						
F14K	Arctic Creek	83.62	8	P	P	06 37 00.1	+0.8
	baz=200						
M22K	Willow	83.64	17	P	P	06 36 59.1	-0.3
	baz=215,SNR=8.5						
PFO	Pinyon Flats O	83.66	52		P	06 37 00.9	+0.5
PFO				IAmb	IAmb	06 37 02.7	
	comp=Z,20nm,1.5s						
PFO	Pinyon Flats O	83.66	52	LR	LR	07 06 34.6	
	comp=Z,349nm,20.7s,baz=245,slow=30						
PFO	Pinyon Flats O	83.66	52	P	P	06 37 00.9	+0.5
PFO				pmax	pmax		
	comp=Z,20nm,1.5s						
PMR	Palmer	83.78	17	P	P	06 37 00.2	0.0
	baz=216,SNR=18						
GLI	Glacier Island	83.80	18	P	P	06 37 00.1	-0.3
	baz=218,SNR=6.8						
KNK	Knik Glacier	83.83	17	IAmb	IAmb	06 37 01.7	
	comp=Z,20nm,1.0s						
KNK	Knik Glacier	83.83	17	P	P	06 37 00.6	+0.1
	baz=217,SNR=6.0						
KAIM	Kayak Island	83.90	20	P	P	06 37 01.4	+0.5
	baz=220						
TNCH	TengChong	83.92	298	*e*P	P	06 37 02.9	+0.8
TNCH				pmax	pmax		
	comp=Z,300nm,4.0s						
EYAK	Cordova Ski Ar	83.95	19	IAmb	IAmb	06 37 02.1	
	comp=Z,14nm,1.1s						
EYAK	Cordova Ski Ar	83.95	19	P	P	06 37 00.7	-0.4
	baz=219						
K20K	Telida	83.99	14	IAmb	IAmb	06 37 03.1	
	comp=Z,41nm,1.6s						
K20K	Telida	83.99	14	P	P	06 37 01.4	+0.1
	baz=211,SNR=9.3						
BELA	Belgrano 2	84.00	174	P	P	06 37 00.1	-1.3
BELA				IAmb	IAmb	06 37 01.0	
	comp=Z,20nm,1.5s						
PPLA	Purkeypile	84.05	15	P	P	06 37 02.1	+0.3
	baz=213						
F15K	North Star Dit	84.08	9	IAmb	IAmb	06 37 03.6	
	comp=Z,18nm,1.1s						
F15K	North Star Dit	84.08	9	P	P	06 37 02.1	+0.4
	baz=201						
GSC	Goldstone, Bar	84.12	51	IAmb	IAmb	06 37 04.9	
	comp=Z,30nm,1.4s						
CUT	Chulitna	84.14	16	P	P	06 37 01.9	-0.2
	baz=215						
LZH	Lanzhou	84.15	310	*e*P	P	06 37 04.5	+1.5
LZH				sP	pwP	06 37 15.4	+1.7
LZH				pmax	pmax		
	comp=Z,30nm,1.2s						
LZH				pmax	pmax		
	comp=Z,260nm,4.5s						
G16K	Koyuk River	84.15	10	P	P	06 37 02.5	+0.4
	baz=203,SNR=8.8						
H17K	Granite Mounta	84.16	11	P	P	06 37 02.7	+0.6
	baz=206,SNR=14						
DSP	Deep Springs	84.17	48	IAmb	IAmb	06 37 05.3	
	comp=Z,28nm,1.1s						
SML	Sawmill	84.18	17	P	P	06 37 02.1	-0.3
	baz=217,SNR=6.3						
J19K	Poorman	84.19	13	IAmb	IAmb	06 37 04.4	
	comp=Z,41nm,1.6s						
J19K	Poorman	84.19	13	P	P	06 37 02.8	+0.5
	baz=210,SNR=12						
PAHR	Pah Rah Range	84.23	46	IAmb	IAmb	06 37 05.5	
	comp=Z,30nm,1.3s						
HMT	Hamilton	84.26	20	IAmb	IAmb	06 37 03.9	
	comp=Z,27nm,1.1s						
RYN	Ryan	84.34	47	IAmb	IAmb	06 37 06.0	
	comp=Z,25nm,1.3s						
M23K	Glacier View	84.34	17	P	P	06 37 02.8	-0.4
	baz=217						
DIV	Divide	84.40	19	IAmb	IAmb	06 37 04.4	
	comp=Z,22nm,1.0s						
NVAR	Mina Array Bea	84.41	47	P	P	06 37 05.2	+0.9
NVAR	Mina Array Bea	84.41	47	P	P	06 37 04.7	+0.4
	comp=Z,9.7nm,1.0s,baz=230,slow=8.5,SNR=45						
NVAR				LR	LR	07 06 19.8	
	comp=Z,382nm,21.3s,baz=213,slow=30						
	comp=Z,9.7nm,1.0s						
SCM	Sheep Creek Mo	84.49	18	P	P	06 37 04.0	0.0
SCM	Sheep Creek Mo	84.49	18	P	P	06 37 04.0	0.0
SCM				pmax	pmax		
	comp=Z,28nm,0.9s						
SCM	Sheep Creek Mo	84.49	18	P	P	06 37 04.0	0.0
	baz=218,SNR=16						
NV11	Mina Array Sit	84.51	47	IAmb	IAmb	06 37 06.9	
	comp=Z,31nm,1.3s						
CAST	Castle Rocks	84.52	15	IAmb	IAmb	06 37 04.0	
	comp=Z,21nm,1.0s						
CAST	Castle Rocks	84.52	15	P	P	06 37 03.1	-0.9
	baz=213,SNR=14						
G17K	Kiwalik Mounta	84.54	11	P	P	06 37 04.8	+0.8
	baz=205,SNR=12						
GCSA	Galena City Sc	84.58	12	P	P	06 37 04.6	+0.4
	baz=209						
GWY	Greenwater Val	84.59	50	IAmb	IAmb	06 37 07.0	
	comp=Z,20nm,1.3s						
BMRM	Bremner River	84.64	19	P	P	06 37 04.4	-0.2
	baz=220,SNR=7.1						
KLU	Klutina	84.64	18	IAmb	IAmb	06 37 05.7	
	comp=Z,13nm,1.1s						
KLU	Klutina	84.64	18	P	P	06 37 04.9	+0.2
	baz=219,SNR=5.9						
H18K	Honhosa River	84.65	12	IAmb	IAmb	06 37 05.9	
	comp=Z,20nm,1.2s						
H18K	Honhosa River	84.65	12	P	P	06 37 04.3	-0.3
	baz=207,SNR=5.6						
J20K	Nowinta River	84.67	14	P	P	06 37 05.0	+0.3
	baz=211,SNR=9.1						
H04A	Detroit Lake	84.79	40	IAmb	IAmb	06 37 07.4	
	comp=Z,34nm,1.4s						
CHUM	Lake Minchumin	84.85	15	P	P	06 37 04.7	-0.9
	baz=213						
BILL	Bilibino	84.91	357		P	06 37 05.4	-0.4
BILL				IAmb	IAmb	06 37 06.6	
	comp=Z,32nm,1.6s						
BILL	Bilibino	84.91	357	*ce*P	P	06 37 05.6	-0.2
BILL				pmax	pmax		
	comp=Z,23nm,1.7s						
BILL				MLR	MLR		
	comp=Z,165nm,20.0s						
LPIG	La Paz	84.94	63	LR	LR	07 06 23.4	
	comp=Z,341nm,20.8s,baz=208,slow=30						
CRQM	Cirque	84.94	20	IAmb	IAmb	06 37 07.5	
	comp=Z,24nm,1.1s						
WAT1	Susitna Watana	84.95	17	P	P	06 37 05.9	-0.3
	baz=216						
CRQE	Cirque	84.96	20	P	P	06 37 06.1	-0.3
	baz=222,SNR=5.8						
WAT6	Susitna Watana	84.97	17	P	P	06 37 06.3	-0.2
	baz=217,SNR=11						
TRF	Thorofare Moun	84.99	16	IAmb	IAmb	06 37 07.0	
	comp=Z,15nm,1.2s						
TRF	Thorofare Moun	84.99	16	P	P	06 37 05.4	-1.2
	baz=215,SNR=6.0						
M24K	Tolsona, Glenn	85.04	18	P	P	06 37 06.7	0.0
	baz=219,SNR=10						
TGL	Tana Glacier	85.04	20	IAmb	IAmb	06 37 07.9	
	comp=Z,25nm,1.3s						
CRAG	Craig	85.10	27	P	P	06 37 07.3	+0.2
	baz=231						
N25K	Chitina, Valde	85.13	19	IAmb	IAmb	06 37 08.3	
	comp=Z,17nm,1.0s						
N25K	Chitina, Valde	85.13	19	P	P	06 37 06.9	-0.3
	baz=220,SNR=10.0						
I20K	Naaghedeneel	85.13	13	IAmb	IAmb	06 37 09.0	
	comp=Z,29nm,1.1s						
I20K	Naaghedeneel	85.13	13	P	P	06 37 07.3	+0.3
	baz=211,SNR=5.1						
BLYC	Blythe	85.18	53	IAmb	IAmb	06 37 10.4	
	comp=Z,32nm,1.2s						
SIT	Sitka	85.19	25	P	P	06 37 07.3	-0.2
	baz=229						
TPNV	Topopah Spring	85.23	49	IAmb	IAmb	06 37 10.6	
	comp=Z,19nm,1.1s						
G18K	Tagagawik	85.26	11	IAmb	IAmb	06 37 09.1	
	comp=Z,35nm,1.3s						
G18K	Tagagawik	85.26	11	P	P	06 37 07.9	+0.2
	baz=207,SNR=13						
F17K	Baldwin Pennin	85.30	10	P	P	06 37 08.3	+0.5
	baz=204,SNR=5.2						
RND	Reindeer	85.33	16	IAmb	IAmb	06 37 08.9	
	comp=Z,20nm,1.0s						
BPAW	Bear Paw Mtn.	85.36	15	P	P	06 37 08.2	0.0
	baz=214						
H19K	Roundabout Mou	85.36	12	IAmb	IAmb	06 37 10.0	
	comp=Z,30nm,1.2s						
H19K	Roundabout Mou	85.36	12	P	P	06 37 08.7	+0.6
	baz=209,SNR=10						
113A	Mohawk Valley,	85.37	54	IAmb	IAmb	06 37 11.3	
	comp=Z,25nm,1.3s						
GRNC	Granite Creek	85.38	20	IAmb	IAmb	06 37 09.7	
	comp=Z,16nm,1.2s						
PNL	Peninsula	85.43	22	P	P	06 37 08.3	-0.4
	baz=225						
PINM	Pinnacle	85.43	21	P	P	06 37 08.2	-0.5
	baz=224						
S31K	Pelican	85.44	24	P	P	06 37 08.6	-0.1
	baz=228						
HOOD	Mount Hood Mea	85.44	40	IAmb	IAmb	06 37 10.9	
	comp=Z,25nm,1.2s						
MCARA	McCarthy VSAT	85.45	19	P	P	06 37 08.9	+0.2
MCARA				IAmb	IAmb	06 38 30.5	
	comp=Z,11nm,0.9s						
MCARA	McCarthy VSAT	85.45	19	P	P	06 37 08.3	-0.4
	baz=222						
DHY	Denali Highway	85.47	17	P	P	06 37 08.7	-0.2
	baz=218,SNR=6.4						
BBB	Bella Bella	85.48	32	LR	LR	07 07 38.9	
	comp=Z,210nm,20.5s,baz=210,slow=30						
U33K	Whale Pass	85.51	27	P	P	06 37 09.9	+0.8
	baz=231						
HARP	HAARP	85.57	18	P	P	06 37 09.5	+0.1
	baz=220						
MCK	McKinley	85.58	16	P	P	06 37 08.7	-0.6
	baz=216						
H20K	Anotleneega Mo	85.65	13	P	P	06 37 09.9	+0.3
	baz=210,SNR=8.2						
V35K	Ketchikan	85.68	28	IAmb	IAmb	06 37 11.9	
	comp=Z,18nm,1.1s						
V35K	Ketchikan	85.68	28	P	P	06 37 09.7	-0.3
	baz=232						
CTG	Chitna Glacier	85.69	20	P	P	06 37 09.8	-0.3
	baz=223,SNR=6.3						
CTGM	Chitina Glacie	85.69	20	IAmb	IAmb	06 37 11.2	
	comp=Z,14nm,1.0s						
F18K	Selawik	85.71	10	P	P	06 37 09.9	+0.1
	baz=206						
V12A	Nelson	85.74	51	IAmb	IAmb	06 37 13.1	
	comp=Z,23nm,1.5s						
S32K	Killisnoo	85.77	25	P	P	06 37 10.6	+0.2
	baz=229						
G19K	Purcell Mounta	85.77	12	IAmb	IAmb	06 37 12.0	
	comp=Z,19nm,1.1s						
G19K	Purcell Mounta	85.77	12	P	P	06 37 10.6	+0.3
	baz=208,SNR=12						
E17K	Hotham Inlet	85.79	10	P	P	06 37 10.9	+0.7
	baz=204						
S11A	Rachel	85.88	49	IAmb	IAmb	06 37 12.3	
	comp=Z,22nm,1.1s						
PAX	Paxson	85.92	18	P	P	06 37 10.3	-0.8
	baz=219						
YAK	Yakutsk	85.93	341	*e*P	P	06 37 11.1	+0.1
YAK				*e*		06 37 13.6	
YAK				*e*		06 40 30.2	
YAK				*e*S	SKSac	06 47 35.9	+1.1
YAK				pmax	pmax		
	comp=Z,38nm,1.0s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.4s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,89nm,3.7s						
YAK				smax	smax		
	comp=N,32nm,2.8s						
YAK				MLR	MLR		
	comp=Z,167nm,21.0s						
YAK				MLR	MLR		
	comp=N,103nm,23.0s						
YAK				MLR	MLR		
	comp=E,77nm,23.0s						
O28M	Mount Upton	85.94	21	IAmb	IAmb	06 37 12.6	
	comp=Z,16nm,1.1s						
O28M	Mount Upton	85.94	21	P	P	06 37 11.2	-0.4
	baz=224,SNR=9.4						
WVOR	Wild Horse Val	85.99	43	IAmb	IAmb	06 37 14.2	
	comp=Z,31nm,1.3s						
WVOR	Wild Horse Val	85.99	43	P	P	06 37 13.0	+1.0
WVOR				pmax	pmax		
	comp=Z,20nm,1.2s						
P29M	Windy Craggy	86.00	23	IAmb	IAmb	06 37 13.0	
	comp=Z,21nm,1.1s						
P29M	Windy Craggy	86.00	23	P	P	06 37 11.5	-0.1
	baz=226,SNR=7.4						
I21K	Tanana	86.02	14	IAmb	IAmb	06 37 12.8	
	comp=Z,15nm,1.1s						
I21K	Tanana	86.02	14	P	P	06 37 11.4	0.0
	baz=213,SNR=8.7						
WRAK	Wrangell Islan	86.04	27	P	P	06 37 12.0	+0.3
	baz=231						
O29M	Mount Kennedy	86.17	22	P	P	06 37 11.9	-0.6
	baz=226						
D17K	Noatak River	86.17	9	P	P	06 37 12.4	+0.3
	baz=203,SNR=7.8						
I07A	Izee	86.19	42	IAmb	IAmb	06 37 15.1	
	comp=Z,22nm,1.2s						
MLY	Manley	86.19	14	P	P	06 37 11.7	-0.6
	baz=214						
M26K	Nabesna, AK	86.23	19	P	P	06 37 12.6	0.0
	baz=222,SNR=9.5						
H21K	Melozitna Rive	86.24	13	P	P	06 37 12.0	-0.6
	baz=212,SNR=6.9						
NEA2	Nenana	86.24	15	P	P	06 37 11.3	-1.2
	baz=216						
F19K	Shaleruckik Mo	86.26	11	IAmb	IAmb	06 37 14.1	
	comp=Z,16nm,1.1s						
F19K	Shaleruckik Mo	86.26	11	P	P	06 37 12.6	0.0
	baz=208,SNR=7.8						
PRN	Pahroc Range	86.29	49	IAmb	IAmb	06 37 16.2	
	comp=Z,33nm,1.2s						
E18K	Tukpahlearik C	86.30	10	IAmb	IAmb	06 37 14.7	
	comp=Z,24nm,1.1s						
E18K	Tukpahlearik C	86.30	10	P	P	06 37 12.9	+0.1
	baz=205,SNR=8.0						
R32K	Eaglecrest	86.32	25	P	P	06 37 13.1	0.0
	baz=229						
C16K	Lisburne Hills	86.39	8	P	P	06 37 13.3	+0.1
	baz=200						
PLBC	Pleasant Camp	86.39	23	P	P	06 37 13.4	0.0
	baz=228						
YUK8	Steele Glacier	86.45	21	P	P	06 37 13.8	-0.2
	baz=224,SNR=14						
K24K	Donnelly Dome	86.48	17	IAmb	IAmb	06 37 15.0	
	comp=Z,17nm,0.9s						
K24K	Donnelly Dome	86.48	17	P	P	06 37 13.8	0.0
	baz=219,SNR=8.7						
J08A	Circle Bar Ran	86.51	43	IAmb	IAmb	06 37 16.5	
	comp=Z,23nm,1.2s						
RDOG	Red Dog Mine	86.52	9	P	P	06 37 14.2	+0.3
	baz=203						
M27K	Edge Creek, AK	86.54	19	P	P	06 37 14.1	-0.2
	baz=223						
YUK3	Moose Creek	86.57	20	P	P	06 37 14.6	+0.1
	baz=224,SNR=14						
L26K	Log Cabin Wild	86.59	18	P	P	06 37 14.6	+0.3
	baz=221						
I23K	Minto, Yukon-K	86.62	15	P	P	06 37 14.9	+0.5
	baz=216						
P30M	Million Dollar	86.62	22	P	P	06 37 14.2	-0.4

	baz=227,SNR=7.7						
HDA	Harding Lake	86.64	16	IAmb	IAmb	06 37 15.4	
	comp=Z,18nm,1.2s						
HDA	Harding Lake	86.64	16	P	P	06 37 13.4	-1.1
	baz=218,SNR=11						
YUK6	Outpost Mounta	86.69	21	P	P	06 37 14.2	-1.0
	baz=226						
RIDG	Independent Ri	86.70	17	IAmb	IAmb	06 37 15.9	
	comp=Z,15nm,0.9s						
RIDG	Independent Ri	86.70	17	P	P	06 37 14.5	-0.4
	baz=220,SNR=14						
H22K	Ishtalitna Cre	86.76	14	P	P	06 37 14.2	-0.9
	baz=214						
SKAG	Skagway	86.79	24	P	P	06 37 15.7	+0.4
	baz=228						
G21K	Allakaket	86.82	13	P	P	06 37 15.4	+0.1
	baz=212,SNR=6.1						
F20K	Avaraart Lake	86.83	12	P	P	06 37 15.6	+0.2
	baz=210						
C17K	DeLong Mountai	86.88	8	P	P	06 37 15.7	+0.1
	baz=202						
YUK4	Talbot Arm	86.88	21	P	P	06 37 15.8	-0.2
	baz=226						
BVCY	Beaver Creek	86.91	20	P	P	06 37 15.6	-0.4
	baz=224,SNR=5.2						
E19K	Redstone River	86.91	11	P	P	06 37 16.3	+0.5
	baz=208,SNR=10						
HYT	Haines Junctio	86.91	22	P	P	06 37 15.7	-0.4
	baz=227						
ILAR	Eielson Array	86.95	16	P	P	06 37 14.6	-1.4
ILAR	Eielson Array	86.95	16	P	P	06 37 14.3	-1.7
	comp=Z,5.2nm,1.0s,baz=236,slow=5.6,SNR=39						
ILAR				LR	LR	07 09 08.7	
	comp=Z,391nm,22.0s,baz=214,slow=31						
	comp=Z,5.2nm,1.0s						
ILAR	Eielson Array	86.95	16	P	P	06 37 14.6	-1.4
LTY	Liberty	86.97	39	IAmb	IAmb	06 37 18.1	
	comp=Z,18nm,1.4s						
L27K	Beaver Creek,	87.08	19	P	P	06 37 16.2	-0.6
	baz=223						
POKR	Poker Plat Res	87.08	16	P	P	06 37 15.5	-1.2
	baz=217						
G08A	Pilot Rock	87.09	41	P	P	06 37 17.8	+0.4
G08A				IAmb	IAmb	06 37 19.2	
	comp=Z,20nm,1.2s						
SCRK	Sand Creek	87.12	17	P	P	06 37 16.5	-0.6
	baz=221,SNR=12						
H23K	Yukon River	87.13	14	P	P	06 37 16.9	0.0
	baz=215						
J25K	Salcha River,	87.23	17	P	P	06 37 17.1	-0.4
	baz=219,SNR=9.9						
T35M	Bob Quinn	87.30	27	P	P	06 37 18.1	+0.2
	baz=233						
C18K	Utukok River	87.32	9	IAmb	IAmb	06 37 19.4	
	comp=Z,18nm,1.5s						
C18K	Utukok River	87.32	9	P	P	06 37 17.4	-0.4
	baz=204						
O30N	Mendenhall	87.38	22	P	P	06 37 17.8	-0.4
	baz=228						
ULN	Ulaanbaatar	87.41	322		P	06 37 19.2	+0.3
ULN				IAmb	IAmb	06 37 20.5	
	comp=Z,16nm,1.2s						
ULN	Ulaanbaatar	87.41	322	P	P	06 37 19.2	+0.3
ULN				pmax	pmax		
	comp=Z,16nm,1.2s						
F21K	Alatna River	87.43	12	P	P	06 37 17.9	-0.4
	baz=212						
LCMT	Little Creek M	87.45	50	IAmb	IAmb	06 37 21.6	
	comp=Z,15nm,1.3s						
SPR3	Spring Creek 3	87.46	48	IAmb	IAmb	06 37 21.4	
	comp=Z,23nm,1.4s						
S34M	Telegraph Cree	87.49	26	IAmb	IAmb	06 37 20.7	
	comp=Z,16nm,1.2s						
S34M	Telegraph Cree	87.49	26	P	P	06 37 19.5	+0.8
	baz=232,SNR=6.7						
N30M	Aishikik Lake	87.50	21	P	P	06 37 19.2	+0.4
	baz=227						
P32M	Atlin	87.50	24	P	P	06 37 18.9	+0.1
	baz=230						
TUC	Tucson	87.52	55		P	06 37 21.0	+1.3
TUC				IAmb	IAmb	06 37 22.3	
	comp=Z,12nm,1.1s						
TUC	Tucson	87.52	55	P	P	06 37 21.0	+1.3
TUC				pmax	pmax		
	comp=Z,12nm,1.2s						
ELK	Elko	87.54	46	IAmb	IAmb	06 37 21.8	
	comp=Z,19nm,1.2s						
ELK	Elko	87.54	46	LR	LR	07 08 23.5	
	comp=Z,308nm,22.0s,baz=224,slow=30						
ELK	Elko	87.54	46	P	P	06 37 20.4	+0.6
H24K	Noodor Dome	87.54	15	P	P	06 37 19.1	+0.1
	baz=217						
G22K	Bettles	87.59	13	P	P	06 37 19.5	+0.5
	baz=214						
PSUT	Pine Spring	87.61	49	IAmb	IAmb	06 37 22.2	
	comp=Z,12nm,1.2s						
J26L	Joseph Creek	87.64	17	P	P	06 37 19.1	-0.4
	baz=221,SNR=11						
Q32M	Nakina River	87.67	25	P	P	06 37 19.7	-0.1
	baz=231						
PMSA	Palmer Station	87.67	159	LR	LR	07 09 41.6	
	comp=Z,174nm,20.1s,baz=223,slow=31						
D19K	Kuna River	87.68	10	P	P	06 37 19.7	+0.2
	baz=207						
M29M	Somme Creek	87.71	20	P	P	06 37 19.2	-0.7
	baz=226						
K27K	Chicken	87.72	18	P	P	06 37 19.9	+0.1
	baz=222						
G23K	Bananza Creek	87.75	14	P	P	06 37 19.8	-0.1
	baz=215						
WHY	Whitehorse	87.75	23	P	P	06 37 19.8	-0.3
	baz=229						
SONM	Songino Array	87.78	322		P	06 37 20.2	-0.4
SONM	Songino Array	87.78	322	P	P	06 37 19.6	-1.1
	comp=Z,3.7nm,1.0s,baz=127,slow=3.2,SNR=11						
SONM				LR	LR	07 16 44.2	
	comp=Z,66nm,18.4s,baz=116,slow=36						
	comp=Z,3.7nm,1.0s						
SONM	Songino Array	87.78	322	P	P	06 37 20.2	-0.4
SONM				pmax	pmax		
	comp=Z,13nm,1.4s						
X16A	Lo Mia Camp, P	87.80	53	IAmb	IAmb	06 37 23.6	
	comp=Z,12nm,1.1s						
E20K	Nigu River	87.81	11	P	P	06 37 20.2	0.0
	baz=209,SNR=5.6						
PRP	Porcupine Dome	87.89	16	P	P	06 37 20.7	-0.1
	baz=219						
B18K	Kokolik River	87.89	9	P	P	06 37 20.7	+0.3
	baz=204						
U15A	North Rim	87.92	51	IAmb	IAmb	06 37 24.4	
	comp=Z,20nm,1.2s						
BMO	Blue Mountains	87.94	42	IAmb	IAmb	06 37 23.2	
	comp=Z,26nm,1.6s						
F22K	John River	87.94	13	P	P	06 37 21.1	+0.3
	baz=213						
N31M	Braeburn, Yuko	87.98	22	P	P	06 37 20.5	-0.6
	baz=228						
C19K	Lookout Ridge	87.99	9	P	P	06 37 20.7	-0.3
	baz=206						
D20K	Etivluk River	88.13	11	IAmb	IAmb	06 37 23.3	
	comp=Z,9.4nm,1.0s						
D20K	Etivluk River	88.13	11	P	P	06 37 21.4	-0.3
	baz=209						
COLD	Coldfoot	88.13	13	P	P	06 37 21.6	0.0
	baz=215						
SYO	Syowa Base	88.17	195	⇓*e*P	P	06 37 22.2	+0.2
SYO	Syowa Base	88.17	195	⇑*e*pP	pP	06 37 27.5	-1.7
P33M	Teslin, Yukon	88.24	24	P	P	06 37 22.3	-0.1
	baz=231						
WUAZ	Wupatki	88.26	52	IAmb	IAmb	06 37 25.7	
	comp=Z,17nm,1.1s						
DLBC	Dease Lake	88.27	26	IAmb	IAmb	06 37 23.6	
	comp=Z,14nm,1.4s						
DLBC	Dease Lake	88.27	26	P	P	06 37 22.0	-0.6
	comp=Z,2.7nm,0.9s,baz=167,slow=6.7,SNR=5.0						
DLBC				LR	LR	07 08 22.5	
	comp=Z,294nm,21.9s,baz=252,slow=30						
	comp=Z,2.7nm,0.9s						
DLBC	Dease Lake	88.27	26	P	P	06 37 22.5	-0.1
	baz=233						
L29M	L29M	88.29	20	P	P	06 37 22.2	-0.3
	baz=226,SNR=9.3						
B08A	Colville Reser	88.29	38	IAmb	IAmb	06 37 24.2	
	comp=Z,16nm,1.3s						
G24K	Hadweenzic Riv	88.33	15	P	P	06 37 22.3	-0.3
	baz=217						
I26K	Coal Creek Min	88.37	17	P	P	06 37 22.3	-0.5
	baz=221,SNR=11						
319A	Douglas	88.38	57	IAmb	IAmb	06 37 26.4	
	comp=Z,13nm,1.1s						
E21K	Killik River	88.38	12	P	P	06 37 22.7	-0.2
	baz=211						
H25L	Birch Creek	88.40	15	P	P	06 37 22.9	0.0
	baz=219						
GTA	Gaotai	88.43	312	P	P	06 37 25.2	+1.3
GTA				pP	pP	06 37 28.6	-2.5
GTA				pmax	pmax		
	comp=Z,23nm,1.5s						
R33M	Jennings River	88.47	25	P	P	06 37 23.9	+0.4
	baz=232,SNR=5.7						
E22K	Anaktuvuk Pass	88.54	12	P	P	06 37 24.0	+0.4
	baz=213						
DAWY	Dawson	88.56	19	P	P	06 37 22.8	-1.0
	baz=225,SNR=10.0						
N32M	Quiet Lake	88.74	23	P	P	06 37 24.3	-0.5
	baz=230						
A19K	Wainwright	88.77	8	P	P	06 37 25.0	+0.5
	baz=204						
MVU	Marysvale	88.78	49	IAmb	IAmb	06 37 28.6	
	comp=Z,24nm,1.5s						
C21K	Knifeblade Rid	88.84	11	P	P	06 37 25.2	+0.3
	baz=210						
PLID	Pearl Lake	88.87	42	IAmb	IAmb	06 37 27.5	
	comp=Z,15nm,1.1s						
F24K	Squaw Lake	88.89	14	P	P	06 37 25.3	0.0
	baz=217						
E23K	Chandalar	88.94	13	P	P	06 37 25.0	-0.6
	baz=215						
M31M	Drury Creek, Y	88.95	22	P	P	06 37 25.6	-0.1
	baz=229						
X18A	Snowflake	88.98	53	IAmb	IAmb	06 37 29.2	
	comp=Z,27nm,1.4s						
K29M	Barlow Dome	88.99	20	P	P	06 37 25.8	-0.1
	baz=226,SNR=5.6						
D22K	Ayikyak River	89.00	12	P	P	06 37 25.9	+0.2
	baz=212						
DUG	Dugway, Tooele	89.01	47	P	P	06 37 27.4	+0.8
DUG				pmax	pmax		
	comp=Z,13nm,1.5s						
I27K	Kandik River	89.02	17	P	P	06 37 26.1	+0.1
	baz=223						
BGU	Big Grassy Mou	89.15	47	IAmb	IAmb	06 37 29.4	
	comp=Z,20nm,1.4s						
B20K	Meade River	89.18	10	P	P	06 37 26.8	+0.2
	baz=208						
E24K	Your Creek	89.21	13	P	P	06 37 26.4	-0.4
	baz=216						
HLID	Hailey	89.27	44	IAmb	IAmb	06 37 30.2	
	comp=Z,16nm,1.1s						
B21K	Ikpikpuk River	89.28	11	P	P	06 37 27.0	+0.1
	baz=211						
FARO	Faro, Yukon	89.34	22	P	P	06 37 27.0	-0.4
	baz=230						
I28M	Miner Creek	89.39	18	P	P	06 37 27.8	+0.1
	baz=224,SNR=5.7						
TOLK	Toolik Lake Re	89.43	13	P	P	06 37 27.8	0.0
	baz=215						
G26K	Porcupine Rive	89.45	16	P	P	06 37 27.3	-0.5
	baz=221,SNR=6.1						
D23K	Nanushuk River	89.47	12	P	P	06 37 27.7	-0.2
	baz=214						
F25K	Christian Rive	89.48	15	P	P	06 37 28.0	-0.1
	baz=219						
H27K	Steamboat Moun	89.51	17	P	P	06 37 27.7	-0.5
	baz=223						
NEW	Newport	89.56	39		P	06 37 28.9	0.0
NEW	Newport	89.56	39	LR	LR	07 09 49.7	
	comp=Z,282nm,21.9s,baz=216,slow=30						
NEW	Newport	89.56	39	P	P	06 37 28.9	0.0
NEW				pmax	pmax		
	comp=Z,11nm,1.2s						
HMU	Henry Mountain	89.64	50	IAmb	IAmb	06 37 31.8	
	comp=Z,34nm,1.5s						
TMUT	Trail Mountain	89.81	49	IAmb	IAmb	06 37 33.2	
	comp=Z,26nm,1.2s						
I29M	Ogilvie Camp,	89.81	18	P	P	06 37 29.0	-0.6
	baz=226,SNR=8.8						
HPIG		89.84	62	IAmb	IAmb	06 37 33.3	
	comp=Z,20nm,1.7s						
J30M	Hart River	89.88	19	P	P	06 37 29.9	-0.2
	baz=228						
G27K	Doyon Strip	89.90	16	P	P	06 37 30.1	+0.1
	baz=223						
E25K	Arctic Village	89.91	14	P	P	06 37 29.8	-0.2
	baz=219						
F26K	Sheenjek River	89.92	15	P	P	06 37 30.0	-0.1
	baz=220						
D24K	Happy Valley	90.01	13	P	P	06 37 29.8	-0.6
	baz=216						
B22K	Teshekpuk Lake	90.11	11	P	P	06 37 30.7	-0.1
	baz=212						
JLU	Jordanelle	90.13	47	IAmb	IAmb	06 37 34.1	
	comp=Z,19nm,1.1s						
C23K	Itkillik River	90.21	12	P	P	06 37 31.0	-0.3
	baz=214						
SRU	San Rafael Swe	90.23	49	IAmb	IAmb	06 37 34.5	
	comp=Z,26nm,1.2s						
I30M	Mount Dempster	90.30	19	P	P	06 37 31.2	-0.9
	baz=228,SNR=7.4						
MMPY	Sheldon Lake,	90.34	22	P	P	06 37 31.9	-0.3
	baz=232,SNR=7.0						
TCUT	Toone Canyon	90.35	47	IAmb	IAmb	06 37 35.2	
	comp=Z,23nm,1.0s						
H29M	Whitestone	90.39	18	IAmb	IAmb	06 40 08.8	
	comp=Z,32nm,2.0s						
H29M	Whitestone	90.39	18	P	P	06 37 31.8	-0.5
	baz=226						
A22K	Sinclair Lake	90.41	10	P	P	06 37 32.2	0.0
	baz=210						
C24K	Franklin Bluff	90.50	12	P	P	06 37 32.3	-0.4
	baz=216						
LIRD	Liard River Hi	90.50	26	P	P	06 37 33.3	+0.4
	baz=237						
TOAD	Toad River Com	90.56	27	P	P	06 37 33.3	0.0
	baz=237,SNR=13						
BSUT	Blindstream Ca	90.59	48	IAmb	IAmb	06 37 36.4	
	comp=Z,20nm,1.0s						
D25K	Kavik River	90.67	13	P	P	06 37 33.4	-0.2
	baz=218						
ZAK	Zakamensk	90.77	323	*e*P	P	06 37 33.7	-0.8
ZAK				pmax	pmax		
	comp=Z,13nm,1.3s						
GOMU	GeErMu	90.92	308	P	P	06 37 36.8	+0.9
GOMU				pP	PcP	06 37 39.1	+2.2
GOMU				pmax	pmax		
	comp=Z,28nm,1.0s						
E27K	Coleen River	90.93	15	P	P	06 37 35.1	+0.3
	baz=223						
G29M	Pine Creek	90.98	17	P	P	06 37 34.7	-0.3
	baz=226						
EPYK	Eagle Plains	90.98	18	P	P	06 37 34.3	-0.8
	baz=227						
TROLL	Troll, Antarti	91.04	183	⇑P	P	06 37 34.2	-1.4
MVCO	Mesa Verde	91.04	51	IAmb	IAmb	06 37 38.4	
	comp=Z,14nm,1.3s						
PV17	East Wray Mesa	91.07	50	IAmb	IAmb	06 37 38.4	
	comp=Z,25nm,1.3s						
PV16	Nyswonger Mesa	91.12	50	IAmb	IAmb	06 37 38.7	
	comp=Z,30nm,1.6s						
PV13	Radium Mtn., P	91.13	50	IAmb	IAmb	06 37 38.7	
	comp=Z,19nm,1.4s						
PV03	Paradox Valley	91.15	50	IAmb	IAmb	06 37 38.7	
	comp=Z,30nm,1.7s						
Y22D	IRIS PASSCAL I	91.18	55	P	P	06 37 36.0	-0.9
	baz=250						
DLMT	Dillon	91.18	43	IAmb	IAmb	06 37 38.7	
	comp=Z,25nm,1.4s						
PV01	Paradox Valley	91.31	51	IAmb	IAmb	06 37 39.5	
	comp=Z,25nm,1.6s						
H31M	Peel River	91.32	19	P	P	06 37 36.9	+0.3
	baz=229						
BEAVL	Fort Liard	91.36	26	P	P	06 37 37.2	+0.3
	baz=237						
PV07	Paradox Valley	91.36	50	IAmb	IAmb	06 37 39.8	
	comp=Z,22nm,1.2s						
C26K	Camden Bay	91.46	13	P	P	06 37 37.3	+0.2
	baz=220						
C27K	Jago River	91.50	14	P	P	06 37 37.7	+0.3
	baz=221						
G30M	tAoh Zraii Nji	91.54	18	P	P	06 37 37.9	+0.2
	baz=228						
SNAA	Sanae	91.56	181	⇑P	P	06 37 35.3	-2.6
	comp=Z,48nm,0.9s						
SNAA	Sanae	91.56	181	P	P	06 37 38.0	+0.1
SNAA				IAmb	IAmb	06 38 14.5	
	comp=Z,13nm,1.3s						
SNAA	Sanae	91.56	181	P	P	06 37 38.2	+0.2
	comp=Z,2.8nm,1.0s,baz=215,slow=5.7,SNR=3.9						
SNAA				LR	LR	07 16 23.5	
	comp=Z,190nm,19.4s,baz=189,slow=34						
	comp=Z,2.8nm,1.0s						
SNAA	Sanae	91.56	181	*ce*P	P	06 37 37.1	-0.8
SNAA				pmax	pmax		
	comp=Z,14nm,1.6s						
MNTX	Cornudas Mount	91.62	57	IAmb	IAmb	06 37 40.9	
	comp=Z,14nm,1.1s						
VHRN	Van Horn	91.65	58	IAmb	IAmb	06 37 41.4	
	comp=Z,26nm,1.4s						
SNOW	Snow King Moun	91.68	45	IAmb	IAmb	06 37 41.3	
	comp=Z,15nm,1.5s						
KOTAN	Kotaneelee Air	91.76	26	P	P	06 37 38.9	+0.2
	baz=238						
E28M	Babbage River	91.76	16	P	P	06 37 38.4	-0.2
	baz=225						
ANMO	Albuquerque	91.83	54		P	06 37 40.5	+0.6
ANMO				IAmb	IAmb	06 37 41.8	
	comp=Z,20nm,1.1s						
ANMO	Albuquerque	91.83	54	LR	LR	07 10 30.7	
	comp=Z,333nm,21.9s,baz=350,slow=30						
ANMO	Albuquerque	91.83	54	P	P	06 37 40.6	+0.6
ANMO				pmax	pmax		
	comp=Z,20nm,1.2s						
D27M	Malcolm River	91.87	15	P	P	06 37 38.8	-0.4
	baz=223						
BOZ	Bozeman (W)	91.90	43	IAmb	IAmb	06 37 42.0	
	comp=Z,14nm,1.4s						
YHL	Hebgen Lake	91.91	44	IAmb	IAmb	06 37 42.7	
	comp=Z,13nm,1.3s						
VNA3	Neumayer Olymp	92.00	179	⇑P	P	06 37 35.8	-4.1
	comp=Z,3.2nm,0.6s						
E29M	Blow River	92.04	16	P	P	06 37 39.9	0.0
	baz=226						
G31M	Satah River	92.08	18	P	P	06 37 39.3	-0.7
	baz=229						
F30M	Barrier River	92.09	17	P	P	06 37 39.4	-0.7
	baz=228						
BW06	Boulder Array	92.24	46	IAmb	IAmb	06 37 47.5	
	comp=Z,14nm,1.6s						
PD31	Pinedale Array	92.24	46	IAmb	IAmb	06 37 47.5	
	comp=Z,14nm,1.6s						
PDAR	Pinedale Array	92.24	46		P	06 37 41.6	-0.1
PDAR	Pinedale Array	92.24	46	P	P	06 37 42.1	+0.4
	comp=Z,1.9nm,0.9s,baz=204,slow=3.3,SNR=12						
	comp=Z,1.9nm,0.9s						
O20A	White River Ci	92.24	49	IAmb	IAmb	06 37 43.1	
	comp=Z,14nm,1.3s						
TX31	Lajitas Ar. Si	92.28	60	IAmb	IAmb	06 37 44.6	
	comp=Z,20nm,1.2s						
TXAR	Lajitas Array	92.28	60		P	06 37 43.5	+1.5
TXAR	Lajitas Array	92.28	60	P	P	06 37 43.2	+1.2
	comp=Z,6.0nm,0.9s,baz=220,slow=5.3,SNR=52						
TXAR				LR	LR	07 10 43.1	
	comp=Z,243nm,21.4s,baz=238,slow=30						
	comp=Z,6.0nm,0.9s						
TXAR	Lajitas Array	92.28	60	P	P	06 37 43.5	+1.5
ALPN	Alpine	92.62	59	IAmb	IAmb	06 37 45.7	
	comp=Z,11nm,1.0s						
INK	Inuvik	93.19	17	LR	LR	07 13 07.2	
	comp=Z,284nm,21.4s,baz=214,slow=31						
TIXI	Tiksi	93.35	347		P	06 37 45.1	-0.7
TIXI				IAmb	IAmb	06 37 46.3	
	comp=Z,10nm,1.1s						
TIXI	Tiksi	93.35	347	*i* P	P	06 37 44.8	-1.0
TIXI				pmax	pmax		
	comp=Z,12nm,1.1s						
MNHN	Monahans	93.63	58	IAmb	IAmb	06 37 49.7	
	comp=Z,13nm,1.2s						
ODSA	Odessa	94.04	58	IAmb	IAmb	06 37 51.6	
	comp=Z,16nm,1.0s						
DRIO	Del Rio	94.84	61	IAmb	IAmb	06 37 55.5	
	comp=Z,16nm,1.2s						
OZNA	Ozona	94.85	59	IAmb	IAmb	06 37 55.3	
	comp=Z,12nm,1.1s						
POST	Post	95.16	57	IAmb	IAmb	06 37 56.1	
	comp=Z,16nm,1.2s						
JCT	Junction City	95.82	60	IAmb	IAmb	06 38 00.1	
	comp=Z,12nm,1.4s						
HNDO	Hondo	95.99	61	IAmb	IAmb	06 38 01.1	
	comp=Z,9.2nm,1.1s						
APMT	Aspermont	96.34	57	IAmb	IAmb	06 38 01.6	
	comp=Z,13nm,1.0s						
RSSD	Black Hills	96.48	46		P	06 38 01.5	+0.3
RSSD				IAmb	IAmb	06 38 02.2	
	comp=Z,7.3nm,1.1s						
RSSD	Black Hills	96.48	46	P	P	06 38 01.5	+0.3
RSSD				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CMIG	Matias Romero	96.52	74	LR	LR	07 11 34.9	
	comp=Z,227nm,21.4s,baz=227,slow=29						
YKA	Yellowknife Ar	96.89	26	P	P	06 38 02.7	+0.5
YKA	Yellowknife Ar	96.89	26	P	P	06 38 01.6	-0.6
	comp=Z,2.7nm,1.0s,baz=260,slow=4.8,SNR=25						
YKA				PP	PP	06 41 58.1	+0.2
	comp=Z,0.4nm,0.9s,baz=259,slow=8.2,SNR=4.2						
YKA				LR	LR	07 13 42.6	
	comp=Z,217nm,21.7s,baz=218,slow=30						
	comp=Z,2.7nm,1.0s						
YKA	Yellowknife Ar	96.89	26	P	P	06 38 02.7	+0.5
YKAW3	Yellowknife Wh	96.92	26	IAmb	IAmb	06 38 04.0	
	comp=Z,6.6nm,1.1s						
YKAW1	Yellowknife Wh	96.94	26	IAmb	IAmb	06 38 04.2	
	comp=Z,4.7nm,1.1s						
A36M	Sachs Harbour	97.65	16	P	P	06 38 04.9	-0.6
	baz=238						
WMQ	Urumqi	98.45	313	*e*P	Pdif	06 38 11.1	+1.2
WMQ				LR	LR		
	comp=Z,200nm,23.9s						
MKAR	Makanchi Array	102.84	315	Pdiff	Pdif	06 38 29.5	+0.3
	comp=Z,2.0nm,0.8s,baz=101,slow=6.3,SNR=13						
MKAR				PKiKP	PKiKP	06 42 48.3	-1.4
	comp=Z,0.1nm,0.4s,baz=111,slow=3.6,SNR=3.8						
ARCES	ARCESS Array B	123.79	347	PKP	PKPdf	06 43 27.6	-1.1
	comp=Z,3.7nm,0.9s,baz=64,slow=2.1,SNR=5.9						
KLMR	Klimovskoe	125.24	334	*e*PKIKP	PKPdf	06 43 29.4	-2.2
KLMR				pmax	pmax		
	comp=Z,20nm,1.6s						
BDFB	Brasilia	127.94	126	PKP	PKPdf	06 43 37.0	-1.3
	comp=Z,4.4nm,0.9s,baz=254,slow=7.4,SNR=5.2						
OBN	Obninsk	129.62	329	⇑*e*PKIKP	PKPdf	06 43 40.0	-0.1
OBN				*e*		06 45 57.7	
OBN				*e*PPP	PPP	06 48 34.9	
OBN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV	Kislovodsk	130.58	314	*i* PKIKP	PKPdf	06 43 42.4	-0.1
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV				pmax	pmax		
	comp=Z,96nm,23.0s						
SHA1	Shidzhatmaz	130.66	314	*i* PKIKP	PKiKP	06 43 43.8	+0.1
AKASG	Malin Array Be	135.77	328	*c i*PKIKP	PKiKP	06 43 53.5	0.0
BRTR	Keskin Array B	138.35	311	PKP	PKPdf	06 43 56.1	-1.1
	comp=Z,1.3nm,1.0s,baz=324,slow=1.8,SNR=5.9						
BRTR	Keskin Array B	138.35	311	*c i*PKIKP	PKPdf	06 43 57.5	+0.3
BRTR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
STHS	Stebnicka Huta	140.51	331	*e*PKIKP	PKPdf	06 44 00.8	+0.1
STHS	Stebnicka Huta	140.51	331	*e*PKP	PKPdf	06 44 00.8	+0.1
BSEG	Bad Segeberg	140.79	344	*e*L	L	07 43 00.2	
	comp=Z,315nm,21.9s						
MORC	Moravsky Berou	141.86	334	*e*PKP	PKPdf	06 44 00.5	-2.7
CLL	Collm	142.30	340	*i* PKIKP	PKPdf	06 44 00.0	-3.8
CLL				*i*		06 44 03.6	
CLL				*i*		06 44 06.3	
CLL				pmax	pmax		
	comp=Z,9.0nm,1.3s						
CLL	Collm	142.30	340	*i* PKPpre	PKPpre	06 44 00.0	
	comp=Z,9.0nm,1.3s						
CLL				*i* PKPdf	PKPdf	06 44 03.6	-0.2
CLL				*i* x	x	06 44 06.3	
CLL				*e*x	x	07 10 02.0	
CLL				*e*SSS	SSS	07 11 05.0	
BRG	Berggiesshubel	142.35	339	*e*PKP	PKPdf	06 44 04.1	+0.1
BRG				Amp		06 44 09.3	
	comp=Z,4.0nm,0.9s						
VRAC	Vranov	142.61	335	*e*PKP	PKPdf	06 44 01.2	-3.3
KRUC	Moravsky	142.88	335	*e*PKP	PKPdf	06 44 02.0	-2.9
MODS	Modra-Piesok	143.05	333	*i* P	Pdif	06 41 29.0	+1.0
MODS	Modra-Piesok	143.05	333	*e*PDIFF	Pdif	06 41 29.0	+1.0
MODS	Modra-Piesok	143.05	333	*e*PKP	PKiKP	06 44 07.2	-1.3
TANN	Tannenbergstha	143.24	339	*e*PKPbc	PKPbc	06 44 02.2	-0.4
	baz=30,slow=3.2						
MOX	Moxa	143.32	340	*e*L	L	07 45 26.1	
	comp=Z,196nm,21.2s						

MANZ	Manzenberg	143.73	339	ePKPbc	PKPbc	06 44 04.5	+0.5
	baz=30,slow=3.2						
ROTZ	Rotzenmuhle	143.88	339	ePKPbc	PKPbc	06 44 05.1	+0.7
	baz=30,slow=3.2						
CKRC	Cesky Krumlov	143.91	336	ePKP	PKPbc	06 44 05.5	+1.0
CKRC	Cesky Krumlov	143.91	336	ePKIKP	PKPbc	06 44 05.5	+1.0
KHC	Kasperske Hory	143.93	337	ePKP	PKPbc	06 44 05.7	+1.1
KHC	Kasperske Hory	143.93	337	ePKIKP	PKPbc	06 44 05.7	+1.1
RONA	Rosalia, Austr	143.99	333	i PKP	PKPdf	06 44 06.6	-0.4
	comp=Z,15nm,1.3s,SNR=5.9						
CONA	Conrad Observa	143.99	334	i PKP	PKPbc	06 44 05.6	+0.7
	comp=Z,15nm,1.3s,SNR=7.6						
GEC2	GERESS Array S	144.12	337	ePKPbc	PKPbc	06 44 05.4	+0.2
	baz=30,slow=3.2						
GEC2				eL	L	07 47 30.1	
	comp=Z,122nm,21.4s						
GERES	GERESS Array B	144.12	337	PKP	PKPbc	06 44 05.6	+0.3
	comp=Z,7.2nm,0.9s,baz=36,slow=2.5,SNR=38						
WET	Wettzell	144.17	338	ePKPbc	PKPbc	06 44 05.7	+0.3
	baz=30,slow=3.2						
WET				eL	L	07 47 07.9	
	comp=Z,210nm,22.0s						
FRGS	Fruska Gora	144.18	327	⇓iP	PKPbc	06 44 05.6	+0.1
GRA1	Grafenberg Arr	144.27	340		PKPbc	06 44 06.6	+1.0
GRF	Grafenberg Arr	144.27	340	PKIKP	PKPbc	06 44 06.6	+1.0
GRF	Grafenberg Arr	144.27	340	ePKPbc	PKPbc	06 44 06.2	+0.6
	baz=30,slow=3.2						
GRF				eL	L	07 47 22.5	
	comp=Z,122nm,21.8s						
GRFO	Grafenberg	144.28	340		PKPbc	06 44 06.5	+0.9
GRFO	Grafenberg	144.28	340	PKIKP	PKPbc	06 44 06.6	+1.0
TNS	Taunus Mts	144.64	343	ePKPbc	PKPbc	06 44 07.1	+0.3
	baz=30,slow=3.2						
TNS				eL	L	07 51 59.5	
	comp=Z,136nm,21.4s						
ARSA	Arzberg	144.66	334		PKPbc	06 44 07.7	+0.7
ARSA	Arzberg	144.66	334	i PKP	PKPbc	06 44 07.2	+0.2
	comp=Z,24nm,1.5s,SNR=9.4						
KARP	Karpathos	144.68	308		PKPbc	06 44 08.0	+0.5
MOA	Molln	144.71	335	i PKP	PKPbc	06 44 07.4	+0.3
	comp=Z,52nm,1.4s,SNR=19						
TEKS	Tekeris	144.74	327	⇓iP	PKPab	06 44 06.9	-0.3
BTNL	Ternell	144.90	346	dPKPdf	PKPbc	06 44 08.2	+0.5
MEM	Membach	144.91	346	dPKPdf	PKPbc	06 44 08.1	+0.5
BSTI	Sart Tilman	145.04	346	dPKPdf	PKPdf	06 44 08.9	+0.2
VAY	Valandovo	145.04	320	i P	PKPbc	06 44 07.5	-0.8
BIOA	Bad Ischl, Aus	145.09	336	i PKP	PKPbc	06 44 08.4	+0.1
	comp=Z,22nm,0.9s,SNR=8.1						
UCC	Uccle	145.09	348	dPKPdf	PKPdf	06 44 08.8	+0.1
BHOU	Houvegnez	145.15	346	dPKPdf	PKPab	06 44 08.6	+0.1
BCLA	Clavier	145.25	347	dPKPdf	PKPbc	06 44 08.4	-0.2
BBLS	Lazi&#263i	145.27	326	⇓iP	PKPab	06 44 09.4	+0.2
PERS	Pernice	145.32	333	i PKPbc	PKPbc	06 44 08.4	-0.7
SOKA	Soboth	145.32	333	i PKP	PKPbc	06 44 09.1	-0.1
	comp=Z,53nm,1.3s,SNR=33						
BGES	Gesves	145.33	347	dPKP	PKPbc	06 44 09.2	+0.2
HAPS	Han Pijesak,Bl	145.36	327	⇓iP	PKPdf	06 44 09.9	+0.3
SJES	Sjenica	145.36	325	⇓iP	PKPdf	06 44 09.9	+0.3
RJOB	Jochberg	145.37	337	ePKPbc	PKPdf	06 44 09.7	+0.2
	baz=30,slow=3.2						
RUDO	Rudo	145.45	326	eP	PKPbc	06 44 09.6	0.0
BMRD	Maredsous	145.48	347	dPKP	PKPab	06 44 09.8	+0.2
FUR	Furstenfeldbru	145.57	339	ePKPbc	PKPab	06 44 10.7	+0.6
	baz=30,slow=3.2						
FUR				eL	L	07 47 29.5	
	comp=Z,124nm,21.5s						
OBKA	Obir	145.66	334	⇓iP	PKPdf	06 44 09.6	-0.4
OBKA	Obir	145.66	334	i PKP	PKPdf	06 44 09.9	-0.1
	comp=Z,27nm,1.0s,SNR=14						
LESA	Schwarzleotal	145.68	336	i PKP	PKPdf	06 44 10.2	+0.2
	comp=Z,74nm,1.2s,SNR=26						
KBA	Koelnbreinsper	145.70	335	i PKP	PKPdf	06 44 10.1	-0.1
	comp=Z,51nm,1.1s,SNR=29						
DOU	Dourbes	145.71	347	dPKP	PKPab	06 44 10.5	0.0
STU	Stuttgart	145.72	341		PKPab	06 44 10.6	0.0
STU	Stuttgart	145.72	341	PKIKP	PKPab	06 44 10.6	0.0
STU	Stuttgart	145.72	341	ePKPbc	PKPab	06 44 11.3	+0.6
	baz=30,slow=3.2						
A051A	Mrakovica	145.73	330	⇓iP	PKPbc	06 44 10.7	+0.2
WLF	Walferdange	145.75	345		PKPab	06 44 11.8	+1.1
WLF	Walferdange	145.75	345	PKIKP	PKPab	06 44 11.8	+1.1
WLF	Walferdange	145.75	345	dPKP	PKPab	06 44 10.9	+0.2
WLF	Walferdange	145.75	345	ePKPbc	PKPab	06 44 11.5	+0.8
	baz=30,slow=3.2						
BLY	Banja Luka	145.79	329	⇓iP	PKPab	06 44 11.0	0.0
CRES	Cresnjevec Ost	145.80	332	⇓iP	PKPdf	06 44 10.4	+0.3
MYKA	Terra Mystica	145.94	335	i PKP	PKPdf	06 44 10.5	+0.1
	comp=Z,86nm,1.5s,SNR=20						
LJU	Ljubljana	146.04	333	i PKPbc	PKPbc	06 44 11.3	-0.1
CRNS	Crni Vrh	146.12	333	i PKPbc	PKPdf	06 44 11.2	+0.5
PRED	Cave del Predi	146.12	335		PKPdf	06 44 10.8	+0.1
BOJS	Bojanci	146.14	332	⇓iP	PKPbc	06 44 12.0	+0.4
WATA	Walderalm	146.16	337	i PKP	PKPbc	06 44 11.9	0.0
	comp=Z,66nm,1.6s,SNR=11						
WTTA	Wattenberg	146.20	337	i PKP	PKPbc	06 44 12.1	+0.1
	comp=Z,71nm,1.4s,SNR=21						
OHR	Ohrid	146.24	321	i P	PKPbc	06 44 11.9	-0.3
ABTA	Abfaltersbach	146.30	336	i PKP	PKPdf	06 44 11.7	+0.6
	comp=Z,68nm,1.3s,SNR=26						
A050A	Klekovaca	146.30	329	⇓iP	PKPbc	06 44 12.0	-0.3
PDG	Podgorica	146.30	324	⇓iP	PKPbc	06 44 12.0	-0.2
CEY	Cerknica	146.32	333	⇓iP	PKPbc	06 44 12.2	0.0
MOTA	Moosalm	146.33	338	i PKP	PKPbc	06 44 12.3	-0.1
	comp=Z,36nm,1.0s,SNR=17						
RETA	Reutte	146.33	338	i PKP	PKPbc	06 44 12.6	+0.3
	comp=Z,26nm,1.2s,SNR=8.5						
BFO	Black Forest	146.38	342		PKPbc	06 44 12.7	+0.4
BFO	Black Forest	146.38	342	PKP2	PKPbc	06 44 12.7	+0.4
BFO	Black Forest	146.38	342	ePKPbc	PKPbc	06 44 12.7	+0.4
	baz=30,slow=3.2						
BFO				eL	L	07 48 54.6	
	comp=Z,148nm,21.0s						
BRY	Bratogost	146.38	326	eP	PKPbc	06 44 12.5	-0.2
UBR	Ueberruh	146.38	339	ePKPbc	PKPbc	06 44 12.5	+0.1
	baz=30,slow=3.2						
SQTA	Sankt Quirin	146.39	338	i PKP	PKPbc	06 44 12.7	+0.1
	comp=Z,33nm,0.9s,SNR=13						
IDI	Anoyia	146.48	309		PKPab	06 44 13.8	-0.2
IDI	Anoyia	146.48	309	PKPbc	PKPbc	06 44 13.1	0.0
	comp=Z,21nm,1.0s,baz=157,slow=1.8,SNR=6.0						
SABO	M.te Sabotino	146.48	334		PKPbc	06 44 12.4	-0.3
DRME	Dracevica, Mon	146.50	324	eP	PKPbc	06 44 12.5	-0.4
HCY	Herceg Novi	146.71	325	eP	PKPbc	06 44 13.2	-0.3
FETA	Feichten	146.74	338	i PKP	PKPbc	06 44 13.8	+0.2
	comp=Z,40nm,1.2s,SNR=12						
DAVA	Damuels	146.80	339	i PKP	PKPbc	06 44 14.2	+0.4
	comp=Z,58nm,1.2s,SNR=14						
STON	Ston	146.85	326	eP	PKPdf	06 44 11.8	-0.2
CTI	Castel Tesino	147.21	336		PKPbc	06 44 14.8	-0.1
CTI	Castel Tesino	147.21	336	PKP2	PKPbc	06 44 14.8	-0.1
DAVOX	Davos/Dischmat	147.24	339	PKPbc	PKPbc	06 44 15.5	+0.4
	comp=Z,17nm,0.9s,baz=303,slow=1.4,SNR=25						
TUE	Stuetta	147.69	339		PKPbc	06 44 16.6	+0.3
ITM	Ithomi	147.72	314		PKPbc	06 44 16.3	-0.2
KEST	Kesra	156.48	326	PKPab	PKPab	06 44 54.6	-0.8
	comp=Z,6.4nm,0.9s,baz=318,slow=4.1,SNR=8.9						
ESDC	Sonseca Array	157.24	355		PKPab	06 44 58.9	+0.5
ESDC	Sonseca Array	157.24	355	PKPab	PKPab	06 44 58.0	-0.4
	comp=Z,6.9nm,1.1s,baz=356,slow=4.3,SNR=23						
TORD	Torodi Ar. Bea	171.06	246		PKPdf	06 44 39.3	-1.4

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*ASRS **04** 06:46:49.0±1.4, 53°.72N×91°.07E, h0km, M3.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*NNC **04** 06:46:54.8±3.3, 53°.92N×90°.59E, h12km±16km, mb3.7, mpv3.5, Error ellipse: s-maj=28.2km s-min=20.2km az=23.0, Suspected Mining explosion.*

*IDC **04** 06:46:54.1±4.0, 53°.64N×90°.83E, h0km, mbtmp3.4/4, ML3.1/4, Error ellipse: s-maj=42.4km s-min=23.0km az=51.0*

ISC 04 06:46:56.3±3.9**, 53°.8N**±0°.1×**90°.4E**±0°.2**, h0km, n12, σ1s.21**/15**, 8C-6D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	3.34	275	I	I	07 08 45.0	
	0.1nm,1.0s,baz=91,slow=327,SNR=7.7						
ZAA0	Zalesovo Array	3.34	275	⇑Pg	Pb	06 47 55.8	-0.6
	2.6nm,0.6s						
ZAA0				⇑Lg	Lg	06 48 45.4	
	17nm,0.8s						
ZALV	Zalesovo Beam	3.34	275	Pn	Pn	06 47 51.5	+1.8
	3.1nm,0.3s,baz=91,slow=13,SNR=18						
ZALV				Pg	Pg	06 48 00.8	+0.5
	5.5nm,0.3s,baz=95,slow=14,SNR=18						
ZALV				Lg	Lg	06 48 46.8	
	3.4nm,0.3s,baz=99,slow=29,SNR=11						
	1.8nm,0.3s						
KURK	Kurchatov	7.87	252	⇑Pn	Pn	06 48 51.7	-0.3
	2.1nm,0.8s						
KURK				⇑Sn	Sn	06 50 22.8	+1.1
	15nm,0.8s						
KURK				⇓Lg	Lg	06 51 11.9	
	17nm,0.8s						
KURBB	Kurchatov Arra	7.97	252	Pn	Pn	06 48 53.8	+0.6
	0.5nm,0.3s,baz=66,slow=14,SNR=26						
KURBB				Sn	Sn	06 50 22.0	-2.0
	0.1nm,0.3s,baz=67,slow=24,SNR=7.7						
KURBB				Lg	Lg	06 51 12.8	
	0.1nm,0.3s,baz=63,slow=33,SNR=5.9						
	4.6nm,0.6s						
KURBB	Kurchatov Arra	7.97	252	⇓Pn	Pn	06 48 53.2	0.0
	7.9nm,0.7s						
KURBB				⇑Sn	Sn	06 50 24.8	+0.8
	38nm,0.8s						
KURBB				⇓Lg	Lg	06 51 11.5	
	91nm,1.1s						
MK31	Makanchi Array	8.71	220	⇑Pn	Pn	06 49 02.8	-0.7
	0.7nm,0.5s,baz=32,slow=13,SNR=18						
MK31				⇓Sn	Sn	06 50 43.4	+1.1
	6.2nm,0.9s,baz=199,slow=16,SNR=2.7						
MK31				⇑Lg	Lg	06 51 36.7	
	19nm,0.8s,baz=30,slow=28,SNR=4.3						
MKAR	Makanchi Array	8.71	220	Pn	Pn	06 49 02.5	-1.0
	0.6nm,0.3s,baz=37,slow=12,SNR=16						
MKAR				Sn	Sn	06 50 32.1	-10
	baz=38,slow=26						
MKAR				Lg	Lg	06 51 26.1	
	baz=38,slow=26						
	0.9nm,0.3s						
MAKZ	Makanchi	8.82	221	⇓Pn	Pn	06 49 04.3	-0.7
	0.5nm,0.3s						
MAKZ				⇓Sn	Sn	06 50 45.0	0.0
	3.3nm,0.8s						
MAKZ				⇑Lg	Lg	06 51 43.7	
	11nm,1.1s						
SONM	Songino Array	11.70	114	Lg	Lg	06 52 47.5	
	0.2nm,0.3s,baz=308,slow=26,SNR=7.3						
BVAR	Borovoye Array	11.99	275	Pn	Pn	06 49 46.3	-2.1
	baz=73,slow=14,SNR=2.7						
	0.3nm,0.4s						
AAK	Ala-Archa	15.35	230	Lg	Lg	06 55 03.8	
	0.3nm,0.3s,baz=3.9,slow=21,SNR=3.9						

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*OSPL **04** 06:54:24.3±0.5, 19°.85N×70°.21W, h0km±7km, ML1.8*

*SDD **04** 06:54:26.9±2.6, 19°.96N×70°.35W, h19km±29km, MD3.0, ML1.9*

ISC 04 06:54:24.3±1.5**, 19°.94N**±0°.08×**70°.36W**±0°.05**, h15km**±18km**, n7, σ1s.10**/13**, 6C-4D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUDR	Luperon	0.56	265	⇑ePg	Pn	06 54 37.9	+0.1
LUDR				⇓eSg	Sn	06 54 46.2	-0.7
LUDR				IAML		06 54 47.6	
	comp=N,292nm,0.3s						
ABDR	Alto Bandera	1.15	193	⇑ePg	Pg	06 54 46.0	-0.5
ABDR				⇓eSg	Sg	06 55 02.9	+1.3
ABDR				IAML		06 55 05.0	
	comp=N,34nm,0.2s						
SDDR	Presa de Saban	1.29	223	⇑ePg	Pg	06 54 48.2	-1.0
SDDR				⇑eSg	Sg	06 55 07.4	+1.3
SDDR				IAML		06 55 09.4	
	comp=N,10.0nm,0.7s						
SDDR	Presa de Saban	1.29	223	i P	Pg	06 54 48.2	-1.0
SDDR				IAML		06 55 07.7	
	comp=Z,7.8nm,1.1s						
HATOM	Hato Mayor del	1.47	141	⇓ePg	Pg	06 54 51.7	-0.9
HATOM				⇓eSg	Sg	06 55 12.5	+0.8
HATOM				IAML		06 55 16.4	
	comp=N,9.0nm,1.3s						
MIDR	Miches	1.56	127	⇑ePg	Pg	06 54 53.6	-0.6
MIDR				⇑eSg	Sg	06 55 15.0	+0.6
MIDR				IAML		06 55 18.9	
	comp=N,14nm,2.2s						
GRTK	Grand Turk	1.73	335	i P	Pb	06 54 55.2	-0.4
GRTK				eS	Sb	06 55 18.7	+1.5
GRTK				IAML		06 55 22.0	
	comp=Z,14nm,1.6s						

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*NNC **04** 07:04:59.9±3.3, 54°.64N×87°.76E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=28.9km s-min=19.6km az=8.0, Suspected Mining explosion.*

*ASRS **04** 07:05:07.0±0.6, 54°.31N×86°.90E, h0km, M2.8, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*IDC **04** 07:05:11.7±2.7, 54°.19N×86°.76E, h0km, mbtmp3.2/3, ML2.6/3, Error ellipse: s-maj=24.2km s-min=12.8km az=64.0*

ISC 04 07:05:12.3±2.3**, 54°.7N**±0°.1×**83°.85E**±0°.08**, h0km, n10, σ2s.08**/12**, 7C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.94	143	I	I	07 13 20.7	
	baz=74,slow=330,SNR=4.6						
ZAA0	Zalesovo Array	0.94	143	⇑Pn	Pb	07 05 31.8	+0.4
	0.5nm,0.2s						
ZAA0				⇑Sn	Sn	07 05 58.2	+11
	1.2nm,0.3s						
ZALV	Zalesovo Beam	0.94	143	Pg	Pn	07 05 32.3	-0.5
	5.4nm,0.3s,baz=77,slow=18,SNR=35						
ZALV				Lg	Lg	07 05 49.7	
	2.9nm,0.3s,baz=77,slow=32,SNR=7.7						
KURK	Kurchatov	5.10	221	⇑Pn	Pb	07 06 43.0	+0.7
	0.4nm,0.6s						
KURK				⇓Lg	Lg	07 08 37.2	
	1.1nm,0.7s						
KURBB	Kurchatov Arra	5.21	221	Pn	Pb	07 06 44.4	+0.2
	0.2nm,0.3s,baz=53,slow=14,SNR=6.0						
	1.7nm,0.3s						
KURBB	Kurchatov Arra	5.21	221	⇑Pn	Pb	07 06 43.3	-0.9
	2.1nm,0.5s						
KURBB				⇓Lg	Lg	07 08 39.1	
	7.8nm,0.7s						
MK31	Makanchi Array	7.98	188	⇓Pn	Pn	07 07 08.1	-1.3
	0.1nm,0.3s,baz=26,slow=14,SNR=3.9						
MK31				⇑Sn	Sn	07 08 45.2	+4.8
	0.3nm,0.5s						
MK31				⇑Lg	Lg	07 09 30.5	
	0.8nm,0.6s,baz=20,slow=28,SNR=6.9						
MKAR	Makanchi Array	7.98	188	Pn	Pn	07 07 08.8	-0.6
	0.2nm,0.3s,baz=26,slow=14,SNR=11						
MKAR				Sn	Sn	07 08 38.4	-2.0
	0.2nm,0.3s,baz=25,slow=24,SNR=3.8						
MKAR				Lg	Lg	07 09 23.5	
	0.2nm,0.3s,baz=24,slow=29,SNR=3.6						
	0.2nm,0.3s						
MAKZ	Makanchi	7.99	189	⇑Pn	Pn	07 07 07.1	-2.5
	0.3nm,0.6s						
MAKZ				⇓Sn	Sn	07 08 41.7	+1.0
	0.7nm,0.6s						
MAKZ				⇓Lg	Lg	07 09 33.9	
	1.3nm,0.8s						
BVAR	Borovoye Array	8.13	264	Pn	Pb	07 07 34.7	+0.8
	baz=63,slow=14,SNR=1.8						
	0.3nm,0.3s						

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*IDC **04** 07:15:46.6±1.8, 28°.81N×139°.06E, h394km±37km, mb2.9/2, mbtmp3.9/5, Error ellipse: s-maj=87.0km s-min=17.9km az=72.0*

*JMA **04** 07:15:47.5±0.1, 29°N±2°×14°0E±°, h462km, MV3.4/12, NEAR TORISHIMA IS*

ISC 04 07:15:48.3±0.9**, 29°.10N**±0°.08×**140°.0E**±0°.2**, h450km, n12, σ1s.49**/18**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.78	135	eP	P	07 16 54.3	+0.5
CBIJ				eS	S	07 17 46.6	-0.3
JCJ	Chichijima	2.78	135	P	P	07 16 52.9	-1.0
	31nm,0.3s,baz=286,slow=19,SNR=13						
JCJ				S	S	07 17 43.7	-3.3
	222nm,0.3s,baz=303,slow=22,SNR=33						
JHH2	Haha-jima-NKT2	3.13	141	eP	P	07 16 57.1	+0.7
JHH2				eS	S	07 17 51.8	+0.2
BSO1	Boso 1	5.60	8	eP	P	07 17 19.4	+1.6
BSO1				eS	S	07 18 31.9	+0.8
JIE	Ise	5.97	333	eP	P	07 17 23.1	+0.9
JTNC	Tanabenakahech	6.01	323	eP	P	07 17 23.6	+0.9
JRY	Ryogami san	6.96	353	eP	P	07 17 32.7	+0.2
MJAR	Matsushiro Arr	7.57	349	P	P	07 17 37.8	-1.2
	3.2nm,0.3s,baz=169,slow=10,SNR=11						
MJAR				S	S	07 19 06.7	-3.1
	1.2nm,0.5s,baz=116,slow=14,SNR=2.3						
JHS	Saijyo	8.28	317	eP	P	07 17 46.0	-0.7
USRK	Ussuriysk Ar.	16.37	339	P	P	07 19 14.4	+0.7
	5.9nm,0.6s,baz=170,slow=11,SNR=16						
WRA	Warramunga Arr	49.06	187	P	P	07 23 53.0	-0.1
	0.6nm,0.3s,baz=1.6,slow=7.6,SNR=12						
WRA				PcP	PcP	07 25 10.6	+1.8
	0.4nm,0.9s,baz=360,slow=4.5,SNR=1.1						
	0.6nm,0.3s						
ASAR	Alice Springs	52.79	187	P	P	07 24 20.4	+0.1
	0.2nm,0.4s,baz=8.4,slow=7.4,SNR=1.6						
	0.2nm,0.4s						

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*IDC **04** 07:18:11.6±3.7, 1°.00S×100°.16E, h93km±32km, mb3.6/8, mbtmp3.9/9, Error ellipse: s-maj=49.6km s-min=17.1km az=52.0*

*NEIC **04** 07:18:14.1±0.8, 0°.82S±0°.06×100°.26E±0°.08, h97km±2km, mb4.6/16, Error ellipse: s-maj=11.8km s-min=8.7km az=76.0*

*DJA **04** 07:18:14.7±0.3, 1°S±3°×10°0E±°, h72km±6km, M3.8/12, mb4.0/3, MLv3.7/12*

ISC 04 07:18:13.7±0.6**, 0°.80S**±0°.07×**100°.25E**±0°.07**, h100km, n46, σ0s.78**/47**, mb4.4**/16**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPI	Padang Panjang	0.37	24	P	Pn	07 18 28.1	-0.6
PPI				S	Sn	07 18 38.4	-1.5
BKNI	Bangkinang	1.37	35	Pn	Pn	07 18 38.9	+0.4
BKNI				Sn	Sn	07 18 56.9	-0.3
BKNI	Bangkinang	1.37	35	P	Pn	07 18 38.1	-0.4
MNSI	Mandailing Nat	1.72	337	P	Pn	07 18 42.8	0.0
GSI	Gunungsitoli	3.39	308		Pn	07 19 05.0	+0.3
GSI	Gunungsitoli	3.39	308	P	Pn	07 19 04.9	+0.2
RPSI	Rantau Prapat	3.71	339		Pn	07 19 10.0	+0.9
RPSI	Rantau Prapat	3.71	339		Pn	07 19 09.0	-0.1
PSI	Prapat	3.81	340	P	Pn	07 19 09.0	-1.6
	4.6nm,0.3s,baz=209,slow=3.9,SNR=11						
MNAI	Manna	4.45	143	Pn	Pn	07 19 19.0	-0.1
MNAI	Manna	4.45	143	P	Pn	07 19 19.6	+0.5
TPRI	Tanjung Pinang	4.61	68	P	Pn	07 19 21.7	+0.5
MDSI	Maura Dua	5.37	133	P	Pn	07 19 32.3	+0.8
	0.1nm11nm,0.6s						
KULM	Kulim	6.06	4	Pn	Pn	07 19 41.2	+0.2
LHMI	Lhok Sumawe	6.83	331	Pn	Pn	07 19 51.0	-0.5
TPI	Tanjungpandan	7.66	105	P	Pn	07 20 03.8	+1.2
LUWI	Luwuk	22.52	91	P	P	07 23 05.5	0.0
DAV	Davao City (W)	26.46	72	P	P	07 23 41.6	-0.1
WB0	Warramunga Arr	38.37	122	P	P	07 25 23.6	-1.9
WB0				IAmb	IAmb	07 25 59.1	
	comp=Z,24nm,1.5s						
WRA	Warramunga Arr	38.40	122	P	P	07 25 23.8	-2.0
	comp=Z,0.4nm,0.5s,baz=303,slow=9.1,SNR=6.4						
	comp=Z,0.4nm,0.5s						
WR8	Warramunga Arr	38.54	122	P	P	07 25 25.4	-1.5
ASAR	Alice Springs	39.77	127	P	P	07 25 35.5	-1.7
	comp=Z,0.9nm,0.7s,baz=303,slow=9.1,SNR=6.6						
	comp=Z,0.9nm,0.7s						
BBOO	Buckleboo	46.34	137	P	P	07 26 30.0	+0.1
BBOO				IAmb	IAmb	07 27 08.4	
	comp=Z,16nm,1.2s						
KDJ	Kajisay	47.54	337	P	P	07 26 39.9	+0.6
SONM	Songino Array	48.73	6	P	P	07 26 48.5	+0.1
SONM	Songino Array	48.73	6	P	P	07 26 48.4	+0.1
	comp=Z,0.6nm,0.4s,baz=168,slow=7.4,SNR=2.6						
	comp=Z,0.6nm,0.4s						
MK31	Makanchi Array	49.95	344	P	P	07 26 58.1	+0.6
MKAR	Makanchi Array	49.95	344	P	P	07 26 57.7	+0.2
MKAR	Makanchi Array	49.95	344	P	P	07 26 57.5	+0.1
	comp=Z,0.8nm,0.4s,baz=153,slow=8.1,SNR=10						
	comp=Z,0.8nm,0.4s						
KKAR	Karatay Array	51.21	332	P	P	07 27 07.4	+0.4
USRK	Ussuriysk Ar.	52.99	28	P	P	07 27 20.6	+0.4
USRK	Ussuriysk Ar.	52.99	28	P	P	07 27 20.4	+0.2
	comp=Z,2.3nm,0.5s,baz=239,slow=3.8,SNR=7.1						
	comp=Z,2.3nm,0.5s						
ZALV	Zalesovo Beam	56.04	349	P	P	07 27 41.7	-0.4
	comp=Z,0.7nm,0.3s,baz=163,slow=5.6,SNR=1.3						
	comp=Z,0.7nm,0.3s						
BVAR	Borovoye Array	59.15	339	P	P	07 28 03.4	-0.5
	comp=Z,1.1nm,0.5s,baz=136,slow=6.6,SNR=7.2						
	comp=Z,1.1nm,0.5s						
AB31	Akbulak array	60.72	331	P	P	07 28 14.9	+0.2
AB31				IAmb	IAmb	07 28 15.5	
	comp=Z,1.9nm,0.8s						
ABKAR	Akbulak array	60.72	331	P	P	07 28 15.0	+0.4
ABKAR	Akbulak array	60.72	331	P	P	07 28 14.9	+0.2
ABKAR				IAmb	IAmb	07 28 15.5	
	comp=Z,1.9nm,0.8s						
CASY	Casey	65.75	175	P	P	07 28 47.9	+0.3
CASY				IAmb	IAmb	07 29 09.2	
	comp=Z,6.6nm,1.2s						
MARD	Mardin	66.63	312	P	P	07 28 55.1	+1.2
MARD				IAmb	IAmb	07 28 55.5	
	comp=Z,4.9nm,0.6s						
CSS	Mathiatis	71.69	307	P	P	07 29 25.0	-0.2
CSS				IAmb	IAmb	07 29 27.0	
	comp=Z,7.5nm,0.5s						
BRTR	Keskin Array B	72.70	312	P	P	07 29 30.6	-0.7
	comp=Z,0.8nm,0.8s,baz=116,slow=5.6,SNR=5.1						
	comp=Z,0.8nm,0.8s						
BKZ	Black Stump Fm	78.84	130	P	P	07 30 06.5	+0.4
BKZ				IAmb	IAmb	07 30 33.0	
	comp=Z,25nm,1.3s						
RTZ	Ruatahuna	79.14	129	P	P	07 30 08.0	+0.2
FINES	FINESS Array B	83.17	332	P	P	07 30 28.9	+0.4
QSPA	South Pole Qui	89.15	180	P	P	07 30 58.6	+0.7
QSPA				IAmb	IAmb	07 31 15.2	
	comp=Z,5.5nm,1.4s						
TXAR	Lajitas Array	143.60	37	PKP	PKPab	07 37 35.1	+0.7
	comp=Z,0.3nm,0.6s,baz=323,slow=3.8,SNR=3.5						

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*SNET **04** 07:22:29.0±0.8, 13°.11N×89°.54W, h52km±12km, ML2.9*

*CATAC **04** 07:22:29.4±0.6, 13°N±4°×9°0W±°, h39km±5km, M2.9/16, MLv2.9/16, Error ellipse: s-maj=9.2km s-min=5.0km az=23.5, confirmed*

*GCG **04** 07:22:30.4±0.7, 13°.22N×89°.60W, h52km±9km, MD3.5, ML3.0*

ISC 04 07:22:30.1±1.8**, 13°.10N**±0°.08×**89°.48W**±0°.04**, h32km**±11km**, n51, σ0s.99**/58**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	0.55	3	eP	Pb	07 22 41.0	-0.6
JAYA				eS	Sn	07 22 50.5	+0.4
JAYA	Jayaque - finc	0.55	3	i P	Pb	07 22 41.0	-0.6
JAYA				i S	Sb	07 22 49.7	+0.1
JAYA	Jayaque - finc	0.55	3	P	Pb	07 22 41.1	-0.5
LOMA	Loma Larga	0.62	29	eP	Pb	07 22 42.1	-0.6
LOMA				eS	Sn	07 22 53.1	+1.3
LOMA	Loma Larga	0.62	29	S	Sn	07 22 52.6	+0.9
LOMA	Loma Larga	0.62	29	P	Pb	07 22 42.2	-0.5
PMON	Piamonte	0.63	15	eP	Pb	07 22 42.1	-0.8
PMON	Piamonte	0.63	15	P	Sn	07 22 52.4	+0.4
UEES	Universidad Ev	0.66	21	P	Pn	07 22 42.7	-0.6
UTEC	Universidad Te	0.66	24	P	Pn	07 22 42.7	-0.6
UTEC	Universidad Te	0.66	24	S	Sn	07 22 53.6	+1.1
BOQS	Boqueron	0.66	17	eP	Pn	07 22 42.9	-0.6
PIC2	El Picacho	0.68	19	eP	Pn	07 22 43.2	-0.5
UDBS	Universidad Do	0.69	27	P	Pn	07 22 38.9	-4.8
CEVE	Cerro Verde	0.74	349	eP	Pn	07 22 43.6	-0.9
CEVE				IAML		07 22 56.4	
	comp=Z,444nm,0.4s						
CEVE	Cerro Verde	0.74	349	P	Pn	07 22 43.7	-0.9
COEG	Centro de Oper	0.78	48	eP	Pn	07 22 44.2	-0.7
COEG				eS	Sb	07 22 56.2	+0.5
COEG				IAML		07 22 57.1	
	comp=Z,361nm,0.3s						
COEG	Centro de Oper	0.78	48	P	Pn	07 22 44.4	-0.6
PAVA	Las Pavas	0.81	41	eP	Pn	07 22 45.2	-0.2
PAVA				eS	Sb	07 22 57.7	+1.1
PAVA	Las Pavas	0.81	41	P	Pn	07 22 45.1	-0.2

TECO	Alcaldia de Te	0.81	57	P	Pn	07 22 44.5	-0.8
TECO	Alcaldia de Te	0.81	57	S	Sn	07 22 56.5	+0.3
NUBE	Las Nubes	0.85	340	*e*P	Pn	07 22 44.5	-1.4
NUBE				*e*S	Sn	07 22 56.2	-1.2
NUBE	Las Nubes	0.85	340	*i*P	Pn	07 22 44.5	-1.4
NUBE				*i*S	Sn	07 22 56.3	-1.2
NUBE	Las Nubes	0.85	340	P	Pn	07 22 44.6	-1.4
UESV	Universidad de	0.86	52	P	Pn	07 22 45.3	-0.7
UESV	Universidad de	0.86	52	S	Sn	07 22 58.0	+0.5
UNIC	Universidad Ca	0.88	356	P	Pn	07 22 45.6	-0.7
FAME	Alcaldia de Sa	0.91	325	P	Pb	07 22 56.3	+9.0
SCLA	Alcaldia de Sa	0.95	51	P	Pn	07 22 46.8	-0.4
SCLA	Alcaldia de Sa	0.95	51	S	Sb	07 23 01.1	+0.7
SLOZ	Alcaldia de Sa	0.97	342	P	Pn	07 22 46.4	-1.1
SLOZ	Alcaldia de Sa	0.97	342	S	Sn	07 22 60.0	-0.2
PQSS	Presa 15 de Se	1.04	60	P	Pn	07 22 48.0	-0.4
PQSS	Presa 15 de Se	1.04	60	S	Sn	07 23 02.4	+0.6
PACA	Pacayal	1.19	72	*e*P	Pn	07 22 50.8	+0.3
PACA				*e*S	Sb	07 23 07.5	+0.2
PACA	Pacayal	1.19	72	P	Pn	07 22 51.0	+0.4
LCY	Lacayo	1.20	74	*e*P	Pn	07 22 50.7	0.0
RANC	El Ranchito	1.21	74	P	Pn	07 22 47.8	-3.1
RANC	El Ranchito	1.21	74	S	Sn	07 23 05.2	-1.0
BLLM	Bellamira	1.26	74	*e*P	Pn	07 22 51.3	-0.2
MTO3	Montecristo	1.30	5	*e*P	Pn	07 22 51.2	-1.0
MTO3	Montecristo	1.30	5	*i*P	Pn	07 22 51.3	-1.0
MTO3	Montecristo	1.30	5	P	Pn	07 22 51.4	-0.8
MTO3	Montecristo	1.30	5	S	Sn	07 23 08.4	-0.2
ESQI	Esquipulas	1.46	5	*e*P	Pn	07 22 53.6	-0.7
ESQI	Esquipulas	1.46	5	P	Pn	07 22 53.9	-0.4
FG16	Alotenango, Sa	1.54	320	*i*P	Pb	07 22 59.1	+0.9
FG16				*i*S	Sb	07 23 20.8	+3.5
CNCH	Conchagua	1.61	84	P	Pn	07 22 55.9	-0.5
CNCH	Conchagua	1.61	84	S	Sn	07 23 16.9	+0.7
CHOHN	Orocuina	2.29	80	P	Pn	07 23 05.2	-0.6

*ASRS **04** 07:25:59.0±0.9, 54°.36N×86°.97E, h0^{km}, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 04 07:26:01.4±3.7, 54°.41N×87°.12E, h0^{km}, mbtmp3.2/2, ML2.7/2, Error ellipse: s-maj=33.2km s-min=22.1km az=43.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.43	252	I	I	07 34 20.0	
	baz=71,slow=326,SNR=18						
ZALV	Zalesovo Beam	1.43	252	Pn	Pn	07 26 26.6	-1.9
	0.7nm,0.3s,baz=74,slow=17,SNR=7.3						
ZALV				Lg	Lg	07 26 47.1	
	0.9nm,0.3s,baz=66,slow=28,SNR=6.1						
KURBB	Kurchatov Arra	6.47	238	Pn	Pn	07 27 39.2	+1.5
	0.1nm,0.3s,baz=56,slow=14,SNR=1.4						
	1.2nm,0.2s						
MKAR	Makanchi Array	8.21	204	Pn	Pn	07 28 02.9	+1.1
	0.2nm,0.3s,baz=21,slow=12,SNR=2.9						
	0.3nm,0.5s						

*HEL **04** 07:29:07.6±0.1, 63°.98N×28°.07E, h0^{km}, ML1.9, Explosion*

*IDC **04** 07:29:08.2±1.7, 63°.94N×28°.53E, h0^{km}, mbtmp2.9/3, ML2.3/3, Error ellipse: s-maj=31.6km s-min=9.2km az=99.0*

*UPP **04** 07:29:09.3±2.2, 63°.85N×27°.74E, h0^{km}, ML1.7*

*KOLA **04** 07:29:13.5, 64°.75N×32°.25E, h0^{km}, ML2.0, Karelia*

ISC 04 07:29:07.5±0.8, 63°.95N±0°.03×28°.10E±0°.03, h0^{km}, n49, σ1^{s}.27/78, Finland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIF	Nilsia	0.58	193	PG	Pg	07 29 18.7	+0.1
	baz=15						
NIF				SG	Sg	07 29 26.4	+0.3
RMF	Romuvaara	0.85	71	PG	Pg	07 29 23.4	-0.3
	baz=254						
RMF				SG	Sg	07 29 33.9	-0.8
RMF				MSG		07 29 34.1	
	comp=Z,9.8nm,0.2s						
OUL	Oulu	1.48	321	PN	Pn	07 29 34.9	-0.5
OUL				SN	Sg	07 29 54.9	-0.2
SUF	Sumiainen	1.52	216	PN	Pn	07 29 35.7	-0.2
	baz=35						
SUF				MSG		07 29 53.5	
	comp=Z,4.4nm,0.2s						
SUF				SN	Sn	07 29 57.5	+1.2
OUF	Merijarvi	1.53	287	PN	Pn	07 29 35.6	-0.5
OUF				MSG		07 29 53.0	
	comp=Z,13nm,0.2s						
OUF				SN	Sn	07 29 55.7	-0.9
OBF4	Vikkela, Lumij	1.56	305	PN	Pn	07 29 36.1	-0.4
OBF4				MSG		07 29 53.7	
	comp=Z,12nm,0.2s						
OBF4				SN	Sn	07 29 57.6	+0.2
KU1	Kurvinen	1.73	20	PG	Pn	07 29 38.9	0.0
KU1				SG	Sn	07 30 01.3	-0.4
KU2	Taivalkoski	1.76	2	PG	Pn	07 29 39.1	-0.2
KU2				SN	Sn	07 30 02.2	-0.2
OBF0	Syolatti, Pyha	1.77	290	PG	Pn	07 29 39.7	+0.3
OBF0				MSG		07 29 60.0	
	comp=Z,12nm,0.2s						
OBF0				SN	Sn	07 30 03.4	+0.8
MSF	Maaselka	2.01	11	PG	Pn	07 29 43.0	+0.4
	baz=188						
MSF				SG	Sn	07 30 08.5	+0.1
KAF	Kangasniemi	2.02	205	PG	Pb	07 29 44.3	-0.7
	baz=21						
KAF				MSG		07 30 08.0	
	comp=Z,7.4nm,0.2s						
KAF				SG	Sg	07 30 11.6	-0.7
OBF8	Ulkokalla	2.08	283	PG	Pn	07 29 44.7	+1.2
OBF8				MSG		07 30 08.5	
	comp=Z,5.1nm,0.2s						
RANF	Ranua	2.14	346	PG	Pn	07 29 45.9	+1.4
	baz=167						
RANF				SG	Sn	07 30 12.8	+1.0
KU6	Riekki	2.22	19	PG	Pn	07 29 47.2	+1.7
KU6				MSG		07 30 12.7	
	comp=Z,3.3nm,0.2s						
KU6				SG	Sn	07 30 14.6	+1.1
KEF	Keuruu	2.32	221	PG	Pb	07 29 49.1	-1.0
KEF				MSG		07 30 16.5	
	comp=Z,6.2nm,0.2s						
KEF				SG	Sb	07 30 19.5	+0.2
OLKF	Oulanka, Finla	2.44	12	PG	Pn	07 29 50.6	+2.0
OLKF				MSG		07 30 19.1	
	comp=Z,6.7nm,0.2s						
OLKF				SG	Sn	07 30 21.1	+2.1
RUF	Ruokolahti	2.57	171	PG	Pb	07 29 53.2	-1.2
	baz=348						
RUF				MSG		07 30 24.0	
	comp=Z,5.6nm,0.2s						
RUF				SG	Sb	07 30 27.0	+0.5
VAF	Ylistaro	2.60	252	PG	Pb	07 29 53.4	-1.5
VAF				MSG		07 30 24.0	
	comp=Z,4.4nm,0.2s						
VAF				SG	Sb	07 30 27.1	-0.2
TOF	Tornio	2.67	325	PB	Pn	07 29 52.4	+0.8
	baz=145						
TOF				SB	Sn	07 30 24.5	-0.1
TOF				MSG		07 30 25.3	
	comp=Z,2.5nm,0.2s						
FIA0	FINESS Array S	2.69	201	PB	Pb	07 29 54.7	-1.7
FIA0				MSG		07 30 27.1	
	comp=Z,3.8nm,0.2s						
FIA0				SB	Sb	07 30 28.5	-1.3
FINES	FINESS Array B	2.69	201	Pn	Pb	07 29 55.0	-1.4
	comp=Z,1.6nm,0.3s,baz=25,slow=16,SNR=49						
FINES				Sn	Sb	07 30 29.6	-0.2
	comp=Z,2.5nm,0.3s,baz=22,slow=27,SNR=33						
	comp=Z,4.7nm,0.5s						
KALU	Kalix	2.78	316	P	Pn	07 29 54.5	+1.3
KALU				S	Sn	07 30 28.4	+0.9
KALU	Kalix	2.78	316	PB	Pn	07 29 54.6	+1.3
	baz=130						
KALU				SB	Sn	07 30 28.6	+1.1
RNF	Rovaniemi	2.81	343	PG	Pn	07 29 56.7	+3.1
RNF				SB	Sn	07 30 30.4	+2.4
BURU	Burvik	3.00	285	P	Pn	07 29 56.6	+0.4
BURU	Burvik	3.00	285	PN	Pn	07 29 57.1	+0.9
BURU				SN	Sn	07 30 33.4	+0.6
SJUU	Sjulsmark	3.19	302	P	Pn	07 29 59.8	+0.9
SJUU				S	Sn	07 30 37.9	+0.3
ODEU	Stanfors	3.26	281	P	Pn	07 29 59.5	-0.3
UMAU	Umeaa	3.28	272	PN	Pn	07 29 60.0	-0.1
KPF	Kankaanpaa	3.48	235	PB	Pn	07 30 05.9	+3.0
ERTU	Ertsjaerv	3.60	319	P	Pn	07 30 05.6	+1.1
ERTU				S	Sn	07 30 48.2	+0.5
ERTU	Ertsjaerv	3.60	319	PN	Pn	07 30 06.1	+1.6
ERTU				SB	Sn	07 30 52.0	+4.2
KLF	Kolari	3.71	334	PN	Pn	07 30 07.0	+1.0
	baz=152						
KLF				SN	Sn	07 30 49.4	-1.0
PAJU	Pajala	3.72	328	P	Pn	07 30 07.2	+1.1
PAJU	Pajala	3.72	328	SN	Sn	07 30 50.0	-0.5
HARU	Harads	3.75	309	P	Pn	07 30 07.5	+1.0
SVAU	Svanoeiden	3.77	282	P	Pn	07 30 06.5	-0.2
NUR	Nurmijarvi	3.81	207	SG	Sb	07 31 04.6	+2.3
MASU	Masugnsbyn	4.33	327	P	Pn	07 30 15.9	+1.4
DUNU	Dundret	4.46	319	P	Pn	07 30 17.3	+0.9
RAJF	Raja-Jooseppi	4.54	1	PN	Pn	07 30 19.1	+1.7
KUA	Kurravaara	5.12	325	P	Pn	07 30 26.6	+1.3
RATU	Laukkuluspa	5.22	322	P	Pn	07 30 27.9	+1.2
SALU	Saltoluokta	5.25	315	P	Pn	07 30 27.9	+0.7
KOVU	Salmi	5.36	327	P	Pn	07 30 30.0	+1.3
ARCES	ARCESS Array B	5.70	351	Pn	Pn	07 30 33.7	+0.4
	comp=Z,0.1nm,0.3s,baz=162,slow=15,SNR=12						
ARCES				Sn	Sn	07 31 37.0	-2.3
	comp=Z,0.3nm,0.3s,baz=169,slow=25,SNR=9.6						
ARCES				Lg	Lg	07 31 59.9	
	comp=Z,0.3nm,0.3s,baz=163,slow=31,SNR=8.5						
	comp=Z,0.2nm,0.3s						
ARCES	ARCESS Array B	5.70	351	P	Pn	07 30 33.8	+0.5
ARCES				S	Sn	07 31 37.1	-2.2
I37NO	I37NO	6.38	328	I	I	08 07 20.0	
	baz=140,slow=320,SNR=11						
HFS	Hagfors	7.77	247	Pn	Pn	07 31 02.6	+0.9
	comp=Z,0.2nm,0.3s,baz=52,slow=16,SNR=5.5						
	comp=Z,0.6nm,0.4s						

*IDC **04** 07:34:15.5±2.4, 17°.78S×178°.52W, h588^{km}±22^{km}, mb3.4/3, mbtmp4.3/5, Error ellipse: s-maj=111.8km s-min=25.3km az=154.0*

*NEIC **04** 07:34:16.2±1.0, 18°.0S±0°.2×178°.5W±0°.2, h580^{km}±8^{km}, mb4.3/12, Error ellipse: s-maj=26.0km s-min=18.7km az=135.0*

ISC 04 07:34:15.6±0.9, 17°.9S±0°.1×178°.5W±0°.1, h579^{km}, n23, σ0^{s}.72/24, mb4.2/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.29	273	P	P	07 35 35.5	+0.6
MSVF	Nonsavu	3.29	273	P	P	07 35 35.3	+0.4
	82nm,0.7s,baz=126,slow=11,SNR=61						
FUNA	Funafuti	9.61	346	P	P	07 36 30.0	-0.2
DZM	Mont Dzumac	14.74	251	P	P	07 37 21.7	-0.3
	3.8nm,1.1s,baz=133,slow=19,SNR=1.1						
COEN	Coen	37.02	270	P	P	07 40 38.2	+0.7
STKA	Stephens Creek	38.54	241	P	P	07 40 49.9	+0.2
STKA	Stephens Creek	38.54	241	P	P	07 40 49.5	-0.3
	2.2nm,0.4s,baz=327,slow=17,SNR=8.7						
	2.2nm,0.4s						
BBOO	Buckleboo	43.32	241	P	P	07 41 27.3	-0.2
BBOO				IAmb	IAmb	07 41 51.9	
	comp=Z,21nm,1.4s						
WR8	Warramunga Arr	44.39	260	P	P	07 41 34.9	-1.1
WR8				IAmb	IAmb	07 41 37.7	
	comp=Z,20nm,1.5s						
WB0	Warramunga Arr	44.51	260	P	P	07 41 36.3	-0.6
WB0				IAmb	IAmb	07 41 36.4	
	comp=Z,6.5nm,0.8s						
WRA	Warramunga Arr	44.54	260	P	P	07 41 35.9	-1.2
	comp=Z,1.9nm,0.4s,baz=96,slow=8.3,SNR=9.9						
AS31	Alice Springs	44.70	254		P	07 41 38.1	-0.2
AS31				IAmb	IAmb	07 41 38.8	
	comp=Z,5.3nm,0.6s						
ASAR	Alice Springs	44.70	254		P	07 41 38.3	-0.1
ASAR	Alice Springs	44.70	254	P	P	07 41 38.0	-0.4
	comp=Z,17nm,0.5s,baz=88,slow=8.3,SNR=331						
ASAR				PcP	PcP	07 43 06.8	-1.3
	comp=Z,0.3nm,0.4s,baz=99,slow=3.4,SNR=2.1						
	comp=Z,17nm,0.5s						
KNRA	Kununurra	50.40	264	P	P	07 42 21.0	+0.1
FITZ	Fitzroy Crossi	52.94	261	P	P	07 42 39.6	+0.4
TOLI2	Tolitoli	62.63	281	P	P	07 43 44.9	+0.1
QSPA	South Pole Qui	72.13	180	P	P	07 44 43.2	+1.2
PEA0B	Petropavlovsk-	73.68	345	P	P	07 44 51.6	+0.8
PEA0B				IAmb	IAmb	07 44 55.7	
	comp=Z,19nm,1.4s						
PETK	Petropavlovsk-	73.68	345	P	P	07 44 51.6	+0.8
TXAR	Lajitas Array	86.08	58	P	P	07 45 56.3	0.0
TXAR	Lajitas Array	86.08	58	P	P	07 45 55.0	-1.3
	comp=Z,0.4nm,0.7s,baz=240,slow=3.8,SNR=5.8						
	comp=Z,0.4nm,0.7s						
SNAA	Sanae	90.58	179	P	P	07 46 16.2	-0.3
SNAA				IAmb	IAmb	07 46 58.9	
	comp=Z,2.8nm,1.1s						

*WEL **04** 07:43:21.5, 38°.45S×176°.19E, h7^{km}, ML3.2, Mw3.4, Moment Tensor Solution. s7 Moment tensor: Scale 10^{14} Nm; M_{rr}-0.28; $M_{\theta\theta}$1.42; $M_{\phi\phi}$-1.14; $M_{r\theta}$0.25; $M_{\theta\phi}$0.99; $M_{\phi r}$-0.07; Fault plane solution: $M_0$1.64000×10^{14} NP1: ϕ_s296.00000°, δ89.00000°, λ-9.00000°. NP2: ϕ_s26.00000°, δ81.00000°, λ-179.00000°. Principal axes: T 1.7780, Plg6.0000°, Azm341.0000°; N -1.4990, Plg81.0000°, Azm109.0000°; P -0.2790, Plg7.0000°, Azm251.0000°; Stations used: TLZ RATZ RTZ OPRZ TOZ HIZ WAZ STRIKE-SLIP FAULTING*

WEL 04 07:43:21.5±0.4, 38°S±2°×17°6E±°, h4^{km}±2^{km}, M3.2/41, ML3.5/28, MLv3.2/41 Error ellipse: s-maj=3.0km s-min=2.2km az=107.5, confirmed, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WPRZ	Whakapapatarin	0.07	198	P	Pg	07 43 23.0	0.0
WPRZ				S	Sg	07 43 25.0	+0.9
HRRZ	Handcock Road	0.10	49	P	Pg	07 43 23.5	0.0
HRRZ				S	Sg	07 43 25.5	+0.7
GRRZ	Galatos Road	0.12	329	P	Pg	07 43 24.0	0.0
GRRZ				S	Sg	07 43 26.4	+0.9
HSRZ	Hossack Road	0.15	17	P	Pg	07 43 24.7	+0.3
HSRZ				S	Sg	07 43 27.2	+0.8
ALRZ	Allen Road	0.16	132	P	Pg	07 43 24.9	+0.2
ALRZ				S	Sg	07 43 27.4	+0.6
PRRZ	Plateau Road	0.17	106	P	Pg	07 43 24.9	+0.2
PRRZ				S	Sg	07 43 27.9	+0.9
HLRZ	Highlands Stat	0.24	32	P	Pg	07 43 26.5	+0.4
HLRZ				S	Sg	07 43 30.7	+1.5
UTU	Utuhina	0.28	1	P	Pg	07 43 27.2	+0.4
UTU				S	Sg	07 43 31.6	+1.1
WHTZ	Whakaora	0.28	221	P	Pg	07 43 27.5	+0.6
RRRZ	Republican Roa	0.28	66	P	Pg	07 43 26.9	0.0
KUTZ	Kaahu Road	0.29	263	P	Pg	07 43 27.2	+0.1
TARZ	Mount Tarawera	0.33	49	P	Pg	07 43 28.4	+0.5
NGRZ	Ngongotaha	0.35	360	P	Pg	07 43 28.6	+0.3
OMRZ	Omania	0.38	23	P	Pg	07 43 29.0	+0.3
MKRZ	Makatiti	0.38	35	P	Pg	07 43 29.5	+0.6
MRHZ	Matea Rd	0.42	155	P	Pg	07 43 29.6	0.0
KARZ	Kaharoa	0.43	6	P	Pg	07 43 30.1	+0.3
WATZ	Wairara	0.44	235	P	Pg	07 43 30.1	+0.2
MUGZ	Murupara	0.46	93	P	Pg	07 43 30.4	+0.1
LIRZ	Lichensteins R	0.47	19	P	Pb	07 43 31.6	-0.8
RATZ	Rangitukua	0.53	218	P	Pg	07 43 32.1	+0.5
TLZ	Tolley Road	0.53	283	P	Pg	07 43 31.1	-0.5
EDRZ	Edgecumbe	0.56	51	P	Pb	07 43 33.0	-0.8
RITZ	Rihia Road	0.58	206	P	Pg	07 43 33.2	+0.5
MARZ	Manawahe	0.60	39	P	Pb	07 43 34.0	-0.6
RTZ	Ruatahuna	0.64	105	P	Pg	07 43 34.2	+0.4
MTHZ	Maungataniwha	0.65	128	P	Pg	07 43 34.3	+0.4
KATZ	Kakaramea	0.65	216	P	Pg	07 43 34.5	+0.5
OPRZ	Ohinepanea	0.67	25	P	Pg	07 43 34.6	+0.2
TGRZ	Tauranga	0.73	4	P	Pg	07 43 35.6	+0.2
BKZ	Black Stump Fm	0.75	162	P	Pg	07 43 35.9	+0.1
URZ	Urewera	0.75	75	P	Pg	07 43 35.8	-0.1
NTVZ	North Tongarir	0.76	212	P	Pg	07 43 36.6	+0.6
TMVZ	Te Maari	0.76	210	P	Pb	07 43 36.9	-0.4
KRVZ	Karewarewa	0.77	214	P	Pg	07 43 36.6	+0.4
ETVZ	East Tongariro	0.78	209	P	Pg	07 43 36.5	+0.1
NMHZ	Naumai	0.80	143	P	Pb	07 43 37.8	-0.2
WTVZ	West Tongariro	0.81	215	P	Pg	07 43 37.0	0.0
NNVZ	North Ngauruho	0.81	213	P	Pg	07 43 37.4	+0.3
OTVZ	Oturere	0.82	210	P	Pb	07 43 38.1	-0.3
RAHZ	Arahi	0.84	124	P	Pb	07 43 38.8	+0.1
TWVZ	Taurewa	0.85	223	P	Pg	07 43 37.4	-0.4
NGZ	Ngauruhoe	0.85	212	P	Pg	07 43 38.2	+0.3
WHRZ	Whale Island	0.86	46	P	Pb	07 43 38.7	-0.3
COVZ	Chateau Observ	0.90	214	P	Pb	07 43 39.7	0.0
TOZ	Tahuroa Road	0.90	323	P	Pg	07 43 37.9	-0.9
TUVZ	Tukino	0.91	207	P	Pb	07 43 39.8	-0.2
FWVZ	Far West T-bar	0.94	212	P	Pb	07 43 40.0	-0.5
MAVZ	Matarangi	0.95	211	P	Pn	07 43 41.6	-0.3
WHVZ	Whangaehu Hut	0.95	209	P	Pb	07 43 40.3	-0.4
SNGZ	Shannon Statio	0.96	110	P	Pb	07 43 40.7	0.0
RAGZ	Rawiri	0.96	93	P	Pg	07 43 40.3	+0.3
TRVZ	Turoa	0.98	210	P	Pb	07 43 40.8	-0.4
KWHZ	Kaweka Forest	0.99	169	P	Pg	07 43 40.4	0.0
WNVZ	Wahianoa	0.99	208	P	Pg	07 43 40.5	+0.1
MOVZ	Moawhango	1.01	200	P	Pg	07 43 40.2	-0.7
ARHZ	Aropaoanui	1.02	142	P	Pn	07 43 42.6	0.0
WHHZ	Waihua	1.03	128	P	Pn	07 43 42.7	0.0
HIZ	Hauiti	1.05	266	P	Pg	07 43 40.9	-0.7
MWZ	Matawai	1.06	84	P	Pg	07 43 41.1	-0.6
PKVZ	Pokaka	1.06	218	P	Pg	07 43 41.5	-0.3
MCHZ	McNeill Hill	1.06	158	P	Pn	07 43 43.3	+0.1
MYRZ	Mayor Island	1.17	2	P	Pb	07 43 44.3	0.0
KRHZ	Kereru	1.20	173	P	Pg	07 43 44.2	-0.2
RIGZ	Rimuhau	1.26	102	P	Pn	07 43 48.7	+2.8
RUGZ	Raukumara Rang	1.27	68	P	Pg	07 43 45.4	-0.4
KNZ	Kokohu	1.29	116	P	Pb	07 43 48.3	+2.0
TKGZ	Te Karaka	1.30	90	P	Pb	07 43 46.6	+0.1
VRZ	Vera Road	1.30	239	P	Pn	07 43 44.8	-1.7
HAZ	Te Kaha	1.44	61	P	Pn	07 43 46.7	-1.6
KAHZ	Kahuranaki	1.44	158	P	Pg	07 43 49.9	+0.8
PNHZ	Pukenui	1.46	180	P	Pb	07 43 49.0	-0.2
CNGZ	Carnagh Statio	1.58	92	P	Pb	07 43 51.5	+0.2

IDC 04 07:46:36.7±7.5, 18°.49S×176°.70W, h0^{km}, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=327.4km s-min=38.6km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	46.13	260	P	P	07 55 02.7	-0.5
	0.4nm,0.5s,baz=97,slow=6.8,SNR=10.0						
	0.4nm,0.5s						
ASAR	Alice Springs	46.20	255	P	P	07 55 03.9	+0.1
	3.3nm,0.5s,baz=88,slow=8.4,SNR=64						
	3.3nm,0.5s						
ILAR	Eielson Array	86.10	12	P	P	07 59 19.1	+0.1
	0.1nm,0.4s,baz=210,slow=5.0,SNR=4.5						
	0.1nm,0.4s						

*KRSC **04** 07:48:59.9±2.0, 50°.55N×160°.14E, h44^{km}±41^{km}, Ml4.0*

*IDC **04** 07:48:59.1±2.0, 50°.46N×159°.79E, h0^{km}, mb3.8/7, mbtmp3.7/8, ML2.4/1, MS2.9/2, Error ellipse: s-maj=48.9km s-min=20.9km az=21.0*

*NEIC **04** 07:49:01.8±1.0, 50°.58N±0°.06×159°.9E±0°.1, h10^{km}±1^{km}, mb4.1/19, Error ellipse: s-maj=14.6km s-min=9.0km az=56.0*

*MOS **04** 07:49:02.5±0.9, 50°.54N×160°.01E, h43^{km}, mb4.2/1, Error ellipse: s-maj=13.9km s-min=4.1km az=99.3*

ISC 04 07:49:03.1±2.1, 50°.54N±0°.03×159°.88E±0°.03, h24^{km}±15^{km}, n98, σ0^{s}.81/99, mb4.0/17, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDTR	Khodutka, Kamc	1.71	319	PN	Pn	07 49 30.6	-0.7
KDTR				S	Sn	07 49 52.1	-0.2
KDTR	Khodutka, Kamc	1.71	319	*e*P	Pn	07 49 30.7	-0.7
KDTR				*e*S	Sn	07 49 52.1	-0.2
RUS	Russkaya	2.08	336	PN	Pn	07 49 35.5	-1.0
RUS				S	Sn	07 50 01.1	-0.5
RUS	Russkaya	2.08	336	*e*P	Pn	07 49 35.6	-1.0
RUS				*e*S	Sn	07 50 01.1	-0.5
PAU	Pauzhetka	2.15	297	PN	Pn	07 49 37.2	-0.2
PAU				S	Sn	07 50 03.7	+0.4
PAU	Pauzhetka	2.15	297	*e*P	Pn	07 49 37.3	-0.2
PAU				*e*S	Sn	07 50 03.8	+0.4
MTVR	Mutnovka	2.22	332	PN	Pn	07 49 37.8	-0.7
MTVR				S	Sn	07 50 05.2	0.0
MTVR	Mutnovka	2.22	332	*e*P	Pn	07 49 37.8	-0.7
MTVR				*e*S	Sn	07 50 05.2	0.0
ASAK	Asacha	2.23	327	PN	Pn	07 49 38.6	+0.1
ASAK	Asacha	2.23	327	*e*P	Pn	07 49 38.6	+0.1
GRL	Gorelyy	2.31	331	PN	Pn	07 49 40.2	+0.5
GRL	Gorelyy	2.31	331	*e*P	Pn	07 49 40.3	+0.5
SKR	Severo-Kuril's	2.40	275	*e*PN	Pn	07 49 40.0	-0.9
SKR				*e*S	Sn	07 50 07.8	-1.7
SKR				pmax	pmax		
	comp=Z,167nm,0.5s						
SKR				smax	smax		
	comp=E,753nm,0.4s						
SKR				smax	smax		
	comp=N,434nm,0.3s						
SKR	Severo-Kuril's	2.40	275	*e*P	Pn	07 49 39.8	-1.0
KRMR	Karymshinskiy	2.54	335	PN	Pn	07 49 42.6	-0.2
KRMR				S	Sn	07 50 13.7	+0.8
KRMR	Karymshinskiy	2.54	335	*e*P	Pn	07 49 42.6	-0.2
KRMR				*e*S	Sn	07 50 13.7	+0.8
SPN	Mys Shipunski	2.57	2	PN	Pn	07 49 42.0	-1.1
SPN				S	Sn	07 50 11.6	-1.9
SPN	Mys Shipunski	2.57	2	*e*P	Pn	07 49 42.1	-1.1
SPN				*e*S	Sn	07 50 11.7	-1.9
PET	Petropavlovsk	2.60	343	Pn	Pn	07 49 43.1	-0.6
PET				Sn	Sn	07 50 14.2	-0.3
PET	Petropavlovsk	2.60	343	*e*PN	Pn	07 49 42.8	-0.9
PET				*e*S	Sn	07 50 13.8	-0.7
PET				pmax	pmax		
	comp=Z,26nm,1.1s						
PET				smax	smax		
	comp=E,62nm,0.3s						
PET				smax	smax		
	comp=N,123nm,0.5s						
PET	Petropavlovsk	2.60	343	*e*P	Pn	07 49 42.9	-0.7
PET				*e*S	Sn	07 50 13.7	-0.7
NLC	Nalytchevo	2.66	353	PN	Pn	07 49 43.5	-0.9
NLC				S	Sn	07 50 14.1	-1.7
NLC	Nalytchevo	2.66	353	*e*P	Pn	07 49 43.5	-0.9
NLC				*e*S	Sn	07 50 14.1	-1.7
UGLR	Uglovaya	2.75	347	PN	Pn	07 49 45.7	-0.1
UGLR	Uglovaya	2.75	347	*e*P	Pn	07 49 45.8	-0.1
SMAR	Somma	2.81	347	PN	Pn	07 49 47.2	+0.5
SMAR	Somma	2.81	347	*e*P	Pn	07 49 47.3	+0.5
SDLR	Sedlovina	2.81	348	PN	Pn	07 49 46.4	-0.2
SDLR	Sedlovina	2.81	348	*e*P	Pn	07 49 46.4	-0.2
AVH	Avacha	2.82	346	PN	Pn	07 49 47.1	+0.4
AVH	Avacha	2.82	346	*e*P	Pn	07 49 47.1	+0.4
KRER	Koryakskii	2.86	346	PN	Pn	07 49 48.1	+0.8
KRER	Koryakskii	2.86	346	*e*P	Pn	07 49 48.1	+0.8
KOK	Koryaka	2.86	345	PN	Pn	07 49 47.7	+0.4
KOK	Koryaka	2.86	345	*e*P	Pn	07 49 47.7	+0.4
PEA0B	Petropavlovsk-	2.91	333	Pn	Pn	07 49 47.9	+0.1
PEA0B				Sn	Sn	07 50 22.8	+0.7
PEA0B	Petropavlovsk-	2.91	333	PN	Pn	07 49 48.3	+0.4
PEA0B				S	Sn	07 50 24.0	+2.0
PETK	Petropavlovsk-	2.91	333		Pn	07 49 47.1	-0.8
PETK	Petropavlovsk-	2.91	333	Pn	Pn	07 49 47.7	-0.2
	comp=N,2.8nm,0.3s,baz=325,slow=22,SNR=47						
PETK				Sn	Sn	07 50 24.1	+2.0
	comp=N,3.5nm,0.3s,baz=296,slow=14,SNR=8.9						
PETK				LR	LR	07 50 57.0	
	comp=N,66nm,21.0s,baz=122,slow=40						
	comp=N,7.3nm,0.5s						
KRX	Arik	2.93	345	PN	Pn	07 49 47.9	-0.3
KRX	Arik	2.93	345	*e*P	Pn	07 49 47.9	-0.3
APC	Apacha	2.93	326	PN	Pn	07 49 48.7	+0.6
APC	Apacha	2.93	326	*e*P	Pn	07 49 48.8	+0.6
GNL	Ganaly	3.38	340	PN	Pn	07 49 55.1	+0.7
GNL	Ganaly	3.38	340	*e*P	Pn	07 49 55.1	+0.7
KII	Karymskiy	3.51	356	PN	Pn	07 49 56.7	+0.5
KII	Karymskiy	3.51	356	*e*P	Pn	07 49 56.8	+0.5
MKZ	Mys Kozlova	4.18	15	PN	Pn	07 50 03.7	-1.6
MKZ	Mys Kozlova	4.18	15	*e*P	Pn	07 50 03.7	-1.6
TUMD	Tumrok D	4.68	4	PN	Pn	07 50 12.1	-0.1
TUMD	Tumrok D	4.68	4	*e*P	Pn	07 50 12.2	-0.1
TUMD				*e*S	Sn	07 51 04.5	-1.3
KMNR	Kamenistaya	5.23	2	PN	Pn	07 50 21.4	+1.6
KMNR	Kamenistaya	5.23	2	*e*P	Pn	07 50 21.5	+1.6
BZGR	Bezymyannyi-Gr	5.43	5	PN	Pn	07 50 24.2	+1.6
BZGR	Bezymyannyi-Gr	5.43	5	*e*P	Pn	07 50 24.2	+1.6
KPT	Kopyto	5.44	2	PN	Pn	07 50 24.1	+1.4

KPT	Kopyto	5.44	2	*e*P	Pn	07 50 24.1	+1.4
KBTR	Krutoberegovo	5.95	16	PN	Pn	07 50 28.7	-0.9
KBTR	Krutoberegovo	5.95	16	*e*P	Pn	07 50 28.7	-0.9
BKI	Bering	5.95	36	PN	Pn	07 50 27.2	-2.4
BKI	Bering	5.95	36	*e*P	Pn	07 50 27.2	-2.4
BKI				*e*S	Sn	07 51 30.4	-6.5
SMY	Shemya	9.11	71	Pn	Pn	07 51 12.5	-0.5
SMY	Shemya	9.11	71	PN	Pn	07 51 12.5	-0.5
YSS	Yuzhno-Sakhali	11.86	259	Pn	Pn	07 51 50.2	-0.4
M14K	Bethel	23.49	50	P	P	07 54 09.8	-0.9
TIXI	Tiksi	25.38	338	P	P	07 54 28.3	+0.4
TIXI				IAmb	IAmb	07 54 30.0	
	comp=Z,5.3nm,0.8s						
TIXI	Tiksi	25.38	338	P	P	07 54 27.9	0.0
	comp=Z,4.7nm,0.6s,baz=136,slow=10,SNR=15						
	comp=Z,4.7nm,0.6s						
TIXI	Tiksi	25.38	338	P	P	07 54 28.3	+0.4
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
N18K	Kilae Creek	26.46	50	P	P	07 54 38.9	+1.0
N18K				IAmb	IAmb	07 54 56.2	
	comp=Z,5.8nm,1.3s						
J19K	Poorman	26.91	43	P	P	07 54 42.1	+0.2
D20K	Etivluk River	27.65	33	P	P	07 54 49.3	+0.7
D20K				IAmb	IAmb	07 55 06.4	
	comp=Z,6.8nm,1.4s						
G21K	Allakaket	28.23	38	P	P	07 54 54.3	+0.6
G21K				IAmb	IAmb	07 55 21.2	
	comp=Z,6.0nm,1.4s						
H21K	Melozitna Rive	28.36	40	P	P	07 54 55.8	+0.9
H21K				IAmb	IAmb	07 54 58.6	
	comp=Z,3.9nm,1.4s						
E22K	Anaktuvuk Pass	29.20	35	P	P	07 55 02.6	+0.2
E22K				IAmb	IAmb	07 55 03.5	
	comp=Z,3.1nm,1.1s						
SML	Sawmill	30.11	48	P	P	07 55 10.7	+0.2
WRH	Wood River Hil	30.23	43	P	P	07 55 12.4	+1.0
CCB	Clear Creek Bu	30.36	42	P	P	07 55 12.4	-0.1
DHY	Denali Highway	30.53	46	P	P	07 55 14.3	0.0
DHY				IAmb	IAmb	07 55 35.7	
	comp=Z,3.7nm,1.4s						
G24K	Hadweenzic Riv	30.64	38	P	P	07 55 15.8	+0.8
G24K				IAmb	IAmb	07 55 17.1	
	comp=Z,4.8nm,1.2s						
ILAR	Eielson Array	30.76	42	P	P	07 55 16.2	+0.1
ILAR	Eielson Array	30.76	42	P	P	07 55 15.8	-0.3
	comp=Z,0.6nm,0.7s,baz=247,slow=7.5,SNR=9.5						
	comp=Z,0.6nm,0.7s						
D25K	Kavik River	31.38	33	P	P	07 55 22.7	+1.1
K27K	Chicken	32.86	44	P	P	07 55 34.8	+0.2
K27K				IAmb	IAmb	07 55 36.2	
	comp=Z,3.0nm,1.0s						
H27K	Steamboat Moun	33.00	39	P	P	07 55 36.8	+0.9
H27K				IAmb	IAmb	07 55 43.7	
	comp=Z,4.2nm,1.4s						
EUNU	Eureka	44.47	13	P	P	07 57 12.3	+0.6
KURK	Kurchatov	49.01	304	P	P	07 57 47.7	+0.2
KURBB	Kurchatov Arra	49.10	304	P	P	07 57 47.6	-0.6
	comp=Z,0.5nm,0.5s,baz=62,slow=7.7,SNR=4.2						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	49.18	298	P	P	07 57 49.5	+0.6
MKAR	Makanchi Array	49.18	298	P	P	07 57 49.5	+0.6
BVAR	Borovoye Array	51.90	310	P	P	07 58 08.8	-0.6
	comp=Z,0.9nm,0.5s,baz=64,slow=9.8,SNR=4.7						
	comp=Z,0.9nm,0.5s						
NVAR	Mina Array Bea	56.77	68	P	P	07 58 46.1	+0.8
	comp=Z,0.2nm,0.5s,baz=317,slow=8.2,SNR=2.4						
	comp=Z,0.2nm,0.5s						
PDAR	Pinedale Array	58.91	59	P	P	07 59 00.8	+0.5
	comp=Z,0.7nm,0.8s,baz=306,slow=3.5,SNR=4.8						
	comp=Z,0.7nm,0.8s						
SFJD	Kangerlussuaq	60.53	13	LR	LR	08 29 03.0	
	comp=Z,30nm,19.1s,baz=138,slow=40						
TXAR	Lajitas Array	71.78	66	P	P	08 00 23.9	+0.3
TXAR	Lajitas Array	71.78	66	P	P	08 00 23.8	+0.2
	comp=Z,0.6nm,0.5s,baz=307,slow=4.3,SNR=11						
	comp=Z,0.6nm,0.5s						
TXAR	Lajitas Array	71.78	66	P	P	08 00 23.9	+0.3
FITZ	Fitzroy Crossi	74.69	214	P	P	08 00 41.2	+0.7
BUR08	Bucovina Ar. S	74.70	330	P	P	08 00 41.0	+0.5
BUR08				IAmb	IAmb	08 00 53.6	
	comp=Z,2.6nm,1.4s						

CNRM ***04*** *07:50:12.4, 35°.39N×4°.22W, h16^{km}*

SFS ***04*** *07:50:13.8, 35°.33N×4°.25W, h0^{km}, ML2.6/12, ML2.7/12, MLv2.6/12*

MDD ***04*** *07:50:15.3±1.7, 35°.32N×4°.37W, h2^{km}±11^{km}, mb_Lg2.2/4, Error ellipse: s-maj=11.0km s-min=5.0km az=99.0*

ISC 04 07:50:12.6±1.1**, 35°.31N**±0°.02×**4°.25W**±0°.03**, h5**^{km}±10^{km}**, n42, σ1^{s}14**/60**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	Palemas	0.27	109	P	Pg	07 50 18.2	+0.4
PALE	Palemas	0.27	109	S	Sg	07 50 23.0	+1.5
AKLM	AKL	0.85	158	P	Pg	07 50 28.8	-0.1
AKLM	AKL	0.85	158	S	Sg	07 50 39.6	-0.5
SMIR	Smir Dam	0.99	293	P	Pg	07 50 31.8	+0.1
SMIR	Smir Dam	0.99	293	S	Sb	07 50 45.8	+0.1
GOG	Mont Gurugu	1.03	94	P	Pg	07 50 31.7	-0.7
GOG	Mont Gurugu	1.03	94	S	Sg	07 50 45.7	0.0
WMELI	Melilla	1.06	89	Pg	Pg	07 50 33.9	+1.0
WMELI				Sg	Sg	07 50 46.0	-0.8
CEU	Ceuta	1.09	303	Sg	Sg	07 50 46.3	-1.3
CEU				Pg	Pg	07 50 31.9	-1.5
ECEU	Ceuta	1.09	303	Sg	Sb	07 50 47.8	-0.6
ECEU				Pg	Pg	07 50 33.1	-0.4
TARIF	Tarifa	1.29	304	Pg	Pb	07 50 37.5	+0.1
EMIJ	Mijas	1.33	342	Pn	Pg	07 50 37.0	-0.9
EMIJ				Sn	Sg	07 50 54.1	-1.1
EMIJ	Mijas	1.33	342	Pn	Pn	07 50 39.6	+1.8
EMIJ				Sn	Sg	07 50 55.3	+0.1
EMIJ				*i* IVmb_Lg		07 51 00.1	
TAF	Taforalt	1.58	107	P	Pn	07 50 40.2	-1.2
TAF	Taforalt	1.58	107	S	Sn	07 51 01.2	-1.2
JBK	JBK	1.69	124	P	Pn	07 50 41.3	-1.6
JBK	JBK	1.69	124	S	Sn	07 51 03.1	-2.0
EGOR	Sierra Gorda,	1.81	4	Pn	Pn	07 50 44.0	-0.5
EGOR				Sn	Sn	07 51 09.1	+1.3
IFR	Ifrane	1.93	202	Pn	Pn	07 50 47.1	+1.0
IFR				Sn	Sn	07 51 11.1	+0.3
MD31	MD31	2.47	190	P	Pn	07 50 53.5	-0.1
MD31	MD31	2.47	190	S	Sn	07 51 25.4	+1.3
MDT	Midelt	2.50	187	P	Pn	07 50 53.9	-0.1
MDT	Midelt	2.50	187	S	Sn	07 51 26.0	+1.0
EQES	Quesada	2.67	21	Pn	Pn	07 50 57.9	+1.6
EQES				Sn	Sn	07 51 29.6	+0.4
EQES				*i* IVmb_Lg		07 51 38.8	
EADA	Adamuz	2.87	355	Pn	Pn	07 50 59.5	+0.5
EADA				Sn	Sn	07 51 34.1	+0.2
EADA	Adamuz	2.87	355	Pn	Pn	07 51 00.9	+1.9
EADA				Sn	Sn	07 51 35.9	+1.9
EADA				*i* IVmb_Lg		07 51 42.8	
ECAB	El Cabril	2.92	342	Pn	Pn	07 50 59.2	-0.5
ECAB				Sn	Sn	07 51 35.4	+0.2
ECAB	El Cabril	2.92	342	Pn	Pn	07 51 00.9	+1.2
ECAB				Sn	Sn	07 51 35.6	+0.4
ECAB				*i* IVmb_Lg		07 51 39.6	
EMIN	Mina Concepcio	3.14	322	Pn	Pn	07 51 04.3	+1.6
EMIN				Sn	Sn	07 51 39.9	-0.6
EGRO	El Granado	3.43	311	Pn	Pn	07 51 06.9	+0.2
EGRO				Sn	Sn	07 51 46.5	-1.2
EGRO	El Granado	3.43	311	Pn	Pn	07 51 07.7	+1.1
EGRO				Sn	Sn	07 51 45.2	-2.4
PBDV	Barranco-do-Ve	3.55	304	*e*P	Pn	07 51 09.3	+1.0
PBAR	Barrancos	3.63	323	Pn	Pn	07 51 09.8	+0.3
PBAR				Sn	Sn	07 51 51.3	-1.5
PBAR	Barrancos	3.63	323	*e*P	Pn	07 51 10.8	+1.3
PBAR				*e*S	Sn	07 51 52.6	-0.2
PBAR				IAML		07 51 53.7	
PBAR				IAML		07 51 55.6	
PBAR				IAML		07 52 01.6	
PCVE	Castro Verde	3.83	308	Sn	Sn	07 51 58.5	+0.8
EBAD	Badajoz	4.09	328	Pn	Pn	07 51 15.0	-0.8
EBAD				Sn	Sn	07 52 03.4	-0.7
PMRV	Marv??o	4.82	330	*e*P	Pn	07 51 27.1	+1.3
OUZM	OUZ	4.86	206	P	Pn	07 51 28.7	+2.2
PMTG	Montargil	4.92	321	*e*P	Pn	07 51 29.0	+1.9
TIO	Tiouine	5.04	211	Pn	Pn	07 51 30.1	+1.1
TIO				Sn	Sn	07 52 26.6	-1.1
PARRA	Arraiolos	5.19	314	*e*P	Pn	07 51 24.7	-6.2
PARRA				*e*S	Sn	07 52 17.3	-14

WEL 04 08:12:41.9±0.9**, 38°S**±2°×**17°6E**±°**, h5**^{km}±5^{km}**, M2.0**/12**, ML2.3**/13**, MLv2.0**/12**, Error ellipse: s-maj=3.5km s-min=2.8km az=118.8, confirmed, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WPRZ	Whakapapatarin	0.06	189	P	Pg	08 12 43.7	+0.3
WPRZ				S	Sg	08 12 45.2	+0.8
HRRZ	Handcock Road	0.12	49	P	Pg	08 12 44.6	+0.4
HRRZ				S	Sg	08 12 46.9	+1.0
GRRZ	Galatos Road	0.12	337	P	Pg	08 12 44.9	+0.5
GRRZ				S	Sg	08 12 47.2	+1.1
HSRZ	Hossack Road	0.16	20	P	Pg	08 12 45.7	+0.5
HSRZ				S	Sg	08 12 48.7	+1.4
ALRZ	Allen Road	0.17	126	P	Pg	08 12 45.6	+0.5
PRRZ	Plateau Road	0.18	101	P	Pg	08 12 45.8	+0.4
PRRZ				S	Sg	08 12 48.5	+0.8
TPPS	Taupo Police S	0.24	200	S	Sg	08 12 51.7	+2.1
HLRZ	Highlands Stat	0.26	34	P	Pg	08 12 47.6	+0.7
HLRZ				S	Sb	08 12 52.2	-1.5
KUTZ	Kaahu Road	0.28	265	P	Pg	08 12 47.9	+0.6
KUTZ				S	Sg	08 12 51.8	+0.9
RRRZ	Republican Roa	0.30	65	P	Pg	08 12 48.0	+0.4
TARZ	Mount Tarawera	0.35	49	P	Pg	08 12 49.4	+0.8
NGRZ	Ngongotaha	0.36	2	P	Pg	08 12 49.7	+0.8
OMRZ	Omania	0.39	24	P	Pg	08 12 50.1	+0.7
MRHZ	Matea Rd	0.41	153	P	Pg	08 12 50.3	+0.4
MUGZ	Murupara	0.47	92	P	Pg	08 12 51.4	+0.5
TLZ	Tolley Road	0.52	285	P	Pg	08 12 51.9	+0.1
MTHZ	Maungataniwha	0.65	127	P	Pb	08 12 55.1	-0.6
TGRZ	Tauranga	0.74	5	P	Pb	08 12 56.7	-0.4
BKZ	Black Stump Fm	0.74	160	P	Pg	08 12 56.6	+0.5
URZ	Urewera	0.77	75	P	Pg	08 12 56.8	+0.3
TOZ	Tahuroa Road	0.90	324	P	Pg	08 12 58.9	-0.3
SNGZ	Shannon Statio	0.97	109	P	Pn	08 13 01.7	-0.4
MWZ	Matawai	1.07	83	P	Pg	08 13 02.4	0.0
MHEZ	Mangahewa	1.57	247	P	Pn	08 13 10.0	-0.3
PKGZ	Pakihiroa	1.62	69	P	Pn	08 13 11.4	+0.4
PXZ	Pawanui	1.65	161	P	Pn	08 13 11.4	-0.1
PREZ	Palmer Road	1.80	240	P	Pn	08 13 11.7	-1.9
PKE	Pukeiti	1.86	246	P	Pn	08 13 12.1	-2.2
KHEZ	Kahui Hut	1.88	243	P	Pn	08 13 11.6	-3.0
TIWZ	Tintock	2.32	185	P	Pn	08 13 19.5	-1.1
OKCZ	Okains Bay	5.75	203	P	Pn	08 14 13.1	+5.2
MQZ	McQueen’s Vall	5.87	206	P	Pn	08 14 09.8	+0.4

WEL 04 08:12:44.3±0.9**, 40°S**±4°×**17°3E**±°**, h161**^{km}±7^{km}**, M2.5**/12**, ML3.2**/1**, MLv2.5**/12**, Error ellipse: s-maj=7.8km s-min=5.0km az=109.7, confirmed, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUWZ	D’Urville Isla	0.58	140	P	Pn	08 13 08.4	+1.1
DUWZ				S	Sn	08 13 26.8	+1.8
KHLK	Kaihoka Lakes	0.66	252	P	Pn	08 13 07.9	+0.2
TKNZ	Takaka Hill	0.77	208	P	Pn	08 13 08.9	+0.5
TKNZ				S	Sn	08 13 28.3	+1.3
QRZ	Quartz Range	0.83	235	P	Pn	08 13 09.0	+0.2
NNZ	Nelson	0.86	183	P	Pn	08 13 09.7	+0.6
NNZ				S	Sn	08 13 29.6	+1.5
TCW	Tory Channel	1.07	143	S	Sn	08 13 31.5	+0.6
KHEZ	Kahui Hut	1.15	23	S	Sn	08 13 33.3	+1.0
NEZ	North Egmont	1.20	25	P	Pn	08 13 12.1	+0.2
NEZ	North Egmont	1.20	25	P	Pn	08 13 12.0	+0.1
NEZ				S	Sn	08 13 33.8	+0.7
KIW	Kapiti Island	1.23	115	P	Pn	08 13 12.8	+0.7
KIW				S	Sn	08 13 33.4	-0.1
WAZ	Wanganui	1.33	64	P	Pn	08 13 13.9	+0.8
WAZ	Wanganui	1.33	64	P	Pn	08 13 13.8	+0.8
OHWZ	Ohakea	1.45	85	P	Pn	08 13 14.9	+0.8
THZ	Tophouse	1.46	196	P	Pn	08 13 14.8	+0.4
THZ				S	Sn	08 13 37.7	+0.1
VRZ	Vera Road	1.60	40	P	Pn	08 13 15.2	-0.5
VRZ				S	Sn	08 13 39.8	-0.1
MRZ	Mangatainoka R	1.66	101	P	Pn	08 13 16.7	+0.4
MRZ	Mangatainoka R	1.66	101	P	Pn	08 13 16.8	+0.4
HOWZ	Holdsworth Sta	1.67	110	P	Pn	08 13 17.0	+0.5
MTW	Mount Morrison	1.76	118	P	Pn	08 13 17.9	+0.5
MTW				S	Sn	08 13 42.9	-0.1
PKVZ	Pokaka	1.82	55	P	Pn	08 13 17.7	-0.4
MTVZ	Mangateitei	1.84	59	P	Pn	08 13 18.0	-0.4
FWVZ	Far West T-bar	1.97	57	P	Pn	08 13 19.4	-0.6
MOVZ	Moawhango	2.02	63	P	Pn	08 13 19.5	-0.9
NGZ	Ngauruhoe	2.04	56	P	Pn	08 13 20.1	-0.7
KHZ	Kahutara	2.06	178	P	Pn	08 13 20.6	-0.1
NNVZ	North Ngauruho	2.08	55	P	Pn	08 13 20.3	-0.8
KRVZ	Karewarewa	2.12	54	P	Pn	08 13 20.6	-1.0
ETVZ	East Tongariro	2.14	56	P	Pn	08 13 21.2	-0.6
TMVZ	Te Maari	2.14	55	P	Pn	08 13 21.3	-0.6
BFZ	Birch Farm	2.17	100	P	Pn	08 13 22.2	+0.2
BFZ	Birch Farm	2.17	100	P	Pn	08 13 22.1	+0.1

IDC ***04*** *08:46:08.6±2.0, 50°.51N×160°.00E, h0^{km}, mb3.5/6, mbtmp3.4/7, ML3.3/2, MS3.6/1, Error ellipse: s-maj=47.5km s-min=21.7km az=8.0*

KRSC ***04*** *08:46:09.0±1.8, 50°.55N×160°.15E, h45^{km}±38^{km}, Ml3.9*

ISC 04 08:46:12.9±1.1**, 50°.51N**±0°.08×**160°.13E**±0°.05**, h35**^{km}**, n39, σ1^{s}63**/51**, mb3.6**/6**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	1.83	316	*e*P	Pn	08 46 39.8	-2.1
KDTR				*e*S	Sn	08 47 01.2	-2.6
RUS	Russkaya	2.17	333	*e*P	Pn	08 46 44.8	-1.8
RUS				*e*S	Sn	08 47 10.1	-2.1
PAU	Pauzhetka	2.31	296	*e*P	Pn	08 46 47.2	-1.2
PAU				*e*S	Sn	08 47 13.3	-2.2
MTVR	Mutnovka	2.32	329	*e*P	Pn	08 46 47.1	-1.6
MTVR				*e*S	Sn	08 47 14.6	-1.5
ASAK	Asacha	2.34	324	*e*P	Pn	08 46 47.7	-1.1
GRL	Gorelyy	2.41	329	*e*P	Pn	08 46 49.2	-0.7
SKR	Severo-Kuril’s	2.56	275	*e*P	Pn	08 46 48.9	-3.0
SPN	Mys Shipunski	2.59	359	*e*P	Pn	08 46 51.2	-1.0
SPN				*e*S	Sn	08 47 21.2	-1.3
KRMR	Karymshinskiy	2.63	332	*e*P	Pn	08 46 51.5	-1.4
KRMR				*e*S	Sn	08 47 22.1	-1.4
DALK	Dalny	2.66	342	*e*P	Pn	08 46 51.8	-1.4
DALK				*e*S	Sn	08 47 22.4	-1.9
PET	Petropavlovsk	2.68	340	*e*P	Pn	08 46 51.8	-1.6
PET				*e*S	Sn	08 47 22.9	-1.7
NLC	Nalytchevo	2.71	350	*e*P	Pn	08 46 53.7	-0.2
MIPR	Malaya Ipel'ka	2.75	311	*e*P	Pn	08 46 53.4	-1.2
UGLR	Uglovaya	2.82	344	*e*P	Pn	08 46 54.6	-1.0
SDLR	Sedlovina	2.88	345	*e*P	Pn	08 46 55.0	-1.3
SMAR	Somma	2.88	344	*e*P	Pn	08 46 55.9	-0.5
AVH	Avacha	2.89	343	*e*P	Pn	08 46 56.1	-0.4
KRER	Koryakskii	2.92	343	*e*P	Pn	08 46 57.3	+0.3
KOK	Koryaka	2.93	342	*e*P	Pn	08 46 56.7	-0.4
KRX	Arik	2.99	343	*e*P	Pn	08 46 56.9	-1.1
PETK	Petropavlovsk-	3.01	331	Pn	Pn	08 46 57.7	-0.4
	2.2nm,0.3s,baz=134,slow=17,SNR=18						
PETK				Sn	Sn	08 47 33.3	+0.5
	1.9nm,0.3s,baz=163,slow=15,SNR=3.5						
	4.7nm,0.5s						
APC	Apacha	3.04	324	*e*P	Pn	08 46 58.6	+0.1
APC				*e*S	Sn	08 47 34.5	+0.8
GNL	Ganaly	3.46	338	*e*P	Pn	08 47 04.1	-0.3
KII	Karymskiy	3.55	353	*e*P	Pn	08 47 06.3	+0.7
MKZ	Mys Kozlova	4.16	13	*e*P	Pn	08 47 12.9	-1.0
TUMD	Tumrok D	4.70	2	*e*P	Pn	08 47 21.3	0.0
TUMD				*e*S	Sn	08 48 13.7	-0.8
KMNR	Kamenistaya	5.25	1	*e*P	Pn	08 47 29.7	+0.8
BZGR	Bezymyannyi-Gr	5.45	3	*e*P	Pn	08 47 32.7	+1.1
KPT	Kopyto	5.46	1	*e*P	Pn	08 47 33.1	+1.3
BKI	Bering	5.88	35	*e*P	Pn	08 47 36.6	-0.8
BKI				*e*S	Sn	08 48 39.4	-4.1
KBTR	Krutoberegovo	5.93	15	*e*P	Pn	08 47 37.8	-0.2
SHEM	Shemya Is, Ala	8.97	70	Pn	Pn	08 48 20.4	+0.6
	2.5nm,0.3s,baz=264,slow=9.2,SNR=2.6						
SHEM				Sn	Sn	08 49 53.9	-5.5
	2.3nm,0.3s,baz=319,slow=20,SNR=1.7						
ILAR	Eielson Array	30.67	42	P	P	08 52 24.4	+0.8
	0.3nm,0.5s,baz=245,slow=8.3,SNR=8.1						
	0.3nm,0.5s						
YKA	Yellowknife Ar	45.08	41	P	P	08 54 26.8	+1.8
	0.2nm,0.7s,baz=298,slow=9.0,SNR=4.1						
	0.2nm,0.7s						
TGY	Tagaytay City	48.21	235	LR	LR	09 15 03.1	
	comp=Z,76nm,21.2s,baz=206,slow=36						
KURBB	Kurchatov Arra	49.25	304	P	P	08 54 57.6	-0.1
	0.6nm,0.5s,baz=58,slow=8.3,SNR=1.7						
	0.6nm,0.5s						
MKAR	Makanchi Array	49.34	298	P	P	08 54 59.7	+1.2
	0.2nm,0.4s,baz=59,slow=7.3,SNR=2.2						
	0.2nm,0.4s						
BVAR	Borovoye Array	52.04	310	P	P	08 55 17.9	-0.8
	0.4nm,0.4s,baz=46,slow=10,SNR=1.4						
	0.4nm,0.4s						
TXAR	Lajitas Array	71.64	66	P	P	08 57 32.7	+1.8
	0.4nm,0.5s,baz=306,slow=4.2,SNR=6.5						
	0.4nm,0.5s						

JMA ***04*** *08:48:16.4±0.1, 24°.1N±0°.3×121°.8E±0°.3, h64^{km}, MV2.7/12, TAIWAN REGION*

TAP ***04*** *08:48:17.0, 24°.18N×121°.77E, h60^{km}, ML3.5, B*

ISC 04 08:48:17.2±1.2**, 24°.15N**±0°.02×**121°.84E**±0°.02**, h58**^{km}±5^{km}**, n119, σ0^{s}92**/224**, 6C-20D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	Fush Village	0.19	274	*e*P	Pn	08 48 26.3	-0.2
EAHA	Aohua	0.20	335	*e*P	Pn	08 48 26.4	-0.1
EAHA				*e*S	Sn	08 48 33.8	+0.7
NACB	Ninganchiao	0.22	278	⇓*i*P	Pn	08 48 26.3	-0.3
NACB				*e*S	Sn	08 48 32.7	-0.6
TWD	Chiawan	0.23	254	⇓P	Pn	08 48 26.5	-0.1
TWD				S	Sn	08 48 33.4	+0.1
ENA	Nanau	0.29	343	P	Pn	08 48 27.1	0.0
ENA				S	Sn	08 48 34.6	+0.4
EWUT	Wuta	0.30	350	P	Pn	08 48 27.0	-0.2
EWUT				S	Sn	08 48 34.5	+0.2
ETLH	Xiulin Townshi	0.33	281	*e*P	Pn	08 48 27.0	-0.4
ETLH				*e*S	Sn	08 48 34.4	-0.5
TEYL	Yanliau Villag	0.35	218	*e*P	Pn	08 48 27.5	-0.1
TEYL				*e*S	Sn	08 48 35.5	+0.5
ETM	Tongmen	0.36	240	⇑P	Pn	08 48 27.2	-0.5
ETM				*e*S	Sn	08 48 34.3	-0.8
LXIB	Xiulin Townshi	0.41	252	⇓*i*P	Pn	08 48 27.5	-0.7
LXIB				*e*S	Sn	08 48 35.6	-0.6
ESAO	Su ao	0.43	1	*e*P	Pn	08 48 28.4	+0.1
ESAO				*e*S	Sn	08 48 36.6	+0.4
SHUL	Shoufeng	0.43	215	*e*P	Pn	08 48 28.4	+0.1
SHUL				*e*S	Sn	08 48 37.6	+1.3
EOS4	EOS4	0.44	93	⇑P	Pn	08 48 28.4	+0.4
EOS4				*e*S	Sn	08 48 37.7	+1.9
EOS2	EOS2	0.45	53	⇑*i*P	Pn	08 48 29.3	+0.9
EOS2				*e*S	Sn	08 48 38.6	+2.1
EOS3	EOS3	0.46	72	⇑*i*P	Pn	08 48 29.4	+1.0
TWC	Suao	0.46	2	⇓P	Pn	08 48 28.8	+0.1
TWC				S	Sn	08 48 37.4	+0.5
LATG	Datong	0.48	324	⇓*i*P	Pn	08 48 28.6	-0.4
LATG				*e*S	Sn	08 48 36.9	-0.5
ESL	Shilin	0.49	228	⇓P	Pn	08 48 28.2	-0.8
ESL				*e*S	Sn	08 48 36.8	-0.7
NDS	Dongshan	0.50	347	*e*P	Pn	08 48 28.0	-1.0
NDS				*e*S	Sn	08 48 37.2	-0.4
NNSB	Datong	0.50	304	⇓P	Pn	08 48 28.7	-0.5
NNSB				*e*S	Sn	08 48 37.1	-0.8
TEGC	Jichi Village	0.51	212	*e*P	Pn	08 48 29.3	+0.2
TEGC				*e*S	Sn	08 48 38.8	+1.1
NNS	Nan Shan	0.51	305	*e*P	Pn	08 48 28.8	-0.5
NNS				*e*S	Sn	08 48 37.6	-0.5
WHF	Hehuan Shan	0.52	270	⇓P	Pn	08 48 29.2	-0.5
WHF				*e*S	Sn	08 48 37.6	-1.1
ENTT	Nioudou	0.55	334	⇓P	Pn	08 48 29.3	-0.3
ENTT				*e*S	Sn	08 48 38.7	+0.1
WARBT	Fenglin Townsh	0.59	224	⇓P	Pn	08 48 29.1	-1.0
WARBT				*e*S	Sn	08 48 38.0	-1.4
TWE	Neicheng	0.59	345	⇓P	Pn	08 48 29.9	-0.2
TWE				*e*S	Sn	08 48 39.7	+0.3
EGFH	Guangfu	0.60	218	*e*P	Pn	08 48 30.4	+0.2
EGFH				S	Sn	08 48 38.9	-0.7
TWT	Tachien	0.61	280	*e*P	Pn	08 48 30.6	+0.1
TWT				*e*S	Sn	08 48 40.2	+0.1
ILA	Ilan	0.62	353	*e*P	Pn	08 48 30.7	+0.2
ILA				*e*S	Sn	08 48 40.7	+0.6
TDCB	Techi	0.63	280	⇓P	Pn	08 48 30.6	0.0
TDCB				*e*S	Sn	08 48 40.0	-0.4
OWD	Renai	0.63	253	*e*P	Pn	08 48 30.4	-0.2
OWD				*e*S	Sn	08 48 39.6	-0.9
FUSB	Fushanzhiwuyua	0.65	340	⇓*i*P	Pn	08 48 30.6	-0.3
FUSB				*e*S	Sn	08 48 40.3	-0.5
YHNB	Yeheng	0.67	321	⇓P	Pn	08 48 30.7	-0.4
YHNB				*e*S	Sn	08 48 40.4	-0.8
WUSB	Renai	0.67	257	⇓P	Pn	08 48 31.1	-0.1
WUSB				*e*S	Sn	08 48 40.6	-0.7
NWLT	Wulai	0.70	334	*e*P	Pn	08 48 31.0	-0.4
NWLT				*e*S	Sn	08 48 40.8	-1.0
EGS		0.70	7	*e*P	Pn	08 48 31.8	+0.4
EGS				*e*S	Sn	08 48 42.2	+0.5
VWDT	VWDT	0.74	239	*e*P	Pn	08 48 31.9	0.0
VWDT				*e*S	Sn	08 48 41.9	-0.7
HGSD	Ruisui	0.75	210	*e*P	Pn	08 48 31.9	-0.1
HGSD				*e*S	Sn	08 48 43.2	+0.5
EHY	Hungye	0.79	217	*e*P	Pn	08 48 31.9	-0.7
NFF	Wufeng Townshi	0.81	307	*e*P	Pn	08 48 32.9	0.0
NFF				*e*S	Sn	08 48 44.4	0.0
WHP	Taichung City	0.82	279	*e*P	Pn	08 48 33.4	+0.4
WHP				*e*S	Sn	08 48 45.1	+0.5
TIPB	Shuangxi	0.82	359	⇓P	Pn	08 48 33.3	+0.3
TIPB				*e*S	Sn	08 48 44.6	+0.1
WCS	Beigang Elemen	0.85	264	*e*P	Pn	08 48 33.5	+0.2
WCS				*e*S	Sn	08 48 45.3	+0.4
TWA	Mucha	0.86	345	⇓P	Pn	08 48 33.1	-0.4
TWA				*e*S	Sn	08 48 45.0	-0.4
KSHI	Guanxi Townshi	0.87	316	*e*P	Pn	08 48 33.7	+0.2
KSHI				*e*S	Sn	08 48 46.0	+0.5
TWB1	Santiao Chiao	0.87	9	*e*P	Pn	08 48 33.4	-0.1
TWB1				*e*S	Sn	08 48 45.1	-0.4
SSLB	Suanglung	0.88	246	*e*P	Pn	08 48 34.6	+0.9
SSLB				*e*S	Sn	08 48 46.4	+0.6
SMLT	Sun Moon Lake	0.89	253	*e*P	Pn	08 48 34.6	+0.7
SMLT				*e*S	Sn	08 48 47.4	+1.2
ECBN	Changbin	0.90	203	*e*P	Pn	08 48 33.9	0.0
ECBN				*e*S	Sn	08 48 46.1	0.0
YULB	Yu-li	0.90	213	*e*P	Pn	08 48 32.9	-1.0
LIOB	Emei	0.90	304	*e*P	Pn	08 48 33.7	-0.2
LIOB				*e*S	Sn	08 48 46.2	+0.1
NSTT	Nanjuang	0.90	303	*e*P	Pn	08 48 34.0	+0.1
NSTT				*e*S	Sn	08 48 46.1	-0.1
EYUL	Yuli	0.92	211	*e*P	Pn	08 48 35.0	+0.8
EYUL				*e*S	Sn	08 48 45.9	-0.8
NWF	Wu-fen Shan	0.92	357	⇑P	Pn	08 48 34.5	+0.2
NWF				*e*S	Sn	08 48 47.2	+0.3
WFSB	Wu-fen Shan	0.92	357	*e*P	Pn	08 48 34.4	+0.2
WFSB				*e*S	Sn	08 48 46.7	0.0
TYC	Yuchr	0.93	255	*e*P	Pn	08 48 34.7	+0.5
TYC				*e*S	Sn	08 48 47.3	+0.6
TWF1	Yuli	0.93	212	*e*P	Pn	08 48 32.7	-1.6
SXI1	Grass Mountain	0.95	2	⇓P	Pn	08 48 34.5	-0.1
SXI1				*e*S	Sn	08 48 47.6	+0.2
TWQ1	Liyutan	0.99	282	*e*P	Pn	08 48 35.2	+0.1
TWQ1				*e*S	Sn	08 48 48.3	0.0
WHYT	Xinyi Township	1.00	244	*e*P	Pn	08 48 36.2	+1.0
WHYT				*e*S	Sn	08 48 50.3	+1.6
NSY	Sanyi	1.02	286	*e*P	Pn	08 48 35.7	+0.3
NSY				*e*S	Sn	08 48 50.0	+1.1
HSN	Hsinchu	1.02	310	*e*P	Pn	08 48 34.8	-0.7
HSN				*e*S	Sn	08 48 48.2	-0.8
YM01	YM01	1.03	346	⇓P	Pn	08 48 34.8	-0.8
YM01				*e*S	Sn	08 48 48.1	-1.1
NMLH	Miaoli	1.03	293	*e*P	Pn	08 48 35.4	-0.2
NMLH				*e*S	Sn	08 48 48.8	-0.4
CHKH	Chenggong	1.03	203	*e*P	Pn	08 48 35.2	-0.4
CHKH				*e*S	Sn	08 48 49.3	+0.1
ZUZH	Zhuzihu	1.05	345	*e*P	Pn	08 48 35.0	-0.9
ZUZH				*e*S	Sn	08 48 48.1	-1.5
JYNG	Yonagunijimaku	1.06	73	P	Pn	08 48 36.0	+0.1
JYNG				S	Sn	08 48 50.5	+0.7
TCU	Taichung	1.06	270	*e*P	Pn	08 48 36.3	+0.3
TCU				*e*S	Sn	08 48 49.9	0.0
WJS	Zhushan	1.06	253	*e*P	Pn	08 48 37.0	+0.9
WJS				*e*S	Sn	08 48 51.8	+1.8
YM08	YM08	1.06	348	⇓P	Pn	08 48 35.0	-1.1
YM08				*e*S	Sn	08 48 48.2	-1.8

FULB	Fuli	1.06	208	eP	Pn	08 48 36.0	-0.1
FULB				eS	Sn	08 48 50.9	+0.8
WNT	Mingjian	1.09	256	eP	Pn	08 48 37.4	+1.0
WNT				eS	Sn	08 48 52.0	+1.5
WDJ	Dajia District	1.11	281	eS	Sn	08 48 51.2	+0.1
YOJ	Yonaguni jima	1.12	73	eP	Pn	08 48 36.9	+0.2
YOJ				S	Sn	08 48 51.8	+0.5
YOJ	Yonaguni jima	1.12	73	⇑P	Pn	08 48 36.7	0.0
YOJ				eS	Sn	08 48 51.9	+0.7
CHKT	Chengkung	1.13	203	eP	Pn	08 48 35.9	-1.0
CHKT				eS	Sn	08 48 50.0	-1.5
ALS	Alishan	1.14	236	eP	Pn	08 48 38.0	+0.7
ALS				eS	Sn	08 48 53.0	+0.9
TWY	Chenhua	1.15	349	eP	Pn	08 48 36.7	-0.4
TWY				eS	Sn	08 48 51.5	-0.4
EHD	Haiduan	1.15	210	eP	Pn	08 48 35.9	-1.3
EHD				eS	Sn	08 48 50.3	-1.6
WCHH	Zhanghua	1.17	267	eP	Pn	08 48 37.6	+0.2
WCHH				eS	Sn	08 48 52.5	0.0
CHN5	Tsauling	1.19	243	eP	Pn	08 48 38.6	+0.8
CHN5				eS	Sn	08 48 54.5	+1.4
ELDTW	Lidau	1.21	218	eP	Pn	08 48 37.6	-0.5
ELDTW				eS	Sn	08 48 52.9	-0.8
WGK	Gukeng	1.25	249	eS	Sn	08 48 56.5	+2.1
EDH	Donghe	1.26	203	eP	Pn	08 48 38.1	-0.7
EDH				eS	Sn	08 48 53.9	-0.9
WDLH	Douliu	1.27	249	eP	Pn	08 48 39.7	+0.9
WDLH				eS	Sn	08 48 56.8	+1.9
WCKO	Fanlu	1.33	238	eP	Pn	08 48 40.6	+1.0
WCKO				eS	Sn	08 48 58.3	+2.0
STYH	Taoyuan	1.37	225	eP	Pn	08 48 40.1	0.0
STYH				eS	Sn	08 48 57.5	+0.1
CHN4	Tsaushan	1.39	235	eP	Pn	08 48 41.5	+1.1
CHN4				eS	Sn	08 48 59.1	+1.4
TPUB	Ta-pu	1.39	233	eP	Pn	08 48 41.2	+0.8
TPUB				eS	Sn	08 48 58.9	+1.2
LONT	Longtian	1.39	208	eP	Pn	08 48 40.6	+0.2
LONT				eS	Sn	08 48 56.2	-1.6
WTK	Tuku	1.40	251	eP	Pn	08 48 40.8	+0.3
WTK				eS	Sn	08 48 59.3	+1.3
WTP	Ta-pu	1.43	232	eP	Pn	08 48 41.8	+0.8
WTP				eS	Sn	08 49 00.4	+1.5
CHY	Chiayi	1.44	244	eP	Pn	08 48 42.6	+1.5
CHY				eS	Sn	08 49 01.2	+2.2
TWGBT	Beinan	1.49	208	eP	Pn	08 48 40.7	-1.0
TWGBT				eS	Sn	08 48 58.4	-1.9
TWG	Pinlang	1.49	208	eP	Pn	08 48 40.9	-0.9
LDUT	Ludao	1.50	193	eP	Pn	08 48 40.7	-1.2
LDUT				eS	Sn	08 48 58.3	-2.2
TWK	Hsinying	1.51	235	eP	Pn	08 48 42.8	+0.7
TWK				eS	Sn	08 49 02.3	+1.5
CHN1	Nanshi	1.53	232	eP	Pn	08 48 43.3	+0.9
CHN1				eS	Sn	08 49 03.1	+1.9
SNST	Tainan City	1.53	233	eS	Sn	08 49 03.0	+1.8
WSF	Szhu	1.56	251	eS	Sn	08 49 02.6	+0.8
SGST	Jiashian	1.56	228	eP	Pn	08 48 42.9	+0.2
SGST				eS	Sn	08 49 02.9	+0.9
WSL	Shuilin Townsh	1.60	248	eP	Pn	08 48 43.1	-0.1
WSL				eS	Sn	08 49 03.5	+0.7
ICHU	Yijhu	1.62	242	eP	Pn	08 48 44.1	+0.5
ICHU				eS	Sn	08 49 04.6	+1.2
CHN8	Yiju	1.69	242	eP	Pn	08 48 45.2	+0.8
CHN8				eS	Sn	08 49 06.5	+1.5
ECL	Taimali	1.74	208	eS	Sn	08 49 04.2	-2.1
IRIF	Iriomote-Funau	1.74	83	P	Pn	08 48 45.0	-0.2
IRIF				S	Sn	08 49 06.0	-0.3
SSD	Sandimen	1.78	219	eP	Pn	08 48 47.6	+2.0
SSD				eS	Sn	08 49 08.8	+1.6
HATJ	Hateruma jima	1.80	92	eS	Sn	08 49 08.8	+1.0
TSMG	Majia	1.80	218	eP	Pn	08 48 46.8	+0.8
TSMG				eS	Sn	08 49 09.4	+1.6
MASBT	Mashibuluo	1.88	216	eP	Pn	08 48 48.1	+1.0
MASBT				eS	Sn	08 49 11.7	+1.9
TSCK	Chigu Township	1.89	239	eP	Pn	08 48 47.3	+0.2
TSCK				eS	Sn	08 49 09.6	-0.2
JKRS	Kuro-shima	1.99	87	eP	Pn	08 48 49.0	+0.6
JKRS				eS	Sn	08 49 12.5	+0.2
TAWH	Dawu Township	2.00	206	eS	Sn	08 49 11.5	-1.0
SCZT	Fangliau	2.09	213	eP	Pn	08 48 50.9	+1.0
SCZT				eS	Sn	08 49 15.6	+0.8
LAY	Lan-yu	2.11	187	eP	Pn	08 48 49.2	-1.0
LAY				S	Sn	08 49 12.5	-2.9
JIJ	Ishigaki jima	2.12	84	eP	Pn	08 48 50.1	-0.1
JIJ				S	Sn	08 49 14.3	-1.1
PHUB	P'eng-hu	2.17	254	eS	Sn	08 49 14.4	-2.2
WDGT	Dungji	2.18	247	eP	Pn	08 48 50.7	-0.4
WDGT				eS	Sn	08 49 15.0	-2.0
JISG	Ishigakijimahi	2.30	78	P	Pn	08 48 52.4	-0.4
JISG				eS	Sn	08 49 19.3	-0.6

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*ASRS **04** 09:23:48.0±0.8, 53°.55N×87°.62E, h0^{km}, M3.0, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*IDC **04** 09:23:50.7±2.8, 53°.52N×87°.61E, h0^{km}, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=24.7km s-min=13.8km az=66.0*

*NNC **04** 09:23:51.0±1.1, 53°.49N×87°.66E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=9.5km s-min=4.0km az=60.0, Suspected Mining explosion.*

ISC 04 09:23:49.6±3.5**, 53°.6N**±0°.1×**87°.7E**±0°.2**, h0**^{km}**, n9, σ0^{s}.71**/12**, 8C-4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.76	283	I	I	09 34 57.8	
	0.1nm,0.9s,baz=102,slow=328,SNR=12						
ZAA0	Zalesovo Array	1.76	283	⇓Pn	Pb	09 24 22.5	-0.2
	0.7nm,0.6s						
ZAA0				⇑Sn	Sg	09 24 46.6	+0.6
	3.4nm,0.7s						
ZALV	Zalesovo Beam	1.76	283	Pg	Pn	09 24 21.1	-0.1
	0.8nm,0.3s,baz=104,slow=19,SNR=13						
ZALV				Lg	Lg	09 24 45.7	
	2.7nm,0.3s,baz=106,slow=29,SNR=11						
ZALV				I	I	09 35 03.6	
	baz=162,slow=38,SNR=7.5						
KURK	Kurchatov	6.30	246	⇓Pn	Pn	09 25 24.1	+0.4
	0.8nm,0.9s						
KURK				⇑Lg	Lg	09 27 07.1	
	3.6nm,0.8s						
KURBB	Kurchatov Arra	6.40	246	Pn	Pn	09 25 24.9	-0.1
	0.1nm,0.3s,baz=62,slow=14,SNR=5.5						
KURBB				Lg	Lg	09 27 08.8	
	baz=64,slow=30,SNR=6.8						
	0.7nm,0.4s						
KURBB	Kurchatov Arra	6.40	246	⇑Pn	Pn	09 25 25.1	+0.1
	1.9nm,0.8s						
KURBB				⇑Lg	Lg	09 27 09.7	
	15nm,1.0s						
MK31	Makanchi Array	7.65	209	⇑Pn	Pn	09 25 43.2	+0.9
	0.5nm,0.6s,baz=30,slow=12,SNR=7.7						
MK31				⇑Sn	Sn	09 27 08.9	-0.7
	0.7nm,0.7s,baz=32,slow=27,SNR=4.6						
MK31				⇑Lg	Lg	09 27 49.7	
	2.8nm,0.8s,baz=26,slow=29,SNR=4.2						
MKAR	Makanchi Array	7.65	209	Pn	Pn	09 25 43.4	+1.1
	0.2nm,0.3s,baz=30,slow=13,SNR=7.8						
MKAR				Sn	Sn	09 27 08.8	-0.9
	0.1nm,0.3s,baz=32,slow=23,SNR=6.9						
MKAR				Lg	Lg	09 27 49.1	
	baz=24,slow=32,SNR=5.9						
	0.4nm,0.4s						
MAKZ	Makanchi	7.73	211	⇓Pn	Pn	09 25 42.6	-0.8
	0.4nm,0.4s						
MAKZ				⇑Sn	Sn	09 27 11.8	+0.2
	1.5nm,0.8s						
MAKZ				⇓Lg	Lg	09 27 56.8	
	2.5nm,1.1s						

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*IDC **04** 09:26:06.6±1.8, 22°.41S×179°.51W, h528^{km}±26^{km}, mb3.0/6, mbtmp4.0/8, Error ellipse: s-maj=30.5km s-min=21.9km az=175.0*

ISC 04 09:26:07.0±1.0**, 22°.44S**±0°.09×**179°.6W**±0°.2**, h550**^{km}**, n21, σ2^{s}.08**/25**, mb3.6**/6**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.19	334	P	P	09 27 36.4	-2.2
	59nm,0.7s,baz=145,slow=16,SNR=39						
MSVF				S	S	09 28 51.3	-2.0
	13nm,0.9s,baz=267,slow=19,SNR=2.1						
GLKZ	Green Lake	6.96	168	P	P	09 27 48.9	-5.5
DZM	Mont Dzumac	12.96	269	P	P	09 28 56.1	+0.5
	2.9nm,0.6s,baz=92,slow=18						
KUZ	Kuaotunu	14.84	195	P	P	09 29 13.2	-1.4
MXZ	Matakaoa Point	15.19	186	P	P	09 29 18.2	0.0
ETAZ	East Tamaki Re	15.23	197	P	P	09 29 18.1	-0.6
MKAZ	Moumakai	15.31	196	P	P	09 29 18.4	-1.2
AWAZ	Awhitu Peninsu	15.42	198	P	P	09 29 19.8	-0.7
HAZ	Te Kaha	15.44	188	P	P	09 29 20.0	-0.8
HAZ				S	S	09 31 58.0	-1.8
PKGZ	Pakihiroa	15.51	187	P	P	09 29 20.3	-1.3
RUGZ	Raukumara Rang	15.66	188	P	P	09 29 21.1	-2.1
PUZ	Puketiti	15.70	186	P	P	09 29 22.4	-1.0
URZ	Urewera	16.03	190	P	P	09 29 22.5	-4.1
	4.5nm,0.3s,baz=350,slow=3.7,SNR=15						
URZ				S	S	09 32 05.7	-4.0
	6.3nm,0.8s,baz=31,slow=19,SNR=2.1						
URZ	Urewera	16.03	190	P	P	09 29 22.4	-4.3
URZ				S	S	09 32 08.6	-1.0
MWZ	Matawai	16.04	188	P	P	09 29 24.6	-2.3
MWZ				S	S	09 32 08.6	-1.4
STKA	Stephens Creek	35.66	246	P	P	09 32 20.4	+1.1
	1.3nm,0.6s,baz=87,slow=15,SNR=4.7						
	1.3nm,0.6s						
ASAR	Alice Springs	42.69	259	P	P	09 33 17.6	+1.6
	1.8nm,0.7s,baz=96,slow=7.6,SNR=20						
	1.8nm,0.7s						
WRA	Warramunga Arr	42.92	264	P	P	09 33 19.2	+1.3
	0.8nm,0.6s,baz=94,slow=7.9,SNR=8.8						
	0.8nm,0.6s						
VNDA	Vanda	55.87	185	P	P	09 34 53.3	+1.1
	0.5nm,0.6s,baz=338,slow=5.4,SNR=2.1						
	0.5nm,0.6s						
QSPA	South Pole Qui	67.64	180	P	P	09 36 11.0	+1.8
	2.5nm,0.7s,baz=327,slow=0.6,SNR=23						
	2.5nm,0.7s						
TXAR	Lajitas Array	89.32	58	P	P	09 38 06.8	+1.4
	0.7nm,0.9s,baz=257,slow=4.0,SNR=5.4						
	0.7nm,0.9s						

STR 04 09:29:54.9±0.5**, 43°N**±2°×°±°**, h0**^{km}**, MLv2.0**/11**, Error ellipse: s-maj=0.0km s-min=0.0km az=69.7, preliminary, Near south coast of France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FLAF	Flassans-sur-I	0.42	34	Pg	Pg	09 30 03.0	+0.1
FLAF				Sg	Sg	09 30 07.4	-0.9
ARTF	Artigues	0.56	350	Pg	Pg	09 30 05.5	-0.2
ARTF				Sg	Sg	09 30 12.0	-0.9
TRIGF	Trigance	0.79	26	Pg	Pg	09 30 09.9	-0.1
TRIGF				Sg	Sg	09 30 20.9	+0.7
BSTF	la Bastide-des	0.87	346	Pg	Pg	09 30 10.4	-1.2
BSTF				Pn	Pb	09 30 12.6	-0.3
BLAF	les Blancs	0.92	5	Pg	Pg	09 30 12.7	+0.2
BLAF				Pn	Pn	09 30 14.5	-0.6
BLAF				Sg	Sg	09 30 25.1	+0.6
MLYF	Mely	0.96	353	Pn	Pn	09 30 15.2	-0.5
RUSF	Rustrel	0.96	340	Pg	Pg	09 30 13.7	+0.3
RUSF				Sg	Sg	09 30 26.3	+0.4
SALSA	La sagne	1.01	33	Pn	Pn	09 30 16.0	-0.5
SALSA				Sg	Sb	09 30 28.4	-0.7
CALF	Calern	1.01	45	Pg	Pb	09 30 15.1	-0.3
CALF				Sg	Sg	09 30 28.3	+0.9
SAUF	chteau de Sau	1.08	326	Pn	Pn	09 30 17.4	0.0
SAUF				Sg	Sb	09 30 31.3	0.0
OGDI	Digne	1.10	14	Pg	Pb	09 30 16.8	-0.2
OGDI				Sg	Sg	09 30 30.8	+0.4
MVIF	Mont Vial	1.23	45	Pg	Pb	09 30 19.2	0.0
MVIF				Sg	Sb	09 30 36.2	+0.5
TURF	col de Turini	1.41	48	Pn	Pb	09 30 22.3	0.0
TURF				Sg	Sg	09 30 40.4	0.0
JAUF	Jausiers	1.51	23	Pn	Pg	09 30 23.7	-0.2
JAUF				Sg	Sn	09 30 44.0	+0.1
SURF	Saint Ours	1.58	23	Pg	Pg	09 30 25.2	0.0
SURF				Sn	Sn	09 30 45.1	-0.5
ENR	Entracque	1.60	42	Pn	Pb	09 30 25.3	-0.2

STR 04 09:30:20.5±1.6**, 45°N**±6°×°±°**, h0**^{km}**, MLv1.1**/6**, Error ellipse: s-maj=0.0km s-min=0.0km az=122.0, preliminary, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRN	Grenoble	0.13	96	Pg	Pg	09 30 23.4	+0.4
GRN				Sg	Sg	09 30 24.2	-0.3
ORIF	Oris-en-Rattie	0.40	147	Pg	Pg	09 30 28.6	+0.3
ORIF				Sg	Sg	09 30 33.9	+0.5

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*SOME **04** 09:30:49.7, 44°.65N×82°.15E, h20^{km}*

*NNC **04** 09:30:51.8±1.5, 44°.66N×82°.03E, h0^{km}, mb3.7, mpv3.5, Error ellipse: s-maj=17.6km s-min=4.2km az=122.0, Suspected Mining explosion.*

ISC 04 09:30:48.5±1.7**, 44°.60N**±0°.07×**82°.24E**±0°.09**, h0**^{km}**, n13, σ0^{s}.45**/20**, 5C-1D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	Jarkent	1.78	262	P	Pb	09 31 22.1	+0.1
	11nm,0.2s						
DJR				S	Sg	09 31 46.0	+0.4
	20nm,0.5s						
DJR	Jarkent	1.78	262	eP	Pb	09 31 22.1	+0.1
	11nm,0.2s						
DJR				eS	Sg	09 31 46.0	+0.4
	20nm,0.5s						
MK31	Makanchi Array	2.19	1	⇑Pn	Pb	09 31 29.2	+0.1
	5.3nm,0.3s,baz=186,slow=14,SNR=439						
MK31				⇑Sn	Sb	09 31 57.1	+0.3
	6.8nm,0.5s,baz=189,slow=27,SNR=11						
KNOS	Konyrlen	2.21	265	Pg	Pb	09 31 29.0	-0.4
KNOS				Lg	Lg	09 31 57.5	
	33nm,0.2s						
MAKZ	Makanchi	2.22	355	⇑Pn	Pb	09 31 29.0	-0.4
	3.9nm,0.3s						
MAKZ				⇓Sn	Sb	09 31 57.1	-0.4
	12nm,0.3s						
PDGK	Podgornoye	2.36	238	⇑Pn	Pb	09 31 31.6	-0.4
	4.8nm,0.5s						
PDGK				⇑Sn	Sb	09 32 01.8	+0.1
	7.4nm,0.5s						
SHLS	Shalkode	2.48	235	Pg	Pn	09 31 30.7	+0.5
	21nm,0.2s						
SHLS				Lg	Lg	09 32 00.2	
	22nm,0.3s						
SHLS	Shalkode	2.48	235	eP	Pn	09 31 30.7	+0.5
	21nm,0.2s						
SHLS				eS	Sn	09 32 00.2	-1.0
	22nm,0.3s						
UZB	Uzynbulak	2.75	239	Pg	Pb	09 31 38.6	0.0
	7.4nm,0.3s						
UZB				Lg	Lg	09 32 13.5	
	5.4nm,0.5s						
BLB	Baldybastay	2.75	261	Pg	Pb	09 31 37.8	-0.8
	22nm,0.2s						
BLB				Lg	Lg	09 32 12.7	
	14nm,0.2s						
TDK	Taldyqorghan	2.76	280	eP	Pb	09 31 38.4	-0.3
	44nm,0.1s						
TDK				eS	Sb	09 32 13.4	+0.3
	67nm,0.3s						
KPKS	Kokpek	2.81	247	Pg	Pb	09 31 39.1	-0.4
	5.6nm,0.2s						
KPKS				Lg	Lg	09 32 14.8	
	12nm,0.4s						
SATY	Saty	3.17	242	Pg	Pb	09 31 45.8	-0.1
	2.5nm,0.2s						
SATY				Lg	Lg	09 32 26.2	
	12nm,0.3s						

DJA 04 09:32:24.3±0.9**, 0°N**±5°×**9°8E**±°**, h26**^{km}±4^{km}**, M3.9**/11**, mb3.8**/2**, MLv3.9**/11**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.89	358	P	Pn	09 32 42.1	+1.0
GSI				S	Sb	09 32 50.2	-2.4
MNSI	Mandailing Nat	2.02	79	P	Pn	09 32 56.8	+0.2
PPI	Padang Panjang	2.93	107	P	Pn	09 33 10.0	+0.8
PPI				S	Sn	09 33 43.0	-0.5
MLSI	Meulaboh, Aceh	4.01	343	P	Pn	09 33 24.2	+0.1
MLSI				S	Sn	09 34 09.9	-0.5
BSI	Banda Aceh	5.55	336	P	Pn	09 33 44.2	-1.1
	0.1nm12nm,1.0s						

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*GII **04** 09:33:56.5±0.0, 26°.151N±0°.003×33°.052E±0°.001, h8^{km}, Mws3.8/4, confirmed*

*HLW **04** 09:34:06.4, 26°.83N×33°.00E, h20^{km}±1^{km}, Md3.5, Ml3.5*

*SGS **04** 09:34:07.6, 26°.92N×33°.18E, h6^{km}, Ml2.8*

ISC 04 09:34:04.5±1.1**, 26°.84N**±0°.04×**33°.01E**±0°.05**, h10**^{km}**, n53, σ1^{s}.15**/55**, Egypt**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HHRG	Al Ghardaqah	0.63	53	P	Pg	09 34 18.1	+1.5
HHRG				S	Sg	09 34 26.4	+1.5
NSFG	Safaga	0.84	95	P	Pg	09 34 22.3	+1.7
ASUT		1.40	294	P	Pn	09 34 29.8	-0.3
TR1	Tor 1	1.43	36	P	Pn	09 34 30.1	-0.5
GRB	Gharib	1.44	352	P	Pn	09 34 30.1	-0.5
TR2	Tor 2	1.66	22	P	Pn	09 34 33.4	-0.3
HRDS	Abu Rudays	1.88	8	P	Pn	09 34 36.7	0.0
HKAT	Jabal Katrina	1.89	27	P	Pn	09 34 36.7	-0.3
NEDF	New Edfo	1.95	182	P	Pn	09 34 37.5	-0.1
NADB	Abo Dabab	2.01	138	P	Pn	09 34 38.9	+0.4
NBNS	Bani Suef	2.33	320	P	Pn	09 34 43.6	+0.7
HDHB	Dhahab	2.35	37	P	Pn	09 34 43.4	+0.2
KRABS	KRABS	2.36	57	S	Sn	09 35 09.7	-2.5
KRABS	KRABS	2.36	57	P	Pn	09 34 42.8	-0.4
TAYS	Tayyib Ism	2.37	44	P	Pn	09 34 43.1	-0.4
TAYS				S	Sn	09 35 10.5	-2.1
MWLHS	Almuwaylih	2.41	67	P	Pn	09 34 43.8	-0.1
AYUS	`Aynunah	2.42	56	P	Pn	09 34 43.6	-0.4
AYUS	`Aynunah	2.42	56	S	Sn	09 35 11.3	-2.3
BDAS	Al Bad`	2.44	49	P	Pn	09 34 44.4	0.0
ZNM	Zenema	2.53	357	P	Pn	09 34 46.2	+0.7
NUB	Nuweibaa	2.62	33	P	Pn	09 34 46.8	0.0
HAQS	Haql	2.77	37	P	Pn	09 34 49.6	+0.6
HAQS	Haql	2.77	37	S	Sn	09 35 22.2	-0.3
HBST	Basata	2.81	32	P	Pn	09 34 50.2	+0.7
WTBKS	WTBKS	2.86	64	S	Sn	09 35 22.1	-2.8
WTBKS	WTBKS	2.86	64	P	Pn	09 34 51.4	+1.1
DESA	DESA	2.89	76	P	Pn	09 34 51.0	+0.4
NMAN	Kulet Umm Tihe	2.92	179	P	Pn	09 34 51.0	+0.1
AKUR	Kurkur	2.94	184	P	Pn	09 34 50.2	-1.1
JMOS	Jabal al Moall	2.97	38	P	Pn	09 34 52.6	+0.9
NAHD	NAHD	3.04	184	P	Pn	09 34 52.5	-0.1
HAGS	Hagol	3.04	143	P	Pn	09 34 53.0	+0.4
NNMR	New North Mara	3.12	188	P	Pn	09 34 54.0	+0.3
BRNS	Bernies	3.14	161	P	Pn	09 34 54.5	+0.5
HHAG	Hagoal	3.20	346	P	Pn	09 34 55.8	+0.9
KOT	Kottamia	3.24	342	P	Pn	09 34 56.2	+0.7
RYAN	Fayoum	3.29	313	P	Pn	09 34 56.5	+0.4
EIL	Elat	3.30	31	P	Pn	09 34 56.4	+0.2
EIL	Elat	3.30	31	S	Sb	09 35 42.2	-1.1
MBRI	Mt Berech	3.39	29	P	Pn	09 34 58.1	+0.6
MBRI	Mt Berech	3.39	29	S	Sn	09 35 38.7	+0.9
TBKS	Tabuk	3.42	66	P	Pn	09 34 59.8	+1.9
KRMI	Paran Flat	3.59	24	P	Pn	09 35 01.2	+0.9
KRMI	Paran Flat	3.59	24	S	Sb	09 35 50.9	-1.0
HRFI	Mount Harif	3.65	29	P	Pn	09 35 01.4	+0.4
HRFI	Mount Harif	3.65	29	S	Sb	09 35 50.9	-2.5
PRNI	Paran	3.91	26	P	Pn	09 35 06.4	+1.7
PRNI	Paran	3.91	26	S	Sb	09 35 58.9	-2.1
HMSM	Jabal Masmas	4.07	195	P	Pn	09 35 07.3	+0.5
ZFRI	Zfri	4.16	27	P	Pn	09 35 09.8	+1.8
KZIT	Kziot	4.23	16	P	Pn	09 35 10.0	+1.0
MSBI	Mazada	4.91	24	P	Pn	09 35 19.0	+0.8
GHAJ	Ghor Haditha	4.98	26	P	Pn	09 35 20.7	+1.4

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*NEIC **04** 09:38:04.4±1.8, 17°.48S±0°.07×171°.8W±0°.1, h10^{km}, mb4.8/59, Error ellipse: s-maj=18.1km s-min=10.0km az=64.0*

*IDC **04** 09:38:12.5±5.1, 17°.73S×172°.33W, h54^{km}±44^{km}, mb3.9/14, mbtmp4.2/15, ML5.7/1, MS4.1/2, Error ellipse: s-maj=25.3km s-min=16.7km az=120.0*

ISC 04 09:38:05.5±0.4**, 17°.43S**±0°.08×**171°.95W**±0°.07**, h15**^{km}**, n124, σ2^{s}.05**/122**, mb4.8**/43**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	2.52	131	Pn	Pn	09 38 42.5	-3.5
NIUE	Niue	2.52	131	P	Pn	09 38 42.7	-3.3
NIUE				S	Sn	09 39 09.2	-7.3
AFI	Afiamalu	3.50	3	Pn	Pn	09 38 59.8	+0.2
AFI	Afiamalu	3.50	3	P	Pn	09 38 59.5	-0.1
FUTU	Fugatoga	6.70	297	Pn	Pn	09 39 41.4	-2.1
MSVF	Nonsavu	9.54	267	Pn	Pn	09 40 25.7	+3.1
MSVF	Nonsavu	9.54	267	P	Pn	09 40 24.2	+1.6
	2.6nm,0.3s,baz=113,slow=22,SNR=13						
MSVF				LR	LR	09 43 34.4	
	comp=Z,1µm,19.5s,baz=116,slow=35						
	36nm,0.8s						
RAR	Rarotonga	12.09	110	P	Pn	09 40 55.6	-1.8
	39nm,0.7s,baz=275,slow=7.1,SNR=8.8						
RAO	Raoul Island	12.98	204	LR	LR	09 45 53.5	
	comp=Z,28nm,18.8s,baz=90,slow=37						
PINNC	Pines Island,	20.03	252	P	P	09 42 38.3	+0.2
PINNC				IAmb	IAmb	09 43 04.5	
	comp=Z,80nm,1.3s						
DZM	Mont Dzumac	20.85	254	P	P	09 42 47.0	-0.1
DZM				IAmb	IAmb	09 42 54.1	
	comp=Z,38nm,1.3s						
DZM	Mont Dzumac	20.85	254	P	P	09 42 44.5	-2.6
	comp=Z,6.3nm,0.7s,baz=78,slow=16,SNR=7.5						
DZM				LR	LR	09 49 30.6	
	comp=Z,446nm,19.1s,baz=94,slow=33						
	comp=Z,6.3nm,0.7s						
MXZ	Matakaoa Point	21.81	201	P	P	09 43 00.8	+3.6
GRZ	Great Barrier	21.82	208	P	P	09 42 57.7	+0.5
OUZ	Omahuta	21.90	213	P	P	09 42 57.4	-0.8
KUZ	Kuaotunu	22.11	207	P	P	09 43 01.9	+1.5
HAZ	Te Kaha	22.17	202	P	P	09 43 06.2	+5.2
PUZ	Puketiti	22.29	201	P	P	09 43 05.0	+2.7
TWGZ	Tauwhareparae	22.48	201	P	P	09 43 09.9	+5.6
OPRZ	Ohinepanea	22.71	204	P	P	09 43 09.4	+2.7
TKGZ	Te Karaka	22.76	201	P	P	09 43 12.5	+5.3
MWZ	Matawai	22.77	202	P	P	09 43 12.2	+4.7
URZ	Urewera	22.86	203	P	P	09 43 09.5	+1.2
KMRZ	Kaimai	22.95	205	P	P	09 43 12.9	+3.5
RAGZ	Rawiri	22.96	202	P	P	09 43 14.1	+4.7
OMRZ	Omania	23.00	204	P	P	09 43 13.5	+3.6
RIGZ	Rimuhau	23.03	201	P	P	09 43 14.8	+4.7
TOZ	Tahuroa Road	23.04	206	P	P	09 43 14.0	+3.8
SNGZ	Shannon Statio	23.24	202	P	P	09 43 14.4	+2.1
RAHZ	Arahi	23.45	202	P	P	09 43 17.3	+2.9
MTHZ	Maungataniwha	23.48	202	P	P	09 43 16.5	+1.7
TLZ	Tolley Road	23.53	205	P	P	09 43 19.8	+4.6
NMHZ	Naumai	23.71	202	P	P	09 43 19.0	+2.0
BKZ	Black Stump Fm	23.89	203	P	P	09 43 18.3	-0.4
RATZ	Rangitukua	23.90	204	P	P	09 43 20.6	+1.8
HIZ	Hauiti	23.97	206	P	P	09 43 22.4	+3.1
TMVZ	Te Maari	24.14	204	P	P	09 43 23.1	+2.0
ETVZ	East Tongariro	24.15	204	P	P	09 43 23.0	+1.7
OTVZ	Oturere	24.20	204	P	P	09 43 24.0	+2.3
WNVZ	Wahianoa	24.36	204	P	P	09 43 25.1	+1.9
PXZ	Pawanui	24.52	201	P	P	09 43 28.3	+3.9
VRZ	Vera Road	24.52	206	P	P	09 43 27.0	+2.5
TSZ	Takapari Road	24.86	202	P	P	09 43 29.0	+1.4
ARMA	Armidale	35.55	242	P	P	09 45 00.6	-1.9
ARMA				IAmb	IAmb	09 45 26.6	
	comp=Z,31nm,1.2s						
CTAO	Charters Tower	39.59	259	P	P	09 45 34.5	-2.2
CTAO				IAmb	IAmb	09 45 54.8	
	comp=Z,17nm,1.2s						
TOO	Toolangi	42.31	233	P	P	09 45 58.5	-0.4
TAU	Tasmania Unive	42.82	225	P	P	09 46 02.8	-0.1
COEN	Coen	43.27	268	P	P	09 46 06.0	-1.0
STKA	Stephens Creek	44.28	242	P	P	09 46 13.7	-1.1
STKA	Stephens Creek	44.28	242	P	P	09 46 12.3	-2.6
	comp=Z,4.6nm,0.9s,baz=93,slow=10,SNR=8.7						
	comp=Z,4.6nm,0.9s						
BBOO	Buckleboo	49.04	241		P	09 46 51.0	-1.2
WR8	Warramunga Arr	50.62	258		P	09 47 03.1	-1.2
WR8				IAmb	IAmb	09 47 05.9	
	comp=Z,21nm,1.2s						
WB0	Warramunga Arr	50.74	258		P	09 47 04.2	-1.1
WRAB	Tennant Creek	50.76	258	P	P	09 47 04.5	-1.0
WRAB				IAmb	IAmb	09 47 05.9	

	comp=Z,15nm,0.7s						
WRA	Warramunga Arr	50.77	258	P	P	09 47 03.8	-1.7
WRA	Warramunga Arr	50.77	258	P	P	09 47 03.8	-1.7
	comp=Z,11nm,0.6s,baz=97,slow=7.7,SNR=112						
WRA				PcP	PcP	09 48 23.1	+0.6
	comp=Z,0.6nm,0.5s,baz=93,slow=3.2,SNR=1.4						
	comp=Z,11nm,0.6s						
AS31	Alice Springs	50.84	253		P	09 47 05.2	-0.9
AS31				IAmb	IAmb	09 47 07.5	
	comp=Z,16nm,0.7s						
ASAR	Alice Springs	50.84	253		P	09 47 05.5	-0.6
ASAR	Alice Springs	50.84	253	P	P	09 47 04.8	-1.2
	comp=Z,53nm,0.7s,baz=91,slow=8.4,SNR=806						
ASAR				PcP	PcP	09 48 23.1	+0.3
	comp=Z,1.4nm,0.6s,baz=100,slow=7.1,SNR=0.7						
FORT	Forrest	55.77	244	P	P	09 47 41.7	-0.4
KNRA	Kununurra	56.66	262	P	P	09 47 49.7	+1.0
FITZ	Fitzroy Crossi	59.17	259	P	P	09 48 06.6	+0.3
SBA	Scott Base	61.35	185		P	09 48 21.7	+1.4
SBA				IAmb	IAmb	09 48 32.8	
	comp=Z,11nm,1.2s						
VNDA	Vanda	61.52	186	P	P	09 48 20.5	-0.9
VNDA	Vanda	61.52	186	P	P	09 48 21.6	+0.3
	comp=Z,0.7nm,0.6s,baz=15,slow=10.0,SNR=3.3						
	comp=Z,0.7nm,0.6s						
PSA00	Pilbara Seismi	63.98	254	P	P	09 48 37.7	-1.0
MBWA	Marble Bar	64.15	255	P	P	09 48 39.1	-0.8
LUWI	Luwuk	66.14	277	P	P	09 48 52.9	0.0
MORW	Morawa	66.30	245	P	P	09 48 51.6	-2.1
TOLI2	Tolitoli	68.71	278	P	P	09 49 07.5	-1.7
TOLI2				IAmb	IAmb	09 49 11.9	
	comp=Z,12nm,1.0s						
MJAR	Matsushiro Arr	71.38	319	P	P	09 49 27.4	+2.2
	comp=Z,1.0nm,0.6s,baz=154,slow=3.9,SNR=4.9						
	comp=Z,1.0nm,0.6s						
JAGI	Jajag, Banyuwa	72.22	267	P	P	09 49 30.9	+0.3
QSPA	South Pole Qui	72.63	180	P	P	09 49 32.5	+0.2
	comp=Z,4.4nm,1.0s,baz=18,slow=0.9,SNR=17						
	comp=Z,4.4nm,1.0s						
NVAR	Mina Array Bea	74.92	41	P	P	09 49 44.1	-2.1
NVAR	Mina Array Bea	74.92	41	P	P	09 49 50.5	+4.2
	comp=Z,1.0nm,0.8s,baz=223,slow=9.9,SNR=7.1						
	comp=Z,1.0nm,0.8s						
PETK	Petropavlovsk-	74.98	342	P	P	09 49 45.4	-0.6
PETK	Petropavlovsk-	74.98	342	P	P	09 49 49.2	+3.2
	comp=Z,2.4nm,1.0s,baz=159,slow=6.2,SNR=4.3						
	comp=Z,2.4nm,1.0s						
NV11	Mina Array Sit	75.01	41	P	P	09 49 46.6	-0.1
ACHA	Angle Creek He	76.61	9	P	P	09 49 55.8	+0.5
ACHA				IAmb	IAmb	09 50 00.5	
	comp=Z,11nm,1.4s						
P18K	Big Mountain,	77.76	9		P	09 50 00.9	-0.8
P18K				IAmb	IAmb	09 50 06.5	
	comp=Z,23nm,1.4s						
WUAZ	Wupatki	77.85	47	P	P	09 50 00.2	-2.7
HPIG		77.96	57	P	P	09 50 01.9	-1.9
HPIG				IAmb	IAmb	09 50 10.2	
	comp=Z,7.9nm,1.2s						
DUN6	Lazy B Ranch	77.97	50	P	P	09 50 02.2	-1.4
O18K	Koktuh Hills	78.21	9	P	P	09 50 04.7	+0.5
O18K				IAmb	IAmb	09 50 10.2	
	comp=Z,15nm,1.3s						
M14K	Bethel	78.32	5	P	P	09 50 05.2	+0.6
CBB	Campbell River	78.72	29	P	P	09 50 05.2	-2.0
CBB				IAmb	IAmb	09 50 15.9	
	comp=Z,12nm,1.2s						
VHRN	Van Horn	80.22	53		P	09 50 15.4	-0.6
VHRN				IAmb	IAmb	09 50 22.6	
	comp=Z,10nm,1.4s						
L18K	Granite Mounta	80.30	7		P	09 50 15.4	-0.1
FID	Port Fidalgo	80.56	12	P	P	09 50 16.4	-0.6
FID				IAmb	IAmb	09 50 26.4	
	comp=Z,9.9nm,1.0s						
TX31	Lajitas Ar. Si	80.60	55		P	09 50 17.4	-0.6
TX31				IAmb	IAmb	09 50 24.9	
	comp=Z,10nm,1.4s						
TXAR	Lajitas Array	80.60	55	P	P	09 50 23.2	+5.2
	comp=Z,2.0nm,1.1s,baz=216,slow=6.2,SNR=14						
	comp=Z,2.0nm,1.1s						
SKT	Skwentna	80.79	10	P	P	09 50 18.1	-0.1
SKT				IAmb	IAmb	09 50 22.4	
	comp=Z,7.1nm,1.3s						
M22K	Willow	80.81	10	P	P	09 50 19.1	+0.9
M22K				IAmb	IAmb	09 50 34.0	
	comp=Z,11nm,1.0s						
ANMO	Albuquerque	81.05	49	P	P	09 50 18.9	-1.5
ANMO	Albuquerque	81.05	49	P	P	09 50 17.9	-2.5
ANMO				IAmb	IAmb	09 50 26.9	
	comp=Z,3.4nm,1.2s						
ANMO	Albuquerque	81.05	49	P	P	09 50 18.0	-2.5
ANMO				IAmb	IAmb	09 50 26.9	
	comp=Z,3.0nm,1.1s						
PV21	Cone Mtn., Par	81.07	45	P	P	09 50 19.4	-1.1
MDJ	Mudanjiang	81.47	322	P	P	09 50 21.3	-0.9
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.8s						
MSO	Missoula	82.48	36	P	P	09 50 26.8	-0.8
NJ2	Nanjing	82.49	307	eP	P	09 50 29.4	+1.6
NJ2				pmax	pmax		
	comp=Z,32nm,0.7s						
PDAR	Pinedale Array	82.86	41	P	P	09 50 32.1	+2.4
	comp=Z,0.3nm,0.5s,baz=180,slow=3.0,SNR=4.5						
	comp=Z,0.3nm,0.5s						
M27K	Edge Creek, AK	83.00	14	P	P	09 50 30.5	+0.6
M27K				IAmb	IAmb	09 50 36.5	
	comp=Z,6.0nm,1.1s						
G18K	Tagagawik	83.68	5	P	P	09 50 33.4	+0.2
G18K				IAmb	IAmb	09 50 38.7	
	comp=Z,11nm,1.1s						
WRH	Wood River Hil	83.69	10	P	P	09 50 32.7	-0.5
WRH				IAmb	IAmb	09 50 38.4	
	comp=Z,11nm,1.0s						
I21K	Tanana	83.75	8	P	P	09 50 33.9	+0.3
I21K				IAmb	IAmb	09 50 38.7	
	comp=Z,7.9nm,1.2s						
YNE	Yellowstone No	83.76	39	P	P	09 50 33.2	-1.2
CCB	Clear Creek Bu	83.89	10	P	P	09 50 34.9	+0.6
CCB				IAmb	IAmb	09 50 39.2	
	comp=Z,10nm,1.1s						
SCRK	Sand Creek	83.99	12	P	P	09 50 35.5	+0.5
SCRK				IAmb	IAmb	09 50 39.6	
	comp=Z,6.4nm,1.4s						
H21K	Melozitna Rive	84.09	8		P	09 50 36.2	+0.8
H21K				IAmb	IAmb	09 50 41.2	
	comp=Z,7.9nm,1.2s						
ILAR	Eielson Array	84.17	11	P	P	09 50 37.4	+1.7
	comp=Z,1.0nm,0.9s,baz=210,slow=6.3,SNR=8.2						
	comp=Z,1.0nm,0.9s						
MAW	Mawson	86.32	198	P	P	09 50 46.5	-0.1
	comp=Z,2.7nm,0.7s,baz=134,slow=9.6,SNR=6.1						
	comp=Z,2.7nm,0.7s						
BMAR	Burnt Mountain	86.98	10		P	09 50 50.4	+0.7
H29M	Whitestone	87.11	13	P	P	09 50 49.9	-0.5
H29M				IAmb	IAmb	09 50 56.1	
	comp=Z,6.1nm,0.9s						
SNAA	Sanae	90.81	177	P	P	09 51 07.8	-0.2
SNAA				IAmb	IAmb	09 51 10.7	
	comp=Z,3.9nm,1.2s						
SNAA	Sanae	90.81	177	P	P	09 51 07.6	-0.4
	comp=Z,0.8nm,0.6s,baz=188,slow=21,SNR=6.2						
	comp=Z,0.8nm,0.6s						
YKA	Yellowknife Ar	91.41	23	P	P	09 51 14.4	+3.8
	comp=Z,0.7nm,1.1s,baz=228,slow=4.8,SNR=5.9						
	comp=Z,0.7nm,1.1s						
PB05	IPOC Station P	93.69	115	P	P	09 51 21.0	-1.4
PB05				IAmb	IAmb	09 51 23.5	
	comp=Z,7.7nm,1.1s						
LZH	Lanzhou	95.54	306	eP	P	09 51 30.1	-0.4
LZH				sP	sP	09 51 37.7	+2.9
LZH				pmax	pmax		
	comp=Z,100nm,1.9s						
CLL	Collm	145.97	354	i PKiKP	PKiKP	09 57 47.9	-0.1
	comp=Z,17nm,1.0s						
BRG	Berggiesshubel	146.31	353	ePKP	PKiKP	09 57 49.8	+1.1
BRG				Amp		09 57 51.5	
	comp=Z,7.2nm,1.1s						
MORC	Moravsky Berou	146.84	349	ePKP	PKiKP	09 57 51.2	+1.3
VRAC	Vranov	147.46	350	ePKP	PKiKP	09 57 52.6	+1.5
KRUC	Moravsky	147.73	350	ePKP	PKPab	09 57 52.9	+1.0
GERES	GERESS Array B	148.33	353	PKPbc	PKiKP	09 57 54.2	+1.1
	comp=Z,0.8nm,0.7s,baz=0.0,slow=2.7,SNR=6.9						

BJI **04** 09:46:15.2,22°.78N×121°.65E,h10^{km},mB5.6/73,mb5.4/82,ML5.7/8,Ms5.8/98,Ms7 5.6/95

MOS **04** 09:46:16.2±1.0,22°.83N×121°.64E,h12^{km},mb5.9/90,MS5.2/53,Error ellipse: s-maj=5.5km s-min=3.4km az=110.5

NEIC **04** 09:46:17.5,22°.87N×121°.69E,h4^{km}

NEIC **04** 09:46:18.4,22°.87N×121°.66E,h12^{km}

NEIC **04** 09:46:18.4,22°.97N×121°.66E,h12^{km},Moment Tensor Solution. Duration: 3^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}2.48; $M_{\theta\theta}$-0.16; $M_{\phi\phi}$-2.32; $M_{r\theta}$0.41; $M_{\theta\phi}$-0.77; $M_{\phi r}$-0.70; Fault plane solution: $M_0$2.65000×10^{17} NP1:ϕ_s30.56000°,δ40.38000°,λ110.06000°. NP2:ϕ_s184.94000°,δ52.52000°,λ73.73000°. Principal axes: T 2.6784, Plg76.0000°, Azm42.0000°; N -0.0502, Plg13.0000°, Azm195.0000°; P -2.6282, Plg6.0000°, Azm286.0000°;

ISC-PP **04** 09:46:18,22°.90N×121°.69E,h9^{km},Mwppsm6.0,Moment Tensor Solution. s46 Moment tensor: Scale 10^{18}Nm; M_{rr}0.51±.07; $M_{\theta\theta}$0.69±.15; $M_{\phi\phi}$-0.18±.09; $M_{r\theta}$-0.21±.12; $M_{\theta\phi}$0.04±.10; $M_{\phi r}$-0.27±.08; Fault plane solution: $M_0$1.33000×10^{18} NP1:ϕ_s237.10000°,δ70.40000°,λ157.40000°. NP2:ϕ_s335.00000°,δ68.80000°,λ21.00000°.

ASIES **04** 09:46:19.0,22°.84N×121°.61E,h15^{km},ML5.9,Mw5.5,Moment Tensor Solution. Moment tensor: Scale 10^{24}Nm; M_{rr}1.77; $M_{\theta\theta}$-0.30; $M_{\phi\phi}$-2.27; $M_{r\theta}$0.13; $M_{\theta\phi}$-0.54; $M_{\phi r}$0.26; Fault plane solution: $M_0$2.13536×10^{24} NP1:ϕ_s192.51000°,δ41.20000°,λ87.42000°. NP2:ϕ_s15.94000°,δ48.85000°,λ92.26000°. Principal axes: T Plg85.8120°, Azm308.3470°; N Plg1.6990°, Azm194.4520°; P Plg3.8270°, Azm104.3380°;

NIED **04** 09:46:18.3,22°.81N×121°.60E,h32^{km},MW5.4,Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M_{rr}1.18; $M_{\theta\theta}$0.34; $M_{\phi\phi}$-1.52; $M_{r\theta}$0.20; $M_{\theta\phi}$0.14; $M_{\phi r}$0.60; Fault plane solution: $M_0$1.50000×10^{17} NP1:ϕ_s161.00000°,δ35.00000°,λ67.00000°. NP2:ϕ_s8.00000°,δ58.00000°,λ105.00000°.

NEIC **04** 09:46:18.4±2.0,22°.90N±0°.06×121°.69E±0°.05,h10^{km}±1^{km},mb5.8/528,Ms_20 5.1/701,Mwr5.5/16,Mww5.5/38 Error ellipse: s-maj=9.8km s-min=7.2km az=194.0,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.99; $M_{\theta\theta}$0.21; $M_{\phi\phi}$-2.19; $M_{r\theta}$-0.35; $M_{\theta\phi}$-0.57; $M_{\phi r}$0.49; Fault plane solution: $M_0$2.26000×10^{17} NP1:ϕ_s359.48000°,δ51.81000°,λ72.38000°. NP2:ϕ_s206.67000°,δ41.49000°,λ111.04000°. Principal axes: T 2.1332, Plg75.0000°, Azm212.0000°; N 0.2286, Plg14.0000°, Azm11.0000°; P -2.3619, Plg5.0000°, Azm102.0000°;

IDC **04** 09:46:18.4±2.0,22°.75N×121°.63E,h17^{km}±12^{km},mb5.1/30,mbtmp5.2/35,ML4.6/5,MS4.9/76 Error ellipse: s-maj=12.4km s-min=10.4km az=84.0

TAP **04** 09:46:19.0,22°.84N×121°.61E,h15^{km},ML5.9,C

JMA **04** 09:46:18.3±0.1,22°.8N±0°.5×121°.6E±0°.6,h32^{km},MD5.7/18,MW5.6/18,TAIWAN REGION

GCMT **04** 09:46:20.4±0.1,22°.89N±0°.01×121°.61E±0°.01,h13^{km},MW5.6/164,Moment Tensor Solution. s146,c262; s164,c355; Duration: 1^{s}5 Moment tensor: Scale 10^{17} Nm; M_{rr}2.77±.04; $M_{\theta\theta}$-0.01±.03; $M_{\phi\phi}$-2.76±.03; $M_{r\theta}$-0.16±.07; $M_{\theta\phi}$-0.81±.02; $M_{\phi r}$0.94±.07; Best double couple: $M_0$3.03100×10^{17} NP1:ϕ_s204.00000°,δ37.00000°,λ103.00000°. NP2:ϕ_s7.00000°,δ54.00000°,λ80.00000°. Principal axes: T 2.9540, Plg78.0000°, Azm240.0000°; N 0.1530, Plg8.0000°, Azm13.0000°; P -3.1070, Plg8.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 04 09:46:17.9±0.3**,22°.84N**±0°.01×**121°.65E**±0°.02**,h11**^{km}±1^{km}**, h12**^{km}**:pP-P,n2153,**σ1^s**49**/2133**,mb5.7**/452**,MS5.1**/468**, 175C-65D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LDUT	Ludao	0.23	226	eP	Pg	09 46 24.2	+1.5
LDUT				eS	Sg	09 46 27.8	+1.8
EDH	Donghe	0.35	293	⇓iP	Pg	09 46 25.5	+0.7
EDH				S	Sb	09 46 30.5	-1.1
CHKT	Chengkung	0.37	315	⇓iP	Pg	09 46 25.9	+0.6
CHKT				i S	Sg	09 46 30.7	+0.5
CHKH	Chenggong	0.42	326	⇓iP	Pg	09 46 27.1	+0.8
CHKH				i S	Sg	09 46 32.6	+0.7
TTN	Taitung	0.47	260	⇓P	Pb	09 46 27.8	-0.4
TTN				i S	Sb	09 46 34.5	-0.6
ECS	Chishang	0.47	303	⇓iP	Pb	09 46 28.0	-0.2
ECS				i S	Sb	09 46 34.9	-0.4
LONT	Longtian	0.49	278	⇓iP	Pg	09 46 27.5	+0.1
LONT				eS	Sg	09 46 34.2	+0.3
FULB	Fuli	0.49	318	⇓iP	Pg	09 46 27.8	+0.3
FULB				eS	Sg	09 46 34.0	+0.1
ECBN	Changbin	0.51	339	P	Pg	09 46 28.6	+0.7
ECBN				eS	Sg	09 46 35.0	+0.3
EHD	Haiduan	0.52	307	⇓iP	Pg	09 46 28.4	+0.5
EHD				eS	Sg	09 46 34.8	0.0
TWGBT	Beinan	0.53	268	P	Pg	09 46 27.8	-0.4
TWGBT	Beinan	0.53	268	⇓iP	Pg	09 46 28.3	+0.1
TWGBT				S	Sg	09 46 35.3	+0.1
TWG	Pinlang	0.53	268		Pg	09 46 27.5	-0.8
TWG	Pinlang	0.53	268	⇓iP	Pg	09 46 28.2	-0.1
TWG				S	Sg	09 46 35.2	-0.2
EYUL	Yuli	0.59	329	⇑P	Pg	09 46 30.1	+0.6
EYUL				eS	Sg	09 46 37.6	+0.3
TWF1	Yuli	0.61	328	⇑iP	Pg	09 46 29.9	+0.2
TWF1				eS	Sb	09 46 38.5	-0.6
YULB	Yu-li	0.64	330		Pg	09 46 30.2	-0.2
YULB	Yu-li	0.64	330	P	Pg	09 46 29.8	-0.6
YULB	Yu-li	0.64	330	S	Sg	09 46 39.2	+0.4
YULB	Yu-li	0.64	330	⇑P	Pg	09 46 30.7	+0.3
YULB				eS	Sg	09 46 38.8	-0.1
ELDTW	Lidau	0.68	301	⇓eP	Pg	09 46 30.6	-0.5
ECL	Taimali	0.69	250	eP	Pg	09 46 31.5	+0.3
ECL				eS	Sg	09 46 39.5	-0.7
HGSD	Ruisui	0.69	342	⇑iP	Pg	09 46 30.9	-0.2
EHYH	Wanrong	0.71	337	eP	Pg	09 46 31.7	0.0
EHY	Hungye	0.73	336	⇑P	Pg	09 46 32.1	0.0
EHY				eS	Sg	09 46 42.1	+0.4
LAY	Lan-yu	0.80	187	⇓eP	Pg	09 46 32.8	-0.5
LYUB	Lan-yu	0.83	184	⇓eP	Pg	09 46 32.6	-1.3
TAW	Tawu	0.84	236	⇑eP	Pg	09 46 33.9	-0.2
TAW				eS	Sg	09 46 44.2	-1.0
EGFH	Guangfu	0.85	346	eP	Pg	09 46 34.7	+0.3
TAWH	Dawu Township	0.86	235	⇑eP	Pg	09 46 33.8	-0.7
EAST	Anshuo	0.87	239	⇑iP	Pg	09 46 33.8	-0.9
EAST				eS	Sg	09 46 45.2	-0.8
TEGC	Jichi Village	0.88	353	P	Pg	09 46 34.3	-0.5
TEGC				eS	Sg	09 46 45.7	-0.5
STYT	Tauyuan	0.89	292	⇓iP	Pg	09 46 34.5	-0.4
STYT				eS	Sg	09 46 45.8	-0.8
WARBT	Fenglin Townsh	0.91	345	⇑iP	Pg	09 46 34.7	-0.8
TSMG	Majia	0.94	262	⇓eP	Pg	09 46 35.4	-0.6
SSD	Sandimen	0.94	265	⇓P	Pg	09 46 35.2	-0.9
SHUL	Shoufeng	0.95	355	⇑P	Pg	09 46 35.6	-0.6
MASBT	Mashibuluo	0.97	257	⇑iP	Pg	09 46 35.6	-0.9
MASBT				eS	Sg	09 46 47.1	-2.0
ESL	Shilin	0.99	348	⇑iP	Pg	09 46 36.0	-1.0
ESL				eS	Sg	09 46 48.3	-1.7
SLIU	Shizi	1.00	232	⇑eP	Pg	09 46 35.7	-1.4
SGST	Jiashian	1.01	284	⇓iP	Pg	09 46 36.4	-1.0
SGST				S	Sg	09 46 50.2	-0.4
ALS	Alishan	1.03	311	⇓eP	Pg	09 46 37.5	-0.2
TEYL	Yanliau Villag	1.03	357	P	Pg	09 46 37.3	-0.4
TEYL				eS	Sb	09 46 51.6	+0.4
WTP	Ta-pu	1.04	293	⇓iP	Pg	09 46 37.6	-0.3
WTP				S	Sb	09 46 51.6	0.0
TPUB	Ta-pu	1.05	296		Pg	09 46 37.8	-0.3
TPUB	Ta-pu	1.05	296	P	Pg	09 46 37.0	-1.1
TPUB	Ta-pu	1.05	296	⇓iP	Pg	09 46 38.0	-0.1
TPUB				eS	Sg	09 46 50.1	-1.6
SCZT	Fangliau	1.06	244	⇑P	Pg	09 46 37.3	-1.0
SSPT	Xinbi	1.06	251	eP	Pn	09 46 39.8	+1.2
SCST	Cishan	1.07	273	⇓eP	Pg	09 46 38.4	0.0
SCST				eS	Sb	09 46 52.9	+0.6
SGLT	Jiouru	1.08	264	eP	Pg	09 46 38.6	0.0
TSPT	Pingtung City	1.08	262	⇓eP	Pg	09 46 38.6	0.0
CHN1	Nanshi	1.09	289	⇓P	Pg	09 46 39.0	+0.1
CHN1				eS	Sg	09 46 52.9	-0.2
CHN4	Tsaushan	1.10	298	⇓iP	Pg	09 46 38.9	-0.2
CHN4				eS	Sb	09 46 54.0	+0.6
SMST	Manzhou Townsh	1.11	223	eP	Pg	09 46 38.0	-1.2
WHYT	Xinyi Township	1.13	320	⇓P	Pg	09 46 39.4	-0.1
SNST	Tainan City	1.13	290	⇓P	Pg	09 46 39.5	-0.1
SNST				eS	Sb	09 46 54.6	+0.5
TWM1	Shoushan	1.13	270	⇓eP	Pn	09 46 40.3	+0.6
ETM	Tongmen	1.13	353	eP	Pg	09 46 38.3	-1.4
WCKO	Fanlu	1.14	302	⇓eP	Pg	09 46 39.5	-0.2
WCKO				eS	Sn	09 46 55.3	0.0
HWA	Hwalien	1.14	358	eP	Pg	09 46 38.9	-0.8
HWA				eS	Sg	09 46 54.0	-0.6
SSLB	Suanglung	1.14	326		Pg	09 46 38.6	-1.2
SSLB	Suanglung	1.14	326	P	Pg	09 46 38.7	-1.2
SSLB	Suanglung	1.14	326	⇑iP	Pg	09 46 38.8	-1.2
SSLB				eS	Sg	09 46 52.4	-2.4
TWK	Hsinying	1.15	292	⇓eP	Pg	09 46 39.7	-0.4
TWK				eS	Sg	09 46 54.8	-0.3
TSEB	Hengchuen, Pin	1.16	217	P	Pg	09 46 39.4	-0.9
TSEB				eS	Sg	09 46 53.8	-1.6
CHN5	Tsauling	1.17	310	⇓eP	Pg	09 46 40.4	0.0
CHN5				eS	Sb	09 46 56.3	+0.8
HEN	Hengchun	1.18	226	⇑P	Pb	09 46 39.2	-1.1
HEN				eS	Sg	09 46 54.2	-1.8
TWKBT	Hengchun	1.18	221	⇑iP	Pb	09 46 38.9	-1.4
TWKBT				eS	Sg	09 46 53.5	-2.5
TWK1	Hengchun	1.18	222	⇑P	Pb	09 46 39.0	-1.4
OWD	Renai	1.20	339	⇑P	Pg	09 46 39.5	-1.4
CHN3	Shinhua	1.21	282	⇓eP	Pn	09 46 42.2	+1.5
SNJT	Kaohsiung City	1.22	266	eP	Pn	09 46 42.6	+1.8
TWD	Chiawan	1.24	358	eP	Pn	09 46 39.9	-1.2
TWD				eS	Sb	09 46 55.1	-2.2
SMLT	Sun Moon Lake	1.25	327	⇑P	Pb	09 46 41.0	-0.6
SMLT				eS	Sg	09 46 57.1	-1.1
WUSB	Renai	1.25	337	⇑iP	Pb	09 46 40.6	-1.0
KAU	Kaohsiung	1.27	258	eP	Pg	09 46 43.2	+1.0
WLCH	Liuqiu	1.27	248	⇑eP	Pg	09 46 43.7	+1.4
CHN2	Minshiung	1.28	303	⇓eP	Pg	09 46 42.7	+0.1
CHN2				eS	Sg	09 46 59.2	-0.1
TWP	Hsiaoliuchiu	1.29	248	⇑eP	Pg	09 46 43.2	+0.6
TYC	Yuchr	1.29	326	eP	Pn	09 46 41.6	-0.2
TYC				eS	Sg	09 46 59.2	-0.2
SSHA	Shanhua	1.29	284	⇓eP	Pg	09 46 43.0	+0.4
WJS	Zhushan	1.30	319	P	Pn	09 46 42.4	+0.4
WJS				eS	Sn	09 46 59.9	+0.6
WSSB	Gushan	1.30	262	⇑eP	Pg	09 46 42.8	0.0
CHY	Chiayi	1.31	300	⇓eP	Pb	09 46 42.8	+0.4
CHY				eS	Sg	09 46 59.6	-0.4
WGK	Gukeng	1.31	310	⇓eP	Pg	09 46 43.3	+0.2
WGK				eS	Sn	09 47 00.4	+0.8
ETL	Fush Village	1.32	359	eP	Pn	09 46 40.9	-1.4
TAI1	Yung-k'ang	1.33	279	eP	Pg	09 46 43.4	0.0
WDLH	Douliu	1.33	310	⇓eP	Pg	09 46 43.6	+0.2
NACB	Ninganchiao	1.33	358		Pn	09 46 40.9	-1.5
NACB	Ninganchiao	1.33	358	P	Pn	09 46 42.4	0.0
NACB	Ninganchiao	1.33	358	⇑P	Pn	09 46 41.0	-1.4
WPL	Puli Township	1.33	332	eP	Pn	09 46 42.4	0.0
WDL	Douliou City	1.35	311	eP	Pg	09 46 43.9	+0.2
WDL				eS	Sn	09 47 01.0	+0.6
TAI	Tainan	1.35	277	eP	Pg	09 46 43.7	-0.1
WHF	Hehuan Shan	1.35	345	P	Pn	09 46 41.8	-1.3
DPDB	Guoxing	1.36	331	⇑P	Pn	09 46 42.9	0.0
WNT	Mingjian	1.37	320	eP	Pb	09 46 43.7	+0.2
WNT				eS	Sb	09 47 00.6	-0.3
ICHU	Yijhu	1.37	293	eP	Pn	09 46 43.5	+0.6
ICHU				eS	Sb	09 47 00.8	-0.1
ETLH	Xiulin Townshi	1.37	354	eP	Pn	09 46 41.8	-1.3
SCLT	Jiali	1.38	284	eP	Pn	09 46 43.8	+0.7
SCLT				eS	Sn	09 47 02.0	+0.6
WNT1	Nantou City	1.39	320	eP	Pb	09 46 44.3	+0.5
WNT1				eS	Sg	09 47 02.7	0.0
WCS	Beigang Elemen	1.39	331	eP	Pn	09 46 43.7	+0.4
EOS4	EOS4	1.42	25	eP	Pn	09 46 43.3	0.0
CHN8	Yiju	1.42	291	eP	Pb	09 46 44.4	0.0
CHN8				eS	Sb	09 47 02.5	0.0
WTK	Tuku	1.44	306	eP	Pn	09 46 44.7	+0.8
FUSS	Fushou	1.45	345	eP	Pn	09 46 44.2	-0.2
EHP	Heping Village	1.47	3	eP	Pn	09 46 44.4	+0.1
EHP				eS	Sn	09 47 03.6	0.0
TSCK	Chigu Township	1.48	282	eP	Pn	09 46 44.8	+0.5
TSCK				eS	Sn	09 47 04.0	+0.4
TWT	Tachien	1.48	343	eP	Pn	09 46 44.7	+0.1
TWT				eS	Sn	09 47 01.9	-2.0
WSL	Shuilin Townsh	1.48	298	eP	Pn	09 46 45.2	+0.8
WSL				eS	Sn	09 47 04.0	+0.3
TDCB	Techi	1.48	342	⇑iP	Pn	09 46 44.3	-0.3
WWF	Wufeng	1.49	324	eP	Pn	09 46 45.4	+0.8
EAHA	Aohua	1.49	3	eP	Pn	09 46 42.5	-2.1
WSF	Szhu	1.54	302	⇓P	Pn	09 46 45.9	+0.7
WSF				eS	Sn	09 47 04.5	-0.7
EOS3	EOS3	1.57	23	eP	Pn	09 46 45.6	+0.1
TCU	Taichung	1.58	326	eP	Pn	09 46 47.0	+1.1
TCU				eS	Sb	09 47 07.6	+0.4
RLNB	Erlin	1.58	312	⇑P	Pn	09 46 46.4	+0.5
RLNB				S	Sn	09 47 05.6	-0.7
ENA	Nanau	1.59	3	eP	Pn	09 46 45.4	-0.6
WCHH	Zhanghua	1.59	321	eP	Pb	09 46 47.6	+0.3
WCH1	Changhua City	1.59	321	eP	Pb	09 46 47.4	+0.1
NNSB	Datong	1.60	351	⇑P	Pn	09 46 45.5	-0.8
NNSH	Datong	1.60	351	eP	Pn	09 46 45.8	-0.5
EWUT	Wuta	1.61	4	eP	Pn	09 46 46.1	0.0
NNS	Nan Shan	1.62	351	eP	Pn	09 46 45.7	-0.7
WTCT	Ta-ch'eng	1.62	309	P	Pn	09 46 47.1	+0.7
WTCT				eS	Sn	09 47 07.8	+0.5
EOS2	EOS2	1.66	19	eP	Pn	09 46 47.3	+0.4
LATG	Datong	1.69	356	⇑P	Pn	09 46 46.7	-0.8
TWQ1	Liyutan	1.71	332	⇑eP	Pb	09 46 49.2	-0.1
WDJ	Dajia District	1.77	329	⇑eP	Pb	09 46 50.1	-0.2
TWC	Suao	1.77	6	⇑eP	Pn	09 46 48.2	-0.3
TWC				eS	Sn	09 47 11.0	-0.1
NDS	Dongshan	1.79	2	eP	Pn	09 46 47.8	-1.0
ENTT	Nioudou	1.80	358	⇑eP	Pn	09 46 48.0	-0.8
YHNB	Yeheng	1.84	352	Pn	Pn	09 46 49.4	-0.1
YHNB	Yeheng	1.84	352	P	Pn	09 46 49.3	-0.2
YHNB	Yeheng	1.84	352	⇑P	Pn	09 46 49.5	-0.1
NFF	Wufeng Townshi	1.85	345	eP	Pn	09 46 51.1	+1.5
NMLH	Miaoli	1.87	335	eP	Pn	09 46 51.0	+1.2
NMLH				eS	Sn	09 47 14.5	+1.1
TWE	Neicheng	1.88	0	eP	Pn	09 46 49.5	-0.4
WDGT	Dungji	1.88	283	⇑eP	Pn	09 46 49.9	-0.1
NSTT	Nanjuang	1.88	342	eP	Pn	09 46 51.1	+1.1
LIOB	Emei	1.89	342	eP	Pn	09 46 51.2	+1.0
FUSB	Fushanzhiwuyua	1.92	358	eP	Pn	09 46 50.2	-0.3
ILA	Ilan	1.92	3	eP	Pn	09 46 51.5	+0.9
NWLT	Wulai	1.94	356	eP	Pn	09 46 51.1	+0.3
NJD	Zhudong	1.96	345	eP	Pn	09 46 52.0	+0.9
KSHI	Guanxi Townshi	1.98	347	eP	Pn	09 46 52.8	+1.5
JYNG	Yonagunijimaku	2.00	36	P	Pn	09 46 51.9	+0.3
JYNG				eS	Sn	09 47 16.2	-0.4
JYNG	Yonagunijimaku	2.00	36	A	A	09 46 51.9	
	comp=N,97nm,5.9s,comp=E,96nm,4.7s						
EGS		2.02	7	eP	Pn	09 46 53.2	+1.4
HSN1	Hsinchu	2.02	343	eP	Pn	09 46 53.2	+1.3
PHUB	P'eng-hu	2.03	290	eP	Pn	09 46 51.8	-0.1
SBCB	Hsinchu	2.04	343	eP	Pn	09 46 53.1	+0.9
YOJ	Yonaguni jima	2.04	37		Pn	09 46 52.4	+0.2
YOJ	Yonaguni jima	2.04	37	P	Pn	09 46 52.4	+0.2
YOJ	Yonaguni jima	2.04	37	P	Pn	09 46 52.4	+0.2
YOJ	Yonaguni jima	2.04	37	P	Pn	09 46 52.6	+0.4
YOJ				eS	Sn	09 47 18.4	+0.7
YOJ	Yonaguni jima	2.04	37	A	A	09 46 52.6	
	comp=N,99nm,6.4s,comp=E,99nm,5.0s						
YOJ	Yonaguni jima	2.04	37	⇓iP	Pn	09 46 52.5	+0.4
YOJ				eS	Sn	09 47 18.1	+0.4
HSN	Hsinchu	2.05	342	eP	Pb	09 46 55.1	0.0
PNG	Penghu	2.06	291	eP	Pn	09 46 52.6	+0.2
PNG				eS	Sn	09 47 16.6	-1.5
VCHM	Qimei	2.08	281	P	Pn	09 46 52.6	-0.1
NHDH	Xindian Distri	2.12	357	eP	Pn	09 46 53.6	+0.3
TIPB	Shuangxi	2.13	4	⇑eP	Pn	09 46 54.0	+0.5
TIPB				eS	Sn	09 47 20.2	+0.2
TATO	Taipei	2.13	356		Pn	09 46 53.8	+0.3
TATO	Taipei	2.13	356	P	Pn	09 46 54.6	+1.1
TATO				S	Sn	09 47 21.5	+1.5
TATO	Taipei	2.13	356	P	Pn	09 46 54.5	+1.1
TATO	Taipei	2.13	356	⇑eP	Pn	09 46 54.0	+0.6
TWA	Mucha	2.14	358	eP	Pn	09 46 53.8	+0.3
NCU	National Centr	2.17	349	eP	Pn	09 46 54.6	+0.7
NTY	Taoyuan	2.18	352	eP	Pn	09 46 55.4	+1.4
TWB1	Santiao Chiao	2.18	8	eP	Pn	09 46 54.4	+0.3
NWF	Wu-fen Shan	2.23	3	eP	Pn	09 46 55.9	+1.1
WFSB	Wu-fen Shan	2.23	3	eP	Pn	09 46 55.9	+1.1

WFSB				eS	Sn	09 47 23.6	+1.3
NHW	Xinwu Township	2.23	346	eP	Pn	09 46 55.6	+0.8
SXI1	Grass Mountain	2.26	5	⇑P	Pn	09 46 56.2	+0.9
SXI1				eS	Sn	09 47 23.0	-0.1
YM01	YM01	2.30	358	eP	Pn	09 46 55.8	0.0
ZUZH	Zhuzihu	2.32	358	eP	Pn	09 46 56.2	+0.2
HATJ	Hateruma jima	2.32	58	P	Pn	09 46 56.1	+0.1
HATJ				eS	Sn	09 47 23.3	-1.3
HATJ	Hateruma jima	2.32	58	A	A	09 46 56.1	
	comp=N,111nm,4.4s,comp=E,151nm,4.7s						
NTST	Danshui	2.33	355	eP	Pn	09 46 57.3	+1.2
YM08	YM08	2.34	359	eP	Pn	09 46 56.2	-0.1
ANP	Anpu	2.34	357	eP	Pn	09 46 57.2	+0.7
NWRT	Kuosheng	2.36	0	eP	Pn	09 46 57.0	+0.4
IRIF	Iriomote-Funau	2.42	52	P	Pn	09 46 57.7	+0.3
IRIF				eS	Sn	09 47 27.6	+0.5
IRIF	Iriomote-Funau	2.42	52	A	A	09 46 57.7	
	comp=N,91nm,2.3s,comp=E,63nm,6.1s						
TWY	Chenhua	2.43	359	eP	Pn	09 46 58.7	+1.2
JKRS	Kuro-shima	2.58	57	P	Pn	09 46 59.9	+0.4
JKRS				S	Sn	09 47 30.0	-0.8
JKRS	Kuro-shima	2.58	57	A	A	09 46 59.9	
	comp=N,105nm,4.4s,comp=E,111nm,4.6s						
JIJ	Ishigaki jima	2.75	56	P	Pn	09 47 01.8	-0.1
JIJ				eS	Sn	09 47 33.7	-1.4
JIJ	Ishigaki jima	2.75	56	A	A	09 47 01.8	
	comp=N,36nm,5.5s,comp=E,23nm,5.6s						
VWUC	VWUC	2.94	317	⇑eP	Pn	09 47 04.4	-0.2
JISG	Ishigakijimahi	3.00	54	P	Pn	09 47 05.1	-0.2
JISG				eS	Sn	09 47 39.5	-1.7
JISG	Ishigakijimahi	3.00	54	A	A	09 47 05.1	
	comp=N,40nm,7.4s,comp=E,33nm,7.4s						
PTMZ	Houxiangcun	3.19	314	⇑eP	Pn	09 47 08.0	0.0
JTJ	Tarama	3.32	57	P	Pn	09 47 10.0	+0.2
JTJ				S	Sn	09 47 48.8	-0.5
JTJ	Tarama	3.32	57	A	A	09 47 10.0	
	comp=N,48nm,2.5s,comp=E,57nm,11.6s						
KNM	Kinmen	3.34	299	⇑eP	Pn	09 47 11.5	+1.4
KNMB	Chin-men Tao	3.40	299		Pn	09 47 10.5	-0.4
KNMB	Chin-men Tao	3.40	299	⇑eP	Pn	09 47 10.7	-0.2
QZH	Quanzhou	3.50	307	⇑iPn	Pn	09 47 11.8	-0.4
QZH				Sn	Sn	09 47 51.5	-2.1
QZH				smax	smax		
	comp=E,11µm,1.4s						
QZH				smax	smax		
	comp=E,9µm,1.1s						
QZH				LR	LR		
	comp=E,43µm,6.5s						
QZH				LR	LR		
	comp=E,58µm,5.3s						
QZH				LR	LR		
	comp=E,76µm,9.3s						
MATB	Ma-tsu	3.65	335	⇑eP	Pn	09 47 13.8	-0.5
MSUT	Lienchiang	3.67	335	eP	Pn	09 47 15.2	+0.6
ZPLA	Ao Xicun	3.75	288	⇑eP	Pn	09 47 15.8	+0.1
JIRB	Irabujima	3.79	58	P	Pn	09 47 16.2	+0.1
JIRB				eS	Sn	09 47 59.6	-1.1
JIRB	Irabujima	3.79	58	A	A	09 47 16.2	
	comp=N,40nm,6.5s,comp=E,42nm,5.4s						
JMJ2	Miyako jima3	3.87	60	P	Pn	09 47 17.7	+0.4
JMJ2				eS	Sn	09 48 01.5	-1.2
JMJ2	Miyako jima3	3.87	60	A	A	09 47 17.7	
	comp=N,102nm,5.4s,comp=E,94nm,7.6s						
JMJ	Miyako jima 2	3.87	59	P	Pn	09 47 18.2	+0.8
JMJ	Miyako jima 2	3.87	59	⇓P	Pn	09 47 17.8	+0.4
JMJ				eS	Sn	09 48 02.3	-0.6
JIKM	Ikemajima	3.89	57	P	Pn	09 47 18.1	+0.5
JIKM				S	Sn	09 48 02.0	-1.4
JIKM	Ikemajima	3.89	57	A	A	09 47 18.1	
	comp=N,52nm,8.6s,comp=E,62nm,5.1s						
JOGS	Gusukube	3.94	60	P	Pn	09 47 18.8	+0.5
JOGS				eS	Sn	09 48 04.7	+0.2
JOGS	Gusukube	3.94	60	A	A	09 47 18.8	
	comp=N,93nm,6.6s,comp=E,76nm,5.7s						
AXDP	Jialang	3.95	302	⇑eP	Pn	09 47 18.4	0.0
DSXP	Dongshan	3.98	283	⇑eP	Pn	09 47 19.1	+0.3
MHZQ	Yeshan	4.03	324	⇑eP	Pn	09 47 19.3	-0.3
XPSS	Dashiqiu	4.29	342	eP	Pn	09 47 22.3	-0.7
VDOS	Pratas Island	5.04	246	⇑eP	Pn	09 47 34.3	+0.8
SXFK	Yanhouchang	5.09	315	⇑eP	Pn	09 47 33.8	-0.3
SZP	Santa	5.38	192	P	Pn	09 47 40.0	+1.9
SZP	Santa	5.38	192	S	Sn	09 48 42.8	+2.8
JKE	Kume jima 2	5.82	52	A	A	09 47 45.8	
	comp=N,7.0nm,10.0s,comp=E,8.0nm,7.4s						
HKPS	Hong Kong Po S	6.96	267		Pn	09 48 00.4	+0.5
HKPS	Hong Kong Po S	6.96	267	⇑eP	Pn	09 48 00.5	+0.6
JOW	Kunigami	7.21	55		Pn	09 48 01.7	-1.5
JOW	Kunigami	7.21	55	Pn	Pn	09 48 01.9	-1.3
	comp=E,36nm,0.3s,baz=219,slow=9.4,SNR=107						
JOW				Sn	Sn	09 49 20.6	-4.6
	comp=E,6.0nm,0.3s,baz=165,slow=19,SNR=1.3						
	comp=E,134nm,0.4s						
JOW	Kunigami	7.21	55	P	Pn	09 48 02.5	-0.8
JOW	Kunigami	7.21	55	eP	Pn	09 48 01.9	-1.3
MCO	Taipa Grande	7.52	266	P	Pn	09 48 08.0	+0.5
GZH	Guangzhou	7.66	273	Pn	Pn	09 48 06.5	-2.9
GZH				Sn	Sn	09 49 29.3	-6.9
GZH				smax	smax		
	comp=E,6µm,1.2s						
GZH				smax	smax		
	comp=E,4µm,1.0s						
SSE	Sheshan	8.24	357	P	Pn	09 48 18.3	+1.0
SSE				S	Sn	09 49 53.6	+3.2
TGY	Tagaytay City	8.71	185	Pn	Pn	09 48 31.4	+7.4
	comp=E,22nm,0.3s,baz=152,slow=2.4,SNR=6.3						
TGY				LR	LR	09 52 14.9	
	comp=E,5µm,21.7s,baz=14,slow=41						
JMZ	Minamidaito 2	9.22	69		Pn	09 48 28.0	-2.8
JMZ	Minamidaito 2	9.22	69	eP	Pn	09 48 28.8	-2.0
CNSH	ChangSha	9.50	306	P	Pn	09 48 33.2	-1.5
CNSH				S	Sn	09 50 16.8	-4.8
CNSH				smax	smax		
	comp=E,4µm,1.6s						
CNSH				smax	smax		
	comp=E,4µm,1.3s						
CNSH				LR	LR		
	comp=E,39µm,8.8s						
CNSH				LR	LR		
	comp=E,25µm,9.5s						
CNSH				LR	LR		
	comp=E,33µm,11.5s						
NJ2	Nanjing	9.51	345	eP	Pn	09 48 35.1	+0.3
NJ2				pP		09 48 38.3	
NJ2				sP		09 48 41.5	
NJ2				S	Sn	09 50 17.1	-4.6
NJ2				pmax	pmax		
	comp=E,17nm,0.5s						
NJ2				LR	LR		
	comp=E,33µm,9.5s						
NJ2				LR	LR		
	comp=E,31µm,9.0s						
NJ2				LR	LR		
	comp=E,38µm,9.5s						
WHN	Wuhan	10.07	321	P	Pn	09 48 42.5	0.0
WHN				sP		09 48 48.0	
WHN				S	Sn	09 50 30.2	-5.3
WHN				pmax	pmax		
	comp=E,270nm,0.5s						
WHN				pmax	pmax		
	comp=E,2µm,4.4s						
WHN				LR	LR		
	comp=E,99µm,6.1s						
WHN				LR	LR		
	comp=E,103µm,8.6s						
WHN				LR	LR		
	comp=E,109µm,8.9s						
GULI	GuiLin	10.60	286	P	Pn	09 48 51.5	+1.8
GULI				S	Sn	09 51 00.3	+12
GULI				pmax	pmax		
	comp=E,50nm,0.7s						
GULI				LR	LR		
	comp=E,13µm,6.8s						
GULI				LR	LR		
	comp=E,18µm,6.0s						
GULI				LR	LR		
	comp=E,23µm,9.1s						
QIZ	Qiongzhong	11.66	253		Pn	09 49 06.1	+1.8
QIZ	Qiongzhong	11.66	253	P	Pn	09 49 05.5	+1.1
QIZ				pmax	pmax		
	comp=E,51nm,0.9s						
QIZ				pmax	pmax		
	comp=E,390nm,4.3s						
QIZ				LR	LR		
	comp=E,11µm,12.0s						
QIZ				LR	LR		
	comp=E,19µm,12.7s						
QIZ	Qiongzhong	11.66	253	P	Pn	09 49 05.8	+1.4
JNU	Nakatsue	13.09	36		Pn	09 49 24.8	+1.0
JNU	Nakatsue	13.09	36	Pn	Pn	09 49 24.6	+0.8
	comp=E,1.1nm,0.3s,baz=290,slow=4.8,SNR=12						
	comp=E,10nm,0.7s						
JNU	Nakatsue	13.09	36	P	Pn	09 49 25.2	+1.4
ENH	Enshi	13.16	307	Pn	Pn	09 49 27.1	+2.3
ENH	Enshi	13.16	307	P	Pn	09 49 25.6	+0.8
JTU	Tsushima	13.48	29	P	Pn	09 49 31.9	+2.8
TIA	Tai'an	13.90	345	P	Pn	09 49 38.6	+3.8
TIA				pmax	pmax		
	comp=E,2µm,4.8s						
TIA				LR	LR		
	comp=E,23µm,8.6s						
TIA				LR	LR		
	comp=E,20µm,8.6s						
TIA				LR	LR		
	comp=E,40µm,7.6s						
GYA	Guiyang	14.10	288	⇑P	Pn	09 49 36.2	-1.5
GYA				S	Sn	09 52 06.3	-8.0
GYA				pmax	pmax		
	comp=E,39nm,1.0s						
GYA				pmax	pmax		
	comp=E,2µm,8.8s						
GYA				LR	LR		
	comp=E,22µm,8.1s						
GYA				LR	LR		
	comp=E,24µm,9.6s						
GYA				LR	LR		
	comp=E,29µm,11.4s						
LYN	LuoYang	14.17	327	P	Pn	09 49 41.9	+3.3
LYN				sP	P	09 49 47.9	+1.8
LYN				PP	PnPn	09 49 52.0	+5.4
LYN				S	Sn	09 52 22.2	+6.3
LYN				pmax	pmax		
	comp=E,37nm,1.4s						
LYN				pmax	pmax		
	comp=E,3µm,4.6s						
LYN				LR	LR		
	comp=E,79µm,9.6s						
LYN				LR	LR		
	comp=E,33µm,7.6s						
LYN				LR	LR		
	comp=E,82µm,9.5s						
TJN	Taejon	14.38	19	Pn	Pn	09 49 40.6	-0.7
TJN	Taejon	14.38	19	P	Pn	09 49 43.1	+1.8
TJN	Taejon	14.38	19	iP	Pn	09 49 42.2	+0.9
INCN	Inchon	15.22	15	P	Pn	09 49 52.8	+0.1
INCN				S	Sn	09 52 43.1	+1.8
INCN	Inchon	15.22	15	P	Pn	09 49 53.9	+1.2
JMN	Monobe	15.28	42	Pn	Pn	09 49 51.7	-1.9
JMN	Monobe	15.28	42	P	Pn	09 49 55.4	+1.9
KSAR	Wonju Array Be	15.52	19		Pn	09 49 58.5	+1.9
KSAR	Wonju Array Be	15.52	19	P	Pn	09 49 58.5	+1.9
KSRS	Korea Array	15.54	19	Pn	Pn	09 49 59.0	+2.1
	comp=E,3.8nm,0.3s,baz=197,slow=12,SNR=120						
KSRS				PcP	PcP	09 54 59.4	+0.2
	comp=E,3.2nm,0.7s,baz=209,slow=2.4,SNR=4.9						
KSRS				LR	LR	09 56 14.0	
	comp=E,3µm,18.7s,baz=225,slow=38						
	comp=E,33nm,0.5s						
KS19	Wonju Array Si	15.57	19	Pn	Pn	09 49 57.9	+0.6
HNS	HongShan	15.70	339	⇑P	Pn	09 50 01.6	+2.6
HNS				S	S	09 53 03.1	-4.9
HNS				pmax	pmax		
	comp=E,370nm,1.6s						
HNS				pmax	pmax		
	comp=E,5µm,4.9s						
HNS				LR	LR		
	comp=E,25µm,13.5s						
HNS				LR	LR		
	comp=E,23µm,11.3s						
HNS				LR	LR		
	comp=E,18µm,12.7s						
XAN	Xi'an	15.79	318	⇑P	Pn	09 50 00.0	-0.3
XAN				S	Sn	09 52 53.5	-1.9
XAN				SS	S	09 53 10.0	-0.1
XAN				pmax	pmax		
	comp=E,200nm,1.4s						
XAN				pmax	pmax		
	comp=E,5µm,4.6s						
XAN				LR	LR		
	comp=E,34µm,8.9s						
XAN				LR	LR		
	comp=E,25µm,7.6s						
XAN				LR	LR		
	comp=E,28µm,7.3s						
DL2	Dalian	16.02	360	P	Pn	09 50 04.9	+1.8
DL2				S	Sn	09 53 07.5	+6.8
DL2				pmax	pmax		
	comp=E,170nm,1.4s						
DL2				pmax	pmax		
	comp=E,1µm,8.6s						
DL2				LR	LR		
	comp=E,17µm,9.8s						
DL2				LR	LR		
	comp=E,7µm,8.2s						
DL2				LR	LR		
	comp=E,18µm,11.4s						
DAV	Davao City (W)	16.12	166	LR	LR	09 55 57.9	
	comp=E,8µm,19.8s,baz=351,slow=36						
DAV	Davao City (W)	16.12	166	P	Pn	09 50 04.0	-0.6
SLVN	Son La	16.52	268		Pn	09 50 10.4	+0.7
SLVN	Son La	16.52	268	P	Pn	09 50 10.9	+1.2
DLV	Lat	16.57	231		P	09 50 13.6	+0.5
DLV	Lat	16.57	231	P	Pn	09 50 12.0	+1.4
TIY	Taiyuan	16.81	334	eP	P	09 50 16.0	+0.5
TIY				S	Sn	09 53 22.0	+1.8
TIY				pmax	pmax		
	comp=E,48nm,1.6s						
TIY				pmax	pmax		
	comp=E,3µm,4.0s						
TIY				LR	LR		
	comp=E,47µm,11.7s						
TIY				LR	LR		
	comp=E,27µm,10.7s						
TIY				LR	LR		
	comp=E,40µm,11.8s						
UBPT	Khong Chiam	17.03	247		P	09 50 19.1	+1.1
KMI	Kunming	17.43	281	P	Pn	09 50 20.5	-0.9
KMI				pmax	pmax		
	comp=E,77nm,2.0s						
KMI				pmax	pmax		
	comp=E,3µm,9.6s						
KMI				LR	LR		
	comp=E,14µm,9.0s						
KMI				LR	LR		
	comp=E,12µm,10.1s						
KMI				LR	LR		
	comp=E,12µm,16.1s						
KKM	Kota Kinabalu	17.50	198	P	Pn	09 50 23.4	+1.3
KKM				IAmb	IAmb	09 50 29.0	
	comp=Z,684nm,1.1s						
KKM	Kota Kinabalu	17.50	198	P	P	09 50 24.6	+1.4
BJT	Baijiatuau	17.75	346	P	Pn	09 50 25.3	+0.3
BJT	Baijiatuau	17.75	346	P	P	09 50 27.5	+1.7
BJT	Baijiatuau	17.75	346	P	Pn	09 50 25.3	+0.3
BJT				pmax	pmax		
	comp=Z,71nm,1.1s						
BJI	Beijing	17.77	346	P	P	09 50 26.5	+0.5
BJI				pP	sP	09 50 30.1	+0.8
BJI				sP	pwP	09 50 33.6	+1.5
BJI				S	Sn	09 53 41.5	-1.7
BJI				pmax	pmax		
	comp=Z,33nm,1.0s						
BJI				pmax	pmax		
	comp=Z,1µm,5.2s						
BJI				LR	LR		
	comp=Z,8µm,10.1s						
BJI				LR	LR		
	comp=Z,4µm,10.3s						
BJI				LR	LR		
	comp=Z,8µm,11.1s						
MYLDM	Lahad Datu	17.82	190		Pn	09 50 26.6	+0.7
MYLDM	Lahad Datu	17.82	190	P	P	09 50 28.5	+1.9
CD2	Chengdu	17.86	301	P	P	09 50 27.5	+0.4
CD2				S	Sn	09 53 49.0	+3.4
CD2				pmax	pmax		
	comp=Z,250nm,0.8s						
CD2				pmax	pmax		
	comp=Z,3µm,4.5s						
CD2				LR	LR		
	comp=Z,24µm,8.9s						
CD2				LR	LR		
	comp=Z,26µm,9.8s						
PZH	PanZhiHua	18.46	285	P	Pn	09 50 36.7	+2.8
PZH				S	Sn	09 53 59.7	-0.5
PZH				pmax	pmax		
	comp=Z,50nm,1.0s						
PZH				pmax	pmax		
	comp=Z,4µm,9.2s						
PZH				LR	LR		
	comp=Z,9µm,10.2s						
PZH				LR	LR		
	comp=Z,11µm,10.6s						
PZH				LR	LR		
	comp=Z,12µm,10.6s						
JSG	Sagara	18.66	47	P	P	09 50 35.3	-0.6
JSG	Sagara	18.66	47	P	Pn	09 50 37.8	+1.7
JGF	Kuroka	18.67	44		P	09 50 34.5	-1.5
JGF	Kuroka	18.67	44	P	Pn	09 50 37.5	+1.2
JHJ2	Mitsune	19.00	53	P	P	09 50 38.4	-1.2
JHJ2	Mitsune	19.00	53	P	Pn	09 50 41.8	+1.5
SNY	Shenyang	19.01	4	⇑P	P	09 50 39.3	-0.3
SNY				S	Sn	09 54 12.6	-0.5
SNY				pmax	pmax		
	comp=Z,1µm,5.6s						
SNY				LR	LR		
	comp=Z,4µm,11.0s						
SNY				LR	LR		
	comp=Z,4µm,12.3s						
SNY				LR	LR		
	comp=Z,5µm,13.3s						
JCJ	Chichijima	19.09	73		P	09 50 40.1	-0.5
JCJ				IAmb	IAmb	09 50 46.7	
	comp=Z,857nm,1.1s						
JCJ	Chichijima	19.09	73	P	P	09 50 40.6	0.0
	comp=Z,10nm,0.3s,baz=276,slow=8.5,SNR=13						
JCJ				LR	LR	09 56 38.8	
	comp=Z,4µm,21.8s,baz=254,slow=32						
	comp=Z,517nm,1.0s						
JCJ	Chichijima	19.09	73	P	Pn	09 50 42.8	+1.4
SGSI	Sangihe	19.40	168	P	Pn	09 50 46.5	+1.2
	comp=Z,4µmcomp=Z,8µmcomp=Z,235nm,1.2s						
MAJO	Matsushiro	19.80	43	P	P	09 50 48.5	+0.2
MAJO	Matsushiro	19.80	43	P	P	09 50 50.0	+1.7
MAJO	Matsushiro	19.80	43	P	P	09 50 48.5	+0.2
MAJO				pmax	pmax		
	comp=Z,235nm,1.1s						
MJAR	Matsushiro Arr	19.80	43	P	P	09 50 49.7	+1.4
	comp=Z,0.2nm,0.3s,baz=230,slow=9.7,SNR=38						
MJAR				S	Sn	09 54 36.8	+4.6
	comp=Z,0.8nm,0.3s,baz=241,slow=9.6,SNR=1.3						
MJAR				ScP	ScP	09 58 41.3	-1.2
	comp=Z,3.8nm,1.0s,baz=225,slow=1.7,SNR=5.5						
MJAR				LR	LR	09 59 27.3	
	comp=Z,3µm,19.2s,baz=220,slow=40						
	comp=Z,50nm,0.9s						
MJB9	Matsu-Tunnel	19.80	43	P	P	09 50 48.5	+0.2
HHC	Hu-ho-hao-te	19.87	337	eP	Pn	09 50 51.4	+0.6
HHC				sP	pwP	09 50 58.4	+2.9
HHC				S	Sn	09 54 38.3	+4.1
HHC				pmax	pmax		
	comp=Z,170nm,1.9s						
HHC				pmax	pmax		
	comp=Z,1µm,4.9s						
HHC				LR	LR		
	comp=Z,16µm,15.5s						
HHC				LR	LR		
	comp=Z,31µm,18.5s						
HHC				LR	LR		
	comp=Z,12µm,13.1s						
BTO	Baotou	20.26	334	⇑iP	Pn	09 50 56.6	+1.3
BTO				pP	pwP	09 51 00.5	+0.8
BTO				sP	sP	09 51 03.6	+6.9
BTO				PP	PnPn	09 51 17.5	+7.4
BTO				sS	Sn	09 54 50.0	+6.6
BTO				SS	SnSn	09 55 10.8	+13
BTO				pmax	pmax		
	comp=Z,400nm,1.8s						
BTO				pmax	pmax		
	comp=Z,5µm,8.6s						
BTO				LR	LR		
	comp=Z,49µm,16.6s						
BTO				LR	LR		
	comp=Z,86µm,14.8s						
BTO				LR	LR		
	comp=Z,105µm,11.1s						
LZH	Lanzhou	20.32	314	⇑P	Pn	09 50 56.5	+0.3
LZH				pP	pwP	09 51 01.8	+1.0
LZH				S	S	09 54 40.7	-1.3
LZH				PcP	PcP	09 55 08.6	+1.2
LZH				pmax	pmax		
	comp=Z,210nm,1.7s						
LZH				pmax	pmax		
	comp=Z,3µm,6.9s						
LZH				LR	LR		
	comp=Z,21µm,11.6s						
LZH				LR	LR		
	comp=Z,11µm,12.7s						
LZH				LR	LR		
	comp=Z,16µm,14.8s						
JSD	Sado	20.80	39	P	P	09 51 00.9	+1.8
CN2	Changchun	21.14	8	⇑P	P	09 51 02.5	-0.3
CN2				esP	pwP	09 51 09.0	+0.3
CN2				eS	S	09 54 52.7	-5.2
CN2				pmax	pmax		
	comp=Z,30nm,1.2s						
CN2				pmax	pmax		
	comp=Z,700nm,4.0s						
CN2				LR	LR		
	comp=Z,8µm,11.0s						
CN2				LR	LR		
	comp=Z,7µm,11.0s						
CN2				LR	LR		
	comp=Z,5µm,12.0s						
PSTR	Posyet	21.18	19	iP	P	09 51 04.2	+1.0
MSHR	Mys Shultsa	21.22	20	iP	P	09 51 04.0	+0.3
MSHR				pmax	pmax		
	comp=Z,118nm,0.9s						
MSHR				MLR	MLR		
	comp=Z,4µm,19.0s						
TNCH	TengChong	21.25	281	⇑P	P	09 51 07.0	+2.6
TNCH				S	S	09 54 56.6	-4.1
TNCH				pmax	pmax		
	comp=Z,380nm,1.3s						
TNCH				LR	LR		
	comp=Z,10µm,7.4s						
TNCH				LR	LR		
	comp=Z,6µm,10.3s						
TNCH				LR	LR		
	comp=Z,9µm,12.9s						
XLT	XiLinHaoTe	21.51	349	eP	P	09 51 06.0	-0.8
XLT				pP	sP	09 51 10.2	-0.1
XLT				PP	PnPn	09 51 27.9	+0.7
XLT				S	S	09 55 01.4	-3.8
XLT				SS	SnSn	09 55 35.8	+7.0
XLT				pmax	pmax		
	comp=Z,36nm,0.8s						
XLT				pmax	pmax		
	comp=Z,740nm,6.8s						
XLT				LR	LR		
	comp=Z,950nm,9.9s						
XLT				LR	LR		
	comp=Z,8µm,10.2s						
XLT				LR	LR		
	comp=Z,14µm,10.3s						
CHTO	Chiang Mai	21.59	264	P	P	09 51 09.7	+1.8
CHTO				IAmb	IAmb	09 51 14.7	
	comp=Z,409nm,1.2s						
CHTO	Chiang Mai	21.59	264	P	P	09 51 09.9	+2.0
CHTO				P	P	09 51 09.9	+2.0
CHTO				P	P	09 51 09.9	+2.0
CHTO				S	S	09 55 10.4	+3.2
CHTO				S	S	09 55 10.4	+3.2
CHTO				S	S	09 55 10.4	+3.2
CHTO	Chiang Mai	21.59	264	P	P	09 51 09.9	+2.0
CHTO	Chiang Mai	21.59	264	P	P	09 51 09.7	+1.8
CHTO				pmax	pmax		
	comp=Z,409nm,1.2s						
CHTO				MLR	MLR		
	comp=Z,11µm,18.0s						
TOLI2	Tolitoli	21.61	182		P	09 51 07.7	-0.4
TOLI2	Tolitoli	21.61	182	P	P	09 51 08.6	+0.6
CM31	Chiang Mai Arr	21.68	263	P	P	09 51 11.2	+2.3
CM31	Chiang Mai Arr	21.68	263	P	P	09 51 10.8	+1.9
	SNR=109						
CM31				P	P	09 51 10.8	+1.9

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      SNR=109
CMAR  Chiang Mai Arr   21.68 263        P        09 51 11.1 +2.2
CMAR  Chiang Mai Arr   21.68 263   P    P        09 51 10.7 +1.8
      comp=Z,86nm,1.0s,baz=68,slow=8.9,SNR=280
CMAR                               PcP  PcP      09 55 10.3 +0.2
      comp=Z,6.9nm,0.6s,baz=30,slow=0.5,SNR=12
CMAR                               ScP  ScP      09 58 44.6 -2.7
      comp=Z,3.2nm,0.8s,baz=67,slow=2.3,SNR=5.1
CMAR                               LR   LR       10 00 19.5
      comp=Z,9µm,18.7s,baz=80,slow=39
CMAR                               P3KP          10 25 49.9
      comp=Z,0.6nm,0.3s,baz=298,slow=3.3,SNR=4.2
CMAR  Chiang Mai Arr   21.68 263 i P    P        09 51 11.1 +2.2
CMAR                               pmax pmax
      comp=Z,86nm,1.0s
VLA   Vladivostok      21.94  20 i P    P        09 51 12.4 +1.0
VLA                                pmax pmax
      comp=Z,105nm,1.0s
VLA                                MLR  MLR
      comp=Z,3µm,20.0s
MRSI  Marisa           22.23 179   P    P        09 51 17.4 +2.7
      comp=Z,4µmcomp=Z,240nm,0.9s
JMM   Marumori         22.23  43        P        09 51 13.5 -1.1
JMM                                IAmb IAmb     09 51 21.6
      comp=Z,652nm,1.6s
JMM   Marumori         22.23  43   P    P        09 51 14.8 +0.2
KMSI  Cibinong         22.24 174   P    P        09 51 15.7 +0.9
      comp=Z,3µmcomp=Z,8µmcomp=Z,605nm,1.2s
MPSI  Mapaga           22.43 185   P    P        09 51 17.0 +0.2
TNTI  Ternate          22.62 165        P        09 51 18.9  0.0
TNTI  Ternate          22.62 165   P    P        09 51 20.8 +1.9
TNTI  Ternate          22.62 165   P    P        09 51 18.7 -0.2
      comp=Z,163nm,1.1s
MDJ   Mudanjiang       22.68  15   P    P        09 51 19.5 +0.2
MDJ                                IAmb IAmb     09 51 28.2
      comp=Z,266nm,1.4s
MDJ   Mudanjiang       22.68  15   P    P        09 51 18.8 -0.5
MDJ                                S    S        09 55 25.6 -1.9
MDJ                                pmax pmax
      comp=Z,110nm,1.2s
MDJ                                pmax pmax
      comp=Z,2µm,4.1s
MDJ                                LR   LR
      comp=Z,6µm,13.7s
MDJ                                LR   LR
      comp=Z,15µm,17.9s
MDJ                                LR   LR
      comp=Z,9µm,14.4s
MDJ   Mudanjiang       22.68  15   P    P        09 51 21.0 +1.7
USA0B Ussuriysk Arra   22.95  19        P        09 51 21.4 -0.7
USA0B Ussuriysk Arra   22.95  19   P    P        09 51 21.4 -0.7
USA0B                              pmax pmax
      comp=Z,53nm,0.9s
USRK  Ussuriysk Ar.    22.95  19   P    P        09 51 20.9 -1.2
USRK  Ussuriysk Ar.    22.95  19   P    P        09 51 22.0 -0.1
      comp=Z,26nm,0.7s,baz=204,slow=8.6,SNR=26
      comp=Z,26nm,0.7s
BNX   BinXian          23.32  10 ⇓P    P        09 51 24.7 -1.2
BNX                                pP   sP       09 51 29.7 +0.2
BNX                                S    S        09 55 35.4 -3.0
BNX                                pmax pmax
      comp=Z,1µm,6.1s
BNX                                LR   LR
      comp=Z,5µm,13.9s
BNX                                LR   LR
      comp=Z,6µm,11.6s
BNX                                LR   LR
      comp=Z,5µm,10.1s
SMKI  Samarinda        23.54 191   P    P        09 51 29.6 +1.3
      comp=Z,6µmcomp=Z,10µmcomp=Z,521nm,1.4s
APSI  Ampana           23.60 180   P    P        09 51 29.3 +0.4
PCI   Palu             23.66 185   P    P        09 51 30.8 +1.3
      comp=Z,6µmcomp=Z,426nm,1.0s
LUWI  Luwuk            23.76 177        P        09 51 29.6 -0.8
LUWI  Luwuk            23.76 177   P    P        09 51 28.9 -1.5
LUWI  Luwuk            23.76 177   P    P        09 51 32.1 +1.7
LUWI  Luwuk            23.76 177   P    P        09 51 29.8 -0.6
      comp=Z,7µmcomp=Z,6µmcomp=Z,490nm,1.0s
GUMO  Guam             23.87 109   LR   LR       09 58 38.2
      comp=Z,4µm,21.2s,baz=260,slow=31
KSM   Kuching          23.92 209        P        09 51 31.8 -0.3
KSM                                IAmb IAmb     09 51 35.2
      comp=Z,192nm,1.1s
KSM   Kuching          23.92 209   P    P        09 51 33.2 +1.2
JTM   Tenmabayashi     24.25  38   P    P        09 51 36.1 +1.2
BKB   Balikpapan       24.39 192        P        09 51 36.5 +0.1
BKB   Balikpapan       24.39 192   P    P        09 51 36.5 +0.1
BKB   Balikpapan       24.39 192   P    P        09 51 36.4 +0.1
STKI  Sintang          24.70 205   P    P        09 51 39.1 -0.1
      comp=Z,168nm,1.1s
GTA   Gaotai           24.85 317   P    P        09 51 41.8 +1.3
GTA                                S    S        09 56 08.6 +5.2
GTA                                sS   sS       09 56 15.8 +7.5
GTA                                pmax pmax
      comp=Z,120nm,1.5s
GTA                                pmax pmax
      comp=Z,2µm,4.9s
GTA                                LR   LR
      comp=Z,2µm,10.5s
GTA                                LR   LR
      comp=Z,14µm,12.4s
GTA                                LR   LR
      comp=Z,14µm,13.8s
SANI  Sanana           25.09 170   P    P        09 51 41.3 -1.4
SANI  Sanana           25.09 170   P    P        09 51 42.2 -0.5
SANI  Sanana           25.09 170   P    P        09 51 41.3 -1.4
      comp=Z,4µmcomp=Z,2µmcomp=Z,143nm,1.0s
TEY   Ternei           25.30  25⇑eP    P        09 51 45.4 +1.1
TEY                                              09 56 04.6
TEY                                pmax pmax
      comp=N,100nm,5.4s
TEY                                pmax pmax
      comp=Z,100nm,5.6s
SRIT  Nakonsritamara   25.46 240   P    P        09 51 47.7 +1.6
SRIT                               IAmb IAmb     09 52 03.3
      comp=Z,336nm,1.4s
SRIT  Nakonsritamara   25.46 240   P    P        09 51 47.3 +1.2
TTSI  Tana Toraja      25.79 184   P    P        09 51 48.9 -0.1
      comp=Z,2µmcomp=Z,129nm,1.1s
ERM   Erimo            26.24  38        P        09 51 52.4 -0.6
ERM   Erimo            26.24  38   P    P        09 51 53.6 +0.7
ERM   Erimo            26.24  38ceP    P        09 51 53.3 +0.4
ERM                                pmax pmax
      comp=Z,150nm,1.3s
JEM   Erimo            26.24  38   P    P        09 51 54.3 +1.4
HIA   Hailar           26.42 357   P    P        09 51 53.9 -0.6
HIA   Hailar           26.42 357   P    P        09 51 55.8 +1.3
      comp=Z,31nm,0.9s
HIA   Hailar           26.42 357   P    P        09 51 53.9 -0.6
HIA                                pmax pmax
      comp=Z,173nm,2.0s
HIA                                MLR  MLR
      comp=Z,3µm,20.0s
NLAI  Namlea           26.46 168   P    P        09 51 56.1 +1.0
      comp=Z,3µmcomp=Z,3µmcomp=Z,343nm,1.0s
SPSI  Sidrap Palu      26.70 184   P    P        09 51 55.3 -2.0
      comp=Z,2µmcomp=Z,105nm,1.2s
KULM  Kulim            26.75 232        P        09 51 59.0 +1.2
KULM                               IAmb IAmb     09 52 01.7
      comp=Z,212nm,1.5s
KULM                               IAMs_20 IAMs_20 10 03 09.8
      comp=Z,4µm,18.0s
KULM  Kulim            26.75 232   P    P        09 51 58.9 +1.2
GOMU  GeErMu           26.78 306   P    P        09 51 59.8 +1.5
GOMU                               PcP  PcP      09 55 21.5 +0.2
GOMU                               S    S        09 56 36.4 +1.9
GOMU                               pmax pmax
      comp=Z,160nm,1.1s
GOMU                               pmax pmax
      comp=Z,3µm,5.6s
GOMU                               LR   LR
      comp=Z,9µm,12.6s
GOMU                               LR   LR
      comp=Z,13µm,13.0s
GOMU                               LR   LR
      comp=Z,14µm,13.0s
MSAI  Masohi           26.98 164   P    P        09 52 01.5 +1.7
      comp=Z,189nm,1.3s
RKPI  Ransiki, Papua   27.11 152   P    P        09 52 03.1 +2.2
BNSI  Bone             27.11 183   P    P        09 52 01.4 +0.4
      comp=Z,2µmcomp=Z,1µmcomp=Z,102nm,1.4s
AAI   Ambon            27.12 166   P    P        09 52 02.5 +1.4
      comp=Z,104nm,0.8s
ASAJ  Asahikawa        27.34  34   P    P        09 52 04.0 +1.1
      comp=Z,24nm,0.5s,baz=230,slow=7.6,SNR=18
ASAJ                               S    S        09 56 46.1 +3.6
      comp=Z,4.0nm,0.9s,baz=276,slow=17,SNR=1.6
ASAJ                               LR   LR       10 03 54.4
      comp=Z,2µm,21.7s,baz=241,slow=38
      comp=Z,24nm,0.5s
TPRI  Tanjung Pinang   27.42 220   P    P        09 52 04.2 +0.4
      comp=Z,108nm,0.9s
KLR   Kul'dur          27.53  14   PcP  PcP      09 55 21.6 -0.8
      comp=Z,4.3nm,0.7s,baz=192,slow=4.7,SNR=4.8
KLR                                S    S        09 56 48.0 +2.8
      comp=Z,4.2nm,1.2s,baz=180,slow=10,SNR=1.4
KLR                                LR   LR       10 03 47.1
      comp=Z,4µm,19.8s,baz=200,slow=38
KLR   Kul'dur          27.53  14ceP    P        09 52 05.9 +1.5
KLR                                pmax pmax
      comp=Z,71nm,1.1s
ULN   Ulaanbaatar      27.57 338        P        09 52 04.6 -0.5
ULN                                IAmb IAmb     09 52 07.0
      comp=Z,187nm,1.6s
ULN   Ulaanbaatar      27.57 338   P    P        09 52 04.1 -1.0
ULN                                P    pP       09 52 05.1 -2.4
ULN   Ulaanbaatar      27.57 338 i P    P        09 52 04.7 -0.4
ULN                                pmax pmax
      comp=Z,29nm,0.7s
FAKI  Fak Fak          27.61 157        P        09 52 04.7 -0.8
FAKI  Fak Fak          27.61 157   P    P        09 52 07.6 +2.1
FAKI  Fak Fak          27.61 157   P    P        09 52 05.8 +0.3
      comp=Z,2µmcomp=Z,80nm,1.2s
BRDH  Bariadhala       27.65 276   LR   LR       10 05 16.3
      comp=Z,4µm,18.5s,baz=134,slow=41
HEH   HeiHe            27.74   8 eP    P        09 52 06.2 -0.1
HEH                                pP   sP       09 52 09.7 -0.2
HEH                                PP   PnPn     09 52 56.2 +4.1
HEH                                PcP  PcP      09 55 22.2 -0.6
HEH                                S    S        09 56 56.0 +7.5
HEH                                pmax pmax
      comp=Z,52nm,1.8s
HEH                                pmax pmax
      comp=Z,2µm,7.0s
HEH                                LR   LR
      comp=Z,9µm,11.8s
HEH                                LR   LR
      comp=Z,6µm,11.7s
HEH                                LR   LR
      comp=Z,13µm,10.7s
KAPI  Kappang          27.74 184        P        09 52 06.3 -0.3
KAPI                               IAmb IAmb     09 52 22.7
      comp=Z,166nm,1.2s
KAPI  Kappang          27.74 184   LR   LR       10 04 28.5
      comp=Z,2µm,21.7s,baz=357,slow=39
KAPI  Kappang          27.74 184   P    P        09 52 05.6 -1.0
KAPI                               P    P        09 52 05.6 -1.0
KAPI  Kappang          27.74 184   P    P        09 52 08.1 +1.5
KAPI  Kappang          27.74 184   P    P        09 52 06.3 -0.3
KAPI                               pmax pmax
      comp=Z,167nm,1.2s
KAPI                               MLR  MLR
      comp=Z,2µm,21.0s
SONM  Songino Array    27.77 338        P        09 52 06.1 -0.8
SONM  Songino Array    27.77 338   P    P        09 52 06.8 -0.1
      comp=Z,16nm,0.7s,baz=157,slow=9.9,SNR=83
SONM                               PcP  PcP      09 55 22.4 -0.8
      comp=Z,5.6nm,0.7s,baz=180,slow=3.2,SNR=4.2
SONM                               LR   LR       10 04 56.6
      comp=Z,5µm,19.4s,baz=147,slow=40
      comp=Z,16nm,0.7s
LSA   Lhasa            28.14 291   IAmb IAmb     09 52 20.2
      comp=Z,155nm,1.1s
LSA   Lhasa            28.14 291   P    P        09 52 13.0 +2.3
LSA                                S    S        09 56 55.5 -0.8
LSA                                pmax pmax
      comp=Z,90nm,1.3s
LSA                                LR   LR
      comp=Z,3µm,14.7s
LSA                                LR   LR
      comp=Z,6µm,19.0s
LSA   Lhasa            28.14 291   P    P        09 52 12.6 +2.0
LSA                                P    P        09 52 12.6 +2.0
LSA   Lhasa            28.14 291 i P    P        09 52 12.9 +2.3
      SNR=34
BBSI  Bau Bau          28.16 178   P    P        09 52 10.6 +0.2
      comp=Z,2µmcomp=Z,81nm,1.3s
SRPI  Serui, Papua     28.38 148   P    P        09 52 13.0 +0.6
TPI   Tanjungpandan    28.87 210   P    P        09 52 17.3 +0.6
      comp=Z,1µmcomp=Z,126nm,1.0s
PPBI  Pangkal Pinang   29.09 213   P    P        09 52 19.6 +0.9
YSS   Yuzhno-Sakhali   29.46  30   P    P        09 52 19.5 -2.2
YSS                                IAmb IAmb     09 52 26.2
      comp=Z,300nm,1.2s
YSS   Yuzhno-Sakhali   29.46  30   P    P        09 52 23.4 +1.7
YSS   Yuzhno-Sakhali   29.46  30αeP    P        09 52 23.8 +2.1
YSS                               e              09 53 28.0
YSS                               e              09 55 26.6
YSS                               eS    S        09 57 15.0 -0.7
YSS                                pmax pmax
      comp=Z,1µm,4.3s
YSS                                pmax pmax
      comp=N,500nm,4.2s
YSS                                pmax pmax
      comp=E,500nm,7.7s
YSS                                pmax pmax
      comp=Z,190nm,1.2s
YSS                                smax smax
      comp=N,900nm,9.0s
YSS                                MLR  MLR
      comp=N,1µm,16.0s
TSI   Tuntungan        29.48 233   P    P        09 52 22.9 +0.7
      comp=N,232nm,1.6s
LHMI  Lhok Sumawe      29.59 237        P        09 52 23.4 +0.3
LHMI  Lhok Sumawe      29.59 237   P    P        09 52 24.8 +1.7
LHMI  Lhok Sumawe      29.59 237   P    P        09 52 24.4 +1.3
      comp=N,3µmcomp=N,166nm,1.5s
PSI   Prapat           29.70 231   LR   LR       10 03 55.0
      comp=N,702nm,19.1s,baz=32,slow=36
PSI   Prapat           29.70 231   P    P        09 52 25.3 +1.1
PSI   Prapat           29.70 231   P    P        09 52 25.4 +1.2
PSI                                pmax pmax
      comp=Z,98nm,0.9s
PSI                                MLR  MLR
      comp=Z,3µm,18.0s
SMPI  Sarmi            29.76 144   P    P        09 52 25.8 +1.2
      comp=Z,2µmcomp=Z,2µmcomp=Z,83nm,1.0s
RPSI  Rantau Prapat    29.77 231        P        09 52 25.4 +0.6
RPSI                               IAmb IAmb     09 52 32.9
      comp=Z,98nm,0.9s
CIT   Chita            29.80 350 eP    P        09 52 34.6  +10
CIT                              e               09 55 28.6
CIT                                pmax pmax
      comp=Z,126nm,2.3s
BKNI  Bangkinang       30.04 225   P    P        09 52 27.8 +0.7
BKNI                               IAmb IAmb     09 52 29.5
      comp=Z,171nm,1.2s
BKNI  Bangkinang       30.04 225   P    P        09 52 26.8 -0.3
BKNI  Bangkinang       30.04 225   P    P        09 52 28.5 +1.4
BKNI  Bangkinang       30.04 225   P    P        09 52 26.7 -0.4
      comp=Z,3µmcomp=Z,126nm,1.2s
GRNR  Gornyy           30.17  19⇑iP    P        09 52 29.0 +1.1
GRNR                               pmax pmax
      comp=Z,10.0nm,0.9s
PMBI  Palembang        30.45 215   P    P        09 52 32.4 +1.7
PMBI  Palembang        30.45 215   P    P        09 52 31.0 +0.3
      comp=Z,173nm,1.2s
MLSI  Meulaboh, Aceh   30.61 237   P    P        09 52 32.4 +0.2
      comp=Z,2µmcomp=Z,104nm,0.8s
MNSI  Mandailing Nat   30.66 227   P    P        09 52 32.4 -0.2
      comp=Z,184nm,0.9s
BSI   Banda Aceh       30.73 240   P    P        09 52 33.1 -0.1
      comp=Z,2µmcomp=Z,98nm,1.2s
UGL   Uglegorsk        30.77  27 eP    P        09 52 29.2 -4.0
UGL                              eS    S        09 57 32.1 -4.1
UGL                                pmax pmax
      comp=Z,1µm,2.1s
UGL                                pmax pmax
      comp=Z,200nm,0.9s
UGL                                smax smax
      comp=E,2µm,5.9s
UGL                                smax smax
      comp=N,2µm,6.6s
GRJI  Gresik           30.90 198   P    P        09 52 40.2 +5.5
KUR   Kuril'sk         30.92  37c iP    P        09 52 34.3 -0.3
KUR                              eS    S        09 57 38.7  0.0
KUR                                pmax pmax
      comp=Z,1µm,5.3s
KUR                                pmax pmax
      comp=Z,372nm,1.0s
KUR                                MLR  MLR
      comp=N,1µm,17.0s
KUR                                MLR  MLR
      comp=E,2µm,17.0s
KUR                                MLR  MLR
      comp=Z,2µm,17.0s
ZAK   Zakamensk        31.02 337 eP    P        09 52 34.2 -1.4
ZAK                                pmax pmax
      comp=Z,14nm,1.3s
PPI   Padang Panjang   31.05 225   P    P        09 52 36.4 +0.4
      comp=Z,3µmcomp=Z,188nm,1.6s
GENI  Genyem           31.07 142   P    P        09 52 38.2 +2.0
ZEA   Zeya             31.15   6 eP    P        09 52 36.2 -0.3
ZEA                              e               09 53 49.2
ZEA                              eS    S        09 57 36.2 -5.8
ZEA                                pmax pmax
      comp=N,200nm,6.5s
ZEA                                pmax pmax
      comp=Z,300nm,6.4s
ZEA                                pmax pmax
      comp=Z,300nm,8.9s
ZEA                                smax smax
      comp=E,300nm,10.4s
ZEA                                smax smax
      comp=N,300nm,10.6s
ZEA                                MLR  MLR
      comp=E,2µm,14.0s
ZEA                                MLR  MLR
      comp=N,4µm,12.0s
ZEA                                MLR  MLR
      comp=Z,4µm,12.0s
MMRI  Maumere          31.28 179        P        09 52 38.1 +0.1
MMRI  Maumere          31.28 179   P    P        09 52 38.6 +0.6
MMRI  Maumere          31.28 179   P    P        09 52 36.6 -1.4
      comp=Z,4µmcomp=Z,252nm,1.1s
JAY   Jayapura         31.31 141   LR   LR       10 03 09.7
      comp=Z,4µm,19.7s,baz=322,slow=32
EDFI  Ende, Flores     31.39 180   P    P        09 52 36.8 -2.3
      comp=Z,5µmcomp=Z,2µmcomp=Z,190nm,1.2s
NGJI  Ngawi            31.63 200   P    P        09 52 41.9 +0.8
      comp=Z,139nm,0.8s
SMRI  Semarang         31.66 202   P    P        09 52 44.7 +3.3
SMRI  Semarang         31.66 202   P    P        09 52 42.5 +1.1
      comp=Z,795nmcomp=Z,69nm,0.9s
PLAI  Plampang         31.70 187   P    P        09 52 43.6 +1.9
PLAI  Plampang         31.70 187   P    P        09 52 40.9 -0.8
      comp=Z,1µmcomp=Z,116nm,0.9s
GSI   Gunungsitoli     31.70 231        P        09 52 41.9 +0.1
GSI                                IAmb IAmb     09 52 49.6
      comp=Z,47nm,0.7s
GSI   Gunungsitoli     31.70 231   P    P        09 52 43.2 +1.4
GSI   Gunungsitoli     31.70 231   P    P        09 52 41.3 -0.5
      comp=Z,82nm,2.0s
TWSI  Taliwang, Sumb   31.73 189   P    P        09 52 40.6 -1.3
      comp=Z,2µmcomp=Z,81nm,1.3s
EVN   Everest          31.81 287        P        09 52 44.0 +0.6
EVN                                IAmb IAmb     09 53 02.7
      comp=Z,151nm,1.2s
SNSI  Sinabang, Aceh   31.87 234   P    P        09 52 44.0 +0.7
      comp=Z,207nm,1.0s
GMJI  Gumukmas         31.95 195   P    P        09 52 43.0 -0.9
      comp=Z,53nm,0.9s
MDSI  Maura Dua        32.08 214   P    P        09 52 45.0 -0.1
      comp=Z,2µmcomp=Z,127nm,0.9s
KSI   Kapahiang        32.24 218   P    P        09 52 46.9 +0.3
WOJI  Wonogiri, Jawa   32.24 200   P    P        09 52 47.0 +0.5
IRK   Irkutsk          32.26 340 eP    P        09 52 45.5 -0.8
IRK                                pmax pmax
      comp=Z,95nm,1.7s
BLSI  Bandar Lampung   32.30 212   P    P        09 52 47.9 +0.9
      comp=Z,138nm,0.8s
TYV   Tymovskoe        32.40  25 eP    P        09 52 50.5 +2.9
TYV                              eS    S        09 58 06.3 +4.6
TYV                                pmax pmax
      comp=Z,100nm,1.3s
TYV                                pmax pmax
      comp=Z,500nm,2.2s
TYV                                smax smax
      comp=N,900nm,5.7s
TYV                                smax smax
      comp=E,500nm,5.7s
UGM   Wanagama         32.44 201   P    P        09 52 49.0 +0.8
UGM                                IAmb IAmb     09 53 02.2
      comp=Z,162nm,1.1s
UGM   Wanagama         32.44 201   P    P        09 52 49.1 +0.8
SOEI  Soe              32.49 175   IAmb IAmb     09 53 02.3
      comp=Z,143nm,0.9s
SOEI  Soe              32.49 175   P    P        09 52 50.9 +2.1
SOEI  Soe              32.49 175   P    P        09 52 48.5 -0.3
      comp=Z,172nm,1.0s
LEM   Lembang          32.52 207   P    P        09 52 50.6 +1.5
      comp=Z,3µmcomp=Z,151nm,1.3s
LWLI  Liwa             32.59 214   P    P        09 52 50.1 +0.4
MNAI  Manna            32.62 216   P    P        09 52 50.8 +0.9
      comp=Z,336nm,1.5s
KASI  Kota Agung       32.80 213   P    P        09 52 53.4 +2.0
      comp=Z,71nm,0.9s
BATI  Baumata          32.90 176   P    P        09 52 52.0 -0.3
      comp=Z,117nm,1.0s
MOY   Mondy            32.91 336 eP    P        09 52 50.7 -1.5
MOY                                pmax pmax
      comp=Z,84nm,1.8s
BBJI  Bungbulang       33.08 206   P    P        09 52 55.9 +1.9
CNJI  Cibinong         33.16 207   P    P        09 52 54.9 +0.4
      comp=Z,54nm,1.2s
NKL   Nikolayevsk      33.56  21 eP    P        09 52 55.7 -1.9
NKL                              eS    S        09 58 20.7 +1.1
NKL                                pmax pmax
      comp=N,395nm,1.5s
NKL                                pmax pmax
      comp=E,219nm,1.5s
NKL                                pmax pmax
      comp=Z,969nm,1.5s
NKL                                smax smax
      comp=E,145nm,4.0s
NKL                                smax smax
      comp=N,569nm,5.2s
NKL                                MLR  MLR
      comp=E,4µm,8.0s
NKL                                MLR  MLR
      comp=N,10µm,12.0s
NKL                                MLR  MLR
      comp=Z,14µm,12.0s
WMQ   Urumqi           34.90 315 eP    P        09 53 11.1 +1.6
WMQ                                pmax pmax
      comp=Z,140nm,1.1s
WMQ                                pmax pmax
      comp=Z,1µm,5.3s
WMQ                                LR   LR
      comp=Z,7µm,13.1s
WMQ                                LR   LR
      comp=Z,6µm,11.9s
WMQ                                LR   LR
      comp=Z,2µm,18.9s
MANU  Manus Island     35.22 131        P        09 53 12.1 -0.3
MANU                               IAmb IAmb     09 53 15.9
      comp=Z,91nm,1.1s
ZSN   Zaisan           38.29 319 eP    P        09 53 38.9 +0.5
ZSN                                pmax pmax
      comp=Z,137nm,1.3s
ZSN   Zaisan           38.29 319 eP    P        09 53 38.9 +0.5
      comp=Z,137nm,1.3s
SKR   Severo-Kuril's   38.59  35 eP    P        09 53 41.9 +1.1
SKR                              e               09 55 30.4
SKR                              eS    S        09 59 34.9 -1.8
SKR                                pmax pmax
      comp=Z,3µm,3.7s
PATS  Pohnpei          38.70 108   P    P        09 53 41.9 -0.2
PATS                               IAMs_20 IAMs_20 10 09 08.9
      comp=Z,3µm,19.0s
PATS  Pohnpei          38.70 108   P    P        09 53 44.2 +2.1
      comp=Z,436nm,1.5s
PATS  Pohnpei          38.70 108   P    P        09 53 44.3 +2.2
KNRA  Kununurra        38.90 169   P    P        09 53 41.9 -1.7
YAK   Yakutsk          39.56   6        P        09 53 48.1 -0.6
YAK                                     PcP      09 55 55.1 -0.8
YAK   Yakutsk          39.56   6   P    P        09 53 48.1 -0.6
      comp=Z,23nm,0.5s,baz=136,slow=0.8,SNR=13
YAK                                PcP  PcP      09 55 54.8 -1.1
      comp=Z,26nm,0.4s,baz=263,slow=1.3,SNR=4.6
YAK                                LR   LR       10 11 12.5
      comp=Z,2µm,19.6s,baz=184,slow=38
      comp=Z,23nm,0.5s
YAK   Yakutsk          39.56   6 eP    P        09 53 47.8 -0.9
YAK                              e               09 55 19.3
YAK                              e               09 55 55.1
YAK                              eS    S        09 59 51.0  0.0
YAK                              e               10 03 56.4
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YAK                                       pmax     pmax
      comp=Z,42nm,1.3s
YAK                                       pmax     pmax
      comp=E,12nm,1.4s
YAK                                       pmax     pmax
      comp=N,30nm,1.3s
YAK                                       pmax     pmax
      comp=Z,217nm,3.5s
YAK                                       pmax     pmax
      comp=E,91nm,3.8s
YAK                                       pmax     pmax
      comp=N,191nm,3.7s
YAK                                       smax     smax
      comp=E,60nm,2.0s
YAK                                       smax     smax
      comp=N,56nm,2.3s
YAK                                       MLR      MLR
      comp=Z,6µm,14.0s
YAK                                       MLR      MLR
      comp=E,4µm,13.0s
YAK                                       MLR      MLR
      comp=N,4µm,16.0s
MK31  Makanchi Array     39.60 317ceP     P        09 53 48.2 -1.2
MKAR  Makanchi Array     39.60 317  P     P        09 53 50.1 +0.7
MKAR  Makanchi Array     39.60 317  P     P        09 53 50.4 +1.0
      comp=N,210nm,0.9s,baz=111,slow=8.3,SNR=747
MKAR                                PcP   PcP      09 55 56.0 -0.4
      comp=N,14nm,0.8s,baz=108,slow=4.7,SNR=5.8
MKAR                                ScP   ScP      09 59 43.1 -2.1
      comp=N,2.5nm,1.0s,baz=103,slow=4.6,SNR=2.9
MKAR                                LR    LR       10 11 36.9
      comp=N,4µm,19.1s,baz=105,slow=38
      comp=N,210nm,0.9s
MAKZ  Makanchi           39.81 317  P     P        09 53 51.7 +0.6
MAKZ  Makanchi           39.81 317  P     P        09 53 51.7 +0.6
MAKZ                                pmax  pmax
      comp=Z,527nm,1.1s
MAKZ                                MLR   MLR
      comp=Z,5µm,18.0s
WUS   Wushi              39.91 307  P     P        09 53 53.5 +1.3
WUS                                 IAmb  IAmb     09 54 03.4
      comp=Z,136nm,1.1s
WUS   Wushi              39.91 307  IAMs_20 IAMs_20 10 10 51.0
      comp=Z,3µm,18.0s
RABL  Rabaul             40.12 128  P     P        09 53 56.5 +2.5
RABL                                IAmb  IAmb     09 53 58.0
      comp=Z,302nm,0.9s
SHLS  Shalkode           40.25 310 eP     P        09 53 52.6 -2.3
SHLS                                pmax  pmax
      comp=Z,154nm,1.0s
SHLS  Shalkode           40.25 310 eP     P        09 53 52.6 -2.3
      comp=Z,154nm,1.0s
PDGK  Podgornoye         40.28 311  P     P        09 53 55.2  0.0
UZB   Uzynbulak          40.56 310 eP     P        09 53 57.6 +0.1
UZB                                eS     S        10 00 07.1 +0.3
UZB                                 pmax  pmax
      comp=Z,119nm,1.5s
UZB   Uzynbulak          40.56 310 eP     P        09 53 57.6 +0.1
      comp=Z,119nm,1.5s
UZB                                eS     S        10 00 07.2 +0.3
PMG   Port Moresby       40.63 139        P        09 53 58.4 +0.2
PMG                                 IAmb  IAmb     09 54 01.7
      comp=Z,145nm,1.1s
PMG   Port Moresby       40.63 139  LR    LR       10 08 23.4
      comp=Z,1µm,21.6s,baz=298,slow=33
PMG   Port Moresby       40.63 139  P     P        09 54 00.0 +1.9
PMG   Port Moresby       40.63 139  P     P        09 54 00.1 +1.9
PMG   Port Moresby       40.63 139 i P    P        09 53 59.1 +1.0
PMG                                 pmax  pmax
      comp=Z,124nm,1.0s
HYB   Hyderabad          40.72 270 eP     P        09 53 59.5 +0.5
HYB                                esP    pwP      09 54 03.8 -1.8
HYB                                ePcP   PcP      09 56 00.7 +0.2
HYB                                eS     S        10 00 10.8 +1.3
PEA0B Petropavlovsk-     40.75  33  P     P        09 53 59.1 +0.4
PEA0B                               IAmb  IAmb     09 54 01.3
      comp=Z,241nm,1.4s
PEA0B Petropavlovsk-     40.75  33ceP     P        09 53 59.4 +0.7
PETK  Petropavlovsk-     40.75  33  P     P        09 53 59.6 +0.8
      comp=Z,36nm,0.9s,baz=217,slow=4.7,SNR=52
PETK                                LR    LR       10 12 26.7
      comp=Z,1µm,18.2s,baz=232,slow=38
      comp=Z,36nm,0.9s
PRZ   Przheval'sk        40.82 309  IAmb  IAmb     09 54 03.7
      comp=Z,358nm,1.2s
FITZ  Fitzroy Crossi     40.87 174  P     P        09 53 58.4 -1.6
FITZ  Fitzroy Crossi     40.87 174  P     P        09 53 58.4 -1.6
KPKS  Kokpek             40.88 311 eP     P        09 54 00.3 +0.2
KPKS                               eS     S        10 00 12.1 +0.5
KPKS                                pmax  pmax
      comp=Z,91nm,1.3s
KPKS  Kokpek             40.88 311 eP     P        09 54 00.3 +0.2
      comp=Z,91nm,1.3s
KPKS                               eS     S        10 00 12.1 +0.5
SATY  Saty               40.97 310 eP     P        09 54 01.1 +0.2
SATY                                pmax  pmax
      comp=Z,82nm,0.9s
SATY  Saty               40.97 310 eP     P        09 54 01.1 +0.2
      comp=Z,82nm,0.9s
ZHN   Zhinishke          40.98 310 eP     P        09 54 01.1 +0.2
ZHN                                 pmax  pmax
      comp=Z,119nm,1.5s
ZHN   Zhinishke          40.98 310 eP     P        09 54 01.2 +0.2
      comp=Z,119nm,1.5s
TARG  Taragay, Kyrgy     41.07 308  P     P        09 54 03.2 +1.2
TARG                                IAmb  IAmb     09 54 05.7
      comp=Z,298nm,1.3s
TARG                                IAMs_20 IAMs_20 10 11 37.5
      comp=Z,4µm,22.0s
TARG  Taragay, Kyrgy     41.07 308  P     P        09 54 03.2 +1.2
TARG                                pmax  pmax
      comp=Z,298nm,1.3s
TARG                                MLR   MLR
      comp=Z,4µm,22.0s
PET   Petropavlovsk      41.19  34  P     P        09 54 03.1 +0.8
PET                                 IAMs_20 IAMs_20 10 13 27.6
      comp=Z,2µm,18.0s
PET   Petropavlovsk      41.19  34  P     P        09 54 03.7 +1.4
PET   Petropavlovsk      41.19  34 eP     P        09 54 02.2 -0.1
PET                                eS     S        10 00 09.2 -6.3
PET                                 pmax  pmax
      comp=Z,3µm,2.0s
PET                                 pmax  pmax
      comp=Z,1µm,6.0s
PET                                 pmax  pmax
      comp=Z,577nm,1.5s
PET                                 MLR   MLR
      comp=Z,2µm,16.0s
PET                                 MLR   MLR
      comp=Z,2µm,16.0s
TDK   Taldyqorghan       41.52 313 eP     P        09 54 05.6 +0.4
TDK                                 pmax  pmax
      comp=Z,152nm,1.0s
TDK   Taldyqorghan       41.52 313 eP     P        09 54 05.6 +0.4
      comp=Z,152nm,1.0s
ZAA0  Zalesovo Array     41.61 328  P     P        09 54 05.3 -0.4
ZAA0                                IAmb  IAmb     09 54 06.8
      comp=Z,274nm,1.1s
ZALV  Zalesovo Beam      41.61 328  P     P        09 54 05.2 -0.5
      comp=Z,67nm,0.5s,baz=111,slow=8.1,SNR=288
ZALV                                PcP   PcP      09 56 01.8 -0.9
      comp=Z,15nm,0.7s,baz=98,slow=2.9,SNR=3.3
ZALV                                LR    LR       10 11 46.6
      comp=Z,2µm,20.0s,baz=125,slow=37
      comp=Z,67nm,0.5s
ZALV  Zalesovo Beam      41.61 328 i P    P        09 54 05.3 -0.5
ZALV                                pmax  pmax
      comp=Z,66nm,0.5s
MALK  Mahakanadarawa     41.95 257  P     P        09 54 08.1 -1.0
MDOK  Medeo              41.96 310 eP     P        09 54 09.1 +0.1
MDOK                               eS     S        10 00 28.0 +0.4
MDOK  Medeo              41.96 310 eP     P        09 54 09.1 +0.1
MDOK                               eS     S        10 00 28.0 +0.4
TNSS  Tian-Shan          42.00 310 eP     P        09 54 09.5 -0.1
TNSS  Tian-Shan          42.00 310 eP     P        09 54 09.5 -0.1
KSH   Kashi              42.00 304  P     P        09 54 13.3 +3.9
KSH                                 sP    pwP      09 54 21.1 +5.1
KSH                                 PP    PnPn     09 55 56.0 +4.4
KSH                                 S     S        10 00 33.4 +5.1
KSH                                 pmax  pmax
      comp=Z,200nm,1.3s
KSH                                 pmax  pmax
      comp=Z,1µm,4.6s
KSH                                 LR    LR
      comp=Z,3µm,14.1s
KSH                                 LR    LR
      comp=Z,3µm,14.8s
KSH                                 LR    LR
      comp=Z,4µm,17.2s
WAKE  Wake Island        42.03  86  P     P        09 54 09.8 +0.1
WAKE                                IAmb  IAmb     09 54 12.2
      comp=Z,168nm,1.1s
WAKE  Wake Island        42.03  86  P     P        09 54 11.5 +1.9
AAA   Alma-Ata           42.06 310 eP     P        09 54 10.0 +0.3
AAA                                 pmax  pmax
      comp=Z,151nm,1.2s
AAA   Alma-Ata           42.06 310 eP     P        09 54 10.1 +0.3
      comp=Z,151nm,1.2s
MA2   Magadan            42.07  22  P     P        09 54 10.0 +0.5
MA2                                 IAmb  IAmb     09 54 11.8
      comp=Z,198nm,1.2s
MA2                                 IAMs_20 IAMs_20 10 11 31.8
      comp=Z,3µm,20.0s
MA2   Magadan            42.07  22  P     P        09 54 10.0 +0.5
      comp=Z,64nm,1.0s,baz=218,slow=8.1,SNR=70
MA2                                 PcP   PcP      09 56 03.5 -0.6
      comp=Z,14nm,0.7s,baz=181,slow=2.1,SNR=3.9
MA2                                 LR    LR       10 11 43.5
      comp=Z,3µm,21.2s,baz=222,slow=36
      comp=Z,64nm,1.0s
MA2   Magadan            42.07  22  P     P        09 54 10.5 +1.0
MA2   Magadan            42.07  22 eP     P        09 54 10.5 +1.0
MA2                                 pmax  pmax
      comp=Z,110nm,1.1s
H11N1 WAKE ISLAND Hy     42.15  85  T     T        10 39 25.9
      baz=282,slow=75,SNR=1482
H11N2 WAKE ISLAND Hy     42.15  85  T     T        10 39 27.4
      baz=282,slow=75,SNR=2152
H11N3 WAKE ISLAND Hy     42.17  85  T     T        10 39 25.3
      baz=282,slow=75,SNR=1818
COEN  Coen               42.21 148  P     P        09 54 10.9 -0.2
COEN                                IAmb  IAmb     09 54 20.2
      comp=Z,150nm,1.3s
COEN                                IAMs_20 IAMs_20 10 10 21.8
      comp=Z,3µm,20.0s
COEN  Coen               42.21 148  P     P        09 54 12.1 +1.0
      comp=Z,96nm,1.2s
COEN  Coen               42.21 148  P     P        09 54 11.9 +0.8
H11S3 WAKE ISLAND Hy     42.24  87  T     T        10 39 31.2
      baz=284,slow=74,SNR=2115
H11S1 WAKE ISLAND Hy     42.25  87  T     T        10 39 30.1
      baz=284,slow=74,SNR=1186
H11S2 WAKE ISLAND Hy     42.26  87  T     T        10 39 32.4
      baz=284,slow=74,SNR=1116
PALK  Pallekele          42.29 255  P     P        09 54 11.8 -0.1
PALK                                IAMs_20 IAMs_20 10 11 50.5
      comp=Z,3µm,21.0s
PALK  Pallekele          42.29 255  LR    LR       10 11 41.4
      comp=Z,3µm,21.5s,baz=54,slow=36
PALK  Pallekele          42.29 255  P     P        09 54 10.7 -1.1
PALK  Pallekele          42.29 255  P     P        09 54 11.8 -0.1
PALK                                pmax  pmax
      comp=Z,115nm,1.3s
PALK                                MLR   MLR
      comp=Z,3µm,21.0s
ULHL  Ulahol             42.32 308  P     P        09 54 14.5 +2.4
      SNR=19
COCO  West Island        42.46 217  P     P        09 54 13.0 -0.1
COCO                                IAmb  IAmb     09 54 16.5
      comp=Z,135nm,1.1s
COCO  West Island        42.46 217  P     P        09 54 13.0 -0.1
COCO                                pmax  pmax
      comp=Z,135nm,1.1s
KUU   Kurty              42.64 311 eP     P        09 54 14.6 +0.2
KUU                                 pmax  pmax
      comp=Z,181nm,1.4s
KUU   Kurty              42.64 311 eP     P        09 54 14.7 +0.2
      comp=Z,181nm,1.4s
TKM2  Tokmak 2           42.94 309  P     P        09 54 18.5 +1.5
      SNR=256
KBK   Karagaybulak       43.34 309  P     P        09 54 22.3 +2.0
      SNR=95
KURK  Kurchatov          43.40 321  P     P        09 54 20.8 +0.4
KURK  Kurchatov          43.40 321  IAMs_20 IAMs_20 10 10 19.7
      comp=Z,3µm,21.0s
KURK  Kurchatov          43.40 321  P     P        09 54 21.7 +1.3
KURK                                P     P        09 54 21.7 +1.3
KURK  Kurchatov          43.40 321ceP     P        09 54 20.2 -0.2
KURK                                pmax  pmax
      comp=Z,487nm,1.7s
KURBB Kurchatov Arra     43.41 321  P     P        09 54 21.4 +0.9
      comp=Z,100nm,1.0s,baz=119,slow=7.4,SNR=374
KURBB                               PcP   PcP      09 56 07.2 -1.6
      comp=Z,12nm,1.0s,baz=130,slow=2.8,SNR=3.1
KURBB                               LR    LR       10 12 39.4
      comp=Z,2µm,18.5s,baz=140,slow=36
      comp=Z,100nm,1.0s
KURBB Kurchatov Arra     43.41 321  P     P        09 54 19.8 -0.7
CHMS  Chumysh            43.56 309  P     P        09 54 23.3 +1.4
      SNR=40
UCH   Uchtor             43.57 308  P     P        09 54 24.9 +2.3
      SNR=84
FRU1  Bishkek            43.61 309  IAmb  IAmb     09 54 25.3
      comp=Z,208nm,0.9s
NIL   Nilore             43.63 295  P     P        09 54 23.5 +0.9
NIL                                 IAmb  IAmb     09 54 25.1
      comp=Z,248nm,1.1s
NIL   Nilore             43.63 295  IAMs_20 IAMs_20 10 14 47.5
      comp=Z,3µm,22.0s
NIL   Nilore             43.63 295  P     P        09 54 24.0 +1.4
NIL                                 P     P        09 54 24.0 +1.4
NIL   Nilore             43.63 295  P     P        09 54 23.5 +0.9
NIL                                 pmax  pmax
      comp=Z,248nm,1.2s
NIL                                 MLR   MLR
      comp=Z,3µm,22.0s
AAK   Ala-Archa          43.67 308  P     P        09 54 24.6 +1.7
      SNR=58
AAK   Ala-Archa          43.67 308  P     P        09 54 24.2 +1.3
AAK                                 IAmb  IAmb     09 54 25.9
      comp=Z,118nm,1.0s
AAK   Ala-Archa          43.67 308  LR    LR       10 13 03.3
      comp=Z,4µm,19.6s,baz=98,slow=37
AAK   Ala-Archa          43.67 308  P     P        09 54 24.9 +1.9
AAK                                 P     P        09 54 24.9 +1.9
AAK                                 P     P        09 54 24.9 +1.9
AAK   Ala-Archa          43.67 308ceP     P        09 54 23.9 +1.0
AAK                                 pmax  pmax
      comp=Z,172nm,1.3s
AAK   Ala-Archa          43.67 308 i P    P        09 54 24.4 +1.5
      SNR=62
SGDS  Sogindy            43.74 310 eP     P        09 54 23.6 +0.2
      comp=Z,53nm,1.0s
MBWA  Marble Bar         43.77 183  P     P        09 54 22.2 -1.4
MBWA  Marble Bar         43.77 183  P     P        09 54 22.2 -1.4
MBWA  Marble Bar         43.77 183  P     P        09 54 21.8 -1.8
MBWA                                P     P        09 54 21.8 -1.8
USP   Ospenovka          43.79 309  P     P        09 54 25.1 +1.3
      SNR=97
AML   Almayashu          44.15 308  P     P        09 54 28.9 +1.8
      SNR=243
PSA00 Pilbara Seismi     44.17 182  P     P        09 54 25.2 -1.7
PSA00 Pilbara Seismi     44.17 182  P     P        09 54 25.4 -1.4
PSA00 Pilbara Seismi     44.17 182  P     P        09 54 25.8 -1.1
EKS2  Erkin-Say          44.19 308  P     P        09 54 28.6 +1.5
      SNR=73
WRAB  Tennant Creek      44.28 163  P     P        09 54 26.4 -1.4
WRAB  Tennant Creek      44.28 163  P     P        09 54 26.4 -1.4
WRAB                                pmax  pmax
      comp=Z,29nm,0.9s
WRAB                                MLR   MLR
      comp=Z,800nm,20.0s
WRA   Warramunga Arr     44.29 163  P     P        09 54 26.3 -1.6
      comp=Z,31nm,0.9s,baz=343,slow=8.0,SNR=58
WR8   Warramunga Arr     44.34 163  P     P        09 54 27.1 -1.1
BTLS  Baital             44.51 312 eP     P        09 54 29.8 +0.4
BTLS                               eS     S        10 01 05.4 +0.7
BTLS                                pmax  pmax
      comp=Z,79nm,1.0s
BTLS  Baital             44.51 312 eP     P        09 54 29.8 +0.4
      comp=Z,79nm,1.0s
BTLS                               eS     S        10 01 05.4 +0.7
ARSB  Arslanbob          44.54 306  IAMs_20 IAMs_20 10 14 39.5
      comp=Z,3µm,19.0s
SEY   Seymchan           45.10  19  P     P        09 54 35.5 +1.7
      comp=Z,26nm,0.8s,baz=228,slow=6.3,SNR=81
SEY                                 LR    LR       10 13 57.3
      comp=Z,1µm,20.6s,baz=218,slow=37
      comp=Z,26nm,0.8s
SEY   Seymchan           45.10  19ceP     P        09 54 34.3 +0.5
SEY                                 pmax  pmax
      comp=Z,118nm,1.7s
GIRL  Giralia            45.78 190  P     P        09 54 40.7 +1.0
      comp=Z,740nm,0.9s
GIRL  Giralia            45.78 190  P     P        09 54 40.6 +1.0
BTK   Batken             46.01 304  IAMs_20 IAMs_20 10 15 57.3
      comp=Z,2µm,19.0s
MTSU  Mount Surprise     46.36 150  P     P        09 54 45.7 +1.4
      comp=Z,65nm,0.8s
MTSU  Mount Surprise     46.36 150  P     P        09 54 46.0 +1.7
OTUK  Ortayu             46.45 316  P     P        09 54 45.3 +0.5
QIS   Mount Isa          46.55 157  P     P        09 54 45.8  0.0
      comp=Z,74nm,1.0s
QIS   Mount Isa          46.55 157  P     P        09 54 45.8  0.0
KK31  Karatay Array      46.63 308  P     P        09 54 47.0 +0.7
KK31                                PcP   PcP      09 56 19.9 -0.2
KK31  Karatay Array      46.63 308 i P    P        09 54 47.0 +0.7
KKAR  Karatay Array      46.63 308  P     P        09 54 46.9 +0.6
KKAR                                PcP   PcP      09 56 19.8 -0.3
KKAR  Karatay Array      46.63 308  P     P        09 54 46.9 +0.6
BRZS  Berezniki          46.71 318 eP     P        09 54 47.2 +0.4
BRZS                                pmax  pmax
      comp=Z,46nm,1.4s
BRZS  Berezniki          46.71 318 eP     P        09 54 47.3 +0.4
      comp=Z,46nm,1.4s
KBU   Kabul Universi     47.06 296  P     P        09 54 49.2 -0.8
BRLS  Borolday           47.11 308 eP     P        09 54 51.0 +1.0
BRLS                                pmax  pmax
      comp=Z,41nm,0.9s
BRLS  Borolday           47.11 308 eP     P        09 54 51.0 +1.0
      comp=Z,40nm,0.9s
KBL   Kabul              47.13 297  P     P        09 54 51.4 +0.8
KBL                                 PcP   PcP      09 56 21.9 -0.4
KBL   Kabul              47.13 297  P     P        09 54 52.1 +1.6
      SNR=162
KBL                                 P     P        09 54 52.1 +1.6
      SNR=162
CHM   Chimkent           47.19 307 eP     P        09 54 50.8 +0.2
CHM                                 pmax  pmax
      comp=Z,50nm,0.7s
CHM   Chimkent           47.19 307 eP     P        09 54 50.9 +0.2
      comp=Z,50nm,0.7s
SIMJ  Simiganj           47.29 302  P     P        09 54 52.5 +0.8
SIMJ                                IAmb  IAmb     09 54 55.0
      comp=Z,106nm,0.9s
SIMJ                                PcP   PcP      09 56 23.1 +0.4
AS31  Alice Springs      47.73 165  P     P        09 54 53.8 -1.2
AS31                                PcP   PcP      09 56 23.6 -0.6
AS31  Alice Springs      47.73 165  P     P        09 54 54.8 -0.2
      comp=Z,7.4nm,0.9s
ASAR  Alice Springs      47.73 165  P     P        09 54 54.1 -0.9
ASAR                                PcP   PcP      09 56 23.8 -0.4
ASAR  Alice Springs      47.73 165  P     P        09 54 54.1 -0.9
      comp=Z,12nm,0.8s,baz=340,slow=6.7,SNR=71
ASAR                                PcP   PcP      09 56 23.4 -0.7
      comp=Z,15nm,0.9s,baz=346,slow=4.1,SNR=7.0
ASAR                                ScP   ScP      10 00 15.0 -3.5
      comp=Z,2.7nm,0.9s,baz=351,slow=3.6,SNR=4.6
ASAR                                LR    LR       10 16 50.3
      comp=Z,456nm,19.0s,baz=0.5,slow=38
ASAR                                P4KPbc         10 32 34.9
      comp=Z,0.9nm,0.8s,baz=333,slow=3.7,SNR=6.0
      comp=Z,12nm,0.8s
AS01  Alice Springs      47.74 165  P     P        09 54 55.0 -0.1
TV1H  Townsville Har     48.52 148  P     P        09 55 02.4 +1.4
TATA  Tatamba Isabel     48.56 125  P     P        09 55 03.9 +2.4
CTAO  Charters Tower     48.96 149  P     P        09 55 04.6 +0.1
CTAO                                IAmb  IAmb     09 55 06.4
      comp=Z,70nm,1.2s
CTAO  Charters Tower     48.96 149  IAMs_20 IAMs_20 10 13 04.6
      comp=Z,2µm,22.0s
CTAO  Charters Tower     48.96 149  P     P        09 55 05.2 +0.7
CTAO  Charters Tower     48.96 149  P     P        09 55 04.6 +0.1
CTAO                                pmax  pmax
      comp=Z,70nm,1.2s
BVA0  Borovoye Array     48.99 321 i P    P        09 55 04.2 -0.2
BVAR  Borovoye Array     48.99 321  P     P        09 55 04.7 +0.3
      comp=Z,67nm,0.9s,baz=106,slow=8.8,SNR=144
BVAR                                PcP   PcP      09 56 28.0 -0.3
      comp=Z,26nm,0.9s,baz=70,slow=1.7,SNR=5.4
BVAR                                ScP   ScP      10 00 21.1 -2.3
      comp=Z,4.4nm,1.0s,baz=114,slow=3.5,SNR=3.3
BVAR                                LR    LR       10 15 01.8
      comp=Z,1µm,18.6s,baz=105,slow=35
      comp=Z,67nm,0.9s
TIXI  Tiksi              49.01   3  P     P        09 55 03.0 -1.3
TIXI                                IAmb  IAmb     09 55 05.6
      comp=Z,82nm,1.5s
TIXI  Tiksi              49.01   3  P     P        09 55 03.1 -1.2
      comp=Z,8.8nm,0.5s,baz=189,slow=5.6,SNR=29
TIXI                                PcP   PcP      09 56 27.7 -0.2
      comp=Z,14nm,0.7s,baz=176,slow=3.5,SNR=4.3
TIXI                                ScP   ScP      10 00 21.4 -1.7
      comp=Z,2.4nm,0.4s,baz=279,slow=16,SNR=2.1
TIXI                                LR    LR       10 17 42.4
      comp=Z,3µm,18.2s,baz=200,slow=38
      comp=Z,8.8nm,0.5s
TIXI  Tiksi              49.01   3 i P    P        09 55 02.7 -1.5
TIXI                                pmax  pmax
      comp=Z,92nm,2.0s
BRVK  Borovoye           49.06 321  P     P        09 55 05.4 +0.5
BRVK  Borovoye           49.06 321  IAMs_20 IAMs_20 10 16 28.3
      comp=Z,2µm,18.0s
BRVK  Borovoye           49.06 321  P     P        09 55 05.5 +0.6
BRVK  Borovoye           49.06 321ceP     P        09 55 04.6 -0.3
BRVK                                pmax  pmax
      comp=Z,91nm,0.9s
SAVO  Savo Central       49.06 126  P     P        09 55 07.7 +2.3
HMDM  Hanimaadhoo        49.26 259  IAMs_20 IAMs_20 10 16 23.1
      comp=Z,2µm,21.0s
MEEK  Meekatharra        49.27 184  P     P        09 55 05.3 -1.5
MEEK  Meekatharra        49.27 184  P     P        09 55 05.4 -1.4
HNR   Honiara            49.34 126  P     P        09 55 07.5  0.0
HNR                                 IAMs_20 IAMs_20 10 11 51.6
      comp=Z,2µm,22.0s
HNR   Honiara            49.34 126  LR    LR       10 12 46.7
      comp=Z,470nm,18.8s,baz=312,slow=32
HNR   Honiara            49.34 126  P     P        09 55 07.5  0.0
HNR                                 pmax  pmax
      comp=Z,276nm,1.1s
ALEG  Aligegeo Malai     49.46 125  P     P        09 55 10.6 +2.1
NRIK  Noril'sk           50.81 345  P     P        09 55 16.3 -1.7
NRIK                                PcP   PcP      09 56 34.6 -0.1
NRIK                                IAmb  IAmb     09 56 35.3
      comp=Z,83nm,1.3s
NRIK  Noril'sk           50.81 345  P     P        09 55 16.1 -1.8
      comp=Z,13nm,0.8s,baz=135,slow=6.7,SNR=16
NRIK                                PcP   PcP      09 56 34.4 -0.2
      comp=Z,26nm,0.9s,baz=136,slow=3.3,SNR=8.5
NRIK                                LR    LR       10 17 18.0
      comp=Z,1µm,21.4s,baz=148,slow=36
      comp=Z,13nm,0.8s
NRIK  Noril'sk           50.81 345ceP     P        09 55 16.3 -1.7
NRIK                                pmax  pmax
      comp=Z,22nm,1.0s
NGOA  Tingoa Renbel      50.83 128  P     P        09 55 20.6 +1.8
MORW  Morawa             51.89 186  P     P        09 55 25.7 -0.8
MORW  Morawa             51.89 186  P     P        09 55 25.7 -0.8
HRA   Herat              52.75 297  IAmb  IAmb     09 55 35.7
      comp=Z,93nm,1.1s
BILL  Bilibino           52.80  19  P     P        09 55 33.5 +0.6
BILL                                IAMs_20 IAMs_20 10 18 23.4
      comp=Z,1µm,21.0s
BILL  Bilibino           52.80  19ceP     P        09 55 33.2 +0.3
BILL                                pmax  pmax
      comp=Z,158nm,2.5s
BILL                                MLR   MLR
      comp=Z,2µm,23.0s
BLDU  Ballidu            53.36 185  P     P        09 55 36.4 -0.9
FORT  Forrest            53.66 173  P     P        09 55 38.8 -0.8
FORT                                IAmb  IAmb     09 55 42.3
      comp=Z,102nm,0.9s
FORT  Forrest            53.66 173  P     P        09 55 39.8 +0.2
QLP   Quilpie            53.77 155  P     P        09 55 40.2 -0.2
RK1H  Rockhampton Ha     53.83 147  P     P        09 55 42.8 +1.9
      comp=Z,40nm,1.0s
KMBL  Kambalda           53.90 180  P     P        09 55 40.3 -1.0
KLBR  Kellerberrin       54.25 184  P     P        09 55 43.1 -0.7
LUES  Luesalemba Tem     54.66 123  P     P        09 55 48.8 +1.7
AB31  Akbulak array      54.69 315  P     P        09 55 47.5 +0.5
AB31  Akbulak array      54.69 315  P     P        09 55 47.1 +0.1
ABKAR Akbulak array      54.69 315  P     P        09 55 47.4 +0.5
MUN   Mundaring          54.75 186  P     P        09 55 47.4 -0.1
MIDW  Midway             54.80  71  P     P        09 55 49.8 +1.8
MIDW  Midway             54.80  71  P     P        09 55 49.4 +1.3
NGCH  Negor - Chabah     54.89 286  P     P        09 55 51.3 +2.5
ADK   Adak               54.95  42  P     P        09 55 48.7 -0.1
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ADK	**Adak**	**54.95**	**42**		P	**P**	**09 55 48.7**	**-0.1**
ADK					pmax	pmax		
	comp=Z,225nm,1.3s							
SVE	**Sverdlovsk**	**55.38**	**324**	*d i*	P	**P**	**09 55 52.3**	**+0.5**
SVE				*e*	S	**S**	**10 03 38.4**	**+2.3**
SVE					pmax	pmax		
	comp=Z,412nm,1.5s							
SVE					pmax	pmax		
	comp=Z,3µm,13.0s							
NWAO	**Narrogin (SRO)**	**55.61**	**185**		P	**P**	**09 55 53.3**	**-0.4**
NWAO					IAmb	IAmb	09 55 53.9	
	comp=Z,52nm,1.0s							
NWAO	**Narrogin (SRO)**	**55.61**	**185**		LR	LR	10 20 32.1	
	comp=Z,362nm,21.6s,baz=18,slow=37							
NWAO	**Narrogin (SRO)**	**55.61**	**185**		P	**P**	**09 55 53.1**	**-0.5**
NWAO	**Narrogin (SRO)**	**55.61**	**185**		P	**P**	**09 55 53.5**	**-0.2**
NWAO	**Narrogin (SRO)**	**55.61**	**185**		P	**P**	**09 55 55.7**	**+2.0**
NWAO	**Narrogin (SRO)**	**55.61**	**185**		P	**P**	**09 55 53.3**	**-0.4**
NWAO					pmax	pmax		
	comp=Z,52nm,1.0s							
EIDS	**Eidsvold**	**55.77**	**147**		P	**P**	**09 55 54.4**	**-0.6**
AKTO	**Aktyubinsk**	**56.04**	**316**		LR	LR	10 21 40.0	
	comp=Z,3µm,19.9s,baz=84,slow=38							
AKTO	**Aktyubinsk**	**56.04**	**316**		P	**P**	**09 55 56.5**	**-0.2**
ATKA	**Atka Island**	**56.52**	**42**		P	**P**	**09 55 59.7**	**-0.3**
ATKA	**Atka Island**	**56.52**	**42**		P	**P**	**09 56 02.2**	**+2.2**
ARTI	**Arti**	**56.53**	**323**		P	**P**	**09 55 59.7**	**-0.4**
ARTI					IAMs_20	IAMs_20	10 19 32.7	
	comp=Z,2µm,19.0s							
ARTI	**Arti**	**56.53**	**323**		LR	LR	10 19 54.7	
	comp=Z,2µm,19.9s,baz=100,slow=36							
ARTI	**Arti**	**56.53**	**323**	*c i*	P	**P**	**09 55 59.5**	**-0.6**
ARTI							09 56 59.5	
ARTI							09 58 10.7	
ARTI					PPP	PPP	09 59 25.1	
ARTI					S	**S**	**10 03 50.8**	**-0.6**
ARTI					SS	**SS**	**10 07 33.6**	**-4.8**
ARTI					pmax	pmax		
	comp=Z,140nm,0.7s							
ARTI					MLR	MLR		
	comp=Z,2µm,20.0s							
BBOO	**Buckleboo**	**57.02**	**166**		P	**P**	**09 56 03.4**	**-0.4**
BBOO					IAmb	IAmb	09 56 04.7	
	comp=Z,68nm,0.9s							
BBOO	**Buckleboo**	**57.02**	**166**		P	**P**	**09 56 03.2**	**-0.6**
JLN	**Jalan Bani Buh**	**57.11**	**282**		P	**P**	**09 56 06.2**	**+1.5**
	SNR=12							
JLN					P	**P**	**09 56 06.2**	**+1.5**
	SNR=12							
WSAR	**Wadi Sarin**	**57.56**	**284**		LR	LR	10 23 41.9	
	comp=Z,6.8nm,20.9s,baz=90,slow=39							
WSAR	**Wadi Sarin**	**57.56**	**284**		P	**P**	**09 56 09.3**	**+1.4**
	SNR=15							
WSAR					S	**S**	**10 04 08.4**	**+2.4**
STKA	**Stephens Creek**	**57.66**	**160**		P	**P**	**09 56 07.7**	**-0.6**
STKA					IAmb	IAmb	09 56 09.0	
	comp=Z,124nm,1.0s							
STKA	**Stephens Creek**	**57.66**	**160**		P	**P**	**09 56 07.5**	**-0.8**
	comp=Z,20nm,0.9s,baz=341,slow=7.2,SNR=24							
STKA					LR	LR	10 22 21.8	
	comp=Z,621nm,20.5s,baz=337,slow=38							
	comp=Z,20nm,0.9s							
STKA	**Stephens Creek**	**57.66**	**160**		P	**P**	**09 56 08.6**	**+0.3**
STKA	**Stephens Creek**	**57.66**	**160**	*i*	P	**P**	**09 56 07.9**	**-0.4**
BIDO	**Bidbid**	**57.95**	**284**		P	**P**	**09 56 12.2**	**+1.6**
	SNR=23							
BIDO					P	**P**	**09 56 12.2**	**+1.6**
	SNR=23							
BIDO					P	**P**	**09 56 12.2**	**+1.6**
	SNR=23							
SMDO	**Samad**	**58.12**	**284**		P	**P**	**09 56 13.2**	**+1.2**
	SNR=16							
SMDO					P	**P**	**09 56 13.2**	**+1.2**
	SNR=16							
SMDO					P	**P**	**09 56 13.2**	**+1.2**
	SNR=16							
JMDO	**Jabal Madar**	**58.24**	**283**		P	**P**	**09 56 13.7**	**+1.0**
	SNR=12							
JMDO					P	**P**	**09 56 13.7**	**+1.0**
	SNR=12							
HTT	**Hallett**	**58.33**	**163**		P	**P**	**09 56 13.3**	**+0.3**
HOQ	**Hoqain**	**58.67**	**284**		P	**P**	**09 56 16.9**	**+1.2**
	SNR=19							
HOQ					P	**P**	**09 56 16.9**	**+1.2**
	SNR=19							
HOQ					P	**P**	**09 56 16.9**	**+1.2**
	SNR=19							
MHTO	**MHTO**	**58.70**	**281**		P	**P**	**09 56 16.3**	**+0.4**
	SNR=14							
MHTO					P	**P**	**09 56 16.3**	**+0.4**
	SNR=14							
MHTO					P	**P**	**09 56 16.3**	**+0.4**
	SNR=14							
CMSA	**Cobar Meteorol**	**58.77**	**156**		P	**P**	**09 56 17.4**	**+1.4**
BSY	**Bisya**	**58.96**	**284**		P	**P**	**09 56 19.0**	**+1.3**
	SNR=10							
BSY					P	**P**	**09 56 19.0**	**+1.3**
	SNR=10							
BSY					P	**P**	**09 56 19.0**	**+1.3**
	SNR=10							
BANOM	**Banah**	**59.05**	**287**		P	**P**	**09 56 20.4**	**+2.0**
BANOM					P	**P**	**09 56 20.4**	**+2.0**
BANOM					P	**P**	**09 56 20.4**	**+2.0**
BANOM	**Banah**	**59.05**	**287**	*i*	P	**P**	**09 56 19.0**	**+0.7**
	SNR=15							
SHME	**Shamm**	**59.16**	**288**		P	**P**	**09 56 20.8**	**+1.7**
	SNR=6.1							
SHME					P	**P**	**09 56 20.8**	**+1.7**
	SNR=6.1							
SHME	**Shamm**	**59.16**	**288**	*i*	P	**P**	**09 56 20.4**	**+1.3**
	SNR=9.2							
MDH	**Madha**	**59.19**	**287**		P	**P**	**09 56 19.5**	**+0.2**
MDH					P	**P**	**09 56 19.5**	**+0.2**
VLAKA	**Lakatoro**	**59.19**	**127**		P	**P**	**09 56 20.9**	**+1.7**
SOHO	**SOHO**	**59.23**	**285**		P	**P**	**09 56 20.8**	**+1.2**
SOHO					P	**P**	**09 56 20.8**	**+1.2**
SOHO	**SOHO**	**59.23**	**285**	*i*	P	**P**	**09 56 19.9**	**+0.3**
	SNR=19							
SPIA	**Saint Paul Isl**	**59.27**	**36**		P	**P**	**09 56 20.7**	**+1.4**
	baz=265,SNR=5.9							
MASF	**Masafi**	**59.29**	**287**		P	**P**	**09 56 21.1**	**+1.0**
	SNR=9.4							
MASF					P	**P**	**09 56 21.1**	**+1.0**
	SNR=9.4							
MSFE	**Esma-Masafi**	**59.30**	**287**	*i*	P	**P**	**09 56 20.3**	**+0.3**
	SNR=18							
UOSS	**Minazif**	**59.35**	**286**		P	**P**	**09 56 20.3**	**-0.1**
UOSS	**Minazif**	**59.35**	**286**		P	**P**	**09 56 21.1**	**+0.7**
UOSS					P	**P**	**09 56 21.1**	**+0.7**
UOSS	**Minazif**	**59.35**	**286**	*i*	P	**P**	**09 56 20.4**	**-0.1**
	SNR=7.2							
DQM	**DQM**	**59.35**	**280**		P	**P**	**09 56 18.4**	**-2.1**
	SNR=6.7							
DQM					P	**P**	**09 56 18.4**	**-2.1**
	SNR=6.7							
ARQ	**Araqi**	**59.43**	**284**		P	**P**	**09 56 22.4**	**+1.5**
	SNR=19							
ARQ					P	**P**	**09 56 22.4**	**+1.5**
	SNR=19							
ARQ					P	**P**	**09 56 22.4**	**+1.5**
	SNR=19							
HATD	**Hatta, Dubai**	**59.44**	**286**		P	**P**	**09 56 22.6**	**+1.5**
	SNR=17							
HATD	**Hatta, Dubai**	**59.44**	**286**	*i*	P	**P**	**09 56 21.6**	**+0.6**
	SNR=23							
GAMB	**Gambell**	**59.46**	**28**		P	**P**	**09 56 20.3**	**-0.1**
GAMB					IAmb	IAmb	09 56 23.2	
	comp=Z,104nm,1.2s							
GAMB	**Gambell**	**59.46**	**28**		P	**P**	**09 56 21.8**	**+1.3**
	baz=260,SNR=6.9							
GAMB					S	**S**	**10 04 32.3**	**+2.9**
	baz=260							
ASHO	**Ashiyiah**	**59.53**	**286**		P	**P**	**09 56 23.1**	**+1.4**
	SNR=22							
ASHO					P	**P**	**09 56 23.1**	**+1.4**
	SNR=22							
ASHO	**Ashiyiah**	**59.53**	**286**	*i*	P	**P**	**09 56 22.4**	**+0.7**
	SNR=39							
P08K	**Saint George I**	**59.60**	**37**		P	**P**	**09 56 22.4**	**+0.8**
	baz=266							
UMQ	**Umm Al-Quwin**	**59.70**	**287**	*i*	P	**P**	**09 56 24.8**	**+2.0**
	SNR=5.8							
NAZ	**Nazwa, Dubai**	**59.82**	**286**		P	**P**	**09 56 24.6**	**+1.0**
	SNR=13							
NAZ	**Nazwa, Dubai**	**59.82**	**286**	*i*	P	**P**	**09 56 24.3**	**+0.7**
	SNR=12							
NIKH	**Nikolski High**	**59.82**	**41**		P	**P**	**09 56 22.2**	**-1.0**
NIKH	**Nikolski High**	**59.82**	**41**		P	**P**	**09 56 23.5**	**+0.4**
NIKH	**Nikolski High**	**59.82**	**41**		P	**P**	**09 56 22.6**	**-0.5**
	baz=268,SNR=11							
FAQ	**Al Faqa, Dubai**	**59.93**	**286**		P	**P**	**09 56 25.3**	**+0.9**
	SNR=12							
FAQ					P	**P**	**09 56 25.3**	**+0.9**
	SNR=12							
FAQ	**Al Faqa, Dubai**	**59.93**	**286**	*i*	P	**P**	**09 56 25.0**	**+0.6**
	SNR=21							
ALNE	**Al Ain**	**59.95**	**285**		P	**P**	**09 56 25.7**	**+1.1**
	SNR=33							
ALNE					P	**P**	**09 56 25.7**	**+1.1**
	SNR=33							
ALNE	**Al Ain**	**59.95**	**285**	*i*	P	**P**	**09 56 25.6**	**+1.1**
	SNR=41							
ASUD	**Al Ashush, Dub**	**60.19**	**286**		P	**P**	**09 56 27.7**	**+1.5**
	SNR=10							
ASUD					P	**P**	**09 56 27.7**	**+1.5**
	SNR=10							
ASUD					P	**P**	**09 56 27.7**	**+1.5**
	SNR=10							
ASUD	**Al Ashush, Dub**	**60.19**	**286**	*i*	P	**P**	**09 56 27.2**	**+1.0**
	SNR=11							
ARMA	**Armidale**	**60.27**	**150**		IAMs_20	IAMs_20	10 20 53.1	
	comp=Z,2µm,21.0s							
ARMA	**Armidale**	**60.27**	**150**		P	**P**	**09 56 28.6**	**+2.0**
AJN	**Ajban**	**60.51**	**286**		P	**P**	**09 56 29.4**	**+1.0**
	SNR=6.2							
AJN					P	**P**	**09 56 29.4**	**+1.0**
	SNR=6.2							
AJN	**Ajban**	**60.51**	**286**	*i*	P	**P**	**09 56 28.8**	**+0.4**
	SNR=9.7							
UMZA	**Um Al Zommool**	**60.79**	**284**		P	**P**	**09 56 30.9**	**+0.6**
UMZA					P	**P**	**09 56 30.9**	**+0.6**
UNV	**Unalaska Valle**	**61.24**	**40**		P	**P**	**09 56 32.2**	**-0.6**
UNV					IAmb	IAmb	09 56 39.1	
	comp=Z,51nm,0.9s							
UNV	**Unalaska Valle**	**61.24**	**40**		P	**P**	**09 56 31.8**	**-1.0**
	baz=270,SNR=7.9							
TNA	**Tin City**	**61.35**	**27**		P	**P**	**09 56 33.7**	**+0.4**
TNA					IAmb	IAmb	09 56 36.2	
	comp=Z,121nm,1.5s							
TNA	**Tin City**	**61.35**	**27**		P	**P**	**09 56 34.5**	**+1.2**
	baz=262,SNR=5.8							
TNA					S	**S**	**10 04 55.5**	**+1.9**
	baz=262							
KIRV	**Kirov**	**61.57**	**325**		LR	LR	10 24 10.0	
	comp=Z,1µm,19.6s,baz=96,slow=37							
KIRV	**Kirov**	**61.57**	**325**	*ce*	P	**P**	**09 56 34.8**	**-0.1**
M11K	**Mekoryuk**	**61.62**	**33**		P	**P**	**09 56 37.3**	**+2.1**
	baz=266							
M11K					S	**S**	**10 05 00.1**	**+3.0**
	baz=266							
MZWR	**Madinat Zayed**	**61.68**	**286**		P	**P**	**09 56 37.1**	**+0.8**
MZWR					P	**P**	**09 56 37.1**	**+0.8**
MZWR					P	**P**	**09 56 37.1**	**+0.8**
F14K	**Arctic Creek**	**62.00**	**27**		P	**P**	**09 56 39.1**	**+1.4**
	baz=264,SNR=11							
F14K					S	**S**	**10 05 04.4**	**+2.6**
	baz=264							
MZR	**Muzera**	**62.22**	**285**		P	**P**	**09 56 40.5**	**+0.5**
	SNR=25							
MZR					P	**P**	**09 56 40.5**	**+0.5**
	SNR=25							
MZR	**Muzera**	**62.22**	**285**	*i*	P	**P**	**09 56 40.3**	**+0.3**
	SNR=36							
ARPS	**Mount Arapiles**	**62.27**	**162**		P	**P**	**09 56 42.0**	**+2.1**
ANM	**Nome**	**62.31**	**28**		P	**P**	**09 56 40.2**	**+0.3**
ANM					IAmb	IAmb	09 56 43.1	
	comp=Z,81nm,1.2s							
ANM					IAMs_20	IAMs_20	10 24 33.0	
	comp=Z,950nm,19.0s							
ANM	**Nome**	**62.31**	**28**		P	**P**	**09 56 40.2**	**+0.3**
ANM					pmax	pmax		
	comp=Z,81nm,1.2s							
ANM					MLR	MLR		
	comp=Z,900nm,19.0s							
ANM	**Nome**	**62.31**	**28**		P	**P**	**09 56 41.4**	**+1.5**
	baz=265							
ANM					S	**S**	**10 05 10.5**	**+4.7**
	baz=265							
JRN	**Qarnain Island**	**62.31**	**287**		P	**P**	**09 56 41.2**	**+0.6**
	SNR=13							
DMTO	**DMTO**	**62.32**	**279**		P	**P**	**09 56 41.7**	**+1.0**
DZM	**Mont Dzumac**	**62.41**	**132**		IAMs_20	IAMs_20	10 20 32.9	
	comp=Z,2µm,20.0s							
DZM	**Mont Dzumac**	**62.41**	**132**		P	**P**	**09 56 43.6**	**+2.4**
K13K	**Kusilvak Mount**	**62.45**	**31**		P	**P**	**09 56 41.7**	**+0.8**
K13K	**Kusilvak Mount**	**62.45**	**31**		P	**P**	**09 56 42.4**	**+1.5**
	baz=267,SNR=12							
K13K					S	**S**	**10 05 11.4**	**+3.8**
	baz=267							
GHWR	**Ruwais**	**62.52**	**286**		P	**P**	**09 56 42.8**	**+0.8**
GHWR					P	**P**	**09 56 42.8**	**+0.8**
ONTNC	**Ouen Toro**	**62.58**	**133**		P	**P**	**09 56 43.4**	**+1.2**
BELG	**Belogornoye**	**62.58**	**318**		LR	LR	10 25 36.4	
	comp=Z,1µm,18.8s,baz=78,slow=38							
BELG	**Belogornoye**	**62.58**	**318**	*c i*	P	**P**	**09 56 41.1**	**-0.7**
BELG					pmax	pmax		
	comp=Z,68nm,1.1s							
C16K	**Lisburne Hills**	**62.71**	**24**		P	**P**	**09 56 42.1**	**-0.4**
C16K					IAmb	IAmb	09 56 45.7	
	comp=Z,160nm,1.7s							
C16K					IAMs_20	IAMs_20	10 28 59.4	
	comp=Z,1µm,19.0s							
C16K	**Lisburne Hills**	**62.71**	**24**		P	**P**	**09 56 43.0**	**+0.5**
	baz=263,SNR=9.7							
C16K					S	**S**	**10 05 11.4**	**+0.8**
	baz=263							
YATNC	**Mamie plateau,**	**62.71**	**132**		P	**P**	**09 56 45.8**	**+2.7**
F15K	**North Star Dit**	**62.71**	**27**		IAmb	IAmb	09 56 45.7	
	comp=Z,159nm,1.6s							
F15K					IAMs_20	IAMs_20	10 27 40.7	
	comp=Z,881nm,18.0s							
F15K	**North Star Dit**	**62.71**	**27**		P	**P**	**09 56 43.8**	**+1.2**
	baz=265,SNR=11							
F15K					S	**S**	**10 05 13.8**	**+2.9**
	baz=265							
DOK	**Doka**	**62.81**	**280**		P	**P**	**09 56 43.7**	**-0.3**
DOK					P	**P**	**09 56 43.7**	**-0.3**
DOK					P	**pP**	**09 56 44.1**	**-2.5**
DOK					P	**pP**	**09 56 44.1**	**-2.5**
G15K	**Niukluk**	**62.91**	**27**		P	**P**	**09 56 45.0**	**+1.1**
	baz=266							
G15K					S	**S**	**10 05 16.2**	**+2.9**
	baz=266							
OUENC	**Ouen Island, N**	**62.92**	**132**		P	**P**	**09 56 46.2**	**+1.7**
J14K	**Nanvaranak Lak**	**63.00**	**30**		IAmb	IAmb	09 56 47.4	
	comp=Z,96nm,1.1s							
J14K	**Nanvaranak Lak**	**63.00**	**30**		P	**P**	**09 56 45.7**	**+1.2**
	baz=268,SNR=12							
J14K					S	**S**	**10 05 18.5**	**+4.0**
	baz=268							
M13K	**Dall Lake**	**63.03**	**33**		P	**P**	**09 56 46.6**	**+1.9**
	baz=269,SNR=6.5							
M13K					S	**S**	**10 05 18.2**	**+3.2**
	baz=269							
RBK	**Rabkut**	**63.06**	**279**		P	**P**	**09 56 46.8**	**+1.1**
	SNR=11							
WHFO	**Wadi Hawf**	**63.34**	**279**		P	**P**	**09 56 47.5**	**0.0**
	SNR=5.1							
WHFO					P	**P**	**09 56 47.5**	**0.0**
	SNR=5.1							
L14K	**Kuka Creek**	**63.37**	**31**		P	**P**	**09 56 48.0**	**+1.0**
L14K	**Kuka Creek**	**63.37**	**31**		P	**P**	**09 56 48.4**	**+1.5**
	baz=269,SNR=35							
L14K					S	**S**	**10 05 20.4**	**+1.2**
	baz=269							
MAK	**Makhachkala**	**63.45**	**308**	*c i*	P	P	09 56 42.8	-5.0
MAK				*e*			09 59 06.8	
MAK				*e*	S	**S**	**10 05 14.3**	**-6.4**
MAK				*e*	SS	**SS**	**10 09 21.0**	**-6.4**
MAK					pmax	pmax		
	comp=Z,331nm,1.4s							
MAK					MLR	MLR		
	comp=Z,2µm,14.0s							
PINNC	**Pines Island,**	**63.46**	**132**		IAMs_20	IAMs_20	10 16 46.7	
	comp=Z,1µm,21.0s							
PINNC	**Pines Island,**	**63.46**	**132**		P	**P**	**09 56 50.6**	**+2.5**
D17K	**Noatak River**	**63.50**	**24**		P	**P**	**09 56 48.9**	**+1.2**
	baz=266,SNR=31							
D17K					S	**S**	**10 05 22.4**	**+1.8**
	baz=266							
CNB	**Canberra Magne**	**63.52**	**155**		P	**P**	**09 56 50.0**	**+1.7**
C17K	**DeLong Mountai**	**63.53**	**23**		P	**P**	**09 56 48.6**	**+0.7**
	baz=265,SNR=8.0							
C17K					S	**S**	**10 05 22.0**	**+1.0**
	baz=265							
SLWR	**Sila**	**63.55**	**286**		P	**P**	**09 56 50.0**	**+1.2**
SLWR					P	**P**	**09 56 50.0**	**+1.2**
RDOG	**Red Dog Mine**	**63.59**	**24**		P	**P**	**09 56 47.9**	**-0.4**
RDOG					IAMs_20	IAMs_20	10 26 19.7	
	comp=Z,1µm,19.0s							
RDOG	**Red Dog Mine**	**63.59**	**24**		P	**P**	**09 56 49.1**	**+0.7**
	baz=266,SNR=5.7							
G16K	**Koyuk River**	**63.65**	**27**		IAmb	IAmb	09 56 51.6	
	comp=Z,75nm,1.4s							
G16K					IAMs_20	IAMs_20	10 25 35.3	
	comp=Z,1µm,19.0s							
G16K	**Koyuk River**	**63.65**	**27**		P	**P**	**09 56 49.6**	**+0.9**
	baz=267,SNR=8.3							
G16K					S	**S**	**10 05 24.5**	**+2.0**
	baz=267							
H16K	**Elim**	**63.66**	**28**		P	**P**	**09 56 49.9**	**+1.1**
	baz=268							
H16K					S	**S**	**10 05 25.2**	**+2.4**
	baz=268							
M14K	**Bethel**	**63.72**	**32**		P	**P**	**09 56 49.0**	**-0.2**
M14K	**Bethel**	**63.72**	**32**		P	**P**	**09 56 50.5**	**+1.2**
	baz=270,SNR=15							
SHMA	**Al-Shehemyia**	**63.75**	**289**		P	**P**	**09 56 51.0**	**+0.9**
	SNR=17							
TRNA	**Turayna**	**63.80**	**287**		P	**P**	**09 56 50.9**	**+0.4**
	SNR=27							
N14K	**Kuskokwak Cree**	**63.86**	**33**		P	**P**	**09 56 50.4**	**+0.2**
N14K	**Kuskokwak Cree**	**63.86**	**33**		P	**P**	**09 56 51.4**	**+1.2**
	baz=271,SNR=12							
K15K	**Wolf Creek Mou**	**63.93**	**30**		IAmb	IAmb	09 56 53.9	
	comp=Z,117nm,1.2s							
K15K	**Wolf Creek Mou**	**63.93**	**30**		P	**P**	**09 56 52.2**	**+1.5**
	baz=270,SNR=20							
K15K					S	**S**	**10 05 29.2**	**+3.1**
	baz=270							
ABTO	**Aybut**	**63.94**	**279**		P	**P**	**09 56 52.0**	**+0.5**
	SNR=6.4							
ABTO					P	**P**	**09 56 52.0**	**+0.5**
	SNR=6.4							
E17K	**Hotham Inlet**	**63.94**	**25**		P	**P**	**09 56 51.9**	**+1.3**
	baz=267,SNR=6.7							
E17K					S	**S**	**10 05 28.4**	**+2.3**
	baz=267							
L15K	**Ungalak Mounta**	**63.95**	**31**		P	**P**	**09 56 51.8**	**+1.0**
	baz=270							
L15K					S	**S**	**10 05 29.6**	**+3.2**
	baz=270							
O14K	**Tigyukauivet M**	**64.09**	**34**		IAmb	IAmb	09 56 54.2	
	comp=Z,74nm,1.1s							
O14K	**Tigyukauivet M**	**64.09**	**34**		P	**P**	**09 56 52.7**	**+0.9**
	baz=271,SNR=5.3							
O14K					S	**S**	**10 05 30.5**	**+2.4**
	baz=271							
B18K	**Kokolik River**	**64.09**	**23**		P	**P**	**09 56 53.0**	**+1.4**
	baz=266,SNR=13							
B18K					S	**S**	**10 05 28.6**	**+0.7**
	baz=266							
SAKB	**Bahrain**	**64.09**	**289**		P	**P**	**09 56 53.3**	**+1.0**
TOO	**Toolangi**	**64.14**	**159**		P	**P**	**09 56 53.0**	**+0.7**
TOO	**Toolangi**	**64.14**	**159**		P	**P**	**09 56 53.0**	**+0.7**
TOO					pmax	pmax		
	comp=Z,33nm,1.0s							
F17K	**Baldwin Pennin**	**64.14**	**26**		IAmb	IAmb	09 56 56.0	
	comp=Z,126nm,1.4s							
F17K	**Baldwin Pennin**	**64.14**	**26**		P	**P**	**09 56 53.1**	**+1.1**
	baz=268							
SMRA	**Abu-Samra**	**64.14**	**287**		P	**P**	**09 56 53.5**	**+0.8**
	SNR=48							
C18K	**Utukok River**	**64.27**	**23**		IAmb	IAmb	09 56 56.4	
	comp=Z,72nm,1.2s							
C18K					IAMs_20	IAMs_20	10 24 31.6	
	comp=Z,1µm,18.0s							
C18K	**Utukok River**	**64.27**	**23**		P	**P**	**09 56 53.6**	**+0.7**
	baz=267,SNR=16							
C18K					S	**S**	**10 05 30.9**	**+0.6**
	baz=267							
I17K	**Unalakleet**	**64.32**	**29**		IAmb	IAmb	09 56 56.4	
	comp=Z,86nm,1.1s							
I17K	**Unalakleet**	**64.32**	**29**		P	**P**	**09 56 54.6**	**+1.4**
	baz=270,SNR=11							
I17K					S	**S**	**10 05 34.0**	**+3.1**
	baz=270							
GEXS	**Deakin Univers**	**64.33**	**160**		P	**P**	**09 56 55.1**	**+1.6**
M15K	**Kasigluk River**	**64.34**	**32**		P	**P**	**09 56 54.3**	**+0.9**
	baz=271,SNR=20							
M15K					S	**S**	**10 05 33.4**	**+2.1**
	baz=271							
J16K	**Anvik River**	**64.36**	**29**		IAmb	IAmb	09 56 56.6	
	comp=Z,45nm,1.1s							
J16K	**Anvik River**	**64.36**	**29**		P	**P**	**09 56 54.9**	**+1.4**
	baz=270,SNR=10.0							
J16K					S	**S**	**10 05 34.2**	**+2.8**
	baz=270							
G17K	**Kiwalik Mounta**	**64.36**	**27**		P	**P**	**09 56 54.6**	**+1.1**
	baz=269,SNR=20							
G17K					S	**S**	**10 05 33.9**	**+2.5**
	baz=269							
A19K	**Wainwright**	**64.40**	**22**		P	**P**	**09 56 54.8**	**+1.2**
	baz=266							
E18K	**Tukpahlearik C**	**64.43**	**25**		IAmb	IAmb	09 56 57.1	
	comp=Z,127nm,1.6s							
E18K	**Tukpahlearik C**	**64.43**	**25**		P	**P**	**09 56 55.3**	**+1.4**
	baz=268,SNR=12							
E18K					S	**S**	**10 05 34.3**	**+2.1**
	baz=268							
N15K	**Kwethluk River**	**64.66**	**33**		P	**P**	**09 56 56.7**	**+1.2**
	baz=272,SNR=35							
N15K					S	**S**	**10 05 36.9**	**+1.7**
	baz=272							
H17K	**Granite Mounta**	**64.67**	**27**		IAMs_20	IAMs_20	10 26 39.3	
	comp=Z,874nm,19.0s							
H17K	**Granite Mounta**	**64.67**	**27**		P	**P**	**09 56 56.8**	**+1.3**
	baz=270,SNR=23							
H17K					S	**S**	**10 05 37.8**	**+2.6**
	baz=270							
SDPT	**Sand Point**	**64.69**	**38**		P	**P**	**09 56 55.5**	**-0.2**
SDPT	**Sand Point**	**64.69**	**38**		P	**P**	**09 56 55.0**	**-0.7**
	baz=274							
F18K	**Selawik**	**64.79**	**26**		P	**P**	**09 56 57.2**	**+1.0**
	baz=269,SNR=9.0							
F18K					S	**S**	**10 05 39.3**	**+2.8**
	baz=269							
O15K	**Ungalikthiuk R**	**64.83**	**34**		P	**P**	**09 56 57.6**	**+1.0**
	baz=273,SNR=20							
O15K					S	**S**	**10 05 40.0**	**+2.6**
	baz=273							
C19K	**Lookout Ridge**	**64.87**	**23**		IAmb	IAmb	09 57 00.9	
	comp=Z,99nm,1.3s							
C19K					IAMs_20	IAMs_20	10 24 03.4	
	comp=Z,1µm,21.0s							
C19K	**Lookout Ridge**	**64.87**	**23**		P	**P**	**09 56 57.8**	**+1.0**
	baz=268,SNR=20							
C19K					S	**S**	**10 05 38.3**	**+0.6**
	baz=268							
L16K	**Owhat River**	**64.91**	**31**		IAmb	IAmb	09 56 59.8	
	comp=Z,86nm,1.1s							
L16K	**Owhat River**	**64.91**	**31**		P	**P**	**09 56 58.1**	**+1.1**
	baz=272,SNR=28							
L16K					S	**S**	**10 05 41.3**	**+3.1**
	baz=272							
J17K	**VABM Dome**	**65.05**	**29**		IAmb	IAmb	09 57 01.2	
	comp=Z,84nm,0.8s							
J17K	**VABM Dome**	**65.05**	**29**		P	**P**	**09 56 59.5**	**+1.6**
	baz=271,SNR=40							
J17K					S	**S**	**10 05 43.4**	**+3.4**
	baz=271							
S14K	**Fog Glacier**	**65.15**	**37**		P	**P**	**09 57 00.6**	**+1.8**
	baz=274							
M16K	**Timber Creek**	**65.18**	**32**		IAmb	IAmb	09 57 01.6	
	comp=Z,105nm,1.0s							
M16K	**Timber Creek**	**65.18**	**32**		P	**P**	**09 57 00.2**	**+1.3**
	baz=272,SNR=37							
M16K					S	**S**	**10 05 43.8**	**+2.2**
	baz=272							
G18K	**Tagagawik**	**65.19**	**26**		IAmb	IAmb	09 57 02.4	
	comp=Z,144nm,1.7s							
G18K	**Tagagawik**	**65.19**	**26**		P	**P**	**09 56 59.5**	**+0.7**
	baz=270,SNR=21							
G18K					S	**S**	**10 05 43.9**	**+2.2**
	baz=270							
CHNA	**Chernabura Isl**	**65.24**	**39**		P	**P**	**09 57 02.2**	**+2.9**
CHNA	**Chernabura Isl**	**65.24**	**39**		P	**P**	**09 56 59.2**	**-0.1**
	baz=275,SNR=14							
N16K	**Nishlik Lake**	**65.30**	**32**		P	**P**	**09 57 00.8**	**+1.1**
	baz=273,SNR=40							

H18K	Honhosa River	65.32	27	IAMs_20	IAMs_20	10 26 36.6	
	comp=Z,1µm,20.0s						
H18K	Honhosa River	65.32	27	P	P	09 57 00.6	+0.9
	baz=271,SNR=17						
H18K				S	S	10 05 46.3	+3.0
	baz=271						
D19K	Kuna River	65.39	24	P	P	09 57 01.2	+1.0
	baz=270,SNR=82						
D19K				S	S	10 05 43.7	-0.5
	baz=270						
K17K	Iditarod	65.42	30	P	P	09 57 02.0	+1.6
	baz=272,SNR=38						
K17K				S	S	10 05 48.5	+3.9
	baz=272						
L17K	Donlin	65.45	31	P	P	09 57 02.5	+1.9
	baz=273,SNR=40						
L17K				S	S	10 05 47.9	+3.0
	baz=273						
F19K	Shaleruckik Mo	65.53	25	IAmb	IAmb	09 57 04.5	
	comp=Z,86nm,1.4s						
F19K				IAMs_20	IAMs_20	10 24 46.1	
	comp=Z,1µm,22.0s						
F19K	Shaleruckik Mo	65.53	25	P	P	09 57 02.1	+1.0
	baz=271,SNR=25						
F19K				S	S	10 05 47.7	+1.9
	baz=271						
O16K	Kokwok River B	65.69	33	P	P	09 57 03.3	+1.1
	baz=274,SNR=25						
O16K				S	S	10 05 50.6	+2.7
	baz=274						
GUDG	Gudauri	65.72	308	P	P	09 57 04.6	+1.6
E19K	Redstone River	65.73	25	P	P	09 57 03.1	+0.7
E19K				IAmb	IAmb	09 57 06.2	
	comp=Z,67nm,1.1s						
E19K	Redstone River	65.73	25	P	P	09 57 03.3	+1.0
	baz=271,SNR=30						
E19K				S	S	10 05 50.5	+2.2
	baz=271						
B20K	Meade River	65.74	22	IAmb	IAmb	09 57 06.2	
	comp=Z,52nm,1.0s						
B20K				IAMs_20	IAMs_20	10 28 02.3	
	comp=Z,1µm,19.0s						
B20K	Meade River	65.74	22	P	P	09 57 03.2	+0.9
	baz=270						
B20K				S	S	10 05 48.2	+0.1
	baz=270						
P16K	Nushagak River	65.78	34	P	P	09 57 04.0	+1.2
	baz=274,SNR=6.9						
KBD	Kabd	65.79	293	P	P	09 57 04.0	+0.6
KBD				P	pP	09 57 04.5	-1.4
KBD				P	sP	09 57 06.1	-1.0
G19K	Purcell Mounta	65.83	26	IAmb	IAmb	09 57 06.6	
	comp=Z,116nm,1.6s						
G19K				IAMs_20	IAMs_20	10 29 27.9	
	comp=Z,876nm,18.0s						
G19K	Purcell Mounta	65.83	26	P	P	09 57 03.9	+1.0
	baz=272,SNR=17						
G19K				S	S	10 05 49.9	+0.5
	baz=272						
M17K	Holitna River	65.90	31	P	P	09 57 05.2	+1.7
	baz=274,SNR=25						
M17K				S	S	10 05 52.7	+2.3
	baz=274						
A21K	Barrow	65.92	20	P	P	09 57 04.0	+0.6
	baz=270						
GNI	Garni	65.92	305	P	P	09 57 05.2	+1.0
GNI	Garni	65.92	305	IAMs_20	IAMs_20	10 30 09.0	
	comp=Z,2µm,19.0s						
GNI	Garni	65.92	305	LR	LR	10 30 20.3	
	comp=Z,2µm,18.8s,baz=89,slow=40						
GNI	Garni	65.92	305	P	P	09 57 06.2	+1.9
GNI				P	P	09 57 06.2	+1.9
GNI	Garni	65.92	305*c*	*i*P	P	09 57 05.6	+1.3
GNI				pmax	pmax		
	comp=Z,198nm,1.4s						
GNI	Garni	65.92	305	P	P	09 57 05.5	+1.3
D20K	Etivluk River	65.94	23	IAMs_20	IAMs_20	10 25 44.8	
	comp=Z,1µm,19.0s						
D20K	Etivluk River	65.94	23	P	P	09 57 04.6	+0.9
	baz=271,SNR=37						
D20K				S	S	10 05 52.6	+1.8
	baz=271						
GCSA	Galena City Sc	65.97	28	P	P	09 57 04.8	+0.9
	baz=273,SNR=20						
GCSA				S	S	10 05 53.9	+2.9
	baz=273						
N17K	Nushagak Hills	66.08	32	P	P	09 57 05.3	+0.7
N17K	Nushagak Hills	66.08	32	P	P	09 57 06.3	+1.6
	baz=274,SNR=38						
N17K				S	S	10 05 56.6	+3.9
	baz=274						
J18K	Innoko River	66.11	29	IAmb	IAmb	09 57 07.4	
	comp=Z,65nm,1.1s						
J18K	Innoko River	66.11	29	P	P	09 57 05.8	+1.0
	baz=273,SNR=43						
J18K				S	S	10 05 55.2	+2.3
	baz=273						
E20K	Nigu River	66.11	24	P	P	09 57 05.6	+0.7
	baz=272,SNR=80						
E20K				S	S	10 05 54.1	+1.1
	baz=272						
H19K	Roundabout Mou	66.11	27	P	P	09 57 06.1	+1.3
	baz=273,SNR=48						
H19K				S	S	10 05 55.6	+2.8
	baz=273						
TRLG	Trialeti	66.16	307	P	P	09 57 06.7	+1.0
O17K	Koliganek Bris	66.18	33	P	P	09 57 06.2	+0.9
	baz=275,SNR=18						
O17K				S	S	10 05 56.5	+2.6
	baz=275						
L18K	Granite Mounta	66.20	30	IAmb	IAmb	09 57 08.6	
	comp=Z,88nm,1.1s						
L18K	Granite Mounta	66.20	30	P	P	09 57 06.7	+1.3
	baz=274,SNR=51						
L18K				S	S	10 05 56.9	+2.9
	baz=274						
VRH	Novokhopyorsk	66.33	317	*e*P	P	09 57 05.8	-0.6
VRH				pmax	pmax		
	comp=Z,320nm,0.9s						
F20K	Avaraart Lake	66.33	25	IAmb	IAmb	09 57 10.1	
	comp=Z,106nm,1.5s						
F20K				IAMs_20	IAMs_20	10 25 11.2	
	comp=Z,1µm,22.0s						
F20K	Avaraart Lake	66.33	25	P	P	09 57 07.2	+1.1
	baz=273						
F20K				S	S	10 05 55.5	0.0
	baz=273						
GOF	Gofitskoye	66.34	311*c*	*e*P	P	09 57 06.7	+0.1
A22K	Sinclair Lake	66.45	21	P	P	09 57 07.7	+0.8
	baz=272						
Q16K	King Salmon	66.50	34	P	P	09 57 08.4	+1.0
	baz=276,SNR=11						
KLMR	Klimovskoe	66.53	328	*e*P	P	09 57 05.7	-1.8
KLMR				*e*		09 57 33.2	
KLMR				S	S	10 05 55.8	-2.2
KLMR				SS	SS	10 10 14.0	-0.5
KLMR				pmax	pmax		
	comp=Z,412nm,1.4s						
KLMR				MLR	MLR		
	comp=Z,2µm,15.0s						
J19K	Poorman	66.56	28	IAmb	IAmb	09 57 10.6	
	comp=Z,169nm,1.6s						
J19K	Poorman	66.56	28	P	P	09 57 09.0	+1.3
	baz=274,SNR=28						
J19K				S	S	10 06 02.3	+4.0
	baz=274						
P17K	Kvichak River	66.57	34	P	P	09 57 09.2	+1.4
	baz=276,SNR=39						
P17K				S	S	10 06 00.9	+2.3
	baz=276						
C21K	Knifeblade Rid	66.59	23	P	P	09 57 08.9	+1.1
	baz=273,SNR=21						
C21K				S	S	10 06 00.2	+1.6
	baz=273						
B21K	Ikpikpuk River	66.63	22	P	P	09 57 08.5	+0.5
B21K				IAMs_20	IAMs_20	10 25 34.2	
	comp=Z,2µm,21.0s						
B21K	Ikpikpuk River	66.63	22	P	P	09 57 09.1	+1.1
	baz=273						
B21K				S	S	10 06 00.5	+1.5
	baz=273						
KBZ	Khabaz	66.66	309	P	P	09 57 09.2	+0.5
	comp=Z,164nm,0.9s,baz=93,slow=4.8,SNR=238						
KBZ				LR	LR	10 30 22.0	
	comp=Z,930nm,19.1s,baz=62,slow=40						
KBZ	Khabaz	66.66	309*c*	*e*P	P	09 57 08.7	0.0
KBZ				pmax	pmax		
	comp=Z,199nm,0.9s						
M18K	Stony River	66.66	31	P	P	09 57 09.9	+1.5
	baz=275,SNR=31						
M18K				S	S	10 06 02.6	+3.0
	baz=275						
N18K	Kilae Creek	66.70	32	IAmb	IAmb	09 57 11.8	
	comp=Z,144nm,1.5s						
N18K	Kilae Creek	66.70	32	P	P	09 57 10.2	+1.5
	baz=275,SNR=27						
N18K				S	S	10 06 03.7	+3.4
	baz=275						
H20K	Anotleneega Mo	66.77	27	P	P	09 57 10.2	+1.2
	baz=274,SNR=27						
H20K				S	S	10 06 02.9	+2.0
	baz=274						
KIV	Kislovodsk	66.77	310	P	P	09 57 10.2	+0.7
KIV				IAMs_20	IAMs_20	10 28 44.2	
	comp=Z,1µm,20.0s						
KIV	Kislovodsk	66.77	310	P	P	09 57 10.9	+1.4
KIV				P	P	09 57 10.9	+1.4
KIV	Kislovodsk	66.77	310	*e*P	P	09 57 09.5	0.0
KIV				*e*		09 59 36.5	
KIV				*e*S	S	10 06 02.0	+0.2
KIV				*e*SS	SS	10 10 20.6	+1.3
KIV				pmax	pmax		
	comp=Z,391nm,1.1s						
KIV				pmax	pmax		
	comp=Z,236nm,4.1s						
KIV				pmax	pmax		
	comp=Z,894nm,17.0s						
KIV	Kislovodsk	66.77	310	*i* P	P	09 57 10.1	+0.5
	SNR=63						
SHA1	Shidzhatmaz	66.83	309	*i* P	P	09 57 10.6	+0.5
E21K	Killik River	66.92	24	P	P	09 57 10.8	+0.8
E21K				IAmb	IAmb	09 57 13.6	
	comp=Z,79nm,1.1s						
E21K	Killik River	66.92	24	P	P	09 57 10.4	+0.4
	baz=274						
E21K				S	S	10 06 03.9	+1.2
	baz=274						
Q17K	Contact Creek	66.95	35	P	P	09 57 10.0	-0.4
	baz=276,SNR=27						
Q17K				S	S	10 06 02.1	-1.3
	baz=276						
I20K	Naaghedeneel	66.99	28	P	P	09 57 12.0	+1.6
	baz=275,SNR=32						
B22K	Teshekpuk Lake	67.00	21	IAmb	IAmb	09 57 14.3	
	comp=Z,88nm,1.2s						
B22K				IAMs_20	IAMs_20	10 28 43.7	
	comp=Z,1µm,19.0s						
B22K	Teshekpuk Lake	67.00	21	P	P	09 57 11.3	+0.9
	baz=273,SNR=6.0						
B22K				S	S	10 06 04.4	+0.9
	baz=273						
L19K	White Mountain	67.06	30	IAmb	IAmb	09 57 14.0	
	comp=Z,109nm,1.1s						
L19K	White Mountain	67.06	30	P	P	09 57 12.3	+1.4
	baz=276,SNR=62						
L19K				S	S	10 06 08.6	+4.1
	baz=276						
O18K	Koktuh Hills	67.12	33	P	P	09 57 12.4	+1.0
O18K	Koktuh Hills	67.12	33	P	P	09 57 12.6	+1.2
	baz=276,SNR=45						
O18K				S	S	10 06 07.9	+2.5
	baz=276						
P18K	Big Mountain,	67.16	33	P	P	09 57 12.4	+0.7
	baz=276,SNR=39						
P18K				S	S	10 06 07.0	+1.1
	baz=276						
J20K	Nowinta River	67.19	28	P	P	09 57 13.0	+1.3
	baz=275,SNR=54						
J20K				S	S	10 06 09.4	+3.5
	baz=275						
F21K	Alatna River	67.20	25	IAmb	IAmb	09 57 28.6	
	comp=Z,66nm,1.8s						
F21K				IAMs_20	IAMs_20	10 28 49.0	
	comp=Z,802nm,18.0s						
F21K	Alatna River	67.20	25	P	P	09 57 12.2	+0.5
	baz=275,SNR=23						
F21K				S	S	10 06 07.9	+1.9
	baz=275						
G21K	Allakaket	67.25	26	IAmb	IAmb	09 57 16.0	
	comp=Z,84nm,1.2s						
G21K	Allakaket	67.25	26	P	P	09 57 13.0	+0.9
	baz=275,SNR=45						
G21K				S	S	10 06 09.8	+3.2
	baz=275						
ACHA	Angle Creek He	67.25	35	P	P	09 57 11.8	-0.5
ACHA				IAmb	IAmb	09 57 13.3	
	comp=Z,64nm,1.0s						
K20K	Telida	67.30	29	IAmb	IAmb	09 57 15.8	
	comp=Z,56nm,0.9s						
K20K	Telida	67.30	29	P	P	09 57 13.9	+1.5
	baz=276						
K20K				S	S	10 06 10.5	+3.1
	baz=276						
M19K	Big River Lodg	67.30	31	P	P	09 57 13.8	+1.3
M19K				IAmb	IAmb	09 57 15.7	
	comp=Z,67nm,1.0s						
M19K	Big River Lodg	67.30	31	P	P	09 57 14.1	+1.6
	baz=276						
M19K				S	S	10 06 10.6	+3.1
	baz=276						
YSA	Yasawairara	67.35	121	P	P	09 57 15.6	+2.2
D22K	Ayikyak River	67.36	23	IAmb	IAmb	09 57 20.6	
	comp=Z,104nm,1.2s						
D22K				IAMs_20	IAMs_20	10 25 11.3	
	comp=Z,2µm,22.0s						
D22K	Ayikyak River	67.36	23	P	P	09 57 13.8	+1.0
	baz=275,SNR=32						
D22K				S	S	10 06 10.1	+2.2
	baz=275						
Q18K	Katmai Hardscr	67.36	34	P	P	09 57 12.6	-0.5
	baz=277,SNR=23						
Q18K				S	S	10 06 07.5	-1.0
	baz=277						
N19K	Bonanza Creek	67.38	32	IAmb	IAmb	09 57 16.0	
	comp=Z,90nm,1.2s						
N19K	Bonanza Creek	67.38	32	P	P	09 57 14.4	+1.3
	baz=276,SNR=24						
N19K				S	S	10 06 10.6	+2.1
	baz=276						
CHIR	Chirikof Islan	67.39	37	P	P	09 57 15.5	+2.4
CHIR	Chirikof Islan	67.39	37	P	P	09 57 13.7	+0.6
	baz=278,SNR=6.6						
L20K	Farewell, AK	67.48	30	P	P	09 57 14.9	+1.3
	baz=276,SNR=42						
L20K				S	S	10 06 14.4	+4.8
	baz=276						
O19K	Port Alsworth	67.53	33	P	P	09 57 15.0	+1.1
	baz=277,SNR=22						
O19K				S	S	10 06 13.5	+3.4
	baz=277						
H21K	Melozitna Rive	67.61	27	P	P	09 57 15.5	+1.1
H21K	Melozitna Rive	67.61	27	P	P	09 57 15.6	+1.2
	baz=276,SNR=59						
H21K				S	S	10 06 14.0	+3.0
	baz=276						
F22K	John River	67.67	25	P	P	09 57 15.9	+1.1
	baz=276						
F22K				S	S	10 06 14.4	+2.7
	baz=276						
E22K	Anaktuvuk Pass	67.75	24	P	P	09 57 16.1	+0.8
E22K				IAmb	IAmb	09 57 19.1	
	comp=Z,107nm,1.3s						
E22K				IAMs_20	IAMs_20	10 26 17.6	
	comp=Z,1µm,20.0s						
E22K	Anaktuvuk Pass	67.75	24	P	P	09 57 16.1	+0.8
	baz=276,SNR=54						
E22K				S	S	10 06 13.4	+0.7
	baz=276						
R18K	Karluk	67.80	35	P	P	09 57 15.1	-0.5
	baz=278						
R18K				S	S	10 06 11.4	-2.0
	baz=278						
VORR	Voronezh	67.82	318	*e*P	P	09 57 13.4	-2.5
VORR				pmax	pmax		
	comp=Z,230nm,1.1s						
LPSR	Galich'ya Gora	67.85	319	*e*P	P	09 57 15.4	-0.7
LPSR				pmax	pmax		
	comp=Z,330nm,1.0s						
VORD	Divnogorie	67.88	317	*e*P	P	09 57 13.0	-3.3
VORD				pmax	pmax		
	comp=Z,130nm,1.0s						
M20K	Styx River	67.90	31	IAmb	IAmb	09 57 19.5	
	comp=Z,63nm,1.0s						
M20K	Styx River	67.90	31	P	P	09 57 17.9	+1.5
	baz=277						
M20K				S	S	10 06 18.6	+3.8
	baz=277						
VSR	Storozhevoye	67.92	318	*e*P	P	09 57 13.0	-3.5
VSR				pmax	pmax		
	comp=Z,180nm,1.0s						
LVZ	Lovozero	67.95	336	*i* P	P	09 57 16.5	0.0
LVZ				pmax	pmax		
	comp=Z,34nm,1.1s						
G22K	Bettles	68.00	25	P	P	09 57 17.4	+0.6
	baz=276						
G22K				S	S	10 06 17.2	+1.7
	baz=276						
ERBR	Yeremizino-Bor	68.00	312*c*	*i*P	P	09 57 17.5	+0.3
ERBR				*e*S	S	10 06 15.6	-0.7
ERBR				pmax	pmax		
	comp=Z,484nm,1.0s						
ERBR				MLR	MLR		
	comp=Z,2µm,20.0s						
C23K	Itkillik River	68.00	22	P	P	09 57 17.0	+0.2
C23K				IAmb	IAmb	09 57 22.5	
	comp=Z,36nm,0.9s						
C23K	Itkillik River	68.00	22	P	P	09 57 17.7	+1.0
	baz=276						
C23K				S	S	10 06 17.3	+1.7
	baz=276						
I21K	Tanana	68.01	27	IAmb	IAmb	09 57 21.1	
	comp=Z,130nm,1.6s						
I21K	Tanana	68.01	27	P	P	09 57 18.2	+1.4
	baz=277						
I21K				S	S	10 06 20.4	+4.7
	baz=277						
CHUM	Lake Minchumin	68.02	28	P	P	09 57 18.2	+1.3
	baz=277,SNR=32						
CHUM				S	S	10 06 19.7	+3.8
	baz=277						
Q19K	Cape Douglas,	68.03	34	P	P	09 57 16.8	-0.4
	baz=278,SNR=18						
LABN	Labinsk	68.03	311	*e*P	P	09 57 17.7	+0.3
LABN				*e*S	S	10 06 16.1	-0.7
LABN				pmax	pmax		
	comp=Z,122nm,0.9s						
LABN				MLR	MLR		
	comp=Z,1µm,15.0s						
D23K	Nanushuk River	68.07	23	IAmb	IAmb	09 57 21.5	
	comp=Z,96nm,1.2s						
D23K	Nanushuk River	68.07	23	P	P	09 57 18.1	+0.9
	baz=276,SNR=22						
D23K				S	S	10 06 18.5	+2.0
	baz=276						
SII	Sitkinak Islan	68.08	36	P	P	09 57 19.6	+2.1
SII	Sitkinak Islan	68.08	36	P	P	09 57 18.0	+0.4
	baz=278,SNR=9.1						
MOS	Moscow	68.13	323	*e*P	P	09 57 16.4	-1.3
MOS				*e*		09 57 41.7	
MOS				*e*		09 59 44.9	
MOS				*e*S	S	10 06 15.0	-2.4
MOS				pmax	pmax		
	comp=Z,600nm,1.6s						
MOS				pmax	pmax		
	comp=Z,419nm,1.6s						
MOS				pmax	pmax		
	comp=N,73nm,0.9s						
MOS				pmax	pmax		
	comp=E,132nm,1.0s						
MOS				MLR	MLR		
	comp=Z,1µm,14.0s						
P19K	Oil Pt	68.14	33	P	P	09 57 18.0	+0.1
	baz=278,SNR=15						
H22K	Ishtalitna Cre	68.17	26	P	P	09 57 19.2	+1.3
	baz=277,SNR=92						
H22K				S	S	10 06 20.3	+2.5
	baz=277						
CAST	Castle Rocks	68.18	29	P	P	09 57 18.9	+1.0
CAST	Castle Rocks	68.18	29	P	P	09 57 19.0	+1.0
	baz=277,SNR=88						
CAST				S	S	10 06 19.9	+2.0
	baz=277						
PPLA	Purkeypile	68.20	29	P	P	09 57 19.1	+0.8
	baz=278,SNR=41						
GURO	Guroymak-BITLI	68.29	304	IAmb	IAmb	09 57 22.1	
	comp=Z,70nm,0.9s						
GURO				IAMs_20	IAMs_20	10 32 17.9	
	comp=Z,873nm,18.0s						
MSVF	Nonsavu	68.30	121	P	P	09 57 19.1	-0.4
MSVF				IAmb	IAmb	09 57 27.4	
	comp=Z,142nm,1.4s						
MSVF	Nonsavu	68.30	121	P	P	09 57 21.4	+2.0
	comp=Z,32nm,1.1s,baz=293,slow=4.4,SNR=6.5						
MSVF				LR	LR	10 22 01.5	
	comp=Z,1µm,21.6s,baz=334,slow=31						
MSVF	Nonsavu	68.30	121	P	P	09 57 22.4	+2.9
MSVF	Nonsavu	68.30	121	P	P	09 57 19.1	-0.4
MSVF				pmax	pmax		
	comp=Z,142nm,1.5s						
O20K	Slope Mountain	68.39	33	P	P	09 57 19.5	+0.1
	baz=278,SNR=5.9						
N20K	Mount Spurr	68.43	31	P	P	09 57 20.4	+0.7
	baz=278,SNR=32						
N20K				S	S	10 06 21.9	+0.8
	baz=278						
SPCR	Spurr Chakacha	68.43	31	P	P	09 57 20.3	+0.7
	baz=278,SNR=23						
APA	Apatity	68.46	336⇓	*i*P	P	09 57 17.5	-2.1
APA				*i*		09 59 50.3	
APA				*i* S	S	10 06 15.0	-6.0
APA				*i*		10 07 05.0	
APA				MLR	MLR		
	comp=Z,3µm,13.0s						
COLD	Coldfoot	68.47	25	IAmb	IAmb	09 57 23.7	
	comp=Z,81nm,1.6s						
COLD	Coldfoot	68.47	25	P	P	09 57 20.7	+1.0
	baz=278,SNR=21						
COLD				S	S	10 06 23.3	+2.1
	baz=278						
OHAK	Old Harbor	68.47	36	IAmb	IAmb	09 57 21.6	
	comp=Z,94nm,1.1s						
OHAK	Old Harbor	68.47	36	P	P	09 57 21.9	+2.0
OHAK	Old Harbor	68.47	36	P	P	09 57 20.3	+0.4
	baz=279,SNR=26						
TOLK	Toolik Lake Re	68.51	23	IAMs_20	IAMs_20	10 27 31.8	
	comp=Z,1µm,18.0s						
TOLK	Toolik Lake Re	68.51	23	P	P	09 57 20.9	+0.8
	baz=278,SNR=13						
TOLK				S	S	10 06 20.9	-1.0
	baz=278						
MLY	Manley	68.55	27	IAmb	IAmb	09 57 26.6	
	comp=Z,161nm,1.8s						
MLY	Manley	68.55	27	P	P	09 57 21.3	+0.9
	baz=278,SNR=34						
MLY				S	S	10 06 25.7	+3.4
	baz=278						
STLK	Strandline Lak	68.56	31	P	P	09 57 20.5	0.0
STLK				IAmb	IAmb	09 57 22.3	
	comp=Z,84nm,1.6s						
BPAW	Bear Paw Mtn.	68.57	28	IAMs_20	IAMs_20	10 30 04.6	
	comp=Z,829nm,19.0s						
BPAW	Bear Paw Mtn.	68.57	28	P	P	09 57 21.3	+0.9
	baz=278,SNR=33						
BPAW				S	S	10 06 24.7	+2.1
	baz=278						
E23K	Chandalar	68.58	24	IAmb	IAmb	09 57 38.2	
	comp=Z,49nm,1.1s						
E23K				IAMs_20	IAMs_20	10 26 43.5	
	comp=Z,1µm,21.0s						
E23K	Chandalar	68.58	24	P	P	09 57 21.4	+0.9
	baz=278,SNR=24						
E23K				S	S	10 06 23.2	+0.5
	baz=278						
G23K	Bananza Creek	68.61	25	IAMs_20	IAMs_20	10 29 34.3	
	comp=Z,790nm,18.0s						
G23K	Bananza Creek	68.61	25	P	P	09 57 21.7	+1.1
	baz=278,SNR=52						
G23K				S	S	10 06 23.7	+0.8
	baz=278						
SKT	Skwentna	68.63	30	IAmb	IAmb	09 57 22.6	
	comp=Z,65nm,1.1s						
SKT	Skwentna	68.63	30	P	P	09 57 21.0	+0.1
	baz=278,SNR=44						
SKT				S	S	10 06 24.7	+1.3
	baz=278						
C24K	Franklin Bluff	68.68	22	IAmb	IAmb	09 57 24.6	
	comp=Z,75nm,1.1s						
C24K				IAMs_20	IAMs_20	10 27 11.9	
	comp=Z,1µm,20.0s						
C24K	Franklin Bluff	68.68	22	P	P	09 57 21.2	+0.3
	baz=278						

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KTH   Kantishna Hill   68.68  29   IAmb     IAmb     09 57 27.2
      comp=Z,208nm,2.0s
D24K  Happy Valley     68.71  23   IAmb     IAmb     09 57 30.5
      comp=Z,163nm,1.7s
D24K                               IAMs_20  IAMs_20  10 27 12.0
      comp=Z,2µm,22.0s
D24K  Happy Valley     68.71  23   P        P        09 57 21.9 +0.7
      baz=278,SNR=11
D24K                               S        S        10 06 26.0 +1.9
      baz=278
Q20K  Shuyak Island    68.72  34   P        P        09 57 21.4  0.0
      baz=279,SNR=23
VSLR  Vesyoloye        68.75 309c iP        P        09 57 21.8 -0.1
KDAK  Kodiak Island    68.76  35   P        P        09 57 20.6 -1.1
KDAK  Kodiak Island    68.76  35   LR       LR       10 28 46.7
      comp=Z,406nm,20.5s,baz=258,slow=37
KDAK  Kodiak Island    68.76  35c iP        P        09 57 21.6  0.0
KDAK  Kodiak Island    68.76  35   P        P        09 57 22.2 +0.5
      baz=279
KDAK                               S        S        10 06 25.9 +1.0
      baz=279
OBN   Obninsk          68.82 322   P        P        09 57 21.5 -0.6
OBN   Obninsk          68.82 322   LR       LR       10 27 33.5
      comp=Z,2µm,18.0s,baz=20,slow=36
OBN   Obninsk          68.82 322c iP        P        09 57 20.8 -1.3
OBN                               e                  09 59 53.7
OBN                               ePPP      PPP      10 01 38.0
OBN                               i S       S        10 06 20.8 -4.9
OBN                               eSS       SS       10 10 50.5 +0.3
OBN                                pmax     pmax
      comp=Z,211nm,1.2s
OBN                                MLR      MLR
      comp=Z,1µm,17.0s
DGTI  Dogotuki         68.86 119   P        P        09 57 25.1 +2.2
H23K  Yukon River      68.93  26   IAmb     IAmb     09 57 27.1
      comp=Z,76nm,1.1s
H23K  Yukon River      68.93  26   P        P        09 57 24.0 +1.4
      baz=279,SNR=80
H23K                               S        S        10 06 30.8 +4.0
      baz=279
HOM   Homer            68.94  33   P        P        09 57 22.8  0.0
      baz=279
SOC   Sochi            68.95 310  eP        P        09 57 20.6 -2.6
SOC                               e                  09 59 51.8
SOC                               ePPP      PPP      10 01 30.5
SOC                               eS        S        10 06 25.2 -2.5
SOC                               e                  10 07 20.7
SOC                               eSS       SS       10 10 54.0 +1.2
SOC                                pmax     pmax
      comp=Z,112nm,0.7s
SOC                                MLR      MLR
      comp=Z,1µm,16.0s
TRF   Thorofare Moun   68.98  29   IAmb     IAmb     09 57 26.4
      comp=Z,79nm,1.5s
TRF   Thorofare Moun   68.98  29   P        P        09 57 23.2 +0.1
      baz=279,SNR=28
TRF                                S        S        10 06 29.1 +1.4
      baz=279
E24K  Your Creek       68.99  24   IAmb     IAmb     09 57 33.2
      comp=Z,28nm,0.8s
E24K                               IAMs_20  IAMs_20  10 27 42.5
      comp=Z,1µm,21.0s
E24K  Your Creek       68.99  24   P        P        09 57 23.9 +0.8
      baz=279
E24K                               S        S        10 06 30.8 +3.2
      baz=279
CAPN  Captain Cook N   69.00  32   P        P        09 57 23.7 +0.6
      baz=279
SUA   Susitna One      69.08  31   IAmb     IAmb     09 57 25.3
      comp=Z,68nm,0.9s
SUA   Susitna One      69.08  31   P        P        09 57 23.9 +0.1
      baz=279,SNR=53
SUA                                S        S        10 06 29.0 +0.1
      baz=279
I23K  Minto, Yukon-K   69.11  27   IAmb     IAmb     09 57 37.1
      comp=Z,74nm,1.4s
I23K  Minto, Yukon-K   69.11  27   P        P        09 57 24.7 +1.0
      baz=279,SNR=23
I23K                               S        S        10 06 32.3 +3.5
      baz=279
KOPT  Kop Dagi         69.14 306   P        P        09 57 25.7 +1.0
CUT   Chulitna         69.15  30   P        P        09 57 23.7 -0.3
      baz=279,SNR=14
RAYN  Ar Rayn          69.15 288   P        P        09 57 25.0 +0.2
RAYN  Ar Rayn          69.15 288   IAMs_20  IAMs_20  10 31 48.6
      comp=Z,1µm,19.0s
RAYN  Ar Rayn          69.15 288   P        P        09 57 25.6 +0.8
RAYN  Ar Rayn          69.15 288   P        P        09 57 25.0 +0.2
RAYN                               pmax     pmax
      comp=Z,143nm,1.1s
RAYN                               MLR      MLR
      comp=Z,1µm,19.0s
RAYN  Ar Rayn          69.15 288 i P        P        09 57 25.3 +0.5
      SNR=84
CNPM  China Poot       69.17  33   IAmb     IAmb     09 57 25.2
      comp=Z,133nm,1.7s
BWN   Browne           69.22  28   IAmb     IAmb     09 57 38.2
      comp=Z,59nm,0.9s
BWN                                IAMs_20  IAMs_20  10 29 20.6
      comp=Z,740nm,18.0s
BRLK  Bradley Lake     69.30  33   P        P        09 57 25.0 -0.1
BRLK                               IAmb     IAmb     09 57 27.9
      comp=Z,87nm,1.1s
F24K  Squaw Lake       69.31  24   IAmb     IAmb     09 57 35.5
      comp=Z,32nm,0.8s
F24K                               IAMs_20  IAMs_20  10 30 10.8
      comp=Z,1µm,18.0s
F24K  Squaw Lake       69.31  24   P        P        09 57 25.8 +0.8
      baz=280,SNR=38
F24K                               S        S        10 06 32.7 +1.5
      baz=280
NEA2  Nenana           69.32  27   IAmb     IAmb     09 57 34.8
      comp=Z,49nm,1.0s
NEA2  Nenana           69.32  27   P        P        09 57 25.5 +0.4
      baz=280,SNR=24
NEA2                               S        S        10 06 32.8 +1.4
      baz=280
M22K  Willow           69.33  31   P        P        09 57 24.8 -0.4
      baz=280,SNR=22
M22K                               S        S        10 06 31.0 -0.5
      baz=280
BRSE  Bradley Lake S   69.38  33   P        P        09 57 25.0 -0.5
      baz=280,SNR=22
SLKM  Skilak Lake      69.50  32   IAmb     IAmb     09 57 27.4
      comp=Z,122nm,1.4s
VADS  Vadso            69.51 339  eP        P        09 57 26.7 +0.6
VADS                               IAmb     IAmb     09 57 27.8
      comp=Z,149nm,1.6s
MCK   McKinley         69.53  28   P        P        09 57 26.4  0.0
MCK                                IAMs_20  IAMs_20  10 29 38.8
      comp=Z,783nm,18.0s
MCK   McKinley         69.53  28   P        P        09 57 26.4  0.0
MCK                                pmax     pmax
      comp=Z,237nm,1.8s
MCK                                MLR      MLR
      comp=Z,800nm,18.0s
MCK   McKinley         69.53  28   P        P        09 57 26.4  0.0
      baz=280,SNR=25
MCK                                S        S        10 06 29.8 -4.1
      baz=280
D25K  Kavik River      69.55  22   P        P        09 57 26.8 +0.2
D25K                               IAmb     IAmb     09 57 32.1
      comp=Z,47nm,1.1s
D25K  Kavik River      69.55  22   P        P        09 57 26.7 +0.2
      baz=280
D25K                               S        S        10 06 33.8 -0.2
      baz=280
TAU   Tasmania Unive   69.57 160   P        P        09 57 27.5 +0.8
TAU   Tasmania Unive   69.57 160   P        P        09 57 28.9 +2.2
TAU   Tasmania Unive   69.57 160   P        P        09 57 27.5 +0.8
TAU                                pmax     pmax
      comp=Z,215nm,1.6s
H24K  Noodor Dome      69.60  26   IAMs_20  IAMs_20  10 32 45.7
      comp=Z,898nm,19.0s
H24K  Noodor Dome      69.60  26   P        P        09 57 28.0 +1.1
      baz=280,SNR=38
H24K                               S        S        10 06 36.5 +1.7
      baz=280
G24K  Hadweenzic Riv   69.61  25   IAMs_20  IAMs_20  10 30 13.8
      comp=Z,807nm,18.0s
G24K  Hadweenzic Riv   69.61  25   P        P        09 57 27.9 +1.1
      baz=280,SNR=32
G24K                               S        S        10 06 37.3 +2.5
      baz=280
RND   Reindeer         69.62  29   IAmb     IAmb     09 57 31.4
      comp=Z,66nm,0.7s
RC01  Rabbit Creek A   69.63  31   IAmb     IAmb     09 57 29.4
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      comp=Z,66nm,1.2s
RC01  Rabbit Creek A   69.63  31   P        P        09 57 26.8 -0.3
      baz=280,SNR=10
RC01                               S        S        10 06 34.0 -1.2
      baz=280
O22K  Cooper Landing   69.74  32   P        P        09 57 27.5 -0.2
      baz=281,SNR=13
O22K                               S        S        10 06 35.1 -1.4
      baz=281
WRH   Wood River Hil   69.76  28   IAmb     IAmb     09 57 30.7
      comp=Z,115nm,1.8s
COLA  College          69.79  27   P        P        09 57 28.0 +0.1
COLA                               IAmb     IAmb     09 57 41.3
      comp=Z,174nm,1.9s
COLA  College          69.79  27   P        P        09 57 29.5 +1.6
COLA  College          69.79  27   P        P        09 57 28.0 +0.1
COLA                               pmax     pmax
      comp=Z,174nm,2.0s
COLA                               MLR      MLR
      comp=Z,700nm,20.0s
COLA  College          69.79  27   P        P        09 57 28.1 +0.1
      baz=281
COLA                               S        S        10 06 39.5 +2.7
      baz=281
PMR   Palmer           69.82  31   IAmb     IAmb     09 57 29.6
      comp=Z,194nm,1.8s
PMR   Palmer           69.82  31   P        P        09 57 29.4 +1.2
PMR   Palmer           69.82  31   P        P        09 57 28.0 -0.2
      baz=281,SNR=46
PMR                                S        S        10 06 35.9 -1.4
      baz=281
WAT1  Susitna Watana   69.86  29   P        P        09 57 28.2 -0.3
      baz=281
WAT1                               S        S        10 06 37.3 -0.6
      baz=281
GHO   Glory Hole Cre   69.89  30   IAmb     IAmb     09 57 34.0
      comp=Z,194nm,1.8s
POKR  Poker Plat Res   69.92  27   IAmb     IAmb     09 57 32.1
      comp=Z,210nm,1.9s
POKR                               IAMs_20  IAMs_20  10 29 31.0
      comp=Z,819nm,19.0s
POKR  Poker Plat Res   69.92  27   P        P        09 57 28.9 +0.2
      baz=281,SNR=14
POKR                               S        S        10 06 39.2 +0.8
      baz=281
SEW   Seward           69.95  32   P        P        09 57 29.0  0.0
SEW                                IAmb     IAmb     09 57 30.4
      comp=Z,94nm,1.2s
SEW   Seward           69.95  32   P        P        09 57 28.9 -0.1
      baz=281,SNR=13
SEW                                S        S        10 06 37.9 -1.0
      baz=281
E25K  Arctic Village   70.06  23   IAMs_20  IAMs_20  10 27 29.6
      comp=Z,1µm,20.0s
E25K  Arctic Village   70.06  23   P        P        09 57 30.3 +0.7
      baz=281
E25K                               S        S        10 06 40.9 +0.9
      baz=281
MSEY  Mahe Island      70.11 256   P        P        09 57 30.1 -0.7
MSEY  Mahe Island      70.11 256   IAMs_20  IAMs_20  10 28 23.3
      comp=Z,1µm,18.0s
MSEY  Mahe Island      70.11 256   P        P        09 57 32.3 +1.5
MSEY                               P        P        09 57 32.3 +1.5
MSEY  Mahe Island      70.11 256   P        P        09 57 30.1 -0.7
MSEY                               pmax     pmax
      comp=Z,283nm,1.3s
MSEY                               MLR      MLR
      comp=Z,1µm,18.0s
MSEY  Mahe Island      70.11 256 i P        P        09 57 32.1 +1.2
      SNR=14
G25K  Bearman Lake     70.13  25   P        P        09 57 31.2 +1.2
      baz=281,SNR=13
G25K                               S        S        10 06 43.6 +2.8
      baz=281
F25K  Christian Rive   70.14  24   IAMs_20  IAMs_20  10 28 39.8
      comp=Z,1µm,21.0s
F25K  Christian Rive   70.14  24   P        P        09 57 31.4 +1.3
      baz=282,SNR=25
F25K                               S        S        10 06 43.3 +2.2
      baz=282
SML   Sawmill          70.16  30   P        P        09 57 30.4 +0.1
SML   Sawmill          70.16  30   P        P        09 57 30.5 +0.1
      baz=281,SNR=36
SML                                S        S        10 06 42.6 +1.2
      baz=281
KNK   Knik Glacier     70.17  31   P        P        09 57 30.8 +0.4
      baz=281,SNR=41
KNK                                S        S        10 06 41.9 +0.4
      baz=281
IL31                   70.21  27   P        P        09 57 30.1 -0.4
ILAR  Eielson Array    70.21  27   P        P        09 57 29.9 -0.7
      comp=Z,6.4nm,0.6s,baz=270,slow=5.4,SNR=61
ILAR                               PP       PP       10 00 05.2 -0.3
      comp=Z,4.4nm,1.1s,baz=279,slow=7.3,SNR=5.2
ILAR                               PKP2bc            10 25 25.6
      comp=Z,1.0nm,1.1s,baz=349,slow=0.3,SNR=6.1
ILAR                               LR       LR       10 29 50.1
      comp=Z,579nm,21.7s,baz=284,slow=37
      comp=Z,6.4nm,0.6s
HDA   Harding Lake     70.26  27   IAmb     IAmb     09 57 35.3
      comp=Z,71nm,1.5s
HDA   Harding Lake     70.26  27   P        P        09 57 30.2 -0.7
      baz=282,SNR=27
WAT6  Susitna Watana   70.28  29   P        P        09 57 31.1 -0.1
      baz=282,SNR=43
WAT6                               S        S        10 06 42.9 -0.1
      baz=282
ANN   Anapa            70.30 311c iP        P        09 57 30.8 -0.6
ANN                               eS        S        10 06 41.9 -1.5
ANN                                pmax     pmax
      comp=Z,481nm,0.9s
ANN                                MLR      MLR
      comp=Z,1µm,15.0s
DHY   Denali Highway   70.34  29   P        P        09 57 31.8 +0.3
DHY   Denali Highway   70.34  29   P        P        09 57 31.5 -0.1
      baz=282,SNR=20
DHY                                S        S        10 06 42.6 -1.2
      baz=282
PWL   Port Wells       70.34  31   P        P        09 57 31.5 +0.1
      baz=282,SNR=34
PWL                                S        S        10 06 43.4 -0.2
      baz=282
H25L  Birch Creek      70.34  25   P        P        09 57 32.2 +0.9
      baz=282,SNR=23
H25L                               S        S        10 06 47.2 +3.9
      baz=282
KEV   Kevo             70.38 338   P        P        09 57 30.8 -0.7
KEV                                IAmb     IAmb     09 57 32.6
      comp=Z,104nm,1.5s
KEV   Kevo             70.38 338   P        P        09 57 30.8 -0.7
KEV                                pmax     pmax
      comp=Z,104nm,1.5s
KEV                                MLR      MLR
      comp=Z,2µm,18.0s
C27K  Jago River       70.41  22   IAmb     IAmb     09 57 58.2
      comp=Z,74nm,1.4s
C27K                               IAMs_20  IAMs_20  10 28 16.8
      comp=Z,1µm,21.0s
C27K  Jago River       70.41  22   P        P        09 57 31.9 +0.3
      baz=283
M23K  Glacier View     70.44  30   P        P        09 57 31.9 -0.1
      baz=282,SNR=21
M23K                               S        S        10 06 45.5 +0.8
      baz=282
FYU   Fort Yukon       70.51  25   IAmb     IAmb     09 58 13.4
      comp=Z,51nm,1.2s
BMAR  Burnt Mountain   70.58  24   P        P        09 57 33.5 +0.6
SCM   Sheep Creek Mo   70.62  30   P        P        09 57 33.6 +0.4
      baz=282,SNR=46
SCM                                S        S        10 06 48.9 +2.0
      baz=282
PRP   Porcupine Dome   70.62  26   P        P        09 57 33.3 +0.1
      baz=282,SNR=21
PRP                                S        S        10 06 47.4 +0.5
      baz=282
F26K  Sheenjek River   70.68  24   IAmb     IAmb     09 57 48.2
      comp=Z,56nm,1.4s
F26K                               IAMs_20  IAMs_20  10 28 09.0
      comp=Z,1µm,22.0s
F26K  Sheenjek River   70.68  24   P        P        09 57 34.6 +1.2
      baz=283,SNR=18
F26K                               S        S        10 06 52.7 +5.4
      baz=283
J25K  Salcha River,    70.88  27   IAMs_20  IAMs_20  10 30 10.6
      comp=Z,819nm,19.0s
J25K  Salcha River,    70.88  27   P        P        09 57 33.5 -1.2
      baz=283,SNR=21
J25K                               S        S        10 06 48.6 -1.3
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      baz=283
SPB2  Spitsbergen Ar   70.88 348   IAmb     IAmb     09 57 36.7
      comp=Z,239nm,2.0s
SPA0  Spitsbergen Ar   70.89 348  eP        P        09 57 34.8 +0.4
SPA0                               IAmb     IAmb     09 57 36.4
      comp=Z,144nm,1.6s
SPITS Spitsbergen Ar   70.89 348   P        P        09 57 34.5 +0.1
      comp=Z,13nm,0.8s,baz=95,slow=7.0,SNR=27
SPITS                              LR       LR       10 32 27.4
      comp=Z,1µm,18.0s,baz=32,slow=39
      comp=Z,13nm,0.8s
K24K  Donnelly Dome    70.89  28   IAmb     IAmb     09 57 39.7
      comp=Z,57nm,0.8s
K24K  Donnelly Dome    70.89  28   P        P        09 57 34.5 -0.2
      baz=283,SNR=48
K24K                               S        S        10 06 49.4 -0.5
      baz=283
ROCAM Rodrigues Isla   70.90 238   P        P        09 57 34.0 -1.4
GLI   Glacier Island   70.93  31   P        P        09 57 35.1 +0.1
      baz=283,SNR=12
GLI                                S        S        10 06 50.8 +0.4
      baz=283
ARA0  ARCESS Array S   70.94 338  eP        P        09 57 34.8 -0.2
ARCES ARCESS Array B   70.94 338   P        P        09 57 34.2 -0.8
ARCES                              IAmb     IAmb     09 57 36.2
      comp=Z,95nm,1.6s
ARCES ARCESS Array B   70.94 338   P        P        09 57 34.5 -0.4
      comp=Z,3.2nm,0.5s,baz=69,slow=9.6,SNR=29
ARCES                              LR       LR       10 32 02.3
      comp=Z,1µm,18.2s,baz=62,slow=39
      comp=Z,3.2nm,0.5s
P23K  Montague Islan   70.98  32   P        P        09 57 35.8 +0.5
      baz=283,SNR=9.5
P23K                               S        S        10 06 53.0 +2.1
      baz=283
ARPR  Arapgir-MALATY   70.98 305   IAmb     IAmb     09 57 44.9
      comp=Z,122nm,1.3s
ARPR                               IAMs_20  IAMs_20  10 31 00.9
      comp=Z,1µm,21.0s
G26K  Porcupine Rive   70.99  25   P        P        09 57 36.1 +0.9
G26K  Porcupine Rive   70.99  25   P        P        09 57 36.3 +1.1
      baz=283,SNR=24
G26K                               S        S        10 06 54.2 +3.4
      baz=283
M24K  Tolsona, Glenn   71.09  30   P        P        09 57 36.9 +0.9
      baz=283,SNR=51
M24K                               S        S        10 06 54.5 +2.2
      baz=283
PAX   Paxson           71.21  29   IAmb     IAmb     09 57 42.4
      comp=Z,86nm,1.6s
PAX   Paxson           71.21  29   P        P        09 57 37.0 +0.2
      baz=283,SNR=32
PAX                                S        S        10 06 54.4 +0.7
      baz=283
PUL   Pulkovo          71.22 328ceP         P        09 57 37.6 +0.9
PUL                                pmax     pmax
      comp=Z,148nm,1.0s
HAMF  Hammerfest       71.27 340  eP        P        09 57 37.1 +0.2
RIDG  Independent Ri   71.31  28   IAmb     IAmb     09 57 39.9
      comp=Z,193nm,1.8s
RIDG  Independent Ri   71.31  28   P        P        09 57 37.0 -0.3
      baz=284,SNR=34
RIDG                               S        S        10 06 53.4 -1.3
      baz=284
HIN   Hinchinbrook I   71.33  32   IAmb     IAmb     09 57 42.8
      comp=Z,54nm,0.8s
KLU   Klutina          71.35  30   IAmb     IAmb     09 57 42.5
      comp=Z,31nm,0.6s
KLU                                IAMs_20  IAMs_20  10 29 48.1
      comp=Z,718nm,18.0s
KLU   Klutina          71.35  30   P        P        09 57 37.9 +0.3
      baz=283,SNR=36
KLU                                S        S        10 06 56.0 +0.7
      baz=283
KBS   Kingsbay         71.43 349 i P        P        09 57 35.5 -2.2
D27M  Malcolm River    71.44  22   P        P        09 57 38.4 +0.4
D27M                               IAmb     IAmb     09 57 43.2
      comp=Z,87nm,1.6s
D27M                               IAMs_20  IAMs_20  10 28 51.1
      comp=Z,1µm,21.0s
D27M  Malcolm River    71.44  22   P        P        09 57 38.6 +0.6
      baz=285
HSPB  Hornsund (broa   71.46 347  eP        P        09 57 37.1 -0.9
HARP  HAARP            71.48  29   P        P        09 57 39.2 +0.9
      baz=284,SNR=8.5
HARP                               S        S        10 06 57.6 +0.8
      baz=284
E27K  Coleen River     71.50  23   P        P        09 57 38.8 +0.5
      baz=285,SNR=8.4
E27K                               S        S        10 06 59.6 +2.8
      baz=285
SCRK  Sand Creek       71.62  28   IAmb     IAmb     09 57 52.2
      comp=Z,126nm,1.7s
SCRK  Sand Creek       71.62  28   P        P        09 57 39.1 -0.2
      baz=284,SNR=49
SCRK                               S        S        10 06 58.4 -0.1
      baz=284
Q23K  Middleton Isla   71.63  33   P        P        09 57 39.7 +0.5
      baz=284
I26K  Coal Creek Min   71.63  26   IAMs_20  IAMs_20  10 33 17.4
      comp=Z,774nm,20.0s
I26K  Coal Creek Min   71.63  26   P        P        09 57 39.4 +0.2
      baz=284,SNR=48
I26K                               S        S        10 06 59.7 +1.3
      baz=284
EYAK  Cordova Ski Ar   71.65  31   IAmb     IAmb     09 57 41.7
      comp=Z,150nm,1.5s
EYAK                               IAMs_20  IAMs_20  10 27 07.2
      comp=Z,951nm,22.0s
EYAK  Cordova Ski Ar   71.65  31   P        P        09 57 41.5 +2.2
EYAK  Cordova Ski Ar   71.65  31   P        P        09 57 40.0 +0.6
      baz=284,SNR=22
EYAK                               S        S        10 06 59.8 +1.1
      baz=284
DOT   Dot Lake         71.67  28   IAmb     IAmb     09 57 42.0
      comp=Z,157nm,1.9s
J26L  Joseph Creek     71.67  27   IAMs_20  IAMs_20  10 33 18.3
      comp=Z,738nm,19.0s
J26L  Joseph Creek     71.67  27   P        P        09 57 39.0 -0.5
      baz=284,SNR=52
J26L                               S        S        10 06 59.9 +0.9
      baz=284
G27K  Doyon Strip      71.84  24   IAMs_20  IAMs_20  10 28 21.6
      comp=Z,802nm,20.0s
G27K  Doyon Strip      71.84  24   P        P        09 57 41.3 +0.8
      baz=285,SNR=19
G27K                               S        S        10 07 03.2 +2.5
      baz=285
KTK1  Kautokeino       71.86 338  eP        P        09 57 40.2 -0.2
N25K  Chitina, Valde   71.94  30   IAmb     IAmb     09 57 43.6
      comp=Z,161nm,2.0s
N25K                               IAMs_20  IAMs_20  10 29 46.6
      comp=Z,878nm,20.0s
N25K  Chitina, Valde   71.94  30   P        P        09 57 41.9 +0.8
      baz=284,SNR=20
N25K                               S        S        10 07 03.8 +1.7
      baz=284
MENT  Mentasta         72.00  29   P        P        09 57 43.0 +1.5
H27K  Steamboat Moun   72.04  25   P        P        09 57 42.7 +1.0
      baz=286,SNR=22
H27K                               S        S        10 07 05.6 +2.5
      baz=286
TOKA  Tokat            72.06 307   P        P        09 57 42.6 +0.4
TOKA                               IAmb     IAmb     09 57 44.2
      comp=Z,79nm,1.0s
BMRM  Bremner River    72.09  31   IAmb     IAmb     09 57 49.7
      comp=Z,62nm,1.1s
BMRM  Bremner River    72.09  31   P        P        09 57 42.7 +0.6
      baz=285,SNR=21
BMRM                               S        S        10 07 04.8 +0.9
      baz=285
E28M  Babbage River    72.12  22   IAMs_20  IAMs_20  10 29 18.9
      comp=Z,1µm,22.0s
E28M  Babbage River    72.12  22   P        P        09 57 42.6 +0.6
      baz=287,SNR=15
E28M                               S        S        10 07 03.3 -0.5
      baz=287
L26K  Log Cabin Wild   72.14  29   P        P        09 57 43.2 +0.9
      baz=285,SNR=33
L26K                               S        S        10 07 03.8 -0.4
      baz=285
I27K  Kandik River     72.18  26   P        P        09 57 43.5 +1.0
      baz=286,SNR=31
I27K                               S        S        10 07 07.5 +2.8
      baz=286
D28M  Stokes Point     72.18  22   P        P        09 57 43.0 +0.7
      baz=287
D28M                               S        S        10 07 05.2 +0.8
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	baz=287						
RAGM	Ragged Mountai	72.21	31	IAMs_20	IAMs_20	10 27 23.9	
	comp=Z,846nm,22.0s						
F28M	Old Crow	72.28	23	IAMs_20	IAMs_20	10 29 44.3	
	comp=Z,1µm,20.0s						
F28M	Old Crow	72.28	23	P	P	09 57 43.7	+0.6
	baz=287,SNR=29						
F28M				S	S	10 07 08.5	+2.8
	baz=287						
GAZ	Gaziantep	72.33	303	IAmb	IAmb	09 57 46.4	
	comp=Z,131nm,1.0s						
K27K	Chicken	72.42	27	P	P	09 57 44.4	+0.5
	baz=286						
K27K				S	S	10 07 09.1	+1.6
	baz=286						
HMT	Hamilton	72.42	31	IAmb	IAmb	09 57 46.2	
	comp=Z,178nm,1.8s						
KAIM	Kayak Island	72.45	32	IAmb	IAmb	09 57 50.0	
	comp=Z,111nm,1.0s						
KAIM	Kayak Island	72.45	32	P	P	09 57 44.9	+0.8
	baz=285,SNR=14						
KAIM				S	S	10 07 10.4	+2.5
	baz=285						
M26K	Nabesna, AK	72.46	29	IAmb	IAmb	09 57 49.8	
	comp=Z,52nm,0.9s						
M26K	Nabesna, AK	72.46	29	P	P	09 57 44.8	+0.5
	baz=286,SNR=83						
M26K				S	S	10 07 09.6	+1.6
	baz=286						
SIM	Simferopol'	72.55	312	eP	P	09 57 45.3	+0.2
SIM				e		10 00 29.0	
SIM				eS	S	10 07 10.0	+0.4
DIKM	Dikmen	72.60	308	⇓P	P	09 57 44.9	-0.6
JETT	Jettan, Norway	72.66	339	eP	P	09 57 45.0	-0.3
BERG	Berg Lake	72.67	31	IAMs_20	IAMs_20	10 27 51.0	
	comp=Z,846nm,22.0s						
MCARA	McCarthy VSAT	72.72	30	IAmb	IAmb	09 57 51.6	
	comp=Z,93nm,1.3s						
MCARA	McCarthy VSAT	72.72	30	P	P	09 57 46.4	+0.6
	baz=286,SNR=16						
MCARA				S	S	10 07 09.7	-1.3
	baz=286						
SUCK	Suckling Hills	72.72	32	IAmb	IAmb	09 57 49.4	
	comp=Z,220nm,1.9s						
SUCK				IAMs_20	IAMs_20	10 29 40.5	
	comp=Z,842nm,19.0s						
E29M	Blow River	72.76	22	IAMs_20	IAMs_20	10 28 58.9	
	comp=Z,2µm,22.0s						
E29M	Blow River	72.76	22	P	P	09 57 45.9	0.0
	baz=288,SNR=17						
E29M				S	S	10 07 11.4	+0.2
	baz=288						
L27K	Beaver Creek,	72.79	28	IAmb	IAmb	09 57 50.1	
	comp=Z,48nm,1.1s						
L27K	Beaver Creek,	72.79	28	P	P	09 57 47.1	+0.9
	baz=286,SNR=66						
L27K				S	S	10 07 13.2	+1.3
	baz=286						
BCAR	Beaver Creek A	72.81	28	P	P	09 57 46.7	+0.3
FIA1	FINESS Array S	72.82	330	P	P	09 57 45.5	-0.8
FINES	FINESS Array B	72.82	330	P	P	09 57 46.1	-0.2
	comp=Z,34nm,0.9s,baz=69,slow=6.3,SNR=44						
FINES				LR	LR	10 31 16.9	
	comp=Z,2µm,19.9s,baz=76,slow=37						
	comp=Z,34nm,0.9s						
FINES	FINESS Array B	72.82	330	i P	P	09 57 46.0	-0.3
FINES				pmax	pmax		
	comp=Z,34nm,0.9s						
CRQM	Cirque	72.84	31	P	P	09 57 46.6	-0.1
CRQM				IAmb	IAmb	09 57 52.1	
	comp=Z,55nm,0.9s						
CRQM				IAMs_20	IAMs_20	10 28 54.2	
	comp=Z,1µm,22.0s						
CRQE	Cirque	72.86	31	P	P	09 57 47.1	+0.3
	baz=286,SNR=23						
I28M	Miner Creek	72.89	26	P	P	09 57 46.6	-0.2
I28M				IAmb	IAmb	09 57 50.5	
	comp=Z,96nm,1.7s						
I28M				IAMs_20	IAMs_20	10 32 08.6	
	comp=Z,680nm,18.0s						
I28M	Miner Creek	72.89	26	P	P	09 57 47.4	+0.6
	baz=287,SNR=30						
I28M				S	S	10 07 15.7	+2.7
	baz=287						
BGLC	Bering Glacier	72.95	31	P	P	09 57 47.7	+0.6
	baz=286						
M27K	Edge Creek, AK	72.97	29	IAMs_20	IAMs_20	10 35 46.9	
	comp=Z,836nm,18.0s						
M27K	Edge Creek, AK	72.97	29	P	P	09 57 48.0	+0.6
	baz=287,SNR=28						
M27K				S	S	10 07 15.4	+1.3
	baz=287						
TGL	Tana Glacier	72.99	31	IAmb	IAmb	09 57 52.8	
	comp=Z,42nm,0.9s						
TGL				IAMs_20	IAMs_20	10 28 46.5	
	comp=Z,1µm,22.0s						
WAX	Waxell Ridge	73.06	31	IAmb	IAmb	09 57 50.2	
	comp=Z,208nm,1.7s						
WAX				IAMs_20	IAMs_20	10 28 13.5	
	comp=Z,895nm,22.0s						
KEF	Keuruu	73.17	331	eP	P	09 57 48.1	-0.3
G29M	Pine Creek	73.18	24	IAMs_20	IAMs_20	10 30 34.1	
	comp=Z,1µm,22.0s						
G29M	Pine Creek	73.18	24	P	P	09 57 48.6	+0.2
	baz=289,SNR=20						
H29M	Whitestone	73.27	25	IAMs_20	IAMs_20	10 29 37.5	
	comp=Z,758nm,20.0s						
H29M	Whitestone	73.27	25	P	P	09 57 49.4	+0.5
	baz=288,SNR=21						
VSU	Vasula	73.34	327	ceP	P	09 57 47.8	-1.6
VSU				pmax	pmax		
	comp=Z,221nm,1.3s						
VSU	Vasula	73.34	327	eP	P	09 57 48.3	-1.1
BVCY	Beaver Creek	73.41	29	P	P	09 57 50.7	+0.8
	baz=287,SNR=29						
BVCY				S	S	10 07 19.5	+0.7
	baz=287						
BZK	Bozkurt	73.42	309	⇑P	P	09 57 49.8	-0.5
KIP	Kipapa	73.47	73	P	P	09 57 52.6	+1.7
KIP	Kipapa	73.47	73	P	P	09 57 52.8	+1.9
GRNC	Granite Creek	73.50	31	P	P	09 57 49.4	-1.3
GRNC				IAmb	IAmb	09 57 54.7	
	comp=Z,121nm,1.7s						
GRNC				IAMs_20	IAMs_20	10 28 39.9	
	comp=Z,889nm,21.0s						
DAWY	Dawson	73.54	27	IAMs_20	IAMs_20	10 34 32.7	
	comp=Z,699nm,18.0s						
DAWY	Dawson	73.54	27	P	P	09 57 51.1	+0.5
	baz=288,SNR=43						
DAWY				S	S	10 07 21.0	+0.8
	baz=288						
I29M	Ogilvie Camp,	73.57	25	IAMs_20	IAMs_20	10 31 39.4	
	comp=Z,882nm,19.0s						
I29M	Ogilvie Camp,	73.57	25	P	P	09 57 50.9	+0.2
	baz=289,SNR=18						
I29M				S	S	10 07 22.0	+1.5
	baz=289						
MESA	MESA	73.57	31	IAMs_20	IAMs_20	10 28 29.9	
	comp=Z,794nm,21.0s						
MESA	MESA	73.57	31	P	P	09 57 51.8	+0.8
	baz=287,SNR=7.8						
MESA				S	S	10 07 22.4	+1.3
	baz=287						
YAH	Yahtse	73.61	31	IAmb	IAmb	09 57 54.9	
	comp=Z,73nm,1.4s						
CTG	Chitna Glacier	73.62	30	P	P	09 57 52.1	+0.8
	baz=287,SNR=40						
CTG				S	S	10 07 23.1	+1.6
	baz=287						
CTGM	Chitina Glacie	73.63	30	IAmb	IAmb	09 57 54.8	
	comp=Z,129nm,1.3s						
CTGM				IAMs_20	IAMs_20	10 30 41.3	
	comp=Z,749nm,20.0s						
NOR	Nord	73.72	354	i P	P	09 57 49.2	-2.1
NOR				IAmb	IAmb	09 57 51.9	
	comp=Z,50nm,1.7s						
F30M	Barrier River	73.77	23	IAmb	IAmb	09 57 56.3	
	comp=Z,50nm,1.0s						
F30M				IAMs_20	IAMs_20	10 33 52.6	
	comp=Z,963nm,20.0s						
F30M	Barrier River	73.77	23	P	P	09 57 52.0	+0.2
	baz=290,SNR=31						
FKH	Fakeheh	73.77	301	eP	P	09 57 53.3	+0.7
YUK3	Moose Creek	73.78	29	P	P	09 57 53.0	+0.7
	baz=288,SNR=29						
YUK3				S	S	10 07 24.0	+0.6
	baz=288						
LOGN	Logan Glacier	73.82	30	IAmb	IAmb	09 57 56.1	
	comp=Z,135nm,1.5s						
G30M	tAoh Zraii Nji	73.83	24	IAMs_20	IAMs_20	10 30 54.2	
	comp=Z,1µm,22.0s						
G30M	tAoh Zraii Nji	73.83	24	P	P	09 57 51.5	-0.7
	baz=290,SNR=30						
EPYK	Eagle Plains	73.85	24	IAMs_20	IAMs_20	10 31 14.8	
	comp=Z,913nm,20.0s						
EPYK	Eagle Plains	73.85	24	P	P	09 57 52.0	-0.4
	baz=290,SNR=18						
MNK	Minsk	73.85	323	i P	P	09 57 52.8	+0.2
	comp=E,85nm,1.2s						
MNK				i P	P	09 57 52.8	+0.2
	comp=N,137nm,1.1s						
MNK				i P	P	09 57 52.8	+0.2
	comp=Z,166nm,0.9s,baz=73						
MNK				i PP	PP	10 00 36.7	-0.2
MNK				i PPP	PPP	10 02 22.4	
MNK				i S	S	10 07 25.4	+1.4
MNK				i SS	SS	10 12 10.5	+3.1
MNK				i SSS	SSS	10 15 31.9	
MNK				i LQ	LQ	10 25 20.2	
MNK				i LRM	MLR	10 32 11.4	
	comp=N,871nm,17.3s						
MNK				i LRM	MLR	10 32 55.8	
	comp=Z,1µm,16.2s						
MNK				i LRM	MLR	10 33 10.5	
	comp=E,1µm,14.6s						
MNK	Minsk	73.85	323	i P	P	09 57 52.7	+0.2
MNK				i		10 00 36.7	
MNK				i PPP	PPP	10 02 22.4	
MNK				i S	S	10 07 25.3	+1.4
MNK				i SS	SS	10 12 10.5	+3.1
MNK				pmax	pmax		
	comp=Z,166nm,0.9s						
MNK				pmax	pmax		
	comp=N,137nm,1.1s						
MNK				pmax	pmax		
	comp=E,85nm,1.2s						
MNK				MLR	MLR		
	comp=N,871nm,17.0s						
MNK				MLR	MLR		
	comp=Z,1µm,16.0s						
MNK				MLR	MLR		
	comp=E,1µm,15.0s						
BEIL	Beino	73.86	301	eP	P	09 57 53.7	+0.7
VAF	Ylistaro	73.87	332	eP	P	09 57 52.3	-0.1
J29N	Klondike Camp	73.90	26	IAmb	IAmb	09 57 56.5	
	comp=Z,63nm,1.2s						
J29N	Klondike Camp	73.90	26	P	P	09 57 53.5	+0.7
	baz=289						
MEF	Metsahovi	73.97	329	eP	P	09 57 53.0	-0.1
ASF	Jabal al Asfar	73.98	299	LR	LR	10 34 48.7	
	comp=Z,710nm,18.3s,baz=95,slow=39						
HWQ	Hawqa	74.12	301	eP	P	09 57 54.9	+0.2
AKASG	Malin Array Be	74.16	319	P	P	09 57 53.4	-1.0
	comp=Z,56nm,1.0s,baz=62,slow=5.6,SNR=145						
AKASG				PP	PP	10 00 38.9	-0.7
	comp=Z,3.8nm,0.9s,baz=64,slow=8.9,SNR=5.0						
AKASG				LR	LR	10 32 45.2	
	comp=Z,933nm,18.5s,baz=56,slow=38						
	comp=Z,56nm,1.0s						
AKASG	Malin Array Be	74.16	319	i P	P	09 57 53.4	-1.0
AKASG				pmax	pmax		
	comp=Z,95nm,1.1s						
AKBB	Malin Array Si	74.16	319	IAmb	IAmb	09 57 54.9	
	comp=Z,141nm,1.1s						
AKBB	Malin Array Si	74.16	319	ceP	P	09 57 53.1	-1.3
AKBB				pmax	pmax		
	comp=Z,59nm,1.0s						
KIEV	Kiev	74.17	319	P	P	09 57 53.4	-1.1
KIEV				IAmb	IAmb	09 57 54.9	
	comp=Z,127nm,1.1s						
KIEV	Kiev	74.17	319	IAMs_20	IAMs_20	10 32 25.2	
	comp=Z,1µm,20.0s						
KIEV	Kiev	74.17	319	P	P	09 57 53.4	-1.1
KIEV				pmax	pmax		
	comp=Z,127nm,1.2s						
KIEV				MLR	MLR		
	comp=Z,1µm,20.0s						
KIEV	Kiev	74.17	319	i P	P	09 57 53.2	-1.3
	SNR=9.2						
O28M	Mount Upton	74.22	30	P	P	09 57 56.0	+1.1
	baz=288,SNR=17						
O28M				S	S	10 07 28.9	+0.4
	baz=288						
YUK8	Steele Glacier	74.25	30	P	P	09 57 56.1	+1.0
	baz=289,SNR=23						
YUK8				S	S	10 07 31.4	+2.6
	baz=289						
KIRS	Kirsehir-Merke	74.28	306	⇑P	P	09 57 55.0	-0.5
ZAHL	Zahle	74.30	300	eP	P	09 57 56.3	+0.6
INK	Inuvik	74.31	22	IAMs_20	IAMs_20	10 33 49.9	
	comp=Z,963nm,20.0s						
INK	Inuvik	74.31	22	LR	LR	10 34 11.4	
	comp=Z,724nm,18.7s,baz=294,slow=39						
INK	Inuvik	74.31	22	P	P	09 57 54.6	-0.3
	baz=292,SNR=19						
INK				S	S	10 07 27.8	-0.8
	baz=292						
BR131	Keskin Array S	74.32	307	P	P	09 57 55.4	-0.3
BR131				IAmb	IAmb	09 57 57.3	
	comp=Z,96nm,1.1s						
BR131	Keskin Array S	74.32	307	P	P	09 57 56.5	+0.7
	SNR=44						
BR131	Keskin Array S	74.32	307	c iP	P	09 57 54.8	-1.0
BRTR	Keskin Array B	74.32	307	P	P	09 57 55.4	-0.4
BRTR	Keskin Array B	74.32	307	P	P	09 57 55.9	+0.1
	comp=Z,33nm,0.8s,baz=104,slow=6.1,SNR=175						
BRTR				LR	LR	10 33 19.5	
	comp=Z,679nm,19.9s,baz=66,slow=38						
	comp=Z,33nm,0.8s						
BRTR	Keskin Array B	74.32	307	i P	P	09 57 55.2	-0.6
BRTR				pmax	pmax		
	comp=Z,33nm,0.8s						
NACGM	Naroch	74.35	323	eP	P	09 57 55.9	+0.5
	comp=E,33nm,0.9s						
I30M	Mount Dempster	74.38	25	IAMs_20	IAMs_20	10 32 01.9	
	comp=Z,906nm,19.0s						
I30M	Mount Dempster	74.38	25	P	P	09 57 55.7	+0.1
	baz=290,SNR=36						
I30M				S	S	10 07 32.5	+2.7
	baz=290						
L29M	L29M	74.38	28	IAmb	IAmb	09 57 59.6	
	comp=Z,89nm,1.3s						
L29M	L29M	74.38	28	P	P	09 57 56.7	+1.2
	baz=290,SNR=50						
L29M				S	S	10 07 32.9	+3.1
	baz=290						
K29M	Barlow Dome	74.39	27	P	P	09 57 56.5	+0.8
	baz=290,SNR=35						
K29M				S	S	10 07 31.8	+1.8
	baz=290						
PCA	Pinnacle	74.40	31	IAmb	IAmb	09 57 59.2	
	comp=Z,248nm,1.7s						
PINM	Pinnacle	74.41	31	P	P	09 57 56.8	+1.0
	baz=289,SNR=16						
PINM				S	S	10 07 31.9	+1.7
	baz=289						
RCY	Rachaya	74.44	300	eP	P	09 57 57.1	+0.5
M29M	Somme Creek	74.46	28	IAMs_20	IAMs_20	10 33 39.1	
	comp=Z,806nm,20.0s						
M29M	Somme Creek	74.46	28	P	P	09 57 57.3	+1.2
	baz=289,SNR=60						
M29M				S	S	10 07 33.7	+3.0
	baz=289						
BHL	Bhannes	74.47	301	eP	P	09 57 56.8	+0.1
ISAL	Salakas	74.50	324	eP	P	09 57 56.6	+0.3
QRWL	Qaraoun	74.55	300	eP	P	09 57 57.8	+0.7
SHBL	Chebaa	74.56	300	eP	P	09 57 57.6	+0.3
F31M	Tsiigehtchic	74.56	23	IAMs_20	IAMs_20	10 33 00.6	
	comp=Z,989nm,20.0s						
F31M	Tsiigehtchic	74.56	23	P	P	09 57 55.8	-0.6
	baz=292,SNR=8.3						
G31M	Satah River	74.56	23	IAmb	IAmb	09 57 58.6	
	comp=Z,107nm,1.9s						
G31M	Satah River	74.56	23	P	P	09 57 55.7	-0.7
	baz=292,SNR=11						
G31M				S	SKiKP	10 07 28.0	+5.6
	baz=292						
DQRL	Deir Qamar	74.59	300	eP	P	09 57 58.2	+0.8
J30M	Hart River	74.62	26	IAMs_20	IAMs_20	10 36 34.4	
	comp=Z,714nm,18.0s						
J30M	Hart River	74.62	26	P	P	09 57 57.4	+0.4
	baz=291,SNR=15						
J30M				S	S	10 07 34.7	+2.1
	baz=291						
MTSE	Matsula	74.72	328	eP	P	09 57 57.9	+0.4
YUK4	Talbot Arm	74.74	30	P	P	09 57 58.6	+0.7
	baz=290,SNR=13						
BCPM	Bancas Point	74.74	31	IAmb	IAmb	09 58 01.4	
	comp=Z,203nm,1.7s						
ANTO	Ankara	74.90	307	P	P	09 57 57.2	-1.8
ANTO				IAmb	IAmb	09 58 00.6	
	comp=Z,98nm,0.8s						
ANTO	Ankara	74.90	307	IAMs_20	IAMs_20	10 33 46.8	
	comp=Z,908nm,22.0s						
ANTO	Ankara	74.90	307	P	P	09 57 60.0	+0.9
ANTO				P	P	09 57 60.0	+0.9
ANTO	Ankara	74.90	307	⇑P	P	09 57 59.4	+0.3
ANTO	Ankara	74.90	307	P	P	09 57 59.3	+0.3
MMAI	Mount Meron Ar	74.93	300	P	P	09 58 00.1	+0.7
	comp=Z,42nm,1.0s,baz=76,slow=6.1,SNR=42						
MMAI				LR	LR	10 36 16.2	
	comp=Z,960nm,18.2s,baz=54,slow=40						
	comp=Z,42nm,1.0s						
RAF	Rauma	74.94	330	eP	P	09 57 58.6	-0.1
PNL	Peninsula	74.95	31	P	P	09 58 00.4	+1.5
PNL	Peninsula	74.95	31	P	P	09 57 59.8	+0.9
	baz=289,SNR=8.8						
H31M	Peel River	74.96	24	IAMs_20	IAMs_20	10 31 50.1	
	comp=Z,930nm,19.0s						
H31M	Peel River	74.96	24	P	P	09 57 58.4	-0.4
	baz=292,SNR=13						
STEI	Steigen	75.00	338	eP	P	09 57 58.5	-0.5
STEI				IAmb	IAmb	09 57 60.0	
	comp=Z,68nm,1.1s						
YUK6	Outpost Mounta	75.01	30	P	P	09 58 00.5	+1.1
	baz=290,SNR=29						
O29M	Mount Kennedy	75.13	31	IAMs_20	IAMs_20	10 30 09.9	
	comp=Z,844nm,22.0s						
O29M	Mount Kennedy	75.13	31	P	P	09 58 01.2	+1.1
	baz=290,SNR=13						
O29M				S	S	10 07 41.6	+3.2
	baz=290						
FAUS	Fauske	75.21	337	eP	P	09 57 59.7	-0.4
FAUS				IAmb	IAmb	09 58 10.0	
	comp=Z,47nm,0.8s						
A36M	Sachs Harbour	75.28	17	IAMs_20	IAMs_20	10 36 00.4	
	comp=Z,902nm,21.0s						
A36M	Sachs Harbour	75.28	17	P	P	09 57 59.8	-0.7
	baz=299						
GHAJ	Ghor Haditha	75.32	298	IAMs_20	IAMs_20	10 36 27.7	
	comp=Z,947nm,20.0s						
ATD	Arta Tunnel	75.39	277	LR	LR	10 32 39.9	
	comp=Z,13nm,18.3s,baz=52,slow=37						
ATD	Arta Tunnel	75.39	277	P	P	09 58 03.9	+1.6
	SNR=26						
N30M	Aishikik Lake	75.41	29	IAmb	IAmb	09 58 05.4	
	comp=Z,103nm,1.6s						
N30M				IAMs_20	IAMs_20	10 34 25.3	
	comp=Z,730nm,20.0s						
N30M	Aishikik Lake	75.41	29	P	P	09 58 02.6	+1.1
	baz=291,SNR=29						
N30M				S	S	10 07 41.5	+0.2
	baz=291						
HYT	Haines Junctio	75.44	30	IAmb	IAmb	09 58 05.7	
	comp=Z,83nm,1.4s						
HYT				IAMs_20	IAMs_20	10 31 50.2	
	comp=Z,703nm,19.0s						
HYT	Haines Junctio	75.44	30	P	P	09 58 02.9	+1.1
	baz=291,SNR=35						
HYT				S	S	10 07 43.4	+1.6
	baz=291						
SORM	Soroca	75.47	316	⇑P	P	09 58 02.0	0.0
SORM	Soroca	75.47	316	P	P	09 58 02.0	0.0
KIS	Kishinev	75.52	315	⇑iP	P	09 58 00.0	-2.3
	comp=Z,280nm,5.4s						
KIS				eL	L	10 27 19.0	
KIS				LQM		10 30 14.0	
	comp=Z,800nm,14.0s						
KIS				LRM	MLR	10 33 00.0	
	comp=Z,400nm,15.5s						
KIS	Kishinev	75.52	315	c iP	P	09 58 00.0	-2.3
KIS				pmax	pmax		
	comp=Z,280nm,5.4s						
KIS				MLR	MLR		
	comp=Z,400nm,15.5s						
MILM	Milestii Mici	75.54	315	⇑iP	P	09 58 00.0	-2.5
	comp=Z,400nm,2.2s						
MILM				eL	L	10 29 47.0	
MILM				LQM		10 30 09.0	
	comp=Z,2µm,16.0s						
MILM				LRM	MLR	10 33 02.0	
	comp=Z,1µm,16.5s						
MILM	Milestii Mici	75.54	315	ceP	P	09 58 00.0	-2.5
MILM				pmax	pmax		
	comp=Z,400nm,2.2s						
MILM				MLR	MLR		
	comp=Z,1µm,16.0s						
VSVD	Vaisvydziai	75.55	325	eP	P	09 58 03.0	+0.7
PABE	Paberze	75.69	324	eP	P	09 58 03.3	+0.1
P29M	Windy Craggy	75.76	31	IAmb	IAmb	09 58 07.5	
	comp=Z,186nm,1.6s						
P29M	Windy Craggy	75.76	31	P	P	09 58 04.8	+1.2
	baz=291,SNR=26						
P29M				S	S	10 07 45.8	+0.6
	baz=291						
SLIT	Slitere, Latvi	75.84	327	eP	P	09 58 03.0	-0.9
MDUB	Mudurnu	75.88	308	P	P	09 58 04.5	-0.2
P30M	Million Dollar	75.95	30	P	P	09 58 05.5	+0.9
	baz=291						
P30M				S	S	10 07 49.2	+1.9
	baz=291						
CSS	Mathiatis	75.97	302	P	P	09 58 05.5	+0.2
CSS				IAmb	IAmb	09 58 06.8	
	comp=Z,101nm,0.8s						
N31M	Braeburn, Yuko	75.98	29	IAmb	IAmb	09 58 17.4	
	comp=Z,91nm,1.4s						
N31M	Braeburn, Yuko	75.98	29	P	P	09 58 05.9	+1.1
	baz=292,SNR=24						
N31M				S	S	10 07 49.9	+2.3
	baz=292						
MOR8	Moi Rana	76.01	336	eP	P	09 58 02.2	-2.6
SAHE	Sakarya_HENDEK	76.01	309	⇑P	P	09 58 05.8	+0.5
O30N	Mendenhall	76.11	30	P	P	09 58 06.5	+0.9
	baz=292,SNR=34						
O30N				S	S	10 07 48.9	-0.1
	baz=292						
VAGH	Vaagaholmen	76.20	337	eP	P	09 58 05.1	-0.7
VAGH				IAmb	IAmb	09 58 06.7	
	comp=Z,117nm,1.5s						
POHA	Pohakuloa	76.21	74	P	P	09 58 09.2	+2.1
VASR	Vaslui	76.30	315	⇑P	P	09 58 07.7	+0.8
M31M	Drury Creek, Y	76.32	28	IAMs_20	IAMs_20	10 32 45.3	
	comp=Z,728nm,20.0s						
M31M	Drury Creek, Y	76.32	28	P	P	09 58 06.9	+0.2
	baz=293,SNR=18						
M31M				S	S	10 07 53.0	+1.7
	baz=293						
EIL	Elat	76.33	297	LR	LR	10 37 21.3	
	comp=Z,1µm,18.6s,baz=72,slow=40						
KONS	Konsvik	76.35	337	eP	P	09 58 06.6	-0.1
VLDR	Vladesti	76.36	314	⇓P	P	09 58 08.2	+1.0
MLH	Mauna Loa	76.43	74	P	P	09 58 06.7	-1.7
TPGR	Topolog	76.45	313	⇑P	P	09 58 07.2	-0.5
STOK	Stokkvaagen	76.46	337	eP	P	09 58 06.6	-0.7
STOK				IAmb	IAmb	09 58 08.1	
	comp=Z,82nm,1.4s						
PLBC	Pleasant Camp	76.47	31	P	P	09 58 08.1	+0.6
	baz=292,SNR=14						
PLBC				S	S	10 07 53.3	+0.4
	baz=292						
LEIR	Leirfjorden	76.53	337	eP	P	09 58 07.0	-0.7
LEIR				IAmb	IAmb	09 58 08.3	
	comp=Z,35nm,0.8s						
CFR	Carcaliu	76.54	313	⇓P	P	09 58 08.3	0.0
CFR	Carcaliu	76.54	313	P	P	09 58 08.2	0.0
TIRR	Tirgusor	76.58	313	IAmb	IAmb	09 58 09.7	
	comp=Z,89nm,1.1s						
TIRR				IAMs_20	IAMs_20	10 33 15.0	
	comp=Z,1µm,20.0s						
TIRR	Tirgusor	76.58	313	⇑P	P	09 58 08.0	-0.4
TIRR	Tirgusor	76.58	313	P	P	09 58 08.0	-0.4
PBUR	Paburge	76.59	325	eP	P	09 58 08.6	+0.3
NEGRR	Negrea	76.60	314	⇑P	P	09 58 08.8	+0.3
BORA	Eskisehir	76.61	308	P	P	09 58 07.9	-1.0
BORA				IAmb	IAmb	09 58 09.9	
	comp=Z,78nm,1.1s						
SUW	Suwalki	76.63	323	eP	P	09 58 07.6	-0.9
SUW	Suwalki	76.63	323	P	P	09 58 08.0	-0.5
SUW	Suwalki	76.63	323	P	P	09 58 08.0	-0.5
SUW				MLR	MLR		

	comp=Z,2µm,21.0s						
SUW	Suwalki	76.63	323	*e*P	P	09 58 08.4	-0.1
WHY	Whitehorse	76.70	29	IAMs_20	IAMs_20	10 35 14.5	
	comp=Z,1µm,21.0s						
WHY	Whitehorse	76.70	29	P	P	09 58 09.7	+0.6
	baz=293,SNR=38						
WHY				S	S	10 07 56.9	+1.2
	baz=293						
FARO	Faro, Yukon	76.76	28	IAmb	IAmb	09 58 12.4	
	comp=Z,87nm,1.7s						
FARO	Faro, Yukon	76.76	28	P	P	09 58 09.6	+0.4
	baz=294,SNR=27						
FARO				S	S	10 07 56.6	+0.5
	baz=294						
SILT	Sile	76.79	309	⇑P	P	09 58 10.0	+0.3
HARR	Harsova	76.83	313	⇑P	P	09 58 09.7	-0.3
HARR	Harsova	76.83	313	P	P	09 58 09.6	-0.3
SKAG	Skagway	76.96	31	IAmb	IAmb	09 58 14.1	
	comp=Z,77nm,1.2s						
SKAG				IAMs_20	IAMs_20	10 31 16.4	
	comp=Z,927nm,22.0s						
SKAG	Skagway	76.96	31	P	P	09 58 12.3	+2.0
SKAG	Skagway	76.96	31	P	P	09 58 11.2	+1.0
	baz=293,SNR=12						
TESR	Tescani	77.08	315	⇓P	P	09 58 11.5	+0.2
S31K	Pelican	77.10	32	IAmb	IAmb	09 58 21.2	
	comp=Z,58nm,1.2s						
S31K	Pelican	77.10	32	P	P	09 58 12.0	+1.0
	baz=292						
ICOR	Ion Corvin	77.11	313	⇓P	P	09 58 11.7	+0.2
R31K	City Hall, Gus	77.17	32	P	P	09 58 12.1	+0.6
	baz=293						
KLYT	Kilyos	77.18	309	⇑P	P	09 58 10.6	-1.3
ISP	Isparta	77.22	306	IAmb	IAmb	09 58 13.0	
	comp=Z,100nm,1.0s						
ISP				IAMs_20	IAMs_20	10 35 29.4	
	comp=Z,832nm,22.0s						
ISP	Isparta	77.22	306	P	P	09 58 11.6	-0.7
ISP	Isparta	77.22	306	*e*P	P	09 58 11.9	-0.5
VRI	Vrincioaia	77.25	314	⇑P	P	09 58 12.4	+0.2
VRI	Vrincioaia	77.25	314	P	P	09 58 12.4	+0.2
BCK	Bucak	77.28	305	P	P	09 58 11.2	-1.5
PLOR	Plostina	77.30	314	⇑P	P	09 58 13.0	+0.3
PLOR	Plostina	77.30	314	P	P	09 58 12.9	+0.3
ONER	Baraj Valea Uz	77.31	315	⇑P	P	09 58 13.1	+0.5
N32M	Quiet Lake	77.31	29	P	P	09 58 11.9	-0.4
N32M				IAmb	IAmb	09 58 22.1	
	comp=Z,129nm,1.6s						
N32M				IAMs_20	IAMs_20	10 34 23.5	
	comp=Z,720nm,19.0s						
N32M	Quiet Lake	77.31	29	P	P	09 58 12.6	+0.3
	baz=294						
N32M				S	S	10 08 02.6	+0.4
	baz=294						
BISRR	Bisoca	77.37	314	⇑P	P	09 58 13.6	+0.6
MMPY	Sheldon Lake,	77.48	27	P	P	09 58 13.7	+0.4
	baz=295,SNR=13						
MMPY				S	S	10 08 04.1	+0.1
	baz=295						
BESE	Bessie Mountai	77.53	31	IAmb	IAmb	09 58 17.4	
	comp=Z,103nm,1.6s						
ISR	Istrita	77.62	314	⇑P	P	09 58 13.7	-0.8
ISR	Istrita	77.62	314	P	P	09 58 13.6	-0.8
BUR08	Bucovina Ar. S	77.63	317	IAmb	IAmb	09 58 16.4	
	comp=Z,110nm,1.1s						
BURAR	Bucovina Array	77.63	317	P	P	09 58 14.1	-0.4
BURAR				IAmb	IAmb	09 58 16.7	
	comp=Z,99nm,1.1s						
BURAR	Bucovina Array	77.63	317	⇓P	P	09 58 14.0	-0.4
BURAR	Bucovina Array	77.63	317	P	P	09 58 13.9	-0.6
CTYL	Yalikoy Yolu	77.65	310	⇓P	P	09 58 12.7	-1.8
TURR	Turia	77.65	315	⇑P	P	09 58 15.0	+0.5
P32M	Atlin	77.66	30	IAMs_20	IAMs_20	10 36 01.0	
	comp=Z,727nm,20.0s						
P32M	Atlin	77.66	30	P	P	09 58 15.2	+0.8
	baz=294,SNR=16						
NSS	Namsos	77.67	335	*e*P	P	09 58 13.0	-1.1
NSS				IAmb	IAmb	09 58 20.9	
	comp=Z,85nm,1.4s						
NEHR	Nehoiu	77.68	314	⇑P	P	09 58 15.6	+0.9
DAG	Danmarks Havn	77.76	351	P	P	09 58 11.4	-3.1
DAG	Danmarks Havn	77.76	351	P	P	09 58 13.1	-1.4
DAG	Danmarks Havn	77.76	351	*i* P	P	09 58 13.4	-1.1
DAG				IAmb	IAmb	09 58 15.6	
	comp=Z,96nm,1.5s						
OZUR		77.79	315	⇑P	P	09 58 14.1	-1.2
R32K	Eaglecrest	77.81	32	P	P	09 58 16.4	+1.2
	baz=294,SNR=17						
P33M	Teslin, Yukon	77.82	29	P	P	09 58 16.0	+0.7
	baz=295,SNR=21						
RAO	Raoul Island	77.86	129	LR	LR	10 28 31.7	
	comp=Z,383nm,20.0s,baz=298,slow=33						
JIS	Juneau Island	77.88	32	P	P	09 58 18.1	+2.7
MLR	Muntele Rosu	77.89	314	IAmb	IAmb	09 58 18.0	
	comp=Z,71nm,0.8s						
MLR	Muntele Rosu	77.89	314	LR	LR	10 34 58.9	
	comp=Z,1µm,18.2s,baz=60,slow=38						
MLR	Muntele Rosu	77.89	314	⇑P	P	09 58 15.6	-0.4
MLR	Muntele Rosu	77.89	314	P	P	09 58 15.6	-0.4
SIT	Sitka	77.90	33	IAmb	IAmb	09 58 27.3	
	comp=Z,59nm,1.0s						
SIT	Sitka	77.90	33	P	P	09 58 17.1	+1.5
SIT	Sitka	77.90	33	P	P	09 58 16.8	+1.2
	baz=293,SNR=8.1						
ELL	Elmali	78.03	305		P	09 58 16.7	-0.2
ELL	Elmali	78.03	305	P	P	09 58 16.7	-0.2
ELL				pmax	pmax		
	comp=Z,337nm,0.9s						
DOPR	Dopca	78.09	315	⇑P	P	09 58 16.8	-0.2
S32K	Killisnoo	78.11	32	P	P	09 58 17.7	+0.9
	baz=294						
BAND	Balkesir-Ban	78.16	309	⇑P	P	09 58 16.5	-0.9
EDC	Edincik	78.33	309	P	P	09 58 18.0	-0.4
ARCR	ARCALIA	78.37	316	⇓P	P	09 58 19.4	+1.0
AKAS	Kas	78.44	304	P	P	09 58 17.9	-1.3
KWP	Kalwaria Pacla	78.47	319	*e*P	P	09 58 18.9	0.0
KWP	Kalwaria Pacla	78.47	319	P	P	09 58 19.1	+0.1
VOIR		78.50	314	⇑P	P	09 58 18.3	-1.1
VOIR		78.50	314	P	P	09 58 18.2	-1.1
Q32M	Nakina River	78.60	31	IAmb	IAmb	09 58 23.6	
	comp=Z,108nm,1.9s						
Q32M				IAMs_20	IAMs_20	10 33 49.8	
	comp=Z,859nm,20.0s						
Q32M	Nakina River	78.60	31	P	P	09 58 20.7	+0.9
	baz=295,SNR=8.3						
BEL	Belsk	78.77	322	*e*P	P	09 58 20.8	+0.3
ARR	Arges	78.80	314	⇑P	P	09 58 21.0	+0.1
HUMR	Humele	78.87	314	⇑P	P	09 58 20.7	-0.5
SBV	Sambava	78.92	250	P	P	09 58 23.1	+1.2
	SNR=5.7						
HFS	Hagfors	78.95	331	P	P	09 58 20.7	-0.6
	comp=Z,20nm,0.8s,baz=104,slow=6.3,SNR=40						
HFS				PP	PP	10 01 18.1	-1.6
	comp=Z,9.1nm,0.9s,baz=96,slow=12,SNR=3.9						
HFS				LR	LR	10 37 07.8	
	comp=Z,2µm,19.1s,baz=64,slow=39						
	comp=Z,20nm,0.8s						
CJR	Cluj-Napoca	78.98	316	⇑P	P	09 58 22.0	0.0
CJR	Cluj-Napoca	78.98	316	P	P	09 58 21.9	0.0
KOLS	Kolonicke sedl	78.99	318	*e*P	P	09 58 22.3	+0.5
KOLS				pmax	pmax		
	comp=Z,21nm,0.9s						
KOLS	Kolonicke sedl	78.99	318	*e*P	P	09 58 22.3	+0.5
KOLS				*e*PP	PP	10 01 34.1	+14
R33M	Jennings River	79.02	30	P	P	09 58 23.1	+1.2
	baz=296,SNR=18						
QRZ	Quartz Range	79.02	143	P	P	09 58 24.4	+2.5
T33K	Petersburg	79.19	33	P	P	09 58 23.5	+0.8
	baz=295						
TGTN	Hyland Airport	79.23	27	P	P	09 58 23.3	+0.4
	baz=298						
MARR	Marisel-Cluj	79.30	316	⇑P	P	09 58 23.8	+0.1
LOT	Lotru	79.34	315	⇑P	P	09 58 22.9	-1.1
JCZ	Jackson Bay	79.35	147	P	P	09 58 25.6	+1.9
NC405	NORSAR Array S	79.36	332	IAmb	IAmb	09 58 31.7	
	comp=Z,66nm,0.8s						
U33K	Whale Pass	79.40	33	P	P	09 58 24.8	+1.0
	baz=295						
CAVK	Edirne/Enez-Ca	79.42	310	⇑P	P	09 58 22.9	-1.4
STHS	Stebnicka Huta	79.43	319	*e*P	P	09 58 23.9	-0.4
STHS				*e*		10 01 26.1	
STHS				pmax	pmax		
	comp=Z,42nm,1.2s						
STHS	Stebnicka Huta	79.43	319	*e*P	P	09 58 23.9	-0.4
STHS				*e*PP	PP	10 01 26.1	+2.1
ALN	Alexandroupoli	79.43	310	IAmb	IAmb	09 58 25.5	
	comp=Z,65nm,1.1s						
NC303	NORSAR Array S	79.46	333	IAmb	IAmb	09 58 24.6	
	comp=Z,111nm,1.3s						
FOZ	Fox Glacier	79.47	147	IAmb	IAmb	09 58 29.2	
	comp=Z,82nm,1.0s						
DRGR		79.52	316	⇑P	P	09 58 24.9	0.0
DRGR		79.52	316	P	P	09 58 24.8	0.0
ARG	Arkhangelos	79.56	305	IAmb	IAmb	09 58 26.4	
	comp=Z,154nm,1.1s						
DCZ	Deep Cove	79.58	149	IAmb	IAmb	09 58 30.2	
	comp=Z,100nm,1.1s						
S34M	Telegraph Cree	79.60	31	P	P	09 58 25.1	+0.1
S34M	Telegraph Cree	79.60	31	P	P	09 58 26.2	+1.2
	baz=296,SNR=14						
NB2	NORSAR Subarra	79.61	332	P	P	09 58 23.9	-1.1
	comp=Z,43nm,0.9s,baz=62,slow=5.6						
NB2				PP	PP	10 01 21.6	-3.6
	comp=Z,83nm,1.7s,baz=67,slow=8.6						
NB2	NORSAR Subarra	79.61	332	P	P	09 58 23.9	-1.1
	baz=62,slow=5.6						
NOA	NORSAR Array B	79.61	332	P	P	09 58 23.8	-1.2
	comp=Z,12nm,0.6s,baz=61,slow=5.2,SNR=42						
NOA				PP	PP	10 01 24.4	-0.8
	comp=Z,8.1nm,1.0s,baz=65,slow=8.2,SNR=5.4						
NOA				LR	LR	10 36 15.9	
	comp=Z,2µm,18.1s,baz=70,slow=38						
	comp=Z,12nm,0.6s						
NC602	NORSAR Array S	79.62	332	*e*P	P	09 58 23.6	-1.4
EZN	Ezine	79.62	309	⇑P	P	09 58 25.3	-0.1
EZN	Ezine	79.62	309	P	P	09 58 25.3	-0.1
WRAK	Wrangell Islan	79.66	33	P	P	09 58 26.0	+0.7
	baz=296,SNR=7.2						
WTLY	Watson Lake, Y	79.67	29	P	P	09 58 25.9	+0.5
	baz=298,SNR=18						
CRAG	Craig	79.67	34	IAmb	IAmb	09 58 27.9	
	comp=Z,188nm,1.9s						
CRAG	Craig	79.67	34	P	P	09 58 28.1	+2.7
CRAG	Craig	79.67	34	P	P	09 58 26.1	+0.7
	baz=295,SNR=5.3						
NC204	NORSAR Array S	79.69	333	IAmb	IAmb	09 58 25.9	
	comp=Z,84nm,1.3s						
RDO	Rodhopi	79.70	310	IAMs_20	IAMs_20	10 37 29.8	
	comp=Z,1µm,20.0s						
DEV	Deva	79.74	315	P	P	09 58 26.9	+0.9
INZ	Inchbonnie	79.75	145	IAmb	IAmb	09 58 48.5	
	comp=Z,92nm,1.4s						
NEEM	North Greenlan	79.84	358	*i* P	P	09 58 25.6	-0.8
NEEM				IAmb	IAmb	09 58 29.1	
	comp=Z,57nm,0.9s						
DLBC	Dease Lake	79.88	30	IAmb	IAmb	09 58 30.6	
	comp=Z,103nm,1.6s						
DLBC	Dease Lake	79.88	30	LR	LR	10 33 38.5	
	comp=Z,481nm,21.6s,baz=309,slow=36						
DLBC	Dease Lake	79.88	30	P	P	09 58 27.5	+0.9
	baz=297,SNR=18						
RES	Resolute Bay	79.92	9	P	P	09 58 25.4	-1.0
RES				IAMs_20	IAMs_20	10 34 36.7	
	comp=Z,797nm,21.0s						
RES	Resolute Bay	79.92	9	LR	LR	10 38 19.1	
	comp=Z,449nm,18.1s,baz=320,slow=39						
RES	Resolute Bay	79.92	9	P	P	09 58 25.4	-1.0
RES				pmax	pmax		
	comp=Z,26nm,1.2s						
RES				MLR	MLR		
	comp=Z,800nm,21.0s						
MLZ	Mavora Lakes	79.97	149	IAmb	IAmb	09 58 40.9	
	comp=Z,71nm,1.1s						
OJC	Ojcow	79.98	320	*e*P	P	09 58 27.0	-0.2
URZ	Urewera	79.99	139	LR	LR	10 32 04.1	
	comp=Z,528nm,20.3s,baz=40,slow=34						
DBG	Daneborg	79.99	350	*i* P	P	09 58 25.4	-1.4
NIE	Niedzica	80.00	319	*e*P	P	09 58 27.7	+0.3
SRE	Strehaia	80.00	314	⇑P	P	09 58 25.8	-1.7
SRE	Strehaia	80.00	314	P	P	09 58 25.7	-1.7
GZR	Gura Zlata	80.01	315	⇑P	P	09 58 27.3	-0.3
GZR	Gura Zlata	80.01	315	P	P	09 58 27.2	-0.3
DOMB	Dombas	80.02	334	*e*P	P	09 58 26.9	-0.3
DOMB				IAmb	IAmb	09 58 27.9	
	comp=Z,60nm,1.2s						
GKP	Gorka Klasztor	80.18	324	*e*P	P	09 58 27.9	-0.2
GKP	Gorka Klasztor	80.18	324	*e*P	P	09 58 28.3	+0.1
BKZ	Black Stump Fm	80.20	140	P	P	09 58 29.0	+0.6
JMIC	Jan Mayen	80.24	345	LR	LR	10 37 15.8	
	comp=Z,633nm,19.0s,baz=46,slow=38						
RPZ	Rata Peaks	80.24	146	LR	LR	10 33 15.2	
	comp=Z,386nm,19.8s,baz=315,slow=35						
LBZ	Lake Benmore	80.27	147	IAmb	IAmb	09 58 35.0	
	comp=Z,72nm,1.0s						
WHZ	Wether Hill Ro	80.27	149	IAmb	IAmb	09 58 30.3	
	comp=Z,62nm,1.0s						
SURR	Surduc	80.29	316	⇑P	P	09 58 28.8	-0.2
WRGLY	Wrigley	80.32	25	IAMs_20	IAMs_20	10 38 37.8	
	comp=Z,782nm,19.0s						
WRGLY	Wrigley	80.32	25	P	P	09 58 28.9	+0.2
	baz=302						
HERR	Herculane	80.44	315	⇑P	P	09 58 29.1	-0.7
T35M	Bob Quinn	80.44	32	IAMs_20	IAMs_20	10 37 51.6	
	comp=Z,749nm,20.0s						
T35M	Bob Quinn	80.44	32	P	P	09 58 30.6	+1.0
	baz=297,SNR=7.2						
V35K	Ketchikan	80.51	34	P	P	09 58 30.2	+0.3
	baz=296						
KARP	Karpathos	80.53	304	IAMs_20	IAMs_20	10 40 00.3	
	comp=Z,653nm,19.0s						
KARP	Karpathos	80.53	304	*e*P	P	09 58 30.3	-0.3
LANS	Liptovska Anna	80.61	319	*e*P	P	09 58 31.4	+0.8
LANS				*e*		10 01 33.4	
LANS				pmax	pmax		
	comp=Z,27nm,1.1s						
LANS	Liptovska Anna	80.61	319	*e*P	P	09 58 31.4	+0.8
LANS				*e*PP	PP	10 01 33.4	-0.4
BSD	Bornholm Skovb	80.61	326	*e*P	P	09 58 29.8	-0.6
BSD	Bornholm Skovb	80.61	326	*i* P	P	09 58 28.3	-2.2
BSD				IAmb	IAmb	09 58 30.7	
	comp=Z,106nm,1.2s						
TULEG	Thule	80.64	2	IAMs_20	IAMs_20	10 37 34.8	
	comp=Z,1µm,21.0s						
KHZ	Kahutara	80.66	144	IAmb	IAmb	09 58 31.6	
	comp=Z,55nm,1.0s						
BZS	Buzias	80.67	316	⇑P	P	09 58 30.3	-0.7
BZS	Buzias	80.67	316	P	P	09 58 30.3	-0.7
GVZ	Greta Valley S	80.76	144	IAmb	IAmb	09 58 35.9	
	comp=Z,96nm,0.9s						
AKN	Aaknes	80.78	334	*e*P	P	09 58 31.2	-0.1
XMAS	Kiritimati	80.83	92	P	P	09 58 30.9	-1.4
XMAS	Kiritimati	80.83	92	P	P	09 58 34.1	+1.7
PSZ	Piszkesteto	80.85	318	IAmb	IAmb	09 58 33.4	
	comp=Z,112nm,1.3s						
PSZ	Piszkesteto	80.85	318	⇑P	P	09 58 31.9	-0.2
PSZ	Piszkesteto	80.85	318	P	P	09 58 31.8	-0.2
PSZ	Piszkesteto	80.85	318	*e*P	P	09 58 32.5	+0.5
MDVR	Moldovita	80.94	315	⇑P	P	09 58 32.1	-0.4
MSWZ	Moikau Station	80.94	142	P	P	09 58 32.4	+0.1
SKAR	Skarslia	81.03	333	*e*P	P	09 58 32.4	-0.3
SKAR				IAmb	IAmb	09 58 37.0	
	comp=Z,71nm,1.5s						
BFZ	Birch Farm	81.03	141	IAmb	IAmb	09 58 42.9	
	comp=Z,76nm,0.9s						
BFZ	Birch Farm	81.03	141	P	P	09 58 33.1	+0.3
U35K	Hyder	81.05	33	IAMs_20	IAMs_20	10 40 43.7	
	comp=Z,768nm,18.0s						
U35K	Hyder	81.05	33	P	P	09 58 32.9	+0.2
	baz=298						
OKC	Ostrava-Krasne	81.11	320	*e*P	P	09 58 32.3	-0.9
OKC				AMS	AMS	10 34 40.0	
	comp=Z,1µm,14.2s						
OKC	Ostrava-Krasne	81.11	320	*e*P	P	09 58 32.3	-0.9
OKC				MLR	MLR		
	comp=Z,1µm,14.2s						
LIRD	Liard River Hi	81.20	29	P	P	09 58 34.1	+0.5
	baz=300,SNR=5.9						
APE	Apeiranthos	81.20	306	⇑P	P	09 58 33.0	-1.1
APE	Apeiranthos	81.20	306	P	P	09 58 33.0	-1.1
VYHS	Vyhne	81.26	319	*e*P	P	09 58 34.4	+0.3
VYHS				pmax	pmax		
	comp=Z,154nm,1.2s						
VYHS	Vyhne	81.26	319	*e*P	P	09 58 34.4	+0.3
BEAVL	Fort Liard	81.26	28	P	P	09 58 34.3	+0.4
	baz=301						
STEB	Steborice	81.29	321	*e*P	P	09 58 34.1	-0.1
SYZ	Scrubby Hill	81.31	149	P	P	09 58 35.6	+1.5
BOVS	Bovan	81.39	314	⇓P	P	09 58 34.8	-0.1
MORC	Moravsky Berou	81.49	321	IAmb	IAmb	09 58 36.9	
	comp=Z,79nm,1.3s						
MORC	Moravsky Berou	81.49	321	*e*P	P	09 58 35.2	-0.1
MORC	Moravsky Berou	81.49	321	P	P	09 58 35.4	+0.1
MAUC	Maruska	81.49	320	*e*P	P	09 58 35.7	+0.3
BUD	Budapest	81.56	318	P	P	09 58 35.9	+0.2
VAY	Valandovo	81.71	311	*i* P	P	09 58 36.1	-0.6
KOTAN	Kotaneelee Air	81.72	27	P	P	09 58 36.3	0.0
	baz=302						
KSP	Ksiaz	81.75	322	*e*P	P	09 58 36.3	-0.3
JAVC	Velka Javorina	81.80	320	*e*P	P	09 58 38.0	+1.0
KRLC	Kraliky	81.80	321	*e*P	P	09 58 37.6	+0.6
KRLC	Kraliky	81.80	321	*e*P	P	09 58 37.6	+0.6
TOAD	Toad River Com	81.87	29	P	P	09 58 37.0	-0.1
	baz=301,SNR=21						
OSTC	Ostas	81.92	322	*e*P	P	09 58 37.6	0.0
OSTC				AMS	AMS	10 40 00.0	
	comp=Z,2µm,13.1s						
OSTC	Ostas	81.92	322	*e*P	P	09 58 37.6	0.0
OSTC				MLR	MLR		
	comp=Z,2µm,13.1s						
DPC	Dobruska-Polom	81.95	321	*e*P	P	09 58 39.2	+1.4
DPC				*e*SKS	S	10 08 47.3	-4.4
DPC				AMS	AMS	10 34 30.0	
	comp=Z,2µm,14.7s						
DPC	Dobruska-Polom	81.95	321	*e*P	P	09 58 39.2	+1.4
DPC				*e*		10 08 47.3	
DPC				MLR	MLR		
	comp=Z,2µm,14.7s						
CHVC	Chvalec	82.00	322	AMS	AMS	10 40 00.0	
	comp=Z,2µm,13.2s						
FRGS	Fruska Gora	82.02	316	⇑*i*P	P	09 58 37.8	-0.4
UPC	Upice	82.06	322	*e*SKS	S	10 08 55.0	+2.3
UPC				AMS	AMS	10 40 10.0	
	comp=Z,2µm,13.5s						
SMOL	Smolenice	82.10	319	*e*P	P	09 58 39.3	+0.8
SMOL				pmax	pmax		
	comp=Z,44nm,1.4s						
MODS	Modra-Piesok	82.25	319	*e*P	P	09 58 38.7	-0.6
MODS				pmax	pmax		
	comp=Z,113nm,1.3s						
MODS	Modra-Piesok	82.25	319	*e*P	P	09 58 38.7	-0.6
VRAC	Vranov	82.25	320	LR	LR	10 36 00.3	
	comp=Z,2µm,19.3s,baz=56,slow=36						
VRAC	Vranov	82.25	320	*e*P	P	09 58 39.3	0.0
MORH	Mrgy, Hungar	82.33	317	⇑P	P	09 58 39.5	-0.2
IDI	Anoyia	82.35	305	IAmb	IAmb	09 58 47.2	
	comp=Z,86nm,1.5s						
IDI	Anoyia	82.35	305	P	P	09 58 38.3	-1.9
IDI	Anoyia	82.35	305	LR	LR	10 39 18.4	
	comp=Z,465nm,21.9s,baz=90,slow=39						
RUE	Ruedersdorf	82.41	324	*e*P	P	09 58 40.4	+0.4
TEKS	Tekeris	82.46	315	⇑*i*P	P	09 58 39.2	-1.3
KRUC	Moravsky	82.47	320	*e*P	P	09 58 40.4	-0.1
BLS5	Blasjo	82.48	332	*e*P	P	09 58 40.3	0.0
BLS5				IAmb	IAmb	09 58 47.3	
	comp=Z,41nm,1.2s						
SJES	Sjenica	82.70	314	⇑*i*P	P	09 58 41.9	0.0
KULLO	Kullorsuaq	82.82	360	*i* P	P	09 58 41.2	-0.6
KULLO				IAmb	IAmb	09 58 43.1	
	comp=Z,70nm,1.3s						
BBLS	Lazi&#263i	82.82	315	⇑*i*P	P	09 58 42.2	-0.3
PVCC	Panska Ves	82.87	322	*e*P	P	09 58 42.4	-0.1
PVCC				AMS	AMS	10 39 30.0	
	comp=Z,2µm,13.7s						
PVCC	Panska Ves	82.87	322	*e*P	P	09 58 42.4	-0.1
PVCC				MLR	MLR		
	comp=Z,2µm,13.7s						
TREC	Trest	82.90	321	*e*P	P	09 58 42.6	-0.1
TREC				AMS	AMS	10 38 20.0	
	comp=Z,2µm,16.2s						
TREC	Trest	82.90	321	*e*P	P	09 58 42.6	-0.1
TREC				MLR	MLR		
	comp=Z,2µm,16.2s						
IVA	Berane	82.91	314	⇑*i*P	P	09 58 42.8	-0.2
RUDO	Rudo	82.95	314	⇑*i*P	P	09 58 42.3	-0.8
SOP	Sopron	82.98	319	P	P	09 58 43.0	-0.1
OHR	Ohrid	83.02	312	*i* P	P	09 58 42.6	-0.9
GOPC	GO Pecny, Ondr	83.03	321	*e*P	P	09 58 42.9	-0.5
GOPC				AMS	AMS	10 35 00.0	
	comp=Z,2µm,14.8s						
GOPC	GO Pecny, Ondr	83.03	321	*e*P	P	09 58 42.9	-0.5
GOPC				MLR	MLR		
	comp=Z,2µm,14.8s						
HAPS	Han Pijesak,BI	83.03	315	⇑*i*P	P	09 58 43.5	-0.1
PLE	Pljevlja	83.06	314	⇑*i*P	P	09 58 44.2	+0.4
BRG	Berggiesshubel	83.06	323	*i* P	P	09 58 43.6	+0.2
BRG				Amp		09 58 44.9	
	comp=Z,75nm,1.4s						
BRG	Berggiesshubel	83.06	323	P	P	09 58 53.3	+10
BRG				Amp		09 58 54.9	
	comp=Z,39nm,1.4s						
BRG	Berggiesshubel	83.06	323	S	S	10 09 02.0	-0.9
SSRD	Sdr. Stenderup	83.09	328	*i* P	P	09 58 41.3	-2.2
SSRD				IAmb	IAmb	09 58 44.6	
	comp=Z,93nm,1.0s						
RICC	Richard	83.13	322	AMS	AMS	10 37 20.0	
	comp=Z,2µm,14.6s						
PRU	Pruhonice	83.13	322	*e*P	P	09 58 44.3	+0.4
PRU				AMS	AMS	10 35 10.0	
	comp=Z,2µm,14.8s						
PRU	Pruhonice	83.13	322	*e*P	P	09 58 44.3	+0.4
PRU				MLR	MLR		
	comp=Z,2µm,14.8s						
RONA	Rosalia, Austr	83.14	319	*i* P	P	09 58 44.0	0.0
	comp=Z,40nm,1.2s,SNR=9.3						
RONA				*e*PP	PP	10 01 57.6	+3.0
	comp=Z,28nm,1.3s						
PRA	Prague	83.16	322	AMS	AMS	10 40 50.0	
	comp=Z,2µm,13.8s						
KOME	Kolasin	83.17	314	⇑*i*P	P	09 58 44.4	0.0
CONA	Conrad Observa	83.30	319	*i* P	P	09 58 45.0	+0.1
	comp=Z,73nm,1.2s,SNR=17						
CONA				*i* PP	PP	10 01 58.8	+2.7
	comp=Z,32nm,1.4s						
CLL	Collm	83.38	323	IAmb	IAmb	09 58 46.1	
	comp=Z,98nm,1.3s						
CLL	Collm	83.38	323	⇑*i*P	P	09 58 44.2	-0.9
CLL				*i*		09 58 47.5	
CLL				*e*S	S	10 09 03.0	-3.1
CLL				pmax	pmax		
	comp=Z,108nm,1.4s						
CLL	Collm	83.38	323	⇑*i*P	P	09 58 44.2	-0.9
	comp=Z,108nm,1.4s						
CLL				*i* x	x	09 58 47.5	
CLL				*e*x	x	10 01 51.0	
CLL				*e*PP	PP	10 01 57.0	+0.5
CLL				*e*x	x	10 02 23.0	
CLL				*e*PPP	PPP	10 03 49.0	
CLL				*e*S	S	10 09 03.0	-3.1
CLL				*e*PS	PnS	10 10 00.0	+2.8
CLL				*e*PPS	PPS	10 10 24.0	
CLL				*e*SS	SS	10 14 48.0	+17
CLL				*e*SSS	SSS	10 18 18.0	
CLL				AMS	AMS	10 33 00.0	
	comp=N,2µm,21.9s						
CLL				AMS	AMS	10 33 00.0	
	comp=E,2µm,19.8s						
UPM	Unac-Piva	83.43	314	⇑*i*P	P	09 58 45.0	-0.8
UPM	Unac-Piva	83.43	314	⇑*i*P	P	09 58 45.0	-0.8
SCO	Scoresbysund	83.46	348	IAmb	IAmb	09 58 47.4	
	comp=Z,139nm,1.5s						
SCO				IAMs_20	IAMs_20	10 39 32.6	
	comp=Z,961nm,18.0s						
SCO	Scoresbysund	83.46	348	*i* P	P	09 58 43.3	-1.8
SCO				IAmb	IAmb	09 58 47.0	
	comp=Z,112nm,1.4s						
HSKC	Hora Svate Kat	83.48	322	*e*P	P	09 58 46.0	+0.3
HSKC				*e*SKS	S	10 09 04.2	-3.0
HSKC				AMS	AMS	10 41 00.0	
	comp=Z,3µm,13.4s						
PDG	Podgorica	83.52	313	IAMs_20	IAMs_20	10 42 44.5	
	comp=Z,924nm,19.0s						
PDG	Podgorica	83.52	313	⇑*i*P	P	09 58 45.5	-0.5
PDG	Podgorica	83.52	313	⇑*i*P	P	09 58 45.7	-0.3
TIR	Tirane	83.56	312	P	P	09 58 46.5	+0.2
ZVC	Zvikov	83.59	321	*e*P	P	09 58 46.2	0.0
ZVC				AMS	AMS	10 41 00.0	
	comp=Z,2µm,17.4s						
DRME	Dracevica, Mon	83.67	313	⇑*i*P	P	09 58 46.2	-0.6
DRME	Dracevica, Mon	83.67	313	⇑*i*P	P	09 58 46.5	-0.3
CEME	Cevo	83.70	314	⇑*i*P	P	09 58 46.3	-0.7
ABPO	Ambohimpanom	83.72	246	P	P	09 58 47.8	+0.3
ABPO	Ambohimpanom	83.72	246	P	P	09 58 47.8	+0.3
ABPO				pmax	pmax		
	comp=Z,246nm,1.0s						

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ULC   Ulcinj            83.73 313⇑iP      P        09 58 46.5 -0.6
POIN  Pond Inlet        83.79   6  IAmb    IAmb     09 58 56.9
      comp=Z,63nm,1.5s
BRY   Bratogost         83.80 314⇑iP      P        09 58 46.9 -0.8
ARSA  Arzberg           83.81 319  P       P        09 58 47.4  0.0
ARSA  Arzberg           83.81 319 i P      P        09 58 47.0 -0.5
      comp=Z,36nm,1.2s,SNR=12
ARSA                              i PP     PP       10 02 01.5 +1.4
      comp=Z,9.3nm,1.0s
CKRC  Cesky Krumlov     83.81 321  AMS     AMS      10 37 10.0
      comp=Z,1µm,19.5s
ITM   Ithomi            83.81 308  IAMs_20 IAMs_20  10 41 05.9
      comp=Z,625nm,21.0s
BUM   Brajici-Budva     83.82 313⇑iP      P        09 58 47.5 -0.2
SUMG  Summit            83.88 354  IAmb    IAmb     09 58 49.8
      comp=Z,72nm,1.2s
SUMG                               IAMs_20 IAMs_20  10 39 21.5
      comp=Z,955nm,18.0s
SUMG  Summit            83.88 354  P       P        09 58 46.3 -1.5
SUMG  Summit            83.88 354 i P      P        09 58 47.0 -0.8
SUMG                               IAmb    IAmb     09 58 48.7
      comp=Z,150nm,1.6s
BLY   Banja Luka        83.89 316⇑iP      P        09 58 47.6 -0.2
A051A Mrakovica         83.95 316⇑iP      P        09 58 47.8 -0.5
YKAW3 Yellowknife Wh    83.99  23  IAmb    IAmb     09 58 49.2
      comp=Z,101nm,1.6s
HCY   Herceg Novi       84.03 314⇑iP      P        09 58 48.7 +0.1
HCY   Herceg Novi       84.03 314⇑iP      P        09 58 47.9 -0.7
YKA   Yellowknife Ar    84.04  23  P       P        09 58 47.4 -0.8
YKA   Yellowknife Ar    84.04  23  P       P        09 58 48.1 -0.1
      comp=Z,15nm,0.9s,baz=317,slow=5.3,SNR=114
YKA                                PKKPbc  PKKPdf   10 17 00.1 +5.8
      comp=Z,1.5nm,1.0s,baz=121,slow=2.0,SNR=8.8
YKA                                LR      LR       10 41 44.7
      comp=Z,320nm,18.2s,baz=320,slow=40
      comp=Z,15nm,0.9s
KHC   Kasperske Hory    84.09 321 eP       P        09 58 48.8 -0.1
KHC                               eSKS     SKSac    10 09 05.4 -6.9
KHC                                AMS     AMS      10 41 30.0
      comp=Z,2µm,14.9s
KHC   Kasperske Hory    84.09 321ceP       P        09 58 48.4 -0.5
KHC                                pmax    pmax
      comp=Z,175nm,1.7s
YKAW1 Yellowknife Wh    84.09  23  P       P        09 58 48.0 -0.5
YKAW1                              IAmb    IAmb     09 58 49.7
      comp=Z,58nm,1.3s
GEC2  GERESS Array S    84.15 321  IAmb    IAmb     09 58 50.5
      comp=Z,106nm,1.4s
GERES GERESS Array B    84.15 321  P       P        09 58 48.6 -0.6
GERES GERESS Array B    84.15 321  P       P        09 58 49.4 +0.1
      comp=Z,30nm,1.0s,baz=57,slow=4.9,SNR=58
GERES                              LR      LR       10 38 45.6
      comp=Z,970nm,20.5s,baz=61,slow=37
      comp=Z,30nm,1.0s
NKC   Novy Kostel       84.21 322 eP       P        09 58 48.9 -0.5
NKC                                AMS     AMS      10 41 20.0
      comp=Z,2µm,13.4s
NKC   Novy Kostel       84.21 322 eP       P        09 58 48.9 -0.5
NKC                                MLR     MLR
      comp=Z,2µm,13.4s
MOA   Molln             84.29 320 i P      P        09 58 49.8  0.0
      comp=Z,68nm,1.1s,SNR=32
MOA                               ePP      PP       10 02 05.4 +1.4
      comp=Z,25nm,1.3s
KEK   Kerkira           84.29 311  IAmb    IAmb     09 58 52.2
      comp=Z,70nm,1.1s
KEK                                IAMs_20 IAMs_20  10 38 49.3
      comp=Z,824nm,20.0s
PERS  Pernice           84.33 318 eP       P        09 58 49.7 -0.5
DOBS  Dobrina           84.34 318 i P      P        09 58 49.6 -0.5
SOKA  Soboth            84.37 318 i P      P        09 58 50.0 -0.4
      comp=Z,52nm,1.0s,SNR=22
SOKA                              ePP      PP       10 02 05.6 +0.8
      comp=Z,20nm,1.1s
STON  Ston              84.37 314⇑iP      P        09 58 49.1 -1.2
A050A Klekovaca         84.42 316⇑iP      P        09 58 50.5 -0.2
CRES  Cresnjevec Ost    84.49 318⇑iP      P        09 58 50.4 -0.5
CRES  Cresnjevec Ost    84.49 318 i P      P        09 58 50.7 -0.2
UPNV  Upernavik         84.62 359 i P      P        09 58 51.2 +0.3
UPNV                               IAmb    IAmb     09 58 53.1
      comp=Z,29nm,0.8s
BIOA  Bad Ischl, Aus    84.73 320 i P      P        09 58 52.1 -0.1
      comp=Z,50nm,1.3s,SNR=13
BIOA                              ePP      PP       10 02 08.5 +0.8
      comp=Z,24nm,1.2s
OBKA  Obir              84.74 318⇑iP      P        09 58 51.6 -0.7
OBKA  Obir              84.74 318 i P      P        09 58 51.7 -0.7
      comp=Z,47nm,1.2s,SNR=18
OBKA                              ePP      PP       10 02 08.3 +0.4
      comp=Z,20nm,1.5s
BOJS  Bojanci           84.77 317⇑iP      P        09 58 52.0 -0.3
BOJS  Bojanci           84.77 317 eP       P        09 58 52.2 -0.1
KIBK  Kibwezi           85.01 265  P       P        09 58 53.4 -0.8
KIBK  Kibwezi           85.01 265  P       P        09 58 56.2 +2.0
      SNR=42
GRFO  Grafenberg        85.17 322  P       P        09 58 54.7 +0.5
GRFO  Grafenberg        85.17 322  P       P        09 58 54.7 +0.5
GRFO                               pmax    pmax
      comp=Z,152nm,1.5s
GRFO                               MLR     MLR
      comp=Z,1µm,19.0s
CEY   Cerknica          85.17 318⇑iP      P        09 58 53.9 -0.5
KBA   Koelnbreinsper    85.20 319 i P      P        09 58 53.6 -1.1
      comp=Z,26nm,1.1s,SNR=17
MYKA  Terra Mystica     85.23 319 i P      P        09 58 53.8 -0.9
      comp=Z,24nm,1.3s,SNR=8.1
MYKA                              i PP     PP       10 02 11.0 -0.8
      comp=Z,11nm,1.2s
KMBO  Kilima Mbogo      85.27 267  P       P        09 58 56.6 +0.9
KMBO  Kilima Mbogo      85.27 267  P       P        09 58 57.6 +2.0
KMBO  Kilima Mbogo      85.27 267c iP      P        09 58 56.6 +0.9
KMBO  Kilima Mbogo      85.27 267 i P      P        09 58 57.4 +1.7
      SNR=83
LODK  Lodwar            85.27 272  P       P        09 58 57.2 +1.8
      SNR=39
PRED  Cave del Predi    85.37 319  P       P        09 58 55.0 -0.4
VOI   Vohitsoka         85.37 244  P       P        09 58 56.7 +0.8
      SNR=8.5
LESA  Schwarzleotal     85.43 320 i P      P        09 58 55.2 -0.6
      comp=Z,61nm,1.5s,SNR=18
LESA                              i PP     PP       10 02 13.4  0.0
      comp=Z,44nm,1.5s
TRI   Trieste           85.60 318  IAmb    IAmb     09 58 57.0
      comp=Z,107nm,1.5s
ABTA  Abfaltersbach     85.86 319 i P      P        09 58 56.2 -1.7
      comp=Z,41nm,1.3s,SNR=10
STAL  STALIGIAL         85.98 319  IAmb    IAmb     09 58 58.5
      comp=Z,103nm,1.5s
MATE  Matera            86.02 313 ⇑P      P        09 58 58.2 -0.4
MATE  Matera            86.02 313 eP       P        09 58 56.5 -2.2
WATA  Walderalm         86.13 320 i P      P        09 58 58.1 -1.1
      comp=Z,43nm,1.5s,SNR=8.6
WATA                              i PP     PP       10 02 19.1  0.0
      comp=Z,44nm,1.6s
WTTA  Wattenberg        86.13 320 i P      P        09 58 58.3 -1.1
      comp=Z,32nm,0.9s,SNR=12
WTTA                              ePP      PP       10 02 19.3 +0.1
      comp=Z,40nm,1.2s
SGRT  San Giovanni R    86.17 314  P       P        09 58 59.0 -0.5
SGRT                               IAmb    IAmb     09 59 00.4
      comp=Z,120nm,1.3s
MOTA  Moosalm           86.40 320 i P      P        09 58 59.6 -1.0
      comp=Z,26nm,1.3s,SNR=7.1
SQTA  Sankt Quirin      86.40 320 i P      P        09 58 59.7 -0.9
      comp=Z,43nm,1.3s,SNR=9.3
SQTA                              ePP      PP       10 02 19.5 -1.8
      comp=Z,22nm,1.1s
ILON  Igloolik, Nuna    86.50   8  IAmb    IAmb     09 59 00.8
      comp=Z,54nm,1.1s
ILON                               IAMs_20 IAMs_20  10 38 34.8
      comp=Z,934nm,21.0s
RETA  Reutte            86.53 321 i P      P        09 59 00.4 -0.7
      comp=Z,24nm,1.4s
TIP   Timpagrande       86.65 311  IAMs_20 IAMs_20  10 40 22.4
      comp=Z,1µm,22.0s
FETA  Feichten          86.79 320 i P      P        09 59 01.8 -0.8
      comp=Z,32nm,1.4s,SNR=8.3
CUC   Castrocucco       86.93 312  IAmb    IAmb     09 59 04.9
      comp=Z,92nm,1.5s
CUC                                IAMs_20 IAMs_20  10 42 01.7
      comp=Z,934nm,19.0s
SOEG  Soedalen          87.08 350 i P      P        09 59 02.6 -0.7
SOEG                               IAmb    IAmb     09 59 04.5
      comp=Z,85nm,1.4s
GUMA  Gualdo di Mace    87.13 316  IAMs_20 IAMs_20  10 43 01.8
      comp=Z,1µm,20.0s
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DAVA  Damuels           87.15 321 i P      P        09 59 03.6 -0.7
      comp=Z,29nm,1.4s,SNR=5.8
DAVA                              ePP      PP       10 02 27.4  0.0
      comp=Z,26nm,1.7s
INTR  Introdacqua       87.26 315  IAmb    IAmb     09 59 12.8
      comp=Z,135nm,1.5s
FUORN Ofenpass-Fuorn    87.27 320  P       P        09 59 04.2 -0.8
FUORN                              IAmb    IAmb     09 59 06.3
      comp=Z,85nm,1.4s
PAOL  Paolisi           87.29 314  P       P        09 59 04.4 -0.5
PAOL                               IAmb    IAmb     09 59 05.4
      comp=Z,68nm,1.6s
ICESG Greenland Ices    87.34 353 i P      P        09 59 04.4 -0.6
ICESG                              IAmb    IAmb     09 59 05.5
      comp=Z,181nm,1.6s
NRCA  Norcia            87.38 316  IAMs_20 IAMs_20  10 44 56.5
      comp=Z,915nm,22.0s
DAVOX Davos/Dischmat    87.41 320  LR      LR       10 40 41.4
      comp=Z,1µm,19.8s,baz=77,slow=37
AQU   L'Aquila          87.43 315  P       P        09 59 03.0 -2.6
AQU   L'Aquila          87.43 315  P       P        09 59 05.6  0.0
BTNL  Ternell           87.48 325 dP       P        09 59 05.1 -0.5
      comp=Z,13nm,1.6s
BFO   Black Forest      87.50 322  P       P        09 59 04.5 -1.3
BFO                                IAmb    IAmb     09 59 06.6
      comp=Z,73nm,1.8s
BFO   Black Forest      87.50 322  P       P        09 59 04.5 -1.3
BFO                                pmax    pmax
      comp=Z,73nm,1.8s
BFO                                MLR     MLR
      comp=Z,1µm,19.0s
MEM   Membach           87.53 325 dP       P        09 59 04.9 -0.9
MEM                               dP       pP       09 59 05.5 -3.1
MEM                               dPP      PP       10 02 30.6 +0.5
CEL   Celeste           87.67 311  P       P        09 59 06.3 -0.5
CEL                                IAMs_20 IAMs_20  10 41 01.5
      comp=Z,743nm,21.0s
BHOU  Houvegnez         87.68 325 dP       P        09 59 06.2 -0.4
SLE   Schleitheim       87.70 322  P       P        09 59 05.3 -1.5
CLRS  Cowichan Lake     87.74  37  IAMs_20 IAMs_20  10 38 28.9
      comp=Z,641nm,20.0s
CESX  Cesi              87.84 316  IAmb    IAmb     09 59 08.3
      comp=Z,104nm,1.7s
TUE   Stuetta           87.89 320  IAmb    IAmb     09 59 09.0
      comp=Z,63nm,1.5s
LLLB  Lillooet          87.97  35  IAmb    IAmb     09 59 10.3
      comp=Z,48nm,1.0s
LLLB                               IAMs_20 IAMs_20  10 41 06.8
      comp=Z,527nm,19.0s
WLF   Walferdange       87.98 324  P       P        09 59 07.2 -0.8
WLF   Walferdange       87.98 324  P       P        09 59 07.9 -0.1
WLF   Walferdange       87.98 324 dP       P        09 59 08.1 +0.1
      comp=Z,28nm,1.4s
BCLA  Clavier           88.01 325 dP       P        09 59 07.8 -0.4
      comp=Z,10nm,1.6s
BCLA                              dPP      PP       10 02 35.2 +1.2
ILULI Ilulissat         88.07 357  IAmb    IAmb     10 01 05.3
      comp=Z,23nm,0.7s
ILULI                              IAMs_20 IAMs_20  10 36 32.0
      comp=Z,951nm,21.0s
BGES  Gesves            88.15 325 dP       P        09 59 08.3 -0.5
RAR   Rarotonga         88.18 114  LR      LR       10 30 54.0
      comp=Z,142nm,20.0s,baz=291,slow=30
ECH   Echery            88.22 322  P       P        09 59 08.4 -0.8
ECH                                IAmb    IAmb     09 59 10.1
      comp=Z,82nm,2.0s
ECH   Echery            88.22 322  P       P        09 59 08.4 -0.8
ECH                                pmax    pmax
      comp=Z,82nm,2.0s
OSSC  Osservatorio P    88.23 317  IAmb    IAmb     09 59 10.1
      comp=Z,107nm,1.6s
UCC   Uccle             88.29 326  IAmb    IAmb     09 59 10.1
      comp=Z,104nm,1.7s
UCC   Uccle             88.29 326 dP       P        09 59 09.0 -0.4
BLKN  Baker Lake        88.33  15  P       P        09 59 08.3 -1.1
BLKN                               IAmb    IAmb     09 59 09.6
      comp=Z,51nm,1.2s
BMRD  Maredsous         88.36 325 dP       P        09 59 09.3 -0.5
VLC   Villacollemand    88.45 318  P       P        09 59 09.0 -1.4
DOU   Dourbes           88.57 325 dP       P        09 59 10.3 -0.5
      comp=Z,12nm,1.0s
NLWA  Neilton Lookou    88.66  38  IAmb    IAmb     09 59 14.2
      comp=Z,62nm,1.1s
VAE   Valguarnera       89.07 311  LR      LR       10 48 53.9
      comp=Z,304nm,19.7s,baz=39,slow=42
EKA   Eskdalemuir Ar    89.10 332  P       P        09 59 12.1 -1.1
      comp=Z,3.0nm,0.8s,baz=29,slow=3.1,SNR=9.8
EKA                                PP      PP       10 02 41.7 -0.8
      comp=Z,5.2nm,1.0s,baz=48,slow=8.2,SNR=5.0
      comp=Z,3.0nm,0.8s
CASY  Casey             89.24 184  P       P        09 59 13.1 -0.2
CASY                               IAmb    IAmb     09 59 14.3
      comp=Z,43nm,1.1s
D05A  Enumclaw          89.84  38  P       P        09 59 16.6 -0.2
SFJD  Kangerlussuaq     90.25 357  P       P        09 59 17.6 -0.7
SFJD                               IAmb    IAmb     09 59 19.6
      comp=Z,139nm,1.9s
SFJD  Kangerlussuaq     90.25 357  IAMs_20 IAMs_20  10 42 09.0
      comp=Z,964nm,20.0s
SFJD  Kangerlussuaq     90.25 357  P       P        09 59 17.6 -0.7
SFJD                               pmax    pmax
      comp=Z,139nm,1.9s
SFJD                               MLR     MLR
      comp=Z,1µm,20.0s
SFJD  Kangerlussuaq     90.25 357 i P      P        09 59 17.7 -0.6
SFJD                               IAmb    IAmb     09 59 19.1
      comp=Z,47nm,1.3s
ANGG  Ammassalik, Gr    90.41 352  IAMs_20 IAMs_20  10 42 44.3
      comp=Z,913nm,18.0s
COR   Corvallis         90.52  40  P       P        09 59 20.7 +0.7
COR                                IAmb    IAmb     09 59 23.1
      comp=Z,76nm,1.0s
COR   Corvallis         90.52  40  P       P        09 59 20.7 +0.7
COR                                pmax    pmax
      comp=Z,76nm,1.0s
LTY   Liberty           90.54  37  IAmb    IAmb     09 59 22.1
      comp=Z,50nm,1.2s
B08A  Colville Reser    90.63  36  IAmb    IAmb     09 59 22.6
      comp=Z,71nm,1.1s
I03D  Drain, OR         90.98  41  P       P        09 59 20.3 -1.9
CLF   Chambon-Foret     91.03 324  P       P        09 59 21.5 -0.8
MBAR  Mbarara           91.07 270  P       P        09 59 22.7 -0.7
MBAR                               IAmb    IAmb     09 59 25.6
      comp=Z,58nm,1.4s
MBAR  Mbarara           91.07 270  IAMs_20 IAMs_20  10 39 14.8
      comp=Z,726nm,22.0s
MBAR  Mbarara           91.07 270  P       P        09 59 24.2 +0.9
MBAR  Mbarara           91.07 270  P       P        09 59 22.7 -0.7
MBAR                               pmax    pmax
      comp=Z,58nm,1.4s
MBAR                               MLR     MLR
      comp=Z,700nm,22.0s
HOOD  Mount Hood Mea    91.08  39  IAmb    IAmb     09 59 25.2
      comp=Z,84nm,1.2s
IDGL  Inch Island, C    91.11 334  P       P        09 59 22.0 -0.5
H04A  Detroit Lake      91.13  40  P       P        09 59 21.4 -1.5
H04A                               IAmb    IAmb     09 59 25.0
      comp=Z,61nm,1.3s
MXC   Moxie City        91.14  38  P       P        09 59 22.6 -0.3
MXC                                IAmb    IAmb     09 59 25.4
      comp=Z,56nm,1.1s
ILTH  Belurgan, Co L    91.34 332  P       P        09 59 22.8 -0.8
SSB   Saint Sauveur     91.35 321  IAmb    IAmb     09 59 24.9
      comp=Z,55nm,1.6s
E07A  Sunnyside         91.40  37  IAmb    IAmb     09 59 26.7
      comp=Z,76nm,1.3s
WAH2  Wahluke Slope     91.44  37  IAmb    IAmb     09 59 26.6
      comp=Z,49nm,1.0s
I04A  Tendick Farm,     91.50  41  IAmb    IAmb     09 59 26.7
      comp=Z,54nm,1.0s
VSL   Villasalto        91.50 314  IAMs_20 IAMs_20  10 44 38.4
      comp=Z,755nm,22.0s
C09A  Chrisman Ranch    91.53  36  IAmb    IAmb     09 59 26.9
      comp=Z,47nm,1.2s
HAWA  Hanford           91.68  37  IAmb    IAmb     09 59 27.8
      comp=Z,55nm,1.4s
G06A  Carlson Farm,     91.72  39  IAmb    IAmb     09 59 28.2
      comp=Z,83nm,1.4s
F07A  Phinny Hill Vi    91.75  38  IAmb    IAmb     09 59 28.3
      comp=Z,40nm,1.1s
NEW   Newport           91.86  35  P       P        09 59 26.4 +0.1
NEW                                IAmb    IAmb     09 59 28.3
      comp=Z,37nm,1.1s
NEW   Newport           91.86  35  IAMs_20 IAMs_20  10 48 01.9
      comp=Z,496nm,18.0s
NEW   Newport           91.86  35  LR      LR       10 41 36.9
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      comp=Z,227nm,20.1s,baz=336,slow=36
NEW   Newport           91.86  35  P       P        09 59 26.4 +0.1
NEW                                pmax    pmax
      comp=Z,37nm,1.1s
DSB   Dublin            91.90 332  P       P        09 59 25.5 -0.7
PINE  Pine Mountain     92.37  40  IAmb    IAmb     09 59 31.6
      comp=Z,68nm,1.1s
J05D  Fort Rock, OR     92.49  41  IAmb    IAmb     09 59 31.8
      comp=Z,42nm,1.1s
K04D  Chiloquin, OR     92.55  41  IAmb    IAmb     09 59 31.8
      comp=Z,53nm,1.0s
IGLA  Glengowla, Co     93.06 333  P       P        09 59 30.1 -1.5
NUUK  Nuuk              93.12 357 i P      P        09 59 30.1 -1.5
NUUK                               IAmb    IAmb     09 59 31.8
      comp=Z,53nm,1.3s
O02D  Mt. Diablo Mer    93.27  44  IAMs_20 IAMs_20  10 41 54.0
      comp=Z,558nm,20.0s
FRB   Frobisher Bay     93.34   5  LR      LR       10 46 37.8
      comp=Z,548nm,18.8s,baz=347,slow=39
KEST  Kesra             93.47 311  P       P        09 59 33.9 -0.1
      comp=Z,46nm,1.0s,baz=303,slow=0.6,SNR=34
KEST                               PP      PP       10 03 16.8 -1.0
      comp=Z,20nm,1.3s,baz=29,slow=2.5,SNR=5.1
KEST                               LR      LR       10 49 08.6
      comp=Z,508nm,18.1s,baz=40,slow=40
      comp=Z,46nm,1.0s
KEST  Kesra             93.47 311  P       P        09 59 34.3 +0.3
      SNR=26
FCC   Fort Churchill    93.49  18  P       P        09 59 32.3 -1.2
FCC                                IAmb    IAmb     09 59 33.8
      comp=Z,25nm,1.1s
FCC                                IAMs_20 IAMs_20  10 43 12.0
      comp=Z,921nm,20.0s
FCC   Fort Churchill    93.49  18  P       P        09 59 32.3 -1.2
FCC                                pmax    pmax
      comp=Z,25nm,1.1s
FCC                                MLR     MLR
      comp=Z,900nm,20.0s
HATC  Hat Creek Radi    93.75  43  IAmb    IAmb     09 59 37.0
      comp=Z,40nm,1.0s
J08A  Circle Bar Ran    94.08  39  IAmb    IAmb     09 59 39.0
      comp=Z,37nm,1.4s
FFC   Flin Flon         94.19  24  P       P        09 59 35.0 -1.8
FFC                                IAmb    IAmb     09 59 37.4
      comp=Z,56nm,1.6s
FFC   Flin Flon         94.19  24  IAMs_20 IAMs_20  10 44 42.7
      comp=Z,662nm,21.0s
FFC   Flin Flon         94.19  24  P       P        09 59 35.0 -1.8
FFC                                pmax    pmax
      comp=Z,56nm,1.6s
FFC                                MLR     MLR
      comp=Z,700nm,21.0s
CMAH  Djebel Manchou    94.32 313  P       P        09 59 38.2 +0.3
ORV   Oroville          94.44  44  P       P        09 59 37.2 -1.1
ORV   Oroville          94.44  44  P       P        09 59 37.2 -1.1
ORV                                pmax    pmax
      comp=Z,12nm,1.0s
ORV                                MLR     MLR
      comp=Z,400nm,19.0s
MSO   Missoula          94.44  35  P       P        09 59 38.0 -0.2
MSO                                IAMs_20 IAMs_20  10 48 38.1
      comp=Z,521nm,20.0s
ABSA  Djebel Ababsia    94.47 312  P       P        09 59 37.4 -1.2
VAL   Valentia          94.49 332  P       P        09 59 38.0 -0.2
WVOR  Wild Horse Val    94.54  40  IAmb    IAmb     09 59 41.1
      comp=Z,40nm,1.6s
MAHO  Mahon             94.58 317  P       P        09 59 39.1 +0.2
CASM  Ain Smara         95.15 313  P       P        09 59 41.5 -0.2
CTEI  Djebel Teioual    95.31 313  P       P        09 59 38.4 -4.1
DFRA  Djebel Bou Aff    95.41 313  P       P        09 59 43.1 +0.2
MPK   Martis Peak       95.52  43  IAmb    IAmb     09 59 45.3
      comp=Z,30nm,1.2s
PPT   Papeete           95.56 107  LR      LR       10 36 14.1
      comp=Z,487nm,20.5s,baz=271,slow=31
ETOS  Mallorca          95.57 317  P       P        09 59 42.5 -1.0
CKHR  Kef el Ahmar      95.95 313  P       P        09 59 38.1 -7.3
DLMT  Dillon            96.11  35  IAmb    IAmb     09 59 47.8
      comp=Z,27nm,1.1s
DLMT                               IAMs_20 IAMs_20  10 49 41.2
      comp=Z,562nm,19.0s
HLID  Hailey            96.28  37  P       P        09 59 47.5 +0.7
BOZ   Bozeman (W)       96.46  34  IAMs_20 IAMs_20  10 45 44.5
      comp=Z,660nm,20.0s
NVAR  Mina Array Bea    97.12  43  P       P        09 59 50.5 -0.3
NVAR  Mina Array Bea    97.12  43  P       P        09 59 51.0 +0.3
      comp=Z,2.2nm,0.7s,baz=299,slow=4.4,SNR=19
NVAR                               PP      PP       10 03 44.9 -1.3
      comp=Z,2.6nm,1.1s,baz=287,slow=7.4,SNR=5.5
NVAR                               LR      LR       10 40 47.7
      comp=Z,205nm,19.9s,baz=328,slow=34
      comp=Z,2.2nm,0.7s
YHB   Horse Butte       97.25  35  P       P        09 59 50.7 -0.6
ELK   Elko              97.58  40  LR      LR       10 46 47.6
      comp=Z,183nm,18.2s,baz=331,slow=37
DGMT  Dagmar            98.03  29  IAMs_20 IAMs_20  10 47 41.6
      comp=Z,473nm,20.0s
FXWY  Fox Creek         98.09  36  IAMs_20 IAMs_20  10 46 58.8
      comp=Z,586nm,21.0s
LOHW  Long Hollow       98.33  35  IAMs_20 IAMs_20  10 52 11.2
      comp=Z,464nm,19.0s
SNOW  Snow King Moun    98.35  36  IAMs_20 IAMs_20  10 47 07.9
      comp=Z,530nm,20.0s
LAO   LASA Array        98.40  31  IAMs_20 IAMs_20  10 49 23.7
      comp=Z,555nm,19.0s
LSZ   Lusaka            98.91 257  P       P        09 59 58.4 -0.6
LSZ   Lusaka            98.91 257  LR      LR       10 41 15.0
      comp=Z,981nm,21.7s,baz=82,slow=33
LSZ   Lusaka            98.91 257  P       P        09 59 58.6 -0.4
LSZ   Lusaka            98.91 257  P       P        09 59 58.4 -0.6
LSZ                                pmax    pmax
      comp=Z,62nm,1.1s
HWUT  Hardware Ranch    99.15  37  IAMs_20 IAMs_20  10 53 06.0
      comp=Z,615nm,18.0s
CCAC  Calif City Air    99.24  46  IAMs_20 IAMs_20  10 41 00.3
      comp=Z,503nm,21.0s
DUG   Dugway, Tooele    99.36  39  IAMs_20 IAMs_20  10 48 38.8
      comp=Z,503nm,18.0s
BW06  Boulder Array     99.47  36  IAMs_20 IAMs_20  10 49 28.3
      comp=Z,593nm,22.0s
PDAR  Pinedale Array    99.47  36  P       Pdif     10 00 00.5 -0.8
      comp=Z,0.3nm,0.4s,baz=320,slow=3.9,SNR=3.7
PDAR                               PP      PP       10 04 02.2 -1.7
      comp=Z,1.6nm,0.9s,baz=298,slow=3.2,SNR=7.0
PDAR                               LR      LR       10 47 34.7
      comp=Z,139nm,20.4s,baz=340,slow=37
      comp=Z,0.3nm,0.4s
ESDC  Sonseca Array     99.74 320  PP      PP       10 04 02.3 -3.6
      comp=Z,11nm,1.3s,baz=48,slow=6.5,SNR=6.6
ESDC                               LR      LR       10 50 21.6
      comp=Z,904nm,18.1s,baz=32,slow=38
PBRG  Braganca          99.91 323 ePP      PP       10 04 10.9 +3.8
MAW   Mawson            99.97 199  LR      LR       10 40 31.1
      comp=Z,117nm,21.2s,baz=56,slow=33
POGA  Pongola          100.11 245  IAMs_20 IAMs_20  10 37 07.6
      comp=Z,588nm,18.0s
MVO   Moncorvo         100.50 323 ePP      PP       10 04 15.5 +3.9
MVO                               eLQ      LQ       10 34 44.2
MVO                               eLR      LR       10 39 16.9
MVO                               i AMs_20          10 48 01.3
      comp=Z,2µm,18.0s
PGAV  Gavieira, Arco   100.63 324 eLR      LR       10 37 31.6
PGAV                              i AMs_20          10 48 58.0
      comp=Z,1µm,18.0s
PCAB  Cabril           100.67 324 ePdif    Pdif     10 00 03.0 -3.4
PCAB                              ePP      PP       10 03 55.7  -17
POLO  Lamas de Olo     100.78 324 ePP      PP       10 04 18.6 +4.8
E28A  Huff             101.01  28  IAMs_20 IAMs_20  10 48 45.4
      comp=Z,651nm,19.0s
K22A  Casper           101.15  34  IAMs_20 IAMs_20  10 48 00.6
      comp=Z,556nm,21.0s
PFO   Pinyon Flats O   101.19  46  IAMs_20 IAMs_20  10 48 45.1
      comp=Z,496nm,18.0s
PVIS  Viseu            101.29 323 ePP      PP       10 04 18.1 +0.6
MTE   Manteigas        101.31 323 ePdif    Pdif     10 00 04.0 -5.3
MTE                               ePP      PP       10 04 18.4 +0.7
MTE                               eLR      LR       10 37 50.0
MTE                               eLQ      LQ       10 37 50.8
MTE                               i AMs_20          10 48 24.8
      comp=Z,1µm,18.0s
AGMN  Agassiz Nation   101.62  25  IAMs_20 IAMs_20  10 51 00.3
      comp=Z,690nm,19.0s
PCBR  Castelo Branco   101.66 322 ePP      PP       10 04 25.0 +4.7
PMRV  Marv??o          101.89 322 ePP      PP       10 04 23.4 +1.4
PMRV                              eLQ      LQ       10 38 24.3
PMRV                              eLR      LR       10 43 15.4
PMRV                              i AMs_20          10 50 43.8
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	comp=Z,812nm,18.0s						
COI	Coimbra	101.92	323	*e*PP	PP	10 04 25.8	+3.5
PCAS	Casmilo, Conde	102.08	323	*e*PP	PP	10 04 25.9	+2.4
PSARD	Sardoal	102.20	323	*e*PP	PP	10 04 25.6	+1.1
PESTR	Estremoz	102.38	322	*e*PP	PP	10 04 27.6	+1.8
BLYC	Blythe	102.39	45	IAMs_20	IAMs_20	10 47 28.5	
	comp=Z,476nm,20.0s						
PBAR	Barrancos	102.53	321	*e*Pdif	Pdif	10 00 12.0	-2.7
PBAR				*e*PP	PP	10 04 29.1	+2.2
PMTG	Montargil	102.60	322	*e*PP	PP	10 04 29.6	+2.2
PSBE	So Bento	102.62	323	*e*PP	PP	10 04 30.3	+2.8
EVO	Evora	102.85	322	*e*PP	PP	10 04 32.3	+3.0
VNDA	Vanda	102.91	172	PP	PP	10 04 25.1	-4.6
	comp=Z,1.4nm,0.9s,baz=277,slow=17,SNR=3.0						
VNDA				PKKPbc	PKKPbc	10 16 13.6	-2.0
	comp=Z,3.9nm,1.2s,baz=206,slow=1.9,SNR=6.2						
TAM	Tamanrasset	103.08	302	IAMs_20	IAMs_20	10 53 25.3	
	comp=Z,537nm,19.0s						
PARRA	Arraiolos	103.24	323	*e*PP	PP	10 04 27.8	-4.4
LIS	Lisbon	103.37	323	*e*PP	PP	10 04 34.2	+1.1
LIS				IAMs_20	IAMs_20	10 45 06.3	
	comp=E,3µm,23.1s						
SUSD	Miller	103.44	29	IAMs_20	IAMs_20	10 52 19.8	
	comp=Z,584nm,20.0s						
MESJ	Messejana	103.44	321	*e*PP	PP	10 04 34.9	+1.2
MESJ				IAMs_20	IAMs_20	10 44 33.6	
	comp=N,2µm,16.6s						
MESJ	Messejana	103.44	321	*e*PP	PKiKP	10 04 38.3	+0.7
PVAQ	Vaqueiros	103.45	321	*e*PP	PP	10 04 35.2	+1.4
PVAQ				*e*LR	LR	10 44 21.5	
PVAQ				*i* AMs_20		10 46 55.4	
	comp=N,996nm,20.0s						
F33A	5 Mile Ranch,	103.45	26	IAMs_20	IAMs_20	10 55 09.0	
	comp=Z,608nm,19.0s						
PCVE	Castro Verde	103.48	321	*e*PP	PP	10 04 34.9	+0.8
TBO	Thunder Bay	103.61	21	IAMs_20	IAMs_20	10 55 34.7	
	comp=Z,637nm,19.0s						
ISCO	Idaho Springs	103.67	36	IAMs_20	IAMs_20	10 49 08.4	
	comp=Z,537nm,21.0s						
PBDV	Barranco-do-Ve	103.68	321	*e*PP	PKiKP	10 04 38.0	-0.1
MVCO	Mesa Verde	103.86	39	IAMs_20	IAMs_20	10 53 12.3	
	comp=Z,546nm,22.0s						
PTEO	Sao Teotonio	103.94	321	*e*PP	PKiKP	10 04 39.2	+0.7
MORF	Marmelete	104.06	321	*e*PP	PKiKP	10 04 39.5	+0.7
MORF				IAMs_20	IAMs_20	10 44 51.6	
	comp=E,3µm,24.9s						
MORF	Marmelete	104.06	321	*e*PP	PKiKP	10 04 39.8	+1.0
PFVI	Vila Bisbo	104.28	321	*e*PP	PP	10 04 42.0	+2.0
S22A	4UR Ranch, Cre	104.45	38	IAMs_20	IAMs_20	10 46 31.4	
	comp=Z,486nm,21.0s						
K30B	Basset	104.53	30	IAMs_20	IAMs_20	10 55 51.7	
	comp=Z,525nm,19.0s						
E38A	The Farm, Brul	104.64	23	IAMs_20	IAMs_20	10 48 00.8	
	comp=Z,629nm,20.0s						
ECSD	EROS Data Cent	105.02	28	IAMs_20	IAMs_20	10 56 42.7	
	comp=Z,642nm,20.0s						
SDCO	Great Sand Dun	105.19	37	IAMs_20	IAMs_20	10 50 15.0	
	comp=Z,555nm,21.0s						
SPMN	Marine on St.	105.34	24	IAMs_20	IAMs_20	10 50 48.8	
	comp=Z,506nm,20.0s						
I37A	Lemond, Waseca	106.12	26	IAMs_20	IAMs_20	10 49 49.6	
	comp=Z,737nm,21.0s						
BGNE	Belgrade	106.19	30	IAMs_20	IAMs_20	10 53 55.8	
	comp=Z,492nm,20.0s						
T25A	Trinidad	106.23	37	IAMs_20	IAMs_20	10 51 58.9	
	comp=Z,438nm,21.0s						
G40A	Rib Lake	106.27	23	IAMs_20	IAMs_20	10 57 05.2	
	comp=Z,579nm,18.0s						
L34A	Svendsen Farm,	106.55	29	IAMs_20	IAMs_20	10 52 49.0	
	comp=Z,584nm,20.0s						
F42A	Maple Grove Fa	106.56	21	IAMs_20	IAMs_20	10 58 08.8	
	comp=Z,618nm,18.0s						
ANMO	Albuquerque	106.62	40	IAMs_20	IAMs_20	10 58 12.0	
	comp=Z,506nm,18.0s						
ANMO	Albuquerque	106.62	40	IAMs_20	IAMs_20	10 58 12.0	
	comp=Z,505nm,18.0s						
ANMO	Albuquerque	106.62	40	IAMs_20	IAMs_20	10 58 12.0	
	comp=Z,505nm,18.0s						
Y22D	IRIS PASSCAL I	106.95	41	P	PKiKP	10 04 44.2	-0.2
	baz=314						
E46A	Sault Ste Mari	107.22	18	IAMs_20	IAMs_20	10 53 50.0	
	comp=Z,662nm,20.0s						
I40A	Norwalk	107.30	24	IAMs_20	IAMs_20	10 49 35.6	
	comp=Z,666nm,21.0s						
VLDQ	Val d'Or	107.33	13	IAMs_20	IAMs_20	10 55 25.0	
	comp=Z,645nm,18.0s						
CBKS	Cedar Bluff	107.45	33	IAMs_20	IAMs_20	10 58 03.1	
	comp=Z,530nm,18.0s						
N35A	Tabor	107.77	29	IAMs_20	IAMs_20	10 53 55.4	
	comp=Z,578nm,20.0s						
H43A	Windswept, Lux	107.81	22	IAMs_20	IAMs_20	10 53 23.0	
	comp=Z,631nm,19.0s						
I42A	Draeger Farm,	107.92	23	IAMs_20	IAMs_20	10 56 26.7	
	comp=Z,658nm,18.0s						
SCIA	State Center	107.95	27	IAMs_20	IAMs_20	10 58 42.1	
	comp=Z,533nm,18.0s						
JFWS	Jewell Farm	108.28	24	IAMs_20	IAMs_20	10 52 50.4	
	comp=Z,574nm,19.0s						
SYO	Syowa Base	108.30	202	⇓*e*pPdiff	pPdif	10 00 45.4	+3.3
SYO	Syowa Base	108.30	202	⇓*e*PKiKP	PKiKP	10 04 48.8	+3.3
GLMI	Grayling	108.52	19	IAMs_20	IAMs_20	10 51 46.5	
	comp=Z,800nm,21.0s						
LDAQ	Lac Daran	108.58	9	IAMs_20	IAMs_20	10 52 55.7	
	comp=Z,676nm,21.0s						
L40A	Anamosa	108.63	25	IAMs_20	IAMs_20	10 54 09.6	
	comp=Z,643nm,19.0s						
I45A	Fountain	108.71	21	IAMs_20	IAMs_20	10 59 52.5	
	comp=Z,584nm,19.0s						
KSU1	Kansas State U	108.74	31	IAMs_20	IAMs_20	10 55 52.3	
	comp=Z,519nm,20.0s						
EPT	El Paso	108.78	42	IAMs_20	IAMs_20	10 46 43.6	
	comp=Z,375nm,18.0s						
N38A	Joes South For	108.87	27	IAMs_20	IAMs_20	10 59 07.4	
	comp=Z,604nm,18.0s						
K43A	Burlington	109.16	23	IAMs_20	IAMs_20	10 57 04.6	
	comp=Z,686nm,19.0s						
L42A	Oliver, Polo	109.28	24	IAMs_20	IAMs_20	10 55 41.7	
	comp=Z,459nm,20.0s						
AMTX	Amarillo	109.39	37	IAMs_20	IAMs_20	10 52 32.0	
	comp=Z,394nm,19.0s						
MSTX	Muleshoe	109.45	38	IAMs_20	IAMs_20	10 53 43.7	
	comp=Z,573nm,20.0s						
P38A	Dawn	109.71	28	IAMs_20	IAMs_20	10 53 08.7	
	comp=Z,572nm,20.0s						
TRQ	Mont Tremblant	109.72	12	IAMs_20	IAMs_20	10 55 32.9	
	comp=Z,667nm,20.0s						
L44A	Lake County Fo	109.77	23	IAMs_20	IAMs_20	10 57 32.8	
	comp=Z,639nm,19.0s						
N41A	Harden Midland	109.92	26	IAMs_20	IAMs_20	10 59 43.2	
	comp=Z,520nm,18.0s						
HQIL	Hanson Quary C	110.13	23	IAMs_20	IAMs_20	10 57 42.3	
	comp=Z,551nm,18.0s						
M44A	Midewin, Midew	110.42	23	IAMs_20	IAMs_20	10 57 54.0	
	comp=Z,603nm,20.0s						
P40A	Paris	110.42	27	IAMs_20	IAMs_20	10 56 13.4	
	comp=Z,689nm,20.0s						
L46A	Eue Claire	110.49	22	IAMs_20	IAMs_20	10 52 19.6	
	comp=Z,594nm,22.0s						
T35A	Sooner Cattle	110.52	32	IAMs_20	IAMs_20	10 50 50.4	
	comp=Z,482nm,22.0s						
HDIL	Hopedale	110.67	25	IAMs_20	IAMs_20	10 53 23.8	
	comp=Z,736nm,20.0s						
OK029	Liberty Lake	110.93	33	IAMs_20	IAMs_20	10 54 57.5	
	comp=Z,547nm,20.0s						
K50A	Casco	110.98	19	IAMs_20	IAMs_20	10 56 05.5	
	comp=Z,672nm,20.0s						
WMOK	Wichita Mounta	111.06	35	IAMs_20	IAMs_20	11 00 34.2	
	comp=Z,519nm,18.0s						
OK052	Battle Ridge R	111.11	33	IAMs_20	IAMs_20	10 58 58.0	
	comp=Z,550nm,18.0s						
TORD	Torodi Ar. Bea	111.19	295	PP	PP	10 05 25.9	-5.6
	comp=Z,1.5nm,0.4s,baz=39,slow=9.3,SNR=4.3						
P43A	Skaggs, Pawnee	111.36	25	IAMs_20	IAMs_20	10 53 49.1	
	comp=Z,753nm,21.0s						
PECO	Prince Edward	111.39	14	IAMs_20	IAMs_20	10 51 04.2	
	comp=Z,786nm,22.0s						
S39A	Bolivar	111.39	29	IAMs_20	IAMs_20	11 01 10.4	
	comp=Z,564nm,19.0s						
SFIN	Lafayette	111.65	23	IAMs_20	IAMs_20	10 59 21.3	
	comp=Z,680nm,19.0s						
TUL3	Leonard	111.67	32	IAMs_20	IAMs_20	10 54 35.9	
	comp=Z,451nm,19.0s						
N47A	Urbana	111.70	22	IAMs_20	IAMs_20	10 54 30.7	
	comp=Z,721nm,21.0s						
MEDO	Medina	111.77	16	IAMs_20	IAMs_20	10 56 01.3	
	comp=Z,753nm,21.0s						
G65A	Princeton	111.77	7	IAMs_20	IAMs_20	11 00 30.8	
	comp=Z,658nm,19.0s						
J55A	Hilton	111.83	15	IAMs_20	IAMs_20	10 55 56.6	
	comp=Z,568nm,20.0s						
VT1	Waterbury	111.87	11	IAMs_20	IAMs_20	10 53 10.1	
	comp=Z,718nm,21.0s						
U38A	Gravette	111.92	31	IAMs_20	IAMs_20	10 56 17.4	
	comp=Z,530nm,20.0s						
SLM	Saint Louis	111.93	26	IAMs_20	IAMs_20	10 57 41.4	
	comp=Z,524nm,20.0s						
CCM	Cathedral Cave	112.00	28	IAMs_20	IAMs_20	10 57 11.3	
	comp=Z,552nm,19.0s						
LBNH	Lisbon	112.10	10	IAMs_20	IAMs_20	10 55 29.9	
	comp=Z,582nm,20.0s						
M50A	Fremont	112.11	20	IAMs_20	IAMs_20	10 53 58.5	
	comp=Z,540nm,20.0s						
J57A	Williamstown	112.11	14	IAMs_20	IAMs_20	10 55 29.0	
	comp=Z,622nm,19.0s						
PMOZ	Porto Moniz, M	112.13	323	*e*LR	LR	10 42 55.5	
PMOZ				*i* AMs_20		10 49 30.1	
	comp=Z,730nm,20.0s						
N49A	Columbus Grove	112.17	21	IAMs_20	IAMs_20	10 54 06.1	
	comp=Z,683nm,20.0s						
ABTX	Abilene, Hawle	112.20	37	IAMs_20	IAMs_20	10 57 49.3	
	comp=Z,569nm,19.0s						
TXAR	Lajitas Array	112.23	42	PKiKP	PKiKP	10 04 54.0	-0.3
	comp=Z,2.1nm,0.8s,baz=272,slow=0.9,SNR=14						
TXAR				PP	PP	10 05 36.9	-1.4
	comp=Z,4.1nm,1.1s,baz=298,slow=5.3,SNR=6.1						
TXAR				PKKPbc	PKKPbc	10 15 42.6	-2.5
	comp=Z,0.7nm,0.8s,baz=152,slow=5.7,SNR=4.1						
TXAR				PKKPab	PKKPab	10 15 53.4	-2.3
	comp=Z,0.4nm,0.7s,baz=144,slow=8.7,SNR=4.3						
MGMO	Mountain Grove	112.31	29	IAMs_20	IAMs_20	10 57 36.6	
	comp=Z,558nm,20.0s						
MMNY	Mt. Morris Dam	112.31	15	IAMs_20	IAMs_20	10 56 03.6	
	comp=Z,642nm,20.0s						
J59A	Piesco	112.38	13	IAMs_20	IAMs_20	10 54 22.9	
	comp=Z,639nm,19.0s						
FVM	French Village	112.41	27	IAMs_20	IAMs_20	10 53 26.1	
	comp=Z,573nm,22.0s						
WVNY	West Valley, N	112.44	16	IAMs_20	IAMs_20	10 58 51.8	
	comp=Z,612nm,20.0s						
M52A	Chesterland	112.49	19	IAMs_20	IAMs_20	10 59 57.3	
	comp=Z,610nm,19.0s						
I62A	Tamworth	112.56	10	IAMs_20	IAMs_20	10 52 58.6	
	comp=Z,637nm,20.0s						
HNH	Hanover	112.56	11	IAMs_20	IAMs_20	10 59 17.8	
	comp=Z,544nm,19.0s						
QSPA	South Pole Qui	112.63	180	PKiKP	PKiKP	10 04 52.5	-1.3
	comp=Z,6.2nm,1.0s,baz=323,slow=1.4,SNR=12						
QSPA				PKKPbc	PKKPbc	10 15 41.8	-3.5
	comp=Z,2.3nm,1.0s,baz=195,slow=1.1,SNR=9.6						
K57A	Scipio Center	112.64	14	IAMs_20	IAMs_20	10 55 11.1	
	comp=Z,725nm,21.0s						
OLIL	Olney	112.70	25	IAMs_20	IAMs_20	10 52 43.4	
	comp=Z,607nm,22.0s						
O49A	Covington	112.78	21	IAMs_20	IAMs_20	10 54 26.3	
	comp=Z,709nm,21.0s						
J61A	Chester	112.86	11	IAMs_20	IAMs_20	10 54 12.7	
	comp=Z,672nm,21.0s						
BLO	Bloomington	112.92	23	IAMs_20	IAMs_20	10 59 32.9	
	comp=Z,511nm,20.0s						
T42A	Van Buren	112.93	28	IAMs_20	IAMs_20	10 54 55.6	
	comp=Z,431nm,20.0s						
Z35A	Perchaven, San	112.95	35	IAMs_20	IAMs_20	10 57 59.0	
	comp=Z,476nm,20.0s						
L56A	Greenwood	112.96	15	IAMs_20	IAMs_20	10 56 33.5	
	comp=Z,664nm,22.0s						
P48A	Milroy	113.06	23	IAMs_20	IAMs_20	10 56 32.6	
	comp=Z,532nm,20.0s						
SIUC	Southern Illin	113.14	26	IAMs_20	IAMs_20	10 54 59.0	
	comp=Z,568nm,20.0s						
S44A	Carbondale	113.14	26	IAMs_20	IAMs_20	10 55 00.1	
	comp=Z,530nm,20.0s						
FW07	Weatherford	113.16	36	IAMs_20	IAMs_20	10 59 35.4	
	comp=Z,512nm,19.0s						
ACSO	Alum Creek Sta	113.19	20	IAMs_20	IAMs_20	11 01 07.9	
	comp=Z,565nm,18.0s						
TRY	Troy	113.25	12	IAMs_20	IAMs_20	10 51 34.0	
	comp=Z,726nm,22.0s						
CGM3	Cape Girardeau	113.31	27	IAMs_20	IAMs_20	10 55 33.6	
	comp=Z,594nm,20.0s						
N53A	Lisbon	113.32	18	IAMs_20	IAMs_20	10 59 29.2	
	comp=Z,616nm,20.0s						
PBMO	Poplar Bluff	113.42	28	IAMs_20	IAMs_20	10 58 02.7	
	comp=Z,641nm,20.0s						
K62A	Royalston	113.58	11	IAMs_20	IAMs_20	10 54 31.7	
	comp=Z,613nm,21.0s						
O52A	Adamsville	113.65	19	IAMs_20	IAMs_20	11 00 48.2	
	comp=Z,584nm,18.0s						
LCAR	Lake Charles	113.70	29	IAMs_20	IAMs_20	10 58 23.2	
	comp=Z,575nm,19.0s						
L61B	Northampton	113.71	12	IAMs_20	IAMs_20	10 59 45.1	
	comp=Z,636nm,18.0s						
FW14	Alvarado	113.71	35	IAMs_20	IAMs_20	10 58 43.0	
	comp=Z,622nm,18.0s						
O53A	New Philadelph	113.72	19	IAMs_20	IAMs_20	10 55 44.9	
	comp=Z,701nm,20.0s						
WCI	Wyandotte Cave	113.83	24	IAMs_20	IAMs_20	11 00 11.2	
	comp=Z,499nm,21.0s						
P51A	Williamsport	113.84	21	IAMs_20	IAMs_20	10 55 16.2	
	comp=Z,640nm,20.0s						
MIAR	Mount Ida	113.84	31	IAMs_20	IAMs_20	11 00 22.1	
	comp=Z,457nm,21.0s						
WHTX	Lake Whitney,	113.88	36	IAMs_20	IAMs_20	11 00 13.8	
	comp=Z,507nm,20.0s						
T45A	Paducah	113.97	26	IAMs_20	IAMs_20	10 56 46.0	
	comp=Z,476nm,20.0s						
P52A	Corning	114.00	20	IAMs_20	IAMs_20	11 00 37.4	
	comp=Z,603nm,18.0s						
HICK	Hickman	114.14	27	IAMs_20	IAMs_20	10 57 09.4	
	comp=Z,539nm,19.0s						
Z38A	Mt. Pleasant	114.18	33	IAMs_20	IAMs_20	11 01 20.3	
	comp=Z,573nm,20.0s						
R49A	Shelbyville	114.19	23	IAMs_20	IAMs_20	10 54 48.5	
	comp=Z,634nm,21.0s						
PEBM	Pemiscott Bayo	114.23	28	IAMs_20	IAMs_20	10 58 06.1	
	comp=Z,599nm,19.0s						
UALR	University of	114.24	30	IAMs_20	IAMs_20	11 02 45.5	
	comp=Z,647nm,19.0s						
X40A	Basin Creek Fa	114.25	31	IAMs_20	IAMs_20	10 57 13.7	
	comp=Z,476nm,20.0s						
GNAR	Gosnell	114.29	28	IAMs_20	IAMs_20	10 58 09.6	
	comp=Z,537nm,19.0s						
GLAT	Glass	114.34	27	IAMs_20	IAMs_20	10 56 03.9	
	comp=Z,700nm,21.0s						
LNXT	Lenox	114.40	27	IAMs_20	IAMs_20	10 57 50.5	
	comp=Z,557nm,19.0s						
UCCT	U. Connecticut	114.42	11	IAMs_20	IAMs_20	10 55 08.1	
	comp=Z,569nm,20.0s						
UTMT	University of	114.46	27	IAMs_20	IAMs_20	11 02 20.8	
	comp=Z,519nm,18.0s						
R50A	Paris	114.49	22	IAMs_20	IAMs_20	10 53 01.6	
	comp=Z,670nm,22.0s						
Q52A	Bidwell	114.57	20	IAMs_20	IAMs_20	11 02 05.5	
	comp=Z,563nm,19.0s						
T47A	Sharon Grove	114.61	25	IAMs_20	IAMs_20	10 57 51.8	
	comp=Z,471nm,20.0s						
HALT	Halls	114.62	27	IAMs_20	IAMs_20	10 58 48.5	
	comp=Z,474nm,19.0s						
TRNY	Table Rock, Ra	114.66	13	IAMs_20	IAMs_20	10 59 41.4	
	comp=Z,632nm,20.0s						
WLAR	White Oak Lake	114.76	32	IAMs_20	IAMs_20	10 59 12.5	
	comp=Z,472nm,19.0s						
M63A	Gales Ferry	114.84	11	IAMs_20	IAMs_20	11 00 21.0	
	comp=Z,633nm,19.0s						
PAL	Palisades	114.86	13	IAMs_20	IAMs_20	10 58 24.7	
	comp=Z,617nm,18.0s						
N62A	Caumsett State	115.02	13	IAMs_20	IAMs_20	10 58 15.9	
	comp=Z,584nm,20.0s						
MET	Memphis--Engin	115.04	28	IAMs_20	IAMs_20	10 58 27.5	
	comp=Z,578nm,19.0s						
WVT	Waverly	115.06	26	IAMs_20	IAMs_20	11 04 04.0	
	comp=Z,539nm,19.0s						
Z41A	Richland Creek	115.26	32	IAMs_20	IAMs_20	10 55 37.8	
	comp=Z,476nm,20.0s						
S51A	Beattyville	115.33	22	IAMs_20	IAMs_20	10 53 38.6	
	comp=Z,704nm,22.0s						
Q56A	Snyder Ridge,	115.43	18	IAMs_20	IAMs_20	10 57 56.0	
	comp=Z,668nm,22.0s						
T50A	Nancy	115.44	23	IAMs_20	IAMs_20	10 55 26.7	
	comp=Z,575nm,21.0s						
WUPA	West Chester U	115.51	15	IAMs_20	IAMs_20	10 52 18.1	
	comp=Z,442nm,22.0s						
U49A	Red Boiling Sp	115.53	24	IAMs_20	IAMs_20	10 59 19.3	
	comp=Z,440nm,19.0s						
NATX	Nacogdoches	115.54	34	IAMs_20	IAMs_20	11 02 18.3	
	comp=Z,481nm,21.0s						
CLTN	Cedars of Leba	115.69	25	IAMs_20	IAMs_20	11 02 46.5	
	comp=Z,322nm,18.0s						
SDMD	Soldier’s Deli	115.71	16	IAMs_20	IAMs_20	10 53 27.3	
	comp=Z,475nm,22.0s						
V48A	Smith Brothers	115.81	26	IAMs_20	IAMs_20	10 56 12.6	
	comp=Z,506nm,21.0s						
R55A	Marlinton	115.86	19	IAMs_20	IAMs_20	10 55 41.5	
	comp=Z,666nm,20.0s						
S54A	Dingess, Beckl	115.94	20	IAMs_20	IAMs_20	10 55 16.6	
	comp=Z,425nm,20.0s						
PLAL	Pickwick Lake	115.95	27	IAMs_20	IAMs_20	10 58 09.5	
	comp=Z,511nm,20.0s						
HKT	Hockley	116.34	36	IAMs_20	IAMs_20	10 59 50.3	
	comp=Z,519nm,18.0s						
143A	Socs Landing,	116.39	31	IAMs_20	IAMs_20	11 00 33.6	
	comp=Z,469nm,19.0s						
ACRG	Accra	116.55	289	IAMs_20	IAMs_20	11 04 25.7	
	comp=Z,432nm,18.0s						
SWET	Sewanee	116.61	25	IAMs_20	IAMs_20	10 57 57.0	
	comp=Z,419nm,20.0s						
X48A	Hartselle	116.83	26	IAMs_20	IAMs_20	10 55 03.9	
	comp=Z,519nm,22.0s						
W50A	Signal Mountai	116.87	25	IAMs_20	IAMs_20	11 02 18.7	
	comp=Z,634nm,19.0s						
U54A	Nelsons Funny	116.94	21	IAMs_20	IAMs_20	10 56 40.2	
	comp=Z,534nm,22.0s						
441A	DeRidder	117.10	34	IAMs_20	IAMs_20	11 01 03.6	
	comp=Z,564nm,19.0s						
VBMS	Vicksburg	117.21	30	IAMs_20	IAMs_20	11 00 53.1	
	comp=Z,645nm,20.0s						
FPAL	Fort Paine	117.33	25	IAMs_20	IAMs_20	11 02 38.0	
	comp=Z,371nm,18.0s						
Z47A	Carrollton	117.48	28	IAMs_20	IAMs_20	10 57 51.1	
	comp=Z,491nm,22.0s						
W52A	Murphy	117.48	24	IAMs_20	IAMs_20	11 03 11.9	
	comp=Z,568nm,19.0s						
X51A	Calhoun	117.60	25	IAMs_20	IAMs_20	10 57 25.1	
	comp=Z,463nm,20.0s						
Y49A	Blount Mountai	117.61	26	IAMs_20	IAMs_20	10 57 33.4	
	comp=Z,622nm,22.0s						
V55A	Taylorsville	117.75	21	IAMs_20	IAMs_20	11 05 54.6	
	comp=Z,619nm,20.0s						
T59A	Double "B" Far	117.82	17	IAMs_20	IAMs_20	10 55 44.2	
	comp=Z,669nm,22.0s						
NVL	N'lazarevskaya	117.89	201	*e*PKIKP	PKiKP	10 05 06.8	+3.1
NVL				pmax	pmax		
	comp=Z,11nm,0.9s						
LRAL	Lakeview Retre	118.08	27	IAMs_20	IAMs_20	11 00 52.8	
	comp=Z,560nm,19.0s						
KMSC	Kings Mountain	118.35	21	IAMs_20	IAMs_20	10 59 38.7	
	comp=Z,559nm,20.0s						
346A	Big Creek Wild	118.39	30	IAMs_20	IAMs_20	11 00 53.5	
	comp=Z,507nm,19.0s						
Y52A	Lilburn	118.53	24	IAMs_20	IAMs_20	10 57 13.6	
	comp=Z,647nm,21.0s						
GOGA	Godfrey	119.16	24	IAMs_20	IAMs_20	10 59 00.1	
	comp=Z,512nm,20.0s						
JSC	Jenkinsville	119.16	22	IAMs_20	IAMs_20	11 04 44.1	
	comp=Z,451nm,20.0s						
250A	Grady	119.30	27	IAMs_20	IAMs_20	11 02 24.4	
	comp=Z,466nm,20.0s						
152A	Waverly Hall	119.33	25	IAMs_20	IAMs_20	11 03 56.0	
	comp=Z,569nm,18.0s						
BRAL	Brewton	119.66	28	IAMs_20	IAMs_20	10 57 26.9	
	comp=Z,593nm,22.0s						
DBIC	Dimbokro	120.04	293	PKP	PKPdf	10 05 09.8	+0.2
	comp=Z,3.8nm,0.4s,baz=92,slow=1.7,SNR=14						
DBIC				PP	PP	10 06 34.1	+0.3
	comp=Z,7.5nm,0.9s,baz=70,slow=9.0,SNR=3.5						
352A	Blakely	120.29	26	IAMs_20	IAMs_20	10 57 10.4	
	comp=Z,586nm,22.0s						
TROLL	Troll, Antarti	120.42	198	⇑PKiKP	PKPdf	10 05 08.3	-0.4
	comp=Z,228nm,0.5s						
TIGA	Tifton	120.86	25	IAMs_20	IAMs_20	11 02 24.5	
	comp=Z,591nm,20.0s						
SNAA	Sanae	122.10	198	⇑PKiKP	PKPdf	10 05 10.8	-1.1
	comp=Z,37nm,0.6s						
SNAA	Sanae	122.10	198	PKP	PKPdf	10 05 10.4	-1.5
	comp=Z,2.6nm,0.9s,baz=182,slow=4.7,SNR=4.1						
SNAA				PP	PP	10 06 46.6	-0.2
	comp=Z,5.0nm,1.1s,baz=97,slow=12,SNR=3.5						
VNA2	Neumayer--Watz	123.74	198	⇑PKiKP	PKPdf	10 05 14.5	-0.5
	comp=Z,16nm,0.7s,baz=106,slow=1.6						
VNA1	Neumayer--Stat	124.13	198	⇑PKiKP	PKPdf	10 05 15.3	-0.4
	comp=Z,19nm,0.9s						
VNA3	Neumayer Olymp	124.21	197	⇑PKiKP	PKPdf	10 05 15.0	-0.9
	comp=Z,12nm,0.9s						
061Z	Ochoppi	126.88	26	IAMs_20	IAMs_20	11 03 14.9	
	comp=Z,543nm,21.0s						
TEIG	Tepich	128.19	37	IAMs_20	IAMs_20	11 03 10.6	
	comp=Z,428nm,18.0s						
SOR	Soroa	128.69	30	IAMs_20	IAMs_20	11 05 32.1	
	comp=Z,367nm,19.0s						
NMDO	Nuevo Mundo	133.92	22	IAMs_20	IAMs_20	11 07 38.9	
	comp=Z,563nm,20.0s						
CHIV	Chivirico	133.94	24	IAMs_20	IAMs_20	11 04 52.7	
	comp=Z,537nm,22.0s						
HERN	Volcan Telica	135.06	41	IAMs_20	IAMs_20	11 05 42.4	
	comp=Z,592nm,20.0s						
SDDR	Presa de Saban	136.56	18	IAMs_20	IAMs_20	11 09 12.6	
	comp=Z,453nm,20.0s						
ACON	Acoyapa	136.56	40	IAMs_20	IAMs_20	11 11 15.9	
	comp=Z,411nm,18.0s						
GCPR	Guaynabo City	138.41	11	IAMs_20	IAMs_20	11 07 43.4	
	comp=Z,272nm,21.0s						
CRPR	Cabo Rojo, PR	138.51	13	IAMs_20	IAMs_20	11 08 51.1	
	comp=Z,333nm,20.0s						
CELP	Cerrillos	138.55	12	IAMs_20	IAMs_20	11 16 49.1	
	comp=Z,333nm,18.0s						
OBIP	Obispado Ponce	138.58	12	IAMs_20	IAMs_20	11 16 48.7	
	comp=Z,443nm,20.0s						
SJG	San Juan	138.59	11	IAMs_20	IAMs_20	11 07 45.2	
	comp=Z,381nm,22.0s						
HUMP	Col San Antoni	138.62	11		PKPdf	10 05 44.5	-0.2
HUMP				IAMs_20	IAMs_20	11 15 01.8	
	comp=Z,282nm,20.0s						
PDPR	Patillas Dam,	138.71	11	IAMs_20	IAMs_20	11 16 24.2	
	comp=Z,335nm,20.0s						
HDC	Heredia	138.75	40	IAMs_20	IAMs_20	11 10 40.2	
	comp=Z,474nm,21.0s						
APAC	Apartado, Choc	144.62	32	PKP	PKPab	10 05 54.5	+0.5
GRGR	Grenville	145.10	6	PKP	PKPbc	10 05 54.7	-1.0
UREC	San Jos de Ur	145.26	31	PKP	PKPbc	10 05 55.7	-0.6
DBBC	Dabeiba	145.56	33	PKP	PKPdf	10 05 57.7	+0.4
ZARC	Zaragoza, Cauc	145.80	30	PKP	PKPdf	10 05 57.0	-0.6
SDV	Santo Domingo	146.26	22		PKPdf	10 05 58.3	-0.2
SDV	Santo Domingo	146.26	22	*e*P	PKPdf	10 05 58.2	-0.4
SDV	Santo Domingo	146.26	22	PKP	PKPdf	10 05 58.4	-0.2
CBOC	Ciudad Bolivar	146.65	33	PKP	PKPdf	10 05 59.6	+0.3
PTBC	PUERTO BERRIO,	146.82	30	PKP	PKPdf	10 05 59.4	+0.1
PAMC	Pamplona, Colo	146.88	27	PKP	PKPdf	10 06 01.8	+1.8
BAUV	El Baul	147.02	18	PKPbc	PKPdf	10 06 00.7	+1.1
MG01	Puerto William	147.20	170		PKPbc	10 06 01.4	+0.5
PLMC	San Jos del P	147.33	35	PKP	PKPdf	10 06 00.8	+0.5
BARC	Barichara	147.35	28	PKP	PKPdf	10 06 01.7	+1.2
GUY2C	Guyana, Caldas	147.53	33	PKP	PKPdf	10 06 01.5	+0.4
MG03	Isla Dawson	147.70	167	PKPbc	PKPbc	10 06 02.2	-0.1
SPBC	San Pablo de B	147.78	30	PKP	PKPdf	10 06 02.1	+1.1
RUSC	La Rusia	148.02	29	PKP	PKPdf	10 06 03.5	+1.6
YOTC	Yotoco, Valle	148.07	36	PKP	PKPdf	10 06 02.1	+0.5
TAMC	Tame, Arauca	148.07	26	PKP	PKPdf	10 06 03.5	+2.0
ROSC	El Rosal	148.37	32		PKPdf	10 06 03.2	+0.8
ROSC	El Rosal	148.37	32	PKPbc	PKPdf	10 06 02.8	+0.4
	comp=Z,18nm,0.6s,baz=74,slow=6.1,SNR=18						
ROSC	El Rosal	148.37	32	PKP	PKPdf	10 06 04.6	+2.2
JAMC	Jamundi, Valle	148.53	37	PKP	PKPdf	10 06 02.1	-0.3
ORTC	Ortega, Tolima	148.71	34	PKP	PKPdf	10 06 02.5	0.0
POPC	Popayan, Colom	149.08	38	PKP	PKPdf	10 06 03.5	+0.1
BBAC	Balboa, Cauca	149.18	39	PKP	PKPdf	10 06 03.7	+0.2
MG05	Puerto Natales	149.20	163		PKPbc	10 06 06.2	0.0
VILC	Villavicencio,	149.31	31	PKP	PKPdf	10 06 04.3	+0.7
GO09	Cerro Castillo	149.61	163		PKPbc	10 06 07.5	+0.2
PAC1	Pacto, Paraso	149.62	44	PKP	PKPdf	10 06 04.2	+0.1
CRUC	La Cruz	149.72	39	PKP	PKPdf	10 06 06.2	+1.7
OTAV	Otavalo	149.85	43	*e*P	PKPdf	10 06 04.7	-0.1
OTAV	Otavalo	149.85	43	PKP	PKPdf	10 06 05.3	+0.4
GARC	Garzon, Huila	150.03	36	PKP	PKPdf	10 06 05.4	+0.5
BONI	La Bonita	150.26	41	PKP	PKPdf	10 06 06.0	+0.7
SLOR	San Lorenzo -	150.56	44		PKPdf	10 06 07.7	+1.7
PIAT	Ana Tenorio	150.92	44	PKP	PKPdf	10 06 07.4	+1.0
MACC	Macarena, Meta	150.93	33	PKP	PKPdf	10 06 05.8	-0.2
COHC	Cochancay	151.34	48	PKP	PKPdf	10 06 06.5	-0.1
PTLC	Puerto Leguiza	152.09	37	PKP	PKPdf	10 06 09.1	+1.4
MCRA	Macar, Loja	152.19	52	PKP	PKPdf	10 06 07.2	-0.7
NBCL	Cascavel-CE	153.19	311	*e*P	PKPdf	10 06 08.4	-0.9
BOAV	Boa Vista	154.83	5	*e*P	PKPdf	10 06 10.7	-1.0

NBPB	**Pedra_Branca-C**	155.03	311	*e*P	PKPdf	10 06 11.8	-0.1
SGC2	**Sao Gabriel da**	155.94	22	PKP	PKPdf	10 06 12.6	-0.6
TBTG	**Tabatinga, AM**	158.35	33	*e*P	PKPdf	10 06 15.5	-0.7
TBTG	**Tabatinga, AM**	158.35	33	PKP	PKPdf	10 06 15.8	-0.4
PLCA	**Paso Flores**	159.40	153		PKPab	10 07 54.7	+0.4
PLCA	**Paso Flores**	159.40	153	PKP	PKPdf	10 06 15.9	-0.9
	comp=Z,1.9nm,0.9s,baz=222,slow=12,SNR=2.8						
PLCA				PKPab	PKPab	10 06 53.9	-0.4
	comp=Z,3.5nm,0.8s,baz=252,slow=5.8,SNR=5.5						
CZSB	**Cruzeiro do Su**	159.60	45		PKPdf	10 06 17.4	-0.2
CZSB	**Cruzeiro do Su**	159.60	45	*e*P	PKPdf	10 06 17.1	-0.5
CZSB	**Cruzeiro do Su**	159.60	45	PKP	PKPdf	10 06 17.5	-0.2
TEFE	**Tefe**	159.84	18	*e*P	PKPdf	10 06 17.1	-0.8
MACA	**Manacapuru-AM**	160.31	7	*e*P	PKPdf	10 06 17.8	-0.7
ITTB	**Itaituba**	161.47	352	*e*P	PKPdf	10 06 18.5	-1.2
GUA01	**Guaratinga, BA**	161.47	286	*e*P	PKPdf	10 06 19.1	-0.5
PRPB	**Parauapebas**	161.50	332	*e*P	PKPdf	10 06 19.1	-0.6
SMTB	**Santa Maria do**	162.69	322	*e*P	PKPdf	10 06 20.8	-0.2
SDBA	**SAO DESIDERIO**	163.53	307	*e*P	PKPdf	10 06 21.0	-0.8
BO02	**Sierra Bellavi**	163.87	140		PKPab	10 07 14.5	+0.4
NPGB	**Novo Progresso**	164.04	349	*e*P	PKPdf	10 06 21.9	-0.4
TRQA	**Tornquist**	164.51	169		PKPab	10 07 15.9	-0.7
TRQA	**Tornquist**	164.51	169	PKP2	PKPab	10 07 15.9	-0.7
JANB	**Januaria**	164.64	298	*e*P	PKPdf	10 06 22.1	-0.6
PEL	**Peldehue**	165.04	136		PKPab	10 07 20.4	+1.1
PEL	**Peldehue**	165.04	136	PKP2	PKPab	10 07 20.4	+1.1
SAML	**Samuel**	165.43	19		PKPab	10 07 19.8	-1.4
SAML	**Samuel**	165.43	19	PKP2	PKPab	10 07 19.8	-1.4
SAML	**Samuel**	165.43	19	*e*P	PKPdf	10 06 22.5	-0.9
DIAM	**Diamantina, MG**	165.53	286	*e*P	PKPdf	10 06 22.6	-1.0
SNDB	**Serra Nova Dou**	167.28	327	*e*P	PKPdf	10 06 24.1	-0.7
CFA	**Coronel Fontan**	167.61	137	PKP	PKPdf	10 06 22.6	-2.1
	comp=Z,3.2nm,1.1s,baz=272,slow=2.4,SNR=7.1						
BDFB	**Brasilia**	167.90	304		PKPdf	10 06 25.0	-0.4
BDFB	**Brasilia**	167.90	304	PKP	PKPdf	10 06 24.5	-0.9
	comp=Z,9.1nm,0.9s,baz=108,slow=2.9,SNR=9.5						
BDFB				PKPab	PKPab	10 07 32.4	0.0
	comp=Z,48nm,1.0s,baz=43,slow=7.6,SNR=26						
BDFB	**Brasilia**	167.90	304	PKIKP	PKPdf	10 06 25.0	-0.4
LPAZ	**La Paz**	168.71	56	PKP	PKPdf	10 06 26.7	+0.1
	comp=Z,22nm,1.1s,baz=20,slow=2.2,SNR=36						
LPAZ				PKPab	PKPab	10 07 35.0	-1.7
	comp=Z,7.4nm,0.9s,baz=324,slow=2.5,SNR=9.2						
LPAZ	**La Paz**	168.71	56	*e*P	PKPdf	10 06 26.3	-0.2
PDRB	**Porto dos Gac**	168.73	352	*e*P	PKPdf	10 06 24.4	-1.4
VILB	**Vilhena**	170.01	10	*e*P	PKPdf	10 06 27.2	+0.6
PLTB	**Pedras Altas**	170.16	204		PKPdf	10 06 26.2	0.0
PLTB	**Pedras Altas**	170.16	204	*e*P	PKPdf	10 06 26.0	-0.2
ARAG	**Araguaiana, MT**	170.60	318	*e*P	PKPdf	10 06 26.9	+0.1
CPSB	**Cacapava Do Su**	171.28	209	*e*P	PKPdf	10 06 26.6	-0.2
PTLB	**Pontes e Lacer**	172.61	6	*e*P	PKPdf	10 06 27.8	-0.1
SALV	**Santo Antonio**	172.66	340	*e*P	PKPdf	10 06 27.4	-0.4
SIV	**San Ignacio**	172.72	21	PKP	PKPdf	10 06 27.4	-0.6
	comp=Z,7.6nm,1.0s,baz=34,slow=1.1,SNR=24						
SIV				PKPab	PKPab	10 07 53.1	-0.3
	comp=Z,3.4nm,0.8s,baz=285,slow=1.9,SNR=5.4						
ITQB	**Itaqui**	173.02	192	*e*P	PKPdf	10 06 27.2	-0.4
PCMB	**Pacaembu**	173.32	279	*e*P	PKPdf	10 06 27.0	-1.0
BBSD	**Serra de San D**	173.99	21	*e*P	PKPdf	10 06 27.6	-0.7
RPRD	**Ribas do Rio P**	175.08	298	*e*P	PKPdf	10 06 28.4	-0.3
CPUP	**Villa Florida**	176.40	195	PKP	PKPdf	10 06 27.5	-1.3
	comp=Z,1.9nm,1.1s,baz=344,slow=0.6,SNR=4.9						
CPUP				PKPab	PKPab	10 08 07.9	-1.5
	comp=Z,1.3nm,0.9s,baz=327,slow=2.4,SNR=4.2						
AQDB	**Aquidauana**	176.60	313		PKPdf	10 06 28.2	-0.8
AQDB	**Aquidauana**	176.60	313	*e*P	PKPdf	10 06 27.9	-1.0
SJPY	**San Joaquin**	177.03	223	*e*P	PKPdf	10 06 28.4	-0.6
MURT	**Porto Murtinho**	178.64	330	*e*P	PKPdf	10 06 27.6	-1.7

HEL ***04*** *10:00:22.3±0.2, 64°.66N×30°.83E, h0^{km}, ML1.7, Explosion*
IDC ***04*** *10:00:23.0±3.0, 64°.58N×31°.06E, h0^{km}, mbtmp3.1/3, ML2.4/2, Error ellipse: s-maj=43.9km s-min=10.5km az=104.0*
KOLA ***04*** *10:00:24.5, 64°.65N×30°.59E, h0^{km}, ML2.0, Error ellipse: s-maj=24.4km s-min=17.6km az=170.0, Kostomuksha, Karelia*
ISC 04 10:00:23.0±0.9**, 64°.69N**±0°.03×**30°.39E**±0°.05**, h0**^{km}**, n19, σ0^{s}.83**/32**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RMF	**Romuvaara**	0.52	203	*e*P	Pg	10 00 32.9	+0.1
RMF				*e*S	Sg	10 00 40.7	+1.2
KU1	**Kurvinen**	0.94	339	*e*P	Pg	10 00 40.9	-0.1
KU1				*e*S	Sb	10 00 54.6	-0.6
PUF	**PUOLANKA**	1.00	269	*e*P	Pb	10 00 43.5	+0.3
PUF				*e*S	Sn	10 00 58.9	-0.2
MSF	**Maaselka**	1.35	336	*e*P	Pg	10 00 48.4	-0.4
MSF				*e*S	Sn	10 01 07.5	-0.1
KU6	**Riekki**	1.35	351	*e*P	Pg	10 00 47.9	-1.0
KU6				*e*S	Sg	10 01 05.8	-0.6
KU2	**Taivalkoski**	1.37	319	*e*P	Pg	10 00 49.0	-0.1
KU2				*e*S	Sn	10 01 09.3	+1.2
KU2				MSG		10 01 12.1	
	comp=Z,5.1nm,0.1s						
OLKF	**Oulanka, Finla**	1.69	346	*e*P	Pn	10 00 53.8	+0.1
OLKF				*e*S	Sb	10 01 16.8	+0.2
OLKF				MSG		10 01 21.1	
	comp=Z,4.2nm,0.1s						
NIF	**Nilsia**	1.73	222	*e*P	Pb	10 00 54.7	-0.8
NIF				*e*S	Sg	10 01 18.2	-0.3
NIF				MSG		10 01 21.4	
	comp=Z,2.6nm,0.1s						
OUL	**Oulu**	1.96	284	*e*PB	Pg	10 01 00.2	-0.2
OUL				*e*S	Sg	10 01 26.2	+0.5
OUL				MSG		10 01 33.1	
	comp=Z,7.0nm,0.1s						
KVDA	**Kovda**	2.26	26	P	Pn	10 01 01.9	+0.5
KVDA				S	Sn	10 01 30.0	0.0
APA0	**Apatity Array**	3.11	19	P	Pn	10 01 14.7	+1.4
APA0				S	Sn	10 01 51.9	+0.8
APA	**Apatity**	3.14	22	S	Sn	10 01 51.8	0.0
FINES	**FINESS Array B**	3.80	213	Pn	Pn	10 01 23.6	+0.9
	comp=Z,0.7nm,0.3s,baz=29,slow=12,SNR=0.9						
FINES				Sn	Sn	10 02 06.5	-1.5
	comp=Z,0.3nm,0.3s,baz=36,slow=26,SNR=1.8						
FINES				Lg	Lg	10 02 23.5	
	comp=Z,1.1nm,0.3s,baz=35,slow=27,SNR=6.5						
PRVG	**Vayda Guba**	5.12	7	S	Sn	10 02 40.8	+0.2
ARCES	**ARCESS Array B**	5.22	341	Pn	Pn	10 01 42.2	0.0
	comp=Z,0.1nm,0.3s,baz=154,slow=14,SNR=11						
ARCES				Sn	Sn	10 02 43.3	+0.2
	comp=Z,0.1nm,0.3s,baz=153,slow=20,SNR=1.6						
ARCES				Lg	Lg	10 03 04.3	
	comp=Z,0.3nm,0.3s,baz=151,slow=25,SNR=2.2						
	comp=Z,2.5nm,0.9s						
ARCES	**ARCESS Array B**	5.22	341	P	Pn	10 01 44.2	+2.0
ARCES				S	Sn	10 02 41.9	-1.2
I37NO	**I37NO**	6.38	319	I	I	10 39 10.0	
	baz=129,slow=313,SNR=1.8						
HFS	**Hagfors**	8.98	247	Pn	Pn	10 02 34.4	+0.7
	comp=Z,0.1nm,0.3s,baz=50,slow=13,SNR=1.0						
	comp=Z,1.4nm,0.7s						
BRG	**Berggiesshubel**	16.31	220	P	Pn	10 04 11.8	-1.3
BRG				Amp		10 04 13.7	
	comp=Z,6.8nm,1.1s						

SOME ***04*** *10:21:52.7, 43°.33N×81°.88E, h10^{km}*
NNC 04 10:21:54.2±2.5**, 43°.33N×81°.87E, h0**^{km}**, mb3.6, mpv3.4, Error ellipse: s-maj=16.9km s-min=14.1km az=122.0, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	**Shalkode**	1.77	265	P	Pn	10 22 21.6	-4.5
	19nm,0.2s						
SHLS				S	Sn	10 22 42.4	-7.0
	28nm,0.4s						
SHLS	**Shalkode**	1.77	265	*e*P	Pn	10 22 21.6	-4.5
	19nm,0.2s						
SHLS				*e*S	Sn	10 22 42.4	-7.0
	28nm,0.4s						
DJR	**Jarkent**	1.81	304	P	Pn	10 22 27.3	+0.6
	4.7nm,0.2s						
DJR				S	Sg	10 22 52.2	-0.1
	15nm,0.3s						
DJR	**Jarkent**	1.81	304	*e*P	Pn	10 22 27.3	+0.6
	4.7nm,0.2s						
DJR				*e*S	Sg	10 22 52.2	-0.1
	15nm,0.3s						
UZB	**Uzynbulak**	2.09	266	Pg	Pb	10 22 32.2	-0.9
	6.1nm,0.3s						
UZB				Lg	Lg	10 23 00.5	
	11nm,0.4s						
KNOS	**Konyrlen**	2.21	299	Pg	Pb	10 22 33.7	-1.3
	4.3nm,0.2s						
KNOS				Lg	Lg	10 23 03.3	
	11nm,0.3s						
KPKS	**Kokpek**	2.33	275	Pg	Pb	10 22 35.8	-1.3
	2.2nm,0.2s						
KPKS				Lg	Lg	10 23 07.0	
	30nm,0.3s						
SATY	**Saty**	2.55	265	Pg	Pb	10 22 40.7	-0.1
	4.8nm,0.2s						
SATY				Lg	Lg	10 23 15.2	
	21nm,0.4s						
BLB	**Baldybastay**	2.58	289	Pg	Pb	10 22 39.4	-2.0
	15nm,0.2s						
BLB				Lg	Lg	10 23 13.4	
	8.2nm,0.3s						

NEIC ***04*** *10:25:06.0±1.0, 1°.9N±0°.1×128°.09E±0°.09, h136^{km}±8^{km}, mb4.3/13, Error ellipse: s-maj=20.9km s-min=10.3km az=210.0*
IDC ***04*** *10:25:09.7±11.0, 1°.90N×128°.14E, h181^{km}±111^{km}, mb3.6/7, mbtmp4.0/8, Error ellipse: s-maj=86.8km s-min=16.6km az=58.0*
ISC 04 10:25:05.2±0.7**, 2°.02N**±0°.08×**128°.17E**±0°.10**, h134**^{km}**, n28, σ1^{s}.11**/29**, mb4.3**/15**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	1.48	213	Pn	Pn	10 25 32.8	-0.6
LUWI	**Luwuk**	6.20	241	Pn	Pn	10 26 32.7	-1.9
FAKI	**Fak Fak**	6.38	140	Pn	Pn	10 26 36.7	-0.3
TOLI2	**Tolitoli**	7.45	263		Pn	10 26 50.2	-1.1
KAPI	**Kappang**	10.94	230	P	Pn	10 27 40.5	+2.4
	3.9nm,0.5s,baz=76,slow=4.2,SNR=7.3						
KAPI				S	Sn	10 29 40.5	+1.6
	1.1nm,0.3s,baz=171,slow=19,SNR=1.0						
WB0	**Warramunga Arr**	22.50	165	P	P	10 29 53.1	-0.7
WB0				IAmb	IAmb	10 30 17.5	
	comp=Z,15nm,1.4s						
WRA	**Warramunga Arr**	22.65	165	P	P	10 29 54.3	-1.0
	comp=Z,0.4nm,0.5s,baz=338,slow=10,SNR=2.5						
WR8	**Warramunga Arr**	22.71	164	P	P	10 29 54.5	-1.3
WR8				IAmb	IAmb	10 30 19.2	
	comp=Z,20nm,1.4s						
AS31	**Alice Springs**	26.14	168	P	P	10 30 26.4	-0.7
ASAR	**Alice Springs**	26.14	168	P	P	10 30 26.1	-1.0
	comp=Z,0.2nm,0.7s,baz=356,slow=11,SNR=1.5						
	comp=Z,0.2nm,0.7s						
STKA	**Stephens Creek**	36.04	160	P	P	10 31 53.5	-0.3
STKA	**Stephens Creek**	36.04	160	P	P	10 31 53.3	-0.5
	comp=Z,1.0nm,0.4s,baz=333,slow=11,SNR=4.2						
	comp=Z,1.0nm,0.4s						
SONM	**Songino Array**	49.37	341	P	P	10 33 41.4	+0.2
	comp=Z,0.8nm,0.5s,baz=153,slow=9.7,SNR=3.9						
	comp=Z,0.8nm,0.5s						
MKAR	**Makanchi Array**	59.77	325	P	P	10 34 56.8	+0.6
MKAR	**Makanchi Array**	59.77	325	P	P	10 34 56.6	+0.4
	comp=Z,1.8nm,0.4s,baz=116,slow=7.8,SNR=28						
	comp=Z,1.8nm,0.4s						
MAKZ	**Makanchi**	59.96	325	P	P	10 34 58.1	+0.6
MAKZ				IAmb	IAmb	10 34 58.4	
	comp=Z,2.1nm,0.6s						
KURBB	**Kurchatov Arra**	63.94	327	P	P	10 35 23.9	-0.1
	comp=Z,1.5nm,0.4s,baz=128,slow=6.1,SNR=18						
	comp=Z,1.5nm,0.4s						
KURK	**Kurchatov**	63.95	327	P	P	10 35 24.2	+0.2
BVAR	**Borovoye Array**	69.53	327	P	P	10 35 59.4	0.0
	comp=Z,0.9nm,0.6s,baz=111,slow=11,SNR=3.7						
	comp=Z,0.9nm,0.6s						
ABKAR	**Akbulak array**	74.38	321	P	P	10 36 27.0	-1.4
C19K	**Lookout Ridge**	81.83	20	P	P	10 37 10.6	+1.4
C19K				IAmb	IAmb	10 37 14.9	
	comp=Z,9.2nm,1.4s						
G19K	**Purcell Mounta**	82.01	23	P	P	10 37 10.9	+0.9
D19K	**Kuna River**	82.19	21	P	P	10 37 12.0	+1.0
D19K				IAmb	IAmb	10 37 14.6	
	comp=Z,9.0nm,1.4s						
KDAK	**Kodiak Island**	82.56	32	P	P	10 37 13.5	+0.4
D20K	**Etivluk River**	82.77	21	P	P	10 37 15.2	+1.2
D20K				IAmb	IAmb	10 37 19.6	
	comp=Z,5.5nm,1.4s						
B21K	**Ikpikpuk River**	83.67	20	P	P	10 37 19.8	+1.3
E22K	**Anaktuvuk Pass**	84.41	22	P	P	10 37 23.9	+1.5
E22K				IAmb	IAmb	10 37 32.8	
	comp=Z,6.0nm,1.4s						
ARCES	**ARCESS Array B**	92.54	340	P	P	10 37 59.8	-1.2
	comp=Z,2.3nm,1.0s,baz=95,slow=5.5,SNR=2.3						
	comp=Z,2.3nm,1.0s						

VAO ***04*** *10:33:33.5±0.5, 32°.69S×72°.18W, h30^{km}, mb4.5*
SJA ***04*** *10:33:37.6±1.1, 32°.15S×71°.77W, h24^{km}±3^{km}, ML4.6, MW4.7*
NEIC ***04*** *10:33:39.7, 32°.15S×71°.82W, h30^{km}*
GUC ***04*** *10:33:39.2±0.8, 32°.16S×71°.75W, h37^{km}±2^{km}, ML4.6*
NEIC ***04*** *10:33:39.6±1.3, 32°.147S±0°.008×71°.84W±0°.08, h30^{km}±5^{km}, mb4.7/26, Mwr4.4/70, Mwr4.7(GUC), Error ellipse: s-maj=9.6km s-min=1.2km az=91.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}3.52; $M_{\theta\theta}$0.51; $M_{\phi\phi}$-4.03; $M_{r\theta}$-0.47; $M_{\theta\phi}$-1.38; $M_{\phi r}$-2.67; Fault plane solution: $M_0$4.87000×10^{15} NP1: ϕ_s191.74000°, δ62.20000°, λ85.73000°. NP2: ϕ_s20.83000°, δ28.10000°, λ98.03000°. Principal axes: T 4.3660, Plg72.0000°, Azm92.0000°; N 0.8853, Plg4.0000°, Azm194.0000°; P -5.2512, Plg17.0000°, Azm285.0000°;*
IDC ***04*** *10:33:41.6±2.5, 32°.14S×71°.77W, h47^{km}±21^{km}, mb4.6/9, mbtmp4.6/14, ML4.4/5, MS3.9/3 Error ellipse: s-maj=23.6km s-min=12.0km az=113.0*
ISC 04 10:33:37.3±1.0**, 32°.13S**±0°.02×**71°.87W**±0°.04**, h20**^{km}±4^{km}**, n183, σ1^{s}.24**/227**, mb4.8**/21**, 6C-16D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	**Catapilco**	0.65	132		Pb	10 33 50.3	+0.3
VA06				Sn	Sb	10 33 58.7	+0.1
VA06	**Catapilco**	0.65	132	⇓*i*P	Pg	10 33 50.6	+0.3
VA06				*e*S	Sb	10 33 58.4	-0.2
VA06				IAML		10 33 59.8	
	comp=E,113µm,0.5s						
VA01	**Torpederas**	0.92	168		Pg	10 33 55.1	-0.1
VA01				Sn	Sg	10 34 07.2	-0.1
VA01	**Torpederas**	0.92	168	*e*P	Pg	10 33 55.0	-0.1
VA01				*e*S	Sg	10 34 07.0	-0.3
VA01	**Torpederas**	0.92	168	*i* P	Pb	10 33 54.8	+0.3
VA01				IAML		10 34 10.7	
	comp=Z,4µm,0.3s						
ROC1	**El Roble**	1.11	140	*i* P	Pn	10 33 58.0	-0.1
ROC1				*i* S	Sb	10 34 12.2	-0.1
ROCH	**El Roble**	1.11	140	⇓*i*P	Pn	10 33 58.0	-0.1
ROCH				*e*S	Sb	10 34 11.3	-0.9
ROCH				IAML		10 34 15.1	
	comp=N,31µm,0.5s						
CO02	**Combarbal**	1.18	39		Pb	10 33 59.7	+0.6
CO02				Sn	Sb	10 34 14.8	+0.8
CO02	**Combarbal**	1.18	39	⇓*i*P	Pb	10 33 59.7	+0.6
CO02				*e*S	Sb	10 34 14.7	+0.8
CO02	**Combarbal**	1.18	39	*i* P	Pb	10 33 59.8	+0.7
CO02				*i* S	Sb	10 34 14.9	+0.8
CO02				IAML		10 34 15.3	
	comp=Z,15µm,0.3s						
VA03	**San Esteban**	1.28	120		Pn	10 34 00.3	0.0
VA03				Sn	Sn	10 34 16.1	-0.9
VA03	**San Esteban**	1.28	120	⇓*i*P	Pn	10 34 00.2	0.0
VA03				*e*S	Sn	10 34 15.6	-1.4
VA03				IAML		10 34 21.3	
	comp=N,26µm,0.5s						
VA03	**San Esteban**	1.28	120	*i* P	Pn	10 33 59.4	-0.8
VA03				IAML		10 34 22.6	
	comp=Z,13µm,0.5s						
MT02	**Curacav**	1.29	152		Pn	10 34 00.6	+0.4
MT02				Sn	Sn	10 34 16.5	-0.5
MT02	**Curacav**	1.29	152	⇓*i*P	Pn	10 34 00.5	+0.3
MT02				*e*S	Sn	10 34 16.3	-0.6
MT02	**Curacav**	1.29	152	*i* P	Pb	10 34 00.8	-0.2
MT02				*i* S	Sn	10 34 16.4	-0.6
MT02				IAML		10 34 21.8	
	comp=Z,6µm,0.3s						
PEL	**Peldehue**	1.42	136		Pn	10 34 02.7	+0.5
PEL	**Peldehue**	1.42	136	⇓*i*P	Pn	10 34 02.6	+0.4
PEL				*e*S	Sn	10 34 20.1	-0.3
PEL				IAML		10 34 21.9	
	comp=N,15µm,0.5s						
PEL	**Peldehue**	1.42	136	*i* P	Pn	10 34 02.7	+0.5
PEL				*e*S	Sb	10 34 21.3	+0.3
CO06	**Fray Jorge**	1.46	8		Pb	10 34 03.8	0.0
CO06	**Fray Jorge**	1.46	8	⇓*i*P	Pb	10 34 03.8	0.0
CO06				*e*S	Sg	10 34 24.3	-0.3
VA05	**Santo Domingo**	1.54	172		Pb	10 34 04.5	-0.7
VA05	**Santo Domingo**	1.54	172	*e*P	Pb	10 34 04.5	-0.7
VA05				*e*S	Sb	10 34 24.6	+0.2
VA05				IAML		10 34 30.7	
	comp=E,29µm,0.4s						
MT05	**Renca**	1.58	143		Pn	10 34 04.9	+0.6
MT05	**Renca**	1.58	143	*e*P	Pn	10 34 04.9	+0.6
MT05				*e*S	Sn	10 34 24.8	+0.5
MT05				IAML		10 34 29.2	
	comp=E,19µm,0.4s						
MT05	**Renca**	1.58	143	*i* P	Pn	10 34 05.1	+0.7
MT05				IAML		10 34 29.1	
	comp=Z,6µm,0.8s						
MT10	**Hacienda Santa**	1.60	136	⇓*i*P	Pn	10 34 05.5	+0.8
MT10				*e*S	Sn	10 34 25.5	+0.6
CO03	**El Pedregal**	1.63	38		Pb	10 34 06.8	0.0
CO03	**El Pedregal**	1.63	38	⇓*i*P	Pb	10 34 06.7	0.0
CO03				*e*S	Sb	10 34 27.1	+0.2
CO03				IAML		10 34 33.8	
	comp=E,11µm,0.2s						
CO03	**El Pedregal**	1.63	38	*i* P	Pb	10 34 06.9	+0.1
CO03				*e*S	Sb	10 34 27.6	+0.6
CO03				IAML		10 34 29.2	
	comp=Z,11µm,1.1s						
MT14	**Cerro Cal¡n**	1.69	139	⇓*i*P	Pn	10 34 06.7	+0.8
MT14				*e*S	Sn	10 34 26.9	-0.1
MT14				IAML		10 34 33.0	
	comp=E,17µm,0.5s						
MT16	**CCHEN**	1.72	139		Pn	10 34 07.2	+0.9
MT16	**CCHEN**	1.72	139	⇓*i*P	Pn	10 34 07.2	+0.9
MT16				*e*S	Sn	10 34 28.3	+0.5
MT03	**Universidad Ad**	1.78	140		Pn	10 34 08.0	+0.9
MT03	**Universidad Ad**	1.78	140	⇓*i*P	Pn	10 34 08.1	+0.9
MT03				*e*S	Sn	10 34 30.3	+1.1
MT03				IAML		10 34 32.9	
	comp=E,20µm,0.3s						
MT03	**Universidad Ad**	1.78	140	*i* P	Pn	10 34 08.2	+1.1
MT03				*i* S	Sb	10 34 31.1	-0.3
MT03				IAML		10 34 38.4	
	comp=Z,10µm,0.6s						
FCH	**Farellones**	1.79	132	⇓*i*P	Pn	10 34 08.3	+0.8
FCH				*e*S	Sn	10 34 30.1	+0.3
FCH				IAML		10 34 33.1	
	comp=E,12µm,0.2s						
MT09	**Talagante**	1.81	156		Pb	10 34 09.0	-0.9
MT09	**Talagante**	1.81	156	⇓*i*P	Pb	10 34 08.8	-1.0
MT09				*e*S	Sn	10 34 31.0	+1.1
MT09				IAML		10 34 38.6	
	comp=N,11µm,0.2s						
MT01	**Popeta**	1.81	164		Pn	10 34 08.6	+1.1
MT01	**Popeta**	1.81	164	⇑*i*P	Pn	10 34 08.5	+1.1
MT01				*e*S	Sn	10 34 30.8	+0.9
MT01				IAML		10 34 38.2	
	comp=E,7µm,0.5s						
MT01	**Popeta**	1.81	164	*i* P	Pn	10 34 08.6	+1.1
MT01				IAML		10 34 37.7	
	comp=Z,5µm,0.6s						
MT15	**Las Vizcachas**	1.86	142	*e*P	Pn	10 34 09.1	+0.9
MT15				*e*S	Sn	10 34 31.7	+0.5
MT15				IAML		10 34 35.8	
	comp=N,13µm,0.4s						
MT04	**Ro Olivares**	1.94	132	⇓*i*P	Pn	10 34 10.4	+1.0
MT04				*e*S	Sn	10 34 34.3	+0.9
MT04				IAML		10 34 37.7	
	comp=E,6µm,0.3s						
MT04	**Ro Olivares**	1.94	132	*i* P	Pn	10 34 10.6	+1.2
MT04				*i* S	Sn	10 34 34.8	+1.5
MT04				IAML		10 34 37.0	
	comp=Z,5µm,0.8s						
MT08	**Bocatoma Ro**	2.04	131		Pn	10 34 12.4	+1.6
MT08	**Bocatoma Ro**	2.04	131	⇓*e*P	Pn	10 34 12.4	+1.6
MT08				*e*S	Sn	10 34 36.4	+0.6
MT08				IAML		10 34 41.5	
	comp=N,5µm,0.1s						
MT08	**Bocatoma Ro**	2.04	131	*i* P	Pb	10 34 12.6	-1.3
MT08				*i* S	Sb	10 34 38.1	-0.8
MT08				IAML		10 34 39.2	
	comp=Z,2µm,0.6s						
MT13	**San Alfonso**	2.09	141		Pn	10 34 12.7	+1.4
MT13	**San Alfonso**	2.09	141	*e*P	Pn	10 34 12.8	+1.4
MT13				*e*S	Sn	10 34 37.7	+0.7
MT13				IAML		10 34 41.0	
	comp=E,13µm,0.6s						
MT13	**San Alfonso**	2.09	141	*i* P	Pn	10 34 12.8	+1.4
MT13				*e*S	Sn	10 34 38.0	+1.1
MT13				IAML		10 34 40.9	
	comp=Z,5µm,0.5s						
BO04	**La Punta**	2.14	151		Pn	10 34 13.7	+1.7
GO04	**Tololo Observa**	2.15	25		Pn	10 34 14.1	+1.8
GO04	**Tololo Observa**	2.15	25	*e*P	Pn	10 34 14.2	+1.8
RTLS	**Leoncito**	2.21	82	*i* P	Pb	10 34 17.0	+0.2
RTLS				IAML		10 34 52.2	
	comp=Z,10µm,0.7s						
LMEL	**Las Melosas**	2.21	141		Pn	10 34 14.7	+1.5
LMEL	**Las Melosas**	2.21	141	*i* P	Pn	10 34 14.7	+1.5
LMEL				*i* S	Sb	10 34 42.4	-1.5
CO05	**La Serena**	2.26	14		Pn	10 34 15.6	+2.0
BO01	**Tunca**	2.35	164		Pn	10 34 16.2	+1.3
BO01	**Tunca**	2.35	164	*i* P	Pn	10 34 16.2	+1.3
BO01				*i* S	Sn	10 34 43.7	+0.5
BO01				IAML		10 34 55.2	
	comp=Z,3µm,0.8s						
ARCO	**CERRO ARCO**	2.58	107	*i* P	Pb	10 34 22.7	-0.4
ARCO				*e*S	Sb	10 34 56.5	+2.0
ARCO				IAML		10 34 59.3	
	comp=Z,4µm,0.8s						
CO01	**Juntas del Tor**	2.63	36		Pn	10 34 21.3	+2.4
CO01	**Juntas del Tor**	2.63	36	*i* P	Pb	10 34 21.9	-2.0
CO01				*i* S	Sn	10 34 50.5	+0.1
CO01				IAML		10 34 59.8	
	comp=Z,3µm,0.5s						
DOCA	**Reserva Natura**	2.65	64	*i* P	Pb	10 34 23.6	-0.8
DOCA				*i* S	Sb	10 34 57.4	+0.8
DOCA				IAML		10 35 06.2	
	comp=Z,3µm,0.7s						
AAGR	**Agrelo**	2.74	111	*i* P	Pb	10 34 24.9	-0.8
AAGR				IAML		10 35 10.0	
	comp=Z,2µm,1.3s						
ZON	**Zonda**	2.77	79		Pb	10 34 24.8	-1.5
ZON	**Zonda**	2.77	79	*i* P	Pb	10 34 24.8	-1.5
ZON				IAML		10 35 13.5	
	comp=Z,2µm,0.7s						
BO02	**Sierra Bellavi**	2.81	161		Pn	10 34 22.6	+1.4
BO02	**Sierra Bellavi**	2.81	161	*i* P	Pn	10 34 22.9	+1.6
BO02				IAML		10 35 04.9	
	comp=Z,4µm,0.8s						
ACCO	**Cerro Coronel**	2.84	58	*i* P	Pg	10 34 31.0	-0.9
RTLL	**Cerro Villicun**	3.00	76	*e*P	Pb	10 34 28.2	-1.8
AVIZ	**Vizcacheras**	3.13	116	*i* P	Pb	10 34 29.9	-2.4
CFA	**Coronel Fontan**	3.13	81	P	Pn	10 34 29.1	+3.4
	comp=Z,91nm,0.3s,baz=247,slow=10,SNR=843						
CFA				S	Sn	10 35 03.9	+1.3
	comp=Z,789nm,0.7s,baz=72,slow=11,SNR=4.0						
	comp=Z,216nm,0.3s						
CFA	**Coronel Fontan**	3.13	81	*i* P	Pn	10 34 29.1	+3.5
CFA				*e*S	Sb	10 35 07.9	-2.3
CFA				IAML		10 35 20.3	
	comp=Z,13µm,0.8s						
LCO	**Las Campanas**	3.26	18		Pn	10 34 29.2	+1.5
LCO	**Las Campanas**	3.26	18	*i* P	Pn	10 34 29.2	+1.5
LCO				IAML		10 35 23.7	
	comp=Z,3µm,0.5s						
AC05	**El Transito**	3.55	23		Pn	10 34 33.7	+2.2
AC05	**El Transito**	3.55	23	*i* P	Pn	10 34 34.1	+2.5
AC05				IAML		10 35 30.6	
	comp=Z,1µm,1.1s						
ML02	**Panimavida**	3.65	174		Pn	10 34 33.8	+1.1
AGUA	**GUANDACOL**	3.92	49	*i* P	Pn	10 34 41.1	+4.6
AGUA				IAML		10 35 45.5	
	comp=Z,2µm,0.7s						
AC04	**Llanos de Chal**	3.97	10		Pn	10 34 37.8	+0.8
AC04	**Llanos de Chal**	3.97	10	*i* P	Pn	10 34 37.9	+0.8
AC04				IAML		10 35 50.4	

	comp=Z,1µm,0.7s						
BI02	**San Fabin de**	**4.55**	**174**		**Pn**	**10 34 46.3**	**+1.1**
BI02	**San Fabin de**	**4.55**	**174**	*i* P	**Pn**	**10 34 46.5**	**+1.3**
BI02				IAML		10 36 04.4	
	comp=Z,540nm,1.0s						
GO03	**Copiapo**	**4.73**	**18**		**Pn**	**10 34 48.7**	**+1.1**
GO03	**Copiapo**	**4.73**	**18**	*i* P	**Pn**	**10 34 48.9**	**+1.2**
BI05	**Punta Hualpn**	**4.74**	**193**		**Pn**	**10 34 47.6**	**0.0**
AC06	**Mina Casimiro**	**4.93**	**16**		**Pn**	**10 34 51.2**	**+0.9**
ACLC	**CERRO LA CRUZ**	**5.01**	**59**	*i* P	**Pn**	**10 34 55.4**	**+3.7**
ACLC				IAML		10 36 03.8	
	comp=Z,597nm,1.0s						
AC02	**Maricunga**	**5.79**	**25**		**Pn**	**10 35 04.0**	**+1.5**
VA04	**Juan Fernndez**	**6.05**	**254**	Pn	**Pn**	**10 35 03.1**	**-2.6**
AC01	**Pan de Azucar**	**6.06**	**11**	Pn	**Pn**	**10 35 03.7**	**-2.1**
GO02	**Mina Guanaco**	**7.22**	**17**	Pn	**Pn**	**10 35 21.6**	**-0.4**
PB14	**IPOC Station P**	**7.58**	**10**		**Pn**	**10 35 26.1**	**-0.9**
LR04	**Corral**	**7.84**	**189**	Pn	**Pn**	**10 35 30.0**	**-0.2**
LR05	**Currie**	**8.09**	**181**	Pn	**Pn**	**10 35 33.5**	**-0.2**
PLCA	**Paso Flores**	**8.66**	**173**		**Pn**	**10 35 43.0**	**+1.5**
PLCA	**Paso Flores**	**8.66**	**173**	P	**Pn**	**10 35 42.4**	**+0.8**
	comp=Z,2.2nm,0.3s,baz=333,slow=11,SNR=71						
PLCA				S	**Sn**	**10 37 19.8**	**+1.2**
	comp=Z,4.6nm,0.8s,baz=350,slow=17,SNR=1.2						
PLCA				LR	LR	10 39 40.7	
	comp=Z,532nm,19.6s,baz=340,slow=42						
	comp=Z,5.2nm,0.4s						
PLCA	**Paso Flores**	**8.66**	**173**	*e*P	Pn	10 35 28.9	-13
PB05	**IPOC Station P**	**9.35**	**9**	Pn	**Pn**	**10 35 49.0**	**-2.2**
PB06	**IPOC Station P**	**9.60**	**13**	Pn	**Pn**	**10 35 52.4**	**-2.2**
AF01	**San Pedro de A**	**9.71**	**21**	Pn	**Pn**	**10 35 53.5**	**-2.7**
TRQA	**Tornquist**	**10.03**	**129**		**Pn**	**10 36 00.6**	**+0.3**
PB01	**IPOC Station P**	**11.24**	**11**	Pn	**Pn**	**10 36 14.3**	**-2.7**
ITQB	**Itaqui**	**13.32**	**83**		**Pn**	**10 36 44.3**	**-1.0**
ITQB	**Itaqui**	**13.32**	**83**	*e*P	**Pn**	**10 36 45.5**	**+0.2**
CPUP	**Villa Florida**	**13.94**	**69**		**Pn**	**10 36 52.0**	**-1.8**
CPUP	**Villa Florida**	**13.94**	**69**	P	**Pn**	**10 36 54.7**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=105,slow=12,SNR=8.3						
CPUP				S	**Sn**	**10 39 24.8**	**-3.2**
	comp=Z,4.3nm,0.7s,baz=90,slow=15,SNR=3.4						
	comp=Z,0.8nm,0.4s						
CPUP	**Villa Florida**	**13.94**	**69**	*e*P	**Pn**	**10 36 54.6**	**+0.9**
AY03	**Cochrane**	**15.12**	**182**	Pn	**Pn**	**10 37 05.4**	**-4.3**
PLTB	**Pedras Altas**	**15.51**	**94**		**Pn**	**10 37 13.6**	**-1.4**
LPAZ	**La Paz**	**16.13**	**13**	Pn	**Pn**	**10 37 21.1**	**-2.4**
LPAZ	**La Paz**	**16.13**	**13**	P	**Pn**	**10 37 24.4**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=190,slow=8.1,SNR=7.1						
	comp=Z,2.2nm,0.7s						
LPAZ	**La Paz**	**16.13**	**13**	*e*P	**Pn**	**10 37 24.7**	**+1.1**
ITAB	**Concordia**	**17.82**	**79**	Pn	**Pn**	**10 37 42.4**	**-1.8**
ITAB				IAmb	IAmb	10 37 49.0	
	comp=Z,67nm,1.2s						
BBSD	**Serra de San D**	**18.03**	**37**	*e*P	**P**	**10 37 48.9**	**+1.7**
AQDB	**Aquidauana**	**18.54**	**55**	P	**P**	**10 37 52.1**	**-0.7**
SIV	**San Ignacio**	**18.82**	**34**	P	**P**	**10 37 55.7**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=208,slow=11,SNR=16						
	comp=Z,2.8nm,0.5s						
GO09	**Cerro Castillo**	**19.13**	**181**	P	**P**	**10 37 58.9**	**-0.3**
GO09				IAmb	IAmb	10 38 16.6	
	comp=Z,37nm,1.3s						
TRCB	**Terra Rica**	**19.41**	**66**	*e*P	**Pn**	**10 38 03.3**	**-0.3**
RPRD	**Ribas do Rio P**	**19.96**	**59**	*e*P	**P**	**10 38 09.5**	**+1.1**
PTLB	**Pontes e Lacer**	**20.25**	**38**	P	**P**	**10 38 11.5**	**0.0**
PTLB				IAmb	IAmb	10 38 17.7	
	comp=Z,14nm,1.2s						
PTLB	**Pontes e Lacer**	**20.25**	**38**	*e*P	Pn	10 38 13.2	-0.3
LDASE	**Londrina, Braz**	**20.29**	**70**	*e*P	**P**	**10 38 10.9**	**-1.1**
PCMB	**Pacaembu**	**21.12**	**65**	*e*P	**P**	**10 38 20.7**	**-0.3**
SALV	**Santo Antonio**	**21.84**	**46**	*e*P	**P**	**10 38 28.1**	**-0.6**
VILB	**Vilhena**	**21.88**	**32**	P	**P**	**10 38 28.7**	**-0.4**
VILB				IAmb	IAmb	10 38 30.1	
	comp=Z,28nm,0.9s						
VILB	**Vilhena**	**21.88**	**32**	*e*P	**P**	**10 38 28.7**	**-0.4**
EFI	**East Falkland**	**22.00**	**157**	P	**P**	**10 38 29.6**	**-0.6**
USHA	**Ushuaia**	**22.83**	**175**	P	**P**	**10 38 40.0**	**+1.1**
	comp=Z,22nm,0.9s,baz=344,slow=4.5,SNR=9.0						
	comp=Z,22nm,0.9s						
ITRB	**Iturama**	**22.91**	**63**	*e*P	**P**	**10 38 41.0**	**+0.9**
VAO	**Valinhos**	**23.83**	**74**	P	**P**	**10 38 49.4**	**+0.1**
VAO				IAmb	IAmb	10 39 07.9	
	comp=Z,52nm,1.3s						
CZSB	**Cruzeiro do Su**	**24.29**	**358**	*e*P	**P**	**10 38 54.1**	**+0.6**
SAML	**Samuel**	**24.43**	**21**	P	**P**	**10 38 55.0**	**+0.2**
SAML	**Samuel**	**24.43**	**21**	*e*P	**P**	**10 38 55.6**	**+0.8**
ARAG	**Araguaiana, MT**	**24.49**	**53**	*e*P	**P**	**10 38 55.1**	**-0.3**
PDRB	**Porto dos Gac**	**24.72**	**38**	*e*P	**P**	**10 38 57.5**	**0.0**
BDFB	**Brasilia**	**27.20**	**58**	P	**P**	**10 39 19.8**	**-0.2**
BDFB				IAmb	IAmb	10 39 20.8	
	comp=Z,32nm,1.1s						
BDFB	**Brasilia**	**27.20**	**58**	P	**P**	**10 39 19.6**	**-0.4**
	comp=Z,22nm,0.9s,baz=239,slow=4.9,SNR=14						
BDFB				LR	LR	10 52 34.0	
	comp=Z,222nm,20.2s,baz=181,slow=42						
	comp=Z,22nm,0.9s						
SNDB	**Serra Nova Dou**	**27.57**	**48**	*e*P	**P**	**10 39 23.2**	**-0.1**
NPGB	**Novo Progresso**	**29.32**	**35**	*e*P	**P**	**10 39 38.0**	**-0.8**
MACA	**Manacapuru-AM**	**30.67**	**22**	P	**P**	**10 39 51.3**	**+0.6**
MACA				IAmb	IAmb	10 39 51.7	
	comp=Z,11nm,0.6s						
SMTB	**Santa Maria do**	**32.29**	**50**	*e*P	**P**	**10 40 05.4**	**+0.3**
PRPB	**Parauapebas**	**33.02**	**43**	*e*P	**P**	**10 40 11.1**	**-0.4**
BOAV	**Boa Vista**	**35.98**	**20**	P	**P**	**10 40 37.6**	**+0.6**
BOAV				IAmb	IAmb	10 40 38.8	
	comp=Z,12nm,0.9s						
BOAV	**Boa Vista**	**35.98**	**20**	*e*P	**P**	**10 40 37.6**	**+0.6**
BAUV	**El Baul**	**41.00**	**6**	P	**P**	**10 41 19.4**	**+0.2**
BAUV				IAmb	IAmb	10 41 21.3	
	comp=Z,16nm,0.9s						
LCR2	**La Lucha 2**	**43.22**	**342**	P	**P**	**10 41 37.7**	**+0.2**
BELA	**Belgrano 2**	**48.70**	**170**	P	**P**	**10 42 21.4**	**+1.5**
BELA				IAmb	IAmb	10 42 22.8	
	comp=Z,9.6nm,1.0s						
VNA3	**Neumayer Olymp**	**51.04**	**158**	⇑P	**P**	**10 42 39.0**	**+1.3**
	comp=Z,12nm,0.6s						
VNA1	**Neumayer--Stat**	**51.34**	**158**	⇑P	**P**	**10 42 42.0**	**+2.0**
	comp=Z,10nm,0.8s						
VNA2	**Neumayer--Watz**	**51.68**	**158**	⇑P	**P**	**10 42 43.9**	**+1.4**
	comp=Z,19nm,0.7s,baz=285,slow=6.2						
SNAA	**Sanae**	**53.27**	**158**	⇑P	**P**	**10 42 55.4**	**+1.1**
	comp=Z,426nm,1.1s						
SNAA	**Sanae**	**53.27**	**158**	P	**P**	**10 42 55.5**	**+1.1**
SNAA	**Sanae**	**53.27**	**158**	P	**P**	**10 42 55.0**	**+0.7**
	comp=Z,13nm,0.8s,baz=276,slow=6.7,SNR=31						
	comp=Z,13nm,0.8s						
TROLL	**Troll, Antarti**	**54.98**	**159**	⇑P	**P**	**10 43 08.0**	**+1.2**
	comp=Z,779nm,0.7s						
QSPA	**South Pole Qui**	**58.11**	**180**	P	**P**	**10 43 30.0**	**+0.8**
QSPA	**South Pole Qui**	**58.11**	**180**	P	**P**	**10 43 30.9**	**+1.7**
	comp=Z,12nm,0.8s,baz=150,slow=1.8,SNR=61						
	comp=Z,12nm,0.8s						
TXAR	**Lajitas Array**	**68.18**	**330**	P	**P**	**10 44 38.1**	**+1.7**
	comp=Z,0.2nm,0.5s,baz=144,slow=7.3,SNR=1.8						
WVT	**Waverly**	**69.53**	**346**	P	**P**	**10 44 44.6**	**+0.1**
WVT				IAmb	IAmb	10 44 59.4	
	comp=Z,5.3nm,0.9s						
DBIC	**Dimbokro**	**74.45**	**72**	P	**P**	**10 45 14.9**	**+0.3**
DBIC	**Dimbokro**	**74.45**	**72**	P	**P**	**10 45 14.8**	**+0.3**
	comp=Z,14nm,0.6s,baz=236,slow=6.2,SNR=19						
	comp=Z,14nm,0.6s						
MAW	**Mawson**	**74.93**	**164**	P	**P**	**10 45 16.6**	**+0.2**
	comp=Z,4.7nm,0.8s,baz=221,slow=6.1,SNR=7.4						
MAW				LR	LR	11 20 18.1	
	comp=Z,96nm,18.1s,baz=279,slow=37						
	comp=Z,4.7nm,0.8s						
BOSA	**Boshof**	**80.81**	**118**	P	**P**	**10 45 49.8**	**-0.3**
BOSA				IAmb	IAmb	10 45 51.2	
	comp=Z,12nm,1.1s						
BOSA	**Boshof**	**80.81**	**118**	P	**P**	**10 45 49.5**	**-0.6**
	comp=Z,5.6nm,0.8s,baz=229,slow=3.7,SNR=12						
	comp=Z,5.6nm,0.8s						
GRTLG	**Ghanzi**	**81.42**	**110**	P	**P**	**10 45 53.7**	**+0.2**
GRTLG				IAmb	IAmb	10 45 54.7	
	comp=Z,10nm,0.8s						
QNGWA	**Qangwa**	**82.33**	**108**	P	**P**	**10 45 57.7**	**-0.6**
QNGWA				IAmb	IAmb	10 45 59.2	
	comp=Z,3.3nm,0.8s						
LBTB	**Lobatse**	**82.96**	**115**	P	**P**	**10 46 01.6**	**+0.1**
TORD	**Torodi Ar. Bea**	**83.44**	**70**	P	**P**	**10 46 03.7**	**-0.2**
	comp=Z,8.4nm,0.6s,baz=272,slow=4.4,SNR=12						
	comp=Z,8.4nm,0.6s						
LPHEP	**Lephephe**	**84.04**	**114**	P	**P**	**10 46 07.3**	**+0.3**
SCHQ	**Schefferville**	**86.71**	**3**	P	**P**	**10 46 19.8**	**+0.5**
	comp=Z,4.4nm,0.9s,baz=153,slow=2.3,SNR=4.0						
	comp=Z,4.4nm,0.9s						
ASAR	**Alice Springs**	**119.30**	**207**	PKP	**PKPdf**	**10 52 24.9**	**-0.9**
	comp=Z,0.5nm,0.9s,baz=113,slow=1.9,SNR=2.8						
BRTR	**Keskin Array B**	**120.78**	**60**	PKP	**PKPdf**	**10 52 27.3**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=270,slow=1.4,SNR=4.5						
AKASG	**Malin Array Be**	**120.81**	**47**	PKP	**PKPdf**	**10 52 26.8**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=268,slow=2.1,SNR=4.9						
WRA	**Warramunga Arr**	**122.46**	**209**	PKP	**PKPdf**	**10 52 30.9**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=147,slow=1.8,SNR=2.7						
BVAR	**Borovoye Array**	**145.79**	**41**	PKPbc	**PKPab**	**10 53 16.0**	**+1.0**
	comp=Z,4.3nm,0.5s,baz=278,slow=4.2,SNR=27						
KURBB	**Kurchatov Arra**	**151.39**	**41**	PKPbc	**PKiKP**	**10 53 30.2**	**+0.5**
	comp=Z,5.8nm,0.7s,baz=303,slow=2.9,SNR=51						
ZALV	**Zalesovo Beam**	**152.56**	**31**	PKPbc	**PKPbc**	**10 53 31.8**	**0.0**
	comp=Z,4.4nm,0.5s,baz=321,slow=2.1,SNR=22						
MKAR	**Makanchi Array**	**155.39**	**46**	PKP	**PKPdf**	**10 53 29.1**	**0.0**
	comp=Z,1.0nm,0.8s,baz=321,slow=3.1,SNR=7.3						
MKAR				PKPab	**PKPab**	**10 53 55.4**	**+0.7**
	comp=Z,4.6nm,0.7s,baz=293,slow=4.4,SNR=26						
SONM	**Songino Array**	**164.25**	**4**	PKPab	**PKPab**	**10 54 33.8**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=15,slow=6.0,SNR=2.3						
HHC	**Hu-ho-hao-te**	**170.87**	**343**	*e*P	**PKPdf**	**10 53 43.5**	**-0.7**
PZH	**PanZhiHua**	**172.10**	**134**	PKP	**PKPdf**	**10 53 44.7**	**-0.6**
LZH	**Lanzhou**	**174.68**	**41**	*e*P	**PKPdf**	**10 53 42.4**	**-3.6**
LZH				pP	pPKPdf	10 53 52.0	-0.2
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						

IDC 04 10:50:05.9±329.0**, 58°.59N×30°.00E, h0^{km}, Error ellipse: s-maj=128.0km s-min=91.1km az=114.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**4.31**	**113**	I	I	11 18 17.4	
	baz=299,slow=309,SNR=1.2						
I37NO	**I37NO**	**11.63**	**339**	I	I	12 00 24.6	
	baz=146,slow=325,SNR=2.6						
I26DE	**FREYUNG INFRAS**	**13.68**	**232**	I	I	12 08 40.0	
	baz=39,slow=319,SNR=0.7						

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*SNET **04** 11:27:15.1±1.1, 13°.18N×89°.51W, h55^{km}, ML3.7*

*CATAC **04** 11:27:16.3±0.5, 13°N±4°×8°9W±°, h34^{km}±4^{km}, M3.7/24, MLv3.7/24, Error ellipse: s-maj=9.1km s-min=4.7km az=19.7, confirmed*

*GCG **04** 11:27:17.0±0.6, 13°.32N×89°.51W, h53^{km}±4^{km}, MD3.8, ML3.6*

ISC 04 11:27:16.2±1.7**, 13°.20N**±0°.09×**89°.49W**±0°.06**, h53^{km}**±11^{km}**, n62, σ0^{s}.62**/65**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.33**	**29**	*e*P	**Pn**	**11 27 25.9**	**0.0**
LALI				*e*S	**Sn**	**11 27 32.5**	**-0.3**
LALI	**Alcalda de L**	**0.33**	**29**	*i* P	**Pn**	**11 27 25.9**	**0.0**
LALI				*i* S	**Sn**	**11 27 32.6**	**-0.2**
LALI				IAML		11 27 34.3	
	comp=N,1µm,0.2s						
LALI	**Alcalda de L**	**0.33**	**29**	P	**Pn**	**11 27 26.0**	**0.0**
JAYA	**Jayaque - finc**	**0.45**	**4**	*i* P	**Pn**	**11 27 27.0**	**-0.4**
JAYA				*i* S	**Sn**	**11 27 34.6**	**-0.7**
JAYA	**Jayaque - finc**	**0.45**	**4**	S	**Sn**	**11 27 35.4**	**+0.1**
JAYA	**Jayaque - finc**	**0.45**	**4**	P	**Pn**	**11 27 27.1**	**-0.2**
PANCS	**Alcalda de**	**0.51**	**36**	P	Pn	11 27 35.7	+7.9
ITCA	**Escuela Especi**	**0.51**	**23**	P	**Pn**	**11 27 27.7**	**-0.2**
ITCA	**Escuela Especi**	**0.51**	**23**	S	**Sn**	**11 27 36.5**	**+0.2**
PMON	**Piamonte**	**0.53**	**18**	P	**Pn**	**11 27 28.0**	**-0.2**
LOMA	**Loma Larga**	**0.54**	**35**	P	**Pn**	**11 27 28.0**	**-0.3**
LOMA	**Loma Larga**	**0.54**	**35**	S	**Sn**	**11 27 37.1**	**+0.2**
SEMO	**Seminario San**	**0.56**	**27**	P	Pn	11 27 38.2	+10
UEES	**Universidad Ev**	**0.56**	**25**	*e*P	**Pn**	**11 27 28.3**	**-0.2**
UEES				*e*S	**Sn**	**11 27 37.5**	**+0.1**
UEES	**Universidad Ev**	**0.56**	**25**	P	**Pn**	**11 27 28.5**	**0.0**
BOQS	**Boqueron**	**0.57**	**21**	*e*P	**Pn**	**11 27 28.6**	**-0.1**
UTEC	**Universidad Te**	**0.57**	**29**	P	**Pn**	**11 27 28.5**	**-0.1**
UTEC	**Universidad Te**	**0.57**	**29**	S	**Sn**	**11 27 37.5**	**0.0**
LFRS	**El Faro**	**0.59**	**44**	*e*P	**Pn**	**11 27 28.6**	**-0.3**
LFRS				*e*S	**Sn**	**11 27 38.6**	**+0.7**
IGN	**Direccin Gen**	**0.59**	**31**	P	**Pn**	**11 27 28.8**	**0.0**
IGN	**Direccin Gen**	**0.59**	**31**	S	**Sn**	**11 27 38.4**	**+0.4**
UDBS	**Universidad Do**	**0.60**	**32**	P	**Pn**	**11 27 29.1**	**+0.1**
UDBS	**Universidad Do**	**0.60**	**32**	S	**Sn**	**11 27 38.4**	**+0.2**
CEDA	**San Andres**	**0.60**	**8**	P	**Pn**	**11 27 29.0**	**+0.1**
CEDA	**San Andres**	**0.60**	**8**	S	**Sn**	**11 27 38.6**	**+0.4**
CEVE	**Cerro Verde**	**0.64**	**348**	*e*P	**Pn**	**11 27 29.6**	**0.0**
CEVE				*e*S	**Sn**	**11 27 39.8**	**+0.5**
CEVE	**Cerro Verde**	**0.64**	**348**	P	**Pn**	**11 27 29.7**	**+0.1**
SBLS	**San Blas**	**0.65**	**348**	*e*P	**Pn**	**11 27 29.5**	**-0.2**
COEG	**Centro de Oper**	**0.72**	**55**	P	**Pn**	**11 27 30.0**	**-0.4**
COEG	**Centro de Oper**	**0.72**	**55**	S	**Sn**	**11 27 40.5**	**-0.3**
PAVA	**Las Pavas**	**0.74**	**46**	P	**Pn**	**11 27 30.8**	**+0.1**
PAVA	**Las Pavas**	**0.74**	**46**	S	**Sn**	**11 27 42.0**	**+0.8**
NUBE	**Las Nubes**	**0.75**	**338**	*i* P	**Pn**	**11 27 30.6**	**-0.4**
NUBE				*i* S	**Sn**	**11 27 41.4**	**-0.3**
NUBE	**Las Nubes**	**0.75**	**338**	P	**Pn**	**11 27 30.8**	**-0.2**
TECO	**Alcaldia de Te**	**0.76**	**64**	P	**Pn**	**11 27 30.4**	**-0.5**
UNIC	**Universidad Ca**	**0.78**	**355**	*e*P	**Pn**	**11 27 29.9**	**-1.3**
UNIC	**Universidad Ca**	**0.78**	**355**	P	**Sn**	**11 27 43.9**	**+1.8**
UESV	**Universidad de**	**0.81**	**57**	*e*P	**Pn**	**11 27 31.2**	**-0.3**
UESV	**Universidad de**	**0.81**	**57**	P	**Pn**	**11 27 31.3**	**-0.2**
UESV	**Universidad de**	**0.81**	**57**	S	**Sn**	**11 27 42.9**	**+0.2**
FAME	**Alcaldia de Sa**	**0.82**	**321**	P	**Pn**	**11 27 31.3**	**-0.4**
LOAL	**Lomas de Alarc**	**0.84**	**340**	P	**Pn**	**11 27 32.0**	**0.0**
SLOZ	**Alcaldia de Sa**	**0.87**	**341**	P	**Pn**	**11 27 32.3**	**0.0**
SCLA	**Alcaldia de Sa**	**0.89**	**56**	P	**Pn**	**11 27 32.5**	**-0.1**
PQSS	**Presa 15 de Se**	**0.99**	**65**	P	**Pn**	**11 27 33.7**	**-0.2**
PACA	**Pacayal**	**1.16**	**77**	*e*P	**Pn**	**11 27 36.6**	**+0.3**
PACA	**Pacayal**	**1.16**	**77**	P	**Pn**	**11 27 36.6**	**+0.3**
PACA	**Pacayal**	**1.16**	**77**	S	**Sn**	**11 27 51.5**	**+0.3**
RANC	**El Ranchito**	**1.19**	**79**	P	**Pn**	**11 27 33.9**	**-2.8**
MTO3	**Montecristo**	**1.20**	**6**	*i* P	**Pn**	**11 27 36.3**	**-0.6**
MTO3	**Montecristo**	**1.20**	**6**	P	**Pn**	**11 27 36.4**	**-0.6**
ESQI	**Esquipulas**	**1.36**	**6**	P	**Pn**	**11 27 38.8**	**-0.2**
FG16	**Alotenango, Sa**	**1.46**	**317**	*i* P	Pn	11 27 45.8	+5.4
FG16				*i* S	Sn	11 28 07.4	+8.9
FG16				IAML		11 28 12.3	
	comp=N,2µm,0.2s						
CNCH	**Conchagua**	**1.61**	**87**	P	**Pn**	**11 27 42.4**	**+0.1**
ESSG	**Sabana Grande**	**1.76**	**312**	*i* P	**Pn**	**11 27 44.2**	**-0.2**
ESSG				IAML		11 28 08.5	
	comp=E,363nm,0.4s						
CSGN	**Cosiguina Volc**	**1.89**	**97**	P	**Pn**	**11 27 46.4**	**+0.2**
STG8	**El Palmar, Qui**	**2.20**	**305**	*i* P	Pn	11 27 55.9	+5.4
STG8				IAML		11 28 29.9	
	comp=E,452nm,0.2s						
QUEN	**Al S del Volca**	**2.64**	**103**	P	**Pn**	**11 27 56.4**	**+0.1**
HERN	**Volcan Telica**	**2.65**	**103**	P	**Pn**	**11 27 56.4**	**-0.2**
HOYN	**Al Sur del Vol**	**2.66**	**103**	P	**Pn**	**11 27 57.6**	**+0.9**
POLN	**Al Sur del Vol**	**2.66**	**102**	P	**Pn**	**11 27 54.6**	**-2.1**
COPN	**Copaltepe**	**3.00**	**109**	P	**Pn**	**11 28 01.9**	**+0.6**

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*HEL **04** 11:28:38.4±0.2, 68°.06N×33°.03E, h0^{km}, ML1.7, Explosion*

*UPP **04** 11:28:38.0±3.0, 68°.01N×33°.03E, h0^{km}, ML1.8*

*KOLA **04** 11:28:39.6, 68°.10N×33°.19E, h0^{km}, ML2.1, Error ellipse: s-maj=2.6km s-min=1.5km az=90.0, Olenegorsk City, Mines*

*IDC **04** 11:28:41.9±2.7, 68°.17N×32°.47E, h0^{km}, mbtmp2.9/2, ML2.0/2, Error ellipse: s-maj=32.7km s-min=13.6km az=59.0*

ISC 04 11:28:37.5±0.8**, 68°.07N**±0°.02×**32°.99E**±0°.03**, h0^{km}, n43, σ1^{s}.10**/62**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA0	**Apatity Array**	**0.46**	**180**	S	**Sb**	**11 28 55.7**	**-0.2**
APA	**Apatity**	**0.52**	**162**	S	**Sg**	**11 28 55.5**	**+1.2**
LVZ	**Lovozero**	**0.65**	**104**	P	**Pg**	**11 28 49.6**	**-0.3**
LVZ				S	**Sg**	**11 28 57.8**	**-0.5**
LVZ	**Lovozero**	**0.65**	**104**	PG	**Pg**	**11 28 49.8**	**-0.1**
TERR	**Teriberka**	**1.38**	**33**	P	**Pg**	**11 29 02.4**	**-1.6**
TERR				S	**Sg**	**11 29 20.2**	**-1.6**
KVDA	**Kovda**	**1.38**	**182**	S	**Sn**	**11 29 23.9**	**+1.0**
PRVG	**Vayda Guba**	**1.71**	**351**	P	**Pb**	**11 29 09.9**	**+0.1**
PRVG				S	**Sg**	**11 29 33.6**	**+1.1**
RAJF	**Raja-Jooseppi**	**1.79**	**285**	PG	**Pb**	**11 29 10.6**	**-0.5**
RAJF				SG	**Sn**	**11 29 33.1**	**+0.1**
OLKF	**Oulanka, Finla**	**2.24**	**220**	PG	**Pb**	**11 29 17.9**	**-1.0**
OLKF				MSG		11 29 45.0	
	comp=Z,3.7nm,0.2s						
OLKF				SG	**Sb**	**11 29 47.5**	**+0.4**
KU6	**Riekki**	**2.38**	**212**	PG	**Pb**	**11 29 20.8**	**-0.4**
	baz=33						
KU6				MSG		11 29 48.9	
	comp=Z,1.9nm,0.2s						
VADS	**Vadso**	**2.44**	**329**	P	**Pb**	**11 29 20.7**	**-1.5**
VADS				S	**Sn**	**11 29 49.8**	**+0.7**
VADS	**Vadso**	**2.44**	**329**	*e*P	**Pn**	**11 29 18.1**	**-0.4**
MSF	**Maaselka**	**2.66**	**217**	PG	**Pb**	**11 29 25.3**	**-0.7**
MSF				SG	**Sg**	**11 30 01.3**	**-1.7**
KEV	**Kevo**	**2.75**	**311**	*e*P	Pn	11 29 12.6	-10
KEV	**Kevo**	**2.75**	**311**	PB	**Pn**	**11 29 22.8**	**0.0**
KEV				SB	**Sn**	**11 29 57.8**	**+1.2**
KEV				MSG		11 29 59.8	
	comp=Z,3.7nm,0.2s						
KU2	**Taivalkoski**	**3.02**	**221**	PG	**Pb**	**11 29 30.5**	**-1.6**
RNF	**Rovaniemi**	**3.07**	**245**	PN	**Pn**	**11 29 28.3**	**+1.1**
RNF				SN	**Sn**	**11 30 05.7**	**+1.1**
ARA0	**ARCESS Array S**	**3.09**	**302**	PB	**Pn**	**11 29 28.4**	**+0.9**
ARA0				SG	**Sb**	**11 30 13.9**	**+2.4**
ARCES	**ARCESS Array B**	**3.09**	**302**	Pn	**Pn**	**11 29 28.3**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=119,slow=15,SNR=13						
ARCES				Sn	**Sn**	**11 30 05.8**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=118,slow=23,SNR=2.6						
ARCES				Lg	Lg	11 30 11.8	
	comp=Z,0.7nm,0.3s,baz=115,slow=34,SNR=6.4						
ARCES				Rg	Rg	11 30 26.4	
	comp=Z,3.2nm,0.5s,baz=124,slow=28,SNR=5.0						
	comp=Z,1.4nm,0.7s						
ARCES	**ARCESS Array B**	**3.09**	**302**	P	**Pn**	**11 29 28.4**	**+0.9**
ARCES				S	**Sn**	**11 30 06.3**	**+1.1**
RANF	**Ranua**	**3.19**	**233**	PN	**Pn**	**11 29 29.7**	**+0.9**
	baz=43						
RANF				SB	**Sb**	**11 30 15.0**	**+0.8**
HEF	**Hetta**	**3.49**	**280**	PN	**Pn**	**11 29 33.7**	**+0.7**
	baz=90						
HEF				SN	**Sn**	**11 30 14.8**	**-0.2**
KLF	**Kolari**	**3.55**	**261**	PN	**Pn**	**11 29 35.7**	**+1.9**
KLF				SG	**Sg**	**11 30 30.0**	**-1.3**
KTK1	**Kautokeino**	**3.71**	**289**	PN	**Pn**	**11 29 37.5**	**+1.5**
KTK1				SG	**Sb**	**11 30 32.8**	**+3.5**
PAJU	**Pajala**	**3.93**	**259**	P	**Pn**	**11 29 39.3**	**+0.3**
PAJU	**Pajala**	**3.93**	**259**	PN	**Pn**	**11 29 39.5**	**+0.5**
	baz=75						
PAJU				SN	**Sn**	**11 30 26.9**	**+1.1**
TOF	**Tornio**	**3.93**	**244**	SG	**Sg**	**11 30 43.1**	**-0.6**
RMF	**Romuvaara**	**4.06**	**199**	PN	**Pn**	**11 29 41.2**	**+0.4**
MASU	**Masugnsbyn**	**4.22**	**267**	P	**Pn**	**11 29 42.8**	**-0.2**
KALU	**Kalix**	**4.38**	**244**	P	**Pn**	**11 29 45.5**	**+0.3**
KALU				S	**Sn**	**11 30 36.0**	**-0.9**
KALU	**Kalix**	**4.38**	**244**	PN	**Pn**	**11 29 45.8**	**+0.6**
KALU				SN	**Sn**	**11 30 36.8**	**-0.2**
ERTU	**Ertsjaerv**	**4.45**	**255**	P	**Pn**	**11 29 46.0**	**-0.2**
ERTU	**Ertsjaerv**	**4.45**	**255**	PN	**Pn**	**11 29 46.3**	**+0.2**
ERTU				SN	**Sn**	**11 30 38.4**	**-0.2**
KIF	**Kilpisjarvi**	**4.58**	**287**	SN	**Sn**	**11 30 40.7**	**-0.9**
KUA	**Kurravaara**	**4.76**	**275**	P	**Pn**	**11 29 50.3**	**-0.1**
KOVU	**Salmi**	**4.80**	**278**	P	**Pn**	**11 29 51.2**	**+0.2**
KOVU				S	**Sn**	**11 30 46.7**	**-0.4**
DUNU	**Dundret**	**4.85**	**265**	P	**Pn**	**11 29 52.2**	**+0.6**
RATU	**Laukkuluspa**	**5.06**	**273**	P	**Pn**	**11 29 54.5**	**0.0**
HARU	**Harads**	**5.06**	**253**	P	**Pn**	**11 29 53.9**	**-0.6**
SJUU	**Sjulsmark**	**5.18**	**246**	P	**Pn**	**11 29 55.2**	**-1.0**
I37NO	**I37NO**	**5.37**	**287**	I	I	11 59 15.0	
	comp=Z,0.1nm,1.1s,baz=93,slow=312,SNR=10						
FAUS	**Fauske**	**6.76**	**272**	S	**Sn**	**11 31 33.6**	**-1.8**
FINES	**FINESS Array B**	**7.27**	**207**	Pn	**Pn**	**11 30 27.6**	**+2.7**
	comp=Z,0.1nm,0.3s,baz=36,slow=13,SNR=2.7						
	comp=Z,2.1nm,0.9s						

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*IDC **04** 11:34:04.1±0.8, 12°.08S×165°.73E, h0^{km}, mb4.4/14, mbtmp4.4/16, ML4.2/2, MS3.7/9, Error ellipse: s-maj=27.9km s-min=17.7km az=99.0*

*NEIC **04** 11:34:06.1±1.8, 12°.12S±0°.10×165°.8E±0°.1, h10^{km}±1^{km}, mb4.9/34, Error ellipse: s-maj=20.5km s-min=14.8km az=61.0*

ISC 04 11:34:05.7±0.6**, 12°.12S**±0°.07×**165°.72E**±0°.10**, h10^{km}, n69, σ0^{s}.82**/66**, mb4.8**/30**, MS3.7**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.27**	**295**	Pn	**Pn**	**11 35 38.6**	**+0.2**
HNR	**Honiara**	**6.27**	**295**	Pn	**Pn**	**11 35 39.4**	**+1.1**
	15nm,0.3s,baz=270,slow=5.0,SNR=4.6						
HNR				Sn	**Sn**	**11 36 49.5**	**-0.5**
	7.1nm,0.3s,baz=132,slow=8.2,SNR=4.6						
HNR				LR	LR	11 38 21.8	
	comp=Z,260nm,18.7s,baz=144,slow=41						
	64nm,0.3s						
DZM	**Mont Dzumac**	**9.92**	**176**	Pn	**Pn**	**11 36 27.2**	**-1.3**
DZM	**Mont Dzumac**	**9.92**	**176**	Pn	**Pn**	**11 36 30.3**	**+1.8**
	0.8nm,0.3s,baz=158,slow=21,SNR=9.2						
DZM				Sn	**Sn**	**11 38 20.5**	**+0.4**
	baz=160,slow=18,SNR=1.6						
	4.4nm,0.5s						
ONTNC	**Ouen Toro**	**10.15**	**176**	Pn	**Pn**	**11 36 31.5**	**-0.1**
PMG	**Port Moresby**	**18.43**	**277**	LR	LR	11 45 15.6	
	comp=Z,188nm,18.2s,baz=155,slow=36						
CTAO	**Charters Tower**	**20.29**	**245**	P	**P**	**11 38 40.6**	**-1.3**
MANU	**Manus Island**	**20.76**	**297**		**P**	**11 38 46.6**	**-0.4**
MANU				IAmb	IAmb	11 38 51.9	
	comp=Z,63nm,1.4s						
ARMA	**Armidale**	**22.40**	**213**		**P**	**11 39 04.0**	**-0.6**
ARMA				IAmb	IAmb	11 39 10.3	
	comp=Z,57nm,1.2s						
STKA	**Stephens Creek**	**29.65**	**225**	P	**P**	**11 40 10.8**	**-0.9**
	comp=Z,5.3nm,1.1s,baz=110,slow=5.0,SNR=3.9						
STKA				LR	LR	11 51 03.1	
	comp=Z,95nm,18.1s,baz=25,slow=34						
	comp=Z,5.3nm,1.1s						
WB0	**Warramunga Arr**	**31.02**	**252**		**P**	**11 40 23.8**	**-0.1**
WRA	**Warramunga Arr**	**31.10**	**251**	P	**P**	**11 40 24.4**	**-0.3**
WRA	**Warramunga Arr**	**31.10**	**251**	P	**P**	**11 40 24.5**	**-0.1**
	comp=Z,8.5nm,1.2s,baz=83,slow=8.8,SNR=11						
	comp=Z,8.5nm,1.2s						
AS31	**Alice Springs**	**32.29**	**245**	P	**P**	**11 40 35.4**	**+0.2**
ASAR	**Alice Springs**	**32.30**	**245**	P	**P**	**11 40 35.0**	**-0.2**
ASAR	**Alice Springs**	**32.30**	**245**	P	**P**	**11 40 34.9**	**-0.3**
	comp=Z,2.9nm,0.9s,baz=77,slow=9.4,SNR=17						
ASAR				PcP	**PcP**	**11 43 24.2**	**+0.8**
	comp=Z,0.8nm,1.0s,baz=80,slow=4.2,SNR=2.5						
ASAR				LR	LR	11 53 27.4	
	comp=Z,85nm,18.2s,baz=92,slow=36						
	comp=Z,2.9nm,0.9s						
PPT	**Papeete**	**43.48**	**103**	LR	LR	11 58 23.6	
	comp=Z,98nm,18.5s,baz=138,slow=34						
KAPI	**Kappang**	**45.94**	**275**	P	**P**	**11 42 29.9**	**+0.6**
KAPI				IAmb	IAmb	11 42 36.4	
	comp=Z,20nm,1.2s						
TOLI2	**Tolitoli**	**46.51**	**283**		**P**	**11 42 34.3**	**+0.5**
TOLI2				IAmb	IAmb	11 42 35.4	
	comp=Z,21nm,1.3s						
NWAO	**Narrogin (SRO)**	**48.84**	**237**	LR	LR	12 03 29.7	
	comp=Z,119nm,18.4s,baz=288,slow=36						
JMN	**Monobe**	**54.75**	**327**	P	**P**	**11 43 35.0**	**-0.7**
MJAR	**Matsushiro Arr**	**54.91**	**333**	P	**P**	**11 43 34.8**	**-2.0**
	comp=Z,6.4nm,1.0s,baz=159,slow=6.7,SNR=11						
	comp=Z,6.4nm,1.0s						
MAJO	**Matsushiro**	**54.91**	**333**	P	**P**	**11 43 36.5**	**-0.3**
MAJO				IAmb	IAmb	11 43 37.3	
	comp=Z,8.8nm,0.9s						
MJB9	**Matsu-Tunnel**	**54.91**	**333**	P	**P**	**11 43 36.2**	**-0.6**
MJB9				IAmb	IAmb	11 43 37.3	
	comp=Z,9.3nm,1.0s						
NACB	**Ninganchiao**	**56.20**	**310**	P	**P**	**11 43 46.1**	**-0.2**
NACB				IAmb	IAmb	11 44 13.7	
	comp=Z,13nm,0.8s						
JKA	**Kamikawa-asahi**	**59.79**	**341**	P	**P**	**11 44 11.9**	**+0.8**
JKA				IAmb	IAmb	11 44 37.8	
	comp=Z,10nm,1.1s						
KSRS	**Korea Array**	**60.75**	**326**	P	**P**	**11 44 16.7**	**-1.0**
	comp=Z,2.3nm,1.0s,baz=145,slow=7.6,SNR=8.4						
	comp=Z,2.3nm,1.0s						
USA0B	**Ussuriysk Arra**	**63.89**	**334**	P	**P**	**11 44 39.0**	**+0.3**
USA0B				IAmb	IAmb	11 44 40.7	
	comp=Z,10.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**63.89**	**334**		**P**	**11 44 39.2**	**+0.5**
USRK	**Ussuriysk Ar.**	**63.89**	**334**	P	**P**	**11 44 38.5**	**-0.2**
	comp=Z,12nm,1.1s,baz=143,slow=6.1,SNR=11						
	comp=Z,12nm,1.1s						
PEA0B	**Petropavlovsk-**	**65.33**	**355**	P	**P**	**11 44 48.2**	**+0.3**
PETK	**Petropavlovsk-**	**65.33**	**355**	P	**P**	**11 44 48.8**	**+0.9**
PETK	**Petropavlovsk-**	**65.33**	**355**	P	**P**	**11 44 48.6**	**+0.7**
	comp=Z,1.5nm,0.8s,baz=196,slow=14,SNR=2.8						
	comp=Z,1.5nm,0.8s						

KULM	**Kulim**	66.95	281	P	P	11 45 00.5	+1.3
KULM				IAmb	IAmb	11 45 02.6	
	comp=Z,12nm,1.2s						
RPSI	**Rantau Prapat**	67.96	278	P	P	11 45 06.3	+0.7
ENH	**Enshi**	68.55	309	P	P	11 45 09.8	+0.9
GSI	**Gunungsitoli**	68.94	276	P	P	11 45 12.7	+1.0
CM31	**Chiang Mai Arr**	72.52	294	P	P	11 45 34.0	+0.7
CMAR	**Chiang Mai Arr**	72.52	294		P	11 45 32.5	-0.9
CMAR	**Chiang Mai Arr**	72.52	294	P	P	11 45 35.2	+1.8
	comp=Z,2.7nm,1.0s,baz=115,slow=4.3,SNR=13						
	comp=Z,2.7nm,1.0s						
CHTO	**Chiang Mai**	72.63	294	P	P	11 45 33.8	-0.3
CHTO				IAmb	IAmb	11 45 36.9	
	comp=Z,12nm,1.5s						
HIA	**Hailar**	73.29	331	P	P	11 45 37.7	+0.4
HIA				IAmb	IAmb	11 45 40.5	
	comp=Z,12nm,1.3s						
QSPA	**South Pole Qui**	77.89	180	P	P	11 46 04.3	+0.7
QSPA				IAmb	IAmb	11 46 24.2	
	comp=Z,13nm,1.2s						
QSPA	**South Pole Qui**	77.89	180	P	P	11 46 03.5	-0.1
	comp=Z,5.5nm,1.0s,baz=346,slow=2.2,SNR=9.0						
	comp=Z,5.5nm,1.0s						
SONM	**Songino Array**	79.51	324		P	11 46 13.3	+0.5
SONM	**Songino Array**	79.51	324	P	P	11 46 13.3	+0.5
	comp=Z,2.4nm,0.9s,baz=134,slow=5.3,SNR=11						
	comp=Z,2.4nm,0.9s						
KLU	**Klutina**	82.61	21	P	P	11 46 28.1	-0.9
KLU				IAmb	IAmb	11 46 52.4	
	comp=Z,7.7nm,1.5s						
M24K	**Tolsona, Glenn**	82.94	21	P	P	11 46 30.0	-0.7
M24K				IAmb	IAmb	11 46 50.7	
	comp=Z,8.3nm,0.9s						
CCB	**Clear Creek Bu**	84.17	18	P	P	11 46 36.5	-0.3
HDA	**Harding Lake**	84.27	19	P	P	11 46 37.4	0.0
HDA				IAmb	IAmb	11 46 59.9	
	comp=Z,4.0nm,0.9s						
ILAR	**Eielson Array**	84.54	18	P	P	11 46 38.7	0.0
	comp=Z,0.4nm,0.7s,baz=219,slow=9.2,SNR=5.5						
	comp=Z,0.4nm,0.7s						
J25K	**Salcha River,**	84.91	19		P	11 46 41.1	+0.4
J25K				IAmb	IAmb	11 47 04.6	
	comp=Z,9.0nm,1.4s						
SCRK	**Sand Creek**	84.93	20		P	11 46 40.2	-0.7
EVN	**Everest**	86.03	300	P	P	11 46 47.6	-0.2
EVN				IAmb	IAmb	11 47 03.9	
	comp=Z,6.3nm,1.1s						
NVAR	**Mina Array Bea**	86.74	50	LR	LR	12 19 26.3	
	comp=Z,78nm,18.3s,baz=201,slow=31						
H27K	**Steamboat Moun**	87.18	19	P	P	11 46 52.7	+0.8
MKAR	**Makanchi Array**	94.28	317		P	11 47 25.7	+0.2
MKAR	**Makanchi Array**	94.28	317	P	P	11 47 23.4	-2.0
	comp=Z,2.5nm,0.9s,baz=96,slow=6.7,SNR=12						
	comp=Z,2.5nm,0.9s						
ZALV	**Zalesovo Beam**	94.41	324		P	11 47 24.8	-1.0
ZALV	**Zalesovo Beam**	94.41	324	P	P	11 47 24.3	-1.5
	comp=Z,0.5nm,0.2s,baz=121,slow=6.9,SNR=1.7						
	comp=Z,0.5nm,0.2s						
MAKZ	**Makanchi**	94.50	317		P	11 47 26.1	-0.4
ANMO	**Albuquerque**	95.08	56	LR	LR	12 23 35.7	
	comp=Z,48nm,19.0s,baz=299,slow=31						
TXAR	**Lajitas Array**	96.37	61	LR	LR	12 24 22.0	
	comp=Z,20nm,19.5s,baz=204,slow=31						
NRIK	**Noril'sk**	97.11	340		P	11 47 37.3	-0.5
NRIK	**Noril'sk**	97.11	340	P	P	11 47 36.9	-0.9
	comp=Z,2.7nm,0.8s,baz=101,slow=5.9,SNR=4.6						
	comp=Z,2.7nm,0.8s						
NOA	**NORSAR Array B**	127.73	345	PKP	PKPdf	11 53 10.1	-1.2
	comp=Z,0.3nm,0.6s,baz=31,slow=2.6,SNR=1.9						
BRTR	**Keskin Array B**	129.66	312	PKP	PKPdf	11 53 15.9	+0.2
	comp=Z,0.4nm,0.7s,baz=76,slow=6.1,SNR=3.8						
KEST	**Kesra**	148.24	322	PKPbc	PKPbc	11 53 52.7	0.0
	comp=Z,6.5nm,1.0s,baz=107,slow=2.5,SNR=7.3						
ESDC	**Sonseca Array**	151.08	343	PKPbc	PKiKP	11 53 60.0	-0.2
	comp=Z,2.6nm,1.0s,baz=1.9,slow=2.3,SNR=11						

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*OSPL **04** 11:58:35.0±0.9, 20.°04N×72.°63W, h0^{km}±5^{km}, ML2.8*
*SSNC **04** 11:58:36.6±1.6, 20.°15N×72.°56W, h11^{km}±12^{km}, MD3.2, ML2.7, MW2.7*
*SDD **04** 11:58:37.2±2.4, 20.°13N×72.°67W, h33^{km}±450^{km}, MD3.6, ML3.0, MW3.3*
ISC 04 11:58:32.1±1.2**, 20.°13N**±0.°06×**72.°59W**±0.°03**, h9**^{km}±11^{km}**, n22,** $\sigma 1^{s}$**21**/35**, 3C-4D, Haiti region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCDR	**Montecristi**	0.91	105	⇓*e*Pg	Pn	11 58 52.1	+1.0
MCDR				⇓*e*Sg	Sn	11 59 06.1	+1.8
MCDR				IAML		11 59 07.1	
	comp=N,1μm,0.2s						
MCDR				IAML		11 59 11.1	
	comp=E,1μm,0.6s						
LODA1	**ITESIL, Dajabo**	1.01	125	*e*S	Sg	11 59 05.9	+1.1
LODA1				IAML		11 59 07.2	
	comp=Z,919nm,1.3s						
REDR	**Restauracion**	1.48	130	⇓*e*Pg	Pn	11 58 55.4	-3.5
REDR				IAML		11 59 13.2	
	comp=E,901nm,0.1s						
REDR				IAML		11 59 15.1	
	comp=N,459nm,0.2s						
MASC	**Masc**	1.54	272	*e*P	Pg	11 59 01.8	0.0
MASC				*e*S	Sb	11 59 20.8	+0.2
MASC				*e*Sg	Sg	11 59 22.6	+0.8
MASC				IAML		11 59 23.7	
	comp=E,66nm,0.4s						
MASC				IAML		11 59 24.1	
	comp=N,92nm,0.6s						
MASC	**Masc**	1.54	272	*i* P	Pg	11 59 01.8	0.0
MASC				*e*S	Sb	11 59 20.3	-0.3
MASC				IAML		11 59 25.0	
	comp=Z,56nm,0.4s						
LUDR	**Luperon**	1.56	98	*e*Pg	Pg	11 59 02.4	+0.4
LUDR				IAML		11 59 32.8	
	comp=E,569nm,0.2s						
LUDR				IAML		11 59 34.6	
	comp=N,653nm,0.3s						
PAPH	**Port-au-Prince**	1.62	170	*e*P	Pn	11 59 00.4	-0.5
PAPH				*e*S	Sn	11 59 21.5	-0.4
PAPH				IAML		11 59 24.8	
	comp=E,69nm,0.3s						
PAPH				IAML		11 59 24.9	
	comp=N,93nm,0.2s						
SDDR	**Presa de Saban**	1.68	133	*e*P	Pb	11 59 03.3	+0.1
SDDR				*e*S	Sn	11 59 23.5	+0.2
SDDR				IAML		11 59 27.7	
	comp=N,90nm,0.3s						
SDDR				IAML		11 59 30.3	
	comp=N,116nm,0.4s						
SDDR	**Presa de Saban**	1.68	133	⇑*e*Pg	Pb	11 59 03.2	+0.1
SDDR				*e*Sg	Sb	11 59 24.7	+0.3
SDDR				IAML		11 59 27.1	
	comp=N,114nm,0.9s						
SDDR				IAML		11 59 30.3	
	comp=E,113nm,0.3s						
SDDR	**Presa de Saban**	1.68	133	*i* P	Pb	11 59 03.5	+0.3
SDDR				*e*S	Sb	11 59 23.9	-0.5
SDDR				IAML		11 59 31.0	
	comp=Z,107nm,0.3s						
GRTK	**Grand Turk**	1.94	44	*e*Pg	Pg	11 59 08.2	-1.1
GRTK				IAML		11 59 36.0	
	comp=E,48nm,0.2s						
GRTK				IAML		11 59 44.1	
	comp=N,49nm,0.2s						
GRTK	**Grand Turk**	1.94	44	*i* P	Pg	11 59 08.2	-1.1
QMBU	**Quimbuelo**	2.09	272	*e*P	Pn	11 59 07.9	+0.5
QMBU				*e*S	Sn	11 59 33.1	-0.4
QMBU				IAML		11 59 38.2	
	comp=E,78nm,0.3s						
QMBU				IAML		11 59 38.2	
	comp=N,76nm,0.4s						
QMBU	**Quimbuelo**	2.09	272	⇓*e*Pg	Pn	11 59 08.5	+1.1
QMBU				IAML		11 59 41.2	
	comp=N,58nm,0.3s						
ABDR	**Alto Bandera**	2.27	125	⇑*e*Pg	Pb	11 59 13.0	-0.5
ABDR				IAML		11 59 43.9	
	comp=E,56nm,0.4s						
ABDR				IAML		11 59 55.5	
	comp=N,53nm,0.7s						
NMDO	**Nuevo Mundo**	2.29	281	*e*P	Pn	11 59 10.3	+0.2
NMDO				*e*S	Sb	11 59 40.3	-1.7
NMDO				IAML		11 59 51.2	
	comp=E,36nm,0.1s						
NMDO				IAML		11 59 51.8	
	comp=N,39nm,0.4s						
PODR	**Polo**	2.31	147	*e*Pg	Pb	11 59 13.7	-0.4
PODR				IAML		11 59 53.9	
	comp=N,33nm,0.5s						
GTBY	**Guantanamo Bay**	2.38	266	*e*P	Pn	11 59 11.4	0.0
GTBY				*e*S	Sn	11 59 42.2	+1.5
GTBY				IAML		11 59 43.7	
	comp=N,19nm,0.5s						
GTBY				IAML		11 59 45.1	
	comp=N,29nm,0.7s						
GTBY	**Guantanamo Bay**	2.38	266	⇑*e*Pg	Pn	11 59 11.5	+0.1
GTBY				IAML		11 59 48.2	
	comp=E,20nm,0.4s						
GTBY				IAML		12 00 29.6	
	comp=N,22nm,1.9s						
PINC	**Pinares de May**	3.03	277	*e*P	Pn	11 59 22.0	+1.8
PINC				*e*S	Sb	12 00 00.2	-3.1
PINC				IAML		12 00 06.2	
	comp=E,18nm,0.8s						
PINC				IAML		12 00 09.5	
	comp=N,19nm,0.6s						
MARVS	**Santiago de Cu**	3.12	268	*e*P	Pn	11 59 21.6	+0.2
MARVS				*e*S	Sn	11 59 59.3	+0.5
MARVS				IAML		12 00 04.6	
	comp=E,15nm,0.6s						
MARVS				IAML		12 00 04.7	
	comp=N,20nm,0.6s						
HATOM	**Hato Mayor del**	3.31	113	*e*Pg	Pn	11 59 25.9	+1.8
HATOM				IAML		12 00 16.9	
	comp=E,32nm,0.2s						
HATOM				IAML		12 00 27.8	
	comp=N,17nm,0.8s						

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*IDC **04** 12:07:37.0±0.6, 32.°10S×57.°13E, h0^{km}, mb4.2/13, mbtmp4.2/14, ML4.9/1, MS3.6/32, Error ellipse: s-maj=22.4km s-min=17.3km az=72.0*
*NEIC **04** 12:07:40.8±1.4, 32.°2S±0.°1×56.°7E±0.°1, h10^{km}±1^{km}, mb4.7/32, Error ellipse: s-maj=19.4km s-min=15.9km az=228.0*
*GCMT **04** 12:07:40.8±0.4, 32.°19S±0.°02×57.°01E±0.°02, h24^{km}±1^{km}, MW4.9/83, Moment Tensor Solution. s14,c14; s83,c100; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.46±.15; $M_{\theta\theta}$0.15±.11; $M_{\phi\phi}$0.30±.13; $M_{r\theta}$0.26±.22; $M_{\theta\phi}$2.57±.11; $M_{\phi r}$-0.44±.25; Best double couple: $M_0$2.63500×10^{16} NP1:ϕ_s268.00000°, δ79.00000°, λ-8.00000°. NP2: ϕ_s360.00000°, δ82.00000°, λ-168.00000°. Principal axes: T 2.8070, Plg2.0000°, Azm134.0000°; N -0.3430, Plg76.0000°, Azm34.0000°; P -2.4630, Plg14.0000°, Azm224.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 04 12:07:39.9±0.5**, 32.°10S**±0.°08×**56.°75E**±0.°08**, h10**^{km}**, n89,** $\sigma 1^{s}$**55**/56**, mb4.7**/25**, MS3.7**/31**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	10.93	355	Pn	Pn	12 10 17.4	+0.9
FOMA	**Nahampoana Res**	11.14	307		Pn	12 10 21.0	+1.8
VOI	**Vohitsoka**	13.47	316		Pn	12 10 53.2	+2.0
H04N2	**CROZET ISLANDS**	14.56	194	T	T	12 25 53.1	
	baz=20,slow=75,SNR=3371						
H04N1	**CROZET ISLANDS**	14.56	194	T	T	12 25 54.2	
	baz=20,slow=75,SNR=3074						
H04N3	**CROZET ISLANDS**	14.57	194	T	T	12 25 53.0	
	baz=20,slow=75,SNR=2876						
ABPO	**Ambohimpanom**	15.59	324		P	12 11 23.1	-1.2
OPO	**Ambohidratompo**	15.99	325	Pn	Pn	12 11 27.0	+1.9
	0.4nm,0.3s,baz=128,slow=13,SNR=37						
OPO				Sn	Sn	12 14 16.7	-5.9
	0.2nm,0.3s,baz=53,slow=20,SNR=2.1						
OPO				LR	LR	12 16 08.5	
	comp=Z,184nm,18.8s,baz=4.5,slow=32						
	14nm,0.5s						
AIS	**Amsterdam Isla**	17.98	114		P	12 11 51.4	+1.0
BOSA	**Boshof**	27.35	269	LR	LR	12 22 12.9	
	comp=Z,104nm,21.1s,baz=120,slow=32						
LBTB	**Lobatse**	28.19	277	LR	LR	12 23 13.2	
	comp=Z,80nm,18.4s,baz=118,slow=33						
H08S1	**Diego Carcia H**	28.39	34	T	T	12 42 59.1	
	baz=207,slow=76,SNR=125						
H08S2	**Diego Garcia H**	28.40	34	T	T	12 43 03.8	
	baz=207,slow=76,SNR=110						
H08S3	**Diego Garcia H**	28.41	34	T	T	12 43 00.2	
	baz=207,slow=76,SNR=180						
LPHEP	**Lephephe**	28.62	280	P	P	12 13 36.8	+0.2
LPHEP				IAmb	IAmb	12 13 48.4	
	comp=Z,13nm,1.2s						
KDWAN	**Kaudwane**	29.61	279	P	P	12 13 45.8	+0.2
KDWAN				IAmb	IAmb	12 13 58.1	
	comp=Z,12nm,0.8s						
LSZ	**Lusaka**	30.92	296	LR	LR	12 25 14.1	
	comp=Z,133nm,19.3s,baz=164,slow=34						
PHDHD	**Phuduhudu**	31.13	284	P	P	12 13 59.6	+0.7
PHDHD				IAmb	IAmb	12 14 28.8	
	comp=Z,6.4nm,0.6s						
KSANE	**Kasane**	31.84	289	P	P	12 14 05.0	-0.2
KSANE				IAmb	IAmb	12 14 45.2	
	comp=Z,15nm,1.4s						
KGCAE	**Kacgae**	31.89	278	P	P	12 14 05.0	-0.7
KGCAE				IAmb	IAmb	12 14 17.9	
	comp=Z,14nm,0.9s						
QNGWA	**Qangwa**	34.23	283	P	P	12 14 25.1	-0.9
QNGWA				IAmb	IAmb	12 14 31.9	
	comp=Z,8.2nm,1.1s						
KIBK	**Kibwezi**	34.44	325	P	P	12 14 28.2	+0.4
MAW	**Mawson**	35.73	176	LR	LR	12 24 07.5	
	comp=Z,118nm,21.4s,baz=305,slow=28						
TSUM	**Tsumeb**	37.37	280	LR	LR	12 28 53.0	
	comp=Z,216nm,19.9s,baz=145,slow=34						
PALK	**Pallekele**	45.33	34	LR	LR	12 31 13.6	
	comp=Z,98nm,19.0s,baz=208,slow=31						
H01W2	**Cape Leeuwin H**	47.37	110	T	T	13 06 15.2	
	baz=255,slow=75,SNR=183						
H01W3	**Cape Leeuwin H**	47.38	110	T	T	13 06 15.6	
	baz=255,slow=75,SNR=171						
H01W1	**Cape Leeuwin H**	47.39	110	T	T	13 06 16.5	
	baz=255,slow=75,SNR=220						
NWAO	**Narrogin (SRO)**	50.38	108	LR	LR	12 33 02.5	
	comp=Z,70nm,19.9s,baz=232,slow=30						
SNAA	**Sanae**	50.39	201	P	P	12 16 37.0	+0.1
SNAA				IAmb	IAmb	12 16 48.3	
	comp=Z,7.9nm,1.1s						
SNAA	**Sanae**	50.39	201	P	P	12 16 36.8	-0.1
	comp=Z,4.4nm,0.9s,baz=93,slow=5.9,SNR=9.3						
SNAA				LR	LR	12 32 23.0	
	comp=Z,72nm,21.8s,baz=170,slow=29						
	comp=Z,4.4nm,0.9s						
RAYN	**Ar Rayn**	56.34	348	P	P	12 17 22.3	+1.1
RAYN				IAmb	IAmb	12 17 22.7	
	comp=Z,6.1nm,0.8s						
PSA00	**Pilbara Seismi**	56.58	96	P	P	12 17 23.1	+0.1
PSA00				IAmb	IAmb	12 17 42.8	
	comp=Z,4.9nm,1.0s						
MBWA	**Marble Bar**	56.66	96	P	P	12 17 24.6	+1.0
QSPA	**South Pole Qui**	58.07	180	P	P	12 17 32.6	-0.5
QSPA				IAmb	IAmb	12 17 37.0	
	comp=Z,7.5nm,0.8s						
QSPA	**South Pole Qui**	58.07	180	P	P	12 17 31.8	-1.3
	comp=Z,8.2nm,1.0s,baz=267,slow=1.8,SNR=31						
QSPA				LR	LR	12 41 24.7	
	comp=Z,55nm,18.8s,baz=281,slow=35						
	comp=Z,8.2nm,1.0s						
VNDA	**Vanda**	62.09	166	P	P	12 17 59.6	-0.7
	comp=Z,1.6nm,1.0s,baz=251,slow=8.6,SNR=4.3						
VNDA				LR	LR	12 41 02.5	
	comp=Z,72nm,20.9s,baz=252,slow=32						
	comp=Z,1.6nm,1.0s						
CMAR	**Chiang Mai Arr**	64.50	45	P	P	12 18 14.7	-2.3
	comp=Z,1.2nm,0.7s,baz=227,slow=7.2,SNR=14						
CMAR				LR	LR	12 41 50.9	
	comp=Z,50nm,19.7s,baz=190,slow=32						
	comp=Z,1.2nm,0.7s						
EIL	**Elat**	64.82	339	LR	LR	12 44 23.0	
	comp=Z,46nm,18.5s,baz=248,slow=34						
ASF	**Jabal al Asfar**	66.62	342	LR	LR	12 42 53.7	
	comp=Z,46nm,21.5s,baz=188,slow=32						
ASAR	**Alice Springs**	67.41	104	P	P	12 18 36.4	+0.4
ASAR	**Alice Springs**	67.41	104	P	P	12 18 31.8	-4.1
	comp=Z,0.8nm,0.7s,baz=237,slow=6.0,SNR=12						
	comp=Z,0.8nm,0.7s						
AS31	**Alice Springs**	67.41	104	P	P	12 18 36.0	0.0
MMAI	**Mount Meron Ar**	67.83	341	LR	LR	12 45 06.6	
	comp=Z,53nm,19.5s,baz=146,slow=33						
TOLI2	**Tolitoli**	68.81	75	P	P	12 18 46.2	+1.5
TOLI2				IAmb	IAmb	12 18 47.2	
	comp=Z,7.3nm,1.2s						
TORD	**Torodi Ar. Bea**	69.27	301	P	P	12 18 48.4	+0.9
TORD	**Torodi Ar. Bea**	69.27	301	P	P	12 18 47.2	-0.3
	comp=Z,2.1nm,0.7s,baz=125,slow=4.7,SNR=5.3						
	comp=Z,2.1nm,0.7s						
WRA	**Warramunga Arr**	69.46	101	P	P	12 18 49.6	+0.8
WRA	**Warramunga Arr**	69.46	101	P	P	12 18 45.1	-3.6
	comp=Z,0.9nm,0.6s,baz=239,slow=5.3,SNR=11						
	comp=Z,0.9nm,0.6s						
WB0	**Warramunga Arr**	69.58	101	P	P	12 18 49.9	+0.4
WB0				IAmb	IAmb	12 19 05.7	
	comp=Z,6.4nm,1.1s						
WR8	**Warramunga Arr**	69.58	101	P	P	12 18 49.3	-0.2
STKA	**Stephens Creek**	69.95	116	P	P	12 18 52.5	+0.9
STKA	**Stephens Creek**	69.95	116	P	P	12 18 49.1	-2.5
	comp=Z,1.5nm,0.8s,baz=315,slow=12,SNR=2.8						
STKA				LR	LR	12 42 49.8	
	comp=Z,83nm,21.2s,baz=205,slow=30						
	comp=Z,1.5nm,0.8s						
DBIC	**Dimbokro**	70.13	292	P	P	12 18 52.6	-0.2
	comp=Z,6.5nm,1.0s,baz=221,slow=7.4,SNR=2.9						
DBIC				LR	LR	12 46 01.4	
	comp=Z,84nm,22.0s,baz=150,slow=33						
	comp=Z,6.5nm,1.0s						
SIMJ	**Simiganj**	71.31	10	P	P	12 19 00.6	+1.0
GNI	**Garni**	72.74	350	LR	LR	12 48 40.9	
	comp=Z,38nm,21.5s,baz=179,slow=34						
ARPR	**Arapgir-MALATY**	72.87	345	P	P	12 19 10.5	+1.5
BRTR	**Keskin Array B**	74.61	342	P	P	12 19 20.7	+1.6
BRTR	**Keskin Array B**	74.61	342	P	P	12 19 18.2	-0.9
	comp=Z,0.9nm,0.9s,baz=160,slow=9.2,SNR=6.5						
	comp=Z,0.9nm,0.9s						
KK31	**Karatay Array**	75.89	10	P	P	12 19 27.2	+0.9
KK31				IAmb	IAmb	12 19 39.5	
	comp=Z,8.9nm,1.4s						
KKAR	**Karatay Array**	75.89	10	P	P	12 19 26.6	+0.3
AAK	**Ala-Archa**	76.14	13		P	12 19 28.7	+0.8
AAK				IAmb	IAmb	12 19 46.6	
	comp=Z,8.4nm,1.2s						
AAK	**Ala-Archa**	76.14	13	LR	LR	12 51 08.7	
	comp=Z,9.3nm,19.2s,baz=258,slow=34						
KBZ	**Khabaz**	76.52	350	LR	LR	12 52 04.7	
	comp=Z,26nm,21.1s,baz=154,slow=35						
PRZ	**Przheval'sk**	76.84	16	P	P	12 19 33.5	+1.5
VAE	**Valguarnera**	79.70	327	LR	LR	12 57 02.8	
	comp=Z,65nm,18.1s,baz=102,slow=37						
KEST	**Kesra**	80.80	323	LR	LR	12 56 57.0	
	comp=Z,32nm,18.4s,baz=337,slow=36						
AB31	**Akbulak array**	81.04	2	P	P	12 19 55.0	+0.4
ABKAR	**Akbulak array**	81.04	2	P	P	12 19 55.0	+0.5
MAKZ	**Makanchi**	81.77	17	P	P	12 20 00.7	+2.1
MKAR	**Makanchi Array**	81.84	17	P	P	12 19 58.6	-0.3
MKAR	**Makanchi Array**	81.84	17	P	P	12 19 57.9	-1.1
	comp=Z,0.5nm,0.7s,baz=228,slow=4.8,SNR=5.6						
	comp=Z,0.5nm,0.7s						
MLR	**Muntele Rosu**	82.13	339	LR	LR	12 55 25.0	
	comp=Z,28nm,18.4s,baz=109,slow=35						
RPZ	**Rata Peaks**	83.64	138	LR	LR	12 48 58.3	
	comp=Z,87nm,20.4s,baz=290,slow=30						
BBTS	**Babate**	84.07	291	LR	LR	12 56 05.4	
	comp=Z,36nm,18.3s,baz=1.0,slow=34						
KURBB	**Kurchatov Arra**	84.58	14	P	P	12 20 11.3	-1.7
	comp=Z,1.8nm,0.8s,baz=212,slow=5.6,SNR=4.2						
	comp=Z,1.8nm,0.8s						
KURK	**Kurchatov**	84.69	14	P	P	12 20 13.8	+0.3
KURK				IAmb	IAmb	12 20 26.6	
	comp=Z,5.8nm,1.1s						
BVAR	**Borovoye Array**	85.59	8	P	P	12 20 17.4	-0.6
	comp=Z,3.8nm,0.8s,baz=183,slow=5.6,SNR=17						
	comp=Z,3.8nm,0.8s						
GO09	**Cerro Castillo**	85.68	209	P	P	12 20 19.0	+0.2
AKASG	**Malin Array Be**	85.96	343	P	P	12 20 21.3	+1.5
AKASG	**Malin Array Be**	85.96	343	LR	LR	12 56 44.0	
	comp=Z,18nm,19.0s,baz=60,slow=34						
MDT	**Midelt**	86.71	312	LR	LR	13 01 02.8	
	comp=Z,63nm,18.2s,baz=280,slow=37						
VRAC	**Vranov**	88.58	335	LR	LR	13 02 01.9	
	comp=Z,16nm,18.3s,baz=150,slow=37						
DAVOX	**Davos/Dischmat**	89.16	330	LR	LR	13 02 59.9	
	comp=Z,17nm,19.5s,baz=260,slow=37						
ESDC	**Sonseca Array**	90.91	318	LR	LR	13 04 32.7	
	comp=Z,37nm,18.2s,baz=132,slow=38						
CPUP	**Villa Florida**	94.44	235	LR	LR	12 57 34.8	
	comp=Z,14nm,18.3s,baz=72,slow=32						
JNU	**Nakatsue**	95.32	54	LR	LR	13 00 03.3	
	comp=Z,35nm,18.5s,baz=290,slow=33						
ILAR	**Eielson Array**	144.19	17	PKP	PKPab	12 27 11.8	-1.1
	comp=Z,0.5nm,0.8s,baz=331,slow=1.9,SNR=4.4						
YKA	**Yellowknife Ar**	149.09	352	PKPbc	PKPbc	12 27 26.9	-0.7
	comp=Z,1.5nm,0.8s,baz=4.3,slow=2.9,SNR=6.0						

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*SJA **04** 12:13:03.6±0.7, 30.°35S×72.°12W, h10^{km}±3^{km}, ML4.0, MW3.8*
*NEIC **04** 12:13:06.7±2.1, 30.°39S±0.°03×72.°05W±0.°05, h21^{km}±7^{km}, mb4.4/5, ML4.0(GUC), Error ellipse: s-maj=7.4km s-min=3.0km az=55.0*
*GUC **04** 12:13:07.9±0.8, 30.°34S×71.°83W, h6^{km}±2^{km}, ML4.1*
ISC 04 12:13:05.3±1.1**, 30.°38S**±0.°02×**72.°11W**±0.°04**, h19**^{km}±3^{km}**, n94,** $\sigma 1^{s}$**67**/132**, mb4.4**/3**, 1C-4D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	0.50	125		Pg	12 13 15.6	0.0
CO06				Sg	Sg	12 13 21.6	-0.9
CO06	**Fray Jorge**	0.50	125	⇓*e*P	Pg	12 13 15.6	0.0
CO06				*e*S	Sg	12 13 21.5	-0.9
CO05	**La Serena**	0.89	59		Pb	12 13 22.4	+0.3
CO05				Sg	Sb	12 13 31.0	-2.5
CO05	**La Serena**	0.89	59	*e*P	Pb	12 13 20.9	-1.2
CO05				*e*S	Sb	12 13 31.0	-2.5
CO05				IAML		12 13 36.0	
	comp=E,17μm,0.5s						
GO04	**Tololo Observa**	1.16	80		Pn	12 13 26.4	-0.3
GO04				Sg	Sb	12 13 38.5	-3.0
GO04	**Tololo Observa**	1.16	80	*e*P	Pn	12 13 26.1	-0.5
GO04				*e*S	Sb	12 13 38.9	-2.6
GO04				IAML		12 13 44.3	
	comp=N,28μm,0.3s						
GO04	**Tololo Observa**	1.16	80	*e*P	Pn	12 13 26.2	-0.4
GO04				*e*S	Sg	12 13 43.7	+0.7
CO02	**Combarbal**	1.26	131		Pn	12 13 28.1	+0.1
CO02				Sn	Sb	12 13 44.2	-0.2
CO02	**Combarbal**	1.26	131	⇓*e*P	Pn	12 13 28.0	+0.1
CO02				*e*S	Sb	12 13 44.7	+0.4
CO02				IAML		12 13 45.9	
	comp=N,14μm,0.3s						
CO02	**Combarbal**	1.26	131	*e*P	Pn	12 13 28.0	+0.1
CO02				*e*S	Sn	12 13 45.2	+0.8
CO02				IAML		12 13 45.7	
	comp=Z,2μm,0.6s						
CO03	**El Pedregal**	1.31	111		Pn	12 13 28.4	-0.2
CO03	**El Pedregal**	1.31	111	⇓*e*P	Pn	12 13 28.4	-0.2
CO03				*e*S	Sn	12 13 45.6	0.0
CO03				IAML		12 13 47.8	
	comp=N,5μm,0.4s						
CO03	**El Pedregal**	1.31	111	*e*P	Pn	12 13 28.4	-0.2
CO03				*e*S	Sg	12 13 47.0	-0.8
CO03				IAML		12 13 47.8	
	comp=Z,3μm,0.5s						
CO01	**Juntas del Tor**	1.79	77		Pn	12 13 36.9	+1.4
CO01	**Juntas del Tor**	1.79	77	⇓*e*P	Pn	12 13 36.8	+1.4
CO01				*e*S	Sb	12 14 00.1	+0.2
CO01				IAML		12 14 02.4	
	comp=N,2μm,0.5s						
CO01	**Juntas del Tor**	1.79	77	*e*P	Pn	12 13 36.9	+1.4
CO01				*e*S	Sb	12 14 00.7	+0.8
CO01				IAML		12 14 01.9	
	comp=Z,1μm,0.5s						
LCO	**Las Campanas**	1.84	42		Pn	12 13 37.4	+1.3
LCO	**Las Campanas**	1.84	42	*e*P	Pn	12 13 37.2	+1.1
LCO				*e*S	Sb	12 14 00.2	-1.0
LCO	**Las Campanas**	1.84	42	*e*P	Pn	12 13 37.4	+1.3
LCO				*e*S	Sb	12 14 02.3	+1.1
LCO				IAML		12 14 12.6	
	comp=Z,2μm,0.8s						
AC05	**El Transito**	2.22	47	Pn	Pn	12 13 43.2	+1.9
AC05	**El Transito**	2.22	47	⇑*e*P	Pn	12 13 43.1	+1.9
AC05				*e*S	Sb	12 14 10.4	-1.8
AC05				IAML		12 14 16.4	
	comp=N,1μm,0.3s						
AC05	**El Transito**	2.22	47	*e*P	Pn	12 13 43.1	+1.9

AC05				eS	Sb	12 14 11.2	-0.9
AC05				IAML		12 14 20.8	
	comp=Z,1µm,0.7s						
VA06	Catapilco	2.28	162		Pn	12 13 42.9	+0.9
VA06	Catapilco	2.28	162	eP	Pb	12 13 46.4	+0.5
VA06				eS	Sb	12 14 16.6	+3.0
VA06				IAML		12 14 22.4	
	comp=N,2µm,0.3s						
AROD	Rodeo	2.29	85	eP	Pb	12 13 45.8	-0.5
AROD				eS	Sb	12 14 15.3	+0.9
AC04	Llanos de Chal	2.35	23		Pn	12 13 43.8	+0.8
AC04	Llanos de Chal	2.35	23	eP	Pn	12 13 43.8	+0.8
AC04	Llanos de Chal	2.35	23	eP	Pn	12 13 43.5	+0.6
AC04				eS	Sb	12 14 17.6	+1.8
AC04				IAML		12 14 30.5	
	comp=Z,712nm,0.8s						
ACDV	Cuesta del Vie	2.60	86	eP	Pb	12 13 50.6	-0.8
ACDV				eS	Sb	12 14 22.9	-0.1
ACDV				IAML		12 14 29.9	
	comp=Z,748nm,0.7s						
ACCO	Cerro Coronel	2.64	95	eP	Pb	12 13 50.5	-1.7
ACCO				eS	Sg	12 14 33.1	+2.8
VA01	Torpederas	2.66	172	eP	Pn	12 13 31.5	-16
DOCA	Reserva Natura	2.67	103	eP	Pn	12 13 46.4	-1.3
DOCA				eS	Sb	12 14 24.4	-0.9
DOCA				IAML		12 14 31.1	
	comp=Z,693nm,0.7s						
VA03	San Esteban	2.72	151		Pn	12 13 50.0	+1.9
VA03	San Esteban	2.72	151	eP	Pb	12 13 52.3	-1.2
VA03				eS	Sb	12 14 26.7	+0.2
VA03				IAML		12 14 31.6	
	comp=E,2µm,0.8s						
VA03	San Esteban	2.72	151	eP	Pn	12 13 50.4	+2.3
VA03				eS	Sb	12 14 25.0	-1.4
VA03				IAML		12 14 35.8	
	comp=Z,623nm,0.6s						
ROCH	El Roble	2.75	160	eP	Pb	12 13 52.7	-1.2
ROCH				eS	Sb	12 14 29.1	+1.8
ROC1	El Roble	2.75	160	eP	Pn	12 13 49.9	+1.3
ROC1				eS	Sb	12 14 25.5	-1.9
RTLS	Leoncito	2.80	121	eP	Pb	12 13 53.9	-1.0
RTLS				IAML		12 14 33.5	
	comp=Z,900nm,0.7s						
MT02	Curacav	2.98	164		Pn	12 13 52.7	+1.1
MT02	Curacav	2.98	164	eP	Pb	12 13 56.9	-1.0
MT02				IAML		12 14 42.3	
	comp=E,311nm,0.4s						
MT02	Curacav	2.98	164	eP	Pn	12 13 53.3	+1.7
MT02				eS	Sb	12 14 31.8	-2.1
MT02				IAML		12 14 46.4	
	comp=Z,266nm,0.7s						
PEL	Peldehue	3.01	157		Pn	12 13 53.9	+1.9
PEL	Peldehue	3.01	157	eP	Pb	12 13 56.9	-1.4
PEL				eS	Sb	12 14 34.7	0.0
PEL				IAML		12 14 40.9	
	comp=E,579nm,0.4s						
PEL	Peldehue	3.01	157	eP	Pn	12 13 50.4	-1.6
PEL				eS	Sb	12 14 32.4	-2.3
ZON	Zonda	3.17	112	eS	Sb	12 14 35.8	-3.5
ZON				IAML		12 14 52.9	
	comp=Z,312nm,0.9s						
MT10	Hacienda Santa	3.18	155	eP	Pb	12 14 01.0	-0.2
MT10				eS	Sb	12 14 39.8	+0.2
MT05	Renca	3.22	159	Pn	Pn	12 13 55.6	+0.7
MT05	Renca	3.22	159	eS	Sb	12 14 40.2	-0.6
MT05	Renca	3.22	159	eP	Pn	12 13 57.1	+2.2
MT05				eS	Sb	12 14 38.6	-2.1
MT05				IAML		12 15 01.2	
	comp=Z,384nm,1.0s						
GO03	Copiapo	3.23	31		Pn	12 13 56.3	+1.2
GO03	Copiapo	3.23	31	eP	Pn	12 13 56.6	+1.5
GO03	Copiapo	3.23	31	eP	Pn	12 13 56.3	+1.2
GO03				eS	Sb	12 14 40.8	-0.3
SJA	San Juan	3.26	111	eS	Sn	12 14 31.2	-2.5
SJA				IAML		12 14 41.3	
	comp=Z,392nm,0.6s						
RTLL	Cerro Villicun	3.27	108	eP	Pn	12 13 42.5	-13
RTLL				eS	Sn	12 14 36.1	+2.2
AGUA	GUANDACOL	3.27	75	eP	Pn	12 13 55.2	-0.5
AGUA				eS	Sb	12 14 43.2	+1.0
AGUA				IAML		12 14 55.2	
	comp=Z,907nm,0.5s						
VA05	Santo Domingo	3.29	173	Pn	Pn	12 13 56.6	+0.8
FCH	Farellones	3.32	153	eP	Pn	12 13 58.8	+2.3
MT16	CCHEN	3.32	156	Pn	Pn	12 13 58.7	+2.4
MT03	Universidad Ad	3.39	157	Pn	Pn	12 13 57.7	+0.5
AC06	Mina Casimiro	3.39	28		Pn	12 13 58.1	+0.9
MT04	Ro Olivares	3.45	151	eP	Pn	12 14 01.6	+3.4
MT04				eS	Sb	12 14 46.5	-1.0
MT04				IAML		12 14 58.2	
	comp=Z,339nm,0.8s						
MT09	Talagante	3.51	165		Pn	12 14 01.0	+1.9
MT08	Bocatoma Ro	3.53	150	Pn	Pn	12 14 00.3	+0.9
MT08	Bocatoma Ro	3.53	150	eP	Pn	12 14 03.4	+4.0
MT08				eS	Sn	12 14 43.2	+2.5
MT08				IAML		12 15 05.0	
	comp=Z,232nm,1.1s						
CFA	Coronel Fontan	3.54	111	eP	Pn	12 14 03.0	+3.7
CFA				eS	Sn	12 14 44.6	+3.9
MT01	Popeta	3.55	168		Pn	12 14 00.2	+0.9
MT01	Popeta	3.55	168	eP	Pn	12 14 00.5	+1.1
MT01				eS	Sb	12 14 53.8	+3.7
MT01				IAML		12 15 02.8	
	comp=Z,194nm,0.5s						
MT13	San Alfonso	3.69	156		Pn	12 14 03.2	+1.8
BO04	La Punta	3.81	161		Pn	12 14 04.6	+1.5
LMEL	Las Melosas	3.81	155		Pn	12 14 05.1	+1.9
LMEL	Las Melosas	3.81	155	eP	Pn	12 14 06.1	+3.0
LMEL				eS	Sb	12 14 55.3	-2.6
BO01	Tunca	4.09	168		Pn	12 14 08.7	+1.9
BO01	Tunca	4.09	168	eS	Sg	12 15 13.0	-3.6
AC02	Maricunga	4.40	37		Pn	12 14 13.4	+1.8
AC01	Pan de Azucar	4.43	18		Pn	12 14 10.6	-0.9
BO02	Sierra Bellavi	4.54	166		Pn	12 14 14.4	+1.4
BO02	Sierra Bellavi	4.54	166	IAML		12 15 38.1	
	comp=Z,124nm,0.6s						
GO02	Mina Guanaco	5.66	24	Pn	Pn	12 14 28.3	-0.4
PB14	IPOC Station P	5.93	15	Pn	Pn	12 14 31.3	-1.1
BI02	San Fabin de	6.30	174		Pn	12 14 38.4	+1.1
PB10	IPOC Station P	6.98	12	Pn	Pn	12 14 44.9	-1.7
PB05	IPOC Station P	7.69	13	Pn	Pn	12 14 54.4	-2.1
PB06	IPOC Station P	7.98	17	Pn	Pn	12 14 59.8	-0.6
PB03	IPOC Station P	8.57	15	Pn	Pn	12 15 06.8	-1.7
PB09	IPOC Station P	8.93	17	Pn	Pn	12 15 13.0	-0.5
PB01	IPOC Station P	9.60	15	Pn	Pn	12 15 19.9	-2.7
PLCA	Paso Flores	10.40	173	Pn	Pn	12 15 34.1	+0.6
PB08	IPOC Station P	10.54	15	Pn	Pn	12 15 34.0	-1.8
TRQA	Tornquist	11.35	135	Pn	Pn	12 15 46.8	+0.4
PLTB	Pedras Altas	15.92	100	Pn	Pn	12 16 46.6	-1.7
CZSB	Cruzeiro do Su	22.55	358	P	P	12 18 04.3	0.0
CZSB				IAmb	IAmb	12 18 14.9	
	comp=Z,17nm,1.2s						
SNAA	Sanae	54.96	159	P	P	12 22 36.7	+2.0
SNAA				IAmb	IAmb	12 22 48.6	
	comp=Z,4.8nm,1.3s						
QSPA	South Pole Qui	59.84	180	P	P	12 23 10.7	+1.4
TX31	Lajitas Ar. Si	66.57	330	P	P	12 23 54.2	-0.1
TX31				IAmb	IAmb	12 23 55.2	
	comp=Z,3.3nm,1.4s						

*UPP **04** 12:15:02.8±0.6,60°.04N×21°.26E,h0^{km},ML2.7*
*DNK **04** 12:15:02.0±1.9,60°.08N×21°.43E,h0^{km}±10^{km}*
*HEL **04** 12:15:02.2±0.1,60°.08N×21°.41E,h0^{km},ML2.2,Explosion*
ISC 04 12:15:00.9±0.8**,60°.08N**±0°.04×**21°.43E**±0°.02**,h0^{km},n54,**
σ1^{s}12/70**,Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAL	Aland	0.72	279	P	Pg	12 15 15.0	+0.3
AAL				S	Sg	12 15 24.3	+0.2
AAL	Aland	0.72	279	P	Pg	12 15 15.0	+0.3
AAL				S	Sg	12 15 24.3	+0.2
AAL	Aland	0.72	279	eP	Pg	12 15 15.1	+0.3
AAL				eS	Sg	12 15 24.0	-0.1
TVF	Tvarminne	0.95	103	eP	Pg	12 15 18.9	-0.1
TVF				eS	Sg	12 15 31.7	+0.4
RAF	Rauma	0.96	10	eP	Pg	12 15 19.2	-0.1
RAF	Rauma	0.96	10	eP	Pg	12 15 19.3	-0.1
RAF				eS	Sg	12 15 32.1	+0.2
GRAU	Graesoe	1.47	281	P	Pn	12 15 28.3	-0.2
GRAU	Graesoe	1.47	281	P	Pn	12 15 28.3	-0.2
NRTU	Norrtaelje	1.47	255	P	Pn	12 15 27.9	-0.7
NRTU	Norrtaelje	1.47	255	P	Pn	12 15 27.9	-0.7
MEF	Metsahovi	1.49	83	eP	Pn	12 15 28.7	-0.2
MEF	Metsahovi	1.49	83	eP	Pn	12 15 29.0	+0.1
MEF				eS	Sg	12 15 48.1	-0.7
FORU	Forsmark	1.65	282	P	Pn	12 15 31.7	+0.6
FORU	Forsmark	1.65	282	P	Pn	12 15 31.7	+0.6
NUR	Nurmijarvi	1.66	73	eP	Pn	12 15 31.8	+0.6
NUR				eS	Sn	12 15 53.0	-0.3
NUR				MSG		12 15 54.2	
	comp=Z,15nm,0.1s						
HEL1	Helsinki	1.73	85	eP	Pn	12 15 33.0	+0.8
HEL1				eS	Sn	12 15 55.2	+0.2
HEL1				MSG		12 15 59.4	
	comp=Z,19nm,0.1s						
FLYU	Flymyra	1.77	273	P	Pn	12 15 33.3	+0.5
FLYU	Flymyra	1.77	273	P	Pn	12 15 33.3	+0.5
KPF	Kankaanpaa	1.79	10	eP	Pn	12 15 33.8	+0.7
KPF				eS	Sb	12 15 57.3	-0.2
MTSE	Matsula	1.83	137	eP	Pn	12 15 34.5	+1.0
MTSE	Matsula	1.83	137	ePN	Pn	12 15 34.9	+1.3
MTSE				eSN	Sn	12 15 59.1	+1.6
NYNU	Nynaeshamn	2.05	240	P	Pn	12 15 38.0	+1.5
NYNU	Nynaeshamn	2.05	240	P	Pn	12 15 38.0	+1.5
FIBU	Brunna	2.06	267	P	Pn	12 15 37.8	+1.1
FIBU	Brunna	2.06	267	P	Pn	12 15 37.8	+1.1
OSTU	Oestervaala	2.15	276	P	Pn	12 15 39.2	+1.2
OSTU	Oestervaala	2.15	276	P	Pn	12 15 39.2	+1.2
BACU	Backbrunna	2.18	266	P	Pn	12 15 40.2	+1.8
BACU	Backbrunna	2.18	266	P	Pn	12 15 40.2	+1.8
IGGU	Iggoen	2.19	293	P	Pn	12 15 40.0	+1.6
IGGU	Iggoen	2.19	293	P	Pn	12 15 40.0	+1.6
PVF	Pernaja	2.26	76	ePB	Pb	12 15 41.8	-0.7
PVF				eSB	Sb	12 16 10.6	-0.3
PVF				MSG		12 16 15.9	
	comp=Z,12nm,0.1s						
SLIT	Slitere, Latvi	2.50	169	eP	Pn	12 15 43.8	+1.2
ARNU	Arnoeviken	2.56	311	P	Pn	12 15 45.0	+1.5
ARNU	Arnoeviken	2.56	311	P	Pn	12 15 45.0	+1.5
KEF	Keuruu	2.68	37	eP	Pn	12 15 46.4	+1.1
VAF	Ylistaro	3.04	11	eP	Pn	12 15 51.9	+1.7
BLEU	Blekinge	4.81	221	iP	Pn	12 16 15.4	+1.0
BLEU				iS	Sn	12 17 10.3	-0.5
NB201	NORSAR Array S	5.09	285	eP	Pn	12 16 19.1	+0.6
STRU	Stroemstad	5.31	263	eP	Pn	12 16 22.8	+1.4
NC204	NORSAR Array S	5.38	288	eP	Pn	12 16 22.6	+0.2
DEL	Delary	5.38	231	iP	Pn	12 16 22.6	+0.3
DEL				iS	Sn	12 17 21.7	-3.2
TJOU	Tjoern	5.46	252	iP	Pn	12 16 26.1	+2.8
TJOU				eS	Sn	12 17 25.8	-0.9
ONAU	Onsala	5.63	246	eP	Pn	12 16 26.6	+0.8
ONAU				iS	Sn	12 17 31.2	+0.1
BJUU	Bjuv	6.00	232	iP	Pn	12 16 31.9	+1.1
BJUU				iS	Sn	12 17 38.0	-2.0
BSD	Bornholm Skovb	6.08	218	eP	Pn	12 16 33.2	+1.3
MOR8	Moi Rana	6.88	336	eP	Pn	12 16 45.1	+2.1
LEIR	Leirfjorden	7.13	332	eP	Pn	12 16 47.1	+0.9
SALU	Saltoluokta	7.45	351	eP	Pn	12 16 50.7	+0.1
KONS	Konsvik	7.45	333	eP	Pn	12 16 52.2	+1.5
STEI	Steigen	8.34	344	eP	Pn	12 17 03.0	+0.2
HEF	Hetta	8.42	6	eP	Pn	12 17 02.9	-1.1
ARA0	ARCESS Array S	9.65	9	eP	Pn	12 17 19.8	-1.1
KEV	Kevo	10.00	11	eP	Pn	12 17 25.3	-0.2

*JMA **04** 12:16:59.2±0.2,23°N±1°×12°2E±°,h45^{km}±4^{km},MV3.9/12, TAIWAN REGION*
*ASIES **04** 12:17:00.7,23°.26N×121°.59E,h41^{km},ML4.3,Mw3.7, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M$_{rr}$3.69; M$_{\theta\theta}$0.38; M$_{\phi\phi}$-4.07; M$_{r\theta}$-0.98; M$_{\theta\phi}$-0.61; M$_{\phi r}$1.01; Fault plane solution: M$_0$4.18606×10^{21} NP1: φ$_s$204.03000°,δ41.13000°,λ115.62000°. NP2: φ$_s$351.55000°,δ53.62000°,λ69.31000°. Principal axes: T Plg72.1740°, Azm206.8630°; N Plg16.5240°, Azm4.1700°; P Plg6.5010°, Azm96.1070°;*
*TAP **04** 12:17:00.7,23°.26N×121°.59E,h41^{km},ML4.3,B*
*IDC **04** 12:17:04.0±4.1,23°.33N×121°.97E,h87^{km}±46^{km},mb3.3/7, mbtmp3.8/8,Error ellipse: s-maj=28.5km s-min=17.7km az=59.0*
ISC 04 12:17:00.1±0.9**,23°.23N**±0°.02×**121°.65E**±0°.02**,h34^{km}**±2^{km}**,**
n180,σ0^{s}97/302**,mb3.6**/7**,17C-35D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECBN	Changbin	0.20	295	iP	Pb	12 17 07.9	+1.2
ECBN				eS	Sb	12 17 13.1	+1.8
CHKH	Chenggong	0.23	260	iP	Pb	12 17 07.7	+0.7
CHKH				iS	Sb	12 17 13.0	+1.1
CHKT	Chengkung	0.29	243	⇑iP	Pn	12 17 08.3	+0.5
CHKT				eS	Sb	12 17 14.3	+1.3
EYUL	Yuli	0.32	291	⇓iP	Pn	12 17 09.2	+0.8
EYUL				eS	Sb	12 17 15.4	+1.7
FULB	Fuli	0.33	264	⇑iP	Pb	12 17 08.7	+0.4
FULB				eS	Sb	12 17 15.3	+1.5
HGSD	Ruisui	0.33	322	⇑iP	Pb	12 17 08.6	+0.4
HGSD				eS	Sb	12 17 14.8	+0.9
TWF1	Yuli	0.34	290	⇓iP	Pn	12 17 09.0	+0.3
TWF1				eS	Sb	12 17 15.0	+0.8
YULB	Yu-li	0.36	296	P	Pb	12 17 09.2	+0.5
YULB	Yu-li	0.36	296	⇓iP	Pb	12 17 09.1	+0.4
YULB				eS	Sb	12 17 15.1	+0.5
EHYH	Wanrong	0.38	313	iP	Pb	12 17 09.4	+0.5
EHYH				eS	Sb	12 17 15.7	+0.7
EHY	Hungye	0.40	312	⇓iP	Pb	12 17 09.5	+0.2
EHY				eS	Sb	12 17 15.4	-0.2
EDH	Donghe	0.41	231	⇑P	Pn	12 17 09.8	+0.1
EDH				eS	Sn	12 17 17.1	+1.2
EHD	Haiduan	0.41	258	⇓iP	Pb	12 17 09.6	+0.2
EHD				iS	Sb	12 17 16.0	+0.1
ECS	Chishang	0.42	251	⇓iP	Pn	12 17 10.4	+0.6
ECS				eS	Sn	12 17 17.9	+1.7
EGFH	Guangfu	0.48	335	P	Pb	12 17 10.7	+0.3
EGFH				eS	Sb	12 17 17.8	+0.3
TEGC	Jichi Village	0.48	348	eP	Pb	12 17 10.9	+0.4
TEGC				eS	Sn	12 17 18.8	+0.9
WARBT	Fenglin Townsh	0.54	334	⇑iP	Pn	12 17 10.9	-0.5
WARBT				eS	Sb	12 17 18.5	-0.6
SHUL	Shoufeng	0.56	352	⇑iP	Pn	12 17 11.8	+0.2
SHUL				iS	Sn	12 17 20.5	+0.9
LONT	Longtian	0.58	236	⇓iP	Pn	12 17 11.9	0.0
LONT				eS	Sb	12 17 20.3	+0.2
ELDTW	Lidau	0.58	266	⇓iP	Pn	12 17 11.6	-0.4
ELDTW				iS	Sb	12 17 19.3	-1.0
LDUT	Ludao	0.58	196	eP	Pn	12 17 11.9	0.0
LDUT				eS	Sn	12 17 20.7	+0.5
ESL	Shilin	0.61	341	⇑iP	Pn	12 17 11.9	-0.4
ESL				S	Sn	12 17 20.1	-0.9
TEYL	Yanliau Villag	0.63	356	⇑iP	Pb	12 17 13.2	+0.4
TEYL				eS	Sb	12 17 22.7	+1.1
TTN	Taitung	0.66	224	P	Pb	12 17 13.7	+0.4
TTN				eS	Sb	12 17 23.9	+1.5
TWGBT	Beinan	0.67	232	P	Pn	12 17 12.8	-0.3
TWGBT	Beinan	0.67	232	S	Sn	12 17 22.0	-0.4
TWGBT	Beinan	0.67	232	⇓iP	Pn	12 17 12.7	-0.3
TWGBT				eS	Sn	12 17 21.6	-0.8
TWG	Pinlang	0.67	232	⇓iP	Pn	12 17 12.7	-0.4
TWG				S	Sn	12 17 21.8	-0.7
HWA	Hwalien	0.74	357	eP	Pn	12 17 14.3	+0.2
HWA				eS	Sb	12 17 25.0	+0.4
ETM	Tongmen	0.74	349	eP	Pn	12 17 14.0	-0.2
STYH	Taoyuan	0.80	266	⇓iP	Pn	12 17 13.8	-1.2
STYH				eS	Sn	12 17 24.5	-1.3
ALS	Alishan	0.82	290	⇓iP	Pn	12 17 16.1	+0.5
ALS				eS	Sn	12 17 27.2	+0.6
OWD	Renai	0.84	329	⇑P	Pn	12 17 15.5	-0.2
OWD				eS	Sn	12 17 25.8	-1.1
SSLB	Suanglung	0.84	311	P	Pn	12 17 15.8	+0.2
SSLB	Suanglung	0.84	311	S	Sn	12 17 27.6	+0.8
SSLB	Suanglung	0.84	311	⇓iP	Pn	12 17 15.6	0.0
SSLB				eS	Sn	12 17 25.8	-1.0
TWD	Chiawan	0.84	357	eP	Pn	12 17 15.4	-0.2
TWD				iS	Sn	12 17 27.1	+0.3
WHYT	Xinyi Township	0.86	302	⇓iP	Pn	12 17 16.6	+0.7
WHYT				eS	Sn	12 17 27.6	+0.3
WUSB	Renai	0.90	327	⇑iP	Pn	12 17 16.6	+0.1
WUSB				eS	Sn	12 17 27.2	-1.1
ECL	Taimali	0.90	225	eP	Pn	12 17 15.4	-0.9
ECL				eS	Sn	12 17 26.6	-1.5
ETL	Fush Village	0.92	359	eP	Pn	12 17 16.6	-0.1
ETL				eS	Sn	12 17 28.8	0.0
NACB	Ninganchiao	0.94	357	P	Pn	12 17 16.8	-0.1
NACB	Ninganchiao	0.94	357	S	Sn	12 17 29.3	+0.2
NACB	Ninganchiao	0.94	357	⇑P	Pn	12 17 16.5	-0.4
NACB				eS	Sn	12 17 28.4	-0.7
TPUB	Ta-pu	0.94	274	P	Pb	12 17 17.8	-0.1
TPUB	Ta-pu	0.94	274	⇓iP	Pn	12 17 17.6	+0.7
TPUB				eS	Sn	12 17 30.0	+0.8
SMLT	Sun Moon Lake	0.94	313	⇓iP	Pn	12 17 17.6	+0.5
SMLT				eS	Sn	12 17 29.7	+0.3
WTP	Ta-pu	0.95	271	⇓iP	Pn	12 17 17.8	+0.7
WTP				eS	Sb	12 17 30.9	+0.5
WHF	Hehuan Shan	0.97	339	⇑iP	Pn	12 17 17.3	-0.4
WHF				eS	Sn	12 17 30.0	-0.6
CHN4	Tsaushan	0.98	277	⇓iP	Pn	12 17 18.3	+0.9
CHN4				S	Sb	12 17 31.3	+0.1
WCKO	Fanlu	0.98	282	⇓P	Pn	12 17 18.4	+1.0
WCKO				eS	Sn	12 17 31.2	+1.1
ETLH	Xiulin Townshi	0.98	351	⇑eP	Pn	12 17 17.0	-0.5
ETLH				eS	Sn	12 17 28.8	-1.5
TYC	Yuchr	0.99	313	⇓iP	Pn	12 17 18.3	+0.7
TYC				eS	Sn	12 17 31.0	+0.7
SGST	Jiashian	0.99	261	⇓iP	Pn	12 17 17.7	+0.1
SGST				S	Sn	12 17 31.4	+0.9
WJS	Zhushan	1.03	305	⇓P	Pb	12 17 19.4	0.0
WJS				eS	Sb	12 17 33.2	+0.5
CHN1	Nanshi	1.03	268	⇓iP	Pb	12 17 19.3	-0.2
CHN1				iS	Sb	12 17 33.7	+1.0
SSD	Sandimen	1.05	243	eP	Pn	12 17 18.8	+0.3
SSD				eS	Sb	12 17 33.4	0.0
SNST	Tainan City	1.06	270	⇓eP	Pb	12 17 19.7	-0.2
SNST				eS	Sb	12 17 34.6	+1.2
TSMG	Majia	1.06	241	eP	Pn	12 17 18.8	+0.2
TSMG				eS	Sn	12 17 31.4	-0.8
WCS	Beigang Elemen	1.06	321	⇓eP	Pn	12 17 19.5	+0.9
WCS				eS	Sn	12 17 32.7	+0.5
TWK	Hsinying	1.07	272	⇓P	Pn	12 17 19.4	+0.8
TWK				eS	Sb	12 17 33.7	0.0
EOS4	EOS4	1.08	35	P	Pn	12 17 19.3	+0.9
EOS4				iS	Sn	12 17 32.9	+0.8
WNT	Mingjian	1.09	306	⇓P	Pb	12 17 20.2	-0.3
WNT				iS	Sb	12 17 35.0	+0.5
WGK	Gukeng	1.09	295	eP	Pb	12 17 20.2	-0.3
WGK				S	Sb	12 17 35.0	+0.5
EAHA	Aohua	1.09	4	⇑eP	Pn	12 17 19.0	0.0
EAHA				S	Sn	12 17 33.4	+0.4
TWT	Tachien	1.10	337	⇓iP	Pn	12 17 20.1	+0.8
TWT				eS	Sn	12 17 33.4	-0.1
TDCB	Techi	1.11	336	eP	Pn	12 17 19.9	+0.5
TDCB				eS	Sn	12 17 32.8	-0.8
TAW	Tawu	1.11	219	eP	Pn	12 17 18.9	-0.3
TAW				eS	Sn	12 17 32.4	-1.0
WDLH	Douliu	1.11	294	P	Pb	12 17 20.6	-0.3
WDLH				iS	Sb	12 17 35.4	+0.3
CHN2	Minshiung	1.12	286	eP	Pb	12 17 20.8	-0.1
CHN2				eS	Sb	12 17 35.9	+0.8
SCST	Cishan	1.12	252	⇓iP	Pb	12 17 21.1	+0.2
SCST				S	Sb	12 17 36.9	+1.8
MASBT	Mashibuluo	1.12	237	eP	Pn	12 17 19.7	+0.3
MASBT				eS	Sn	12 17 33.2	-0.5
EAST	Anshuo	1.12	221	eP	Pn	12 17 19.2	-0.3
EAST				eS	Sn	12 17 33.5	-0.2
WDL	Douliou City	1.12	295	eP	Pn	12 17 20.6	+1.1
TAWH	Dawu Township	1.13	218	eP	Pn	12 17 19.4	-0.1
TAWH				eS	Sn	12 17 32.8	-1.1
CHY	Chiayi	1.15	283	⇓eP	Pn	12 17 21.0	+1.1
CHY				eS	Sb	12 17 36.0	-0.2
SGLT	Jiouru	1.18	245	eP	Pb	12 17 22.6	+0.7
SGLT				eS	Sb	12 17 38.5	+1.6
CHN3	Shinhua	1.19	263	eP	Pb	12 17 22.5	+0.4
CHN3				eS	Sb	12 17 39.3	+2.1
LAY	Lan-yu	1.19	184	eP	Pn	12 17 20.1	-0.3
LAY				eS	Sn	12 17 35.5	+0.1
ENA	Nanau	1.19	4	eP	Pn	12 17 20.7	+0.3
ENA				S	Sn	12 17 35.5	0.0
TWM1	Shoushan	1.20	250	⇓iP	Pb	12 17 23.0	+0.7
TWM1				eS	Sb	12 17 39.2	+1.7
EWUT	Wuta	1.21	6	⇑eP	Pn	12 17 20.9	+0.2
EWUT				eS	Sn	12 17 36.0	+0.1
NNSB	Datong	1.21	349	eP	Pn	12 17 20.9	+0.1
EOS3	EOS3	1.22	30	eP	Pn	12 17 21.3	+0.8
WHP	Taichung City	1.22	328	P	Pn	12 17 22.1	+1.3
WHP				eS	Sn	12 17 37.6	+1.3
LYUB	Lan-yu	1.23	183	eP	Pn	12 17 20.0	-0.8
NNS	Nan Shan	1.23	348	eP	Pn	12 17 22.0	+1.0
NNS				eS	Sn	12 17 36.4	-0.1
WTK	Tuku	1.24	292	eP	Pn	12 17 21.8	+0.8
WTK				iS	Sb	12 17 38.4	-0.3
SSHA	Shanhua	1.25	266	eP	Pb	12 17 23.2	0.0
SSHA				eS	Sb	12 17 39.9	+0.9
ICHU	Yijhu	1.26	276	eP	Pn	12 17 22.4	+1.1
ICHU				S	Sb	12 17 39.3	0.0
TCU	Taichung	1.27	316	eP	Pb	12 17 23.2	-0.3
TCU				eS	Sb	12 17 39.9	+0.3
SCZT	Fangliau	1.28	228	eP	Pn	12 17 22.3	+0.7
SCZT				iS	Sb	12 17 39.1	-0.7
EOS2	EOS2	1.30	24	eP	Pb	12 17 23.1	-0.8
SNJT	Kaohsiung City	1.30	249	eP	Pb	12 17 23.8	-0.2
SNJT				eS	Sb	12 17 42.2	+1.9
LATG	Datong	1.30	355	eP	Pn	12 17 22.6	+0.6
WCHH	Zhanghua	1.31	310	⇑P	Pb	12 17 23.5	-0.5
WCHH				iS	Sb	12 17 40.5	-0.1
WCH1	Changhua City	1.31	310	eP	Pb	12 17 23.6	-0.5
WCH1				eS	Sb	12 17 40.6	0.0
CHN8	Yiju	1.32	275	⇓iP	Pn	12 17 23.2	+1.1
CHN8				iS	Sn	12 17 40.3	+1.7
WSL	Shuilin Townsh	1.33	283	⇓P	Pn	12 17 23.3	+1.0
WSL				eS	Sn	12 17 40.2	+1.3
SCLT	Jiali	1.34	268	⇓eP	Pn	12 17 23.6	+1.3
SCLT				iS	Sb	12 17 41.2	-0.2
ESAO	Su ao	1.35	8	eP	Pn	12 17 23.4	+0.9
ESAO				eS	Sn	12 17 40.1	+0.8
TWQ1	Liyutan	1.37	324	eP	Pb	12 17 24.8	-0.3
TWQ1				iS	Sb	12 17 42.2	-0.2
WSF	Szhu	1.37	287	P	Pn	12 17 23.4	+0.6
WSF				eS	Sn	12 17 40.5	+0.8
TWC	Suao	1.38	8	eP	Pn	12 17 23.8	+0.8
TWC				iS	Sn	12 17 40.9	+0.8
NDS	Dongshan	1.40	3	eP	Pn	12 17 23.2	+0.1
WTCT	Ta-ch'eng	1.40	297	eP	Pn	12 17 24.0	+0.8
WTCT				iS	Sn	12 17 41.9	+1.4
ENTT	Nioudou	1.40	357	eP	Pn	12 17 24.0	+0.7
WSSB	Gushan	1.41	246	eP	Pb	12 17 25.7	0.0
WSSB				eS	Sb	12 17 43.9	+0.5
SMST	Manzhou Townsh	1.42	212	eP	Pn	12 17 23.9	+0.4
NSY	Sanyi	1.43	326	eP	Pb	12 17 26.1	-0.1
NSY				S	Sb	12 17 45.9	+1.8
TSCK	Chigu Township	1.44	267	eP	Pn	12 17 24.5	+0.7
TSCK				eS	Sb	12 17 43.9	-0.5
WDJ	Dajia District	1.44	320	iP	Pb	12 17 25.9	-0.5
WDJ				eS	Sb	12 17 44.5	+0.1
YHNB	Yeheng	1.45	350	P	Pn	12 17 25.1	+1.1
YHNB	Yeheng	1.45	350	⇑P	Pn	12 17 24.8	+0.7
WLCH	Liuqiu	1.46	233	eP	Pb	12 17 27.2	+0.5
NFF	Wufeng Townshi	1.47	341	eP	Pb	12 17 26.2	-0.7
NFF				eS	Sn	12 17 43.5	+1.0
TWP	Hsiaoliuchiu	1.48	234	eP	Pb	12 17 27.1	+0.1
TWP				eS	Sb	12 17 46.2	+0.8
TWE	Neicheng	1.48	1	eP	Pb	12 17 26.1	-0.9
TSEB	Hengchuen, Pin	1.50	208	eP	Pn	12 17 25.6	+1.0
TSEB				S	Sn	12 17 44.0	+1.1
TWKBT	Hengchun	1.50	211	eP	Pn	12 17 24.8	+0.2
TWKBT				eS	Sn	12 17 43.2	+0.3
TWK1	Hengchun	1.50	211	⇓P	Pn	12 17 25.0	+0.4
TWK1				eS	Sn	12 17 43.7	+0.7
NSTT	Nanjuang	1.51	337	eP	Pn	12 17 26.4	+1.7
NSTT				eS	Sn	12 17 45.0	+1.7
NMLH	Miaoli	1.52	329	eP	Pn	12 17 26.4	+1.5
NMLH				iS	Sb	12 17 46.2	-0.3
LIOB	Emei	1.52	338	eP	Pb	12 17 26.7	-1.0
LIOB				eS	Sn	12 17 44.7	+1.2
FUSB	Fushanzhiwuyua	1.52	358	eP	Pn	12 17 26.1	+1.1
ILA	Ilan	1.53	3	eP	Pn	12 17 26.2	+1.2
ILA				eS	Sn	12 17 45.2	+1.5
NWLT	Wulai	1.54	355	eP	Pn	12 17 26.6	+1.4
KSHI	Guanxi Townshi	1.60	344	eP	Pb	12 17 28.5	-0.5
KSHI				eS	Sn	12 17 47.0	+1.6
EGS		1.63	9	eP	Pb	12 17 28.4	-1.0

EGS				eS	Sn	12 17 46.6	+0.5
SBCB	Hsinchu	1.67	339	eP	Pn	12 17 27.8	+0.9
HSN	Hsinchu	1.68	339	eP	Pb	12 17 29.5	-0.9
HSN				iS	Sb	12 17 50.6	-0.6
JYNG	Yonagunijimaku	1.70	44	iP	Pn	12 17 28.9	+1.5
JYNG				S	Sn	12 17 49.0	+1.2
NHDH	Xindian Distri	1.73	356	eP	Pb	12 17 29.9	-1.3
NHDH				eS	Sn	12 17 50.2	+1.6
TIPB	Shuangxi	1.74	5	P	Pn	12 17 29.8	+1.8
TIPB				eS	Sn	12 17 50.2	+1.2
TWA	Mucha	1.74	358	eP	Pn	12 17 29.8	+1.9
TATO	Taipei	1.74	355	P	Pn	12 17 29.5	+1.6
TATO	Taipei	1.74	355	S	Sn	12 17 51.1	+2.2
YOJ	Yonaguni jima	1.75	45	P	Pn	12 17 29.7	+1.7
YOJ	Yonaguni jima	1.75	45	S	Sb	12 17 51.4	-1.7
YOJ	Yonaguni jima	1.75	45	P	Pn	12 17 29.4	+1.4
YOJ				S	Sn	12 17 50.4	+1.3
YOJ	Yonaguni jima	1.75	45	P	Pn	12 17 29.4	+1.4
YOJ				eS	Sn	12 17 50.8	+1.6
NCUH	Zhongli	1.78	346	eP	Pn	12 17 29.5	+1.1
TWB1	Santiao Chiao	1.79	10	eP	Pn	12 17 30.2	+1.6
TWB1				eS	Sn	12 17 51.7	+1.5
WDGT	Dungji	1.83	271	P	Pn	12 17 29.3	+0.2
WDGT				eS	Sn	12 17 49.9	-1.2
NWF	Wu-fen Shan	1.83	4	eP	Pn	12 17 31.4	+2.1
NWF				eS	Sn	12 17 53.0	+1.7
WFSB	Wu-fen Shan	1.83	4	eP	Pn	12 17 31.3	+2.1
WFSB				eS	Sn	12 17 52.8	+1.6
SXI1	Grass Mountain	1.86	6	eP	Pn	12 17 31.5	+1.8
SXI1				eS	Sb	12 17 55.3	-1.3
YM01	YM01	1.91	358	eP	Pn	12 17 31.8	+1.5
ZUZH	Zhuzihu	1.92	357	eP	Pn	12 17 32.0	+1.6
ZUZH				eS	Sn	12 17 53.8	+0.3
PHUB	P'eng-hu	1.93	279	iP	Pn	12 17 30.6	+0.2
PHUB				eS	Sn	12 17 52.4	-1.2
NTST	Danshui	1.93	355	eP	Pn	12 17 32.4	+1.8
NTST				eS	Sn	12 17 54.6	+1.0
YM08	YM08	1.95	358	eP	Pn	12 17 31.9	+1.1
ANP	Anpu	1.95	357	eP	Pn	12 17 32.7	+1.8
PNG	Penghu	1.95	280	P	Pn	12 17 31.0	+0.2
PNG				iS	Sn	12 17 52.9	-1.2
TWY	Chenhua	2.03	359	eP	Pn	12 17 33.8	+1.9
VCHM	Qimei	2.04	270	eP	Pn	12 17 32.0	0.0
VCHM				eS	Sn	12 17 54.7	-1.6
HATJ	Hateruma jima	2.14	67	P	Pn	12 17 34.6	+1.2
HATJ				S	Sn	12 18 00.1	+1.2
IRIF	Iriomote-Funau	2.20	60	iP	Pn	12 17 35.7	+1.4
IRIF				eS	Sn	12 18 01.7	+1.4
JKRS	Kuro-shima	2.38	65	P	Pn	12 17 38.2	+1.5
JKRS				eS	Sn	12 18 06.1	+1.2
JIJ	Ishigaki jima	2.55	63	iP	Pn	12 17 39.9	+0.8
VWUC	VWUC	2.66	312	eP	Pn	12 17 40.4	-0.2
PTMZ	Houxiangcun	2.93	308	eP	Pn	12 17 44.0	-0.3
KNMB	Chin-men Tao	3.23	293	eP	Pn	12 17 47.8	-0.5
MATB	Ma-tsu	3.29	332	eP	Pn	12 17 49.2	-0.1
JMJ	Miyako jima 2	3.69	64	P	Pn	12 17 56.0	+1.3
JMJ	Miyako jima 2	3.69	64	S	Sn	12 18 38.3	+1.3
MHZQ	Yeshan	3.72	321	eP	Pn	12 17 55.1	0.0
JOW	Kunigami	7.00	58	P	Pn	12 18 39.0	-1.1
	17nm,0.2s,baz=162,slow=10,SNR=65						
JOW				S	Sn	12 19 55.6	-3.0
	2.6nm,0.3s,baz=188,slow=12,SNR=1.2						
JOW	Kunigami	7.00	58	P	Pn	12 18 39.1	-1.1
KSRS	Korea Array	15.17	19	P	P	12 20 36.2	-0.3
	0.4nm,0.4s,baz=198,slow=11,SNR=2.2						
CMAR	Chiang Mai Arr	21.73	262	P	P	12 21 51.6	+3.0
	0.5nm,0.6s,baz=58,slow=9.0,SNR=7.4						
	0.5nm,0.6s						
MKAR	Makanchi Array	39.31	317	P	P	12 24 25.6	-0.4
	1.4nm,0.7s,baz=110,slow=9.6,SNR=14						
	1.4nm,0.7s						
ZALV	Zalesovo Beam	41.27	328	P	P	12 24 41.0	-0.9
	0.8nm,0.3s,baz=131,slow=8.1,SNR=4.8						
	0.8nm,0.3s						
H11N1	WAKE ISLAND Hy	42.12	86	T	T	13 09 58.9	
	baz=283,slow=75,SNR=39						
H11N2	WAKE ISLAND Hy	42.13	86	T	T	13 10 08.7	
	baz=283,slow=75,SNR=49						
H11N3	WAKE ISLAND Hy	42.14	86	T	T	13 10 03.4	
	baz=283,slow=75,SNR=39						
KURBB	Kurchatov Arra	43.11	320	P	P	12 24 56.2	-0.7
	0.5nm,0.4s,baz=111,slow=10.0,SNR=7.1						
	0.5nm,0.4s						
WRA	Warramunga Arr	44.66	163	P	P	12 25 08.1	-1.6
	0.4nm,0.7s,baz=344,slow=8.3,SNR=1.8						
	0.4nm,0.7s						
ASAR	Alice Springs	48.12	165	P	P	12 25 35.4	-1.5
	0.2nm,0.5s,baz=332,slow=6.7,SNR=7.7						
	0.2nm,0.5s						
BVAR	Borovoye Array	48.68	321	P	P	12 25 40.1	-0.7
	1.1nm,0.6s,baz=98,slow=8.1,SNR=4.6						
	1.1nm,0.6s						

NOU 04 12:24:20.8, 20°.43S×168°.87E, h9^{km}, MLv3.8/13, Loyalty Islands, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INH	Isangel	0.96	23	P	Pg	12 24 38.9	-0.3
INH	Isangel	0.96	23	S	Sb	12 24 52.8	+0.5
YATNC	Mamie plateau,	2.46	228	P	Pn	12 25 00.0	-1.1
PINNC	Pines Island,	2.54	211	P	Pn	12 25 02.7	+0.4
PINNC	Pines Island,	2.54	211	P	Sn	12 25 34.5	+1.1
OUENC	Ouen Island, N	2.74	223	P	Pn	12 25 05.2	+0.3
DZM	Mont Dzumac	2.79	234	P	Pn	12 25 05.6	-0.2
DZM	Mont Dzumac	2.79	234	S	Sn	12 25 39.8	+0.2
ONTNC	Ouen Toro	2.93	230	P	Pn	12 25 07.8	+0.3
KOUNC	Koumac, New Ca	4.30	268	P	Pn	12 25 27.0	+0.6
VLAKA	Lakatoro	4.52	342	P	Pn	12 25 29.8	+0.4

WEL 04 12:27:15.9±1.4, 32°S±36°×18°0W±7°4, h466^{km}±63^{km}, M4.0/5, mB4.0/3, MLv4.0/5, Mw(mB)3.1/3, Error ellipse: s-maj=102.7km s-min=31.5km az=111.4, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	5.93	196	P	P	12 28 50.7	+0.7
HAZ	Te Kaha	6.04	200	P	P	12 28 50.8	-0.3
HAZ				S	S	12 30 09.7	+0.8
PKGZ	Pakihiroa	6.06	198	P	P	12 28 51.6	+0.2
PUZ	Puketiti	6.21	196	P	P	12 28 52.9	+0.1
PUZ				S	S	12 30 12.0	-0.2
RUGZ	Raukumara Rang	6.26	200	P	P	12 28 53.1	-0.4
TWGZ	Tauwhareparae	6.38	198	P	P	12 28 55.1	+0.5
MWZ	Matawai	6.65	200	P	P	12 28 57.8	+0.5
MWZ				S	S	12 30 21.0	+0.6
TKGZ	Te Karaka	6.66	198	P	P	12 28 57.1	-0.2
TKGZ				S	S	12 30 21.5	+1.0
URZ	Urewera	6.71	203	P	P	12 28 57.5	-0.3
RIGZ	Rimuhau	6.93	197	P	P	12 29 00.0	-0.2
MTHZ	Maungataniwha	7.34	202	P	P	12 29 04.9	+0.4
OTVZ	Oturere	8.03	207	P	P	12 29 12.6	+0.7

DJA 04 12:37:54.5±1.0, 8°S±3°×10°7E±°, h19^{km}±9^{km}, M4.1/19, mb4.3/6, MLv4.0/19, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNJI	Cibinong	0.72	18	P	Pb	12 38 08.4	0.0
SKJI	Sukabumi	1.05	340	P	Pn	12 38 14.4	+0.2
SKJI				S	Sb	12 38 27.2	-0.2
LEM	Lembang	1.36	31	P	Pn	12 38 18.3	-0.3
CMJI	Cimerak	1.54	82	P	Pn	12 38 19.6	-1.3
CMJI				S	Sn	12 38 36.0	-4.4
CGJI	Cibinong	1.83	319	P	Pn	12 38 25.4	+0.4
TNG	Tangerang	1.83	352	P	Pb	12 38 25.5	-2.0
TNG				P	Pn	12 38 25.2	+0.2
YOGI	Yogyakarta	3.36	87	P	Pn	12 38 46.2	+0.2
UGM	Wanagama	3.58	89	P	Pn	12 38 47.9	-1.2
SMRI	Semarang	3.63	75	P	Pn	12 38 49.2	-0.5
WOJI	Wonogiri, Jawa	3.98	88	P	Pn	12 38 54.9	+0.4
LWLI	Liwa	4.10	316	P	Pn	12 38 55.9	-0.4
PCJI	Pacitan	4.23	93	P	Pn	12 38 57.3	-0.7
MDSI	Maura Dua	4.42	322	P	Pn	12 39 02.6	+2.0
TPI	Tanjungpandan	5.26	8	P	Pn	12 39 11.6	-0.6
	0.1nm13nm,0.6s						
GMJI	Gumukmas	6.47	93	P	Pn	12 39 29.8	+0.9
	0.2nm20nm,1.2s						
JAGI	Jajag, Banyuwa	7.18	94	P	Pn	12 39 40.0	+1.4
	28nm,1.0s						
SRBI	Singaraja	8.22	91	P	Pn	12 39 53.9	+1.0
	20nm,1.1s						
TWSI	Taliwang, Sumb	9.89	95	P	Pn	12 40 16.8	+1.0
	16nm,1.2s						
PLAI	Plampang	10.78	95	P	Pn	12 40 27.9	-0.1

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*SJA **04** 12:48:03.8±0.7, 19°.93S×69°.17W, h120^{km}±4^{km}, ML4.5, MW4.2*

*NEIC **04** 12:48:05.2±1.9, 19°.96S±0°.05×69°.13W±0°.07, h99^{km}±4^{km}, mb4.5/77, ML4.2(GUC), Error ellipse: s-maj=10.1km s-min=6.6km az=97.0*

*IDC **04** 12:48:06.3±0.7, 19°.87S×68°.94W, h109^{km}±5^{km}, mb3.8/12, mbtmp4.2/15, MS3.1/2, Error ellipse: s-maj=14.7km s-min=10.9km az=91.0*

*GUC **04** 12:48:06.1±0.9, 19°.87S×69°.22W, h94^{km}±4^{km}, ML4.3*

*VAO **04** 12:48:08.5±1.1, 19°.68S×68°.88W, h119^{km}±8^{km}, mb4.4*

ISC 04 12:48:04.5±0.5, 19°.97S±0°.03×69°.09W±0°.04, h100^{km}±4^{km}, n181, σ1§64/208, mb4.5/40, 1C-5D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.18	199		Pn	12 48 20.5	+1.3
PB08				Sn	Sn	12 48 31.9	+1.8
GO01	Chusmiza	0.31	342		Pn	12 48 20.3	+0.4
GO01				Sn	Sn	12 48 31.6	+0.4
GO01	Chusmiza	0.31	342	⇓iP	Pn	12 48 20.2	+0.4
GO01				eS	Sn	12 48 31.4	+0.2
GO01	Chusmiza	0.31	342	eP	Pn	12 48 20.4	+0.6
PB11	IPOC Station P	0.57	291		Pn	12 48 21.1	0.0
PB11				Sn	Sn	12 48 33.1	-0.3
PB11	IPOC Station P	0.57	291	⇓iP	Pn	12 48 21.1	0.0
PB11				eS	Sn	12 48 32.8	-0.7
PB11				IAML		12 48 33.6	
	comp=E,10μm,0.2s						
PB11	IPOC Station P	0.57	291	eP	Pn	12 48 21.1	0.0
PB11				eS	Sn	12 48 36.0	+2.6
PB11				IAML		12 48 41.5	
	comp=Z,4μm,0.3s						
TA02	Huaiquique	1.02	253		Pn	12 48 25.7	+0.5
TA02				Sn	Sn	12 48 41.0	+0.2
TA02	Huaiquique	1.02	253	eP	Pn	12 48 25.8	+0.5
TA02				eS	Sn	12 48 41.2	+0.4
TA02				IAML		12 48 45.9	
	comp=E,26μm,0.2s						
TA02	Huaiquique	1.02	253	eP	Pn	12 48 25.9	+0.7
TA02				eS	Sn	12 48 43.0	+2.2
TA02				IAML		12 48 44.8	
	comp=Z,8μm,0.2s						
PB01	IPOC Station P	1.13	199	Pn	Pn	12 48 28.5	+2.0
PB01	IPOC Station P	1.13	199	⇓iP	Pn	12 48 28.6	+2.0
PB01	IPOC Station P	1.13	199	eP	Pn	12 48 28.5	+2.0
PB01				eS	Sn	12 48 46.4	+3.3
PB01				IAML		12 48 47.3	
	comp=Z,11μm,0.3s						
TA01	Diego Aracena	1.18	240		Pn	12 48 27.6	+0.6
TA01	Diego Aracena	1.18	240	⇓iP	Pn	12 48 27.7	+0.6
TA01				eS	Sn	12 48 44.1	+0.1
TA01				IAML		12 48 48.0	
	comp=E,14μm,0.5s						
TA01	Diego Aracena	1.18	240	eP	Pn	12 48 27.6	+0.6
TA01				eS	Sn	12 48 45.9	+1.9
TA01				IAML		12 48 47.9	
	comp=Z,3μm,0.5s						
PB16	IPOC Station P	1.67	346		Pn	12 48 34.1	+0.5
PB16	IPOC Station P	1.67	346	⇓iP	Pn	12 48 34.1	+0.5
PB16				eS	Sn	12 48 54.8	-0.6
PB16	IPOC Station P	1.67	346	eP	Pn	12 48 34.0	+0.5
PB16				eS	Sn	12 48 56.9	+1.5
PB09	IPOC Station P	1.82	184		Pn	12 48 37.0	+2.0
PB09	IPOC Station P	1.82	184	⇑iP	Pn	12 48 37.9	+2.9
PB09				eS	Sn	12 49 03.4	+5.1
PB09				IAML		12 49 06.7	
	comp=N,3μm,0.6s						
PB09	IPOC Station P	1.82	184	eP	Pn	12 48 32.7	-2.4
PB09				eS	Sn	12 48 55.7	-2.6
PB09				IAML		12 49 06.7	
	comp=Z,3μm,0.8s						
AP01	Chacalluta	1.98	323	Pn	Pn	12 48 36.7	-0.2
AP01	Chacalluta	1.98	323	eP	Pn	12 48 36.9	0.0
AP01				eS	Sn	12 49 02.2	+0.6
AP01				IAML		12 49 11.5	
	comp=Z,2μm,0.3s						
PB03	IPOC Station P	2.16	197		Pn	12 48 40.4	+1.0
PB03	IPOC Station P	2.16	197	eP	Pn	12 48 41.2	+1.8
PB03				eS	Sn	12 49 12.0	+6.0
PB03				IAML		12 49 16.8	
	comp=Z,5μm,0.2s						
PB18	Visviri	2.40	351		Pn	12 48 44.2	+1.4
PB06	IPOC Station P	2.76	189		Pn	12 48 48.7	+1.5
PB06	IPOC Station P	2.76	189	eP	Pn	12 48 49.0	+1.8
PB06				eS	Sn	12 49 12.4	-7.7
PB06				IAML		12 49 32.8	
	comp=Z,2μm,0.4s						
PB05	IPOC Station P	3.05	200		Pn	12 48 52.1	+1.0
PB05	IPOC Station P	3.05	200	eP	Pn	12 48 52.3	+1.2
PB05				eS	Sn	12 49 16.6	-10
PB05				IAML		12 49 43.3	
	comp=Z,1μm,0.4s						
AF01	San Pedro de A	3.09	164	eP	Pn	12 48 51.3	-0.5
AF01				eS	Sn	12 49 25.0	-3.1
AF01				IAML		12 50 10.4	
	comp=Z,954nm,0.7s						
LPAZ	La Paz	3.77	14		Pn	12 49 03.6	+2.4
LPAZ	La Paz	3.77	14	P	Pn	12 49 03.5	+2.2
	comp=Z,70nm,0.6s,baz=188,slow=7.2,SNR=202						
LPAZ				S	Sn	12 49 48.5	+3.4
	comp=Z,25nm,0.7s,baz=200,slow=9.8,SNR=1.8						
LPAZ				LR	LR	12 50 30.7	
	comp=Z,75nm,20.7s,baz=172,slow=40						
LPAZ	La Paz	3.77	14	eP	Pn	12 49 01.9	+0.6
LPAZ	La Paz	3.77	14	eP	Pn	12 49 03.7	+2.4
PB10	IPOC Station P	3.78	201		Pn	12 49 00.9	+0.1
PB10	IPOC Station P	3.78	201	eP	Pn	12 49 01.4	+0.7
PB10				eS	Sn	12 50 00.4	+16
PB10				IAML		12 50 02.2	
	comp=Z,488nm,0.5s						
YJA	Yavi	4.00	124	eP	Pn	12 49 04.3	+0.2
YJA				eS	Sn	12 49 56.3	+6.1
PB14	IPOC Station P	4.79	194		Pn	12 49 14.6	-0.1
PB14	IPOC Station P	4.79	194	eP	Pn	12 49 14.5	-0.2
PB14				eS	Sn	12 50 21.3	+12
PB14				IAML		12 50 33.5	
	comp=Z,322nm,0.5s						
GO02	Mina Guanaco	5.19	185		Pn	12 49 21.0	+0.8
GO02	Mina Guanaco	5.19	185	eP	Pn	12 49 21.1	+1.0
GO02				eS	Sn	12 50 37.8	+19
AC01	Pan de Azucar	6.31	192	Pn	Pn	12 49 33.6	-1.3
AC02	Maricunga	6.84	180		Pn	12 49 43.5	+0.9
GO03	Copiapo	7.66	188	Pn	Pn	12 49 50.4	-3.1
AC04	Llanos de Chal	8.40	192	Pn	Pn	12 49 59.9	-3.5
BBSD	Serra de San D	8.50	72	eP	Pn	12 50 04.0	-0.9
BBSD				eS	Sn	12 51 37.2	-2.1
SIV	San Ignacio	8.59	64	P	Pn	12 50 05.2	-1.0
	comp=Z,14nm,0.5s,baz=251,slow=10,SNR=63						
SIV				S	Sn	12 51 36.6	-4.9
	comp=Z,4.5nm,0.8s,baz=329,slow=21,SNR=1.8						
AC05	El Transito	8.89	187	Pn	Pn	12 50 08.6	-1.7
LCO	Las Campanas	9.12	189	Pn	Pn	12 50 11.2	-2.4
CO01	Juntas del Tor	10.01	185	Pn	Pn	12 50 24.1	-1.5
GO04	Tololo Observa	10.28	188	Pn	Pn	12 50 26.5	-2.7
PTLB	Pontes e Lacer	10.49	66		Pn	12 50 31.5	-0.5
PTLB	Pontes e Lacer	10.49	66	eP	Pn	12 50 31.5	-0.5
CO06	Fray Jorge	10.90	192	Pn	Pn	12 50 35.7	-1.8
VILB	Vilhena	11.01	52		Pn	12 50 38.7	-0.4
VILB	Vilhena	11.01	52	eP	Pn	12 50 38.8	-0.4
BDQN	Bodoquena, MS	11.60	94	eP	Pn	12 50 45.2	-1.6
CFA	Coronel Fontan	11.61	176	P	Pn	12 50 47.1	+0.1
	comp=Z,0.6nm,0.3s,baz=348,slow=19,SNR=1.7						
CFA				S	Sn	12 52 47.0	-7.8
	comp=Z,0.8nm,0.3s,baz=69,slow=21,SNR=1.3						
CPUP	Villa Florida	12.53	123		Pn	12 50 59.6	+0.4
CPUP	Villa Florida	12.53	123	P	Pn	12 50 59.5	+0.2
	comp=Z,1.9nm,0.8s,baz=260,slow=6.1,SNR=10						
AQDB	Aquidauana	12.58	95	eP	Pn	12 51 01.9	+2.0
SALV	Santo Antonio	13.37	75	eP	Pn	12 51 10.1	-0.3
RPRD	Ribas do Rio P	14.46	95	eP	P	12 51 26.4	-1.9
PDRB	Porto dos Gac	14.50	57	eP	Pn	12 51 24.9	-0.1
TRCB	Terra Rica	15.58	103	Pn	P	12 51 39.3	-1.5
TRCB				IAmb	IAmb	12 51 44.2	
	comp=Z,34nm,0.8s						
TRCB	Terra Rica	15.58	103	eP	P	12 51 40.0	-0.8
LDASE	Londrina, Braz	17.05	105	eP	P	12 51 59.4	+2.4
PLTB	Pedras Altas	18.20	133	P	P	12 52 08.8	-0.8
NPGB	Novo Progresso	18.51	48	eP	P	12 52 12.0	-1.1
MACA	Manacapuru-AM	18.61	27	P	P	12 52 13.9	-0.3
MACA				IAmb	IAmb	12 52 15.3	
	comp=Z,19nm,0.6s						
SNDB	Serra Nova Dou	18.85	68	eP	P	12 52 16.5	-0.4
TRQA	Tornquist	19.05	163	P	P	12 52 18.4	-0.5
IPMB	Ipameri, GO	19.84	88	eP	Pn	12 52 28.0	-2.2
COHC	Cochancay	20.03	329		P	12 52 28.9	-0.7
ITTB	Itaituba	20.24	42	eP	P	12 52 30.1	-1.8
BDFB	Brasilia	20.52	81	P	P	12 52 33.2	-1.9
BDFB				IAmb	IAmb	12 52 54.6	
	comp=Z,19nm,1.4s						
BDFB	Brasilia	20.52	81	P	P	12 52 33.4	-1.6
	comp=Z,4.1nm,0.4s,baz=253,slow=11,SNR=7.3						
	comp=Z,4.1nm,0.4s						
PLCA	Paso Flores	20.73	183	P	P	12 52 36.0	-1.1
PLCA	Paso Flores	20.73	183	P	Pn	12 52 39.7	-0.7
	comp=Z,4.1nm,1.0s,baz=347,slow=12,SNR=5.1						
PLCA				pP	pP	12 53 01.7	+4.7
	comp=Z,2.9nm,0.9s,baz=346,slow=12,SNR=2.6						
	comp=Z,4.1nm,1.0s						
LL01	San Ignacio de	22.52	186	P	P	12 52 53.0	-2.9
LL01				IAmb	IAmb	12 53 05.3	
	comp=Z,36nm,1.4s						
MAL2	Monte Alegre,	23.04	41	P	P	12 52 59.1	-2.2
MAL2				IAmb	IAmb	12 52 59.6	
	comp=Z,22nm,0.9s						
SMTB	Santa Maria do	23.54	65	eP	P	12 53 05.2	-0.8
BOAV	Boa Vista	23.76	22		P	12 53 07.6	-0.3
BOAV				IAmb	IAmb	12 53 08.0	
	comp=Z,8.3nm,0.8s						
BOAV	Boa Vista	23.76	22	eP	P	12 53 07.5	-0.4
JANB	Januaria	24.12	82	eP	P	12 53 10.6	-0.6
RUSC	La Rusia	26.00	351		P	12 53 28.0	-0.8
RUSC				IAmb	IAmb	12 53 30.6	
	comp=Z,9.9nm,0.8s						
RCBR	Riachuelo	35.17	71	P	P	12 54 50.6	+1.5
OBIP	Obispado Ponce	37.85	4	P	P	12 55 11.6	-0.1
CELP	Cerrillos	37.89	4		P	12 55 11.5	-0.5
MTO3	Montecristo	39.55	328	P	P	12 55 27.4	+1.2
MTO3				IAmb	IAmb	12 55 28.9	
	comp=Z,3.4nm,0.8s						
553A	Crawfordville	52.01	343	P	P	12 57 04.8	+1.1
JSC	Jenkinsville	55.18	348	P	P	12 57 26.9	+0.1
JSC				IAmb	IAmb	12 57 53.4	
	comp=Z,10nm,1.0s						
SWET	Sewanee	57.16	344	P	P	12 57 39.5	-1.5
U54A	Nelsons Funny	57.46	348	P	P	12 57 42.9	-0.2
PLAL	Pickwick Lake	57.55	342	P	P	12 57 42.6	-1.0
PLAL				IAmb	IAmb	12 57 49.7	
	comp=Z,4.0nm,0.6s						
WVT	Waverly	58.55	342	P	P	12 57 49.3	-1.3
R55A	Marlinton	58.86	350	P	P	12 57 52.6	-0.2
R55A				IAmb	IAmb	12 58 00.3	
	comp=Z,4.7nm,0.9s						
MIAR	Mount Ida	59.01	336	P	P	12 57 53.6	-0.2
MIAR				IAmb	IAmb	12 58 20.1	
	comp=Z,6.1nm,1.1s						
TXAR	Lajitas Array	59.28	325	P	P	12 57 55.8	-0.2
	comp=Z,0.4nm,0.7s,baz=148,slow=7.4,SNR=3.8						
TXAR				PcP	PcP	12 58 43.1	0.0
	comp=Z,0.2nm,0.5s,baz=141,slow=4.0,SNR=1.6						
	comp=Z,0.4nm,0.7s						
Q54A	Coxs Mills	59.66	349	P	P	12 57 57.8	-0.4
Q54A				IAmb	IAmb	12 57 58.6	
	comp=Z,5.3nm,0.6s						
FCAR	Ozark Folk Cen	59.69	338	P	P	12 57 57.6	-0.8
FCAR				IAmb	IAmb	12 57 58.1	
	comp=Z,5.4nm,1.1s						
PBMO	Poplar Bluff	59.93	340	P	P	12 57 59.3	-0.8
CGM3	Cape Girardeau	60.17	341	P	P	12 58 01.3	-0.5
P53A	Whipple	60.25	349	P	P	12 58 02.3	0.0
SIUC	Southern Illin	60.42	342	P	P	12 58 02.7	-0.7
SIUC				IAmb	IAmb	12 58 29.1	
	comp=Z,7.9nm,1.0s						
FVM	French Village	61.04	341	P	P	12 58 07.0	-0.6
VHRN	Van Horn	61.13	325	P	P	12 58 08.0	-0.5
VHRN				IAmb	IAmb	12 58 34.4	
	comp=Z,2.5nm,1.0s						
N53A	Lisbon	61.44	350	P	P	12 58 10.5	+0.2
N49A	Columbus Grove	62.18	347	P	P	12 58 14.7	-0.6
SFIN	Lafayette	62.34	345	P	P	12 58 15.2	-1.0
ERPA	Erie	62.59	351	P	P	12 58 18.0	+0.1
P40A	Paris	62.96	340	P	P	12 58 20.1	-0.4
P40A				IAmb	IAmb	12 58 20.4	
	comp=Z,6.2nm,0.7s						
J59A	Piesco	63.31	356	P	P	12 58 23.1	+0.3
J59A				IAmb	IAmb	12 58 39.1	
	comp=Z,14nm,1.3s						
P38A	Dawn	63.53	339	P	P	12 58 23.9	-0.4
SNAA	Sanae	63.78	161	P	P	12 58 27.3	+1.7
SNAA				IAmb	IAmb	12 58 28.3	
	comp=Z,2.4nm,0.8s						
SNAA	Sanae	63.78	161	P	P	12 58 27.7	+2.1
	comp=Z,1.5nm,0.6s,baz=276,slow=7.7,SNR=8.3						
	comp=Z,1.5nm,0.6s						
DELO	Deloro Mine	64.64	353	P	P	12 58 31.4	0.0
DELO				IAmb	IAmb	12 58 55.0	
	comp=Z,7.2nm,1.2s						
K43A	Burlington	64.84	344	P	P	12 58 31.9	-0.8
WBO	Williamsburg	64.90	355	P	P	12 58 33.3	+0.3
WBO				IAmb	IAmb	12 58 33.6	
	comp=Z,6.1nm,0.7s						
F64A	Sherman	65.52	1	P	P	12 58 37.2	+0.2
F64A				IAmb	IAmb	12 59 01.0	
	comp=Z,18nm,1.4s						
BUKO	Buck Lake	65.77	352	P	P	12 58 38.7	+0.1
BUKO				IAmb	IAmb	12 58 39.1	
	comp=Z,7.8nm,0.7s						
TRQ	Mont Tremblant	66.06	356	P	P	12 58 40.6	0.0
TRQ				IAmb	IAmb	12 58 40.9	
	comp=Z,6.9nm,0.6s						
SDCO	Great Sand Dun	66.85	329	P	P	12 58 47.1	+1.0
E46A	Sault Ste Mari	67.44	349	P	P	12 58 48.6	-0.7
E46A				IAmb	IAmb	12 58 48.9	
	comp=Z,4.7nm,0.7s						
DBIC	Dimbokro	68.47	74	P	P	12 58 56.2	-0.2
DBIC				IAmb	IAmb	12 58 56.8	
	comp=Z,14nm,0.9s						
DBIC	Dimbokro	68.47	74	P	P	12 58 56.0	-0.4
	comp=Z,12nm,0.8s,baz=245,slow=6.6,SNR=9.3						
DBIC				pP	pP	12 59 24.0	+1.0
	comp=Z,3.7nm,0.6s,baz=279,slow=12,SNR=2.2						
	comp=Z,12nm,0.8s						
U15A	North Rim	69.37	324	P	P	12 59 03.4	+1.4
QSPA	South Pole Qui	70.22	180	P	P	12 59 09.2	+2.7
QSPA	South Pole Qui	70.22	180	P	P	12 59 09.2	+2.7
	comp=Z,1.4nm,0.6s,baz=213,slow=0.9,SNR=11						
	comp=Z,1.4nm,0.6s						
EYMN	Ely	70.53	344	P	P	12 59 07.8	-0.5
EYMN				IAmb	IAmb	12 59 08.0	
	comp=Z,7.2nm,0.9s						
MVU	Marysvale	70.84	325	P	P	12 59 12.4	+1.6
MVU				IAmb	IAmb	12 59 13.3	
	comp=Z,5.1nm,1.2s						
SHPR	Sheep Range	71.05	322	P	P	12 59 12.2	+0.1
RSSD	Black Hills	71.35	334	P	P	12 59 14.8	+1.1
RSSD				IAmb	IAmb	12 59 15.1	
	comp=Z,2.8nm,0.8s						
PSUT	Pine Spring	71.75	324	P	P	12 59 15.3	-0.9
AGMN	Agassiz Nation	72.06	342	P	P	12 59 16.9	-0.7
AGMN				IAmb	IAmb	12 59 18.2	
	comp=Z,4.0nm,0.8s						
E28A	Huff	72.13	338		P	12 59 18.1	0.0
E28A				IAmb	IAmb	12 59 19.2	
	comp=Z,8.0nm,0.7s						
EPLO	Experimental L	72.70	344	P	P	12 59 20.2	-1.2
EPLO				IAmb	IAmb	12 59 21.5	
	comp=Z,6.9nm,1.0s						
PDAR	Pinedale Array	72.71	330	P	P	12 59 22.0	+0.1
PDAR	Pinedale Array	72.71	330	P	P	12 59 22.8	+0.9
	comp=Z,0.4nm,0.5s,baz=133,slow=6.7,SNR=2.6						
	comp=Z,0.4nm,0.5s						
MDND	Maddock	72.85	339	P	P	12 59 22.6	+0.4
ULM	Lac du Bonnet	73.81	342	P	P	12 59 27.1	-0.8
ULM				IAmb	IAmb	12 59 28.0	
	comp=Z,4.9nm,0.6s						
ULM	Lac du Bonnet	73.81	342	P	P	12 59 27.3	-0.6
	comp=Z,4.1nm,0.6s,baz=162,slow=5.5,SNR=9.3						
	comp=Z,4.1nm,0.6s						
FXWY	Fox Creek	74.06	330	P	P	12 59 30.4	+0.6
NVAR	Mina Array Bea	74.19	322	P	P	12 59 31.5	+0.8

	comp=Z,0.6nm,0.8s,baz=142,slow=6.0,SNR=6.1						
NVAR				pP	**pP**	**12 59 58.4**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=158,slow=3.5,SNR=3.5						
	comp=Z,0.6nm,0.8s						
RLMT	**Red Lodge**	**74.39**	**332**	P	**P**	**12 59 32.9**	**+1.2**
YNE	**Yellowstone No**	**74.64**	**331**	P	**P**	**12 59 34.2**	**+1.1**
YNE				IAmb	IAmb	12 59 35.0	
	comp=Z,6.8nm,0.8s						
YHH	**Holmes Hill**	**74.86**	**331**	P	**P**	**12 59 33.0**	**-1.4**
YHL	**Hebgen Lake**	**75.06**	**330**	P	**P**	**12 59 36.9**	**+1.3**
HLID	**Hailey**	**75.66**	**328**	P	**P**	**12 59 40.5**	**+1.5**
PAHR	**Pah Rah Range**	**75.67**	**322**	P	**P**	**12 59 39.8**	**+0.7**
MCMT	**McKenzie Canyo**	**75.82**	**329**	P	**P**	**12 59 41.2**	**+1.3**
EGMT	**Eagleton**	**76.86**	**333**	P	**P**	**12 59 46.0**	**+0.5**
TORD	**Torodi Ar. Bea**	**77.01**	**71**		**P**	**12 59 46.2**	**-0.8**
TORD				IAmb	IAmb	12 59 46.6	
	comp=Z,2.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**77.01**	**71**	P	**P**	**12 59 46.1**	**-0.8**
	comp=Z,3.7nm,0.4s,baz=255,slow=5.1,SNR=61						
TORD				pP	**pP**	**13 00 14.4**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=255,slow=4.6,SNR=3.3						
	comp=Z,3.7nm,0.4s						
BPMT	**Black Pine Rid**	**77.30**	**330**	P	**P**	**12 59 49.5**	**+1.2**
PLID	**Pearl Lake**	**77.55**	**328**		**P**	**12 59 50.7**	**+1.1**
NEW	**Newport**	**80.34**	**330**	LR	LR	13 39 36.3	
	comp=Z,37nm,20.4s,baz=38,slow=38						
ESDC	**Sonseca Array**	**84.87**	**45**	P	**P**	**13 00 28.5**	**+0.2**
	comp=Z,0.9nm,1.0s,baz=259,slow=5.6,SNR=4.3						
	comp=Z,0.9nm,1.0s						
YKAW1	**Yellowknife Wh**	**89.65**	**341**		**P**	**13 00 51.1**	**+0.5**
YKAW1				IAmb	IAmb	13 00 51.9	
	comp=Z,7.3nm,0.8s						
YKA	**Yellowknife Ar**	**89.69**	**341**	P	**P**	**13 00 51.2**	**+0.4**
	comp=Z,4.1nm,0.7s,baz=134,slow=4.1,SNR=73						
YKA				pP	**pP**	**13 01 18.3**	**0.0**
	comp=Z,1.2nm,0.7s,baz=135,slow=4.1,SNR=5.4						
	comp=Z,4.1nm,0.7s						
YKAW3	**Yellowknife Wh**	**89.75**	**341**		**P**	**13 00 51.5**	**+0.4**
YKAW3				IAmb	IAmb	13 00 52.5	
	comp=Z,6.2nm,0.7s						
ASAR	**Alice Springs**	**131.18**	**208**	PKP	**PKPdf**	**13 07 06.2**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=123,slow=1.7,SNR=9.6						
WRA	**Warramunga Arr**	**134.17**	**211**	PKP	**PKPdf**	**13 07 12.1**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=154,slow=1.6,SNR=6.8						
WRA				pPKP	**pPKPdf**	**13 07 41.0**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=151,slow=1.8,SNR=2.0						
SIMJ	**Simiganj**	**139.40**	**53**	PKPdf	**PKPdf**	**13 07 19.3**	**-1.2**
KURBB	**Kurchatov Arra**	**140.15**	**32**	PKP	**PKPdf**	**13 07 20.7**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=309,slow=2.4,SNR=2.5						
ZALV	**Zalesovo Beam**	**140.64**	**24**	PKPdf	**PKPdf**	**13 07 22.1**	**0.0**
ZALV	**Zalesovo Beam**	**140.64**	**24**	PKP	**PKPdf**	**13 07 21.8**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=282,slow=1.3,SNR=2.2						
MAKZ	**Makanchi**	**144.31**	**35**	PKPdf	**PKPdf**	**13 07 28.9**	**+0.1**
MKAR	**Makanchi Array**	**144.49**	**35**	PKPdf	PKPbc	13 07 28.6	+0.6
MKAR	**Makanchi Array**	**144.49**	**35**	PKP	PKPbc	13 07 28.1	+0.2
	comp=Z,1.2nm,0.7s,baz=325,slow=2.9,SNR=9.5						
ERM	**Erimo**	**145.01**	**316**	PKPbc	**PKPbc**	**13 07 29.9**	**+0.2**
KLR	**Kul'dur**	**146.37**	**335**	PKPbc	**PKPbc**	**13 07 34.4**	**+0.7**
	comp=Z,1.0nm,0.5s,baz=331,slow=7.8,SNR=2.6						
USA0B	**Ussuriysk Arra**	**150.13**	**329**	PKPbc	**PKPbc**	**13 07 44.2**	**+0.5**
USRK	**Ussuriysk Ar.**	**150.13**	**329**	PKPbc	**PKPbc**	**13 07 43.7**	**0.0**
USRK	**Ussuriysk Ar.**	**150.13**	**329**	PKPbc	**PKPbc**	**13 07 43.4**	**-0.3**
	comp=Z,3.5nm,0.7s,baz=32,slow=1.4,SNR=5.9						
MAJO	**Matsushiro**	**150.97**	**310**	PKPbc	**PKPbc**	**13 07 46.5**	**+0.4**
MJB9	**Matsu-Tunnel**	**150.97**	**310**	PKPbc	**PKPbc**	**13 07 46.6**	**+0.6**
SONM	**Songino Array**	**151.96**	**6**	PKPbc	**PKiKP**	**13 07 48.8**	**+0.4**
SONM	**Songino Array**	**151.96**	**6**	PKPbc	**PKiKP**	**13 07 48.9**	**+0.5**
	comp=Z,2.9nm,0.6s,baz=317,slow=2.2,SNR=13						

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*MOS **04** 13:27:31.8±1.2, 24.°99N×94.°92E, h67^{km}, mb4.6/25, Error ellipse: s-maj=13.2km s-min=5.7km az=113.7*

*BJI **04** 13:27:32.3, 25.°05N×94.°79E, h72^{km}, mB4.6/13, mb4.6/37, Ms4.1/33, Ms7 3.8/37*

*NDI **04** 13:27:32.6±1.5, 24.°98N×94.°97E, h66^{km}±20^{km}, ML4.5, MW4.4, mb4.6(NEIC)*

*IDC **04** 13:27:33.9±1.2, 24.°90N×94.°90E, h77^{km}±11^{km}, mb3.8/28, mbtmp4.1/30, MS3.4/44, Error ellipse: s-maj=11.6km s-min=9.2km az=62.0*

*NEIC **04** 13:27:34.0±1.8, 25.°04N±0.°07×94.°87E±0.°07, h65^{km}±7^{km}, mb4.6/113, Error ellipse: s-maj=10.5km s-min=9.6km az=176.0*

*BKK **04** 13:27:35.2±0.5, 25°N±7°×9°5E±°, h45^{km}, M4.4/21, mB4.9/19, mb4.7/21, Mjma4.5/21, ML5.3/9, MLv4.8/2, Mw(mB)4.1/19*

ISC 04 13:27:33.1±0.3, **25.°01N**±0.°03×**94.°79E**±0.°03, **h65^{km}, n492,** σ**1^{s}39**/454, **mb4.5**/105, **9C-1D, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
IMP	**Imphal**	**0.79**	**257**	*e*P	**Pn**	**13 27 51.0**	**+2.3**
IMP				*e*S	**Sn**	**13 28 02.5**	**+2.3**
IMP				IAML		13 28 08.6	
	comp=N,3µm,0.5s						
IMP				IAML		13 28 09.3	
	comp=E,3µm,0.4s						
KOHI	**KOHIMA**	**0.94**	**319**	*e*P	**Pn**	**13 27 52.9**	**+2.3**
KOHI				*e*S	**Sn**	**13 28 06.3**	**+2.6**
KOHI				IAML		13 28 10.2	
	comp=N,15µm,0.8s						
KOHI				IAML		13 28 18.0	
	comp=E,12µm,1.2s						
AZL	**Aizawl**	**2.29**	**237**	*e*P	**Pn**	**13 28 09.8**	**+1.1**
AZL				*e*S	**Sn**	**13 28 37.2**	**+1.2**
AZL				IAML		13 28 47.8	
	comp=N,3µm,0.5s						
AZL				IAML		13 28 49.6	
	comp=E,4µm,0.2s						
ZIRO	**ZIRO**	**2.64**	**342**	*e*P	**Pn**	**13 28 14.1**	**+0.5**
ZIRO				*e*S	**Sn**	**13 28 44.0**	**-0.6**
ZIRO				IAML		13 28 45.2	
	comp=E,6µm,0.6s						
TNCH	**TengChong**	**3.39**	**89**	⇑P	**Pn**	**13 28 25.2**	**+1.6**
TNCH				S	**Sn**	**13 29 03.9**	**+1.2**
TNCH				smax	smax		
	comp=E,2µm,1.1s						
TNCH				smax	smax		
	comp=E,2µm,1.2s						
TNCH				LR	LR		
	comp=E,1µm,4.4s						
BRDH	**Bariadhala**	**3.70**	**232**	P	**Pn**	**13 28 29.0**	**+1.2**
	comp=E,64nm,0.3s,baz=50,slow=23,SNR=7.3						
BRDH				S	**Sn**	**13 29 10.7**	**+0.6**
	comp=E,534nm,0.4s,baz=57,slow=18,SNR=32						
LSA	**Lhasa**	**5.68**	**326**		**Pn**	**13 28 56.7**	**+1.4**
LSA	**Lhasa**	**5.68**	**326**	P	**Pn**	**13 28 57.8**	**+2.5**
LSA				smax	smax		
	comp=E,75nm,0.6s						
LSA	**Lhasa**	**5.68**	**326**	P	**Pn**	**13 28 56.7**	**+1.4**
GTK	**Tadong**	**6.01**	**294**	*e*P	**Pn**	**13 29 00.0**	**+0.4**
GTK				*e*S	**Sn**	**13 30 06.0**	**-1.1**
GTK				IAML		13 30 12.1	
	comp=N,2µm,0.3s						
GTK				IAML		13 30 13.4	
	comp=E,2µm,0.7s						
CMAI	**Chiengmai2**	**6.41**	**141**	P	**Pn**	**13 29 06.4**	**+1.4**
PZH	**PanZhiHua**	**6.44**	**75**	P	**Pn**	**13 29 09.4**	**+4.0**
PZH				S	**Sn**	**13 30 25.1**	**+7.4**
PZH				pmax	pmax		
	comp=E,140nm,0.6s						
PZH				LR	LR		
	comp=E,630nm,4.1s						
PZH				LR	LR		
	comp=E,430nm,6.4s						
PZH				LR	LR		
	comp=E,540nm,7.1s						
ODAN	**Odare**	**6.91**	**287**	Pn	**Pn**	**13 29 12.7**	**+0.8**
	baz=280,slow=0.0						
ODAN				Sn	**Sn**	**13 30 27.5**	**-1.7**
	comp=E,475nm,0.4s,baz=280,slow=0.0						
KMI	**Kunming**	**7.21**	**87**	⇑P	**Pn**	**13 29 20.4**	**+4.3**
KMI				smax	smax		
	comp=E,79nm,1.5s						
KMI				smax	smax		
	comp=E,53nm,1.2s						
KMI				LR	LR		
	comp=E,570nm,6.9s						
KMI				LR	LR		
	comp=E,420nm,4.9s						
KMI				LR	LR		
	comp=E,600nm,7.0s						
CHTO	**Chiang Mai**	**7.28**	**147**		**Pn**	**13 29 17.0**	**+0.3**
CHTO	**Chiang Mai**	**7.28**	**147**	P	**Pn**	**13 29 17.6**	**+0.8**
CHTO	**Chiang Mai**	**7.28**	**147**	P	**Pn**	**13 29 17.0**	**+0.3**
MHMT	**Maesarieng**	**7.40**	**156**	P	**Pn**	**13 29 19.5**	**+1.0**
CM15	**Chiang Mai Arr**	**7.58**	**149**	P	**Pn**	**13 29 21.9**	**+1.0**
	comp=E,0.5nmcomp=E,579nmcomp=E,55nm,0.8s						
CM31	**Chiang Mai Arr**	**7.58**	**149**		**Pn**	**13 29 21.7**	**+0.7**
CMAR	**Chiang Mai Arr**	**7.58**	**149**		**Pn**	**13 29 21.7**	**+0.7**
CMAR	**Chiang Mai Arr**	**7.58**	**149**	P	**Pn**	**13 29 21.5**	**+0.5**
	comp=E,22nm,0.7s,baz=325,slow=14,SNR=86						
CMAR				S	**Sn**	**13 30 44.4**	**-1.0**
	comp=E,12nm,0.9s,baz=313,slow=16,SNR=1.3						
CMAR				LR	LR	13 32 51.4	
	comp=E,168nm,21.5s,baz=320,slow=43						
CMAR	**Chiang Mai Arr**	**7.58**	**149**	*i* P	**Pn**	**13 29 22.0**	**+1.1**
CMAR				pmax	pmax		
	comp=Z,23nm,0.7s						
CM13	**Chiang Mai Arr**	**7.59**	**149**	P	**Pn**	**13 29 22.3**	**+1.2**
	comp=Z,0.3nmcomp=Z,0.5nmcomp=Z,590nmcomp=Z,38nm,0.8s						
CM02	**Chiang Mai Arr**	**7.60**	**149**	P	**Pn**	**13 29 22.4**	**+1.2**
	comp=Z,0.5nmcomp=Z,678nmcomp=Z,64nm,0.9s						
CM09	**Chiang Mai Arr**	**7.61**	**148**	P	**Pn**	**13 29 22.7**	**+1.3**
	comp=Z,0.6nmcomp=Z,520nmcomp=Z,45nm,0.7s						
RAMN	**Ramite**	**7.62**	**286**	Pn	**Pn**	**13 29 22.4**	**+0.8**
	baz=280,slow=0.0						
RAMN				Sn	**Sn**	**13 30 44.5**	**-2.1**
	comp=Z,303nm,0.4s,baz=280,slow=0.0						
CM01	**Chiang Mai Arr**	**7.62**	**149**	P	**Pn**	**13 29 22.6**	**+1.1**
	comp=Z,0.6nmcomp=Z,649nmcomp=Z,63nm,0.8s						
CM05	**Chiang Mai Arr**	**7.63**	**149**	P	**Pn**	**13 29 22.7**	**+1.1**
	comp=Z,0.6nmcomp=Z,486nmcomp=Z,29nm,1.0s						
CM04	**Chiang Mai Arr**	**7.65**	**149**	P	**Pn**	**13 29 23.0**	**+1.2**
	comp=Z,0.6nmcomp=Z,804nmcomp=Z,54nm,0.7s						
EVN	**Everest**	**7.72**	**294**		**Pn**	**13 29 23.6**	**+0.2**
LAMP	**Lampang**	**7.87**	**144**	P	**Pn**	**13 29 25.9**	**+1.0**
	comp=Z,843nmcomp=Z,92nm,0.7s						
GUN	**Gumba**	**8.49**	**292**	Pn	**Pn**	**13 29 33.9**	**+0.3**
	baz=286,slow=0.0						
PKI	**Pulchoki**	**8.79**	**289**	Pn	**Pn**	**13 29 37.7**	**-0.1**
	baz=283,slow=0.0						
PKI				Sn	**Sn**	**13 31 11.8**	**-3.8**
	comp=Z,150nm,0.6s,baz=283,slow=0.0						
PKIN	**Phulchoki**	**8.81**	**289**	Pn	**Pn**	**13 29 37.7**	**-0.2**
	baz=284,slow=0.0						
PKIN				Sn	**Sn**	**13 31 12.6**	**-3.2**
	comp=Z,167nm,0.4s,baz=284,slow=0.0						
KKN	**Kakani**	**8.96**	**290**	Pn	**Pn**	**13 29 40.8**	**+0.8**
	baz=285,slow=0.0						
KKN				Sn	**Sn**	**13 31 16.1**	**-3.4**
	comp=Z,116nm,0.3s,baz=285,slow=0.0						
DMN	**Daman**	**9.06**	**289**	Pn	**Pn**	**13 29 41.1**	**-0.3**
	baz=283,slow=0.0						
DMN				Sn	**Sn**	**13 31 18.8**	**-3.3**
	comp=Z,111nm,0.4s,baz=283,slow=0.0						
SLVN	**Son La**	**9.15**	**112**		**Pn**	**13 29 42.2**	**-0.3**
SLVN	**Son La**	**9.15**	**112**	P	**Pn**	**13 29 45.0**	**+2.5**
PHIT	**Phitsanulok**	**9.39**	**145**	P	**Pn**	**13 29 47.1**	**+1.5**
GKN	**Gorkha**	**9.57**	**290**	Pn	**Pn**	**13 29 48.1**	**-0.1**
	baz=285,slow=0.0						
GKN				Sn	**Sn**	**13 31 29.1**	**-5.1**
	comp=Z,111nm,0.3s,baz=285,slow=0.0						
KOLN	**Koldanda**	**10.40**	**288**	Pn	**Pn**	**13 29 58.7**	**-0.9**
	baz=283,slow=0.0						
KOLN				Sn	**Sn**	**13 31 50.1**	**-4.6**
	comp=Z,94nm,0.4s,baz=283,slow=0.0						
KHLT	**Khaolaem Dam**	**10.77**	**160**	P	**Pn**	**13 30 06.1**	**+1.5**
GYA	**Guiyang**	**10.80**	**80**	P	**Pn**	**13 30 06.5**	**+1.4**
GYA				sP		13 30 24.4	
GYA				S	**Sn**	**13 31 59.6**	**-4.8**
GYA				pmax	pmax		
	comp=Z,18nm,0.6s						
GYA				LR	LR		
	comp=Z,470nm,24.4s						
PYUN	**Piuthan**	**11.00**	**289**	Pn	**Pn**	**13 30 06.5**	**-1.3**
	baz=284,slow=0.0						
PYUN				Sn	**Sn**	**13 32 03.7**	**-5.6**
	comp=Z,130nm,0.6s,baz=284,slow=0.0						
GOMU	**GeErMu**	**11.15**	**0**	P	**Pn**	**13 30 08.8**	**-1.2**
GOMU				S	**Sn**	**13 32 15.5**	**+2.4**
GOMU				pmax	pmax		
	comp=Z,33nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,230nm,4.6s						
GOMU				LR	LR		
	comp=Z,520nm,10.0s						
GOMU				LR	LR		
	comp=Z,300nm,8.0s						
GOMU				LR	LR		
	comp=Z,770nm,10.2s						
CHAI	**Chaiyaphum**	**11.29**	**142**	P	**Pn**	**13 30 14.7**	**+3.0**
PANO	**Nakornpanom**	**12.05**	**129**	P	**Pn**	**13 30 20.5**	**-1.5**
LZH	**Lanzhou**	**13.51**	**33**	P	**Pn**	**13 30 42.0**	**+0.1**
LZH				pP	P	13 30 55.6	+6.7
LZH				sP		13 31 04.2	
LZH				sS	S	13 33 28.1	-2.1
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
LZH				LR	LR		
	comp=Z,390nm,12.4s						
LZH				LR	LR		
	comp=Z,630nm,9.6s						
LZH				LR	LR		
	comp=Z,380nm,14.0s						
UBPT	**Khong Chiam**	**13.93**	**132**		**Pn**	**13 30 46.6**	**-0.8**
UBPT	**Khong Chiam**	**13.93**	**132**	P	**Pn**	**13 30 46.2**	**-1.3**
ENH	**Enshi**	**14.04**	**65**	Pn	**Pn**	**13 30 48.2**	**-0.6**
GTA	**Gaotai**	**14.97**	**15**	*e*P	**Pn**	**13 30 59.4**	**-1.6**
GTA				SS	**S**	**13 34 02.3**	**+2.3**
GTA				ScS	**ScS**	**13 43 09.1**	**-3.5**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GTA				LR	LR		
	comp=Z,140nm,10.9s						
GTA				LR	LR		
	comp=Z,680nm,10.2s						
GTA				LR	LR		
	comp=Z,270nm,13.8s						
QIZ	**Qiongzhong**	**15.17**	**110**	Pn	**Pn**	**13 31 03.1**	**-0.5**
QIZ				IAmb	IAmb	13 31 09.8	
	comp=Z,32nm,1.2s						
QIZ	**Qiongzhong**	**15.17**	**110**	P	**Pn**	**13 31 03.4**	**-0.2**
QIZ				S	**Sn**	**13 33 51.5**	**+0.8**
QIZ				pmax	pmax		
	comp=Z,17nm,2.1s						
QIZ				LR	LR		
	comp=Z,240nm,6.9s						
QIZ				LR	LR		
	comp=Z,150nm,15.9s						
QIZ	**Qiongzhong**	**15.17**	**110**	P	**P**	**13 31 06.0**	**-1.3**
XAN	**Xi'an**	**15.23**	**51**	⇑P	**P**	**13 31 06.2**	**-1.7**
XAN				PP	**PnPn**	**13 31 15.5**	**+1.9**
XAN				S	**Sn**	**13 33 54.8**	**+2.9**
XAN				pmax	pmax		
	comp=Z,11nm,1.1s						
XAN				pmax	pmax		
	comp=Z,91nm,4.7s						
XAN				LR	LR		
	comp=Z,240nm,7.2s						
XAN				LR	LR		
	comp=Z,200nm,7.9s						
XAN				LR	LR		
	comp=Z,280nm,6.7s						
HYB	**Hyderabad**	**16.91**	**247**	*e*P	**P**	**13 31 28.2**	**+1.6**
HYB				*e*S	**S**	**13 34 42.5**	**+2.7**
DLV	**Lat**	**18.36**	**133**		**P**	**13 31 43.5**	**+0.8**
DLV	**Lat**	**18.36**	**133**	P	**Pn**	**13 31 46.8**	**+3.4**
BSI	**Banda Aceh**	**19.41**	**178**	P	**P**	**13 31 53.4**	**-0.7**
	comp=Z,18nm,0.9s						
WMQ	**Urumqi**	**19.64**	**345**	*e*P	**Pn**	**13 31 58.6**	**+0.2**
WMQ				pP	pP	13 32 11.0	+0.6
WMQ				pmax	pmax		
	comp=Z,19nm,0.9s						
WMQ				LR	LR		
	comp=Z,210nm,21.7s						
LHMI	**Lhok Sumawe**	**19.78**	**174**	P	**P**	**13 31 59.5**	**+1.4**
	comp=Z,57nm,1.2s						
BTO	**Baotou**	**20.09**	**36**	*e*P	**P**	**13 32 00.6**	**-0.9**
BTO				pP	**pP**	**13 32 16.0**	**+0.7**
BTO				PP	**sP**	**13 32 23.2**	**-0.3**
BTO				sP	Pn	13 32 26.3	+23
BTO				S	**S**	**13 35 37.1**	**-6.6**
BTO				sS	**sS**	**13 35 59.3**	**-7.4**
BTO				SS	**SnSn**	**13 36 07.5**	**+2.5**
BTO				pmax	pmax		
	comp=Z,28nm,0.7s						
BTO				pmax	pmax		
	comp=Z,110nm,5.4s						
BTO				LR	LR		
	comp=Z,580nm,12.5s						
BTO				LR	LR		
	comp=Z,600nm,15.0s						
BTO				LR	LR		
	comp=Z,540nm,19.6s						
KULM	**Kulim**	**20.40**	**163**		**P**	**13 32 05.2**	**+0.4**
KULM	**Kulim**	**20.40**	**163**	P	Pn	13 32 09.2	+1.8
NIL	**Nilore**	**20.63**	**300**	P	**P**	**13 32 07.8**	**+0.6**
NIL				IAmb	IAmb	13 32 44.8	
	comp=Z,19nm,0.7s						
NIL	**Nilore**	**20.63**	**300**	P	**P**	**13 32 07.8**	**+0.6**
NIL				pmax	pmax		
	comp=Z,19nm,0.7s						
MLSI	**Meulaboh, Aceh**	**20.68**	**175**	P	**P**	**13 32 09.1**	**+1.2**
	comp=Z,3µmcomp=Z,34nm,0.7s						
WUS	**Wushi**	**20.70**	**325**	IAmb	IAmb	13 32 10.2	
	comp=Z,28nm,0.9s						
HNS	**HongShan**	**20.99**	**49**	*e*P	Pn	13 32 13.8	-0.5
HNS				S	**S**	**13 36 04.0**	**+2.8**
HNS				LR	LR		
	comp=Z,200nm,10.4s						
HNS				LR	LR		
	comp=Z,130nm,12.7s						
HHC	**Hu-ho-hao-te**	**21.10**	**37**	*e*P	**P**	**13 32 13.7**	**+1.4**
KSH	**Kashi**	**21.44**	**317**	P	**P**	**13 32 17.3**	**+1.3**
KSH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TSI	**Tuntungan**	**21.69**	**170**	P	**P**	**13 32 19.6**	**+0.9**
TARG	**Taragay, Kyrgy**	**21.82**	**324**	P	**P**	**13 32 21.4**	**+1.0**
TARG	**Taragay, Kyrgy**	**21.82**	**324**	P	**P**	**13 32 21.4**	**+1.0**
TARG				pmax	pmax		
	comp=Z,13nm,0.9s						
PRZ	**Przheval'sk**	**22.05**	**326**	P	**P**	**13 32 25.0**	**+2.4**
PRZ				pmax	pmax		
	comp=Z,24nm,1.2s						
PALK	**Pallekele**	**22.19**	**220**	LR	LR	13 43 51.3	
	comp=Z,60nm,18.4s,baz=34,slow=44						
NJ2	**Nanjing**	**22.25**	**66**	*e*P	**P**	**13 32 24.1**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,160nm,8.5s						
NJ2				LR	LR		
	comp=Z,170nm,10.9s						
NJ2				LR	LR		
	comp=Z,470nm,18.5s						
PSI	**Prapat**	**22.44**	**169**	P	**P**	**13 32 29.7**	**+2.8**
PSI	**Prapat**	**22.44**	**169**	P	**P**	**13 32 28.7**	**+1.8**
PSI				pmax	pmax		
	comp=Z,12nm,0.7s						
RPSI	**Rantau Prapat**	**22.54**	**169**	P	**P**	**13 32 28.6**	**+0.8**
GSI	**Gunungsitoli**	**23.72**	**173**		**P**	**13 32 38.6**	**-0.7**
GSI	**Gunungsitoli**	**23.72**	**173**	P	**P**	**13 32 39.8**	**+0.5**
	comp=Z,50nm,1.0s						
TKM2	**Tokmak 2**	**23.83**	**323**	P	**P**	**13 32 42.8**	**+2.4**
	SNR=15						
ARLS	**Aral**	**23.86**	**320**	P	**P**	**13 32 43.1**	**+2.5**
ARLS				pmax	pmax		
	comp=Z,22nm,1.2s						
MK31	**Makanchi Array**	**23.92**	**338**	*ce*P	**P**	**13 32 42.5**	**+1.6**
MKAR	**Makanchi Array**	**23.92**	**338**	P	**P**	**13 32 41.6**	**+0.7**
MKAR	**Makanchi Array**	**23.92**	**338**	P	**P**	**13 32 42.1**	**+1.3**
	comp=Z,9.3nm,0.5s,baz=148,slow=9.5,SNR=118						
MKAR				ScP	**ScP**	**13 39 51.6**	**-3.1**
	comp=Z,0.7nm,0.8s,baz=129,slow=2.0,SNR=4.9						
MKAR				LR	LR	13 44 26.5	
	comp=Z,44nm,19.9s,baz=135,slow=42						
	comp=Z,9.3nm,0.5s						
KBK	**Karagaybulak**	**24.01**	**322**	P	**P**	**13 32 45.4**	**+3.4**
	SNR=6.3						
MAKZ	**Makanchi**	**24.04**	**338**	P	**P**	**13 32 43.2**	**+1.3**
MAKZ				IAmb	IAmb	13 32 44.8	
	comp=Z,15nm,0.7s						
MAKZ	**Makanchi**	**24.04**	**338**	P	**P**	**13 32 43.2**	**+1.3**
MAKZ				pmax	pmax		
	comp=Z,15nm,0.7s						
TWGBT	**Beinan**	**24.12**	**90**	P	**P**	**13 32 44.0**	**+1.1**
YULB	**Yu-li**	**24.22**	**88**	P	**P**	**13 32 44.2**	**+0.3**
YULB				IAmb	IAmb	13 32 46.3	
	comp=Z,14nm,0.7s						
YULB	**Yu-li**	**24.22**	**88**	P	**P**	**13 32 45.3**	**+1.4**
KBL	**Kabul**	**24.22**	**299**	P	**P**	**13 32 45.3**	**+1.3**
KBL				IAmb	IAmb	13 33 20.5	
	comp=Z,18nm,1.1s						
KBL	**Kabul**	**24.22**	**299**	P	**P**	**13 32 45.3**	**+1.3**
KBL				pmax	pmax		
	comp=Z,18nm,1.1s						
AAK	**Ala-Archa**	**24.25**	**321**	P	**P**	**13 32 46.1**	**+2.0**
AAK	**Ala-Archa**	**24.25**	**321**	P	**P**	**13 32 45.8**	**+1.7**
	comp=Z,4.5nm,0.8s,baz=137,slow=9.8,SNR=10						
AAK				LR	LR	13 42 51.2	
	comp=Z,67nm,18.4s,baz=112,slow=38						
	comp=Z,4.5nm,0.8s						
AAK	**Ala-Archa**	**24.25**	**321**	*ce*P	**P**	**13 32 45.1**	**+1.0**
AAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ARSB	**Arslanbob**	**24.35**	**317**	P	**P**	**13 32 45.5**	**+0.5**
ARSB	**Arslanbob**	**24.35**	**317**	P	**P**	**13 32 45.5**	**+0.5**
ARSB				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AML	**Almayashu**	**24.40**	**320**	P	**P**	**13 32 48.0**	**+2.2**
	SNR=6.8						
MNSI	**Mandailing Nat**	**24.52**	**168**	P	**P**	**13 32 48.4**	**+1.9**
	comp=Z,20nm,0.7s						
SONM	**Songino Array**	**24.56**	**19**	P	**P**	**13 32 46.8**	**-0.1**
SONM	**Songino Array**	**24.56**	**19**	P	**P**	**13 32 47.5**	**+0.7**
	comp=Z,11nm,1.3s,baz=187,slow=7.8,SNR=9.5						
SONM				ScP	**ScP**	**13 39 53.5**	**-3.1**
	comp=Z,0.3nm,0.4s,baz=197,slow=4.6,SNR=4.1						
SONM				LR	LR	13 44 15.3	
	comp=Z,69nm,20.8s,baz=205,slow=41						
	comp=Z,11nm,1.3s						
SONM	**Songino Array**	**24.56**	**19**	P	**P**	**13 32 46.8**	**-0.1**
SONM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
USP	**Ospenovka**	**24.66**	**323**	P	**P**	**13 32 49.2**	**+1.5**
	SNR=9.5						
EKS2	**Erkin-Say**	**24.68**	**321**	P	**P**	**13 32 50.3**	**+2.3**
	SNR=10						
ULN	**Ulaanbaatar**	**24.79**	**20**	P	**P**	**13 32 48.5**	**-0.4**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BTK	**Batken**	**25.06**	**313**	IAmb	IAmb	13 33 17.1	
	comp=Z,14nm,0.9s						
BTK	**Batken**	**25.06**	**313**	P	**P**	**13 32 52.4**	**+1.0**
BTK				pmax	pmax		
	comp=Z,15nm,1.0s						
ARK	**Arkit**	**25.25**	**317**	P	**P**	**13 32 55.0**	**+1.9**
ARK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TRKS	**Terek-Say**	**25.61**	**316**	P	**P**	**13 32 57.9**	**+1.4**
TRKS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ZAK	**Zakamensk**	**26.17**	**12**	*e*P	**P**	**13 33 02.5**	**+1.1**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TGY	**Tagaytay City**	**26.87**	**109**	LR	LR	13 43 34.4	
	comp=Z,37nm,20.2s,baz=331,slow=36						
KURBB	**Kurchatov Arra**	**28.48**	**338**	P	**P**	**13 33 22.8**	**+0.9**
	comp=Z,3.4nm,0.6s,baz=147,slow=9.6,SNR=37						
KURBB				PcP	**PcP**	**13 36 32.4**	**0.0**
	comp=Z,0.8nm,0.5s,baz=154,slow=2.1,SNR=5.7						
KURBB				ScP	**ScP**	**13 40 06.2**	**-1.8**
	comp=Z,0.7nm,0.6s,baz=149,slow=2.8,SNR=8.5						
KURBB				LR	LR	13 44 53.6	
	comp=Z,42nm,21.5s,baz=215,slow=36						
	comp=Z,3.4nm,0.6s						
KURK	**Kurchatov**	**28.53**	**338**	P	**P**	**13 33 23.0**	**+0.6**
KURK	**Kurchatov**	**28.53**	**338**	*ce*P	**P**	**13 33 23.6**	**+1.2**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PPBI	**Pangkal Pinang**	**29.17**	**156**	P	**P**	**13 33 29.0**	**+0.6**
ZAA0	**Zalesovo Array**	**29.85**	**348**	P	**P**	**13 33 34.8**	**+0.9**
ZALV	**Zalesovo Beam**	**29.85**	**348**	P	**P**	**13 33 35.0**	**+1.1**
	comp=Z,1.6nm,0.3s,baz=167,slow=8.4,SNR=8.6						
ZALV				LR	LR	13 46 52.7	
	comp=Z,66nm,19.0s,baz=142,slow=39						
	comp=Z,1.6nm,0.3s						
JOW	**Kunigami**	**30.12**	**79**	LR	LR	13 46 52.8	
	comp=Z,146nm,19.0s,baz=116,slow=39						
KSRS	**Korea Array**	**30.77**	**58**	P	**P**	**13 33 40.9**	**-1.4**
	comp=Z,0.4nm,0.4s,baz=244,slow=7.4,SNR=1.6						
KSRS				LR	LR	13 47 12.5	
	comp=Z,69nm,18.2s,baz=250,slow=38						
	comp=Z,0.4nm,0.4s						
JNU	**Nakatsue**	**32.44**	**67**	LR	LR	13 48 26.9	

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             comp=Z,59nm,21.1s,baz=304,slow=39
BVAR  Borovoye Array   33.47 333    P      P       13 34 06.7 +0.9
             comp=Z,2.3nm,0.6s,baz=138,slow=11,SNR=12
BVAR                                PcP    PcP     13 36 46.1 +0.5
             comp=Z,0.7nm,0.6s,baz=191,slow=2.9,SNR=3.9
BVAR                                ScP    ScP     13 40 22.5 -2.0
             comp=Z,1.4nm,0.7s,baz=134,slow=4.3,SNR=5.2
             comp=Z,2.3nm,0.6s
BRVK  Borovoye         33.53 333           P       13 34 07.5 +1.1
BRVK  Borovoye         33.53 333ceP        P       13 34 07.7 +1.3
BRVK                                pmax   pmax
             comp=Z,3.0nm,0.9s
MDJ   Mudanjiang       34.27  46    P      P       13 34 10.0 -2.9
MDJ                                 pmax   pmax
             comp=Z,7.0nm,1.4s
DAV   Davao City (W)   34.41 116    LR     LR      13 49 26.6
             comp=Z,44nm,19.6s,baz=314,slow=38
USRK  Ussuriysk Ar.    35.72  48    LR     LR      13 50 17.9
             comp=Z,55nm,18.4s,baz=230,slow=38
AB31  Akbulak array    36.34 321    IAmb   IAmb    13 34 32.7
             comp=Z,4.9nm,0.8s
ABKAR Akbulak array    36.34 321    P      P       13 34 31.7 +1.2
ABKAR Akbulak array    36.34 321    IAmb   IAmb    13 34 32.7
             comp=Z,4.9nm,0.8s
ZEA   Zeya             37.53  32  i P      P       13 34 40.8 +0.2
KLR   Kul'dur          37.55  40    LR     LR      13 50 53.7
             comp=Z,48nm,18.7s,baz=232,slow=37
KAPI  Kappang          38.47 137    LR     LR      13 52 38.0
             comp=Z,41nm,18.3s,baz=310,slow=39
MJAR  Matsushiro Arr   38.74  62    P      P       13 34 49.8 -1.3
             comp=Z,0.9nm,0.5s,baz=268,slow=11,SNR=4.4
MJAR                                LR     LR      13 51 53.5
             comp=Z,53nm,21.1s,baz=256,slow=38
             comp=Z,0.9nm,0.5s
ARTI  Arti             40.92 330    LR     LR      13 54 22.5
             comp=Z,99nm,20.1s,baz=44,slow=39
ARTI  Arti             40.92 330d iP       P       13 35 09.7 +0.8
ARTI                                               13 37 06.3
ARTI                                S      S       13 41 16.7 +0.9
ARTI                                SS     SS      13 44 16.2 -3.2
ARTI                                pmax   pmax
             comp=Z,2.0nm,0.5s
JCJ   Chichijima       42.44  77    LR     LR      13 53 15.2
             comp=Z,40nm,21.9s,baz=154,slow=36
YAK   Yakutsk          43.81  23    LR     LR      13 53 41.1
             comp=Z,56nm,18.1s,baz=210,slow=36
YAK   Yakutsk          43.81  23  i P      P       13 35 32.0 -0.2
YAK                                 pmax   pmax
             comp=Z,6.0nm,0.6s
NRIK  Noril'sk         44.56 356    P      P       13 35 38.1 +0.1
             comp=Z,1.2nm,0.4s,baz=169,slow=8.4,SNR=3.7
NRIK                                LR     LR      13 56 07.3
             comp=Z,52nm,20.2s,baz=180,slow=38
             comp=Z,1.2nm,0.4s
NRIK  Noril'sk         44.56 356  i P      P       13 35 38.4 +0.3
NRIK                                pmax   pmax
             comp=Z,2.0nm,0.9s
BELG  Belogornoye      44.74 320    LR     LR      13 57 23.4
             comp=Z,36nm,19.1s,baz=63,slow=40
KBZ   Khabaz           45.93 307    P      P       13 35 50.7 +1.4
             comp=Z,0.5nm,0.7s,baz=131,slow=19,SNR=1.2
KBZ                                 LR     LR      13 58 02.8
             comp=Z,28nm,21.8s,baz=133,slow=40
             comp=Z,0.5nm,0.7s
KIV   Kislovodsk       46.10 308  eP       P       13 35 50.8 -0.1
KIV                                 pmax   pmax
             comp=Z,4.0nm,1.0s
KIV                                 pmax   pmax
             comp=Z,17nm,16.0s
KIRV  Kirov            46.21 329    LR     LR      13 57 38.1
             comp=Z,59nm,21.3s,baz=127,slow=39
KIRV  Kirov            46.21 329ceP        P       13 35 52.6 +1.3
MARD  Mardin           47.24 299    P      P       13 36 01.4 +1.5
TIXI  Tiksi            50.44  13    P      P       13 36 23.3 -0.4
TIXI  Tiksi            50.44  13    LR     LR      13 57 40.4
             comp=Z,30nm,19.1s,baz=202,slow=36
TIXI  Tiksi            50.44  13  i P      P       13 36 23.7  0.0
TIXI                                pmax   pmax
             comp=Z,8.0nm,0.6s
MA2   Magadan          51.66  33    LR     LR      14 00 37.7
             comp=Z,35nm,21.4s,baz=254,slow=38
KLMR  Klimovskoe       51.71 329    P      P       13 36 32.6 -0.7
KLMR                                pmax   pmax
             comp=Z,10.0nm,1.1s
OBN   Obninsk          51.78 322ceP        P       13 36 33.5 -0.4
OBN                               e                13 38 35.8
OBN                               eS       S       13 44 07.3 +16
OBN                                 pmax   pmax
             comp=Z,5.0nm,1.1s
OBN                                 MLR    MLR
             comp=Z,58nm,19.0s
FITZ  Fitzroy Crossi   52.34 142    P      P       13 36 36.8 -1.7
             comp=Z,5.5nm,0.9s,baz=36,slow=7.9,SNR=2.9
             comp=Z,5.5nm,0.9s
BRTR  Keskin Array B   52.75 302    P      P       13 36 42.1 +0.5
             comp=Z,0.3nm,0.7s,baz=114,slow=6.5,SNR=6.9
             comp=Z,0.3nm,0.7s
EIL   Elat             52.85 289    LR     LR      14 05 48.4
             comp=Z,27nm,18.6s,baz=68,slow=43
SEY   Seymchan         53.39  29    LR     LR      14 01 03.6
             comp=Z,112nm,20.6s,baz=266,slow=38
PETK  Petropavlovsk-   54.23  41    LR     LR      14 02 02.5
             comp=Z,25nm,19.7s,baz=253,slow=38
AKASG Malin Array Be   55.72 316    P      P       13 37 02.5 -0.3
             comp=Z,0.7nm,0.3s,baz=80,slow=6.5,SNR=9.2
AKASG                               LR     LR      14 04 44.6
             comp=Z,27nm,18.9s,baz=88,slow=40
             comp=Z,0.7nm,0.3s
AKASG Malin Array Be   55.72 316  i P      P       13 37 02.5 -0.3
AKASG                               pmax   pmax
             comp=Z,3.0nm,0.6s
MLR   Muntele Rosu     58.05 309    LR     LR      14 05 41.3
             comp=Z,43nm,21.8s,baz=82,slow=39
FINES FINESS Array B   58.19 328    P      P       13 37 20.6 +0.5
             comp=Z,1.5nm,0.5s,baz=104,slow=8.0,SNR=8.4
FINES                               LR     LR      14 04 40.4
             comp=Z,71nm,19.6s,baz=62,slow=38
             comp=Z,1.5nm,0.5s
WRA   Warramunga Arr   58.96 136    P      P       13 37 24.4 -1.6
             comp=Z,4.1nm,0.7s,baz=322,slow=7.5,SNR=15
WRA                                 ScP    ScP     13 42 05.7 -3.9
             comp=Z,0.7nm,0.8s,baz=321,slow=4.5,SNR=1.9
             comp=Z,4.1nm,0.7s
WRA   Warramunga Arr   58.96 136  i P      P       13 37 24.3 -1.8
WRA                                 pmax   pmax
             comp=Z,5.0nm,0.7s
ARCES ARCESS Array B   59.57 338    P      P       13 37 30.0 +0.5
             comp=Z,1.2nm,0.6s,baz=90,slow=6.4,SNR=7.8
ARCES                               LR     LR      14 06 17.4
             comp=Z,46nm,20.9s,baz=100,slow=39
             comp=Z,1.2nm,0.6s
BILL  Bilibino         60.13  24  i P      P       13 37 33.1 -0.3
BILL                                pmax   pmax
             comp=Z,2.0nm,0.9s
ASAR  Alice Springs    61.47 139    P      P       13 37 41.5 -1.7
             comp=Z,3.8nm,0.8s,baz=323,slow=6.8,SNR=21
ASAR                                ScP    ScP     13 42 18.8 -1.8
             comp=Z,0.2nm,0.4s,baz=319,slow=4.2,SNR=1.8
ASAR                                LR     LR      14 09 09.9
             comp=Z,34nm,18.3s,baz=269,slow=41
             comp=Z,3.8nm,0.8s
SPITS Spitsbergen Ar   63.32 347    P      P       13 37 54.9 +0.1
             comp=Z,5.5nm,1.0s,baz=108,slow=9.8,SNR=5.4
             comp=Z,5.5nm,1.0s
VRAC  Vranov           63.93 315    LR     LR      14 10 17.0
             comp=Z,25nm,18.7s,baz=80,slow=40
HFS   Hagfors          64.26 327    P      P       13 38 01.9 +0.7
             comp=Z,1.7nm,0.5s,baz=102,slow=5.1,SNR=7.9
HFS                                 LR     LR      14 08 30.9
             comp=Z,76nm,19.9s,baz=85,slow=38
             comp=Z,1.7nm,0.5s
NB2   NORSAR Subarra   65.37 328    P      P       13 38 08.1 -0.3
             comp=Z,0.3nm,0.4s,baz=90,slow=6.2
NOA   NORSAR Array B   65.37 328    P      P       13 38 08.7 +0.2
             comp=Z,1.2nm,0.8s,baz=83,slow=6.4,SNR=6.0
NOA                                 LR     LR      14 08 51.4
             comp=Z,52nm,20.1s,baz=250,slow=38
             comp=Z,1.2nm,0.8s
CLL   Collm            65.88 317  i P      P       13 38 14.0 +2.2
GERES GERESS Array B   65.89 314    P      P       13 38 12.9 +0.8
             comp=Z,0.6nm,0.5s,baz=79,slow=8.4,SNR=4.0
GERES                               LR     LR      14 10 53.6
             comp=Z,32nm,19.0s,baz=90,slow=39
             comp=Z,0.6nm,0.5s
DAVOX Davos/Dischmat   68.85 313    LR     LR      14 12 44.5
             comp=Z,57nm,18.6s,baz=79,slow=39
GAMB  Gambell          69.39  28    P      P       13 38 32.3 -1.3
             baz=285
TNA   Tin City         70.46  26    P      P       13 38 38.5 -1.7
             baz=287
C16K  Lisburne Hills   70.59  23    P      P       13 38 39.8 -1.1
             baz=289
JMIC  Jan Mayen        70.80 340    LR     LR      14 14 43.4
             comp=Z,44nm,19.8s,baz=211,slow=40
F14K  Arctic Creek     71.12  26    P      P       13 38 43.5 -0.8
             baz=289
C17K  DeLong Mountai   71.28  22    P      P       13 38 44.1 -1.1
             baz=290
A19K  Wainwright       71.35  20    P      P       13 38 43.9 -1.6
             baz=292
B18K  Kokolik River    71.42  21    P      P       13 38 45.5 -0.5
             baz=291
RDOG  Red Dog Mine     71.52  23    P      P       13 38 45.8 -0.9
             baz=291
D17K  Noatak River     71.58  23    P      P       13 38 46.4 -0.6
             baz=291
F15K  North Star Dit   71.70  25    P      P       13 38 46.4 -1.4
             baz=290
ANM   Nome             71.80  27    P      P       13 38 47.3 -1.0
             baz=290
C18K  Utukok River     71.89  22    P      P       13 38 48.2 -0.7
             baz=292
SPIA  Saint Paul Isl   71.95  35    P      P       13 38 48.6 -0.8
             baz=288
STKA  Stephens Creek   72.10 139    P      P       13 38 50.6 +0.1
             comp=Z,1.1nm,0.5s,baz=298,slow=14,SNR=1.4
STKA                                LR     LR      14 16 32.6
             comp=Z,26nm,20.7s,baz=23,slow=41
             comp=Z,1.1nm,0.5s
C19K  Lookout Ridge    72.25  21    IAmb   IAmb    13 38 53.0
             comp=Z,8.5nm,0.9s
C19K  Lookout Ridge    72.25  21    P      P       13 38 50.3 -0.8
             baz=293
E17K  Hotham Inlet     72.26  24    P      P       13 38 50.6 -0.5
             baz=292
KEST  Kesra            72.35 302    P      P       13 38 54.4 +2.1
             comp=Z,1.8nm,0.9s,baz=22,slow=14,SNR=2.0
             comp=Z,1.8nm,0.9s
P08K  Saint George I   72.49  35    P      P       13 38 51.5 -1.1
             baz=289
E18K  Tukpahlearik C   72.57  23    IAmb   IAmb    13 38 53.8
             comp=Z,4.7nm,0.7s
E18K  Tukpahlearik C   72.57  23    P      P       13 38 52.4 -0.5
             baz=293
B20K  Meade River      72.65  20    P      P       13 38 52.9 -0.4
             baz=295
G16K  Koyuk River      72.70  25    P      P       13 38 52.9 -0.8
             baz=292
F17K  Baldwin Pennin   72.72  24    P      P       13 38 53.0 -0.7
             baz=293
A22K  Sinclair Lake    72.87  19    P      P       13 38 54.1 -0.5
             baz=297
D19K  Kuna River       72.99  22    P      P       13 38 55.3 -0.2
             baz=295
K13K  Kusilvak Mount   73.03  29    P      P       13 38 54.9 -0.8
             baz=291
H16K  Elim             73.04  26    P      P       13 38 54.3 -1.4
             baz=292
J14K  Nanvaranak Lak   73.21  28    P      P       13 38 56.3 -0.4
             baz=292
F18K  Selawik          73.25  24    P      P       13 38 55.8 -1.1
             baz=294
G17K  Kiwalik Mounta   73.32  25    P      P       13 38 56.6 -0.8
             baz=294
D20K  Etivluk River    73.39  21    P      P       13 38 57.7 -0.1
D20K  Etivluk River    73.39  21    P      P       13 38 57.4 -0.4
             baz=296,SNR=6.6
B21K  Ikpikpuk River   73.62  20    P      P       13 38 58.8 -0.2
             baz=298
B22K  Teshekpuk Lake   73.64  19    P      P       13 38 58.9 -0.2
             baz=299
E20K  Nigu River       73.74  22    P      P       13 38 59.2 -0.7
             baz=297,SNR=5.3
E19K  Redstone River   73.74  22    P      P       13 38 59.7 -0.1
             baz=296
C21K  Knifeblade Rid   73.78  20    P      P       13 38 59.7 -0.3
             baz=298
F19K  Shaleruckik Mo   73.82  23    IAmb   IAmb    13 39 01.2
             comp=Z,4.4nm,0.8s
F19K  Shaleruckik Mo   73.82  23    P      P       13 38 59.9 -0.4
             baz=296,SNR=6.1
H17K  Granite Mounta   73.83  25    P      P       13 38 59.9 -0.5
             baz=294
G18K  Tagagawik        73.91  24    P      P       13 39 00.6 -0.3
             baz=295
I17K  Unalakleet       73.95  26    P      P       13 39 00.6 -0.5
             baz=294
NIKH  Nikolski High    74.09  39    P      P       13 39 01.2 -0.9
             baz=290
L14K  Kuka Creek       74.13  29    P      P       13 39 01.6 -0.5
             baz=293
EKA   Eskdalemuir Ar   74.13 324    P      P       13 39 03.1 +0.8
             comp=Z,0.2nm,0.3s,baz=72,slow=5.6,SNR=4.4
             comp=Z,0.2nm,0.3s
M13K  Dall Lake        74.19  30    P      P       13 39 01.8 -0.7
             baz=293
J16K  Anvik River      74.24  27    P      P       13 39 02.3 -0.5
             baz=294
K15K  Wolf Creek Mou   74.25  28    P      P       13 39 02.5 -0.4
             baz=294
H18K  Honhosa River    74.34  25    P      P       13 39 02.9 -0.5
             baz=296
G19K  Purcell Mounta   74.38  24    P      P       13 39 03.1 -0.5
             baz=296
E21K  Killik River     74.38  21    P      P       13 39 03.8 +0.2
             baz=299
F20K  Avaraart Lake    74.45  23    IAmb   IAmb    13 39 04.3
             comp=Z,5.2nm,0.7s
F20K  Avaraart Lake    74.45  23    P      P       13 39 03.6 -0.3
             baz=297,SNR=5.8
L15K  Ungalak Mounta   74.52  29    P      P       13 39 03.9 -0.5
             baz=294
D22K  Ayikyak River    74.58  20    P      P       13 39 04.8 +0.1
             baz=300
M14K  Bethel           74.68  30    P      P       13 39 04.8 -0.6
             baz=294
C23K  Itkillik River   74.73  19    P      P       13 39 05.0 -0.5
             baz=301,SNR=6.3
J17K  VABM Dome        74.81  27    P      P       13 39 05.5 -0.6
             baz=295
H19K  Roundabout Mou   74.89  24    IAmb   IAmb    13 39 07.4
             comp=Z,5.5nm,0.9s
H19K  Roundabout Mou   74.89  24    P      P       13 39 06.2 -0.3
             baz=297
GCSA  Galena City Sc   75.08  25    P      P       13 39 07.2 -0.4
             baz=297
UNV   Unalaska Valle   75.09  37    P      P       13 39 07.2 -0.6
             baz=292
F21K  Alatna River     75.14  22    IAmb   IAmb    13 39 08.6
             comp=Z,6.2nm,0.7s
F21K  Alatna River     75.14  22    P      P       13 39 07.4 -0.6
             baz=299,SNR=11
N14K  Kuskokwak Cree   75.15  30    P      P       13 39 07.2 -0.9
             baz=294
D23K  Nanushuk River   75.16  20    P      P       13 39 07.6 -0.4
             baz=301,SNR=7.3
E22K  Anaktuvuk Pass   75.23  21    IAmb   IAmb    13 39 08.9
             comp=Z,4.5nm,0.8s
E22K  Anaktuvuk Pass   75.23  21    P      P       13 39 08.1 -0.4
             baz=300,SNR=5.5
M15K  Kasigluk River   75.28  29    P      P       13 39 08.4 -0.4
             baz=295
C24K  Franklin Bluff   75.35  19    P      P       13 39 09.4 +0.3
             baz=303
L16K  Owhat River      75.38  28    P      P       13 39 09.5 +0.1
             baz=296
K17K  Iditarod         75.43  27    P      P       13 39 09.4 -0.3
             baz=296
F22K  John River       75.43  21    P      P       13 39 09.2 -0.5
             baz=300
G21K  Allakaket        75.48  23    IAmb   IAmb    13 39 10.2
             comp=Z,6.1nm,0.6s
G21K  Allakaket        75.48  23    P      P       13 39 09.8 -0.1
             baz=299,SNR=8.0
H20K  Anotleneega Mo   75.48  24    P      P       13 39 09.7 -0.3
             baz=298
O14K  Tigyukauivet M   75.62  31    P      P       13 39 10.2 -0.5
             baz=295
D24K  Happy Valley     75.62  19    P      P       13 39 10.2 -0.5
             baz=303
TOLK  Toolik Lake Re   75.67  20    P      P       13 39 10.5 -0.6
             baz=302,SNR=5.7
L17K  Donlin           75.69  28    P      P       13 39 10.5 -0.6
             baz=296
J18K  Innoko River     75.73  26    P      P       13 39 10.4 -1.0
             baz=297
N15K  Kwethluk River   75.77  30    P      P       13 39 11.3 -0.4
             baz=295
M16K  Timber Creek     75.90  29    P      P       13 39 12.0 -0.4
             baz=296
J19K  Poorman          75.92  25    IAmb   IAmb    13 39 40.6
             comp=Z,6.0nm,1.1s
J19K  Poorman          75.92  25    P      P       13 39 11.9 -0.5
             baz=298
G22K  Bettles          75.96  22    P      P       13 39 12.2 -0.4
             baz=301
I20K  Naaghedeneel     75.97  24    P      P       13 39 12.1 -0.6
             baz=299
E23K  Chandalar        75.97  20    P      P       13 39 12.4 -0.4
             baz=302,SNR=6.6
H21K  Melozitna Rive   76.15  23    P      P       13 39 13.6 -0.2
             baz=300,SNR=12
N16K  Nishlik Lake     76.23  29    P      P       13 39 13.9 -0.4
             baz=296
COLD  Coldfoot         76.23  21    P      P       13 39 13.7 -0.5
             baz=302
LSZ   Lusaka           76.25 246    LR     LR      14 13 27.5
             comp=Z,36nm,18.2s,baz=136,slow=36
D25K  Kavik River      76.25  19    P      P       13 39 14.6 +0.3
             baz=305,SNR=7.3
O15K  Ungalikthiuk R   76.32  31    P      P       13 39 14.2 -0.6
             baz=296
E24K  Your Creek       76.32  20    P      P       13 39 14.9 +0.1
             baz=304,SNR=17
L18K  Granite Mounta   76.33  27    P      P       13 39 14.6 -0.2
             baz=298
M17K  Holitna River    76.39  28    P      P       13 39 14.7 -0.4
             baz=297
J20K  Nowinta River    76.40  25    P      P       13 39 14.8 -0.4
             baz=299
H22K  Ishtalitna Cre   76.54  23    P      P       13 39 15.6 -0.4
             baz=301,SNR=6.4
G23K  Bananza Creek    76.57  22    IAmb   IAmb    13 39 17.0
             comp=Z,10.0nm,1.4s
G23K  Bananza Creek    76.57  22    P      P       13 39 15.7 -0.4
             baz=302
I21K  Tanana           76.69  23    P      P       13 39 16.5 -0.4
             baz=301
F24K  Squaw Lake       76.82  21    P      P       13 39 17.2 -0.4
             baz=304
C27K  Jago River       76.83  18    P      P       13 39 17.3 -0.2
             baz=307
K20K  Telida           76.83  26    P      P       13 39 17.6  0.0
             baz=300
N17K  Nushagak Hills   76.90  29    P      P       13 39 17.7 -0.3
             baz=298
O16K  Kokwok River B   76.93  30    P      P       13 39 17.5 -0.7
             baz=297
M18K  Stony River      77.03  28    P      P       13 39 18.1 -0.7
             baz=299
L19K  White Mountain   77.10  27    P      P       13 39 18.7 -0.5
             baz=299
E25K  Arctic Village   77.19  20    P      P       13 39 19.7  0.0
             baz=306
H23K  Yukon River      77.21  22    P      P       13 39 19.1 -0.6
             baz=303
MLY   Manley           77.22  23    IAmb   IAmb    13 39 20.6
             comp=Z,4.5nm,0.8s
MLY   Manley           77.22  23    P      P       13 39 19.3 -0.6
             baz=302,SNR=5.5
P16K  Nushagak River   77.23  30    P      P       13 39 19.1 -0.8
             baz=297
CHUM  Lake Minchumin   77.24  25    P      P       13 39 19.2 -0.7
             baz=301
O17K  Koliganek Bris   77.29  30    P      P       13 39 19.8 -0.5
             baz=298
L20K  Farewell, AK     77.35  26    P      P       13 39 20.0 -0.6
             baz=300
N18K  Kilae Creek      77.39  28    P      P       13 39 20.0 -0.8
             baz=299
G24K  Hadweenzic Riv   77.42  21    P      P       13 39 20.3 -0.6
             baz=305
M19K  Big River Lodg   77.43  27    P      P       13 39 20.4 -0.6
             baz=300
F25K  Christian Rive   77.48  20    IAmb   IAmb    13 39 22.6
             comp=Z,3.8nm,0.8s
F25K  Christian Rive   77.48  20    P      P       13 39 21.1 -0.2
             baz=306,SNR=5.3
CAST  Castle Rocks     77.57  25    IAmb   IAmb    13 39 22.5
             comp=Z,5.7nm,0.8s
CAST  Castle Rocks     77.57  25    P      P       13 39 21.0 -0.8
             baz=301,SNR=7.0
BPAW  Bear Paw Mtn.    77.63  24    IAmb   IAmb    13 39 23.2
             comp=Z,4.1nm,0.7s
BPAW  Bear Paw Mtn.    77.63  24    P      P       13 39 21.4 -0.7
             baz=302,SNR=6.0
I23K  Minto, Yukon-K   77.65  23    P      P       13 39 21.3 -0.8
             baz=303
SUMG  Summit           77.66 347  i P      P       13 39 25.0 +2.4
SDPT  Sand Point       77.68  34    P      P       13 39 21.5 -0.9
             baz=296
S14K  Fog Glacier      77.73  33    P      P       13 39 21.8 -1.1
             baz=297
H24K  Noodor Dome      77.78  22    P      P       13 39 22.2 -0.8
             baz=304
PPLA  Purkeypile       77.80  26    IAmb   IAmb    13 39 58.6
             comp=Z,10nm,1.3s
PPLA  Purkeypile       77.80  26    P      P       13 39 22.3 -1.0
             baz=301
G25K  Bearman Lake     77.83  21    P      P       13 39 23.1  0.0
             baz=306
D27M  Malcolm River    77.83  18    P      P       13 39 22.7 -0.5
             baz=310
P17K  Kvichak River    77.86  30    P      P       13 39 22.4 -1.0
             baz=298
F26K  Sheenjek River   77.88  20    IAmb   IAmb    13 39 25.1
             comp=Z,4.8nm,0.6s
F26K  Sheenjek River   77.88  20    P      P       13 39 23.3 -0.2
             baz=307,SNR=6.0
BMAR  Burnt Mountain   77.91  20    P      P       13 39 24.8 +1.1
N19K  Bonanza Creek    77.93  28    P      P       13 39 22.9 -1.0
             baz=300
M20K  Styx River       77.95  27    IAmb   IAmb    13 39 24.7
             comp=Z,5.9nm,0.7s
M20K  Styx River       77.95  27    P      P       13 39 23.1 -0.9
             baz=301,SNR=8.2
NEA2  Nenana           78.06  23    IAmb   IAmb    13 39 24.9
             comp=Z,7.3nm,1.2s
NEA2  Nenana           78.06  23    P      P       13 39 24.3 -0.2
             baz=304
O18K  Koktuh Hills     78.09  29    P      P       13 39 24.3 -0.5
             baz=299
R16K  Pilot Point      78.11  32    P      P       13 39 24.1 -0.7
             baz=298
H25L  Birch Creek      78.21  21    P      P       13 39 25.4 +0.2
             baz=306
TRF   Thorofare Moun   78.24  25    P      P       13 39 25.0 -0.7
             baz=303
P18K  Big Mountain,    78.31  29    P      P       13 39 25.3 -0.7
             baz=300
E27K  Coleen River     78.33  19    IAmb   IAmb    13 39 26.7
             comp=Z,8.0nm,0.9s
E27K  Coleen River     78.33  19    P      P       13 39 25.1 -0.8
             baz=310
COLA  College          78.33  23    P      P       13 39 25.3 -0.6
             baz=305
POKR  Poker Plat Res   78.34  22    P      P       13 39 25.3 -0.8
             baz=305
CHNA  Chernabura Isl   78.37  35    P      P       13 39 25.4 -0.9
             baz=297
D28M  Stokes Point     78.37  17    P      P       13 39 25.2 -0.8
             baz=312
G26K  Porcupine Rive   78.45  20    P      P       13 39 26.1 -0.4
             baz=308,SNR=7.7
SKT   Skwentna         78.55  26    IAmb   IAmb    13 39 26.9
             comp=Z,6.7nm,0.7s
SKT   Skwentna         78.55  26    P      P       13 39 25.8 -1.4
             baz=302,SNR=7.3
Q17K  Contact Creek    78.57  31    P      P       13 39 26.3 -1.2
             baz=299
MCK   McKinley         78.59  24    P      P       13 39 26.3 -1.1
             baz=304
E28M  Babbage River    78.64  18    P      P       13 39 27.0 -0.6
             baz=311,SNR=8.1
N20K  Mount Spurr      78.69  27    P      P       13 39 27.5 -0.6
             baz=302
ILAR  Eielson Array    78.73  23    P      P       13 39 26.6 -1.5
ILAR  Eielson Array    78.73  23    P      P       13 39 26.5 -1.6
             comp=Z,1.4nm,0.7s,baz=306,slow=4.7,SNR=21
             comp=Z,1.4nm,0.7s
ILAR  Eielson Array    78.73  23    P      P       13 39 26.7 -1.5
PRP   Porcupine Dome   78.76  22    IAmb   IAmb    13 39 29.3
             comp=Z,6.0nm,0.7s
PRP   Porcupine Dome   78.76  22    P      P       13 39 27.7 -0.8
             baz=306,SNR=9.2
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HDA	Harding Lake	78.92	23	P	P	13 39 28.6	-0.6
	baz=306						
O20K	Slope Mountain	79.10	28	P	P	13 39 29.5	-0.8
	baz=301						
SUA	Susitna One	79.14	26	P	P	13 39 29.1	-1.5
	baz=303						
G27K	Doyon Strip	79.19	20	IAmb	IAmb	13 39 31.9	
	comp=Z,8.5nm,1.4s						
G27K	Doyon Strip	79.19	20	P	P	13 39 30.7	0.0
	baz=310,SNR=6.1						
F28M	Old Crow	79.20	19	IAmb	IAmb	13 39 31.7	
	comp=Z,4.2nm,0.7s						
F28M	Old Crow	79.20	19	P	P	13 39 30.4	-0.3
	baz=311,SNR=5.5						
E29M	Blow River	79.23	17	IAmb	IAmb	13 39 31.6	
	comp=Z,4.4nm,0.8s						
E29M	Blow River	79.23	17	P	P	13 39 30.5	-0.3
	baz=313,SNR=5.1						
M22K	Willow	79.23	26	P	P	13 39 30.5	-0.4
	baz=303						
J25K	Salcha River,	79.35	22	P	P	13 39 30.4	-1.3
	baz=307,SNR=5.5						
A36M	Sachs Harbour	79.43	12	P	P	13 39 31.2	-0.6
	baz=324,SNR=11						
DHY	Denali Highway	79.54	24	P	P	13 39 32.0	-0.9
	baz=305						
R18K	Karluk	79.58	31	P	P	13 39 32.3	-0.6
	baz=300						
H27K	Steamboat Moun	79.61	20	P	P	13 39 32.9	-0.1
	baz=310,SNR=18						
I26K	Coal Creek Min	79.67	21	P	P	13 39 33.0	-0.3
	baz=309						
WAT6	Susitna Watana	79.69	25	P	P	13 39 32.8	-0.9
	baz=305						
K24K	Donnelly Dome	79.69	23	P	P	13 39 32.6	-0.9
	baz=307,SNR=14						
GHO	Glory Hole Cre	79.70	26	IAmb	IAmb	13 39 34.6	
	comp=Z,8.4nm,1.4s						
PMR	Palmer	79.72	26	IAmb	IAmb	13 39 33.3	
	comp=Z,4.7nm,0.8s						
PMR	Palmer	79.72	26	P	P	13 39 32.4	-1.1
	baz=304						
HOM	Homer	79.74	28	P	P	13 39 32.9	-0.8
	baz=302						
RC01	Rabbit Creek A	79.75	26	P	P	13 39 32.3	-1.5
	baz=304						
CHIR	Chirikof Islan	79.89	33	P	P	13 39 33.5	-1.1
	baz=300						
SML	Sawmill	79.91	25	IAmb	IAmb	13 39 34.9	
	comp=Z,6.8nm,0.7s						
SML	Sawmill	79.91	25	P	P	13 39 34.2	-0.5
	baz=305						
Q20K	Shuyak Island	79.97	29	P	P	13 39 34.0	-1.0
	baz=302						
I27K	Kandik River	79.98	21	P	P	13 39 34.2	-0.8
	baz=310,SNR=13						
J26L	Joseph Creek	80.04	22	P	P	13 39 34.4	-1.0
	baz=308,SNR=7.2						
RIDG	Independent Ri	80.06	23	IAmb	IAmb	13 39 35.1	
	comp=Z,4.4nm,0.8s						
RIDG	Independent Ri	80.06	23	P	P	13 39 34.6	-0.9
	baz=307,SNR=5.3						
BRSE	Bradley Lake S	80.08	28	P	P	13 39 34.5	-1.1
	baz=303						
KNK	Knik Glacier	80.08	26	P	P	13 39 34.4	-1.2
	baz=305						
O22K	Cooper Landing	80.10	27	P	P	13 39 34.9	-0.7
	baz=304						
M23K	Glacier View	80.15	25	P	P	13 39 35.2	-0.8
	baz=305						
G29M	Pine Creek	80.21	19	P	P	13 39 35.9	-0.2
	baz=313						
SII	Sitkinak Islan	80.22	32	P	P	13 39 35.2	-1.2
	baz=301						
SCRK	Sand Creek	80.22	23	IAmb	IAmb	13 39 36.9	
	comp=Z,11nm,1.5s						
SCRK	Sand Creek	80.22	23	P	P	13 39 35.4	-1.1
	baz=308,SNR=6.8						
SCM	Sheep Creek Mo	80.28	25	IAmb	IAmb	13 39 45.3	
	comp=Z,8.9nm,1.2s						
SCM	Sheep Creek Mo	80.28	25	P	P	13 39 35.5	-1.2
	baz=306						
OHAK	Old Harbor	80.30	31	P	P	13 39 35.7	-1.1
	baz=301						
PAX	Paxson	80.31	24	P	P	13 39 35.8	-1.0
	baz=307						
KDAK	Kodiak Island	80.33	30	LR	LR	14 18 39.5	
	comp=Z,34nm,18.6s,baz=308,slow=38						
KDAK	Kodiak Island	80.33	30	P	P	13 39 35.5	-1.4
	baz=302						
F30M	Barrier River	80.35	17	IAmb	IAmb	13 39 37.9	
	comp=Z,5.3nm,0.6s						
F30M	Barrier River	80.35	17	P	P	13 39 36.2	-0.7
	baz=315,SNR=5.6						
SEW	Seward	80.42	27	P	P	13 39 36.5	-0.9
	baz=304						
INK	Inuvik	80.44	16	P	P	13 39 37.3	0.0
INK				pmax	pmax		
	comp=Z,13nm,1.5s						
INK	Inuvik	80.44	16	P	P	13 39 36.6	-0.8
	baz=317,SNR=6.3						
PWL	Port Wells	80.45	26	P	P	13 39 36.4	-1.2
	baz=305,SNR=6.9						
M24K	Tolsona, Glenn	80.56	25	P	P	13 39 37.3	-0.9
	baz=306						
H29M	Whitestone	80.58	19	IAmb	IAmb	13 39 38.7	
	comp=Z,5.9nm,0.6s						
H29M	Whitestone	80.58	19	P	P	13 39 37.4	-0.8
	baz=313,SNR=9.3						
I28M	Miner Creek	80.61	20	IAmb	IAmb	13 39 39.1	
	comp=Z,4.9nm,0.7s						
I28M	Miner Creek	80.61	20	P	P	13 39 38.1	-0.4
	baz=311,SNR=9.7						
G30M	tAoh Zraii Nji	80.67	18	P	P	13 39 37.6	-1.1
	baz=314,SNR=8.3						
ESDC	Sonseca Array	80.74	309	P	P	13 39 41.3	+1.7
	comp=Z,0.1nm,0.4s,baz=54,slow=5.1,SNR=1.8						
	comp=Z,0.1nm,0.4s						
HARP	HAARP	80.77	24	P	P	13 39 38.5	-0.7
	baz=307						
K27K	Chicken	80.84	22	P	P	13 39 39.2	-0.4
	baz=310						
EPYK	Eagle Plains	80.96	19	P	P	13 39 39.3	-1.0
	baz=314						
F31M	Tsiigehtchic	81.02	17	P	P	13 39 40.3	-0.2
	baz=316						
KLU	Klutina	81.03	25	IAmb	IAmb	13 39 41.3	
	comp=Z,5.1nm,0.8s						
KLU	Klutina	81.03	25	P	P	13 39 39.8	-0.9
	baz=307						
L26K	Log Cabin Wild	81.04	23	P	P	13 39 39.9	-0.8
	baz=309						
G31M	Satah River	81.25	18	IAmb	IAmb	13 39 42.9	
	comp=Z,5.2nm,0.8s						
G31M	Satah River	81.25	18	P	P	13 39 41.3	-0.4
	baz=316						
P23K	Montague Islan	81.33	27	P	P	13 39 41.6	-0.6
	baz=306						
N25K	Chitina, Valde	81.46	25	IAmb	IAmb	13 39 43.9	
	comp=Z,5.1nm,0.7s						
N25K	Chitina, Valde	81.46	25	P	P	13 39 42.6	-0.5
	baz=308,SNR=5.7						
L27K	Beaver Creek,	81.55	23	P	P	13 39 43.9	+0.4
	baz=310,SNR=15						
M26K	Nabesna, AK	81.56	23	IAmb	IAmb	13 39 49.6	
	comp=Z,6.9nm,1.3s						
M26K	Nabesna, AK	81.56	23	P	P	13 39 43.5	0.0
	baz=309,SNR=5.9						
BCAR	Beaver Creek A	81.56	23	P	P	13 39 43.6	+0.1
EYAK	Cordova Ski Ar	81.66	26	P	P	13 39 43.4	-0.6
	baz=307						
DAWY	Dawson	81.71	21	P	P	13 39 43.4	-0.9
	baz=312						
BMRM	Bremner River	81.85	25	IAmb	IAmb	13 39 45.6	
	comp=Z,6.8nm,0.7s						
BMRM	Bremner River	81.85	25	P	P	13 39 44.3	-0.8
	baz=308						
I30M	Mount Dempster	81.86	19	IAmb	IAmb	13 39 45.4	
	comp=Z,5.4nm,0.7s						
I30M	Mount Dempster	81.86	19	P	P	13 39 44.1	-1.0
	baz=314,SNR=12						
M27K	Edge Creek, AK	81.99	23	IAmb	IAmb	13 39 47.2	
	comp=Z,6.1nm,0.8s						
M27K	Edge Creek, AK	81.99	23	P	P	13 39 45.7	-0.2
	baz=310,SNR=7.0						
H31M	Peel River	82.04	18	P	P	13 39 45.0	-0.9
	baz=316,SNR=12						
BVCY	Beaver Creek	82.31	23	P	P	13 39 47.4	0.0
	baz=311,SNR=7.6						
J30M	Hart River	82.33	20	P	P	13 39 47.3	-0.3
	baz=314,SNR=5.8						
K29M	Barlow Dome	82.47	21	IAmb	IAmb	13 39 49.2	
	comp=Z,5.5nm,0.7s						
K29M	Barlow Dome	82.47	21	P	P	13 39 47.5	-0.8
	baz=314,SNR=8.6						
CRQE	Cirque	82.57	25	P	P	13 39 47.8	-1.1
	baz=309						
KAIM	Kayak Island	82.57	26	P	P	13 39 48.0	-0.8
	baz=308						
L29M	L29M	82.78	21	IAmb	IAmb	13 39 51.0	
	comp=Z,11nm,1.5s						
L29M	L29M	82.78	21	P	P	13 39 50.3	+0.4
	baz=313						
YUK3	Moose Creek	82.87	23	P	P	13 39 51.1	+0.5
	baz=311						
BGLC	Bering Glacier	82.89	25	P	P	13 39 50.6	+0.2
	baz=309						
CTG	Chitna Glacier	83.09	24	P	P	13 39 51.6	0.0
	baz=311,SNR=5.8						
M29M	Somme Creek	83.12	22	IAmb	IAmb	13 39 53.0	
	comp=Z,4.0nm,0.7s						
M29M	Somme Creek	83.12	22	P	P	13 39 51.8	0.0
	baz=313,SNR=7.9						
LOGN	Logan Glacier	83.30	24	IAmb	IAmb	13 39 54.6	
	comp=Z,4.7nm,0.6s						
LBTB	Lobatse	83.36	239	LR	LR	14 14 52.3	
	comp=Z,35nm,21.2s,baz=40,slow=34						
MESA	MESA	83.37	25	P	P	13 39 53.1	-0.1
	baz=310						
YUK8	Steele Glacier	83.45	23	P	P	13 39 53.5	-0.1
	baz=312						
O28M	Mount Upton	83.64	24	P	P	13 39 54.3	-0.4
	baz=312						
YUK4	Talbot Arm	83.81	23	P	P	13 39 55.0	-0.3
	baz=313						
PINM	Pinnacle	84.06	24	P	P	13 39 56.2	-0.4
	baz=312						
YUK6	Outpost Mounta	84.18	23	P	P	13 39 57.6	+0.3
	baz=313						
N30M	Aishikik Lake	84.27	22	IAmb	IAmb	13 39 58.9	
	comp=Z,5.3nm,0.8s						
N30M	Aishikik Lake	84.27	22	P	P	13 39 57.6	0.0
	baz=314,SNR=5.2						
O29M	Mount Kennedy	84.55	24	P	P	13 39 59.1	0.0
	baz=313						
HYT	Haines Junctio	84.57	23	IAmb	IAmb	13 40 00.2	
	comp=Z,4.9nm,0.9s						
HYT	Haines Junctio	84.57	23	P	P	13 39 58.5	-0.7
	baz=314,SNR=6.2						
M31M	Drury Creek, Y	84.64	21	P	P	13 39 59.5	+0.1
	baz=316						
PNL	Peninsula	84.67	24	P	P	13 39 59.8	+0.3
	baz=312						
N31M	Braeburn, Yuko	84.70	22	P	P	13 39 59.1	-0.6
	baz=315,SNR=9.9						
FARO	Faro, Yukon	84.96	20	P	P	13 40 00.8	-0.2
	baz=317						
O30N	Mendenhall	85.10	22	P	P	13 40 01.6	-0.1
	baz=315,SNR=9.6						
P30M	Million Dollar	85.25	23	P	P	13 40 02.4	-0.2
	baz=314						
MMPY	Sheldon Lake,	85.31	20	P	P	13 40 02.8	0.0
	baz=319,SNR=12						
P29M	Windy Craggy	85.31	24	P	P	13 40 02.2	-0.6
	baz=314						
BOSA	Boshof	85.49	236	P	P	13 40 04.1	-0.1
	comp=Z,1.8nm,0.5s,baz=69,slow=4.0,SNR=6.3						
BOSA				LR	LR	14 17 10.9	
	comp=Z,36nm,18.9s,baz=24,slow=35						
	comp=Z,1.8nm,0.5s						
WHY	Whitehorse	85.60	22	P	P	13 40 04.2	-0.1
	baz=316						
N32M	Quiet Lake	85.84	21	P	P	13 40 04.6	-0.8
	baz=318						
PLBC	Pleasant Camp	85.94	24	P	P	13 40 05.2	-0.7
	baz=315						
SKAG	Skagway	86.31	23	P	P	13 40 07.4	-0.2
	baz=316						
P33M	Teslin, Yukon	86.62	22	IAmb	IAmb	13 40 09.9	
	comp=Z,3.3nm,0.7s						
P33M	Teslin, Yukon	86.62	22	P	P	13 40 08.9	-0.4
	baz=318,SNR=5.8						
P32M	Atlin	86.78	22	P	P	13 40 09.6	-0.4
	baz=317						
S31K	Pelican	87.05	25	P	P	13 40 10.9	-0.4
	baz=315						
TGTN	Hyland Airport	87.06	19	P	P	13 40 10.7	-0.6
	baz=322						
R32K	Eaglecrest	87.46	24	P	P	13 40 13.3	0.0
	baz=316						
Q32M	Nakina River	87.75	22	P	P	13 40 14.4	-0.5
	baz=318						
R33M	Jennings River	87.86	22	IAmb	IAmb	13 40 16.6	
	comp=Z,3.3nm,0.8s						
R33M	Jennings River	87.86	22	P	P	13 40 15.3	0.0
	baz=319						
SIT	Sitka	88.04	25	P	P	13 40 15.5	-0.5
	baz=316						
DLBC	Dease Lake	88.91	22	P	P	13 40 19.5	-0.7
	baz=320						
S34M	Telegraph Cree	88.93	23	P	P	13 40 19.1	-1.2
	baz=319						
BEAVL	Fort Liard	89.08	19	P	P	13 40 20.3	-0.6
	baz=324						
U33K	Whale Pass	89.56	25	P	P	13 40 23.0	-0.2
	baz=318						
WRAK	Wrangell Islan	89.62	24	P	P	13 40 23.1	-0.4
	baz=318						
YKA	Yellowknife Ar	89.69	13	P	P	13 40 22.9	-0.8
	comp=Z,0.7nm,0.7s,baz=285,slow=11,SNR=14						
	comp=Z,0.7nm,0.7s						
T35M	Bob Quinn	89.95	23	P	P	13 40 24.9	-0.2
	baz=320						
TOAD	Toad River Com	90.11	20	P	P	13 40 26.1	+0.3
	baz=324						
V35K	Ketchikan	90.72	24	P	P	13 40 28.5	-0.1
	baz=319						
QSPA	South Pole Qui	114.82	180	PKP	PKiKP	13 46 03.9	-1.7
	comp=Z,1.0nm,0.7s,baz=333,slow=0.8,SNR=8.1						
TXAR	Lajitas Array	123.13	19	PKP	PKPdf	13 46 21.9	-1.0
	comp=Z,0.2nm,0.3s,baz=324,slow=2.0,SNR=4.2						
BDFB	Brasilia	143.99	278	PKP	PKPbc	13 47 01.9	+1.8
	comp=Z,1.6nm,0.3s,baz=45,slow=2.9,SNR=1.8						

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*DJA **04** 13:27:47.8±0.4, 10°S±3°×12°4E±°, h64^{km}±5^{km}, M4.0/11, mb4.2/5, MLv4.0/11*

ISC 04 13:27:49.1±0.9**, 9°.61S**±0°.07×**124°.16E**±0°.06**, h66**^{km}±10^{km}**,**
n19, σ0ˢ.90/25**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	Soe	0.18	145	P	Pn	13 27 59.0	-0.4
SOEI	Soe	0.18	145	P	Pn	13 27 58.9	-0.4
SOEI				S	Sn	13 28 07.7	+0.9
BATI	Baumata	0.77	219	P	Pn	13 28 05.7	+1.0
BATI				S	Sn	13 28 17.3	+1.2
MMRI	Maumere	2.13	297	P	Pn	13 28 23.1	+0.6
MMRI	Maumere	2.13	297	P	Pn	13 28 22.0	-0.5
MMRI				S	Sn	13 28 47.1	-0.8
EDFI	Ende, Flores	2.58	289	P	Pn	13 28 28.0	-0.7
EDFI				S	Sn	13 28 58.5	-0.6
BASI	Baing, Sumba	3.58	260	P	Pn	13 28 41.8	-0.5
BASI				S	Sn	13 29 23.0	-0.4
WSI	Waingapu	3.81	269	P	Pn	13 28 44.6	-0.8
WSI				S	Sn	13 29 29.0	0.0
WBSI	Waikabubak, Su	4.71	269	P	Pn	13 28 57.4	-0.3
BSSI	Bau Bau, Buton	5.01	313	P	Pn	13 29 02.2	+0.4
	0.1nm31nm,1.6s						
PLAI	Plampang	6.35	276	P	Pn	13 29 21.5	+1.3
PLAI	Plampang	6.35	276	P	Pn	13 29 19.8	-0.4
	0.2nm29nm,1.2s						
DRS	Darwin Rock St	7.18	114	P	Pn	13 29 30.6	-1.0
TWSI	Taliwang, Sumb	7.24	276	P	Pn	13 29 31.6	-0.7
MTN	Manton Dam	7.56	116	P	Pn	13 29 35.4	-1.3
FITZ	Fitzroy Crossi	8.56	171	P	Pn	13 29 49.0	-1.4
JAGI	Jajag, Banyuwa	9.95	276	P	Pn	13 30 11.0	+1.6
FAKI	Fak Fak	10.43	51	P	Pn	13 30 16.5	+0.6
QIS	Mount Isa	18.44	128	P	P	13 31 59.3	-0.2

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*NAO **04** 13:41:41.8±3.1, 76°.43N×16°.40E, h5^{km}±18^{km}, ML2.5*
*FCIAR **04** 13:41:41.0, 76°.43N×14°.82E, h10^{km}, station ZFI2 has station magnitude of 3.40 station OMEGA has station magnitude of 3.40*
*KOLA **04** 13:41:41.7, 76°.48N×16°.35E, h0^{km}, ML2.4, Error ellipse: s-maj=22.5km s-min=11.8km az=80.0, Spitsbergen,Barentz Sea*
*BER **04** 13:41:43.6±2.4, 76°.44N×16°.47E, h10^{km}, ML2.2, ML2.5(NAO), Confirmed Earthquake*

ISC 04 13:41:41.4±1.1**, 76°.43N**±0°.04×**16°.71E**±0°.04**, h18**^{km}±8^{km}**,**
n27, σ1ˢ.71/47**, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSPB	Hornsund (broa	0.64	335	Pg	Pg	13 41 53.6	-0.4
HSPB				Lg	Lg	13 42 01.1	
HSPB	Hornsund (broa	0.64	335	P	Pg	13 41 53.5	-0.4
HSPB				S	Sg	13 42 01.0	-1.4
HSPB	Hornsund (broa	0.64	335	*e*P	Pg	13 41 53.5	-0.4
HSPB				*e*S	Sg	13 42 00.1	-2.3
HSPB	Hornsund (broa	0.64	335	*e*P	Pg	13 41 53.6	-0.4
HSPB				*e*S	Sg	13 42 01.0	-1.4
HSPB				IAML		13 42 02.9	
	comp=Z,56nm,0.4s						
BRBA	Barentsburg A	1.73	343	Pn	Pb	13 42 12.7	+0.1
BRBA				Lg	Lg	13 42 37.5	
BRBA	Barentsburg A	1.73	343	*e*P	Pb	13 42 12.7	+0.1
BRBA				*e*Sg	Sg	13 42 37.4	+0.4
BRBA				IAML		13 42 39.1	
	comp=Z,51nm,0.3s						
SPA0	Spitsbergen Ar	1.76	358	Pn	Pb	13 42 12.9	-0.2
	baz=172,slow=16						
SPA0				Lg	Lg	13 42 38.0	
SPA0	Spitsbergen Ar	1.76	358	*e*P	Pb	13 42 13.3	+0.2
SPA0				*e*S	Sb	13 42 36.4	+1.5
SPA0	Spitsbergen Ar	1.76	358	*e*P	Pb	13 42 12.9	-0.2
SPA0				*e*Sg	Sg	13 42 36.6	-1.4
SPA0				IAML		13 42 42.1	
	comp=Z,42nm,0.3s						
SPITS	Spitsbergen Ar	1.76	358	P	Pb	13 42 12.6	-0.5
SPITS				S	Sb	13 42 35.6	+0.7
BRBB	Barentsburg B	1.76	343	Pn	Pb	13 42 12.9	-0.3
BRBB				Lg	Lg	13 42 38.3	
BRBB	Barentsburg B	1.76	343	P	Pb	13 42 12.8	-0.3
BRBB				S	Sb	13 42 36.4	+1.5
BRBB	Barentsburg B	1.76	343	*e*P	Pb	13 42 12.9	-0.3
BRBB				*e*Sg	Sg	13 42 37.8	-0.3
HOPEN	Hopen	1.95	84	Pn	Pb	13 42 16.6	+0.2
HOPEN				Sn	Sb	13 42 41.6	+1.2
HOPEN				Lg	Lg	13 42 46.2	
HOPEN	Hopen	1.95	84	*e*P	Pb	13 42 15.8	-0.6
HOPEN				*e*S	Sg	13 42 44.8	+0.6
HOPEN	Hopen	1.95	84	*e*P	Pb	13 42 16.6	+0.2
HOPEN				*e*Sg	Sg	13 42 46.1	+1.9
HOPEN				IAML		13 42 47.5	
	comp=Z,60nm,0.3s						
BJO1	Bjornoya	2.02	162	*e*P	Pn	13 42 15.8	+1.2
BJO1				*e*S	Sg	13 42 44.8	-1.6
KBS	Kingsbay	2.71	340	Pn	Pn	13 42 25.3	+1.3
KBS				Pg	Pb	13 42 30.8	+1.5
KBS				Lg	Lg	13 43 07.2	
KBS	Kingsbay	2.71	340	P	Pn	13 42 25.2	+1.3
KBS				S	Sn	13 42 57.3	+1.0
KBS	Kingsbay	2.71	340	*e*P	Pn	13 42 25.3	+1.3
VADS	Vadso	7.29	144	P	Pn	13 43 30.9	+4.1
VADS				S	Sn	13 44 47.6	-1.4
ARA0	ARCESS Array S	7.38	155	Pn	Pn	13 43 31.0	+2.8
	baz=339,slow=14						
ARA0				Sn	Sn	13 44 47.4	-3.9
	slow=22						
ARA0	ARCESS Array S	7.38	155	Pn	Pn	13 43 31.0	+2.8
	baz=339,slow=14						
ARA0				Sn	Sn	13 44 47.4	-3.9
	slow=22						
ARCES	ARCESS Array B	7.38	155	S	Sn	13 44 48.4	-2.9
ZFI2	Zemlya Franca-	7.41	40	*e*P	Pn	13 43 28.4	-0.1
ZFI2				*e*S	Sn	13 44 49.3	-2.7
	comp=Z,12nm,1.6s						
OMEGA	Omega	7.42	40	*e*P	Pn	13 43 28.4	-0.2
OMEGA				*e*S	Sn	13 44 49.3	-2.7
	comp=Z,11nm,1.2s						
PRVG	Vayda Guba	8.05	138	P	Pn	13 43 42.2	+5.0
PRVG				S	Sn	13 45 06.2	-1.5

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*IDC **04** 13:43:59.4±5.1, 7°.00S×129°.70E, h67^{km}±47^{km}, mb3.8/5, mbtmp4.2/8, ML4.6/3, MS3.0/3, Error ellipse: s-maj=68.2km s-min=21.1km az=66.0*
*NEIC **04** 13:44:03.6±1.9, 6°.96S±0°.07×129°.8E±0°.1, h110^{km}±3^{km}, mb4.4/10, Error ellipse: s-maj=17.3km s-min=10.6km az=83.0*
*DJA **04** 13:44:04.1±0.4, 7°S±3°×13°0E±°, h161^{km}±10^{km}, M4.5/11, mB5.0/2, mb4.4/6, MLv4.5/11, Mw(mB)4.4/2*

ISC 04 13:44:02.0±0.6**, 6°.99S**±0°.05×**129°.76E**±0°.07**, h100**^{km}**, n50,**
σ2ˢ.64/44**, mb4.3**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.82	123	Pn	Pn	13 44 36.5	+4.2
SAUI	Saumlaki	1.82	123	P	Pn	13 44 36.6	+4.3
SAUI	Saumlaki	1.82	123	P	Pn	13 44 36.5	+4.2
SAUI				S	Sn	13 45 01.0	+5.6
BNDI	Bandanaira	2.45	3	P	Pn	13 44 44.1	+3.6
AAI	Ambon	3.63	334	P	Pn	13 45 00.5	+4.3
FAKI	Fak Fak	4.74	32	Pn	Pn	13 45 10.7	-0.5
FAKI	Fak Fak	4.74	32	S	Sn	13 46 01.2	-3.9
FAKI	Fak Fak	4.74	32	P	Pn	13 45 10.8	-0.5
KMPI	Kaimana, Papua	5.13	50	P	Pn	13 45 17.4	+0.9
DRS	Darwin Rock St	5.53	168	P	Pn	13 45 24.1	+2.2
MTN	Manton Dam	5.98	167		Pn	13 45 30.2	+2.2
SOEI	Soe	6.09	243	P	Pn	13 45 20.1	-10
SOEI	Soe	6.09	243	P	Pn	13 45 35.7	+6.0
KDU	Kakadu	6.26	155	P	Pn	13 45 33.5	+1.6
SWI	Sorong	6.26	14	P	Pn	13 45 32.1	+0.2
	0.2nm993nm23nm,0.4s						
BATI	Baumata	6.82	242	P	Pn	13 45 44.8	+5.2
RKPI	Ransiki, Papua	7.00	39	P	Pn	13 45 41.8	-0.1
	59nm,0.5s						
KNRA	Kununurra	8.69	186	Pn	Pn	13 46 06.4	+1.4
FITZ	Fitzroy Crossi	11.75	200	Pn	Pn	13 46 46.2	-0.3
FITZ	Fitzroy Crossi	11.75	200	P	Pn	13 46 45.1	-1.4
	2.5nm,0.3s,baz=31,slow=11,SNR=72						
FITZ				S	Sn	13 48 49.4	-6.4
	7.9nm,0.3s,baz=43,slow=19,SNR=5.7						
	6.9nm,0.3s						
PLAI	Plampang	12.01	260	P	Pn	13 46 40.6	-9.3
WB0	Warramunga Arr	13.48	161		Pn	13 47 07.4	-1.8
WRAB	Tennant Creek	13.62	161	Pn	Pn	13 47 06.5	-4.6
WRA	Warramunga Arr	13.62	161		Pn	13 47 07.7	-3.5
WRA	Warramunga Arr	13.62	161	P	Pn	13 47 09.0	-2.2
	3.7nm,0.3s,baz=339,slow=13,SNR=74						
WRA				S	Sn	13 49 31.3	-10
	6.6nm,0.6s,baz=345,slow=22,SNR=8.3						
	4.0nm,0.3s						
WR8	Warramunga Arr	13.69	161		Pn	13 47 10.1	-1.9
COEN	Coen	14.89	119	Pn	Pn	13 47 27.0	-0.6
COEN	Coen	14.89	119	P	Pn	13 47 29.5	+2.0
AS31	Alice Springs	17.06	167	Pn	Pn	13 47 52.1	-2.4
ASAR	Alice Springs	17.06	167	Pn	Pn	13 47 52.9	-1.5
ASAR	Alice Springs	17.06	167	P	Pn	13 47 54.4	0.0
	1.5nm,0.3s,baz=349,slow=9.7,SNR=15						
ASAR				S	Sn	13 50 56.6	-7.5
	1.1nm,0.4s,baz=358,slow=29,SNR=4.3						
	2.6nm,0.5s						
BBOO	Buckleboo	26.36	168	P	P	13 49 26.8	-2.1
BBOO				IAmb	IAmb	13 50 04.5	
	comp=Z,33nm,1.5s						
STKA	Stephens Creek	27.12	157	P	P	13 49 36.7	+1.0
STKA				IAmb	IAmb	13 50 08.4	
	comp=Z,25nm,1.2s						
STKA	Stephens Creek	27.12	157	P	P	13 49 36.7	+1.0
	comp=Z,2.2nm,0.4s,baz=339,slow=8.0,SNR=8.1						
	comp=Z,2.2nm,0.4s						
JNU	Nakatsue	39.90	1	LR	LR	14 10 34.1	
	comp=Z,22nm,18.2s,baz=138,slow=40						
KSRS	Korea Array	44.24	358	LR	LR	14 09 58.5	
	comp=Z,15nm,21.7s,baz=135,slow=35						
ASAJ	Asahikawa	52.17	12	LR	LR	14 14 29.6	
	comp=Z,12nm,21.2s,baz=234,slow=35						
SONM	Songino Array	58.35	342	P	P	13 53 48.2	+1.4
	comp=Z,0.2nm,0.4s,baz=156,slow=6.9,SNR=1.4						
	comp=Z,0.2nm,0.4s						
MNCI	Minicoy	58.53	284	P	P	13 53 47.2	-1.3
PRZ	Przheval'sk	67.84	321	P	P	13 54 49.7	-0.1
PRZ				IAmb	IAmb	13 55 22.5	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,12nm,1.2s						
MKAR	Makanchi Array	68.08	327	P	P	13 54 51.5	+0.4
MKAR	Makanchi Array	68.08	327	P	P	13 54 52.2	+1.2
	comp=Z,1.8nm,0.4s,baz=120,slow=7.8,SNR=19						
	comp=Z,1.8nm,0.4s						
MAKZ	Makanchi	68.26	327	P	P	13 54 52.6	+0.5
MAKZ				IAmb	IAmb	13 54 54.0	
	comp=Z,5.8nm,1.5s						
RAR	Rarotonga	69.32	110	P	P	13 54 58.0	-1.2
KURBB	Kurchatov Arra	72.37	329	P	P	13 55 17.7	+0.7
	comp=Z,0.9nm,0.4s,baz=130,slow=5.0,SNR=17						
	comp=Z,0.9nm,0.4s						
KURK	Kurchatov	72.38	329	P	P	13 55 17.3	+0.2
KURK				IAmb	IAmb	13 55 31.1	
	comp=Z,2.3nm,1.2s						
VNDA	Vanda	72.49	173	P	P	13 55 18.6	+1.3
ABKAR	Akbulak array	82.35	322	P	P	13 56 13.0	+0.3
QSPA	South Pole Qui	82.99	180	P	P	13 56 16.6	+0.6
	comp=Z,1.8nm,1.0s,baz=8.0,slow=0.3,SNR=9.2						
	comp=Z,1.8nm,1.0s						
L16K	Owhat River	87.16	27	P	P	13 56 38.0	+1.3
L16K				IAmb	IAmb	13 57 10.8	
	comp=Z,4.5nm,1.1s						

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*NNC **04** 13:45:23.0±1.0, 42°.77N×79°.25E, h0^{km}, mb3.1, mpv3.2, Error ellipse: s-maj=6.9km s-min=2.9km az=149.0*
*SOME **04** 13:45:22.2, 42°.70N×79°.23E, h15^{km}*
*KRNET **04** 13:45:23.2±0.1, 42°.59N×79°.28E, h20^{km}, mb2.8*
ISC 04 13:45:21.4±1.3, **42°.71N**±0°.04×**79°.18E**±0°.04, **h12**^{km}±12^{km}, **n33**, σ**1^{s}.46**/62, **20C-10D**, **Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.46	346	P	Pb	13 45 31.1	-0.4
	17nm,0.1s						
UZB				S	Sb	13 45 37.6	-0.7
	152nm,0.1s						
UZB	Uzynbulak	0.46	346	eP	Pb	13 45 31.1	-0.4
UZB				eS	Sb	13 45 37.6	-0.7
SHLS	Shalkode	0.50	25	P	Pn	13 45 34.9	+0.4
	48nm,0.1s						
SHLS				S	Sb	13 45 44.0	+4.4
	81nm,0.1s						
SHLS	Shalkode	0.50	25	eP	Pn	13 45 34.9	+0.4
	48nm,0.1s						
SHLS				eS	Sb	13 45 44.0	+4.4
	81nm,0.1s						
PRZ	Przheval'sk	0.61	249	⇑iP	Pn	13 45 35.5	-0.7
PRZ				⇑iS	Sb	13 45 44.8	+1.8
PDGK	Podgornoye	0.66	20	⇓P	Pb	13 45 34.2	-0.9
	3.7nm,0.3s						
PDGK				⇓S	Sb	13 45 42.8	-1.6
	31nm,0.6s						
SATY	Saty	0.67	302	P	Pb	13 45 35.7	+0.6
	5.0nm,0.1s						
SATY				S	Sb	13 45 45.2	+0.7
	51nm,0.1s						
ZHN	Zhinishke	0.71	311	P	Pb	13 45 36.2	+0.2
	9.2nm,0.1s						
ZHN				S	Sb	13 45 46.0	+0.3
	35nm,0.1s						
ZHN	Zhinishke	0.71	311	eP	Pb	13 45 36.1	+0.2
	9.2nm,0.1s						
ZHN				eS	Sb	13 45 46.0	+0.3
	35nm,0.1s						
KPKS	Kokpek	0.84	335	P	Pb	13 45 38.2	+0.1
	3.9nm,0.1s						
KPKS				S	Sb	13 45 49.5	+0.1
	50nm,0.1s						
TARG	Taragay, Kyrgy	1.41	227	⇑iP	Pg	13 45 48.6	+0.1
TARG				⇑iS	Sg	13 46 07.4	+0.5
BLB	Baldybastay	1.48	340	P	Pg	13 45 49.7	-0.1
	54nm,0.1s						
BLB				S	Sg	13 46 09.4	+0.3
	23nm,0.1s						
KDJ	Kajisay	1.59	249	⇑eP	Pg	13 45 52.4	+0.5
KDJ				⇑eS	Sg	13 46 13.8	+1.3
MDOK	Medeo	1.63	287	Pg	Pg	13 45 52.5	-0.2
	3.0nm,0.2s						
MDOK				⇑Pn	Pb	13 45 52.7	+1.2
	2.0nm,0.4s						
MDOK				Lg	Lg	13 46 14.1	
	1.9nm,0.4s						
MDOK				⇑Sn	Sg	13 46 19.1	+5.2
	2.9nm,0.5s						
KNOS	Konyrlen	1.65	0	P	Pg	13 45 52.4	-0.8
	5.2nm,0.1s						
KNOS				S	Sg	13 46 13.9	-0.7
	5.4nm,0.1s						
TNSS	Tian-Shan	1.67	282	P	Pg	13 45 53.9	+0.3
	4.4nm,0.2s						
TNSS				S	Sg	13 46 16.3	+1.1
	2.7nm,0.1s						
TNSS	Tian-Shan	1.67	282	eP	Pg	13 45 53.9	+0.3
	4.4nm,0.2s						
TNSS				eS	Sg	13 46 16.3	+1.1
	2.7nm,0.1s						
DJR	Jarkent	1.69	15	P	Pg	13 45 52.7	-1.1
	2.9nm,0.1s						
DJR				S	Sg	13 46 14.7	-0.9
	15nm,0.2s						
DJR	Jarkent	1.69	15	eP	Pg	13 45 52.7	-1.1
	2.9nm,0.1s						
DJR				eS	Sg	13 46 14.7	-0.9
	15nm,0.2s						
MTBS	Maitube	2.06	283	Pg	Pg	13 46 00.8	-0.2
	5.8nm,0.2s						
MTBS				Lg	Lg	13 46 28.3	
	8.9nm,0.2s						
MTBS	Maitube	2.06	283	eP	Pg	13 46 00.8	-0.2
	5.8nm,0.2s						
MTBS				eS	Sg	13 46 28.3	+0.6
	8.9nm,0.2s						
ULHL	Ulahol	2.22	259	⇑iP	Pg	13 46 02.8	-1.2
ULHL				⇑iS	Sg	13 46 32.0	-0.8
KST	Kastek	2.39	279	Pg	Pg	13 46 06.4	-0.8
	3.8nm,0.3s						
KST				Lg	Lg	13 46 37.6	
	10.0nm,0.3s						
KST	Kastek	2.39	279	eP	Pg	13 46 06.4	-0.8
	3.8nm,0.3s						
KST				eS	Sg	13 46 37.6	-0.5
	10.0nm,0.3s						
BOOM	Boomskoye usch	2.40	266	⇑iP	Pb	13 46 05.3	+0.6
BOOM				⇑iS	Sb	13 46 35.9	+1.6
TKM2	Tokmak 2	2.64	276	⇓Pn	Pb	13 46 10.2	+1.3
	1.4nm,0.6s						
TKM2				⇑Lg	Lg	13 46 48.1	
	3.1nm,0.5s						
NRN	Naryn	2.69	243	⇑eP	Pb	13 46 08.6	-1.0
NRN				⇑eS	Sb	13 46 42.2	-0.5
KBK	Karagaybulak	3.12	271	⇓iP	Pb	13 46 15.7	-1.2
KBK				⇓iS	Sb	13 46 54.4	-0.6
CHMS	Chumysh	3.27	277	⇑iP	Pb	13 46 17.9	-1.5
CHMS				⇑iS	Sb	13 46 58.1	-1.0
AAK	Ala-Archa	3.45	270	⇓eP	Pb	13 46 20.3	-2.3
AAK				⇓iS	Sb	13 47 02.4	-2.2
USP	Ospenovka	3.48	281	⇑iP	Pb	13 46 21.0	-2.0
USP				⇑iS	Sb	13 47 03.4	-1.8
MAKZ	Makanchi	4.56	25	⇓Pn	Pn	13 46 32.1	+1.8
	1.1nm,0.6s						
MAKZ				⇑Lg	Lg	13 47 41.8	
	1.0nm,0.8s						
MK31	Makanchi Array	4.65	27	⇓Pn	Pn	13 46 31.6	0.0
	0.2nm,0.5s,baz=200,slow=15,SNR=4.4						
MK31				⇓Lg	Lg	13 47 45.0	
	1.0nm,0.8s,baz=209,slow=30,SNR=4.2						

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*DNK **04** 13:48:35.6±1.1, 51°.27N×16°.43E, h25^{km}±48^{km}, ML2.6*
*IPEC **04** 13:48:36.8±0.2, 51°.46N×16°.33E, h1^{km}, ML2.7/5, Error ellipse: s-maj=1.6km s-min=1.0km az=34.0*
*VIE **04** 13:48:36.2±1.0, 51°.46N×16°.34E, h0^{km}, mb2.4/2, ml3.3/1, Error ellipse: s-maj=12.0km s-min=7.1km az=65.0 62 km NW of Wroclaw Suspected Mining induced.*
*IDC **04** 13:48:38.0±0.9, 51°.48N×16°.03E, h0^{km}, mbtmp3.2/5, ML2.3/5, Error ellipse: s-maj=21.8km s-min=8.4km az=118.0*
*BGR **04** 13:48:38.3±0.3, 51°.38N×16°.24E, h1^{km}, ML2.9/21, Error ellipse: s-maj=3.3km s-min=2.2km az=39.0*
*PRU **04** 13:48:39.8, 51°.34N×16°.24E, h0^{km}*
ISC 04 13:48:36.2±0.7, **51°.47N**±0°.02×**16°.26E**±0°.02, **h0**^{km}, **n61**, σ**1^{s}.05**/115, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.62	178	ePg	Pg	13 48 48.8	+0.6
KSP				eSg	Sg	13 48 56.5	+0.2
KSP	Ksiaz	0.62	178	ePg	Pg	13 48 48.8	+0.6
	SNR=19						
KSP				eSg	Sg	13 48 56.3	+0.1
	SNR=2.4						
CHVC	Chvalec	0.89	189	ePG	Pg	13 48 54.0	+0.8
CHVC				eSG	Sg	13 49 05.3	+0.6
	comp=Z,79nm,0.4s						
OSTC	Ostas	0.91	182	ePG	Pg	13 48 54.2	+0.6
OSTC				eSG	Sg	13 49 05.7	+0.3
	comp=Z,80nm,0.4s						
UPC	Upice	0.97	189	ePG	Pg	13 48 55.4	+0.6
UPC				eSG	Sg	13 49 07.7	+0.3
	comp=Z,202nm,0.6s						
DPC	Dobruska-Polom	1.12	178	ePG	Pg	13 48 57.4	-0.2
DPC				eSG	Sg	13 49 11.6	-0.5
	comp=Z,78nm,0.4s						
DPC	Dobruska-Polom	1.12	178	ePg	Pg	13 48 57.7	+0.1
	SNR=22						
DPC				eSg	Sg	13 49 11.9	-0.1
	SNR=6.9						
PIVO	Bartosovice	1.29	172	ePg	Pg	13 49 01.4	+0.4
	baz=354						
PIVO				eSg	Sg	13 49 16.8	-0.9
	116nm,0.3s,baz=354						
PVCC	Panska Ves	1.42	229	ePG	Pb	13 49 04.4	+0.8
PVCC				eSG	Sg	13 49 22.4	+0.5
	comp=Z,269nm,0.3s						
PVCC	Panska Ves	1.42	229	ePg	Pb	13 49 04.1	+0.5
	SNR=12						
PVCC				eSg	Sg	13 49 22.5	+0.7
	SNR=6.2						
KRLC	Kraliky	1.43	166	eSG	Sg	13 49 22.1	0.0
	comp=Z,104nm,0.4s						
BRG	Berggiesshubel	1.57	249	ePn	Pn	13 49 05.0	-0.4
	SNR=1.3						
BRG				ePg	Pb	13 49 06.4	+0.2
	SNR=13						
BRG				eSg	Sg	13 49 27.4	+0.6
	SNR=6.1						
BRG	Berggiesshubel	1.57	249	Pn	Pn	13 49 05.0	-0.4
BRG				Pg	Pb	13 49 06.5	+0.3
BRG				Sg	Sg	13 49 27.4	+0.6
BRG				Amp		13 49 28.7	
	comp=Z,81nm,0.3s						
STEB	Steborice	1.81	147	ePG	Pb	13 49 09.9	-0.3
STEB				eSG	Sn	13 49 33.0	+0.7
GOPC	GO Pecny, Ondr	1.81	212	ePN	Pn	13 49 09.6	+0.9
PRU	Pruhonice	1.84	217	ePG	Pb	13 49 11.0	+0.3
PRU				eSG	Sb	13 49 34.2	0.0
	comp=Z,89nm,0.8s						
PRU	Pruhonice	1.84	217	ePg	Pb	13 49 10.9	+0.3
	SNR=9.8						
PRU				eSg	Sb	13 49 34.3	0.0
	SNR=2.6						
RUE	Ruedersdorf	1.84	304	ePg	Pg	13 49 13.2	+1.7
	SNR=3.1						
RUE				eSg	Sg	13 49 38.1	+2.8
	SNR=5.6						
MORC	Moravsky Berou	1.88	154	ePn	Pn	13 49 09.4	-0.2
	baz=336						
MORC				eSg	Sn	13 49 34.8	+0.8
	comp=Z,54nm,0.4s,baz=336						
MORC	Moravsky Berou	1.88	154	ePn	Pn	13 49 09.6	0.0
	SNR=4.6						
MORC				eSg	Sb	13 49 35.5	+0.1
	SNR=6.0						
HSKC	Hora Svate Kat	1.98	245	ePG	Pb	13 49 13.2	0.0
HSKC				eSG	Sb	13 49 39.0	+0.6
	comp=Z,50nm,0.1s						
OKC	Ostrava-Krasne	2.02	143	eSG	Sb	13 49 39.8	+0.2
	comp=Z,35nm,0.4s						
OKC	Ostrava-Krasne	2.02	143	eSg	Sb	13 49 40.0	+0.4
	SNR=7.0						
CLL	Collm	2.05	267	ePn	Pn	13 49 11.7	-0.2
	SNR=1.7						
CLL				ePg	Pb	13 49 15.1	+0.8
	SNR=11						
CLL				eSg	Sg	13 49 42.3	+0.3
	SNR=2.7						
CLL	Collm	2.05	267	ePn	Pn	13 49 12.0	+0.1
CLL				ePg	Pb	13 49 15.0	+0.8
CLL				eSg	Sg	13 49 42.0	0.0
	comp=Z,41nm,0.4s						
VRAC	Vranov	2.17	174	ePn	Pn	13 49 13.7	+0.1
	baz=356						
VRAC				eSg	Sb	13 49 44.1	+0.3
	comp=Z,30nm,0.5s,baz=356						
VRAC	Vranov	2.17	174	ePN	Pn	13 49 13.8	+0.1
VRAC				eSG	Sb	13 49 44.2	+0.4
VRAC	Vranov	2.17	174	ePg	Pg	13 49 17.7	0.0
	SNR=4.2						
VRAC				eSg	Sb	13 49 44.4	+0.6
	SNR=3.4						
TREC	Trest	2.23	193	ePn	Pn	13 49 14.7	+0.3
	SNR=2.2						
TREC				ePg	Pb	13 49 18.4	+1.1
	SNR=3.2						
TREC				eSg	Sg	13 49 47.3	-0.5
	SNR=6.3						
KRUC	Moravsky	2.41	178	ePn	Pn	13 49 17.2	+0.3
	baz=359						
KRUC				eSg	Sb	13 49 51.8	+1.2
	comp=Z,22nm,0.4s,baz=359						
KRUC	Moravsky	2.41	178	ePg	Pb	13 49 21.6	+1.2
	SNR=4.9						
KRUC				eSg	Sg	13 49 52.8	-0.7
	SNR=4.4						
ZVC	Zvikov	2.42	214	eSG	Sb	13 49 52.7	+1.7
TANN	Tannenbergstha	2.62	248	ePn	Pn	13 49 20.4	+0.6
	SNR=1.8						
TANN				ePg	Pg	13 49 27.1	+0.7
	SNR=4.1						
TANN				eSg	Sg	13 50 00.6	+0.1
	SNR=4.1						
NKC	Novy Kostel	2.71	244	ePN	Pn	13 49 21.4	+0.3
NKC				ePG	Pg	13 49 28.2	0.0
NKC				eSG	Sg	13 50 05.4	+2.1
	comp=Z,84nm,1.0s						
NKC	Novy Kostel	2.71	244	ePn	Pn	13 49 21.6	+0.5
	SNR=2.9						
NKC				ePg	Pg	13 49 28.6	+0.4
	SNR=3.3						
NKC				eSg	Sg	13 50 03.4	0.0
	SNR=3.2						
JAVC	Velka Javorina	2.76	160	ePn	Pn	13 49 21.7	0.0
	baz=342						
JAVC	Velka Javorina	2.76	160	ePN	Pn	13 49 21.8	0.0
JAVC	Velka Javorina	2.76	160	ePn	Pn	13 49 22.9	+1.1
	SNR=1.4						
NEUB	Neuenburg	2.83	267	ePg	Pg	13 49 30.8	+0.5
	SNR=7.7						
NEUB				eSg	Sg	13 50 08.9	+1.9
	SNR=3.6						
KHC	Kasperske Hory	2.90	217	ePN	Pn	13 49 24.5	+0.8
KHC				ePG	Pb	13 49 30.1	+1.3
KHC				eSN	Sn	13 49 57.7	-1.6
KHC				eSG	Sb	13 50 07.6	+2.7
	comp=Z,29nm,0.5s						
CKRC	Cesky Krumlov	2.93	206	ePG	Pb	13 49 30.9	+1.6
CKRC				eSG	Sg	13 50 08.7	-1.6
	comp=Z,38nm,0.6s						
CKRC	Cesky Krumlov	2.93	206	eSg	Sb	13 50 06.6	+0.9
	SNR=5.2						
MANZ	Manzenberg	3.03	242	eSg	Sg	13 50 12.9	-0.5
	SNR=3.1						
MOX	Moxa	3.04	256	ePg	Pg	13 49 34.8	+0.3
	SNR=3.4						
ROTZ	Rotzenmuhle	3.09	238	ePn	Pn	13 49 27.0	+0.8
	SNR=2.8						
ROTZ				ePg	Pg	13 49 35.3	-0.1
	SNR=1.6						
ROTZ				eSg	Sg	13 50 14.9	-0.6
	SNR=3.7						
GEC2	GERESS Array S	3.10	213	ePg	Pg	13 49 34.4	-1.1
	SNR=5.0						
GEC2				eSg	Sb	13 50 13.0	+2.5
	SNR=3.1						
GERES	GERESS Array B	3.10	213	Pn	Pn	13 49 27.4	+1.0
	comp=Z,0.1nm,0.3s,baz=27,slow=18,SNR=2.2						
GERES				Pg	Pb	13 49 33.4	+1.2
	comp=Z,0.6nm,0.3s,baz=29,slow=18,SNR=18						
GERES				Sn	Sn	13 50 03.6	-0.5
	comp=Z,0.3nm,0.3s,baz=25,slow=21,SNR=4.4						
GERES				Lg	Lg	13 50 12.9	
	comp=Z,0.8nm,0.3s,baz=30,slow=30,SNR=5.9						
	comp=Z,0.5nm,0.3s						
MODS	Modra-Piesok	3.16	168	ePG	Pg	13 49 36.2	-0.6
MODS				eSG	Sg	13 50 17.2	-0.6
WET	Wettzell	3.18	224	ePn	Pn	13 49 28.8	+1.4
	SNR=1.8						
WET				eSg	Sg	13 50 16.2	-2.0
	SNR=2.5						
VYHS	Vyhne	3.41	150	ePG	Pg	13 49 43.1	+1.6
VYHS				eSG	Sg	13 50 25.9	+0.3
CONA	Conrad Observa	3.55	184	ePn	Pn	13 49 32.6	-0.1
	comp=Z,1.1nm,0.3s						
BSD	Bornholm Skovb	3.74	348	i P	Pn	13 49 35.2	0.0
BSD				i S	Sn	13 50 18.4	-1.5
BSD				IAML		13 50 26.6	
	comp=Z,5.6nm,0.5s						
STHS	Stebnicka Huta	3.79	121	ePG	Pg	13 49 50.8	+2.0
STHS				eSG	Sg	13 50 41.0	+3.2
LUNU	Lund	4.50	339	eS	Sn	13 50 37.9	-0.6
BLEU	Blekinge	4.86	357	i P	Pn	13 49 51.1	+0.6
BLEU				eS	Sn	13 50 45.0	-2.3
BJUU	Bjuv	5.00	339	i P	Pn	13 49 52.1	-0.4
DEL	Delary	5.21	345	i P	Pn	13 49 55.0	-0.3
AKASG	Malin Array Be	8.20	90	Pn	Pn	13 50 36.4	0.0
	comp=Z,0.2nm,0.3s,baz=280,slow=12,SNR=1.0						
	comp=Z,0.2nm,0.3s						
HFS	Hagfors	8.81	352	Pn	Pn	13 50 44.0	-0.7
	comp=Z,0.1nm,0.3s,baz=164,slow=16,SNR=1.8						
	comp=Z,1.4nm,0.7s						
FINES	FINESS Array B	11.36	25	Pn	Pn	13 51 17.1	-2.5
	comp=Z,0.1nm,0.3s,baz=209,slow=14,SNR=5.0						
	comp=Z,0.8nm,0.5s						
ARCES	ARCESS Array B	18.65	10	Pn	P	13 52 51.6	-3.7
	comp=Z,0.1nm,0.3s,baz=192,slow=13,SNR=4.6						
	comp=Z,1.0nm,0.8s						

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*IDC **04** 13:55:16.8±0.9, 24°.94N×45°.87W, h0^{km}, mb3.9/14, mbtmp3.9/14, MS3.4/25, Error ellipse: s-maj=28.7km s-min=19.9km az=166.0*
*NEIC **04** 13:55:16.6±1.4, 24°.79N±0°.06×45°.4W±0°.1, h10^{km}±1^{km}, mb4.6/40, Error ellipse: s-maj=22.3km s-min=4.8km az=113.0*
ISC 04 13:55:17.5±0.7, **24°.9N**±0°.1×**45°.67W**±0°.10, **h10**^{km}, **n74**, σ**1^{s}.08**/55, **mb4.4**/28, **MS3.4**/25, **Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SABA	Saba	17.88	250	P	P	13 59 28.5	+1.4
SABA				IAmb	IAmb	14 00 09.3	
	comp=Z,46nm,0.8s						
PDPR	Patillas Dam,	20.12	254	P	P	13 59 52.3	+0.6
PDPR				IAmb	IAmb	14 00 04.5	
	comp=Z,28nm,1.2s						
SJG	San Juan	20.19	255	LR	LR	14 05 54.5	
	comp=Z,48nm,21.5s,baz=83,slow=32						
MDP	Montagnes des	20.75	200	LR	LR	14 07 00.4	
	comp=Z,38nm,18.6s,baz=206,slow=34						
PCRV	Puerto La Cruz	23.20	234	LR	LR	14 10 25.0	
	comp=Z,22nm,18.1s,slow=39						
MACI	Morro de la Ar	26.28	76	P	P	14 00 49.4	-4.1
SDV	Santo Domingo	28.60	241	LR	LR	14 10 46.7	
	comp=Z,36nm,21.4s,baz=78,slow=33						
BBTS	Babate	29.18	105	LR	LR	14 09 52.8	
	comp=Z,62nm,21.6s,baz=140,slow=30						
SADO	Sadowa	33.58	315	LR	LR	14 13 30.2	
	comp=Z,55nm,19.5s,baz=160,slow=33						
SCHQ	Schefferville	33.79	338	LR	LR	14 14 30.6	
	comp=Z,49nm,19.0s,baz=158,slow=34						
TKL	Tuckaleechee C	34.44	297	LR	LR	14 13 21.4	
	comp=Z,84nm,20.8s,baz=114,slow=32						
MDT	Midelt	36.66	68	LR	LR	14 14 52.8	
	comp=Z,36nm,19.2s,baz=38,slow=32						
KUQ	Kuujjuuaa	36.97	340	P	P	14 02 25.9	-0.8
KUQ				IAmb	IAmb	14 02 31.1	
	comp=Z,8.9nm,0.9s						
JTS	Las Juntas de	39.99	256	LR	LR	14 18 12.5	
	comp=Z,36nm,21.2s,baz=111,slow=34						
BDFB	Brasilia	40.31	183	LR	LR	14 17 11.7	
	comp=Z,118nm,18.0s,baz=171,slow=33						
FCAR	Ozark Folk Cen	41.22	297	P	P	14 03 01.8	-0.9
FRB	Frobisher Bay	41.70	345	LR	LR	14 17 56.8	
	comp=Z,52nm,21.5s,baz=342,slow=33						
X40A	Basin Creek Fa	41.77	295	P	P	14 03 08.1	+0.9
DBIC	Dimbokro	43.01	108	LR	LR	14 17 59.7	
	comp=Z,80nm,20.5s,baz=304,slow=32						
CLF	Chambon-Foret	44.08	46	P	P	14 03 24.9	-0.8
TORD	Torodi Ar. Bea	46.06	96	P	P	14 03 44.3	+2.4
	comp=Z,1.1nm,0.4s,baz=311,slow=9.3,SNR=2.3						
	comp=Z,1.1nm,0.4s						
ULM	Lac du Bonnet	46.07	317	LR	LR	14 20 10.2	
	comp=Z,58nm,21.1s,baz=284,slow=32						
LPAZ	La Paz	46.39	210	P	P	14 03 44.5	-0.5
LPAZ				IAmb	IAmb	14 04 04.8	
	comp=Z,4.7nm,1.1s						
LPAZ	La Paz	46.39	210	P	P	14 03 45.6	+0.6
	comp=Z,2.1nm,0.8s,baz=16,slow=5.5,SNR=5.7						
	comp=Z,2.1nm,0.8s						
CMIG	Matias Romero	46.40	270	LR	LR	14 20 59.3	
	comp=Z,36nm,19.5s,baz=48,slow=33						
WMOK	Wichita Mounta	46.67	295	P	P	14 03 46.6	+0.1
WMOK				IAmb	IAmb	14 03 47.5	
	comp=Z,3.4nm,0.8s						
BRDY	Brady	47.12	290	P	P	14 03 49.8	-0.3
BRDY				IAmb	IAmb	14 03 57.9	
	comp=Z,5.6nm,1.1s						
SMWD	Samnorwood	47.85	296	P	P	14 03 55.8	0.0
APMT	Aspermont	47.87	293	P	P	14 03 55.9	0.0
APMT				IAmb	IAmb	14 03 56.7	
	comp=Z,5.4nm,0.8s						
SUMG	Summit	47.93	3	P	P	14 03 56.7	+0.5
SUMG				IAmb	IAmb	14 04 04.5	
	comp=Z,6.7nm,1.0s						
AMTX	Amarillo	49.04	295	P	P	14 04 05.1	+0.1
POST	Post	49.05	293	P	P	14 04 05.1	+0.1
SAND	Sanderson	49.96	289	P	P	14 04 10.8	-1.2
PB11	IPOC Station P	50.12	210	P	P	14 04 11.7	-1.6
TX31	Lajitas Ar. Si	51.38	289	P	P	14 04 22.1	-0.8
TXAR	Lajitas Array	51.38	289	P	P	14 04 22.2	-0.6
	comp=Z,1.1nm,0.7s,baz=98,slow=9.0,SNR=9.3						
TXAR				PcP	PcP	14 05 36.0	-1.5
	comp=Z,0.6nm,0.8s,baz=116,slow=4.5,SNR=3.6						
TXAR				LR	LR	14 24 35.9	
	comp=Z,18nm,20.9s,baz=126,slow=34						
	comp=Z,1.1nm,0.7s						
NOA	NORSAR Array B	52.65	31	P	P	14 04 32.0	+0.4
	comp=Z,0.8nm,0.8s,baz=253,slow=7.8,SNR=1.5						
NOA				LR	LR	14 22 29.1	
	comp=Z,12nm,20.1s,baz=225,slow=31						
	comp=Z,0.8nm,0.8s						
ANMO	Albuquerque	52.95	296	LR	LR	14 26 10.2	
	comp=Z,48nm,18.9s,baz=202,slow=35						
BNM	Barren Site	53.18	295	P	P	14 04 37.0	+0.8
PDAR	Pinedale Array	54.74	306	P	P	14 04 47.2	-0.4
PDAR	Pinedale Array	54.74	306	P	P	14 04 47.4	-0.2
	comp=Z,0.7nm,0.6s,baz=81,slow=9.2,SNR=5.5						
PDAR				LR	LR	14 26 00.6	
	comp=Z,30nm,19.9s,baz=86,slow=34						
	comp=Z,0.7nm,0.6s						
P18A	Preston Nutter	55.48	302	P	P	14 04 53.5	+0.4
P18A				IAmb	IAmb	14 05 01.2	
	comp=Z,4.6nm,1.1s						
SRU	San Rafael Swe	55.74	302	P	P	14 04 54.9	+0.2
SRU				IAmb	IAmb	14 05 03.0	
	comp=Z,6.2nm,1.1s						
YHL	Hebgen Lake	55.83	309	P	P	14 04 55.4	0.0
MVU	Marysvale	57.12	301	P	P	14 05 05.2	+0.5
DUG	Dugway, Tooele	57.38	303	P	P	14 05 06.6	+0.2
DUG				IAmb	IAmb	14 05 07.6	
	comp=Z,3.5nm,0.8s						
EUNU	Eureka	57.91	352	P	P	14 05 10.0	+0.7
EUNU				IAmb	IAmb	14 05 17.8	
	comp=Z,4.4nm,1.1s						
YKA	Yellowknife Ar	58.55	329	P	P	14 05 13.3	-0.7
	comp=Z,0.6nm,0.8s,baz=98,slow=7.6,SNR=7.4						
YKA				LR	LR	14 29 51.0	
	comp=Z,37nm,18.9s,baz=324,slow=36						
	comp=Z,0.6nm,0.8s						
SPR3	Spring Creek 3	58.70	302	P	P	14 05 16.6	+0.8
SPR3				IAmb	IAmb	14 05 25.1	
	comp=Z,3.8nm,1.0s						
ELK	Elko	59.16	304	P	P	14 05 19.1	+0.2
NEW	Newport	59.73	313	P	P	14 05 22.3	-0.1
NEW				IAmb	IAmb	14 05 23.5	

	comp=Z,4.6nm,0.8s						
NEW	**Newport**	**59.73**	**313**	LR	LR	14 29 42.9	
	comp=Z,60nm,19.6s,baz=62,slow=35						
FINES	**FINESS Array B**	**59.78**	**32**	P	**P**	**14 05 23.5**	**+1.0**
	comp=Z,1.5nm,0.7s,baz=251,slow=8.7,SNR=2.6 comp=Z,1.5nm,0.7s						
ARCES	**ARCESS Array B**	**60.37**	**23**	P	**P**	**14 05 27.3**	**+0.8**
	comp=Z,1.4nm,0.7s,baz=257,slow=4.9,SNR=6.7 comp=Z,1.4nm,0.7s						
TPNV	**Topopah Spring**	**60.52**	**300**	P	**P**	**14 05 29.4**	**+1.2**
TPNV				IAmb	IAmb	14 05 37.1	
	comp=Z,4.8nm,1.1s						
PFO	**Pinyon Flats O**	**61.33**	**296**	LR	LR	14 30 12.9	
	comp=Z,36nm,19.7s,baz=62,slow=34						
NVAR	**Mina Array Bea**	**61.86**	**302**	P	**P**	**14 05 37.2**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=43,slow=5.7,SNR=2.1						
NVAR				LR	LR	14 30 16.7	
	comp=Z,73nm,21.0s,baz=6.0,slow=34 comp=Z,0.4nm,0.7s						
BRTR	**Keskin Array B**	**66.67**	**56**	P	**P**	**14 06 10.3**	**+1.5**
	comp=Z,0.8nm,0.8s,baz=293,slow=2.9,SNR=5.0 comp=Z,0.8nm,0.8s						
DAWY	**Dawson**	**69.54**	**332**	P	**P**	**14 06 26.1**	**-0.3**
DAWY				IAmb	IAmb	14 06 27.4	
	comp=Z,5.8nm,1.5s						
BCAR	**Beaver Creek A**	**70.85**	**331**	P	**P**	**14 06 34.2**	**-0.2**
L26K	**Log Cabin Wild**	**71.54**	**332**	P	**P**	**14 06 37.6**	**-0.8**
IL31		**72.43**	**334**	P	**P**	**14 06 43.9**	**+0.2**
ILAR	**Eielson Array**	**72.43**	**334**	P	**P**	**14 06 44.0**	**+0.2**
	comp=Z,0.7nm,0.9s,baz=80,slow=5.0,SNR=7.6 comp=Z,0.7nm,0.9s						
MARD	**Mardin**	**72.71**	**56**	P	**P**	**14 06 43.5**	**-2.6**
RAGM	**Ragged Mountai**	**73.01**	**329**	P	**P**	**14 06 46.3**	**-1.0**
H23K	**Yukon River**	**73.07**	**335**	P	**P**	**14 06 48.4**	**+0.8**
H23K				IAmb	IAmb	14 06 57.2	
	comp=Z,7.7nm,1.4s						
MCK	**McKinley**	**73.65**	**333**	P	**P**	**14 06 50.6**	**-0.4**
G21K	**Allakaket**	**74.25**	**337**	P	**P**	**14 06 54.8**	**+0.3**
K20K	**Telida**	**75.89**	**334**	P	**P**	**14 07 03.2**	**-0.7**
K20K				IAmb	IAmb	14 07 05.5	
	comp=Z,9.1nm,1.4s						
KDAK	**Kodiak Island**	**77.80**	**328**	LR	LR	14 41 36.0	
	comp=Z,28nm,19.8s,baz=101,slow=36						
BVAR	**Borovoye Array**	**84.72**	**33**	P	**P**	**14 07 53.3**	**+1.6**
	comp=Z,1.3nm,0.7s,baz=324,slow=4.1,SNR=4.2 comp=Z,1.3nm,0.7s						
BOSA	**Boshof**	**86.45**	**124**	LR	LR	14 43 53.8	
	comp=Z,39nm,18.4s,baz=198,slow=34						
KURBB	**Kurchatov Arra**	**90.17**	**32**	P	**P**	**14 08 19.5**	**+1.4**
	comp=Z,0.8nm,0.7s,baz=313,slow=5.0,SNR=7.8 comp=Z,0.8nm,0.7s						
ZALV	**Zalesovo Beam**	**90.66**	**27**	P	**P**	**14 08 21.5**	**+1.2**
	comp=Z,0.4nm,0.5s,baz=306,slow=5.3,SNR=4.0 comp=Z,0.4nm,0.5s						

IDC 04 13:59:03.0±330.0,**57.°83N**×**29.°19E**,**h0**^{km},**Error ellipse: s-maj=131.6km s-min=95.0km az=101.0,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**4.50**	**101**	I	I	14 29 00.0	
	0.1nm,0.9s,baz=283,slow=304,SNR=1.3						
I37NO	**I37NO**	**12.21**	**342**	I	I	15 05 00.0	
	baz=147,slow=326,SNR=2.1						
I26DE	**FREYUNG INFRAS**	**12.87**	**232**	I	I	15 20 10.0	
	baz=39,slow=318,SNR=0.6						

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*WEL **04** 14:20:03.1,38.°44S×176.°18E,h8^{km},ML3.1,Mw3.6, Moment Tensor Solution. s10 Moment tensor: Scale 10^{14}Nm; M_{rr}0.21; $M_{\theta\theta}$2.13; $M_{\phi\phi}$-2.34; $M_{r\theta}$0.23; $M_{\theta\phi}$1.87; $M_{\phi r}$0.27; Fault plane solution: $M_0$2.94000×10^{14} NP1: ϕ_s25.00000°,δ88.00000°,λ173.00000°. NP2: ϕ_s115.00000°,δ83.00000°,λ2.00000°. Principal axes: T 2.8460, Plg6.0000°, Azm340.0000°; N -3.0300, Plg83.0000°, Azm189.0000°; P 0.1840, Plg4.0000°, Azm70.0000°; Stations used: RTZ OPRZ OTVZ TOZ HIZ WIZ TSZ WAZ MRZ BFZ STRIKE-SLIP FAULTING*

WEL 04 14:20:03.1±0.3,**38°S**±2°×**17°6E**±°,**h5**^{km},**M3.1**/77, **ML3.6**/23,**MLv3.1**/77 **Error ellipse: s-maj=3.0km s-min=2.7km az=148.5,confirmed,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WPRZ	**Whakapapatarin**	**0.08**	**190**	P	Pg	14 20 05.1	+0.2
HRRZ	**Handcock Road**	**0.10**	**59**	P	Pg	14 20 05.0	-0.2
GRRZ	**Galatos Road**	**0.11**	**328**	P	Pg	14 20 05.7	+0.3
HSRZ	**Hossack Road**	**0.14**	**22**	P	Pg	14 20 06.1	+0.2
ALRZ	**Allen Road**	**0.18**	**134**	P	Pg	14 20 07.0	+0.3
ALRZ				S	Sg	14 20 09.6	+0.6
PRRZ	**Plateau Road**	**0.18**	**110**	P	Pg	14 20 07.3	+0.6
PRRZ				S	Sg	14 20 09.9	+0.9
HLRZ	**Highlands Stat**	**0.23**	**36**	P	Pg	14 20 08.1	+0.4
HLRZ				S	Sg	14 20 12.1	+1.4
UTU	**Utuhina**	**0.26**	**2**	P	Pg	14 20 08.8	+0.6
RRRZ	**Republican Roa**	**0.28**	**69**	P	Pg	14 20 08.4	-0.2
KUTZ	**Kaahu Road**	**0.28**	**260**	P	Pg	14 20 09.0	+0.4
KUTZ				S	Sg	14 20 13.8	+1.3
WHTZ	**Whakaora**	**0.29**	**218**	P	Pb	14 20 09.8	-1.0
OMRZ	**Omania**	**0.37**	**24**	P	Pg	14 20 10.4	+0.2
MKRZ	**Makatiti**	**0.38**	**37**	P	Pb	14 20 11.5	-0.9
KARZ	**Kaharoa**	**0.42**	**7**	P	Pg	14 20 11.7	+0.5
MRHZ	**Matea Rd**	**0.43**	**155**	P	Pg	14 20 11.4	-0.2
WATZ	**Wairara**	**0.44**	**233**	P	Pg	14 20 12.0	+0.3
LIRZ	**Lichensteins R**	**0.47**	**20**	P	Pb	14 20 13.4	-0.4
MUGZ	**Murupara**	**0.47**	**95**	P	Pg	14 20 12.1	0.0
TLZ	**Tolley Road**	**0.52**	**282**	P	Pg	14 20 12.9	-0.2
TLZ				S	Sg	14 20 20.1	+0.3
RATZ	**Rangitukua**	**0.53**	**217**	P	Pg	14 20 14.1	+0.7
EDRZ	**Edgecumbe**	**0.55**	**53**	P	Pb	14 20 14.5	-0.8
RITZ	**Rihia Road**	**0.59**	**205**	P	Pb	14 20 16.1	0.0
MARZ	**Manawahe**	**0.60**	**41**	P	Pb	14 20 15.8	-0.3
KMRZ	**Kaimai**	**0.62**	**342**	P	Pg	14 20 15.1	0.0
RTZ	**Ruatahuna**	**0.65**	**106**	P	Pb	14 20 16.6	-0.5
KATZ	**Kakaramea**	**0.66**	**215**	P	Pb	14 20 16.6	-0.6
MTHZ	**Maungataniwha**	**0.66**	**129**	P	Pg	14 20 16.3	+0.4
OPRZ	**Ohinepanea**	**0.66**	**27**	P	Pb	14 20 16.7	-0.5
TGRZ	**Tauranga**	**0.71**	**5**	P	Pg	14 20 17.0	+0.2
URZ	**Urewera**	**0.75**	**76**	P	Pg	14 20 17.3	-0.3
BKZ	**Black Stump Fm**	**0.77**	**162**	P	Pg	14 20 17.7	-0.1
NTVZ	**North Tongarir**	**0.77**	**211**	P	Pb	14 20 18.6	-0.5
TMVZ	**Te Maari**	**0.77**	**209**	P	Pb	14 20 18.8	-0.3
KRVZ	**Karewarewa**	**0.78**	**213**	P	Pg	14 20 18.5	+0.4
ETVZ	**East Tongariro**	**0.79**	**208**	P	Pg	14 20 18.8	+0.6
WTVZ	**West Tongariro**	**0.82**	**214**	P	Pg	14 20 19.1	+0.3
NMHZ	**Naumai**	**0.82**	**143**	P	Pb	14 20 19.7	-0.3
NNVZ	**North Ngauruho**	**0.82**	**212**	P	Pg	14 20 19.3	+0.4
OTVZ	**Oturere**	**0.83**	**209**	P	Pg	14 20 19.5	+0.5
RAHZ	**Arahi**	**0.85**	**124**	P	Pb	14 20 20.5	0.0
SNVZ	**South Ngauruho**	**0.86**	**209**	P	Pg	14 20 19.9	+0.3
WHRZ	**Whale Island**	**0.86**	**47**	P	Pn	14 20 21.3	-0.6
TWVZ	**Taurewa**	**0.86**	**222**	P	Pg	14 20 19.5	-0.1
NGZ	**Ngauruhoe**	**0.86**	**211**	P	Pb	14 20 20.3	-0.4
TOZ	**Tahuroa Road**	**0.89**	**323**	P	Pg	14 20 19.5	-0.7
COVZ	**Chateau Observ**	**0.91**	**213**	P	Pg	14 20 20.8	+0.3
TUVZ	**Tukino**	**0.92**	**206**	P	Pb	14 20 21.7	0.0
FWVZ	**Far West T-bar**	**0.95**	**211**	P	Pg	14 20 21.7	+0.3
MAVZ	**Matarangi**	**0.96**	**210**	P	Pb	14 20 22.5	+0.1
WHVZ	**Whangaehu Hut**	**0.96**	**209**	P	Pg	14 20 22.0	+0.4
SNGZ	**Shannon Statio**	**0.97**	**111**	P	Pn	14 20 23.0	-0.5
RAGZ	**Rawiri**	**0.97**	**94**	P	Pb	14 20 22.4	-0.1
TRVZ	**Turoa**	**0.99**	**210**	P	Pb	14 20 22.8	-0.2
WNVZ	**Wahianoa**	**1.00**	**207**	P	Pg	14 20 21.9	-0.3
KWHZ	**Kaweka Forest**	**1.00**	**169**	P	Pg	14 20 22.3	0.0
MOVZ	**Moawhango**	**1.02**	**199**	P	Pg	14 20 22.0	-0.7
ARHZ	**Aropaoanui**	**1.04**	**142**	P	Pn	14 20 24.6	+0.2
WHHZ	**Waihua**	**1.04**	**128**	P	Pn	14 20 24.9	+0.5
HIZ	**Hauiti**	**1.04**	**266**	P	Pg	14 20 22.7	-0.4
MWZ	**Matawai**	**1.06**	**85**	P	Pg	14 20 23.1	-0.5
PKVZ	**Pokaka**	**1.07**	**217**	P	Pg	14 20 23.4	-0.2
MCHZ	**McNeill Hill**	**1.08**	**158**	P	Pn	14 20 25.3	+0.3
MTVZ	**Mangateitei**	**1.09**	**210**	P	Pg	14 20 24.2	+0.1
MYRZ	**Mayor Island**	**1.16**	**2**	P	Pn	14 20 27.2	+1.2
KRHZ	**Kereru**	**1.21**	**173**	P	Pg	14 20 26.1	-0.3
RIGZ	**Rimuhau**	**1.27**	**103**	P	Pn	14 20 29.1	+1.5
RUGZ	**Raukumara Rang**	**1.27**	**69**	P	Pg	14 20 27.0	-0.5
KNZ	**Kokohu**	**1.30**	**117**	P	Pg	14 20 29.9	+1.7
VRZ	**Vera Road**	**1.30**	**238**	P	Pn	14 20 27.0	-1.1
TKGZ	**Te Karaka**	**1.31**	**90**	P	Pg	14 20 28.8	+0.6
CKHZ	**Cape Kidnapper**	**1.40**	**150**	P	Pg	14 20 32.0	+1.9
PRGZ	**Paritu Road**	**1.42**	**110**	P	Pg	14 20 32.6	+2.3
HAZ	**Te Kaha**	**1.44**	**62**	P	Pg	14 20 30.7	0.0
TWGZ	**Tauwhareparae**	**1.44**	**80**	P	Pg	14 20 31.6	+0.9
KAHZ	**Kahuranaki**	**1.46**	**158**	P	Pg	14 20 32.0	+0.9
PNHZ	**Pukenui**	**1.47**	**179**	P	Pb	14 20 31.0	0.0
MHGZ	**Mahia Peninsul**	**1.52**	**118**	P	Pg	14 20 34.4	+2.0
MKAZ	**Moumakai**	**1.56**	**328**	P	Pb	14 20 32.0	-0.5
CNGZ	**Carnagh Statio**	**1.59**	**92**	P	Pg	14 20 34.9	+1.2
PKGZ	**Pakihiroa**	**1.60**	**70**	P	Pg	14 20 33.7	-0.1
WAZ	**Wanganui**	**1.61**	**215**	P	Pb	14 20 33.0	-0.4
TSZ	**Takapari Road**	**1.62**	**186**	P	Pb	14 20 33.3	-0.3
WPHZ	**Waipukurau**	**1.64**	**173**	P	Pg	14 20 34.8	+0.4
PXZ	**Pawanui**	**1.67**	**162**	P	Pb	14 20 34.4	0.0
PUZ	**Puketiti**	**1.68**	**78**	P	Pg	14 20 35.5	+0.3
DREZ	**Durham Road**	**1.72**	**244**	P	Pn	14 20 34.2	+0.5
LREZ	**Lake Rotokare**	**1.72**	**233**	P	Pb	14 20 35.5	+0.2
KUZ	**Kuaotunu**	**1.73**	**348**	P	Pb	14 20 35.3	-0.1
ETAZ	**East Tamaki Re**	**1.79**	**326**	P	Pn	14 20 33.8	-0.9
PREZ	**Palmer Road**	**1.82**	**240**	P	Pg	14 20 37.7	-0.3
NEZ	**North Egmont**	**1.83**	**242**	P	Pn	14 20 35.9	+0.7
AWAZ	**Awhitu Peninsu**	**1.84**	**318**	P	Pb	14 20 37.1	-0.1
WIAZ	**Waiheke Island**	**1.84**	**333**	P	Pb	14 20 37.7	+0.4
DVHZ	**Dannevirke**	**1.86**	**180**	P	Pb	14 20 38.1	+0.5
PRHZ	**Porangahau**	**1.86**	**169**	P	Pb	14 20 38.1	+0.5
WMGZ	**Waiomatatini S**	**1.87**	**71**	P	Pb	14 20 37.8	+0.1
PKE	**Pukeiti**	**1.87**	**246**	P	Pb	14 20 37.9	+0.1
KHEZ	**Kahui Hut**	**1.89**	**243**	P	Pn	14 20 37.2	+1.0
MXZ	**Matakaoa Point**	**1.89**	**63**	P	Pg	14 20 39.4	0.0
EPAZ	**Eden Park BICE**	**1.93**	**323**	P	Pg	14 20 39.5	-0.7
MBAZ	**Motutapu North**	**1.96**	**328**	P	Pb	14 20 38.7	-0.5
HBAZ	**Herne Bay Bore**	**1.96**	**324**	P	Pg	14 20 40.0	-0.7
WTAZ	**Waiatarua**	**1.97**	**319**	P	Pn	14 20 38.1	+0.9
POWZ	**Post Office Ro**	**1.98**	**189**	P	Pb	14 20 39.7	+0.2
NBEZ	**Newall Road No**	**1.99**	**245**	P	Pb	14 20 40.3	+0.5
ANWZ	**Angora Road**	**2.03**	**174**	P	Pb	14 20 41.0	+0.5
BFZ	**Birch Farm**	**2.24**	**179**	P	Pb	14 20 43.7	-0.4
GRZ	**Great Barrier**	**2.26**	**345**	P	Pg	14 20 45.6	-0.9
MRZ	**Mangatainoka R**	**2.27**	**192**	P	Pn	14 20 42.2	+1.0
TIWZ	**Tintock**	**2.34**	**185**	P	Pb	14 20 45.4	-0.5
OGWZ	**Otaki Gorge**	**2.50**	**198**	P	Pn	14 20 45.2	+0.8
HOWZ	**Holdsworth Sta**	**2.51**	**192**	P	Pn	14 20 44.8	+0.2
CAW	**Cannon Point**	**2.80**	**198**	P	Pb	14 20 54.0	+0.4
WCZ	**Waipu Caves**	**2.90**	**329**	P	Pn	14 20 50.3	+0.4
DUWZ	**D'Urville Isla**	**2.93**	**216**	P	Pb	14 20 54.2	-1.7
TCW	**Tory Channel**	**3.13**	**207**	P	Pb	14 20 57.8	-1.5
TUWZ	**Tuamarina**	**3.45**	**209**	P	Pb	14 21 04.4	-0.3
NNZ	**Nelson**	**3.51**	**217**	P	Pb	14 21 04.7	-1.1

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*IDC **04** 14:33:07.6±0.6,1.°68S×122.°75E,h0^{km},mb4.1/16, mbtmp4.1/18,ML4.1/2,MS3.2/8,Error ellipse: s-maj=27.2km s-min=13.1km az=73.0*

*BJI **04** 14:33:07.8,2.°10S×122.°63E,h17^{km},mB4.7/6,mb4.5/21, Ms4.2/2*

*NEIC **04** 14:33:10.8±1.1,1.°82S±0.°02×122.°61E±0.°07,h13^{km}±5^{km}, mb4.8/25,Error ellipse: s-maj=10.3km s-min=1.8km az=101.0*

*DJA **04** 14:33:10.8±0.5,2°S±2°×12°3E±°,h10^{km}±4^{km},M4.6/24, mB5.0/6,mb4.9/13,MLv4.7/24,Mw(mB)4.3/6*

ISC 04 14:33:10.9±1.9,**1.°82S**±0.°04×**122.°64E**±0.°05,**h17**^{km}±12^{km}, **n97**,σ**1^{s}17**/109,**mb4.6**/35,**MS3.4**/6,**1D,Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.79**	**10**		**Pb**	**14 33 26.3**	**+0.1**
LUWI				Sg	**Sg**	**14 33 36.4**	**-0.4**
LUWI	**Luwuk**	**0.79**	**10**	P	**Pb**	**14 33 26.5**	**+0.3**
LUWI				S	**Sb**	**14 33 37.9**	**+1.4**
APSI	**Ampana**	**1.34**	**313**	P	**Pn**	**14 33 34.5**	**-0.3**
KDI	**Kendari**	**2.12**	**180**	P	**Pn**	**14 33 46.3**	**+0.7**
KDI				S	**Sn**	**14 34 12.3**	**+0.7**
MRSI	**Marisa**	**2.39**	**343**	P	**Pn**	**14 33 49.3**	**0.0**
KMSI	**Cibinong**	**2.73**	**29**	P	**Pn**	**14 33 55.8**	**+1.8**
KMSI				S	**Sb**	**14 34 30.4**	**-2.2**
PCI	**Palu**	**2.94**	**288**	P	**Pn**	**14 33 57.9**	**+1.0**
PCI				S	**Sn**	**14 34 32.9**	**+1.0**
TTSI	**Tana Toraja**	**3.06**	**247**	P	**Pn**	**14 33 58.3**	**-0.3**
TTSI				S	**Sn**	**14 34 34.2**	**-0.7**
SANI	**Sanana**	**3.36**	**94**	P	**Pn**	**14 34 02.8**	**+0.2**
TOLI2	**Tolitoli**	**3.45**	**328**		**Pn**	**14 34 04.3**	**+0.3**
MPSI	**Mapaga**	**3.48**	**308**	P	**Pn**	**14 34 04.1**	**-0.2**
SPSI	**Sidrap Palu**	**3.57**	**233**	P	**Pn**	**14 34 06.6**	**+1.1**
SPSI				S	**Sn**	**14 34 48.0**	**+0.7**
BNSI	**Bone**	**3.60**	**225**	P	**Pn**	**14 34 06.4**	**+0.5**
BNSI				S	**Sn**	**14 34 48.9**	**+0.9**
BBSI	**Bau Bau**	**3.64**	**181**	P	**Pn**	**14 34 07.1**	**+0.5**
BBSI				S	**Sn**	**14 34 50.2**	**+1.1**
KAPI	**Kappang**	**4.28**	**222**		**Pn**	**14 34 15.4**	**+0.1**
KAPI	**Kappang**	**4.28**	**222**	Pn	**Pn**	**14 34 16.2**	**+0.9**
	21nm,0.3s,baz=354,slow=4.8,SNR=123						
KAPI				Sn	**Sn**	**14 35 04.3**	**-0.6**
	122nm,0.3s,baz=50,slow=19,SNR=22						
KAPI				LR	LR	14 36 06.5	
	comp=Z,256nm,18.3s,baz=40,slow=40 73nm,0.5s						
NLAI	**Namlea**	**4.68**	**108**	P	**Pn**	**14 34 22.4**	**+1.6**
BSSI	**Bau Bau, Buton**	**4.80**	**206**	P	**Pn**	**14 34 22.6**	**+0.2**
BSSI				S	**Sn**	**14 35 18.5**	**+0.9**
TNTI	**Ternate**	**5.39**	**61**		**Pn**	**14 34 30.8**	**+0.3**
TNTI	**Ternate**	**5.39**	**61**	P	**Pn**	**14 34 32.3**	**+1.7**
	0.3nm993nm53nm,0.5s						
BKB	**Balikpapan**	**5.76**	**275**		**Pn**	**14 34 35.5**	**-0.2**
BKB	**Balikpapan**	**5.76**	**275**	P	**Pn**	**14 34 35.4**	**-0.3**
	0.4nm2µm96nm,0.6s						
MMRI	**Maumere**	**6.78**	**183**		**Pn**	**14 34 49.2**	**-0.5**
MMRI	**Maumere**	**6.78**	**183**	P	**Pn**	**14 34 50.1**	**+0.4**
	0.3nm106nm,0.8s						
EDFI	**Ende, Flores**	**6.95**	**188**	P	**Pn**	**14 34 51.7**	**-0.4**
	0.2nm699nm48nm,0.9s						
SOEI	**Soe**	**8.05**	**168**		**Pn**	**14 35 07.3**	**+0.1**
SOEI	**Soe**	**8.05**	**168**	P	**Pn**	**14 35 08.2**	**+1.0**
	92nm,0.7s						
WSI	**Waingapu**	**8.13**	**197**	P	**Pn**	**14 35 09.4**	**+1.1**
	100nm,1.5s						
BATI	**Baumata**	**8.39**	**173**	P	**Pn**	**14 35 13.0**	**+1.1**
WBSI	**Waikabubak, Su**	**8.41**	**202**	P	**Pn**	**14 35 11.5**	**-0.7**
	60nm,1.1s						
SWI	**Sorong**	**8.67**	**84**	P	**Pn**	**14 35 18.2**	**+2.5**
TWSI	**Taliwang, Sumb**	**8.94**	**220**	P	**Pn**	**14 35 19.7**	**+0.3**
DAV	**Davao City (W)**	**9.31**	**18**	LR	LR	14 38 52.8	
	comp=Z,79nm,18.9s,baz=334,slow=38						
FAKI	**Fak Fak**	**9.67**	**97**	Pn	**Pn**	**14 35 30.2**	**+0.8**
FAKI	**Fak Fak**	**9.67**	**97**	P	**Pn**	**14 35 30.2**	**+0.8**
KNRA	**Kununurra**	**15.03**	**157**	Pn	**Pn**	**14 36 42.1**	**-0.7**
LEM	**Lembang**	**15.78**	**251**	LR	LR	14 42 26.9	
	comp=Z,113nm,22.0s,baz=171,slow=35						
FITZ	**Fitzroy Crossi**	**16.44**	**170**		**Pn**	**14 37 02.1**	**+1.1**
FITZ	**Fitzroy Crossi**	**16.44**	**170**	Pn	**Pn**	**14 36 59.8**	**-1.2**
	0.3nm,0.3s,baz=1.3,slow=5.4,SNR=7.5						
FITZ				Sn	**Sn**	**14 40 01.0**	**-2.2**
	baz=324,slow=19,SNR=1.9 5.1nm,0.7s						
MBWA	**Marble Bar**	**19.43**	**188**	P	**P**	**14 37 37.1**	**+0.5**
WB0	**Warramunga Arr**	**21.22**	**148**		**P**	**14 37 55.9**	**-0.3**
WB0				IAmb	IAmb	14 37 59.6	
	comp=Z,25nm,0.8s						
WRA	**Warramunga Arr**	**21.34**	**148**	P	**P**	**14 37 56.0**	**-1.4**
WRA	**Warramunga Arr**	**21.34**	**148**	P	**P**	**14 37 57.3**	**-0.1**
	comp=Z,21nm,0.8s,baz=330,slow=10.0,SNR=32 comp=Z,21nm,0.8s						
WR8	**Warramunga Arr**	**21.43**	**148**		**P**	**14 37 58.1**	**-0.3**
WR8				IAmb	IAmb	14 38 01.7	
	comp=Z,32nm,0.8s						
COEN	**Coen**	**23.62**	**122**	P	**P**	**14 38 21.1**	**-0.2**
COEN				IAmb	IAmb	14 38 42.2	
	comp=Z,46nm,1.6s						
UBPT	**Khong Chiam**	**24.02**	**316**		**P**	**14 38 25.2**	**0.0**
PSI	**Prapat**	**24.14**	**281**	LR	LR	14 49 32.3	
	comp=Z,94nm,18.2s,baz=156,slow=41						
QIZ	**Qiongzhong**	**24.24**	**329**	P	**P**	**14 38 27.6**	**+0.4**
QIZ				S	**S**	**14 42 46.9**	**+1.8**
AS31	**Alice Springs**	**24.30**	**154**		**P**	**14 38 26.4**	**-1.4**
ASAR	**Alice Springs**	**24.30**	**154**	P	**P**	**14 38 26.7**	**-1.0**
ASAR	**Alice Springs**	**24.30**	**154**	P	**P**	**14 38 27.9**	**+0.1**
	comp=Z,11nm,0.7s,baz=329,slow=7.9,SNR=139						
ASAR				PcP	**PcP**	**14 42 07.8**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=348,slow=1.8,SNR=6.8 comp=Z,11nm,0.7s						
PMG	**Port Moresby**	**25.52**	**108**	P	**P**	**14 38 40.0**	**+1.1**
PMG				IAmb	IAmb	14 38 49.0	
	comp=Z,35nm,1.1s						
FORT	**Forrest**	**29.25**	**170**	P	**P**	**14 39 11.0**	**-1.2**
FORT				IAmb	IAmb	14 39 12.5	
	comp=Z,17nm,0.9s						
CMAR	**Chiang Mai Arr**	**30.82**	**312**	P	**P**	**14 39 26.6**	**+0.4**
	comp=Z,2.1nm,0.7s,baz=137,slow=7.0,SNR=21						
CMAR				PcP	**PcP**	**14 42 24.8**	**+1.4**
	comp=Z,0.7nm,0.7s,baz=180,slow=1.9,SNR=4.9						
CMAR				LR	LR	14 54 49.0	
	comp=Z,13nm,18.9s,baz=240,slow=42 comp=Z,2.1nm,0.7s						
BBOO	**Buckleboo**	**33.31**	**159**	P	**P**	**14 39 47.5**	**-0.4**
NJ2	**Nanjing**	**33.88**	**354**	*e*P	**P**	**14 39 55.2**	**+2.4**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
PZH	**PanZhiHua**	**34.64**	**326**	P	**P**	**14 40 03.0**	**+3.3**
STKA	**Stephens Creek**	**34.83**	**151**	P	**P**	**14 40 01.3**	**+0.2**
STKA	**Stephens Creek**	**34.83**	**151**	P	**P**	**14 40 01.3**	**+0.2**
	comp=Z,7.6nm,0.8s,baz=332,slow=11,SNR=7.9 comp=Z,7.6nm,0.8s						
XAN	**Xi'an**	**37.93**	**341**	P	**P**	**14 40 28.3**	**+0.6**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KSRS	**Korea Array**	**39.38**	**7**	P	**P**	**14 40 37.5**	**-2.2**
	comp=Z,0.7nm,0.8s,baz=183,slow=11,SNR=4.1 comp=Z,0.7nm,0.8s						
MJAR	**Matsushiro Arr**	**40.83**	**19**	P	**P**	**14 40 49.5**	**-2.3**
	comp=Z,2.2nm,0.8s,baz=190,slow=8.0,SNR=5.9 comp=Z,2.2nm,0.8s						
CAN	**Canberra**	**41.37**	**147**	P	**P**	**14 40 57.5**	**+1.2**
LZH	**Lanzhou**	**41.59**	**337**	*e*P	**P**	**14 40 59.5**	**+1.3**
LZH				sP	sP	14 41 07.0	+1.6
LZH				pmax	pmax		
	comp=Z,9.0nm,1.3s						
LZH				LR	LR		
	comp=Z,140nm,9.6s						
LZH				LR	LR		
	comp=Z,110nm,11.7s						
PALK	**Pallekele**	**42.80**	**283**	LR	LR	15 00 22.2	
	comp=Z,37nm,18.1s,baz=115,slow=38						
HHC	**Hu-ho-hao-te**	**43.65**	**348**	*e*P	**P**	**14 41 17.8**	**+3.0**
HHC				pmax	pmax		
	comp=Z,16nm,0.5s						
HHC				pmax	pmax		
	comp=Z,78nm,3.9s						
LHI	**Lord Howe Isla**	**45.31**	**134**	P	**P**	**14 41 27.2**	**-0.9**
EVN	**Everest**	**45.40**	**313**	P	**P**	**14 41 28.3**	**-1.3**
GTA	**Gaotai**	**46.07**	**335**	P	**P**	**14 41 35.8**	**+1.6**
GTA				pP	sP	14 41 40.0	-1.5
GTA				PcP	**PcP**	**14 43 11.4**	**+1.0**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
USRK	**Ussuriysk Ar.**	**46.58**	**9**	P	**P**	**14 41 35.7**	**-2.2**
	comp=Z,2.0nm,0.6s,baz=212,slow=7.8,SNR=3.6 comp=Z,2.0nm,0.6s						
MDJ	**Mudanjiang**	**46.65**	**7**	P	**P**	**14 41 36.8**	**-1.6**
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SONM	**Songino Array**	**51.45**	**346**	P	**P**	**14 42 13.8**	**-1.5**
	comp=Z,0.8nm,0.7s,baz=165,slow=8.6,SNR=4.7						
SONM				PcP	**PcP**	**14 43 29.1**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=175,slow=5.2,SNR=3.8 comp=Z,0.8nm,0.7s						
MKAR	**Makanchi Array**	**59.97**	**329**	P	**P**	**14 43 15.4**	**-1.1**
MKAR	**Makanchi Array**	**59.97**	**329**	P	**P**	**14 43 15.8**	**-0.6**
	comp=Z,1.9nm,0.8s,baz=130,slow=7.1,SNR=14						
MKAR				PcP	**PcP**	**14 44 01.8**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=126,slow=4.7,SNR=6.5 comp=Z,1.9nm,0.8s						
PETK	**Petropavlovsk-**	**62.09**	**23**	P	**P**	**14 43 31.1**	**+0.3**
PETK	**Petropavlovsk-**	**62.09**	**23**	P	**P**	**14 43 30.0**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=258,slow=6.9,SNR=3.3 comp=Z,0.9nm,0.8s						
ZALV	**Zalesovo Beam**	**63.82**	**336**	P	**P**	**14 43 39.7**	**-2.4**
	comp=Z,1.8nm,0.8s,baz=108,slow=3.3,SNR=5.2 comp=Z,1.8nm,0.8s						
KURBB	**Kurchatov Arra**	**64.35**	**331**	P	**P**	**14 43 44.0**	**-1.8**
	comp=Z,1.3nm,0.7s,baz=137,slow=6.2,SNR=6.3 comp=Z,1.3nm,0.7s						
BVAR	**Borovoye Array**	**69.85**	**329**	P	**P**	**14 44 19.1**	**-1.6**
	comp=Z,1.3nm,0.8s,baz=140,slow=9.5,SNR=4.0 comp=Z,1.3nm,0.8s						
VNDA	**Vanda**	**78.50**	**172**	LR	LR	15 18 33.8	
	comp=Z,22nm,19.9s,baz=17,slow=35						
SBA	**Scott Base**	**79.46**	**171**	P	**P**	**14 45 16.8**	**+0.8**
SBA				IAmb	IAmb	14 45 24.4	
	comp=Z,8.4nm,1.4s						
F15K	**North Star Dit**	**84.60**	**23**	P	**P**	**14 45 44.0**	**+0.8**
O15K	**Ungalikthiuk R**	**85.18**	**30**	P	**P**	**14 45 47.1**	**+0.9**
O15K				IAmb	IAmb	14 45 48.3	
	comp=Z,14nm,1.1s						
SYO	**Syowa Base**	**85.81**	**201**⇓	*e*PcP	**PcP**	**14 45 52.7**	**+0.8**
H17K	**Granite Mounta**	**86.33**	**25**	P	**P**	**14 45 52.9**	**+1.1**
H17K				IAmb	IAmb	14 46 24.3	
	comp=Z,10nm,1.2s						
G19K	**Purcell Mounta**	**87.72**	**24**		**P**	**14 45 59.0**	**+0.5**
G19K				IAmb	IAmb	14 45 59.8	
	comp=Z,4.3nm,0.7s						
H19K	**Roundabout Mou**	**87.88**	**24**		**P**	**14 46 00.0**	**+0.8**
QSPA	**South Pole Qui**	**88.12**	**180**	P	**P**	**14 45 59.8**	**-0.8**
	comp=Z,1.9nm,1.0s,baz=276,slow=1.1,SNR=9.1 comp=Z,1.9nm,1.0s						
I21K	**Tanana**	**89.69**	**25**	P	**P**	**14 46 08.2**	**+0.4**
I21K				IAmb	IAmb	14 46 09.2	
	comp=Z,6.4nm,1.1s						
BRTR	**Keskin Array B**	**90.38**	**310**	P	**P**	**14 46 11.0**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=76,slow=6.5,SNR=2.4 comp=Z,0.2nm,0.3s						
H23K	**Yukon River**	**90.75**	**24**	P	**P**	**14 46 13.4**	**+0.6**
H23K				IAmb	IAmb	14 46 14.2	
	comp=Z,4.0nm,0.8s						
I23K	**Minto, Yukon-K**	**90.80**	**25**		**P**	**14 46 13.3**	**+0.3**
I23K				IAmb	IAmb	14 46 14.1	
	comp=Z,4.6nm,0.9s						
ILAR	**Eielson Array**	**91.84**	**25**	P	**P**	**14 46 16.0**	**-1.9**
	comp=Z,0.4nm,0.7s,baz=242,slow=6.3,SNR=5.9 comp=Z,0.4nm,0.7s						
LSZ	**Lusaka**	**93.81**	**255**	LR	LR	15 26 19.9	
	comp=Z,17nm,18.1s,baz=132,slow=34						
BCAR	**Beaver Creek A**	**94.15**	**27**	P	**P**	**14 46 29.2**	**+0.6**
I28M	**Miner Creek**	**94.74**	**25**		**P**	**14 46 31.8**	**+0.5**
I28M				IAmb	IAmb	14 46 32.7	
	comp=Z,4.1nm,0.8s						
CLL	**Collm**	**103.61**	**323**	*i* Pdif	**Pdif**	**14 47 09.2**	**-2.1**

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*NEIC **04** 14:43:29.6±1.4,15.°07S±0.°09×173.°5W±0.°1,h10^{km}±1^{km}, mb4.4/26,Error ellipse: s-maj=22.2km s-min=11.8km az=303.0*

*IDC **04** 14:43:43.5±4.7,15.°17S×173.°81W,h129^{km}±41^{km}, mb3.6/10,mbtmp4.0/11,MS3.4/28,Error ellipse: s-maj=28.1km s-min=17.9km az=127.0*

ISC 04 14:43:28.9±0.6,**15.°09S**±0.°09×**173.°6W**±0.°1,**h10**^{km},**n68**, σ**0^{s}86**/41,**mb4.4**/22,**MS3.6**/25,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.14**	**57**	Pn	**Pn**	**14 44 03.0**	**-1.8**
AFI				Sn	Sn	14 44 23.2	-8.3
NIUE	**Niue**	**5.31**	**139**	Pn	**Pn**	**14 44 47.2**	**-1.2**
MSVF	**Nonsavu**	**8.41**	**251**	P	Pn	14 45 41.5	+10
	8.4nm,0.7s,baz=81,slow=12,SNR=5.4						
MSVF				LR	LR	14 48 22.9	
	comp=Z,302nm,21.1s,baz=59,slow=34						
RAR	**Rarotonga**	**14.50**	**117**	LR	LR	14 51 45.6	
	comp=Z,46nm,20.4s,baz=280,slow=33						
RAO	**Raoul Island**	**14.64**	**195**	LR	LR	14 51 49.6	
	comp=Z,164nm,20.8s,baz=50,slow=34						
URZ	**Urewera**	**24.49**	**198**	LR	LR	14 57 34.6	
	comp=Z,179nm,19.0s,baz=118,slow=34						
BKZ	**Black Stump Fm**	**25.51**	**198**	P	**P**	**14 48 57.3**	**-0.3**
BKZ				IAmb	IAmb	14 49 01.0	
	comp=Z,17nm,1.3s						
QRZ	**Quartz Range**	**28.33**	**203**	P	**P**	**14 49 22.8**	**-0.1**
WHZ	**Wether Hill Ro**	**34.39**	**203**	P	**P**	**14 50 17.1**	**+0.9**
H11N3	**WAKE ISLAND Hy**	**39.54**	**330**	T	T	15 33 22.5	
	baz=149,slow=76,SNR=13						
H11N1	**WAKE ISLAND Hy**	**39.54**	**330**	T	T	15 33 44.2	
	baz=149,slow=76,SNR=9.0						
H11N2	**WAKE ISLAND Hy**	**39.55**	**330**	T	T	15 33 25.5	
	baz=149,slow=76,SNR=9.7						
STKA	**Stephens Creek**	**44.00**	**240**	P	**P**	**14 51 36.2**	**-0.6**
	comp=Z,1.5nm,0.6s,baz=34,slow=15,SNR=3.0						
STKA				LR	LR	15 08 34.8	
	comp=Z,38nm,19.2s,baz=30,slow=34 comp=Z,1.5nm,0.6s						
WR8	**Warramunga Arr**	**49.55**	**257**	P	**P**	**14 52 19.7**	**-0.7**

WB0	Warramunga Arr	49.66	257	P	P	14 52 20.7	-0.6
WRA	Warramunga Arr	49.70	257	P	P	14 52 20.6	-1.1
	comp=Z,1.8nm,0.9s,baz=95,slow=6.3,SNR=12						
	comp=Z,1.8nm,0.9s						
GUMO	Guam	49.99	303	LR	LR	15 11 29.4	
	comp=Z,8.9nm,19.8s,baz=104,slow=33						
AS31	Alice Springs	50.00	252	P	P	14 52 22.9	-1.0
ASAR	Alice Springs	50.00	252	P	P	14 52 22.4	-1.4
ASAR	Alice Springs	50.00	252	P	P	14 52 22.9	-1.0
	comp=Z,4.9nm,0.8s,baz=88,slow=7.9,SNR=51						
ASAR				LR	LR	15 12 14.5	
	comp=Z,48nm,21.1s,baz=96,slow=34						
	comp=Z,4.9nm,0.8s						
FORT	Forrest	55.36	243	P	P	14 53 02.4	-1.1
SBA	Scott Base	63.54	185	P	P	14 54 00.9	+1.8
SBA				IAmb	IAmb	14 54 35.2	
	comp=Z,5.2nm,1.2s						
VNDA	Vanda	63.66	186	P	P	14 54 01.3	+1.4
VNDA				IAmb	IAmb	14 54 01.3	
	comp=Z,2.5nm,0.9s						
VNDA	Vanda	63.66	186	P	P	14 54 00.6	+0.7
	comp=Z,1.8nm,0.9s,baz=357,slow=4.2,SNR=6.1						
	comp=Z,1.8nm,0.9s						
NWAO	Narrogin (SRO)	64.58	240	LR	LR	15 20 04.4	
	comp=Z,55nm,21.1s,baz=72,slow=34						
MJAR	Matsushiro Arr	68.56	320	LR	LR	15 18 29.4	
	comp=Z,26nm,21.9s,baz=142,slow=30						
ASAJ	Asahikawa	71.17	328	LR	LR	15 20 37.4	
	comp=Z,7.7nm,21.6s,baz=182,slow=31						
JNU	Nakatsue	71.43	313	LR	LR	15 19 22.1	
	comp=Z,33nm,20.0s,baz=137,slow=30						
PETK	Petropavlovsk-	72.27	342	LR	LR	15 26 37.0	
	comp=Z,8.3nm,18.6s,baz=123,slow=36						
PFO	Pinyon Flats O	72.87	47	LR	LR	15 19 10.2	
	comp=Z,56nm,20.8s,baz=249,slow=29						
LPIG	La Paz	73.06	59	LR	LR	15 17 41.0	
	comp=Z,54nm,21.3s,baz=234,slow=28						
NVAR	Mina Array Bea	74.25	42	P	P	14 55 07.5	+1.0
	comp=Z,1.5nm,0.8s,baz=232,slow=10,SNR=5.7						
NVAR				LR	LR	15 21 04.7	
	comp=Z,49nm,21.2s,baz=216,slow=30						
	comp=Z,1.5nm,0.8s						
QSPA	South Pole Qui	74.95	180	P	P	14 55 10.4	+0.2
QSPA	South Pole Qui	74.95	180	P	P	14 55 09.8	-0.4
	comp=Z,5.0nm,0.9s,baz=69,slow=1.7,SNR=18						
	comp=Z,5.0nm,0.9s						
KSRS	Korea Array	75.79	316	LR	LR	15 22 36.3	
	comp=Z,9.7nm,21.5s,baz=110,slow=31						
USRK	Ussuriysk Ar.	77.01	323	LR	LR	15 23 13.2	
	comp=Z,34nm,20.3s,baz=89,slow=31						
ELK	Elko	77.50	42	LR	LR	15 23 34.0	
	comp=Z,39nm,19.9s,baz=250,slow=31						
BBB	Bella Bella	77.71	27	LR	LR	15 24 02.2	
	comp=Z,23nm,19.1s,baz=248,slow=31						
L18K	Granite Mounta	78.21	8	P	P	14 55 28.7	+0.4
L18K				IAmb	IAmb	14 55 35.7	
	comp=Z,7.9nm,1.4s						
M19K	Big River Lodg	78.24	9	P	P	14 55 28.8	+0.3
M19K				IAmb	IAmb	14 55 37.4	
	comp=Z,5.9nm,1.3s						
SUA	Susitna One	78.44	11	P	P	14 55 30.7	+0.9
SUA				IAmb	IAmb	14 55 52.8	
	comp=Z,5.7nm,1.3s						
CUT	Chulitna	79.40	11	P	P	14 55 35.2	+0.4
J18K	Innoko River	79.40	8	P	P	14 55 36.2	+1.3
SCM	Sheep Creek Mo	79.44	12	P	P	14 55 35.9	+0.6
SCM				IAmb	IAmb	14 55 37.3	
	comp=Z,3.2nm,0.9s						
MA2	Magadan	79.81	342	LR	LR	15 26 39.1	
	comp=Z,14nm,21.3s,baz=142,slow=32						
CAST	Castle Rocks	80.03	10	P	P	14 55 38.7	+0.4
KLR	Kul'dur	80.14	327	LR	LR	15 24 03.5	
	comp=Z,17nm,21.8s,baz=111,slow=30						
TRF	Thorofare Moun	80.36	10	P	P	14 55 40.9	+0.6
TRF				IAmb	IAmb	14 55 41.6	
	comp=Z,2.7nm,0.8s						
NEW	Newport	80.58	34	LR	LR	15 22 58.3	
	comp=Z,30nm,21.1s,baz=172,slow=29						
TXAR	Lajitas Array	80.62	56	P	P	14 55 43.5	+1.2
	comp=Z,0.2nm,0.6s,baz=248,slow=5.3,SNR=4.5						
	comp=Z,0.2nm,0.6s						
ANMO	Albuquerque	80.77	50	LR	LR	15 23 06.4	
	comp=Z,55nm,20.9s,baz=340,slow=29						
DLBC	Dease Lake	81.49	22	LR	LR	15 26 17.8	
	comp=Z,27nm,18.9s,baz=304,slow=31						
DOT	Dot Lake	81.75	13	P	P	14 55 47.9	+0.4
CCB	Clear Creek Bu	81.90	11	P	P	14 55 48.3	+0.1
CCB				IAmb	IAmb	14 55 50.2	
	comp=Z,2.9nm,0.9s						
I23K	Minto, Yukon-K	82.09	10	P	P	14 55 49.5	+0.4
I23K				IAmb	IAmb	14 55 54.4	
	comp=Z,4.1nm,1.3s						
PDAR	Pinedale Array	82.18	42	P	P	14 55 50.6	+0.1
	comp=Z,0.6nm,0.8s,baz=242,slow=3.2,SNR=4.0						
PDAR				LR	LR	15 25 44.9	
	comp=Z,23nm,20.4s,baz=210,slow=31						
	comp=Z,0.6nm,0.8s						
ILAR	Eielson Array	82.19	11	P	P	14 55 49.9	+0.1
	comp=Z,0.4nm,0.7s,baz=220,slow=5.5,SNR=6.7						
	comp=Z,0.4nm,0.7s						
J25K	Salcha River,	82.34	12	P	P	14 55 51.0	+0.4
F19K	Shaleruckik Mo	82.53	6	P	P	14 55 52.4	+1.0
F19K				IAmb	IAmb	14 55 58.6	
	comp=Z,5.0nm,1.2s						
G21K	Allakaket	82.73	8	P	P	14 55 53.4	+0.9
G21K				IAmb	IAmb	14 56 18.6	
	comp=Z,3.0nm,1.1s						
CMIG	Matias Romero	83.98	71	LR	LR	15 27 21.2	
	comp=Z,47nm,18.1s,baz=1.0,slow=31						
BELA	Belgrano 2	84.33	172	P	P	14 56 00.1	-0.7
BELA				IAmb	IAmb	14 56 01.7	
	comp=Z,2.7nm,0.8s						
H29M	Whitestone	85.22	14	P	P	14 56 05.5	+0.3
MAW	Mawson	88.02	199	LR	LR	15 33 12.6	
	comp=Z,47nm,19.6s,baz=113,slow=34						
INK	Inuvik	88.02	14	LR	LR	15 30 43.5	
	comp=Z,20nm,19.4s,baz=251,slow=32						
YKA	Yellowknife Ar	89.90	23	P	P	14 56 27.5	-0.3
	comp=Z,0.2nm,0.6s,baz=240,slow=4.7,SNR=3.3						
	comp=Z,0.2nm,0.6s						
BRTR	Keskin Array B	145.78	321	PKPbc	PKPbc	15 03 09.0	+0.2
	comp=Z,1.3nm,0.7s,baz=85,slow=1.9,SNR=12						
GERES	GERESS Array B	145.81	351	PKPbc	PKPbc	15 03 08.7	+0.2
	comp=Z,0.2nm,0.3s,baz=18,slow=3.6,SNR=1.7						

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*UPP **04** 14:44:59.8±0.6, 60°.30N×21°.43E, h0^{km}, ML2.6*
*DNK **04** 14:44:59.6±1.9, 60°.13N×21°.49E, h0^{km}±11^{km}, ML2.5*
*HEL **04** 14:45:00.9±0.1, 60°.09N×21°.41E, h0^{km}, ML2.1, Explosion*
*IDC **04** 14:45:01.0±1.4, 60°.16N×21°.45E, h0^{km}, mbtmp2.8/4, ML2.1/4, Error ellipse: s-maj=21.2km s-min=6.2km az=162.0*
ISC 04 14:44:59.2±0.7, **60°.15N**±0°.04×**21°.43E**±0°.02, **h0**^{km}, **n52,** σ**1^{s}35**/78, **Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAL	Aland	0.72	273	P	Pg	14 45 13.5	+0.6
AAL				S	Sg	14 45 23.0	+0.7
AAL	Aland	0.72	273	P	Pg	14 45 13.5	+0.6
AAL				S	Sg	14 45 23.0	+0.7
AAL	Aland	0.72	273	*e*P	Pg	14 45 13.6	+0.7
AAL				*e*S	Sg	14 45 23.2	+0.9
RAF	Rauma	0.90	10	*e*P	Pb	14 45 18.0	+0.4
RAF	Rauma	0.90	10	*e*P	Pb	14 45 17.9	+0.4
RAF				*e*S	Sb	14 45 30.4	+0.4
TVF	Tvarminne	0.96	108	*e*P	Pg	14 45 17.6	0.0
TVF				*e*S	Sg	14 45 30.6	+0.5
GRAU	Graesoe	1.46	279	P	Pn	14 45 25.9	-0.7
GRAU				S	Sg	14 45 45.6	-0.3
GRAU	Graesoe	1.46	279	P	Pn	14 45 25.9	-0.7
GRAU				S	Sg	14 45 45.6	-0.3
MEF	Metsahovi	1.48	86	*e*P	Pn	14 45 27.6	+0.5
MEF	Metsahovi	1.48	86	*e*P	Pn	14 45 27.5	+0.5
MEF				*e*S	Sb	14 45 47.1	+0.2
FORU	Forsmark	1.64	280	P	Pn	14 45 29.3	+0.1
FORU				S	Sn	14 45 51.6	+0.7
FORU	Forsmark	1.64	280	P	Pn	14 45 29.3	+0.1
FORU				S	Sn	14 45 51.6	+0.7
NUR	Nurmijarvi	1.64	76	*e*P	Pb	14 45 30.5	+0.2
NUR				*e*S	Sb	14 45 51.5	+0.1
NUR				MSG		14 45 52.6	
	comp=Z,16nm,0.1s						
KPF	Kankaanpaa	1.72	10	*e*P	Pg	14 45 32.3	+0.2
KPF				*e*SN	Sg	14 45 56.3	+1.8
KPF				MSG		14 45 59.6	
	comp=Z,16nm,0.1s						
HEL1	Helsinki	1.73	87	*e*P	Pb	14 45 31.6	0.0
HEL1				*e*S	Sb	14 45 53.8	-0.1
HEL1				MSG		14 45 55.6	
	comp=Z,11nm,0.1s						
FLYU	Flymyra	1.77	271	P	Pn	14 45 31.1	+0.1
FLYU				S	Sb	14 45 56.0	+0.7
FLYU	Flymyra	1.77	271	P	Pn	14 45 31.1	+0.1
FLYU				S	Sb	14 45 56.0	+0.7
MTSE	Matsula	1.88	139	*e*P	Pn	14 45 33.4	+0.9
MTSE	Matsula	1.88	139	*e*P	Pn	14 45 33.4	+0.9
MTSE				*e*S	Sn	14 45 57.4	+0.5
UPP	Uppsala	1.94	263	P	Pn	14 45 34.8	+1.5
UPP	Uppsala	1.94	263	P	Pn	14 45 34.8	+1.5
FIBU	Brunna	2.06	265	P	Pn	14 45 36.3	+1.3
FIBU				S	Sn	14 46 03.3	+1.9
FIBU	Brunna	2.06	265	P	Pn	14 45 36.3	+1.3
FIBU				S	Sn	14 46 03.3	+1.9
NYNU	Nynaeshamn	2.09	238	P	Pn	14 45 36.5	+1.2
NYNU	Nynaeshamn	2.09	238	P	Pn	14 45 36.5	+1.2
OSTU	Oestervaala	2.15	274	P	Pn	14 45 37.6	+1.4
OSTU	Oestervaala	2.15	274	P	Pn	14 45 37.6	+1.4
BACU	Backbrunna	2.19	264	P	Pn	14 45 38.4	+1.6
BACU	Backbrunna	2.19	264	P	Pn	14 45 38.4	+1.6
PVF	Pernaja	2.24	78	*e*PB	Pb	14 45 40.5	+0.1
PVF				*e*SB	Sb	14 46 09.5	+0.9
PVF				MSG		14 46 14.8	
	comp=Z,15nm,0.1s						
SLIT	Slitere, Latvi	2.56	170	*e*P	Pn	14 45 42.6	+0.7
FINES	FINESS Array B	2.62	58	Pn	Pb	14 45 46.4	-0.6
	comp=Z,1.6nm,0.3s,baz=243,slow=15,SNR=116						
FINES				Lg	Lg	14 46 21.1	
	comp=Z,4.1nm,0.3s,baz=245,slow=20,SNR=29						
FINES				Rg	Rg	14 46 38.0	
	comp=Z,9.6nm,0.9s,baz=236,slow=32,SNR=11						
	comp=Z,3.7nm,0.2s						
KEF	Keuruu	2.62	38	*e*P	Pn	14 45 44.4	+1.6
VAF	Ylistaro	2.97	11	*e*P	Pb	14 45 52.2	-0.7
HFS	Hagfors	3.87	273	Pn	Pn	14 46 00.9	+1.1
	comp=Z,0.1nm,0.3s,baz=86,slow=15,SNR=5.8						
HFS				Pg	Pb	14 46 08.3	+0.1
	comp=Z,0.5nm,0.3s,baz=83,slow=16,SNR=26						
HFS				Lg	Lg	14 47 01.3	
	comp=Z,2.1nm,0.3s,baz=87,slow=30,SNR=14						
	comp=Z,0.4nm,0.4s						
BLEU	Blekinge	4.86	220	*i* P	Pn	14 46 14.6	+1.2
BLEU				*e*S	Sn	14 47 09.1	-1.3
NC602	NORSAR Array S	4.94	281	*e*P	Pn	14 46 15.7	+1.2
NC303	NORSAR Array S	5.06	287	*e*P	Pn	14 46 17.3	+1.0
NB201	NORSAR Array S	5.08	285	*e*P	Pn	14 46 17.6	+1.1
NOA	NORSAR Array B	5.12	285	Pn	Pn	14 46 17.3	+0.3
	baz=91,slow=8.4,SNR=5.2						
NOA				Sn	Sn	14 47 15.0	-1.7
	baz=95,slow=12,SNR=1.4						
NOA				Lg	Lg	14 47 36.0	
	comp=Z,0.1nm,0.3s,baz=102,slow=19,SNR=5.1						
	comp=Z,0.4nm,0.6s						
STRU	Stroemstad	5.33	262	*e*P	Pn	14 46 21.3	+1.5
NC204	NORSAR Array S	5.36	287	*e*P	Pn	14 46 21.1	+0.7
DEL	Delary	5.43	231	*i* P	Pn	14 46 21.0	-0.2
DEL				*i* S	Sn	14 47 21.6	-2.7
BJUU	Bjuv	6.04	231	*e*P	Pn	14 46 28.4	-1.3
BJUU				*e*S	Sn	14 47 35.2	-4.2
LUNU	Lund	6.21	227	*e*P	Pn	14 46 33.2	+1.2
MOR8	Moi Rana	6.82	335	*e*P	Pn	14 46 43.0	+2.6
SALU	Saltoluokta	7.38	351	*e*P	Pn	14 46 49.4	+1.4
SALU				*e*S	Sn	14 48 10.7	-1.5
KONS	Konsvik	7.39	333	*e*P	Pn	14 46 50.3	+2.2
VAGH	Vaagaholmen	7.55	335	*e*P	Pn	14 46 53.0	+2.8
STEI	Steigen	8.27	344	*e*P	Pn	14 47 01.0	+0.9
KTK1	Kautokeino	8.94	4	*e*P	Pn	14 47 09.5	+0.2
ARCES	ARCESS Array B	9.58	9	Pn	Pn	14 47 18.1	0.0
	comp=Z,0.1nm,0.3s,baz=187,slow=14,SNR=24						
ARCES				Sn	Sn	14 49 01.3	-5.1
	comp=Z,0.1nm,0.3s,baz=190,slow=24,SNR=2.0						
	comp=Z,0.6nm,0.6s						

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*NNC **04** 14:51:26.9±4.7, 51°.26N×92°.84E, h0^{km}, mb4.3, mpv4.0, Error ellipse: s-maj=44.8km s-min=28.0km az=71.0*
*IDC **04** 14:51:26.6±0.9, 50°.98N×92°.91E, h0^{km}, mb3.7/11, mbtmp3.7/17, ML3.3/6, MS3.0/9, Error ellipse: s-maj=18.2km s-min=13.0km az=171.0*
ISC 04 14:51:27.8±0.8, **50°.98N**±0°.09×**92°.92E**±0°.07, **h10**^{km}, **n27,** σ**0^{s}97**/24, **mb3.6**/11, **MS2.9**/6, **1C-9D,**
Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	5.78	304	⇓Pg	Pb	14 53 06.4	-2.2
	2.0nm,0.7s						
ZAA0				⇓Lg	Lg	14 54 24.0	
	18nm,0.8s						
ZALV	Zalesovo Beam	5.78	304	Pn	Pn	14 52 53.9	+0.4
	1.0nm,0.3s,baz=111,slow=11,SNR=12						
ZALV				Pg	Pb	14 53 07.9	-0.6
	1.0nm,0.3s,baz=96,slow=12,SNR=5.7						
ZALV				Lg	Lg	14 54 24.0	
	8.3nm,0.3s,baz=109,slow=27,SNR=13						
ZALV				LR	LR	14 54 43.1	
	comp=Z,9.0nm,18.1s,baz=134,slow=34						
	3.1nm,0.4s						
MK31	Makanchi Array	8.16	243	⇑Pn	Pn	14 53 26.8	+0.6
	20nm,0.8s,baz=54,slow=13,SNR=80						
MK31				⇓Lg	Lg	14 55 48.6	
	21nm,0.7s,baz=51,slow=32,SNR=3.6						
MKAR	Makanchi Array	8.16	243	Pn	Pn	14 53 27.7	+1.4
	1.9nm,0.3s,baz=75,slow=14,SNR=36						
MKAR				Sn	Sn	14 54 58.2	-0.3
	1.4nm,0.3s,baz=57,slow=16,SNR=2.4						
MKAR				Lg	Lg	14 55 46.5	
	2.6nm,0.3s,baz=44,slow=32,SNR=5.4						
MKAR				LR	LR	14 56 46.3	
	comp=Z,78nm,19.9s,baz=47,slow=39						
	4.3nm,0.3s						
MAKZ	Makanchi	8.33	244	⇓Pn	Pn	14 53 28.6	+0.1
	12nm,0.6s						
MAKZ				⇓Lg	Lg	14 55 55.1	
	49nm,0.9s						
KURK	Kurchatov	9.06	274	⇓Pn	Pn	14 53 40.9	+2.4
	2.0nm,0.7s						
KURK				⇓Lg	Lg	14 56 14.2	
	25nm,0.8s						
KURBB	Kurchatov Arra	9.12	273	Pn	Pn	14 53 39.1	-0.3
	0.1nm,0.3s,baz=83,slow=16,SNR=10						
KURBB				Lg	Lg	14 56 09.2	
	0.3nm,0.3s,baz=87,slow=33,SNR=5.5						
	0.7nm,0.5s						
KURBB	Kurchatov Arra	9.12	273	⇓Pn	Pn	14 53 40.0	+0.6
	7.4nm,0.8s						
KURBB				⇓Lg	Lg	14 56 12.2	
	213nm,0.9s						
SONM	Songino Array	9.33	104	Pn	Pn	14 53 41.3	-1.1
	0.9nm,0.3s,baz=337,slow=6.9,SNR=7.6						
SONM				Pg		14 54 16.8	
	0.3nm,0.3s,baz=299,slow=18,SNR=3.7						
SONM				Lg	Lg	14 56 19.4	
	0.3nm,0.3s,baz=293,slow=24,SNR=3.6						
SONM				LR	LR	14 57 30.9	
	comp=Z,64nm,19.1s,baz=292,slow=39						
	0.6nm,0.4s						
BVAR	Borovoye Array	14.02	287	Pn	Pn	14 54 41.9	-4.5
	baz=81,slow=13,SNR=6.2						
BVAR				Lg	Lg	14 58 45.5	
	baz=94,slow=24						
	1.3nm,0.7s						
AAK	Ala-Archa	15.10	244	Pn	Pn	14 55 00.6	-0.5
	0.2nm,0.3s,baz=41,slow=9.3,SNR=1.6						
AAK				Lg	Lg	14 59 23.7	
	0.2nm,0.3s,baz=316,slow=15,SNR=3.7						
AAK				LR	LR	15 01 07.4	
	comp=Z,37nm,20.7s,baz=62,slow=38						
	0.9nm,0.3s						
ARTI	Arti	21.00	298	P	P	14 56 11.0	-0.1
	2.8nm,0.4s,baz=130,slow=4.0,SNR=6.8						
	2.8nm,0.4s						
AKTO	Aktyubinsk	21.99	282	P	P	14 56 20.8	-1.0
	1.4nm,0.6s,baz=50,slow=4.7,SNR=6.3						
AKTO				LR	LR	15 06 03.6	
	comp=Z,20nm,20.6s,baz=205,slow=40						
	1.4nm,0.6s						
YAK	Yakutsk	22.77	47	LR	LR	15 05 45.7	
	comp=Z,22nm,19.6s,baz=43,slow=38						
KSRS	Korea Array	28.20	105	LR	LR	15 07 39.9	
	comp=Z,11nm,19.5s,baz=305,slow=34						
ARCES	ARCESS Array B	35.83	326	P	P	14 58 27.7	+0.7
	0.8nm,0.6s,baz=56,slow=11,SNR=5.9						
	0.8nm,0.6s						
FINES	FINESS Array B	36.97	313	P	P	14 58 37.5	+0.7
	1.6nm,0.9s,baz=54,slow=9.7,SNR=4.5						
	1.6nm,0.9s						
AKASG	Malin Array Be	39.09	295	P	P	14 58 55.1	+0.3
	0.6nm,0.4s,baz=59,slow=9.2,SNR=2.3						
	0.6nm,0.4s						
BRTR	Keskin Array B	42.08	278	P	P	14 59 19.9	+0.2
	0.5nm,0.8s,baz=68,slow=8.2,SNR=5.2						
	0.5nm,0.8s						
HFS	Hagfors	43.12	314	P	P	14 59 28.2	+0.4
	1.6nm,0.8s,baz=59,slow=4.0,SNR=3.6						
	1.6nm,0.8s						
NB2	NORSAR Subarra	43.84	316	P	P	14 59 34.1	+0.4
	comp=Z,0.2nm,0.4s,baz=65,slow=7.9						
NOA	NORSAR Array B	43.84	316	P	P	14 59 33.6	0.0
	comp=Z,0.6nm,0.6s,baz=66,slow=7.7,SNR=3.8						
NOA				LR	LR	15 19 38.5	
	comp=Z,24nm,19.6s,baz=75,slow=39						
	comp=Z,0.6nm,0.6s						
ILAR	Eielson Array	55.68	27	P	P	15 01 04.8	+1.2
	comp=Z,0.4nm,0.8s,baz=337,slow=4.9,SNR=1.6						
	comp=Z,0.4nm,0.8s						
YKA	Yellowknife Ar	64.79	14	LR	LR	15 31 42.5	
	comp=Z,34nm,19.5s,baz=288,slow=37						
WRA	Warramunga Arr	79.44	141	P	P	15 03 34.1	-0.1
	comp=Z,0.6nm,0.9s,baz=343,slow=6.2,SNR=2.7						
	comp=Z,0.6nm,0.9s						
ASAR	Alice Springs	82.63	143	P	P	15 03 51.2	+0.1
	comp=Z,0.4nm,0.9s,baz=348,slow=5.5,SNR=1.8						
	comp=Z,0.4nm,0.9s						
LBTB	Lobatse	96.01	237	LR	LR	15 52 17.8	
	comp=Z,24nm,18.4s,baz=159,slow=38						

KRSC 04 14:58:22.1±1.1, **55°.94N**×**164°.18E, h16**^{km}±19^{km}, **Ml3.5,**
Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.81	290	*e*P	Pb	14 58 37.2	-0.7
KBTR				*e*S	Sg	14 58 48.4	-0.1
KBG	Krutoberegovo	0.89	291	*e*P	Pb	14 58 38.1	-1.0
KBG				*e*S	Sg	14 58 50.8	-0.1
BKI	Bering	1.26	125	*i* P	Pn	14 58 44.5	-0.5
BKI				*e*S	Sb	14 59 00.9	-0.4
SMKR	Semkarok	1.64	294	*e*P	Pn	14 58 50.3	-0.1
SMKR				*e*S	Sn	14 59 11.3	0.0
ZLN	Zelenaya	1.90	274	*e*P	Pb	14 58 55.8	-0.7
BZGR	Bezymyannyi-Gr	1.96	271	*e*P	Pb	14 58 56.7	-0.8
MKZ	Mys Kozlova	1.98	226	*e*P	Pb	14 58 57.4	-0.3
MKZ				*e*S	Sb	14 59 22.6	+0.6
KLY	Klyuchi	2.01	282	*e*P	Pn	14 58 54.9	-0.5
KLY				*e*S	Sn	14 59 19.6	-0.6
BZWR	Bezymyannyi-We	2.07	272	*e*P	Pb	14 58 58.5	-1.0
KIRR	Kirishev	2.16	272	*e*P	Pb	14 58 59.3	-1.6
KPT	Kopyto	2.23	272	*e*P	Pb	14 59 00.8	-1.3
KMNR	Kamenistaya	2.23	267	*e*P	Pb	14 59 01.5	-0.6
TUMD	Tumrok D	2.27	253	*e*P	Pb	14 59 01.9	-0.9
SRDR	Sredinnyy	2.53	280	*e*P	Pn	14 59 04.4	+1.8
SRDR				*e*S	Sb	14 59 36.2	-1.8
ESO	Esso	3.08	272	*e*P	Pn	14 59 12.3	+2.1
KII	Karymskiy	3.33	237	*e*P	Pn	14 59 17.2	+3.6
SPN	Mys Shipunski	3.74	222	*e*P	Pn	14 59 20.9	+1.7
SPN				*e*S	Sn	15 00 04.6	+1.7
NLC	Nalytchevo	3.95	227	*e*P	Pn	14 59 25.3	+3.2
NLC				*e*S	Sn	15 00 12.3	+4.2
SDLR	Sedlovina	4.08	231	*e*P	Pn	14 59 27.9	+4.0
KRER	Koryakskii	4.12	232	*e*P	Pb	14 59 29.5	-4.8
SMAR	Somma	4.12	232	*e*P	Pn	14 59 28.5	+3.9
KRX	Arik	4.13	233	*e*P	Pb	14 59 29.9	-4.5
AVH	Avacha	4.15	232	*e*P	Pn	14 59 29.6	+4.7
UGLR	Uglovaya	4.15	231	*e*P	Pn	14 59 29.0	+4.1
KOK	Koryaka	4.18	233	*e*P	Pn	14 59 29.8	+4.6
GNL	Ganaly	4.25	241	*e*P	Pn	14 59 30.5	+4.2
DALK	Dalny	4.30	230	*e*P	Pn	14 59 30.2	+3.3
PET	Petropavlovsk	4.35	230	*e*P	Pn	14 59 31.4	+3.9
PET				*e*S	Sn	15 00 22.5	+4.6
RUS	Russkaya	4.84	226	*e*P	Pn	14 59 38.2	+4.0
GRL	Gorelyy	4.94	229	*e*P	Pn	14 59 40.7	+4.9
MTVR	Mutnovka	4.94	228	*e*P	Pn	14 59 40.4	+4.7
ASAK	Asacha	5.13	229	*e*P	Pn	14 59 43.3	+5.0

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*IDC **04** 15:01:00.2±0.9, 28°.93N×139°.41E, h414^{km}±11^{km}, mb2.7/7, mbtmp3.5/9, Error ellipse: s-maj=25.2km s-min=12.5km az=81.0*
*JMA **04** 15:01:00.9±0.3, 29°.1N±1°.0×14°0E±°, h460^{km}±4^{km}, MV3.3/14, NEAR TORISHIMA IS*
ISC 04 15:01:01.1±0.8, **28°.95N**±0°.07×**139°.5E**±0°.1, **h423**^{km}, **n16,** σ**1^{s}43**/20, **mb2.8**/7, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.02	127	*e*P	P	15 02 07.4	+1.1
CBIJ				*e*S	S	15 02 59.3	+0.2
JCJ	Chichijima	3.02	127	P	P	15 02 05.8	-0.5
	7.6nm,0.2s,baz=278,slow=18,SNR=1.9						
JCJ				S	S	15 02 57.3	-1.8
	77nm,0.3s,baz=306,slow=23,SNR=22						
JHH2	Haha-jima-NKT2	3.32	133	*e*P	P	15 02 09.9	+1.2
JHH2				*e*S	S	15 03 04.3	+0.8
BSO1	Boso 1	5.83	12	*e*S	S	15 03 46.2	-0.1
BSO3	Boso 3	5.90	8	*e*S	S	15 03 47.2	-1.0
JIE	Ise	5.92	337	*e*P	P	15 02 36.7	+3.3
JKN2	Miekihoku	5.94	333	*e*P	P	15 02 36.9	+3.3
BSO4	Boso 4	6.07	7	*e*S	S	15 03 50.8	-0.9
MJAR	Matsushiro Arr	7.64	352	P	P	15 02 52.1	-0.4
	1.9nm,0.4s,baz=167,slow=11,SNR=7.4						
MJAR				S	S	15 04 22.1	-1.2
	0.7nm,0.5s,baz=170,slow=18,SNR=1.1						
MKAR	Makanchi Array	47.45	308	P	P	15 08 55.1	-0.6
	0.1nm,0.4s,baz=84,slow=5.9,SNR=1.3						
	0.1nm,0.4s						
WRA	Warramunga Arr	48.86	186	P	P	15 09 05.8	-0.7
	0.6nm,0.3s,baz=1.4,slow=7.7,SNR=16						
	0.6nm,0.3s						
KURBB	Kurchatov Arra	50.03	313	P	P	15 09 13.9	-0.9
	0.2nm,0.4s,baz=98,slow=11,SNR=4.8						
	0.2nm,0.4s						
ASAR	Alice Springs	52.59	186	P	P	15 09 33.7	-0.1
	0.2nm,0.4s,baz=17,slow=12,SNR=8.1						
	0.2nm,0.4s						
ILAR	Eielson Array	57.25	29	P	P	15 10 05.9	-0.4
	0.3nm,0.8s,baz=256,slow=5.7,SNR=2.3						
	0.3nm,0.8s						
YKA	Yellowknife Ar	71.64	28	P	P	15 11 38.2	+0.1
	0.3nm,0.7s,baz=302,slow=6.9,SNR=4.4						
	0.3nm,0.7s						
NVAR	Mina Array Bea	81.23	51	P	P	15 12 32.7	+0.7
	0.4nm,0.5s,baz=313,slow=5.6,SNR=2.6						
	0.4nm,0.5s						

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*JMA **04** 15:02:09.5±0.1, 25°N±1°×122°.4E±0°.5, h33^{km}±4^{km}, MV2.0/10, TAIWAN REGION*
*TAP **04** 15:02:09.2, 24°.73N×122°.30E, h13^{km}±1^{km}, ML2.7, C*
ISC 04 15:02:08.5±1.0, **24°.74N**±0°.03×**122°.36E**±0°.02, **h16**^{km}±8^{km}, **n42,** σ**0^{s}70**/67, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS2	EOS2	0.34	200	P	Pb	15 02 16.3	+0.2
EOS2				*i* S	Sb	15 02 22.1	+0.9
EGS		0.40	285	*e*P	Pb	15 02 16.9	-0.4
EGS				*e*S	Sb	15 02 22.5	-0.6
TWB1	Santiao Chiao	0.43	309	*i* P	Pg	15 02 17.6	+0.3
TWB1				S	Sb	15 02 23.3	-0.7
EOS3	EOS3	0.45	185	P	Pg	15 02 18.3	+0.7
EOS3				*e*S	Sb	15 02 25.4	+1.0
TWC	Suao	0.48	254	P	Pg	15 02 17.8	-0.4
TWC				*e*S	Sb	15 02 24.8	-0.6
ESAO	Su ao	0.50	251	*e*P	Pb	15 02 18.4	-0.4
TIPB	Shuangxi	0.54	296	*e*P	Pb	15 02 20.3	+0.8
SXI1	Grass Mountain	0.56	309	P	Pb	15 02 20.3	+0.3
SXI1				*e*S	Sb	15 02 27.9	0.0
NDS	Dongshan	0.59	260	*e*P	Pg	15 02 19.2	-1.1
NDS				*e*S	Sb	15 02 28.2	-0.5
EWUT	Wuta	0.60	241	*e*P	Pg	15 02 20.0	-0.4
EWUT				*e*S	Sn	15 02 30.1	-1.6
JYNG	Yonagunijimaku	0.61	118	*e*P	Pg	15 02 20.4	-0.1
JYNG				*e*S	Sg	15 02 28.4	-0.2

EOS4	**EOS4**	**0.62**	**183**	*e*P	**Pb**	**15 02 21.4**	**+0.7**
EOS4				*e*S	**Sb**	**15 02 30.1**	**+1.2**
NWF	**Wu-fen Shan**	**0.62**	**302**	*e*P	**Pb**	**15 02 22.1**	**+1.1**
NWF				*e*S	**Sn**	**15 02 31.2**	**-1.1**
WFSB	**Wu-fen Shan**	**0.62**	**302**	P	**Pn**	**15 02 22.2**	**-0.4**
WFSB				*e*S	**Sn**	**15 02 31.1**	**-1.1**
TWE	**Neicheng**	**0.63**	**268**	P	**Pg**	**15 02 20.7**	**-0.2**
TWE				*e*S	**Sb**	**15 02 29.7**	**+0.1**
ENA	**Nanau**	**0.64**	**241**	*e*P	**Pb**	**15 02 21.4**	**+0.1**
ENA				*e*S	**Sb**	**15 02 30.9**	**+0.8**
YOJ	**Yonaguni jima**	**0.66**	**115**	*e*P	**Pg**	**15 02 21.6**	**+0.1**
YOJ				*e*S	**Sg**	**15 02 29.6**	**-0.6**
YOJ	**Yonaguni jima**	**0.66**	**115**	*e*P	**Pg**	**15 02 21.4**	**0.0**
FUSB	**Fushanzhiwuyua**	**0.70**	**272**	*e*P	**Pb**	**15 02 22.3**	**-0.1**
FUSB				*e*S	**Sb**	**15 02 31.8**	**-0.1**
ENTT	**Nioudou**	**0.73**	**262**	*e*P	**Pb**	**15 02 22.7**	**-0.1**
TWA	**Mucha**	**0.74**	**289**	*e*P	**Pb**	**15 02 23.9**	**+0.8**
TWA				*e*S	**Sb**	**15 02 33.9**	**+0.9**
LATG	**Datong**	**0.78**	**255**	P	**Pb**	**15 02 23.7**	**-0.2**
YM01	**YM01**	**0.82**	**300**	*e*P	**Pb**	**15 02 25.2**	**+0.7**
YM01				*e*S	**Sn**	**15 02 36.8**	**-0.4**
YM08	**YM08**	**0.83**	**303**	*e*P	**Pb**	**15 02 24.9**	**+0.3**
YM08				*e*S	**Sb**	**15 02 36.3**	**+0.8**
TWY	**Chenhua**	**0.87**	**308**	*e*P	**Pb**	**15 02 26.0**	**+0.8**
TWY				*e*S	**Sn**	**15 02 38.3**	**-0.1**
NACB	**Ninganchiao**	**0.90**	**231**	*e*P	**Pg**	**15 02 25.4**	**-0.6**
YHNB	**Yeheng**	**0.90**	**266**	P	**Pb**	**15 02 25.9**	**+0.2**
YHNB				*e*S	**Sn**	**15 02 39.4**	**+0.2**
NNSB	**Datong**	**0.94**	**251**	*e*P	**Pg**	**15 02 26.1**	**-0.7**
NNSB				*e*S	**Sn**	**15 02 40.1**	**-0.2**
NNS	**Nan Shan**	**0.94**	**252**	*e*P	**Pb**	**15 02 26.8**	**+0.2**
TWD	**Chiawan**	**0.96**	**227**	*e*P	**Pb**	**15 02 26.9**	**+0.2**
ETLH	**Xiulin Townshi**	**0.96**	**237**	*e*P	**Pg**	**15 02 26.4**	**-0.8**
NFF	**Wufeng Townshi**	**1.13**	**265**	*e*P	**Pn**	**15 02 30.9**	**+1.2**
WHF	**Hehuan Shan**	**1.16**	**240**	*e*P	**Pb**	**15 02 30.4**	**0.0**
WHF				*e*S	**Sn**	**15 02 45.9**	**-0.2**
LIOB	**Emei**	**1.23**	**266**	*e*P	**Pg**	**15 02 33.5**	**+1.3**
NSTT	**Nanjuang**	**1.24**	**265**	*e*P	**Pg**	**15 02 33.6**	**+1.1**
NSTT				*e*S	**Sn**	**15 02 49.5**	**+1.9**
IRIF	**Iriomote-Funau**	**1.31**	**108**	*e*P	**Pn**	**15 02 31.3**	**-0.8**
OWD	**Renai**	**1.33**	**234**	*e*P	**Pg**	**15 02 33.7**	**-0.5**
WUSB	**Renai**	**1.35**	**237**	*e*P	**Pb**	**15 02 33.7**	**+0.2**
WUSB				*e*S	**Sg**	**15 02 52.3**	**-0.1**
WHP	**Taichung City**	**1.37**	**251**	*e*P	**Pg**	**15 02 35.1**	**+0.2**
JKRS	**Kuro-shima**	**1.58**	**108**	*e*P	**Pn**	**15 02 35.5**	**-0.4**
JIJ	**Ishigaki jima**	**1.67**	**103**	*e*P	**Pn**	**15 02 36.5**	**-0.5**
JISG	**Ishigakijimahi**	**1.78**	**94**	*e*S	**Sn**	**15 03 00.6**	**-0.3**

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*JMA **04** 15:02:46.4±0.2, 22°.8N±0°.4×121°.6E±0°.5, h24^{km}, TAIWAN REGION*

*TAP **04** 15:02:47.7, 22°.83N×121°.58E, h13^{km}, ML2.5, C*

ISC 04 15:02:47.0±1.1, **22°.81N**±0°.03×**121°.62E**±0°.04, **h18**^{km}±3^{km}, **n32,** σ**0^{s}.58**/46, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LDUT	**Ludao**	**0.19**	**226**	P	**Pg**	**15 02 52.4**	**+0.5**
LDUT				S	**Sg**	**15 02 55.9**	**+0.7**
EDH	**Donghe**	**0.33**	**299**	P	**Pg**	**15 02 54.1**	**-0.1**
EDH				*i* S	**Sg**	**15 02 58.7**	**-0.3**
CHKT	**Chengkung**	**0.37**	**321**	P	**Pg**	**15 02 54.8**	**-0.1**
CHKT				S	**Sg**	**15 02 59.4**	**-0.7**
CHKH	**Chenggong**	**0.43**	**332**	P	**Pg**	**15 02 55.7**	**-0.2**
CHKH				S	**Sg**	**15 03 01.4**	**-0.5**
TTN	**Taitung**	**0.44**	**263**	P	**Pb**	**15 02 56.1**	**-0.2**
TTN				S	**Sb**	**15 03 02.5**	**0.0**
LONT	**Longtian**	**0.46**	**282**	*e*P	**Pg**	**15 02 56.0**	**-0.5**
LONT				*e*S	**Sb**	**15 03 03.5**	**+0.3**
ECS	**Chishang**	**0.47**	**308**	P	**Pb**	**15 02 56.6**	**-0.1**
ECS				*i* S	**Sb**	**15 03 03.8**	**+0.5**
FULB	**Fuli**	**0.49**	**322**	*e*P	**Pg**	**15 02 56.5**	**-0.5**
FULB				S	**Sg**	**15 03 02.8**	**-0.9**
TWGBT	**Beinan**	**0.50**	**271**	P	**Pg**	**15 02 56.4**	**-0.7**
TWGBT				*e*S	**Sb**	**15 03 04.0**	**-0.2**
TWG	**Pinlang**	**0.51**	**271**	P	**Pg**	**15 02 56.5**	**-0.8**
TWG				*e*S	**Sb**	**15 03 04.7**	**+0.4**
EHD	**Haiduan**	**0.51**	**312**	P	**Pg**	**15 02 57.0**	**-0.3**
EHD				*e*S	**Sb**	**15 03 04.5**	**0.0**
ECBN	**Changbin**	**0.53**	**343**	*e*S	**Sg**	**15 03 04.3**	**-0.5**
EYUL	**Yuli**	**0.60**	**333**	*e*P	**Pb**	**15 02 58.8**	**-0.1**
TWF1	**Yuli**	**0.62**	**331**	*e*P	**Pb**	**15 02 58.7**	**-0.5**
ECL	**Taimali**	**0.65**	**251**	*e*P	**Pb**	**15 02 59.3**	**-0.4**
ECL				*e*S	**Sb**	**15 03 07.8**	**-0.6**
YULB	**Yu-li**	**0.65**	**333**	*e*P	**Pb**	**15 02 59.4**	**-0.4**
YULB				*e*S	**Sb**	**15 03 08.5**	**0.0**
ELDTW	**Lidau**	**0.67**	**304**	*e*P	**Pb**	**15 02 59.5**	**-0.7**
EHY	**Hungye**	**0.75**	**339**	*e*P	**Pb**	**15 03 01.3**	**-0.2**
LYUB	**Lan-yu**	**0.80**	**182**	*e*P	**Pb**	**15 03 00.9**	**-1.5**
MASBT	**Mashibuluo**	**0.93**	**258**	*e*P	**Pb**	**15 03 04.0**	**-0.6**
SCZT	**Fangliau**	**1.02**	**245**	*e*P	**Pg**	**15 03 07.4**	**+0.6**
WTP	**Ta-pu**	**1.02**	**295**	*e*P	**Pg**	**15 03 07.3**	**+0.3**
TPUB	**Ta-pu**	**1.03**	**298**	*e*P	**Pn**	**15 03 06.7**	**0.0**
CHN1	**Nanshi**	**1.07**	**291**	*e*P	**Pg**	**15 03 08.6**	**+0.7**
CHN4	**Tsaushan**	**1.09**	**300**	*e*P	**Pn**	**15 03 07.5**	**+0.2**
SNST	**Tainan City**	**1.11**	**292**	*e*S	**Sg**	**15 03 24.1**	**+0.9**
TWK	**Hsinying**	**1.14**	**294**	*e*S	**Sg**	**15 03 25.3**	**+1.3**
JKRS	**Kuro-shima**	**2.61**	**57**	*e*S	**Sn**	**15 03 59.9**	**+0.3**
JIJ	**Ishigaki jima**	**2.78**	**56**	*e*S	**Sn**	**15 04 03.3**	**-0.5**
JISG	**Ishigakijimahi**	**3.04**	**54**	*e*P	**Pn**	**15 03 34.7**	**+0.6**
JISG				*e*S	**Sn**	**15 04 10.0**	**0.0**
JTJ	**Tarama**	**3.36**	**57**	*e*S	**Sn**	**15 04 18.4**	**+0.4**
JIRB	**Irabujima**	**3.83**	**58**	*e*P	**Pn**	**15 03 46.1**	**+1.1**

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*SKHL **04** 15:08:51.9±0.1, 44°.50N×148°.30E, h33^{km}±1^{km}, mb4.6/4*

*JMA **04** 15:08:52.4±0.7, 44°N±2°×14°8E±°, h0^{km}, MV3.7/33, SE OFF ETOROFU*

ISC 04 15:08:48.1±3.0, **44°.34N**±0°.08×**148°.4E**±0°.2, **h10**^{km}±12^{km}, **n22,** σ**1^{s}.96**/30, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.96**	**338**	*i* P	**Pg**	**15 09 06.3**	**-0.3**
KUR				AMB	AMB	15 09 06.7	
	330nm,0.4s						
KUR				*e*S	**Sg**	**15 09 17.2**	**-1.9**
KUR				A	A	15 09 18.8	
	370nm,0.2s						
KUR				A	A	15 09 18.8	
	620nm,0.2s						
SHO	**Shikotan**	**1.20**	**248**	*i* P	**Pg**	**15 09 12.0**	**+0.8**
SHO				AMB	AMB	15 09 12.3	
	40nm,0.2s						
SHO				*i* S	**Sg**	**15 09 25.7**	**-1.1**
SHO				A	A	15 09 26.9	
	160nm,0.1s						
SHO				A	A	15 09 26.9	
	470nm,0.1s						
YUK	**Yuzh-Kuril'sk**	**1.83**	**261**	*i* P	**Pn**	**15 09 20.4**	**+0.9**
YUK				AMB	AMB	15 09 23.3	
	160nm,0.2s						
YUK				*i* S	**Sn**	**15 09 41.8**	**-0.9**
YUK				A	A	15 09 46.4	
	290nm,0.2s						
YUK				A	A	15 09 46.4	
	130nm,0.2s						
NEM2	**Nemuro 2**	**2.13**	**244**	*e*P	**Pn**	**15 09 24.3**	**+0.6**
NEM2				*e*S	**Sn**	**15 09 47.8**	**-2.4**
GLVR	**Golovnino**	**2.14**	**255**	*e*P	**Pn**	**15 09 25.2**	**+1.4**
GLVR				AMB	AMB	15 09 26.2	
	80nm,0.1s						
GLVR				*e*S	**Sn**	**15 09 50.1**	**-0.3**
GLVR				A	A	15 09 54.9	
	360nm,0.3s						
GLVR				A	A	15 09 54.9	
	160nm,0.3s						
NMR	**Nemuro--Hokkai**	**2.14**	**244**	*i* P	**Pn**	**15 09 24.3**	**+0.5**
NMR				*i* S	**Sn**	**15 09 48.5**	**-1.9**
JRA	**Rausu**	**2.37**	**261**	*e*P	**Pn**	**15 09 29.2**	**+2.2**
JNSB	**Nemuroshibetsu**	**2.49**	**258**	*e*P	**Pn**	**15 09 30.6**	**+2.0**
JKHN	**Kushirohamanak**	**2.64**	**243**	*i* P	**Pn**	**15 09 31.8**	**+1.1**
JNK	**Nakash**	**2.74**	**255**	*e*P	**Pn**	**15 09 33.7**	**+1.7**
AKK	**Akkeshi**	**2.88**	**244**	*e*P	**Pn**	**15 09 35.0**	**+1.0**
JAK	**Akkeshi**	**2.98**	**245**	*e*P	**Pn**	**15 09 36.4**	**+1.0**
JAK				*e*S	**Sn**	**15 10 09.5**	**-1.7**
JTKR	**Abashiri--Toko**	**3.23**	**265**	*e*P	**Pn**	**15 09 41.5**	**+2.7**
JAR	**Ashorobuto**	**3.49**	**254**	*e*P	**Pn**	**15 09 44.7**	**+2.4**
JOB	**Onbets**	**3.59**	**248**	*e*P	**Pn**	**15 09 46.0**	**+2.2**
JMP	**Maruseppu**	**3.62**	**266**	*e*P	**Pn**	**15 09 46.7**	**+2.6**
JCH	**Churui**	**4.03**	**246**	*e*P	**Pn**	**15 09 51.4**	**+1.6**
JKK2	**Kamakawa 2**	**4.08**	**265**	*e*P	**Pn**	**15 09 54.5**	**+4.1**
JSE	**Soyaes**	**4.17**	**281**	*e*P	**Pn**	**15 09 53.2**	**+1.5**
JNBK	**Urakawa-nobuka**	**4.58**	**245**	*e*P	**Pn**	**15 09 59.1**	**+1.7**
JRBN	**Rebuntou**	**5.30**	**284**	*e*P	**Pn**	**15 10 09.4**	**+2.2**
JOT	**Ohata**	**6.14**	**244**	*e*P	**Pn**	**15 10 20.2**	**+1.4**
JOT				*e*S	**Sn**	**15 11 26.2**	**-2.7**

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*NEIC **04** 15:33:38.6±2.0, 7°.8S±0°.1×122°.5E±0°.1, h255^{km}±8^{km}, mb4.4/11, Error ellipse: s-maj=15.7km s-min=14.5km az=186.0*

*DJA **04** 15:33:38.9±0.2, 8°S±2°×12°2E±°, h247^{km}, M4.0/16, mB4.3/2, mb4.0/4, MLv4.1/16, Mw(mB)3.4/2*

*IDC **04** 15:33:39.5±1.6, 7°.91S×122°.48E, h261^{km}±17^{km}, mb3.5/9, mbtmp4.1/14, Error ellipse: s-maj=23.9km s-min=8.9km az=67.0*

ISC 04 15:33:38.2±0.6, **7°.90S**±0°.05×**122°.54E**±0°.05, **h247**^{km}±6^{km}, **n82,** σ**1^{s}.18**/92, **mb3.8**/12, **Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	**Maumere**	**0.80**	**202**		**Pn**	**15 34 12.8**	**+0.9**
MMRI	**Maumere**	**0.80**	**202**	P	**Pn**	**15 34 13.0**	**+1.1**
MMRI	**Maumere**	**0.80**	**202**	P	**Pn**	**15 34 12.9**	**+1.1**
MMRI				S	**S**	**15 34 39.3**	**+0.9**
EDFI	**Ende, Flores**	**1.20**	**225**	P	**Pn**	**15 34 15.3**	**+1.1**
EDFI				S	**S**	**15 34 43.0**	**+0.5**
BBSI	**Bau Bau**	**2.39**	**1**	P	**Pn**	**15 34 25.5**	**+1.3**
SOEI	**Soe**	**2.51**	**137**		**Pn**	**15 34 26.5**	**+1.0**
SOEI	**Soe**	**2.51**	**137**	P	**Pn**	**15 34 26.6**	**+1.1**
SOEI	**Soe**	**2.51**	**137**	S	**S**	**15 35 04.1**	**+1.3**
SOEI	**Soe**	**2.51**	**137**	P	**Pn**	**15 34 26.5**	**+1.0**
SOEI				S	**S**	**15 35 03.5**	**+0.7**
BATI	**Baumata**	**2.55**	**154**	P	**Pn**	**15 34 26.7**	**+0.9**
BATI				S	**S**	**15 35 03.7**	**+0.3**
BSSI	**Bau Bau, Buton**	**2.68**	**310**	P	**Pn**	**15 34 27.3**	**+0.2**
WSI	**Waingapu**	**2.83**	**231**	P	**Pn**	**15 34 27.8**	**-0.9**
WSI				S	**S**	**15 35 06.6**	**-2.0**
BASI	**Baing, Sumba**	**3.02**	**220**	P	**Pn**	**15 34 31.1**	**+0.4**
BASI				S	**S**	**15 35 10.9**	**-1.3**
WBSI	**Waikabubak, Su**	**3.57**	**241**	P	**Pn**	**15 34 35.8**	**-1.1**
WBSI				S	**S**	**15 35 21.3**	**-2.1**
KAPI	**Kappang**	**3.99**	**316**	P	**Pn**	**15 34 43.5**	**+1.7**
	4.3nm,0.5s,baz=35,slow=1.4,SNR=5.1						
BNSI	**Bone**	**4.23**	**325**	P	**Pn**	**15 34 47.1**	**+2.4**
SPSI	**Sidrap Palu**	**4.78**	**325**	P	**Pn**	**15 34 52.3**	**+1.0**
PLAI	**Plampang**	**4.81**	**259**	P	**Pn**	**15 34 52.0**	**+0.4**
PLAI	**Plampang**	**4.81**	**259**	P	**Pn**	**15 34 51.8**	**+0.2**
TWSI	**Taliwang, Sumb**	**5.67**	**261**	P	**Pn**	**15 35 02.2**	**0.0**
TWSI				S	**S**	**15 36 06.9**	**-2.2**
NLAI	**Namlea**	**6.48**	**45**	P	**Pn**	**15 35 15.4**	**+3.1**
	0.2nm57nm,0.9s						
JAGI	**Jajag, Banyuwa**	**8.33**	**265**	Pn	Pn	15 35 29.7	-6.0
JAGI	**Jajag, Banyuwa**	**8.33**	**265**	P	**Pn**	**15 35 35.9**	**+0.2**
JAGI	**Jajag, Banyuwa**	**8.33**	**265**	P	**Pn**	**15 35 34.2**	**-1.5**
DRS	**Darwin Rock St**	**9.38**	**119**	P	**Pn**	**15 35 48.3**	**-0.7**
MTN	**Manton Dam**	**9.77**	**121**		**Pn**	**15 35 53.4**	**-0.6**
MTN	**Manton Dam**	**9.77**	**121**	P	**Pn**	**15 35 53.5**	**-0.6**
KNRA	**Kununurra**	**9.84**	**142**	Pn	**Pn**	**15 35 53.9**	**-1.0**
FITZ	**Fitzroy Crossi**	**10.58**	**164**	Pn	**Pn**	**15 36 03.6**	**-0.6**
FITZ	**Fitzroy Crossi**	**10.58**	**164**	P	**Pn**	**15 36 05.0**	**+0.9**
	1.5nm,0.3s,baz=356,slow=8.7,SNR=18						
FITZ				S	**S**	**15 38 00.4**	**-2.5**
	9.8nm,0.7s,baz=324,slow=17,SNR=7.5						
FITZ	**Fitzroy Crossi**	**10.58**	**164**	P	**Pn**	**15 36 05.9**	**+1.7**
FAKI	**Fak Fak**	**10.85**	**63**		**Pn**	**15 36 06.3**	**-1.3**
FAKI	**Fak Fak**	**10.85**	**63**	P	**Pn**	**15 36 06.0**	**-1.7**
FAKI	**Fak Fak**	**10.85**	**63**	S	**S**	**15 38 08.0**	**-1.3**
KDU	**Kakadu**	**10.87**	**117**	P	**Pn**	**15 36 07.2**	**-0.6**
UGM	**Wanagama**	**11.91**	**269**	Pn	**Pn**	**15 36 18.8**	**-2.1**
UGM	**Wanagama**	**11.91**	**269**	P	**Pn**	**15 36 21.5**	**+0.6**
UGM	**Wanagama**	**11.91**	**269**	S	**S**	**15 38 35.0**	**+1.3**
MBWA	**Marble Bar**	**13.46**	**191**	P	**P**	**15 36 42.9**	**+1.6**
PSA00	**Pilbara Seismi**	**13.85**	**191**	P	**Pn**	**15 36 44.4**	**-0.2**
PSA00	**Pilbara Seismi**	**13.85**	**191**	P	**P**	**15 36 46.9**	**+1.4**
BBJI	**Bungbulang**	**14.77**	**271**	P	**Pn**	**15 36 56.2**	**+0.2**
WB0	**Warramunga Arr**	**16.47**	**137**	P	**P**	**15 37 14.6**	**+0.1**
WB0				IAmb	IAmb	15 37 38.2	
	comp=Z,16nm,1.2s						
WRA	**Warramunga Arr**	**16.55**	**138**	P	**P**	**15 37 15.0**	**-0.4**
WRA	**Warramunga Arr**	**16.55**	**138**	P	**P**	**15 37 15.7**	**+0.3**
	comp=Z,3.8nm,0.7s,baz=318,slow=12,SNR=24						
WRA				S	**S**	**15 40 18.1**	**+2.2**
	comp=Z,1.8nm,0.6s,baz=321,slow=23,SNR=7.4						
WR8	**Warramunga Arr**	**16.67**	**137**	P	**P**	**15 37 16.9**	**+0.2**
WR8				IAmb	IAmb	15 37 18.6	
	comp=Z,7.2nm,0.7s						
GIRL	**Giralia**	**16.70**	**208**	P	**Pn**	**15 37 18.5**	**-0.3**
JAY	**Jayapura**	**18.85**	**74**	P	**Pn**	**15 37 42.1**	**-2.1**
	comp=Z,8.5nm,0.8s,baz=143,slow=5.1,SNR=4.1						
MEEK	**Meekatharra**	**19.01**	**191**	P	**P**	**15 37 43.1**	**+1.1**
AS31	**Alice Springs**	**19.09**	**146**		**P**	**15 37 44.0**	**+1.1**
AS31				IAmb	IAmb	15 37 49.0	
	comp=Z,8.3nm,0.3s						
ASAR	**Alice Springs**	**19.09**	**146**	P	**P**	**15 37 44.1**	**+1.2**
	comp=Z,7.1nm,0.3s,baz=328,slow=12,SNR=266						
ASAR				S	**S**	**15 41 06.0**	**-0.3**
	comp=Z,1.5nm,0.8s,baz=328,slow=22,SNR=7.3						
AS01	**Alice Springs**	**19.12**	**146**	P	**P**	**15 37 44.7**	**+1.5**
QIS	**Mount Isa**	**20.75**	**129**	P	**P**	**15 38 00.8**	**+0.1**
COEN	**Coen**	**21.12**	**108**	P	**P**	**15 38 03.4**	**-1.1**
COEN				IAmb	IAmb	15 38 14.3	
	comp=Z,30nm,1.4s						
COEN	**Coen**	**21.12**	**108**	P	**P**	**15 38 04.0**	**-0.5**
MORW	**Morawa**	**21.93**	**195**	P	**P**	**15 38 12.5**	**+0.5**
MORW				IAmb	IAmb	15 38 13.3	
	comp=Z,8.5nm,0.6s						
MORW	**Morawa**	**21.93**	**195**	P	**P**	**15 38 12.8**	**+0.9**
BLDU	**Ballidu**	**23.25**	**193**	P	**P**	**15 38 25.7**	**+1.8**
FORT	**Forrest**	**23.34**	**168**	P	**P**	**15 38 25.2**	**+0.4**
FORT	**Forrest**	**23.34**	**168**	P	**P**	**15 38 25.8**	**+1.1**
KMBL	**Kambalda**	**23.36**	**181**	P	**P**	**15 38 25.9**	**+1.0**
KLBR	**Kellerberrin**	**24.00**	**190**	P	**P**	**15 38 31.4**	**+0.7**
NWAO	**Narrogin (SRO)**	**25.39**	**190**	P	**P**	**15 38 44.7**	**+1.5**
BBOO	**Buckleboo**	**27.78**	**155**	P	**P**	**15 39 04.8**	**+0.3**
BBOO				IAmb	IAmb	15 39 17.8	
	comp=Z,18nm,1.2s						
BBOO	**Buckleboo**	**27.78**	**155**	P	**P**	**15 39 05.0**	**+0.4**
HTT	**Hallett**	**29.58**	**151**	P	**P**	**15 39 21.1**	**+0.5**
STKA	**Stephens Creek**	**29.73**	**146**	P	**P**	**15 39 22.4**	**+0.6**
STKA	**Stephens Creek**	**29.73**	**146**	P	**P**	**15 39 22.6**	**+0.8**
	comp=Z,2.9nm,0.5s,baz=323,slow=9.2,SNR=7.5						
	comp=Z,2.9nm,0.5s						
STKA	**Stephens Creek**	**29.73**	**146**	P	**P**	**15 39 22.6**	**+0.8**
CMSA	**Cobar Meteorol**	**31.92**	**141**	P	**P**	**15 39 42.0**	**+1.0**
ARPS	**Mount Arapiles**	**33.68**	**151**	P	**P**	**15 39 56.4**	**+0.2**
MJAR	**Matsushiro Arr**	**46.59**	**17**	P	**P**	**15 41 40.1**	**-1.7**
	comp=Z,1.6nm,0.7s,baz=196,slow=8.9,SNR=4.2						
	comp=Z,1.6nm,0.7s						
ASAJ	**Asahikawa**	**54.86**	**18**	P	**P**	**15 42 44.7**	**+1.6**
	comp=Z,1.0nm,0.4s,baz=212,slow=9.5,SNR=2.0						
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	**65.15**	**331**	P	**P**	**15 43 51.7**	**-1.2**
MKAR	**Makanchi Array**	**65.15**	**331**	P	**P**	**15 43 52.5**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=142,slow=8.5,SNR=9.7						
	comp=Z,0.4nm,0.4s						
PETK	**Petropavlovsk-**	**67.70**	**22**	P	**P**	**15 44 09.3**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=183,slow=3.7,SNR=3.3						
	comp=Z,1.6nm,0.7s						
ZALV	**Zalesovo Beam**	**69.32**	**337**	P	**P**	**15 44 17.4**	**-1.5**
	comp=Z,0.8nm,0.6s,baz=149,slow=6.6,SNR=2.8						
	comp=Z,0.8nm,0.6s						
VNDA	**Vanda**	**72.55**	**172**	P	**P**	**15 44 38.2**	**+0.3**
VNDA	**Vanda**	**72.55**	**172**	P	**P**	**15 44 38.4**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=323,slow=11,SNR=2.6						
	comp=Z,0.6nm,0.6s						
SEY	**Seymchan**	**74.23**	**14**	P	**P**	**15 44 47.9**	**0.0**
	comp=Z,1.7nm,0.8s,baz=207,slow=4.6,SNR=8.9						
	comp=Z,1.7nm,0.8s						
QSPA	**South Pole Qui**	**82.09**	**180**	P	**P**	**15 45 31.3**	**+0.3**
QSPA				IAmb	IAmb	15 45 32.2	
	comp=Z,2.7nm,0.9s						
QSPA	**South Pole Qui**	**82.09**	**180**	P	**P**	**15 45 31.4**	**+0.3**
	comp=Z,2.1nm,0.9s,baz=267,slow=2.1,SNR=11						
	comp=Z,2.1nm,0.9s						

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*IDC **04** 15:35:42.0±6.3, 42°.80N×144°.54E, h128^{km}±33^{km}, mb3.3/5, mbtmp3.7/5, MS2.5/1, Error ellipse: s-maj=80.7km s-min=29.9km az=175.0*

*JMA **04** 15:35:42.1±0.2, 42°.1N±0°.8×142°.5E±0°.8, h67^{km}±2^{km}, MV3.1/39, S OFF URAKAWA*

ISC 04 15:35:42.6±1.1, **42°.06N**±0°.05×**142°.45E**±0°.04, **h61**^{km}±8^{km}, **n31,** σ**0^{s}.60**/32, **mb3.7**/5, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.32**	**45**	*e*P	**Pn**	**15 35 52.6**	**-0.3**
JNBK				*e*S	**Sn**	**15 36 00.9**	**+0.5**
JSHD	**Hidakashinhida**	**0.35**	**2**	*e*P	**Pn**	**15 35 53.4**	**+0.2**
JEM	**Erimo**	**0.53**	**94**	*e*P	**Pn**	**15 35 55.0**	**+0.2**
JTHR	**Tokachihiroo**	**0.67**	**69**	*e*P	**Pn**	**15 35 56.4**	**-0.1**
JTHR				*e*S	**Sn**	**15 36 06.9**	**+0.2**
JIAM	**Iburiatsuma**	**0.69**	**325**	*e*P	**Pn**	**15 35 57.4**	**+0.6**
JBT2	**Biratori 2**	**0.72**	**355**	*e*P	**Pn**	**15 35 56.8**	**-0.4**
JBT2				*e*S	**Sn**	**15 36 07.5**	**-0.4**
JCH	**Churui**	**0.88**	**50**	*e*P	**Pn**	**15 35 58.6**	**-0.4**
JKB	**Kayabe**	**1.07**	**261**	*e*P	**Pn**	**15 36 01.5**	**0.0**
JKB				*e*S	**Sn**	**15 36 16.0**	**+0.3**
JEW	**Eniwo**	**1.08**	**317**	*e*P	**Pn**	**15 36 01.8**	**+0.1**
JFR	**Furan**	**1.11**	**5**	*e*P	**Pn**	**15 36 01.5**	**-0.6**
JNB	**Noboribetsu**	**1.13**	**292**	*e*P	**Pn**	**15 36 01.5**	**-0.8**
JNB				*e*S	**Sn**	**15 36 16.6**	**-0.4**
JOT	**Ohata**	**1.25**	**238**	*e*P	**Pn**	**15 36 03.8**	**-0.1**
JOT				*e*S	**Sn**	**15 36 20.1**	**+0.2**
JOB	**Onbets**	**1.33**	**50**	*e*P	**Pn**	**15 36 05.5**	**+0.6**
JISS	**Ishikarishitsu**	**1.44**	**328**	*e*P	**Pn**	**15 36 06.5**	**0.0**
JISS				*e*S	**Sn**	**15 36 24.7**	**+0.4**
JAB	**Ashibetsu**	**1.46**	**353**	*e*P	**Pn**	**15 36 06.8**	**+0.1**
JYM2	**Yakumo 2**	**1.55**	**273**	*e*P	**Pn**	**15 36 07.9**	**0.0**
JAR	**Ashorobuto**	**1.58**	**38**	*e*P	**Pn**	**15 36 08.0**	**-0.2**
JAR				*e*S	**Sn**	**15 36 27.5**	**-0.2**
JSR	**Shiriuchi**	**1.61**	**252**	*e*P	**Pn**	**15 36 09.2**	**+0.5**
ASAJ	**Asahikawa**	**2.06**	**3**	P	**Pn**	**15 36 15.7**	**+0.8**
	34nm,0.4s,baz=209,slow=12,SNR=77						
ASAJ				S	**Sn**	**15 36 40.6**	**+1.1**
	21nm,0.5s,baz=170,slow=33,SNR=13						
KLR	**Kul'dur**	**10.37**	**317**	LR	LR	15 42 15.2	
	comp=Z,25nm,18.7s,baz=214,slow=36						
SONM	**Songino Array**	**26.00**	**295**	P	**P**	**15 41 11.1**	**+1.4**
	0.4nm,0.5s,baz=90,slow=9.4,SNR=2.1						
	0.4nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**30.39**	**130**	T	T	16 13 24.2	
	baz=324,slow=75,SNR=19						
H11N1	**WAKE ISLAND Hy**	**30.40**	**130**	T	T	16 13 25.0	
	baz=324,slow=75,SNR=16						
H11N3	**WAKE ISLAND Hy**	**30.41**	**130**	T	T	16 13 25.5	
	baz=324,slow=75,SNR=18						
H11S1	**WAKE ISLAND Hy**	**31.25**	**131**	T	T	16 14 36.1	
	baz=325,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy**	**31.25**	**131**	T	T	16 14 30.3	
	baz=325,slow=76,SNR=11						
H11S2	**WAKE ISLAND Hy**	**31.27**	**131**	T	T	16 14 30.7	
	baz=325,slow=76,SNR=10						
ZALV	**Zalesovo Beam**	**39.29**	**308**	P	**P**	**15 43 04.2**	**-0.9**
	0.6nm,0.5s,baz=72,slow=9.3,SNR=2.7						
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**43.70**	**304**	P	**P**	**15 43 39.9**	**-1.3**
	0.6nm,0.3s,baz=76,slow=8.8,SNR=5.3						
	0.6nm,0.3s						
ILAR	**Eielson Array**	**44.87**	**35**	P	P	15 43 30.5	-20
	0.2nm,0.5s,baz=280,slow=7.2,SNR=4.1						
	0.2nm,0.5s						
BVAR	**Borovoye Array**	**47.90**	**309**	P	**P**	**15 44 13.8**	**-0.5**
	1.0nm,0.4s,baz=78,slow=8.7,SNR=9.9						
	1.0nm,0.4s						

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*NEIC **04** 15:43:24.0±2.0, 10°.45S±0°.07×123°.62E±0°.05, h10^{km}±1^{km}, mb4.6/6, Error ellipse: s-maj=12.0km s-min=7.8km az=175.0*

*DJA **04** 15:43:27.4±0.4, 11°S±3°×12°4E±°, h10^{km}, M4.2/13, mB5.0/1, mb4.5/6, MLv4.1/13, Mw(mB)4.4/1*

*IDC **04** 15:43:30.3±2.9, 10°.69S×123°.93E, h71^{km}±32^{km}, mb3.5/6, mbtmp3.9/11, ML3.6/4, MS3.0/5, Error ellipse: s-maj=51.6km s-min=17.3km az=55.0*

ISC 04 15:43:26.7±0.5, **10°.60S**±0°.04×**123°.62E**±0°.04, **h29**^{km}, **n52,** σ**2^{s}.08**/58, **mb4.2**/10, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**0.39**	**6**	P	**Pb**	**15 43 33.3**	**-2.2**
SOEI	**Soe**	**1.05**	**37**		**Pn**	**15 43 45.6**	**-0.1**
SOEI	**Soe**	**1.05**	**37**	P	**Pb**	**15 43 47.4**	**+1.0**
SOEI	**Soe**	**1.05**	**37**	P	**Pb**	**15 43 47.5**	**+1.0**
SOEI				S	**Sb**	**15 44 01.3**	**+1.4**
MMRI	**Maumere**	**2.38**	**325**	Pg	**Pn**	**15 44 05.8**	**+2.0**
MMRI	**Maumere**	**2.38**	**325**	P	**Pn**	**15 44 06.0**	**+2.2**
MMRI	**Maumere**	**2.38**	**325**	P	**Pn**	**15 44 06.2**	**+2.4**
MMRI				S	**Sb**	**15 44 36.0**	**-1.9**
EDFI	**Ende, Flores**	**2.65**	**314**	P	**Pn**	**15 44 09.2**	**+1.6**
EDFI				S	**Sn**	**15 44 40.1**	**+1.3**
BASI	**Baing, Sumba**	**3.02**	**277**	P	**Pn**	**15 44 15.6**	**+3.0**
BASI				S	**Sb**	**15 44 52.2**	**-4.0**
WSI	**Waingapu**	**3.40**	**285**	P	**Pn**	**15 44 20.1**	**+2.2**
WSI				S	**Sn**	**15 44 59.3**	**+2.1**
WBSI	**Waikabubak, Su**	**4.27**	**282**	P	**Pn**	**15 44 31.9**	**+2.0**
BBSI	**Bau Bau**	**5.18**	**348**	P	**Pn**	**15 44 44.6**	**+2.2**
	0.2nm40nm,0.9s						
PLAI	**Plampang**	**6.02**	**286**	P	**Pn**	**15 44 56.3**	**+2.3**
PLAI	**Plampang**	**6.02**	**286**	P	**Pn**	**15 44 56.3**	**+2.3**
	0.3nm1µm68nm,0.7s						
PLAI				S	**Sn**	**15 46 04.0**	**+2.0**
	0.3nm1µm68nm,0.7s						
KAPI	**Kappang**	**6.74**	**325**	Pn	**Pn**	**15 45 00.5**	**-3.3**
KAPI	**Kappang**	**6.74**	**325**	P	Pn	15 45 09.4	+5.5
	0.4nm,0.3s,baz=175,slow=12,SNR=4.1						
KAPI				LR	LR	15 48 12.7	
	comp=Z,183nm,18.3s,baz=152,slow=40						
	2.4nm,0.4s						
TWSI	**Taliwang, Sumb**	**6.90**	**285**	P	**Pn**	**15 45 08.4**	**+2.4**
TWSI				S	**Sn**	**15 46 24.9**	**+1.4**
BNSI	**Bone**	**7.07**	**330**	P	**Pn**	**15 45 09.0**	**+0.6**
	0.1nm17nm,1.3s						
KNRA	**Kununurra**	**7.11**	**136**		**Pn**	**15 45 10.3**	**+1.4**
MTN	**Manton Dam**	**7.69**	**108**	Pn	**Pn**	**15 45 16.8**	**-0.1**
FITZ	**Fitzroy Crossi**	**7.71**	**166**	Pn	**Pn**	**15 45 18.9**	**+1.8**
FITZ	**Fitzroy Crossi**	**7.71**	**166**	P	**Pn**	**15 45 19.3**	**+2.2**
	0.7nm,0.3s,baz=347,slow=9.4,SNR=31						
FITZ				S	**Sn**	**15 46 41.5**	**-2.0**
	38nm,0.5s,baz=241,slow=19,SNR=15						
FITZ				LR	LR	15 48 33.6	
	comp=Z,67nm,21.1s,baz=337,slow=40						
	2.4nm,0.3s						
KDU	**Kakadu**	**8.92**	**104**	P	**Pn**	**15 45 34.8**	**+1.1**
	34nm,2.0s						
JAGI	**Jajag, Banyuwa**	**9.57**	**282**	Pn	**Pn**	**15 45 42.2**	**-0.6**
MBWA	**Marble Bar**	**11.15**	**199**	Pn	**Pn**	**15 46 04.7**	**+0.4**
PSA00	**Pilbara Seismi**	**11.50**	**198**	Pn	**Pn**	**15 46 11.0**	**+1.9**
TOLI2	**Tolitoli**	**11.97**	**346**	Pn	**Pn**	**15 46 12.0**	**-3.6**
WB0	**Warramunga Arr**	**13.82**	**133**	Pn	**Pn**	**15 46 40.1**	**-0.7**
WRA	**Warramunga Arr**	**13.89**	**133**	Pn	**Pn**	**15 46 41.2**	**-0.6**
WRA	**Warramunga Arr**	**13.89**	**133**	P	**Pn**	**15 46 40.7**	**-1.1**
	0.5nm,0.3s,baz=308,slow=15,SNR=14						
WRA				S	Sn	15 49 08.0	-7.2
	11nm,0.9s,baz=305,slow=25,SNR=8.9						
	1.9nm,0.6s						
WR8	**Warramunga Arr**	**14.02**	**133**	Pn	**Pn**	**15 46 42.4**	**-1.1**
GIRL	**Giralia**	**14.97**	**216**	P	**Pn**	**15 47 00.0**	**+3.6**
LEM	**Lembang**	**16.25**	**282**	P	**P**	**15 47 19.0**	**+2.9**
	14nm,0.6s,baz=46,slow=14,SNR=4.2						
AS31	**Alice Springs**	**16.28**	**144**		**Pn**	**15 47 13.9**	**+0.4**
ASAR	**Alice Springs**	**16.28**	**144**	Pn	**Pn**	**15 47 14.8**	**+1.4**
ASAR	**Alice Springs**	**16.28**	**144**	P	**Pn**	**15 47 12.8**	**-0.6**
	0.4nm,0.3s,baz=314,slow=12,SNR=29						
ASAR				S	**Sn**	**15 50 06.3**	**-7.0**
	3.9nm,0.8s,baz=317,slow=24,SNR=8.5						
ASAR				LR	LR	15 53 00.9	
	comp=Z,78nm,19.0s,baz=273,slow=36						
	1.6nm,0.4s						
AS01	**Alice Springs**	**16.31**	**144**	P	**Pn**	**15 47 16.0**	**+2.2**
MEEK	**Meekatharra**	**16.64**	**196**	P	**P**	**15 47 22.1**	**+1.9**
BBOO	**Buckleboo**	**24.90**	**154**	P	**P**	**15 48 48.7**	**+1.4**
BBOO				IAmb	IAmb	15 49 03.4	
	comp=Z,21nm,1.2s						
STKA	**Stephens Creek**	**26.92**	**145**	P	**P**	**15 49 04.4**	**-1.2**
STKA	**Stephens Creek**	**26.92**	**145**	LR	LR	16 01 45.5	
	comp=Z,46nm,18.3s,baz=223,slow=41						
GSI	**Gunungsitoli**	**28.48**	**293**	P	**P**	**15 49 17.8**	**-1.9**
GSI				IAmb	IAmb	15 49 58.1	
	comp=Z,12nm,1.3s						
CMAR	**Chiang Mai Arr**	**37.77**	**320**	P	**P**	**15 50 41.1**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=147,slow=6.2,SNR=5.6						
CMAR				LR	LR	16 10 04.7	
	comp=Z,15nm,19.2s,baz=170,slow=42						
	comp=Z,0.3nm,0.3s						
MJB9	**Matsu-Tunnel**	**48.86**	**16**	P	**P**	**15 52 08.1**	**-1.7**

MJB9				IAmb	IAmb	15 52 33.2	
	comp=Z,4.9nm,1.1s						
SONM	**Songino Array**	60.15	347	P	P	15 53 32.3	+0.5
	comp=Z,0.5nm,0.5s,baz=144,slow=5.5,SNR=2.1						
	comp=Z,0.5nm,0.5s						
KSH	**Kashi**	66.64	321	P	P	15 54 22.2	+7.3
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MKAR	**Makanchi Array**	68.01	331	P	P	15 54 22.6	-0.7
MKAR	**Makanchi Array**	68.01	331	P	P	15 54 23.6	+0.2
	comp=Z,1.6nm,0.7s,baz=148,slow=6.5,SNR=12						
	comp=Z,1.6nm,0.7s						
ZALV	**Zalesovo Beam**	72.21	337	P	P	15 54 47.3	-1.6
ZALV	**Zalesovo Beam**	72.21	337	P	P	15 54 48.8	-0.1
	comp=Z,1.7nm,0.8s,baz=127,slow=3.9,SNR=6.5						
	comp=Z,1.7nm,0.8s						
KURBB	**Kurchatov Arra**	72.47	332	P	P	15 54 50.4	0.0
	comp=Z,0.3nm,0.3s,baz=143,slow=6.0,SNR=1.9						
	comp=Z,0.3nm,0.3s						
BVAR	**Borovoye Array**	77.89	330	P	P	15 55 21.6	-0.1
	comp=Z,0.1nm,0.3s,baz=107,slow=4.8,SNR=1.5						
	comp=Z,0.1nm,0.3s						

SCB 04 15:44:03.1±1.3,21°.44S×66°.82W,h193km±25km,ML3.6/2, MW3.1,Error ellipse: s-maj=9.4km s-min=8.6km az=0.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YJA	**Yavi**	1.42	122	Pg	Pn	15 44 36.6	+0.6
PB09	**IPOC Station P**	2.28	260	Pg	Pn	15 44 45.2	+0.9
PB01	**IPOC Station P**	2.52	278	Pg	Pn	15 44 47.4	+0.5
PB01				Sg	Sn	15 45 21.1	+0.1
PB01				IAML		15 45 22.5	
	69nm,0.2s						
PB08	**IPOC Station P**	2.54	300	Pg	Pn	15 44 47.8	+0.4
GO01	**Chusmiza**	2.84	308	Pg	Pn	15 44 51.2	+0.2
SOEO	**Opoqueri**	3.03	340	Pg	Pn	15 44 54.2	+0.9
PB11	**IPOC Station P**	3.14	302	Pg	Pn	15 44 53.9	-0.3
PB11				Sg	Sn	15 45 33.5	-0.6
PB11				IAML		15 45 35.5	
	230nm,0.2s						
SOET	**ToroToro**	3.44	16	Pg	Pn	15 44 57.8	-0.3
BBOJ	**La Paz, Jacaqu**	4.62	343	Pg	Pn	15 45 14.2	+1.1
SOEJ	**Jacaque**	4.62	343	Pg	Pn	15 45 14.1	+1.0
BBOE	**La Paz, Chanca**	4.73	346	Pg	Pn	15 45 15.4	+0.9
BBOD	**La Paz, Gloria**	5.06	340	Pg	Pn	15 45 19.7	+1.0
LPAZ	**La Paz**	5.27	346	Pg	Pn	15 45 21.4	-0.1
BBOB	**La Paz, Bander**	5.41	346	Pg	Pn	15 45 22.8	-0.4

IDC 04 15:59:52.6±2.2,8°.73S×127°.55E,h0km,mb3.5/1, mbtmp3.5/3,ML3.7/2,MS3.3/1,Error ellipse: s-maj=230.3km s-min=33.4km az=62.0,Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	12.94	150	Pn	Pn	16 02 58.0	+0.2
	0.6nm,0.3s,baz=331,slow=14,SNR=20						
WRA				Sn	Sn	16 05 17.3	-5.3
	0.4nm,0.3s,baz=325,slow=25,SNR=5.2						
	0.8nm,0.4s						
ASAR	**Alice Springs**	16.05	158	Pn	Pn	16 03 39.5	-0.3
	0.1nm,0.3s,baz=333,slow=11,SNR=23						
ASAR				Sn	Sn	16 06 30.2	-8.3
	0.1nm,0.3s,baz=319,slow=18,SNR=1.9						
	0.5nm,0.7s						
RPZ	**Rata Peaks**	51.41	140	LR	LR	16 29 53.4	
	comp=Z,29nm,20.6s,baz=278,slow=35						
MKAR	**Makanchi Array**	68.38	328	P	P	16 10 56.1	0.0
	0.3nm,0.6s,baz=126,slow=7.9,SNR=2.4						
	0.3nm,0.6s						

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*JMA **04** 16:06:07.6±0.2,22°.8N±0°.3×12°2E±°,h29km±4km, TAIWAN REGION*

*TAP **04** 16:06:08.8,22°.83N×121°.58E,h16km,ML2.9,C*

ISC 04 16:06:07.6±1.0,22°.81N±0°.02×121°.64E±0°.02,h16km±7km, n104,σ0ˢ.81/154,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LDUT	**Ludao**	0.21	229	*i* P	Pb	16 06 13.7	+0.7
LDUT				S	Sb	16 06 17.4	+0.7
EDH	**Donghe**	0.35	298	P	Pg	16 06 15.2	+0.3
EDH				S	Sg	16 06 19.7	-0.1
CHKT	**Chengkung**	0.38	319	P	Pg	16 06 15.7	+0.2
CHKT				*i* S	Sg	16 06 20.5	-0.3
CHKH	**Chenggong**	0.44	330	*i* P	Pg	16 06 16.9	+0.4
CHKH				S	Sg	16 06 22.5	0.0
TTN	**Taitung**	0.46	263	P	Pg	16 06 17.3	+0.5
TTN				S	Sb	16 06 23.9	0.0
LONT	**Longtian**	0.48	282	*e*P	Pg	16 06 17.4	+0.2
LONT				*e*S	Sg	16 06 23.3	-0.4
ECS	**Chishang**	0.48	306	*e*P	Pb	16 06 17.8	0.0
ECS				*i* S	Sb	16 06 24.8	+0.1
FULB	**Fuli**	0.50	321	P	Pg	16 06 17.7	+0.1
FULB				*e*S	Sg	16 06 23.2	-1.2
TWGBT	**Beinan**	0.52	271	P	Pg	16 06 17.7	-0.2
TWGBT				S	Sb	16 06 25.6	0.0
EHD	**Haiduan**	0.52	310	*i* P	Pg	16 06 18.2	+0.2
EHD				S	Sb	16 06 25.1	-0.7
TWG	**Pinlang**	0.52	271	*i* P	Pg	16 06 17.8	-0.2
TWG				*e*S	Sb	16 06 25.7	-0.2
ECBN	**Changbin**	0.53	341	*e*P	Pg	16 06 18.8	+0.6
ECBN				S	Sg	16 06 25.4	0.0
EYUL	**Yuli**	0.61	331	P	Pg	16 06 19.9	+0.2
TWF1	**Yuli**	0.63	330	P	Pg	16 06 20.0	0.0
YULB	**Yu-li**	0.66	332	*e*P	Pg	16 06 20.6	0.0
ECL	**Taimali**	0.67	252	P	Pg	16 06 20.5	-0.2
ECL				S	Sg	16 06 28.8	-0.7
ELDTW	**Lidau**	0.69	304	*e*P	Pg	16 06 20.6	-0.5
ELDTW				*e*S	Sg	16 06 29.3	-1.0
HGSD	**Ruisui**	0.71	344	P	Pg	16 06 20.9	-0.6
EHYH	**Wanrong**	0.73	338	*e*P	Pg	16 06 22.1	+0.1
EHY	**Hungye**	0.75	337	*e*P	Pg	16 06 22.5	+0.2
LAY	**Lan-yu**	0.77	186	*i* P	Pb	16 06 22.2	-0.5
LAY				*e*S	Sb	16 06 32.6	-0.3
LYUB	**Lan-yu**	0.81	184	P	Pb	16 06 21.9	-1.4
LYUB				*e*S	Sb	16 06 33.1	-0.8
TAW	**Tawu**	0.82	237	*e*P	Pb	16 06 23.9	+0.4
TAW				*e*S	Sb	16 06 34.1	-0.3
TAWH	**Dawu Township**	0.84	236	P	Pb	16 06 23.5	-0.3
TAWH				S	Sb	16 06 33.9	-1.0
EAST	**Anshuo**	0.84	240	*e*P	Pb	16 06 23.5	-0.4
EAST				*e*S	Sb	16 06 34.0	-1.1
STYH	**Taoyuan**	0.87	295	*e*P	Pb	16 06 22.2	-2.3
STYH				*e*S	Sb	16 06 33.8	-2.1
TSMG	**Majia**	0.92	264	*e*P	Pb	16 06 24.8	-0.5
SSD	**Sandimen**	0.93	266	P	Pb	16 06 24.7	-0.7
SSD				*e*S	Sb	16 06 35.0	-2.6
WARBT	**Fenglin Townsh**	0.94	346	*e*P	Pb	16 06 25.2	-0.3
MASBT	**Mashibuluo**	0.95	258	P	Pb	16 06 25.2	-0.5
SLIU	**Shizi**	0.98	233	*e*P	Pb	16 06 25.6	-0.6
SHUL	**Shoufeng**	0.98	356	P	Pb	16 06 26.4	+0.2
SGST	**Jiashian**	1.01	286	*e*P	Pb	16 06 26.3	-0.5
ESL	**Shilin**	1.02	349	*e*P	Pb	16 06 26.7	-0.3
ESL				*e*S	Sb	16 06 39.3	-0.8
ALS	**Alishan**	1.04	312	*e*P	Pb	16 06 27.6	+0.1
SCZT	**Fangliau**	1.04	245	*e*P	Pb	16 06 26.9	-0.3
WTP	**Ta-pu**	1.04	295	*e*P	Pb	16 06 27.2	-0.1
TPUB	**Ta-pu**	1.05	298	*e*P	Pb	16 06 27.5	0.0
TPUB				*e*S	Sn	16 06 41.8	-0.3
TEYL	**Yanliau Villag**	1.05	358	*e*P	Pb	16 06 27.0	-0.5
SCST	**Cishan**	1.06	274	*i* P	Pn	16 06 28.2	+0.4
SMST	**Manzhou Townsh**	1.08	224	*e*P	Pb	16 06 27.4	-0.5
SMST				*e*S	Sb	16 06 40.6	-1.2
CHN1	**Nanshi**	1.09	290	*e*P	Pg	16 06 29.3	+0.6
CHN1				*e*S	Sn	16 06 44.0	+0.9
CHN4	**Tsaushan**	1.10	299	P	Pn	16 06 28.7	+0.2
CHN4				*e*S	Sn	16 06 44.5	+1.0
TWM1	**Shoushan**	1.12	271	*e*P	Pg	16 06 30.2	+0.9
SNST	**Tainan City**	1.13	291	*e*P	Pn	16 06 29.1	+0.3
TSEB	**Hengchuen, Pin**	1.13	217	*e*P	Pb	16 06 29.1	+0.3
TSEB				*e*S	Sb	16 06 43.9	+0.5
WCKO	**Fanlu**	1.14	304	*e*P	Pg	16 06 29.9	+0.2
WHYT	**Xinyi Township**	1.14	321	*e*P	Pn	16 06 29.5	+0.4
TWKBT	**Hengchun**	1.15	222	P	Pn	16 06 28.6	-0.6
TWKBT				S	Sb	16 06 43.0	-0.9
HEN	**Hengchun**	1.16	226	*e*P	Pn	16 06 29.7	+0.5
TWK	**Hsinying**	1.16	293	*e*P	Pn	16 06 29.7	+0.5
TWK1	**Hengchun**	1.16	222	P	Pn	16 06 28.7	-0.5
TWK1				*e*S	Sb	16 06 43.1	-1.0
ETM	**Tongmen**	1.16	353	*e*P	Pn	16 06 29.0	-0.2
SSLB	**Suanglung**	1.16	327	*e*P	Pb	16 06 29.6	+0.2
CHN5	**Tsauling**	1.18	312	*e*P	Pg	16 06 30.3	-0.1
CHN3	**Shinhua**	1.21	283	*e*P	Pg	16 06 32.1	+1.2
CHN3				*e*S	Sg	16 06 49.1	+2.5
LXIB	**Xiulin Townshi**	1.23	350	*e*P	Pn	16 06 28.9	-1.4
LXIB				*e*S	Sb	16 06 44.7	-1.5
TWD	**Chiawan**	1.27	358	*e*P	Pn	16 06 29.9	-0.8
TWD				*e*S	Sb	16 06 45.7	-1.5
SMLT	**Sun Moon Lake**	1.27	328	*e*P	Pn	16 06 30.7	-0.1
TWP	**Hsiaoliuchiu**	1.27	249	*e*P	Pg	16 06 33.5	+1.5
WUSB	**Renai**	1.27	338	*e*P	Pn	16 06 30.7	-0.2
WSSB	**Gushan**	1.28	263	*e*P	Pg	16 06 33.6	+1.3
TYC	**Yuchr**	1.31	327	*e*P	Pb	16 06 32.6	+0.8
WJS	**Zhushan**	1.31	320	*e*P	Pg	16 06 33.4	+0.5
WGK	**Gukeng**	1.32	312	*e*P	Pg	16 06 33.0	-0.1
WDLH	**Douliu**	1.34	311	*e*P	Pg	16 06 33.5	+0.1
WDLH				*e*S	Sg	16 06 52.4	+1.5
NACB	**Ninganchiao**	1.36	358	*e*P	Pn	16 06 31.4	-0.6
NACB				*e*S	Sn	16 06 47.7	-2.0
ICHU	**Yijhu**	1.37	294	*e*P	Pn	16 06 32.7	+0.6
ICHU				*e*S	Sg	16 06 52.0	+0.2
WHF	**Hehuan Shan**	1.37	346	*e*P	Pn	16 06 32.2	-0.3
WNT	**Mingjian**	1.38	321	*e*P	Pb	16 06 33.8	+0.7
WNT				*e*S	Sg	16 06 52.9	+0.6
ETLH	**Xiulin Townshi**	1.40	354	*e*P	Pn	16 06 31.6	-1.1
WCS	**Beigang Elemen**	1.41	332	*e*P	Pn	16 06 33.4	+0.7
CHN8	**Yiju**	1.42	292	*e*P	Pg	16 06 34.8	-0.2
WTK	**Tuku**	1.45	307	*e*P	Pb	16 06 34.1	-0.1
WTK				S	Sb	16 06 52.7	+0.3
EOS4	**EOS4**	1.45	25	*e*P	Pn	16 06 33.7	+0.8
EOS4				*e*S	Sn	16 06 50.0	-1.3
TSCK	**Chigu Township**	1.47	284	*e*S	Sg	16 06 53.5	-1.6
WSL	**Shuilin Townsh**	1.48	299	*e*P	Pn	16 06 34.5	+0.8
WSL				*e*S	Sb	16 06 53.7	+0.3
WSF	**Szhu**	1.54	303	*e*P	Pb	16 06 35.8	0.0
WSF				*e*S	Sb	16 06 55.4	+0.2
WHP	**Taichung City**	1.59	337	*e*P	Pb	16 06 37.9	+1.1
EOS3	**EOS3**	1.60	23	*e*P	Pn	16 06 35.8	+0.7
EOS3				*e*S	Sn	16 06 54.6	-0.7
ENA	**Nanau**	1.61	3	*e*P	Pn	16 06 35.4	-0.1
ENA				*e*S	Sn	16 06 55.0	-1.1
NNSB	**Datong**	1.63	352	*e*P	Pn	16 06 36.4	+0.6
EWUT	**Wuta**	1.63	4	*e*P	Pn	16 06 36.0	+0.2
NNS	**Nan Shan**	1.64	351	*e*P	Pb	16 06 37.6	0.0
EOS2	**EOS2**	1.69	19	*e*P	Pn	16 06 37.6	+1.2
EOS2				*e*S	Sn	16 06 58.2	+0.5
LATG	**Datong**	1.72	357	*e*P	Pn	16 06 37.3	+0.2
NSY	**Sanyi**	1.79	333	*e*P	Pb	16 06 40.4	+0.3
ENTT	**Nioudou**	1.82	358	*e*P	Pn	16 06 38.6	+0.2
YHNB	**Yeheng**	1.87	353	*e*P	Pn	16 06 39.9	+0.8
NFF	**Wufeng Townshi**	1.88	345	*e*P	Pb	16 06 41.8	+0.2
WDGT	**Dungji**	1.88	284	*e*P	Pn	16 06 39.3	+0.2
LIOB	**Emei**	1.92	343	*e*P	Pb	16 06 42.5	+0.2
FUSB	**Fushanzhiwuyua**	1.94	359	*e*P	Pn	16 06 41.8	+1.7
PHUB	**P'eng-hu**	2.03	291	*e*P	Pn	16 06 41.5	+0.4
PHUB				*e*S	Sn	16 07 05.4	-0.8
YOJ	**Yonaguni jima**	2.07	37	*e*P	Pn	16 06 42.7	+0.9
YOJ				*e*S	Sn	16 07 07.2	-0.1
VCHM	**Qimei**	2.08	281	*e*P	Pn	16 06 42.3	+0.5
SXI1	**Grass Mountain**	2.29	5	*e*P	Pn	16 06 46.8	+2.0
SXI1				*e*S	Sn	16 07 14.1	+1.4
HATJ	**Hateruma jima**	2.34	58	P	Pn	16 06 46.1	+0.6
HATJ				*e*S	Sn	16 07 12.9	-1.1
IRIF	**Iriomote-Funau**	2.45	51	P	Pn	16 06 48.2	+1.2
JKRS	**Kuro-shima**	2.60	56	P	Pn	16 06 50.0	+0.9
JKRS				*e*S	Sn	16 07 20.9	+0.6
JISG	**Ishigakijimahi**	3.02	54	P	Pn	16 06 55.2	+0.4
JISG				S	Sn	16 07 30.3	-0.4
JTJ	**Tarama**	3.35	56	*e*S	Sn	16 07 38.8	0.0
JIRB	**Irabujima**	3.81	57	P	Pn	16 07 06.6	+0.9
JIRB				*e*S	Sn	16 07 50.6	+0.4
JMJ2	**Miyako jima3**	3.89	60	P	Pn	16 07 07.6	+0.8

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*NEIC **04** 16:08:31.0±1.9,44°.06N±0°.09×105°.62W±0°.06,h0km±1km, ML2.8/18,Error ellipse: s-maj=15.0km s-min=6.9km az=187.0*

*IDC **04** 16:08:34.6±2.1,44°.51N×105°.95W,h0km,mbtmp2.7/3, ML3.1/3,Error ellipse: s-maj=26.3km s-min=17.4km az=152.0*

ISC 04 16:08:29.1±1.0,44°.19N±0°.07×105°.74W±0°.06,h0km,n14, σ1ˢ.01/14,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	1.23	93		Pn	16 08 53.5	-0.2
RSSD				Sg	Sg	16 09 07.4	-1.1
K22A	**Casper**	1.64	201		Pn	16 08 59.2	-0.2
K22A				IAML		16 09 23.8	
	57nm,0.8s						
RLMT	**Red Lodge**	2.69	291	Pn	Pb	16 09 17.5	-0.7
RLMT				IAML		16 10 22.1	
	16nm,1.0s						
BW06	**Boulder Array**	3.13	244	Pn	Pb	16 09 24.6	-1.0
BW06				IAML		16 10 19.7	
	12nm,0.8s						
BW06				IAML		16 10 25.1	
	13nm,0.8s						
PD31	**Pinedale Array**	3.13	244	Pn	Pb	16 09 24.7	-1.0
PDAR	**Pinedale Array**	3.13	244	Pn	Pb	16 09 25.5	-0.1
PDAR	**Pinedale Array**	3.13	244	Pn	Pg	16 09 29.1	+0.2
	0.4nm,0.3s,baz=66,slow=14,SNR=7.2						
PDAR				Pg	Pb	16 09 33.2	+7.5
	0.4nm,0.3s,baz=64,slow=17,SNR=6.1						
PDAR				Lg	Lg	16 10 14.4	
	0.2nm,0.3s,baz=64,slow=29,SNR=4.2						
	0.5nm,0.4s						
YNE	**Yellowstone No**	3.16	286	Pn	Pb	16 09 25.1	-1.1
YNE				IAML		16 10 33.9	
	comp=N,21nm,0.8s						
YNE				IAML		16 10 37.2	
	comp=E,28nm,2.2s						
YMP	**Mirror Lake Pl**	3.21	281	Pn	Pb	16 09 26.6	-0.5
YMP				IAML		16 10 39.6	
	comp=N,30nm,0.8s						
YMP				IAML		16 10 46.2	
	comp=E,29nm,0.9s						
GCMT	**Greycliff**	3.22	301	Pn	Pb	16 09 26.3	-0.9
OGNE	**Ogallala**	4.24	139	Pn	Pn	16 09 35.9	+0.9
OGNE				IAML		16 10 39.2	
	comp=E,40nm,1.0s						
E28A	**Huff**	4.28	54	Pn	Pn	16 09 35.3	-0.1
E28A				IAML		16 11 05.6	
	comp=E,28nm,0.9s						
TXAR	**Lajitas Array**	14.92	173	Pn	P	16 12 13.3	+6.1
	comp=E,0.1nm,0.3s,baz=0.8,slow=17,SNR=6.6						
TXAR				Lg	Lg	16 16 16.9	
	baz=349,slow=25,SNR=1.9						
	comp=E,0.1nm,0.2s						
YKA	**Yellowknife Ar**	19.05	347	P	Pn	16 12 55.3	+2.1
	baz=161,slow=12,SNR=1.3						
	comp=E,0.1nm,0.3s						

IDC 04 16:10:22.4±296.0,53°.98N×99°.85E,h0km,Error ellipse: s-maj=127.4km s-min=112.8km az=64.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I34MN	**SONGINO INFRAS**	7.44	143	I	I	16 54 20.0	
	baz=329,slow=318,SNR=0.7						
I46RU	**ZALESOVO INFRA**	8.86	276	I	I	17 02 30.0	
	baz=82,slow=327,SNR=0.9						
I31KZ	**AKTYUBINSK INF**	25.60	279	I	I	18 47 20.0	
	baz=64,slow=322,SNR=1.4						
I43RU	**DUBNA INFRASON**	34.62	300	I	I	19 40 05.3	
	baz=68,slow=331,SNR=2.2						
I37NO	**I37NO**	38.25	325	I	I	20 07 30.0	
	baz=71,slow=323,SNR=2.6						

IDC 04 16:22:18.7±347.0,48°.41N×47°.48E,h0km,Error ellipse: s-maj=144.5km s-min=99.6km az=1.0,Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	7.17	70	I	I	17 05 30.0	
	0.4nm,0.6s,baz=257,slow=326,SNR=4.5						
I43RU	**DUBNA INFRASON**	10.40	327	I	I	17 20 30.0	
	baz=140,slow=318,SNR=7.1						
I26DE	**FREYUNG INFRAS**	22.22	284	I	I	18 36 50.0	
	baz=76,slow=316,SNR=1.5						
I37NO	**I37NO**	25.11	336	I	I	18 56 40.0	
	baz=133,slow=324,SNR=2.3						

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*IDC **04** 16:32:51.6±0.8,33°.05N×104°.90E,h0km,mb3.6/14, mbtmp3.6/16,ML3.5/2,MS2.3/1,Error ellipse: s-maj=27.9km s-min=16.6km az=45.0*

ISC 04 16:32:56.5±0.8,33°.0N±0°.1×104°.9E±0°.1,h35km,n16, σ0ˢ.87/16,mb3.7/14,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	15.44	202	Pn	Pn	16 36 30.4	-1.3
	0.1nm,0.3s,baz=116,slow=27,SNR=1.6						
	0.1nm,0.4s						
KSRS	**Korea Array**	19.29	70	P	Pn	16 37 18.9	-0.5
	0.1nm,0.3s,baz=248,slow=8.9,SNR=4.3						
KSRS				LR	LR	16 43 42.4	
	comp=Z,9.9nm,20.9s,baz=0.0,slow=34						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	22.07	315	P	P	16 37 48.9	+0.6
	1.2nm,0.7s,baz=110,slow=14,SNR=12						
	1.2nm,0.7s						
USRK	**Ussuriysk Ar.**	23.82	54	P	P	16 38 07.0	+0.8
	1.0nm,0.6s,baz=260,slow=11,SNR=4.5						
	1.0nm,0.6s						
ZALV	**Zalesovo Beam**	25.36	332	P	P	16 38 19.6	-0.4
	1.4nm,0.5s,baz=123,slow=13,SNR=6.9						
	1.4nm,0.5s						
KURBB	**Kurchatov Arra**	26.19	320	P	P	16 38 27.6	-0.1
	1.5nm,0.8s,baz=125,slow=10,SNR=7.4						
	1.5nm,0.8s						
BVAR	**Borovoye Array**	31.78	319	P	P	16 39 17.5	+0.2
	0.4nm,0.7s,baz=127,slow=6.3,SNR=2.0						
	0.4nm,0.7s						
FINES	**FINESS Array B**	56.40	326	P	P	16 42 34.5	+0.5
	0.6nm,0.5s,baz=112,slow=8.8,SNR=7.4						
	0.6nm,0.5s						
BRTR	**Keskin Array B**	56.43	299	P	P	16 42 35.0	+0.2
	0.5nm,0.7s,baz=114,slow=5.4,SNR=4.1						
	0.5nm,0.7s						
AKASG	**Malin Array Be**	56.61	312	P	P	16 42 36.5	+0.7
	0.4nm,0.3s,baz=63,slow=8.1,SNR=2.3						
	0.4nm,0.3s						
WRA	**Warramunga Arr**	59.67	148	P	P	16 42 58.9	+1.5
	0.8nm,1.0s,baz=339,slow=7.1,SNR=2.2						
	0.8nm,1.0s						
HFS	**Hagfors**	62.60	326	P	P	16 43 16.5	-0.3
	0.6nm,0.4s,baz=89,slow=7.6,SNR=4.5						
	0.6nm,0.4s						
ASAR	**Alice Springs**	62.76	150	P	P	16 43 19.1	+0.8
	0.3nm,0.7s,baz=341,slow=8.1,SNR=7.3						
	0.3nm,0.7s						
NOA	**NORSAR Array B**	63.45	327	P	P	16 43 21.9	-0.6
	0.4nm,0.5s,baz=72,slow=4.5,SNR=3.3						
	0.4nm,0.5s						
EKA	**Eskdalemuir Ar**	72.80	325	P	P	16 44 20.7	-0.5
	0.5nm,0.6s,baz=59,slow=5.9,SNR=1.8						
	0.5nm,0.6s						
YKA	**Yellowknife Ar**	79.68	17	P	P	16 44 58.6	-1.5
	0.3nm,0.7s,baz=344,slow=9.0,SNR=4.7						
	0.3nm,0.7s						

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*IDC **04** 16:47:15.0±0.9,51°.53N×173°.81E,h0km,mb3.8/16, mbtmp3.8/18,ML3.1/2,MS2.5/2,Error ellipse: s-maj=23.6km s-min=14.5km az=164.0*

*NEIC **04** 16:47:16.5±1.2,51°.60N±0°.07×173°.7E±0°.1,h10km±2km, mb3.9/33,Error ellipse: s-maj=14.5km s-min=11.9km az=114.0*

ISC 04 16:47:19.4±0.7,51°.69N±0°.09×173°.66E±0°.06,h28km,n73, σ1ˢ.26/65,mb3.8/24,Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHEM	**Shemya Is, Ala**	1.08	15	Pn	Pn	16 47 39.2	+0.6
SHEM	**Shemya Is, Ala**	1.08	15	Pn	Pb	16 47 39.4	+0.1
	98nm,0.3s,baz=157,slow=4.9,SNR=47						
SHEM				Sn	Sn	16 47 53.4	+0.8
	60nm,0.3s,baz=265,slow=17,SNR=11						
SMY	**Shemya**	1.08	15		Pn	16 47 39.2	+0.6
ADK	**Adak**	6.00	84	Pn	Pn	16 48 44.2	-2.0
ATKA	**Atka Island**	7.53	81	Pn	Pn	16 49 06.0	-1.1
PET	**Petropavlovsk**	9.28	284	Pn	Pn	16 49 29.5	-1.7
PETK	**Petropavlovsk-**	9.86	285	Pn	Pn	16 49 38.2	-1.0
PETK	**Petropavlovsk-**	9.86	285	Pn	Pn	16 49 40.8	+1.7
	0.6nm,0.3s,baz=102,slow=19,SNR=6.0						
PETK				Sn	Sn	16 51 23.0	-5.8
	0.7nm,0.3s,baz=86,slow=22,SNR=6.1						
	1.4nm,0.4s						
NIKH	**Nikolski High**	10.78	76	Pn	Pn	16 49 52.0	+0.2
P08K	**Saint George I**	11.00	57	Pn	Pn	16 49 54.3	-0.4
UNV	**Unalaska Valle**	12.21	72	Pn	Pn	16 50 11.2	0.0
LVA	**Lava Point**	12.50	71	Pn	Pn	16 50 14.8	-0.4
MA2	**Magadan**	15.08	310	Pn	Pn	16 50 49.0	-1.3
MA2				IAmb	IAmb	16 51 19.4	
	comp=Z,4.5nm,1.1s						
SEY	**Seymchan**	15.99	323	Pn	Pn	16 51 01.9	-0.2
	comp=Z,0.1nm,0.3s,baz=107,slow=19,SNR=1.8						
	comp=Z,0.5nm,0.7s						
L14K	**Kuka Creek**	16.15	44		P	16 51 06.4	-0.6
M14K	**Bethel**	16.22	47		P	16 51 06.6	-1.3
M14K				IAmb	IAmb	16 51 13.4	
	comp=Z,14nm,1.1s						
N15K	**Kwethluk River**	16.88	50		P	16 51 15.1	-0.1
N15K				IAmb	IAmb	16 51 40.7	
	comp=Z,16nm,1.4s						
K15K	**Wolf Creek Mou**	17.07	42	P	P	16 51 16.9	-0.3
K15K				IAmb	IAmb	16 51 23.8	
	comp=Z,15nm,1.3s						
M17K	**Holitna River**	18.51	47		Pn	16 51 33.6	+0.1
M17K				IAmb	IAmb	16 51 36.0	
	comp=Z,10nm,0.8s						
ACHA	**Angle Creek He**	18.85	58	P	P	16 51 36.5	-0.4
Q19K	**Cape Douglas,**	19.81	56	P	P	16 51 47.1	-0.4
OHAK	**Old Harbor**	19.86	61	P	P	16 51 46.8	-1.1
P19K	**Oil Pt**	20.12	54	P	P	16 51 50.6	-0.2
E18K	**Tukpahlearik C**	20.21	29	P	P	16 51 51.0	-0.6
E18K				IAmb	IAmb	16 52 28.2	
	comp=Z,6.9nm,1.1s						
KDAK	**Kodiak Island**	20.27	59	P	P	16 51 50.6	-1.7
	comp=Z,2.7nm,0.3s,baz=281,slow=3.5,SNR=14						
KDAK				S	S	16 55 33.2	-4.7
	comp=Z,1.1nm,0.7s,baz=315,slow=22,SNR=1.1						
	comp=Z,2.7nm,0.3s						
K20K	**Telida**	20.63	43	P	P	16 51 56.5	+0.1
C18K	**Utukok River**	20.84	26	P	P	16 51 59.1	+0.6
C18K				IAmb	IAmb	16 52 00.3	
	comp=Z,8.5nm,1.4s						
J20K	**Nowinta River**	20.89	41	P	P	16 51 59.2	+0.2
J20K				IAmb	IAmb	16 52 19.2	
	comp=Z,7.8nm,1.4s						
CNPM	**China Poot**	21.11	54	P	P	16 52 01.2	-0.3
E19K	**Redstone River**	21.28	31	P	P	16 52 03.5	+0.3
CAST	**Castle Rocks**	21.50	44	P	P	16 52 05.3	-0.4
SUA	**Susitna One**	21.64	49	P	P	16 52 07.5	+0.3
SUA				IAmb	IAmb	16 52 24.8	
	comp=Z,10nm,1.4s						
ASAJ	**Asahikawa**	22.03	262	P	P	16 52 12.4	+1.0
	comp=Z,6.2nm,1.0s,baz=116,slow=8.9,SNR=6.1						
	comp=Z,6.2nm,1.0s						
TRF	**Thorofare Moun**	22.29	44	P	P	16 52 14.4	+0.1
TRF				IAmb	IAmb	16 52 31.9	
	comp=Z,4.8nm,1.2s						
PWL	**Port Wells**	22.70	51	P	P	16 52 17.9	-0.6
PWL				IAmb	IAmb	16 52 19.4	
	comp=Z,2.8nm,0.8s						
NEA2	**Nenana**	23.11	42	P	P	16 52 22.8	0.0
NEA2				IAmb	IAmb	16 52 25.6	
	comp=Z,2.4nm,0.7s						
SCM	**Sheep Creek Mo**	23.31	49	P	P	16 52 24.7	0.0
DHY	**Denali Highway**	23.49	46	P	P	16 52 26.4	-0.3
FID	**Port Fidalgo**	23.60	52	P	P	16 52 26.5	-1.0
ILAR	**Eielson Array**	24.06	42	P	P	16 52 32.8	+0.9
	comp=Z,0.6nm,0.7s,baz=251,slow=9.8,SNR=5.0						
	comp=Z,0.6nm,0.7s						
PAX	**Paxson**	24.33	47	P	P	16 52 34.4	0.0
RAGM	**Ragged Mountai**	24.46	53	P	P	16 52 35.2	-0.5
DOT	**Dot Lake**	25.06	45	P	P	16 52 40.2	-0.8
SCRK	**Sand Creek**	25.14	44	P	P	16 52 41.2	-0.7
SCRK				IAmb	IAmb	16 52 56.3	
	comp=Z,1.9nm,0.8s						
J26L	**Joseph Creek**	25.41	43	P	P	16 52 43.4	-0.8

J26L				IAmb	IAmb	16 52 45.0	
	comp=Z,1.9nm,0.8s						
K27K	**Chicken**	**25.98**	**45**	P	**P**	**16 52 48.7**	**-0.6**
K27K				IAmb	IAmb	16 52 50.4	
	comp=Z,3.2nm,1.2s						
HYT	**Haines Junctio**	**28.00**	**52**	P	**P**	**16 53 07.5**	**0.0**
HYT				IAmb	IAmb	16 53 12.1	
	comp=Z,4.0nm,1.3s						
MJAR	**Matsushiro Arr**	**29.27**	**253**	LR	LR	17 08 55.4	
	comp=Z,8.0nm,18.9s,baz=130,slow=44						
P33M	**Teslin, Yukon**	**30.36**	**53**	P	**P**	**16 53 28.6**	**+0.1**
H11N2	**WAKE ISLAND Hy**	**32.33**	**192**	T	T	17 29 00.1	
	baz=10						
H11N3	**WAKE ISLAND Hy**	**32.34**	**192**	T	T	17 28 59.6	
	baz=10						
H11N1	**WAKE ISLAND Hy**	**32.35**	**192**	T	T	17 28 59.6	
	baz=10						
H11S1	**WAKE ISLAND Hy**	**33.56**	**192**	T	T	17 30 32.3	
	baz=7.9						
H11S3	**WAKE ISLAND Hy**	**33.58**	**192**	T	T	17 30 32.3	
	baz=7.9						
H11S2	**WAKE ISLAND Hy**	**33.58**	**192**	T	T	17 30 32.3	
	baz=7.9						
KSRS	**Korea Array**	**34.95**	**264**	LR	LR	17 09 42.1	
	comp=Z,7.7nm,18.3s,baz=165,slow=38						
YKAW3	**Yellowknife Wh**	**38.38**	**45**	P	**P**	**16 54 38.1**	**+0.5**
YKAW3				IAmb	IAmb	16 54 39.2	
	comp=Z,1.9nm,0.7s						
YKA	**Yellowknife Ar**	**38.40**	**45**	P	**P**	**16 54 38.6**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=282,slow=17,SNR=9.4						
	comp=Z,0.8nm,0.6s						
SONM	**Songino Array**	**42.23**	**292**	P	**P**	**16 55 11.6**	**+1.7**
	comp=Z,0.3nm,0.4s,baz=52,slow=7.7,SNR=2.0						
	comp=Z,0.3nm,0.4s						
SPITS	**Spitsbergen Ar**	**49.65**	**354**	P	**P**	**16 56 09.1**	**+1.3**
	comp=Z,2.7nm,0.8s,baz=27,slow=9.9,SNR=5.4						
	comp=Z,2.7nm,0.8s						
PDAR	**Pinedale Array**	**50.63**	**68**	P	**P**	**16 56 14.4**	**-1.6**
	comp=Z,0.5nm,0.7s,baz=300,slow=5.4,SNR=1.9						
	comp=Z,0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**55.40**	**310**	P	**P**	**16 56 51.7**	**+1.1**
	comp=Z,2.7nm,0.7s,baz=52,slow=6.9,SNR=16						
	comp=Z,2.7nm,0.7s						
MKAR	**Makanchi Array**	**56.05**	**304**	P	**P**	**16 56 56.0**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=52,slow=7.3,SNR=9.1						
	comp=Z,1.2nm,0.7s						
ARCES	**ARCESS Array B**	**56.86**	**347**	P	**P**	**16 57 02.0**	**+1.1**
	comp=Z,1.9nm,0.7s,baz=10,slow=12,SNR=3.3						
	comp=Z,1.9nm,0.7s						
BVAR	**Borovoye Array**	**57.49**	**316**	P	**P**	**16 57 06.1**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=52,slow=9.6,SNR=4.5						
	comp=Z,0.4nm,0.5s						
SCHQ	**Schefferville**	**62.55**	**35**	P	**P**	**16 57 40.8**	**+0.5**
	comp=Z,2.6nm,0.7s,baz=330,slow=5.6,SNR=3.6						
	comp=Z,2.6nm,0.7s						
TXAR	**Lajitas Array**	**63.21**	**76**	P	**P**	**16 57 45.7**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=304,slow=4.9,SNR=4.5						
	comp=Z,0.3nm,0.5s						
FINES	**FINESS Array B**	**64.29**	**343**	P	**P**	**16 57 52.3**	**+0.7**
	comp=Z,1.4nm,0.9s,baz=46,slow=12,SNR=2.1						
	comp=Z,1.4nm,0.9s						
CMAR	**Chiang Mai Arr**	**66.29**	**270**	P	**P**	**16 58 05.8**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=38,slow=6.1,SNR=4.3						
	comp=Z,0.3nm,0.4s						
ASAR	**Alice Springs**	**82.74**	**216**	P	**P**	**16 59 39.8**	**-0.6**
	comp=Z,0.8nm,0.9s,baz=27,slow=5.9,SNR=6.0						
	comp=Z,0.8nm,0.9s						
H03N2	**Juan Fernandez**	**125.80**	**100**	T	T	19 25 17.7	
	baz=313						
H03N1	**Juan Fernandez**	**125.82**	**100**	T	T	19 25 17.7	
	baz=313						
H03N3	**Juan Fernandez**	**125.82**	**100**	T	T	19 25 19.8	
	baz=313						

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*IDC **04** 16:53:07.1±2.6, 7°.75S×108°.04E, h0^{km}, mb3.8/3, mbtmp3.8/3, MS3.3/2, Error ellipse: s-maj=99.1km s-min=10.5km az=58.0*

*DJA **04** 16:53:07.1±0.4, 7°S±5°×10°7E±°, h87^{km}±4^{km}, M3.3/11, MLv3.3/11*

*NEIC **04** 16:53:11.5±2.0, 8°.3S±0°.1×107°.34E±0°.07, h35^{km}±2^{km}, mb4.4/12, Error ellipse: s-maj=20.6km s-min=6.2km az=327.0*

ISC 04 16:53:06.7±0.9, **7°.1S**±0°.1×**106°.81E**±0°.05, **h100**^{km}±7^{km}, **n33**, σ**0^{s}.98**/34, **mb4.2**/8, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKJI	**Sukabumi**	**0.27**	**289**	P	**Pn**	**16 53 20.8**	**-0.4**
SKJI				S	**Sn**	**16 53 33.0**	**+1.0**
CNJI	**Cibinong**	**0.38**	**124**	P	**Pn**	**16 53 21.8**	**+0.1**
CNJI				S	**Sn**	**16 53 33.4**	**+0.5**
LEM	**Lembang**	**0.84**	**71**	Pg	**Pn**	**16 53 26.4**	**+0.7**
	13nm,0.3s,baz=162,slow=13,SNR=15						
LEM				Lg	Lg	16 53 40.8	
	24nm,0.3s,baz=153,slow=17,SNR=15						
LEM	**Lembang**	**0.84**	**71**	P	**Pn**	**16 53 26.2**	**+0.5**
LEM				S	**Sn**	**16 53 39.2**	**-0.7**
CGJI	**Cibinong**	**1.21**	**293**	P	**Pn**	**16 53 29.5**	**-0.1**
CGJI				S	**Sn**	**16 53 46.9**	**+0.1**
JCJI	**Jatiwangi**	**1.57**	**67**	P	**Pn**	**16 53 32.8**	**-1.0**
CMJI	**Cimerak**	**1.76**	**113**	P	**Pn**	**16 53 36.7**	**+0.5**
CMJI				S	**Sn**	**16 53 58.9**	**+0.2**
XMIS	**Christmas Isla**	**3.55**	**199**	Pn	Pn	16 53 54.3	-5.7
SMRI	**Semarang**	**3.60**	**89**	Pn	**Pn**	**16 54 01.2**	**+0.7**
SMRI	**Semarang**	**3.60**	**89**	P	**Pn**	**16 54 01.0**	**+0.4**
MDSI	**Maura Dua**	**3.69**	**315**	P	**Pn**	**16 54 01.9**	**+0.1**
UGM	**Wanagama**	**3.77**	**103**	Pn	**Pn**	**16 54 00.7**	**-2.2**
UGM	**Wanagama**	**3.77**	**103**	P	**Pn**	**16 54 04.4**	**+1.6**
UGM				S	**Sn**	**16 54 47.1**	**+0.8**
PCJI	**Pacitan**	**4.46**	**104**	P	**Pn**	**16 54 13.3**	**+1.1**
PCJI				S	**Sn**	**16 55 03.6**	**+0.6**
JAGI	**Jajag, Banyuwa**	**7.40**	**101**	Pn	**Pn**	**16 54 49.3**	**-2.8**
LHMI	**Lhok Sumawe**	**15.71**	**321**	P	P	16 57 06.9	+22
LHMI				IAmb	IAmb	16 57 39.3	
	comp=Z,22nm,0.8s						
MORW	**Morawa**	**23.52**	**159**	P	**P**	**16 58 05.9**	**-2.1**
MORW				IAmb	IAmb	16 58 32.1	
	comp=Z,21nm,1.4s						
NWAO	**Narrogin (SRO)**	**27.46**	**161**	P	**P**	**16 58 43.1**	**-0.4**
WB0	**Warramunga Arr**	**29.57**	**118**	P	**P**	**16 59 02.0**	**-0.4**
WB0				IAmb	IAmb	16 59 43.3	
	comp=Z,12nm,1.2s						
WRA	**Warramunga Arr**	**29.59**	**118**	P	**P**	**16 59 02.1**	**-0.5**
	comp=Z,1.0nm,1.1s,baz=298,slow=7.6,SNR=6.4						
	comp=Z,1.0nm,1.1s						
WB2	**Warramunga Arr**	**29.60**	**118**	P	**P**	**16 59 02.2**	**-0.5**
WB2				IAmb	IAmb	16 59 30.8	
	comp=Z,12nm,1.4s						
WR8	**Warramunga Arr**	**29.73**	**118**	P	**P**	**16 59 03.6**	**-0.2**
WR8				IAmb	IAmb	16 59 32.1	
	comp=Z,10nm,1.3s						
WR0	**Warramunga Arr**	**29.77**	**118**	P	**P**	**16 59 03.9**	**-0.3**
AS31	**Alice Springs**	**30.78**	**125**	P	**P**	**16 59 13.6**	**+0.5**
ASAR	**Alice Springs**	**30.78**	**125**	P	**P**	**16 59 13.7**	**+0.6**
ASAR	**Alice Springs**	**30.78**	**125**	P	**P**	**16 59 12.7**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=303,slow=8.4,SNR=5.7						
	comp=Z,0.6nm,0.8s						
JAY	**Jayapura**	**34.06**	**84**	LR	LR	17 14 41.6	
	comp=Z,42nm,19.1s,baz=293,slow=39						
STKA	**Stephens Creek**	**40.71**	**132**	P	**P**	**17 00 38.2**	**+0.4**
STKA	**Stephens Creek**	**40.71**	**132**	P	**P**	**17 00 38.1**	**+0.4**
	comp=Z,1.0nm,0.4s,baz=316,slow=7.1,SNR=3.7						
	comp=Z,1.0nm,0.4s						
TAU	**Tasmania Unive**	**50.38**	**142**	P	**P**	**17 01 54.5**	**+0.6**
SONM	**Songino Array**	**54.69**	**360**	LR	LR	17 27 23.2	
	comp=Z,27nm,18.4s,baz=62,slow=37						
AKBB	**Malin Array Si**	**87.66**	**322**	P	P	17 06 01.5	+18
AKBB				IAmb	IAmb	17 06 24.7	
	comp=Z,1.4nm,0.9s						
KIEV	**Kiev**	**87.66**	**322**	P	P	17 06 01.4	+17

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*NEIC **04** 17:00:52.9±1.0, 17°.7S±0°.2×178°.6W±0°.2, h556^{km}±10^{km}, mb4.1/30, Error ellipse: s-maj=35.7km s-min=18.5km az=128.0*

*IDC **04** 17:00:54.5±1.9, 17°.81S×178°.74W, h565^{km}±19^{km}, mb3.2/9, mbtmp4.0/10, Error ellipse: s-maj=36.0km s-min=19.0km az=144.0*

ISC 04 17:00:55.1±0.7, **17°.8S**±0°.1×**178°.7W**±0°.1, **h579**^{km}, **n53**, σ**0^{s}.87**/57, **mb4.0**/24, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.07**	**271**	P	**P**	**17 02 10.0**	**-3.0**
MSVF	**Nonsavu**	**3.07**	**271**	P	**P**	**17 02 11.5**	**-1.5**
	11nm,0.7s,baz=126,slow=14,SNR=8.5						
DZM	**Mont Dzumac**	**14.57**	**251**	P	**P**	**17 04 01.9**	**+2.0**
	4.5nm,1.0s,baz=98,slow=20,SNR=1.6						
NNZ	**Nelson**	**24.31**	**195**	P	**P**	**17 05 27.3**	**-0.7**
THZ	**Tophouse**	**24.94**	**195**	P	**P**	**17 05 32.9**	**-0.7**
TOO	**Toolangi**	**37.00**	**231**	P	**P**	**17 07 17.1**	**+0.5**
STKA	**Stephens Creek**	**38.41**	**241**	P	**P**	**17 07 27.5**	**-0.6**
STKA	**Stephens Creek**	**38.41**	**241**	P	**P**	**17 07 28.2**	**+0.1**
	1.3nm,0.5s,baz=78,slow=8.9,SNR=5.2						
	1.3nm,0.5s						
BBOO	**Buckleboo**	**43.19**	**241**	P	**P**	**17 08 06.1**	**+0.1**
WR8	**Warramunga Arr**	**44.20**	**259**	P	**P**	**17 08 13.5**	**-0.4**
WR8				IAmb	IAmb	17 08 50.6	
	comp=Z,8.6nm,1.2s						
WB0	**Warramunga Arr**	**44.31**	**260**	P	**P**	**17 08 14.6**	**-0.3**
WB0				IAmb	IAmb	17 08 28.8	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**44.35**	**259**	P	**P**	**17 08 14.3**	**-0.8**
WRA	**Warramunga Arr**	**44.35**	**259**	P	**P**	**17 08 15.1**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=97,slow=7.0,SNR=9.8						
WRA				PcP	**PcP**	**17 09 47.2**	**+0.8**
	comp=Z,0.6nm,1.0s,baz=103,slow=3.1,SNR=1.9						
	comp=Z,0.9nm,0.6s						
AS31	**Alice Springs**	**44.52**	**254**	P	**P**	**17 08 16.6**	**+0.2**
AS31				PcP	**PcP**	**17 09 47.7**	**+0.7**
ASAR	**Alice Springs**	**44.52**	**254**	P	**P**	**17 08 15.9**	**-0.5**
ASAR				PcP	**PcP**	**17 09 47.9**	**+0.9**
ASAR	**Alice Springs**	**44.52**	**254**	P	**P**	**17 08 16.6**	**+0.1**
	comp=Z,8.3nm,0.6s,baz=89,slow=7.9,SNR=264						
ASAR				PcP	**PcP**	**17 09 47.8**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=102,slow=4.1,SNR=7.1						
	comp=Z,8.3nm,0.6s						
KNRA	**Kununurra**	**50.19**	**264**	P	**P**	**17 08 58.0**	**-0.9**
MJAR	**Matsushiro Arr**	**67.63**	**324**	P	**P**	**17 10 55.3**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=158,slow=12,SNR=1.7						
	comp=Z,0.8nm,0.7s						
LVA	**Lava Point**	**72.49**	**8**	P	**P**	**17 11 23.0**	**-0.5**
P18K	**Big Mountain,**	**79.28**	**12**	P	**P**	**17 12 00.3**	**-0.5**
P18K				IAmb	IAmb	17 12 06.9	
	comp=Z,7.6nm,1.2s						
O18K	**Koktuh Hills**	**79.71**	**12**	P	**P**	**17 12 03.1**	**+0.1**
O18K				IAmb	IAmb	17 12 24.0	
	comp=Z,6.0nm,1.1s						
M17K	**Holitna River**	**80.75**	**10**	P	**P**	**17 12 07.8**	**-0.6**
M17K				IAmb	IAmb	17 12 10.1	
	comp=Z,9.3nm,1.0s						
L18K	**Granite Mounta**	**81.64**	**10**	P	**P**	**17 12 11.7**	**-1.2**
L18K				IAmb	IAmb	17 12 27.2	
	comp=Z,9.4nm,1.4s						
SUA	**Susitna One**	**82.09**	**13**	P	**P**	**17 12 15.3**	**-0.1**
SUA				IAmb	IAmb	17 12 55.4	
	comp=Z,7.3nm,1.4s						
J17K	**VABM Dome**	**82.37**	**9**	P	**P**	**17 12 17.3**	**+0.7**
J17K				IAmb	IAmb	17 12 41.6	
	comp=Z,11nm,1.4s						
J18K	**Innoko River**	**82.80**	**10**	P	**P**	**17 12 17.3**	**-1.5**
K20K	**Telida**	**83.15**	**11**	P	**P**	**17 12 20.4**	**-0.2**
K20K				IAmb	IAmb	17 12 52.8	
	comp=Z,6.9nm,1.5s						
SCM	**Sheep Creek Mo**	**83.20**	**14**	P	**P**	**17 12 20.3**	**-0.6**
SCM				IAmb	IAmb	17 12 32.4	
	comp=Z,5.9nm,1.1s						
SEY	**Seymchan**	**83.60**	**347**	P	**P**	**17 12 22.8**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=143,slow=6.6,SNR=8.8						
	comp=Z,1.8nm,0.6s						
M24K	**Tolsona, Glenn**	**83.71**	**15**	P	**P**	**17 12 23.3**	**-0.1**
M24K				IAmb	IAmb	17 12 52.6	
	comp=Z,5.5nm,1.0s						
TRF	**Thorofare Moun**	**83.97**	**12**	P	**P**	**17 12 24.1**	**-0.7**
TRF				IAmb	IAmb	17 12 53.0	
	comp=Z,6.5nm,1.4s						
Q32M	**Nakina River**	**85.40**	**22**	P	**P**	**17 12 32.8**	**+0.9**
Q32M				IAmb	IAmb	17 13 00.4	
	comp=Z,5.4nm,1.2s						
H21K	**Melozitna Rive**	**85.48**	**10**	P	**P**	**17 12 31.1**	**-0.8**
J25K	**Salcha River,**	**86.05**	**14**	P	**P**	**17 12 34.6**	**-0.1**
TXAR	**Lajitas Array**	**86.20**	**58**	P	**P**	**17 12 38.1**	**+1.8**
	comp=Z,0.6nm,0.7s,baz=204,slow=5.5,SNR=6.3						
	comp=Z,0.6nm,0.7s						
I26K	**Coal Creek Min**	**87.14**	**14**	P	**P**	**17 12 39.0**	**-0.7**
PDAR	**Pinedale Array**	**87.48**	**44**	P	**P**	**17 12 42.0**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=312,slow=2.6,SNR=4.1						
	comp=Z,0.7nm,0.3s						
E23K	**Chandalar**	**88.21**	**11**	P	**P**	**17 12 44.4**	**-0.4**
E23K				IAmb	IAmb	17 13 23.3	
	comp=Z,3.7nm,1.1s						
MMPY	**Sheldon Lake,**	**88.37**	**20**	P	**P**	**17 12 44.6**	**-1.1**
MMPY				IAmb	IAmb	17 13 27.3	
	comp=Z,3.6nm,1.4s						
CMAR	**Chiang Mai Arr**	**88.56**	**290**	P	**P**	**17 12 49.5**	**+2.0**
	comp=Z,0.2nm,0.3s,baz=98,slow=3.4,SNR=2.5						
	comp=Z,0.2nm,0.3s						
B21K	**Ikpikpuk River**	**88.85**	**8**	P	**P**	**17 12 47.4**	**-0.2**
SNAA	**Sanae**	**90.72**	**179**	P	**P**	**17 12 56.3**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=190,slow=12,SNR=1.6						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**108.84**	**314**	PKiKP	**PKiKP**	**17 18 18.8**	**-0.4**
	comp=Z,0.1nm,0.5s,baz=90,slow=4.3,SNR=1.5						
BVAR	**Borovoye Array**	**116.56**	**321**	PKP	**PKPdf**	**17 18 33.4**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=40,slow=4.2,SNR=2.9						
BNN	**Bunyan**	**143.35**	**312**		**PKPdf**	**17 19 24.0**	**-0.6**
BUR08	**Bucovina Ar. S**	**144.35**	**332**		**PKPdf**	**17 19 25.3**	**-0.8**
BURAR	**Bucovina Array**	**144.37**	**332**		**PKPab**	**17 19 26.5**	**0.0**
BR131	**Keskin Array S**	**144.48**	**315**		**PKPdf**	**17 19 26.2**	**-0.4**
BRTR	**Keskin Array B**	**144.48**	**315**		**PKPdf**	**17 19 26.6**	**0.0**
BRTR	**Keskin Array B**	**144.48**	**315**	PKP	**PKPab**	**17 19 27.1**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=48,slow=1.8,SNR=8.9						
CLL	**Collm**	**145.29**	**347**	*i* PKPbc	**PKPab**	**17 19 29.5**	**-0.3**
MMAI	**Mount Meron Ar**	**145.82**	**303**	PKPbc	**PKPab**	**17 19 31.8**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=49,slow=6.7,SNR=1.7						
GERES	**GERESS Array B**	**147.42**	**345**	PKPbc	**PKPbc**	**17 19 35.2**	**+0.6**
	comp=Z,1.1nm,0.5s,baz=348,slow=3.3,SNR=7.7						

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*NEIC **04** 17:04:58.4±0.7, 59°.92N±0°.04×153°.19W±0°.08, h117^{km}±1^{km}, Error ellipse: s-maj=6.0km s-min=5.2km az=139.0*

*IDC **04** 17:04:59.2±1.3, 59°.48N×150°.66W, h0^{km}, mb3.5/1, mbtmp3.4/3, ML3.5/2, MS3.1/2, Error ellipse: s-maj=54.4km s-min=11.5km az=116.0*

*AEIC **04** 17:04:59.6±1.4, 59°.89N±0°.03×153°.20W±0°.08, h112^{km}±4^{km}, ML3.0, ML3.1/20(NEIC), Error ellipse: s-maj=6.1km s-min=4.6km az=94.0*

ISC 04 17:04:58.3±1.2, **59°.90N**±0°.04×**153°.20W**±0°.04, **h118**^{km}±7^{km}, **n123**, σ**0^{s}.66**/125, **Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILS	**Iliamna Low So**	**0.09**	**47**		**Pn**	**17 05 14.4**	**-0.1**
ILS					**Sn**	**17 05 26.7**	**0.0**
OPT	**Oil Point**	**0.24**	**184**		**Pn**	**17 05 15.1**	**+0.3**
P19K	**Oil Pt**	**0.24**	**184**		**Pn**	**17 05 14.8**	**0.0**
P19K	**Oil Pt**	**0.24**	**184**		**Sn**	**17 05 27.4**	**+0.2**
O20K	**Slope Mountain**	**0.34**	**57**		**Pn**	**17 05 15.5**	**+0.3**
O20K					**Sn**	**17 05 28.4**	**+0.4**
AUL	**Augustine Lava**	**0.53**	**193**		**Pn**	**17 05 16.6**	**+0.5**
AU22	**Augustine Moun**	**0.53**	**189**		**Pn**	**17 05 16.5**	**+0.3**
AU22					**Sn**	**17 05 29.7**	**+0.2**
AUCH	**Augustine Cone**	**0.55**	**193**		**Pn**	**17 05 16.8**	**+0.4**
RED	**Redoubt Volcan**	**0.57**	**22**		**Pn**	**17 05 16.5**	**0.0**
RED				IAML		17 05 31.0	
	comp=E,334nm,0.9s						
RED				IAML		17 05 31.1	
	comp=N,189nm,0.9s						
RED	**Redoubt Volcan**	**0.57**	**22**		**Sn**	**17 05 29.7**	**-0.6**
RDWB	**Redoubt West**	**0.62**	**17**		**Pn**	**17 05 16.9**	**-0.1**
RDWB					**Sn**	**17 05 30.4**	**-0.6**
O19K	**Port Alsworth**	**0.64**	**299**		**Pn**	**17 05 16.8**	**-0.1**
O19K				IAML		17 05 31.1	
	comp=E,479nm,0.4s						
O19K				IAML		17 05 31.4	
	comp=N,399nm,0.4s						
O19K	**Port Alsworth**	**0.64**	**299**		**Sn**	**17 05 30.3**	**-0.6**
HOM	**Homer**	**0.82**	**106**		**Pn**	**17 05 18.7**	**+0.4**
HOM				IAML		17 05 35.4	
	comp=N,465nm,0.5s						
Q19K	**Cape Douglas,**	**1.00**	**193**		**Pn**	**17 05 20.2**	**+0.1**
Q19K				IAML		17 05 43.3	
	comp=E,409nm,1.0s						
O18K	**Koktuh Hills**	**1.01**	**269**		**Pn**	**17 05 20.0**	**-0.2**
CNPM	**China Poot**	**1.06**	**110**		**Pn**	**17 05 20.9**	**+0.2**
CNPM				IAML		17 05 38.1	
	comp=N,305nm,0.7s						
CNPM				IAML		17 05 38.3	
	comp=E,327nm,0.6s						
N19K	**Bonanza Creek**	**1.12**	**326**		**Pn**	**17 05 21.4**	**0.0**
N19K				IAML		17 05 39.5	
	comp=N,87nm,0.7s						
P18K	**Big Mountain,**	**1.15**	**245**		**Pn**	**17 05 21.3**	**-0.3**
BRLK	**Bradley Lake**	**1.18**	**95**		**Pn**	**17 05 22.0**	**+0.1**
BRLK				IAML		17 05 40.5	
	comp=E,327nm,0.2s						
SYI	**Shuyak Island**	**1.35**	**162**		**Pn**	**17 05 24.2**	**+0.4**
SPBG	**Spurr Blockage**	**1.43**	**16**		**Pn**	**17 05 24.6**	**-0.1**
N18K	**Kilae Creek**	**1.55**	**302**		**Pn**	**17 05 26.0**	**-0.2**
KAHC	**Katmai Hardscr**	**1.56**	**217**		**Pn**	**17 05 26.5**	**+0.2**
KAHG	**Katmai Hook Gl**	**1.57**	**207**		**Pn**	**17 05 26.9**	**+0.5**
SLKM	**Skilak Lake**	**1.61**	**66**		**Pn**	**17 05 26.9**	**0.0**
STLK	**Strandline Lak**	**1.74**	**22**		**Pn**	**17 05 28.7**	**+0.2**
O22K	**Cooper Landing**	**1.83**	**70**		**Pn**	**17 05 29.5**	**+0.1**
SEW	**Seward**	**1.89**	**82**		**Pn**	**17 05 30.1**	**-0.1**
FIS	**Fire Island**	**1.94**	**48**	Pn	**Pn**	**17 05 32.2**	**+1.5**
O17K	**Koliganek Bris**	**1.97**	**268**		**Pn**	**17 05 31.5**	**+0.3**
SUA	**Susitna One**	**1.98**	**36**		**Pn**	**17 05 31.9**	**+0.4**
M20K	**Styx River**	**1.99**	**1**		**Pn**	**17 05 31.9**	**+0.3**
ACHA	**Angle Creek He**	**2.02**	**214**		**Pn**	**17 05 32.0**	**+0.2**
ANCK	**Angle Creek**	**2.07**	**216**		**Pn**	**17 05 33.2**	**+0.6**
N17K	**Nushagak Hills**	**2.09**	**289**		**Pn**	**17 05 32.8**	**+0.1**
N17K					**Sn**	**17 05 59.0**	**0.0**
RC01	**Rabbit Creek A**	**2.09**	**54**		**Pn**	**17 05 32.5**	**-0.2**
M19K	**Big River Lodg**	**2.10**	**344**		**Pn**	**17 05 32.8**	**0.0**
KDAK	**Kodiak Island**	**2.14**	**171**		**Pn**	**17 05 32.5**	**-0.9**
KDAK	**Kodiak Island**	**2.14**	**171**	Pn	**Pn**	**17 05 32.6**	**-0.8**
	comp=E,13nm,0.3s,baz=29,slow=7.1,SNR=54						
KDAK				Pg		17 05 35.7	
	comp=E,14nm,0.3s,baz=27,slow=7.6,SNR=36						
KDAK				Sn	**Sn**	**17 05 58.5**	**-1.7**
	comp=E,29nm,0.3s,baz=131,slow=19,SNR=22						
CNTC	**Contact Creek**	**2.14**	**221**		**Pn**	**17 05 33.9**	**+0.4**
SKT	**Skwentna**	**2.25**	**21**		**Pn**	**17 05 35.2**	**+0.5**
M22K	**Willow**	**2.40**	**38**		**Pn**	**17 05 36.7**	**+0.2**
R18K	**Karluk**	**2.43**	**196**		**Pn**	**17 05 36.4**	**-0.5**
L19K	**White Mountain**	**2.43**	**341**		**Pn**	**17 05 36.9**	**-0.1**
O16K	**Kokwok River B**	**2.50**	**265**		**Pn**	**17 05 38.5**	**+0.6**
M17K	**Holitna River**	**2.58**	**308**		**Pn**	**17 05 39.0**	**+0.1**
P16K	**Nushagak River**	**2.59**	**253**		**Pn**	**17 05 40.3**	**+1.2**
PWL	**Port Wells**	**2.60**	**66**		**Pn**	**17 05 38.3**	**-0.9**
PMR	**Palmer**	**2.62**	**48**	P	**Pn**	**17 05 39.6**	**+0.1**
OHAK	**Old Harbor**	**2.68**	**181**		**Pn**	**17 05 39.0**	**-1.2**
OHAK	**Old Harbor**	**2.68**	**181**	P	Pn	17 05 35.8	-4.5
KNK	**Knik Glacier**	**2.79**	**55**		**Pn**	**17 05 40.8**	**-0.9**
GHO	**Glory Hole Cre**	**2.82**	**46**		**Pn**	**17 05 41.3**	**-0.8**
N16K	**Nishlik Lake**	**2.84**	**284**		**Pn**	**17 05 43.2**	**+0.8**
CUT	**Chulitna**	**2.89**	**28**		**Pn**	**17 05 43.2**	**+0.3**
P23K	**Montague Islan**	**2.92**	**85**		**Pn**	**17 05 43.2**	**-0.1**
PPLA	**Purkeypile**	**3.05**	**9**		**Pn**	**17 05 45.6**	**+0.4**
SML	**Sawmill**	**3.06**	**49**		**Pn**	**17 05 44.2**	**-1.0**
GLI	**Glacier Island**	**3.19**	**69**		**Pn**	**17 05 45.6**	**-1.3**
SII	**Sitkinak Islan**	**3.39**	**189**		**Pn**	**17 05 48.3**	**-1.3**
SII	**Sitkinak Islan**	**3.39**	**189**	P	**Pn**	**17 05 47.8**	**-1.8**
FID	**Port Fidalgo**	**3.45**	**73**		**Pn**	**17 05 48.6**	**-1.7**
SCM	**Sheep Creek Mo**	**3.47**	**53**		**Pn**	**17 05 49.8**	**-0.9**
Q23K	**Middleton Isla**	**3.51**	**95**		**Pn**	**17 05 51.5**	**+0.4**
CAST	**Castle Rocks**	**3.58**	**8**		**Pn**	**17 05 52.4**	**+0.4**
KTH	**Kantishna Hill**	**3.83**	**15**		**Pn**	**17 05 55.4**	**-0.1**
TRF	**Thorofare Moun**	**3.83**	**20**		**Pn**	**17 05 55.4**	**-0.2**
KLU	**Klutina**	**3.92**	**63**		**Pn**	**17 05 55.8**	**-0.9**
M24K	**Tolsona, Glenn**	**4.08**	**54**		**Pn**	**17 05 58.6**	**-0.1**
RND	**Reindeer**	**4.09**	**29**		**Pn**	**17 05 58.4**	**-0.5**
DHY	**Denali Highway**	**4.24**	**39**		**Pn**	**17 06 00.7**	**-0.3**
J19K	**Poorman**	**4.27**	**346**		**Pn**	**17 06 01.0**	**-0.3**
CHIR	**Chirikof Islan**	**4.29**	**199**		**Pn**	**17 06 00.4**	**-1.2**
CHIR	**Chirikof Islan**	**4.29**	**199**	P	**Pn**	**17 06 00.3**	**-1.2**
J20K	**Nowinta River**	**4.32**	**354**		**Pn**	**17 06 02.0**	**0.0**
BPAW	**Bear Paw Mtn.**	**4.35**	**13**		**Pn**	**17 06 01.9**	**-0.5**
MCK	**McKinley**	**4.35**	**26**		**Pn**	**17 06 02.5**	**+0.1**
BMRM	**Bremner River**	**4.39**	**72**		**Pn**	**17 06 03.1**	**+0.1**
HMT	**Hamilton**	**4.49**	**80**		**Pn**	**17 06 04.3**	**-0.1**
N25K	**Chitina, Valde**	**4.55**	**64**		**Pn**	**17 06 04.8**	**-0.4**
BWN	**Browne**	**4.64**	**21**		**Pn**	**17 06 06.8**	**+0.6**
NICHA	**Nichawak Mount**	**4.64**	**82**		**Pn**	**17 06 06.4**	**+0.2**
WACK	**Wrangell Chich**	**4.81**	**60**		**Pn**	**17 06 08.4**	**-0.3**
PAX	**Paxson**	**4.82**	**47**		**Pn**	**17 06 08.6**	**-0.2**
KHIT	**Khitrov Hills**	**5.00**	**79**		**Pn**	**17 06 11.1**	**-0.1**
NEA2	**Nenana**	**5.09**	**20**		**Pn**	**17 06 11.7**	**-0.7**
WRH	**Wood River Hil**	**5.18**	**25**		**Pn**	**17 06 12.9**	**-0.5**
WAX	**Waxell Ridge**	**5.20**	**79**		**Pn**	**17 06 13.7**	**-0.1**
K24K	**Donnelly Dome**	**5.26**	**39**		**Pn**	**17 06 15.1**	**+0.4**
MLY	**Manley**	**5.28**	**11**		**Pn**	**17 06 14.5**	**-0.4**
I21K	**Tanana**	**5.33**	**6**		**Pn**	**17 06 15.5**	**-0.1**
CCB	**Clear Creek Bu**	**5.39**	**26**		**Pn**	**17 06 15.6**	**-0.7**
HDA	**Harding Lake**	**5.39**	**30**		**Pn**	**17 06 15.9**	**-0.5**
RIDG	**Independent Ri**	**5.53**	**42**		**Pn**	**17 06 18.3**	**+0.1**
I23K	**Minto, Yukon-K**	**5.56**	**17**		**Pn**	**17 06 18.2**	**-0.4**
MESA	**MESA**	**5.65**	**82**		**Pn**	**17 06 20.7**	**+0.7**
IL31		**5.71**	**28**		**Pn**	**17 06 19.8**	**-0.7**
ILAR	**Eielson Array**	**5.71**	**28**	Pn	**Pn**	**17 06 19.3**	**-1.3**
ILAR	**Eielson Array**	**5.71**	**28**	Pn	**Pn**	**17 06 19.0**	**-1.5**
	comp=E,3.2nm,0.3s,baz=216,slow=14,SNR=74						
	comp=E,5.5nm,0.5s						
DOT	**Dot Lake**	**5.74**	**45**		**Pn**	**17 06 21.1**	**0.0**
YAH	**Yahtse**	**5.75**	**80**		**Pn**	**17 06 22.0**	**+0.7**
H21K	**Melozitna Rive**	**5.79**	**2**		**Pn**	**17 06 21.8**	**+0.1**
POKR	**Poker Plat Res**	**5.88**	**25**		**Pn**	**17 06 22.6**	**-0.3**
SCRK	**Sand Creek**	**5.97**	**43**		**Pn**	**17 06 23.3**	**-1.0**
J25K	**Salcha River,**	**5.98**	**34**		**Pn**	**17 06 23.9**	**-0.4**
CHX	**Chaix Hills**	**6.07**	**83**		**Pn**	**17 06 26.4**	**+0.8**
CHNA	**Chernabura Isl**	**6.14**	**217**	P	**Pn**	**17 06 28.4**	**+1.9**
H23K	**Yukon River**	**6.18**	**14**		**Pn**	**17 06 27.0**	**0.0**
SAMH	**Samovar Hills**	**6.23**	**82**		**Pn**	**17 06 28.8**	**+1.0**
H24K	**Noodor Dome**	**6.44**	**20**		**Pn**	**17 06 29.7**	**-0.8**
J26L	**Joseph Creek**	**6.45**	**40**		**Pn**	**17 06 30.0**	**-0.8**
PCA	**Pinnacle**	**6.50**	**83**		**Pn**	**17 06 31.2**	**-0.1**
O28M	**Mount Upton**	**6.52**	**77**		**Pn**	**17 06 32.8**	**+1.0**
PRP	**Porcupine Dome**	**6.65**	**29**		**Pn**	**17 06 32.7**	**-0.8**
YUK8	**Steele Glacier**	**6.76**	**72**		**Pn**	**17 06 36.5**	**+1.4**
PNL	**Peninsula**	**6.97**	**86**		**Pn**	**17 06 37.9**	**+0.2**
G23K	**Bananza Creek**	**6.99**	**10**		**Pn**	**17 06 37.8**	**-0.1**
I27K	**Kandik River**	**7.80**	**38**		**Pn**	**17 06 49.1**	**+0.1**
YKA	**Yellowknife Ar**	**18.59**	**65**	P	**P**	**17 09 06.0**	**+0.2**
	comp=E,0.1nm,0.3s,baz=263,slow=14,SNR=5.2						
	comp=E,0.2nm,0.4s						
USRK	**Ussuriysk Ar.**	**45.97**	**285**	LR	LR	17 34 45.0	
	comp=E,33nm,20.4s,baz=8.3,slow=38						
JMIC	**Jan Mayen**	**47.07**	**15**	LR	LR	17 34 33.9	
	comp=E,14nm,20.9s,baz=215,slow=38						
MKAR	**Makanchi Array**	**64.45**	**321**	P	P	17 15 44.4	+23
	comp=E,0.3nm,0.6s,baz=44,slow=6.0,SNR=1.8						
	comp=E,0.3nm,0.6s						

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*NEIC **04** 17:05:10.4±1.6, 56°.18N±0°.07×149°.3W±0°.1, h10^{km}±2^{km}, ML3.9/50, ML3.5(AEIC), Error ellipse: s-maj=12.4km s-min=9.8km az=174.0*

*IDC **04** 17:05:11.4±0.9, 56°.25N×149°.32W, h0^{km}, mb3.8/7, mbtmp3.7/12, ML3.7/5, MS3.0/15, Error ellipse: s-maj=20.7km s-min=15.4km az=23.0*

*AEIC **04** 17:05:15.7±1.5, 56°.23N±0°.09×149°.3W±0°.1, h10^{km}±7^{km}, Error ellipse: s-maj=12.9km s-min=8.9km az=167.0*

ISC 04 17:05:11.7±0.7, **56°.31N**±0°.08×**149°.31W**±0°.05, **h10**^{km}, **n159**, σ**1^{s}.30**/140, **mb3.8**/7, **MS3.0**/13, **Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.32**	**311**		**Pn**	**17 05 49.0**	**-0.9**
KDAK	**Kodiak Island**	**2.32**	**311**	Pn	**Pn**	**17 05 50.0**	**+0.2**
	8.2nm,0.3s,baz=79,slow=5.2,SNR=14						
KDAK				Sn	**Sn**	**17 06 17.3**	**-1.1**
	30nm,0.3s,baz=114,slow=20,SNR=18						
	33nm,0.5s						
OHAK	**Old Harbor**	**2.37**	**294**		**Pn**	**17 05 49.9**	**-0.7**
OHAK					**Sn**	**17 06 17.3**	**-2.4**
SII	**Sitkinak Islan**	**2.72**	**277**		**Pn**	**17 05 54.4**	**-1.0**
SII					**Sn**	**17 06 25.7**	**-2.5**
SII	**Sitkinak Islan**	**2.72**	**277**	IAML		17 06 29.6	
	comp=E,278nm,0.5s						
SYI	**Shuyak Island**	**2.84**	**325**		**Pn**	**17 05 56.6**	**-0.5**
SYI	**Shuyak Island**	**2.84**	**325**	IAML		17 06 33.4	
	comp=E,226nm,0.5s						
SYI				IAML		17 06 33.6	
	comp=N,208nm,0.5s						
R18K	**Karluk**	**3.08**	**296**		**Pn**	**17 06 00.5**	**+0.1**
R18K					**Sn**	**17 06 35.0**	**-2.2**
R18K	**Karluk**	**3.08**	**296**	IAML		17 06 43.4	

	comp=E,384nm,0.3s						
R18K				IAML		17 06 45.6	
	comp=N,441nm,0.4s						
Q23K	Middleton Isla	3.51	26	Pn	Pn	17 06 05.8	-0.4
Q23K				IAML		17 06 46.1	
	comp=N,139nm,0.9s						
Q23K				IAML		17 06 56.0	
	comp=E,192nm,1.1s						
Q19K	Cape Douglas,	3.51	320		Pn	17 06 07.6	+1.3
BRSE	Bradley Lake S	3.52	348		Pn	17 06 06.4	-0.1
BRLK	Bradley Lake	3.56	347	Pn	Pn	17 06 07.3	+0.3
CHIR	Chirikof Islan	3.57	265		Pn	17 06 05.7	-1.4
CHIR				IAML		17 06 50.8	
	comp=N,95nm,1.3s						
CHIR				IAML		17 06 53.6	
	comp=E,94nm,1.6s						
CHIR	Chirikof Islan	3.57	265		Sn	17 06 45.2	-4.1
KAHG	Katmai Hook Gl	3.58	310		Pn	17 06 08.5	+1.2
ACHA	Angle Creek He	3.78	303		Pn	17 06 11.3	+1.3
P23K	Montague Islan	3.83	15	Pn	Pn	17 06 10.4	-0.3
P23K				IAML		17 07 00.0	
	comp=E,154nm,0.6s						
P23K				IAML		17 07 00.8	
	comp=N,143nm,0.6s						
ANCK	Angle Creek	3.85	302		Pn	17 06 11.7	+0.6
ANCK					Pb	17 06 12.9	-6.9
KAHC	Katmai Hardscr	3.87	310		Pn	17 06 12.5	+1.2
CNTC	Contact Creek	4.07	302		Pn	17 06 14.7	+0.6
SLKM	Skilak Lake	4.24	354	Pn	Pn	17 06 16.6	+0.3
SLKM				IAML		17 07 06.5	
	comp=E,180nm,0.4s						
SLKM				IAML		17 07 06.7	
	comp=N,126nm,0.3s						
PLK1	Peulik 1	4.25	294		Pn	17 06 17.1	+0.7
HIN	Hinchinbrook I	4.36	19		Pn	17 06 17.7	-0.2
HIN				IAML		17 07 18.6	
	comp=E,132nm,0.8s						
P18K	Big Mountain,	4.42	317		Pn	17 06 19.0	+0.2
P18K	Big Mountain,	4.42	317	IAML		17 07 11.1	
	comp=E,54nm,0.3s						
KAIM	Kayak Island	4.46	34		Pn	17 06 19.0	-0.3
KAIM	Kayak Island	4.46	34	IAML		17 07 23.6	
	comp=E,152nm,1.1s						
Q16K	King Salmon	4.62	304		Pn	17 06 22.6	+1.2
EYAK	Cordova Ski Ar	4.64	22		Pn	17 06 22.0	+0.2
EYAK				IAML		17 07 20.2	
	comp=N,114nm,0.8s						
EYAK				IAML		17 07 20.5	
	comp=E,82nm,0.6s						
FID	Port Fidalgo	4.69	17	Pn	Pn	17 06 21.8	-0.8
FID				IAML		17 07 14.2	
	comp=E,83nm,0.5s						
FID				IAML		17 07 26.1	
	comp=N,64nm,0.7s						
O18K	Koktuh Hills	4.73	321	Pn	Pn	17 06 23.6	+0.5
O18K				IAML		17 07 28.5	
	comp=E,49nm,0.5s						
O18K				IAML		17 07 33.0	
	comp=N,71nm,0.7s						
RAGM	Ragged Mountai	4.76	29		Pn	17 06 23.4	-0.2
SUCK	Suckling Hills	4.78	36		Pn	17 06 23.6	0.0
SUCK				IAML		17 07 22.0	
	comp=E,108nm,0.8s						
SUCK				IAML		17 07 29.6	
	comp=N,115nm,1.1s						
HMT	Hamilton	4.84	31	Pn	Pn	17 06 24.9	+0.4
BGLC	Bering Glacier	4.97	37		Pn	17 06 26.7	+0.4
ANPB	Aniakchak Plen	4.99	279		Pn	17 06 27.1	+0.6
BERG	Berg Lake	5.05	33		Pn	17 06 27.1	-0.3
GRIN	Grindle Hills	5.08	36		Pn	17 06 28.2	+0.3
DIV	Divide	5.17	19		Pn	17 06 29.6	+0.5
DIV				IAML		17 07 34.8	
	comp=N,42nm,0.7s						
DIV				IAML		17 07 38.5	
	comp=E,31nm,0.7s						
N19K	Bonanza Creek	5.26	331	Pn	Pn	17 06 31.0	+0.5
BMRM	Bremner River	5.28	26	Pn	Pn	17 06 30.6	0.0
BMRM				IAML		17 07 38.2	
	comp=E,79nm,0.9s						
BMRM				IAML		17 07 39.2	
	comp=N,76nm,0.7s						
WAX	Waxell Ridge	5.36	37	Pn	Pn	17 06 31.6	-0.2
P16K	Nushagak River	5.40	304		Pn	17 06 33.2	+1.1
KLU	Klutina	5.49	17	Pn	Pn	17 06 33.1	-0.4
MESA	MESA	5.49	42		Pn	17 06 32.7	-1.0
VNHG	Veniaminof 1	5.49	273		Pn	17 06 34.2	+0.7
CRQM	Cirque	5.51	33		Pn	17 06 33.5	-0.3
TGL	Tana Glacier	5.60	35		Pn	17 06 34.8	-0.3
YAH	Yahtse	5.69	41	Pn	Pn	17 06 36.1	-0.3
VNFG	Fog Glacier, M	5.70	274		Pn	17 06 36.5	0.0
O16K	Kokwok River B	5.72	309		Pn	17 06 37.5	+1.0
RKAV	Rock Avalanche	5.80	43		Pn	17 06 38.7	+0.9
N25K	Chitina, Valde	5.84	23		Pn	17 06 38.5	+0.1
SAMH	Samovar Hills	5.91	46		Pn	17 06 41.5	+2.1
GRNC	Granite Creek	5.94	39		Pn	17 06 39.1	-0.8
CNBA	Chernabura Isl	6.02	260		Pn	17 06 39.5	-1.1
MCARA	McCarthy VSAT	6.04	30		Pn	17 06 41.4	+0.3
CTGM	Chitina Glacie	6.25	38		Pn	17 06 43.8	-0.3
LOGN	Logan Glacier	6.27	40		Pn	17 06 44.1	-0.3
BCPM	Bancas Point	6.29	51	Pn	Pn	17 06 43.9	-0.6
O15K	Ungalikthiuk R	6.32	301		Pn	17 06 45.6	+0.8
SDPT	Sand Point	6.36	266		Pn	17 06 44.8	-0.7
L19K	White Mountain	6.54	337	Pn	Pn	17 06 47.9	+0.1
O28M	Mount Upton	6.54	43	Pn	Pn	17 06 47.8	-0.4
M17K	Holitna River	6.62	324	Pn	Pn	17 06 49.2	+0.3
N15K	Kwethluk River	6.88	309		Pn	17 06 53.7	+1.2
M16K	Timber Creek	6.90	317	Pn	Pn	17 06 52.4	-0.3
P29M	Windy Craggy	7.00	57		Pn	17 06 50.4	-3.8
O14K	Tigyukauivet M	7.04	300	Pn	Pn	17 06 54.5	-0.1
M27K	Edge Creek, AK	7.16	29		Pn	17 06 55.4	-1.1
S12K	Black Hills	7.17	270	Pn	Pn	17 06 55.6	-1.0
S31K	Pelican	7.31	71		Pn	17 06 54.8	-3.6
N14K	Kuskokwak Cree	7.48	304	Pn	Pn	17 07 01.9	+1.2
L16K	Owhat River	7.53	320	Pn	Pn	17 07 01.9	+0.4
HYT	Haines Junctio	7.65	49	Pn	Pn	17 07 03.2	0.0
SIT	Sitka	7.74	79	Pn	Pn	17 07 00.6	-3.7
SIT	Sitka	7.74	79	P	Pn	17 07 00.9	-3.4
L27K	Beaver Creek,	7.75	26	Pn	Pn	17 07 05.1	+0.6
BCAR	Beaver Creek A	7.77	26	Pn	Pn	17 07 05.6	+0.9
RIDG	Independent Ri	7.78	15	Pn	Pn	17 07 06.0	+1.1
BPAW	Bear Paw Mtn.	7.86	355	Pn	Pn	17 07 05.9	0.0
K17K	Iditarod	7.88	328	Pn	Pn	17 07 06.0	-0.2
M14K	Bethel	7.97	309	Pn	Pn	17 07 08.7	+1.2
BESE	Bessie Mountai	8.12	68	Pn	Pn	17 07 07.8	-1.8
S32K	Killisnoo	8.15	76	Pn	Pn	17 07 06.9	-3.0
N30M	Aishikik Lake	8.16	46		Pn	17 07 09.9	-0.2
O30N	Mendenhall	8.23	52		Pn	17 07 10.6	-0.5
R32K	Eaglecrest	8.25	70		Pn	17 07 09.9	-1.4
M29M	Somme Creek	8.27	38	Pn	Pn	17 07 12.5	+0.8
CCB	Clear Creek Bu	8.40	4	Pn	Pn	17 07 14.3	+1.0
L14K	Kuka Creek	8.57	312		Pn	17 07 16.3	+0.7
IL31		8.57	7	Pn	Pn	17 07 16.1	+0.4
ILAR	Eielson Array	8.57	7	Pn	Pn	17 07 15.5	-0.3
	comp=N,1.5nm,0.3s,baz=187,slow=13,SNR=5.4						
ILAR				Sn	Sn	17 08 49.3	-3.1
	comp=N,0.4nm,0.3s,baz=226,slow=16,SNR=1.9						
ILAR				LR	LR	17 10 55.9	
	comp=N,75nm,18.2s,baz=112,slow=40						
	comp=N,2.6nm,0.4s						
J17K	VABM Dome	8.63	329	Pn	Pn	17 07 16.8	+0.3
K15K	Wolf Creek Mou	8.65	319	Pn	Pn	17 07 17.8	+1.0
N31M	Braeburn, Yuko	8.71	48		Pn	17 07 17.4	-0.2
WHY	Whitehorse	8.72	54		Pn	17 07 17.2	-0.6
MLY	Manley	8.78	356	Pn	Pn	17 07 18.8	+0.2
L29M	L29M	8.84	35		Pn	17 07 19.9	+0.4
I23K	Minto, Yukon-K	8.87	360	Pn	Pn	17 07 20.6	+0.8
P32M	Atlin	8.92	62		Pn	17 07 18.2	-2.3
I21K	Tanana	8.99	353	Pn	Pn	17 07 20.8	-0.7
J16K	Anvik River	9.00	326	Pn	Pn	17 07 20.8	-0.8
U33K	Whale Pass	9.03	85	Pn	Pn	17 07 17.7	-4.2
Q32M	Nakina River	9.52	67	Pn	Pn	17 07 27.4	-1.4
P33M	Teslin, Yukon	9.52	59		Pn	17 07 28.0	-0.8
H21K	Melozitna Rive	9.53	351		Pn	17 07 27.7	-1.1
K29M	Barlow Dome	9.56	33		Pn	17 07 27.6	-1.8
AKUT	Akutan	9.65	264	Pn	Pn	17 07 28.1	-2.4
K13K	Kusilvak Mount	9.68	312	Pn	Pn	17 07 30.2	-0.6
LVA	Lava Point	9.79	264	Pn	Pn	17 07 31.8	-0.6
UNV	Unalaska Valle	10.16	263	Pn	Pn	17 07 35.8	-1.6
R33M	Jennings River	10.25	65		Pn	17 07 36.7	-2.1
G23K	Bananza Creek	10.44	358	Pn	Pn	17 07 41.5	+0.1
J30M	Hart River	10.46	32		Pn	17 07 40.1	-1.5
G24K	Hadweenzic Riv	10.46	4		Pn	17 07 41.1	-0.5
FYU	Fort Yukon	10.47	9		Pn	17 07 41.2	-0.5
DLBC	Dease Lake	10.62	70	Pn	Pn	17 07 44.5	+0.6
	comp=N,0.7nm,0.3s,baz=231,slow=17,SNR=5.2						
DLBC				Sn	Sn	17 09 41.7	-1.1
	comp=N,0.2nm,0.3s,baz=232,slow=19,SNR=1.8						
	comp=N,1.0nm,0.3s						
F20K	Avaraart Lake	11.19	347		Pn	17 07 51.2	-0.2
BMAR	Burnt Mountain	11.38	9	Pn	Pn	17 07 55.0	+0.9
SPIA	Saint Paul Isl	11.52	283	Pn	Pn	17 07 55.1	-0.9
NIKH	Nikolski High	11.79	262	Pn	Pn	17 07 58.9	-0.9
E24K	Your Creek	11.81	2	Pn	Pn	17 08 00.7	+0.6
H31M	Peel River	11.93	31		Pn	17 08 01.1	-0.5
E21K	Killik River	12.36	352		Pn	17 08 05.8	-1.7
D23K	Nanushuk River	12.72	358		Pn	17 08 12.6	+0.2
BBB	Bella Bella	13.05	100	LR	LR	17 11 56.4	
	comp=N,91nm,20.7s,baz=274,slow=31						
INK	Inuvik	14.03	25	Pn	Pn	17 08 32.4	+2.2
	comp=N,0.3nm,0.3s,baz=192,slow=14,SNR=3.9						
	comp=N,3.9nm,0.9s						
B20K	Meade River	14.18	349	Pn	Pn	17 08 32.1	-0.2
B22K	Teshekpuk Lake	14.20	354	Pn	Pn	17 08 33.1	+0.6
YKA	Yellowknife Ar	18.54	56	P	Pn	17 09 29.1	+0.9
	comp=N,0.1nm,0.3s,baz=270,slow=12,SNR=9.1						
	comp=N,0.1nm,0.3s						
NEW	Newport	21.11	99	LR	LR	17 16 38.0	
	comp=N,58nm,20.4s,baz=355,slow=32						
ELK	Elko	27.05	111	LR	LR	17 19 26.1	
	comp=N,37nm,21.3s,baz=308,slow=32						
NVAR	Mina Array Bea	27.24	118	P	P	17 10 57.6	+1.6
	comp=N,1.3nm,0.9s,baz=304,slow=8.6,SNR=5.2						
	comp=N,1.3nm,0.9s						
PDAR	Pinedale Array	28.69	101	LR	LR	17 22 42.9	
	comp=N,23nm,18.4s,baz=352,slow=37						
PETK	Petropavlovsk-	30.15	287	LR	LR	17 23 12.3	
	comp=N,24nm,20.4s,baz=70,slow=36						
MA2	Magadan	31.03	301	LR	LR	17 25 39.8	
	comp=N,25nm,18.3s,baz=92,slow=40						
PFO	Pinyon Flats O	31.99	121	LR	LR	17 22 58.1	
	comp=N,36nm,18.5s,baz=94,slow=33						
ANMO	Albuquerque	36.00	108	LR	LR	17 24 44.9	
	comp=N,18nm,18.9s,baz=38,slow=33						
YAK	Yakutsk	39.34	313	LR	LR	17 31 59.5	
	comp=N,20nm,18.5s,baz=70,slow=41						
TXAR	Lajitas Array	41.85	111	P	P	17 13 03.6	+1.7
	comp=N,0.1nm,0.3s,baz=289,slow=6.3,SNR=5.6						
	comp=N,0.1nm,0.3s						
ASAJ	Asahikawa	43.47	284	P	P	17 13 17.3	+2.6
	comp=N,2.3nm,0.8s,baz=68,slow=5.5,SNR=4.8						
	comp=N,2.3nm,0.8s						
H11N2	WAKE ISLAND Hy	48.88	240	T	T	18 07 19.2	
	baz=29,slow=74						
H11N3	WAKE ISLAND Hy	48.89	240	T	T	18 07 17.0	
	baz=29,slow=74						
H11N1	WAKE ISLAND Hy	48.90	240	T	T	18 07 13.6	
	baz=29						
H11S1	WAKE ISLAND Hy	50.02	239	T	T	18 08 50.3	
	baz=29,slow=76,SNR=7.9						
H11S2	WAKE ISLAND Hy	50.04	239	T	T	18 08 52.5	
	baz=29,slow=76,SNR=4.6						
H11S3	WAKE ISLAND Hy	50.04	239	T	T	18 08 39.9	
	baz=29,slow=76,SNR=5.6						
SONM	Songino Array	58.61	310	P	P	17 15 09.6	+1.0
	comp=N,0.5nm,0.4s,baz=45,slow=6.3,SNR=5.3						
	comp=N,0.5nm,0.4s						
NOA	NORSAR Array B	61.99	11	LR	LR	17 41 52.2	
	comp=N,4.9nm,21.9s,baz=240,slow=36						
FINES	FINESS Array B	62.53	2	P	P	17 15 36.2	+1.3
	comp=N,1.6nm,0.9s,baz=344,slow=7.7,SNR=2.0						
	comp=N,1.6nm,0.9s						
HFS	Hagfors	63.12	9	LR	LR	17 45 16.4	
	comp=N,13nm,18.3s,baz=330,slow=38						
BVAR	Borovoye Array	66.25	335	LR	LR	17 51 55.3	
	comp=N,17nm,18.2s,baz=332,slow=42						
MKAR	Makanchi Array	68.56	325	P	P	17 16 15.1	+0.9
	comp=N,0.4nm,0.6s,baz=19,slow=5.2,SNR=5.7						
	comp=N,0.4nm,0.6s						
PPT	Papeete	73.59	180	LR	LR	17 42 41.4	
	comp=N,25nm,20.3s,baz=110,slow=31						
VRAC	Vranov	74.10	10	LR	LR	17 51 55.5	
	comp=N,12nm,18.4s,baz=288,slow=38						
CMAR	Chiang Mai Arr	86.25	298	P	P	17 17 54.3	+0.7
	comp=N,0.2nm,0.3s,baz=34,slow=5.5,SNR=2.6						
	comp=N,0.2nm,0.3s						
QSPA	South Pole Qui	146.10	180	PKPbc	PKPbc	17 24 50.3	-0.2
	comp=N,0.8nm,0.7s,baz=13,slow=3.4,SNR=6.2						

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*IDC **04** 17:05:26.6±1.4, 12°.37N×124°.86E, h0^{km}, mb3.8/8, mbtmp3.8/8, Error ellipse: s-maj=143.0km s-min=18.9km az=69.0*

ISC 04 17:05:32.6±1.3**, 12°.4N**±0°.4×**124°.9E**±0°.9**, h44**^{km}**, n14,** σ**0^{s}80**/8**, mb3.7**/8**, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	33.45	164	P	P	17 12 08.2	+0.6
	0.5nm,0.6s,baz=344,slow=8.8,SNR=3.0						
	0.5nm,0.6s						
ASAR	Alice Springs	36.90	166	P	P	17 12 36.6	-0.8
	0.2nm,0.5s,baz=340,slow=7.3,SNR=12						
	0.2nm,0.5s						
SONM	Songino Array	38.58	340	P	P	17 12 50.4	-1.0
	0.4nm,0.3s,baz=139,slow=7.4,SNR=2.1						
	0.4nm,0.3s						
H11S3	WAKE ISLAND Hy	40.68	76	T	T	17 56 32.2	
	baz=268,slow=75,SNR=16						
H11S1	WAKE ISLAND Hy	40.69	76	T	T	17 56 26.8	
	baz=268,slow=75,SNR=15						
H11S2	WAKE ISLAND Hy	40.69	76	T	T	17 56 31.7	
	baz=268,slow=75,SNR=30						
H11N1	WAKE ISLAND Hy	40.93	74	T	T	17 56 52.3	
	baz=267,slow=75,SNR=148						
H11N2	WAKE ISLAND Hy	40.94	74	T	T	17 56 48.5	
	baz=267,slow=75,SNR=112						
H11N3	WAKE ISLAND Hy	40.95	74	T	T	17 56 55.7	
	baz=267,slow=75,SNR=197						
MKAR	Makanchi Array	49.53	322	P	P	17 14 18.9	-0.1
	0.5nm,0.7s,baz=105,slow=9.2,SNR=4.1						
	0.5nm,0.7s						
ZALV	Zalesovo Beam	52.13	331	P	P	17 14 38.8	+0.4
	0.6nm,0.5s,baz=115,slow=13,SNR=2.2						
	0.6nm,0.5s						
KURBB	Kurchatov Arra	53.57	325	P	P	17 14 49.9	+0.8
	2.1nm,0.2s,baz=116,slow=8.3,SNR=2.1						
	2.1nm,0.2s						
BVAR	Borovoye Array	59.16	325	P	P	17 15 28.6	-0.3
	0.2nm,0.4s,baz=120,slow=8.5,SNR=1.9						
	0.2nm,0.4s						
NRIK	Noril'sk	61.64	346	P	P	17 15 46.2	+0.7
	0.8nm,0.3s,baz=111,slow=9.2,SNR=2.5						
	0.8nm,0.3s						

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*IDC **04** 17:06:34.2±0.8, 50°.44N×159°.88E, h0^{km}, mb3.8/14, mbtmp3.8/15, ML2.3/1, MS2.4/1, Error ellipse: s-maj=20.8km s-min=18.0km az=22.0*

*KRSC **04** 17:06:36.2±2.0, 50°.54N×160°.10E, h60^{km}±36^{km}, Ml4.0*

*MOS **04** 17:06:38.1±0.6, 50°.51N×159°.97E, h40^{km}, mb3.6/1, Error ellipse: s-maj=14.8km s-min=3.8km az=97.4*

ISC 04 17:06:38.9±0.8**, 50°.45N**±0°.06×**160°.04E**±0°.05**, h35**^{km}**, n88,** σ**1^{s}27**/88**, mb3.8**/13**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	Russkaya	2.20	335	PN	Pn	17 07 11.3	-1.6
RUS				S	Sn	17 07 36.9	-1.9
RUS	Russkaya	2.20	335	*e*P	Pn	17 07 11.4	-1.6
RUS				*e*S	Sn	17 07 37.0	-1.9
PAU	Pauzhetka	2.28	298	PN	Pn	17 07 13.1	-0.8
PAU	Pauzhetka	2.28	298	*e*P	Pn	17 07 13.2	-0.8
MTVR	Mutnovka	2.34	331	PN	Pn	17 07 13.7	-1.3
MTVR				S	Sn	17 07 41.3	-1.3
MTVR	Mutnovka	2.34	331	*e*P	Pn	17 07 13.7	-1.3
MTVR				*e*S	Sn	17 07 41.3	-1.3
ASAK	Asacha	2.35	326	PN	Pn	17 07 14.2	-0.8
ASAK	Asacha	2.35	326	*e*P	Pn	17 07 14.3	-0.8
GRL	Gorelyy	2.44	330	PN	Pn	17 07 15.7	-0.5
GRL	Gorelyy	2.44	330	*e*P	Pn	17 07 15.8	-0.5
SKR	Severo-Kuril's	2.51	277	*e*PN	Pn	17 07 15.4	-1.8
SKR				*e*S	Sn	17 07 42.9	-3.6
SKR				pmax	pmax		
	comp=Z,124nm,0.4s						
SKR				smax	smax		
	comp=E,1µm,0.5s						
SKR				smax	smax		
	comp=N,836nm,0.4s						
SKR	Severo-Kuril's	2.51	277	*e*P	Pn	17 07 15.3	-1.8
SPN	Mys Shipunski	2.65	360	PN	Pn	17 07 18.0	-1.1
SPN				S	Sn	17 07 47.6	-2.3
SPN	Mys Shipunski	2.65	360	*e*P	Pn	17 07 18.0	-1.1
SPN				*e*S	Sn	17 07 47.7	-2.3
KRMR	Karymshinskiy	2.66	334	PN	Pn	17 07 18.1	-1.1
KRMR				S	Sn	17 07 49.1	-1.1
KRMR	Karymshinskiy	2.66	334	*e*P	Pn	17 07 18.1	-1.1
KRMR				*e*S	Sn	17 07 49.1	-1.1
DALK	Dalny	2.71	343	PN	Pn	17 07 18.7	-1.1
DALK				S	Sn	17 07 49.1	-2.1
DALK	Dalny	2.71	343	*e*P	Pn	17 07 18.7	-1.1
DALK				*e*S	Sn	17 07 49.2	-2.1
PET	Petropavlovsk	2.72	342	*e*PN	Pn	17 07 18.8	-1.2
PET				*e*S	Sn	17 07 49.9	-1.6
PET				smax	smax		
	comp=N,110nm,0.5s						
PET				smax	smax		
	comp=E,60nm,0.5s						
PET	Petropavlovsk	2.72	342	*e*P	Pn	17 07 18.7	-1.3
PET				*e*S	Sn	17 07 49.9	-1.6
NLC	Nalytchevo	2.76	351	PN	Pn	17 07 20.6	+0.1
NLC				S	Sn	17 07 51.4	-1.1
NLC	Nalytchevo	2.76	351	*e*P	Pn	17 07 20.6	+0.1
NLC				*e*S	Sn	17 07 51.4	-1.1
UGLR	Uglovaya	2.86	345	PN	Pn	17 07 21.7	-0.4
UGLR	Uglovaya	2.86	345	*e*P	Pn	17 07 21.8	-0.4
SMAR	Somma	2.92	345	PN	Pn	17 07 23.2	+0.3
SMAR	Somma	2.92	345	*e*P	Pn	17 07 23.2	+0.3
SDLR	Sedlovina	2.92	346	PN	Pn	17 07 22.3	-0.6
SDLR	Sedlovina	2.92	346	*e*P	Pn	17 07 22.3	-0.6
AVH	Avacha	2.93	344	PN	Pn	17 07 23.0	0.0
AVH	Avacha	2.93	344	*e*P	Pn	17 07 23.1	0.0
KRER	Koryakskii	2.97	345	PN	Pn	17 07 23.4	-0.2
KRER	Koryakskii	2.97	345	*e*P	Pn	17 07 23.5	-0.2
KOK	Koryaka	2.98	344	PN	Pn	17 07 23.2	-0.4
KOK	Koryaka	2.98	344	*e*P	Pn	17 07 23.3	-0.4
PEA0B	Petropavlovsk-	3.03	332	PN	Pn	17 07 24.3	0.0
PEA0B				S	Sn	17 07 58.6	-0.8
PETK	Petropavlovsk-	3.03	332	Pn	Pn	17 07 23.3	-1.0
	comp=E,2.0nm,0.3s,baz=138,slow=16,SNR=76						
PETK				Sn	Sn	17 07 59.0	-0.4
	comp=E,3.3nm,0.3s,baz=135,slow=20,SNR=5.0						
	comp=E,7.6nm,0.5s						
KRX	Arik	3.04	344	PN	Pn	17 07 23.6	-0.9
KRX	Arik	3.04	344	*e*P	Pn	17 07 23.7	-0.9
APC	Apacha	3.06	325	PN	Pn	17 07 24.3	-0.3
APC	Apacha	3.06	325	*e*P	Pn	17 07 24.4	-0.3
GNL	Ganaly	3.50	339	PN	Pn	17 07 31.4	+0.6
GNL	Ganaly	3.50	339	*e*P	Pn	17 07 31.4	+0.6
KII	Karymskiy	3.61	354	PN	Pn	17 07 32.8	+0.5
KII	Karymskiy	3.61	354	*e*P	Pn	17 07 32.9	+0.5
MKZ	Mys Kozlova	4.24	13	PN	Pn	17 07 39.6	-1.2
MKZ	Mys Kozlova	4.24	13	*e*P	Pn	17 07 39.7	-1.2
MKZ				*e*S	Sn	17 08 26.2	-2.8
TUMD	Tumrok D	4.77	2	PN	Pn	17 07 48.1	0.0
TUMD	Tumrok D	4.77	2	*e*P	Pn	17 07 48.1	0.0
KMNR	Kamenistaya	5.32	1	PN	Pn	17 07 56.6	+0.9
KMNR	Kamenistaya	5.32	1	*e*P	Pn	17 07 56.7	+0.9
BZGR	Bezymyannyi-Gr	5.51	4	PN	Pn	17 07 59.8	+1.4
BZGR	Bezymyannyi-Gr	5.51	4	*e*P	Pn	17 07 59.9	+1.4
KPT	Kopyto	5.53	1	PN	Pn	17 07 59.7	+1.1
KPT	Kopyto	5.53	1	*e*P	Pn	17 07 59.8	+1.1
BZWR	Bezymyannyi-We	5.53	3	PN	Pn	17 08 00.1	+1.4
BZWR	Bezymyannyi-We	5.53	3	*e*P	Pn	17 08 00.1	+1.4
ESO	Esso	5.54	352	PN	Pn	17 07 59.2	+0.4
ESO	Esso	5.54	352	*e*P	Pn	17 07 59.2	+0.4
KLY	Klyuchi	5.88	3	PN	Pn	17 08 03.7	+0.3
KLY	Klyuchi	5.88	3	*e*P	Pn	17 08 03.8	+0.3
BKI	Bering	5.96	35	PN	Pn	17 08 03.3	-1.2
BKI	Bering	5.96	35	*e*P	Pn	17 08 03.4	-1.2
BKI				*e*S	Sn	17 09 06.2	-5.2
KBTR	Krutoberegovo	6.00	15	PN	Pn	17 08 04.6	-0.4
KBTR	Krutoberegovo	6.00	15	*e*P	Pn	17 08 04.7	-0.4
KLR	Kul'dur	18.25	277	LR	LR	17 19 39.0	
	comp=E,13nm,19.0s,baz=100,slow=43						
YAK	Yakutsk	20.25	316	P	Pn	17 11 08.4	-4.4
	comp=E,4.7nm,0.5s,baz=162,slow=6.9,SNR=4.7						
	comp=E,4.7nm,0.5s						
TIXI	Tiksi	25.50	338	P	P	17 12 03.9	+0.6
	comp=E,3.7nm,0.6s,baz=142,slow=10,SNR=21						
	comp=E,3.7nm,0.6s						
ILAR	Eielson Array	30.75	42	P	P	17 12 51.2	+0.8
	comp=E,0.6nm,0.6s,baz=260,slow=7.8,SNR=5.4						
	comp=E,0.6nm,0.6s						
H11N2	WAKE ISLAND Hy	31.13	167	T	T	17 47 16.7	
	baz=353						
H11N3	WAKE ISLAND Hy	31.15	167	T	T	17 47 16.7	
	baz=353						
H11N1	WAKE ISLAND Hy	31.15	167	T	T	17 47 16.7	
	baz=353						
H11S1	WAKE ISLAND Hy	32.31	168	T	T	17 48 45.3	
	baz=349						
H11S3	WAKE ISLAND Hy	32.32	168	T	T	17 48 44.6	
	baz=349						
H11S2	WAKE ISLAND Hy	32.33	168	T	T	17 48 45.3	
	baz=349						
YKA	Yellowknife Ar	45.16	41	P	P	17 14 53.3	+1.8
	comp=E,0.5nm,0.8s,baz=300,slow=8.1,SNR=3.5						
	comp=E,0.5nm,0.8s						
KURK	Kurchatov	49.14	304	P	P	17 15 23.9	+1.2
KURBB	Kurchatov Arra	49.24	304	P	P	17 15 23.9	+0.4
	comp=E,1.5nm,0.2s,baz=65,slow=6.9,SNR=4.3						
	comp=E,1.5nm,0.2s						
MKAR	Makanchi Array	49.31	298	P	P	17 15 24.0	-0.2
	comp=E,0.2nm,0.5s,baz=60,slow=8.4,SNR=5.6						
	comp=E,0.2nm,0.5s						
MKAR	Makanchi Array	49.31	298	P	P	17 15 24.0	-0.2
SPITS	Spitsbergen Ar	49.74	351	P	P	17 15 27.7	+0.7
	comp=E,4.5nm,0.9s,baz=44,slow=6.8,SNR=1.7						
	comp=E,4.5nm,0.9s						
BVAR	Borovoye Array	52.04	310	P	P	17 15 44.5	-0.1
	comp=E,0.7nm,0.5s,baz=60,slow=9.5,SNR=6.1						
	comp=E,0.7nm,0.5s						
NVAR	Mina Array Bea	56.71	68	P	P	17 16 18.6	-0.4
	comp=E,0.3nm,0.3s,baz=305,slow=5.1,SNR=2.0						
	comp=E,0.3nm,0.3s						
PDAR	Pinedale Array	58.87	59	P	P	17 16 36.0	+1.8
	comp=E,0.3nm,0.3s,baz=286,slow=2.6,SNR=4.0						
	comp=E,0.3nm,0.3s						
TXAR	Lajitas Array	71.72	66	P	P	17 17 59.1	+1.7
	comp=E,0.8nm,0.5s,baz=301,slow=4.8,SNR=14						
	comp=E,0.8nm,0.5s						
EKA	Eskdalemuir Ar	73.66	350	P	P	17 18 09.0	+0.7
	comp=E,0.1nm,0.3s,baz=18,slow=5.2,SNR=2.5						
	comp=E,0.1nm,0.3s						
WRA	Warramunga Arr	73.67	205	P	P	17 18 09.0	+0.3
	comp=E,1.1nm,1.1s,baz=21,slow=6.7,SNR=2.5						
	comp=E,1.1nm,1.1s						
WRA	Warramunga Arr	73.67	205	P	P	17 18 09.0	+0.3
ASAR	Alice Springs	77.33	204	P	P	17 18 30.5	+0.8
	comp=E,0.5nm,0.9s,baz=11,slow=5.0,SNR=5.9						
	comp=E,0.5nm,0.9s						

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*IDC **04** 17:36:47.3±0.7, 35°.96N×137°.56E, h275^{km}±7^{km}, mb3.1/7, mbtmp3.7/11, Error ellipse: s-maj=28.9km s-min=15.2km az=78.0*

*JMA **04** 17:36:47.4±0.2, 35°.9N±0°.9×13°7E±°, h263^{km}±1^{km}, MV2.7/35, NORTHERN GIFU PREF*

ISC 04 17:36:47.1±0.8**, 35°.89N**±0°.08×**137°.14E**±0°.08**, h264**^{km}±6^{km}**, n27,** σ**0^{s}74**/32**, mb3.2**/7**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYTA	Yamagatataniai	0.44	228	*e*P	Pn	17 37 21.7	+0.2
JYTA				*e*S	S	17 37 47.4	-1.1
JKG	Kaga	0.76	301	*e*P	Pn	17 37 22.7	+0.3
MAT	Matsushiro	1.08	53	P	Pn	17 37 24.4	+0.4
MAT				*e*S	S	17 37 53.2	0.0
MJAR	Matsushiro Arr	1.08	53	P	Pn	17 37 24.4	+0.4
	8.8nm,0.5s,baz=272,slow=8.8,SNR=33						
MJAR				S	S	17 37 53.6	+0.4
	2.7nm,0.7s,baz=243,slow=13,SNR=4.3						
JYN	Shimob	1.21	109	*e*P	Pn	17 37 25.0	+0.1
JRY	Ryogami san	1.44	85	P	Pn	17 37 27.0	+0.7
JRY				*e*S	S	17 37 57.9	+0.6
JIE	Ise	1.54	193	*i* P	Pn	17 37 27.2	+0.2
JWT	Wachi	1.54	247	P	Pn	17 37 27.3	+0.3
JWT				*e*S	S	17 37 57.8	-0.8
JSZ	Suzu	1.56	7	P	Pn	17 37 27.4	+0.2
JOD2	Odawara 2	1.71	111	P	Pn	17 37 29.1	+0.7
JAG	Ashikaga	1.95	73	*e*P	Pn	17 37 29.9	-0.3
JHG	Hegura jima	1.96	355	P	Pn	17 37 31.0	+0.7
JWY	Kouya	2.10	218	*e*P	Pn	17 37 32.1	+0.4

TTO1	TONANKAI O.B.S	2.28	187	*e*P	Pn	17 37 34.1	+1.1
JSD	Sado	2.32	22	P	Pn	17 37 34.0	+0.4
JSD				*e*S	S	17 38 10.3	-0.1
JTNC	Tanabenakahech	2.42	212	P	Pn	17 37 34.9	+0.2
JNU	Nakatsue	5.86	244	P	Pn	17 38 20.1	+6.3
	2.5nm,0.8s,baz=48,slow=14,SNR=1.6						
USRK	Ussuriysk Ar.	9.19	336	P	Pn	17 38 56.5	+1.3
	1.1nm,0.7s,baz=152,slow=16,SNR=2.6						
ASAJ	Asahikawa	9.22	25	P	Pn	17 38 53.4	-2.3
	2.3nm,0.3s,baz=253,slow=9.1,SNR=16						
ASAJ				S	S	17 40 30.3	-9.5
	2.6nm,1.0s,baz=148,slow=32,SNR=2.1						
KLR	Kul'dur	13.90	345	P	Pn	17 39 52.7	-0.7
	0.8nm,0.4s,baz=183,slow=14,SNR=2.3						
MKAR	Makanchi Array	41.81	303	P	P	17 44 11.3	+0.1
	0.4nm,0.6s,baz=90,slow=9.8,SNR=5.1						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	44.00	308	P	P	17 44 28.7	+0.2
	1.2nm,0.2s,baz=85,slow=8.3,SNR=2.0						
	1.2nm,0.2s						
BVAR	Borovoye Array	48.79	312	P	P	17 45 06.5	+0.9
	0.2nm,0.3s,baz=97,slow=4.4,SNR=3.7						
	0.2nm,0.3s						
WRA	Warramunga Arr	55.59	183	P	P	17 45 55.0	-0.7
	0.2nm,0.3s,baz=0.3,slow=7.6,SNR=5.7						
	0.2nm,0.3s						
ASAR	Alice Springs	59.31	183	P	P	17 46 21.2	-0.4
	0.2nm,0.8s,baz=1.4,slow=5.4,SNR=5.1						
	0.2nm,0.8s						
ARCES	ARCESS Array B	63.83	339	P	P	17 46 51.7	+0.6
	1.6nm,0.9s,baz=51,slow=6.5,SNR=2.0						
	1.6nm,0.9s						
FINES	FINESS Array B	68.18	331	P	P	17 47 18.9	+0.1
	0.3nm,0.4s,baz=88,slow=8.5,SNR=3.6						
	0.3nm,0.4s						

TIR ***04*** *17:58:18.7, 40°.60N×21°.42E, h6^{km}±1^{km}, Md2.8/3, Ml2.1/5*

ATH ***04*** *17:58:19.9, 40°.57N×21°.37E, h14^{km}±2^{km}, ML1.7/6, Manual Solution by A.Plessa First location: 2019/06/04 17:59:25, This location: 2019/06/04 18:06:15 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

ISC 04 17:58:19.6±1.0**, 40°.60N**±0°.03×**21°.40E**±0°.04**, h14**^{km}±9^{km}**, n15, σ1^{s}.00**/22**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNA	Florina	0.19	354	P	Pb	17 58 24.8	-0.1
FNA				S	Sg	17 58 28.0	+1.0
NEST	Nestorio	0.32	236	Pg	Pg	17 58 25.9	-0.4
NEST				Sg	Sg	17 58 30.8	-0.1
NEST				AML	AML	17 58 34.7	
	0.5nm,0.2s						
NEST				AMd		17 59 18.9	
NEST	Nestorio	0.32	236	P	Pg	17 58 26.2	-0.1
NEST				S	Sg	17 58 30.6	-0.3
KZN	Kozani	0.40	136	P	Pb	17 58 28.3	-0.3
KZN				S	Sb	17 58 35.3	+0.7
KBN	Korca	0.47	274	Pg	Pg	17 58 28.2	-0.7
KBN				Sg	Sg	17 58 35.1	-0.1
KBN				AML	AML	17 58 37.7	
	0.8nm,0.3s						
KPRO	Kipourio	0.64	183	P	Pb	17 58 32.2	-0.4
KPRO				S	Sb	17 58 41.2	-0.3
LSK	Leskovik	0.76	234	Pg	Pg	17 58 33.6	-0.7
LSK				Sg	Sb	17 58 45.3	+0.4
LSK				AML	AML	17 58 50.4	
	0.2nm,0.4s						
LSK				AMd		17 59 40.0	
TYRN	Tyrnavos	1.09	144	P	Pn	17 58 40.6	+0.1
THL	Klokotos Trika	1.13	155	P	Pb	17 58 40.5	-0.4
TETR	Tetrakomo, Epi	1.25	185	P	Pn	17 58 41.8	-1.0
KNT	Kendrikon	1.27	63	P	Pg	17 58 43.7	-0.3
SRN	Sarande	1.29	237	Pg	Pg	17 58 44.6	+0.2
SRN				Sg	Sg	17 59 04.0	+2.9
SRN				AML	AML	17 59 06.9	
	0.1nm,0.5s						
SRN				AMd		17 59 37.0	
IGT	Igoumenitsa	1.34	218	Sg	Sg	17 59 04.9	+2.0
PUK	Puka	1.84	322	Sn	Sg	17 59 19.8	+1.0
SCTE	Santa Cesarea	2.30	258	AML	AML	17 59 32.3	
	0.1nm,0.8s						

HEL ***04*** *18:04:34.9±0.2, 67°.08N×20°.83E, h0^{km}, ML2.1, Explosion*

UPP ***04*** *18:04:35.0±0.1, 67°.06N×20°.92E, h0^{km}, ML2.4, Unknown*

IDC ***04*** *18:04:36.1±0.8, 67°.06N×21°.20E, h0^{km}, mbtmp3.1/5, ML2.5/5, Error ellipse: s-maj=14.1km s-min=7.2km az=109.0*

BER ***04*** *18:04:36.8±3.5, 66°.94N×20°.91E, h0^{km}, ML2.0, Suspected explosion*

ISC 04 18:04:34.8±0.7**, 67°.08N**±0°.02×**20°.88E**±0°.02**, h0**^{km}**, n58, σ1^{s}.08**/98**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	Dundret	0.13	289	P	Pg	18 04 38.1	+0.9
DUNU				S	Sg	18 04 40.2	+1.4
MASU	Masugnsbyn	0.58	49	P	Pg	18 04 46.1	+0.2
MASU				S	Sg	18 04 53.8	+0.5
ERTU	Ertsjaerv	0.74	135	P	Pg	18 04 48.5	-0.5
ERTU				S	Sg	18 04 58.3	-0.2
ERTU	Ertsjaerv	0.74	135	PG	Pg	18 04 48.1	-0.9
PAJU	Pajala	0.88	93	P	Pg	18 04 50.7	-0.9
PAJU				S	Sg	18 05 02.8	-0.1
PAJU	Pajala	0.88	93	PG	Pg	18 04 50.6	-1.0
PAJU				SB	Sg	18 05 03.1	+0.1
RATU	Laukkuluspa	0.90	327	P	Pg	18 04 51.7	-0.3
RATU				S	Sb	18 05 04.6	-1.1
KUA	Kurravaara	0.90	347	P	Pg	18 04 51.9	-0.2
KUA				S	Sb	18 05 04.7	-1.2
HARU	Harads	0.92	178	P	Pg	18 04 52.0	-0.4
HARU				S	Sg	18 05 04.5	+0.1
SALU	Saltoluokta	0.97	289	P	Pg	18 04 53.5	+0.1
SALU				S	Sb	18 05 06.9	-1.0
SALU	Saltoluokta	0.97	289	*e*P	Pg	18 04 53.6	+0.1
SALU				*e*S	Sb	18 05 07.6	-0.2
LANU	Lannavaara	1.06	23	PN	Pn	18 04 58.7	+1.7
KOVU	Salmi	1.18	347	P	Pg	18 04 56.8	-0.6
KOVU				S	Sb	18 05 13.6	-0.3
KLF	Kolari	1.22	81	PG	Pg	18 04 56.7	-1.4
KLF				MSG		18 05 12.2	
	comp=Z,12nm,0.2s						
KLF				SB	Sg	18 05 13.5	-0.3
KALU	Kalix	1.58	140	P	Pn	18 05 03.3	-0.7
KALU	Kalix	1.58	140	PG	Pn	18 05 03.3	-0.7
	baz=324						
KALU				SN	Sn	18 05 25.1	0.0
SJUU	Sjulsmark	1.61	169	P	Pn	18 05 04.2	-0.2
HEF	Hetta	1.70	37	*e*P	Pn	18 05 05.5	-0.3
HEF				*e*S	Sn	18 05 28.1	-0.2
HEF	Hetta	1.70	37	PG	Pn	18 05 05.3	-0.4
HEF				MSG		18 05 26.2	
	comp=Z,12nm,0.2s						
HEF				SG	Sn	18 05 28.0	-0.2
TOF	Tornio	1.71	125	PG	Pn	18 05 05.6	-0.1
TOF				MSG		18 05 26.5	
	comp=Z,15nm,0.2s						
TOF				SN	Sn	18 05 28.6	+0.4
KIF	Kilpisjarvi	1.93	359	*e*P	Pb	18 05 10.3	-0.5
KIF				*e*S	Sg	18 05 36.6	-0.3
KIF	Kilpisjarvi	1.93	359	PG	Pb	18 05 10.2	-0.7
KIF				MSG		18 05 33.5	
	comp=Z,36nm,0.2s						
KIF				SG	Sg	18 05 36.8	-0.1
RNF	Rovaniemi	2.08	101	PG	Pn	18 05 11.4	+0.4
RNF				SG	Sb	18 05 40.0	+0.1
KTK1	Kautokeino	2.13	23	*e*P	Pn	18 05 12.9	+1.2
KTK1				*e*S	Sb	18 05 41.8	+0.5
KTK1				IAML		18 05 42.8	
	comp=Z,17nm,0.4s						
KTK1	Kautokeino	2.13	23	PG	Pn	18 05 12.8	+1.2
KTK1				SG	Sb	18 05 41.4	+0.1
I37NO	I37NO	2.18	338	I	I	18 18 13.9	
	comp=Z,0.1nm,0.5s,baz=156,slow=320,SNR=6.5						
FAUS	Fauske	2.20	281	*e*P	Pb	18 05 14.6	-0.7
FAUS				*e*Sg	Sg	18 05 45.7	+0.5
FAUS				IAML		18 05 47.3	
	comp=Z,21nm,0.2s						
STEI	Steigen	2.33	294	*e*P	Pb	18 05 15.8	-1.8
JETT	Jettan, Norway	2.49	356	*e*P	Pb	18 05 19.3	-1.2
JETT				*e*S	Sb	18 05 52.5	+0.9
JETT				IAML		18 05 55.1	
	comp=Z,27nm,0.4s						
BURU	Burvik	2.52	175	PB	Pn	18 05 17.9	+1.0
	baz=358						
BURU				SG	Sb	18 05 52.2	-0.1
RANF	Ranua	2.60	112	PN	Pn	18 05 18.2	+0.2
RANF				SG	Sb	18 05 54.6	+0.1
TRO	Tromso	2.66	345	PG	Pb	18 05 23.2	-0.1
TRO				SB	Sb	18 05 54.3	-2.2
MOR8	Moi Rana	2.72	253	*e*P	Pn	18 05 20.5	+0.7
MOR8				*e*Sg	Sb	18 05 56.2	-2.0
MOR8				IAML		18 05 59.0	
	comp=Z,6.9nm,0.3s						
OBF4	Vikkela, Lumij	2.86	141	PB	Pn	18 05 22.2	+0.6
OBF4				MSG		18 05 59.4	
	comp=Z,4.1nm,0.2s						
OUL	Oulu	2.86	132	PB	Pn	18 05 23.1	+1.5
OUL				SG	Sb	18 06 03.1	+0.9
OBF0	Syolatti, Pyha	2.94	150	PB	Pn	18 05 24.5	+1.8
OBF0				MSG		18 06 01.7	
	comp=Z,4.0nm,0.2s						
OBF8	Ulkokalla	2.96	158	PG	Pb	18 05 27.5	-0.8
	baz=337						
OBF8				MSG		18 06 02.0	
	comp=Z,7.5nm,0.2s						
ARA0	ARCESS Array S	3.01	33	*e*P	Pn	18 05 24.0	+0.3
ARA0				*e*S	Sn	18 06 02.3	+1.9
ARA0	ARCESS Array S	3.01	33	PN	Pn	18 05 23.9	+0.3
	baz=215						
ARA0				SB	Sb	18 06 05.1	-1.2
ARCES	ARCESS Array B	3.01	33	Pn	Pn	18 05 23.9	+0.3
	comp=Z,0.9nm,0.3s,baz=210,slow=12,SNR=110						
ARCES				Sn	Sn	18 06 00.7	+0.4
	comp=Z,0.4nm,0.3s,baz=214,slow=16,SNR=5.5						
	comp=Z,1.9nm,0.3s						
RAJF	Raja-Jooseppi	3.15	60	PN	Pn	18 05 25.3	-0.3
RAJF				SG	Sb	18 06 12.9	+2.3
OUF	Merijarvi	3.15	148	PB	Pn	18 05 26.9	+1.3
OUF				SB	Sn	18 06 06.5	+2.5
UMAU	Umeaa	3.21	182	PN	Pn	18 05 27.3	+0.9
	baz=1.0						
UMAU				SG	Sb	18 06 14.5	+2.2
KU2	Taivalkoski	3.26	112	PN	Pn	18 05 27.8	+0.6
OLKF	Oulanka, Finla	3.47	99	PN	Pn	18 05 30.8	+0.8
MSF	Maaselka	3.48	106	PN	Pn	18 05 30.7	+0.7
MSF				SG	Sb	18 06 22.3	+2.5
KEV	Kevo	3.51	37	*e*P	Pn	18 05 30.4	-0.2
KEV				*e*S	Sn	18 06 13.6	+0.8
KEV	Kevo	3.51	37	PN	Pn	18 05 30.6	0.0
KEV				SN	Sn	18 06 14.1	+1.3
KU6	Riekki	3.75	102	PN	Pn	18 05 34.7	+0.8
KU1	Kurvinen	3.82	109	PN	Pn	18 05 36.2	+1.4
HUSU	Husum	3.82	191	PB	Pn	18 05 37.2	+2.4
HUSU				SN	Sn	18 06 20.3	0.0
VAF	Ylistaro	4.13	169	PN	Pn	18 05 40.3	+1.3
NIF	Nilsia	4.71	139	PN	Pn	18 05 48.5	+1.4
RMF	Romuvaara	4.72	123	PN	Pn	18 05 48.9	+1.7
FINES	FINESS Array B	6.09	156	Pn	Pn	18 06 06.9	+0.9
	comp=Z,0.3nm,0.3s,baz=346,slow=13,SNR=14						
FINES				Sn	Sn	18 07 15.7	-0.6
	comp=Z,0.5nm,0.3s,baz=344,slow=23,SNR=7.8						
FINES				Lg	Lg	18 07 45.7	
	comp=Z,0.5nm,0.3s,baz=346,slow=27,SNR=4.5						
	comp=Z,0.5nm,0.3s						
NOA	NORSAR Array B	7.39	219	Pn	Pn	18 06 25.2	+1.4
	baz=26,slow=11,SNR=0.9						
NOA				Sn	Sn	18 07 46.6	-1.6
	baz=32,slow=8.4,SNR=2.0						
	comp=Z,0.1nm,0.3s						
HFS	Hagfors	7.67	208	Pn	Pn	18 06 26.9	-0.6
	comp=Z,0.2nm,0.3s,baz=23,slow=13,SNR=8.9						
HFS				Sn	Sn	18 07 52.1	-2.9
	comp=Z,0.2nm,0.3s,baz=28,slow=25,SNR=1.4						
HFS				Lg	Lg	18 08 36.3	
	comp=Z,0.2nm,0.3s,baz=29,slow=30,SNR=2.0						
	comp=Z,0.4nm,0.2s						
SPITS	Spitsbergen Ar	11.23	355	Pn	Pn	18 07 16.8	+0.4
	baz=169,slow=10						
	comp=Z,2.1nm,0.7s						

SJA ***04*** *18:23:20.9±0.7, 24°.27S×66°.95W, h168^{km}±8^{km}, ML3.7, MW3.8*

IDC ***04*** *18:23:24.6±2.5, 24°.12S×66°.98W, h179^{km}±23^{km}, mb3.5/7, mbtmp3.8/12, Error ellipse: s-maj=25.3km s-min=15.8km az=74.0*

GUC ***04*** *18:23:24.8±0.8, 24°.20S×67°.23W, h181^{km}±10^{km}, ML4.1*

ISC 04 18:23:23.1±0.7**, 24°.24S**±0°.04×**67°.13W**±0°.04**, h172**^{km}±6^{km}**, n50, σ2^{s}.09**/67**, mb3.7**/6**, 6C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALTA		0.72	89	⇓*i*P	Pn	18 23 51.5	+2.7
SALTA		0.72	89	*e*P	Pn	18 23 45.8	-3.0
SLA	San Lorenzo	1.56	108	⇓*i*P	Pn	18 23 58.3	+3.1
SLA				*i* S	Sn	18 24 24.1	+4.1
SLA	San Lorenzo	1.56	108	*e*P	Pn	18 23 52.8	-2.4
SLA				IAML		18 24 24.8	
	comp=Z,205nm,1.4s						
AF01	San Pedro de A	1.60	323	*e*P	Pn	18 23 57.4	+1.6
AF01	San Pedro de A	1.60	323	*e*P	Pn	18 23 55.4	-0.4
AF01				*e*S	Sn	18 24 26.1	+5.2
AF01				IAML		18 24 29.9	
	comp=Z,253nm,0.5s						
AZAP	Zapla	1.89	90	*e*P	Pn	18 23 55.5	-3.1
AZAP				IAML		18 24 30.7	
	comp=Z,189nm,0.6s						
FSA	Cafayete	2.14	151	*e*P	Pn	18 23 58.5	-2.9
FSA				*e*S	Sn	18 24 34.0	+2.9
GO02	Mina Guanaco	2.42	247	⇑*i*P	Pn	18 24 06.6	+1.9
GO02				*i* S	Sn	18 24 38.2	+1.2
GO02				IAML		18 24 39.2	
	comp=N,1µm,0.7s						
GO02	Mina Guanaco	2.42	247	*e*P	Pn	18 24 06.0	+1.2
GO02				*e*S	Sn	18 24 38.8	+1.8
ASTB	Santa Barbara	2.46	84	*e*P	Pn	18 24 01.4	-3.8
YJA	Yavi	2.53	36	*e*P	Pn	18 24 03.6	-2.6
YJA				*e*S	Sn	18 24 37.6	-2.0
PB06	IPOC Station P	2.71	304	⇑*i*P	Pn	18 24 09.5	+1.4
PB06				*i* S	Sn	18 24 42.8	-0.1
PB06				IAML		18 24 44.6	
	comp=E,514nm,0.2s						
PB06	IPOC Station P	2.71	304	*e*P	Pn	18 24 08.8	+0.7
PB06				*e*S	Sn	18 24 43.3	+0.4
PB06				IAML		18 24 45.6	
	comp=Z,363nm,0.3s						
ALOL	LOMAS DE OLMED	2.91	82	*e*P	Pn	18 23 51.8	-19
PB14	IPOC Station P	3.01	262	IAML		18 24 49.8	
	comp=E,195nm,0.5s						
PB14	IPOC Station P	3.01	262	*e*P	Pn	18 24 12.2	+0.4
PB14				*e*S	Sn	18 24 49.4	-0.3
PB14				IAML		18 24 50.7	
	comp=Z,133nm,0.3s						
PB09	IPOC Station P	3.11	321	⇑*i*P	Pn	18 24 14.6	+1.6
PB09				*i* S	Sn	18 24 51.8	0.0
PB09				IAML		18 24 53.1	
	comp=N,267nm,0.5s						
PB09	IPOC Station P	3.11	321	*e*P	Pn	18 24 15.0	+2.0
PB09				*e*S	Sn	18 24 52.7	+0.9
PB09				IAML		18 24 58.1	
	comp=Z,219nm,0.5s						
PB05	IPOC Station P	3.14	295	⇑*i*P	Pn	18 24 14.0	+0.8
PB05				IAML		18 24 54.1	
	comp=E,211nm,0.2s						
PB05	IPOC Station P	3.14	295	*e*P	Pn	18 24 13.4	+0.2
PB05				*e*S	Sn	18 24 52.7	+0.5
PB05				IAML		18 25 00.7	
	comp=Z,93nm,1.0s						
AC02	Maricunga	3.15	214	*e*P	Pn	18 24 11.0	-2.8
AC02				*e*S	Sn	18 24 51.9	-1.4
PB10	IPOC Station P	3.21	282	⇑*i*P	Pn	18 24 15.1	+1.0
PB10				*i* S	Sn	18 24 52.6	-1.1
PB10				IAML		18 24 58.5	
	comp=E,238nm,0.2s						
PB10	IPOC Station P	3.21	282	*e*P	Pn	18 24 15.2	+1.1
PB10				*e*S	Sn	18 24 53.2	-0.5
PB10				IAML		18 24 57.7	
	comp=Z,198nm,0.5s						
PB03	IPOC Station P	3.25	312	⇑*i*P	Pn	18 24 15.5	+0.8
PB03				IAML		18 24 54.9	
	comp=E,366nm,0.3s						
PB03	IPOC Station P	3.25	312	*e*P	Pn	18 24 15.1	+0.4
PB03				*e*S	Sn	18 24 53.6	-1.2
PB03				IAML		18 24 56.3	
	comp=Z,351nm,0.3s						
AC01	Pan de Azucar	3.67	238	*e*P	Pn	18 24 19.9	0.0
AC01				*e*S	Sn	18 25 01.8	-2.3
AC01				IAML		18 25 02.6	
	comp=Z,132nm,0.9s						
PB01	IPOC Station P	3.85	325	*e*P	Pn	18 24 22.4	+0.2
PB01				*e*S	Sn	18 25 07.4	-0.9
PB01				IAML		18 25 10.2	
	comp=Z,93nm,0.3s						
GO03	Copiapo	4.36	219	*e*P	Pn	18 24 28.9	+0.2
GO03				*e*S	Sn	18 25 13.4	-6.5
PB08	IPOC Station P	4.49	335	*e*P	Pn	18 24 29.9	-0.8
PB08				*e*S	Sn	18 25 22.8	-0.6
PB08				IAML		18 25 24.2	
	comp=Z,60nm,0.5s						
GO01	Chusmiza	4.93	337	*e*P	Pn	18 24 37.3	+0.8
PB11	IPOC Station P	5.03	332	*e*P	Pn	18 24 36.0	-1.6
PB11				*e*S	Sn	18 25 32.4	-3.5
PB11				IAML		18 25 33.1	
	comp=Z,90nm,0.5s						
CFA	Coronel Fontan	7.41	187	S	Sn	18 26 28.2	-3.7
	comp=Z,2.9nm,0.3s,baz=97,slow=19,SNR=6.3						
LPAZ	La Paz	7.96	353	P	Pn	18 25 17.1	+0.5
	comp=Z,3.5nm,0.3s,baz=183,slow=9.7,SNR=12						
LPAZ				S	Sn	18 26 40.3	-5.9
	comp=Z,4.1nm,0.6s,baz=85,slow=11,SNR=6.5						
CPUP	Villa Florida	9.11	105	P	Pn	18 25 30.9	-0.2
	comp=Z,0.2nm,0.4s,baz=250,slow=11,SNR=2.1						
SIV	San Ignacio	9.98	36	P	Pn	18 25 41.4	-1.3
	comp=Z,1.6nm,0.6s,baz=206,slow=14,SNR=7.9						
SIV				S	Sn	18 27 23.0	-11
	comp=Z,0.6nm,0.6s,baz=255,slow=15,SNR=1.4						
PLCA	Paso Flores	16.70	189	P	Pn	18 27 08.3	+1.1
	comp=Z,1.7nm,0.9s,baz=298,slow=7.8,SNR=1.7						
BDFB	Brasilia	19.89	68	P	P	18 27 40.5	-1.0
	comp=Z,3.6nm,0.4s,baz=263,slow=8.9,SNR=4.0						
SNAA	Sanae	59.17	161	P	P	18 33 06.8	+1.3
	comp=Z,0.8nm,0.7s,baz=266,slow=10,SNR=5.8						
	comp=Z,0.8nm,0.7s						
TXAR	Lajitas Array	63.80	325	P	P	18 33 38.0	+0.9
	comp=Z,0.2nm,0.5s,baz=140,slow=6.5,SNR=4.2						
	comp=Z,0.2nm,0.5s						
QSPA	South Pole Qui	65.97	180	P	P	18 33 52.4	+1.7
	comp=Z,0.9nm,0.9s,baz=101,slow=11,SNR=7.2						
	comp=Z,0.9nm,0.9s						
TORD	Torodi Ar. Bea	76.77	69	P	P	18 34 55.9	-0.2
	comp=Z,0.8nm,0.5s,baz=262,slow=5.2,SNR=1.4						
	comp=Z,0.8nm,0.5s						
ULM	Lac du Bonnet	78.41	342	P	P	18 35 04.5	+0.2
	comp=Z,2.6nm,0.7s,baz=152,slow=5.7,SNR=4.4						
	comp=Z,2.6nm,0.7s						
BOSA	Boshof	80.73	117	P	P	18 35 18.6	+0.8
	comp=Z,1.3nm,0.8s,baz=198,slow=3.2,SNR=1.1						
	comp=Z,1.3nm,0.8s						
YKA	Yellowknife Ar	94.30	340	P	P	18 36 22.7	+0.4
	comp=Z,0.5nm,0.7s,baz=131,slow=4.1,SNR=7.7						
	comp=Z,0.5nm,0.7s						
ASAR	Alice Springs	128.19	205	PKP	PKiKP	18 42 10.0	-0.2
	comp=Z,0.2nm,0.4s,baz=124,slow=1.7,SNR=5.2						
WRA	Warramunga Arr	131.36	207	PKP	PKPdf	18 42 15.4	-0.3
	comp=Z,0.6nm,0.9s,baz=149,slow=1.5,SNR=5.0						
KURBB	Kurchatov Arra	142.64	36	PKhKP	PKPpre	18 42 29.4	
	comp=Z,0.1nm,0.5s,baz=300,slow=1.8,SNR=2.1						
ZALV	Zalesovo Beam	143.66	28	PKP	PKPdf	18 42 35.7	-1.4
	comp=Z,1.0nm,0.5s,baz=287,slow=5.7,SNR=4.7						
MKAR	Makanchi Array	146.78	40	PKPbc	PKPbc	18 42 44.1	-0.7
	comp=Z,1.3nm,0.6s,baz=297,slow=3.2,SNR=16						

IDC 04 19:02:48.8±2.4**, 11°.65N×93°.95E, h0**^{km}**, mb3.3**/3**, mbtmp3.2**/4**, ML3.3**/1**, MS2.8**/1**, Error ellipse: s-maj=74.2km s-min=29.0km az=67.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	8.31	35	Pn	Pn	19 04 49.3	-1.3
	0.1nm,0.3s,baz=232,slow=16,SNR=1.3						
	0.2nm,0.3s						
H08S3	Diego Garcia H	28.68	229	T	T	19 38 06.6	
	baz=40						
H08S2	Diego Garcia H	28.69	229	T	T	19 37 56.4	
	baz=40						
H08S1	Diego Carcia H	28.70	229	T	T	19 38 00.9	
	baz=40						
MKAR	Makanchi Array	36.39	346	P	P	19 09 55.4	+0.5
	0.3nm,0.8s,baz=158,slow=8.9,SNR=2.0						
MKAR				LR	LR	19 28 44.4	
	comp=Z,12nm,18.6s,baz=219,slow=43						
	0.3nm,0.8s						
WRA	Warramunga Arr	50.66	128	P	P	19 11 50.2	0.0
	0.2nm,0.3s,baz=298,slow=8.7,SNR=1.4						
	0.2nm,0.3s						
ASAR	Alice Springs	52.52	132	P	P	19 12 03.9	-0.3
	0.4nm,0.7s,baz=312,slow=7.2,SNR=5.7						
	0.4nm,0.7s						

SJA ***04*** *19:06:47.1±0.7, 21°.23S×68°.78W, h126^{km}±6^{km}, ML3.6, MW3.7*

IDC ***04*** *19:06:49.0±2.8, 21°.27S×68°.36W, h110^{km}±27^{km}, mb3.6/3, mbtmp3.9/6, Error ellipse: s-maj=42.9km s-min=21.9km az=115.0*

GUC ***04*** *19:06:48.1±0.7, 21°.23S×68°.78W, h125^{km}±4^{km}, ML3.5*

ISC 04 19:06:48.2±0.8**, 21°.20S**±0°.03×**68°.80W**±0°.05**, h124**^{km}±7^{km}**, n34, σ1^{s}.49**/49**, 2C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	IPOC Station P	0.66	283	*e*P	Pn	19 07 07.8	-0.1
PB01				*e*S	Sn	19 07 21.8	-0.7
PB01				IAML		19 07 23.5	
	comp=E,4µm,0.2s						
PB01	IPOC Station P	0.66	283	*e*P	Pn	19 07 07.5	-0.3
PB01				*e*S	Sn	19 07 22.7	+0.2
PB01				IAML		19 07 24.1	
	comp=Z,2µm,0.2s						
PB09	IPOC Station P	0.72	214	*e*P	Pn	19 07 08.2	-0.2
PB09				*e*S	Sn	19 07 22.9	-0.7
PB09				IAML		19 07 25.4	
	comp=E,1µm,0.5s						
PB09	IPOC Station P	0.72	214	*e*P	Pn	19 07 07.9	-0.6
PB09				IAML		19 07 24.2	
	comp=Z,1µm,0.4s						
PB08	IPOC Station P	1.10	343	*e*P	Pn	19 07 12.5	+0.4
PB08				*e*S	Sn	19 07 30.5	+0.4
PB08				IAML		19 07 32.7	
	comp=E,943nm,0.3s						
PB08	IPOC Station P	1.10	343	*e*P	Pn	19 07 12.5	+0.4
PB08				*e*S	Sn	19 07 31.1	+1.1
PB08				IAML		19 07 32.2	
	comp=Z,413nm,0.4s						
PB03	IPOC Station P	1.23	226	*e*P	Pn	19 07 12.9	-0.2
PB03				*e*S	Sn	19 07 31.5	-0.5
PB03	IPOC Station P	1.23	226	*e*S	Sn	19 07 31.9	-0.1
PB03				IAML		19 07 33.1	
	comp=Z,817nm,0.2s						
TA01	Diego Aracena	1.43	296	⇑*e*P	Pn	19 07 15.4	+0.2
TA01				*e*S	Sn	19 07 35.6	0.0
TA01	Diego Aracena	1.43	296	*e*P	Pn	19 07 15.3	+0.2
TA01				*e*S	Sn	19 07 36.5	+0.8
TA01				IAML		19 07 37.9	
	comp=Z,1µm,0.2s						
TA02	Huaiquique	1.55	306	*e*P	Pn	19 07 16.1	-0.4
TA02	Huaiquique	1.55	306	*e*P	Pn	19 07 18.2	+1.7
TA02				*e*S	Sn	19 07 39.0	+1.0
TA02				IAML		19 07 39.9	
	comp=Z,477nm,0.5s						
GO01	Chusmiza	1.56	346	*e*P	Pn	19 07 17.5	+0.3
GO01				IAML		19 07 42.7	
	comp=N,1µm,0.1s						
GO01	Chusmiza	1.56	346	*e*P	Pn	19 07 16.8	-0.4
PB11	IPOC Station P	1.64	331	*e*P	Pn	19 07 17.7	0.0
PB11	IPOC Station P	1.64	331	*e*P	Pn	19 07 17.9	+0.1
PB11				*e*S	Sn	19 07 41.0	+0.8
PB11				IAML		19 07 44.2	
	comp=Z,520nm,0.2s						
PB06	IPOC Station P	1.66	205	⇑*e*P	Pn	19 07 17.8	-0.2
PB06				*e*S	Sn	19 07 39.9	-0.8
PB06				IAML		19 07 42.0	
	comp=E,623nm,0.2s						
PB06	IPOC Station P	1.66	205	*e*P	Pn	19 07 17.4	-0.6

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PB06                                   eS       Sn       19 07 40.7  0.0
PB06                                    IAML             19 07 43.4
       comp=Z,445nm,0.3s
AF01   San Pedro de A      1.84 162    eS       Sn       19 07 46.2 +1.5
AF01                                    IAML             19 08 07.5
       comp=Z,224nm,1.4s
PB05   IPOC Station P      2.10 218    eP       Pn       19 07 22.9 -0.4
PB05                                    IAML             19 07 53.6
       comp=N,124nm,0.4s
PB05   IPOC Station P      2.10 218    eP       Pn       19 07 23.5 +0.2
PB05                                   eS       Sn       19 07 48.4 -1.7
PB10   IPOC Station P      2.82 215    eP       Pn       19 07 31.8 -0.5
PB10   IPOC Station P      2.82 215    eP       Pn       19 07 31.6 -0.7
YJA    Yavi                3.21 108    eP       Pn       19 07 38.4 +0.6
YJA                                    eS       Sn       19 08 18.7 +2.7
LPAZ   La Paz              4.92   8     P       Pn       19 08 02.3 +1.4
       comp=N,2.1nm,0.4s,baz=208,slow=5.2,SNR=13
LPAZ                                    S       Sn       19 08 51.1 -6.1
       comp=N,2.6nm,0.6s,baz=163,slow=20,SNR=4.2
LPAZ   La Paz              4.92   8    eP       Pn       19 08 03.0 +2.2
AC01   Pan de Azucar       5.20 198    eP       Pn       19 08 01.1 -2.8
SIV    San Ignacio         8.97  56     P       Pn       19 08 50.9 -4.0
       comp=N,14nm,0.5s,baz=248,slow=13,SNR=71
PLCA   Paso Flores        19.53 184     P       Pn       19 11 07.5 -1.1
       comp=N,1.8nm,0.8s,baz=288,slow=7.3,SNR=3.1
BDFB   Brasilia           20.48  78     P       P        19 11 14.8 -1.6
       comp=N,3.0nm,0.4s,baz=250,slow=10,SNR=5.3
       comp=N,3.0nm,0.4s
SNAA   Sanae              62.53 161     P       P        19 16 59.3 +0.8
       comp=N,0.6nm,0.6s,baz=292,slow=10,SNR=1.9
       comp=N,0.6nm,0.6s
QSPA   South Pole Qui     68.99 180     P       P        19 17 41.9 +1.8
       comp=N,1.7nm,1.0s,baz=216,slow=0.4,SNR=5.9
       comp=N,1.7nm,1.0s
TORD   Torodi Ar. Bea     77.16  70     P       P        19 18 28.9 +0.1
       comp=N,10.0nm,0.3s,baz=241,slow=5.2,SNR=23
MKAR   Makanchi Array    145.33  36     PKPbc   PKPab    19 26 12.7 +1.0
       comp=N,0.8nm,0.8s,baz=311,slow=3.4,SNR=6.3
```

IDC 04 19:07:52.5±3.2, 25°.62N×98°.61E, h0^{km}, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=513.7km s-min=29.1km az=57.0, Myanmar-China border region

```
Code   Station Name        Δ°    AZ°    Phase ID            Time     Res
                                        Op      ISC       h  m  s    ISC
MKAR   Makanchi Array     24.80 333     P       P        19 13 16.2  0.0
       0.2nm,0.5s,baz=142,slow=11,SNR=4.9
       0.2nm,0.5s
WRA    Warramunga Arr     57.06 139     P       P        19 17 39.6 -1.1
       0.4nm,0.8s,baz=326,slow=7.5,SNR=1.8
       0.4nm,0.8s
ASAR   Alice Springs      59.73 142     P       P        19 18 00.1 +0.7
       0.2nm,0.4s,baz=324,slow=6.6,SNR=5.8
       0.2nm,0.4s
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*IDC **04** 19:12:03.6±0.9, 16°.87N×100°.18W, h0^{km}, mb4.1/13, mbtmp4.1/16, ML4.1/3, MS3.5/32, Error ellipse: s-maj=32.9km s-min=16.8km az=51.0*

*NEIC **04** 19:12:07.3±2.9, 17°.14N±0°.06×99°.91W±0°.04, h28^{km}±7^{km}, mb4.5/232, Md4.9/186(MEX), Error ellipse: s-maj=9.7km s-min=5.7km az=194.0*

*MEX **04** 19:12:09.3±0.7, 17°.06N×99°.94W, h39^{km}±4^{km}, MD4.9*

ISC 04 19:12:07.8±0.8, 17°.09N±0°.02×99°.95W±0°.02, h33^{km}±5^{km}, n595, σ1^{s}.92/623, mb4.5/98, MS3.5/28, 10C-2D, Guerrero

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Code   Station Name        Δ°    AZ°    Phase ID            Time     Res
                                        Op      ISC       h  m  s    ISC
VNTA   La Mica             0.21 145    eP       Pn       19 12 14.6 -0.2
VNTA                                   eS       Sb       19 12 19.7 +0.7
ACP2   Acapulco            0.22 165             Pn       19 12 14.7 -0.2
ACP2                                            Sb       19 12 19.9 +0.7
ACP2   Acapulco            0.22 165    eP       Pn       19 12 14.7 -0.2
ACP2                                   eS       Sb       19 12 19.9 +0.7
DAIG   Los Arroyos         0.29 103             Pn       19 12 15.3 -0.6
DAIG                                            Sn       19 12 20.7 -0.4
DAIG   Los Arroyos         0.29 103⇑iP          Pn       19 12 15.3 -0.6
DAIG                                   eS       Sn       19 12 20.7 -0.4
CAIG   El Cayaco           0.31 262             Pn       19 12 15.8 -0.3
CAIG                                            Sn       19 12 21.8 +0.3
CAIG   El Cayaco           0.31 262⇑eP          Pn       19 12 15.8 -0.3
CAIG                                   i S      Sn       19 12 21.8 +0.3
ATYC   Atoyac              0.48 285    eP       Pb       19 12 17.9 -0.2
ATYC                                   eS       Sn       19 12 25.5 -0.2
CRIG   Cruz Grande         0.86 114             Pn       19 12 22.6 -1.0
CRIG                                            Sb       19 12 33.2 -2.3
CRIG   Cruz Grande         0.86 114    eP       Pn       19 12 22.6 -1.0
CRIG                                   eS       Sb       19 12 33.2 -2.3
MEIG   Mezcala             0.89  21             Pn       19 12 23.8 -0.4
MEIG                                            Sb       19 12 35.6 -1.0
MEIG   Mezcala             0.89  21⇓eP          Pn       19 12 23.8 -0.4
MEIG                                   eS       Sb       19 12 35.6 -1.0
ARIG   Puente Sto Nin      1.25 342             Pn       19 12 29.2 +0.1
ARIG                                            Sn       19 12 44.2 -0.5
ARIG   Puente Sto Nin      1.25 342⇓eP          Pn       19 12 29.2 +0.1
ARIG                                   i S      Sn       19 12 44.2 -0.5
PET2   Petatlan            1.33 290    eP       Pn       19 12 29.9 -0.3
PET2                                   eS       Sn       19 12 45.5 -1.3
PLIG   Platanillo          1.36  18             Pn       19 12 31.0 +0.3
PLIG                                            Sn       19 12 47.2 -0.5
PLIG   Platanillo          1.36  18    eP       Pn       19 12 31.0 +0.3
PLIG                                   eS       Sn       19 12 47.2 -0.5
TLIG   Tlapa               1.40  70             Pn       19 12 31.0 -0.2
TLIG                                    Sn      Sn       19 12 42.1 -6.6
TLIG   Tlapa               1.40  70⇑iP          Pn       19 12 31.2 -0.1
TLIG                                   eS       Sn       19 12 48.1 -0.6
HMTT   Tlapaneco           1.50  62             Pn       19 12 32.6  0.0
HMTT                                            Sn       19 12 50.1 -1.1
HMTT   Tlapaneco           1.50  62    eP       Pn       19 12 32.6  0.0
HMTT                                   eS       Sn       19 12 50.1 -1.1
ZIIG   Zihuatanejo         1.54 290             Pn       19 12 32.8 -0.2
ZIIG                                            Sn       19 12 50.8 -1.1
ZIIG   Zihuatanejo         1.54 290⇑eP          Pn       19 12 32.8 -0.2
ZIIG                                   eS       Sn       19 12 50.8 -1.1
PNIG   Pinotepa            1.88 111             Pn       19 12 37.0 -0.7
PNIG                                            Sn       19 12 57.5 -2.8
PNIG   Pinotepa            1.88 111    eP       Pn       19 12 37.0 -0.7
PNIG                                   eS       Sn       19 12 57.5 -2.8
MAVM   Malinalco, Edo      1.91  13             Pn       19 12 38.0 -0.3
MAVM                                            Sn       19 13 00.9 -0.4
MAVM   Malinalco, Edo      1.91  13    i P      Pn       19 12 38.0 -0.3
MAVM                                   eS       Sn       19 13 00.9 -0.4
FTIG   Fresnillo de T      1.91  65             Pn       19 12 38.4 +0.1
FTIG                                            Sb       19 13 03.9 -1.9
FTIG   Fresnillo de T      1.91  65⇑iP          Pn       19 12 38.4 +0.1
FTIG                                   eS       Sb       19 13 03.9 -1.9
YAIG   Yautepec            1.95  25             Pn       19 12 38.1 -0.8
YAIG                                            Sn       19 13 03.9 +1.5
YAIG   Yautepec            1.95  25    eP       Pn       19 12 38.1 -0.8
YAIG                                   eS       Sn       19 13 03.9 +1.5
UON    La Union            1.99 296    eP       Pn       19 12 40.3 +1.2
UON                                    eS       Sn       19 13 02.5 -0.4
TXIG   Tlaxiaco            2.09  85             Pn       19 12 41.0 +0.1
TXIG   Tlaxiaco            2.09  85⇑iP          Pn       19 12 41.0 +0.1
TLVM   San Miguel Top      2.24  20    eP       Pn       19 12 43.0  0.0
TLVM                                   eS       Sn       19 13 11.2 +1.4
AOVM   Tlapan              2.25  15             Pn       19 12 43.2 -0.1
AOVM                                            Sn       19 13 12.5 +2.4
AOVM   Tlapan              2.25  15    eP       Pn       19 12 43.2 -0.1
AOVM                                   eS       Sn       19 13 12.5 +2.4
INVM   La Marquesa         2.26  14    eP       Pn       19 12 43.3  0.0
INVM                                   eS       Sn       19 13 11.6 +1.5
PPPT   Popocatepetl        2.26  34    eP       Pn       19 12 43.0 -0.4
PPPT                                   eS       Sb       19 13 14.9 -1.2
PBXN   Popocatepetl        2.27  33    eP       Pn       19 12 43.4 -0.2
PBXN                                   eS       Sb       19 13 16.0 -0.4
MPVM   San Francisco       2.28  23    eP       Pn       19 12 42.8 -0.7
MPVM                                   eS       Sn       19 13 11.2 +0.5
XCVM   Xochimilco          2.29  20    eP       Pn       19 12 43.3 -0.4
XCVM                                   eS       Sn       19 13 13.5 +2.5
PBCV   Popocatepetl        2.31  35    eP       Pn       19 12 43.5 -0.4
PBCV                                   eS       Sn       19 13 13.9 +2.6
YOIG   Yosondua            2.31  95             Pn       19 12 44.2 +0.3
YOIG                                            Sn       19 13 10.1 -1.3
YOIG   Yosondua            2.31  95    i P      Pn       19 12 44.2 +0.3
YOIG                                   eS       Sn       19 13 10.1 -1.3
PBPN   Popocatepetl        2.31  33    eP       Pn       19 12 43.7 -0.5
PBPN                                   eP       Pb       19 12 44.0 -5.3
PBPN                                   eS       Sn       19 13 10.0 -1.8
PBPN                                   eS       Sb       19 13 13.9 -3.7
AMVM   AMECAMECA           2.31  28             Pn       19 12 43.7 -0.3
AMVM                                            Sn       19 13 12.9 +1.4
AMVM   AMECAMECA           2.31  28    eP       Pn       19 12 43.7 -0.3
AMVM                                   eS       Sn       19 13 12.9 +1.4
CNCY   Coyoacan            2.33  18    eP       Pn       19 12 44.0 -0.2
CNCY                                   eS       Sn       19 13 10.2 -1.7
PPIG   Popocatepetl        2.33  32             Pn       19 12 44.1 -0.3
PPIG                                            Sb       19 13 16.2 -2.1
PPM    Popocatepetl        2.33  32    i P      Pn       19 12 44.1 -0.3
PPM                                    eS       Sb       19 13 16.2 -2.1
UNM    Universidad Na      2.34  18             Pn       19 12 43.0 -1.4
UNM                                     Sn      Sn       19 13 01.4  -11
UNM    Universidad Na      2.34  18    eP       Pn       19 12 41.5 -2.9
UNM                                    eS       Sn       19 13 13.9 +1.6
CUP5   Mexico City         2.35  18    eP       Pn       19 12 44.2 -0.2
CUP5                                   eS       Sn       19 13 14.4 +2.2
CJVM   Cuajimalpa          2.35  15    eP       Pb       19 12 47.4 -2.2
CJVM                                   eS       Sb       19 13 15.8 -2.5
COVM   Coyoacan            2.37  18    eP       Pn       19 12 47.0 +2.2
COVM                                   eP       Pb       19 12 49.8 -0.3
COVM                                   eS       Sn       19 13 14.9 +2.0
COVM                                   eS       Sb       19 13 16.1 -3.0
BJVM   Benito Juarez       2.39  18    eP       Pb       19 12 48.4 -2.1
BJVM                                   eS       Sn       19 13 14.4 +1.1
SCT2   Benito Juarez       2.42  18    eP       Pb       19 12 49.8 -1.1
SCT2                                   eS       Sb       19 13 18.6 -1.8
VRVM   Mexico City         2.45  19    eS       Sb       19 13 19.1 -2.2
CTVM   Cuauhtemoc          2.46  17    eS       Sn       19 13 18.1 +3.2
PBVM   Pinon               2.48  19             Pn       19 12 45.7 -0.2
PBVM                                            Sn       19 13 16.0 +0.9
PBVM   Pinon               2.48  19    eP       Pn       19 12 45.7 -0.2
PBVM                                   eS       Sn       19 13 16.0 +0.9
APVM   Azcapotzalco        2.49  16             Pb       19 12 50.5 -1.6
APVM   Azcapotzalco        2.49  16    eP       Pb       19 12 50.5 -1.6
AZVM   Cuida Lopez Ma      2.56  14             Pn       19 12 47.5 +0.1
AZVM                                            Sn       19 13 20.0 +2.4
AZVM   Cuida Lopez Ma      2.56  14    eP       Pn       19 12 47.5 +0.1
AZVM                                   eS       Sn       19 13 20.0 +2.4
PHPU   Puebla              2.58  41             Pb       19 12 55.4 +1.7
PHPU                                            Sb       19 13 22.8 -2.2
PHPU   Puebla              2.58  41    eP       Pb       19 12 55.4 +1.7
PHPU                                   eS       Sb       19 13 22.8 -2.2
ATVM   ATLACOMULCO         2.66   2             Pn       19 12 48.4 -0.4
ATVM                                            Sn       19 13 23.3 +3.2
ATVM   ATLACOMULCO         2.66   2    eP       Pn       19 12 48.4 -0.4
ATVM                                   eS       Sn       19 13 23.3 +3.2
TPIG   Tehuac#an           2.80  61             Pn       19 12 50.2 -0.3
TPIG                                            Sn       19 13 25.1 +1.8
TPIG   Tehuac#an           2.80  61⇑iP          Pn       19 12 50.2 -0.3
TPIG                                   eS       Sn       19 13 25.1 +1.8
THEZ   Tehuacan            2.81  60    eP       Pn       19 12 50.2 -0.4
THEZ                                   eS       Sb       19 13 31.6 +0.1
MOIG   Morelia             2.83 336             Pn       19 12 51.5 +0.4
MOIG   Morelia             2.83 336    eP       Pn       19 12 52.7 +1.7
MOIG                                   eS       Sn       19 13 28.6 +4.4
ZUVM   ZUMPANGO            2.85  17             Pb       19 12 54.9 -3.3
ZUVM                                            Sb       19 13 30.2 -2.5
ZUVM   ZUMPANGO            2.85  17    eP       Pb       19 12 54.9 -3.3
ZUVM                                   eS       Sb       19 13 30.2 -2.5
ACIG   Acambay             2.88   1             Pn       19 12 51.7 +0.1
ACIG                                            Sb       19 13 32.6 -0.9
ACIG   Acambay             2.88   1⇑eP          Pn       19 12 51.7 +0.1
ACIG                                   eS       Sb       19 13 32.6 -0.9
VTVM   Tizayuca            2.89  22             Pb       19 12 56.7 -2.2
VTVM                                            Sb       19 13 32.6 -1.4
VTVM   Tizayuca            2.89  22    eP       Pb       19 12 56.7 -2.2
VTVM                                   eS       Sb       19 13 32.6 -1.4
PEIG   Puerto Escondi      2.90 112             Pn       19 12 51.6 -0.2
PEIG                                            Sn       19 13 21.1 -4.4
PEIG   Puerto Escondi      2.90 112    eP       Pn       19 12 51.6 -0.2
PEIG                                   eS       Sn       19 13 21.1 -4.4
TOIG   Toxpalan            2.93  70             Pn       19 12 52.1 -0.1
TOIG   Toxpalan            2.93  70⇑iP          Pn       19 12 52.1 -0.1
ACAM   Acambaro            3.03 346             Pn       19 12 54.4 +0.7
ACAM                                            Sn       19 13 33.7 +4.6
ACAM   Acambaro            3.03 346    eP       Pn       19 12 54.4 +0.7
ACAM                                   eS       Sn       19 13 33.7 +4.6
VHO    Vista Hermosa       3.07  90⇑eP          Pn       19 12 54.9 +0.6
VHO                                    eS       Sn       19 13 29.6 -0.5
OXIG   Oaxaca              3.08  90             Pn       19 12 54.9 +0.6
OXIG                                            Sn       19 13 29.6 -0.6
URUA   Uruapan             3.08 319             Pn       19 12 57.7 +3.3
URUA                                            Sn       19 13 33.5 +3.3
URUA   Uruapan             3.08 319    eP       Pn       19 12 57.7 +3.3
URUA                                   eS       Sn       19 13 33.5 +3.3
OXBJ   Oaxaca              3.08  90             Pn       19 12 53.7 -0.8
OXBJ                                            Sn       19 13 28.0 -2.3
OXBJ   Oaxaca              3.08  90    eP       Pn       19 12 53.7 -0.8
OXBJ                                   eS       Sn       19 13 28.0 -2.3
OXLC   Oaxaca              3.10  90    eP       Pn       19 12 56.3 +1.5
OXLC                                   eS       Sn       19 13 30.7 -0.1
DHIG   Demacu              3.31  15             Pn       19 12 56.5 -1.2
DHIG                                            Sb       19 13 43.3 -2.7
DEIG   Demacu              3.31  15    eP       Pn       19 12 56.5 -1.2
DEIG                                   eS       Sb       19 13 43.3 -2.7
MMIG   Aquila              3.45 291             Pn       19 12 59.2 -0.1
MMIG   Aquila              3.45 291    eP       Pn       19 12 59.2 -0.1
JRQG   Juriquilla Cam      3.63 353             Pn       19 13 02.6 +0.6
JRQG   Juriquilla Cam      3.63 353    eP       Pn       19 13 04.7 +2.7
JRQG                                   eS       Sb       19 13 51.2 -3.9
JAUV   Jalcomulco          3.75  52    eP       Pn       19 13 01.8 -1.7
JAUV                                   eS       Sn       19 13 41.0 -5.6
CXUV   Coxquihui           3.80  36    eP       Pn       19 13 01.4 -2.7
CXUV                                   eS       Sn       19 13 47.5 -0.2
IGIG   Irapuato, Guan      3.87 340             Pn       19 13 08.3 +3.0
IGIG                                            Sb       19 13 57.8 -4.3
IGIG   Irapuato, Guan      3.87 340    eP       Pn       19 13 08.3 +3.0
IGIG                                   eS       Sb       19 13 57.8 -4.3
HUIG   Huatulco            3.91 109             Pn       19 13 05.9 +0.2
HUIG                                            Sn       19 13 44.5 -6.0
HUIG   Huatulco            3.91 109    eP       Pn       19 13 05.9 +0.2
HUIG                                   eS       Sn       19 13 44.5 -6.0
NEUV   Arroyo Zacate       4.01  80    eP       Pn       19 13 06.8 -0.2
NEUV                                   eS       Sn       19 13 50.3 -2.5
MNGA   Volcan de Coli      4.21 305    eP       Pn       19 13 13.2 +3.1
MNGA                                   eS       Sn       19 14 02.0 +3.6
INCO   Volcan de Coli      4.24 305    eP       Pn       19 13 13.5 +3.0
INCO                                   eS       Sn       19 14 05.6 +6.5
COMA   Comala              4.25 302    eP       Pn       19 13 15.3 +4.9
COMA                                   eS       Sn       19 14 02.3 +3.3
LVIG   Laguna Verde        4.25  51    eP       Pn       19 13 10.1 -0.3
LVIG                                   eS       Sn       19 13 59.4 +0.5
SOMAC  Volcano de Col      4.25 305    eP       Pn       19 13 13.4 +2.6
SOMAC                                  eS       Sb       19 14 09.5 -3.8
CDAR   Ciudad de Arme      4.28 296    eP       Pn       19 13 11.9 +1.2
CDAR                                   eS       Sn       19 13 56.4 -3.3
CEGR   Campo Tres          4.36 302    eP       Pn       19 13 14.3 +2.2
CEGR                                   eS       Sn       19 14 03.4 +1.4
CTUV   Llano Grande        4.61  19    eP       Pn       19 13 15.3  0.0
CTUV                                   eS       Sn       19 14 11.8 +4.0
RPIG   Rio Verde           4.77 360             Pn       19 13 23.4 +5.8
RPIG                                            Sn       19 14 17.9 +6.0
RPIG   Rio Verde           4.77 360    eP       Pn       19 13 23.4 +5.8
RPIG                                   eS       Sn       19 14 17.9 +6.0
CMIG   Matias Romero       4.84  89     Pn      Pn       19 13 18.8 +0.3
       12nm,0.3s,baz=277,slow=12,SNR=90
CMIG                                    Sn      Sn       19 14 11.2 -2.3
       18nm,0.3s,baz=297,slow=15,SNR=5.0
CMIG                                    Lg      Lg       19 14 32.1
       38nm,0.3s,baz=292,slow=12,SNR=4.3
CMIG                                    LR      LR       19 15 18.6
       comp=Z,1μm,18.9s,baz=258,slow=38
       29nm,0.3s
CIHU   Emiliano Zapat      5.04 296    eP       Pn       19 13 22.6 +1.4
CIHU                                   eS       Sn       19 14 15.9 -2.5
TUIG   Tuzandepetl         5.35  79    eP       Pn       19 13 23.9 -1.6
TUIG                                   eS       Sn       19 14 32.2 +6.1
AAIG   Aguscalientes       5.37 335             Pn       19 13 27.2 +1.3
AAIG                                            Sb       19 14 36.9 -8.3
AAIG   Aguscalientes       5.37 335    eP       Pn       19 13 27.2 +1.3
AAIG                                   eS       Sb       19 14 36.9 -8.3
CJM    Chamela             5.40 297    eP       Pn       19 13 27.7 +1.5
CJM                                    eS       Sn       19 14 23.4 -3.9
ANIG   Ahuacatlan          5.85 313             Pn       19 13 36.3 +3.9
ANIG                                            Sn       19 14 36.6 -2.0
ANIG   Ahuacatlan          5.85 313    eP       Pn       19 13 36.3 +3.9
ANIG                                   eS       Sn       19 14 36.6 -2.0
GTIG   Gomez Farias        5.99   7             Pn       19 13 32.7 -1.6
GTIG                                            Sn       19 14 50.2 +8.3
GTIG   Gomez Farias        5.99   7    eP       Pn       19 13 32.7 -1.6
GTIG                                   eS       Sn       19 14 50.2 +8.3
PUVA   Puert Vallarta      6.11 306             Pn       19 13 42.3 +6.5
PUVA                                            Sn       19 14 54.4  +10
PUVA   Puert Vallarta      6.11 306    eP       Pn       19 13 42.3 +6.5
PUVA                                   eS       Sn       19 14 54.4  +10
ZAIG   Zacatecas           6.17 337             Pn       19 13 37.1 +0.2
ZAIG   Zacatecas           6.17 337    eP       Pn       19 13 37.8 +0.9
ZAIG                                   eS       Sn       19 14 51.9 +5.4
TGIG                       6.54  92             Pn       19 13 39.8 -2.1
TGIG                                            Sn       19 15 03.2 +7.7
TGIG                       6.54  92    eP       Pn       19 13 39.8 -2.1
TGIG                                   eS       Sn       19 15 03.2 +7.7
PCIG                       6.60 101             Pn       19 13 43.5 +0.8
PCIG                                            Sn       19 14 52.0 -4.9
PCIG                       6.60 101    eP       Pn       19 13 43.5 +0.8
PCIG                                   eS       Sn       19 14 52.0 -4.9
CCIG   Comitan             7.53  95             Pn       19 13 55.6 +0.1
CCIG                                    Sn      Sn       19 15 14.2 -5.7
CCIG   Comitan             7.53  95    i P      Pn       19 13 57.3 +1.7
CCIG                                   eS       Sn       19 15 13.0 -7.0
LNIG   Linares             7.78   3    eP       Pn       19 13 58.2 -0.7
LNIG                                   eS       Sn       19 15 32.8 +6.9
PDIG   Papasquiaro         9.40 328             Pn       19 14 26.5 +5.2
PDIG                                            Sn       19 16 02.3 -3.7
PDIG   Papasquiaro         9.40 328    eP       Pn       19 14 26.5 +5.2
PDIG                                   eS       Sn       19 16 02.3 -3.7
MTO3   Montecristo        10.54 103             Pn       19 14 38.1 +1.2
HPIG                      11.14 333             Pn       19 14 43.4 -1.7
SLBS   Sierra La Lagu     11.44 307    eP       Pn       19 14 53.5 +4.4
TEIG   Tepich             11.49  72             Pn       19 14 48.2 -1.5
TEIG   Tepich             11.49  72    eP       Pn       19 14 47.4 -2.3
TEIG                                   eS       Sn       19 16 52.7 -4.4
LPIG   La Paz             11.95 307     LR      LR       19 19 01.7
       comp=Z,456nm,19.9s,baz=137,slow=35
DRIO   Del Rio            12.29 357             Pn       19 14 59.3 -1.4
HNDO   Hondo              12.40   3             Pn       19 14 59.2 -2.9
TXAR   Lajitas Array      12.66 345             Pn       19 15 04.3 -1.4
TXAR   Lajitas Array      12.66 345     Pn      Pn       19 15 08.0 +2.2
       0.1nm,0.3s,baz=163,slow=14,SNR=10
TXAR                                    Lg      Lg       19 18 47.2
       baz=160,slow=24,SNR=3.2
TXAR                                    LR      LR       19 20 39.6
       comp=Z,140nm,18.6s,baz=152,slow=40
       0.8nm,0.7s
TX31   Lajitas Ar. Si     12.66 345             Pn       19 15 03.9 -1.9
SAND   Sanderson          12.96 352             Pn       19 15 10.7 +0.8
ALPN   Alpine             13.65 346             Pn       19 15 19.0 -0.3
OZNA   Ozona              13.81 356             Pn       19 15 20.7 -0.8
BRDY   Brady              14.16   3             Pn       19 15 23.8 -2.4
VHRN   Van Horn           14.39 342             Pn       19 15 29.4 -0.1
MNHN   Monahans           14.42 350             Pn       19 15 29.7 -0.1
BOAB   BOACO BROADBAN14.56 107          P       P        19 15 35.2 -2.6
PECS   Pecos              14.66 347             Pn       19 15 33.9 +0.9
SGCY   Sterling City      14.80 356             Pn       19 15 34.6 -0.4
441A   DeRidder           14.93  23             Pn       19 15 36.1 -0.5
WHTX   Lake Whitney,      15.01   8             Pn       19 15 36.8 -0.8
SRIG   Santa Rosalia      15.26 314     P       Pn       19 15 39.7 -1.3
237A   Washetta, Mont     15.31  13             Pn       19 15 40.4 -1.3
MNTX   Cornudas Mount     15.36 342             Pn       19 15 42.3  0.0
MNTX   Cornudas Mount     15.36 342    eP       Pn       19 15 42.8 +0.5
FW13   Cleburne           15.37   8             Pn       19 15 40.6 -1.8
NATX   Nacogdoches        15.38  17             Pn       19 15 39.9 -2.5
ABTX   Abilene, Hawle     15.47   1             Pn       19 15 42.4 -1.4
ABTX                                    IAmb    IAmb     19 16 03.1
       comp=Z,24nm,0.8s
CLNB   Carlsbad           15.52 347     P       Pn       19 15 44.8 +0.3
HSIG                      15.59 322     P       Pn       19 15 47.4 +2.1
CLN7   Carlsbad 7         15.65 348     P       Pn       19 15 46.2 +0.1
HTMS   Hat Mesa           15.68 348     P       Pn       19 15 46.5  0.0
PLPT   Palo Pinto         15.73   5     P       Pn       19 15 45.8 -1.2
PLPT                                    IAmb    IAmb     19 16 02.0
       comp=Z,54nm,1.0s
SN05   Snyder 5           15.74 357     P       Pn       19 15 47.0 -0.4
SN05                                    IAmb    IAmb     19 16 06.7
       comp=Z,55nm,1.3s
SN07   Snyder 07          15.96 357     P       Pn       19 15 49.1 -1.0
FW06   Azle               15.96   7     P       Pn       19 15 49.0 -1.1
FW06                                    IAmb    IAmb     19 15 55.4
       comp=Z,44nm,0.9s
POST   Post               15.97 355     P       Pn       19 15 49.8 -0.5
POST                                    IAmb    IAmb     19 16 09.3
       comp=Z,65nm,1.2s
FW03   Perrin-Whitt E     15.97   6     P       Pn       19 15 49.3 -0.9
APMT   Aspermont          16.17 359             Pn       19 15 52.5 -0.2
DKNS   Dickens            16.53 357     P       Pn       19 15 56.5 -0.9
319A   Douglas            16.56 331             Pn       19 15 58.2 +0.4
319A                                    IAmb    IAmb     19 16 18.5
       comp=Z,25nm,0.8s
Z38A   Mt. Pleasant       16.71  15             Pn       19 15 57.7 -1.9
Z38A                                    IAmb    IAmb     19 16 02.4
       comp=Z,47nm,0.9s
MSTX   Muleshoe           17.00 352             Pn       19 16 02.5 -0.8
LCR2   La Lucha 2         17.13 113     P       P        19 16 07.5 +0.8
Z41A   Richland Creek     17.34  20     P       Pn       19 16 04.0 -3.4
DUN6   Lazy B Ranch       17.48 333     P       Pn       19 16 07.6 -1.7
DUN6                                    IAmb    IAmb     19 16 24.1
       comp=Z,80nm,1.3s
X34A   Smith Ranch, M     17.54   6     IAmb    IAmb     19 16 27.3
       comp=Z,33nm,0.9s
WMOK   Wichita Mounta     17.61   3     P       Pn       19 16 08.1 -2.6
AMTX   Amarillo           17.79 355     IAmb    IAmb     19 16 30.1
       comp=Z,53nm,1.0s
CRNM   Carthage           17.86 341             Pn       19 16 13.2 -0.9
SMWD   Samnorwood         17.95 359             Pn       19 16 13.6 -1.3
SMWD                                    IAmb    IAmb     19 16 31.4
       comp=Z,35nm,0.7s
BNM    Barren Site        18.02 342             Pn       19 16 16.1 +0.1
SBM    South Baldy        18.03 340     P       Pn       19 16 16.6 +0.3
TUC    Tucson             18.05 329             P        19 16 17.4 +0.9
MIAR   Mount Ida          18.30  17             P        19 16 17.6 -1.5
CSTR   Hydro, Custer      18.52   3     P       P        19 16 19.9 -1.6
ANMO   Albuquerque        18.71 343             P        19 16 22.3 -1.6
ANMO   Albuquerque        18.71 343             P        19 16 22.6 -1.3
ANMO                                    IAmb    IAmb     19 16 36.4
       comp=Z,11nm,0.8s
ANMO   Albuquerque        18.71 343     P       Pn       19 16 25.0 +0.5
       comp=Z,0.8nm,0.3s,baz=231,slow=13,SNR=11
ANMO                                    Lg      Lg       19 22 07.1
       baz=84,slow=14
ANMO                                    LR      LR       19 24 47.5
       comp=Z,152nm,20.7s,baz=262,slow=40
       comp=Z,6.0nm,0.6s
OK029  Liberty Lake       18.77   6     P       P        19 16 21.8 -2.5
OK029                                   IAmb    IAmb     19 16 40.9
       comp=Z,25nm,0.6s
DEOK   Depew              18.93   9     P       P        19 16 23.9 -2.2
DEOK                                    IAmb    IAmb     19 16 41.5
       comp=Z,46nm,1.1s
OK052  Battle Ridge R     19.04   8     P       P        19 16 25.1 -2.1
TUL3   Leonard            19.11  10     IAmb    IAmb     19 16 32.2
       comp=Z,32nm,0.8s
QUOK   Quay               19.22   8     IAmb    IAmb     19 16 31.1
       comp=Z,29nm,0.9s
OK038  West end E0370     19.34   3     P       P        19 16 29.5 -1.1
WHAR   Wooly Hollow       19.37  19     IAmb    IAmb     19 16 31.5
       comp=Z,18nm,0.6s
CROK   Carrier            19.42   5     IAmb    IAmb     19 16 33.6
       comp=Z,34nm,0.9s
RTBA   Rita Blanca        19.43 353     IAmb    IAmb     19 16 53.2
       comp=Z,25nm,1.1s
RLO    Rose Lookout       19.50  12     P       P        19 16 29.8 -2.5
RLO                                     IAmb    IAmb     19 16 43.6
       comp=Z,15nm,0.7s
X18A   Snowflake          19.54 335     IAmb    IAmb     19 16 39.3
       comp=Z,20nm,1.0s
U38A   Gravette           19.90  13     P       P        19 16 34.5 -2.1
T35A   Sooner Cattle      19.98   8     IAmb    IAmb     19 16 39.7
       comp=Z,32nm,0.9s
113A   Mohawk Valley,     19.98 324             P        19 16 37.9 +0.3
113A                                    IAmb    IAmb     19 17 00.4
       comp=Z,29nm,1.3s
LCAR   Lake Charles       20.45  21     IAmb    IAmb     19 17 02.1
       comp=Z,18nm,0.9s
152A   Waverly Hall       20.73  39     P       P        19 16 43.0 -2.7
PLAL   Pickwick Lake      20.74  28     IAmb    IAmb     19 16 47.8
       comp=Z,15nm,0.8s
X48A   Hartselle          20.80  31             P        19 16 44.3 -2.1
X48A                                    IAmb    IAmb     19 17 00.7
       comp=Z,18nm,0.8s
WUAZ   Wupatki            20.99 333             P        19 16 49.0 +0.3
MGMO   Mountain Grove     21.11  17     IAmb    IAmb     19 16 53.1
       comp=Z,13nm,0.8s
BLYC   Blythe             21.14 324     IAmb    IAmb     19 17 18.0
       comp=Z,18nm,0.9s
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MVCO   Mesa Verde        21.42 341         P      19 16 52.0 -1.4
MVCO                               IAmb    IAmb   19 17 23.6
       comp=Z,15nm,0.9s
S22A   4UR Ranch, Cre    21.45 345  IAmb   IAmb   19 17 09.7
       comp=Z,18nm,1.0s
FPAL   Fort Paine        21.60  34  IAmb   IAmb   19 17 07.6
       comp=Z,15nm,0.9s
CBKS   Cedar Bluff       21.65   0         P      19 16 54.3 -1.2
WVT    Waverly           21.80  27  P      P      19 16 54.7 -2.5
WVT                                 IAmb   IAmb   19 17 14.1
       comp=Z,18nm,0.6s
Y52A   Lilburn           21.97  38  IAmb   IAmb   19 17 07.1
       comp=Z,12nm,0.7s
KSCO   Kaye Shedlock'    21.97 354         P      19 16 57.9 -1.2
GOGA   Godfrey           22.00  39  P      P      19 16 57.4 -2.0
GOGA                                IAmb   IAmb   19 17 16.9
       comp=Z,16nm,0.9s
X51A   Calhoun           22.03  35  IAmb   IAmb   19 17 08.7
       comp=Z,13nm,0.6s
PFO    Pinyon Flats O    22.16 321  P      P      19 17 02.9 +1.6
       comp=Z,3.7nm,0.8s,baz=121,slow=11,SNR=4.2
PFO                                 LR     LR     19 26 04.5
       comp=Z,187nm,19.4s,baz=164,slow=38
       comp=Z,3.7nm,0.8s
CCM    Cathedral Cave    22.24  18         P      19 16 59.3 -2.6
CCM                                 IAmb   IAmb   19 17 18.1
       comp=Z,10nm,0.7s
PV02   Paradox Valley    22.41 342  IAmb   IAmb   19 17 47.8
       comp=Z,16nm,0.9s
FVM    French Village    22.43  20  IAmb   IAmb   19 17 20.2
       comp=Z,16nm,0.8s
CLTN   Cedars of Leba    22.46  30  P      P      19 17 00.9 -3.3
CLTN                                IAmb   IAmb   19 17 21.1
       comp=Z,9.2nm,0.6s
PV15   Paradox Valley    22.46 342  IAmb   IAmb   19 17 16.6
       comp=Z,19nm,1.1s
PV18   Skein Mesa, Pa    22.50 341         P      19 17 04.4 -0.5
PV18                                IAmb   IAmb   19 17 16.7
       comp=Z,12nm,0.8s
PV11   David Mesa, Pa    22.54 341  IAmb   IAmb   19 17 20.4
       comp=Z,9.6nm,0.7s
PV17   East Wray Mesa    22.54 341  IAmb   IAmb   19 17 54.5
       comp=Z,12nm,0.9s
PV07   Paradox Valley    22.59 342  P      P      19 17 05.0 -0.9
PV07                                IAmb   IAmb   19 17 33.5
       comp=Z,16nm,1.1s
PV20   West Nyswonger    22.60 341  IAmb   IAmb   19 17 17.3
       comp=Z,12nm,0.8s
PV04   Paradox Valley    22.63 341  IAmb   IAmb   19 17 17.9
       comp=Z,11nm,0.8s
PV23   Carpenter Ridg    22.72 341  IAmb   IAmb   19 17 19.1
       comp=Z,15nm,0.9s
CPCT   Cooper Cave       22.87  34  IAmb   IAmb   19 17 18.6
       comp=Z,18nm,0.7s
W52A   Murphy            22.93  36  P      P      19 17 07.1 -2.2
W52A                                IAmb   IAmb   19 17 22.5
       comp=Z,15nm,0.6s
HODGE  Hodges            23.30  40  P      P      19 17 11.0 -2.0
HODGE                               IAmb   IAmb   19 17 29.1
       comp=Z,26nm,1.3s
TKL    Tuckaleechee C    23.43  35  IAmb   IAmb   19 17 27.8
       comp=Z,13nm,0.8s
TKL    Tuckaleechee C    23.43  35  LR     LR     19 29 50.6
       comp=Z,40nm,18.3s,baz=158,slow=45
SRU    San Rafael Swe    23.80 339  IAmb   IAmb   19 17 19.2
       comp=Z,9.7nm,0.8s
OGNE   Ogallala          23.84 356  P      P      19 17 17.5 -0.8
OGNE                                IAmb   IAmb   19 17 44.8
       comp=Z,17nm,0.9s
Q16A   Castle Valley     23.86 338         P      19 17 18.3 -0.2
MVU    Marysvale         23.89 336         P      19 17 19.2 +0.3
T50A   Nancy             23.92  31  IAmb   IAmb   19 17 28.0
       comp=Z,18nm,0.9s
V53A   Saluda            23.98  36  IAmb   IAmb   19 17 36.1
       comp=Z,15nm,0.8s
O20A   White River Ci    24.07 344  IAmb   IAmb   19 17 22.2
       comp=Z,18nm,0.9s
P18A   Preston Nutter    24.18 340  IAmb   IAmb   19 17 34.1
       comp=Z,14nm,0.8s
KMSC   Kings Mountain    24.47  39  IAmb   IAmb   19 17 35.2
       comp=Z,17nm,0.8s
RDMU   Red Mountain      24.84 342  IAmb   IAmb   19 17 29.6
       comp=Z,14nm,0.7s
S51A   Beattyville       25.02  32  P      P      19 17 27.9 -1.0
V55A   Taylorsville      25.03  38  IAmb   IAmb   19 17 41.1
       comp=Z,25nm,1.2s
BSUT   Blindstream Ca    25.17 340  IAmb   IAmb   19 17 33.5
       comp=Z,12nm,0.9s
W57A   Gilead            25.30  41         P      19 17 29.7 -1.8
TCUT   Toone Canyon      25.91 340  IAmb   IAmb   19 17 54.7
       comp=Z,25nm,1.3s
L40A   Anamosa           25.99  15  IAmb   IAmb   19 17 48.5
       comp=Z,14nm,0.8s
K22A   Casper            26.09 349  IAmb   IAmb   19 17 54.5
       comp=Z,12nm,0.9s
V58A   Windy Hill, Pi    26.26  41  P      P      19 17 38.8 -1.4
HWUT   Hardware Ranch    26.40 340  IAmb   IAmb   19 17 56.2
       comp=Z,9.9nm,0.8s
NV11   Mina Array Sit    26.58 327  IAmb   IAmb   19 17 46.3
       comp=Z,7.8nm,0.8s
NVAR   Mina Array Bea    26.66 327  P      P      19 17 44.0  0.0
NVAR   Mina Array Bea    26.66 327  P      P      19 17 45.9 +1.9
       comp=Z,8.2nm,0.8s,baz=150,slow=10,SNR=18
NVAR                                LR     LR     19 29 24.0
       comp=Z,134nm,18.8s,baz=179,slow=39
       comp=Z,8.2nm,0.8s
ECSD   EROS Data Cent    26.71   5  IAmb   IAmb   19 18 05.0
       comp=Z,11nm,0.8s
BW06   Boulder Array     26.88 344  IAmb   IAmb   19 18 00.1
       comp=Z,9.4nm,1.0s
PDAR   Pinedale Array    26.88 344         P      19 17 45.2 -0.7
PDAR   Pinedale Array    26.88 344  P      P      19 17 46.9 +0.9
       comp=Z,1.8nm,0.5s,baz=138,slow=9.3,SNR=17
PDAR                                LR     LR     19 29 34.5
       comp=Z,322nm,18.4s,baz=154,slow=39
       comp=Z,1.8nm,0.5s
ELK    Elko              27.02 334  LR     LR     19 30 48.4
       comp=Z,36nm,19.0s,baz=158,slow=42
S57A   Dark Hollow, R    27.65  38  IAmb   IAmb   19 18 03.0
       comp=Z,13nm,0.8s
O52A   Adamsville        27.80  31         P      19 17 52.8 -1.2
TPAW   Teton Pass        27.93 343  P      P      19 17 55.4  0.0
FXWY   Fox Creek         28.08 343  IAmb   IAmb   19 18 13.0
       comp=Z,6.3nm,0.8s
RUSC   La Rusia          28.54 110  P      P      19 17 59.9 -1.5
RUSC                                IAmb   IAmb   19 18 16.9
       comp=Z,9.6nm,1.0s
RLMT   Red Lodge         29.02 346         P      19 18 04.1 -1.0
SDV    Santo Domingo     29.67 102  LR     LR     19 31 06.3
       comp=Z,115nm,19.4s,baz=286,slow=38
PLID   Pearl Lake        30.99 338         P      19 18 22.2 -0.3
ATAH   Atahualpa         32.15 137  LR     LR     19 29 14.6
       comp=Z,100nm,19.1s,baz=303,slow=32
SJG    San Juan          32.21  83  LR     LR     19 31 36.6
       comp=Z,34nm,20.6s,baz=270,slow=36
G08A   Pilot Rock        32.31 335         P      19 18 33.9 -0.1
G08A                                IAmb   IAmb   19 18 35.2
       comp=Z,6.5nm,0.8s
SADO   Sadowa            32.67  28  LR     LR     19 34 29.2
       comp=Z,48nm,18.6s,baz=214,slow=41
EPLO   Experimental L    32.89   7  IAmb   IAmb   19 18 49.8
       comp=Z,5.7nm,0.7s
ULM    Lac du Bonnet     33.24   5  P      P      19 18 39.1 -2.8
       comp=Z,1.7nm,0.5s,baz=186,slow=9.2,SNR=4.2
PCRV   Puerto La Cruz    34.96  97  LR     LR     19 33 50.1
       comp=Z,50nm,21.7s,slow=37
FFC    Flin Flon         37.59 358         P      19 19 18.0 -1.3
FFC                                 IAmb   IAmb   19 19 19.8
       comp=Z,11nm,1.0s
BBB    Bella Bella       41.47 334  LR     LR     19 38 27.9
       comp=Z,86nm,19.0s,baz=138,slow=38
V35K   Ketchikan         45.18 335  P      P      19 20 22.0 +0.6
       baz=135
SCHQ   Schefferville     45.44  26  P      P      19 20 22.8 -0.8
       comp=Z,3.6nm,0.7s,baz=265,slow=8.3,SNR=4.2
SCHQ                                LR     LR     19 41 30.9
       comp=Z,45nm,18.0s,baz=290,slow=39
LPAZ   La Paz            45.65 135  P      P      19 20 27.5 +1.1
       comp=Z,0.6nm,0.6s,baz=324,slow=8.7,SNR=1.6
LPAZ                                LR     LR     19 37 26.2
       comp=Z,84nm,21.1s,baz=261,slow=33
       comp=Z,0.6nm,0.6s
TOAD   Toad River Com    45.65 342  P      P      19 20 25.9 +0.7
       baz=145
T35M   Bob Quinn         45.85 337  IAmb   IAmb   19 20 29.5
       comp=Z,5.6nm,0.8s
T35M   Bob Quinn         45.85 337  P      P      19 20 28.0 +1.1
       baz=137,SNR=5.3
CRAG   Craig             45.90 334  P      P      19 20 27.9 +0.8
       baz=133
U33K   Whale Pass        46.34 335  P      P      19 20 32.1 +1.5
       baz=133
KOTAN  Kotaneelee Air    46.38 344  P      P      19 20 32.3 +1.4
       baz=147
YKAW1  Yellowknife Wh    46.48 351         P      19 20 30.4 -1.2
YKAW1                               IAmb   IAmb   19 20 31.6
       comp=Z,7.5nm,0.9s
YKA    Yellowknife Ar    46.51 351  P      P      19 20 31.3 -0.5
       comp=Z,4.3nm,0.8s,baz=163,slow=6.9,SNR=32
YKAW3  Yellowknife Wh    46.57 351         P      19 20 31.5 -0.9
YKAW3                               IAmb   IAmb   19 20 32.4
       comp=Z,5.9nm,0.8s
BEAVL  Fort Liard        46.70 343  P      P      19 20 34.5 +1.0
       baz=146
T33K   Petersburg        46.76 336  P      P      19 20 35.1 +1.2
       baz=134
DLBC   Dease Lake        46.87 339  P      P      19 20 35.6 +0.7
DLBC   Dease Lake        46.87 339  P      P      19 20 35.3 +0.5
       baz=139,SNR=8.1
BLKN   Baker Lake        47.26   2         P      19 20 36.4 -1.3
MDP    Montagnes des     47.80  99  LR     LR     19 44 50.1
       comp=Z,18nm,18.2s,baz=288,slow=41
S32K   Killisnoo         47.86 336  P      P      19 20 42.8 +0.4
       baz=132
SIT    Sitka             47.88 335  P      P      19 20 43.4 +0.8
       baz=131
R33M   Jennings River    47.91 339  P      P      19 20 43.9 +0.9
       baz=138,SNR=8.4
Q32M   Nakina River      48.04 338  P      P      19 20 45.1 +1.0
       baz=136
R32K   Eaglecrest        48.39 336  P      P      19 20 47.6 +1.0
       baz=133
WRGLY  Wrigley           48.89 346  P      P      19 20 51.6 +1.4
       baz=149
P32M   Atlin             49.01 338  IAmb   IAmb   19 20 54.5
       comp=Z,4.3nm,1.0s
P32M   Atlin             49.01 338  P      P      19 20 51.9 +0.6
       baz=135
P33M   Teslin, Yukon     49.15 339  P      P      19 20 53.1 +0.6
       baz=136
PLBC   Pleasant Camp     49.90 337  P      P      19 20 58.8 +0.8
       baz=132
WHY    Whitehorse        50.18 338  P      P      19 21 01.7 +1.3
       baz=134
MMPY   Sheldon Lake,     50.45 342  P      P      19 21 03.8 +1.5
       baz=140,SNR=11
SIV    San Ignacio       50.49 129  LR     LR     19 41 42.2
       comp=Z,59nm,18.2s,baz=96,slow=35
P29M   Windy Craggy      50.54 336  P      P      19 21 04.5 +1.5
       baz=130
O30N   Mendenhall        50.69 338  P      P      19 21 05.5 +1.4
       baz=133
FARO   Faro, Yukon       50.80 341  P      P      19 21 06.4 +1.4
       baz=137
N31M   Braeburn, Yuko    51.08 339  P      P      19 21 07.6 +0.6
N31M                                IAmb   IAmb   19 21 12.3
       comp=Z,5.9nm,0.9s
N31M   Braeburn, Yuko    51.08 339  P      P      19 21 08.2 +1.2
       baz=134
M31M   Drury Creek, Y    51.12 340  P      P      19 21 08.5 +1.2
       baz=136
PNL    Peninsula         51.21 336  P      P      19 21 08.9 +0.9
       baz=128
HYT    Haines Junctio    51.24 337  P      P      19 21 08.5 +0.1
       baz=131
O29M   Mount Kennedy     51.30 337  P      P      19 21 09.0 +0.3
       baz=130
N30M   Aishikik Lake     51.51 338  P      P      19 21 10.6 +0.3
       baz=132
YUK6   Outpost Mounta    51.63 337  P      P      19 21 12.5 +1.1
       baz=130
PINM   Pinnacle          51.81 336  P      P      19 21 13.4 +0.8
       baz=128
YUK4   Talbot Arm        52.00 338  P      P      19 21 15.5 +1.4
       baz=130
O28M   Mount Upton       52.21 336  P      P      19 21 16.0 +0.2
       baz=128
YUK8   Steele Glacier    52.37 337  P      P      19 21 18.1 +1.1
       baz=129
M29M   Somme Creek       52.66 339  IAmb   IAmb   19 21 39.6
       comp=Z,4.9nm,1.0s
M29M   Somme Creek       52.66 339  P      P      19 21 20.4 +1.5
       baz=131
CTG    Chitna Glacier    52.77 336  P      P      19 21 20.8 +1.1
       baz=127
YUK3   Moose Creek       52.94 337  P      P      19 21 21.9 +0.8
       baz=129
L29M   L29M              52.99 339  IAmb   IAmb   19 21 39.2
       comp=Z,11nm,1.2s
L29M   L29M              52.99 339  P      P      19 21 22.3 +1.1
       baz=132,SNR=7.6
K29M   Barlow Dome       53.29 340         P      19 21 24.5 +1.0
K29M   Barlow Dome       53.29 340  P      P      19 21 24.8 +1.2
       baz=133
KAIM   Kayak Island      53.41 334  P      P      19 21 25.6 +1.3
       baz=123
J30M   Hart River        53.43 341  P      P      19 21 26.0 +1.4
       baz=135
ILON   Igloolik, Nuna    53.47   8         P      19 21 24.0 -0.6
BVCY   Beaver Creek      53.49 338  P      P      19 21 26.6 +1.6
       baz=128
MCARA  McCarthy VSAT     53.68 336  P      P      19 21 27.8 +1.5
       baz=126
H31M   Peel River        53.75 343  P      P      19 21 28.1 +1.4
       baz=138
M27K   Edge Creek, AK    53.83 337  P      P      19 21 29.3 +1.7
       baz=127
I30M   Mount Dempster    53.90 342  IAmb   IAmb   19 21 30.2
       comp=Z,3.7nm,0.8s
I30M   Mount Dempster    53.90 342  P      P      19 21 28.6 +0.6
       baz=135,SNR=7.3
DAWY   Dawson            54.05 340  P      P      19 21 29.4 +0.4
       baz=131
BMRM   Bremner River     54.07 335  P      P      19 21 29.2  0.0
       baz=124
BCAR   Beaver Creek A    54.23 338         P      19 21 30.9 +0.6
L27K   Beaver Creek,     54.24 338  IAmb   IAmb   19 21 50.9
       comp=Z,6.6nm,1.4s
L27K   Beaver Creek,     54.24 338  P      P      19 21 31.6 +1.1
       baz=128
M26K   Nabesna, AK       54.27 337  IAmb   IAmb   19 21 50.7
       comp=Z,3.4nm,0.8s
M26K   Nabesna, AK       54.27 337  P      P      19 21 31.6 +1.0
       baz=126
EYAK   Cordova Ski Ar    54.31 334  P      P      19 21 32.6 +1.8
       baz=122
N25K   Chitina, Valde    54.43 336  P      P      19 21 32.9 +1.1
       baz=124
G31M   Satah River       54.57 344  P      P      19 21 33.6 +1.0
       baz=138,SNR=5.2
I29M   Ogilvie Camp,     54.58 341  IAmb   IAmb   19 21 51.4
       comp=Z,3.5nm,0.9s
I29M   Ogilvie Camp,     54.58 341  P      P      19 21 33.5 +0.7
       baz=133
P23K   Montague Islan    54.73 333  P      P      19 21 34.3 +0.4
       baz=120
EPYK   Eagle Plains      54.82 343  P      P      19 21 35.4 +0.9
       baz=135
KLU    Klutina           54.89 335  P      P      19 21 36.4 +1.2
       baz=122
K27K   Chicken           54.93 339  IAmb   IAmb   19 21 38.8
       comp=Z,5.3nm,0.9s
K27K   Chicken           54.93 339  P      P      19 21 37.0 +1.6
       baz=128
GLI    Glacier Island    55.05 334  P      P      19 21 37.5 +1.3
       baz=121
HARP   HAARP             55.09 336  P      P      19 21 37.9 +1.4
       baz=124
G30M   tAoh Zraii Nji    55.13 344  P      P      19 21 37.0 +0.2
       baz=136
I28M   Miner Creek       55.14 341  P      P      19 21 37.5 +0.5
       baz=131
H29M   Whitestone        55.19 342         P      19 21 38.0 +0.8
H29M                                IAmb   IAmb   19 21 39.7
       comp=Z,5.0nm,0.8s
H29M   Whitestone        55.19 342  P      P      19 21 37.6 +0.4
       baz=133
M24K   Tolsona, Glenn    55.33 336  P      P      19 21 39.4 +1.1
       baz=123
DOT    Dot Lake          55.40 338  IAmb   IAmb   19 21 41.8
       comp=Z,8.1nm,1.3s
INK    Inuvik            55.43 346  P      P      19 21 39.9 +1.1
       baz=140
F30M   Barrier River     55.47 344  P      P      19 21 39.6 +0.4
       baz=137
PAX    Paxson            55.53 337  IAmb   IAmb   19 21 59.3
       comp=Z,5.2nm,1.2s
PAX    Paxson            55.53 337  P      P      19 21 40.5 +0.7
       baz=124
PWL    Port Wells        55.56 334  P      P      19 21 41.4 +1.4
       baz=120
SCRK   Sand Creek        55.57 338  IAmb   IAmb   19 22 08.7
       comp=Z,4.6nm,1.1s
SCRK   Sand Creek        55.57 338  P      P      19 21 40.7 +0.6
       baz=126
G29M   Pine Creek        55.58 343  IAmb   IAmb   19 21 44.7
       comp=Z,3.4nm,0.8s
G29M   Pine Creek        55.58 343  P      P      19 21 40.7 +0.7
       baz=134
SCM    Sheep Creek Mo    55.64 335  P      P      19 21 41.7 +1.1
       baz=121
SEW    Seward            55.67 333  P      P      19 21 41.4 +0.8
       baz=118
J26L   Joseph Creek      55.74 339  IAmb   IAmb   19 22 02.0
       comp=Z,8.0nm,1.1s
J26L   Joseph Creek      55.74 339  P      P      19 21 42.5 +1.2
       baz=127,SNR=8.3
RIDG   Independent Ri    55.74 338  P      P      19 21 43.0 +1.8
RIDG   Independent Ri    55.74 338  P      P      19 21 41.7 +0.4
       baz=125
I27K   Kandik River      55.78 340  P      P      19 21 42.5 +1.0
       baz=129
KNK    Knik Glacier      55.89 334  P      P      19 21 43.4 +1.1
       baz=120
SML    Sawmill           56.04 335  P      P      19 21 44.1 +0.7
       baz=120
BRSE   Bradley Lake S    56.08 332  P      P      19 21 44.5 +0.8
       baz=116
I26K   Coal Creek Min    56.09 340  IAmb   IAmb   19 21 48.0
       comp=Z,3.3nm,0.9s
I26K   Coal Creek Min    56.09 340  P      P      19 21 44.3 +0.7
       baz=128
KDAK   Kodiak Island     56.11 329  LR     LR     19 45 34.7
       comp=Z,84nm,19.9s,baz=120,slow=36
KDAK   Kodiak Island     56.11 329  P      P      19 21 45.6 +1.7
       baz=113
K24K   Donnelly Dome     56.12 337  P      P      19 21 45.1 +1.2
       baz=124
H27K   Steamboat Moun    56.15 341  P      P      19 21 44.8 +0.7
       baz=130
WAT6   Susitna Watana    56.20 336  P      P      19 21 46.0 +1.3
       baz=121
OHAK   Old Harbor        56.24 328  P      P      19 21 46.0 +1.2
       baz=112
RC01   Rabbit Creek A    56.27 333  P      P      19 21 45.7 +0.7
       baz=118
DHY    Denali Highway    56.32 336  P      P      19 21 46.6 +1.1
       baz=122
Q20K   Shuyak Island     56.36 330  P      P      19 21 46.9 +1.2
       baz=114
J25K   Salcha River,     56.43 338  P      P      19 21 47.1 +1.0
       baz=125
SII    Sitkinak Islan    56.45 327  P      P      19 21 47.4 +1.0
       baz=111
G27K   Doyon Strip       56.57 342  P      P      19 21 47.8 +0.7
       baz=130
F28M   Old Crow          56.58 343  IAmb   IAmb   19 21 49.6
       comp=Z,5.8nm,1.1s
F28M   Old Crow          56.58 343  P      P      19 21 48.0 +0.8
       baz=132
E29M   Blow River        56.59 344  P      P      19 21 47.8 +0.7
       baz=135
WAT1   Susitna Watana    56.65 336  P      P      19 21 48.9 +1.2
       baz=120
A36M   Sachs Harbour     56.87 351  P      P      19 21 49.2 +0.2
       baz=150
SUA    Susitna One       56.88 334  P      P      19 21 50.9 +1.4
       baz=117
HDA    Harding Lake      56.88 338  P      P      19 21 51.0 +1.7
       baz=123
CHIR   Chirikof Islan    56.94 326  P      P      19 21 51.1 +1.3
       baz=109
R18K   Karluk            56.96 328  P      P      19 21 51.0 +1.2
       baz=111
PRP    Porcupine Dome    57.01 339  IAmb   IAmb   19 22 14.5
       comp=Z,4.7nm,0.9s
PRP    Porcupine Dome    57.01 339  P      P      19 21 51.0 +0.6
       baz=125
POIN   Pond Inlet        57.04   8         P      19 21 49.7 -0.5
POIN                                IAmb   IAmb   19 21 51.6
       comp=Z,7.5nm,1.1s
ILAR   Eielson Array     57.06 338         P      19 21 50.6 +0.1
ILAR   Eielson Array     57.06 338  P      P      19 21 52.0 +1.4
       comp=Z,1.3nm,0.9s,baz=152,slow=5.3,SNR=12
ILAR                                LR     LR     19 48 19.9
       comp=Z,115nm,18.4s,baz=90,slow=38
       comp=Z,1.3nm,0.9s
O20K   Slope Mountain    57.09 332  P      P      19 21 52.2 +1.3
       baz=115
Q19K   Cape Douglas,     57.09 330  P      P      19 21 51.3 +0.5
       baz=113
CUT    Chulitna          57.12 335  P      P      19 21 52.7 +1.7
       baz=118
E28M   Babbage River     57.17 344  P      P      19 21 52.2 +0.9
       baz=133
MCK    McKinley          57.26 336  P      P      19 21 53.1 +1.0
       baz=121
G26K   Porcupine Rive    57.31 341  P      P      19 21 53.3 +1.0
       baz=128
N20K   Mount Spurr       57.38 333  P      P      19 21 53.9 +0.9
       baz=116
SKT    Skwentna          57.45 334  IAmb   IAmb   19 21 57.3
       comp=Z,6.6nm,1.0s
SKT    Skwentna          57.45 334  P      P      19 21 54.0 +0.6
       baz=117
E27K   Coleen River      57.45 343  P      P      19 21 54.4 +1.1
       baz=131
D28M   Stokes Point      57.47 345  P      P      19 21 54.1 +0.8
       baz=134
H25L   Birch Creek       57.55 340  P      P      19 21 55.3 +1.4
       baz=125
Q18K   Katmai Hardscr    57.63 330  P      P      19 21 55.0 +0.1
       baz=112
TRF    Thorofare Moun    57.64 336  P      P      19 21 56.1 +1.2
       baz=119,SNR=7.9
NEA2   Nenana            57.76 337  P      P      19 21 56.3 +0.8
       baz=121
F26K   Sheenjek River    57.88 342  P      P      19 21 57.6 +1.3
       baz=128
Q17K   Contact Creek     57.92 329  P      P      19 21 57.6 +0.7
       baz=110
G25K   Bearman Lake      57.93 340  P      P      19 21 58.0 +1.4
       baz=125
D27M   Malcolm River     57.99 344  P      P      19 21 56.9 -0.2
       baz=132
H24K   Noodor Dome       58.00 339  IAmb   IAmb   19 22 13.8
       comp=Z,7.4nm,1.3s
H24K   Noodor Dome       58.00 339  P      P      19 21 57.6 +0.4
       baz=123
P18K   Big Mountain,     58.02 330  P      P      19 21 57.8 +0.3
       baz=112
M20K   Styx River        58.08 333  IAmb   IAmb   19 22 31.5
       comp=Z,4.2nm,0.8s
M20K   Styx River        58.08 333  P      P      19 21 58.7 +0.8
       baz=115
PPLA   Purkeypile        58.14 335  P      P      19 21 59.1 +0.8
       baz=117
I23K   Minto, Yukon-K    58.15 338  IAmb   IAmb   19 22 17.8
       comp=Z,6.1nm,0.8s
I23K   Minto, Yukon-K    58.15 338  P      P      19 21 58.9 +0.7
       baz=121
O18K   Koktuh Hills      58.18 331  P      P      19 21 59.1 +0.6
       baz=112
N19K   Bonanza Creek     58.23 332  P      P      19 21 59.2 +0.2
       baz=113
BPAW   Bear Paw Mtn.     58.23 336  P      P      19 21 59.4 +0.6
       baz=119
F25K   Christian Rive    58.27 341  P      P      19 21 59.2 +0.1
       baz=126
CAST   Castle Rocks      58.34 335  IAmb   IAmb   19 22 03.3
       comp=Z,5.5nm,1.0s
CAST   Castle Rocks      58.34 335  P      P      19 22 00.2 +0.6
       baz=117
G24K   Hadweenzic Riv    58.34 340  P      P      19 22 00.9 +1.4
G24K                                IAmb   IAmb   19 22 30.5
       comp=Z,6.9nm,1.1s
G24K   Hadweenzic Riv    58.34 340  P      P      19 22 00.4 +0.9
       baz=124
P17K   Kvichak River     58.52 330  P      P      19 22 02.0 +1.1
       baz=110
E25K   Arctic Village    58.57 342  P      P      19 22 01.9 +0.8
       baz=126
H23K   Yukon River       58.57 338  P      P      19 22 02.5 +1.3
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	baz=121						
MLY	Manley	58.60	337	IAmb	IAmb	19 22 20.8	
	comp=Z,6.6nm,1.1s						
MLY	Manley	58.60	337	P	P	19 22 01.7	+0.3
	baz=119						
M19K	Big River Lodg	58.63	333	P	P	19 22 02.6	+1.0
	baz=114						
L20K	Farewell, AK	58.66	334	P	P	19 22 02.6	+0.8
	baz=115						
CHNA	Chernabura Isl	58.81	324	P	P	19 22 04.6	+1.7
	baz=105						
N18K	Kilae Creek	58.81	332	P	P	19 22 04.2	+1.3
	baz=112						
F24K	Squaw Lake	58.94	341	P	P	19 22 04.8	+1.1
	baz=124						
L19K	White Mountain	58.95	333	P	P	19 22 05.0	+1.1
	baz=114						
C27K	Jago River	58.97	344	P	P	19 22 05.2	+1.4
	baz=129						
O17K	Koliganek Bris	59.04	330	P	P	19 22 06.4	+1.9
	baz=110						
M18K	Stony River	59.09	332	P	P	19 22 06.2	+1.4
	baz=112						
SFJD	Kangerlussuaq	59.10	20	LR	LR	19 49 31.4	
	comp=Z,59nm,20.3s,baz=242,slow=38						
K20K	Telida	59.11	335	IAmb	IAmb	19 22 08.3	
	comp=Z,5.6nm,1.1s						
K20K	Telida	59.11	335	P	P	19 22 05.6	+0.6
	baz=115						
I21K	Tanana	59.13	337	P	P	19 22 06.6	+1.6
	baz=118						
S14K	Fog Glacier	59.19	326	P	P	19 22 06.0	+0.3
	baz=106						
G23K	Bananza Creek	59.20	339	P	P	19 22 05.8	+0.3
	baz=121						
P16K	Nushagak River	59.22	329	P	P	19 22 06.1	+0.4
	baz=109						
H22K	Ishtalitna Cre	59.26	338	P	P	19 22 06.5	+0.6
	baz=119						
N17K	Nushagak Hills	59.35	331	P	P	19 22 08.2	+1.6
	baz=110						
E24K	Your Creek	59.44	341	P	P	19 22 08.1	+0.9
	baz=123						
SDPT	Sand Point	59.44	325	P	P	19 22 09.2	+1.9
	baz=104						
O16K	Kokwok River B	59.46	330	P	P	19 22 09.0	+1.7
	baz=109						
C26K	Camden Bay	59.48	344	P	P	19 22 08.9	+1.5
	baz=128						
J20K	Nowinta River	59.50	336	IAmb	IAmb	19 22 26.4	
	comp=Z,4.4nm,0.8s						
J20K	Nowinta River	59.50	336	P	P	19 22 08.1	+0.5
	baz=116						
D25K	Kavik River	59.52	343	P	P	19 22 08.0	+0.2
	baz=126						
COLD	Coldfoot	59.53	340	P	P	19 22 08.1	+0.3
	baz=121						
H21K	Melozitna Rive	59.66	337	P	P	19 22 08.9	+0.2
	baz=118						
L18K	Granite Mounta	59.75	333	P	P	19 22 09.4	+0.1
	baz=112						
M17K	Holitna River	59.78	332	P	P	19 22 11.2	+1.6
	baz=111						
E23K	Chandalar	59.78	341	P	P	19 22 09.6	0.0
	baz=122						
I20K	Naaghedeneel	59.90	336	P	P	19 22 12.2	+1.9
	baz=116						
J19K	Poorman	60.01	335	P	P	19 22 12.6	+1.5
	baz=114						
N16K	Nishlik Lake	60.07	331	P	P	19 22 13.2	+1.6
	baz=109						
TOLK	Toolik Lake Re	60.09	341	P	P	19 22 13.4	+1.8
	baz=122						
O15K	Ungalikthiuk R	60.16	329	P	P	19 22 13.7	+1.4
	baz=107						
J18K	Innoko River	60.24	334	P	P	19 22 13.8	+1.1
	baz=112						
G21K	Allakaket	60.31	338	P	P	19 22 14.1	+0.9
	baz=117						
F22K	John River	60.33	340	P	P	19 22 15.1	+1.8
	baz=119						
M16K	Timber Creek	60.34	331	P	P	19 22 14.9	+1.5
	baz=109						
H20K	Anotleneega Mo	60.35	337	P	P	19 22 14.9	+1.4
	baz=115						
S12K	Black Hills	60.40	325	P	P	19 22 15.5	+1.6
	baz=103						
L17K	Donlin	60.42	333	P	P	19 22 14.7	+0.8
	baz=110						
C24K	Franklin Bluff	60.42	342	P	P	19 22 15.6	+1.8
	baz=124						
E22K	Anaktuvuk Pass	60.53	340	P	P	19 22 15.6	+0.9
	baz=120						
D23K	Nanushuk River	60.60	341	P	P	19 22 16.2	+1.1
	baz=122						
K17K	Iditarod	60.63	333	P	P	19 22 16.6	+1.2
	baz=111						
F21K	Alatna River	60.64	339	P	P	19 22 16.9	+1.6
F21K				IAmb	IAmb	19 22 46.6	
	comp=Z,6.5nm,1.2s						
F21K	Alatna River	60.64	339	P	P	19 22 16.7	+1.3
	baz=118						
BDFB	Brasilia	60.67	120	P	P	19 22 18.3	+1.9
	comp=Z,1.2nm,0.4s,baz=288,slow=9.9,SNR=1.5						
	comp=Z,1.2nm,0.4s						
L16K	Owhat River	60.80	332	P	P	19 22 17.3	+0.8
	baz=109						
O14K	Tigyukauivet M	60.90	329	P	P	19 22 18.2	+1.0
	baz=106						
H19K	Roundabout Mou	60.96	337	P	P	19 22 18.7	+1.2
	baz=114						
M15K	Kasigluk River	61.04	331	P	P	19 22 18.5	+0.4
	baz=107						
C23K	Itkillik River	61.04	342	P	P	19 22 19.0	+1.0
	baz=122						
D22K	Ayikyak River	61.18	341	P	P	19 22 19.0	-0.1
	baz=119						
J17K	VABM Dome	61.20	334	P	P	19 22 20.0	+0.8
	baz=110						
F20K	Avaraart Lake	61.34	338	P	P	19 22 21.1	+1.1
	baz=115						
E21K	Killik River	61.38	340	P	P	19 22 21.6	+1.2
	baz=118						
G19K	Purcell Mounta	61.45	337	P	P	19 22 21.7	+0.8
G19K	Purcell Mounta	61.45	337	P	P	19 22 21.3	+0.4
	baz=114						
H18K	Honhosa River	61.55	336	P	P	19 22 22.7	+1.1
	baz=112						
M14K	Bethel	61.65	330	P	P	19 22 23.3	+1.0
	baz=106						
L15K	Ungalak Mounta	61.70	332	P	P	19 22 23.3	+0.7
	baz=107						
J16K	Anvik River	61.81	333	P	P	19 22 24.3	+1.0
	baz=109						
K15K	Wolf Creek Mou	61.91	332	P	P	19 22 25.4	+1.4
	baz=107						
G18K	Tagagawik	61.95	337	P	P	19 22 24.8	+0.6
	baz=112						
C21K	Knifeblade Rid	61.98	341	P	P	19 22 25.5	+1.1
	baz=117						
F19K	Shaleruckik Mo	61.98	338	P	P	19 22 25.0	+0.6
	baz=113						
E20K	Nigu River	62.03	339	P	P	19 22 25.4	+0.6
	baz=116						
E19K	Redstone River	62.05	338	P	P	19 22 25.8	+0.9
	baz=114						
I17K	Unalakleet	62.05	334	P	P	19 22 25.2	+0.3
	baz=109						
H17K	Granite Mounta	62.09	335	P	P	19 22 26.4	+1.2
	baz=110						
B22K	Teshekpuk Lake	62.13	342	P	P	19 22 26.7	+1.4
	baz=119						
B21K	Ikpikpuk River	62.14	341	P	P	19 22 25.4	0.0
	baz=118						
L14K	Kuka Creek	62.16	331	P	P	19 22 26.6	+1.0
	baz=106						
M13K	Dall Lake	62.22	330	P	P	19 22 27.3	+1.2
	baz=104						
D20K	Etivluk River	62.37	340	P	P	19 22 27.8	+0.7
	baz=115						
UNV	Unalaska Valle	62.57	322	P	P	19 22 29.3	+0.8
	baz=98						
G17K	Kiwalik Mounta	62.57	336	P	P	19 22 28.2	-0.2
	baz=110						
F18K	Selawik	62.58	337	P	P	19 22 28.9	+0.5
	baz=111						
D19K	Kuna River	62.78	339	P	P	19 22 30.5	+0.7
	baz=114						
A22K	Sinclair Lake	62.91	342	P	P	19 22 30.9	+0.4
	baz=118						
H16K	Elim	62.93	335	P	P	19 22 31.6	+0.9
	baz=108						
J14K	Nanvaranak Lak	62.94	332	P	P	19 22 32.1	+1.3
	baz=106						
B20K	Meade River	63.10	341	P	P	19 22 32.0	+0.2
	baz=115						
G16K	Koyuk River	63.21	335	P	P	19 22 34.0	+1.3
	baz=108						
K13K	Kusilvak Mount	63.22	331	P	P	19 22 33.7	+0.9
	baz=104						
E18K	Tukpahlearik C	63.23	338	P	P	19 22 33.8	+1.0
	baz=111						
C19K	Lookout Ridge	63.51	340	P	P	19 22 34.2	-0.4
	baz=112						
M11K	Mekoryuk	63.59	329	P	P	19 22 35.2	0.0
	baz=102						
ICESG	Greenland Ices	63.72	20	*e*P	P	19 22 36.0	-0.5
G15K	Niukluk	63.77	335	P	P	19 22 37.4	+1.1
	baz=106						
NIKH	Nikolski High	63.85	321	P	P	19 22 38.3	+1.2
	baz=96						
C18K	Utukok River	63.88	339	P	P	19 22 37.8	+0.7
	baz=111						
ANM	Nome	64.20	334	P	P	19 22 40.2	+1.0
	baz=105						
F15K	North Star Dit	64.22	335	P	P	19 22 40.7	+1.4
	baz=106						
D17K	Noatak River	64.22	338	P	P	19 22 40.6	+1.4
	baz=108						
B18K	Kokolik River	64.34	340	P	P	19 22 40.2	+0.2
	baz=110						
A19K	Wainwright	64.41	341	P	P	19 22 40.9	+0.5
	baz=112						
C17K	DeLong Mountai	64.51	339	P	P	19 22 41.6	+0.4
	baz=109						
P08K	Saint George I	64.68	325	P	P	19 22 43.4	+0.9
	baz=97						
F14K	Arctic Creek	64.83	335	P	P	19 22 43.4	+0.2
	baz=104						
NEEM	North Greenlan	65.00	10	*i* P	P	19 22 44.2	-0.4
NEEM				IAmb	IAmb	19 22 45.9	
	comp=Z,11nm,0.8s						
SPIA	Saint Paul Isl	65.13	326	P	P	19 22 45.4	0.0
	baz=97						
C16K	Lisburne Hills	65.21	338	P	P	19 22 46.6	+0.9
	baz=106						
SUMG	Summit	65.42	17		P	19 22 47.5	0.0
SUMG				IAmb	IAmb	19 23 00.2	
	comp=Z,5.4nm,0.9s						
SUMG	Summit	65.42	17	*i* P	P	19 22 48.0	+0.5
TNA	Tin City	65.49	335	P	P	19 22 48.2	+0.7
	baz=103						
GAMB	Gambell	66.75	333	P	P	19 22 56.3	+0.6
	baz=98						
BORG	Borgarnes	69.83	27	LR	LR	19 56 29.0	
	comp=Z,22nm,18.2s,baz=313,slow=38						
SPITS	Spitsbergen Ar	78.56	11	P	P	19 24 07.7	+2.0
	comp=Z,2.9nm,0.8s,baz=305,slow=5.1,SNR=1.9						
	comp=Z,2.9nm,0.8s						
EKA	Eskdalemuir Ar	79.92	35	P	P	19 24 16.1	+2.7
	comp=Z,0.6nm,0.7s,baz=279,slow=4.7,SNR=3.5						
	comp=Z,0.6nm,0.7s						
PETK	Petropavlovsk-	83.70	324	P	P	19 24 34.5	+1.1
	comp=Z,1.6nm,0.9s,baz=61,slow=12,SNR=2.4						
	comp=Z,1.6nm,0.9s						
ESDC	Sonseca Array	83.76	51	P	P	19 24 36.5	+2.4
	comp=Z,0.7nm,1.1s,baz=305,slow=12,SNR=3.7						
	comp=Z,0.7nm,1.1s						
MA2	Magadan	84.80	331	LR	LR	20 03 34.8	
	comp=Z,20nm,18.7s,baz=36,slow=36						
NB2	NORSAR Subarra	85.00	27	P	P	19 24 58.5	+19
	comp=Z,1.1nm,0.8s,baz=300,slow=5.1						
NOA	NORSAR Array B	85.00	27	P	P	19 24 43.1	+3.2
	comp=Z,0.3nm,0.6s,baz=319,slow=5.4,SNR=1.7						
NOA				LR	LR	20 04 13.5	
	comp=Z,11nm,18.0s,baz=295,slow=37						
	comp=Z,0.3nm,0.6s						
MDT	Midelt	85.27	57	LR	LR	19 58 27.6	
	comp=Z,26nm,19.3s,baz=230,slow=32						
ARCES	ARCESS Array B	85.51	17	P	P	19 24 45.4	+3.2
	comp=Z,6.0nm,1.1s,baz=292,slow=6.4,SNR=8.0						
ARCES				LR	LR	20 05 59.0	
	comp=Z,24nm,18.2s,baz=313,slow=38						
	comp=Z,6.0nm,1.1s						
TIXI	Tiksi	85.55	346	LR	LR	20 08 23.8	
	comp=Z,37nm,18.1s,baz=32,slow=39						
HFS	Hagfors	86.51	27	LR	LR	20 06 54.7	
	comp=Z,13nm,18.4s,baz=302,slow=38						
DAVOX	Davos/Dischmat	90.62	40	LR	LR	20 06 54.4	
	comp=Z,18nm,20.6s,baz=263,slow=36						
FINES	FINESS Array B	90.81	23	P	P	19 25 10.5	+2.8
	comp=Z,1.0nm,0.9s,baz=328,slow=4.9,SNR=2.0						
	comp=Z,1.0nm,0.9s						
YAK	Yakutsk	91.98	339	LR	LR	20 09 24.8	
	comp=Z,33nm,18.2s,baz=48,slow=37						
VRAC	Vranov	93.38	36	LR	LR	20 10 13.3	
	comp=Z,11nm,18.0s,baz=302,slow=37						
WRA	Warramunga Arr	128.63	258	PKP	PKPdf	19 31 12.0	-0.5
	comp=Z,1.5nm,0.6s,baz=84,slow=2.6,SNR=15						
ASAR	Alice Springs	129.33	253	PKP	PKPdf	19 31 12.8	-1.0
	comp=Z,1.0nm,0.8s,baz=105,slow=1.4,SNR=8.3						
PZH	PanZhiHua	131.81	334	PKP	PKPdf	19 31 18.8	+0.2

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*NNC **04** 19:15:07.0±0.3, 43°.19N×77°.26E, h6^{km}±4^{km}, mpv2.8, Error ellipse: s-maj=5.0km s-min=2.8km az=172.0*

*KRNET **04** 19:15:07.3±0.1, 43°.23N×77°.24E, h20^{km}, mb2.5*

*SOME **04** 19:15:07.6, 43°.22N×77°.22E, h15^{km}*

ISC 04 19:15:07.1±0.8**, 43°.22N**±0°.03×**77°.25E**±0°.02**, h14**^{km}±5^{km}**, n34,** σ**0ˢ.40**/66**, 6C-6D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOTS	Kotyrbulak	0.10	278	P	Pg	19 15 10.3	-0.2
	84nm,0.1s						
KOTS				S	Sg	19 15 13.0	+0.2
	193nm,0.2s						
KOTS	Kotyrbulak	0.10	278	*e*P	Pg	19 15 10.3	-0.2
KOTS				*e*S	Sg	19 15 12.4	-0.4
KOTS	Kotyrbulak	0.10	278	*e*P	Pg	19 15 10.3	-0.2
	84nm,0.1s						
KOTS				*e*S	Sg	19 15 12.4	-0.4
	193nm,0.2s						
MDOK	Medeo	0.16	249	Pg	Pg	19 15 11.2	0.0
	2.5nm,0.0s						
MDOK				Lg	Lg	19 15 13.8	
	64nm,0.2s						
MDOK	Medeo	0.16	249	*e*P	Pg	19 15 11.2	0.0
MDOK				*e*S	Sg	19 15 13.8	-0.2
AAA	Alma-Ata	0.25	268	*e*P	Pb	19 15 13.1	-0.4
AAA				*e*S	Sg	19 15 16.9	+0.7
AAA	Alma-Ata	0.25	268	*e*P	Pb	19 15 13.1	-0.4
	18nm,0.1s						
AAA				*e*S	Sg	19 15 16.9	+0.7
	10nm,0.1s						
TNSS	Tian-Shan	0.29	231	P	Pg	19 15 13.4	0.0
	3.3nm,0.1s						
TNSS				S	Sg	19 15 17.9	+0.2
	12nm,0.1s						
TNSS	Tian-Shan	0.29	231	*e*P	Pg	19 15 13.4	0.0
TNSS				*e*S	Sg	19 15 17.8	+0.2
TNSS	Tian-Shan	0.29	231	*e*P	Pg	19 15 13.4	0.0
	3.3nm,0.1s						
TNSS				*e*S	Sg	19 15 17.9	+0.2
	12nm,0.1s						
MTBS	Maitube	0.61	262	P	Pg	19 15 19.0	-0.1
	1.6nm,0.1s						
MTBS				S	Sg	19 15 27.3	+0.1
	6.1nm,0.1s						
MTBS	Maitube	0.61	262	*e*P	Pg	19 15 19.0	-0.1
MTBS				*e*S	Sg	19 15 27.3	+0.1
MTBS	Maitube	0.61	262	*e*P	Pg	19 15 19.0	-0.1
	1.6nm,0.1s						
MTBS				*e*S	Sg	19 15 27.3	+0.1
	6.1nm,0.1s						
KTBS	Karatobe	0.64	320	*e*P	Pg	19 15 19.4	-0.3
KTBS				*e*S	Sg	19 15 27.9	-0.4
SATY	Saty	0.86	100	P	Pb	19 15 23.8	-0.1
	1.6nm,0.1s						
SATY				S	Sb	19 15 35.6	+0.3
	12nm,0.1s						
SATY	Saty	0.86	100	*e*P	Pb	19 15 23.8	-0.1
SATY				*e*S	Sb	19 15 35.6	+0.3
KST	Kastek	0.96	260	P	Pb	19 15 25.5	-0.1
	1.2nm,0.1s						
KST				S	Sb	19 15 38.2	0.0
	5.2nm,0.1s						
KST	Kastek	0.96	260	*e*P	Pb	19 15 25.5	-0.1
KST				*e*S	Sb	19 15 38.2	0.0
KST	Kastek	0.96	260	*e*P	Pb	19 15 25.5	-0.1
	1.2nm,0.1s						
KST				*e*S	Sb	19 15 38.2	0.0
	5.2nm,0.1s						
KPKS	Kokpek	1.07	76	P	Pb	19 15 27.8	+0.2
	0.5nm,0.1s						
KPKS				S	Sb	19 15 41.7	+0.3
	2.3nm,0.2s						
KPKS	Kokpek	1.07	76	*e*P	Pb	19 15 27.8	+0.2
KPKS				*e*S	Sb	19 15 41.8	+0.3
KDJ	Kajisay	1.09	183	⇓*e*P	Pb	19 15 27.5	-0.4
KDJ				⇓*e*S	Sg	19 15 42.5	+0.1
PRZ	Przheval'sk	1.12	131	⇓*e*P	Pb	19 15 27.8	-0.6
PRZ				⇓*e*S	Sg	19 15 43.4	0.0
BOOM	Boomskoye usch	1.21	233	⇓*e*P	Pn	19 15 29.5	-0.3
BOOM				⇓*e*S	Sn	19 15 45.9	-0.2
BLB	Baldybastay	1.25	45	P	Pn	19 15 30.3	0.0
	6.2nm,0.1s						
BLB				S	Sb	19 15 46.7	+0.2
	9.4nm,0.1s						
TKM2	Tokmak 2	1.25	257	⇑*i*P	Pb	19 15 30.5	-0.1
TKM2				⇑*i*S	Sn	19 15 47.2	+0.1
UZB	Uzynbulak	1.30	93	P	Pb	19 15 31.4	0.0
	1.4nm,0.1s						
UZB				S	Sn	19 15 48.3	+0.2
	1.4nm,0.1s						
UZB	Uzynbulak	1.30	93	*e*P	Pb	19 15 31.4	0.0
UZB				*e*S	Sn	19 15 48.4	+0.2
UZB	Uzynbulak	1.30	93	*e*P	Pb	19 15 31.4	0.0
UZB				*e*S	Sn	19 15 48.3	+0.2
KNOS	Konyrlen	1.80	50	P	Pb	19 15 40.4	+0.5
	0.7nm,0.2s						
KNOS				S	Sg	19 16 04.2	-0.9
	7.6nm,0.2s						
CHMS	Chumysh	1.84	264	⇑*i*P	Pb	19 15 40.2	-0.5
CHMS				⇑*i*S	Sb	19 16 04.7	+1.1
USP	Ospenovka	2.01	272	⇑*i*P	Pb	19 15 43.6	+0.1
USP				⇑*i*S	Sb	19 16 08.9	+0.5
DJR	Jarkent	2.15	58	Pg	Pb	19 15 46.7	+0.9
	0.5nm,0.1s						
DJR				Lg	Lg	19 16 14.7	
	1.9nm,0.3s						
DJR	Jarkent	2.15	58	*e*P	Pb	19 15 46.7	+0.9
	0.5nm,0.1s						
DJR				*e*S	Sg	19 16 14.8	-1.4
	1.9nm,0.3s						

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*IDC **04** 20:06:30.0±1.9, 8°.02S×155°.93E, h0^{km}, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=57.9km s-min=31.9km az=105.0*

ISC 04 20:06:33.4±1.1**, 8°.0S**±0°.2×**155°.8E**±0°.1**, h18**^{km}**, n6,** σ**0ˢ.29**/6**,** **mb3.8**/5**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.33	109	Sn	Sn	20 08 28.6	+0.1
	12nm,0.3s,baz=258,slow=14,SNR=1.8						
WRA	Warramunga Arr	23.92	238	P	P	20 11 47.1	+0.4
	1.2nm,0.5s,baz=62,slow=9.3,SNR=8.9						
	1.2nm,0.5s						
ASAR	Alice Springs	26.12	231	P	P	20 12 06.5	-0.1
	0.4nm,0.9s,baz=66,slow=9.2,SNR=1.8						
	0.4nm,0.9s						
SONM	Songino Array	70.63	327	P	P	20 17 47.9	-0.1
	0.3nm,0.4s,baz=128,slow=6.3,SNR=5.1						
	0.3nm,0.4s						
QSPA	South Pole Qui	81.96	180	P	P	20 18 51.9	-0.2
	1.1nm,1.1s,baz=90,slow=2.0,SNR=1.4						
	1.1nm,1.1s						
MKAR	Makanchi Array	84.70	319	P	P	20 19 06.5	+0.1
	0.5nm,0.6s,baz=102,slow=6.0,SNR=5.5						
	0.5nm,0.6s						

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*IDC **04** 20:44:38.6±1.4, 7°.07S×127°.63E, h0^{km}, mb3.6/3, mbtmp3.9/6, ML4.2/3, Error ellipse: s-maj=80.5km s-min=23.9km az=77.0*

ISC 04 20:44:37.7±0.9**, 7°.48S**±0°.06×**128°.02E**±0°.09**, h10**^{km}**, n11,** σ**2ˢ.34**/13**, mb3.6**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	4.35	238	P	Pg	20 46 00.9	-0.2
DRS	Darwin Rock St	5.68	150	P	Pb	20 46 18.0	+1.0
MTN	Manton Dam	6.15	150	P	Pb	20 46 24.5	-0.5
FAKI	Fak Fak	6.18	43	P	Pb	20 46 26.6	+1.0
KDU	Kakadu	6.78	140	P	Pb	20 46 32.8	-2.9
FITZ	Fitzroy Crossi	10.81	192	Pn	Pn	20 47 21.4	+8.8
	1.2nm,0.3s,baz=17,slow=17,SNR=15						
FITZ				Sn	Sn	20 49 13.8	+0.1
	2.7nm,0.3s,baz=80,slow=16,SNR=6.1						
	3.9nm,0.4s						
WRA	Warramunga Arr	13.82	154	Pn	P	20 48 02.2	-0.2
	1.2nm,0.3s,baz=328,slow=13,SNR=24						
WRA				Sn	Sn	20 50 27.8	+0.2
	2.0nm,0.3s,baz=325,slow=24,SNR=14						
	3.7nm,0.6s						
ASAR	Alice Springs	17.06	161	P	P	20 48 44.3	+6.0
	1.3nm,0.3s,baz=339,slow=12,SNR=71						
ASAR				S	Sn	20 51 44.3	-2.0
	1.8nm,0.6s,baz=343,slow=25,SNR=6.1						
	5.9nm,0.5s						
KSRS	Korea Array	44.70	360	P	P	20 52 50.9	0.0
	0.6nm,0.5s,baz=183,slow=8.4,SNR=2.1						
	0.6nm,0.5s						
MKAR	Makanchi Array	67.57	328	P	P	20 55 32.6	-1.9
	0.2nm,0.4s,baz=124,slow=8.2,SNR=4.2						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	71.91	329	P	P	20 56 00.6	-0.5
	0.2nm,0.4s,baz=127,slow=5.1,SNR=4.2						
	0.2nm,0.4s						

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*CATAC **04** 20:54:55.9±0.6, 14°N±3°×9°2W±°, h22^{km}±5^{km}, M4.0/19, MLv4.0/19, Error ellipse: s-maj=8.5km s-min=3.7km az=45.7, confirmed*

*GCG **04** 20:54:56.3±1.4, 13°.93N×91°.58W, h68^{km}±20^{km}, MD4.0, ML4.0*

*SNET **04** 20:54:58.1±0.9, 13°.95N×91°.37W, h13^{km}±9^{km}, ML3.7*

ISC 04 20:54:54.1±2.0**, 13°.75N**±0°.08×**91°.58W**±0°.08**, h14**^{km}±11^{km}**, n49,** σ**1ˢ.35**/60**, 1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG8	El Palmar, Qui	0.73	17	*i* P	Pn	20 55 12.4	+2.1
STG8				IAML		20 55 25.8	
	comp=E,5μm,0.2s						
RTAL	Retalhuleu	0.78	352	⇓*i*P	Pg	20 55 09.9	+0.6
RTAL				*e*S	Sg	20 55 19.8	+0.2
RTAL				IAML		20 55 23.4	
	comp=Z,611nm,0.2s						
RTAL	Retalhuleu	0.78	352	P	Pg	20 55 10.0	+0.6
RTAL				S	Sb	20 55 21.3	+1.3
ESSG	Sabana Grande	0.96	49	*i* P	Pb	20 55 13.2	+0.5
ESSG				IAML		20 55 28.4	
	comp=N,2μm,0.1s						
ESSJ	San Jos, E	1.06	100	*i* P	Pb	20 55 11.8	-2.5
SOKI	Kika Raxquin	1.08	9	*e*P	Pb	20 55 14.5	-0.4
SOKI				*i* S	Sb	20 55 28.6	-0.5
SOKI				IAML		20 55 29.2	
	comp=E,3μm,0.3s						
FG8	Yepocapa, Chim	1.11	63	*i* P	Pb	20 55 13.0	-2.2
QUEO	Labor Ovalle	1.12	3	*i* S	Sb	20 55 30.2	+0.1
FG16	Alotenango, Sa	1.16	63	*i* P	Pn	20 55 14.0	-2.2
FG16				*i* S	Sb	20 55 26.5	-4.6
FG16				IAML		20 55 30.5	
	comp=N,18μm,0.2s						
SMCA	Catarina	1.20	336	*i* P	Pn	20 55 14.6	-2.0
SMCA				IAML		20 55 34.0	
	comp=N,790nm,0.2s						
FAME	Alcaldia de Sa	1.52	86	P	Pn	20 55 21.4	+0.4
FAME	Alcaldia de Sa	1.52	86	S	Sn	20 55 41.5	+0.9
HUEH	Huehuetenango	1.56	3	P	Pn	20 55 21.6	-0.2
NUBE	Las Nubes	1.75	85	*e*P	Pn	20 55 25.1	+0.7
NUBE				*e*S	Sn	20 55 45.5	-1.0
NUBE	Las Nubes	1.75	85	*i* P	Pn	20 55 25.0	+0.7
NUBE				*i* S	Sn	20 55 46.3	-0.3
NUBE	Las Nubes	1.75	85	P	Pn	20 55 25.0	+0.7
NUBE	Las Nubes	1.75	85	S	Sn	20 55 47.1	+0.5
LOAL	Lomas de Alarc	1.76	82	*e*P	Pn	20 55 25.4	+1.1

LOAL	Lomas de Alarc	1.76	82	P	Pn	20 55 25.5	+1.1
LOAL	Lomas de Alarc	1.76	82	S	Sn	20 55 48.0	+1.3
SLOZ	Alcaldia de Sa	1.76	81	eP	Pn	20 55 25.5	+1.2
SLOZ				eS	Sn	20 55 46.3	-0.4
SLOZ	Alcaldia de Sa	1.76	81	S	Sn	20 55 47.9	+1.3
SLOZ	Alcaldia de Sa	1.76	81	P	Pn	20 55 25.4	+1.0
CEVE	Cerro Verde	1.90	87	eP	Pn	20 55 27.4	+1.0
CEVE				eS	Sn	20 55 51.0	+0.7
CEVE				IAML		20 55 57.2	
	comp=Z,2μm,0.3s						
CEVE	Cerro Verde	1.90	87	P	Pn	20 55 27.2	+0.8
SBLS	San Blas	1.90	87	eP	Pn	20 55 27.2	+0.8
SBLS				eS	Sn	20 55 50.7	+0.4
SNJE	San Jose	1.92	86	eP	Pn	20 55 27.8	+1.2
JAYA	Jayaque - finc	2.07	92	eP	Pn	20 55 29.3	+0.7
JAYA				IAML		20 55 57.7	
	comp=Z,1μm,0.2s						
JAYA	Jayaque - finc	2.07	92	i P	Pn	20 55 29.2	+0.5
JAYA				i S	Sn	20 55 55.3	+0.9
JAYA	Jayaque - finc	2.07	92	P	Pn	20 55 29.6	+0.9
PMON	Piamonte	2.20	91	eP	Pn	20 55 31.9	+1.6
PMON				eS	Sn	20 55 57.9	+0.4
PMON	Piamonte	2.20	91	P	Pn	20 55 32.0	+1.6
PMON	Piamonte	2.20	91	S	Sn	20 55 59.0	+1.5
BOQS	Boqueron	2.23	90	eP	Pn	20 55 32.9	+1.9
MTO3	Montecristo	2.25	73	eP	Pn	20 55 32.5	+1.3
MTO3	Montecristo	2.25	73	i P	Pn	20 55 32.4	+1.3
MTO3	Montecristo	2.25	73	P	Pn	20 55 32.5	+1.3
MTO3	Montecristo	2.25	73	S	Sn	20 55 59.8	+1.0
UEES	Universidad Ev	2.27	91	S	Sn	20 56 00.8	+1.5
UEES	Universidad Ev	2.27	91	P	Pn	20 55 32.3	+0.9
LOMA	Loma Larga	2.34	92	eP	Pn	20 55 33.9	+1.6
LOMA	Loma Larga	2.34	92	P	Pn	20 55 33.2	+0.8
LFRS	El Faro	2.45	93	eP	Pn	20 55 35.5	+1.7
CCIG	Comitan	2.58	348	P	Pn	20 55 35.6	0.0
CCIG	Comitan	2.58	348	S	Sn	20 56 06.7	-0.2
PACA	Pacayal	3.18	95	P	Pn	20 55 45.2	+1.3
CSGN	Cosiguina Volc	3.99	101	P	Pn	20 55 56.2	+1.2
CRIN	San Cristobal	4.53	103	P	Pn	20 56 04.2	+1.8
YUSH	Yuscaran	4.60	87	P	Pn	20 56 04.4	+0.9

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*INMG **04** 20:58:02.6±1.9, 40°.52N×0°.57W, h7^{km}±3^{km}, ML2.6, Error ellipse: s-maj=2.7km s-min=2.3km az=106.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NE Teruel (ESP)*

*LDG **04** 20:58:02.3±0.1, 40°.54N×0°.52W, h2^{km}, Ml3.0/33, Error ellipse: s-maj=2.1km s-min=1.5km az=125.0*

*MDD **04** 20:58:02.1±0.1, 40°.53N×0°.56W, h0^{km}, mb_Lg3.3/75, Error ellipse: s-maj=1.2km s-min=0.8km az=143.0*

*SFS **04** 20:58:04.3, 40°.47N×0°.55W, h22^{km}, ML3.5/9, ML3.5/11, MLv3.0/11*

*STR **04** 20:58:05.3±1.1, 41°N±8°×°±°, h10^{km}, MLv3.4/18, Error ellipse: s-maj=0.0km s-min=0.0km az=15.8, preliminary*

ISC 04 20:58:00.8±0.8**, 40°.57N**±0°.02×**0°.56W**±0°.02**, h13**^{km}±7^{km}**, n125, σ2**§**11**/223**, 3C, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMOS	Mosqueruela	0.22	163	⇑Pg	Pg	20 58 06.2	+0.4
EMOS				Sg	Sg	20 58 08.1	-1.0
EMOS				i IVmb_Lg		20 58 09.0	
E0901	Celadas (Terue	0.45	258	⇑Pg	Pg	20 58 10.6	+0.9
E0901				Sg	Sg	20 58 16.2	+0.5
E0901				i IVmb_Lg		20 58 16.6	
ERTA	Horta de San J	0.78	60	⇑Pg	Pb	20 58 17.7	+1.5
ERTA				Sg	Sb	20 58 27.8	+1.0
ERTA				i IVmb_Lg		20 58 32.5	
ECHE	Chera	1.03	198	Pg	Pb	20 58 21.2	+0.6
ECHE				Sg	Sb	20 58 33.7	-0.2
ECHE	Chera	1.03	198	Pg	Pb	20 58 21.1	+0.6
ECHE				Sg	Sb	20 58 34.5	+0.5
ECHE				i IVmb_Lg		20 58 36.6	
ESAC	San Caprasio	1.15	3	Pg	Pg	20 58 24.8	+1.8
ESAC				Sg	Sg	20 58 41.1	+3.0
ESAC				i IVmb_Lg		20 58 43.4	
ECOL	Islas Columbre	1.16	125	Pg	Pn	20 58 24.0	+1.2
ECOL				Sg	Sb	20 58 38.5	+0.7
ETOR	Torete	1.17	283	Pg	Pg	20 58 24.4	+1.1
ETOR				Sg	Sn	20 58 40.1	+1.4
ETOR				i IVmb_Lg		20 58 42.5	
EVIV	Cofrentes, Val	1.37	199	Pg	Pn	20 58 26.3	+0.5
EVIV				Sg	Sn	20 58 43.2	-0.6
EVIV				i IVmb_Lg		20 58 47.9	
EPOB	Poblet	1.46	57	Pn	Pn	20 58 29.0	+2.0
EPOB				Pg	Pb	20 58 30.1	+2.1
EPOB				Sg	Sb	20 58 49.3	+2.8
EPOB				i IVmb_Lg		20 58 51.7	
EBEN2	Beniarda presa	1.91	171	Pn	Pn	20 58 33.8	+0.7
EBEN2				Pg	Pb	20 58 37.3	+1.7
EBEN2				Sg	Sb	20 59 00.0	+0.6
EBEN2				i IVmb_Lg		20 59 01.3	
UCM	Universidad Co	2.07	264	Pn	Pb	20 58 37.0	-1.2
UCM				Sn	Sn	20 59 01.1	+0.2
EIBI	Ibiza	2.13	136	Pn	Pn	20 58 35.9	-0.2
EIBI				Sn	Sn	20 59 00.3	-2.0
EIBI	Ibiza	2.13	136	Pn	Pn	20 58 35.8	-0.2
EIBI				Sn	Sn	20 59 00.5	-1.8
EIBI				i IVmb_Lg		20 59 01.5	
ECHI	Chisagues Biel	2.17	15	Pn	Pb	20 58 40.3	+0.3
ECHI				Pg	Pg	20 58 42.4	0.0
ECHI				Sg	Sg	20 59 12.1	+1.6
ECHI				i IVmb_Lg		20 59 19.1	
ECHI	Chisagues Biel	2.17	15	P	Pn	20 58 39.1	+2.3
CANF	Canfranc	2.19	1	P	Pb	20 58 40.8	+0.4
ETSF	Etsaut	2.33	360	eP	Pb	20 58 42.6	0.0
ETSF	Etsaut	2.33	360	ePg	Pg	20 58 45.4	0.0
ETSF				eSg	Sg	20 59 16.4	+0.8
	30nm,0.2s						
EARA	Aranguren	2.33	341	Pg	Pb	20 58 44.3	+1.6
EARA				Sn	Sb	20 59 10.8	-0.5
EARA				Sg	Sg	20 59 16.3	+0.6
EARA				i IVmb_Lg		20 59 19.0	
EARA	Aranguren	2.33	341	P	Pg	20 58 46.0	+0.6
VIEF	Viey	2.35	10	P	Pb	20 58 42.8	-0.3
EORO	Oroz-Betelu	2.39	347	Pg	Pb	20 58 45.6	+1.9
EORO				Sn	Sb	20 59 11.1	-1.9
EORO				Sg	Sg	20 59 18.8	+1.2
EORO				i IVmb_Lg		20 59 26.3	
REYF	Montagne du Re	2.50	3	P	Pb	20 58 44.4	-1.3
MELF	Melles	2.50	23	P	Pb	20 58 45.3	-0.3
PAND	Andorre	2.51	38	P	Pn	20 58 44.4	+2.9
ATE	Arette	2.51	358	P	Pn	20 58 44.3	+2.9
LABF	Labassere	2.52	11	P	Pn	20 58 44.3	+2.8
SALF	Salau	2.55	30	P	Pb	20 58 45.9	-0.6
SJPF	Ste Jean	2.59	349	eP	Pb	20 58 45.7	-1.4
SJPF	Ste Jean	2.59	349	ePg	Pg	20 58 50.5	+0.1
SJPF				eSn	Sn	20 59 14.7	+1.0
	1.6nm,0.1s						
SJPF				eSg	Sg	20 59 25.0	+1.0
	24nm,0.2s						
VALC	Valcebollere	2.66	46	P	Pn	20 58 46.5	+3.0
MLS	Moulis	2.69	27	P	Pn	20 58 47.5	+3.7
ETOS	Mallorca	2.71	106	Pn	Pn	20 58 44.4	+0.4
ETOS				Sn	Sn	20 59 15.5	-1.1
ETOS	Mallorca	2.71	106	Pn	Pn	20 58 44.5	+0.4
ETOS				Sn	Sn	20 59 15.6	-1.0
OSSF	Osses	2.73	349	P	Pn	20 58 47.3	+2.9
EALK	Alkurruntz	2.74	345	Pn	Pn	20 58 47.7	+3.1
EALK				Pg	Pg	20 58 52.5	-0.9
EALK				Sn	Sn	20 59 20.3	+2.8
EALK				Sg	Sg	20 59 30.1	+1.2
EALK				i IVmb_Lg		20 59 35.0	
EALK	Alkurruntz	2.74	345	P	Pn	20 58 47.3	+2.7
EALK				S	Sn	20 59 20.5	+2.9
GUD	Guadarrama	2.74	273	Pn	Pn	20 58 46.8	+2.2
GUD				Sn	Sn	20 59 17.8	+0.2
GUD				i IVmb_Lg		20 59 20.2	
ESBB	Sonseca Array	2.76	252	Pn	Pn	20 58 46.3	+1.5
ESBB				Sn	Sn	20 59 16.3	-1.7
ESDC	Sonseca Array	2.76	252	Pn	Pn	20 58 46.3	+1.5
ESDC				Sn	Sn	20 59 16.9	-1.2
ESDC				i IVmb_Lg		20 59 19.5	
EZAR	Zarzadilla de	2.83	199	Pn	Pn	20 58 46.5	+0.6
EZAR				Pg	Pb	20 58 51.9	+0.5
EZAR				Sn	Sn	20 59 19.6	-0.3
EZAR				Sg	Sb	20 59 29.9	+3.9
CARF	Carcanieres	2.93	42	P	Pn	20 58 50.2	+3.0
CART	Cartagena	3.00	187	Pn	Pn	20 58 49.1	+1.1
DUNF	Dun	3.02	35	P	Pn	20 58 52.8	+4.4
PSIM	Granatula de C	3.02	236	Pn	Pn	20 58 49.5	+1.1
PSIM				Sn	Sn	20 59 24.0	-0.6
FNEB	Nbias	3.07	40	P	Pn	20 58 52.4	+3.4
FILF	Fillols	3.07	49	P	Pn	20 58 50.7	+1.7
PAB	San Pablo	3.08	252	Pn	Pn	20 58 50.8	+1.5
PAB				Sn	Sn	20 59 24.7	-1.4
PAB				i IVmb_Lg		20 59 28.2	
EJON	La Jonquera	3.19	53	Pn	Pn	20 58 53.3	+2.5
EJON				Sg	Sb	20 59 42.1	+5.8
EJON	La Jonquera	3.19	53	Pn	Pn	20 58 53.2	+2.5
EJON				Sn	Sn	20 59 30.4	+1.7
EJON				Sg	Sg	20 59 43.8	+0.3
EJON				i IVmb_Lg		20 59 51.1	
SJAF	Saint Jean de	3.21	52	P	Pn	20 58 53.4	+2.5
EQES	Quesada	3.38	216	Pn	Pn	20 58 54.5	+1.1
EQES				Sn	Sn	20 59 32.3	-1.2
EQES				Sg	Sg	20 59 47.3	-2.3
EQES				i IVmb_Lg		20 59 55.5	
ELAN	Lanestosa	3.42	322	Pn	Pn	20 58 56.3	+2.4
ELAN				Sn	Sn	20 59 37.4	+3.2
ELAN				Sg	Sg	20 59 50.6	+0.1
ELAN				i IVmb_Lg		20 59 56.7	
MTLF	Montolieu	3.46	36	eP	Pn	20 58 57.3	+3.0
MTLF	Montolieu	3.46	36	ePg	Pg	20 59 06.8	-0.2
MTLF				eSg	Sg	20 59 51.2	-0.6
	18nm,0.2s						
CLAF	Gruissan	3.74	46	P	Pn	20 58 59.5	+1.3
EADA	Adamuz	3.93	234	Pn	Pn	20 59 01.6	+0.7
EADA				Sn	Sn	20 59 44.1	-2.8
EADA	Adamuz	3.93	234	Pn	Pn	20 59 01.6	+0.7
EADA				Sn	Sn	20 59 46.6	-0.3
EADA				i IVmb_Lg		20 59 49.0	
EADA				Sg	Sg	21 00 04.4	-2.7
MONQ	Montcuq	4.01	18	P	Pn	20 59 03.8	+1.9
MONQ				S	Sn	20 59 49.6	+0.8
EPLA	Plasencia	4.25	265	Pn	Pn	20 59 06.8	+1.5
EPLA				Sn	Sn	20 59 54.4	-0.4
EPLA				i IVmb_Lg		20 59 56.9	
LAJAS	L'Hospitalet-d	4.40	38	P	Pn	20 59 08.3	+0.9
EARI	Arriondas	4.41	310	Pn	Pn	20 59 09.1	+1.6
EARI				Sn	Sn	20 59 59.3	+0.6
EARI				i IVmb_Lg		21 02 21.6	
LFF	La Frestale	4.47	12	ePn	Pn	20 59 09.2	+1.0
LFF				eSn	Sn	20 59 59.5	-0.5
	20nm,0.3s						
ECAB	El Cabril	4.52	238	Pn	Pn	20 59 10.1	+1.1
ECAB	El Cabril	4.52	238	Pn	Pn	20 59 10.1	+1.1
ECAB				Sn	Sn	21 00 01.1	-0.2
CAF	Calviac	4.76	23	ePn	Pn	20 59 14.1	+1.8
CAF				eSn	Sn	21 00 06.4	-0.9
	5.3nm,0.2s						
CAF				eSg	Sg	21 00 32.4	-1.2
	3.9nm,0.2s						
LEUC	Leucamp	4.77	28	P	Pn	20 59 14.3	+1.9
LEUC				S	Sn	21 00 07.5	0.0
LASF	Ste Croix	4.79	42	ePn	Pn	20 59 14.4	+1.7
LASF	Ste Croix	4.79	42	ePg	Pg	20 59 30.7	-1.9
LASF				eSn	Sn	21 00 06.8	-1.3
	1.3nm,0.2s						
LASF				eSg	Sg	21 00 33.0	-1.6
	1.9nm,0.1s						
PBRG	Braganca	4.83	287	ePn	Pn	20 59 15.0	+1.8
PBRG				eSn	Sn	21 00 08.2	-0.8
PBRG				i AML	AML	21 00 09.9	
PBRG				i AML	AML	21 00 10.5	
PBRG				i AML	AML	21 00 41.4	
ECAL	Calabor	4.86	288	Pn	Pn	20 59 15.2	+1.6
ECAL				Sn	Sn	21 00 08.6	-1.1
ECAL	Calabor	4.86	288	Pn	Pn	20 59 15.5	+1.9
ECAL				Sn	Sn	21 00 09.5	-0.2
ECAL				i IVmb_Lg		21 00 11.5	
MVO	Moncorvo	4.94	279	ePn	Pn	20 59 16.5	+1.7
MVO				eSn	Sn	21 00 09.5	-2.3
MVO				i AML	AML	21 00 12.7	
MVO				i AML	AML	21 00 14.7	
MVO				i AML	AML	21 00 14.7	
RJF	Les Rejaudoux	4.97	17	eSn	Sn	21 00 11.1	-1.3
	11nm,0.2s						
EBAD	Badajoz	5.30	252	Pn	Pn	20 59 21.6	+1.9
EBAD				Sn	Sn	21 00 15.5	-5.1
EBAD	Badajoz	5.30	252	Pn	Pn	20 59 21.2	+1.5
EBAD				Sn	Sn	21 00 16.4	-4.2
EBAD				i IVmb_Lg		21 00 21.2	
FRNF	Fournols	5.33	24	P	Pn	20 59 22.2	+2.1
FRNF				S	Sn	21 00 20.8	-0.5
MTE	Manteigas	5.33	270	eSn	Sn	21 00 19.1	-2.3
MTE				i AML	AML	21 00 52.1	
MTE				i AML	AML	21 00 52.5	
MTE				i AML	AML	21 01 02.0	
PCBR	Castelo Branco	5.35	264	ePn	Pn	20 59 21.3	+1.0
PCBR				eSn	Sn	21 00 18.4	-3.3
PCBR				i AML	AML	21 00 21.1	
PCBR				i AML	AML	21 00 26.0	
PCBR				i AML	AML	21 00 57.3	
PMRV	Marv??o	5.37	260	ePn	Pn	20 59 22.1	+1.4
PMRV				eSn	Sn	21 00 18.9	-3.5
PMRV				i AML	AML	21 00 21.6	
PMRV				i AML	AML	21 00 22.5	
PMRV				i AML	AML	21 00 22.6	
LBL	Lubilhac	5.43	30	P	Pn	20 59 23.4	+1.9
LBL				S	Sn	21 00 22.9	-1.0
PVRL	Vila Real	5.47	280	ePn	Pn	20 59 22.1	+0.1
POLO	Lamas de Olo	5.54	281	ePn	Pn	20 59 25.0	+2.0
POLO				eSn	Sn	21 00 23.1	-3.5
POLO				i AML	AML	21 00 26.4	
POLO				i AML	AML	21 00 27.6	
POLO				i AML	AML	21 01 05.9	
PBAR	Barrancos	5.56	247	Pn	Pn	20 59 23.6	+0.3
PBAR	Barrancos	5.56	247	ePn	Pn	20 59 24.6	+1.3
PBAR				eSn	Sn	21 00 23.0	-4.1
PBAR				i AML	AML	21 01 04.0	
PBAR				i AML	AML	21 01 06.1	
PBAR				i AML	AML	21 01 11.4	
PVIS	Viseu	5.58	274	ePn	Pn	20 59 26.0	+2.4
PVIS				eSn	Sn	21 00 24.6	-3.1
ARTF	Artigues	5.61	55	P	Pn	20 59 26.0	+2.0
SMRF	Simiane la Rot	5.68	51	ePn	Pn	20 59 24.9	0.0
SMRF				eSg	Sg	21 01 00.7	-2.4
	3.1nm,0.4s						
PCAB	Cabril	5.75	284	ePn	Pn	20 59 26.9	+1.0
PCAB				eSn	Sn	21 00 29.8	-2.0
PCAB				i AML	AML	21 00 32.4	
PCAB				i AML	AML	21 00 37.0	
PCAB				i AML	AML	21 00 43.5	
VIVF	Saint-Julien-l	5.76	40	eP	Pn	20 59 32.1	+6.1
VIVF	Saint-Julien-l	5.76	40	ePg	Pg	20 59 48.7	-2.4
VIVF				eSg	Sg	21 01 02.8	-2.8
	2.6nm,0.3s						
ELOB	Lobios	5.80	285	Pn	Pn	20 59 28.7	+2.0
ELOB				Sn	Sn	21 00 32.1	-1.0
ELOB				i IVmb_Lg		21 00 33.9	
COLF	Collangettes	5.84	31	P	Pn	20 59 29.0	+1.8
COLF				S	Sn	21 00 32.6	-1.4
PSARD	Sardoal	5.91	263	ePn	Pn	20 59 29.1	+1.0
PSARD				eSn	Sn	21 00 30.1	-5.6
PSARD				i AML	AML	21 01 14.7	
PSARD				i AML	AML	21 01 15.3	
PSARD				i AML	AML	21 01 27.2	
LMR	La Mourre	5.95	60	ePn	Pn	20 59 29.3	+0.8
LMR				eSn	Sn	21 00 33.5	-3.0
	1.5nm,0.2s						
PGAV	Gavieira, Arco	5.98	286	ePn	Pn	20 59 31.1	+2.1
PGAV				eSn	Sn	21 00 36.5	-0.9
PGAV				i AML	AML	21 00 39.1	
PGAV				i AML	AML	21 00 40.5	
PGAV				i AML	AML	21 00 55.4	
MFF	Saint Martin d	6.04	3	ePn	Pn	20 59 30.7	+1.0
MFF				eSn	Sn	21 00 36.5	-2.1
	1.7nm,0.3s						
TCF	Toulx Ste Croi	6.06	18	ePn	Pn	20 59 31.1	+1.0
TCF	Toulx Ste Croi	6.06	18	ePg	Pg	20 59 54.9	-1.9
TCF				eSn	Sn	21 00 37.0	-2.3
	3.1nm,0.3s						
TCF				eSg	Sg	21 01 13.5	-1.7
	4.4nm,0.4s						
TRIGF	Trigance	6.07	56	P	Pn	20 59 33.4	+3.1
TRIGF				S	Sn	21 00 39.3	-0.3
PMTG	Montargil	6.09	258	ePn	Pn	20 59 31.4	+0.9
PMTG				eSn	Sn	21 00 34.6	-5.5
PMTG				i AML	AML	21 00 38.0	
PMTG				i AML	AML	21 00 38.9	
PMTG				i AML	AML	21 00 47.3	
PCAS	Casmilo, Conde	6.09	268	eSn	Sn	21 00 38.1	-2.0
PCAS				i AML	AML	21 01 15.8	
PCAS				i AML	AML	21 01 26.3	
PCAS				i AML	AML	21 01 27.2	
AGO	Saint Agoulin	6.10	25	P	Pn	20 59 32.5	+1.8
EVO	Evora	6.11	253	ePn	Pn	20 59 31.3	+0.5
EVO				eSn	Sn	21 00 35.6	-5.0
EVO				i AML	AML	21 00 39.6	
EVO				i AML	AML	21 00 39.9	
EVO				i AML	AML	21 00 40.2	
MOE	Montemor	6.36	254	eSn	Sn	21 00 44.2	-2.5
MOE				i AML	AML	21 00 45.1	
MOE				i AML	AML	21 01 25.9	
MOE				i AML	AML	21 01 33.4	
BGF	Bois d'Agland	6.47	21	ePn	Pn	20 59 36.3	+0.5
BGF	Bois d'Agland	6.47	21	ePg	Pg	21 00 01.5	-3.2
BGF				eSn	Sn	21 00 47.1	-2.3
	4.8nm,0.3s						
BGF				eSg	Sg	21 01 25.9	-2.6
	8.2nm,0.3s						
MESJ	Messejana	6.55	248	eSn	Sn	21 00 46.3	-5.0
MESJ				i AML	AML	21 01 34.6	
MESJ				i AML	AML	21 01 35.7	
MESJ				i AML	AML	21 01 43.0	
PARRA	Arraiolos	6.77	258	ePn	Pn	20 59 30.6	-9.3
PARRA				eSn	Sn	21 00 33.3	-24
PARRA				i AML	AML	21 01 08.5	
PARRA				i AML	AML	21 01 16.2	
PARRA				i AML	AML	21 01 23.0	
AVF	Avril sur Loir	6.83	23	ePn	Pn	20 59 41.6	+1.0
AVF				eSn	Sn	21 00 55.6	-2.6
AVF				eSg	Sg	21 01 36.7	-3.3
	1.8nm,0.3s						
SMF	Signal de Mont	6.86	26	ePn	Pn	20 59 42.0	+1.0
SMF				eSg	Sg	21 01 37.3	-3.5
	0.9nm,0.3s						
PMAFR	Mafra	6.91	259	eSn	Sn	21 00 57.0	-3.3
MORF	Marmelete	7.10	245	eSn	Sn	21 01 05.2	+0.1
SSF	Saint Saulge	7.12	23	ePn	Pn	20 59 44.4	-0.2
SSF				eSn	Sn	21 01 03.8	-1.6
SSF				eSg	Sg	21 01 45.5	-3.7
	0.6nm,0.2s						
LOR	Lormes	7.41	24	eP	Pn	20 59 54.4	+5.7
LOR				eSg	Sg	21 01 56.9	-1.7
	0.9nm,0.3s						
PGF	Pioggiola	7.43	71	ePn	Pn	20 59 49.6	+0.6
PGF				eSn	Sn	21 01 09.0	-4.3
	0.4nm,0.2s						
QUIF	Quistinic	7.58	347	ePn	Pn	20 59 51.6	+0.7
QUIF	Quistinic	7.58	347	ePg	Pb	21 00 23.2	+11
QUIF				eSn	Sn	21 01 13.1	-3.5
	0.4nm,0.1s						
SGMF	Saint Gilles	7.81	350	ePn	Pn	20 59 54.8	+0.7
SGMF				eSn	Sn	21 01 18.7	-3.7
	0.7nm,0.2s						
GRR	Gorron	7.82	359	ePn	Pn	20 59 56.8	+2.6
GRR				eSn	Sn	21 01 18.3	-4.2
	2.0nm,0.2s						
ROSF	Rostrenen	8.00	347	ePn	Pn	20 59 57.7	+1.0
ROSF				eSn	Sn	21 01 23.9	-3.1
	0.1nm,0.1s						
LDF	La Druitiere	8.03	2	ePn	Pn	20 59 58.5	+1.4
LDF				eSn	Sn	21 01 24.4	-3.2
	0.4nm,0.1s						
FLN	La Foliniere	8.19	0	ePn	Pn	21 00 01.4	+2.1
FLN				eSn	Sn	21 01 27.7	-3.9
	0.7nm,0.2s						
NACGM	Naroch	23.12	42	eP	P	21 03 10.4	+4.1
	comp=Z,3.0nm,0.7s,baz=242						

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*CRAAG **04** 20:59:52.4, 35°.70N×0°.28W, Ml4.2, Algerie 08km S Chehairia*

*CNRM **04** 20:59:57.1, 35°.68N×0°.25W, h80^{km}, ML2.7*

*MDD **04** 20:59:57.8±1.0, 35°.57N×0°.13W, h25^{km}±16^{km}, Mb4.2/13, M_mb3.5/13, Error ellipse: s-maj=16.2km s-min=5.1km az=156.0*

ISC 04 20:59:55.1±0.9**, 35°.61N**±0°.03×**0°.10W**±0°.03**, h16**^{km}**, n40, σ1**§**64**/56**, 9C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ODJA	Bouhanifia	0.28	188	P	Pg	21 00 00.4	-0.7
OJGS	Djebel Guires	0.70	98	P	Pg	21 00 10.3	+1.5
EANR	'Ain N'Sour	1.04	70	P	Pb	21 00 14.5	-0.2
EBNR	Beni Rached	1.49	62	P	Pn	21 00 19.5	-1.7
EADEB	Ain Deheb	1.55	118	P	Pn	21 00 22.1	-0.1
EBGR	Bougara	1.66	91	P	Pn	21 00 23.5	-0.1
EDDR	Deurdeur	1.92	77	P	Pn	21 00 22.1	-5.1
TAF	Taforalt	2.05	248	P	Pn	21 00 29.2	+0.2
TAF	Taforalt	2.05	248	S	Sn	21 00 53.1	-1.2
CART	Cartagena	2.11	340	Pn	Pn	21 00 29.6	-0.1
CART				Sn	Sn	21 00 53.7	-1.8
CART	Cartagena	2.11	340	P	Pn	21 00 29.6	-0.1
CART	Cartagena	2.11	340	S	Sn	21 00 53.9	-1.6
ENIJ	Nijar	2.18	309	Pn	Pn	21 00 30.9	+0.2
ENIJ				Sn	Sn	21 00 56.9	-0.5
ENIJ	Nijar	2.18	309	Pn	Pn	21 00 31.0	+0.3
ENIJ				⇑iIVmb_VC		21 00 33.0	
	647nm,SNR=4.2						
ENIJ				Sn	Sn	21 00 56.4	-1.0
JBK	JBK	2.39	239	P	Pn	21 00 34.3	+0.5
JBK	JBK	2.39	239	S	Sn	21 01 04.3	+1.5
GOG	Mont Gurugu	2.40	262	P	Pn	21 00 33.0	-0.7
GOG	Mont Gurugu	2.40	262	S	Sn	21 01 00.5	-2.3
EZAR	Zarzadilla de	2.60	331	Pn	Pn	21 00 37.3	+0.7
EZAR				⇑iIVmb_VC		21 00 38.9	
	498nm,SNR=2.6						
EZAR				Sn	Sn	21 01 06.7	-1.2
EBEN2	Beniarda presa	3.07	359	Pn	Pn	21 00 43.2	+0.3
EBEN2				⇑iIVmb_VC		21 00 46.9	
	560nm,SNR=1.2						
EBEN2				Sn	Sn	21 01 17.8	-1.4
EQUE	Quentar	3.13	302	Pn	Pn	21 00 45.3	+1.4
EQUE				⇑iIVmb_VC		21 00 47.6	
	334nm,SNR=3.8						
EQUE				Sn	Sn	21 01 22.8	+1.8
EQTA	Presa de Quent	3.13	302	Pn	Pn	21 00 45.4	+1.5
EQES	Quesada	3.24	313	Pn	Pn	21 00 48.1	+2.7
EQES				⇑iIVmb_VC		21 00 51.0	
	662nm,SNR=7.7						
EQES				Sn	Sn	21 01 24.5	+0.8
AKLM	AKL	3.27	252	P	Pn	21 00 47.3	+1.5
AKLM	AKL	3.27	252	S	Sn	21 01 24.3	-0.2
E0803	Jimena (Jaen)	3.50	310	Pn	Pn	21 00 51.6	+2.7
E0803				Sn	Sn	21 01 31.5	+1.4
EGOR	Sierra Gorda,	3.57	296	Pn	Pn	21 00 52.1	+2.2
EGOR	Sierra Gorda,	3.57	296	Pn	Pn	21 00 51.8	+1.9
EGOR				Sn	Sn	21 01 34.6	+2.8
FIGM	Figuig	3.60	196	P	Pn	21 00 51.1	+0.8
FIGM	Figuig	3.60	196	S	Sn	21 01 34.4	+1.9
EIBI	Ibiza	3.60	18	Pn	Pn	21 00 52.0	+1.8
EIBI				Sn	Sn	21 01 31.9	-0.6
EIBI	Ibiza	3.60	18	Pn	Pn	21 00 51.9	+1.6
EIBI				⇑iIVmb_VC		21 00 54.1	
	555nm,SNR=2.7						
EIBI				Sn	Sn	21 01 31.5	-1.0
EMAL	Malaga-Limoner	3.69	290	Sn	Sn	21 01 31.8	-2.7
EMAL				Pn	Pn	21 00 50.9	-0.5
EVIV	Cofrentes, Val	3.74	348	Pn	Pn	21 00 53.5	+1.3
EVIV				⇑iIVmb_VC		21 01 02.5	
	167nm,SNR=0.9						
EVIV				Sn	Sn	21 01 33.0	-3.0
EMIJ	Mijas	3.90	286	Pn	Pn	21 00 54.0	-0.4
EMIJ				Sn	Sn	21 01 35.7	-4.2
EMIJ	Mijas	3.90	286	Pn	Pn	21 00 53.8	-0.6
EMIJ				⇑iIVmb_VC		21 01 01.5	
	138nm,SNR=1.7						
EMIJ				Sn	Sn	21 01 36.4	-3.5
ECHE	Chera	4.04	350	Pn	Pn	21 00 57.7	+1.5
ECHE				Sn	Sn	21 01 41.2	-2.0
MDT	Midelt	4.66	235	P	Pn	21 01 03.2	-1.6
MDT	Midelt	4.66	235	S	Sn	21 01 57.0	-1.6
ETOS	Mallorca	4.75	28	⇑iIVmb_VC		21 01 06.2	
	121nm,SNR=1.1						
ETOS				Pn	Pn	21 01 07.1	+1.0
ETOS				Sn	Sn	21 01 59.9	-1.0

IDC ***04*** *21:09:33.1±0.7, 37°.18N×141°.26E, h0^{km}, mb3.9/18, mbtmp3.8/25, ML3.2/7, MS3.5/39, Error ellipse: s-maj=17.2km s-min=14.6km az=137.0*

NIED ***04*** *21:09:35.4, 37°.15N×141°.25E, h21^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-2.96; M$_{\theta\theta}$2.57; M$_{\phi\phi}$0.39; M$_{r\theta}$0.91; M$_{\theta\phi}$1.19; M$_{\phi r}$0.02; Fault plane solution: M$_0$3.16000×10^{15} NP1:φ$_s$59.00000°, δ38.00000°, λ-101.00000°. NP2:φ$_s$253.00000°, δ53.00000°, λ-82.00000°.*

JMA ***04*** *21:09:35.4±0.1, 37°.2N±0°.2×141°.3E±0°.7, h21^{km}, MD4.5/39, MW4.3/39, E OFF FUKUSHIMA PREF*

JMA Felt II J1 at E OFF FUKUSHIMA PREF .

NEIC ***04*** *21:09:38.0±1.0, 37°.26N±0°.05×141°.21E±0°.09, h26^{km}±5^{km}, mb4.4/37, Error ellipse: s-maj=10.4km s-min=6.6km az=92.0*

ISC 04 21:09:33.5±1.6**, 37°.13N**±0°.03×**141°.37E**±0°.05**, h2**^{km}±9^{km}**, n179,** σ1^s.**27**/118**, mb4.3**/39**, MS3.5**/36**, 2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.46**	**266**	*i* P	**Pg**	**21 09 42.9**	**+0.6**
ONAJ				S	**Sg**	**21 09 48.3**	**+0.1**
ONAJ	**Iwakimizuishiy**	**0.46**	**266**	A	A	21 09 42.9	
	comp=N,23nm,1.3s,comp=E,27nm,0.3s						
JFK	**Kawauchi**	**0.46**	**301**	*i* P	**Pg**	**21 09 43.0**	**+0.7**
JFK				S	**Sg**	**21 09 48.5**	**+0.2**
JFFD	**Fukushimafurud**	**0.65**	**267**	*i* P	**Pg**	**21 09 46.2**	**+0.3**
JFFD				S	**Sg**	**21 09 54.0**	**-0.3**
JFFD	**Fukushimafurud**	**0.65**	**267**	A	A	21 09 46.2	
	comp=N,14nm,4.3s,comp=E,12nm,2.7s						
JMST	**Minamisoumatoc**	**0.70**	**327**	*i* P	**Pg**	**21 09 47.6**	**+0.6**
JMST				S	**Sg**	**21 09 56.5**	**+0.4**
JMST	**Minamisoumatoc**	**0.70**	**327**	A	A	21 09 47.6	
	comp=N,12nm,0.4s,comp=E,9.0nm,0.3s						
JHO	**Hitachi**	**0.83**	**231**	⇓*i*P	**Pg**	**21 09 49.1**	**-0.2**
JHO				⇓S	**Sg**	**21 09 59.8**	**-0.2**
JHO	**Hitachi**	**0.83**	**231**	A	A	21 09 49.1	
	comp=N,9.0nm,0.8s,comp=E,9.0nm,1.7s						
JMM	**Marumori**	**0.86**	**328**		**Pg**	**21 09 50.1**	**0.0**
JMM				Sg	**Sg**	**21 10 00.7**	**-0.6**
JMM	**Marumori**	**0.86**	**328**	P	**Pg**	**21 09 50.3**	**+0.2**
JMM	**Marumori**	**0.86**	**328**	*i* P	**Pg**	**21 09 50.3**	**+0.2**
JMM				S	**Sg**	**21 10 01.3**	**0.0**
JMM	**Marumori**	**0.86**	**328**	A	A	21 09 50.3	
	comp=N,8.0nm,2.3s,comp=E,9.0nm,1.5s						
JOTO	**OTAMA OYAMA**	**0.93**	**298**	*i* P	**Pg**	**21 09 51.5**	**+0.2**
JOTO				S	**Sg**	**21 10 03.1**	**-0.3**
JOTO	**OTAMA OYAMA**	**0.93**	**298**	A	A	21 09 51.5	
	comp=N,34nm,3.4s,comp=E,25nm,1.0s						
JHYU	**Hitachinakayam**	**1.01**	**219**	A	A	21 09 53.2	
	comp=N,17nm,0.6s,comp=E,18nm,0.6s						
JSB	**Shiboa**	**1.17**	**262**	*i* P	**Pb**	**21 09 56.0**	**-0.5**
JSB				*e*S	**Sb**	**21 10 10.5**	**-1.5**
JSB	**Shiboa**	**1.17**	**262**	A	A	21 09 56.0	
	comp=N,21nm,5.2s,comp=E,27nm,2.5s						
JYAR	**Yonezawaarcadi**	**1.25**	**309**	A	A	21 09 56.3	
	comp=N,40nm,1.1s,comp=E,36nm,0.9s						
JYT	**Yasato**	**1.31**	**227**	A	A	21 09 57.8	
	comp=N,12nm,0.4s,comp=E,20nm,0.4s						
JIHU	**Itakohorinouch**	**1.35**	**210**	A	A	21 09 58.8	
	comp=N,48nm,2.3s,comp=E,37nm,4.4s						
JOU	**Okura**	**1.35**	**336**	A	A	21 09 58.5	
	comp=N,23nm,1.4s,comp=E,22nm,1.4s						
JFY	**Yanaizu**	**1.35**	**282**	A	A	21 09 57.9	
	comp=N,10.0nm,6.0s,comp=E,8.0nm,4.9s						
JYS	**Shirataka**	**1.50**	**317**	A	A	21 10 00.4	
	comp=N,21nm,1.5s,comp=E,17nm,1.9s						
JOFO	**Osakifurukawao**	**1.51**	**346**	A	A	21 10 01.1	
	comp=N,75nm,1.7s,comp=E,49nm,1.5s						
JSMT	**Sammumatsuo**	**1.66**	**207**	A	A	21 10 03.6	
	comp=N,27nm,2.8s,comp=E,24nm,1.6s						
JKMT	**Kesennumamotoy**	**1.68**	**3**	A	A	21 10 04.0	
	comp=N,5.0nm,2.1s,comp=E,8.0nm,5.8s						
JAG	**Ashikaga**	**1.69**	**246**	A	A	21 10 03.3	
	comp=N,5.0nm,1.4s,comp=E,4.0nm,2.7s						
JKT	**Katashina**	**1.74**	**258**	A	A	21 10 03.8	
	comp=N,6.0nm,4.3s,comp=E,8.0nm,4.3s						
JNS	**Sasagawa**	**1.77**	**293**	A	A	21 10 04.2	
	comp=N,9.0nm,1.5s,comp=E,9.0nm,1.6s						
JMK	**Ichinoseki**	**1.82**	**356**	A	A	21 10 06.0	
	comp=N,5.0nm,3.4s,comp=E,7.0nm,1.4s						
JUON	**Uonuma**	**1.85**	**273**	A	A	21 10 05.3	
	comp=N,11nm,3.3s,comp=E,6.0nm,5.7s						
JYK	**Kaneyama**	**1.95**	**336**	A	A	21 10 07.5	
	comp=N,6.0nm,2.7s,comp=E,6.0nm,2.3s						
JYA	**Atsumi**	**1.96**	**319**	A	A	21 10 07.3	
	comp=N,16nm,1.3s,comp=E,26nm,1.0s						
OFUJ	**Ofunato**	**1.96**	**7**	A	A	21 10 08.3	
	comp=N,4.0nm,1.8s,comp=E,6.0nm,3.8s						
I30JP	**ISUMI INFRASON**	**2.01**	**205**	I	I	21 19 30.0	
	baz=17,slow=323,SNR=1.5						
JAW	**Awa shima**	**2.14**	**309**	A	A	21 10 09.7	
	comp=N,6.0nm,4.0s,comp=E,5.0nm,3.6s						
JIZZ	**Izumozaki**	**2.16**	**281**	A	A	21 10 09.8	
	comp=N,23nm,3.9s,comp=E,26nm,5.8s						
JYYZ	**Yamagatayuza**	**2.20**	**329**	A	A	21 10 10.8	
	comp=N,28nm,2.6s,comp=E,22nm,2.1s						
JGK	**Kuni**	**2.26**	**256**	A	A	21 10 11.5	
	comp=N,7.0nm,4.7s,comp=E,4.0nm,5.2s						
JOM	**Ohasama**	**2.34**	**359**	A	A	21 10 13.5	
	comp=N,3.0nm,3.8s,comp=E,6.0nm,1.9s						
JYW	**Yuwa**	**2.57**	**340**	A	A	21 10 16.5	
	comp=N,16nm,1.6s,comp=E,9.0nm,2.9s						
MJAR	**Matsushiro Arr**	**2.60**	**258**	Pn	**Pn**	**21 10 16.5**	**-0.1**
	comp=E,1.3nm,0.3s,baz=80,slow=15,SNR=90						
MJAR				Sn	**Sn**	**21 10 48.7**	**0.0**
	comp=E,4.2nm,0.3s,baz=74,slow=16,SNR=3.4						
	comp=E,43nm,0.8s						
MAJO	**Matsushiro**	**2.60**	**258**		**Pn**	**21 10 16.9**	**+0.3**
MAJO	**Matsushiro**	**2.60**	**258**	P	**Pn**	**21 10 17.2**	**+0.6**
MJB9	**Matsu-Tunnel**	**2.60**	**258**		**Pn**	**21 10 16.9**	**+0.3**
JOD2	**Odawara 2**	**2.62**	**225**	A	A	21 10 17.1	
	comp=N,4.0nm,5.3s,comp=E,3.0nm,1.5s						
JSZI	**Iwateshizukuis**	**2.62**	**353**	A	A	21 10 17.5	
	comp=N,9.0nm,2.0s,comp=E,10.0nm,5.4s						
JSD	**Sado**	**2.63**	**291**	P	**Pn**	**21 10 16.1**	**-0.8**
JNG	**Nsakai**	**2.72**	**256**	A	A	21 10 18.1	
	comp=N,3.0nm,5.7s,comp=E,2.0nm,4.1s						
JKEN	**Kujiedanarisaw**	**3.08**	**5**	A	A	21 10 24.3	
	comp=N,7.0nm,1.8s,comp=E,8.0nm,2.8s						
JAH	**Hinai**	**3.10**	**350**	A	A	21 10 24.3	
	comp=N,3.0nm,5.6s,comp=E,5.0nm,4.1s						
JNTW	**Noshirotokiwa**	**3.27**	**344**	A	A	21 10 26.5	
	comp=N,13nm,2.3s,comp=E,12nm,2.6s						
JTT	**Ttatey**	**3.28**	**262**	A	A	21 10 25.9	
	comp=N,6.0nm,2.4s,comp=E,4.0nm,5.3s						
JOG3	**Oga3**	**3.31**	**328**	A	A	21 10 23.1	
	comp=N,9.0nm,2.5s,comp=E,6.0nm,2.0s						
JSG	**Sagara**	**3.56**	**227**		**Pn**	**21 10 30.7**	**+1.0**
JGF	**Kuroka**	**3.58**	**246**		**Pn**	**21 10 30.9**	**+0.9**
JGF	**Kuroka**	**3.58**	**246**	P	**Pn**	**21 10 30.7**	**+0.7**
JTM	**Tenmabayashi**	**3.66**	**356**		**Pn**	**21 10 32.1**	**+1.1**
JAHD	**Aomorihigashid**	**4.13**	**360**	A	A	21 10 39.0	
	comp=N,6.0nm,1.2s,comp=E,7.0nm,1.6s						
JHJ2	**Mitsune**	**4.21**	**198**	Pn	**Pn**	**21 10 41.2**	**+2.6**
JHJ2	**Mitsune**	**4.21**	**198**	P	**Pn**	**21 10 41.4**	**+2.8**
ERM	**Erimo**	**5.07**	**15**	Pn	**Pn**	**21 10 49.9**	**-0.5**
JMN	**Monobe**	**6.99**	**243**	Pn	**Pn**	**21 11 17.6**	**+0.7**
ASAJ	**Asahikawa**	**7.04**	**7**	Pn	**Pn**	**21 11 16.9**	**-0.5**
	comp=E,1.1nm,0.3s,baz=205,slow=14,SNR=6.9						
ASAJ				Sn	**Sn**	**21 12 38.8**	**+0.7**
	baz=186,slow=18						
ASAJ				LR	LR	21 14 11.9	
	comp=E,247nm,20.9s,baz=247,slow=40						
	comp=E,2.5nm,0.4s						
JKA	**Kamikawa-asahi**	**7.04**	**7**		**Pn**	**21 11 17.4**	**-0.1**
JNU	**Nakatsue**	**9.48**	**248**	Pn	**Pn**	**21 11 50.4**	**-0.6**
	comp=E,0.2nm,0.3s,baz=20,slow=17,SNR=1.3						
	comp=E,1.8nm,0.6s						
YSS	**Yuzhno-Sakhali**	**9.87**	**6**	Pn	**Pn**	**21 11 56.8**	**+0.5**
USA0B	**Ussuriysk Arra**	**10.02**	**318**	Pn	**Pn**	**21 11 57.1**	**-1.3**
USRK	**Ussuriysk Ar.**	**10.02**	**318**		**Pn**	**21 11 57.1**	**-1.3**
USRK	**Ussuriysk Ar.**	**10.02**	**318**	Pn	**Pn**	**21 11 56.7**	**-1.7**
	comp=E,0.2nm,0.3s,baz=138,slow=14,SNR=5.0						
USRK				LR	LR	21 15 40.5	
	comp=E,286nm,18.2s,baz=141,slow=37						
	comp=E,1.6nm,0.7s						
KSRS	**Korea Array**	**10.72**	**276**	Pn	**Pn**	**21 12 07.6**	**-0.3**
	comp=E,0.2nm,0.3s,baz=92,slow=14,SNR=11						
KSRS				LR	LR	21 15 41.3	
	comp=E,118nm,20.7s,baz=90,slow=34						
	comp=E,0.4nm,0.3s						
KSAR	**Wonju Array Be**	**10.75**	**276**		**Pn**	**21 12 08.0**	**-0.4**
MDJ	**Mudanjiang**	**11.62**	**314**	P	**Pn**	**21 12 24.4**	**+4.1**
MDJ				S	**Sn**	**21 14 34.0**	**+3.4**
MDJ				SS	**SnSn**	**21 14 49.5**	**+7.0**
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,140nm,3.8s						
MDJ				LR	LR		
	comp=N,230nm,12.7s						
MDJ				LR	LR		
	comp=E,190nm,14.1s						
MDJ				LR	LR		
	comp=Z,320nm,17.9s						
KLR	**Kul'dur**	**13.96**	**333**	Pn	**Pn**	**21 12 53.1**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=148,slow=13,SNR=1.6						
KLR				LR	LR	21 18 07.3	
	comp=Z,219nm,19.2s,baz=146,slow=37						
	comp=Z,0.4nm,0.4s						
HEH	**HeiHe**	**16.51**	**327**	*e*P	P	21 13 42.2	+13
HEH				pmax	pmax		
	comp=Z,3.0nm,1.2s						
NJ2	**Nanjing**	**19.20**	**261**	*e*P	**P**	**21 13 58.2**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NJ2				LR	LR		
	comp=N,100nm,14.2s						
NJ2				LR	LR		
	comp=E,170nm,13.3s						
NJ2				LR	LR		
	comp=Z,180nm,12.8s						
PETK	**Petropavlovsk-**	**19.62**	**30**	P	**P**	**21 14 03.9**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=229,slow=8.8,SNR=2.8						
PETK				LR	LR	21 22 47.6	
	comp=Z,67nm,18.4s,baz=234,slow=40						
	comp=Z,1.9nm,0.8s						
MA2	**Magadan**	**23.27**	**12**	P	**P**	**21 14 40.5**	**-1.5**
MA2				IAmb	IAmb	21 15 03.3	
	comp=Z,7.5nm,0.9s						
MA2	**Magadan**	**23.27**	**12**	LR	LR	21 23 36.6	
	comp=Z,70nm,20.7s,baz=193,slow=36						
HHC	**Hu-ho-hao-te**	**23.41**	**288**	*e*P	**P**	**21 14 43.6**	**-0.2**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,56nm,5.3s						
HHC				LR	LR		
	comp=N,140nm,12.3s						
HHC				LR	LR		
	comp=E,92nm,11.6s						
HHC				LR	LR		
	comp=Z,93nm,14.3s						
YAK	**Yakutsk**	**25.96**	**347**	P	**P**	**21 15 05.4**	**-1.6**
YAK				IAmb	IAmb	21 15 24.4	
	comp=Z,14nm,1.1s						
YAK	**Yakutsk**	**25.96**	**347**	LR	LR	21 25 26.4	
	comp=Z,161nm,19.8s,baz=138,slow=37						
SEY	**Seymchan**	**26.70**	**11**	LR	LR	21 25 46.2	
	comp=Z,112nm,21.7s,baz=218,slow=36						
ENH	**Enshi**	**27.30**	**265**	P	**P**	**21 15 18.4**	**-1.2**
ENH				IAmb	IAmb	21 15 46.6	
	comp=Z,4.9nm,0.9s						
SONM	**Songino Array**	**27.70**	**304**	P	**P**	**21 15 20.6**	**-2.5**
SONM	**Songino Array**	**27.70**	**304**	P	**P**	**21 15 22.2**	**-0.9**
	comp=Z,0.7nm,0.6s,baz=98,slow=8.2,SNR=3.7						
SONM				LR	LR	21 26 20.7	
	comp=Z,42nm,19.0s,baz=92,slow=36						
	comp=Z,0.7nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.23**	**121**	T	T	21 45 02.8	
	baz=313,slow=75,SNR=1926						
H11N1	**WAKE ISLAND Hy**	**28.24**	**121**	T	T	21 45 03.5	
	baz=313,slow=75,SNR=1767						
H11N3	**WAKE ISLAND Hy**	**28.25**	**121**	T	T	21 45 19.6	
	baz=313,slow=75,SNR=1288						
H11S1	**WAKE ISLAND Hy**	**28.94**	**123**	T	T	21 46 17.0	
	baz=315,slow=75,SNR=720						
H11S3	**WAKE ISLAND Hy**	**28.95**	**123**	T	T	21 46 10.6	
	baz=315,slow=75,SNR=470						
H11S2	**WAKE ISLAND Hy**	**28.96**	**123**	T	T	21 46 01.7	
	baz=315,slow=75,SNR=309						
LZH	**Lanzhou**	**30.01**	**279**	*e*P	**P**	**21 15 45.9**	**+2.1**
LZH				sP	sP	21 15 56.6	+12
LZH				pmax	pmax		
	comp=Z,6.0nm,1.0s						
DAV	**Davao City (W)**	**33.20**	**210**	LR	LR	21 28 37.4	
	comp=Z,40nm,21.8s,baz=9.5,slow=34						
PZH	**PanZhiHua**	**35.08**	**264**	P	**P**	**21 16 28.6**	**+0.5**
TIXI	**Tiksi**	**35.19**	**353**	LR	LR	21 31 01.5	
	comp=Z,84nm,21.2s,baz=185,slow=37						
FAKI	**Fak Fak**	**40.74**	**194**	P	**P**	**21 17 16.6**	**+0.8**
FAKI				IAmb	IAmb	21 17 39.2	
	comp=Z,13nm,1.0s						
WMQ	**Urumqi**	**40.76**	**297**	*e*P	**P**	**21 17 17.5**	**+1.6**
WMQ				LR	LR		
	comp=N,320nm,16.3s						
WMQ				LR	LR		
	comp=Z,88nm,19.3s						
CMAR	**Chiang Mai Arr**	**41.49**	**255**	P	**P**	**21 17 22.0**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=51,slow=8.3,SNR=1.1						
CMAR				LR	LR	21 35 58.0	
	comp=Z,18nm,18.8s,baz=280,slow=38						
	comp=Z,0.3nm,0.4s						
ZAA0	**Zalesovo Array**	**41.82**	**312**	P	**P**	**21 17 22.8**	**-1.5**
ZALV	**Zalesovo Beam**	**41.82**	**312**	P	**P**	**21 17 23.5**	**-0.8**
	comp=Z,1.5nm,0.6s,baz=90,slow=8.6,SNR=7.1						
ZALV				LR	LR	21 35 21.8	
	comp=Z,46nm,20.6s,baz=76,slow=37						
	comp=Z,1.5nm,0.6s						
LSA	**Lhasa**	**42.16**	**275**	P	**P**	**21 17 27.4**	**-0.7**
NRIK	**Noril'sk**	**43.16**	**335**	LR	LR	21 36 49.5	
	comp=Z,108nm,18.5s,baz=125,slow=38						
MKAR	**Makanchi Array**	**44.03**	**302**	P	**P**	**21 17 41.5**	**-1.0**
MKAR	**Makanchi Array**	**44.03**	**302**	P	**P**	**21 17 41.7**	**-0.8**
	comp=Z,1.2nm,0.7s,baz=87,slow=9.4,SNR=10						
MKAR				LR	LR	21 36 17.6	
	comp=Z,44nm,20.1s,baz=99,slow=36						
	comp=Z,1.2nm,0.7s						
C18K	**Utukok River**	**44.20**	**26**	P	**P**	**21 17 44.3**	**+0.7**
C18K				IAmb	IAmb	21 17 50.5	
	comp=Z,6.0nm,0.8s						
MAKZ	**Makanchi**	**44.24**	**302**	P	**P**	**21 17 43.1**	**-1.1**
C19K	**Lookout Ridge**	**44.88**	**26**	P	**P**	**21 17 50.0**	**+1.0**
KSM	**Kuching**	**45.59**	**226**	P	**P**	**21 17 56.0**	**+0.8**
KURK	**Kurchatov**	**45.84**	**308**	P	**P**	**21 17 55.9**	**-0.8**
KURK				IAmb	IAmb	21 18 08.3	
	comp=Z,6.1nm,0.9s						
KURBB	**Kurchatov Arra**	**45.91**	**308**	P	**P**	**21 17 55.6**	**-1.7**
	comp=Z,3.4nm,0.9s,baz=83,slow=8.1,SNR=18						
	comp=Z,3.4nm,0.9s						
KAPI	**Kappang**	**46.53**	**210**	P	**P**	**21 18 02.4**	**-0.1**
B21K	**Ikpikpuk River**	**46.71**	**26**	P	**P**	**21 18 04.7**	**+1.4**
KDAK	**Kodiak Island**	**47.05**	**42**	P	**P**	**21 18 06.8**	**+0.7**
CAST	**Castle Rocks**	**47.16**	**34**	P	**P**	**21 18 08.3**	**+1.3**
CAST				IAmb	IAmb	21 18 10.3	
	comp=Z,2.6nm,1.0s						
WUS	**Wushi**	**47.46**	**295**	P	**P**	**21 18 09.0**	**-0.8**
WUS				IAmb	IAmb	21 18 20.9	
	comp=Z,9.4nm,1.1s						
TARG	**Taragay, Kyrgy**	**48.32**	**296**	P	**P**	**21 18 16.2**	**-0.6**
TARG				IAmb	IAmb	21 18 28.6	
	comp=Z,5.3nm,0.9s						
ILAR	**Eielson Array**	**49.43**	**32**	P	**P**	**21 18 24.9**	**+0.5**
ILAR	**Eielson Array**	**49.43**	**32**	P	**P**	**21 18 24.9**	**+0.4**
	comp=Z,1.7nm,0.8s,baz=277,slow=7.8,SNR=16						
	comp=Z,1.7nm,0.8s						
HNR	**Honiara**	**49.49**	**156**	LR	LR	21 37 10.4	
	comp=Z,29nm,21.6s,baz=200,slow=33						
BMAR	**Burnt Mountain**	**50.26**	**29**	P	**P**	**21 18 31.6**	**+0.8**
AAK	**Ala-Archa**	**50.41**	**298**	LR	LR	21 40 26.7	
	comp=Z,82nm,18.7s,baz=89,slow=37						
BVAR	**Borovoye Array**	**50.48**	**312**	P	**P**	**21 18 30.8**	**-1.8**
	comp=Z,0.5nm,0.5s,baz=72,slow=5.4,SNR=2.3						
BVAR				LR	LR	21 40 50.4	
	comp=Z,43nm,18.4s,baz=75,slow=37						
	comp=Z,0.5nm,0.5s						
SCRK	**Sand Creek**	**50.74**	**33**	P	**P**	**21 18 35.5**	**+0.9**
BCAR	**Beaver Creek A**	**51.83**	**34**	P	**P**	**21 18 44.2**	**+1.5**
ARSB	**Arslanbob**	**51.89**	**297**	P	**P**	**21 18 43.0**	**-0.6**
ARSB				IAmb	IAmb	21 18 56.6	
	comp=Z,3.6nm,0.7s						
I28M	**Miner Creek**	**52.30**	**31**		**P**	**21 18 47.8**	**+1.7**
KK31	**Karatay Array**	**53.04**	**300**		**P**	**21 18 50.8**	**-1.1**
KK31				IAmb	IAmb	21 19 16.8	
	comp=Z,3.6nm,1.2s						
KKAR	**Karatay Array**	**53.04**	**300**	P	**P**	**21 18 49.9**	**-2.0**
UGM	**Wanagama**	**53.31**	**219**	P	**P**	**21 18 55.1**	**+1.0**
L29M	**L29M**	**53.47**	**34**		**P**	**21 18 55.7**	**+0.9**
L29M				IAmb	IAmb	21 18 58.8	
	comp=Z,4.4nm,0.9s						
INK	**Inuvik**	**54.31**	**27**	LR	LR	21 45 07.6	
	comp=Z,33nm,18.7s,baz=256,slow=39						
SIMJ	**Simiganj**	**55.70**	**295**	P	**P**	**21 19 10.5**	**-0.9**
SIMJ				IAmb	IAmb	21 19 27.0	
	comp=Z,3.9nm,0.9s						
ARTI	**Arti**	**56.37**	**318**	P	**P**	**21 19 14.8**	**-1.0**
ARTI				IAmb	IAmb	21 19 39.6	
	comp=Z,4.1nm,0.8s						
ARTI	**Arti**	**56.37**	**318**	LR	LR	21 45 24.2	
	comp=Z,57nm,18.4s,baz=82,slow=38						
FITZ	**Fitzroy Crossi**	**56.90**	**198**	P	**P**	**21 19 20.7**	**+0.8**
FITZ				IAmb	IAmb	21 19 35.3	
	comp=Z,8.1nm,1.4s						
WB0	**Warramunga Arr**	**56.97**	**188**	P	**P**	**21 19 20.1**	**-0.3**
WRA	**Warramunga Arr**	**57.15**	**188**	P	**P**	**21 19 21.2**	**-0.4**
WRA	**Warramunga Arr**	**57.15**	**188**	P	**P**	**21 19 21.0**	**-0.7**
	comp=Z,1.8nm,0.7s,baz=5.3,slow=7.2,SNR=8.3						
	comp=Z,1.8nm,0.7s						
KBL	**Kabul**	**57.35**	**291**	P	**P**	**21 19 21.0**	**-2.4**
KBL				IAmb	IAmb	21 19 50.2	
	comp=Z,4.8nm,1.4s						
ABKAR	**Akbulak array**	**57.85**	**310**	P	**P**	**21 19 25.4**	**-0.9**
ABKAR				IAmb	IAmb	21 19 36.1	
	comp=Z,3.6nm,1.3s						
ABKAR	**Akbulak array**	**57.85**	**310**	P	**P**	**21 19 25.5**	**-0.9**
KIRV	**Kirov**	**60.15**	**323**	LR	LR	21 48 15.1	
	comp=Z,38nm,18.9s,baz=86,slow=39						
SPITS	**Spitsbergen Ar**	**60.42**	**349**	LR	LR	21 46 48.1	
	comp=Z,54nm,20.5s,baz=335,slow=37						
ASAR	**Alice Springs**	**60.88**	**188**	P	**P**	**21 19 48.0**	**+0.5**
ASAR	**Alice Springs**	**60.88**	**188**	P	**P**	**21 19 47.6**	**0.0**
	comp=Z,1.2nm,0.8s,baz=10,slow=7.7,SNR=5.4						
	comp=Z,1.2nm,0.8s						
RES	**Resolute Bay**	**62.51**	**14**	LR	LR	21 48 11.3	
	comp=Z,24nm,21.8s,baz=5.5,slow=37						
DZM	**Mont Dzumac**	**63.46**	**154**	LR	LR	21 46 28.7	
	comp=Z,38nm,19.2s,baz=220,slow=35						
BELG	**Belogornoye**	**63.70**	**317**	LR	LR	21 48 30.8	
	comp=Z,29nm,18.9s,baz=56,slow=37						
YKA	**Yellowknife Ar**	**63.74**	**30**	P	**P**	**21 20 05.0**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=295,slow=5.5,SNR=4.2						
	comp=Z,0.3nm,0.7s						
ARCES	**ARCESS Array B**	**63.89**	**339**	P	**P**	**21 20 06.6**	**-0.6**
	comp=Z,1.5nm,0.8s,baz=50,slow=6.8,SNR=3.8						
ARCES				LR	LR	21 50 57.9	
	comp=Z,48nm,19.9s,baz=77,slow=39						
	comp=Z,1.5nm,0.8s						
FORT	**Forrest**	**68.70**	**192**	P	**P**	**21 20 39.3**	**+1.0**
FINES	**FINESS Array B**	**68.71**	**332**	P	**P**	**21 20 37.5**	**-0.7**
	comp=Z,4.2nm,1.0s,baz=37,slow=6.6,SNR=6.9						
FINES				LR	LR	21 53 02.0	
	comp=Z,45nm,19.2s,baz=48,slow=38						
	comp=Z,4.2nm,1.0s						
KBZ	**Khabaz**	**70.81**	**311**	P	**P**	**21 20 51.1**	**-0.3**
	comp=Z,1.7nm,0.9s,baz=100,slow=6.1,SNR=4.4						
KBZ				LR	LR	21 56 33.5	
	comp=Z,27nm,19.1s,baz=75,slow=40						
	comp=Z,1.7nm,0.9s						
KIV	**Kislovodsk**	**70.81**	**311**	P	**P**	**21 20 51.1**	**-0.4**
GNI	**Garni**	**71.62**	**307**	LR	LR	21 55 15.6	
	comp=Z,28nm,18.2s,baz=75,slow=38						
HFS	**Hagfors**	**73.98**	**336**	P	**P**	**21 21 09.7**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=50,slow=7.8,SNR=1.9						
HFS				LR	LR	21 56 31.8	
	comp=Z,68nm,18.4s,baz=32,slow=38						
	comp=Z,0.9nm,0.8s						
NB2	**NORSAR Subarra**	**74.08**	**337**	P	**P**	**21 21 10.4**	**-0.3**
	comp=Z,3.3nm,1.4s,baz=39,slow=6.2						
NOA	**NORSAR Array B**	**74.08**	**337**	P	**P**	**21 21 10.6**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=40,slow=5.7,SNR=3.5						
NOA				LR	LR	21 57 07.8	
	comp=Z,44nm,19.1s,baz=40,slow=39						
	comp=Z,1.0nm,0.8s						
AKASG	**Malin Array Be**	**74.20**	**322**	P	**P**	**21 21 10.6**	**-0.9**
	comp=Z,1.1nm,0.3s,baz=48,slow=6.4,SNR=12						
AKASG				LR	LR	21 54 53.2	
	comp=Z,39nm,19.5s,baz=60,slow=37						
	comp=Z,1.1nm,0.3s						
SFJD	**Kangerlussuaq**	**75.79**	**5**	LR	LR	21 58 01.7	
	comp=Z,20nm,18.5s,baz=350,slow=38						
BORG	**Borgarnes**	**77.55**	**352**	LR	LR	21 59 17.4	
	comp=Z,24nm,18.1s,baz=312,slow=38						
PDAR	**Pinedale Array**	**77.62**	**45**	P	**P**	**21 21 31.8**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=300,slow=4.8,SNR=4.1						
	comp=Z,0.2nm,0.3s						
BUR08	**Bucovina Ar. S**	**78.20**	**322**	P	**P**	**21 21 34.1**	**-0.3**
BUR08				IAmb	IAmb	21 21 59.5	
	comp=Z,4.9nm,1.4s						
BURAR	**Bucovina Array**	**78.21**	**322**	P	**P**	**21 21 34.3**	**-0.2**
MLR	**Muntele Rosu**	**79.29**	**320**	P	**P**	**21 21 40.2**	**-0.3**
MLR				IAmb	IAmb	21 21 43.5	
	comp=Z,6.7nm,1.5s						
MLR	**Muntele Rosu**	**79.29**	**320**	LR	LR	22 00 18.8	
	comp=Z,59nm,18.4s,baz=76,slow=38						
RAYN	**Ar Rayn**	**80.58**	**292**	P	**P**	**21 21 46.7**	**-1.1**
VRAC	**Vranov**	**81.02**	**327**	LR	LR	22 01 48.6	
	comp=Z,34nm,18.9s,baz=39,slow=39						
GERES	**GERESS Array B**	**82.61**	**328**	P	**P**	**21 21 58.0**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=25,slow=8.0,SNR=2.9						
	comp=Z,0.3nm,0.3s						
DAVOX	**Davos/Dischmat**	**85.83**	**329**	LR	LR	22 04 04.1	
	comp=Z,40nm,18.3s,baz=262,slow=38						
SADO	**Sadowa**	**90.63**	**28**	LR	LR	22 08 25.3	
	comp=Z,19nm,19.0s,baz=180,slow=39						
ESDC	**Sonseca Array**	**97.19**	**334**	LR	LR	22 10 49.7	
	comp=Z,45nm,19.2s,baz=356,slow=38						
LPAZ	**La Paz**	**146.67**	**59**	PKPbc	**PKPbc**	**21 29 18.2**	**+0.2**
	comp=Z,1.8nm,0.6s,baz=307,slow=2.4,SNR=6.3						
H03N2	**Juan Fernandez**	**147.07**	**96**	T	T	00 13 45.1	
	baz=292,slow=76,SNR=61						
H03N3	**Juan Fernandez**	**147.08**	**96**	T	T	00 13 44.6	
	baz=292,slow=76,SNR=70						
H03N1	**Juan Fernandez**	**147.09**	**96**	T	T	00 13 45.7	
	baz=292,slow=76,SNR=70						
SIV	**San Ignacio**	**151.05**	**49**	PKPbc	**PKiKP**	**21 29 29.6**	**+0.5**
	comp=Z,2.1nm,0.6s,baz=316,slow=6.3,SNR=7.0						

SJA ***04*** *21:34:20.2±0.7, 34°.89S×71°.87W, h24^{km}±2^{km}, ML3.8, MW3.7*

GUC ***04*** *21:34:22.5±0.9, 34°.93S×71°.85W, h43^{km}±2^{km}, ML3.8*

ISC 04 21:34:24.2±1.0**, 34°.91S**±0°.03×**71°.84W**±0°.06**, h30**^{km}±8^{km}**, n53,** σ1^s.**88**/89**, 7C-8D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	**Hualane**	**0.12**	**215**	⇑*i*P	**Pb**	**21 34 29.8**	**0.0**
GO05				*i* S	**Sb**	**21 34 35.1**	**+1.6**
GO05				IAML		21 34 36.9	
	comp=N,12μm,0.2s						
BO01	**Tunca**	**0.81**	**51**	⇓*i*P	**Pn**	**21 34 37.2**	**-2.3**
BO01				*i* S	**Sb**	**21 34 48.4**	**-1.9**
BO01				IAML		21 34 49.2	
	comp=N,4μm,0.4s						
BO01	**Tunca**	**0.81**	**51**	*e*P	**Pn**	**21 34 37.1**	**-2.5**
BO01				*e*S	**Sb**	**21 34 47.8**	**-2.5**
BO01				IAML		21 34 48.5	
	comp=Z,3μm,0.2s						
BO02	**Sierra Bellavi**	**0.88**	**83**	⇓*i*P	**Pn**	**21 34 38.3**	**-2.3**
BO02				*i* S	**Sn**	**21 34 50.4**	**-2.2**
BO02				IAML		21 34 51.3	
	comp=N,12μm,0.3s						
BO02	**Sierra Bellavi**	**0.88**	**83**	*e*P	**Pn**	**21 34 38.1**	**-2.6**
BO02				*e*S	**Sn**	**21 34 50.3**	**-2.2**
BO02				IAML		21 34 52.2	
	comp=Z,10μm,0.1s						
ML02	**Panimavida**	**0.92**	**158**	*e*P	**Pn**	**21 34 38.7**	**-2.4**
ML02				*i* S	**Sb**	**21 34 51.3**	**-2.2**
ML02				IAML		21 34 53.5	
	comp=N,2μm,0.4s						
ML02	**Panimavida**	**0.92**	**158**	*e*P	**Pn**	**21 34 38.9**	**-2.3**
ML02				*e*S	**Sb**	**21 34 52.0**	**-1.6**
ML02				IAML		21 34 52.8	
	comp=Z,2μm,0.3s						
MT01	**Popeta**	**1.15**	**25**	⇓*i*P	**Pn**	**21 34 42.3**	**-2.1**
MT01				*i* S	**Sn**	**21 34 56.8**	**-2.2**
MT01				IAML		21 35 00.4	
	comp=E,3μm,0.2s						
MT01	**Popeta**	**1.15**	**25**	*e*P	**Pn**	**21 34 42.2**	**-2.1**
MT01				*e*S	**Sn**	**21 34 58.3**	**-0.7**
MT01				IAML		21 34 58.8	
	comp=Z,1μm,0.2s						
VA05	**Santo Domingo**	**1.26**	**9**	*e*P	**Pn**	**21 34 43.5**	**-2.2**
VA05				IAML		21 35 07.2	
	comp=E,2μm,0.2s						
MT09	**Talagante**	**1.33**	**32**	⇓*i*P	**Pn**	**21 34 45.4**	**-1.5**

MT09				iS	Sn	21 35 02.9	-0.8
MT09				IAML		21 35 06.4	
	comp=N,3µm,0.3s						
BO04	La Punta	1.37	48	⇓iP	Pn	21 34 45.4	-2.0
BO04				iS	Sn	21 35 03.4	-1.1
BO04				IAML		21 35 06.8	
	comp=E,4µm,0.3s						
MT12	Pirque	1.59	43	eP	Pn	21 34 48.8	-1.5
MT12				IAML		21 35 12.0	
	comp=E,4µm,0.3s						
MT15	Las Vizcachas	1.71	41	eP	Pn	21 34 50.6	-1.4
MT15				iS	Sn	21 35 12.1	-0.9
LMEL	Las Melosas	1.72	53	⇓iP	Pn	21 34 50.6	-1.6
LMEL				iS	Sn	21 35 12.8	-0.5
LMEL				IAML		21 35 19.7	
	comp=N,2µm,0.3s						
LMEL	Las Melosas	1.72	53	eP	Pn	21 34 50.9	-1.4
LMEL				eS	Sn	21 35 14.1	+0.8
MT13	San Alfonso	1.73	48	eP	Pn	21 34 50.8	-1.6
MT13				IAML		21 35 16.2	
	comp=E,2µm,0.3s						
MT13	San Alfonso	1.73	48	eP	Pn	21 34 51.0	-1.4
MT13				eS	Sn	21 35 14.2	+0.5
MT13				IAML		21 35 15.9	
	comp=Z,955nm,0.2s						
MT02	Curacav	1.75	20	⇑iP	Pn	21 34 50.5	-1.9
MT02				IAML		21 35 18.6	
	comp=N,590nm,0.2s						
MT02	Curacav	1.75	20	eP	Pn	21 34 50.6	-1.9
MT02				eS	Sn	21 35 01.8	-12
MT02				IAML		21 35 17.9	
	comp=Z,418nm,0.5s						
MT05	Renca	1.77	32	eP	Pn	21 34 51.6	-1.2
MT05				iS	Sn	21 35 14.6	+0.3
MT05				IAML		21 35 21.1	
	comp=E,2µm,0.4s						
MT05	Renca	1.77	32	eP	Pn	21 34 51.6	-1.2
MT05				eS	Sn	21 35 16.4	+2.1
MT05				IAML		21 35 17.6	
	comp=Z,711nm,0.2s						
MT03	Universidad Ad	1.79	38	eP	Pn	21 34 51.6	-1.6
MT03				IAML		21 35 19.3	
	comp=E,3µm,0.2s						
MT03	Universidad Ad	1.79	38	eP	Pn	21 34 51.8	-1.4
MT03				eS	Sn	21 35 16.1	+1.2
MT03				IAML		21 35 18.4	
	comp=Z,1µm,0.1s						
BI02	San Fabin de	1.81	165	eP	Pn	21 34 51.4	-2.1
BI02				iS	Sn	21 35 13.1	-2.4
BI02				IAML		21 35 15.3	
	comp=N,358nm,0.3s						
BI02	San Fabin de	1.81	165	eP	Pn	21 34 51.1	-2.4
MT16	CCHEN	1.84	37	eP	Pn	21 34 52.3	-1.5
MT16				iS	Sn	21 35 15.6	-0.5
MT16				IAML		21 35 19.0	
	comp=N,787nm,0.6s						
MT14	Cerro Cal¡n	1.86	36	⇓iP	Pn	21 34 52.7	-1.4
MT14				iS	Sn	21 35 15.7	-0.8
MT14				IAML		21 35 20.4	
	comp=N,2µm,0.4s						
MT10	Hacienda Santa	1.96	34	⇑iP	Pn	21 34 54.1	-1.4
MT10				iS	Sn	21 35 19.4	+0.3
MT10				IAML		21 35 25.8	
	comp=E,3µm,0.5s						
PEL	Peldehue	2.00	29	⇓iP	Pn	21 34 54.9	-1.2
PEL				iS	Sn	21 35 19.5	-0.7
PEL				IAML		21 35 24.8	
	comp=N,830nm,0.4s						
PEL	Peldehue	2.00	29	eP	Pn	21 34 55.0	-1.2
PEL				eS	Sn	21 35 18.9	-1.3
FCH	Farellones	2.04	40	⇑iP	Pn	21 34 55.3	-1.5
FCH				iS	Sn	21 35 20.7	-0.6
FCH				IAML		21 35 27.2	
	comp=N,1µm,0.3s						
ROC1	El Roble	2.04	20	eP	Pn	21 34 54.9	-1.9
ROC1				eS	Sn	21 35 23.6	+2.1
ROCH	El Roble	2.05	20	eP	Pn	21 34 55.2	-1.7
ROCH				⇑iP	Pn	21 34 55.2	-1.7
ROCH				iS	Sn	21 35 20.4	-1.2
ROCH				iS		21 35 21.1	
ROCH				IAML		21 35 33.6	
	comp=N,1µm,0.5s						
ROCH				IAML		21 35 33.8	
	comp=N,479nm,0.8s						
MT04	Ro Olivares	2.06	44	eP	Pn	21 34 55.8	-1.2
MT04				iS	Sn	21 35 21.5	-0.3
MT04				IAML		21 35 26.7	
	comp=E,952nm,0.8s						
MT04	Ro Olivares	2.06	44	eP	Pn	21 34 55.9	-1.1
MT04				eS	Sn	21 35 23.1	+1.3
MT04				IAML		21 35 27.8	
	comp=Z,619nm,0.2s						
MT08	Bocatoma Ro	2.10	47	⇑iP	Pn	21 34 57.2	-0.4
MT08				iS	Sn	21 35 24.3	+1.5
MT08				IAML		21 35 29.8	
	comp=E,700nm,0.3s						
MT08	Bocatoma Ro	2.10	47	eP	Pn	21 34 57.4	-0.2
MT08				eS	Sn	21 35 25.6	+2.8
MT08				IAML		21 35 33.1	
	comp=Z,294nm,0.5s						
EDS3	Malargue	2.18	114	eP	Pn	21 34 54.9	-3.7
VA06	Catapilco	2.38	11	⇑iP	Pn	21 34 59.1	-2.1
VA06				IAML		21 35 39.7	
	comp=E,1µm,0.4s						
VA03	San Esteban	2.39	27	eP	Pn	21 35 00.0	-1.5
VA03				IAML		21 35 39.8	
	comp=Z,486nm,0.4s						
CANA	Caviahue	3.04	168	eP	Pb	21 35 21.0	+3.3
CANA				eS	Sb	21 36 00.8	+6.3
AAGR	Agrelo	3.09	55	eP	Pn	21 35 11.8	+0.7
AVIZ	Vizcacheras	3.11	64	eP	Pn	21 35 07.8	-3.5
ARCO	CERRO ARCO	3.18	50	eP	Pn	21 35 14.0	+1.6
CO02	Combarbal	3.76	11	eP	Pn	21 35 17.9	-2.4
CO02				eS	Sn	21 36 07.3	+3.7
CO02				IAML		21 36 18.7	
	comp=Z,159nm,0.3s						
RTLS	Leoncito	3.76	35	eP	Pn	21 35 20.9	+0.4
RTLS				eS	Sb	21 36 18.2	+2.9
RTLS				IAML		21 36 24.8	
	comp=Z,222nm,0.6s						
CFA	Coronel Fontan	4.47	44	eP	Pn	21 35 29.4	-0.6
CFA				eS	Sn	21 36 24.2	+3.2
DOCA	Reserva Natura	4.58	31	eP	Pn	21 35 30.9	-0.9
GO04	Tololo Observa	4.80	11	eP	Pn	21 35 32.3	-2.5
GO04				eS	Sn	21 36 27.2	-2.3
AROD	Rodeo	5.13	24	eP	Pn	21 35 38.9	-0.5
AROD				eS	Sb	21 36 54.6	-0.1
CO01	Juntas del Tor	5.13	17	eP	Pn	21 35 38.3	-1.0
CO01				eS	Sn	21 36 48.4	+11
ACDV	Cuesta del Vie	5.25	27	eP	Pn	21 35 39.7	-1.1

HEL 04 22:04:44.8±0.3, 67°.15N×20°.53E, h0km, ML1.0, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERTU	Ertsjaerv	0.89	131	PG	Pg	22 05 00.8	-0.9
	baz=318						
ERTU				SB	Sg	22 05 13.2	+0.1
PAJU	Pajala	1.02	96	PG	Pg	22 05 03.0	-1.2
	baz=283						
PAJU				SN	Sn	22 05 21.6	+0.3
LANU	Lannavaara	1.07	31	PN	Pn	22 05 06.6	-0.4
KLF	Kolari	1.34	85	PG	Pg	22 05 08.5	-1.9
	baz=266						
KLF				MSG		22 05 25.2	
	comp=Z,0.6nm,0.2s						
KLF				SN	Sn	22 05 30.2	+0.9
KALU	Kalix	1.72	137	PG	Pn	22 05 16.1	+0.2
	baz=330						
HEF	Hetta	1.74	42	PG	Pn	22 05 16.0	-0.2
	baz=218						
HEF				MSG		22 05 36.6	
	comp=Z,0.8nm,0.2s						
HEF				SN	Sn	22 05 38.6	-0.5
TOF	Tornio	1.85	124	PG	Pn	22 05 18.2	+0.4
TOF				MSG		22 05 40.0	
	comp=Z,0.7nm,0.2s						
TOF				SN	Sb	22 05 42.8	-0.3
KIF	Kilpisjarvi	1.87	3	PG	Pb	22 05 19.2	-0.5
	baz=181						
KIF				MSG		22 05 41.6	
	comp=Z,1.0nm,0.2s						
KIF				SG	Sg	22 05 44.4	-0.4
KTK1	Kautokeino	2.13	27	SG	Sb	22 05 51.7	+0.5
RNF	Rovaniemi	2.23	101	SG	Sb	22 05 53.4	-0.7
RANF	Ranua	2.75	112	SG	Sb	22 06 07.9	-0.9
ARA0	ARCESS Array S	3.03	35	SB	Sb	22 06 14.9	-2.0

UPP 04 22:05:18.2±0.0, 67°.18N×20°.66E, h0km, ML1.6, Unknown, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.07	209	P	Pg	22 05 19.8	+0.3
DUNU				S	Sg	22 05 20.8	+0.4
MASU	Masugnsbyn	0.59	61	P	Pg	22 05 29.4	0.0
MASU				S	Sg	22 05 37.6	+0.5
RATU	Laukkuluspa	0.76	328	P	Pg	22 05 32.5	-0.3
RATU				S	Sg	22 05 42.9	+0.2
KUA	Kurravaara	0.79	351	P	Pg	22 05 32.9	-0.3
SALU	Saltoluokta	0.86	284	P	Pg	22 05 33.9	-0.7
ERTU	Ertsjaerv	0.88	135	P	Pg	22 05 34.0	-0.9
PAJU	Pajala	0.97	98	P	Pg	22 05 36.2	-0.6
SJUU	Sjulsmark	1.73	167	P	Pn	22 05 49.5	+0.1

IDC 04 22:05:44.2±2.0, 2°.96N×126°.56E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=127.1km s-min=25.2km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.95	182	P	Pn	22 10 30.4	-1.0
	2.4nm,0.9s,baz=12,slow=13,SNR=1.0						
	2.4nm,0.9s						
WRA	Warramunga Arr	24.01	162	P	P	22 11 00.5	-0.4
	0.4nm,0.4s,baz=338,slow=10,SNR=7.8						
	0.4nm,0.4s						
ASAR	Alice Springs	27.42	165	P	P	22 11 31.4	-0.4
	0.5nm,0.9s,baz=345,slow=12,SNR=2.0						
	0.5nm,0.9s						
MKAR	Makanchi Array	58.09	326	P	P	22 15 39.3	-0.2
	0.3nm,0.4s,baz=119,slow=6.5,SNR=5.3						
	0.3nm,0.4s						

GCG 04 22:08:59.1±0.6, 14°.07N×91°.58W, h80km±9km, MD3.7, ML3.5, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG8	El Palmar, Qui	0.44	30	iP	Pn	22 09 15.0	+2.4
STG8				iS	Sn	22 09 27.8	+5.1
STG8				IAML		22 09 29.9	
	comp=E,951nm,0.1s						
SOKI	Kika Raxquin	0.77	13	iP	Pn	22 09 17.2	+1.2
SOKI				iS	Sn	22 09 31.4	+3.0
SOKI				IAML		22 09 37.6	
	comp=N,494nm,0.8s						
FG8	Yepocapa, Chim	1.01	79	iP	Pn	22 09 15.7	-2.7
FG8				iS	Sn	22 09 28.3	-4.5
FG16	Alotenango, Sa	1.06	79	iP	Pn	22 09 16.7	-2.4
FG16				iS	Sn	22 09 30.4	-3.6
FG16				IAML		22 09 33.2	
	comp=N,4µm,0.2s						

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*SJA **04** 22:17:03.4±0.6, 20°.99S×67°.52W, h213km, ML3.5, MW3.5*
*SCB **04** 22:17:07.6±1.4, 20°.99S×67°.53W, h163km±17km, ML3.4/3, MW2.9, Error ellipse: s-maj=7.7km s-min=5.7km az=0.0*
*IDC **04** 22:17:14.3±33.0, 19°.98S×67°.08W, h250km±216km, mb3.3/1, mbtmp3.9/3, ML3.6/2, MS2.4/1, Error ellipse: s-maj=571.0km s-min=41.4km az=8.0*
ISC 04 22:17:05.1±1.0, 21°.07S±0°.05×67°.53W±0°.04, h201km±8km, n35, σ1s.47/44, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	1.75	245	Pg	Pn	22 17 42.7	+1.3
PB09	IPOC Station P	1.75	245	eS	S	22 18 09.5	+0.3
PB09				IAML		22 18 13.4	
	comp=Z,108nm,0.2s						
MOCB	Mochara	1.77	96	Pg	Pn	22 17 42.0	+0.1
MOCB				Sg	S	22 18 08.3	-1.6
MOCB				IAML		22 18 09.0	
	comp=Z,81nm,0.3s						
PB08	IPOC Station P	1.78	301	Pg	Pn	22 17 42.3	+0.4
PB08	IPOC Station P	1.78	301	eP	Pn	22 17 41.5	-0.4
PB08				eS	S	22 18 10.8	+0.8
PB01	IPOC Station P	1.83	270	Pg	Pn	22 17 42.2	+0.1
PB01				Sg	S	22 18 08.7	-1.6
PB01				IAML		22 18 10.7	
	comp=Z,164nm,0.2s						
PB01	IPOC Station P	1.83	270	eS	S	22 18 10.5	+0.3
PB01				IAML		22 18 11.3	
	comp=Z,152nm,0.2s						
GO01	Chusmiza	2.09	311	Pg	Pn	22 17 45.0	-0.2
GO01	Chusmiza	2.09	311	eS	S	22 18 21.4	+5.7
YJA	Yavi	2.17	121	Pg	Pn	22 17 47.0	+1.1
YJA	Yavi	2.17	121	eP	Pn	22 17 46.7	+0.8
YJA				eS	S	22 18 15.8	-1.3
PB03	IPOC Station P	2.29	244	eP	Pn	22 17 47.4	+0.5
PB03				eS	S	22 18 18.5	-0.3
PB03				IAML		22 18 19.6	
	comp=Z,277nm,0.1s						
PB11	IPOC Station P	2.38	303	Pg	Pn	22 17 47.5	-0.4
PB11				Sg	S	22 18 18.6	-2.0
PB11				IAML		22 18 20.9	
	comp=Z,400nm,0.2s						
PB11	IPOC Station P	2.38	303	eP	Pn	22 17 46.8	-1.1
PB11				eS	S	22 18 19.5	-1.2
PB11				IAML		22 18 20.7	
	comp=Z,169nm,0.2s						
PB06	IPOC Station P	2.50	229	eP	Pn	22 17 50.2	+1.0
PB06				eS	S	22 18 23.8	+0.7
PB06				IAML		22 18 30.9	
	comp=Z,138nm,0.1s						
SOEO	Opoqueri	2.52	352	Pg	Pn	22 17 50.1	+0.3
TA01	Diego Aracena	2.53	281	eP	Pn	22 17 48.6	-0.7
TA01				eS	S	22 18 22.9	-0.4
TA02	Huaiquique	2.56	288	eS	S	22 18 21.8	-2.1
TA02				IAML		22 18 24.0	
	comp=Z,260nm,0.1s						
PB05	IPOC Station P	3.05	234	eP	Pn	22 17 44.3	-11
PB05				eS	S	22 18 34.0	-0.3
PB05				IAML		22 18 37.6	
	comp=Z,49nm,0.3s						
SALTA		3.33	161	eP	Pn	22 18 01.3	+2.1
SALTA				eP		22 18 02.1	
AZAP	Zapla	3.88	145	eP	Pn	22 18 05.9	+0.3
AZAP				IAML		22 19 09.9	
	comp=Z,17nm,2.9s						
BBOJ	La Paz, Jacaqu	4.12	351	Pg	Pn	22 18 10.6	+1.6
SOEJ	Jacaque	4.12	351	Pg	Pn	22 18 10.2	+1.2
BBOE	La Paz, Chanca	4.25	354	Pg	Pn	22 18 11.8	+1.1
PB14	IPOC Station P	4.42	216	eP	Pn	22 18 13.0	+0.5
PB14				eS	S	22 19 02.7	-2.4
PB14				IAML		22 19 06.8	
	comp=Z,37nm,0.2s						
GO02	Mina Guanaco	4.50	205	eP	Pn	22 18 13.3	0.0
GO02				eS	S	22 19 06.5	-0.2
BBOD	La Paz, Gloria	4.52	347	Pg	Pn	22 18 15.2	+1.2
LPAZ	La Paz	4.79	353	P	Pn	22 18 16.7	-0.8
	comp=Z,1.8nm,0.3s,baz=175,slow=10,SNR=28						
	comp=Z,4.6nm,0.3s						
LPAZ	La Paz	4.79	353	Pg	Pn	22 18 17.6	+0.1
LPAZ	La Paz	4.79	353	eP	Pn	22 18 12.0	-5.5
BBOB	La Paz, Bander	4.94	353	Pg	Pn	22 18 19.1	-0.1
SIV	San Ignacio	7.94	52	P	Pn	22 18 54.3	-3.2
	comp=Z,0.3nm,0.3s,baz=249,slow=14,SNR=44						
	comp=Z,10.0nm,0.5s						
TEIG	Tepich	45.78	332	LR	LR	22 46 00.2	
	comp=Z,5.1nm,21.8s,baz=23,slow=38						
TORD	Torodi Ar. Bea	76.00	70	P	P	22 28 30.5	0.0
	comp=Z,0.4nm,0.3s,baz=254,slow=4.9,SNR=2.6						
	comp=Z,0.4nm,0.3s						
MKAR	Makanchi Array	144.53	37	PKP	PKPdf	22 36 18.0	+0.5
	comp=Z,0.3nm,0.5s,baz=325,slow=3.2,SNR=4.7						

IDC 04 22:21:30.5±1.7, 0°.96N×96°.85E, h0km, mb3.6/3, mbtmp3.7/4, ML4.2/1, Error ellipse: s-maj=206.1km s-min=33.5km az=83.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	17.51	7	P	Pn	22 25 35.6	-0.6
	0.3nm,0.3s,baz=172,slow=12,SNR=1.8						
	0.8nm,0.3s						
H08S2	Diego Garcia H	25.76	250	T	T	22 53 49.2	
	baz=72,slow=76,SNR=53						
H08S3	Diego Garcia H	25.76	250	T	T	22 53 53.4	
	baz=72,slow=76,SNR=92						
H08S1	Diego Carcia H	25.77	250	T	T	22 53 54.5	
	baz=72,slow=76,SNR=67						
H01W3	Cape Leeuwin H	39.16	157	T	T	23 10 13.7	
	baz=333,slow=76,SNR=21						
H01W2	Cape Leeuwin H	39.17	157	T	T	23 10 15.8	
	baz=333,slow=76,SNR=25						
H01W1	Cape Leeuwin H	39.17	157	T	T	23 10 14.9	
	baz=333,slow=76,SNR=23						
MKAR	Makanchi Array	47.39	346	P	P	22 30 05.3	-1.2
	0.1nm,0.5s,baz=159,slow=8.5,SNR=1.2						
	0.1nm,0.5s						
ZALV	Zalesovo Beam	53.74	351	P	P	22 30 55.6	+1.3
	0.3nm,0.4s,baz=165,slow=6.0,SNR=1.7						
	0.3nm,0.4s						
H04N2	CROZET ISLANDS	61.38	214	T	T	23 38 22.0	
	baz=54,slow=75,SNR=90						
H04N1	CROZET ISLANDS	61.39	214	T	T	23 38 23.1	
	baz=54,slow=75,SNR=67						
H04N3	CROZET ISLANDS	61.40	214	T	T	23 38 22.0	
	baz=54,slow=75,SNR=74						
H04S1	CROZET ISLANDS	61.72	213	T	T	23 38 46.5	
	baz=53,slow=76,SNR=6.5						
H04S3	CROZET ISLANDS	61.73	213	T	T	23 38 44.2	
	baz=53,slow=76,SNR=7.0						
H04S2	CROZET ISLANDS	61.74	213	T	T	23 38 44.1	
	baz=53,slow=76,SNR=6.0						
VNDA	Vanda	85.66	169	P	P	22 34 10.5	-0.1
	1.6nm,0.9s,baz=283,slow=7.2,SNR=4.1						
	1.6nm,0.9s						

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*IDC **04** 22:38:33.0±1.1, 34°.21S×179°.81W, h0km, mb4.0/3, mbtmp4.1/4, ML4.2/1, Error ellipse: s-maj=36.9km s-min=30.6km az=67.0*
*WEL **04** 22:38:49.0±0.7, 35°S±8°×18°0E±1°4, h243km±6km, M3.9/26, mB4.4/6, ML4.3/8, MLv4.1/26, Mw(mB)3.5/6, Error ellipse: s-maj=20.1km s-min=5.9km az=119.1, confirmed*
ISC 04 22:38:51.7±1.6, 35°.50S±0°.10×179°.6E±0°.1, h230km±9km, n61, σ1s.70/83, mb3.7/3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.29	206	P	Pn	22 39 31.9	-3.4
MXZ				S	S	22 40 07.3	-2.2
WMGZ	Waiomatatini S	2.49	201	P	Pn	22 39 36.6	-0.7
WMGZ				S	S	22 40 15.0	+1.8
PKGZ	Pakihiroa	2.64	206	P	Pn	22 39 38.0	-1.0
PKGZ				S	S	22 40 15.2	-0.9
HAZ	Te Kaha	2.67	212	P	Pn	22 39 38.0	-1.2
HAZ				S	S	22 40 17.9	+1.4
PUZ	Puketiti	2.77	202	P	Pn	22 39 39.0	-1.3
PUZ				S	S	22 40 17.9	-0.8
RUGZ	Raukumara Rang	2.89	211	P	Pn	22 39 41.4	-0.3
RUGZ				S	S	22 40 21.6	+0.5
TWGZ	Tauwhareparae	2.96	205	P	Pn	22 39 41.4	-1.0
TWGZ				S	S	22 40 24.5	+2.1
CNGZ	Carnagh Statio	3.17	200	P	Pn	22 39 44.3	-0.4
TKGZ	Te Karaka	3.24	205	P	Pn	22 39 44.0	-1.5
TKGZ				S	S	22 40 29.4	+1.5
MWZ	Matawai	3.26	209	P	Pn	22 39 45.2	-0.7
MWZ				S	S	22 40 29.3	+0.8
URZ	Urewera	3.38	215	Pn	Pn	22 39 46.0	-1.2
	9.2nm,0.3s,baz=354,slow=6.0,SNR=66						
URZ				Sn	S	22 40 30.8	-0.1
	16nm,0.3s,baz=116,slow=8.6,SNR=13						
	19nm,0.3s						
URZ	Urewera	3.38	215	P	Pn	22 39 45.5	-1.7
URZ				S	S	22 40 31.5	+0.6
MKAZ	Moumakai	3.90	245	P	Pn	22 39 53.5	+0.2
RAHZ	Arahi	3.94	209	P	Pn	22 39 53.7	-0.1
RAHZ	Arahi	3.94	209	P	Pn	22 39 53.4	-0.4
RAHZ				S	S	22 40 44.7	+1.8
TOZ	Tahuroa Road	3.95	235	P	Pn	22 39 54.2	+0.3
MTHZ	Maungataniwha	3.99	212	P	Pn	22 39 53.5	-0.9
MTHZ				S	S	22 40 45.3	+1.4
ALRZ	Allen Road	4.00	219	P	Pn	22 39 54.8	+0.4
WHHZ	Waihua	4.02	207	P	Pn	22 39 54.8	+0.1
WHHZ				S	S	22 40 47.2	+2.5
MRHZ	Matea Rd	4.17	216	P	Pn	22 39 55.8	-0.8
MRHZ				S	S	22 40 49.4	+1.5
NMHZ	Naumai	4.21	211	P	Pn	22 39 56.6	-0.4
NMHZ				S	S	22 40 52.7	+3.8
WCZ	Waipu Caves	4.27	263	P	Pn	22 39 55.5	-2.3
ARHZ	Aropaoanui	4.27	208	P	Pn	22 39 57.6	-0.2
ARHZ				S	S	22 40 54.2	+4.0
MCHZ	McNeill Hill	4.55	209	P	Pn	22 40 00.4	-0.7
CKHZ	Cape Kidnapper	4.59	205	P	Pn	22 40 01.4	-0.3
KWHZ	Kaweka Forest	4.64	212	P	Pn	22 40 00.6	-1.8
KWHZ				S	S	22 41 01.1	+2.7
KAHZ	Kahuranaki	4.79	206	P	Pn	22 40 04.3	+0.1
KAHZ				S	S	22 41 05.0	+3.5
KRHZ	Kereru	4.85	211	P	Pn	22 40 03.7	-1.3
KRHZ				S	S	22 41 03.4	+0.4
PNHZ	Pukenui	5.15	210	P	Pn	22 40 06.8	-1.9
PNHZ				S	S	22 41 10.2	+0.5
WPHZ	Waipukurau	5.18	208	P	Pn	22 40 06.6	-2.4
WPHZ				S	S	22 41 11.3	+0.9
PRHZ	Porangahau	5.29	205	P	Pn	22 40 09.1	-1.2
PRHZ				S	S	22 41 13.9	+1.0
DVHZ	Dannevirke	5.49	208	P	Pn	22 40 11.2	-1.7
DVHZ				S	S	22 41 17.0	-0.5
POWZ	Post Office Ro	5.73	210	P	Pn	22 40 15.1	-0.8
POWZ				S	S	22 41 22.9	0.0
BFZ	Birch Farm	5.79	206	P	Pn	22 40 15.9	-0.8
BFZ				S	S	22 41 25.5	+1.1
TIWZ	Tintock	6.01	208	P	Pn	22 40 18.7	-0.8
TIWZ				S	S	22 41 30.2	+0.9
MRZ	Mangatainoka R	6.03	210	P	Pn	22 40 18.3	-1.4
MRZ				S	S	22 41 29.7	-0.1
HOWZ	Holdsworth Sta	6.26	209	P	Pn	22 40 21.2	-1.4
HOWZ				S	S	22 41 33.4	-1.7
OGWZ	Otaki Gorge	6.33	212	P	Pn	22 40 22.0	-1.5
OGWZ				S	S	22 41 37.5	+0.8
KIW	Kapiti Island	6.48	213	P	Pn	22 40 24.1	-1.4
KIW				S	S	22 41 39.4	-0.9
MTW	Mount Morrison	6.49	208	P	Pn	22 40 23.8	-1.7
MTW				S	S	22 41 37.0	-3.3
GLKZ	Green Lake	6.58	20	S	S	22 41 16.5	-26
PAWZ	Paruwai Farm	6.71	208	P	Pn	22 40 27.0	-1.3
PAWZ				S	S	22 41 45.4	-0.1
MSWZ	Moikau Station	6.80	209	P	Pn	22 40 28.1	-1.5
MSWZ				S	S	22 41 46.7	-1.0
PLWZ	Palliser	6.93	208	P	Pn	22 40 29.2	-2.0
PLWZ				S	S	22 41 49.1	-1.7
TCW	Tory Channel	7.05	215	P	Pn	22 40 30.7	-1.9
TCW				S	S	22 41 52.4	-0.9
ASAR	Alice Springs	41.09	274	P	P	22 46 22.1	+8.8
	1.2nm,0.3s,baz=115,slow=8.4,SNR=22						
	1.2nm,0.3s						
WRA	Warramunga Arr	42.55	279	P	P	22 46 33.5	+8.4
	1.0nm,0.3s,baz=120,slow=7.8,SNR=12						
	1.0nm,0.3s						
QSPA	South Pole Qui	54.62	180	P	P	22 48 12.6	+16
	0.6nm,0.5s,baz=30,slow=20,SNR=6.1						
	0.6nm,0.5s						
H03S2	Juan Fernandez	79.34	124	T	T	00 19 06.8	
	baz=239						
H03S1	Juan Fernandez	79.35	124	T	T	00 19 10.1	
	baz=239						
H03S3	Juan Fernandez	79.36	124	T	T	00 19 07.6	
	baz=239						
H03N3	Juan Fernandez	79.57	124	T	T	00 19 21.2	
	baz=237						
H03N2	Juan Fernandez	79.57	124	T	T	00 19 21.2	
	baz=237						
H03N1	Juan Fernandez	79.58	124	T	T	00 19 20.1	
	baz=237						
MKAR	Makanchi Array	119.41	309	PKP	PKiKP	22 57 22.1	+8.7
	0.4nm,0.9s,baz=126,slow=2.0,SNR=2.1						
KURBB	Kurchatov Arra	123.04	312	PKP	PKiKP	22 57 29.3	+9.0
	0.1nm,0.3s,baz=99,slow=1.6,SNR=4.2						
BVAR	Borovoye Array	128.51	313	PKP	PKiKP	22 57 39.9	+8.8
	0.3nm,0.5s,baz=186,slow=1.4,SNR=1.6						
FINES	FINESS Array B	149.08	335	PKPbc	PKPab	22 58 20.4	+3.6

	0.4nm,0.4s,baz=46,slow=4.0,SNR=7.2						
MMAI	Mount Meron Ar	150.37	276	PKPbc	PKPab	22 58 26.5	+3.3
	0.6nm,0.5s,baz=92,slow=4.8,SNR=1.8						
AKASG	Malin Array Be	153.78	315	PKPbc	PKPab	22 58 32.2	-4.7
	0.2nm,0.3s,baz=57,slow=3.4,SNR=1.8						
TORD	Torodi Ar. Bea	157.66	185	PKPab	PKPab	22 59 09.2	+15
	0.7nm,0.3s,baz=151,slow=3.3,SNR=3.3						

WEL 04 22:38:58.2±0.4**, 42°S**±2°×**17°4E**±°**, h8**^{km}±2^{km}**, ML2.5**/14**, MLv1.8**/4**, Error ellipse: s-maj=3.7km s-min=2.3km az=141.2, confirmed, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.13	350	P	Pg	22 39 01.5	+0.5
CMWZ				S	Sg	22 39 04.8	+1.9
KEKS	Kekerengu Vall	0.21	248	P	Pg	22 39 02.6	+0.2
KEKS				S	Sg	22 39 07.2	+1.9
SEDS	Seddon Fire St	0.24	329	S	Sg	22 39 07.6	+1.5
BSWZ	Blackbirch Sta	0.32	300	P	Pg	22 39 04.6	+0.1
BSWZ				S	Sg	22 39 09.9	+1.2
TUWZ	Tuamarina	0.50	333	P	Pg	22 39 08.4	+0.5
TUWZ				S	Sb	22 39 15.8	-0.9
BWRS	Waikakaho Road	0.51	330	P	Pg	22 39 08.3	+0.3
BWRS				S	Sg	22 39 15.7	+1.1
BHW	Baring Head	0.66	45	P	Pb	22 39 11.8	-0.3
BHW				S	Sb	22 39 22.8	+1.4
TCW	Tory Channel	0.67	2	P	Pg	22 39 10.6	-0.4
TCW				S	Sg	22 39 20.4	+0.7
KHZ	Kahutara	0.75	224	P	Pb	22 39 13.4	-0.1
KHZ				S	Sb	22 39 25.2	+1.3
PLWZ	Palliser	0.82	68	P	Pg	22 39 14.0	+0.1
PLWZ				S	Sb	22 39 27.0	+1.1
MSWZ	Moikau Station	0.88	59	P	Pg	22 39 15.1	-0.1
MSWZ				S	Sb	22 39 28.2	+0.4
THZ	Tophouse	1.01	276	P	Pg	22 39 17.5	0.0
DUWZ	D'Urville Isla	1.10	347	P	Pg	22 39 19.1	-0.3
DUWZ				S	Sb	22 39 34.4	+0.3
KIW	Kapiti Island	1.13	26	P	Pg	22 39 19.0	-0.9
KIW				S	Sb	22 39 35.1	+0.1
MTW	Mount Morrison	1.19	53	P	Pg	22 39 19.0	-2.0
MTW				S	Sb	22 39 36.5	0.0
MRNZ	Matariki Terra	1.21	293	P	Pb	22 39 21.3	-0.1
OGWZ	Otaki Gorge	1.27	34	P	Pn	22 39 20.9	-1.4
OGWZ				S	Sb	22 39 38.2	-0.7
GVZ	Greta Valley S	1.41	219	P	Pn	22 39 22.6	-1.6
GVZ				S	Sb	22 39 42.0	-1.0
MRZ	Mangatainoka R	1.58	40	P	Pn	22 39 24.6	-1.9
QRZ	Quartz Range	1.67	309	P	Pb	22 39 28.4	-0.7
QRZ				S	Sg	22 39 51.9	+0.2
LTZ	Lake Taylor	1.72	238	P	Pn	22 39 27.5	-1.0

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*SJA **04** 22:59:14.8±0.7, 21°.49S×66°.90W, h232^{km}±6^{km}, ML3.7, MW3.7*

*IDC **04** 22:59:16.5±8.8, 21°.30S×66°.66W, h227^{km}±61^{km}, mb3.0/2, mbtmp3.7/3, Error ellipse: s-maj=108.4km s-min=43.9km az=24.0*

*SCB **04** 22:59:16.7±1.6, 21°.44S×66°.94W, h211^{km}±14^{km}, ML4.2/3, MW3.5, Error ellipse: s-maj=10.1km s-min=6.2km az=0.0*

ISC 04 22:59:15.1±0.9**, 21°.51S**±0°.04×**66°.95W**±0°.04**, h226**^{km}±7^{km}**, n51, σ1^{s}.22**/69**, 1C, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCB	Mochara	1.25	79	Pg	Pn	22 59 50.1	+0.3
MOCB				Sg	S	23 00 15.3	-1.5
MOCB				IAML		23 00 16.0	
	1µm,0.6s						
YJA	Yavi	1.49	117	Pg	Pn	22 59 52.3	+0.7
YJA	Yavi	1.49	117	eP	Pn	22 59 52.4	+0.7
YJA				eS	S	23 00 20.1	0.0
AF01	San Pedro de A	1.84	218	eS	S	23 00 20.4	-4.8
PB09	IPOC Station P	2.15	262	eP	Pn	22 59 58.4	+1.0
PB09				eS	S	23 00 30.7	+0.5
PB09				IAML		23 00 34.2	
	comp=N,155nm,0.3s						
PB09	IPOC Station P	2.15	262	Pg	Pn	22 59 59.0	+1.6
PB09	IPOC Station P	2.15	262	eP	Pn	22 59 58.7	+1.3
PB09				eS	S	23 00 31.9	+1.6
PB09				IAML		23 00 33.2	
	comp=Z,164nm,0.5s						
PB01	IPOC Station P	2.41	281	eP	Pn	23 00 00.5	+0.6
PB01				eS	S	23 00 34.0	-0.8
PB01				IAML		23 00 35.8	
	comp=N,365nm,0.3s						
PB01	IPOC Station P	2.41	281	Pg	Pn	23 00 00.9	+1.0
PB01				Sg	S	23 00 34.7	-0.1
PB01				IAML		23 00 35.8	
	comp=N,335nm,0.3s						
PB01	IPOC Station P	2.41	281	eP	Pn	23 00 00.6	+0.7
PB01				IAML		23 00 36.5	
	comp=Z,190nm,0.2s						
PB08	IPOC Station P	2.47	303	⇑eP	Pn	23 00 01.9	+1.0
PB08				IAML		23 00 39.4	
	comp=E,168nm,0.2s						
PB08	IPOC Station P	2.47	303	Pg	Pn	23 00 02.0	+1.1
PB08	IPOC Station P	2.47	303	eP	Pn	23 00 01.8	+1.0
PB08				eS	S	23 00 37.1	+0.7
PB08				IAML		23 00 39.1	
	comp=Z,73nm,0.2s						
PB03	IPOC Station P	2.66	258	eP	Pn	23 00 03.4	+0.7
PB03				IAML		23 00 39.1	
	comp=N,289nm,0.2s						
PB03	IPOC Station P	2.66	258	eP	Pn	23 00 03.3	+0.7
PB03				eS	S	23 00 39.0	-0.8
PB03				IAML		23 00 40.6	
	comp=Z,289nm,0.1s						
PB06	IPOC Station P	2.71	243	eP	Pn	23 00 04.2	+1.0
PB06				eS	S	23 00 40.3	-0.4
PB06				IAML		23 00 42.9	
	comp=E,288nm,0.1s						
PB06	IPOC Station P	2.71	243	eP	Pn	23 00 04.2	+1.0
PB06				eS	S	23 00 41.3	+0.6
PB06				IAML		23 00 44.9	
	comp=Z,303nm,0.3s						
SALTA		2.76	168	eP	Pn	23 00 01.6	-2.5
SALTA				eP		23 00 06.6	
SALTA				eP		23 00 06.8	
GO01	Chusmiza	2.79	311	eP	Pn	23 00 04.9	+0.5
GO01				IAML		23 00 50.0	
	comp=N,528nm,0.1s						
GO01	Chusmiza	2.79	311	Pg	Pn	23 00 05.1	+0.7
GO01	Chusmiza	2.79	311	eP	Pn	23 00 05.1	+0.7
SOEO	Opoqueri	3.06	343	Pg	Pn	23 00 09.0	+1.6
PB11	IPOC Station P	3.07	304	eP	Pn	23 00 07.2	0.0
PB11	IPOC Station P	3.07	304	Pg	Pn	23 00 07.4	+0.2
PB11				Sg	S	23 00 46.4	-1.6
PB11				IAML		23 00 47.1	
	comp=N,725nm,0.2s						
PB11	IPOC Station P	3.07	304	eP	Pn	23 00 07.3	0.0
PB11				IAML		23 00 48.8	
	comp=Z,234nm,0.3s						
TA01	Diego Aracena	3.16	287	eP	Pn	23 00 08.3	+0.3
TA01	Diego Aracena	3.16	287	eP	Pn	23 00 08.5	+0.5
TA01				eS	S	23 00 47.0	-2.4
TA01				IAML		23 00 50.6	
	comp=Z,54nm,0.6s						
AZAP	Zapla	3.21	148	eP	Pn	23 00 09.8	+0.9
AZAP				eS	S	23 00 39.9	-11
AZAP				IAML		23 00 58.5	
	comp=Z,123nm,0.4s						
TA02	Huaiquique	3.22	292	eP	Pn	23 00 08.5	-0.3
TA02				eS	S	23 00 48.2	-2.5
TA02	Huaiquique	3.22	292	eP	Pn	23 00 10.1	+1.4
TA02				eS	S	23 00 49.2	-1.5
TA02				IAML		23 00 53.1	
	comp=Z,215nm,0.1s						
PB05	IPOC Station P	3.30	245	eP	Pn	23 00 10.4	+0.7
PB05				eS	S	23 00 51.1	-1.5
PB05	IPOC Station P	3.30	245	eP	Pn	23 00 10.8	+1.0
PB05				eS	S	23 00 51.9	-0.7
PB05				IAML		23 00 53.2	
	comp=Z,86nm,0.2s						
ASTB	Santa Barbara	3.35	137	eP	Pn	23 00 30.7	+20
SOET	ToroToro	3.54	18	Pg	Pn	23 00 12.7	-0.1
PB10	IPOC Station P	3.89	238	eP	Pn	23 00 17.2	+0.6
PB10	IPOC Station P	3.89	238	eP	Pn	23 00 17.1	+0.6
PB10				eS	S	23 01 03.3	-1.6
PB10				eS	S	23 01 03.9	-1.0
PB10				IAML		23 01 05.8	
	comp=Z,69nm,1.1s						
GO02	Mina Guanaco	4.38	213	eP	Pn	23 00 23.9	+1.1
GO02				eS	S	23 01 15.6	-0.6
PB14	IPOC Station P	4.45	225	eP	Pn	23 00 24.1	+0.4
PB14				eS	S	23 01 16.5	-1.2
PB14				IAML		23 01 17.9	
	comp=Z,94nm,0.7s						
BBOJ	La Paz, Jacaqu	4.66	345	Pg	Pn	23 00 28.3	+1.7
SOEJ	Jacaque	4.66	345	Pg	Pn	23 00 28.4	+1.8
FSA	Cafayete	4.67	169	eP	Pn	23 00 28.4	+2.1
BBOE	La Paz, Chanca	4.77	348	Pg	Pn	23 00 29.4	+1.4
BBOD	La Paz, Gloria	5.09	342	Pg	Pn	23 00 33.0	+1.1
LPAZ	La Paz	5.31	348	P	Pn	23 00 34.3	-0.5
	comp=Z,16nm,0.4s,baz=159,slow=6.6,SNR=129						
LPAZ				S	S	23 01 37.2	-0.5
	comp=Z,3.8nm,0.6s,baz=148,slow=11,SNR=4.0						
LPAZ	La Paz	5.31	348	Pg	Pn	23 00 35.2	+0.4
LPAZ	La Paz	5.31	348	eP	Pn	23 00 35.2	+0.4
BBOB	La Paz, Bander	5.45	348	Pg	Pn	23 00 36.6	+0.1
TXAR	Lajitas Array	61.70	324	P	P	23 09 10.6	+0.9
	comp=Z,0.1nm,0.5s,baz=142,slow=8.1,SNR=1.7						
	comp=Z,0.1nm,0.5s						
TORD	Torodi Ar. Bea	75.64	69	P	P	23 10 35.1	-0.7
	comp=Z,0.5nm,0.3s,baz=251,slow=4.9,SNR=2.5						
	comp=Z,0.5nm,0.3s						
ZALV	Zalesovo Beam	141.16	26	PKP	PKiKP	23 18 20.2	-0.8
	comp=Z,0.6nm,0.5s,baz=318,slow=5.8,SNR=2.1						
MKAR	Makanchi Array	144.55	37	PKP	PKPdf	23 18 25.3	+0.8
	comp=Z,1.5nm,0.8s,baz=316,slow=3.8,SNR=11						

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*ISK **04** 23:01:45.0, 37°.40N×26°.95E, h11^{km}, ML2.5/20*

*AFAD **04** 23:01:45.3, 37°.39N×26°.91E, h7^{km}±1^{km}, ML2.2*

*ATH **04** 23:01:45.4, 37°.44N×26°.92E, h11^{km}±3^{km}, ML2.3/5, Manual Solution by E.Daskalaki First location: 2019/06/04 23:03:12, This location: 2019/06/05 09:28:19 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

ISC 04 23:01:45.6±0.9**, 37°.40N**±0°.02×**26°.93E**±0°.03**, h15**^{km}±8^{km}**, n38, σ0^{s}.44**/55**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDIM	Aydin, Didim	0.25	77	P	Pg	23 01 51.1	-0.1
DDIM				i IAML		23 01 55.0	
	comp=N,658nm,0.6s						
DDIM				S	Sg	23 01 55.3	+0.3
DDIM				i IAML		23 01 56.0	
	comp=E,1µm,0.7s						
GCAM	G?zelcaml?	0.38	39	Pg	Pg	23 01 53.3	-0.1
GCAM				Sg	Sg	23 01 59.1	+0.3
GCAM	G?zelcaml?	0.38	39	P	Pg	23 01 53.5	+0.1
GCAM				S	Sg	23 01 59.2	+0.5
GCAM				i IAML		23 02 00.0	
	comp=N,1µm,0.3s						
GCAM				i IAML		23 02 00.0	
	comp=E,1µm,0.4s						
YKAV	Yalikavak-Bodr	0.39	135	Pg	Pg	23 01 52.7	-0.9
YKAV				Sg	Sg	23 01 58.8	-0.2
KLNA	Kalymnos	0.44	176	P	Pb	23 01 54.8	-0.4
KLNA				S	Sb	23 02 01.4	-0.2
BODT	Bodrum	0.45	138	Pg	Pg	23 01 54.4	-0.3
BODT				Sg	Sg	23 02 00.8	-0.1
BDRM	Kayabasi	0.53	129	P	Pg	23 01 56.0	-0.1
BDRM				S	Sb	23 02 04.0	-0.1
BDRM				i IAML		23 02 04.0	
	comp=E,233nm,0.5s						
DGB	zmir	0.65	357	P	Pg	23 01 58.2	-0.2
DGB				S	Sb	23 02 07.8	+0.3
DGB				i IAML		23 02 10.0	
	comp=N,173nm,0.3s						
DGB				i IAML		23 02 10.0	
	comp=E,98nm,0.3s						
GMLD	Gumuldur	0.67	359	Pg	Pg	23 01 57.9	-0.9
GMLD				Sg	Sb	23 02 08.6	+0.4
MLSB	Milas	0.68	99	Pg	Pg	23 01 58.3	-0.7
AYDN	Tasoluk	0.80	71	P	Pg	23 02 00.5	-0.7
AYDN				S	Sb	23 02 12.3	+0.5
AYDN				i IAML		23 02 16.0	
	comp=E,92nm,0.3s						
AYDN				i IAML		23 02 17.0	
	comp=N,192nm,0.4s						
YAZI	Mula-Dat§a-	0.83	150	P	Pb	23 02 01.9	+0.2
YAZI				S	Sb	23 02 13.5	+0.8
YAZI				i IAML		23 02 16.0	
	comp=E,147nm,0.5s						
YAZI				i IAML		23 02 17.0	
	comp=N,59nm,0.6s						
DAT	Datca	0.85	142	Pg	Pg	23 02 01.8	-0.3
DATC	Datca-Mugla	0.87	137	Pg	Pg	23 02 01.8	-0.7
AYDB	Zeytinkoy-Aydi	0.94	54	Pg	Pg	23 02 03.1	-0.7
ASTA	Astypalaia	0.97	209	P	Pn	23 02 05.0	+0.3
ASTA				S	Sn	23 02 18.0	-0.1
BLCB	Balcova	0.99	5	Pg	Pg	23 02 04.3	-0.4
AMGA	Amorgos Island	1.00	236	P	Pn	23 02 05.3	+0.1
IZMR	zmir-demi	1.09	47	P	Pb	23 02 06.1	-0.1
IZMR				S	Sb	23 02 20.4	+0.1
IZMR				i IAML		23 02 24.0	
	comp=E,32nm,0.4s						
IZMR				i IAML		23 02 25.0	
	comp=N,28nm,0.4s						
APE	Apeiranthos	1.17	254	Pn	Pg	23 02 08.2	+0.1
APE	Apeiranthos	1.17	254	P	Pg	23 02 07.6	-0.5
APE				S	Sn	23 02 23.1	+0.1
ESEN	Aydn-Nazilli	1.19	70	P	Pn	23 02 07.6	-0.1
ESEN				S	Sb	23 02 22.7	-0.5
ESEN				i IAML		23 02 27.0	
	comp=N,30nm,0.5s						
ESEN				i IAML		23 02 32.0	
	comp=E,27nm,0.4s						
CHOS	Chios island	1.20	325	Pn	Pg	23 02 08.6	-0.3
CHOS	Chios island	1.20	325	P	Pn	23 02 07.7	-0.2
CHOS				S	Sb	23 02 23.1	-0.5
NAZL	Nazilli-Aydin	1.22	62	Pn	Pn	23 02 07.7	-0.4
TURN	Turunc	1.22	120	Pn	Pb	23 02 08.6	+0.2
ODEM	Odemis-Izmir	1.26	46	Pn	Pn	23 02 08.7	0.0
EAG2	Marmaro, Chios	1.31	331	P	Pn	23 02 09.3	-0.1
DALY	Dalyan (Mula)	1.50	112	Pn	Pn	23 02 12.4	+0.5
ARG	Arkhangelos	1.52	141	Pn	Pn	23 02 12.9	+0.6
ARG	Arkhangelos	1.52	141	P	Pb	23 02 13.2	-0.4
ARG				S	Sb	23 02 33.1	+0.5
DKL	Dikili	1.67	359	Pn	Pn	23 02 14.9	+0.6
DKL	Dikili	1.67	359	P	Pn	23 02 14.7	+0.4
KULA	Kula-Manisa	1.76	50	Pn	Pn	23 02 16.3	+0.6
GORD	Gordes-Manisa	1.80	33	Pn	Pn	23 02 16.1	0.0
APMY	Acipayam-Deniz	1.89	87	Pn	Pn	23 02 17.9	+0.5
SIGR	SIGRI	2.00	335	P	Pn	23 02 19.1	+0.4
KARY	Karystos	2.08	288	P	Pn	23 02 20.4	+0.5

IDC 04 23:07:13.6±1.8**, 2°.37N**×**126°.60E, h0**^{km}**, mb3.6**/5**, mbtmp3.7**/5**, Error ellipse: s-maj=111.5km s-min=20.8km az=62.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.44	161	P	P	23 12 24.7	-0.1
	1.7nm,0.6s,baz=341,slow=10,SNR=14						
	1.7nm,0.6s						
ASAR	Alice Springs	26.84	165	P	P	23 12 56.1	+0.1
	0.3nm,0.4s,baz=344,slow=10,SNR=6.4						
	0.3nm,0.4s						
CMAR	Chiang Mai Arr	31.47	302	P	P	23 13 36.8	-0.5
	0.5nm,0.3s,baz=109,slow=6.7,SNR=1.3						
	0.5nm,0.3s						
MKAR	Makanchi Array	58.60	326	P	P	23 17 12.4	-0.1
	0.1nm,0.4s,baz=122,slow=7.8,SNR=4.1						
	0.1nm,0.4s						
KURBB	Kurchatov Arra	62.81	328	P	P	23 17 41.5	+0.4
	0.5nm,0.5s,baz=118,slow=5.7,SNR=1.2						
	0.5nm,0.5s						

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*CRAAG **04** 23:15:47.7, 35°.76N×0°.07W, Ml3.7, Algerie 05km NW Fornaka*

*CNRM **04** 23:15:49.9, 35°.61N×0°.14W, h33^{km}, ML2.5*

*MDD **04** 23:15:51.5±0.8, 35°.56N×0°.09W, h30^{km}, Mb4.1/17, M_mb3.4/17, Error ellipse: s-maj=6.7km s-min=3.9km az=170.0*

ISC 04 23:15:48.4±1.0**, 35°.60N**±0°.04×**0°.11W**±0°.04**, h16**^{km}**, n42, σ2^{s}.09**/61**, 12C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ODJA	Bouhanifia	0.28	187	P	Pn	23 15 57.7	-0.1
USTO	Oran	0.38	290	P	Pn	23 16 07.1	+7.8
ESMB	Sidi M'hamed B	0.56	93	P	Pn	23 16 00.6	-1.1
OJGS	Djebel Guires	0.70	98	P	Pn	23 16 04.6	+0.8
EKMS	Oued Kramis	0.93	40	P	Pb	23 16 05.0	-1.2
OLHC	Oulhaca	1.13	252	P	Pg	23 16 13.1	+2.9
TAF	Taforalt	2.05	248	P	Pn	23 16 21.8	-0.4
TAF	Taforalt	2.05	248	S	Sn	23 16 46.1	-1.4
CART	Cartagena	2.11	340	Pn	Pn	23 16 22.9	-0.1
CART				Sn	Sn	23 16 45.7	-3.1
CART	Cartagena	2.11	340	P	Pn	23 16 22.9	-0.1
CART	Cartagena	2.11	340	S	Sn	23 16 48.0	-0.9
ENIJ	Nijar	2.18	309	Pn	Pn	23 16 24.6	+0.6
ENIJ				Sn	Sn	23 16 43.4	-7.3
ENIJ	Nijar	2.18	309	Pn	Pn	23 16 24.5	+0.6
ENIJ				⇑iIVmb_VC		23 16 26.9	
	422nm,SNR=3.6						
ENIJ				Sn	Sn	23 16 48.3	-2.3
EXMAZ	Mazarron	2.21	334	Pn	Pn	23 16 26.0	+1.6
EXMAZ				Sn	Sn	23 16 49.0	-2.4
WMELI	Melilla	2.34	264	Sn	Sn	23 16 51.6	-3.0
JBK	JBK	2.38	239	P	Pn	23 16 27.4	+0.5
JBK	JBK	2.38	239	S	Sn	23 16 58.0	+2.0
GOG	Mont Gurugu	2.39	262	P	Pn	23 16 25.6	-1.4
GOG	Mont Gurugu	2.39	262	S	Sn	23 16 54.5	-1.5
ETRV	Los Montesinos	2.47	348	Pn	Pn	23 16 29.5	+1.6
ETRV				⇑iIVmb_VC		23 16 30.4	
	763nm,SNR=1.8						
ETRV				Sn	Sn	23 16 55.9	-1.9
EBEN2	Beniarda presa	3.07	359	Pn	Pn	23 16 37.0	+0.8
EBEN2				⇑iIVmb_VC		23 16 38.5	
	291nm,SNR=0.9						
EBEN2				Sn	Sn	23 17 11.1	-1.5
EQES	Quesada	3.24	314	Pn	Pn	23 16 41.8	+3.2
EQES				⇑iIVmb_VC		23 16 44.0	
	278nm,SNR=4.2						
EQES				Sn	Sn	23 17 17.1	+0.2
AKLM	AKL	3.27	252	P	Pn	23 16 39.6	+0.6
AKLM	AKL	3.27	252	S	Sn	23 17 18.9	+1.2
E0803	Jimena (Jaen)	3.50	310	Pn	Pn	23 16 45.4	+3.1
E0803				Sn	Sn	23 17 26.8	+3.4
EIBI	Ibiza	3.61	18	Pn	Pn	23 16 45.2	+1.6
EIBI				Sn	Sn	23 17 25.3	-0.6
EIBI	Ibiza	3.61	18	Pn	Pn	23 16 45.2	+1.6
EIBI				Sn	Sn	23 17 25.8	-0.1
EMAL	Malaga-Limoner	3.68	290	Pn	Pn	23 16 44.9	+0.3
EVIV	Cofrentes, Val	3.75	348	Pn	Pn	23 16 47.7	+2.1
EVIV				⇑iIVmb_VC		23 16 48.4	
	162nm,SNR=1.1						
EVIV				Sn	Sn	23 17 27.2	-2.2
EMIJ	Mijas	3.90	286	Pn	Pn	23 16 47.4	-0.2
EMIJ	Mijas	3.90	286	Pn	Pn	23 16 47.4	-0.2
EMIJ				⇑iIVmb_VC		23 16 49.2	
	155nm,SNR=1.5						
EMIJ				Sn	Sn	23 17 29.7	-3.4
ECHE	Chera	4.04	351	Pn	Pn	23 16 51.3	+1.7
ECHE				⇑iIVmb_VC		23 16 54.6	
	261nm,SNR=1.1						
ECHE				Pg	Pb	23 16 57.4	-1.7
ECHE				Sn	Sn	23 17 36.1	-0.5
PSIM	Granatula de C	4.33	319	Pn	Pn	23 16 55.0	+1.3
PSIM				Sn	Sn	23 17 43.0	-0.9
EADA	Adamuz	4.40	307	Pn	Pn	23 16 53.9	-0.7
EADA	Adamuz	4.40	307	Pn	Pn	23 16 57.6	+3.0
EADA				Sn	Sn	23 17 45.0	-0.6
ETOS	Mallorca	4.76	28	Pn	Pn	23 17 00.5	+1.0
ETOS	Mallorca	4.76	28	Pn	Pn	23 17 00.3	+0.9
ETOS				⇑iIVmb_VC		23 17 02.8	
	115nm,SNR=1.2						
ETOS				Sn	Sn	23 17 52.3	-2.0
EMOS	Mosqueruela	4.76	357	Pn	Pn	23 17 02.1	+2.5
EMOS				⇑iIVmb_VC		23 17 09.2	
	143nm,SNR=1.3						
EMOS				Sn	Sn	23 17 52.8	-1.8
ECAB	El Cabril	4.92	302	Pn	Pn	23 17 02.1	+0.4
ECAB	El Cabril	4.92	302	Pn	Pn	23 17 02.3	+0.5
ECAB				⇑iIVmb_VC		23 17 09.3	
	68nm,SNR=1.2						
ECAB				Sn	Sn	23 17 54.8	-3.6
PAB	San Pablo	5.18	321	Pn	Pn	23 17 07.4	+2.1
PAB				⇑iIVmb_VC		23 17 10.5	
	85nm,SNR=1.6						
PAB				Sn	Sn	23 18 00.7	-4.1
ERTA	Horta de San J	5.36	4	Pn	Pn	23 17 10.3	+2.6
ERTA				⇑iIVmb_VC		23 17 11.0	
	166nm,SNR=1.3						

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*IDC **04** 23:19:49.9±1.5, 29°.08N×97°.43E, h0^{km}, mb3.5/4, mbtmp3.5/6, ML4.3/1, Error ellipse: s-maj=66.2km s-min=22.7km az=68.0*

ISC 04 23:19:54.7±1.2**, 29°.1N**±0°.1×**97°.5E**±0°.4**, h35**^{km}**, n6, σ1^{s}.28**/6**, mb3.4**/4**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	10.65	172	Pn	Pn	23 22 24.6	-0.3
	0.7nm,0.3s,baz=345,slow=10,SNR=2.3						
	0.7nm,0.3s						
SONM	Songino Array	19.98	18	P	P	23 24 24.4	+0.3
	0.3nm,0.4s,baz=209,slow=12,SNR=2.1						
MKAR	Makanchi Array	21.30	330	P	P	23 24 38.7	+0.4
	0.6nm,0.7s,baz=139,slow=9.0,SNR=6.8						
	0.6nm,0.7s						
KURBB	Kurchatov Arra	25.83	332	P	P	23 25 23.4	+0.7
	0.7nm,0.7s,baz=144,slow=9.1,SNR=5.1						
	0.7nm,0.7s						
ZALV	Zalesovo Beam	26.52	343	P	P	23 25 26.8	-2.0
	0.4nm,0.4s,baz=157,slow=7.8,SNR=1.4						
	0.4nm,0.4s						
WRA	Warramunga Arr	60.34	139	P	P	23 30 00.7	+0.4
	0.6nm,0.7s,baz=322,slow=6.6,SNR=2.3						
	0.6nm,0.7s						

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*NOU **04** 23:27:17.4, 20°.11S×175°.44W, h0^{km}, mb4.9/13, Tonga Islands*

*NEIC **04** 23:27:25.1±1.3, 20°.1S±0°.1×175°.2W±0°.1, h76^{km}±6^{km}, mb5.0/24, Error ellipse: s-maj=20.1km s-min=15.7km az=177.0*

*IDC **04** 23:27:37.5±3.4, 20°.13S×175°.50W, h184^{km}±29^{km}, mb3.8/13, mbtmp4.3/15, Error ellipse: s-maj=20.0km s-min=15.8km az=97.0*

ISC 04 23:27:26.9±0.4**, 20°.06S**±0°.07×**175°.11W**±0°.07**, h100**^{km}**, n123, σ1^{s}.35**/117**, mb4.6**/23**, 1C, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	4.99	80	Pn	Pn	23 28 38.0	-1.5
NIUE				Sn	Sn	23 29 27.8	-8.2
NIUE	Niue	4.99	80	P	Pn	23 28 37.9	-1.5
TAVE	Taveuni	5.64	305	P	Pn	23 28 38.5	-10
MSVF	Nonsavu	6.87	289	P	Pn	23 29 12.8	+7.7
	62nm,1.0s,baz=108,slow=19,SNR=24						
AFI	Afiamalu	6.90	28	Pn	Pn	23 29 03.8	-1.8
AFI				Sn	Sn	23 30 11.5	-11
RAR	Rarotonga	14.41	97	Pn	Pn	23 30 45.8	-0.3
RAR	Rarotonga	14.41	97	P	Pn	23 30 46.4	+0.4
	18nm,0.7s,baz=268,slow=8.9,SNR=2.1						
RAR				S	Sn	23 33 13.0	-12
	17nm,0.6s,baz=106,slow=18,SNR=2.2						
PINNC	Pines Island,	16.45	258		P	23 31 17.1	+4.5
DZM	Mont Dzumac	17.33	260	P	Pn	23 31 25.2	+2.6
DZM	Mont Dzumac	17.33	260	P	Pn	23 31 24.7	+2.1
	24nm,0.7s,baz=84,slow=18,SNR=14						
WCZ	Waipu Caves	18.33	208	P	Pn	23 31 34.6	+0.1
HAZ	Te Kaha	18.68	198	P	P	23 31 35.4	-1.7
TWGZ	Tauwhareparae	19.02	197	P	Pn	23 31 41.5	-1.3
TWGZ				S	S	23 34 55.8	-16
MWZ	Matawai	19.29	198	P	P	23 31 43.3	-0.6
MWZ				S	S	23 34 58.8	-18
URZ	Urewera	19.35	199	P	P	23 31 42.2	-2.2
	15nm,0.3s,baz=20,slow=2.0,SNR=15						
URZ				S	S	23 35 00.6	-17
	9.3nm,0.5s,baz=18,slow=20,SNR=8.4						
URZ	Urewera	19.35	199	P	P	23 31 43.4	-1.0
URZ	Urewera	19.35	199	P	P	23 31 43.2	-1.2
URZ				S	S	23 35 05.3	-13
TOZ	Tahuroa Road	19.41	203	P	Pn	23 31 46.1	-1.1
SNGZ	Shannon Statio	19.76	198	P	Pn	23 31 49.4	-2.0

KNZ	Kokohu	19.89	197	P	Pn	23 31 51.2	-1.6
RAHZ	Arahi	19.96	198	P	P	23 31 50.2	-0.9
NMHZ	Naumai	20.21	198	P	P	23 31 53.2	-0.7
NMHZ				S	S	23 35 20.2	-15
BKZ	Black Stump Fm	20.37	199	P	P	23 31 52.4	-3.1
BKZ	Black Stump Fm	20.37	199	P	P	23 31 54.6	-0.9
BKZ	Black Stump Fm	20.37	199	P	P	23 31 54.1	-1.4
BKZ				S	S	23 35 23.1	-15
TMVZ	Te Maari	20.57	201	P	P	23 31 56.0	-1.8
FWVZ	Far West T-bar	20.75	201	P	P	23 31 57.9	-1.9
WHVZ	Whangaehu Hut	20.76	201	P	P	23 31 57.8	-2.1
BFZ	Birch Farm	21.84	198	P	P	23 32 09.1	-2.1
SNZO	South Karori	22.88	200	P	P	23 32 20.9	-1.0
QRZ	Quartz Range	23.23	204	P	P	23 32 23.9	-1.4
MRNZ	Matariki Terra	23.64	203	P	P	23 32 26.9	-2.1
KHZ	Kahutara	24.26	201	P	P	23 32 33.7	-0.8
DSZ	Denniston Nort	24.30	204	P	P	23 32 36.1	+1.1
DSZ				IAmb	IAmb	23 32 36.8	
	comp=Z,151nm,1.5s						
RPZ	Rata Peaks	26.27	203	P	P	23 32 53.1	+0.3
FOZ	Fox Glacier	26.59	205	P	P	23 32 54.8	-0.9
FOZ				IAmb	IAmb	23 32 58.5	
	comp=Z,33nm,0.6s						
JCZ	Jackson Bay	27.45	206	P	P	23 33 02.1	-1.4
EIDS	Eidsvold	31.57	254	P	P	23 33 39.0	-1.1
EIDS				IAmb	IAmb	23 34 26.4	
	comp=Z,31nm,1.5s						
ARMA	Armidale	31.70	244	P	P	23 33 40.6	-0.6
ARMA				IAmb	IAmb	23 33 59.0	
	comp=Z,128nm,1.9s						
CAN	Canberra	35.01	237	P	P	23 34 08.7	-1.2
TV1H	Townsville Har	35.83	265	P	P	23 34 17.0	0.0
CTAO	Charters Tower	36.23	263	P	P	23 34 20.5	0.0
CTAO				IAmb	IAmb	23 34 21.2	
	comp=Z,20nm,0.5s						
CTAO	Charters Tower	36.23	263	P	P	23 34 20.5	0.0
CTAO	Charters Tower	36.23	263	P	P	23 34 20.5	0.0
CMSA	Cobar Meteorol	36.91	244	P	P	23 34 25.1	-1.0
TOO	Toolangi	38.35	234	P	P	23 34 36.9	-1.3
TOO				IAmb	IAmb	23 35 18.0	
	comp=Z,25nm,1.7s						
COEN	Coen	40.27	272	P	P	23 34 54.1	-0.3
COEN				IAmb	IAmb	23 35 10.8	
	comp=Z,47nm,1.5s						
STKA	Stephens Creek	40.42	244	P	P	23 34 54.1	-1.3
STKA	Stephens Creek	40.42	244	P	P	23 34 54.2	-1.3
	comp=Z,3.2nm,0.4s,baz=91,slow=14,SNR=13						
	comp=Z,3.2nm,0.4s						
BBOO	Buckleboo	45.16	243	P	P	23 35 32.0	-1.8
BBOO				IAmb	IAmb	23 36 04.0	
	comp=Z,57nm,1.8s						
AS31	Alice Springs	47.25	256	P	P	23 35 49.5	-0.8
ASAR	Alice Springs	47.25	256	P	P	23 35 48.9	-1.4
ASAR				PcP	PcP	23 37 20.1	0.0
ASAR	Alice Springs	47.25	256	P	P	23 35 48.6	-1.7
	comp=Z,4.1nm,0.7s,baz=95,slow=8.0,SNR=24						
ASAR				PcP	PcP	23 37 20.0	-0.1
	comp=Z,2.4nm,0.8s,baz=99,slow=3.6,SNR=9.7						
	comp=Z,4.1nm,0.7s						
WB0	Warramunga Arr	47.32	261	P	P	23 35 49.7	-1.2
WB0				IAmb	IAmb	23 36 55.8	
	comp=Z,42nm,1.8s						
WRA	Warramunga Arr	47.34	261	P	P	23 35 49.7	-1.3
WRA	Warramunga Arr	47.34	261	P	P	23 35 49.6	-1.5
	comp=Z,2.1nm,0.5s,baz=100,slow=5.1,SNR=25						
WRA				PcP	PcP	23 37 20.6	+0.1
	comp=Z,2.0nm,0.9s,baz=103,slow=2.7,SNR=4.3						
	comp=Z,2.1nm,0.5s						
MTN	Manton Dam	51.87	269	P	P	23 36 25.1	-0.3
KNRA	Kununurra	53.39	265	P	P	23 36 35.9	-0.8
DRV	Dumont d'Urvil	54.68	200	P	P	23 36 45.6	+0.4
FITZ	Fitzroy Crossi	55.77	261	P	P	23 36 53.6	-0.3
FITZ				IAmb	IAmb	23 38 46.1	
	comp=Z,11nm,1.6s						
SBA	Scott Base	58.50	184	P	P	23 37 14.8	+2.7
SBA				IAmb	IAmb	23 37 15.7	
	comp=Z,4.1nm,0.7s						
VNDA	Vanda	58.60	186	P	P	23 37 14.4	+1.6
VNDA				IAmb	IAmb	23 37 14.7	
	comp=Z,12nm,1.8s						
VNDA	Vanda	58.60	186	P	P	23 37 14.3	+1.5
	comp=Z,1.9nm,0.7s,baz=18,slow=5.5,SNR=9.0						
	comp=Z,1.9nm,0.7s						
MBWA	Marble Bar	60.59	256	P	P	23 37 25.2	-2.2
CCD	Concordia, Ant	63.57	195	P	P	23 37 47.9	+1.0
CCD				PcP	PcP	23 38 22.5	-0.1
CASY	Casey	65.52	205	P	P	23 37 59.4	+0.2
QSPA	South Pole Qui	70.01	180	P	P	23 38 28.7	+1.2
QSPA	South Pole Qui	70.01	180	P	P	23 38 28.8	+1.2
	comp=Z,7.0nm,0.8s,baz=47,slow=2.9,SNR=37						
	comp=Z,7.0nm,0.8s						
MJAR	Matsushiro Arr	71.50	322	P	P	23 38 35.9	-1.0
	comp=Z,1.1nm,0.4s,baz=111,slow=7.2,SNR=1.5						
	comp=Z,1.1nm,0.4s						
UGM	Wanagama	72.68	268	P	P	23 38 43.6	-0.9
NVAR	Mina Array Bea	78.87	42	P	P	23 39 22.6	+3.2
	comp=Z,1.6nm,0.9s,baz=243,slow=8.2,SNR=3.8						
	comp=Z,1.6nm,0.9s						
BELA	Belgrano 2	79.63	172	P	P	23 39 23.2	+0.5
X16A	Lo Mia Camp, P	81.21	49	P	P	23 39 33.5	+1.4
MAW	Mawson	82.88	199	P	P	23 39 40.6	+0.6
	comp=Z,2.6nm,0.6s,baz=147,slow=6.5,SNR=2.2						
	comp=Z,2.6nm,0.6s						
H03S2	Juan Fernandez	83.99	124	T	T	01 12 17.8	
	baz=248,slow=75,SNR=189						
H03S1	Juan Fernandez	84.00	124	T	T	01 12 18.9	
	baz=248,slow=75,SNR=218						
H03S3	Juan Fernandez	84.01	124	T	T	01 12 17.6	
	baz=248,slow=75,SNR=257						
H03N2	Juan Fernandez	84.12	123	T	T	01 12 20.5	
	baz=257,slow=71,SNR=71						
H03N3	Juan Fernandez	84.12	123	T	T	01 12 21.3	
	baz=257,slow=71,SNR=41						
H03N1	Juan Fernandez	84.14	123	T	T	01 12 23.0	
	baz=257,slow=71,SNR=35						
TXAR	Lajitas Array	84.55	56	P	P	23 39 50.8	+1.5
	comp=Z,0.6nm,0.9s,baz=245,slow=4.1,SNR=4.8						
	comp=Z,0.6nm,0.9s						
ILAR	Eielson Array	87.31	12	P	P	23 40 02.7	+0.7
	comp=Z,0.3nm,0.2s,baz=206,slow=3.9,SNR=4.3						
	comp=Z,0.3nm,0.2s						
SYO	Syowa Base	87.73	192	⇑*i*P	P	23 40 04.0	-0.1
SNAA	Sanae	88.35	178	P	P	23 40 07.5	+0.3
	comp=Z,1.5nm,0.7s,baz=225,slow=7.1,SNR=6.1						
	comp=Z,1.5nm,0.7s						
CMAR	Chiang Mai Arr	92.53	289	P	P	23 40 28.1	+0.6
	comp=Z,0.6nm,0.3s,baz=101,slow=2.5,SNR=1.5						
	comp=Z,0.6nm,0.3s						
SONM	Songino Array	97.22	318	P	Pdif	23 40 49.5	+1.0
	comp=Z,0.2nm,0.3s,baz=124,slow=7.2,SNR=2.5						
	comp=Z,0.2nm,0.3s						
MKAR	Makanchi Array	112.87	313	PKiKP	PKiKP	23 45 51.4	-0.6
	comp=Z,0.2nm,0.5s,baz=144,slow=0.8,SNR=5.0						
KURBB	Kurchatov Arra	115.56	317	PKP	PKPdf	23 45 56.3	-0.8
	comp=Z,0.4nm,0.3s,baz=99,slow=1.4,SNR=4.4						
BVAR	Borovoye Array	120.48	320	PKP	PKPdf	23 46 05.7	-0.7
	comp=Z,0.6nm,0.5s,baz=104,slow=3.4,SNR=6.3						
KKAR	Karatay Array	121.09	309	PKPdf	PKPdf	23 46 07.7	-0.3
BOSA	Boshof	127.76	203	PKPdf	PKPdf	23 46 19.2	-2.3
BOSA	Boshof	127.76	203	PKP	PKPdf	23 46 20.0	-1.5
	comp=Z,2.4nm,0.9s,baz=97,slow=3.2,SNR=5.1						
ARCES	ARCESS Array B	128.95	351	PKPdf	PKPdf	23 46 22.6	+0.4
ARCES	ARCESS Array B	128.95	351	PKP	PKPdf	23 46 22.5	+0.3
	comp=Z,0.6nm,0.4s,baz=39,slow=1.8,SNR=16						
FINES	FINESS Array B	136.07	346	PKP	PKPdf	23 46 34.5	-1.3
	comp=Z,0.5nm,0.6s,baz=15,slow=5.9,SNR=4.4						
NOA	NORSAR Array B	138.82	355	PKP	PKPdf	23 46 40.7	-0.3
	comp=Z,0.4nm,0.8s,baz=14,slow=3.8,SNR=2.0						
HFS	Hagfors	139.48	353	PKhKP	PKPpre	23 46 33.8	
	comp=Z,1.0nm,0.8s,baz=20,slow=4.6,SNR=2.2						
HFS				PKP	PKPdf	23 46 41.5	-0.6
	comp=Z,0.8nm,0.6s,baz=14,slow=3.0,SNR=2.5						
AKASG	Malin Array Be	143.89	334	PKP	PKPab	23 46 47.7	0.0
	comp=Z,0.3nm,0.3s,baz=43,slow=4.8,SNR=5.7						
EKA	Eskdalemuir Ar	144.26	8	PKP	PKPab	23 46 49.4	+0.5
	comp=Z,0.5nm,0.6s,baz=355,slow=2.6,SNR=3.6						
MARD	Mardin	144.39	307	PKPdf	PKPbc	23 46 51.1	+0.6
LODK	Lodwar	145.99	245		PKPab	23 46 56.6	-0.2
BURAR	Bucovina Array	147.94	334	PKPbc	PKPbc	23 46 59.7	-0.9
CLL	Collm	148.17	350	*i* PKPbc	PKPbc	23 47 01.9	+1.0
CLL				*i* pPKPdf	pPKPdf	23 47 20.2	-4.4
DPC	Dobruska-Polom	148.44	346	*e*PKP	PKiKP	23 47 03.1	-0.2
BRTR	Keskin Array B	148.50	315	PKPbc	PKPbc	23 47 00.8	-1.6
KRLC	Kraliky	148.59	345	*e*PKP	PKiKP	23 47 03.8	+0.2
PRU	Pruhonice	149.16	348	*e*PKP	PKiKP	23 47 05.3	+0.6
ZVC	Zvikov	149.76	348	*e*PKP	PKiKP	23 47 06.8	+0.8
MMAI	Mount Meron Ar	149.92	302	PKPbc	PKiKP	23 47 07.3	+0.4
	comp=Z,0.7nm,0.4s,baz=85,slow=4.8,SNR=10						
KHC	Kasperske Hory	150.17	348	*e*PKP	PKiKP	23 47 07.7	+0.8
GERES	GERESS Array B	150.42	348	PKPbc	PKiKP	23 47 08.1	+0.6
	comp=Z,1.7nm,0.7s,baz=56,slow=2.5,SNR=12						
BORA	Eskisehir	150.50	318	PKPbc	PKiKP	23 47 08.0	0.0
CONA	Conrad Observa	150.81	345	*e*PKP	PKiKP	23 47 09.3	+1.0
	comp=Z,1.3nm,0.6s						
RONA	Rosalia, Austr	150.91	344	*e*PKP	PKiKP	23 47 09.3	+0.8
	comp=Z,2.6nm,0.5s						
MOA	Molln	151.25	347	*i* PKP	PKiKP	23 47 09.4	+0.2
	comp=Z,0.8nm,0.4s						
LESA	Schwarzleotal	151.98	349	*i* PKP	PKiKP	23 47 11.6	+0.9
	comp=Z,1.8nm,0.6s						
KBA	Koelnbreinsper	152.18	348	*i* PKP	PKiKP	23 47 11.9	+0.6
	comp=Z,2.6nm,0.5s						
SOKA	Soboth	152.18	345	*i* PKP	PKPbc	23 47 11.2	+0.3
	comp=Z,1.1nm,0.5s						
WTTA	Wattenberg	152.31	350	*i* PKP	PKiKP	23 47 12.3	+0.7
	comp=Z,3.6nm,0.5s						
ABTA	Abfaltersbach	152.66	349	*i* PKP	PKPbc	23 47 12.3	+0.3
	comp=Z,2.7nm,0.6s						
PRED	Cave del Predi	152.74	347	PKPbc	PKiKP	23 47 12.8	+0.5
FUORN	Ofenpass-Fuorn	153.15	352	PKPbc	PKiKP	23 47 14.5	+1.1
TORD	Torodi Ar. Bea	172.47	156	PKPab	PKPab	23 48 50.7	+0.8
	comp=Z,0.6nm,0.3s,baz=200,slow=4.5,SNR=2.2						

SJA ***04*** *23:42:14.9±0.6, 22°.03S×68°.55W, h134^{km}±3^{km}, ML3.5, MW3.5*

GUC ***04*** *23:42:16.6±0.8, 22°.02S×68°.54W, h125^{km}±5^{km}, ML3.6*

ISC 04 23:42:16.5±1.3, **22°.05S**±0°.03×**68°.51W**±0°.04, **h123**^{km}±9^{km}, **n32**, σ**1^{s}.22**/55, **9C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.72	290	⇑*i*P	Pn	23 42 36.5	0.0
PB09				*i* S	Sn	23 42 51.2	-0.3
PB09				IAML		23 42 53.8	
	comp=E,748nm,0.4s						
PB09	IPOC Station P	0.72	290	*e*P	Pn	23 42 36.4	-0.1
PB09				*e*S	Sn	23 42 52.0	+0.5
PB09				IAML		23 42 52.9	
	comp=Z,1μm,0.2s						
AF01	San Pedro de A	0.95	161	⇓*i*P	Pn	23 42 38.6	0.0
AF01				*i* S	Sn	23 42 53.5	-2.0
AF01				IAML		23 42 58.5	
	comp=E,635nm,0.2s						
AF01	San Pedro de A	0.95	161	*e*P	Pn	23 42 38.6	0.0
AF01				*e*S	Sn	23 42 56.9	+1.5
AF01				IAML		23 43 18.4	
	comp=Z,415nm,0.4s						
PB03	IPOC Station P	1.15	270	⇑*i*P	Pn	23 42 40.2	-0.3
PB03				*i* S	Sn	23 42 58.4	-0.2
PB03				IAML		23 43 00.2	
	comp=N,1μm,0.2s						
PB03	IPOC Station P	1.15	270	*e*P	Pn	23 42 39.4	-1.0
PB03				*e*S	Sn	23 42 59.0	+0.5
PB03				IAML		23 43 04.1	
	comp=Z,568nm,0.2s						
PB06	IPOC Station P	1.18	236	⇑*i*P	Pn	23 42 40.8	+0.1
PB06				*i* S	Sn	23 42 59.2	+0.1
PB06				IAML		23 43 00.5	
	comp=N,1μm,0.6s						
PB06	IPOC Station P	1.18	236	*e*P	Pn	23 42 40.7	-0.1
PB06				*e*S	Sn	23 42 59.7	+0.5
PB06				IAML		23 43 02.1	
	comp=Z,912nm,0.2s						
PB01	IPOC Station P	1.35	317	⇑*i*P	Pn	23 42 42.0	-0.5
PB01				*i* S	Sn	23 43 02.8	+0.6
PB01				IAML		23 43 03.6	
	comp=E,838nm,0.2s						
PB01	IPOC Station P	1.35	317	*e*P	Pn	23 42 42.1	-0.5
PB01				*e*S	Sn	23 43 03.5	+1.2
PB01				IAML		23 43 03.5	
	comp=Z,428nm,0.2s						
PB05	IPOC Station P	1.76	242	⇑*i*P	Pn	23 42 47.0	-0.2
PB05				*i* S	Sn	23 43 09.9	-0.8
PB05				IAML		23 43 16.2	
	comp=N,360nm,0.3s						
PB05	IPOC Station P	1.76	242	*e*P	Pn	23 42 47.0	-0.2
PB05				*e*S	Sn	23 43 12.6	+1.9
PB05				IAML		23 43 13.9	
	comp=Z,224nm,0.3s						
PB08	IPOC Station P	1.99	342	⇑*i*P	Pn	23 42 51.0	+0.7
PB08				*i* S	Sn	23 43 16.6	+0.5
PB08				IAML		23 43 18.0	
	comp=E,510nm,0.6s						
PB08	IPOC Station P	1.99	342	*e*P	Pn	23 42 51.1	+0.7
PB08				*e*S	Sn	23 43 17.8	+1.7
PB08				IAML		23 43 18.2	
	comp=Z,214nm,0.4s						
TA01	Diego Aracena	2.14	313	⇑*i*P	Pn	23 42 50.9	-0.9
TA01				*i* S	Sn	23 43 18.2	-0.7
TA01				IAML		23 43 20.2	
	comp=E,672nm,0.3s						
TA01	Diego Aracena	2.14	313	*e*P	Pn	23 42 51.2	-0.6
TA01				*e*S	Sn	23 43 19.2	+0.3
TA01				IAML		23 43 20.8	
	comp=Z,247nm,0.6s						
TA02	Huaiquique	2.33	319	*e*P	Pn	23 42 53.2	-1.0
TA02				*e*S	Sn	23 43 23.9	+0.8
TA02				IAML		23 43 26.9	
	comp=Z,269nm,0.1s						
PB10	IPOC Station P	2.39	232	*e*P	Pn	23 42 55.2	+0.3
PB10				*e*S	Sn	23 43 21.3	-3.1
GO01	Chusmiza	2.45	345	⇑*i*P	Pn	23 42 56.3	+0.1
GO01				*i* S	Sn	23 43 27.4	+0.7
GO01				IAML		23 43 30.6	
	comp=N,590nm,0.1s						
GO01	Chusmiza	2.45	345	*e*P	Pn	23 42 56.2	0.0
PB11	IPOC Station P	2.51	335	⇑*i*P	Pn	23 42 56.1	-0.7
PB11				*i* S	Sn	23 43 26.7	-0.8
PB11				IAML		23 43 28.3	
	comp=E,606nm,0.3s						
PB11	IPOC Station P	2.51	335	*e*P	Pn	23 42 56.0	-0.7
PB11				*e*S	Sn	23 43 27.4	-0.1
PB11				IAML		23 43 31.1	
	comp=Z,212nm,0.2s						
YJA	Yavi	2.78	93	*e*P	Pn	23 43 01.5	+1.1
YJA	Yavi	2.78	93	*e*P	Pn	23 43 01.5	+1.1
YJA				*e*S	Sn	23 43 31.9	-2.3
SALTA		2.95	138	*e*P	Pn	23 42 52.0	-11
SALTA				*e*P		23 43 04.0	
PB14	IPOC Station P	3.10	214	*e*P	Pn	23 43 04.3	-0.2
PB14				*e*S	Sn	23 43 29.4	-12
PB14				IAML		23 43 52.6	
	comp=Z,64nm,0.4s						
GO02	Mina Guanaco	3.26	197	*e*P	Pn	23 43 06.0	-0.5
GO02				*e*S	Sn	23 43 45.5	+0.3
SLA	San Lorenzo	3.84	135	*e*P	Pn	23 43 10.6	-3.5
AZAP	Zapla	3.84	125	*e*P	Pn	23 43 14.7	+0.5
ALOL	LOMAS DE OLMED	4.53	114	*e*P	Pn	23 43 22.1	-1.1
FSA	Cafayete	4.66	151	*e*P	Pn	23 43 26.3	+1.2
AC02	Maricunga	4.80	187	*e*P	Pn	23 43 27.1	-0.2
AC02				*e*S	Sn	23 44 26.6	+4.3
AC02				IAML		23 45 07.0	
	comp=Z,20nm,2.3s						

IDC ***04*** *23:46:28.3±3.7, 37°.10N×142°.23E, h0^{km}, mb3.4/5, mbtmp3.4/6, ML2.7/1, MS2.2/1, Error ellipse: s-maj=80.7km s-min=28.8km az=158.0*

NIED ***04*** *23:46:36.5, 36°.97N×141°.72E, h48^{km}, MW3.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.09; $M_{\theta\theta}$0.85; $M_{\phi\phi}$0.24; $M_{r\theta}$1.10; $M_{\theta\phi}$-0.38; $M_{\phi r}$0.32; Fault plane solution: $M_0$1.54000×10^{14} NP1: ϕ_s131.00000°, δ27.00000°, λ-51.00000°. NP2: ϕ_s269.00000°, δ69.00000°, λ-108.00000°.*

JMA ***04*** *23:46:36.5±0.2, 37°.0N±0°.6×14°2E±°, h48^{km}±2^{km}, MV3.5/37, E OFF FUKUSHIMA PREF*

ISC 04 23:46:32.9±2.4, **36°.96N**±0°.10×**141°.96E**±0°.10, **h29**^{km}±14^{km}, **n17**, σ**1^{s}.35**/22, **mb3.4**/5, **2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.94	279	⇓*i*P	Pn	23 46 50.7	+0.6
ONAJ				⇓S	Sn	23 47 01.1	-1.5
JFK	Kawauchi	0.95	296	P	Pn	23 46 51.1	+0.7
JFK				S	Sn	23 47 01.3	-1.7
JFFD	Fukushimafurud	1.12	277	P	Pn	23 46 53.5	+0.8
JMST	Minamisoumatoc	1.14	312	P	Pb	23 46 54.3	+0.3
JMST				S	Sn	23 47 07.2	-0.4
JHO	Hitachi	1.17	253	P	Pn	23 46 53.8	+0.5
JMM	Marumori	1.29	315	P	Pn	23 46 56.5	+1.5
JMM				*e*S	Sn	23 47 11.5	+0.2
JOTO	OTAMA OYAMA	1.43	295	*e*P	Pb	23 46 59.0	+0.2
JIO	Ouri	1.57	342	P	Pb	23 47 00.9	-0.3
JOU	Okura	1.74	324	*e*P	Pb	23 47 03.8	-0.3
JFY	Yanaizu	1.85	285	*e*P	Pn	23 47 04.9	+2.2
JYS	Shirataka	1.96	311	*e*P	Pb	23 47 07.7	-0.2
MJAR	Matsushiro Arr	3.04	263	Pn	Pn	23 47 21.8	+2.8
	0.9nm,0.3s,baz=82,slow=14,SNR=14						
MJAR				Sn	Sb	23 48 01.4	-1.5
	0.5nm,0.3s,baz=80,slow=16,SNR=5.8						
MJAR				LR	LR	23 48 42.9	
	comp=Z,38nm,19.8s,baz=98,slow=41						
	3.3nm,0.3s						
SONM	Songino Array	28.18	304	P	P	23 52 24.3	+1.4
	0.4nm,0.7s,baz=93,slow=7.8,SNR=1.8						
	0.4nm,0.7s						
ZALV	Zalesovo Beam	42.28	312	P	P	23 54 24.8	+1.3
	0.2nm,0.3s,baz=81,slow=9.3,SNR=1.5						
	0.2nm,0.3s						
MKAR	Makanchi Array	44.52	302	P	P	23 54 40.5	-1.3
	0.4nm,0.7s,baz=90,slow=7.9,SNR=4.1						
	0.4nm,0.7s						
KURBB	Kurchatov Arra	46.39	308	P	P	23 54 56.1	-0.4
	0.2nm,0.2s,baz=78,slow=8.3,SNR=4.2						
	0.2nm,0.2s						
ILAR	Eielson Array	49.33	32	P	P	23 55 17.4	-1.6
	0.3nm,0.8s,baz=277,slow=9.0,SNR=2.2						
	0.3nm,0.8s						

BER ***04*** *23:51:26.9±1.4, 82°.62N×6°.80W, h10^{km}, Mw3.6, Confirmed Earthquake*

ISC 04 23:51:23.4±2.0, **82°.5N**±0°.1×**6°.70W**±0°.06, **h10**^{km}, **n10**, σ**2^{s}.70**/17, **North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOR	Nord	1.67	241	*e*P	Pg	23 51 54.9	-0.5
NOR				*e*S	Sn	23 52 15.0	+0.9
NOR	Nord	1.67	241	*i* P	Pg	23 51 54.9	-0.5
NOR				*i* S	Sg	23 52 19.7	+2.6
NOR				IAML		23 52 56.6	
	comp=Z,2.3nm,1.0s						
KBS	Kingsbay	4.68	131	*e*P	Pn	23 52 35.9	+2.0
KBS				IAML		23 52 36.4	
	comp=Z,3.2nm,0.1s						
BRBB	Barentsburg B	5.63	131	*e*P	Pn	23 52 49.1	+2.1
SPA0	Spitsbergen Ar	5.78	127	*e*P	Pn	23 52 50.6	+1.6
SPA0				IAML		23 52 58.4	
	comp=Z,4.0nm,0.3s						
SPA0				*e*S	Sn	23 53 51.9	-3.3
DAG	Danmarks Havn	6.16	206	*e*P	Pn	23 52 56.7	+2.5
DAG				*e*S	Sn	23 54 02.8	-1.8
DAG	Danmarks Havn	6.16	206	*i* P	Pn	23 52 56.6	+2.4
DAG				*i* S	Sn	23 54 05.5	+1.0
DAG				IAML		23 54 58.5	
	comp=Z,2.5nm,2.3s						
HSPB	Hornsund (broa	6.75	133	*e*P	Pn	23 53 05.1	+2.9
NEEM	North Greenlan	8.94	260	*i* P	Pn	23 53 33.0	+0.4
NEEM				*i* S	Sn	23 55 11.3	-2.0
NEEM				IAML		23 56 21.8	
	comp=Z,4.1nm,2.1s						
SUMG	Summit	11.81	231	*i* P	Pn	23 54 10.8	-1.0
SUMG				*i* S	Sn	23 56 17.1	-6.5
SUMG				IAML		23 57 38.7	
	comp=Z,6.1nm,3.7s						

GUC ***04*** *23:56:53.3±0.7, 27°.73S×71°.48W, h36^{km}±3^{km}, ML2.9*

SJA ***04*** *23:56:53.8±0.7, 27°.64S×71°.36W, h20^{km}±5^{km}, ML3.0, MW3.5*

ISC 04 23:56:51.7±2.0, **27°.65S**±0°.06×**71°.4W**±0°.1, **h18**^{km}, **n18**, σ**1^{s}.73**/21, **2C, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC04	Llanos de Chal	0.63	151	⇑*e*P	Pn	23 57 05.7	-0.1
AC04				*e*S	Sn	23 57 14.4	-1.0
AC04				IAML		23 57 15.1	
	comp=E,775nm,0.2s						
AC06	Mina Casimiro	0.99	73	*e*P	Pg	23 57 12.0	+1.0
AC06				IAML		23 57 27.4	
	comp=N,415nm,0.5s						
GO03	Copiapo	1.05	87	*e*P	Pg	23 57 13.1	+0.9
GO03	Copiapo	1.05	87	*e*S	Sn	23 57 27.4	+1.5
LCO	Las Campanas	1.49	155	*e*P	Pb	23 57 19.4	+0.3
LCO				*e*S	Sb	23 57 38.6	+0.7
AC05	El Transito	1.55	140	⇑*e*P	Pg	23 57 20.9	-0.7
AC05				*e*S	Sb	23 57 40.1	+0.8
AC01	Pan de Azucar	1.67	26	IAML		23 57 40.7	
	comp=E,144nm,0.3s						
AC02	Maricunga	2.19	69	*e*P	Pb	23 57 31.1	-0.1
AC02				IAML		23 58 04.6	
	comp=N,188nm,0.1s						
AC02	Maricunga	2.19	69	*e*P	Pb	23 57 31.2	-0.1
AC02				*e*S	Sg	23 57 59.3	-3.2
AC02				IAML		23 58 04.0	
	comp=Z,98nm,0.3s						
CO05	La Serena	2.26	176	*e*P	Pn	23 57 28.7	+0.5
CO05				IAML		23 58 02.8	
	comp=N,121nm,0.2s						
GO04	Tololo Observa	2.57	168	*e*P	Pn	23 57 33.8	+1.1
CO01	Juntas del Tor	2.59	154	IAML		23 58 08.9	
	comp=E,71nm,0.4s						
CO06	Fray Jorge	3.02	184	*e*P	Pn	23 57 38.3	-0.3
AROD	Rodeo	3.03	146	*e*P	Pb	23 57 43.9	-1.4
AROD				*e*S	Sb	23 58 21.2	-0.9
VCA	Vinchina	3.03	112	*e*P	Pn	23 57 40.0	+1.0
VCA				IAML		23 58 32.3	
	comp=Z,57nm,0.3s						
ACDV	Cuesta del Vie	3.22	142	*e*P	Pb	23 57 46.9	-1.6
ACDV				*e*S	Sg	23 58 39.0	+3.9
ACLC	CERRO LA CRUZ	4.31	115	*e*P	Pb	23 58 03.3	-3.7
CYA	Choya	5.02	100	*e*P	Pn	23 57 47.1	-19

IDC ***05*** *00:15:31.5±4.8, 28°.94N×130°.59E, h95^{km}±17^{km}, mb3.2/3, mbtmp3.6/6, Error ellipse: s-maj=90.1km s-min=11.0km az=114.0*

JMA ***05*** *00:15:33.1±0.1, 29°.3N±0°.3×130°.0E±0°.7, h56^{km}±1^{km}, MV3.5/20, NEAR AMAMI-OSHIMA ISLAND*

JMA Felt I J1 at NEAR AMAMI-OSHIMA ISLAND.

ISC 05 00:15:32.9±1.0, **29°.31N**±0°.04×**129°.98E**±0°.07, **h58**^{km}±10^{km}, **n19**, σ**1^{s}.34**/24, **mb3.3**/3, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNN	Nakanoshima	0.54	350	P	Pn	00 15 45.2	0.0
JNN				S	Sn	00 15 53.8	-0.3
JNN	Nakanoshima	0.54	350	A	A	00 15 45.2	
	comp=N,4.0nm,4.8s,comp=E,6.0nm,1.6s						
JTAJ	Takarajima	0.69	258	P	Pn	00 15 47.0	0.0
JTAJ				*e*S	Sn	00 15 57.3	+0.1
JAM	Amami Oshima	0.95	200	P	Pn	00 15 50.7	+0.5
JAM				*e*S	Sn	00 16 03.2	+0.3
JYAK	Yakushimahirau	1.04	26	P	Pn	00 15 51.7	+0.3
JAMN	Amaminishikomi	1.27	214	*i* P	Pn	00 15 54.8	+0.3
JAMN				*e*S	Sn	00 16 10.1	-0.5
JTN	Tanegashima 3	1.60	33	P	Pn	00 15 59.9	+1.0
JTK	Tokunoshima	1.76	211	P	Pn	00 16 01.6	+0.5
JOKE	Okinoerabujima	2.30	213	P	Pn	00 16 09.3	+0.8
JYRO	Yoronjima	2.64	211	P	Pn	00 16 14.3	+1.1
JYRO				*e*S	Sn	00 16 45.9	+1.9
JOW	Kunigami	2.89	212	P	Pn	00 16 17.5	+1.0
	comp=E,32nm,0.3s,baz=87,slow=14,SNR=13						
JOW				S	Sn	00 16 50.9	+0.8
	comp=E,30nm,0.3s,baz=55,slow=19,SNR=4.6						
JOW	Kunigami	2.89	212	*e*P	Pn	00 16 17.4	+0.9
JMZ	Minamidaito 2	3.64	162	P	Pn	00 16 28.0	+1.1
JMZ				*e*S	Sn	00 17 06.9	-1.7
JNU	Nakatsue	3.88	11	P	Pn	00 16 32.7	+2.6
	comp=E,15nm,0.4s,baz=197,slow=11,SNR=27						
JNU				S	Sn	00 17 21.3	+6.9
	comp=E,12nm,0.7s,baz=230,slow=17,SNR=2.4						
JKE	Kume jima 2	4.10	224	*e*P	Pn	00 16 34.0	+0.9
KSRS	Korea Array	8.31	349	P	Pn	00 17 35.1	+4.5
	comp=E,1.1nm,0.7s,baz=170,slow=14,SNR=5.7						
SONM	Songino Array	25.95	322	P	P	00 21 02.4	+2.4

	comp=E,0.4nm,0.4s,baz=130,slow=7.2,SNR=2.3						
	comp=E,0.4nm,0.4s						
KURBB	Kurchatov Arra	43.77	314	P	P	00 23 32.0	-0.7
	comp=E,0.3nm,0.6s,baz=96,slow=8.5,SNR=2.8						
	comp=E,0.3nm,0.6s						
FINES	FINESS Array B	70.96	330	P	P	00 26 41.2	-2.8
	comp=E,0.8nm,0.9s,baz=82,slow=10.0,SNR=1.6						
	comp=E,0.8nm,0.9s						

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*IDC **05** 00:16:38.9±15.0, 72°.75N×11°.98W, h0km, mbtmp3.3/5, ML2.8/5, Error ellipse: s-maj=192.4km s-min=50.5km az=126.0*

*BER **05** 00:17:23.5±3.5, 72°.00N×4°.80W, h10km, Mw3.6, Confirmed Earthquake*

ISC 05 00:17:01.3±1.1**, 70°.99N**±0°.10×**7°.3W**±0°.1**, h10km, n13, σ2ˢ.34**/14**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBG	Daneborg	5.09	317	eP	Pg	00 18 37.5	-1.2
DBG	Daneborg	5.09	317	i P	Pg	00 18 37.3	-1.4
DBG				i S	Sb	00 19 35.3	+3.9
DAG	Danmarks Havn	6.59	337	eP	Pb	00 18 52.2	-3.7
DAG				eS	Sn	00 19 53.7	+0.5
DAG	Danmarks Havn	6.59	337	eP	Pb	00 18 51.3	-4.6
DAG				eS	Sn	00 19 53.5	+0.3
HSPB	Hornsund (broa	8.66	36	eP	Pn	00 19 06.4	0.0
HSPB				IAML		00 19 17.9	
	comp=Z,3.7nm,0.6s						
BRBB	Barentsburg B	9.07	29	eP	Pn	00 19 13.4	+1.3
KBS	Kingsbay	9.33	23	eP	Pn	00 19 19.5	+3.9
SPA0	Spitsbergen Ar	9.48	30	eP	Pn	00 19 19.8	+2.2
SPA0				IAML		00 19 21.8	
	comp=Z,1.7nm,0.6s						
ARCES	ARCESS Array B	11.11	82	Pn	Pn	00 19 37.6	-2.3
	comp=Z,0.1nm,0.3s,baz=297,slow=12,SNR=10.0						
	comp=Z,0.3nm,0.4s						
NOA	NORSAR Array B	12.43	134	Pn	Pn	00 20 10.2	+12
	baz=331,slow=19,SNR=1.0						
	comp=Z,0.3nm,0.7s						
HFS	Hagfors	13.82	131	Pn	P	00 20 26.1	+0.5
	comp=Z,0.1nm,0.3s,baz=334,slow=13,SNR=4.1						
	comp=Z,0.7nm,0.6s						
EKA	Eskdalemuir Ar	15.82	171	P	P	00 20 48.5	+0.8
	baz=354,slow=13						
	comp=Z,0.3nm,0.5s						
FINES	FINESS Array B	16.26	109	P	P	00 20 52.8	+0.4
	comp=Z,0.1nm,0.3s,baz=328,slow=9.9,SNR=1.5						
	comp=Z,1.2nm,1.0s						

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*ISK **05** 00:20:53.8, 36°.70N×27°.02E, h147km, ML2.3/11*

*ATH **05** 00:20:54.3, 36°.68N×26°.98E, h144km±6km, ML2.8/2, Manual Solution by A.Fokaefs First location: 2019/06/05 00:22:35, This location: 2019/06/05 06:14:57 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 2 km*

ISC 05 00:20:54.2±1.8**, 36°.70N**±0°.06×**27°.00E**±0°.05**, h143km**±13km**, n20, σ0ˢ.40**/29**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BODT	Bodrum	0.44	35	Pg	Pn	00 21 14.7	+0.2
BODT				Sg	Sn	00 21 29.9	-0.1
DAT	Datca	0.47	86	Pg	Pn	00 21 14.7	-0.1
DAT				Sg	Sn	00 21 30.3	0.0
TURN	Turunc	1.01	85	Pg	Pn	00 21 18.4	0.0
TURN				Sg	Sn	00 21 36.4	-0.3
ARG	Arkhangelos	1.03	117	Pg	Pn	00 21 18.9	+0.3
ARG				Sg	Sn	00 21 36.9	-0.2
ARG	Arkhangelos	1.03	117	P	Pn	00 21 19.1	+0.5
ARG				S	Sn	00 21 37.3	+0.1
KARP	Karpathos	1.16	173	Pn	Pn	00 21 20.0	+0.2
KARP	Karpathos	1.16	173	P	Pn	00 21 19.9	0.0
KARP				S	Sn	00 21 39.4	+0.1
APE	Apeiranthos	1.23	288	P	Pn	00 21 20.7	+0.2
DALY	Dalyan (Mula)	1.34	84	Pn	Pn	00 21 21.9	+0.4
DALY				Sn	Sn	00 21 42.1	-0.2
AYDB	Zeytinkoy-Aydi	1.44	30	Pn	Pn	00 21 22.7	0.0
AYDB				Sn	Sn	00 21 43.9	-0.7
FETY	Fethiye	1.68	91	Pn	Pn	00 21 25.3	0.0
ZKR	Zakros	1.70	202	P	Pn	00 21 25.9	+0.4
ZKR				S	Sn	00 21 49.7	+0.3
CAME	Cameli-Denizli	1.87	82	Pn	Pn	00 21 27.5	0.0
APMY	Acipayam-Deniz	2.00	67	Pn	Pn	00 21 29.0	0.0
AKAS	Kas	2.15	102	Pn	Pn	00 21 30.8	-0.1
IDI	Anoyia	2.21	231	P	Pn	00 21 30.9	-0.7
ELL	Elmali	2.34	88	P	Pn	00 21 33.4	+0.3
CHAN	Chania	2.66	245	P	Pn	00 21 36.1	-0.9
GUR	Goura	3.91	290	P	Pn	00 21 54.2	+1.0
KLV	Kalavryta, Ach	4.09	291	P	Pn	00 21 55.6	+0.2

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*IDC **05** 00:34:10.4±3.3, 35°.01N×36°.47W, h0km, mb3.6/10, mbtmp3.6/10, MS3.2/14, Error ellipse: s-maj=96.0km s-min=23.1km az=173.0*

ISC 05 00:34:12.3±3.0**, 35°.1N**±0°.6×**36°.5W**±0°.2**, h10km, n27, σ0ˢ.77**/10**, mb3.7**/10**, MS3.2**/14**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESDC	Sonseca Array	26.16	70	LR	LR	00 47 50.9	
	comp=Z,38nm,19.5s,baz=298,slow=31						
EKA	Eskdalemuir Ar	30.55	38	P	P	00 40 25.0	-0.8
	1.3nm,0.9s,baz=254,slow=6.3,SNR=1.5						
	1.3nm,0.9s						
SADO	Sadowa	33.77	300	LR	LR	00 52 36.4	
	comp=Z,26nm,19.4s,baz=140,slow=33						
TKL	Tuckaleechee C	38.27	285	LR	LR	00 53 45.8	
	comp=Z,26nm,21.6s,baz=57,slow=31						
GERES	GERESS Array B	39.06	54	P	P	00 41 40.8	+1.4
	0.4nm,0.7s,baz=241,slow=5.5,SNR=3.3						
	0.4nm,0.7s						
NOA	NORSAR Array B	39.78	34	LR	LR	00 55 53.6	
	comp=Z,11nm,20.5s,baz=215,slow=33						
DBIC	Dimbokro	40.57	127	LR	LR	00 55 10.3	
	comp=Z,41nm,21.8s,baz=316,slow=31						
VRAC	Vranov	40.97	53	LR	LR	00 57 17.6	
	comp=Z,24nm,18.6s,baz=282,slow=34						
ULM	Lac du Bonnet	45.02	309	LR	LR	01 02 48.5	
	comp=Z,33nm,18.1s,baz=161,slow=38						
FINES	FINESS Array B	46.89	36	P	P	00 42 42.3	-0.1
	1.4nm,1.0s,baz=273,slow=9.6,SNR=2.2						
	1.4nm,1.0s						
H10N2	ASCENSION HYDR	47.47	150	T	T	01 33 08.6	
	baz=335,slow=75,SNR=81						
H10N3	ASCENSION HYDR	47.48	150	T	T	01 33 09.0	
	baz=335,slow=75,SNR=71						
H10N1	ASCENSION HYDR	47.49	150	T	T	01 33 10.0	
	baz=335,slow=75,SNR=82						
MLR	Muntele Rosu	47.65	58	LR	LR	00 59 21.0	
	comp=Z,28nm,21.6s,baz=257,slow=32						
H10S3	ASCENSION HYDR	48.42	151	T	T	01 34 16.0	
	baz=335,slow=74,SNR=34						
H10S2	ASCENSION HYDR	48.43	151	T	T	01 34 17.1	
	baz=245,slow=74,SNR=34						
AKASG	Malin Array Be	48.99	50	P	P	00 42 58.4	-0.5
	1.0nm,0.6s,baz=275,slow=7.4,SNR=7.6						
	1.0nm,0.6s						
YKA	Yellowknife Ar	54.18	326	P	P	00 43 38.3	+0.8
	0.9nm,1.0s,baz=76,slow=6.9,SNR=5.8						
	0.9nm,1.0s						
CMIG	Matias Romero	54.68	267	LR	LR	01 06 00.9	
	comp=Z,32nm,19.9s,baz=173,slow=35						
PDAR	Pinedale Array	55.73	302	P	P	00 43 48.7	-0.7
	0.5nm,0.7s,baz=72,slow=9.7,SNR=4.0						
PDAR				LR	LR	01 07 44.8	
	comp=Z,20nm,18.6s,baz=73,slow=36						
	0.5nm,0.7s						
ANMO	Albuquerque	56.15	292	LR	LR	01 07 10.5	
	comp=Z,30nm,19.1s,baz=206,slow=35						
TXAR	Lajitas Array	56.17	284	P	P	00 43 52.7	+0.1
	0.6nm,0.8s,baz=45,slow=6.7,SNR=2.4						
TXAR				LR	LR	01 06 37.6	
	comp=Z,29nm,19.1s,baz=116,slow=35						
	0.6nm,0.8s						
NEW	Newport	59.01	310	LR	LR	01 08 46.4	
	comp=Z,44nm,19.8s,baz=6.5,slow=35						
BELG	Belogornoye	59.75	45	LR	LR	01 09 01.7	
	comp=Z,43nm,19.9s,baz=116,slow=35						
ILAR	Eielson Array	66.76	334	P	P	00 45 03.7	+0.2
	0.4nm,0.9s,baz=60,slow=6.7,SNR=4.6						
	0.4nm,0.9s						
KURBB	Kurchatov Arra	77.28	36	P	P	00 46 06.4	-0.3
	0.4nm,0.7s,baz=315,slow=5.6,SNR=4.4						
	0.4nm,0.7s						
MKAR	Makanchi Array	81.69	37	P	P	00 46 30.6	-0.3
	0.3nm,0.7s,baz=328,slow=6.8,SNR=3.5						
	0.3nm,0.7s						

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*IDC **05** 00:50:31.4±0.7, 37°.17N×134°.89E, h374km±8km, mb3.1/12, mbtmp3.9/18, Error ellipse: s-maj=13.1km s-min=10.8km az=76.0*

*NEIC **05** 00:50:31.7±1.5, 37°.25N±0°.08×135°.0E±0°.1, h374km±9km, mb4.0/20, Error ellipse: s-maj=13.4km s-min=11.2km az=135.0*

*JMA **05** 00:50:31.3±0.1, 37°.2N±0°.6×134°.9E±0°.7, h376km±1km, MV3.2/57, SEA OF JAPAN*

ISC 05 00:50:31.5±0.5**, 37°.23N**±0°.05×**134°.90E**±0°.05**, h372km, n80, σ1ˢ.06**/87**, mb3.6**/22**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKY	Yasaka	1.61	174	eP	Pn	00 51 22.7	+0.1
JKY				eS	S	00 52 02.5	-1.0
JOI	OKI	1.63	235	P	Pn	00 51 22.8	+0.2
JKSM	Kasumi	1.65	187	eP	Pn	00 51 22.4	-0.4
JSZ	Suzu	1.97	83	P	Pn	00 51 25.5	+0.9
JWT	Wachi	1.99	168	P	Pn	00 51 24.7	-0.1
JYTA	Yamagatataniai	2.20	137	P	Pn	00 51 26.5	+0.2
JYTA				eS	S	00 52 09.8	-0.6
JGF	Kuroka	2.56	129		Pn	00 51 28.4	-0.6
JGF	Kuroka	2.56	129	P	Pn	00 51 29.3	+0.3
JGF	Kuroka	2.56	129	S	S	00 52 14.8	-0.6
JHS	Saijyo	2.66	214	eP	Pn	00 51 29.7	-0.1
JHS				eS	S	00 52 15.6	-1.2
JNG	Nsakai	2.69	107	P	Pn	00 51 30.5	+0.4
MJB9	Matsu-Tunnel	2.73	104	Pn	Pn	00 51 30.1	-0.2
MAJO	Matsushiro	2.74	104	Pn	Pn	00 51 30.2	-0.1
MAJO	Matsushiro	2.74	104	P	Pn	00 51 31.0	+0.7
MAJO	Matsushiro	2.74	104	S	S	00 52 18.8	+1.0
MAT	Matsushiro	2.74	104	eP	Pn	00 51 30.7	+0.4
MJAR	Matsushiro Arr	2.74	104	P	Pn	00 51 31.1	+0.8
	40nm,0.7s,baz=282,slow=9.7,SNR=109						
MJAR				S	S	00 52 18.5	+0.7
	2.0nm,0.8s,baz=283,slow=16,SNR=1.1						
JSD	Sado	2.78	72	P	Pn	00 51 31.6	+0.9
JSD	Sado	2.78	72	eP	Pn	00 51 31.5	+0.9
JNY	Yasuok	3.04	127	eP	Pn	00 51 33.0	+0.1
JKN2	Miekihoku	3.19	159	eP	Pn	00 51 34.2	-0.1
JIE	Ise	3.19	152	eP	Pn	00 51 34.8	+0.5
JMN	Monobe	3.59	194	Pn	Pn	00 51 39.1	+1.0
JMM	Marumori	4.72	81	Pn	Pn	00 51 48.9	-0.2
JMM	Marumori	4.72	81	P	Pn	00 51 50.0	+0.9
JMM	Marumori	4.72	81	S	S	00 52 51.7	-0.4
JNU	Nakatsue	5.26	220	Pn	Pn	00 51 54.2	-0.8
JNU	Nakatsue	5.26	220	P	Pn	00 51 54.8	-0.3
	16nm,0.7s,baz=24,slow=12,SNR=13						
JNU				S	S	00 53 01.5	-1.3
	14nm,1.2s,baz=116,slow=18,SNR=1.7						
JNU	Nakatsue	5.26	220	P	Pn	00 51 55.4	+0.4
KSRS	Korea Array	5.57	274	P	Pn	00 51 59.3	+1.1
	5.1nm,0.6s,baz=92,slow=12,SNR=23						
JTM	Tenmabayashi	5.97	52	Pn	Pn	00 52 02.6	0.0
JTM	Tenmabayashi	5.97	52	P	Pn	00 52 03.7	+1.1
JTM	Tenmabayashi	5.97	52	S	S	00 53 17.3	+0.6
TJN	Taejon	6.11	264	P	Pn	00 52 06.9	+2.7
	77nm,1.0s						
USA0B	Ussuriysk Arra	7.30	343	Pn	P	00 52 18.9	+0.1
USRK	Ussuriysk Ar.	7.30	343	Pn	P	00 52 18.9	+0.2
USRK	Ussuriysk Ar.	7.30	343	P	P	00 52 19.5	+0.7
	39nm,0.7s,baz=169,slow=11,SNR=75						
ERM	Erimo	7.96	51	Pn	Pn	00 52 24.4	-0.9
ERM	Erimo	7.96	51	P	Pn	00 52 25.6	+0.2
JEM	Erimo	7.96	51	P	Pn	00 52 25.7	+0.3
MDJ	Mudanjiang	8.40	333	P	P	00 52 32.7	+0.7
ASAJ	Asahikawa	9.02	38	P	Pn	00 52 37.4	-0.4
	68nm,0.5s,baz=230,slow=12,SNR=69						
ASAJ				S	S	00 54 14.9	-6.4
	19nm,0.6s,baz=233,slow=20,SNR=9.3						
JKA	Kamikawa-asahi	9.02	38	Pn	Pn	00 52 36.3	-1.5
KLR	Kul'dur	12.21	350	P	Pn	00 53 14.9	-0.2
	4.0nm,0.6s,baz=166,slow=7.0,SNR=16						
KLR				S	S	00 55 28.9	-0.1
	0.5nm,0.6s,baz=155,slow=22,SNR=6.1						
YHNB	Yeheng	17.05	227	P	P	00 54 07.9	+0.5
HHC	Hu-ho-hao-te	18.47	288	eP	P	00 54 21.2	-1.2
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
SONM	Songino Array	23.40	306	P	P	00 55 07.6	-1.2
	comp=Z,0.6nm,0.5s,baz=104,slow=11,SNR=2.1						
	comp=Z,0.6nm,0.5s						
GTA	Gaotai	27.51	285	eP	P	00 55 46.1	+0.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CMAR	Chiang Mai Arr	36.60	249	P	P	00 57 04.0	+0.2
	comp=Z,0.8nm,0.3s,baz=52,slow=8.0,SNR=6.9						
	comp=Z,0.8nm,0.3s						
ZALV	Zalesovo Beam	37.94	312	P	P	00 57 14.2	-0.3
	comp=Z,0.7nm,0.3s,baz=94,slow=7.2,SNR=2.4						
	comp=Z,0.7nm,0.3s						
MKAR	Makanchi Array	39.58	301	P	P	00 57 28.2	+0.1
MKAR	Makanchi Array	39.58	301	P	P	00 57 27.9	-0.3
	comp=Z,0.7nm,0.5s,baz=88,slow=9.8,SNR=9.9						
	comp=Z,0.7nm,0.5s						
FAKI	Fak Fak	40.02	184	P	P	00 57 31.5	-0.5
FAKI				IAmb	IAmb	00 57 40.5	
	comp=Z,14nm,1.1s						
EVN	Everest	41.18	271	P	P	00 57 43.1	+1.0
EVN				IAmb	IAmb	00 57 44.2	
	comp=Z,3.7nm,0.6s						
KURK	Kurchatov	41.69	307	P	P	00 57 44.6	-0.5
KURBB	Kurchatov Arra	41.76	307	P	P	00 57 44.8	-0.8
	comp=Z,0.2nm,0.3s,baz=90,slow=8.5,SNR=6.2						
	comp=Z,0.2nm,0.3s						
BVAR	Borovoye Array	46.56	311	P	P	00 58 22.8	-0.4
	comp=Z,0.7nm,0.5s,baz=84,slow=8.1,SNR=5.0						
	comp=Z,0.7nm,0.5s						
COEN	Coen	51.51	170	P	P	00 59 01.4	+0.7
ARTI	Arti	52.83	317	P	P	00 59 09.4	-0.4
KNRA	Kununurra	52.94	187	P	P	00 59 10.8	-0.2
SCRK	Sand Creek	53.48	33	P	P	00 59 15.7	+1.1
AB31	Akbulak array	53.78	308	P	P	00 59 16.1	-0.8
AB31				IAmb	IAmb	00 59 17.2	
	comp=Z,1.3nm,0.5s						
ABKAR	Akbulak array	53.78	308	P	P	00 59 16.5	-0.3
I28M	Miner Creek	54.87	31	P	P	00 59 26.1	+1.7
WB0	Warramunga Arr	56.69	181	P	P	00 59 36.8	-0.9
WB0				IAmb	IAmb	00 59 49.3	
	comp=Z,10nm,1.1s						
WRA	Warramunga Arr	56.87	181	P	P	00 59 38.0	-0.9
	comp=Z,1.8nm,0.4s,baz=356,slow=7.6,SNR=22						
	comp=Z,1.8nm,0.4s						
WR8	Warramunga Arr	56.88	180	P	P	00 59 38.2	-0.7
WR8				IAmb	IAmb	00 59 38.8	
	comp=Z,4.9nm,0.7s						
HRA	Herat	57.63	291	P	P	00 59 44.2	-0.1
SPB2	Spitsbergen Ar	59.28	348	P	P	00 59 53.5	-1.1
SPB2				IAmb	IAmb	01 00 05.3	
	comp=Z,10nm,1.0s						
ASAR	Alice Springs	60.58	181	P	P	01 00 03.0	-1.0
	comp=Z,0.9nm,0.6s,baz=15,slow=13,SNR=7.6						
	comp=Z,0.9nm,0.6s						
FINES	FINESS Array B	66.13	330	P	P	01 00 39.7	+0.1
FINES	FINESS Array B	66.13	330	P	P	01 00 39.6	0.0
	comp=Z,0.4nm,0.5s,baz=72,slow=6.2,SNR=5.2						
	comp=Z,0.4nm,0.5s						
AKASG	Malin Array Be	70.86	320	P	P	01 01 08.5	-0.3
	comp=Z,0.7nm,0.4s,baz=51,slow=6.2,SNR=8.4						
	comp=Z,0.7nm,0.4s						
AKBB	Malin Array Si	70.86	320	P	P	01 01 08.5	-0.3
AKBB				IAmb	IAmb	01 01 09.2	
	comp=Z,2.0nm,0.6s						
KIEV	Kiev	70.88	320	P	P	01 01 08.6	-0.3
KIEV				IAmb	IAmb	01 01 09.2	
	comp=Z,1.8nm,0.6s						
HFS	Hagfors	71.66	333	P	P	01 01 13.6	+0.3
	comp=Z,0.5nm,0.4s,baz=56,slow=5.4,SNR=1.7						
	comp=Z,0.5nm,0.4s						
BURAR	Bucovina Array	74.83	319	P	P	01 01 32.0	0.0
NVAR	Mina Array Bea	78.94	50	P	P	01 01 56.2	+1.1
	comp=Z,0.2nm,0.5s,baz=312,slow=5.5,SNR=2.5						
	comp=Z,0.2nm,0.5s						
GERES	GERESS Array B	79.68	325	P	P	01 02 00.8	+2.1
DSP	Deep Springs	79.81	51	P	P	01 02 01.0	+1.5
DSP				IAmb	IAmb	01 02 01.8	
	comp=Z,0.9nm,0.7s						

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*NOU **05** 00:55:37.7, 33°.88S×178°.75E, h375km, mb4.3/7, South of Kermadec Islands*

WEL 05 00:55:19.4±1.1**, 33°S**±18°×**18°0E**±2°2**, h427km**±40km**, mB4.7**/7**, ML4.6**/9**, MLv4.6**/7**, Mw(mB)3.9**/7**, Error ellipse: s-maj=28.3km s-min=22.8km az=96.3, confirmed, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	5.17	193	P	P	00 56 45.3	+1.2
MXZ	Matakaoa Point	5.17	193	P	P	00 56 45.0	+1.0
MXZ				S	S	00 57 54.3	+1.0
WMGZ	Waiomatatini S	5.40	191	P	P	00 56 47.5	+1.0
WMGZ				S	S	00 57 57.0	-0.7
HAZ	Te Kaha	5.46	197	P	P	00 56 45.9	-1.2
HAZ				S	S	00 58 00.3	+1.4
PKGZ	Pakihiroa	5.50	194	P	P	00 56 46.1	-1.5
PKGZ				S	S	00 57 58.1	-1.6
WCZ	Waipu Caves	5.63	231	P	P	00 56 49.1	+0.3
PUZ	Puketiti	5.67	192	P	P	00 56 50.4	+1.1
PUZ				S	S	00 58 03.8	+0.9
RUGZ	Raukumara Rang	5.69	197	P	P	00 56 50.4	+0.8
RUGZ				S	S	00 58 03.4	0.0
TWGZ	Tauwhareparae	5.82	194	P	P	00 56 51.7	+0.8
TWGZ				S	S	00 58 06.9	+1.0
MKAZ	Moumakai	5.93	218	P	P	00 56 52.8	+0.9
MWZ	Matawai	6.08	197	P	P	00 56 52.0	-1.5
MWZ				S	S	00 58 12.1	+1.5
CNGZ	Carnagh Statio	6.08	192	P	P	00 56 54.5	+1.0
CNGZ				S	S	00 58 11.1	+0.5
TKGZ	Te Karaka	6.10	194	P	P	00 56 53.8	+0.1
TKGZ				S	S	00 58 11.7	+0.7
URZ	Urewera	6.12	200	P	P	00 56 53.8	-0.1
URZ	Urewera	6.12	200	P	P	00 56 52.8	-1.1
URZ				S	S	00 58 11.1	-0.3
RIGZ	Rimuhau	6.38	194	P	P	00 56 57.0	+0.3
RIGZ				S	S	00 58 17.1	+0.6
MUGZ	Murupara	6.42	201	P	P	00 56 57.4	+0.3
MUGZ				S	S	00 58 17.4	+0.2
SNGZ	Shannon Statio	6.55	197	P	P	00 56 58.8	0.0
SNGZ				S	S	00 58 24.2	+4.4
PRGZ	Paritu Road	6.56	193	P	P	00 57 00.3	+1.3
PRGZ				S	S	00 58 21.6	+1.5
KNZ	Kokohu	6.70	194	P	P	00 57 00.5	0.0
KNZ				S	S	00 58 22.5	-0.3
RAHZ	Arahi	6.74	198	P	P	00 57 00.8	0.0
RAHZ				S	S	00 58 26.1	+2.6
TLZ	Tolley Road	6.74	210	P	P	00 57 04.3	+3.4
MTHZ	Maungataniwha	6.75	200	P	P	00 57 01.5	+0.5
MTHZ				S	S	00 58 26.0	+2.3
MHGZ	Mahia Peninsul	6.78	192	P	P	00 57 02.5	+1.2
MHGZ				S	S	00 58 25.8	+1.3
NMHZ	Naumai	6.98	199	P	P	00 57 02.2	-1.4
NMHZ				S	S	00 58 31.7	+3.2
ARHZ	Aropaoanui	7.09	198	P	P	00 57 04.7	+0.1
ARHZ				S	S	00 58 33.6	+3.1
BKZ	Black Stump Fm	7.14	201	P	P	00 57 04.4	-0.8
BKZ	Black Stump Fm	7.14	201	P	P	00 57 04.4	-0.8
BKZ				S	S	00 58 33.3	+1.8
MCHZ	McNeill Hill	7.34	199	P	P	00 57 08.6	+1.3
MCHZ				S	S	00 58 36.2	+0.8
BFZ	Birch Farm	8.62	198	P	P	00 57 21.3	+0.1
SNZO	South Karori	9.65	203	P	P	00 57 33.6	+1.0
QRZ	Quartz Range	10.11	213	P	P	00 57 38.2	+0.5
KHZ	Kahutara	11.04	205	P	P	00 57 48.8	+1.0

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*UCR **05** 00:56:34.7±2.1, 9°.55N×79°.35W, h52km±16km, MW3.5*

*UPA **05** 00:56:35.8±1.0, 9°.60N×79°.39W, h42km±4km, MD4.0, MW4.0*

*RSNC **05** 00:56:36.8±0.0, 10°N±6°×7°9W±°, h29km±5km, M3.1, mB4.8, mb4.3, ML3.0, Mw(mB)4.0*

ISC 05 00:56:34.6±1.3**, 9°.66N**±0°.07×**79°.40W**±0°.03**, h44km**±16km**, n57, σ1ˢ.64**/79**, 6C-8D, Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAZU	Cerro Azul, Pa	0.42	181	eP	Pn	00 56 44.7	0.0
CAZU				eS	Sn	00 56 51.5	-0.3
BCIP	Isla Barro Col	0.66	221	⇑iP	Pn	00 56 47.7	+0.2
BCIP				eS	Sn	00 56 56.8	-0.1
BCIP	Isla Barro Col	0.66	221	P	Pn	00 56 47.7	+0.2
BCIP				S	Sn	00 56 56.7	-0.1
BCIP	Isla Barro Col	0.66	221	⇑iP	Pn	00 56 47.8	+0.2
BCIP				i S	Sn	00 56 56.9	+0.1
UPA	Univ. de Panam	0.69	191	i P	Pn	00 56 48.1	+0.1
UPA				i S	Sn	00 56 57.2	-0.4
ARRA3	Arraijan, Pana	0.74	200	⇓eP	Pn	00 56 49.0	+0.4
ZANG	Zanguenga, Cho	0.84	213	eP	Pn	00 56 50.3	+0.2
ZANG				eS	Sn	00 57 01.6	+0.3
CHOR3	La Chorrera	0.84	205	⇓iP	Pn	00 56 50.6	+0.6
CHOR3				i S	Sn	00 57 01.3	0.0
TABO3	Taboga, Panama	0.88	190	eP	Pn	00 56 51.1	+0.6
TOTI	Torti	1.30	124	⇓iP	Pn	00 56 57.0	+0.7
TOTI				eS	Sn	00 57 12.5	+0.1
PNME	Penonome	1.49	218	eP	Pn	00 56 59.0	+0.1
PNME				eS	Sn	00 57 17.4	+0.3
CHIT3	Chitre	1.97	211	⇑eP	Pn	00 57 05.4	-0.2
CHIT3				i S	Sn	00 57 28.8	-0.2
AZU	Azuero	2.05	205	⇑iP	Pn	00 57 06.2	-0.3
AZU				eS	Sn	00 57 30.1	-0.9
AZU	Azuero	2.05	205	P	Pn	00 57 06.3	-0.3
AZU				S	Sn	00 57 29.8	-1.2
AZU	Azuero	2.05	205	⇑iP	Pn	00 57 06.3	-0.3
AZU				i S	Sn	00 57 28.8	-2.2
CAPC	Capurgana	2.27	117	P	Pn	00 57 10.0	+0.4
CAPC				S	Sn	00 57 36.1	-0.2
ACHO3	Achotines, Los	2.36	199	eP	Pn	00 57 12.8	+2.0
GMAL	Guarumal, Vera	2.62	224	eP	Pn	00 57 11.4	-3.0
GMAL	Guarumal, Vera	2.62	224	⇓eP	Pn	00 57 14.2	-0.2
CACAO	El Cacao, Vera	2.72	212	P	Pn	00 57 16.2	+0.4
CACAO				S	Sn	00 57 48.0	+0.5
CACAO	El Cacao, Vera	2.72	212	⇓eP	Pn	00 57 16.2	+0.4
CACAO				eS	Sn	00 57 48.2	+0.7
RBALA	Bur	2.83	254	eP	Pn	00 57 18.1	+0.8
PTAC	Punta Ardita,	2.95	148	P	Pn	00 57 17.9	-1.1
QLAJS	Quebrada de La	3.04	247	eP	Pn	00 57 22.8	+2.6
QLAJS				⇓iP		00 57 24.5	
LCBC	Los crdobas,	3.10	105	P	Pn	00 57 23.5	+2.5
LCBC				S	Sn	00 57 55.4	-1.4
BQTLY	Boquete Panama	3.15	254	eP	Pn	00 57 23.2	+1.3
DVD	David	3.25	248	⇓eP	Pn	00 57 25.3	+2.2
APAC	Apartado, Choc	3.29	122	P	Pn	00 57 25.8	+2.1
APAC				S	Sn	00 58 04.6	+3.0
CLLRA	Cordillera,	3.30	254	eP	Pn	00 57 25.7	+1.7
MCANO	Manzana, Boque	3.32	251	eP	Pn	00 57 26.2	+2.1
BRU2	Volcan	3.36	255	eP	Pn	00 57 13.9	-11
BRU2	Volcan	3.36	255	⇓eP	Pn	00 57 26.4	+1.6
BRIBI	Bribri	3.37	270	eP	Pn	00 57 19.6	-5.2
ALCO	Alturas Coton,	3.46	258	eP	Pn	00 57 27.9	+1.7
ALCO				eS	Sn	00 58 02.2	-3.8
VERH	Veragua Rainfo	3.75	274	eP	Pn	00 57 30.6	+0.6
EDP2	Potrero Grande	3.78	261	eP	Pn	00 57 33.0	+2.6
EDP2				eS	Sn	00 58 12.6	-1.1
DRK0	Durika	3.81	264	eP	Pn	00 57 31.5	+0.5
DRK0	Durika	3.81	264	⇑eP	Pn	00 57 32.0	+1.0
DRK0				eS	Sn	00 58 11.7	-3.0
SAJE	San Jernim	4.07	266	eP	Pn	00 57 35.6	+1.2
SJCC	San Jacinto, C	4.17	86	P	Pn	00 57 37.2	+1.5
SJCC				S	Sn	00 58 20.9	-2.3
ABRB	Las Abras (San	4.27	275	eP	Pn	00 57 35.1	-2.2
VTCV	VTCV, Calle Va	4.28	275	eP	Pn	00 57 38.6	+1.3
CVTV	Tajo	4.30	275	eP	Pn	00 57 39.3	+1.4
CVTQ	Turrialba Volc	4.32	275	eP	Pn	00 57 39.9	+1.8
VTLA	Turrialba Volc	4.33	275	eP	Pn	00 57 39.8	+1.6
TRT2	Tortugero	4.36	282	eP	Pn	00 57 38.3	-0.1
PIEC	Cerro El Cedra	4.50	270	eP	Pn	00 57 41.3	+0.8
LCR2	La Lucha 2	4.54	271	eP	Pn	00 57 42.8	+1.8
ABE2	San Pablo	4.59	271	eP	Pn	00 57 43.7	+2.0
VBV1	V. Barva	4.65	276	eP	Pn	00 57 43.9	+1.3
PICV	PH. Pirrs	4.73	270	eP	Pn	00 57 45.7	+2.3
PAR1A	Puntarenas Pro	4.79	270	eP	Pn	00 57 46.9	+2.7
ZARC	Zaragoza, Cauc	4.98	115	P	Pn	00 57 47.8	+0.9
ZARC				S	Sn	00 58 40.6	-2.7
ARE1	Arenal 1	5.30	279	eP	Pn	00 57 50.4	-0.9

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VARE2	V. Arenal	5.30	279	eP	Pn	00 57 53.2	+1.9
JTS	Las Juntas de	5.51	277	eP	Pn	00 57 56.1	+2.0
CRJC	Cerrejon, Guaj	6.55	78	P	Pn	00 58 08.9	+0.3
CRJC				S	Sn	00 59 16.4	-5.7

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*ISN **05** 01:12:30.4±0.8, 35°.34N×46°.80E, h16km±23km, ML2.7*

*TEH **05** 01:12:31.6, 35°.23N×46°.69E, h10km±70km*

ISC 05 01:12:31.6±1.2**, 35°.23N**±0°.06×**46°.68E**±0°.04**, h10km, n13, σ0s.87**/17**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILIN	Lien	0.38	143	Pg	Pg	01 12 39.8	+0.6
IDHR	Dehrash	0.58	205	Pg	Pg	01 12 42.6	-0.3
IDHR				Sg	Sb	01 12 51.9	-0.4
SNQR	Sonqor, Kerman	0.86	115	Pg	Pb	01 12 48.6	-0.1
IGHG	Ghaleghazi	0.90	186	Pg	Pg	01 12 49.1	+0.2
KCHF	Cheshme Sefid,	0.99	163	Pg	Pg	01 12 50.7	0.0
IBZA	Bozab	1.23	128	Pg	Pg	01 12 55.3	+0.1
GLG1	Gilan-e-Gharb	1.28	210	Pg	Pg	01 12 56.9	+0.7
ILBA	Ilam Banvizeh	1.65	194	Pg	Pg	01 13 03.6	+0.4
HGHA	Hamedan- Ghaye	1.80	81	Pg	Pg	01 13 05.6	-0.4
HSAM	Samen	1.88	122	Pn	Pg	01 13 07.5	-0.1
IKRK	Kirkuk	1.92	276	ePn	Pb	01 13 06.0	-0.7
IKRK				eSn	Sb	01 13 31.0	+0.2
IKRK				AML	AML	01 13 40.1	
	comp=N,72nm,0.5s						
IKRK				AML	AML	01 13 43.0	
	comp=E,83nm,0.8s						
IBDR	Badra	2.20	197	ePn	Pb	01 13 10.0	-1.5
IBDR				eSn	Sb	01 13 39.0	+0.2
BHD	Baghdad	2.73	225	ePn	Pn	01 13 17.0	+1.6
BHD				eSn	Sb	01 13 52.0	-2.0

GCG 05 01:25:36.4±0.5**, 13°.81N×91°.49W, h68km**±44km**, MD3.7, ML3.2, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG8	El Palmar, Qui	0.65	12	eP	Pn	01 25 54.6	+3.7
STG8				i S	Sn	01 26 09.5	+8.0
STG8				IAML		01 26 15.2	
	comp=N,587nm,0.1s						
SOKI	Kika Raxquin	1.01	5	i P	Pn	01 25 56.6	+1.2
SOKI				eS	Sn	01 26 11.6	+2.3
FG8	Yepocapa, Chim	1.01	64	i P	Pn	01 25 53.0	-2.1
FG16	Alotenango, Sa	1.06	64	i P	Pn	01 25 54.1	-1.7
FG16				IAML		01 26 21.9	
	comp=N,2μm,0.2s						

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*SKHL **05** 01:26:52.9±0.2, 42°.10N×143°.10E, h80km±5km, mb5.0/3*

*MOS **05** 01:26:53.3±0.7, 42°.20N×143°.16E, h78km, mb4.5/13, Error ellipse: s-maj=8.8km s-min=5.8km az=88.8*

*JMA **05** 01:26:54.8±0.2, 42°.3N±0°.5×143°.1E±0°.6, h51km±1km, MD4.0/34, MV3.9/34, HIDAKA MOUNTAINS REGION*

JMA Felt I J1 at HIDAKA MOUNTAINS REGION .

*NIED **05** 01:26:54.8, 42°.33N×143°.07E, h51km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.99; $M_{\theta\theta}$-0.39; $M_{\phi\phi}$-0.60; $M_{r\theta}$0.53; $M_{\theta\phi}$-0.53; $M_{\phi r}$0.76; Fault plane solution: $M_0$1.37000×10^{15} NP1: ϕ_s223.00000°, δ24.00000°, λ96.00000°. NP2: ϕ_s36.00000°, δ66.00000°, λ87.00000°.*

*NEIC **05** 01:26:54.2±1.8, 42°.28N±0°.06×143°.1E±0°.1, h63km±6km, mb4.3/34 Error ellipse: s-maj=13.2km s-min=6.7km az=125.0*

*IDC **05** 01:26:55.2±2.1, 42°.33N×143°.07E, h73km±16km, mb3.8/22, mbtmp4.0/26, MS2.8/8, Error ellipse: s-maj=20.4km s-min=15.3km az=119.0*

ISC 05 01:26:54.1±0.6**, 42°.28N**±0°.04×**143°.09E**±0°.03**, h61km**±5km**, n172, σ1s.31**/177**, mb4.3**/47**, 10C-9D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTHR	Tokachihiroo	0.16	86	i P	Pn	01 27 03.2	-0.2
JTHR				eS	Sn	01 27 09.7	-0.4
JTHR	Tokachihiroo	0.16	86	A	A	01 27 03.2	
	comp=N,6.0nm,1.6s,comp=E,8.0nm,1.6s						
JNBK	Urakawa-nobuka	0.25	270	⇓P	Pn	01 27 03.3	-0.5
JNBK				⇓eS	Sn	01 27 10.5	-0.5
JNBK	Urakawa-nobuka	0.25	270	A	A	01 27 03.3	
	comp=N,64nm,0.4s,comp=E,32nm,0.5s						
ERM	Erimo	0.27	169		Pn	01 27 04.3	+0.3
ERM				Sn	Sn	01 27 11.4	+0.2
ERM	Erimo	0.27	169	cePN	Pn	01 27 04.3	+0.3
ERM				pmax	pmax		
	comp=Z,7μm,1.3s						
JEM	Erimo	0.27	169	P	Pn	01 27 04.4	+0.4
JEM				eS	Sn	01 27 12.0	+0.8
JEM	Erimo	0.27	169	A	A	01 27 04.4	
	comp=N,12nm,2.0s,comp=E,15nm,2.0s						
JCH	Churui	0.39	31	P	Pn	01 27 04.7	-0.3
JCH				eS	Sn	01 27 12.2	-0.7
JCH	Churui	0.39	31	A	A	01 27 04.7	
	comp=N,11nm,0.7s,comp=E,9.0nm,0.7s						
JSHD	Hidakashinhida	0.48	286	⇓P	Pn	01 27 05.8	0.0
JSHD				⇓eS	Sn	01 27 15.0	+0.5
JSHD	Hidakashinhida	0.48	286	A	A	01 27 05.8	
	comp=N,17nm,0.9s,comp=E,24nm,2.1s						
JBT2	Biratori 2	0.73	313	⇓P	Pn	01 27 08.9	+0.2
JBT2				⇓S	Sn	01 27 20.1	+0.6
JBT2	Biratori 2	0.73	313	A	A	01 27 08.9	
	comp=N,8.0nm,0.7s,comp=E,7.0nm,0.6s						
JOB	Onbets	0.83	41	P	Pn	01 27 10.8	+0.8
JOB				eS	Sn	01 27 23.0	+1.3
JOB	Onbets	0.83	41	A	A	01 27 10.8	
	comp=N,12nm,3.2s,comp=E,6.0nm,0.9s						
JIAM	Iburiatsuma	0.93	292	eP	Pn	01 27 12.3	+1.1
JIAM				eS	Sn	01 27 24.6	+0.7
JIAM	Iburiatsuma	0.93	292	A	A	01 27 12.3	
	comp=N,18nm,0.3s,comp=E,18nm,0.4s						
JFR	Furan	0.96	338	⇓P	Pn	01 27 10.5	-1.1
JFR				⇓eS	Sn	01 27 23.0	-1.6
JAR	Ashorobuto	1.13	26	P	Pn	01 27 13.8	0.0
JAR				eS	Sn	01 27 27.8	-0.8
JAR	Ashorobuto	1.13	26	A	A	01 27 13.8	
	comp=N,4.0nm,0.9s,comp=E,6.0nm,0.4s						
JEW	Eniwo	1.33	295	A	A	01 27 17.1	
	comp=N,7.0nm,1.4s,comp=E,8.0nm,2.9s						
JAK	Akkeshi	1.39	58	A	A	01 27 18.1	
	comp=N,7.0nm,0.9s,comp=E,5.0nm,1.2s						
AKK	Akkeshi	1.49	60	eP	Pn	01 27 18.4	-0.2
JISS	Ishikarishitsu	1.58	310	A	A	01 27 20.4	
	comp=N,5.0nm,0.5s,comp=E,6.0nm,1.0s						
JAHD	Aomorihigashid	1.66	233	A	A	01 27 22.3	
	comp=N,7.0nm,1.3s,comp=E,6.0nm,0.4s						
JHR	Hokuryu	1.77	326	A	A	01 27 23.1	
	comp=N,6.0nm,0.7s,comp=E,8.0nm,1.1s						
JKA	Kamikawa-asahi	1.87	349	Pn	Pn	01 27 24.4	+0.6
ASAJ	Asahikawa	1.87	349	P	Pn	01 27 24.6	+0.9
	comp=E,211nm,0.3s,baz=201,slow=16,SNR=93						
ASAJ				S	Sn	01 27 40.1	-6.2
	comp=E,138nm,0.5s,baz=207,slow=25,SNR=7.1						
JTM	Tenmabayashi	2.13	226	Pn	Pn	01 27 26.9	-0.3
JTM				Sn	Sn	01 27 52.5	-0.1
NMR	Nemuro--Hokkai	2.23	60	ePN	Pn	01 27 27.8	-0.8
NMR				i S	Sn	01 27 53.8	-1.1
NMR	Nemuro--Hokkai	2.23	60	eP	Pn	01 27 27.8	-0.8
NMR				i S	Sn	01 27 53.8	-1.1
RUSJ	Misakicho	2.41	40	ePN	Pn	01 27 32.6	+1.5
RUSJ				eS	Sn	01 28 03.4	+3.9
YUK	Yuzh-Kuril'sk	2.68	48	ePN	Pn	01 27 37.1	+2.3
YUK				eS	Sn	01 28 07.1	+1.0
YUK				pmax	pmax		
	comp=N,85nm,0.1s						
YUK				pmax	pmax		
	comp=Z,271nm,0.1s						
YUK				pmax	pmax		
	comp=E,162nm,0.2s						
YUK				smax	smax		
	comp=N,576nm,0.3s						
YUK				smax	smax		
	comp=E,919nm,0.5s						
YUK	Yuzh-Kuril'sk	2.68	48	eP	Pn	01 27 35.2	+0.4
YUK				AMB	AMB	01 27 40.5	
	comp=E,270nm,0.1s						
YUK				eS	Sn	01 28 07.1	+1.0
YUK				A	A	01 28 12.7	
	comp=E,580nm,0.4s						
YUK				A	A	01 28 12.7	
	comp=E,920nm,0.4s						
SHO	Shikotan	3.17	59	ePN	Pn	01 27 42.0	+0.6
SHO				i S	Sn	01 28 17.3	-0.7
SHO				pmax	pmax		
	comp=N,28nm,0.2s						
SHO				pmax	pmax		
	comp=Z,51nm,0.2s						
SHO				smax	smax		
	comp=N,297nm,0.4s						
SHO				smax	smax		
	comp=E,434nm,0.2s						
SHO	Shikotan	3.17	59	eP	Pn	01 27 42.0	+0.6
SHO				AMB	AMB	01 27 43.3	
	comp=E,30nm,0.2s						
SHO				AMB	AMB	01 27 43.3	
	comp=E,50nm,0.2s						
SHO				i S	Sn	01 28 18.7	+0.7
SHO				A	A	01 28 22.1	
	comp=E,300nm,0.3s						
SHO				A	A	01 28 22.1	
	comp=E,430nm,0.3s						
KUR	Kuril'sk	4.55	48	ePN	Pn	01 28 03.6	+3.3
KUR				eS	Sn	01 28 56.7	+4.9
KUR				pmax	pmax		
	comp=Z,53nm,0.6s						
KUR				smax	smax		
	comp=N,108nm,0.6s						
KUR				smax	smax		
	comp=E,77nm,0.5s						
KUR	Kuril'sk	4.55	48	eP	Pn	01 28 00.5	+0.2
KUR				AMB	AMB	01 28 08.6	
	comp=E,50nm,0.5s						
KUR				eS	Sn	01 28 51.3	-0.5
KUR				A	A	01 29 06.8	
	comp=E,110nm,0.5s						
KUR				A	A	01 29 06.8	
	comp=E,80nm,0.5s						
YSS	Yuzhno-Sakhali	4.68	357	ePN	Pn	01 28 04.5	+2.4
YSS				eS	Sn	01 28 59.4	+4.4
YSS				pmax	pmax		
	comp=Z,30nm,0.5s						
YSS				smax	smax		
	comp=N,30nm,0.5s						
YSS				smax	smax		
	comp=E,20nm,0.4s						
YSS	Yuzhno-Sakhali	4.68	357	eP	Pn	01 28 04.3	+2.2
YSS				eS	Sn	01 28 56.9	+1.9
JMM	Marumori	4.75	203	Pn	Pn	01 28 02.1	-1.0
MJA0	Matsu Arr-Jizo	6.84	215	ePN	Pn	01 28 33.1	+1.2
MJA0				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MJB9	Matsu-Tunnel	6.86	215	Pn	Pn	01 28 33.7	+1.6
MAJO	Matsushiro	6.86	215	Pn	Pn	01 28 33.9	+1.8
MAJO	Matsushiro	6.86	215	PN	Pn	01 28 33.9	+1.8
MJAR	Matsushiro Arr	6.86	215	P	Pn	01 28 32.7	+0.6
	comp=Z,2.2nm,0.5s,baz=31,slow=11,SNR=7.4						
MJAR				LR	LR	01 31 57.7	
	comp=Z,19nm,21.9s,baz=72,slow=44						
JGF	Kuroka	8.02	216	Pn	Pn	01 28 49.2	+1.2
USRK	Ussuriysk Ar.	8.33	287	P	Pn	01 28 53.3	+1.2
	comp=Z,1.5nm,0.4s,baz=89,slow=16,SNR=4.8						
TYV	Tymovskoe	8.59	358	ePN	Pn	01 28 58.2	+2.6
TYV				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TYV				pmax	pmax		
	comp=Z,100nm,3.5s						
TYV	Tymovskoe	8.59	358	eP	Pn	01 28 58.2	+2.6
TYV				eS	Sn	01 30 31.5	+0.6
GRNR	Gornyy	9.65	334	⇓iPN	Pn	01 29 13.2	+3.1
GRNR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,80nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,40nm,14.0s						
KLR	Kul'dur	10.53	315	P	Pn	01 29 24.1	+2.0
	comp=Z,1.9nm,0.7s,baz=131,slow=13,SNR=4.9						
KLR				LR	LR	01 33 41.1	
	comp=Z,29nm,20.1s,baz=154,slow=39						
KLR	Kul'dur	10.53	315	cePN	Pn	01 29 25.4	+3.3
KLR				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KLR	Kul'dur	10.53	315	eP	Pn	01 29 23.3	+1.2
BNX	BinXian	11.81	292	⇑P	Pn	01 29 41.6	+2.0
BNX	BinXian	11.81	292	⇑P	Pn	01 29 41.7	+2.1
BNX				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BNX				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KSRS	Korea Array	12.61	253	P	Pn	01 29 51.3	+0.8
	comp=Z,1.5nm,0.7s,baz=67,slow=13,SNR=6.7						
KSRS				LR	LR	01 34 34.3	
	comp=Z,15nm,18.7s,baz=50,slow=36						
KSRS	Korea Array	12.61	253	ePN	Pn	01 29 51.9	+1.4
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KSRS	Korea Array	12.61	253	erx	rx	01 29 51.9	
MA2	Magadan	17.96	13	LR	LR	01 37 24.8	
	comp=Z,27nm,19.6s,baz=164,slow=35						
SEY	Seymchan	21.40	12	P	P	01 31 34.1	-2.3
	comp=Z,1.1nm,0.3s,baz=181,slow=7.2,SNR=5.6						
	comp=Z,1.1nm,0.3s						
SEY	Seymchan	21.40	12	ceP	P	01 31 35.1	-1.3
SEY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SEY	Seymchan	21.40	12	eP	P	01 31 35.1	-1.3
HHC	Hu-ho-hao-te	23.57	277	eP	P	01 31 58.1	-1.1
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
SONM	Songino Array	26.33	295	P	P	01 32 25.1	+0.9
SONM	Songino Array	26.33	295	P	P	01 32 24.0	-0.3
	comp=Z,3.0nm,0.7s,baz=90,slow=8.8,SNR=14						
SONM				LR	LR	01 43 50.4	
	comp=Z,47nm,18.7s,baz=94,slow=39						
	comp=Z,3.0nm,0.7s						
SONM	Songino Array	26.33	295	eP	P	01 32 24.3	0.0
SONM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BILL	Bilibino	28.64	18	i P	P	01 32 43.8	-0.7
BILL				pmax	pmax		
	comp=Z,7.0nm,2.3s						
BILL	Bilibino	28.64	18	eP	P	01 32 43.8	-0.7
H11N2	WAKE ISLAND Hy	30.17	131	T	T	02 04 32.8	
	baz=324,slow=75,SNR=101						
H11N1	WAKE ISLAND Hy	30.18	131	T	T	02 04 30.0	
	baz=324,slow=75,SNR=114						
H11N3	WAKE ISLAND Hy	30.19	131	T	T	02 04 34.3	
	baz=324,slow=75,SNR=112						
H11S1	WAKE ISLAND Hy	31.05	133	T	T	02 05 36.4	
	baz=325,slow=76,SNR=69						
H11S3	WAKE ISLAND Hy	31.05	133	T	T	02 05 37.5	
	baz=325,slow=76,SNR=67						
H11S2	WAKE ISLAND Hy	31.07	133	T	T	02 05 36.5	
	baz=325,slow=76,SNR=60						
GTA	Gaotai	32.60	280	P	P	01 33 20.6	+0.7
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NRIK	Noril'sk	39.13	332	P	P	01 34 14.7	-0.5
	comp=Z,0.7nm,0.3s,baz=93,slow=12,SNR=1.9						
	comp=Z,0.7nm,0.3s						
ZAA0	Zalesovo Array	39.52	308	P	P	01 34 18.1	-0.6
ZAA0				IAmb	IAmb	01 34 19.4	
	comp=Z,4.2nm,0.8s						
ZALV	Zalesovo Beam	39.52	308	P	P	01 34 19.1	+0.4
ZALV	Zalesovo Beam	39.52	308	P	P	01 34 18.6	0.0
	comp=Z,3.3nm,0.5s,baz=90,slow=7.4,SNR=15						
ZALV				PcP	PcP	01 36 23.1	-2.0
	comp=Z,0.3nm,0.3s,baz=108,slow=4.7,SNR=3.6						
ZALV				LR	LR	01 50 43.0	
	comp=Z,24nm,19.6s,baz=17,slow=36						
	comp=Z,3.3nm,0.5s						
ZALV	Zalesovo Beam	39.52	308	eP	P	01 34 18.9	+0.2
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.5s						
WMQ	Urumqi	39.87	292	eP	P	01 34 23.6	+1.9
WMQ				LR	LR		
	comp=Z,120nm,20.5s						
E19K	Redstone River	40.28	31	P	P	01 34 24.5	-0.3
E19K				IAmb	IAmb	01 35 04.0	
	comp=Z,3.3nm,1.1s						
D20K	Etivluk River	40.69	29	P	P	01 34 28.0	-0.2
D20K				IAmb	IAmb	01 34 51.3	
	comp=Z,7.1nm,1.2s						
B20K	Meade River	40.72	27	P	P	01 34 28.0	-0.3
CAST	Castle Rocks	42.22	37	P	P	01 34 41.2	+0.5
E22K	Anaktuvuk Pass	42.39	30	P	P	01 34 41.2	-0.9
KDAK	Kodiak Island	42.42	46	LR	LR	01 52 00.2	
	comp=Z,47nm,19.9s,baz=207,slow=36						
MK31	Makanchi Array	42.63	298	ceP	P	01 34 44.4	+0.1
MKAR	Makanchi Array	42.63	298	P	P	01 34 44.3	0.0
MKAR	Makanchi Array	42.63	298	P	P	01 34 44.0	-0.2
	comp=Z,2.6nm,0.6s,baz=82,slow=9.8,SNR=28						
MKAR				PcP	PcP	01 36 33.9	-1.5
	comp=Z,0.6nm,0.8s,baz=58,slow=4.1,SNR=3.5						
	comp=Z,2.6nm,0.6s						
MKAR	Makanchi Array	42.63	298	eP	P	01 34 44.4	+0.1
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MAKZ	Makanchi	42.83	298	P	P	01 34 45.6	-0.3
MAKZ				IAmb	IAmb	01 34 46.8	
	comp=Z,3.9nm,0.7s						
MAKZ	Makanchi	42.83	298	P	P	01 34 45.6	-0.3
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NEA2	Nenana	43.49	35	P	P	01 34 51.8	+0.8
KURK	Kurchatov	43.88	304	P	P	01 34 53.9	-0.4
KURK				IAmb	IAmb	01 34 55.0	
	comp=Z,7.0nm,0.9s						
KURK	Kurchatov	43.88	304	ceP	P	01 34 54.4	+0.1
KURK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KURK	Kurchatov	43.88	304	eP	P	01 34 54.4	+0.1
KURBB	Kurchatov Arra	43.96	304	P	P	01 34 54.5	-0.4
	comp=Z,3.6nm,0.4s,baz=76,slow=8.7,SNR=42						
KURBB				PcP	PcP	01 36 38.7	-1.0
	comp=Z,0.5nm,0.8s,baz=65,slow=4.4,SNR=2.7						
	comp=Z,3.6nm,0.4s						
CMAR	Chiang Mai Arr	44.24	251	P	P	01 34 57.4	-0.2
	comp=Z,1.5nm,0.3s,baz=54,slow=8.2,SNR=0.8						
CMAR				LR	LR	01 53 02.7	
	comp=Z,14nm,19.1s,baz=285,slow=35						
	comp=Z,1.5nm,0.3s						
ILAR	Eielson Array	44.42	35	P	P	01 34 58.5	+0.1
	comp=Z,0.8nm,0.9s,baz=272,slow=6.7,SNR=7.7						
	comp=Z,0.8nm,0.9s						
SCRK	Sand Creek	45.76	36	P	P	01 35 08.9	-0.3
K27K	Chicken	46.59	36	P	P	01 35 16.9	+1.3
I28M	Miner Creek	47.25	34	P	P	01 35 21.8	+1.0
I28M				IAmb	IAmb	01 35 52.3	
	comp=Z,5.0nm,1.4s						
BVAR	Borovoye Array	48.13	309	P	P	01 35 27.7	0.0
	comp=Z,2.6nm,0.4s,baz=82,slow=9.2,SNR=30						
BVAR				PcP	PcP	01 36 54.9	+0.6
	comp=Z,1.3nm,0.6s,baz=86,slow=2.5,SNR=5.4						
	comp=Z,2.6nm,0.4s						
BRVK	Borovoye	48.18	309	P	P	01 35 28.4	+0.4
BRVK				IAmb	IAmb	01 35 29.2	
	comp=Z,4.5nm,1.2s						
BRVK	Borovoye	48.18	309	ceP	P	01 35 29.0	+1.0
BRVK				pmax	pmax		
	comp=Z,6.0nm,2.5s						
BRVK	Borovoye	48.18	309	eP	P	01 35 29.0	+1.0
BOOM	Boomskoye usch	48.38	294	P	P	01 35 29.8	-0.1
BOOM				IAmb	IAmb	01 35 31.2	
	comp=Z,4.0nm,0.7s						
BOOM	Boomskoye usch	48.38	294	P	P	01 35 29.8	-0.1
BOOM				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HYT	Haines Junctio	49.37	39	P	P	01 35 39.2	+2.0
HYT				IAmb	IAmb	01 36 08.3	
	comp=Z,3.5nm,1.1s						
KK31	Karatay Array	51.75	297	P	P	01 35 54.7	-0.6
KK31				IAmb	IAmb	01 35 56.9	
	comp=Z,1.3nm,0.6s						
KK31	Karatay Array	51.75	297	P	P	01 35 54.7	-0.6
KK31				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KKAR	Karatay Array	51.75	297	P	P	01 35 55.3	0.0
KKAR	Karatay Array	51.75	297	P	P	01 35 55.3	0.0
ARTI	Arti	53.48	316	P	P	01 36 07.6	-0.2
ARTI	Arti	53.48	316	P	P	01 36 07.3	-0.4
	comp=Z,6.5nm,0.5s,baz=86,slow=3.3,SNR=14						
	comp=Z,6.5nm,0.5s						
ARTI	Arti	53.48	316	c iP	P	01 36 07.4	-0.4
ARTI						01 37 07.0	
ARTI				S	S	01 43 38.8	+3.1
ARTI				SS	SKiKP	01 47 16.5	-0.8
ARTI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SIMJ	Simiganj	54.80	293	P	P	01 36 17.2	-0.7
SIMJ				IAmb	IAmb	01 36 18.2	
	comp=Z,3.4nm,0.6s						
EUNU	Eureka	54.81	9	P	P	01 36 16.0	-1.3
EUNU				IAmb	IAmb	01 36 47.8	
	comp=Z,3.0nm,1.2s						
AB31	Akbulak array	55.64	308	P	P	01 36 23.7	+0.2
AB31				IAmb	IAmb	01 36 24.7	
	comp=Z,6.4nm,1.3s						
ABKAR	Akbulak array	55.64	308	P	P	01 36 23.5	-0.1
SPITS	Spitsbergen Ar	55.64	348	P	P	01 36 22.4	-0.8
	comp=Z,2.8nm,0.8s,baz=61,slow=8.7,SNR=5.9						
	comp=Z,2.8nm,0.8s						
KBL	Kabul	56.86	289	P	P	01 36 31.4	-1.4
KBL	Kabul	56.86	289	P	P	01 36 31.4	-1.4
KBL				pmax	pmax		
	comp=Z,8.0nm,1.5s						
RES	Resolute Bay	57.20	16	P	P	01 36 33.6	-0.7
RES				IAmb	IAmb	01 36 34.4	
	comp=Z,4.1nm,1.3s						
RES	Resolute Bay	57.20	16	P	P	01 36 33.6	-0.7
RES				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KEV	Kevo	59.02	339	P	P	01 36 46.5	-0.5
KEV	Kevo	59.02	339	P	P	01 36 46.5	-0.5
KEV				pmax	pmax		
	comp=Z,17nm,1.3s						
ARCES	ARCESS Array B	59.56	339	P	P	01 36 51.0	+0.2
ARCES	ARCESS Array B	59.56	339	P	P	01 36 49.1	-1.7
	comp=Z,0.4nm,0.4s,baz=47,slow=8.9,SNR=11						
	comp=Z,0.4nm,0.4s						
ARCES	ARCESS Array B	59.56	339	eP	P	01 36 51.3	+0.5
WRA	Warramunga Arr	62.43	189	P	P	01 37 10.4	-0.4
	comp=Z,0.8nm,0.9s,baz=5.7,slow=6.9,SNR=2.5						
	comp=Z,0.8nm,0.9s						
OBN	Obninsk	64.70	322	i P	P	01 37 25.4	0.0
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
OBN	Obninsk	64.70	322	eP	P	01 37 25.4	0.0
FIA1	FINESS Array S	64.79	332	P	P	01 37 24.8	-1.1
FINES	FINESS Array B	64.79	332	P	P	01 37 25.0	-0.8
FINES	FINESS Array B	64.79	332	P	P	01 37 25.2	-0.7
	comp=Z,2.5nm,0.4s,baz=50,slow=6.9,SNR=53						
	comp=Z,2.5nm,0.4s						
FINES	FINESS Array B	64.79	332	eP	P	01 37 25.3	-0.6
FINES				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KIV	Kislovodsk	68.48	310	eP	P	01 37 49.6	-0.2
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV	Kislovodsk	68.48	310	eP	P	01 37 49.6	-0.2
KBZ	Khabaz	68.50	310	P	P	01 37 49.5	-0.3
	comp=Z,1.2nm,0.6s,baz=64,slow=2.2,SNR=4.3						
	comp=Z,1.2nm,0.6s						
NC405	NORSAR Array S	69.65	337	P	P	01 37 55.8	-0.9
HFS	Hagfors	69.84	336	P	P	01 37 57.3	-0.6
	comp=Z,2.1nm,0.4s,baz=47,slow=6.5,SNR=35						
	comp=Z,2.1nm,0.4s						
NB2	NORSAR Subarra	69.85	337	P	P	01 37 57.3	-0.7
	comp=Z,0.4nm,0.5s,baz=34,slow=6.5						
NB2	NORSAR Subarra	69.85	337	P	P	01 37 57.4	-0.6
NOA	NORSAR Array B	69.85	337	P	P	01 37 57.4	-0.6
	comp=Z,0.5nm,0.5s,baz=34,slow=6.3,SNR=8.4						
	comp=Z,0.5nm,0.5s						
AKASG	Malin Array Be	70.95	322	P	P	01 38 03.6	-1.2
	comp=Z,0.7nm,0.4s,baz=44,slow=6.5,SNR=6.8						
	comp=Z,0.7nm,0.4s						
AKASG	Malin Array Be	70.95	322	eP	P	01 38 04.0	-0.8
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	Malin Array Si	70.95	322	ceP	P	01 38 05.2	+0.4
UOSS	Minazif	71.47	287	P	P	01 38 08.1	-0.2
UOSS				IAmb	IAmb	01 38 09.3	
	comp=Z,3.6nm,0.9s						
BUR08	Bucovina Ar. S	74.98	322	P	P	01 38 28.3	-0.5
BURAR	Bucovina Array	75.00	322	P	P	01 38 28.8	-0.1
BRTR	Keskin Array B	76.34	312	P	P	01 38 36.9	+0.1
BRTR	Keskin Array B	76.34	312	P	P	01 38 36.9	+0.1
CLL	Collm	77.18	330	eP	P	01 38 40.0	-1.1
CLL	Collm	77.18	330	eP	P	01 38 40.0	-1.1
EKA	Eskdalemuir Ar	78.61	341	P	P	01 38 48.7	-0.3
	comp=Z,0.4nm,0.5s,baz=21,slow=3.3,SNR=1.5						
	comp=Z,0.4nm,0.5s						

GERES	**GERESS Array B**	**78.92**	**329**	P	**P**	**01 38 51.0**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=61,slow=4.9,SNR=2.3						
	comp=Z,0.2nm,0.4s						
MMAI	**Mount Meron Ar**	**79.98**	**306**	P	**P**	**01 38 55.0**	**-1.9**
	comp=Z,1.1nm,0.6s,baz=36,slow=7.5,SNR=2.1						
	comp=Z,1.1nm,0.6s						
STAL	**STALIGIAL**	**81.42**	**328**	P	**P**	**01 39 02.6**	**-1.7**
STAL				IAmb	IAmb	01 39 24.1	
	comp=Z,2.8nm,1.0s						
FDMO	**Fiordimonte**	**83.91**	**326**	P	**P**	**01 39 15.3**	**-2.0**
FDMO				IAmb	IAmb	01 39 41.8	
	comp=Z,4.2nm,1.2s						
NRCA	**Norcia**	**84.07**	**325**	P	**P**	**01 39 18.2**	**0.0**
NRCA				IAmb	IAmb	01 39 19.7	
	comp=Z,2.6nm,0.7s						
ITM	**Ithomi**	**84.45**	**317**	P	**P**	**01 39 19.6**	**-0.6**
TXAR	**Lajitas Array**	**85.93**	**54**	P	**P**	**01 39 28.7**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=292,slow=3.9,SNR=4.2						
	comp=Z,0.4nm,0.7s						
H03N2	**Juan Fernandez**	**145.96**	**89**	T	T	04 29 33.3	
	baz=300,slow=77,SNR=2.9						
H03N3	**Juan Fernandez**	**145.97**	**89**	T	T	04 29 32.5	
	baz=300,slow=77,SNR=4.6						
H03N1	**Juan Fernandez**	**145.97**	**89**	T	T	04 29 35.0	
	baz=300,slow=77,SNR=5.6						
SNAA	**Sanae**	**146.13**	**199**	PKPbc	**PKPbc**	**01 46 26.0**	**-0.2**
SNAA	**Sanae**	**146.13**	**199**	PKPbc	**PKPab**	**01 46 26.4**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=203,slow=3.0,SNR=2.0						
SNAA	**Sanae**	**146.13**	**199**	PKP2	**PKPbc**	**01 46 26.0**	**-0.2**

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*AEIC **05** 01:37:15.7±0.9, 53°.83N±0°.09×164°.95W±0°.07, h48^{km}±10^{km}, Error ellipse: s-maj=13.9km s-min=3.0km az=158.0*

NEIC 05 01:37:15.7±0.9**, 53°.81N**±0°.06×**164°.96W**±0°.04**, h26**^{km}±6^{km}**, ML2.7**/12**, ML2.6**(AEIC)**, Error ellipse: s-maj=8.4km s-min=3.3km az=165.0, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKUT	**Akutan**	**0.58**	**304**		Pb	01 37 27.7	+0.4
AKUT					Sn	01 37 37.2	+0.4
AKUT				IAML		01 37 38.4	
	comp=N,420nm,0.2s						
AHB	**Akutan Harbor**	**0.59**	**301**		Pn	01 37 28.4	+0.1
AHB					Sn	01 37 37.5	+0.3
AKBBA	**Akutan Broad B**	**0.64**	**297**		Pn	01 37 29.2	+0.1
AKBBA					Sn	01 37 39.0	+0.6
ZRO	**Akutan Zero**	**0.66**	**295**		Pn	01 37 29.3	0.0
ZRO					Sn	01 37 38.9	0.0
AKMO	**Akutan Morgan**	**0.68**	**294**		Pn	01 37 29.6	0.0
AKMO					Sn	01 37 39.6	+0.3
AKGG	**Akutan Green G**	**0.72**	**303**		Pn	01 37 30.4	+0.2
AKGG					Sn	01 37 41.2	+0.9
LVA	**Lava Point**	**0.72**	**299**		Pb	01 37 29.9	+0.2
LVA					Sn	01 37 40.8	+0.3
LVA				IAML		01 37 43.7	
	comp=E,428nm,0.5s						
AKRB	**Akutan Reef Bi**	**0.73**	**296**		Pn	01 37 30.2	-0.1
AKRB					Sn	01 37 41.5	+0.9
WEBT	**Westdahl Beart**	**0.79**	**9**		Pn	01 37 31.0	-0.1
WEBT					Sn	01 37 43.9	+1.9
UNV	**Unalaska Valle**	**0.92**	**273**		Pn	01 37 31.6	-1.1
UNV				Sg	Sb	01 37 43.4	-1.3
MTBL	**Makushin Table**	**1.03**	**279**		Pn	01 37 34.5	+0.1
MTBL					Sb	01 37 47.6	-0.4
MREP	**Makushin Rep't**	**1.06**	**271**		Pn	01 37 34.5	-0.3
SSLS	**Shishaldin Sou**	**1.06**	**32**		Pn	01 37 34.1	-0.8
SSLS					Sn	01 37 48.1	-0.7
SSBA	**Shishaldin**	**1.08**	**27**		Pn	01 37 34.6	-0.5
SSBA					Sn	01 37 48.8	-0.4
MGOD	**Makushin Gods**	**1.14**	**270**		Pn	01 37 35.6	-0.3
MGOD					Sn	01 37 50.6	0.0
ISLZ	**Isanotski Laza**	**1.17**	**38**		Pn	01 37 35.5	-0.8
ISLZ					Sn	01 37 50.5	-1.0
MAPS	**Pakushin South**	**1.18**	**271**		Pn	01 37 36.2	-0.1
MAPS					Sn	01 37 51.5	0.0
ISNN	**Isanotski Nort**	**1.23**	**34**		Pn	01 37 37.2	0.0
ISNN					Sn	01 37 52.6	-0.3
OKTU	**Okmok Mt. Tuli**	**1.89**	**258**		Pn	01 37 46.5	+0.3
OKSP	**Okmok Steeple**	**2.07**	**256**		Pn	01 37 49.2	+0.6
NIKH	**Nikolski High**	**2.48**	**252**	Pn	Pn	01 37 52.7	-1.6
NIKH				IAML		01 38 36.1	
	comp=N,31nm,0.7s						
NIKH				IAML		01 38 37.7	
	comp=E,28nm,1.0s						
SDPT	**Sand Point**	**3.03**	**58**	Pn	Pn	01 37 59.7	-2.1
SDPT				IAML		01 38 41.4	
	comp=N,35nm,1.0s						
CNBA	**Chernabura Isl**	**3.30**	**70**	Pn	Pn	01 38 03.7	-1.9
CNBA				IAML		01 39 59.9	
	comp=E,14nm,1.3s						

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*BER **05** 02:01:22.0±3.2, 71°.89N×4°.26W, h10^{km}, Mw3.6, Confirmed Earthquake*

ISC 05 02:01:23.2±3.5**, 72°.2N**±0°.2×**4°.51W**±0°.09**, h10**^{km}**, n7, σ1^{s}.18**/11**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBG	**Daneborg**	**4.99**	**302**	*e*P	**Pn**	**02 02 37.5**	**-0.5**
DBG				*e*S	**Sn**	**02 03 35.4**	**-0.2**
DBG	**Daneborg**	**4.99**	**302**	*i* P	**Pn**	**02 02 37.2**	**-0.8**
DBG				*e*S	**Sn**	**02 03 34.6**	**-1.1**
DAG	**Danmarks Havn**	**5.92**	**327**	*e*P	**Pn**	**02 02 52.1**	**+1.4**
DAG				*e*S	**Sn**	**02 03 57.4**	**-1.0**
DAG	**Danmarks Havn**	**5.92**	**327**	*i* P	**Pn**	**02 02 52.5**	**+1.8**
DAG				*i* S	**Sn**	**02 03 57.8**	**-0.6**
HSPB	**Hornsund (broa**	**7.12**	**39**	*e*P	**Pn**	**02 03 06.5**	**-0.8**
BRBB	**Barentsburg B**	**7.55**	**30**	*e*P	**Pn**	**02 03 13.7**	**+0.7**
SPA0	**Spitsbergen Ar**	**7.95**	**32**	*e*P	**Pn**	**02 03 19.8**	**+1.2**
SPA0				IAML		02 03 20.7	
	comp=Z,1.8nm,0.9s						

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*NEIC **05** 02:18:04.4±1.9, 67°.02N±0°.02×157°.87W±0°.03, h10^{km}±1^{km}, Error ellipse: s-maj=4.0km s-min=2.9km az=154.0*

AEIC 05 02:18:04.3±1.5**, 67°.00N**±0°.02×**157°.92W**±0°.04**, h6**^{km}±6^{km}**, ML2.2, ML2.5**/106(NEIC)**, Error ellipse: s-maj=2.5km s-min=2.0km az=151.0, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
F19K	**Shaleruckik Mo**	**0.17**	**161**	Pg	Pg	02 18 08.9	+1.2
F19K				IAML		02 18 11.9	
	comp=N,987nm,0.3s						
E19K	**Redstone River**	**0.54**	**30**	Pg	Pg	02 18 13.8	-0.8
E19K				Sg	Sg	02 18 20.1	-1.4
E19K				IAML		02 18 27.5	
	comp=N,217nm,0.2s						
F18K	**Selawik**	**0.79**	**241**		Pg	02 18 19.8	+0.3
F18K					Sg	02 18 30.2	+0.4
F20K	**Avaraart Lake**	**0.86**	**85**	Pg	Pg	02 18 19.7	-1.1
F20K				Sg	Sg	02 18 30.9	-1.0
F20K				IAML		02 18 35.3	
	comp=E,101nm,0.3s						
F20K				IAML		02 18 35.6	
	comp=N,145nm,0.3s						
G19K	**Purcell Mounta**	**0.92**	**158**	Pg	Pg	02 18 21.8	0.0
G19K				Sg	Sg	02 18 34.0	+0.2
G19K				IAML		02 18 38.3	
	comp=N,147nm,0.4s						
E18K	**Tukpahlearik C**	**1.13**	**293**	Pg	Pg	02 18 25.6	-0.4
E18K				Sg	Sg	02 18 39.5	-1.0
E18K				IAML		02 18 43.8	
	comp=E,84nm,0.6s						
E18K				IAML		02 18 44.4	
	comp=N,81nm,0.3s						
G18K	**Tagagawik**	**1.15**	**195**	Pg	Pg	02 18 25.8	-0.4
G18K				Sg	Sg	02 18 40.9	-0.1
G18K				IAML		02 18 44.2	
	comp=N,64nm,0.3s						
G18K				IAML		02 18 44.5	
	comp=E,70nm,0.4s						
E20K	**Nigu River**	**1.43**	**27**		Pn	02 18 30.1	-0.6
E20K					Sg	02 18 50.6	+0.4
F17K	**Baldwin Pennin**	**1.44**	**249**		Pn	02 18 29.9	-0.9
F17K				IAML		02 18 52.6	
	comp=N,77nm,0.9s						
F17K				IAML		02 18 54.8	
	comp=E,72nm,0.7s						
D19K	**Kuna River**	**1.51**	**357**	Pn	Pn	02 18 31.8	-0.1
D19K				IAML		02 18 55.4	
	comp=E,55nm,1.1s						
E17K	**Hotham Inlet**	**1.54**	**275**		Pn	02 18 32.4	+0.3
E17K					Sb	02 18 52.8	0.0
H19K	**Roundabout Mou**	**1.59**	**157**	Pn	Pn	02 18 32.4	-0.5
H19K				IAML		02 18 56.5	
	comp=N,40nm,0.3s						
H19K				IAML		02 18 57.7	
	comp=E,65nm,0.5s						
F21K	**Alatna River**	**1.75**	**80**	Pn	Pn	02 18 34.6	-0.5
F21K				IAML		02 19 01.1	
	comp=E,58nm,0.6s						
F21K				IAML		02 19 03.3	
	comp=N,44nm,0.4s						
D20K	**Etivluk River**	**1.79**	**15**	Pn	Pn	02 18 35.7	0.0
G21K	**Allakaket**	**1.81**	**103**	Pn	Pn	02 18 35.2	-0.8
G21K				IAML		02 19 03.3	
	comp=N,54nm,0.4s						
G21K				IAML		02 19 05.7	
	comp=E,43nm,0.3s						
H18K	**Honhosa River**	**1.86**	**186**	Pn	Pn	02 18 36.6	-0.1
H18K				IAML		02 19 04.2	
	comp=N,45nm,0.5s						
H18K				IAML		02 19 08.6	
	comp=E,41nm,0.5s						
G17K	**Kiwalik Mounta**	**1.87**	**218**		Pn	02 18 36.0	-0.6
G17K					Sb	02 19 02.9	+0.6
H20K	**Anotleneega Mo**	**1.95**	**139**		Pn	02 18 37.5	-0.3
C18K	**Utukok River**	**2.07**	**325**	Pn	Pn	02 18 39.4	-0.2
E21K	**Killik River**	**2.09**	**44**	Pn	Pn	02 18 39.5	-0.3
E21K				IAML		02 19 10.9	
	comp=E,34nm,0.7s						
D17K	**Noatak River**	**2.12**	**292**		Pn	02 18 40.9	+0.7
C19K	**Lookout Ridge**	**2.21**	**344**	Pn	Pn	02 18 41.6	+0.2
C19K				IAML		02 19 19.1	
	comp=N,18nm,0.7s						
H17K	**Granite Mounta**	**2.22**	**202**	Pn	Pn	02 18 41.2	-0.4
H17K				IAML		02 19 15.8	
	comp=E,34nm,0.3s						
H17K				IAML		02 19 17.1	
	comp=N,31nm,0.3s						
G16K	**Koyuk River**	**2.42**	**230**	Pn	Pn	02 18 43.2	-1.0
G16K				IAML		02 19 22.6	
	comp=N,21nm,0.4s						
G16K				IAML		02 19 24.0	
	comp=E,23nm,0.7s						
H21K	**Melozitna Rive**	**2.46**	**121**	Pn	Pn	02 18 43.8	-1.1
C21K	**Knifeblade Rid**	**2.47**	**27**		Pn	02 18 45.3	+0.3
C21K					Sn	02 19 16.2	+0.8
C17K	**DeLong Mountai**	**2.50**	**309**		Pn	02 18 45.0	-0.3
E22K	**Anaktuvuk Pass**	**2.60**	**61**	Pn	Pn	02 18 45.5	-1.4
D22K	**Ayikyak River**	**2.74**	**44**	Pn	Pn	02 18 48.1	-0.6
B18K	**Kokolik River**	**2.79**	**330**		Pn	02 18 49.5	+0.2
B21K	**Ikpikpuk River**	**2.91**	**23**	Pn	Pn	02 18 51.1	+0.1
F15K	**North Star Dit**	**3.01**	**248**	Pn	Pn	02 18 51.7	-0.6
F15K				IAML		02 19 46.4	
	comp=N,9.5nm,0.8s						
I21K	**Tanana**	**3.03**	**124**	Pn	Pn	02 18 52.0	-0.6
I21K				IAML		02 19 42.4	
	comp=N,11nm,0.5s						
I21K				IAML		02 19 43.4	
	comp=E,13nm,1.5s						
B20K	**Meade River**	**3.04**	**5**	Pn	Pn	02 18 51.9	-0.8
B20K				IAML		02 19 55.7	
	comp=E,13nm,1.3s						
C16K	**Lisburne Hills**	**3.12**	**298**	Pn	Pn	02 18 53.7	-0.1
G23K	**Bananza Creek**	**3.13**	**92**	Pn	Pn	02 18 53.6	-0.5
G23K				IAML		02 19 53.2	
	comp=N,11nm,1.1s						
J19K	**Poorman**	**3.16**	**161**	Pn	Pn	02 18 53.6	-0.9
J20K	**Nowinta River**	**3.23**	**149**	Pn	Pn	02 18 55.2	-0.3
I17K	**Unalakleet**	**3.33**	**202**	Pn	Pn	02 18 55.4	-1.4
I17K				IAML		02 19 26.1	
	comp=N,9.6nm,1.4s						
E23K	**Chandalar**	**3.36**	**68**	Pn	Pn	02 18 56.6	-0.7
E23K				IAML		02 20 04.5	
	comp=E,12nm,0.8s						
D23K	**Nanushuk River**	**3.37**	**51**	Pn	Pn	02 18 57.7	+0.4
D23K				IAML		02 19 53.4	
	comp=E,9.7nm,0.5s						
MLY	**Manley**	**3.53**	**121**	Pn	Pn	02 19 00.3	+0.7
H23K	**Yukon River**	**3.57**	**105**	Pn	Pn	02 19 01.1	+1.1
H23K				IAML		02 19 55.4	
	comp=N,6.8nm,1.0s						
H23K				IAML		02 19 59.2	
	comp=E,5.9nm,1.1s						
TOLK	**Toolik Lake Re**	**3.57**	**59**	Pn	Pn	02 19 00.5	+0.4
TOLK				IAML		02 20 06.9	
	comp=N,8.9nm,0.8s						
TOLK				IAML		02 20 07.3	
	comp=E,8.0nm,0.5s						
J18K	**Innoko River**	**3.58**	**171**	Pn	Pn	02 18 60.0	-0.3
J17K	**VABM Dome**	**3.65**	**188**	Pn	Pn	02 19 01.2	+0.1
J17K				IAML		02 20 02.3	
	comp=N,7.7nm,0.9s						
B22K	**Teshekpuk Lake**	**3.74**	**24**	Pn	Pn	02 19 02.0	-0.4
E24K	**Your Creek**	**3.78**	**69**	Pn	Pn	02 19 03.4	+0.4
E24K				IAML		02 20 07.1	
	comp=N,6.5nm,0.9s						
E24K				IAML		02 20 12.5	
	comp=E,5.9nm,0.8s						
J16K	**Anvik River**	**3.90**	**198**	Pn	Pn	02 19 05.0	+0.4
J16K				IAML		02 20 16.5	
	comp=N,8.0nm,1.3s						
C23K	**Itkillik River**	**3.93**	**40**	Pn	Pn	02 19 06.2	+1.3
K20K	**Telida**	**4.00**	**154**	Pn	Pn	02 19 05.6	-0.4
BPAW	**Bear Paw Mtn.**	**4.09**	**132**	Pn	Pn	02 19 06.0	-1.2
G24K	**Hadweenzic Riv**	**4.13**	**89**	Pn	Pn	02 19 06.2	-1.7
G24K				IAML		02 20 15.3	
	comp=E,6.7nm,1.4s						
G24K				IAML		02 20 25.2	
	comp=N,6.0nm,1.0s						
A22K	**Sinclair Lake**	**4.16**	**13**		Pn	02 19 08.1	-0.1
H24K	**Noodor Dome**	**4.20**	**101**	Pn	Pn	02 19 06.3	-2.4
H24K				IAML		02 20 18.8	
	comp=E,4.3nm,1.4s						
CAST	**Castle Rocks**	**4.35**	**143**	Pn	Pn	02 19 10.6	-0.2
CAST				IAML		02 20 08.8	
	comp=E,5.9nm,0.6s						
WRH	**Wood River Hil**	**4.78**	**117**	Pn	Pn	02 19 14.8	-1.9
WRH				IAML		02 20 29.4	
	comp=N,3.5nm,0.3s						
PPLA	**Purkeypile**	**4.78**	**147**	Pn	Pn	02 19 17.9	+1.1
TRF	**Thorofare Moun**	**4.79**	**134**	Pn	Pn	02 19 17.6	+0.6
F25K	**Christian Rive**	**4.79**	**77**	Pn	Pn	02 19 15.7	-1.2
F25K				IAML		02 20 44.9	
	comp=E,4.2nm,1.4s						
F25K				IAML		02 21 10.6	
	comp=N,2.5nm,1.5s						
L18K	**Granite Mounta**	**4.83**	**173**	Pn	Pn	02 19 17.1	-0.3
L18K				IAML		02 20 32.4	
	comp=N,3.9nm,1.4s						
D25K	**Kavik River**	**4.90**	**56**	Pn	Pn	02 19 18.3	-0.1
D25K				IAML		02 20 22.1	
	comp=E,3.1nm,1.1s						
D25K				IAML		02 21 01.6	
	comp=N,3.3nm,1.5s						
L19K	**White Mountain**	**5.01**	**163**	Pn	Pn	02 19 19.5	-0.4
L19K				IAML		02 20 25.4	
	comp=N,3.6nm,0.7s						
IL31		**5.04**	**111**	Pn	Pn	02 19 19.8	-0.4
BMAR	**Burnt Mountain**	**5.20**	**79**	Pn	Pn	02 19 21.2	-1.3
C27K	**Jago River**	**5.89**	**57**	Pn	Pn	02 19 32.2	+0.3

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*NNC **05** 02:41:48.8±6.1, 37°.10N×70°.52E, h0^{km}, mb4.6, mpv4.5, Error ellipse: s-maj=48.9km s-min=38.5km az=169.0*

*IDC **05** 02:41:48.0±9.4, 36°.64N×70°.66E, h195^{km}±65^{km}, mb3.3/3, mbtmp3.9/8, Error ellipse: s-maj=88.9km s-min=42.8km az=174.0*

ISC 05 02:41:50.7±2.0**, 36°.9N**±0°.2×**70°.6E**±0°.1**, h200**^{km}**, n22, σ0^{s}.76**/27**, mb3.6**/3**, 6C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**5.76**	**23**	P	**Pn**	**02 43 15.4**	**+0.2**
	SNR=145						
UCH	**Uchtor**	**6.13**	**28**	P	**Pn**	**02 43 20.2**	**+0.2**
	SNR=7.0						
KK31	**Karatay Array**	**6.23**	**359**	⇑P	**Pn**	**02 43 21.1**	**+0.3**
	13nm,0.2s,baz=170,slow=11,SNR=243						
KK31				⇑S	**Sn**	**02 44 30.6**	**-1.7**
	5.9nm,0.3s,baz=190,slow=24,SNR=12						
EKS2	**Erkin-Say**	**6.27**	**22**	P	**Pn**	**02 43 22.0**	**+0.6**
	SNR=14						
AAK	**Ala-Archa**	**6.48**	**26**	P	**Pn**	**02 43 24.6**	**+0.4**
	SNR=21						
AAK	**Ala-Archa**	**6.48**	**26**	P	**Pn**	**02 43 24.2**	**0.0**
	12µm,0.9s,baz=33,slow=0.2,SNR=0.3						
AAK				S	**Sn**	**02 44 39.5**	**+1.0**
	12µm,0.9s,baz=3.5,slow=0.4,SNR=5.7						
KBK	**Karagaybulak**	**6.67**	**29**	P	**Pn**	**02 43 27.1**	**+0.4**
	SNR=20						
CHMS	**Chumysh**	**6.89**	**26**	P	**Pn**	**02 43 29.6**	**+0.3**
	SNR=14						
CHMS	**Chumysh**	**6.89**	**26**	⇑P	**Pn**	**02 43 29.1**	**-0.3**
	20nm,0.8s						
CHMS				⇓S	**Sn**	**02 44 47.2**	**-0.6**
	10nm,0.7s						
USP	**Ospenovka**	**7.04**	**24**	P	**Pn**	**02 43 31.4**	**0.0**
	SNR=6.8						
TKM2	**Tokmak 2**	**7.15**	**31**	P	**Pn**	**02 43 32.9**	**0.0**
	SNR=55						
TKM2	**Tokmak 2**	**7.15**	**31**	⇑P	**Pn**	**02 43 32.4**	**-0.5**
	17nm,0.4s						
TKM2				⇑S	**Sn**	**02 44 52.9**	**-1.2**
	1.1nm,0.3s						
MKAR	**Makanchi Array**	**13.17**	**38**	P	**Pn**	**02 44 50.0**	**-0.1**
	2.2nm,0.7s,baz=219,slow=12,SNR=18						
AB31	**Akbulak array**	**14.62**	**331**	⇑P	**P**	**02 45 10.0**	**+0.8**
	1.1nm,0.5s,baz=150,slow=12,SNR=26						
AB31				⇓S	**S**	**02 47 50.7**	**+0.3**
	0.2nm,0.3s,baz=146,slow=19,SNR=3.5						
KURBB	**Kurchatov Arra**	**14.87**	**20**	P	**P**	**02 45 12.4**	**+0.5**
	0.4nm,0.3s,baz=198,slow=11,SNR=7.6						
BVAR	**Borovoye Array**	**16.16**	**359**	P	**Pn**	**02 45 27.5**	**+0.9**
	1.3nm,0.4s,baz=162,slow=10.0,SNR=8.5						
AKTO	**Aktyubinsk**	**16.32**	**330**	P	**Pn**	**02 45 29.1**	**+0.5**
	3.3nm,0.6s,baz=146,slow=8.6,SNR=14						
ZALV	**Zalesovo Beam**	**19.71**	**25**	P	**P**	**02 46 04.6**	**0.0**
	3.1nm,0.3s,baz=219,slow=10,SNR=13						
FINES	**FINESS Array B**	**37.02**	**326**	P	**P**	**02 48 40.5**	**-0.3**
	0.8nm,0.5s,baz=111,slow=8.4,SNR=5.7						
	0.8nm,0.5s						
HFS	**Hagfors**	**42.60**	**322**	P	**P**	**02 49 25.8**	**-0.9**
	2.0nm,0.8s,baz=100,slow=7.7,SNR=5.3						
	2.0nm,0.8s						
NB2	**NORSAR Subarra**	**43.91**	**323**	P	**P**	**02 49 36.1**	**-1.1**
	comp=Z,1.1nm,0.8s,baz=98,slow=7.9						
NOA	**NORSAR Array B**	**43.91**	**323**	P	**P**	**02 49 35.6**	**-1.6**
	comp=Z,0.6nm,0.7s,baz=96,slow=7.7,SNR=4.3						
	comp=Z,0.6nm,0.7s						

RSNC 05 03:04:22.4±0.0**, 7°N**±1°×**7°3W**±°**, h143**^{km}±2^{km}**, M3.1, mb3.5, mB6.0, ML2.9, Mw(mB)5.7, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.23**	**195**	P	Pn	03 04 41.7	-0.6
BARC				S	Sn	03 04 57.1	-0.2
BRJC	**Barrancabermej**	**0.64**	**284**	P	Pn	03 04 43.4	-0.3
BRJC				S	Sn	03 05 00.4	+0.5
PAMC	**Pamplona, Colo**	**0.66**	**39**	P	Pn	03 04 44.7	+0.2
PAMC				S	Sn	03 05 01.8	+0.5
RUSC	**La Rusia**	**0.92**	**178**	P	Pn	03 04 45.6	-0.8
RUSC				S	Sn	03 05 04.6	-0.1
PTBC	**PUERTO BERRIO,**	**1.36**	**258**	P	Pn	03 04 48.2	-1.7
TAMC	**Tame, Arauca**	**1.37**	**106**	P	Pn	03 04 50.2	0.0
TAMC				S	Sn	03 05 10.4	-0.9
SPBC	**San Pablo de B**	**1.50**	**219**	P	Pn	03 04 50.7	-0.8
SPBC				S	Sn	03 05 12.6	-1.2
ZARC	**Zaragoza, Cauc**	**1.85**	**291**	P	Pn	03 04 54.2	-1.2
ZARC				S	Sn	03 05 19.8	-0.8
NORC	**Norcasia**	**2.14**	**234**	P	Pn	03 04 57.9	-1.0
NORC				S	Sn	03 05 26.1	-0.8
CHIC	**Chingaza**	**2.26**	**196**	P	Pn	03 05 00.1	-0.6
CHIC				S	Sn	03 05 28.7	-1.3
ROSC	**El Rosal**	**2.30**	**211**	P	Pn	03 05 01.5	+0.3
ROSC				S	Sn	03 05 31.8	+0.9
CVER	**Cruz Verde, Cu**	**2.47**	**203**	P	Pn	03 05 03.3	0.0
CVER				S	Sn	03 05 35.6	+0.8
UREC	**San Jos de Ur**	**2.57**	**291**	P	Pn	03 05 02.2	-1.8
UREC				S	Sn	03 05 32.4	-3.7
GUY2C	**Guyana, Caldas**	**2.74**	**235**	P	Pn	03 05 07.0	+0.3
GUY2C				S	Sn	03 05 39.1	-1.6
VILC	**Villavicencio,**	**2.75**	**192**	P	Pn	03 05 05.8	-0.7
VILC				S	Sn	03 05 40.2	-0.3
NIZA	**Niza - Manizal**	**2.92**	**233**	P	Pn	03 05 11.6	+2.8
NIZA				S	Sn	03 05 46.2	+1.7
CBOC	**Ciudad Bolivar**	**3.03**	**252**	P	Pn	03 05 10.2	+0.2
CBOC				S	Sn	03 05 45.4	-1.4
DBBC	**Dabeiba**	**3.07**	**274**	P	Pn	03 05 09.9	-0.6
DBBC				S	Sn	03 05 45.1	-2.6
ARGC	**Ariguani, Magd**	**3.22**	**340**	P	Pn	03 05 13.6	+1.3
ARGC				S	Sn	03 05 50.9	-0.1
ANIL	**Santa Ana**	**3.24**	**225**	P	Pn	03 05 12.7	-0.2
ANIL				S	Sn	03 05 54.1	+2.2
PRAC	**Prado**	**3.55**	**210**	P	Pn	03 05 15.8	-0.9
PRAC				S	Sn	03 05 57.7	-1.1
ORTC	**Ortega, Tolima**	**3.58**	**216**	P	Pn	03 05 16.4	-0.7
ORTC				S	Sn	03 05 59.5	0.0
APAC	**Apartado, Choc**	**3.60**	**288**	P	Pn	03 05 15.6	-1.6
APAC				S	Sn	03 05 59.2	-0.5
SJCC	**San Jacinto, C**	**3.67**	**326**	P	Pn	03 05 15.9	-2.4
SJCC				S	Sn	03 05 56.9	-4.7
PLMC	**San Jos del P**	**3.68**	**239**	P	Pn	03 05 17.3	-1.0
PLMC				S	Sn	03 06 01.4	-0.3
LCBC	**Los crdobas,**	**3.80**	**302**	P	Pn	03 05 20.6	+0.7
LCBC				S	Sn	03 06 04.4	-0.1
CRJC	**Cerrejon, Guaj**	**4.18**	**3**	P	Pn	03 05 22.6	-2.4
CRJC				S	Sn	03 06 09.6	-4.0
YOTC	**Yotoco, Valle**	**4.27**	**229**	P	Pn	03 05 24.3	-1.9
GUVC	**San Jose del G**	**4.28**	**173**	P	Pn	03 05 24.6	-1.6
GUVC				S	Sn	03 06 14.0	-1.7
CAPC	**Capurgana**	**4.56**	**294**	P	Pn	03 05 26.1	-3.9
CAPC				S	Sn	03 06 17.9	-4.6
MACC	**Macarena, Meta**	**4.70**	**189**	P	Pn	03 05 29.1	-2.7
MACC				S	Sn	03 06 20.2	-5.6
URIC	**Uribia, Colomb**	**4.98**	**13**	P	Pn	03 05 32.2	-3.2
URIC				S	Sn	03 06 28.4	-3.9
MALC	**Bahia Malaga**	**5.04**	**237**	P	Pn	03 05 36.4	+0.2
POPC	**Popayan, Colom**	**5.54**	**220**	P	Pn	03 05 41.7	-1.4
	3.7nm,0.6s						
POPC				S	Sn	03 06 45.0	-1.0
	3.7nm,0.6s						
FLOC	**Florencia**	**5.78**	**206**	P	Pn	03 05 44.7	-1.5
FLOC				S	Sn	03 06 50.2	-1.5

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*IDC **05** 03:13:28.4±1.6, 23°.64S×174°.57W, h0^{km}, mb3.8/5, mbtmp3.9/6, ML5.3/1, MS3.4/1, Error ellipse: s-maj=65.2km s-min=25.7km az=161.0*

ISC 05 03:13:34.0±1.4**, 23°.6S**±0°.3×**174°.6W**±0°.2**, h35**^{km}**, n7, σ1^{s}.11**/6**, mb3.9**/5**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**8.97**	**309**	Pn	**Pn**	**03 15 41.3**	**+0.2**
	1.0nm,0.3s,baz=130,slow=17,SNR=4.3						
	3.4nm,0.5s						
STKA	**Stephens Creek**	**39.41**	**248**	LR	LR	03 36 32.1	
	comp=Z,47nm,18.2s,baz=200,slow=35						
ASAR	**Alice Springs**	**46.93**	**259**	P	**P**	**03 22 02.8**	**+1.2**
	1.0nm,0.7s,baz=103,slow=7.2,SNR=9.8						
	1.0nm,0.7s						
WRA	**Warramunga Arr**	**47.33**	**264**	P	**P**	**03 22 03.3**	**-1.4**
	2.4nm,0.6s,baz=102,slow=7.9,SNR=23						
	2.4nm,0.6s						
NVAR	**Mina Array Bea**	**81.17**	**41**	P	**P**	**03 25 46.6**	**+0.3**
	0.4nm,0.6s,baz=217,slow=5.6,SNR=2.4						
	0.4nm,0.6s						
TXAR	**Lajitas Array**	**86.12**	**56**	P	**P**	**03 26 11.7**	**-0.1**
	0.6nm,0.8s,baz=237,slow=4.7,SNR=5.1						
	0.6nm,0.8s						
ILAR	**Eielson Array**	**90.63**	**12**	P	**P**	**03 26 32.1**	**-0.2**
	0.4nm,0.9s,baz=206,slow=6.0,SNR=4.5						
	0.4nm,0.9s						

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*IDC **05** 03:23:15.9±8.4, 40°.76N×142°.05E, h0^{km}, mb3.7/8, mbtmp3.7/9, ML3.2/1, Error ellipse: s-maj=212.7km s-min=31.8km az=172.0*

*JMA **05** 03:23:28.1±0.1, 41°.5N±0°.4×142°.0E±0°.6, h62^{km}±1^{km}, MV3.1/38, E OFF AOMORI PREF*

ISC 05 03:23:28.2±1.0**, 41°.48N**±0°.05×**141°.98E**±0°.07**, h65**^{km}±8^{km}**, n25, σ0^{s}.80**/29**, mb3.7**/8**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAHD	Aomorihigashid	0.53	246	P	Pn	03 23 41.0	+0.2
JAHD				S	Sn	03 23 50.6	+0.5
JARK	Aomorirokkasho	0.66	225	P	Pn	03 23 42.0	-0.3
JARK				S	Sn	03 23 52.1	-0.5
JOT	Ohata	0.71	262	*i* P	Pn	03 23 42.7	-0.1
JOT				S	Sn	03 23 53.7	+0.1
JKB	Kayabe	0.82	300	*i* P	Pn	03 23 43.8	-0.4
JTM	Tenmabayashi	0.98	225	*i* P	Pn	03 23 46.4	+0.2
JTM				S	Sn	03 23 59.5	0.0
JNBK	Urakawa-nobuka	0.99	35	P	Pn	03 23 45.7	-0.6
JEM	Erimo	1.03	58	*i* P	Pn	03 23 46.8	0.0
JEM				*e*S	Sn	03 24 00.4	-0.3
JIAM	Iburiatsuma	1.14	358	P	Pn	03 23 49.0	+0.8
JANG	Nango	1.16	198	*i* P	Pn	03 23 48.3	-0.3
JANG				*e*S	Sn	03 24 02.9	-0.8
JSR	Shiriuchi	1.18	273	P	Pn	03 23 49.0	+0.3
JSR				S	Sn	03 24 05.1	+1.1
JNB	Noboribetsu	1.21	325	*i* P	Pn	03 23 48.7	-0.5
JYM2	Yakumo 2	1.36	298	*i* P	Pn	03 23 51.7	+0.5
JEW	Eniwo	1.42	344	P	Pn	03 23 52.2	+0.3
JOMM	Oshimamatsumae	1.48	272	P	Pn	03 23 52.9	+0.1
JCH	Churui	1.53	42	P	Pn	03 23 54.3	+0.9
JAH	Hinai	1.65	219	P	Pn	03 23 55.9	+0.9
USRK	Ussuriysk Ar.	7.83	294	Pn	Pn	03 25 17.4	-1.9
	0.3nm,0.3s,baz=101,slow=11,SNR=2.2						
	1.0nm,0.4s						
ZALV	Zalesovo Beam	39.37	308	P	P	03 30 49.0	-2.1
	1.0nm,0.6s,baz=91,slow=10,SNR=3.6						
	1.0nm,0.6s						
MKAR	Makanchi Array	42.27	298	P	P	03 31 14.0	-1.1
	0.2nm,0.5s,baz=92,slow=8.9,SNR=4.7						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	43.73	304	P	P	03 31 27.1	+0.3
	0.9nm,0.4s,baz=79,slow=8.7,SNR=6.0						
	0.9nm,0.4s						
ILAR	Eielson Array	45.55	35	P	P	03 31 41.9	+0.8
	0.4nm,0.9s,baz=281,slow=7.3,SNR=7.6						
	0.4nm,0.9s						
BVAR	Borovoye Array	48.00	310	P	P	03 32 01.2	+0.8
	0.7nm,0.4s,baz=76,slow=9.1,SNR=4.3						
	0.7nm,0.4s						
FINES	FINESS Array B	65.11	332	P	P	03 34 01.9	+0.3
	0.4nm,0.4s,baz=34,slow=7.1,SNR=4.3						
	0.4nm,0.4s						
HFS	Hagfors	70.23	335	P	P	03 34 33.8	-0.1
	0.5nm,0.6s,baz=31,slow=8.6,SNR=1.5						
	0.5nm,0.6s						
AKASG	Malin Array Be	71.07	322	P	P	03 34 39.2	0.0
	0.3nm,0.3s,baz=45,slow=6.9,SNR=5.5						
	0.3nm,0.3s						

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*ISN **05** 03:29:02.6±0.4, 34°.47N×45°.52E, h14^{km}±19^{km}, ML2.8*
*TEH **05** 03:29:02.4, 34°.45N×45°.61E, h8^{km}±24^{km}*
ISC 05 03:29:01.8±1.0**, 34°.50N**±0°.04×**45°.65E**±0°.03**, h14**^{km}±6^{km}**,**
n14, σ0^{s}67/20**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KGS1	Ghasr-e-Shirin	0.05	276	Pg	Pg	03 29 04.3	-0.2
KGS1				Sg	Sg	03 29 06.6	+0.4
GLG1	Gilan-e-Gharb	0.44	151	Pg	Pb	03 29 10.9	-0.6
IDHR	Dehrash	0.64	72	Pg	Pb	03 29 14.9	-0.1
IDHR				Sg	Sn	03 29 26.0	-0.8
IGHG	Ghaleghazi	0.78	102	Pg	Pb	03 29 17.7	+0.4
IGHG				Sg	Sn	03 29 30.6	+0.3
ILIN	Lien	1.16	69	Pg	Pg	03 29 25.2	+1.0
KCHF	Cheshme Sefid,	1.17	101	Pg	Pg	03 29 24.9	+0.4
IKRK	Kirkuk	1.40	310	*e*Pn	Pg	03 29 29.0	+0.2
IKRK				*e*Sn	Sg	03 29 48.0	+1.0
IKRK				AML	AML	03 29 51.7	
	comp=E,262nm,0.5s						
IKRK				AML	AML	03 30 00.4	
	comp=N,146nm,0.5s						
IBDR	Badra	1.41	170	*e*Pg	Pb	03 29 28.0	+0.1
IBDR				*e*Sg	Sg	03 29 47.0	-0.2
BHD	Baghdad	1.62	221	*e*Pn	Pb	03 29 31.0	-0.5
BHD				*e*Sn	Sb	03 29 52.0	+0.2
SNQR	Sonqor, Kerman	1.67	77	Pg	Pg	03 29 34.1	+0.2
IBZA	Bozab	1.83	90	Pn	Pg	03 29 36.9	0.0
IKFM	Kafar-mosalman	2.07	117	Pn	Pb	03 29 39.4	+0.2
HGHA	Hamedan- Ghaye	2.81	69	Pn	Pb	03 29 50.8	-1.2
HAGD	Aghdareh	2.90	83	Pn	Pb	03 29 52.1	-1.3

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*MOS **05** 03:33:03.8±1.3, 34°.33N×45°.55E, h14^{km}, mb4.9/35, Error ellipse: s-maj=5.8km s-min=3.1km az=112.8*
*IDC **05** 03:33:03.0±0.5, 34°.38N×45°.64E, h0^{km}, mb4.4/31, mbtmp4.4/41, ML4.1/8, MS3.8/24, Error ellipse: s-maj=12.1km s-min=9.7km az=161.0*
*GII **05** 03:33:05.8±0.0, 34°.35N×45°.64E, h10^{km}, confirmed*
*NEIC **05** 03:33:05.5±1.4, 34°.37N±0°.07×45°.62E±0°.09, h10^{km}±1^{km}, mb4.7/102, Error ellipse: s-maj=13.1km s-min=11.7km az=138.0*
*TEH **05** 03:33:05.8, 34°.42N×45°.60E, h12^{km}±30^{km}*
*ISN **05** 03:33:05.6±0.6, 34°.47N×45°.55E, h6^{km}±23^{km}, ML4.6*
*THR **05** 03:33:06.0±0.0, 34°.47N×45°.53E, h12^{km}±2^{km}, ML4.7*
*DSN **05** 03:33:06.6±0.7, 34°.22N×45°.80E, h10^{km}, mb4.7/2, Error ellipse: s-maj=11.9km s-min=7.4km az=53.0*
*OMAN **05** 03:33:13.0±0.7, 33°.78N×46°.15E, h10^{km}, mb4.5/25, Error ellipse: s-maj=7.4km s-min=5.1km az=53.0*
*NAO **05** 03:33:33.7, 36°.98N×43°.56E, h33^{km}, mb4.5*
ISC 05 03:33:05.8±0.5**, 34°.33N**±0°.03×**45°.66E**±0°.02**, h16**^{km}±3^{km}**,**
h16^{km}:pP-P, n832, σ1^{s}72/836**, mb4.6**/150**, MS3.8**/36**,**
33C-15D, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KGS1	Ghasr-e-Shirin	0.19	341	Pg	Pg	03 33 08.8	-1.6
GLG1	Gilan-e-Gharb	0.30	136	Pg	Pb	03 33 14.1	+1.4
IDHR	Dehrash	0.70	58	Pg	Pg	03 33 19.2	-0.5
IGHG	Ghaleghazi	0.75	90	Pg	Pn	03 33 21.7	-0.2
ILBA	Ilam Banvizeh	0.83	147	Pg	Pn	03 33 23.6	+0.7
ILBA	Ilam Banvizeh	0.83	147	*e*PgA		03 33 25.2	
ILBA				IAML		03 33 52.4	
	comp=Z,2.2nm,1.0s						
KCHF	Cheshme Sefid,	1.14	92	Pg	Pg	03 33 28.7	+0.8
ILIN	Lien	1.22	61	Pg	Pb	03 33 28.9	+0.2
IBDR	Badra	1.23	169	*e*Pg	Pg	03 33 32.0	+2.4
IBDR				*e*Sg	Sg	03 33 52.0	+6.3
IBDR				AML	AML	03 33 56.5	
	comp=N,4μm,0.2s						
IBDR				AML	AML	03 34 02.1	
	comp=E,3μm,0.3s						
BHD	Baghdad	1.50	226	*e*Pn	Pg	03 33 35.0	+0.3
BHD				*e*Sn	Sg	03 33 57.0	+2.8
IKRK	Kirkuk	1.52	315	*e*Pn	Pb	03 33 33.0	-0.7
IKRK				*e*Sn	Sb	03 33 53.0	+0.2
IKRK				AML	AML	03 33 55.0	
	comp=N,32μm,0.6s						
IKRK				AML	AML	03 33 55.4	
	comp=E,37μm,0.4s						
SNGE	Sanandaj	1.58	61	*e*PnA		03 33 35.0	
SNGE				IAML		03 34 01.4	
	comp=Z,25nm,1.0s						
SNQR	Sonqor, Kerman	1.71	71	Pg	Pg	03 33 38.0	-0.6
IBZA	Bozab	1.82	85	Pn	Pb	03 33 39.7	+0.8
SRSL	SARDASHT	1.89	354	*e*PnA		03 33 38.3	
SRSL				IAML		03 34 05.3	
	comp=Z,140nm,1.0s						
IKFM	Kafar-mosalman	1.98	113	Pn	Pb	03 33 42.1	+0.6
MAHB	Mahabad	2.43	1	Pn	Pn	03 33 46.1	+1.1
HSAM	Samen	2.44	92	Pn	Pb	03 33 48.2	-1.2
NGD1	Naghade .Az. G	2.62	356	Pn	Pn	03 33 48.7	+1.2
HGHA	Hamedan- Ghaye	2.87	65	Pn	Pn	03 33 53.2	+2.1
HAGD	Aghdareh	2.91	79	Pn	Pn	03 33 54.1	+2.4
IHSH	Hashtrud	3.24	23	Pn	Pn	03 33 58.0	+1.7
IAZR	Azarshahr	3.35	4	Pn	Pn	03 33 59.2	+1.4
ZNJK	Zanjan	3.40	46	*e*PnA		03 34 00.8	
ZNJK				IAML		03 34 57.6	
	comp=Z,2.5nm,1.0s						
GTMR	Gotvand	3.43	122	*e*PnA		03 34 02.0	
GTMR				IAML		03 35 20.8	
	comp=Z,1.7nm,1.0s						
QABG	Abgarm-Qazvin	3.50	66	Pn	Pn	03 34 02.3	+2.5
ASAO	Ashtian	3.61	85	*e*PnA		03 34 05.8	
ASAO				IAML		03 35 20.0	
	comp=Z,1.6nm,1.0s						
ITBZ	Tabriz	3.92	6	Pn	Pn	03 34 05.9	+0.5
JIR1	Jirandeh	4.13	54	Pn	Pn	03 34 10.5	+2.2
IHRS	Heris	4.14	15	Pn	Pn	03 34 09.8	+1.4
IGZV	Ghazvin	4.25	60	Pn	Pn	03 34 12.2	+2.2
GIDE	GILAN DEYLAMAN	4.32	52	*e*PnA		03 34 15.5	
GIDE				IAML		03 35 45.4	
	comp=Z,7.7nm,1.0s						
IQOM	Qom	4.49	82	Pn	Pn	03 34 16.0	+2.6
GEVA	Gevas	4.50	333		Pn	03 34 14.1	+0.7
GHVR	GHOM	4.66	87	*e*Pn	Pn	03 34 19.0	+3.5
GHVR				IAML		03 35 10.4	
	comp=Z,2.0nm,1.0s						
IPIR	Pirpir	4.67	109	Pn	Pn	03 34 18.2	+2.4
JHBN	Jahan bin	4.68	115	Pn	Pn	03 34 18.8	+2.7
CHTH	Charan	4.75	69	*e*Pn	Pn	03 34 19.6	+2.7
CHTH				IAML		03 35 47.5	
	comp=Z,0.5nm,1.0s						
GAS1	Astara - Iran	4.79	31	Pn	Pn	03 34 19.2	+1.9
GRMI	Germi	4.82	21	Pn	Pn	03 34 19.3	+1.5
GRMI	Germi	4.82	21	*e*PnA		03 34 19.4	
GRMI				IAML		03 35 48.3	
	comp=Z,1.5nm,1.0s						
NAX	Nakhchivan	4.84	358	P	Pn	03 34 18.6	+0.6
ZNGN	Zangian	4.88	115	Pn	Pn	03 34 21.3	+2.5
KLST	Kelardasht - M	4.92	62	Pn	Pn	03 34 22.0	+2.7
MARD	Mardin	4.96	308		Pn	03 34 18.9	-0.8
IKLH	Kolahrood	5.03	100	Pn	Pn	03 34 24.0	+3.3
IVRN	Varamin	5.04	81	Pn	Pn	03 34 23.6	+2.8
LKRN	Lenkeran, Azer	5.04	29	P	Pn	03 34 21.6	+0.9
MAKU	Maku	5.08	351	Pn	Pn	03 34 22.3	+0.9
GURO	Guroymak-BITLI	5.13	326		Pn	03 34 21.9	-0.1
MZPU	Pul - Mazandar	5.27	65	Pn	Pn	03 34 27.0	+3.0
IBRJ	Brojen	5.28	116	Pn	Pn	03 34 26.6	+2.3
IDMV	Damavand	5.38	75	Pn	Pn	03 34 28.8	+3.1
KRSH	Karshahi	5.38	92	Pn	Pn	03 34 28.5	+3.0
KBD	Kabd	5.42	161	P	Pn	03 34 29.6	+3.7
ISFB	Sefidab	5.44	88	Pn	Pn	03 34 29.0	+2.7
IZEF	Zefreh	5.74	103	Pn	Pn	03 34 33.6	+3.0
GNI	Garni	5.86	353		Pn	03 34 33.9	+1.8
GNI	Garni	5.86	353	Pn	Pn	03 34 33.7	+1.6
GNI	Garni	5.86	353	Pn	Pn	03 34 34.6	+2.6
	comp=Z,1.5nm,0.3s,baz=318,slow=3.8,SNR=11						
GNI				Sn	Sn	03 35 26.0	-13
	comp=Z,12nm,0.3s,baz=0.1,slow=4.9,SNR=6.2						
GNI				Lg	Lg	03 36 11.8	
	comp=Z,3.6nm,0.3s,baz=282,slow=10,SNR=3.8						
	comp=Z,17nm,0.7s						
GNI	Garni	5.86	353	P	Pb	03 34 51.5	+3.9
GNI	Garni	5.86	353	*i* P	Pn	03 34 33.0	+1.0
GNI	Garni	5.86	353	P	Pn	03 34 34.9	+2.8
GNI	Garni	5.86	353	P	Pn	03 34 33.1	+1.0
	comp=Z,2.0nmcomp=Z,3μmcomp=Z,106nm,0.7s						
IFIR	Firoozkooh	5.97	75	Pn	Pn	03 34 36.6	+2.9
KLNJ	Kolanjah	6.00	122	Pn	Pn	03 34 36.6	+2.4
ILAS	Lasjerd	6.09	78	Pn	Pn	03 34 37.7	+2.3
IRAM	Ramesheh	6.17	112	Pn	Pn	03 34 38.7	+2.2
GANJ	Ganja	6.33	5	P	Pn	03 34 38.9	+0.5
MNGR	Mingechevir, A	6.53	10	P	Pn	03 34 41.0	-0.2
KARS	Kars	6.62	343		Pn	03 34 42.0	-0.4
KARS	Kars	6.62	343	P	Pn	03 34 42.1	-0.4
SEKA	Sheki	6.98	10	P	Pn	03 34 46.9	-0.4
KOPT	Kop Dagi	7.02	326		Pn	03 34 47.4	-0.7
GAZ	Gaziantep	7.43	295		Pn	03 34 53.9	+0.3
ARPR	Arapgir-MALATY	7.56	311		Pn	03 34 55.2	-0.3
DSBU	Dashti - Bushe	7.63	140	Pn	Pn	03 34 58.6	+2.2
ASF	Jabal al Asfar	7.65	256	Pn	Pn	03 34 56.5	-0.2
	comp=Z,3.8nm,0.3s,baz=85,slow=8.0,SNR=31						
ASF				Sn	Sn	03 36 20.9	-2.1
	comp=Z,3.0nm,0.3s,baz=76,slow=3.3,SNR=3.5						
ASF				Lg	Lg	03 37 08.2	
	comp=Z,3.9nm,0.3s,baz=110,slow=22,SNR=10						
ASF				LR	LR	03 38 42.5	
	comp=Z,1μm,18.8s,baz=129,slow=44						
	comp=Z,8.4nm,0.4s						
IMEH	Mehriz	8.08	109	Pn	Pn	03 35 04.9	+2.3
KSHT	Keshet	8.32	263	P	Pn	03 35 07.1	+1.3
NATI	Neve Ativ	8.33	265	P	Pn	03 35 05.9	0.0
MMAI	Mount Meron Ar	8.65	264	Pn	Pn	03 35 11.4	+1.1
	comp=Z,2.5nm,0.3s,baz=77,slow=15,SNR=8.6						
MMAI				Lg	Lg	03 37 37.4	
	comp=Z,8.7nm,0.3s,baz=101,slow=37,SNR=5.4						
MMAI				LR	LR	03 39 12.5	
	comp=Z,833nm,18.4s,baz=90,slow=43						
	comp=Z,1.3nm,0.3s						
MAK	Makhachkala	8.74	9	*d i*P	Pn	03 35 07.0	-4.4
MAK				*e*S	Sn	03 36 43.7	-5.9
MAK				pmax	pmax		
	comp=Z,60nm,1.0s						
MAK				MLR	MLR		
	comp=Z,830nm,10.0s						
HNTI	Hanita	8.83	265	P	Pn	03 35 12.6	-0.1
GHAJ	Ghor Haditha	9.02	253		Pn	03 35 15.4	+0.2
GHAJ	Ghor Haditha	9.02	253	P	Pn	03 35 15.7	+0.4
DSI	Dead Sea	9.07	255	P	Pn	03 35 16.6	+0.7
BNN	Bunyan	9.09	303		Pn	03 35 16.5	0.0
SLTI	Sal'it	9.13	260	P	Pn	03 35 18.5	+1.6
MSBI	Mazada	9.18	254	P	Pn	03 35 18.4	+0.9
TOKA	Tokat	9.45	312		Pn	03 35 21.9	+0.7
TKDS	Koohdasht(Taba	9.55	91	Pn	Pn	03 35 25.2	+2.5
SHMA	Al-Shehemyia	9.61	150	P	Pn	03 35 23.2	-0.2
KBZ	Khabaz	9.63	348	Pn	Pn	03 35 26.5	+2.9
	comp=Z,0.2nm,0.3s,baz=171,slow=8.8,SNR=33						
	comp=Z,18nm,0.9s						
SHA1	Shidzhatmaz	9.68	347	*i* P	Pn	03 35 26.2	+1.6
PRNI	Paran	9.85	249	P	Pn	03 35 27.1	+0.4
KVAR	Kislovodsk Arr	9.89	347	Pn	Pn	03 35 28.9	+1.7
	comp=Z,13nm,0.9s,baz=172,slow=7.1						
KIV	Kislovodsk	9.89	347		Pn	03 35 26.3	-1.0
KIV	Kislovodsk	9.89	347	*e*P	Pn	03 35 29.5	+2.2
KIV				pmax	pmax		
	comp=Z,44nm,1.1s						
KIV				pmax	pmax		
	comp=Z,104nm,13.0s						
KIV	Kislovodsk	9.89	347	*i* P	Pn	03 35 31.0	+3.8
	SNR=6.8						
HRFI	Mount Harif	9.97	247	P	Pn	03 35 29.6	+1.3
SBZV	Sabzevar	9.97	75	Pn	Pn	03 35 31.4	+2.8
BJRD	Bojnurd	10.09	67	*e*PnA		03 35 34.1	
KRMI	Paran Flat	10.17	249	P	Pn	03 35 31.6	+0.5
MBRI	Mt Berech	10.18	247	P	Pn	03 35 32.4	+1.1
CSS	Mathiatis	10.18	277	P	Pn	03 35 31.9	+0.7
	comp=Z,11nm,0.8s						
EIL	Elat	10.21	246	Pn	Pn	03 35 31.8	+0.2
	comp=Z,1.9nm,0.3s,baz=55,slow=12,SNR=14						
EIL				LR	LR	03 40 25.2	
	comp=Z,845nm,18.4s,baz=82,slow=43						
	comp=Z,4.9nm,0.4s						
EIL	Elat	10.21	246	P	Pn	03 35 32.5	+0.9
SOC	Sochi	10.33	335	*e*P	Pn	03 35 29.6	-3.7
SOC				*e*SS	Sn	03 37 35.9	+7.2
SOC				MLR	MLR		
	comp=Z,743nm,13.0s						
TRNA	Turayna	10.71	152	P	Pn	03 35 38.6	+0.2
RAYN	Ar Rayn	10.77	181		Pn	03 35 39.1	-0.3
RAYN	Ar Rayn	10.77	181	P	Pn	03 35 39.3	-0.1
RAYN				S	Sn	03 37 37.4	-2.2
RAYN	Ar Rayn	10.77	181	P	Pn	03 35 39.1	-0.3
RAYN	Ar Rayn	10.77	181	P	Pn	03 35 39.3	-0.1
GOF	Gofitskoye	10.90	350	*ce*P	Pn	03 35 45.0	+3.9
LABN	Labinsk	10.98	341	*e*P	Pn	03 35 45.0	+2.9
LABN				*e*S	Sn	03 37 49.8	+5.2
LABN				pmax	pmax		
	comp=Z,15nm,0.7s						
LABN				MLR	MLR		
	comp=E,2μm,14.0s						
LABN				MLR	MLR		
	comp=Z,1μm,15.0s						
LABN				MLR	MLR		
	comp=N,848nm,10.0s						
DIKM	Dikmen	10.99	315	P	Pn	03 35 42.8	+0.6
	comp=N,365nmcomp=N,12nm,1.4s						
BR131	Keskin Array S	11.01	303		Pn	03 35 42.9	+0.1
BR131	Keskin Array S	11.01	303	P	Pn	03 35 42.9	+0.1
BRTR	Keskin Array B	11.01	303		Pn	03 35 42.4	-0.4
BRTR	Keskin Array B	11.01	303	P	Pn	03 35 42.4	-0.4
JRN	Qarnain Island	11.24	144	P	Pn	03 35 45.4	-0.4
JRN				S	Sn	03 37 44.7	-6.5
SLWR	Sila	11.49	151	P	Pn	03 35 49.4	+0.1
SLWR				S	Sn	03 37 51.0	-6.3
ILGA	Ilgaz	11.60	309		Pn	03 35 50.0	-0.8
ANTO	Ankara	11.66	302		Pn	03 35 51.0	-0.5
ANTO	Ankara	11.66	302	P	Pn	03 35 51.1	-0.5
ANTO	Ankara	11.66	302	P	Pn	03 35 51.7	+0.1
	comp=N,8.1nm,1.2s						
ERBR	Yeremizino-Bor	12.04	342	*e*P	Pn	03 35 58.1	+1.4
ERBR				*e*S	Sn	03 38 13.4	+2.8
ERBR				pmax	pmax		
	comp=Z,37nm,1.3s						
ERBR				MLR	MLR		
	comp=Z,703nm,16.0s						
ANN	Anapa	12.23	331	*e*P	Pn	03 36 00.0	+0.9
ANN				*e*S	Sn	03 38 17.2	+2.2
ANN				pmax	pmax		
	comp=Z,27nm,1.1s						
ANN				MLR	MLR		
	comp=N,1μm,13.0s						
ANN				MLR	MLR		
	comp=Z,764nm,13.0s						
ANN				MLR	MLR		
	comp=E,716nm,13.0s						
SHME	Shamm	12.25	130	P	Pn	03 35 59.4	-0.2
	SNR=15						
SHME				S	Sn	03 38 09.3	-6.5
SHME	Shamm	12.25	130	*i* P	Pn	03 35 58.8	-0.8
	SNR=15						
UMQ	Umm Al-Quwin	12.33	133	P	Pn	03 36 00.4	-0.2
BANOM	Banah	12.44	129	P	Pn	03 36 02.0	-0.2
BANOM				S	Sn	03 38 14.0	-6.5
BANOM	Banah	12.44	129	*i* P	Pn	03 36 01.5	-0.8
	SNR=22						
BANOM				S	Sn	03 38 15.7	-4.8
AJN	Ajban	12.67	138	P	Pn	03 36 06.1	+0.8
NAZ	Nazwa, Dubai	12.73	134	P	Pn	03 36 06.3	+0.2
	SNR=32						
NAZ				S	Sn	03 38 21.0	-6.5
NAZ	Nazwa, Dubai	12.73	134	*i* P	Pn	03 36 07.0	+0.9
	SNR=32						
ISP	Isparta	12.73	290		Pn	03 36 05.6	-0.6
ISP	Isparta	12.73	290	P	Pn	03 36 05.6	-0.6
MZWR	Madinat Zayed	12.74	144	P	Pn	03 36 06.2	0.0
MZWR				S	Sn	03 38 21.4	-6.4
MASF	Masafi	12.74	132	P	Pn	03 36 06.3	-0.1
	SNR=18						
MASF				S	Sn	03 38 21.5	-6.5
MSFE	Esma-Masafi	12.75	132	*i* P	Pn	03 36 06.4	-0.1
	SNR=21						
ASUD	Al Ashush, Dub	12.81	136	P	Pn	03 36 08.4	+1.2
	SNR=6.8						
ASUD				S	Sn	03 38 22.7	-6.8
ASUD	Al Ashush, Dub	12.81	136	*i* P	Pn	03 36 08.3	+1.1
	SNR=7.0						
FAQ	Al Faqa, Dubai	12.87	135	P	Pn	03 36 09.3	+1.2
FAQ				S	Sn	03 38 23.4	-7.7
FAQ	Al Faqa, Dubai	12.87	135	P	Pn	03 36 08.6	+0.5
MDH	Madha	12.88	131	P	Pn	03 36 08.0	-0.3
	SNR=11						
MDH				S	Sn	03 38 25.0	-6.3
MDH	Madha	12.88	131	*i* P	Pn	03 36 08.4	+0.1
	SNR=11						
MDUB	Mudurnu	13.03	302		Pn	03 36 09.9	-0.3
ELL	Elmali	13.06	285		Pn	03 36 09.9	-0.8
ELL	Elmali	13.06	285	P	Pn	03 36 09.9	-0.8
UOSS	Minazif	13.09	133	Pn	Pn	03 36 11.0	-0.1
UOSS	Minazif	13.09	133	P	Pn	03 36 10.8	-0.2
UOSS				S	Sn	03 38 29.8	-6.5
UOSS	Minazif	13.09	133	*i* P	Pn	03 36 11.0	-0.1
	SNR=7.1						
HATD	Hatta, Dubai	13.13	133	P	Pn	03 36 12.2	+0.6
	SNR=12						
HATD				S	Sn	03 38 30.6	-6.8
HATD	Hatta, Dubai	13.13	133	*i* P	Pn	03 36 12.2	+0.6
	SNR=13						
ASHO	Ashiyiah	13.19	134	P	Pn	03 36 12.8	+0.3
	SNR=55						
ASHO				S	Sn	03 38 32.3	-6.7
ASHO	Ashiyiah	13.19	134	*i* P	Pn	03 36 12.7	+0.1
	SNR=34						
MZR	Muzera	13.20	147	P	Pn	03 36 13.0	+0.5
	SNR=11						
MZR	Muzera	13.20	147	*i* P	Pn	03 36 12.4	-0.2
	SNR=11						
BORA	Eskisehir	13.34	299		Pn	03 36 14.0	-0.5
ALNE	Al Ain	13.49	137	P	Pn	03 36 17.1	+0.5
	SNR=11						
ALNE				S	Sn	03 38 39.7	-6.6
ALNE	Al Ain	13.49	137	*i* P	Pn	03 36 17.1	+0.5
	SNR=15						
SIM	Simferopol'	13.83	324	*e*P	P	03 36 29.5	+0.1
SIM				pmax	pmax		
	comp=Z,41nm,1.0s						
SOHO	SOHO	13.89	134	P	Pn	03 36 21.8	-0.2
SOHO	SOHO	13.89	134	*i* P	Pn	03 36 21.8	-0.2
	SNR=6.1						
UMZA	Um Al Zommool	14.26	142	P	Pn	03 36 26.8	-0.2
YLV	Yalova	14.35	300	P	Pn	03 36 28.6	+0.3
	comp=Z,282nmcomp=Z,25nm,0.9s						
MANT	Manisa	14.38	292	Pn	Pn	03 36 29.6	+0.7
ARQ	Araqi	14.50	136	P	Pn	03 36 30.1	-0.2
	SNR=8.5						
ARQ				S	Sn	03 39 05.0	-5.8
HOQ	Hoqain	14.77	133	P	Pn	03 36 33.9	-0.1
HOQ				S	Sn	03 39 10.6	-6.8
KLYT	Kilyos	14.84	303	⇑P	P	03 36 38.2	-2.4
KLYT	Kilyos	14.84	303	P	Pn	03 36 35.2	+0.4
BAND	Balkesir-Ban	15.20	298	⇓P	P	03 36 42.6	-2.1
KARP	Karpathos	15.23	280	Pn	Pn	03 36 40.4	+0.3
KARP	Karpathos	15.23	280	P	Pn	03 36 40.5	+0.3
	comp=Z,91nm,1.1s						
BIDO	Bidbid	15.31	131	P	Pn	03 36 41.0	-0.3
BIDO				S	Sn	03 39 24.1	-6.5
BSY	Bisya	15.35	136	P	Pn	03 36 42.0	+0.2
BSY				S	Sn	03 39 24.8	-6.7
SMDO	Samad	15.61	133	P	Pn	03 36 44.9	-0.4
	SNR=10						
SMDO				S	Sn	03 39 31.1	-6.9
WSAR	Wadi Sarin	15.84	131	Pn	Pn	03 36 46.8	-1.3
	baz=331,slow=24,SNR=7.9						
WSAR	Wadi Sarin	15.84	131	P	Pn	03 36 47.5	-0.5
	SNR=9.1						
WSAR				S	Sn	03 39 37.0	-6.3
NGCH	Negor - Chabah	16.11	120	P	Pn	03 36 51.7	+0.1
NGCH				S	Sn	03 39 44.2	-5.8
JMDO	Jabal Madar	16.16	134	P	Pn	03 36 52.8	+0.5
JMDO				S	Sn	03 39 44.8	-6.5
EZN	Ezine	16.37	295	P	Pn	03 36 55.6	+0.8
	comp=Z,526nmcomp=Z,13nm,1.1s						
APE	Apeiranthos	16.58	285	P	P	03 37 04.8	+4.8
APE				pmax	pmax		
	comp=Z,32nm,1.5s						
JURR	Jurilovca	16.59	314	⇓P	P	03 36 59.4	-0.6
TIRR	Tirgusor	16.71	312	Pn	Pn	03 36 59.1	+0.1
TIRR	Tirgusor	16.71	312	⇑P	P	03 37 01.3	0.0
TIRR	Tirgusor	16.71	312	P	P	03 37 01.2	0.0
TIRR	Tirgusor	16.71	312	P	Pn	03 36 59.8	+0.8
	comp=Z,18nm,1.4s						
ALN	Alexandroupoli	16.85	299	Pn	Pn	03 37 01.0	+0.1
ALN	Alexandroupoli	16.85	299	P	Pn	03 37 01.0	+0.1
ALN				pmax	pmax		
	comp=Z,15nm,1.2s						
TLCR		16.86	315	⇓P	P	03 37 02.8	-0.2
TLCR		16.86	315	P	P	03 37 02.8	-0.2
TPGR	Topolog	16.91	314	⇑P	Pn	03 37 02.5	+0.8
PURM	Purcari	17.08	320	P	Pn	03 37 03.9	+0.2
	comp=Z,44nm,0.9s						
IDI	Anoyia	17.09	279		Pn	03 37 04.4	+0.4
IDI				IAmb	IAmb	03 37 13.1	
	comp=Z,44nm,1.0s						
IDI	Anoyia	17.09	279	P	Pn	03 37 04.4	+0.4
	comp=Z,11nm,0.8s,baz=81,slow=13,SNR=13						
VRH	Novokhopyorsk	17.11	352	*e*P	Pn	03 37 01.9	-2.1
VRH				pmax	pmax		
	comp=Z,36nm,0.6s						
HARR	Harsova	17.12	312	⇑P	P	03 37 06.1	+0.2
HARR	Harsova	17.12	312	P	P	03 37 06.1	+0.2
JLN	Jalan Bani Buh	17.12	132	P	Pn	03 37 05.0	+0.6
MHTO	MHTO	17.17	138	P	Pn	03 37 04.1	-0.9
	SNR=15						
CFR	Carcaliu	17.25	314	⇑P	Pn	03 37 06.4	+0.5
CFR	Carcaliu	17.25	314	P	Pn	03 37 06.4	+0.5
VORD	Divnogorie	17.26	346	*e*P	Pn	03 37 05.0	-1.0
VORD				pmax	pmax		
	comp=Z,50nm,1.0s						
RDO	Rodhopi	17.29	299		Pn	03 37 06.8	+0.3
DOK	Doka	17.37	152	P	Pn	03 37 06.1	-1.5
	SNR=10						
VSR	Storozhevoye	17.53	346	*e*P	Pn	03 37 07.3	-2.0
VSR				pmax	pmax		
	comp=Z,50nm,1.0s						

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WHFO  Wadi Hawf         17.88 154   P     Pn      03 37 12.6  -1.3
      SNR=20
MILM  Milestii Mici     17.89 320⇑ iP     Pn      03 37 12.8  -1.0
      comp=Z,50nm,1.1s
MILM                             eS       Sn      03 40 32.0  -0.8
MILM                              LRM     MLR     03 49 35.0
      comp=Z,300nm,13.0s
MILM  Milestii Mici     17.89 320 ⇑P      Pn      03 37 12.9  -0.9
MILM  Milestii Mici     17.89 320c iP     Pn      03 37 12.8  -1.0
MILM                             eS       Sn      03 40 32.0  -0.8
MILM                              pmax    pmax
      comp=Z,50nm,1.1s
VORR  Voronezh          17.95 347 eP      Pn      03 37 13.0  -1.5
VORR                              pmax    pmax
      comp=Z,56nm,0.8s
BELG  Belogornoye       18.11   4   P     Pn      03 37 14.3  -2.2
      comp=Z,1.1nm,0.3s,baz=221,slow=1.3,SNR=14
      comp=Z,41nm,0.9s
ABTO  Aybut             18.23 156   P     Pn      03 37 16.2  -2.0
AB31  Akbulak array     18.28  31         P       03 37 18.8  +0.1
ABKAR Akbulak array     18.28  31         P       03 37 19.1  +0.5
BISRR Bisoca            18.30 313 ⇓P      Pn      03 37 18.4  -0.6
RBK   Rabkut            18.42 153   P     P       03 37 18.7  -1.7
VRI   Vrincioaia        18.46 314 ⇑P      Pn      03 37 21.1  +0.2
VRI   Vrincioaia        18.46 314   P     Pn      03 37 21.0  +0.2
VRI   Vrincioaia        18.46 314   P     Pn      03 37 20.9  +0.1
      comp=Z,14nm,0.9s
AKTO  Aktyubinsk        18.46  26   P     Pn      03 37 20.9  +0.1
      comp=Z,0.3nm,0.3s,baz=210,slow=11,SNR=12
      comp=Z,14nm,0.8s
DMTO  DMTO              18.51 151   P     P       03 37 20.0  -1.4
      SNR=28
MLR   Muntele Rosu      18.74 312         P       03 37 23.7  -0.2
MLR   Muntele Rosu      18.74 312   P     Pn      03 37 24.4   0.0
      comp=Z,0.2nm,0.3s,baz=92,slow=5.1,SNR=5.6
MLR                               LR      LR      03 44 55.0
      comp=Z,329nm,20.3s,baz=120,slow=38
      comp=Z,2.8nm,0.8s
TESR  Tescani           18.86 316 ⇓P      P       03 37 24.6  -0.4
LPSR  Galich'ya Gora    18.89 347 eP      P       03 37 22.7  -2.7
LPSR                              pmax    pmax
      comp=Z,214nm,0.8s
ONER  Baraj Valea Uz    18.91 315 ⇑P      P       03 37 25.5  -0.1
SORM  Soroca            18.91 322 ⇓P      P       03 37 24.0  -1.6
SORM  Soroca            18.91 322   P     P       03 37 24.2  -1.4
TURR  Turia             18.98 314 ⇓P      Pn      03 37 27.0  -0.2
DZET  Dzherino          19.12  70   P     Pn      03 37 31.8  +2.8
DZET                              pmax    pmax
      comp=Z,10.0nm,1.2s
OZUR                    19.14 314 ⇑P      Pn      03 37 28.8  -0.3
SIMJ  Simiganj          19.25  70         Pn      03 37 31.3  +0.7
VOIR                    19.27 311 ⇑P      Pn      03 37 30.4  -0.3
VOIR                    19.27 311   P     Pn      03 37 30.9  +0.2
VOIR                    19.27 311   P     Pn      03 37 30.1  -0.6
      comp=Z,680nmcomp=Z,45nm,1.1s
KBL   Kabul             19.28  83         Pn      03 37 31.8  +0.7
KBL   Kabul             19.28  83   P     Pn      03 37 33.3  +2.2
      SNR=12
KBL   Kabul             19.28  83   P     Pn      03 37 31.8  +0.7
KBL                               pmax    pmax
      comp=Z,16nm,1.1s
DOPR  Dopca             19.31 313 ⇑P      Pn      03 37 30.5  -0.6
ITM   Ithomi            19.46 285         P       03 37 32.0  +0.2
LOT   Lotru             20.07 310 ⇑P      P       03 37 38.4  -0.1
AK07  Malin Array Si    20.18 328   P     P       03 37 38.1  -1.4
AK06  Malin Array Si    20.21 328   P     P       03 37 38.2  -1.6
AK08  Malin Array Si    20.22 329   P     P       03 37 38.3  -1.6
BURAR Bucovina Array    20.28 317   P     P       03 37 40.0  -0.7
BURAR                             IAmb    IAmb    03 37 43.7
      comp=Z,26nm,0.8s
BURAR Bucovina Array    20.28 317   P     P       03 37 40.6  -0.1
AKASG Malin Array Be    20.29 329   P     P       03 37 37.7  -2.9
AKASG                             IAmb    IAmb    03 37 48.6
      comp=Z,26nm,0.8s
AKASG Malin Array Be    20.29 329   P     P       03 37 38.6  -1.9
      comp=Z,14nm,0.9s,baz=142,slow=9.0,SNR=51
AKASG                             LR      LR      03 46 32.6
      comp=Z,182nm,18.7s,baz=140,slow=40
      comp=Z,14nm,0.9s
AKASG Malin Array Be    20.29 329 eP      P       03 37 39.2  -1.4
AKASG                             pmax    pmax
      comp=Z,11nm,0.8s
AKBB  Malin Array Si    20.29 329   P     P       03 37 39.2  -1.4
AKBB                              IAmb    IAmb    03 37 49.1
      comp=Z,50nm,0.9s
AKBB  Malin Array Si    20.29 329ceP      P       03 37 38.9  -1.7
KIEV  Kiev              20.29 329   P     P       03 37 39.1  -1.5
KIEV                              IAmb    IAmb    03 37 49.1
      comp=Z,45nm,0.9s
KIEV  Kiev              20.29 329 ⇓P      P       03 37 38.8  -1.8
KIEV  Kiev              20.29 329   P     P       03 37 39.1  -1.5
KIEV                              pmax    pmax
      comp=Z,45nm,1.0s
KIEV  Kiev              20.29 329   P     P       03 37 39.0  -1.5
      comp=Z,2µmcomp=Z,223nm,0.9s
BUR08 Bucovina Ar. S    20.31 317         P       03 37 39.9  -1.1
AK15  Malin Array Si    20.32 329   P     P       03 37 39.4  -1.6
AK04  Malin Array Si    20.33 329   P     P       03 37 39.5  -1.5
LUBAR Lubar, Ukraine    20.39 325   P     P       03 37 40.3  -1.4
HORU  Horodok           20.58 322   P     P       03 37 42.3  -1.5
GZR   Gura Zlata        20.68 309 ⇑P      P       03 37 44.6  -0.5
GZR   Gura Zlata        20.68 309   P     P       03 37 44.5  -0.5
HERR  Herculane         20.71 308 ⇓P      P       03 37 44.9  -0.4
KSV   Kosov             20.76 319   P     P       03 37 44.2  -1.6
CJR   Cluj-Napoca       20.76 313   P     P       03 37 46.8  +0.9
BTK   Batken            20.81  67   P     P       03 37 47.4  +0.9
BTK                               IAmb    IAmb    03 37 58.5
      comp=Z,42nm,1.3s
BTK   Batken            20.81  67   P     P       03 37 47.4  +0.9
BTK                               pmax    pmax
      comp=Z,42nm,1.3s
MARR  Marisel-Cluj      21.03 313 ⇑P      P       03 37 48.8  -0.1
RAKU  Rahkiv            21.10 317   P     P       03 37 48.9  -0.5
MI28  Mi28,Pidlybu      21.13 327   P     P       03 37 48.3  -1.5
MDVR  Moldovita         21.14 307 ⇓P      P       03 37 49.6  -0.4
KK31  Karatay Array     21.22  58         P       03 37 51.0  +0.3
KK31  Karatay Array     21.22  58   P     P       03 37 51.1  +0.3
KK31                              pmax    pmax
      comp=Z,17nm,1.2s
KKAR  Karatay Array     21.22  58   P     P       03 37 51.3  +0.5
KKAR  Karatay Array     21.22  58   P     P       03 37 51.6  +0.8
KKAR  Karatay Array     21.22  58   P     P       03 37 51.6  +0.8
KKAR                              pmax    pmax
      comp=Z,18nm,1.2s
SURR  Surduc            21.25 310 ⇑P      P       03 37 50.4  -0.7
BMR   Baia Mare         21.30 315   P     P       03 37 52.0  +0.4
BMR                               pmax    pmax
      comp=Z,61nm,1.2s
KEK   Kerkira           21.30 292   P     P       03 37 51.8  +0.1
DRGR                    21.34 313 ⇑P      P       03 37 51.6  -0.4
DRGR                    21.34 313   P     P       03 37 51.7  -0.4
TIR   Tirane            21.50 297 ⇓P      P       03 37 54.7  +0.9
TIR   Tirane            21.50 297   P     P       03 37 54.7  +0.9
BZS   Buzias            21.52 309 ⇑P      P       03 37 52.8  -1.2
BZS   Buzias            21.52 309   P     P       03 37 52.8  -1.2
MEZ   Mezhgor'ye        21.73 317   P     P       03 37 55.8  -0.4
OBN   Obninsk           21.73 346   P     P       03 37 53.8  -2.2
      comp=Z,23nm,0.5s,baz=117,slow=13,SNR=8.7
OBN                               LR      LR      03 47 49.9
      comp=Z,266nm,19.5s,baz=120,slow=41
      comp=Z,23nm,0.5s
OBN   Obninsk           21.73 346 eP      P       03 37 53.3  -2.8
OBN                               pmax    pmax
      comp=Z,65nm,1.3s
OBN                               MLR     MLR
      comp=Z,186nm,15.0s
KORU  Korolevo          21.75 316   P     P       03 37 56.3  -0.2
SJES  Sjenica           21.85 302 eP      P       03 37 56.3  -1.4
BRIU  Brid              21.91 317   P     P       03 37 57.6  -0.6
BERU  Beregovo          22.07 316   P     P       03 37 59.3  -0.6
MOS   Moscow            22.12 348 eP      P       03 37 56.7  -3.6
MOS                              eS       S       03 41 55.1  -8.3
MOS                               pmax    pmax
      comp=Z,88nm,1.0s
DRME  Dracevica, Mon    22.16 299 eP      P       03 38 02.1  +1.2
PDG   Podgorica         22.16 299 eP      P       03 38 03.8  +2.9
LVV   L'vov             22.18 321 eP      P       03 37 59.7  -1.4
RNPP8 Varash            22.24 326   P     P       03 38 00.2  -1.5
RNPP9 Sopachiv          22.28 326   P     P       03 38 00.6  -1.4
RUDO  Rudo              22.37 302 eP      P       03 38 01.9  -1.3
HOLU  Holmets           22.38 316   P     P       03 38 02.2  -0.9
BBLS  Lazi&#263i        22.41 303 eP      P       03 38 02.1  -1.6
TEKS  Tekeris           22.53 305 eP      P       03 38 02.9  -2.0
FRGS  Fruska Gora       22.54 306 eP      P       03 38 03.1  -1.8
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UPM   Unac-Piva         22.59 301 eP      P       03 38 08.8  +3.1
KOLS  Kolonicke sedl    22.65 317 eP      P       03 38 06.6  +0.5
KOLS                              pmax    pmax
      comp=Z,17nm,0.9s
KOLS  Kolonicke sedl    22.65 317 eP      P       03 38 06.6  +0.5
HCY   Herceg Novi       22.72 299 eP      P       03 38 05.8  -1.0
BRY   Bratogost         22.78 300 eP      P       03 38 06.7  -1.0
KWP   Kalwaria Pacla    22.78 319   P     P       03 38 07.1  -0.4
      comp=Z,66nm,1.1s
HAPS  Han Pijesak,BI    22.79 303 eP      P       03 38 02.9  -4.8
NIL   Nilore            22.86  84         P       03 38 09.4  +0.9
NIL                               IAmb    IAmb    03 38 27.1
      comp=Z,28nm,1.4s
NIL   Nilore            22.86  84   P     P       03 38 11.3  +2.8
NIL   Nilore            22.86  84   P     P       03 38 09.4  +0.9
NIL                               pmax    pmax
      comp=Z,28nm,1.4s
TREB  Trebinje          22.88 300 eP      P       03 38 05.6  -2.9
STON  Ston              23.38 300 eP      P       03 38 10.6  -3.0
KECS  Kecovo            23.45 315 eP      P       03 38 15.1  +0.8
KECS                              pmax    pmax
      comp=Z,38nm,1.3s
KECS  Kecovo            23.45 315 eP      P       03 38 15.1  +0.8
STHS  Stebnicka Huta    23.48 317 eP      P       03 38 14.8  +0.2
STHS                              pmax    pmax
      comp=Z,6.0nm,1.2s
STHS  Stebnicka Huta    23.48 317 eP      P       03 38 14.8  +0.2
PSZ   Piszkesteto       23.55 313   P     P       03 38 14.4  -1.0
PSZ                               IAmb    IAmb    03 38 21.0
      comp=Z,22nm,1.1s
PSZ   Piszkesteto       23.55 313 ⇓P      P       03 38 12.9  -2.5
PSZ   Piszkesteto       23.55 313   P     P       03 38 14.4  -1.0
PSZ                               pmax    pmax
      comp=Z,22nm,1.1s
TIP   Timpagrande       23.61 290   P     P       03 38 15.9  -0.1
TIP   Timpagrande       23.61 290 ⇓P      P       03 38 15.2  -0.8
MNK   Minsk             23.71 334 i P     P       03 38 15.6  -1.1
      comp=E,15nm,0.8s
MNK                               i P     P       03 38 15.6  -1.1
      comp=N,23nm,0.6s
MNK                               i P     P       03 38 15.6  -1.1
      comp=Z,47nm,0.7s,baz=141
MNK                               i PP    PnPn    03 38 39.3  -4.9
MNK                               i PPP   PPP     03 38 43.3
MNK                               i S     S       03 42 32.8  +1.8
MNK                               i SS    SnSn    03 43 11.0  +2.1
MNK                               i LQ    LQ      03 46 22.6
MNK                               i LR    LR      03 47 35.1
MNK                               i LRM   MLR     03 48 52.0
      comp=E,125nm,13.0s
MNK                               i LRM   MLR     03 48 57.5
      comp=N,85nm,12.1s
MNK                               i LRM   MLR     03 49 00.5
      comp=Z,66nm,9.7s
MNK   Minsk             23.71 334 i P     P       03 38 15.5  -1.1
MNK                               i PPP   PPP     03 38 43.2
MNK                               i S     S       03 42 32.7  +1.8
MNK                               i SS    SnSn    03 43 11.0  +2.1
MNK                               pmax    pmax
      comp=N,23nm,0.6s
MNK                               pmax    pmax
      comp=E,15nm,0.8s
MNK                               pmax    pmax
      comp=Z,47nm,0.7s
MNK                               MLR     MLR
      comp=E,125nm,13.0s
MNK                               MLR     MLR
      comp=N,85nm,12.0s
MNK                               MLR     MLR
      comp=Z,66nm,10.0s
ARTI  Arti              23.73  18         P       03 38 17.3  +0.4
ARTI  Arti              23.73  18   P     P       03 38 19.2  +2.3
ARTI                                              03 38 52.2
ARTI                              S       S       03 42 36.5  +5.3
ARTI                              SS      SnSn    03 43 15.4  +6.0
ARTI                              MLR     MLR
      comp=Z,212nm,15.0s
AAK   Ala-Archa         23.96  61ceP      P       03 38 21.5  +2.0
AAK                               pmax    pmax
      comp=Z,8.0nm,1.7s
AAK   Ala-Archa         23.96  61   P     P       03 38 21.0  +1.5
NIE   Niedzica          24.01 317   P     P       03 38 20.2  +0.5
NIE   Niedzica          24.01 317   P     P       03 38 19.7   0.0
      comp=Z,8.3nm,1.5s
BLY   Banja Luka        24.19 304 eP      P       03 38 20.2  -1.2
CEL   Celeste           24.26 288   P     P       03 38 22.4  +0.2
      comp=Z,418nmcomp=Z,21nm,0.9s
LANS  Liptovska Anna    24.36 315 eP      P       03 38 23.7  +0.7
LANS                              pmax    pmax
      comp=Z,9.0nm,1.3s
LANS  Liptovska Anna    24.36 315 eP      P       03 38 23.7  +0.7
CUC   Castrocucco       24.38 292         P       03 38 22.3  -1.0
KIRV  Kirov             24.39   5   LR    LR      03 50 00.9
      comp=Z,184nm,18.3s,baz=188,slow=42
KIRV  Kirov             24.39   5ceP      P       03 38 22.2  -0.8
NACGM Naroch            24.43 333 eP      P       03 38 22.3  -1.1
      comp=Z,29nm,0.9s,baz=140
VYHS  Vyhne             24.44 313 eP      P       03 38 22.8  -0.9
VYHS                              pmax    pmax
      comp=Z,6.0nm,1.2s
VYHS  Vyhne             24.44 313 eP      P       03 38 22.8  -0.9
A051A Mrakovica         24.45 304 eP      P       03 38 21.3  -2.6
SRO   Srobarova         24.48 312 eP      P       03 38 24.3  +0.4
SRO                               pmax    pmax
      comp=Z,30nm,1.9s
SRO   Srobarova         24.48 312 eP      P       03 38 24.3  +0.4
A050A Klekovaca         24.57 303 eP      P       03 38 23.4  -1.6
OJC   Ojcow             24.69 318         P       03 38 24.7  -1.2
OJC   Ojcow             24.69 318   P     P       03 38 24.7  -1.2
KSH   Kashi             24.71  69   P     P       03 38 26.9  +0.5
KSH                               pP      pP      03 38 31.2  -0.3
KSH                               S       S       03 42 46.3  -1.4
KSH                               pmax    pmax
      comp=Z,5.0nm,0.8s
KSH                               LR      LR
      comp=N,320nm,13.4s
KSH                               LR      LR
      comp=E,640nm,15.5s
KSH                               LR      LR
      comp=Z,650nm,16.8s
MPLH  Magyarpolny       24.72 310   P     P       03 38 26.3  +0.1
      comp=Z,745nmcomp=Z,44nm,1.1s
BOOM  Boomskoye usch    24.99  62         P       03 38 29.3  +0.5
BOOM                              IAmb    IAmb    03 38 38.8
      comp=Z,15nm,0.9s
BOOM  Boomskoye usch    24.99  62   P     P       03 38 29.3  +0.5
BOOM                              pmax    pmax
      comp=Z,15nm,0.9s
JAVC  Velka Javorina    25.30 313 eP      P       03 38 30.4  -1.0
SMOL  Smolenice         25.30 313 eP      P       03 38 31.9  +0.5
SMOL                              pmax    pmax
      comp=Z,12nm,1.1s
KOGS  Kog               25.31 307 i P     P       03 38 31.1  -0.4
MODS  Modra-Piesok      25.34 312 eP      P       03 38 31.7  -0.1
MODS                              pmax    pmax
      comp=Z,50nm,1.3s
MODS  Modra-Piesok      25.34 312 eP      P       03 38 31.7  -0.1
PTJ   Puntijarka        25.34 306   P     P       03 38 33.1  +1.2
MAUC  Maruska           25.42 315 eP      P       03 38 32.7  +0.2
OKC   Ostrava-Krasne    25.44 316   AMS   AMS     03 50 30.0
      comp=Z,200nm,13.8s
SOP   Sopron            25.52 310   P     P       03 38 33.9  +0.5
SOP                               pmax    pmax
      comp=Z,42nm,1.1s
BRVK  Borovoye          25.62  36ceP      P       03 38 35.6  +1.3
BRVK                              pmax    pmax
      comp=Z,15nm,1.7s
BVAR  Borovoye Array    25.65  36   P     P       03 38 35.0  +0.4
      comp=Z,3.5nm,0.6s,baz=232,slow=7.3,SNR=15
      comp=Z,3.5nm,0.6s
BVAR  Borovoye Array    25.65  36   P     P       03 38 35.0  +0.4
CRES  Cresnjevec Ost    25.66 306 eP      P       03 38 34.1  -0.6
RONA  Rosalia, Austr    25.70 310 i P     P       03 38 34.5  -0.6
      comp=Z,12nm,1.1s,SNR=13
STEB  Steborice         25.70 316 eP      P       03 38 34.5  -0.5
BOJS  Bojanci           25.71 305 eP      P       03 38 33.9  -1.2
MORC  Moravsky Berou    25.77 315         P       03 38 35.0  -0.7
MORC                              IAmb    IAmb    03 38 42.9
      comp=Z,26nm,1.1s
MORC  Moravsky Berou    25.77 315 eP      P       03 38 34.5  -1.2
MORC  Moravsky Berou    25.77 315 ⇑P      P       03 38 33.7  -2.0
MORC  Moravsky Berou    25.77 315   P     P       03 38 35.0  -0.7
MORC                              pmax    pmax
      comp=Z,26nm,1.1s
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PABE  Paberze           25.96 331         P       03 38 36.0  -1.2
ARSA  Arzberg           26.04 309         P       03 38 37.9  -0.2
ARSA  Arzberg           26.04 309 eP      P       03 38 38.1  -0.1
      comp=Z,6.0nm,1.0s
CONA  Conrad Observa    26.05 310 i P     P       03 38 38.2  -0.1
      comp=Z,20nm,1.2s,SNR=12
CONA                              epP     pP      03 38 43.4   0.0
      comp=Z,29nm,1.5s
VRAC  Vranov            26.12 314 eP      P       03 38 38.4  -0.5
KRUC  Moravsky          26.14 313 eP      P       03 38 38.3  -0.8
SOKA  Soboth            26.18 307 eP      P       03 38 38.8  -0.7
      comp=Z,6.1nm,1.1s
CEY   Cerknica          26.33 305 eP      P       03 38 39.6  -1.2
KRLC  Kraliky           26.34 315 eP      P       03 38 40.4  -0.5
KRLC                              AMS     AMS     03 52 30.0
      comp=Z,300nm,12.4s
KRLC  Kraliky           26.34 315 eP      P       03 38 40.4  -0.5
KRLC                              MLR     MLR
      comp=Z,300nm,12.4s
LJU   Ljubljana         26.34 306 eP      P       03 38 40.8  -0.1
OBKA  Obir              26.45 307 eP      P       03 38 41.0  -1.0
OBKA  Obir              26.45 307 i P     P       03 38 42.1  +0.1
      comp=Z,11nm,1.4s,SNR=9.0
DPC   Dobruska-Polom    26.72 316 eP      P       03 38 43.8  -0.5
DPC                               AMS     AMS     03 52 10.0
      comp=Z,300nm,12.3s
DPC   Dobruska-Polom    26.72 316 eP      P       03 38 43.8  -0.5
DPC                               MLR     MLR
      comp=Z,300nm,12.3s
DPC   Dobruska-Polom    26.72 316   P     P       03 38 44.0  -0.3
      comp=Z,12nm,1.1s
KLMR  Klimovskoe        26.84 353 eP      P       03 38 39.2  -6.0
KLMR                              pmax    pmax
      comp=Z,40nm,1.3s
OSTC  Ostas             26.87 316 eP      P       03 38 45.3  -0.4
OSTC                              AMS     AMS     03 51 10.0
      comp=Z,200nm,15.1s
OSTC  Ostas             26.87 316 eP      P       03 38 45.3  -0.4
OSTC                              MLR     MLR
      comp=Z,200nm,15.1s
CADS  Cadrg             26.92 306 eP      P       03 38 45.3  -0.8
SABO  M.te Sabotino     26.95 305         P       03 38 45.8  -0.6
SABO                              IAmb    IAmb    03 39 05.5
      comp=Z,14nm,1.0s
UPC   Upice             26.97 316 eP      P       03 38 45.9  -0.6
UPC   Upice             26.97 316 eP      P       03 38 45.9  -0.6
CHVC  Chvalec           26.98 316 eP      P       03 38 46.1  -0.5
CHVC                              AMS     AMS     03 51 20.0
      comp=Z,200nm,16.2s
CHVC  Chvalec           26.98 316 eP      P       03 38 46.1  -0.5
CHVC                              MLR     MLR
      comp=Z,200nm,16.2s
MOA   Molln             27.04 309 i P     P       03 38 47.0  -0.2
      comp=Z,15nm,1.1s,SNR=5.8
MYKA  Terra Mystica     27.09 307 eP      P       03 38 48.8  +1.1
      comp=Z,1.1nm,0.4s
PRED  Cave del Predi    27.09 306         P       03 38 47.2  -0.5
VSU   Vasula            27.25 338ceP      P       03 38 46.8  -2.1
VSU                               pmax    pmax
      comp=Z,30nm,1.0s
CKRC  Cesky Krumlov     27.33 311   AMS   AMS     03 52 30.0
      comp=Z,300nm,13.2s
BIOA  Bad Ischl, Aus    27.39 309 eP      P       03 38 49.7  -0.6
      comp=Z,8.0nm,0.9s
KBA   Koelnbreinsper    27.41 307 eP      P       03 38 50.1  -0.5
      comp=Z,5.9nm,0.7s
GOPC  GO Pecny, Ondr    27.44 314   AMS   AMS     03 53 20.0
      comp=Z,300nm,15.9s
PRU   Pruhonice         27.62 314   AMS   AMS     03 53 20.0
      comp=Z,300nm,13.3s
ZVC   Zvikov            27.62 313 eP      P       03 38 52.0  -0.4
GEC2  GERESS Array S    27.72 311 eL      L       03 53 52.1
      comp=Z,129nm,20.7s
GERES GERESS Array B    27.72 311   P     P       03 38 51.9  -1.5
      comp=Z,0.6nm,0.6s,baz=119,slow=8.2,SNR=6.3
      comp=Z,0.6nm,0.6s
ABTA  Abfaltersbach     27.87 306 eP      P       03 38 55.1  +0.4
      comp=Z,2.4nm,0.9s
KHC   Kasperske Hory    27.89 312 eP      P       03 38 55.2  +0.4
KHC                               AMS     AMS     03 53 00.0
      comp=Z,200nm,12.1s
KHC   Kasperske Hory    27.89 312 eP      P       03 38 55.2  +0.4
KHC                               MLR     MLR
      comp=Z,200nm,12.1s
LESA  Schwarzleotal     27.94 308 eP      P       03 38 54.4  -0.9
      comp=Z,3.7nm,1.0s
BRG   Berggiesshubel    28.32 315 eP      P       03 38 57.7  -0.9
      comp=Z,5.5nm,1.0s,baz=108,slow=10
WET   Wettzell          28.33 311 eP      P       03 38 57.2  -1.5
      comp=Z,5.0nm,1.1s,baz=108,slow=10
WET                              eL       L       03 51 35.5
      comp=Z,119nm,21.2s
ZCCA  Zocca             28.45 301         P       03 38 60.0  +0.1
HSKC  Hora Svate Kat    28.51 315   AMS   AMS     03 53 20.0
      comp=Z,300nm,17.6s
WTTA  Wattenberg        28.58 307 eP      P       03 39 00.7  -0.5
      comp=Z,7.9nm,0.6s
WATA  Walderalm         28.64 307 eP      P       03 39 00.2  -1.4
      comp=Z,7.7nm,1.1s
WATA                             epP      pP      03 39 05.5  -1.3
      comp=Z,7.5nm,0.7s
SQTA  Sankt Quirin      28.85 307 eP      P       03 39 01.9  -1.5
      comp=Z,5.5nm,0.8s
SQTA                             epP      pP      03 39 07.6  -1.0
      comp=Z,12nm,0.6s
KURBB Kurchatov Arra    28.90  46   P     P       03 39 04.7  +1.0
      comp=Z,4.3nm,0.8s,baz=254,slow=9.4,SNR=20
KURBB                             LR      LR      03 52 58.9
      comp=Z,188nm,21.1s,baz=191,slow=41
      comp=Z,4.3nm,0.8s
ROTZ  Rotzenmuhle       28.95 312 eP      P       03 39 03.4  -0.8
      comp=Z,1.7nm,1.0s,baz=108,slow=10
MOTA  Moosalm           28.95 307 eP      P       03 39 02.6  -1.8
      comp=Z,5.7nm,1.0s
MOTA                             epP      pP      03 39 08.6  -1.0
      comp=Z,11nm,0.7s
KURK  Kurchatov         28.98  46         P       03 39 04.5   0.0
KURK                              IAmb    IAmb    03 39 13.9
      comp=Z,11nm,1.1s
KURK  Kurchatov         28.98  46ceP      P       03 39 06.4  +1.9
KURK                              pmax    pmax
      comp=Z,12nm,1.3s
CLL   Collm             29.04 316 i P     P       03 39 03.5  -1.4
CLL                               pmax    pmax
      comp=Z,11nm,1.4s
CLL   Collm             29.04 316 eP      P       03 39 03.5  -1.4
      comp=Z,11nm,1.4s,baz=108,slow=10
CLL                              eL       L       03 54 37.3
      comp=Z,237nm,18.4s
CLL   Collm             29.04 316 i P     P       03 39 03.5  -1.4
      comp=Z,11nm,1.4s
CLL                              ex       x       03 44 33.0
CLL                               AMS     AMS     03 54 00.0
      comp=Z,200nm,18.4s
FUR   Furstenfeldbru    29.05 309 eL      L       03 51 48.9
      comp=Z,165nm,18.0s
FETA  Feichten          29.12 306 eP      P       03 39 05.5  -0.5
      comp=Z,2.8nm,0.7s
FETA                             epP      pP      03 39 09.8  -1.2
      comp=Z,5.5nm,0.6s
RETA  Reutte            29.21 307 eP      P       03 39 04.1  -2.5
RETA                             epP      pP      03 39 10.3  -1.5
      comp=Z,4.2nm,0.6s
GRA1  Grafenberg Arr    29.53 312         P       03 39 08.0  -1.3
GRF   Grafenberg Arr    29.53 312   P     P       03 39 08.0  -1.3
GRF                               pmax    pmax
      comp=Z,29nm,1.4s
GRF   Grafenberg Arr    29.53 312 eP      P       03 39 08.4  -0.9
      comp=Z,15nm,1.2s,baz=108,slow=10
GRF                              eL       L       03 54 59.4
      comp=Z,191nm,18.5s
MOX   Moxa              29.61 314 eL      L       03 52 55.8
      comp=Z,135nm,19.4s
KEST  Kesra             29.67 283   P     P       03 39 12.0  +1.2
      comp=Z,3.1nm,0.9s,baz=179,slow=7.7,SNR=4.9
      comp=Z,3.1nm,0.9s
DAVA  Damuels           29.75 307 eP      P       03 39 10.4  -1.1
      comp=Z,12nm,0.6s
DAVA                             epP      pP      03 39 15.5  -1.1
      comp=Z,13nm,0.7s
FIA1  FINESS Array S    29.89 341         P       03 39 11.8  -0.6
FINES FINESS Array B    29.89 341         P       03 39 11.0  -1.4
FINES FINESS Array B    29.89 341   P     P       03 39 10.7  -1.7
      comp=Z,2.7nm,0.4s,baz=145,slow=11,SNR=33
      comp=Z,2.7nm,0.4s
FINES FINESS Array B    29.89 341 eP      P       03 39 11.1  -1.3
FINES                             pmax    pmax
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      comp=Z,3.0nm,0.3s
MK31  Makanchi Array    30.21  55ceP    P      03 39 17.4 +2.0
MKAR  Makanchi Array    30.21  55       P      03 39 15.5 +0.1
MKAR  Makanchi Array    30.21  55  P    P      03 39 16.6 +1.2
      comp=Z,1.3nm,0.5s,baz=252,slow=10,SNR=13
MKAR                               LR   LR     03 54 26.9
      comp=Z,168nm,21.2s,baz=251,slow=42
      comp=Z,1.3nm,0.5s
MKAR  Makanchi Array    30.21  55 eP    P      03 39 16.9 +1.5
MKAR                               pmax pmax
      comp=Z,1.0nm,0.4s
GORT1 Trebel            30.66 318 eP    P      03 39 18.9  -0.3
      comp=Z,19nm,1.1s,baz=108,slow=10
BFO   Black Forest      31.00 308 eL    L      03 53 53.2
      comp=Z,127nm,19.3s
TNS   Taunus Mts        31.40 312 eP    P      03 39 24.6  -1.3
      comp=Z,24nm,1.7s,baz=108,slow=10
TNS                               eL    L      03 56 04.6
      comp=Z,181nm,19.3s
BNI   Bardonecchia      31.57 302       P      03 39 26.7  -0.9
BNI   Bardonecchia      31.57 302  P    P      03 39 26.7  -0.9
BNI                                pmax pmax
      comp=Z,16nm,0.7s
BSEG  Bad Segeberg      31.59 319 eL    L      03 55 58.6
      comp=Z,169nm,18.4s
KASTN Kahler Asten      31.70 314 eP    P      03 39 26.8  -1.8
      comp=Z,8.6nm,1.2s,baz=108,slow=10
ECH   Echery            31.74 308  P    P      03 39 27.9  -1.0
ECH                                pmax pmax
      comp=Z,64nm,1.3s
ORIF  Oris-en-Rattie    32.13 301  P    P      03 39 35.8 +3.4
ORIF                               pmax pmax
      comp=Z,9.0nm,1.5s
LODK  Lodwar            32.21 200       P      03 39 33.4 +0.1
WLF   Walferdange       32.69 310 eP    P      03 39 35.5  -1.7
      comp=Z,12nm,0.9s,baz=108,slow=10
BTNL  Ternell           32.92 312 dPP   PP     03 40 46.8  -6.9
HFS   Hagfors           33.14 331  P    P      03 39 39.6  -1.3
      comp=Z,17nm,0.6s,baz=134,slow=8.5,SNR=57
      comp=Z,17nm,0.6s
WMQ   Urumqi            33.67  61 eP    P      03 39 50.5 +4.6
WMQ                                LR   LR
      comp=Z,89nm,22.3s
ZALV  Zalesovo Beam     33.69  42       P      03 39 46.1 +0.3
ZALV  Zalesovo Beam     33.69  42  P    P      03 39 45.9 +0.1
      comp=Z,2.3nm,0.3s,baz=249,slow=9.3,SNR=12
      comp=Z,2.3nm,0.3s
ZALV  Zalesovo Beam     33.69  42 eP    P      03 39 46.7 +0.9
ZALV                               pmax pmax
      comp=Z,2.0nm,0.3s
OSL   Oslo              34.25 329 eP    P      03 39 49.9  -0.7
NC602 NORSAR Array S    34.36 331 eP    P      03 39 50.9  -0.7
NORES NORESS Array B    34.36 331  P    P      03 39 54.9 +3.3
NC405 NORSAR Array S    34.51 331       P      03 39 51.5  -1.4
NC405                              IAmb IAmb   03 39 56.1
      comp=Z,11nm,0.8s
KONO  Kongsberg         34.58 328 eP    P      03 39 52.1  -1.4
NB2   NORSAR Subarra    34.66 331  P    P      03 39 52.3  -2.0
      comp=Z,6.9nm,0.9s,baz=125,slow=9.3
NB2   NORSAR Subarra    34.66 331  P    P      03 39 52.3  -2.0
      baz=125,slow=9.3
NOA   NORSAR Array B    34.66 331  P    P      03 39 52.0  -2.3
      comp=Z,2.4nm,0.6s,baz=124,slow=8.6,SNR=18
      comp=Z,2.4nm,0.6s
EVN   Everest           35.61  89       P      03 40 04.8 +1.3
EVN                                IAmb IAmb   03 40 16.5
      comp=Z,8.0nm,0.8s
SKAR  Skarslia          35.67 329 eP    P      03 40 02.9  -0.1
BLS5  Blasjo            35.88 327 eP    P      03 40 04.5  -0.2
ODD1  Odda              36.02 327 eP    P      03 40 05.5  -0.5
DOMB  Dombas            36.08 332 eP    P      03 40 05.5  -0.9
NSS   Namsos            36.50 336 eP    P      03 40 08.3  -1.6
BER   Bergen            36.81 328 eP    P      03 40 11.7  -0.9
BER                                IAmb IAmb   03 40 15.3
      comp=Z,53nm,1.4s
MOR8  Moi Rana          36.83 339 eP    P      03 40 11.3  -1.4
MOR8                               IAmb IAmb   03 40 12.2
      comp=Z,17nm,0.9s
TAM   Tamanrasset       36.86 263       P      03 40 13.7   0.0
TAM                                IAmb IAmb   03 40 16.6
      comp=Z,14nm,1.0s
TAM   Tamanrasset       36.86 263  P    P      03 40 13.7   0.0
TAM                                pmax pmax
      comp=Z,14nm,1.0s
KTK1  Kautokeino        36.94 347 eP    P      03 40 12.6  -1.1
KTK1                               IAmb IAmb   03 40 13.1
      comp=Z,14nm,0.8s
VADS  Vadso             36.95 351 eP    P      03 40 12.5  -1.1
AKN   Aaknes            36.98 331 eP    P      03 40 12.8  -1.3
ARA0  ARCESS Array S    36.99 348 eP    P      03 40 12.7  -1.4
ARA0                               IAmb IAmb   03 40 13.8
      comp=Z,18nm,1.0s
ARCES ARCESS Array B    36.99 348       P      03 40 13.4  -0.7
ARCES                              IAmb IAmb   03 40 14.6
      comp=Z,19nm,1.1s
ARCES ARCESS Array B    36.99 348  P    P      03 40 12.5  -1.6
      comp=Z,9.3nm,0.8s,baz=165,slow=8.5,SNR=52
      comp=Z,9.3nm,0.8s
ARCES ARCESS Array B    36.99 348 eP    P      03 40 13.3  -0.7
ARCES                              pmax pmax
      comp=Z,9.0nm,0.8s
LEIR  Leirfjorden       37.18 339 eP    P      03 40 15.0  -0.7
STOK  Stokkvaagen       37.36 339 eP    P      03 40 15.8  -1.3
KONS  Konsvik           37.44 339 eP    P      03 40 17.4  -0.4
KONS                               IAmb IAmb   03 40 21.7
      comp=Z,42nm,1.5s
FAUS  Fauske            37.46 341 eP    P      03 40 17.1  -0.8
VAGH  Vaagaholmen       37.55 340 eP    P      03 40 18.6  -0.3
STEI  Steigen           37.87 342 eP    P      03 40 20.4  -1.1
JETT  Jettan, Norway    37.95 346 eP    P      03 40 21.3  -0.9
JETT                               IAmb IAmb   03 40 22.2
      comp=Z,27nm,0.9s
HAMF  Hammerfest        38.27 348 eP    P      03 40 24.7  -0.1
TRO   Tromso            38.32 345 eP    P      03 40 24.1  -1.1
EKA   Eskdalemuir Ar    39.46 317  P    P      03 40 33.5  -1.6
      comp=Z,1.6nm,0.5s,baz=102,slow=9.4,SNR=13
      comp=Z,1.6nm,0.5s
ESDC  Sonseca Array     39.58 293       P      03 40 35.5  -0.8
ESDC  Sonseca Array     39.58 293  P    P      03 40 35.2  -1.1
      comp=Z,2.7nm,0.9s,baz=66,slow=8.4,SNR=14
ESDC                               LR   LR     03 59 49.8
      comp=Z,87nm,19.4s,baz=107,slow=41
      comp=Z,2.7nm,0.9s
MVO   Moncorvo          41.69 295 eP    P      03 40 53.7   0.0
MVO                               i Amb        03 40 54.3
      comp=Z,35nm,1.5s
NRIK  Noril'sk          41.98  21       P      03 40 56.3 +0.8
NRIK  Noril'sk          41.98  21  P    P      03 40 55.5  -0.1
      comp=Z,6.6nm,0.8s,baz=218,slow=6.4,SNR=9.2
      comp=Z,6.6nm,0.8s
NRIK  Noril'sk          41.98  21 i P   P      03 40 56.5 +0.9
NRIK                               pmax pmax
      comp=Z,10.0nm,0.9s
PVRL  Vila Real         42.18 296 eP    P      03 40 57.8 +0.1
PVRL                              i Amb        03 41 15.7
      comp=Z,37nm,1.9s
MTE   Manteigas         42.19 294 eP    P      03 40 58.3 +0.5
MTE                               i Amb        03 41 08.5
      comp=Z,38nm,1.7s
PBAR  Barrancos         42.20 291 eP    P      03 40 57.8  -0.1
PBAR                              i Amb        03 41 05.9
      comp=Z,34nm,1.7s
PCBR  Castelo Branco    42.23 294 eP    P      03 40 58.1 +0.1
PCBR                              i Amb        03 40 58.6
      comp=Z,32nm,1.3s
PMRV  Marv??o           42.24 293 eP    P      03 40 56.7  -1.5
PMRV                              i Amb        03 41 28.4
      comp=Z,20nm,1.9s
PCAS  Casmilo, Conde    42.97 294 eP    P      03 41 04.1   0.0
GTA   Gaotai            43.08  67 eP    P      03 41 06.3 +1.1
GTA                                pP   sP     03 41 11.8  -0.7
GTA                                PcP  PcP    03 42 55.0   0.0
GTA                                pmax pmax
      comp=Z,5.0nm,1.2s
ZAK   Zakamensk         44.36  51 eP    P      03 41 15.8 +0.5
ZAK                                pmax pmax
      comp=Z,3.0nm,1.7s
TORD  Torodi Ar. Bea    45.00 253       P      03 41 20.4  -0.2
TORD                               IAmb IAmb   03 41 27.0
      comp=Z,12nm,1.4s
TORD  Torodi Ar. Bea    45.00 253  P    P      03 41 20.5  -0.1
      comp=Z,2.6nm,0.5s,baz=46,slow=8.7,SNR=4.1
TORD                               LR   LR     04 03 20.5
      comp=Z,115nm,18.8s,baz=10,slow=40
      comp=Z,2.6nm,0.5s
SPITS Spitsbergen Ar    45.73 352  P    P      03 41 24.7  -0.9
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      comp=Z,1.8nm,0.3s,baz=143,slow=12,SNR=104
      comp=Z,1.8nm,0.3s
SONM  Songino Array     46.58  54  P    P      03 41 32.8  -0.1
      comp=Z,0.7nm,0.5s,baz=292,slow=7.6,SNR=1.5
SONM                               PcP  PcP    03 43 06.2  -0.7
      comp=Z,0.9nm,0.7s,baz=256,slow=3.0,SNR=4.8
      comp=Z,0.7nm,0.5s
LZH   Lanzhou           46.95  70 eP    P      03 41 43.7 +7.6
LZH                                sP   sP     03 41 52.4 +9.0
LZH                                PP   PP     03 43 28.8 +2.4
LZH                                pmax pmax
      comp=Z,21nm,1.2s
PZH   PanZhiHua         48.47  83  P    P      03 41 49.4 +1.5
CD2   Chengdu           48.48  77  P    P      03 41 49.2 +1.4
CD2                                pmax pmax
      comp=Z,10.0nm,0.4s
CMAR  Chiang Mai Arr    49.74  94  P    P      03 41 57.3  -0.2
      comp=Z,1.6nm,0.4s,baz=296,slow=8.6,SNR=7.3
CMAR                               LR   LR     04 08 03.6
      comp=Z,62nm,18.6s,baz=305,slow=42
      comp=Z,1.6nm,0.4s
CMAR  Chiang Mai Arr    49.74  94 eP    P      03 41 59.2 +1.7
CMAR                               pmax pmax
      comp=Z,2.0nm,0.4s
BTO   Baotou            50.46  63 eP    P      03 42 02.2  -0.7
BTO                                pP   pP     03 42 06.7  -1.5
BTO                                sP   sP     03 42 09.3  -1.0
BTO                                S    S      03 49 14.5  -1.5
BTO                                sS   pS     03 49 21.8  -0.7
BTO   Baotou            50.46  63  SS   SS     03 52 42.9  -6.8
BTO                                pmax pmax
      comp=Z,15nm,1.0s
BTO                                pmax pmax
      comp=Z,210nm,7.6s
BTO                                LR   LR
      comp=N,420nm,24.1s
BTO                                LR   LR
      comp=E,290nm,19.2s
BTO                                LR   LR
      comp=Z,430nm,13.6s
DBG   Daneborg          50.79 341 eP    P      03 42 05.0 +0.3
DBG                                IAmb IAmb   03 42 10.4
      comp=Z,7.8nm,1.1s
DAG   Danmarks Havn     51.03 345  P    P      03 42 06.0  -0.5
DAG                                pmax pmax
      comp=Z,5.0nm,0.7s
DAG   Danmarks Havn     51.03 345 i P   P      03 42 06.1  -0.5
DAG                                IAmb IAmb   03 42 13.3
      comp=Z,7.4nm,1.1s
HHC   Hu-ho-hao-te      51.53  62 eP    P      03 42 12.4 +1.4
HHC                                pmax pmax
      comp=Z,10.0nm,0.8s
XAN   Xi'an             51.54  71 ⇑P    P      03 42 11.6 +0.6
XAN                                pP   pP     03 42 16.5 +0.1
XAN                                PcP  sP     03 42 26.0 +7.6
XAN                                pmax pmax
      comp=Z,16nm,1.1s
XAN                                pmax pmax
      comp=Z,140nm,4.1s
NOR   Nord              52.29 351 eP    P      03 42 15.3  -0.5
NOR                                IAmb IAmb   03 42 15.9
      comp=Z,5.6nm,0.9s
DBIC  Dimbokro          54.02 251  P    P      03 42 29.4  -0.1
      comp=Z,4.1nm,0.5s,baz=38,slow=6.8,SNR=13
      comp=Z,4.1nm,0.5s
SUMG  Summit            55.89 339       P      03 42 42.3  -0.4
SUMG                               IAmb IAmb   03 42 43.5
      comp=Z,7.3nm,1.0s
SUMG  Summit            55.89 339  P    P      03 42 42.3  -0.4
SUMG                               pmax pmax
      comp=Z,7.0nm,1.0s
SUMG  Summit            55.89 339 eP    P      03 42 42.5  -0.2
SUMG                               IAmb IAmb   03 42 45.2
      comp=Z,9.8nm,1.1s
ANGG  Ammassalik, Gr    56.58 330 eP    P      03 42 46.0  -1.2
ANGG                               IAmb IAmb   03 42 46.9
      comp=Z,13nm,1.0s
ICESG Greenland Ices    56.76 335 eP    P      03 42 47.9  -1.0
ICESG                              IAmb IAmb   03 42 54.4
      comp=Z,22nm,1.6s
YAK   Yakutsk           57.61  34  LR   LR     04 11 39.7
      comp=Z,177nm,18.5s,baz=280,slow=40
PSI   Prapat            58.55 110  LR   LR     04 11 11.6
      comp=Z,110nm,18.7s,baz=292,slow=39
HEH   HeiHe             59.56  47 eP    P      03 43 08.8 +0.4
HEH                                pmax pmax
      comp=Z,9.0nm,1.1s
NJ2   Nanjing           60.02  70 eP    P      03 43 13.2 +1.4
NJ2                                pmax pmax
      comp=Z,5.0nm,0.8s
BNX   BinXian           61.06  52 ⇑P    P      03 43 17.6  -1.1
BNX                                pmax pmax
      comp=Z,4.0nm,1.7s
SFJD  Kangerlussuaq     61.28 334  LR   LR     04 10 17.2
      comp=Z,78nm,20.9s,baz=66,slow=36
KLR   Kul'dur           62.55  47  P    P      03 43 28.0  -0.7
      comp=Z,1.3nm,0.5s,baz=296,slow=6.7,SNR=5.0
      comp=Z,1.3nm,0.5s
KLR   Kul'dur           62.55  47ceP    P      03 43 29.0 +0.3
KLR                                pmax pmax
      comp=Z,5.0nm,1.3s
EUNU  Eureka            62.85 352       P      03 43 30.4 +0.1
KSAR  Wonju Array Be    64.60  61       P      03 43 42.8 +0.4
KSAR  Wonju Array Be    64.60  61  P    P      03 43 42.8 +0.4
KSRS  Korea Array       64.62  61  P    P      03 43 42.5  -0.1
      comp=Z,1.5nm,0.7s,baz=285,slow=7.0,SNR=6.9
KSRS                               LR   LR     04 15 51.8
      comp=Z,68nm,18.5s,baz=235,slow=40
      comp=Z,1.5nm,0.7s
KSRS  Korea Array       64.62  61 eP    P      03 43 46.4 +3.9
KSRS                               pmax pmax
      comp=Z,4.0nm,0.8s
USRK  Ussuriysk Ar.     64.65  53       P      03 43 42.5  -0.1
USRK  Ussuriysk Ar.     64.65  53  P    P      03 43 41.3  -1.3
      comp=Z,2.7nm,0.9s,baz=280,slow=5.6,SNR=9.7
      comp=Z,2.7nm,0.9s
USRK  Ussuriysk Ar.     64.65  53  P    P      03 43 42.5  -0.1
BOSA  Boshof            65.51 200  P    P      03 43 48.6 +0.2
      comp=Z,7.3nm,0.9s,baz=24,slow=6.0,SNR=9.3
      comp=Z,7.3nm,0.9s
POIN  Pond Inlet        66.51 344       P      03 43 54.0  -0.2
POIN                               IAmb IAmb   03 44 04.1
      comp=Z,4.2nm,0.9s
SEY   Seymchan          67.03  28ceP    P      03 43 59.0 +1.4
SEY                                pmax pmax
      comp=Z,12nm,1.3s
RES   Resolute Bay      68.20 350  P    P      03 44 04.2  -0.7
      comp=Z,3.5nm,1.0s,baz=49,slow=6.5,SNR=7.8
      comp=Z,3.5nm,1.0s
BILL  Bilibino          68.80  20       P      03 44 09.2 +0.5
BILL                               IAmb IAmb   03 44 14.1
      comp=Z,7.3nm,1.0s
BILL  Bilibino          68.80  20ceP    P      03 44 09.2 +0.5
BILL                               pmax pmax
      comp=Z,14nm,1.3s
ILON  Igloolik, Nuna    69.73 343       P      03 44 13.6  -0.8
TGY   Tagaytay City     70.12  86  LR   LR     04 15 59.6
      comp=Z,165nm,21.3s,baz=14,slow=37
ASAJ  Asahikawa         71.49  49  LR   LR     04 19 14.4
      comp=Z,81nm,19.5s,baz=3.0,slow=39
MJAR  Matsushiro Arr    72.35  58  P    P      03 44 30.1  -0.9
      comp=Z,3.5nm,1.1s,baz=306,slow=6.6,SNR=6.7
      comp=Z,3.5nm,1.1s
MJA0  Matsu Arr-Jizo    72.38  58 eP    P      03 44 32.0 +0.8
MJA0                               pmax pmax
      comp=Z,2.0nm,0.8s
A36M  Sachs Harbour     73.78 357       P      03 44 38.8   0.0
A36M  Sachs Harbour     73.78 357  P    P      03 44 39.0 +0.3
      baz=7.9
A22K  Sinclair Lake     73.93   7  P    P      03 44 40.1 +0.5
      baz=342
A19K  Wainwright        73.98   9  P    P      03 44 39.9   0.0
      baz=337
B20K  Meade River       74.65   8  P    P      03 44 44.4 +0.6
      baz=341
B18K  Kokolik River     74.66  10  P    P      03 44 44.4 +0.5
      baz=337
B22K  Teshekpuk Lake    74.72   7  P    P      03 44 44.7 +0.5
      baz=344
C16K  Lisburne Hills    75.11  11  P    P      03 44 46.8 +0.3
      baz=334
C19K  Lookout Ridge     75.20   9  P    P      03 44 48.0 +0.9
      baz=339
C17K  DeLong Mountai    75.28  11  P    P      03 44 48.5 +0.9
      baz=336,SNR=7.6
B21K  Ikpikpuk River    75.30   7  P    P      03 44 47.7 +0.2
      baz=343
```

```
C18K  Utukok River      75.41  10       P      03 44 48.5 +0.2
C18K                               IAmb IAmb   03 44 49.7
      comp=Z,9.2nm,0.9s
C18K  Utukok River      75.41  10  P    P      03 44 48.8 +0.5
      baz=337,SNR=5.9
C23K  Itkillik River    75.46   6  P    P      03 44 48.9 +0.4
      baz=346
C21K  Knifeblade Rid    75.72   7  P    P      03 44 50.7 +0.7
      baz=343
C24K  Franklin Bluff    75.72   5  P    P      03 44 49.5  -0.5
      baz=348
D20K  Etivluk River     75.94   8  P    P      03 44 51.5 +0.2
      baz=341
D19K  Kuna River        75.96   9       P      03 44 52.1 +0.7
D19K  Kuna River        75.96   9  P    P      03 44 51.8 +0.3
      baz=340,SNR=6.2
D17K  Noatak River      76.00  11  P    P      03 44 52.0 +0.3
      baz=336,SNR=7.4
C27K  Jago River        76.12   3  P    P      03 44 52.7 +0.3
      baz=352
D22K  Ayikyak River     76.20   7  P    P      03 44 53.3 +0.5
      baz=344
D24K  Happy Valley      76.27   5  P    P      03 44 53.5 +0.4
      baz=348
D25K  Kavik River       76.28   4  P    P      03 44 53.5 +0.3
      baz=350
D23K  Nanushuk River    76.31   6  P    P      03 44 53.6 +0.2
      baz=346
C36M  Paulatuk          76.36 356  P    P      03 44 53.4  -0.2
      baz=8.8
E20K  Nigu River        76.42   8  P    P      03 44 54.4 +0.2
      baz=342
E21K  Killik River      76.50   7  P    P      03 44 54.7 +0.2
      baz=343
D28M  Stokes Point      76.60   2  P    P      03 44 55.1 +0.2
      baz=356
D27M  Malcolm River     76.62   2  P    P      03 44 55.4 +0.1
      baz=354
E18K  Tukpahlearik C    76.63  10       P      03 44 54.9  -0.4
E18K                               IAmb IAmb   03 44 56.0
      comp=Z,7.8nm,1.1s
E18K  Tukpahlearik C    76.63  10  P    P      03 44 55.1  -0.1
      baz=338
TOLK  Toolik Lake Re    76.72   6  P    P      03 44 55.9 +0.1
      baz=347
E17K  Hotham Inlet      76.76  11  P    P      03 44 55.8  -0.2
      baz=337
E22K  Anaktuvuk Pass    77.01   7  P    P      03 44 57.4  -0.1
      baz=345
E19K  Redstone River    77.06   9       P      03 44 58.2 +0.6
E19K                               IAmb IAmb   03 44 59.0
      comp=Z,7.5nm,0.8s
E19K  Redstone River    77.06   9  P    P      03 44 58.0 +0.3
      baz=341,SNR=9.2
TNA   Tin City          77.08  14  P    P      03 44 58.4 +0.6
      baz=332
BLKN  Baker Lake        77.15 344       P      03 44 58.1   0.0
BLKN                               IAmb IAmb   03 44 58.8
      comp=Z,8.5nm,1.0s
E23K  Chandalar         77.28   6  P    P      03 44 59.1 +0.1
      baz=347
E28M  Babbage River     77.31   2  P    P      03 44 59.3 +0.3
      baz=356
E24K  Your Creek        77.36   5  P    P      03 44 59.8 +0.4
      baz=348
F17K  Baldwin Pennin    77.44  11  P    P      03 44 59.0  -0.7
      baz=338
F14K  Arctic Creek      77.46  13  P    P      03 45 00.2 +0.2
      baz=333
E25K  Arctic Village    77.52   4  P    P      03 45 01.1 +0.8
      baz=351
F18K  Selawik           77.54  10  P    P      03 45 00.8 +0.5
      baz=339
F15K  North Star Dit    77.56  12  P    P      03 45 00.7 +0.2
      baz=335
E29M  Blow River        77.56   1       P      03 45 00.4   0.0
E29M  Blow River        77.56   1  P    P      03 45 00.8 +0.3
      baz=357
F19K  Shaleruckik Mo    77.58   9  P    P      03 45 00.7 +0.2
      baz=340
F22K  John River        77.58   7  P    P      03 45 01.4 +0.8
      baz=345
F20K  Avaraart Lake     77.63   8  P    P      03 45 01.2 +0.3
      baz=342,SNR=5.6
E27K  Coleen River      77.65   3       P      03 45 01.6 +0.5
E27K  Coleen River      77.65   3  P    P      03 45 01.4 +0.4
      baz=354
INK   Inuvik            77.68 360       P      03 45 01.6 +0.5
INK                                IAmb IAmb   03 45 02.0
      comp=Z,6.1nm,1.1s
INK   Inuvik            77.68 360  P    P      03 44 59.9  -1.2
      comp=Z,5.2nm,1.0s,baz=360,slow=6.0,SNR=3.9
      comp=Z,5.2nm,1.0s
INK   Inuvik            77.68 360  P    P      03 45 01.6 +0.5
INK                                pmax pmax
      comp=Z,6.0nm,1.1s
INK   Inuvik            77.68 360  P    P      03 45 01.2 +0.2
      baz=0.7
F21K  Alatna River      77.72   8       P      03 45 01.7 +0.2
F21K                               IAmb IAmb   03 45 03.1
      comp=Z,9.0nm,1.0s
F21K  Alatna River      77.72   8  P    P      03 45 02.0 +0.5
      baz=344,SNR=6.7
F24K  Squaw Lake        77.95   5  P    P      03 45 03.2 +0.5
      baz=349
F26K  Sheenjek River    78.02   4  P    P      03 45 03.7 +0.6
      baz=352
F25K  Christian Rive    78.03   4       P      03 45 03.5 +0.3
F25K                               IAmb IAmb   03 45 05.0
      comp=Z,7.7nm,1.1s
F25K  Christian Rive    78.03   4  P    P      03 45 04.0 +0.8
      baz=350
COLD  Coldfoot          78.04   6  P    P      03 45 03.7 +0.6
      baz=347,SNR=7.0
G22K  Bettles           78.22   7  P    P      03 45 04.4 +0.2
      baz=346
G16K  Koyuk River       78.24  12  P    P      03 45 04.9 +0.7
      baz=337
F28M  Old Crow          78.29   2  P    P      03 45 05.0 +0.5
      baz=355
G15K  Niukluk           78.31  12  P    P      03 45 04.8 +0.2
      baz=335
G19K  Purcell Mounta    78.32   9  IAmb IAmb   03 45 06.1
      comp=Z,8.4nm,0.9s
G19K  Purcell Mounta    78.32   9  P    P      03 45 05.0 +0.3
      baz=341,SNR=6.3
G18K  Tagagawik         78.34  10  IAmb IAmb   03 45 05.9
      comp=Z,5.2nm,1.1s
G18K  Tagagawik         78.34  10  P    P      03 45 04.7  -0.2
      baz=340
F30M  Barrier River     78.37   1  P    P      03 45 05.1 +0.1
      baz=359,SNR=10
G21K  Allakaket         78.40   8  IAmb IAmb   03 45 06.4
      comp=Z,9.0nm,1.0s
G21K  Allakaket         78.40   8  P    P      03 45 05.3 +0.1
      baz=344,SNR=7.9
G17K  Kiwalik Mounta    78.41  11  P    P      03 45 05.0  -0.2
      baz=338
ANM   Nome              78.46  13  P    P      03 45 06.0 +0.5
      baz=334
F31M  Tsiigehtchic      78.55 360       P      03 45 05.5  -0.4
F31M  Tsiigehtchic      78.55 360  P    P      03 45 05.8  -0.1
      baz=0.5,SNR=9.0
G23K  Bananza Creek     78.57   6  P    P      03 45 06.6 +0.5
      baz=347
G26K  Porcupine Rive    78.78   4  IAmb IAmb   03 45 09.3
      comp=Z,9.0nm,0.9s
G26K  Porcupine Rive    78.78   4  P    P      03 45 07.8 +0.6
      baz=352,SNR=5.2
G24K  Hadweenzic Riv    78.79   5  IAmb IAmb   03 45 09.2
      comp=Z,9.5nm,1.2s
G24K  Hadweenzic Riv    78.79   5  P    P      03 45 08.0 +0.7
      baz=349,SNR=5.7
G25K  Bearman Lake      78.82   5  P    P      03 45 07.8 +0.3
      baz=350
H19K  Roundabout Mou    78.99   9  P    P      03 45 08.8 +0.4
      baz=342
G30M  tAoh Zraii Nji    79.00   1  P    P      03 45 08.1  -0.4
      baz=358,SNR=12
G27K  Doyon Strip       79.03   3  IAmb IAmb   03 45 10.6
      comp=Z,6.3nm,0.9s
G27K  Doyon Strip       79.03   3  P    P      03 45 09.5 +0.9
      baz=354,SNR=8.5
G29M  Pine Creek        79.04   1  P    P      03 45 08.5  -0.2
      baz=357,SNR=7.7
H17K  Granite Mounta    79.05  11  P    P      03 45 08.8   0.0
      baz=339
G31M  Satah River       79.07 360  P    P      03 45 08.4  -0.4
```

	baz=0.1,SNR=16						
H18K	**Honhosa River**	**79.08**	**10**	P	**P**	**03 45 09.1**	**+0.2**
	baz=340						
H20K	**Anotleneega Mo**	**79.23**	**9**	P	**P**	**03 45 09.7**	**0.0**
	baz=343,SNR=8.5						
H22K	**Ishtalitna Cre**	**79.23**	**7**	P	**P**	**03 45 10.8**	**+1.0**
	baz=346,SNR=5.1						
H21K	**Melozitna Rive**	**79.31**	**8**	P	**P**	**03 45 11.1**	**+0.9**
	baz=345,SNR=14						
H25L	**Birch Creek**	**79.34**	**5**	P	**P**	**03 45 11.3**	**+1.0**
	baz=350						
H23K	**Yukon River**	**79.48**	**6**	P	**P**	**03 45 12.1**	**+1.0**
	baz=347,SNR=6.6						
EPYK	**Eagle Plains**	**79.61**	**1**	P	**P**	**03 45 11.4**	**-0.4**
	baz=358,SNR=8.7						
H24K	**Noodor Dome**	**79.61**	**6**	P	**P**	**03 45 12.8**	**+1.0**
	baz=349						
H27K	**Steamboat Moun**	**79.61**	**3**	IAmb	IAmb	03 45 13.7	
	comp=Z,9.1nm,1.1s						
H27K	**Steamboat Moun**	**79.61**	**3**	P	**P**	**03 45 12.5**	**+0.7**
	baz=354,SNR=7.9						
H29M	**Whitestone**	**79.73**	**2**	IAmb	IAmb	03 45 13.7	
	comp=Z,11nm,0.9s						
H29M	**Whitestone**	**79.73**	**2**	P	**P**	**03 45 12.7**	**+0.3**
	baz=357,SNR=6.4						
KAPI	**Kappang**	**79.79**	**103**	LR	LR	04 25 24.0	
	comp=Z,43nm,18.0s,baz=350,slow=39						
I21K	**Tanana**	**79.86**	**7**	P	**P**	**03 45 14.1**	**+0.9**
	baz=345,SNR=9.8						
I17K	**Unalakleet**	**79.91**	**12**	P	**P**	**03 45 14.4**	**+1.1**
	baz=338						
I20K	**Naaghedeneel**	**79.95**	**9**	P	**P**	**03 45 14.7**	**+1.1**
	baz=343						
PRP	**Porcupine Dome**	**80.10**	**5**	P	**P**	**03 45 15.3**	**+0.7**
	baz=351						
MLY	**Manley**	**80.14**	**7**	P	**P**	**03 45 15.4**	**+0.7**
	baz=346,SNR=9.3						
I23K	**Minto, Yukon-K**	**80.16**	**6**	P	**P**	**03 45 15.5**	**+0.8**
	baz=348,SNR=5.1						
JCJ	**Chichijima**	**80.18**	**64**	LR	LR	04 25 03.1	
	comp=Z,33nm,18.7s,baz=168,slow=39						
H31M	**Peel River**	**80.19**	**0**	IAmb	IAmb	03 45 25.2	
	comp=Z,8.3nm,1.0s						
H31M	**Peel River**	**80.19**	**0**	P	**P**	**03 45 15.1**	**+0.1**
	baz=0.0,SNR=6.3						
I27K	**Kandik River**	**80.23**	**3**	P	**P**	**03 45 15.4**	**+0.2**
	baz=354						
POKR	**Poker Plat Res**	**80.35**	**6**	P	**P**	**03 45 16.3**	**+0.5**
	baz=349						
I26K	**Coal Creek Min**	**80.45**	**4**	IAmb	IAmb	03 45 17.7	
	comp=Z,6.9nm,0.9s						
I26K	**Coal Creek Min**	**80.45**	**4**	P	**P**	**03 45 16.6**	**+0.2**
	baz=353,SNR=7.8						
I28M	**Miner Creek**	**80.45**	**2**	IAmb	IAmb	03 45 23.3	
	comp=Z,6.9nm,0.9s						
I28M	**Miner Creek**	**80.45**	**2**	P	**P**	**03 45 16.4**	**-0.1**
	baz=355,SNR=7.3						
J14K	**Nanvaranak Lak**	**80.45**	**13**	P	**P**	**03 45 16.8**	**+0.5**
	baz=336						
J16K	**Anvik River**	**80.49**	**12**	P	**P**	**03 45 17.1**	**+0.6**
	baz=338						
COLA	**College**	**80.56**	**6**	P	**P**	**03 45 17.9**	**+1.0**
COLA	**College**	**80.56**	**6**	P	**P**	**03 45 17.3**	**+0.5**
	baz=349						
J19K	**Poorman**	**80.57**	**9**	IAmb	IAmb	03 45 18.8	
	comp=Z,11nm,1.1s						
J19K	**Poorman**	**80.57**	**9**	P	**P**	**03 45 17.8**	**+0.8**
	baz=342,SNR=9.8						
J20K	**Nowinta River**	**80.58**	**9**	IAmb	IAmb	03 45 18.9	
	comp=Z,8.5nm,1.1s						
J20K	**Nowinta River**	**80.58**	**9**	P	**P**	**03 45 17.9**	**+0.8**
	baz=344,SNR=8.0						
I29M	**Ogilvie Camp,**	**80.59**	**2**	P	**P**	**03 45 17.2**	**+0.1**
	baz=357,SNR=7.8						
J17K	**VABM Dome**	**80.63**	**11**	P	**P**	**03 45 17.7**	**+0.4**
	baz=340						
NEA2	**Nenana**	**80.73**	**6**	P	**P**	**03 45 18.0**	**+0.1**
	baz=348						
ILAR	**Eielson Array**	**80.74**	**5**		**P**	**03 45 18.1**	**+0.3**
ILAR	**Eielson Array**	**80.74**	**5**	P	**P**	**03 45 17.4**	**-0.5**
	comp=Z,2.5nm,0.9s,baz=331,slow=4.3,SNR=19						
ILAR				LR	LR	04 24 21.2	
	comp=Z,40nm,20.5s,baz=314,slow=38						
	comp=Z,2.5nm,0.9s						
ILAR	**Eielson Array**	**80.74**	**5**	*e*P	**P**	**03 45 17.8**	**-0.1**
ILAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
I30M	**Mount Dempster**	**80.76**	**1**	IAmb	IAmb	03 45 19.2	
	comp=Z,12nm,1.0s						
I30M	**Mount Dempster**	**80.76**	**1**	P	**P**	**03 45 18.1**	**-0.1**
	baz=358,SNR=12						
J18K	**Innoko River**	**80.92**	**10**		P	03 45 24.4	+5.5
J18K				IAmb	IAmb	03 45 25.3	
	comp=Z,6.9nm,1.2s						
J18K	**Innoko River**	**80.92**	**10**	P	**P**	**03 45 19.4**	**+0.5**
	baz=342						
K13K	**Kusilvak Mount**	**80.98**	**14**	P	**P**	**03 45 19.8**	**+0.6**
	baz=335						
J25K	**Salcha River,**	**81.01**	**5**	P	**P**	**03 45 19.4**	**0.0**
	baz=351						
BPAW	**Bear Paw Mtn.**	**81.02**	**7**	IAmb	IAmb	03 45 20.7	
	comp=Z,9.5nm,1.1s						
BPAW	**Bear Paw Mtn.**	**81.02**	**7**	P	**P**	**03 45 19.9**	**+0.4**
	baz=346,SNR=9.2						
CHUM	**Lake Minchumin**	**81.09**	**8**	P	**P**	**03 45 20.2**	**+0.5**
	baz=345,SNR=11						
HDA	**Harding Lake**	**81.09**	**6**	P	**P**	**03 45 19.7**	**-0.1**
	baz=350						
J26L	**Joseph Creek**	**81.23**	**4**	P	**P**	**03 45 20.2**	**-0.4**
	baz=352						
K15K	**Wolf Creek Mou**	**81.25**	**12**	P	**P**	**03 45 21.5**	**+0.9**
	baz=338						
K20K	**Telida**	**81.38**	**9**	P	**P**	**03 45 21.8**	**+0.4**
	baz=344						
K17K	**Iditarod**	**81.39**	**11**	P	**P**	**03 45 21.8**	**+0.4**
	baz=340						
J30M	**Hart River**	**81.41**	**1**	P	**P**	**03 45 21.7**	**0.0**
	baz=358,SNR=11						
CAST	**Castle Rocks**	**81.56**	**8**	IAmb	IAmb	03 45 23.7	
	comp=Z,10nm,1.0s						
CAST	**Castle Rocks**	**81.56**	**8**	P	**P**	**03 45 22.8**	**+0.5**
	baz=345,SNR=13						
MCK	**McKinley**	**81.58**	**7**	P	**P**	**03 45 22.2**	**-0.3**
	baz=348						
SCRK	**Sand Creek**	**81.73**	**4**	P	**P**	**03 45 23.7**	**+0.3**
	baz=352,SNR=14						
K24K	**Donnelly Dome**	**81.78**	**5**	P	**P**	**03 45 24.5**	**+1.0**
	baz=350,SNR=7.1						
K27K	**Chicken**	**81.78**	**3**	P	**P**	**03 45 24.2**	**+0.8**
	baz=354						
L15K	**Ungalak Mounta**	**81.83**	**13**	P	**P**	**03 45 24.2**	**+0.5**
	baz=338						
DAWY	**Dawson**	**81.86**	**2**	P	**P**	**03 45 24.2**	**+0.3**
	baz=356,SNR=6.8						
RIDG	**Independent Ri**	**81.91**	**5**	P	**P**	**03 45 24.5**	**+0.3**
	baz=351,SNR=6.7						
L14K	**Kuka Creek**	**81.91**	**13**	P	**P**	**03 45 24.8**	**+0.7**
	baz=337						
RND	**Reindeer**	**81.91**	**7**	IAmb	IAmb	03 45 24.4	
	comp=Z,6.8nm,1.1s						
L17K	**Donlin**	**81.94**	**11**	P	**P**	**03 45 25.0**	**+0.7**
	baz=340						
PPLA	**Purkeypile**	**82.06**	**8**	P	**P**	**03 45 25.8**	**+0.7**
	baz=345						
M11K	**Mekoryuk**	**82.06**	**15**	P	**P**	**03 45 26.2**	**+1.3**
	baz=334						
L18K	**Granite Mounta**	**82.11**	**10**	P	**P**	**03 45 25.9**	**+0.7**
	baz=342						
K29M	**Barlow Dome**	**82.13**	**1**	IAmb	IAmb	03 45 26.8	
	comp=Z,6.2nm,0.9s						
K29M	**Barlow Dome**	**82.13**	**1**	P	**P**	**03 45 25.8**	**+0.3**
	baz=357,SNR=7.8						
L16K	**Owhat River**	**82.15**	**12**	P	**P**	**03 45 25.9**	**+0.5**
	baz=339						
YKAW3	**Yellowknife Wh**	**82.15**	**351**		**P**	**03 45 24.5**	**-0.8**
YKAW3				IAmb	IAmb	03 45 25.9	
	comp=Z,7.2nm,1.0s						
YKAW1	**Yellowknife Wh**	**82.21**	**351**	IAmb	IAmb	03 45 26.2	
	comp=Z,6.4nm,1.1s						
YKAW1					**P**	**03 45 26.4**	**+0.7**
YKA	**Yellowknife Ar**	**82.21**	**351**	P	**P**	**03 45 24.5**	**-1.2**
	comp=Z,4.4nm,1.0s,baz=12,slow=5.8,SNR=27						
	comp=Z,4.4nm,1.0s						
YKA	**Yellowknife Ar**	**82.21**	**351**	*e*P	**P**	**03 45 25.2**	**-0.5**
YKA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
L20K	**Farewell, AK**	**82.25**	**9**	P	**P**	**03 45 26.6**	**+0.6**
	baz=344						
DHY	**Denali Highway**	**82.37**	**6**	P	**P**	**03 45 26.9**	**+0.2**
	baz=349						
L19K	**White Mountain**	**82.41**	**10**	P	**P**	**03 45 27.4**	**+0.6**
	baz=343						
PAX	**Paxson**	**82.63**	**5**	P	**P**	**03 45 28.0**	**0.0**
	baz=351						
M13K	**Dall Lake**	**82.64**	**14**	P	**P**	**03 45 28.3**	**+0.4**
	baz=336						
L26K	**Log Cabin Wild**	**82.71**	**4**	P	**P**	**03 45 28.9**	**+0.6**
	baz=353						
M19K	**Big River Lodg**	**82.74**	**9**	P	**P**	**03 45 29.2**	**+0.6**
	baz=343						
BCAR	**Beaver Creek A**	**82.76**	**3**		**P**	**03 45 28.9**	**+0.2**
L27K	**Beaver Creek,**	**82.76**	**3**	IAmb	IAmb	03 45 29.8	
	comp=Z,6.4nm,1.1s						
L27K	**Beaver Creek,**	**82.76**	**3**	P	**P**	**03 45 29.1**	**+0.5**
	baz=354,SNR=7.5						
M17K	**Holitna River**	**82.77**	**11**	P	**P**	**03 45 29.4**	**+0.7**
	baz=341						
WAT6	**Susitna Watana**	**82.83**	**6**	P	**P**	**03 45 28.5**	**-0.7**
	baz=349,SNR=5.5						
L29M	**L29M**	**82.85**	**2**	IAmb	IAmb	03 45 30.7	
	comp=Z,10nm,1.4s						
L29M	**L29M**	**82.85**	**2**	P	**P**	**03 45 29.3**	**+0.2**
	baz=357,SNR=5.8						
M16K	**Timber Creek**	**82.88**	**12**	P	**P**	**03 45 30.0**	**+0.7**
	baz=340						
M15K	**Kasigluk River**	**82.89**	**13**	P	**P**	**03 45 30.0**	**+0.8**
	baz=338						
M20K	**Styx River**	**82.92**	**9**	P	**P**	**03 45 29.9**	**+0.3**
	baz=344						
M18K	**Stony River**	**82.93**	**10**	P	**P**	**03 45 30.1**	**+0.6**
	baz=342						
SKT	**Skwentna**	**83.03**	**8**	P	**P**	**03 45 29.8**	**-0.2**
	baz=346						
HARP	**HAARP**	**83.22**	**5**	P	**P**	**03 45 31.7**	**+0.8**
	baz=351						
M26K	**Nabesna, AK**	**83.36**	**4**	IAmb	IAmb	03 45 33.4	
	comp=Z,4.6nm,1.1s						
M26K	**Nabesna, AK**	**83.36**	**4**	P	**P**	**03 45 32.4**	**+0.6**
	baz=353						
MMPY	**Sheldon Lake,**	**83.36**	**359**	IAmb	IAmb	03 45 33.9	
	comp=Z,6.2nm,1.1s						
MMPY	**Sheldon Lake,**	**83.36**	**359**	P	**P**	**03 45 32.4**	**+0.7**
	baz=2.6,SNR=5.9						
M22K	**Willow**	**83.40**	**7**	P	**P**	**03 45 32.3**	**+0.4**
	baz=347						
N14K	**Kuskokwak Cree**	**83.42**	**13**	P	**P**	**03 45 32.7**	**+0.7**
	baz=338						
M24K	**Tolsona, Glenn**	**83.43**	**6**	P	**P**	**03 45 33.1**	**+0.9**
	baz=350,SNR=5.4						
N16K	**Nishlik Lake**	**83.43**	**12**	P	**P**	**03 45 32.7**	**+0.6**
	baz=340						
BVCY	**Beaver Creek**	**83.45**	**3**	P	**P**	**03 45 33.0**	**+0.8**
	baz=355						
M27K	**Edge Creek, AK**	**83.46**	**4**	P	**P**	**03 45 32.9**	**+0.5**
	baz=354,SNR=7.8						
N15K	**Kwethluk River**	**83.48**	**13**	P	**P**	**03 45 33.0**	**+0.6**
	baz=339						
M29M	**Somme Creek**	**83.51**	**2**	P	**P**	**03 45 33.0**	**+0.4**
	baz=357						
SML	**Sawmill**	**83.53**	**7**	P	**P**	**03 45 32.7**	**0.0**
	baz=348,SNR=5.3						
SCM	**Sheep Creek Mo**	**83.60**	**6**	P	**P**	**03 45 33.0**	**-0.1**
	baz=349						
SUA	**Susitna One**	**83.62**	**8**	P	**P**	**03 45 33.2**	**0.0**
	baz=346						
N17K	**Nushagak Hills**	**83.64**	**11**	P	**P**	**03 45 34.0**	**+0.8**
	baz=341						
PMR	**Palmer**	**83.67**	**7**	P	**P**	**03 45 34.0**	**+0.8**
	baz=348						
N18K	**Kilae Creek**	**83.70**	**10**	P	**P**	**03 45 34.2**	**+0.7**
	baz=342						
N20K	**Mount Spurr**	**83.70**	**9**	P	**P**	**03 45 34.0**	**+0.5**
	baz=345						
N19K	**Bonanza Creek**	**83.77**	**10**	P	**P**	**03 45 34.9**	**+0.9**
	baz=343						
FARO	**Faro, Yukon**	**83.78**	**360**	P	**P**	**03 45 34.5**	**+0.7**
	baz=0.9,SNR=9.3						
M31M	**Drury Creek, Y**	**83.81**	**0**	P	**P**	**03 45 34.5**	**+0.5**
	baz=360,SNR=7.5						
KNK	**Knik Glacier**	**83.91**	**7**	P	**P**	**03 45 35.1**	**+0.6**
	baz=348						
N25K	**Chitina, Valde**	**84.04**	**5**	P	**P**	**03 45 35.7**	**+0.4**
	baz=352						
KLU	**Klutina**	**84.06**	**6**	P	**P**	**03 45 36.2**	**+0.8**
	baz=350,SNR=9.4						
YUK3	**Moose Creek**	**84.11**	**3**	P	**P**	**03 45 36.4**	**+0.6**
	baz=355,SNR=7.6						
O14K	**Tigyukauivet M**	**84.12**	**14**	P	**P**	**03 45 36.6**	**+1.0**
	baz=338						
TGTN	**Hyland Airport**	**84.36**	**357**	P	**P**	**03 45 37.8**	**+0.9**
	baz=5.1						
MCARA	**McCarthy VSAT**	**84.37**	**4**	P	**P**	**03 45 37.6**	**+0.8**
	baz=353						
O17K	**Koliganek Bris**	**84.37**	**11**	P	**P**	**03 45 37.7**	**+0.8**
	baz=341						
O15K	**Ungalikthiuk R**	**84.46**	**13**	P	**P**	**03 45 38.1**	**+0.7**
	baz=339						
PWL	**Port Wells**	**84.47**	**7**	P	**P**	**03 45 38.0**	**+0.6**
	baz=348						
GLI	**Glacier Island**	**84.56**	**6**	P	**P**	**03 45 38.3**	**+0.5**
	baz=350						
O18K	**Koktuh Hills**	**84.59**	**10**	P	**P**	**03 45 38.6**	**+0.6**
	baz=343						
YUK4	**Talbot Arm**	**84.60**	**2**	P	**P**	**03 45 38.4**	**+0.1**
	baz=357						
N32M	**Quiet Lake**	**84.86**	**359**	P	**P**	**03 45 40.2**	**+0.8**
	baz=1.1						
CTG	**Chitna Glacier**	**84.88**	**3**	P	**P**	**03 45 40.1**	**+0.4**
	baz=354						
P17K	**Kvichak River**	**85.03**	**11**	P	**P**	**03 45 41.1**	**+0.9**
	baz=342						
HYT	**Haines Junctio**	**85.16**	**2**	P	**P**	**03 45 41.7**	**+0.7**
	baz=357,SNR=9.0						
O30N	**Mendenhall**	**85.23**	**1**	P	**P**	**03 45 41.7**	**+0.4**
	baz=359						
BGLC	**Bering Glacier**	**85.61**	**4**	P	**P**	**03 45 43.6**	**+0.5**
	baz=353						
O29M	**Mount Kennedy**	**85.65**	**2**	P	**P**	**03 45 43.9**	**+0.4**
	baz=356						
PINM	**Pinnacle**	**85.80**	**3**	P	**P**	**03 45 44.4**	**+0.3**
	baz=355						
P33M	**Teslin, Yukon**	**85.80**	**359**	P	**P**	**03 45 43.9**	**-0.3**
	baz=1.3						
P30M	**Million Dollar**	**85.87**	**1**	P	**P**	**03 45 45.1**	**+0.6**
	baz=358						
Q17K	**Contact Creek**	**86.01**	**11**	P	**P**	**03 45 44.6**	**-0.7**
	baz=342						
Q23K	**Middleton Isla**	**86.06**	**6**	P	**P**	**03 45 45.5**	**+0.2**
	baz=350						
Q20K	**Shuyak Island**	**86.19**	**9**	P	**P**	**03 45 46.1**	**+0.2**
	baz=345						
PNL	**Peninsula**	**86.26**	**3**	P	**P**	**03 45 46.8**	**+0.4**
	baz=356						
P29M	**Windy Craggy**	**86.35**	**2**	P	**P**	**03 45 47.3**	**+0.5**
	baz=357						
P32M	**Atlin**	**86.43**	**360**	P	**P**	**03 45 47.6**	**+0.4**
	baz=0.6						
PLBC	**Pleasant Camp**	**86.55**	**1**	P	**P**	**03 45 48.6**	**+0.8**
	baz=358						
R33M	**Jennings River**	**86.58**	**358**	P	**P**	**03 45 48.7**	**+0.6**
	baz=2.8						
TOAD	**Toad River Com**	**86.86**	**355**	P	**P**	**03 45 50.1**	**+0.7**
	baz=7.5						
KDAK	**Kodiak Island**	**86.97**	**10**		**P**	**03 45 50.6**	**+0.8**
KDAK	**Kodiak Island**	**86.97**	**10**	P	**P**	**03 45 49.8**	**0.0**
	comp=Z,12nm,0.9s,baz=5.1,slow=3.2,SNR=7.7						
	comp=Z,12nm,0.9s						
KDAK	**Kodiak Island**	**86.97**	**10**	P	**P**	**03 45 50.6**	**+0.8**
KDAK				pmax	pmax		
	comp=Z,13nm,0.9s						
KDAK	**Kodiak Island**	**86.97**	**10**	P	**P**	**03 45 51.0**	**+1.2**
	baz=345						
Q32M	**Nakina River**	**87.05**	**359**	P	**P**	**03 45 51.0**	**+0.5**
	baz=1.8						
OHAK	**Old Harbor**	**87.41**	**10**	P	**P**	**03 45 52.7**	**+0.7**
	baz=344						
DLBC	**Dease Lake**	**87.52**	**358**	P	**P**	**03 45 52.4**	**-0.2**
	comp=Z,2.9nm,0.9s,baz=338,slow=22,SNR=4.4						
	comp=Z,2.9nm,0.9s						
DLBC	**Dease Lake**	**87.52**	**358**	P	**P**	**03 45 53.4**	**+0.8**
	baz=3.6						
R32K	**Eaglecrest**	**87.75**	**0**	P	**P**	**03 45 54.7**	**+1.1**
	baz=360						
S31K	**Pelican**	**88.05**	**1**	P	**P**	**03 45 55.9**	**+0.9**
	baz=358						
S34M	**Telegraph Cree**	**88.07**	**358**	P	**P**	**03 45 56.2**	**+1.0**
	baz=2.7						
S32K	**Killisnoo**	**88.56**	**0**	P	**P**	**03 45 58.5**	**+1.1**
	baz=360						
SIT	**Sitka**	**88.97**	**1**	P	**P**	**03 46 00.1**	**+0.8**
	baz=359						
T35M	**Bob Quinn**	**88.98**	**358**	P	**P**	**03 46 00.7**	**+1.2**
	baz=3.4						
ULM	**Lac du Bonnet**	**89.18**	**336**	LR	LR	04 26 30.1	
	comp=Z,66nm,19.2s,baz=16,slow=36						
U33K	**Whale Pass**	**89.91**	**359**	P	**P**	**03 46 05.0**	**+1.2**
	baz=1.0						
V35K	**Ketchikan**	**90.67**	**358**	P	**P**	**03 46 07.4**	**+0.1**
	baz=2.3						
BBB	**Bella Bella**	**93.68**	**356**	LR	LR	04 35 55.4	
	comp=Z,36nm,18.1s,baz=14,slow=40						
TKL	**Tuckaleechee C**	**95.87**	**321**	LR	LR	04 31 40.9	
	comp=Z,29nm,21.0s,baz=26,slow=37						
NVL	**N'lazarevskaya**	**107.56**	**191**	*e*P	Pdif	03 47 41.1	+18
NVL				pmax	pmax		
	comp=Z,12nm,0.8s						
QSPA	**South Pole Qui**	**124.16**	**180**	PKP	**PKiKP**	**03 52 03.2**	**+0.3**
	comp=Z,4.5nm,1.1s,baz=273,slow=0.4,SNR=7.7						

NAO ***05*** *03:36:02.9, 33°.01N×46°.65E, h33^{km}, mb4.0*
MOS ***05*** *03:36:14.0±1.5, 34°.47N×45°.67E, h11^{km}, mb4.7/31, Error ellipse: s-maj=6.3km s-min=4.1km az=107.5*
NEIC ***05*** *03:36:15.6±1.1, 34°.47N±0°.08×45°.7E±0°.1, h10^{km}±1^{km}, mb4.6/135, Error ellipse: s-maj=15.6km s-min=13.1km az=106.0*
ISN ***05*** *03:36:15.5±0.4, 34°.47N×45°.64E, h12^{km}±32^{km}, ML4.8*
TEH ***05*** *03:36:16.2, 34°.45N×45°.64E, h9^{km}±14^{km}*
THR ***05*** *03:36:16.5±0.0, 34°.48N×45°.61E, h13^{km}±2^{km}, ML5.0*
IDC ***05*** *03:36:17.5±4.2, 34°.46N×45°.57E, h27^{km}±28^{km}, mb4.2/35, mbtmp4.4/44, ML4.5/4, MS3.8/10, Error ellipse: s-maj=14.5km s-min=9.8km az=154.0*
ISC 05 03:36:16.4±0.6, **34°.45N**±0°.02×**45°.66E**±0°.03, **h20**^{km}±2^{km}, **n713**, σ**1^{s}.57**/732, **mb4.6**/148, **MS4.0**/23, **10C-17D, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KGS1	**Ghasr-e-Shirin**	**0.08**	**315**	Pg	**Pg**	**03 36 18.7**	**-1.6**
GLG1	**Gilan-e-Gharb**	**0.39**	**148**	Pg	**Pg**	**03 36 24.6**	**-0.2**
IDHR	**Dehrash**	**0.65**	**67**	Pg	**Pg**	**03 36 29.1**	**-0.3**
IGHG	**Ghaleghazi**	**0.76**	**99**	Pg	**Pb**	**03 36 31.7**	**+0.5**
ILBA	**Ilam Banvizeh**	**0.94**	**151**	Pg	**Pg**	**03 36 34.5**	**-0.3**
ILBA	**Ilam Banvizeh**	**0.94**	**151**	*e*Pg	**Pb**	**03 36 35.2**	**+1.1**
ILBA				IAML		03 36 54.4	
	comp=Z,17nm,1.0s						
KCHF	**Cheshme Sefid,**	**1.16**	**98**	Pg	**Pb**	**03 36 38.6**	**+0.7**
ILIN	**Lien**	**1.17**	**66**	Pg	**Pg**	**03 36 39.1**	**-0.1**
IBDR	**Badra**	**1.35**	**170**	*e*Pg	**Pb**	**03 36 42.0**	**+0.9**
IBDR				*e*Sg	**Sg**	**03 37 01.0**	**+0.7**
IBDR				AML	AML	03 37 05.6	
	comp=N,27μm,0.2s						
IBDR				AML	AML	03 37 06.0	
	comp=E,42μm,0.5s						
IKRK	**Kirkuk**	**1.44**	**312**	*e*Pn	**Pg**	**03 36 43.0**	**-1.3**
IKRK				*e*Sn	**Sg**	**03 37 03.0**	**-0.1**
IKRK				AML	AML	03 37 05.8	
	comp=N,6μm,0.5s						
IKRK				AML	AML	03 37 06.1	
	comp=E,12μm,0.4s						
SNGE	**Sanandaj**	**1.53**	**65**	*e*Pn	**Pg**	**03 36 45.3**	**-0.7**
SNGE				IAML		03 37 12.6	
	comp=Z,41nm,1.0s						
BHD	**Baghdad**	**1.59**	**223**	*e*Pn	**Pb**	**03 36 45.0**	**-0.1**
BHD				*e*Sn	**Sg**	**03 37 07.0**	**-0.7**
SNQR	**Sonqor, Kerman**	**1.67**	**75**	Pg	**Pg**	**03 36 48.5**	**-0.2**
SRSL	**SARDASHT**	**1.77**	**354**	*e*Pn	**Pb**	**03 36 48.7**	**+0.3**
SRSL				IAML		03 37 15.8	
	comp=Z,24nm,1.0s						
IBZA	**Bozab**	**1.82**	**89**	Pn	**Pb**	**03 36 49.8**	**+0.6**
IKFM	**Kafar-mosalman**	**2.04**	**116**	Pn	**Pb**	**03 36 52.9**	**+0.1**
MAHB	**Mahabad**	**2.31**	**1**	Pn	**Pb**	**03 36 56.4**	**-1.2**
HSAM	**Samen**	**2.45**	**95**	Pn	**Pb**	**03 36 58.6**	**-1.4**
NGD1	**Naghade .Az. G**	**2.50**	**355**	Pn	**Pb**	**03 36 59.4**	**-1.4**
HGHA	**Hamedan- Ghaye**	**2.82**	**68**	Pn	**Pn**	**03 37 04.0**	**+3.3**
HAGD	**Aghdareh**	**2.89**	**82**	Pn	**Pn**	**03 37 04.7**	**+3.0**
IHSH	**Hashtrud**	**3.13**	**24**	Pn	**Pn**	**03 37 08.1**	**+3.0**
IAZR	**Azarshahr**	**3.23**	**5**	Pn	**Pn**	**03 37 09.2**	**+2.8**
ZNJK	**Zanjan**	**3.32**	**47**	*e*Pn	**Pn**	**03 37 10.5**	**+3.0**
ZNJK				IAML		03 37 45.8	
	comp=Z,1.6nm,1.0s						
GTMR	**Gotvand**	**3.50**	**123**	*e*Pn	**Pn**	**03 37 11.6**	**+1.8**
GTMR				*e*Sg	**Sn**	**03 37 54.3**	**+3.7**
GTMR				IAML		03 38 15.5	
	comp=Z,6.5nm,1.0s						
ASAO	**Ashtian**	**3.61**	**87**	*e*Pn	**Pn**	**03 37 15.0**	**+3.5**
ASAO				IAML		03 38 19.8	
	comp=Z,4.5nm,1.0s						
KHMZ	**Khomeyn**	**3.64**	**100**	*e*Pn	**Pn**	**03 37 15.0**	**+3.1**
KHMZ				IAML		03 38 27.5	
	comp=Z,3.4nm,1.0s						
ITBZ	**Tabriz**	**3.80**	**6**	Pn	**Pn**	**03 37 17.5**	**+3.4**
AHWZ	**Ahwaz**	**4.00**	**140**	Pn	**Pn**	**03 37 19.4**	**+2.8**
IHRS	**Heris**	**4.02**	**16**	Pn	**Pn**	**03 37 20.3**	**+3.2**
JIR1	**Jirandeh**	**4.06**	**55**	Pn	**Pn**	**03 37 21.0**	**+3.4**
GEVA	**Gevas**	**4.39**	**332**	Pn	**Pn**	**03 37 24.5**	**+2.3**
IQOM	**Qom**	**4.48**	**83**	Pn	**Pn**	**03 37 26.3**	**+2.9**
LHJ2	**Lahijan - Gila**	**4.49**	**52**	Pn	**Pn**	**03 37 27.4**	**+4.1**
GAS1	**Astara - Iran**	**4.69**	**32**	Pn	**Pn**	**03 37 29.4**	**+3.2**
GRMI	**Germi**	**4.71**	**22**	Pn	**Pn**	**03 37 29.4**	**+2.9**
GRMI	**Germi**	**4.71**	**22**	IAML		03 39 05.9	
	comp=Z,0.6nm,1.0s						
IPIR	**Pirpir**	**4.71**	**110**	Pn	**Pn**	**03 37 29.1**	**+2.4**
NAX	**Nakhchivan**	**4.72**	**358**	P	**Pn**	**03 37 27.9**	**+1.3**
JHBN	**Jahan bin**	**4.74**	**116**	Pn	**Pn**	**03 37 29.0**	**+1.9**
KLST	**Kelardasht - M**	**4.87**	**63**	Pn	**Pn**	**03 37 32.2**	**+3.3**
ZNGN	**Zangian**	**4.93**	**117**	Pn	**Pn**	**03 37 31.6**	**+1.9**
LKRN	**Lenkeran, Azer**	**4.94**	**30**	P	**Pn**	**03 37 32.8**	**+3.3**
MAKU	**Maku**	**4.96**	**351**	*e*Pn	**Pn**	**03 37 33.1**	**+3.1**
IVRN	**Varamin**	**5.03**	**82**	Pn	**Pn**	**03 37 33.8**	**+2.9**
GURO	**Guroymak-BITLI**	**5.03**	**326**	Pn	**Pn**	**03 37 32.9**	**+2.0**
IKLH	**Kolahrood**	**5.05**	**101**	Pn	**Pn**	**03 37 34.1**	**+2.7**
MZPU	**Pul - Mazandar**	**5.22**	**66**	Pn	**Pn**	**03 37 37.4**	**+3.8**
DAMV	**Damavand**	**5.31**	**75**	*e*Pn	**Pn**	**03 37 37.3**	**+2.4**
DAMV				IAML		03 38 46.1	
	comp=Z,0.0nm,1.0s						
IDMV	**Damavand**	**5.35**	**76**	Pn	**Pn**	**03 37 38.4**	**+3.0**
KRSH	**Karshahi**	**5.39**	**93**	Pn	**Pn**	**03 37 38.7**	**+2.8**
KBD	**Kabd**	**5.54**	**161**	P	**Pn**	**03 37 37.8**	**0.0**
KBD				S	**Sn**	**03 38 40.7**	**-0.2**
IGAR	**Gharneh**	**5.71**	**109**	Pn	**Pn**	**03 37 42.6**	**+2.2**
GNI	**Garni**	**5.74**	**353**	Pn	**Pn**	**03 37 43.7**	**+3.1**
	comp=Z,46nm,1.0s,baz=153,slow=11,SNR=0.6						
GNI	**Garni**	**5.74**	**353**	*i* P	**Pn**	**03 37 39.8**	**-0.9**
IZEF	**Zefreh**	**5.77**	**104**	Pn	**Pn**	**03 37 44.2**	**+3.0**
IFIR	**Firoozkooh**	**5.94**	**76**	Pn	**Pn**	**03 37 46.5**	**+2.9**
KLNJ	**Kolanjah**	**6.06**	**123**	*e*Pn	**Pn**	**03 37 48.8**	**+3.5**
KLNJ				IAML		03 39 07.4	
	comp=Z,1.6nm,1.0s						
ILAS	**Lasjerd**	**6.07**	**79**	Pn	**Pn**	**03 37 48.5**	**+3.2**
IRAM	**Ramesheh**	**6.22**	**113**	Pn	**Pn**	**03 37 49.5**	**+2.0**
ASF	**Jabal al Asfar**	**7.68**	**255**	Pn	**Pn**	**03 38 08.1**	**+0.8**
	comp=Z,5.1nm,0.3s,baz=347,slow=18,SNR=1.1						
ASF				Lg	Lg	03 40 17.4	
	comp=Z,11nm,0.3s,baz=105,slow=22,SNR=3.9						
	comp=Z,69nm,0.7s						
MAK	**Makhachkala**	**8.62**	**9**	*e*P	Pn	03 38 15.4	-4.7
MAK				*e*S	**Sn**	**03 39 49.9**	**-6.8**
MAK				pmax	pmax		
	comp=Z,119nm,1.7s						
MAK				MLR	MLR		
	comp=Z,856nm,10.0s						
MMAI	**Mount Meron Ar**	**8.66**	**263**	Pn	**Pn**	**03 38 21.6**	**+0.8**
	comp=Z,73nm,1.0s,baz=79,slow=15,SNR=1.6						
MMAI				Lg	Lg	03 40 42.9	
	comp=Z,7.0nm,0.3s,baz=64,slow=44,SNR=1.7						
SAKB	**Bahrain**	**9.44**	**152**	P	**Pn**	**03 38 30.1**	**-1.2**
SAKB				S	**Sn**	**03 40 14.1**	**-2.7**
KBZ	**Khabaz**	**9.51**	**348**	Pn	**Pn**	**03 38 35.6**	**+3.4**
	comp=Z,5.6nm,0.8s,baz=168,slow=8.5,SNR=3.9						
KBZ	**Khabaz**	**9.51**	**348**	*i* P	**Pn**	**03 38 35.9**	**+3.6**
SHA1	**Shidzhatmaz**	**9.56**	**347**	*i* P	**Pn**	**03 38 34.5**	**+1.3**
SHMA	**Al-Shehemyia**	**9.71**	**150**	P	**Pn**	**03 38 34.6**	**-0.5**
SHMA				S	**Sn**	**03 40 20.9**	**-2.7**
KVAR	**Kislovodsk Arr**	**9.77**	**347**	Pn	**Pn**	**03 38 38.9**	**+3.0**
	comp=Z,4.7nm,0.6s,baz=149,slow=5.9						
KIV	**Kislovodsk**	**9.77**	**347**		**Pn**	**03 38 38.2**	**+2.3**
KIV	**Kislovodsk**	**9.77**	**347**	*e*P	**Pn**	**03 38 38.4**	**+2.5**

KIV				pmax	pmax		
	comp=Z,18nm,1.0s						
KIV				pmax	pmax		
	comp=Z,118nm,13.0s						
SOC	Sochi	10.22	335	eP	Pn	03 38 38.5	-3.5
SOC				e		03 40 32.1	
SOC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SOC				MLR	MLR		
	comp=Z,561nm,13.0s						
EIL	Elat	10.26	245	Pn	Pn	03 38 38.9	-3.7
	comp=Z,3.6nm,0.3s,baz=284,slow=19,SNR=6.6						
EIL				Lg	Lg	03 41 41.2	
	comp=Z,5.7nm,0.3s,baz=98,slow=17,SNR=4.0						
SMRA	Abu-Samra	10.66	154	P	Pn	03 38 46.9	-1.2
GOF	Gofitskoye	10.79	350	ceP	Pn	03 39 00.1	+10
TRNA	Turayna	10.82	152	P	Pn	03 38 49.2	-1.1
TRNA				S	Sn	03 40 48.4	-2.3
LABN	Labinsk	10.87	341	eP	Pn	03 38 41.4	-9.4
LABN				pmax	pmax		
	comp=Z,12nm,0.7s						
LABN				MLR	MLR		
	comp=E,2µm,14.0s						
LABN				MLR	MLR		
	comp=Z,1µm,15.0s						
LABN				MLR	MLR		
	comp=N,905nm,10.0s						
JRN	Qarnain Island	11.35	145	P	Pn	03 38 56.2	-1.2
SLWR	Sila	11.60	151	P	Pn	03 38 59.8	-1.2
SLWR				S	Sn	03 41 05.3	-4.7
ERBR	Yeremizino-Bor	11.93	342	eP	Pn	03 39 07.9	+2.6
ERBR				pmax	pmax		
	comp=Z,30nm,1.9s						
ERBR				MLR	MLR		
	comp=Z,665nm,16.0s						
ANN	Anapa	12.12	331	eP	P	03 39 15.1	-5.4
ANN				pmax	pmax		
	comp=Z,18nm,1.1s						
ANN				MLR	MLR		
	comp=N,643nm,12.0s						
ANN				MLR	MLR		
	comp=Z,844nm,13.0s						
ANN				MLR	MLR		
	comp=E,634nm,14.0s						
GHWR	Ruwais	12.20	147	P	Pn	03 39 07.5	-1.6
GHWR				S	Sn	03 41 19.9	-4.7
SHME	Shamm	12.33	130	P	Pn	03 39 10.3	-0.6
	SNR=7.5						
SHME	Shamm	12.33	130	i Pn	Pn	03 39 09.2	-1.7
	SNR=8.8						
UMQ	Umm Al-Quwin	12.41	133	P	Pn	03 39 12.3	+0.2
	SNR=5.2						
UMQ				S	Sn	03 41 26.2	-3.6
BANOM	Banah	12.52	130	P	Pn	03 39 12.4	-1.2
BANOM				S	Sn	03 41 26.7	-5.8
BANOM	Banah	12.52	130	i Pn	Pn	03 39 12.3	-1.2
	SNR=12						
BANOM				Sn	Sn	03 41 22.2	-10
ISP	Isparta	12.69	290		Pn	03 39 19.7	+3.8
ISP	Isparta	12.69	290	P	Pn	03 39 19.7	+3.8
AJN	Ajban	12.76	138	P	Pn	03 39 16.5	-0.3
	SNR=18						
AJN				S	Sn	03 41 34.5	-3.9
	SNR=8.3						
AJN	Ajban	12.76	138	i Pn	Pn	03 39 16.7	-0.2
	SNR=19						
NAZ	Nazwa, Dubai	12.81	135	P	Pn	03 39 17.6	+0.1
	SNR=14						
NAZ	Nazwa, Dubai	12.81	135	i Pn	Pn	03 39 17.8	+0.2
	SNR=14						
MASF	Masafi	12.83	132	P	Pn	03 39 17.5	-0.3
	SNR=16						
MASF				S	Sn	03 41 35.1	-5.0
MSFE	Esma-Masafi	12.84	132	i Pn	Pn	03 39 17.3	-0.6
	SNR=16						
MZWR	Madinat Zayed	12.84	144	P	Pn	03 39 16.7	-1.2
MZWR				S	Sn	03 41 35.6	-4.7
ASUD	Al Ashush, Dub	12.90	137	P	Pn	03 39 18.6	-0.2
	SNR=7.5						
ASUD				S	Sn	03 41 37.2	-4.6
	SNR=7.3						
ASUD	Al Ashush, Dub	12.90	137	i Pn	Pn	03 39 18.7	0.0
	SNR=7.3						
FAQ	Al Faqa, Dubai	12.96	136	P	Pn	03 39 19.4	-0.2
FAQ	Al Faqa, Dubai	12.96	136	Pn	Pn	03 39 18.5	-1.0
MDH	Madha	12.97	132	P	Pn	03 39 18.6	-1.0
	SNR=6.8						
MDH				S	Sn	03 41 38.1	-5.3
MDH	Madha	12.97	132	i Pn	Pn	03 39 18.4	-1.2
	SNR=5.6						
ELL	Elmali	13.02	285	Pn	Pn	03 39 24.9	+4.5
ELL	Elmali	13.02	285	P	Pn	03 39 25.0	+4.5
UOSS	Minazif	13.17	133	P	Pn	03 39 20.7	-1.7
UOSS				S	Sn	03 41 41.2	-7.2
UOSS	Minazif	13.17	133	Pn	Pn	03 39 20.9	-1.5
HATD	Hatta, Dubai	13.22	134	P	Pn	03 39 22.1	-1.0
	SNR=7.2						
HATD				S	Sn	03 41 42.5	-7.0
HATD	Hatta, Dubai	13.22	134	i Pn	Pn	03 39 22.2	-0.8
	SNR=6.9						
ASHO	Ashiyiah	13.28	134	P	Pn	03 39 23.1	-0.9
	SNR=12						
ASHO				S	Sn	03 41 44.8	-6.3
ASHO	Ashiyiah	13.28	134	i Pn	Pn	03 39 23.1	-0.9
	SNR=12						
ALNE	Al Ain	13.59	137	P	Pn	03 39 26.9	-1.2
	SNR=8.2						
ALNE	Al Ain	13.59	137	i Pn	Pn	03 39 27.7	-0.5
	SNR=8.2						
ZHSF	Zahedan	13.70	106	i P	Pn	03 39 32.8	+3.0
SIM	Simferopol'	13.73	323	P	P	03 39 39.1	+0.6
SIM				pmax	pmax		
	comp=Z,19nm,1.1s						
SOHO	SOHO	13.98	134	P	Pn	03 39 31.8	-1.7
SOHO				S	Sn	03 41 58.8	-9.2
SOHO	SOHO	13.98	134	i Pn	Pn	03 39 33.0	-0.5
	SNR=8.0						
MANT	Manisa	14.34	291	Pn	Pn	03 39 42.1	+3.5
UMZA	Um Al Zommool	14.35	142	P	Pn	03 39 37.7	-0.9
HOQ	Hoqain	14.86	134	P	Pn	03 39 46.2	+0.8
BAND	Balkesir-Ban	15.14	298	⇓P	P	03 39 54.6	+0.4
KARP	Karpathos	15.20	279		P	03 39 55.0	+0.1
BIDO	Bidbid	15.40	132	P	Pn	03 39 51.2	-1.4
	SNR=5.4						
BSY	Bisya	15.44	136	P	Pn	03 39 53.5	+0.3
SMDO	Samad	15.69	133	P	Pn	03 39 55.1	-1.5
	SNR=7.2						
WSAR	Wadi Sarin	15.92	131	Pn	Pn	03 39 57.0	-2.3
	comp=Z,0.1nm,0.3s,baz=130,slow=24,SNR=9.2						
WSAR				Sn	Sn	03 42 44.0	-11
	baz=145,slow=24,SNR=4.6						
WSAR	Wadi Sarin	15.92	131	P	Pn	03 39 57.7	-1.6
	SNR=5.5						
NGCH	Negor - Chabah	16.18	120	P	Pn	03 40 00.3	-2.3
JMDO	Jabal Madar	16.25	135	P	Pn	03 40 03.2	-0.4
JURR	Jurilovca	16.50	314	⇓P	P	03 40 09.5	+0.2
TIRR	Tirgusor	16.62	312	Pn	Pn	03 40 07.3	-0.9
TIRR	Tirgusor	16.62	312	⇑P	P	03 40 12.0	+1.4
TIRR	Tirgusor	16.62	312	P	P	03 40 12.0	+1.4
ALN	Alexandroupoli	16.79	298		P	03 40 13.1	+0.6
ALN	Alexandroupoli	16.79	298	P	P	03 40 13.1	+0.6
ALN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TPGR	Topolog	16.83	313	⇓P	P	03 40 12.8	-0.1
VRH	Novokhopyorsk	16.99	351	eP	Pn	03 40 09.0	-3.8
VRH				pmax	pmax		
	comp=Z,30nm,0.9s						
HARR	Harsova	17.04	312	P	P	03 40 16.0	+0.9
HARR	Harsova	17.04	312	⇑P	P	03 40 16.1	+0.9
IDI	Anoyia	17.07	279	P	Pn	03 40 14.7	+0.7
IDI	Anoyia	17.07	279	Pn	Pn	03 40 14.7	+0.7
	comp=Z,10nm,0.9s,baz=85,slow=9.4,SNR=11						
VORD	Divnogorie	17.15	346	eP	Pn	03 40 14.8	0.0
VORD				pmax	pmax		
	comp=Z,40nm,0.9s						
CFR	Carcaliu	17.17	314	P	P	03 40 16.4	-0.2
CFR	Carcaliu	17.17	314	⇓P	P	03 40 16.5	-0.2
JLN	Jalan Bani Buh	17.20	132	P	Pn	03 40 14.6	-1.1
RDO	Rodhopi	17.23	299		Pn	03 40 16.2	+0.2
MHTO	MHTO	17.26	138	P	Pn	03 40 15.0	-1.4
	SNR=10						
VSR	Storozhevoye	17.41	346	eP	Pn	03 40 17.3	-0.7
VSR				pmax	pmax		
	comp=Z,20nm,0.8s						
DOK	Doka	17.48	152	P	Pn	03 40 16.0	-3.2
	SNR=27						
VORR	Voronezh	17.84	347	eP	Pn	03 40 22.0	-1.3
VORR				pmax	pmax		
	comp=Z,30nm,1.0s						
DQM	DQM	17.89	141	P	Pn	03 40 23.9	-0.3
	SNR=11						
BELG	Belogornoye	17.99	4	P	Pn	03 40 24.4	-0.8
	comp=Z,2.2nm,0.3s,baz=230,slow=2.6,SNR=5.6						
	comp=Z,12nm,0.5s						
BELG	Belogornoye	17.99	4	i P	P	03 40 26.0	+0.4
AB31	Akbulak array	18.18	31	P	Pn	03 40 27.4	-0.1
ABKAR	Akbulak array	18.18	31		Pn	03 40 27.2	-0.3
ABKAR	Akbulak array	18.18	31		Pn	03 40 26.6	-1.0
ABKAR				IAmb	IAmb	03 40 40.7	
	comp=Z,11nm,0.7s						
ABTO	Aybut	18.34	156	P	Pn	03 40 26.1	-3.7
	SNR=8.6						
AKTO	Aktyubinsk	18.35	26	P	Pn	03 40 29.8	+0.1
	comp=Z,0.9nm,0.3s,baz=219,slow=9.4,SNR=5.4						
	comp=Z,3.6nm,0.6s						
RBK	Rabkut	18.53	153	P	P	03 40 28.6	-3.2
	SNR=18						
DMTO	DMTO	18.62	151	P	P	03 40 30.0	-2.8
	SNR=31						
MLR	Muntele Rosu	18.66	312	P	P	03 40 33.5	+0.3
	comp=Z,0.4nm,0.3s,baz=125,slow=16,SNR=4.7						
	comp=Z,1.9nm,0.6s						
TESR	Tescani	18.77	316	⇓P	Pn	03 40 35.7	+0.9
LPSR	Galich'ya Gora	18.77	347	eP	P	03 40 33.1	-1.1
LPSR				pmax	pmax		
	comp=Z,75nm,0.8s						
SORM	Soroca	18.81	322	P	P	03 40 34.9	+0.2
SORM	Soroca	18.81	322	⇑P	P	03 40 34.9	+0.2
ONER	Baraj Valea Uz	18.82	315	⇓P	P	03 40 35.6	+0.7
TURR	Turia	18.90	314	⇑P	Pn	03 40 36.7	+0.3
SIMJ	Simiganj	19.21	71	P	P	03 40 38.1	-1.3
KBL	Kabul	19.27	83		P	03 40 40.0	-0.1
KBL				IAmb	IAmb	03 40 51.0	
	comp=Z,34nm,1.1s						
KBL	Kabul	19.27	83	P	P	03 40 40.4	+0.2
	SNR=8.8						
KBL	Kabul	19.27	83	P	P	03 40 40.0	-0.1
KBL				pmax	pmax		
	comp=Z,34nm,1.1s						
ARR	Arges	19.41	310	⇓P	Pn	03 40 42.9	+0.3
ITM	Ithomi	19.43	285	P	Pn	03 40 43.1	+0.2
LOT	Lotru	19.99	310	⇑P	P	03 40 48.7	+0.9
AKASG	Malin Array Be	20.18	329	P	P	03 40 48.7	-0.9
AKASG	Malin Array Be	20.18	329	P	P	03 40 48.8	-0.8
	comp=Z,1.7nm,0.4s,baz=139,slow=8.8,SNR=8.0						
AKASG				PcP	PcP	03 45 02.8	-0.8
	comp=Z,1.9nm,0.6s,baz=96,slow=2.1,SNR=5.9						
	comp=Z,1.7nm,0.4s						
AKASG	Malin Array Be	20.18	329	eP	P	03 40 49.1	-0.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKBB	Malin Array Si	20.18	329	P	P	03 40 49.1	-0.5
AKBB				IAmb	IAmb	03 40 58.9	
	comp=Z,24nm,0.9s						
AKBB	Malin Array Si	20.18	329	i P	P	03 40 48.8	-0.8
KIEV	Kiev	20.18	329	P	P	03 40 49.3	-0.4
KIEV	Kiev	20.18	329	P	P	03 40 49.3	-0.4
KIEV				pmax	pmax		
	comp=Z,22nm,1.0s						
KIEV	Kiev	20.18	329	⇓P	P	03 40 49.2	-0.5
BURAR	Bucovina Array	20.19	317		P	03 40 50.5	+0.6
BURAR	Bucovina Array	20.19	317	⇓P	P	03 40 50.3	+0.4
BURAR	Bucovina Array	20.19	317	P	P	03 40 50.3	+0.4
BUR08	Bucovina Ar. S	20.22	317		P	03 40 51.1	+0.9
GZR	Gura Zlata	20.61	309	P	P	03 40 55.4	+1.0
GZR	Gura Zlata	20.61	309	⇓P	P	03 40 55.4	+1.0
HERR	Herculane	20.64	307	⇑P	P	03 40 55.5	+0.8
BRLS	Borolday	20.66	58	eP	P	03 40 53.7	-1.3
BRLS				pmax	pmax		
	comp=Z,16nm,1.4s						
BTK	Batken	20.76	67		P	03 40 56.0	-0.2
BTK				IAmb	IAmb	03 41 08.2	
	comp=Z,42nm,1.2s						
BTK	Batken	20.76	67	P	P	03 40 56.0	-0.2
BTK				pmax	pmax		
	comp=Z,42nm,1.2s						
MARR	Marisel-Cluj	20.95	312	⇓P	P	03 40 58.6	+0.5
MDVR	Moldovita	21.07	306	⇓P	P	03 40 59.8	+0.5
KK31	Karatay Array	21.16	59	P	P	03 40 59.9	-0.4
KK31				IAmb	IAmb	03 41 12.1	
	comp=Z,31nm,1.1s						
KK31	Karatay Array	21.16	59	P	P	03 40 59.9	-0.4
KK31				pmax	pmax		
	comp=Z,31nm,1.2s						
KKAR	Karatay Array	21.16	59		P	03 41 00.1	-0.2
KKAR	Karatay Array	21.16	59	P	P	03 40 59.7	-0.6
KKAR				IAmb	IAmb	03 41 12.1	
	comp=Z,32nm,1.1s						
KKAR	Karatay Array	21.16	59	P	P	03 41 00.1	-0.2
SURR	Surduc	21.17	309	⇓P	P	03 41 00.7	+0.3
DRGR		21.25	312	P	P	03 41 01.7	+0.3
DRGR		21.25	312	⇓P	P	03 41 01.7	+0.3
KEK	Kerkira	21.26	292		P	03 41 02.4	+1.0
KEK				IAmb	IAmb	03 41 19.1	
	comp=Z,21nm,0.6s						
OBN	Obninsk	21.61	346	P	P	03 41 03.6	-1.4
	comp=Z,14nm,0.4s,baz=126,slow=22,SNR=4.1						
	comp=Z,14nm,0.4s						
OBN	Obninsk	21.61	346	i P	P	03 41 03.1	-1.9
OBN				i		03 41 09.8	
OBN				pmax	pmax		
	comp=Z,21nm,0.9s						
OBN				MLR	MLR		
	comp=Z,255nm,20.0s						
MOS	Moscow	22.00	348	eP	P	03 41 07.7	-1.5
MOS				eS	S	03 45 06.2	-4.8
MOS				pmax	pmax		
	comp=Z,48nm,0.8s						
KOLS	Kolonicke sedl	22.56	317	eP	P	03 41 16.6	+1.3
KOLS	Kolonicke sedl	22.56	317	eP	P	03 41 16.6	+1.3
ARSB	Arslanbob	22.57	64	P	P	03 41 16.0	+0.3
ARSB				IAmb	IAmb	03 41 40.4	
	comp=Z,39nm,1.1s						
ARSB	Arslanbob	22.57	64	P	P	03 41 16.0	+0.3
ARSB				pmax	pmax		
	comp=Z,39nm,1.1s						
NIL	Nilore	22.85	84		P	03 41 17.3	-1.3
NIL				IAmb	IAmb	03 41 43.7	
	comp=Z,25nm,0.8s						
NIL	Nilore	22.85	84	P	P	03 41 20.0	+1.4
NIL	Nilore	22.85	84	P	P	03 41 17.3	-1.3
NIL				pmax	pmax		
	comp=Z,25nm,0.9s						
ATD	Arta Tunnel	22.96	187	P	P	03 41 20.8	+1.0
ATD				IAmb	IAmb	03 41 35.3	
	comp=Z,17nm,1.0s						
AML	Almayashu	23.23	62	P	P	03 41 25.2	+2.5
	SNR=14						
PSZ	Piszkesteto	23.47	313		P	03 41 25.5	+0.8
PSZ	Piszkesteto	23.47	313	P	P	03 41 25.5	+0.8
PSZ				pmax	pmax		
	comp=Z,14nm,1.2s						
TIP	Timpagrande	23.56	290	P	P	03 41 27.9	+2.2
TIP	Timpagrande	23.56	290	⇓P	P	03 41 26.9	+1.1
MORH	Mrgy, Hungar	23.59	308	⇓P	P	03 41 25.4	-0.4
MNK	Minsk	23.60	334	i P	P	03 41 25.3	-0.5
	comp=E,4.0nm,0.8s						
MNK				i P	P	03 41 25.3	-0.5
	comp=N,9.0nm,0.8s						
MNK				i P	P	03 41 25.3	-0.5
	comp=Z,14nm,0.6s,baz=140						
MNK				i PP	PnPn	03 41 51.7	-1.3
MNK				i PPP	PPP	03 41 59.6	
MNK				i S	S	03 45 39.9	+0.8
MNK				i SS	SnSn	03 46 16.7	+0.3
MNK				i LQ	LQ	03 48 40.8	
MNK				i LR	LR	03 50 48.3	
MNK				i LRM	MLR	03 51 10.5	
	comp=N,182nm,15.8s						
MNK				i LRM	MLR	03 52 04.2	
	comp=E,222nm,15.4s						
MNK				i LRM	MLR	03 52 06.8	
	comp=Z,126nm,14.8s						
MNK	Minsk	23.60	334	i P	P	03 41 25.2	-0.5
MNK				i PPP	PPP	03 41 59.6	
MNK				i S	S	03 45 39.8	+0.8
MNK				i SS	SnSn	03 46 16.6	+0.3
MNK				pmax	pmax		
	comp=N,9.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,4.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,14nm,0.6s						
MNK				MLR	MLR		
	comp=N,182nm,16.0s						
MNK				MLR	MLR		
	comp=E,222nm,15.0s						
MNK				MLR	MLR		
	comp=Z,126nm,15.0s						
ARTI	Arti	23.61	18	P	P	03 41 25.9	-0.1
ARTI				IAmb	IAmb	03 41 41.3	
	comp=Z,18nm,0.8s						
ARTI	Arti	23.61	18	d iP	P	03 41 27.2	+1.3
ARTI						03 41 54.9	
ARTI				S	S	03 45 43.4	+4.2
ARTI				SS	SnSn	03 46 20.6	+4.0
ARTI				pmax	pmax		
	comp=Z,14nm,1.6s						
AAK	Ala-Archa	23.90	61	i P	P	03 41 30.6	+1.5
AAK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
USP	Ospenovka	24.03	60	P	P	03 41 32.1	+2.0
	SNR=7.3						
BTLS	Baital	24.14	56	eP	P	03 41 31.8	+0.7
BTLS				pmax	pmax		
	comp=Z,21nm,1.1s						
CHMS	Chumysh	24.16	61	P	P	03 41 33.8	+2.5
	SNR=8.9						
CEL	Celeste	24.22	288		P	03 41 32.5	+0.6
CEL				IAmb	IAmb	03 42 15.2	
	comp=Z,14nm,0.8s						
KBK	Karagaybulak	24.24	62	P	P	03 41 33.7	+1.5
	SNR=6.2						
LANS	Liptovska Anna	24.27	315	eP	P	03 41 32.2	-0.1
LANS	Liptovska Anna	24.27	315	eP	P	03 41 32.2	-0.1
NACGM	Naroch	24.32	333	eP	P	03 41 32.2	-0.4
	comp=Z,14nm,0.8s,baz=139						
VYHS	Vyhne	24.36	313	eP	P	03 41 34.7	+1.7
VYHS	Vyhne	24.36	313	eP	P	03 41 34.7	+1.7
SRO	Srobarova	24.39	311	eP	P	03 41 39.7	+6.3
SRO	Srobarova	24.39	311	eP	P	03 41 39.7	+6.3
OJC	Ojcow	24.60	318		P	03 41 34.9	-0.3
OJC	Ojcow	24.60	318	P	P	03 41 34.9	-0.3
KSH	Kashi	24.67	69	P	P	03 41 36.1	-0.1
KSH				sP	sP	03 41 42.6	-2.2
KSH				pmax	pmax		
	comp=Z,12nm,0.9s						
KSH				LR	LR		
	comp=Z,350nm,13.7s						
KSH				LR	LR		
	comp=Z,630nm,15.5s						
KSH				LR	LR		
	comp=Z,650nm,16.2s						
TKM2	Tokmak 2	24.75	61	P	P	03 41 39.2	+2.3
	SNR=12						
BOOM	Boomskoye usch	24.93	62		P	03 41 38.0	-0.5
BOOM	Boomskoye usch	24.93	62	P	P	03 41 38.0	-0.5
BOOM				pmax	pmax		
	comp=Z,30nm,0.9s						
ISAL	Salakas	25.07	333	eP	P	03 41 40.4	+1.1
BRZS	Berezniki	25.14	44	eP	P	03 41 41.3	+1.2
BRZS				pmax	pmax		
	comp=Z,8.0nm,1.2s						
JAVC	Velka Javorina	25.21	313	eP	P	03 41 40.9	+0.1
SMOL	Smolenice	25.22	312	eP	P	03 41 43.9	+3.1
KOGS	Kog	25.23	307	i P	P	03 41 41.0	0.0
MODS	Modra-Piesok	25.25	312	eP	P	03 41 41.6	+0.4
MODS	Modra-Piesok	25.25	312	eP	P	03 41 41.6	+0.4
MAUC	Maruska	25.33	314	eP	P	03 41 42.6	+0.7
OKC	Ostrava-Krasne	25.35	316	P	P	03 41 48.3	+6.3
SOP	Sopron	25.44	310	P	P	03 41 49.0	+6.1
SOP				pmax	pmax		
	comp=Z,29nm,1.4s						
BRVK	Borovoye	25.53	36	P	P	03 41 43.4	-0.1
BRVK				IAmb	IAmb	03 42 00.2	
	comp=Z,17nm,1.1s						
BRVK	Borovoye	25.53	36	i P	P	03 41 43.8	+0.2
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
BVAR	Borovoye Array	25.56	36	P	P	03 41 44.6	+0.8
	comp=Z,2.7nm,0.6s,baz=237,slow=9.2,SNR=17						
BVAR				PcP	PcP	03 45 14.4	-0.2
	comp=Z,1.1nm,0.4s,baz=229,slow=1.6,SNR=3.7						
	comp=Z,2.7nm,0.6s						
STEB	Steborice	25.61	316	eP	P	03 41 43.9	-0.5
RONA	Rosalia, Austr	25.62	310	eP	P	03 41 44.7	+0.2
	comp=Z,22nm,2.2s						
MORC	Moravsky Berou	25.68	315	eP	P	03 41 44.5	-0.5
MORC	Moravsky Berou	25.68	315	P	P	03 41 45.1	+0.1
MORC	Moravsky Berou	25.68	315	⇑P	P	03 41 45.1	+0.1
PABE	Paberze	25.85	331	P	P	03 41 46.1	-0.3
PABE	Paberze	25.85	331	eP	P	03 41 46.1	-0.3
ARSA	Arzberg	25.96	309	eP	P	03 41 50.5	+2.9
	comp=Z,8.2nm,1.0s						
CONA	Conrad Observa	25.97	310	i P	P	03 41 48.4	+0.6
	comp=Z,12nm,1.0s						
VRAC	Vranov	26.04	314	eP	P	03 41 47.7	-0.6
KRUC	Moravsky	26.06	313	eP	P	03 41 47.9	-0.6
SOKA	Soboth	26.11	307	eP	P	03 41 49.4	+0.4
	comp=Z,6.2nm,1.2s						
SOKA				ePcP	PcP	03 45 17.2	+1.0
	comp=Z,2.2nm,0.7s						
KRLC	Kraliky	26.25	315	eP	P	03 41 49.9	-0.3
KRLC	Kraliky	26.25	315	eP	P	03 41 49.9	-0.3
LJU	Ljubljana	26.27	306	eP	P	03 41 53.4	+3.0
OBKA	Obir	26.38	307	eP	P	03 41 53.7	+2.2
	comp=Z,8.4nm,1.3s						
DPC	Dobruska-Polom	26.63	316	eP	P	03 41 58.1	+4.4
DPC				AMS	AMS	03 55 50.0	
	comp=Z,300nm,12.9s						
DPC	Dobruska-Polom	26.63	316	eP	P	03 41 58.1	+4.4
DPC				MLR	MLR		
	comp=Z,300nm,12.9s						
KLMR	Klimovskoe	26.72	353	eP	P	03 41 53.6	-0.6
KLMR				pmax	pmax		
	comp=Z,29nm,1.5s						
OSTC	Ostas	26.79	316	eP	P	03 41 53.9	-1.1
OSTC	Ostas	26.79	316	eP	P	03 41 53.9	-1.1
ZHN	Zhinishke	26.85	61	eP	P	03 41 49.4	-6.4
ZHN				pmax	pmax		
	comp=Z,8.0nm,0.1s						
CHVC	Chvalec	26.89	316	eP	P	03 41 56.0	0.0
CHVC	Chvalec	26.89	316	eP	P	03 41 56.0	0.0
MOA	Molln	26.96	309	eP	P	03 41 57.2	+0.6
	comp=Z,8.3nm,1.1s						
PRED	Cave del Predi	27.02	306	P	P	03 41 56.5	-0.7
KPKS	Kokpek	27.07	61	eP	P	03 41 59.3	+1.6
KPKS				pmax	pmax		
	comp=Z,5.0nm,1.2s						
VSU	Vasula	27.14	338	i P	P	03 41 56.5	-1.5
VSU				pmax	pmax		
	comp=Z,14nm,0.8s						
VSU	Vasula	27.14	338	eP	P	03 41 56.7	-1.3
CKRC	Cesky Krumlov	27.25	311	eP	P	03 42 04.3	+5.1
CKRC	Cesky Krumlov	27.25	311	eP	P	03 42 04.3	+5.1
UZB	Uzynbulak	27.27	61	eP	P	03 42 00.1	+0.5
UZB				pmax	pmax		
	comp=Z,12nm,1.2s						
BIOA	Bad Ischl, Aus	27.31	309	eP	P	03 41 59.6	-0.3
	comp=Z,2.7nm,0.7s						
KBA	Koelnbreinsper	27.33	307	eP	P	03 41 59.5	-0.6
	comp=Z,3.0nm,0.9s						
KBA				ePcP	PcP	03 45 19.0	-0.1
	comp=Z,3.0nm,0.9s						
PRU	Pruhonice	27.53	314	AMS	AMS	03 56 20.0	
	comp=Z,300nm,13.3s						
ZVC	Zvikov	27.54	313	eP	P	03 42 06.2	+4.4
SHLS	Shalkode	27.59	62	eP	P	03 42 08.2	+5.7
GERES	GERESS Array B	27.64	311	P	P	03 42 02.3	-0.5
	comp=Z,0.6nm,0.7s,baz=109,slow=8.9,SNR=2.1						
GERES				PcP	PcP	03 45 19.8	+0.1
	comp=Z,1.5nm,0.6s,baz=132,slow=2.0,SNR=8.7						
	comp=Z,0.6nm,0.7s						
ABTA	Abfaltersbach	27.80	306	eP	P	03 42 06.1	+1.9
	comp=Z,2.7nm,0.8s						
ABTA				ePcP	PcP	03 45 21.3	+1.2
	comp=Z,2.6nm,0.6s						
KHC	Kasperske Hory	27.81	312	eP	P	03 42 03.6	-0.6
KHC				AMS	AMS	03 56 30.0	
	comp=Z,200nm,18.5s						
KHC	Kasperske Hory	27.81	312	eP	P	03 42 03.6	-0.6
KHC				MLR	MLR		
	comp=Z,200nm,18.5s						
LESA	Schwarzleotal	27.86	308	ePcP	PcP	03 45 20.4	+0.1
	comp=Z,3.6nm,0.5s						

SLIT	Slitere, Latvi	28.02	333	*e*P	P	03 42 04.8	-1.1
OSSC	Osservatorio P	28.08	299	IAmb	IAmb	03 42 07.4	
	comp=Z,6.7nm,0.6s						
CTI	Castel Tesino	28.22	305	P	P	03 42 09.4	+1.5
CTI	Castel Tesino	28.22	305	P	P	03 42 09.5	+1.5
CTI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MTSE	Matsula	28.28	336	*e*P	P	03 42 08.0	-0.3
HSKC	Hora Svate Kat	28.43	314	AMS	AMS	03 56 20.0	
	comp=Z,300nm,13.6s						
WTTA	Wattenberg	28.50	307	*e*PcP	PcP	03 45 22.9	+0.8
	comp=Z,6.1nm,0.7s						
WATA	Walderalm	28.56	307	*e*P	P	03 42 10.9	-0.2
	comp=Z,3.3nm,0.6s						
WATA				*e*PcP	PcP	03 45 22.7	+0.6
	comp=Z,4.8nm,0.6s						
SQTA	Sankt Quirin	28.77	307	*e*P	P	03 42 12.0	-0.9
	comp=Z,2.5nm,0.5s						
SQTA				*e*PcP	PcP	03 45 23.5	+0.9
	comp=Z,5.4nm,0.5s						
KURBB	Kurchatov Arra	28.81	46	P	P	03 42 14.1	+1.0
	comp=Z,8.2nm,0.6s,baz=253,slow=9.1,SNR=31						
KURBB				PcP	PcP	03 45 22.8	+0.3
	comp=Z,2.3nm,0.6s,baz=244,slow=2.8,SNR=9.7						
	comp=Z,8.2nm,0.6s						
MOTA	Moosalm	28.87	307	*e*P	P	03 42 13.4	-0.5
	comp=Z,5.9nm,1.1s						
MOTA				*e*PcP	PcP	03 45 23.4	+0.5
	comp=Z,4.2nm,0.7s						
KURK	Kurchatov	28.90	46	P	P	03 42 12.1	-1.8
KURK	Kurchatov	28.90	46	P	P	03 42 16.4	+2.5
KURK	Kurchatov	28.90	46	*i* P	P	03 42 14.9	+1.0
KURK				pmax	pmax		
	comp=Z,27nm,1.0s						
FETA	Feichten	29.05	306	*e*P	P	03 42 15.5	0.0
	comp=Z,3.4nm,0.7s						
FETA				*e*PcP	PcP	03 45 24.3	+0.9
	comp=Z,3.5nm,0.7s						
RETA	Reutte	29.13	307	*e*PcP	PcP	03 45 24.1	+0.6
	comp=Z,2.6nm,0.6s						
MEF	Metsahovi	29.26	338	*e*P	P	03 42 16.1	-0.9
GRF	Grafenberg Arr	29.45	312	*e*P	P	03 42 16.9	-1.8
	comp=Z,30nm,1.5s,baz=108,slow=9.2						
GRF				*e*L	L	03 57 00.2	
	comp=Z,102nm,18.2s						
MOX	Moxa	29.52	314	*e*L	L	03 56 58.6	
	comp=Z,132nm,18.7s						
KEST	Kesra	29.64	283	P	P	03 42 20.1	-0.6
	comp=Z,1.6nm,0.9s,baz=94,slow=5.6,SNR=1.6						
KEST				PcP	PcP	03 45 25.5	+0.5
	comp=Z,2.2nm,0.7s,baz=68,slow=4.6,SNR=4.2						
KEST				LR	LR	03 57 38.9	
	comp=Z,120nm,18.9s,baz=354,slow=43						
	comp=Z,1.6nm,0.9s						
DAVA	Damuels	29.67	306	*e*PcP	PcP	03 45 25.7	+0.8
	comp=Z,3.2nm,0.5s						
FINES	FINESS Array B	29.78	341	P	P	03 42 20.8	-0.7
	comp=Z,1.9nm,0.4s,baz=146,slow=10,SNR=9.3						
FINES				PcP	PcP	03 45 24.1	-0.6
	comp=Z,1.4nm,0.6s,baz=123,slow=7.0,SNR=3.9						
	comp=Z,1.9nm,0.4s						
MAKZ	Makanchi	29.93	55	P	P	03 42 22.6	-0.5
MAKZ				IAmb	IAmb	03 42 33.6	
	comp=Z,8.8nm,1.1s						
MAKZ	Makanchi	29.93	55	P	P	03 42 22.6	-0.5
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MK31	Makanchi Array	30.14	55	*i* P	P	03 42 25.9	+0.9
MKAR	Makanchi Array	30.14	55		P	03 42 24.5	-0.5
MKAR	Makanchi Array	30.14	55	P	P	03 42 26.6	+1.6
	comp=Z,3.5nm,0.6s,baz=249,slow=11,SNR=13						
MKAR				PcP	PcP	03 45 25.6	-0.4
	comp=Z,0.9nm,0.7s,baz=262,slow=3.1,SNR=2.5						
	comp=Z,3.5nm,0.6s						
MKAR	Makanchi Array	30.14	55	*e*P	P	03 42 26.8	+1.8
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KEF	Keuruu	30.70	341	*e*P	P	03 42 29.2	-0.5
RAF	Rauma	30.71	337	*e*P	P	03 42 28.8	-0.9
BNI	Bardonecchia	31.51	301	P	P	03 42 36.4	-0.8
BNI				pmax	pmax		
	comp=Z,12nm,0.7s						
VAF	Ylistaro	32.01	340	*e*P	P	03 42 40.7	-0.5
LODK	Lodwar	32.32	199		P	03 42 45.2	+0.7
LODK				IAmb	IAmb	03 42 47.5	
	comp=Z,7.3nm,1.2s						
HFS	Hagfors	33.03	331	P	P	03 42 49.8	-0.4
	comp=Z,12nm,0.6s,baz=134,slow=8.5,SNR=16						
HFS				LR	LR	03 57 32.7	
	comp=Z,164nm,18.9s,baz=132,slow=39						
	comp=Z,12nm,0.6s						
ZAA0	Zalesovo Array	33.60	42		P	03 42 55.3	+0.1
ZAA0				IAmb	IAmb	03 43 04.6	
	comp=Z,18nm,1.2s						
ZALV	Zalesovo Beam	33.60	42		P	03 42 55.0	-0.2
ZALV	Zalesovo Beam	33.60	42	P	P	03 42 55.9	+0.7
	comp=Z,3.2nm,0.3s,baz=253,slow=9.8,SNR=15						
	comp=Z,3.2nm,0.3s						
ZALV	Zalesovo Beam	33.60	42	*e*P	P	03 42 56.5	+1.3
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.3s						
WMQ	Urumqi	33.61	61	*e*P	P	03 42 58.7	+3.1
OSL	Oslo	34.15	329	*e*P	P	03 42 59.2	-0.7
NORES	NORESS Array B	34.25	331	P	P	03 43 04.2	+3.4
NB2	NORSAR Subarra	34.55	331	P	P	03 43 02.2	-1.3
	comp=Z,1.2nm,0.6s,baz=124,slow=8.6						
NB2	NORSAR Subarra	34.55	331	P	P	03 43 02.2	-1.3
	baz=124,slow=8.6						
NOA	NORSAR Array B	34.55	331	P	P	03 43 02.5	-0.9
	comp=Z,1.8nm,0.7s,baz=125,slow=8.7,SNR=9.0						
NOA				LR	LR	03 58 28.6	
	comp=Z,127nm,19.5s,baz=140,slow=39						
	comp=Z,1.8nm,0.7s						
SKAR	Skarslia	35.56	329	*e*P	P	03 43 12.9	+0.7
EVN	Everest	35.61	89		P	03 43 13.0	-0.7
EVN				IAmb	IAmb	03 43 47.3	
	comp=Z,10nm,0.7s						
NSS	Namsos	36.39	336	*e*P	P	03 43 18.9	-0.2
KTK1	Kautokeino	36.82	347	*e*P	P	03 43 22.0	-0.8
ARA0	ARCESS Array S	36.87	348	*e*P	P	03 43 23.0	-0.2
ARCES	ARCESS Array B	36.87	348	P	P	03 43 22.9	-0.3
	comp=Z,1.9nm,0.5s,baz=166,slow=7.9,SNR=15						
	comp=Z,1.9nm,0.5s						
TAM	Tamanrasset	36.88	262		P	03 43 25.3	+1.3
TAM	Tamanrasset	36.88	262	P	P	03 43 25.3	+1.3
TAM				pmax	pmax		
	comp=Z,21nm,0.8s						
STOK	Stokkvaagen	37.24	339	*e*P	P	03 43 26.0	-0.3
VAGH	Vaagaholmen	37.44	340	*e*P	P	03 43 28.2	+0.2
JETT	Jettan, Norway	37.83	346	*e*P	P	03 43 31.1	-0.3
TRO	Tromso	38.20	345	*e*P	P	03 43 33.8	-0.6
EKA	Eskdalemuir Ar	39.37	317	P	P	03 43 43.5	-0.9
	comp=Z,1.1nm,0.4s,baz=102,slow=8.8,SNR=8.3						
EKA				PcP	PcP	03 45 52.5	0.0
	comp=Z,1.0nm,0.5s,baz=120,slow=5.1,SNR=3.6						
	comp=Z,1.1nm,0.4s						
ESDC	Sonseca Array	39.53	293	P	P	03 43 45.4	-0.7
	comp=Z,1.2nm,0.7s,baz=85,slow=8.3,SNR=6.4						
ESDC				PcP	PcP	03 45 53.4	0.0
	comp=Z,0.9nm,0.7s,baz=48,slow=3.4,SNR=5.2						
	comp=Z,1.2nm,0.7s						
GOMU	GeErMu	39.80	73	P	P	03 43 50.2	+1.5
GOMU				pmax	pmax		
	comp=Z,14nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,180nm,4.3s						
MDT	Midelt	41.54	282	LR	LR	04 03 25.1	
	comp=Z,99nm,20.2s,baz=84,slow=39						
MVO	Moncorvo	41.63	295	*e*P	P	03 44 08.7	+5.2
NRIK	Noril'sk	41.86	21	P	P	03 44 05.2	+0.4
NRIK	Noril'sk	41.86	21	P	P	03 44 05.6	+0.8
	comp=Z,3.3nm,0.6s,baz=242,slow=6.4,SNR=6.7						
	comp=Z,3.3nm,0.6s						
NRIK	Noril'sk	41.86	21	*e*P	P	03 44 05.9	+1.1
NRIK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
PBAR	Barrancos	42.16	291	*e*P	P	03 44 08.0	+0.3
PBAR				*i* Amb		03 44 37.4	
	comp=Z,25nm,1.6s						
PCBR	Castelo Branco	42.18	293	*e*P	P	03 44 08.0	+0.2
BJO1	Bjornoya	42.19	350	*e*P	P	03 44 07.5	+0.2
MOY	Mondy	42.84	49	*e*P	P	03 44 15.4	+2.3
MOY				pmax	pmax		
	comp=Z,17nm,2.4s						
GTA	Gaotai	43.03	67	P	P	03 44 16.1	+1.2
GTA				pP	sP	03 44 21.0	-2.6
GTA				pmax	pmax		
	comp=Z,9.0nm,1.5s						
GTA				LR	LR		
	comp=Z,190nm,17.8s						
GTA				LR	LR		
	comp=Z,110nm,14.5s						
GTA				LR	LR		
	comp=Z,200nm,11.3s						
ZAK	Zakamensk	44.28	51	*e*P	P	03 44 26.6	+1.8
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.6s						
TORD	Torodi Ar. Bea	45.03	253	P	P	03 44 31.7	+0.6
TORD				IAmb	IAmb	03 44 37.4	
	comp=Z,11nm,1.2s						
TORD	Torodi Ar. Bea	45.03	253	P	P	03 44 30.3	-0.7
	comp=Z,3.4nm,0.6s,baz=55,slow=11,SNR=4.0						
	comp=Z,3.4nm,0.6s						
SPITS	Spitsbergen Ar	45.60	352	P	P	03 44 34.8	0.0
	comp=Z,2.1nm,0.4s,baz=147,slow=11,SNR=17						
	comp=Z,2.1nm,0.4s						
SONM	Songino Array	46.51	54	P	P	03 44 43.6	+1.1
	comp=Z,0.7nm,0.4s,baz=269,slow=9.4,SNR=2.8						
SONM				PcP	PcP	03 46 16.4	-0.3
	comp=Z,0.6nm,0.3s,baz=270,slow=4.3,SNR=3.6						
SONM				LR	LR	04 05 01.2	
	comp=Z,148nm,18.2s,baz=274,slow=37						
	comp=Z,0.7nm,0.4s						
LZH	Lanzhou	46.91	70	*e*P	P	03 44 47.6	+1.7
LZH				sP	sP	03 44 54.5	-0.1
LZH				pmax	pmax		
	comp=Z,33nm,1.3s						
LZH				LR	LR		
	comp=Z,170nm,16.5s						
LZH				LR	LR		
	comp=Z,170nm,19.9s						
LZH				LR	LR		
	comp=Z,160nm,20.0s						
ULN	Ulaanbaatar	46.94	54	P	P	03 44 46.0	+0.1
ULN	Ulaanbaatar	46.94	54	P	P	03 44 46.0	+0.1
ULN				pmax	pmax		
	comp=Z,13nm,1.2s						
CD2	Chengdu	48.46	77	P	P	03 44 58.7	+0.9
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
PZH	PanZhiHua	48.46	83	P	P	03 45 01.0	+3.0
CHTO	Chiang Mai	49.57	94		P	03 45 05.2	-1.2
CHTO				IAmb	IAmb	03 45 15.9	
	comp=Z,7.7nm,0.7s						
CHTO	Chiang Mai	49.57	94	P	P	03 45 05.2	-1.2
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.7s						
CMAR	Chiang Mai Arr	49.75	94	P	P	03 45 07.6	-0.1
	comp=Z,6.4nm,0.6s,baz=296,slow=8.4,SNR=17						
	comp=Z,6.4nm,0.6s						
CMAR	Chiang Mai Arr	49.75	94	*e*P	P	03 45 07.8	+0.1
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BTO	Baotou	50.41	63	*e*P	P	03 45 13.3	+0.7
BTO				pP	pP	03 45 17.8	-1.2
BTO				sP	sP	03 45 20.3	-1.1
BTO				S	S	03 52 23.0	-2.1
BTO				SS	SS	03 55 51.5	-7.2
BTO				pmax	pmax		
	comp=Z,43nm,0.9s						
BTO				pmax	pmax		
	comp=Z,120nm,4.2s						
BTO				LR	LR		
	comp=Z,410nm,23.4s						
BTO				LR	LR		
	comp=Z,260nm,14.0s						
BTO				LR	LR		
	comp=Z,280nm,16.5s						
HHC	Hu-ho-hao-te	51.48	62	*e*P	P	03 45 22.0	+1.3
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
XAN	Xi'an	51.50	71	⇑P	P	03 45 21.5	+0.6
XAN				pP	sP	03 45 28.3	-1.4
XAN				pmax	pmax		
	comp=Z,38nm,1.1s						
XAN				pmax	pmax		
	comp=Z,75nm,3.8s						
XAN				LR	LR		
	comp=Z,280nm,15.1s						
XAN				LR	LR		
	comp=Z,130nm,12.9s						
XAN				LR	LR		
	comp=Z,250nm,10.8s						
LSZ	Lusaka	52.17	202	LR	LR	04 09 58.0	
	comp=Z,97nm,18.9s,baz=44,slow=39						
SLVN	Son La	52.47	88		P	03 45 27.7	-0.6
SLVN				IAmb	IAmb	03 45 36.5	
	comp=Z,5.4nm,0.8s						
DBIC	Dimbokro	54.06	251	P	P	03 45 39.7	-0.2
DBIC	Dimbokro	54.06	251	P	P	03 45 39.1	-0.8
	comp=Z,9.7nm,0.6s,baz=49,slow=7.4,SNR=19						
	comp=Z,9.7nm,0.6s						
DBIC	Dimbokro	54.06	251	P	P	03 45 39.7	-0.2
DBIC				pmax	pmax		
	comp=Z,11nm,0.8s						
LYN	LuoYang	54.09	70	P	P	03 45 41.3	+1.4
LYN				sP	sP	03 45 48.2	-0.5
LYN				pmax	pmax		
	comp=Z,22nm,0.7s						
LYN				LR	LR		
	comp=Z,180nm,17.9s						
LYN				LR	LR		
	comp=Z,130nm,17.5s						
LYN				LR	LR		
	comp=Z,360nm,15.1s						
TIXI	Tiksi	55.59	22	LR	LR	04 14 51.8	
	comp=Z,76nm,18.3s,baz=349,slow=42						
TIA	Tai'an	57.07	66	P	P	03 45 51.2	-10
TIA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TIA				pmax	pmax		
	comp=Z,130nm,4.7s						
ZEA	Zeya	58.35	44	*e*P	P	03 46 18.7	+8.7
ZEA				MLR	MLR		
	comp=Z,100nm,13.0s						
QNGWA	Qangwa	58.52	207	P	P	03 46 11.4	-0.3
QNGWA				IAmb	IAmb	03 46 14.3	
	comp=Z,11nm,1.2s						
MREMI	Moremi	59.29	200		P	03 46 16.4	-0.5
TSUM	Tsumeb	59.67	211	LR	LR	04 11 28.4	
	comp=Z,63nm,20.6s,baz=12,slow=35						
NJ2	Nanjing	59.98	70	*e*P	P	03 46 22.2	+0.5
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
GRTLG	Ghanzi	60.17	206	P	P	03 46 23.9	+0.8
BNX	BinXian	60.98	52	⇑P	P	03 46 28.0	-0.3
BNX				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KOOLE	Kule	62.04	207	P	P	03 46 36.8	+1.1
KLR	Kul'dur	62.47	48	P	P	03 46 38.6	+0.3
	comp=Z,3.5nm,0.5s,baz=300,slow=8.2,SNR=13						
KLR				LR	LR	04 14 00.8	
	comp=Z,88nm,18.4s,baz=287,slow=36						
	comp=Z,3.5nm,0.5s						
EUNU	Eureka	62.73	352		P	03 46 39.9	+0.3
MAKGR	Makgori	63.11	201	P	P	03 46 42.6	-0.3
KSAR	Wonju Array Be	64.54	61		P	03 46 51.7	-0.5
KSAR	Wonju Array Be	64.54	61	P	P	03 46 51.7	-0.5
KSRS	Korea Array	64.56	61	P	P	03 46 52.1	-0.1
	comp=Z,3.3nm,0.6s,baz=285,slow=7.0,SNR=12						
	comp=Z,3.3nm,0.6s						
USA0B	Ussuriysk Arra	64.58	53		P	03 46 51.6	-0.7
USA0B	Ussuriysk Arra	64.58	53	P	P	03 46 51.6	-0.7
USA0B				pmax	pmax		
	comp=Z,6.0nm,0.8s						
USRK	Ussuriysk Ar.	64.58	53		P	03 46 51.5	-0.8
USRK	Ussuriysk Ar.	64.58	53	P	P	03 46 51.8	-0.5
	comp=Z,5.8nm,0.6s,baz=282,slow=6.0,SNR=17						
USRK				LR	LR	04 19 31.2	
	comp=Z,80nm,19.4s,baz=285,slow=40						
	comp=Z,5.8nm,0.6s						
BOSA	Boshof	65.62	200	P	P	03 46 58.7	-0.5
	comp=Z,5.5nm,0.5s,baz=15,slow=6.1,SNR=22						
	comp=Z,5.5nm,0.5s						
RES	Resolute Bay	68.08	350	P	P	03 47 14.0	-0.2
	comp=Z,1.3nm,0.6s,baz=28,slow=6.6,SNR=8.9						
	comp=Z,1.3nm,0.6s						
JNU	Nakatsue	68.65	64	P	P	03 47 19.2	+0.6
	comp=Z,1.1nm,0.5s,baz=323,slow=5.1,SNR=1.2						
	comp=Z,1.1nm,0.5s						
BILL	Bilibino	68.69	20		P	03 47 18.8	+0.7
BILL	Bilibino	68.69	20	*i* P	P	03 47 18.8	+0.7
BILL				pmax	pmax		
	comp=Z,13nm,1.4s						
ILON	Igloolik, Nuna	69.61	343	P	P	03 47 24.0	+0.2
ILON				IAmb	IAmb	03 47 33.4	
	comp=Z,5.3nm,0.9s						
ASAJ	Asahikawa	71.42	49	P	P	03 47 35.1	-0.2
	comp=Z,2.2nm,0.5s,baz=33,slow=5.7,SNR=4.6						
	comp=Z,2.2nm,0.5s						
MJAR	Matsushiro Arr	72.29	58	P	P	03 47 40.7	0.0
	comp=Z,2.3nm,0.7s,baz=304,slow=6.8,SNR=8.0						
	comp=Z,2.3nm,0.7s						
MJA0	Matsu Arr-Jizo	72.32	58	*e*P	P	03 47 40.9	0.0
MJA0				pmax	pmax		
	comp=Z,2.0nm,0.8s						
A21K	Barrow	73.34	7	P	P	03 47 46.2	0.0
	baz=341						
A36M	Sachs Harbour	73.66	357		P	03 47 48.8	+0.6
A36M	Sachs Harbour	73.66	357	P	P	03 47 48.1	0.0
	baz=7.7						
A19K	Wainwright	73.86	9	P	P	03 47 49.9	+0.5
	baz=337						
SCHQ	Schefferville	73.96	326	P	P	03 47 49.4	-0.8
	comp=Z,3.5nm,0.6s,baz=47,slow=3.7,SNR=7.9						
	comp=Z,3.5nm,0.6s						
B20K	Meade River	74.53	8	P	P	03 47 54.4	+1.2
	baz=340						
B18K	Kokolik River	74.54	10	P	P	03 47 54.7	+1.4
	baz=337						
B22K	Teshekpuk Lake	74.60	7	P	P	03 47 54.4	+0.8
	baz=344						
PETK	Petropavlovsk-	74.79	35	P	P	03 47 54.4	-0.7
	comp=Z,3.1nm,1.0s,baz=336,slow=3.2,SNR=2.6						
	comp=Z,3.1nm,1.0s						
C16K	Lisburne Hills	75.00	11	P	P	03 47 56.2	+0.3
	baz=334						
C19K	Lookout Ridge	75.08	9	P	P	03 47 57.2	+0.6
	baz=339						
C17K	DeLong Mountai	75.16	11	P	P	03 47 57.7	+0.8
	baz=336						
B21K	Ikpikpuk River	75.17	7	P	P	03 47 58.1	+1.1
	baz=343						
C18K	Utukok River	75.29	10		P	03 47 58.4	+0.6
C18K				IAmb	IAmb	03 48 12.4	
	comp=Z,12nm,1.2s						
C18K	Utukok River	75.29	10	P	P	03 47 58.5	+0.7
	baz=337						
C23K	Itkillik River	75.34	6	P	P	03 47 58.7	+0.8
	baz=346						
RDOG	Red Dog Mine	75.58	11	P	P	03 48 00.5	+1.1
	baz=336						
C21K	Knifeblade Rid	75.60	7	P	P	03 48 00.4	+0.9
	baz=343						
C24K	Franklin Bluff	75.60	5	P	P	03 47 59.8	+0.3
	baz=348						
C26K	Camden Bay	75.65	4	P	P	03 47 59.8	+0.1
	baz=351						
D20K	Etivluk River	75.82	8	P	P	03 48 01.7	+0.9
	baz=341						
D19K	Kuna River	75.84	9		P	03 48 01.8	+0.9
D19K				IAmb	IAmb	03 48 18.6	
	comp=Z,15nm,1.4s						
D19K	Kuna River	75.84	9	P	P	03 48 01.9	+0.9
	baz=340						
D17K	Noatak River	75.88	11	P	P	03 48 01.4	+0.4
	baz=336						
C27K	Jago River	76.00	3	P	P	03 48 02.3	+0.5
	baz=352						
D22K	Ayikyak River	76.08	7	P	P	03 48 02.8	+0.6
	baz=344						
D24K	Happy Valley	76.15	5	P	P	03 48 02.7	+0.1
	baz=348						
D25K	Kavik River	76.16	4	P	P	03 48 03.4	+0.7
	baz=350						
D23K	Nanushuk River	76.18	6	P	P	03 48 03.6	+0.8
	baz=346						
C36M	Paulatuk	76.23	356	P	P	03 48 03.4	+0.4
	baz=8.6						
E20K	Nigu River	76.31	8	P	P	03 48 03.9	+0.3
	baz=342						
E21K	Killik River	76.38	7	P	P	03 48 04.5	+0.5
	baz=343						
D27M	Malcolm River	76.50	2	P	P	03 48 05.1	+0.4
	baz=354						
E18K	Tukpahlearik C	76.51	10		P	03 48 05.3	+0.6
E18K				IAmb	IAmb	03 48 25.9	
	comp=Z,4.0nm,0.8s						
E18K	Tukpahlearik C	76.51	10	P	P	03 48 05.3	+0.6
	baz=338						
TOLK	Toolik Lake Re	76.59	6	P	P	03 48 06.0	+0.8
TOLK	Toolik Lake Re	76.59	6	P	P	03 48 05.5	+0.3
	baz=347						
E17K	Hotham Inlet	76.64	11	P	P	03 48 05.8	+0.4
	baz=337						
E22K	Anaktuvuk Pass	76.89	7		P	03 48 07.5	+0.6
E22K				IAmb	IAmb	03 48 25.8	
	comp=Z,4.2nm,0.8s						
E22K	Anaktuvuk Pass	76.89	7	P	P	03 48 07.4	+0.6
	baz=345						
E19K	Redstone River	76.94	9		P	03 48 07.7	+0.6
E19K				IAmb	IAmb	03 48 08.3	
	comp=Z,4.8nm,0.7s						
E19K	Redstone River	76.94	9	P	P	03 48 08.0	+0.9
	baz=341						
TNA	Tin City	76.96	14	P	P	03 48 07.9	+0.7
	baz=332						
BLKN	Baker Lake	77.03	344	P	P	03 48 08.1	+0.5
BLKN				IAmb	IAmb	03 48 17.8	
	comp=Z,4.6nm,0.9s						
E23K	Chandalar	77.16	6	P	P	03 48 09.1	+0.6
	baz=347						
E28M	Babbage River	77.18	2	P	P	03 48 08.6	+0.2
	baz=356						
E24K	Your Creek	77.24	5	P	P	03 48 09.0	+0.2
	baz=348						
F17K	Baldwin Pennin	77.33	11	P	P	03 48 09.5	+0.3
	baz=337						
E25K	Arctic Village	77.40	4	P	P	03 48 10.3	+0.6
	baz=350						
F18K	Selawik	77.42	10	P	P	03 48 10.5	+0.7
	baz=339						
F15K	North Star Dit	77.44	12	P	P	03 48 10.6	+0.7
	baz=335						
E29M	Blow River	77.44	1		P	03 48 10.5	+0.6
E29M	Blow River	77.44	1	P	P	03 48 10.3	+0.4
	baz=357,SNR=7.7						
F19K	Shaleruckik Mo	77.46	9	P	P	03 48 10.2	+0.2
F19K				IAmb	IAmb	03 48 10.6	
	comp=Z,4.4nm,0.9s						
F19K	Shaleruckik Mo	77.46	9	P	P	03 48 09.9	-0.1
	baz=340						
F22K	John River	77.46	7	P	P	03 48 11.0	+0.9
	baz=345						
F20K	Avaraart Lake	77.51	8	P	P	03 48 10.9	+0.6
F20K	Avaraart Lake	77.51	8	P	P	03 48 10.2	-0.1
	baz=342						
E27K	Coleen River	77.53	3		P	03 48 10.8	+0.4
E27K				IAmb	IAmb	03 48 12.4	
	comp=Z,5.7nm,0.9s						
E27K	Coleen River	77.53	3	P	P	03 48 10.7	+0.2
	baz=354						
INK	Inuvik	77.56	360	P	P	03 48 10.1	-0.4
	comp=Z,2.2nm,0.7s,baz=8.3,slow=12,SNR=3.9						
	comp=Z,2.2nm,0.7s						
INK	Inuvik	77.56	360	P	P	03 48 11.2	+0.7
	baz=0.6						
F21K	Alatna River	77.61	8		P	03 48 11.5	+0.6
F21K				IAmb	IAmb	03 48 17.7	
	comp=Z,6.6nm,1.1s						
F21K	Alatna River	77.61	8	P	P	03 48 11.5	+0.6
	baz=344						
GAMB	Gambell	77.72	16	P	P	03 48 12.1	+0.6
	baz=329						
F24K	Squaw Lake	77.83	5		P	03 48 12.9	+0.8
F24K	Squaw Lake	77.83	5	P	P	03 48 12.6	+0.4
	baz=348						
F26K	Sheenjek River	77.90	4	P	P	03 48 13.0	+0.4
	baz=352						
F25K	Christian Rive	77.91	4	P	P	03 48 13.3	+0.6
	baz=350						
COLD	Coldfoot	77.92	6	P	P	03 48 13.7	+1.1
COLD				IAmb	IAmb	03 48 27.7	
	comp=Z,4.5nm,0.7s						
COLD	Coldfoot	77.92	6	P	P	03 48 13.2	+0.6
	baz=347						
G22K	Bettles	78.10	7	P	P	03 48 14.1	+0.5
	baz=346						
G16K	Koyuk River	78.12	12	P	P	03 48 14.3	+0.6
	baz=337						
F28M	Old Crow	78.17	2	P	P	03 48 14.5	+0.6

F28M				IAmb	IAmb	03 48 18.9	
	comp=Z,6.3nm,1.0s						
F28M	Old Crow	78.17	2	P	P	03 48 14.6	+0.6
	baz=355						
G15K	Niukluk	78.20	12	P	P	03 48 14.8	+0.7
	baz=335						
G19K	Purcell Mounta	78.20	9		P	03 48 13.5	-0.7
G19K	Purcell Mounta	78.20	9	P	P	03 48 15.1	+0.9
	baz=341						
G18K	Tagagawik	78.22	10		P	03 48 14.4	+0.1
G18K				IAmb	IAmb	03 48 27.5	
	comp=Z,4.1nm,0.8s						
G18K	Tagagawik	78.22	10	P	P	03 48 14.7	+0.4
	baz=340						
F30M	Barrier River	78.25	1		P	03 48 14.7	+0.2
F30M	Barrier River	78.25	1	P	P	03 48 14.9	+0.5
	baz=359,SNR=7.8						
G21K	Allakaket	78.28	8		P	03 48 15.1	+0.5
G21K				IAmb	IAmb	03 48 16.2	
	comp=Z,5.3nm,0.9s						
G21K	Allakaket	78.28	8	P	P	03 48 15.2	+0.5
	baz=344,SNR=6.6						
G17K	Kiwalik Mounta	78.29	11	P	P	03 48 14.9	+0.2
	baz=338						
F31M	Tsiigehtchic	78.42	360		P	03 48 15.4	0.0
F31M	Tsiigehtchic	78.42	360	P	P	03 48 15.3	0.0
	baz=0.4,SNR=6.7						
G23K	Bananza Creek	78.45	6	P	P	03 48 16.3	+0.8
	baz=347						
G26K	Porcupine Rive	78.66	4	P	P	03 48 17.5	+0.8
G26K				IAmb	IAmb	03 48 19.0	
	comp=Z,7.0nm,0.8s						
G26K	Porcupine Rive	78.66	4	P	P	03 48 17.3	+0.6
	baz=352						
G24K	Hadweenzic Riv	78.67	5	P	P	03 48 17.9	+1.1
	baz=349						
G25K	Bearman Lake	78.70	5	P	P	03 48 17.6	+0.7
	baz=350						
H16K	Elim	78.84	12	P	P	03 48 17.9	+0.2
	baz=337						
H19K	Roundabout Mou	78.87	9	P	P	03 48 18.2	+0.4
	baz=342						
G30M	tAoh Zraii Nji	78.88	1		P	03 48 17.9	0.0
G30M				IAmb	IAmb	03 48 19.1	
	comp=Z,8.9nm,0.8s						
G30M	tAoh Zraii Nji	78.88	1	P	P	03 48 18.2	+0.3
	baz=358,SNR=6.1						
G27K	Doyon Strip	78.91	3		P	03 48 18.5	+0.5
G27K				IAmb	IAmb	03 48 20.4	
	comp=Z,5.1nm,0.8s						
G27K	Doyon Strip	78.91	3	P	P	03 48 18.3	+0.2
	baz=354,SNR=6.3						
G29M	Pine Creek	78.92	1	P	P	03 48 18.5	+0.4
G29M	Pine Creek	78.92	1	P	P	03 48 18.5	+0.4
	baz=357						
H17K	Granite Mounta	78.94	11	P	P	03 48 18.3	+0.1
	baz=339						
G31M	Satah River	78.95	360		P	03 48 18.6	+0.4
G31M	Satah River	78.95	360	P	P	03 48 18.2	0.0
	baz=360,SNR=8.4						
H18K	Honhosa River	78.97	10	P	P	03 48 18.9	+0.5
	baz=340						
H20K	Anotleneega Mo	79.11	9	P	P	03 48 19.2	0.0
	baz=343,SNR=9.6						
H22K	Ishtalitna Cre	79.11	7	P	P	03 48 20.1	+0.9
	baz=346						
H21K	Melozitna Rive	79.19	8	P	P	03 48 20.5	+0.9
H21K				IAmb	IAmb	03 48 21.9	
	comp=Z,6.4nm,0.8s						
H21K	Melozitna Rive	79.19	8	P	P	03 48 20.4	+0.8
	baz=344,SNR=8.6						
H25L	Birch Creek	79.22	5	P	P	03 48 20.6	+0.9
	baz=350						
H23K	Yukon River	79.36	6	P	P	03 48 21.5	+1.0
H23K				IAmb	IAmb	03 48 22.7	
	comp=Z,4.9nm,0.8s						
H23K	Yukon River	79.36	6	P	P	03 48 21.5	+1.0
	baz=347,SNR=5.4						
EPYK	Eagle Plains	79.48	1	P	P	03 48 21.8	+0.5
EPYK				IAmb	IAmb	03 48 21.9	
	comp=Z,7.7nm,0.7s						
EPYK	Eagle Plains	79.48	1	P	P	03 48 20.9	-0.3
	baz=358,SNR=6.8						
H24K	Noodor Dome	79.49	6	P	P	03 48 22.3	+1.0
H24K	Noodor Dome	79.49	6	P	P	03 48 22.0	+0.7
	baz=349						
H27K	Steamboat Moun	79.49	3		P	03 48 22.2	+0.9
H27K				IAmb	IAmb	03 48 23.0	
	comp=Z,5.6nm,0.9s						
H27K	Steamboat Moun	79.49	3	P	P	03 48 22.3	+0.9
	baz=354,SNR=6.2						
H29M	Whitestone	79.61	2		P	03 48 22.5	+0.7
H29M				IAmb	IAmb	03 48 23.3	
	comp=Z,9.8nm,0.8s						
H29M	Whitestone	79.61	2	P	P	03 48 22.1	+0.3
	baz=356,SNR=6.8						
I21K	Tanana	79.74	7	P	P	03 48 23.8	+1.1
I21K				IAmb	IAmb	03 48 24.9	
	comp=Z,6.8nm,0.9s						
I21K	Tanana	79.74	7	P	P	03 48 23.3	+0.7
	baz=345,SNR=6.6						
I17K	Unalakleet	79.79	12	P	P	03 48 23.9	+1.0
	baz=338						
I20K	Naaghedeneel	79.83	9	P	P	03 48 24.4	+1.4
	baz=343						
PRP	Porcupine Dome	79.98	5	P	P	03 48 24.6	+0.5
	baz=351						
MLY	Manley	80.02	7	P	P	03 48 25.0	+0.8
MLY				IAmb	IAmb	03 48 26.1	
	comp=Z,4.5nm,0.8s						
MLY	Manley	80.02	7	P	P	03 48 24.9	+0.8
	baz=346,SNR=7.0						
I23K	Minto, Yukon-K	80.04	6	P	P	03 48 24.6	+0.4
	baz=347						
H31M	Peel River	80.07	0	P	P	03 48 24.8	+0.4
H31M				IAmb	IAmb	03 48 40.2	
	comp=Z,7.0nm,1.1s						
H31M	Peel River	80.07	0	P	P	03 48 24.8	+0.4
	baz=360						
I27K	Kandik River	80.11	3	P	P	03 48 25.2	+0.5
	baz=354						
POKR	Poker Plat Res	80.23	6	P	P	03 48 25.5	+0.2
	baz=349						
I26K	Coal Creek Min	80.33	4		P	03 48 26.1	+0.3
I26K				IAmb	IAmb	03 48 27.4	
	comp=Z,5.1nm,0.8s						
I26K	Coal Creek Min	80.33	4	P	P	03 48 26.1	+0.3
	baz=353,SNR=7.2						
I28M	Miner Creek	80.33	2		P	03 48 26.0	+0.1
I28M				IAmb	IAmb	03 48 27.1	
	comp=Z,4.6nm,0.8s						
I28M	Miner Creek	80.33	2	P	P	03 48 26.2	+0.3
	baz=355,SNR=7.1						
J14K	Nanvaranak Lak	80.34	13	P	P	03 48 26.4	+0.6
	baz=336						
J16K	Anvik River	80.37	12	P	P	03 48 25.9	-0.2
	baz=338						
COLA	College	80.44	6	P	P	03 48 26.8	+0.5
	baz=349						
J19K	Poorman	80.45	9	P	P	03 48 27.2	+0.8
J19K	Poorman	80.45	9	P	P	03 48 27.5	+1.0
	baz=342						
J20K	Nowinta River	80.46	9		P	03 48 27.0	+0.5
J20K				IAmb	IAmb	03 48 40.0	
	comp=Z,6.1nm,1.1s						
J20K	Nowinta River	80.46	9	P	P	03 48 27.0	+0.5
	baz=343,SNR=7.1						
I29M	Ogilvie Camp,	80.47	2	P	P	03 48 26.0	-0.6
I29M				IAmb	IAmb	03 48 27.6	
	comp=Z,4.2nm,0.7s						
I29M	Ogilvie Camp,	80.47	2	P	P	03 48 27.0	+0.4
	baz=357,SNR=6.2						
J17K	VABM Dome	80.51	11	P	P	03 48 27.2	+0.4
	baz=339						
NEA2	Nenana	80.61	6	P	P	03 48 27.3	0.0
	baz=348						
IL31		80.62	5	P	P	03 48 28.1	+0.8
ILAR	Eielson Array	80.62	5	P	P	03 48 27.9	+0.6
ILAR	Eielson Array	80.62	5	P	P	03 48 27.2	-0.1
	comp=Z,1.3nm,0.8s,baz=337,slow=3.6,SNR=15						
	comp=Z,1.3nm,0.8s						
ILAR	Eielson Array	80.62	5	*e*P	P	03 48 27.7	+0.3
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
I30M	Mount Dempster	80.64	1		P	03 48 28.0	+0.3
I30M				IAmb	IAmb	03 48 28.9	
	comp=Z,6.6nm,0.8s						
I30M	Mount Dempster	80.64	1	P	P	03 48 27.5	-0.1
	baz=358,SNR=9.6						
CCB	Clear Creek Bu	80.67	6		P	03 48 27.8	+0.2
J18K	Innoko River	80.80	10		P	03 48 29.2	+0.8
J18K	Innoko River	80.80	10	P	P	03 48 28.8	+0.4
	baz=341						
K13K	Kusilvak Mount	80.87	14	P	P	03 48 28.4	-0.3
	baz=335						
J25K	Salcha River,	80.89	5		P	03 48 29.1	+0.2
J25K				IAmb	IAmb	03 48 30.7	
	comp=Z,4.3nm,0.8s						
J25K	Salcha River,	80.89	5	P	P	03 48 28.7	-0.2
	baz=351,SNR=6.2						
BPAW	Bear Paw Mtn.	80.90	7		P	03 48 29.4	+0.5
BPAW				IAmb	IAmb	03 48 30.5	
	comp=Z,6.0nm,0.9s						
BPAW	Bear Paw Mtn.	80.90	7	P	P	03 48 29.1	+0.2
	baz=346,SNR=6.9						
CHUM	Lake Minchumin	80.97	8	P	P	03 48 29.7	+0.5
	baz=345						
HDA	Harding Lake	80.97	6	P	P	03 48 29.0	-0.2
	baz=349						
J26L	Joseph Creek	81.11	4		P	03 48 30.4	+0.3
J26L	Joseph Creek	81.11	4	P	P	03 48 29.9	-0.2
	baz=352,SNR=6.7						
K15K	Wolf Creek Mou	81.13	12	P	P	03 48 29.9	-0.2
	baz=338						
K20K	Telida	81.26	9	P	P	03 48 31.1	+0.3
	baz=344						
K17K	Iditarod	81.27	11	P	P	03 48 31.3	+0.4
	baz=340						
J30M	Hart River	81.29	1	IAmb	IAmb	03 48 32.4	
	comp=Z,5.0nm,0.8s						
J30M	Hart River	81.29	1	P	P	03 48 31.0	-0.1
	baz=358,SNR=8.0						
CAST	Castle Rocks	81.44	8	IAmb	IAmb	03 48 33.5	
	comp=Z,6.0nm,0.9s						
CAST	Castle Rocks	81.44	8	P	P	03 48 32.0	+0.2
	baz=345,SNR=8.9						
MCK	McKinley	81.47	7	P	P	03 48 31.6	-0.3
	baz=348						
SCRK	Sand Creek	81.61	4	IAmb	IAmb	03 48 34.8	
	comp=Z,6.3nm,0.7s						
SCRK	Sand Creek	81.61	4	P	P	03 48 33.0	+0.2
	baz=352,SNR=12						
K24K	Donnelly Dome	81.66	5	P	P	03 48 33.6	+0.6
	baz=350						
K27K	Chicken	81.66	3	P	P	03 48 33.7	+0.8
	baz=354						
L15K	Ungalak Mounta	81.71	13	P	P	03 48 33.7	+0.5
	baz=338						
DAWY	Dawson	81.73	2	P	P	03 48 33.9	+0.5
	baz=356						
RIDG	Independent Ri	81.79	5	IAmb	IAmb	03 48 45.8	
	comp=Z,9.0nm,1.2s						
RIDG	Independent Ri	81.79	5	P	P	03 48 34.3	+0.6
	baz=351						
L14K	Kuka Creek	81.80	13	P	P	03 48 35.0	+1.3
	baz=337						
L17K	Donlin	81.82	11	P	P	03 48 34.5	+0.7
	baz=340						
DOT	Dot Lake	81.93	4	IAmb	IAmb	03 48 36.2	
	comp=Z,4.2nm,0.7s						
PPLA	Purkeypile	81.94	8	P	P	03 48 34.9	+0.3
	baz=345						
L18K	Granite Mounta	81.99	10	P	P	03 48 35.1	+0.4
	baz=341						
K29M	Barlow Dome	82.01	1	IAmb	IAmb	03 48 36.1	
	comp=Z,4.9nm,0.8s						
K29M	Barlow Dome	82.01	1	P	P	03 48 35.3	+0.4
	baz=357,SNR=9.2						
YKAW3	Yellowknife Wh	82.03	351	P	P	03 48 34.5	-0.4
YKAW3				IAmb	IAmb	03 48 35.2	
	comp=Z,3.5nm,0.9s						
L16K	Owhat River	82.03	12	P	P	03 48 35.7	+0.9
	baz=339						
YKAW1	Yellowknife Wh	82.09	351	P	P	03 48 35.2	+0.1
YKAW1				IAmb	IAmb	03 48 44.7	
	comp=Z,4.5nm,1.1s						
YKA	Yellowknife Ar	82.09	351	P	P	03 48 34.6	-0.6
	comp=Z,1.7nm,0.8s,baz=18,slow=6.2,SNR=9.1						
	comp=Z,1.7nm,0.8s						
YKA	Yellowknife Ar	82.09	351	*e*P	P	03 48 35.2	0.0
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
L20K	Farewell, AK	82.13	9	P	P	03 48 35.8	+0.4
	baz=344,SNR=5.3						
DHY	Denali Highway	82.25	6	P	P	03 48 36.2	0.0
	baz=349						
M14K	Bethel	82.48	13	P	P	03 48 37.4	+0.2
	baz=337						
PAX	Paxson	82.51	5	P	P	03 48 37.7	+0.2
	baz=351						
M13K	Dall Lake	82.52	14	P	P	03 48 38.3	+0.9
	baz=336						
L26K	Log Cabin Wild	82.59	4	P	P	03 48 38.4	+0.5
	baz=352						
M19K	Big River Lodg	82.62	9	P	P	03 48 38.5	+0.5
	baz=343						
BCAR	Beaver Creek A	82.64	3	P	P	03 48 38.8	+0.7
L27K	Beaver Creek,	82.64	3	IAmb	IAmb	03 48 39.7	
	comp=Z,3.8nm,0.8s						
L27K	Beaver Creek,	82.64	3	P	P	03 48 38.9	+0.7
	baz=354,SNR=6.7						
M17K	Holitna River	82.65	11	P	P	03 48 38.7	+0.5
	baz=341						
WAT6	Susitna Watana	82.71	6	P	P	03 48 38.7	+0.1
	baz=349						
L29M	L29M	82.73	2	IAmb	IAmb	03 48 45.2	
	comp=Z,9.0nm,1.5s						
L29M	L29M	82.73	2	P	P	03 48 39.3	+0.7
	baz=357						
M15K	Kasigluk River	82.77	13	P	P	03 48 39.0	+0.3
	baz=338						
M20K	Styx River	82.81	9	P	P	03 48 39.3	+0.3
	baz=344						
M18K	Stony River	82.81	10	P	P	03 48 39.3	+0.3
	baz=342						
SKT	Skwentna	82.91	8	IAmb	IAmb	03 48 40.9	
	comp=Z,6.6nm,0.8s						
SKT	Skwentna	82.91	8	P	P	03 48 40.0	+0.5
	baz=346						
HARP	HAARP	83.10	5	P	P	03 48 40.9	+0.4
	baz=351						
M26K	Nabesna, AK	83.23	4	IAmb	IAmb	03 49 04.2	
	comp=Z,4.7nm,1.2s						
M26K	Nabesna, AK	83.23	4	P	P	03 48 41.6	+0.4
	baz=353						
MMPY	Sheldon Lake,	83.24	359	P	P	03 48 42.0	+0.7
	baz=2.5						
M24K	Tolsona, Glenn	83.31	6	P	P	03 48 42.2	+0.6
	baz=350						
N16K	Nishlik Lake	83.31	12	P	P	03 48 42.5	+0.9
	baz=340						
M27K	Edge Creek, AK	83.34	4	IAmb	IAmb	03 48 44.2	
	comp=Z,3.9nm,0.8s						
M27K	Edge Creek, AK	83.34	4	P	P	03 48 42.6	+0.7
	baz=354						
N15K	Kwethluk River	83.37	13	P	P	03 48 41.7	-0.2
	baz=339						
M29M	Somme Creek	83.39	2	P	P	03 48 42.4	+0.3
	baz=356						
SML	Sawmill	83.41	7	P	P	03 48 42.5	+0.3
	baz=348						
SCM	Sheep Creek Mo	83.48	6	P	P	03 48 42.9	+0.3
	baz=349						
M23K	Glacier View	83.48	6	P	P	03 48 42.6	+0.2
	baz=349						
SUA	Susitna One	83.50	8	P	P	03 48 42.4	-0.3
	baz=346						
N17K	Nushagak Hills	83.52	11	P	P	03 48 42.6	-0.1
	baz=341						
PMR	Palmer	83.55	7	IAmb	IAmb	03 48 43.8	
	comp=Z,5.3nm,0.9s						
PMR	Palmer	83.55	7	P	P	03 48 42.8	+0.1
	baz=348						
N18K	Kilae Creek	83.58	10	P	P	03 48 43.7	+0.7
	baz=342						
N19K	Bonanza Creek	83.66	10	P	P	03 48 44.8	+1.3
N19K	Bonanza Creek	83.66	10	P	P	03 48 44.0	+0.5
	baz=343						
FARO	Faro, Yukon	83.66	360	P	P	03 48 44.5	+1.2
FARO				IAmb	IAmb	03 48 44.8	
	comp=Z,3.5nm,0.8s						
FARO	Faro, Yukon	83.66	360	P	P	03 48 44.0	+0.6
	baz=0.7						
M31M	Drury Creek, Y	83.69	0	IAmb	IAmb	03 48 44.7	
	comp=Z,3.1nm,0.8s						
M31M	Drury Creek, Y	83.69	0	P	P	03 48 44.0	+0.4
	baz=360						
KNK	Knik Glacier	83.79	7	P	P	03 48 44.7	+0.6
	baz=348						
N25K	Chitina, Valde	83.92	5	P	P	03 48 45.5	+0.6
	baz=351						
KLU	Klutina	83.94	6	P	P	03 48 45.8	+0.9
	baz=350						
RC01	Rabbit Creek A	83.97	7	P	P	03 48 45.4	+0.4
	baz=347						
YUK3	Moose Creek	83.99	3	P	P	03 48 45.4	0.0
	baz=355						
O17K	Koliganek Bris	84.25	11	P	P	03 48 46.6	+0.2
	baz=341						
O16K	Kokwok River B	84.26	12	P	P	03 48 46.8	+0.4
	baz=340						
PWL	Port Wells	84.34	7	P	P	03 48 47.6	+0.7
	baz=348						
N30M	Aishikik Lake	84.41	1	P	P	03 48 46.9	-0.3
	baz=358						
GLI	Glacier Island	84.44	6	P	P	03 48 47.1	-0.3
	baz=349						
O18K	Koktuh Hills	84.47	10	P	P	03 48 47.8	+0.2
	baz=343						
YUK4	Talbot Arm	84.48	2	P	P	03 48 47.6	-0.3
	baz=356						
BMRM	Bremner River	84.56	5	P	P	03 48 48.2	+0.2
	baz=351						
O20K	Slope Mountain	84.61	9	P	P	03 48 49.0	+0.6
	baz=345						
N32M	Quiet Lake	84.74	359	P	P	03 48 49.3	+0.4
	baz=0.9						
CTG	Chitna Glacier	84.76	3	P	P	03 48 49.4	+0.2
	baz=354						
CRQE	Cirque	84.87	4	P	P	03 48 49.7	0.0
	baz=353						
YUK6	Outpost Mounta	84.89	2	P	P	03 48 50.3	+0.4
	baz=357						
P17K	Kvichak River	84.91	11	P	P	03 48 50.8	+1.1
	baz=342						
P19K	Oil Pt	84.95	10	P	P	03 48 50.2	+0.2
	baz=344						
O28M	Mount Upton	85.00	3	P	P	03 48 50.3	-0.3
	baz=355						
HYT	Haines Junctio	85.03	2	IAmb	IAmb	03 48 52.1	
	comp=Z,6.7nm,1.0s						
HYT	Haines Junctio	85.03	2	P	P	03 48 51.2	+0.7
	baz=357						
O30N	Mendenhall	85.11	1	P	P	03 48 51.2	+0.4
	baz=358						
BRSE	Bradley Lake S	85.18	8	P	P	03 48 51.6	+0.5
	baz=346						
WHY	Whitehorse	85.23	0	P	P	03 48 51.9	+0.4
	baz=360						
Q16K	King Salmon	85.37	11	P	P	03 48 52.9	+0.9
	baz=342						
O29M	Mount Kennedy	85.53	2	IAmb	IAmb	03 48 54.1	
	comp=Z,4.2nm,0.9s						
O29M	Mount Kennedy	85.53	2	P	P	03 48 53.6	+0.6
	baz=356						
KAIM	Kayak Island	85.60	5	P	P	03 48 54.3	+1.1
	baz=352						
Q18K	Katmai Hardscr	85.66	11	P	P	03 48 54.8	+1.1
	baz=343						
P33M	Teslin, Yukon	85.68	359	P	P	03 48 53.8	+0.1
	baz=1.2						
P30M	Million Dollar	85.75	1	P	P	03 48 54.5	+0.5
	baz=358						
Q17K	Contact Creek	85.89	11	P	P	03 48 55.5	+0.7
	baz=342						
Q23K	Middleton Isla	85.94	6	P	P	03 48 55.5	+0.7
	baz=350						
Q20K	Shuyak Island	86.07	9	P	P	03 48 56.1	+0.6
	baz=345						
PNL	Peninsula	86.14	3	P	P	03 48 56.0	+0.2
	baz=356						
P29M	Windy Craggy	86.23	2	P	P	03 48 57.3	+0.9
	baz=357						
P32M	Atlin	86.31	360	P	P	03 48 57.5	+0.7
	baz=0.4						
PLBC	Pleasant Camp	86.43	1	P	P	03 48 58.1	+0.8
	baz=358						
R33M	Jennings River	86.46	358	P	P	03 48 58.5	+0.8
	baz=2.7						
TOAD	Toad River Com	86.74	355	P	P	03 48 59.9	+1.0
	baz=7.4						
KDAK	Kodiak Island	86.85	10	P	P	03 48 59.5	+0.2
	comp=Z,8.6nm,0.7s,baz=17,slow=2.5,SNR=13						
	comp=Z,8.6nm,0.7s						
KDAK	Kodiak Island	86.85	10	P	P	03 49 00.2	+0.9
	baz=345						
Q32M	Nakina River	86.92	359	P	P	03 49 00.6	+0.6
	baz=1.6						
DLBC	Dease Lake	87.39	358	P	P	03 49 02.6	+0.5
	comp=Z,1.5nm,0.7s,baz=4.7,slow=12,SNR=3.1						
	comp=Z,1.5nm,0.7s						
DLBC	Dease Lake	87.39	358	P	P	03 49 02.2	+0.1
	baz=3.5						
R32K	Eaglecrest	87.63	0	P	P	03 49 04.3	+1.1
	baz=360						
SDPT	Sand Point	87.80	15	P	P	03 49 04.9	+1.0
	baz=339						
NIKH	Nikolski High	87.90	20	P	P	03 49 05.2	+0.7
	baz=332						
S34M	Telegraph Cree	87.95	358	P	P	03 49 05.8	+1.1
	baz=2.6						
CHIR	Chirikof Islan	88.27	12	P	P	03 49 07.0	+0.8
	baz=342						
S32K	Killisnoo	88.44	0	P	P	03 49 08.2	+1.3
	baz=360						
CHNA	Chernabura Isl	88.46	14	P	P	03 49 08.3	+1.2
	baz=339						
SIT	Sitka	88.85	1	P	P	03 49 09.7	+0.8
	baz=359						
WRAK	Wrangell Islan	89.47	359	P	P	03 49 13.1	+1.3
	baz=1.6						
U33K	Whale Pass	89.79	359	P	P	03 49 14.1	+0.8
	baz=0.9						
CRAG	Craig	90.44	359	P	P	03 49 17.1	+0.8
	baz=0.9						
V35K	Ketchikan	90.55	358	P	P	03 49 17.9	+1.0
	baz=2.2						
QSPA	South Pole Qui	124.28	180	PKP	PKPdf	03 55 12.7	-0.3
	comp=Z,3.8nm,0.9s,baz=248,slow=0.6,SNR=12						

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*IPEC **05** 03:49:00.5±0.2, 51°.58N×16°.17E, h1^{km}, ML2.6/6, Error ellipse: s-maj=1.7km s-min=1.1km az=44.0*

*IDC **05** 03:49:00.9±1.2, 51°.56N×16°.10E, h0^{km}, mbtmp3.0/5, ML2.6/5, Error ellipse: s-maj=15.4km s-min=9.7km az=126.0*

*PRU **05** 03:49:02.6, 51°.54N×16°.09E, h0^{km}*

*DNK **05** 03:49:03.5±1.3, 51°.57N×16°.08E, h52^{km}±12^{km}, ML2.0*

ISC 05 03:48:58.9±0.8, **51°.68N**±0°.03×**16°.14E**±0°.02, **h0^{km}, n57, σ1^{s}.42**/104, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.84	173	*e*Pg	Pg	03 49 15.4	+0.4
KSP				*e*Sg	Sg	03 49 25.1	-0.8
CHVC	Chvalec	1.10	183	*e*PG	Pg	03 49 20.1	+0.3
CHVC				*e*SG	Sg	03 49 33.1	-0.9
	comp=Z,63nm,0.4s						
OSTC	Ostas	1.13	178	*e*PG	Pb	03 49 21.2	0.0
OSTC				*e*SG	Sg	03 49 33.8	-1.2
	comp=Z,70nm,0.2s						
UPC	Upice	1.18	184	*e*PG	Pg	03 49 21.4	0.0
UPC				*e*SG	Sg	03 49 35.9	-0.8
	comp=Z,115nm,0.3s						
DPC	Dobruska-Polom	1.34	175	*e*PG	Pg	03 49 24.2	-0.3
DPC				*e*SG	Sg	03 49 40.0	-1.8
	comp=Z,56nm,0.2s						
PIVO	Bartosovice	1.52	170	*e*Pn	Pn	03 49 27.2	-0.1
	baz=350						
PIVO				*e*Sg	Sg	03 49 44.7	-2.9
	59nm,0.2s,baz=350						
PVCC	Panska Ves	1.52	221	*e*PG	Pb	03 49 28.0	+0.1
PVCC				*e*SG	Sg	03 49 47.2	-0.5
	comp=Z,263nm,0.2s						
BRG	Berggiesshubel	1.60	240	Pg	Pg	03 49 29.8	+0.3
BRG				Sg	Sn	03 49 49.9	+0.2
BRG				Amp		03 49 50.5	
	comp=Z,159nm,0.4s						
KRLC	Kraliky	1.66	166	*e*PG	Pn	03 49 29.3	+0.1
KRLC				*e*SG	Sn	03 49 50.4	-0.8
	comp=Z,65nm,0.3s						
RYBC	Ceska Rybna	1.88	182	*e*Pn	Pn	03 49 32.2	0.0

```
         baz=2.1
RYBC                                 eSg     Sn       03 49 55.9 -0.7
         comp=Z,63nm,0.2s,baz=2.1
PRA      Prague             1.94 215 ePN     Pn       03 49 31.9 -1.2
GOPC     GO Pecny, Ondr     1.97 206 ePG     Pn       03 49 34.3 +0.8
GOPC                                 eSG     Sn       03 49 59.7 +0.9
PRU      Pruhonice          1.98 212 ePG     Pn       03 49 34.1 +0.6
PRU                                  eSG     Sn       03 49 59.8 +0.8
         comp=Z,33nm,0.3s
CLL      Collm              2.00 260 i Pn    Pn       03 49 33.9 +0.1
CLL                                  i Pg    Pg       03 49 37.0 -0.1
CLL                                  i x     x        03 49 40.4
CLL                                  eSg     Sg       03 50 03.0  0.0
         comp=Z,30nm,0.3s
HSKC     Hora Svate Kat     2.02 239 ePG     Pb       03 49 36.8 +0.4
HSKC                                 eSG     Sb       03 50 02.1  0.0
         comp=Z,56nm,0.2s
STEB     Steborice          2.03 149 ePN     Pn       03 49 34.5 +0.2
STEB                                 ePG     Pg       03 49 37.3 -0.5
STEB                                 eSG     Sg       03 50 03.1 -1.0
MORC     Moravsky Berou     2.10 154 ePn     Pn       03 49 35.2 -0.2
         baz=335
MORC                                 eSg     Sn       03 50 03.1 +0.9
         comp=Z,30nm,0.3s,baz=335
OKC      Ostrava-Krasne     2.24 145 ePG     Pg       03 49 41.7 -0.1
OKC                                  eSG     Sb       03 50 09.1 +0.6
         comp=Z,74nm,0.7s
VRAC     Vranov             2.39 173  Pn     Pn       03 49 39.9 +0.6
         comp=Z,3.1nm,0.3s,baz=346,slow=14,SNR=16
VRAC                                  Pg     Pg       03 49 44.3 -0.4
         comp=Z,4.4nm,0.3s,baz=339,slow=18,SNR=11
VRAC                                  Lg     Lg       03 50 12.5
         comp=Z,5.8nm,0.3s,baz=66,slow=18,SNR=6.2
         comp=Z,5.4nm,0.3s
VRAC     Vranov             2.39 173 ePn     Pn       03 49 39.3  0.0
         baz=353
VRAC                                 eSg     Sb       03 50 12.1 -0.8
         comp=Z,27nm,0.5s,baz=353
TREC     Trest              2.43 190 eSG     Sb       03 50 14.1 +0.3
ZVC      Zvikov             2.57 210 eSG     Sb       03 50 19.1 +1.3
KRUC     Moravsky           2.63 176 ePn     Pn       03 49 42.6 +0.1
         baz=357
KRUC                                 eSg     Sb       03 50 19.2 -0.3
         comp=Z,18nm,0.6s,baz=357
KRUC     Moravsky           2.63 176 ePN     Pn       03 49 42.7 +0.2
KRUC                                 eSG     Sb       03 50 19.3 -0.3
OJC      Ojcow              2.74 121 eSg     Sg       03 50 27.5 +0.8
OJC      Ojcow              2.74 121 ePg     Pg       03 49 52.1 +0.8
JAVC     Velka Javorina     2.99 160 ePn     Pn       03 49 47.4 -0.1
         baz=341
JAVC     Velka Javorina     2.99 160 ePN     Pn       03 49 47.5 -0.1
KHC      Kasperske Hory     3.04 214 ePN     Pn       03 49 48.4 +0.3
KHC                                  ePG     Pb       03 49 54.4 +0.7
KHC                                  eSN     Sn       03 50 24.2 -1.0
KHC                                  eSG     Sb       03 50 32.8 +1.5
         comp=Z,16nm,0.3s
CKRC     Cesky Krumlov      3.10 203 ePN     Pn       03 49 49.9 +0.9
CKRC                                 ePG     Pb       03 49 56.0 +1.2
GERES    GERESS Array B     3.24 210  Pn     Pn       03 49 51.8 +0.7
         comp=Z,0.2nm,0.3s,baz=28,slow=12,SNR=23
GERES                                 Pg     Pb       03 49 57.6 +0.3
         comp=Z,0.4nm,0.3s,baz=30,slow=16,SNR=21
GERES                                 Lg     Lg       03 50 38.2
         comp=Z,0.8nm,0.3s,baz=28,slow=27,SNR=11
         comp=Z,2.8nm,0.4s
LANS     Liptovska Anna     3.31 139 eSG     Sg       03 50 44.9 -0.2
LANS     Liptovska Anna     3.31 139 ePN     Pn       03 49 53.2 +1.3
LANS     Liptovska Anna     3.31 139 ePG     Pg       03 50 02.0 -0.2
MODS     Modra-Piesok       3.39 167 eSG     Sg       03 50 45.5 -2.2
MODS     Modra-Piesok       3.39 167 ePN     Pn       03 49 53.2 +0.2
MODS     Modra-Piesok       3.39 167 ePG     Pg       03 50 03.3 -0.5
NIE      Niedzica           3.49 129 ePg     Pg       03 50 05.8 +0.1
NIE                                  eSg     Sg       03 50 49.8 -1.0
BSD      Bornholm Skovb     3.52 348 eP      Pn       03 49 56.8 +2.1
BSD                                  eS      Sn       03 50 36.2 -0.8
BSD                                   IAML            03 50 59.3
         comp=Z,1.4nm,0.2s
VYHS     Vyhne              3.63 150 ePN     Pn       03 49 56.6 +0.3
VYHS                                 ePG     Pg       03 50 08.2 -0.2
VYHS                                 eSG     Sg       03 50 53.6 -1.9
CONA     Conrad Observa     3.76 183 i Pn    Pn       03 49 59.1 +0.9
         comp=Z,1.9nm,0.3s,SNR=7.5
CONA                                 eSg     Sg       03 50 56.6 -3.0
         comp=Z,22nm,0.6s
STHS     Stebnicka Huta     3.96 123 ePN     Pn       03 50 02.9 +2.0
STHS                                 ePG     Pg       03 50 16.1 +1.3
STHS                                 eSG     Sg       03 51 07.9 +1.7
RONA     Rosalia, Austr     3.99 179 ePn     Pn       03 50 02.0 +0.8
         comp=Z,0.7nm,0.2s
RONA                                 i Sg    Sb       03 51 01.3 +2.5
         comp=Z,4.6nm,0.3s
MOA      Molln              4.02 198 i Pn    Pn       03 50 02.3 +0.6
         comp=Z,7.1nm,0.3s,SNR=5.2
MOA                                  ePg     Pg       03 50 16.1 +0.1
         comp=Z,6.0nm,0.5s
MOA                                  eSg     Sg       03 51 04.4 -3.6
         comp=Z,5.3nm,0.3s
LUNU     Lund               4.27 339 eS      Sn       03 50 53.8 -1.7
BIOA     Bad Ischl, Aus     4.31 203 ePn     Pn       03 50 07.6 +2.0
         comp=Z,5.2nm,0.3s
BIOA                                  Sg     Sg       03 51 16.6 -0.7
         comp=Z,11nm,0.4s
ARSA     Arzberg            4.45 185 i Pn    Pn       03 50 10.0 +2.4
         comp=Z,2.2nm,0.3s
ARSA                                 ePg     Pg       03 50 22.9 -1.3
         comp=Z,2.1nm,0.4s
ARSA                                 eSg     Sg       03 51 20.5 -1.3
         comp=Z,5.8nm,0.4s
BLEU     Blekinge           4.64 358 eP      Pn       03 50 13.1 +3.0
BLEU                                 eS      Sn       03 51 02.1 -2.4
BJUU     Bjuv               4.77 338 eP      Pn       03 50 14.2 +2.3
BJUU                                 eS      Sn       03 51 05.0 -2.9
KOLS     Kolonicke sedl     4.80 123 ePN     Pn       03 50 13.8 +1.5
KOLS                                 ePG     Pg       03 50 29.5 -1.2
KOLS                                 eSG     Sg       03 51 32.1 -0.7
DEL      Delary             4.98 345 eP      Pn       03 50 16.5 +1.7
DEL                                  eS      Sn       03 51 10.6 -2.5
WTTA     Wattenberg         5.31 215 i Pn    Pn       03 50 21.6 +2.1
         comp=Z,1.4nm,0.2s
RETA     Reutte             5.46 222 ePn     Pn       03 50 22.3 +0.8
         comp=Z,0.6nm,0.2s
RETA                                  Sg     Sg       03 51 51.4 -2.8
         comp=Z,3.7nm,0.4s
DAVA     Damuels            6.00 225 eSg     Sg       03 52 17.4 +6.0
         comp=Z,5.3nm,0.6s
DAVOX    Davos/Dischmat     6.39 222  Pn     Pn       03 50 34.5 +0.1
         comp=Z,0.2nm,0.3s,baz=40,slow=16,SNR=1.5
DAVOX                                 Lg     Lg       03 52 20.2
         comp=Z,0.4nm,0.3s,baz=9.5,slow=18,SNR=4.1
         comp=Z,0.6nm,0.3s
AKASG    Malin Array Be     8.28  92  Pn     Pn       03 50 57.8 -2.2
         comp=Z,0.6nm,0.3s,baz=285,slow=12,SNR=4.5
         comp=Z,0.1nm,0.2s
FINES    FINESS Array B    11.20  25  Pn     Pn       03 51 39.3 -0.7
         comp=Z,0.1nm,0.3s,baz=215,slow=14,SNR=3.4
         comp=Z,1.4nm,1.0s
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*IDC **05** 03:50:53.8±2.2, 18.°04S×178.°15W, h601km±21km, mb3.0/5, mbtmp4.1/7, Error ellipse: s-maj=39.0km s-min=22.9km az=127.0*

*NEIC **05** 03:50:54.0±1.5, 18.°11S±0.°09×178.°1W±0.°1, h607km±9km, mb4.0/25, Error ellipse: s-maj=20.1km s-min=8.9km az=60.0*

ISC 05 03:50:52.4±0.6**, 18.°1S**±0.°1×**178.°1W**±0.°1**, h590**km**, n38,** σ**0ˢ97**/39**, mb3.9**/18**, Fiji Islands region**

```
Code     Station Name        Δ°   AZ°    Phase ID         Time      Res
                                        Op      ISC       h  m  s   ISC
MSVF     Nonsavu            3.71 274  P      P        03 52 17.1 +1.8
         117nm,0.6s,baz=111,slow=1.9,SNR=99
DZM      Mont Dzumac       15.08 252  P      P        03 54 01.7 -0.2
         7.9nm,1.1s,baz=71,slow=18
RAR      Rarotonga         17.52 103  P      P        03 54 24.4 +0.2
BKZ      Black Stump Fm    21.55 192  P      P        03 55 01.0 +0.6
MSWZ     Moikau Station    23.97 192  P      P        03 55 21.0 -0.9
WR8      Warramunga Arr    44.77 260  P      P        03 58 14.1 -0.9
WR8                                   IAmb   IAmb     03 58 19.8
         comp=Z,4.7nm,1.1s
WB0      Warramunga Arr    44.89 260  P      P        03 58 14.6 -1.3
WB0                                   IAmb   IAmb     03 58 15.9
         comp=Z,14nm,1.4s
WRA      Warramunga Arr    44.92 260  P      P        03 58 15.8 -0.4
WRA      Warramunga Arr    44.92 260  P      P        03 58 16.1  0.0
         comp=Z,0.6nm,0.5s,baz=97,slow=7.6,SNR=6.1
         comp=Z,0.6nm,0.5s
ASAR     Alice Springs     45.06 254  P      P        03 58 17.4 +0.2
         comp=Z,2.1nm,0.8s,baz=88,slow=8.6,SNR=15
ASAR                                  PcP    PcP      03 59 45.5 +0.3
         comp=Z,0.4nm,0.4s,baz=100,slow=3.7,SNR=4.5
         comp=Z,2.1nm,0.8s
FITZ     Fitzroy Crossi    53.32 261  P      P        03 59 17.3 -0.6
VNDA     Vanda             60.32 185  P      P        04 00 04.9 +0.2
JAGI     Jajag, Banyuwa    66.36 269  P      P        04 00 43.1 -1.2
ADK      Adak              69.66   1  P      P        04 01 04.3 +0.9
SMY      Shemya            70.82 355  P      P        04 01 09.7 -0.5
QSPA     South Pole Qui    71.99 180  P      P        04 01 17.9 +0.7
         comp=Z,1.9nm,1.1s,baz=22,slow=5.4,SNR=2.3
         comp=Z,1.9nm,1.1s
UNV      Unalaska Valle    72.30   7  P      P        04 01 19.2 +0.4
PEA0B    Petropavlovsk-    73.91 345  P      P        04 01 28.6 +0.5
PETK     Petropavlovsk-    73.91 345  P      P        04 01 28.4 +0.3
         comp=Z,1.5nm,0.7s,baz=119,slow=7.2,SNR=4.6
         comp=Z,1.5nm,0.7s
M11K     Mekoryuk          78.76   6  P      P        04 01 54.4 +0.1
N14K     Kuskokwak Cree    78.85   8  P      P        04 01 56.3 +1.5
N14K                                  IAmb   IAmb     04 01 57.1
         comp=Z,12nm,0.8s
P18K     Big Mountain,     79.41  12  P      P        04 01 58.7 +0.8
P18K                                  IAmb   IAmb     04 02 01.6
         comp=Z,4.0nm,1.0s
O18K     Koktuh Hills      79.84  11  P      P        04 02 00.8 +0.7
O18K                                  IAmb   IAmb     04 02 01.9
         comp=Z,3.2nm,0.8s
K15K     Wolf Creek Mou    81.15   8  P      P        04 02 08.4 +1.5
K15K                                  IAmb   IAmb     04 02 15.2
         comp=Z,11nm,1.4s
L18K     Granite Mounta    81.79  10  P      P        04 02 12.2 +2.1
SUA      Susitna One       82.21  13  P      P        04 02 13.3 +0.9
SUA                                   IAmb   IAmb     04 02 16.1
         comp=Z,9.5nm,1.3s
J16K     Anvik River       82.23   8  P      P        04 02 11.4 -0.9
J16K                                  IAmb   IAmb     04 02 14.6
         comp=Z,2.6nm,0.8s
J18K     Innoko River      82.96   9  P      P        04 02 17.4 +1.4
K20K     Telida            83.30  11  P      P        04 02 18.7 +1.0
SCM      Sheep Creek Mo    83.30  14  P      P        04 02 18.7 +0.9
SCM                                   IAmb   IAmb     04 02 19.3
         comp=Z,2.6nm,0.6s
CRQM     Cirque            83.43  16  P      P        04 02 18.8 +0.2
CRQM                                  IAmb   IAmb     04 02 19.9
         comp=Z,4.9nm,0.6s
CAST     Castle Rocks      83.72  11  P      P        04 02 19.7 -0.1
CAST                                  IAmb   IAmb     04 02 20.7
         comp=Z,1.7nm,0.7s
J20K     Nowinta River     84.04  10  P      P        04 02 22.6 +1.3
TRF      Thorofare Moun    84.09  12  P      P        04 02 22.2 +0.4
TRF                                   IAmb   IAmb     04 02 23.6
         comp=Z,2.8nm,0.8s
PV22     Blue Mesa, Par    85.83  47  P      P        04 02 28.9 -1.9
PV22                                  IAmb   IAmb     04 02 30.6
         comp=Z,2.9nm,0.5s
ILAR     Eielson Array     85.97  13  P      P        04 02 31.1 +0.5
         comp=Z,0.3nm,0.4s,baz=220,slow=4.8,SNR=15
         comp=Z,0.3nm,0.4s
CLL      Collm            145.68 348 i PKPbc PKPab    04 09 27.1 -0.6
         comp=Z,4.0nm,0.9s
GERES    GERESS Array B   147.84 345  PKPbc  PKPbc    04 09 30.9 -1.0
         comp=Z,0.6nm,0.6s,baz=22,slow=1.4,SNR=4.3
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*ECX **05** 04:02:03.3±0.3, 31.°46N×114.°48W, h20km±5km, ML3.2*

*MEX **05** 04:02:03.9±0.4, 31.°36N×114.°50W, h14km±15km, MD3.9*

ISC 05 04:02:01.3±1.5**, 31.°48N**±0.°04×**114.°45W**±0.°04**, h14**km±12km**, n14,** σ**0ˢ67**/25**, 1C-3D, Gulf of California**

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Code     Station Name        Δ°   AZ°    Phase ID         Time      Res
                                        Op      ISC       h  m  s   ISC
ECBX     El Chinero         0.52 270⇑ eP     Pb       04 02 12.3 +0.2
ECBX                                 i S     Sb       04 02 19.3 -0.2
ECBX                                  IAML            04 02 19.5
         comp=E,1μm,0.2s
ECBX                                ⇓e                04 02 19.5
EDOMX    El Doctor, EDO     0.54 332 eP      Pn       04 02 13.4 -1.2
EDOMX                                e                04 02 23.7
EDOMX                                 IAML            04 02 23.7
         comp=N,2μm,0.4s
SFX      San Felipe         0.56 218 eP      Pb       04 02 13.1 +0.2
SFX                                  eS      Sb       04 02 20.4 -0.2
SFX                                 ⇓e                04 02 21.7
SFX      San Felipe         0.56 218 eP      Pb       04 02 13.0 +0.2
SFX                                  eS      Sb       04 02 20.2 -0.4
PPXB     Puerto Peasco      0.71 101 eP      Pn       04 02 16.3 -0.7
PPXB                                 eS      Sn       04 02 26.4 -1.3
RITX     Riito Sonora       0.81 328 eP      Pg       04 02 17.3 +0.2
RHX      Rio Hardy          0.97 313⇓eP      Pb       04 02 19.3 -0.5
RHX                                  eS      Sb       04 02 32.1 -0.4
SPIG     San Pedro Mart     0.97 244 eP      Pg       04 02 20.1  0.0
SPIG                                 eS      Sb       04 02 32.7 -0.2
SPIG     San Pedro Mart     0.97 244 eP      Pg       04 02 20.1  0.0
SPIG                                 eS      Sb       04 02 32.7 -0.2
AGSX     Ej. Aguas Cali     0.99 323 eP      Pb       04 02 20.1 -0.2
VTX      Valle De La Tr     1.14 266 eP      Pb       04 02 22.9  0.0
VTX                                  eS      Sn       04 02 37.8 -0.6
CBX      Cerro Bola         2.06 294 eP      Pn       04 02 36.2 +0.6
CBX                                  eS      Sn       04 03 01.6 +0.5
TJIG     Tijuana            2.12 297 eP      Pn       04 02 36.5 +0.2
TJIG                                 eS      Sn       04 03 03.4 +1.0
TUC      Tucson             3.23  74 eP      Pn       04 02 52.4 +0.8
TUC                                  eS      Sn       04 03 31.4 +1.5
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*ISK **05** 04:09:16.4, 37.°40N×26.°93E, h5km, ML2.8/19*

*ATH **05** 04:09:16.6, 37.°39N×27.°11E, h25km±4km, ML2.5/7, Manual Solution by G.Panopoulou First location: 2019/06/05 04:10:44, This location: 2019/06/05 05:38:15 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 4 km*

*AFAD **05** 04:09:17.1, 37.°40N×26.°95E, h7km±2km, ML2.3*

ISC 05 04:09:17.1±0.9**, 37.°40N**±0.°02×**26.°95E**±0.°02**, h14**km±7km**, n36,** σ**0ˢ74**/51**, Dodecanese Islands**

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Code     Station Name        Δ°   AZ°    Phase ID         Time      Res
                                        Op      ISC       h  m  s   ISC
DIDI     Didim-Aydin        0.23  96  Pg     Pg       04 09 21.9 -0.3
DIDI                                  Sg     Sg       04 09 26.1 +0.5
DDIM     Aydin, Didim       0.24  76  P      Pg       04 09 22.4 +0.1
DDIM                                  S      Sg       04 09 26.6 +0.7
DDIM                                 i IAML           04 09 27.0
         comp=N,916nm,0.2s
DDIM                                 i IAML           04 09 27.0
         comp=E,1μm,0.2s
GCAM     G?zelcaml?         0.38  37  Pg     Pg       04 09 24.6 -0.1
GCAM                                  Sg     Sb       04 09 30.4 -0.8
GCAM     G?zelcaml?         0.38  37  P      Pb       04 09 24.9 -0.6
GCAM                                  S      Sb       04 09 30.6 -0.6
YKAV     Yalikavak-Bodr     0.38 136  Pg     Pg       04 09 24.7 -0.1
YKAV                                  Sg     Sb       04 09 30.8 -0.5
KLNA     Kalymnos           0.44 178  P      Pb       04 09 25.9 -0.7
KLNA                                  S      Sb       04 09 32.2 -0.9
BODT     Bodrum             0.44 139  Pg     Pg       04 09 25.9  0.0
BODT                                  Sg     Sb       04 09 32.3 -0.9
BDRM     Kayabasi           0.52 130  P      Pb       04 09 27.3 -0.6
BDRM                                  S      Sb       04 09 35.2  0.0
BDRM                                 i IAML           04 09 36.0
         comp=E,369nm,0.4s
MLSB     Milas              0.67  99  Pg     Pg       04 09 29.8 -0.3
GMLD     Gumuldur           0.68 358  Pg     Pg       04 09 29.8 -0.5
AYDN     Tasoluk            0.78  70  P      Pg       04 09 31.8 -0.5
AYDN                                 i IAML           04 09 45.0
         comp=E,180nm,0.2s
AYDN                                 i IAML           04 09 49.0
         comp=N,189nm,0.4s
YAZI     Mula-Dat§a-        0.82 150  P      Pb       04 09 33.3 +0.2
YAZI                                  S      Sb       04 09 45.0 +0.9
YAZI                                 i IAML           04 09 47.0
         comp=E,214nm,0.4s
YAZI                                 i IAML           04 09 48.0
         comp=N,61nm,0.2s
DAT      Datca              0.84 143  Pg     Pb       04 09 33.4 -0.1
DATC     Datca-Mugla        0.86 138  Pg     Pb       04 09 33.9 +0.2
ZEYE     Izmir, Urla-Ze     0.91 337  P      Pg       04 09 34.4 -0.3
ZEYE                                  S      Sb       04 09 48.1 +1.5
ZEYE                                 i IAML           04 09 50.0
         comp=N,186nm,0.5s
ZEYE                                 i IAML           04 09 55.0
         comp=E,107nm,0.4s
AYDB     Zeytinkoy-Aydi     0.93  54  Pg     Pg       04 09 34.6 -0.4
ASTA     Astypalaia         0.98 209  P      Pg       04 09 35.4 -0.6
ASTA                                  S      Sb       04 09 49.4 +0.9
BLCB     Balcova            0.99   4  Pg     Pg       04 09 35.7 -0.5
URLA     Izmir              1.00 344  P      Pb       04 09 36.2  0.0
URLA                                  S      Sn       04 09 51.8 +1.2
URLA                                 i IAML           04 09 53.0
         comp=E,110nm,0.5s
URLA                                 i IAML           04 09 55.0
         comp=N,71nm,0.3s
AMGA     Amorgos Island     1.02 236  P      Pb       04 09 36.8 +0.3
IZMR     zmir-demi          1.08  47  P      Pb       04 09 37.6  0.0
IZMR                                  S      Sb       04 09 52.2 +0.7
IZMR                                 i IAML           04 09 54.0
         comp=N,47nm,0.4s
IZMR                                 i IAML           04 09 56.0
         comp=E,49nm,0.4s
APE      Apeiranthos        1.18 254  Pn     Pn       04 09 39.5 +0.3
APE      Apeiranthos        1.18 254  P      Pg       04 09 39.0 -0.8
APE                                   S      Sn       04 09 56.7 +1.7
ESEN     Aydn-Nazilli       1.18  70  P      Pg       04 09 38.9 -0.9
ESEN                                  S      Sg       04 09 53.8 -1.4
ESEN                                 i IAML           04 09 57.0
         comp=N,36nm,0.3s
ESEN                                 i IAML           04 10 04.0
         comp=E,38nm,0.4s
NAZL     Nazilli-Aydin      1.21  62  Pn     Pn       04 09 40.1 +0.6
TURN     Turunc             1.21 121  Pn     Pn       04 09 40.4 +0.9
CHOS     Chios island       1.21 325  Pn     Pg       04 09 39.9 -0.6
CHOS     Chios island       1.21 325  P      Pg       04 09 39.5 -1.0
ODEM     Odemis-Izmir       1.25  45  Pn     Pg       04 09 40.9 -0.3
DALY     Dalyan (Mula)      1.48 113  Pn     Pb       04 09 44.6 +0.2
ARG      Arkhangelos        1.51 141  Pn     Pb       04 09 45.2 +0.3
DKL      Dikili             1.67 359  P      Pn       04 09 45.4 -0.5
KARP     Karpathos          1.86 175  P      Pn       04 09 46.8 -1.7
KARY     Karystos           2.09 288  P      Pn       04 09 51.1 -0.6
IDI      Anoyia             2.68 219  P      Pn       04 09 60.0 +0.1
SMTH     Samothraki Isl     3.26 341  P      Pn       04 10 07.4 -0.4
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*IDC **05** 04:26:36.8±0.8, 39.°43S×174.°14E, h228km±9km, mb3.5/5, mbtmp4.2/7, Error ellipse: s-maj=16.5km s-min=11.2km az=124.0*

*NOU **05** 04:26:38.8, 39.°58S×174.°23E, h250km, MLv4.2/20, North Island, New Zealand*

*NEIC **05** 04:26:39.2±1.3, 39.°52S±0.°07×174.°19E±0.°10, h254km±5km, mb4.1/10, Error ellipse: s-maj=10.9km s-min=10.0km az=89.0*

*WEL **05** 04:26:40.6±0.9, 40°S±7°×17°4E±°, h241km±6km, M3.8/28, ML3.3/6, MLv3.8/28, Error ellipse: s-maj=10.0km s-min=7.7km az=130.7, confirmed*

ISC 05 04:26:39.0±0.6**, 39.°53S**±0.°04×**174.°18E**±0.°05**, h257**km±5km**, n222,** σ**1ˢ07**/232**, mb3.9**/9**, North Island**

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Code     Station Name        Δ°   AZ°    Phase ID         Time      Res
                                        Op      ISC       h  m  s   ISC
HWHS     Hawera High Sc     0.10 126  P      Pn       04 27 11.6 -0.3
HWHS                                  S      S        04 27 36.7 -1.2
PREZ     Palmer Road        0.19 356  P      Pn       04 27 12.4 +0.2
LREZ     Lake Rotokare      0.19  69  P      Pn       04 27 12.5 +0.4
LREZ                                  S      S        04 27 37.0 -1.1
NMEZ     Namu Road          0.26 296  P      Pn       04 27 12.6 +0.4
NMEZ                                  S      S        04 27 38.3  0.0
KHEZ     Kahui Hut          0.27 332  P      Pn       04 27 12.8 +0.4
KHEZ     Kahui Hut          0.27 332  P      Pn       04 27 12.8 +0.4
KHEZ                                  S      S        04 27 38.2 -0.4
NEZ      North Egmont       0.27 346  P      Pn       04 27 12.7 +0.3
NEZ                                   S      S        04 27 38.0 -0.6
DREZ     Durham Road        0.34   3  P      Pn       04 27 12.4  0.0
NBEZ     Newall Road No     0.35 317  P      Pn       04 27 12.7 +0.3
PKE      Pukeiti            0.36 336  P      Pn       04 27 12.7 +0.2
MHEZ     Mangahewa          0.47  14  P      Pn       04 27 13.3 +0.6
VRZ      Vera Road          0.61  48  P      Pn       04 27 12.6 -0.5
VRZ                                   S      S        04 27 38.3 -1.6
WAZ      Wanganui           0.67 110  P      Pn       04 27 14.1 +0.8
WAZ                                   S      S        04 27 39.2 -1.0
PKVZ     Pokaka             0.94  76  P      Pn       04 27 14.4 -0.2
MTVZ     Mangateitei        1.01  82  P      Pn       04 27 14.9 -0.1
TWVZ     Taurewa            1.08  65  P      Pn       04 27 15.0 -0.4
TRVZ     Turoa              1.09  78  P      Pn       04 27 15.4 -0.2
FWVZ     Far West T-bar     1.10  76  P      Pn       04 27 15.5 -0.2
MAVZ     Matarangi          1.10  77  P      Pn       04 27 15.5 -0.3
OHWZ     Ohakea             1.11 128  P      Pn       04 27 16.2 +0.8
COVZ     Chateau Observ     1.11  73  P      Pn       04 27 15.4 -0.2
WNVZ     Wahianoa           1.12  80  P      Pn       04 27 15.6 -0.1
WHVZ     Whangaehu Hut      1.12  78  P      Pn       04 27 15.6 -0.2
HIZ      Hauiti             1.14  28         Pn       04 27 15.0 -0.8
HIZ                                   Sn     S        04 27 43.1 -1.5
HIZ      Hauiti             1.14  28  P      Pn       04 27 14.9 -0.8
HIZ      Hauiti             1.14  28  S      S        04 27 43.4 -1.2
HIZ      Hauiti             1.14  28  P      Pn       04 27 14.9 -0.8
NGZ      Ngauruhoe          1.16  73  P      Pn       04 27 15.6 -0.3
WTVZ     West Tongariro     1.17  70  P      Pn       04 27 15.8 -0.2
TUVZ     Tukino             1.18  78  P      Pn       04 27 16.0  0.0
NNVZ     North Ngauruho     1.19  71  P      Pn       04 27 15.9 -0.2
SNVZ     South Ngauruho     1.19  74  P      Pn       04 27 15.9 -0.2
OTVZ     Oturere            1.21  73  P      Pn       04 27 16.2 -0.1
KRVZ     Karewarewa         1.22  70  P      Pn       04 27 15.9 -0.4
MOVZ     Moawhango          1.23  85  P      Pn       04 27 15.8 -0.4
NTVZ     North Tongarir     1.24  70  P      Pn       04 27 16.3 -0.1
ETVZ     East Tongariro     1.25  72  P      Pn       04 27 16.1 -0.4
TMVZ     Te Maari           1.25  71  P      Pn       04 27 16.5  0.0
DUWZ     D'Urville Isla     1.29 189  P      Pn       04 27 17.0 +0.5
KATZ     Kakaramea          1.30  65  P      Pn       04 27 16.4 -0.4
RATZ     Rangitukua         1.41  62  P      Pn       04 27 16.9 -0.6
RITZ     Rihia Road         1.42  68  P      Pn       04 27 17.1 -0.4
WATZ     Wairara            1.46  56  P      Pn       04 27 17.6 -0.2
TSZ      Takapari Road      1.47 112  P      Pn       04 27 18.0 +0.2
OGWZ     Otaki Gorge        1.50 150  P      Pn       04 27 18.4 +0.5
POWZ     Post Office Ro     1.50 126  P      Pn       04 27 18.1 +0.1
MRZ      Mangatainoka R     1.56 137         Pn       04 27 18.5 +0.1
MRZ      Mangatainoka R     1.56 137  P      Pn       04 27 18.5 +0.1
TLZ      Tolley Road        1.60  42  P      Pn       04 27 18.1 -0.8
PNHZ     Pukenui            1.61 104  P      Pn       04 27 18.9  0.0
KUTZ     Kaahu Road         1.65  52  P      Pn       04 27 18.7 -0.5
TCW      Tory Channel       1.68 177         Pn       04 27 19.5 +0.2
TCW      Tory Channel       1.68 177  P      Pn       04 27 19.8 +0.5
KRHZ     Kereru             1.70  95  P      Pn       04 27 19.6  0.0
HOWZ     Holdsworth Sta     1.71 144  P      Pn       04 27 19.7 +0.1
DVHZ     Dannevirke         1.71 117  P      Pn       04 27 19.7 +0.1
KWHZ     Kaweka Forest      1.74  87  P      Pn       04 27 20.1 +0.2
TKNZ     Takaka Hill        1.77 211         Pn       04 27 20.2 +0.2
TKNZ     Takaka Hill        1.77 211  P      Pn       04 27 20.2 +0.2
NNZ      Nelson             1.79 200         Pn       04 27 20.8 +0.6
NNZ      Nelson             1.79 200  P      Pn       04 27 20.7 +0.5
QRZ      Quartz Range       1.81 224         Pn       04 27 20.5 +0.1
QRZ      Quartz Range       1.81 224  P      Pn       04 27 20.5 +0.1
QRZ      Quartz Range       1.81 224  S      S        04 27 50.6 -2.5
QRZ      Quartz Range       1.81 224  P      Pn       04 27 20.4 +0.1
TIWZ     Tintock            1.81 134  P      Pn       04 27 20.7 +0.3
WEL      Wellington         1.81 166  P      Pn       04 27 21.0 +0.6
SNZO     South Karori       1.82 167         Pn       04 27 20.8 +0.3
SNZO     South Karori       1.82 167  P      Pn       04 27 20.7 +0.3
SNZO     South Karori       1.82 167  S      S        04 27 51.6 -1.7
WPHZ     Waipukurau         1.82 108  P      Pn       04 27 20.8 +0.3
BKZ      Black Stump Fm     1.83  79         Pn       04 27 20.1 -0.6
BKZ      Black Stump Fm     1.83  79  P      Pn       04 27 20.1 -0.6
BKZ      Black Stump Fm     1.83  79  S      S        04 27 50.2 -3.4
BKZ      Black Stump Fm     1.83  79  P      Pn       04 27 20.2 -0.6
WPRZ     Whakapapatarin     1.85  58  P      Pn       04 27 19.9 -0.9
MRHZ     Matea Rd           1.88  69  P      Pn       04 27 19.9 -1.1
TUWZ     Tuamarina          1.91 185         Pn       04 27 22.1 +0.9
TUWZ     Tuamarina          1.91 185  P      Pn       04 27 22.0 +0.9
GRRZ     Galatos Road       1.91  53  P      Pn       04 27 20.7 -0.7
MTW      Mount Morrison     1.92 149  P      Pn       04 27 21.5 +0.2
ALRZ     Allen Road         1.94  61  P      Pn       04 27 20.5 -1.2
BHW      Baring Head        1.95 164  Pn     Pn       04 27 21.8 +0.2
BHW      Baring Head        1.95 164  P      Pn       04 27 21.8 +0.2
MCHZ     McNeill Hill       1.95  88  P      Pn       04 27 22.2 +0.6
BFZ      Birch Farm         1.96 127         Pn       04 27 21.8 +0.1
BFZ      Birch Farm         1.96 127  P      Pn       04 27 21.7 +0.1
BFZ      Birch Farm         1.96 127  P      Pn       04 27 21.8 +0.1
ANWZ     Angora Road        2.00 118  P      Pn       04 27 22.3 +0.4
HRRZ     Handcock Road      2.00  56  P      Pn       04 27 21.2 -0.9
PRRZ     Plateau Road       2.01  60  P      Pn       04 27 20.9 -1.3
HSRZ     Hossack Road       2.02  54  P      Pn       04 27 21.5 -0.8
PRHZ     Porangahau         2.03 112  P      Pn       04 27 22.6 +0.3
TMWZ     Te Maipa           2.05 141  P      Pn       04 27 22.7 +0.2
MSWZ     Moikau Station     2.06 157         Pn       04 27 22.8 +0.2
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MSWZ	Moikau Station	2.06	157	P	Pn	04 27 22.7	+0.2
TOZ	Tahuroa Road	2.07	30	Pn	Pn	04 27 21.9	-0.9
TOZ	Tahuroa Road	2.07	30	P	Pn	04 27 21.9	-0.9
CPWZ	Castlepoint	2.08	132	P	Pn	04 27 23.4	+0.7
PAWZ	Paruwai Farm	2.08	153	P	Pn	04 27 23.0	+0.2
NMHZ	Naumai	2.09	79	P	Pn	04 27 23.2	+0.3
KAHZ	Kahuranaki	2.10	98	P	Pn	04 27 23.5	+0.5
HLRZ	Highlands Stat	2.12	54	P	Pn	04 27 23.0	-0.3
PWZ	Pawanui	2.13	104	P	Pn	04 27 23.4	+0.2
PXZ	Pawanui	2.13	104	P	Pn	04 27 23.4	+0.2
MRNZ	Matariki Terra	2.16	210		Pn	04 27 23.4	-0.1
MRNZ	Matariki Terra	2.16	210	P	Pn	04 27 23.6	+0.1
KMRZ	Kaimai	2.18	40	P	Pn	04 27 23.2	-0.6
RRRZ	Republican Roa	2.18	58	P	Pn	04 27 22.6	-1.2
MTHZ	Maungataniwha	2.18	73	P	Pn	04 27 22.8	-0.9
TRWZ	Traveller	2.19	149	P	Pn	04 27 24.0	+0.3
BSWZ	Blackbirch Sta	2.20	186		Pn	04 27 24.1	+0.3
BSWZ	Blackbirch Sta	2.20	186	P	Pn	04 27 24.1	+0.3
PLWZ	Palliser	2.20	158		Pn	04 27 24.1	+0.2
PLWZ	Palliser	2.20	158	P	Pn	04 27 24.0	+0.2
ARHZ	Aropaoanui	2.20	84	P	Pn	04 27 24.0	+0.1
KARZ	Kaharoa	2.21	48	P	Pn	04 27 23.2	-0.8
CMWZ	Cape Campbell	2.22	179	Pn	Pn	04 27 24.3	+0.3
CMWZ	Cape Campbell	2.22	179	P	Pn	04 27 24.8	+0.8
OMRZ	Omania	2.23	51	P	Pn	04 27 23.2	-1.0
TARZ	Mount Tarawera	2.23	55	P	Pn	04 27 23.4	-1.0
CKHZ	Cape Kidnapper	2.25	94	P	Pn	04 27 24.7	+0.4
MUGZ	Murupara	2.28	63	P	Pn	04 27 23.1	-1.6
RAHZ	Arahi	2.34	76	P	Pn	04 27 24.9	-0.4
RTZ	Ruatahuna	2.37	68		Pn	04 27 24.5	-1.1
RTZ	Ruatahuna	2.37	68	P	Pn	04 27 24.5	-1.1
WHHZ	Waihua	2.42	80	P	Pn	04 27 25.8	-0.1
TGRZ	Tauranga	2.43	43	P	Pn	04 27 25.2	-0.9
THZ	Tophouse	2.43	203		Pn	04 27 26.3	+0.2
THZ	Tophouse	2.43	203	P	Pn	04 27 26.3	+0.2
AWAZ	Awhitu Peninsu	2.49	9	P	Pn	04 27 26.3	-0.5
OPRZ	Ohinepanea	2.51	49	P	Pn	04 27 25.9	-1.0
MKAZ	Moumakai	2.54	18	P	Pn	04 27 26.8	-0.4
SNGZ	Shannon Statio	2.57	74	P	Pn	04 27 27.0	-0.6
URZ	Urewera	2.62	62	P	Pn	04 27 25.2	-2.7
	114nm,0.3s,baz=324,slow=5.0,SNR=223						
URZ				S	S	04 28 00.4	-6.3
	240nm,0.3s,baz=211,slow=19,SNR=34						
URZ	Urewera	2.62	62	P	Pn	04 27 26.1	-1.8
URZ	Urewera	2.62	62	P	Pn	04 27 26.2	-1.8
ETAZ	East Tamaki Re	2.64	13	P	Pn	04 27 28.0	-0.2
RAGZ	Rawiri	2.73	69	P	Pn	04 27 28.2	-1.0
KNZ	Kokohu	2.76	81	P	Pn	04 27 28.8	-0.5
MBAZ	Motutapu North	2.81	12	P	Pn	04 27 29.5	-0.5
DSZ	Denniston Nort	2.86	218		Pn	04 27 30.2	-0.1
DSZ	Denniston Nort	2.86	218	P	Pn	04 27 30.3	-0.1
MWZ	Matawai	2.87	67	P	Pn	04 27 29.4	-1.3
RIGZ	Rimuhau	2.91	75	P	Pn	04 27 30.4	-0.6
MHGZ	Mahia Peninsul	2.92	84	P	Pn	04 27 31.0	-0.1
KHZ	Kahutara	2.92	189		Pn	04 27 31.1	+0.1
KHZ	Kahutara	2.92	189	P	Pn	04 27 30.9	-0.1
KHZ	Kahutara	2.92	189	P	S	04 28 10.6	-1.7
KHZ	Kahutara	2.92	189	P	Pn	04 27 30.9	-0.1
PRGZ	Paritu Road	2.94	79	P	Pn	04 27 30.9	-0.5
KUZ	Kuaotunu	3.03	24	P	Pn	04 27 31.6	-0.7
KUZ	Kuaotunu	3.03	24	P	Pn	04 27 31.7	-0.6
TKGZ	Te Karaka	3.06	70	P	Pn	04 27 31.9	-0.7
RUGZ	Raukumara Rang	3.15	61	P	Pn	04 27 31.3	-2.4
TWGZ	Tauwhareparae	3.26	67	P	Pn	04 27 33.9	-0.9
CNGZ	Carnagh Statio	3.31	73	P	Pn	04 27 34.9	-0.4
HAZ	Te Kaha	3.33	59	P	Pn	04 27 33.1	-2.5
PKGZ	Pakihiroa	3.48	63	P	Pn	04 27 35.6	-1.6
PUZ	Puketiti	3.50	67	P	Pn	04 27 36.5	-1.0
GVZ	Greta Valley S	3.54	194		Pn	04 27 37.4	-0.4
GVZ	Greta Valley S	3.54	194	P	Pn	04 27 37.3	-0.5
LTZ	Lake Taylor	3.55	203		Pn	04 27 37.7	-0.3
LTZ	Lake Taylor	3.55	203	P	Pn	04 27 37.5	-0.5
WMGZ	Waiomatatini S	3.73	64	P	Pn	04 27 38.2	-1.8
MXZ	Matakaoa Point	3.79	60	Pn	Pn	04 27 38.9	-1.8
MXZ	Matakaoa Point	3.79	60	P	Pn	04 27 39.6	-1.1
MXZ	Matakaoa Point	3.79	60	P	Pn	04 27 39.7	-1.0
INZ	Inchbonnie	3.80	212		Pn	04 27 40.2	-0.6
INZ	Inchbonnie	3.80	212	P	Pn	04 27 40.2	-0.6
AMCZ	Amberley	3.82	197		Pn	04 27 40.4	-0.6
AMCZ	Amberley	3.82	197	P	Pn	04 27 40.4	-0.6
OXZ	Oxford	4.12	202		Pn	04 27 43.5	-0.9
OXZ	Oxford	4.12	202	P	Pn	04 27 43.4	-1.0
OKCZ	Okains Bay	4.27	191	P	Pn	04 27 45.6	-0.6
MQZ	McQueen's Vall	4.33	195		Pn	04 27 45.7	-1.1
MQZ	McQueen's Vall	4.33	195	P	Pn	04 27 45.3	-1.5
WVZ	Waitaha Valley	4.39	215	P	Pn	04 27 46.5	-1.1
AKCZ	Akaroa Harbour	4.44	192	P	Pn	04 27 47.3	-0.9
MHCZ	Mount Hutt	4.45	205	P	Pn	04 27 47.3	-1.1
RACZ	Rakaia	4.46	199	P	Pn	04 27 47.6	-0.8
WACZ	Wakanui South	4.74	201	P	Pn	04 27 51.0	-0.8
GCSZ	Gaunt Creek Bo	4.76	216	P	Pn	04 27 50.9	-1.2
RPZ	Rata Peaks	4.79	208	P	Pn	04 27 51.6	-0.9
	138nm,0.5s,baz=31,slow=3.3,SNR=98						
RPZ				S	S	04 28 47.0	-4.1
	23nm,0.3s,baz=0.0,slow=18,SNR=7.5						
RPZ	Rata Peaks	4.79	208	P	Pn	04 27 51.4	-1.0
RPZ	Rata Peaks	4.79	208	P	Pn	04 27 51.6	-0.9
ARCZ	Arundel	4.95	206	P	Pn	04 27 53.3	-1.1
FOZ	Fox Glacier	5.17	218		Pn	04 27 55.2	-1.8
FOZ	Fox Glacier	5.17	218	P	Pn	04 27 55.1	-1.8
TMZ	Timaru	5.39	205	P	Pn	04 27 59.0	-0.7
LBZ	Lake Benmore	5.69	210	Pn	Pn	04 28 01.7	-1.7
LBZ	Lake Benmore	5.69	210	P	Pn	04 28 01.8	-1.7
JCZ	Jackson Bay	6.07	220	P	Pn	04 28 06.1	-2.0
JCZ	Jackson Bay	6.07	220	P	Pn	04 28 06.1	-2.0
ODZ	Otahua Downs	6.10	204		Pn	04 28 08.2	-0.2
ODZ	Otahua Downs	6.10	204	P	Pn	04 28 08.3	-0.2
ODZ	Otahua Downs	6.10	204	S	S	04 29 17.6	-2.5
ODZ	Otahua Downs	6.10	204	P	Pn	04 28 08.2	-0.2
WKZ	Wanaka	6.53	214	Pn	Pn	04 28 11.3	-2.5
WKZ	Wanaka	6.53	214	P	Pn	04 28 11.6	-2.3
EAZ	Earnscleugh	6.74	211	P	Pn	04 28 13.9	-2.5
TUZ	Tuapeka	7.24	206	P	Pn	04 28 21.5	-1.1
MLZ	Mavora Lakes	7.35	216	P	Pn	04 28 22.5	-1.7
WHZ	Wether Hill Ro	7.84	214	P	Pn	04 28 27.9	-2.2
SYZ	Scrubby Hill	7.92	206	P	Pn	04 28 30.1	-1.0
APZ	The Paps	8.58	210	P	Pn	04 28 38.0	-1.5
ASAR	Alice Springs	37.43	283	P	P	04 33 28.1	+0.2
	1.9nm,0.8s,baz=126,slow=8.5,SNR=12						
	1.9nm,0.8s						
VNDA	Vanda	38.45	184	P	P	04 33 37.8	+2.1
	0.8nm,0.6s,baz=2.6,slow=7.8,SNR=5.1						
	0.8nm,0.6s						
WRA	Warramunga Arr	39.32	288	P	P	04 33 44.0	+0.4
WRA	Warramunga Arr	39.32	288	P	P	04 33 43.4	-0.2
	0.8nm,0.4s,baz=129,slow=7.3,SNR=8.9						
	0.8nm,0.4s						
WB0	Warramunga Arr	39.39	288	P	P	04 33 44.0	-0.2
WB0				IAmb	IAmb	04 34 22.9	
	comp=Z,7.4nm,1.1s						
RABL	Rabaul	40.43	325	P	P	04 33 53.8	+1.0
NWAO	Narrogin (SRO)	45.75	260	P	P	04 34 34.8	-0.2
NWAO				IAmb	IAmb	04 34 52.7	
	comp=Z,23nm,0.8s						
FITZ	Fitzroy Crossi	46.94	283	P	P	04 34 44.8	+0.4
QSPA	South Pole Qui	50.60	180	P	P	04 35 13.8	+2.1
QSPA				IAmb	IAmb	04 35 14.2	
	comp=Z,2.9nm,0.6s						
QSPA	South Pole Qui	50.60	180	P	P	04 35 13.5	+1.9
	comp=Z,3.1nm,0.6s,baz=22,slow=0.9,SNR=25						
	comp=Z,3.1nm,0.6s						
BELA	Belgrano 2	61.55	173	P	P	04 36 28.6	+0.1
BELA				IAmb	IAmb	04 36 30.2	
	comp=Z,2.7nm,0.8s						
DAV	Davao City (W)	64.52	304	P	P	04 36 47.6	-1.2
SNAA	Sanae	69.08	181	P	P	04 37 17.1	+0.3
SNAA				IAmb	IAmb	04 37 17.9	
	comp=Z,3.5nm,1.1s						
SNAA	Sanae	69.08	181	P	P	04 37 17.1	+0.3
	comp=Z,2.0nm,0.9s,baz=180,slow=11,SNR=9.3						
	comp=Z,2.0nm,0.9s						
AY03	Cochrane	75.15	140	P	P	04 37 54.0	+1.0
AY03				IAmb	IAmb	04 38 28.9	
	comp=Z,5.4nm,0.8s						
ARCES	ARCESS Array B	145.67	341	PKPbc	PKPbc	04 45 45.4	-1.0
	comp=Z,2.0nm,1.1s,baz=75,slow=1.2,SNR=6.8						

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*IDC **05** 04:38:38.0±2.7, 7°.45S×128°.39E, h136km±25km, mb3.6/9, mbtmp4.1/14, Error ellipse: s-maj=31.1km s-min=13.4km az=64.0*

*NEIC **05** 04:38:37.2±1.3, 7°.48S±0°.10×128°.41E±0°.07, h124km±8km, mb4.4/15, Error ellipse: s-maj=14.7km s-min=10.2km az=160.0*

*DJA **05** 04:38:39.0±0.2, 7°S±3°×12°9E±°, h144km±8km, M4.7/13, mb4.7/13, mB5.4/4, MLv4.6/12, Mw(mB)4.8/4*

ISC 05 04:38:39.3±0.5, **7°.43S**±0°.05×**128°.50E**±0°.04, **h151**km, **n71**, σ1s.**82**/76, **mb4.0**/15, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.83	101	Pn	Pn	04 39 22.4	-2.1
SAUI	Saumlaki	2.83	101	P	Pn	04 39 26.5	+2.0
SAUI				S	Sn	04 40 01.5	+2.0
SOEI	Soe	4.78	241		Pn	04 39 46.1	-3.8
SOEI	Soe	4.78	241	P	Pn	04 39 51.4	+1.5
SOEI	Soe	4.78	241	S	Sn	04 40 45.0	0.0
SOEI	Soe	4.78	241	P	Pn	04 39 51.2	+1.3
SOEI				S	Sn	04 40 44.6	-0.4
DRS	Darwin Rock St	5.50	155	P	Pn	04 40 00.9	+1.6
DRS	Darwin Rock St	5.50	155	S	Sn	04 41 00.3	-1.6
BATI	Baumata	5.52	240	P	Pn	04 40 00.4	+0.8
BATI				S	Sn	04 41 00.7	-1.7
FAKI	Fak Fak	5.84	40		Pn	04 40 02.9	-1.0
FAKI	Fak Fak	5.84	40	P	Pn	04 40 02.8	-1.0
	0.2nm782nm49nm,0.7s						
FAKI				S	Sn	04 41 06.5	-3.5
	0.2nm782nm49nm,0.7s						
SANI	Sanana	5.91	335	P	Pn	04 40 02.7	-2.1
MTN	Manton Dam	5.97	154		Pn	04 40 02.2	-3.4
MTN	Manton Dam	5.97	154	P	Pn	04 40 06.0	+0.4
MMRI	Maumere	6.32	259	P	Pn	04 40 10.7	+0.5
	0.4nm4µm68nm,1.2s						
KMPI	Kaimana, Papua	6.39	54	P	Pn	04 40 11.5	+0.2
	220nm,0.6s						
KMPI				S	Sn	04 41 19.6	-3.7
	220nm,0.6s						
KDU	Kakadu	6.52	143	P	Pn	04 40 13.5	+0.5
KDU	Kakadu	6.52	143	S	Sn	04 41 23.4	-3.0
EDFI	Ende, Flores	6.87	259	P	Pn	04 40 18.5	+0.8
SWI	Sorong	7.08	23	P	Pn	04 40 19.8	-0.7
	0.1nm40nm,0.7s						
RKPI	Ransiki, Papua	8.16	44	P	Pn	04 40 34.8	-0.1
	19µm120nm,0.6s						
KNRA	Kununurra	8.20	178		Pn	04 40 32.6	-2.7
BASI	Baing, Sumba	8.30	250	P	Pn	04 40 37.9	+1.1
	204nm,1.3s						
WSI	Waingapu	8.41	254	P	Pn	04 40 38.4	+0.2
KAPI	Kappang	9.02	285	P	Pn	04 40 44.4	-1.9
	4.1nm,0.7s,baz=101,slow=16,SNR=2.6						
WBSI	Waikabubak, Su	9.27	256	P	Pn	04 40 50.3	+0.6
	47nm,1.0s						
PLAI	Plampang	10.71	262	P	Pn	04 41 10.9	+2.2
FITZ	Fitzroy Crossi	10.96	194	Pn	Pn	04 41 08.9	-3.0
FITZ	Fitzroy Crossi	10.96	194	P	Pn	04 41 09.5	-2.5
	6.3nm,0.6s,baz=7.0,slow=8.8,SNR=18						
FITZ				S	Sn	04 43 03.9	-9.3
	20nm,0.5s,baz=1.5,slow=17,SNR=10.0						
FITZ	Fitzroy Crossi	10.96	194	P	Pn	04 41 11.3	-0.7
JAY	Jayapura	13.10	69	P	Pn	04 41 40.5	+0.6
	1.6nm,0.5s,baz=319,slow=7.2,SNR=4.1						
WB0	Warramunga Arr	13.53	156	Pn	Pn	04 41 43.9	-1.4
WRA	Warramunga Arr	13.66	156	Pn	Pn	04 41 43.6	-3.4
WRA	Warramunga Arr	13.66	156	P	Pn	04 41 44.9	-2.1
	1.0nm,0.5s,baz=335,slow=12,SNR=12						
WRA				S	Sn	04 44 08.7	-10
	3.6nm,0.4s,baz=334,slow=22,SNR=8.6						
WR8	Warramunga Arr	13.74	156	Pn	Pn	04 41 45.4	-2.6
COEN	Coen	15.80	115	Pn	Pn	04 42 12.6	-1.1
COEN				IAmb	IAmb	04 42 26.9	
	comp=Z,42nm,1.4s						
COEN	Coen	15.80	115	P	P	04 42 17.0	+2.6
COEN	Coen	15.80	115	S	S	04 45 12.9	+2.3
MBWA	Marble Bar	16.06	211	Pn	Pn	04 42 14.1	-2.7
MBWA				IAmb	IAmb	04 42 33.8	
	comp=Z,35nm,1.3s						
PSA00	Pilbara Seismi	16.35	210		Pn	04 42 18.7	-1.6
PSA00				IAmb	IAmb	04 42 22.1	
	comp=Z,5.0nm,0.8s						
AS31	Alice Springs	16.95	163	P	P	04 42 27.5	+0.4
ASAR	Alice Springs	16.95	163		P	04 42 26.5	-0.6
ASAR	Alice Springs	16.95	163	P	Pn	04 42 28.3	+0.7
	comp=Z,8.1nm,0.6s,baz=336,slow=10,SNR=105						
ASAR				S	S	04 45 29.9	-6.3
	comp=Z,2.4nm,0.7s,baz=344,slow=24,SNR=7.5						
AS01	Alice Springs	16.97	163	P	Pn	04 42 29.4	+1.6
FORT	Forrest	23.23	181	P	P	04 43 34.8	+1.8
MORW	Morawa	24.52	207	P	P	04 43 45.9	+1.1
MORW				IAmb	IAmb	04 44 04.6	
	comp=Z,24nm,1.4s						
BLDU	Ballidu	25.57	204	P	P	04 43 57.4	+3.1
BBOO	Buckleboo	26.21	165	P	P	04 44 00.9	+0.9
BBOO				IAmb	IAmb	04 44 14.5	
	comp=Z,18nm,1.4s						
BBOO	Buckleboo	26.21	165	P	P	04 44 01.0	+0.9
STKA	Stephens Creek	27.21	155	P	P	04 44 10.2	+1.2
	comp=Z,2.0nm,0.5s,baz=335,slow=8.3,SNR=5.8						
	comp=Z,2.0nm,0.5s						
CMAR	Chiang Mai Arr	38.89	312	P	P	04 45 50.8	+0.4
	comp=Z,0.9nm,0.3s,baz=118,slow=8.8,SNR=4.1						
	comp=Z,0.9nm,0.3s						
SONM	Songino Array	58.40	343	P	P	04 48 19.6	+0.6
	comp=Z,1.1nm,0.9s,baz=143,slow=5.0,SNR=4.0						
	comp=Z,1.1nm,0.9s						
MK31	Makanchi Array	67.78	328	P	P	04 49 21.9	+1.1
MKAR	Makanchi Array	67.78	328	P	P	04 49 21.1	+0.3
MKAR	Makanchi Array	67.78	328	P	P	04 49 21.0	+0.2
	comp=Z,0.9nm,0.7s,baz=126,slow=7.1,SNR=8.7						
	comp=Z,0.9nm,0.7s						
ZALV	Zalesovo Beam	71.32	334	P	P	04 49 42.1	-0.1
	comp=Z,0.7nm,0.4s,baz=134,slow=4.2,SNR=2.3						
	comp=Z,0.7nm,0.4s						
KURBB	Kurchatov Arra	72.11	329	P	P	04 49 46.9	-0.2
	comp=Z,2.0nm,0.8s,baz=128,slow=5.2,SNR=15						
	comp=Z,2.0nm,0.8s						
KURK	Kurchatov	72.12	329	P	P	04 49 47.4	+0.2
KURK				IAmb	IAmb	04 49 47.9	
	comp=Z,3.3nm,0.9s						
VNDA	Vanda	72.20	173	P	P	04 49 48.0	+0.7
	comp=Z,0.8nm,0.6s,baz=352,slow=8.9,SNR=4.0						
	comp=Z,0.8nm,0.6s						
BVAR	Borovoye Array	77.64	328	P	P	04 50 18.0	-0.8
	comp=Z,0.6nm,0.6s,baz=130,slow=6.2,SNR=4.4						
	comp=Z,0.6nm,0.6s						
ABKAR	Akbulak array	81.93	322	P	P	04 50 41.5	-0.5
ABKAR	Akbulak array	81.93	322	P	P	04 50 41.0	-1.0
ABKAR				IAmb	IAmb	04 50 43.0	
	comp=Z,1.3nm,0.8s						
QSPA	South Pole Qui	82.55	180	P	P	04 50 45.2	+0.1
QSPA	South Pole Qui	82.55	180	P	P	04 50 45.0	-0.1
	comp=Z,1.6nm,0.8s,baz=318,slow=5.1,SNR=7.6						
	comp=Z,1.6nm,0.8s						
FIS	Fire Island	92.26	29	P	P	04 51 33.9	+2.1
G23K	Bananza Creek	93.41	23	P	P	04 51 38.6	+1.5
G23K				IAmb	IAmb	04 51 51.8	
	comp=Z,3.9nm,1.4s						
BELA	Belgrano 2	94.30	184	P	P	04 51 40.5	-0.5
F24K	Squaw Lake	94.37	23	P	P	04 51 44.1	+2.6
F24K				IAmb	IAmb	04 51 57.1	
	comp=Z,4.3nm,1.5s						
C24K	Franklin Bluff	94.42	20	P	P	04 51 42.7	+1.1
SNAA	Sanae	94.89	194	P	P	04 51 45.5	+1.6
SNAA				IAmb	IAmb	04 51 49.5	
	comp=Z,3.4nm,1.2s						
LPAZ	La Paz	151.25	145	PKPbc	PKPbc	04 58 17.4	+0.7
	comp=Z,0.7nm,0.8s,baz=180,slow=6.1,SNR=2.6						

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*ISK **05** 05:16:59.9, 34°.97N×23°.24E, h58km, ML3.1/17*

*IDC **05** 05:17:00.9±4.0, 34°.73N×23°.21E, h53km±29km, mb3.5/7, mbtmp3.7/10, ML3.4/3, MS3.1/3, Error ellipse: s-maj=36.5km s-min=22.0km az=15.0*

*ATH **05** 05:17:03.3, 34°.96N×23°.47E, h56km±2km, ML3.3/11, Manual Solution by G.Panopoulou First location: 2019/06/05 05:18:08, This location: 2019/06/05 06:21:47 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

*THE **05** 05:17:04.0, 35°N±8°×2°3E±°, h53km±12km, M3.2/11, MLh3.2/11*

ISC 05 05:17:02.1±1.0, **34°.91N**±0°.06×**23°.42E**±0°.05, **h49**km±8km, **n78**, σ1s.**60**/94, **mb3.7**/7, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNDR	Palaiochora Ch	0.39	34	Pg	Pn	05 17 10.5	-1.5
KNDR				Sg	Sn	05 17 19.3	+0.2
KNDR	Palaiochora Ch	0.39	34	P	Pn	05 17 13.0	+1.0
KNDR				S	Sn	05 17 20.0	+1.0
GVD	Gavdhos	0.56	97	Pg	Pn	05 17 14.9	+1.0
GVD				Sg	Sn	05 17 25.4	+2.9
GVD	Gavdhos	0.56	97	P	Pn	05 17 15.5	+1.5
GVD	Gavdhos	0.56	97	P	Pn	05 17 14.9	+1.0
GVD				S	Sn	05 17 23.9	+1.5
IMMV	Iera Moni Meta	0.72	40	Pg	Pn	05 17 15.9	-0.1
IMMV				Sg	Sn	05 17 27.3	+1.2
IMMV	Iera Moni Meta	0.72	40	P	Pn	05 17 16.8	+0.8
IMMV				S	Sn	05 17 28.0	+1.9
IMMV	Iera Moni Meta	0.72	40	P	Pn	05 17 16.4	+0.4
IMMV				S	Sn	05 17 26.8	+0.7
CHNB	Souda	0.78	43	P	Pn	05 17 17.7	+0.8
CHAN	Chania	0.79	40	P	Pn	05 17 18.0	+1.0
CHAN				S	Sn	05 17 30.7	+2.8
CHAN	Chania	0.79	40	P	Pn	05 17 18.2	+1.2
ANKY	Antikythira Is	0.96	354	P	Pn	05 17 20.7	+1.5
ANKY				S	Sn	05 17 33.9	+2.1
ANKY	Antikythira Is	0.96	354	P	Pn	05 17 20.6	+1.4
ANKY				S	Sn	05 17 33.0	+1.2
PRNS	Prines Rethymn	1.00	63	P	Pn	05 17 20.3	+0.6
PRNS	Prines Rethymn	1.00	63	P	Pn	05 17 20.5	+0.8
IDI	Anoyia	1.27	72	Pn	Pn	05 17 24.5	+1.1
IDI				Sn	Sn	05 17 41.8	+2.5
IDI	Anoyia	1.27	72	P	Pn	05 17 25.5	+2.1
IDI				S	Sn	05 17 40.9	+1.6
IDI	Anoyia	1.27	72	P	Pn	05 17 25.4	+2.0
	32nm,0.8s,baz=263,slow=9.9,SNR=30						
IDI				S	Sn	05 17 43.6	+4.2
	64nm,0.7s,baz=336,slow=20,SNR=9.5						
IDI	Anoyia	1.27	72	P	Pn	05 17 25.0	+1.6
IDI				S	Sn	05 17 40.0	+0.6
VLI	Veliai	1.84	348	P	Pn	05 17 33.5	+2.2
VLI	Veliai	1.84	348	P	Pn	05 17 33.1	+1.8
MHLO	Agia Marina, M	1.95	24	P	Pn	05 17 34.0	+1.4
MHLO	Agia Marina, M	1.95	24	P	Pn	05 17 33.8	+1.1
MHLO				S	Sn	05 17 55.2	-0.7
THR5	Thira Island,	2.17	46	P	Pn	05 17 36.5	+0.7
SAP3	Santorini-Thir	2.19	45	P	Pn	05 17 36.1	+0.1
SAP3				S	Sn	05 18 01.6	-0.2
THR3	Thira Island,	2.20	47	P	Pn	05 17 37.2	+1.1
ZKR	Zakros	2.31	84	Pn	Pn	05 17 39.3	+1.7
ZKR	Zakros	2.31	84	P	Pn	05 17 38.5	+0.9
ZKR				S	Sn	05 18 05.0	+0.2
PYL	PYLOS	2.40	326	P	Pn	05 17 40.1	+1.2
ITM	Ithomi	2.57	332	Pn	Pn	05 17 39.2	-2.0
ITM	Ithomi	2.57	332	P	Pn	05 17 43.4	+2.2
ITM	Ithomi	2.57	332	P	Pn	05 17 42.5	+1.3
VLX	Vlachokerasia	2.59	341	P	Pn	05 17 43.5	+1.9
MET6	Megalochori,Me	2.67	359	P	Pn	05 17 42.6	0.0
MET5	Makryloggos,Me	2.71	359	P	Pn	05 17 44.7	+1.6
MET4	Agioi Theodoro	2.71	360	P	Pn	05 17 44.6	+1.6
APE	Apeiranthos	2.75	38	Pn	Pn	05 17 43.8	0.0
APE	Apeiranthos	2.75	38	P	Pn	05 17 44.0	+0.2
APE	Apeiranthos	2.75	38	P	Pn	05 17 43.8	0.0
AMT	Artemida-Makis	2.96	333	P	Pn	05 17 47.2	+0.7
ATHU	Athens Univers	3.06	5	P	Pn	05 17 48.2	+0.3
LTK	Loutraki	3.13	353	P	Pn	05 17 49.6	+0.8
KARP	Karpathos	3.13	77	Pn	Pn	05 17 50.7	+1.8
KARP	Karpathos	3.13	77	P	Pn	05 17 50.2	+1.3
GUR	Goura	3.14	344	P	Pn	05 17 50.2	+1.1
PTL	Penteli	3.15	6	P	Pn	05 17 49.1	-0.1
DION	Dionisos Attik	3.19	7	P	Pn	05 17 50.4	+0.7
KARY	Karystos	3.22	14	P	Pn	05 17 50.6	+0.5
KLV	Kalavryta, Ach	3.29	342	P	Pn	05 17 52.9	+1.7
VIL2	Platees	3.30	358	P	Pn	05 17 51.2	0.0
YRMI	Loutra Irminis	3.59	333	P	Pn	05 17 56.3	+1.1
KALE	Kalithea	3.62	344	P	Pn	05 17 55.6	-0.1
SERG	Sergoula	3.66	343	P	Pn	05 17 57.0	+0.8
AXS	Araxos	3.67	334	P	Pn	05 17 57.4	+1.2
KYMI	Kymi, Euboea I	3.75	8	P	Pn	05 17 57.7	+0.3
BODT	Bodrum	3.82	55	Pn	Pn	05 17 59.6	+1.3
DAT	Datca	3.84	61	Pn	Pn	05 18 00.1	+1.4
ARG	Arkhangelos	4.05	70	Pn	Pn	05 18 03.5	+2.0
TURN	Turunc	4.34	63	Pn	Pn	05 18 07.4	+1.9
DALY	Dalyan (Mula)	4.66	64	Pn	Pn	05 18 11.9	+2.1
FETY	Fethiye	4.92	68	Pn	Pn	05 18 14.7	+1.3
CAME	Cameli-Denizli	5.19	65	Pn	Pn	05 18 19.3	+2.0
AKAS	Kas	5.21	74	Pn	Pn	05 18 18.6	+1.0
ELL	Elmali	5.58	69	Pn	Pn	05 18 24.7	+2.0
VAE	Valguarnera	7.72	292	S	Sn	05 20 18.2	+0.3
	11nm,0.5s,baz=183,slow=23,SNR=2.0						
EIL	Elat	11.07	115	P	Pn	05 19 36.9	-0.8
	0.2nm,0.3s,baz=352,slow=3.0,SNR=7.0						
EIL				S	Sn	05 21 32.4	-7.6
	1.2nm,0.6s,baz=317,slow=18,SNR=1.3						
	1.3nm,0.4s						
VRAC	Vranov	15.24	343	P	P	05 20 36.6	-1.4
	3.3nm,0.5s,baz=88,slow=7.4,SNR=3.9						
VRAC				LR	LR	05 27 48.7	
	comp=Z,39nm,21.2s,baz=172,slow=42						
GERES	GERESS Array B	15.67	336	P	Pn	05 20 40.7	+1.1
	baz=130,slow=11,SNR=4.2						
	0.8nm,0.5s						
AKASG	Malin Array Be	16.34	13	P	P	05 20 50.6	+0.5
	0.9nm,0.3s,baz=209,slow=9.2,SNR=7.1						
	0.3nm,0.4s						
HFS	Hagfors	26.02	349	P	P	05 22 29.5	-0.8
	0.9nm,0.6s,baz=158,slow=12,SNR=6.6						
	0.9nm,0.6s						
FINES	FINESS Array B	26.61	3	LR	LR	05 34 10.1	
	comp=Z,27nm,20.1s,baz=191,slow=38						
NOA	NORSAR Array B	27.30	347	P	P	05 22 41.3	-0.5
	0.3nm,0.6s,baz=160,slow=9.7,SNR=2.1						
	0.3nm,0.6s						
ARCES	ARCESS Array B	34.70	1	P	P	05 23 45.6	-1.2
	0.5nm,0.5s,baz=183,slow=7.9,SNR=8.1						
	0.5nm,0.5s						
KURBB	Kurchatov Arra	42.39	51	P	P	05 24 51.3	-0.1
	0.8nm,0.7s,baz=279,slow=8.8,SNR=6.6						
	0.8nm,0.7s						
SPITS	Spitsbergen Ar	43.48	358	P	P	05 25 00.6	+0.6
	4.7nm,0.9s,baz=143,slow=13,SNR=1.9						
	4.7nm,0.9s						
MKAR	Makanchi Array	45.10	56	P	P	05 25 13.9	+0.6
	0.7nm,0.6s,baz=280,slow=7.1,SNR=9.4						
	0.7nm,0.6s						
PALK	Pallekele	59.18	104	LR	LR	05 57 38.2	
	comp=Z,34nm,18.5s,baz=194,slow=41						
SONM	Songino Array	60.74	50	P	P	05 27 09.5	+0.7
	0.5nm,0.6s,baz=265,slow=7.2,SNR=2.8						
	0.5nm,0.6s						

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*NOU **05** 05:17:52.5, 39°.15S×174°.88E, h214km, MLv3.5/15, North Island, New Zealand*

*WEL **05** 05:17:55.0±0.8, 39°S±7°×17°5E±°, h200km±5km, M3.2/53, ML3.1/5, MLv3.2/53, Error ellipse: s-maj=9.6km s-min=8.7km az=175.2, confirmed*

ISC 05 05:17:49.6±1.7, **39°.11S**±0°.05×**174°.86E**±0°.05, **h239**km±9km, **n138**, σ1s.**43**/148, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRZ	Vera Road	0.08	257	P	Pn	05 18 21.6	+1.1
VRZ				S	S	05 18 43.1	-1.5
PKVZ	Pokaka	0.42	116	P	Pn	05 18 22.4	+1.3
PKVZ				S	S	05 18 44.1	-1.7
TWVZ	Taurewa	0.45	86	P	Pn	05 18 22.4	+1.2
LREZ	Lake Rotokare	0.50	225	P	Pn	05 18 22.9	+1.7
DREZ	Durham Road	0.52	261	P	Pn	05 18 22.9	+1.6
DREZ				S	S	05 18 45.5	-0.6
COVZ	Chateau Observ	0.54	100	P	Pn	05 18 22.9	+1.4
MTVZ	Mangateitei	0.55	121	P	Pn	05 18 22.8	+1.3
FWVZ	Far West T-bar	0.56	106	P	Pn	05 18 23.0	+1.3
TRVZ	Turoa	0.57	110	P	Pn	05 18 23.1	+1.3
TRVZ				S	S	05 18 44.8	-2.1
WTVZ	West Tongariro	0.57	91	P	Pn	05 18 22.9	+1.3
WTVZ				S	S	05 18 44.9	-1.8
MAVZ	Matarangi	0.57	107	P	Pn	05 18 23.1	+1.2
NGZ	Ngauruhoe	0.58	97	P	Pn	05 18 23.0	+1.3
NGZ				S	S	05 18 45.0	-1.9
NNVZ	North Ngauruho	0.59	93	P	Pn	05 18 23.1	+1.4
HIZ	Hauiti	0.59	360	P	Pn	05 18 22.3	+0.7
HIZ	Hauiti	0.59	360	P	Pn	05 18 22.6	+0.9
HIZ				S	S	05 18 45.2	-1.5
PREZ	Palmer Road	0.59	246	P	Pn	05 18 23.4	+1.8
WHVZ	Whangaehu Hut	0.59	108	P	Pn	05 18 23.2	+1.4
KRVZ	Karewarewa	0.61	89	P	Pn	05 18 23.1	+1.3

SNVZ	South Ngauruho	0.61	98	P	Pn	05 18 23.3	+1.4
NEZ	North Egmont	0.61	254	P	Pn	05 18 23.5	+1.7
NEZ				S	S	05 18 46.0	-0.8
WNVZ	Wahianoa	0.61	111	P	Pn	05 18 23.2	+1.4
OTVZ	Oturere	0.63	95	P	Pn	05 18 23.5	+1.6
NTVZ	North Tongarir	0.64	90	P	Pn	05 18 23.4	+1.5
TUVZ	Tukino	0.64	105	P	Pn	05 18 23.4	+1.5
WAZ	Wanganui	0.66	171	P	Pn	05 18 23.7	+1.9
TMVZ	Te Maari	0.66	91	P	Pn	05 18 23.7	+1.7
TMVZ				S	S	05 18 45.7	-1.6
ETVZ	East Tongariro	0.66	93	P	Pn	05 18 23.6	+1.6
KATZ	Kakaramea	0.66	79	P	Pn	05 18 23.1	+1.1
KHEZ	Kahui Hut	0.68	254	P	Pn	05 18 23.7	+1.7
KHEZ	Kahui Hut	0.68	254	S	S	05 18 47.4	+0.1
KHEZ	Kahui Hut	0.68	254	P	Pn	05 18 23.7	+1.7
PKE	Pukeiti	0.68	262	P	Pn	05 18 23.6	+1.6
MOVZ	Moawhango	0.76	114	P	Pn	05 18 23.4	+1.1
MOVZ				S	S	05 18 45.0	-2.9
NBEZ	Newall Road No	0.79	258	P	Pn	05 18 24.1	+1.8
WATZ	Wairara	0.79	60	P	Pn	05 18 23.9	+1.4
NMEZ	Namu Road	0.82	248	P	Pn	05 18 24.0	+1.5
TLZ	Tolley Road	0.94	35	P	Pn	05 18 24.3	+1.0
KUTZ	Kaahu Road	0.97	51	P	Pn	05 18 24.9	+1.5
OHWZ	Ohakea	1.15	162	P	Pn	05 18 26.6	+2.2
MRHZ	Matea Rd	1.25	78	P	Pn	05 18 25.9	+0.8
KWHZ	Kaweka Forest	1.25	105	P	Pn	05 18 27.0	+1.8
BKZ	Black Stump Fm	1.27	93	P	Pn	05 18 26.1	+0.8
BKZ	Black Stump Fm	1.27	93	S	S	05 18 51.0	-2.2
BKZ	Black Stump Fm	1.27	93	P	Pn	05 18 25.9	+0.7
TSZ	Takapari Road	1.28	139	P	Pn	05 18 27.1	+1.9
ALRZ	Allen Road	1.28	65	P	Pn	05 18 26.1	+0.8
KRHZ	Kereru	1.29	115	P	Pn	05 18 27.1	+1.7
PNHZ	Pukenui	1.31	128	P	Pn	05 18 27.2	+1.7
POWZ	Post Office Ro	1.46	152	P	Pn	05 18 28.1	+1.6
TOZ	Tahuroa Road	1.46	20	P	Pn	05 18 27.8	+1.2
MCHZ	McNeill Hill	1.47	104	P	Pn	05 18 28.9	+2.3
NMHZ	Naumai	1.52	90	P	Pn	05 18 29.3	+2.2
OMRZ	Omania	1.55	50	P	Pn	05 18 28.2	+0.8
WPHZ	Waipukurau	1.55	129	P	Pn	05 18 29.2	+1.9
TARZ	Mount Tarawera	1.56	57	P	Pn	05 18 28.7	+1.2
DVHZ	Dannevirke	1.56	140	P	Pn	05 18 28.9	+1.6
MTHZ	Maungataniwha	1.57	81	P	Pn	05 18 28.7	+1.2
MUGZ	Murupara	1.62	68	P	Pn	05 18 28.5	+0.6
MRZ	Mangatainoka R	1.65	161	P	Pn	05 18 29.4	+1.4
ARHZ	Aropaoanui	1.67	96	P	Pn	05 18 30.3	+2.1
KAHZ	Kahuranaki	1.71	114	P	Pn	05 18 30.8	+2.2
OGWZ	Otaki Gorge	1.73	172	P	Pn	05 18 30.4	+1.8
RTZ	Ruatahuna	1.73	74	P	Pn	05 18 29.8	+1.0
RAHZ	Arahi	1.75	84	P	Pn	05 18 30.7	+1.7
KIW	Kapiti Island	1.75	179	P	Pn	05 18 30.4	+1.5
TGRZ	Tauranga	1.76	39	P	Pn	05 18 30.4	+1.3
PXZ	Pawanui	1.80	121	P	Pn	05 18 31.2	+1.9
CKHZ	Cape Kidnapper	1.81	108	P	Pn	05 18 31.8	+2.4
ANWZ	Angora Road	1.84	138	P	Pn	05 18 31.6	+1.9
DUWZ	D'Urville Isla	1.84	203	P	Pn	05 18 31.3	+1.5
TIWZ	Tintock	1.85	155	P	Pn	05 18 31.3	+1.6
HOWZ	Holdsworth Sta	1.86	164	P	Pn	05 18 31.2	+1.3
BFZ	Birch Farm	1.90	146	P	Pn	05 18 31.6	+1.4
BFZ	Birch Farm	1.90	146	S	S	05 19 01.4	-0.8
BFZ	Birch Farm	1.90	146	P	Pn	05 18 31.7	+1.4
URZ	Urewera	1.96	65	P	Pn	05 18 31.0	+0.2
URZ	Urewera	1.96	65	P	Pn	05 18 31.2	+0.4
SNGZ	Shannon Statio	1.96	81	P	Pn	05 18 32.3	+1.5
MKAZ	Moumakai	2.01	7	P	Pn	05 18 32.9	+1.5
AWAZ	Awhitu Peninsu	2.05	355	P	Pn	05 18 33.2	+1.6
CPWZ	Castlepoint	2.08	151	P	Pn	05 18 33.9	+2.1
MTW	Mount Morrison	2.11	167	P	Pn	05 18 33.4	+1.2
ETAZ	East Tamaki Re	2.15	1	P	Pn	05 18 33.8	+1.2
TCW	Tory Channel	2.15	192	P	Pn	05 18 34.3	+1.8
TMWZ	Te Maipa	2.15	159	P	Pn	05 18 33.9	+1.4
WTAZ	Waiatarua	2.18	354	P	Pn	05 18 34.7	+1.7
KNZ	Kokohu	2.19	89	P	Pn	05 18 34.5	+1.6
SNZO	South Karori	2.21	183	P	Pn	05 18 34.3	+1.3
SNZO	South Karori	2.21	183	P	S	05 19 06.5	-0.8
MWZ	Matawai	2.23	71	P	Pn	05 18 34.2	+0.8
RIGZ	Rimuhau	2.30	81	P	Pn	05 18 35.7	+1.5
PAWZ	Paruwai Farm	2.31	169	P	Pn	05 18 35.5	+1.3
MSWZ	Moikau Station	2.33	173	P	Pn	05 18 35.6	+1.3
MBAZ	Motutapu North	2.33	1	P	Pn	05 18 36.4	+1.9
PRGZ	Paritu Road	2.36	87	P	Pn	05 18 36.5	+1.8
MHGZ	Mahia Peninsul	2.37	92	P	Pn	05 18 36.7	+1.9
TRWZ	Traveller	2.38	165	P	Pn	05 18 36.1	+1.4
NNZ	Nelson	2.39	208	P	Pn	05 18 36.3	+1.4
TKNZ	Takaka Hill	2.41	217	P	Pn	05 18 36.0	+0.8
TUWZ	Tuamarina	2.42	197	P	Pn	05 18 37.2	+2.0
TKGZ	Te Karaka	2.43	75	P	Pn	05 18 37.0	+1.6
KUZ	Kuaotunu	2.45	16	P	Pn	05 18 37.0	+1.4
KUZ	Kuaotunu	2.45	16	P	Pn	05 18 37.0	+1.4
PLWZ	Palliser	2.48	173	P	Pn	05 18 37.0	+1.2
QRZ	Quartz Range	2.48	225	P	Pn	05 18 36.5	+0.7
QRZ	Quartz Range	2.48	225	P	Pn	05 18 36.6	+0.8
RUGZ	Raukumara Rang	2.49	64	P	Pn	05 18 36.1	0.0
TWGZ	Tauwhareparae	2.61	70	P	Pn	05 18 38.9	+1.5
HAZ	Te Kaha	2.66	61	P	Pn	05 18 37.8	+0.1
BSWZ	Blackbirch Sta	2.71	196	P	Pn	05 18 40.1	+1.9
MRNZ	Matariki Terra	2.80	214	P	Pn	05 18 40.0	+0.9
PKGZ	Pakihiroa	2.81	65	P	Pn	05 18 40.0	+0.6
PUZ	Puketiti	2.86	70	P	Pn	05 18 40.7	+0.8
THZ	Tophouse	3.04	209	P	Pn	05 18 43.1	+1.2
WMGZ	Waiomatatini S	3.07	66	P	Pn	05 18 42.9	+0.7
WCZ	Waipu Caves	3.19	352	P	Pn	05 18 45.3	+1.7
KHZ	Kahutara	3.46	196	P	Pn	05 18 47.8	+1.4
KHZ	Kahutara	3.46	196	P	S	05 19 30.0	-1.4
KHZ	Kahutara	3.46	196	P	Pn	05 18 48.0	+1.5
DSZ	Denniston Nort	3.52	221	P	Pn	05 18 48.0	+0.8
GVZ	Greta Valley S	4.10	199	P	Pn	05 18 55.0	+1.0
LTZ	Lake Taylor	4.16	207	P	Pn	05 18 55.8	+1.0
INZ	Inchbonnie	4.45	214	P	Pn	05 18 58.9	+0.7
OXZ	Oxford	4.72	206	P	Pn	05 19 02.0	+0.4
OKCZ	Okains Bay	4.81	196	P	Pn	05 19 03.4	+0.8
MQZ	McQueen's Vall	4.89	199	P	Pn	05 19 03.6	+0.1
WVZ	Waitaha Valley	5.04	217	P	Pn	05 19 06.2	+0.8
RACZ	Rakaia	5.05	203	P	Pn	05 19 06.1	+0.6
MHCZ	Mount Hutt	5.07	208	P	Pn	05 19 06.4	+0.6
WACZ	Wakanui South	5.34	204	P	Pn	05 19 09.8	+0.7
GCSZ	Gaunt Creek Bo	5.42	218	P	Pn	05 19 10.3	+0.1
RPZ	Rata Peaks	5.42	211	P	Pn	05 19 11.1	+0.9
ARCZ	Arundel	5.57	209	P	Pn	05 19 12.7	+0.6
FOZ	Fox Glacier	5.83	219	P	Pn	05 19 15.7	+0.5
TMZ	Timaru	6.01	207	P	Pn	05 19 18.6	+1.1
LBZ	Lake Benmore	6.33	212	P	Pn	05 19 22.0	+0.4
ODZ	Otahua Downs	6.71	206	P	Pn	05 19 27.7	+1.4
JCZ	Jackson Bay	6.73	221	P	Pn	05 19 26.9	+0.1

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*GCG **05** 05:26:42.9±1.6, 15°.46N×93°.23W, h70^{km}±21^{km}, MD4.0, ML3.8, MW2.9*

*MEX **05** 05:26:42.6±0.4, 15°.43N×93°.25W, h96^{km}±3^{km}, MD4.1*

*CATAC **05** 05:26:43.7±0.7, 15°N±3°×9°3W±°, h87^{km}±7^{km}, M3.7/13, MLv3.7/13, Error ellipse: s-maj=9.3km s-min=6.4km az=63.0, confirmed*

ISC 05 05:26:40.2±1.2**, 15°.39N**±0°.04×**93°.33W**±0°.03**, h100**^{km}±9^{km}**, n55, σ2.^{s}15**/81**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.33	18	*e*P	Pn	05 26 55.1	+0.1
PCIG				*i* S	Sn	05 27 05.4	-0.6
PATR	El Naranjo	1.09	104	*e*P	Pn	05 27 01.9	0.0
PATR				*e*S	Sn	05 27 17.2	-1.0
PAVE	Pavencul	1.12	100	*e*P	Pn	05 27 02.5	+0.2
PAVE				*e*S	Sn	05 27 18.2	-0.7
THIG		1.13	115	*e*P	Pn	05 27 02.3	+0.2
THIG				*e*S	Sn	05 27 17.8	-0.8
THIG		1.13	115	*i* P	Pn	05 27 02.3	+0.2
THIG				*i* S	Sn	05 27 18.4	-0.2
THIG				IAML		05 27 20.5	
	comp=E,1µm,0.3s						
SMCA	Catarina	1.32	113	*i* P	Pn	05 27 04.3	0.0
SMCA				*i* S	Sn	05 27 21.4	-1.2
SMCA				IAML		05 27 22.9	
	comp=E,885nm,0.2s						
TGIG		1.40	8	*e*P	Pn	05 27 05.9	+0.6
TGIG				*e*S	Sn	05 27 23.1	-1.2
TGIG		1.40	8	*i* P	Pn	05 27 05.9	+0.6
TGIG				*i* S	Sn	05 27 23.2	-1.1
TGIG				IAML		05 27 28.6	
	comp=N,337nm,0.4s						
CCIG	Comitan	1.45	52	*e*P	Pn	05 27 06.3	+0.2
CCIG				*e*S	Sn	05 27 22.6	-3.0
CCIG	Comitan	1.45	52	*i* P	Pn	05 27 06.7	+0.6
CCIG				*e*S	Sn	05 27 25.3	-0.3
CCIG	Comitan	1.45	52	P	Pn	05 27 07.3	+1.2
HUEH	Huehuetenango	1.76	92	*e*P	Pn	05 27 09.6	-0.4
HUEH				*e*S	Sn	05 27 32.2	-0.3
HUEH	Huehuetenango	1.76	92	*i* P	Pn	05 27 11.3	+1.4
HUEH				*i* S	Sn	05 27 33.3	+0.7
HUEH				IAML		05 27 37.0	
	comp=E,1µm,0.6s						
HUEH	Huehuetenango	1.76	92	P	Pn	05 27 11.3	+1.4
RTAL	Retalhuleu	1.79	118	*e*P	Pn	05 27 10.7	+0.6
RTAL				*e*S	Sn	05 27 32.6	-0.4
RTAL	Retalhuleu	1.79	118	P	Pn	05 27 11.4	+1.2
QUEO	Labor Ovalle	1.82	106	*i* P	Pn	05 27 12.7	+1.9
QUEO				*i* S	Sn	05 27 37.1	+3.0
STG8	El Palmar, Qui	2.12	116	*i* P	Pn	05 27 11.1	-3.6
STG8				*i* S	Sn	05 27 33.8	-7.2
STG8				IAML		05 27 38.1	
	comp=N,1µm,0.2s						
HUIG	Huatulco	2.71	278	*e*P	Pn	05 27 22.1	-0.1
HUIG				*e*S	Sn	05 27 51.6	-2.7
AVCB	Coban	2.82	88	*i* S	Sn	05 27 56.7	-0.4
AVCB				IAML		05 28 05.5	
	comp=E,2µm,0.4s						
FG16	Alotenango, Sa	2.94	112	*i* P	Pn	05 27 23.2	-2.2
FG16				*i* S	Sn	05 27 54.0	-6.1
FG16				IAML		05 27 54.6	
	comp=E,733nm,0.2s						
NEUV	Arroyo Zacate	3.31	315	*e*P	Pn	05 27 32.1	+1.9
NEUV				*i* S	Sn	05 28 04.8	-4.0
FAME	Alcaldia de Sa	3.55	115	S	Sn	05 28 15.1	+0.5
FAME	Alcaldia de Sa	3.55	115	P	Pn	05 27 35.9	+2.5
PMUV	Sontecomapan	3.58	332	*e*P	Pn	05 27 42.0	+8.2
PMUV				*e*S	Sn	05 28 13.3	-2.1
PETF	Flores	3.66	65	*e*P	Pn	05 27 35.3	+0.5
PETF				*e*S	Sn	05 28 12.7	-4.3
PETF	Flores	3.66	65	*i* P	Pn	05 27 35.9	+1.1
PETF	Flores	3.66	65	S	Sn	05 28 15.7	-1.3
PETF	Flores	3.66	65	P	Pn	05 27 35.5	+0.7
VHO	Vista Hermosa	3.68	298	*e*P	Pn	05 27 37.7	+2.5
VHO				*e*S	Sn	05 28 16.6	-1.2
SLOZ	Alcaldia de Sa	3.68	111	S	Sn	05 28 19.5	+1.7
SLOZ	Alcaldia de Sa	3.68	111	P	Pn	05 27 37.5	+2.2
PEIG	Puerto Escondi	3.73	280	*e*P	Pn	05 27 34.8	-1.0
PEIG				*e*S	Sn	05 28 17.3	-1.6
NUBE	Las Nubes	3.73	113	P	Pn	05 27 38.4	+2.4
NUBE	Las Nubes	3.73	113	S	Sn	05 28 20.5	+1.3
CEVE	Cerro Verde	3.90	113	P	Pn	05 27 40.5	+2.1
CEVE	Cerro Verde	3.90	113	S	Sn	05 28 24.1	+0.8
ESQI	Esquipulas	3.94	102	S	Sn	05 28 24.0	0.0
ESQI	Esquipulas	3.94	102	P	Pn	05 27 39.4	+0.7
MTO3	Montecristo	3.96	104	P	Pn	05 27 39.8	+0.7
MTO3	Montecristo	3.96	104	S	Sn	05 28 25.2	+0.6
JAYA	Jayaque - finc	4.13	114	S	Sn	05 28 29.3	+0.6
JAYA	Jayaque - finc	4.13	114	P	Pn	05 27 43.0	+1.6
PMON	Piamonte	4.22	113	S	Sn	05 28 32.5	+1.5
PMON	Piamonte	4.22	113	P	Pn	05 27 45.3	+2.7
YOIG	Yosondua	4.31	290	*e*P	Pn	05 27 45.8	+1.9
YOIG				*e*S	Sn	05 28 30.4	-2.9
TOIG	Toxpalan	4.48	307	*e*P	Pn	05 27 49.2	+3.1
TOIG				*e*S	Sn	05 28 36.5	-0.7
TXIG	Tlaxiaco	4.65	294	*e*P	Pn	05 27 52.6	+4.0
TXIG				*e*S	Sn	05 28 40.3	-1.2
PNIG	Pinotepa	4.73	283	*e*P	Pn	05 27 51.6	+2.3
PNIG				*e*S	Sn	05 28 40.4	-2.6
TPIG	Tehuac#an	4.90	309	*e*P	Pn	05 27 57.8	+6.0
HLIG	Huajuapan de L	4.93	300	*e*P	Pn	05 27 55.6	+3.3
HLIG				*e*S	Sn	05 28 44.2	-4.0
JAUV	Jalcomulco	5.17	320	*e*P	Pn	05 27 55.3	+0.1
JAUV				*e*S	Sn	05 28 51.1	-2.6
FTIG	Fresnillo de T	5.25	299	*e*P	Pn	05 28 00.8	+4.3
FTIG				*e*S	Sn	05 28 53.0	-2.7
TLIG	Tlapa	5.47	294	*e*S	Sn	05 29 03.1	+1.8
CXUV	Coxquihui	6.26	320	*e*P	Pn	05 28 11.5	+1.4

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*IDC **05** 05:33:52.8±3.2, 57°.10N×157°.33W, h61^{km}±31^{km}, mb3.4/10, mbtmp3.7/13, ML4.2/4, MS2.4/1, Error ellipse: s-maj=38.5km s-min=22.0km az=165.0*

*NEIC **05** 05:33:52.7±0.8, 56°.63N±0°.03×157°.12W±0°.06, h71^{km}±9^{km}, Error ellipse: s-maj=5.3km s-min=4.0km az=217.0*

*AEIC **05** 05:33:53.7±1.2, 56°.62N±0°.04×157°.11W±0°.06, h59^{km}±7^{km}, ML3.5, ML3.5/74(NEIC), Error ellipse: s-maj=5.4km s-min=4.9km az=138.0*

ISC 05 05:33:52.0±0.8**, 56°.62N**±0°.04×**157°.11W**±0°.03**, h81**^{km}±7^{km}**, n143, σ0.^{s}83**/143**, mb3.8**/10**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANPB	Aniakchak Plen	0.67	286		Pn	05 34 07.0	-0.5
ANPB					Sn	05 34 18.0	-1.0
CHGN	Chignik	0.79	247		Pn	05 34 08.3	-0.4
CHGN					Sn	05 34 19.9	-1.1
R16K	Pilot Point	0.98	345		Pn	05 34 10.8	-0.1
R16K					Sn	05 34 24.3	-0.7
R16K	Pilot Point	0.98	345	IAML		05 34 24.9	
	comp=E,965nm,0.3s						
R16K				IAML		05 34 25.1	
	comp=N,2µm,0.8s						
PLBL	Peulik Blue Cr	1.09	8		Pn	05 34 12.7	+0.4
PLBL					Sn	05 34 27.0	-0.5
CHIR	Chirikof Islan	1.15	133		Pn	05 34 13.3	+0.3
CHIR					Sn	05 34 29.1	+0.4
CHIR	Chirikof Islan	1.15	133	IAML		05 34 36.0	
	comp=E,989nm,0.6s						
CHIR				IAML		05 34 36.0	
	comp=N,1µm,0.7s						
CHIR	Chirikof Islan	1.15	133	P	Pn	05 34 13.2	+0.3
PLK1	Peulik 1	1.22	13		Pn	05 34 14.2	+0.5
PLK1					Sn	05 34 30.3	+0.3
VNFG	Fog Glacier, M	1.40	257		Pn	05 34 16.3	+0.2
VNFG					Sn	05 34 34.7	+0.4
SII	Sitkinak Islan	1.62	91		Pn	05 34 19.3	+0.4
SII				IAML		05 34 51.7	
	comp=N,782nm,0.7s						
SII				IAML		05 35 01.7	
	comp=E,718nm,0.7s						
SII	Sitkinak Islan	1.62	91		Sn	05 34 39.4	+0.1
SII	Sitkinak Islan	1.62	91	P	Pn	05 34 19.3	+0.4
KJL	Kejulik	1.66	29		Pn	05 34 20.0	+0.5
KJL					Sn	05 34 40.0	-0.3
R18K	Karluk	1.73	56		Pn	05 34 20.9	+0.6
R18K					Sn	05 34 41.4	-0.4
R18K	Karluk	1.73	56	IAML		05 34 47.8	
	comp=E,773nm,0.5s						
CNTC	Contact Creek	1.78	21		Sn	05 34 42.2	-0.8
ANCK	Angle Creek	1.81	28		Sn	05 34 43.3	-0.5
ACHA	Angle Creek He	1.86	30		Pn	05 34 22.6	+0.4
ACHA	Angle Creek He	1.86	30		Sn	05 34 44.8	-0.3
KELA	Mount Kelaz	1.97	21		Pn	05 34 23.8	+0.3
OHAK	Old Harbor	2.18	72		Pn	05 34 26.6	+0.3
OHAK	Old Harbor	2.18	72		Sn	05 34 52.0	-0.4
OHAK	Old Harbor	2.18	72	P	Pn	05 34 26.5	+0.3
CHNA	Chernabura Isl	2.28	219	P	Pn	05 34 27.5	-0.1
SDPT	Sand Point	2.28	237		Pn	05 34 28.0	+0.4
SDPT				IAML		05 34 58.2	
	comp=E,461nm,0.7s						
SDPT	Sand Point	2.28	237		Sn	05 34 54.8	-0.1
SDPT	Sand Point	2.28	237	P	Pn	05 34 28.3	+0.7
CNBA	Chernabura Isl	2.29	219		Pn	05 34 27.4	-0.3
CNBA				IAML		05 35 03.1	
	comp=N,267nm,0.5s						
CNBA				IAML		05 35 04.2	
	comp=E,298nm,0.6s						
CNBA	Chernabura Isl	2.29	219		Sn	05 34 54.1	-0.9
KAHC	Katmai Hardscr	2.33	28		Sn	05 34 55.9	-0.2
P16K	Nushagak River	2.46	349		Pn	05 34 30.4	+0.3
P16K	Nushagak River	2.46	349		Sn	05 34 58.9	-0.3
P17K	Kvichak River	2.61	8		Sn	05 35 02.4	-0.3
KDAK	Kodiak Island	2.72	63		Pn	05 34 33.9	+0.3
KDAK				IAML		05 35 18.2	
	comp=E,163nm,0.9s						
KDAK				IAML		05 35 21.8	
	comp=E,132nm,0.7s						
KDAK	Kodiak Island	2.72	63	P	Pn	05 34 33.8	+0.3
	comp=E,88nm,0.3s,baz=240,slow=6.4,SNR=3961						
KDAK				S	Sn	05 35 04.3	-1.2
	comp=E,32nm,0.3s,baz=233,slow=22,SNR=9.2						
PS1A	Pavlof South-1	2.87	247		Sn	05 35 08.8	-0.2
PVV	Pavlof Volcano	2.91	247		Pn	05 34 36.7	+0.6
O15K	Ungalikthiuk R	2.94	332		Pn	05 34 36.9	+0.3
O15K				IAML		05 35 10.7	
	comp=E,114nm,0.7s						
O15K				IAML		05 35 11.1	
	comp=N,97nm,0.9s						
O15K	Ungalikthiuk R	2.94	332		Sn	05 35 09.7	-1.2
P18K	Big Mountain,	2.96	19		Pn	05 34 37.2	+0.4
PS4A	Pavlof South-4	2.96	246		Pn	05 34 37.5	+0.8
Q19K	Cape Douglas,	2.97	37		Pn	05 34 37.7	+0.9
Q19K				IAML		05 35 17.5	
	comp=N,209nm,0.8s						
O16K	Kokwok River B	3.03	350		Pn	05 34 37.7	0.0
SYI	Shuyak Island	3.23	50		Pn	05 34 41.1	+0.8
SYI				IAML		05 35 29.2	
	comp=N,120nm,0.7s						
SYI				IAML		05 35 29.9	
	comp=E,108nm,0.3s						
O18K	Koktuh Hills	3.40	16		Pn	05 34 43.3	+0.6
O18K				IAML		05 35 23.4	
	comp=N,74nm,0.6s						
O18K				IAML		05 35 45.5	
	comp=E,70nm,0.9s						
O14K	Tigyukauivet M	3.45	322		Pn	05 34 43.7	+0.4
P19K	Oil Pt	3.67	32		Pn	05 34 47.8	+1.4
P19K				IAML		05 35 30.7	
	comp=E,108nm,0.5s						
P19K				IAML		05 35 30.9	
	comp=N,113nm,0.5s						
O19K	Port Alsworth	3.87	21		Pn	05 34 50.3	+1.2
N15K	Kwethluk River	3.89	337		Pn	05 34 50.1	+0.8
N15K	Kwethluk River	3.89	337	IAML		05 35 49.1	
	comp=E,57nm,0.8s						
N17K	Nushagak Hills	3.92	359		Pn	05 34 50.1	+0.3
N17K				IAML		05 35 33.9	
	comp=E,46nm,0.4s						
N14K	Kuskokwak Cree	4.10	326	IAML		05 36 16.7	
	comp=E,61nm,1.3s						
N14K				IAML		05 36 40.9	
	comp=N,47nm,1.4s						
N18K	Kilae Creek	4.12	8		Pn	05 34 52.8	+0.2
N18K				IAML		05 35 51.2	
	comp=N,40nm,0.7s						
ISLZ	Isanotski Laza	4.19	246		Pn	05 34 54.3	+0.8
O20K	Slope Mountain	4.20	32		Pn	05 34 55.2	+1.6
HOM	Homer	4.20	41		Pn	05 34 55.1	+1.5
CNPM	China Poot	4.27	44	IAML		05 35 42.2	
	comp=E,48nm,0.2s						
CNPM				IAML		05 35 53.5	
	comp=N,80nm,0.5s						
N19K	Bonanza Creek	4.42	17	IAML		05 36 01.7	
	comp=N,34nm,0.8s						
N19K				IAML		05 36 04.1	
	comp=E,35nm,0.5s						
RED	Redoubt Volcan	4.44	29		Pn	05 34 58.4	+1.5
RDWB	Redoubt West	4.48	28		Pn	05 34 58.8	+1.3
BRLK	Bradley Lake	4.56	44		Pn	05 34 58.5	0.0
DFR	Drift River	4.61	28		Pn	05 35 00.7	+1.5
M17K	Holitna River	4.80	358		Pn	05 35 01.9	+0.2
M17K				IAML		05 36 16.8	
	comp=N,49nm,0.7s						
M14K	Bethel	4.86	331	IAML		05 36 28.7	
	comp=E,44nm,1.2s						
M14K				IAML		05 36 37.4	
	comp=N,34nm,1.1s						
M13K	Dall Lake	5.02	322	IAML		05 36 39.5	
	comp=E,22nm,1.1s						
M13K				IAML		05 36 55.0	
	comp=N,22nm,1.4s						
L16K	Owhat River	5.25	348	IAML		05 36 42.3	
	comp=N,18nm,0.8s						
SEW	Seward	5.33	46	Pn	Pn	05 35 08.3	-0.7
SEW				IAML		05 36 10.7	
	comp=E,24nm,0.4s						
SEW				IAML		05 36 19.8	
	comp=N,21nm,1.4s						
AKUT	Akutan	5.53	247	Pn	Pn	05 35 12.3	+0.6
AKUT	Akutan	5.53	247	P	Pn	05 35 12.7	+1.0
STLK	Strandline Lak	5.60	27		Pn	05 35 14.0	+1.4
MTBL	Makushin Table	6.08	248		Pn	05 35 20.3	+1.1
SKT	Skwentna	6.09	26		Pn	05 35 20.7	+1.4
K15K	Wolf Creek Mou	6.12	340		Pn	05 35 20.2	+0.5
P23K	Montague Islan	6.13	52		Pn	05 35 19.5	-0.4
MGOD	Makushin Gods	6.26	247		Pn	05 35 21.8	+0.1
MAPS	Pakushin South	6.29	248		Pn	05 35 22.3	+0.2
PMR	Palmer	6.46	36	Pn	Pn	05 35 24.6	+0.3
PMR	Palmer	6.46	36	P	Pn	05 35 24.2	-0.1
KNK	Knik Glacier	6.56	39		Pn	05 35 25.5	-0.2
PPLA	Purkeypile	6.77	19		Pn	05 35 31.7	+3.1
SML	Sawmill	6.88	37	Pn	Pn	05 35 29.8	-0.3
J14K	Nanvaranak Lak	6.96	335	Pn	Pn	05 35 31.9	+0.9
OKTU	Okmok Mt. Tuli	7.07	247		Pn	05 35 32.9	+0.1
M23K	Glacier View	7.07	39		Pn	05 35 32.4	-0.4
EYAK	Cordova Ski Ar	7.12	52	P	Pn	05 35 33.0	-0.3
SPIA	Saint Paul Isl	7.22	280		Pn	05 35 35.9	+1.2
CAST	Castle Rocks	7.27	18		Pn	05 35 36.7	+1.3
OKSP	Okmok Steeple	7.27	247		Pn	05 35 35.0	-0.5
WAT7	Susitna Watana	7.50	30		Pn	05 35 37.7	-0.8
KLU	Klutina	7.55	45		Pn	05 35 39.3	0.0
GOAT	Goat Mountain	7.59	53		Pn	05 35 39.7	0.0
KTH	Kantishna Hill	7.61	21		Pn	05 35 40.6	+0.6
NIKH	Nikolski High	7.71	247		Pn	05 35 41.0	-0.4
NIKH	Nikolski High	7.71	247	P	Pn	05 35 41.5	+0.1
BMRM	Bremner River	7.82	51		Pn	05 35 42.7	-0.2
SUCK	Suckling Hills	7.82	58	Pn	Pn	05 35 42.5	-0.3
M24K	Tolsona, Glenn	7.83	41		Pn	05 35 42.9	-0.2
RND	Reindeer	7.96	28		Pn	05 35 44.5	-0.4
BERG	Berg Lake	7.97	56		Pn	05 35 44.5	-0.4
BPAW	Bear Paw Mtn.	8.09	19		Pn	05 35 46.1	-0.5
DHY	Denali Highway	8.11	33		Pn	05 35 46.2	-0.8
N25K	Chitina, Valde	8.14	47		Pn	05 35 47.0	-0.4
HARP	HAARP	8.39	41		Pn	05 35 51.1	+0.5
H17K	Granite Mounta	8.46	352		Pn	05 35 52.8	+1.2
WACK	Wrangell Chich	8.46	45		Pn	05 35 52.0	+0.2
H18K	Honhosa River	8.58	356		Pn	05 35 54.0	+0.7
PAX	Paxson	8.65	38		Pn	05 35 54.6	+0.3
MCARA	McCarthy VSAT	8.69	51		Pn	05 35 54.8	+0.1
I21K	Tanana	8.94	14		Pn	05 35 58.6	+0.5
RKAV	Rock Avalanche	9.04	59		Pn	05 35 59.0	-0.7
CHX	Chaix Hills	9.09	61		Pn	05 36 00.6	+0.4
M26K	Nabesna, AK	9.21	45		Pn	05 36 02.4	+0.5
MENT	Mentasta	9.24	41	P	Pn	05 36 03.3	+1.0
SAMH	Samovar Hills	9.27	61		Pn	05 36 02.6	0.0
CTGM	Chitina Glacie	9.27	55		Pn	05 36 02.8	+0.1
H21K	Melozitna Rive	9.30	11		Pn	05 36 03.9	+0.9
G18K	Tagagawik	9.34	356		Pn	05 36 04.3	+0.8
I23K	Minto, Yukon-K	9.34	21		Pn	05 36 02.4	-1.2
RIDG	Independent Ri	9.38	35	Pn	Pn	05 36 04.7	+0.5
COLA	College	9.43	25	P	Pn	05 36 03.4	-1.3
PCA	Pinnacle	9.51	62		Pn	05 36 05.8	-0.2
IL31		9.58	27		Pn	05 36 04.7	-2.0
ILAR	Eielson Array	9.58	27	P	Pn	05 36 04.5	-2.3
	comp=N,0.7nm,0.3s,baz=213,slow=13,SNR=34						
ILAR				S	Sn	05 37 43.8	-8.7
	comp=N,0.4nm,0.3s,baz=195,slow=25,SNR=7.5						
ILAR				LR	LR	05 39 27.6	
	comp=N,23nm,18.2s,baz=136,slow=36						
	comp=N,1.3nm,0.4s						
YUK2	White River	9.80	51		Pn	05 36 10.5	+0.5
F15K	North Star Dit	9.81	341		Pn	05 36 11.0	+1.1
PNL	Peninsula	9.84	65		Pn	05 36 09.3	-1.2
BCAR	Beaver Creek A	10.04	44	Pn	Pn	05 36 13.5	+0.4
E19K	Redstone River	10.88	360	Pn	Pn	05 36 26.1	+1.6
DAWY	Dawson	11.48	42	Pn	Pn	05 36 33.4	+0.6
SIT	Sitka	11.93	79	Pn	Pn	05 36 38.3	-0.5
DLBC	Dease Lake	14.62	72	P	Pn	05 37 16.6	+2.1
	comp=N,0.5nm,0.3s,baz=284,slow=13,SNR=7.2						
	comp=N,1.2nm,0.4s						
INK	Inuvik	15.86	33	P	Pn	05 37 27.6	-2.3
	comp=N,0.9nm,0.3s,baz=221,slow=16,SNR=19						
	comp=N,1.7nm,0.4s						
YKA	Yellowknife Ar	21.99	57	P	P	05 38 39.8	+0.9
	comp=N,0.2nm,0.6s,baz=278,slow=11,SNR=5.9						
	comp=N,0.2nm,0.6s						
PETK	Petropavlovsk-	25.88	281	P	P	05 39 15.8	0.0
	comp=N,0.8nm,0.5s,baz=74,slow=14,SNR=5.0						
	comp=N,0.8nm,0.5s						
SPITS	Spitsbergen Ar	45.40	2	P	P	05 42 00.8	-0.9
	comp=N,2.9nm,0.9s,baz=12,slow=7.4,SNR=8.3						
	comp=N,2.9nm,0.9s						
ARCES	ARCESS Array B	54.13	359	P	P	05 43 07.0	-1.0
	comp=N,2.5nm,0.9s,baz=23,slow=6.6,SNR=5.7						
	comp=N,2.5nm,0.9s						
SONM	Songino Array	54.99	305	P	P	05 43 15.6	+0.9
	comp=N,0.5nm,0.7s,baz=50,slow=4.5,SNR=2.1						

	comp=N,0.5nm,0.7s						
FINES	FINESS Array B	62.25	358	P	P	05 44 03.6	-1.0
	comp=N,0.4nm,0.4s,baz=2.4,slow=10,SNR=4.7						
	comp=N,0.4nm,0.4s						
HFS	Hagfors	63.36	5	P	P	05 44 12.3	+0.2
	comp=N,1.1nm,0.8s,baz=296,slow=7.7,SNR=2.1						
	comp=N,1.1nm,0.8s						
BVAR	Borovoye Array	63.99	330	P	P	05 44 16.4	+0.1
	comp=N,0.6nm,0.4s,baz=66,slow=1.7,SNR=2.8						
	comp=N,0.6nm,0.4s						
MKAR	Makanchi Array	65.66	320	P	P	05 44 26.4	-0.8
	comp=N,0.1nm,0.4s,baz=38,slow=4.4,SNR=1.9						
	comp=N,0.1nm,0.4s						
EKA	Eskdalemuir Ar	66.41	16	P	P	05 44 32.7	+0.9
	comp=N,0.5nm,0.5s,baz=323,slow=6.4,SNR=5.0						
	comp=N,0.5nm,0.5s						

*IDC **05** 05:57:45.7±1.0, 10°.68S×123°.36E, h0^{km}, mb3.8/5, mbtmp3.9/8, ML3.8/3, MS3.3/3, Error ellipse: s-maj=82.7km s-min=19.4km az=67.0*

*NEIC **05** 05:57:48.2±2.1, 10°.61S±0°.05×123°.59E±0°.09, h10^{km}±2^{km}, mb4.2/3, Error ellipse: s-maj=16.6km s-min=3.6km az=60.0*

*DJA **05** 05:57:51.2±0.6, 11°S±3°×12°4E±°, h22^{km}±4^{km}, M4.3/13, mB5.2/1, mb4.4/6, MLv4.2/13, Mw(mB)4.5/1*

ISC 05 05:57:50.3±0.7**, 10°.62S**±0°.05×**123°.69E**±0°.06**, h29^{km}, n37,** σ**1s.67**/42**, mb4.0**/6**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	0.41	357	P	Pb	05 57 56.6	-2.7
SOEI	Soe	1.03	34		Pb	05 58 10.9	+1.2
SOEI	Soe	1.03	34	P	Pb	05 58 10.7	+1.0
MMRI	Maumere	2.43	324		Pn	05 58 29.4	+1.3
MMRI	Maumere	2.43	324	P	Pn	05 58 29.8	+1.6
MMRI				S	Sn	05 58 58.4	+1.4
EDFI	Ende, Flores	2.71	313	P	Pn	05 58 32.6	+0.6
BASI	Baing, Sumba	3.08	277	P	Pn	05 58 39.2	+2.1
BASI				S	Sn	05 59 14.6	+1.6
WSI	Waingapu	3.47	285	P	Pn	05 58 45.7	+3.3
WBSI	Waikabubak, Su	4.34	283	P	Pn	05 58 55.2	+0.8
BBSI	Bau Bau	5.22	348	P	Pn	05 59 08.6	+2.2
BSSI	Bau Bau, Buton	5.46	324	P	Pn	05 59 10.6	+0.9
	0.2nm37nm,1.4s						
PLAI	Plampang	6.09	286	P	Pn	05 59 19.7	+1.2
	0.2nm53nm,0.7s						
PLAI				S	Sn	06 00 25.8	-1.5
	0.2nm53nm,0.7s						
KAPI	Kappang	6.80	325	LR	LR	06 02 53.0	
	comp=Z,72nm,18.4s,baz=150,slow=46						
TWSI	Taliwang, Sumb	6.96	285	P	Pn	05 59 32.0	+1.5
	0.2nm44nm,0.6s						
TWSI				S	Sn	06 00 47.1	-1.7
	0.2nm44nm,0.6s						
KNRA	Kununurra	7.05	136		Pn	05 59 34.9	+3.3
MTN	Manton Dam	7.62	108	Pn	Pn	05 59 41.9	+2.4
SPSI	Sidrap Palu	7.67	329	P	Pn	05 59 40.3	+0.2
	0.1nm1μm12nm,0.8s						
FITZ	Fitzroy Crossi	7.67	166	Pn	Pn	05 59 44.0	+3.8
FITZ	Fitzroy Crossi	7.67	166	Pn	Pn	05 59 40.9	+0.7
	0.7nm,0.3s,baz=353,slow=8.1,SNR=11						
FITZ				Sn	Sn	06 01 07.2	+1.0
	1.8nm,0.3s,baz=336,slow=11,SNR=5.1						
	6.0nm,0.9s						
WB0	Warramunga Arr	13.76	133	Pn	Pn	06 01 03.3	-0.3
WRA	Warramunga Arr	13.83	133	Pn	Pn	06 01 05.1	+0.5
WRA	Warramunga Arr	13.83	133	Pn	Pn	06 01 04.1	-0.5
	0.6nm,0.3s,baz=308,slow=15,SNR=13						
WRA				Sn	Sn	06 03 33.3	-4.1
	0.9nm,0.3s,baz=305,slow=25,SNR=9.2						
	2.1nm,0.6s						
WRAB	Tennant Creek	13.84	133	Pn	Pn	06 01 04.7	0.0
WB2	Warramunga Arr	13.84	133	Pn	Pn	06 01 04.7	0.0
WR8	Warramunga Arr	13.96	133	Pn	Pn	06 01 06.2	-0.1
WR0	Warramunga Arr	13.99	133	Pn	Pn	06 01 06.8	+0.1
AS31	Alice Springs	16.23	144	Pn	Pn	06 01 36.7	+0.3
AS31				IAmb	IAmb	06 02 13.4	
	comp=Z,1.3nm,0.6s						
ASAR	Alice Springs	16.23	144	Pn	Pn	06 01 37.1	+0.7
ASAR	Alice Springs	16.23	144	Pn	Pn	06 01 36.6	+0.2
	comp=Z,0.4nm,0.3s,baz=314,slow=12,SNR=29						
ASAR				Sn	Sn	06 04 33.3	-2.3
	comp=Z,0.6nm,0.3s,baz=318,slow=24,SNR=8.0						
ASAR				LR	LR	06 08 40.2	
	comp=Z,75nm,19.0s,baz=270,slow=40						
	comp=Z,1.2nm,0.4s						
BBOO	Buckleboo	24.85	155	P	P	06 03 10.0	-0.4
BBOO				IAmb	IAmb	06 03 24.5	
	comp=Z,13nm,1.2s						
SONM	Songino Array	60.19	347	P	P	06 07 55.9	+0.3
	comp=Z,0.3nm,0.4s,baz=165,slow=5.7,SNR=2.3						
	comp=Z,0.3nm,0.4s						
MKAR	Makanchi Array	68.06	331	P	P	06 08 47.4	+0.2
	comp=Z,0.8nm,0.5s,baz=142,slow=6.8,SNR=5.0						
	comp=Z,0.8nm,0.5s						
VNDA	Vanda	69.71	172	LR	LR	06 41 04.7	
	comp=Z,80nm,18.2s,baz=154,slow=37						
ZALV	Zalesovo Beam	72.25	337	P	P	06 09 11.0	-1.7
	comp=Z,0.6nm,0.3s,baz=126,slow=7.5,SNR=4.1						
	comp=Z,0.6nm,0.3s						
KURBB	Kurchatov Arra	72.51	332	P	P	06 09 13.4	-0.9
	comp=Z,0.2nm,0.2s,baz=146,slow=7.4,SNR=1.7						
	comp=Z,0.2nm,0.2s						
QSPA	South Pole Qui	79.38	180	P	P	06 09 52.8	-0.7
QSPA				IAmb	IAmb	06 10 10.4	
	comp=Z,4.9nm,1.4s						
QSPA	South Pole Qui	79.38	180	P	P	06 09 53.4	-0.1
	comp=Z,0.8nm,0.9s,baz=321,slow=1.8,SNR=3.4						
	comp=Z,0.8nm,0.9s						

*IDC **05** 06:30:02.4±3.7, 54°.19N×87°.36E, h0^{km}, mbtmp2.7/2, ML2.2/2, Error ellipse: s-maj=32.9km s-min=20.4km az=49.0*

ASRS 05 06:30:01.0±0.5**, 54°.10N**×**87°.12E, h0^{km}, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.37	265	I	I	06 39 00.0	
	baz=79,slow=317,SNR=9.9						
ZALV	Zalesovo Beam	1.37	265	Pg	Pb	06 30 29.8	+2.4
	0.7nm,0.3s,baz=84,slow=15,SNR=6.1						
ZALV				Lg	Lg	06 30 50.6	
	0.6nm,0.3s,baz=81,slow=26,SNR=4.6						
KURBB	Kurchatov Arra	6.31	240	Pn	Pn	06 31 39.4	+4.2
	baz=56,slow=13,SNR=1.1						
	0.3nm,0.2s						
MKAR	Makanchi Array	7.94	205	Pn	Pn	06 32 02.0	+4.4
	0.1nm,0.3s,baz=24,slow=13,SNR=1.5						
	0.1nm,0.3s						

*IDC **05** 06:37:48.0±0.6, 27°.64N×65°.93E, h0^{km}, mb4.4/35, mbtmp4.4/35, ML2.8/1, MS4.1/68, Error ellipse: s-maj=14.0km s-min=11.2km az=5.0*

*BJI **05** 06:37:50.7, 28°.02N×65°.91E, h10^{km}, mB4.8/19, mb4.6/44, Ms4.7/34, Ms7 4.4/33*

*MOS **05** 06:37:51.4±1.1, 27°.81N×65°.94E, h26^{km}, mb4.9/49, MS4.3/8, Error ellipse: s-maj=5.5km s-min=3.5km az=90.1*

*GCMT **05** 06:37:51.6±0.3, 27°.72N±0°.02×65°.99E±0°.02, h24^{km}±1^{km}, MW4.9/91, Moment Tensor Solution. s39,c43; s91,c122; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.44±.11; $M_{\theta\theta}$-0.34±.09; $M_{\phi\phi}$0.78±.10; $M_{r\theta}$-0.13±.12; $M_{\theta\phi}$-2.34±.08; $M_{\phi r}$-0.32±.13; Best double couple: $M_0$2.43800×10^{16} NP1:ϕ_s97.00000°, δ81.00000°, λ-175.00000°. NP2: ϕ_s6.00000°, δ85.00000°, λ-9.00000°. Principal axes: T 2.6390, Plg3.0000°, Azm52.0000°; N -0.4020, Plg80.0000°, Azm160.0000°; P -2.2370, Plg10.0000°, Azm321.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **05** 06:37:53.6±1.7, 27°.75N±0°.08×65°.81E±0°.08, h26^{km}±5^{km}, mb4.7/115 Error ellipse: s-maj=11.8km s-min=9.5km az=152.0*

ISC 05 06:37:51.2±0.6**, 27°.71N**±0°.04×**65°.95E**±0°.03**, h14^{km}**±3^{km}**, h14^{km}:pP-P, n517,** σ**1s.92**/516**, mb4.7**/155**, MS4.1**/87**, 37C-17D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JASL	Jaisalmer	4.47	99	eP	Pn	06 38 59.3	+0.6
JASL				eS	Sn	06 39 50.6	0.0
JASL				IAML		06 39 55.7	
	comp=E,1μm,0.7s						
JASL				IAML		06 40 02.9	
	comp=N,1μm,0.8s						
NGCH	Negor - Chabah	4.91	243	P	Pn	06 39 03.7	-0.9
	SNR=12						
NGCH				S	Sn	06 40 01.2	0.0
BHUJ	Bhuj	5.56	142	eP	Pn	06 39 13.0	-0.5
BHUJ				eS	Sn	06 40 11.9	-5.3
BHUJ				IAML		06 40 26.3	
	comp=N,542nm,0.5s						
BHUJ				IAML		06 40 30.4	
	comp=E,489nm,0.7s						
BKNR	BIKANER	6.49	86	eP	Pn	06 39 27.4	+1.0
BKNR				eS	Sn	06 40 40.5	+0.1
BKNR				IAML		06 40 44.2	
	comp=N,817nm,0.6s						
BKNR				IAML		06 40 45.8	
	comp=E,980nm,0.7s						
KBL	Kabul	7.31	21		Pn	06 39 37.6	-0.2
KBL	Kabul	7.31	21	P	Pn	06 39 38.5	+0.7
	SNR=30						
KBL				S	Sn	06 41 03.3	+2.6
KBL	Kabul	7.31	21	P	Pn	06 39 37.6	-0.2
HRA	Herat	7.38	335		Pn	06 39 39.2	+0.5
AJM	Ajmer	7.84	97	eP	Pn	06 39 45.2	+0.1
AJM				eS	Sn	06 41 09.3	-4.4
AJM				IAML		06 41 27.5	
	comp=N,287nm,0.8s						
AJM				IAML		06 41 29.2	
	comp=E,258nm,0.6s						
WSAR	Wadi Sarin	7.97	238	Pn	Pn	06 39 44.3	-2.4
	comp=E,0.1nm,0.3s,baz=89,slow=24,SNR=55						
WSAR				Sn	Sn	06 41 05.0	-12
	comp=E,0.3nm,0.3s,baz=342,slow=19,SNR=5.3						
WSAR				LR	LR	06 43 44.7	
	comp=E,6.0nm,20.2s,baz=52,slow=45						
WSAR	Wadi Sarin	7.97	238	P	Pn	06 39 44.4	-2.4
	SNR=42						
JLN	Jalan Bani Buh	8.11	228	P	Pn	06 39 47.0	-1.7
	SNR=28						
BIDO	Bidbid	8.20	241	P	Pn	06 39 48.5	-1.4
	SNR=24						
BIDO				P	Pn	06 39 48.5	-1.4
	SNR=24						
SMDO	Samad	8.51	239	P	Pn	06 39 52.6	-1.6
	SNR=22						
SMDO				P	Pn	06 39 52.6	-1.6
	SNR=22						
NIL	Nilore	8.63	45		Pn	06 39 55.7	-0.2
NIL	Nilore	8.63	45	P	Pn	06 39 56.0	+0.2
NIL	Nilore	8.63	45	P	Pn	06 39 55.7	-0.2
BANOM	Banah	8.80	261	P	Pn	06 39 57.8	-0.4
BANOM				P	Pn	06 39 57.8	-0.4
BANOM	Banah	8.80	261	*i* P	Pn	06 39 57.5	-0.7
	SNR=46						
HOQ	Hoqain	8.81	244	P	Pn	06 39 56.5	-1.8
	SNR=10						
HOQ				P	Pn	06 39 56.5	-1.8
	SNR=10						
JMDO	Jabal Madar	8.88	235	P	Pn	06 39 58.2	-1.0
	SNR=38						
JMDO				P	Pn	06 39 58.2	-1.0
	SNR=38						
SHME	Shamm	8.91	262	P	Pn	06 39 59.7	0.0
	SNR=74						
SHME				P	Pn	06 39 59.7	0.0
	SNR=74						
SHME	Shamm	8.91	262	*i* P	Pn	06 39 59.8	+0.2
	SNR=74						
MDH	Madha	8.97	257	P	Pn	06 39 59.4	-1.1
	SNR=58						
MDH				P	Pn	06 39 59.4	-1.1
	SNR=58						
MDH	Madha	8.97	257	*i* P	Pn	06 39 59.2	-1.3
	SNR=58						
MASF	Masafi	9.07	257	P	Pn	06 40 00.7	-1.2
	SNR=28						
MASF				P	Pn	06 40 00.7	-1.2
	SNR=28						
MSFE	Esma-Masafi	9.07	257	*i* P	Pn	06 40 00.4	-1.5
	SNR=49						
UOSS	Minazif	9.17	255		Pn	06 40 01.0	-2.0
UOSS	Minazif	9.17	255	P	Pn	06 40 01.1	-2.0
UOSS				P	Pn	06 40 01.1	-2.0
UOSS	Minazif	9.17	255	*i* P	Pn	06 40 01.0	-2.0
	SNR=45						
SOHO	SOHO	9.19	249	P	Pn	06 40 02.0	-1.5
SOHO				P	Pn	06 40 02.0	-1.5
SOHO	SOHO	9.19	249	*i* P	Pn	06 40 01.8	-1.7
	SNR=9.6						
JMU	Jammu	9.21	55	eP	Pn	06 40 02.9	-0.7
JMU				eS	Sn	06 41 43.2	-3.9
JMU				IAML		06 41 48.9	
	comp=N,460nm,0.8s						
HATD	Hatta, Dubai	9.27	254	P	Pn	06 40 03.0	-1.6
	SNR=40						
HATD				P	Pn	06 40 03.0	-1.6
	SNR=40						
HATD	Hatta, Dubai	9.27	254	*i* P	Pn	06 40 00.8	-3.8
	SNR=40						
KUDL	Kundal	9.33	85	eP	Pn	06 40 04.8	-0.5
KUDL				eS	Sn	06 41 42.7	-7.5
KUDL				IAML		06 41 49.7	
	comp=N,285nm,0.5s						
KUDL				IAML		06 41 58.1	
	comp=E,144nm,0.6s						
BSY	Bisya	9.34	240	P	Pn	06 40 05.5	0.0
	SNR=6.7						
BSY				P	Pn	06 40 05.5	0.0
	SNR=6.7						
ASHO	Ashiyiah	9.38	253	P	Pn	06 40 05.3	-0.8
	SNR=42						
ASHO				P	Pn	06 40 05.3	-0.8
	SNR=42						
ASHO	Ashiyiah	9.38	253	*i* P	Pn	06 40 05.4	-0.7
	SNR=42						
UMQ	Umm Al-Quwin	9.46	259	P	Pn	06 40 07.9	+0.8
	SNR=9.5						
UMQ				P	Pn	06 40 07.9	+0.8
	SNR=9.5						
UMQ				S	Sn	06 41 53.1	-0.3
UMQ				S	Sn	06 41 53.1	-0.3
UMQ	Umm Al-Quwin	9.46	259	*i* P	Pn	06 40 07.5	+0.4
	SNR=9.4						
ARQ	Araqi	9.56	245	P	Pn	06 40 09.8	+1.2
	SNR=60						
ARQ				P	Pn	06 40 09.8	+1.2
	SNR=60						
ARQ				S	Sn	06 41 55.3	-0.6
	SNR=6.3						
ARQ				S	Sn	06 41 55.3	-0.6
	SNR=6.3						
NAZ	Nazwa, Dubai	9.62	256	P	Pn	06 40 11.1	+1.8
	SNR=44						
NAZ				P	Pn	06 40 11.1	+1.8
	SNR=44						
NAZ	Nazwa, Dubai	9.62	256	*i* P	Pn	06 40 09.1	-0.2
	SNR=44						
THN	Thein Dam	9.68	59	eP	Pn	06 40 10.6	+0.4
THN				eS	Sn	06 41 54.9	-3.8
THN				IAML		06 42 03.0	
	comp=E,454nm,1.2s						
THN				IAML		06 42 09.0	
	comp=N,360nm,0.8s						
FAQ	Al Faqa, Dubai	9.76	255	P	Pn	06 40 12.1	+0.9
	SNR=55						
FAQ				P	Pn	06 40 12.1	+0.9
	SNR=55						
FAQ	Al Faqa, Dubai	9.76	255	*i* P	Pn	06 40 11.0	-0.2
	SNR=55						
SONA	Sohna	9.86	84	eP	Pn	06 40 12.2	-0.4
SONA				eS	Sn	06 41 57.9	-5.2
SONA				IAML		06 42 00.9	
	comp=E,424nm,0.5s						
SONA				IAML		06 42 03.4	
	comp=N,233nm,0.5s						
ALNE	Al Ain	9.88	251	P	Pn	06 40 14.0	+1.1
	SNR=60						
ALNE	Al Ain	9.88	251	*i* P	Pn	06 40 12.4	-0.5
	SNR=60						
MHTO	MHTO	9.88	229	P	Pn	06 40 11.8	-1.1
	SNR=11						
AYAN	Aya Nagar	9.90	83	eP	Pn	06 40 13.3	+0.2
AYAN				eS	Sn	06 41 58.2	-5.9
NPLP	NPLP New Delhi	9.94	82	eP	Pn	06 40 13.2	-0.6
NPLP				eS	Sn	06 41 57.4	-7.8
NPLP				IAML		06 42 21.9	
	comp=E,194nm,0.8s						
NDI	New Delhi	9.99	82	eP	Pn	06 40 13.0	-1.4
NDI				eS	Sn	06 41 59.2	-7.1
NDI				IAML		06 42 10.4	
	comp=E,136nm,0.5s						
NDI				IAML		06 42 12.1	
	comp=N,170nm,0.8s						
ASUD	Al Ashush, Dub	10.02	255	P	Pn	06 40 16.5	+1.6
	SNR=15						
ASUD				P	Pn	06 40 16.5	+1.6
	SNR=15						
ASUD	Al Ashush, Dub	10.02	255	*i* P	Pn	06 40 15.2	+0.4
	SNR=15						
DHRM	DHARAMSHALA	10.05	61	eP	Pn	06 40 15.5	+0.1
DHRM				eS	Sn	06 42 00.4	-7.7
DHRM				IAML		06 42 15.1	
	comp=N,1μm,0.4s						
DHRM				IAML		06 42 21.2	
	comp=E,1μm,0.7s						
AJN	Ajban	10.34	255	P	Pn	06 40 19.9	+0.7
	SNR=5.1						
AJN				P	Pn	06 40 19.9	+0.7
	SNR=5.1						
AJN	Ajban	10.34	255	*i* P	Pn	06 40 19.6	+0.4
	SNR=7.6						
UGON	Onchagaon	10.59	84	eP	Pn	06 40 22.8	+0.2
UGON				eS	Sn	06 42 15.9	-5.2
UGON				IAML		06 42 24.8	
	comp=E,565nm,1.1s						
UGON				IAML		06 42 35.3	
	comp=N,578nm,1.2s						
GUNA	GUNA	10.67	104	eP	Pn	06 40 22.7	-1.0
GUNA				eS	Sn	06 42 15.9	-7.2
GUNA				IAML		06 42 58.8	
	comp=N,199nm,1.7s						
GUNA				IAML		06 43 00.4	
	comp=E,395nm,0.8s						
DDI	Dehra Dun	10.91	73	eP	Pn	06 40 25.8	-1.3
DDI				eS	Sn	06 42 23.3	-5.7
DDI				IAML		06 42 30.5	
	comp=N,366nm,0.2s						
DDI				IAML		06 42 42.8	
	comp=E,614nm,1.1s						
DQM	DQM	10.92	227	P	Pn	06 40 25.8	-1.3
DQM				P	Pn	06 40 25.8	-1.3
UMZA	Um Al Zommool	10.96	245	P	Pn	06 40 27.8	+0.1
SIMJ	Simiganj	11.21	12		Pn	06 40 31.0	-0.3
DZET	Dzherino	11.32	12	P	Pn	06 40 32.1	-0.6
DZET				pmax	pmax		
	comp=Z,27nm,0.8s						
JHNI	Jhansi	11.49	98	eP	Pn	06 40 33.3	-1.6
JHNI				eS	Sn	06 42 36.0	-7.1
JHNI				IAML		06 43 05.4	
	comp=E,60nm,1.0s						
JHNI				IAML		06 43 09.1	
	comp=N,161nm,1.0s						
MZWR	Madinat Zayed	11.57	253	P	Pn	06 40 35.3	-0.7
MZWR				P	Pn	06 40 35.3	-0.7
MZR	Muzera	12.21	250	P	Pn	06 40 44.0	-0.8
	SNR=8.7						
MZR				P	Pn	06 40 44.0	-0.8
	SNR=8.7						
MZR	Muzera	12.21	250	*i* P	Pn	06 40 43.9	-0.8
	SNR=8.7						
JOSI	Joshimath	12.23	73	eP	Pn	06 40 45.8	+0.5
JOSI				eS	Sn	06 42 52.9	-8.7
JOSI				IAML		06 43 06.2	
	comp=E,380nm,0.9s						
JOSI				IAML		06 43 07.9	
	comp=N,406nm,0.7s						
GHWR	Ruwais	12.35	255	P	Pn	06 40 46.0	-0.7
PTH	Pithoragarh	12.67	78	eP	Pn	06 40 49.9	-1.3
PTH				eS	Sn	06 43 01.7	-10
PTH				IAML		06 43 11.9	
	comp=E,110nm,0.5s						
PTH				IAML		06 43 16.0	
	comp=N,124nm,0.9s						
LGTI	Lohaghat	12.69	79	eP	Pn	06 40 47.2	-4.1
LGTI				eS	Sn	06 43 00.8	-12
LGTI				IAML		06 43 06.6	
	comp=E,180nm,0.5s						
LGTI				IAML		06 43 06.8	
	comp=N,158nm,0.9s						
BTK	Batken	12.96	17		Pn	06 40 53.7	-1.4
BTK	Batken	12.96	17	P	Pn	06 40 53.7	-1.4
SLWR	Sila	13.34	257	P	Pn	06 40 59.5	-0.7
SHMA	Al-Shehemyia	13.51	266	P	Pn	06 41 01.9	-0.7
	SNR=14						
TRNA	Turayna	13.56	261	P	Pn	06 41 02.8	-0.3
	SNR=7.7						
NGP	Nagpur	13.60	116	eP	Pn	06 41 02.1	-1.7
NGP				eS	Sn	06 43 36.2	+1.4
NGP				IAML		06 44 20.0	
	comp=N,47nm,1.4s						
NGP				IAML		06 44 29.1	
	comp=E,37nm,1.2s						
SAKB	Bahrain	13.87	266	P	Pn	06 41 07.2	-0.3
SMRA	Abu-Samra	13.89	261	P	Pn	06 41 07.3	-0.5
OHH	Osh	13.97	22	P	Pn	06 41 09.3	+0.4
OHH				pmax	pmax		
	comp=Z,31nm,1.0s						
DOK	Doka	14.13	233	P	Pn	06 41 10.7	-0.4
	SNR=10						
DMTO	DMTO	14.20	228	P	Pn	06 41 11.3	-0.8
ARSB	Arslanbob	14.76	21		Pn	06 41 17.6	-2.1
ARSB	Arslanbob	14.76	21	P	Pn	06 41 17.6	-2.1
RBK	Rabkut	14.85	229	P	Pn	06 41 20.1	-0.9
WHFO	Wadi Hawf	14.86	232	P	Pn	06 41 20.1	-1.0
CHM	Chimkent	14.88	11	eP	Pn	06 41 20.8	-0.4
CHM	Chimkent	14.88	11	eP	Pn	06 41 20.8	-0.4
HYB	Hyderabad	15.49	129	eP	P	06 41 35.9	+2.0
ABTO	Aybut	15.57	231	P	Pn	06 41 29.9	-0.6
BRLS	Borolday	15.61	11	eP	Pn	06 41 26.8	-4.0
BRLS	Borolday	15.61	11	eP	Pn	06 41 26.8	-4.0
BLSP	Bilaspur	15.69	107	eP	Pn	06 41 31.6	-0.5
BLSP				eS	Sn	06 44 30.3	+4.5
BLSP				IAML		06 45 27.1	
	comp=E,51nm,1.9s						
BLSP				IAML		06 45 39.7	
	comp=N,86nm,0.4s						
AML	Almayashu	15.72	22	P	Pn	06 41 28.6	-4.1
	SNR=44						
KK31	Karatay Array	15.80	12		Pn	06 41 30.5	-2.9
KK31	Karatay Array	15.80	12	*i* P	Pn	06 41 30.0	-3.3
KKAR	Karatay Array	15.80	12		Pn	06 41 30.3	-3.0
KKAR	Karatay Array	15.80	12	P	Pn	06 41 30.3	-3.0
KKAR				pmax	pmax		
	comp=Z,18nm,0.7s						
KBD	Kabd	16.13	280	P	Pn	06 41 37.4	-0.2
EKS2	Erkin-Say	16.22	21	P	Pn	06 41 36.6	-2.2
	SNR=19						
AAK	Ala-Archa	16.44	23	P	Pn	06 41 40.6	-1.0
	SNR=11						
AAK	Ala-Archa	16.44	23		Pn	06 41 39.4	-2.2
AAK	Ala-Archa	16.44	23	Pn	Pn	06 41 38.4	-3.2
	comp=Z,0.9nm,0.3s,baz=211,slow=15,SNR=13						
AAK				Sn	Sn	06 44 37.0	-6.9
	comp=Z,0.2nm,0.3s,baz=199,slow=18,SNR=2.4						
AAK				LR	LR	06 49 11.7	
	comp=Z,952nm,21.3s,baz=222,slow=41						
AAK	Ala-Archa	16.44	23	P	Pn	06 41 39.4	-2.2
AAK				pmax	pmax		
	comp=Z,30nm,1.0s						
KBK	Karagaybulak	16.61	24	P	P	06 41 46.6	+0.2
	SNR=7.1						
FRU1	Bishkek	16.64	23	Pn	Pn	06 41 42.3	-1.8
FRU1	Bishkek	16.64	23	P	Pn	06 41 42.3	-1.8
FRU1				pmax	pmax		
	comp=Z,122nm,0.2s						
BOOM	Boomskoye usch	16.84	26		Pn	06 41 43.6	-3.2
BOOM	Boomskoye usch	16.84	26	P	Pn	06 41 43.6	-3.2
BOOM				pmax	pmax		
	comp=Z,30nm,1.0s						
USP	Ospenovka	17.00	22	P	P	06 41 51.2	+0.7
	SNR=8.4						
TARG	Taragay, Kyrgy	17.02	32		Pn	06 41 47.5	-1.8
TARG	Taragay, Kyrgy	17.02	32	P	Pn	06 41 47.5	-1.8
TARG				pmax	pmax		
	comp=Z,34nm,0.9s						

TKM2	**Tokmak 2**	**17.08**	**25**	P	**Pn**	**06 41 46.7**	**-3.1**
	SNR=17						
WUS	**Wushi**	**17.32**	**36**		**Pn**	**06 41 51.7**	**-0.9**
WUS				IAmb	IAmb	06 42 01.5	
	comp=Z,65nm,0.9s						
TNSS	**Tian-Shan**	**17.70**	**27**	*e*P	**Pn**	**06 41 57.2**	**-0.5**
TNSS	**Tian-Shan**	**17.70**	**27**	*e*P	**Pn**	**06 41 57.3**	**-0.5**
AAA	**Alma-Ata**	**17.83**	**27**	*e*P	**Pn**	**06 41 58.9**	**-0.1**
AAA				pmax	pmax		
	comp=Z,73nm,1.4s						
AAA	**Alma-Ata**	**17.83**	**27**	*e*P	**Pn**	**06 41 58.1**	**-0.9**
	comp=Z,73nm,1.4s						
MDOK	**Medeo**	**17.85**	**27**	P	**P**	**06 42 01.4**	**+1.4**
MDOK	**Medeo**	**17.85**	**27**	*e*P	**Pn**	**06 41 59.0**	**-0.3**
PRZ	**Przheval'sk**	**17.89**	**31**	Pn	**Pn**	**06 41 58.7**	**-1.1**
PRZ				IAmb	IAmb	06 42 17.6	
	comp=Z,48nm,0.9s						
PRZ	**Przheval'sk**	**17.89**	**31**	P	**Pn**	**06 41 58.7**	**-1.1**
PRZ				pmax	pmax		
	comp=Z,48nm,0.9s						
LKRN	**Lenkeran, Azer**	**18.05**	**312**	P	**P**	**06 42 01.5**	**-0.5**
SATY	**Saty**	**18.34**	**30**	*e*P	**P**	**06 42 05.1**	**-0.3**
SATY	**Saty**	**18.34**	**30**	*e*P	**P**	**06 42 05.2**	**-0.3**
ZHN	**Zhinishke**	**18.44**	**30**	*e*P	**Pn**	**06 42 06.3**	**-0.3**
ZHN	**Zhinishke**	**18.44**	**30**	*e*P	**Pn**	**06 42 06.3**	**-0.3**
EVN	**Everest**	**18.46**	**84**		**P**	**06 42 04.3**	**-3.1**
EVN				IAmb	IAmb	06 42 20.0	
	comp=Z,63nm,1.0s						
BTLS	**Baital**	**18.47**	**18**	*e*P	Pn	06 42 22.0	+15
UZB	**Uzynbulak**	**18.69**	**31**	*e*P	**P**	**06 42 09.1**	**-0.1**
UZB	**Uzynbulak**	**18.69**	**31**	*e*P	**P**	**06 42 09.2**	**-0.1**
KPKS	**Kokpek**	**18.79**	**30**	*e*P	**P**	**06 42 09.8**	**-0.5**
KPKS	**Kokpek**	**18.79**	**30**	*e*P	**P**	**06 42 09.8**	**-0.5**
RAYN	**Ar Rayn**	**18.90**	**262**		**P**	**06 42 08.8**	**-2.8**
RAYN	**Ar Rayn**	**18.90**	**262**	P	**P**	**06 42 10.9**	**-0.7**
RAYN	**Ar Rayn**	**18.90**	**262**	P	**P**	**06 42 08.8**	**-2.8**
RAYN				pmax	pmax		
	comp=Z,20nm,0.8s						
RAYN	**Ar Rayn**	**18.90**	**262**	*i* P	**P**	**06 42 10.4**	**-1.2**
	SNR=28						
SHLS	**Shalkode**	**18.90**	**32**	*e*P	**Pn**	**06 42 13.5**	**+1.4**
SHLS				pmax	pmax		
	comp=Z,23nm,1.0s						
SHLS	**Shalkode**	**18.90**	**32**	*e*P	**Pn**	**06 42 13.6**	**+1.4**
	comp=Z,23nm,1.0s						
MNGR	**Mingechevir, A**	**20.27**	**315**	P	**P**	**06 42 26.9**	**+0.6**
NAX	**Nakhchivan**	**20.50**	**309**	P	Pn	06 42 30.2	-0.9
GANJ	**Ganja**	**20.68**	**314**	P	Pn	06 42 31.8	-1.4
OTUK	**Ortayu**	**21.10**	**12**	P	**P**	**06 42 34.8**	**-0.5**
MAK	**Makhachkala**	**21.33**	**320**	*e*P	**P**	**06 42 33.2**	**-4.6**
MAK				*e*S	**S**	**06 46 28.0**	**-6.3**
MAK				pmax	pmax		
	comp=Z,81nm,1.2s						
MAK				MLR	MLR		
	comp=Z,369nm,14.0s						
GNI	**Garni**	**21.47**	**311**	P	**P**	**06 42 39.3**	**-0.3**
GNI	**Garni**	**21.47**	**311**	P	**P**	**06 42 38.3**	**-1.2**
	comp=Z,17nm,0.8s,baz=43,slow=18,SNR=11						
	comp=Z,17nm,0.8s						
GNI	**Garni**	**21.47**	**311**	P	**P**	**06 42 40.1**	**+0.6**
GNI	**Garni**	**21.47**	**311**	*d* *i*P	**P**	**06 42 39.2**	**-0.3**
GEVA	**Gevas**	**21.86**	**305**		**P**	**06 42 43.1**	**-0.7**
GEVA				IAmb	IAmb	06 43 05.1	
	comp=Z,17nm,0.7s						
AB31	**Akbulak array**	**22.01**	**349**	P	**P**	**06 42 45.6**	**+0.6**
AB31	**Akbulak array**	**22.01**	**349**	P	**P**	**06 42 45.0**	**0.0**
ABKAR	**Akbulak array**	**22.01**	**349**		**P**	**06 42 45.3**	**+0.3**
LSA	**Lhasa**	**22.18**	**79**	P	**P**	**06 42 49.9**	**+2.3**
LSA	**Lhasa**	**22.18**	**79**	P	**P**	**06 42 49.8**	**+2.3**
LSA				LR	LR		
	comp=Z,1µm,18.7s						
LSA				LR	LR		
	comp=Z,420nm,14.4s						
LSA	**Lhasa**	**22.18**	**79**	P	**P**	**06 42 49.9**	**+2.3**
LSA				pmax	pmax		
	comp=Z,58nm,1.0s						
GURO	**Guroymak-BITLI**	**22.70**	**305**	P	**P**	**06 42 52.7**	**0.0**
GURO				IAmb	IAmb	06 43 08.5	
	comp=Z,37nm,1.1s						
BRZS	**Berezniki**	**22.83**	**11**	*e*P	**P**	**06 42 53.5**	**-0.3**
BRZS	**Berezniki**	**22.83**	**11**	*e*P	**P**	**06 42 53.5**	**-0.3**
MAKZ	**Makanchi**	**22.86**	**29**		**P**	**06 42 52.8**	**-1.3**
MAKZ	**Makanchi**	**22.86**	**29**	P	**P**	**06 42 52.8**	**-1.3**
MAKZ				pmax	pmax		
	comp=Z,75nm,0.8s						
MK31	**Makanchi Array**	**22.98**	**30**	P	**P**	**06 42 54.3**	**-1.1**
MK31				IAmb	IAmb	06 43 04.4	
	comp=Z,19nm,0.8s						
MK31	**Makanchi Array**	**22.98**	**30**	*i* P	**P**	**06 42 53.9**	**-1.5**
MKAR	**Makanchi Array**	**22.98**	**30**		**P**	**06 42 53.6**	**-1.8**
MKAR	**Makanchi Array**	**22.98**	**30**	P	**P**	**06 42 53.8**	**-1.6**
	comp=Z,21nm,0.9s,baz=207,slow=11,SNR=68						
MKAR				LR	LR	06 54 05.1	
	comp=Z,438nm,19.9s,baz=219,slow=42						
	comp=Z,21nm,0.9s						
MKAR	**Makanchi Array**	**22.98**	**30**	*i* P	**P**	**06 42 53.7**	**-1.8**
MKAR				pmax	pmax		
	comp=Z,14nm,0.8s						
MARD	**Mardin**	**23.23**	**301**		**P**	**06 42 56.8**	**-1.3**
MARD				IAmb	IAmb	06 43 15.2	
	comp=Z,25nm,0.6s						
AKTO	**Aktyubinsk**	**23.49**	**347**	P	**P**	**06 43 00.4**	**-0.1**
	comp=Z,15nm,0.7s,baz=159,slow=7.8,SNR=24						
AKTO				LR	LR	06 53 20.6	
	comp=Z,379nm,21.4s,baz=114,slow=40						
	comp=Z,15nm,0.7s						
BRDH	**Bariadhala**	**23.76**	**96**	LR	LR	06 54 03.3	
	comp=Z,490nm,19.7s,baz=332,slow=41						
WMQ	**Urumqi**	**23.76**	**42**	*e*P	**P**	**06 43 04.9**	**+1.6**
WMQ				sP	sP	06 43 16.5	+6.7
WMQ				PP	**PnPn**	**06 43 38.3**	**+7.3**
WMQ				pmax	pmax		
	comp=Z,43nm,1.5s						
WMQ				LR	LR		
	comp=Z,2µm,12.7s						
WMQ				LR	LR		
	comp=Z,1µm,16.3s						
WMQ				LR	LR		
	comp=Z,430nm,16.3s						
NCK	**Nalchik**	**23.94**	**317**	⇑*e*P	**P**	**06 43 05.5**	**+0.5**
NCK				pmax	pmax		
	comp=Z,11nm,0.9s						
KBZ	**Khabaz**	**24.49**	**317**	P	**P**	**06 43 09.5**	**-0.5**
	comp=Z,5.9nm,0.7s,baz=158,slow=6.5,SNR=14						
	comp=Z,5.9nm,0.7s						
KBZ	**Khabaz**	**24.49**	**317**	*de*P	**P**	**06 43 10.2**	**+0.2**
ZSN	**Zaisan**	**24.64**	**32**	*e*P	**P**	**06 43 11.3**	**-0.1**
ZSN				pmax	pmax		
	comp=Z,18nm,0.9s						
ZSN	**Zaisan**	**24.64**	**32**	*e*P	**P**	**06 43 11.3**	**-0.1**
	comp=Z,18nm,0.9s						
SHA1	**Shidzhatmaz**	**24.64**	**317**	*ce*P	**P**	**06 43 12.8**	**+1.1**
PALK	**Pallekele**	**24.67**	**143**	LR	LR	06 53 11.5	
	comp=Z,262nm,21.5s,baz=318,slow=38						
KIV	**Kislovodsk**	**24.75**	**317**		**P**	**06 43 11.7**	**-0.7**
KIV	**Kislovodsk**	**24.75**	**317**	P	**P**	**06 43 13.5**	**+1.1**
KIV	**Kislovodsk**	**24.75**	**317**	⇑P	**P**	**06 43 13.5**	**+1.1**
KIV	**Kislovodsk**	**24.75**	**317**	*e*P	**P**	**06 43 12.6**	**+0.2**
KIV				pmax	pmax		
	comp=Z,28nm,1.1s						
KIV				pmax	pmax		
	comp=Z,76nm,15.0s						
KURBB	**Kurchatov Arra**	**24.80**	**19**	P	**P**	**06 43 13.1**	**+0.3**
	comp=Z,14nm,0.8s,baz=211,slow=8.8,SNR=13						
KURBB				LR	LR	06 53 53.9	
	comp=Z,666nm,19.0s,baz=158,slow=39						
	comp=Z,14nm,0.8s						
KURBB	**Kurchatov Arra**	**24.80**	**19**	P	**P**	**06 43 13.2**	**+0.5**
KURK	**Kurchatov**	**24.91**	**19**		**P**	**06 43 12.8**	**-0.9**
KURK				IAmb	IAmb	06 43 38.4	
	comp=Z,24nm,1.0s						
KURK	**Kurchatov**	**24.91**	**19**	*de*P	**P**	**06 43 14.0**	**+0.3**
KURK				pmax	pmax		
	comp=Z,13nm,0.8s						
BVA0	**Borovoye Array**	**25.50**	**6**	P	**P**	**06 43 18.8**	**-0.3**
BVAR	**Borovoye Array**	**25.50**	**6**	P	**P**	**06 43 19.2**	**+0.2**
	comp=Z,15nm,0.8s,baz=172,slow=8.9,SNR=19						
BVAR				LR	LR	06 55 26.5	
	comp=Z,229nm,19.1s,baz=195,slow=41						
	comp=Z,15nm,0.8s						
BRVK	**Borovoye**	**25.53**	**6**		**P**	**06 43 18.1**	**-1.2**
BRVK				IAmb	IAmb	06 43 37.8	
	comp=Z,31nm,1.0s						
BRVK	**Borovoye**	**25.53**	**6**	P	**P**	**06 43 20.2**	**+1.0**
BRVK				P	**P**	**06 43 20.2**	**+1.0**
BRVK	**Borovoye**	**25.53**	**6**	*de*P	**P**	**06 43 19.6**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,26nm,1.3s						
ASF	**Jabal al Asfar**	**25.53**	**287**	P	**P**	**06 43 19.3**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=90,slow=5.1,SNR=8.7						
ASF				LR	LR	06 55 37.2	
	comp=Z,358nm,19.6s,baz=124,slow=42						
	comp=Z,0.8nm,0.5s						
ARPR	**Arapgir-MALATY**	**25.60**	**303**		**P**	**06 43 20.8**	**+0.6**
GOMU	**GeErMu**	**25.84**	**64**	P	**P**	**06 43 24.2**	**+1.5**
GOMU				pP	sP	06 43 30.9	+1.6
GOMU				S	**S**	**06 47 54.7**	**+2.4**
GOMU				pmax	pmax		
	comp=Z,25nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,250nm,4.0s						
GOMU				LR	LR		
	comp=Z,2µm,18.5s						
GOMU				LR	LR		
	comp=Z,370nm,18.3s						
GOMU				LR	LR		
	comp=Z,650nm,18.6s						
GAZ	**Gaziantep**	**25.94**	**299**	P	**P**	**06 43 21.6**	**-1.7**
GAZ				IAmb	IAmb	06 43 43.8	
	comp=Z,30nm,1.1s						
VSLR	**Vesyoloye**	**26.15**	**314**	*de*P	**P**	**06 43 24.8**	**-0.2**
VSLR				pmax	pmax		
	comp=Z,25nm,0.9s						
SOC	**Sochi**	**26.41**	**314**	*e*P	**P**	**06 43 25.5**	**-1.8**
SOC				*e*PPP	PPP	06 44 11.5	
SOC				*e*S	**S**	**06 47 57.8**	**-2.6**
SOC				*e*SSS	SSS	06 49 16.5	
SOC				pmax	pmax		
	comp=Z,21nm,0.7s						
SOC				MLR	MLR		
	comp=Z,166nm,18.0s						
MMAI	**Mount Meron Ar**	**26.83**	**289**	P	**P**	**06 43 31.8**	**+0.5**
	comp=Z,4.9nm,0.9s,baz=85,slow=13,SNR=8.8						
	comp=Z,4.9nm,0.9s						
ATD	**Arta Tunnel**	**26.99**	**238**	P	**P**	**06 43 33.5**	**+0.6**
ATD				IAmb	IAmb	06 43 39.7	
	comp=Z,18nm,1.1s						
ATD	**Arta Tunnel**	**26.99**	**238**	LR	LR	06 55 07.3	
	comp=Z,9.5nm,19.2s,baz=26,slow=39						
EIL	**Elat**	**27.23**	**282**	P	**P**	**06 43 35.5**	**+0.6**
	comp=Z,0.9nm,0.4s,baz=100,slow=6.1,SNR=1.7						
EIL				LR	LR	06 57 21.7	
	comp=Z,856nm,18.1s,baz=77,slow=43						
	comp=Z,0.9nm,0.4s						
TOKA	**Tokat**	**27.34**	**305**	P	**P**	**06 43 34.9**	**-1.0**
BNN	**Bunyan**	**27.39**	**302**	P	**P**	**06 43 34.3**	**-2.2**
BNN				IAmb	IAmb	06 44 07.9	
	comp=Z,21nm,0.9s						
BELG	**Belogornoye**	**28.20**	**336**	P	**P**	**06 43 43.1**	**-0.2**
	comp=Z,17nm,0.7s,baz=164,slow=19,SNR=8.7						
BELG				LR	LR	06 58 19.3	
	comp=Z,377nm,18.3s,baz=138,slow=44						
	comp=Z,17nm,0.7s						
BELG	**Belogornoye**	**28.20**	**336**	*c* *i*P	**P**	**06 43 43.0**	**-0.3**
BELG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KIRS	**Kirsehir-Merke**	**28.92**	**301**	⇑P	**P**	**06 43 49.7**	**-0.3**
ARTI	**Arti**	**29.17**	**351**	P	**P**	**06 43 52.0**	**+0.2**
ARTI				IAmb	IAmb	06 44 02.0	
	comp=Z,13nm,1.0s						
ARTI	**Arti**	**29.17**	**351**	P	**P**	**06 43 51.9**	**0.0**
	comp=Z,3.3nm,0.3s,baz=168,slow=3.0,SNR=6.2						
ARTI				LR	LR	06 56 51.9	
	comp=Z,444nm,18.4s,baz=157,slow=39						
	comp=Z,3.3nm,0.3s						
ARTI	**Arti**	**29.17**	**351**	*d* *i*P	**P**	**06 43 52.1**	**+0.2**
ARTI						06 44 45.3	
ARTI						06 46 55.2	
ARTI				S	**S**	**06 48 44.6**	**+1.0**
ARTI				SS	**SnSn**	**06 50 08.1**	**-0.2**
ARTI				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ARTI				MLR	MLR		
	comp=Z,373nm,15.0s						
BR131	**Keskin Array S**	**29.27**	**303**	P	**P**	**06 43 50.6**	**-2.6**
BR131	**Keskin Array S**	**29.27**	**303**	P	**P**	**06 43 50.6**	**-2.6**
BR131				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRTR	**Keskin Array B**	**29.27**	**303**	P	**P**	**06 43 51.0**	**-2.1**
BRTR	**Keskin Array B**	**29.27**	**303**	P	**P**	**06 43 51.1**	**-2.1**
ILGA	**Ilgaz**	**29.57**	**305**	P	**P**	**06 43 51.7**	**-4.2**
BZK	**Bozkurt**	**29.63**	**307**	⇑P	**P**	**06 43 57.4**	**+1.2**
ZAA0	**Zalesovo Array**	**29.66**	**23**		**P**	**06 43 54.9**	**-1.4**
ZAA0				IAmb	IAmb	06 44 38.1	
	comp=Z,18nm,1.1s						
ZALV	**Zalesovo Beam**	**29.66**	**23**		**P**	**06 43 55.5**	**-0.8**
ZALV	**Zalesovo Beam**	**29.66**	**23**	P	**P**	**06 43 55.9**	**-0.3**
	comp=Z,2.1nm,0.4s,baz=232,slow=9.2,SNR=8.9						
ZALV				LR	LR	06 57 02.1	
	comp=Z,601nm,20.4s,baz=224,slow=39						
	comp=Z,2.1nm,0.4s						
ZALV	**Zalesovo Beam**	**29.66**	**23**	*i* P	**P**	**06 43 56.9**	**+0.6**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.6s						
GTA	**Gaotai**	**30.37**	**59**	*e*P	**P**	**06 44 03.9**	**+1.0**
GTA				pP	pP	06 44 08.3	+0.8
GTA				SS	SS	06 50 39.8	-33
GTA				pmax	pmax		
	comp=Z,11nm,1.3s						
GTA				LR	LR		
	comp=Z,180nm,13.8s						
GTA				LR	LR		
	comp=Z,430nm,12.4s						
GTA				LR	LR		
	comp=Z,480nm,12.0s						
VORD	**Divnogorie**	**30.75**	**326**	*e*P	**P**	**06 44 03.2**	**-2.8**
VORD				pmax	pmax		
	comp=Z,5.0nm,0.8s						
VSR	**Storozhevoye**	**30.98**	**327**	*e*P	**P**	**06 44 05.4**	**-2.5**
VSR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ISP	**Isparta**	**31.29**	**298**		**P**	**06 44 09.4**	**-1.6**
ISP				IAmb	IAmb	06 44 31.9	
	comp=Z,16nm,0.9s						
ISP	**Isparta**	**31.29**	**298**	⇑*i*P	**P**	**06 44 10.6**	**-0.4**
ISP				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CHTO	**Chiang Mai**	**31.50**	**99**		**P**	**06 44 13.4**	**+0.5**
CHTO				IAmb	IAmb	06 44 31.4	
	comp=Z,18nm,1.4s						
CHTO	**Chiang Mai**	**31.50**	**99**	P	**P**	**06 44 13.4**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,18nm,1.4s						
CMAR	**Chiang Mai Arr**	**31.64**	**100**	P	**P**	**06 44 15.4**	**+1.3**
CMAR	**Chiang Mai Arr**	**31.64**	**100**	P	**P**	**06 44 13.5**	**-0.6**
	comp=Z,1.2nm,0.3s,baz=297,slow=8.0,SNR=8.0						
CMAR				LR	LR	06 59 28.8	
	comp=Z,241nm,18.1s,baz=285,slow=41						
	comp=Z,1.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**31.64**	**100**	P	**P**	**06 44 15.4**	**+1.3**
PZH	**PanZhiHua**	**31.82**	**84**	P	**P**	**06 44 19.0**	**+3.2**
LPSR	**Galich'ya Gora**	**31.98**	**328**	*e*P	**P**	**06 44 13.4**	**-3.3**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MANT	**Manisa**	**32.92**	**299**	P	**P**	**06 44 23.6**	**-1.8**
KIRV	**Kirov**	**32.95**	**344**	P	**P**	**06 44 24.5**	**-0.6**
	comp=Z,9.5nm,0.5s,baz=190,slow=6.1,SNR=5.1						
KIRV				LR	LR	06 59 22.0	
	comp=Z,371nm,19.2s,baz=151,slow=39						
	comp=Z,9.5nm,0.5s						
KIRV	**Kirov**	**32.95**	**344**	*ce*P	**P**	**06 44 25.2**	**+0.1**
BAND	**Balkesir-Ban**	**33.56**	**302**	⇑P	**P**	**06 44 29.3**	**-1.5**
KARP	**Karpathos**	**33.77**	**293**	P	**P**	**06 44 31.0**	**-1.7**
TIRR	**Tirgusor**	**34.28**	**309**		**P**	**06 44 35.4**	**-1.6**
TIRR				IAmb	IAmb	06 44 42.5	
	comp=Z,16nm,1.2s						
TIRR	**Tirgusor**	**34.28**	**309**	⇑P	**P**	**06 44 36.9**	**-0.1**
TIRR	**Tirgusor**	**34.28**	**309**	⇑P	**P**	**06 44 36.9**	**-0.1**
TPGR	**Topolog**	**34.39**	**310**	⇑P	**P**	**06 44 37.7**	**-0.2**
MOS	**Moscow**	**34.63**	**332**	*e*P	**P**	**06 44 36.8**	**-3.0**
OBN	**Obninsk**	**34.67**	**330**	⇑*e*P	**P**	**06 44 40.3**	**+0.1**
OBN				*i*		06 45 51.6	
OBN				pmax	pmax		
	comp=Z,12nm,0.6s						
MILM	**Milestii Mici**	**34.79**	**314**	*e*P	**P**	**06 44 40.0**	**-1.3**
	comp=Z,22nm,0.7s						
MILM	**Milestii Mici**	**34.79**	**314**	*e*P	**P**	**06 44 40.0**	**-1.3**
EZN	**Ezine**	**34.82**	**301**	⇑P	**P**	**06 44 40.8**	**-0.9**
EZN	**Ezine**	**34.82**	**301**	⇑P	**P**	**06 44 40.8**	**-0.9**
SORM	**Soroca**	**35.51**	**315**	⇑P	**P**	**06 44 46.7**	**-0.8**
SORM	**Soroca**	**35.51**	**315**	⇑P	**P**	**06 44 46.7**	**-0.8**
MOY	**Mondy**	**35.52**	**38**	*e*P	**P**	**06 44 48.8**	**+1.1**
MOY				pmax	pmax		
	comp=Z,10.0nm,1.8s						
RDO	**Rodhopi**	**35.61**	**303**	P	**P**	**06 44 46.9**	**-1.6**
VRI	**Vrincioaia**	**35.82**	**311**	⇑P	**P**	**06 44 50.8**	**+0.5**
VRI	**Vrincioaia**	**35.82**	**311**	⇑P	**P**	**06 44 50.8**	**+0.5**
PLOR	**Plostina**	**35.87**	**311**	⇓P	**P**	**06 44 51.5**	**+0.7**
PLOR	**Plostina**	**35.87**	**311**	⇓P	**P**	**06 44 51.5**	**+0.7**
AKASG	**Malin Array Be**	**36.02**	**320**	P	**P**	**06 44 50.0**	**-1.9**
	comp=Z,2.0nm,0.5s,baz=116,slow=7.3,SNR=17						
	comp=Z,2.0nm,0.5s						
AKASG	**Malin Array Be**	**36.02**	**320**	*i* P	**P**	**06 44 50.5**	**-1.3**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKBB	**Malin Array Si**	**36.02**	**320**		**P**	**06 44 51.1**	**-0.7**
AKBB	**Malin Array Si**	**36.02**	**320**	*d* *i*P	**P**	**06 44 50.8**	**-1.0**
KIEV	**Kiev**	**36.02**	**320**		**P**	**06 44 51.1**	**-0.8**
KIEV	**Kiev**	**36.02**	**320**	P	**P**	**06 44 51.1**	**-0.8**
KIEV				pmax	pmax		
	comp=Z,16nm,0.8s						
TESR	**Tescani**	**36.07**	**312**	⇑P	**P**	**06 44 52.2**	**-0.1**
ONER	**Baraj Valea Uz**	**36.18**	**312**	⇑P	**P**	**06 44 54.2**	**+0.8**
ZAK	**Zakamensk**	**36.23**	**41**	*e*P	**P**	**06 44 54.2**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MLR	**Muntele Rosu**	**36.25**	**310**	⇑P	**P**	**06 44 54.6**	**+0.5**
MLR	**Muntele Rosu**	**36.25**	**310**	⇑P	**P**	**06 44 54.6**	**+0.5**
TURR	**Turia**	**36.35**	**311**	⇑P	**P**	**06 44 55.0**	**+0.1**
DOPR	**Dopca**	**36.75**	**311**	⇑P	**P**	**06 44 58.0**	**-0.2**
VOIR		**36.84**	**310**	⇑P	**P**	**06 44 59.0**	**-0.1**
VOIR		**36.84**	**310**	⇑P	**P**	**06 44 59.0**	**-0.1**
ARR	**Arges**	**37.11**	**310**	⇑P	**P**	**06 45 01.3**	**-0.1**
XAN	**Xi'an**	**37.21**	**69**	P	**P**	**06 45 02.5**	**+0.2**
XAN				pP	sP	06 45 10.2	+1.3
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,140nm,5.1s						
XAN				LR	LR		
	comp=Z,440nm,11.7s						
XAN				LR	LR		
	comp=Z,600nm,14.4s						
XAN				LR	LR		
	comp=Z,750nm,17.9s						
SONM	**Songino Array**	**37.21**	**46**		**P**	**06 45 03.2**	**+0.9**
SONM	**Songino Array**	**37.21**	**46**	P	**P**	**06 45 02.3**	**0.0**
	comp=Z,2.2nm,0.8s,baz=254,slow=8.2,SNR=17						
SONM				LR	LR	07 03 29.6	
	comp=Z,592nm,18.7s,baz=244,slow=41						
	comp=Z,2.2nm,0.8s						
SONM	**Songino Array**	**37.21**	**46**	P	**P**	**06 45 03.2**	**+0.9**
SONM				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MLSI	**Meulaboh, Aceh**	**37.22**	**123**	P	**P**	**06 45 00.4**	**-2.0**
	comp=Z,50nm,1.1s						
BURAR	**Bucovina Array**	**37.33**	**313**		**P**	**06 45 02.6**	**-0.6**
BURAR	**Bucovina Array**	**37.33**	**313**	⇓P	**P**	**06 45 02.6**	**-0.6**
BURAR	**Bucovina Array**	**37.33**	**313**	⇓P	**P**	**06 45 02.6**	**-0.6**
BUR08	**Bucovina Ar. S**	**37.35**	**313**		**P**	**06 45 02.8**	**-0.6**
BUR08				IAmb	IAmb	06 45 09.9	
	comp=Z,10nm,0.7s						
KLMR	**Klimovskoe**	**37.63**	**339**	*e*P	**P**	**06 45 02.2**	**-3.2**
KLMR				*e*		06 46 28.6	
KLMR				pmax	pmax		
	comp=Z,14nm,0.8s						
KLMR				MLR	MLR		
	comp=Z,504nm,13.0s						
ULN	**Ulaanbaatar**	**37.65**	**46**	P	**P**	**06 45 05.7**	**-0.2**
ULN	**Ulaanbaatar**	**37.65**	**46**	*de*P	**P**	**06 45 06.8**	**+0.8**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BTO	**Baotou**	**38.29**	**59**	*e*P	**P**	**06 45 12.4**	**+0.9**
BTO				pP	**pP**	**06 45 17.2**	**+1.1**
BTO				sP	**sP**	**06 45 19.3**	**+1.3**
BTO				PP	**PnPn**	**06 46 43.1**	**+2.5**
BTO				S	**S**	**06 51 05.2**	**-0.1**
BTO				sS	**pS**	**06 51 11.6**	**+1.0**
BTO				SS	**SnSn**	**06 53 43.7**	**-6.4**
BTO				pmax	pmax		
	comp=Z,40nm,0.9s						
BTO				pmax	pmax		
	comp=Z,190nm,5.4s						
BTO				LR	LR		
	comp=Z,780nm,19.3s						
BTO				LR	LR		
	comp=Z,430nm,17.8s						
BTO				LR	LR		
	comp=Z,780nm,20.2s						
GZR	**Gura Zlata**	**38.39**	**309**	⇑P	**P**	**06 45 10.9**	**-1.3**
GZR	**Gura Zlata**	**38.39**	**309**	⇑P	**P**	**06 45 10.9**	**-1.3**
MARR	**Marisel-Cluj**	**38.45**	**311**	⇓P	**P**	**06 45 12.4**	**-0.3**
MNK	**Minsk**	**38.48**	**325**	*i* P	**P**	**06 45 16.6**	**+3.9**
	comp=E,9.0nm,0.7s						
MNK				*i* P	**P**	**06 45 16.6**	**+3.9**
	comp=N,17nm,0.8s						
MNK				*i* P	**P**	**06 45 16.6**	**+3.9**
	comp=Z,19nm,0.8s,baz=118						
MNK				*i* PP	**PnPn**	**06 46 46.2**	**+3.7**
MNK				*i* PPP	PPP	06 47 01.9	
MNK				*i* PcP	**PcP**	**06 47 29.0**	**+3.5**
MNK				*i* S	**S**	**06 51 15.5**	**+8.0**
MNK				*i* SS	SnSn	06 53 07.8	-46
MNK				*i* SSS	SSS	06 54 51.0	
MNK				*i* LQ	LQ	06 59 18.8	
MNK				*i* LR	LR	07 02 00.9	
MNK				*i* LRM	MLR	07 02 53.5	
	comp=N,39nm,10.3s						
MNK				*i* LRM	MLR	07 02 54.8	
	comp=E,258nm,14.1s						
MNK	**Minsk**	**38.48**	**325**	*i* P	**P**	**06 45 16.5**	**+3.9**
MNK				*i*		06 46 46.2	
MNK				*i* PPP	PPP	06 47 01.9	
MNK				*i*		06 47 29.0	
MNK				pmax	pmax		
	comp=E,9.0nm,0.7s						
MNK				pmax	pmax		
	comp=N,17nm,0.8s						
MNK				pmax	pmax		
	comp=Z,19nm,0.8s						
MNK				MLR	MLR		
	comp=N,39nm,10.0s						
MNK				MLR	MLR		
	comp=E,258nm,14.0s						
BZS	**Buzias**	**39.23**	**309**	⇑P	**P**	**06 45 19.2**	**0.0**
BZS	**Buzias**	**39.23**	**309**	⇑P	**P**	**06 45 19.2**	**0.0**
HHC	**Hu-ho-hao-te**	**39.48**	**58**	*e*P	**P**	**06 45 22.5**	**+1.1**
HHC				pmax	pmax		
	comp=E,7.0nm,0.7s						
KOLS	**Kolonicke sedl**	**39.59**	**314**	*e*P	**P**	**06 45 23.3**	**+1.2**
KOLS	**Kolonicke sedl**	**39.59**	**314**	*e*P	**P**	**06 45 23.3**	**+1.2**
PSI	**Prapat**	**40.06**	**122**	LR	LR	07 04 14.5	
	comp=E,102nm,18.1s,baz=301,slow=40						
PSI	**Prapat**	**40.06**	**122**	P	**P**	**06 45 27.0**	**+0.5**
PSI				pmax	pmax		
	comp=Z,19nm,1.3s						
GSI	**Gunungsitoli**	**40.08**	**125**		**P**	**06 45 28.0**	**+1.5**
GSI	**Gunungsitoli**	**40.08**	**125**	P	**P**	**06 45 25.2**	**-1.3**
	comp=Z,31nm,1.2s						
RPSI	**Rantau Prapat**	**40.13**	**122**		**P**	**06 45 27.0**	**+0.1**
RPSI				IAmb	IAmb	06 45 51.1	
	comp=Z,19nm,1.3s						
STHS	**Stebnicka Huta**	**40.38**	**315**	*e*P	**P**	**06 45 28.3**	**-0.3**
STHS	**Stebnicka Huta**	**40.38**	**315**	*e*P	**P**	**06 45 28.3**	**-0.3**
PSZ	**Piszkesteto**	**40.88**	**312**	P	**P**	**06 45 32.4**	**-0.5**
PSZ	**Piszkesteto**	**40.88**	**312**	P	**P**	**06 45 32.4**	**-0.5**
PSZ				pmax	pmax		
	comp=Z,13nm,1.3s						
VSU	**Vasula**	**41.01**	**330**	⇓*e*P	**P**	**06 45 31.2**	**-2.5**
VSU				pmax	pmax		
	comp=Z,14nm,0.7s						
MORH	**Mrgy, Hungar**	**41.38**	**309**	⇓P	**P**	**06 45 36.3**	**-0.6**
LANS	**Liptovska Anna**	**41.44**	**314**	*e*P	**P**	**06 45 36.5**	**-0.9**
LANS	**Liptovska Anna**	**41.44**	**314**	*e*P	**P**	**06 45 36.5**	**-0.9**
VYHS	**Vyhne**	**41.69**	**313**	*e*P	**P**	**06 45 40.0**	**+0.5**
VYHS	**Vyhne**	**41.69**	**313**	*e*P	**P**	**06 45 40.0**	**+0.5**
HNS	**HongShan**	**41.82**	**64**	*e*P	**P**	**06 45 44.7**	**+4.1**
HNS				S	**S**	**06 52 04.6**	**+6.6**
HNS				LR	LR		
	comp=Z,330nm,19.1s						
HNS				LR	LR		
	comp=Z,500nm,20.7s						
WHN	**Wuhan**	**42.12**	**74**	P	**P**	**06 45 44.1**	**+0.9**
MODS	**Modra-Piesok**	**42.69**	**312**	*e*P	**P**	**06 45 47.7**	**+0.1**

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MODS  Modra-Piesok      42.69 312 eP    P     06 45 47.7 +0.1
STEB  Steborice         42.69 315 eP    P     06 45 47.9 +0.3
MORC  Moravsky Berou    42.80 314 eP    P     06 45 48.6 +0.1
FIA1  FINESS Array S    42.90 333       P     06 45 48.6 -0.5
FINES FINESS Array B    42.90 333       P     06 45 48.0 -1.1
FINES FINESS Array B    42.90 333 P     P     06 45 47.6 -1.4
      comp=Z,3.8nm,0.5s,baz=125,slow=8.8,SNR=24
FINES                             LR    LR    07 08 10.7
      comp=Z,156nm,19.2s,baz=111,slow=42
      comp=Z,3.8nm,0.5s
FINES FINESS Array B    42.90 333 i P   P     06 45 48.4 -0.6
FINES                             pmax  pmax
      comp=Z,4.0nm,0.5s
BJT   Baijiatuau        42.95  60 P     P     06 45 50.1 +0.3
BJT   Baijiatuau        42.95  60 P     P     06 45 50.2 +0.3
BJT                               pmax  pmax
      comp=Z,8.0nm,0.8s
BJI   Beijing           42.96  60 P     P     06 45 49.8 -0.1
BJI                               pP    sP    06 45 57.3 +0.8
BJI                               pmax  pmax
      comp=Z,3.0nm,0.9s
BJI                               LR    LR
      comp=Z,200nm,17.6s
BJI                               LR    LR
      comp=Z,83nm,14.9s
BJI                               LR    LR
      comp=Z,230nm,19.4s
XLT   XiLinHaoTe        43.08  54 eP    P     06 45 59.5 +8.6
XLT                               pmax  pmax
      comp=Z,16nm,0.9s
XLT                               LR    LR
      comp=N,26nm,17.6s
XLT                               LR    LR
      comp=E,200nm,14.1s
XLT                               LR    LR
      comp=Z,210nm,15.4s
RONA  Rosalia, Austr    43.22 311 eP    P     06 45 52.0 +0.1
      comp=Z,6.6nm,1.0s
VRAC  Vranov            43.31 314 LR    LR    07 08 06.0
      comp=Z,213nm,19.5s,baz=116,slow=42
PPI   Padang Panjang    43.33 124 P     P     06 45 51.3 -1.8
      comp=Z,11nm,1.4s
NRIK  Noril'sk          43.53  11       P     06 45 54.5 +0.4
NRIK                              IAmb  IAmb  06 46 11.5
      comp=Z,10nm,0.8s
NRIK  Noril'sk          43.53  11 P     P     06 45 52.5 -1.6
      comp=Z,2.1nm,0.4s,baz=197,slow=6.7,SNR=8.3
NRIK                              LR    LR    07 06 35.9
      comp=Z,187nm,18.9s,baz=208,slow=40
      comp=Z,2.1nm,0.4s
NRIK  Noril'sk          43.53  11deP    P     06 45 54.6 +0.5
NRIK                              pmax  pmax
      comp=Z,8.0nm,0.9s
CONA  Conrad Observa    43.54 312 i P   P     06 45 55.1 +0.5
      comp=Z,4.0nm,1.0s
ARSA  Arzberg           43.66 310 P     P     06 45 53.9 -1.7
ARSA  Arzberg           43.66 310 epP   pP    06 45 59.5 -0.8
      comp=Z,5.7nm,0.7s
DPC   Dobruska-Polom    43.69 315 eP    P     06 45 56.5 +0.8
DPC   Dobruska-Polom    43.69 315 eP    P     06 45 56.5 +0.8
TIA   Tai'an            43.81  66 P     P     06 45 58.1 +1.2
TIA                               pmax  pmax
      comp=Z,6.0nm,0.4s
TIA                               LR    LR
      comp=Z,870nm,20.6s
TIA                               LR    LR
      comp=Z,300nm,17.6s
TIA                               LR    LR
      comp=Z,380nm,15.9s
CHVC  Chvalec           43.91 315 eP    P     06 45 58.6 +1.2
CHVC  Chvalec           43.91 315 eP    P     06 45 58.6 +1.2
CHVC                              MLR   MLR
      comp=Z,200nm,12.7s
SOKA  Soboth            43.92 310 epP   P     06 45 59.2 +1.6
      comp=Z,6.9nm,1.2s
VAE   Valguarnera       44.03 296 LR    LR    07 07 29.3
      comp=Z,94nm,18.8s,baz=100,slow=40
LVZ   Lovozero          44.37 344 P     P     06 45 59.8 -1.1
LVZ   Lovozero          44.37 344⥣eP   P     06 46 00.7 -0.2
LVZ                               pmax  pmax
      comp=Z,14nm,0.7s
MOA   Molln             44.59 311 eP    P     06 46 03.0  0.0
      comp=Z,4.1nm,0.9s
ZVC   Zvikov            44.88 313 eP    P     06 46 05.6 +0.4
PRED  Cave del Predi    44.90 309       P     06 46 03.9 -1.6
PRED                              IAmb  IAmb  06 46 25.2
      comp=Z,6.9nm,0.8s
NRCA  Norcia            44.98 304 P     P     06 46 04.8 -1.4
NRCA                              IAmb  IAmb  06 46 26.6
      comp=Z,6.9nm,0.8s
FDMO  Fiordimonte       45.01 304 P     P     06 46 04.2 -2.1
FDMO                              IAmb  IAmb  06 46 23.1
      comp=Z,9.1nm,0.9s
GEC2  GERESS Array S    45.10 312 P     P     06 46 05.0 -2.1
GERES GERESS Array B    45.10 312 P     P     06 46 05.7 -1.4
GERES GERESS Array B    45.10 312 P     P     06 46 05.0 -2.1
      comp=Z,1.7nm,0.6s,baz=108,slow=4.3,SNR=8.4
GERES                             LR    LR    07 09 23.6
      comp=Z,141nm,18.6s,baz=91,slow=42
      comp=Z,1.7nm,0.6s
GERES GERESS Array B    45.10 312 P     P     06 46 05.7 -1.4
KBA   Koelnbreinsper    45.12 310 eP    P     06 46 06.5 -0.8
      comp=Z,5.2nm,0.5s
KHC   Kasperske Hory    45.23 313 eP    P     06 46 06.9 -1.1
KHC   Kasperske Hory    45.23 313ceP    P     06 46 08.1 +0.1
KHC                               pmax  pmax
      comp=Z,6.0nm,1.0s
BRG   Berggiesshubel    45.28 315 eP    P     06 46 09.4 +1.0
BRG                               Amp         06 46 11.9
      comp=Z,4.7nm,0.7s
LESA  Schwarzleotal     45.61 310 eP    P     06 46 10.8 -0.3
      comp=Z,13nm,0.4s
ABTA  Abfaltersbach     45.65 309 eP    P     06 46 11.1 -0.4
      comp=Z,3.9nm,0.5s
NJ2   Nanjing           45.70  71 eP    P     06 46 13.2 +1.2
NJ2                               pmax  pmax
      comp=Z,11nm,0.9s
CLL   Collm             45.94 316 i P   P     06 46 13.7 +0.1
CLL   Collm             45.94 316 i P   P     06 46 13.7 +0.1
CLL                               AMS   AMS   07 08 00.0
      comp=Z,100nm,19.6s
WTTA  Wattenberg        46.30 310 eP    P     06 46 16.3 -0.3
      comp=Z,4.6nm,0.5s
MOTA  Moosalm           46.66 310 eP    P     06 46 18.0 -1.5
      comp=Z,4.3nm,0.5s
FETA  Feichten          46.89 310 epP   P     06 46 23.7 +2.4
      comp=Z,12nm,0.9s
DAVOX Davos/Dischmat    47.46 309 LR    LR    07 11 38.6
      comp=Z,88nm,18.2s,baz=90,slow=43
HFS   Hagfors           47.77 328 P     P     06 46 26.9 -0.9
      comp=Z,3.7nm,0.7s,baz=119,slow=5.4,SNR=9.2
HFS                               LR    LR    07 09 51.8
      comp=Z,232nm,18.8s,baz=98,slow=40
      comp=Z,3.7nm,0.7s
TUE   Stuetta           47.81 309       P     06 46 26.7 -1.8
TUE                               IAmb  IAmb  06 46 50.2
      comp=Z,9.2nm,0.8s
VSL   Villasalto        47.86 299 P     P     06 46 28.7 -0.1
ARA0  ARCESS Array S    47.91 342 eP    P     06 46 28.7  0.0
ARCES ARCESS Array B    47.91 342       P     06 46 28.8 +0.1
ARCES ARCESS Array B    47.91 342 P     P     06 46 28.3 -0.4
      comp=Z,6.8nm,0.6s,baz=133,slow=8.4,SNR=34
ARCES                             LR    LR    07 08 35.7
      comp=Z,248nm,19.3s,baz=122,slow=38
      comp=Z,6.8nm,0.6s
ARCES ARCESS Array B    47.91 342 P     P     06 46 28.8 +0.1
ARCES                             pmax  pmax
      comp=Z,17nm,1.1s
KTK1  Kautokeino        48.23 341 eP    P     06 46 31.0 -0.2
KEST  Kesra             48.24 294 P     P     06 46 31.6 -0.2
      comp=Z,3.1nm,0.6s,baz=106,slow=4.7,SNR=18
KEST                              LR    LR    07 10 33.1
      comp=Z,198nm,19.4s,baz=22,slow=41
      comp=Z,3.1nm,0.6s
KEST  Kesra             48.24 294 P     P     06 46 32.6 +0.7
      SNR=6.3
KEST                              P     P     06 46 32.6 +0.7
      SNR=6.3
NC602 NORSAR Array S    48.98 328 P     P     06 46 35.4 -1.6
NC602 NORSAR Array S    48.98 328 eP    P     06 46 35.8 -1.2
NORES NORESS Array B    48.98 328 P     P     06 46 40.9 +3.9
HAMF  Hammerfest        49.09 343 eP    P     06 46 38.5 +0.7
NB2   NORSAR Subarra    49.22 328 P     P     06 46 37.1 -1.8
      comp=Z,1.1nm,0.6s,baz=109,slow=7.4
NB2   NORSAR Subarra    49.22 328 P     P     06 46 37.1 -1.8
      baz=109,slow=7.4
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NOA   NORSAR Array B    49.22 328 P     P     06 46 37.3 -1.7
      comp=Z,2.3nm,0.7s,baz=108,slow=7.5,SNR=7.6
NOA                               LR    LR    07 10 33.2
      comp=Z,131nm,19.2s,baz=125,slow=40
      comp=Z,2.3nm,0.7s
JETT  Jettan, Norway    49.37 341 eP    P     06 46 40.2 +0.2
BNI   Bardonecchia      49.66 307 IAmb  IAmb  06 46 58.9
      comp=Z,12nm,1.0s
TRO   Tromso            49.84 340 eP    P     06 46 43.6 +0.1
LEIR  Leirfjorden       50.17 335 eP    P     06 46 45.7 -0.3
KONS  Konsvik           50.32 335 eP    P     06 46 47.4 +0.2
VAGH  Vaagaholmen       50.35 336 eP    P     06 46 47.0 -0.4
BNX   BinXian           51.18  52 ⥥P    P     06 46 54.3 +0.3
BNX                               pmax  pmax
      comp=Z,5.0nm,1.2s
HEH   HeiHe             51.20  46 eP    P     06 46 54.3 +0.2
HEH                               pmax  pmax
      comp=Z,19nm,0.9s
HEH                               LR    LR
      comp=Z,160nm,15.4s
HEH                               LR    LR
      comp=Z,470nm,18.2s
HEH                               LR    LR
      comp=Z,820nm,18.0s
ZEA   Zeya              51.32  42 eP    P     06 47 02.4 +7.5
ZEA                               pmax  pmax
      comp=Z,10.0nm,0.9s
ZEA                               MLR   MLR
      comp=E,100nm,15.0s
ZEA                               MLR   MLR
      comp=Z,200nm,16.0s
KSAR  Wonju Array Be    52.27  63       P     06 47 03.0 +0.8
KSAR  Wonju Array Be    52.27  63 P     P     06 47 03.0 +0.8
KSRS  Korea Array       52.29  63 P     P     06 47 01.9 -0.5
      comp=Z,3.9nm,0.7s,baz=272,slow=7.3,SNR=18
KSRS                              LR    LR    07 11 32.8
      comp=Z,208nm,19.8s,baz=290,slow=39
      comp=Z,3.9nm,0.7s
LEM   Lembang           52.91 124 LR    LR    07 12 00.2
      comp=Z,123nm,19.0s,baz=145,slow=39
YAK   Yakutsk           53.64  32 LR    LR    07 11 29.0
      comp=Z,346nm,18.9s,baz=254,slow=38
YAK   Yakutsk           53.64  32 eP    P     06 47 11.5 -0.4
YAK                               e*PP  pP    06 47 14.6 -2.1
YAK                               e           06 49 11.2
YAK                               pmax  pmax
      comp=Z,13nm,0.9s
YAK                               pmax  pmax
      comp=Z,10.0nm,0.4s
YAK                               MLR   MLR
      comp=Z,313nm,15.0s
YAK                               MLR   MLR
      comp=E,253nm,17.0s
YAK                               MLR   MLR
      comp=N,123nm,14.0s
KLR   Kul'dur           54.02  48 LR    LR    07 13 19.8
      comp=N,418nm,19.0s,baz=268,slow=39
KLR   Kul'dur           54.02  48ceP    P     06 47 14.8 -0.2
KLR                               pmax  pmax
      comp=Z,6.0nm,0.7s
USRK  Ussuriysk Ar.     54.53  54 P     P     06 47 21.3 +2.6
USRK  Ussuriysk Ar.     54.53  54 LR    LR    07 14 02.3
      comp=Z,439nm,19.2s,baz=270,slow=40
USRK  Ussuriysk Ar.     54.53  54 P     P     06 47 21.3 +2.6
MYLDM Lahad Datu        54.66 104 P     P     06 47 21.0 +0.9
JOW   Kunigami          54.86  75 LR    LR    07 13 00.6
      comp=Z,165nm,19.5s,baz=292,slow=38
SPITS Spitsbergen Ar    55.17 349 P     P     06 47 22.6 -0.3
      comp=Z,7.2nm,1.0s,baz=106,slow=8.8,SNR=7.5
SPITS                             LR    LR    07 14 20.3
      comp=Z,164nm,18.7s,baz=92,slow=40
      comp=Z,7.2nm,1.0s
TIXI  Tiksi             55.49  20 LR    LR    07 15 01.0
      comp=Z,140nm,18.2s,baz=236,slow=40
EKA   Eskdalemuir Ar    55.93 320 P     P     06 47 27.7 -0.9
      comp=Z,1.4nm,0.5s,baz=108,slow=7.6,SNR=7.8
      comp=Z,1.4nm,0.5s
LSZ   Lusaka            56.27 225 LR    LR    07 13 18.1
      comp=Z,158nm,18.2s,baz=24,slow=38
GRNR  Gornyy            56.94  46⥣iP    P     06 47 36.3 +0.3
GRNR                              pmax  pmax
      comp=Z,8.0nm,0.9s
GRNR                              MLR   MLR
      comp=E,200nm,15.0s
GRNR                              MLR   MLR
      comp=N,120nm,13.0s
GRNR                              MLR   MLR
      comp=Z,260nm,14.0s
ESDC  Sonseca Array     58.05 301 P     P     06 47 42.3 -1.8
ESDC  Sonseca Array     58.05 301 P     P     06 47 42.4 -1.8
      comp=Z,1.4nm,0.9s,baz=57,slow=7.1,SNR=6.6
ESDC                              LR    LR    07 15 19.6
      comp=Z,54nm,19.4s,baz=127,slow=39
      comp=Z,1.4nm,0.9s
PAB   San Pablo         58.37 301 P     P     06 47 44.1 -2.2
PAB                               IAmb  IAmb  06 47 56.8
      comp=Z,10nm,1.1s
PAB   San Pablo         58.37 301 P     P     06 47 44.1 -2.2
PAB                               pmax  pmax
      comp=Z,10.0nm,1.1s
JMIC  Jan Mayen         59.01 338 LR    LR    07 14 39.5
      comp=Z,79nm,18.3s,baz=160,slow=37
DAV   Davao City (W)    59.90  98 LR    LR    07 14 34.2
      comp=Z,126nm,21.7s,baz=339,slow=37
MVO   Moncorvo          60.05 304 eP    P     06 48 02.8 +4.9
MDT   Midelt            60.13 294 LR    LR    07 19 38.3
      comp=Z,119nm,20.1s,baz=66,slow=42
MJAR  Matsushiro Arr    60.54  62 P     P     06 47 59.6 -1.7
      comp=Z,1.2nm,0.3s,baz=283,slow=8.4,SNR=5.4
MJAR                              LR    LR    07 16 13.5
      comp=Z,113nm,20.8s,baz=285,slow=38
      comp=Z,1.2nm,0.3s
POLO  Lamas de Olo      60.57 304 eP    P     06 48 06.8 +5.3
POLO                              i Amb       06 48 23.2
      comp=Z,18nm,1.6s
MTE   Manteigas         60.59 303 eP    P     06 48 07.6 +6.0
PCBR  Castelo Branco    60.67 302 eP    P     06 48 01.9 -0.2
PMRV  Marv??o           60.70 302 eP    P     06 48 06.6 +4.3
PMRV                              i Amb       06 48 19.4
      comp=Z,26nm,1.6s
PBAR  Barrancos         60.72 300 eP    P     06 48 07.3 +4.9
PBAR                              i Amb       06 48 13.2
      comp=Z,25nm,1.2s
TYV   Tymovskoe         60.86  45 eP    P     06 48 09.2 +6.0
TYV                               pmax  pmax
      comp=Z,9.0nm,0.9s
TYV                               pmax  pmax
      comp=Z,100nm,4.0s
KAPI  Kappang           61.22 113 LR    LR    07 18 41.8
      comp=Z,86nm,18.6s,baz=314,slow=40
PSARD Sardoal           61.24 302 eP    P     06 48 06.0  0.0
PSARD                             i Amb       06 49 05.3
      comp=Z,40nm,1.7s
TORD  Torodi Ar. Bea    61.34 270       P     06 48 06.0 -1.0
TORD                              IAmb  IAmb  06 48 10.5
      comp=Z,7.3nm,1.1s
TORD  Torodi Ar. Bea    61.34 270 P     P     06 48 05.0 -2.0
      comp=Z,4.8nm,1.0s,baz=53,slow=8.8,SNR=7.7
      comp=Z,4.8nm,1.0s
PCAS  Casmilo, Conde    61.38 303 eP    P     06 48 10.5 +3.5
YSS   Yuzhno-Sakhali    61.60  49 eP    P     06 48 08.6 +0.3
YSS                               pmax  pmax
      comp=Z,20nm,1.0s
NOR   Nord              61.69 350 eP    P     06 48 08.4  0.0
NOR                               IAmb  IAmb  06 48 15.6
      comp=Z,4.3nm,0.8s
DAG   Danmarks Havn     62.01 345 eP    P     06 48 10.0 -0.5
DAG                               IAmb  IAmb  06 48 15.3
      comp=Z,5.8nm,0.6s
ASAJ  Asahikawa         62.07  52 LR    LR    07 16 36.0
      comp=Z,185nm,19.9s,baz=290,slow=38
DBG   Daneborg          62.54 342 eP    P     06 48 13.0 -1.1
DBG                               IAmb  IAmb  06 48 19.1
      comp=Z,2.0nm,0.8s
SCO   Scoresbysund      63.48 338 eP    P     06 48 24.5 +4.1
SCO                               IAmb  IAmb  06 48 27.2
      comp=Z,5.0nm,1.1s
MA2   Magadan           63.97  34 LR    LR    07 18 30.8
      comp=Z,239nm,19.0s,baz=278,slow=38
SEY   Seymchan          64.12  30 LR    LR    07 17 33.7
      comp=Z,206nm,18.9s,baz=268,slow=37
SEY   Seymchan          64.12  30ceP    P     06 48 25.7 +1.0
SEY                               pmax  pmax
      comp=Z,6.0nm,1.0s
BORG  Borgarnes         64.16 332 LR    LR    07 18 34.3
      comp=Z,274nm,18.3s,baz=76,slow=38
LBTB  Lobatse           65.26 220       P     06 48 33.6 +0.8
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LBTB  Lobatse           65.26 220 LR    LR    07 15 57.6
      comp=Z,113nm,21.4s,baz=39,slow=35
LBTB  Lobatse           65.26 220 P     P     06 48 33.6 +0.8
LBTB                              pmax  pmax
      comp=Z,18nm,1.2s
KGCAE Kacgae            65.66 224 P     P     06 48 36.1 +0.6
TSUM  Tsumeb            66.08 231 LR    LR    07 17 38.1
      comp=Z,100nm,19.6s,baz=149,slow=36
JCJ   Chichijima        66.57  71 LR    LR    07 21 50.6
      comp=Z,82nm,19.1s,baz=270,slow=40
SUMG  Summit            68.00 342       P     06 48 50.3 +0.2
SUMG  Summit            68.00 342 P     P     06 48 50.3 +0.2
SUMG                              pmax  pmax
      comp=Z,7.0nm,0.7s
SUMG  Summit            68.00 342 eP    P     06 48 49.2 -0.9
SUMG                              IAmb  IAmb  06 48 55.2
      comp=Z,5.8nm,0.9s
BOSA  Boshof            68.24 218 P     P     06 48 50.1 -1.7
      comp=Z,2.5nm,0.8s,baz=38,slow=7.7,SNR=15
BOSA                              LR    LR    07 17 25.2
      comp=Z,120nm,20.1s,baz=33,slow=35
      comp=Z,2.5nm,0.8s
BILL  Bilibino          68.36  23 P     P     06 48 52.6 +0.7
NEEM  North Greenlan    68.70 348 eP    P     06 48 55.5 +1.2
NEEM                              IAmb  IAmb  06 49 01.0
      comp=Z,5.6nm,0.8s
PETK  Petropavlovsk-    69.35  40 P     P     06 48 56.8 -1.5
      comp=Z,0.4nm,0.4s,baz=286,slow=5.8,SNR=4.2
PETK                              LR    LR    07 21 35.5
      comp=Z,180nm,18.2s,baz=290,slow=38
      comp=Z,0.4nm,0.4s
ICESG Greenland Ices    69.75 338 eP    P     06 49 00.5 -0.5
ICESG                             IAmb  IAmb  06 49 07.9
      comp=Z,15nm,1.4s
DBIC  Dimbokro          69.95 267 LR    LR    07 24 27.7
      comp=Z,106nm,18.9s,baz=54,slow=40
MBWA  Marble Bar        71.16 127 P     P     06 49 09.0 -0.7
FITZ  Fitzroy Crossi    73.58 121 LR    LR    07 25 42.1
      comp=Z,66nm,18.5s,baz=297,slow=39
SFJD  Kangerlussuaq     74.37 339 LR    LR    07 25 42.2
      comp=Z,87nm,18.3s,baz=51,slow=39
RES   Resolute Bay      77.10 355 LR    LR    07 27 54.0
      comp=Z,82nm,18.6s,baz=22,slow=39
NWAO  Narrogin (SRO)    77.52 138 LR    LR    07 21 30.6
      comp=Z,76nm,20.8s,baz=280,slow=34
SHEM  Shemya Is, Ala    78.51  36 LR    LR    07 28 46.8
      comp=Z,96nm,18.7s,baz=322,slow=39
D19K  Kuna River        78.75  15 IAmb  IAmb  06 50 10.2
      comp=Z,12nm,1.1s
E19K  Redstone River    79.78  16 IAmb  IAmb  06 50 15.5
      comp=Z,4.3nm,0.7s
F21K  Alatna River      80.83  15       P     06 50 04.6 +0.3
G19K  Purcell Mounta    80.85  16 IAmb  IAmb  06 50 22.4
      comp=Z,6.0nm,0.8s
E23K  Chandalar         80.93  13 IAmb  IAmb  06 50 51.2
      comp=Z,8.2nm,1.2s
H17K  Granite Mounta    81.06  18 IAmb  IAmb  06 50 31.8
      comp=Z,7.2nm,1.1s
WRA   Warramunga Arr    81.35 118 P     P     06 50 08.7 +0.8
WRA   Warramunga Arr    81.35 118 P     P     06 50 06.6 -1.2
      comp=Z,2.6nm,0.7s,baz=316,slow=4.7,SNR=16
WRA                               LR    LR    07 32 13.3
      comp=Z,40nm,18.6s,baz=228,slow=40
      comp=Z,2.6nm,0.7s
G23K  Bananza Creek     82.00  14 P     P     06 50 11.5 +0.9
FRB   Frobisher Bay     82.07 341 LR    LR    07 29 29.1
      comp=Z,98nm,18.1s,baz=67,slow=38
H21K  Melozitna Rive    82.28  15 IAmb  IAmb  06 50 29.8
      comp=Z,8.7nm,1.1s
BMAR  Burnt Mountain    82.42  11 P     P     06 50 13.4 +0.6
G24K  Hadweenzic Riv    82.53  13 IAmb  IAmb  06 50 39.9
      comp=Z,9.8nm,1.1s
H23K  Yukon River       82.86  14 IAmb  IAmb  06 50 32.9
      comp=Z,4.9nm,1.0s
AS31  Alice Springs     83.08 121 P     P     06 50 16.9  0.0
ASAR  Alice Springs     83.08 121       P     06 50 16.8  0.0
ASAR  Alice Springs     83.08 121 P     P     06 50 16.3 -0.6
      comp=Z,2.4nm,0.6s,baz=306,slow=4.8,SNR=18
ASAR                              LR    LR    07 28 43.2
      comp=Z,46nm,20.4s,baz=272,slow=37
      comp=Z,2.4nm,0.6s
ASAR  Alice Springs     83.08 121 P     P     06 50 16.8  0.0
INK   Inuvik            83.19   7 IAmb  IAmb  06 50 40.1
      comp=Z,4.9nm,0.9s
INK   Inuvik            83.19   7 LR    LR    07 32 48.9
      comp=Z,81nm,19.4s,baz=308,slow=40
H24K  Noodor Dome       83.20  13 IAmb  IAmb  06 50 47.7
      comp=Z,9.2nm,1.3s
G27K  Doyon Strip       83.48  11       P     06 50 18.7 +0.5
G27K                              IAmb  IAmb  06 50 23.8
      comp=Z,3.7nm,0.7s
L16K  Owhat River       83.67  20 IAmb  IAmb  06 50 36.1
      comp=Z,6.0nm,0.8s
K20K  Telida            83.87  17 IAmb  IAmb  06 50 38.2
      comp=Z,4.5nm,0.9s
F31M  Tsiigehtchic      83.99   8 IAmb  IAmb  06 50 42.3
      comp=Z,6.5nm,0.8s
H27K  Steamboat Moun    84.03  11 IAmb  IAmb  06 50 53.1
      comp=Z,5.3nm,0.9s
G30M  tAoh Zraii Nji    84.12   9 IAmb  IAmb  06 51 08.1
      comp=Z,7.9nm,1.1s
CAST  Castle Rocks      84.32  16       P     06 50 22.9 +0.4
CAST                              IAmb  IAmb  06 50 52.7
      comp=Z,7.0nm,1.0s
ILAR  Eielson Array     84.34  14       P     06 50 22.4 -0.2
ILAR  Eielson Array     84.34  14 P     P     06 50 21.6 -1.0
      comp=Z,0.5nm,0.6s,baz=312,slow=4.2,SNR=7.5
ILAR                              LR    LR    07 33 07.9
      comp=Z,70nm,19.6s,baz=324,slow=39
      comp=Z,0.5nm,0.6s
ILAR  Eielson Array     84.34  14 P     P     06 50 22.4 -0.2
I26K  Coal Creek Min    84.59  12 IAmb  IAmb  06 50 55.1
      comp=Z,4.4nm,0.9s
I28M  Miner Creek       85.01  11 IAmb  IAmb  06 50 50.8
      comp=Z,4.8nm,0.7s
J26L  Joseph Creek      85.24  12       P     06 50 26.9 -0.4
J26L                              IAmb  IAmb  06 50 60.0
      comp=Z,4.7nm,0.8s
K24K  Donnelly Dome     85.42  14 P     P     06 50 28.1  0.0
K24K                              IAmb  IAmb  06 50 45.3
      comp=Z,7.0nm,0.9s
H31M  Peel River        85.49   8 IAmb  IAmb  06 51 03.0
      comp=Z,6.9nm,1.1s
SCRK  Sand Creek        85.63  13 IAmb  IAmb  06 51 14.0
      comp=Z,5.5nm,1.0s
I30M  Mount Dempster    85.77   9       P     06 50 30.2 +0.2
I30M                              IAmb  IAmb  06 50 45.4
      comp=Z,3.4nm,0.8s
N19K  Bonanza Creek     85.85  19       P     06 50 30.6 +0.2
DAWY  Dawson            86.38  11 IAmb  IAmb  06 50 57.2
      comp=Z,3.5nm,0.8s
PMG   Port Moresby      86.64 102 LR    LR    07 36 22.6
      comp=Z,18nm,18.1s,baz=132,slow=41
K29M  Barlow Dome       86.89  10       P     06 50 35.5  0.0
K29M                              IAmb  IAmb  06 50 55.4
      comp=Z,5.4nm,0.9s
L29M  L29M              87.48  11       P     06 50 38.5 +0.2
L29M                              IAmb  IAmb  06 51 18.9
      comp=Z,6.8nm,1.2s
M29M  Somme Creek       88.05  11 P     P     06 50 41.7 +0.6
M29M                              IAmb  IAmb  06 50 47.0
      comp=Z,4.3nm,0.8s
SCHQ  Schefferville     88.35 335 LR    LR    07 31 58.5
      comp=Z,85nm,20.5s,baz=44,slow=37
CTGM  Chitina Glacie    88.89  13 P     P     06 50 46.1 +1.0
CTGM                              IAmb  IAmb  06 51 12.0
      comp=Z,3.6nm,0.8s
KDAK  Kodiak Island     88.91  19 P     P     06 50 45.5 +0.5
KDAK  Kodiak Island     88.91  19 LR    LR    07 36 13.1
      comp=Z,132nm,18.6s,baz=320,slow=39
KDAK  Kodiak Island     88.91  19 P     P     06 50 45.5 +0.5
KDAK                              pmax  pmax
      comp=Z,15nm,1.3s
MMPY  Sheldon Lake,     88.94   8 P     P     06 50 46.3 +1.1
MMPY                              IAmb  IAmb  06 51 09.5
      comp=Z,4.2nm,1.0s
HYT   Haines Junctio    89.73  11 P     P     06 50 49.1  0.0
HYT                               IAmb  IAmb  06 51 18.6
      comp=Z,3.5nm,0.9s
BBOO  Buckleboo         89.74 128 P     P     06 50 50.2 +1.0
YKA   Yellowknife Ar    90.11   0 P     P     06 50 51.4 +0.8
      comp=Z,0.7nm,0.8s,baz=354,slow=5.2,SNR=8.5
YKA                               LR    LR    07 37 34.4
      comp=Z,81nm,18.2s,baz=3.0,slow=40
      comp=Z,0.7nm,0.8s
YKA   Yellowknife Ar    90.11   0 i P   P     06 50 53.2 +2.6
YKA                               pmax  pmax
```

	comp=Z,1.0nm,0.8s						
P33M	Teslin, Yukon	91.06	9		P	06 50 55.2	+0.1
P33M				IAmb	IAmb	06 51 22.0	
	comp=Z,3.4nm,0.9s						
DLBC	Dease Lake	93.15	8	LR	LR	07 39 17.7	
	comp=Z,64nm,18.1s,baz=350,slow=40						
STKA	Stephens Creek	93.21	124	LR	LR	07 36 51.0	
	comp=Z,68nm,18.8s,baz=211,slow=38						
BBB	Bella Bella	99.50	9	LR	LR	07 44 12.4	
	comp=Z,36nm,18.2s,baz=1.0,slow=40						
TXAR	Lajitas Array	122.42	349	PKP	PKPdf	06 56 46.3	-0.4
	comp=Z,0.2nm,0.6s,baz=10,slow=2.1,SNR=1.7						

*OSPL **05** 06:39:26.6±2.0, 18.°66N×71.°58W, h0^{km}±25^{km}, ML1.3*
*SDD **05** 06:39:26.3±1.3, 18.°69N×71.°61W, h23^{km}±10^{km}, MD2.7, ML1.7*
ISC 05 06:39:25.7±1.3, 18.°67N±0.°03×71.°59W±0.°03, h20^{km}±7^{km}, n13, σ0^{s}.67/22, 6C-7D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEDR	Neiba UASD	0.25	138	⇑ePg	Pb	06 39 31.3	-0.3
NEDR				⇓eSg	Sb	06 39 36.0	+0.4
NEDR				IAML		06 39 37.1	
	comp=N,80nm,0.3s						
JIDR	Jimani	0.30	234	⇓ePg	Pb	06 39 31.9	-0.5
JIDR				⇑eSg	Sb	06 39 37.8	+0.8
JIDR				IAML		06 39 38.1	
	comp=N,217nm,0.2s						
LODU1	El Espartillar	0.33	161	i P	Pb	06 39 32.5	-0.5
LODU1				IAML		06 39 40.3	
	comp=Z,41nm,0.3s						
SDDR	Presa de Saban	0.42	43	⇑ePg	Pb	06 39 33.8	-0.7
SDDR				⇑eSg	Sb	06 39 40.3	-0.2
SDDR				IAML		06 39 42.9	
	comp=N,14nm,0.8s						
SDDR	Presa de Saban	0.42	43	i P	Pb	06 39 33.8	-0.7
SDDR				eS	Sb	06 39 40.3	-0.2
SDDR				IAML		06 39 43.3	
	comp=Z,14nm,0.2s						
REDR	Restauracion	0.53	21	⇓ePg	Pb	06 39 37.1	+0.7
REDR				⇓eSg	Sn	06 39 45.9	-0.6
REDR				IAML		06 39 46.2	
	comp=N,38nm,0.1s						
PODR	Polo	0.58	150	⇑ePg	Pb	06 39 36.8	-0.6
PODR				⇓eSg	Sb	06 39 46.2	+1.0
PODR				IAML		06 39 46.7	
	comp=N,39nm,0.5s						
PODR	Polo	0.58	150	i P	Pb	06 39 36.8	-0.6
PODR				eS	Sb	06 39 46.1	+0.8
PAPH	Port-au-Prince	0.69	258	i P	Pb	06 39 38.5	-0.6
PAPH				eS	Sb	06 39 49.2	+1.1
PAPH				IAML		06 39 51.6	
	comp=Z,13nm,0.5s						
LOBH	Bahia de las A	0.80	183	i P	Pb	06 39 40.6	-0.5
LOBH				IAML		06 40 03.6	
	comp=Z,33nm,1.5s						
LOVI	El Cajuil, Ovi	0.89	166	i P	Pb	06 39 41.9	-0.6
LOVI				IAML		06 39 59.6	
	comp=Z,55nm,0.8s						
ABDR	Alto Bandera	0.92	81	⇓ePg	Pb	06 39 43.4	+0.1
ABDR				⇑eSg	Sb	06 39 55.9	+0.6
ABDR				IAML		06 39 59.0	
	comp=N,15nm,0.4s						
HATOM	Hato Mayor del	2.10	86	⇓ePg	Pb	06 40 03.2	+0.1
HATOM				IAML		06 40 34.8	
	comp=N,8.1nm,2.5s						

*TIR **05** 06:50:50.6, 40.°91N×20.°34E, h9^{km}±1^{km}, Ml2.5/10*
*ATH **05** 06:50:51.8, 41.°04N×20.°43E, h8^{km}±2^{km}, ML2.6/14, Manual Solution by G.Panopoulou First location: 2019/06/05 06:52:03, This location: 2020/10/15 12:46:06 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*PDG **05** 06:50:52.0±0.2, 40.°95N×20.°36E, h4^{km}, ML2.7/10, Error ellipse: s-maj=0.4km s-min=0.9km az=0.0*
*SKO **05** 06:50:52.9, 40.°95N×20.°36E, h10^{km}, ML2.6*
*THE **05** 06:50:52.6, 41°N±2°×2°0E±°, h0^{km}±3^{km}, M2.4/9, MLh2.4/9*
*BEO **05** 06:50:53.5±0.5, 40.°98N×20.°39E, h5^{km}±2^{km}, ML2.4/12*
ISC 05 06:50:52.2±1.1, 40.°96N±0.°01×20.°39E±0.°02, h4^{km}±9^{km}, n83, σ0^{s}.88/133, 9C-12D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHR	Ohrid	0.35	63	i Pg	Pg	06 50 59.9	+1.0
OHR				i Sg	Sb	06 51 06.2	-0.6
OHR				i Lg	Lg	06 51 06.4	
	comp=N,368nm,0.3s						
OHR				i Lg	Lg	06 51 07.0	
	comp=E,799nm,0.6s						
OHR	Ohrid	0.35	63	ePg	Pg	06 50 59.9	+1.0
OHR				eSg	Sb	06 51 05.7	-1.1
KBN	Korca	0.45	138	⇓iPg	Pg	06 51 00.7	-0.1
KBN				Sg	Sg	06 51 05.8	-0.8
KBN				AML	AML	06 51 09.6	
	comp=E,4.6nm,0.4s						
TIR	Tirane	0.56	315	⇑ePg	Pg	06 51 01.8	-1.0
TIR				Sg	Sb	06 51 11.6	-1.3
TIR				AML	AML	06 51 12.8	
	comp=E,1.0nm,0.2s						
TIR	Tirane	0.56	315	i Pg	Pg	06 51 02.1	-0.8
TIR				i Sg	Sb	06 51 11.7	-1.2
TIR	Tirane	0.56	315	ePg	Pg	06 51 01.9	-1.0
TIR				eSg	Sg	06 51 11.3	+1.1
TIR	Tirane	0.56	315	P	Pg	06 51 02.0	-0.8
TIR				S	Sg	06 51 09.9	-0.2
PHP	Peshkopia	0.73	3	⇓iPg	Pg	06 51 05.6	-0.6
PHP				Sg	Sb	06 51 17.3	-0.6
PHP				AML	AML	06 51 18.4	
	comp=E,0.7nm,0.4s						
NEST	Nestorio	0.74	137	⇑ePg	Pg	06 51 05.4	-0.9
NEST				Sg	Sg	06 51 15.6	-0.2
NEST				AML	AML	06 51 24.5	
	comp=E,0.9nm,0.5s						
NEST	Nestorio	0.74	137	P	Pg	06 51 06.3	0.0
NEST				S	Sb	06 51 17.6	-0.4
NEST	Nestorio	0.74	137	P	Pg	06 51 06.5	+0.2
NEST				S	Sb	06 51 18.0	-0.1
FNA	Florina	0.77	103	⇓iPg	Pg	06 51 06.8	-0.1
FNA				Sg	Sb	06 51 19.0	+0.1
FNA				AML	AML	06 51 21.4	
	comp=E,0.7nm,0.4s						
FNA	Florina	0.77	103	P	Pg	06 51 06.8	-0.1
FNA				S	Sb	06 51 18.4	-0.5
FNA	Florina	0.77	103	i Pg	Pg	06 51 06.7	-0.2
FNA				i Sg	Sb	06 51 19.2	+0.3
FNA	Florina	0.77	103	P	Pg	06 51 06.8	-0.1
FNA				S	Sg	06 51 17.0	+0.2
LSK	Leskovik	0.82	169	⇓iPg	Pg	06 51 06.2	-1.7
LSK				Sg	Sg	06 51 17.8	-0.7
LSK				AML	AML	06 51 23.4	
	comp=E,1.7nm,0.4s						
PENT	Pentalofos	0.95	143	P	Pg	06 51 10.1	-0.3
SRN	Sarande	1.11	196	⇓ePn	Pg	06 51 12.5	-1.1
SRN				Sn	Sg	06 51 27.9	0.0
SRN				AML	AML	06 51 33.2	
	comp=E,0.4nm,0.5s						
PUK	Puka	1.15	341	⇑iPn	Pg	06 51 12.9	-1.3
PUK				Sn	Sn	06 51 30.6	-0.7
PUK				AML	AML	06 51 38.7	
	comp=E,0.6nm,0.5s						
KZN	Kozani	1.23	121	P	Pb	06 51 15.2	-0.8
KZN				S	Sb	06 51 32.8	+0.5
KPRO	Kipourio	1.24	143	P	Pn	06 51 15.8	-0.6
KPRO				S	Sn	06 51 34.5	+0.9
KPRO	Kipourio	1.24	143	P	Pn	06 51 15.8	-0.6
KPRO				S	Sn	06 51 33.6	0.0
KEK	Kerkira	1.32	200	P	Pb	06 51 17.6	+0.1
KEK				S	Sn	06 51 37.5	+2.1
KEK	Kerkira	1.32	200	P	Pb	06 51 17.6	+0.1
KEK				S	Sn	06 51 36.6	+1.2
ULC	Ulcinj	1.33	320	⇑ePn	Pn	06 51 15.9	-1.6
ULC	Ulcinj	1.33	320	i Pg	Pn	06 51 17.0	-0.5
ULC	Ulcinj	1.33	320	ePg	Pn	06 51 16.0	-1.5
ULC				i Sg	Sn	06 51 37.0	+1.4
IGT	Igoumenitsa	1.42	182	⇑iPn	Pb	06 51 19.4	+0.1
IGT				Sn	Sn	06 51 37.3	-0.7
IGT				AML	AML	06 51 42.6	
	comp=E,0.3nm,0.5s						
IGT	Igoumenitsa	1.42	182	P	Pn	06 51 19.1	+0.3
IGT				S	Sg	06 51 39.6	+1.8
IGT	Igoumenitsa	1.42	182	P	Pn	06 51 18.8	0.0
IGT				S	Sg	06 51 39.3	+1.4
KTI	Kastanea	1.43	113	P	Pn	06 51 18.9	-0.1
BCI	Bajram Curri	1.43	350	⇓ePn	Pn	06 51 18.7	-0.3
BCI				Sn	Sg	06 51 40.2	+2.0
BCI				AML	AML	06 51 48.2	
	comp=E,0.8nm,0.5s						
BCI	Bajram Curri	1.43	350	S	Sg	06 51 39.9	+1.7
DRME	Dracevica, Mon	1.53	324	⇓iPn	Pn	06 51 20.4	+0.2
DRME	Dracevica, Mon	1.53	324	ePg	Pn	06 51 20.2	0.0
DRME				i Sg	Sg	06 51 44.0	+2.7
VAY	Valandovo	1.69	77	i Pn	Pg	06 51 24.7	+0.2
VAY	Valandovo	1.69	77	ePn	Pb	06 51 24.3	+0.6
VAY				eSn	Sb	06 51 45.6	+0.3
PDG	Podgorica	1.70	330	ePn	Pb	06 51 23.7	-0.3
PDG				eSn	Sb	06 51 46.1	+0.3
PDG	Podgorica	1.70	330	⇓iPn	Pb	06 51 23.9	-0.1
PDG				i Sn	Sg	06 51 48.3	+1.4
SCTE	Santa Cesarea	1.71	240	P	Pn	06 51 22.4	-0.3
TETR	Tetrakomo, Epi	1.75	157	P	Pn	06 51 24.1	+0.8
TETR				S	Sb	06 51 47.6	+0.5
BUM	Brajici-Budva	1.75	321	⇑iPn	Pn	06 51 23.7	+0.3
BUM	Brajici-Budva	1.75	321	ePn	Pn	06 51 23.8	+0.4
BUM				i Sn	Sg	06 51 49.5	+1.0
LIT	Litokhoron	1.81	117	i Pn	Pb	06 51 25.3	-0.7
LIT	Litokhoron	1.81	117	P	Pn	06 51 23.4	-0.8
THL	Klokotos Trika	1.86	138	P	Pn	06 51 25.1	+0.2
THL				S	Sn	06 51 49.5	+0.7
TYRN	Tyrnavos	1.88	131	P	Pn	06 51 25.4	+0.4
TYRN	Tyrnavos	1.88	131	P	Pn	06 51 24.6	-0.4
TYRN				S	Sn	06 51 48.2	-0.9
KNT	Kendrikon	1.91	83	P	Pn	06 51 25.1	-0.4
KNT	Kendrikon	1.91	83	i Pn	Pn	06 51 25.5	0.0
KNT	Kendrikon	1.91	83	P	Pn	06 51 24.3	-1.2
KNT				S	Sn	06 51 48.3	-1.6
CEME	Cevo	1.94	326	⇑iPn	Pn	06 51 26.0	+0.1
CEME	Cevo	1.94	326	ePn	Pn	06 51 25.6	-0.3
CEME				i Sn	Sg	06 51 54.4	0.0
IVA	Berane	1.95	349	⇓iPn	Pn	06 51 27.1	+1.0
IVA				i Sn	Sg	06 51 55.3	+0.4
KOME	Kolasin	2.00	341	⇓iPn	Pn	06 51 27.5	+0.6
KOME				i Sn	Sg	06 51 56.1	-0.5
HCY	Herceg Novi	2.06	317	⇑eP	Pb	06 51 29.2	-1.0
HCY	Herceg Novi	2.06	317	ePn	Pn	06 51 28.1	+0.5
HCY				i Sn	Sb	06 51 56.9	+0.8
HORT	Hortiatis	2.09	99	P	Pn	06 51 27.0	-1.0
TSLK	Tsoukalades, L	2.14	174	P	Pn	06 51 29.3	+0.7
BARS	Barje	2.14	29	ePn	Pb	06 51 30.4	-1.1
BARS				eSn	Sn	06 51 55.6	-0.1
LKD2	Lefkada island	2.17	174	⇑iPn	Pn	06 51 29.9	+0.7
LKD2				Sn	Sb	06 51 59.8	+0.4
LKD2	Lefkada island	2.17	174	P	Pn	06 51 29.8	+0.7
LKD2	Lefkada island	2.17	174	P	Pn	06 51 29.7	+0.6
LKD2				S	Sb	06 51 58.8	-0.6
BOSS	Bosilegrad	2.19	45	ePn	Pb	06 51 31.1	-1.3
SJES	Sjenica	2.33	352	ePn	Pn	06 51 32.2	+0.9
SJES				eSn	Sn	06 52 01.5	+1.1
SELS	Selova	2.33	13	ePn	Pn	06 51 31.3	0.0
SELS				eSn	Sn	06 52 01.2	+0.9
TREB	Trebinje	2.33	320	ePn	Pb	06 51 33.4	-1.3
MAKR	Makrakomi, Fth	2.36	145	P	Pn	06 51 31.7	0.0
BRY	Bratogost	2.39	325	⇓ePn	Pn	06 51 32.7	+0.6
BRY	Bratogost	2.39	325	ePn	Pn	06 51 33.1	+0.9
BRY				i Sn	Sb	06 52 05.1	-0.5
AGG	Agios Georgios	2.44	142	P	Pn	06 51 33.0	+0.2
FSK	Fiskardo	2.50	177	P	Pn	06 51 33.5	0.0
UPM	Unac-Piva	2.50	334	⇓ePn	Pn	06 51 35.4	+1.5
UPM	Unac-Piva	2.50	334	ePn	Pn	06 51 34.5	+0.7
UPM				i Sn	Sb	06 52 07.6	-1.4
IVAS	Ivanjica	2.62	356	ePn	Pn	06 51 36.3	+0.9
GOCS	Kraljevo Serbi	2.63	8	ePn	Pn	06 51 35.5	0.0
GOCS				eSn	Sn	06 52 09.2	+1.3
ANX	Ano Chora	2.64	153	P	Pn	06 51 36.2	+0.6
VTS	Vitosha	2.70	51	ePn	Pn	06 51 36.3	-0.2
STON	Ston	2.77	315	ePn	Pn	06 51 39.3	+1.9
VLS	Valsamata	2.78	177	P	Pn	06 51 37.8	+0.3
ZAPS	Zavoj	2.85	35	ePn	Pn	06 51 38.6	+0.1
ZAPS				eSn	Sn	06 52 13.1	-0.3
GRUS	Gruza	2.94	5	ePn	Pn	06 51 40.0	+0.3
BBLS	Lazi&#263i	3.00	346	ePn	Pn	06 51 42.3	+1.8

*NNC **05** 06:51:51.0±2.6, 37.°92N×71.°32E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=19.5km s-min=15.5km az=166.0*
ISC 05 06:51:50.1±3.6, 37.°6N±0.°2×71.°3E±0.°1, h35^{km}, n11, σ1^{s}.38/16, 8C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	4.90	22	P	Pn	06 53 03.0	+1.4
	SNR=44						
EKS2	Erkin-Say	5.41	20	P	Pn	06 53 10.1	+1.7
	SNR=12						
KK31	Karatay Array	5.52	354	⇑Pn	Pn	06 53 11.1	+1.2
	1.6nm,0.3s,baz=179,slow=14,SNR=26						
KK31				⇓Sn	Sn	06 54 12.9	+0.8
	2.1nm,0.2s,baz=223,slow=34,SNR=4.8						
KK31				⇑Lg	Lg	06 54 36.7	
	6.5nm,0.6s						
AAK	Ala-Archa	5.61	25	P	Pn	06 53 08.0	-3.1
	SNR=6.7						
AAK	Ala-Archa	5.61	25	⇑Pn	Pn	06 53 12.0	+0.8
	0.5nm,0.4s						
AAK				⇑Sn	Sn	06 54 15.0	+0.6
	4.5nm,0.7s						
AAK				⇑Lg	Lg	06 54 40.0	
	2.9nm,1.1s						
CHMS	Chumysh	6.02	25	P	Pn	06 53 17.9	+1.2
	SNR=6.5						
CHMS	Chumysh	6.02	25	⇑Pn	Pn	06 53 17.6	+1.0
	5.4nm,0.3s						
CHMS				⇑Sn	Sn	06 54 23.9	-0.4
	6.4nm,0.6s						
USP	Ospenovka	6.18	23	P	Pn	06 53 19.5	+0.7
	SNR=9.9						
TKM2	Tokmak 2	6.27	31	P	Pn	06 53 21.0	+0.8
	SNR=8.2						
TKM2	Tokmak 2	6.27	31	⇓Pn	Pn	06 53 20.2	0.0
	2.7nm,0.4s						
TKM2				⇑Sn	Sn	06 54 30.0	-0.7
	4.6nm,0.7s						
AB31	Akbulak array	14.23	329	Pn	Pn	06 55 08.5	-0.5
	0.7nm,0.4s,baz=149,slow=11,SNR=29						
AB31				⇓Sn	Sn	06 57 44.0	-1.6
	1.2nm,0.6s,baz=157,slow=22,SNR=4.5						

*AEIC **05** 06:58:37.1±1.0, 53.°8N±0.°1×165.°8W±0.°1, h70^{km}±8^{km}, Error ellipse: s-maj=18.4km s-min=6.6km az=155.0*
NEIC 05 06:58:37.9±1.0, 53.°7N±0.°2×165.°8W±0.°2, h64^{km}±21^{km}, ML3.0/10, ML3.0(AEIC), Error ellipse: s-maj=32.9km s-min=4.1km az=153.0, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKBBA	Akutan Broad B	0.40	347		Pn	06 58 49.1	-0.1
AKBBA					Sn	06 58 58.0	+0.6
ZRO	Akutan Zero	0.40	343		Pn	06 58 49.2	0.0
ZRO					Sn	06 58 58.0	+0.5
AKMO	Akutan Morgan	0.40	341		Pn	06 58 49.1	-0.1
AKMO					Sn	06 58 58.0	+0.5
AHB	Akutan Harbor	0.40	357		Pn	06 58 49.0	-0.3
AHB					Sn	06 58 58.3	+0.8
AKUT	Akutan	0.42	1		Pn	06 58 49.4	0.0
AKUT				IAML		06 59 02.9	
	comp=N,740nm,0.3s						
AKUT	Akutan	0.42	1		Sn	06 58 58.3	+0.6
AKRB	Akutan Reef Bi	0.45	338		Pn	06 58 49.5	-0.2
AKRB					Sn	06 58 58.8	+0.5
LVA	Lava Point	0.47	342		Pn	06 58 49.5	-0.4
LVA				IAML		06 59 11.6	
	comp=E,496nm,0.6s						
LVA				IAML		06 59 11.6	
	comp=N,758nm,0.6s						
LVA	Lava Point	0.47	342		Sn	06 58 59.0	+0.3
AKGG	Akutan Green G	0.50	346		Sn	06 58 59.5	+0.3
MTBL	Makushin Table	0.59	296		Pn	06 58 51.2	0.0
MTBL					Sn	06 59 01.1	+0.2
MGOD	Makushin Gods	0.65	278		Sn	06 59 02.5	+0.5
MAPS	Pakushin South	0.69	278		Sn	06 59 03.3	+0.4
WEBT	Westdahl Beart	1.07	34		Pn	06 58 56.6	-0.4
WEBT					Sn	06 59 11.5	+0.3
OKFG	Magazine Ridge	1.30	257		Sn	06 59 17.0	+0.4
OKNC	Okmok New Cone	1.42	261		Pn	06 59 01.0	-0.6
OKNC					Sn	06 59 19.2	-0.1
SSLS	Shishaldin Sou	1.45	46		Pn	06 59 01.9	-0.2
SSLS					Sn	06 59 20.2	+0.1
ISLZ	Isanotski Laza	1.59	49		Pn	06 59 03.5	-0.3
ISLZ					Sn	06 59 23.6	+0.2
ISNN	Isanotski Nort	1.63	46		Pn	06 59 04.5	+0.1
ISNN					Sn	06 59 25.5	+1.2
NIKH	Nikolski High	1.98	249		Pn	06 59 09.1	0.0
NIKH				IAML		06 59 34.2	
	comp=E,110nm,0.6s						
NIKH	Nikolski High	1.98	249		Sn	06 59 33.5	+0.5
PS1A	Pavlof South-1	2.91	52		Pn	06 59 21.8	0.0
SDPT	Sand Point	3.50	60		Pn	06 59 29.8	0.0
SDPT					Sn	07 00 09.7	-0.2
SDPT	Sand Point	3.50	60	IAML		07 00 23.3	
	comp=N,41nm,0.5s						
CNBA	Chernabura Isl	3.80	71		Pn	06 59 32.8	-1.1
CNBA	Chernabura Isl	3.80	71	IAML		07 00 36.1	
	comp=E,20nm,1.8s						

*IDC **05** 07:17:48.4±2.5, 20.°36S×178.°29W, h586^{km}±23^{km}, mb3.0/5, mbtmp3.9/6, Error ellipse: s-maj=36.4km s-min=27.5km az=129.0*
ISC 05 07:17:48.3±1.3, 20.°4S±0.°2×178.°3W±0.°3, h587^{km}, n7, σ0^{s}.55/8, mb3.5/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.33	306	P	P	07 19 15.5	+0.1
	12nm,0.5s,baz=190,slow=8.7,SNR=14						
ASAR	Alice Springs	44.29	257	P	P	07 25 07.2	-0.1
	2.4nm,0.5s,baz=97,slow=7.4,SNR=30						
ASAR				PcP	PcP	07 26 39.3	+0.6
	0.4nm,0.6s,baz=96,slow=3.6,SNR=4.6						
	2.4nm,0.5s						
WRA	Warramunga Arr	44.35	262	P	P	07 25 07.8	-0.1
	1.0nm,0.3s,baz=97,slow=7.0,SNR=30						
	1.0nm,0.3s						
QSPA	South Pole Qui	69.72	180	P	P	07 28 00.1	+0.1
	0.6nm,0.7s,baz=128,slow=2.6,SNR=1.4						
	0.6nm,0.7s						
MJAR	Matsushiro Arr	69.93	324	P	P	07 28 01.6	0.0
	0.9nm,0.5s,baz=130,slow=4.9,SNR=2.1						
	0.9nm,0.5s						
ILAR	Eielson Array	88.23	13	P	P	07 29 37.5	+0.2
	0.2nm,0.6s,baz=205,slow=5.0,SNR=2.6						
	0.2nm,0.6s						
AKASG	Malin Array Be	142.75	331	PKP	PKPdf	07 36 14.4	-1.0
	2.4nm,0.4s,baz=23,slow=2.3,SNR=23						

*IDC **05** 07:18:20.6±2.6, 21.°65S×68.°53W, h90^{km}±23^{km}, mb3.8/12, mbtmp4.1/16, Error ellipse: s-maj=21.0km s-min=14.9km az=88.0*
*SJA **05** 07:18:20.6±0.7, 21.°75S×68.°77W, h121^{km}±5^{km}, ML4.2, MW4.1*
*VAO **05** 07:18:21.0±1.2, 21.°56S×68.°70W, h110^{km}, mb4.6*
*NEIC **05** 07:18:22.4±1.6, 21.°72S±0.°04×68.°84W±0.°05, h110^{km}±4^{km}, mb4.5/67, ML4.2(GUC), Error ellipse: s-maj=7.4km s-min=5.4km az=68.0*
*GUC **05** 07:18:23.1±0.8, 21.°70S×68.°83W, h105^{km}±4^{km}, ML4.2*
ISC 05 07:18:21.3±0.6, 21.°74S±0.°03×68.°82W±0.°04, h110^{km}±5^{km}, n165, σ1^{s}.83/185, mb4.5/40, 2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	0.40	261		Pn	07 18 38.1	+0.4
PB09				Sn	Sn	07 18 51.2	+1.2
PB09	IPOC Station P	0.40	261	eP	Pn	07 18 38.5	+0.9
PB09				i S	Sn	07 18 51.1	+1.2
PB09				IAML		07 18 53.2	
	comp=E,10µm,0.5s						
PB09	IPOC Station P	0.40	261	eP	Pn	07 18 37.8	+0.1
PB09				IAML		07 18 51.6	
	comp=Z,9µm,0.6s						
PB03	IPOC Station P	0.92	250		Pn	07 18 42.6	+0.8
PB03				Sn	Sn	07 18 58.7	+1.3
PB03	IPOC Station P	0.92	250	eP	Pn	07 18 43.0	+1.1
PB03				i S	Sn	07 18 58.6	+1.3
PB03				IAML		07 19 01.5	
	comp=N,5µm,0.2s						
PB03	IPOC Station P	0.92	250	eP	Pn	07 18 42.9	+1.1
PB03				eS	Sn	07 18 59.7	+2.4
PB03				IAML		07 19 00.5	
	comp=Z,5µm,0.2s						
PB01	IPOC Station P	0.93	318		Pn	07 18 42.1	+0.3
PB01				Sn	Sn	07 18 57.5	+0.2
PB01	IPOC Station P	0.93	318	eP	Pn	07 18 42.1	+0.3
PB01				i S	Sn	07 18 57.4	+0.1
PB01				IAML		07 18 60.0	
	comp=E,9µm,0.2s						
PB01	IPOC Station P	0.93	318	eP	Pn	07 18 42.1	+0.3
PB01				eS	Sn	07 18 59.8	+2.5
PB01				IAML		07 19 01.2	
	comp=Z,4µm,0.2s						
PB06	IPOC Station P	1.19	216		Pn	07 18 45.5	+0.8
PB06				Sn	Sn	07 19 04.2	+1.9
PB06	IPOC Station P	1.19	216	eP	Pn	07 18 46.0	+1.3
PB06				i S	Sn	07 19 04.3	+2.0
PB06				IAML		07 19 05.2	
	comp=E,6µm,0.2s						
PB06	IPOC Station P	1.19	216	eP	Pn	07 18 45.7	+1.0
PB06				eS	Sn	07 19 04.8	+2.4
PB06				IAML		07 19 06.1	
	comp=Z,4µm,0.3s						
AF01	San Pedro de A	1.34	154		Pn	07 18 47.7	+1.1
AF01				Sn	Sn	07 19 08.0	+2.3
AF01	San Pedro de A	1.34	154	eP	Pn	07 18 47.9	+1.3
AF01				i S	Sn	07 19 08.0	+2.3
AF01				IAML		07 19 21.1	
	comp=E,4µm,0.5s						
AF01	San Pedro de A	1.34	154	eP	Pn	07 18 48.3	+1.8
AF01				IAML		07 19 29.2	
	comp=Z,3µm,1.5s						
PB08	IPOC Station P	1.62	349		Pn	07 18 51.1	+1.2
PB08				Sn	Sn	07 19 12.1	+0.5
PB08	IPOC Station P	1.62	349	eP	Pn	07 18 51.1	+1.2
PB08				i S	Sn	07 19 12.4	+0.8
PB08				IAML		07 19 14.5	
	comp=N,2µm,0.2s						
PB08	IPOC Station P	1.62	349	eP	Pn	07 18 51.0	+1.2
PB08				eS	Sn	07 19 13.7	+2.1
PB08				IAML		07 19 16.1	
	comp=Z,1µm,0.4s						
PB05	IPOC Station P	1.70	229		Pn	07 18 51.5	+1.0
PB05				Sn	Sn	07 19 14.5	+1.6
PB05	IPOC Station P	1.70	229	eP	Pn	07 18 51.6	+1.0
PB05				i S	Sn	07 19 13.7	+0.8
PB05				IAML		07 19 20.8	
	comp=N,2µm,0.6s						
PB05	IPOC Station P	1.70	229	eP	Pn	07 18 51.6	+1.0
PB05				eS	Sn	07 19 10.8	-2.1
PB05				IAML		07 19 20.9	
	comp=Z,2µm,0.4s						
TA01	Diego Aracena	1.73	312		Pn	07 18 51.4	+0.6
TA01	Diego Aracena	1.73	312	eP	Pn	07 18 51.4	+0.6
TA01				i S	Sn	07 19 13.9	+0.6
TA01				IAML		07 19 20.3	
	comp=E,5µm,0.3s						
TA01	Diego Aracena	1.73	312	eP	Pn	07 18 51.5	+0.6
TA01				eS	Sn	07 19 15.7	+2.4
TA01				IAML		07 19 20.1	
	comp=Z,1µm,0.4s						
TA02	Huaiquique	1.91	320		Pn	07 18 53.4	+0.3
TA02	Huaiquique	1.91	320	eP	Pn	07 18 53.4	+0.3
TA02				i S	Sn	07 19 17.1	-0.2
TA02	Huaiquique	1.91	320	eP	Pn	07 18 52.9	-0.2
TA02				eS	Sn	07 19 13.1	-4.3
TA02				IAML		07 19 28.4	
	comp=Z,2µm,0.8s						
GO01	Chusmiza	2.09	350		Pn	07 18 56.7	+0.9
GO01	Chusmiza	2.09	350	eP	Pn	07 18 56.9	+1.1
GO01				i S	Sn	07 19 23.3	+1.1
GO01				IAML		07 19 28.3	
	comp=N,2µm,0.3s						
GO01	Chusmiza	2.09	350	eP	Pn	07 18 56.9	+1.1

GO01				eS	Sn	07 19 24.1	+1.9
PB11	IPOC Station P	2.12	338		Pn	07 18 56.2	+0.3
PB11	IPOC Station P	2.12	338	eP	Pn	07 18 56.2	+0.3
PB11				i S	Sn	07 19 21.9	-0.4
PB11	IPOC Station P	2.12	338	eP	Pn	07 18 56.2	+0.3
PB11				eS	Sn	07 19 24.1	+1.7
PB11				IAML		07 19 26.6	
	comp=Z,1µm,0.5s						
PB10	IPOC Station P	2.39	222		Pn	07 19 00.1	+0.8
PB10	IPOC Station P	2.39	222	eP	Pn	07 18 59.7	+0.5
PB10				i S	Sn	07 19 28.5	+0.2
PB10				IAML		07 19 41.4	
	comp=N,926nm,0.5s						
PB10	IPOC Station P	2.39	222	eP	Pn	07 19 00.5	+1.3
PB10				eS	Sn	07 19 23.4	-4.9
PB10				IAML		07 19 39.6	
	comp=Z,611nm,0.6s						
YJA	Yavi	3.10	99	eP	Pn	07 19 10.0	+1.1
PB14	IPOC Station P	3.23	207		Pn	07 19 10.5	0.0
PB14	IPOC Station P	3.23	207	eP	Pn	07 19 11.1	+0.6
PB14				eS	Sn	07 19 49.8	+1.3
PB14				IAML		07 19 59.0	
	comp=Z,552nm,1.0s						
SALTA		3.37	138	eP	Pn	07 19 14.4	+1.8
SALTA				eP		07 19 14.6	
SALTA				eS	Sn	07 19 57.4	+5.3
GO02	Mina Guanaco	3.48	192		Pn	07 19 13.6	-0.3
GO02	Mina Guanaco	3.48	192	eP	Pn	07 19 14.1	+0.1
GO02				eS	Sn	07 19 58.4	+3.7
PB18	Visviri	4.17	351	Pn	Pn	07 19 24.0	+0.6
AZAP	Zapla	4.25	126	eP	Pn	07 19 24.5	+0.3
SLA	San Lorenzo	4.25	135	eP	Pn	07 19 26.4	+2.2
AC01	Pan de Azucar	4.68	200		Pn	07 19 29.3	-0.5
AC01	Pan de Azucar	4.68	200	eP	Pn	07 19 28.5	-1.3
AC01				eS	Sn	07 20 20.2	-2.9
AC01				IAML		07 20 42.1	
	comp=Z,208nm,0.7s						
ALOL	LOMAS DE OLMED	4.92	116	eP	Pn	07 19 32.4	-0.6
ALOL				eS	Sn	07 20 30.8	+2.0
FSA	Cafayete	5.07	150	eP	Pn	07 19 37.1	+1.9
FSA				eS	Sn	07 20 15.9	-17
AC02	Maricunga	5.08	183		Pn	07 19 36.6	+0.9
AC02	Maricunga	5.08	183	eP	Pn	07 19 36.6	+0.9
AC02				eS	Sn	07 20 21.1	-12
AC02				IAML		07 20 21.9	
	comp=Z,104nm,0.5s						
LPAZ	La Paz	5.46	7		Pn	07 19 42.4	+1.5
LPAZ	La Paz	5.46	7	P	Pn	07 19 42.8	+1.9
	comp=Z,4.8nm,0.5s,baz=187,slow=3.4,SNR=48						
AC06	Mina Casimiro	5.77	194		Pn	07 19 44.7	+0.2
GO03	Copiapo	5.97	192		Pn	07 19 47.7	+0.4
AC05	El Transito	7.19	190		Pn	07 20 02.0	-1.9
CO01	Juntas del Tor	8.29	188	Pn	Pn	07 20 16.1	-2.8
GO04	Tololo Observa	8.59	192	Pn	Pn	07 20 19.9	-3.0
BBSD	Serra de San D	8.97	61	eP	Pn	07 20 23.4	-4.6
CO03	El Pedregal	9.22	190	Pn	Pn	07 20 26.2	-5.1
SIV	San Ignacio	9.29	53	P	Pn	07 20 28.2	-4.2
	comp=Z,16nm,0.4s,baz=242,slow=12,SNR=136						
SIV				S	Sn	07 22 03.6	-12
	comp=Z,3.3nm,0.6s,baz=311,slow=19,SNR=1.4						
CFA	Coronel Fontan	9.84	177	P	Pn	07 20 40.6	+0.9
	comp=Z,0.9nm,0.3s,baz=324,slow=14,SNR=6.0						
CFA				S	Sn	07 22 22.0	-6.4
	comp=Z,0.9nm,0.3s,baz=190,slow=18,SNR=1.1						
VA06	Catapilco	11.00	191	Pn	Pn	07 20 53.5	-1.9
PTLB	Pontes e Lacer	11.10	57		Pn	07 20 53.2	-3.6
PTLB	Pontes e Lacer	11.10	57	eP	Pn	07 20 53.2	-3.6
CPUP	Villa Florida	11.45	116	Pn	Pn	07 21 01.2	-0.2
CPUP	Villa Florida	11.45	116	P	Pn	07 20 58.9	-2.6
	comp=Z,0.8nm,0.5s,baz=161,slow=11,SNR=8.4						
CPUP	Villa Florida	11.45	116	eP	Pn	07 21 00.5	-0.9
MT02	Curacav	11.66	190	Pn	Pn	07 20 58.8	-5.4
VILB	Vilhena	11.99	45		Pn	07 21 06.0	-2.8
VILB	Vilhena	11.99	45	eP	Pn	07 21 05.7	-3.0
SJPY	San Joaquin	12.12	108	eP	Pn	07 21 08.6	-1.7
AQDB	Aquidauana	12.31	87		Pn	07 21 08.2	-4.6
ITQB	Itaqui	13.53	128	eP	Pn	07 21 28.8	+0.1
SALV	Santo Antonio	13.71	67	eP	Pn	07 21 29.1	-2.1
RPRD	Ribas do Rio P	14.16	88	eP	Pn	07 21 35.9	-1.1
CZSB	Cruzeiro do Su	14.42	344	Pn	Pn	07 21 39.1	-1.3
TRCB	Terra Rica	15.02	97	Pn	Pn	07 21 44.8	-3.2
C2SB	Chapadao do Su	15.28	82	eP	Pn	07 21 49.7	-1.5
ITAB	Concordia	16.14	113	Pn	Pn	07 21 59.4	-2.4
ITAB				IAmb	IAmb	07 22 38.7	
	comp=Z,32nm,0.9s						
CPSB	Cacapava Do Su	16.28	125	eP	Pn	07 22 03.7	+0.2
PCMB	Pacaembu	16.32	93	eP	Pn	07 22 02.4	-1.7
CLDB	Colider	16.50	51	eP	Pn	07 22 05.5	-0.9
PLTB	Pedras Altas	16.84	130	Pn	Pn	07 22 09.6	-0.9
ARAG	Araguaiana, MT	17.18	72	eP	P	07 22 13.4	-1.2
ITRB	Iturama	17.39	87	eP	P	07 22 16.2	-0.6
PLCA	Paso Flores	18.99	184	P	P	07 22 31.9	-2.4
PLCA	Paso Flores	18.99	184	P	Pn	07 22 36.1	-0.1
	comp=Z,2.4nm,0.8s,baz=335,slow=5.9,SNR=4.9						
SNDB	Serra Nova Dou	19.36	63	eP	P	07 22 36.0	-2.4
NPGB	Novo Progresso	19.55	44	eP	P	07 22 37.5	-3.1
IPMB	Ipameri, GO	19.73	83	eP	P	07 22 39.9	-2.7
MACA	Manacapuru-AM	20.09	24	P	P	07 22 43.8	-2.5
MACA				IAmb	IAmb	07 22 47.1	
	comp=Z,22nm,0.8s						
MACA	Manacapuru-AM	20.09	24	eP	P	07 22 43.9	-2.3
VAO	Valinhos	20.25	98	P	P	07 22 46.0	-2.1
VAO				IAmb	IAmb	07 22 47.1	
	comp=Z,24nm,0.8s						
BDFB	Brasilia	20.61	76	P	P	07 22 49.9	-2.2
BDFB	Brasilia	20.61	76	P	P	07 22 49.3	-2.7
	comp=Z,3.5nm,0.4s,baz=253,slow=9.3,SNR=10						
	comp=Z,3.5nm,0.4s						
ITTB	Itaituba	21.43	38	eP	P	07 22 58.2	-2.5
PRPB	Parauapebas	24.02	53	eP	P	07 23 24.2	-2.1
SMTB	Santa Maria do	24.11	61	eP	P	07 23 24.8	-2.1
JANB	Januaria	24.16	78	eP	P	07 23 24.8	-2.8
MAL2	Monte Alegre,	24.23	38	P	P	07 23 25.6	-2.5
MAL2				IAmb	IAmb	07 23 28.7	
	comp=Z,13nm,0.4s						
SDBA	SAO DESIDERIO	24.64	72	eP	P	07 23 29.4	-2.5
BOAV	Boa Vista	25.32	20	P	P	07 23 37.8	-0.1
TUMC	Tumaco	25.34	336	P	P	07 23 36.9	-1.2
RUSC	La Rusia	27.78	351	P	P	07 23 58.8	-1.8
RUSC				IAmb	IAmb	07 24 30.9	
	comp=Z,7.8nm,0.9s						
PAYG	Puerto Ayora	29.60	312	P	P	07 24 17.0	+0.7
RCBR	Riachuelo	35.55	68	P	P	07 25 06.9	-1.3
TEIG	Tepich	45.84	334	P	P	07 26 31.9	-0.6
SOR	Soroa	46.37	342	P	P	07 26 37.9	+1.3
SOR				IAmb	IAmb	07 26 47.2	
	comp=Z,16nm,1.2s						
LRAL	Lakeview Retre	57.16	342	P	P	07 27 56.5	-0.2
LRAL				IAmb	IAmb	07 28 01.3	
	comp=Z,10nm,1.4s						
Y49A	Blount Mountai	57.77	343	P	P	07 28 00.8	-0.1
Y49A				IAmb	IAmb	07 28 01.9	
	comp=Z,12nm,1.2s						
V55A	Taylorsville	58.47	348	P	P	07 28 06.9	+1.1
X48A	Hartselle	58.51	342	P	P	07 28 06.5	+0.5
W50A	Signal Mountai	58.75	344	P	P	07 28 08.0	+0.2
W50A				IAmb	IAmb	07 28 09.2	
	comp=Z,6.0nm,0.9s						
CPCT	Cooper Cave	58.79	345	P	P	07 28 08.2	+0.2
CPCT				IAmb	IAmb	07 28 09.5	
	comp=Z,6.5nm,0.9s						
HNDO	Hondo	58.81	329	P	P	07 28 08.5	+0.2
HNDO				IAmb	IAmb	07 28 10.8	
	comp=Z,6.8nm,0.8s						
TKL	Tuckaleechee C	58.82	346	P	P	07 28 08.6	+0.4
SWET	Sewanee	58.92	344		P	07 28 09.7	+0.8
V48A	Smith Brothers	59.66	343	P	P	07 28 14.5	+0.5
CLTN	Cedars of Leba	59.85	344	P	P	07 28 15.5	+0.2
CLTN				IAmb	IAmb	07 28 17.1	
	comp=Z,5.6nm,1.1s						
BRDY	Brady	60.15	330	IAmb	IAmb	07 28 19.3	
	comp=Z,3.0nm,0.8s						
WVT	Waverly	60.30	342		P	07 28 18.0	-0.3
SAND	Sanderson	60.57	327	IAmb	IAmb	07 28 23.0	
	comp=Z,7.7nm,1.2s						
MIAR	Mount Ida	60.72	337	P	P	07 28 22.3	+1.0
MIAR				IAmb	IAmb	07 28 22.6	
	comp=Z,5.0nm,0.6s						
TXAR	Lajitas Array	60.87	325	P	P	07 28 23.9	+1.4
TXAR	Lajitas Array	60.87	325	P	P	07 28 24.1	+1.5
	comp=Z,0.6nm,0.6s,baz=149,slow=8.2,SNR=10						
	comp=Z,0.6nm,0.6s						
TX31	Lajitas Ar. Si	60.87	325	P	P	07 28 23.6	+1.1
LCAR	Lake Charles	61.26	339	P	P	07 28 24.9	+0.1
LCAR				IAmb	IAmb	07 28 25.9	
	comp=Z,4.2nm,0.8s						
FCAR	Ozark Folk Cen	61.42	339	P	P	07 28 26.3	+0.4
FCAR				IAmb	IAmb	07 28 27.0	
	comp=Z,6.5nm,1.2s						
Q54A	Coxs Mills	61.44	349	P	P	07 28 27.1	+1.0
PBMO	Poplar Bluff	61.67	340	IAmb	IAmb	07 28 28.8	
	comp=Z,6.6nm,0.7s						
CGM3	Cape Girardeau	61.92	341	IAmb	IAmb	07 28 30.5	
	comp=Z,5.0nm,0.7s						
WTFS	Witchita Falls	62.00	332	P	P	07 28 31.0	+1.1
WTFS				IAmb	IAmb	07 28 32.0	
	comp=Z,5.9nm,0.7s						
MNHN	Monahans	62.01	327	IAmb	IAmb	07 28 32.6	
	comp=Z,4.2nm,0.8s						
SNAA	Sanae	62.03	161	⇓P	P	07 28 30.0	+0.3
	comp=Z,28nm,0.5s						
SNAA	Sanae	62.03	161	P	P	07 28 30.9	+1.2
	comp=Z,1.4nm,0.6s,baz=261,slow=7.8,SNR=11						
	comp=Z,1.4nm,0.6s						
S44A	Carbondale	62.17	342	IAmb	IAmb	07 28 32.7	
	comp=Z,6.9nm,0.8s						
SIUC	Southern Illin	62.17	342	IAmb	IAmb	07 28 33.2	
	comp=Z,6.5nm,0.7s						
VHRN	Van Horn	62.72	325	IAmb	IAmb	07 28 37.5	
	comp=Z,4.9nm,0.9s						
MNTX	Cornudas Mount	63.64	325	P	P	07 28 41.5	+0.7
TROLL	Troll, Antarti	63.74	161	⇓P	P	07 28 42.5	+1.4
	comp=Z,132nm,0.8s						
SMWD	Samnorwood	63.92	332	IAmb	IAmb	07 28 44.6	
	comp=Z,7.2nm,0.8s						
ANMO	Albuquerque	66.74	327	P	P	07 29 03.2	+2.2
ANMO	Albuquerque	66.74	327	P	P	07 29 03.3	+2.2
ANMO				IAmb	IAmb	07 29 06.0	
	comp=Z,1.6nm,0.8s						
QSPA	South Pole Qui	68.45	180	P	P	07 29 13.7	+2.4
	comp=Z,1.4nm,0.5s,baz=290,slow=0.9,SNR=26						
	comp=Z,1.4nm,0.5s						
SDCO	Great Sand Dun	68.49	329	IAmb	IAmb	07 29 15.3	
	comp=Z,6.4nm,1.4s						
DBIC	Dimbokro	68.72	73	P	P	07 29 13.2	-0.5
	comp=Z,5.8nm,0.6s,baz=234,slow=6.0,SNR=8.4						
	comp=Z,5.8nm,0.6s						
WUAZ	Wupatki	69.77	324	IAmb	IAmb	07 29 24.0	
	comp=Z,5.2nm,1.1s						
P18A	Preston Nutter	72.27	328	P	P	07 29 37.8	+2.6
P18A				IAmb	IAmb	07 29 38.7	
	comp=Z,4.9nm,1.0s						
PDAR	Pinedale Array	74.36	330	P	P	07 29 49.4	+2.2
	comp=Z,0.4nm,0.4s,baz=116,slow=10,SNR=3.9						
	comp=Z,0.4nm,0.4s						
AHID	Auburn Hatcher	75.08	329	IAmb	IAmb	07 29 54.5	
	comp=Z,9.5nm,1.2s						
NVAR	Mina Array Bea	75.73	322	P	P	07 29 57.8	+2.6
	comp=Z,0.8nm,0.8s,baz=151,slow=7.2,SNR=6.0						
	comp=Z,0.8nm,0.8s						
YNE	Yellowstone No	76.30	331	IAmb	IAmb	07 30 01.6	
	comp=Z,4.2nm,0.9s						
VNDA	Vanda	76.63	190	P	P	07 30 01.6	+2.2
	comp=Z,0.5nm,0.8s,baz=340,slow=18,SNR=2.4						
	comp=Z,0.5nm,0.8s						
PAHR	Pah Rah Range	77.22	322	P	P	07 30 05.9	+2.4
PAHR				IAmb	IAmb	07 30 07.4	
	comp=Z,6.5nm,1.0s						
HLID	Hailey	77.29	328	P	P	07 30 06.7	+2.9
TORD	Torodi Ar. Bea	77.35	70		P	07 30 04.9	+0.4
TORD				IAmb	IAmb	07 30 33.4	
	comp=Z,5.0nm,0.9s						
TORD	Torodi Ar. Bea	77.35	70	P	P	07 30 04.7	+0.2
	comp=Z,1.3nm,0.3s,baz=256,slow=5.6,SNR=3.5						
	comp=Z,1.3nm,0.3s						
PLID	Pearl Lake	79.18	328	P	P	07 30 16.5	+2.3
PLID				IAmb	IAmb	07 30 17.5	
	comp=Z,4.6nm,0.9s						
BOSA	Boshof	83.26	118	P	P	07 30 37.3	+1.0
	comp=Z,2.7nm,0.9s,baz=117,slow=22,SNR=1.6						
	comp=Z,2.7nm,0.9s						
MAW	Mawson	84.08	163	P	P	07 30 40.4	+1.0
	comp=Z,4.0nm,1.0s,baz=55,slow=15,SNR=1.8						
	comp=Z,4.0nm,1.0s						
YKA	Yellowknife Ar	91.44	341	P	P	07 31 16.0	+1.4
	comp=Z,1.6nm,0.8s,baz=131,slow=4.2,SNR=12						
	comp=Z,1.6nm,0.8s						
KIRV	Kirov	122.96	33	PKP	PKiKP	07 37 05.4	+1.1
	comp=Z,19nm,0.3s,baz=5.6,slow=1.2,SNR=5.3						
MKAR	Makanchi Array	145.77	36	PKPbc	PKPab	07 37 48.7	+0.6
	comp=Z,0.7nm,0.5s,baz=316,slow=5.2,SNR=8.7						
PZH	PanZhiHua	170.16	59	PKP	PKPdf	07 38 16.1	-0.7

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*ASRS **05** 07:19:28.0±1.0, 53°.80N×88°.22E, h0^{km}, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 05 07:19:31.7±3.3**, 53°.74N×88°.14E, h0**^{km}**, mbtmp2.8**/2**, ML2.6**/2**, Error ellipse: s-maj=25.9km s-min=17.1km az=58.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.98	278	I	I	07 32 02.1	
	0.2nm,1.2s,baz=93,slow=324,SNR=23						
ZALV	Zalesovo Beam	1.98	278	Pg	Pn	07 20 06.9	+0.5
	1.9nm,0.3s,baz=94,slow=14,SNR=6.6						
ZALV				Lg	Lg	07 20 34.9	
	2.4nm,0.3s,baz=99,slow=20,SNR=8.6						
KURBB	Kurchatov Arra	6.68	246	Pn	Pn	07 21 11.7	+0.7
	0.1nm,0.3s,baz=63,slow=14,SNR=6.2						
KURBB				Sn	Sn	07 22 27.0	-0.8
	baz=59,slow=24,SNR=1.9						
KURBB				Lg	Lg	07 23 03.1	
	baz=62,slow=35,SNR=4.3						
	0.6nm,0.4s						
MKAR	Makanchi Array	7.89	211	Pn	Pn	07 21 28.9	+1.3
	0.1nm,0.3s,baz=28,slow=14,SNR=2.5						
MKAR				Sn	Sn	07 22 57.2	-0.5
	0.2nm,0.3s,baz=28,slow=26,SNR=3.9						
MKAR				Lg	Lg	07 23 42.3	
	baz=30,slow=32,SNR=2.3						
	0.2nm,0.4s						

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*IDC **05** 07:24:48.1±1.3, 27°.72N×65°.93E, h0^{km}, mb3.9/17, mbtmp3.9/18, ML3.1/2, MS3.5/20, Error ellipse: s-maj=28.1km s-min=19.0km az=143.0*

*NEIC **05** 07:24:48.1±2.0, 27°.5N±0°.1×66°.06E±0°.04, h10^{km}±1^{km}, mb4.3/21, Error ellipse: s-maj=18.3km s-min=5.5km az=172.0*

ISC 05 07:24:50.8±0.5**, 27°.66N**±0°.05×**66°.03E**±0°.04**, h25**^{km}**, n120,** σ**1^{s}.90**/133**, mb4.0**/27**, MS3.5**/20**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NGCH	Negor - Chabah	4.94	244	P	Pn	07 26 04.2	+0.8
	SNR=15						
NGCH				S	Sn	07 27 00.4	+0.6
KBL	Kabul	7.33	20		Pn	07 26 36.5	0.0
KBL	Kabul	7.33	20	P	Pn	07 26 39.3	+2.9
	SNR=5.3						
HRA	Herat	7.45	335		Pn	07 26 39.0	+1.0
AJM	Ajmer	7.77	97	eP	Pn	07 26 46.0	+3.7
AJM				eS	Sn	07 28 07.1	-2.5
WSAR	Wadi Sarin	8.00	238	Pn	Pn	07 26 43.8	-1.7
	baz=88,slow=24,SNR=32						
WSAR				Sn	Sn	07 28 06.8	-8.4
	0.1nm,0.3s,baz=286,slow=24,SNR=9.1						
WSAR	Wadi Sarin	8.00	238	P	Pn	07 26 44.1	-1.4
	SNR=8.3						
JLN	Jalan Bani Buh	8.13	229	P	Pn	07 26 46.2	-1.0
BIDO	Bidbid	8.23	242	P	Pn	07 26 48.8	+0.2
SMDO	Samad	8.54	239	P	Pn	07 26 53.0	0.0
	SNR=6.8						
SMDO				P	Pn	07 26 53.0	0.0
	SNR=6.8						
NIL	Nilore	8.62	44		Pn	07 26 55.2	+1.2
NIL	Nilore	8.62	44	P	Pn	07 26 55.9	+1.9
HOQ	Hoqain	8.85	245	P	Pn	07 26 56.0	-1.1
	SNR=9.5						
HOQ				P	Pn	07 26 56.0	-1.1
	SNR=9.5						
BANOM	Banah	8.86	261	P	Pn	07 26 57.2	-0.1
BANOM				P	Pn	07 26 57.2	-0.1
BANOM	Banah	8.86	261	i Pn	Pn	07 26 56.4	-0.9
	SNR=12						
BANOM				Sn	Sn	07 28 26.9	-10
JMDO	Jabal Madar	8.90	236	P	Pn	07 26 57.8	-0.1
	SNR=19						
SHME	Shamm	8.97	262	P	Pn	07 26 58.8	+0.1
	SNR=20						
SHME				P	Pn	07 26 58.8	+0.1
	SNR=20						
SHME	Shamm	8.97	262	i Pn	Pn	07 26 58.1	-0.6
	SNR=20						
MDH	Madha	9.03	257	P	Pn	07 26 58.7	-0.8
	SNR=10						
MDH				P	Pn	07 26 58.7	-0.8
	SNR=10						
MDH	Madha	9.03	257	i Pn	Pn	07 26 58.8	-0.8
	SNR=10						
MASF	Masafi	9.12	258	P	Pn	07 27 00.2	-0.8
	SNR=15						
MASF				P	Pn	07 27 00.2	-0.8
	SNR=15						
MSFE	Esma-Masafi	9.13	258	i Pn	Pn	07 26 59.7	-1.3
	SNR=15						
UOSS	Minazif	9.22	255		Pn	07 27 00.5	-1.7
UOSS	Minazif	9.22	255	P	Pn	07 27 00.7	-1.4
UOSS				P	Pn	07 27 00.7	-1.4
UOSS	Minazif	9.22	255	i Pn	Pn	07 27 00.2	-2.0
	SNR=19						
SOHO	SOHO	9.24	250	P	Pn	07 27 01.1	-1.4
SOHO				P	Pn	07 27 01.1	-1.4
SOHO	SOHO	9.24	250	i Pn	Pn	07 27 01.0	-1.4
	SNR=28						
KUDL	Kundal	9.27	85	eP	Pn	07 27 04.8	+2.0
KUDL				eS	Sn	07 28 43.0	-3.4
HATD	Hatta, Dubai	9.32	255	P	Pn	07 27 02.9	-0.7
	SNR=9.1						
HATD				P	Pn	07 27 02.9	-0.7
	SNR=9.1						
HATD	Hatta, Dubai	9.32	255	Pn	Pn	07 27 02.5	-1.0
BSY	Bisya	9.37	240	P	Pn	07 27 04.6	+0.3
	SNR=7.6						
BSY				P	Pn	07 27 04.6	+0.3
	SNR=7.6						
ASHO	Ashiyiah	9.43	254	P	Pn	07 27 04.8	-0.3
	SNR=36						
ASHO				P	Pn	07 27 04.8	-0.3
	SNR=36						
ASHO	Ashiyiah	9.43	254	i Pn	Pn	07 27 04.6	-0.5
	SNR=36						
ARQ	Araqi	9.60	245	P	Pn	07 27 08.8	+1.3
	SNR=44						
ARQ				S	Sn	07 28 55.0	+0.4
	SNR=6.0						
THN	Thein Dam	9.65	58	eP	Pn	07 27 11.2	+3.1
THN				eS	Sn	07 28 54.3	-1.4
THN				IAML		07 28 59.5	
	comp=E,92nm,0.1s						
THN				IAML		07 29 01.8	
	comp=N,65nm,0.7s						
NAZ	Nazwa, Dubai	9.67	256	P	Pn	07 27 10.2	+1.8
	SNR=5.8						
NAZ				P	Pn	07 27 10.2	+1.8
	SNR=5.8						
NAZ	Nazwa, Dubai	9.67	256	Pn	Pn	07 27 08.9	+0.5
SONA	Sohna	9.80	84	eP	Pn	07 27 12.0	+2.0
SONA				eS	Sn	07 28 55.2	-4.0
SONA				IAML		07 29 00.2	
	comp=E,97nm,0.5s						
SONA				IAML		07 29 02.5	
	comp=N,70nm,0.9s						
FAQ	Al Faqa, Dubai	9.81	255	P	Pn	07 27 11.2	+0.9
	SNR=9.4						
FAQ				P	Pn	07 27 11.2	+0.9
	SNR=9.4						
FAQ	Al Faqa, Dubai	9.81	255	Pn	Pn	07 27 10.5	+0.2
MHTO	MHTO	9.90	230	P	Pn	07 27 12.5	+1.0
MHTO				P	Pn	07 27 12.5	+1.0
ALNE	Al Ain	9.92	251	P	Pn	07 27 12.4	+0.6
	SNR=6.6						
ALNE				P	Pn	07 27 12.4	+0.6
	SNR=6.6						
ALNE	Al Ain	9.92	251	i Pn	Pn	07 27 13.0	+1.2
	SNR=34						
DHRM	DHARAMSHALA	10.02	60	eP	Pn	07 27 15.0	+1.7
DHRM				eS	Sn	07 28 56.9	-8.1
DHRM				IAML		07 29 11.9	
	comp=E,238nm,0.6s						
DHRM				IAML		07 29 14.2	
	comp=N,269nm,0.4s						
ASUD	Al Ashush, Dub	10.07	255	P	Pn	07 27 15.1	+1.3
ASUD				P	Pn	07 27 15.1	+1.3
ASUD	Al Ashush, Dub	10.07	255	Pn	Pn	07 27 14.2	+0.4
AJN	Ajban	10.39	255	i Pn	Pn	07 27 17.8	-0.4
	SNR=9.9						
UMZA	Um Al Zommool	11.00	246	P	Pn	07 27 27.3	+0.7
SIMJ	Simiganj	11.25	12		Pn	07 27 30.1	0.0
KLP	Kalpa	11.32	67	eP	Pn	07 27 31.3	+0.1
KLP				eS	Sn	07 29 28.0	-9.1
KLP				IAML		07 29 41.7	
	comp=N,49nm,0.5s						
KLP				IAML		07 29 42.7	
	comp=E,48nm,0.8s						
JHNI	Jhansi	11.41	98	eP	Pn	07 27 36.1	+3.9
JHNI				eS	Sn	07 29 34.0	-5.0
JHNI				IAML		07 30 09.0	
	comp=N,40nm,0.8s						
MZR	Muzera	12.25	251	Pn	Pn	07 27 44.5	+0.7
LGTI	Lohaghat	12.63	79	eP	Pn	07 27 46.3	-2.5
LGTI				eS	Sn	07 30 00.8	-7.9
LGTI				IAML		07 30 05.7	
	comp=E,43nm,0.6s						
LGTI				IAML		07 30 06.0	
	comp=N,38nm,0.5s						
BTK	Batken	12.99	17		Pn	07 27 55.2	+1.3
SHMA	Al-Shehemyia	13.58	266	P	Pn	07 28 02.7	+0.9
SAKB	Bahrain	13.93	267	P	Pn	07 28 07.5	+0.9
DOK	Doka	14.16	233	P	Pn	07 28 10.5	+0.7
KSH	Kashi	14.43	32	P	Pn	07 28 10.7	-2.8
KSH				S	Sn	07 30 43.4	-9.4
KSH				pmax	pmax		
	comp=Z,13nm,0.6s						
KSH				LR	LR		
	comp=N,890nm,16.8s						
KSH				LR	LR		
	comp=E,860nm,17.9s						
KSH				LR	LR		
	comp=Z,580nm,14.4s						
ARSB	Arslanbob	14.78	21		Pn	07 28 17.4	-0.9
WHFO	Wadi Hawf	14.88	232	P	Pn	07 28 20.0	+0.4
HYB	Hyderabad	15.41	129	eP	P	07 28 29.1	-2.0
KK31	Karatay Array	15.84	12	P	P	07 28 35.4	-0.2
KKAR	Karatay Array	15.84	12		P	07 28 35.3	-0.3
AAK	Ala-Archa	16.46	23		P	07 28 41.4	-1.3
AAK	Ala-Archa	16.46	23	Pn	Pn	07 28 40.0	-0.1
	comp=Z,0.4nm,0.3s,baz=205,slow=6.8,SNR=5.6						
AAK				Sn	Sn	07 31 36.7	-5.4
	comp=Z,0.2nm,0.3s,baz=6.5,slow=11,SNR=3.9						
AAK				LR	LR	07 36 10.3	
	comp=Z,196nm,20.5s,baz=226,slow=42						
	comp=Z,1.9nm,0.5s						
BOOM	Boomskoye usch	16.86	26	P	P	07 28 46.1	-1.0
WUS	Wushi	17.32	35	P	P	07 28 53.2	+1.0
EVN	Everest	18.40	84	P	P	07 29 04.2	-0.6
EVN				IAmb	IAmb	07 29 26.9	
	comp=Z,11nm,0.6s						
RAYN	Ar Rayn	18.96	262	P	Pn	07 29 10.2	-0.8
RAYN	Ar Rayn	18.96	262	P	Pn	07 29 12.1	+1.1
GNI	Garni	21.55	311	P	P	07 29 37.9	-0.6
	comp=Z,4.6nm,0.5s,baz=35,slow=20,SNR=1.6						
	comp=Z,4.6nm,0.5s						
AB31	Akbulak array	22.07	349	P	P	07 29 44.7	+1.0
AB31				IAmb	IAmb	07 29 52.4	
	comp=Z,13nm,0.8s						
ABKAR	Akbulak array	22.07	349		P	07 29 44.6	+0.9
ABKAR	Akbulak array	22.07	349		P	07 29 44.6	+0.9
ABKAR				IAmb	IAmb	07 29 52.4	
	comp=Z,13nm,0.8s						
MAKZ	Makanchi	22.87	29		P	07 29 52.3	0.0
MAKZ				IAmb	IAmb	07 30 01.0	
	comp=Z,13nm,0.8s						
MK31	Makanchi Array	23.00	30	P	P	07 29 53.5	-0.1
MK31				IAmb	IAmb	07 30 03.5	
	comp=Z,4.5nm,0.8s						
MKAR	Makanchi Array	23.00	30		P	07 29 53.1	-0.5
MKAR	Makanchi Array	23.00	30	P	P	07 29 53.7	+0.1
	comp=Z,2.3nm,0.6s,baz=211,slow=11,SNR=22						
MKAR				LR	LR	07 41 03.9	
	comp=Z,103nm,18.3s,baz=221,slow=42						
	comp=Z,2.3nm,0.6s						
AKTO	Aktyubinsk	23.55	347	P	P	07 29 59.0	-0.1

	comp=Z,2.4nm,0.7s,baz=192,slow=4.1,SNR=7.7						
AKTO				LR	LR	07 40 19.4	
	comp=Z,85nm,19.2s,baz=225,slow=40						
	comp=Z,2.4nm,0.7s						
WMQ	**Urumqi**	23.76	42	*e*P	**P**	**07 30 01.8**	**+0.6**
WMQ				LR	LR		
	comp=N,360nm,14.7s						
WMQ				LR	LR		
	comp=E,250nm,11.9s						
WMQ				LR	LR		
	comp=Z,85nm,20.1s						
KOPT	**Kop Dagi**	24.43	307	P	**P**	**07 30 05.2**	**-2.7**
KBZ	**Khabaz**	24.58	317	P	**P**	**07 30 09.8**	**+1.1**
	comp=Z,1.8nm,0.6s,baz=153,slow=7.1,SNR=3.7						
	comp=Z,1.8nm,0.6s						
PALK	**Pallekele**	24.59	143	LR	LR	07 40 12.5	
	comp=Z,63nm,19.4s,baz=302,slow=38						
KURBB	**Kurchatov Arra**	24.83	19	P	**P**	**07 30 12.2**	**+1.2**
	comp=Z,1.3nm,0.5s,baz=212,slow=8.8,SNR=9.0						
	comp=Z,1.3nm,0.5s						
KURK	**Kurchatov**	24.94	19		**P**	**07 30 12.8**	**+0.9**
KURK				IAmb	IAmb	07 30 52.0	
	comp=Z,6.0nm,1.1s						
BVAR	**Borovoye Array**	25.55	6	P	**P**	**07 30 18.4**	**+1.0**
	comp=Z,2.2nm,0.6s,baz=169,slow=8.8,SNR=6.6						
	comp=Z,2.2nm,0.6s						
ASF	**Jabal al Asfar**	25.61	287	LR	LR	07 42 35.7	
	comp=Z,93nm,21.3s,baz=127,slow=42						
EIL	**Elat**	27.30	282	LR	LR	07 43 47.4	
	comp=Z,124nm,19.2s,baz=71,slow=42						
BELG	**Belogornoye**	28.28	336	LR	LR	07 45 44.9	
	comp=Z,68nm,18.5s,baz=120,slow=45						
KIRV	**Kirov**	33.01	344	LR	LR	07 46 20.7	
	comp=Z,79nm,19.1s,baz=148,slow=39						
AKASG	**Malin Array Be**	36.10	320	P	**P**	**07 31 49.6**	**-0.8**
	comp=Z,0.5nm,0.4s,baz=119,slow=7.5,SNR=4.6						
	comp=Z,0.5nm,0.4s						
BURAR	**Bucovina Array**	37.42	313		**P**	**07 32 01.6**	**-0.3**
BURAR				IAmb	IAmb	07 32 09.1	
	comp=Z,2.2nm,0.7s						
BUR08	**Bucovina Ar. S**	37.44	313		**P**	**07 32 02.4**	**+0.3**
BUR08				IAmb	IAmb	07 32 09.0	
	comp=Z,2.4nm,0.7s						
ITM	**Ithomi**	38.13	296	P	**P**	**07 32 07.8**	**-0.1**
ITM				IAmb	IAmb	07 32 12.2	
	comp=Z,14nm,1.5s						
HHC	**Hu-ho-hao-te**	39.45	58	*e*P	**P**	**07 32 18.8**	**-0.3**
HHC				pmax	pmax		
	comp=Z,20nm,0.8s						
PSI	**Prapat**	39.98	122	LR	LR	07 50 53.3	
	comp=Z,102nm,18.0s,baz=297,slow=39						
TIP	**Timpagrande**	42.23	299	P	**P**	**07 32 40.3**	**-1.7**
TIP				IAmb	IAmb	07 32 48.5	
	comp=Z,7.8nm,1.4s						
CUC	**Castrocucco**	42.97	300		**P**	**07 32 48.8**	**+0.8**
FINES	**FINESS Array B**	42.97	333	P	**P**	**07 32 48.0**	**+0.5**
FINES	**FINESS Array B**	42.97	333	P	**P**	**07 32 48.2**	**+0.7**
	comp=Z,1.0nm,0.5s,baz=130,slow=8.9,SNR=7.8						
	comp=Z,1.0nm,0.5s						
NRIK	**Noril'sk**	43.57	11	P	**P**	**07 32 53.1**	**+0.9**
	comp=Z,1.1nm,0.5s,baz=106,slow=4.9,SNR=2.0						
	comp=Z,1.1nm,0.5s						
VAE	**Valguarnera**	44.12	296	LR	LR	07 52 30.2	
	comp=Z,46nm,18.1s,baz=130,slow=38						
GRA1	**Grafenberg Arr**	46.91	313		**P**	**07 33 17.9**	**-1.2**
GRFO	**Grafenberg**	46.91	313	P	**P**	**07 33 17.8**	**-1.3**
HFS	**Hagfors**	47.85	328	P	**P**	**07 33 26.5**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=99,slow=7.4,SNR=2.0						
HFS				LR	LR	07 57 41.8	
	comp=Z,24nm,19.2s,baz=104,slow=41						
	comp=Z,1.1nm,0.6s						
ARCES	**ARCESS Array B**	47.98	342	P	**P**	**07 33 28.2**	**+1.0**
	comp=Z,1.3nm,0.6s,baz=138,slow=7.5,SNR=8.3						
ARCES				LR	LR	07 54 24.8	
	comp=Z,53nm,18.4s,baz=92,slow=37						
	comp=Z,1.3nm,0.6s						
KEST	**Kesra**	48.33	294	P	**P**	**07 33 30.7**	**+0.3**
	comp=Z,1.8nm,1.0s,baz=66,slow=3.4,SNR=5.0						
	comp=Z,1.8nm,1.0s						
NOA	**NORSAR Array B**	49.30	328	P	**P**	**07 33 37.0**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=106,slow=7.6,SNR=2.4						
NOA				LR	LR	07 58 32.5	
	comp=Z,18nm,19.2s,baz=130,slow=41						
	comp=Z,0.5nm,0.6s						
KSRS	**Korea Array**	52.26	63	P	**P**	**07 34 00.1**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=277,slow=7.3,SNR=1.9						
	comp=Z,0.5nm,0.3s						
YAK	**Yakutsk**	53.65	32	LR	LR	07 58 28.0	
	comp=Z,68nm,19.0s,baz=211,slow=38						
JOW	**Kunigami**	54.81	75	P	**P**	**07 34 17.6**	**-1.3**
EKA	**Eskdalemuir Ar**	56.01	320	P	**P**	**07 34 26.9**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=105,slow=7.3,SNR=4.8						
	comp=Z,0.2nm,0.3s						
MJAR	**Matsushiro Arr**	60.51	62	LR	LR	08 03 26.2	
	comp=Z,38nm,19.3s,baz=286,slow=38						
ASAJ	**Asahikawa**	62.05	52	LR	LR	08 05 36.3	
	comp=Z,72nm,18.1s,baz=183,slow=39						
MA2	**Magadan**	63.97	34	LR	LR	08 05 08.7	
	comp=Z,39nm,21.5s,baz=250,slow=38						
BOSA	**Boshof**	68.24	218	P	**P**	**07 35 51.7**	**+2.1**
	comp=Z,7.4nm,1.1s,baz=337,slow=11,SNR=2.7						
	comp=Z,7.4nm,1.1s						
DBIC	**Dimbokro**	70.01	267	LR	LR	08 10 05.7	
	comp=Z,30nm,21.6s,baz=124,slow=39						
SHEM	**Shemya Is, Ala**	78.51	36	LR	LR	08 12 44.7	
	comp=Z,35nm,20.5s,baz=71,slow=37						
ILAR	**Eielson Array**	84.38	14	P	**P**	**07 37 22.5**	**+1.9**
	comp=Z,0.3nm,0.6s,baz=337,slow=6.5,SNR=4.3						
	comp=Z,0.3nm,0.6s						
KDAK	**Kodiak Island**	88.94	20	LR	LR	08 23 21.9	
	comp=Z,54nm,18.5s,baz=105,slow=40						

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*AZER **05** 07:25:30.9, 41°.66N×46°.70E, h25^{km}, ml3.0*
*TIF **05** 07:25:30.1, 41°.76N×46°.91E, h22^{km}±1^{km}*
*NSSP **05** 07:25:30.9, 41°.73N×46°.82E, h10^{km}, Ms3.2*
*MOS **05** 07:25:30.7, 41°.70N×46°.87E, h23^{km}, MPVA3.9*
*DRS **05** 07:25:32.8, 41°.67N×46°.84E, h24^{km}*
*NORS **05** 07:25:32.5, 41°.70N×46°.74E, h3^{km}, MPVA3.9*
ISC 05 07:25:31.6±1.0, **41°.72N**±0°.02×**46°.85E**±0°.02, **h15**^{km}±8^{km},
n63, σ**1**^{s}**35**/122, **11C-1D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKTA	**Zakatala**	0.19	245	P	**Pb**	**07 25 36.5**	**-0.3**
ZKTA				S	**Sb**	**07 25 40.7**	**+0.4**
KMKR	**Kumukh**	0.45	24	*e*Pg	**Pn**	**07 25 41.9**	**-1.9**
KMKR				*e*Sg	**Sn**	**07 25 49.2**	**-2.5**
SEKA	**Sheki**	0.57	153	Pg	**Pg**	**07 25 41.7**	**-1.2**
SEKA				Sg	**Sg**	**07 25 50.0**	**-0.5**
VSHL	**Vashlovani**	0.59	215	P	**Pg**	**07 25 43.6**	**+0.3**
VSHL				S	**Sb**	**07 25 53.6**	**+1.7**
VSHL	**Vashlovani**	0.59	215	*e*Pg	**Pg**	**07 25 43.6**	**+0.3**
VSHL				*e*Sg	**Sb**	**07 25 53.6**	**+1.7**
GNBR	**Gunib**	0.68	7	*i* Pg	**Pn**	**07 25 45.7**	**-1.0**
GNBR				*e*Sg	**Sn**	**07 25 55.9**	**-1.1**
URKR	**Urkarakh**	0.74	52	*e*Pg	**Pn**	**07 25 46.4**	**-1.2**
URKR				*e*Sg	**Sn**	**07 25 57.4**	**-1.2**
XNZR	**Khunzakh**	0.83	353	*e*Pg	**Pn**	**07 25 48.7**	**-0.2**
XNZR				*e*Sg	**Sn**	**07 26 01.0**	**0.0**
ARKR	**Arakani**	0.89	7	*e*Pg	**Pn**	**07 25 52.4**	**+2.8**
ARKR				*e*Sg	**Sn**	**07 26 01.2**	**-1.1**
MNGR	**Mingechevir, A**	0.96	169	P	**Pb**	**07 25 49.2**	**-0.8**
MNGR				S	**Sb**	**07 26 02.8**	**+0.4**
KSMR	**Kasumkent**	0.96	96	*e*Pg	**Pn**	**07 25 49.6**	**-1.0**
KSMR				*e*Sg	**Sn**	**07 26 04.1**	**-0.1**
UNCR	**Uncukul**	1.00	358	*e*Pg	**Pn**	**07 25 51.3**	**+0.2**
UNCR				*e*Sg	**Sn**	**07 26 05.3**	**+0.4**
BTLR	**Botlikh**	1.05	334	*e*Pg	**Pn**	**07 25 51.7**	**-0.2**
BTLR				*e*Sg	**Sn**	**07 26 06.0**	**-0.3**
QBL	**Gabala**	1.07	136	P	**Pb**	**07 25 50.7**	**-1.1**
QBL				S	**Sn**	**07 26 08.2**	**+1.5**
QSAR	**Qusar**	1.08	100	P	**Pn**	**07 25 52.0**	**-0.3**
QSAR				S	**Sn**	**07 26 10.3**	**+3.4**
KRNR	**Karanay**	1.11	2	*e*Pg	**Pn**	**07 25 53.1**	**+0.4**
KRNR				*e*Sg	**Sn**	**07 26 07.9**	**+0.1**
XNQ	**Khinaliq**	1.11	119	P	**Pb**	**07 25 52.2**	**-0.5**
XNQ				S	**Sn**	**07 26 10.3**	**+2.4**
BUJR	**Buynaksk**	1.12	10	*e*Pg	**Pg**	**07 25 56.2**	**+2.8**
BUJR				*e*Sg	**Sn**	**07 26 08.5**	**+0.5**
DGRG	**David-gareji**	1.14	257	P	**Pn**	**07 25 52.6**	**-0.5**
DGRG				S	**Sn**	**07 26 10.3**	**+1.9**
DGRG	**David-gareji**	1.14	257	*e*Pg	**Pn**	**07 25 52.6**	**-0.5**
DGRG				*e*Sg	**Sn**	**07 26 10.3**	**+1.9**
GANJ	**Ganja**	1.14	201	P	**Pn**	**07 25 50.8**	**-2.2**
GANJ				S	**Sb**	**07 26 05.6**	**-2.1**
QUBA	**Quba, Azerbaij**	1.28	106	Pg	**Pg**	**07 25 55.7**	**-0.7**
QUBA				Sg	**Sg**	**07 26 15.2**	**+2.0**
QZX	**Qazax, Azerbai**	1.29	240	P	**Pn**	**07 25 53.6**	**-1.6**
QZX				S	**Sb**	**07 26 10.7**	**-1.3**
GDB	**GEDABAY**	1.29	220	P	**Pn**	**07 25 52.9**	**-2.4**
GDB				S	**Sb**	**07 26 09.6**	**-2.6**
DBC	**Dubki**	1.30	359	*e*Pg	**Pg**	**07 25 56.0**	**-0.7**
DBC				*e*Sg	**Sg**	**07 26 14.4**	**+0.7**
DVE	**Vedeno**	1.35	337	*e*Pg	**Pg**	**07 25 57.7**	**0.0**
DVE				*e*Sg	**Sg**	**07 26 16.0**	**+0.8**
IML	**Ismayilli**	1.36	132	Pg	**Pn**	**07 25 55.7**	**-0.5**
IML				Sg	**Sg**	**07 26 17.2**	**+1.5**
BRDA	**Brd**	1.48	170	Pg	**Pn**	**07 25 57.6**	**0.0**
BRDA				Sg	**Sg**	**07 26 19.3**	**+0.1**
LSVT	**Lusahovit**	1.48	238	⇓*i*P	**Pn**	**07 25 56.3**	**-1.6**
LSVT				⇑*i*S	**Sn**	**07 26 15.6**	**-1.4**
SEAG	**Tbilisi Sea**	1.53	272	P	**Pn**	**07 25 58.5**	**+0.1**
SEAG				S	**Sb**	**07 26 19.1**	**+0.2**
CHRG	**Chargali**	1.56	294	P	**Pn**	**07 25 58.7**	**-0.2**
CHRG				S	**Sb**	**07 26 19.5**	**-0.3**
SHTL	**Shatili**	1.57	307	P	**Pg**	**07 26 01.1**	**-0.8**
TBLG	**Delisi**	1.58	271	P	**Pn**	**07 25 58.7**	**-0.4**
TBLG				S	**Sb**	**07 26 20.4**	**0.0**
PQL	**Pirkuli**	1.61	125	Pg	**Pb**	**07 26 00.6**	**-0.5**
PQL				Sg	**Sg**	**07 26 24.8**	**+1.3**
AGDM	**Agdam**	1.62	173	Pg	**Pn**	**07 25 59.4**	**-0.3**
AGDM				Sg	**Sb**	**07 26 21.9**	**+0.4**
SIZA	**Siyzn**	1.67	112	Pg	**Pg**	**07 26 02.6**	**-1.1**
SIZA				Sg	**Sg**	**07 26 27.9**	**+2.5**
GROC	**Groznyy**	1.68	333	*e*Pg	**Pg**	**07 26 03.4**	**-0.5**
GROC				*e*Sg	**Sg**	**07 26 26.9**	**+1.3**
ATGJ	**Altiaghaj**	1.79	118	Pg	**Pg**	**07 26 05.2**	**-0.9**
ATGJ				Sg	**Sg**	**07 26 31.6**	**+2.3**
AYRK	**Ayrk**	1.79	207	⇑*i*P	**Pn**	**07 26 01.8**	**-0.4**
AYRK				⇑*i*S	**Sn**	**07 26 24.9**	**+0.2**
GUDG	**Gudauri**	1.92	294	*e*Pg	**Pn**	**07 26 04.3**	**+0.4**
GUDG				*e*Sg	**Sb**	**07 26 30.7**	**+0.5**
GBS	**Qobustan**	1.97	126	Pg	**Pg**	**07 26 08.6**	**-0.9**
GBS				Sg	**Sg**	**07 26 35.9**	**+0.8**
SRTK	**Saratovka**	2.01	252	⇑*i*P	**Pn**	**07 26 05.0**	**-0.2**
SRTK				⇑*i*S	**Sn**	**07 26 30.4**	**+0.3**
BLQ	**Beylaqan**	2.07	165	Pn	**Pn**	**07 26 06.5**	**+0.8**
BLQ				Sn	**Sn**	**07 26 31.8**	**+0.6**
TRLG	**Trialeti**	2.07	266	P	**Pn**	**07 26 05.6**	**-0.3**
TRLG				S	**Sn**	**07 26 32.9**	**+1.4**
KAPZ	**Kaputan**	2.14	230	*e*P	**Pn**	**07 26 07.3**	**+0.3**
KAPZ				*e*S	**Sn**	**07 26 35.5**	**+2.1**
LACR	**Lac**	2.19	301	*e*Pg	**Pb**	**07 26 11.3**	**+0.2**
LACR				*e*Sg	**Sb**	**07 26 39.3**	**+1.1**
SAAT	**Saatly**	2.21	147	Sg	**Sb**	**07 26 39.4**	**+1.1**
GNI	**Garni**	2.24	226	⇑*i*P	**Pn**	**07 26 10.0**	**+1.7**
GNI				⇑*i*S	**Sb**	**07 26 39.2**	**-0.2**
GNI	**Garni**	2.24	226	*e*Pn	**Pn**	**07 26 09.9**	**+1.7**
GNI				*e*Sn	**Sb**	**07 26 38.9**	**-0.5**
QRD	**Qoradiz**	2.28	171	Sn	**Sn**	**07 26 38.3**	**+1.7**
KMOZ	**Kamo**	2.36	249	⇑*i*P	**Pn**	**07 26 10.9**	**+0.9**
KMOZ				⇑*i*S	**Sb**	**07 26 41.5**	**-1.5**
EGVZ	**Egvard**	2.50	186	⇑*i*P	**Pn**	**07 26 11.9**	**+0.1**
EGVZ				⇑*i*S	**Sn**	**07 26 43.8**	**+1.7**
HYR	**Heyderabad**	2.51	218	Pg	**Pn**	**07 26 12.8**	**+0.9**
HYR				Sg	**Sb**	**07 26 47.1**	**+0.1**
SBZ	**Shahbuz**	2.52	204	Pg	**Pb**	**07 26 15.1**	**-1.5**
SBZ				Sg	**Sb**	**07 26 46.9**	**-0.5**
AKH	**Akhalkalaki**	2.54	264	*e*Pn	**Pb**	**07 26 15.0**	**-1.9**
AKH				*e*Sn	**Sn**	**07 26 45.5**	**+2.4**
NAX	**Nakhchivan**	2.74	203	Sg	**Sb**	**07 26 56.0**	**+2.2**
ORD	**Ordubad**	2.86	193	Pg	**Pb**	**07 26 20.1**	**-2.3**
ORD				Sg	**Sb**	**07 26 57.6**	**+0.3**
YRD	**Yardimli**	2.99	159	Pn	**Pn**	**07 26 18.0**	**-0.7**
YRD				Sn	**Sn**	**07 26 53.2**	**-1.2**
LRK	**Lerik**	3.28	159	Pn	**Pn**	**07 26 22.2**	**-0.4**
LRK				Sn	**Sn**	**07 27 01.8**	**+0.5**
LKRN	**Lenkeran, Azer**	3.35	153	Pn	**Pn**	**07 26 23.1**	**-0.2**
LKRN				Sn	**Sn**	**07 27 03.2**	**+0.4**
ASTR	**Astara**	3.49	154	Pn	**Pn**	**07 26 25.0**	**-0.3**
ASTR				Sn	**Sn**	**07 27 06.8**	**+0.5**
KBZ	**Khabaz**	3.54	306	*e*Pn	**Pb**	**07 26 29.6**	**-4.2**
KBZ				*e*Sn	**Sn**	**07 27 10.6**	**+3.2**
SHA1	**Shidzhatmaz**	3.69	305	*e*Pn	**Pn**	**07 26 30.3**	**+2.0**
SHA1				*e*Sn	**Sn**	**07 27 10.5**	**-1.1**

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*IDC **05** 07:26:55.3±0.7, 28°.15N×103°.65E, h0^{km}, mb4.1/17, mbtmp4.0/19, ML4.3/2, MS3.4/11, Error ellipse: s-maj=18.6km s-min=13.6km az=52.0*
*BJI **05** 07:26:58.4, 28°.11N×103°.63E, h8^{km}, mB4.5/7, mb4.3/25, ML4.4/20, Ms4.0/29, Ms7 3.7/22*
*NEIC **05** 07:27:01.1±1.1, 28°.2N±0°.1×103°.7E±0°.1, h34^{km}±3^{km}, mb4.4/17, Error ellipse: s-maj=20.6km s-min=14.5km az=126.0*
*MOS **05** 07:27:07.8±0.9, 28°.25N×103°.75E, h38^{km}, mb4.3/11, Error ellipse: s-maj=12.0km s-min=7.7km az=92.2*
ISC 05 07:26:57.7±0.4, **28°.11N**±0°.04×**103°.74E**±0°.05, **h10**^{km}, **n98**,
σ**1**^{s}**77**/95, **mb4.3**/37, **MS3.3**/10, **7C-8D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PZH	**PanZhiHua**	2.39	229	Pg	**Pn**	**07 27 38.3**	**+1.2**
PZH				Sg	**Sn**	**07 28 07.6**	**+1.1**
PZH				smax	smax		
	comp=N,1µm,0.8s						
PZH				smax	smax		
	comp=E,3µm,0.8s						
CD2	**Chengdu**	2.79	0	⇑Pn	**Pn**	**07 27 43.6**	**+1.0**
CD2				Pg	Pb	07 27 45.7	-2.1
CD2				Sg	**Sn**	**07 28 20.6**	**+4.2**
CD2				smax	smax		
	comp=N,2µm,0.5s						
GYA	**Guiyang**	3.08	122	Pn	Pn	07 27 43.9	-2.6
GYA				Sn	**Sn**	**07 28 23.7**	**+0.2**
GYA				smax	smax		
	comp=N,720nm,0.9s						
GYA				smax	smax		
	comp=E,570nm,0.9s						
GYA				LR	LR		
	comp=Z,1µm,4.3s						
KMI	**Kunming**	3.10	197	Pg	**Pb**	**07 27 53.0**	**-0.2**
KMI				Sg	**Sb**	**07 28 32.6**	**+1.4**
KMI				LR	LR		
	comp=N,1µm,4.0s						
KMI				LR	LR		
	comp=E,770nm,4.3s						
ENH	**Enshi**	5.47	65		**Pn**	**07 28 20.9**	**+1.6**
TNCH	**TengChong**	5.59	238	Pg	Pb	07 28 41.6	+6.1
TNCH				Sg	**Sb**	**07 29 50.8**	**+8.1**
TNCH				smax	smax		
	comp=N,260nm,0.7s						
TNCH				smax	smax		
	comp=E,220nm,0.5s						
TNCH				LR	LR		
	comp=N,420nm,3.0s						
TNCH				LR	LR		
	comp=E,340nm,2.0s						
SLVN	**Son La**	6.74	179		**Pn**	**07 28 38.4**	**+1.5**
LZH	**Lanzhou**	7.96	1	Pg	Pg	07 29 27.5	-2.6
LZH				Sg	**Sg**	**07 31 13.9**	**+0.7**
LZH				smax	smax		
	comp=N,65nm,0.9s						
LZH				smax	smax		
	comp=E,79nm,1.0s						
LZH				LR	LR		
	comp=N,540nm,6.0s						
LZH				LR	LR		
	comp=E,910nm,7.6s						
LZH				LR	LR		
	comp=Z,580nm,8.9s						
CNSH	**ChangSha**	8.12	87	P	**Pn**	**07 28 57.4**	**+1.8**
CNSH				smax	smax		
	comp=Z,290nm,0.9s						
CNSH				smax	smax		
	comp=Z,240nm,0.6s						
WHN	**Wuhan**	9.57	73	⇓P	**Pn**	**07 29 17.0**	**+1.4**
WHN				LR	LR		
	comp=Z,3µm,14.2s						
WHN				LR	LR		
	comp=Z,1µm,11.7s						
WHN				LR	LR		
	comp=Z,2µm,6.7s						
LYN	**LuoYang**	9.85	47	P	**Pn**	**07 29 19.1**	**-0.3**
LYN				S	**Sn**	**07 31 17.6**	**+7.7**
LYN				pmax	pmax		
	comp=Z,53nm,0.6s						
LYN				LR	LR		
	comp=N,690nm,12.4s						
LYN				LR	LR		
	comp=E,700nm,12.7s						
LYN				LR	LR		
	comp=Z,540nm,13.1s						
GZH	**Guangzhou**	10.00	118	P	**Pn**	**07 29 21.9**	**+0.3**
GZH				S	**Sn**	**07 31 15.2**	**+1.3**
CMAR	**Chiang Mai Arr**	10.56	206	Pn	**Pn**	**07 29 30.3**	**+1.0**
	comp=Z,1.2nm,0.3s,baz=25,slow=14,SNR=8.5						
CMAR				Lg	Lg	07 32 34.3	
	baz=181,slow=36						
CMAR				LR	LR	07 33 57.4	
	comp=Z,148nm,21.2s,baz=5.0,slow=40						
	comp=Z,2.0nm,0.3s						
CMAR	**Chiang Mai Arr**	10.56	206	*ce*P	Pn	07 29 38.5	+9.2
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
QIZ	**Qiongzhong**	10.62	147	P	**Pn**	**07 29 28.7**	**-1.4**
QIZ				S	**Sn**	**07 31 31.0**	**+1.8**
QIZ				LR	LR		
	comp=E,530nm,8.0s						
QIZ				LR	LR		
	comp=Z,330nm,7.4s						
GTA	**Gaotai**	11.74	345	*e*P	**Pn**	**07 29 48.1**	**+2.7**
GTA				pP		07 29 52.0	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				LR	LR		
	comp=Z,280nm,10.5s						
GTA				LR	LR		
	comp=Z,660nm,12.7s						
HNS	**HongShan**	13.07	42	*e*P	**Pn**	**07 30 08.0**	**+4.6**
HNS				LR	LR		
	comp=Z,280nm,9.6s						
HNS				LR	LR		
	comp=Z,130nm,7.2s						
HNS				LR	LR		
	comp=Z,230nm,12.7s						
BTO	**Baotou**	13.50	21	*e*P	**Pn**	**07 30 09.3**	**-0.1**
BTO				pP	P	07 30 14.0	-4.7
BTO				sP		07 30 16.3	
BTO				S	**Sn**	**07 32 42.3**	**+2.7**
BTO				pmax	pmax		
	comp=Z,23nm,0.8s						
BTO				pmax	pmax		
	comp=Z,110nm,7.6s						
BTO				LR	LR		
	comp=Z,610nm,16.2s						
BTO				LR	LR		
	comp=Z,480nm,7.7s						
BTO				LR	LR		
	comp=Z,600nm,15.3s						
NJ2	**Nanjing**	13.66	70	*e*P	Pn	07 30 09.6	-2.0
NJ2				pmax	pmax		
	comp=Z,11nm,0.9s						
NJ2				LR	LR		
	comp=N,400nm,7.1s						
NJ2				LR	LR		
	comp=E,290nm,6.9s						
NJ2				LR	LR		
	comp=Z,380nm,8.5s						
TIA	**Tai'an**	13.91	51	P	**Pn**	**07 30 14.6**	**-0.4**
TIA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TIA				LR	LR		
	comp=Z,160nm,11.0s						
TIA				LR	LR		
	comp=Z,220nm,9.4s						
TIA				LR	LR		
	comp=Z,240nm,10.4s						
HHC	**Hu-ho-hao-te**	14.25	25	*e*P	**Pn**	**07 30 21.6**	**+2.0**
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
BJI	**Beijing**	15.72	38	P	**Pn**	**07 30 37.9**	**-1.4**
BJI				pP	**P**	**07 30 41.9**	**-1.4**
BJI				S	**Sn**	**07 33 35.2**	**+1.6**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BJI				LR	LR		
	comp=Z,61nm,11.7s						
BJI				LR	LR		
	comp=Z,59nm,10.8s						
SONM	**Songino Array**	19.80	5		**P**	**07 31 28.8**	**+0.3**
SONM	**Songino Array**	19.80	5	P	**P**	**07 31 28.4**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=190,slow=14,SNR=9.9						
SONM				LR	LR	07 40 04.5	
	comp=Z,105nm,18.6s,baz=212,slow=40						
	comp=Z,1.7nm,0.6s						
SONM	**Songino Array**	19.80	5	*e*P	**P**	**07 31 29.7**	**+1.3**
ULN	**Ulaanbaatar**	19.90	7	⇓*e*P	**P**	**07 31 29.6**	**+0.1**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WMQ	**Urumqi**	20.30	325	*e*P	**P**	**07 31 35.5**	**+1.7**
WMQ				LR	LR		
	comp=Z,410nm,16.5s						
WMQ				LR	LR		
	comp=Z,250nm,12.7s						
TJN	**Taejon**	21.58	62	P	**P**	**07 31 48.0**	**+0.4**
TJN	**Taejon**	21.58	62	⇓*e*P	**P**	**07 31 48.1**	**+0.5**
JOW	**Kunigami**	21.80	88	P	**P**	**07 31 50.6**	**+0.6**
	comp=Z,48nm,0.3s,baz=133,slow=18,SNR=8.9						
ZAK	**Zakamensk**	22.25	359	*e*P	**P**	**07 31 53.8**	**-1.0**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
KSAR	**Wonju Array Be**	22.28	59		**P**	**07 31 55.5**	**+0.3**
KSAR	**Wonju Array Be**	22.28	59	P	**P**	**07 31 55.5**	**+0.3**
KS19	**Wonju Array Si**	22.29	59	P	**P**	**07 31 55.6**	**+0.4**
KSRS	**Korea Array**	22.32	59	P	**P**	**07 31 55.5**	**0.0**
	comp=Z,9.8nm,0.6s,baz=246,slow=9.9,SNR=51						
	comp=Z,9.8nm,0.6s						
KSRS	**Korea Array**	22.32	59	*e*P	**P**	**07 31 55.5**	**0.0**
KSRS				pmax	pmax		
	comp=Z,11nm,0.5s						
JNU	**Nakatsue**	23.85	71	LR	LR	07 41 00.3	
	comp=Z,51nm,19.8s,baz=150,slow=35						
HIA	**Hailar**	24.45	26	P	**P**	**07 32 15.9**	**-0.8**
HIA				IAmb	IAmb	07 32 17.4	
	comp=Z,12nm,0.8s						
HIA	**Hailar**	24.45	26	*d i*P	**P**	**07 32 16.8**	**+0.1**
HIA				pmax	pmax		
	comp=Z,11nm,0.9s						
PRZ	**Przheval'sk**	25.05	312	P	**P**	**07 32 22.1**	**-0.3**
PRZ	**Przheval'sk**	25.05	312	P	**P**	**07 32 22.1**	**-0.3**
PRZ				pmax	pmax		
	comp=Z,25nm,1.4s						
MK31	**Makanchi Array**	25.12	324	*de*P	**P**	**07 32 22.2**	**-0.6**
MKAR	**Makanchi Array**	25.12	324		**P**	**07 32 22.1**	**-0.7**
MKAR	**Makanchi Array**	25.12	324	P	**P**	**07 32 21.8**	**-1.0**
	comp=Z,1.7nm,0.4s,baz=133,slow=9.6,SNR=14						
	comp=Z,1.7nm,0.4s						
MKAR	**Makanchi Array**	25.12	324	*e*P	**P**	**07 32 22.4**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MAKZ	**Makanchi**	25.29	323		**P**	**07 32 23.6**	**-0.7**
MAKZ	**Makanchi**	25.29	323	P	**P**	**07 32 23.6**	**-0.7**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BOOM	**Boomskoye usch**	26.70	310	P	**P**	**07 32 34.2**	**-3.1**
BOOM				IAmb	IAmb	07 32 42.6	
	comp=Z,5.3nm,0.7s						
BOOM	**Boomskoye usch**	26.70	310	P	**P**	**07 32 34.2**	**-3.1**
BOOM				pmax	pmax		
	comp=Z,5.0nm,0.7s						
USA0B	**Ussuriysk Arra**	27.71	47	P	**P**	**07 32 45.3**	**-0.9**
USA0B				IAmb	IAmb	07 32 46.2	
	comp=Z,5.1nm,0.7s						
USA0B	**Ussuriysk Arra**	27.71	47	*c i*P	**P**	**07 32 45.2**	**-0.9**
USRK	**Ussuriysk Ar.**	27.71	47	P	**P**	**07 32 45.3**	**-0.9**
	comp=Z,4.6nm,0.6s,baz=245,slow=9.1,SNR=11						
USRK				LR	LR	07 45 24.1	
	comp=Z,61nm,18.6s,baz=220,slow=40						
	comp=Z,4.6nm,0.6s						
FRU1	**Bishkek**	27.71	310	P	**P**	**07 32 45.4**	**-0.9**
FRU1	**Bishkek**	27.71	310	P	**P**	**07 32 45.4**	**-0.9**
FRU1				pmax	pmax		
	comp=Z,26nm,0.7s						
AAK	**Ala-Archa**	27.74	309	P	**P**	**07 32 46.1**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=84,slow=8.3,SNR=1.1						
	comp=Z,0.6nm,0.3s						
ZALV	**Zalesovo Beam**	29.31	337	P	P	07 32 58.0	-2.3
	comp=Z,1.1nm,0.4s,baz=142,slow=7.5,SNR=3.6						
ZALV				LR	LR	07 44 01.1	
	comp=Z,98nm,20.0s,baz=213,slow=35						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,1.1nm,0.4s						
ZALV	Zalesovo Beam	29.31	337	eP	P	07 33 01.5	+1.2
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURBB	Kurchatov Arra	29.50	327	P	P	07 33 00.5	-1.5
	comp=Z,1.1nm,0.7s,baz=132,slow=9.6,SNR=8.5						
KURBB				PcP	PcP	07 36 06.0	-1.2
	comp=Z,0.1nm,0.3s,baz=130,slow=2.4,SNR=1.5						
	comp=Z,1.1nm,0.7s						
KURK	Kurchatov	29.52	327	⇑eP	P	07 33 01.6	-0.5
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KLR	Kul'dur	30.10	38	LR	LR	07 45 57.8	
	comp=Z,40nm,20.6s,baz=242,slow=38						
KLR	Kul'dur	30.10	38	⇓eP	P	07 33 07.4	+0.1
KLR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MJAR	Matsushiro Arr	30.19	65	LR	LR	07 45 26.0	
	comp=Z,31nm,20.1s,baz=238,slow=37						
ZEA	Zeya	30.88	27	⇓eP	P	07 33 14.6	+0.4
JCJ	Chichijima	33.99	82	LR	LR	07 46 35.9	
	comp=Z,27nm,20.9s,baz=156,slow=35						
BVAR	Borovoye Array	34.99	325	P	P	07 33 48.8	-1.3
	comp=Z,0.4nm,0.3s,baz=123,slow=9.5,SNR=2.2						
BVAR				PcP	PcP	07 36 20.5	-1.7
	comp=Z,0.7nm,0.5s,baz=149,slow=1.8,SNR=3.9						
	comp=Z,0.4nm,0.3s						
YAK	Yakutsk	38.02	20	⇑eP	P	07 34 14.4	-1.4
YAK				pmax	pmax		
	comp=Z,15nm,0.6s						
AB31	Akbulak array	39.48	315	P	P	07 34 26.6	-1.7
ABKAR	Akbulak array	39.48	315		P	07 34 26.4	-1.9
ABKAR	Akbulak array	39.48	315		P	07 34 26.5	-1.7
ABKAR				IAmb	IAmb	07 34 31.7	
	comp=Z,2.2nm,0.8s						
NRIK	Noril'sk	42.33	352	P	P	07 34 50.3	-1.2
NRIK				IAmb	IAmb	07 34 51.1	
	comp=Z,4.0nm,0.7s						
NRIK	Noril'sk	42.33	352	P	P	07 34 50.4	-1.2
	comp=Z,3.6nm,0.6s,baz=142,slow=5.3,SNR=6.4						
	comp=Z,3.6nm,0.6s						
NRIK	Noril'sk	42.33	352	i P	P	07 34 50.5	-1.0
NRIK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TIXI	Tiksi	45.75	11	LR	LR	07 56 06.4	
	comp=Z,79nm,20.5s,baz=227,slow=38						
KIV	Kislovodsk	50.73	305	eP	P	07 35 58.0	+0.1
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KLMR	Klimovskoe	53.37	327	eP	P	07 36 14.2	-2.9
KLMR				e*PP	sP	07 36 38.6	+16
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.4s						
BILL	Bilibino	54.02	24	⇓eP	P	07 36 20.3	-1.5
BILL				pmax	pmax		
	comp=Z,7.0nm,1.8s						
OBN	Obninsk	54.52	319	i P	P	07 36 26.6	+1.0
OBN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WRA	Warramunga Arr	56.19	145	P	P	07 36 37.1	-0.9
	comp=Z,2.1nm,0.8s,baz=334,slow=8.6,SNR=13						
	comp=Z,2.1nm,0.8s						
WRA	Warramunga Arr	56.19	145	eP	P	07 36 37.8	-0.3
WRA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MMAI	Mount Meron Ar	58.12	293	P	P	07 36 50.3	-1.5
	comp=Z,1.0nm,0.3s,baz=76,slow=6.1,SNR=3.1						
	comp=Z,1.0nm,0.3s						
ASAR	Alice Springs	59.12	148	P	P	07 36 58.1	-0.6
	comp=Z,1.1nm,0.4s,baz=329,slow=6.7,SNR=14						
	comp=Z,1.1nm,0.4s						
AKASG	Malin Array Be	59.23	314	P	P	07 36 56.9	-2.2
	comp=Z,1.3nm,0.5s,baz=74,slow=6.2,SNR=9.1						
	comp=Z,1.3nm,0.5s						
AKASG	Malin Array Be	59.23	314	ceP	P	07 36 58.5	-0.6
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKBB	Malin Array Si	59.23	314	⇑eP	P	07 36 58.4	-0.7
ARCES	ARCESS Array B	59.86	337	P	P	07 37 01.5	-1.7
	comp=Z,0.4nm,0.4s,baz=85,slow=7.0,SNR=7.6						
	comp=Z,0.4nm,0.4s						
FINES	FINESS Array B	59.89	327	P	P	07 37 01.6	-1.8
	comp=Z,0.6nm,0.3s,baz=92,slow=7.7,SNR=7.0						
	comp=Z,0.6nm,0.3s						
HFS	Hagfors	66.09	327	P	P	07 37 42.7	-2.1
	comp=Z,1.2nm,0.5s,baz=106,slow=4.8,SNR=5.1						
	comp=Z,1.2nm,0.5s						
NB2	NORSAR Subarra	67.02	328	P	P	07 37 50.0	-0.7
	comp=Z,1.0nm,0.6s,baz=73,slow=6.9						
NOA	NORSAR Array B	67.02	328	P	P	07 37 48.7	-2.0
	comp=Z,0.4nm,0.5s,baz=74,slow=6.5,SNR=4.4						
	comp=Z,0.4nm,0.5s						
NOA	NORSAR Array B	67.02	328	eP	P	07 37 50.0	-0.7
D20K	Etivluk River	67.53	23		P	07 37 53.1	-0.7
D20K				IAmb	IAmb	07 37 57.5	
	comp=Z,5.0nm,0.9s						
H19K	Roundabout Mou	68.69	26		P	07 38 00.9	-0.2
H19K				IAmb	IAmb	07 38 06.1	
	comp=Z,2.9nm,0.8s						
G21K	Allakaket	69.44	25		P	07 38 04.7	-1.0
G21K				IAmb	IAmb	07 38 30.0	
	comp=Z,3.3nm,1.1s						
MLY	Manley	71.09	26	P	P	07 38 15.6	-0.5
MLY				IAmb	IAmb	07 38 28.7	
	comp=Z,1.3nm,0.7s						
BPAW	Bear Paw Mtn.	71.41	27		P	07 38 18.2	+0.3
BPAW				IAmb	IAmb	07 38 35.0	
	comp=Z,5.2nm,1.3s						
ILAR	Eielson Array	72.67	25	P	P	07 38 24.5	-0.9
	comp=Z,0.2nm,0.6s,baz=304,slow=6.0,SNR=2.2						
	comp=Z,0.2nm,0.6s						
BOSA	Boshof	93.91	240	LR	LR	08 24 58.3	
	comp=Z,58nm,18.3s,baz=200,slow=37						
TSUM	Tsumeb	95.58	251	LR	LR	08 23 53.5	
	comp=Z,32nm,18.0s,baz=329,slow=36						

*IDC **05** 07:38:09.2±9.7,2°.23N×127°.62E,h116km±87km,mb3.6/7, mbtmp4.0/7,Error ellipse: s-maj=100.8km s-min=19.1km az=65.0*

*DJA **05** 07:38:11.7±0.4,3°N±3°×12°8E±°,h120km±4km,M4.4/14, mB4.9/2,mb4.5/7,MLv4.3/14,Mw(mB)4.2/2*

ISC 05 07:38:07.1±1.2,2°.6N±0°.1×128°.5E±0°.1,h100km,n17, σ2ˢ.36/16,mb4.0/6,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.15	211	P	Pn	07 38 44.8	+3.2
SGSI	Sangihe	3.11	290	P	Pn	07 38 56.4	+2.0
SGSI				S	Sn	07 39 32.7	+1.8
SWI	Sorong	4.46	141	P	Pn	07 39 17.1	+4.6
KMSI	Cibinong	4.93	246	P	Pn	07 39 19.1	+0.3
SANI	Sanana	5.27	208	P	Pn	07 39 24.3	+0.8
	0.2nm67nm,1.2s						
NLAI	Namlea	5.99	193	P	Pn	07 39 35.9	+2.6
	0.3nm82nm,0.8s						
FAKI	Fak Fak	6.69	146	P	Pn	07 39 48.8	+6.0
	0.1nm35nm,0.9s						
LUWI	Luwuk	6.76	237	P	Pn	07 39 44.6	+0.8
	3µm138nm,0.9s						
MRSI	Marisa	6.86	252	P	Pn	07 39 47.0	+1.8
	0.2nm642nm49nm,0.9s						
APSI	Ampana	7.67	243	P	Pn	07 39 57.6	+1.5
FITZ	Fitzroy Crossi	20.79	188	P	P	07 42 36.3	-4.0
	2.4nm,0.8s,baz=1.1,slow=9.6,SNR=1.6						
	2.4nm,0.8s						
WRA	Warramunga Arr	23.16	166	P	P	07 43 04.3	-0.8
	2.5nm,0.4s,baz=341,slow=10,SNR=17						
	2.5nm,0.4s						
ASAR	Alice Springs	26.67	169	P	P	07 43 35.9	-1.0
	0.6nm,0.5s,baz=354,slow=8.0,SNR=11						
ASAR				PcP	PcP	07 46 57.1	-1.3
	0.5nm,0.4s,baz=351,slow=2.7,SNR=8.0						
	0.6nm,0.5s						
STKA	Stephens Creek	36.52	161	P	P	07 45 02.7	-0.3
	2.4nm,0.3s,baz=347,slow=7.0,SNR=12						
	2.4nm,0.3s						
MKAR	Makanchi Array	59.44	325	P	P	07 47 59.0	-0.4
	0.5nm,0.3s,baz=126,slow=7.7,SNR=7.0						
	0.5nm,0.3s						
KURBB	Kurchatov Arra	63.59	327	P	P	07 48 26.6	-0.7
	0.6nm,0.4s,baz=130,slow=5.9,SNR=5.3						
	0.6nm,0.4s						
QSPA	South Pole Qui	92.54	180	P	P	07 51 05.5	-1.6
	1.5nm,1.0s,baz=319,slow=9.3,SNR=1.9						
	1.5nm,1.0s						

*NEIC **05** 07:51:49.3±1.0,55°.04N±0°.09×160°.00W±0°.09, h73km±15km,ML3.4/32,ML3.3(AEIC),Error ellipse: s-maj=14.5km s-min=6.4km az=158.0*

*AEIC **05** 07:51:50.8±1.2,55°.06N±0°.08×160°.00W±0°.07,h63km±7km, Error ellipse: s-maj=12.3km s-min=5.4km az=168.0*

ISC 05 07:51:49.4±1.0,55°.06N±0°.06×159°.97W±0°.04,h74km±9km, n83,σ0ˢ.61/89,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHNA	Chernabura Isl	0.32	136	P	Pn	07 52 01.0	0.0
CHNA	Chernabura Isl	0.32	136	S	Sn	07 52 09.7	+0.1
CNBA	Chernabura Isl	0.33	137		Pn	07 52 01.1	0.0
CNBA				IAML		07 52 10.1	
	comp=N,3µm,0.3s						
CNBA	Chernabura Isl	0.33	137		Sn	07 52 09.7	0.0
SDPT	Sand Point	0.41	316		Pn	07 52 01.7	0.0
SDPT					Sn	07 52 10.6	-0.3
SDPT	Sand Point	0.41	316	IAML		07 52 11.7	
	comp=E,2µm,0.2s						
SDPT	Sand Point	0.41	316	P	Pn	07 52 01.6	-0.1
SDPT	Sand Point	0.41	316	S	Sn	07 52 10.6	-0.3
PS1A	Pavlof South-1	1.08	291		Pn	07 52 09.0	0.0
PS1A					Sn	07 52 23.2	-0.5
PVV	Pavlof Volcano	1.09	288		Pn	07 52 08.9	-0.2
PVV					Sn	07 52 23.4	-0.5
PS4A	Pavlof South-4	1.12	286		Pn	07 52 09.5	0.0
PS4A					Sn	07 52 24.1	-0.5
HAG	Hague Volcano	1.14	284		Pn	07 52 09.9	+0.1
HAG					Sn	07 52 25.1	0.0
VNFG	Fog Glacier, M	1.25	11		Pn	07 52 12.1	+0.8
VNFG					Sn	07 52 28.4	+0.6
ANPB	Aniakchak Plen	1.99	28		Pn	07 52 21.5	+0.5
ISLZ	Isanotski Laza	2.19	263		Pn	07 52 23.8	+0.3
ISLZ					Sn	07 52 49.5	-0.2
CHIR	Chirikof Islan	2.59	71		Pn	07 52 29.2	+0.2
CHIR				IAML		07 52 59.9	
	comp=E,225nm,0.5s						
CHIR	Chirikof Islan	2.59	71		Sn	07 53 00.6	+1.2
CHIR	Chirikof Islan	2.59	71	P	Pn	07 52 29.1	+0.1
CHIR	Chirikof Islan	2.59	71	S	Sn	07 52 59.0	-0.5
R16K	Pilot Point	2.85	27		Pn	07 52 32.7	+0.2
R16K					Sn	07 53 04.6	-1.0
PLK1	Peulik 1	3.33	33		Sn	07 53 16.6	-0.6
AKUT	Akutan	3.50	257	Pn	Pn	07 52 42.0	+0.7
AKUT				IAML		07 53 35.1	
	comp=E,56nm,0.9s						
AKUT				IAML		07 53 41.9	
	comp=N,59nm,0.5s						
AKUT	Akutan	3.50	257	P	Pn	07 52 41.8	+0.5
AHB	Akutan Harbor	3.53	257		Pn	07 52 42.2	+0.4
SII	Sitkinak Islan	3.60	63		Pn	07 52 42.6	0.0
SII				IAML		07 53 42.0	
	comp=N,81nm,0.9s						
SII				IAML		07 53 42.0	
	comp=E,83nm,0.6s						
SII	Sitkinak Islan	3.60	63	P	Pn	07 52 42.4	-0.3
AKBBA	Akutan Broad B	3.60	257		Pn	07 52 42.9	+0.2
ZRO	Akutan Zero	3.63	257		Pn	07 52 43.5	+0.4
LVA	Lava Point	3.64	258	Pn	Pn	07 52 43.4	+0.1
KJL	Kejulik	3.87	37		Pn	07 52 46.8	+0.4
UNV	Unalaska Valle	4.00	255		Pn	07 52 48.0	-0.2
ACHA	Angle Creek He	4.07	37		Pn	07 52 49.7	+0.6
O15K	Ungalikthiuk R	4.13	1		Pn	07 52 50.0	0.0
O15K				IAML		07 53 36.0	
	comp=E,40nm,0.6s						
O15K				IAML		07 53 36.4	
	comp=N,30nm,0.6s						
O14K	Tigyukauivet M	4.27	351		Pn	07 52 51.6	-0.1
O14K				IAML		07 53 40.7	
	comp=N,26nm,1.2s						
O14K				IAML		07 54 22.4	
	comp=E,23nm,1.3s						
OHAK	Old Harbor	4.32	57		Pn	07 52 51.9	-0.6
OHAK	Old Harbor	4.32	57	P	Pn	07 52 51.6	-0.9
KAHG	Katmai Hook Gl	4.56	39		Pn	07 52 55.9	+0.1
P17K	Kvichak River	4.57	23		Pn	07 52 56.6	+0.7
KDAK	Kodiak Island	4.93	53		Pn	07 53 00.0	-0.7
KDAK				IAML		07 53 54.6	
	comp=E,28nm,0.3s						
KDAK				IAML		07 53 57.5	
	comp=E,18nm,0.6s						
N14K	Kuskokwak Cree	4.97	350	IAML		07 54 59.5	
	comp=E,40nm,1.4s						
P18K	Big Mountain,	5.05	29		Pn	07 53 02.8	+0.3
N15K	Kwethluk River	5.13	359		Pn	07 53 03.5	+0.1
N15K				IAML		07 54 34.9	
	comp=N,20nm,1.2s						
N15K				IAML		07 54 36.3	
	comp=E,25nm,1.2s						
OKSP	Okmok Steeple	5.21	253		Pn	07 53 04.7	0.0
O18K	Koktuh Hills	5.45	26		Pn	07 53 08.4	+0.5
N16K	Nishlik Lake	5.47	6		Pn	07 53 08.5	+0.3
SYI	Shuyak Island	5.48	46		Pn	07 53 08.2	-0.1
NIKH	Nikolski High	5.64	252	P	Pn	07 53 11.0	+0.5
M14K	Bethel	5.81	350		Pn	07 53 12.7	0.0
M16K	Timber Creek	6.01	5		Pn	07 53 15.9	+0.4
L14K	Kuka Creek	6.46	348		Pn	07 53 21.3	-0.4
N19K	Bonanza Creek	6.47	25		Pn	07 53 22.8	+0.9
CNPM	China Poot	6.51	43	Pn	Pn	07 53 23.0	+0.5
L16K	Owhat River	6.68	2		Pn	07 53 24.2	-0.4
M18K	Stony River	6.81	17		Pn	07 53 26.1	-0.3
K13K	Kusilvak Mount	7.32	342		Pn	07 53 33.7	+0.3
M19K	Big River Lodg	7.46	21		Pn	07 53 36.4	+1.0
SEW	Seward	7.58	44		Pn	07 53 36.7	-0.3
L19K	White Mountain	7.63	18		Pn	07 53 38.4	+0.8
K17K	Iditarod	7.73	6		Pn	07 53 38.8	-0.2
RC01	Rabbit Creek A	8.12	38		Pn	07 53 43.9	-0.4
SKT	Skwentna	8.22	29	Pn	Pn	07 53 45.9	+0.2
P23K	Montague Islan	8.38	49		Pn	07 53 47.1	-0.7
KNK	Knik Glacier	8.79	39		Pn	07 53 52.8	-0.7
ATKA	Atka Island	8.92	257	P	Pn	07 53 55.5	+0.2
HIN	Hinchinbrook I	8.97	48		Pn	07 53 54.5	-1.4
GLI	Glacier Island	8.98	44		Pn	07 53 54.2	-1.9
FID	Port Fidalgo	9.16	46	Pn	Pn	07 53 57.3	-1.3
EYAK	Cordova Ski Ar	9.37	48	Pn	Pn	07 54 00.7	-0.5
EYAK	Cordova Ski Ar	9.37	48	P	Pn	07 54 00.8	-0.5
SCM	Sheep Creek Mo	9.48	39	Pn	Pn	07 54 02.1	-0.8
RAGM	Ragged Mountai	9.76	51	Pn	Pn	07 54 06.2	-0.5
HMT	Hamilton	9.92	51	Pn	Pn	07 54 08.5	-0.4
NICHA	Nichawak Mount	10.01	52		Pn	07 54 09.4	-0.7
BMRM	Bremner River	10.06	48	Pn	Pn	07 54 10.3	-0.6
M24K	Tolsona, Glenn	10.07	40		Pn	07 54 10.4	-0.6
BERG	Berg Lake	10.20	52	Pn	Pn	07 54 12.3	-0.3
ADK	Adak	10.46	259	Pn	Pn	07 54 16.3	+0.1
CRQM	Cirque	10.60	51	Pn	Pn	07 54 18.2	-0.1
WAX	Waxell Ridge	10.61	52	Pn	Pn	07 54 17.9	-0.4
RIDG	Independent Ri	11.59	35	Pn	Pn	07 54 31.6	-0.1
BCAR	Beaver Creek A	12.29	42	Pn	Pn	07 54 39.5	-1.6
WHY	Whitehorse	14.43	57	Pn	Pn	07 55 10.7	+1.1
CRAG	Craig	15.28	77	P	Pn	07 55 22.2	+1.7

*IDC **05** 07:52:12.2±1.6,50°.27N×159°.84E,h0km,mb3.6/7, mbtmp3.6/8,ML2.3/1,MS2.7/2,Error ellipse: s-maj=40.9km s-min=22.6km az=13.0*

*KRSC **05** 07:52:15.0±2.3,50°.43N×159°.84E,h61km±25km,Ml3.9*

ISC 05 07:52:14.6±3.7,50°.36N±0°.08×159°.79E±0°.07,h15km±23km, n30,σ1ˢ.41/40,mb3.6/7,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAU	Pauzhetka	2.19	302	eP	Pb	07 52 52.8	-1.1
PAU				eS	Sn	07 53 17.5	+0.2
RUS	Russkaya	2.23	339	eP	Pn	07 52 50.1	-0.9
RUS				eS	Sn	07 53 16.5	-1.8
ASAK	Asacha	2.35	330	eP	Pn	07 52 52.7	0.0
ASAK				eS	Sn	07 53 21.2	-0.3
MTVR	Mutnovka	2.36	335	eP	Pn	07 52 52.5	-0.5
MTVR				eS	Sn	07 53 21.0	-0.6
SKR	Severo-Kuril's	2.37	279	eP	Pn	07 52 52.4	-0.5
SKR				eS	Sn	07 53 19.9	-1.8
GRL	Gorelyy	2.45	335	eP	Pn	07 52 54.8	+0.7
GRL				eS	Sn	07 53 23.8	-0.1
KRMR	Karymshinskiy	2.69	338	eS	Sn	07 53 30.1	+0.5
MIPR	Malaya Ipel'ka	2.71	316	eP	Pn	07 52 58.5	+0.9
SPN	Mys Shipunski	2.75	3	eP	Pn	07 52 57.5	-0.7
SPN				eS	Sn	07 53 28.1	-3.0
DALK	Dalny	2.76	347	eP	Pn	07 52 57.9	-0.3
DALK				eS	Sn	07 53 29.1	-2.2
UGLR	Uglovaya	2.92	348	eP	Pn	07 53 00.6	0.0
SMAR	Somma	2.98	348	eP	Pn	07 53 01.8	+0.3
SDLR	Sedlovina	2.98	349	eP	Pn	07 53 01.5	0.0
AVH	Avacha	2.99	348	eP	Pn	07 53 03.0	+1.5
KOK	Koryaka	3.03	347	eP	Pn	07 53 02.4	+0.3
PETK	Petropavlovsk-	3.05	336	Pn	Pn	07 53 03.1	+0.9
	1.9nm,0.3s,baz=150,slow=15,SNR=17						
PETK				Sn	Sn	07 53 40.5	+2.0
	2.1nm,0.3s,baz=131,slow=15,SNR=2.9						
PETK				LR	LR	07 55 12.7	
	comp=Z,28nm,18.9s,baz=155,slow=57						
	6.5nm,0.5s						
KRX	Arik	3.09	347	eP	Pn	07 53 03.3	+0.3
GNL	Ganaly	3.54	342	eP	Pn	07 53 10.5	+1.4
MKZ	Mys Kozlova	4.37	15	eP	Pn	07 53 18.8	-1.6
TUMD	Tumrok D	4.87	4	eP	Pn	07 53 30.0	+2.6
TUMD				eS	Sn	07 54 20.6	-2.8
KMNR	Kamenistaya	5.42	3	eP	Pn	07 53 37.4	+2.5
KPT	Kopyto	5.63	2	eP	Pn	07 53 41.0	+3.3
TIXI	Tiksi	25.52	338	P	P	07 57 43.3	+1.2
	1.2nm,0.4s,baz=145,slow=8.0,SNR=4.8						
	1.2nm,0.4s						
ILAR	Eielson Array	30.93	42	P	P	07 58 30.4	0.0
	0.3nm,0.7s,baz=245,slow=9.8,SNR=5.2						
	0.3nm,0.7s						
KURBB	Kurchatov Arra	49.16	304	P	P	08 01 02.0	+0.5
	0.3nm,0.3s,baz=62,slow=7.5,SNR=2.8						
	0.3nm,0.3s						
MKAR	Makanchi Array	49.22	298	P	P	08 01 02.2	+0.1
	0.2nm,0.6s,baz=48,slow=7.9,SNR=1.6						
MKAR				PcP	PcP	08 02 25.2	+0.2
	0.4nm,0.5s,baz=46,slow=5.1,SNR=6.2						
	0.2nm,0.6s						
BVAR	Borovoye Array	51.98	310	P	P	08 01 22.7	-0.1
	0.7nm,0.5s,baz=55,slow=6.4,SNR=4.2						
	0.7nm,0.5s						
AAK	Ala-Archa	56.15	298	LR	LR	08 27 57.8	
	comp=Z,26nm,18.0s,baz=186,slow=38						
PDAR	Pinedale Array	59.06	59	P	P	08 02 15.0	+0.9
	0.2nm,0.4s,baz=297,slow=5.2,SNR=3.7						
	0.2nm,0.4s						
TXAR	Lajitas Array	71.91	66	P	P	08 03 36.9	-0.4
	0.4nm,0.8s,baz=301,slow=3.7,SNR=5.7						
	0.4nm,0.8s						

DJA 05 07:54:14.0±0.8,0°N±4°×9°8E±°,h12km±4km,M3.7/10, mb4.0/1,MLv3.5/10,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	1.12	1	P	Pb	07 54 35.0	-0.3
MNSI	Mandailing Nat	2.11	73	P	Pn	07 54 48.6	-0.5
MNSI				S	Sn	07 55 16.7	+1.4
PPI	Padang Panjang	2.91	103	P	Pn	07 55 00.4	+0.3
BKNI	Bangkinang	3.48	88	P	Pn	07 55 09.0	+1.0
MLSI	Meulaboh, Aceh	4.22	344	P	Pn	07 55 18.3	+0.1
MDSI	Maura Dua	8.07	125	P	Pn	07 56 10.7	-0.5

*IDC **05** 08:07:08.8±1.0,28°.03N×103°.69E,h0km,mb3.9/7, mbtmp3.8/9,ML3.8/2,MS3.3/3,Error ellipse: s-maj=25.0km s-min=20.4km az=65.0*

ISC 05 08:07:13.9±0.9,28°.1N±0°.1×103°.7E±0°.1,h35km,n11, σ0ˢ.33/9,mb3.9/7,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.51	206	Pn	Pn	08 09 42.4	+0.2
	0.4nm,0.3s,baz=12,slow=13,SNR=1.5						
CMAR				LR	LR	08 13 59.0	
	comp=Z,58nm,18.3s,baz=30,slow=39						
	0.9nm,0.3s						
SONM	Songino Array	19.86	5	P	P	08 11 42.1	+0.1
	0.1nm,0.3s,baz=179,slow=8.6,SNR=4.5						
	0.3nm,0.5s						
JOW	Kunigami	21.82	87	P	P	08 12 03.7	+0.4
	3.8nm,0.4s,baz=234,slow=6.5,SNR=4.8						
	3.8nm,0.4s						
KSRS	Korea Array	22.36	59	P	P	08 12 08.8	-0.1
	1.9nm,0.5s,baz=246,slow=9.7,SNR=12						
	1.9nm,0.5s						
MKAR	Makanchi Array	25.15	324	P	P	08 12 35.7	-0.1
	0.7nm,0.5s,baz=131,slow=8.7,SNR=5.4						
	0.7nm,0.5s						
USRK	Ussuriysk Ar.	27.76	47	P	P	08 12 59.3	0.0
	1.6nm,0.7s,baz=242,slow=8.4,SNR=4.0						
	1.6nm,0.7s						
KURBB	Kurchatov Arra	29.53	327	LR	LR	08 26 11.4	
	comp=Z,51nm,20.6s,baz=166,slow=39						
FITZ	Fitzroy Crossi	50.55	153	LR	LR	08 39 48.5	
	comp=Z,83nm,18.1s,baz=178,slow=39						
WRA	Warramunga Arr	56.16	145	P	P	08 16 49.7	-0.6
	0.8nm,0.6s,baz=334,slow=7.3,SNR=2.2						
	0.8nm,0.6s						
ASAR	Alice Springs	59.09	147	P	P	08 17 10.9	0.0
	1.1nm,0.7s,baz=325,slow=6.9,SNR=13						
	1.1nm,0.7s						
AKASG	Malin Array Be	59.25	315	P	P	08 17 11.7	0.0
	0.5nm,0.5s,baz=83,slow=4.8,SNR=4.5						
	0.5nm,0.5s						

*ASRS **05** 08:10:27.0±1.1,53°.74N×91°.12E,h0km,M2.9,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*IDC **05** 08:10:32.5±3.5,53°.70N×90°.99E,h0km,mbtmp3.0/3, ML2.6/3,Error ellipse: s-maj=28.1km s-min=23.4km az=62.0*

ISC 05 08:10:34.8±4.7,53°.7N±0°.2×90°.6E±0°.3,h0km,n5,σ1ˢ.25/6, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	3.43	276	I	I	08 32 24.6	
	0.1nm,0.9s,baz=91,slow=317,SNR=9.9						
ZALV	Zalesovo Beam	3.43	276	Pn	Pn	08 11 30.3	+0.8
	0.5nm,0.3s,baz=91,slow=15,SNR=5.7						
ZALV				Pg	Pg	08 11 39.5	-1.1
	1.1nm,0.3s,baz=94,slow=14,SNR=8.5						
ZALV				Lg	Lg	08 12 28.2	
	1.3nm,0.3s,baz=90,slow=24,SNR=11						
	0.9nm,0.3s						
KURBB	Kurchatov Arra	8.05	252	Pn	Pn	08 12 32.6	-0.2
	0.1nm,0.3s,baz=65,slow=15,SNR=6.2						
KURBB				Sn	Sn	08 14 06.0	+1.5
	baz=66,slow=25,SNR=6.1						
KURBB				Lg	Lg	08 14 55.0	
	baz=69,slow=30,SNR=6.9						
	0.8nm,0.4s						
MKAR	Makanchi Array	8.75	221	Pn	Pn	08 12 43.1	+0.6
	0.2nm,0.3s,baz=36,slow=13,SNR=3.9						
MKAR				Sn	Sn	08 14 21.3	-0.5
	baz=41,slow=24,SNR=1.5						
MKAR				Lg	Lg	08 15 14.5	
	baz=36,slow=31,SNR=3.8						
	0.5nm,0.5s						
SONM	Songino Array	11.60	114	Lg	Lg	08 16 31.5	
	0.3nm,0.3s,baz=307,slow=29,SNR=5.2						

*IDC **05** 08:24:34.5±1.8,50°.52N×159°.89E,h0km,mb3.8/6, mbtmp3.7/7,ML2.3/1,MS2.8/4,Error ellipse: s-maj=47.4km s-min=21.1km az=12.0*

*KRSC **05** 08:24:36.5±1.8,50°.56N×160°.00E,h60km±38km,Ml4.0*

*MOS **05** 08:24:37.4±0.9,50°.49N×159°.97E,h38km,mb4.0/1,Error ellipse: s-maj=16.9km s-min=4.1km az=98.5*

*NEIC **05** 08:24:38.8±0.8,50°.73N±0°.08×160°.0E±0°.1,h10km±2km, mb4.2/11,Error ellipse: s-maj=17.8km s-min=7.6km az=132.0*

ISC 05 08:24:39.4±1.0,50°.50N±0°.07×159°.91E±0°.06,h35km,n86, σ1ˢ.07/101,mb4.0/13,1C,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	Russkaya	2.12	336	PN	Pn	08 25 10.7	-1.6
RUS				S	Sn	08 25 36.3	-1.1
RUS	Russkaya	2.12	336	eP	Pn	08 25 10.7	-1.6
RUS				eS	Sn	08 25 36.3	-1.1
PAU	Pauzhetka	2.18	298	PN	Pn	08 25 13.2	0.0
PAU	Pauzhetka	2.18	298	eP	Pn	08 25 13.2	0.0
MTVR	Mutnovka	2.26	332	PN	Pn	08 25 13.1	-1.3
MTVR				S	Sn	08 25 40.5	-0.6
MTVR	Mutnovka	2.26	332	eP	Pn	08 25 13.1	-1.3
MTVR				eS	Sn	08 25 40.5	-0.6

ASAK	Asacha	2.26	327	PN	Pn	08 25 13.7	-0.7
ASAK				S	Sn	08 25 40.9	-0.2
ASAK	Asacha	2.26	327	eP	Pn	08 25 13.7	-0.7
ASAK				eS	Sn	08 25 41.0	-0.2
GRL	Gorelyy	2.35	332	PN	Pn	08 25 15.0	-0.6
GRL	Gorelyy	2.35	332	eP	Pn	08 25 15.1	-0.6
SKR	Severo-Kuril's	2.42	276	⇑iPN	Pn	08 25 15.1	-1.4
SKR				i S	Sn	08 25 42.0	-2.8
SKR				pmax	pmax		
	comp=Z,148nm,0.5s						
SKR				smax	smax		
	comp=E,1µm,0.4s						
SKR				smax	smax		
	comp=N,719nm,0.5s						
SKR	Severo-Kuril's	2.42	276	eP	Pn	08 25 15.0	-1.5
KRMR	Karymshinskiy	2.58	335	PN	Pn	08 25 17.8	-0.8
KRMR				S	Sn	08 25 48.3	-0.5
KRMR	Karymshinskiy	2.58	335	eP	Pn	08 25 17.9	-0.8
KRMR				eS	Sn	08 25 48.3	-0.5
SPN	Mys Shipunski	2.60	2	PN	Pn	08 25 17.0	-1.9
SPN				S	Sn	08 25 47.0	-2.3
SPN	Mys Shipunski	2.60	2	eP	Pn	08 25 17.1	-1.9
SPN				eS	Sn	08 25 47.0	-2.3
PET	Petropavlovsk	2.64	343	Pn	Pn	08 25 18.3	-1.2
PET				Sn	Sn	08 25 48.5	-1.8
PET	Petropavlovsk	2.64	343	ePN	Pn	08 25 18.1	-1.4
PET				eS	Sn	08 25 48.7	-1.6
PET				smax	smax		
	comp=N,120nm,0.5s						
PET				smax	smax		
	comp=E,71nm,0.5s						
PET	Petropavlovsk	2.64	343	eS	Sn	08 25 49.3	-1.1
NLC	Nalytchevo	2.70	353	PN	Pn	08 25 20.0	-0.2
NLC				S	Sn	08 25 51.7	+0.1
NLC	Nalytchevo	2.70	353	eP	Pn	08 25 20.0	-0.2
NLC				eS	Sn	08 25 51.7	+0.1
UGLR	Uglovaya	2.79	347	PN	Pn	08 25 22.5	+0.8
UGLR	Uglovaya	2.79	347	eP	Pn	08 25 22.5	+0.8
SMAR	Somma	2.85	347	PN	Pn	08 25 22.9	+0.3
SMAR	Somma	2.85	347	eP	Pn	08 25 22.9	+0.3
SDLR	Sedlovina	2.85	348	PN	Pn	08 25 21.9	-0.6
SDLR	Sedlovina	2.85	348	eP	Pn	08 25 21.9	-0.6
AVH	Avacha	2.86	346	PN	Pn	08 25 22.6	0.0
AVH	Avacha	2.86	346	eP	Pn	08 25 22.7	0.0
KRER	Koryakskii	2.90	346	PN	Pn	08 25 23.2	0.0
KRER	Koryakskii	2.90	346	eP	Pn	08 25 23.3	0.0
KOK	Koryaka	2.90	345	PN	Pn	08 25 22.4	-0.8
KOK	Koryaka	2.90	345	eP	Pn	08 25 22.4	-0.8
PEA0B	Petropavlovsk-	2.95	333		Pn	08 25 23.1	-0.7
PEA0B				Sn	Sn	08 25 56.1	-1.8
PEA0B	Petropavlovsk-	2.95	333	PN	Pn	08 25 23.6	-0.1
PETK	Petropavlovsk-	2.95	333	Pn	Pn	08 25 23.4	-0.3
PETK	Petropavlovsk-	2.95	333	Pn	Pn	08 25 22.7	-1.1
	comp=E,2.1nm,0.3s,baz=135,slow=16,SNR=20						
PETK				Sn	Sn	08 25 58.8	+0.9
	comp=E,3.0nm,0.3s,baz=203,slow=14,SNR=2.3						
PETK				LR	LR	08 26 45.4	
	comp=E,80nm,20.0s,baz=150,slow=45						
	comp=E,7.3nm,0.5s						
PETK	Petropavlovsk-	2.95	333	PN	Pn	08 25 23.4	-0.3
KRX	Arik	2.97	345	PN	Pn	08 25 23.5	-0.6
KRX	Arik	2.97	345	eP	Pn	08 25 23.5	-0.6
APC	Apacha	2.97	326	PN	Pn	08 25 23.7	-0.3
APC	Apacha	2.97	326	eP	Pn	08 25 23.8	-0.3
GNL	Ganaly	3.42	340	PN	Pn	08 25 30.0	-0.3
GNL	Ganaly	3.42	340	eP	Pn	08 25 30.1	-0.3
KII	Karymskiy	3.55	356	PN	Pn	08 25 32.7	+0.6
KII	Karymskiy	3.55	356	eP	Pn	08 25 32.7	+0.6
MKZ	Mys Kozlova	4.21	15	PN	Pn	08 25 38.7	-2.3
MKZ	Mys Kozlova	4.21	15	eP	Pn	08 25 38.8	-2.3
TUMD	Tumrok D	4.72	3	PN	Pn	08 25 47.3	-0.7
TUMD	Tumrok D	4.72	3	eP	Pn	08 25 47.4	-0.7
TUMD				eS	Sn	08 26 39.0	-2.5
KMNR	Kamenistaya	5.27	2	PN	Pn	08 25 56.9	+1.3
KMNR	Kamenistaya	5.27	2	eP	Pn	08 25 57.0	+1.3
BZMR	Bezymyannaya	5.46	3	PN	Pn	08 25 59.1	+0.8
BZMR	Bezymyannaya	5.46	3	eP	Pn	08 25 59.2	+0.8
BZGR	Bezymyannyi-Gr	5.47	5	PN	Pn	08 25 58.7	+0.3
BZGR	Bezymyannyi-Gr	5.47	5	eP	Pn	08 25 58.8	+0.3
KPT	Kopyto	5.48	2	PN	Pn	08 25 58.2	-0.3
KPT	Kopyto	5.48	2	eP	Pn	08 25 58.2	-0.3
ESO	Esso	5.48	353	PN	Pn	08 25 58.7	+0.2
ESO	Esso	5.48	353	eP	Pn	08 25 58.8	+0.2
BZWR	Bezymyannyi-We	5.49	3	PN	Pn	08 26 00.3	+1.6
BZWR	Bezymyannyi-We	5.49	3	eP	Pn	08 26 00.4	+1.6
KBTR	Krutoberegovo	5.98	16	PN	Pn	08 26 03.8	-1.5
KBTR	Krutoberegovo	5.98	16	eP	Pn	08 26 03.9	-1.5
MA2	Magadan	10.48	334	LR	LR	08 31 23.0	
	comp=E,32nm,19.4s,baz=98,slow=39						
KLR	Kul'dur	18.16	277	LR	LR	08 36 08.2	
	comp=E,34nm,18.8s,baz=57,slow=38						
USRK	Ussuriysk Ar.	19.86	262	LR	LR	08 36 51.5	
	comp=E,45nm,19.2s,baz=191,slow=37						
J19K	Poorman	26.92	43	P	P	08 30 17.3	+0.3
J19K				IAmb	IAmb	08 30 33.3	
	comp=Z,6.7nm,1.4s						
I23K	Minto, Yukon-K	29.74	41	P	P	08 30 42.7	+0.7
I23K				IAmb	IAmb	08 30 44.3	
	comp=Z,4.1nm,1.4s						
WRH	Wood River Hil	30.25	43	P	P	08 30 47.1	+0.6
G24K	Hadweenzic Riv	30.66	38	P	P	08 30 51.1	+1.1
G24K				IAmb	IAmb	08 30 51.4	
	comp=Z,2.0nm,0.7s						
IL31		30.77	42	P	P	08 30 51.4	+0.4
ILAR	Eielson Array	30.77	42	P	P	08 30 50.9	-0.3
	comp=Z,0.6nm,0.6s,baz=250,slow=7.8,SNR=11						
	comp=Z,0.6nm,0.6s						
FYU	Fort Yukon	31.54	39	P	P	08 30 58.9	+1.1
BMAR	Burnt Mountain	31.85	37	P	P	08 31 01.7	+1.1
DOT	Dot Lake	32.02	44	P	P	08 31 02.0	-0.1
G26K	Porcupine Rive	32.13	38	P	P	08 31 04.2	+1.2
G26K				IAmb	IAmb	08 31 04.9	
	comp=Z,3.0nm,0.8s						
K27K	Chicken	32.88	43	P	P	08 31 10.3	+0.7
K27K				IAmb	IAmb	08 31 10.8	
	comp=Z,2.4nm,0.8s						
L27K	Beaver Creek,	33.06	45	P	P	08 31 12.5	+1.2
L27K				IAmb	IAmb	08 31 13.7	
	comp=Z,4.0nm,1.1s						
L29M	L29M	34.73	45	P	P	08 31 27.4	+1.6
L29M				IAmb	IAmb	08 31 28.4	
	comp=Z,3.0nm,1.0s						
KURK	Kurchatov	49.04	304	P	P	08 33 23.2	+0.7
KURBB	Kurchatov Arra	49.14	304	P	P	08 33 23.2	-0.1
	comp=Z,0.9nm,0.6s,baz=63,slow=7.7,SNR=6.1						
	comp=Z,0.9nm,0.6s						
MKAR	Makanchi Array	49.21	298	P	P	08 33 24.2	+0.2
	comp=Z,0.4nm,0.6s,baz=60,slow=8.5,SNR=3.0						
	comp=Z,0.4nm,0.6s						
BVAR	Borovoye Array	51.94	310	P	P	08 33 44.4	0.0
	comp=Z,1.1nm,0.5s,baz=52,slow=6.5,SNR=6.4						
	comp=Z,1.1nm,0.5s						
PDAR	Pinedale Array	58.92	59	P	P	08 34 36.0	+0.9
	comp=Z,0.9nm,0.8s,baz=313,slow=3.3,SNR=6.0						
	comp=Z,0.9nm,0.8s						
TXAR	Lajitas Array	71.78	66	P	P	08 35 58.6	+0.3
	comp=Z,0.6nm,0.5s,baz=296,slow=4.2,SNR=14						
	comp=Z,0.6nm,0.5s						

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*NOU **05** 08:25:48.4, 34.°80S×179.°47E, h276^{km}, MLv4.8/9, South of Kermadec Islands*

*IDC **05** 08:25:53.9±5.3, 34.°67S×179.°01E, h129^{km}±39^{km}, mb3.9/7, mbtmp4.3/8, Error ellipse: s-maj=46.4km s-min=17.4km az=45.0*

*WEL **05** 08:25:58.3±1.0, 35.°S±5.°×17.°9E±.°, h12^{km}, M4.5/15, ML4.6/18, MLv4.5/15, Error ellipse: s-maj=12.3km s-min=5.7km az=79.9, confirmed*

ISC 05 08:26:01.7±0.9**, 35.°23S**±0.°05×**178.°82E**±0.°06**, h201**^{km}±5^{km}**, n174, σ2.**^{s}**38**/130**, mb4.0**/7**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.36	190	P	Pn	08 26 41.5	-2.6
MXZ	Matakaoa Point	2.36	190	P	Pn	08 26 41.6	-2.6
MXZ				S	S	08 27 15.4	-1.4
WMGZ	Waiomatatini S	2.60	187	P	Pn	08 26 44.8	-2.0
WMGZ				S	S	08 27 22.4	+0.9
WIZ	White Island	2.64	209	P	Pn	08 26 46.5	-0.8
HAZ	Te Kaha	2.65	198	P	Pn	08 26 44.9	-2.5
HAZ				S	S	08 27 23.9	+1.4
PKGZ	Pakihiroa	2.69	193	P	Pn	08 26 46.0	-1.9
PUZ	Puketiti	2.87	189	P	Pn	08 26 47.3	-2.5
PUZ				S	S	08 27 25.5	-1.6
RUGZ	Raukumara Rang	2.88	198	P	Pn	08 26 47.6	-2.5
GRZ	Great Barrier	2.92	249	P	Pn	08 26 47.8	-2.7
KUZ	Kuaotunu	2.93	238	P	Pn	08 26 49.1	-1.5
KUZ	Kuaotunu	2.93	238	P	Pn	08 26 48.9	-1.7
TWGZ	Tauwhareparae	3.02	193	P	Pn	08 26 49.6	-2.0
TWGZ				S	S	08 27 32.4	+2.3
OPCS	Opotiki Colleg	3.04	204	P	Pn	08 26 48.9	-2.9
OPRZ	Ohinepanea	3.18	214	P	Pn	08 26 52.9	-0.6
TGRZ	Tauranga	3.24	219	P	Pn	08 26 53.9	-0.3
MARZ	Manawahe	3.25	212	P	Pn	08 26 53.7	-0.6
MWZ	Matawai	3.27	198	P	Pn	08 26 52.5	-2.1
CNGZ	Carnagh Statio	3.28	188	P	Pn	08 26 52.5	-2.2
TKGZ	Te Karaka	3.29	193	P	Pn	08 26 52.6	-2.3
URZ	Urewera	3.32	204	P	Pn	08 26 52.8	-2.3
	55nm,0.3s,baz=354,slow=4.3,SNR=204						
URZ				S	S	08 27 37.5	+1.0
	146nm,0.3s,baz=231,slow=23,SNR=11						
URZ	Urewera	3.32	204	P	Pn	08 26 52.9	-2.3
URZ	Urewera	3.32	204	P	Pn	08 26 52.9	-2.3
EDRZ	Edgecumbe	3.32	210	P	Pn	08 26 54.4	-0.9
LIRZ	Lichensteins R	3.39	215	P	Pn	08 26 53.9	-2.1
MKRZ	Makatiti	3.46	212	P	Pn	08 26 57.3	+0.3
KARZ	Kaharoa	3.47	216	P	Pn	08 26 56.7	-0.4
OMRZ	Omania	3.48	214	P	Pn	08 26 56.8	-0.3
KMRZ	Kaimai	3.49	221	P	Pn	08 26 57.4	+0.1
MKAZ	Moumakai	3.50	237	P	Pn	08 26 56.6	-0.7
RIGZ	Rimuhau	3.57	193	P	Pn	08 26 55.6	-2.6
ETAZ	East Tamaki Re	3.59	240	P	Pn	08 26 57.9	-0.6
HLRZ	Highlands Stat	3.61	213	P	Pn	08 26 58.3	-0.4
UTU	Utuhina	3.62	215	P	Pn	08 27 00.0	+1.2
MUGZ	Murupara	3.63	206	P	Pn	08 26 56.9	-2.1
MUGZ				S	S	08 27 46.2	+2.8
RTZ	Ruatahuna	3.69	203	P	Pn	08 26 57.1	-2.6
RTZ				S	S	08 27 45.7	+1.0
EPAZ	Eden Park BICE	3.69	242	P	Pn	08 26 59.1	-0.6
HSRZ	Hossack Road	3.71	213	P	Pn	08 26 59.8	-0.1
WCZ	Waipu Caves	3.72	258	P	Pn	08 26 57.0	-3.0
SNGZ	Shannon Statio	3.74	198	P	Pn	08 26 57.8	-2.5
SNGZ				S	S	08 27 48.3	+2.6
HRRZ	Handcock Road	3.75	212	P	Pn	08 26 59.9	-0.6
PRGZ	Paritu Road	3.76	191	P	Pn	08 26 57.6	-2.9
PRGZ				S	S	08 27 45.9	-0.4
PRRZ	Plateau Road	3.80	210	P	Pn	08 26 59.5	-1.6
ALRZ	Allen Road	3.87	210	P	Pn	08 27 00.4	-1.6
KNZ	Kokohu	3.89	193	P	Pn	08 26 59.0	-3.1
WPRZ	Whakapapatarin	3.91	212	P	Pn	08 27 01.7	-0.8
MTHZ	Maungataniwha	3.94	203	P	Pn	08 27 00.1	-2.8
MHGZ	Mahia Peninsul	3.98	190	P	Pn	08 27 00.7	-2.6
WHHZ	Waihua	4.04	198	P	Pn	08 27 01.5	-2.5
WHHZ				S	S	08 27 54.5	+2.0
KUTZ	Kaahu Road	4.04	216	P	Pn	08 27 03.8	-0.2
TLZ	Tolley Road	4.06	220	P	Pn	08 27 04.6	+0.2
MRHZ	Matea Rd	4.08	207	P	Pn	08 27 02.1	-2.4
WHTZ	Whakaora	4.12	213	P	Pn	08 27 05.0	-0.1
NMHZ	Naumai	4.18	202	P	Pn	08 27 03.6	-2.2
NMHZ				S	S	08 27 58.7	+3.0
WATZ	Wairara	4.26	215	P	Pn	08 27 06.1	-0.7
ARHZ	Aropaoanui	4.28	199	P	Pn	08 27 04.2	-2.7
ARHZ				S	S	08 27 59.7	+1.8
OUZ	Omahuta	4.28	269	P	Pn	08 27 03.2	-3.8
OUZ	Omahuta	4.28	269	P	Pn	08 27 02.9	-4.2
BKZ	Black Stump Fm	4.34	205	P	Pn	08 27 04.8	-3.0
BKZ	Black Stump Fm	4.34	205	P	Pn	08 27 05.0	-2.8
BKZ				S	S	08 27 59.8	+0.4
RATZ	Rangitukua	4.37	213	P	Pn	08 27 07.6	-0.6
RITZ	Rihia Road	4.42	212	P	Pn	08 27 07.4	-1.4
KATZ	Kakaramea	4.50	213	P	Pn	08 27 09.2	-0.6
NGHS	Napier Girls H	4.51	199	P	Pn	08 27 07.1	-2.8
NGHS				S	S	08 28 04.5	+1.5
MCHZ	McNeill Hill	4.53	201	P	Pn	08 27 07.3	-2.9
HIZ	Hauiti	4.56	223	P	Pn	08 27 11.6	+1.0
KWHZ	Kaweka Forest	4.60	204	P	Pn	08 27 08.1	-3.0
NTVZ	North Tongarir	4.61	212	P	Pn	08 27 09.6	-1.6
TMVZ	Te Maari	4.61	212	P	Pn	08 27 09.4	-1.8
KRVZ	Karewarewa	4.62	212	P	Pn	08 27 09.9	-1.4
ETVZ	East Tongariro	4.62	212	P	Pn	08 27 09.4	-2.0
CKHZ	Cape Kidnapper	4.63	197	P	Pn	08 27 07.9	-3.5
WTVZ	West Tongariro	4.66	213	P	Pn	08 27 10.2	-1.7
NNVZ	North Ngauruho	4.66	212	P	Pn	08 27 10.3	-1.6
OTVZ	Oturere	4.66	212	P	Pn	08 27 10.0	-1.9
TWVZ	Taurewa	4.69	214	P	Pn	08 27 10.7	-1.5
SNVZ	South Ngauruho	4.69	212	P	Pn	08 27 10.5	-1.9
NGZ	Ngauruhoe	4.70	212	P	Pn	08 27 10.6	-1.9
COVZ	Chateau Observ	4.75	213	P	Pn	08 27 11.1	-1.9
TUVZ	Tukino	4.75	211	P	Pn	08 27 11.0	-2.1
FWVZ	Far West T-bar	4.79	212	P	Pn	08 27 11.4	-2.2
MAVZ	Matarangi	4.79	212	P	Pn	08 27 11.7	-2.0
WHVZ	Whangaehu Hut	4.79	212	P	Pn	08 27 11.5	-2.2
KAHZ	Kahuranaki	4.81	198	P	Pn	08 27 10.5	-3.2
KRHZ	Kereru	4.82	203	P	Pn	08 27 10.2	-3.6
TRVZ	Turoa	4.83	212	P	Pn	08 27 11.9	-2.2
WNVZ	Wahianoa	4.83	211	P	Pn	08 27 11.4	-2.6
MOVZ	Moawhango	4.83	210	P	Pn	08 27 10.8	-3.2
PKVZ	Pokaka	4.91	213	P	Pn	08 27 12.9	-2.1
MTVZ	Mangateitei	4.93	212	P	Pn	08 27 13.1	-2.2
PXZ	Pawanui	5.04	197	P	Pn	08 27 12.4	-4.1
VRZ	Vera Road	5.06	219	P	Pn	08 27 16.7	-0.2
PNHZ	Pukenui	5.12	203	P	Pn	08 27 13.5	-4.1
WPHZ	Waipukurau	5.18	201	P	Pn	08 27 15.0	-3.4
PRHZ	Porangahau	5.32	198	P	Pn	08 27 16.4	-3.7
TSZ	Takapari Road	5.33	204	P	Pn	08 27 16.0	-4.3
WAZ	Wanganui	5.45	213	P	Pn	08 27 19.2	-2.6
DVHZ	Dannevirke	5.48	202	P	Pn	08 27 17.9	-4.3
LREZ	Lake Rotokare	5.50	219	P	Pn	08 27 22.3	-0.1
PKE	Pukeiti	5.53	223	P	Pn	08 27 23.5	+0.6
ANWZ	Angora Road	5.54	199	P	Pn	08 27 18.9	-4.1
OHWZ	Ohakea	5.69	208	P	Pn	08 27 22.4	-2.5
POWZ	Post Office Ro	5.69	204	P	Pn	08 27 21.5	-3.4
BFZ	Birch Farm	5.81	200	P	Pn	08 27 22.2	-4.2
BFZ	Birch Farm	5.81	200	P	Pn	08 27 22.5	-4.0
MRZ	Mangatainoka R	5.99	204	P	Pn	08 27 24.1	-4.7
TIWZ	Tintock	6.00	202	P	Pn	08 27 25.2	-3.7
HOWZ	Holdsworth Sta	6.23	204	P	Pn	08 27 26.7	-5.2
OGWZ	Otaki Gorge	6.28	206	P	Pn	08 27 27.7	-4.7
KIW	Kapiti Island	6.41	208	P	Pn	08 27 29.3	-4.9
MTW	Mount Morrison	6.47	203	P	Pn	08 27 29.6	-5.3
MAVS	Martinborough	6.53	203	P	Pn	08 27 31.0	-4.8
TRWZ	Traveller	6.63	201	P	Pn	08 27 32.2	-4.9
BMTS	Belmont	6.69	206	P	Pn	08 27 33.3	-4.6
PAWZ	Paruwai Farm	6.69	202	P	Pn	08 27 32.8	-5.1
INSS	Lower Hutt GNS	6.73	206	P	Pn	08 27 33.8	-4.6
NEWS	Newlands	6.77	207	P	Pn	08 27 34.9	-3.9
DUWZ	D'Urville Isla	6.77	213	P	Pn	08 27 34.8	-4.1
MSWZ	Moikau Station	6.78	203	P	Pn	08 27 33.8	-5.2
WEL	Wellington	6.83	207	P	Pn	08 27 34.9	-4.7
SNZO	South Karori	6.88	207	P	Pn	08 27 34.9	-5.3
BHW	Baring Head	6.90	206	P	Pn	08 27 35.6	-5.0
PLWZ	Palliser	6.92	203	P	Pn	08 27 35.7	-5.2
TCW	Tory Channel	6.96	210	P	Pn	08 27 36.0	-5.3
HAVS	Havelock	7.21	212	P	Pn	08 27 40.6	-4.1
KHLK	Kaihoka Lakes	7.24	221	P	Pn	08 27 41.4	-3.5
TUWZ	Tuamarina	7.28	210	P	Pn	08 27 40.4	-5.1
BWRS	Waikakaho Road	7.30	210	P	Pn	08 27 40.2	-5.5
NNZ	Nelson	7.35	214	P	Pn	08 27 41.7	-4.7
TKNZ	Takaka Hill	7.41	217	P	Pn	08 27 42.4	-4.8
QRZ	Quartz Range	7.47	220	P	Pn	08 27 43.5	-4.5
BSWZ	Blackbirch Sta	7.54	209	P	Pn	08 27 43.9	-5.0
MRNZ	Matariki Terra	7.79	216	P	Pn	08 27 46.7	-5.4
THZ	Tophouse	8.00	214	P	Pn	08 27 49.8	-5.1
KHZ	Kahutara	8.27	208	P	Pn	08 27 53.2	-5.2
KHZ	Kahutara	8.27	208	P	Pn	08 27 52.8	-5.5
DSZ	Denniston Nort	8.52	218	P	Pn	08 27 56.0	-5.6
GVZ	Greta Valley S	8.94	208	P	Pn	08 28 01.3	-5.8
LTZ	Lake Taylor	9.10	212	P	Pn	08 28 03.0	-6.2
CTZ	Chatham Island	9.19	159	P	Pn	08 28 09.2	-1.1
AMCZ	Amberley	9.26	209	P	Pn	08 28 06.0	-5.3
INZ	Inchbonnie	9.43	215	P	Pn	08 28 07.2	-6.2
MNZS	Menzies Bay Ba	9.53	207	P	Pn	08 28 10.0	-4.7
OKCZ	Okains Bay	9.57	206	P	Pn	08 28 09.5	-5.9
OXZ	Oxford	9.64	211	P	Pn	08 28 09.7	-6.5
MQZ	McQueen's Vall	9.71	208	P	Pn	08 28 10.1	-6.9
AKCZ	Akaroa Harbour	9.76	206	P	Pn	08 28 12.2	-5.5
RACZ	Rakaia	9.93	209	P	Pn	08 28 13.7	-6.2
MHCZ	Mount Hutt	10.01	212	P	Pn	08 28 15.4	-5.5
WACZ	Wakanui South	10.23	210	P	Pn	08 28 18.2	-5.5
RPZ	Rata Peaks	10.38	213	P	Pn	08 28 20.6	-5.2
	4.1nm,0.3s,baz=284,slow=1.6,SNR=24						
RPZ				S	S	08 30 15.4	-6.5
	5.8nm,0.3s,baz=312,slow=23,SNR=7.7						
RPZ	Rata Peaks	10.38	213	P	Pn	08 28 20.5	-5.2
GCSZ	Gaunt Creek Bo	10.41	217	P	Pn	08 28 21.5	-4.6
ARCZ	Arundel	10.51	212	P	Pn	08 28 21.8	-5.6
FOZ	Fox Glacier	10.82	217	P	Pn	08 28 26.1	-5.3
TMZ	Timaru	10.93	211	P	Pn	08 28 26.8	-6.1
LBZ	Lake Benmore	11.29	213	P	Pn	08 28 32.0	-5.5
ODZ	Otahua Downs	11.62	210	P	Pn	08 28 36.3	-5.3
JCZ	Jackson Bay	11.73	218	P	Pn	08 28 37.4	-5.7
HHSZ	Highcliff Hill	12.33	208	P	Pn	08 28 49.0	-1.6
EAZ	Earnscleugh	12.34	213	P	Pn	08 28 46.2	-4.5
STKA	Stephens Creek	31.09	265	P	P	08 32 02.8	+1.6
	1.6nm,0.5s,baz=106,slow=11,SNR=7.1						
	1.6nm,0.5s						
ASAR	Alice Springs	40.47	274	P	P	08 33 20.9	-0.1
	8.7nm,0.5s,baz=115,slow=7.9,SNR=151						
	8.7nm,0.5s						
WRA	Warramunga Arr	41.91	279	P	P	08 33 32.0	-0.7
	5.9nm,0.4s,baz=118,slow=7.7,SNR=92						
	5.9nm,0.4s						
VNDA	Vanda	43.04	185	P	P	08 33 44.8	+3.8
	0.7nm,0.9s,baz=2.4,slow=5.4,SNR=3.5						
	0.7nm,0.9s						
QSPA	South Pole Qui	54.89	180	P	P	08 35 15.0	+3.8
	1.9nm,0.6s,baz=202,slow=4.0,SNR=15						
	1.9nm,0.6s						
SNAA	Sanae	73.39	179	P	P	08 37 14.2	+3.1
	0.5nm,0.4s,baz=188,slow=8.9,SNR=11						
	0.5nm,0.4s						
H03S2	Juan Fernandez	79.99	124	T	T	10 06 20.1	
	baz=233						
H03S1	Juan Fernandez	80.00	124	T	T	10 06 31.1	
	baz=233						
H03S3	Juan Fernandez	80.01	124	T	T	10 06 29.2	
	baz=233						
H03N3	Juan Fernandez	80.22	124	T	T	10 06 32.1	
	baz=237,slow=72,SNR=4.5						
H03N2	Juan Fernandez	80.22	124	T	T	10 06 29.0	
	baz=237,slow=72,SNR=4.2						
H03N1	Juan Fernandez	80.23	124	T	T	10 06 33.9	
	baz=237,slow=72,SNR=4.6						
PLCA	Paso Flores	81.13	134	P	P	08 37 57.2	+2.5
	5.8nm,1.1s,baz=342,slow=3.6,SNR=3.5						
	5.8nm,1.1s						
FINES	FINESS Array B	148.58	335	PKPbc	PKPdf	08 45 22.2	+2.3
	0.5nm,0.4s,baz=70,slow=3.2,SNR=6.2						

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*CATAC **05** 08:44:16.3±0.6, 13.°N±4.°×8.°9W±.°, h23^{km}±4^{km}, M3.1/15, MLv3.1/15, Error ellipse: s-maj=7.8km s-min=4.4km az=19.6, confirmed*

*SNET **05** 08:44:17.4±0.7, 13.°00N×89.°04W, h37^{km}±36^{km}, ML3.1*

*GCG **05** 08:44:17.6±0.6, 13.°01N×89.°19W, h62^{km}±14^{km}, MD3.5*

ISC 05 08:44:16.7±2.2**, 12.°9N**±0.°1×**89.°06W**±0.°04**, h31**^{km}±11^{km}**, n65, σ0.**^{s}**41**/71**, 2C-4D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.61	335	S	Sn	08 44 38.8	+0.8
LALI	Alcalda de L	0.61	335	P	Pb	08 44 29.0	0.0
ALJI	Alcalda de J	0.61	50	eP	Pb	08 44 29.0	-0.1
ALJI	Alcalda de J	0.61	50	P	Pb	08 44 29.0	-0.1
ALJI	Alcalda de J	0.61	50	S	Sn	08 44 39.0	+0.8
TECO	Alcaldia de Te	0.66	24	⇓iP	Pb	08 44 29.3	-0.5
TECO				eS	Sb	08 44 38.4	-0.3
TECO	Alcaldia de Te	0.66	24	P	Pb	08 44 29.3	-0.5
LFRS	El Faro	0.69	360	⇑eP	Pn	08 44 30.0	-0.5
LFRS				eS	Sb	08 44 39.9	+0.2
COEG	Centro de Oper	0.70	14	eP	Pn	08 44 29.9	-0.7
COEG	Centro de Oper	0.70	14	P	Pn	08 44 29.9	-0.7
COEG	Centro de Oper	0.70	14	S	Sb	08 44 40.2	+0.1
LOMA	Loma Larga	0.72	351	⇓iP	Pn	08 44 30.5	-0.4
LOMA				IAML		08 44 42.0	
	comp=Z,625nm,0.1s						
LOMA	Loma Larga	0.72	351	P	Pn	08 44 30.5	-0.4
LOMA	Loma Larga	0.72	351	S	Sb	08 44 41.1	+0.6
UESV	Universidad de	0.75	20	eP	Pn	08 44 30.6	-0.5
TECA	Tecapa	0.78	44	eP	Pn	08 44 31.7	-0.1
TECA				eS	Sb	08 44 42.5	+0.3
UTEC	Universidad Te	0.78	350	S	Sn	08 44 42.3	0.0
UTEC	Universidad Te	0.78	350	P	Pn	08 44 31.3	-0.4
SEMO	Seminario San	0.78	348	S	Sn	08 44 42.6	+0.1
SEMO	Seminario San	0.78	348	P	Pn	08 44 30.9	-0.9
UDBS	Universidad Do	0.78	353	S	Sn	08 44 42.5	0.0
UDBS	Universidad Do	0.78	353	P	Pn	08 44 31.5	-0.3
IGN	Direccin Gen	0.79	352	S	Sn	08 44 42.5	0.0
IGN	Direccin Gen	0.79	352	P	Pn	08 44 31.6	-0.2
PAVA	Las Pavas	0.79	9	eP	Pn	08 44 31.5	-0.3
PAVA	Las Pavas	0.79	9	P	Pn	08 44 31.3	-0.4
PAVA	Las Pavas	0.79	9	S	Sn	08 44 42.6	0.0
UEES	Universidad Ev	0.80	347	eP	Pn	08 44 31.5	-0.4
UEES	Universidad Ev	0.80	347	P	Pn	08 44 31.8	-0.2
UEES	Universidad Ev	0.80	347	S	Sb	08 44 43.3	+0.5
JAYA	Jayaque - finc	0.81	332	⇓iP	Pn	08 44 31.8	-0.4
JAYA				eS	Sn	08 44 42.5	-0.9
JAYA				IAML		08 44 43.8	
	comp=Z,2µm,0.2s						
JAYA	Jayaque - finc	0.81	332	i P	Pn	08 44 31.8	-0.4
JAYA				eS	Sn	08 44 43.1	-0.2
JAYA	Jayaque - finc	0.81	332	P	Pn	08 44 31.8	-0.4
LFU	La Fuente	0.81	356	eP	Pn	08 44 32.0	-0.2
PMON	Piamonte	0.81	342	eP	Pn	08 44 31.8	-0.4
PMON	Piamonte	0.81	342	S	Sn	08 44 43.7	+0.4
PMON	Piamonte	0.81	342	P	Pn	08 44 31.9	-0.3
BOQS	Boqueron	0.83	345	eP	Pn	08 44 32.1	-0.3
SCLA	Alcaldia de Sa	0.83	23	⇓eP	Pn	08 44 32.1	-0.2
SCLA	Alcaldia de Sa	0.83	23	P	Pn	08 44 32.3	-0.1
SCLA	Alcaldia de Sa	0.83	23	S	Sb	08 44 44.0	+0.5
PIC2	El Picacho	0.83	346	eP	Pn	08 44 32.1	-0.4
PQSS	Presa 15 de Se	0.84	35	eP	Pn	08 44 32.3	-0.1
PQSS	Presa 15 de Se	0.84	35	P	Pn	08 44 32.4	-0.1
PQSS	Presa 15 de Se	0.84	35	S	Sb	08 44 44.4	+0.6
LCY	Lacayo	0.89	57	eP	Pn	08 44 33.0	-0.2
PACA	Pacayal	0.89	53	eP	Pn	08 44 33.1	-0.1
PACA	Pacayal	0.89	53	P	Pn	08 44 33.2	-0.1
PACA	Pacayal	0.89	53	S	Sn	08 44 45.5	+0.3
CEDA	San Andres	0.93	339	S	Sn	08 44 46.3	+0.4
BLLM	Bellamira	0.94	57	eP	Pn	08 44 33.9	-0.1
CEVE	Cerro Verde	1.05	328	eP	Pn	08 44 35.8	+0.2
CEVE	Cerro Verde	1.05	328	S	Sn	08 44 49.9	+0.7
CEVE	Cerro Verde	1.05	328	P	Pn	08 44 35.6	+0.1
SBLS	San Blas	1.06	329	eP	Pn	08 44 35.7	0.0
SNJE	San Jose	1.07	330	eP	Pn	08 44 35.7	-0.2
UNIC	Universidad Ca	1.15	335	P	Pn	08 44 36.9	+0.2
UNIC	Universidad Ca	1.15	335	S	Sn	08 44 52.2	+0.7
NUBE	Las Nubes	1.19	324	eP	Pn	08 44 37.2	-0.2
NUBE	Las Nubes	1.19	324	i P	Pn	08 44 37.2	-0.2
NUBE				i S	Sn	08 44 52.2	-0.5
NUBE	Las Nubes	1.19	324	P	Pn	08 44 37.3	-0.2
LCND	La Caada	1.20	72	eP	Pn	08 44 37.1	-0.3
LCND				IAML		08 44 53.7	
	comp=Z,152nm,0.2s						
CNCH	Conchagua	1.24	74	⇑eP	Pn	08 44 37.5	-0.5
SLOZ	Alcaldia de Sa	1.30	327	eP	Pn	08 44 38.9	+0.2
MTO3	Montecristo	1.49	349	i P	Pn	08 44 41.4	-0.2

MEX 05 08:44:21.2±0.4**, 17.°35N×94.°30W, h155**^{km}±6^{km}**, MD4.1, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGIG		1.27	117	eP	Pn	08 44 47.6	-1.3
TGIG				i S	Sn	08 45 08.1	-2.0
PMUV	Sontecomapan	1.42	327	eP	Pn	08 44 45.5	-4.9
PMUV				eS	Sn	08 45 05.7	-7.3
NEUV	Arroyo Zacate	1.48	284	i P	Pn	08 44 49.7	-1.2
NEUV				i S	Sn	08 45 11.3	-2.3
PCIG		1.94	147	eP	Pn	08 44 54.5	-1.5
PCIG				eS	Sn	08 45 21.0	-1.7
OXLC	Oaxaca	2.31	263	i P	Pn	08 45 01.4	+0.9
OXLC				eS	Sn	08 45 31.3	+0.5
OXBJ	Oaxaca	2.33	263	eP	Pn	08 44 59.7	-1.1
OXBJ				eS	Sn	08 45 30.4	-0.8
VHO	Vista Hermosa	2.34	264	eP	Pn	08 45 00.4	-0.5
VHO				eS	Sn	08 45 30.9	-0.4
HUIG	Huatulco	2.34	228	eP	Pn	08 44 57.4	-3.3
HUIG				eS	Sn	08 45 28.9	-2.2
TOIG	Toxpalan	2.73	286	eP	Pn	08 45 04.9	-0.7
TOIG				eS	Sn	08 45 37.2	-2.6
PAVE	Pavencul	2.96	136	eP	Pn	08 45 04.6	-3.9

PAVE				*e*S	Sn	08 45 40.3	-4.8
PATR	**El Naranjo**	2.98	138	*e*P	Pn	08 45 07.4	-1.4
PATR				*e*S	Sn	08 45 43.0	-2.6
PEIG	**Puerto Escondi**	3.04	244	*e*P	Pn	08 45 05.8	-3.5
PEIG				*e*S	Sn	08 45 42.0	-4.6
TPIG	**Tehuac#an**	3.10	290	*e*P	Pn	08 45 07.8	-2.4
TPIG				*e*S	Sn	08 45 46.1	-2.1
JAUV	**Jalcomulco**	3.11	311	*e*P	Pn	08 45 08.6	-1.6
JAUV				*i* S	Sn	08 45 44.9	-3.3
YOIG	**Yosondua**	3.14	261	*e*P	Pn	08 45 09.1	-1.7
YOIG				*e*S	Sn	08 45 42.8	-6.5
TXIG	**Tlaxiaco**	3.31	269	*e*P	Pn	08 45 11.7	-1.3
TXIG				*e*S	Sn	08 45 48.1	-5.1
HLIG	**Huajuapan de L**	3.37	279	*e*P	Pn	08 45 13.0	-0.7
HLIG				*e*S	Sn	08 45 51.2	-3.2
FTIG	**Fresnillo de T**	3.69	279	*e*P	Pn	08 45 16.9	-0.8
FTIG				*e*S	Sn	08 45 57.0	-4.6
PNIG	**Pinotepa**	3.79	256	*e*P	Pn	08 45 15.2	-3.6
PNIG				*e*S	Sn	08 45 55.7	-8.0
TLIG	**Tlapa**	4.08	274	*e*P	Pn	08 45 21.2	-1.5
TLIG				*e*S	Sn	08 46 05.4	-5.1
CXUV	**Coxquihui**	4.19	313	*e*P	Pn	08 45 24.3	+0.2
CXUV				*e*S	Sn	08 46 05.1	-8.1
PBCV	**Popocatepetl**	4.36	293	*e*P	Pn	08 45 26.6	0.0
PBCV				*e*S	Sn	08 46 12.7	-4.8
PPPT	**Popocatepetl**	4.41	292	*e*P	Pn	08 45 27.1	-0.4
PPPT				*i* S	Sn	08 46 12.1	-7.0
PBXN	**Popocatepetl**	4.46	292	*e*P	Pn	08 45 28.2	+0.2
PBXN				*e*S	Sn	08 46 11.8	-8.2
CRIG	**Cruz Grande**	4.66	263	*e*P	Pn	08 45 27.2	-3.0
CRIG				*e*S	Sn	08 46 19.4	-4.7
YAIG	**Yautepec**	4.77	289	*e*P	Pn	08 45 31.7	-0.1
YAIG				*e*S	Sn	08 46 22.9	-4.1
COVM	**Coyoacan**	5.02	294	*e*P	Pn	08 45 36.0	+0.8
COVM				*e*S	Sn	08 46 27.3	-5.7
PLIG	**Platanillo**	5.06	283	*e*P	Pn	08 45 35.0	-0.5
PLIG				*e*S	Sn	08 46 25.3	-8.3
MEIG	**Mezcala**	5.10	277	*e*P	Pn	08 45 35.5	-0.6
MEIG				*e*S	Sn	08 46 27.5	-7.1
MAVM	**Malinalco, Edo**	5.19	289	*e*P	Pn	08 45 37.5	+0.1
ARIG	**Puente Sto Nin**	5.83	280	*e*P	Pn	08 45 45.8	0.0
ARIG				*e*S	Sn	08 46 43.2	-8.8

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*ATH **05** 09:03:04.9, 40°.50N×20°.76E, h8^{km}±1^{km}, ML2.2/12, Manual Solution by G.Panopoulou First location: 2019/06/05 09:04:17, This location: 2020/10/15 13:07:32 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*

*TIR **05** 09:03:04.3, 40°.46N×20°.79E, h13^{km}±1^{km}, Md2.7/2, Ml2.5/4*

ISC 05 09:03:04.6±1.0**, 40°.48N**±0°.03×**20°.75E**±0°.04**, h12**^{km}±8^{km}**, n21, σ0^{s}54**/32**, 1C-3D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	0.15	10	⇑*e*Pg	Pg	09 03 08.1	0.0
KBN				Sg	Sg	09 03 10.5	-0.2
KBN				AML	AML	09 03 13.0	
	4.0nm,0.3s						
NEST	**Nestorio**	0.23	106	⇓*i*Pg	Pg	09 03 09.8	+0.3
NEST				Sg	Sg	09 03 12.6	-0.4
NEST				AML	AML	09 03 14.1	
	4.3nm,0.2s						
NEST				AMd		09 03 59.2	
NEST	**Nestorio**	0.23	106	P	Pg	09 03 09.9	+0.3
NEST				S	Sg	09 03 13.6	+0.7
LSK	**Leskovik**	0.35	200	⇓*i*Pg	Pg	09 03 11.6	0.0
LSK				Sg	Sb	09 03 17.8	-0.5
LSK				AML	AML	09 03 30.4	
	2.2nm,0.7s						
LSK				AMd		09 04 02.5	
PENT	**Pentalofos**	0.41	134	P	Pg	09 03 12.8	+0.1
PENT				S	Sb	09 03 19.3	-0.7
LMS2	**Laimos Florina**	0.46	40	P	Pg	09 03 13.7	0.0
LMS2				S	Sg	09 03 20.1	+0.2
FNA	**Florina**	0.56	57	⇓*e*Pg	Pg	09 03 15.4	-0.2
FNA				Sg	Sb	09 03 24.1	-0.4
FNA				AML	AML	09 03 27.3	
	1.2nm,0.4s						
FNA	**Florina**	0.56	57	P	Pg	09 03 15.3	-0.2
FNA				S	Sg	09 03 23.2	+0.1
KPRO	**Kipourio**	0.70	138	P	Pg	09 03 17.8	-0.4
KPRO				S	Sb	09 03 28.5	+0.1
KZN	**Kozani**	0.80	102	P	Pg	09 03 19.9	-0.1
KZN				S	Sb	09 03 31.8	+0.6
IGT	**Igoumenitsa**	1.00	199	P	Pn	09 03 24.8	+0.3
KEK	**Kerkira**	1.06	224	P	Pn	09 03 26.2	+1.0
TETR	**Tetrakomo, Epi**	1.20	160	P	Pg	09 03 28.9	+1.2
THL	**Klokotos Trika**	1.33	133	P	Pg	09 03 30.1	-0.1
THL				S	Sg	09 03 47.2	-0.2
TYRN	**Tyrnavos**	1.37	124	P	Pg	09 03 30.7	-0.2
LIT	**Litokhoron**	1.38	105	P	Pb	09 03 30.3	-0.1
KNT	**Kendrikon**	1.77	67	P	Pn	09 03 35.8	+0.8
MAKR	**Makrakomi, Fth**	1.81	144	P	Pb	09 03 37.1	-0.5
AGG	**Agios Georgios**	1.90	140	P	Pb	09 03 38.3	-0.9
PDO	**Prodromos**	1.91	170	P	Pb	09 03 38.8	-0.5
ANX	**Ano Chora**	2.09	154	P	Pb	09 03 41.3	-1.1

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*NNC **05** 09:12:20.0±0.8, 44°.69N×81°.85E, h0^{km}, mb3.5, mpv3.0, Error ellipse: s-maj=14.4km s-min=2.5km az=117.0, Suspected Mining explosion.*

*SOME **05** 09:12:20.9, 44°.73N×81°.88E, h25^{km}*

ISC 05 09:12:18.9±2.3**, 44°.6N**±0°.1×**82°.0E**±0°.2**, h0**^{km}**, n5, σ0^{s}66**/9**, 3C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	1.60	261	*e*P	Pg	09 12 49.5	0.0
	10nm,0.2s						
DJR				*e*S	Sn	09 13 09.9	+0.1
	11nm,0.2s						
PDGK	**Podgornoye**	2.21	236	⇑Pg	Pb	09 12 59.6	-0.1
	4.8nm,0.5s						
PDGK				⇓Lg	Lg	09 13 29.7	
	5.8nm,0.5s						
MK31	**Makanchi Array**	2.21	5	⇓Pn	Pn	09 12 57.0	+0.2
	6.6nm,0.4s,baz=151,slow=5.2,SNR=379						
MK31				⇓Sn	Sn	09 13 24.8	0.0
	1.6nm,0.2s,baz=186,slow=26,SNR=8.9						
MAKZ	**Makanchi**	2.21	360	⇑Pn	Pn	09 12 56.8	0.0
	3.3nm,0.3s						
MAKZ				⇑Sn	Sn	09 13 24.7	-0.2
	5.2nm,0.3s						
SHLS	**Shalkode**	2.33	233	*e*P	Pn	09 12 59.3	+0.8
	20nm,0.2s						
SHLS				*e*S	Sn	09 13 26.5	-1.4
	26nm,0.3s						

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*ASRS **05** 09:19:42.0±0.6, 54°.05N×86°.50E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 05 09:19:44.3±2.7**, 54°.09N×86°.60E, h0**^{km}**, mbtmp3.0**/2**, ML2.7**/2**, Error ellipse: s-maj=21.5km s-min=12.7km az=61.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	1.06	263	I	I	09 26 30.0	
	baz=84,slow=313,SNR=4.3						
ZALV	**Zalesovo Beam**	1.06	263	Pg	Pg	09 20 03.8	-0.9
	0.9nm,0.3s,baz=82,slow=18,SNR=7.5						
ZALV				Lg	Lg	09 20 19.2	
	3.7nm,0.3s,baz=86,slow=29,SNR=19						
KURBB	**Kurchatov Arra**	6.04	238	Pn	Pn	09 21 15.0	+0.2
	0.1nm,0.3s,baz=56,slow=14,SNR=8.1						
KURBB				Lg	Lg	09 22 57.8	
	baz=50,slow=30,SNR=5.9 0.9nm,0.4s						
MKAR	**Makanchi Array**	7.80	202	Pn	Pn	09 21 39.9	+0.8
	0.2nm,0.3s,baz=25,slow=14,SNR=6.7						
MKAR				Sn	Sn	09 23 10.5	+2.4
	0.1nm,0.3s,baz=20,slow=25,SNR=2.8						
MKAR				Lg	Lg	09 23 53.2	
	baz=19,slow=32,SNR=2.5 0.3nm,0.4s						

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*CATAC **05** 09:25:34.0±0.3, 13°N±2°×8°9W±°, h32^{km}±2^{km}, M3.9/39, MLv3.9/39, Error ellipse: s-maj=4.7km s-min=2.1km az=33.0, confirmed*

*SNET **05** 09:25:34.0, 13°.01N×89°.40W, h39^{km}, ML3.8*

*GCG **05** 09:25:35.2±0.7, 13°.05N×89°.50W, h34^{km}±4^{km}, MD4.1, ML3.9*

ISC 05 09:25:34.5±1.3**, 13°.01N**±0°.04×**89°.36W**±0°.03**, h34**^{km}±2^{km}**, n129, σ0^{s}92**/143**, 21C-4D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	0.48	5	⇑*e*P	Pn	09 25 45.4	+0.4
LALI	**Alcalda de L**	0.48	5	*i* P	Pn	09 25 45.4	+0.4
LALI				*i* S	Sn	09 25 52.5	+0.3
LALI	**Alcalda de L**	0.48	5	P	Pn	09 25 45.4	+0.4
LALI	**Alcalda de L**	0.48	5	S	Sn	09 25 53.3	+1.1
PANCS	**Alcalda de**	0.63	17	⇑*e*P	Pb	09 25 47.1	-0.1
PANCS	**Alcalda de**	0.63	17	P	Pb	09 25 47.1	-0.1
PANCS	**Alcalda de**	0.63	17	S	Sb	09 25 56.3	+0.4
JAYA	**Jayaque - finc**	0.65	353	⇑*i*P	Pb	09 25 47.3	-0.4
JAYA				*e*S	Sb	09 25 56.7	0.0
JAYA	**Jayaque - finc**	0.65	353	*i* P	Pb	09 25 47.3	-0.4
JAYA				*i* S	Sb	09 25 57.2	+0.5
JAYA	**Jayaque - finc**	0.65	353	P	Pb	09 25 47.1	-0.5
LOMA	**Loma Larga**	0.66	16	⇑*e*P	Pb	09 25 47.9	0.0
LOMA				*e*S	Sb	09 25 57.6	+0.7
LOMA	**Loma Larga**	0.66	16	P	Pb	09 25 47.8	0.0
LOMA	**Loma Larga**	0.66	16	S	Sb	09 25 58.1	+1.1
ITCA	**Escuela Especi**	0.67	7	⇑*e*P	Pb	09 25 47.8	-0.2
ITCA	**Escuela Especi**	0.67	7	P	Pb	09 25 47.9	0.0
ITCA	**Escuela Especi**	0.67	7	S	Sb	09 25 57.8	+0.7
LFRS	**El Faro**	0.68	26	⇓*i*P	Pb	09 25 48.2	+0.1
PMON	**Piamonte**	0.70	4	⇑*i*P	Pb	09 25 48.2	-0.3
PMON	**Piamonte**	0.70	4	P	Pb	09 25 48.2	-0.3
PMON	**Piamonte**	0.70	4	S	Sb	09 25 58.2	+0.1
SEMO	**Seminario San**	0.70	11	P	Pb	09 25 48.2	-0.3
SEMO	**Seminario San**	0.70	11	S	Sb	09 25 58.7	+0.6
UTEC	**Universidad Te**	0.71	13	P	Pb	09 25 48.3	-0.3
UTEC	**Universidad Te**	0.71	13	S	Sb	09 25 58.8	+0.7
UEES	**Universidad Ev**	0.71	10	⇑*e*P	Pb	09 25 48.5	-0.3
UEES	**Universidad Ev**	0.71	10	P	Pb	09 25 48.4	-0.3
UEES	**Universidad Ev**	0.71	10	S	Sb	09 25 58.9	+0.5
AEIL	**Aeropuerto Ilo**	0.73	19	⇑*i*P	Pb	09 25 49.0	+0.1
UESS	**Universidad de**	0.73	13	⇑*e*P	Pb	09 25 48.8	-0.1
IGN	**Direccin Gen**	0.73	15	*e*P	Pb	09 25 48.7	-0.2
IGN	**Direccin Gen**	0.73	15	P	Pb	09 25 48.6	-0.2
IGN	**Direccin Gen**	0.73	15	S	Sb	09 25 59.7	+1.0
BOQS	**Boqueron**	0.73	6	⇑*i*P	Pb	09 25 48.9	-0.2
PIC2	**El Picacho**	0.74	8	⇑*e*P	Pb	09 25 49.1	-0.2
COEG	**Centro de Oper**	0.77	38	⇑*e*P	Pb	09 25 49.2	-0.4
COEG	**Centro de Oper**	0.77	38	P	Pb	09 25 49.2	-0.4
COEG	**Centro de Oper**	0.77	38	S	Sb	09 26 00.1	+0.3
TECO	**Alcaldia de Te**	0.77	47	⇓*e*P	Pn	09 25 49.1	+0.1
TECO	**Alcaldia de Te**	0.77	47	P	Pn	09 25 49.2	+0.1
TECO	**Alcaldia de Te**	0.77	47	S	Sb	09 26 00.2	+0.3
LFU	**La Fuente**	0.78	18	*e*P	Pb	09 25 49.6	-0.1
CEDA	**San Andres**	0.79	358	⇑*i*P	Pb	09 25 49.3	-0.7
CEDA	**San Andres**	0.79	358	P	Pb	09 25 49.3	-0.7
LBRS	**Las Brisas**	0.79	23	*e*P	Pb	09 25 50.0	+0.1
PAVA	**Las Pavas**	0.81	31	⇑*e*P	Pb	09 25 50.1	-0.2
PAVA	**Las Pavas**	0.81	31	P	Pb	09 25 50.2	-0.2
PAVA	**Las Pavas**	0.81	31	S	Sb	09 26 01.9	+0.7
QUEZ	**Alcaldia de Qu**	0.83	6	*e*P	Pb	09 25 50.2	-0.3
ALJI	**Alcalda de J**	0.83	68	⇓*i*P	Pn	09 25 50.2	+0.4
ALJI	**Alcalda de J**	0.83	68	P	Pn	09 25 50.2	+0.4
ALJI	**Alcalda de J**	0.83	68	S	Sb	09 26 02.2	+0.6
UESV	**Universidad de**	0.84	42	*e*P	Pb	09 25 50.3	-0.4
UESV	**Universidad de**	0.84	42	P	Pb	09 25 50.3	-0.4
UESV	**Universidad de**	0.84	42	S	Sb	09 26 02.4	+0.6
CEVE	**Cerro Verde**	0.85	343	⇑*e*P	Pb	09 25 50.2	-0.9
CEVE	**Cerro Verde**	0.85	343	P	Pb	09 25 50.2	-0.9
CEVE	**Cerro Verde**	0.85	343	S	Sb	09 26 02.5	0.0
SBLS	**San Blas**	0.86	343	⇑*i*P	Pb	09 25 50.3	-1.0
SNJE	**San Jose**	0.89	345	⇑*e*P	Pb	09 25 50.6	-1.1
SCLA	**Alcaldia de Sa**	0.93	42	*e*P	Pb	09 25 51.9	-0.4
SCLA	**Alcaldia de Sa**	0.93	42	P	Pb	09 25 51.8	-0.4
SCLA	**Alcaldia de Sa**	0.93	42	S	Sn	09 26 03.1	-0.2
TECA	**Tecapa**	0.97	60	*e*P	Pb	09 25 52.4	-0.6
NUBE	**Las Nubes**	0.98	336	⇑*e*P	Pn	09 25 51.4	-0.6
NUBE	**Las Nubes**	0.98	336	*i* P	Pn	09 25 51.4	-0.6
NUBE				*i* S	Sb	09 26 04.4	-1.4
NUBE	**Las Nubes**	0.98	336	P	Pn	09 25 51.4	-0.6
UNIC	**Universidad Ca**	0.98	349	*e*P	Pb	09 25 52.1	-1.1
UNIC	**Universidad Ca**	0.98	349	P	Pb	09 25 52.1	-1.1
UNIC	**Universidad Ca**	0.98	349	S	Sn	09 26 04.5	-0.3
PQSS	**Presa 15 de Se**	0.99	52	*e*P	Pn	09 25 52.4	+0.4
PQSS	**Presa 15 de Se**	0.99	52	P	Pn	09 25 52.4	+0.4
PQSS	**Presa 15 de Se**	0.99	52	S	Sn	09 26 05.3	+0.4
FAME	**Alcaldia de Sa**	1.04	323	P	Pn	09 25 52.1	-0.6
FAME	**Alcaldia de Sa**	1.04	323	S	Sn	09 26 05.3	-0.9
LOAL	**Lomas de Alarc**	1.06	338	*e*P	Pb	09 25 53.2	-1.3
LOAL	**Lomas de Alarc**	1.06	338	P	Pb	09 25 53.2	-1.3
LOAL	**Lomas de Alarc**	1.06	338	S	Sb	09 26 06.9	-1.4
SLOZ	**Alcaldia de Sa**	1.09	338	*e*P	Pn	09 25 53.3	-0.1
SLOZ	**Alcaldia de Sa**	1.09	338	P	Pn	09 25 53.3	-0.1
SLOZ	**Alcaldia de Sa**	1.09	338	S	Sb	09 26 08.4	-0.6
PACA	**Pacayal**	1.11	65	*e*P	Pb	09 25 54.6	-0.8
PACA	**Pacayal**	1.11	65	P	Pb	09 25 54.7	-0.7
PACA	**Pacayal**	1.11	65	S	Sb	09 26 09.5	-0.1
LCY	**Lacayo**	1.12	68	*e*P	Pn	09 25 54.5	+0.6
RANC	**El Ranchito**	1.13	68	P	Pn	09 25 51.7	-2.3
RANC	**El Ranchito**	1.13	68	S	Sn	09 26 08.0	-0.5
BLLM	**Bellamira**	1.18	68	*e*P	Pn	09 25 55.3	+0.7
CNRM	**Centro Naciona**	1.25	68	*e*P	Pb	09 25 56.6	-0.9
CNRM	**Centro Naciona**	1.25	68	P	Pb	09 25 56.8	-0.8
CNRM	**Centro Naciona**	1.25	68	S	Sb	09 26 13.2	-0.2
CAHU	**Cacacuatique**	1.35	56	⇑*e*P	Pb	09 25 58.5	-0.9
MTO3	**Montecristo**	1.38	0	⇑*i*P	Pn	09 25 57.9	+0.3
MTO3	**Montecristo**	1.38	0	*i* P	Pn	09 25 57.9	+0.3
MTO3	**Montecristo**	1.38	0	P	Pn	09 25 57.9	+0.3
MTO3	**Montecristo**	1.38	0	S	Sb	09 26 15.8	-1.6
LCND	**La Caada**	1.47	78	⇑*e*P	Pn	09 25 59.5	+1.0
CNCH	**Conchagua**	1.51	80	⇓*e*P	Pn	09 25 59.8	+0.5
CNCH	**Conchagua**	1.51	80	P	Pn	09 25 59.8	+0.5
CNCH	**Conchagua**	1.51	80	S	Sn	09 26 19.4	+1.5
ESQI	**Esquipulas**	1.54	1	*e*P	Pn	09 26 00.4	+0.7
ESQI	**Esquipulas**	1.54	1	S	Sb	09 26 19.9	-2.0
FG16	**Alotenango, Sa**	1.68	319	*i* P	Pb	09 26 06.3	+1.3
FG16				*i* S	Sb	09 26 30.6	+4.7
FG16				IAML		09 26 34.8	
	comp=N,3µm,0.3s						
FG8	**Yepocapa, Chim**	1.71	317	*i* P	Pb	09 26 06.7	+1.4
FG8				*i* S	Sb	09 26 31.0	+4.5
CSGN	**Cosiguina Volc**	1.76	91	P	Pn	09 26 02.9	+0.2
CSGN				S	Sn	09 26 24.9	+1.0
POTN	**Potosi Cosigui**	1.81	90	P	Pn	09 26 03.9	+0.7
POTN				S	Sn	09 26 25.9	+0.9
ESSG	**Sabana Grande**	1.98	314	*i* P	Pn	09 26 05.0	-0.7
ESSG				*i* S	Sn	09 26 27.8	-1.5
ESSG				IAML		09 26 30.7	
	comp=E,580nm,0.4s						
CRIN	**San Cristobal**	2.28	97	P	Pn	09 26 10.4	+0.6
CRIN	**San Cristobal**	2.28	97	S	Sn	09 26 38.6	+1.9
TGUH	**Tegucigalpa,Un**	2.29	63	P	Pn	09 26 10.7	+0.8
STG8	**El Palmar, Qui**	2.41	307	*i* P	Pb	09 26 16.2	-1.1
STG8				*i* S	Sb	09 26 47.9	+1.2
STG8				IAML		09 26 57.0	
	comp=N,438nm,0.2s						
QUEN	**Al S del Volca**	2.48	99	P	Pn	09 26 12.8	+0.2
HERN	**Volcan Telica**	2.50	99	P	Pn	09 26 12.5	-0.3
HERN	**Volcan Telica**	2.50	99	S	Sn	09 26 42.4	+0.2
HOYN	**Al Sur del Vol**	2.51	99	P	Pn	09 26 12.9	0.0
POLN	**Al Sur del Vol**	2.51	98	P	Pn	09 26 12.0	-0.9
POLN				S	Sn	09 26 41.2	-1.3
CNGA	**Al SSO del Vol**	2.65	101	P	Pn	09 26 14.6	-0.2
CNGA				S	Sn	09 26 45.2	-0.6
CNGN	**Cerro Negro**	2.65	101	P	Pn	09 26 14.6	-0.3
MOMN	**Momotombo**	2.82	102	P	Pn	09 26 17.0	-0.2
MOMN				S	Sn	09 26 48.8	-1.2
COPN	**Copaltepe**	2.83	107	P	Pn	09 26 16.7	-0.6
LIMN	**Finca el Limon**	2.92	89	P	Pn	09 26 18.9	+0.3
LIMN	**Finca el Limon**	2.92	89	S	Sn	09 26 52.9	+0.3
SAPS	**Ciudad Sandino**	3.01	106	P	Pn	09 26 19.9	+0.2
SAPS	**Ciudad Sandino**	3.01	106	S	Sn	09 26 53.1	-1.5
RCVN	**Varillal2**	3.14	79	P	Pn	09 26 22.2	+0.5
RCPN	**Sur Rio San Ju**	3.22	80	P	Pn	09 26 23.4	+0.5
NANN	**Nandasmo**	3.34	108	P	Pn	09 26 25.2	+0.8
NANN	**Nandasmo**	3.34	108	S	Sn	09 27 03.0	+0.2
MATN	**Matagalpa**	3.35	91	P	Pn	09 26 23.8	-0.8
BOAB	**BOACO BROADBAN**	3.65	98	P	Pn	09 26 28.3	-0.3

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*ASRS **05** 09:33:52.0±0.9, 54°.24N×87°.03E, h0^{km}, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 05 09:33:53.3±3.2**, 54°.35N×87°.27E, h0**^{km}**, mbtmp2.9**/2**, ML2.6**/2**, Error ellipse: s-maj=26.4km s-min=17.9km az=60.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	1.50	256	I	I	09 42 34.0	
	0.1nm,0.9s,baz=77,slow=318,SNR=10						
ZALV	**Zalesovo Beam**	1.50	256	Pg	Pn	09 34 19.1	-2.3
	1.3nm,0.3s,baz=75,slow=17,SNR=8.1						
ZALV				Lg	Lg	09 34 41.1	
	2.1nm,0.3s,baz=75,slow=27,SNR=7.6						
KURBB	**Kurchatov Arra**	6.51	239	Pn	Pn	09 35 30.6	+0.3
	0.1nm,0.3s,baz=52,slow=13,SNR=5.9						
KURBB				Lg	Lg	09 37 20.9	
	baz=51,slow=31,SNR=4.2 0.6nm,0.4s						
MKAR	**Makanchi Array**	8.20	205	Pn	Pn	09 35 55.1	+1.6
	0.1nm,0.3s,baz=22,slow=14,SNR=1.9						
MKAR				Sn	Sn	09 37 26.8	0.0
	0.1nm,0.3s,baz=23,slow=27,SNR=1.5						
MKAR				Lg	Lg	09 38 15.0	
	baz=21,slow=31,SNR=1.4 0.1nm,0.3s						

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*KOLA **05** 09:59:53.5, 64°.72N×30°.72E, h0^{km}, ML1.9, Error ellipse: s-maj=23.6km s-min=15.9km az=10.0, Kostomuksha, Karelia*

HEL 05 09:59:52.5±0.2**, 64°.75N×30°.69E, h0**^{km}**, ML1.8, Suspected explosion, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RMF	**Romuvaara**	0.63	212	PG	Pg	10 00 03.9	-0.6
	baz=29						
RMF				MSG		10 00 12.5	
	comp=Z,8.3nm,0.2s						
RMF				SG	Sb	10 00 14.4	-1.1
KU1	**Kurvinen**	0.95	330	PG	Pg	10 00 09.6	-1.1
KU1				SB	Sb	10 00 24.3	-0.6
KU6	**Riekki**	1.33	346	PG	Pg	10 00 16.4	-1.5
KU6				MSG		10 00 32.4	
	comp=Z,5.1nm,0.2s						
KU6				SG	Sg	10 00 33.4	-1.6
MSF	**Maaselka**	1.36	330	PG	Pg	10 00 16.8	-1.7
	baz=145						
MSF				SG	Sg	10 00 34.7	-1.4
KU2	**Taivalkoski**	1.42	314	PG	Pn	10 00 18.1	-1.3
KU2				SN	Sn	10 00 39.2	+0.4
OLKF	**Oulanka, Finla**	1.67	342	PG	Pn	10 00 22.2	-0.7
OLKF				MSG		10 00 42.3	
	comp=Z,3.3nm,0.2s						
OLKF				SN	Sb	10 00 45.6	0.0
NIF	**Nilsia**	1.86	224	PG	Pn	10 00 25.9	+0.3
OUL	**Oulu**	2.07	282	PG	Pn	10 00 29.4	+1.0
OUL				SG	Sn	10 00 55.6	+0.8
RANF	**Ranua**	2.07	310	PG	Pn	10 00 29.5	+1.0
	baz=129						
RANF				SG	Sn	10 00 55.8	+0.9
KVDA	**Kovda**	2.15	24	P	Pn	10 00 30.4	+0.8
KVDA				S	Sn	10 00 57.4	+0.5
OBF4	**Vikkela, Lumij**	2.39	274	PG	Pn	10 00 34.4	+1.5
OBF4				MSG		10 01 03.2	
	comp=Z,3.8nm,0.2s						
OBF4				SG	Sb	10 01 06.6	+0.2
OUF	**Merijarvi**	2.60	264	PB	Pn	10 00 37.6	+1.8
	baz=82						
OUF				MSG		10 01 09.2	
	comp=Z,5.2nm,0.2s						
OUF				SG	Sb	10 01 11.7	-0.6
RNF	**Rovaniemi**	2.69	316	PB	Pn	10 00 38.7	+1.7
RNF				SG	Sb	10 01 13.4	-1.5
OBF0	**Syolatti, Pyha**	2.79	268	PB	Pb	10 00 41.0	-2.2
OBF0				SB	Sn	10 01 13.8	+1.2
OBF0				MSG		10 01 14.6	
	comp=Z,4.0nm,0.2s						
SUF	**Sumiainen**	2.87	227	PB	Pb	10 00 42.2	-2.2
SUF				MSG		10 01 17.0	
	comp=Z,3.4nm,0.2s						
KALU	**Kalix**	3.27	293	SB	Sb	10 01 28.9	-2.8
KAF	**Kangasniemi**	3.30	219	PG	Pb	10 00 52.9	+1.1
KLF	**Kolari**	3.71	315	PG	Pb	10 00 58.4	-0.5
KLF				SG	Sb	10 01 47.1	+2.8
PAJU	**Pajala**	3.86	310	SB	Sn	10 01 43.3	+4.3
ERTU	**Ertsjaerv**	3.96	301	PB	Pb	10 00 59.8	-3.3
UMAU	**Umeaa**	4.44	263	PG	Pb	10 01 10.2	-1.0
UMAU				SG	Sb	10 02 05.1	-0.2
PRVG	**Vayda Guba**	5.05	6	S	Sn	10 02 08.2	-0.2
ARCES	**ARCESS Array B**	5.21	340	P	Pn	10 01 11.8	+0.1
ARCES				S	Sn	10 02 10.3	-2.1

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*DNK **05** 09:59:59.3±2.2, 60°.05N×21°.54E, h0^{km}±12^{km}, ML2.3*

*IDC **05** 10:00:00.8±1.4, 60°.12N×21°.61E, h0^{km}, mbtmp2.8/3, ML2.1/3, Error ellipse: s-maj=20.7km s-min=6.3km az=162.0*

*HEL **05** 10:00:00.6±0.1, 60°.06N×21°.42E, h0^{km}, ML2.7, Explosion*

*BER **05** 10:00:00.2±1.4, 59°.87N×21°.79E, h0^{km}, ML2.0, ML2.7(HEL), Suspected explosion*

*UPP **05** 10:00:00.1±0.7, 60°.12N×21°.42E, h0^{km}, ML2.8*

ISC 05 09:59:58.4±0.7**, 60°.04N**±0°.02×**21°.47E**±0°.02**, h0**^{km}**, n64, σ1^{s}49**/100**, Finland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAL	**Aland**	0.75	281	P	Pg	10 00 13.7	+1.0
AAL				S	Sg	10 00 23.5	+1.0
AAL	**Aland**	0.75	281	P	Pg	10 00 13.7	+1.0
AAL				S	Sg	10 00 23.5	+1.0
AAL	**Aland**	0.75	281	*e*P	Pg	10 00 13.8	+1.0
AAL				*e*S	Sg	10 00 22.9	+0.4
TVF	**Tvarminne**	0.92	102	*e*P	Pb	10 00 17.9	+0.7
TVF				*e*S	Sb	10 00 29.6	-0.2
RAF	**Rauma**	0.99	8	*e*P	Pg	10 00 18.1	+0.7
RAF	**Rauma**	0.99	8	*e*P	Pg	10 00 18.0	+0.6
RAF				*e*S	Sg	10 00 30.0	-0.3
MEF	**Metsahovi**	1.48	82	*e*P	Pg	10 00 27.0	+0.3
MEF	**Metsahovi**	1.48	82	*e*PN	Pb	10 00 28.3	+1.7
MEF				*e*SB	Sn	10 00 47.0	+0.9
NRTU	**Norrtaelje**	1.48	257	P	Pn	10 00 26.6	+0.3
NRTU	**Norrtaelje**	1.48	257	P	Pn	10 00 26.6	+0.3
GRAU	**Graesoe**	1.49	282	P	Pn	10 00 26.1	-0.3
GRAU				S	Sg	10 00 46.3	0.0
GRAU	**Graesoe**	1.49	282	P	Pn	10 00 26.1	-0.3
GRAU				S	Sg	10 00 46.3	0.0
NUR	**Nurmijarvi**	1.65	72	*e*P	Pg	10 00 30.5	+0.5
NUR				*e*S	Sg	10 00 51.8	+0.4
NUR				MSG		10 00 56.5	
	comp=Z,49nm,0.1s						
FORU	**Forsmark**	1.68	283	P	Pn	10 00 29.4	+0.4
FORU				S	Sn	10 00 52.3	+1.2
FORU	**Forsmark**	1.68	283	P	Pn	10 00 29.4	+0.4
FORU				S	Sn	10 00 52.3	+1.2
HEL1	**Helsinki**	1.71	84	*e*P	Pg	10 00 31.6	+0.4
HEL1				*e*S	Sg	10 00 53.9	+0.5
MTSE	**Matsula**	1.79	137	*e*P	Pg	10 00 33.1	+0.4
MTSE	**Matsula**	1.79	137	*e*PG	Pg	10 00 33.3	+0.6
MTSE				*e*SN	Sg	10 00 57.5	+1.5
FLYU	**Flymyra**	1.80	274	P	Pn	10 00 31.4	+0.8
FLYU				S	Sb	10 00 56.3	+1.1
FLYU	**Flymyra**	1.80	274	P	Pn	10 00 31.4	+0.8
FLYU				S	Sb	10 00 56.3	+1.1
KPF	**Kankaanpaa**	1.82	9	*e*P	Pb	10 00 32.4	-0.1
KPF				*e*S	Sb	10 00 55.9	+0.1
KPF				MSG		10 00 58.0	
	comp=Z,30nm,0.1s						
UPP	**Uppsala**	1.94	266	P	Pn	10 00 34.2	+1.6
UPP	**Uppsala**	1.94	266	P	Pn	10 00 34.2	+1.6
NYNU	**Nynaeshamn**	2.05	241	P	Pb	10 00 36.7	+0.2
NYNU	**Nynaeshamn**	2.05	241	P	Pb	10 00 36.7	+0.2
FIBU	**Brunna**	2.08	268	P	Pb	10 00 36.5	-0.4
FIBU	**Brunna**	2.08	268	P	Pb	10 00 36.5	-0.4
OSTU	**Oestervaala**	2.18	277	P	Pn	10 00 37.7	+1.9
OSTU	**Oestervaala**	2.18	277	P	Pn	10 00 37.7	+1.9
BACU	**Backbrunna**	2.20	267	P	Pb	10 00 38.5	-0.6
BACU	**Backbrunna**	2.20	267	P	Pb	10 00 38.5	-0.6
PVF	**Pernaja**	2.24	75	*e*PB	Pb	10 00 40.5	+0.7

PVF				eSG	Sg	10 01 09.8	-0.6
PVF				MSG		10 01 12.3	
	comp=Z,29nm,0.1s						
SLIT	Slitere, Latvi	2.46	170	eP	Pb	10 00 43.7	+0.3
SLIT	Slitere, Latvi	2.46	170	ePG	Pb	10 00 43.9	+0.5
SLIT				eSG	Sb	10 01 15.1	+0.9
FIA0	FINESS Array S	2.66	56	ePB	Pb	10 00 47.0	+0.1
FIA0				eSB	Sb	10 01 20.6	+0.5
FIA0				MSN		10 01 23.3	
	comp=Z,25nm,0.2s						
FINES	FINESS Array B	2.66	56	Pg	Pb	10 00 46.3	-0.5
	comp=Z,2.0nm,0.3s,baz=238,slow=13,SNR=108						
FINES				Lg	Lg	10 01 20.8	
	comp=Z,5.1nm,0.3s,baz=246,slow=24,SNR=26						
KEF	Keuruu	2.69	36	eP	Pn	10 00 44.2	+1.2
KEF	Keuruu	2.69	36	ePB	Pb	10 00 47.4	0.0
KEF				eSB	Sb	10 01 21.4	+0.4
VAF	Ylistaro	3.06	10	eP	Pn	10 00 50.4	+2.4
VAF	Ylistaro	3.06	10	ePB	Pb	10 00 52.0	-1.7
VAF				eS	Sn	10 01 26.9	+1.6
KAF	Kangasniemi	3.13	46	ePB	Pb	10 00 54.0	-0.9
KAF				eSB	Sb	10 01 33.2	-0.5
HUSU	Husum	3.48	343	eP	Pn	10 00 56.4	+2.7
HUSU				eS	Sn	10 01 38.2	+2.7
HUSU				MSN		10 01 40.2	
	comp=Z,15nm,0.2s						
HFS	Hagfors	3.90	275	Pn	Pn	10 01 01.9	+2.5
	comp=Z,0.1nm,0.3s,baz=82,slow=14,SNR=6.3						
HFS				Pg	Pb	10 01 08.6	+0.7
	comp=Z,0.5nm,0.3s,baz=87,slow=19,SNR=19						
HFS				Lg	Lg	10 02 01.2	
	comp=Z,2.5nm,0.3s,baz=90,slow=35,SNR=12						
	comp=Z,1.4nm,0.8s						
BLEU	Blekinge	4.80	221	eP	Pn	10 01 13.4	+1.6
BLEU				eS	Sn	10 02 08.4	+0.4
BORU	Boraas	5.12	246	eP	Pn	10 01 18.0	+1.7
BORU				eS	Sn	10 02 17.2	+1.2
NOA	NORSAR Array B	5.16	286	Pn	Pn	10 01 18.6	+1.7
	baz=94,slow=8.0,SNR=4.5						
NOA				Sn	Sn	10 02 17.2	+0.2
	baz=101,slow=19,SNR=1.9						
NOA				Lg	Lg	10 02 45.9	
	comp=Z,0.1nm,0.3s,baz=138,slow=25,SNR=4.2						
	comp=Z,0.1nm,0.3s						
STRU	Stroemstad	5.33	264	eP	Pn	10 01 21.4	+2.3
STRU				eS	Sn	10 02 20.0	-1.2
STRU	Stroemstad	5.33	264	eP	Pn	10 01 20.9	+1.8
STRU				eS	Sn	10 02 20.8	-0.4
DEL	Delary	5.38	232	eP	Pn	10 01 21.4	+1.6
DEL				eS	Sn	10 02 20.6	-1.7
ONAU	Onsala	5.64	246	eP	Pn	10 01 26.2	+2.8
BJUU	Bjuv	5.99	232	eP	Pn	10 01 28.9	+0.7
BJUU				eS	Sn	10 02 35.5	-2.0
BSD	Bornholm Skovb	6.07	218	eP	Pn	10 01 29.9	+0.6
BSD				eS	Sn	10 02 34.7	-4.6
BSD				IAML		10 03 13.0	
	comp=Z,1.4nm,0.2s						
LUNU	Lund	6.16	228	eP	Pn	10 01 31.2	+0.8
LUNU				eS	Sn	10 02 35.9	-5.6
MOR8	Moi Rana	6.92	336	eP	Pn	10 01 41.6	+0.7
MOR8				eS	Sn	10 02 59.8	-0.5
MOR8				IAML		10 03 03.4	
	comp=Z,2.1nm,0.1s						
LEIR	Leirfjorden	7.17	332	eP	Pn	10 01 45.6	+1.3
SALU	Saltoluokta	7.48	351	eP	Pn	10 01 49.8	+1.2
VAGH	Vaagaholmen	7.65	335	eP	Pn	10 01 52.9	+2.0
VAGH				eS	Sn	10 03 15.8	-2.3
FAUS	Fauske	7.86	342	eP	Pn	10 01 54.5	+0.8
STEI	Steigen	8.37	344	eP	Pn	10 02 01.3	+0.5
HEF	Hetta	8.45	6	eP	Pn	10 02 02.0	+0.1
KIF	Kilpisjarvi	9.00	358	eP	Pn	10 02 10.1	+0.7
KTK1	Kautokeino	9.04	4	eP	Pn	10 02 10.1	+0.2
JETT	Jettan, Norway	9.56	358	eP	Pn	10 02 17.5	+0.4
ARCES	ARCESS Array B	9.68	8	Pn	Pn	10 02 17.8	-0.9
	comp=Z,0.1nm,0.3s,baz=187,slow=14,SNR=3.6						
ARCES				Sn	Sn	10 04 02.1	-5.9
	comp=Z,0.1nm,0.3s,baz=192,slow=24,SNR=2.4						
ARCES				Lg	Lg	10 04 58.6	
	comp=Z,0.1nm,0.3s,baz=185,slow=28,SNR=3.0						
	comp=Z,0.3nm,0.2s						

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*ISK **05** 10:03:41.2, 39°.02N×26°.04E, h5^{km}, ML2.8/34*
*AFAD **05** 10:03:41.9, 39°.02N×26°.04E, h7^{km}±3^{km}, ML2.7*
*THE **05** 10:03:42.7, 39°N±1°×2°6E±°, h10^{km}±2^{km}, M2.7/10, MLh2.7/10*
*ATH **05** 10:03:42.0, 38°.98N×26°.07E, h14^{km}±1^{km}, ML2.6/11, Manual Solution by G.Panopoulou First location: 2019/06/05 10:04:53, This location: 2019/06/05 10:38:25 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
ISC 05 10:03:42.1±0.9, **39°.00N**±0°.02×**26°.04E**±0°.02, **h12**^{km}±8^{km}, **n72**, σ**0ˢ.73**/99, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIGR	SIGRI	0.25	325	Pg	Pb	10 03 48.1	-0.5
SIGR				Sg	Sg	10 03 51.5	+0.6
SIGR	SIGRI	0.25	325	P	Pb	10 03 48.0	-0.5
SIGR				S	Sb	10 03 52.1	-0.8
SIGR	SIGRI	0.25	325	P	Pb	10 03 48.0	-0.5
SIGR				S	Sb	10 03 52.2	-0.8
PRK	Paraskevi	0.30	36	P	Pg	10 03 48.4	+0.2
PRK				S	Sb	10 03 53.0	-1.3
PRK	Paraskevi	0.30	36	P	Pg	10 03 48.4	+0.2
PRK				S	Sg	10 03 52.1	-0.2
KARB	zmir-Karabur	0.45	139	P	Pg	10 03 51.0	+0.2
KARB				S	Sg	10 03 57.2	+0.5
KARB				i IAML		10 04 01.0	
	comp=N,606nm,0.3s						
KARB				i IAML		10 04 01.0	
	comp=E,478nm,0.3s						
GPNR	Gulpinar-Canak	0.46	9	Pg	Pg	10 03 51.2	+0.1
GPNR				Sg	Sb	10 03 58.2	-0.6
EAG2	Marmaro, Chios	0.46	174	P	Pg	10 03 50.8	-0.4
EAG2				S	Sg	10 03 57.1	-0.2
AYVA	Ayvalik	0.59	59	P	Pb	10 03 54.1	-0.1
AYVA				S	Sb	10 04 01.4	-1.2
AYVA				i IAML		10 04 07.0	
	comp=N,466nm,0.5s						
CAND	Candarli	0.60	94	Pg	Pb	10 03 54.1	-0.3
CHOS	Chios island	0.61	179	Pg	Pg	10 03 54.3	+0.2
CHOS				Sg	Sb	10 04 04.2	+0.7
CHOS	Chios island	0.61	179	P	Pg	10 03 54.0	0.0
CHOS				S	Sb	10 04 04.1	+0.7
CHOS	Chios island	0.61	179	P	Pg	10 03 54.1	0.0
CHOS				S	Sg	10 04 02.0	-0.2
DKL	Dikili	0.68	84	Pg	Pb	10 03 55.5	-0.3
DKL	Dikili	0.68	84	P	Pb	10 03 55.4	-0.4
DKL				S	Sg	10 04 03.5	-0.6
IZMD	zmir-Dikili-	0.69	91	P	Pg	10 03 55.2	-0.3
IZMD				P	Pn	10 03 57.2	-0.5
IZMD				S	Sb	10 04 05.2	-0.4
CESE	eme	0.70	163	Pg	Pb	10 03 56.2	0.0
CESE				Sg	Sb	10 04 07.0	+1.2
URLA	Izmir	0.78	146	P	Pg	10 03 56.9	-0.1
URLA				S	Sb	10 04 09.2	+1.2
URLA				i IAML		10 04 10.0	
	comp=N,290nm,0.6s						
URLA				i IAML		10 04 10.0	
	comp=E,317nm,0.5s						
EZNE	Ezine-Canakkal	0.79	18	Pg	Pb	10 03 57.5	-0.3
ZEDA	zmir-Bergama	0.81	92	P	Pb	10 03 57.8	-0.3
ZEDA				S	Sb	10 04 09.1	+0.2
BOZC	Bozcaada	0.84	1	Pg	Pb	10 03 58.2	-0.4
BOZC				Sg	Sb	10 04 10.5	+0.7
EZN	Ezine	0.85	15	Pg	Pb	10 03 58.4	-0.4
EZN	Ezine	0.85	15	P	Pb	10 03 58.5	-0.2
BUHA	Balikesir, Bur	0.95	58	P	Pb	10 03 60.0	-0.4
BUHA				S	Sb	10 04 12.4	-0.4
BUHA				i IAML		10 04 15.0	
	comp=N,256nm,0.5s						
BUHA				i IAML		10 04 15.0	
	comp=E,242nm,0.4s						
EFSA	Agios Efstrati	0.98	304	P	Pn	10 04 02.0	+0.4
EFSA				S	Sb	10 04 14.7	+0.9
BLCB	Balcova	1.00	128	Pg	Pb	10 04 01.5	+0.3
BLCB	Balcova	1.00	128	P	Pb	10 04 01.4	+0.1
YAYO	Edremit-Balk	1.00	52	Pg	Pb	10 04 01.1	-0.3
COMU	Canakkale	1.15	17	Pn	Pn	10 04 04.0	+0.1
COMU				Sn	Sn	10 04 20.6	+1.1
SKY	Skiros Island	1.17	264	P	Pb	10 04 03.6	-0.6
SOMA	Soma-Manisa	1.17	82	Pn	Pg	10 04 04.8	+0.2
GADA	Gvkgeada	1.19	355	Pn	Pn	10 04 04.5	0.0
CANM	Can-anakkale	1.27	38	Pn	Pg	10 04 06.6	0.0
YENI	Yenice-Canakka	1.32	45	Pn	Pg	10 04 07.3	-0.1
AKHS	Akhisar	1.39	95	P	Pg	10 04 08.5	-0.2
GELI	Tayfur-Gelibol	1.43	13	Pn	Pg	10 04 08.9	-0.7
LPK	Lapseki	1.48	22	Pn	Pb	10 04 08.9	-0.5
SMTH	Samothraki Isl	1.52	345	P	Pb	10 04 09.7	-0.5
SMTH				S	Sb	10 04 29.4	+0.1
SMTH	Samothraki Isl	1.52	345	P	Pb	10 04 09.7	-0.5
SMTH				S	Sb	10 04 29.6	+0.2
KYMI	Kymi, Euboea I	1.56	257	P	Pn	10 04 09.8	+0.2
KYMI	Kymi, Euboea I	1.56	257	P	Pn	10 04 09.4	-0.2
KARY	Karystos	1.59	233	P	Pn	10 04 09.7	-0.3
KARY	Karystos	1.59	233	P	Pn	10 04 09.9	-0.1
KARY				S	Sn	10 04 29.7	-0.7
GCAM	G?zelcaml?	1.60	144	Pn	Pb	10 04 11.8	+0.2
GONE	Gonen-Balikesi	1.65	50	Pn	Pb	10 04 12.1	-0.2
GORD	Gordes-Manisa	1.67	93	Pn	Pb	10 04 12.6	-0.1
AOS	Alonnisos	1.69	276	P	Pn	10 04 12.3	+1.0
KRBG	Karabiga-Canak	1.69	35	Pn	Pb	10 04 12.3	-0.8
ERIK	Erikli-Kesan	1.71	12	Pn	Pb	10 04 12.8	-0.5
ENEZ	Enez	1.73	3	Pn	Pb	10 04 13.3	-0.5
ODEM	Odemis-Izmir	1.75	114	Pn	Pb	10 04 13.9	-0.2
AYDB	Zeytinkoy-Aydi	1.79	125	Pn	Pb	10 04 14.5	-0.4
ALN	Alexandroupoli	1.89	0	Pn	Pb	10 04 15.7	-0.8
DION	Dionisos Attik	1.89	241	P	Pn	10 04 13.8	-0.5
RKY	Sarkoy-Tekirda	1.90	27	Pn	Pb	10 04 15.7	-0.9
THAS	Thassos island	1.90	328	P	Pn	10 04 14.5	+0.2
EDC	Edincik	1.94	46	Pn	Pb	10 04 16.3	-1.1
APE	Apeiranthos	1.97	192	P	Pn	10 04 14.9	-0.4
APE	Apeiranthos	1.97	192	P	Pn	10 04 14.9	-0.4
APE				S	Sn	10 04 38.8	-1.2
MRMT	Marmara Adasi	2.00	36	Pn	Pb	10 04 17.0	-1.4
OUR	Ouranopolis	2.07	311	Pn	Pn	10 04 17.9	+1.3
OUR	Ouranopolis	2.07	311	P	Pn	10 04 16.3	-0.3
KULA	Kula-Manisa	2.10	103	Pn	Pb	10 04 18.7	-1.5
UKOP	Uzunkopru-Edir	2.17	12	Pn	Pn	10 04 19.4	+1.4
RDO	Rodhopi	2.17	350	Pn	Pn	10 04 19.6	+1.5
RDO	Rodhopi	2.17	350	P	Pn	10 04 18.4	+0.3
RDO				S	Sn	10 04 46.0	+1.1
SIMA	Simav-Kutahya	2.29	87	Pn	Pb	10 04 21.6	-1.8
ARMT	Armutlu	2.67	53	Pn	Pn	10 04 26.8	+1.8
KDZ	Kurdzhali	2.68	349	Pn	Pn	10 04 26.7	+1.7
AGG	Agios Georgios	2.89	272	P	Pn	10 04 28.7	+0.8
EDRB	Edirne	2.89	10	Pn	Pn	10 04 29.9	+2.0
MAKR	Makrakomi, Fth	3.05	271	P	Pn	10 04 30.1	+0.1

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*BER **05** 10:08:38.8±0.9, 59°.35N×22°.40E, h0^{km}, ML2.7(HEL), Suspected explosion*
*IDC **05** 10:08:39.3±0.8, 59°.56N×22°.49E, h0^{km}, mbtmp3.5/6, ML3.1/6, Error ellipse: s-maj=10.9km s-min=7.5km az=178.0*
*DNK **05** 10:08:40.9±0.7, 59°.75N×22°.15E, h0^{km}, ML2.8(UPP), Suspected explosion*
*HEL **05** 10:08:40.1±0.1, 59°.71N×22°.30E, h0^{km}, ML2.3, Explosion*
*EST **05** 10:08:40.1, 59°.70N×22°.31E, h0^{km}, ML2.2(HEL), Explosion*
*UPP **05** 10:08:41.5±1.1, 59°.75N×22°.04E, h0^{km}, ML2.8*
ISC 05 10:08:38.2±0.7, **59°.73N**±0°.02×**22°.37E**±0°.02, **h0**^{km}, **n60**, σ**1ˢ.38**/82, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TVF	Tvarminne	0.46	75	eP	Pb	10 08 48.9	-0.2
TVF				eS	Sb	10 08 55.6	-0.8
EE06	Soera, Palade,	0.80	162	eP	Pg	10 08 54.0	+0.5
EE06				eS	Sg	10 09 03.9	+0.2
MEF	Metsahovi	1.13	63	eP	Pb	10 09 01.2	+0.7
MEF	Metsahovi	1.13	63	eP	Pb	10 09 01.1	+0.6
MEF				eS	Sb	10 09 16.2	+0.5
MTSE	Matsula	1.26	143	eP	Pg	10 09 02.9	+0.7
MTSE	Matsula	1.26	143	eP	Pg	10 09 02.7	+0.5
MTSE				eS	Sb	10 09 19.7	+0.3
AAL	Aland	1.28	292	P	Pg	10 09 02.3	-0.4
AAL				S	Sg	10 09 18.0	-1.3
AAL	Aland	1.28	292	P	Pg	10 09 02.3	-0.4
AAL				S	Sg	10 09 18.0	-1.3
AAL	Aland	1.28	292	eP	Pg	10 09 02.6	0.0
AAL				eS	Sg	10 09 18.9	-0.4
RAF	Rauma	1.33	347	eP	Pb	10 09 07.0	+2.9
RAF	Rauma	1.33	347	ePB	Pg	10 09 04.4	+0.6
RAF				eSB	Sg	10 09 22.4	+1.4
RAF				MSG		10 09 25.8	
	comp=Z,15nm,0.1s						
HEL1	Helsinki	1.34	69	eP	Pn	10 09 04.8	+0.7
HEL1				eS	Sb	10 09 22.5	+0.7
HEL1				MSG		10 09 27.3	
	comp=Z,14nm,0.1s						
NUR	Nurmijarvi	1.38	54	ePG	Pb	10 09 05.6	+0.8
NUR				eS	Sg	10 09 22.8	+0.3
NUR				MSG		10 09 31.0	
	comp=Z,18nm,0.2s						
EE08	Sarghaua, Vand	1.82	125	eP	Pb	10 09 12.6	+0.2
EE08				eSN	Sg	10 09 37.5	+0.8
NRTU	Norrtaelje	1.90	270	P	Pn	10 09 12.5	+0.8
NRTU	Norrtaelje	1.90	270	P	Pn	10 09 12.5	+0.8
PVF	Pernaja	1.93	63	ePB	Pb	10 09 14.9	+0.8
PVF				eSB	Sg	10 09 40.1	+0.1
PVF				MSG		10 09 42.5	
	comp=Z,57nm,0.3s						
GRAU	Graesoe	2.02	289	P	Pn	10 09 14.1	+0.7
GRAU	Graesoe	2.02	289	P	Pn	10 09 14.1	+0.7
SLIT	Slitere, Latvi	2.11	181	eP	Pn	10 09 16.1	+1.6
SLIT	Slitere, Latvi	2.11	181	ePB	Pn	10 09 16.0	+1.4
SLIT				eSG	Sb	10 09 43.7	-0.1
KPF	Kankaanpaa	2.12	356	ePG	Pb	10 09 18.0	+0.6
KPF				eSB	Sb	10 09 44.3	+0.1
KPF				MSG		10 09 49.3	
	comp=Z,38nm,0.2s						
FORU	Forsmark	2.21	289	P	Pn	10 09 17.6	+1.7
FORU	Forsmark	2.21	289	P	Pn	10 09 17.6	+1.7
FLYU	Flymyra	2.30	282	P	Pn	10 09 18.3	+1.1
FLYU	Flymyra	2.30	282	P	Pn	10 09 18.3	+1.1
NYNU	Nynaeshamn	2.35	254	P	Pn	10 09 19.7	+1.7
NYNU	Nynaeshamn	2.35	254	P	Pn	10 09 19.7	+1.7
FIA0	FINESS Array S	2.51	45	ePB	Pb	10 09 23.8	-0.3
FIA0				eSB	Sb	10 09 55.8	+0.3
FINES	FINESS Array B	2.51	45	Pn	Pb	10 09 23.6	-0.5
	comp=Z,4.1nm,0.3s,baz=230,slow=13,SNR=125						
FINES				Sn	Sb	10 09 56.4	+1.0
	comp=Z,26nm,0.3s,baz=228,slow=22,SNR=4.2						
	comp=Z,6.4nm,0.3s						
FIBU	Brunna	2.54	276	P	Pn	10 09 22.3	+1.7
FIBU	Brunna	2.54	276	P	Pn	10 09 22.3	+1.7
VSU	Vasula	2.58	118	eP	Pn	10 09 22.0	+0.9
BACU	Backbrunna	2.67	275	P	Pn	10 09 24.1	+1.8
BACU	Backbrunna	2.67	275	P	Pn	10 09 24.1	+1.8
OSTU	Oestervaala	2.68	283	P	Pn	10 09 23.8	+1.3
OSTU	Oestervaala	2.68	283	P	Pn	10 09 23.8	+1.3
KEF	Keuruu	2.73	25	eP	Pn	10 09 25.9	+2.7
KEF	Keuruu	2.73	25	ePB	Pb	10 09 28.2	+0.3
KEF				eSB	Sb	10 10 03.1	+1.2
IGGU	Iggoen	2.77	297	P	Pn	10 09 25.1	+1.4
IGGU	Iggoen	2.77	297	P	Pn	10 09 25.1	+1.4
KAF	Kangasniemi	3.07	37	ePB	Pb	10 09 32.2	-1.3
KAF				eSB	Sb	10 10 10.3	-1.2
ESKU	Eskilstuna	3.09	263	P	Pn	10 09 29.4	+1.3
ESKU	Eskilstuna	3.09	263	P	Pn	10 09 29.4	+1.3
ARNU	Arnoeviken	3.15	311	P	Pn	10 09 30.7	+1.8
ARNU	Arnoeviken	3.15	311	P	Pn	10 09 30.7	+1.8
VAF	Ylistaro	3.33	2	eP	Pn	10 09 34.8	+3.4
HFS	Hagfors	4.39	279	Pn	Pn	10 09 47.3	+1.3
	comp=Z,1.1nm,0.3s,baz=100,slow=12,SNR=26						
HFS				Pg	Pb	10 09 57.2	+1.2
	comp=Z,1.8nm,0.3s,baz=95,slow=19,SNR=16						
HFS				Sn	Sn	10 10 38.9	+1.2
	comp=Z,1.4nm,0.3s,baz=98,slow=29,SNR=6.3						
	comp=Z,1.7nm,0.3s						
NC303	NORSAR Array S	5.65	290	eP	Pn	10 10 04.0	+0.7
NB201	NORSAR Array S	5.65	288	eP	Pn	10 10 03.7	+0.3
NOA	NORSAR Array B	5.69	288	Pn	Pn	10 10 03.9	0.0
	comp=Z,0.1nm,0.3s,baz=99,slow=11,SNR=28						
NOA				Sn	Sn	10 11 10.1	+0.2
	comp=Z,0.1nm,0.3s,baz=109,slow=19,SNR=4.5						
	comp=Z,0.3nm,0.3s						
NC204	NORSAR Array S	5.94	290	eP	Pn	10 10 07.4	0.0
NC204				eS	Sn	10 11 13.5	-2.7
DOMB	Dombas	6.90	295	eP	Pn	10 10 20.5	+0.1
SALU	Saltoluokta	7.87	349	eP	Pn	10 10 36.3	+2.5
HEF	Hetta	8.73	3	eP	Pn	10 10 46.4	+0.8
OBN	Obninsk	8.94	115	Pn	Pn	10 10 45.1	-3.3
	comp=Z,1.7nm,0.3s,baz=178,slow=21,SNR=1.2						
OBN				Lg	Lg	10 13 18.0	
	comp=Z,5.1nm,0.3s,baz=308,slow=23,SNR=1.6						
	comp=Z,10nm,0.4s						
KTK1	Kautokeino	9.33	2	eP	Pn	10 10 55.7	+2.0
KIF	Kilpisjarvi	9.34	357	eP	Pn	10 10 55.5	+1.7
AKASG	Malin Array Be	9.85	154	Pn	Pn	10 10 53.5	-7.4
	comp=Z,0.9nm,0.3s,baz=357,slow=21,SNR=4.4						
	comp=Z,0.4nm,0.3s						
ARCES	ARCESS Array B	9.94	6	Pn	Pn	10 11 02.1	+0.1
	comp=Z,0.4nm,0.3s,baz=186,slow=13,SNR=36						
ARCES				Sn	Sn	10 12 50.0	-4.1
	comp=Z,0.3nm,0.3s,baz=188,slow=24,SNR=3.6						
	comp=Z,0.8nm,0.3s						

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*SOME **05** 10:12:37.9, 41°.28N×83°.17E, h0^{km}*
*NNC **05** 10:12:39.4±3.3, 41°.40N×83°.41E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=23.9km s-min=15.5km az=160.0*
ISC 05 10:12:37.4±2.8, **41°.2N**±0°.1×**83°.11E**±0°.08, **h10**^{km}, **n24**, σ**1ˢ.77**/33, **4C-4D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	3.33	307	Pg	Pb	10 13 37.0	+0.3
	25nm,0.3s						
SHLS				Lg	Lg	10 14 20.2	
	214nm,0.7s						
SHLS	Shalkode	3.33	307	eP	Pb	10 13 35.4	-1.2
	16nm,0.3s						
SHLS				eS	Sb	10 14 16.8	-0.5
	214nm,0.6s						
PDGK	Podgornoye	3.41	309	⇑Pg	Pg	10 13 48.6	+5.8
	15nm,0.5s						
PDGK				⇓Sn	Sb	10 14 20.4	+0.8
	128nm,0.8s						
PDGK				⇑Lg	Lg	10 14 35.8	
	75nm,0.7s						
UZB	Uzynbulak	3.60	304	Pg	Pg	10 13 45.6	-0.7
	22nm,0.4s						
UZB				Lg	Lg	10 14 35.5	
	73nm,0.4s						
SATY	Saty	3.95	299	Pg	Pg	10 13 53.3	+0.2
	19nm,0.6s						
SATY				Lg	Lg	10 14 48.0	
	82nm,0.6s						
DJR	Jarkent	3.95	323	Pg	Pg	10 13 51.5	-1.7
	15nm,0.4s						
DJR				Lg	Lg	10 14 44.7	
	40nm,0.9s						
DJR	Jarkent	3.95	323	eP	Pg	10 13 51.5	-1.7
	15nm,0.4s						
DJR				eS	Sg	10 14 44.7	+0.4
	40nm,0.9s						
KPKS	Kokpek	3.98	306	Pg	Pg	10 13 52.4	-1.2
	8.3nm,0.5s						
KPKS				Lg	Lg	10 14 46.1	
	105nm,0.5s						
ZHN	Zhinishke	3.98	301	Pg	Pg	10 13 53.0	-0.7
	11nm,0.2s						
ZHN				Lg	Lg	10 14 47.5	
	64nm,0.4s						
ZHN	Zhinishke	3.98	301	eP	Pg	10 13 53.0	-0.7
	11nm,0.2s						
ZHN				eS	Sg	10 14 47.5	+2.2
	64nm,0.4s						
KNOS	Konyrlen	4.27	319	Pg	Pg	10 13 57.3	-1.9
	12nm,1.0s						
KNOS				Lg	Lg	10 14 54.8	
	33nm,1.0s						
BLB	Baldybastay	4.46	312	Pg	Pg	10 14 01.9	-1.0
	54nm,1.0s						
BLB				Lg	Lg	10 15 02.5	
	32nm,0.5s						
KOTS	Kotyrbulak	4.89	296	Pg	Pg	10 14 09.1	-2.0
	8.2nm,0.7s						
KOTS				Lg	Lg	10 15 14.5	
	62nm,0.9s						
KOTS	Kotyrbulak	4.89	296	eP	Pg	10 14 09.1	-2.0
	8.2nm,0.7s						
KOTS				eS	Sg	10 15 14.5	+0.2
	62nm,0.9s						
MDOK	Medeo	4.91	295	Pg	Pg	10 14 09.3	-2.1
	8.2nm,1.1s						
MDOK				Lg	Lg	10 15 15.3	
	12nm,0.6s						
TNSS	Tian-Shan	4.93	294	Pg	Pg	10 14 10.3	-1.6
	8.5nm,0.5s						
TNSS				Lg	Lg	10 15 17.3	
	14nm,0.5s						
TNSS	Tian-Shan	4.93	294	eP	Pg	10 14 10.3	-1.6
	8.5nm,0.5s						
TNSS				eS	Sg	10 15 17.3	+1.6
	14nm,0.5s						
MTBS	Maitube	5.32	293	Pg	Pg	10 14 16.6	-2.6
	5.8nm,0.5s						
MTBS				Lg	Lg	10 15 28.0	
	14nm,0.7s						
MTBS	Maitube	5.32	293	eP	Pg	10 14 16.6	-2.6
	5.8nm,0.5s						
MTBS				eS	Sg	10 15 27.9	-0.2
	14nm,0.7s						
KTBS	Karatobe	5.37	300	Pg	Pg	10 14 17.7	-2.5
	2.5nm,0.3s						
KTBS				Lg	Lg	10 15 30.0	
	29nm,0.9s						
MK31	Makanchi Array	5.60	354	Pn	Pn	10 14 03.2	+2.5
	0.4nm,0.5s,baz=178,slow=12,SNR=9.6						
MK31				⇓Pg	Pb	10 14 16.8	+1.6
	1.1nm,0.5s,baz=168,slow=12,SNR=4.0						
MK31				⇑Lg	Lg	10 15 32.7	
	25nm,0.6s,baz=151,slow=30,SNR=6.8						
KST	Kastek	5.62	291	Pg	Pg	10 14 22.7	-2.3
	8.9nm,0.7s						
KST				Lg	Lg	10 15 38.1	
	23nm,0.6s						
KST	Kastek	5.62	291	eP	Pg	10 14 22.7	-2.3
	8.9nm,0.7s						
KST				eS	Sg	10 15 38.1	+0.3
	23nm,0.6s						
MAKZ	Makanchi	5.64	352	⇑Pg	Pg	10 14 21.8	-3.6
	2.4nm,0.7s						
MAKZ				⇓Sn	Sn	10 15 05.1	-1.1
	11nm,1.0s						
MAKZ				⇓Lg	Lg	10 15 33.4	
	21nm,0.9s						

NNC 05 10:12:38.9±3.0, **38°.52N**×**70°.30E**, **h0**^{km}, **mb3.9**, **mpv3.5**, **7C-1D**, **Error ellipse: s-maj=26.2km s-min=21.6km az=0.0**, **Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	4.58	2	⇑Pn	Pn	10 13 49.9	+0.5
	1.5nm,0.2s,baz=200,slow=16,SNR=76						
KK31				⇑Pg	Pb	10 14 02.7	+2.5
	4.3nm,0.4s,baz=194,slow=18,SNR=13						
KK31				⇑Lg	Lg	10 15 03.4	
	12nm,0.5s,baz=189,slow=29,SNR=5.7						
AAK	Ala-Archa	5.21	36	⇑Pg	Pb	10 14 12.4	+1.5
	2.4nm,0.8s						
AAK				⇓Lg	Lg	10 15 24.7	
	2.2nm,0.6s						
TKM2	Tokmak 2	5.96	41	⇑Pn	Pn	10 14 08.3	-0.2
	2.8nm,0.3s						
TKM2				⇑Pg	Pb	10 14 27.9	+4.1
	6.8nm,0.6s						
TKM2				⇑Lg	Lg	10 15 50.8	
	40nm,1.1s						

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*IDC **05** 10:13:24.6±0.9, 3°.60S×141°.93E, h0^{km}, mb4.1/11, mbtmp4.2/13, ML1.7/1, MS3.0/7, Error ellipse: s-maj=19.8km s-min=9.9km az=99.0*
*DJA **05** 10:13:30.5±1.2, 3°S±14°×14°2E±°, h71^{km}±20^{km}, M4.7/7, mb4.8/4, MLv4.6/7*
ISC 05 10:13:29.7±0.7, **3°.60S**±0°.06×**141°.93E**±0°.07, **h35**^{km}, **n35**, σ**1ˢ.85**/38, **mb4.0**/11, **MS2.9**/6, **New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC

JAY	**Jayapura**	1.63	311	Pn	Pn	10 13 55.0	-1.0
	36nm,0.3s,baz=156,slow=11,SNR=126						
JAY				Sn	Sn	10 14 17.4	+1.5
	43nm,0.3s,baz=208,slow=10,SNR=6.8						
JAY				LR	LR	10 14 45.7	
	comp=Z,229nm,22.0s,baz=150,slow=50						
JAY	**Jayapura**	1.63	311	P	Pn	10 13 55.4	-0.6
JAY				S	Sn	10 14 16.3	+0.5
GENI	**Genyem**	2.03	299	P	Pn	10 14 01.1	-0.3
GENI	**Genyem**	2.03	299	P	Pn	10 14 01.1	-0.3
GENI				S	Sn	10 14 27.2	+1.7
WAMI	**Wamena**	3.23	265	P	Pn	10 14 18.2	+0.3
SMPI	**Sarmi**	3.59	296	P	Pn	10 14 25.0	+2.1
SRPI	**Serui, Papua**	5.94	287	P	Pn	10 14 55.5	+0.3
	0.5nm79nm,0.5s						
SRPI				S	Sn	10 16 03.6	+1.5
	0.5nm79nm,0.5s						
BAKI	**Biak**	6.29	292	P	Pn	10 15 00.6	+0.5
	0.2nm36nm,0.9s						
PMG	**Port Moresby**	7.76	138	Pn	Pn	10 15 20.9	+0.7
	0.6nm,0.3s,baz=285,slow=16,SNR=1.7						
PMG				Sn	Sn	10 16 45.9	-1.0
	baz=192,slow=20						
	16nm,0.8s						
FAKI	**Fak Fak**	9.69	274	P	Pn	10 15 46.3	-0.5
FAKI	**Fak Fak**	9.69	274	P	Pn	10 15 48.5	+1.7
COEN	**Coen**	10.37	173	P	Pn	10 15 58.8	+2.8
KDU	**Kakadu**	13.00	225	P	Pn	10 16 30.3	-1.8
KDU	**Kakadu**	13.00	225	S	Sn	10 18 49.8	-5.8
DRS	**Darwin Rock St**	14.01	231	P	Pn	10 16 44.4	-1.4
MTN	**Manton Dam**	14.09	229	P	Pn	10 16 44.6	-2.3
QIS	**Mount Isa**	17.01	187	P	Pn	10 17 26.2	+1.2
GUMO	**Guam**	17.32	10	LR	LR	10 23 13.0	
	comp=Z,22nm,18.4s,baz=191,slow=34						
WRA	**Warramunga Arr**	17.86	204	P	Pn	10 17 33.3	-2.2
	5.3nm,0.4s,baz=24,slow=12,SNR=28						
WRA				S	Sn	10 20 55.3	+1.7
	3.2nm,0.9s,baz=19,slow=22,SNR=4.6						
LUWI	**Luwuk**	19.31	277	P	P	10 17 49.9	-2.1
ASAR	**Alice Springs**	21.41	201	P	P	10 18 13.4	-1.3
	2.2nm,0.5s,baz=27,slow=11,SNR=43						
ASAR				S	S	10 22 15.4	+4.9
	1.1nm,0.8s,baz=20,slow=30,SNR=4.2						
ASAR				LR	LR	10 26 19.4	
	comp=Z,105nm,18.1s,baz=90,slow=36						
	2.2nm,0.5s						
FITZ	**Fitzroy Crossi**	21.50	227	P	P	10 18 14.7	-1.0
	7.3nm,0.5s,baz=42,slow=12,SNR=17						
FITZ				S	S	10 22 15.2	+2.8
	6.7nm,0.8s,baz=191,slow=13,SNR=2.9						
	7.3nm,0.5s						
KAPI	**Kappang**	22.16	266	P	P	10 18 22.4	-0.4
	6.9nm,0.5s,baz=80,slow=1.3,SNR=9.0						
KAPI				LR	LR	10 28 55.4	
	comp=Z,53nm,19.0s,baz=94,slow=42						
	6.9nm,0.5s						
STKA	**Stephens Creek**	28.13	181	P	P	10 19 18.3	-0.2
	0.9nm,0.6s,baz=40,slow=8.4,SNR=3.3						
	0.9nm,0.6s						
JOW	**Kunigami**	33.01	337	LR	LR	10 31 00.9	
	comp=Z,25nm,21.7s,baz=97,slow=32						
KSRS	**Korea Array**	42.87	344	LR	LR	10 36 19.7	
	comp=Z,12nm,22.0s,baz=200,slow=32						
ASAJ	**Asahikawa**	47.50	1	LR	LR	10 47 46.3	
	comp=Z,5.6nm,18.2s,baz=164,slow=43						
CMAR	**Chiang Mai Arr**	47.68	299	P	P	10 22 03.2	+0.1
	0.4nm,0.3s,baz=122,slow=6.2,SNR=4.5						
	0.4nm,0.3s						
USRK	**Ussuriysk Ar.**	48.41	350	P	P	10 22 08.4	0.0
	0.3nm,0.3s,baz=130,slow=15,SNR=1.6						
	0.3nm,0.3s						
PPT	**Papeete**	68.42	107	LR	LR	10 52 29.4	
	comp=Z,24nm,18.8s,baz=139,slow=34						
MKAR	**Makanchi Array**	72.47	322	P	P	10 24 53.8	+1.0
	2.9nm,0.8s,baz=111,slow=6.6,SNR=17						
	2.9nm,0.8s						
KURBB	**Kurchatov Arra**	76.32	324	P	P	10 25 15.1	+0.1
	1.3nm,0.8s,baz=112,slow=5.2,SNR=8.4						
	1.3nm,0.8s						
BVAR	**Borovoye Array**	81.89	325	P	P	10 25 46.1	+0.6
	5.6nm,0.8s,baz=104,slow=6.3,SNR=18						
	5.6nm,0.8s						
ILAR	**Eielson Array**	85.31	24	P	P	10 26 02.6	-0.2
	0.8nm,0.8s,baz=259,slow=4.5,SNR=7.0						
	0.8nm,0.8s						
QSPA	**South Pole Qui**	86.35	180	P	P	10 26 08.2	+0.1
	1.1nm,0.7s,baz=332,slow=1.6,SNR=9.4						
	1.1nm,0.7s						

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*IDC **05** 10:15:15.7±2.3, 59°.29N×22°.72E, h0^{km}, mbtmp3.5/5, ML3.0/5, Error ellipse: s-maj=28.9km s-min=8.3km az=158.0*

*HEL **05** 10:15:19.1±0.1, 59°.71N×22°.29E, h0^{km}, ML2.4, Explosion*

*EST **05** 10:15:19.0, 59°.70N×22°.29E, h0^{km}, ML2.4(HEL), Explosion*

*DNK **05** 10:15:21.0±0.9, 59°.77N×21°.99E, h0^{km}, ML2.7(UPP), Suspected explosion*

*UPP **05** 10:15:21.8±0.9, 59°.75N×21°.86E, h0^{km}, ML2.7*

ISC 05 10:15:17.9±0.7, **59°.76N**±0°.02×**22°.41E**±0°.02, **h0**^{km}, **n62**, σ**1ˢ.09**/86, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TVF	**Tvarminne**	0.43	79	*e*P	Pb	10 15 27.9	-0.4
TVF				*e*S	Sb	10 15 34.9	-0.5
EE06	**Soera, Palade,**	0.83	164	*e*P	Pg	10 15 33.0	-0.7
EE06				*e*S	Sg	10 15 42.6	-1.8
MEF	**Metsahovi**	1.10	65	*e*P	Pn	10 15 40.4	-0.1
MEF	**Metsahovi**	1.10	65	*e*P	Pn	10 15 40.2	-0.2
MEF				*e*S	Sn	10 15 55.5	-0.8
MTSE	**Matsula**	1.28	145	*e*P	Pg	10 15 41.9	-0.4
MTSE	**Matsula**	1.28	145	*e*P	Pg	10 15 41.8	-0.5
MTSE				*e*S	Sg	10 15 58.3	-0.6
AAL	**Aland**	1.28	290	P	Pg	10 15 41.3	-1.1
AAL				S	Sg	10 15 55.2	-3.8
AAL	**Aland**	1.28	290	P	Pg	10 15 41.3	-1.1
AAL				S	Sg	10 15 55.2	-3.8
AAL	**Aland**	1.28	290	*e*P	Pg	10 15 41.4	-1.0
AAL				*e*S	Sg	10 15 57.5	-1.5
RAF	**Rauma**	1.30	346	*e*P	Pn	10 15 44.1	+0.8
RAF	**Rauma**	1.30	346	*e*PB	Pn	10 15 43.4	+0.1
RAF				*e*SB	Sn	10 16 01.3	0.0
RAF				MSG		10 16 07.8	
	comp=Z,42nm,0.2s						
HEL1	**Helsinki**	1.31	71	*e*P	Pn	10 15 44.0	+0.6
HEL1				*e*S	Sn	10 16 01.6	0.0
HEL1				MSG		10 16 01.9	
	comp=Z,24nm,0.2s						
NUR	**Nurmijarvi**	1.35	55	*e*P	Pb	10 15 44.7	+0.7
NUR				*e*S	Sn	10 16 02.3	-0.2
EE08	**Sarghaua, Vand**	1.83	126	*e*PN	Pb	10 15 51.8	-0.4
PVF	**Pernaja**	1.90	64	*e*PB	Pg	10 15 54.0	-0.2
PVF				*e*SB	Sg	10 16 19.1	+0.3
PVF				MSG		10 16 23.4	
	comp=Z,78nm,0.3s						
NRTU	**Norrtaelje**	1.92	269	P	Pn	10 15 51.5	-0.1
NRTU	**Norrtaelje**	1.92	269	P	Pn	10 15 51.5	-0.1
GRAU	**Graesoe**	2.02	288	P	Pn	10 15 53.3	+0.2
GRAU	**Graesoe**	2.02	288	P	Pn	10 15 53.3	+0.2
KPF	**Kankaanpaa**	2.08	356	*e*PG	Pb	10 15 57.0	+0.5
KPF				*e*SG	Sg	10 16 24.9	+0.2
SLIT	**Slitere, Latvi**	2.14	182	*e*P	Pn	10 15 55.1	+0.3
SLIT	**Slitere, Latvi**	2.14	182	*e*PN	Pn	10 15 55.1	+0.3
SLIT				*e*PB	Pn	10 15 55.1	+0.3
SLIT				*e*SB	Sn	10 16 22.5	+0.5
SLIT				*e*SG	Sn	10 16 22.5	+0.5
FORU	**Forsmark**	2.21	288	P	Pn	10 15 56.6	+0.9
FORU	**Forsmark**	2.21	288	P	Pn	10 15 56.6	+0.9
FLYU	**Flymyra**	2.30	281	P	Pn	10 15 57.3	+0.3
FLYU	**Flymyra**	2.30	281	P	Pn	10 15 57.3	+0.3
NYNU	**Nynaeshamn**	2.38	253	P	Pn	10 15 58.8	+0.8
NYNU	**Nynaeshamn**	2.38	253	P	Pn	10 15 58.8	+0.8
UPP	**Uppsala**	2.42	274	P	Pn	10 15 59.7	+1.1
UPP	**Uppsala**	2.42	274	P	Pn	10 15 59.7	+1.1
FIA0	**FINESS Array S**	2.47	45	*e*PB	Pb	10 16 02.9	-0.2
FIA0				*e*SB	Sg	10 16 35.9	-1.4
FINES	**FINESS Array B**	2.47	45	Pn	Pb	10 16 02.6	-0.5
	comp=Z,3.7nm,0.3s,baz=215,slow=12,SNR=74						
FINES				Sn	Sg	10 16 36.5	-0.8
	comp=Z,27nm,0.3s,baz=232,slow=24,SNR=69						
	comp=Z,5.5nm,0.3s						
FIBU	**Brunna**	2.56	275	P	Pn	10 16 01.5	+1.1
FIBU	**Brunna**	2.56	275	P	Pn	10 16 01.5	+1.1
VSU	**Vasula**	2.59	118	*e*P	Pn	10 16 01.3	+0.4
BACU	**Backbrunna**	2.68	274	P	Pn	10 16 03.2	+1.0
BACU	**Backbrunna**	2.68	274	P	Pn	10 16 03.2	+1.0
OSTU	**Oestervaala**	2.69	282	P	Pn	10 16 02.9	+0.6
OSTU	**Oestervaala**	2.69	282	P	Pn	10 16 02.9	+0.6
KEF	**Keuruu**	2.69	25	*e*P	Pb	10 16 04.7	-2.2
KEF	**Keuruu**	2.69	25	*e*PB	Pb	10 16 06.9	0.0
KEF				*e*SB	Sg	10 16 42.8	-1.6
IGGU	**Iggoen**	2.77	296	P	Pn	10 16 04.1	+0.8
IGGU	**Iggoen**	2.77	296	P	Pn	10 16 04.1	+0.8
KAF	**Kangasniemi**	3.03	37	*e*PB	Pb	10 16 11.5	-1.1
KAF				*e*SB	Sb	10 16 50.3	+0.3
ESKU	**Eskilstuna**	3.11	263	P	Pn	10 16 08.5	+0.4
ESKU	**Eskilstuna**	3.11	263	P	Pn	10 16 08.5	+0.4
ARNU	**Arnoeviken**	3.14	310	P	Pn	10 16 09.7	+1.2
ARNU	**Arnoeviken**	3.14	310	P	Pn	10 16 09.7	+1.2
VIKU	**Vikbolandet**	3.20	249	P	Pn	10 16 09.2	-0.1
VIKU	**Vikbolandet**	3.20	249	P	Pn	10 16 09.2	-0.1
VAF	**Ylistaro**	3.29	2	*e*P	Pn	10 16 13.7	+3.1
FALU	**Falun**	3.37	285	P	Pn	10 16 12.0	+0.4
FALU	**Falun**	3.37	285	P	Pn	10 16 12.0	+0.4
ROTU	**Roteberg**	3.65	300	P	Pn	10 16 15.8	+0.2
ROTU	**Roteberg**	3.65	300	P	Pn	10 16 15.8	+0.2
PABE	**Paberze**	4.35	168	*e*P	Pn	10 16 25.2	+0.1
HFS	**Hagfors**	4.40	279	Pn	Pn	10 16 25.9	+0.1
	comp=Z,0.8nm,0.3s,baz=95,slow=13,SNR=15						
HFS				Pg	Pb	10 16 36.6	+0.8
	comp=Z,2.0nm,0.3s,baz=101,slow=16,SNR=16						
HFS				Sn	Sn	10 17 18.4	+0.8
	comp=Z,1.3nm,0.3s,baz=85,slow=18,SNR=5.7						
	comp=Z,1.4nm,0.3s						
NC602	**NORSAR Array S**	5.50	285	*e*P	Pn	10 16 41.0	+0.1
NB201	**NORSAR Array S**	5.66	288	*e*P	Pn	10 16 43.1	0.0
NOA	**NORSAR Array B**	5.69	288	Pn	Pn	10 16 42.7	-0.9
	comp=Z,0.1nm,0.3s,baz=106,slow=13,SNR=18						
NOA				Pg	Pb	10 16 59.2	+1.2
	comp=Z,0.1nm,0.3s,baz=115,slow=5.0,SNR=8.6						
NOA				Sn	Sn	10 17 53.0	+3.4
	comp=Z,0.1nm,0.3s,baz=121,slow=14,SNR=3.2						
	comp=Z,0.3nm,0.3s						
ARCES	**ARCESS Array B**	9.90	6	Pn	Pn	10 17 40.6	-0.6
	comp=Z,0.5nm,0.3s,baz=195,slow=11,SNR=37						
ARCES				Sn	Sn	10 19 32.5	-0.4
	comp=Z,0.2nm,0.3s,baz=191,slow=23,SNR=2.3						
	comp=Z,0.9nm,0.3s						
SPITS	**Spitsbergen Ar**	18.61	356	P	Pn	10 19 38.5	+2.1
	baz=172,slow=12						
	comp=Z,4.9nm,0.9s						

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*IDC **05** 10:24:43.9±2.2, 59°.56N×22°.25E, h0^{km}, mbtmp3.0/4, ML2.5/4, Error ellipse: s-maj=32.8km s-min=9.2km az=168.0*

*HEL **05** 10:24:45.9±0.0, 59°.69N×22°.29E, h0^{km}, ML2.2, Explosion*

*EST **05** 10:24:46.0, 59°.69N×22°.29E, h0^{km}, ML2.2(HEL), Explosion*

*DNK **05** 10:24:47.4±0.7, 59°.77N×22°.09E, h0^{km}, ML2.7(UPP), Suspected explosion*

*UPP **05** 10:24:48.3±1.0, 59°.73N×21°.92E, h0^{km}, ML2.7*

ISC 05 10:24:43.4±0.7, **59°.70N**±0°.02×**22°.26E**±0°.02, **h0**^{km}, **n46**, σ**0ˢ.94**/64, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TVF	**Tvarminne**	0.52	74	*e*P	Pb	10 24 54.9	-0.5
TVF				*e*S	Sb	10 25 01.7	-1.8
EE06	**Soera, Palade,**	0.80	157	*e*P	Pb	10 24 59.9	-0.1
EE06				*e*S	Sg	10 25 10.0	+1.1
MEF	**Metsahovi**	1.19	63	*e*P	Pg	10 25 05.6	-0.6
MEF	**Metsahovi**	1.19	63	*e*P	Pn	10 25 07.2	-0.1
MEF				*e*S	Sb	10 25 22.6	-0.2
AAL	**Aland**	1.24	294	P	Pn	10 25 08.4	+0.5
AAL				S	Sg	10 25 23.3	+0.2
AAL	**Aland**	1.24	294	P	Pn	10 25 08.4	+0.5
AAL				S	Sg	10 25 23.3	+0.2
AAL	**Aland**	1.24	294	*e*P	Pn	10 25 08.4	+0.5
AAL				*e*SB	Sn	10 25 25.2	-0.1
AAL				MSG		10 25 26.0	
	comp=Z,15nm,0.2s						
MTSE	**Matsula**	1.27	140	*e*P	Pg	10 25 07.7	-0.1
MTSE	**Matsula**	1.27	140	*e*P	Pn	10 25 08.2	-0.2
MTSE				*e*SB	Sb	10 25 25.2	+0.1
RAF	**Rauma**	1.35	350	*e*P	Pb	10 25 12.1	+2.6
RAF	**Rauma**	1.35	350	*e*P	Pb	10 25 10.4	+0.9
RAF				*e*SB	Sn	10 25 28.4	+0.4
RAF				MSG		10 25 29.4	
	comp=Z,19nm,0.1s						
HEL1	**Helsinki**	1.40	69	*e*P	Pb	10 25 10.8	+0.4
HEL1				*e*SB	Sn	10 25 29.4	0.0
HEL1				MSG		10 25 30.6	
	comp=Z,18nm,0.1s						
NUR	**Nurmijarvi**	1.44	55	*e*P	Pb	10 25 11.6	+0.5
NUR				*e*S	Sn	10 25 30.2	-0.2
NRTU	**Norrtaelje**	1.84	271	P	Pg	10 25 18.5	-0.1
NRTU	**Norrtaelje**	1.84	271	P	Pg	10 25 18.5	-0.1
EE08	**Sarghaua, Vand**	1.86	123	*e*PN	Pg	10 25 18.7	-0.3
EE08				*e*SN	Sg	10 25 42.7	-0.4
GRAU	**Graesoe**	1.97	290	P	Pb	10 25 20.1	0.0
GRAU	**Graesoe**	1.97	290	P	Pb	10 25 20.1	0.0
PVF	**Pernaja**	1.99	63	*e*PG	Pg	10 25 21.2	-0.4
PVF				*e*SG	Sg	10 25 46.7	-0.6
PVF				MSG		10 25 50.2	
	comp=Z,48nm,0.2s						
SLIT	**Slitere, Latvi**	2.08	180	*e*P	Pb	10 25 21.4	-0.6
SLIT	**Slitere, Latvi**	2.08	180	*e*PG	Pb	10 25 22.1	+0.1
SLIT				*e*SG	Sb	10 25 48.5	+0.2
KPF	**Kankaanpaa**	2.14	358	*e*PB	Pg	10 25 23.9	-0.5
KPF				*e*SB	Sg	10 25 51.5	-0.6
KPF				MSG		10 25 55.4	
	comp=Z,20nm,0.2s						
FORU	**Forsmark**	2.16	290	P	Pb	10 25 23.6	+0.3
FORU	**Forsmark**	2.16	290	P	Pb	10 25 23.6	+0.3
FLYU	**Flymyra**	2.25	283	P	Pb	10 25 24.3	-0.5
FLYU	**Flymyra**	2.25	283	P	Pb	10 25 24.3	-0.5
NYNU	**Nynaeshamn**	2.29	254	P	Pb	10 25 25.8	+0.2
NYNU	**Nynaeshamn**	2.29	254	P	Pb	10 25 25.8	+0.2
FIBU	**Brunna**	2.49	277	P	Pb	10 25 28.5	-0.4
FIBU	**Brunna**	2.49	277	P	Pb	10 25 28.5	-0.4
FINES	**FINESS Array B**	2.57	46	Pn	Pb	10 25 28.8	-1.5
	comp=Z,1.7nm,0.3s,baz=228,slow=13,SNR=88						
	comp=Z,2.6nm,0.3s						
FIA1	**FINESS Array S**	2.57	46	*e*PB	Pb	10 25 30.1	-0.2
FIA1				*e*SB	Sb	10 26 03.1	+0.7
VSU	**Vasula**	2.62	116	*e*P	Pn	10 25 26.4	-0.5
VSU	**Vasula**	2.62	116	*e*SB	Sb	10 26 04.0	+0.1
OSTU	**Oestervaala**	2.63	284	P	Pb	10 25 29.9	-1.5
OSTU	**Oestervaala**	2.63	284	P	Pb	10 25 29.9	-1.5
IGGU	**Iggoen**	2.73	298	P	Pb	10 25 31.1	-1.9
IGGU	**Iggoen**	2.73	298	P	Pb	10 25 31.1	-1.9
KEF	**Keuruu**	2.78	26	*e*P	Pn	10 25 30.9	+1.8
KEF	**Keuruu**	2.78	26	*e*PB	Pb	10 25 33.9	0.0
KEF				*e*SB	Sb	10 26 09.9	+1.4
KAF	**Kangasniemi**	3.12	38	*e*PB	Pb	10 25 38.8	-0.9
KAF				*e*SB	Sb	10 26 18.4	+0.1
VAF	**Ylistaro**	3.36	3	*e*P	Pn	10 25 39.6	+2.6
PABE	**Paberze**	4.31	167	*e*P	Pn	10 25 51.6	+1.5
HFS	**Hagfors**	4.33	279	Pn	Pn	10 25 50.8	+0.3
	comp=Z,0.4nm,0.3s,baz=91,slow=14,SNR=17						
HFS				Lg	Lg	10 27 00.4	
	comp=Z,1.7nm,0.3s,baz=90,slow=31,SNR=9.1						
	comp=Z,0.9nm,0.2s						
NOA	**NORSAR Array B**	5.64	288	Pn	Pn	10 26 06.6	-1.9
	comp=Z,0.1nm,0.3s,baz=229,slow=18,SNR=13						
NOA				Sn	Sn	10 27 12.1	-1.8
	baz=266,slow=2.9,SNR=1.3						
NOA				Lg	Lg	10 27 42.1	
	comp=Z,0.1nm,0.3s,baz=109,slow=18,SNR=3.7						
	comp=Z,0.2nm,0.3s						
ARCES	**ARCESS Array B**	9.97	7	Pn	Pn	10 27 07.5	-0.2
	comp=Z,0.2nm,0.3s,baz=186,slow=13,SNR=12						
	comp=Z,0.4nm,0.3s						

DJA 05 10:27:42.3±0.4, **8°S**±5°×**11°6E**±°, **h13**^{km}±3^{km}, **M3.8**/12, **mb4.1**/2, **MLv3.6**/12, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRBI	**Singaraja**	0.89	280	P	Pg	10 27 59.3	-0.3
SRBI				S	Sb	10 28 12.3	+0.8
TWSI	**Taliwang, Sumb**	0.92	123	P	Pg	10 27 59.2	-0.9
TWSI				S	Sb	10 28 12.8	+0.6
DNP	**Denpasar**	0.98	244	P	Pb	10 28 00.4	-0.8
DNP				S	Sn	10 28 17.1	+1.5
PLAI	**Plampang**	1.76	110	P	Pn	10 28 13.4	+0.9
PLAI				S	Sb	10 28 35.8	-0.6
JAGI	**Jajag, Banyuwa**	1.94	263	P	Pn	10 28 14.0	-1.0
JAGI				S	Sn	10 28 38.5	-0.8
KMMI	**Kalianget**	2.42	299	P	Pn	10 28 22.8	+1.2
GMJI	**Gumukmas**	2.63	269	P	Pn	10 28 25.4	+0.9
WBSI	**Waikabubak, Su**	3.54	113	P	Pn	10 28 37.1	+0.1
GRJI	**Gresik**	3.82	290	P	Pn	10 28 40.7	-0.2
BSSI	**Bau Bau, Buton**	4.83	65	P	Pn	10 28 54.5	-0.3
PCJI	**Pacitan**	4.87	270	P	Pn	10 28 55.4	0.0
PCJI				S	Sn	10 29 50.3	-1.4
UGM	**Wanagama**	5.53	273	P	Pn	10 29 05.3	+0.8
	63nm,2.3s						
EDFI	**Ende, Flores**	5.55	96	P	Pn	10 29 04.6	-0.2

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*EST **05** 10:31:41.2, 59°.70N×22°.29E, h0^{km}, ML2.2(HEL), Explosion*

*HEL **05** 10:31:41.3±0.1, 59°.71N×22°.29E, h0^{km}, ML2.3, Explosion*

*LVSN **05** 10:31:42.4±2.1, 59°.70N×22°.34E, h0^{km}±22^{km}, ML2.5*

*IDC **05** 10:31:42.2±1.5, 60°.00N×22°.08E, h0^{km}, mbtmp3.1/4, ML2.7/4, Error ellipse: s-maj=20.2km s-min=5.9km az=162.0*

*DNK **05** 10:31:43.4±0.8, 59°.75N×21°.93E, h0^{km}, ML2.7(UPP), Suspected explosion*

*UPP **05** 10:31:44.1±0.8, 59°.73N×21°.82E, h0^{km}, ML2.7*

ISC 05 10:31:39.0±0.7, **59°.72N**±0°.02×**22°.27E**±0°.02, **h0**^{km}, **n57**, σ**1ˢ.71**/79, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TVF	**Tvarminne**	0.51	76	*e*P	Pg	10 31 50.0	+1.1
TVF				*e*S	Sg	10 31 57.0	+1.6
EE06	**Soera, Palade,**	0.81	158	*e*P	Pg	10 31 55.1	+0.5
EE06				*e*S	Sg	10 32 04.6	-0.5
MEF	**Metsahovi**	1.18	64	*e*P	Pg	10 32 02.0	+0.4
MEF	**Metsahovi**	1.18	64	*e*P	Pb	10 32 02.3	0.0
MEF				*e*S	Sb	10 32 18.0	-0.1
MEF				AML	AML	10 32 18.5	
	comp=N,66nm,0.3s						
MEF				AML	AML	10 32 26.1	
	comp=E,50nm,0.5s						
MEF				AML	AML	10 32 26.2	
	comp=Z,70nm,0.6s						
MEF	**Metsahovi**	1.18	64	*e*P	Pb	10 32 02.2	0.0
MEF				*e*S	Sg	10 32 17.6	+0.7
AAL	**Aland**	1.23	293	P	Pb	10 32 03.4	+0.3
AAL				S	Sg	10 32 16.9	-1.6
AAL	**Aland**	1.23	293	P	Pb	10 32 03.4	+0.3
AAL				S	Sg	10 32 16.9	-1.6
AAL	**Aland**	1.23	293	*e*P	Pb	10 32 03.7	+0.5
AAL				*e*S	Sb	10 32 19.8	+0.3
MTSE	**Matsula**	1.29	141	*e*P	Pg	10 32 03.5	-0.2
MTSE	**Matsula**	1.29	141	*e*P	Pg	10 32 03.8	+0.1
MTSE				*e*S	Sg	10 32 19.6	-0.8
RAF	**Rauma**	1.33	349	*e*P	Pn	10 32 06.5	+1.7
RAF	**Rauma**	1.33	349	*e*P	Pn	10 32 05.5	+0.6
RAF				*e*S	Sn	10 32 23.4	+0.3
RAF				AML	AML	10 32 29.4	
	comp=N,54nm,0.2s						
RAF				AML	AML	10 32 30.0	
	comp=Z,42nm,0.2s						
RAF				AML	AML	10 32 30.1	
	comp=E,44nm,0.2s						
RAF	**Rauma**	1.33	349	*e*P	Pn	10 32 05.4	+0.6
RAF				*e*SB	Sn	10 32 23.3	+0.2
RAF				MSG		10 32 29.5	
	comp=Z,16nm,0.1s						
HEL1	**Helsinki**	1.39	70	*e*P	Pg	10 32 06.0	+0.2
HEL1				*e*SB	Sb	10 32 24.4	+0.2
HEL1				MSG		10 32 31.0	
	comp=Z,31nm,0.2s						
NUR	**Nurmijarvi**	1.43	56	*e*P	Pb	10 32 06.8	+0.3
NUR				*e*SB	Sb	10 32 25.4	+0.1
NUR				MSG		10 32 27.2	
	comp=Z,11nm,0.1s						
NRTU	**Norrtaelje**	1.84	270	P	Pb	10 32 13.7	+0.1
NRTU	**Norrtaelje**	1.84	270	P	Pb	10 32 13.7	+0.1
EE08	**Sarghaua, Vand**	1.87	124	*e*P	Pb	10 32 13.7	-0.2
EE08				*e*SN	Sb	10 32 38.5	+0.7
PVF	**Pernaja**	1.98	64	*e*PB	Pb	10 32 16.1	+0.3
PVF				*e*SB	Sb	10 32 41.5	+0.4
PVF				MSG		10 32 46.1	
	comp=Z,74nm,0.3s						
SLIT	**Slitere, Latvi**	2.10	180	*e*P	Pb	10 32 17.3	-0.7
SLIT	**Slitere, Latvi**	2.10	180	*e*P	Pn	10 32 17.2	+1.7
SLIT				*e*S	Sb	10 32 44.5	-0.1
SLIT				AML	AML	10 32 47.1	
	comp=N,275nm,0.3s						
SLIT				AML	AML	10 32 48.5	
	comp=Z,170nm,0.2s						
SLIT				AML	AML	10 32 49.9	
	comp=E,322nm,0.2s						
SLIT	**Slitere, Latvi**	2.10	180	*e*PB	Pb	10 32 17.3	-0.7
SLIT				*e*SG	Sb	10 32 44.6	+0.1
KPF	**Kankaanpaa**	2.12	357	*e*PG	Pb	10 32 19.2	+0.9
KPF				*e*SG	Sg	10 32 46.8	-0.2
KPF				MSG		10 32 48.9	
	comp=Z,29nm,0.2s						
NYNU	**Nynaeshamn**	2.30	254	P	Pb	10 32 20.9	-0.4
NYNU	**Nynaeshamn**	2.30	254	P	Pb	10 32 20.9	-0.4
FIA0	**FINESS Array S**	2.55	46	*e*PB	Pb	10 32 24.8	-0.8
FIA0				*e*SB	Sb	10 32 58.2	+0.6
FINES	**FINESS Array B**	2.55	46	Pn	Pb	10 32 24.7	-0.9
	comp=Z,3.3nm,0.3s,baz=232,slow=14,SNR=80						
FINES				Lg	Lg	10 32 58.2	
	comp=Z,22nm,0.3s,baz=234,slow=23,SNR=54						
	comp=Z,5.9nm,0.3s						
BACU	**Backbrunna**	2.61	275	P	Pn	10 32 25.0	+2.6
BACU	**Backbrunna**	2.61	275	P	Pn	10 32 25.0	+2.6
VSU	**Vasula**	2.63	117	*e*P	Pn	10 32 18.9	-3.8
VSU	**Vasula**	2.63	117	*e*P	Pn	10 32 24.2	+1.5
VSU				AML	AML	10 33 00.1	
	comp=N,86nm,0.4s						
VSU				AML	AML	10 33 00.9	
	comp=E,100nm,0.3s						
VSU				AML	AML	10 33 05.3	
	comp=Z,65nm,0.3s						
IGGU	**Iggoen**	2.72	297	P	Pn	10 32 26.2	+2.3
IGGU	**Iggoen**	2.72	297	P	Pn	10 32 26.2	+2.3
KEF	**Keuruu**	2.76	26	*e*P	Pb	10 32 28.7	-0.5
KEF	**Keuruu**	2.76	26	*e*PB	Pb	10 32 29.1	-0.2
KEF				*e*SB	Sb	10 33 04.8	+1.2
ESKU	**Eskilstuna**	3.04	263	P	Pn	10 32 30.6	+2.3
ESKU	**Eskilstuna**	3.04	263	P	Pn	10 32 30.6	+2.3
KAF	**Kangasniemi**	3.10	38	*e*PB	Pb	10 32 33.3	-1.8
KAF				*e*SB	Sb	10 33 12.8	-0.7
ARNU	**Arnoeviken**	3.11	312	P	Pn	10 32 31.6	+2.4
ARNU	**Arnoeviken**	3.11	312	P	Pn	10 32 31.6	+2.4
VIKU	**Vikbolandet**	3.12	249	P	Pn	10 32 31.3	+1.9
VIKU	**Vikbolandet**	3.12	249	P	Pn	10 32 31.3	+1.9
FALU	**Falun**	3.31	286	P	Pn	10 32 34.3	+2.2
FALU	**Falun**	3.31	286	P	Pn	10 32 34.3	+2.2
VAF	**Ylistaro**	3.34	3	*e*P	Pb	10 32 36.3	-2.7
VAF	**Ylistaro**	3.34	3	*e*P	Pb	10 32 36.3	-2.7
HEMU	**Hemsoen**	3.60	327	P	Pn	10 32 39.4	+3.4
HEMU	**Hemsoen**	3.60	327	P	Pn	10 32 39.4	+3.4
ROTU	**Roteberg**	3.61	301	P	Pn	10 32 38.0	+1.9
ROTU	**Roteberg**	3.61	301	P	Pn	10 32 38.0	+1.9
HASU	**Hassela**	3.68	314	P	Pn	10 32 39.8	+2.7
HASU	**Hassela**	3.68	314	P	Pn	10 32 39.8	+2.7
PBUR	**Paburge**	3.72	183	*e*P	Pn	10 32 39.6	+2.0
PABE	**Paberze**	4.33	167	*e*P	Pn	10 32 47.5	+1.5
HFS	**Hagfors**	4.33	279	Pn	Pn	10 32 47.8	+1.7
	comp=Z,0.7nm,0.3s,baz=90,slow=12,SNR=14						
HFS				Sn	Sn	10 33 35.8	-1.4
	comp=Z,1.2nm,0.3s,baz=105,slow=26,SNR=5.9						
HFS				Lg	Lg	10 33 54.1	
	comp=Z,2.6nm,0.3s,baz=89,slow=30,SNR=12						
	comp=Z,1.2nm,0.3s						
NOA	**NORSAR Array B**	5.64	288	Pn	Pn	10 33 01.1	-3.0
	comp=Z,0.1nm,0.3s,baz=86,slow=14,SNR=19						
NOA				Sn	Sn	10 34 04.0	-5.5
	comp=Z,0.1nm,0.3s,baz=98,slow=18,SNR=4.1						
NOA				Lg	Lg	10 34 34.9	
	comp=Z,0.1nm,0.3s,baz=93,slow=19,SNR=5.3						
	comp=Z,0.3nm,0.3s						
ARCES	**ARCESS Array B**	9.95	7	Pn	Pn	10 34 01.0	-2.1
	comp=Z,0.5nm,0.3s,baz=187,slow=13,SNR=31						
ARCES				Sn	Sn	10 35 43.6	-12

comp=Z,0.3nm,0.3s,baz=192,slow=22,SNR=5.2
comp=Z,0.9nm,0.3s

TRN 05 10:47:09.1, 15°.24N×61°.10W, h146^{km}, MD3.5, East of Dominica., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLPL	La Plaine	0.17	302	*e*P	Pn	10 47 29.4	+0.5
DLPL				*e*S	Sn	10 47 44.9	+0.9
MDN	Morne-Daniel	0.29	285	*e*P	Pn	10 47 30.3	+1.1
MDN				*e*S	Sn	10 47 45.9	+1.5
DSLB	Salisbury	0.37	302	*e*P	Pn	10 47 30.7	+1.3
DSLB				*e*S	Sn	10 47 45.9	+0.9
DWS	Wesley	0.38	328	*e*P	Pn	10 47 29.5	0.0
DWS				*e*S	Sn	10 47 46.0	+0.9
SVN	Savane Anatole	0.41	190	*e*P	Pn	10 47 31.1	+1.4
BIM	Bigot	0.72	178	*e*P	Pn	10 47 32.9	+1.4
BIM				*e*S	Sn	10 47 50.4	+1.9
MAGL	Barre de l'ile	0.72	346	*e*S	Sn	10 47 49.3	+0.9
TBG	Guadaloupe-3	0.80	319	*e*P	Pn	10 47 33.0	+1.1
TBG				*e*S	Sn	10 47 49.9	+0.5
MPOM	Morne Pois Mar	0.83	164	*e*P	Pn	10 47 33.1	+0.9
SLBI	Saint Lucia, B	1.22	174	*e*P	Pn	10 47 36.6	+1.0
SLBI				*e*S	Sn	10 47 55.8	0.0
SLAC	Saint Lucia, A	1.35	172	*e*P	Pn	10 47 38.1	+1.2
SLAC				*e*S	Sn	10 47 58.7	+0.5
MBFL	Flemmings, Mon	1.84	325	*e*P	Pn	10 47 43.0	+0.8
ANBD	Bethesda, Anti	1.91	340	*e*P	Pn	10 47 44.0	+1.1
ANBD				*e*S	Sn	10 48 09.2	+0.2
ANWB	Willy Bob	2.50	345	*e*P	Pn	10 47 50.6	+0.5
ANWB				*e*S	Sn	10 48 21.5	-0.2
BBGH	Gun Hill	2.57	144	*e*P	Pn	10 47 52.2	+1.3
BBGH				*e*S	Sn	10 48 23.9	+0.7
SKI	Saint Kitts	2.61	323	*e*P	Pn	10 47 52.7	+1.3

NEIC ***05*** *10:47:17.1±1.4, 32°.82N±0°.02×118°.45W±0°.03, h10^{km}±2^{km}, Error ellipse: s-maj=4.9km s-min=3.1km az=220.0*

NEIC ***05*** *10:47:18.8, 33°.02N×118°.48W, h12^{km}, Moment Tensor Solution. Duration: 0 Moment tensor: Scale 10^{15}Nm; M_{rr}0.17; $M_{\theta\theta}$-4.18; $M_{\phi\phi}$4.01; $M_{r\theta}$-1.70; $M_{\theta\phi}$-1.18; $M_{\phi r}$-0.28; Fault plane solution: $M_0$4.55000×10^{15} NP1: ϕ_s128.52000°, δ76.50000°, λ-167.02000°. NP2: ϕ_s35.44000°, δ77.38000°, λ-13.84000°. Principal axes: T 4.1802, Plg1.0000°, Azm82.0000°; N 0.7476, Plg71.0000°, Azm174.0000°; P -4.9278, Plg19.0000°, Azm352.0000°;*

NEIC ***05*** *10:47:18.8, 32°.82N×118°.48W, h12^{km}*

PAS ***05*** *10:47:18.8±2.4, 32°.82N±0°.03×118°.48W±0°.03, h8^{km}±6^{km}, Mwr4.3/6, mb4.4/58(NEIC), ML4.3/60(NEIC), Mww4.4/19(NEIC), Error ellipse: s-maj=4.6km s-min=2.2km az=220.0*

IDC ***05*** *10:47:20.5±1.1, 32°.94N×118°.23W, h0^{km}, mb4.1/7, mbtmp3.9/13, ML3.7/6, MS3.6/12, Error ellipse: s-maj=14.4km s-min=11.3km az=13.0*

ISC 05 10:47:17.5±1.4, 32°.84N±0°.04×118°.43W±0°.04, h2^{km}±9^{km}, n361, σ1^s.05/332, mb4.3/34, MS3.3/6, Off coast of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CIAC	Catalina I. Ai	0.56	1		Pb	10 47 29.5	-0.7
CIAC					Sg	10 47 36.4	+0.7
SBI	Santa Barbara	0.82	322		Pb	10 47 33.7	-0.7
SBI					Sb	10 47 44.7	-1.2
FMP	Fort Macarthur	0.88	7		Pn	10 47 35.5	-1.4
FMP					Sg	10 47 46.5	+0.6
RPV	Rancho Palos V	0.91	1		Pn	10 47 36.0	-1.2
RPV						10 47 47.7	
SANC	Santa Ana	0.98	27		Pn	10 47 37.5	-0.7
SANC					Sn	10 47 50.9	-1.8
BREC	Barre Substati	1.04	21		Pn	10 47 38.9	-0.2
BREC					Sn	10 47 52.5	-1.6
DLAC	Del Amo	1.05	15		Pn	10 47 38.9	-0.2
DLAC					Sn	10 47 53.3	-1.1
GORC	Green Oak Ranc	1.05	72		Pn	10 47 38.2	-1.1
GORC					Sg	10 47 51.1	-0.4
SDMC	San Diego Miss	1.09	92		Pn	10 47 39.4	-0.3
SDMC					Sn	10 47 53.6	-1.7
WTT2	Watts, South G	1.12	7		Pn	10 47 39.9	-0.3
BHPC	Baldwin Hills	1.15	3		Pg	10 47 40.3	+0.6
MTRP	Mission Trails	1.15	90		Pg	10 47 40.4	+0.8
LCGC	La Cienega, Cu	1.16	2		Pg	10 47 40.5	+0.7
ELS	Elsinore Mount	1.17	46		Pn	10 47 39.9	-1.0
ELS				Sg	Sb	10 47 53.9	-2.1
ELS				IAML		10 47 56.1	
	comp=N,12µm,0.6s						
USC	University of	1.19	6		Pg	10 47 41.1	+0.8
TJX	Tijuana	1.20	105		Pg	10 47 41.5	+0.9
TJX					Sn	10 47 57.1	-1.1
TJX				IAML		10 47 59.5	
	comp=N,12µm,0.5s						
TJX				IAML		10 48 09.6	
	comp=E,10µm,0.7s						
RHC	Rose Hills Cem	1.21	16		Pg	10 47 41.1	+0.3
GVRC	Garvey Reservo	1.24	12		Pg	10 47 41.6	+0.3
SDRC	San Diego Road	1.25	94		Pg	10 47 41.7	+0.1
DPP	Dos Picos Cty	1.26	82		Pg	10 47 41.6	-0.1
DJJ	Donna J Jenkin	1.27	359		Pb	10 47 41.3	-0.8
OLP	Otay Lakes Par	1.28	100		Pg	10 47 42.5	+0.4
GR2C	Griffith Obs.	1.28	5		Pb	10 47 41.8	-0.6
MURC	Murrieta	1.28	53		Pn	10 47 41.6	-0.9
CHNC	Chino	1.32	28		Pg	10 47 42.7	-0.1
EML	El Monte Cty P	1.33	87		Pb	10 47 42.5	-0.6
AGOC	Agoura	1.34	348		Pg	10 47 43.6	+0.4
HLLC	North Hollywoo	1.34	2		Pb	10 47 42.7	-0.7
PASC	Pasadena Art C	1.35	9		Pn	10 47 42.3	-1.0
PASC					Sb	10 47 58.1	-3.1
PASC				IAML		10 47 58.9	
	comp=N,4µm,0.5s						
PASC				IAML		10 48 08.6	
	comp=E,4µm,1.0s						
PSRC	Puddingstone R	1.35	22		Pb	10 47 43.0	-0.7
DUZA	Dulzura	1.41	99		Pb	10 47 44.0	-0.6
DECC	Green Verdugo	1.42	3		Pb	10 47 43.6	-1.0
MWC	Mount Wilson	1.42	12		Pn	10 47 43.6	-0.9
BLCC	Black Canyon	1.42	352		Pn	10 47 43.3	-1.1
RVR	Riverside	1.45	37		Pb	10 47 45.0	-0.3
SSK	Sunset Peak	1.50	24		Pb	10 47 45.4	-0.9
OAT	Oat Mountain	1.51	354		Pb	10 47 45.2	-1.1
JUEM	Julian Eagle M	1.56	80		Pb	10 47 45.9	-1.2
TKX	Tecate	1.56	99		Pb	10 47 46.0	-1.0
TKX				IAML		10 48 09.0	
	comp=N,4µm,0.3s						
TKX				IAML		10 48 12.5	
	comp=E,2µm,0.3s						
CBX	Cerro Bola	1.58	109		Pb	10 47 46.6	-0.9
CBX				IAML		10 48 15.4	
	comp=N,5µm,0.9s						
CRY	Cary Ranch	1.59	62		Pb	10 47 46.5	-1.2
PDE	Pardee, Santa	1.61	355		Pb	10 47 46.9	-1.0
BZNA	Buzz No.'s Pla	1.61	66		Pb	10 47 46.9	-1.2
BBSC	Beaumont Base	1.62	48		Pg	10 47 49.2	+0.6
JNH	Juniper Hills	1.66	14		Pn	10 47 47.2	-0.4
FRD	Ford Ranch, An	1.67	66		Pb	10 47 47.8	-1.2
SNDA	J Saunders Pla	1.68	64		Pb	10 47 48.1	-1.1
SVD	Seven Oaks Dam	1.69	41		Pg	10 47 50.9	+1.1
MONP2	Monument Peak	1.69	88		Pb	10 47 48.2	-1.2
HOLC	Holcomb Ridge	1.69	17		Pn	10 47 47.8	-0.3
CJV	Casa Juvan	1.71	8		Pn	10 47 48.1	-0.3
CSP	Cedar Springs	1.71	31		Pb	10 47 48.3	-1.4
LRRC	Littlerock Res	1.72	11		Pb	10 47 48.4	-1.4
BORC	Borrego Spring	1.74	75		Pb	10 47 49.1	-1.1
CCX	Cicese	1.78	122		Pb	10 47 49.7	-1.1
CCX				IAML		10 48 17.8	
	comp=N,2µm,1.2s						
CCX				IAML		10 48 18.9	
	comp=E,2µm,0.6s						
OSI	Osito Audit: C	1.79	352		Pn	10 47 49.0	-0.5
LEOC	Leona Valley	1.79	3		Pn	10 47 49.2	-0.4
PFO	Pinyon Flats O	1.82	64		Pb	10 47 50.5	-1.2
PFO	Pinyon Flats O	1.82	64	Pn	Pb	10 47 50.3	-1.4
	comp=E,59nm,0.3s,baz=253,slow=12,SNR=1070						
PFO				Lg	Lg	10 48 12.5	
	comp=E,248nm,0.3s,baz=116,slow=18,SNR=13						
PFO				LR	LR	10 48 30.2	
	comp=E,544nm,21.1s,baz=248,slow=43						
ALPC	Antelope	1.85	3		Pb	10 47 50.3	-1.8
SLH	Sleepy Hollow	1.86	78		Pb	10 47 51.3	-0.9
PMD	Palm Desert	1.90	64		Pb	10 47 51.2	-1.7
BBRC	Big Bear Solar	1.90	41		Pb	10 47 52.4	-0.6
IKP	In-Ko-Pah, Jac	1.96	95		Pb	10 47 52.6	-1.4
YUH	Yuha Desert	2.12	94		Pb	10 47 55.0	-1.6
YUH				IAML		10 48 30.8	
	comp=E,1µm,0.8s						
YUH				IAML		10 48 36.8	
	comp=N,1µm,0.9s						
BCW	Bitter Crk WRg	2.25	339		Pn	10 47 56.3	+0.4
ESJX	Sierra Juarez	2.25	111		Pb	10 47 56.8	-2.2
CCAC	Calif City Air	2.34	8		Pn	10 47 57.7	+0.7
VTX	Valle De La Tr	2.67	122		Pb	10 48 02.8	-3.2
CPBX	Cerro Prieto	2.67	98		Pn	10 48 02.1	+0.6
GSC	Goldstone, Bar	2.80	28		Pn	10 48 04.5	+1.1
GSC				IAML		10 48 54.6	
	comp=N,2µm,0.8s						
ISA	Isabella, Lake	2.82	359		Pn	10 48 04.4	+0.8
GLA	Glamis	3.03	85		Pn	10 48 07.2	+0.6
GLA				IAML		10 49 00.2	
	comp=E,582nm,0.9s						
BLYC	Blythe	3.39	73		Pn	10 48 12.1	+0.6
BLYC				IAML		10 49 16.9	
	comp=N,414nm,1.1s						
SFX	San Felipe	3.53	120	Pn	Pn	10 48 14.4	+1.1
SFX				IAML		10 49 22.7	
	comp=N,353nm,0.9s						
GWY	Greenwater Val	3.64	23		Pn	10 48 16.2	+1.2
GWY				IAML		10 49 16.9	
	comp=N,826nm,0.9s						
PMPB	Monarch Peak	3.90	330		Pn	10 48 18.3	-0.2
PMPB				IAML		10 49 21.1	
	comp=E,393nm,0.7s						
PMPB				IAML		10 49 27.3	
	comp=N,476nm,0.9s						
113A	Mohawk Valley,	3.92	90		Pn	10 48 19.6	+0.8
V12A	Nelson	4.13	45		Pn	10 48 23.1	+1.4
V12A				IAML		10 49 31.9	
	comp=E,274nm,0.8s						
V12A				IAML		10 49 40.7	
	comp=N,287nm,1.7s						
GRAC	Grapevine Rang	4.24	12		Pn	10 48 22.6	-0.5
GRAC				IAML		10 49 44.0	
	comp=N,494nm,1.4s						
GRAC				IAML		10 49 57.4	
	comp=E,394nm,1.2s						
BBGB	Big Mountain B	4.31	331		Pn	10 48 24.7	+0.5
W13A	Hualapai Mount	4.40	58		Pn	10 48 26.6	+1.1
W13A				IAML		10 49 38.9	
	comp=N,213nm,1.2s						
TPNV	Topopah Spring	4.48	23		Pn	10 48 28.5	+2.0
TPNV				IAML		10 49 41.0	
	comp=N,500nm,0.8s						
DSP	Deep Springs	4.54	5		Pn	10 48 29.1	+1.9
SHPR	Sheep Range	4.54	35		Pn	10 48 29.2	+1.7
SAO	San Andreas Ge	4.64	328		Pn	10 48 28.3	-0.3
Y14A	Wickenburg	4.67	75		Pn	10 48 30.9	+1.9
MZP	Montezuma Peak	4.93	10		Pn	10 48 34.6	+1.8
S11A	Rachel	5.27	24		Pn	10 48 38.4	+0.9
TPH	Tonopah	5.32	10		Pn	10 48 40.2	+2.0
PRN	Pahroc Range	5.33	30		Pn	10 48 40.5	+2.2
LHV	Little Huntoon	5.40	359		Pn	10 48 38.4	-0.7
CMB	Columbia Colle	5.43	343		Pn	10 48 39.9	+0.4
NVAR	Mina Array Bea	5.58	1		Pn	10 48 41.3	-0.5
NVAR	Mina Array Bea	5.58	1	Pn	Pn	10 48 44.2	+2.5
	comp=N,1.5nm,0.3s,baz=186,slow=15,SNR=47						
NVAR				Lg	Lg	10 50 09.9	
	baz=262,slow=17						
NVAR				LR	LR	10 51 02.0	
	comp=N,1µm,19.7s,baz=185,slow=40						
	comp=N,4.0nm,0.5s						
LCMT	Little Creek M	5.96	44		Pn	10 48 49.0	+2.2
R11B	Troy Canyon, C	5.97	22		Pn	10 48 48.8	+1.8
X16A	Lo Mia Camp, P	6.04	73		Pn	10 48 50.0	+2.0
U15A	North Rim	6.20	53		Pn	10 48 52.3	+2.1
MCCM	Marconi Confer	6.42	327	Pn	Pn	10 48 52.6	-0.4
WUAZ	Wupatki	6.43	63		Pn	10 48 54.7	+1.4
AFDM	Forest Hills D	6.44	342		Pn	10 48 53.7	+0.3
PSUT	Pine Spring	6.79	32		Pn	10 49 01.2	+2.8
PAHR	Pah Rah Range	6.90	354		Pn	10 49 00.1	+0.3
SPR3	Spring Creek 3	6.99	27		Pn	10 49 01.6	+0.4
ORV	Oroville	7.15	341		Pn	10 49 02.9	-0.2
X18A	Snowflake	7.26	74		Pn	10 49 05.9	+1.1
319A	Douglas	7.89	98		Pn	10 49 14.3	+0.9
HMU	Henry Mountain	8.08	49		Pn	10 49 16.9	+0.8
ELK	Elko	8.30	17		Pn	10 49 22.2	+3.2
ELK	Elko	8.30	17	Pn	Pn	10 49 21.9	+2.9
	comp=N,1.2nm,0.3s,baz=204,slow=9.1,SNR=34						
ELK				Sn	Sn	10 50 52.1	-1.3
	comp=N,0.4nm,0.3s,baz=227,slow=18,SNR=1.8						
ELK				Lg	Lg	10 51 37.2	
	comp=N,1.1nm,0.3s,baz=266,slow=23,SNR=6.4						
	comp=N,11nm,0.7s						
MVCO	Mesa Verde	9.24	59	Pn	Pn	10 49 32.5	+0.6
LENM	Lemitar	9.66	79		Pn	10 49 38.7	+1.1
CRNM	Carthage	9.84	80		Pn	10 49 41.0	+0.9
BNM	Barren Site	9.94	79		Pn	10 49 42.4	+0.8
ANMO	Albuquerque	10.17	75	Pn	Pn	10 49 46.1	+1.5
	comp=N,0.1nm,0.3s,baz=10.0,slow=9.2,SNR=9.0						
	comp=N,0.6nm,0.6s						
J05D	Fort Rock, OR	10.66	349	Pn	Pn	10 49 49.7	-1.7
MNTX	Cornudas Mount	11.10	92		Pn	10 49 57.7	+0.4
HLID	Hailey	11.16	15	Pn	Pn	10 49 59.2	+0.9
J01E	Myrtle Point	11.18	339	Pn	Pn	10 49 58.1	-0.2
LPIG	La Paz	11.25	139	LR	LR	10 54 20.2	
	comp=N,382nm,18.7s,baz=264,slow=37						
SDCO	Great Sand Dun	11.64	62	Pn	Pn	10 50 04.9	0.0
PDAR	Pinedale Array	12.13	33	Pn	Pn	10 50 14.8	+3.2
	comp=N,0.1nm,0.3s,baz=224,slow=10,SNR=9.8						
PDAR				Lg	Lg	10 53 35.9	
	comp=N,0.1nm,0.3s,baz=36,slow=39,SNR=1.4						
PDAR				LR	LR	10 55 32.8	
	comp=N,75nm,21.9s,baz=221,slow=41						
	comp=N,0.9nm,0.8s						
TPAW	Teton Pass	12.15	27	Pn	Pn	10 50 12.6	+0.8
CLNB	Carlsbad	12.29	89	Pn	Pn	10 50 13.7	+0.1
TXAR	Lajitas Array	13.12	102	Pn	Pn	10 50 28.4	+3.4
	comp=N,0.2nm,0.3s,baz=281,slow=11,SNR=15						
TXAR				Lg	Lg	10 54 07.0	
	comp=N,0.2nm,0.3s,baz=312,slow=30,SNR=2.2						
TXAR				LR	LR	10 55 46.9	
	comp=N,153nm,18.4s,baz=284,slow=39						
	comp=N,1.4nm,0.8s						
LON	Longmire	14.14	350	P	P	10 50 45.0	-1.6
MSO	Missoula	14.39	12	Pn	Pn	10 50 41.1	-1.2
DKNS	Dickens	14.67	82	Pn	Pn	10 50 46.5	+0.3
SN07	Snyder 07	14.73	84	Pn	Pn	10 50 47.3	+0.5
C09A	Chrisman Ranch	14.95	0		Pn	10 50 48.8	-1.0
NEW	Newport	15.44	3	Pn	P	10 50 58.5	-2.5
	comp=N,0.2nm,0.3s,baz=181,slow=13,SNR=14						
NEW				LR	LR	10 57 16.5	
	comp=N,314nm,21.1s,baz=192,slow=39						
	comp=N,8.3nm,0.9s						
B08A	Colville Reser	15.52	358		Pn	10 50 57.5	+0.2
BBB	Bella Bella	20.58	343	P	Pn	10 52 00.9	+1.2
	comp=N,12nm,1.1s,baz=114,slow=5.6,SNR=3.2						
BBB				LR	LR	11 00 39.3	
	comp=N,116nm,18.4s,baz=196,slow=39						
	comp=N,12nm,1.1s						
MIAR	Mount Ida	20.74	78		Pn	10 52 02.9	+1.2
MIAR				IAmb	IAmb	10 52 07.7	
	comp=Z,13nm,0.8s						
S39A	Bolivar	21.04	70	P	P	10 52 05.9	+3.3
WHAR	Wooly Hollow	21.77	76	IAmb	IAmb	10 52 18.0	
	comp=Z,18nm,1.3s						
FCAR	Ozark Folk Cen	21.90	75	P	P	10 52 15.0	+3.0
P40A	Paris	22.27	65	IAmb	IAmb	10 52 34.6	
	comp=Z,15nm,1.3s						
T42A	Van Buren	22.76	72	IAmb	IAmb	10 52 25.5	
	comp=Z,13nm,1.4s						
AGMN	Agassiz Nation	22.95	41	IAmb	IAmb	10 52 28.9	
	comp=Z,7.2nm,0.8s						
PBMO	Poplar Bluff	23.29	72	IAmb	IAmb	10 52 32.0	
	comp=Z,9.3nm,1.1s						
ULM	Lac du Bonnet	24.09	37	IAmb	IAmb	10 52 54.0	
	comp=Z,8.8nm,1.1s						
ULM	Lac du Bonnet	24.09	37	P	P	10 52 35.8	+1.5
	comp=Z,2.6nm,0.7s,baz=239,slow=11,SNR=5.3						
ULM				LR	LR	11 01 44.9	
	comp=Z,74nm,18.9s,baz=259,slow=36						
	comp=Z,2.6nm,0.7s						
V35K	Ketchikan	24.32	342	P	P	10 52 35.9	-0.4
	baz=152						
FFC	Flin Flon	24.77	23		P	10 52 42.8	+2.4
FFC				IAmb	IAmb	10 52 48.5	
	comp=Z,6.2nm,0.8s						
CRAG	Craig	24.86	340	P	P	10 52 40.2	-1.0
	baz=150						
WVT	Waverly	25.38	74	IAmb	IAmb	10 52 52.5	
	comp=Z,5.6nm,0.9s						
U33K	Whale Pass	25.42	341	P	P	10 52 45.8	-0.4
	baz=150						
WRAK	Wrangell Islan	25.48	342	P	P	10 52 47.1	+0.4
	baz=152						
T35M	Bob Quinn	25.48	345	P	P	10 52 47.3	+0.5
	baz=156						
X48A	Hartselle	26.12	78	IAmb	IAmb	10 52 59.7	
	comp=Z,11nm,1.1s						
TOAD	Toad River Com	26.42	352	P	P	10 52 55.9	+0.5
	baz=167,SNR=8.7						
S34M	Telegraph Cree	26.53	345	P	P	10 52 57.0	+0.7
	baz=156						
DLBC	Dease Lake	26.78	346	P	P	10 52 58.9	+0.3
	baz=158						
SIT	Sitka	26.86	339	P	P	10 52 59.2	-0.1
	baz=147						
KOTAN	Kotaneelee Air	27.55	354	P	P	10 53 05.6	+0.1
	baz=170						
R32K	Eaglecrest	27.68	342	P	P	10 53 06.5	-0.1
	baz=150						
BEAVL	Fort Liard	27.70	353	P	P	10 53 07.1	+0.3
	baz=168						
Q32M	Nakina River	27.73	345	P	P	10 53 07.2	-0.2
	baz=154						
R33M	Jennings River	27.85	346	P	P	10 53 09.1	+0.7
	baz=157						
P32M	Atlin	28.63	344	P	P	10 53 14.5	-0.7
	baz=153						
TKL	Tuckaleechee C	28.70	75	LR	LR	11 05 16.7	
	comp=Z,126nm,18.2s,baz=286,slow=38						
P33M	Teslin, Yukon	28.98	345	P	P	10 53 18.9	+0.5
	baz=155						
P29M	Windy Craggy	29.71	340	P	P	10 53 25.4	+0.6
	baz=146						
YKA	Yellowknife Ar	29.77	4	P	P	10 53 27.3	+2.1
	comp=Z,0.7nm,0.8s,baz=186,slow=8.4,SNR=6.8						
YKA				LR	LR	11 06 32.0	
	comp=Z,214nm,18.9s,baz=154,slow=39						
	comp=Z,0.7nm,0.8s						
WHY	Whitehorse	29.85	344	P	P	10 53 26.1	0.0
	baz=152						
N32M	Quiet Lake	29.89	346	P	P	10 53 27.0	+0.7
	baz=155						
P30M	Million Dollar	29.91	341	P	P	10 53 27.3	+0.8
	baz=148						
PNL	Peninsula	30.23	339	P	P	10 53 29.4	0.0
	baz=143						
O30N	Mendenhall	30.24	343	P	P	10 53 30.0	+0.6
	baz=150						
O29M	Mount Kennedy	30.51	340	P	P	10 53 30.9	-1.0
	baz=145						
HYT	Haines Junctio	30.65	342	P	P	10 53 33.6	+0.5
	baz=148						
N31M	Braeburn, Yuko	30.79	344	P	P	10 53 34.7	+0.5
	baz=151						
MMPY	Sheldon Lake,	30.90	348	IAmb	IAmb	10 53 43.2	
	comp=Z,4.6nm,1.2s						
MMPY	Sheldon Lake,	30.90	348	P	P	10 53 36.2	+0.9
	baz=159						
FARO	Faro, Yukon	30.93	346	P	P	10 53 36.1	+0.7
	baz=155						
YUK6	Outpost Mounta	30.98	341	P	P	10 53 36.3	+0.1
	baz=146						
N30M	Aishikik Lake	31.08	343	P	P	10 53 37.5	+0.6
	baz=149						
M31M	Drury Creek, Y	31.11	346	P	P	10 53 38.2	+1.1
	baz=154						
O28M	Mount Upton	31.36	340	P	P	10 53 40.4	+0.8
	baz=143						
YUK4	Talbot Arm	31.39	341	P	P	10 53 40.6	+0.8
	baz=146						
MESA	MESA	31.43	338	P	P	10 53 40.0	-0.2
	baz=140						
YUK8	Steele Glacier	31.65	340	P	P	10 53 42.6	+0.5
	baz=144						
CTG	Chitna Glacier	31.86	339	P	P	10 53 45.1	+1.4
	baz=142						
YUK3	Moose Creek	32.24	340	P	P	10 53 48.6	+1.3
	baz=144						
M29M	Somme Creek	32.27	343	P	P	10 53 48.1	+0.8
	baz=147						
SADO	Sadowa	32.55	57	LR	LR	11 06 12.8	
	comp=Z,71nm,19.2s,baz=186,slow=35						
MAYO	Mayo, Yukon	32.67	346	P	P	10 53 50.9	+0.1
	baz=152						
MCARA	McCarthy VSAT	32.70	338	P	P	10 53 51.8	+0.8
	baz=140						
L29M	L29M	32.75	344	IAmb	IAmb	10 53 58.2	
	comp=Z,4.3nm,1.1s						
L29M	L29M	32.75	344	P	P	10 53 51.1	-0.4
	baz=148						
BVCY	Beaver Creek	32.87	341	P	P	10 53 52.4	-0.2
	baz=144						
BMRM	Bremner River	32.90	337	P	P	10 53 52.5	-0.3
	baz=137						
EYAK	Cordova Ski Ar	32.99	335	P	P	10 53 53.8	+0.3
	baz=135						
M27K	Edge Creek, AK	33.11	340	P	P	10 53 55.0	+0.2
	baz=142						
P23K	Montague Islan	33.21	334	P	P	10 53 55.5	+0.1
	baz=132						
K29M	Barlow Dome	33.24	345	IAmb	IAmb	10 54 05.5	
	comp=Z,6.2nm,1.1s						
K29M	Barlow Dome	33.24	345	P	P	10 53 56.2	+0.3
	baz=150,SNR=5.5						
N25K	Chitina, Valde	33.37	337	IAmb	IAmb	10 54 06.1	
	comp=Z,5.5nm,1.2s						
N25K	Chitina, Valde	33.37	337	P	P	10 53 57.6	+0.7
	baz=138						
M26K	Nabesna, AK	33.47	339	IAmb	IAmb	10 54 06.6	
	comp=Z,7.0nm,1.4s						
M26K	Nabesna, AK	33.47	339	P	P	10 53 58.0	+0.2
	baz=141						
J30M	Hart River	33.63	346	P	P	10 53 59.9	+0.7
	baz=152						
L27K	Beaver Creek,	33.66	341	P	P	10 54 00.1	+0.7
	baz=143						
KLU	Klutina	33.72	336	IAmb	IAmb	10 54 09.0	
	comp=Z,5.4nm,1.0s						
KLU	Klutina	33.72	336	P	P	10 54 00.1	+0.1
	baz=136						
DAWY	Dawson	33.86	344	P	P	10 54 01.7	+0.5
	baz=147						
KDAK	Kodiak Island	34.02	327	P	P	10 54 02.5	0.0
	baz=122						
SEW	Seward	34.06	333	P	P	10 54 03.4	+0.6
	baz=129						
L26K	Log Cabin Wild	34.06	340	P	P	10 54 03.5	+0.6
	baz=141,SNR=5.3						
I30M	Mount Dempster	34.22	347	P	P	10 54 05.2	+0.9
	baz=153						
M24K	Tolsona, Glenn	34.24	337	P	P	10 54 05.3	+0.8
	baz=136						
BRSE	Bradley Lake S	34.34	331	P	P	10 54 05.9	+0.5
	baz=127						
H31M	Peel River	34.37	348	P	P	10 54 05.8	+0.2
	baz=156						
SCM	Sheep Creek Mo	34.44	336	P	P	10 54 06.6	+0.4
	baz=134						
K27K	Chicken	34.50	342	P	P	10 54 07.9	+1.2
	baz=144						
CHIR	Chirikof Islan	34.52	323	P	P	10 54 06.7	-0.1
	baz=116						
KNK	Knik Glacier	34.54	335	P	P	10 54 07.7	+0.7
	baz=132						
PAX	Paxson	34.65	339	P	P	10 54 08.7	+0.6
	baz=138						
I29M	Ogilvie Camp,	34.73	346	P	P	10 54 09.0	+0.4
	baz=150,SNR=5.2						
SML	Sawmill	34.76	335	P	P	10 54 09.5	+0.5
	baz=133						
PMR	Palmer	34.90	335	P	P	10 54 11.2	+1.1
	baz=131						
SCRK	Sand Creek	34.98	341	IAmb	IAmb	10 54 19.3	
	comp=Z,5.9nm,1.2s						
SCRK	Sand Creek	34.98	341	P	P	10 54 11.8	+0.9
	baz=141						
RIDG	Independent Ri	35.04	340	P	P	10 54 12.6	+1.1
	baz=139						
WAT6	Susitna Watana	35.10	337	P	P	10 54 12.1	0.0
	baz=134						
I28M	Miner Creek	35.16	345	IAmb	IAmb	10 54 21.5	
	comp=Z,6.1nm,1.1s						
I28M	Miner Creek	35.16	345	P	P	10 54 12.7	+0.3
	baz=148						

J26L	Joseph Creek baz=142	35.27	341	P	P	10 54 13.7	+0.2
EPYK	Eagle Plains baz=153	35.30	347	P	P	10 54 15.1	+1.5
DHY	Denali Highway baz=135	35.33	338	P	P	10 54 14.8	+0.9
K24K	Donnelly Dome baz=138	35.37	339	P	P	10 54 14.7	+0.6
G31M	Satah River baz=157	35.39	349	P	P	10 54 15.7	+1.4
SUA	Susitna One baz=129	35.41	334	P	P	10 54 14.8	+0.1
H29M	Whitestone baz=150	35.49	346	P	P	10 54 15.9	+0.7
WAT1	Susitna Watana baz=134	35.54	337	P	P	10 54 16.2	+0.5
I27K	Kandik River baz=146	35.67	344	P	P	10 54 17.2	+0.4
G30M	tAoh Zraii Nji baz=154	35.77	348	P	P	10 54 17.7	+0.1
Q17K	Contact Creek baz=119	35.77	327	P	P	10 54 17.9	+0.1
F31M	Tsiigehtchic baz=158	35.79	350	P	P	10 54 18.5	+0.8
I26K	Coal Creek Min baz=143	35.81	343	P	P	10 54 18.5	+0.6
J25K	Salcha River, baz=140	35.86	341	P	P	10 54 19.0	+0.5
G29M	Pine Creek baz=151	36.03	347	P	P	10 54 20.4	+0.6
P18K	Big Mountain, baz=121	36.04	329	P	P	10 54 19.8	-0.2
HDA	Harding Lake baz=137	36.16	339	P	P	10 54 21.8	+0.8
H27K	Steamboat Moun baz=146	36.17	344	P	P	10 54 21.7	+0.6
F30M	Barrier River baz=155	36.26	349	P	P	10 54 22.4	+0.6
ILAR	Eielson Array comp=Z,2.9nm,0.9s,baz=159,slow=7.9,SNR=17 comp=Z,2.9nm,0.9s	36.41	340	P	P	10 54 26.4	+3.4
TRF	Thorofare Moun baz=132	36.54	337	P	P	10 54 24.8	+0.4
INK	Inuvik comp=Z,7.8nm,1.1s	36.56	351	IAmb	IAmb	10 54 32.1	
INK	Inuvik baz=158	36.56	351	P	P	10 54 25.2	+0.9
M20K	Styx River baz=127	36.57	333	P	P	10 54 24.0	-0.6
CCB	Clear Creek Bu comp=Z,7.6nm,1.4s	36.59	339	IAmb	IAmb	10 54 32.7	
PRP	Porcupine Dome baz=140	36.59	341	P	P	10 54 24.6	-0.2
G27K	Doyon Strip comp=Z,6.7nm,1.2s	36.69	345	IAmb	IAmb	10 54 33.5	
G27K	Doyon Strip baz=146	36.69	345	P	P	10 54 25.5	+0.1
POKR	Poker Plat Res baz=137	36.82	340	P	P	10 54 27.1	+0.5
PPLA	Purkeypile baz=129	36.84	335	P	P	10 54 27.7	+0.8
NEA2	Nenana baz=135	36.93	339	P	P	10 54 28.3	+0.8
F28M	Old Crow baz=149	37.00	347	P	P	10 54 29.4	+1.4
M19K	Big River Lodg baz=125	37.07	333	P	P	10 54 28.9	+0.2
CAST	Castle Rocks baz=130	37.13	336	P	P	10 54 29.5	+0.2
L20K	Farewell, AK baz=126,SNR=5.6	37.21	334	P	P	10 54 29.4	-0.5
BPAW	Bear Paw Mtn. baz=132	37.21	337	P	P	10 54 30.1	+0.2
H25L	Birch Creek baz=140	37.25	342	P	P	10 54 30.4	+0.3
G26K	Porcupine Rive baz=144	37.28	344	P	P	10 54 30.7	+0.2
E29M	Blow River baz=152	37.32	348	P	P	10 54 30.9	+0.2
M18K	Stony River baz=123	37.40	331	P	P	10 54 31.8	+0.3
I23K	Minto, Yukon-K baz=135,SNR=5.7	37.41	339	P	P	10 54 31.7	+0.1
O16K	Kokwok River B baz=118	37.41	328	P	P	10 54 31.6	0.0
N17K	Nushagak Hills baz=120	37.47	329	P	P	10 54 31.9	-0.2
H24K	Noodor Dome comp=Z,12nm,1.4s	37.48	341	IAmb	IAmb	10 54 39.9	
H24K	Noodor Dome baz=137,SNR=5.3	37.48	341	P	P	10 54 32.7	+0.5
CHUM	Lake Minchumin baz=130	37.51	336	P	P	10 54 32.6	+0.2
G25K	Bearman Lake baz=140	37.70	342	P	P	10 54 34.4	+0.4
MLY	Manley baz=133	37.75	338	P	P	10 54 34.9	+0.3
E28M	Babbage River baz=150	37.80	348	P	P	10 54 35.2	+0.4
K20K	Telida baz=127	37.80	335	P	P	10 54 35.6	+0.6
E27K	Coleen River baz=147	37.83	346	P	P	10 54 35.1	-0.1
H23K	Yukon River baz=135	37.95	340	P	P	10 54 36.0	-0.2
F26K	Sheenjek River baz=144	37.97	344	P	P	10 54 36.6	+0.2
G24K	Hadweenzic Riv baz=138	38.01	342	P	P	10 54 36.5	-0.1
M17K	Holitna River baz=121	38.02	331	P	P	10 54 36.7	0.0
O15K	Ungalikthiuk R baz=116	38.02	326	P	P	10 54 36.8	0.0
N16K	Nishlik Lake baz=118	38.13	329	P	P	10 54 37.5	-0.2
L18K	Granite Mounta baz=123	38.14	332	P	P	10 54 36.8	-1.0
F25K	Christian Rive baz=142	38.24	344	P	P	10 54 38.7	+0.1
I21K	Tanana baz=131,SNR=7.8	38.24	338	P	P	10 54 39.0	+0.4
D28M	Stokes Point baz=152	38.29	349	P	P	10 54 39.0	+0.1
J20K	Nowinta River	38.33	336		P	10 54 42.7	+3.4
J20K	comp=Z,8.3nm,0.9s			IAmb	IAmb	10 54 47.2	
J20K	Nowinta River baz=128,SNR=6.2	38.33	336	P	P	10 54 39.2	-0.1
M16K	Timber Creek baz=118	38.47	329	P	P	10 54 40.4	-0.2
H22K	Ishtalitna Cre baz=133,SNR=6.8	38.54	339	P	P	10 54 41.0	-0.1
E25K	Arctic Village baz=142	38.64	344	P	P	10 54 42.3	+0.3
G23K	Bananza Creek baz=135	38.71	341	P	P	10 54 42.7	+0.1
O14K	Tigyukauivet M baz=114	38.72	326	P	P	10 54 42.8	+0.1
F24K	Squaw Lake baz=139	38.73	342	P	P	10 54 42.9	+0.2
J19K	Poorman baz=126	38.74	335	P	P	10 54 42.7	0.0
L17K	Donlin baz=120	38.74	331	P	P	10 54 42.6	-0.2
H21K	Melozitna Rive baz=131,SNR=12	38.82	338	P	P	10 54 43.6	+0.1
I20K	Naaghedeneel baz=128	38.82	336	P	P	10 54 43.2	-0.2
J18K	Innoko River baz=124	38.83	334	P	P	10 54 43.0	-0.7
L16K	Owhat River comp=Z,12nm,1.2s	39.02	330	IAmb	IAmb	10 54 54.2	
L16K	Owhat River baz=119	39.02	330	P	P	10 54 45.5	+0.3
K17K	Iditarod baz=121	39.04	332	P	P	10 54 45.3	0.0
M15K	Kasigluk River baz=116	39.07	328	P	P	10 54 45.4	-0.2
COLD	Coldfoot baz=136	39.13	341	P	P	10 54 46.3	+0.3
N14K	Kuskokwak Cree baz=114	39.19	327	P	P	10 54 46.6	0.0
G22K	Bettles baz=134	39.28	340	P	P	10 54 47.3	+0.1
E24K	Your Creek baz=138	39.30	343	P	P	10 54 47.3	-0.2
H20K	Anotleneega Mo baz=128,SNR=15	39.38	337	P	P	10 54 48.1	-0.1
G21K	Allakaket comp=Z,6.9nm,0.9s	39.60	339	IAmb	IAmb	10 54 58.0	
G21K	Allakaket baz=131	39.60	339	P	P	10 54 49.6	-0.3
GCSA	Galena City Sc baz=125	39.62	335	P	P	10 54 49.4	-0.7
M14K	Bethel baz=115	39.66	328	P	P	10 54 48.9	-1.5
J17K	VABM Dome baz=121	39.70	333	P	P	10 54 49.5	-1.2
H19K	Roundabout Mou comp=Z,6.7nm,1.1s	39.92	336	IAmb	IAmb	10 55 00.8	
H19K	Roundabout Mou baz=126	39.92	336	P	P	10 54 52.6	0.0
TOLK	Toolik Lake Re baz=138	39.99	343	P	P	10 54 54.0	+0.7
F21K	Alatna River baz=131	40.06	340	P	P	10 54 54.1	+0.3
M13K	Dall Lake baz=113	40.15	327	P	P	10 54 55.2	+0.6
D24K	Happy Valley baz=139	40.20	344	P	P	10 54 55.9	+1.1
E22K	Anaktuvuk Pass comp=Z,13nm,1.5s	40.21	341	IAmb	IAmb	10 55 04.3	
E22K	Anaktuvuk Pass baz=134	40.21	341	P	P	10 54 55.0	0.0
J16K	Anvik River baz=119	40.24	332	P	P	10 54 55.8	+0.5
H18K	Honhosa River baz=124	40.37	335	P	P	10 54 57.8	+1.4
G19K	Purcell Mounta baz=126	40.50	337	P	P	10 54 58.3	+0.9
D23K	Nanushuk River baz=136	40.51	343	P	P	10 54 58.8	+1.3
F20K	Avaraart Lake baz=128	40.62	339	P	P	10 54 59.4	+1.0
G18K	Tagagawik baz=124	40.88	336	P	P	10 55 00.4	-0.2
E21K	Killik River baz=132	41.01	341	P	P	10 55 01.6	-0.1
F19K	Shaleruckik Mo comp=Z,14nm,1.4s	41.13	338	IAmb	IAmb	10 55 09.4	
F19K	Shaleruckik Mo baz=126	41.13	338	P	P	10 55 02.5	-0.1
J14K	Nanvaranak Lak baz=115	41.19	330	P	P	10 55 02.1	-1.0
K13K	Kusilvak Mount baz=113	41.33	329	P	P	10 55 04.0	-0.3
E19K	Redstone River baz=127,SNR=12	41.33	339	P	P	10 55 04.0	-0.3
E20K	Nigu River baz=129	41.52	340	P	P	10 55 05.3	-0.6
F18K	Selawik baz=124	41.61	337	P	P	10 55 06.1	-0.4
D20K	Etivluk River baz=129	41.92	340	P	P	10 55 07.4	-1.7
G16K	Koyuk River baz=119	41.93	334	P	P	10 55 07.6	-1.6
B21K	Ikpikpuk River baz=132	41.97	342	P	P	10 55 08.2	-1.2
D19K	Kuna River comp=Z,11nm,1.2s	42.22	339	IAmb	IAmb	10 55 19.6	
D19K	Kuna River baz=127	42.22	339	P	P	10 55 10.5	-1.1
E18K	Tukpahlearik C baz=123	42.38	337	P	P	10 55 11.5	-1.4
B20K	Meade River baz=129	42.90	342	P	P	10 55 16.7	-0.3
C19K	Lookout Ridge baz=126	43.02	340	P	P	10 55 16.7	-1.4
C18K	Utukok River baz=124	43.24	339	P	P	10 55 18.5	-1.3
D17K	Noatak River baz=120	43.33	337	P	P	10 55 18.9	-1.6
C17K	DeLong Mountai baz=121	43.76	338	P	P	10 55 22.7	-1.3
SJG	San Juan comp=Z,29nm,18.8s,baz=270,slow=40	48.95	94	LR	LR	11 19 53.3	
PETK	Petropavlovsk- comp=Z,2.1nm,0.9s,baz=89,slow=11,SNR=1.3 comp=Z,2.1nm,0.9s	61.01	317	P	P	10 57 34.9	+2.6
H11N3	WAKE ISLAND Hy baz=62,slow=75,SNR=35	67.00	279	T	T	12 11 13.9	
H11N2	WAKE ISLAND Hy baz=62,slow=75,SNR=51	67.00	279	T	T	12 11 14.3	
H11N1	WAKE ISLAND Hy baz=62,slow=75,SNR=72	67.02	279	T	T	12 11 13.2	
H11S1	WAKE ISLAND Hy baz=61,slow=75,SNR=99	67.74	278	T	T	12 12 07.0	
H11S2	WAKE ISLAND Hy baz=61,slow=75,SNR=84	67.75	278	T	T	12 12 07.1	
H11S3	WAKE ISLAND Hy baz=61,slow=75,SNR=56	67.76	278	T	T	12 12 09.0	
MJAR	Matsushiro Arr comp=Z,2.1nm,1.0s,baz=42,slow=4.3,SNR=5.2 comp=Z,2.1nm,1.0s	80.61	307	P	P	10 59 35.8	+4.0
FINES	FINESS Array B comp=Z,1.1nm,0.6s,baz=337,slow=2.9,SNR=5.5 comp=Z,1.1nm,0.6s	81.72	16	P	P	10 59 39.5	+2.2
HHC	Hu-ho-hao-te	93.38	324	*e*P	P	11 00 32.0	-2.5
HHC	comp=Z,11nm,0.7s			pmax	pmax		

KRNET ***05*** *10:52:52.0±0.1,39°.40N×73°.20E,h22^{km},mb3.6*

SOME ***05*** *10:52:58.2,39°.77N×73°.07E,h0^{km}*

NNC ***05*** *10:53:01.9±1.4,39°.82N×73°.24E,h0^{km},mb3.9,mpv3.5, Error ellipse: s-maj=11.2km s-min=6.3km az=179.0*

ISC 05 10:52:53.0±1.2**,39°.47N**±0°.05×**73°.22E**±0°.03**,h10^{km},n53,** σ**2^s.07**/88**,32C-29D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.59	22	⇑*i*P	Pb	10 53 04.6	-1.0
SFK				⇑*i*S	Sb	10 53 14.0	-0.1
DRK	Karamyk	1.10	271	⇓*e*P	Pg	10 53 12.5	-1.6
DRK				⇓*e*S	Sg	10 53 27.5	-0.9
OHH	Osh	1.11	343	⇑*i*P	Pb	10 53 13.7	-0.6
OHH				⇑*i*S	Sn	10 53 29.4	-0.7
SALK	Salom-Alik	1.49	18	⇓*i*P	Pb	10 53 20.6	-0.3
SALK				⇓*i*S	Sg	10 53 41.7	+0.8
ARSB	Arslanbob	1.86	355	⇓*e*P	Pb	10 53 26.8	-0.5
ARSB				⇓*e*S	Sg	10 53 52.4	-0.6
BTK	Batken	1.94	288	⇓*i*P	Pb	10 53 27.0	-1.5
BTK				⇓*i*S	Sb	10 53 52.5	-0.4
ARK	Arkit	2.52	338	⇓*e*P	Pb	10 53 35.8	-2.6
ARK				⇓*e*S	Sb	10 54 07.9	-1.6
ARLS	Aral	2.54	19	⇓*i*P	Pb	10 53 36.1	-2.6
ARLS				⇓*i*S	Sb	10 54 08.4	-1.6
TRKS	Terek-Say	2.60	323	⇑*i*P	Pn	10 53 35.8	+0.5
TRKS				⇑*i*S	Sn	10 54 07.8	+0.8
AML	Almayashu SNR=56	2.69	8	P	Pb	10 53 42.1	+0.7
AML	Almayashu	2.69	8	⇓*i*P	Pb	10 53 38.6	-2.8
AML				⇓*i*S	Sb	10 54 12.6	-2.0
NRN	Naryn	2.89	46	⇑*e*P	Pn	10 53 41.1	+1.7
NRN				⇑*e*S	Sn	10 54 16.2	+1.8
UCH	Uchtor	2.93	19	⇓*i*P	Pn	10 53 41.8	+1.7
UCH				⇓*i*S	Sb	10 54 18.2	-3.4
MNAS	Manas	3.07	350	⇓*i*P	Pn	10 53 43.5	+1.8
MNAS				⇓*i*S	Sn	10 54 21.3	+2.8
EKS2	Erkin-Say	3.22	7	⇓*i*P	Pn	10 53 45.8	+2.0
EKS2				⇓*i*S	Sn	10 54 25.0	+2.8
MRKS	Merke 16nm,0.4s	3.28	0	Pg	Pg	10 53 55.2	-0.6
MRKS	110nm,0.7s			Lg	Lg	10 54 36.3	
MRKS	Merke 16nm,0.3s	3.28	0	*e*P	Pg	10 53 54.4	-1.3
MRKS	110nm,0.6s			*e*S	Sb	10 54 34.5	+3.2
AAK	Ala-Archa SNR=26	3.31	17	P	Pb	10 53 51.2	-0.8
AAK	Ala-Archa 4.2nm,0.6s	3.31	17	⇑Pn	Pb	10 53 50.5	-1.4
AAK	12nm,0.6s			⇓Lg	Lg	10 54 33.9	
AAK	Ala-Archa	3.31	17	⇓*i*P	Pn	10 53 47.1	+2.0
AAK				⇓*i*S	Sn	10 54 27.5	+2.9
KBK	Karagaybulak SNR=5.8	3.44	22	P	Pb	10 53 53.6	-0.6
KBK	Karagaybulak	3.44	22	⇑*i*P	Pn	10 53 49.0	+2.1
KBK				⇑*i*S	Sn	10 54 30.5	+2.6
FRU1	Bishkek	3.51	17	⇓*i*P	Pn	10 53 49.9	+2.3
FRU1				⇓*i*S	Sn	10 54 32.3	+3.1
ULHL	Ulahol	3.60	39	⇓*i*P	Pn	10 53 51.2	+2.1
ULHL				⇓*i*S	Sn	10 54 34.2	+2.4
BOOM	Boomskoye usch	3.66	33	⇑*i*P	Pn	10 53 51.8	+2.0
BOOM				⇑*i*S	Sn	10 54 35.6	+2.5
CHMS	Chumysh SNR=25	3.71	18	P	Pb	10 53 56.5	-2.2
CHMS	Chumysh 12nm,0.3s	3.71	18	⇑Pn	Pb	10 53 56.1	-2.6
CHMS	20nm,0.6s			⇑Lg	Lg	10 54 45.7	
CHMS	Chumysh	3.71	18	⇑*i*P	Pn	10 53 52.5	+2.0
CHMS				⇑*i*S	Sn	10 54 36.8	+2.5
TKM2	Tokmak 2 SNR=17	3.89	27	P	Pb	10 53 58.9	-2.9
TKM2	Tokmak 2 4.3nm,0.5s	3.89	27	⇑Pn	Pb	10 53 58.9	-2.9
TKM2	17nm,0.6s			⇑Lg	Lg	10 54 51.7	
TKM2	Tokmak 2	3.89	27	⇑*i*P	Pn	10 53 55.2	+2.2
TKM2				⇑*i*S	Sn	10 54 41.3	+2.4
USP	Ospenovka	3.92	14	⇑*i*P	Pn	10 53 55.5	+2.2
USP				⇑*i*S	Sn	10 54 41.7	+2.4
KDJ	Kajisay	4.01	47	⇑*e*P	Pn	10 53 57.0	+2.3
KDJ				⇑*e*S	Sn	10 54 44.1	+2.2
KST	Kastek 5.9nm,0.9s	4.13	29	Pg	Pg	10 54 11.5	-0.6
KST	34nm,0.7s			Lg	Lg	10 55 04.2	
KST	Kastek 5.4nm,0.5s	4.13	29	*e*P	Pg	10 54 11.5	-0.6
KST	35nm,0.8s			*e*S	Sg	10 55 04.2	-1.3
TARG	Taragay, Kyrgy	4.16	56	⇓*i*P	Pn	10 53 58.4	+1.5
TARG				⇓*i*S	Sn	10 54 47.0	+1.2
KK31	Karatay Array 1.3nm,0.2s,baz=148,slow=13,SNR=33	4.17	332	Pn	Pb	10 54 01.1	-5.3
KK31	4.0nm,0.3s,baz=144,slow=15,SNR=14			⇑Pg	Pg	10 54 10.5	-2.3
KK31	12nm,0.4s,baz=152,slow=24,SNR=5.2			⇑Sn	Sn	10 54 50.9	+5.4
KK31	22nm,0.6s			⇑Lg	Lg	10 55 06.7	
KKAR	Karatay Array	4.17	332	⇑*i*P	Pn	10 53 58.5	+1.8
KKAR				⇑*i*S	Sn	10 54 47.2	+1.8
BRLS	Borolday 13nm,0.5s	4.38	325	*e*P	Pb	10 54 12.3	+2.3
BRLS	13nm,0.5s			*e*S	Sb	10 55 05.5	+2.6
MTBS	Maitube 5.4nm,0.3s	4.39	32	Pg	Pg	10 54 17.1	0.0
MTBS	19nm,0.5s			Lg	Lg	10 55 13.9	
MTBS	Maitube 5.4nm,0.3s	4.39	32	*e*P	Pg	10 54 17.1	0.0
MTBS	19nm,0.5s			*e*S	Sg	10 55 13.9	0.0
TNSS	Tian-Shan 10nm,0.5s	4.54	37	Pg	Pg	10 54 20.7	+0.7
TNSS	14nm,0.7s			Lg	Lg	10 55 20.0	
TNSS	Tian-Shan 10nm,0.5s	4.54	37	*e*P	Pg	10 54 20.7	+0.7
TNSS	14nm,0.7s			*e*S	Sg	10 55 20.0	+1.2
MDOK	Medeo 9.1nm,0.6s	4.69	37	Pg	Pg	10 54 22.1	-0.7
MDOK	10.0nm,0.8s			Pg	Pb	10 54 22.5	+7.2
MDOK	20nm,0.6s			Lg	Lg	10 55 18.4	
MDOK	18nm,0.8s			Lg	Lg	10 55 22.7	
KOTS	Kotyrbulak 11nm,0.7s	4.77	37	Pg	Pg	10 54 23.1	-1.3
KOTS	44nm,0.9s			Lg	Lg	10 55 24.3	
KOTS	Kotyrbulak 11nm,0.7s	4.77	37	*e*P	Pg	10 54 23.1	-1.3
KOTS	44nm,0.9s			*e*S	Sg	10 55 24.3	-1.9
PRZ	Przheval'sk	4.95	51	⇑*i*P	Pn	10 54 09.4	+1.9
PRZ				⇑*i*S	Sn	10 55 06.2	+1.3
KTBS	Karatobe 6.9nm,0.9s	4.97	30	Pg	Pg	10 54 26.7	-1.5
KTBS	24nm,0.6s			Lg	Lg	10 55 30.6	
SATY	Saty 5.8nm,0.8s	5.31	46	Pg	Pg	10 54 34.8	+0.1
SATY	25nm,1.3s			Lg	Lg	10 55 44.3	
BTLS	Baital 0.9nm,0.5s	5.61	6	*e*P	Pg	10 54 37.0	-3.3
BTLS	5.7nm,0.5s			*e*S	Sg	10 55 47.7	-5.1
BLB	Baldybastay 8.6nm,0.6s	6.07	39	Pg	Pg	10 54 46.2	-3.1
BLB	22nm,1.0s			Lg	Lg	10 56 04.0	
DJR	Jarkent 1.2nm,0.7s	6.90	43	Pg	Pg	10 55 02.2	-2.9
DJR	4.3nm,1.0s			Lg	Lg	10 56 30.8	
DJR	Jarkent 0.4nm,0.1s	6.90	43	*e*P	Pg	10 55 03.7	-1.5
DJR	1.7nm,0.4s			*e*S	Sg	10 56 33.1	-1.4

MOS ***05*** *10:57:50.2±0.8,54°.75N×164°.51E,h50^{km},mb5.3/60, MS4.4/13,Error ellipse: s-maj=4.6km s-min=4.1km az=94.0*

BJI ***05*** *10:57:52.0,54°.80N×164°.40E,h10^{km},mB5.2/51,mb5.1/75, Ms4.8/74,Ms7 4.7/74*

KRSC ***05*** *10:57:52.5±1.3,54°.66N×164°.49E,h52^{km}±24^{km},Mc5.6, Ml5.5,Felt [IV] at kordon Kronoki; [III-IV] at kordon Valley of Geysers; [II-III] at Nikolskoe.*

IDC ***05*** *10:57:52.3±0.4,54°.82N×164°.37E,h0^{km},mb4.9/35, mbtmp4.9/40,ML4.7/6,MS4.1/77,Error ellipse: s-maj=11.0km s-min=9.0km az=160.0*

NEIC ***05*** *10:57:53.5,54°.71N×164°.43E,h18^{km}*

NEIC ***05*** *10:57:53.5±1.1,54°.71N±0°.08×164°.4E±0°.1,h10^{km}±1^{km}, mb5.4/748,Mww5.1/54,Error ellipse: s-maj=14.0km s-min=9.8km az=164.0*

NEIC ***05*** *10:57:53.5,54°.61N×164°.43E,h18^{km},Moment Tensor Solution. Duration: 1^{s}9 Moment tensor: Scale 10^{16}Nm; M_{rr}-6.46; $M_{\theta\theta}$4.73; $M_{\phi\phi}$1.73; $M_{r\theta}$2.63; $M_{\theta\phi}$0.09; $M_{\phi r}$1.29; Fault plane solution: $M_0$6.49000×10^{16} NP1:ϕ_s92.46000°, δ32.34000°,λ-78.05000°. NP2:ϕ_s258.40000°,δ58.44000°, λ-97.47000°. Principal axes: T 5.3582, Plg13.0000°, Azm354.0000°; N 1.8593, Plg6.0000°, Azm262.0000°; P -7.2175, Plg75.0000°, Azm147.0000°;*

GCMT ***05*** *10:57:56.5±0.1,54°.78N±0°.01×164°.43E±0°.02,h12^{km}, MW5.1/143,Moment Tensor Solution. s95,c126; s143,c234; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.29±.07; $M_{\theta\theta}$4.20±.07; $M_{\phi\phi}$1.09±.06; $M_{r\theta}$3.07±.20; $M_{\theta\phi}$-0.02±.07; $M_{\phi r}$0.86±.22; Best double couple: $M_0$5.70500×10^{16} NP1:ϕ_s95.00000°,δ29.00000°, λ-79.00000°. NP2:ϕ_s262.00000°,δ62.00000°, λ-96.00000°. Principal axes: T 5.1190, Plg17.0000°, Azm357.0000°; N 1.1700, Plg5.0000°, Azm265.0000°; P -6.2900, Plg72.0000°, Azm158.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***05*** *10:58:09.2,54°.86N×164°.74E,h33^{km},mb5.0,Ms4.3*

ISC 05 10:57:54.3±0.4**,54°.68N**±0°.03×**164°.48E**±0°.03**,h16^{km}**±2^{km}**, h16^{km}:pP-P,n1351,** σ**1^s.30**/1070**,mb5.3**/522**,MS4.3**/115**, 52C-30D,Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	Bering	1.01	58	PN	Pb	10 58 11.8	-1.6
BKI				S	Sb	10 58 24.0	-2.5
BKI	Bering	1.01	58	*e*P	Pb	10 58 11.9	-1.6
BKI				*e*S	Sb	10 58 24.0	-2.5
MKZ	Mys Kozlova	1.60	267	PN	Pn	10 58 21.1	-0.8
MKZ	Mys Kozlova	1.60	267	*e*P	Pn	10 58 21.2	-0.8
KBTR	Krutoberegovo	1.80	329	PN	Pn	10 58 22.1	-2.6
KBTR	Krutoberegovo	1.80	329	*e*P	Pn	10 58 22.1	-2.6
KBG	Krutoberegovo	1.87	328	PN	Pn	10 58 23.1	-2.6
KBG				S	Sn	10 58 46.7	-2.3
KBG	Krutoberegovo	1.87	328	*e*P	Pn	10 58 23.2	-2.6

KBG				*e*S	Sn	10 58 46.7	-2.3
TUMD	Tumrok D	2.41	284	PN	Pn	10 58 32.7	-0.4
TUMD				S	Sn	10 59 01.6	-0.7
TUMD	Tumrok D	2.41	284	*e*P	Pn	10 58 32.8	-0.4
TUMD				*e*S	Sn	10 59 01.7	-0.7
ZLN	Zelenaya	2.49	304	PN	Pn	10 58 34.1	-0.1
ZLN	Zelenaya	2.49	304	*e*P	Pn	10 58 34.2	-0.1
BZGR	Bezymyannyi-Gr	2.50	302	PN	Pn	10 58 34.3	-0.1
BZGR				S	Sn	10 59 04.5	-0.2
BZGR	Bezymyannyi-Gr	2.50	302	*e*P	Pn	10 58 34.4	-0.1
BZGR				*e*S	Sn	10 59 04.6	-0.2
SMKR	Semkarok	2.56	319	PN	Pn	10 58 34.6	-0.5
SMKR				S	Sn	10 59 05.7	-0.3
SMKR	Semkarok	2.56	319	*e*P	Pn	10 58 34.7	-0.5
SMKR				*e*S	Sn	10 59 05.7	-0.3
CIRR	Tsirk	2.57	306	PN	Pn	10 58 35.1	-0.3
CIRR	Tsirk	2.57	306	*e*P	Pn	10 58 35.1	-0.3
LGNR	Loginova	2.58	305	PN	Pn	10 58 35.5	-0.1
LGNR	Loginova	2.58	305	*e*P	Pn	10 58 35.6	-0.1
BZMR	Bezymyannaya	2.60	301	PN	Pn	10 58 35.7	-0.1
BZMR				S	Sn	10 59 07.1	-0.1
BZMR	Bezymyannaya	2.60	301	*e*P	Pn	10 58 35.8	-0.1
BZMR				*e*S	Sn	10 59 07.2	-0.1
BZWR	Bezymyannyi-We	2.61	301	PN	Pn	10 58 36.1	+0.1
BZWR				S	Sn	10 59 08.6	+1.1
BZWR	Bezymyannyi-We	2.61	301	*e*P	Pn	10 58 36.2	+0.1
BZWR				*e*S	Sn	10 59 08.6	+1.1
BDR	Baidarnaya	2.65	317	PN	Pn	10 58 36.9	+0.5
BDR	Baidarnaya	2.65	317	*e*P	Pn	10 58 36.9	+0.5
KMNR	Kamenistaya	2.66	296	PN	Pn	10 58 36.6	+0.1
KMNR	Kamenistaya	2.66	296	*e*P	Pn	10 58 36.7	+0.1
KIRR	Kirishev	2.69	300	PN	Pn	10 58 36.9	-0.1
KIRR				S	Sn	10 59 09.9	+0.7
KIRR	Kirishev	2.69	300	*e*P	Pn	10 58 36.9	-0.1
KIRR				*e*S	Sn	10 59 09.9	+0.7
KRSR	Krestovskiy	2.71	306	PN	Pn	10 58 36.6	-0.6
KRSR				S	Sn	10 59 08.7	-1.0
KRSR	Krestovskiy	2.71	306	*e*P	Pn	10 58 36.7	-0.6
KRSR				*e*S	Sn	10 59 08.8	-1.0
KLY	Klyuchi	2.72	309	PN	Pn	10 58 35.5	-1.9
KLY				S	Sn	10 59 07.5	-2.4
KLY	Klyuchi	2.72	309	*e*P	Pn	10 58 35.5	-1.9
KLY				*e*S	Sn	10 59 07.5	-2.4
SRKR	Sorokina	2.73	318	PN	Pn	10 58 38.4	+0.9
SRKR				S	Sb	10 59 13.0	-2.9
SRKR	Sorokina	2.73	318	*e*P	Pn	10 58 38.5	+0.9
SRKR				*e*S	Sb	10 59 13.0	-2.9
KPT	Kopyto	2.75	300	PN	Pn	10 58 37.6	-0.2
KPT	Kopyto	2.75	300	*e*P	Pn	10 58 37.7	-0.2
KOZ	Kozyrevsk	2.97	300	PN	Pn	10 58 41.1	+0.4
KOZ				S	Sn	10 59 17.5	+1.5
KOZ	Kozyrevsk	2.97	300	*e*P	Pn	10 58 41.2	+0.4
KOZ				*e*S	Sn	10 59 17.6	+1.5
KII	Karymskiy	3.01	260	PN	Pn	10 58 41.9	+0.5
KII	Karymskiy	3.01	260	*e*P	Pn	10 58 42.0	+0.5
KII				*e*S	Sn	10 59 15.7	-1.5
SPN	Mys Shipunski	3.07	241	PN	Pn	10 58 40.9	-1.3
SPN	Mys Shipunski	3.07	241	*e*P	Pn	10 58 41.0	-1.3
SPN				*e*S	Sn	10 59 14.8	-3.8
SRDR	Sredinnyy	3.17	303	PN	Pn	10 58 43.5	0.0
SRDR				S	Sn	10 59 21.5	+0.5
SRDR	Sredinnyy	3.17	303	*e*P	Pn	10 58 43.6	0.0
SRDR				*e*S	Sn	10 59 21.5	+0.5
NLC	Nalytchevo	3.39	246	PN	Pn	10 58 45.8	-0.7
NLC	Nalytchevo	3.39	246	*e*P	Pn	10 58 45.8	-0.7
NLC				*e*S	Sn	10 59 23.8	-2.6
ESO	Esso	3.53	293	PN	Pn	10 58 48.2	-0.3
ESO	Esso	3.53	293	*e*P	Pn	10 58 48.2	-0.3
ESO				*e*S	Sn	10 59 28.0	-1.9
SDLR	Sedlovina	3.59	249	PN	Pn	10 58 48.8	-0.6
SDLR	Sedlovina	3.59	249	*e*P	Pn	10 58 48.9	-0.6
SDLR				*e*S	Sn	10 59 29.8	-1.7
SMAR	Somma	3.64	249	PN	Pn	10 58 50.6	+0.5
SMAR	Somma	3.64	249	*e*P	Pn	10 58 50.7	+0.5
SMAR				*e*S	Sn	10 59 30.6	-2.3
KRER	Koryakskii	3.65	250	PN	Pn	10 58 50.8	+0.5
KRER	Koryakskii	3.65	250	*e*P	Pn	10 58 50.9	+0.5
UGLR	Uglovaya	3.65	248	PN	Pn	10 58 50.4	+0.2
UGLR	Uglovaya	3.65	248	*e*P	Pn	10 58 50.4	+0.2
UGLR				*e*S	Sn	10 59 32.2	-0.8
AVH	Avacha	3.67	250	PN	Pn	10 58 51.0	+0.5
AVH	Avacha	3.67	250	*e*P	Pn	10 58 51.0	+0.5
KRX	Arik	3.68	251	PN	Pn	10 58 51.0	+0.3
KRX	Arik	3.68	251	*e*P	Pn	10 58 51.0	+0.3
KOK	Koryaka	3.72	250	PN	Pn	10 58 51.5	+0.4
KOK	Koryaka	3.72	250	*e*P	Pn	10 58 51.5	+0.4
DALK	Dalny	3.77	246	PN	Pn	10 58 51.5	-0.2
DALK	Dalny	3.77	246	*e*P	Pn	10 58 51.6	-0.2
PET	Petropavlovsk	3.83	247		Pn	10 58 52.3	-0.3
PET				Sn	Sn	10 59 34.9	-2.3
PET	Petropavlovsk	3.83	247	P	Pn	10 58 52.4	-0.1
PET	Petropavlovsk	3.83	247	S	Sn	10 59 37.4	+0.3
PET	Petropavlovsk	3.83	247	*e*PN	Pn	10 58 52.4	-0.1
PET				pmax	pmax		
	comp=Z,343nm,0.8s						
PET				MLR	MLR		
	comp=Z,3µm,12.0s						
PET				MLR	MLR		
	comp=Z,4µm,11.0s						
INSR	Institute	3.83	247	PN	Pn	10 58 52.8	+0.2
INSR	Institute	3.83	247	*e*P	Pn	10 58 52.8	+0.2
INSR				*e*S	Sn	10 59 36.0	-1.3
GNL	Ganaly	3.96	258	PN	Pn	10 58 55.7	+1.2
GNL	Ganaly	3.96	258	*e*P	Pn	10 58 55.8	+1.2
KRMR	Karymshinskiy	4.20	246	PN	Pn	10 58 58.1	+0.5
KRMR	Karymshinskiy	4.20	246	*e*P	Pn	10 58 58.1	+0.5
KRMR				*e*S	Sn	10 59 44.2	-2.1
RUS	Russkaya	4.21	240	PN	Pn	10 58 57.8	0.0
RUS	Russkaya	4.21	240	*e*P	Pn	10 58 57.8	0.0
RUS				*e*S	Sn	10 59 43.8	-2.8
PEA0B	Petropavlovsk-	4.31	251		Pn	10 58 59.7	+0.6
PEA0B	Petropavlovsk-	4.31	251	PN	Pn	10 58 59.7	+0.6
PETK	Petropavlovsk-	4.31	251		Pn	10 58 59.3	+0.1
PETK	Petropavlovsk-	4.31	251	Pn	Pn	10 58 59.1	0.0
	comp=Z,36nm,0.3s,baz=64,slow=16,SNR=396						
PETK				Sn	Sn	10 59 49.6	+0.5
	comp=Z,66nm,0.3s,baz=292,slow=13,SNR=11						
	comp=Z,92nm,0.4s						
PETK	Petropavlovsk-	4.31	251	PN	Pn	10 58 59.3	+0.1
MTVR	Mutnovka	4.35	242	PN	Pn	10 59 00.1	+0.3
MTVR	Mutnovka	4.35	242	*e*P	Pn	10 59 00.1	+0.3
MTVR				*e*S	Sn	10 59 46.7	-3.5
GRL	Gorelyy	4.37	243	PN	Pn	10 59 00.7	+0.6
GRL	Gorelyy	4.37	243	*e*P	Pn	10 59 00.7	+0.6
ASAK	Asacha	4.55	242	PN	Pn	10 59 03.3	+0.8
ASAK	Asacha	4.55	242	*e*P	Pn	10 59 03.4	+0.8
OSSR	Ossora	4.65	351	PN	Pn	10 59 02.5	-1.3
OSSR	Ossora	4.65	351	*e*P	Pn	10 59 02.5	-1.3
APC	Apacha	4.68	251	PN	Pn	10 59 05.9	+1.7
APC	Apacha	4.68	251	*e*P	Pn	10 59 06.0	+1.7
MIPR	Malaya Ipel'ka	5.20	246	PN	Pn	10 59 13.4	+2.0
MIPR	Malaya Ipel'ka	5.20	246	*e*P	Pn	10 59 13.4	+2.0
PAU	Pauzhetka	5.63	238	PN	Pn	10 59 18.0	+0.7
PAU	Pauzhetka	5.63	238	*e*P	Pn	10 59 18.0	+0.7
TILK	Tilichiki	5.85	8	PN	Pn	10 59 20.6	+0.3
TILK	Tilichiki	5.85	8	*e*P	Pn	10 59 20.6	+0.3
SHEM	Shemya Is, Ala	6.04	105	Pn	Pn	10 59 22.9	-0.1
SHEM	Shemya Is, Ala	6.04	105	Pn	Pn	10 59 23.8	+0.9
	comp=Z,14nm,0.3s,baz=186,slow=5.9,SNR=14						
SHEM				Sn	Sn	11 00 26.8	-4.8
	comp=Z,16nm,0.3s,baz=247,slow=19,SNR=4.3						
SHEM				LR	LR	11 01 22.6	
	comp=Z,2µm,21.6s,baz=212,slow=34						
	comp=Z,37nm,0.5s						
SMY	Shemya	6.04	105	Pn	Pn	10 59 22.9	0.0
SMY	Shemya	6.04	105	P	Pn	10 59 23.5	+0.5
SMY	Shemya	6.04	105	PN	Pn	10 59 23.4	+0.5
SKR	Severo-Kuril's	6.47	235	⇑*i*PN	Pn	10 59 29.9	+1.1
SKR				pmax	pmax		
	comp=Z,673nm,0.7s						
SKR				pmax	pmax		
	comp=Z,1µm,5.1s						
SKR				MLR	MLR		
	comp=N,3µm,15.0s						
SKR				MLR	MLR		
	comp=E,1µm,15.0s						
SKR				MLR	MLR		
	comp=Z,2µm,15.0s						
SKR	Severo-Kuril's	6.47	235	*e*P	Pn	10 59 29.8	+1.1
KMSK	Kamenskaya	7.86	6	PN	Pn	10 59 48.0	+0.2
KMSK	Kamenskaya	7.86	6	*e*P	Pn	10 59 48.1	+0.2
MA2	Magadan	8.92	309		Pn	11 00 02.3	-0.1
MA2	Magadan	8.92	309	Pn	Pn	11 00 01.1	-1.2
	comp=Z,0.8nm,0.3s,baz=122,slow=8.0,SNR=12						
MA2				Sn	Sn	11 01 39.4	-2.9
	comp=Z,0.5nm,0.3s,baz=186,slow=22,SNR=1.2						
	comp=Z,14nm,0.8s						
MA2	Magadan	8.92	309	*e*PN	Pn	11 00 02.3	-0.1
SEY	Seymchan	10.36	328	Pn	Pn	11 00 20.1	-2.0
	comp=Z,0.8nm,0.3s,baz=134,slow=12,SNR=68						
SEY				LR	LR	11 04 58.9	
	comp=Z,2µm,18.7s,baz=136,slow=42						
SEY	Seymchan	10.36	328	⇑*e*PN	Pn	11 00 18.9	-3.2
OKH	Okha	12.68	274	c *i*PN	Pn	11 00 51.9	-2.0
OKH				pmax	pmax		
	comp=Z,200nm,9.8s						
OKH				MLR	MLR		
	comp=Z,2µm,12.0s						
OKH				MLR	MLR		
	comp=E,2µm,12.0s						
ATKA	Atka Island	12.95	92		Pn	11 00 57.8	+0.3
ATKA	Atka Island	12.95	92	P	Pn	11 01 00.5	+3.1
BILL	Bilibino	13.43	3		Pn	11 01 04.3	+0.3
BILL	Bilibino	13.43	3	⇓*e*PN	Pn	11 01 02.5	-1.5
BILL				pmax	pmax		
	comp=Z,15nm,0.8s						
TYV	Tymovskoe	13.73	263	*e*P	Pn	11 01 10.9	+2.7
TYV				*e*S	Sn	11 03 47.5	+7.2
TYV				pmax	pmax		
	comp=Z,61nm,1.1s						
TYV				pmax	pmax		
	comp=Z,500nm,5.3s						
TYV				smax	smax		
	comp=N,7.0nm,1.1s						
TYV				smax	smax		
	comp=E,9.0nm,1.1s						
TYV				smax	smax		
	comp=N,200nm,3.5s						
TYV				smax	smax		
	comp=E,200nm,3.5s						
TYV				MLR	MLR		
	comp=N,900nm,15.0s						
TYV				MLR	MLR		
	comp=Z,1µm,16.0s						
KUR	Kuril'sk	14.24	235	*e*P	Pn	11 01 13.4	-1.7
KUR				pmax	pmax		
	comp=Z,74nm,1.0s						
KUR				pmax	pmax		
	comp=E,41nm,0.9s						
KUR				pmax	pmax		
	comp=N,419nm,11.0s						
SPIA	Saint Paul Isl	14.36	70	P	Pn	11 01 15.9	-0.8
	baz=271						
P08K	Saint George I	14.76	72	P	Pn	11 01 22.4	+0.1
	baz=274						
UGL	Uglegorsk	14.90	257	⇓*e*P	Pn	11 01 18.5	-5.6
UGL				pmax	pmax		
	comp=Z,40nm,0.5s						
UGL				MLR	MLR		
	comp=Z,1µm,16.0s						
UGL				MLR	MLR		
	comp=N,600nm,14.0s						
GAMB	Gambell	15.12	43		Pn	11 01 27.1	+0.1
GAMB				IAmb	IAmb	11 01 33.9	
	comp=Z,88nm,0.9s						
GAMB	Gambell	15.12	43	P	Pn	11 01 25.9	-1.1
	baz=244,SNR=5.5						
YSS	Yuzhno-Sakhali	15.71	249		Pn	11 01 33.9	-0.9
YSS	Yuzhno-Sakhali	15.71	249	*e*P	Pn	11 01 35.0	+0.2
YSS				*e*S	Sn	11 04 22.5	-5.8
YSS				pmax	pmax		
	comp=Z,300nm,9.2s						
YSS				pmax	pmax		
	comp=N,200nm,8.1s						
YSS				pmax	pmax		
	comp=Z,50nm,0.8s						
YSS				MLR	MLR		
	comp=N,500nm,12.0s						
YSS				MLR	MLR		
	comp=Z,2µm,12.0s						
YSS				MLR	MLR		
	comp=E,1µm,13.0s						
NIKH	Nikolski High	15.81	85		Pn	11 01 37.2	+1.2
NIKH	Nikolski High	15.81	85	P	Pn	11 01 37.9	+1.9
NIKH	Nikolski High	15.81	85	P	Pn	11 01 35.2	-0.8
	baz=287						
YUK	Yuzh-Kuril'sk	16.09	236	c*e*P	Pn	11 01 37.1	-2.5
M11K	Mekoryuk	16.65	58	P	Pn	11 01 45.7	-1.1
	baz=263						
UNV	Unalaska Valle	16.92	81		P	11 01 51.4	-0.7
UNV	Unalaska Valle	16.92	81	P	Pn	11 01 49.7	-0.5
	baz=285						
AKUT	Akutan	17.27	80		P	11 01 55.5	-0.5
TNA	Tin City	17.37	40		Pn	11 01 55.7	0.0
TNA	Tin City	17.37	40	P	Pn	11 01 54.0	-1.7
	baz=245,SNR=5.7						
GRNR	Gornyy	17.38	269	⇑*i*P	P	11 01 56.9	-0.4
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GRNR				MLR	MLR		
	comp=N,500nm,16.0s						
K13K	Kusilvak Mount	17.63	53	P	P	11 01 59.7	-0.2
K13K	Kusilvak Mount	17.63	53	P	Pn	11 01 59.1	+0.1
	baz=260,SNR=5.1						
JKA	Kamikawa-asahi	17.66	242	P	Pn	11 01 59.0	-0.4
ASAJ	Asahikawa	17.66	242	P	Pn	11 01 59.4	-0.1
	comp=N,7.5nm,0.3s,baz=68,slow=13,SNR=63						
ASAJ				S	Sn	11 05 12.8	-2.9
	comp=N,8.6nm,1.1s,baz=131,slow=28,SNR=1.6						
ASAJ				LR	LR	11 08 23.8	
	comp=N,522nm,18.4s,baz=46,slow=36						
	comp=N,124nm,0.8s						
ASAJ	Asahikawa	17.66	242	P	Pn	11 01 59.0	-0.4
ASAJ				pmax	pmax		
	comp=Z,119nm,0.8s						
F14K	Arctic Creek	17.94	41	P	P	11 02 03.4	+0.1
	baz=247						
ANM	Nome	17.99	45	P	P	11 02 04.5	+0.7
	baz=251						
M13K	Dall Lake	18.06	58	P	Pn	11 02 04.2	-0.1
M13K	Dall Lake	18.06	58	P	P	11 02 05.7	+1.0
	baz=266						
J14K	Nanvaranak Lak	18.29	51	P	Pn	11 02 06.5	-0.5
J14K	Nanvaranak Lak	18.29	51	P	P	11 02 07.4	+0.3
	baz=259,SNR=10						
L14K	Kuka Creek	18.48	56	P	Pn	11 02 10.0	+0.6
	baz=264,SNR=9.9						
G15K	Niukluk	18.67	44	P	Pn	11 02 12.1	+0.5
	baz=252,SNR=8.4						
F15K	North Star Dit	18.67	42	P	Pn	11 02 12.6	+0.9
	baz=249,SNR=12						
M14K	Bethel	18.77	58	P	Pn	11 02 13.3	+0.3
	baz=266,SNR=8.2						
N14K	Kuskokwak Cree	18.87	60	P	Pn	11 02 14.2	+0.1
N14K	Kuskokwak Cree	18.87	60	P	P	11 02 13.6	+0.1
	baz=269						
JEM	Erimo	18.91	237	P	P	11 02 12.3	-1.8
ERM	Erimo	18.91	237		P	11 02 10.8	-3.3
ERM	Erimo	18.91	237	P	P	11 02 12.2	-1.9
ERM	Erimo	18.91	237	P	P	11 02 10.8	-3.3
ERM				pmax	pmax		
	comp=Z,64nm,0.6s						
S12K	Black Hills	19.03	73	P	P	11 02 11.8	-3.5
L15K	Ungalak Mounta	19.08	55	P	Pn	11 02 16.8	+0.1
	baz=264						
O14K	Tigyukauivet M	19.09	62	P	P	11 02 16.1	+0.2
	baz=271						
K15K	Wolf Creek Mou	19.14	53	P	P	11 02 16.5	+0.1
K15K	Wolf Creek Mou	19.14	53	P	Pn	11 02 17.4	0.0
	baz=262,SNR=11						
H16K	Elim	19.30	46	P	Pn	11 02 18.8	-0.5
	baz=255						
M15K	Kasigluk River	19.39	58	P	P	11 02 19.7	+0.4
	baz=268,SNR=10						
G16K	Koyuk River	19.47	43	P	P	11 02 20.2	+0.1
	baz=253,SNR=7.6						
YAK	Yakutsk	19.48	306		P	11 02 17.8	-2.4
YAK				IAmb	IAmb	11 02 20.6	
	comp=Z,186nm,0.8s						
YAK	Yakutsk	19.48	306	P	P	11 02 18.7	-1.4
	comp=Z,9.4nm,0.3s,baz=63,slow=2.3,SNR=48						
YAK				S	Sn	11 05 54.7	-4.6
	comp=Z,8.6nm,0.4s,baz=306,slow=23,SNR=5.7						
YAK				LR	LR	11 10 35.1	
	comp=Z,682nm,19.1s,baz=94,slow=39						
	comp=Z,182nm,0.8s						
YAK	Yakutsk	19.48	306	*e*P	P	11 02 18.1	-2.1
YAK				*e*S	Sn	11 05 54.9	-4.4
YAK				pmax	pmax		
	comp=Z,156nm,0.8s						
YAK				pmax	pmax		
	comp=E,102nm,1.3s						
YAK				pmax	pmax		
	comp=N,21nm,1.2s						
YAK				pmax	pmax		
	comp=Z,170nm,0.8s						
YAK				pmax	pmax		
	comp=E,94nm,1.1s						
YAK				pmax	pmax		
	comp=N,25nm,0.9s						
YAK				smax	smax		
	comp=E,91nm,1.5s						
YAK				smax	smax		
	comp=N,52nm,1.0s						
YAK				MLR	MLR		
	comp=Z,1µm,13.0s						
YAK				MLR	MLR		
	comp=E,888nm,14.0s						
YAK				MLR	MLR		
	comp=N,478nm,13.0s						
C16K	Lisburne Hills	19.53	34	P	P	11 02 20.4	-0.3
C16K	Lisburne Hills	19.53	34	P	P	11 02 20.8	+0.1
	baz=241						
N15K	Kwethluk River	19.68	59	IAmb	IAmb	11 02 38.5	
	comp=Z,104nm,0.8s						
N15K	Kwethluk River	19.68	59	P	Pn	11 02 23.3	-0.6
	baz=270,SNR=17						
J16K	Anvik River	19.71	50	P	Pn	11 02 23.8	-0.4
	baz=261,SNR=9.9						
I17K	Unalakleet	19.78	48	P	Pn	11 02 24.3	-0.7
	baz=259,SNR=5.2						
O15K	Ungalikthiuk R	19.83	62	P	P	11 02 24.3	+0.3
	baz=273,SNR=13						
SDPT	Sand Point	19.98	74	P	Pn	11 02 27.2	-0.3
SDPT	Sand Point	19.98	74	P	Pn	11 02 27.2	-0.3
	baz=283						
D17K	Noatak River	20.03	37	P	P	11 02 25.9	-0.2
	baz=246,SNR=20						
L16K	Owhat River	20.04	55	P	P	11 02 25.9	-0.4
L16K	Owhat River	20.04	55	P	P	11 02 26.3	0.0
	baz=266						
G17K	Kiwalik Mounta	20.18	44	P	P	11 02 28.0	+0.2
	baz=254,SNR=19						
F17K	Baldwin Pennin	20.23	41	P	P	11 02 28.7	+0.4
	baz=251,SNR=5.8						
E17K	Hotham Inlet	20.23	39	P	P	11 02 28.8	+0.4
	baz=249,SNR=11						
RDOG	Red Dog Mine	20.24	36	P	P	11 02 27.8	-0.7
RDOG	Red Dog Mine	20.24	36	P	P	11 02 28.0	-0.4
	baz=245,SNR=7.0						
M16K	Timber Creek	20.25	57	IAmb	IAmb	11 02 39.9	
	comp=Z,119nm,0.9s						
M16K	Timber Creek	20.25	57	P	P	11 02 29.1	+0.5
	baz=268,SNR=31						
TEY	Ternei	20.27	253	⇑*e*P	P	11 02 29.4	+0.5
TEY						11 06 11.4	
TEY				pmax	pmax		
	comp=N,10.0nm,1.8s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.8s						
TEY				pmax	pmax		
	comp=Z,20nm,1.8s						
S14K	Fog Glacier	20.31	71	P	Pn	11 02 30.8	-0.6
	baz=281						
C17K	DeLong Mountai	20.33	35	P	P	11 02 29.6	+0.1
	baz=244,SNR=26						
N16K	Nishlik Lake	20.34	59	P	P	11 02 29.7	+0.1
	baz=270,SNR=14						
H17K	Granite Mounta	20.34	46	IAmb	IAmb	11 02 31.5	
	comp=Z,106nm,0.8s						
H17K	Granite Mounta	20.34	46	P	P	11 02 30.2	+0.7
	baz=257,SNR=50						
J17K	VABM Dome	20.41	50	IAmb	IAmb	11 02 45.7	
	comp=Z,162nm,0.9s						
J17K	VABM Dome	20.41	50	P	P	11 02 31.3	+1.0
	baz=262,SNR=33						
CHNA	Chernabura Isl	20.60	75	P	P	11 02 32.1	-0.3
CHNA	Chernabura Isl	20.60	75	P	P	11 02 31.8	-0.6
	baz=285						
L17K	Donlin	20.63	54	P	P	11 02 33.4	+0.7
	baz=266,SNR=25						
K17K	Iditarod	20.68	52	IAmb	IAmb	11 02 44.4	
	comp=Z,166nm,0.9s						
K17K	Iditarod	20.68	52	P	P	11 02 34.0	+0.8
	baz=264,SNR=55						
O16K	Kokwok River B	20.70	61	P	P	11 02 33.1	-0.3
	baz=273,SNR=6.3						
KLR	Kul'dur	20.77	268	P	P	11 02 34.0	-0.3
	comp=Z,8.2nm,0.8s,baz=75,slow=8.5,SNR=23						
KLR				S	S	11 06 23.7	-1.7
	comp=Z,1.9nm,0.8s,baz=192,slow=20,SNR=1.9						
KLR				LR	LR	11 11 03.9	
	comp=Z,366nm,18.1s,baz=74,slow=38						
	comp=Z,8.2nm,0.8s						
KLR	Kul'dur	20.77	268	d*e*P	P	11 02 34.4	+0.1
KLR				pmax	pmax		
	comp=Z,26nm,1.7s						
P16K	Nushagak River	20.78	63	P	P	11 02 34.2	-0.2
	baz=275						
E18K	Tukpahlearik C	20.80	38	P	P	11 02 35.0	+0.5
	baz=250,SNR=30						
JTM	Tenmabayashi	20.86	238	P	P	11 02 32.6	-2.8
F18K	Selawik	20.89	41	P	P	11 02 35.7	+0.3
	baz=253,SNR=5.4						
M17K	Holitna River	21.00	56	P	P	11 02 37.9	+1.1
M17K				IAmb	IAmb	11 02 51.0	
	comp=Z,190nm,0.8s						
M17K	Holitna River	21.00	56	P	P	11 02 37.2	+0.5
	baz=269,SNR=52						
H18K	Honhosa River	21.03	45	IAmb	IAmb	11 02 38.6	
	comp=Z,96nm,0.8s						
H18K	Honhosa River	21.03	45	P	P	11 02 37.6	+0.6
	baz=258,SNR=50						
C18K	Utukok River	21.07	35	P	P	11 02 37.4	-0.1
C18K				IAmb	IAmb	11 02 50.4	
	comp=Z,104nm,0.8s						
C18K	Utukok River	21.07	35	P	P	11 02 37.0	-0.5
	baz=246,SNR=58						
G18K	Tagagawik	21.08	43	P	P	11 02 37.6	0.0
	baz=256,SNR=33						
N17K	Nushagak Hills	21.12	58	P	P	11 02 37.9	-0.1
	baz=271,SNR=12						
B18K	Kokolik River	21.18	33	P	P	11 02 38.5	0.0
	baz=243,SNR=27						
O17K	Koliganek Bris	21.19	60	P	P	11 02 38.7	-0.1
	baz=273,SNR=14						
L18K	Granite Mounta	21.39	54	P	P	11 02 41.2	+0.3
	baz=267,SNR=17						
J18K	Innoko River	21.47	50	IAmb	IAmb	11 02 53.3	
	comp=Z,135nm,0.9s						
J18K	Innoko River	21.47	50	P	P	11 02 42.0	+0.2
	baz=264,SNR=106						
Q16K	King Salmon	21.51	63	P	P	11 02 42.4	+0.2
	baz=276						
P17K	Kvichak River	21.57	62	P	P	11 02 43.0	+0.2
	baz=275,SNR=7.9						
GCSA	Galena City Sc	21.57	47	P	P	11 02 42.3	-0.5
	baz=261,SNR=22						
ZEA	Zeya	21.63	283	*e*P	P	11 02 45.1	+1.5
ZEA				*e*S	S	11 06 37.1	-5.3
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ZEA				smax	smax		
	comp=N,200nm,12.5s						
F19K	Shaleruckik Mo	21.67	41	P	P	11 02 43.6	-0.3
	baz=255,SNR=70						
N18K	Kilae Creek	21.75	58	IAmb	IAmb	11 02 58.1	
	comp=Z,91nm,0.8s						
N18K	Kilae Creek	21.75	58	P	P	11 02 44.8	0.0
	baz=272,SNR=23						
G19K	Purcell Mounta	21.76	43	P	P	11 02 44.4	-0.5
	baz=257,SNR=41						
M18K	Stony River	21.77	56	P	P	11 02 45.2	+0.1
	baz=270,SNR=18						
C19K	Lookout Ridge	21.79	35	IAmb	IAmb	11 02 46.1	
	comp=Z,129nm,1.0s						
C19K	Lookout Ridge	21.79	35	P	P	11 02 45.1	-0.1
	baz=247,SNR=41						
A19K	Wainwright	21.79	31	P	P	11 02 45.1	0.0
	baz=242						
H19K	Roundabout Mou	21.89	45	IAmb	IAmb	11 02 59.0	
	comp=Z,129nm,0.9s						
H19K	Roundabout Mou	21.89	45	P	P	11 02 46.0	-0.2
	baz=259,SNR=60						
Q17K	Contact Creek	21.96	64	P	P	11 02 46.5	-0.7

	baz=278,SNR=11						
J19K	**Poorman**	**22.01**	**49**	IAmb	IAmb	11 02 59.7	
	comp=Z,106nm,0.8s						
J19K	**Poorman**	**22.01**	**49**	P	**P**	**11 02 46.9**	**-0.7**
	baz=264,SNR=56						
E19K	**Redstone River**	**22.05**	**40**	IAmb	IAmb	11 03 00.6	
	comp=Z,132nm,0.8s						
E19K	**Redstone River**	**22.05**	**40**	P	**P**	**11 02 47.8**	**-0.1**
	baz=254,SNR=82						
D19K	**Kuna River**	**22.06**	**37**	IAmb	IAmb	11 02 59.5	
	comp=Z,88nm,0.9s						
D19K	**Kuna River**	**22.06**	**37**	P	**P**	**11 02 47.3**	**-0.8**
	baz=250,SNR=43						
O18K	**Koktuh Hills**	**22.14**	**60**	P	**P**	**11 02 48.6**	**-0.3**
	baz=275,SNR=8.9						
P18K	**Big Mountain,**	**22.17**	**61**	P	**P**	**11 02 49.2**	**-0.1**
	baz=276						
L19K	**White Mountain**	**22.24**	**54**	P	**P**	**11 02 49.9**	**-0.2**
	baz=269,SNR=17						
Q18K	**Katmai Hardscr**	**22.36**	**63**	P	**P**	**11 02 50.8**	**-0.8**
	baz=278,SNR=15						
N19K	**Bonanza Creek**	**22.44**	**57**	P	**P**	**11 02 51.9**	**-0.3**
	baz=273,SNR=13						
M19K	**Big River Lodg**	**22.46**	**55**	P	**P**	**11 02 52.4**	**0.0**
	baz=270						
F20K	**Avaraart Lake**	**22.50**	**41**	P	**P**	**11 02 52.3**	**-0.5**
	baz=256						
H20K	**Anotleneega Mo**	**22.53**	**45**	P	**P**	**11 02 52.9**	**-0.3**
	baz=261,SNR=55						
O19K	**Port Alsworth**	**22.56**	**59**	P	**P**	**11 02 53.1**	**-0.3**
	baz=274						
CHIR	**Chirikof Islan**	**22.56**	**71**	P	**P**	**11 02 52.7**	**-0.8**
CHIR	**Chirikof Islan**	**22.56**	**71**	P	**P**	**11 02 53.7**	**+0.2**
CHIR	**Chirikof Islan**	**22.56**	**71**	P	**P**	**11 02 53.1**	**-0.4**
	baz=284						
I20K	**Naaghedeneel**	**22.60**	**47**	IAmb	IAmb	11 03 05.7	
	comp=Z,174nm,0.8s						
I20K	**Naaghedeneel**	**22.60**	**47**	P	**P**	**11 02 53.4**	**-0.4**
	baz=263,SNR=33						
K20K	**Telida**	**22.65**	**51**	P	**P**	**11 02 53.9**	**-0.5**
	baz=267						
D20K	**Etivluk River**	**22.65**	**37**	IAmb	IAmb	11 02 55.7	
	comp=Z,82nm,0.9s						
D20K	**Etivluk River**	**22.65**	**37**	P	**P**	**11 02 53.5**	**-0.9**
	baz=252,SNR=76						
E20K	**Nigu River**	**22.66**	**38**	P	**P**	**11 02 53.9**	**-0.6**
	baz=253,SNR=78						
J20K	**Nowinta River**	**22.67**	**49**	P	**P**	**11 02 54.3**	**-0.3**
J20K				IAmb	IAmb	11 03 06.3	
	comp=Z,167nm,0.9s						
J20K	**Nowinta River**	**22.67**	**49**	P	**P**	**11 02 53.8**	**-0.9**
	baz=265,SNR=63						
L20K	**Farewell, AK**	**22.70**	**53**	P	**P**	**11 02 54.3**	**-0.7**
	baz=269,SNR=8.1						
TIXI	**Tiksi**	**22.82**	**332**	LR	LR	11 12 44.7	
	comp=Z,623nm,20.9s,baz=174,slow=39						
R18K	**Karluk**	**22.82**	**66**	P	**P**	**11 02 54.0**	**-2.2**
	baz=281						
HEH	**HeiHe**	**22.82**	**274**	*e*P	**P**	**11 02 51.6**	**-4.7**
HEH				S	**S**	**11 06 58.8**	**-6.0**
HEH				pmax	pmax		
	comp=Z,12nm,1.0s						
HEH				LR	LR		
	comp=Z,1µm,12.1s						
HEH				LR	LR		
	comp=Z,1µm,12.9s						
HEH				LR	LR		
	comp=Z,2µm,12.1s						
B20K	**Meade River**	**22.92**	**33**	P	**P**	**11 02 56.1**	**-1.1**
	baz=248						
Q19K	**Cape Douglas,**	**23.03**	**62**	IAmb	IAmb	11 03 07.9	
	comp=Z,83nm,0.8s						
Q19K	**Cape Douglas,**	**23.03**	**62**	P	**P**	**11 02 57.6**	**-0.8**
	baz=278						
M20K	**Styx River**	**23.05**	**55**	P	**P**	**11 02 58.4**	**-0.3**
	baz=271						
P19K	**Oil Pt**	**23.15**	**60**	P	**P**	**11 02 59.6**	**-0.1**
	baz=277						
SII	**Sitkinak Islan**	**23.17**	**68**	IAmb	IAmb	11 03 08.2	
	comp=Z,75nm,0.9s						
SII	**Sitkinak Islan**	**23.17**	**68**	P	**P**	**11 03 00.2**	**+0.3**
SII	**Sitkinak Islan**	**23.17**	**68**	P	**P**	**11 02 59.3**	**-0.6**
	baz=283						
G21K	**Allakaket**	**23.25**	**43**	P	**P**	**11 03 00.1**	**-0.5**
	baz=260,SNR=63						
JMM	**Marumori**	**23.29**	**234**	IAmb	IAmb	11 03 29.1	
	comp=Z,99nm,1.0s						
JMM	**Marumori**	**23.29**	**234**	P	**P**	**11 03 01.4**	**+0.2**
RED	**Redoubt Volcan**	**23.31**	**58**	IAmb	IAmb	11 03 11.5	
	comp=Z,80nm,0.8s						
USA0B	**Ussuriysk Arra**	**23.38**	**257**	P	**P**	**11 02 59.7**	**-2.3**
USA0B	**Ussuriysk Arra**	**23.38**	**257**	*de*P	**P**	**11 03 03.2**	**+1.2**
USRK	**Ussuriysk Ar.**	**23.38**	**257**	P	**P**	**11 02 59.9**	**-2.1**
USRK	**Ussuriysk Ar.**	**23.38**	**257**	P	**P**	**11 03 03.0**	**+1.0**
	comp=Z,8.1nm,0.7s,baz=49,slow=13,SNR=11						
USRK				LR	LR	11 11 55.2	
	comp=Z,511nm,21.2s,baz=61,slow=36						
	comp=Z,8.1nm,0.7s						
USRK	**Ussuriysk Ar.**	**23.38**	**257**	P	**P**	**11 02 59.9**	**-2.1**
F21K	**Alatna River**	**23.40**	**41**	IAmb	IAmb	11 03 13.1	
	comp=Z,84nm,1.1s						
F21K	**Alatna River**	**23.40**	**41**	P	**P**	**11 03 01.5**	**-0.6**
	baz=259,SNR=54						
H21K	**Melozitna Rive**	**23.41**	**45**	IAmb	IAmb	11 03 13.1	
	comp=Z,216nm,1.2s						
H21K	**Melozitna Rive**	**23.41**	**45**	P	**P**	**11 03 01.4**	**-0.7**
	baz=263,SNR=73						
O20K	**Slope Mountain**	**23.41**	**59**	P	**P**	**11 03 01.9**	**-0.4**
	baz=276						
C21K	**Knifeblade Rid**	**23.42**	**36**	P	**P**	**11 03 01.7**	**-0.5**
	baz=253,SNR=43						
CHUM	**Lake Minchumin**	**23.46**	**50**	P	**P**	**11 03 02.6**	**0.0**
	baz=268,SNR=28						
PPLA	**Purkeypile**	**23.49**	**52**	IAmb	IAmb	11 03 14.9	
	comp=Z,104nm,1.0s						
PPLA	**Purkeypile**	**23.49**	**52**	P	**P**	**11 03 03.3**	**+0.2**
	baz=270,SNR=17						
E21K	**Killik River**	**23.50**	**38**	P	**P**	**11 03 01.7**	**-1.4**
	baz=255						
OHAK	**Old Harbor**	**23.51**	**66**	P	**P**	**11 03 02.4**	**-0.8**
OHAK	**Old Harbor**	**23.51**	**66**	P	**P**	**11 03 00.6**	**-2.6**
	baz=282,SNR=20						
N20K	**Mount Spurr**	**23.52**	**56**	P	**P**	**11 03 03.4**	**-0.1**
	baz=274						
SPCR	**Spurr Chakacha**	**23.52**	**56**	P	**P**	**11 03 03.5**	**+0.1**
	baz=274						
CAST	**Castle Rocks**	**23.54**	**51**	IAmb	IAmb	11 03 14.9	
	comp=Z,85nm,0.9s						
CAST	**Castle Rocks**	**23.54**	**51**	P	**P**	**11 03 03.4**	**-0.1**
	baz=269,SNR=41						
A21K	**Barrow**	**23.61**	**30**	P	**P**	**11 03 02.7**	**-1.4**
	baz=246						
B21K	**Ikpikpuk River**	**23.62**	**35**	P	**P**	**11 03 03.3**	**-0.9**
	baz=252,SNR=70						
I21K	**Tanana**	**23.70**	**46**	IAmb	IAmb	11 03 15.1	
	comp=Z,98nm,1.0s						
I21K	**Tanana**	**23.70**	**46**	P	**P**	**11 03 04.6**	**-0.4**
	baz=265,SNR=90						
Q20K	**Shuyak Island**	**23.72**	**63**	P	**P**	**11 03 03.9**	**-1.4**
	baz=280,SNR=8.3						
KDAK	**Kodiak Island**	**23.77**	**65**	P	**P**	**11 03 04.7**	**-1.0**
KDAK				IAmb	IAmb	11 03 16.3	
	comp=Z,57nm,0.8s						
KDAK	**Kodiak Island**	**23.77**	**65**	LR	LR	11 13 01.5	
	comp=Z,525nm,18.2s,baz=253,slow=38						
KDAK	**Kodiak Island**	**23.77**	**65**	*de*P	**P**	**11 03 04.2**	**-1.5**
KDAK				pmax	pmax		
	comp=Z,17nm,0.8s						
KDAK	**Kodiak Island**	**23.77**	**65**	P	**P**	**11 03 04.9**	**-0.8**
	baz=281						
SKT	**Skwentna**	**23.81**	**54**	IAmb	IAmb	11 03 16.9	
	comp=Z,84nm,1.0s						
SKT	**Skwentna**	**23.81**	**54**	P	**P**	**11 03 06.3**	**+0.1**
	baz=272,SNR=24						
F22K	**John River**	**23.95**	**41**	P	**P**	**11 03 06.7**	**-0.7**
	baz=259						
HOM	**Homer**	**23.95**	**60**	P	**P**	**11 03 07.6**	**+0.2**
	baz=278						
A22K	**Sinclair Lake**	**23.98**	**32**	P	**P**	**11 03 06.6**	**-1.0**
	baz=248						
H22K	**Ishtalitna Cre**	**24.02**	**45**	P	**P**	**11 03 07.7**	**-0.4**
	baz=264,SNR=60						
BPAW	**Bear Paw Mtn.**	**24.05**	**49**	IAmb	IAmb	11 03 19.6	
	comp=Z,168nm,1.0s						
BPAW	**Bear Paw Mtn.**	**24.05**	**49**	P	**P**	**11 03 07.8**	**-0.6**
	baz=268,SNR=83						
D22K	**Ayikyak River**	**24.07**	**37**	P	**P**	**11 03 07.7**	**-0.8**
	baz=256,SNR=33						
G22K	**Bettles**	**24.11**	**42**	P	**P**	**11 03 07.9**	**-0.9**
	baz=261						
MLY	**Manley**	**24.21**	**47**	IAmb	IAmb	11 03 21.1	
	comp=Z,140nm,1.2s						
MLY	**Manley**	**24.21**	**47**	P	**P**	**11 03 09.3**	**-0.6**
	baz=266,SNR=135						
E22K	**Anaktuvuk Pass**	**24.21**	**39**	P	**P**	**11 03 09.3**	**-0.6**
	baz=258,SNR=70						
SUA	**Susitna One**	**24.21**	**56**	P	**P**	**11 03 09.9**	**-0.2**
	baz=274,SNR=41						
B22K	**Teshekpuk Lake**	**24.23**	**34**	P	**P**	**11 03 09.2**	**-0.8**
	baz=252,SNR=33						
BRLK	**Bradley Lake**	**24.32**	**60**	IAmb	IAmb	11 03 20.7	
	comp=Z,64nm,1.0s						
TRF	**Thorofare Moun**	**24.35**	**51**	P	**P**	**11 03 10.7**	**-0.6**
	baz=270,SNR=108						
CUT	**Chulitna**	**24.38**	**53**	P	**P**	**11 03 10.7**	**-0.7**
	baz=273,SNR=9.5						
BRSE	**Bradley Lake S**	**24.39**	**60**	P	**P**	**11 03 10.9**	**-0.7**
	baz=278						
MDJ	**Mudanjiang**	**24.49**	**260**	P	**P**	**11 03 11.8**	**-0.8**
MDJ	**Mudanjiang**	**24.49**	**260**	P	**P**	**11 03 12.0**	**-0.5**
MDJ				S	**S**	**11 07 30.3**	**-1.7**
MDJ				pmax	pmax		
	comp=Z,24nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,130nm,9.4s						
MDJ				LR	LR		
	comp=Z,960nm,12.4s						
MDJ				LR	LR		
	comp=Z,830nm,14.4s						
MDJ				LR	LR		
	comp=Z,2µm,13.7s						
M22K	**Willow**	**24.49**	**55**	P	**P**	**11 03 11.3**	**-1.1**
M22K				IAmb	IAmb	11 03 22.4	
	comp=Z,76nm,0.8s						
M22K	**Willow**	**24.49**	**55**	P	**P**	**11 03 11.5**	**-0.8**
	baz=274						
SLKM	**Skilak Lake**	**24.56**	**58**	P	**P**	**11 03 13.0**	**-0.1**
COLD	**Coldfoot**	**24.66**	**42**	P	**P**	**11 03 13.3**	**-0.6**
COLD	**Coldfoot**	**24.66**	**42**	P	**P**	**11 03 13.1**	**-0.8**
	baz=262,SNR=153						
G23K	**Bananza Creek**	**24.66**	**43**	IAmb	IAmb	11 03 24.4	
	comp=Z,60nm,0.9s						
G23K	**Bananza Creek**	**24.66**	**43**	P	**P**	**11 03 13.0**	**-0.9**
	baz=263,SNR=56						
RC01	**Rabbit Creek A**	**24.73**	**56**	P	**P**	**11 03 13.6**	**-1.0**
	baz=276						
H23K	**Yukon River**	**24.76**	**45**	P	**P**	**11 03 14.7**	**-0.2**
	baz=266,SNR=141						
D23K	**Nanushuk River**	**24.79**	**37**	P	**P**	**11 03 14.5**	**-0.6**
	baz=258						
I23K	**Minto, Yukon-K**	**24.80**	**47**	P	**P**	**11 03 14.8**	**-0.3**
	baz=267,SNR=202						
O22K	**Cooper Landing**	**24.80**	**58**	P	**P**	**11 03 14.5**	**-0.7**
	baz=277						
NEA2	**Nenana**	**24.90**	**48**	P	**P**	**11 03 15.4**	**-0.7**
	baz=269,SNR=59						
MCK	**McKinley**	**24.95**	**50**	P	**P**	**11 03 16.0**	**-0.7**
	baz=271,SNR=27						
PMR	**Palmer**	**24.97**	**55**	P	**P**	**11 03 16.4**	**-0.3**
	baz=275,SNR=13						
SEW	**Seward**	**24.99**	**59**	IAmb	IAmb	11 03 29.3	
	comp=Z,75nm,0.8s						
SEW	**Seward**	**24.99**	**59**	P	**P**	**11 03 15.3**	**-1.6**
	baz=278,SNR=12						
RND	**Reindeer**	**25.00**	**51**	IAmb	IAmb	11 03 27.4	
	comp=Z,144nm,1.0s						
E23K	**Chandalar**	**25.00**	**40**	P	**P**	**11 03 16.7**	**-0.4**
	baz=261,SNR=140						
C23K	**Itkillik River**	**25.02**	**35**	IAmb	IAmb	11 03 19.1	
	comp=Z,108nm,0.9s						
C23K	**Itkillik River**	**25.02**	**35**	P	**P**	**11 03 16.1**	**-0.9**
	baz=256,SNR=20						
PSTR	**Posyet**	**25.02**	**255**	⇓*e*P	**P**	**11 03 15.8**	**-1.6**
GHO	**Glory Hole Cre**	**25.05**	**55**	IAmb	IAmb	11 03 30.3	
	comp=Z,44nm,0.8s						
BNX	**BinXian**	**25.09**	**265**	⇓P	**P**	**11 03 16.8**	**-1.2**
BNX				S	**S**	**11 07 43.6**	**+1.9**
BNX				pmax	pmax		
	comp=Z,24nm,0.7s						
BNX				pmax	pmax		
	comp=Z,200nm,5.2s						
BNX				LR	LR		
	comp=Z,620nm,12.5s						
BNX				LR	LR		
	comp=Z,1µm,12.4s						
BNX				LR	LR		
	comp=Z,1µm,12.7s						
TOLK	**Toolik Lake Re**	**25.12**	**38**	P	**P**	**11 03 17.5**	**-0.7**
	baz=260,SNR=77						
WAT1	**Susitna Watana**	**25.16**	**52**	P	**P**	**11 03 17.0**	**-1.4**
	baz=273						
KNK	**Knik Glacier**	**25.31**	**55**	IAmb	IAmb	11 03 32.3	
	comp=Z,83nm,0.7s						
KNK	**Knik Glacier**	**25.31**	**55**	P	**P**	**11 03 18.9**	**-0.9**
	baz=276,SNR=18						
SML	**Sawmill**	**25.33**	**55**	IAmb	IAmb	11 03 31.3	
	comp=Z,73nm,0.8s						
SML	**Sawmill**	**25.33**	**55**	P	**P**	**11 03 19.1**	**-0.9**
	baz=276,SNR=26						
E24K	**Your Creek**	**25.43**	**40**	P	**P**	**11 03 20.6**	**-0.3**
	baz=262						
COLA	**College**	**25.43**	**47**	P	**P**	**11 03 20.6**	**-0.2**
COLA	**College**	**25.43**	**47**	P	**P**	**11 03 20.1**	**-0.7**
COLA	**College**	**25.43**	**47**	*c i*P	**P**	**11 03 20.2**	**-0.6**
COLA				pmax	pmax		
	comp=Z,53nm,0.9s						
COLA	**College**	**25.43**	**47**	P	**P**	**11 03 20.5**	**-0.4**
	baz=269						
PWL	**Port Wells**	**25.43**	**57**	P	**P**	**11 03 19.6**	**-1.4**
	baz=278,SNR=49						
CCB	**Clear Creek Bu**	**25.45**	**48**	P	**P**	**11 03 20.4**	**-0.6**
H24K	**Noodor Dome**	**25.45**	**45**	IAmb	IAmb	11 03 32.8	
	comp=Z,68nm,0.8s						
H24K	**Noodor Dome**	**25.45**	**45**	P	**P**	**11 03 21.0**	**-0.1**
	baz=267,SNR=52						
D24K	**Happy Valley**	**25.48**	**37**	IAmb	IAmb	11 03 32.2	
	comp=Z,92nm,0.8s						
D24K	**Happy Valley**	**25.48**	**37**	P	**P**	**11 03 20.3**	**-1.0**
	baz=259,SNR=30						
WAT6	**Susitna Watana**	**25.55**	**53**	P	**P**	**11 03 20.6**	**-1.6**
	baz=274						
MJB9	**Matsu-Tunnel**	**25.58**	**236**	P	**P**	**11 03 23.7**	**+1.2**
MJB9				IAmb	IAmb	11 03 35.7	
	comp=Z,110nm,0.8s						
MAJO	**Matsushiro**	**25.58**	**236**	P	**P**	**11 03 23.8**	**+1.3**
MAJO	**Matsushiro**	**25.58**	**236**	P	**P**	**11 03 23.8**	**+1.3**
MAJO	**Matsushiro**	**25.58**	**236**	*d i*P	**P**	**11 03 23.6**	**+1.1**
MAJO				pmax	pmax		
	comp=Z,125nm,1.1s						
MJAR	**Matsushiro Arr**	**25.58**	**236**	P	**P**	**11 03 23.8**	**+1.3**
	comp=Z,55nm,0.8s,baz=27,slow=7.8,SNR=111						
MJAR				LR	LR	11 14 21.8	
	comp=Z,371nm,20.2s,baz=78,slow=39						
	comp=Z,55nm,0.8s						
F24K	**Squaw Lake**	**25.58**	**41**	IAmb	IAmb	11 03 33.3	
	comp=Z,57nm,0.8s						
F24K	**Squaw Lake**	**25.58**	**41**	P	**P**	**11 03 21.6**	**-0.7**
	baz=264,SNR=33						
POKR	**Poker Plat Res**	**25.61**	**47**	IAmb	IAmb	11 03 34.2	
	comp=Z,75nm,0.8s						
POKR	**Poker Plat Res**	**25.61**	**47**	P	**P**	**11 03 22.1**	**-0.4**
	baz=269,SNR=12						
M23K	**Glacier View**	**25.62**	**54**	P	**P**	**11 03 21.7**	**-0.9**
	baz=276,SNR=24						
C24K	**Franklin Bluff**	**25.64**	**36**	P	**P**	**11 03 22.9**	**+0.2**
	baz=258						
G24K	**Hadweenzic Riv**	**25.66**	**43**	P	**P**	**11 03 23.0**	**0.0**
	baz=266,SNR=104						
DHY	**Denali Highway**	**25.68**	**51**	IAmb	IAmb	11 03 35.3	
	comp=Z,77nm,0.8s						
DHY	**Denali Highway**	**25.68**	**51**	P	**P**	**11 03 22.1**	**-1.2**
	baz=274,SNR=51						
SCM	**Sheep Creek Mo**	**25.80**	**54**	P	**P**	**11 03 23.7**	**-0.7**
	baz=276,SNR=55						
HDA	**Harding Lake**	**25.82**	**48**	IAmb	IAmb	11 03 37.9	
	comp=Z,83nm,0.7s						
HDA	**Harding Lake**	**25.82**	**48**	P	**P**	**11 03 22.9**	**-1.5**
	baz=271,SNR=93						
IL31		**25.84**	**48**	IAmb	IAmb	11 03 36.6	
	comp=Z,95nm,0.9s						
ILAR	**Eielson Array**	**25.84**	**48**	P	**P**	**11 03 23.5**	**-1.1**
	comp=Z,51nm,0.8s,baz=261,slow=8.7,SNR=346						
ILAR				PcP	**PcP**	**11 06 52.7**	**-0.6**
	comp=Z,0.9nm,0.6s,baz=292,slow=3.9,SNR=1.3						
ILAR				LR	LR	11 15 02.6	
	comp=Z,736nm,18.1s,baz=266,slow=40						
	comp=Z,51nm,0.8s						
P23K	**Montague Islan**	**26.02**	**59**	P	**P**	**11 03 25.4**	**-0.9**
P23K				IAmb	IAmb	11 03 37.7	
	comp=Z,78nm,0.9s						
P23K	**Montague Islan**	**26.02**	**59**	P	**P**	**11 03 25.2**	**-1.1**
	baz=280						
GLI	**Glacier Island**	**26.03**	**56**	IAmb	IAmb	11 03 37.9	
	comp=Z,104nm,0.8s						
GLI	**Glacier Island**	**26.03**	**56**	P	**P**	**11 03 26.0**	**-0.4**
	baz=278,SNR=14						
G25K	**Bearman Lake**	**26.21**	**43**	P	**P**	**11 03 27.8**	**-0.2**
	baz=267,SNR=15						
H25L	**Birch Creek**	**26.31**	**44**	P	**P**	**11 03 28.6**	**-0.2**
	baz=268,SNR=15						
M24K	**Tolsona, Glenn**	**26.32**	**54**	P	**P**	**11 03 29.1**	**0.0**
	baz=277,SNR=43						
FID	**Port Fidalgo**	**26.35**	**57**	IAmb	IAmb	11 03 41.9	
	comp=Z,73nm,0.7s						
K24K	**Donnelly Dome**	**26.35**	**50**	IAmb	IAmb	11 03 40.8	
	comp=Z,87nm,0.9s						
K24K	**Donnelly Dome**	**26.35**	**50**	P	**P**	**11 03 27.9**	**-1.4**
	baz=273,SNR=35						
D25K	**Kavik River**	**26.37**	**37**	IAmb	IAmb	11 03 39.2	
	comp=Z,82nm,0.7s						
D25K	**Kavik River**	**26.37**	**37**	P	**P**	**11 03 28.4**	**-1.1**
	baz=262,SNR=29						
PRP	**Porcupine Dome**	**26.41**	**46**	P	**P**	**11 03 29.6**	**-0.3**
	baz=270,SNR=147						
F25K	**Christian Rive**	**26.45**	**41**	IAmb	IAmb	11 03 34.3	
	comp=Z,45nm,0.9s						
F25K	**Christian Rive**	**26.45**	**41**	P	**P**	**11 03 30.0**	**-0.1**
	baz=266,SNR=48						
J25K	**Salcha River,**	**26.50**	**48**	IAmb	IAmb	11 03 48.0	
	comp=Z,36nm,0.7s						
J25K	**Salcha River,**	**26.50**	**48**	P	**P**	**11 03 28.7**	**-1.9**
	baz=272,SNR=38						
KLU	**Klutina**	**26.51**	**55**	IAmb	IAmb	11 03 45.2	
	comp=Z,40nm,0.8s						
KLU	**Klutina**	**26.51**	**55**	P	**P**	**11 03 30.0**	**-0.8**
	baz=278,SNR=22						
E25K	**Arctic Village**	**26.52**	**40**	IAmb	IAmb	11 03 41.0	
	comp=Z,56nm,0.8s						
E25K	**Arctic Village**	**26.52**	**40**	P	**P**	**11 03 30.5**	**-0.2**
	baz=265,SNR=27						
PAX	**Paxson**	**26.55**	**52**	P	**P**	**11 03 30.4**	**-0.8**
	baz=275,SNR=23						
EYAK	**Cordova Ski Ar**	**26.74**	**57**	IAmb	IAmb	11 03 45.2	
	comp=Z,44nm,0.8s						
EYAK	**Cordova Ski Ar**	**26.74**	**57**	P	**P**	**11 03 32.2**	**-0.5**
EYAK	**Cordova Ski Ar**	**26.74**	**57**	P	**P**	**11 03 32.0**	**-0.7**
	baz=280,SNR=11						
JGF	**Kuroka**	**26.74**	**236**	P	**P**	**11 03 34.2**	**+1.1**
HARP	**HAARP**	**26.76**	**53**	P	**P**	**11 03 32.7**	**-0.2**
	baz=277,SNR=12						
RIDG	**Independent Ri**	**26.77**	**50**	IAmb	IAmb	11 03 41.9	
	comp=Z,66nm,0.8s						
RIDG	**Independent Ri**	**26.77**	**50**	P	**P**	**11 03 31.6**	**-1.5**
	baz=274,SNR=34						
BMAR	**Burnt Mountain**	**26.84**	**42**	P	**P**	**11 03 33.9**	**+0.2**
F26K	**Sheenjek River**	**27.02**	**41**	P	**P**	**11 03 35.1**	**-0.2**
	baz=267,SNR=13						
N25K	**Chitina, Valde**	**27.12**	**54**	IAmb	IAmb	11 03 46.3	
	comp=Z,40nm,0.8s						
N25K	**Chitina, Valde**	**27.12**	**54**	P	**P**	**11 03 36.0**	**-0.4**
	baz=279,SNR=21						
DOT	**Dot Lake**	**27.13**	**50**	IAmb	IAmb	11 03 45.8	
	comp=Z,41nm,0.8s						
SCRK	**Sand Creek**	**27.13**	**49**	IAmb	IAmb	11 03 45.4	
	comp=Z,68nm,0.9s						
SCRK	**Sand Creek**	**27.13**	**49**	P	**P**	**11 03 34.9**	**-1.5**
	baz=275,SNR=59						
G26K	**Porcupine Rive**	**27.14**	**43**	IAmb	IAmb	11 03 46.8	
	comp=Z,88nm,0.9s						
G26K	**Porcupine Rive**	**27.14**	**43**	P	**P**	**11 03 36.3**	**+0.1**
	baz=269,SNR=39						
BMRM	**Bremner River**	**27.22**	**56**	IAmb	IAmb	11 03 53.6	
	comp=Z,58nm,0.8s						
BMRM	**Bremner River**	**27.22**	**56**	P	**P**	**11 03 36.5**	**-0.7**
	baz=280,SNR=22						
J26L	**Joseph Creek**	**27.28**	**48**	P	**P**	**11 03 35.3**	**-2.4**
	baz=274,SNR=20						
RAGM	**Ragged Mountai**	**27.29**	**57**	IAmb	IAmb	11 03 50.0	
	comp=Z,47nm,0.8s						
C27K	**Jago River**	**27.34**	**37**	IAmb	IAmb	11 03 48.1	
	comp=Z,87nm,0.9s						
C27K	**Jago River**	**27.34**	**37**	P	**P**	**11 03 37.5**	**-0.6**
	baz=264,SNR=17						
CN2	**Changchun**	**27.36**	**263**	*e*P	**P**	**11 03 37.0**	**-1.5**
CN2				*e*S	**S**	**11 08 12.1**	**-5.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,100nm,6.0s						
CN2				LR	LR		
	comp=Z,600nm,13.0s						
CN2				LR	LR		
	comp=Z,900nm,13.0s						
CN2				LR	LR		
	comp=Z,1µm,13.0s						
I26K	**Coal Creek Min**	**27.41**	**46**	P	**P**	**11 03 37.8**	**-1.0**
	baz=273,SNR=5.8						
HMT	**Hamilton**	**27.50**	**57**	IAmb	IAmb	11 03 49.8	
	comp=Z,43nm,0.8s						
KAIM	**Kayak Island**	**27.51**	**58**	IAmb	IAmb	11 03 50.6	
	comp=Z,88nm,0.8s						
KAIM	**Kayak Island**	**27.51**	**58**	P	**P**	**11 03 39.1**	**-0.6**
	baz=282						
L26K	**Log Cabin Wild**	**27.51**	**51**	P	**P**	**11 03 39.0**	**-0.7**
	baz=277,SNR=13						
BOD	**Bodaibo**	**27.69**	**297**	*e*P	**P**	**11 03 39.4**	**-1.9**
BOD				pmax	pmax		
	comp=Z,25nm,1.1s						
M26K	**Nabesna, AK**	**27.75**	**53**	P	**P**	**11 03 42.0**	**+0.1**
	baz=278,SNR=16						
MCARA	**McCarthy VSAT**	**27.90**	**55**	IAmb	IAmb	11 04 05.5	
	comp=Z,36nm,0.8s						
MCARA	**McCarthy VSAT**	**27.90**	**55**	P	**P**	**11 03 42.8**	**-0.5**
	baz=280						
CRQM	**Cirque**	**27.96**	**56**	IAmb	IAmb	11 03 54.8	
	comp=Z,66nm,0.9s						
K27K	**Chicken**	**27.97**	**49**	P	**P**	**11 03 43.1**	**-0.7**
	baz=276						
G27K	**Doyon Strip**	**27.98**	**43**	P	**P**	**11 03 43.7**	**-0.1**
	baz=271,SNR=18						
CRQE	**Cirque**	**27.99**	**56**	P	**P**	**11 03 43.9**	**-0.3**
	baz=281,SNR=11						
E27K	**Coleen River**	**28.01**	**40**	P	**P**	**11 03 43.7**	**-0.4**
	baz=269,SNR=6.7						
I27K	**Kandik River**	**28.04**	**46**	P	**P**	**11 03 43.0**	**-1.5**
	baz=274,SNR=9.8						
H27K	**Steamboat Moun**	**28.04**	**44**	IAmb	IAmb	11 03 55.1	
	comp=Z,46nm,0.8s						
H27K	**Steamboat Moun**	**28.04**	**44**	P	**P**	**11 03 44.4**	**-0.1**
	baz=272,SNR=33						
L27K	**Beaver Creek,**	**28.19**	**51**	P	**P**	**11 03 45.8**	**-0.1**
L27K				IAmb	IAmb	11 03 56.5	
	comp=Z,96nm,0.9s						
L27K	**Beaver Creek,**	**28.19**	**51**	P	**P**	**11 03 46.0**	**+0.1**
	baz=278,SNR=66						
BCAR	**Beaver Creek A**	**28.21**	**51**	P	**P**	**11 03 46.0**	**0.0**
M27K	**Edge Creek, AK**	**28.28**	**52**	IAmb	IAmb	11 03 57.6	
	comp=Z,40nm,0.8s						
M27K	**Edge Creek, AK**	**28.28**	**52**	P	**P**	**11 03 47.2**	**+0.5**
	baz=279,SNR=39						
D27M	**Malcolm River**	**28.28**	**38**	IAmb	IAmb	11 03 56.6	
	comp=Z,52nm,0.8s						
D27M	**Malcolm River**	**28.28**	**38**	P	**P**	**11 03 46.2**	**-0.4**
	baz=267						
F28M	**Old Crow**	**28.66**	**41**	IAmb	IAmb	11 04 00.3	
	comp=Z,42nm,0.8s						
F28M	**Old Crow**	**28.66**	**41**	P	**P**	**11 03 49.9**	**0.0**
	baz=271,SNR=22						
MESA	**MESA**	**28.66**	**57**	IAmb	IAmb	11 04 01.2	
	comp=Z,50nm,0.8s						
MESA	**MESA**	**28.66**	**57**	P	**P**	**11 03 50.4**	**+0.2**
	baz=283,SNR=7.8						
YAH	**Yahtse**	**28.72**	**57**	IAmb	IAmb	11 04 01.3	
	comp=Z,60nm,0.8s						
BVCY	**Beaver Creek**	**28.73**	**52**	P	**P**	**11 03 50.8**	**+0.2**
	baz=280,SNR=47						
I28M	**Miner Creek**	**28.75**	**46**	P	**P**	**11 03 50.3**	**-0.5**
	baz=275,SNR=20						
E28M	**Babbage River**	**28.78**	**39**	P	**P**	**11 03 50.8**	**-0.1**
E28M	**Babbage River**	**28.78**	**39**	P	**P**	**11 03 50.5**	**-0.4**
	baz=270,SNR=5.2						
CTG	**Chitna Glacier**	**28.79**	**55**	P	**P**	**11 03 51.3**	**0.0**
	baz=282,SNR=14						
CTGM	**Chitina Glacie**	**28.79**	**55**	P	**P**	**11 03 51.4**	**+0.1**

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CTGM                                IAmb    IAmb      11 04 02.0
      comp=Z,39nm,0.8s
LOGN  Logan Glacier     28.98  55   IAmb    IAmb      11 04 03.9
      comp=Z,44nm,0.8s
YUK3  Moose Creek       29.04  53   P       P         11 03 53.3 -0.2
      baz=281,SNR=27
DAWY  Dawson            29.14  49   P       P         11 03 54.0 -0.2
DAWY  Dawson            29.14  49   P       P         11 03 53.7 -0.6
      baz=278,SNR=38
H29M  Whitestone        29.32  44   P       P         11 03 55.9  0.0
H29M                                IAmb    IAmb      11 04 06.3
      comp=Z,48nm,0.7s
H29M  Whitestone        29.32  44   P       P         11 03 55.8  0.0
      baz=275,SNR=29
O28M  Mount Upton       29.38  55   IAmb    IAmb      11 04 07.7
      comp=Z,55nm,0.8s
O28M  Mount Upton       29.38  55   P       P         11 03 56.5 -0.1
      baz=283,SNR=49
E29M  Blow River        29.38  40   P       P         11 03 56.3  0.0
E29M  Blow River        29.38  40   P       P         11 03 56.3  0.0
      baz=272,SNR=11
G29M  Pine Creek        29.41  43   IAmb    IAmb      11 04 07.5
      comp=Z,83nm,0.8s
G29M  Pine Creek        29.41  43   P       P         11 03 56.9 +0.4
      baz=274,SNR=43
I29M  Ogilvie Camp,     29.43  46   P       P         11 03 56.6 -0.2
I29M  Ogilvie Camp,     29.43  46   P       P         11 03 56.2 -0.7
      baz=277,SNR=29
YUK8  Steele Glacier    29.46  54   P       P         11 03 57.2 -0.2
      baz=283,SNR=23
PCA   Pinnacle          29.50  57   IAmb    IAmb      11 04 08.2
      comp=Z,60nm,0.8s
PINM  Pinnacle          29.51  57   P       P         11 03 57.1 -0.4
      baz=284,SNR=19
J29N  Klondike Camp     29.59  48   P       P         11 03 57.6 -0.6
      baz=278
M29M  Somme Creek       29.82  52   IAmb    IAmb      11 04 11.5
      comp=Z,48nm,0.7s
M29M  Somme Creek       29.82  52   P       P         11 04 00.7 +0.3
      baz=282,SNR=36
L29M  L29M              29.85  50   P       P         11 04 01.2 +0.7
      baz=281,SNR=99
EPYK  Eagle Plains      29.97  44   P       P         11 04 01.4 -0.2
      baz=276,SNR=22
YUK4  Talbot Arm        29.98  54   P       P         11 04 01.8  0.0
      baz=283,SNR=25
K29M  Barlow Dome       29.99  49   P       P         11 04 01.5 -0.4
      baz=280,SNR=14
PNL   Peninsula         30.04  57   P       P         11 04 01.4 -0.8
PNL   Peninsula         30.04  57   P       P         11 04 01.7 -0.4
      baz=286,SNR=12
G30M  tAoh Zraii Nji    30.11  42   IAmb    IAmb      11 04 12.7
      comp=Z,36nm,0.7s
G30M  tAoh Zraii Nji    30.11  42   P       P         11 04 02.3 -0.4
      baz=276,SNR=14
KS19  Wonju Array Si    30.20 251   P       P         11 04 04.2 +0.4
KS19                                IAmb    IAmb      11 04 07.0
      comp=Z,64nm,1.0s
KSRS  Korea Array       30.20 250   P       P         11 04 05.1 +1.3
      comp=Z,38nm,0.8s,baz=43,slow=9.2,SNR=200
KSRS                                PcP     PcP       11 07 05.3 +1.0
      comp=Z,2.7nm,0.9s,baz=9.9,slow=2.9,SNR=6.3
KSRS                                LR      LR        11 16 08.2
      comp=Z,323nm,19.9s,baz=55,slow=36
      comp=Z,38nm,0.8s
YUK6  Outpost Mounta    30.20  55   P       P         11 04 03.7 -0.2
      baz=284,SNR=22
F30M  Barrier River     30.22  41   IAmb    IAmb      11 04 14.5
      comp=Z,58nm,1.1s
F30M  Barrier River     30.22  41   P       P         11 04 03.6 -0.1
      baz=275,SNR=9.0
KSAR  Wonju Array Be    30.23 250   P       P         11 04 05.4 +1.3
KSAR  Wonju Array Be    30.23 250   P       P         11 04 05.4 +1.3
I30M  Mount Dempster    30.26  46   IAmb    IAmb      11 04 14.4
      comp=Z,55nm,0.7s
I30M  Mount Dempster    30.26  46   P       P         11 04 03.6 -0.6
      baz=278,SNR=44
O29M  Mount Kennedy     30.27  56   P       P         11 04 04.4 +0.1
      baz=285,SNR=8.1
J30M  Hart River        30.38  47   P       P         11 04 04.5 -0.7
J30M  Hart River        30.38  47   P       P         11 04 04.4 -0.9
      baz=280,SNR=12
HYT   Haines Junctio    30.64  55   P       P         11 04 07.6  0.0
HYT                                 IAmb    IAmb      11 04 18.8
      comp=Z,40nm,0.7s
HYT   Haines Junctio    30.64  55   P       P         11 04 07.9 +0.3
      baz=285,SNR=29
N30M  Aishikik Lake     30.68  53   P       P         11 04 07.6 -0.3
      baz=284,SNR=9.7
MAYO  Mayo, Yukon       30.74  49   IAmb    IAmb      11 04 35.3
      comp=Z,53nm,0.8s
MAYO  Mayo, Yukon       30.74  49   P       P         11 04 08.4  0.0
      baz=282,SNR=9.2
P29M  Windy Craggy      30.86  57   P       P         11 04 09.8 +0.4
      baz=287,SNR=19
G31M  Satah River       30.88  42   P       P         11 04 08.6 -0.8
      baz=277,SNR=8.2
H31M  Peel River        31.01  45   IAmb    IAmb      11 04 20.7
      comp=Z,30nm,0.9s
H31M  Peel River        31.01  45   P       P         11 04 10.1 -0.6
      baz=279,SNR=10
INK   Inuvik            31.01  40   IAmb    IAmb      11 04 20.8
      comp=Z,39nm,0.7s
INK   Inuvik            31.01  40   LR      LR        11 18 36.2
      comp=Z,226nm,18.5s,baz=288,slow=40
INK   Inuvik            31.01  40   P       P         11 04 10.6  0.0
INK                                 pmax    pmax
      comp=Z,60nm,0.8s
INK   Inuvik            31.01  40   P       P         11 04 10.4 -0.2
      baz=276,SNR=12
F31M  Tsiigehtchic      31.02  41   IAmb    IAmb      11 04 20.6
      comp=Z,36nm,0.7s
F31M  Tsiigehtchic      31.02  41   P       P         11 04 10.2 -0.5
      baz=277,SNR=20
P30M  Million Dollar    31.09  56   P       P         11 04 11.3 -0.2
      baz=287
N31M  Braeburn, Yuko    31.28  53   P       P         11 04 13.5 +0.4
      baz=285,SNR=13
TJN   Taejon            31.30 250d iP       P         11 04 15.1 +1.6
O30N  Mendenhall        31.32  54   P       P         11 04 13.7 +0.1
      baz=286,SNR=17
PLBC  Pleasant Camp     31.57  57   P       P         11 04 15.9 +0.2
      baz=288
JTU   Tsushima          31.60 245   P       P         11 04 17.7 +1.5
M31M  Drury Creek, Y    31.73  51   IAmb    IAmb      11 04 28.6
      comp=Z,56nm,0.7s
M31M  Drury Creek, Y    31.73  51   P       P         11 04 17.8 +0.7
      baz=285,SNR=48
WHY   Whitehorse        31.93  54   IAmb    IAmb      11 04 31.2
      comp=Z,58nm,0.8s
WHY   Whitehorse        31.93  54   P       P         11 04 19.6 +0.7
      baz=287,SNR=23
JNU   Nakatsue          31.93 241   IAmb    IAmb      11 04 23.9
      comp=Z,44nm,1.4s
JNU   Nakatsue          31.93 241   P       P         11 04 20.4 +1.2
      comp=Z,11nm,0.8s,baz=234,slow=7.1,SNR=9.2
JNU                                 LR      LR        11 16 48.7
      comp=Z,343nm,20.8s,baz=30,slow=36
      comp=Z,11nm,0.8s
JNU   Nakatsue          31.93 241   P       P         11 04 20.7 +1.6
SKAG  Skagway           32.08  57   P       P         11 04 19.9 -0.2
SKAG                                IAmb    IAmb      11 04 32.6
      comp=Z,27nm,0.8s
SKAG  Skagway           32.08  57   P       P         11 04 20.8 +0.7
      baz=289
S31K  Pelican           32.13  60   P       P         11 04 20.5 -0.1
      baz=290
FARO  Faro, Yukon       32.20  51   P       P         11 04 21.0 -0.2
FARO  Faro, Yukon       32.20  51   P       P         11 04 21.6 +0.4
      baz=286,SNR=17
BESE  Bessie Mountai    32.60  58   P       P         11 04 24.5 -0.3
BESE                                IAmb    IAmb      11 04 35.8
      comp=Z,29nm,0.8s
N32M  Quiet Lake        32.62  53   P       P         11 04 25.0 +0.1
      baz=287
DL2   Dalian            32.71 259   P       P         11 04 25.6 -0.2
DL2                                 S       S         11 09 46.6 +5.1
DL2                                 pmax    pmax
      comp=Z,48nm,1.0s
DL2                                 pmax    pmax
      comp=Z,190nm,8.8s
DL2                                 LR      LR
      comp=Z,710nm,13.9s
DL2                                 LR      LR
      comp=Z,930nm,14.1s
DL2                                 LR      LR
      comp=Z,770nm,17.6s
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P32M  Atlin             32.81  56   P       P         11 04 27.3 +0.7
      baz=289,SNR=6.7
R32K  Eaglecrest        32.87  58   IAmb    IAmb      11 04 39.1
      comp=Z,41nm,0.7s
R32K  Eaglecrest        32.87  58   P       P         11 04 27.9 +0.8
      baz=291,SNR=23
SIT   Sitka             32.91  61   IAmb    IAmb      11 04 40.2
      comp=Z,49nm,1.0s
SIT   Sitka             32.91  61   P       P         11 04 29.0 +1.6
SIT   Sitka             32.91  61   P       P         11 04 28.7 +1.3
      baz=292,SNR=7.6
JIS   Juneau Island     32.94  58   P       P         11 04 28.8 +1.2
MMPY  Sheldon Lake,     33.02  50   IAmb    IAmb      11 04 39.7
      comp=Z,38nm,0.8s
MMPY  Sheldon Lake,     33.02  50   P       P         11 04 29.2 +0.7
      baz=286,SNR=32
P33M  Teslin, Yukon     33.04  54   P       P         11 04 29.3 +0.7
      baz=289,SNR=17
S32K  Killisnoo         33.13  60   P       P         11 04 30.2 +0.9
      baz=292,SNR=5.3
A36M  Sachs Harbour     33.42  32   P       P         11 04 31.8 +0.1
A36M                                IAmb    IAmb      11 04 45.1
      comp=Z,36nm,0.8s
A36M  Sachs Harbour     33.42  32   P       P         11 04 31.6 -0.1
      baz=277
Q32M  Nakina River      33.73  56   IAmb    IAmb      11 04 46.6
      comp=Z,24nm,0.8s
Q32M  Nakina River      33.73  56   P       P         11 04 36.2 +1.4
      baz=291,SNR=19
R33M  Jennings River    34.20  55   IAmb    IAmb      11 04 50.5
      comp=Z,28nm,0.8s
R33M  Jennings River    34.20  55   P       P         11 04 40.1 +1.3
      baz=291,SNR=23
C36M  Paulatuk          34.24  37   P       P         11 04 38.5 -0.4
C36M                                IAmb    IAmb      11 04 48.8
      comp=Z,65nm,0.8s
C36M  Paulatuk          34.24  37   P       P         11 04 38.1 -0.7
      baz=282,SNR=9.1
U33K  Whale Pass        34.40  61   P       P         11 04 40.8 +0.5
      baz=295
WRAK  Wrangell Islan    34.67  61   IAmb    IAmb      11 04 56.0
      comp=Z,28nm,0.7s
WRAK  Wrangell Islan    34.67  61   P       P         11 04 44.2 +1.5
      baz=295,SNR=11
CRAG  Craig             34.67  63   P       P         11 04 45.0 +2.3
CRAG  Craig             34.67  63   P       P         11 04 43.9 +1.1
      baz=295
S34M  Telegraph Cree    34.67  58   IAmb    IAmb      11 04 54.5
      comp=Z,26nm,0.8s
S34M  Telegraph Cree    34.67  58   P       P         11 04 43.7 +0.9
      baz=293,SNR=16
TGTN  Hyland Airport    34.70  51   P       P         11 04 43.2 +0.2
      baz=290
WTLY  Watson Lake, Y    34.96  53   IAmb    IAmb      11 04 56.3
      comp=Z,33nm,0.8s
WTLY  Watson Lake, Y    34.96  53   P       P         11 04 45.8 +0.5
      baz=292,SNR=7.5
DLBC  Dease Lake        35.01  57   IAmb    IAmb      11 04 57.8
      comp=Z,39nm,0.8s
DLBC  Dease Lake        35.01  57   LR      LR        11 19 42.6
      comp=Z,323nm,19.5s,baz=303,slow=38
DLBC  Dease Lake        35.01  57   P       P         11 04 47.4 +1.7
      baz=293,SNR=27
T35M  Bob Quinn         35.49  59   IAmb    IAmb      11 05 02.4
      comp=Z,34nm,0.8s
T35M  Bob Quinn         35.49  59   P       P         11 04 52.0 +2.2
      baz=295,SNR=18
V35K  Ketchikan         35.51  62   P       P         11 04 51.3 +1.3
      baz=296
ULN   Ulaanbaatar       35.67 283   P       P         11 04 51.2 -0.4
ULN   Ulaanbaatar       35.67 283deP      P         11 04 52.9 +1.3
ULN                                 pmax    pmax
      comp=Z,5.0nm,0.8s
SONM  Songino Array     36.05 284   P       P         11 04 54.3 -0.6
SONM  Songino Array     36.05 284   P       P         11 04 54.1 -0.8
      comp=Z,4.7nm,0.7s,baz=60,slow=8.0,SNR=15
SONM                                PcP     PcP       11 07 21.5 +0.8
      comp=Z,3.1nm,0.7s,baz=58,slow=1.2,SNR=4.9
SONM                                LR      LR        11 21 03.0
      comp=Z,265nm,18.4s,baz=68,slow=39
      comp=Z,4.7nm,0.7s
NRIK  Noril'sk          36.12 324   P       P         11 04 55.1  0.0
NRIK  Noril'sk          36.12 324   P       P         11 04 54.1 -1.0
      comp=Z,14nm,0.9s,baz=91,slow=8.7,SNR=24
NRIK                                LR      LR        11 21 16.1
      comp=Z,683nm,18.3s,baz=74,slow=39
      comp=Z,14nm,0.9s
NRIK  Noril'sk          36.12 324c iP       P         11 04 54.5 -0.6
NRIK                                pmax    pmax
      comp=Z,21nm,1.0s
ZAK   Zakamensk         36.44 289  eP       P         11 04 58.1  0.0
ZAK                                 pmax    pmax
      comp=Z,7.0nm,1.2s
LIRD  Liard River Hi    36.49  54   P       P         11 04 59.2 +0.8
      baz=294,SNR=8.3
BEAVL Fort Liard        36.66  52   P       P         11 05 00.6 +0.8
      baz=294,SNR=11
TOAD  Toad River Com    37.13  54   P       P         11 05 05.1 +1.3
      baz=295,SNR=30
KOTAN Kotaneelee Air    37.14  52   P       P         11 05 05.0 +1.1
      baz=294
TIA   Tai'an            37.15 260   P       P         11 05 04.4 +0.2
TIA                                 S       S         11 10 50.2 +0.2
TIA                                 pmax    pmax
      comp=Z,22nm,1.0s
TIA                                 pmax    pmax
      comp=Z,140nm,4.2s
TIA                                 LR      LR
      comp=Z,270nm,18.8s
TIA                                 LR      LR
      comp=Z,570nm,18.8s
TIA                                 LR      LR
      comp=Z,640nm,20.1s
HHC   Hu-ho-hao-te      37.24 271  eP       P         11 05 03.8 -1.3
HHC                                 S       S         11 10 45.3 -6.1
HHC                                 pmax    pmax
      comp=Z,96nm,7.3s
HHC                                 LR      LR
      comp=Z,640nm,12.1s
HHC                                 LR      LR
      comp=Z,630nm,12.0s
HHC                                 LR      LR
      comp=Z,1μm,12.1s
HNS   HongShan          37.72 264  ⇑P       P         11 05 10.4 +1.5
HNS                                 S       S         11 11 00.7 +2.3
HNS                                 pmax    pmax
      comp=Z,43nm,1.0s
HNS                                 LR      LR
      comp=Z,1μm,13.1s
HNS                                 LR      LR
      comp=Z,270nm,14.3s
HNS                                 LR      LR
      comp=Z,840nm,13.3s
BTO   Baotou            38.29 271  eP       P         11 05 14.7 +0.7
BTO                                 pP      sP        11 05 19.2 +0.5
BTO                                 sP      pwP       11 05 21.8 -1.9
BTO                                 S       S         11 11 06.2 -1.2
BTO                                 sS      ScP       11 11 15.5 +0.9
BTO                                 SS      SnSn      11 13 44.9 -7.2
BTO                                 pmax    pmax
      comp=Z,43nm,1.8s
BTO                                 pmax    pmax
      comp=Z,210nm,4.3s
BTO                                 LR      LR
      comp=Z,2μm,12.6s
BTO                                 LR      LR
      comp=Z,2μm,13.0s
BTO                                 LR      LR
      comp=Z,2μm,12.8s
JOW   Kunigami          38.35 238   P       P         11 05 15.1 +0.6
      comp=Z,28nm,0.6s,baz=7.7,slow=9.1,SNR=12
JOW                                 LR      LR        11 21 14.1
      comp=Z,170nm,21.8s,baz=42,slow=36
      comp=Z,28nm,0.6s
BBB   Bella Bella       38.85  65   LR      LR        11 21 06.8
      comp=Z,186nm,18.9s,baz=294,slow=36
KRAR  Krasnoyarsk       39.06 302⇓eP      P         11 05 19.8 -0.2
NJ2   Nanjing           39.21 254  eP       P         11 05 21.4 -0.1
NJ2                                 pP      sP        11 05 25.8 -0.4
NJ2                                 S       S         11 11 26.0 +4.9
NJ2                                 pmax    pmax
      comp=Z,36nm,0.9s
NJ2                                 LR      LR
      comp=Z,410nm,16.1s
NJ2                                 LR      LR
      comp=Z,450nm,16.1s
NJ2                                 LR      LR
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      comp=Z,750nm,21.8s
EUNU  Eureka            39.77  15   IAmb    IAmb      11 05 26.9
      comp=Z,60nm,0.8s
YKAW3 Yellowknife Wh    40.19  45   IAmb    IAmb      11 05 39.8
      comp=Z,20nm,0.7s
YKA   Yellowknife Ar    40.22  45   P       P         11 05 29.3 -0.3
YKA   Yellowknife Ar    40.22  45   P       P         11 05 29.5 -0.1
      comp=Z,7.7nm,0.8s,baz=303,slow=8.4,SNR=54
YKA                                 PcP     PcP       11 07 33.6 +0.4
      comp=Z,2.0nm,0.7s,baz=310,slow=3.7,SNR=4.1
YKA                                 LR      LR        11 24 18.9
      comp=Z,270nm,18.3s,baz=282,slow=39
      comp=Z,7.7nm,0.8s
YKAW1 Yellowknife Wh    40.27  45   P       P         11 05 28.5 -1.5
YKAW1                               IAmb    IAmb      11 05 40.6
      comp=Z,17nm,0.8s
RES   Resolute Bay      40.85  24   LR      LR        11 23 25.6
      comp=Z,97nm,21.9s,baz=6.0,slow=38
RES   Resolute Bay      40.85  24   P       P         11 05 34.4 -0.3
RES                                 pmax    pmax
      comp=Z,31nm,0.9s
LYN   LuoYang           41.00 262   P       P         11 05 37.4 +1.0
LYN                                 pP      sP        11 05 41.3 +0.1
LYN                                 S       S         11 11 51.4 +3.5
LYN                                 sS      sS        11 11 55.5 +2.3
LYN                                 pmax    pmax
      comp=Z,82nm,1.0s
LYN                                 pmax    pmax
      comp=Z,240nm,3.8s
LYN                                 LR      LR
      comp=Z,800nm,21.0s
LYN                                 LR      LR
      comp=Z,450nm,20.3s
LYN                                 LR      LR
      comp=Z,410nm,22.3s
WHN   Wuhan             42.87 257  ⇓P       P         11 05 52.3 +0.6
WHN                                 pP      pwP       11 06 02.1 +0.4
WHN                                 sP      sP        11 06 04.7 +8.3
WHN                                 S       S         11 12 16.6 +1.1
WHN                                 pmax    pmax
      comp=Z,160nm,1.0s
WHN                                 LR      LR
      comp=Z,980nm,11.7s
WHN                                 LR      LR
      comp=Z,680nm,12.8s
WHN                                 LR      LR
      comp=Z,1μm,14.7s
XAN   Xi'an             43.42 265  ⇓P       P         11 05 56.4 +0.2
XAN                                 pmax    pmax
      comp=Z,20nm,1.4s
XAN                                 pmax    pmax
      comp=Z,120nm,5.1s
XAN                                 LR      LR
      comp=Z,620nm,19.9s
XAN                                 LR      LR
      comp=Z,680nm,19.9s
XAN                                 LR      LR
      comp=Z,420nm,19.9s
KIP   Kipapa            43.54 125  i P      P         11 05 58.1 +0.9
GUMO  Guam              43.78 208   LR      LR        11 22 12.4
      comp=Z,132nm,20.6s,baz=36,slow=33
NLWA  Neilton Lookou    43.82  69   IAmb    IAmb      11 06 11.1
      comp=Z,61nm,1.2s
NOR   Nord              43.96   0   P       P         11 05 59.2 -0.7
NOR                                 pmax    pmax
      comp=Z,10.0nm,1.3s
ZAA0  Zalesovo Array    44.09 303   P       P         11 06 00.4 -0.9
ZALV  Zalesovo Beam     44.09 303   P       P         11 06 00.1 -1.2
ZALV  Zalesovo Beam     44.09 303   P       P         11 06 00.1 -1.1
      comp=Z,1.3nm,0.4s,baz=45,slow=8.6,SNR=5.8
ZALV                                PcP     PP        11 07 44.6 +0.8
      comp=Z,1.2nm,0.4s,baz=90,slow=5.9,SNR=1.7
ZALV                                LR      LR        11 26 04.9
      comp=Z,266nm,19.4s,baz=47,slow=38
      comp=Z,1.3nm,0.4s
E03A  Lebam             44.50  69   P       P         11 06 04.9 +0.2
E03A                                IAmb    IAmb      11 06 16.8
      comp=Z,49nm,1.0s
SSLB  Suanglung         44.58 244   P       P         11 06 04.5 -1.1
YULB  Yu-li             44.73 243   P       P         11 06 06.7  0.0
YULB                                IAmb    IAmb      11 06 22.6
      comp=Z,28nm,0.9s
F03A  Seaside           44.89  70   IAmb    IAmb      11 06 19.3
      comp=Z,83nm,1.2s
LZH   Lanzhou           44.92 271  ⇓P       P         11 06 10.0 +1.7
LZH                                 sP      pwP       11 06 20.0 +1.8
LZH                                 S       S         11 12 48.6 +2.9
LZH                                 pmax    pmax
      comp=Z,88nm,0.9s
LZH                                 pmax    pmax
      comp=Z,220nm,4.5s
LZH                                 LR      LR
      comp=Z,1μm,12.9s
LZH                                 LR      LR
      comp=Z,810nm,13.2s
LZH                                 LR      LR
      comp=Z,1μm,13.6s
D05A  Enumclaw          44.96  68   IAmb    IAmb      11 06 20.1
      comp=Z,51nm,1.1s
GTA   Gaotai            44.98 278   P       P         11 06 10.2 +1.4
GTA                                 pP      pwP       11 06 20.0 +1.4
GTA                                 PcP     PcP       11 07 50.1 +0.4
GTA                                 S       S         11 12 47.9 +1.4
GTA                                 pmax    pmax
      comp=Z,47nm,1.0s
GTA                                 pmax    pmax
      comp=Z,160nm,5.1s
GTA                                 LR      LR
      comp=Z,550nm,13.4s
GTA                                 LR      LR
      comp=Z,820nm,14.5s
GTA                                 LR      LR
      comp=Z,1μm,12.7s
TPUB  Ta-pu             45.15 244   P       P         11 06 10.3 +0.2
TPUB                                IAmb    IAmb      11 06 13.0
      comp=Z,66nm,1.0s
LON   Longmire          45.33  68   P       P         11 06 10.8 -0.5
LON   Longmire          45.33  68   P       P         11 06 10.9 -0.5
LON                                 pmax    pmax
      comp=Z,17nm,1.4s
CNSH  ChangSha          45.47 256   P       P         11 06 13.2 +0.6
CNSH                                S       S         11 12 50.2 -3.2
CNSH                                pmax    pmax
      comp=Z,34nm,1.1s
CNSH                                LR      LR
      comp=Z,290nm,12.4s
CNSH                                LR      LR
      comp=Z,360nm,12.1s
CNSH                                LR      LR
      comp=Z,440nm,13.5s
LTY   Liberty           45.62  67   P       P         11 06 14.0 +0.3
KBS   Kingsbay          45.64 353   P       P         11 06 13.4  0.0
KBS                                 IAmb    IAmb      11 06 24.3
      comp=Z,42nm,1.1s
KBS   Kingsbay          45.64 353deP      P         11 06 14.0 +0.6
KBS                                 pmax    pmax
      comp=Z,38nm,1.0s
KBS   Kingsbay          45.64 353  eP       P         11 06 13.3  0.0
KBS                                 IAmb    IAmb      11 06 23.9
      comp=Z,38nm,1.1s
KBS   Kingsbay          45.64 353  i P      P         11 06 13.3 -0.1
B08A  Colville Reser    45.65  65   IAmb    IAmb      11 06 25.3
      comp=Z,42nm,0.9s
ENH   Enshi             45.85 261   P       P         11 06 16.0 +0.4
ENH   Enshi             45.85 261   P       P         11 06 16.2 +0.6
POIN  Pond Inlet        45.86  22   P       P         11 06 14.2 -0.8
SPA0  Spitsbergen Ar    45.98 351  eP       P         11 06 16.1  0.0
SPA0                                IAmb    IAmb      11 06 26.1
      comp=Z,161nm,0.8s
SPITS Spitsbergen Ar    45.98 351   P       P         11 06 15.9 -0.2
      comp=Z,93nm,0.8s,baz=100,slow=8.0,SNR=60
      comp=Z,93nm,0.8s
SPITS Spitsbergen Ar    45.98 351   P       P         11 06 15.8 -0.2
SPITS                               pmax    pmax
      comp=Z,175nm,0.9s
SPB2  Spitsbergen Ar    45.98 351   P       P         11 06 16.1  0.0
NEEM  North Greenlan    46.29  10  i P      P         11 06 17.9 -0.9
NEEM                                IAmb    IAmb      11 06 28.0
      comp=Z,38nm,1.0s
BUCK  Buck Mountain     46.30  72   IAmb    IAmb      11 06 30.8
      comp=Z,26nm,1.1s
BLKN  Baker Lake        46.30  36   P       P         11 06 18.0 -0.7
HOOD  Mount Hood Mea    46.31  70   P       P         11 06 19.3 +0.1
HOOD                                IAmb    IAmb      11 06 30.4
      comp=Z,58nm,1.1s
H04A  Detroit Lake      46.43  71   IAmb    IAmb      11 06 31.0
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       comp=Z,40nm,1.2s
J01E  Myrtle Point       46.44  73    IAmb   IAmb   11 06 31.8
       comp=Z,21nm,0.9s
E07A  Sunnyside          46.50  67    IAmb   IAmb   11 06 31.6
       comp=Z,29nm,1.0s
WAH2  Wahluke Slope      46.53  67    IAmb   IAmb   11 06 31.5
       comp=Z,30nm,0.9s
C09A  Chrisman Ranch     46.55  65    IAmb   IAmb   11 06 31.6
       comp=Z,40nm,1.1s
HAWA  Hanford            46.77  67    IAmb   IAmb   11 06 33.6
       comp=Z,31nm,1.0s
NEW   Newport            46.87  64    IAmb   IAmb   11 06 34.1
       comp=Z,28nm,1.1s
NEW   Newport            46.87  64    LR     LR     11 26 22.8
       comp=Z,244nm,19.4s,baz=312,slow=36
NEW   Newport            46.87  64    P      P      11 06 23.7 +0.3
NEW                                   pmax   pmax
       comp=Z,27nm,1.0s
I04A  Tendick Farm,      46.88  72    IAmb   IAmb   11 06 34.7
       comp=Z,28nm,1.0s
F07A  Phinny Hill Vi     46.88  68    IAmb   IAmb   11 06 34.7
       comp=Z,45nm,0.8s
I05D  Terrebonne, OR     47.11  70    IAmb   IAmb   11 06 36.5
       comp=Z,24nm,1.1s
HSPB  Hornsund (broa     47.13 351  eP     P      11 06 25.3 +0.3
ILON  Igloolik, Nuna     47.27  26    P      P      11 06 25.9 -0.3
ILON                                  IAmb   IAmb   11 06 36.0
       comp=Z,21nm,0.9s
BBOR  Butler Butte       47.32  73    IAmb   IAmb   11 06 38.9
       comp=Z,44nm,1.3s
E09A  Wood Farm, Sta     47.44  66    IAmb   IAmb   11 06 38.5
       comp=Z,47nm,1.0s
PINE  Pine Mountain      47.69  71    IAmb   IAmb   11 06 41.6
       comp=Z,29nm,1.0s
J05D  Fort Rock, OR      47.86  71    IAmb   IAmb   11 06 43.0
       comp=Z,50nm,1.0s
ZSN   Zaisan             48.01 296  eP     P      11 06 31.6 -0.7
ZSN                                   pmax   pmax
       comp=Z,22nm,0.9s
ZSN   Zaisan             48.01 296  eP     P      11 06 31.7 -0.7
       comp=Z,22nm,0.9s
KULLO Kullorsuaq         48.06  14 i  P      P      11 06 31.4 -0.8
KULLO                                 IAmb   IAmb   11 06 42.1
       comp=Z,44nm,0.9s
YBH   Yreka Blue Hor     48.06  74    P      P      11 06 34.0 +1.1
YBH   Yreka Blue Hor     48.06  74    P      P      11 06 34.0 +1.1
YBH                                   pmax   pmax
       comp=Z,15nm,0.9s
I07A  Izee               48.28  70    P      P      11 06 34.3 -0.3
CD2   Chengdu            48.68 267 ⇓  P      P      11 06 38.8 +1.1
CD2                                   S      S      11 13 41.3 +2.0
CD2                                   pmax   pmax
       comp=Z,80nm,1.0s
CD2                                   pmax   pmax
       comp=Z,270nm,3.5s
CD2                                   LR     LR
       comp=Z,290nm,13.3s
CD2                                   LR     LR
       comp=Z,440nm,12.1s
DAG   Danmarks Havn      48.80   1    P      P      11 06 37.4 -0.5
DAG                                   pmax   pmax
       comp=Z,57nm,1.1s
DAG   Danmarks Havn      48.80   1 i  P      P      11 06 37.0 -0.9
DAG                                   IAmb   IAmb   11 06 47.8
       comp=Z,44nm,0.9s
WMQ   Urumqi             48.87 291  eP     P      11 06 40.4 +1.4
WMQ                                   sP     pwP    11 06 49.9 +1.0
WMQ                                   pmax   pmax
       comp=Z,59nm,1.1s
WMQ                                   pmax   pmax
       comp=Z,210nm,4.7s
WMQ                                   LR     LR
       comp=Z,390nm,12.3s
WMQ                                   LR     LR
       comp=Z,320nm,22.3s
WMQ                                   LR     LR
       comp=Z,260nm,22.5s
BMO   Blue Mountains     48.96  67    IAmb   IAmb   11 06 50.7
       comp=Z,24nm,0.9s
KURK  Kurchatov          49.07 303    P      P      11 06 39.6 -0.7
KURK  Kurchatov          49.07 303d iP     P      11 06 39.9 -0.5
KURK                                  pmax   pmax
       comp=Z,124nm,1.3s
KURBB Kurchatov Arra     49.18 303    P      P      11 06 40.9 -0.3
       comp=Z,45nm,0.8s,baz=56,slow=7.8,SNR=161
KURBB                                 LR     LR     11 29 15.4
       comp=Z,543nm,18.6s,baz=172,slow=38
       comp=Z,45nm,0.8s
KURBB Kurchatov Arra     49.18 303    P      P      11 06 40.6 -0.6
HATC  Hat Creek Radi     49.38  74    IAmb   IAmb   11 07 06.5
       comp=Z,39nm,1.1s
MSO   Missoula           49.44  63    IAmb   IAmb   11 06 54.1
       comp=Z,32nm,1.2s
UPNV  Upernavik          49.77  15 i  P      P      11 06 44.0 -1.4
UPNV                                  IAmb   IAmb   11 06 54.4
       comp=Z,35nm,0.9s
MK31  Makanchi Array     49.78 297deP     P      11 06 45.3 -0.6
MKAR  Makanchi Array     49.78 297    P      P      11 06 45.1 -0.8
MKAR  Makanchi Array     49.78 297    P      P      11 06 45.3 -0.6
       comp=Z,11nm,0.8s,baz=58,slow=7.5,SNR=90
MKAR                                  PcP    PcP    11 08 04.6 -1.9
       comp=Z,3.2nm,0.8s,baz=52,slow=9.3,SNR=1.1
MKAR                                  LR     LR     11 29 25.2
       comp=Z,218nm,18.8s,baz=26,slow=38
       comp=Z,11nm,0.8s
MKAR  Makanchi Array     49.78 297    P      P      11 06 45.1 -0.8
WVOR  Wild Horse Val     49.85  71    P      P      11 06 46.9 +0.3
MAKZ  Makanchi           49.93 297    P      P      11 06 46.6 -0.4
MAKZ                                  IAmb   IAmb   11 06 47.8
       comp=Z,48nm,1.2s
MAKZ  Makanchi           49.93 297    P      P      11 06 45.6 -1.4
FFC   Flin Flon          50.04  49    P      P      11 06 48.0 +0.3
FFC   Flin Flon          50.04  49    P      P      11 06 48.0 +0.3
FFC                                   pmax   pmax
       comp=Z,22nm,0.9s
GOMU  GeErMu             50.06 278    P      P      11 06 48.3 -0.3
GOMU                                  S      S      11 13 57.4 -1.8
GOMU                                  SS     SS     11 17 32.9 +1.0
GOMU                                  pmax   pmax
       comp=Z,30nm,1.2s
GOMU                                  pmax   pmax
       comp=Z,240nm,4.6s
GOMU                                  LR     LR
       comp=Z,660nm,13.4s
GOMU                                  LR     LR
       comp=Z,770nm,11.6s
GOMU                                  LR     LR
       comp=Z,1µm,11.8s
GYA   Guiyang            50.35 260    P      P      11 06 52.0 +1.5
GYA                                   S      S      11 14 04.1 +1.2
GYA                                   pmax   pmax
       comp=Z,53nm,1.3s
GYA                                   pmax   pmax
       comp=Z,310nm,4.4s
GYA                                   LR     LR
       comp=Z,390nm,11.6s
GYA                                   LR     LR
       comp=Z,490nm,13.6s
GYA                                   LR     LR
       comp=Z,440nm,23.4s
FCC   Fort Churchill     50.60  41    P      P      11 06 51.6 -0.1
FCC                                   IAmb   IAmb   11 07 02.2
       comp=Z,43nm,0.8s
FCC   Fort Churchill     50.60  41    P      P      11 06 51.7 -0.1
FCC                                   pmax   pmax
       comp=Z,43nm,0.8s
MPK   Martis Peak        51.22  75    IAmb   IAmb   11 07 08.7
       comp=Z,49nm,1.0s
DBG   Daneborg           51.26   2 i  P      P      11 06 55.8 -0.8
DBG                                   IAmb   IAmb   11 07 06.2
       comp=Z,29nm,0.9s
BVA0  Borovoye Array     51.41 310 i  P      P      11 06 57.6 -0.4
BVAR  Borovoye Array     51.41 310    P      P      11 06 57.8 -0.3
       comp=Z,7.5nm,0.6s,baz=59,slow=8.8,SNR=37
BVAR                                  PcP    PcP    11 08 11.7 -0.6
       comp=Z,6.6nm,0.8s,baz=315,slow=0.2,SNR=4.2
BVAR                                  LR     LR     11 31 47.5
       comp=Z,571nm,18.5s,baz=42,slow=40
       comp=Z,7.5nm,0.6s
BRVK  Borovoye           51.43 310    P      P      11 06 57.7 -0.5
BRVK                                  IAmb   IAmb   11 07 08.7
       comp=Z,62nm,1.4s
BRVK  Borovoye           51.43 310ceP     P      11 06 57.5 -0.7
BRVK                                  pmax   pmax
       comp=Z,36nm,1.7s
PNTR  Pine Nut           51.60  74    IAmb   IAmb   11 07 17.5
       comp=Z,33nm,0.9s
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HAMF  Hammerfest         51.87 344  eP     P      11 06 59.6 -1.6
SUMG  Summit             52.04   9    P      P      11 07 02.9 -0.1
SUMG                                  pmax   pmax
       comp=Z,46nm,1.2s
SUMG  Summit             52.04   9 i  P      P      11 07 02.1 -0.9
SUMG                                  IAmb   IAmb   11 07 13.2
       comp=Z,64nm,1.2s
WAKR  Walker             52.10  75    IAmb   IAmb   11 07 15.5
       comp=Z,25nm,0.8s
LVZ   Lovozero           52.21 338ceP     P      11 07 03.4 -0.4
LVZ                                   pmax   pmax
       comp=Z,19nm,1.1s
YHB   Horse Butte        52.26  64    IAmb   IAmb   11 07 15.9
       comp=Z,35nm,0.9s
BRZS  Berezniki          52.41 305  eP     P      11 07 05.1 -0.5
BRZS  Berezniki          52.41 305  eP     P      11 07 05.1 -0.5
YNR   Norris Junctio     52.55  63    IAmb   IAmb   11 07 19.3
       comp=Z,36nm,1.2s
ARA0  ARCESS Array S     52.55 343  eP     P      11 07 05.3 -1.0
ARA0                                  IAmb   IAmb   11 07 16.5
       comp=Z,25nm,1.0s
ARCES ARCESS Array B     52.55 343    P      P      11 07 05.3 -1.0
ARCES ARCESS Array B     52.55 343    P      P      11 07 05.5 -0.9
       comp=Z,7.1nm,0.8s,baz=27,slow=11,SNR=16
       comp=Z,7.1nm,0.8s
ARCES ARCESS Array B     52.55 343    P      P      11 07 05.3 -1.0
ARCES                                 pmax   pmax
       comp=Z,21nm,1.0s
YNE   Yellowstone No     52.70  63    IAmb   IAmb   11 07 19.1
       comp=Z,29nm,0.9s
APA   Apatity            52.75 339⇓iP     P      11 07 03.0 -4.8
APA                                   pmax   pmax
       comp=Z,6.0nm,0.8s
APA                                   MLR    MLR
       comp=Z,600nm,11.0s
NVAR  Mina Array Bea     52.78  74    P      P      11 07 09.8 +1.0
NVAR  Mina Array Bea     52.78  74    P      P      11 07 09.2 +0.4
       comp=Z,5.8nm,0.7s,baz=303,slow=7.3,SNR=42
NVAR                                  PcP    PcP    11 08 18.9 +0.8
       comp=Z,3.6nm,0.7s,baz=281,slow=5.0,SNR=4.8
NVAR                                  LR     LR     11 28 39.4
       comp=Z,105nm,18.3s,baz=328,slow=35
       comp=Z,5.8nm,0.7s
LHV   Little Huntoon     52.80  74    IAmb   IAmb   11 07 20.9
       comp=Z,46nm,1.1s
YMP   Mirror Lake Pl     52.81  63    IAmb   IAmb   11 07 20.4
       comp=Z,31nm,0.9s
ELK   Elko               52.86  70    P      P      11 07 10.3 +1.0
SVE   Sverdlovsk         52.87 318  eP     P      11 07 09.3 +0.5
SVE                                   pmax   pmax
       comp=Z,43nm,1.1s
SVE                                   pmax   pmax
       comp=Z,981nm,20.0s
TDK   Taldyqorghan       52.99 298  eP     P      11 07 09.3 -0.6
TDK                                   pmax   pmax
       comp=Z,15nm,0.6s
TDK   Taldyqorghan       52.99 298  eP     P      11 07 09.4 -0.6
       comp=Z,14nm,0.6s
RLMT  Red Lodge          53.00  62    IAmb   IAmb   11 07 21.7
       comp=Z,46nm,0.8s
Q09A  Carvers            53.13  73    IAmb   IAmb   11 07 34.7
       comp=Z,57nm,0.9s
PZH   PanZhiHua          53.15 265    P      P      11 07 12.2 +0.8
PZH                                   S      S      11 14 43.9 +2.5
PZH                                   ScS    ScS    11 16 58.9 -1.6
PZH                                   pmax   pmax
       comp=Z,30nm,1.2s
PZH                                   pmax   pmax
       comp=Z,210nm,4.5s
PZH                                   LR     LR
       comp=Z,190nm,14.3s
PZH                                   LR     LR
       comp=Z,270nm,12.2s
PZH                                   LR     LR
       comp=Z,320nm,12.7s
JETT  Jettan, Norway     53.35 345  eP     P      11 07 11.8 -0.4
JETT                                  IAmb   IAmb   11 07 21.8
       comp=Z,83nm,1.4s
KTK1  Kautokeino         53.40 344  eP     P      11 07 11.9 -0.6
KTK1                                  IAmb   IAmb   11 07 22.9
       comp=Z,45nm,0.9s
LAO   LASA Array         53.46  59    IAmb   IAmb   11 07 24.7
       comp=Z,56nm,1.1s
HVU   Hansel Valley      53.47  67    IAmb   IAmb   11 07 25.2
       comp=Z,24nm,0.8s
PDGK  Podgornoye         53.58 295    P      P      11 07 13.4 -1.1
KMI   Kunming            53.63 263    P      P      11 07 16.3 +1.2
KMI                                   S      S      11 14 50.7 +2.5
KMI                                   pmax   pmax
       comp=Z,45nm,1.2s
KMI                                   pmax   pmax
       comp=Z,180nm,3.7s
KMI                                   LR     LR
       comp=Z,270nm,13.4s
KMI                                   LR     LR
       comp=Z,350nm,13.4s
KMI                                   LR     LR
       comp=Z,260nm,21.0s
SHLS  Shalkode           53.72 295  eP     P      11 07 13.2 -2.2
SHLS                                  pmax   pmax
       comp=Z,20nm,1.0s
SHLS  Shalkode           53.72 295  eP     P      11 07 13.2 -2.2
       comp=Z,20nm,1.0s
OTUK  Ortayu             53.77 304    P      P      11 07 14.7 -0.9
KPKS  Kokpek             53.91 296  eP     P      11 07 16.3 -0.5
KPKS  Kokpek             53.91 296  eP     P      11 07 16.4 -0.5
UZB   Uzynbulak          53.95 296  eP     P      11 07 16.4 -0.8
UZB   Uzynbulak          53.95 296  eP     P      11 07 16.4 -0.8
ARTI  Arti               54.05 319    P      P      11 07 17.5  0.0
ARTI  Arti               54.05 319    LR     LR     11 33 53.2
       comp=Z,429nm,18.1s,baz=44,slow=40
ARTI  Arti               54.05 319c iP     P      11 07 17.2 -0.3
ARTI                                                11 08 25.9
ARTI                                                11 09 22.1
ARTI                                  S      S      11 14 53.2 +0.5
ARTI                                                11 17 04.9
ARTI                                  SS     SS     11 18 32.6 -0.8
ARTI                                  pmax   pmax
       comp=Z,56nm,1.0s
ARTI                                  MLR    MLR
       comp=Z,446nm,16.0s
HWUT  Hardware Ranch     54.24  67    IAmb   IAmb   11 07 31.0
       comp=Z,26nm,0.9s
ZHN   Zhinishke          54.25 296  eP     P      11 07 18.6 -0.7
ZHN                                   pmax   pmax
       comp=Z,16nm,1.2s
ZHN   Zhinishke          54.25 296  eP     P      11 07 18.7 -0.7
       comp=Z,16nm,1.2s
GRAC  Grapevine Rang     54.32  75    IAmb   IAmb   11 07 32.0
       comp=Z,20nm,0.8s
SATY  Saty               54.34 296  eP     P      11 07 19.2 -0.8
SATY                                  pmax   pmax
       comp=Z,29nm,1.6s
SATY  Saty               54.34 296  eP     P      11 07 19.2 -0.8
       comp=Z,29nm,1.6s
R11B  Troy Canyon, C     54.35  72    IAmb   IAmb   11 07 31.7
       comp=Z,23nm,1.0s
QIZ   Qiongzhong         54.42 252    P      P      11 07 21.9 +1.2
QIZ                                   S      S      11 15 02.3 +3.8
QIZ                                   pmax   pmax
       comp=Z,20nm,1.2s
QIZ                                   pmax   pmax
       comp=Z,230nm,5.2s
QIZ                                   LR     LR
       comp=Z,410nm,12.3s
QIZ                                   LR     LR
       comp=Z,400nm,13.2s
BW06  Boulder Array      54.49  64    IAmb   IAmb   11 07 32.4
       comp=Z,29nm,1.0s
PD31  Pinedale Array     54.49  64    IAmb   IAmb   11 07 32.4
       comp=Z,29nm,1.0s
PDAR  Pinedale Array     54.49  64    P      P      11 07 20.9 -0.3
PDAR  Pinedale Array     54.49  64    P      P      11 07 21.7 +0.5
       comp=Z,4.1nm,0.8s,baz=304,slow=2.0,SNR=34
       comp=Z,4.1nm,0.8s
JMIC  Jan Mayen          54.53 357    LR     LR     11 29 34.1
       comp=Z,53nm,19.7s,baz=40,slow=35
DUG   Dugway, Tooele     54.56  69    IAmb   IAmb   11 07 33.4
       comp=Z,38nm,0.9s
BCW   Bitter Crk WRg     54.64  78    IAmb   IAmb   11 07 34.3
       comp=Z,43nm,1.2s
TCUT  Toone Canyon       54.67  67    IAmb   IAmb   11 07 34.2
       comp=Z,24nm,0.9s
PRZ   Przheval'sk        54.74 295    IAmb   IAmb   11 07 34.2
       comp=Z,52nm,1.2s
MDOK  Medeo              54.97 297  eP     P      11 07 23.9 -0.7
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MDOK  Medeo              54.97 297  eP     P      11 07 23.9 -0.7
TPNV  Topopah Spring     54.98  74    IAmb   IAmb   11 07 36.5
       comp=Z,59nm,0.9s
FRB   Frobisher Bay      54.98  26    LR     LR     11 34 34.3
       comp=Z,180nm,18.3s,baz=316,slow=40
AAA   Alma-Ata           55.01 297  eP     P      11 07 24.1 -0.7
AAA                                   pmax   pmax
       comp=Z,30nm,1.0s
AAA   Alma-Ata           55.01 297  eP     P      11 07 24.1 -0.7
       comp=Z,30nm,1.0s
JLU   Jordanelle         55.01  68    IAmb   IAmb   11 07 36.6
       comp=Z,26nm,1.0s
SCO   Scoresbysund       55.05   3 i  P      P      11 07 24.2 -0.4
SCO                                   IAmb   IAmb   11 07 36.7
       comp=Z,17nm,0.9s
TNSS  Tian-Shan          55.11 297  eP     P      11 07 24.8 -1.1
TNSS  Tian-Shan          55.11 297  eP     P      11 07 24.9 -1.1
PSUT  Pine Spring        55.18  71    IAmb   IAmb   11 07 37.9
       comp=Z,31nm,0.9s
BTLS  Baital             55.18 300  eP     P      11 07 25.6 -0.2
BTLS  Baital             55.18 300  eP     P      11 07 25.6 -0.2
WUS   Wushi              55.22 294    IAmb   IAmb   11 07 37.5
       comp=Z,40nm,1.0s
ICESG Greenland Ices     55.28  10 i  P      P      11 07 25.8 -0.9
ICESG                                 IAmb   IAmb   11 07 36.2
       comp=Z,43nm,1.2s
GWY   Greenwater Val     55.30  75    IAmb   IAmb   11 07 38.6
       comp=Z,48nm,0.9s
MPU   Maple Canyon       55.33  68    IAmb   IAmb   11 07 39.0
       comp=Z,42nm,0.9s
BSUT  Blindstream Ca     55.43  67    IAmb   IAmb   11 07 40.1
       comp=Z,39nm,1.0s
STEI  Steigen            55.59 346  eP     P      11 07 27.8 -0.6
KIRV  Kirov              55.62 325    LR     LR     11 34 46.9
       comp=Z,391nm,18.0s,baz=34,slow=40
KIRV  Kirov              55.62 325c iP     P      11 07 28.9 +0.1
LOF   Lofoten            55.62 347  eP     P      11 07 27.1 -1.6
LOF                                   IAmb   IAmb   11 07 38.6
       comp=Z,62nm,1.1s
SFJD  Kangerlussuaq      55.82  16    P      P      11 07 28.9 -1.2
SFJD  Kangerlussuaq      55.82  16    LR     LR     11 34 17.0
       comp=Z,111nm,18.4s,baz=346,slow=39
SFJD  Kangerlussuaq      55.82  16    P      P      11 07 28.9 -1.2
SFJD                                  pmax   pmax
       comp=Z,26nm,1.2s
ULM   Lac du Bonnet      55.83  50    P      P      11 07 30.1 -0.3
ULM                                   IAmb   IAmb   11 07 41.1
       comp=Z,37nm,1.1s
ULM   Lac du Bonnet      55.83  50    P      P      11 07 31.2 +0.8
       comp=Z,7.3nm,0.8s,baz=320,slow=7.0,SNR=14
ULM                                   LR     LR     11 31 45.1
       comp=Z,328nm,20.9s,baz=322,slow=36
       comp=Z,7.3nm,0.8s
ULM   Lac du Bonnet      55.83  50deP     P      11 07 30.9 +0.5
TKM2  Tokmak 2           55.89 298    P      P      11 07 31.5 +0.2
       SNR=14
PASC  Pasadena Art C     55.90  78    IAmb   IAmb   11 07 42.4
       comp=Z,31nm,0.8s
SLVN  Son La             55.91 259    IAmb   IAmb   11 07 33.8
       comp=Z,26nm,0.8s
SGDS  Sogindy            56.01 299  eP     P      11 07 31.3 -0.7
BOOM  Boomskoye usch     56.02 297    IAmb   IAmb   11 07 43.0
       comp=Z,29nm,0.9s
TMUT  Trail Mountain     56.07  69    IAmb   IAmb   11 07 44.5
       comp=Z,51nm,0.8s
FAUS  Fauske             56.09 346  eP     P      11 07 31.8 -0.3
FAUS                                  IAmb   IAmb   11 07 45.1
       comp=Z,49nm,1.0s
TNCH  TengChong          56.14 266 ⇓  P      P      11 07 34.8 +1.6
TNCH                                  S      S      11 15 21.1 -0.7
TNCH                                  pmax   pmax
       comp=Z,33nm,0.4s
TNCH                                  pmax   pmax
       comp=Z,250nm,3.8s
TNCH                                  LR     LR
       comp=Z,420nm,13.1s
TNCH                                  LR     LR
       comp=Z,290nm,11.7s
TNCH                                  LR     LR
       comp=Z,560nm,13.6s
K22A  Casper             56.15  63    IAmb   IAmb   11 07 44.1
       comp=Z,34nm,1.2s
USP   Ospenovka          56.21 298    P      P      11 07 33.8 +0.4
       SNR=12
CHMS  Chumysh            56.27 298    P      P      11 07 33.9 +0.1
       SNR=7.0
P18A  Preston Nutter     56.35  68    IAmb   IAmb   11 07 51.9
       comp=Z,31nm,0.9s
RSSD  Black Hills        56.36  60    P      P      11 07 35.1 +0.5
RSSD                                  IAmb   IAmb   11 07 45.5
       comp=Z,46nm,1.4s
RSSD  Black Hills        56.36  60    P      P      11 07 35.2 +0.5
RSSD                                  pmax   pmax
       comp=Z,46nm,1.4s
Q16A  Castle Valley      56.36  69    IAmb   IAmb   11 07 46.6
       comp=Z,35nm,0.9s
KBK   Karagaybulak       56.42 298    P      P      11 07 35.5 +0.5
       SNR=9.5
LCMT  Little Creek M     56.60  72    IAmb   IAmb   11 07 48.4
       comp=Z,31nm,1.0s
AAK   Ala-Archa          56.66 298    P      P      11 07 37.3 +0.6
       SNR=15
AAK   Ala-Archa          56.66 298    P      P      11 07 36.6 -0.1
AAK                                   IAmb   IAmb   11 07 47.3
       comp=Z,48nm,1.0s
AAK   Ala-Archa          56.66 298    LR     LR     11 32 37.4
       comp=Z,172nm,21.2s,baz=40,slow=37
AAK   Ala-Archa          56.66 298d iP     P      11 07 37.1 +0.4
AAK                                   pmax   pmax
       comp=Z,22nm,1.1s
DAV   Davao City (W)     56.76 228    LR     LR     11 33 29.8
       comp=Z,30nm,20.2s,baz=350,slow=38
KLMR  Klimovskoe         56.84 331  eP     P      11 07 35.5 -2.0
KLMR                                  pmax   pmax
       comp=Z,65nm,0.9s
KLMR                                  MLR    MLR
       comp=Z,398nm,14.0s
SOEG  Soedalen           56.87   7 i  P      P      11 07 37.5 -0.1
SOEG                                  IAmb   IAmb   11 07 49.6
       comp=Z,23nm,0.8s
LSA   Lhasa              56.89 276    P      P      11 07 40.4 +1.5
LSA                                   pmax   pmax
       comp=Z,14nm,0.9s
EKS2  Erkin-Say          57.01 298    P      P      11 07 39.8 +0.7
       SNR=14
O20A  White River Ci     57.06  66    IAmb   IAmb   11 07 51.0
       comp=Z,54nm,0.9s
EPLO  Experimental L     57.20  49    IAmb   IAmb   11 07 50.7
       comp=Z,33nm,1.0s
AGMN  Agassiz Nation     57.25  52    IAmb   IAmb   11 07 51.3
       comp=Z,40nm,1.1s
PFO   Pinyon Flats O     57.28  77    P      P      11 07 40.5 -0.7
PFO   Pinyon Flats O     57.28  77    LR     LR     11 29 05.3
       comp=Z,60nm,20.7s,baz=302,slow=33
PFO   Pinyon Flats O     57.28  77ceP     P      11 07 41.7 +0.5
PFO                                   pmax   pmax
       comp=Z,5.0nm,0.9s
MOR8  Moi Rana           57.35 346  eP     P      11 07 38.9 -2.2
MOR8                                  IAmb   IAmb   11 07 49.7
       comp=Z,19nm,0.9s
AML   Almayashu          57.44 298    P      P      11 07 43.4 +0.8
       SNR=9.4
LEIR  Leirfjorden        57.59 347  eP     P      11 07 42.6 -0.1
LEIR                                  IAmb   IAmb   11 07 53.0
       comp=Z,121nm,1.9s
PV10  Paradox Valley     57.91  68    IAmb   IAmb   11 07 57.6
       comp=Z,52nm,1.0s
PV22  Blue Mesa, Par     57.93  68    IAmb   IAmb   11 07 58.0
       comp=Z,29nm,0.9s
PV04  Paradox Valley     57.97  68    IAmb   IAmb   11 07 57.6
       comp=Z,50nm,1.0s
PV16  Nyswonger Mesa     58.02  68    IAmb   IAmb   11 07 57.9
       comp=Z,44nm,1.0s
PV17  East Wray Mesa     58.02  68    IAmb   IAmb   11 07 57.9
       comp=Z,50nm,0.9s
PV11  David Mesa, Pa     58.05  68    IAmb   IAmb   11 07 58.1
       comp=Z,59nm,1.0s
PV07  Paradox Valley     58.07  68    IAmb   IAmb   11 07 58.2
       comp=Z,28nm,0.9s
PV03  Paradox Valley     58.10  68    IAmb   IAmb   11 07 58.4
       comp=Z,38nm,1.0s
CBX   Cerro Bola         58.12  78    IAmb   IAmb   11 07 58.6
       comp=Z,33nm,0.9s
KSH   Kashi              58.15 294    P      P      11 07 51.6 +4.4
KSH                                   sP     pwP    11 08 00.9 +3.7
KSH                                   S      S      11 15 50.3 +2.4
KSH                                   pmax   pmax
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	comp=Z,30nm,1.4s						
KSH				LR	LR		
	comp=Z,330nm,15.1s						
KSH				LR	LR		
	comp=Z,250nm,18.6s						
KSH				LR	LR		
	comp=Z,490nm,13.4s						
NUUK	**Nuuk**	**58.22**	**18**	*i* P	**P**	**11 07 46.5**	**-0.6**
NUUK				IAmb	IAmb	11 07 56.9	
	comp=Z,56nm,1.5s						
PV15	**Paradox Valley**	**58.23**	**67**	IAmb	IAmb	11 07 59.3	
	comp=Z,31nm,0.8s						
BLYC	**Blythe**	**58.27**	**75**	IAmb	IAmb	11 07 59.6	
	comp=Z,22nm,0.9s						
KK31	**Karatay Array**	**58.34**	**301**	P	**P**	**11 07 48.1**	**-0.2**
KK31				IAmb	IAmb	11 07 58.5	
	comp=Z,57nm,1.1s						
KK31	**Karatay Array**	**58.34**	**301**	*i* P	**P**	**11 07 48.5**	**+0.1**
KKAR	**Karatay Array**	**58.34**	**301**	P	**P**	**11 07 48.4**	**0.0**
KKAR	**Karatay Array**	**58.34**	**301**	P	**P**	**11 07 48.4**	**0.0**
AKTO	**Aktyubinsk**	**58.62**	**314**	LR	LR	11 36 13.8	
	comp=Z,634nm,18.8s,baz=6.5,slow=39						
AKTO	**Aktyubinsk**	**58.62**	**314**	P	**P**	**11 07 50.4**	**+0.2**
ISCO	**Idaho Springs**	**58.69**	**64**	IAmb	IAmb	11 08 03.3	
	comp=Z,37nm,1.1s						
AB31	**Akbulak array**	**58.70**	**312**	*i* P	**P**	**11 07 51.2**	**+0.5**
ABKAR	**Akbulak array**	**58.70**	**312**	P	**P**	**11 07 50.8**	**+0.1**
WUAZ	**Wupatki**	**58.73**	**72**	IAmb	IAmb	11 08 03.3	
	comp=Z,26nm,1.0s						
BRLS	**Borolday**	**58.73**	**301**	*e*P	**P**	**11 07 52.4**	**+1.3**
BRLS	**Borolday**	**58.73**	**301**	*e*P	**P**	**11 07 52.5**	**+1.3**
ESJX	**Sierra Juarez**	**58.76**	**78**	IAmb	IAmb	11 08 03.1	
	comp=Z,20nm,0.9s						
F33A	**5 Mile Ranch,**	**58.87**	**54**	IAmb	IAmb	11 08 02.7	
	comp=Z,48nm,1.3s						
VAF	**Ylistaro**	**58.89**	**341**	*e*P	**P**	**11 07 51.7**	**-0.2**
MVCO	**Mesa Verde**	**59.05**	**68**	IAmb	IAmb	11 08 05.0	
	comp=Z,18nm,0.8s						
NSS	**Namsos**	**59.25**	**347**	*e*P	**P**	**11 07 54.5**	**+0.2**
NSS				IAmb	IAmb	11 08 04.2	
	comp=Z,68nm,1.7s						
KEF	**Keuruu**	**59.25**	**339**	*e*P	**P**	**11 07 54.2**	**-0.2**
CHM	**Chimkent**	**59.37**	**301**	*e*P	**P**	**11 07 55.0**	**-0.5**
CHM				pmax	pmax		
	comp=Z,11nm,0.7s						
CHM	**Chimkent**	**59.37**	**301**	*e*P	**P**	**11 07 55.1**	**-0.5**
	comp=Z,12nm,0.7s						
EYMN	**Ely**	**59.47**	**49**	IAmb	IAmb	11 08 06.6	
	comp=Z,43nm,0.8s						
X16A	**Lo Mia Camp, P**	**59.50**	**73**	IAmb	IAmb	11 08 08.8	
	comp=Z,18nm,0.9s						
S22A	**4UR Ranch, Cre**	**59.55**	**67**	IAmb	IAmb	11 08 09.3	
	comp=Z,34nm,1.0s						
K30B	**Basset**	**59.62**	**58**	IAmb	IAmb	11 08 08.3	
	comp=Z,40nm,0.9s						
FIA1	**FINESS Array S**	**59.65**	**338**	P	**P**	**11 07 57.0**	**-0.1**
FINES	**FINESS Array B**	**59.65**	**338**	P	**P**	**11 07 56.9**	**-0.2**
	comp=Z,12nm,0.7s,baz=43,slow=8.6,SNR=53						
	comp=Z,12nm,0.7s						
OGNE	**Ogallala**	**59.69**	**61**	IAmb	IAmb	11 08 12.1	
	comp=Z,26nm,0.9s						
KUQ	**Kuujjuuaa**	**59.74**	**29**	IAmb	IAmb	11 08 06.8	
	comp=Z,22nm,1.0s						
TBO	**Thunder Bay**	**59.84**	**47**	IAmb	IAmb	11 08 08.8	
	comp=Z,28nm,1.1s						
X18A	**Snowflake**	**60.24**	**71**	IAmb	IAmb	11 08 13.9	
	comp=Z,35nm,0.9s						
SDCO	**Great Sand Dun**	**60.26**	**66**	IAmb	IAmb	11 08 13.8	
	comp=Z,19nm,1.1s						
ECSD	**EROS Data Cent**	**60.29**	**56**	IAmb	IAmb	11 08 12.1	
	comp=Z,24nm,1.1s						
JAY	**Jayapura**	**60.30**	**208**	LR	LR	11 33 47.5	
	comp=Z,28nm,18.6s,baz=14,slow=36						
SMPI	**Sarmi**	**60.36**	**210**	P	**P**	**11 08 02.4**	**-0.1**
	comp=Z,45nm,1.3s						
BAKI	**Biak**	**60.39**	**213**	P	**P**	**11 08 04.0**	**+1.3**
	comp=Z,1µmcomp=Z,97nm,1.0s						
EVN	**Everest**	**60.70**	**278**	P	**P**	**11 08 04.4**	**-1.1**
EVN				IAmb	IAmb	11 08 16.5	
	comp=Z,26nm,0.9s						
CHTO	**Chiang Mai**	**60.74**	**261**	P	**P**	**11 08 04.9**	**-0.3**
CHTO				IAmb	IAmb	11 08 16.9	
	comp=Z,28nm,0.8s						
CHTO	**Chiang Mai**	**60.74**	**261**	P	**P**	**11 08 04.9**	**-0.3**
CHTO				pmax	pmax		
	comp=Z,28nm,0.9s						
BORG	**Borgarnes**	**60.82**	**3**	LR	LR	11 36 01.6	
	comp=Z,84nm,18.5s,baz=330,slow=38						
KSCO	**Kaye Shedlock'**	**60.82**	**63**	IAmb	IAmb	11 08 17.0	
	comp=Z,33nm,0.8s						
RAF	**Rauma**	**60.92**	**340**	*e*P	**P**	**11 08 05.6**	**-0.2**
CM31	**Chiang Mai Arr**	**61.02**	**261**	IAmb	IAmb	11 08 19.1	
	comp=Z,21nm,0.8s						
CMAR	**Chiang Mai Arr**	**61.02**	**261**	P	**P**	**11 08 07.3**	**+0.3**
CMAR	**Chiang Mai Arr**	**61.02**	**261**	P	**P**	**11 08 07.7**	**+0.6**
	comp=Z,15nm,0.8s,baz=23,slow=7.0,SNR=71						
CMAR				LR	LR	11 36 33.5	
	comp=Z,160nm,18.4s,baz=50,slow=38						
	comp=Z,15nm,0.8s						
CMAR	**Chiang Mai Arr**	**61.02**	**261**	*i* P	**P**	**11 08 08.5**	**+1.4**
CMAR				pmax	pmax		
	comp=Z,16nm,0.8s						
MEF	**Metsahovi**	**61.12**	**339**	*e*P	**P**	**11 08 06.8**	**-0.3**
BELG	**Belogornoye**	**61.15**	**321**	LR	LR	11 38 05.0	
	comp=Z,436nm,18.4s,baz=44,slow=40						
BELG	**Belogornoye**	**61.15**	**321***c*	*i*P	**P**	**11 08 07.0**	**-0.4**
BELG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
T25A	**Trinidad**	**61.29**	**66**	IAmb	IAmb	11 08 20.4	
	comp=Z,28nm,1.0s						
TUC	**Tucson**	**61.44**	**74**	P	**P**	**11 08 11.1**	**+1.2**
IVI	**Ivigtut**	**61.60**	**17**	*i* P	**P**	**11 08 08.9**	**-1.5**
IVI				IAmb	IAmb	11 08 20.0	
	comp=Z,58nm,1.3s						
MYLDM	**Lahad Datu**	**61.64**	**234**	P	**P**	**11 08 11.3**	**0.0**
MYLDM				IAmb	IAmb	11 08 15.3	
	comp=Z,56nm,1.3s						
MOS	**Moscow**	**61.68**	**329**	*e*P	**P**	**11 08 08.8**	**-2.2**
MOS				pmax	pmax		
	comp=Z,39nm,0.8s						
SWI	**Sorong**	**61.73**	**218**	P	**P**	**11 08 12.5**	**+0.7**
ANMO	**Albuquerque**	**61.84**	**69**	P	**P**	**11 08 12.9**	**+0.2**
ANMO				IAmb	IAmb	11 08 24.2	
	comp=Z,17nm,0.9s						
ANMO	**Albuquerque**	**61.84**	**69**	LR	LR	11 35 16.2	
	comp=Z,112nm,18.1s,baz=71,slow=36						
ANMO	**Albuquerque**	**61.84**	**69***d*	*e*P	**P**	**11 08 13.3**	**+0.6**
ANMO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
COWI	**Conover**	**61.92**	**49**	IAmb	IAmb	11 08 22.9	
	comp=Z,34nm,0.8s						
BRDH	**Bariadhala**	**61.94**	**270**	LR	LR	11 38 33.9	
	comp=Z,211nm,18.1s,baz=87,slow=40						
DOMB	**Dombas**	**62.02**	**347**	*e*P	**P**	**11 08 13.3**	**0.0**
DOMB				IAmb	IAmb	11 08 22.9	
	comp=Z,21nm,0.8s						
G40A	**Rib Lake**	**62.09**	**50**	IAmb	IAmb	11 08 24.3	
	comp=Z,38nm,1.2s						
AKN	**Aaknes**	**62.15**	**348**	*e*P	**P**	**11 08 14.3**	**+0.2**
VSU	**Vasula**	**62.18**	**336***c*	*e*P	**P**	**11 08 13.2**	**-1.1**
VSU				pmax	pmax		
	comp=Z,19nm,0.8s						
VSU	**Vasula**	**62.18**	**336**	*e*P	**P**	**11 08 14.2**	**-0.1**
Y22D	**IRIS PASSCAL I**	**62.24**	**70**	P	**P**	**11 08 16.4**	**+1.0**
	baz=319						
SIMJ	**Simiganj**	**62.41**	**298**	P	**P**	**11 08 16.2**	**-0.2**
CBKS	**Cedar Bluff**	**62.45**	**61**	P	**P**	**11 08 16.6**	**0.0**
CBKS	**Cedar Bluff**	**62.45**	**61**	P	**P**	**11 08 16.6**	**0.0**
CBKS				pmax	pmax		
	comp=Z,56nm,0.8s						
NC303	**NORSAR Array S**	**62.49**	**346**	IAmb	IAmb	11 08 26.1	
	comp=Z,14nm,0.8s						
OBN	**Obninsk**	**62.53**	**329**	P	**P**	**11 08 16.4**	**-0.3**
OBN	**Obninsk**	**62.53**	**329**	*e*P	**P**	**11 08 16.1**	**-0.6**
OBN				*i*		11 08 55.1	
OBN				pmax	pmax		
	comp=Z,18nm,0.8s						
OBN				MLR	MLR		
	comp=Z,219nm,16.0s						
NC204	**NORSAR Array S**	**62.53**	**346**	P	**P**	**11 08 16.5**	**-0.2**
NC204				IAmb	IAmb	11 08 26.8	
	comp=Z,31nm,0.8s						
MTSE	**Matsula**	**62.61**	**338**	*e*P	**P**	**11 08 17.2**	**+0.1**
F42A	**Maple Grove Fa**	**62.63**	**49**	P	**P**	**11 08 17.8**	**+0.3**
NB2	**NORSAR Subarra**	**62.69**	**346**	P	**P**	**11 08 17.2**	**-0.6**
	comp=Z,20nm,0.7s,baz=18,slow=6.9						
NB2	**NORSAR Subarra**	**62.69**	**346**	P	**P**	**11 08 15.6**	**-2.2**
NB2				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NB2	**NORSAR Subarra**	**62.69**	**346**	P	**P**	**11 08 17.2**	**-0.6**
	baz=18,slow=6.9						
NOA	**NORSAR Array B**	**62.69**	**346**	P	**P**	**11 08 17.6**	**-0.2**
	comp=Z,11nm,0.9s,baz=17,slow=6.8,SNR=21						
	comp=Z,11nm,0.9s						
RTBA	**Rita Blanca**	**62.70**	**65**	P	**P**	**11 08 18.5**	**+0.1**
RTBA				IAmb	IAmb	11 08 29.1	
	comp=Z,36nm,0.9s						
NBO00	**NORSAR Array S**	**62.76**	**346**	IAmb	IAmb	11 08 27.8	
	comp=Z,38nm,1.3s						
NC602	**NORSAR Array S**	**62.94**	**345**	*e*P	**P**	**11 08 19.1**	**-0.3**
319A	**Douglas**	**62.98**	**73**	IAmb	IAmb	11 08 32.0	
	comp=Z,36nm,1.0s						
SCHQ	**Schefferville**	**63.00**	**30**	P	**P**	**11 08 19.5**	**-0.4**
	comp=Z,12nm,0.8s,baz=1.2,slow=6.9,SNR=21						
SCHQ				LR	LR	11 40 21.7	
	comp=Z,172nm,18.2s,baz=316,slow=40						
	comp=Z,12nm,0.8s						
HFS	**Hagfors**	**63.19**	**344**	P	**P**	**11 08 20.6**	**-0.4**
	comp=Z,6.7nm,0.6s,baz=40,slow=4.8,SNR=26						
	comp=Z,6.7nm,0.6s						
KMSI	**Cibinong**	**63.27**	**227**	P	**P**	**11 08 23.0**	**+0.8**
FAKI	**Fak Fak**	**63.29**	**217**	P	**P**	**11 08 22.8**	**+0.5**
FAKI	**Fak Fak**	**63.29**	**217**	P	**P**	**11 08 22.0**	**-0.3**
	comp=Z,621nmcomp=Z,58nm,1.2s						
SKAR	**Skarslia**	**63.44**	**347**	*e*P	**P**	**11 08 23.2**	**+0.4**
SKAR				IAmb	IAmb	11 08 33.3	
	comp=Z,24nm,1.0s						
I42A	**Draeger Farm,**	**63.74**	**51**	IAmb	IAmb	11 08 35.0	
	comp=Z,30nm,0.9s						
JFWS	**Jewell Farm**	**63.90**	**52**	IAmb	IAmb	11 08 35.6	
	comp=Z,29nm,0.8s						
SLIT	**Slitere, Latvi**	**63.93**	**338**	*e*P	**P**	**11 08 26.1**	**+0.1**
LPSR	**Galich'ya Gora**	**63.95**	**326**	*e*P	**P**	**11 08 25.2**	**-1.0**
LPSR				pmax	pmax		
	comp=Z,40nm,0.9s						
NIL	**Nilore**	**63.98**	**292**	P	**P**	**11 08 26.7**	**-0.1**
NIL	**Nilore**	**63.98**	**292**	P	**P**	**11 08 26.7**	**-0.1**
NIL				pmax	pmax		
	comp=Z,97nm,0.9s						
ASK	**Askoy**	**64.00**	**349**	*e*P	**P**	**11 08 26.9**	**+0.5**
BER	**Bergen**	**64.09**	**349**	*e*P	**P**	**11 08 27.1**	**+0.2**
BER				IAmb	IAmb	11 08 37.1	
	comp=Z,41nm,0.9s						
N38A	**Joes South For**	**64.15**	**56**	P	**P**	**11 08 27.5**	**-0.3**
TOLI2	**Tolitoli**	**64.18**	**230**	P	**P**	**11 08 28.4**	**+0.2**
VRH	**Novokhopyorsk**	**64.21**	**324**	*e*P	**P**	**11 08 26.0**	**-1.9**
VRH				pmax	pmax		
	comp=Z,30nm,0.8s						
MRSI	**Marisa**	**64.24**	**229**	P	**P**	**11 08 28.6**	**+0.1**
	comp=Z,805nmcomp=Z,56nm,1.3s						
VORR	**Voronezh**	**64.65**	**326**	*e*P	**P**	**11 08 29.0**	**-1.8**
VORR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KAN17	**Caldwell West**	**64.81**	**61**	IAmb	IAmb	11 08 41.7	
	comp=Z,37nm,0.9s						
MNTX	**Cornudas Mount**	**64.88**	**70**	IAmb	IAmb	11 08 44.3	
	comp=Z,40nm,0.9s						
VSR	**Storozhevoye**	**65.05**	**326**	*e*P	**P**	**11 08 32.4**	**-1.0**
VSR				pmax	pmax		
	comp=Z,20nm,0.9s						
CROK	**Carrier**	**65.12**	**62**	IAmb	IAmb	11 08 43.9	
	comp=Z,35nm,0.9s						
VORD	**Divnogorie**	**65.22**	**325**	*e*P	**P**	**11 08 33.0**	**-1.5**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MPSI	**Mapaga**	**65.27**	**231**	P	**P**	**11 08 35.6**	**+0.4**
	comp=Z,31nm,1.5s						
NACGM	**Naroch**	**65.38**	**335**	*e*P	**P**	**11 08 35.2**	**-0.3**
	comp=Z,23nm,0.8s,baz=26						
MNK	**Minsk**	**65.47**	**334**	*i* P	**P**	**11 08 37.7**	**+1.7**
	comp=E,11nm,0.7s						
MNK				*i* P	**P**	**11 08 37.7**	**+1.7**
	comp=N,12nm,0.8s						
MNK				*i* P	**P**	**11 08 37.7**	**+1.7**
	comp=Z,42nm,0.9s,baz=26						
MNK				*i* PcP	**PcP**	**11 09 09.2**	**+1.3**
MNK				*i* PP	**PP**	**11 11 01.9**	**+2.4**
MNK				*i* PPP	PPP	11 12 35.0	
MNK				*i* S	**S**	**11 17 23.7**	**+4.0**
MNK				*i* PS	**PnS**	**11 17 33.4**	**-5.4**
MNK				*i* SS	**SS**	**11 21 38.6**	**+6.5**
MNK				*i* SSS	SSS	11 25 48.8	
MNK	**Minsk**	**65.47**	**334**	*i* P	**P**	**11 08 37.7**	**+1.7**
MNK				*i*		11 09 09.1	
MNK				*i*		11 11 01.8	
MNK				*i* PPP	PPP	11 12 34.9	
MNK				*i* S	**S**	**11 17 23.6**	**+4.0**
MNK				*i* SS	**SS**	**11 21 38.5**	**+6.5**
MNK				pmax	pmax		
	comp=Z,42nm,0.9s						
MNK				pmax	pmax		
	comp=N,12nm,0.8s						
MNK				pmax	pmax		
	comp=E,11nm,0.7s						
PMG	**Port Moresby**	**65.49**	**199**	LR	LR	11 31 45.8	
	comp=E,158nm,20.1s,baz=328,slow=31						
PABE	**Paberze**	**65.51**	**337**	*e*P	**P**	**11 08 37.1**	**+0.8**
KBL	**Kabul**	**65.54**	**295**	P	**P**	**11 08 35.5**	**-1.5**
KBL	**Kabul**	**65.54**	**295**	P	**P**	**11 08 35.6**	**-1.5**
KBL				pmax	pmax		
	comp=Z,42nm,0.8s						
T35A	**Sooner Cattle**	**65.55**	**60**	P	**P**	**11 08 36.2**	**-0.7**
T35A				IAmb	IAmb	11 08 46.4	
	comp=Z,18nm,0.9s						
DKNS	**Dickens**	**65.77**	**66**	IAmb	IAmb	11 08 49.2	
	comp=Z,37nm,0.9s						
VHRN	**Van Horn**	**65.80**	**71**	IAmb	IAmb	11 08 50.2	
	comp=Z,28nm,0.8s						
OK029	**Liberty Lake**	**65.93**	**62**	IAmb	IAmb	11 08 49.5	
	comp=Z,29nm,0.7s						
PECS	**Pecos**	**65.96**	**69**	IAmb	IAmb	11 08 50.9	
	comp=Z,22nm,1.0s						
ODSA	**Odessa**	**66.10**	**68**	IAmb	IAmb	11 08 51.5	
	comp=Z,36nm,0.9s						
OK052	**Battle Ridge R**	**66.11**	**61**	IAmb	IAmb	11 08 50.4	
	comp=Z,21nm,0.8s						
SN07	**Snyder 07**	**66.23**	**66**	IAmb	IAmb	11 08 52.1	
	comp=Z,27nm,0.9s						
FNO	**Franklin**	**66.38**	**62**	IAmb	IAmb	11 08 52.8	
	comp=Z,37nm,0.8s						
DEOK	**Depew**	**66.39**	**61**	IAmb	IAmb	11 08 52.3	
	comp=Z,33nm,0.9s						
TUL3	**Leonard**	**66.69**	**61**	IAmb	IAmb	11 08 54.2	
	comp=Z,30nm,0.9s						
ALPN	**Alpine**	**66.85**	**70**	IAmb	IAmb	11 08 56.5	
	comp=Z,21nm,0.9s						
U38A	**Gravette**	**66.98**	**59**	IAmb	IAmb	11 08 55.7	
	comp=Z,19nm,0.8s						
SUW	**Suwalki**	**67.06**	**336**	*e*P	P	11 08 55.6	+9.4
SMKI	**Samarinda**	**67.18**	**233**	P	**P**	**11 08 49.0**	**+1.5**
	comp=Z,80nm,1.2s						
SADO	**Sadowa**	**67.20**	**44**	LR	LR	11 41 40.4	
	comp=Z,135nm,18.1s,baz=332,slow=39						
CCM	**Cathedral Cave**	**67.25**	**56**	P	**P**	**11 08 47.2**	**-0.6**
CCM	**Cathedral Cave**	**67.25**	**56**	P	**P**	**11 08 47.2**	**-0.6**
CCM				pmax	pmax		
	comp=Z,51nm,0.9s						
SFIN	**Lafayette**	**67.35**	**52**	IAmb	IAmb	11 08 58.0	
	comp=Z,29nm,0.8s						
LDAQ	**Lac Daran**	**67.48**	**37**	P	**P**	**11 08 48.5**	**-0.7**
TXAR	**Lajitas Array**	**67.64**	**71**	P	**P**	**11 08 51.1**	**+0.6**
	comp=Z,11nm,0.6s,baz=301,slow=4.5,SNR=182						
	comp=Z,11nm,0.6s						
TRQ	**Mont Tremblant**	**67.76**	**40**	P	**P**	**11 08 49.9**	**-1.0**
LPIG	**La Paz**	**67.98**	**79**	LR	LR	11 32 51.3	
	comp=Z,62nm,21.9s,baz=334,slow=31						
SAND	**Sanderson**	**68.00**	**69**	IAmb	IAmb	11 09 03.7	
	comp=Z,24nm,1.0s						
DELO	**Deloro Mine**	**68.01**	**43**	IAmb	IAmb	11 09 01.6	
	comp=Z,31nm,0.8s						
BKB	**Balikpapan**	**68.05**	**233**	P	**P**	**11 08 51.9**	**-1.1**
BKB	**Balikpapan**	**68.05**	**233**	P	**P**	**11 08 53.7**	**+0.7**
T42A	**Van Buren**	**68.14**	**57**	IAmb	IAmb	11 09 03.0	
	comp=Z,26nm,0.8s						
N49A	**Columbus Grove**	**68.22**	**49**	IAmb	IAmb	11 09 03.6	
	comp=Z,33nm,0.8s						
TTSI	**Tana Toraja**	**68.31**	**229**	P	**P**	**11 08 53.8**	**-0.8**
	comp=Z,19nm,0.9s						
HPIG		**68.40**	**74**	IAmb	IAmb	11 09 07.5	
	comp=Z,13nm,0.6s						
WBO	**Williamsburg**	**68.52**	**41**	IAmb	IAmb	11 09 04.5	
	comp=Z,24nm,0.8s						
AKASG	**Malin Array Be**	**68.53**	**331**	P	**P**	**11 08 55.2**	**-0.4**
AKASG	**Malin Array Be**	**68.53**	**331**	P	**P**	**11 08 55.4**	**-0.2**
	comp=Z,7.5nm,0.8s,baz=30,slow=6.3,SNR=31						
	comp=Z,7.5nm,0.8s						
AKASG	**Malin Array Be**	**68.53**	**331**	P	**P**	**11 08 55.2**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,13nm,1.2s						
AKBB	**Malin Array Si**	**68.53**	**331**	IAmb	IAmb	11 09 05.5	
	comp=Z,33nm,1.0s						
AKBB	**Malin Array Si**	**68.53**	**331***d*	*e*P	**P**	**11 08 55.1**	**-0.5**
KIEV	**Kiev**	**68.54**	**331**	P	**P**	**11 08 54.8**	**-0.8**
KIEV				IAmb	IAmb	11 09 05.5	
	comp=Z,28nm,0.9s						
KIEV	**Kiev**	**68.54**	**331**	⇑P	**P**	**11 08 55.7**	**0.0**
KIEV	**Kiev**	**68.54**	**331**	P	**P**	**11 08 54.8**	**-0.8**
KIEV				pmax	pmax		
	comp=Z,28nm,1.0s						
SRIT	**Nakonsritamara**	**68.61**	**254**	IAmb	IAmb	11 08 58.4	
	comp=Z,20nm,0.9s						
CGM3	**Cape Girardeau**	**68.62**	**55**	IAmb	IAmb	11 09 07.2	
	comp=Z,15nm,0.9s						
BRDY	**Brady**	**68.64**	**66**	IAmb	IAmb	11 09 07.2	
	comp=Z,28nm,0.8s						
KSM	**Kuching**	**68.86**	**240**	IAmb	IAmb	11 09 00.2	
	comp=Z,26nm,0.8s						
MIAR	**Mount Ida**	**68.88**	**60**	IAmb	IAmb	11 09 08.5	
	comp=Z,37nm,0.8s						
MAK	**Makhachkala**	**68.93**	**315**	*e*P	P	11 08 50.0	-8.2
MAK				*e*SS	SS	11 22 23.0	-3.2
MAK				*e*SSS	SSS	11 25 38.3	
MAK				pmax	pmax		
	comp=Z,97nm,1.0s						
LONY	**Lake Ozonia**	**69.11**	**41**	IAmb	IAmb	11 09 08.1	
	comp=Z,17nm,0.8s						
HRA	**Herat**	**69.15**	**300**	P	**P**	**11 08 59.7**	**-0.3**
HRA				IAmb	IAmb	11 09 10.9	
	comp=Z,24nm,0.9s						
SPSI	**Sidrap Palu**	**69.15**	**229**	P	**P**	**11 08 59.6**	**-0.3**
	comp=Z,795nmcomp=Z,34nm,1.3s						
DRIO	**Del Rio**	**69.23**	**68**	IAmb	IAmb	11 09 11.3	
	comp=Z,34nm,0.8s						
FRNY	**Flat Rock**	**69.30**	**40**	IAmb	IAmb	11 09 09.2	
	comp=Z,14nm,0.8s						
X40A	**Basin Creek Fa**	**69.30**	**59**	IAmb	IAmb	11 09 10.9	
	comp=Z,28nm,1.0s						
BNSI	**Bone**	**69.40**	**228**	P	**P**	**11 09 01.0**	**-0.4**
	comp=Z,23nm,1.0s						
WCI	**Wyandotte Cave**	**69.45**	**53**	P	**P**	**11 09 01.6**	**+0.2**
WCI	**Wyandotte Cave**	**69.45**	**53**	P	**P**	**11 09 01.7**	**+0.2**
WCI				pmax	pmax		
	comp=Z,55nm,0.8s						
STKI	**Sintang**	**69.49**	**239**	P	**P**	**11 09 02.2**	**+0.2**
	comp=Z,24nm,0.6s						
J57A	**Williamstown**	**69.58**	**43**	IAmb	IAmb	11 09 11.3	
	comp=Z,27nm,1.1s						
BSEG	**Bad Segeberg**	**69.67**	**344**	*e*L	L	11 43 20.0	
	comp=Z,160nm,20.4s						
435B	**Jarrell**	**69.78**	**65**	IAmb	IAmb	11 09 14.4	
	comp=Z,28nm,0.8s						
BATG	**Bathurst New B**	**69.83**	**34**	IAmb	IAmb	11 09 13.8	
	comp=Z,22nm,0.8s						
HNDO	**Hondo**	**69.87**	**67**	IAmb	IAmb	11 09 14.7	
	comp=Z,18nm,1.0s						
EKA	**Eskdalemuir Ar**	**69.88**	**353**	P	**P**	**11 09 03.8**	**-0.1**
	comp=Z,12nm,0.8s,baz=7.4,slow=5.8,SNR=18						
	comp=Z,12nm,0.8s						
ESK	**Eskdalemuir**	**69.90**	**353**	P	**P**	**11 09 03.9**	**-0.1**
ESK				IAmb	IAmb	11 09 14.7	
	comp=Z,39nm,0.9s						
ESK	**Eskdalemuir**	**69.90**	**353**	P	**P**	**11 09 03.9**	**-0.1**
ESK				pmax	pmax		
	comp=Z,39nm,1.0s						
R49A	**Shelbyville**	**69.91**	**52**	IAmb	IAmb	11 09 14.6	
	comp=Z,24nm,0.9s						
K57A	**Scipio Center**	**69.95**	**43**	IAmb	IAmb	11 09 13.6	
	comp=Z,28nm,0.8s						
KVAR	**Kislovodsk Arr**	**69.99**	**319**	LR	LR	11 43 26.6	
	comp=Z,256nm,20.0s,slow=39						
KIV	**Kislovodsk**	**69.99**	**319**	*e*P	**P**	**11 09 04.5**	**-0.4**
KIV				pmax	pmax		
	comp=Z,23nm,1.1s						
KIV				pmax	pmax		
	comp=Z,153nm,17.0s						
NCK	**Nalchik**	**70.03**	**318**⇑	*e*P	**P**	**11 09 05.9**	**+0.8**
NCK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
G62A	**West of Eustis**	**70.09**	**38**	IAmb	IAmb	11 09 15.6	
	comp=Z,35nm,0.9s						
KAPI	**Kappang**	**70.10**	**228**	P	**P**	**11 09 05.6**	**-0.1**
KAPI				IAmb	IAmb	11 09 09.2	
	comp=Z,29nm,1.1s						
KAPI	**Kappang**	**70.10**	**228**	LR	LR	11 39 29.6	
	comp=Z,30nm,21.7s,baz=74,slow=36						
KAPI	**Kappang**	**70.10**	**228**⇑	*e*P	**P**	**11 09 06.9**	**+1.2**
KAPI				pmax	pmax		
	comp=Z,22nm,1.0s						
KBZ	**Khabaz**	**70.11**	**319**	P	**P**	**11 09 06.0**	**+0.6**
	comp=Z,12nm,0.9s,baz=176,slow=0.9,SNR=21						
KBZ				LR	LR	11 44 27.8	
	comp=Z,307nm,19.0s,baz=16,slow=40						
	comp=Z,12nm,0.9s						
KBZ	**Khabaz**	**70.11**	**319***d*	*e*P	**P**	**11 09 05.5**	**+0.1**
KBZ				pmax	pmax		
	comp=Z,14nm,0.9s						
J59A	**Piesco**	**70.11**	**42**	IAmb	IAmb	11 09 14.5	
	comp=Z,21nm,0.8s						
SHA1	**Shidzhatmaz**	**70.19**	**319**⇑	*e*P	**P**	**11 09 07.2**	**+0.9**
F64A	**Sherman**	**70.30**	**36**	P	**P**	**11 09 06.7**	**+0.1**
F64A				IAmb	IAmb	11 09 16.3	
	comp=Z,34nm,0.7s						
R50A	**Paris**	**70.31**	**51**	IAmb	IAmb	11 09 17.0	
	comp=Z,34nm,0.8s						
LBNH	**Lisbon**	**70.43**	**39**	IAmb	IAmb	11 09 17.5	
	comp=Z,23nm,0.8s						
WVT	**Waverly**	**70.43**	**55**	P	**P**	**11 09 07.3**	**-0.2**
WVT	**Waverly**	**70.43**	**55**	P	**P**	**11 09 07.3**	**-0.2**
O54A	**Avella**	**70.48**	**47**	IAmb	IAmb	11 09 17.7	
	comp=Z,40nm,1.0s						
ACCN	**Adirondack Com**	**70.50**	**41**	IAmb	IAmb	11 09 17.3	
	comp=Z,30nm,0.8s						
BINY	**Binghamton**	**70.61**	**43**	IAmb	IAmb	11 09 18.0	
	comp=Z,24nm,0.9s						
P53A	**Whipple**	**70.62**	**48**	IAmb	IAmb	11 09 18.5	
	comp=Z,31nm,0.9s						
Q52A	**Bidwell**	**70.67**	**49**	IAmb	IAmb	11 09 18.6	
	comp=Z,31nm,0.8s						
COEN	**Coen**	**70.72**	**202**	P	**P**	**11 09 10.1**	**+0.7**
KULM	**Kulim**	**70.75**	**251**	IAmb	IAmb	11 09 11.3	
	comp=Z,17nm,0.9s						
BSSI	**Bau Bau, Buton**	**70.80**	**227**	P	**P**	**11 09 09.1**	**-0.8**
	comp=Z,1µmcomp=Z,118nm,1.2s						
J61A	**Chester**	**70.96**	**40**	IAmb	IAmb	11 09 20.5	
	comp=Z,24nm,0.8s						
WVL	**Waterville**	**70.97**	**38**	IAmb	IAmb	11 09 21.3	
	comp=Z,27nm,1.0s						
RETH	**Rethem/Aller,**	**70.97**	**344**	*e*P	P	11 09 20.1	+10
	comp=Z,21nm,1.4s,baz=14,slow=5.2						
L59A	**Walton**	**70.99**	**43**	IAmb	IAmb	11 09 20.2	
	comp=Z,40nm,0.8s						
FLTG	**Flechtingen**	**71.06**	**343**	*e*P	P	11 09 20.4	+9.3
	comp=Z,6.8nm,0.8s,baz=14,slow=5.2						
U49A	**Red Boiling Sp**	**71.08**	**53**	IAmb	IAmb	11 09 21.8	
	comp=Z,34nm,0.9s						
I63A	**Otisfield**	**71.08**	**39**	IAmb	IAmb	11 09 21.9	
	comp=Z,44nm,0.9s						
NRDL	**Niedersach Rie**	**71.09**	**344**	*e*P	P	11 09 21.0	+10
	comp=Z,16nm,1.3s,baz=14,slow=5.2						
SORM	**Soroca**	**71.09**	**331**	⇑P	**P**	**11 09 11.3**	**-0.1**
SORM	**Soroca**	**71.09**	**331**	P	**P**	**11 09 11.2**	**-0.1**
T50A	**Nancy**	**71.10**	**52**	IAmb	IAmb	11 09 21.9	
	comp=Z,32nm,0.8s						
G65A	**Princeton**	**71.15**	**36**	IAmb	IAmb	11 09 21.8	
	comp=Z,28nm,0.8s						
SSPA	**Standing Stone**	**71.15**	**45**	P	**P**	**11 09 11.6**	**-0.3**
SSPA				IAmb	IAmb	11 09 21.6	
	comp=Z,30nm,1.0s						
S51A	**Beattyville**	**71.16**	**51**	IAmb	IAmb	11 09 22.0	
	comp=Z,26nm,0.8s						
CLTN	**Cedars of Leba**	**71.17**	**54**	IAmb	IAmb	11 09 22.6	
	comp=Z,40nm,0.8s						
KWP	**Kalwaria Pacla**	**71.22**	**335**	*e*P	**P**	**11 09 13.1**	**+0.9**
KSPA	**Keystone Colle**	**71.23**	**43**	IAmb	IAmb	11 09 21.6	
	comp=Z,24nm,0.8s						
Q54A	**Coxs Mills**	**71.28**	**48**	IAmb	IAmb	11 09 22.7	
	comp=Z,20nm,0.7s						
ASSE	**Asse, Remlinge**	**71.35**	**343**	*e*P	P	11 09 22.6	+10
	comp=Z,37nm,1.5s,baz=14,slow=5.2						

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HKT   Hockley          71.36  65  P      P      11 09 13.5 +0.2
HKT                               IAmb   IAmb   11 09 24.2
      comp=Z,18nm,0.8s
HKT   Hockley          71.36  65  P      P      11 09 13.5 +0.2
HKT                               pmax   pmax
      comp=Z,18nm,0.9s
OJC   Ojcow            71.37 337 eP      P      11 09 13.7 +0.7
OJC   Ojcow            71.37 337  P      P      11 09 13.3 +0.3
OJC   Ojcow            71.37 337  P      P      11 09 13.3 +0.3
VSLR  Vesyoloye        71.41 321⇑iP      P      11 09 12.3 -1.1
VSLR                              pmax   pmax
      comp=Z,21nm,0.9s
SOC   Sochi            71.42 321 eP      P      11 09 14.2 +0.8
SOC                              e              11 11 51.7
SOC                              ePPP   PPP     11 13 34.2
SOC                              eS     S       11 18 35.9 +5.1
SOC                              eSS    SS      11 23 01.2 -3.1
SOC                               MLR   MLR
      comp=Z,301nm,16.0s
N58A  Sunbury          71.46  45  IAmb   IAmb   11 09 23.1
      comp=Z,38nm,0.8s
GGN   Saint George     71.46  36  P      P      11 09 13.7  0.0
GGN                               IAmb   IAmb   11 09 23.6
      comp=Z,34nm,0.9s
KSP   Ksiaz            71.54 339 eP      P      11 09 14.9 +0.8
IBBN  Ibbenburen       71.64 345 eP      P      11 09 24.5  +10
      comp=Z,41nm,1.1s,baz=14,slow=5.2
CLL   Collm            71.73 342  IAmb   IAmb   11 09 25.7
      comp=Z,40nm,1.4s
CLL   Collm            71.73 342 eP      P      11 09 15.0 -0.2
CLL                              i              11 09 19.3
CLL                              eS     S       11 18 38.0 +3.8
CLL                               pmax   pmax
      comp=Z,26nm,1.2s
CLL   Collm            71.73 342 eP      P      11 09 24.5 +9.3
      comp=Z,33nm,1.3s,baz=14,slow=5.2
CLL                              eL     L       11 42 04.8
      comp=Z,161nm,21.4s
CLL   Collm            71.73 342 eP      P      11 09 15.0 -0.2
      comp=Z,8.0nm,1.3s
CLL                              i x    x       11 09 19.3
CLL                              i Pmax         11 09 24.2
      comp=Z,26nm,1.2s
CLL                              eS     S       11 18 38.0 +3.8
CLL                              eSS    SS      11 23 30.0  +21
CLL                              e(SSS)         11 26 06.0
CLL                              eSSSS          11 28 00.0
STHS  Stebnicka Huta   71.78 336 eP      P      11 09 16.2 +0.6
STHS                              pmax   pmax
      comp=Z,9.0nm,0.9s
STHS  Stebnicka Huta   71.78 336 eP      P      11 09 16.2 +0.6
STHS                             e              11 09 25.5
OSTC  Ostas            71.82 339 eP      P      11 09 18.8 +3.0
OSTC  Ostas            71.82 339 eP      P      11 09 18.8 +3.0
CHVC  Chvalec          71.83 339 epP     pP     11 09 25.2 +5.8
CHVC                              AMS    AMS    11 48 50.0
      comp=Z,200nm,12.7s
UPC   Upice            71.91 339 eP      P      11 09 17.4 +1.1
UPC                               AMS    AMS    11 48 50.0
      comp=Z,300nm,12.9s
UPC   Upice            71.91 339 eP      P      11 09 17.4 +1.1
UPC                               MLR    MLR
      comp=Z,300nm,12.9s
BRG   Berggiesshubel   71.97 341 eP      P      11 09 26.0 +9.4
      comp=Z,6.3nm,0.8s,baz=14,slow=5.2
BRG   Berggiesshubel   71.97 341 eP      P      11 09 26.3  +10
BRG                               Amp           11 09 28.0
      comp=Z,6.3nm,0.8s
BRG   Berggiesshubel   71.97 341  S      SKiKP  11 18 45.0 -7.8
KOLS  Kolonicke sedl   71.98 335 eP      P      11 09 17.8 +1.0
KOLS                              pmax   pmax
      comp=Z,10.0nm,0.8s
KOLS  Kolonicke sedl   71.98 335 eP      P      11 09 17.8 +1.0
DPC   Dobruska-Polom   72.00 339 eP      P      11 09 18.0 +1.1
DPC                              ex     x       11 09 26.7
DPC   Dobruska-Polom   72.00 339 eP      P      11 09 18.0 +1.1
NIE   Niedzica         72.00 336 eP      P      11 09 14.3 -2.6
HRV   Adam Dziewonsk   72.05  40  P      P      11 09 08.9 -8.4
MILM  Milestii Mici    72.06 330 ⇑P      P      11 09 17.9 +0.6
MILM  Milestii Mici    72.06 330  P      P      11 09 17.8 +0.6
STEB  Steborice        72.08 338 eP      P      11 09 18.5 +1.1
STEB                             epP    pwP     11 09 27.1 -0.1
TZTN  Tazewell         72.08  52  IAmb   IAmb   11 09 28.0
      comp=Z,30nm,0.8s
OKC   Ostrava-Krasne   72.09 338  AMS    AMS    11 45 50.0
      comp=Z,200nm,13.6s
KRLC  Kraliky          72.16 339 eP      P      11 09 18.8 +0.9
KRLC                             ex     x       11 09 27.6
KRLC                              AMS    AMS    11 45 30.0
      comp=Z,200nm,16.4s
KRLC  Kraliky          72.16 339 eP      P      11 09 18.8 +0.9
KRLC                              MLR    MLR
      comp=Z,200nm,16.4s
X48A  Hartselle        72.16  55  IAmb   IAmb   11 09 28.0
      comp=Z,30nm,1.1s
R55A  Marlinton        72.17  48  IAmb   IAmb   11 09 28.4
      comp=Z,29nm,0.9s
RICC  Richard          72.26 341 eP      P      11 09 20.2 +1.8
MORC  Moravsky Berou   72.28 338 eP      P      11 09 19.5 +0.9
MORC  Moravsky Berou   72.28 338 ⇓P      P      11 09 17.9 -0.8
MORC  Moravsky Berou   72.28 338  P      P      11 09 17.8 -0.8
HSKC  Hora Svate Kat   72.32 341 eP      P      11 09 19.7 +0.9
HSKC                              AMS    AMS    11 49 40.0
      comp=Z,300nm,14.3s
KDU   Kakadu           72.36 213  P      P      11 09 19.4 +0.1
      comp=Z,46nm,1.6s
KDU   Kakadu           72.36 213  P      P      11 09 19.6 +0.3
BUR08 Bucovina Ar. S   72.41 332  IAmb   IAmb   11 09 30.5
      comp=Z,18nm,0.8s
GNI   Garni            72.42 316  LR     LR     11 45 02.8
      comp=Z,335nm,21.9s,baz=38,slow=39
GNI   Garni            72.42 316ceP      P      11 09 21.4 +1.7
GNI                               pmax   pmax
      comp=Z,7.0nm,0.9s
BURAR Bucovina Array   72.44 332  P      P      11 09 20.1 +0.5
BURAR                             IAmb   IAmb   11 09 30.5
      comp=Z,25nm,0.8s
BURAR Bucovina Array   72.44 332 ⇑P      P      11 09 19.9 +0.3
BURAR Bucovina Array   72.44 332  P      P      11 09 19.9 +0.3
LANS  Liptovska Anna   72.44 337 eP      P      11 09 21.6 +2.0
LANS                              pmax   pmax
      comp=Z,7.0nm,0.8s
LANS  Liptovska Anna   72.44 337 eP      P      11 09 21.5 +2.0
LANS                             e              11 09 30.4
CPCT  Cooper Cave      72.53  53  IAmb   IAmb   11 09 30.4
      comp=Z,32nm,0.9s
BUG   Bochum--Univer   72.55 345 eP      P      11 09 29.4 +9.4
      comp=Z,36nm,1.3s,baz=14,slow=5.2
MAUC  Maruska          72.61 338 eP      P      11 09 21.7 +1.2
KASTN Kahler Asten     72.61 344 eP      P      11 09 30.1  +10
      comp=Z,33nm,1.6s,baz=14,slow=5.2
MOX   Moxa             72.62 342 eP      P      11 09 30.3  +10
      comp=Z,29nm,1.4s,baz=14,slow=5.2
MOX                              eL     L       11 42 31.3
      comp=Z,151nm,22.0s
PRA   Prague           72.64 340  AMS    AMS    11 50 30.0
      comp=Z,300nm,14.3s
TANN  Tannenbergstha   72.69 342 eP      P      11 09 30.8  +10
      comp=Z,9.2nm,0.9s,baz=14,slow=5.2
PRU   Pruhonice        72.70 340 eP      P      11 09 22.3 +1.3
PRU                               AMS    AMS    11 50 30.0
      comp=Z,300nm,10.6s
PRU   Pruhonice        72.70 340 eP      P      11 09 22.3 +1.3
PRU                               MLR    MLR
      comp=Z,300nm,10.6s
TKL   Tuckaleechee C   72.71  52  IAmb   IAmb   11 09 31.4
      comp=Z,24nm,1.1s
TKL   Tuckaleechee C   72.71  52  LR     LR     11 43 33.6
      comp=Z,223nm,18.4s,baz=332,slow=38
GOPC  GO Pecny, Ondr   72.72 340 eP      P      11 09 22.3 +1.1
GOPC                              AMS    AMS    11 49 30.0
      comp=Z,200nm,12.9s
GOPC  GO Pecny, Ondr   72.72 340 eP      P      11 09 22.3 +1.1
GOPC                              MLR    MLR
      comp=Z,200nm,12.9s
UBBA  Unterbreizbach   72.73 343 eP      P      11 09 30.7  +10
      comp=Z,19nm,1.3s,baz=14,slow=5.2
FPAL  Fort Paine       72.77  54  IAmb   IAmb   11 09 31.9
      comp=Z,40nm,0.8s
NKC   Novy Kostel      72.86 342  AMS    AMS    11 50 20.0
      comp=Z,300nm,15.7s
VRAC  Vranov           72.93 339  P      P      11 09 23.2 +0.8
      comp=Z,3.8nm,0.5s,baz=56,slow=5.0,SNR=3.3
VRAC                              LR     LR     11 45 56.7
      comp=Z,141nm,18.2s,baz=15,slow=40
      comp=Z,3.8nm,0.5s
VRAC  Vranov           72.93 339 eP      P      11 09 23.4 +1.0
VRAC  Vranov           72.93 339 ⇑P      P      11 09 21.8 -0.6
VRAC  Vranov           72.93 339  P      P      11 09 21.8 -0.6
BLA   Blacksburg       72.93  49  IAmb   IAmb   11 09 32.8
      comp=Z,36nm,0.9s
MTN   Manton Dam       72.94 214  P      P      11 09 23.1 +0.4
      comp=Z,67nm,1.3s
MTN   Manton Dam       72.94 214  P      P      11 09 23.2 +0.4
Y49A  Blount Mountai   72.95  55  IAmb   IAmb   11 09 32.7
      comp=Z,33nm,0.8s
MSVF  Nonsavu          73.05 166  LR     LR     11 35 25.4
      comp=Z,152nm,20.8s,baz=355,slow=31
TESR  Tescani          73.05 331 ⇑P      P      11 09 23.2  0.0
W52A  Murphy           73.10  53  IAmb   IAmb   11 09 34.0
      comp=Z,34nm,0.9s
X51A  Calhoun          73.11  54  IAmb   IAmb   11 09 34.0
      comp=Z,54nm,1.1s
S57A  Dark Hollow, R   73.11  48  IAmb   IAmb   11 09 34.1
      comp=Z,47nm,0.9s
V53A  Saluda           73.14  52  IAmb   IAmb   11 09 34.3
      comp=Z,23nm,1.0s
MANZ  Manzenberg       73.16 342 eP      P      11 09 33.6  +10
      comp=Z,2.0nm,0.8s,baz=14,slow=5.2
KRUC  Moravsky         73.20 339 eP      P      11 09 24.7 +0.7
VYHS  Vyhne            73.20 337 eP      P      11 09 25.2 +1.1
VYHS                             e              11 09 34.3
VYHS                              pmax   pmax
      comp=Z,4.0nm,0.8s
VYHS  Vyhne            73.20 337 eP      P      11 09 25.2 +1.1
VYHS                             e              11 09 34.2
ZVC   Zvikov           73.29 340 eP      P      11 09 25.6 +1.0
ZVC                               AMS    AMS    11 50 50.0
      comp=Z,200nm,12.5s
LRAL  Lakeview Retre   73.34  56  IAmb   IAmb   11 09 34.7
      comp=Z,24nm,0.7s
ROTZ  Rotzenmuhle      73.36 342 eP      P      11 09 34.7  +10
      comp=Z,3.9nm,1.2s,baz=14,slow=5.2
TSI   Tuntungan        73.38 252  P      P      11 09 25.2 -0.3
      comp=Z,74nm,1.0s
PSZ   Piszkesteto      73.50 336 ⇑P      P      11 09 25.3 -0.7
PSZ   Piszkesteto      73.50 336  P      P      11 09 25.2 -0.7
PSZ   Piszkesteto      73.50 336 eP      P      11 09 27.6 +1.8
TNS   Taunus Mts       73.56 344 eP      P      11 09 35.7  +10
      comp=Z,12nm,0.9s,baz=14,slow=5.2
TNS                              eL     L       11 45 29.8
      comp=Z,186nm,19.9s
GRF   Grafenberg Arr   73.60 342 eP      P      11 09 36.7  +10
      comp=Z,18nm,0.7s,baz=14,slow=5.2
GRF                              eL     L       11 43 11.4
      comp=Z,158nm,21.4s
T57A  Hurt             73.62  48  IAmb   IAmb   11 09 36.6
      comp=Z,25nm,0.8s
VRI   Vrincioaia       73.62 331 ⇑P      P      11 09 26.5 -0.1
VRI   Vrincioaia       73.62 331  P      P      11 09 26.4 -0.1
HYB   Hyderabad        73.64 277 eP      P      11 09 27.2 +0.1
HYB                              epP    pP      11 09 30.3 -0.3
HYB                              ePP    PP      11 12 11.0 -0.1
BG3   Lake Jocassee    73.64  52  IAmb   IAmb   11 09 37.3
      comp=Z,31nm,0.8s
TURR  Turia            73.65 331 ⇑P      P      11 09 27.6 +0.8
PLOR  Plostina         73.66 331 ⇑P      P      11 09 26.4 -0.4
PLOR  Plostina         73.66 331  P      P      11 09 26.4 -0.4
MODS  Modra-Piesok     73.67 338 eP      P      11 09 28.2 +1.4
MODS                             e              11 09 37.4
MODS                              pmax   pmax
      comp=Z,14nm,0.9s
MODS  Modra-Piesok     73.67 338 eP      P      11 09 28.2 +1.4
MODS                             e              11 09 37.3
OZUR                   73.67 331 ⇑P      P      11 09 27.7 +0.8
KHC   Kasperske Hory   73.71 341 eP      P      11 09 28.0 +1.0
KHC                              epP    sP      11 09 33.4 +1.4
KHC                               AMS    AMS    11 49 00.0
      comp=Z,200nm,15.5s
KHC   Kasperske Hory   73.71 341deP      P      11 09 27.8 +0.8
KHC                               pmax   pmax
      comp=Z,12nm,1.3s
V55A  Taylorsville     73.71  50  IAmb   IAmb   11 09 37.4
      comp=Z,23nm,0.9s
PSI   Prapat           73.76 251  LR     LR     11 43 26.6
      comp=Z,45nm,20.6s,baz=52,slow=37
WET   Wettzell         73.83 341 eP      P      11 09 37.9  +10
      comp=Z,13nm,0.8s,baz=14,slow=5.2
WET                              eL     L       11 45 11.0
      comp=Z,177nm,19.0s
CFR   Carcaliu         73.84 329 ⇑P      P      11 09 27.5 -0.3
CFR   Carcaliu         73.84 329  P      P      11 09 27.5 -0.3
MARR  Marisel-Cluj     73.86 333 ⇑P      P      11 09 28.4 +0.4
CKRC  Cesky Krumlov    73.86 340  AMS    AMS    11 46 20.0
      comp=Z,200nm,18.6s
GEC2  GERESS Array S   73.96 340 eP      P      11 09 38.4  +10
      comp=Z,8.8nm,0.8s,baz=14,slow=5.2
GEC2                             eL     L       11 44 08.2
      comp=Z,172nm,21.0s
GERES GERESS Array B   73.96 340  P      P      11 09 28.9 +0.3
      comp=Z,2.6nm,0.6s,baz=74,slow=7.2,SNR=13
GERES                             LR     LR     11 46 54.3
      comp=Z,164nm,18.6s,baz=49,slow=40
      comp=Z,2.6nm,0.6s
TPGR  Topolog          74.05 329 ⇑P      P      11 09 30.1 +1.0
Y52A  Lilburn          74.05  54  IAmb   IAmb   11 09 39.6
      comp=Z,36nm,0.9s
MLR   Muntele Rosu     74.18 331  IAmb   IAmb   11 09 41.7
      comp=Z,19nm,0.7s
MLR   Muntele Rosu     74.18 331 ⇑P      P      11 09 30.8 +0.8
MLR   Muntele Rosu     74.18 331  P      P      11 09 30.8 +0.8
KOPT  Kop Dagi         74.21 319  IAmb   IAmb   11 09 44.2
      comp=Z,28nm,0.8s
KMSC  Kings Mountain   74.25  51  IAmb   IAmb   11 09 40.4
      comp=Z,23nm,0.9s
HARR  Harsova          74.34 329 ⇑P      P      11 09 29.6 -1.1
HARR  Harsova          74.34 329  P      P      11 09 29.6 -1.1
PLAI  Plampang         74.36 228  P      P      11 09 30.6 -0.6
T59A  Double "B" Far   74.37  47  IAmb   IAmb   11 09 41.4
      comp=Z,32nm,1.2s
CONA  Conrad Observa   74.39 339 epP     pP     11 09 32.9 -1.9
      comp=Z,4.8nm,0.7s
TIRR  Tirgusor         74.41 329 ⇓P      P      11 09 32.3 +1.1
TIRR  Tirgusor         74.41 329  P      P      11 09 32.2 +1.1
WLF   Walferdange      74.45 346 eP      P      11 09 41.0  +10
      comp=Z,12nm,1.1s,baz=14,slow=5.2
VOIR                   74.48 332 ⇑P      P      11 09 31.9 +0.2
VOIR                   74.48 332  P      P      11 09 31.9 +0.2
RONA  Rosalia, Austr   74.52 338 i pP    P      11 09 33.1 +1.3
      comp=Z,8.5nm,0.8s
MTSU  Mount Surprise   74.54 200  P      P      11 09 32.6 +0.5
      comp=Z,14nm,0.9s
MTSU  Mount Surprise   74.54 200  P      P      11 09 32.9 +0.8
HODGE Hodges           74.58  52  IAmb   IAmb   11 09 42.7
      comp=Z,26nm,0.8s
ARR   Arges            74.66 332 ⇑P      P      11 09 33.1 +0.4
V58A  Windy Hill, Pi   74.69  49  IAmb   IAmb   11 09 43.3
      comp=Z,39nm,0.9s
152A  Waverly Hall     74.73  55  IAmb   IAmb   11 09 43.1
      comp=Z,29nm,1.0s
MOA   Molln            74.80 340 epP     P      11 09 34.3 +0.9
      comp=Z,28nm,1.9s
LOT   Lotru            74.82 332 ⇑P      P      11 09 33.6  0.0
W57A  Gilead           74.84  50  IAmb   IAmb   11 09 43.8
      comp=Z,21nm,0.8s
FUR   Furstenfeldbru   75.06 342 eL     L       11 42 08.3
      comp=Z,156nm,21.9s
BIOA  Bad Ischl, Aus   75.07 340 i P     P      11 09 34.5 -0.5
      comp=Z,3.4nm,0.4s
ARSA  Arzberg          75.11 339 i pP    pP     11 09 36.8 -2.0
      comp=Z,5.9nm,1.0s
GZR   Gura Zlata       75.14 333 ⇑P      P      11 09 36.3 +0.9
GZR   Gura Zlata       75.14 333  P      P      11 09 36.3 +0.9
BZS   Buzias           75.23 334 ⇑P      P      11 09 35.6 -0.3
BZS   Buzias           75.23 334  P      P      11 09 35.6 -0.3
BFO   Black Forest     75.41 344 eP      P      11 09 46.3 +9.3
      comp=Z,18nm,1.2s,baz=14,slow=5.2
BFO                              eL     L       11 45 12.0
      comp=Z,152nm,19.3s
W59A  Clinton          75.51  49  P      P      11 09 37.1 -0.6
W59A                              IAmb   IAmb   11 09 48.3
      comp=Z,60nm,1.0s
LESA  Schwarzleotal    75.52 341 i pP    pP     11 09 39.5 -1.7
      comp=Z,3.7nm,0.6s
KBA   Koelnbreinsper   75.72 340 i pP    pP     11 09 40.7 -1.9
      comp=Z,11nm,0.6s
GSI   Gunungsitoli     75.75 252  IAmb   IAmb   11 10 02.1
      comp=Z,37nm,0.8s
GSI   Gunungsitoli     75.75 252  P      P      11 09 39.5 +0.2
      comp=Z,53nm,0.8s
SOKA  Soboth           75.76 339 epP     P      11 09 40.4 +1.4
      comp=Z,4.1nm,0.8s
ILGA  Ilgaz            75.77 324  IAmb   IAmb   11 09 50.9
      comp=Z,24nm,0.9s
PERS  Pernice          75.78 339 eP      P      11 09 40.0 +0.9
PERS                             i              11 09 49.2
WATA  Walderalm        75.81 341 i pP    P      11 09 40.5 +1.1
      comp=Z,10nm,0.8s
RETA  Reutte           75.81 342 eP      P      11 09 38.7 -0.6
      comp=Z,3.7nm,0.5s
ARPR  Arapgir-MALATY   75.83 320  IAmb   IAmb   11 09 51.0
      comp=Z,22nm,0.9s
WTTA  Wattenberg       75.87 341 i pP    P      11 09 41.2 +1.4
      comp=Z,5.6nm,0.7s
MOTA  Moosalm          75.89 342 epP     P      11 09 41.0 +1.2
      comp=Z,19nm,0.8s
SQTA  Sankt Quirin     75.99 342 i pP    P      11 09 41.9 +1.5
      comp=Z,6.7nm,0.7s
OBKA  Obir             76.02 339 epP     P      11 09 41.6 +1.0
      comp=Z,27nm,0.8s
CTAO  Charters Tower   76.08 198  P      P      11 09 41.5 +0.6
CTAO                              IAmb   IAmb   11 09 41.9
      comp=Z,24nm,0.8s
CTAO  Charters Tower   76.08 198  P      P      11 09 41.1 +0.2
CTAO  Charters Tower   76.08 198  P      P      11 09 41.5 +0.6
CTAO                              pmax   pmax
      comp=Z,24nm,0.8s
MYKA  Terra Mystica    76.09 340 i pP    P      11 09 40.9 +0.1
      comp=Z,9.9nm,0.8s
DAVA  Damuels          76.16 342 epP     P      11 09 41.4  0.0
      comp=Z,3.8nm,0.9s
ABTA  Abfaltersbach    76.20 341 i pP    P      11 09 42.8 +1.3
      comp=Z,5.5nm,0.7s
FETA  Feichten         76.27 342 i pP    P      11 09 43.4 +1.4
      comp=Z,28nm,1.4s
PRED  Cave del Predi   76.28 340  IAmb   IAmb   11 09 53.6
      comp=Z,20nm,0.8s
MARD  Mardin           76.44 317  IAmb   IAmb   11 09 54.2
      comp=Z,25nm,0.7s
DZM   Mont Dzumac      76.45 178 eLR    LR      11 33 15.3
      comp=Z,421nm,26.6s
DZM   Mont Dzumac      76.45 178  LR     LR     11 37 04.4
      comp=Z,140nm,19.7s,baz=319,slow=31
DZM   Mont Dzumac      76.45 178  P      P      11 09 45.0 +1.9
DAVOX Davos/Dischmat   76.65 342  LR     LR     11 45 06.3
      comp=Z,162nm,21.9s,baz=84,slow=37
CEY   Cerknica         76.78 339 i P     P      11 09 45.1 +0.3
BRTR  Keskin Array B   76.98 323  P      P      11 09 45.6 -0.6
BRTR  Keskin Array B   76.98 323  P      P      11 09 45.6 -0.6
BOVS  Bovan            77.05 333 ⇑P      P      11 09 46.8 +0.5
MDSI  Maura Dua        77.08 243  P      P      11 09 44.9 -1.8
      comp=Z,22nm,1.4s
SISI  Saibi            77.11 249  P      P      11 09 46.3 -0.6
ANTO  Ankara           77.14 324 ⇑P      P      11 09 47.9 +1.0
ANTO  Ankara           77.14 324  P      P      11 09 47.9 +1.0
LEM   Lembang          77.34 238  LR     LR     11 46 11.7
      comp=Z,46nm,19.9s,baz=356,slow=38
KIRS  Kirsehir-Merke   77.41 323 ⇑P      P      11 09 48.2 -0.3
QIS   Mount Isa        77.90 204  P      P      11 09 50.9 -0.3
      comp=Z,25nm,1.7s
QIS   Mount Isa        77.90 204  P      P      11 09 50.7 -0.5
GAZ   Gaziantep        77.94 319  IAmb   IAmb   11 10 02.7
      comp=Z,22nm,0.9s
TAOE  Nuku Hiva Isla   78.37 124 eLR    LR      11 33 58.6
      comp=Z,243nm,29.2s
WB0   Warramunga Arr   78.49 209  IAmb   IAmb   11 09 55.1
      comp=Z,32nm,0.9s
WR8   Warramunga Arr   78.64 209  IAmb   IAmb   11 09 56.5
      comp=Z,38nm,1.1s
WRAB  Tennant Creek    78.66 209 i P     P      11 09 55.5 +0.2
WRAB                              pmax   pmax
      comp=Z,29nm,1.0s
WRA   Warramunga Arr   78.67 209  P      P      11 09 55.2 -0.2
WRA   Warramunga Arr   78.67 209  P      P      11 09 55.6 +0.2
      comp=Z,19nm,0.9s,baz=21,slow=5.8,SNR=41
WRA                               LR     LR     11 42 18.8
      comp=Z,53nm,21.4s,baz=44,slow=34
      comp=Z,19nm,0.9s
WRA   Warramunga Arr   78.67 209  P      P      11 09 55.2 -0.2
WRA                               pmax   pmax
      comp=Z,3.0nm,1.1s
PDG   Podgorica        78.81 334  IAmb   IAmb   11 10 06.3
      comp=Z,24nm,0.9s
PDG   Podgorica        78.81 334 ⇑P      P      11 09 56.4 +0.3
FDMO  Fiordimonte      79.64 339  IAmb   IAmb   11 10 12.2
      comp=Z,23nm,0.7s
FITZ  Fitzroy Crossi   79.69 217  P      P      11 10 01.5 +0.5
FITZ  Fitzroy Crossi   79.69 217  P      P      11 10 01.5 +0.5
      comp=Z,8.0nm,1.4s
FITZ  Fitzroy Crossi   79.69 217  LR     LR     11 39 38.4
      comp=Z,79nm,22.0s,baz=7.0,slow=31
FITZ  Fitzroy Crossi   79.69 217  P      P      11 10 01.2 +0.2
UOSS  Minazif          79.85 299  P      P      11 10 01.2 -0.9
CAMP  Campotosto       80.06 339  IAmb   IAmb   11 10 15.7
      comp=Z,29nm,1.0s
INTR  Introdacqua      80.45 338  IAmb   IAmb   11 10 16.9
      comp=Z,23nm,0.8s
PALK  Pallekele        80.51 269  LR     LR     11 48 34.8
      comp=Z,54nm,21.7s,baz=30,slow=38
EIDS  Eidsvold         80.55 192  P      P      11 10 06.2 +0.8
EIDS  Eidsvold         80.55 192  P      P      11 10 06.6 +1.2
      comp=Z,39nm,1.8s
EIDS  Eidsvold         80.55 192  P      P      11 10 06.9 +1.4
RAR   Rarotonga        81.55 147  LR     LR     11 38 46.7
      comp=Z,38nm,20.6s,baz=314,slow=30
PPT   Papeete          81.90 136  LR     LR     11 44 34.8
      comp=Z,106nm,18.5s,baz=338,slow=34
PPT2  Papeete2         81.92 136 eLR    LR      11 35 15.6
      comp=Z,191nm,32.0s
PPT2                             eLR    LR      11 35 30.2
      comp=Z,209nm,23.8s
CMIG  Matias Romero    82.23  72  LR     LR     11 46 22.6
      comp=Z,57nm,19.4s,baz=354,slow=35
MMAI  Mount Meron Ar   82.30 319  P      P      11 10 14.6 -0.5
      comp=Z,3.0nm,0.6s,baz=38,slow=4.2,SNR=3.7
MMAI                              LR     LR     11 53 39.9
      comp=Z,193nm,18.0s,baz=9.0,slow=41
      comp=Z,3.0nm,0.6s
AS01  Alice Springs    82.31 208  P      P      11 10 15.7 +0.8
AS31  Alice Springs    82.33 208  P      P      11 10 15.9 +0.9
      comp=Z,12nm,1.2s
ASAR  Alice Springs    82.33 208  P      P      11 10 15.6 +0.6
ASAR  Alice Springs    82.33 208  P      P      11 10 15.8 +0.8
      comp=Z,30nm,0.9s,baz=17,slow=5.4,SNR=132
ASAR                              LR     LR     11 48 04.8
      comp=Z,46nm,18.6s,baz=74,slow=37
      comp=Z,30nm,0.9s
ASAR  Alice Springs    82.33 208  P      P      11 10 15.6 +0.6
ASF   Jabal al Asfar   82.47 317  LR     LR     11 53 41.5
      comp=Z,246nm,18.2s,baz=55,slow=41
TIP   Timpagrande      82.50 335 ⇑P      P      11 10 15.1 -0.9
QLP   Quilpie          82.78 198  P      P      11 10 18.2 +0.9
      comp=Z,123nm,1.1s
QLP   Quilpie          82.78 198  P      P      11 10 18.2 +0.9
IDI   Anoyia           83.89 328  LR     LR     11 53 01.5
      comp=Z,127nm,19.3s,baz=52,slow=40
POLO  Lamas de Olo     84.09 354 eP      P      11 10 25.7 +1.5
POLO                             i Amb          11 10 35.9
      comp=Z,25nm,1.6s
MVO   Moncorvo         84.25 354 eP      P      11 10 26.3 +1.3
MVO                              i Amb          11 10 36.3
      comp=Z,42nm,1.2s
CCIG  Comitan          84.39  70  IAmb   IAmb   11 10 38.5
      comp=Z,38nm,1.4s
VAE   Valguarnera      84.67 337  LR     LR     11 52 37.2
      comp=Z,140nm,18.5s,baz=349,slow=39
PVIS  Viseu            84.75 354 eP      P      11 10 28.4 +0.8
RAO   Raoul Island     84.95 165  LR     LR     11 42 41.1
      comp=Z,148nm,19.8s,baz=339,slow=32
MTE   Manteigas        85.05 354 eP      P      11 10 30.2 +1.2
MTE                              i Amb          11 10 43.0
      comp=Z,59nm,1.4s
PCAS  Casmilo, Conde   85.45 355 eP      P      11 10 31.8 +0.9
PCAS                             i Amb          11 10 43.5
      comp=Z,88nm,1.8s
EIL   Elat             85.45 318  LR     LR     11 55 07.8
      comp=Z,254nm,18.4s,baz=68,slow=40
ESBB  Sonseca Array    85.49 351  IAmb   IAmb   11 10 42.6
      comp=Z,34nm,0.9s
ESDC  Sonseca Array    85.49 351  P      P      11 10 31.0 -0.2
ESDC                              IAmb   IAmb   11 10 42.6
      comp=Z,37nm,1.1s
ESDC  Sonseca Array    85.49 351  P      P      11 10 31.5 +0.2
      comp=Z,9.5nm,0.9s,baz=0.7,slow=4.6,SNR=17
      comp=Z,9.5nm,0.9s
PCBR  Castelo Branco   85.60 354 eP      P      11 10 32.8 +1.1
PCBR                             i Amb          11 10 42.9
      comp=Z,60nm,0.9s
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PSARD	Sardoal	85.88	354	*e*P	P	11 10 36.1	+3.0
PMRV	Marv??o	86.00	354	*e*P	P	11 10 35.2	+1.5
PMRV				*i* Amb		11 10 45.5	
	comp=Z,34nm,1.9s						
RAYN	Ar Rayn	86.28	306	P	P	11 10 34.8	-0.6
RAYN	Ar Rayn	86.28	306	P	P	11 10 34.6	-0.8
PMTG	Montargil	86.41	354	*e*P	P	11 10 36.4	+0.7
PMTG				*i* Amb		11 10 58.5	
	comp=Z,37nm,2.0s						
PESTR	Estremoz	86.57	354	*e*P	P	11 10 38.0	+1.5
PESTR				*i* Amb		11 10 48.1	
	comp=Z,32nm,2.1s						
EVO	Evora	86.93	354	*e*P	P	11 10 40.0	+1.8
EVO				*i* Amb		11 10 50.9	
	comp=Z,32nm,1.5s						
MOE	Montemor	86.96	354	*e*P	P	11 10 39.5	+1.0
MOE				*i* Amb		11 10 44.1	
	comp=Z,34nm,1.4s						
TBI	Tubuai	87.16	138	*e*LR	LR	11 37 59.8	
	comp=Z,639nm,26.0s						
PBAR	Barrancos	87.23	353	*e*P	P	11 10 40.5	+0.8
PBAR				*i* Amb		11 10 51.5	
	comp=Z,38nm,1.2s						
CMSA	Cobar Meteorol	87.38	196	P	P	11 10 41.1	+1.0
CMSA	Cobar Meteorol	87.38	196	P	P	11 10 41.2	+1.0
KEST	Kesra	87.44	340	LR	LR	11 53 49.7	
	comp=Z,100nm,19.4s,baz=358,slow=38						
STKA	Stephens Creek	88.43	199	P	P	11 10 46.0	+0.8
STKA	Stephens Creek	88.43	199	P	P	11 10 46.0	+0.8
	comp=Z,20nm,0.9s,baz=348,slow=6.7,SNR=31						
STKA				LR	LR	11 47 02.6	
	comp=Z,121nm,19.3s,baz=25,slow=33						
	comp=Z,20nm,0.9s						
STKA	Stephens Creek	88.43	199	P	P	11 10 46.1	+0.8
STKA	Stephens Creek	88.43	199	P	P	11 10 46.0	+0.8
MEEK	Meekatharra	90.06	220	P	P	11 10 53.5	+0.5
HTT	Hallett	90.47	201	P	P	11 10 55.4	+0.6
HTT	Hallett	90.47	201	P	P	11 10 55.8	+1.0
BBOO	Buckleboo	90.51	204	IAmb	IAmb	11 10 56.2	
	comp=Z,14nm,0.9s						
BBOO	Buckleboo	90.51	204	P	P	11 10 53.7	-1.2
FORT	Forrest	90.71	211	P	P	11 10 56.2	+0.3
FORT	Forrest	90.71	211	P	P	11 10 56.5	+0.6
FORT	Forrest	90.71	211	P	P	11 10 56.3	+0.4
URZ	Urewera	93.20	170	LR	LR	11 45 46.7	
	comp=Z,74nm,21.6s,baz=102,slow=31						
NWAO	Narrogin (SRO)	96.25	218	LR	LR	12 03 18.4	
	comp=Z,19nm,18.1s,baz=308,slow=41						
ATD	Arta Tunnel	97.86	303	LR	LR	12 01 21.4	
	comp=Z,5.7nm,18.9s,baz=14,slow=39						
RPZ	Rata Peaks	98.18	175	LR	LR	11 55 27.8	
	comp=Z,181nm,18.1s,baz=326,slow=35						
DBIC	Dimbokro	118.23	348	PKP	PKPdf	11 16 40.4	-0.4
	comp=Z,3.6nm,0.7s,baz=10,slow=3.3,SNR=3.9						
PTLB	Pontes e Lacer	128.39	58		PKPdf	11 16 59.8	-0.3
VNDA	Vanda	131.94	181	PKP	PKiKP	11 17 05.9	-0.2
	comp=Z,1.3nm,0.8s,baz=314,slow=5.2,SNR=6.9						
MAW	Mawson	142.82	218	PKhKP	PKPpre	11 17 22.3	
	comp=Z,5.8nm,0.7s,baz=165,slow=2.2,SNR=11						
QSPA	South Pole Qui	144.43	180	PKP	PKPab	11 17 26.2	-0.4
	comp=Z,49nm,0.7s,baz=337,slow=0.7,SNR=385						
TRQA	Tornquist	144.64	81		PKPbc	11 17 28.6	+0.2
TRQA	Tornquist	144.64	81	PKIKP	PKPbc	11 17 28.6	+0.2
PLTB	Pedras Altas	144.67	65		PKPbc	11 17 28.9	+0.3
SYO	Syowa Base	151.53	218	⇓*i*sPKPdf	PKPbc	11 17 46.1	+0.2
SYO	Syowa Base	151.53	218	⇓*i*PKiKP	PKiKP	11 17 49.4	+3.0
SYO	Syowa Base	151.53	218	⇑*e*pPKiKP	PKPab	11 17 52.0	-2.6
TROLL	Troll, Antarti	160.97	197	⇑PKPab	PKPab	11 18 34.5	-0.8
	comp=Z,121nm,0.6s						
SNAA	Sanae	162.09	193	⇑PKPab	PKPab	11 18 39.0	-1.1
	comp=Z,15nm,0.6s						
SNAA	Sanae	162.09	193	PKPab	PKPab	11 18 39.7	-0.3
	comp=Z,5.6nm,1.0s,baz=174,slow=5.1,SNR=8.5						
VNA3	Neumayer Olymp	163.18	187	⇑PKPab	PKPab	11 18 43.3	-1.5
	comp=Z,6.6nm,0.8s						
VNA2	Neumayer--Watz	163.30	189	⇑PKPab	PKPab	11 18 44.1	-1.2
	comp=Z,8.6nm,0.7s,baz=170,slow=4.5						

DNK 05 11:00:00.7±0.3**, 57°.59N**×**12°.08E, h0^{km}, ML1.0**(UPP)**,**
Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAU	Onsala	0.21	204	P	Pg	11 00 04.6	-0.1
ONAU				S	Sg	11 00 07.6	+0.1
BORU	Boraas	0.37	83	P	Pg	11 00 07.5	-0.3
BORU				S	Sg	11 00 12.7	0.0
TJOU	Tjoern	0.51	331	P	Pg	11 00 09.9	-0.5
TJOU				S	Sg	11 00 16.8	-0.1
FABU	Falkenberg	0.69	149	P	Pg	11 00 13.2	-0.6

DNK 05 11:00:06.5±1.9**, 56°.05N**×**14°.00E, h0^{km}, ML1.4,**
Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DEL	Delary	0.42	351	P	Pg	11 00 13.9	-0.7
DEL				*e*P	Pb	11 00 14.1	-2.8
DEL				S	Sg	11 00 19.9	-0.2
DEL				*i* S	Sb	11 00 20.4	-3.4
LUNU	Lund	0.52	216	P	Pg	11 00 15.5	-1.0
LUNU				S	Sg	11 00 22.9	-0.3
BJUU	Bjuv	0.55	273	P	Pg	11 00 16.3	-0.7
BJUU				*e*P	Pb	11 00 16.5	-2.4
BJUU				S	Sg	11 00 24.0	0.0
BJUU				*i* S	Sb	11 00 24.3	-2.9
VXJU	Vaexsjoe	1.02	31	P	Pg	11 00 24.6	-1.3
BLEU	Blekinge	1.05	75	P	Pg	11 00 24.7	-1.8
BLEU				*e*P	Pb	11 00 24.8	-2.7
BLEU				*i* S	Sb	11 00 41.5	-0.2
BSD	Bornholm Skovb	1.08	151	*e*P	Pg	11 00 24.9	-2.2
BSD				*e*S	Sg	11 00 39.8	-1.3
BSD				IAML		11 00 42.3	
	comp=Z,2.9nm,0.2s						
OSKU	Oskarshamn	1.63	45	P	Pn	11 00 35.7	-0.7

STR 05 11:04:31.0±0.4**, 46°N**±3°×°±°**, h0^{km}, MLv1.4**/6**, Error**
ellipse: s-maj=0.0km s-min=0.0km az=5.5, preliminary,
France

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SSB	Saint Sauveur	0.43	176	Pg	Pg	11 04 39.1	-0.2
SSB				Sg	Sg	11 04 45.3	+0.4
COLF	Collangettes	0.59	251	Pg	Pg	11 04 42.5	+0.1
COLF				Sg	Sg	11 04 51.2	+1.2
PLDF	La Plantade	0.66	293	Pg	Pg	11 04 43.8	+0.1
PLDF				Sg	Sg	11 04 53.3	+1.0
OG35	Corcelles	0.82	66	Pg	Pg	11 04 46.8	0.0
OG35				Sg	Sg	11 04 58.2	+0.8
OGSM	Saint Maurice	0.85	96	Pg	Pg	11 04 47.2	-0.1
OGSM				Sg	Sg	11 04 59.2	+0.9
OGMY	Moye	0.99	80	Pg	Pg	11 04 49.7	-0.3
OGMY				Sg	Sb	11 05 03.9	-0.8
GRN	Grenoble	1.00	118	Pg	Pg	11 04 50.2	+0.1
GRN				Sg	Sb	11 05 04.1	-0.8
LBL	Lubilhac	1.00	242	Pg	Pg	11 04 50.4	+0.3
LBL				Sg	Sb	11 05 04.3	-0.7
AGO	Saint Agoulin	1.01	290	Pg	Pg	11 04 50.1	-0.3
AGO				Sg	Sg	11 05 04.2	+0.7

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*EST **05** 11:08:06.8, 59°.54N×22°.13E, h0^{km}, ML1.8(HEL),*
Explosion
*HEL **05** 11:08:07.3, 59°.56N×22°.07E, h0^{km}, ML2.2, Explosion*
*IDC **05** 11:08:09.9±1.9, 59°.70N×22°.26E, h0^{km}, mbtmp3.0/4,*
ML2.3/4, Error ellipse: s-maj=25.2km s-min=6.5km
az=162.0
*LVSN **05** 11:08:09.9±4.5, 59°.62N×22°.54E, h0^{km}±81^{km}, ML2.2*
ISC 05 11:08:05.9±0.7**, 59°.59N**±0°.02×**22°.21E**±0°.03**, h0^{km}, n22,**
σ**1^{s}.34**/40**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TVF	Tvarminne	0.58	64	*e*P	Pg	11 08 17.5	+0.4
TVF				*e*S	Sb	11 08 28.3	+0.5
EE06	Soera, Palade,	0.71	152	*e*P	Pg	11 08 19.5	0.0
EE06				*e*S	Sg	11 08 27.7	-0.9
MTSE	Matsula	1.21	136	*e*P	Pn	11 08 31.3	+1.3
MTSE				*e*S	Sg	11 08 43.9	-0.8
MTSE	Matsula	1.21	136	*e*P	Pn	11 08 30.0	0.0
MTSE				*e*S	Sg	11 08 45.0	+0.3
AAL	Aland	1.26	299	*e*P	Pg	11 08 29.4	-0.7
AAL				*e*S	Sg	11 08 44.6	-1.9
MEF	Metsahovi	1.27	59	*e*P	Pb	11 08 30.1	-0.6
MEF				AML	AML	11 08 51.7	
	comp=N,29nm,0.2s						
MEF				AML	AML	11 08 51.8	
	comp=Z,39nm,0.2s						
MEF				AML	AML	11 08 53.2	
	comp=E,19nm,0.2s						
MEF	Metsahovi	1.27	59	*e*P	Pn	11 08 30.6	-0.2
MEF				*e*S	Sn	11 08 48.5	0.0
MEF				MSG		11 08 51.1	
	comp=Z,9.7nm,0.1s						
RAF	Rauma	1.45	351	*e*P	Pg	11 08 33.5	-0.2
RAF				*e*S	Sn	11 08 55.5	+2.4
RAF				AML	AML	11 08 58.0	
	comp=E,33nm,0.2s						
RAF				AML	AML	11 08 58.0	
	comp=N,17nm,0.2s						
RAF				AML	AML	11 08 58.0	
	comp=Z,27nm,0.2s						
RAF	Rauma	1.45	351	*e*P	Pg	11 08 33.5	-0.2
RAF				*e*SB	Sn	11 08 53.1	0.0
RAF				MSG		11 08 58.0	
	comp=Z,28nm,0.2s						
HEL1	Helsinki	1.47	65	*e*PN	Pb	11 08 35.3	+1.3
HEL1				*e*SN	Sn	11 08 56.2	+2.7
HEL1				MSG		11 08 57.4	
	comp=Z,5.3nm,0.1s						
NUR	Nurmijarvi	1.53	52	*e*PN	Pg	11 08 36.3	+1.1
NUR				*e*SG	Sn	11 08 56.9	+1.9
NUR				MSG		11 08 59.6	
	comp=Z,9.2nm,0.1s						
EE08	Sarghaua, Vand	1.82	120	*e*P	Pn	11 08 38.6	+0.2
EE08				*e*S	Sb	11 09 03.1	-0.3
SLIT	Slitere, Latvi	1.97	179	*e*P	Pb	11 08 43.2	+0.6
SLIT				AML	AML	11 09 11.8	
	comp=E,211nm,0.2s						
SLIT				AML	AML	11 09 11.9	
	comp=Z,140nm,0.2s						
SLIT				AML	AML	11 09 15.8	
	comp=N,199nm,0.2s						
SLIT	Slitere, Latvi	1.97	179	*e*PG	Pn	11 08 40.8	+0.3
SLIT				*e*S	Sn	11 09 03.6	-2.3
PVF	Pernaja	2.06	61	*e*P	Pb	11 08 43.7	-0.6
PVF				*e*SB	Sg	11 09 12.0	-0.2
KPF	Kankaanpaa	2.25	358	*e*PB	Pb	11 08 47.2	-0.1
KPF				*e*SG	Sg	11 09 17.6	-0.5
FIA0	FINESS Array S	2.66	44	*e*PB	Pb	11 08 53.6	-0.8
FIA0				*e*S	Sb	11 09 26.1	-1.6
FINES	FINESS Array B	2.66	44	Pn	Pb	11 08 53.6	-0.8
	comp=N,1.8nm,0.3s,baz=233,slow=14,SNR=38						
FINES				Lg	Lg	11 09 31.1	
	comp=N,3.0nm,0.3s,baz=231,slow=26,SNR=14						
	comp=N,3.3nm,0.3s						
KEF	Keuruu	2.89	26	*e*PB	Pb	11 08 57.1	-1.2
KEF				*e*SB	Sg	11 09 36.4	-2.3
HFS	Hagfors	4.33	281	Pn	Pn	11 09 15.2	+2.3
	comp=N,0.2nm,0.3s,baz=94,slow=13,SNR=12						
HFS				Sn	Sn	11 10 05.4	+1.4
	comp=N,0.8nm,0.3s,baz=87,slow=27,SNR=6.1						
HFS				Lg	Lg	11 10 26.5	
	comp=N,2.3nm,0.3s,baz=98,slow=31,SNR=11						
	comp=N,1.3nm,0.2s						
NOA	NORSAR Array B	5.65	290	Pn	Pn	11 09 34.7	+3.5
	baz=106,slow=12,SNR=8.2						
NOA				Sn	Sn	11 10 35.8	-0.9
	baz=54,slow=21,SNR=3.8						
NOA				Lg	Lg	11 11 05.3	
	comp=N,0.1nm,0.3s,baz=125,slow=22,SNR=4.2						
	comp=N,0.1nm,0.3s						
ARCES	ARCESS Array B	10.08	7	Pn	Pn	11 10 30.8	-0.9
	comp=N,0.1nm,0.3s,baz=183,slow=14,SNR=18						
	comp=N,0.3nm,0.2s						

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*DNK **05** 11:11:47.7±1.0, 59°.64N×22°.36E, h0^{km}, ML2.8(UPP),*
Suspected explosion
*UPP **05** 11:11:48.9±1.4, 59°.63N×22°.19E, h0^{km}, ML2.8*
*HEL **05** 11:11:49.0±0.0, 59°.55N×22°.17E, h0^{km}, ML2.6, Explosion*
*EST **05** 11:11:49.0, 59°.55N×22°.18E, h0^{km}, ML2.6(HEL),*
Explosion
*IDC **05** 11:11:50.7±0.9, 59°.68N×22°.24E, h0^{km}, mbtmp3.2/5,*
ML2.8/4, Error ellipse: s-maj=12.5km s-min=8.1km
az=168.0
*LVSN **05** 11:11:50.8±2.5, 59°.60N×22°.34E, h0^{km}±21^{km}, ML2.7*
ISC 05 11:11:47.9±0.7**, 59°.58N**±0°.02×**22°.20E**±0°.02**, h0^{km}, n73,**
σ**1^{s}.04**/98**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TVF	Tvarminne	0.59	63	*e*P	Pg	11 11 60.0	+0.8
TVF				*e*S	Sg	11 12 08.1	+1.3
EE06	Soera, Palade,	0.70	151	*e*P	Pg	11 12 01.1	-0.2
EE06				*e*S	Sg	11 12 09.9	-0.3
MTSE	Matsula	1.20	136	*e*P	Pn	11 12 12.6	+0.7
MTSE	Matsula	1.20	136	*e*P	Pg	11 12 10.9	0.0
MTSE	Matsula	1.20	136	*e*PB	Pg	11 12 10.8	-0.1
MTSE				*e*S	Sg	11 12 24.9	-1.6
AAL	Aland	1.26	299	P	Pg	11 12 11.6	-0.5
AAL				S	Sg	11 12 28.6	+0.2
AAL	Aland	1.26	299	P	Pg	11 12 11.6	-0.5
AAL				S	Sg	11 12 28.6	+0.2
AAL	Aland	1.26	299	*e*P	Pg	11 12 11.7	-0.5
AAL				*e*S	Sg	11 12 28.1	-0.4
AAL				MSG		11 12 33.5	
	comp=Z,64nm,0.2s						
MEF	Metsahovi	1.27	59	*e*P	Pg	11 12 12.3	+0.1
MEF	Metsahovi	1.27	59	*e*P	Pg	11 12 12.4	+0.1
MEF				*e*S	Sg	11 12 28.2	-0.5
MEF				AML	AML	11 12 33.0	
	comp=Z,127nm,0.2s						
MEF				AML	AML	11 12 33.2	
	comp=E,74nm,0.2s						
MEF				AML	AML	11 12 33.3	
	comp=N,68nm,0.2s						
MEF	Metsahovi	1.27	59	*e*P	Pg	11 12 12.4	+0.1
MEF				*e*S	Sg	11 12 29.1	+0.3
MEF				MSG		11 12 29.7	
	comp=Z,63nm,0.2s						
RAF	Rauma	1.46	352	*e*P	Pg	11 12 15.9	+0.1
RAF	Rauma	1.46	352	*e*P	Pn	11 12 15.8	+0.4
RAF				*e*S	Sn	11 12 35.4	+0.1
RAF				AML	AML	11 12 41.5	
	comp=E,64nm,0.1s						
RAF				AML	AML	11 12 44.6	
	comp=N,67nm,0.2s						
RAF				AML	AML	11 12 49.0	
	comp=Z,52nm,0.6s						
RAF	Rauma	1.46	352	*e*PG	Pn	11 12 15.8	+0.4
RAF				*e*S	Sg	11 12 34.7	0.0
HEL1	Helsinki	1.48	65	*e*P	Pn	11 12 15.9	+0.2
HEL1				*e*SB	Sb	11 12 35.4	0.0
NUR	Nurmijarvi	1.54	52	*e*P	Pn	11 12 17.0	+0.4
NUR				*e*S	Sg	11 12 37.0	-0.3
NUR				MSG		11 12 37.6	
	comp=Z,43nm,0.2s						
NRTU	Norrtaelje	1.82	275	P	Pn	11 12 21.0	+0.6
NRTU	Norrtaelje	1.82	275	P	Pn	11 12 21.0	+0.6
EE08	Sarghaua, Vand	1.82	119	*e*PN	Pn	11 12 21.3	+0.9
EE08				*e*SN	Sb	11 12 45.4	+0.1
SLIT	Slitere, Latvi	1.96	179	*e*P	Pn	11 12 22.9	+0.6
SLIT	Slitere, Latvi	1.96	179	*e*P	Pn	11 12 22.7	+0.4
SLIT				*e*S	Sn	11 12 48.6	+1.0
SLIT				AML	AML	11 12 53.1	
	comp=E,542nm,0.4s						
SLIT				AML	AML	11 12 54.5	
	comp=Z,336nm,0.2s						
SLIT				AML	AML	11 12 55.3	
	comp=N,384nm,0.5s						
SLIT	Slitere, Latvi	1.96	179	*e*PG	Pn	11 12 22.7	+0.4
SLIT				*e*SG	Sn	11 12 48.3	+0.7
GRAU	Graesoe	1.99	294	P	Pn	11 12 23.3	+0.5
GRAU	Graesoe	1.99	294	P	Pn	11 12 23.3	+0.5
PVF	Pernaja	2.07	61	*e*PB	Pb	11 12 26.0	-0.3
PVF				*e*SB	Sb	11 12 52.7	+0.1
PVF				MSG		11 12 57.1	
	comp=Z,63nm,0.2s						
FORU	Forsmark	2.18	293	P	Pn	11 12 26.7	+1.4
FORU	Forsmark	2.18	293	P	Pn	11 12 26.7	+1.4
NYNU	Nynaeshamn	2.23	257	P	Pn	11 12 27.8	+1.7
NYNU				S	Sb	11 12 56.8	-0.3
NYNU	Nynaeshamn	2.23	257	P	Pn	11 12 27.8	+1.7
NYNU				S	Sb	11 12 56.8	-0.3
FLYU	Flymyra	2.25	286	P	Pn	11 12 27.2	+0.9
FLYU	Flymyra	2.25	286	P	Pn	11 12 27.2	+0.9
KPF	Kankaanpaa	2.26	358	*e*PB	Pb	11 12 29.2	-0.3
KPF				*e*SB	Sb	11 12 57.9	0.0
KPF				MSG		11 13 03.2	
	comp=Z,49nm,0.2s						
FIBU	Brunna	2.48	279	P	Pn	11 12 31.0	+1.6
FIBU	Brunna	2.48	279	P	Pn	11 12 31.0	+1.6
BACU	Backbrunna	2.60	278	P	Pn	11 12 32.3	+1.3
BACU	Backbrunna	2.60	278	P	Pn	11 12 32.3	+1.3
VSU	Vasula	2.60	114	*e*P	Pn	11 12 31.9	+0.8
VSU	Vasula	2.60	114	*e*P	Pn	11 12 32.1	+1.0
VSU				AML	AML	11 13 10.0	
	comp=Z,70nm,0.3s						
VSU				AML	AML	11 13 12.2	
	comp=N,168nm,0.4s						
VSU				AML	AML	11 13 16.1	
	comp=E,92nm,0.3s						
VSU	Vasula	2.60	114	*e*P	Pn	11 12 32.1	+1.0
VSU				*e*S	Sn	11 13 04.4	+1.1
OSTU	Oestervaala	2.63	286	P	Pn	11 12 32.8	+1.2
OSTU	Oestervaala	2.63	286	P	Pn	11 12 32.8	+1.2
FINES	FINESS Array B	2.67	44	Pn	Pb	11 12 34.8	-1.8
	comp=E,6.8nm,0.3s,baz=229,slow=14,SNR=64						
FINES				Sn	Sb	11 13 07.6	-2.3
	comp=E,13nm,0.3s,baz=230,slow=25,SNR=15						
	comp=E,9.9nm,0.3s						
FIA1	FINESS Array S	2.68	44	*e*PB	Pb	11 12 35.0	-1.6
FIA1				*e*S	Sn	11 13 06.7	+1.4
GOTU	Gotland	2.69	227	P	Pn	11 12 33.4	+1.1
GOTU	Gotland	2.69	227	P	Pn	11 12 33.4	+1.1
KEF	Keuruu	2.90	26	*e*P	Pn	11 12 37.0	+1.7
ESKU	Eskilstuna	2.99	266	P	Pn	11 12 37.6	+1.1
ESKU	Eskilstuna	2.99	266	P	Pn	11 12 37.6	+1.1
VIKU	Vikbolandet	3.04	252	P	Pn	11 12 37.9	+0.7
VIKU	Vikbolandet	3.04	252	P	Pn	11 12 37.9	+0.7
VAF	Ylistaro	3.48	4	*e*P	Pn	11 12 45.5	+2.4
NRAU	Nora	3.64	273	P	Pn	11 12 46.4	+1.0
NRAU	Nora	3.64	273	P	Pn	11 12 46.4	+1.0
PABE	Paberze	4.20	166	*e*P	Pn	11 12 55.0	+2.0
HFS	Hagfors	4.33	281	Pn	Pn	11 12 56.7	+1.8
	comp=E,0.5nm,0.3s,baz=96,slow=14,SNR=5.1						
HFS				Pg	Pb	11 13 05.2	+0.5
	comp=E,1.3nm,0.3s,baz=99,slow=18,SNR=7.4						
HFS				Sn	Sn	11 13 46.6	+0.7
	comp=E,2.4nm,0.3s,baz=99,slow=20,SNR=6.3						
	comp=E,1.4nm,0.3s						
BLEU	Blekinge	4.73	229	*e*P	Pn	11 12 60.0	-0.4
BORU	Boraas	5.30	252	*e*P	Pn	11 13 09.8	+1.6
DEL	Delary	5.42	238	*e*P	Pn	11 13 09.8	0.0
NC303	NORSAR Array S	5.62	292	*e*P	Pn	11 13 12.9	+0.3
NB201	NORSAR Array S	5.62	290	*e*P	Pn	11 13 13.4	+0.8
NOA	NORSAR Array B	5.66	290	Pn	Pn	11 13 14.1	+1.0
	comp=E,0.1nm,0.3s,baz=94,slow=13,SNR=5.7						
NOA				Sn	Sn	11 14 16.6	-2.0
	comp=E,0.1nm,0.3s,baz=88,slow=16,SNR=4.4						
	comp=E,0.3nm,0.3s						
STRU	Stroemstad	5.67	269	*e*P	Pn	11 13 13.8	+0.6
STRU	Stroemstad	5.67	269	*e*P	Pn	11 13 14.7	+1.4
TJOU	Tjoern	5.71	259	*e*P	Pn	11 13 15.9	+2.0
NAO01	NORSAR Array S	5.78	287	*e*P	Pn	11 13 16.8	+1.9
ONAU	Onsala	5.82	252	*e*P	Pn	11 13 17.0	+1.6
NBO00	NORSAR Array S	5.86	289	*e*P	Pn	11 13 15.7	-0.2
NC204	NORSAR Array S	5.92	292	*e*P	Pn	11 13 16.4	-0.2
BSD	Bornholm Skovb	5.97	225	*e*P	Pn	11 13 18.3	+0.9
BJUU	Bjuv	6.03	238	*e*P	Pn	11 13 18.0	-0.2
HOMB	Homborsund	7.21	265	*e*P	Pn	11 13 34.1	-0.3
AKASG	Malin Array Be	9.76	153	Pn	Pn	11 14 07.8	-1.6
	comp=E,0.4nm,0.3s,baz=336,slow=13,SNR=5.3						
ARCES	ARCESS Array B	10.09	7	Pn	Pn	11 14 12.6	-1.3
	comp=E,0.2nm,0.3s,baz=197,slow=12,SNR=14						
ARCES				Sn	Sn	11 15 55.9	-12
	comp=E,0.4nm,0.3s,baz=187,slow=15,SNR=5.2						
ARCES				Lg	Lg	11 17 03.0	
	comp=E,0.3nm,0.3s,baz=188,slow=24,SNR=1.3						
	comp=E,0.7nm,0.2s						

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*TEH **05** 11:12:32.5, 32°.67N×47°.20E, h7^{km}±39^{km}*
*ISN **05** 11:12:34.8±0.9, 32°.78N×47°.14E, h8^{km}±4^{km}, ML3.1*
ISC 05 11:12:34.2±0.9**, 32°.75N**±0°.03×**47°.22E**±0°.03**, h10^{km}, n33,**
σ**1^{s}.45**/37**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKFM	Kafar-mosalman	0.94	34	Pg	Pg	11 12 51.7	-0.5
IBDR	Badra	1.14	289	*e*Pg	Pn	11 12 56.0	-0.2
IBDR				*e*Sg	Sg	11 13 10.0	-1.0
ILBA	Ilam Banvizeh	1.22	316	Pg	Pb	11 12 56.5	-0.9
IDOB	Doab	1.31	38	Pg	Pg	11 12 59.6	+0.2
RAFI	Al-Rafai	1.39	223	*e*Pn	Pg	11 13 02.0	+1.2
RAFI				*e*Sn	Sg	11 13 22.0	+3.2
RAFI				AML	AML	11 13 22.4	
	comp=N,392nm,0.4s						
RAFI				AML	AML	11 13 27.6	
	comp=E,372nm,0.6s						
KCHF	Cheshme Sefid,	1.53	354	Pg	Pg	11 13 02.9	-0.7
IGHG	Ghaleghazi	1.67	341	Pg	Pb	11 13 05.2	0.0
GLG1	Gilan-e-Gharb	1.75	322	Pg	Pb	11 13 05.8	-0.6
IBZA	Bozab	1.80	17	Pn	Pb	11 13 07.3	-0.1
HSAM	Samen	1.86	38	Pn	Pb	11 13 08.0	-0.4
AHWZ	Ahwaz	1.86	139	Pn	Pb	11 13 06.0	-2.3
IDHR	Dehrash	2.07	341	Pn	Pb	11 13 10.7	-1.2
SNQR	Sonqor, Kerman	2.13	9	Pn	Pb	11 13 12.0	-1.1
ILIN	Lien	2.17	354	Pn	Pb	11 13 11.9	-1.9
BHD	Baghdad	2.44	283	*e*Pn	Pb	11 13 16.0	-2.2
BHD				*e*Sn	Sb	11 13 46.0	-2.3
HAGD	Aghdareh	2.61	37	Pn	Pb	11 13 18.6	-2.7
JHBN	Jahan bin	2.96	99	Pn	Pn	11 13 22.1	+0.6
HGHA	Hamedan- Ghaye	3.05	26	Pn	Pn	11 13 25.2	+2.5
IPIR	Pirpir	3.10	90	Pn	Pn	11 13 24.3	+0.9
ZNGN	Zangian	3.14	101	Pn	Pn	11 13 24.3	+0.3
IBRJ	Brojen	3.52	103	Pn	Pn	11 13 29.3	+0.1
QABG	Abgarm-Qazvin	3.54	33	Pn	Pn	11 13 31.6	+2.1
IKRK	Kirkuk	3.56	319	*e*Pn	Pn	11 13 31.0	+1.4
IKRK				*e*Sn	Sn	11 14 13.0	+1.3
IKLH	Kolahrood	3.71	80	Pn	Pn	11 13 33.0	+1.3
IQOM	Qom	3.83	56	Pn	Pn	11 13 34.5	+1.1
IGAR	Gharneh	4.09	94	Pn	Pn	11 13 37.4	+0.5
KLNJ	Kolanjah	4.11	114	Pn	Pn	11 13 38.3	+1.0
KRSH	Karshahi	4.29	72	Pn	Pn	11 13 41.2	+1.5
IZEF	Zefreh	4.30	87	Pn	Pn	11 13 41.0	+1.1
IGZV	Ghazvin	4.39	33	Pn	Pn	11 13 42.6	+1.5
IRAM	Ramesheh	4.47	101	Pn	Pn	11 13 43.6	+1.4
ISFB	Sefidab	4.49	68	Pn	Pn	11 13 43.2	+0.9
DSBU	Dashti - Bushe	5.59	140	Pn	Pn	11 13 57.3	-0.2

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*IDC **05** 11:16:56.8±0.9, 40°.02N×144°.42E, h0^{km}, mb3.7/10,*
mbtmp3.6/16, ML3.1/5, Error ellipse: s-maj=22.7km
s-min=17.2km az=83.0
*JMA **05** 11:17:00.2±0.2, 40°.1N±0°.7×144°.0E±0°.9, h33^{km}, MV3.8/34,*
FAR E OFF SANRIKU
ISC 05 11:16:59.5±0.8**, 39°.98N**±0°.05×**144°.13E**±0°.07**, h16^{km}, n40,**
σ**1^{s}.62**/46**, mb3.7**/10**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	1.74	269	P	Pn	11 17 27.4	-1.6
MIYJ	Miyakonagasawa	1.82	258	P	Pn	11 17 29.4	-0.7
MIYJ				*e*S	Sn	11 17 50.6	-2.3
JKEN	Kujiedanarisaw	1.87	278	P	Pn	11 17 28.9	-1.8
JANG	Nango	2.04	282	P	Pn	11 17 31.6	-1.5
JANG				S	Sn	11 17 54.6	-3.6
JOM	Ohasama	2.24	258	P	Pn	11 17 35.6	-0.3
JMK	Ichinoseki	2.47	246	P	Pn	11 17 38.4	-0.7
JMK				*e*S	Sn	11 18 05.6	-3.3
JNBK	Urakawa-nobuka	2.52	336	P	Pn	11 17 39.4	-0.3
JCH	Churui	2.69	348	P	Pn	11 17 41.9	-0.2
JOT	Ohata	2.73	302	P	Pn	11 17 41.9	-0.6
JOT				*e*S	Sn	11 18 12.4	-2.8
JAK	Akkeshi	3.04	8	P	Pn	11 17 46.8	-0.1
JAK				*e*S	Sn	11 18 21.3	-1.6
JYK	Kaneyama	3.10	251	P	Pn	11 17 47.6	-0.1
JYK				*e*S	Sn	11 18 23.2	-1.3
JAR	Ashorobuto	3.32	356	P	Pn	11 17 49.9	-0.9
JAR				*e*S	Sn	11 18 27.8	-2.1
JEW	Eniwo	3.49	326	*e*P	Pn	11 17 54.4	+1.3
JEW				*e*S	Sn	11 18 34.0	-0.1

NEM2	Nemuro 2	3.59	19	P	Pn	11 17 53.8	-0.6
NEM2				*e*S	Sn	11 18 33.6	-2.8
JOTO	OTAMA OYAMA	3.83	232	P	Pn	11 17 57.7	0.0
JOTO				*e*S	Sn	11 18 41.0	-1.4
JTKR	Abashiri--Toko	3.99	358	P	Pn	11 17 59.9	0.0
JTKR				*e*S	Sn	11 18 44.4	-1.9
JAW	Awa shima	4.08	250	P	Pn	11 18 01.9	+0.6
JOSM	Okushiri--Mats	4.09	302	*e*P	Pn	11 18 01.1	-0.2
ASAJ	Asahikawa	4.28	345	Pn	Pn	11 18 03.7	-0.3
	0.8nm,0.3s,baz=195,slow=14,SNR=15						
ASAJ				Sn	Sn	11 18 55.1	+1.5
	3.0nm,0.3s,baz=172,slow=26,SNR=4.2						
	2.2nm,0.4s						
MJAR	Matsushiro Arr	5.79	235	Pn	Pn	11 18 25.3	+0.7
	0.3nm,0.3s,baz=42,slow=12,SNR=19						
	3.2nm,0.4s						
USRK	Ussuriysk Ar.	9.96	299	Pn	Pn	11 19 23.5	+1.8
	0.3nm,0.3s,baz=102,slow=14,SNR=7.0						
	2.9nm,0.6s						
KLR	Kul'dur	12.76	320	Pn	Pn	11 19 59.9	-0.2
	0.1nm,0.3s,baz=113,slow=7.3,SNR=4.8						
	1.0nm,0.7s						
KSRS	Korea Array	12.90	264	Pn	Pn	11 20 05.6	+3.5
	0.1nm,0.3s,baz=74,slow=14,SNR=5.9						
	0.4nm,0.4s						
MA2	Magadan	20.06	10	P	P	11 21 29.2	-2.5
	1.3nm,0.4s,baz=143,slow=5.1,SNR=3.8						
SONM	Songino Array	28.07	299	P	P	11 22 51.7	+1.5
	0.6nm,0.6s,baz=97,slow=12,SNR=2.1						
	0.6nm,0.6s						
H11N2	WAKE ISLAND Hy	28.09	129	T	T	11 52 18.0	
	baz=322						
H11N1	WAKE ISLAND Hy	28.11	129	T	T	11 52 19.2	
	baz=322						
H11N3	WAKE ISLAND Hy	28.11	129	T	T	11 52 21.0	
	baz=322						
H11S1	WAKE ISLAND Hy	28.93	131	T	T	11 53 22.7	
	baz=325						
H11S3	WAKE ISLAND Hy	28.94	131	T	T	11 53 23.3	
	baz=325						
H11S2	WAKE ISLAND Hy	28.95	131	T	T	11 53 23.7	
	baz=325						
ZALV	Zalesovo Beam	41.58	310	P	P	11 24 48.0	+1.8
	0.5nm,0.3s,baz=77,slow=6.4,SNR=3.8						
	0.5nm,0.3s						
MKAR	Makanchi Array	44.42	300	P	P	11 25 10.2	+0.9
	0.4nm,0.7s,baz=87,slow=8.5,SNR=5.8						
	0.4nm,0.7s						
ILAR	Eielson Array	45.87	34	P	P	11 25 18.7	-1.8
	0.3nm,0.6s,baz=252,slow=6.9,SNR=5.0						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	45.92	306	P	P	11 25 21.7	+0.5
	1.1nm,0.5s,baz=79,slow=8.6,SNR=7.8						
	1.1nm,0.5s						
BVAR	Borovoye Array	50.20	311	P	P	11 25 55.2	+1.0
	0.4nm,0.3s,baz=77,slow=8.8,SNR=5.1						
	0.4nm,0.3s						
WRA	Warramunga Arr	60.31	191	P	P	11 27 06.7	-0.7
	0.6nm,0.5s,baz=8.3,slow=6.9,SNR=11						
	0.6nm,0.5s						
ASAR	Alice Springs	64.03	190	P	P	11 27 33.9	+1.6
	0.5nm,0.8s,baz=359,slow=5.4,SNR=4.6						
	0.5nm,0.8s						
FINES	FINESS Array B	67.19	333	P	P	11 27 53.7	+1.4
	0.6nm,0.5s,baz=70,slow=6.3,SNR=5.3						
	0.6nm,0.5s						
TXAR	Lajitas Array	86.65	54	P	P	11 29 42.0	-0.6
	0.2nm,0.4s,baz=323,slow=3.8,SNR=1.3						
	0.2nm,0.4s						

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*IDC **05** 11:35:13.3±0.7, 9°.30S×159°.04E, h0^{km}, mb4.2/10, mbtmp4.2/12, ML3.6/2, MS3.5/2, Error ellipse: s-maj=19.5km s-min=13.9km az=10.0*

ISC 05 11:35:17.6±0.6, **9°.42S**±0°.06×**158°.99E**±0°.06, **h27^{km}, n23, σ0^{s}.93**/22, **mb4.2**/10, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	0.94	91	Pn	Pn	11 35 33.4	-1.7
	213nm,0.3s,baz=240,slow=4.0,SNR=50						
HNR				Sn	Sb	11 35 46.1	-1.4
	2µm,0.3s,baz=177,slow=11,SNR=28						
TATA	Tatamba Isabel	1.30	38	P	Pn	11 35 39.5	-0.5
TATA	Tatamba Isabel	1.30	38	S	Sb	11 35 58.7	+1.0
ALEG	Aligegeo Malai	1.81	69	P	Pn	11 35 47.6	+0.6
ALEG	Aligegeo Malai	1.81	69	S	Sb	11 36 13.0	+0.7
NGOA	Tingoa Renbel	2.37	154	P	Pn	11 35 54.0	-0.8
NGOA	Tingoa Renbel	2.37	154	S	Sn	11 36 22.1	-0.9
HURO	Huro Makira	3.05	110	P	Pn	11 36 04.6	+0.5
HURO	Huro Makira	3.05	110	S	Sn	11 36 39.2	-0.6
PMG	Port Moresby	11.68	269	LR	LR	11 42 14.0	
	comp=Z,214nm,18.8s,baz=123,slow=36						
DZM	Mont Dzumac	14.48	151	Pn	Pn	11 38 42.2	+1.2
	0.2nm,0.3s,baz=52,slow=10,SNR=2.3						
	9.7nm,1.1s						
JAY	Jayapura	19.43	290	P	P	11 39 41.5	-0.7
	0.3nm,0.3s,baz=106,slow=7.3,SNR=4.5						
	6.5nm,0.7s						
WRA	Warramunga Arr	26.00	244	P	P	11 40 49.2	+0.6
	9.5nm,0.5s,baz=70,slow=9.7,SNR=76						
	9.5nm,0.5s						
STKA	Stephens Creek	27.57	213	P	P	11 41 03.1	+0.6
	3.0nm,0.4s,baz=47,slow=15,SNR=12						
	3.0nm,0.4s						
ASAR	Alice Springs	27.84	236	P	P	11 41 05.0	-0.2
	4.3nm,0.7s,baz=63,slow=9.8,SNR=44						
	4.3nm,0.7s						
KSRS	Korea Array	54.96	330	P	P	11 44 44.9	-1.6
	0.9nm,0.9s,baz=154,slow=6.4,SNR=4.2						
	0.9nm,0.9s						
CMAR	Chiang Mai Arr	65.39	295	P	P	11 45 58.4	+0.1
	1.4nm,0.7s,baz=132,slow=5.3,SNR=7.3						
	1.4nm,0.7s						
VNDA	Vanda	68.10	179	P	P	11 46 15.0	+0.5
	2.2nm,0.7s,baz=348,slow=5.2,SNR=10						
	2.2nm,0.7s						
SONM	Songino Array	73.52	326	P	P	11 46 47.6	-0.6
	0.7nm,0.7s,baz=116,slow=3.4,SNR=2.8						
	0.7nm,0.7s						
QSPA	South Pole Qui	80.58	180	P	P	11 47 28.9	+1.4
	2.2nm,0.6s,baz=358,slow=9.0,SNR=29						
	2.2nm,0.6s						
ILAR	Eielson Array	84.20	20	P	P	11 47 46.4	+0.1
	0.3nm,0.9s,baz=217,slow=2.8,SNR=5.7						
	0.3nm,0.9s						
MKAR	Makanchi Array	87.83	318	P	P	11 48 04.6	-0.1
	0.8nm,0.6s,baz=96,slow=5.7,SNR=3.6						
	0.8nm,0.6s						
ANMO	Albuquerque	99.03	56	LR	LR	12 31 38.5	
	comp=Z,20nm,18.6s,baz=330,slow=34						

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*SOME **05** 11:42:19.9, 41°.72N×83°.75E, h15^{km}*

*NNC **05** 11:42:21.8±2.2, 42°.24N×83°.99E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=16.4km s-min=10.8km az=146.0*

ISC 05 11:42:20.6±3.3, **41°.9N**±0°.1×**84°.3E**±0°.1, **h21^{km}, n15, σ1^{s}.72**/20, **4C-4D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	Shalkode	3.78	290	Pg	Pn	11 43 20.3	+2.6
	10.0nm,0.3s						
SHLS				Lg	Lg	11 44 04.7	
	157nm,0.7s						
SHLS	Shalkode	3.78	290	*e*P	Pn	11 43 18.0	+0.3
	6.4nm,0.1s						
SHLS				*e*S	Sn	11 43 59.7	-1.9
	28nm,0.3s						
PDGK	Podgornoye	3.81	293	⇓Pg	Pb	11 43 24.9	-2.2
	7.3nm,0.7s						
PDGK				⇑Lg	Lg	11 44 13.6	
	22nm,0.5s						
DJR	Jarkent	4.08	307	Pg	Pb	11 43 30.5	-1.2
	5.9nm,0.5s						
DJR				Lg	Lg	11 44 21.5	
	12nm,0.3s						
DJR	Jarkent	4.08	307	*e*P	Pb	11 43 30.9	-0.7
	5.2nm,0.4s						
DJR				*e*S	Sb	11 44 21.7	+1.2
	12nm,0.3s						
UZB	Uzynbulak	4.08	289	Pg	Pb	11 43 30.3	-1.5
	5.2nm,0.3s						
UZB				Lg	Lg	11 44 21.3	
	12nm,0.7s						
KPKS	Kokpek	4.41	292	Pg	Pb	11 43 35.0	-2.4
	1.0nm,0.5s						
KPKS				Lg	Lg	11 44 29.1	
	19nm,0.5s						
KNOS	Konyrlen	4.46	305	Pg	Pb	11 43 37.4	-0.8
	6.0nm,0.4s						
KNOS				Lg	Lg	11 44 33.6	
	11nm,0.2s						
MK31	Makanchi Array	5.06	344	⇑Pg	Pb	11 43 47.5	-0.9
	1.0nm,0.3s,baz=160,slow=14,SNR=22						
MK31				Lg	Lg	11 44 50.9	
	8.8nm,0.6s,baz=167,slow=32,SNR=12						
MAKZ	Makanchi	5.14	342	⇓Pg	Pb	11 43 48.1	-1.6
	2.7nm,0.5s						
MAKZ				⇓Lg	Lg	11 44 53.3	
	9.3nm,0.9s						
KOTS	Kotyrbulak	5.46	286	*e*P	Pb	11 43 54.3	-1.0
	3.1nm,0.3s						
KOTS				*e*S	Sb	11 45 02.4	+1.9
	15nm,0.5s						
TNSS	Tian-Shan	5.55	284	Pg	Pb	11 43 55.1	-1.9
	2.0nm,0.5s						
TNSS				Lg	Lg	11 45 04.0	
	3.4nm,0.9s						
TNSS	Tian-Shan	5.55	284	*e*P	Pb	11 43 55.1	-1.9
	2.0nm,0.5s						
TNSS				*e*S	Sb	11 45 04.0	+0.9
	3.4nm,0.9s						
KTBS	Karatobe	5.88	290	Pg	Pb	11 44 03.3	+1.0
	2.3nm,0.4s						
KTBS				Lg	Lg	11 45 17.6	
	4.3nm,0.4s						
TKM2	Tokmak 2	6.52	282	⇓Pn	Pn	11 43 57.2	+1.9
	1.8nm,0.8s						
TKM2				⇑Sn	Sn	11 45 07.5	-1.6
	1.9nm,0.6s						
TKM2				⇑Lg	Lg	11 45 41.9	
	3.0nm,0.6s						

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*BYKL **05** 12:09:09.8±0.1, 52°.75N×106°.65E, h10^{km}±2^{km}, FELT I=III MSK at Tyrgan.*

*MOS **05** 12:09:09.0±1.8, 52°.81N×106°.76E, h17^{km}, mb4.1/2, Error ellipse: s-maj=16.5km s-min=11.4km az=51.4*

MOS Felt (III) at Tyrgan.

ISC 05 12:09:09.3±0.9, **52°.74N**±0°.02×**106°.75E**±0°.02, **h11**^{km}±7^{km}, **n40, σ1^{s}.85**/95, **8C-1D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRG	Tyrgan	0.24	275	⇑*i*Pg	Pg	12 09 14.4	0.0
TRG				*e*Sg	Sg	12 09 16.8	-1.0
TRG				Pmax			
	1µm,0.1s						
TRG				Smax			
	25µm,0.1s						
TRG	Tyrgan	0.24	275	⇑*i*PG	Pg	12 09 14.4	0.0
TRG				*e*		12 09 17.5	
TRG				pmax	pmax		
	comp=Z,1µm,0.1s						
TRG				smax	smax		
	comp=N,24µm,0.1s						
ZRHB	Zarechye	0.31	127	*e*Pg	Pg	12 09 16.8	+1.2
ZRHB				*e*Sg	Sb	12 09 22.2	+0.2
ZRHB				Pmax			
	comp=N,274nm,0.1s						
ZRHB				Smax			
	comp=N,3µm,0.3s						
KAB	Kabansk	0.69	185	*e*Pg	Pg	12 09 22.9	+0.1
KAB				*e*Sg	Sg	12 09 32.3	+0.5
KAB				Pmax			
	comp=N,217nm,0.2s						
KAB				Smax			
	comp=N,1µm,0.3s						
KAB	Kabansk	0.69	185	*e*PG	Pg	12 09 23.1	+0.3
KAB				*e*		12 09 32.3	
KAB				pmax	pmax		
	comp=Z,215nm,0.2s						
KAB				smax	smax		
	comp=E,1µm,0.3s						
KELR	Kotokel	0.81	88	⇑*i*Pg	Pg	12 09 25.2	+0.3
KELR				*e*Sg	Sb	12 09 36.5	+0.1
GORB	Goryachinsk	0.96	75	⇑*i*Pg	Pb	12 09 28.2	+0.1
GORB				*e*Sg	Sn	12 09 42.1	-0.4
OGRR	Ongureny	1.04	29	*e*Pg	Pn	12 09 29.4	-0.5
OGRR				*e*Sg	Sn	12 09 43.5	-0.9
OGRR				Pmax			
	comp=E,69nm,0.1s						
OGRR				Smax			
	comp=E,551nm,0.2s						
UUDB	Ulan-Yde	1.04	147	⇑*i*Pg	Pb	12 09 29.0	-0.4
UUDB				*e*Pb	Pn	12 09 30.4	+0.5
UUDB				*e*Sg	Sb	12 09 42.7	-0.3
UUDB				max			
	comp=E,85nm,0.1s						
UUDB				Smax			
	comp=E,349nm,0.1s						
VBR	Suhoy Ruchey	1.05	206	*e*Pg	Pb	12 09 29.3	-0.2
VBR				*e*Sg	Sb	12 09 43.2	0.0
BGT	Bolshoye Golou	1.08	230	*e*Pg	Pb	12 09 28.8	-1.2
BGT				*e*		12 09 29.9	
BGT				*e*		12 09 30.6	
BGT				*e*		12 09 34.4	
BGT				*e*Sg	Sb	12 09 42.4	-1.7
BGT				*e*Sb	Sg	12 09 44.4	+0.3
BGT				*e*		12 09 49.8	
BGT				max			
	comp=E,124nm,0.1s						
BGT				max			
	comp=E,698nm,0.3s						
HRMR	Khuramsha	1.12	173	*e*Pg	Pb	12 09 30.4	-0.4
HRMR				*e*Pb	Pn	12 09 31.5	+0.5
HRMR				*e*Sg	Sb	12 09 45.3	-0.1
HRMR				max			
	comp=E,161nm,0.3s						
HRMR				Smax			
	comp=E,2µm,0.3s						
MXMB	Maximikha	1.31	66	*e*Pg	Pg	12 09 34.9	+0.3
MXMB				*e*Sg	Sg	12 09 53.0	+1.4
MXMB				*e*		12 10 04.9	
LSTR	Listvyanka	1.47	234	*e*Pg	Pn	12 09 35.4	-0.3
LSTR				*e*Pb	Pb	12 09 36.7	+0.1
LSTR				*e*		12 09 38.8	
LSTR				*e*Sg	Sn	12 09 53.9	-1.0
LSTR				max			
	comp=E,58nm,0.1s						
LSTR				Smax			
	comp=E,291nm,0.1s						
LSTR	Listvyanka	1.47	234	*e*PN	Pn	12 09 35.8	+0.1
LSTR				*e*		12 09 54.9	
LSTR				pmax	pmax		
	comp=Z,59nm,0.5s						
LSTR				smax	smax		
	comp=N,392nm,0.5s						
IRK	Irkutsk	1.59	253	*e*Pg	Pn	12 09 37.4	-0.1
IRK				*e*Sg	Sn	12 09 57.7	-0.4
IRK				Pmax			
	comp=N,285nm,0.2s						
IRK				Smax			
	comp=N,2µm,0.3s						
IRK	Irkutsk	1.59	253	*e*PN	Pn	12 09 37.1	-0.4
IRK				*e*		12 09 57.5	
IRK				pmax	pmax		
	comp=Z,282nm,0.2s						
IRK				smax	smax		
	comp=N,2µm,0.3s						
IVK	Ivanovka	1.72	238	*e*Pn	Pn	12 09 39.8	+0.6
IVK				*e*Pg	Pn	12 09 40.0	+0.8
IVK				*e*		12 09 41.7	
IVK				*e*Sg	Sn	12 10 01.4	+0.3
IVK				Pmax			
	comp=N,115nm,0.2s						
IVK				Smax			
	comp=N,1µm,0.1s						
IVK	Ivanovka	1.72	238	*e*PN	Pn	12 09 40.0	+0.8
IVK				*e*		12 10 01.4	
IVK				pmax	pmax		
	comp=Z,115nm,0.2s						
IVK				smax	smax		
	comp=E,1µm,0.2s						
SYVR	Suvo	2.16	64	*e*Pn	Pb	12 09 46.9	-1.6
SYVR				*e*Pg	Pg	12 09 49.3	-1.4
SYVR				*e*		12 09 56.2	
SYVR				*e*Sn	Sb	12 10 14.8	-0.4
SYVR				*e*Sg	Sg	12 10 19.2	+0.5
SYVR				Pmax			
	comp=E,36nm,0.4s						
SYVR				Smax			
	comp=E,88nm,0.3s						
TLY	Talaya	2.19	242	*i* Pn	Pn	12 09 46.2	+0.5
TLY				*e*Pg	Pb	12 09 48.0	-0.9
TLY				*e*Sn	Sn	12 10 11.5	-1.2
TLY				*e*Sg	Sb	12 10 15.6	-0.4
TLY				Pmax			
	comp=E,26nm,0.2s						
TLY				Smax			
	comp=E,427nm,0.2s						
TLY	Talaya	2.19	242	*e*PN	Pn	12 09 46.1	+0.4
TLY				*e*		12 09 47.9	
TLY				*e*		12 10 15.7	
TLY				pmax	pmax		
	comp=Z,26nm,0.2s						
TLY				smax	smax		
	comp=N,424nm,0.2s						
ARS	Arshan	2.78	255	*e*Pn	Pn	12 09 53.8	0.0
ARS				*e*Pg	Pb	12 09 58.1	-0.9
ARS				*e*PgPg	PnPn	12 10 00.1	-0.9
ARS				*e*Sn	Sn	12 10 26.4	-1.0
ARS				*e*Sg	Sb	12 10 32.9	-0.2
ARS				*e*SgSg	SnSn	12 10 35.7	-2.3
ARS				max			
	comp=N,84nm,0.3s						
ARS				max			
	comp=N,504nm,0.4s						
ARS	Arshan	2.78	255	*e*PN	Pb	12 09 58.4	-0.6
ARS				*e*		12 10 33.6	
ARS				pmax	pmax		
	comp=Z,125nm,0.5s						
ARS				smax	smax		
	comp=E,621nm,0.5s						
ZAK	Zakamensk	3.20	224	*e*Pn	Pn	12 10 01.3	+1.6
ZAK				*e*Pg	Pb	12 10 06.8	+0.5
ZAK				*e*PgPg	Pg	12 10 12.3	+1.6
ZAK				*e*Sn	Sn	12 10 37.4	-0.5
ZAK				*e*Sg	Sb	12 10 47.8	+2.4
ZAK				max			
	comp=E,8.0nm,0.1s						
ZAK				Smax			
	comp=E,55nm,0.3s						
YLYR	Ulyunkhan	3.38	49	*e*Pn	Pn	12 10 04.0	+2.0
YLYR				*e*Pg	Pb	12 10 10.6	+1.4
YLYR				*e*Sn	Sn	12 10 43.0	+0.9
YLYR				*e*Sg	Sg	12 10 55.0	-2.8
YLYR				Pmax			
	comp=E,14nm,0.6s						
YLYR				Smax			
	comp=E,31nm,0.4s						
NIZB	Nizh Angarsk	3.45	27	*e*Pn	Pn	12 10 05.0	+2.0
NIZB				*e*Pg	Pb	12 10 12.4	+2.0
NIZB				*e*		12 10 46.0	
NIZB				*e*Sg	Sg	12 10 57.0	-3.0
NIZB				*e*SgSg	SbSb	12 11 02.6	+5.2
NIZB				Pmax			
	comp=E,16nm,0.2s						
NIZB				Smax			
	comp=E,50nm,0.3s						
KMO	Kumora	4.09	38	*e*Pn	Pn	12 10 14.4	+2.6
KMO				*e*Pg	Pb	12 10 23.9	+2.6
KMO				*e*Sn	Sn	12 10 59.7	+0.1
KMO				*e*Sg	Sg	12 11 16.7	-3.9
KMO				Pmax			
	comp=E,9.0nm,0.6s						
KMO				Smax			
	comp=E,47nm,1.0s						
CIT	Chita	4.23	97	*e*Sg	Sg	12 11 23.3	-1.8
CIT				Smax			
	comp=E,154nm,0.3s						
CIT	Chita	4.23	97	*e*PN	Pn	12 10 13.9	+0.1
CIT				*e*		12 10 26.4	
CIT				*e*		12 11 22.5	
CIT				pmax	pmax		
	comp=Z,61nm,0.2s						
CIT				smax	smax		
	comp=E,172nm,0.6s						
ORL	Orlik	4.23	270	*e*Pn	Pn	12 10 14.5	+0.6
ORL				*e*Pg	Pb	12 10 23.7	-0.1
ORL				*e*		12 11 03.7	
ORL				*e*Sg	Sb	12 11 17.8	+2.9
ORL				Pmax			
	comp=E,11nm,0.6s						
ORL				Smax			
	comp=E,62nm,0.7s						
KPC	Khapcheranga	4.67	128	*e*Pn	Pn	12 10 20.2	+0.4
KPC				*e*		12 10 22.9	
KPC				*e*Pg	Pb	12 10 34.4	+3.2
KPC				*e*		12 10 41.9	
KPC				*e*Sn	Sn	12 11 14.8	+0.9
KPC				*e*Sg	Sg	12 11 35.1	-3.9
KPC				max			
	comp=E,8.0nm,0.4s						
KPC				Smax			
	comp=E,82nm,0.8s						
ULN	Ulaanbaatar	4.88	178	*d**e*PN	Pn	12 10 23.6	+0.7
UKT	Uakit	4.89	53	*e*Pn	Pn	12 10 25.0	+2.1
UKT				*e*Pg	Pb	12 10 38.0	+2.9
UKT				*e*Sn	Sn	12 11 20.1	+0.6
UKT				*e*Sg	Sg	12 11 42.6	-3.7
UKT				Pmax			
	comp=E,8.0nm,0.9s						
UKT				Smax			
	comp=E,16nm,1.0s						
NLYR	Nelyaty	6.41	51	*e*Pg	Pb	12 11 05.5	+4.6
NLYR				*e*		12 11 53.5	
NLYR				*e*Sn	Sn	12 11 55.9	-1.0
NLYR				*e*Sg	Sg	12 12 29.0	-6.0
NLYR				Pmax			
	comp=E,3.0nm,1.4s						
NLYR				Smax			
	comp=E,36nm,1.5s						
TUP	Tupik	8.04	73	*e*Pn	Pn	12 11 08.2	+2.2
TUP				*e*Pg	Pb	12 11 35.2	+6.7
TUP				*e*Sn	Sn	12 12 35.7	-1.1
TUP				*e*Sg	Sg	12 13 20.3	-6.8
TUP				Pmax			
	comp=E,2.0nm,0.6s						
TUP				Smax			
	comp=E,33nm,1.6s						
KRAR	Krasnoyarsk	8.74	298	⇑*e*PN	Pn	12 11 15.3	-0.2
KLR	Kul'dur	16.10	93	⇑*e*P	P	12 12 57.7	-1.1
KLR				pmax	pmax		
	comp=Z,3.0nm,1.9s						
AAK	Ala-Archa	23.76	258	⇑*e*P	P	12 14 23.4	+1.6
AAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KIV	Kislovodsk	42.17	285	*e*P	P	12 17 01.0	-0.8
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						

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*NNC **05** 12:18:52.9±3.5, 38°.04N×71°.63E, h0^{km}, mb4.4, mpv4.3, Error ellipse: s-maj=27.9km s-min=21.4km az=172.0*

*IDC **05** 12:18:56.7±7.5, 37°.84N×72°.17E, h155^{km}±51^{km}, mb3.2/3, mbtmp4.0/9, Error ellipse: s-maj=68.3km s-min=41.1km az=170.0*

ISC 05 12:18:53.0±1.8, **37°.8N**±0°.1×**71°.84E**±0°.09, **h113^{km}, n24, σ1^{s}.56**/32, **mb3.6**/3, **8C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	4.59	18	P	Pn	12 20 02.0	+1.3
	SNR=137						
UCH	Uchtor	4.91	24	P	Pn	12 20 06.6	+1.5
	SNR=9.1						
EKS2	Erkin-Say	5.12	16	P	Pn	12 20 09.4	+1.8
	SNR=54						
AAK	Ala-Archa	5.28	22	P	Pn	12 20 11.5	+1.7
	SNR=97						
AAK	Ala-Archa	5.28	22	P	Pn	12 20 11.5	+1.7
	75nm,0.3s,baz=191,slow=5.2,SNR=159						
AAK				S	Sn	12 21 11.7	+2.2
	18nm,0.5s,baz=323,slow=23,SNR=11						
AAK	Ala-Archa	5.28	22	⇑P	Pn	12 20 11.1	+1.4
	7.3nm,0.4s						
AAK				⇑S	Sn	12 21 11.0	+1.5
	5.6nm,0.5s						
KK31	Karatay Array	5.43	350	P	Pn	12 20 13.2	+1.6
	4.8nm,0.2s,baz=164,slow=11,SNR=87						
KK31				⇑S	Sn	12 21 13.0	0.0
	20nm,0.3s,baz=170,slow=21,SNR=16						
KBK	Karagaybulak	5.44	25	P	Pn	12 20 13.5	+1.6

	SNR=16						
ULHL	Ulahol	5.61	36	P	Pn	12 20 14.5	+0.2
	SNR=10						
CHMS	Chumysh	5.69	22	P	Pn	12 20 16.6	+1.5
	SNR=66						
CHMS	Chumysh	5.69	22	⇑P	Pn	12 20 16.3	+1.2
	42nm,0.3s						
CHMS				⇑S	Sn	12 21 20.3	+1.2
	32nm,0.7s						
USP	Ospenovka	5.86	19	P	Pn	12 20 18.1	+0.6
	SNR=20						
TKM2	Tokmak 2	5.90	28	P	Pn	12 20 19.1	+0.9
	SNR=69						
TKM2	Tokmak 2	5.90	28	⇑P	Pn	12 20 18.9	+0.7
	22nm,0.5s						
MKAR	Makanchi Array	11.88	37	P	Pn	12 21 37.9	-0.9
	2.3nm,0.8s,baz=224,slow=14,SNR=12						
MKAR				S	Sn	12 23 46.7	-2.6
	0.2nm,0.4s,baz=242,slow=24,SNR=1.6						
KURBB	Kurchatov Arra	13.72	18	P	Pn	12 22 02.6	0.0
	0.9nm,0.2s,baz=206,slow=12,SNR=5.0						
AB31	Akbulak array	14.35	327	P	Pn	12 22 09.6	-1.1
	0.7nm,0.3s,baz=132,slow=15,SNR=44						
AB31				⇑S	Sn	12 24 49.7	+0.8
	1.7nm,0.5s,baz=152,slow=21,SNR=10						
BVAR	Borovoye Array	15.30	357	P	Pn	12 22 22.6	-0.1
	1.8nm,0.4s,baz=159,slow=11,SNR=5.9						
AKTO	Aktyubinsk	16.06	326	P	P	12 22 34.2	+0.8
	3.4nm,0.6s,baz=127,slow=13,SNR=7.9						
AKTO				S	Sn	12 25 25.5	-4.7
	2.7nm,0.5s,baz=183,slow=22,SNR=7.9						
AKTO	Aktyubinsk	16.06	326	⇓P	Pn	12 22 32.5	+0.3
	1.5nm,0.5s						
AKTO				⇑S	Sn	12 25 28.6	-1.5
	1.9nm,0.6s						
ZALV	Zalesovo Beam	18.49	25	P	P	12 22 58.8	-1.3
	2.3nm,0.5s,baz=216,slow=11,SNR=9.4						
FINES	FINESS Array B	36.83	325	P	P	12 25 50.4	+0.6
	0.4nm,0.4s,baz=114,slow=9.2,SNR=3.8						
	0.4nm,0.4s						
ARCES	ARCESS Array B	40.24	337	P	P	12 26 17.7	-0.6
	0.7nm,0.8s,baz=106,slow=7.7,SNR=3.6						
	0.7nm,0.8s						
HFS	Hagfors	42.50	321	P	P	12 26 37.4	+0.6
	0.7nm,0.5s,baz=100,slow=12,SNR=1.8						
	0.7nm,0.5s						

IDC ***05*** *12:33:01.5±0.5, 40°.61N×51°.84E, h0^{km}, mb4.3/28, mbtmp4.4/38, ML4.5/10, MS3.5/41, Error ellipse: s-maj=11.0km s-min=6.5km az=168.0*
BJI ***05*** *12:33:04.3, 40°.80N×51°.51E, h41^{km}, mB4.8/9, mb4.6/41, Ms3.8/3, Ms7 3.6/5*
MOS ***05*** *12:33:05.6±1.1, 40°.78N×51°.87E, h38^{km}, mb4.8/25, Error ellipse: s-maj=4.6km s-min=3.8km az=32.4*
NEIC ***05*** *12:33:07.8±1.2, 40°.76N±0°.07×51°.93E±0°.08, h39^{km}±8^{km}, mb4.7/147, Error ellipse: s-maj=10.3km s-min=8.9km az=179.0*
AZER ***05*** *12:33:07.3, 40°.39N×51°.95E, h62^{km}, mb5.3, ml4.8, ms2.5*
NNC ***05*** *12:33:15.4±1.3, 41°.33N×53°.11E, h0^{km}, mb4.7, Error ellipse: s-maj=16.4km s-min=9.2km az=88.0*
ISC 05 12:33:08.2±0.6**, 40°.73N**±0°.03×**51°.96E**±0°.03**, h43**^{km}±5^{km}**, n687, σ1°.77**/674**, mb4.6**/137**, MS3.5**/34**, 59C-24D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GALA	Gala	1.41	258	Pg	Pn	12 33 35.4	+4.0
GALA				Sg	Sn	12 33 56.1	+7.4
NDR	Nardaran	1.51	265	Pg	Pn	12 33 35.4	+2.7
NDR				Sg	Sn	12 33 58.2	+7.1
GOBA	Gobu	1.73	260	Pg	Pn	12 33 38.9	+3.2
GOBA				Sg	Sn	12 34 03.8	+7.3
ATGJ	Altiaghaj	2.30	274	Pn	Pn	12 33 44.8	+1.1
ATGJ				Sn	Sn	12 34 14.1	+3.3
GBS	Qobustan	2.31	266	Pn	Pn	12 33 46.0	+2.2
GBS				Sn	Sn	12 34 13.9	+3.0
SIZA	Siyzn	2.35	280	Pn	Pn	12 33 46.4	+2.1
SIZA				Sn	Sn	12 34 16.2	+4.2
ALIB	&Aumlli-Bayram	2.38	252	Pg	Pn	12 33 46.6	+1.9
ALIB				Sn	Sn	12 34 15.8	+3.1
PQL	Pirkuli	2.56	273	Pn	Pn	12 33 48.5	+1.3
PQL				Sn	Sn	12 34 19.1	+1.9
QUBA	Quba, Azerbaij	2.70	285	Pn	Pn	12 33 50.9	+1.8
QUBA				Sn	Sn	12 34 25.0	+4.5
SAAT	Saatly	2.84	253	Pn	Pn	12 33 52.4	+1.4
SAAT				Sn	Sn	12 34 25.3	+1.4
IML	Ismayilli	2.87	273	Pn	Pn	12 33 52.2	+0.8
IML				Sn	Sn	12 34 26.0	+1.2
KDMR	Kurdemir	2.90	264	Pn	Pn	12 33 52.9	+1.1
KDMR				Sn	Sn	12 34 26.1	+0.8
QSAR	Qusar	2.90	287	Pn	Pn	12 33 53.7	+1.8
QSAR				Sn	Sn	12 34 31.7	+6.1
XNQ	Khinaliq	2.93	280	Pn	Pn	12 33 53.5	+1.1
XNQ				Sn	Sn	12 34 27.4	+0.9
GLBA	Clilabad	3.12	243	Pn	Pn	12 33 54.4	-0.3
GLBA				Sn	Sn	12 34 28.0	-2.7
QBL	Gabala	3.14	275	Pn	Pn	12 33 55.4	+0.3
QBL				Sn	Sn	12 34 32.0	+0.7
LKRN	Lenkeran, Azer	3.17	232	Pn	Pn	12 33 54.0	-1.6
LKRN				Sn	Sn	12 34 28.1	-4.0
ASTR	Astara	3.27	230	Pn	Pn	12 33 55.0	-1.9
ASTR				Sn	Sn	12 34 29.6	-4.8
ZRD	Zardab	3.29	264	Pn	Pn	12 33 57.6	+0.4
ZRD				Sn	Sn	12 34 35.5	+0.5
YRD	Yardimli	3.39	239	Pn	Pn	12 33 57.0	-1.7
YRD				Sn	Sn	12 34 32.8	-4.9
LRK	Lerik	3.48	234	Pn	Pn	12 33 58.2	-1.7
LRK				Sn	Sn	12 34 35.3	-4.7
BLQ	Beylaqan	3.52	255	Pn	Pn	12 33 59.2	-1.0
BLQ				Sn	Sn	12 34 38.2	-2.4
SEKA	Sheki	3.64	279	Pn	Pn	12 34 02.9	+0.9
SEKA				Sn	Sn	12 34 45.6	+1.9
BRDA	Brd	3.67	264	Pn	Pn	12 34 03.2	+0.7
BRDA				Sn	Sn	12 34 45.3	+0.8
MNGR	Mingechevir, A	3.70	272	Pn	Pn	12 34 03.4	+0.5
MNGR				Sn	Sn	12 34 45.7	+0.5
AGDM	Agdam	3.75	262	Pn	Pn	12 34 03.2	-0.4
AGDM				Sn	Sn	12 34 45.0	-1.6
QRD	Qoradiz	3.78	252	Pn	Pn	12 34 03.3	-0.5
QRD				Sn	Sn	12 34 43.7	-3.3
MAK	Makhachkala	4.01	305	eP	Pn	12 34 04.3	-2.7
MAK				eS	Sn	12 34 50.8	-1.9
MAK				pmax	pmax		
	comp=Z,178nm,0.2s						
MAK				smax	smax		
	comp=N,2µm,0.4s						
MAK				smax	smax		
	comp=N,2µm,0.4s						
MAK				MLR	MLR		
	comp=Z,273nm,2.0s						
ZKTA	Zakatala	4.13	284	Pn	Pn	12 34 10.2	+1.4
ZKTA				Sn	Sn	12 34 59.2	+3.5
GANJ	Ganja	4.29	271	Pn	Pn	12 34 09.8	-1.1
GANJ				Sn	Sn	12 34 56.6	-3.0
GDB	GEDABAY	4.72	272	Pn	Pn	12 34 15.6	-1.4
GDB				Sn	Sn	12 35 07.8	-2.6
ORD	Ordubad	4.93	251	Pn	Pn	12 34 19.6	-0.2
ORD				Sn	Sn	12 35 13.4	-2.2
QZX	Qazax, Azerbai	5.00	276	Pn	Pn	12 34 20.2	-0.6
QZX				Sn	Sn	12 35 16.0	-1.3
SBZ	Shahbuz	5.09	257	Pn	Pn	12 34 22.5	+0.5
SBZ				Pn	Pn	12 34 22.5	+0.5
SBZ				Sn	Sn	12 35 18.5	-1.1
SBZ				Sn	Sn	12 35 18.5	-1.1
NAX	Nakhchivan	5.20	255	Pn	Pn	12 34 24.0	+0.4
NAX				Sn	Sn	12 35 21.5	-0.8
HYR	Heyderabad	5.53	262	Pn	Pn	12 34 28.1	0.0
HYR				Sn	Sn	12 35 29.4	-1.0
GNI	Garni	5.54	266		Pn	12 34 27.5	-0.7
GNI				Sn	Sn	12 35 29.4	-1.2
GNI	Garni	5.54	266	Pn	Pn	12 34 26.3	-1.9
	comp=Z,8.2nm,0.3s,baz=100,slow=5.6,SNR=9.3						
GNI				Sn	Sn	12 35 30.9	+0.3
	comp=Z,8.9nm,0.3s,baz=302,slow=18,SNR=4.4						
	comp=Z,18nm,0.3s						
GNI	Garni	5.54	266	d iP	Pn	12 34 28.5	+0.3
GNI	Garni	5.54	266	P	Pn	12 34 27.6	-0.6
KARS	Kars	6.75	272	Pn	Pn	12 34 44.0	-0.8
KARS	Kars	6.75	272	P	Pn	12 34 44.0	-0.8
NCK	Nalchik	6.81	297	deP	Pn	12 34 43.9	-1.6
GEVA	Gevas	7.29	254	Pn	Pn	12 34 51.1	-1.1
KBZ	Khabaz	7.36	297	Pn	Pn	12 34 50.0	-3.0
	comp=Z,1.5nm,0.3s,baz=109,slow=2.6,SNR=30						
KBZ				Sn	Sn	12 36 11.8	-3.4
	comp=Z,9.8nm,0.3s,baz=285,slow=9.8,SNR=5.3						
	comp=Z,5.7nm,0.5s						
KBZ	Khabaz	7.36	297	⇑eP	Pn	12 34 52.0	-1.0
SHA1	Shidzhatmaz	7.53	297	ceP	Pn	12 34 55.1	-0.5
KIV	Kislovodsk	7.59	298		Pn	12 34 55.6	-0.7
KIV	Kislovodsk	7.59	298	eP	Pn	12 34 55.4	-0.8
KIV				eS	Sn	12 36 19.7	-1.3
KIV				pmax	pmax		
	comp=Z,18nm,1.0s						
KIV				smax	smax		
	comp=Z,27nm,12.0s						
GOF	Gofitskoye	7.85	306	ceP	Pn	12 35 16.2	+17
GOF				eS	Sn	12 36 23.4	-3.8
MARD	Mardin	9.34	252		Pn	12 35 20.0	-0.4
SOC	Sochi	9.53	291	eP	Pn	12 35 21.2	-1.5
SOC				e		12 37 12.1	
SOC				pmax	pmax		
	comp=Z,11nm,0.6s						
SOC				MLR	MLR		
	comp=Z,120nm,19.0s						
AB31	Akbulak array	10.23	31		Pn	12 35 31.5	-0.7
AB31	Akbulak array	10.23	31	⇓P	Pn	12 35 30.8	-1.4
	comp=Z,5.1nm,0.3s,baz=212,slow=13,SNR=240						
AB31				⇑S	Sn	12 37 18.1	-7.4
	comp=Z,44nm,0.4s,baz=207,slow=23,SNR=15						
ABKAR	Akbulak array	10.23	31		Pn	12 35 31.4	-0.9
ABKAR	Akbulak array	10.23	31		Pn	12 35 31.5	-0.7
HRA	Herat	10.32	125		Pn	12 35 35.1	+1.3
AKTO	Aktyubinsk	10.59	22	Pn	Pn	12 35 35.8	-1.5
	comp=Z,16nm,0.3s,baz=209,slow=9.2,SNR=58						
AKTO				Sn	Sn	12 37 30.2	-4.2
	comp=Z,21nm,0.3s,baz=25,slow=24,SNR=15						
AKTO				LR	LR	12 41 02.9	
	comp=Z,311nm,18.8s,baz=74,slow=45						
	comp=Z,33nm,0.3s						
AKTO	Aktyubinsk	10.59	22	⇓P	Pn	12 35 36.1	-1.2
	comp=Z,18nm,0.6s						
AKTO				⇑S	Sn	12 37 26.6	-7.9
	comp=Z,183nm,0.7s						
ARPR	Arapgir-MALATY	10.60	266		Pn	12 35 36.9	-0.6
BELG	Belogornoye	12.04	347	Pn	Pn	12 35 55.0	-2.0
	comp=Z,8.3nm,0.3s,baz=190,slow=1.5,SNR=20						
BELG				Sn	Sn	12 38 01.6	-8.2
	comp=Z,23nm,0.3s,baz=294,slow=23,SNR=14						
BELG				LR	LR	12 42 17.8	
	comp=Z,128nm,20.1s,baz=197,slow=46						
BELG	Belogornoye	12.04	347	ceP	Pn	12 35 56.5	-0.5
BELG				pmax	pmax		
	comp=Z,12nm,0.9s						
VRH	Novokhopyorsk	12.65	329	eP	Pn	12 36 04.0	-1.4
VRH				pmax	pmax		
	comp=Z,20nm,0.7s						
DZET	Dzherino	13.12	93	P	Pn	12 36 12.8	+0.8
DZET				pmax	pmax		
	comp=Z,16nm,0.5s						
SIMJ	Simiganj	13.29	93		Pn	12 36 14.9	+0.6
VORD	Divnogorie	13.50	324	eP	Pn	12 36 14.2	-2.7
VORD				pmax	pmax		
	comp=Z,9.0nm,0.4s						
BRLS	Borolday	13.52	74	eP	Pn	12 36 13.6	-3.7
BRLS	Borolday	13.52	74	eP	Pn	12 36 13.6	-3.7
VSR	Storozhevoye	13.73	324	eP	Pn	12 36 16.1	-4.0
VSR				pmax	pmax		
	comp=Z,20nm,0.6s						
SIM	Simferopol'	13.75	294	eP	P	12 36 27.2	-0.9
ILGA	Ilgaz	13.81	277	Pn	Pn	12 36 18.5	-3.0
KIRS	Kirsehir-Merke	13.94	269	⇓P	Pn	12 36 19.7	-3.4
KK31	Karatay Array	14.02	74		Pn	12 36 22.8	-1.3
KK31	Karatay Array	14.02	74	P	Pn	12 36 22.1	-2.0
	comp=Z,5.1nm,0.4s,baz=268,slow=15,SNR=33						
KK31				⇓S	Sn	12 38 49.6	-8.6
	comp=Z,11nm,0.5s,baz=270,slow=25,SNR=3.9						
KK31	Karatay Array	14.02	74	P	Pn	12 36 22.8	-1.3
KKAR	Karatay Array	14.02	74		Pn	12 36 23.2	-0.9
KKAR	Karatay Array	14.02	74		Pn	12 36 23.4	-0.7
KKAR	Karatay Array	14.02	74	P	Pn	12 36 23.2	-0.9
BR131	Keskin Array S	14.04	272		Pn	12 36 23.4	-1.1
BR131	Keskin Array S	14.04	272	P	Pn	12 36 23.4	-1.1
BRTR	Keskin Array B	14.04	272		Pn	12 36 23.6	-0.8
BRTR	Keskin Array B	14.04	272	P	Pn	12 36 23.7	-0.8
VORR	Voronezh	14.04	325	eP	Pn	12 36 19.3	-5.0
VORR				pmax	pmax		
	comp=Z,20nm,0.9s						
BTK	Batken	14.39	87		Pn	12 36 27.4	-1.8
BTK	Batken	14.39	87	P	Pn	12 36 27.4	-1.8
ANTO	Ankara	14.65	273		Pn	12 36 30.8	-1.9
ANTO	Ankara	14.65	273	P	Pn	12 36 30.8	-1.9
ASF	Jabal al Asfar	14.81	240	Pn	Pn	12 36 32.1	-2.7
	comp=Z,0.3nm,0.3s,baz=86,slow=6.6,SNR=9.0						
ASF				LR	LR	12 43 39.3	
	comp=Z,62nm,19.9s,baz=73,slow=44						
	comp=Z,4.4nm,0.7s						
LPSR	Galich'ya Gora	14.84	328	eP	Pn	12 36 32.1	-2.9
LPSR				pmax	pmax		
	comp=Z,50nm,0.7s						
SHME	Shamm	15.04	165	i P	Pn	12 36 36.6	-1.3
	SNR=11						
BANOM	Banah	15.20	165	P	Pn	12 36 38.2	-1.7
MMAI	Mount Meron Ar	15.31	245	Pn	Pn	12 36 39.6	-1.8
	comp=Z,1.0nm,0.3s,baz=64,slow=7.8,SNR=4.1						
MMAI				LR	LR	12 43 29.5	
	comp=Z,85nm,20.3s,baz=53,slow=41						
MSFE	Esma-Masafi	15.72	166	i P	Pn	12 36 44.5	-2.2
	SNR=13						
ARSB	Arslanbob	15.88	81		Pn	12 36 47.5	-1.2
ARSB	Arslanbob	15.88	81	P	Pn	12 36 47.5	-1.2
ARSB				pmax	pmax		
	comp=Z,25nm,0.8s						
NAZ	Nazwa, Dubai	16.00	168	i P	Pn	12 36 47.9	-2.3
	SNR=12						
UOSS	Minazif	16.13	166		Pn	12 36 49.7	-2.2
UOSS	Minazif	16.13	166	i P	Pn	12 36 49.5	-2.4
	SNR=9.5						
FAQ	Al Faqa, Dubai	16.22	168	i P	Pn	12 36 50.8	-2.3
	SNR=10						
ARTI	Arti	16.23	13		Pn	12 36 49.4	-3.5
ARTI	Arti	16.23	13	Pn	Pn	12 36 49.1	-3.8
	comp=Z,7.9nm,0.3s,baz=197,slow=8.4,SNR=19						
ARTI				Sn	Sn	12 39 40.8	-11
	comp=Z,4.8nm,0.3s,baz=77,slow=22,SNR=14						
ARTI				LR	LR	12 44 44.0	
	comp=Z,145nm,19.5s,baz=208,slow=43						
ARTI	Arti	16.23	13	P	Pn	12 36 49.6	-3.3
ARTI				S	Sn	12 39 47.6	-4.1
HATD	Hatta, Dubai	16.23	166	i P	Pn	12 36 51.1	-2.1
	SNR=12						
GHAJ	Ghor Haditha	16.24	240		Pn	12 36 52.4	-0.7
ASUD	Al Ashush, Dub	16.30	169	i P	Pn	12 36 52.4	-1.6
	SNR=12						
AJN	Ajban	16.32	170	i P	Pn	12 36 52.0	-2.2
	SNR=6.1						
OTUK	Ortayu	16.34	56	⇑P	Pn	12 36 52.4	-2.0
	comp=Z,30nm,0.7s						
OTUK				⇑S	Sn	12 39 43.5	-11
	comp=Z,36nm,0.7s						
AML	Almayashu	16.36	78	P	P	12 36 57.6	+0.1
	SNR=10						
ASHO	Ashiyiah	16.36	167	i P	Pn	12 36 52.7	-2.1
	SNR=24						
EKS2	Erkin-Say	16.41	76	P	Pn	12 36 55.3	-0.1
	SNR=15						
BORA	Eskisehir	16.43	274		Pn	12 36 54.8	-0.9
BTLS	Baital	16.74	68	eP	Pn	12 36 58.3	-1.1
BTLS	Baital	16.74	68	eP	Pn	12 36 58.4	-1.1
ISP	Isparta	16.85	267	⇓eP	Pn	12 37 01.0	+0.1
ISP				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ALNE	Al Ain	16.92	168	i P	Pn	12 36 59.1	-2.7
	SNR=8.0						
AAK	Ala-Archa	16.94	76	P	P	12 37 03.4	-0.2
	SNR=7.5						
AAK	Ala-Archa	16.94	76		Pn	12 37 02.5	+0.4
AAK	Ala-Archa	16.94	76	P	Pn	12 37 02.1	0.0
	comp=Z,1.3nm,0.3s,baz=267,slow=9.9,SNR=13						
AAK				S	Sn	12 40 07.2	-2.1
	comp=Z,2.7nm,0.5s,baz=173,slow=9.6,SNR=2.2						
AAK				LR	LR	12 44 42.9	
	comp=Z,94nm,18.0s,baz=259,slow=41						
	comp=Z,4.9nm,0.5s						
AAK	Ala-Archa	16.94	76	deP	Pn	12 37 02.8	+0.7
AAK				pmax	pmax		
	comp=Z,29nm,1.9s						
AAK	Ala-Archa	16.94	76	i P	Pn	12 37 02.7	+0.7
	SNR=9.8						
FRU1	Bishkek	17.03	76	P	Pn	12 37 03.3	+0.1
FRU1	Bishkek	17.03	76	P	Pn	12 37 03.3	+0.1
FRU1				pmax	pmax		
	comp=Z,34nm,1.1s						
SGDS	Sogindy	17.04	73	eP	Pn	12 37 03.1	-0.2
SVE	Sverdlovsk	17.07	16	eP	Pn	12 37 02.6	-0.9
SVE				eS	Sn	12 40 04.0	-8.2
SVE				pmax	pmax		
	comp=Z,42nm,1.2s						
CHMS	Chumysh	17.12	75	P	P	12 37 09.3	+3.8
	SNR=9.3						
BRZS	Berezniki	17.21	51	eP	Pn	12 37 04.8	-0.4
BRZS	Berezniki	17.21	51	eP	Pn	12 37 04.9	-0.4
KBK	Karagaybulak	17.27	76	P	P	12 37 10.6	+3.3
	SNR=9.7						
JURR	Jurilovca	17.41	291	⇑P	Pn	12 37 05.7	-2.1
TLCR		17.50	292	⇓P	Pn	12 37 06.7	-2.1
TLCR		17.50	292	⇓P	Pn	12 37 06.7	-2.1
BRVK	Borovoye	17.51	39		Pn	12 37 08.3	-0.6
BRVK				IAmb	IAmb	12 37 12.2	
	comp=Z,38nm,0.9s						
BRVK	Borovoye	17.51	39	⇓P	Pn	12 37 08.3	-0.6
	comp=Z,23nm,0.8s						
BRVK				⇑S	Sn	12 40 11.3	-12
	comp=Z,33nm,0.7s						
BRVK	Borovoye	17.51	39	d iP	Pn	12 37 08.1	-0.9
BRVK				pmax	pmax		
	comp=Z,34nm,0.9s						
BVA0	Borovoye Array	17.54	39	⇑P	Pn	12 37 08.6	-0.8
	comp=Z,30nm,0.7s,baz=222,slow=13,SNR=23						
BVA0				⇑S	Sn	12 40 12.5	-11
	comp=Z,37nm,0.7s,baz=236,slow=23,SNR=11						
BVAR	Borovoye Array	17.54	39	P	Pn	12 37 07.6	-1.7
	comp=Z,0.4nm,0.3s,baz=228,slow=16,SNR=31						
BVAR				S	Sn	12 40 10.4	-13
	comp=Z,10nm,0.4s,baz=238,slow=19,SNR=5.4						
BVAR				LR	LR	12 45 10.8	
	comp=Z,300nm,19.1s,baz=234,slow=41						
	comp=Z,22nm,0.7s						
ELL	Elmali	17.65	264	IAmb	IAmb	12 37 32.6	
	comp=Z,39nm,0.8s						
OBN	Obninsk	17.65	330	P	Pn	12 37 08.5	-2.1
OBN	Obninsk	17.65	330	P	Pn	12 37 08.6	-2.0
	comp=Z,8.8nm,0.3s,baz=90,slow=9.4,SNR=5.0						
OBN				S	Sn	12 40 16.1	-10
	comp=Z,20nm,0.5s,baz=61,slow=20,SNR=3.3						
	comp=Z,24nm,0.3s						
OBN	Obninsk	17.65	330	eP	Pn	12 37 07.1	-3.5
OBN				pmax	pmax		
	comp=Z,61nm,1.7s						
OBN				MLR	MLR		
	comp=Z,106nm,18.0s						
MFTR	Murfatlar	17.70	289	⇑P	Pn	12 37 09.9	-1.4
EIL	Elat	17.71	237	P	Pn	12 37 09.4	-2.2
	comp=Z,1.0nm,0.3s,baz=110,slow=2.7,SNR=11						
EIL				LR	LR	12 45 31.6	
	comp=Z,75nm,18.7s,baz=69,slow=43						
	comp=Z,3.0nm,0.5s						
MZR	Muzera	17.72	175	i P	Pn	12 37 09.5	-2.2
	SNR=15						
MOS	Moscow	17.74	333	eP	Pn	12 37 07.6	-4.1
MOS				eS	Sn	12 40 19.1	-9.2
MOS				pmax	pmax		
	comp=Z,45nm,0.8s						
TKM2	Tokmak 2	17.74	75	P	P	12 37 12.6	+0.1
	SNR=42						
TKM2	Tokmak 2	17.74	75	⇑P	P	12 37 12.4	-0.2
	comp=Z,27nm,0.8s						
TPGR	Topolog	17.75	291	⇑P	Pn	12 37 09.2	-2.7
KIRV	Kirov	17.95	356	P	Pn	12 37 11.2	-3.1
	comp=Z,47nm,0.6s,baz=345,slow=2.1,SNR=10						
KIRV				S	Sn	12 40 21.5	-12
	comp=Z,23nm,0.6s,baz=352,slow=21,SNR=3.6						
KIRV				LR	LR	12 45 22.9	
	comp=Z,137nm,21.6s,baz=183,slow=41						
KIRV	Kirov	17.95	356	deP	Pn	12 37 11.0	-3.3
CFR	Carcaliu	17.98	292	⇑P	Pn	12 37 12.8	-1.9
CFR	Carcaliu	17.98	292	⇑P	Pn	12 37 12.8	-1.9
RAYN	Ar Rayn	17.99	200		Pn	12 37 12.2	-2.9
RAYN	Ar Rayn	17.99	200	P	Pn	12 37 12.2	-2.9
RAYN				pmax	pmax		
	comp=Z,21nm,0.7s						
RAYN	Ar Rayn	17.99	200	P	Pn	12 37 11.9	-3.2
BOOM	Boomskoye usch	18.01	76		P	12 37 17.2	+1.8
BOOM	Boomskoye usch	18.01	76	P	P	12 37 17.2	+1.8
BOOM				pmax	pmax		
	comp=Z,13nm,0.6s						
AKAS	Kas	18.05	263		Pn	12 37 14.3	-1.6
HARR	Harsova	18.08	291	⇑P	Pn	12 37 14.2	-1.8
HARR	Harsova	18.08	291	⇑P	Pn	12 37 14.2	-1.8
ICOR	Ion Corvin	18.14	289	⇑P	P	12 37 15.1	-1.6
WSAR	Wadi Sarin	18.32	160	P	P	12 37 17.1	-1.6
	comp=Z,0.1nm,0.6s,baz=340,slow=23,SNR=18						
NIL	Nilore	18.35	106	P	P	12 37 18.8	-0.3
NIL	Nilore	18.35	106	P	P	12 37 18.8	-0.3
NIL				pmax	pmax		
	comp=Z,12nm,0.9s						
SORM	Soroca	18.37	302	⇑P	P	12 37 17.2	-1.9
SORM	Soroca	18.37	302	⇑P	P	12 37 17.2	-1.9
KSH	Kashi	18.40	86	P	P	12 37 18.7	-1.0
KSH				pmax	pmax		
	comp=Z,14nm,0.7s						
VASR	Vaslui	18.42	297	⇓P	P	12 37 17.7	-2.0
AKASG	Malin Array Be	18.68	310	P	P	12 37 21.1	-1.4
	comp=Z,33nm,0.6s,baz=113,slow=11,SNR=87						
AKASG				S	Sn	12 40 43.2	-7.8
	comp=Z,5.4nm,0.7s,baz=116,slow=23,SNR=6.9						
AKASG				LR	LR	12 46 09.4	
	comp=Z,54nm,18.6s,baz=56,slow=42						
AKBB	Malin Array Si	18.68	310		P	12 37 20.4	-2.1
AKBB	Malin Array Si	18.68	310	c iP	P	12 37 21.0	-1.5
KIEV	Kiev	18.69	310		P	12 37 21.7	-0.9
KIEV	Kiev	18.69	310	⇑P	P	12 37 22.0	-0.6
KIEV	Kiev	18.69	310	⇑P	P	12 37 22.0	-0.6
KIEV	Kiev	18.69	310	P	P	12 37 21.2	-1.3
AAA	Alma-Ata	18.70	74	eP	P	12 37 23.1	+0.1
AAA	Alma-Ata	18.70	74	eP	P	12 37 23.1	+0.1
TNSS	Tian-Shan	18.73	75	eP	P	12 37 23.6	0.0
TNSS	Tian-Shan	18.73	75	eP	P	12 37 23.7	0.0
MDOK	Medeo	18.80	74	⇓P	Pn	12 37 25.2	+0.2
	comp=Z,7.6nm,0.8s						
MDOK	Medeo	18.80	74	eP	Pn	12 37 24.6	-0.3
MDOK	Medeo	18.80	74	eP	Pn	12 37 24.7	-0.3
VRI	Vrincioaia	19.04	294	⇑P	P	12 37 24.9	-1.6
VRI	Vrincioaia	19.04	294	⇑P	P	12 37 24.9	-1.6
PLOR	Plostina	19.09	294	⇓P	P	12 37 26.1	-1.0
PLOR	Plostina	19.09	294	⇓P	P	12 37 26.1	-1.0
TESR	Tescani	19.18	296	⇑P	P	12 37 25.8	-2.2
ARG	Arkhangelos	19.18	264	P	P	12 37 27.5	-0.6
ARG				IAmb	IAmb	12 37 38.3	
	comp=Z,54nm,1.0s						
ARG	Arkhangelos	19.18	264	P	P	12 37 27.5	-0.6
ARG				pmax	pmax		
	comp=Z,53nm,1.0s						
ONER	Baraj Valea Uz	19.32	295	⇑P	P	12 37 27.3	-2.3
TARG	Taragay, Kyrgy	19.45	79	P	Pn	12 37 35.0	+2.1
TARG				pmax	pmax		
	comp=Z,11nm,0.9s						
MLR	Muntele Rosu	19.55	293		P	12 37 31.8	-0.4
MLR	Muntele Rosu	19.55	293	P	P	12 37 30.7	-1.5
	comp=Z,1.1nm,0.3s,baz=122,slow=7.2,SNR=6.7						
MLR				LR	LR	12 46 50.6	
	comp=Z,64nm,20.5s,baz=82,slow=42						
	comp=Z,2.2nm,0.4s						
MLR	Muntele Rosu	19.55	293	⇓P	P	12 37 30.2	-2.0
MLR	Muntele Rosu	19.55	293	P	P	12 37 31.8	-0.4
MLR				pmax	pmax		
	comp=Z,24nm,1.4s						
SATY	Saty	19.80	74	eP	P	12 37 35.5	+0.5
SATY	Saty	19.80	74	eP	P	12 37 35.6	+0.5
TDK	Taldyqorghan	19.82	69	eP	P	12 37 35.2	+0.2
TDK				pmax	pmax		
	comp=Z,22nm,0.6s						
TDK	Taldyqorghan	19.82	69	eP	P	12 37 35.2	+0.2
	comp=Z,22nm,0.6s						
RDO	Rodhopi	19.95	280	P	P	12 37 36.0	-0.5
DOPR	Dopca	19.98	294	⇑P	P	12 37 34.9	-1.9
KPKS	Kokpek	19.99	73	eP	P	12 37 37.1	+0.1
KPKS	Kokpek	19.99	73	eP	P	12 37 37.2	+0.1
KARP	Karpathos	20.15	263		P	12 37 38.0	-0.8
KARP	Karpathos	20.15	263	eP	P	12 37 38.2	-0.5
VOIR		20.17	292	⇑P	P	12 37 37.3	-1.6
VOIR		20.17	292	⇑P	P	12 37 37.3	-1.6

UZB	Uzynbulak	20.25	74	*e*P	P	12 37 40.4	+0.5
UZB	Uzynbulak	20.25	74	*e*P	P	12 37 40.4	+0.5
BURAR	Bucovina Array	20.32	299		P	12 37 39.3	-1.3
BURAR	Bucovina Array	20.32	299	⇑P	P	12 37 39.7	-0.8
BURAR	Bucovina Array	20.32	299	⇑P	P	12 37 39.7	-0.8
BUR08	Bucovina Ar. S	20.33	299		P	12 37 39.7	-1.0
ARR	Arges	20.46	292	⇑P	P	12 37 39.5	-2.6
SHLS	Shalkode	20.57	74	*e*P	Pn	12 37 47.1	+1.2
SHLS	Shalkode	20.57	74	*e*P	Pn	12 37 47.2	+1.3
PDGK	Podgornoye	20.58	74	⇑P	P	12 37 44.4	+0.9
	comp=Z,8.9nm,0.8s						
APE	Apeiranthos	20.86	268	⇑P	P	12 37 43.7	-2.8
APE	Apeiranthos	20.86	268	⇑P	P	12 37 43.7	-2.8
KURBB	Kurchatov Arra	20.93	53	P	P	12 37 47.3	+0.2
	comp=Z,28nm,0.7s,baz=254,slow=11,SNR=67						
KURBB				S	S	12 41 36.3	-1.6
	comp=Z,1.4nm,0.3s,baz=262,slow=24,SNR=4.6						
KURBB				LR	LR	12 47 06.8	
	comp=Z,206nm,18.8s,baz=170,slow=40						
	comp=Z,28nm,0.7s						
KURBB	Kurchatov Arra	20.93	53	⇑P	Pn	12 37 48.6	-1.4
	comp=Z,26nm,0.7s						
KURK	Kurchatov	21.02	53		P	12 37 48.4	+0.4
KURK	Kurchatov	21.02	53	⇑P	P	12 37 49.7	+1.8
	comp=Z,23nm,0.7s						
KURK	Kurchatov	21.02	53*c*	*i*P	P	12 37 49.4	+1.4
KURK				pmax	pmax		
	comp=Z,42nm,0.8s						
LOT	Lotru	21.07	292	⇓P	P	12 37 47.7	-1.0
MNK	Minsk	21.15	319	*i* P	P	12 37 47.6	-1.7
	comp=E,8.0nm,0.5s						
MNK				*i* P	P	12 37 47.6	-1.7
	comp=N,22nm,0.7s						
MNK				*i* P	P	12 37 47.6	-1.7
	comp=Z,28nm,0.7s,baz=121						
MNK				*i* PP	sP	12 38 06.7	+1.6
MNK				*i* PPP	PPP	12 38 14.6	
MNK				*i* S	S	12 41 43.3	+1.1
MNK				*i* SS	SnSn	12 42 10.2	+4.5
MNK				*i* LR	LR	12 44 10.6	
MNK				*i* LRM	MLR	12 45 28.1	
	comp=E,117nm,14.9s						
MNK				*i* LRM	MLR	12 46 51.4	
	comp=Z,26nm,12.1s						
MNK	Minsk	21.15	319	*i* P	P	12 37 47.6	-1.7
MNK				*i*		12 38 06.6	
MNK				*i* PPP	PPP	12 38 14.5	
MNK				*i* S	S	12 41 43.2	+1.1
MNK				*i* SS	SnSn	12 42 10.1	+4.5
MNK				pmax	pmax		
	comp=Z,28nm,0.7s						
MNK				pmax	pmax		
	comp=N,22nm,0.7s						
MNK				pmax	pmax		
	comp=E,8.0nm,0.5s						
MNK				MLR	MLR		
	comp=N,149nm,17.0s						
MNK				MLR	MLR		
	comp=E,117nm,15.0s						
MNK				MLR	MLR		
	comp=Z,26nm,12.0s						
KLMR	Klimovskoe	21.56	343	*e*P	P	12 37 50.5	-3.2
KLMR				*e*S	S	12 41 46.8	-3.3
KLMR				pmax	pmax		
	comp=Z,35nm,0.7s						
KLMR				MLR	MLR		
	comp=Z,79nm,12.0s						
MARR	Marisel-Cluj	21.61	296	⇑P	P	12 37 52.5	-2.0
GZR	Gura Zlata	21.77	292	⇑P	P	12 37 54.6	-1.5
GZR	Gura Zlata	21.77	292	⇑P	P	12 37 54.6	-1.5
NACGM	Naroch	21.91	319	⇑*i*P	P	12 38 07.3	+10
	comp=Z,21nm,0.8s,baz=121						
IDI	Anoyia	21.97	264		P	12 37 57.1	-1.3
IDI	Anoyia	21.97	264	P	P	12 37 56.1	-2.2
	comp=Z,11nm,0.5s,baz=52,slow=8.4,SNR=16						
	comp=Z,11nm,0.5s						
HERR	Herculane	22.01	291	⇑P	P	12 37 56.7	-2.0
KWP	Kalwaria Pacla	22.34	303	*e*P	P	12 38 01.6	-0.7
KWP	Kalwaria Pacla	22.34	303	P	P	12 38 01.7	-0.5
KWP				pmax	pmax		
	comp=Z,70nm,0.9s						
MAKZ	Makanchi	22.43	64		P	12 38 03.1	-0.1
MAKZ				IAmb	IAmb	12 38 18.9	
	comp=Z,34nm,0.9s						
MAKZ	Makanchi	22.43	64	⇑P	P	12 38 04.3	+1.1
	comp=Z,31nm,0.9s						
MAKZ	Makanchi	22.43	64	P	P	12 38 03.1	-0.1
MAKZ				pmax	pmax		
	comp=Z,34nm,0.9s						
KOLS	Kolonicke sedl	22.49	301	*e*P	P	12 38 05.0	+1.2
KOLS	Kolonicke sedl	22.49	301	*e*P	P	12 38 05.0	+1.2
BOVS	Bovan	22.55	287	⇓P	P	12 38 03.2	-1.2
ISAL	Salakas	22.57	320	*e*P	P	12 38 03.7	-0.8
BZS	Buzias	22.59	293	⇑P	P	12 38 01.8	-3.0
BZS	Buzias	22.59	293	⇑P	P	12 38 01.8	-3.0
MK31	Makanchi Array	22.64	64	P	P	12 38 05.2	-0.2
MK31				IAmb	IAmb	12 38 20.3	
	comp=Z,24nm,0.8s						
MK31	Makanchi Array	22.64	64	⇑P	P	12 38 06.3	+0.8
	comp=Z,27nm,0.8s,baz=260,slow=9.2,SNR=69						
MK31	Makanchi Array	22.64	64*c*	*i*P	P	12 38 06.4	+0.9
MKAR	Makanchi Array	22.64	64		P	12 38 05.7	+0.2
MKAR	Makanchi Array	22.64	64	P	P	12 38 06.6	+1.2
	comp=Z,9.8nm,0.8s,baz=248,slow=26,SNR=4.0						
MKAR				S	S	12 42 14.7	+4.2
	comp=Z,4.2nm,0.9s,baz=251,slow=32,SNR=6.0						
MKAR				LR	LR	12 47 55.2	
	comp=Z,87nm,19.1s,baz=258,slow=39						
	comp=Z,9.8nm,0.8s						
MKAR	Makanchi Array	22.64	64	P	P	12 38 05.7	+0.2
SUW	Suwalki	23.39	314	*e*P	P	12 38 13.2	+0.2
KECS	Kecovo	23.59	300	*e*P	P	12 38 16.5	+1.7
KECS	Kecovo	23.59	300	*e*P	P	12 38 16.5	+1.7
PABE	Paberze	23.61	318		P	12 38 14.2	-0.8
PABE	Paberze	23.61	318	*e*P	P	12 38 14.3	-0.6
NIE	Niedzica	23.84	302	*e*P	P	12 38 16.6	-0.7
NIE	Niedzica	23.84	302	P	P	12 38 18.2	+0.9
NIE				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VSU	Vasula	23.90	326*c*	*i*P	P	12 38 15.6	-2.0
VSU				pmax	pmax		
	comp=Z,19nm,0.8s						
VSU	Vasula	23.90	326	*e*P	P	12 38 16.3	-1.3
BEL	Belsk	24.05	308	*e*P	P	12 38 18.6	-0.5
IGT	Igoumenitsa	24.15	278	P	P	12 38 19.3	-0.8
IGT				pmax	pmax		
	comp=Z,20nm,0.8s						
OJC	Ojcow	24.30	304	*e*P	P	12 38 20.8	-0.6
OJC	Ojcow	24.30	304	P	P	12 38 21.0	-0.5
OJC				pmax	pmax		
	comp=Z,29nm,0.7s						
LANS	Liptovska Anna	24.34	301	*e*P	P	12 38 24.1	+2.2
LANS	Liptovska Anna	24.34	301	*e*P	P	12 38 24.1	+2.2
ZSN	Zaisan	24.44	63	*e*P	P	12 38 22.9	+0.1
ZSN				pmax	pmax		
	comp=Z,21nm,1.8s						
ZSN	Zaisan	24.44	63	*e*P	P	12 38 23.0	+0.1
	comp=Z,21nm,1.8s						
PDG	Podgorica	24.45	285		P	12 38 21.3	-1.5
PDG				IAmb	IAmb	12 38 24.9	
	comp=Z,17nm,0.5s						
KEK	Kerkira	24.51	278	P	P	12 38 23.6	+0.1
KEK				IAmb	IAmb	12 38 40.2	
	comp=Z,19nm,0.7s						
VYHS	Vyhne	24.68	299	*e*P	P	12 38 26.2	+1.3
VYHS				pmax	pmax		
	comp=Z,8.0nm,1.3s						
VYHS	Vyhne	24.68	299	*e*P	P	12 38 26.2	+1.3
PBUR	Paburge	24.87	318	*e*P	P	12 38 26.4	-0.2
MTSE	Matsula	25.30	325	*e*P	P	12 38 29.6	-0.7
SLIT	Slitere, Latvi	25.43	322	*e*P	P	12 38 30.6	-1.0
ZAA0	Zalesovo Array	25.63	48	P	P	12 38 33.5	0.0
ZAA0				IAmb	IAmb	12 38 38.2	
	comp=Z,16nm,0.8s						
ZALV	Zalesovo Beam	25.63	48	P	P	12 38 33.8	+0.4
ZALV	Zalesovo Beam	25.63	48	P	P	12 38 34.5	+1.1
	comp=Z,11nm,0.4s,baz=266,slow=10,SNR=26						
ZALV				S	S	12 43 05.7	+7.2
	comp=Z,0.5nm,0.3s,baz=294,slow=44,SNR=1.2						
ZALV				LR	LR	12 50 18.3	
	comp=Z,126nm,18.9s,baz=232,slow=40						
	comp=Z,11nm,0.4s						
MORC	Moravsky Berou	25.67	302		P	12 38 33.5	-0.4
MORC				IAmb	IAmb	12 38 36.2	
	comp=Z,24nm,1.5s						
MORC	Moravsky Berou	25.67	302	*e*P	P	12 38 33.8	-0.1
MORC	Moravsky Berou	25.67	302	P	P	12 38 33.5	-0.4
MORC				pmax	pmax		
	comp=Z,24nm,1.5s						
MODS	Modra-Piesok	25.70	299	*e*P	P	12 38 34.7	+0.5
MODS				pmax	pmax		
	comp=Z,18nm,0.9s						
MODS	Modra-Piesok	25.70	299	*e*P	P	12 38 34.7	+0.5
MEF	Metsahovi	25.91	328	*e*P	P	12 38 35.5	-0.4
FIA1	FINESS Array S	26.04	331		P	12 38 36.2	-0.8
FINES	FINESS Array B	26.04	331		P	12 38 36.3	-0.7
FINES	FINESS Array B	26.04	331	P	P	12 38 36.6	-0.4
	comp=Z,5.6nm,0.3s,baz=140,slow=11,SNR=34						
FINES				S	S	12 43 20.1	+15
	comp=Z,5.6nm,0.8s,baz=126,slow=19,SNR=4.4						
FINES				LR	LR	12 50 17.4	
	comp=Z,90nm,19.6s,baz=126,slow=40						
	comp=Z,5.6nm,0.3s						
KRLC	Kraliky	26.20	303	*e*P	P	12 38 39.1	+0.4
KRLC	Kraliky	26.20	303	*e*P	P	12 38 39.1	+0.4
VRAC	Vranov	26.23	301	LR	LR	12 50 41.4	
	comp=Z,51nm,20.4s,baz=90,slow=40						
WMQ	Urumqi	26.50	71	*e*P	P	12 38 44.1	+2.6
WMQ				sP	sP	12 38 58.0	0.0
WMQ				pmax	pmax		
	comp=Z,15nm,0.9s						
WMQ				LR	LR		
	comp=Z,49nm,18.3s						
DPC	Dobruska-Polom	26.52	303	*e*P	P	12 38 42.3	+0.7
DPC	Dobruska-Polom	26.52	303	*e*P	P	12 38 42.3	+0.7
KSP	Ksiaz	26.61	304	*e*P	P	12 38 42.5	+0.2
KSP	Ksiaz	26.61	304	P	P	12 38 42.8	+0.4
CONA	Conrad Observa	26.62	298	*i* P	P	12 38 42.3	-0.3
	comp=Z,1.5nm,0.8s						
CHVC	Chvalec	26.73	304	*e*P	P	12 38 43.9	+0.5
CHVC	Chvalec	26.73	304	*e*P	P	12 38 43.9	+0.5
UPC	Upice	26.74	304	*e*P	P	12 38 44.5	+0.9
UPC	Upice	26.74	304	*e*P	P	12 38 44.5	+0.9
ARSA	Arzberg	26.84	296	*e*P	P	12 38 44.2	-0.2
	comp=Z,3.0nm,0.5s						
KEF	Keuruu	26.94	332	*e*P	P	12 38 44.4	-0.8
SOKA	Soboth	27.17	295	*e*P	P	12 38 47.8	+0.2
	comp=Z,3.9nm,0.6s						
RAF	Rauma	27.44	328	*e*P	P	12 38 47.6	-2.0
OBKA	Obir	27.51	295	*e*P	P	12 38 50.7	+0.1
	comp=Z,2.9nm,0.6s						
BRG	Berggiesshubel	28.09	304	⇓*i*P	P	12 38 56.6	+1.0
BRG				Amp		12 38 57.2	
	comp=Z,7.6nm,0.6s						
GERES	GERESS Array B	28.10	300	P	P	12 38 55.3	-0.5
	comp=Z,1.6nm,0.5s,baz=90,slow=11,SNR=8.0						
GERES				S	S	12 43 32.6	-5.2
	comp=Z,0.4nm,0.4s,baz=94,slow=38,SNR=1.2						
	comp=Z,1.6nm,0.5s						
BLEU	Blekinge	28.16	316	*i* P	P	12 38 55.1	-1.0
KHC	Kasperske Hory	28.19	300	*e*P	P	12 38 59.2	+2.6
KHC	Kasperske Hory	28.19	300	*e*P	P	12 38 59.2	+2.6
VAF	Ylistaro	28.29	332	*e*P	P	12 38 56.6	-0.6
BSD	Bornholm Skovb	28.30	313	*i* P	P	12 38 55.5	-1.9
BSD				IAmb	IAmb	12 38 56.3	
	comp=Z,21nm,0.5s						
KBA	Koelnbreinsper	28.32	296	*e*P	P	12 38 58.0	+0.1
	comp=Z,3.5nm,0.4s						
HSKC	Hora Svate Kat	28.39	303	*e*P	P	12 38 59.2	+0.9
CLL	Collm	28.73	305	*i* P	P	12 39 01.1	-0.2
CLL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CLL	Collm	28.73	305	*i* P	P	12 39 01.1	-0.2
	comp=Z,5.0nm,0.7s						
CLL				*e*x	x	12 39 33.0	
CLL				*e*(PP)		12 39 49.0	
CLL				*e*PPP	PPP	12 40 01.0	
APA	Apatity	28.76	345	⇓*i*P	P	12 38 56.7	-4.6
APA				*i*		12 39 51.4	
APA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
APA				MLR	MLR		
	comp=Z,300nm,15.0s						
LESA	Schwarzleotal	28.77	297	*e*P	P	12 39 01.8	0.0
	comp=Z,7.0nm,0.5s						
DEL	Delary	29.24	316	*i* P	P	12 39 05.0	-0.7
LUNU	Lund	29.24	314	*i* P	P	12 39 05.5	-0.3
WTTA	Wattenberg	29.48	296	*e*P	P	12 39 08.2	0.0
	comp=Z,5.2nm,0.5s						
BJUU	Bjuv	29.59	314	*i* P	P	12 39 08.4	-0.4
RETA	Reutte	30.07	297	*e*P	P	12 39 12.9	-0.4
	comp=Z,3.0nm,0.5s						
FETA	Feichten	30.11	296	*e*P	P	12 39 13.5	-0.3
	comp=Z,2.3nm,0.6s						
BORU	Boraas	30.15	317	*i* P	P	12 39 13.7	0.0
FUORN	Ofenpass-Fuorn	30.46	295	P	P	12 39 16.4	-0.6
ONAU	Onsala	30.52	317	*i* P	P	12 39 16.9	-0.2
HFS	Hagfors	30.54	322	P	P	12 39 16.7	-0.5
	comp=Z,5.5nm,0.4s,baz=119,slow=9.0,SNR=33						
HFS				LR	LR	12 52 53.4	
	comp=Z,58nm,18.6s,baz=138,slow=39						
	comp=Z,5.5nm,0.4s						
DAVOX	Davos/Dischmat	30.71	296	LR	LR	12 53 28.7	
	comp=Z,42nm,22.0s,baz=257,slow=40						
TJOU	Tjoern	30.85	318	*i* P	P	12 39 18.8	-1.1
MSSA	Maissana	31.23	291	P	P	12 39 23.4	-0.2
MSSA				IAmb	IAmb	12 39 42.9	
	comp=Z,15nm,1.1s						
NC602	NORSAR Array S	31.75	323	*e*P	P	12 39 27.0	-0.8
NORES	NORESS Array B	31.75	323	P	P	12 39 26.9	-0.9
NC405	NORSAR Array S	31.81	323	P	P	12 39 28.0	-0.4
KEV	Kevo	31.88	344	P	P	12 39 29.5	+0.6
KEV				IAmb	IAmb	12 40 05.5	
	comp=Z,14nm,1.2s						
KEV	Kevo	31.88	344	P	P	12 39 29.5	+0.6
KEV				pmax	pmax		
	comp=Z,14nm,1.2s						
NB201	NORSAR Array S	31.97	323	P	P	12 39 28.5	-1.4
NB2	NORSAR Subarra	32.01	323	P	P	12 39 28.9	-1.3
	comp=Z,3.1nm,0.5s,baz=116,slow=8.6						
NB2	NORSAR Subarra	32.01	323	P	P	12 39 25.6	-4.6
NB2	NORSAR Subarra	32.01	323	P	P	12 39 28.9	-1.3
	baz=116,slow=8.6						
NOA	NORSAR Array B	32.01	323	P	P	12 39 28.9	-1.3
	comp=Z,2.8nm,0.6s,baz=114,slow=8.4,SNR=22						
NOA				LR	LR	12 53 48.1	
	comp=Z,54nm,19.0s,baz=105,slow=39						
	comp=Z,2.8nm,0.6s						
ARCES	ARCESS Array B	32.04	343	P	P	12 39 30.3	0.0
ARCES				IAmb	IAmb	12 39 57.6	
	comp=Z,8.0nm,1.2s						
ARCES	ARCESS Array B	32.04	343	P	P	12 39 29.3	-1.0
	comp=Z,0.9nm,0.5s,baz=144,slow=8.6,SNR=13						
ARCES				PcP	PcP	12 42 18.3	-0.6
	comp=Z,1.0nm,0.4s,baz=156,slow=4.6,SNR=1.5						
ARCES				LR	LR	12 54 32.7	
	comp=Z,75nm,18.0s,baz=112,slow=40						
	comp=Z,0.9nm,0.5s						
ARCES	ARCESS Array B	32.04	343	P	P	12 39 30.3	0.0
ARCES				pmax	pmax		
	comp=Z,8.0nm,1.2s						
NAO01	NORSAR Array S	32.09	323	P	P	12 39 29.8	-1.1
NAO01				IAmb	IAmb	12 39 42.3	
	comp=Z,6.5nm,0.8s						
KTK1	Kautokeino	32.18	341	*e*P	P	12 39 31.4	-0.1
SENIN	Lac Senin/Sane	32.52	295	P	P	12 39 34.0	-1.1
SENIN				IAmb	IAmb	12 40 00.8	
	comp=Z,5.2nm,0.7s						
DOMB	Dombas	33.32	324	*e*P	P	12 39 41.2	-0.4
STOK	Stokkvaagen	33.57	333	*e*P	P	12 39 43.5	-0.2
KEST	Kesra	33.60	275	P	P	12 39 44.3	-0.1
	comp=Z,2.0nm,0.9s,baz=257,slow=15,SNR=1.7						
	comp=Z,2.0nm,0.9s						
KONS	Konsvik	33.62	333	*e*P	P	12 39 44.1	+0.1
VAGH	Vaagaholmen	33.68	333	*e*P	P	12 39 44.8	+0.2
STEI	Steigen	33.70	336	*e*P	P	12 39 44.6	-0.2
BLS5	Blasjo	33.81	319	*e*P	P	12 39 46.1	+0.2
NRIK	Noril'sk	34.21	22	P	P	12 39 50.7	+1.5
	comp=Z,3.0nm,0.6s,baz=226,slow=7.2,SNR=8.2						
NRIK				LR	LR	12 56 10.9	
	comp=Z,88nm,21.1s,baz=214,slow=40						
	comp=Z,3.0nm,0.6s						
NRIK	Noril'sk	34.21	22	*e*P	P	12 39 50.8	+1.5
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
AKN	Aaknes	34.28	324	*e*P	P	12 39 50.4	+0.4
GTA	Gaotai	36.29	76	P	P	12 40 08.4	+0.8
GTA				pP	pP	12 40 20.8	+1.6
GTA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
EKA	Eskdalemuir Ar	38.58	311	P	P	12 40 26.2	-0.4
	comp=Z,7.1nm,0.3s,baz=98,slow=8.5,SNR=82						
EKA				PcP	PcP	12 42 38.0	-0.4
	comp=Z,0.6nm,0.4s,baz=98,slow=2.6,SNR=3.8						
	comp=Z,7.1nm,0.3s						
ESK	Eskdalemuir	38.61	311	P	P	12 40 26.5	-0.4
ESK	Eskdalemuir	38.61	311	P	P	12 40 26.5	-0.4
ESK				pmax	pmax		
	comp=Z,14nm,0.7s						
SONM	Songino Array	38.91	61	P	P	12 40 29.9	+0.2
	comp=Z,0.4nm,0.4s,baz=289,slow=9.0,SNR=1.2						
SONM				LR	LR	12 57 25.9	
	comp=Z,72nm,21.8s,baz=258,slow=38						
	comp=Z,0.4nm,0.4s						
ULN	Ulaanbaatar	39.34	61	P	P	12 40 34.4	+1.1
ULN				IAmb	IAmb	12 40 36.0	
	comp=Z,7.3nm,0.8s						
ULN	Ulaanbaatar	39.34	61	*ce*P	P	12 40 34.7	+1.4
ULN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LODK	Lodwar	40.04	206	P	P	12 40 39.3	0.0
SPITS	Spitsbergen Ar	40.24	349	P	P	12 40 41.3	+1.1
	comp=Z,4.4nm,0.5s,baz=138,slow=11,SNR=37						
	comp=Z,4.4nm,0.5s						
LZH	Lanzhou	40.44	79	*e*P	P	12 40 48.2	+5.6
LZH				pP	pP	12 40 53.7	-0.6
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
ESDC	Sonseca Array	42.10	288	P	P	12 40 55.2	-0.9
	comp=Z,0.5nm,0.4s,baz=59,slow=8.3,SNR=7.2						
	comp=Z,0.5nm,0.4s						
PZH	PanZhiHua	43.26	93	P	P	12 41 06.4	+0.7
BTO	Baotou	43.33	70	*e*P	P	12 41 04.1	-1.9
BTO				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BTO				pmax	pmax		
	comp=Z,210nm,4.6s						
HHC	Hu-ho-hao-te	44.34	69	*e*P	P	12 41 14.6	+0.4
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
XAN	Xi'an	45.07	79	⇑P	P	12 41 20.4	+0.4
XAN				pP	pP	12 41 33.1	+1.2
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CHTO	Chiang Mai	45.62	104	P	P	12 41 24.6	+0.2
CHTO	Chiang Mai	45.62	104	P	P	12 41 24.6	+0.2
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CMAR	Chiang Mai Arr	45.84	105	P	P	12 41 26.1	-0.1
	comp=Z,1.9nm,0.7s,baz=304,slow=8.4,SNR=14						
	comp=Z,1.9nm,0.7s						
BORG	Borgarnes	47.09	326	LR	LR	13 02 03.0	
	comp=Z,47nm,19.6s,baz=279,slow=37						
TIXI	Tiksi	47.86	25	LR	LR	13 05 53.1	
	comp=Z,108nm,19.2s,baz=351,slow=41						
YAK	Yakutsk	49.51	37	LR	LR	13 05 48.7	
	comp=Z,166nm,18.3s,baz=276,slow=40						
ZEA	Zeya	50.40	48	*e*P	P	12 42 02.5	+1.6
HEH	HeiHe	51.62	52	*e*P	P	12 42 11.5	+1.4
HEH				pmax	pmax		
	comp=Z,22nm,1.1s						
TORD	Torodi Ar. Bea	51.67	253	P	P	12 42 09.4	-1.5
TORD	Torodi Ar. Bea	51.67	253	P	P	12 42 10.2	-0.7
	comp=Z,0.7nm,0.3s,baz=32,slow=8.5,SNR=2.4						
	comp=Z,0.7nm,0.3s						
SUMG	Summit	51.83	337	P	P	12 42 10.4	-1.4
SUMG				IAmb	IAmb	12 42 14.7	
	comp=Z,12nm,1.3s						
SUMG	Summit	51.83	337	P	P	12 42 10.5	-1.4
SUMG				pmax	pmax		
	comp=Z,13nm,1.3s						
SUMG	Summit	51.83	337	*i* P	P	12 42 09.0	-2.8
BNX	BinXian	53.30	58	⇑P	P	12 42 22.1	-0.5
BNX				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NJ2	Nanjing	53.38	77	*e*P	P	12 42 24.2	+0.8
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KLR	Kul'dur	54.61	52	LR	LR	13 06 35.7	
	comp=Z,47nm,21.8s,baz=276,slow=37						
KLR	Kul'dur	54.61	52*c*	*i*P	P	12 42 32.8	+0.6
KLR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
USA0B	Ussuriysk Arra	56.90	58	P	P	12 42 48.0	-0.6
USA0B				IAmb	IAmb	12 42 49.6	
	comp=Z,6.2nm,0.8s						
USA0B	Ussuriysk Arra	56.90	58	*de*P	P	12 42 48.9	+0.3
USRK	Ussuriysk Ar.	56.90	58		P	12 42 48.2	-0.3
USRK	Ussuriysk Ar.	56.90	58	P	P	12 42 48.9	+0.3
	comp=Z,4.5nm,0.6s,baz=298,slow=5.6,SNR=13						
USRK				LR	LR	13 09 34.1	
	comp=Z,95nm,19.3s,baz=237,slow=38						
	comp=Z,4.5nm,0.6s						
EUNU	Eureka	57.23	352	P	P	12 42 51.6	+1.0
EUNU				IAmb	IAmb	12 42 52.5	
	comp=Z,8.0nm,0.9s						
KSAR	Wonju Array Be	57.28	67	P	P	12 42 50.7	-0.7
KSAR	Wonju Array Be	57.28	67	P	P	12 42 50.7	-0.7
KSRS	Korea Array	57.30	67	P	P	12 42 51.9	+0.3
	comp=Z,4.1nm,0.7s,baz=289,slow=7.0,SNR=16						
	comp=Z,4.1nm,0.7s						
SFJD	Kangerlussuaq	57.82	333	LR	LR	13 07 53.7	
	comp=Z,38nm,19.4s,baz=58,slow=36						
SEY	Seymchan	59.00	32	*ce*P	P	12 43 04.5	+1.5
SEY				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MA2	Magadan	59.98	36	LR	LR	13 12 25.2	
	comp=Z,80nm,18.2s,baz=291,slow=39						
MA2	Magadan	59.98	36	⇓*e*P	P	12 43 10.2	+0.3
MA2				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TYV	Tymovskoe	60.20	47	*e*P	P	12 43 12.9	+1.4
TYV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TYV				pmax	pmax		
	comp=Z,100nm,3.0s						
DBIC	Dimbokro	60.78	252	P	P	12 43 14.4	-1.5
	comp=Z,2.4nm,0.5s,baz=55,slow=8.8,SNR=6.3						
	comp=Z,2.4nm,0.5s						
BILL	Bilibino	61.02	23	P	P	12 43 17.4	+0.6
BILL	Bilibino	61.02	23*c*	*i*P	P	12 43 17.7	+0.9
BILL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
JNU	Nakatsue	61.57	69	LR	LR	13 10 57.0	
	comp=Z,23nm,19.2s,baz=322,slow=37						
YSS	Yuzhno-Sakhali	62.21	51	*e*P	P	12 43 26.1	+0.9
YSS				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ASAJ	Asahikawa	63.59	54	LR	LR	13 11 33.1	
	comp=Z,27nm,18.4s,baz=330,slow=36						
MJAR	Matsushiro Arr	64.83	63	P	P	12 43 42.4	-0.3
	comp=Z,1.1nm,0.6s,baz=317,slow=11,SNR=4.6						
MJAR				LR	LR	13 13 23.9	
	comp=Z,38nm,19.3s,baz=322,slow=37						
	comp=Z,1.1nm,0.6s						
FRB	Frobisher Bay	65.76	335	LR	LR	13 13 02.1	
	comp=Z,32nm,18.3s,baz=38,slow=36						
PETK	Petropavlovsk-	66.78	39	P	P	12 43 54.4	-0.6
	comp=Z,2.5nm,0.9s,baz=350,slow=8.0,SNR=4.2						
PETK				LR	LR	13 16 25.9	
	comp=Z,74nm,19.6s,baz=292,slow=39						
	comp=Z,2.5nm,0.9s						
A19K	Wainwright	66.80	12	P	P	12 43 54.1	-0.7
	baz=333						
A22K	Sinclair Lake	66.91	9	P	P	12 43 54.3	-1.1
	baz=338						
B18K	Kokolik River	67.44	12	P	P	12 43 58.8	0.0
	baz=333,SNR=6.5						
B20K	Meade River	67.55	10	P	P	12 43 58.9	-0.6
	baz=336						
A36M	Sachs Harbour	67.57	359	P	P	12 43 59.1	-0.5
	baz=2.3						
B22K	Teshekpuk Lake	67.72	9	P	P	12 44 00.6	0.0
	baz=339						
C16K	Lisburne Hills	67.78	14	P	P	12 44 00.3	-0.7
	baz=330						
C17K	DeLong Mountai	68.00	13	P	P	12 44 02.3	-0.1
	baz=332,SNR=10						
C19K	Lookout Ridge	68.02	12	IAmb	IAmb	12 44 19.6	
	comp=Z,14nm,1.5s						
C19K	Lookout Ridge	68.02	12	P	P	12 44 02.8	+0.2
	baz=335						
C18K	Utukok River	68.18	12	P	P	12 44 03.8	+0.2
	baz=334,SNR=9.0						
B21K	Ikpikpuk River	68.25	10	P	P	12 44 04.5	+0.7
	baz=339						
C23K	Itkillik River	68.52	8	P	P	12 44 05.4	-0.1

	baz=342						
C21K	Knifeblade Rid	68.66	10	P	P	12 44 07.2	+0.7
	baz=338						
D17K	Noatak River	68.70	14	P	P	12 44 07.0	+0.2
	baz=332,SNR=13						
D19K	Kuna River	68.80	11	P	P	12 44 07.3	-0.1
	baz=336						
D20K	Etivluk River	68.82	11	P	P	12 44 07.9	+0.4
	baz=337,SNR=6.9						
C24K	Franklin Bluff	68.83	8	P	P	12 44 08.4	+0.9
	baz=343						
D22K	Ayikyak River	69.19	9	P	P	12 44 10.2	+0.4
	baz=340,SNR=5.7						
E20K	Nigu River	69.30	11	P	P	12 44 11.0	+0.4
	baz=338,SNR=10						
D23K	Nanushuk River	69.34	9	P	P	12 44 11.2	+0.5
	baz=342						
C27K	Jago River	69.36	6	P	P	12 44 11.2	+0.4
	baz=347						
D24K	Happy Valley	69.36	8	P	P	12 44 11.1	+0.3
	baz=343						
E18K	Tukpahlearik C	69.38	13	P	P	12 44 11.5	+0.5
	baz=334,SNR=12						
D25K	Kavik River	69.43	7	IAmb	IAmb	12 44 12.8	
	comp=Z,6.6nm,0.8s						
D25K	Kavik River	69.43	7	P	P	12 44 12.1	+0.8
	baz=345						
E21K	Killik River	69.43	10	P	P	12 44 10.8	-0.6
	baz=339						
E17K	Hotham Inlet	69.47	13	P	P	12 44 11.0	-0.6
	baz=333						
TNA	Tin City	69.61	17	P	P	12 44 11.9	-0.6
	baz=329						
TOLK	Toolik Lake Re	69.77	8	P	P	12 44 13.7	+0.2
	baz=343						
LBTB	Lobatse	69.85	205	LR	LR	13 19 00.5	
	comp=Z,68nm,21.2s,baz=7.0,slow=40						
E19K	Redstone River	69.89	12	P	P	12 44 14.3	+0.2
	baz=337,SNR=17						
E22K	Anaktuvuk Pass	70.00	9	IAmb	IAmb	12 44 17.2	
	comp=Z,4.5nm,0.7s						
E22K	Anaktuvuk Pass	70.00	9	P	P	12 44 15.0	+0.1
	baz=341,SNR=6.1						
F17K	Baldwin Pennin	70.15	14	P	P	12 44 16.2	+0.5
	baz=334						
F15K	North Star Dit	70.17	15	P	P	12 44 15.8	-0.1
	baz=331						
C36M	Paulatuk	70.20	359	P	P	12 44 15.9	0.0
	baz=3.2						
GAMB	Gambell	70.25	19	P	P	12 44 16.3	0.0
	baz=326						
F18K	Selawik	70.29	13	P	P	12 44 16.5	0.0
	baz=335						
E23K	Chandalar	70.33	8	IAmb	IAmb	12 44 36.8	
	comp=Z,6.5nm,1.0s						
E23K	Chandalar	70.33	8	P	P	12 44 17.1	+0.2
	baz=343						
F19K	Shaleruckik Mo	70.38	12	IAmb	IAmb	12 44 18.2	
	comp=Z,4.8nm,0.6s						
F19K	Shaleruckik Mo	70.38	12	P	P	12 44 17.1	0.0
	baz=336,SNR=5.2						
E24K	Your Creek	70.43	8	IAmb	IAmb	12 44 20.1	
	comp=Z,5.9nm,0.9s						
E24K	Your Creek	70.43	8	P	P	12 44 18.3	+0.8
	baz=344						
F20K	Avaraart Lake	70.49	11	P	P	12 44 18.2	+0.4
	baz=338						
F22K	John River	70.55	10	P	P	12 44 18.7	+0.5
	baz=341						
F21K	Alatna River	70.65	10	P	P	12 44 19.3	+0.5
	baz=340,SNR=16						
E28M	Babbage River	70.65	4	P	P	12 44 19.5	+0.7
	baz=351						
E25K	Arctic Village	70.68	7	P	P	12 44 19.5	+0.6
	baz=346						
G16K	Koyuk River	70.89	14	P	P	12 44 21.1	+0.9
	baz=333						
G15K	Niukluk	70.92	15	P	P	12 44 20.6	+0.2
	baz=332						
E27K	Coleen River	70.93	5	P	P	12 44 20.5	0.0
	baz=349						
E29M	Blow River	70.96	4	P	P	12 44 20.3	-0.3
	baz=352,SNR=6.4						
ANM	Nome	71.02	16	P	P	12 44 21.5	+0.4
	baz=331						
F24K	Squaw Lake	71.03	8	P	P	12 44 21.3	+0.1
	baz=344						
COLD	Coldfoot	71.06	9	IAmb	IAmb	12 44 23.3	
	comp=Z,13nm,1.3s						
COLD	Coldfoot	71.06	9	P	P	12 44 21.1	-0.2
	baz=342,SNR=7.7						
G18K	Tagagawik	71.10	13	P	P	12 44 20.7	-0.9
	baz=336						
G17K	Kiwalik Mounta	71.11	14	P	P	12 44 21.4	-0.2
	baz=334						
G19K	Purcell Mounta	71.13	12	IAmb	IAmb	12 44 23.8	
	comp=Z,7.8nm,0.9s						
G19K	Purcell Mounta	71.13	12	P	P	12 44 21.6	-0.1
	baz=337,SNR=7.7						
F25K	Christian Rive	71.18	7	P	P	12 44 21.9	-0.2
	baz=346						
G22K	Bettles	71.19	10	P	P	12 44 21.8	-0.3
	baz=341						
INK	Inuvik	71.21	2	P	P	12 44 22.7	+0.5
	baz=356						
F26K	Sheenjek River	71.22	6	P	P	12 44 22.1	-0.1
	baz=347						
G21K	Allakaket	71.31	10	IAmb	IAmb	12 44 24.3	
	comp=Z,11nm,1.4s						
G21K	Allakaket	71.31	10	P	P	12 44 23.1	+0.3
	baz=340,SNR=5.2						
SCHQ	Schefferville	71.44	328	P	P	12 44 23.3	-0.5
	comp=Z,1.9nm,0.5s,baz=39,slow=4.7,SNR=7.5						
	comp=Z,1.9nm,0.5s						
G23K	Bananza Creek	71.57	9	P	P	12 44 24.9	+0.4
	baz=343						
F28M	Old Crow	71.61	5	P	P	12 44 24.7	+0.1
	baz=351						
H17K	Granite Mounta	71.75	14	P	P	12 44 25.7	+0.2
	baz=335						
H19K	Roundabout Mou	71.80	12	IAmb	IAmb	12 44 27.9	
	comp=Z,4.3nm,0.8s						
H19K	Roundabout Mou	71.80	12	P	P	12 44 25.7	0.0
	baz=338						
H18K	Honhosa River	71.83	13	P	P	12 44 25.8	-0.2
	baz=336						
F30M	Barrier River	71.83	3	P	P	12 44 25.8	-0.1
	baz=354						
G24K	Hadweenzic Riv	71.87	8	IAmb	IAmb	12 44 28.4	
	comp=Z,14nm,1.3s						
G24K	Hadweenzic Riv	71.87	8	P	P	12 44 26.4	+0.2
	baz=345,SNR=7.2						
G25K	Bearman Lake	71.95	7	P	P	12 44 27.1	+0.5
	baz=346						
G26K	Porcupine Rive	71.98	6	IAmb	IAmb	12 44 32.9	
	comp=Z,13nm,1.3s						
G26K	Porcupine Rive	71.98	6	P	P	12 44 27.1	+0.3
	baz=348,SNR=5.0						
F31M	Tsiigehtchic	72.07	2	IAmb	IAmb	12 44 28.2	
	comp=Z,5.9nm,0.6s						
F31M	Tsiigehtchic	72.07	2	P	P	12 44 27.3	-0.1
	baz=356,SNR=6.2						
H20K	Anotleneega Mo	72.07	11	P	P	12 44 27.5	+0.1
	baz=339,SNR=7.6						
H22K	Ishtalitna Cre	72.18	10	P	P	12 44 28.7	+0.6
	baz=342,SNR=10						
H21K	Melozitna Rive	72.22	11	IAmb	IAmb	12 44 30.2	
	comp=Z,18nm,1.4s						
H21K	Melozitna Rive	72.22	11	P	P	12 44 28.5	+0.2
	baz=340,SNR=8.9						
G27K	Doyon Strip	72.29	6	IAmb	IAmb	12 44 30.8	
	comp=Z,17nm,1.4s						
G27K	Doyon Strip	72.29	6	P	P	12 44 29.2	+0.5
	baz=349,SNR=6.9						
G29M	Pine Creek	72.42	4	P	P	12 44 29.5	0.0
	baz=352						
G30M	tAoh Zraii Nji	72.44	3	P	P	12 44 29.8	+0.2
	baz=354,SNR=7.9						
GCSA	Galena City Sc	72.45	13	P	P	12 44 30.1	+0.4
	baz=338						
H25L	Birch Creek	72.46	7	P	P	12 44 29.9	+0.3
	baz=346						
H23K	Yukon River	72.48	9	IAmb	IAmb	12 44 33.0	
	comp=Z,4.7nm,0.7s						
H23K	Yukon River	72.48	9	P	P	12 44 30.2	+0.3
	baz=343,SNR=12						
G31M	Satah River	72.58	3	P	P	12 44 30.4	0.0
	baz=355,SNR=10						
H24K	Noodor Dome	72.66	8	P	P	12 44 31.0	+0.1
	baz=344						
I21K	Tanana	72.78	10	IAmb	IAmb	12 44 33.7	
	comp=Z,10nm,1.4s						
I21K	Tanana	72.78	10	P	P	12 44 32.2	+0.6
	baz=341						
I20K	Naaghedeneel	72.79	12	P	P	12 44 32.5	+0.9
	baz=339						
H27K	Steamboat Moun	72.87	6	IAmb	IAmb	12 44 34.3	
	comp=Z,9.2nm,1.4s						
H27K	Steamboat Moun	72.87	6	P	P	12 44 32.7	+0.5
	baz=349						
J14K	Nanvaranak Lak	73.01	16	P	P	12 44 33.1	+0.1
	baz=333						
EPYK	Eagle Plains	73.03	4	P	P	12 44 32.9	-0.2
	baz=353						
H29M	Whitestone	73.09	4	IAmb	IAmb	12 44 34.8	
	comp=Z,15nm,1.5s						
H29M	Whitestone	73.09	4	P	P	12 44 33.7	+0.2
	baz=352						
MLY	Manley	73.09	10	IAmb	IAmb	12 44 35.5	
	comp=Z,19nm,1.4s						
MLY	Manley	73.09	10	P	P	12 44 33.8	+0.3
	baz=342,SNR=13						
J16K	Anvik River	73.13	15	P	P	12 44 34.0	+0.3
	baz=335						
I23K	Minto, Yukon-K	73.15	9	IAmb	IAmb	12 44 42.4	
	comp=Z,8.5nm,1.5s						
I23K	Minto, Yukon-K	73.15	9	P	P	12 44 34.7	+1.0
	baz=343,SNR=5.8						
BOSA	Boshof	73.30	204	P	P	12 44 34.1	-1.1
	comp=Z,2.7nm,0.7s,baz=15,slow=8.0,SNR=3.1						
BOSA				LR	LR	13 19 53.9	
	comp=Z,52nm,18.1s,baz=24,slow=38						
	comp=Z,2.7nm,0.7s						
J17K	VABM Dome	73.31	14	P	P	12 44 35.6	+0.8
	baz=336						
J19K	Poorman	73.36	12	IAmb	IAmb	12 44 37.1	
	comp=Z,15nm,1.4s						
J19K	Poorman	73.36	12	P	P	12 44 36.0	+0.9
	baz=338,SNR=5.6						
POKR	Poker Plat Res	73.41	8	P	P	12 44 35.2	-0.1
	baz=345						
J20K	Nowinta River	73.42	12	IAmb	IAmb	12 44 38.0	
	comp=Z,5.3nm,0.8s						
J20K	Nowinta River	73.42	12	P	P	12 44 35.9	+0.5
	baz=340,SNR=7.9						
I27K	Kandik River	73.48	6	P	P	12 44 36.0	+0.1
	baz=349						
K13K	Kusilvak Mount	73.50	17	P	P	12 44 36.0	+0.2
	baz=332						
COLA	College	73.60	9	P	P	12 44 36.7	+0.4
COLA	College	73.60	9*c*	*i*P	P	12 44 37.0	+0.6
COLA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
COLA	College	73.60	9	P	P	12 44 36.9	+0.5
	baz=344						
I26K	Coal Creek Min	73.65	7	IAmb	IAmb	12 44 37.8	
	comp=Z,4.9nm,0.7s						
I26K	Coal Creek Min	73.65	7	P	P	12 44 36.8	+0.1
	baz=348,SNR=10						
J18K	Innoko River	73.67	13	P	P	12 44 36.9	0.0
	baz=338						
H31M	Peel River	73.69	3	IAmb	IAmb	12 44 38.7	
	comp=Z,4.1nm,0.6s						
H31M	Peel River	73.69	3	P	P	12 44 37.1	+0.1
	baz=355						
NEA2	Nenana	73.72	9	IAmb	IAmb	12 44 38.7	
	comp=Z,8.7nm,1.1s						
NEA2	Nenana	73.72	9	P	P	12 44 37.5	+0.3
	baz=344,SNR=8.9						
I28M	Miner Creek	73.76	5	P	P	12 44 37.4	-0.1
	baz=351,SNR=15						
ILAR	Eielson Array	73.80	8		P	12 44 36.9	-0.7
ILAR	Eielson Array	73.80	8	P	P	12 44 38.0	+0.4
	comp=Z,0.9nm,0.6s,baz=329,slow=4.7,SNR=22						
ILAR				LR	LR	13 21 09.1	
	comp=Z,16nm,19.6s,baz=346,slow=39						
	comp=Z,0.9nm,0.6s						
CCB	Clear Creek Bu	73.82	9	IAmb	IAmb	12 44 39.0	
	comp=Z,13nm,1.5s						
K15K	Wolf Creek Mou	73.84	16	P	P	12 44 38.1	+0.2
	baz=334						
BPAW	Bear Paw Mtn.	73.95	10	IAmb	IAmb	12 44 41.1	
	comp=Z,5.9nm,0.9s						
BPAW	Bear Paw Mtn.	73.95	10	P	P	12 44 38.6	+0.1
	baz=342,SNR=6.2						
CHUM	Lake Minchumin	73.97	11	P	P	12 44 38.7	0.0
	baz=341,SNR=7.4						
K17K	Iditarod	74.08	14	P	P	12 44 39.7	+0.4
	baz=337						
J25K	Salcha River,	74.12	8	P	P	12 44 39.9	+0.4
	baz=346						
HDA	Harding Lake	74.15	8	P	P	12 44 39.7	0.0
	baz=345						
I30M	Mount Dempster	74.19	4	IAmb	IAmb	12 44 41.7	
	comp=Z,5.9nm,0.6s						
I30M	Mount Dempster	74.19	4	P	P	12 44 40.2	+0.1
	baz=354,SNR=16						
K20K	Telida	74.20	12	P	P	12 44 40.1	+0.1
	baz=340						
SHEM	Shemya Is, Ala	74.33	32	LR	LR	13 21 05.4	
	comp=Z,46nm,20.1s,baz=66,slow=39						
J26L	Joseph Creek	74.40	7	P	P	12 44 41.2	-0.1
	baz=348,SNR=9.2						
L15K	Ungalak Mounta	74.41	16	P	P	12 44 41.2	+0.1
	baz=334						
CAST	Castle Rocks	74.44	11	P	P	12 44 41.4	0.0
	baz=341,SNR=18						
L14K	Kuka Creek	74.45	17	P	P	12 44 41.4	0.0
	baz=333						
KTH	Kantishna Hill	74.48	10	IAmb	IAmb	12 44 43.1	
	comp=Z,6.0nm,0.7s						
M11K	Mekoryuk	74.50	19	P	P	12 44 41.7	0.0
	baz=331						
MCK	McKinley	74.57	9	P	P	12 44 41.7	-0.5
	baz=344						
L17K	Donlin	74.62	14	P	P	12 44 43.3	+0.8
	baz=337						
TRF	Thorofare Moun	74.66	10	P	P	12 44 43.1	+0.3
	baz=343						
L16K	Owhat River	74.78	15	P	P	12 44 43.4	+0.1
	baz=336						
L18K	Granite Mounta	74.83	13	IAmb	IAmb	12 44 45.4	
	comp=Z,8.9nm,1.3s						
L18K	Granite Mounta	74.83	13	P	P	12 44 44.3	+0.6
	baz=338						
J30M	Hart River	74.84	4	P	P	12 44 44.1	+0.3
	baz=354						
K24K	Donnelly Dome	74.86	8	IAmb	IAmb	12 44 45.0	
	comp=Z,12nm,0.9s						
K24K	Donnelly Dome	74.86	8	P	P	12 44 43.7	-0.2
	baz=346,SNR=7.5						
SCRK	Sand Creek	74.88	7	IAmb	IAmb	12 44 45.9	
	comp=Z,12nm,1.5s						
SCRK	Sand Creek	74.88	7	P	P	12 44 44.0	0.0
	baz=348,SNR=6.7						
RND	Reindeer	74.89	10	IAmb	IAmb	12 44 44.6	
	comp=Z,5.3nm,0.8s						
PPLA	Purkeypile	74.92	11	IAmb	IAmb	12 45 12.6	
	comp=Z,14nm,1.4s						
PPLA	Purkeypile	74.92	11	P	P	12 44 44.1	-0.3
	baz=341						
K27K	Chicken	75.00	6	P	P	12 44 44.4	-0.2
	baz=349						
RIDG	Independent Ri	75.02	8	P	P	12 44 44.6	-0.2
	baz=347						
L20K	Farewell, AK	75.06	12	P	P	12 44 45.1	+0.1
	baz=340						
M13K	Dall Lake	75.14	17	P	P	12 44 45.7	+0.3
	baz=333						
M14K	Bethel	75.14	16	P	P	12 44 45.1	-0.4
	baz=334						
DAWY	Dawson	75.16	5	IAmb	IAmb	12 44 46.8	
	comp=Z,4.9nm,0.8s						
DAWY	Dawson	75.16	5	P	P	12 44 46.2	+0.6
	baz=351,SNR=11						
L19K	White Mountain	75.18	13	IAmb	IAmb	12 44 47.6	
	comp=Z,14nm,1.4s						
L19K	White Mountain	75.18	13	P	P	12 44 46.2	+0.4
	baz=339						
DOT	Dot Lake	75.19	7	IAmb	IAmb	12 44 48.2	
	comp=Z,4.6nm,0.6s						
DHY	Denali Highway	75.39	9	P	P	12 44 47.2	+0.2
	baz=345,SNR=6.1						
M17K	Holitna River	75.45	14	P	P	12 44 47.6	+0.4
	baz=337						
M15K	Kasigluk River	75.46	16	P	P	12 44 47.6	+0.3
	baz=335						
K29M	Barlow Dome	75.50	4	P	P	12 44 47.5	-0.2
	baz=353,SNR=9.6						
M16K	Timber Creek	75.51	15	P	P	12 44 47.9	+0.3
	baz=336						
M19K	Big River Lodg	75.52	13	P	P	12 44 48.0	+0.3
	baz=340						
M18K	Stony River	75.66	13	P	P	12 44 48.4	-0.1
	baz=339						
CUT	Chulitna	75.67	10	P	P	12 44 48.8	+0.4
	baz=343						
PAX	Paxson	75.71	8	IAmb	IAmb	12 44 49.9	
	comp=Z,6.9nm,1.3s						
PAX	Paxson	75.71	8	P	P	12 44 49.0	+0.2
	baz=346						
M20K	Styx River	75.74	12	P	P	12 44 48.9	-0.1
	baz=341						
WAT6	Susitna Watana	75.83	9	P	P	12 44 49.2	-0.4
	baz=345						
L26K	Log Cabin Wild	75.87	7	IAmb	IAmb	12 44 51.9	
	comp=Z,4.4nm,0.6s						
L26K	Log Cabin Wild	75.87	7	P	P	12 44 50.0	+0.3
	baz=348						
SKT	Skwentna	75.89	11	IAmb	IAmb	12 44 51.3	
	comp=Z,14nm,1.1s						
SKT	Skwentna	75.89	11	P	P	12 44 49.8	0.0
	baz=342,SNR=12						
MENT	Mentasta	75.92	7	IAmb	IAmb	12 44 53.4	
	comp=Z,5.7nm,1.0s						
BCAR	Beaver Creek A	75.97	6	P	P	12 44 50.5	+0.2
L27K	Beaver Creek,	75.97	6	IAmb	IAmb	12 44 52.1	
	comp=Z,5.0nm,0.6s						
L27K	Beaver Creek,	75.97	6	P	P	12 44 50.6	+0.4
	baz=349,SNR=16						
N15K	Kwethluk River	76.07	16	P	P	12 44 50.7	-0.1
	baz=336						
L29M	L29M	76.20	5	P	P	12 44 51.8	+0.3
	baz=352						
HARP	HAARP	76.30	8	P	P	12 44 52.1	0.0
	baz=347						
N17K	Nushagak Hills	76.31	14	P	P	12 44 52.0	-0.2
	baz=338						
M22K	Willow	76.31	11	P	P	12 44 52.2	+0.1
	baz=343						
N18K	Kilae Creek	76.41	14	P	P	12 44 52.5	-0.2
	baz=339						
GHO	Glory Hole Cre	76.46	10	IAmb	IAmb	12 44 55.6	
	comp=Z,5.3nm,0.5s						
M24K	Tolsona, Glenn	76.47	9	P	P	12 44 53.1	-0.1
	baz=346						
SML	Sawmill	76.50	10	IAmb	IAmb	12 44 54.3	
	comp=Z,6.1nm,0.7s						
SML	Sawmill	76.50	10	P	P	12 44 53.7	+0.4
	baz=344,SNR=6.0						
SUA	Susitna One	76.50	11	P	P	12 44 53.5	+0.1
	baz=342,SNR=9.4						
M26K	Nabesna, AK	76.52	7	P	P	12 44 53.7	+0.4
	baz=348						
N19K	Bonanza Creek	76.53	13	P	P	12 44 53.8	+0.2
	baz=340						
N20K	Mount Spurr	76.53	12	P	P	12 44 53.7	+0.1
	baz=341						
YKA	Yellowknife Ar	76.56	354	P	P	12 44 53.0	-0.5
	comp=Z,0.7nm,0.6s,baz=6.4,slow=6.3,SNR=7.5						
YKA				LR	LR	13 22 36.7	
	comp=Z,27nm,20.7s,baz=315,slow=39						
	comp=Z,0.7nm,0.6s						
M23K	Glacier View	76.59	9	P	P	12 44 54.0	+0.2
	baz=345						
SCM	Sheep Creek Mo	76.60	9	IAmb	IAmb	12 44 55.9	
	comp=Z,5.5nm,0.6s						
SCM	Sheep Creek Mo	76.60	9	P	P	12 44 53.8	-0.1
	baz=345						
PMR	Palmer	76.60	10	IAmb	IAmb	12 44 55.0	
	comp=Z,15nm,1.5s						
PMR	Palmer	76.60	10	P	P	12 44 53.8	+0.1
	baz=344						
M27K	Edge Creek, AK	76.66	7	IAmb	IAmb	12 44 56.5	
	comp=Z,5.8nm,0.9s						
M27K	Edge Creek, AK	76.66	7	P	P	12 44 54.4	+0.1
	baz=349,SNR=8.8						
BVCY	Beaver Creek	76.69	6	P	P	12 44 55.1	+0.7
	baz=350,SNR=6.3						
M29M	Somme Creek	76.84	5	P	P	12 44 55.4	+0.2
	baz=352						
KNK	Knik Glacier	76.87	10	IAmb	IAmb	12 44 56.5	
	comp=Z,7.6nm,0.8s						
KNK	Knik Glacier	76.87	10	P	P	12 44 56.0	+0.6
	baz=344,SNR=5.1						
MMPY	Sheldon Lake,	76.97	2	P	P	12 44 56.6	+0.7
	baz=358						
O16K	Kokwok River B	77.00	15	P	P	12 44 56.4	+0.4
	baz=337						
RC01	Rabbit Creek A	77.00	11	P	P	12 44 56.4	+0.3
	baz=343						
O17K	Koliganek Bris	77.03	15	P	P	12 44 56.6	+0.4
	baz=338						
KLU	Klutina	77.10	9	IAmb	IAmb	12 44 59.4	
	comp=Z,7.5nm,0.9s						
KLU	Klutina	77.10	9	P	P	12 44 57.2	+0.5
	baz=346,SNR=8.2						
N25K	Chitina, Valde	77.14	8	P	P	12 44 57.0	+0.1
	baz=347						
O19K	Port Alsworth	77.14	13	P	P	12 44 57.1	+0.3
	baz=340						
M31M	Drury Creek, Y	77.29	3	P	P	12 44 58.2	+0.5
	baz=355						
O18K	Koktuh Hills	77.30	14	P	P	12 44 58.2	+0.4
	baz=339						
FARO	Faro, Yukon	77.31	3	P	P	12 44 57.8	0.0
	baz=356						
YUK3	Moose Creek	77.35	6	P	P	12 44 58.3	0.0
	baz=350,SNR=11						
PWL	Port Wells	77.42	10	P	P	12 44 58.3	-0.1
	baz=344						
GLI	Glacier Island	77.56	9	P	P	12 44 58.7	-0.5
	baz=345						
P18K	Big Mountain,	77.73	14	P	P	12 44 59.4	-0.8
	baz=339						
P19K	Oil Pt	77.84	13	P	P	12 45 01.7	+0.9
	baz=341						
YUK8	Steele Glacier	77.89	6	P	P	12 45 01.9	+0.5
	baz=351						
N30M	Aishikik Lake	77.90	4	P	P	12 45 01.5	+0.3
	baz=353						
YUK4	Talbot Arm	77.92	5	P	P	12 45 00.9	-0.5
	baz=352						
SEW	Seward	77.99	11	IAmb	IAmb	12 45 03.5	
	comp=Z,13nm,1.3s						
SEW	Seward	77.99	11	P	P	12 45 01.5	-0.1
	baz=344						
EYAK	Cordova Ski Ar	78.04	9	P	P	12 45 02.4	+0.6
	baz=346						
CTG	Chitna Glacier	78.08	7	P	P	12 45 02.0	-0.3
	baz=350						
CTGM	Chitina Glacie	78.08	7	IAmb	IAmb	12 45 04.0	
	comp=Z,12nm,1.4s						
LOGN	Logan Glacier	78.25	6	IAmb	IAmb	12 45 05.6	
	comp=Z,4.8nm,0.8s						
YUK6	Outpost Mounta	78.33	5	P	P	12 45 03.5	-0.3
	baz=352						
O28M	Mount Upton	78.37	6	IAmb	IAmb	12 45 46.9	
	comp=Z,3.4nm,0.7s						
O28M	Mount Upton	78.37	6	P	P	12 45 03.9	-0.2
	baz=351						
HYT	Haines Junctio	78.51	5	IAmb	IAmb	12 45 06.3	
	comp=Z,17nm,1.5s						
HYT	Haines Junctio	78.51	5	P	P	12 45 04.5	-0.1
	baz=353,SNR=8.6						
YAH	Yahtse	78.64	7	IAmb	IAmb	12 45 07.2	
	comp=Z,4.5nm,0.7s						
O30N	Mendenhall	78.64	4	P	P	12 45 04.9	-0.3
	baz=354						
KAIM	Kayak Island	78.80	8	P	P	12 45 06.3	+0.2
	baz=347						
R16K	Pilot Point	78.98	16	P	P	12 45 06.9	-0.2
	baz=338						
P33M	Teslin, Yukon	79.34	2	P	P	12 45 09.3	+0.2
	baz=356						
P29M	Windy Craggy	79.68	5	P	P	12 45 10.8	-0.1
	baz=353						
KDAK	Kodiak Island	79.72	13	LR	LR	13 24 37.1	
	comp=Z,42nm,21.1s,baz=22,slow=39						
KDAK	Kodiak Island	79.72	13	P	P	12 45 11.2	+0.1
	baz=341						
P32M	Atlin	79.93	3	P	P	12 45 12.1	-0.2
	baz=356						
PLBC	Pleasant Camp	79.94	4	P	P	12 45 12.2	0.0
	baz=354						

R33M	Jennings River	80.21	2	P	P	12 45 13.5	-0.5
	baz=358						
TOAD	Toad River Com	80.76	359	P	P	12 45 16.4	-0.3
	baz=2.2						
DLBC	Dease Lake	81.19	1	P	P	12 45 18.9	-0.2
	baz=358						
R32K	Eaglecrest	81.21	3	P	P	12 45 19.8	+0.6
	baz=355						
S34M	Telegraph Cree	81.69	2	P	P	12 45 21.6	-0.1
	baz=358						
S32K	Killisnoo	82.02	4	P	P	12 45 23.8	+0.5
	baz=355						
SIT	Sitka	82.39	4	P	P	12 45 25.7	+0.5
	baz=354						
T35M	Bob Quinn	82.64	1	P	P	12 45 26.9	+0.2
	baz=358						
BBB	Bella Bella	87.47	0	LR	LR	13 32 48.4	
	comp=Z,14nm,18.9s,baz=54,slow=41						
Q54A	Coxs Mills	89.73	325	P	P	12 46 02.7	+0.8
WRA	Warramunga Arr	97.21	110	P	P	12 46 34.9	-1.5
	comp=Z,0.8nm,0.6s,baz=320,slow=4.2,SNR=14 comp=Z,0.8nm,0.6s						
ASAR	Alice Springs	99.31	113	P	Pdif	12 46 44.3	-1.5
	comp=Z,0.3nm,0.9s,baz=318,slow=4.2,SNR=1.9 comp=Z,0.3nm,0.9s						
QSPA	South Pole Qui	130.54	180	PKP	PKPdf	12 52 12.1	-1.0
	comp=Z,1.3nm,1.0s,baz=225,slow=3.5,SNR=1.8						
PLCA	Paso Flores	137.13	250	PKP	PKPdf	12 52 25.9	-0.4
	comp=Z,3.8nm,1.2s,baz=188,slow=13,SNR=1.7						
PLCA	Paso Flores	137.13	250	PKIKP	PKPdf	12 52 26.0	-0.4

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*NNC **05** 12:49:20.1±5.0, 41°.33N×83°.95E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=32.9km s-min=19.9km az=137.0*

*SOME **05** 12:49:22.1, 41°.02N×83°.42E, h15^{km}*

ISC 05 12:49:24.7±2.9**, 41°.3N**±0°.1×**83°.4E**±0°.1**, h10^{km}, n11, σ2^s.62**/16**, 5C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	3.50	304	Pg	Pn	12 50 22.0	+2.8
	6.3nm,0.2s						
SHLS				Lg	Lg	12 51 08.0	
	83nm,0.4s						
SHLS	Shalkode	3.50	304	eP	Pb	12 50 22.9	-3.9
	8.5nm,0.2s						
SHLS				eS	Sb	12 51 07.9	-1.5
	105nm,0.5s						
PDGK	Podgornoye	3.57	306	⇑Pg	Pg	12 50 32.5	-0.6
	5.8nm,0.4s						
PDGK				⇑Sn	Sb	12 51 11.5	0.0
	28nm,0.6s						
PDGK				⇓Lg	Lg	12 51 23.8	
	29nm,0.7s						
UZB	Uzynbulak	3.77	301	Pg	Pb	12 50 33.3	+1.8
	5.4nm,0.5s						
UZB				Lg	Lg	12 51 24.1	
	26nm,0.4s						
DJR	Jarkent	4.07	320	Pg	Pb	12 50 39.6	+3.2
	4.3nm,0.5s						
DJR				Lg	Lg	12 51 36.3	
	19nm,0.7s						
DJR	Jarkent	4.07	320	eP	Pb	12 50 39.6	+3.2
	4.3nm,0.5s						
DJR				eS	Sg	12 51 36.3	+1.0
	19nm,0.7s						
SATY	Saty	4.14	297	Pg	Pb	12 50 39.1	+1.4
	2.8nm,0.2s						
SATY				Lg	Lg	12 51 35.4	
	24nm,0.5s						
BLB	Baldybastay	4.62	309	Pg	Pb	12 50 47.6	+1.8
	17nm,0.4s						
BLB				Lg	Lg	12 51 53.2	
	17nm,0.3s						
MK31	Makanchi Array	5.58	352	⇑Pg	Pb	12 51 00.9	-1.3
	1.0nm,0.5s,baz=176,slow=16,SNR=4.3						
MK31				⇓Sn	Sn	12 51 50.2	-1.8
	3.4nm,0.6s,baz=169,slow=17,SNR=5.1						
MK31				⇑Lg	Lg	12 52 20.9	
	8.3nm,0.6s,baz=155,slow=29,SNR=7.1						
MAKZ	Makanchi	5.63	350	⇓Sn	Sn	12 51 52.1	-1.1
	1.8nm,0.4s						
MAKZ				⇓Lg	Lg	12 52 21.5	
	7.6nm,1.1s						
TKM2	Tokmak 2	6.06	288	⇓Pn	Pn	12 50 57.1	+2.6
	1.4nm,0.5s						
TKM2				⇓Pg	Pg	12 51 16.1	-4.6
	2.7nm,0.7s						
TKM2				⇑Lg	Lg	12 52 45.0	
	9.9nm,0.7s						

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*KOLA **05** 13:09:28.4, 68°.12N×33°.26E, h0^{km}, ML1.9, Error ellipse: s-maj=2.7km s-min=1.5km az=90.0, Olenegorsk City, Mines*

*IDC **05** 13:09:29.9±2.0, 68°.21N×32°.83E, h0^{km}, mbtmp3.6/2, ML2.3/3, Error ellipse: s-maj=23.0km s-min=13.9km az=60.0*

ISC 05 13:09:26.7±0.8**, 68°.14N**±0°.03×**33°.23E**±0°.05**, h0^{km}, n12, σ0^s.93**/20**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA0	Apatity Array	0.54	190	P	Pg	13 09 37.3	+0.3
APA0				S	Sg	13 09 44.1	0.0
APA	Apatity	0.57	173	S	Sg	13 09 45.8	+0.7
LVZ	Lovozero	0.59	114	P	Pg	13 09 38.6	+0.7
LVZ				S	Sg	13 09 46.0	+0.6
TERR	Teriberka	1.27	32	P	Pg	13 09 51.0	+0.1
TERR				S	Sg	13 10 07.0	-0.4
KVDA	Kovda	1.46	186	P	Pn	13 09 53.9	-0.3
KVDA				S	Sn	13 10 14.3	+0.4
PRVG	Vayda Guba	1.66	347	P	Pg	13 09 59.1	+0.6
PRVG				S	Sb	13 10 20.4	+0.8
VADS	Vadso	2.43	327	P	Pn	13 10 08.8	+1.2
VADS				S	Sn	13 10 39.2	+1.4
ARCES	ARCESS Array B	3.13	300	Pn	Pn	13 10 18.2	+0.9
	0.1nm,0.3s,baz=114,slow=14,SNR=18						
ARCES				Pg	Pb	13 10 22.3	-0.9
	0.1nm,0.3s,baz=115,slow=14,SNR=2.5						
ARCES				Sn	Sn	13 10 55.6	+0.3
	0.1nm,0.3s,baz=116,slow=22,SNR=1.7						
ARCES				Lg	Lg	13 11 02.0	
	0.1nm,0.3s,baz=115,slow=32,SNR=5.6						
ARCES	ARCESS Array B	3.13	300	P	Pn	13 10 18.1	+0.9
ARCES				S	Sn	13 10 55.7	+0.3
I37NO	I37NO	5.43	287	I	I	13 42 30.0	
	baz=93,slow=319,SNR=7.6						
FINES	FINESS Array B	7.38	208	Pn	Pn	13 11 16.4	+0.9
	0.1nm,0.3s,baz=26,slow=14,SNR=1.8 0.3nm,0.4s						
SPITS	Spitsbergen Ar	11.13	342	Pn	Pn	13 12 04.5	-2.2
	baz=149,slow=15 7.6nm,0.9s						

IDC 05 13:11:45.2±1.8**, 18°.98S×172°.20W, h0^{km}, mb3.7**/4**, mbtmp3.7**/4**, Error ellipse: s-maj=51.6km s-min=42.7km az=144.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	50.19	255	P	P	13 20 41.8	-1.4
	0.4nm,0.4s,baz=97,slow=7.2,SNR=10.0 0.4nm,0.4s						
WRA	Warramunga Arr	50.24	260	P	P	13 20 44.8	+1.3
	1.1nm,0.4s,baz=98,slow=8.3,SNR=7.2 1.1nm,0.4s						
QSPA	South Pole Qui	71.08	180	P	P	13 23 05.4	+0.2
	0.6nm,0.9s,baz=0.0,slow=2.0,SNR=1.2 0.6nm,0.9s						
ILAR	Eielson Array	85.73	11	P	P	13 24 25.5	-0.2
	0.2nm,0.8s,baz=208,slow=3.1,SNR=1.7 0.2nm,0.8s						

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*UPA **05** 13:14:21.8±1.3, 6°.39N×82°.57W, h8^{km}±11^{km}, MW4.8*

*IDC **05** 13:14:22.4±1.6, 6°.68N×82°.67W, h0^{km}, mb4.0/6, mbtmp4.2/9, ML2.8/3, MS3.4/29, Error ellipse: s-maj=45.3km s-min=21.1km az=26.0*

*UCR **05** 13:14:23.2±1.6, 6°.37N×82°.62W, h36^{km}±999^{km}, MW4.3*

*CATAC **05** 13:14:23.9±0.6, 6°N±4°×8°3W±°, h24^{km}±7^{km}, M5.1/25, mb5.3/17, mB5.5/14, MLv5.3/25, Mw(mB)4.9/14, Error ellipse: s-maj=10.1km s-min=3.7km az=28.7, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.08; $M_{\theta\theta}$0.40; $M_{\phi\phi}$-0.32; $M_{r\theta}$1.11; $M_{\theta\phi}$0.75; $M_{\phi r}$0.67; Fault plane solution: $M_0$1.54830×10^{16} NP1:ϕ_s38.29983°, δ10.82755°, λ-113.23177°. NP2:ϕ_s241.90696°, δ80.05970°, λ-85.68565°. Principal axes: T 1.7842, Plg34.9217°, Azm328.1872°; N -0.7937, Plg4.2495°, Azm61.1608°; P -0.9905, Plg54.7439°, Azm157.1945°; Moment Tensor Solution. Moment tensor: Scale 10^{15} Nm; M_{rr}1.43; $M_{\theta\theta}$-1.24; $M_{\phi\phi}$-0.19; $M_{r\theta}$1.11; $M_{\theta\phi}$1.46; $M_{\phi r}$1.78; Fault plane solution: $M_0$2.88945×10^{15} NP1: ϕ_s92.72937°, δ55.30010°, λ37.24522°. NP2:ϕ_s339.32573°, δ60.15966°, λ138.98228°. Principal axes: T 3.2508, Plg48.9718°, Azm303.6916°; N -0.9751, Plg40.8795°, Azm129.5541°; P -2.2757, Plg2.9058°, Azm37.0358°; Moment Tensor Solution. Moment tensor: Scale 10^{15} Nm; M_{rr}2.28; $M_{\theta\theta}$-1.51; $M_{\phi\phi}$-0.77; $M_{r\theta}$0.83; $M_{\theta\phi}$1.58; $M_{\phi r}$1.14; Fault plane solution: $M_0$2.91723×10^{15} NP1: ϕ_s102.83263°, δ51.05631°, λ51.92720°. NP2: ϕ_s334.08865°, δ52.24563°, λ127.34531°. Principal axes: T 3.0525, Plg61.3305°, Azm307.4800°; N -0.2925, Plg28.6604°, Azm129.0468°; P -2.7600, Plg0.6595°, Azm38.6863°; Moment Tensor Solution. Moment tensor: Scale 10^{15} Nm; M_{rr}1.43; $M_{\theta\theta}$-1.24; $M_{\phi\phi}$-0.19; $M_{r\theta}$1.11; $M_{\theta\phi}$1.46; $M_{\phi r}$1.78; Fault plane solution: $M_0$2.88945×10^{15} NP1:ϕ_s92.72937°, δ55.30010°, λ37.24522°. NP2: ϕ_s339.32573°, δ60.15966°, λ138.98228°. Principal axes: T 3.2508, Plg48.9718°, Azm303.6916°; N -0.9751, Plg40.8795°, Azm129.5541°; P -2.2757, Plg2.9058°, Azm37.0358°; Moment Tensor Solution. Moment tensor: Scale 10^{15} Nm; M_{rr}1.61; $M_{\theta\theta}$-1.21; $M_{\phi\phi}$-0.41; $M_{r\theta}$0.85; $M_{\theta\phi}$1.33; $M_{\phi r}$2.04; Fault plane solution: $M_0$2.95863×10^{15} NP1:ϕ_s99.67435°, δ44.67970°, λ34.81405°. NP2: ϕ_s343.36424°, δ66.33210°, λ129.07249°. Principal axes: T 3.3315, Plg51.8730°, Azm299.5739°; N -1.0104, Plg35.2599°, Azm145.3126°; P -2.3210, Plg12.6462°, Azm46.1852°; Moment Tensor Solution. Moment tensor: Scale 10^{15} Nm; M_{rr}1.43; $M_{\theta\theta}$-1.24; $M_{\phi\phi}$-0.19; $M_{r\theta}$1.11; $M_{\theta\phi}$1.46; $M_{\phi r}$1.78; Fault plane solution: $M_0$2.88945×10^{15} NP1:ϕ_s92.72937°, δ55.30010°, λ37.24522°. NP2: ϕ_s339.32573°, δ60.15966°, λ138.98228°. Principal axes: T 3.2508, Plg48.9718°, Azm303.6916°; N -0.9751, Plg40.8795°, Azm129.5541°; P -2.2757, Plg2.9058°, Azm37.0358°; Moment Tensor Solution. Moment tensor: Scale 10^{15} Nm; M_{rr}1.61; $M_{\theta\theta}$-1.20; $M_{\phi\phi}$-0.40; $M_{r\theta}$0.89; $M_{\theta\phi}$1.34; $M_{\phi r}$2.01; Fault plane solution: $M_0$2.95574×10^{15} NP1:ϕ_s99.35760°, δ45.61878°, λ35.09169°. NP2: ϕ_s343.18738°, δ65.74034°, λ129.89900°. Principal axes: T 3.3321, Plg51.7301°, Azm300.2672°; N -1.0264, Plg35.7884°, Azm144.2282°; P -2.3057, Plg11.7733°, Azm45.5864°; confirmed*

*NEIC **05** 13:14:23, 6°.42N×82°.62W, h10^{km}*

*NEIC **05** 13:14:23.0±1.5, 6°.43N±0°.09×82°.60W±0°.04, h10^{km}±2^{km}, mb4.5/32, Mwr4.3/11, Error ellipse: s-maj=14.9km s-min=6.2km az=187.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.10; $M_{\theta\theta}$-1.55; $M_{\phi\phi}$0.46; $M_{r\theta}$0.43; $M_{\theta\phi}$2.67; $M_{\phi r}$2.29; Fault plane solution: $M_0$3.80000×10^{15} NP1:ϕ_s86.37000°, δ53.31000°, λ19.52000°. NP2:ϕ_s344.41000°, δ74.46000°, λ141.67000°. Principal axes: T 3.9573, Plg38.0000°, Azm299.0000°; N -0.3321, Plg49.0000°, Azm146.0000°; P -3.6252, Plg13.0000°, Azm40.0000°;*

*RSNC **05** 13:14:24.2±1.5, 6°N±4°×8°3W±°, h27^{km}±20^{km}, M4.2, mB5.2, mb4.8, ML3.9, Mw(mB)4.6*

ISC 05 13:14:20.8±3.5**, 6°.38N**±0°.06×**82°.61W**±0°.04**, h4^{km}**±22^{km}**, n310, σ1^s.07**/310**, mb4.5**/15**, MS3.4**/25**, 14C-13D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISECA	Islas Secas	1.69	20	⇓iP	Pn	13 14 49.6	-1.5
ISECA				eS	Sn	13 15 10.4	-2.8
LMNES	Limones	1.73	352	eP	Pn	13 14 50.0	-1.6
GMAL	Guarumal, Vera	1.94	45	⇓iP	Pn	13 14 54.0	-0.5
GMAL	Guarumal, Vera	1.94	45	P	Pn	13 14 53.8	-0.7
GMAL				S	Sn	13 15 18.8	-0.4
GMAL	Guarumal, Vera	1.94	45	eP	Pn	13 14 53.8	-0.7
GMAL				eS	Sn	13 15 19.0	-0.3
CACAO	El Cacao, Vera	1.98	61	P	Pn	13 14 53.7	-1.4
CACAO				S	Sn	13 15 17.3	-3.0
CACAO	El Cacao, Vera	1.98	61	eP	Pn	13 14 53.8	-1.3
CACAO				eS	Sn	13 15 18.6	-1.8
RMDIO	Remedios, Chir	1.99	23	⇓eP	Pn	13 14 54.6	-0.6
CSTBL	De las Acacias	2.02	5	eP	Pn	13 14 54.9	-0.8
DVD	David	2.05	4	eP	Pn	13 14 55.2	-0.8
DVD				eS	Sn	13 15 21.4	-0.6
DVD				eS	Sb	13 15 21.8	-2.6
NDIMA	Cerro Iglesias	2.08	23	⇓iP	Pn	13 14 56.0	-0.5
CGUAY	Guayabal, Coch	2.08	7	⇓eP	Pn	13 14 55.8	-0.7
PDCAN	Manzana , Fuen	2.10	25	eP	Pn	13 14 56.0	-0.8
MCANO	Manzana, Boque	2.18	1	eP	Pn	13 14 56.9	-0.9
CDITO	Canoas	2.19	353	P	Pn	13 14 57.2	-0.9
CDITO	Canoas	2.19	353	S	Sn	13 15 24.5	-1.1
SCZRO	Santa Cruz, Re	2.26	356	eP	Pn	13 14 58.5	-0.4
JIME	Puerto Jimenez	2.26	342	eP	Pn	13 14 57.6	-1.3
NELY	Ciudad Neily	2.28	352	eP	Pn	13 14 58.6	-0.6
NELY				eS	Sn	13 15 26.6	-1.1
EDAD	Golfito	2.32	346	eP	Pn	13 14 58.1	-1.8
CLLRA	Cordillera,	2.35	360	⇓eP	Pn	13 14 59.8	-0.6
BQTLY	Boquete Panama	2.37	3	eP	Pn	13 15 00.1	-0.5
DHOFF	Oeste 158, Vol	2.39	359	⇓eP	Pn	13 15 00.3	-0.5
TBS2		2.40	359	eP	Pn	13 15 00.8	-0.2
BRU2	Volcan	2.40	358		Pn	13 15 00.4	-0.6
BRU2				Sn	Sn	13 15 30.9	-0.1
BRU2	Volcan	2.40	358	eP	Pn	13 15 00.4	-0.6
BRU2	Volcan	2.40	358	P	Pn	13 15 00.4	-0.6
BRU2	Volcan	2.40	358	S	Sn	13 15 31.2	+0.2
BRU2	Volcan	2.40	358	eP	Pn	13 15 00.7	-0.3
BRU2				eS	Sn	13 15 30.9	-0.1
SCLRA	Santa Clara, W	2.44	356	eP	Pn	13 15 01.4	-0.2
VITO	San Vito	2.45	352	eP	Pn	13 15 01.6	-0.1
ALCO	Alturas Coton,	2.56	355	⇓eP	Pn	13 15 02.7	-0.5
ALCO				eS	Sn	13 15 35.0	0.0
KKNTU	Kakintº	2.57	18	⇓iP	Pn	13 15 03.2	0.0
CHIT3	Chitre	2.68	54	eP	Pn	13 15 04.3	-0.4
CHIT3				eS	Sn	13 15 36.5	-1.1
EDP2	Potrero Grande	2.68	348	eP	Pn	13 15 04.8	+0.1
FIMO	Fila Mora	2.70	344	eP	Pn	13 15 04.2	-0.9
PANP	Palmar Norte	2.70	342	eP	Pn	13 15 04.2	-0.8
AZU	Azuero	2.71	59	⇓iP	Pn	13 15 04.4	-0.6
AZU				eS	Sn	13 15 36.9	-1.4
AZU	Azuero	2.71	59	P	Pn	13 15 04.5	-0.6
AZU				S	Sn	13 15 36.5	-1.8
AZU	Azuero	2.71	59	eP	Pn	13 15 04.6	-0.5
AZU				eS	Sn	13 15 36.8	-1.4
BURE	Buenos Aires	2.87	345	eP	Pn	13 15 07.5	+0.2
OCHAL	Ojochal	2.89	339	P	Pn	13 15 06.5	-1.1
OCHAL	Ojochal	2.89	339	S	Sn	13 15 41.5	-1.4
EDPE	Pejibaye, P	2.92	341	eP	Pn	13 15 07.5	-0.6
DRK0	Durika	2.93	348	eP	Pn	13 15 07.8	-0.5
DRK0	Durika	2.93	348	P	Pn	13 15 08.3	-0.1
DRK0	Durika	2.93	348	eP	Pn	13 15 08.4	0.0
DRK0				eS	Sn	13 15 44.7	+0.5
ISBTO	Bastimentos Is	2.97	8	eP	Pn	13 15 10.5	+1.8
PNME	Penonome	3.08	47	eP	Pn	13 15 10.4	+0.1
PNME				eS	Sn	13 15 46.9	-0.6
SAJE	San Jernim	3.08	343	eP	Pn	13 15 09.5	-0.9
BRIBI	Bribri	3.23	356	eP	Pn	13 15 14.3	+2.1
CEUA	Cerro Uatsi, L	3.24	354	eP	Pn	13 15 14.4	+2.0
SVQ2	Quepos	3.40	333	eP	Pn	13 15 13.7	-1.0
PIEC	Cerro El Cedra	3.49	338	eP	Pn	13 15 15.6	-0.5
RAZU	San Marcos de	3.55	337	eP	Pn	13 15 16.8	-0.1
PITB	Pirrs, San	3.55	337	eP	Pn	13 15 16.9	0.0
VERH	Veragua Rainfo	3.57	351	eP	Pn	13 15 17.8	+0.8
PAR1A	Puntarenas Pro	3.59	333	eP	Pn	13 15 16.4	-0.8
PICV	PH. Pirrs	3.59	334	⇑eP	Pn	13 15 16.5	-0.8
ABE2	San Pablo	3.60	337	⇓iP	Pn	13 15 17.5	-0.1
LCR2	La Lucha 2	3.62	338		Pn	13 15 17.2	-0.6
LCR2	La Lucha 2	3.62	338	⇑iP	Pn	13 15 17.4	-0.5
LCR2	La Lucha 2	3.62	338	P	Pn	13 15 17.1	-0.7
LCR2	La Lucha 2	3.62	338	S	Sn	13 15 59.0	-2.0
REPA	Paraso	3.65	340	eP	Pn	13 15 18.1	-0.1
TURIB	Turrialba	3.66	343	eP	Pn	13 15 18.7	+0.3
VINA	Juan Vinas	3.67	342	eP	Pn	13 15 18.9	+0.4
TAGO	Cartago	3.70	339	eP	Pn	13 15 19.3	+0.4
PCAYA	Pacayas	3.71	341	eP	Pn	13 15 19.3	+0.2
ACOS	Acosta	3.73	336	⇑iP	Pn	13 15 18.5	-0.8
VTCV	VTCV, Calle Va	3.75	343	eP	Pn	13 15 19.9	+0.3
RAFA	San Farael, Vo	3.75	342	eP	Pn	13 15 19.7	-0.1
TRIO	Tres Rios	3.76	339	eP	Pn	13 15 19.6	-0.2
ABRB	Las Abras (San	3.77	343	⇑eP	Pn	13 15 20.4	+0.4
RESJ	San Isidro (Tu	3.77	344	eP	Pn	13 15 20.2	+0.4
CVTV	Tajo	3.77	343	eP	Pn	13 15 20.4	+0.3
AMPA	Desamparados	3.78	338	eP	Pn	13 15 19.6	-0.4
CVTQ	Turrialba Volc	3.78	342	⇑iP	Pn	13 15 20.5	+0.3
VTLA	Turrialba Volc	3.78	342	eP	Pn	13 15 20.5	+0.3
BITO	Garabito Jaco	3.79	328	eP	Pn	13 15 18.6	-1.3
VTR0	Volcan Turrial	3.79	343	⇑iP	Pn	13 15 20.6	+0.2
CVTR	Volcan Turrial	3.79	343	⇑iP	Pn	13 15 20.5	+0.1
LUJA	Lujan	3.81	338	eP	Pn	13 15 19.9	-0.5
ECI	Escuela Centro	3.81	338	⇑iP	Pn	13 15 20.2	-0.3
SJS3	Mercedes San J	3.81	338	eP	Pn	13 15 20.5	+0.1
CENT	San Jose	3.82	338	eP	Pn	13 15 21.6	+1.1
LUPE	Guadalupe	3.82	338	eP	Pn	13 15 20.6	0.0
CORON	Coronado	3.83	339	⇑eP	Pn	13 15 21.3	+0.6
RVLA	Villa Bonita	3.83	345	eP	Pn	13 15 21.5	+0.9
PAVB	Pavas, San Jos	3.84	337	eP	Pn	13 15 20.8	-0.1
TIBA	Tibas	3.84	338	eP	Pn	13 15 21.0	+0.1
CVIMO	Finca Echandi	3.85	340	eP	Pn	13 15 21.6	+0.5
SANTA	Santa Ana	3.86	336	eP	Pn	13 15 20.6	-0.4
DOMI	Santo Domingo	3.87	338	eP	Pn	13 15 21.6	+0.4
HDC	Heredia	3.90	338		Pn	13 15 21.6	+0.1
HDC	Heredia	3.90	338	⇑iP	Pn	13 15 21.6	+0.1
HDC	Heredia	3.90	338	P	Pn	13 15 21.7	+0.1
HDC				S	Sn	13 16 08.4	+0.5
BCIP	Isla Barro Col	3.90	45		Pn	13 15 22.0	+0.5
BCIP	Isla Barro Col	3.90	45	⇓eP	Pn	13 15 22.0	+0.5
BCIP	Isla Barro Col	3.90	45	P	Pn	13 15 21.9	+0.4
BCIP				S	Sn	13 16 08.1	+0.4
BCIP	Isla Barro Col	3.90	45	eP	Pn	13 15 22.0	+0.5
BELE	Belen	3.90	336	eP	Pn	13 15 21.5	-0.2
UELA	Alajuela	3.95	336	eP	Pn	13 15 22.3	0.0
ATEO	Atenas	3.98	334	eP	Pn	13 15 22.4	-0.3
PILE	Guapiles	3.99	343	eP	Pn	13 15 23.4	+0.7
OROT	Orotina	3.99	332	eP	Pn	13 15 21.5	-1.3
UPA	Univ. de Panam	3.99	49	eP	Pn	13 15 23.4	+0.6
UPA				eS	Sn	13 16 09.0	-1.1
VBV1	V. Barva	3.99	338	eP	Pn	13 15 23.3	+0.3
TCS1	Tacares	4.01	335	eP	Pn	13 15 22.4	-0.7
TCS1	Tacares	4.01	335	P	Pn	13 15 22.4	-0.7
CBL1	Cabuya	4.03	322	⇑iP	Pn	13 15 21.7	-1.6
VPS8	V Poas	4.11	337	eP	Pn	13 15 24.4	-0.3
CARI	Cariari	4.11	344	eP	Pn	13 15 25.3	+0.9
VPS5	V. Poas	4.11	337	eP	Pn	13 15 24.4	-0.4
RAMO	San Ramon	4.12	334	eP	Pn	13 15 24.3	-0.4
SRA1	San Ramn	4.12	333	eP	Pn	13 15 23.9	-0.8
ARZA	Esparza	4.13	330	eP	Pn	13 15 23.3	-1.3
ZARE	Zarcero	4.17	335	eP	Pn	13 15 25.6	+0.1
ARTO	Ro Cuarto	4.25	338	eP	Pn	13 15 27.0	+0.6
SARA	Sarapiqu	4.28	341	eP	Pn	13 15 27.4	+0.7
TRT2	Tortugero	4.30	345	eP	Pn	13 15 27.1	+0.1
TRT2	Tortugero	4.30	345	P	Pn	13 15 26.9	-0.1
TRT2	Tortugero	4.30	345	S	Sn	13 16 19.2	+1.6
ITAL	Pital	4.37	338	eP	Pn	13 15 28.4	+0.4
NYURE	Nandayure	4.45	324	eP	Pn	13 15 27.8	-1.2
SOCE	Pocosol	4.45	334		Pn	13 15 29.3	+0.2
SOCE	Pocosol	4.45	334	eP	Pn	13 15 28.7	-0.4
SOCE	Pocosol	4.45	334	P	Pn	13 15 29.0	-0.1
SOCE	Pocosol	4.45	334	S	Sn	13 16 21.6	+0.2
MTEVE	Monteverde	4.49	331	eP	Pn	13 15 29.1	-0.7
INDI	Punta indio, G	4.50	321	P	Pn	13 15 27.8	-2.0
JUNT	Juntas	4.52	329	eP	Pn	13 15 29.0	-1.1
JTS	Las Juntas de	4.53	329	Pn	Pn	13 15 29.1	-1.1
	132nm,0.3s,baz=134,slow=17,SNR=131						
JTS				Sn	Sn	13 16 22.1	-1.2
	48nm,0.3s,baz=291,slow=23,SNR=6.0						
JTS	Las Juntas de	4.53	329	eP	Pn	13 15 29.1	-1.1
JTS	Las Juntas de	4.53	329	P	Pn	13 15 29.4	-0.8
CASO	Castillo	4.54	333	eP	Pn	13 15 30.0	-0.4
VACR	Volcan Arenal	4.55	333	eP	Pn	13 15 30.3	-0.3
ARE1	Arenal 1	4.56	333	⇑iP	Pn	13 15 29.4	-1.2
ARE1				⇑eP	Pn	13 15 31.0	+0.3
VARE2	V. Arenal	4.56	333	eP	Pn	13 15 30.7	0.0
CMARA	Lajas Hojancha	4.57	323	eP	Pn	13 15 29.0	-1.8
CMARA	Lajas Hojancha	4.57	323	P	Pn	13 15 29.6	-1.2
CEDE	Laguna Cedeo	4.58	333	⇑iP	Pn	13 15 31.1	+0.2
TABAC	Tabacon	4.62	333	eP	Pn	13 15 31.7	+0.2
CHIK	Chiripa	4.63	331	eP	Pn	13 15 31.6	-0.2
COVE	Coope Vega, Sa	4.66	338	P	Pn	13 15 31.6	-0.4
NICO	Nicoya	4.67	323	eP	Pn	13 15 31.0	-1.2
CNAS	Canas	4.72	329	eP	Pn	13 15 33.7	+0.9
INVE	Universidad In	4.74	329	eP	Pn	13 15 32.9	-0.3
QUEB	Quebradon, Cot	4.79	332	eP	Pn	13 15 34.0	+0.3
TIMP	Tierras Morena	4.81	330	eP	Pn	13 15 33.8	-0.3
PTAC	Punta Ardita,	4.83	81	P	Pn	13 15 37.4	+3.2
PTAC				S	Sn	13 16 26.2	-4.4
TENO	El Achiote	4.89	332	eP	Pn	13 15 34.6	-0.7
MOTZ	Rio Naranjo	4.92	330	eP	Pn	13 15 35.5	-0.1
CUI	Cuipilapa	4.95	329	eP	Pn	13 15 41.0	+5.1
COLC	Colonia	4.97	329	eP	Pn	13 15 36.4	0.0
HORNC	Hornillas	5.00	330	eP	Pn	13 15 36.6	-0.1
MESS	Mesas	5.03	330	eP	Pn	13 15 36.6	-0.6
VMAR	Armenia, Volca	5.05	331	⇓eP	Pn	13 15 37.5	0.0
ALIBA	Liberia Airpor	5.10	325	eP	Pn	13 15 38.0	0.0
GPS2	Hotel Rincn d	5.12	328	eP	Pn	13 15 38.7	+0.3
GPS1	Guardaparques	5.14	328	eP	Pn	13 15 39.1	+0.4
ELI1	Hacienda Flor	5.14	326	eP	Pn	13 15 39.0	+0.3
VORI	VORI	5.17	329	eP	Pn	13 15 39.5	+0.3
LAPC	Finca la Perla	5.18	328	eP	Pn	13 15 39.3	+0.2
BUAI	Buenos Aires	5.22	329	eP	Pn	13 15 39.4	-0.3
PEJA	Penjamo Buenos	5.22	329	eP	Pn	13 15 40.2	+0.4
LCRUZ	La Cruz	5.54	328	eP	Pn	13 15 45.1	+0.9
GR1C	Gorgona, Isla	5.55	127	P	Pn	13 15 41.4	-2.8
CARN	Rivas	5.58	329	eP	Pn	13 15 46.0	+1.4
CARN	Rivas	5.58	329	P	Pn	13 15 46.1	+1.5
CARN				S	Sn	13 16 49.8	+0.6
CAP2	Capurgana	5.67	66	P	Pn	13 15 48.2	+2.4
BLUN	Bluefields	5.71	348	eP	Pn	13 15 46.8	+0.4
BLUN	Bluefields	5.71	348	P	Pn	13 15 46.8	+0.4
BLUN	Bluefields	5.71	348	P	Pn	13 15 47.7	+1.3
MALC	Bahia Malaga	5.75	114	P	Pn	13 15 46.5	-0.5
ACON	Acoyapa	6.10	336		Pn	13 15 51.9	+0.1
ACON	Acoyapa	6.10	336	eP	Pn	13 15 51.0	-0.8
ACON	Acoyapa	6.10	336	P	Pn	13 15 51.4	-0.5
ACON	Acoyapa	6.10	336	P	Pn	13 15 52.0	+0.1
	3μm206nm,0.8s						
APAC	Apartado, Choc	6.17	75	P	Pn	13 15 58.2	+5.5
SAIC	Isla e San And	6.18	8	P	Pn	13 15 53.2	+0.3
	140nm,0.5s						
PLMC	San Jos del P	6.46	103	P	Pn	13 15 56.8	0.0
	16nm,0.8s						
NANN	Nandasmo	6.52	328	S	Sn	13 17 11.8	-0.7
NANN	Nandasmo	6.52	328	P	Pn	13 15 58.4	+0.8
YOTC	Yotoco, Valle	6.67	111	P	Pn	13 15 59.7	-0.1
JAMC	Jamundi, Valle	6.70	118	P	Pn	13 15 59.3	-0.9
	21nm,0.8s						
BOAB	BOACO BROADBAN	6.74	334		Pn	13 16 00.7	0.0
SAPS	Ciudad Sandino	6.87	327	P	Pn	13 16 04.2	+1.9
BBAC	Balboa, Cauca	6.88	129	P	Pn	13 16 02.1	-0.6
	31nm,0.6s						
COPN	Copaltepe	6.98	326	P	Pn	13 16 04.7	+0.8
POPC	Popayan, Colom	7.04	123	P	Pn	13 16 03.4	-1.5
	890nm40nm,1.0s						
PRVC	Isla de Provid	7.06	10	Pn	Pn	13 16 04.6	-0.4
PRVC	Isla de Provid	7.06	10	P	Pn	13 16 04.3	-0.7
MOMN	Momotombo	7.14	327	P	Pn	13 16 06.9	+0.8
MOMN				S	Sn	13 17 27.4	-0.3
UREC	San Jos de Ur	7.15	79	eP	Pn	13 16 06.2	0.0
UREC				eS	Sn	13 17 24.5	-3.5
MATN	Matagalpa	7.28	334	P	Pn	13 16 07.5	-0.6
GUY2C	Guyana, Caldas	7.29	99	P	Pn	13 16 11.4	+2.8
CNGA	Al SSO del Vol	7.30	327	P	Pn	13 16 09.4	+1.2
CNGN	Cerro Negro	7.30	327		Pn	13 16 08.9	+0.6
CNGN	Cerro Negro	7.30	327	P	Pn	13 16 09.3	+1.0
ROCN	Rota Cerro Neg	7.34	327	P	Pn	13 16 09.6	+0.8
ILCN	San Idelfonso	7.36	327	P	Pn	13 16 09.4	+0.3
HOYN	Al Sur del Vol	7.45	326	P	Pn	13 16 11.6	+1.2
HOYN				S	Sn	13 17 34.3	-1.2
HERN	Volcan Telica	7.46	326		Pn	13 16 10.6	0.0
HERN	Volcan Telica	7.46	326	P	Pn	13 16 10.9	+0.4
POLN	Al Sur del Vol	7.48	327	P	Pn	13 16 12.0	+1.2
LIMN	Finca el Limon	7.60	331	P	Pn	13 16 13.2	+0.6
CRIN	San Cristobal	7.66	325		Pn	13 16 13.3	0.0
CRIN	San Cristobal	7.66	325	P	Pn	13 16 13.9	+0.6
CRIN	San Cristobal	7.66	325	P	Pn	13 16 14.7	+1.5

	6µm257nm,0.5s						
ORTC	**Ortega, Tolima**	**7.73**	**108**	P	**Pn**	**13 16 16.2**	**+2.0**
RCVN	**Varillal2**	**7.98**	**334**	P	**Pn**	**13 16 19.1**	**+1.3**
PRAC	**Prado**	**8.13**	**109**	P	**Pn**	**13 16 21.1**	**+1.4**
PRAC				S	**Sn**	**13 17 52.9**	**+0.6**
SJCC	**San Jacinto, C**	**8.14**	**64**	P	**Pn**	**13 16 22.5**	**+2.7**
SJCC				S	**Sn**	**13 17 53.9**	**+1.5**
POTN	**Potosi Cosigui**	**8.16**	**324**	P	**Pn**	**13 16 21.3**	**+1.2**
POTN				S	**Sn**	**13 17 51.9**	**-0.9**
SLOR	**San Lorenzo -**	**8.17**	**150**		**Pn**	**13 16 19.8**	**-0.8**
CSGN	**Cosiguina Volc**	**8.17**	**324**	P	**Pn**	**13 16 22.5**	**+2.2**
CSGN				S	**Sn**	**13 17 52.8**	**-0.5**
GARC	**Garzon, Huila**	**8.22**	**120**	P	**Pn**	**13 16 22.2**	**+1.0**
	33nm,0.7s						
CHOHN	**Orocuina**	**8.36**	**328**	P	**Pn**	**13 16 24.4**	**+1.4**
ROSC	**El Rosal**	**8.39**	**100**	Pn	Pn	13 16 28.7	+5.1
	1.8nm,0.3s,baz=216,slow=3.7,SNR=4.4						
	7.9nm,0.4s						
FLOC	**Florencia**	**8.41**	**124**		**Pn**	**13 16 24.1**	**+0.5**
TGUH	**Tegucigalpa,Un**	**8.90**	**329**		**Pn**	**13 16 31.3**	**+0.9**
ARGC	**Ariguani, Magd**	**8.97**	**67**	P	**Pn**	**13 16 34.7**	**+3.5**
MACC	**Macarena, Meta**	**9.69**	**115**	P	**Pn**	**13 16 42.3**	**+1.1**
MTO3	**Montecristo**	**10.37**	**321**		**Pn**	**13 16 49.9**	**-0.7**
RTAL	**Retalhuleu**	**12.05**	**313**		**Pn**	**13 17 14.7**	**+1.2**
SDV	**Santo Domingo**	**12.12**	**77**		**Pn**	**13 17 15.8**	**+1.1**
SDV	**Santo Domingo**	**12.12**	**77**	Pn	**Pn**	**13 17 16.2**	**+1.6**
	0.7nm,0.3s,baz=243,slow=9.9,SNR=19						
SDV				Sn	**Sn**	**13 19 26.5**	**-4.0**
	0.8nm,0.3s,baz=276,slow=21,SNR=2.4						
SDV				LR	LR	13 21 13.9	
	comp=Z,89nm,21.2s,baz=246,slow=34						
	18nm,0.8s						
SDV	**Santo Domingo**	**12.12**	**77**	P	**Pn**	**13 17 17.3**	**+2.7**
HUEH	**Huehuetenango**	**12.45**	**316**		**Pn**	**13 17 21.8**	**+2.7**
MTDJ	**Mount Denham**	**12.77**	**22**	Pn	**Pn**	**13 17 21.8**	**-1.6**
CCIG	**Comitan**	**13.56**	**317**		**Pn**	**13 17 34.5**	**+0.2**
ATAH	**Atahualpa**	**14.07**	**163**	LR	LR	13 22 35.7	
	comp=Z,401nm,18.0s,baz=339,slow=34						
TEIG	**Tepich**	**14.82**	**339**	Pn	**Pn**	**13 17 51.1**	**-0.2**
	0.1nm,0.3s,baz=124,slow=16,SNR=2.1						
CMIG	**Matias Romero**	**16.05**	**313**	Pn	**P**	**13 18 09.3**	**-1.6**
	2.4nm,0.3s,baz=133,slow=9.7,SNR=26						
CMIG				LR	LR	13 23 18.5	
	comp=Z,145nm,21.4s,baz=171,slow=34						
SDDR	**Presa de Saban**	**16.68**	**40**		**Pn**	**13 18 14.8**	**-0.8**
SDDR				IAmb	IAmb	13 18 20.5	
	comp=Z,20nm,0.6s						
BANI	**BANI**	**16.89**	**44**		**Pn**	**13 18 18.0**	**-0.2**
PCRV	**Puerto La Cruz**	**18.18**	**77**	LR	LR	13 26 00.2	
	comp=Z,153nm,21.0s,slow=38						
PRSN	**Puerto Rico Se**	**19.12**	**51**	P	**Pn**	**13 18 45.7**	**-0.1**
PRSN				IAmb	IAmb	13 18 48.2	
	comp=Z,42nm,0.9s						
CELP	**Cerrillos**	**19.48**	**52**		**Pn**	**13 18 50.1**	**0.0**
CELP				IAmb	IAmb	13 18 53.8	
	comp=Z,43nm,1.4s						
AOPR	**Arecibo Observ**	**19.50**	**51**		**P**	**13 18 49.0**	**-0.2**
SJG	**San Juan**	**19.84**	**53**	P	**Pn**	**13 18 54.6**	**+0.2**
	comp=Z,13nm,0.5s,baz=261,slow=11,SNR=8.5						
PDPR	**Patillas Dam,**	**19.89**	**53**	P	**P**	**13 18 52.1**	**-1.2**
PDPR				IAmb	IAmb	13 19 01.1	
	comp=Z,30nm,1.3s						
GCPR	**Guaynabo City**	**20.00**	**52**	P	**P**	**13 18 53.9**	**-0.7**
GCPR				IAmb	IAmb	13 19 03.5	
	comp=Z,20nm,0.9s						
SAML	**Samuel**	**24.63**	**128**		**P**	**13 19 41.8**	**-0.8**
ZAIG	**Zacatecas**	**25.21**	**312**	P	**P**	**13 19 49.2**	**+1.0**
ZAIG				IAmb	IAmb	13 19 53.0	
	comp=Z,14nm,1.2s						
LPAZ	**La Paz**	**26.69**	**148**	LR	LR	13 31 32.1	
	comp=Z,232nm,20.0s,baz=306,slow=38						
TKL	**Tuckaleechee C**	**29.16**	**358**	LR	LR	13 32 32.2	
	comp=Z,46nm,18.2s,baz=181,slow=38						
TXAR	**Lajitas Array**	**30.27**	**321**	P	**P**	**13 20 33.5**	**+0.4**
TXAR	**Lajitas Array**	**30.27**	**321**	P	**P**	**13 20 33.9**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=153,slow=8.4,SNR=6.3						
	comp=Z,0.3nm,0.5s						
TX31	**Lajitas Ar. Si**	**30.27**	**321**	P	**P**	**13 20 33.6**	**+0.4**
SIV	**San Ignacio**	**30.80**	**136**	LR	LR	13 32 46.8	
	comp=Z,165nm,19.1s,baz=284,slow=36						
LPIG	**La Paz**	**31.90**	**306**	LR	LR	13 30 55.3	
	comp=Z,56nm,18.7s,baz=240,slow=31						
WMOK	**Wichita Mounta**	**31.93**	**334**	P	**P**	**13 20 47.2**	**-0.5**
VHRN	**Van Horn**	**32.10**	**322**		**P**	**13 20 49.5**	**+0.1**
M57A	**Sunshine Farm,**	**35.15**	**7**	P	**P**	**13 21 16.2**	**+0.5**
CRNM	**Carthage**	**35.38**	**324**		**P**	**13 21 18.4**	**+0.4**
ANMO	**Albuquerque**	**35.93**	**326**		**P**	**13 21 22.8**	**+0.1**
ANMO				IAmb	IAmb	13 21 25.6	
	comp=Z,12nm,1.4s						
ANMO	**Albuquerque**	**35.93**	**326**		**P**	**13 21 22.8**	**+0.1**
ANMO				IAmb	IAmb	13 21 25.7	
	comp=Z,9.8nm,1.3s						
ANMO	**Albuquerque**	**35.93**	**326**	LR	LR	13 36 47.6	
	comp=Z,73nm,19.2s,baz=240,slow=38						
SDCO	**Great Sand Dun**	**37.52**	**330**	P	**P**	**13 21 36.8**	**+0.4**
SDCO				IAmb	IAmb	13 21 39.0	
	comp=Z,11nm,1.2s						
SADO	**Sadowa**	**38.36**	**4**	LR	LR	13 37 54.2	
	comp=Z,28nm,19.1s,baz=274,slow=37						
X16A	**Lo Mia Camp, P**	**38.57**	**320**	P	**P**	**13 21 45.2**	**+0.1**
MVCO	**Mesa Verde**	**38.71**	**326**		**P**	**13 21 45.8**	**-0.6**
MVCO				IAmb	IAmb	13 21 49.0	
	comp=Z,13nm,1.2s						
113A	**Mohawk Valley,**	**39.10**	**316**		**P**	**13 21 49.0**	**-0.4**
PV18	**Skein Mesa, Pa**	**39.68**	**327**		**P**	**13 21 54.9**	**+0.5**
H03N2	**Juan Fernandez**	**39.75**	**175**	T	T	14 04 02.9	
	baz=354,slow=76,SNR=8.1						
H03N1	**Juan Fernandez**	**39.76**	**175**	T	T	14 04 26.9	
	baz=354,slow=76,SNR=16						
H03N3	**Juan Fernandez**	**39.77**	**175**	T	T	14 04 25.7	
	baz=354,slow=76,SNR=16						
PV10	**Paradox Valley**	**39.85**	**327**	P	**P**	**13 21 54.8**	**-1.0**
PV10				IAmb	IAmb	13 22 00.6	
	comp=Z,12nm,1.2s						
GLA	**Glamis**	**40.00**	**316**	P	**P**	**13 21 57.5**	**+0.6**
BDFB	**Brasilia**	**40.65**	**123**	LR	LR	13 38 30.7	
	comp=Z,61nm,18.7s,baz=327,slow=35						
CPUP	**Villa Florida**	**40.73**	**144**	LR	LR	13 39 46.0	
	comp=Z,26nm,18.3s,baz=196,slow=37						
PFO	**Pinyon Flats O**	**41.44**	**315**	LR	LR	13 38 48.8	
	comp=Z,64nm,18.1s,baz=102,slow=36						
RSSD	**Black Hills**	**42.02**	**337**	P	**P**	**13 22 14.8**	**+1.2**
SHPR	**Sheep Range**	**42.24**	**320**	P	**P**	**13 22 16.2**	**+0.8**
PDAR	**Pinedale Array**	**43.36**	**331**		**P**	**13 22 25.2**	**+0.7**
PDAR	**Pinedale Array**	**43.36**	**331**	P	**P**	**13 22 24.9**	**+0.4**
	comp=Z,1.3nm,0.8s,baz=120,slow=8.7,SNR=10						
PDAR				PcP	**PcP**	**13 24 13.0**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=124,slow=4.8,SNR=2.1						
PDAR				LR	LR	13 42 26.6	
	comp=Z,41nm,18.3s,baz=114,slow=39						
	comp=Z,1.3nm,0.8s						
ELK	**Elko**	**44.95**	**325**	LR	LR	13 41 38.7	
	comp=Z,38nm,21.4s,baz=176,slow=37						
ULM	**Lac du Bonnet**	**45.12**	**348**	P	**P**	**13 22 36.2**	**-2.0**
	comp=Z,7.5nm,0.8s,baz=157,slow=7.7,SNR=16						
	comp=Z,7.5nm,0.8s						
NVAR	**Mina Array Bea**	**45.39**	**320**	P	**P**	**13 22 41.7**	**+0.8**
NVAR	**Mina Array Bea**	**45.39**	**320**	P	**P**	**13 22 42.0**	**+1.1**
	comp=Z,1.9nm,0.8s,baz=134,slow=6.9,SNR=16						
NVAR				PcP	**PcP**	**13 24 20.2**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=109,slow=3.8,SNR=2.6						
	comp=Z,1.9nm,0.8s						
LHV	**Little Huntoon**	**45.42**	**320**	P	**P**	**13 22 42.4**	**+1.6**
LHV				IAmb	IAmb	13 22 43.7	
	comp=Z,7.1nm,1.1s						
PLID	**Pearl Lake**	**48.26**	**328**		**P**	**13 23 03.7**	**+0.5**
PLID				IAmb	IAmb	13 23 04.0	
	comp=Z,3.4nm,1.0s						
SCHQ	**Schefferville**	**49.95**	**12**	LR	LR	13 48 31.8	
	comp=Z,25nm,18.0s,baz=206,slow=41						
NEW	**Newport**	**51.00**	**331**	LR	LR	13 46 17.9	
	comp=Z,48nm,19.9s,baz=130,slow=38						
FRB	**Frobisher Bay**	**58.15**	**7**	LR	LR	13 49 07.8	
	comp=Z,62nm,19.2s,baz=246,slow=36						
YKA	**Yellowknife Ar**	**60.72**	**344**	P	**P**	**13 24 32.6**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=146,slow=6.0,SNR=8.4						
YKA				LR	LR	13 52 47.2	
	comp=Z,33nm,18.0s,baz=312,slow=38						
	comp=Z,1.0nm,0.7s						
DLBC	**Dease Lake**	**63.41**	**334**	P	**P**	**13 24 52.8**	**+1.3**
DLBC				IAmb	IAmb	13 24 53.5	
	comp=Z,3.4nm,0.8s						
SFJD	**Kangerlussuaq**	**64.35**	**13**	LR	LR	13 56 33.2	
	comp=Z,16nm,18.2s,baz=224,slow=40						
M29M	**Somme Creek**	**69.07**	**336**	P	**P**	**13 25 28.7**	**+0.9**
INK	**Inuvik**	**70.40**	**342**		**P**	**13 25 36.6**	**+0.9**
BCAR	**Beaver Creek A**	**70.72**	**336**		**P**	**13 25 38.7**	**+0.9**
SUMG	**Summit**	**71.33**	**13**	P	**P**	**13 25 43.2**	**+1.4**
ILAR	**Eielson Array**	**73.47**	**336**	P	**P**	**13 25 54.0**	**-0.2**
	comp=Z,1.1nm,1.0s,baz=126,slow=4.0,SNR=8.6						
	comp=Z,1.1nm,1.0s						
RND	**Reindeer**	**73.81**	**335**		**P**	**13 25 57.1**	**+0.7**
RND				IAmb	IAmb	13 25 57.2	
	comp=Z,4.9nm,0.8s						
ESDC	**Sonseca Array**	**77.22**	**51**	LR	LR	13 54 59.6	
	comp=Z,24nm,20.0s,baz=318,slow=32						
SPITS	**Spitsbergen Ar**	**85.64**	**12**	LR	LR	14 05 29.9	
	comp=Z,14nm,21.9s,baz=254,slow=36						
NOA	**NORSAR Array B**	**86.32**	**29**	LR	LR	14 04 00.3	
	comp=Z,6.7nm,19.3s,baz=295,slow=35						
DAVOX	**Davos/Dischmat**	**87.10**	**43**	LR	LR	14 02 04.1	
	comp=Z,10nm,18.9s,baz=260,slow=33						
HFS	**Hagfors**	**87.65**	**30**	LR	LR	14 10 10.6	
	comp=Z,9.3nm,18.2s,baz=16,slow=38						
VRAC	**Vranov**	**91.18**	**40**	LR	LR	14 02 22.0	
	comp=Z,23nm,21.2s,baz=287,slow=32						
FINES	**FINESS Array B**	**93.22**	**27**	LR	LR	14 08 09.5	
	comp=Z,12nm,18.7s,baz=270,slow=35						
QSPA	**South Pole Qui**	**96.39**	**180**	LR	LR	14 06 00.2	
	comp=Z,61nm,18.2s,baz=176,slow=32						
TIXI	**Tiksi**	**99.43**	**350**	LR	LR	14 15 05.0	
	comp=Z,21nm,20.9s,baz=22,slow=37						
H11S1	**WAKE ISLAND Hy**	**107.36**	**292**	T	T	15 28 32.6	
	baz=77,slow=75,SNR=44						
H11S2	**WAKE ISLAND Hy**	**107.36**	**292**	T	T	15 28 32.5	
	baz=77,slow=75,SNR=55						
H11S3	**WAKE ISLAND Hy**	**107.38**	**292**	T	T	15 28 33.9	
	baz=77,slow=75,SNR=64						
KURBB	**Kurchatov Arra**	**120.93**	**14**	PKP	**PKiKP**	**13 33 17.9**	**+3.2**
	comp=Z,0.3nm,0.3s,baz=323,slow=1.4,SNR=7.3						
WRA	**Warramunga Arr**	**141.69**	**246**	PKP	**PKPdf**	**13 33 55.6**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=112,slow=2.1,SNR=1.5						

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*NNC **05** 13:20:58.2±0.8, 42°.19N×78°.41E, h0^{km}, mb2.9, mpv3.2,*
Error ellipse: s-maj=5.5km s-min=2.0km az=171.0
*SOME **05** 13:20:58.4, 42°.23N×78°.33E, h5^{km}*
*KRNET **05** 13:20:58.1±0.1, 42°.18N×78°.35E, h10^{km}, mb2.6*
ISC 05 13:20:58.0±1.3**, 42°.17N**±0°.04×**78°.38E**±0°.04**, h7**^{km}±10^{km}**,**
n24, σ0^{s}47/44**, 9C-7D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.31**	**3**	⇑*i*P	**Pg**	**13 21 04.5**	**+0.2**
PRZ				⇑*i*S	**Sg**	**13 21 09.0**	**+0.6**
TARG	**Taragay, Kyrgy**	**0.61**	**224**	⇑*i*P	**Pg**	**13 21 09.9**	**0.0**
TARG				⇑*i*S	**Sg**	**13 21 18.5**	**+0.5**
KDJ	**Kajisay**	**0.89**	**268**	⇓*e*P	**Pg**	**13 21 14.9**	**-0.2**
KDJ				⇓*e*S	**Sg**	**13 21 26.7**	**0.0**
KPKS	**Kokpek**	**1.31**	**10**	P	**Pn**	**13 21 22.6**	**-0.4**
	1.5nm,0.1s						
KPKS				S	**Sg**	**13 21 39.5**	**-0.8**
	2.8nm,0.2s						
TNSS	**Tian-Shan**	**1.36**	**310**	P	**Pb**	**13 21 24.1**	**-0.1**
	3.0nm,0.1s						
TNSS				S	**Sn**	**13 21 42.4**	**-0.1**
	1.1nm,0.2s						
TNSS	**Tian-Shan**	**1.36**	**310**	*e*P	**Pb**	**13 21 24.1**	**-0.1**
TNSS				*e*S	**Sn**	**13 21 42.4**	**-0.1**
TNSS	**Tian-Shan**	**1.36**	**310**	*e*P	**Pb**	**13 21 24.1**	**-0.1**
	3.2nm,0.1s						
TNSS				*e*S	**Sn**	**13 21 42.4**	**-0.1**
	3.0nm,0.2s						
MDOK	**Medeo**	**1.40**	**316**	Pg	**Pg**	**13 21 24.5**	**-0.3**
	2.4nm,0.1s						
MDOK				Lg	Lg	13 21 42.9	
	2.7nm,0.5s						
MDOK	**Medeo**	**1.40**	**316**	*e*P	**Pg**	**13 21 24.5**	**-0.3**
MDOK				*e*S	**Sn**	**13 21 43.1**	**+0.2**
KOTS	**Kotyrbulak**	**1.41**	**319**	P	**Pg**	**13 21 25.1**	**-0.1**
	4.9nm,0.1s						
KOTS				S	**Sn**	**13 21 44.6**	**+1.3**
	9.8nm,0.2s						
KOTS	**Kotyrbulak**	**1.41**	**319**	*e*P	**Pg**	**13 21 24.9**	**-0.2**
KOTS				*e*S	**Sn**	**13 21 43.8**	**+0.5**
KOTS	**Kotyrbulak**	**1.41**	**319**	*e*P	**Pg**	**13 21 24.9**	**-0.2**
	5.4nm,0.1s						
KOTS				*e*S	**Sn**	**13 21 43.9**	**+0.5**
	10nm,0.2s						
PDGK	**Podgornoye**	**1.42**	**35**	⇓P	**Pn**	**13 21 23.6**	**-0.8**
	0.6nm,0.3s						
PDGK				⇑S	**Sb**	**13 21 43.4**	**+0.1**
	1.8nm,0.4s						
KNDC	**Almaty**	**1.48**	**316**	⇓P	**Pn**	**13 21 25.0**	**-0.1**
	9.6nm,0.3s						
KNDC				⇓S	**Sg**	**13 21 45.6**	**+0.2**
	15nm,0.3s						
IZV	**Izvestkoviy**	**1.56**	**304**	P	**Pg**	**13 21 27.7**	**-0.3**
	6.7nm,0.1s						
IZV				S	**Sg**	**13 21 49.2**	**+0.9**
	13nm,0.1s						
IZV	**Izvestkoviy**	**1.56**	**304**	*e*P	**Pg**	**13 21 27.7**	**-0.3**
IZV				*e*S	**Sg**	**13 21 48.5**	**+0.2**
IZV	**Izvestkoviy**	**1.56**	**304**	*e*P	**Pg**	**13 21 27.7**	**-0.3**
	6.7nm,0.1s						
IZV				*e*S	**Sg**	**13 21 48.5**	**+0.2**
	13nm,0.1s						
ULHL	**Ulahol**	**1.59**	**273**	⇓*i*P	**Pb**	**13 21 27.8**	**0.0**
ULHL				⇓*i*S	**Sg**	**13 21 49.5**	**+0.4**
BOOM	**Boomskoye usch**	**1.83**	**281**	⇑*i*P	**Pb**	**13 21 32.0**	**0.0**
BOOM				⇑*i*S	**Sg**	**13 21 56.9**	**-0.1**
BLB	**Baldybastay**	**1.93**	**2**	Pg	**Pb**	**13 21 33.8**	**+0.2**
	10nm,0.1s						
BLB				Lg	Lg	13 21 59.0	
	6.1nm,0.3s						
KTBS	**Karatobe**	**1.98**	**322**	Pg	**Pg**	**13 21 35.0**	**-1.0**
	5.1nm,0.2s						
KTBS				Lg	Lg	13 22 01.7	
	8.1nm,0.2s						
TKM2	**Tokmak 2**	**2.19**	**291**	⇑*i*P	**Pb**	**13 21 37.2**	**-0.9**
TKM2				⇑*i*S	**Sb**	**13 22 06.0**	**+0.5**
KNOS	**Konyrlen**	**2.27**	**15**	Pg	**Pb**	**13 21 39.4**	**0.0**
	1.4nm,0.1s						
KNOS				Lg	Lg	13 22 08.2	
	2.0nm,0.2s						
DJR	**Jarkent**	**2.40**	**25**	*e*P	**Pb**	**13 21 41.6**	**+0.1**
	1.1nm,0.1s						
DJR				*e*S	**Sb**	**13 22 12.2**	**+0.9**
	2.8nm,0.2s						

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*JMA **05** 13:42:13.5±0.2, 24°.8N±0°.5×122°.0E±0°.4, h73^{km}±2^{km},*
MV2.1/11, TAIWAN REGION
*TAP **05** 13:42:13.0, 24°.76N×122°.00E, h80^{km}, ML3.0, C*
ISC 05 13:42:13.0±1.2**, 24°.78N**±0°.03×**122°.01E**±0°.02**, h81**^{km}±5^{km}**,**
n112, σ0^{s}99/217**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGS		**0.09**	**310**	*i* P	**Pn**	**13 42 24.7**	**+0.1**
EGS				S	**Sn**	**13 42 33.0**	**-0.2**
TWB1	**Santiao Chiao**	**0.22**	**355**	*i* P	**Pn**	**13 42 25.0**	**-0.1**
TWB1				S	**Sn**	**13 42 33.2**	**-0.7**
TWC	**Suao**	**0.23**	**220**	P	**Pn**	**13 42 24.8**	**-0.2**
TWC				S	**Sn**	**13 42 32.7**	**-1.3**
ILA	**Ilan**	**0.24**	**266**	*i* P	**Pn**	**13 42 25.3**	**+0.2**
ILA				*e*S	**Sn**	**13 42 33.9**	**-0.1**
TIPB	**Shuangxi**	**0.25**	**318**	*i* P	**Pn**	**13 42 25.2**	**-0.1**
TIPB				*e*S	**Sn**	**13 42 32.4**	**-1.8**
ESAO	**Su ao**	**0.26**	**216**	*e*P	**Pn**	**13 42 25.1**	**-0.1**
ESAO				S	**Sn**	**13 42 33.9**	**-0.3**
NDS	**Dongshan**	**0.31**	**241**	*e*P	**Pn**	**13 42 24.7**	**-0.8**
NDS				*e*S	**Sn**	**13 42 35.2**	**+0.5**
TWE	**Neicheng**	**0.32**	**259**	P	**Pn**	**13 42 26.2**	**+0.7**
TWE				*i* S	**Sn**	**13 42 35.0**	**+0.3**
SXI1	**Grass Mountain**	**0.33**	**338**	P	**Pn**	**13 42 25.7**	**-0.1**
SXI1				S	**Sn**	**13 42 35.0**	**-0.1**
NWF	**Wu-fen Shan**	**0.35**	**324**	*i* P	**Pn**	**13 42 25.9**	**0.0**
NWF				S	**Sn**	**13 42 35.1**	**-0.2**
WFSB	**Wu-fen Shan**	**0.35**	**324**	P	**Pn**	**13 42 26.0**	**+0.2**
WFSB				S	**Sn**	**13 42 35.1**	**-0.1**
FUSB	**Fushanzhiwuyua**	**0.39**	**267**	P	**Pn**	**13 42 26.1**	**+0.1**
FUSB				*i* S	**Sn**	**13 42 36.2**	**+0.4**
EWUT	**Wuta**	**0.40**	**212**	*i* P	**Pn**	**13 42 26.3**	**+0.2**
EWUT				S	**Sn**	**13 42 35.4**	**-0.3**
EOS2	**EOS2**	**0.42**	**151**	*e*P	**Pn**	**13 42 26.7**	**+0.6**
EOS2				*e*S	**Sn**	**13 42 36.5**	**+0.9**
TNOU	**National Taiwa**	**0.42**	**329**	*e*P	**Pn**	**13 42 25.8**	**-0.5**
TNOU				S	**Sn**	**13 42 35.8**	**-0.2**
ENTT	**Nioudou**	**0.43**	**251**	*i* P	**Pn**	**13 42 26.7**	**+0.4**
ENTT				*i* S	**Sn**	**13 42 36.9**	**+0.7**
ENA	**Nanau**	**0.43**	**215**	P	**Pn**	**13 42 26.6**	**+0.2**
ENA				*i* S	**Sn**	**13 42 36.1**	**0.0**
TWA	**Mucha**	**0.43**	**297**	*i* P	**Pn**	**13 42 26.3**	**-0.1**
TWA				*i* S	**Sn**	**13 42 35.8**	**-0.4**
NWLT	**Wulai**	**0.46**	**269**	*i* P	**Pn**	**13 42 26.4**	**-0.2**
NWLT				*i* S	**Sn**	**13 42 35.6**	**-1.1**
NHDH	**Xindian Distri**	**0.48**	**292**	*e*P	**Pn**	**13 42 27.2**	**+0.6**
NHDH				*e*S	**Sn**	**13 42 37.5**	**+0.7**
LATG	**Datong**	**0.51**	**241**	*i* P	**Pn**	**13 42 27.6**	**+0.5**
LATG				S	**Sn**	**13 42 38.2**	**+0.7**
EAHA	**Aohua**	**0.52**	**209**	*i* P	**Pn**	**13 42 27.1**	**+0.1**
EAHA				*e*S	**Sn**	**13 42 38.2**	**+0.9**
YM01	**YM01**	**0.54**	**312**	*e*P	**Pn**	**13 42 27.3**	**0.0**
YM01				S	**Sn**	**13 42 37.2**	**-0.6**
YM08	**YM08**	**0.56**	**317**	*i* P	**Pn**	**13 42 27.3**	**-0.1**
YM08				*e*S	**Sn**	**13 42 36.8**	**-1.3**
ZUZH	**Zhuzihu**	**0.57**	**312**	*i* P	**Pn**	**13 42 27.6**	**0.0**
ZUZH				*i* S	**Sn**	**13 42 37.4**	**-0.9**
EOS3	**EOS3**	**0.57**	**150**	*e*P	**Pn**	**13 42 28.1**	**+0.8**
EOS3				*e*S	**Sn**	**13 42 38.8**	**+0.9**
YHNB	**Yeheng**	**0.59**	**259**	*i* P	**Pn**	**13 42 28.1**	**+0.3**
YHNB				S	**Sn**	**13 42 38.6**	**-0.1**
ANP	**Anpu**	**0.60**	**312**	*e*P	**Pn**	**13 42 28.0**	**+0.1**
ANP				S	**Sn**	**13 42 38.5**	**-0.4**
TWY	**Chenhua**	**0.61**	**323**	P	**Pn**	**13 42 28.6**	**+0.7**
TWY				S	**Sn**	**13 42 39.3**	**+0.3**
NTST	**Danshui**	**0.64**	**307**	*i* P	**Pn**	**13 42 28.2**	**+0.1**
NTST				*e*S	**Sn**	**13 42 39.4**	**0.0**
NNSB	**Datong**	**0.67**	**238**	*i* P	**Pn**	**13 42 29.1**	**+0.5**
NNSB				S	**Sn**	**13 42 40.6**	**+0.4**
NNS	**Nan Shan**	**0.67**	**240**	*i* P	**Pn**	**13 42 29.1**	**+0.5**
NNS				*i* S	**Sn**	**13 42 40.5**	**+0.3**
ETL	**Fush Village**	**0.71**	**210**	*e*P	**Pn**	**13 42 29.1**	**+0.1**
ETL				*e*S	**Sn**	**13 42 40.3**	**-0.5**
NACB	**Ninganchiao**	**0.72**	**212**	*e*P	**Pn**	**13 42 28.7**	**-0.3**
NACB				S	**Sn**	**13 42 40.2**	**-0.6**
EOS4	**EOS4**	**0.72**	**157**	*e*P	**Pn**	**13 42 28.9**	**+0.4**
EOS4				*e*S	**Sn**	**13 42 40.5**	**+0.3**
ETLH	**Xiulin Townshi**	**0.75**	**220**	P	**Pn**	**13 42 29.2**	**-0.2**
ETLH				*e*S	**Sn**	**13 42 40.7**	**-0.9**
KSHI	**Guanxi Townshi**	**0.76**	**270**	*e*P	**Pn**	**13 42 30.2**	**+0.8**
KSHI				S	**Sn**	**13 42 41.7**	**+0.1**
NCUH	**Zhongli**	**0.77**	**284**	P	**Pn**	**13 42 30.2**	**+0.7**
NCUH				S	**Sn**	**13 42 42.6**	**+0.7**
TWD	**Chiawan**	**0.80**	**208**	*i* P	**Pn**	**13 42 29.6**	**-0.2**
TWD				*e*S	**Sn**	**13 42 41.3**	**-1.0**
NFF	**Wufeng Townshi**	**0.83**	**260**	*i* P	**Pn**	**13 42 30.6**	**+0.3**
NFF				S	**Sn**	**13 42 42.5**	**-0.5**
HWA	**Hwalien**	**0.88**	**205**	P	**Pn**	**13 42 31.1**	**+0.3**
HWA				*e*S	**Sn**	**13 42 46.3**	**+2.3**
JYNG	**Yonagunijimaku**	**0.91**	**111**	P	**Pn**	**13 42 31.2**	**+0.1**
JYNG				S	**Sn**	**13 42 44.0**	**-0.6**
LIOB	**Emei**	**0.92**	**262**	P	**Pn**	**13 42 31.6**	**+0.4**
LIOB				*i* S	**Sn**	**13 42 44.6**	**-0.1**
TWT	**Tachien**	**0.93**	**235**	*e*P	**Pn**	**13 42 31.7**	**+0.3**
TWT				*e*S	**Sn**	**13 42 45.8**	**+0.6**
NSTT	**Nanjuang**	**0.93**	**261**	*e*P	**Pn**	**13 42 31.8**	**+0.4**
NSTT				S	**Sn**	**13 42 44.4**	**-0.6**
WHF	**Hehuan Shan**	**0.93**	**227**	*e*P	**Pn**	**13 42 31.7**	**0.0**
WHF				*e*S	**Sn**	**13 42 45.5**	**-0.2**
SBCB	**Hsinchu**	**0.93**	**271**	P	**Pn**	**13 42 31.8**	**+0.5**
SBCB				*e*S	**Sn**	**13 42 46.3**	**+1.3**
TDCB	**Techi**	**0.94**	**236**	*e*P	**Pn**	**13 42 32.8**	**+1.2**
TDCB				*i* S	**Sn**	**13 42 45.7**	**+0.3**
ETM	**Tongmen**	**0.94**	**210**	*e*P	**Pn**	**13 42 30.6**	**-0.8**
ETM				*e*S	**Sn**	**13 42 43.8**	**-1.5**
HSN	**Hsinchu**	**0.95**	**271**	S	**Sn**	**13 42 44.4**	**-0.9**
YOJ	**Yonaguni jima**	**0.96**	**109**	P	**Pn**	**13 42 31.8**	**+0.1**
YOJ				S	**Sn**	**13 42 45.4**	**-0.3**
YOJ	**Yonaguni jima**	**0.96**	**109**	*e*P	**Pn**	**13 42 31.8**	**+0.1**
YOJ				S	**Sn**	**13 42 46.2**	**+0.5**
TEYL	**Yanliau Villag**	**0.99**	**203**	*e*P	**Pn**	**13 42 31.8**	**-0.2**
TEYL				*e*S	**Sn**	**13 42 45.6**	**-0.5**
SHUL	**Shoufeng**	**1.07**	**202**	P	**Pn**	**13 42 33.4**	**+0.4**
SHUL				*e*S	**Sn**	**13 42 49.3**	**+1.3**
WHP	**Taichung City**	**1.09**	**243**	*i* P	**Pn**	**13 42 34.3**	**+1.0**
WHP				*i* S	**Sn**	**13 42 49.1**	**+0.5**
ESL	**Shilin**	**1.10**	**209**	*e*P	**Pn**	**13 42 33.6**	**+0.2**
ESL				*e*S	**Sn**	**13 42 46.3**	**-2.3**
OWD	**Renai**	**1.12**	**223**	*e*P	**Pn**	**13 42 34.1**	**+0.3**
OWD				S	**Sn**	**13 42 48.4**	**-0.9**
WUSB	**Renai**	**1.13**	**226**	*e*P	**Pn**	**13 42 34.8**	**+0.8**
WUSB				S	**Sn**	**13 42 49.4**	**-0.2**
NMLH	**Miaoli**	**1.14**	**258**	*i* P	**Pn**	**13 42 34.3**	**+0.5**
NMLH				*i* S	**Sn**	**13 42 50.0**	**+0.6**
NSY	**Sanyi**	**1.20**	**252**	*e*S	**Sn**	**13 42 52.0**	**+1.3**
WARBT	**Fenglin Townsh**	**1.21**	**208**	*e*P	**Pn**	**13 42 34.9**	**+0.2**
WARBT				*e*S	**Sn**	**13 42 48.4**	**-2.5**
TWQ1	**Liyutan**	**1.21**	**249**	*e*P	**Pn**	**13 42 34.0**	**-0.6**
TWQ1				S	**Sn**	**13 42 51.4**	**+0.4**
EGFH	**Guangfu**	**1.23**	**206**	*e*P	**Pn**	**13 42 35.0**	**0.0**
EGFH				S	**Sn**	**13 42 49.8**	**-1.7**
WCS	**Beigang Elemen**	**1.24**	**234**	P	**Pn**	**13 42 35.6**	**+0.6**
WCS				*i* S	**Sn**	**13 42 52.0**	**+0.5**
VWDT	**VWDT**	**1.30**	**218**	*e*P	**Pn**	**13 42 37.3**	**+1.5**
VWDT				*i* S	**Sn**	**13 42 52.5**	**-0.4**
SMLT	**Sun Moon Lake**	**1.35**	**229**	*e*P	**Pn**	**13 42 38.3**	**+1.7**
SMLT				*e*S	**Sn**	**13 42 55.9**	**+1.5**
TYC	**Yuchr**	**1.37**	**230**	P	**Pn**	**13 42 37.6**	**+0.9**
TYC				*e*S	**Sn**	**13 42 55.7**	**+1.1**
HGSD	**Ruisui**	**1.39**	**203**	*e*P	**Pn**	**13 42 38.0**	**+1.0**
HGSD				*e*S	**Sn**	**13 42 55.8**	**+0.7**
EHY	**Hungye**	**1.42**	**206**	*e*P	**Pn**	**13 42 38.1**	**+0.7**
EHY				*e*S	**Sn**	**13 42 53.3**	**-2.5**
EHYH	**Wanrong**	**1.42**	**205**	*e*P	**Pn**	**13 42 35.4**	**-2.0**
EHYH				*e*S	**Sn**	**13 42 53.8**	**-2.0**
WCHH	**Zhanghua**	**1.50**	**242**	*e*S	**Sn**	**13 42 57.8**	**+0.4**
WNT	**Mingjian**	**1.51**	**234**	P	**Pn**	**13 42 38.8**	**+0.3**
WNT				S	**Sn**	**13 42 58.4**	**+0.6**
WJS	**Zhushan**	**1.51**	**231**	P	**Pn**	**13 42 38.4**	**-0.2**
WJS				S	**Sn**	**13 42 59.0**	**+1.1**
WHYT	**Xinyi Township**	**1.51**	**225**	*e*P	**Pn**	**13 42 40.5**	**+1.9**
WHYT				*e*S	**Sn**	**13 42 59.4**	**+1.5**
TWF1	**Yuli**	**1.57**	**205**	*e*P	**Pn**	**13 42 39.7**	**+0.4**
TWF1				*e*S	**Sn**	**13 42 58.5**	**-0.7**
IRIF	**Iriomote-Funau**	**1.63**	**106**	P	**Pn**	**13 42 40.2**	**+0.2**
IRIF				S	**Sn**	**13 43 00.1**	**-0.4**
ALS	**Alishan**	**1.68**	**221**	P	**Pn**	**13 42 42.0**	**+0.9**
ALS				*e*S	**Sn**	**13 43 04.3**	**+2.1**
CHKH	**Chenggong**	**1.68**	**200**	P	**Pn**	**13 42 41.1**	**+0.3**
CHKH				S	**Sn**	**13 43 00.2**	**-1.5**
CHN5	**Tsauling**	**1.70**	**226**	*e*S	**Sn**	**13 43 04.6**	**+2.3**
FULB	**Fuli**	**1.71**	**203**	*e*P	**Pn**	**13 42 41.7**	**+0.5**
FULB				S	**Sn**	**13 43 02.2**	**-0.3**
WGK	**Gukeng**	**1.72**	**231**	*e*P	**Pn**	**13 42 42.5**	**+1.3**
WGK				S	**Sn**	**13 43 03.4**	**+0.8**
WDLH	**Douliu**	**1.73**	**231**	P	**Pn**	**13 42 42.1**	**+0.7**
WDLH				*e*S	**Sn**	**13 43 02.7**	**-0.2**
CHKT	**Chengkung**	**1.78**	**200**	P	**Pn**	**13 42 41.0**	**-1.0**
CHKT				*e*S	**Sn**	**13 43 01.1**	**-2.9**
EHD	**Haiduan**	**1.79**	**204**	*e*P	**Pn**	**13 42 42.8**	**+0.6**
EHD				*e*S	**Sn**	**13 43 01.5**	**-2.7**
ELDTW	**Lidau**	**1.83**	**210**	*e*P	**Pn**	**13 42 43.5**	**+0.7**
ELDTW				S	**Sn**	**13 43 04.8**	**-0.6**
WCKO	**Fanlu**	**1.86**	**224**	P	**Pn**	**13 42 43.7**	**+0.7**
WCKO				*i* S	**Sn**	**13 43 07.2**	**+1.3**
JKRS	**Kuro-shima**	**1.90**	**106**	P	**Pn**	**13 42 44.4**	**+0.8**
JKRS				S	**Sn**	**13 43 07.5**	**+0.6**
EDH	**Donghe**	**1.92**	**200**	P	**Pn**	**13 42 43.1**	**-0.8**
EDH				S	**Sn**	**13 43 04.8**	**-2.4**
CHN4	**Tsaushan**	**1.93**	**223**	P	**Pn**	**13 42 44.6**	**+0.6**
TPUB	**Ta-pu**	**1.94**	**221**	*e*P	**Pn**	**13 42 45.4**	**+1.2**
TPUB				*e*S	**Sn**	**13 43 10.1**	**+2.1**
STYH	**Taoyuan**	**1.96**	**215**	*e*P	**Pn**	**13 42 44.2**	**-0.2**
STYH				S	**Sn**	**13 43 08.9**	**+0.5**
STYT	**Tauyuan**	**1.98**	**216**	P	**Pn**	**13 42 46.3**	**+1.5**
STYT				S	**Sn**	**13 43 09.6**	**+0.7**
JIJ	**Ishigaki jima**	**1.99**	**102**	P	**Pn**	**13 42 45.1**	**+0.3**
JIJ				*e*S	**Sn**	**13 43 08.2**	**-0.8**
WSF	**Szhu**	**1.99**	**235**	P	**Pn**	**13 42 45.4**	**+0.5**
WSF				*i* S	**Sn**	**13 43 08.9**	**-0.1**
LONT	**Longtian**	**2.04**	**204**	*e*P	**Pn**	**13 42 45.6**	**+0.1**
LONT				*e*S	**Sn**	**13 43 10.0**	**-0.1**
TWK	**Hsinying**	**2.05**	**223**	*e*P	**Pn**	**13 42 47.1**	**+1.4**
TWK				S	**Sn**	**13 43 11.7**	**+1.0**
WSL	**Shuilin Townsh**	**2.06**	**233**	P	**Pn**	**13 42 46.5**	**+0.8**
WSL				*e*S	**Sn**	**13 43 09.7**	**-0.9**
SNST	**Tainan City**	**2.08**	**222**	*e*P	**Pn**	**13 42 47.2**	**+1.1**

SNST				*e*S	Sn	13 43 11.3	0.0
CHN1	Nanshi	2.09	221	*e*S	Sn	13 43 13.5	+2.0
JISG	Ishigakijimahi	2.10	95	P	Pn	13 42 47.2	+0.9
JISG				*e*S	Sn	13 43 12.2	+0.5
TWG	Pinlang	2.13	204	*e*P	Pn	13 42 47.7	+0.9
TWG				*e*S	Sn	13 43 10.6	-1.9
TWGBT	Beinan	2.13	204	*e*P	Pn	13 42 47.1	+0.4
TWGBT				*e*S	Sn	13 43 10.6	-2.0
MATB	Ma-tsu	2.31	307	*e*P	Pn	13 42 49.3	+0.2
MATB				*e*S	Sn	13 43 16.5	-0.2
VWUC	VWUC	2.33	276	*e*P	Pn	13 42 49.3	-0.1
VWUC				*e*S	Sn	13 43 15.3	-2.0
JTJ	Tarama	2.45	93	S	Sn	13 43 21.0	+0.9
MASBT	Mashibuluo	2.50	211	*e*P	Pn	13 42 53.5	+1.8
MASBT				*e*S	Sn	13 43 23.7	+2.4
PNG	Penghu	2.55	242	P	Pn	13 42 51.2	-1.1
PNG				*e*S	Sn	13 43 21.8	-0.6
PHUB	P'eng-hu	2.56	241	P	Pn	13 42 51.1	-1.3
PHUB				*e*S	Sn	13 43 21.9	-0.9
PTMZ	Houxiangcun	2.64	276	*e*P	Pn	13 42 53.6	+0.1
PTMZ				*e*S	Sn	13 43 24.3	-0.3
LYUB	Lan-yu	2.80	188	*e*P	Pn	13 42 55.8	+0.2
LYUB				*e*S	Sn	13 43 24.7	-3.8
VCHM	Qimei	2.83	237	*e*P	Pn	13 42 56.2	+0.1
VCHM				*e*S	Sn	13 43 27.7	-1.6
AXDP	Jialang	3.67	273	*e*P	Pn	13 43 08.1	+0.6
AXDP				*e*S	Sn	13 43 47.3	-2.4

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*BER **05** 13:59:59.6±1.7, 59°.83N×21°.79E, h0^{km}, ML2.2(HEL), Suspected explosion*

*HEL **05** 14:00:00.5±0.1, 60°.08N×21°.44E, h0^{km}, ML2.2, Explosion*

*IDC **05** 14:00:01.2±1.4, 60°.30N×21°.36E, h0^{km}, mbtmp2.6/4, ML2.1/4, Error ellipse: s-maj=26.5km s-min=6.7km az=164.0*

ISC 05 13:59:59.4±0.7, **60°.15N**±0°.03×**21°.48E**±0°.03, **h0^{km}, n38,** σ**1s.03**/54, **Finland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAL	Aland	0.75	273	*e*P	Pg	14 00 13.4	-0.2
AAL				*e*S	Sg	14 00 23.0	-0.3
RAF	Rauma	0.88	9	*e*P	Pb	14 00 17.4	-0.2
RAF	Rauma	0.88	9	*e*P	Pb	14 00 17.7	+0.1
RAF				*e*S	Sb	14 00 29.8	-0.1
TVF	Tvarminne	0.94	109	*e*P	Pg	14 00 17.3	0.0
TVF				*e*S	Sg	14 00 29.3	-0.3
MEF	Metsahovi	1.46	86	*e*P	Pg	14 00 27.2	-0.1
MEF	Metsahovi	1.46	86	*e*PG	Pg	14 00 27.2	-0.1
MEF				*e*SB	Sn	14 00 46.5	-0.2
MEF				MSG		14 00 50.0	
	comp=Z,26nm,0.1s						
NUR	Nurmijarvi	1.61	76	*e*PG	Pb	14 00 30.1	+0.1
NUR				*e*S	Sg	14 00 51.2	0.0
NUR				MSG		14 00 55.5	
	comp=Z,24nm,0.1s						
HEL1	Helsinki	1.70	88	*e*PG	Pb	14 00 31.2	-0.2
HEL1				*e*S	Sb	14 00 53.2	-0.2
HEL1				MSG		14 01 00.1	
	comp=Z,19nm,0.1s						
KPF	Kankaanpaa	1.71	9	*e*P	Pg	14 00 32.1	0.0
KPF				*e*SN	Sg	14 00 55.7	+1.5
KPF				MSG		14 00 58.6	
	comp=Z,17nm,0.1s						
MTSE	Matsula	1.87	139	*e*P	Pn	14 00 33.0	+0.4
MTSE	Matsula	1.87	139	*e*P	Pn	14 00 32.7	+0.1
MTSE				*e*SN	Sn	14 00 57.1	+0.3
PVF	Pernaja	2.21	78	*e*PB	Pb	14 00 40.1	-0.1
PVF				*e*SG	Sg	14 01 09.2	-1.2
SLIT	Slitere, Latvi	2.57	170	*e*P	Pn	14 00 42.4	+0.2
SLIT	Slitere, Latvi	2.57	170	*e*PB	Pn	14 00 43.4	+1.3
SLIT				*e*SB	Sn	14 01 14.2	+0.2
FIA0	FINESS Array S	2.60	58	*e*PB	Pb	14 00 46.6	-0.2
FIA0				*e*SB	Sb	14 01 20.5	+1.4
FINES	FINESS Array B	2.60	58	Pn	Pb	14 00 46.1	-0.6
	comp=Z,1.2nm,0.3s,baz=243,slow=13,SNR=94						
FINES				Lg	Lg	14 01 19.9	
	comp=Z,0.9nm,0.3s,baz=250,slow=27,SNR=5.2						
	comp=Z,2.9nm,0.2s						
KEF	Keuruu	2.60	38	*e*P	Pb	14 00 45.0	-1.8
KEF	Keuruu	2.60	38	*e*PB	Pb	14 00 47.1	+0.2
KEF				*e*SG	Sg	14 01 21.9	-1.0
VAF	Ylistaro	2.95	11	*e*P	Pb	14 00 50.3	-2.5
VAF	Ylistaro	2.95	11	*e*PB	Pb	14 00 52.4	-0.5
VAF				*e*SB	Sb	14 01 30.4	+1.0
VSU	Vasula	3.18	120	*e*P	Pn	14 00 51.6	+1.0
HFS	Hagfors	3.90	273	Pn	Pn	14 01 00.8	+0.4
	comp=Z,0.5nm,0.3s,baz=86,slow=15,SNR=21						
HFS				Pg	Pb	14 01 07.9	-0.9
	comp=Z,0.5nm,0.3s,baz=91,slow=15,SNR=4.4						
HFS				Lg	Lg	14 01 58.7	
	comp=Z,1.8nm,0.3s,baz=84,slow=29,SNR=12						
	comp=Z,0.8nm,0.7s						
NC602	NORSAR Array S	4.96	281	*e*P	Pn	14 01 15.5	+0.5
NC303	NORSAR Array S	5.09	287	*e*P	Pn	14 01 17.4	+0.6
NB201	NORSAR Array S	5.10	285	*e*P	Pn	14 01 17.2	+0.2
NOA	NORSAR Array B	5.14	284	Pn	Pn	14 01 17.2	-0.4
	baz=82,slow=16,SNR=5.5						
NOA				Lg	Lg	14 02 32.6	
	comp=Z,0.1nm,0.3s,baz=49,slow=17,SNR=4.9						
	comp=Z,0.1nm,0.3s						
STRU	Stroemstad	5.35	262	*e*P	Pn	14 01 21.0	+0.6
SKAR	Skarslia	6.55	280	*e*P	Pn	14 01 37.4	+0.5
STOK	Stokkvaagen	7.28	332	*e*P	Pn	14 01 50.0	+3.2
STOK				*e*S	Sn	14 03 10.2	+0.2
SALU	Saltoluokta	7.37	351	*e*P	Pn	14 01 49.9	+1.7
SALU				*e*S	Sn	14 03 10.0	-2.4
KONS	Konsvik	7.39	333	*e*P	Pn	14 01 50.1	+1.8
VAGH	Vaagaholmen	7.55	334	*e*P	Pn	14 01 52.6	+2.1
STEI	Steigen	8.27	343	*e*P	Pn	14 02 00.5	+0.2
HEF	Hetta	8.34	6	*e*P	Pn	14 02 01.7	+0.3
KIF	Kilpisjarvi	8.89	358	*e*P	Pn	14 02 09.5	+0.6
KTK1	Kautokeino	8.93	4	*e*P	Pn	14 02 10.4	+1.0
ARA0	ARCESS Array S	9.57	9	*e*P	Pn	14 02 18.2	0.0
ARCES	ARCESS Array B	9.57	9	Pn	Pn	14 02 16.6	-1.6
	comp=Z,0.2nm,0.3s,baz=188,slow=14,SNR=27						
	comp=Z,0.3nm,0.3s						

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*KOLA **05** 14:25:14.0, 67°.67N×34°.27E, h0^{km}, ML2.2, Error ellipse: s-maj=6.6km s-min=3.2km az=120.0, Murmansk region, Kirovsk district*

*IDC **05** 14:25:16.6±2.1, 67°.84N×33°.90E, h0^{km}, mbtmp3.2/3, ML2.4/3, Error ellipse: s-maj=24.3km s-min=14.1km az=63.0*

ISC 05 14:25:13.7±1.1, **67°.71N**±0°.04×**34°.15E**±0°.05, **h0^{km}, n13,** σ**1s.12**/21, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVZ	Lovozero	0.27	45	P	Pg	14 25 18.4	-0.4
LVZ				S	Sg	14 25 22.6	+0.3
APA	Apatity	0.32	244	P	Pg	14 25 19.4	-0.4
APA				S	Sg	14 25 25.2	+1.4
APA0	Apatity Array	0.46	258	P	Pg	14 25 21.6	-0.8
APA0				S	Sg	14 25 28.5	+0.3
KVDA	Kovda	1.14	207	P	Pg	14 25 33.6	-1.8
KVDA				S	Sg	14 25 50.1	0.0
PRVG	Vayda Guba	2.17	342	P	Pn	14 25 52.5	+1.5
PRVG				S	Sb	14 26 20.6	-0.5
VADS	Vadso	2.98	327	P	Pn	14 26 02.1	0.0
VADS				S	Sn	14 26 38.5	+0.1
VADS	Vadso	2.98	327	*e*P	Pn	14 26 02.3	+0.2
KEV	Kevo	3.32	312	*e*P	Pn	14 26 07.6	+0.9
ARCES	ARCESS Array B	3.66	304	Pn	Pn	14 26 11.2	-0.3
	0.2nm,0.3s,baz=119,slow=15,SNR=22						
ARCES				Pg	Pb	14 26 20.1	+1.0
	0.2nm,0.3s,baz=116,slow=14,SNR=14						
ARCES				Sn	Sn	14 26 54.2	-1.1
	0.3nm,0.3s,baz=120,slow=27,SNR=8.2						
ARCES				Lg	Lg	14 27 05.0	
	0.6nm,0.3s,baz=111,slow=36,SNR=7.3						
	0.4nm,0.3s						
ARCES	ARCESS Array B	3.66	304	P	Pn	14 26 11.9	+0.5
ARCES				S	Sn	14 26 55.8	+0.5
I37NO	I37NO	5.90	291	I	I	15 01 00.0	
	baz=96,slow=319,SNR=1.7						
FINES	FINESS Array B	7.18	213	Pn	Pn	14 27 01.5	+1.7
	0.1nm,0.3s,baz=24,slow=14,SNR=1.7						
	0.8nm,0.9s						
SPITS	Spitsbergen Ar	11.65	342	Pn	Pn	14 27 58.1	-2.7
	baz=150,slow=15						
	3.2nm,1.0s						

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*NEIC **05** 14:32:07.2±1.4, 32°.78N±0°.03×118°.50W±0°.02, h10^{km}±1^{km}, Error ellipse: s-maj=5.1km s-min=2.9km az=29.0*

*PAS **05** 14:32:09.6±2.0, 32°.84N±0°.02×118°.50W±0°.02, h8^{km}±8^{km}, Mwr4.3/7, mb4.1/18(NEIC), ML4.1/64(NEIC), Mww4.4/29(NEIC), Error ellipse: s-maj=4.1km s-min=2.3km az=216.0*

*IDC **05** 14:32:11.1±1.3, 32°.94N×118°.31W, h0^{km}, mb3.9/7, mbtmp3.9/12, ML3.8/4, MS3.5/42, Error ellipse: s-maj=16.4km s-min=12.4km az=24.0*

ISC 05 14:32:07.8±1.5, **32°.80N**±0°.04×**118°.47W**±0°.03, **h2^{km}**±9^{km}, **n195,** σ**1s.08**/157, **mb4.1**/12, **MS3.6**/35, **Off coast of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CIAC	Catalina I. Ai	0.60	5		Pb	14 32 20.0	-1.1
CIAC					Sg	14 32 28.1	+0.9
SBI	Santa Barbara	0.83	326		Pb	14 32 24.1	-0.7
SBI					Sb	14 32 34.5	-1.9
FMP	Fort Macarthur	0.92	9		Pb	14 32 26.1	-0.4
RPV	Rancho Palos V	0.94	3		Pn	14 32 26.6	-1.5
SANC	Santa Ana	1.03	28		Pn	14 32 28.2	-0.9
BREC	Barre Substati	1.09	22		Pb	14 32 28.6	-0.7
BREC					Sb	14 32 43.1	-0.8
DLAC	Del Amo	1.09	17		Pb	14 32 28.2	-1.1
DLAC					Sg	14 32 43.6	+0.7
GORC	Green Oak Ranc	1.10	71		Pb	14 32 28.9	-0.6
SDMC	San Diego Miss	1.12	90		Pn	14 32 30.1	-0.4
CPE	Camp Elliot	1.15	85		Pg	14 32 30.4	+0.5
CPE					Sb	14 32 44.9	-0.9
CPE	Camp Elliot	1.15	85	IAML		14 32 46.0	
	comp=E,4µm,0.2s						
CPE				IAML		14 32 46.6	
	comp=N,8µm,0.8s						
MTRP	Mission Trails	1.19	89		Pg	14 32 31.1	+0.5
BHPC	Baldwin Hills	1.19	4		Pg	14 32 30.8	+0.2
LCGC	La Cienega, Cu	1.20	4		Pg	14 32 31.1	+0.3
LCGC					Sb	14 32 45.8	-1.4
ELS	Elsinore Mount	1.22	46		Pn	14 32 30.4	-1.5
ELS				IAML		14 32 46.8	
	comp=E,5µm,0.8s						
ELS				IAML		14 32 46.9	
	comp=N,5µm,1.1s						
USC	University of	1.23	7		Pg	14 32 31.6	+0.3
TJX	Tijuana	1.23	103		Pg	14 32 32.0	+0.7
TJX				IAML		14 32 54.8	
	comp=N,5µm,0.5s						
TJX				IAML		14 33 04.2	
	comp=E,6µm,0.8s						
RHC	Rose Hills Cem	1.26	18		Pb	14 32 31.7	-0.6
GVRC	Garvey Reservo	1.28	13		Pg	14 32 32.2	-0.2
SDRC	San Diego Road	1.29	92		Pg	14 32 32.4	-0.1
DPP	Dos Picos Cty	1.30	81		Pg	14 32 32.9	+0.2
DJJ	Donna J Jenkin	1.30	1		Pn	14 32 31.8	-1.2
OLP	Otay Lakes Par	1.31	98		Pg	14 32 33.2	+0.3
GR2C	Griffith Obs.	1.32	6		Pn	14 32 32.3	-1.0
MURC	Murrieta	1.33	53		Pn	14 32 32.3	-1.1
AGOC	Agoura	1.37	350		Pg	14 32 34.4	+0.4
EML	El Monte Cty P	1.37	86		Pb	14 32 33.6	-0.5
HLLC	North Hollywoo	1.38	4		Pb	14 32 33.1	-1.1
PASC	Pasadena Art C	1.39	10		Pn	14 32 32.8	-1.4
PASC				IAML		14 32 50.2	
	comp=N,3µm,0.8s						
PASC				IAML		14 32 58.4	
	comp=E,3µm,1.0s						
PSRC	Puddingstone R	1.40	23		Pn	14 32 33.5	-0.9
DUZA	Dulzura	1.44	97		Pb	14 32 34.7	-0.6
BACC	Bachelor Mtn.	1.45	56		Pn	14 32 34.2	-0.8
BLCC	Black Canyon	1.45	353		Pn	14 32 33.7	-1.3
DECC	Green Verdugo	1.46	4		Pn	14 32 34.2	-1.0
PLM	Palomar	1.46	67		Pn	14 32 34.2	-1.1
MWC	Mount Wilson	1.46	14		Pn	14 32 34.1	-1.2
DGR	Domenigoni Val	1.49	55		Pn	14 32 34.6	-1.0
RVR	Riverside	1.50	37		Pb	14 32 35.4	-0.9
BAR	Barrett	1.52	94		Pb	14 32 35.6	-1.0
HMTC	Hemet	1.53	53		Pg	14 32 37.8	+0.8
OAT	Oat Mountain	1.55	356		Pn	14 32 35.7	-0.7
PEC	Perris	1.55	45		Pb	14 32 36.0	-1.2
SSK	Sunset Peak	1.55	25		Pn	14 32 35.9	-0.7
POB	Polly Butte	1.57	55		Pn	14 32 35.9	-0.9
CHFC	Chilao Flat St	1.57	14		Pn	14 32 35.7	-1.2
MATG	Mataguay Scout	1.58	75		Pn	14 32 36.3	-0.6
TKX	Tecate	1.59	98		Pb	14 32 36.5	-1.3
TKX				IAML		14 32 59.5	
	comp=N,2µm,0.7s						
BFSC	Mount Baldy Ra	1.59	25		Pn	14 32 36.3	-0.8
JUEM	Julian Eagle M	1.60	79		Pn	14 32 36.6	-0.6
CBX	Cerro Bola	1.60	107		Pb	14 32 37.3	-0.8
CBX				IAML		14 33 04.3	
	comp=N,4µm,0.8s						
PDE	Pardee, Santa	1.64	357		Pb	14 32 37.4	-1.3
BZNA	Buzz No.'s Pla	1.66	65		Pn	14 32 37.6	-0.5
CFT	Crafton Hills	1.68	42		Pb	14 32 38.7	-0.7
JNH	Juniper Hills	1.70	15		Pn	14 32 37.8	-0.8
FRD	Ford Ranch, An	1.71	66		Pn	14 32 38.4	-0.3
MONP2	Monument Peak	1.73	86		Pb	14 32 38.9	-1.4
SNDA	J Saunders Pla	1.73	64		Pb	14 32 38.8	-1.5
HOLC	Holcomb Ridge	1.74	17		Pn	14 32 38.4	-0.6
SVD	Seven Oaks Dam	1.74	41		Pb	14 32 39.6	-0.8
CJV	Casa Juvan	1.75	9		Pn	14 32 38.7	-0.6
CSP	Cedar Springs	1.76	32		Pn	14 32 39.1	-0.3
LRRC	Littlerock Res	1.76	12		Pn	14 32 39.0	-0.3
BORC	Borrego Spring	1.79	74		Pb	14 32 39.8	-1.4
CCX	Cicese	1.79	121		Pb	14 32 40.0	-1.2
OSI	Osito Audit: C	1.82	353		Pn	14 32 39.4	-0.8
LEOC	Leona Valley	1.83	4		Pn	14 32 39.7	-0.7
PFO	Pinyon Flats O	1.87	64		Pb	14 32 41.0	-1.7
PFO	Pinyon Flats O	1.87	64		Pb	14 32 41.0	-1.7
PFO				IAML		14 33 08.0	
	comp=N,560nm,0.8s						
PFO				IAML		14 33 08.7	
	comp=N,1µm,1.2s						
PFO	Pinyon Flats O	1.87	64	Pn	Pb	14 32 40.9	-1.7
	comp=N,38nm,0.3s,baz=253,slow=12,SNR=376						
PFO				Sn	Sn	14 33 03.6	-1.6
	comp=N,79nm,0.3s,baz=7.2,slow=5.6,SNR=12						
ALPC	Antelope	1.89	4		Pn	14 32 40.8	-0.3
SLH	Sleepy Hollow	1.90	77		Pb	14 32 42.0	-1.2
PMD	Palm Desert	1.95	64		Pn	14 32 41.9	+0.1
SBB	Saddle Back Bu	1.96	16		Pn	14 32 42.0	-0.1
IKP	In-Ko-Pah, Jac	2.00	94		Pb	14 32 43.3	-1.5
BSM	San Miguel Isl	2.00	309		Pb	14 32 43.2	-1.6
EW2	E Wide Canyon	2.07	56		Pn	14 32 43.9	+0.3
TPO	Tropico Hills	2.08	5		Pn	14 32 44.0	+0.2
MPI	Mount Pinos, F	2.09	345		Pn	14 32 43.6	-0.5
CRR	Carrizo Plain	2.11	87		Pb	14 32 44.6	-2.0
THC	Tehachapi Micr	2.11	356		Pn	14 32 43.9	-0.3
EDW2	Edwards Air Fo	2.12	11		Pn	14 32 44.4	+0.2
YUH	Yuha Desert	2.15	93		Pb	14 32 45.3	-2.1
YUH				IAML		14 33 36.0	
	comp=E,747nm,1.3s						
HYS	Haystack Butte	2.19	20		Pn	14 32 45.6	+0.3
NJQ	Nojoqui County	2.24	321		Pn	14 32 45.7	-0.1
BCW	Bitter Crk WRg	2.28	340		Pn	14 32 45.5	-1.0
ESJX	Sierra Juarez	2.28	110		Pb	14 32 47.2	-2.5
WESC	Westside Schoo	2.31	90		Pn	14 32 47.4	+0.7
PKM	Mcpherson Peak	2.37	332		Pn	14 32 47.8	0.0
CCAC	Calif City Air	2.38	9		Pn	14 32 47.8	0.0
VTX	Valle De La Tr	2.68	121		Pn	14 32 52.2	+0.3
GSC	Goldstone, Bar	2.85	29		Pn	14 32 54.7	+0.3
ISA	Isabella, Lake	2.86	360		Pn	14 32 54.4	0.0
ISA				IAML		14 33 50.7	
	comp=E,408nm,1.5s						
GLA	Glamis	3.07	84		Pn	14 32 57.4	0.0
GLA				IAML		14 34 00.6	
	comp=N,325nm,0.8s						
GLA				IAML		14 34 04.4	
	comp=E,393nm,0.8s						
BLYC	Blythe	3.44	73		Pn	14 33 02.8	+0.4
BLYC				IAML		14 34 07.7	
	comp=N,268nm,1.1s						
SFX	San Felipe	3.54	119		Pn	14 33 04.6	+0.9
SFX				IAML		14 34 16.0	
	comp=N,220nm,0.8s						
GWY	Greenwater Val	3.69	23		Pn	14 33 06.3	+0.3
PMPB	Monarch Peak	3.92	331		Pn	14 33 08.5	-0.5
PMPB				IAML		14 34 42.5	
	comp=N,458nm,1.3s						
PMPB				IAML		14 34 45.9	
	comp=E,389nm,1.4s						
113A	Mohawk Valley,	3.96	89		Pn	14 33 11.0	+1.5
V12A	Nelson	4.18	45		Pn	14 33 13.0	+0.3
V12A				IAML		14 34 23.2	
	comp=E,248nm,1.4s						
V12A				IAML		14 34 31.4	
	comp=N,261nm,2.0s						
GRAC	Grapevine Rang	4.29	12		Pn	14 33 15.4	+1.4
GRAC				IAML		14 34 48.0	
	comp=E,352nm,1.2s						
BBGB	Big Mountain B	4.32	331		Pn	14 33 14.7	+0.1
W13A	Hualapai Mount	4.45	58		Pn	14 33 16.7	+0.3
W13A				IAML		14 34 29.7	
	comp=N,164nm,1.3s						
W13A				IAML		14 34 33.5	
	comp=E,118nm,1.1s						
TPNV	Topopah Spring	4.53	23		Pn	14 33 18.2	+0.7
DSP	Deep Springs	4.58	5		Pn	14 33 19.1	+1.1
DSP				IAML		14 35 04.8	
	comp=E,117nm,1.5s						
SHPR	Sheep Range	4.59	35		Pn	14 33 19.7	+1.3
SHPR				IAML		14 34 38.1	
	comp=N,109nm,1.1s						
SAO	San Andreas Ge	4.65	329		Pn	14 33 18.5	-0.6
Y14A	Wickenburg	4.71	75		Pn	14 33 20.6	+0.7
MZP	Montezuma Peak	4.97	10		Pn	14 33 24.4	+0.8
TPH	Tonopah	5.36	11		Pn	14 33 29.1	+0.2
PRN	Pahroc Range	5.38	30		Pn	14 33 30.6	+1.4
CMB	Columbia Colle	5.45	344		Pn	14 33 30.1	0.0
NVAR	Mina Array Bea	5.62	1	Pn	Pn	14 33 33.8	+1.3
	comp=N,0.8nm,0.3s,baz=186,slow=15,SNR=20						
NVAR				LR	LR	14 35 52.6	
	comp=N,1µm,21.3s,baz=186,slow=40						
	comp=N,3.0nm,0.6s						
NV11	Mina Array Sit	5.63	3		Pn	14 33 32.3	-0.3
WAKR	Walker	5.75	352		Pn	14 33 34.7	+0.4
RYN	Ryan	5.82	360		Pn	14 33 35.7	+0.5
LCMT	Little Creek M	6.01	44		Pn	14 33 38.8	+1.0
R11B	Troy Canyon, C	6.02	22		Pn	14 33 39.2	+1.2
X16A	Lo Mia Camp, P	6.08	73		Pn	14 33 39.9	+1.0
U15A	North Rim	6.25	53		Pn	14 33 42.3	+1.1
KNB	Kanab	6.26	46		Pn	14 33 42.4	+1.1
PNTR	Pine Nut	6.34	352		Pn	14 33 43.0	+0.5
AFDM	Forest Hills D	6.46	342		Pn	14 33 44.5	+0.5
PSUT	Pine Spring	6.84	32		Pn	14 33 51.3	+2.0
SPR3	Spring Creek 3	7.04	27		Pn	14 33 52.0	-0.1
ORV	Oroville	7.17	341	Pn	Pn	14 33 54.6	+1.0
X18A	Snowflake	7.31	74		Pn	14 33 57.0	+1.2
ELK	Elko	8.34	17	Pn	Pn	14 34 12.2	+2.3
	comp=N,0.5nm,0.3s,baz=209,slow=13,SNR=24						
ELK				Sn	Sn	14 35 43.0	-1.8
	comp=N,0.4nm,0.3s,baz=148,slow=5.5,SNR=2.2						
ELK				Lg	Lg	14 36 28.8	
	comp=N,0.5nm,0.3s,baz=300,slow=23,SNR=6.2						
ELK				LR	LR	14 36 58.3	
	comp=N,148nm,21.9s,baz=196,slow=35						
	comp=N,9.9nm,0.8s						
PV05	Paradox Valley	9.28	53	Pn	Pn	14 34 27.1	+4.3
ANMO	Albuquerque	10.21	75	Pn	Pn	14 34 39.7	+4.1
	comp=N,0.1nm,0.3s,baz=325,slow=6.0,SNR=3.1						
ANMO				Lg	Lg	14 37 30.8	
	comp=N,0.2nm,0.3s,baz=355,slow=19,SNR=2.0						
ANMO				LR	LR	14 38 36.3	
	comp=N,323nm,21.0s,baz=3.0,slow=38						
MNTX	Cornudas Mount	11.14	92		Pn	14 34 48.8	+0.7
LPIG	La Paz	11.25	138	LR	LR	14 39 10.9	
	comp=N,433nm,18.6s,baz=301,slow=37						
PDAR	Pinedale Array	12.19	33	Pn	Pn	14 35 07.4	+4.8
	comp=N,0.1nm,0.3s,baz=249,slow=15,SNR=8.7						
PDAR				LR	LR	14 39 15.3	
	comp=N,43nm,20.2s,baz=220,slow=35						
	comp=N,1.0nm,0.8s						
TXAR	Lajitas Array	13.15	101	Pn	P	14 35 19.7	-6.3
	comp=N,1.6nm,0.9s,baz=277,slow=12,SNR=8.8						
TXAR				LR	LR	14 40 46.3	
	comp=N,113nm,18.8s,baz=284,slow=40						
GCMT	Greycliff	14.64	25	Pn	Pn	14 35 36.0	0.0
SGCY	Sterling City	14.69	89	Pn	Pn	14 35 37.5	+0.9
NEW	Newport	15.48	3	Pn	P	14 35 48.6	-3.1
NEW				IAmb	IAmb	14 35 52.4	
	comp=Z,12nm,1.1s						
NEW	Newport	15.48	3	Pn	P	14 35 50.9	-0.9
	comp=Z,0.3nm,0.3s,baz=186,slow=12,SNR=11						
NEW				LR	LR	14 41 56.1	
	comp=Z,229nm,20.0s,baz=187,slow=38						
	comp=Z,5.1nm,0.7s						
B08A	Colville Reser	15.56	358		P	14 35 51.5	-1.0
EGMT	Eagleton	16.57	21		P	14 36 04.5	+0.6
EGMT				IAmb	IAmb	14 36 09.0	
	comp=Z,16nm,1.0s						
BRDY	Brady	16.58	90		Pn	14 36 00.8	-0.6
LAO	LASA Array	16.74	30	Pn	Pn	14 36 03.0	-0.3
LAO				IAmb	IAmb	14 36 13.7	
	comp=Z,13nm,1.0s						
FW03	Perrin-Whitt E	17.14	84	Pn	P	14 36 09.8	-0.3
OK029	Liberty Lake	17.62	74	P	P	14 36 14.0	-1.5
E28A	Huff	19.34	39	P	Pn	14 36 34.3	-1.1
E28A				IAmb	IAmb	14 37 09.0	
	comp=Z,10.0nm,0.8s						
BBB	Bella Bella	20.60	343	P	Pn	14 36 51.5	+1.4
	comp=Z,8.9nm,1.0s,baz=148,slow=6.6,SNR=5.5						
BBB				LR	LR	14 45 39.6	
	comp=Z,110nm,19.6s,baz=217,slow=39						
	comp=Z,8.9nm,1.0s						
MIAR	Mount Ida	20.78	78	P	Pn	14 36 50.4	-2.1
MIAR				IAmb	IAmb	14 37 02.1	
	comp=Z,10nm,0.9s						
MGMO	Mountain Grove	21.88	71	P	P	14 37 01.4	-0.6
MGMO				IAmb	IAmb	14 37 12.2	
	comp=Z,8.6nm,1.0s						
T42A	Van Buren	22.81	72	P	P	14 37 12.2	+0.4
T42A				IAmb	IAmb	14 37 19.2	
	comp=Z,9.0nm,1.2s						
AGMN	Agassiz Nation	23.00	41	P	P	14 37 13.4	-0.3
AGMN				IAmb	IAmb	14 37 23.4	
	comp=Z,7.3nm,0.8s						
L40A	Anamosa	23.45	59	P	P	14 37 18.5	+0.1
ULM	Lac du Bonnet	24.14	37	P	P	14 37 27.7	+2.7
	comp=Z,3.6nm,0.9s,baz=227,slow=10,SNR=5.9						
	comp=Z,3.6nm,0.9s						
FFC	Flin Flon	24.82	23		P	14 37 31.1	0.0
DLBC	Dease Lake	26.81	346	P	P	14 37 51.0	+1.8
DLBC				IAmb	IAmb	14 37 59.7	
	comp=Z,5.1nm,1.1s						
DLBC	Dease Lake	26.81	346	LR	LR	14 49 37.6	
	comp=Z,294nm,19.6s,baz=162,slow=39						
TKL	Tuckaleechee C	28.74	75	LR	LR	14 49 49.6	
	comp=Z,128nm,20.5s,baz=288,slow=37						
YKA	Yellowknife Ar	29.82	4	P	P	14 38 17.9	+2.1
	comp=Z,0.6nm,0.9s,baz=193,slow=8.2,SNR=2.9						
YKA				LR	LR	14 51 12.9	
	comp=Z,255nm,19.8s,baz=201,slow=38						
	comp=Z,0.6nm,0.9s						
SADO	Sadowa	32.60	57	LR	LR	14 51 30.6	
	comp=Z,68nm,20.2s,baz=290,slow=36						
KDAK	Kodiak Island	34.03	328	LR	LR	14 49 54.2	
	comp=Z,82nm,18.5s,baz=132,slow=31						
ILAR	Eielson Array	36.43	340	P	P	14 39 15.9	+2.4
	comp=Z,0.8nm,0.7s,baz=155,slow=7.1,SNR=10						
ILAR				LR	LR	14 52 26.4	
	comp=Z,38nm,20.9s,baz=78,slow=33						
	comp=Z,0.8nm,0.7s						
INK	Inuvik	36.60	351	LR	LR	14 54 32.1	
	comp=Z,96nm,19.4s,baz=184,slow=37						
SCHQ	Schefferville	42.09	43	LR	LR	14 58 47.0	
	comp=Z,42nm,21.4s,baz=348,slow=38						
RES	Resolute Bay	43.54	9	LR	LR	14 57 20.2	
	comp=Z,90nm,18.7s,baz=205,slow=35						
FRB	Frobisher Bay	43.61	30	LR	LR	14 57 05.4	
	comp=Z,52nm,21.0s,baz=268,slow=34						
SJG	San Juan	48.99	94	LR	LR	15 06 40.0	
	comp=Z,22nm,18.0s,baz=216,slow=42						
SDV	Santo Domingo	50.10	107	LR	LR	15 04 03.8	
	comp=Z,34nm,19.8s,baz=261,slow=38						
SFJD	Kangerlussuaq	51.64	28	LR	LR	15 03 36.4	
	comp=Z,66nm,18.4s,baz=258,slow=37						
PETK	Petropavlovsk-	61.01	317	P	P	14 42 25.7	+3.2
	comp=Z,3.5nm,1.0s,baz=98,slow=6.1,SNR=4.3						
	comp=Z,3.5nm,1.0s						
TIXI	Tiksi	65.89	341	LR	LR	15 13 16.9	
	comp=Z,28nm,19.5s,baz=19,slow=38						
SPITS	Spitsbergen Ar	66.11	9	LR	LR	15 11 06.6	
	comp=Z,71nm,18.6s,baz=286,slow=35						
H11N3	WAKE ISLAND Hy	66.97	279	T	T	15 55 58.0	
	baz=62,slow=75,SNR=32						

H11N2	WAKE ISLAND Hy	66.97	279	T	T	15 56 04.5	
	baz=62,slow=75,SNR=48						
MDP	Montagnes des	66.97	99	LR	LR	15 14 12.6	
	comp=Z,29nm,20.1s,baz=110,slow=38						
H11N1	WAKE ISLAND Hy	66.98	279	T	T	15 55 59.1	
	baz=62,slow=75,SNR=77						
H11S1	WAKE ISLAND Hy	67.71	278	T	T	15 56 59.8	
	baz=61,slow=75,SNR=65						
H11S2	WAKE ISLAND Hy	67.72	278	T	T	15 56 59.9	
	baz=61,slow=75,SNR=82						
H11S3	WAKE ISLAND Hy	67.73	278	T	T	15 56 59.1	
	baz=61,slow=75,SNR=58						
YAK	Yakutsk	70.87	332	LR	LR	15 13 55.5	
	comp=Z,30nm,18.3s,baz=67,slow=35						
ARCES	ARCESS Array B	74.63	12	LR	LR	15 18 33.5	
	comp=Z,56nm,18.0s,baz=307,slow=37						
NOA	NORSAR Array B	77.92	23	P	P	14 44 11.2	+4.2
	comp=Z,0.5nm,0.7s,baz=321,slow=5.8,SNR=2.6						
NOA				LR	LR	15 19 17.1	
	comp=Z,27nm,18.3s,baz=340,slow=36						
	comp=Z,0.5nm,0.7s						
HFS	Hagfors	79.41	22	P	P	14 44 20.3	+5.2
	comp=Z,1.2nm,0.7s,baz=302,slow=2.8,SNR=4.1						
HFS				LR	LR	15 20 21.0	
	comp=Z,56nm,18.2s,baz=343,slow=36						
MJAR	Matsushiro Arr	80.60	307	LR	LR	15 13 23.4	
	comp=Z,15nm,19.9s,baz=116,slow=31						
FINES	FINESS Array B	81.77	16	P	P	14 44 30.1	+2.3
	comp=Z,1.9nm,0.7s,baz=341,slow=4.0,SNR=9.1						
FINES				LR	LR	15 23 42.7	
	comp=Z,32nm,18.6s,baz=332,slow=38						
	comp=Z,1.9nm,0.7s						
BDFB	Brasilia	82.70	114	LR	LR	15 28 55.6	
	comp=Z,27nm,19.4s,baz=127,slow=41						
ESDC	Sonseca Array	85.80	45	LR	LR	15 19 26.4	
	comp=Z,34nm,19.2s,baz=305,slow=33						
HNR	Honiara	88.06	258	LR	LR	15 18 03.1	
	comp=Z,36nm,19.4s,baz=178,slow=31						
GUMO	Guam	88.23	285	LR	LR	15 24 58.5	
	comp=Z,14nm,18.4s,baz=84,slow=36						
VRAC	Vranov	89.00	28	LR	LR	15 26 22.8	
	comp=Z,34nm,18.4s,baz=298,slow=37						
ARTI	Arti	91.13	2	LR	LR	15 31 49.7	
	comp=Z,17nm,18.3s,baz=4.0,slow=39						
ZALV	Zalesovo Beam	91.28	346	LR	LR	15 32 10.5	
	comp=Z,12nm,18.4s,baz=30,slow=40						
AKASG	Malin Array Be	92.10	20	LR	LR	15 27 16.9	
	comp=Z,29nm,18.8s,baz=260,slow=36						
HHC	Hu-ho-hao-te	93.39	324	*e*P	P	14 45 23.1	-1.7
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
BVAR	Borovoye Array	94.19	355	LR	LR	15 32 42.7	
	comp=Z,35nm,18.7s,baz=3.7,slow=39						
BELG	Belogornoye	94.30	8	LR	LR	15 31 24.2	
	comp=Z,17nm,18.4s,baz=347,slow=38						
MLR	Muntele Rosu	95.66	24	LR	LR	15 32 36.7	
	comp=Z,35nm,19.2s,baz=326,slow=38						
AKTO	Aktyubinsk	97.07	2	LR	LR	15 33 44.6	
	comp=Z,27nm,19.4s,baz=222,slow=38						

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*IDC **05** 14:55:09.7±1.4, 3°.49S×135°.30E, h0^{km}, mb3.8/3, mbtmp3.7/6, ML3.5/3, MS3.1/2, Error ellipse: s-maj=38.0km s-min=26.2km az=88.0*

*DJA **05** 14:55:14.7±0.4, 3°S±4°×13°5E±°, h33^{km}±6^{km}, M4.0/8, mb4.1/1, MLv3.9/8*

ISC 05 14:55:12.7±0.9, 3°.46S±0°.07×135°.42E±0°.04, h22^{km}, n14, σ1.^{s}32/19, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMPI	Kaimana, Papua	1.72	263	P	Pn	14 55 43.5	+2.1
SRPI	Serui, Papua	1.78	27	P	Pn	14 55 41.6	-0.6
SRPI				S	Sn	14 56 03.7	-0.4
RKPI	Ransiki, Papua	2.30	327	P	Pn	14 55 49.7	+0.3
RKPI				S	Sn	14 56 17.2	+0.2
BAKI	Biak	2.35	17	P	Pn	14 55 51.6	+1.5
BAKI				S	Sn	14 56 18.2	-0.2
FAKI	Fak Fak	3.21	280	P	Pn	14 56 02.3	+0.4
FAKI				S	Sn	14 56 39.9	+0.4
SMPI	Sarmi	3.59	66	P	Pn	14 56 08.7	+1.5
SMPI				S	Sn	14 56 49.8	+0.8
SWI	Sorong	4.89	302	P	Pn	14 56 25.1	+0.1
JAY	Jayapura	5.36	80	Pn	Pn	14 56 32.1	+0.6
	0.6nm,0.3s,baz=211,slow=15,SNR=4.7						
JAY				Sn	Sn	14 57 32.6	0.0
	0.3nm,0.3s,baz=172,slow=14,SNR=1.9						
	3.3nm,0.7s						
WRA	Warramunga Arr	16.42	184	Pn	Pn	14 58 59.1	-2.9
	0.2nm,0.3s,baz=1.5,slow=13,SNR=5.8						
WRA				Sn	Sn	15 01 49.3	-14
	0.3nm,0.3s,baz=356,slow=24,SNR=5.4						
	0.7nm,0.5s						
FITZ	Fitzroy Crossi	17.42	213	P	Pn	14 59 12.2	-2.3
	0.2nm,0.3s,baz=30,slow=11,SNR=13						
FITZ				S	Sn	15 02 14.2	-14
	6.3nm,0.9s,baz=197,slow=19,SNR=5.7						
	1.4nm,0.6s						
ASAR	Alice Springs	20.14	184	P	P	14 59 46.6	+1.0
	2.3nm,0.5s,baz=6.7,slow=12,SNR=33						
ASAR				S	S	15 03 20.8	-10
	0.4nm,0.6s,baz=3.0,slow=28,SNR=4.9						
ASAR				LR	LR	15 07 09.3	
	comp=Z,46nm,18.5s,baz=353,slow=36						
	2.3nm,0.5s						
MKAR	Makanchi Array	68.41	324	P	P	15 06 12.1	-0.9
	1.0nm,1.1s,baz=122,slow=7.4,SNR=2.1						
	1.0nm,1.1s						
KURBB	Kurchatov Arra	72.47	326	P	P	15 06 39.0	+1.4
	0.2nm,0.3s,baz=111,slow=4.3,SNR=4.2						
	0.2nm,0.3s						
ILAR	Eielson Array	87.88	25	LR	LR	15 47 56.5	
	comp=Z,12nm,18.9s,baz=145,slow=36						

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*IDC **05** 15:04:25.8±5.4, 56°.81S×26°.73W, h185^{km}±47^{km}, mb3.8/5, mbtmp4.2/6, MS3.3/1, Error ellipse: s-maj=35.1km s-min=13.1km az=66.0*

ISC 05 15:04:23.2±0.8, 56°.9S±0°.1×26°.4W±0°.3, h150^{km}, n17, σ2.^{s}27/22, mb4.1/5, 7C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	15.84	158	⇑P	Pn	15 07 58.8	+1.3
	comp=Z,0.1nm,0.2s						
VNA3	Neumayer Olymp	16.04	160	⇑P	Pn	15 08 02.7	+2.7
	comp=Z,0.2nm,0.3s						
VNA3				⇑S	S	15 10 53.6	-4.7
VNA2	Neumayer--Watz	16.24	157	⇑P	Pn	15 08 04.5	+2.1
	comp=Z,0.2nm,0.2s,baz=314,slow=13						
VNA2				⇑S	S	15 10 59.5	-3.0
	baz=303,slow=36						
SNAA	Sanae	17.79	156	⇑P	P	15 08 21.4	+1.7
	comp=Z,8.2nm,0.3s						
SNAA	Sanae	17.79	156	P	P	15 08 21.6	+1.9
	comp=Z,2.9nm,0.6s,baz=306,slow=11,SNR=36						
SNAA				S	S	15 11 34.3	-2.0
	comp=Z,0.3nm,0.7s,baz=335,slow=14,SNR=0.8						
TROLL	Troll, Antarti	19.29	153	⇑P	P	15 08 38.0	+1.8
	comp=Z,38nm,0.3s						
QSPA	South Pole Qui	33.35	180	P	P	15 10 47.1	+0.5
	comp=Z,2.1nm,0.6s,baz=45,slow=1.7,SNR=47						
QSPA				PcP	PcP	15 13 23.8	-0.7
	comp=Z,1.0nm,0.4s,baz=157,slow=7.7,SNR=14						
	comp=Z,2.1nm,0.6s						
VNDA	Vanda	45.74	183	P	P	15 12 29.4	+0.9
	comp=Z,1.0nm,0.6s,baz=191,slow=6.7,SNR=14						
VNDA				PcP	PcP	15 14 02.1	-1.5
	comp=Z,0.3nm,0.5s,baz=139,slow=4.7,SNR=1.8						
VNDA				LR	LR	15 29 53.3	
	comp=Z,35nm,18.8s,baz=144,slow=33						
	comp=Z,1.0nm,0.6s						
LPAZ	La Paz	51.22	305	P	P	15 13 07.7	-4.2
	comp=Z,4.2nm,0.4s,baz=118,slow=4.4,SNR=14						
LPAZ				PcP	PcP	15 14 22.8	-2.3
	comp=Z,0.8nm,0.5s,baz=143,slow=5.1,SNR=1.9						
	comp=Z,4.2nm,0.4s						
TORD	Torodi Ar. Bea	73.59	29	P	P	15 15 38.9	-0.8
	comp=Z,111nm,0.3s,baz=196,slow=6.8,SNR=3.8						
STKA	Stephens Creek	90.99	170	P	P	15 17 10.2	+0.2
	comp=Z,1.1nm,0.5s,baz=210,slow=8.1,SNR=1.8						
	comp=Z,1.1nm,0.5s						
ASAR	Alice Springs	98.05	162	P	P	15 17 41.4	-1.0
	comp=Z,0.6nm,0.9s,baz=183,slow=4.3,SNR=6.1						
	comp=Z,0.6nm,0.9s						
NVAR	Mina Array Bea	122.12	292	PKP	PKPdf	15 22 58.0	-1.4
	comp=Z,0.3nm,0.5s,baz=178,slow=1.9,SNR=1.9						
FINES	FINESS Array B	124.94	28	PKP	PKPdf	15 23 01.6	-2.1
	comp=Z,0.7nm,0.5s,baz=186,slow=3.8,SNR=7.0						
INK	Inuvik	146.73	320	PKPbc	PKPdf	15 23 43.0	-0.6
	comp=Z,3.5nm,0.7s,baz=93,slow=0.8,SNR=6.9						
SONM	Songino Array	150.34	87	PKPbc	PKPdf	15 23 53.7	+3.3
	comp=Z,0.7nm,0.8s,baz=196,slow=2.6,SNR=2.9						
ILAR	Eielson Array	151.00	310	PKPbc	PKPdf	15 23 54.1	+3.4
	comp=Z,2.4nm,0.9s,baz=136,slow=1.3,SNR=19						

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*KOLA **05** 15:13:45.3, 67°.62N×34°.06E, h0^{km}, ML2.4, Error ellipse: s-maj=2.4km s-min=1.2km az=130.0, Khibiny, mines Koashva, Nyurkpakh*

*HEL **05** 15:13:45.4±0.2, 67°.63N×34°.07E, h0^{km}, ML2.2, Explosion*

*IDC **05** 15:13:48.1±2.6, 67°.60N×33°.41E, h0^{km}, mbtmp3.1/3, ML2.2/3, Error ellipse: s-maj=28.7km s-min=9.3km az=77.0*

ISC 05 15:13:44.5±0.8, 67°.63N±0°.03×34°.08E±0°.04, h0^{km}, n34, σ1.^{s}08/60, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APA	Apatity	0.27	257	P	Pg	15 13 49.5	-0.1
APA				S	Sg	15 13 53.2	+0.2
LVZ	Lovozero	0.35	39	P	Pg	15 13 51.5	+0.4
LVZ				S	Sg	15 13 56.2	+0.6
LVZ	Lovozero	0.35	39	PG	Pg	15 13 51.5	+0.4
LVZ				SG	Sg	15 13 56.2	+0.6
APA0	Apatity Array	0.42	267	P	Pg	15 13 52.2	-0.2
APA0				S	Sg	15 13 58.0	+0.2
KVDA	Kovda	1.05	207	P	Pg	15 14 04.2	-0.5
KVDA				S	Sg	15 14 17.4	-0.8
TERR	Teriberka	1.62	13	P	Pn	15 14 13.9	-0.4
TERR				S	Sn	15 14 35.5	-0.4
PRVG	Vayda Guba	2.23	343	P	Pb	15 14 24.9	-0.7
PRVG				S	Sn	15 14 52.1	+1.1
OLKF	Oulanka, Finla	2.26	237	PB	Pn	15 14 23.8	+0.8
	baz=54						
OLKF				MSG		15 14 52.3	
	comp=Z,14nm,0.2s						
OLKF				SG	Sb	15 14 54.9	+0.3
KU6	Riekki	2.31	228	PB	Pn	15 14 24.8	+1.0
	baz=46						
KU6				MSG		15 14 53.8	
	comp=Z,9.8nm,0.2s						
KU6				SG	Sb	15 14 55.9	-0.2
RAJF	Raja-Jooseppi	2.33	294	PB	Pn	15 14 24.4	+0.4
RAJF				SB	Sn	15 14 53.6	+0.4
MSF	Maaselka	2.64	231	PB	Pn	15 14 29.6	+1.3
MSF				SG	Sb	15 15 06.3	+0.8
KU1	Kurvinen	2.75	223	PN	Pn	15 14 31.3	+1.5
KU1				SG	Sb	15 15 09.4	+0.7
KU2	Taivalkoski	3.02	233	PN	Pn	15 14 35.1	+1.6
	baz=52						
KU2				SG	Sb	15 15 18.2	+1.7
VADS	Vadso	3.03	328	P	Pn	15 14 34.3	+0.7
VADS				S	Sn	15 15 08.6	-1.9
VADS	Vadso	3.03	328	*e*P	Pn	15 14 33.6	0.0
RANF	Ranua	3.31	244	PN	Pn	15 14 38.0	+0.6
RANF				SG	Sb	15 15 24.5	-0.2
RNF	Rovaniemi	3.31	256	PN	Pn	15 14 38.1	+0.6
RNF				SN	Sn	15 15 19.1	+1.6
KEV	Kevo	3.35	313	*e*P	Pn	15 14 38.2	+0.3
KEV	Kevo	3.35	313	PN	Pn	15 14 38.3	+0.3
KEV				SN	Sn	15 15 18.8	+0.4
ARA0	ARCESS Array S	3.68	305	PN	Pn	15 14 42.8	+0.2
	baz=121						
ARA0				SN	Sn	15 15 25.8	-0.8
ARCES	ARCESS Array B	3.68	305	Pn	Pn	15 14 42.6	+0.1
	comp=Z,0.4nm,0.3s,baz=119,slow=15,SNR=69						
ARCES				Pg	Pb	15 14 50.0	-0.3
	comp=Z,0.4nm,0.3s,baz=124,slow=16,SNR=12						
ARCES				Sn	Sn	15 15 24.7	-1.8
	comp=Z,0.7nm,0.3s,baz=119,slow=26,SNR=8.6						
ARCES				Lg	Lg	15 15 36.9	
	comp=Z,1.0nm,0.3s,baz=117,slow=29,SNR=4.1						
	comp=Z,1.3nm,0.2s						
ARCES	ARCESS Array B	3.68	305	P	Pn	15 14 42.9	+0.3
ARCES				S	Sn	15 15 25.3	-1.2
RMF	Romuvaara	3.83	208	PN	Pn	15 14 44.6	+0.1
KLF	Kolari	3.92	269	PN	Pn	15 14 45.7	-0.1
HEF	Hetta	3.99	286	PN	Pn	15 14 47.4	+0.5
HEF				SN	Sn	15 15 34.0	-0.3
TOF	Tornio	4.15	253	PG	Pb	15 14 58.7	+0.4
TOF				SB	Sb	15 15 49.2	+0.3
OUL	Oulu	4.17	236	PG	Pb	15 15 00.5	+1.9
KTK1	Kautokeino	4.25	294	PG	Pb	15 15 01.3	+1.2
KTK1				SN	Sn	15 15 39.2	-1.5
PAJU	Pajala	4.29	267	PN	Pn	15 14 50.9	0.0
PAJU				SN	Sn	15 15 41.1	-0.5
KALU	Kalix	4.61	252	SN	Sn	15 15 49.2	-0.2
ERTU	Ertsjaerv	4.77	262	PN	Pn	15 14 57.6	+0.1
ERTU				SN	Sn	15 15 53.4	0.0
I37NO	I37NO	5.90	291	I	I	15 49 50.0	
	baz=96,slow=320,SNR=2.5						
FINES	FINESS Array B	7.10	213	Pn	Pn	15 15 28.8	-0.6
	comp=Z,0.1nm,0.3s,baz=28,slow=14,SNR=8.0						
FINES				Sn	Sn	15 16 46.5	-4.1
	comp=Z,0.2nm,0.3s,baz=20,slow=28,SNR=3.8						
FINES				Lg	Lg	15 17 22.7	
	comp=Z,0.4nm,0.3s,baz=23,slow=26,SNR=6.9						
	comp=Z,0.3nm,0.2s						
HFS	Hagfors	11.65	240	Pn	Pn	15 16 28.5	-3.3
	baz=55,slow=12,SNR=1.7						
	comp=Z,0.9nm,0.8s						

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*IDC **05** 15:21:55.2±10.0, 22°.12S×176°.72W, h285^{km}±94^{km}, mb3.3/3, mbtmp4.2/5, Error ellipse: s-maj=64.2km s-min=25.3km az=49.0*

ISC 05 15:21:57.3±2.0, 22°.4S±0°.2×176°.8W±0°.2, h300^{km}, n6, σ1.^{s}61/8, mb3.6/3, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	15.48	268	P	P	15 25 19.1	-0.7
	7.3nm,1.0s,baz=119,slow=19,SNR=7.2						
URZ	Urewera	16.67	197	P	P	15 25 32.3	-0.1
	19nm,1.1s,baz=358,slow=4.9,SNR=7.6						
URZ				S	S	15 28 29.6	-1.6
	8.5nm,1.0s,baz=16,slow=7.3,SNR=1.4						
ASAR	Alice Springs	45.17	258	P	P	15 29 46.1	+0.9
	2.0nm,0.7s,baz=93,slow=8.8,SNR=34						
ASAR				PcP	sP	15 31 21.1	+1.1
	0.3nm,0.7s,baz=105,slow=4.0,SNR=1.8						
	2.0nm,0.7s						
WRA	Warramunga Arr	45.44	264	P	P	15 29 47.4	+0.1
	0.6nm,0.3s,baz=102,slow=7.6,SNR=13						
	0.6nm,0.3s						
QSPA	South Pole Qui	67.71	180	P	P	15 32 23.9	+1.4
	1.1nm,0.8s,baz=64,slow=7.0,SNR=10.0						
	1.1nm,0.8s						
AKASG	Malin Array Be	145.16	331	PKPbc	PKPdf	15 40 56.5	-2.4
	1.9nm,0.5s,baz=40,slow=3.8,SNR=12						

IDC 05 15:46:11.0±2.6, 19°.41S×177°.53W, h586^{km}±27^{km}, mb2.8/4, mbtmp3.6/5, Error ellipse: s-maj=42.9km s-min=34.3km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.51	291	P	P	15 47 39.3	0.0
	2.2nm,0.4s,baz=256,slow=20,SNR=9.1						
MSVF				S	S	15 48 40.6	-11
	0.7nm,0.3s,baz=257,slow=22,SNR=6.1						
WRA	Warramunga Arr	45.20	261	P	P	15 53 37.0	-0.1
	0.5nm,0.3s,baz=97,slow=7.5,SNR=7.8						
	0.5nm,0.3s						
ASAR	Alice Springs	45.20	256	P	P	15 53 37.0	-0.1
	1.3nm,0.5s,baz=91,slow=8.0,SNR=46						
	1.3nm,0.5s						
QSPA	South Pole Qui	70.65	180	P	P	15 56 28.4	0.0
	0.3nm,0.6s,baz=90,slow=5.1,SNR=1.0						
	0.3nm,0.6s						
ILAR	Eielson Array	87.16	13	P	P	15 57 55.1	-0.1
	0.2nm,0.5s,baz=220,slow=3.9,SNR=1.7						
	0.2nm,0.5s						

IDC 05 16:13:23.0±2.9, 12°.83N×57°.46E, h0^{km}, mb3.7/5, mbtmp3.7/5, MS3.4/1, Error ellipse: s-maj=71.3km s-min=36.3km az=52.0, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	40.27	77	P	P	16 21 01.8	-0.3
	0.4nm,0.8s,baz=266,slow=8.8,SNR=4.6						
	0.4nm,0.8s						
KURBB	Kurchatov Arra	41.42	20	P	P	16 21 11.3	+0.1
	0.4nm,0.7s,baz=217,slow=8.3,SNR=4.9						
	0.4nm,0.7s						
ZALV	Zalesovo Beam	46.37	22	P	P	16 21 50.8	-0.1
	1.4nm,0.5s,baz=214,slow=4.9,SNR=5.5						
ZALV				LR	LR	16 42 55.8	
	comp=Z,40nm,18.6s,baz=218,slow=38						
	1.4nm,0.5s						
FINES	FINESS Array B	53.59	342	P	P	16 22 45.3	-0.3
	0.9nm,0.8s,baz=133,slow=9.1,SNR=4.0						
	0.9nm,0.8s						
H01W3	Cape Leeuwin H	71.64	134	T	T	17 42 49.1	
	baz=302,slow=75,SNR=21						
H01W2	Cape Leeuwin H	71.65	134	T	T	17 42 48.9	
	baz=302,slow=75,SNR=19						
H01W1	Cape Leeuwin H	71.66	134	T	T	17 42 47.8	
	baz=302,slow=75,SNR=21						
ASAR	Alice Springs	83.02	116	P	P	16 25 51.0	+0.2
	0.8nm,1.0s,baz=292,slow=5.1,SNR=2.7						
	0.8nm,1.0s						

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*VAO **05** 16:19:38.1±0.7, 27°.49S×70°.26W, h43^{km}±5^{km}, mb5.6*

*MOS **05** 16:19:40.8±1.1, 27°.37S×70°.02W, h74^{km}, mb5.7/13, Error ellipse: s-maj=12.3km s-min=6.3km az=96.3*

*SJA **05** 16:19:41.8±0.6, 27°.39S×70°.24W, h86^{km}±4^{km}, ML5.2, MW5.2*

*GUC **05** 16:19:42.8±0.8, 27°.41S×70°.23W, h91^{km}±3^{km}, ML5.4*

*NEIC **05** 16:19:42.4±1.9, 27°.42S±0°.04×70°.19W±0°.06, h75^{km}±3^{km}, mb5.7/515, Mww5.3/21, Mwr5.4(GUC), Error ellipse: s-maj=8.1km s-min=6.0km az=105.0*

*IDC **05** 16:19:43.5±0.3, 27°.37S×70°.00W, h87^{km}±2^{km}, mb4.8/18, mbtmp5.1/23, MS4.1/43, Error ellipse: s-maj=14.0km s-min=8.8km az=75.0*

*NEIC **05** 16:19:43.1, 27°.40S×70°.10W, h60^{km}, Moment Tensor Solution. Duration: 2.^{s}3 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.70; M$_{\theta\theta}$-0.16; M$_{\phi\phi}$0.86; M$_{r\theta}$-0.55; M$_{\theta\phi}$0.05; M$_{\phi r}$-0.68; Fault plane solution: M$_0$1.18000×10^{17} NP1: φ$_s$158.65000°, δ28.63000°, λ-136.07000°. NP2: φ$_s$28.43000°, δ70.58000°, λ-68.53000°. Principal axes: T 1.1618, Plg23.0000°, Azm102.0000°; N 0.0318, Plg20.0000°, Azm201.0000°; P -1.1936, Plg59.0000°, Azm328.0000°;*

*NEIC **05** 16:19:43.1, 27°.40S×70°.22W, h60^{km}*

*GCMT **05** 16:19:44.4±0.1, 27°.43S±0°.01×70°.15W±0°.01, h98^{km}±1^{km}, MW5.3/145, Moment Tensor Solution. s120,c189; s145,c254; Duration: 1.^{s}1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.64±.02; M$_{\theta\theta}$-0.19±.02; M$_{\phi\phi}$0.83±.02; M$_{r\theta}$-0.55±.01; M$_{\theta\phi}$0.05±.02; M$_{\phi r}$-0.80±.01; Best double couple: M$_0$1.23400×10^{17} NP1:φ$_s$157.00000°, δ26.00000°, λ-138.00000°. NP2:φ$_s$28.00000°, δ73.00000°, λ-70.00000°. Principal axes: T 1.2390, Plg26.0000°, Azm103.0000°; N -0.0090, Plg19.0000°, Azm202.0000°; P -1.2280, Plg57.0000°, Azm324.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 16:19:42.5±0.3, 27°.37S±0°.02×70°.24W±0°.03, h84^{km}±2^{km}, h84^{km}:pP-P, n790, σ1.^{s}62/639, mb5.7/320, 21C-30D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AC06	Mina Casimiro	0.10	275	Pn	Pn	16 19 55.2	+0.7
AC06	Mina Casimiro	0.10	275	⇓*i*P	Pn	16 19 55.0	+0.6
AC06				*i* S	Sn	16 20 04.2	+0.9
AC06				IAML		16 20 05.0	
	comp=E,263µm,0.4s						
GO03	Copiapo	0.23	178		Pn	16 19 55.2	+0.2
GO03	Copiapo	0.23	178	⇓*i*P	Pn	16 19 55.2	+0.2
GO03				*i* S	Sn	16 20 04.6	+0.4
GO03				IAML		16 20 06.5	
	comp=E,164µm,0.1s						
GO03	Copiapo	0.23	178	*e*P	Pn	16 19 55.1	+0.2
AC04	Llanos de Chal	1.11	221		Pn	16 20 03.6	+0.5
AC04	Llanos de Chal	1.11	221	⇑*i*P	Pn	16 20 03.3	+0.2
AC04				*i* S	Sn	16 20 19.3	+0.7
AC04				IAML		16 20 21.4	
	comp=E,134µm,0.5s						
AC04	Llanos de Chal	1.11	221	*e*P	Pn	16 20 03.3	+0.2
AC04				*e*S	Sn	16 20 19.6	+1.0
AC04				IAML		16 20 21.2	
	comp=Z,76µm,0.2s						
AC02	Maricunga	1.13	62		Pn	16 20 04.8	+1.0
AC02	Maricunga	1.13	62	⇓*i*P	Pn	16 20 04.8	+1.0
AC02				*i* S	Sn	16 20 20.9	+1.2
AC02				IAML		16 20 22.7	
	comp=E,212µm,0.6s						
AC02	Maricunga	1.13	62	*e*P	Pn	16 20 04.6	+0.8
AC02				*e*S	Sn	16 20 20.9	+1.2
AC02				IAML		16 20 22.0	
	comp=Z,62µm,1.3s						
AC01	Pan de Azucar	1.25	345		Pn	16 20 06.1	+1.2
AC01	Pan de Azucar	1.25	345	⇑*i*P	Pn	16 20 06.1	+1.2
AC01				*i* S	Sn	16 20 22.8	+1.0
AC01	Pan de Azucar	1.25	345	*e*P	Pn	16 20 06.1	+1.2
AC01				*e*S	Sn	16 20 23.2	+1.4
AC01				IAML		16 20 27.5	
	comp=Z,19µm,0.8s						
AC05	El Transito	1.46	181		Pn	16 20 08.0	+0.3
AC05	El Transito	1.46	181	⇓*i*P	Pn	16 20 07.8	+0.1
AC05				*i* S	Sn	16 20 27.0	+0.3
AC05				IAML		16 20 29.4	
	comp=E,54µm,0.3s						
AC05	El Transito	1.46	181	*e*P	Pn	16 20 08.0	+0.3
AC05				*e*S	Sn	16 20 27.7	+1.1
AC05				IAML		16 20 29.4	
	comp=Z,25µm,0.2s						
LCO	Las Campanas	1.69	194		Pn	16 20 10.8	+0.1
LCO	Las Campanas	1.69	194	P	Pn	16 20 10.8	+0.1
LCO	Las Campanas	1.69	194	⇓*i*P	Pn	16 20 10.0	-0.7
LCO	Las Campanas	1.69	194	*e*P	Pn	16 20 10.5	-0.2
LCO				*e*S	Sn	16 20 32.6	+0.6
LCO				IAML		16 20 34.2	
	comp=Z,33µm,0.3s						
GO02	Mina Guanaco	2.27	15		Pn	16 20 19.4	+1.0
GO02	Mina Guanaco	2.27	15	⇓*e*P	Pn	16 20 19.4	+1.0
GO02				IAML		16 20 52.5	
	comp=E,16µm,0.2s						
GO02	Mina Guanaco	2.27	15	*e*P	Pn	16 20 19.6	+1.1
GO02				*e*S	Sn	16 20 42.0	-3.9
CO01	Juntas del Tor	2.60	177		Pn	16 20 23.1	+0.4
CO01	Juntas del Tor	2.60	177	*i* P	Pn	16 20 23.2	+0.4
CO01	Juntas del Tor	2.60	177	*e*P	Pn	16 20 23.4	+0.6
CO01				*e*S	Sn	16 20 54.4	+0.7
CO01				IAML		16 21 20.5	
	comp=Z,5µm,0.8s						
AGUA	GUANDACOL	2.62	144	*e*P	Pn	16 20 24.7	+1.9
AGUA				*e*S	Sn	16 20 55.1	+1.3
CO05	La Serena	2.69	199		Pn	16 20 22.6	-1.1
CO05	La Serena	2.69	199	*e*P	Pn	16 20 22.7	-1.1
CO05				IAML		16 21 23.0	
	comp=N,15µm,0.5s						
PB14	IPOC Station P	2.73	357		Pn	16 20 24.7	+0.1
PB14	IPOC Station P	2.73	357	⇑*e*P	Pn	16 20 24.5	-0.1
PB14	IPOC Station P	2.73	357	*e*P	Pn	16 20 24.6	-0.1
PB14				*e*S	Sn	16 20 48.6	-8.3
PB14				IAML		16 20 58.2	
	comp=Z,10µm,0.4s						
GO04	Tololo Observa	2.84	190		Pn	16 20 25.6	-0.3
GO04	Tololo Observa	2.84	190	*e*P	Pn	16 20 25.0	-0.9
GO04	Tololo Observa	2.84	190	*e*P	Pn	16 20 25.4	-0.6
GO04				*e*S	Sn	16 20 52.6	-6.7
ACCO	Cerro Coronel	3.37	162	*e*P	Pn	16 20 39.6	+6.3
ACCO				*e*S	Sn	16 21 19.7	+7.3
CO03	El Pedregal	3.48	186		Pn	16 20 33.8	-0.7
CO03	El Pedregal	3.48	186	*i* P	Pn	16 20 33.5	-1.0
CO03				IAML		16 21 38.6	
	comp=E,7µm,0.4s						
CO03	El Pedregal	3.48	186	*e*P	Pn	16 20 33.7	-0.8
CO03				*e*S	Sn	16 21 14.8	+0.1
CO03				IAML		16 21 35.8	
	comp=Z,5µm,1.1s						
CO06	Fray Jorge	3.51	200		Pn	16 20 32.7	-2.1
CO06	Fray Jorge	3.51	200	*e*P	Pn	16 20 32.7	-2.1

CO06				IAML		16 21 38.5	
	comp=E,3µm,0.4s						
ACLC	CERRO LA CRUZ	3.55	126	*e*P	Pn	16 20 36.0	+0.5
ACLC				*e*S	Sn	16 21 19.4	+2.9
ACLC				IAML		16 21 20.0	
	comp=Z,2µm,0.9s						
DOCA	Reserva Natura	3.71	164	*e*P	Pn	16 20 38.9	+1.0
DOCA				*e*S	Sn	16 21 22.6	+1.9
DOCA				IAML		16 21 28.0	
	comp=Z,6µm,1.6s						
PB10	IPOC Station P	3.85	356		Pn	16 20 38.2	-1.2
PB10	IPOC Station P	3.85	356	*e*P	Pn	16 20 38.3	-1.2
PB10				IAML		16 21 51.7	
	comp=Z,2µm,0.8s						
CO02	Combarbal	3.88	190		Pn	16 20 38.4	-1.6
CO02	Combarbal	3.88	190	*e*P	Pn	16 20 38.4	-1.6
CO02	Combarbal	3.88	190	*e*P	Pn	16 20 38.5	-1.4
CO02				*e*S	Sn	16 21 07.2	-17
CO02				IAML		16 22 08.3	
	comp=Z,7µm,0.8s						
FSA	Cafayete	4.01	73	*e*P	Pn	16 20 43.9	+2.1
CYA	Choya	4.07	106	*e*P	Pn	16 20 42.6	+0.1
CYA				*e*S	Sn	16 21 29.0	-0.1
CYA				IAML		16 21 32.3	
	comp=Z,2µm,0.5s						
ZON	Zonda	4.38	162	P	Pn	16 20 47.7	+1.0
ZON	Zonda	4.38	162	*e*P	Pn	16 20 47.4	+0.7
ZON				*e*S	Sn	16 21 35.7	-0.9
RTLS	Leoncito	4.49	170	*e*P	Pn	16 20 49.3	+0.9
RTLS				*e*S	Sn	16 21 42.2	+2.6
PB05	IPOC Station P	4.50	0	*e*P	Pn	16 20 46.5	-1.8
PB05				IAML		16 22 02.5	
	comp=Z,2µm,0.9s						
CFA	Coronel Fontan	4.57	158	P	Pn	16 20 49.4	+0.1
	comp=Z,115nm,0.3s,baz=339,slow=13,SNR=391						
CFA				S	Sn	16 21 38.4	-2.8
	comp=Z,434nm,0.3s,baz=304,slow=23,SNR=16						
CFA	Coronel Fontan	4.57	158	*e*P	Pn	16 20 49.5	+0.3
CFA				*e*S	Sn	16 21 40.1	-1.1
PB06	IPOC Station P	4.68	8		Pn	16 20 49.6	-1.3
PB06	IPOC Station P	4.68	8	*e*P	Pn	16 20 49.9	-1.0
PB06				IAML		16 22 21.1	
	comp=Z,3µm,0.9s						
AF01	San Pedro de A	4.78	24	*e*P	Pn	16 20 53.6	+1.3
AF01				*e*S	Sn	16 21 36.0	-11
AF01				IAML		16 22 47.1	
	comp=Z,5µm,0.7s						
PB03	IPOC Station P	5.31	5	Pn	Pn	16 20 57.2	-2.3
PB03	IPOC Station P	5.31	5	*e*P	Pn	16 20 57.2	-2.3
PB03				IAML		16 22 37.2	
	comp=Z,2µm,1.2s						
PB09	IPOC Station P	5.62	10		Pn	16 21 03.1	-0.6
PEL	Peldehue	5.77	184	P	Pn	16 21 04.1	-1.5
PEL				pmax	pmax		
	comp=Z,970nm,0.8s						
PB01	IPOC Station P	6.33	6	Pn	Pn	16 21 10.8	-2.6
TA01	Diego Aracena	6.77	0		Pn	16 21 15.6	-3.6
PB11	IPOC Station P	7.59	4		Pn	16 21 27.1	-3.5
VA04	Juan Fernndez	9.69	228		Pn	16 21 55.3	-3.7
LPAZ	La Paz	11.20	11		Pn	16 22 18.6	-1.6
LPAZ	La Paz	11.20	11	P	Pn	16 22 19.1	-1.2
	comp=Z,8.9nm,0.5s,baz=187,slow=7.5,SNR=24						
LPAZ	La Paz	11.20	11	*e*P	Pn	16 22 19.1	-1.1
LPAZ	La Paz	11.20	11	P	Pn	16 22 18.7	-1.5
	comp=Z,66nm,1.0s						
CPUP	Villa Florida	11.58	88		Pn	16 22 20.4	-4.3
CPUP	Villa Florida	11.58	88	P	Pn	16 22 21.3	-3.5
	comp=Z,8.5nm,0.7s,baz=126,slow=12,SNR=31						
CPUP				LR	LR	16 27 11.4	
	comp=Z,704nm,22.0s,baz=130,slow=39						
CPUP	Villa Florida	11.58	88	*e*P	Pn	16 22 20.9	-3.9
ITQB	Itaqui	12.20	104		Pn	16 22 29.1	-4.0
ITQB	Itaqui	12.20	104	*e*P	Pn	16 22 29.4	-3.7
TRQA	Tornquist	12.72	149		Pn	16 22 36.2	-3.9
TRQA	Tornquist	12.72	149	P	Pn	16 22 36.3	-3.9
SJPY	San Joaquin	12.91	83	*e*P	Pn	16 22 41.3	-1.5
PLCA	Paso Flores	13.34	181	Pn	Pn	16 22 44.2	-4.1
PLCA	Paso Flores	13.34	181	P	Pn	16 22 47.4	-0.9
	comp=Z,3.2nm,0.8s,baz=356,slow=12,SNR=4.1						
PLCA				LR	LR	16 28 55.4	
	comp=Z,270nm,18.4s,baz=352,slow=41						
PLCA	Paso Flores	13.34	181	*e*P	Pn	16 22 42.8	-5.6
BBSD	Serra de San D	13.49	43	*e*P	Pn	16 22 47.2	-3.3
BDQN	Bodoquena, MS	14.13	64	*e*P	Pn	16 22 54.9	-3.8
SIV	San Ignacio	14.16	39	P	Pn	16 22 54.9	-4.3
	comp=Z,13nm,0.4s,baz=226,slow=9.7,SNR=72						
CPSB	Cacapava Do Su	15.03	106	*e*P	Pn	16 23 06.4	-3.9
PLTB	Pedras Altas	15.13	111	Pn	Pn	16 23 06.9	-4.6
PLTB	Pedras Altas	15.13	111	*e*P	Pn	16 23 07.5	-4.1
PTLB	Pontes e Lacer	15.72	43		Pn	16 23 17.6	-1.5
ITAB	Concordia	16.10	94	Pn	Pn	16 23 20.6	-3.3
ITAB	Concordia	16.10	94	*e*P	Pn	16 23 20.9	-3.0
NNA	Nana	16.51	337	Pn	Pn	16 23 27.9	-1.1
NNA	Nana	16.51	337	P	P	16 23 30.8	+0.6
	comp=Z,65nm,0.6s,baz=221,slow=4.7,SNR=21						
NNA				LR	LR	16 28 54.5	
	comp=Z,509nm,21.2s,baz=146,slow=33						
NNA	Nana	16.51	337	⇑*e*P	Pn	16 23 28.5	-0.5
NNA				pmax	pmax		
	comp=Z,79nm,0.7s						
NNA	Nana	16.51	337	P	Pn	16 23 29.3	+0.3
PTGB	Pitanga	16.55	85	*e*P	Pn	16 23 28.1	-1.5
TRCB	Terra Rica	16.59	78	Pn	Pn	16 23 28.5	-1.6
TRCB	Terra Rica	16.59	78	*e*P	Pn	16 23 28.4	-1.6
RPRD	Ribas do Rio P	16.60	69	*e*P	Pn	16 23 28.6	-1.4
VILB	Vilhena	17.15	35	Pn	Pn	16 23 35.6	-1.3
VILB	Vilhena	17.15	35	*e*P	Pn	16 23 36.1	-0.7
CNLB	Canela	17.18	101	*e*P	Pn	16 23 33.9	-3.4
SALV	Santo Antonio	17.68	53	*e*P	P	16 23 40.9	-2.2
LDASE	Londrina, Braz	17.73	81	*e*P	P	16 23 42.2	-1.4
C2SB	Chapadao do Su	18.14	66	*e*P	P	16 23 48.1	-0.1
PCMB	Pacaembu	18.20	76	*e*P	P	16 23 47.8	-1.0
COYC	Coyhaique	18.23	184		P	16 23 47.9	-1.1
FRTB	Fartura	19.11	82	*e*P	P	16 23 58.3	-0.5
SAML	Samuel	19.50	21		P	16 24 03.8	+0.8
SAML	Samuel	19.50	21	P	P	16 24 03.8	+0.8
SAML	Samuel	19.50	21	*e*P	P	16 24 03.8	+0.8
CZSB	Cruzeiro do Su	19.67	353	P	Pn	16 24 06.2	-0.9
CZSB	Cruzeiro do Su	19.67	353	P	P	16 24 05.6	+0.7
ITRB	Iturama	19.75	72	*e*P	P	16 24 05.8	+0.1
PDRB	Porto dos Gac	20.17	42	*e*P	P	16 24 09.6	-0.7
ARAG	Araguaiana, MT	20.67	60	*e*P	P	16 24 14.9	-0.8
PET01	Itanhaem-SP	20.89	87	*e*P	P	16 24 17.3	-0.8
SPB	Sao Paulo	20.93	85	P	P	16 24 17.5	-0.9
SPB	Sao Paulo	20.93	85	*e*P	P	16 24 18.5	+0.1
VAO	Valinhos	21.50	84	P	P	16 24 23.6	-1.0
VAO	Valinhos	21.50	84	*e*P	P	16 24 24.4	-0.2
ATAH	Atahualpa	21.56	337	P	P	16 24 27.6	+1.9
	comp=Z,13nm,0.5s,baz=168,slow=9.2,SNR=31						
	comp=Z,13nm,0.5s						
IPMB	Ipameri, GO	22.34	70	*e*P	P	16 24 31.8	-1.9
PARB	Paraibuna	22.60	85	*e*P	P	16 24 34.5	-1.8
SLP01	Ubatuba-SP	23.01	86	*e*P	P	16 24 39.1	-1.6
TBTG	Tabatinga, AM	23.05	1	P	P	16 24 41.6	+0.7
	comp=Z,14µmcomp=Z,2µm,1.1s						
SNDB	Serra Nova Dou	23.46	53	*e*P	P	16 24 42.9	-1.8
PMNB	Patos De Minas	23.58	73	*e*P	P	16 24 44.4	-1.5
BDFB	Brasilia	23.70	65	P	P	16 24 45.4	-1.7
BDFB	Brasilia	23.70	65	P	P	16 24 45.6	-1.4
	comp=Z,156nm,1.1s,baz=243,slow=8.7,SNR=49						
BDFB				LR	LR	16 35 06.0	
	comp=Z,2µm,21.1s,baz=255,slow=39						
	comp=Z,156nm,1.1s						
BSCB	Bom Sucesso	24.06	80	*e*P	P	16 24 49.8	-0.4
MAN01	Angra dos Reis	24.19	85	*e*P	P	16 24 52.2	+0.8
TEFE	Tefe	24.32	14	*e*P	P	16 24 53.0	+0.5
MG05	Puerto Natales	24.34	183	P	P	16 24 52.0	-0.2
NPGB	Novo Progresso	24.66	38	*e*P	P	16 24 55.5	0.0
MCRA	Macar, Loja	24.68	336	P	P	16 24 56.0	+0.3
	comp=Z,3µmcomp=Z,159nm,1.1s						
VAS01	Vassouras-RJ	24.82	84	*e*P	P	16 24 57.7	+0.7
MACA	Manacapuru-AM	25.75	22	P	P	16 25 05.0	-0.4
MACA				IAmb	IAmb	16 25 08.4	
	comp=Z,272nm,0.7s						
MACA	Manacapuru-AM	25.75	22	*e*P	P	16 25 05.8	+0.4
DUB01	Friburgo-RJ	25.83	84	*e*P	P	16 25 06.7	+0.5
EFI	East Falkland	25.96	163	⇑*e*P	P	16 25 04.9	-2.1
EFI				pmax	pmax		
	comp=Z,49nm,1.1s						
DIAM	Diamantina, MG	26.06	75	*e*P	P	16 25 08.2	-0.1
COHC	Cochancay	26.22	339	P	P	16 25 11.3	+1.7
COHC	Cochancay	26.22	339	P	P	16 25 12.2	+2.6
	comp=Z,2µmcomp=Z,89nm,1.4s						
ITTB	Itaituba	26.73	34	*e*P	P	16 25 14.1	-0.2
JANB	Januaria	27.04	68	*e*P	P	16 25 16.4	-0.7
SGC2	Sao Gabriel da	27.24	7	P	P	16 25 18.1	-0.7
	comp=Z,37nm,0.7s						
PIAT	Ana Tenorio	27.32	342	P	P	16 25 22.9	+2.9
	comp=Z,2µmcomp=Z,127nm,1.3s						
PPLP	Puerto Lpez	27.59	337	P	P	16 25 19.5	-2.5
	comp=Z,46nm,1.1s						
ALF01	Guarapari-ES	27.75	82	*e*P	P	16 25 23.0	-0.4
SDBA	SAO DESIDERIO	28.01	63	*e*P	P	16 25 25.1	-0.7
SMTB	Santa Maria do	28.23	54	*e*P	P	16 25 28.1	+0.3
FLF1	Flavio Alfaro-	28.39	339	P	P	16 25 31.4	+2.2
	comp=Z,3µmcomp=Z,155nm,1.2s						
RIB01	Linhares ES	28.50	80	*e*P	P	16 25 29.6	-0.5
OTAV	Otavalo	28.56	343	P	P	16 25 33.4	+2.4
OTAV	Otavalo	28.56	343	P	P	16 25 33.5	+2.4
	comp=Z,851nmcomp=Z,48nm,1.6s						
PRPB	Parauapebas	28.66	46	*e*P	P	16 25 33.2	+1.7
PAC1	Pacto, Paraso	28.68	342	P	P	16 25 34.5	+2.7
	comp=Z,2µmcomp=Z,178nm,1.1s						
GCUF	Volcan Galeras	29.24	345	P	P	16 25 40.6	+3.4
	comp=Z,1µmcomp=Z,83nm,1.4s						
FLOC	Florencia	29.25	349	IAmb	IAmb	16 25 40.2	
	comp=Z,273nm,1.2s						
FLOC	Florencia	29.25	349	P	P	16 25 37.9	+1.2
	comp=Z,2µmcomp=Z,195nm,1.6s						
CRUC	La Cruz	29.48	346	P	P	16 25 43.4	+4.2
MAL2	Monte Alegre,	29.53	34	P	P	16 25 38.9	-0.4
MACC	Macarena, Meta	29.55	353	P	P	16 25 35.5	-3.8
	comp=Z,32nm,0.6s						
GARC	Garzon, Huila	29.82	349	P	P	16 25 41.2	-0.8
	comp=Z,2µmcomp=Z,98nm,1.5s						
BBAC	Balboa, Cauca	29.99	346	P	P	16 25 45.0	+1.5
	comp=Z,2µmcomp=Z,253nm,1.0s						
BETC	Betania	30.29	350	P	P	16 25 45.9	-0.1
	comp=Z,163nm,0.8s						
POPC	Popayan, Colom	30.37	347	P	P	16 25 48.0	+1.1
	comp=Z,2µmcomp=Z,123nm,1.5s						
URMC	La Uribe, Meta	30.70	352	P	P	16 25 51.4	+1.8
	comp=Z,3µmcomp=Z,184nm,1.3s						
JAMC	Jamundi, Valle	31.03	347	P	P	16 25 51.6	-1.1
	comp=Z,1µmcomp=Z,89nm,1.3s						
BOAV	Boa Vista	31.04	19	P	P	16 25 52.3	-0.2
BOAV	Boa Vista	31.04	19	*e*P	P	16 25 52.7	+0.2
BOAV	Boa Vista	31.04	19	P	P	16 25 51.3	-1.2
	comp=Z,88nm,1.1s						
GR1C	Gorgona, Isla	31.14	345	P	P	16 25 53.4	0.0
PRAC	Prado	31.22	351	P	P	16 25 57.1	+2.9
	comp=Z,3µmcomp=Z,166nm,1.8s						
ORTC	Ortega, Tolima	31.47	350	P	P	16 25 58.1	+1.8
	comp=Z,4µmcomp=Z,382nm,1.5s						
VILC	Villavicencio,	31.47	353	P	P	16 25 59.4	+3.0
	comp=Z,1µmcomp=Z,177nm,0.6s						
YOTC	Yotoco, Valle	31.72	348	P	P	16 26 00.7	+2.1
	comp=Z,525nmcomp=Z,52nm,1.0s						
CVER	Cruz Verde, Cu	31.92	353	P	P	16 25 59.9	-0.8
	comp=Z,2µmcomp=Z,134nm,0.8s						
CHIC	Chingaza	31.99	353	P	P	16 26 01.4	+0.1
	comp=Z,1µmcomp=Z,85nm,1.3s						
ANIL	Santa Ana	32.06	350	P	P	16 26 02.6	+0.8
	comp=Z,2µmcomp=Z,98nm,0.7s						
ROSC	El Rosal	32.26	352	P	P	16 26 05.2	+1.5
	comp=Z,65nm,0.7s,baz=142,slow=13,SNR=14						
ROSC				LR	LR	16 40 15.5	
	comp=Z,296nm,19.9s,baz=246,slow=38						
	comp=Z,65nm,0.7s						
ROSC	El Rosal	32.26	352	P	P	16 26 04.3	+0.7
	comp=Z,1µmcomp=Z,83nm,1.2s						
PLMC	San Jos del P	32.61	349	P	P	16 26 08.9	+2.5
	comp=Z,418nm,1.1s						
TMAB	Tom-Au,PA,Br	32.67	44	*e*P	P	16 26 07.8	+0.9
GUY2C	Guyana, Caldas	32.77	351	P	P	16 26 09.1	+0.8
	comp=Z,2µmcomp=Z,135nm,1.1s						
SPBC	San Pablo de B	33.03	353	P	P	16 26 12.3	+2.2
	comp=Z,1µmcomp=Z,40nm,1.2s						
NORC	Norcasia	33.04	352	P	P	16 26 10.0	-0.1
	comp=Z,1µmcomp=Z,110nm,0.8s						
RUSC	La Rusia	33.18	355	P	P	16 26 12.2	+0.5
RUSC	La Rusia	33.18	355	P	P	16 26 13.9	+2.1
	comp=Z,3µmcomp=Z,248nm,0.9s						
CBOC	Ciudad Bolivar	33.50	350	P	P	16 26 16.2	+1.9
	comp=Z,2µmcomp=Z,165nm,1.1s						
TAMC	Tame, Arauca	33.64	357	P	P	16 26 16.3	+1.0
	comp=Z,2µmcomp=Z,198nm,1.0s						
BARC	Barichara	33.88	355	P	P	16 26 14.7	-2.9
PTBC	PUERTO BERRIO,	33.95	352	P	P	16 26 15.9	-2.1
	comp=Z,1µmcomp=Z,121nm,1.0s						
PAMC	Pamplona, Colo	34.58	356	P	P	16 26 16.8	-7.1
	comp=Z,10µmcomp=Z,28nm,1.3s						
DBBC	Dabeiba	34.66	350	P	P	16 26 25.4	+1.2
ZARC	Zaragoza, Cauc	34.94	352	P	P	16 26 26.4	-0.1
	comp=Z,2µmcomp=Z,174nm,1.0s						
PTAC	Punta Ardita,	35.08	347	P	P	16 26 31.0	+3.3
	comp=Z,10µmcomp=Z,81nm,0.4s						
UREC	San Jos de Ur	35.28	351	P	P	16 26 30.6	+1.1
	comp=Z,928nmcomp=Z,83nm,1.2s						
APAC	Apartado, Choc	35.59	349	P	P	16 26 31.4	-0.7
	comp=Z,2µmcomp=Z,153nm,1.2s						
CACAO	El Cacao, Vera	36.01	342	P	P	16 26 38.3	+2.7
	comp=Z,78nmcomp=Z,1.1nm,0.9s						
SDV	Santo Domingo	36.04	359	P	P	16 26 35.7	-0.4
SDV	Santo Domingo	36.04	359	LR	LR	16 41 32.9	
	comp=Z,308nm,21.6s,baz=194,slow=36						
SDV	Santo Domingo	36.04	359	*e*P	P	16 26 35.4	-0.7
SDV	Santo Domingo	36.04	359	P	P	16 26 35.8	-0.3
	comp=Z,698nmcomp=Z,59nm,0.8s						
AZU	Azuero	36.27	343	*e*P	P	16 26 40.0	+2.1
AZU	Azuero	36.27	343	P	P	16 26 38.5	+0.6
	comp=Z,1µmcomp=Z,72nm,1.1s						
NBPB	Pedra_Branca-C	36.35	59	*e*P	P	16 26 39.5	+0.8
CAPC	Capurgana	36.45	348	P	P	16 26 40.6	+1.2
	comp=Z,2µmcomp=Z,159nm,1.3s						
MDP	Montagnes des	36.49	30	LR	LR	16 42 59.1	
	comp=Z,440nm,21.8s,baz=208,slow=38						
MPGF	Montagnes des	36.49	30	P	P	16 26 39.8	0.0
GMAL	Guarumal, Vera	36.51	341	P	P	16 26 43.1	+3.2
	comp=Z,12µmcomp=Z,157nm,1.2s						
NBAN	Anadia - AL	36.53	68	*e*P	P	16 26 39.4	-0.8
ESPZ	Base Esperanza	37.06	170	P	P	16 26 43.9	-0.2
ARGC	Ariguani, Magd	37.21	353	P	P	16 26 47.1	+1.3
	comp=Z,3µmcomp=Z,261nm,0.6s						
ZANG	Zanguenga, Cho	37.29	344	*e*P	P	16 26 48.4	+1.9
SJCC	San Jacinto, C	37.35	352	P	P	16 26 48.5	+1.4
	comp=Z,5µmcomp=Z,468nm,1.2s						
CAZU	Cerro Azul, Pa	37.46	345	*e*P	P	16 27 35.5	+47
CSTBL	De las Acacias	37.48	340	*e*P	P	16 26 50.4	+2.3
BCIP	Isla Barro Col	37.49	344	*e*P	P	16 26 49.1	+1.0
BCIP	Isla Barro Col	37.49	344	P	P	16 26 50.8	+2.6
	comp=Z,2µmcomp=Z,221nm,0.9s						
PMSA	Palmer Station	37.62	176	LR	LR	16 42 12.0	
	comp=Z,434nm,18.8s,baz=344,slow=36						
MCANO	Manzana, Boque	37.67	340	*e*P	P	16 26 52.3	+2.5
KKNTU	Kakintº	37.70	341	*e*P	P	16 26 51.8	+1.8
PCRV	Puerto La Cruz	37.71	9	LR	LR	16 43 27.5	
	comp=Z,542nm,19.3s,slow=38						
RBALA	Bur	37.83	341	*e*P	P	16 26 53.4	+2.2
CLLRA	Cordillera,	37.84	340	*e*P	P	16 26 53.9	+2.5
ALCO	Alturas Coton,	38.11	340	*e*P	P	16 26 54.8	+1.1
CRJC	Cerrejon, Guaj	38.24	356	P	P	16 26 50.1	-4.6
	comp=Z,847nmcomp=Z,29nm,0.7s						
FIMO	Fila Mora	38.31	339	*e*P	P	16 26 58.1	+2.8
SMRC	Santa Marta, M	38.49	354	P	P	16 26 56.1	-0.6
SMRC				IAmb	IAmb	16 26 57.2	
	comp=Z,96nm,0.9s						
SMRC	Santa Marta, M	38.49	354	P	P	16 26 55.7	-1.0
	comp=Z,127nm,1.3s						
CEUA	Cerro Uatsi, L	38.77	340	*e*P	P	16 27 00.4	+1.3
URIC	Uribia, Colomb	38.87	357	P	P	16 26 55.7	-4.1
	comp=Z,817nmcomp=Z,79nm,1.0s						
RCBR	Riachuelo	39.04	63	P	P	16 27 01.1	-0.3
RCBR	Riachuelo	39.04	63	P	P	16 27 01.1	-0.3
RCBR				pmax	pmax		
	comp=Z,48nm,1.0s						
RCBR	Riachuelo	39.04	63	*e*P	P	16 27 02.2	+0.9
RCBR	Riachuelo	39.04	63	P	P	16 27 02.3	+0.9
VERH	Veragua Rainfo	39.14	340	*e*P	P	16 27 03.9	+1.8
LCR2	La Lucha 2	39.23	338	*e*P	P	16 27 04.5	+1.4
VTCV	VTCV, Calle Va	39.36	339	*e*P	P	16 27 06.8	+2.6
CVTV	Tajo	39.39	339	*e*P	P	16 27 07.3	+2.8
CVTQ	Turrialba Volc	39.40	339	*e*P	P	16 27 06.9	+2.3
VTR0	Volcan Turrial	39.41	339	*e*P	P	16 27 07.3	+2.5
CVTR	Volcan Turrial	39.41	339	*e*P	P	16 27 06.8	+2.0
CVIMO	Finca Echandi	39.47	338	*e*P	P	16 27 07.8	+2.7
VBV1	V. Barva	39.61	338	*e*P	P	16 27 08.9	+2.6
JCR1	Jicaral	39.70	337	*e*P	P	16 27 08.7	+1.8
VPS8	V Poas	39.71	338	*e*P	P	16 27 10.3	+3.0
VPS5	V. Poas	39.72	338	*e*P	P	16 27 10.1	+2.8
VPL2	V. Platanar	39.88	338	*e*P	P	16 27 10.3	+1.9
SOCE	Pocosol	40.03	338	P	P	16 27 12.1	+2.6
SOCE	Pocosol	40.03	338	*e*P	P	16 27 13.1	+3.6
JTS	Las Juntas de	40.06	337	*e*P	P	16 27 11.7	+2.0
JTS	Las Juntas de	40.06	337	P	P	16 27 10.9	+1.2
	comp=Z,1µmcomp=Z,89nm,2.3s						
JTS	Las Juntas de	40.06	337	P	P	16 27 12.7	+2.9
NICO	Nicoya	40.09	336	*e*P	P	16 27 12.7	+2.8
VACR	Volcan Arenal	40.13	338	*e*P	P	16 27 12.7	+2.4
ARE1	Arenal 1	40.14	338	*e*P	P	16 27 13.1	+2.7
ELVJ	El Viejo (Barb	40.34	337	*e*P	P	16 27 14.5	+2.5
ALIBA	Liberia Airpor	40.55	336	*e*P	P	16 27 17.0	+3.2
ELI1	Hacienda Flor	40.60	336	*e*P	P	16 27 17.7	+3.5
VRLE	La Escondida,	40.66	337	*e*P	P	16 27 16.4	+1.6
LCRUZ	La Cruz	41.03	337	*e*P	P	16 27 19.8	+2.1
SAIC	Isla e San And	41.20	343	P	P	16 27 16.2	-2.8
	comp=Z,3µmcomp=Z,272nm,1.1s						
ESPN	Las Esperanzas	41.62	339	*e*P	P	16 27 23.9	+1.3
ACON	Acoyapa	41.70	338	IAmb	IAmb	16 27 25.8	
	comp=Z,134nm,1.2s						
ACON	Acoyapa	41.70	338	*e*P	P	16 27 23.7	+0.6
ACON	Acoyapa	41.70	338	P	P	16 27 16.5	-6.6
	comp=Z,1µmcomp=Z,96nm,1.2s						
PRVC	Isla de Provid	41.91	344	P	P	16 27 23.9	-1.0
	comp=Z,3µmcomp=Z,261nm,1.1s						
CNGN	Cerro Negro	42.73	336	P	P	16 27 30.5	-1.1
	comp=Z,1µm,1.1s						
FDF	Fort de France	42.77	13	IAmb	IAmb	16 27 31.6	
	comp=Z,62nm,0.7s						
FDF	Fort de France	42.77	13	P	P	16 27 30.3	-1.6
TGUH	Tegucigalpa,Un	44.37	336	P	P	16 27 45.6	+0.8
TGUH	Tegucigalpa,Un	44.37	336	P	P	16 27 45.0	+0.1
	comp=Z,3µmcomp=Z,340nm,1.0s						
OBIP	Obispado Ponce	45.28	5	P	P	16 27 50.3	-1.5
OBIP				IAmb	IAmb	16 27 53.1	
	comp=Z,141nm,1.2s						
CELP	Cerrillos	45.31	5	P	P	16 27 50.8	-1.3
CELP				IAmb	IAmb	16 27 52.7	
	comp=Z,73nm,0.7s						
SJG	San Juan	45.38	5	LR	LR	16 50 04.5	
	comp=Z,136nm,19.2s,baz=241,slow=40						
SJG	San Juan	45.38	5	P	P	16 27 51.2	-1.5
	comp=Z,516nmcomp=Z,30nm,1.0s						
HUMP	Col San Antoni	45.44	6	P	P	16 27 51.4	-1.8
MTO3	Montecristo	45.47	334	IAmb	IAmb	16 27 56.6	
	comp=Z,120nm,1.1s						
BANI	BANI	45.49	360	P	P	16 27 53.9	+0.2
AOPR	Arecibo Observ	45.57	5	IAmb	IAmb	16 27 53.6	
	comp=Z,102nm,1.4s						
SDDR	Presa de Saban	46.09	359	P	P	16 27 57.9	-0.4
NMDO	Nuevo Mundo	47.86	354	IAmb	IAmb	16 28 35.3	
	comp=Z,30nm,0.9s						
CCIG	Comitan	48.31	331	IAmb	IAmb	16 28 18.3	
	comp=Z,125nm,1.4s						
CMIG	Matias Romero	50.24	329	LR	LR	16 45 41.0	
	comp=Z,98nm,19.6s,baz=176,slow=31						
TEIG	Tepich	50.43	338	P	P	16 28 32.3	+0.6
TEIG	Tepich	50.43	338	P	P	16 28 33.3	+1.6
TEIG	Tepich	50.43	338	P	P	16 28 32.8	+1.1
BELA	Belgrano 2	53.15	171	P	P	16 28 51.5	+0.3
BELA				IAmb	IAmb	16 29 14.1	
	comp=Z,180nm,1.8s						
VNA3	Neumayer Olymp	54.97	160	⇑P	P	16 29 04.3	-0.3
	comp=Z,27nm,0.7s						
VNA3				⇓pP	pP	16 29 25.8	-0.3
VNA3				⇓sP	sP	16 29 36.3	+0.5
VNA1	Neumayer--Stat	55.23	159	⇑P	P	16 29 06.7	+0.3
	comp=Z,22nm,1.0s						
VNA1				⇓sP	sP	16 29 35.0	-2.6
VNA2	Neumayer--Watz	55.58	159	⇑P	P	16 29 08.8	-0.2
	comp=Z,26nm,0.6s,baz=280,slow=8.3						
VNA2				⇑pP	pP	16 29 30.2	-0.3
	baz=279,slow=11						
VNA2				⇑sP	sP	16 29 36.8	-3.3
	baz=269,slow=9.0						
SNAA	Sanae	57.19	160	⇑P	P	16 29 20.0	-0.4
	comp=Z,583nm,0.9s						
SNAA				⇑pP	pP	16 29 41.8	-0.1
SNAA	Sanae	57.19	160	P	P	16 29 19.6	-0.8
SNAA				IAmb	IAmb	16 29 52.6	
	comp=Z,67nm,1.0s						
SNAA	Sanae	57.19	160	P	P	16 29 20.6	+0.2
	comp=Z,29nm,0.9s,baz=278,slow=8.3,SNR=71						
SNAA				pP	pP	16 29 41.8	-0.1
	comp=Z,21nm,0.8s,baz=279,slow=4.3,SNR=7.3						
SNAA				LR	LR	16 52 00.4	
	comp=Z,194nm,21.9s,baz=294,slow=34						
	comp=Z,29nm,0.9s						
SNAA	Sanae	57.19	160	*ce*P	P	16 29 20.0	-0.4
SNAA				pmax	pmax		
	comp=Z,31nm,1.0s						
TROLL	Troll, Antarti	58.91	160	⇑P	P	16 29 32.4	-0.1
	comp=Z,1µm,1.1s						
TROLL				⇑pP	pP	16 29 54.1	0.0
BRAL	Brewton	60.38	343	P	P	16 29 43.0	+0.2
152A	Waverly Hall	61.27	346	IAmb	IAmb	16 29 49.7	
	comp=Z,89nm,1.0s						
GOGA	Godfrey	61.73	347	IAmb	IAmb	16 29 52.8	
	comp=Z,48nm,0.9s						
HKT	Hockley	62.03	335	P	P	16 29 54.8	+0.8
HKT				IAmb	IAmb	16 29 56.7	
	comp=Z,120nm,1.2s						
HKT	Hockley	62.03	335	*d i*P	P	16 29 55.2	+1.2
HKT				pmax	pmax		
	comp=Z,75nm,1.0s						
HKT	Hockley	62.03	335	P	P	16 29 55.7	+1.8
LRAL	Lakeview Retre	62.14	344	IAmb	IAmb	16 29 55.7	
	comp=Z,84nm,1.2s						
JSC	Jenkinsville	62.20	350	IAmb	IAmb	16 29 56.4	
	comp=Z,80nm,0.9s						
Y52A	Lilburn	62.29	347	IAmb	IAmb	16 29 56.6	
	comp=Z,74nm,0.9s						
146A	Union	62.30	342	IAmb	IAmb	16 29 57.5	
	comp=Z,114nm,1.0s						
BIRD	Birdtown, Kers	62.43	351	IAmb	IAmb	16 29 58.1	
	comp=Z,73nm,0.9s						
Y49A	Blount Mountai	62.79	345	IAmb	IAmb	16 30 00.0	
	comp=Z,119nm,1.3s						
PAULI	Pauline	62.81	349	IAmb	IAmb	16 30 00.6	
	comp=Z,97nm,1.1s						
QSPA	South Pole Qui	62.85	180	P	P	16 29 59.3	0.0
QSPA	South Pole Qui	62.85	180	P	P	16 30 00.2	+0.8
	comp=Z,8.4nm,0.8s,baz=148,slow=2.2,SNR=54						
QSPA				pP	pP	16 30 21.7	+0.6
	comp=Z,150nm,1.0s,baz=140,slow=2.5,SNR=50						
QSPA				LR	LR	16 57 22.0	
	comp=Z,119nm,20.5s,baz=163,slow=36						
	comp=Z,8.4nm,0.8s						
W57A	Gilead	62.86	351	IAmb	IAmb	16 30 00.9	
	comp=Z,78nm,0.8s						
KMSC	Kings Mountain	63.05	350	IAmb	IAmb	16 30 02.1	
	comp=Z,69nm,0.9s						
BG3	Lake Jocassee	63.17	348	IAmb	IAmb	16 30 03.0	
	comp=Z,61nm,0.8s						
V58A	Windy Hill, Pi	63.38	352	IAmb	IAmb	16 30 04.3	
	comp=Z,95nm,0.9s						
W52A	Murphy	63.46	347	IAmb	IAmb	16 30 04.8	
	comp=Z,90nm,0.9s						
SLBS	Sierra La Lagu	63.60	319	P	P	16 30 07.4	+2.7
V55A	Taylorsville	63.73	350	IAmb	IAmb	16 30 06.7	
	comp=Z,109nm,1.0s						
V53A	Saluda	63.81	349	P	P	16 30 05.4	-0.5
V53A				IAmb	IAmb	16 30 07.0	
	comp=Z,75nm,1.0s						
HPIG		63.83	325	IAmb	IAmb	16 30 09.4	
	comp=Z,71nm,0.9s						
CPCT	Cooper Cave	63.92	347	IAmb	IAmb	16 30 07.7	
	comp=Z,95nm,0.8s						
TKL	Tuckaleechee C	63.98	348	IAmb	IAmb	16 30 07.7	
	comp=Z,127nm,1.1s						
TKL	Tuckaleechee C	63.98	348	LR	LR	16 58 28.5	
	comp=Z,62nm,19.9s,baz=185,slow=36						
JCT	Junction City	64.08	332	IAmb	IAmb	16 30 10.2	
	comp=Z,120nm,0.8s						
U56A	King	64.09	351	IAmb	IAmb	16 30 09.4	
	comp=Z,95nm,0.9s						
LPIG	La Paz	64.13	319	LR	LR	16 49 41.7	
	comp=Z,41nm,21.3s,baz=182,slow=28						
PLAL	Pickwick Lake	64.27	344	IAmb	IAmb	16 30 09.5	
	comp=Z,126nm,1.1s						
T59A	Double "B" Far	64.36	354	IAmb	IAmb	16 30 11.2	
	comp=Z,96nm,1.0s						
BRDY	Brady	64.46	333	IAmb	IAmb	16 30 12.3	
	comp=Z,159nm,1.2s						
WHTX	Lake Whitney,	64.47	334	P	P	16 30 10.7	+0.5

WHTX				IAmb	IAmb	16 30 12.3	
	comp=Z,173nm,1.2s						
U54A	**Nelsons Funny**	**64.48**	**350**	IAmb	IAmb	16 30 11.3	
	comp=Z,167nm,1.0s						
TREL	**Terrell**	**64.62**	**336**	IAmb	IAmb	16 30 13.7	
	comp=Z,146nm,1.2s						
Z38A	**Mt. Pleasant**	**64.71**	**337**	IAmb	IAmb	16 30 14.1	
	comp=Z,93nm,0.9s						
FW13	**Cleburne**	**64.78**	**335**	IAmb	IAmb	16 30 14.2	
	comp=Z,85nm,0.8s						
TZTN	**Tazewell**	**64.79**	**348**	IAmb	IAmb	16 30 13.1	
	comp=Z,157nm,1.6s						
TXAR	**Lajitas Array**	**64.83**	**328**	P	**P**	**16 30 14.3**	**+1.6**
TXAR	**Lajitas Array**	**64.83**	**328**	P	**P**	**16 30 14.4**	**+1.7**
	comp=Z,40nm,0.9s,baz=145,slow=8.9,SNR=155						
TXAR				pP	**pP**	**16 30 36.3**	**+1.9**
	comp=Z,8.2nm,0.9s,baz=146,slow=6.1,SNR=3.4						
TXAR				sP	**PcP**	**16 30 45.9**	**+0.5**
	comp=Z,5.2nm,0.8s,baz=150,slow=7.5,SNR=2.4						
TXAR				LR	LR	16 55 05.8	
	comp=Z,66nm,19.8s,baz=120,slow=33						
	comp=Z,40nm,0.9s						
CLTN	**Cedars of Leba**	**64.92**	**346**	IAmb	IAmb	16 30 14.1	
	comp=Z,64nm,0.9s						
OZNA	**Ozona**	**65.03**	**331**	IAmb	IAmb	16 30 16.4	
	comp=Z,132nm,1.1s						
FW07	**Weatherford**	**65.23**	**335**	IAmb	IAmb	16 30 16.6	
	comp=Z,45nm,0.7s						
UALR	**University of**	**65.25**	**340**	P	**P**	**16 30 15.2**	**+0.1**
UALR				IAmb	IAmb	16 30 16.8	
	comp=Z,90nm,1.1s						
S57A	**Dark Hollow, R**	**65.30**	**352**	IAmb	IAmb	16 30 17.2	
	comp=Z,102nm,0.8s						
MIAR	**Mount Ida**	**65.42**	**339**	IAmb	IAmb	16 30 18.2	
	comp=Z,100nm,1.0s						
T50A	**Nancy**	**65.50**	**347**	IAmb	IAmb	16 30 17.5	
	comp=Z,189nm,1.7s						
FW03	**Perrin-Whitt E**	**65.64**	**335**	IAmb	IAmb	16 30 20.0	
	comp=Z,234nm,1.5s						
S54A	**Dingess, Beckl**	**65.65**	**350**	IAmb	IAmb	16 30 18.8	
	comp=Z,188nm,1.4s						
ALPN	**Alpine**	**65.69**	**329**	P	**P**	**16 30 18.8**	**+0.5**
ALPN				IAmb	IAmb	16 30 21.0	
	comp=Z,220nm,1.7s						
WHAR	**Wooly Hollow**	**65.71**	**340**	IAmb	IAmb	16 30 19.8	
	comp=Z,98nm,0.8s						
S51A	**Beattyville**	**65.87**	**348**	IAmb	IAmb	16 30 20.0	
	comp=Z,94nm,1.2s						
SGCY	**Sterling City**	**65.89**	**331**	IAmb	IAmb	16 30 21.6	
	comp=Z,109nm,1.0s						
R55A	**Marlinton**	**65.96**	**352**	IAmb	IAmb	16 30 21.8	
	comp=Z,102nm,1.1s						
MNHN	**Monahans**	**66.11**	**330**	IAmb	IAmb	16 30 23.6	
	comp=Z,171nm,1.2s						
FCAR	**Ozark Folk Cen**	**66.22**	**341**	IAmb	IAmb	16 30 22.8	
	comp=Z,155nm,1.3s						
WTFS	**Witchita Falls**	**66.43**	**335**	IAmb	IAmb	16 30 25.0	
	comp=Z,184nm,1.2s						
PBMO	**Poplar Bluff**	**66.57**	**342**	P	**P**	**16 30 23.6**	**0.0**
PECS	**Pecos**	**66.64**	**329**	IAmb	IAmb	16 30 27.4	
	comp=Z,192nm,1.5s						
VHRN	**Van Horn**	**66.67**	**328**	IAmb	IAmb	16 30 27.2	
	comp=Z,223nm,1.6s						
APMT	**Aspermont**	**66.70**	**333**	IAmb	IAmb	16 30 26.9	
	comp=Z,143nm,0.9s						
SDMD	**Soldier's Deli**	**66.72**	**354**	P	**P**	**16 30 25.5**	**+1.0**
Q54A	**Coxs Mills**	**66.74**	**351**	IAmb	IAmb	16 30 25.6	
	comp=Z,48nm,0.7s						
BBTS	**Babate**	**66.77**	**58**	LR	LR	16 58 57.1	
	comp=Z,170nm,20.6s,baz=106,slow=35						
SN07	**Snyder 07**	**66.81**	**332**	IAmb	IAmb	16 30 27.3	
	comp=Z,93nm,0.9s						
CGM3	**Cape Girardeau**	**66.86**	**343**	IAmb	IAmb	16 30 26.7	
	comp=Z,135nm,1.2s						
Q52A	**Bidwell**	**66.94**	**350**	IAmb	IAmb	16 30 26.8	
	comp=Z,68nm,0.9s						
WCI	**Wyandotte Cave**	**66.96**	**346**	P	**P**	**16 30 25.8**	**-0.2**
WCI				IAmb	IAmb	16 30 26.6	
	comp=Z,84nm,0.8s						
WCI	**Wyandotte Cave**	**66.96**	**346**	P	**P**	**16 30 25.8**	**-0.2**
WCI				pmax	pmax		
	comp=Z,84nm,0.8s						
WCI	**Wyandotte Cave**	**66.96**	**346**	P	**P**	**16 30 25.9**	**-0.2**
T42A	**Van Buren**	**66.99**	**342**	IAmb	IAmb	16 30 27.4	
	comp=Z,68nm,0.9s						
USIN	**University of**	**67.01**	**345**	IAmb	IAmb	16 30 27.0	
	comp=Z,168nm,1.4s						
HHAR	**Hobbs**	**67.13**	**339**	IAmb	IAmb	16 30 28.9	
	comp=Z,92nm,0.9s						
SIUC	**Southern Illin**	**67.14**	**344**	P	**P**	**16 30 27.1**	**0.0**
SIUC				IAmb	IAmb	16 30 28.4	
	comp=Z,138nm,0.9s						
Q51A	**Peebles**	**67.17**	**349**	IAmb	IAmb	16 30 28.3	
	comp=Z,105nm,1.1s						
MVL	**Millersville**	**67.26**	**355**	IAmb	IAmb	16 32 05.4	
	comp=Z,109nm,1.0s						
MCWV	**Mont Chateau**	**67.28**	**352**	IAmb	IAmb	16 30 29.8	
	comp=Z,95nm,0.9s						
P53A	**Whipple**	**67.32**	**351**	IAmb	IAmb	16 30 29.6	
	comp=Z,108nm,1.0s						
DKNS	**Dickens**	**67.32**	**333**	IAmb	IAmb	16 30 30.5	
	comp=Z,65nm,0.8s						
RLO	**Rose Lookout**	**67.37**	**338**	IAmb	IAmb	16 30 30.5	
	comp=Z,106nm,0.8s						
U38A	**Gravette**	**67.42**	**339**	IAmb	IAmb	16 30 30.6	
	comp=Z,64nm,0.8s						
MGMO	**Mountain Grove**	**67.44**	**341**	IAmb	IAmb	16 30 30.8	
	comp=Z,110nm,0.9s						
P52A	**Corning**	**67.57**	**350**	IAmb	IAmb	16 30 30.8	
	comp=Z,120nm,1.0s						
BRNJ	**Basking Ridge**	**67.82**	**356**	P	**P**	**16 30 31.5**	**+0.2**
BRNJ				IAmb	IAmb	16 30 33.7	
	comp=Z,104nm,0.8s						
OLIL	**Olney**	**67.84**	**345**	IAmb	IAmb	16 30 32.2	
	comp=Z,145nm,1.4s						
BLO	**Bloomington**	**67.92**	**346**	IAmb	IAmb	16 30 32.2	
	comp=Z,51nm,0.7s						
CCM	**Cathedral Cave**	**67.99**	**342**	P	**P**	**16 30 33.0**	**+0.5**
CCM	**Cathedral Cave**	**67.99**	**342**	P	**P**	**16 30 33.0**	**+0.5**
CCM				pmax	pmax		
	comp=Z,183nm,0.9s						
CCM	**Cathedral Cave**	**67.99**	**342**	P	**P**	**16 30 33.0**	**+0.5**
CCM				sP	**sP**	**16 31 01.3**	**-2.5**
O52A	**Adamsville**	**68.00**	**350**	IAmb	IAmb	16 30 33.5	
	comp=Z,84nm,0.8s						
SSPA	**Standing Stone**	**68.03**	**354**	P	**P**	**16 30 33.5**	**+0.8**
SSPA				IAmb	IAmb	16 30 34.8	
	comp=Z,94nm,1.0s						
SSPA	**Standing Stone**	**68.03**	**354**	P	**P**	**16 30 33.7**	**+1.0**
O53A	**New Philadelph**	**68.04**	**351**	IAmb	IAmb	16 30 34.0	
	comp=Z,91nm,1.1s						
N58A	**Sunbury**	**68.12**	**355**	IAmb	IAmb	16 30 35.6	
	comp=Z,129nm,1.1s						
TAOE	**Nuku Hiva Isla**	**68.17**	**271**	*e*LR	LR	16 51 11.6	
	comp=Z,897nm,28.6s						
Q44A	**Meyer Farm, Va**	**68.22**	**344**	IAmb	IAmb	16 30 34.6	
	comp=Z,99nm,1.1s						
TRNY	**Table Rock, Ra**	**68.26**	**357**	P	**P**	**16 30 35.2**	**+1.1**
SLM	**Saint Louis**	**68.27**	**343**	IAmb	IAmb	16 30 35.6	
	comp=Z,132nm,1.1s						
ACSO	**Alum Creek Sta**	**68.29**	**350**	IAmb	IAmb	16 30 35.4	
	comp=Z,144nm,0.9s						
HSIG		**68.30**	**322**	IAmb	IAmb	16 30 37.8	
	comp=Z,67nm,1.0s						
SMWD	**Samnorwood**	**68.30**	**334**	IAmb	IAmb	16 30 36.8	
	comp=Z,130nm,0.9s						
M63A	**Gales Ferry**	**68.44**	**359**	IAmb	IAmb	16 30 37.7	
	comp=Z,120nm,1.5s						
O49A	**Covington**	**68.48**	**348**	IAmb	IAmb	16 30 36.3	
	comp=Z,103nm,1.0s						
P46A	**Rosedale**	**68.49**	**346**	IAmb	IAmb	16 30 36.1	
	comp=Z,98nm,0.9s						
N53A	**Lisbon**	**68.54**	**351**	IAmb	IAmb	16 30 37.3	
	comp=Z,94nm,1.2s						
T35A	**Sooner Cattle**	**68.55**	**338**	IAmb	IAmb	16 30 38.1	
	comp=Z,90nm,0.9s						
M57A	**Sunshine Farm,**	**68.65**	**354**	IAmb	IAmb	16 30 38.9	
	comp=Z,79nm,0.8s						
AMTX	**Amarillo**	**68.69**	**333**	P	**P**	**16 30 37.0**	**0.0**
AMTX				IAmb	IAmb	16 30 39.5	
	comp=Z,280nm,1.7s						
CROK	**Carrier**	**68.69**	**336**	IAmb	IAmb	16 30 38.8	
	comp=Z,141nm,1.0s						
O48B	**Farmland**	**68.69**	**348**	IAmb	IAmb	16 30 37.5	
	comp=Z,92nm,1.0s						
KSPA	**Keystone Colle**	**68.77**	**356**	IAmb	IAmb	16 30 39.6	
	comp=Z,104nm,1.0s						
ELIS	**Ellis County**	**68.83**	**335**	IAmb	IAmb	16 30 40.4	
	comp=Z,143nm,1.2s						
UCCT	**U. Connecticut**	**68.84**	**358**	IAmb	IAmb	16 30 39.7	
	comp=Z,65nm,0.8s						
N51A	**Ashland**	**68.86**	**350**	IAmb	IAmb	16 30 38.8	
	comp=Z,130nm,1.3s						
OK038	**West end E0370**	**68.94**	**336**	IAmb	IAmb	16 30 40.7	
	comp=Z,236nm,1.4s						
L64A	**Middleborough**	**68.96**	**360**	IAmb	IAmb	16 30 40.6	
	comp=Z,69nm,1.0s						
GC02	**Grant County #**	**68.96**	**337**	P	**P**	**16 30 39.5**	**+0.9**
SFIN	**Lafayette**	**69.20**	**346**	IAmb	IAmb	16 30 40.3	
	comp=Z,60nm,0.7s						
319A	**Douglas**	**69.27**	**325**	P	**P**	**16 30 41.6**	**+0.8**
319A				IAmb	IAmb	16 30 44.2	
	comp=Z,75nm,0.9s						
ALLY	**Alegheny Colle**	**69.28**	**352**	IAmb	IAmb	16 30 41.9	
	comp=Z,98nm,0.9s						
M52A	**Chesterland**	**69.33**	**351**	IAmb	IAmb	16 30 42.0	
	comp=Z,106nm,0.8s						
N47A	**Urbana**	**69.40**	**348**	IAmb	IAmb	16 30 41.7	
	comp=Z,182nm,1.2s						
BINY	**Binghamton**	**69.42**	**355**	IAmb	IAmb	16 30 43.5	
	comp=Z,190nm,1.2s						
M50A	**Fremont**	**69.44**	**350**	IAmb	IAmb	16 30 42.5	
	comp=Z,94nm,0.8s						
HRV	**Adam Dziewonsk**	**69.53**	**359**	P	**P**	**16 30 43.5**	**+1.5**
HRV	**Adam Dziewonsk**	**69.53**	**359**	P	**P**	**16 30 43.8**	**+1.8**
HRV				PcP	**PcP**	**16 31 06.5**	**+1.9**
K62A	**Royalston**	**69.71**	**358**	IAmb	IAmb	16 30 45.7	
	comp=Z,122nm,1.5s						
ERPA	**Erie**	**69.72**	**352**	IAmb	IAmb	16 30 44.6	
	comp=Z,75nm,1.0s						
SBA	**Scott Base**	**69.86**	**191**	P	**P**	**16 30 45.9**	**+2.2**
K57A	**Scipio Center**	**69.99**	**355**	IAmb	IAmb	16 30 46.4	
	comp=Z,110nm,0.8s						
P38A	**Dawn**	**70.10**	**341**	P	**P**	**16 30 45.8**	**+0.3**
P38A				IAmb	IAmb	16 30 47.1	
	comp=Z,136nm,1.1s						
M44A	**Midewin, Midew**	**70.37**	**346**	IAmb	IAmb	16 30 47.8	
	comp=Z,93nm,0.8s						
J61A	**Chester**	**70.40**	**358**	IAmb	IAmb	16 30 50.0	
	comp=Z,99nm,0.9s						
AAM	**Ann Arbor**	**70.42**	**349**	IAmb	IAmb	16 30 51.0	
	comp=Z,54nm,0.7s						
RTBA	**Rita Blanca**	**70.46**	**333**	IAmb	IAmb	16 30 50.6	
	comp=Z,240nm,1.9s						
ACCN	**Adirondack Com**	**70.47**	**357**	IAmb	IAmb	16 30 50.2	
	comp=Z,63nm,0.9s						
TBI	**Tubuai**	**70.54**	**253**	*e*S	**S**	**16 39 57.2**	**+1.3**
	comp=Z,1µm,29.5s						
TBI				*e*SS	**SS**	**16 44 25.0**	**-3.6**
	comp=Z,1µm,33.5s						
TBI				*e*LR	LR	16 52 19.2	
	comp=Z,2µm,33.5s						
MEDO	**Medina**	**70.59**	**354**	P	**P**	**16 30 49.0**	**+0.6**
MEDO				IAmb	IAmb	16 30 50.1	
	comp=Z,88nm,0.9s						
J59A	**Piesco**	**70.59**	**357**	IAmb	IAmb	16 30 50.6	
	comp=Z,132nm,1.0s						
J55A	**Hilton**	**70.63**	**354**	IAmb	IAmb	16 30 50.3	
	comp=Z,115nm,1.1s						
HQIL	**Hanson Quary C**	**70.72**	**346**	IAmb	IAmb	16 30 50.0	
	comp=Z,132nm,1.0s						
HNH	**Hanover**	**70.75**	**358**	IAmb	IAmb	16 30 52.2	
	comp=Z,107nm,1.0s						
ANMO	**Albuquerque**	**70.81**	**329**	P	**P**	**16 30 51.4**	**+1.1**
ANMO	**Albuquerque**	**70.81**	**329**	LR	LR	16 58 15.6	
	comp=Z,121nm,20.7s,baz=249,slow=33						
ANMO	**Albuquerque**	**70.81**	**329**	*d i*P	**P**	**16 30 51.7**	**+1.4**
ANMO				pmax	pmax		
	comp=Z,15nm,0.9s						
ANMO	**Albuquerque**	**70.81**	**329**	P	**P**	**16 30 52.5**	**+2.2**
VNDA	**Vanda**	**70.89**	**190**	P	**P**	**16 30 51.0**	**+1.1**
VNDA	**Vanda**	**70.89**	**190**	P	**P**	**16 30 51.6**	**+1.7**
	comp=Z,3.9nm,0.7s,baz=124,slow=5.7,SNR=24						
VNDA				pP	**pP**	**16 31 13.2**	**+1.1**
	comp=Z,5.7nm,0.9s,baz=148,slow=4.6,SNR=6.6						
VNDA				LR	LR	16 59 21.1	
	comp=Z,90nm,21.4s,baz=140,slow=34						
	comp=Z,3.9nm,0.7s						
VNDA	**Vanda**	**70.89**	**190**	P	**P**	**16 30 51.6**	**+1.7**
I63A	**Otisfield**	**71.07**	**360**	IAmb	IAmb	16 30 54.2	
	comp=Z,131nm,1.2s						
L44A	**Lake County Fo**	**71.10**	**346**	IAmb	IAmb	16 30 52.5	
	comp=Z,147nm,1.0s						
LBNH	**Lisbon**	**71.27**	**359**	IAmb	IAmb	16 30 55.1	
	comp=Z,73nm,0.9s						
L42A	**Oliver, Polo**	**71.32**	**345**	IAmb	IAmb	16 30 54.1	
	comp=Z,184nm,1.5s						
CBKS	**Cedar Bluff**	**71.38**	**336**	IAmb	IAmb	16 30 55.9	
	comp=Z,145nm,1.1s						
SYO	**Syowa Base**	**71.47**	**159**	⇓*e*P	**P**	**16 30 51.8**	**-1.8**
SYO	**Syowa Base**	**71.47**	**159**	⇑*e*PcP	**PcP**	**16 31 11.6**	**-1.0**
J47A	**Sunmer**	**71.53**	**349**	IAmb	IAmb	16 30 55.0	
	comp=Z,112nm,0.8s						
DBIC	**Dimbokro**	**71.63**	**72**	P	**P**	**16 30 55.3**	**-0.2**
DBIC	**Dimbokro**	**71.63**	**72**	P	**P**	**16 30 55.5**	**0.0**
	comp=Z,24nm,0.8s,baz=243,slow=5.5,SNR=25						
DBIC				pP	**pP**	**16 31 17.5**	**-0.4**
	comp=Z,23nm,0.7s,baz=222,slow=7.2,SNR=5.0						
DBIC				LR	LR	16 59 44.3	
	comp=Z,318nm,21.8s,baz=248,slow=34						
	comp=Z,24nm,0.8s						
DBIC	**Dimbokro**	**71.63**	**72**	P	**P**	**16 30 55.6**	**+0.2**
K43A	**Burlington**	**71.69**	**346**	IAmb	IAmb	16 30 56.3	
	comp=Z,156nm,1.2s						
LONY	**Lake Ozonia**	**71.75**	**357**	IAmb	IAmb	16 30 57.5	
	comp=Z,73nm,0.8s						
EMMW	**East Machias**	**71.77**	**2**	IAmb	IAmb	16 30 57.8	
	comp=Z,78nm,0.8s						
I49A	**Point Hope**	**71.89**	**350**	IAmb	IAmb	16 30 57.1	
	comp=Z,141nm,0.9s						
HAL	**Halifax**	**71.91**	**5**	P	**P**	**16 30 57.1**	**+0.7**
HAL				IAmb	IAmb	16 30 58.6	
	comp=Z,65nm,0.9s						
HAL	**Halifax**	**71.91**	**5**	P	**P**	**16 30 57.1**	**+0.7**
HAL				pmax	pmax		
	comp=Z,65nm,0.9s						
FRNY	**Flat Rock**	**71.92**	**357**	IAmb	IAmb	16 30 58.5	
	comp=Z,89nm,0.9s						
GGN	**Saint George**	**72.20**	**3**	IAmb	IAmb	16 31 00.4	
	comp=Z,64nm,0.8s						
G62A	**West of Eustis**	**72.24**	**360**	IAmb	IAmb	16 31 00.9	
	comp=Z,104nm,0.8s						
SADO	**Sadowa**	**72.25**	**353**	LR	LR	17 05 21.6	
	comp=Z,61nm,19.7s,baz=155,slow=38						
G65A	**Princeton**	**72.26**	**2**	IAmb	IAmb	16 31 00.8	
	comp=Z,60nm,0.8s						
PKME	**Peaks-Kenny Pk**	**72.29**	**1**	P	**P**	**16 30 59.6**	**+1.0**
PKME				IAmb	IAmb	16 31 00.8	
	comp=Z,58nm,0.8s						
MNTQ	**Montreal, Queb**	**72.58**	**358**	IAmb	IAmb	16 31 02.9	
	comp=Z,94nm,1.0s						
SDCO	**Great Sand Dun**	**72.73**	**331**	IAmb	IAmb	16 31 05.0	
	comp=Z,176nm,1.7s						
PPT2	**Papeete2**	**72.88**	**259**	*e*PKIKP	**P**	**16 31 02.5**	**-0.5**
	comp=Z,85nm,23.5s						
PPT2				*e*S	**S**	**16 40 20.6**	**-2.5**
	comp=Z,167nm,26.8s						
PPT2				*e*LQ	LQ	16 50 20.1	
	comp=Z,243nm,27.5s						
PPT2				*e*LR	LR	16 53 22.1	
	comp=Z,316nm,30.5s						
PPT2				*e*LR	LR	16 53 25.3	
	comp=Z,276nm,28.8s						
PPT	**Papeete**	**72.89**	**259**	P	**P**	**16 31 05.1**	**+2.2**
	comp=Z,50nm,0.9s,baz=230,slow=19,SNR=3.6						
	comp=Z,50nm,0.9s						
F64A	**Sherman**	**72.90**	**1**	P	**P**	**16 31 03.4**	**+1.1**
F64A				IAmb	IAmb	16 31 04.5	
	comp=Z,78nm,0.9s						
BUKO	**Buck Lake**	**72.94**	**353**	IAmb	IAmb	16 31 04.2	
	comp=Z,158nm,1.0s						
I42A	**Draeger Farm,**	**72.95**	**346**	IAmb	IAmb	16 31 04.0	
	comp=Z,90nm,0.9s						
LMN	**Caledonia Moun**	**73.04**	**4**	P	**P**	**16 31 03.9**	**+0.8**
LMN				IAmb	IAmb	16 31 04.9	
	comp=Z,78nm,0.8s						
I40A	**Norwalk**	**73.33**	**345**	IAmb	IAmb	16 31 06.1	
	comp=Z,249nm,1.7s						
TRQ	**Mont Tremblant**	**73.34**	**357**	IAmb	IAmb	16 31 06.5	
	comp=Z,87nm,0.9s						
MVCO	**Mesa Verde**	**73.61**	**329**	P	**P**	**16 31 08.1**	**+1.1**
MVCO				IAmb	IAmb	16 31 10.1	
	comp=Z,102nm,1.1s						
WUAZ	**Wupatki**	**73.62**	**326**	IAmb	IAmb	16 31 10.6	
	comp=Z,91nm,1.1s						
E62A	**Clayton Lake**	**73.64**	**1**	IAmb	IAmb	16 31 08.9	
	comp=Z,76nm,0.7s						
OGNE	**Ogallala**	**74.09**	**335**	IAmb	IAmb	16 31 12.2	
	comp=Z,75nm,1.1s						
ISCO	**Idaho Springs**	**74.50**	**332**	P	**P**	**16 31 13.9**	**+1.7**
PV15	**Paradox Valley**	**74.53**	**330**	IAmb	IAmb	16 31 15.9	
	comp=Z,104nm,1.2s						
PV13	**Radium Mtn., P**	**74.53**	**329**	IAmb	IAmb	16 31 15.4	
	comp=Z,81nm,0.9s						
PV02	**Paradox Valley**	**74.53**	**329**	IAmb	IAmb	16 31 15.5	
	comp=Z,132nm,1.1s						
G40A	**Rib Lake**	**74.54**	**346**	P	**P**	**16 31 11.5**	**-0.4**
PV05	**Paradox Valley**	**74.59**	**329**	IAmb	IAmb	16 31 15.6	
	comp=Z,72nm,0.9s						
PV18	**Skein Mesa, Pa**	**74.64**	**329**	IAmb	IAmb	16 31 15.9	
	comp=Z,110nm,0.9s						
PV17	**East Wray Mesa**	**74.69**	**329**	IAmb	IAmb	16 31 16.1	
	comp=Z,57nm,0.9s						
PV20	**West Nyswonger**	**74.75**	**329**	IAmb	IAmb	16 31 16.4	
	comp=Z,86nm,1.0s						
PV04	**Paradox Valley**	**74.76**	**329**	IAmb	IAmb	16 31 16.7	
	comp=Z,94nm,1.3s						
ECSD	**EROS Data Cent**	**74.78**	**341**	IAmb	IAmb	16 31 15.2	
	comp=Z,129nm,1.0s						
U15A	**North Rim**	**74.80**	**326**	IAmb	IAmb	16 31 17.7	
	comp=Z,83nm,1.2s						
PV10	**Paradox Valley**	**74.81**	**329**	IAmb	IAmb	16 31 16.4	
	comp=Z,121nm,0.9s						
PFO	**Pinyon Flats O**	**74.83**	**321**	P	**P**	**16 31 15.3**	**+1.3**
PFO	**Pinyon Flats O**	**74.83**	**321**	LR	LR	16 59 05.3	
	comp=Z,84nm,18.6s,baz=129,slow=32						
PFO	**Pinyon Flats O**	**74.83**	**321**	*d i*P	**P**	**16 31 15.8**	**+1.8**
PFO				pmax	pmax		
	comp=Z,50nm,1.1s						
PV23	**Carpenter Ridg**	**74.86**	**329**	IAmb	IAmb	16 31 17.3	
	comp=Z,86nm,1.0s						
LDAQ	**Lac Daran**	**74.99**	**359**	IAmb	IAmb	16 31 16.3	
	comp=Z,135nm,1.5s						
COWI	**Conover**	**75.10**	**347**	IAmb	IAmb	16 31 16.8	
	comp=Z,72nm,1.0s						
SPMN	**Marine on St.**	**75.11**	**344**	IAmb	IAmb	16 31 16.4	
	comp=Z,86nm,0.9s						
ELS	**Elsinore Mount**	**75.40**	**321**	IAmb	IAmb	16 31 20.4	
	comp=Z,61nm,0.8s						
VLDQ	**Val d'Or**	**75.41**	**355**	IAmb	IAmb	16 31 18.5	
	comp=Z,80nm,0.9s						
O20A	**White River Ci**	**75.89**	**331**	IAmb	IAmb	16 31 23.2	
	comp=Z,127nm,0.9s						
SRU	**San Rafael Swe**	**76.08**	**329**	P	**P**	**16 31 21.6**	**+0.5**
SRU				IAmb	IAmb	16 31 23.9	
	comp=Z,83nm,0.9s						
SRU	**San Rafael Swe**	**76.08**	**329**	P	**P**	**16 31 21.6**	**+0.5**
SRU				pmax	pmax		
	comp=Z,83nm,0.9s						
E38A	**The Farm, Brul**	**76.11**	**345**	IAmb	IAmb	16 31 22.2	
	comp=Z,74nm,1.0s						
SUSD	**Miller**	**76.14**	**339**	IAmb	IAmb	16 31 22.9	
	comp=Z,108nm,0.9s						
Q16A	**Castle Valley**	**76.23**	**328**	IAmb	IAmb	16 31 25.4	
	comp=Z,83nm,1.0s						
P18A	**Preston Nutter**	**76.37**	**329**	IAmb	IAmb	16 31 26.2	
	comp=Z,105nm,0.9s						
MVU	**Marysvale**	**76.39**	**327**	IAmb	IAmb	16 31 26.4	
	comp=Z,75nm,0.9s						
ICQ	**Pointe Anglais**	**76.59**	**2**	IAmb	IAmb	16 31 25.4	
	comp=Z,133nm,0.9s						
TPNV	**Topopah Spring**	**77.22**	**324**	P	**P**	**16 31 28.3**	**+0.7**
TPNV				IAmb	IAmb	16 31 31.2	
	comp=Z,100nm,1.4s						
TPNV	**Topopah Spring**	**77.22**	**324**	P	**P**	**16 31 28.3**	**+0.7**
TPNV				pmax	pmax		
	comp=Z,100nm,1.4s						
K22A	**Casper**	**77.28**	**333**	IAmb	IAmb	16 31 30.7	
	comp=Z,87nm,0.9s						
MPU	**Maple Canyon**	**77.32**	**329**	IAmb	IAmb	16 31 31.1	
	comp=Z,77nm,1.0s						
BSUT	**Blindstream Ca**	**77.34**	**330**	IAmb	IAmb	16 31 31.6	
	comp=Z,95nm,1.0s						
EYMN	**Ely**	**77.36**	**346**	IAmb	IAmb	16 31 29.2	
	comp=Z,66nm,0.9s						
RSSD	**Black Hills**	**77.58**	**336**	P	**P**	**16 31 30.6**	**+1.1**
RSSD	**Black Hills**	**77.58**	**336**	P	**P**	**16 31 30.6**	**+1.1**
RSSD				pmax	pmax		
	comp=Z,53nm,1.1s						
TBO	**Thunder Bay**	**77.59**	**347**	IAmb	IAmb	16 31 30.6	
	comp=Z,81nm,1.0s						
JLU	**Jordanelle**	**77.70**	**329**	IAmb	IAmb	16 31 33.2	
	comp=Z,59nm,0.8s						
SPR3	**Spring Creek 3**	**77.81**	**326**	IAmb	IAmb	16 31 34.0	
	comp=Z,173nm,1.5s						
R11B	**Troy Canyon, C**	**77.94**	**325**	IAmb	IAmb	16 31 35.1	
	comp=Z,102nm,1.5s						
DUG	**Dugway, Tooele**	**78.01**	**328**	IAmb	IAmb	16 31 35.1	
	comp=Z,70nm,1.1s						
TCUT	**Toone Canyon**	**78.09**	**329**	IAmb	IAmb	16 31 36.2	
	comp=Z,77nm,1.0s						
HWUT	**Hardware Ranch**	**78.56**	**330**	IAmb	IAmb	16 31 37.5	
	comp=Z,111nm,0.8s						
E28A	**Huff**	**78.59**	**339**	IAmb	IAmb	16 31 37.2	
	comp=Z,111nm,1.0s						
PDAR	**Pinedale Array**	**78.62**	**332**	P	**P**	**16 31 35.6**	**+0.3**
PDAR	**Pinedale Array**	**78.62**	**332**	P	**P**	**16 31 36.2**	**+1.0**
	comp=Z,22nm,0.9s,baz=124,slow=6.7,SNR=90						
PDAR				pP	**pP**	**16 32 00.8**	**+3.1**
	comp=Z,6.7nm,0.8s,baz=141,slow=9.6,SNR=3.5						
PDAR				LR	LR	17 04 07.0	
	comp=Z,26nm,21.8s,baz=154,slow=34						
	comp=Z,22nm,0.9s						
MAW	**Mawson**	**79.08**	**163**	P	**P**	**16 31 37.9**	**+0.7**
	comp=Z,5.0nm,0.4s,baz=216,slow=7.6,SNR=14						
MAW				pP	**pP**	**16 32 00.0**	**+0.2**
	comp=Z,53nm,0.8s,baz=219,slow=6.6,SNR=22						
MAW				LR	LR	17 05 53.8	
	comp=Z,146nm,21.5s,baz=228,slow=35						
	comp=Z,5.0nm,0.4s						
AHID	**Auburn Hatcher**	**79.28**	**331**	IAmb	IAmb	16 31 41.4	
	comp=Z,129nm,1.1s						
NVAR	**Mina Array Bea**	**79.41**	**324**	P	**P**	**16 31 40.5**	**+0.9**
NVAR	**Mina Array Bea**	**79.41**	**324**	P	**P**	**16 31 41.4**	**+1.7**
	comp=Z,16nm,0.9s,baz=150,slow=6.1,SNR=47						
NVAR				LR	LR	17 02 26.1	
	comp=Z,58nm,20.4s,baz=151,slow=32						
	comp=Z,16nm,0.9s						
EPLO	**Experimental L**	**79.50**	**345**	IAmb	IAmb	16 31 41.1	
	comp=Z,96nm,1.1s						
TSUM	**Tsumeb**	**79.55**	**106**	P	**P**	**16 31 40.4**	**-0.5**
TSUM	**Tsumeb**	**79.55**	**106**	LR	LR	17 02 15.7	
	comp=Z,422nm,22.0s,baz=234,slow=32						
ELK	**Elko**	**79.60**	**327**	P	**P**	**16 31 41.8**	**+1.1**
LOHW	**Long Hollow**	**79.75**	**331**	IAmb	IAmb	16 31 44.1	
	comp=Z,182nm,1.6s						
TPAW	**Teton Pass**	**79.80**	**331**	IAmb	IAmb	16 31 44.6	
	comp=Z,73nm,1.1s						
RAR	**Rarotonga**	**80.14**	**251**	LR	LR	16 58 35.3	
	comp=Z,120nm,21.4s,baz=112,slow=29						
TORD	**Torodi Ar. Bea**	**80.49**	**70**	P	**P**	**16 31 45.2**	**-0.5**
	comp=Z,72nm,0.3s,baz=272,slow=4.7,SNR=1.1						
TORD				pP	**pP**	**16 32 07.9**	**-0.5**
	comp=Z,66nm,0.3s,baz=272,slow=5.4,SNR=1.8						
TORD				LR	LR	17 06 16.2	
	comp=Z,219nm,19.8s,baz=268,slow=35						
ULM	**Lac du Bonnet**	**80.55**	**344**	IAmb	IAmb	16 31 46.7	
	comp=Z,145nm,1.1s						
ULM	**Lac du Bonnet**	**80.55**	**344**	P	**P**	**16 31 45.4**	**+0.2**
	comp=Z,70nm,0.9s,baz=156,slow=5.4,SNR=96						
ULM				pP	**pP**	**16 32 09.2**	**+1.4**
	comp=Z,8.8nm,0.8s,baz=91,slow=10.0,SNR=1.8						
ULM				sP	**sP**	**16 32 17.9**	**+1.0**
	comp=Z,23nm,0.8s,baz=127,slow=3.6,SNR=4.3						
ULM				LR	LR	17 11 27.7	
	comp=Z,47nm,18.6s,baz=150,slow=38						
	comp=Z,70nm,0.9s						
ULM	**Lac du Bonnet**	**80.55**	**344**	*d i*P	**P**	**16 31 45.1**	**-0.1**
LAO	**LASA Array**	**80.57**	**336**	IAmb	IAmb	16 31 47.9	
	comp=Z,94nm,1.0s						
PNTR	**Pine Nut**	**80.58**	**323**	IAmb	IAmb	16 31 49.2	
	comp=Z,74nm,0.9s						
YHH	**Holmes Hill**	**80.81**	**332**	P	**P**	**16 31 49.0**	**+1.8**
PAHR	**Pah Rah Range**	**80.92**	**324**	IAmb	IAmb	16 31 51.0	
	comp=Z,133nm,1.2s						
MPK	**Martis Peak**	**80.96**	**323**	IAmb	IAmb	16 31 51.4	
	comp=Z,122nm,1.3s						
YHL	**Hebgen Lake**	**81.00**	**332**	IAmb	IAmb	16 31 51.5	
	comp=Z,266nm,1.8s						
GRTLG	**Ghanzi**	**81.69**	**110**	*i* P	pP	16 32 15.4	+0.3
BOSA	**Boshof**	**81.78**	**118**	P	**P**	**16 31 52.9**	**+0.2**
	comp=Z,9.1nm,0.8s,baz=229,slow=3.6,SNR=8.0						

BOSA				pP	pP	16 32 14.8	-0.7
	comp=Z,35nm,0.9s,baz=247,slow=4.2,SNR=13						
BOSA				LR	LR	17 04 15.4	
	comp=Z,249nm,19.6s,baz=218,slow=33						
	comp=Z,9.1nm,0.8s						
BOZ	Bozeman (W)	81.79	332	IAmb	IAmb	16 31 54.6	
	comp=Z,135nm,1.9s						
SCHQ	Schefferville	81.91	2	P	P	16 31 52.6	+0.2
	comp=Z,29nm,1.0s,baz=172,slow=4.5,SNR=15						
	comp=Z,29nm,1.0s						
ORV	Oroville	81.94	322	IAmb	IAmb	16 31 55.9	
	comp=Z,109nm,1.2s						
WVOR	Wild Horse Val	82.54	326	P	P	16 31 57.3	+1.2
SKOMA	Sekoma	82.55	114	*i* P	pP	16 32 19.8	+0.2
MAKGR	Makgori	82.67	115	*i* P	pP	16 32 20.2	0.0
HATC	Hat Creek Radi	82.82	323	IAmb	IAmb	16 31 60.0	
	comp=Z,148nm,1.2s						
EGMT	Eagleton	83.01	335	IAmb	IAmb	16 32 00.3	
	comp=Z,98nm,1.4s						
J08A	Circle Bar Ran	83.15	327	IAmb	IAmb	16 32 02.1	
	comp=Z,139nm,1.3s						
KDWAN	Kaudwane	83.65	113	P	P	16 32 02.2	-0.3
KDWAN				IAmb	IAmb	16 32 27.0	
	comp=Z,96nm,1.1s						
LBTB	Lobatse	83.67	115	P	P	16 32 02.3	-0.2
LBTB				IAmb	IAmb	16 32 26.1	
	comp=Z,62nm,0.9s						
LBTB	Lobatse	83.67	115	LR	LR	17 05 38.3	
	comp=Z,155nm,18.2s,baz=230,slow=33						
LBTB	Lobatse	83.67	115	P	P	16 32 02.3	-0.2
LBTB				pmax	pmax		
	comp=Z,62nm,1.0s						
KMPM	Mount Pierce	83.97	322	IAmb	IAmb	16 32 06.6	
	comp=Z,105nm,1.3s						
I07A	Izee	84.19	327	IAmb	IAmb	16 32 07.3	
	comp=Z,108nm,1.7s						
J05D	Fort Rock, OR	84.47	325	IAmb	IAmb	16 32 08.7	
	comp=Z,71nm,1.2s						
KRMB	Red Mountain	84.62	323	P	P	16 32 08.3	+1.6
LPHEP	Lephephe	84.64	113	*i* P	pP	16 32 30.7	+0.3
PINE	Pine Mountain	84.69	326	IAmb	IAmb	16 32 10.1	
	comp=Z,84nm,1.1s						
L02F	Cave Junction	84.86	323	IAmb	IAmb	16 32 10.7	
	comp=Z,88nm,1.5s						
J04A	Umpqua Nationa	84.88	325	IAmb	IAmb	16 32 10.6	
	comp=Z,93nm,1.2s						
I05D	Terrebonne, OR	85.28	326	IAmb	IAmb	16 32 12.8	
	comp=Z,76nm,1.1s						
J01E	Myrtle Point	85.77	324	IAmb	IAmb	16 32 15.2	
	comp=Z,64nm,1.2s						
KEBM	Edson Butte	85.79	323	IAmb	IAmb	16 32 15.4	
	comp=Z,107nm,1.1s						
HAWA	Hanford	85.90	328	IAmb	IAmb	16 32 15.3	
	comp=Z,68nm,1.3s						
BUCK	Buck Mountain	86.01	325	IAmb	IAmb	16 32 16.0	
	comp=Z,87nm,1.2s						
HOOD	Mount Hood Mea	86.14	326	IAmb	IAmb	16 32 16.8	
	comp=Z,54nm,1.0s						
FFC	Flin Flon	86.20	342	P	P	16 32 13.9	-0.2
FFC	Flin Flon	86.20	342	P	P	16 32 13.9	-0.2
FFC				pmax	pmax		
	comp=Z,17nm,1.1s						
NEW	Newport	86.22	331	LR	LR	17 10 53.5	
	comp=Z,37nm,18.3s,baz=157,slow=36						
NEW	Newport	86.22	331	P	P	16 32 14.6	+0.2
PFVI	Vila Bisbo	86.26	45	*e*P	P	16 32 13.9	-0.9
C09A	Chrisman Ranch	86.37	330	IAmb	IAmb	16 32 17.2	
	comp=Z,47nm,0.7s						
I02E	Swisshome, OR	86.39	324	IAmb	IAmb	16 32 18.2	
	comp=Z,111nm,1.3s						
MDT	Midelt	86.43	50	LR	LR	17 10 38.0	
	comp=Z,114nm,19.9s,baz=228,slow=35						
COR	Corvallis	86.44	325	P	P	16 32 17.4	+1.9
COR	Corvallis	86.44	325	P	P	16 32 17.4	+1.9
COR				pmax	pmax		
	comp=Z,177nm,1.3s						
G04A	Mulino	86.47	326	IAmb	IAmb	16 32 18.0	
	comp=Z,105nm,1.0s						
MORF	Marmelete	86.48	45	*e*P	P	16 32 17.3	+1.3
MORF				*i* Amb		16 32 18.9	
	comp=Z,56nm,1.6s						
PTEO	Sao Teotonio	86.58	44	*e*P	P	16 32 18.0	+1.6
PTEO				*i* Amb		16 32 23.8	
	comp=Z,93nm,1.6s						
PTEO				*e*pP	pP	16 32 40.8	+1.5
CASY	Casey	86.65	180	P	P	16 32 17.0	+0.6
CASY				IAmb	IAmb	16 32 41.3	
	comp=Z,43nm,0.8s						
PBDV	Barranco-do-Ve	86.89	45	*e*P	P	16 32 19.6	+1.7
PBDV				*i* Amb		16 32 20.3	
	comp=Z,60nm,1.2s						
PBDV				*e*pP	pP	16 32 42.2	+1.4
BROLN	Tlhalogang	86.90	112	*i* P	pP	16 32 41.6	-0.1
PCVE	Castro Verde	87.06	45	*e*P	P	16 32 20.1	+1.3
PCVE				*i* Amb		16 32 26.6	
	comp=Z,42nm,1.6s						
PCVE				*e*pP	pP	16 32 42.8	+1.2
LTY	Liberty	87.07	328	IAmb	IAmb	16 32 20.6	
	comp=Z,101nm,1.6s						
MESJ	Messejana	87.08	44	*e*P	P	16 32 20.1	+1.3
MESJ				IAmb	IAmb	16 32 20.9	
	comp=Z,20nm,0.8s						
MESJ	Messejana	87.08	44	*e*P	P	16 32 21.1	+2.2
MESJ				*i* Amb		16 32 22.4	
	comp=Z,56nm,1.8s						
MESJ				*e*pP	pP	16 32 43.8	+2.1
PVAQ	Vaqueiros	87.12	45	*e*P	P	16 32 20.4	+1.3
PVAQ				*i* Amb		16 32 21.4	
	comp=Z,49nm,1.5s						
MOE	Montemor	87.42	44	*e*P	P	16 32 21.4	+1.0
D05A	Enumclaw	87.64	328	IAmb	IAmb	16 32 23.2	
	comp=Z,56nm,0.9s						
PMTG	Montargil	87.83	43	*e*P	P	16 32 23.5	+1.1
PMTG				*i* Amb		16 33 06.3	
	comp=Z,31nm,1.6s						
RADR	Rader Ridge	87.98	326	IAmb	IAmb	16 32 25.5	
	comp=Z,106nm,1.2s						
FCC	Fort Churchill	88.07	348	IAmb	IAmb	16 32 24.9	
	comp=Z,64nm,0.8s						
PESTR	Estremoz	88.10	44	*e*P	P	16 32 26.3	+2.6
MATP	Matopo	88.17	112	LR	LR	17 07 08.8	
	comp=Z,120nm,20.8s,baz=240,slow=32						
BFZ	Birch Farm	88.45	224	P	P	16 32 28.0	+2.4
TAM	Tamanrasset	88.53	63	P	P	16 32 25.9	-0.4
TAM	Tamanrasset	88.53	63	P	P	16 32 25.9	-0.4
TAM				pmax	pmax		
	comp=Z,15nm,0.8s						
PMRV	Marv??o	88.56	44	*e*P	P	16 32 26.4	+0.5
NLWA	Neilton Lookou	88.69	327	IAmb	IAmb	16 32 28.8	
	comp=Z,86nm,1.6s						
MWZ	Matawai	88.98	227	P	P	16 32 30.9	+2.8
TSZ	Takapari Road	88.98	225	P	P	16 32 30.9	+2.7
KHZ	Kahutara	89.06	222	P	P	16 32 29.4	+1.0
MTE	Manteigas	89.06	43	*e*P	P	16 32 28.9	+0.6
MTE				*i* Amb		16 32 50.1	
	comp=Z,33nm,1.6s						
ODZ	Otahua Downs	89.10	218	P	P	16 32 29.4	+0.9
BKZ	Black Stump Fm	89.17	226	P	P	16 32 31.6	+2.5
URZ	Urewera	89.29	227	P	P	16 32 30.7	+1.2
	comp=Z,16nm,1.1s,baz=231,slow=10,SNR=2.6						
URZ				LR	LR	17 03 11.5	
	comp=Z,60nm,20.5s,baz=220,slow=29						
	comp=Z,16nm,1.1s						
PGC	Sidney	89.37	328	IAmb	IAmb	16 32 31.5	
	comp=Z,32nm,1.0s						
LTZ	Lake Taylor	89.58	221	P	P	16 32 33.3	+2.4
RPZ	Rata Peaks	89.70	219	LR	LR	17 04 34.3	
	comp=Z,40nm,20.9s,baz=134,slow=30						
RPZ	Rata Peaks	89.70	219	P	P	16 32 33.5	+2.1
EAZ	Earnscleugh	89.71	218	P	P	16 32 33.2	+1.8
THZ	Tophouse	89.83	222	P	P	16 32 34.9	+2.8
WHZ	Wether Hill Ro	90.01	216	P	P	16 32 34.5	+1.7
LLLB	Lillooet	90.04	330	IAmb	IAmb	16 32 34.0	
	comp=Z,117nm,1.9s						
INZ	Inchbonnie	90.10	220	P	P	16 32 36.0	+2.8
WKZ	Wanaka	90.13	218	P	P	16 32 35.1	+1.8
MLZ	Mavora Lakes	90.26	217	P	P	16 32 33.3	-0.7
VRZ	Vera Road	90.28	225	P	P	16 32 35.9	+1.7
LSZ	Lusaka	90.35	107	LR	LR	17 08 39.2	
	comp=Z,398nm,21.9s,baz=250,slow=33						
QRZ	Quartz Range	90.63	222	P	P	16 32 37.0	+1.3
TOZ	Tahuroa Road	90.63	226	P	P	16 32 37.7	+1.9
JCZ	Jackson Bay	90.74	218	P	P	16 32 38.0	+1.7
FRB	Frobisher Bay	90.81	1	LR	LR	17 14 51.0	
	comp=Z,38nm,20.4s,baz=216,slow=36						
MSZ	Milford Sound	90.82	217	P	P	16 32 37.8	+1.3
ESDC	Sonseca Array	90.84	45	P	P	16 32 36.7	+0.1
ESDC	Sonseca Array	90.84	45	P	P	16 32 37.0	+0.4
	comp=Z,2.2nm,1.0s,baz=250,slow=4.5,SNR=6.8						
ESDC				LR	LR	17 11 53.7	
	comp=Z,124nm,19.6s,baz=236,slow=34						
	comp=Z,2.2nm,1.0s						
KUZ	Kuaotunu	91.06	227	P	P	16 32 37.7	-0.1
CBB	Campbell River	91.23	328	IAmb	IAmb	16 32 40.0	
	comp=Z,34nm,1.3s						
BBB	Bella Bella	93.96	328	LR	LR	17 11 58.8	
	comp=Z,66nm,20.5s,baz=137,slow=33						
YKAW1	Yellowknife Wh	96.26	341	IAmb	IAmb	16 33 02.1	
	comp=Z,19nm,1.1s						
YKA	Yellowknife Ar	96.30	341	P	P	16 33 00.3	-0.7
YKA	Yellowknife Ar	96.30	341	P	P	16 33 01.2	+0.2
	comp=Z,8.0nm,0.9s,baz=139,slow=4.3,SNR=33						
YKA				PP	PP	16 36 54.6	-1.3
	comp=Z,1.0nm,0.7s,baz=139,slow=7.2,SNR=4.3						
YKA				LR	LR	17 20 37.0	
	comp=Z,68nm,18.5s,baz=261,slow=38						
	comp=Z,8.0nm,0.9s						
YKAW3	Yellowknife Wh	96.36	341	IAmb	IAmb	16 33 02.6	
	comp=Z,16nm,1.1s						
KEST	Kesra	97.76	54	LR	LR	17 18 00.0	
	comp=Z,306nm,21.9s,baz=244,slow=36						
DLBC	Dease Lake	98.83	333	IAmb	IAmb	16 33 14.7	
	comp=Z,17nm,1.0s						
DLBC	Dease Lake	98.83	333	LR	LR	17 19 54.1	
	comp=Z,33nm,19.4s,baz=112,slow=36						
BORG	Borgarnes	99.34	19	*i* P	Pdif	16 33 16.1	+1.5
WLF	Walferdange	102.22	40	*d*Pdif	Pdif	16 33 28.9	+1.0
M29M	Somme Creek	104.56	334	Pdif	Pdif	16 33 39.2	+1.1
I30M	Mount Dempster	105.25	336		Pdif	16 33 42.2	+1.1
L27K	Beaver Creek,	106.21	333	Pdif	Pdif	16 33 45.4	+0.1
GERES	GERESS Array B	106.34	43	PKiKP	PKiKP	16 37 57.1	-0.1
	comp=Z,0.6nm,0.6s,baz=312,slow=4.6,SNR=5.1						
DZM	Mont Dzumac	106.39	234	*e*LR	LR	17 09 03.2	
	comp=Z,147nm,24.2s						
CLL	Collm	106.88	41	*e*sPdif	sPdif	16 34 20.0	-0.7
CLL				*e*PS	PS	16 47 40.0	+3.0
ILAR	Eielson Array	108.97	334	Pdiff	Pdif	16 33 57.6	+0.1
	comp=Z,0.2nm,0.3s,baz=117,slow=5.6,SNR=2.7						
ILAR				PKiKP	PKiKP	16 38 02.1	+0.6
	comp=Z,1.6nm,0.9s,baz=101,slow=1.4,SNR=10						
VYHS	Vyhne	109.39	45	*e*PKP	PKiKP	16 38 03.5	+0.7
STKA	Stephens Creek	113.73	209	PKiKP	PKiKP	16 38 11.8	+0.1
	comp=Z,1.4nm,0.8s,baz=112,slow=5.4,SNR=3.0						
NACGM	Naroch	115.86	40	*e*Pdif	Pdif	16 34 26.3	-2.1
	comp=Z,8.0nm,0.9s,baz=259						
MNK	Minsk	116.41	40	*i* PKiKP	PKiKP	16 38 16.0	+0.1
	comp=E,16nm,0.8s						
MNK				*i* PKiKP	PKiKP	16 38 16.0	+0.1
	comp=N,19nm,0.8s,baz=259						
MNK				*i* PKiKP	PKiKP	16 38 16.0	+0.1
	comp=Z,19nm,0.8s						
MNK				*i* pPKiKP	pPKPdf	16 38 35.6	-4.1
MNK				*i* sPKiKP	sPKPdf	16 38 47.3	-1.4
MNK				*i* PP	PP	16 39 22.9	-1.0
MNK				*i* PPP	PPP	16 41 57.0	
MNK				*i* SKP		16 42 06.6	
MNK				*i* PKS		16 42 09.5	
MNK				*i* SKS		16 43 59.0	
MNK				*i* SP	SP	16 48 56.4	0.0
MNK				*i* PS	PS	16 49 06.1	-0.9
MNK				*i* SS	SS	16 55 22.2	+0.1
MNK				*i* SSS	SSS	16 59 00.2	
MNK				*i* LQ	LQ	17 21 17.6	
MNK	Minsk	116.41	40	*i* PKIKP	PKiKP	16 38 16.0	+0.1
MNK				*i*		16 38 35.6	
MNK				*i*		16 38 47.2	
MNK				*i*		16 39 22.9	
MNK				*i* PPP	PPP	16 41 57.0	
MNK				*i* SP	SP	16 48 56.4	0.0
MNK				*i* PS	PS	16 49 06.0	-0.9
MNK				*i* SS	SS	16 55 22.2	+0.1
MNK				pmax	pmax		
	comp=Z,19nm,0.8s						
MNK				pmax	pmax		
	comp=N,19nm,0.8s						
MNK				pmax	pmax		
	comp=E,16nm,0.8s						
KIEV	Kiev	116.47	44		PKPdf	16 38 15.1	-1.1
KIEV	Kiev	116.47	44	PKIKP	PKPdf	16 38 15.1	-1.1
VSU	Vasula	116.47	36	⇑*i*PKIKP	PKPdf	16 38 14.9	-1.0
VSU				pmax	pmax		
	comp=Z,7.0nm,0.5s						
AKASG	Malin Array Be	116.48	44	PKP	PKPdf	16 38 15.6	-0.6
	comp=Z,6.7nm,0.7s,baz=265,slow=2.9,SNR=33						
AKASG				pPKP	pPKPdf	16 38 39.9	-0.2
	comp=Z,0.4nm,0.3s,baz=268,slow=2.3,SNR=2.7						
AKBB	Malin Array Si	116.48	44	*d i*PKIKP	PKPdf	16 38 14.9	-1.3
FINES	FINESS Array B	116.62	32	PKP	PKPdf	16 38 16.1	0.0
	comp=Z,2.5nm,0.8s,baz=114,slow=2.3,SNR=9.2						
FINES				pPKP	pPKPdf	16 38 39.8	-0.2
	comp=Z,1.0nm,0.7s,baz=8.5,slow=2.8,SNR=2.6						
MMAI	Mount Meron Ar	116.71	65	PKP	PKiKP	16 38 17.8	+0.5
	comp=Z,1.0nm,0.4s,baz=249,slow=1.4,SNR=4.3						
ARCES	ARCESS Array B	117.35	23	PKP	PKPdf	16 38 17.4	0.0
	comp=Z,0.7nm,0.6s,baz=286,slow=0.9,SNR=4.2						
ARCES				PKKPbc	PKKPab	16 48 41.8	-1.0
	comp=Z,2.2nm,0.9s,baz=116,slow=2.8,SNR=4.6						
ILGA	Ilgaz	117.48	56		PKiKP	16 38 18.9	+0.1
OBN	Obninsk	121.47	40	*d i*PKIKP	PKPdf	16 38 25.2	-0.4
OBN				pmax	pmax		
	comp=Z,26nm,1.0s						
RAYN	Ar Rayn	122.42	78	PKPdf	PKiKP	16 38 28.8	+0.1
RAYN	Ar Rayn	122.42	78	PKIKP	PKiKP	16 38 28.8	+0.1
LPSR	Galich'ya Gora	122.72	43	*e*PKIKP	PKPdf	16 38 26.3	-1.8
LPSR				pmax	pmax		
	comp=Z,30nm,0.9s						
VSR	Storozhevoye	122.78	45	*e*PKIKP	PKPdf	16 38 25.9	-2.4
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VORR	Voronezh	122.83	44	*e*PKIKP	PKPdf	16 38 26.7	-1.7
VORR				pmax	pmax		
	comp=Z,20nm,0.9s						
VORD	Divnogorie	122.84	45	*e*PKIKP	PKPdf	16 38 26.4	-2.0
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KLMR	Klimovskoe	123.09	33	*e*PKIKP	PKPdf	16 38 26.5	-2.1
KLMR				*e*		16 38 49.5	
KLMR				pmax	pmax		
	comp=Z,28nm,0.8s						
MTSU	Mount Surprise	123.71	220	P	PKiKP	16 38 32.2	+0.7
ASAR	Alice Springs	124.16	207	PKP	PKPdf	16 38 31.2	-0.8
	comp=Z,19nm,0.7s,baz=135,slow=1.9,SNR=187						
ASAR				pPKP	pPKPdf	16 38 55.9	+0.1
	comp=Z,3.9nm,0.6s,baz=132,slow=1.8,SNR=5.1						
ASAR				PKKPbc	PKKPbc	16 48 16.6	-0.1
	comp=Z,1.4nm,0.8s,baz=328,slow=3.4,SNR=16						
AS31	Alice Springs	124.16	207	P	PKPdf	16 38 31.6	-0.5
QIS	Mount Isa	124.28	214	P	PKiKP	16 38 32.8	+0.2
VRH	Novokhopyorsk	124.38	45	*e*PKIKP	PKPdf	16 38 29.4	-2.0
VRH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KIV	Kislovodsk	124.51	54	PKPdf	PKPdf	16 38 32.0	+0.1
KIV	Kislovodsk	124.51	54	*i* PKIKP	PKPdf	16 38 32.1	+0.1
KIV				pmax	pmax		
	comp=Z,14nm,1.0s						
KIV				pmax	pmax		
	comp=Z,56nm,23.0s						
KBZ	Khabaz	124.63	54	PKP	PKiKP	16 38 32.9	+0.5
	comp=Z,12nm,0.9s,baz=206,slow=1.6,SNR=21						
KBZ				pPKP	pPKPdf	16 38 57.1	+1.2
	comp=Z,4.6nm,0.9s,baz=266,slow=4.5,SNR=2.5						
KBZ	Khabaz	124.63	54	*c i*PKIKP	PKiKP	16 38 32.7	+0.3
GNI	Garni	125.56	59	⇓*i*PKIKP	PKPdf	16 38 33.8	-0.5
WRA	Warramunga Arr	127.29	209	PKP	PKPdf	16 38 37.9	-0.1
	comp=Z,24nm,0.7s,baz=163,slow=1.6,SNR=150						
WRA				pPKP	pPKPdf	16 39 01.9	+0.1
	comp=Z,7.0nm,0.7s,baz=161,slow=1.7,SNR=5.1						
WRAB	Tennant Creek	127.29	209	PKPdf	PKPdf	16 38 36.9	-1.1
WRAB	Tennant Creek	127.29	209	*d i*PKIKP	PKPdf	16 38 37.8	-0.3
H11N3	WAKE ISLAND Hy	127.43	275	T	T	18 59 19.9	
	baz=49,slow=74,SNR=7.9						
H11N1	WAKE ISLAND Hy	127.44	275	T	T	18 58 51.2	
	baz=104,slow=74,SNR=5.7						
H11N2	WAKE ISLAND Hy	127.45	275	T	T	18 58 45.7	
	SNR=15						
BILL	Bilibino	127.46	337	PKPdf	PKiKP	16 38 37.3	0.0
BILL	Bilibino	127.46	337	*d i*PKIKP	PKiKP	16 38 37.3	0.0
BILL				pmax	pmax		
	comp=Z,31nm,1.3s						
BELG	Belogornoye	128.03	43	*c i*PKIKP	PKPdf	16 38 38.6	+0.3
KIRV	Kirov	128.32	35	*d i*PKIKP	PKPdf	16 38 38.7	0.0
ARTI	Arti	133.53	37	PKPdf	PKPdf	16 38 49.0	+0.3
ARTI	Arti	133.53	37	*i* PKIKP	PKPdf	16 38 49.1	+0.4
ARTI						16 41 18.1	
ARTI				SS	SS	16 58 54.3	-2.5
SEY	Seymchan	134.91	334	*d i*PKIKP	PKiKP	16 38 51.9	-0.6
SEY				pmax	pmax		
	comp=Z,48nm,1.3s						
NRIK	Noril'sk	136.03	11	PKP	PKPdf	16 38 53.8	+0.8
	comp=Z,3.8nm,0.9s,baz=22,slow=1.8,SNR=9.8						
NRIK	Noril'sk	136.03	11	*d i*PKIKP	PKPdf	16 38 53.1	+0.1
ABKAR	Akbulak array	136.17	46		PKPpre	16 38 44.0	
ABKAR				PKPdf	PKPdf	16 38 53.8	0.0
PEA0B	Petropavlovsk-	136.38	320	*d i*PKIKP	PKiKP	16 38 55.5	-0.3
PETK	Petropavlovsk-	136.38	320	PKP	PKiKP	16 38 55.6	-0.2
	comp=Z,18nm,0.8s,baz=23,slow=4.8,SNR=5.9						
MA2	Magadan	137.32	330	*d i*PKIKP	PKPdf	16 38 56.1	+0.5
HRA	Herat	138.92	68		PKPdf	16 39 00.0	+0.3
BRVK	Borovoye	141.16	38	PKPdf	PKPdf	16 39 04.2	+1.4
BRVK	Borovoye	141.16	38	PKIKP	PKPdf	16 39 04.2	+1.4
BVAR	Borovoye Array	141.23	38	PKhKP	PKPpre	16 38 56.0	
	comp=Z,0.7nm,0.5s,baz=304,slow=2.6,SNR=4.6						
BVAR				PKP	PKPdf	16 39 02.3	-0.7
	comp=Z,8.8nm,0.7s,baz=298,slow=3.2,SNR=6.8						
BVAR				SKPbc	SKPbc	16 42 31.7	-0.7
	comp=Z,1.6nm,0.8s,baz=280,slow=2.5,SNR=3.1						
YAK	Yakutsk	142.88	345		PKPpre	16 39 01.4	
YAK	Yakutsk	142.88	345	*e*PKHKP	PKPpre	16 39 02.0	
YAK				pmax	pmax		
	comp=Z,30nm,0.8s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.0s						
TWSI	Taliwang, Sumb	143.45	192	PKP	PKPbc	16 39 06.3	+0.8
CMJI	Cimerak	145.03	178	PKP	PKPab	16 39 10.6	+0.2
CNJI	Cibinong	145.44	175	PKP	PKPab	16 39 12.1	+0.3
CNJI				PKP	PKPbc	16 39 12.5	+0.9
TYV	Tymovskoe	145.78	322	*e*PKP2	PKPab	16 39 12.5	+0.4
TYV				pmax	pmax		
	comp=Z,600nm,2.2s						
TYV				pmax	pmax		
	comp=Z,65nm,1.0s						
CGJI	Cibinong	145.99	173	PKP	PKPab	16 39 13.8	-0.1
KURK	Kurchatov	146.81	37	PKPdf	PKPdf	16 39 13.0	+0.3
KURK	Kurchatov	146.81	37	*de*PKP2	PKPdf	16 39 13.5	+0.8
KURK				pmax	pmax		
	comp=Z,109nm,1.7s						
KURBB	Kurchatov Arra	146.81	37	PKPbc	PKPbc	16 39 14.0	-0.7
	comp=Z,50nm,0.7s,baz=299,slow=3.1,SNR=34						
KURBB				pPKPbc	pPKPab	16 39 39.2	-0.2
	comp=Z,14nm,0.7s,baz=299,slow=2.3,SNR=4.8						
SANI	Sanana	146.84	211	PKP	PKPdf	16 39 13.0	-1.0
SANI				PKP	PKPab	16 39 17.7	+0.5
BNSI	Bone	146.87	199	PKP	PKPbc	16 39 16.5	+0.6
UGL	Uglegorsk	147.01	320	*e*PKHKP	PKPpre	16 39 10.9	
UGL				pmax	pmax		
	comp=Z,80nm,1.1s						
LWLI	Liwa	147.34	169	PKP	PKPbc	16 39 17.9	+0.6
LWLI				PKP	PKPbc	16 39 18.0	+0.6
YSS	Yuzhno-Sakhali	147.57	316	PKPdf	PKPdf	16 39 14.0	-0.1
YSS	Yuzhno-Sakhali	147.57	316	*i* PKIKP	PKPdf	16 39 15.3	+1.2
YSS				*e*		16 39 42.2	
YSS				*e*		16 42 42.8	
YSS				*e*SS	SS	17 01 41.9	+0.9
YSS				pmax	pmax		
	comp=Z,400nm,6.5s						
YSS				pmax	pmax		
	comp=Z,100nm,0.8s						
AAK	Ala-Archa	147.61	53	*de*PKIKP	PKPdf	16 39 14.8	+0.2
ZALV	Zalesovo Beam	147.72	28	PKPbc	PKPdf	16 39 15.1	+1.0
	comp=Z,119nm,0.7s,baz=298,slow=3.2,SNR=98						
ZALV				pPKPbc	pPKPbc	16 39 41.8	+0.9
	comp=Z,50nm,0.7s,baz=303,slow=3.5,SNR=6.2						
MDSI	Maura Dua	147.88	169	PKP	PKPdf	16 39 15.8	+0.1
TNTI	Ternate	148.62	216	PKP	PKPdf	16 39 18.5	+1.6
TNTI				PKP	PKPbc	16 39 20.2	-0.5
GRNR	Gornyy	149.08	326	⇓*i*PKHKP	PKPpre	16 39 17.4	
GRNR				*e*		16 39 21.7	
GRNR				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ERM	Erimo	149.11	307	PKPdf	PKPdf	16 39 16.2	-0.6
ERM	Erimo	149.11	307	PKIKP	PKPdf	16 39 16.2	-0.6
KSH	Kashi	149.49	58	PKPbc	PKPdf	16 39 19.6	+1.9
KSH				pPKP	pPKPdf	16 39 43.2	+1.5
HYB	Hyderabad	149.57	102	*e*PKPbc	PKPbc	16 39 23.2	+0.2
HYB				*e*sPKPdf	pPKPbc	16 39 47.3	+0.7
TARG	Taragay, Kyrgy	150.23	53		PKPdf	16 39 18.2	-1.0
TARG					PKiKP	16 39 24.9	-0.2
TARG	Taragay, Kyrgy	150.23	53	PKIKP	PKPdf	16 39 18.2	-1.0
PCI	Palu	150.26	201	PKP	PKPbc	16 39 22.3	-2.5
PCI				PKP	PKiKP	16 39 25.0	-0.6
ZEA	Zeya	150.66	339	*e*PKIKP	PKPdf	16 39 19.4	+0.5
ZEA				pmax	pmax		
	comp=Z,100nm,2.5s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,50nm,1.0s						
BKB	Balikpapan	150.72	195	PKP	PKPbc	16 39 23.8	-2.0
BKB				PKP	PKiKP	16 39 27.8	+1.3
MAKZ	Makanchi	150.78	41	PKPdf	PKPdf	16 39 18.6	-0.8
MAKZ					PKPbc	16 39 25.1	+0.1
MAKZ	Makanchi	150.78	41	PKIKP	PKPdf	16 39 18.6	-0.8
MRSI	Marisa	150.82	206	PKP	PKPdf	16 39 23.2	+2.8
MRSI				PKP	PKPbc	16 39 25.0	-1.0
MKAR	Makanchi Array	150.97	41	PKPbc	PKiKP	16 39 26.0	0.0
	comp=Z,2.7nm,0.8s,baz=355,slow=0.5,SNR=18						
MKAR				pPKPbc	pPKPbc	16 39 49.9	+0.7
	comp=Z,27nm,0.7s,baz=301,slow=2.0,SNR=4.9						
JCJ	Chichijima	151.21	277	PKPbc	PKPbc	16 39 25.6	-1.0
SMKI	Samarinda	151.43	196	PKP	PKPdf	16 39 24.0	+2.6
SMKI				PKP	PKPbc	16 39 24.5	-3.0
SMKI				PKP	PKiKP	16 39 28.9	+0.9
GSI	Gunungsitoli	151.57	154	PKP	PKiKP	16 39 28.2	0.0
GSI				PKP	PKPbc	16 39 28.6	+0.8
TOLI2	Tolitoli	151.83	204	PKPdf	PKPdf	16 39 20.0	-1.9
TOLI2				PKPbc	PKPbc	16 39 27.4	-1.0
BKNI	Bangkinang	151.84	161		PKPbc	16 39 27.3	-1.1
TEY	Ternei	152.26	317	⇓*e*PKIKP	PKiKP	16 39 29.1	+0.5
TEY				pmax	pmax		
	comp=E,20nm,0.9s						
TEY				pmax	pmax		
	comp=N,10.0nm,0.7s						
TEY				pmax	pmax		
	comp=Z,70nm,0.9s						
SBSI	Sibolga	152.30	156	PKP	PKPdf	16 39 23.4	+0.7
HEH	HeiHe	153.46	334	PKPbc	PKPdf	16 39 23.2	0.0
HEH				AMB	AMB		
	comp=Z,140nm,7.5s						
MJAR	Matsushiro Arr	154.26	298	PKPbc	PKiKP	16 39 33.4	+0.3
	comp=Z,6.4nm,0.7s,baz=93,slow=0.6,SNR=15						
MJAR				PKPab	pPKPdf	16 39 48.8	+0.2
	comp=Z,23nm,0.6s,baz=75,slow=3.8,SNR=25						
MAJO	Matsushiro	154.26	298		PKPdf	16 39 24.0	-0.8
MAJO					PKPbc	16 39 32.9	-0.2
MAJO					PKPab	16 39 47.3	-0.1
MAJO	Matsushiro	154.26	298	PKIKP	PKPdf	16 39 24.0	-0.8
MAJO						16 39 47.3	
MOY	Mondy	154.84	13	*e*PKIKP	PKPdf	16 39 26.3	+1.0
MOY				pmax	pmax		
	comp=Z,40nm,2.2s						
CIT	Chita	155.21	354	*e*PKIKP	PKPdf	16 39 26.6	+0.9
CIT				*e*		16 39 34.4	
CIT				*e*		16 39 51.2	
CIT				*e*		16 39 56.4	
CIT				*e*		16 43 24.0	
CIT				pmax	pmax		
	comp=Z,56nm,1.7s						
USRK	Ussuriysk Ar.	155.47	319	PKP	PKPdf	16 39 26.6	+0.5
	comp=Z,3.7nm,0.9s,baz=288,slow=1.8,SNR=15						
USRK				PKPbc	PKPbc	16 39 36.3	
	comp=Z,11nm,0.8s,baz=331,slow=1.5,SNR=23						
USRK				PKPab	PKPab	16 39 52.9	+0.7
	comp=Z,8.8nm,0.9s,baz=57,slow=5.3,SNR=4.3						
WMQ	Urumqi	155.79	42	*e*PKP	PKPdf	16 39 26.6	-0.1
WMQ				LR	LR		
	comp=Z,120nm,24.1s						
ZAK	Zakamensk	156.49	10	*e*PKIKP	PKPdf	16 39 27.7	+0.2
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.4s						
BNX	BinXian	156.91	327	⇑PKP	PKPdf	16 39 27.5	-0.5
BNX				sPKP		16 39 59.2	
BNX				PP	PP	16 43 38.3	+1.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BNX				AMB	AMB		
	comp=Z,180nm,7.7s						
BNX				LR	LR		
	comp=Z,82nm,13.6s						
BNX				LR	LR		
	comp=Z,70nm,16.6s						
BNX				LR	LR		
	comp=Z,83nm,17.8s						
SONM	**Songino Array**	**159.40**	**6**	PKP	**PKPdf**	**16 39 32.2**	**+1.0**
	comp=Z,7.3nm,1.0s,baz=308,slow=0.4,SNR=37						
SONM				PKPab	**PKPab**	**16 40 08.7**	**-0.4**
	comp=Z,5.7nm,0.7s,baz=296,slow=1.5,SNR=3.7						
SONM				PP	**PP**	**16 43 49.3**	**-0.6**
	comp=Z,2.7nm,0.9s,baz=353,slow=4.1,SNR=6.3						
ULN	**Ulaanbaatar**	**159.43**	**5**		**PKPdf**	**16 39 31.7**	**+0.5**
ULN					**PKPab**	**16 40 10.2**	**+0.9**
ULN	**Ulaanbaatar**	**159.43**	**5**	PKIKP	**PKPdf**	**16 39 31.7**	**+0.5**
ULN						16 40 10.2	
KSRS	**Korea Array**	**161.69**	**308**	PKP	**PKPdf**	**16 39 34.3**	**+0.5**
	comp=Z,5.9nm,0.9s,baz=178,slow=0.3,SNR=16						
KSRS				PKPab	**PKPab**	**16 40 20.0**	**+0.6**
	comp=Z,15nm,0.9s,baz=64,slow=4.7,SNR=29						
XLT	**XiLinHaoTe**	**162.73**	**344**	*e*PKP	**PKPdf**	**16 39 35.4**	**+0.6**
XLT				AMB	AMB		
	comp=Z,130nm,7.0s						
LSA	**Lhasa**	**163.48**	**78**	PKP	**PKPdf**	**16 39 37.4**	**+0.9**
GOMU	**GeErMu**	**164.56**	**52**	PKP	**PKPdf**	**16 39 37.7**	**+0.6**
GOMU				pPKP	pPKPdf	16 40 01.4	+0.4
GOMU				AMB	AMB		
	comp=Z,300nm,5.6s						
GTA	**Gaotai**	**165.41**	**32**	PKP	**PKPdf**	**16 39 38.4**	**+1.0**
GTA				pPKP	pPKPdf	16 40 02.4	+1.0
GTA				PKPab	**PKPab**	**16 40 35.8**	**0.0**
GTA				PP	**PP**	**16 44 20.9**	**-1.5**
GTA				SS	SS	17 04 54.2	+2.2
GTA				LR	LR		
	comp=Z,180nm,23.6s						
BJI	**Beijing**	**166.28**	**339**	PKP	**PKPdf**	**16 39 37.6**	**-0.3**
BJI				pPKP	**pPKPdf**	**16 40 03.1**	**+1.3**
BJI				AMB	AMB		
	comp=Z,35nm,5.3s						
BJI				LR	LR		
	comp=Z,33nm,9.9s						
BJI				LR	LR		
	comp=Z,40nm,11.3s						
BJI				LR	LR		
	comp=Z,53nm,13.7s						
HHC	**Hu-ho-hao-te**	**166.47**	**354**	*e*PKP	**PKPdf**	**16 39 35.6**	**-2.6**
CMAR	**Chiang Mai Arr**	**166.67**	**129**	PKP	**PKPdf**	**16 39 39.4**	**+0.5**
	comp=Z,1.1nm,0.9s,baz=271,slow=1.7,SNR=5.5						
CMAR				PKPab	**PKPab**	**16 40 41.8**	**0.0**
	comp=Z,1.5nm,0.9s,baz=238,slow=2.9,SNR=4.1						
CMAR				pPKPab	**pPKPab**	**16 41 04.3**	**-0.6**
	comp=Z,5.1nm,0.8s,baz=235,slow=4.8,SNR=12						
BTO	**Baotou**	**166.79**	**359**	*e*PKP	**PKPdf**	**16 39 39.4**	**+1.0**
BTO				PP	**PP**	**16 44 30.6**	**+1.7**
BTO				SS	SS	17 05 04.9	0.0
BTO				AMB	AMB		
	comp=Z,240nm,6.9s						
HNS	**HongShan**	**169.16**	**339**	⇑PKP	**PKPdf**	**16 39 41.2**	**+1.2**
TIY	**Taiyuan**	**169.44**	**348**	PKP	**PKPdf**	**16 39 40.8**	**+0.5**
TIY				PP	**PP**	**16 44 42.4**	**0.0**
TIY				SS	SS	17 05 37.7	+6.2
TIY				AMB	AMB		
	comp=Z,160nm,6.3s						
LZH	**Lanzhou**	**169.96**	**29**	*e*PKP	**PKPdf**	**16 39 41.6**	**+0.8**
LZH				PP	**PP**	**16 44 43.9**	**-1.6**
LZH				SS	SS	17 05 37.9	+0.4
LZH				AMB	AMB		
	comp=Z,120nm,5.0s						
LZH				LR	LR		
	comp=Z,81nm,19.8s						
LZH				LR	LR		
	comp=Z,120nm,19.2s						
LZH				LR	LR		
	comp=Z,260nm,22.5s						
NJ2	**Nanjing**	**170.82**	**303**	*e*PKP	**PKPdf**	**16 39 41.9**	**+0.8**
PZH	**PanZhiHua**	**172.79**	**95**	PKP	**PKPdf**	**16 39 42.5**	**+0.1**
PZH				pPKP	**pPKPdf**	**16 40 06.1**	**-0.3**
PZH				SKKS		16 51 34.5	
PZH				SS	**SS**	**17 06 00.5**	**-7.8**
PZH				AMB	AMB		
	comp=Z,130nm,6.2s						
XAN	**Xi'an**	**173.31**	**6**	⇓PKP	**PKPdf**	**16 39 42.7**	**+0.4**
XAN				pPKP	pPKPdf	16 40 03.1	-3.2
XAN				AMB	AMB		
	comp=Z,180nm,5.9s						
ENH	**Enshi**	**177.10**	**5**	PKPdf	**PKPdf**	**16 39 42.6**	**-0.8**
ENH				PKPab	PKPab	16 41 26.9	-0.6

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*IDC **05** 16:37:07.1±1.5, 35°.63N×70°.06E, h0^{km}, mb3.7/3, mbtmp3.7/4, ML3.0/1, Error ellipse: s-maj=39.2km s-min=35.7km az=78.0*

ISC 05 16:37:19.6±1.4**, 35°.9N**±0°.2×**70°.1E**±0°.2**, h100^{km}, n13, σ0^s.92**/11**, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.83**	**23**	P	**Pn**	**16 38 57.6**	**+0.2**
	SNR=16						
EKS2	**Erkin-Say**	**7.33**	**22**	P	**Pn**	**16 39 04.6**	**+0.6**
	SNR=11						
AAK	**Ala-Archa**	**7.54**	**25**	P	**Pn**	**16 39 07.7**	**+0.8**
	SNR=8.0						
KBK	**Karagaybulak**	**7.73**	**28**	P	Pn	16 39 19.9	+10
	SNR=19						
ULHL	**Ulahol**	**7.94**	**35**	P	Pn	16 39 22.5	+10
	SNR=8.0						
CHMS	**Chumysh**	**7.95**	**25**	P	**Pn**	**16 39 13.2**	**+0.8**
	SNR=9.1						
USP	**Ospenovka**	**8.11**	**23**	P	**Pn**	**16 39 14.7**	**+0.2**
	SNR=26						
TKM2	**Tokmak 2**	**8.20**	**30**	P	**Pn**	**16 39 16.0**	**+0.1**
	SNR=39						
BVAR	**Borovoye Array**	**17.13**	**1**	P	**Pn**	**16 41 11.1**	**-1.5**
	0.1nm,0.3s,baz=182,slow=9.7,SNR=5.0						
	1.6nm,0.7s						
ZALV	**Zalesovo Beam**	**20.77**	**25**	P	**P**	**16 41 51.6**	**-0.7**
	2.0nm,0.4s,baz=216,slow=10,SNR=1.8						
	2.0nm,0.4s						
HFS	**Hagfors**	**43.10**	**322**	P	**P**	**16 45 10.9**	**+1.4**
	0.2nm,0.3s,baz=103,slow=13,SNR=1.3						
	0.2nm,0.3s						
TORD	**Torodi Ar. Bea**	**64.98**	**268**	P	**P**	**16 47 48.4**	**-0.8**
	99nm,0.3s,baz=60,slow=5.4,SNR=2.0						
ASAR	**Alice Springs**	**84.51**	**124**	P	**P**	**16 49 41.8**	**+0.2**
	0.5nm,0.9s,baz=318,slow=5.0,SNR=4.4						
	0.5nm,0.9s						

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*IDC **05** 17:01:10.3±0.8, 24°.30N×72°.86E, h0^{km}, mb3.9/15, mbtmp3.9/17, ML3.9/2, MS3.1/1, Error ellipse: s-maj=21.5km s-min=15.2km az=47.0*

*NEIC **05** 17:01:12.4±1.7, 24°.54N±0°.08×72°.74E±0°.08, h10^{km}±2^{km}, mb4.0/22, Error ellipse: s-maj=17.8km s-min=3.8km az=138.0*

*NDI **05** 17:01:13.0±2.6, 24°.29N×72°.75E, h10^{km}, ML4.1, MW4.0, mb4.0(NEIC)*

ISC 05 17:01:11.2±0.5**, 24°.34N**±0°.05×**72°.78E**±0°.04**, h10^{km}, n78, σ2^s.08**/84**, mb4.1**/24**, Northern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHUJ	**Bhuj**	**3.06**	**250**	*e*P	**Pn**	**17 02 01.4**	**+1.8**
BHUJ				*e*S	**Sn**	**17 02 37.1**	**+0.7**
BHUJ				IAML		17 02 38.5	
	comp=N,190nm,0.4s						
BKNR	**BIKANER**	**3.69**	**7**	*e*P	**Pn**	**17 02 12.8**	**+4.6**
BKNR				*e*S	**Sn**	**17 02 56.5**	**+4.6**
BKNR				IAML		17 02 56.6	
	comp=E,197nm,0.1s						
BKNR				IAML		17 02 56.7	
	comp=N,231nm,0.1s						
GUNA	**GUNA**	**4.16**	**85**	*e*P	**Pn**	**17 02 15.0**	**+0.3**
GUNA				*e*S	**Sn**	**17 03 02.0**	**-1.4**
GUNA				IAML		17 03 03.3	
	comp=N,394nm,0.2s						
GUNA				IAML		17 03 04.0	
	comp=E,401nm,0.3s						
BHPL	**Bhopal**	**4.39**	**104**	*e*P	**Pn**	**17 02 19.2**	**+1.3**
BHPL				*e*S	**Sn**	**17 03 09.2**	**0.0**
BHPL				IAML		17 03 10.3	
	comp=N,394nm,0.4s						
BHPL				IAML		17 03 11.1	
	comp=E,387nm,0.3s						
LDR	**Lodi Road**	**5.80**	**42**	*e*P	**Pn**	**17 02 40.8**	**+3.5**
LDR				*e*S	**Sn**	**17 03 43.2**	**-0.6**
LDR				IAML		17 03 46.2	
	comp=N,472nm,0.3s						
LDR				IAML		17 03 54.5	
	comp=E,478nm,0.4s						
NPLP	**NPLP New Delhi**	**5.81**	**42**	*e*P	**Pn**	**17 02 40.3**	**+2.9**
NPLP				*e*S	**Sn**	**17 03 43.8**	**-0.3**
NPLP				IAML		17 03 44.8	
	comp=N,365nm,0.3s						
NPLP				IAML		17 03 45.3	
	comp=E,318nm,0.3s						
POO	**Poona**	**5.87**	**170**	*e*P	**Pn**	**17 02 39.9**	**+1.6**
POO				*e*S	**Sn**	**17 03 42.6**	**-3.1**
DDI	**Dehra Dun**	**7.58**	**37**	*e*P	**Pn**	**17 03 02.5**	**+0.8**
DDI				*e*S	**Sn**	**17 04 25.5**	**-2.3**
DDI				IAML		17 04 27.8	
	comp=E,248nm,0.5s						
DDI				IAML		17 04 28.6	
	comp=N,341nm,0.4s						
DHRM	**DHARAMSHALA**	**8.46**	**21**	*e*P	**Pn**	**17 03 14.6**	**+0.5**
DHRM				*e*S	**Sn**	**17 04 47.0**	**-2.8**
DHRM				IAML		17 04 50.1	
	comp=E,246nm,0.7s						
DHRM				IAmL		17 04 51.0	
	comp=N,403nm,0.4s						
JOSI	**Joshimath**	**8.63**	**43**	*e*P	**Pn**	**17 03 16.9**	**+0.5**
JOSI				*e*S	**Sn**	**17 04 51.1**	**-2.8**
JOSI				IAML		17 04 53.6	
	comp=N,141nm,0.3s						
JOSI				IAML		17 04 55.1	
	comp=E,216nm,0.4s						
KLP	**Kalpa**	**8.64**	**33**	*e*P	**Pn**	**17 03 17.5**	**+0.9**
KLP				*e*S	**Sn**	**17 04 50.3**	**-4.0**
KLP				IAML		17 04 58.5	
	comp=E,134nm,0.3s						
KLP				IAML		17 04 58.9	
	comp=N,132nm,0.6s						
BLSP	**Bilaspur**	**8.88**	**103**	*e*P	**Pn**	**17 03 20.3**	**+0.8**
BLSP				*e*S	**Sn**	**17 04 57.0**	**-2.6**
BLSP				IAML		17 04 58.3	
	comp=E,54nm,0.2s						
NIL	**Nilore**	**9.28**	**2**		**Pn**	**17 03 23.8**	**-1.4**
PYUN	**Piuthan**	**9.90**	**66**	Pn	**Pn**	**17 03 33.3**	**-0.4**
	baz=62,slow=0.0						
PYUN				Sn	**Sn**	**17 05 19.8**	**-5.3**
	comp=E,509nm,0.5s,baz=62,slow=0.0						
KOLN	**Koldanda**	**10.31**	**68**	Pn	**Pn**	**17 03 38.1**	**-1.2**
	baz=65,slow=0.0						
KOLN				Sn	Sn	17 05 28.4	-6.7
	comp=E,249nm,0.3s,baz=65,slow=0.0						
KBL	**Kabul**	**10.67**	**343**		**Pn**	**17 03 42.5**	**-1.8**
GKN	**Gorkha**	**11.25**	**69**	Pn	**Pn**	**17 03 50.4**	**-1.9**
	baz=65,slow=0.0						
GKN				Sn	Sn	17 05 51.8	-6.4
	comp=E,296nm,0.5s,baz=65,slow=0.0						
KNTI	**KHUNTI**	**11.53**	**94**	*e*P	**Pn**	**17 03 54.7**	**-1.3**
KNTI				*e*S	Sn	17 05 56.3	-8.5
KNTI				IAML		17 05 57.9	
	comp=N,44nm,0.2s						
KNTI				IAML		17 06 00.6	
	comp=E,75nm,0.2s						
DMN	**Daman**	**11.55**	**71**	Pn	**Pn**	**17 03 55.2**	**-1.3**
	baz=68,slow=0.0						
DMN				Sn	Sn	17 05 57.9	-7.8
	comp=E,254nm,0.6s,baz=68,slow=0.0						
KKN	**Kakani**	**11.75**	**70**	Pn	**Pn**	**17 03 57.1**	**-2.0**
	baz=67,slow=0.0						
KKN				Sn	Sn	17 06 02.7	-7.7
	comp=E,177nm,0.4s,baz=67,slow=0.0						
PKIN	**Phulchoki**	**11.80**	**71**	Pn	**Pn**	**17 03 57.8**	**-2.0**
	baz=68,slow=0.0						
PKIN				Sn	Sn	17 06 04.3	-7.4
	comp=E,269nm,0.5s,baz=68,slow=0.0						
PKI	**Pulchoki**	**11.81**	**72**	Pn	**Pn**	**17 03 58.1**	**-1.9**
	baz=68,slow=0.0						
PKI				Sn	Sn	17 06 04.3	-7.7
	baz=68,slow=0.0						
GUN	**Gumba**	**12.29**	**70**	Pn	**Pn**	**17 04 04.5**	**-2.1**
	baz=67,slow=0.0						
GUN				Sn	Sn	17 06 15.5	-8.4
	comp=E,173nm,0.4s,baz=67,slow=0.0						
RAMN	**Ramite**	**12.73**	**75**	Pn	Pn	17 04 10.1	-2.5
	baz=72,slow=0.0						
RAMN				Sn	Sn	17 06 24.6	-10
	comp=E,115nm,0.3s,baz=72,slow=0.0						
WSAR	**Wadi Sarin**	**13.01**	**268**	Pn	**Pn**	**17 04 15.5**	**-0.6**
	baz=105,slow=24,SNR=4.0						
WSAR				Sn	**Sn**	**17 06 36.0**	**-5.0**
	baz=324,slow=24,SNR=1.5						
EVN	**Everest**	**13.11**	**71**		**Pn**	**17 04 15.8**	**-2.3**
ODAN	**Odare**	**13.42**	**76**	Pn	Pn	17 04 18.9	-3.0
	baz=73,slow=0.0						
ODAN				Sn	Sn	17 06 41.7	-10
	baz=73,slow=0.0						
SIMJ	**Simiganj**	**14.63**	**348**		Pn	17 04 34.0	-4.3
KSH	**Kashi**	**15.37**	**9**	P	Pn	17 04 43.2	-5.0
KSH				pP	P	17 04 46.7	-6.3
KSH				S	Sn	17 07 22.6	-16
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BTK	**Batken**	**15.76**	**354**		**Pn**	**17 04 50.6**	**-2.7**
BTK				IAmb	IAmb	17 04 59.7	
	comp=Z,17nm,0.8s						
ARSB	**Arslanbob**	**16.94**	**1**		Pn	17 05 03.5	-4.8
ARSB				IAmb	IAmb	17 05 31.9	
	comp=Z,5.3nm,0.7s						
LSA	**Lhasa**	**17.21**	**68**		**Pn**	**17 05 09.6**	**-2.6**
LSA				IAmb	IAmb	17 05 17.5	
	comp=Z,12nm,0.8s						
LSA	**Lhasa**	**17.21**	**68**	Pn	**Pn**	**17 05 10.0**	**-2.2**
LSA				Sn	Sn	17 08 01.9	-22
LSA				smax	smax		
	comp=N,14nm,0.8s						
WUS	**Wushi**	**17.65**	**16**	Pn	Pn	17 05 12.4	-4.9
AAK	**Ala-Archa**	**18.30**	**4**	Pn	**Pn**	**17 05 21.8**	**-3.5**
AAK	**Ala-Archa**	**18.30**	**4**	P	**Pn**	**17 05 26.0**	**+0.6**
	comp=N,0.5nm,0.3s,baz=193,slow=15,SNR=6.0						
	comp=N,1.9nm,0.5s						
PALK	**Pallekele**	**18.59**	**155**	P	**Pn**	**17 05 31.9**	**+2.9**
PALK	**Pallekele**	**18.59**	**155**	P	**P**	**17 05 28.8**	**+0.1**
	comp=N,0.3nm,0.3s,baz=124,slow=19,SNR=2.2						
	comp=N,8.3nm,0.9s						
PRZ	**Przheval'sk**	**18.68**	**13**	P	**P**	**17 05 28.4**	**-1.2**
PRZ				IAmb	IAmb	17 05 39.7	
	comp=Z,6.6nm,0.9s						
KK31	**Karatay Array**	**18.81**	**355**		**P**	**17 05 28.8**	**-2.1**
KK31				IAmb	IAmb	17 05 32.6	
	comp=Z,5.7nm,0.8s						
KKAR	**Karatay Array**	**18.81**	**355**	P	**P**	**17 05 28.9**	**-2.0**
KKAR				IAmb	IAmb	17 05 32.6	
	comp=Z,6.0nm,0.8s						
KKAR	**Karatay Array**	**18.81**	**355**		**P**	**17 05 28.7**	**-2.2**
MAKZ	**Makanchi**	**23.60**	**16**		**P**	**17 06 22.6**	**+0.5**
MAKZ				IAmb	IAmb	17 06 37.0	
	comp=Z,9.9nm,1.0s						
MKAR	**Makanchi Array**	**23.66**	**16**	P	**P**	**17 06 23.2**	**+0.4**
MKAR	**Makanchi Array**	**23.66**	**16**	P	**P**	**17 06 23.3**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=202,slow=9.4,SNR=10.0						
	comp=Z,1.5nm,0.7s						
CHTO	**Chiang Mai**	**24.92**	**98**		**P**	**17 06 35.6**	**+0.9**
RAYN	**Ar Rayn**	**24.94**	**274**	P	**P**	**17 06 34.7**	**-0.1**
RAYN				IAmb	IAmb	17 06 43.1	
	comp=Z,2.7nm,0.8s						
CM31	**Chiang Mai Arr**	**25.03**	**98**	P	**P**	**17 06 36.9**	**+1.2**
CMAR	**Chiang Mai Arr**	**25.03**	**98**		**P**	**17 06 36.4**	**+0.8**
CMAR	**Chiang Mai Arr**	**25.03**	**98**	P	**P**	**17 06 36.7**	**+1.1**
	comp=Z,13nm,0.7s,baz=284,slow=10.0,SNR=104						
CMAR				LR	LR	17 17 48.8	
	comp=Z,42nm,18.4s,baz=270,slow=40						
PZH	**PanZhiHua**	**26.22**	**79**	P	**P**	**17 06 46.5**	**0.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KURBB	**Kurchatov Arra**	**26.61**	**8**	P	**P**	**17 06 50.0**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=206,slow=8.5,SNR=6.3						
	comp=Z,0.8nm,0.6s						
KURK	**Kurchatov**	**26.71**	**8**	P	**P**	**17 06 49.9**	**-0.7**
KURK				IAmb	IAmb	17 06 51.4	
	comp=Z,2.0nm,0.5s						
AB31	**Akbulak array**	**26.83**	**341**	P	**P**	**17 06 51.2**	**-0.4**
ABKAR	**Akbulak array**	**26.83**	**341**	P	**P**	**17 06 50.4**	**-1.2**
ABKAR	**Akbulak array**	**26.83**	**341**	P	**P**	**17 06 50.9**	**-0.8**
ABKAR				IAmb	IAmb	17 07 24.5	
	comp=Z,1.4nm,0.8s						
GTA	**Gaotai**	**27.30**	**50**	*e*P	**P**	**17 07 02.4**	**+6.3**
GTA				pP	sP	17 07 06.4	+5.8
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BVAR	**Borovoye Array**	**28.70**	**357**	P	**P**	**17 07 08.6**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=156,slow=11,SNR=2.4						
	comp=Z,0.3nm,0.4s						
LZH	**Lanzhou**	**29.16**	**59**	*e*P	P	17 07 05.5	-7.3
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
SONM	**Songino Array**	**35.44**	**40**	P	**P**	**17 08 05.3**	**-2.4**
SONM				IAmb	IAmb	17 08 17.2	
	comp=Z,2.8nm,1.1s						
SONM	**Songino Array**	**35.44**	**40**	P	**P**	**17 08 09.4**	**+1.7**
	comp=Z,1.5nm,0.6s,baz=234,slow=8.9,SNR=7.1						
	comp=Z,1.5nm,0.6s						
ULN	**Ulaanbaatar**	**35.84**	**40**	P	P	17 08 08.5	-2.7
HHC	**Hu-ho-hao-te**	**36.25**	**53**	*e*P	**P**	**17 08 16.2**	**+1.6**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AKASG	**Malin Array Be**	**42.55**	**320**	P	**P**	**17 09 10.1**	**+3.1**
	comp=Z,0.3nm,0.6s,baz=101,slow=7.0,SNR=4.8						
	comp=Z,0.3nm,0.6s						
BURAR	**Bucovina Array**	**44.09**	**314**	P	**P**	**17 09 19.1**	**-0.5**
NRIK	**Noril'sk**	**45.87**	**7**	P	**P**	**17 09 33.0**	**-0.3**
NRIK				IAmb	IAmb	17 09 34.9	
	comp=Z,2.6nm,0.8s						
KSRS	**Korea Array**	**48.46**	**61**	P	**P**	**17 09 53.3**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=262,slow=8.5,SNR=8.7						
	comp=Z,1.4nm,0.7s						
FINES	**FINESS Array B**	**48.70**	**332**	P	**P**	**17 09 56.6**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=111,slow=6.6,SNR=3.5						
	comp=Z,0.6nm,0.6s						
USRK	**Ussuriysk Ar.**	**51.64**	**52**	P	**P**	**17 10 18.0**	**0.0**
USRK	**Ussuriysk Ar.**	**51.64**	**52**	P	**P**	**17 10 18.1**	**+0.1**
	comp=Z,1.8nm,0.5s,baz=257,slow=8.5,SNR=5.4						
	comp=Z,1.8nm,0.5s						
KLR	**Kul'dur**	**51.84**	**46**	P	**P**	**17 10 20.0**	**+0.5**
	comp=Z,1.5nm,0.6s,baz=256,slow=7.7,SNR=3.8						
	comp=Z,1.5nm,0.6s						
ARCES	**ARCESS Array B**	**53.03**	**341**	P	**P**	**17 10 29.0**	**+1.0**
	comp=Z,1.5nm,0.8s,baz=102,slow=5.6,SNR=6.4						
	comp=Z,1.5nm,0.8s						
HFS	**Hagfors**	**53.89**	**328**	P	**P**	**17 10 37.0**	**+2.6**
	comp=Z,0.9nm,0.6s,baz=69,slow=8.4,SNR=2.1						
	comp=Z,0.9nm,0.6s						
SEY	**Seymchan**	**63.91**	**30**	P	**P**	**17 11 44.3**	**+0.4**
	comp=Z,2.1nm,0.9s,baz=267,slow=8.1,SNR=4.4						
	comp=Z,2.1nm,0.9s						
TORD	**Torodi Ar. Bea**	**67.63**	**275**	P	**P**	**17 12 09.3**	**+0.5**
	comp=Z,129nm,0.4s,baz=66,slow=6.4,SNR=1.6						
WRA	**Warramunga Arr**	**74.35**	**121**	P	**P**	**17 12 49.7**	**+0.3**
	comp=Z,2.2nm,0.7s,baz=315,slow=5.9,SNR=23						
	comp=Z,2.2nm,0.7s						
ASAR	**Alice Springs**	**76.10**	**124**	P	**P**	**17 12 59.6**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=306,slow=5.9,SNR=24						
	comp=Z,1.8nm,0.7s						
ILAR	**Eielson Array**	**86.02**	**16**	P	**P**	**17 13 51.0**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=316,slow=4.9,SNR=4.8						
	comp=Z,0.3nm,0.4s						

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*IDC **05** 17:02:32.0±0.8, 54°.95N×164°.45E, h0^{km}, mb3.9/22, mbtmp3.9/24, ML3.7/2, MS2.9/2, Error ellipse: s-maj=21.1km s-min=13.8km az=149.0*

*KRSC **05** 17:02:32.2±1.4, 54°.71N×164°.48E, h50^{km}±24^{km}, Ml4.3*

*NEIC **05** 17:02:33.1±1.4, 54°.9N±0°.2×164°.3E±0°.2, h10^{km}±2^{km}, mb4.2/50, Error ellipse: s-maj=31.3km s-min=14.4km az=148.0*

*MOS **05** 17:02:34.7±0.8, 54°.77N×164°.45E, h40^{km}, mb4.3/1, Error ellipse: s-maj=6.1km s-min=5.3km az=72.8*

ISC 05 17:02:33.2±2.0**, 54°.74N**±0°.04×**164°.55E**±0°.05**, h15^{km}**±13^{km}**, n170, σ1^s.28**/196**, mb4.1**/44**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	**Bering**	**0.95**	**60**	PN	**Pb**	**17 02 51.4**	**+0.1**
BKI				S	**Sg**	**17 03 03.5**	**-0.4**
BKI	**Bering**	**0.95**	**60**	*e*P	**Pb**	**17 02 51.4**	**+0.1**
BKI				*e*S	**Sg**	**17 03 03.6**	**-0.4**
KBTR	**Krutoberegovo**	**1.77**	**327**	PN	**Pn**	**17 03 01.3**	**-2.0**
KBTR				S	**Sn**	**17 03 21.0**	**-4.7**
KBTR	**Krutoberegovo**	**1.77**	**327**	*e*P	**Pn**	**17 03 01.4**	**-2.0**
KBTR				*e*S	**Sn**	**17 03 21.0**	**-4.7**
KBG	**Krutoberegovo**	**1.85**	**326**	PN	**Pn**	**17 03 02.9**	**-1.5**
KBG				S	**Sn**	**17 03 23.9**	**-3.6**
KBG	**Krutoberegovo**	**1.85**	**326**	*e*P	**Pn**	**17 03 02.9**	**-1.5**
KBG				*e*S	**Sn**	**17 03 23.9**	**-3.6**
TUMD	**Tumrok D**	**2.44**	**283**	PN	**Pn**	**17 03 12.1**	**-0.4**
TUMD				S	**Sn**	**17 03 40.7**	**-1.3**
TUMD	**Tumrok D**	**2.44**	**283**	*e*P	**Pn**	**17 03 12.2**	**-0.4**
TUMD				*e*S	**Sn**	**17 03 40.8**	**-1.3**
ZLN	**Zelenaya**	**2.49**	**303**	PN	**Pn**	**17 03 13.6**	**+0.3**
ZLN				S	**Sn**	**17 03 44.2**	**+0.7**
ZLN	**Zelenaya**	**2.49**	**303**	*e*P	**Pn**	**17 03 13.6**	**+0.3**
ZLN				*e*S	**Sn**	**17 03 44.2**	**+0.7**
BZGR	**Bezymyannyi-Gr**	**2.51**	**300**	PN	**Pn**	**17 03 13.6**	**0.0**
BZGR				S	**Sn**	**17 03 43.9**	**-0.1**
BZGR	**Bezymyannyi-Gr**	**2.51**	**300**	*e*P	**Pn**	**17 03 13.7**	**0.0**
BZGR				*e*S	**Sn**	**17 03 43.9**	**-0.1**
SMKR	**Semkarok**	**2.54**	**318**	*e*S	**Sn**	**17 03 45.5**	**+0.8**
CIRR	**Tsirk**	**2.57**	**304**	PN	**Pn**	**17 03 14.6**	**+0.2**
CIRR	**Tsirk**	**2.57**	**304**	*e*P	**Pn**	**17 03 14.6**	**+0.2**
LGNR	**Loginova**	**2.58**	**303**	PN	**Pn**	**17 03 15.0**	**+0.3**
LGNR	**Loginova**	**2.58**	**303**	*e*P	**Pn**	**17 03 15.1**	**+0.3**
BZMR	**Bezymyannaya**	**2.61**	**299**	PN	**Pn**	**17 03 15.2**	**+0.2**
BZMR				S	**Sn**	**17 03 46.3**	**-0.2**
BZMR	**Bezymyannaya**	**2.61**	**299**	*e*P	**Pn**	**17 03 15.2**	**+0.2**
BZMR				*e*S	**Sn**	**17 03 46.3**	**-0.2**
BZWR	**Bezymyannyi-We**	**2.62**	**300**	PN	**Pn**	**17 03 15.5**	**+0.3**
BZWR				S	**Sn**	**17 03 48.0**	**+1.2**
BZWR	**Bezymyannyi-We**	**2.62**	**300**	*e*P	**Pn**	**17 03 15.5**	**+0.3**
BZWR				*e*S	**Sn**	**17 03 48.0**	**+1.2**
KMNR	**Kamenistaya**	**2.67**	**294**	PN	**Pn**	**17 03 15.7**	**-0.1**
KMNR				S	**Sn**	**17 03 48.2**	**+0.3**
KMNR	**Kamenistaya**	**2.67**	**294**	*e*P	**Pn**	**17 03 15.7**	**-0.1**
KMNR				*e*S	**Sn**	**17 03 48.2**	**+0.3**
KIRR	**Kirishev**	**2.69**	**299**	PN	**Pn**	**17 03 16.2**	**+0.1**
KIRR				S	**Sn**	**17 03 49.5**	**+0.9**
KIRR	**Kirishev**	**2.69**	**299**	*e*P	**Pn**	**17 03 16.3**	**+0.1**
KIRR				*e*S	**Sn**	**17 03 49.5**	**+0.9**
KRSR	**Krestovskiy**	**2.71**	**305**	PN	**Pn**	**17 03 16.0**	**-0.3**
KRSR				S	**Sn**	**17 03 47.8**	**-1.1**
KRSR	**Krestovskiy**	**2.71**	**305**	*e*P	**Pn**	**17 03 16.0**	**-0.3**
KRSR				*e*S	**Sn**	**17 03 47.9**	**-1.1**
KLY	**Klyuchi**	**2.72**	**307**	PN	**Pn**	**17 03 14.7**	**-1.6**
KLY	**Klyuchi**	**2.72**	**307**	*e*P	**Pn**	**17 03 14.8**	**-1.6**
KPT	**Kopyto**	**2.76**	**298**	PN	**Pn**	**17 03 17.5**	**+0.5**
KPT	**Kopyto**	**2.76**	**298**	*e*P	**Pn**	**17 03 17.6**	**+0.5**
KOZ	**Kozyrevsk**	**2.98**	**298**	PN	**Pn**	**17 03 20.8**	**+0.9**
KOZ				S	**Sn**	**17 03 56.2**	**+0.9**
KOZ	**Kozyrevsk**	**2.98**	**298**	*e*P	**Pn**	**17 03 20.8**	**+0.9**
KOZ				*e*S	**Sn**	**17 03 56.2**	**+0.9**
SPN	**Mys Shipunski**	**3.14**	**240**	PN	**Pn**	**17 03 21.0**	**-1.1**
SPN	**Mys Shipunski**	**3.14**	**240**	*e*P	**Pn**	**17 03 21.1**	**-1.1**
SPN				*e*S	**Sn**	**17 03 55.9**	**-3.4**
SRDR	**Sredinnyy**	**3.17**	**302**	PN	**Pn**	**17 03 23.0**	**+0.4**
SRDR				S	**Sn**	**17 03 59.9**	**-0.3**
SRDR	**Sredinnyy**	**3.17**	**302**	*e*P	**Pn**	**17 03 23.0**	**+0.4**
SRDR				*e*S	**Sn**	**17 03 59.9**	**-0.3**
NLC	**Nalytchevo**	**3.45**	**245**	PN	**Pn**	**17 03 25.9**	**-0.4**
NLC	**Nalytchevo**	**3.45**	**245**	*e*P	**Pn**	**17 03 26.0**	**-0.4**
NLC				*e*S	**Sn**	**17 04 04.0**	**-3.0**
ESO	**Esso**	**3.55**	**292**	PN	**Pn**	**17 03 27.4**	**-0.3**
ESO				S	**Sn**	**17 04 06.7**	**-2.7**
ESO	**Esso**	**3.55**	**292**	*e*P	**Pn**	**17 03 27.5**	**-0.3**
ESO				*e*S	**Sn**	**17 04 06.7**	**-2.7**
SDLR	**Sedlovina**	**3.65**	**249**	PN	**Pn**	**17 03 29.1**	**-0.1**
SDLR				S	**Sn**	**17 04 09.8**	**-2.2**
SDLR	**Sedlovina**	**3.65**	**249**	*e*P	**Pn**	**17 03 29.2**	**-0.1**
SDLR				*e*S	**Sn**	**17 04 09.8**	**-2.2**
SMAR	**Somma**	**3.70**	**249**	PN	**Pn**	**17 03 30.0**	**0.0**
SMAR				S	**Sn**	**17 04 10.9**	**-2.5**
SMAR	**Somma**	**3.70**	**249**	*e*P	**Pn**	**17 03 30.0**	**0.0**
SMAR				*e*S	**Sn**	**17 04 11.0**	**-2.5**
KRER	**Koryakskii**	**3.71**	**250**	PN	**Pn**	**17 03 30.6**	**+0.5**
KRER				S	**Sn**	**17 04 11.9**	**-1.7**
KRER	**Koryakskii**	**3.71**	**250**	*e*P	**Pn**	**17 03 30.7**	**+0.5**
KRER				*e*S	**Sn**	**17 04 12.0**	**-1.7**
UGLR	**Uglovaya**	**3.71**	**248**	PN	**Pn**	**17 03 30.2**	**+0.1**
UGLR	**Uglovaya**	**3.71**	**248**	*e*P	**Pn**	**17 03 30.2**	**+0.1**
UGLR				*e*S	**Sn**	**17 04 10.5**	**-3.0**
AVH	**Avacha**	**3.73**	**249**	PN	**Pn**	**17 03 30.9**	**+0.6**

AVH				S	Sn	17 04 12.7	-1.3
AVH	Avacha	3.73	249	eP	Pn	17 03 30.9	+0.6
AVH				eS	Sn	17 04 12.8	-1.3
KRX	Arik	3.74	251	PN	Pn	17 03 30.8	+0.3
KRX				S	Sn	17 04 12.2	-2.1
KRX	Arik	3.74	251	eP	Pn	17 03 30.8	+0.3
KRX				eS	Sn	17 04 12.3	-2.1
KOK	Koryaka	3.77	250	PN	Pn	17 03 31.3	+0.4
KOK				S	Sn	17 04 12.9	-2.2
KOK	Koryaka	3.77	250	eP	Pn	17 03 31.4	+0.4
KOK				eS	Sn	17 04 12.9	-2.2
DALK	Dalny	3.83	246	PN	Pn	17 03 31.3	-0.3
DALK				S	Sn	17 04 14.5	-1.8
DALK	Dalny	3.83	246	eP	Pn	17 03 31.3	-0.3
DALK				eS	Sn	17 04 14.5	-1.8
PET	Petropavlovsk	3.89	246		Pn	17 03 31.4	-1.0
PET	Petropavlovsk	3.89	246	ePN	Pn	17 03 32.5	+0.1
PET				pmax	pmax		
	comp=Z,58nm,0.9s						
INSR	Institute	3.89	247	PN	Pn	17 03 32.5	+0.1
INSR	Institute	3.89	247	eP	Pn	17 03 32.6	+0.1
INSR				eS	Sn	17 04 14.7	-3.1
GNL	Ganaly	4.01	258	PN	Pn	17 03 35.2	+0.9
GNL	Ganaly	4.01	258	eP	Pn	17 03 35.2	+0.9
KRMR	Karymshinskiy	4.26	246	PN	Pn	17 03 37.6	+0.2
KRMR	Karymshinskiy	4.26	246	eP	Pn	17 03 37.7	+0.2
KRMR				eS	Sn	17 04 24.6	-2.2
RUS	Russkaya	4.27	240	PN	Pn	17 03 37.6	-0.1
RUS	Russkaya	4.27	240	eP	Pn	17 03 37.6	-0.1
RUS				eS	Sn	17 04 24.0	-3.2
PEA0B	Petropavlovsk-	4.36	251		Pn	17 03 39.4	+0.4
PEA0B	Petropavlovsk-	4.36	251	PN	Pn	17 03 39.4	+0.4
PETK	Petropavlovsk-	4.36	251		Pn	17 03 38.2	-0.8
PETK	Petropavlovsk-	4.36	251	Pn	Pn	17 03 39.0	0.0
	comp=Z,10nm,0.3s,baz=68,slow=16,SNR=258						
PETK				Sn	Sn	17 04 29.2	-0.3
	comp=Z,2.4nm,0.3s,baz=186,slow=2.7,SNR=4.6						
PETK				LR	LR	17 04 55.9	
	comp=Z,59nm,19.4s,baz=9.6,slow=33						
	comp=Z,12nm,0.3s						
MTVR	Mutnovka	4.41	242	PN	Pn	17 03 40.0	+0.3
MTVR	Mutnovka	4.41	242	eP	Pn	17 03 40.0	+0.3
GRL	Gorelyy	4.43	243	PN	Pn	17 03 40.7	+0.8
GRL	Gorelyy	4.43	243	eP	Pn	17 03 40.8	+0.8
GRL				eS	Sn	17 04 30.2	-1.1
OSSR	Ossora	4.60	350	PN	Pn	17 03 41.8	-0.3
OSSR	Ossora	4.60	350	eP	Pn	17 03 41.9	-0.3
ASAK	Asacha	4.61	242	PN	Pn	17 03 43.6	+1.2
ASAK	Asacha	4.61	242	eP	Pn	17 03 43.6	+1.2
ASAK				eS	Sn	17 04 33.6	-2.1
APC	Apacha	4.74	251	PN	Pn	17 03 45.5	+1.4
APC	Apacha	4.74	251	eP	Pn	17 03 45.5	+1.4
PALN	Palana	5.04	332	PN	Pn	17 03 48.6	+0.5
PALN	Palana	5.04	332	eP	Pn	17 03 48.6	+0.5
MIPR	Malaya Ipel'ka	5.26	245	PN	Pn	17 03 52.8	+1.5
MIPR	Malaya Ipel'ka	5.26	245	eP	Pn	17 03 52.8	+1.5
PAU	Pauzhetka	5.69	238	PN	Pn	17 03 58.3	+1.1
PAU	Pauzhetka	5.69	238	eP	Pn	17 03 58.4	+1.1
TILK	Tilichiki	5.79	8	PN	Pn	17 03 59.0	+0.5
TILK	Tilichiki	5.79	8	eP	Pn	17 03 59.0	+0.5
SKR	Severo-Kuril's	6.53	235	PN	Pn	17 04 09.7	+1.0
SKR	Severo-Kuril's	6.53	235	eP	Pn	17 04 09.7	+1.0
SHO	Shikotan	15.81	234	eP	Pn	17 06 09.4	-5.8
JKA	Kamikawa-asahi	17.72	242	P	Pn	17 06 38.9	-0.3
JKA				IAmb	IAmb	17 07 04.0	
	comp=Z,18nm,1.4s						
ASAJ	Asahikawa	17.72	242	P	Pn	17 06 38.8	-0.5
	comp=Z,0.7nm,0.3s,baz=66,slow=15,SNR=8.4						
	comp=Z,5.3nm,0.6s						
ERM	Erimo	18.98	237	P	P	17 06 51.6	-2.3
ERM	Erimo	18.98	237	P	P	17 06 51.6	-2.3
ERM				pmax	pmax		
	comp=Z,38nm,1.4s						
G16K	Koyuk River	19.40	44	P	P	17 06 58.3	0.0
C16K	Lisburne Hills	19.46	34	P	Pn	17 07 00.2	0.0
C16K				IAmb	IAmb	17 07 05.8	
	comp=Z,20nm,1.5s						
N15K	Kwethluk River	19.61	60	P	Pn	17 07 02.6	+0.5
N15K				IAmb	IAmb	17 07 07.6	
	comp=Z,13nm,1.2s						
L16K	Owhat River	19.97	55	P	P	17 07 05.3	+0.6
M16K	Timber Creek	20.19	57	P	Pn	17 07 09.0	+0.1
M16K				IAmb	IAmb	17 07 24.6	
	comp=Z,10nm,1.1s						
H17K	Granite Mounta	20.27	46	P	P	17 07 08.9	+1.0
K17K	Iditarod	20.61	52	P	Pn	17 07 13.6	-0.3
E18K	Tukpahlearik C	20.73	39	P	P	17 07 14.5	+1.7
H18K	Honhosa River	20.96	45	P	P	17 07 16.6	+1.2
H18K				IAmb	IAmb	17 07 51.1	
	comp=Z,12nm,1.4s						
C18K	Utukok River	21.00	35	P	P	17 07 16.2	+0.5
J18K	Innoko River	21.40	50		P	17 07 20.9	+0.7
J19K	Poorman	21.94	49		P	17 07 26.5	+0.6
E19K	Redstone River	21.98	40		P	17 07 26.3	0.0
ACHA	Angle Creek He	22.20	65	P	P	17 07 29.3	+0.5
D20K	Etivluk River	22.58	37	P	P	17 07 32.5	-0.2
D20K				IAmb	IAmb	17 07 33.7	
	comp=Z,16nm,1.4s						
J20K	Nowinta River	22.61	49		P	17 07 34.3	+1.4
J20K				IAmb	IAmb	17 07 35.5	
	comp=Z,9.9nm,1.3s						
H21K	Melozitna Rive	23.34	45	P	P	17 07 40.9	+0.4
H21K				IAmb	IAmb	17 07 47.2	
	comp=Z,7.0nm,1.2s						
CAST	Castle Rocks	23.48	51	P	P	17 07 42.5	+0.5
I21K	Tanana	23.63	46	P	P	17 07 43.6	+0.3
I21K				IAmb	IAmb	17 07 44.8	
	comp=Z,4.5nm,0.8s						
E22K	Anaktuvuk Pass	24.14	39		P	17 07 48.5	+0.2
MLY	Manley	24.14	47	P	P	17 07 48.7	+0.4
MLY				IAmb	IAmb	17 07 50.2	
	comp=Z,3.7nm,0.8s						
SUA	Susitna One	24.14	56	IAmb	IAmb	17 07 55.0	
	comp=Z,5.6nm,1.0s						
COLD	Coldfoot	24.59	42	IAmb	IAmb	17 07 54.6	
	comp=Z,5.9nm,1.1s						
H23K	Yukon River	24.70	45	IAmb	IAmb	17 08 00.1	
	comp=Z,7.8nm,1.1s						
E23K	Chandalar	24.93	40	IAmb	IAmb	17 08 08.5	
	comp=Z,6.4nm,0.9s						
CCB	Clear Creek Bu	25.38	48	IAmb	IAmb	17 08 02.2	
	comp=Z,7.2nm,0.8s						
D24K	Happy Valley	25.41	37	P	P	17 07 59.4	-0.3
D24K				IAmb	IAmb	17 08 01.8	
	comp=Z,6.9nm,0.8s						
F24K	Squaw Lake	25.51	41	IAmb	IAmb	17 08 02.4	
	comp=Z,2.9nm,0.7s						
G24K	Hadweenzic Riv	25.60	43	IAmb	IAmb	17 08 03.0	
	comp=Z,5.5nm,0.7s						
MJAR	Matsushiro Arr	25.64	236	P	P	17 08 04.4	+2.2
	comp=Z,1.1nm,0.6s,baz=20,slow=10,SNR=8.2						
	comp=Z,1.1nm,0.6s						
MJB9	Matsu-Tunnel	25.64	236	P	P	17 08 02.5	+0.3
MAJO	Matsushiro	25.64	236	P	P	17 08 03.0	+0.9
MAJO	Matsushiro	25.64	236	P	P	17 08 03.0	+0.9
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HDA	Harding Lake	25.75	48	IAmb	IAmb	17 08 04.1	
	comp=Z,3.3nm,0.7s						
IL31		25.77	48	IAmb	IAmb	17 08 04.1	
	comp=Z,3.7nm,0.8s						
ILAR	Eielson Array	25.77	48	P	P	17 08 02.8	-0.3
	comp=Z,2.2nm,0.7s,baz=262,slow=9.0,SNR=28						
	comp=Z,2.2nm,0.7s						
PRP	Porcupine Dome	26.35	46	IAmb	IAmb	17 08 09.6	
	comp=Z,5.1nm,0.8s						
L27K	Beaver Creek,	28.13	51	IAmb	IAmb	17 08 26.1	
	comp=Z,2.8nm,0.8s						
M29M	Somme Creek	29.76	52	IAmb	IAmb	17 08 41.4	
	comp=Z,2.2nm,0.5s						
L29M	L29M	29.78	50	IAmb	IAmb	17 08 41.1	
	comp=Z,5.1nm,0.9s						
KSRS	Korea Array	30.26	250	P	P	17 08 45.8	+2.4
	comp=Z,0.5nm,0.7s,baz=42,slow=8.0,SNR=2.4						
	comp=Z,0.5nm,0.7s						
M31M	Drury Creek, Y	31.66	51	IAmb	IAmb	17 08 57.9	
	comp=Z,2.4nm,0.7s						
H11N2	WAKE ISLAND Hy	34.99	176	T	T	17 48 00.4	
	baz=359,slow=76,SNR=122						
H11N3	WAKE ISLAND Hy	35.00	176	T	T	17 47 59.8	
	baz=359,slow=76,SNR=91						
H11N1	WAKE ISLAND Hy	35.01	176	T	T	17 48 00.1	
	baz=359,slow=76,SNR=108						
SONM	Songino Array	36.08	284	P	P	17 09 34.2	0.0
	comp=Z,0.6nm,0.4s,baz=69,slow=7.9,SNR=2.4						
SONM				LR	LR	17 25 18.1	
	comp=Z,36nm,18.1s,baz=272,slow=38						
	comp=Z,0.6nm,0.4s						
NRIK	Noril'sk	36.10	324	P	P	17 09 33.8	-0.2
	comp=Z,2.0nm,0.7s,baz=140,slow=2.3,SNR=6.9						
	comp=Z,2.0nm,0.7s						
H11S1	WAKE ISLAND Hy	36.20	177	T	T	17 49 27.1	
	baz=359,slow=74						
H11S3	WAKE ISLAND Hy	36.21	177	T	T	17 49 29.6	
	baz=359						
H11S2	WAKE ISLAND Hy	36.22	177	T	T	17 49 30.9	
	baz=359,slow=74						
YKA	Yellowknife Ar	40.15	45	P	P	17 10 08.9	+0.7
	comp=Z,0.5nm,0.6s,baz=301,slow=8.1,SNR=2.9						
	comp=Z,0.5nm,0.6s						
SPITS	Spitsbergen Ar	45.93	351	P	P	17 10 54.3	-0.5
	comp=Z,6.5nm,0.6s,baz=67,slow=9.2,SNR=15						
	comp=Z,6.5nm,0.6s						
BLKN	Baker Lake	46.23	37	P	P	17 10 57.2	0.0
KURK	Kurchatov	49.08	303	P	P	17 11 20.1	+0.6
KURBB	Kurchatov Arra	49.18	303	P	P	17 11 20.1	-0.2
	comp=Z,0.6nm,0.4s,baz=56,slow=7.7,SNR=4.8						
	comp=Z,0.6nm,0.4s						
MKAR	Makanchi Array	49.79	297	P	P	17 11 24.5	-0.5
	comp=Z,0.5nm,0.7s,baz=39,slow=7.0,SNR=1.7						
	comp=Z,0.5nm,0.7s						
HLID	Hailey	51.31	67		P	17 11 33.5	-3.2
HLID				IAmb	IAmb	17 11 36.7	
	comp=Z,1.4nm,0.7s						
BVAR	Borovoye Array	51.40	310	P	P	17 11 37.0	-0.1
	comp=Z,0.4nm,0.5s,baz=52,slow=12,SNR=2.0						
	comp=Z,0.4nm,0.5s						
BVAR	Borovoye Array	51.40	310	P	P	17 11 37.0	-0.1
ARCES	ARCESS Array B	52.51	343	P	P	17 11 43.2	-1.9
	comp=Z,1.2nm,0.8s,baz=32,slow=7.5,SNR=4.6						
	comp=Z,1.2nm,0.8s						
NVAR	Mina Array Bea	52.73	74	P	P	17 11 48.0	+0.6
	comp=Z,0.6nm,0.7s,baz=337,slow=6.9,SNR=2.5						
	comp=Z,0.6nm,0.7s						
FINES	FINESS Array B	59.61	338	P	P	17 12 35.7	-0.2
	comp=Z,1.4nm,0.6s,baz=24,slow=7.6,SNR=8.3						
	comp=Z,1.4nm,0.6s						
CMAR	Chiang Mai Arr	61.07	261	P	P	17 12 47.7	+1.2
	comp=Z,0.5nm,0.6s,baz=21,slow=6.1,SNR=5.5						
	comp=Z,0.5nm,0.6s						
NB2	NORSAR Subarra	62.65	346	P	P	17 12 56.3	-0.3
	comp=Z,0.5nm,0.5s,baz=18,slow=6.9						
NOA	NORSAR Array B	62.65	346	P	P	17 12 56.2	-0.4
	comp=Z,0.6nm,0.5s,baz=17,slow=6.8,SNR=4.9						
	comp=Z,0.6nm,0.5s						
HFS	Hagfors	63.14	344	P	P	17 12 59.1	-0.7
	comp=Z,1.1nm,0.5s,baz=57,slow=11,SNR=6.9						
	comp=Z,1.1nm,0.5s						
TXAR	Lajitas Array	67.59	71	P	P	17 13 30.6	+1.4
	comp=Z,1.7nm,0.5s,baz=300,slow=5.1,SNR=19						
	comp=Z,1.7nm,0.5s						
AKASG	Malin Array Be	68.50	331	P	P	17 13 33.8	-0.7
	comp=Z,0.5nm,0.4s,baz=28,slow=7.0,SNR=3.6						
	comp=Z,0.5nm,0.4s						
EKA	Eskdalemuir Ar	69.83	353	P	P	17 13 41.9	-0.7
	comp=Z,1.2nm,0.7s,baz=8.5,slow=4.9,SNR=3.9						
	comp=Z,1.2nm,0.7s						
GERES	GERESS Array B	73.92	340	P	P	17 14 07.6	+0.1
	comp=Z,0.5nm,0.6s,baz=32,slow=5.2,SNR=2.2						
	comp=Z,0.5nm,0.6s						
ASAR	Alice Springs	82.40	208	P	P	17 14 56.0	+1.5
	comp=Z,1.3nm,0.9s,baz=18,slow=6.9,SNR=7.3						
	comp=Z,1.3nm,0.9s						
ASAR	Alice Springs	82.40	208	P	P	17 14 56.0	+1.5
ESDC	Sonseca Array	85.45	351	P	P	17 15 09.9	-0.2
	comp=Z,1.0nm,0.8s,baz=7.8,slow=5.1,SNR=4.8						
	comp=Z,1.0nm,0.8s						
QSPA	South Pole Qui	144.49	180	PKhKP	PKPpre	17 22 05.7	
	comp=Z,1.6nm,0.6s,baz=265,slow=0.7,SNR=16						

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*IDC **05** 17:31:52.4±10.0, 71°.97N×4°.95W, h0^{km}, mb3.2/1, mbtmp3.3/5, ML3.0/4, MS3.0/1, Error ellipse: s-maj=140.0km s-min=45.8km az=133.0*

*BER **05** 17:32:03.1±4.1, 71°.65N×4°.07W, h10^{km}, Mw4.0, Confirmed Earthquake*

*DNK **05** 17:32:04.5±1.9, 71°.84N×4°.80W, h0^{km}±66^{km}, ML1.8*

ISC 05 17:31:58.6±0.9**, 71°.59N**±0°.09×**4°.38W**±0°.08**, h10^{km}, n19, σ2^{s}18**/22**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBG	Daneborg	5.39	308	eP	Pn	17 33 21.7	+2.9
DBG				eS	Sn	17 34 19.1	-1.8
DBG	Daneborg	5.39	308	i P	Pn	17 33 20.6	+1.8
DBG				i S	Sn	17 34 19.8	-1.0
DBG				IAML		17 34 34.8	
	comp=Z,2.5nm,0.5s						
DAG	Danmarks Havn	6.48	330	eP	Pn	17 33 36.8	+3.0
DAG	Danmarks Havn	6.48	330	i P	Pn	17 33 35.9	+2.1
DAG				i S	Sn	17 34 43.0	-4.6
DAG				IAML		17 34 48.7	
	comp=Z,4.4nm,0.6s						
LOF	Lofoten	7.08	111	eP	Pn	17 33 42.5	+0.5
HSPB	Hornsund (broa	7.61	36	eP	Pn	17 33 50.8	+1.5
HSPB				IAML		17 33 52.7	
	comp=Z,2.3nm,0.3s						
STEI	Steigen	7.71	109	eP	Pn	17 33 49.7	-0.9
KBS	Kingsbay	8.41	22	eP	Pn	17 34 02.8	+2.6
KBS				IAML		17 34 05.1	
	comp=Z,2.5nm,0.4s						
KBS	Kingsbay	8.41	22	i P	Pn	17 34 03.2	+2.9
JETT	Jettan, Norway	8.48	92	eP	Pn	17 33 59.9	-1.3
SPA0	Spitsbergen Ar	8.48	30	eP	Pn	17 34 04.3	+3.2
SPA0				IAML		17 34 08.7	
	comp=Z,1.4nm,0.7s						
KIF	Kilpisjarvi	8.85	95	eP	Pn	17 34 05.2	-1.1
SALU	Saltoluokta	9.03	107	eP	Pn	17 34 08.4	-0.4
HEF	Hetta	10.05	95	eP	Pn	17 34 22.2	-0.6
ARCES	ARCESS Array B	10.10	87	Pn	Pn	17 34 21.5	-2.0
	comp=Z,0.1nm,0.3s,baz=295,slow=12,SNR=9.1						
	comp=Z,0.8nm,0.6s						
HFS	Hagfors	13.58	139	Pn	Pn	17 35 11.0	+0.1
	comp=Z,0.2nm,0.3s,baz=331,slow=8.6,SNR=7.6						
	comp=Z,0.8nm,0.6s						
FINES	FINESS Array B	15.60	115	Pn	Pn	17 35 37.0	-1.2
	baz=325,slow=12,SNR=2.5						
	comp=Z,0.7nm,0.8s						
EKA	Eskdalemuir Ar	16.33	178	Pn	Pn	17 35 47.6	-0.1
	baz=359,slow=12						
	comp=Z,0.4nm,0.5s						
AKASG	Malin Array Be	25.84	126	P	P	17 37 28.3	-1.4
	comp=Z,0.1nm,0.3s,baz=340,slow=9.7,SNR=1.6						
AKASG				LR	LR	17 47 34.7	
	comp=Z,33nm,18.8s,baz=74,slow=36						
	comp=Z,0.1nm,0.3s						

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*IDC **05** 17:32:31.6±0.5, 61°.60S×55°.36W, h0^{km}, mb4.3/12, mbtmp4.3/14, ML4.1/2, MS3.7/20, Error ellipse: s-maj=23.5km s-min=13.7km az=81.0*

*NEIC **05** 17:32:34.1±2.2, 61°.75S±0°.02×55°.9W±0°.1, h10^{km}±1^{km}, mb4.7/18, Error ellipse: s-maj=11.5km s-min=3.8km az=75.0*

ISC 05 17:32:33.3±0.4**, 61°.68S**±0°.04×**55°.56W**±0°.05**, h10^{km}, n88, σ1^{s}65**/75**, mb4.5**/22**, MS3.7**/20**, 6D, South Shetland Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JUBA	Jubany	1.57	248	i P	Pn	17 32 59.7	-1.5
JUBA				eS	Sn	17 33 20.3	-1.2
ESPZ	Base Esperanza	1.85	200		Pn	17 33 03.7	-1.3
ESPZ	Base Esperanza	1.85	200	i P	Pn	17 33 04.1	-0.9
ESPZ				eSg	Sg	17 33 37.3	+4.6
PMSA	Palmer Station	4.94	227	Pn	Pn	17 33 45.2	-2.2
PMSA	Palmer Station	4.94	227	Pn	Pn	17 33 47.9	+0.4
	5.3nm,0.3s,baz=54,slow=10.0,SNR=9.3						
PMSA				Sn	Sb	17 34 57.2	-1.8
	17nm,0.3s,baz=173,slow=2.9,SNR=4.4						
	45nm,0.5s						
PMSA	Palmer Station	4.94	227	eP	Pn	17 33 47.8	+0.4
PMSA				IAML		17 34 12.8	
	comp=Z,70nm,0.7s						
PMSA				eS	Sb	17 35 00.1	+1.1
SMAI	San Martin Ant	8.11	212	Pn	Pn	17 34 29.4	-1.6
MG01	Puerto William	9.26	311	Pn	Pn	17 34 46.2	-0.6
USHA	Ushuaia	9.63	310	Pn	Pn	17 34 53.1	+1.3
	comp=Z,2.2nm,0.3s,baz=122,slow=13,SNR=20						
USHA				Sn	Sn	17 36 38.8	-1.2
	comp=Z,0.7nm,0.3s,baz=123,slow=16,SNR=1.5						
	comp=Z,16nm,0.6s						
USHA	Ushuaia	9.63	310	i P	Pn	17 34 54.5	+2.6
USHA				IAML		17 34 58.5	
	comp=Z,11nm,0.9s						
USHA				eS	Sn	17 36 38.0	-2.0
EFI	East Falkland	10.12	351	Pn	Pn	17 34 59.8	+1.3
MG03	Isla Dawson	11.15	308		Pn	17 35 12.4	-0.2
MG02	Cerro Sombrero	11.56	314		Pn	17 35 18.1	-0.1
GO10	Punta Arenas	11.91	309	Pn	Pn	17 35 24.3	+1.3
MG04	Isla Riesco	12.34	309	Pn	Pn	17 35 29.7	+0.9
HOPE	Hope Point	12.50	62	Pn	Pn	17 35 33.6	+2.5
MG05	Puerto Natales	13.63	310		Pn	17 35 47.1	+0.7
BELA	Belgrano 2	17.59	166	Pn	Pn	17 36 37.7	-0.4
VNA3	Neumayer Olymp	20.11	137	⇓P	Pn	17 37 08.4	-0.2
	comp=Z,16nm,0.7s						
VNA1	Neumayer--Stat	20.53	136	⇓P	Pn	17 37 13.3	-0.2
	comp=Z,15nm,0.9s						
VNA2	Neumayer--Watz	20.83	136	⇓P	Pn	17 37 16.1	-0.9
	comp=Z,8.5nm,0.8s,baz=265,slow=11						
SNAA	Sanae	22.30	138	⇓P	P	17 37 31.4	+0.8
	comp=Z,275nm,0.8s						
SNAA	Sanae	22.30	138		P	17 37 31.2	+0.7
SNAA				IAmb	IAmb	17 37 42.1	
	comp=Z,30nm,1.1s						
SNAA	Sanae	22.30	138	P	P	17 37 31.6	+1.1
	comp=Z,15nm,0.9s,baz=252,slow=7.4,SNR=59						
SNAA				S	S	17 41 28.6	-6.9
	comp=Z,1.0nm,0.6s,baz=356,slow=14,SNR=2.3						
SNAA				LR	LR	17 44 39.4	
	comp=Z,179nm,19.4s,baz=291,slow=33						
	comp=Z,15nm,0.9s						
PLCA	Paso Flores	22.86	330	P	P	17 37 36.0	-0.7
	comp=Z,2.7nm,0.7s,baz=141,slow=8.4,SNR=4.6						
PLCA				LR	LR	17 46 36.6	
	comp=Z,194nm,19.7s,baz=162,slow=37						
	comp=Z,2.7nm,0.7s						
TROLL	Troll, Antarti	23.97	140	⇓P	P	17 37 46.7	-0.8
	comp=Z,143nm,0.5s						
TRQA	Tornquist	23.98	347		P	17 37 47.5	-0.2
TRQA				IAmb	IAmb	17 37 58.1	
	comp=Z,18nm,0.8s						
BI02	San Fabin de	26.91	331	P	P	17 38 13.4	-1.0
BI02				IAmb	IAmb	17 38 53.3	
	comp=Z,24nm,1.4s						
QSPA	South Pole Qui	28.55	180	P	P	17 38 30.0	+1.0
QSPA	South Pole Qui	28.55	180	P	P	17 38 30.3	+1.3
	comp=Z,35nm,0.8s,baz=167,slow=2.5,SNR=188						
QSPA				LR	LR	17 51 32.9	
	comp=Z,251nm,18.2s,baz=170,slow=40						
MT02	Curacav	30.15	333	P	P	17 38 42.2	-1.0
MT02				IAmb	IAmb	17 38 53.3	
	comp=Z,13nm,1.0s						
CO01	Juntas del Tor	33.12	337		P	17 39 10.5	+0.9
LCO	Las Campanas	34.17	336	P	P	17 39 19.0	+0.1
CPUP	Villa Florida	35.36	357		P	17 39 30.9	+2.1
CPUP	Villa Florida	35.36	357	P	P	17 39 28.6	-0.1
	comp=Z,1.2nm,0.5s,baz=51,slow=6.0,SNR=8.9						
CPUP				LR	LR	17 55 53.2	
	comp=Z,23nm,18.3s,baz=41,slow=40						
	comp=Z,1.2nm,0.5s						
AC02	Maricunga	36.01	339		P	17 39 35.6	+0.7
AC02				IAmb	IAmb	17 39 41.9	
	comp=Z,16nm,1.2s						
SYO	Syowa Base	36.44	143	⇓epP	P	17 39 38.8	+1.2
SBA	Scott Base	38.34	193		P	17 39 54.2	+0.6
SBA				IAmb	IAmb	17 39 56.8	
	comp=Z,12nm,0.8s						
VNDA	Vanda	39.15	192	P	P	17 39 59.7	-0.7
VNDA	Vanda	39.15	192	P	P	17 40 02.5	+2.2
	comp=Z,1.7nm,0.9s,baz=149,slow=7.3,SNR=7.6						
VNDA				LR	LR	17 56 51.2	
	comp=Z,81nm,19.3s,baz=154,slow=37						
	comp=Z,1.7nm,0.9s						
TA01	Diego Aracena	42.32	339	P	P	17 40 27.7	+0.6
TA01				IAmb	IAmb	17 40 33.0	
	comp=Z,25nm,1.3s						
GO01	Chusmiza	43.04	341	P	P	17 40 34.9	+1.3
GO01				IAmb	IAmb	17 40 42.9	
	comp=Z,11nm,1.0s						
MAW	Mawson	43.55	151	P	P	17 40 37.8	+1.2
	comp=Z,7.9nm,0.9s,baz=223,slow=6.4,SNR=6.1						
MAW				LR	LR	17 58 40.9	
	comp=Z,243nm,18.5s,baz=220,slow=36						
	comp=Z,7.9nm,0.9s						
SIV	San Ignacio	45.80	353	LR	LR	18 01 31.3	
	comp=Z,112nm,18.2s,baz=130,slow=38						
LPAZ	La Paz	46.21	343	P	P	17 40 59.4	+0.4
	comp=Z,1.0nm,0.5s,baz=159,slow=8.4,SNR=6.4						
LPAZ				LR	LR	18 01 51.9	
	comp=Z,111nm,19.1s,baz=156,slow=38						
	comp=Z,1.0nm,0.5s						
PTLB	Pontes e Lacer	46.24	355	P	P	17 41 00.2	+1.7
PTLB				IAmb	IAmb	17 41 02.0	
	comp=Z,10nm,1.4s						
BDFB	Brasilia	46.29	10	P	P	17 40 57.4	-1.7
	comp=Z,1.5nm,0.4s,baz=143,slow=1.7,SNR=5.2						
BDFB				LR	LR	17 59 36.1	
	comp=Z,91nm,20.1s,baz=166,slow=35						
	comp=Z,1.5nm,0.4s						
SAML	Samuel	52.92	351	P	P	17 41 51.8	+2.3
SAML				IAmb	IAmb	17 41 53.6	
	comp=Z,11nm,1.5s						
H04S2	CROZET ISLANDS	57.24	129	T	T	18 45 14.5	
	baz=212,slow=74,SNR=4.0						
H04S3	CROZET ISLANDS	57.26	129	T	T	18 45 19.3	
	baz=212,slow=74,SNR=3.1						
H04S1	CROZET ISLANDS	57.26	129	T	T	18 45 16.2	
	baz=212,slow=74,SNR=3.7						
H10S3	ASCENSION HYDR	60.53	48	T	T	18 48 14.3	
	baz=19,slow=74,SNR=7.5						
H10S2	ASCENSION HYDR	60.53	48	T	T	18 48 10.9	
	baz=201,slow=74,SNR=10						
BOSA	Boshof	60.95	97	P	P	17 42 44.6	-1.9
	comp=Z,2.1nm,0.8s,baz=239,slow=7.3,SNR=4.4						
BOSA				LR	LR	18 04 22.6	
	comp=Z,25nm,18.1s,baz=198,slow=31						
	comp=Z,2.1nm,0.8s						
H10N3	ASCENSION HYDR	61.62	48	T	T	18 49 36.0	
	baz=201,slow=75,SNR=18						
H10N1	ASCENSION HYDR	61.62	48	T	T	18 49 35.4	
	baz=201,slow=75,SNR=14						
H10N2	ASCENSION HYDR	61.63	48	T	T	18 49 38.8	
	baz=201,slow=75,SNR=14						
COHC	Cochancay	61.71	333	P	P	17 42 52.8	+1.2
LBTB	Lobatse	64.14	95	LR	LR	18 05 47.4	
	comp=Z,64nm,21.0s,baz=192,slow=31						
MDP	Montagnes des	66.62	3	LR	LR	18 13 42.8	
	comp=Z,46nm,20.0s,baz=128,slow=37						
ROSC	El Rosal	67.89	340	LR	LR	18 15 08.8	
	comp=Z,95nm,18.1s,baz=181,slow=38						
MQZ	McQueen's Vall	67.99	216	P	P	17 43 32.3	+0.2
SDV	Santo Domingo	71.33	344	LR	LR	18 16 39.0	
	comp=Z,43nm,18.6s,baz=230,slow=37						
PCRV	Puerto La Cruz	71.98	351	LR	LR	18 17 20.9	
	comp=Z,76nm,18.7s,slow=37						
LSZ	Lusaka	73.73	92	LR	LR	18 12 21.4	
	comp=Z,41nm,18.4s,baz=146,slow=32						
SJG	San Juan	79.96	350	LR	LR	18 23 26.9	
	comp=Z,23nm,18.1s,baz=164,slow=38						
NWAO	Narrogin (SRO)	85.55	174	P	P	17 45 10.3	-1.1
	comp=Z,7.7nm,0.7s,baz=278,slow=8.5,SNR=2.2						
	comp=Z,7.7nm,0.7s						
STKA	Stephens Creek	85.74	195	P	P	17 45 11.7	-0.7
	comp=Z,2.9nm,0.8s,baz=91,slow=0.8,SNR=4.8						
	comp=Z,2.9nm,0.8s						
TORD	Torodi Ar. Bea	86.98	55	P	P	17 45 17.3	-1.2
	comp=Z,111nm,0.4s,baz=208,slow=4.7,SNR=1.6						
ASAR	Alice Springs	94.62	189	P	P	17 45 52.9	-1.4
	comp=Z,0.9nm,0.8s,baz=167,slow=4.4,SNR=7.7						
ASAR				PP	PP	17 49 42.4	+1.1
	comp=Z,1.4nm,0.9s,baz=168,slow=7.8,SNR=4.6						
ASAR				LR	LR	18 26 50.3	
	comp=Z,54nm,21.9s,baz=268,slow=34						
	comp=Z,0.9nm,0.8s						
WRA	Warramunga Arr	98.28	189	P	P	17 46 09.5	-1.4
	comp=Z,0.9nm,0.7s,baz=180,slow=4.3,SNR=4.7						
WRA				LR	LR	18 30 03.8	
	comp=Z,69nm,20.7s,baz=112,slow=35						
	comp=Z,0.9nm,0.7s						
TXAR	Lajitas Array	98.64	319	LR	LR	18 25 13.0	
	comp=Z,25nm,18.4s,baz=153,slow=32						
YKA	Yellowknife Ar	131.65	328	PKP	PKPdf	17 51 44.0	-0.6
	comp=Z,0.7nm,0.6s,baz=261,slow=7.4,SNR=4.6						
HFS	Hagfors	132.56	39	PKP	PKiKP	17 51 47.6	0.0
	comp=Z,0.7nm,0.5s,baz=163,slow=5.4,SNR=4.7						
CMAR	Chiang Mai Arr	133.25	146	PKP	PKPdf	17 51 48.9	-0.2
	comp=Z,0.2nm,0.3s,baz=189,slow=1.7,SNR=1.0						

FINES	FINESS Array B	137.52	45	PKhKP	PKPpre	17 51 45.5	
	comp=Z,0.5nm,0.6s,baz=122,slow=6.9,SNR=4.3						
FINES				PKP	PKPdf	17 51 54.1	-1.6
	comp=Z,0.7nm,0.7s,baz=90,slow=1.9,SNR=4.5						
PZH	PanZhiHua	141.66	146	PKP	PKPdf	17 52 05.8	+1.3
ARCES	ARCESS Array B	142.82	35	PKhKP	PKPpre	17 51 58.2	
	comp=Z,0.5nm,0.4s,baz=222,slow=2.3,SNR=2.0						
ARCES				PKP	PKPdf	17 52 03.3	-1.8
	comp=Z,1.9nm,0.5s,baz=180,slow=0.7,SNR=6.5						
ILAR	Eielson Array	143.02	315	PKhKP	PKPpre	17 52 00.2	
	comp=Z,0.8nm,0.4s,baz=170,slow=1.7,SNR=9.9						
AAK	Ala-Archa	145.05	100	PKP	PKPbc	17 52 07.6	-1.9
	comp=Z,1.1nm,0.3s,baz=227,slow=3.8,SNR=5.3						
SPITS	Spitsbergen Ar	146.05	21	PKPbc	PKPdf	17 52 10.5	0.0
	comp=Z,2.6nm,0.5s,baz=207,slow=1.6,SNR=12						
ARTI	Arti	146.94	69	PKPbc	PKPab	17 52 15.4	-0.6
	comp=Z,2.9nm,0.5s,baz=208,slow=2.9,SNR=5.9						
BVAR	Borovoye Array	150.41	82	PKPbc	PKPbc	17 52 23.2	-0.4
	comp=Z,2.3nm,0.6s,baz=242,slow=3.2,SNR=8.6						
MKAR	Makanchi Array	151.84	102	PKPbc	PKPbc	17 52 25.8	-1.4
	comp=Z,2.4nm,0.8s,baz=221,slow=2.2,SNR=6.9						
KURBB	Kurchatov Arra	152.74	93	PKPbc	PKPbc	17 52 27.1	-2.0
	comp=Z,0.6nm,0.6s,baz=228,slow=2.8,SNR=6.6						
GTA	Gaotai	153.08	135	*e*PKPbc	PKiKP	17 52 34.7	+4.2
MJAR	Matsushiro Arr	153.39	205	PKPab	PKPab	17 52 42.7	-0.4
	comp=Z,2.4nm,0.9s,baz=182,slow=6.0,SNR=3.2						
SONM	Songino Array	162.75	135	PKPab	PKPab	17 53 23.5	0.0
	comp=Z,1.9nm,0.8s,baz=192,slow=4.4,SNR=5.8						

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*IDC **05** 17:34:59.6±1.8, 44°.73N×7°.11E, h0^{km}, mb3.0/3, mbtmp3.3/7, ML3.5/5, Error ellipse: s-maj=33.8km s-min=23.8km az=132.0*

*GEN **05** 17:35:02.4, 44°.97N×7°.05E, h6^{km}±2^{km}, Ml3.2*

*STR **05** 17:35:02.7±0.2, 45°N±1°×°±°, h10^{km}, MLv3.5/18, Error ellipse: s-maj=0.0km s-min=0.0km az=55.8, preliminary*

*ROM **05** 17:35:02.3±0.1, 44°.962N±0°.004×7°.034E±0°.008, h15^{km}±1^{km}, ML3.1/82, Error ellipse: s-maj=0.5km s-min=0.3km az=82.0*

*LDG **05** 17:35:03.0±0.1, 44°.97N×7°.09E, h5^{km}, Md3.7/1, Ml3.6/46, Error ellipse: s-maj=1.3km s-min=0.9km az=68.0*

*BGR **05** 17:35:04.2±1.0, 45°.00N×7°.14E, h6^{km}±3^{km}, ML3.3/7, Error ellipse: s-maj=37.8km s-min=8.9km az=110.0*

*PRU **05** 17:35:05.2, 45°.27N×7°.00E, h10^{km}*

ISC 05 17:35:02.3±0.9**, 44°.98N**±0°.01×**7°.04E**±0°.01**, h18**^{km}±2^{km}**, n206, σ1^{s}.78**/338**, 2C-11D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RRL	Rocca Remolon	0.19	251	Sg	Sg	17 35 10.2	-0.4
RRL	Rocca Remolon	0.19	251	Pg	Pg	17 35 07.4	+0.1
RRL	Rocca Remolon	0.19	251	P	Pg	17 35 07.4	+0.1
RRL				S	Sg	17 35 10.3	-0.4
RRL	Rocca Remolon	0.19	251	⇑P	Pg	17 35 07.4	+0.1
RRL				S	Sg	17 35 10.2	-0.4
RRL				AML	AML		
	comp=N,23300µm,0.2s						
RRL				AML	AML		
	comp=E,17400µm,0.3s						
BHB	Bricherasio	0.21	131	Pg	Pg	17 35 07.2	-0.2
BHB	Bricherasio	0.21	131	Sg	Sg	17 35 10.1	-0.9
BHB	Bricherasio	0.21	131	P	Pg	17 35 07.3	-0.2
BHB				S	Sg	17 35 09.9	-1.1
BHB	Bricherasio	0.21	131	P	Pg	17 35 07.2	-0.2
BHB				S	Sg	17 35 10.9	-0.1
BHB				AML	AML		
	comp=N,82350µm,0.1s						
BHB				AML	AML		
	comp=E,55550µm,0.1s						
BNI	Bardonecchia	0.27	286	P	Pg	17 35 08.6	+0.2
BNI				S	Sg	17 35 11.8	-0.8
BNI	Bardonecchia	0.27	286	P	Pg	17 35 08.6	+0.2
BNI				S	Sg	17 35 12.3	-0.2
BNI				AML	AML		
	comp=E,4720µm,0.3s						
BNI				AML	AML		
	comp=E,4735µm,0.3s						
BNI				AML	AML		
	comp=N,6765µm,0.3s						
BNI				AML	AML		
	comp=N,6700µm,0.3s						
MBDF	Montbardon	0.32	217	*e*Pg	Pg	17 35 09.5	+0.3
MBDF				*e*Sg	Sg	17 35 13.4	-0.6
	comp=N,6µm,0.3s						
OGMO	Fort Saint-Gob	0.34	312	Pg	Pg	17 35 09.8	+0.3
OGMO				Sg	Sg	17 35 14.6	0.0
OGMO	Fort Saint-Gob	0.34	312	P	Pg	17 35 09.8	+0.3
OGMO				S	Sg	17 35 14.5	0.0
CREF	Crivoux	0.52	215	Pg	Pg	17 35 13.4	+0.6
CREF				Sg	Sg	17 35 20.5	+0.5
SURF	Saint Ours	0.53	198	Pg	Pg	17 35 13.3	+0.3
SURF				Sg	Sb	17 35 20.7	+0.4
SURF	Saint Ours	0.53	198	P	Pg	17 35 13.2	+0.3
SURF				S	Sg	17 35 20.5	+0.5
LPG	La Plagne	0.55	339	*e*Pg	Pg	17 35 13.8	+0.3
LPG				*e*Sg	Sg	17 35 21.0	-0.1
	comp=N,1µm,0.3s						
LPL	La Plagne	0.58	338	*e*Pg	Pg	17 35 14.1	+0.2
LPL				*e*Sg	Sg	17 35 21.7	0.0
	comp=N,1µm,0.3s						
JAUF	Jausiers	0.59	201	Pg	Pg	17 35 14.5	+0.4
JAUF				Sg	Sg	17 35 22.6	+0.6
OGAG	Argentiere	0.64	214	Pg	Pg	17 35 11.3	-3.6
OGAG				Sg	Sg	17 35 16.8	-6.6
OGAG	Argentiere	0.64	214	P	Pg	17 35 11.4	-3.6
OGAG				S	Sg	17 35 16.8	-6.6
MONC	Moncucco Torin	0.64	81	P	Pb	17 35 15.8	+1.0
MONC				S	Sn	17 35 25.6	-0.4
MONC	Moncucco Torin	0.64	81	P	Pb	17 35 15.5	+0.7
MONC				S	Sb	17 35 24.0	+0.7
MONC				AML	AML		
	comp=E,5680µm,1.1s						
MONC				AML	AML		
	comp=E,5680µm,0.9s						
MONC				AML	AML		
	comp=N,5545µm,0.3s						
CIRO	Champorcher	0.72	31	Sg	Sg	17 35 25.5	-0.8
CIRO	Champorcher	0.72	31	Pg	Pg	17 35 16.7	+0.1
CIRO	Champorcher	0.72	31	P	Pg	17 35 16.4	-0.2
CIRO				S	Sg	17 35 25.4	-0.9
CIRO	Champorcher	0.72	31	P	Pg	17 35 16.5	-0.2
CIRO				S	Sg	17 35 26.2	-0.1
CIRO				AML	AML		
	comp=N,1605µm,0.5s						
CIRO				AML	AML		
	comp=E,2640µm,0.8s						
TRAV	Traversella	0.73	43	Pg	Pb	17 35 16.3	-0.1
TRAV	Traversella	0.73	43	Sg	Sg	17 35 25.4	-0.9
TRAV	Traversella	0.73	43	P	Pb	17 35 16.0	-0.5
TRAV				S	Sg	17 35 25.6	-0.7
TRAV	Traversella	0.73	43	P	Pb	17 35 16.0	-0.5
TRAV				S	Sg	17 35 26.1	-0.3
TRAV				AML	AML		
	comp=E,4730µm,0.2s						
TRAV				AML	AML		
	comp=N,3700µm,0.5s						
RSL	Roselend	0.76	338	Pg	Pb	17 35 17.6	+0.5
RSL				Sg	Sb	17 35 27.5	+0.3
RSL	Roselend	0.76	338	P	Pb	17 35 17.6	+0.5
RSL				S	Sb	17 35 27.0	-0.3
STV	Sant Anna di V	0.76	164	Sg	Sb	17 35 26.9	-0.3
STV	Sant Anna di V	0.76	164	Pg	Pb	17 35 16.8	-0.2
STV	Sant Anna di V	0.76	164	P	Pb	17 35 16.6	-0.5
STV				S	Sb	17 35 26.1	-1.0
STV	Sant Anna di V	0.76	164	P	Pb	17 35 16.5	-0.5
STV				S	Sb	17 35 26.7	-0.4
STV				AML	AML		
	comp=E,1810µm,1.4s						
STV				AML	AML		
	comp=N,1365µm,1.6s						
STV				AML	AML		
	comp=E,1810µm,0.6s						
STV				AML	AML		
	comp=N,1365µm,0.4s						
MRGE	Morge	0.79	1	P	Pb	17 35 17.8	+0.3
MRGE				S	Sg	17 35 28.9	+0.7
MRGE	Morge	0.79	1	P	Pb	17 35 17.8	+0.3
MRGE				S	Sb	17 35 28.6	+0.7
MRGE				AML	AML		
	comp=E,918µm,0.7s						
MRGE				AML	AML		
	comp=N,1070µm,1.1s						
MRGE				AML	AML		
	comp=N,1070µm,0.9s						
ISO	Isola	0.80	179	Pg	Pb	17 35 18.1	+0.5
ISO				Sg	Sb	17 35 28.4	+0.3
ISO	Isola	0.80	179	P	Pg	17 35 18.4	+0.5
ISO				S	Sg	17 35 28.8	+0.3
ENR	Entracque	0.80	160	Pg	Pb	17 35 17.1	-0.6
ENR	Entracque	0.80	160	Sg	Sb	17 35 28.3	+0.1
ENR	Entracque	0.80	160	P	Pb	17 35 17.0	-0.7
ENR				S	Sb	17 35 27.3	-0.9
ENR	Entracque	0.80	160	P	Pb	17 35 16.9	-0.8
ENR				S	Sb	17 35 27.2	-1.0
ENR				AML	AML		
	comp=E,3585µm,0.3s						
ENR				AML	AML		
	comp=E,3585µm,1.7s						
ENR				AML	AML		
	comp=N,3435µm,0.6s						
ORIF	Oris-en-Rattie	0.82	266	*e*Pg	Pb	17 35 18.9	+0.8
ORIF				*e*Sg	Sb	17 35 29.6	+0.7
	comp=N,1µm,0.2s						
ORIF	Oris-en-Rattie	0.82	266	Pg	Pg	17 35 19.2	+0.7
ENAUX	Enaux	0.89	192	Pg	Pn	17 35 20.3	+0.3
ENAUX				Sg	Sg	17 35 32.1	+0.6
GBOS	Grotte di Boss	0.94	142	Pg	Pb	17 35 19.8	-0.2
GBOS	Grotte di Boss	0.94	142	P	Pb	17 35 19.3	-0.7
GBOS				S	Sb	17 35 31.4	-0.7
GBOS	Grotte di Boss	0.94	142	⇑P	Pb	17 35 19.4	-0.6
GBOS				S	Sb	17 35 31.6	-0.5
GBOS				AML	AML		
	comp=N,818µm,1.5s						
GBOS				AML	AML		
	comp=E,770µm,1.5s						
GBOS				AML	AML		
	comp=N,818µm,0.5s						
GBOS				AML	AML		
	comp=E,770µm,0.5s						
SPIF	crte de Spivo	0.94	171	Pg	Pb	17 35 20.2	+0.2
SPIF				Sg	Sb	17 35 32.6	+0.4
ROTM	Rocchetta Tana	0.94	98	Pg	Pb	17 35 19.8	-0.2
ROTM	Rocchetta Tana	0.94	98	P	Pg	17 35 20.8	+0.2
ROTM	Rocchetta Tana	0.94	98	P	Pb	17 35 19.3	-0.8
ROTM				S	Sg	17 35 32.9	-0.2
ROTM				AML	AML		
	comp=N,3885µm,0.5s						
ROTM				AML	AML		
	comp=N,3885µm,1.5s						
ROTM				AML	AML		
	comp=E,2565µm,0.8s						
GRN	Grenoble	0.95	286	Pg	Pn	17 35 21.9	+1.2
GRN				Sg	Sn	17 35 35.0	+1.0
PIAF	les Granges de	0.96	154	Pg	Pb	17 35 19.8	-0.6
OGDI	Digne	1.02	211	Pg	Pg	17 35 23.2	+1.1
OGDI				Sg	Sn	17 35 38.1	+2.6
TURF	col de Turini	1.04	166	Pg	Pb	17 35 22.1	+0.3
TURF	col de Turini	1.04	166	P	Pb	17 35 21.6	-0.1
TURF				S	Sg	17 35 36.1	0.0
SAOF	Saorge	1.06	159	Pg	Pb	17 35 22.4	+0.3
SAOF	Saorge	1.06	159	P	Pb	17 35 21.8	-0.3
SAOF				S	Sb	17 35 36.0	+0.4
SAOF	Saorge	1.06	159	P	Pb	17 35 21.3	-0.8
SAOF				S	Sb	17 35 35.4	-0.3
SAOF				AML	AML		
	comp=E,1260µm,1.5s						
SAOF				AML	AML		
	comp=E,1260µm,0.5s						
SAOF				AML	AML		
	comp=N,778µm,1.1s						
SATI	Passo dei Sala	1.07	33	Sg	Sb	17 35 36.8	+0.7
SATI	Passo dei Sala	1.07	33	Pg	Pb	17 35 22.6	+0.2
MVIF	Mont Vial	1.09	176	Pg	Pn	17 35 23.3	+0.6
MVIF				Sg	Sg	17 35 37.9	+0.2
OGSI	Sixt	1.10	350	Pg	Pn	17 35 23.7	+0.9
DIX	Grande Dixence	1.13	13	Sg	Sn	17 35 39.1	+0.5
DIX	Grande Dixence	1.13	13	Pg	Pb	17 35 23.9	+0.5
DIX	Grande Dixence	1.13	13	P	Pb	17 35 23.7	+0.3
DIX				S	Sb	17 35 38.5	+0.6
DIX				AML	AML		
	comp=N,1665µm,0.3s						
DIX				AML	AML		
	comp=E,2280µm,0.3s						
SALSA	La sagne	1.13	193	Pg	Pg	17 35 24.9	+0.7
SALSA				Sg	Sg	17 35 40.2	+1.2
OGSM	Saint Maurice	1.14	304	Pg	Pg	17 35 25.1	+0.9
OGSM				Sg	Sg	17 35 41.1	+2.0
RORO	Rocca Rossa	1.14	139	Pg	Pn	17 35 23.0	-0.2
RORO	Rocca Rossa	1.14	139	Sg	Sb	17 35 38.1	+0.3
RORO	Rocca Rossa	1.14	139	P	Pn	17 35 22.9	-0.3
RORO				S	Sb	17 35 37.8	0.0
RORO				AML	AML		
	comp=N,824µm,0.9s						
RORO				AML	AML		
	comp=E,938µm,0.2s						
QLNO	Quiliano	1.14	125	P	Pn	17 35 23.4	+0.1
QLNO				S	Sg	17 35 39.1	-0.3
QLNO				AML	AML		
	comp=E,824µm,0.5s						
QLNO				AML	AML		
	comp=N,710µm,0.2s						
CANO	Canova, Maglio	1.15	132	Pg	Pn	17 35 23.7	+0.2
CANO	Canova, Maglio	1.15	132	Sg	Sg	17 35 39.5	-0.3
CANO	Canova, Maglio	1.15	132	P	Pn	17 35 23.3	-0.2
CANO				S	Sb	17 35 38.3	0.0
CANO				AML	AML		
	comp=E,1555µm,0.4s						
CANO				AML	AML		
	comp=N,2155µm,0.3s						
CANO				AML	AML		
	comp=N,2155µm,1.7s						
PCP	Piancastagn	1.16	112	Pg	Pb	17 35 24.1	+0.3
PCP	Piancastagn	1.16	112	Sg	Sg	17 35 40.0	0.0
PCP	Piancastagn	1.16	112	P	Pn	17 35 23.7	+0.1
PCP				S	Sg	17 35 39.7	-0.2
PCP				AML	AML		
	comp=N,573µm,0.2s						
PCP				AML	AML		
	comp=E,584µm,0.4s						
ESCA	l'Escarene	1.18	168	Pg	Pb	17 35 24.8	+0.8
OGMY	Moye	1.21	318	Pg	Pg	17 35 26.2	+0.5
OGMY				Sg	Sg	17 35 43.0	+1.5
CALF	Calern	1.23	184	Pg	Pg	17 35 26.3	+0.2
CALF				Sg	Sg	17 35 42.9	+0.7
IMI	Imperia	1.23	150	P	Pn	17 35 24.6	-0.1
IMI				S	Sb	17 35 40.8	+0.2
IMI				AML	AML		
	comp=E,1032µm,1.0s						
IMI				AML	AML		
	comp=E,1032µm,1.0s						
IMI				AML	AML		
	comp=N,1650µm,0.4s						
MMK	Mattmark	1.25	31	P	Pb	17 35 26.1	+0.6
BLAF	les Blancs	1.25	215	Pg	Pg	17 35 27.0	+0.5
BLAF				Sg	Sg	17 35 44.3	+1.5
BURY	Giardini Botan	1.25	163	Sg	Sg	17 35 43.3	+0.4
BURY	Giardini Botan	1.25	163	Pg	Pb	17 35 25.7	+0.4
BURY	Giardini Botan	1.25	163	P	Pn	17 35 24.9	+0.1
MON	Monaco	1.28	167	Pg	Pb	17 35 26.4	+0.6
MON				Sg	Sg	17 35 44.4	+0.6
TRIGF	Trigance	1.31	200	Pg	Pg	17 35 28.0	+0.3
TRIGF				Sg	Sg	17 35 45.8	+1.0
EMBD	Embd, Matterta	1.35	24	Pg	Pg	17 35 28.3	-0.2
AIGLE	Aigle	1.36	358	Sn	Sg	17 35 46.4	0.0
AIGLE	Aigle	1.36	358	Pn	Pb	17 35 28.4	+1.1
EILF	Villa Eilenroc	1.44	177	Pn	Pb	17 35 28.7	+0.3
EILF				Sn	Sg	17 35 48.3	-0.3
SMRF	Simiane la Rot	1.45	227	*e*Pg	Pg	17 35 30.5	+0.2
SMRF				*e*Sg	Sg	17 35 50.1	+0.9
	comp=N,245nm,0.4s						
RNCA	Ronca, Sant'Ol	1.46	110	Pn	Pb	17 35 29.0	+0.2
RNCA	Ronca, Sant'Ol	1.46	110	Sn	Sb	17 35 47.4	+0.5
RNCA	Ronca, Sant'Ol	1.46	110	P	Pb	17 35 28.9	+0.2
RNCA				AML	AML		
	comp=E,165µm,0.7s						
RNCA				AML	AML		
	comp=N,186µm,0.6s						
RNCA				AML	AML		
	comp=E,165µm,1.3s						
OG35	Corcelles	1.48	316	Pn	Pb	17 35 30.0	+0.7
OG35				Sn	Sb	17 35 49.0	+1.2
VARE	Varese	1.51	53	AML	AML		
	comp=E,470µm,1.3s						
VARE				AML	AML		
	comp=E,470µm,0.7s						
VARE				AML	AML		
	comp=N,478µm,1.0s						
GORR	Gorreto	1.65	102	P	Pn	17 35 30.9	+0.6
GORR				AML	AML		
	comp=E,464µm,0.7s						
GORR				AML	AML		
	comp=N,488µm,0.8s						
GORR				AML	AML		
	comp=N,488µm,1.2s						
VIVF	Saint-Julien-l	1.69	267	*e*Pg	Pb	17 35 33.3	+0.6
VIVF				*e*Sg	Sg	17 35 56.4	-0.2
	comp=N,236nm,0.3s						
LMR	La Mourre	1.69	193	*e*Pg	Pg	17 35 34.3	-0.5
LMR				*e*Sg	Sg	17 35 56.4	-0.4
	comp=N,211nm,0.2s						
MUGIO	Muggio	1.69	56	P	Pn	17 35 31.4	+0.5
MUGIO				AML	AML		
	comp=E,247µm,0.2s						
MUGIO				AML	AML		
	comp=N,250µm,0.4s						
MUGIO				AML	AML		
	comp=N,250µm,1.6s						
BOB	Bobbio (Coli)	1.73	96	P	Pb	17 35 33.2	-0.3
CABF	La Chapelle	1.76	338	*e*Pn	Pb	17 35 35.0	+1.0
CABF				*e*Sg	Sg	17 35 58.8	-0.2
	comp=N,173nm,0.5s						
FUSIO	Fusio	1.86	37	P	Pb	17 35 35.3	-0.5
FUSIO				AML	AML		
	comp=E,188µm,0.9s						
FUSIO				AML	AML		
	comp=N,168µm,1.5s						
FUSIO				AML	AML		
	comp=E,188µm,1.1s						
FUSIO				AML	AML		
	comp=N,168µm,0.5s						
MSSA	Maissana	1.89	110	P	Pn	17 35 34.4	+0.7
MSSA				AML	AML		
	comp=E,161µm,0.8s						
MSSA				AML	AML		
	comp=N,176µm,0.5s						
MSSA				AML	AML		
	comp=N,176µm,1.5s						
MSSA				AML	AML		
	comp=E,161µm,1.2s						
MDI	Monti di Nese	2.04	66	P	Pn	17 35 36.3	+0.5
MDI				AML	AML		
	comp=E,280µm,0.2s						
MDI				AML	AML		
	comp=N,275µm,1.4s						
MDI				AML	AML		
	comp=N,275µm,0.6s						
TUE	Stuetta	2.20	47	P	Pn	17 35 39.6	+1.6
TUE				AML	AML		
	comp=E,168µm,0.5s						
TUE				AML	AML		
	comp=E,173µm,0.7s						
TUE				AML	AML		
	comp=N,234µm,0.9s						
TUE				AML	AML		
	comp=N,238µm,0.4s						
GRAM	Graiana	2.21	102	P	Pn	17 35 39.6	+1.5
GRAM				AML	AML		
	comp=N,355µm,1.1s						
GRAM				AML	AML		
	comp=E,288µm,1.3s						
BALST	Balsthal	2.40	11	*e*Pn	Pb	17 35 43.9	-1.0
BALST				*e*Pg	Pg	17 35 48.4	+0.1
BALST				*e*Sg	Sg	17 36 18.6	-0.8
LASF	Ste Croix	2.45	249	*e*Pn	Pn	17 35 43.1	+1.8
LASF				*e*Sn	Sn	17 36 11.8	+1.0
	comp=E,69nm,0.2s						
SARO	Sassorosso	2.53	107	⇓P	Pn	17 35 43.4	+0.8
SARO				AML	AML		
	comp=N,164µm,0.7s						
SARO				AML	AML		
	comp=E,133µm,0.5s						
MAGA	Magasa	2.65	71	P	Pn	17 35 44.7	+0.5
MAGA				AML	AML		
	comp=E,561µm,0.7s						
MAGA				AML	AML		
	comp=N,190µm,0.6s						
DAVOX	Davos/Dischmat	2.68	47	Pn	Pb	17 35 47.7	-2.1
	comp=N,4.1nm,0.3s,baz=229,slow=6.9,SNR=17						
DAVOX				Sn	Sn	17 36 18.2	+1.5
	comp=N,3.5nm,0.3s,baz=326,slow=23,SNR=7.0						
DAVOX				Lg	Lg	17 36 25.6	
	comp=N,6.9nm,0.3s,baz=4.7,slow=15,SNR=7.2						
	comp=N,9.0nm,0.3s						
RONC	Roncone	2.71	67	P	Pn	17 35 46.2	+1.1
RONC				S	Sn	17 36 17.5	0.0
RONC				AML	AML		
	comp=E,245µm,0.3s						
RONC				AML	AML		
	comp=N,328µm,0.4s						
RONC				AML	AML		
	comp=E,245µm,1.7s						
SMF	Signal de Mont	2.79	308	*e*Pn	Pn	17 35 48.6	+2.7
SMF	Signal de Mont	2.79	308	*e*Pg	Pg	17 35 54.6	-1.1
SMF				*e*Sn	Sn	17 36 20.5	+1.4
	comp=E,143nm,0.5s						
SMF				*e*Sg	Sg	17 36 31.2	-0.6
	comp=E,143nm,0.5s						
MBAL	Monte Baldo -	2.79	74	P	Pn	17 35 47.0	+1.0
MBAL				AML	AML		
	comp=E,146µm,0.6s						
MBAL				AML	AML		
	comp=N,97µm,0.9s						
PII	Pisa	2.80	116	P	Pn	17 35 47.1	+1.0
PII				AML	AML		
	comp=E,83µm,0.3s						
PII				AML	AML		
	comp=N,70µm,0.4s						
PGF	Pioggiola	2.82	149	*e*Pn	Pn	17 35 46.2	-0.2
PGF				*e*Sn	Sn	17 36 18.5	-1.4
	comp=N,17nm,0.2s						
HINF	Hinteralfeld	2.84	357	*e*Pn	Pn	17 35 48.8	+2.1
HINF				*e*Sg	Sg	17 36 31.7	-1.8
	comp=N,38nm,0.3s						
METMA	Mettma DE	2.86	17	*e*Pn	Pn	17 35 49.3	+2.4
METMA				*e*Sg	Sg	17 36 34.2	+0.1
LUSI	Trento, Gardas	2.92	69	P	Pn	17 35 48.9	+1.2
LUSI				AML	AML		
	comp=E,111µm,0.4s						
LUSI				AML	AML		
	comp=N,149µm,0.3s						
SLE	Schleitheim	2.96	19	*e*Pn	Pn	17 35 50.8	+2.4
SLE				*e*Sn	Sn	17 36 27.3	+3.9
SLE				*e*Sg	Sg	17 36 36.8	-0.6
BERGE	Lenzkirch (DE)	3.00	15	*e*Pn	Pn	17 35 51.0	+2.1
BERGE				*e*Pg	Pg	17 35 59.3	-0.4
BERGE				*e*Sn	Sb	17 36 29.1	-2.3
BERGE				*e*Sg	Sg	17 36 38.2	-0.3
DAVA	Damuels	3.04	40	*i* Pn	Pb	17 35 54.2	-1.7
	comp=N,2.8nm,0.3s						
DAVA				*i* Sn	Sb	17 36 30.9	-1.7
	comp=N,22nm,0.3s						
DOSS	Dosso del Somm	3.06	71	P	Pn	17 35 50.8	+1.0
DOSS				AML	AML		
	comp=E,122µm,0.5s						
DOSS				AML	AML		
	comp=N,114µm,0.6s						
HAU	Haudompre	3.06	351	*e*Pn	Pn	17 35 52.1	+2.4
HAU				*e*Sg	Sg	17 36 38.2	-2.4
	comp=N,55nm,0.5s						
AVF	Avril sur Loir	3.15	306	*e*P	Pn	17 35 54.5	+3.7
AVF	Avril sur Loir	3.15	306	*e*Pg	Pg	17 36 01.4	-1.1
AVF				*e*Sn	Sn	17 36 28.1	+0.2
AVF				*e*Sg	Sg	17 36 41.9	-1.4
	comp=N,72nm,0.5s						
EMING	Emmingen-Lipti	3.17	23	*e*Pn	Pn	17 35 53.6	+2.4
EMING				*e*Sn	Sn	17 36 32.2	+3.7
EMING				*e*Sg	Sg	17 36 42.5	-1.5
LOR	Lormes	3.18	317	*e*P	Pn	17 35 55.1	+3.7
LOR	Lormes	3.18	317	*e*Pg	Pg	17 36 02.0	-1.2
LOR				*e*Sn	Sn	17 36 30.2	+1.4
LOR				*e*Sg	Sg	17 36 42.3	-2.1
	comp=N,68nm,0.5s						
PANI	Panarotta	3.20	69	P	Pn	17 35 52.6	+0.8
SSF	Saint Saulge	3.22	311	*e*P	Pn	17 35 55.5	+3.6
SSF	Saint Saulge	3.22	311	*e*Pg	Pg	17 36 02.8	-1.2
SSF				*e*Sn	Sn	17 36 31.4	+1.6
SSF				*e*Sg	Sg	17 36 44.2	-1.5
	comp=N,46nm,0.4s						
ECH	Echery	3.24	1	*e*Pn	Pn	17 35 54.4	+2.2
FETA	Feichten	3.28	50	*i* Pn	Pn	17 35 55.6	+2.7
	comp=N,3.1nm,0.3s						

FETA				i Sn	Sn	17 36 35.9	+4.3
	comp=N,6.2nm,0.4s						
BGF	Bois d'Agland	3.33	300	eP	Pn	17 35 56.9	+3.5
BGF				eSn	Sn	17 36 32.8	+0.3
BGF				eSg	Sg	17 36 47.9	-1.3
	comp=N,183nm,0.4s						
KOSI	Kohlern	3.38	62	P	Pn	17 35 55.5	+1.2
KOSI				AML	AML		
	comp=N,60µm,0.8s						
KOSI				AML	AML		
	comp=E,67µm,0.6s						
KOSI				AML	AML		
	comp=E,67µm,0.6s						
ZIAN	Ziano	3.43	66	P	Pn	17 35 56.9	+2.1
BFO	Black Forest	3.46	14	ePn	Pn	17 35 57.1	+1.9
BFO				eSn	Sn	17 36 37.5	+1.7
CGRP	Cima Grappa	3.47	73	P	Pn	17 35 56.4	+0.9
CGRP				AML	AML		
	comp=E,117µm,0.8s						
CGRP				AML	AML		
	comp=N,79µm,0.7s						
CGRP				AML	AML		
	comp=E,117µm,1.2s						
CGRP				AML	AML		
	comp=N,79µm,1.3s						
SFTF	Sexfontaines	3.51	338	ePn	Pn	17 35 58.9	+3.1
SFTF				eSg	Sg	17 36 53.5	-1.4
	comp=N,77nm,0.6s						
CASP	Castiglione de	3.53	127	P	Pn	17 35 56.5	+0.4
CAF	Calviac	3.53	271	ePn	Pn	17 35 59.2	+3.0
CAF				eSn	Sn	17 36 37.4	-0.1
CAF				eSg	Sg	17 36 54.2	-1.5
	comp=N,74nm,0.8s						
RIBO	Ribolla Roccas	3.54	124	⇓P	Pn	17 35 57.3	+1.1
RETA	Reutte	3.60	45	i Pn	Pn	17 35 59.3	+2.1
	comp=N,3.7nm,0.2s						
RETA				eSn	Sb	17 36 45.9	-2.8
	comp=N,4.2nm,0.3s						
TCF	Toulx Ste Croi	3.63	293	ePn	Pn	17 36 00.8	+3.3
TCF				eSn	Sn	17 36 39.6	-0.3
TCF				eSg	Sg	17 36 57.6	-1.2
	comp=N,41nm,0.5s						
SQTA	Sankt Quirin	3.66	51	i Pn	Pn	17 36 01.7	+3.6
	comp=N,2.8nm,0.2s						
SQTA				eSn	Sn	17 36 45.1	+4.2
	comp=N,13nm,0.3s						
MOTA	Moosalm	3.68	49	ePn	Pn	17 36 00.4	+2.0
	comp=N,1.2nm,0.1s						
MOTA				eSn	Sn	17 36 43.4	+2.0
	comp=N,6.6nm,0.2s						
PAGF	Fort de Pagny	3.69	346	ePn	Pn	17 35 58.0	-0.3
PAGF				eSg	Sg	17 36 58.5	-2.1
	comp=N,93nm,0.7s						
MEZF	Maizieres J'vi	3.78	340	ePn	Pn	17 36 00.9	+1.4
MEZF	Maizieres J'vi	3.78	340	ePg	Pg	17 36 13.0	-1.6
MEZF				eSg	Sg	17 37 02.3	-1.2
	comp=N,48nm,0.5s						
HYF	Humbligny	3.82	308	eP	Pn	17 36 04.9	+4.8
HYF				eSg	Sg	17 37 04.0	-0.9
MTLF	Montolieu	3.84	246	eP	Pn	17 36 03.3	+2.9
MTLF				eSn	Sn	17 36 44.7	-0.3
	comp=N,15nm,0.3s						
SAVF	Savonnieres en	3.87	341	ePn	Pn	17 36 02.5	+1.8
SAVF	Savonnieres en	3.87	341	eP	Pn	17 36 05.0	+4.3
	baz=159						
SAVF				eSn	Sn	17 36 45.4	-0.2
	comp=N,22nm,0.4s						
SAVF				eSn	Sn	17 36 45.6	0.0
SAVF				eSg	Sg	17 37 04.9	-1.4
	comp=N,5.5nm,0.2s						
RJF	Les Rejaudoux	3.92	277	eP	Pn	17 36 05.5	+4.0
RJF				eSg	Sg	17 37 06.4	-1.7
	comp=N,40nm,0.3s						
WTTA	Wattenberg	3.93	53	ePn	Pn	17 36 05.1	+3.3
	comp=N,3.9nm,0.2s						
WTTA				eSn	Sn	17 36 52.6	+5.2
	comp=N,9.2nm,0.4s						
WATA	Walderalm	3.94	52	eSn	Sn	17 36 50.1	+2.5
	comp=N,3.9nm,0.2s						
ABTA	Abfaltersbach	4.21	63	i Pn	Pn	17 36 08.6	+3.0
	comp=N,4.7nm,0.3s						
ABTA				eSn	Sn	17 36 56.9	+2.6
	comp=N,2.5nm,0.2s						
LFF	La Frestale	4.47	272	eP	Pn	17 36 13.2	+4.2
LFF				eSg	Sg	17 37 22.5	-3.2
	comp=N,78nm,0.6s						
LESA	Schwarzleotal	4.61	56	i Pn	Pn	17 36 14.6	+3.5
	comp=N,1.7nm,0.2s						
KBA	Koelnbreinsper	4.87	62	i Pn	Pn	17 36 19.2	+4.5
	comp=N,2.4nm,0.3s						
MYKA	Terra Mystica	4.90	68	i Pn	Pn	17 36 19.9	+4.8
	comp=N,1.6nm,0.2s						
MYKA				eSn	Sn	17 37 15.7	+4.4
	comp=N,2.7nm,0.4s						
MFF	Saint Martin d	5.28	290	eP	Pn	17 36 24.2	+4.0
MFF				eSn	Sn	17 37 19.8	-0.7
MFF				eSg	Sg	17 37 48.9	-2.7
	comp=N,41nm,0.7s						
TNS	Taunus Mts	5.33	10	ePn	Pn	17 36 23.6	+2.7
GIVF	Givet	5.34	344	ePn	Pn	17 36 23.2	+2.2
GIVF				eSn	Sn	17 37 20.1	-1.8
GIVF				eSg	Sg	17 37 51.0	-2.5
	comp=N,3.5nm,0.3s						
DOU	Dourbes	5.38	343	dP	Pn	17 36 24.6	+3.1
DOU				dS	Sn	17 37 26.8	+3.9
BAIF	Baives	5.43	340	ePn	Pn	17 36 20.5	-1.7
OBKA	Obir	5.47	71	ePn	Pn	17 36 25.4	+2.4
	comp=N,1.4nm,0.4s						
BMRD	Maredsous	5.54	345	dP	Pn	17 36 26.6	+2.9
BGES	Gesves	5.56	347	dP	Pn	17 36 27.4	+3.3
BCLA	Clavier	5.57	348	dP	Pn	17 36 28.1	+4.0
BTNL	Ternell	5.64	354	dP	Pn	17 36 28.5	+3.3
BTNL				dS	Sn	17 37 32.7	+3.3
MEM	Membach	5.67	353	dP	Pn	17 36 28.6	+3.0
MEM				dS	Sn	17 37 31.0	+0.8
MOA	Molln	5.76	58	ePn	Pn	17 36 29.0	+2.2
	comp=N,1.6nm,0.3s						
MOA				eSn	Sn	17 36 47.0	-45
	comp=N,2.1nm,0.3s						
ETSF	Etsaut	5.87	252	eP	Pn	17 36 33.5	+5.2
ETSF				eSn	Sn	17 37 33.8	-1.3
	comp=N,17nm,0.6s						
GERES	GERESS Array B	5.98	47	Pn	Pn	17 36 30.8	+0.9
	comp=N,0.3nm,0.3s,baz=232,slow=13,SNR=23						
GERES				Sn	Sn	17 37 34.0	-3.8
	comp=N,0.3nm,0.3s,baz=234,slow=23,SNR=5.9						
	comp=N,2.8nm,0.3s						
KHC	Kasperske Hory	6.10	45	ePN	Pn	17 36 31.3	-0.1
KHC				eSN	Sn	17 37 38.2	-2.5
LDF	La Druitiere	6.10	309	eP	Pn	17 36 35.4	+4.0
LDF				eSn	Sn	17 37 38.2	-2.5
LDF				eSg	Sg	17 38 14.4	-3.5
	comp=N,4.7nm,0.4s						
SJPF	Ste Jean	6.24	255	ePn	Pn	17 36 35.1	+1.7
SJPF				eSn	Sn	17 37 42.3	-1.9
	comp=N,9.2nm,0.6s						
CKRC	Cesky Krumlov	6.29	50	eSN	Sn	17 37 42.6	-2.8
ARSA	Arzberg	6.32	66	ePn	Pn	17 36 35.8	+1.3
	comp=N,1.4nm,0.4s						
FLN	La Foliniere	6.39	309	ePn	Pn	17 36 37.5	+2.1
FLN				eSn	Sn	17 37 46.3	-1.6
	comp=N,8.3nm,0.4s						
FLN				eSg	Sg	17 38 23.5	-3.8
	comp=N,10nm,0.6s						
GRR	Gorron	6.41	305	eP	Pn	17 36 39.2	+3.5
GRR				eSn	Sn	17 37 46.6	-1.7
	comp=N,26nm,0.4s						
GRR				eSg	Sg	17 38 24.8	-3.1
	comp=N,3.9nm,0.3s						
ZVC	Zvikov	6.60	45	ePN	Pn	17 36 39.6	+1.3
ZVC				eSN	Sn	17 37 50.6	-2.5
CONA	Conrad Observa	6.77	61	ePn	Pn	17 36 42.6	+1.9
	comp=N,0.2nm,0.2s						
CONA				eSn	Sn	17 37 57.0	-0.3
	comp=N,1.3nm,0.3s						
RONA	Rosalia, Austr	6.96	64	i Pn	Pn	17 36 44.2	+1.0
	comp=N,2.4nm,0.5s						
TREC	Trest	7.20	50	ePN	Pn	17 36 46.0	-0.5
TREC				eSN	Sn	17 38 03.3	-4.4
SGMF	Saint Gilles	7.37	300	ePn	Pn	17 36 50.2	+1.3
SGMF				eSn	Sn	17 38 09.6	-2.4
	comp=N,5.2nm,0.4s						
SGMF				eSg	Sg	17 38 55.3	-3.4
	comp=N,1.6nm,0.3s						
QUIF	Quistinic	7.63	296	ePn	Pn	17 36 53.9	+1.4
QUIF				eSg	Sb	17 39 04.6	+20
	comp=N,5.9nm,0.4s						
ROSF	Rostrenen	7.85	299	ePn	Pn	17 36 57.7	+2.3
ROSF				eSn	Sn	17 38 20.6	-3.1
	comp=N,274nm,2.1s						
KRLC	Kraliky	8.33	49	ePN	Pn	17 37 02.5	+0.4
VAE	Valguarnera	9.32	141	Pn	Pn	17 37 12.0	-3.7
	comp=N,3.0nm,0.3s,baz=71,slow=11,SNR=5.5						
ESDC	Sonseca Array	9.72	241	Pn	Pn	17 37 20.8	-0.3
	comp=N,0.2nm,0.3s,baz=51,slow=14,SNR=5.4						
	comp=N,0.3nm,0.5s						
EKA	Eskdalemuir Ar	12.24	331	Pn	Pn	17 37 57.7	+2.3
	baz=147,slow=15						
	comp=N,0.5nm,0.3s						
FINES	FINESS Array B	19.91	27	P	Pn	17 39 34.8	+0.5
	comp=N,0.5nm,0.8s,baz=221,slow=14,SNR=1.8						
	comp=N,0.5nm,0.8s						
KURBB	Kurchatov Arra	46.64	56	P	P	17 43 30.2	+1.0
	comp=N,0.1nm,0.4s,baz=284,slow=8.9,SNR=1.2						
	comp=N,0.1nm,0.4s						
MKAR	Makanchi Array	50.50	59	P	P	17 43 58.5	-0.6
	comp=N,0.1nm,0.3s,baz=281,slow=6.6,SNR=4.2						
	comp=N,0.1nm,0.3s						

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*VIE **05** 17:39:21.9±0.3, 47°.66N×9°.17E, h15^{km}, mb2.3/14, ml3.0/16, Error ellipse: s-maj=2.4km s-min=2.0km az=46.0*
1 km S of Konstanz
*LDG **05** 17:39:22.8±0.1, 47°.62N×9°.12E, h19^{km}, Ml3.1/30, Error ellipse: s-maj=2.1km s-min=1.7km az=133.0*
*PRU **05** 17:39:22.9, 47°.68N×9°.21E, h10^{km}*
*BUG **05** 17:39:22.2±0.5, 47°.65N×9°.11E, h10^{km}±2^{km}, MD3.2/13, ML3.5/13*
*STR **05** 17:39:22.7±1.0, 48°N±4°×°±°, h20^{km}, MLv3.1/7, Error ellipse: s-maj=0.0km s-min=0.0km az=125.9, preliminary*
*BGR **05** 17:39:23.0±0.2, 47°.65N×9°.12E, h14^{km}±2^{km}, ML2.8/13, Error ellipse: s-maj=2.2km s-min=2.2km az=22.0*
ISC 05 17:39:22.8±0.8, **47°.64N**±0°.01×**9°.08E**±0°.01, **h18**^{km}±6^{km}, **n168,** σ**2^s.28**/299, **22C-21D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WALHA	Wallhausen, DE	0.12	14	⇓iPg	Pb	17 39 26.7	+0.6
WALHA				Sg	Sb	17 39 29.8	+1.4
STEIN	Stein am Rhein	0.15	283	⇑iPg	Pb	17 39 27.5	+0.8
STEIN				Sg	Sb	17 39 31.1	+1.8
ROMAN	Romanshorn, Fo	0.19	112	⇑Pg	Pb	17 39 26.9	-0.7
WILA	Wila	0.25	208	⇑Pg	Pg	17 39 28.7	+0.1
WILA				Sg	Sg	17 39 33.0	+0.6
EMING	Emmingen-Lipti	0.30	328	⇓iPg	Pg	17 39 29.8	+0.4
EMING				Sg	Sg	17 39 34.6	+0.7
A103D	Ravensburg, Wa	0.36	62	⇑iPg	Pg	17 39 29.8	-0.5
A103D				Sg	Sg	17 39 35.0	-0.5
TETT	Tettnang	0.36	86	⇑Pg	Pg	17 39 29.8	-0.6
TETT				Sg	Sg	17 39 35.0	-0.6
SLE	Schleitheim	0.42	288	Pg	Pg	17 39 31.8	+0.4
SLE	Schleitheim	0.42	288	Sg	Sg	17 39 37.4	+0.2
SLE	Schleitheim	0.42	288	⇑iPg	Pg	17 39 31.8	+0.4
SLE				Sg	Sg	17 39 38.1	+0.9
ZUR	Degenried	0.43	232	Pg	Pg	17 39 31.8	+0.2
ZUR	Degenried	0.43	232	Sg	Sg	17 39 37.6	+0.1
GUT	Gutenstein	0.43	3	Pg	Pg	17 39 31.6	-0.1
GUT	Gutenstein	0.43	3	Sg	Sg	17 39 38.5	+0.7
GUT	Gutenstein	0.43	3	⇓iPg	Pg	17 39 31.7	-0.1
LIENZ	Kamor/St.Gall	0.44	140	⇓Pg	Pg	17 39 31.4	-0.5
LIENZ				Sg	Sg	17 39 37.8	-0.2
SAUL	Bad Saulgau	0.47	37	⇑Pg	Pg	17 39 31.9	-0.5
SAUL				Sg	Sg	17 39 38.6	-0.3
A102A	Sigmaringen, J	0.51	9	Pg	Pg	17 39 33.0	-0.1
A102A				Sg	Sg	17 39 40.2	+0.2
MSS	Messtetten	0.55	352	ePg	Pg	17 39 33.9	+0.1
MSS				eSg	Sg	17 39 41.8	+0.6
MSS	Messtetten	0.55	352	⇓iP*	Pg	17 39 33.9	+0.1
MSS				S*	Sg	17 39 41.8	+0.6
MSS				SmS		17 39 43.3	
METMA	Mettma DE	0.56	278	⇑iP*	Pg	17 39 34.3	+0.2
METMA				PmP		17 39 35.0	
METMA				S*	Sg	17 39 42.4	+0.7
EBIN	Albstadt-Ebing	0.57	357	P*	Pg	17 39 34.3	0.0
ROTE	Rottweil	0.59	332	⇓iP*	Pg	17 39 34.6	+0.2
ROTE				S*	Sg	17 39 42.8	+0.4
ROTE				SmS		17 39 44.1	
A101B	Rottweil, Deis	0.60	324	Pg	Pb	17 39 35.0	+0.1
A101B				Sg	Sg	17 39 43.2	+0.4
FREU	Neufra-Freuden	0.60	4	⇓P*	Pb	17 39 34.6	-0.2
FREU				S*	Sg	17 39 43.1	+0.3
BHBD	Braunhartsberg	0.61	355	⇓P*	Pb	17 39 35.1	0.0
BHBD				S*	Sg	17 39 43.8	+0.5
PLONS	Plons/SG	0.62	161	ePg	Pg	17 39 34.5	-0.6
	SNR=37						
PLONS				eSg	Sg	17 39 43.0	-0.4
	SNR=4.9						
PLONS	Plons/SG	0.62	161	⇓P	Pg	17 39 34.5	-0.6
PLONS				S	Sg	17 39 43.0	-0.4
PLONS				AML	AML		
	comp=N,479µm,0.2s						
PLONS				AML	AML		
	comp=N,479µm,0.2s						
PLONS				AML	AML		
	comp=E,428µm,0.3s						
A104C	Biberach, Ahle	0.63	38	P*	Pb	17 39 34.7	-0.6
A104C				Sg	Sg	17 39 43.4	-0.3
DAVA	Damuels	0.65	122	i Pg	Pb	17 39 34.8	-0.8
	comp=E,5.3nm,0.1s,SNR=29						
DAVA				i Sg	Sg	17 39 43.4	-0.9
	comp=E,159nm,0.2s						
DAVA	Damuels	0.65	122	⇑P*	Pb	17 39 34.8	-0.8
DAVA				S*	Sg	17 39 43.5	-0.7
ONST	Albstadt-Onstm	0.65	355	⇓P*	Pb	17 39 35.7	0.0
BERGE	Lenzkirch (DE)	0.65	292	⇑iP*	Pb	17 39 36.0	+0.3
BERGE				S*	Sb	17 39 45.3	+0.8
BALG	Balingen, Zoll	0.66	347	⇓P*	Pb	17 39 35.8	0.0
BALG				S*	Sb	17 39 44.9	+0.3
ZWI	Zwiefalten, Ha	0.67	22	⇓P*	Pb	17 39 35.5	-0.4
ZWI				SmS		17 39 45.8	
JUNG	Jungingen	0.69	358	P*	Pb	17 39 36.4	0.0
JUNG				S*	Sb	17 39 46.1	+0.3
FELD	Feldberg im Sc	0.77	289	Pg	Pb	17 39 37.9	+0.2
FELD	Feldberg im Sc	0.77	289	Sg	Sb	17 39 47.9	0.0
FELD	Feldberg im Sc	0.77	289	⇑Pn	Pb	17 39 37.7	0.0
FELD				⇑Pg	Pg	17 39 38.0	+0.2
FELD				Sg	Sb	17 39 48.7	+0.9
A100A	Rottenburg, We	0.82	353	⇓Pn	Pb	17 39 38.5	-0.1
A100A				Sn	Sb	17 39 49.7	+0.2
BUCH	Bad Urach	0.83	13	Pn	Pb	17 39 38.1	-0.7
BUCH				Sn	Sb	17 39 49.7	0.0
A107C	Memmingen - Ei	0.85	63	Pg	Pb	17 39 38.3	-0.8
A107C				Sg	Sb	17 39 50.1	0.0
KIZ	Kirchzarten	0.85	293	⇑Pn	Pb	17 39 38.6	-0.4
KIZ				Pg	Pg	17 39 39.3	0.0
KIZ				Sg	Sb	17 39 50.9	+0.9
A109A	Bad Urach, See	0.85	17	Pg	Pb	17 39 38.4	-0.6
A109A				Sg	Sb	17 39 50.3	+0.2
A105A	Obersdorf, Sch	0.85	105	Pg	Pb	17 39 38.7	-0.5
A105A				Sg	Sb	17 39 50.1	-0.2
OBER	Oberstdorf	0.85	105	⇓Pg	Pb	17 39 38.6	-0.5
BFO	Black Forest	0.86	324	Pn	Pb	17 39 39.1	-0.2
BFO				⇑Pg	Pg	17 39 39.5	-0.1
BFO				Sg	Sb	17 39 50.9	+0.5
REUL	Reutlingen	0.86	6	⇑Pn	Pb	17 39 39.1	-0.1
A108A	Ulm, Ringingen	0.87	35	Pn	Pb	17 39 39.0	-0.4
A108A				Sg	Sb	17 39 50.8	0.0
BNALP	Bannalp	0.89	210	P	Pb	17 39 39.8	0.0
BNALP				S	Sb	17 39 52.2	+0.9
BNALP				AML	AML		
	comp=E,1510µm,0.4s						
BNALP				AML	AML		
	comp=N,468µm,0.5s						
BNALP				AML	AML		
	comp=N,468µm,0.5s						
BNALP				AML	AML		
	comp=N,468µm,1.5s						
BNALP				AML	AML		
	comp=E,1510µm,0.4s						
FBB	Freiburg im Br	0.91	294	⇑Pg	Pb	17 39 40.4	+0.4
FBB				Sg	Sb	17 39 52.7	+1.0
ENDD	Endenburg	0.91	275	⇑Pn	Pb	17 39 39.5	-0.6
ENDD				Pg	Pg	17 39 40.4	-0.2
ENDD				Sg	Sb	17 39 53.0	+1.1
BALST	Balsthal	0.99	253	Pg	Pb	17 39 40.7	-0.7
BALST	Balsthal	0.99	253	Sg	Sb	17 39 54.1	0.0
BALST	Balsthal	0.99	253	⇑Pn	Pb	17 39 40.7	-0.7
BALST				Pg	Pn	17 39 41.9	+0.1
BALST				eSg	Sb	17 39 55.4	+1.3
	SNR=3.2						
DAVOX	Davos/Dischmat	1.01	147	P	Pb	17 39 41.5	-0.5
DAVOX				S	Sb	17 39 54.9	-0.1
DAVOX				AML	AML		
	comp=E,272µm,1.6s						
DAVOX				AML	AML		
	comp=N,213µm,0.3s						
DAVOX				AML	AML		
	comp=E,272µm,0.4s						
OPP	Oppenau	1.05	325	Pg	Pb	17 39 42.5	+0.1
OPP	Oppenau	1.05	325	Sg	Sb	17 39 56.4	+0.6
OPP	Oppenau	1.05	325	Pg	Pb	17 39 42.5	+0.1
OPP				Sn	Sb	17 39 54.4	-1.5
VOGT	Vogtsburg - To	1.05	296	Pn	Pb	17 39 41.7	-0.7
VOGT				Pg	Pn	17 39 42.9	+0.2
VOGT				Sn	Sb	17 39 54.9	-1.0
VOGT				Sg	Sn	17 39 57.1	+0.2
STU	Stuttgart	1.14	4	⇓Pg	Pn	17 39 43.7	-0.2
STU				Sg	Sb	17 39 59.0	+0.6
RETA	Reutte	1.15	97	i Pg	Pn	17 39 43.4	-0.7
	comp=E,26nm,0.2s,SNR=19						
RETA				i Sg	Sb	17 39 58.3	-0.5
	comp=E,22nm,0.1s						
RETA	Reutte	1.15	97	⇓Pg	Pn	17 39 43.6	-0.5
RETA				Sg	Sb	17 39 59.0	+0.2
GALG	Neuhausen (Enz	1.17	350	Pn	Pn	17 39 42.8	-1.5
GALG				Pg	Pb	17 39 44.3	-0.2
GALG				Sg	Sb	17 40 00.0	+0.7
TUE	Stuetta	1.18	171	P	Pn	17 39 44.3	-0.3
TUE				S	Sb	17 39 59.6	-0.2
TUE				AML	AML		
	comp=E,136µm,1.5s						
TUE				AML	AML		
	comp=E,134µm,0.4s						
TUE				AML	AML		
	comp=N,87µm,0.4s						
TUE				AML	AML		
	comp=N,87µm,1.6s						
TUE				AML	AML		
	comp=E,134µm,1.6s						
TUE				AML	AML		
	comp=N,97µm,0.5s						
HDH	Heidenheim-Cha	1.21	38	Pn	Pn	17 39 42.5	-2.4
HDH				Sg	Sb	17 40 00.3	-0.2
FUSIO	Fusio	1.22	194	P	Pn	17 39 45.6	+0.5
FUSIO				S	Sb	17 40 01.7	+0.9
FUSIO				AML	AML		
	comp=N,603µm,0.2s						
FUSIO				AML	AML		
	comp=E,539µm,1.4s						
BABA	Baden-Baden-Ne	1.24	332	Pn	Pn	17 39 44.4	-0.8
BABA				⇓Pg	Pb	17 39 45.7	+0.1
BABA				Sg	Sb	17 40 01.8	+0.5
URBA	Urbach, Forsts	1.25	16	Pg	Pn	17 39 45.3	-0.1
URBA				Sg	Sb	17 40 01.9	+0.2
BOURR	Bourrignon	1.28	260	⇑Pn	Pn	17 39 44.7	-1.2
BOURR				Sg	Sn	17 40 04.6	+2.0
FETA	Feichten	1.28	118	i Pg	Pn	17 39 46.0	0.0
	comp=E,5.0nm,0.1s,SNR=19						
FETA				eSg	Sb	17 40 02.1	-0.6
	comp=E,28nm,0.2s						
FUORN	Ofenpass-Fuorn	1.30	141	P	Pn	17 39 46.8	+0.5
FUORN				S	Sb	17 40 03.8	+0.5
FUORN				AML	AML		
	comp=E,152µm,0.9s						
FUORN				AML	AML		
	comp=N,144µm,1.1s						
FUORN				AML	AML		
	comp=E,152µm,1.1s						
BERNI	Berninapass	1.38	152	P	Pn	17 39 48.3	+0.8
BERNI				S	Sn	17 40 06.0	+0.5
BERNI				AML	AML		
	comp=E,288µm,1.1s						
BERNI				AML	AML		
	comp=N,128µm,0.4s						
BERNI				AML	AML		
	comp=E,288µm,0.9s						
BERNI				AML	AML		
	comp=N,128µm,1.6s						
WLS	Welschbruch	1.40	305	Sg	Sn	17 40 07.7	+2.2
BRET	Bretten	1.40	349	Sg	Sn	17 40 07.2	+1.7
MOTA	Moosalm	1.40	101	ePn	Pn	17 39 46.4	-1.2
	comp=N,0.5nm,0.1s						
MOTA				ePg	Pb	17 39 47.6	-1.0
	comp=N,7.1nm,0.1s,SNR=36						
MOTA				eSg	Sn	17 40 06.4	+0.6
	comp=N,74nm,0.1s						
ECH	Echery	1.42	295	⇓Pn	Pn	17 39 46.5	-1.2
ECH				Pg	Pb	17 39 50.0	+1.3
ECH				Sn	Sn	17 40 02.8	-3.1
ECH				Sg	Sb	17 40 07.5	+1.1
MOSI	Grossmontoni	1.43	135	P	Pn	17 39 49.2	+1.2
MOSI				S	Sn	17 40 07.8	+1.3
MOSI				AML	AML		
	comp=E,811µm,0.7s						
MOSI				AML	AML		
	comp=N,788µm,0.7s						
MOSI				AML	AML		
	comp=E,811µm,1.3s						
MOSI				AML	AML		
	comp=N,788µm,1.3s						
NORI	Noerdlinger Ri	1.50	43	ePn	Pn	17 39 49.8	+1.0
	SNR=2.0						
NORI				eSg	Sn	17 40 09.1	+1.1
	SNR=14						
SQTA	Sankt Quirin	1.50	105	i Pg	Pn	17 39 49.3	+0.3
	comp=N,16nm,0.1s,SNR=17						
SQTA				i Sn	Sn	17 40 09.5	+1.3
	comp=N,24nm,0.1s						
HINF	Hinteralfeld	1.51	278	ePn	Pn	17 39 47.6	-1.5
HINF	Hinteralfeld	1.51	278	ePg	Pn	17 39 51.4	+2.3
HINF				eSg	Sb	17 40 10.9	+1.6
	comp=N,92nm,0.3s						
FUR	Furstenfeldbru	1.57	69	ePn	Pn	17 39 50.9	+1.0
	SNR=3.6						
FUR				Sg	Sn	17 40 11.7	+2.0
WOER	Woert	1.59	29	⇓Pn	Pn	17 39 47.6	-2.5
WOER				Pg	Pb	17 39 52.3	+0.6
WOER				Sn	Sn	17 40 07.2	-3.1
WOER				Sg	Sb	17 40 11.8	+0.3
ROTT	Steinweiler	1.62	338	Sn	Sn	17 40 09.0	-1.9
CARE	Lago del Cares	1.64	137	P	Pn	17 39 52.9	+1.8
CARE				AML	AML		
	comp=N,233µm,0.8s						
CARE				AML	AML		
	comp=E,109µm,0.7s						
CARE				AML	AML		
	comp=N,233µm,1.2s						
CHMF	Charmoille	1.69	258	⇓Pn	Pn	17 39 50.4	-1.2
CHMF				Pg	Pb	17 39 54.2	+0.7
CHMF				Sn	Sn	17 40 11.7	-1.1
MUGIO	Muggio	1.71	181	⇓P	Pb	17 39 54.5	+0.7
MUGIO				AML	AML		
	comp=E,110µm,0.9s						
MUGIO				AML	AML		
	comp=N,118µm,0.2s						
MUGIO				AML	AML		
	comp=E,110µm,1.1s						
WATA	Walderalm	1.72	99	i Pn	Pn	17 39 52.5	+0.5
	comp=E,0.2nm,0.1s						
WATA				ePg	Pb	17 39 53.0	-1.0
	comp=E,2.4nm,0.1s,SNR=11						
WATA				eSg	Sn	17 40 15.5	+1.9
	comp=E,16nm,0.1s						
ROSI	Rosskopf	1.74	113	P	Pn	17 39 53.6	+1.3
ROSI				AML	AML		
	comp=E,320µm,0.4s						
ROSI				AML	AML		
	comp=N,284µm,0.3s						
ROSI				AML	AML		
	comp=E,320µm,1.6s						
ROSI				AML	AML		
	comp=N,284µm,1.7s						
SIND	Sindeldorf	1.75	11	⇑Pn	Pn	17 39 49.9	-2.4
SIND				Pg	Pb	17 39 55.6	+1.2
MMK	Mattmark	1.76	206	P	Pb	17 39 55.3	+0.6
MMK				AML	AML		
	comp=E,34µm,0.3s						
MMK				AML	AML		
	comp=N,42µm,0.2s						
WTTA	Wattenberg	1.77	101	i Pg	Pn	17 39 53.3	+0.5
	comp=N,1.6nm,0.1s						

WTTA				Sg	Sn	17 40 17.1	+2.1
	comp=N,25nm,0.3s,SNR=5.0						
WTTA	**Wattenberg**	**1.77**	**101**	ePn	**Pn**	**17 39 53.5**	**+0.7**
	SNR=2.2						
WTTA	**Wattenberg**	**1.77**	**101**	P	**Pn**	**17 39 53.3**	**+0.5**
WTTA				AML	AML		
	comp=N,94µm,0.4s						
WTTA				AML	AML		
	comp=E,72µm,0.4s						
VARE	**Varese**	**1.78**	**187**	P	**Pn**	**17 39 55.4**	**+2.6**
VARE				AML	AML		
	comp=N,137µm,0.4s						
VARE				AML	AML		
	comp=E,123µm,0.9s						
KTD	**Kalmit**	**1.81**	**339**	Pg	**Pb**	**17 39 57.7**	**+2.3**
HAU	**Haudompre**	**1.88**	**282**	ePn	**Pn**	**17 39 52.5**	**-1.6**
HAU	**Haudompre**	**1.88**	**282**	ePg	**Pb**	**17 39 58.1**	**+1.5**
HAU				eSg	**Sb**	**17 40 22.0**	**+2.3**
	comp=E,86nm,0.3s						
KOSI	**Kohlern**	**1.96**	**126**	P	**Pb**	**17 39 58.7**	**+0.6**
KOSI				AML	AML		
	comp=E,125µm,0.5s						
KOSI				AML	AML		
	comp=N,119µm,0.4s						
KOSI				AML	AML		
	comp=N,119µm,1.6s						
ZONE	**Zone**	**2.00**	**159**	P	**Pn**	**17 39 58.4**	**+2.6**
ZONE				AML	AML		
	comp=N,79µm,1.1s						
ZONE				AML	AML		
	comp=E,107µm,0.3s						
ZONE				AML	AML		
	comp=N,79µm,0.9s						
WBA	**Furth**	**2.03**	**355**	⇑Pn	**Pn**	**17 39 54.5**	**-1.7**
WBA				Pg	**Pb**	**17 40 01.2**	**+2.1**
CABF	**La Chapelle**	**2.29**	**244**	ePg	**Pb**	**17 40 05.3**	**+1.7**
CABF				eSg	**Sb**	**17 40 33.7**	**+2.2**
	comp=N,40nm,0.3s						
BODE	**Bodenheim**	**2.33**	**347**	Pg	**Pb**	**17 40 07.7**	**+3.4**
PAGF	**Fort de Pagny**	**2.43**	**293**	ePg	**Pb**	**17 40 08.9**	**+2.9**
	baz=114						
PAGF				eSg	**Sb**	**17 40 39.6**	**+4.0**
	comp=N,19nm,0.2s						
LESA	**Schwarzleotal**	**2.45**	**94**	ePn	**Pn**	**17 40 02.1**	**+0.2**
	comp=N,2.4nm,0.1s,SNR=6.5						
LESA				ePg	**Pb**	**17 40 07.6**	**+1.3**
	comp=N,8.4nm,0.2s						
LESA				eSg	**Sb**	**17 40 38.5**	**+2.3**
	comp=N,7.5nm,0.2s						
ABH	**Alteburg**	**2.46**	**336**	ePg	**Pb**	**17 40 09.9**	**+3.3**
	SNR=9.6						
GRF	**Grafenberg Arr**	**2.50**	**34**	ePg	**Pb**	**17 40 10.2**	**+3.0**
	SNR=2.3						
ABTA	**Abfaltersbach**	**2.50**	**110**	ePg	**Pb**	**17 40 08.7**	**+1.4**
	comp=N,5.6nm,0.3s						
ABTA				eSg	**Sb**	**17 40 40.0**	**+2.2**
	comp=N,5.2nm,0.3s						
RJOB	**Jochberg**	**2.51**	**86**	ePn	**Pn**	**17 40 02.9**	**0.0**
	SNR=4.4						
RJOB				ePg	**Pb**	**17 40 09.7**	**+2.3**
	SNR=2.4						
WBG	**Bieber**	**2.54**	**4**	⇑Pn	**Pn**	**17 40 01.2**	**-2.0**
RIVT	**Riveris**	**2.58**	**324**	ePg	**Pb**	**17 40 11.7**	**+3.2**
	SNR=2.4						
RIVT				Sg	**Sb**	**17 40 44.0**	**+4.1**
TNS	**Taunus Mts**	**2.62**	**351**	Pn	**Pn**	**17 40 03.1**	**-1.2**
TNS				ePg	**Pb**	**17 40 12.7**	**+3.4**
	SNR=2.6						
LPL	**La Plagne**	**2.67**	**218**	ePg	**Pb**	**17 40 11.8**	**+1.6**
LPL				eSg	**Sb**	**17 40 45.4**	**+2.8**
	comp=N,21nm,0.4s						
SFTF	**Sexfontaines**	**2.78**	**283**	ePn	**Pn**	**17 40 05.8**	**-0.6**
	baz=100						
SFTF	**Sexfontaines**	**2.78**	**283**	ePg	**Pb**	**17 40 15.4**	**+3.5**
SFTF				eSn	**Sn**	**17 40 38.3**	**-1.2**
SFTF				eSg	**Sb**	**17 40 50.4**	**+4.8**
	comp=N,12nm,0.2s						
SAVF	**Savonnieres en**	**2.83**	**292**	ePn	**Pn**	**17 40 07.2**	**+0.2**
SAVF	**Savonnieres en**	**2.83**	**292**	ePn	**Pn**	**17 40 07.3**	**+0.2**
SAVF	**Savonnieres en**	**2.83**	**292**	ePg	**Pb**	**17 40 16.0**	**+3.3**
SAVF				eSn	**Sn**	**17 40 40.1**	**-0.5**
	comp=N,37nm,0.6s						
SAVF				eSg	**Sb**	**17 40 52.0**	**+5.0**
SAVF				eSg	**Sb**	**17 40 52.0**	**+5.0**
	comp=N,14nm,0.3s						
MEZF	**Maizieres J'vi**	**2.84**	**289**	ePg	**Pb**	**17 40 15.8**	**+2.9**
	baz=109						
MEZF				eSn	**Sn**	**17 40 39.4**	**-1.5**
MEZF				eSg	**Sb**	**17 40 52.2**	**+4.9**
	comp=N,15nm,0.3s						
WET	**Wettzell**	**2.95**	**58**	ePn	**Pn**	**17 40 06.6**	**-2.2**
	SNR=2.9						
WET				ePg	**Pb**	**17 40 16.9**	**+2.1**
	SNR=1.4						
KBA	**Koelnbreinsper**	**2.95**	**99**	ePn	**Pn**	**17 40 09.5**	**+0.5**
	comp=N,1.1nm,0.1s,SNR=4.8						
KBA				ePg	**Pb**	**17 40 16.9**	**+1.9**
	comp=N,4.4nm,0.1s						
KBA				eSg	**Sb**	**17 40 53.3**	**+2.5**
	comp=N,4.4nm,0.3s						
KBA	**Koelnbreinsper**	**2.95**	**99**	ePn	**Pn**	**17 40 09.4**	**+0.5**
	SNR=3.9						
KBA				ePg	**Pb**	**17 40 16.9**	**+1.9**
	SNR=3.3						
ROTZ	**Rotzenmuhle**	**2.97**	**43**	ePg	**Pb**	**17 40 17.4**	**+2.2**
	SNR=4.8						
BIOA	**Bad Ischl, Aus**	**3.08**	**87**	ePg	**Pb**	**17 40 18.9**	**+1.8**
	comp=N,7.8nm,0.2s						
BIOA				Sg	**Sg**	**17 41 00.7**	**-1.1**
	comp=N,12nm,0.3s						
UBBA	**Unterbreizbach**	**3.24**	**10**	ePg	**Pb**	**17 40 23.0**	**+3.2**
	SNR=2.7						
GEC2	**GERESS Array S**	**3.32**	**67**	ePn	**Pn**	**17 40 12.2**	**-1.7**
	SNR=2.6						
GEC2				ePg	**Pb**	**17 40 23.5**	**+2.3**
	SNR=2.4						
MBDF	**Montbardon**	**3.32**	**210**	ePg	**Pb**	**17 40 23.6**	**+2.3**
MBDF				eSn	**Sn**	**17 40 52.1**	**-1.0**
MBDF				eSg	**Sb**	**17 41 06.2**	**+4.8**
	comp=N,16nm,0.5s						
KHC	**Kasperske Hory**	**3.35**	**62**	ePN	**Pn**	**17 40 12.3**	**-2.0**
KHC				ePG	**Pb**	**17 40 24.0**	**+2.3**
KHC				eSG	**Sb**	**17 41 06.7**	**+4.6**
	comp=N,28nm,0.3s						
NKC	**Novy Kostel**	**3.42**	**39**	eSG	**Sb**	**17 41 08.8**	**+4.8**
	comp=N,20nm,0.3s						
MOA	**Molln**	**3.51**	**85**	i Pn	**Pn**	**17 40 15.5**	**-1.0**
	comp=N,1.3nm,0.2s,SNR=4.2						
MOA	**Molln**	**3.51**	**85**	ePn	**Pn**	**17 40 15.4**	**-1.0**
	SNR=2.7						
ORIF	**Oris-en-Rattie**	**3.51**	**220**	ePg	**Pb**	**17 40 27.1**	**+2.7**
ORIF				eSn	**Sn**	**17 40 55.2**	**-2.4**
ORIF				eSg	**Sb**	**17 41 11.2**	**+4.5**
	comp=N,11nm,0.3s						
LOR	**Lormes**	**3.56**	**266**	ePn	**Pn**	**17 40 17.1**	**-0.1**
	baz=84						
LOR	**Lormes**	**3.56**	**266**	ePg	**Pb**	**17 40 28.6**	**+3.3**
LOR				eSg	**Sb**	**17 41 14.0**	**+5.8**
	comp=N,13nm,0.2s						
CKRC	**Cesky Krumlov**	**3.69**	**69**	eSG	**Sg**	**17 41 18.1**	**-3.2**
SMF	**Signal de Mont**	**3.71**	**256**	ePg	Pb	17 40 31.9	+4.1
SMF				eSn	**Sn**	**17 41 00.7**	**-1.8**
SMF				eSg	**Sb**	**17 41 18.9**	**+6.5**
	comp=N,12nm,0.3s						
GIVF	**Givet**	**3.74**	**313**	eSn	**Sn**	**17 41 00.7**	**-2.5**
GIVF				eSg	**Sg**	**17 41 20.8**	**-2.0**
	comp=N,14nm,0.5s						
SSF	**Saint Saulge**	**3.83**	**263**	ePn	**Pn**	**17 40 20.7**	**-0.2**
SSF	**Saint Saulge**	**3.83**	**263**	ePg	Pb	17 40 34.3	+4.4
SSF				eSg	**Sb**	**17 41 22.5**	**+6.6**
	comp=N,6.9nm,0.3s						
ZVC	**Zvikov**	**3.85**	**60**	eSG	**Sb**	**17 41 21.7**	**+5.4**
	comp=N,18nm,0.2s						
AVF	**Avril sur Loir**	**3.99**	**260**	ePn	**Pn**	**17 40 22.5**	**-0.6**
AVF				eSn	**Sn**	**17 41 07.7**	**-1.7**
AVF				eSg	**Sb**	**17 41 27.0**	**+6.4**
BAIF	**Baives**	**4.03**	**309**	ePg	Pb	17 40 38.5	+5.3
BAIF				eSn	**Sn**	**17 41 07.2**	**-3.1**
BAIF				eSg	**Sg**	**17 41 30.0**	**-2.1**
	comp=N,3.8nm,0.2s						
HSKC	**Hora Svate Kat**	**4.12**	**42**	eSG	**Sb**	**17 41 31.4**	**+7.1**
	comp=N,16nm,0.4s						
VIVF	**Saint-Julien-l**	**4.13**	**229**	ePn	**Pn**	**17 40 22.7**	**-2.4**
VIVF	**Saint-Julien-l**	**4.13**	**229**	ePg	**Pb**	**17 40 38.4**	**+3.4**
VIVF				eSn	**Sn**	**17 41 07.1**	**-5.8**
VIVF				eSg	**Sb**	**17 41 30.8**	**+6.2**
	comp=N,11nm,0.3s						
PRU	**Pruhonice**	**4.31**	**55**	eSG	**Sb**	**17 41 35.8**	**+6.2**
	comp=N,15nm,0.4s						
HYF	**Humbligny**	**4.38**	**268**	ePn	**Pn**	**17 40 28.1**	**-0.4**
HYF	**Humbligny**	**4.38**	**268**	ePg	Pb	17 40 44.4	+5.1
HYF				eSg	Sb	17 41 39.7	+7.9
BGF	**Bois d'Agland**	**4.39**	**258**	ePn	**Pn**	**17 40 28.2**	**-0.4**
BGF	**Bois d'Agland**	**4.39**	**258**	ePg	**Pg**	**17 40 45.1**	**-1.8**
BGF				eSn	**Sn**	**17 41 17.3**	**-2.0**
BGF				eSg	**Sb**	**17 41 39.1**	**+7.1**
	comp=N,9.2nm,0.3s						
RICC	**Richard**	**4.40**	**47**	eSG	**Sg**	**17 41 40.4**	**-3.5**
	comp=N,16nm,0.4s						
CLL	**Collm**	**4.48**	**33**	ePn	Pn	17 40 24.0	-5.7
CLL				ePg	**Pg**	**17 40 47.0**	**-1.5**
CLL				eSg	**Sb**	**17 41 42.0**	**+7.6**
	comp=Z,9.0nm,0.5s						
BRG	**Berggiesshubel**	**4.54**	**43**	Sg	**Sb**	**17 41 44.1**	**+7.8**
BRG				Amp		17 41 46.8	
	comp=Z,11nm,0.5s						
TREC	**Trest**	**4.57**	**66**	eSG	**Sb**	**17 41 44.8**	**+7.5**
	comp=Z,12nm,0.3s						
CONA	**Conrad Observa**	**4.58**	**84**	i Pn	**Pn**	**17 40 30.1**	**-1.1**
	comp=Z,3.1nm,0.2s,SNR=11						
CONA				ePg	**Pg**	**17 40 49.9**	**-0.6**
	comp=Z,1.8nm,0.3s						
CONA				eSg	**Sg**	**17 41 49.8**	**-0.1**
	comp=Z,4.3nm,0.4s						
RONA	**Rosalia, Austr**	**4.88**	**87**	i Pn	**Pn**	**17 40 34.6**	**-0.6**
	comp=Z,0.6nm,0.2s						
TCF	**Toulx Ste Croi**	**4.89**	**257**	ePn	**Pn**	**17 40 34.6**	**-0.9**
TCF	**Toulx Ste Croi**	**4.89**	**257**	ePg	**Pg**	**17 40 54.2**	**-2.3**
TCF				eSn	**Sn**	**17 41 28.5**	**-3.2**
	comp=Z,2.1nm,0.2s						
TCF				eSg	Sb	17 41 54.8	+8.3
	comp=Z,3.1nm,0.3s						
KRUC	**Moravsky**	**5.08**	**71**	ePN	**Pn**	**17 40 36.6**	**-1.5**
KRUC				e		17 41 59.3	
LASF	**Ste Croix**	**5.10**	**228**	ePn	**Pn**	**17 40 36.5**	**-1.8**
LASF				eSn	**Sn**	**17 41 33.1**	**-3.6**
LASF				eSg	Sb	17 42 00.9	+8.6
	comp=Z,3.1nm,0.3s						
DPC	**Dobruska-Polom**	**5.49**	**58**	eSG	**Sg**	**17 42 12.8**	**-6.0**
	comp=Z,9.3nm,0.6s						
MODS	**Modra-Piesok**	**5.55**	**79**	eSG	**Sg**	**17 42 20.2**	**-0.7**
CAF	**Calviac**	**5.57**	**243**	ePn	**Pn**	**17 40 42.7**	**-2.1**
CAF				eSn	**Sn**	**17 41 44.3**	**-4.0**
CAF				eSg	**Sg**	**17 42 15.7**	**-5.7**
	comp=Z,2.6nm,0.4s						
RJF	**Les Rejaudoux**	**5.72**	**249**	eSn	**Sn**	**17 41 47.6**	**-4.4**
RJF				eSg	**Sg**	**17 42 21.6**	**-4.7**
	comp=Z,1.5nm,0.2s						
LDF	**La Druitiere**	**6.24**	**282**	ePg	**Pg**	**17 41 19.5**	**-2.6**
LDF				eSg	**Sg**	**17 42 37.5**	**-5.3**
	comp=Z,2.4nm,0.5s						
FLN	**La Foliniere**	**6.49**	**284**	ePn	**Pn**	**17 40 57.5**	**+0.1**
FLN				eSg	**Sg**	**17 42 46.0**	**-5.0**
	comp=Z,4.6nm,0.5s						
GRR	**Gorron**	**6.71**	**280**	ePg	Pg	17 41 28.1	-3.1
GRR				eSg	**Sg**	**17 42 53.8**	**-4.2**
	comp=Z,0.7nm,0.2s						

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*IPEC **05** 17:50:27.9±0.2, 51°.47N×16°.41E, h1^{km}, ML2.3/6, Error ellipse: s-maj=2.5km s-min=1.4km az=78.0*

*DNK **05** 17:50:28.4±2.0, 51°.50N×16°.20E, h0^{km}±90^{km}, ML2.5*

*IDC **05** 17:50:30.0±0.8, 51°.47N×15°.96E, h0^{km}, mbtmp3.0/7, ML2.9/6, Error ellipse: s-maj=17.2km s-min=7.6km az=113.0*

*PRU **05** 17:50:30.8, 51°.36N×16°.27E, h0^{km}*

ISC 05 17:50:27.4±0.7**, 51°.49N**±0°.03×**16°.24E**±0°.02**, h0**^{km}**, n52, σ1^{s}05**/94**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.65**	**177**	ePg	**Pg**	**17 50 40.4**	**+0.6**
KSP				eSg	**Sg**	**17 50 48.1**	**0.0**
CHVC	**Chvalec**	**0.91**	**188**	ePG	**Pg**	**17 50 45.6**	**+0.8**
CHVC				eSG	**Sg**	**17 50 56.9**	**+0.3**
OSTC	**Ostas**	**0.93**	**181**	ePG	**Pg**	**17 50 45.9**	**+0.6**
OSTC				eSG	**Sg**	**17 50 57.5**	**+0.2**
UPC	**Upice**	**0.99**	**189**	ePG	**Pg**	**17 50 46.9**	**+0.5**
UPC				eSG	**Sg**	**17 51 00.0**	**+0.7**
	comp=Z,152nm,0.5s						
DPC	**Dobruska-Polom**	**1.14**	**177**	ePG	**Pg**	**17 50 49.2**	**0.0**
DPC				eSG	**Sg**	**17 51 03.4**	**-0.6**
PIVO	**Bartosovice**	**1.32**	**171**	ePg	**Pg**	**17 50 52.6**	**0.0**
	baz=356						
PIVO				eSg	**Sg**	**17 51 08.5**	**-1.2**
	40nm,0.5s,baz=356						
PVCC	**Panska Ves**	**1.43**	**228**	ePG	**Pb**	**17 50 55.4**	**+0.5**
PVCC				eSG	**Sn**	**17 51 14.6**	**+0.5**
	comp=Z,146nm,0.3s						
KRLC	**Kraliky**	**1.46**	**166**	ePG	**Pn**	**17 50 55.1**	**+0.1**
KRLC				eSG	**Sg**	**17 51 13.0**	**-1.1**
	comp=Z,27nm,0.4s						
BRG	**Berggiesshubel**	**1.57**	**248**	Pn	**Pn**	**17 50 56.6**	**0.0**
BRG				Pg	**Pg**	**17 50 58.7**	**+1.1**
BRG				Sg	**Sg**	**17 51 19.0**	**+1.0**
BRG				Amp		17 51 20.2	
	comp=Z,34nm,0.4s						
RICC	**Richard**	**1.65**	**236**	ePG	**Pb**	**17 50 59.3**	**+0.6**
RYBC	**Ceska Rybna**	**1.69**	**184**	ePn	**Pn**	**17 50 58.4**	**+0.3**
	baz=7.4						
RYBC				eSg	**Sn**	**17 51 20.6**	**+0.2**
	comp=Z,17nm,0.2s,baz=7.4						
PRA	**Prague**	**1.83**	**220**	eSG	**Sb**	**17 51 25.4**	**+0.3**
GOPC	**GO Pecny, Ondr**	**1.83**	**211**	ePG	**Pb**	**17 51 01.9**	**+0.2**
STEB	**Steborice**	**1.83**	**147**	ePG	**Pb**	**17 51 01.7**	**-0.1**
STEB				eSG	**Sn**	**17 51 24.0**	**-0.1**
PRU	**Pruhonice**	**1.85**	**216**	ePG	**Pb**	**17 51 02.0**	**-0.1**
PRU				eSG	**Sb**	**17 51 26.3**	**+0.5**
	comp=Z,24nm,0.4s						
MORC	**Moravsky Berou**	**1.90**	**154**	ePn	**Pn**	**17 51 00.7**	**-0.5**
	baz=338						
MORC				eSg	**Sn**	**17 51 25.5**	**-0.3**
	comp=Z,23nm,0.5s,baz=338						
HSKC	**Hora Svate Kat**	**1.98**	**245**	ePG	**Pb**	**17 51 05.0**	**+0.6**
HSKC				eSG	**Sb**	**17 51 30.7**	**+1.1**
	comp=Z,39nm,0.3s						
CLL	**Collm**	**2.04**	**266**	i Pn	**Pn**	**17 51 03.2**	**+0.2**
CLL				i Pg	**Pb**	**17 51 06.5**	**+1.2**
CLL				i x	x	17 51 21.4	
CLL				eSg	**Sg**	**17 51 34.0**	**+1.1**
	comp=Z,25nm,0.4s						
OKC	**Ostrava-Krasne**	**2.05**	**143**	eSG	**Sb**	**17 51 31.1**	**-0.4**
	comp=Z,35nm,0.6s						
VRAC	**Vranov**	**2.19**	**174**	ePn	**Pn**	**17 51 05.2**	**+0.1**
	baz=357						
VRAC				eSg	**Sb**	**17 51 35.8**	**+0.1**
	comp=Z,18nm,0.6s,baz=357						
TREC	**Trest**	**2.25**	**193**	eSG	**Sb**	**17 51 38.2**	**+0.9**
KRUC	**Moravsky**	**2.43**	**178**	ePn	**Pn**	**17 51 08.6**	**+0.2**
	baz=0.3						
KRUC				eSg	**Sb**	**17 51 43.4**	**+0.9**
	comp=Z,20nm,0.7s,baz=0.3						
OJC	**Ojcow**	**2.59**	**118**	ePg	**Pg**	**17 51 18.6**	**+1.7**
OJC				eSg	**Sg**	**17 51 51.5**	**+1.1**
NKC	**Novy Kostel**	**2.71**	**244**	ePG	**Pg**	**17 51 19.8**	**+0.4**
JAVC	**Velka Javorina**	**2.79**	**160**	ePn	**Pn**	**17 51 12.9**	**-0.4**
	baz=343						
KHC	**Kasperske Hory**	**2.91**	**217**	ePN	**Pn**	**17 51 15.7**	**+0.6**
KHC				ePG	**Pb**	**17 51 21.8**	**+1.6**
KHC				eSN	**Sn**	**17 51 49.3**	**-1.5**
KHC				eSG	**Sg**	**17 51 59.7**	**-1.3**
	comp=Z,13nm,0.6s						
CKRC	**Cesky Krumlov**	**2.95**	**206**	ePN	**Pn**	**17 51 16.7**	**+1.2**
CKRC				ePG	**Pb**	**17 51 22.6**	**+1.8**
CKRC				eSG	**Sb**	**17 51 58.9**	**+1.6**
	comp=Z,22nm,0.6s						
GERES	**GERESS Array B**	**3.11**	**213**	Pn	**Pn**	**17 51 19.2**	**+1.4**
	comp=Z,0.9nm,0.4s,baz=28,slow=15,SNR=10						
GERES				Pg	**Pb**	**17 51 24.6**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=26,slow=16,SNR=51						
GERES				Sn	**Sn**	**17 51 54.2**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=31,slow=28,SNR=4.8						
GERES				Lg	Lg	17 52 04.8	
	comp=Z,0.6nm,0.3s,baz=28,slow=26,SNR=8.8						
LANS	**Liptovska Anna**	**3.12**	**137**	ePG	**Pg**	**17 51 28.3**	**+1.1**
LANS				eSG	**Sg**	**17 52 06.8**	**-0.8**
MODS	**Modra-Piesok**	**3.19**	**168**	ePG	**Pg**	**17 51 27.9**	**-0.6**
MODS				eSG	**Sg**	**17 52 10.3**	**+0.5**
VYHS	**Vyhne**	**3.43**	**150**	ePN	**Pn**	**17 51 22.4**	**+0.2**
VYHS				ePG	**Pg**	**17 51 32.9**	**-0.3**
CONA	**Conrad Observa**	**3.57**	**184**	ePg	**Pb**	**17 51 33.2**	**+1.7**
	comp=Z,2.7nm,0.3s						
CONA				Sg	**Sg**	**17 52 20.1**	**-2.0**
	comp=Z,16nm,0.8s						
RONA	**Rosalia, Austr**	**3.79**	**179**	ePn	**Pn**	**17 51 28.4**	**+1.2**
	comp=Z,1.2nm,0.4s						
RONA				Sg	**Sg**	**17 52 28.0**	**-1.2**
	comp=Z,11nm,0.6s						
STHS	**Stebnicka Huta**	**3.81**	**121**	ePG	**Pg**	**17 51 41.3**	**+0.9**
STHS				eSG	**Sg**	**17 52 30.7**	**+1.0**
KECS	**Kecovo**	**4.07**	**136**	eSG	**Sg**	**17 52 38.0**	**0.0**
ARSA	**Arzberg**	**4.27**	**187**	Pn	**Pg**	**17 51 49.1**	**0.0**
	comp=Z,2.6nm,0.4s						
ARSA				Sg	**Sg**	**17 52 41.0**	**-3.5**
	comp=Z,4.7nm,0.5s						
LUNU	**Lund**	**4.47**	**339**	i P	**Pn**	**17 51 37.4**	**+1.0**
LUNU				eS	**Sn**	**17 52 27.4**	**-1.7**
KOLS	**Kolonicke sedl**	**4.64**	**121**	ePN	**Pn**	**17 51 40.5**	**+1.8**
KOLS				ePG	**Pg**	**17 51 57.9**	**+1.6**
LESA	**Schwarzleotal**	**4.69**	**211**	Sg	**Sg**	**17 52 57.8**	**0.0**
	comp=Z,3.3nm,0.3s						
KBA	**Koelnbreinsper**	**4.80**	**204**	i Pn	**Pn**	**17 51 40.2**	**-1.0**
	comp=Z,0.6nm,0.1s						
KBA				eSg	**Sg**	**17 53 01.5**	**-0.1**
	comp=Z,14nm,0.8s						
BLEU	**Blekinge**	**4.83**	**357**	i P	**Pn**	**17 51 42.8**	**+1.5**
BLEU				eS	**Sn**	**17 52 37.2**	**-0.7**
BJUU	**Bjuv**	**4.98**	**339**	i P	**Pn**	**17 51 43.7**	**+0.4**
BJUU				eS	**Sn**	**17 52 40.4**	**-1.1**
MYKA	**Terra Mystica**	**5.15**	**200**	eSg	**Sg**	**17 53 14.3**	**+1.4**
	comp=Z,2.6nm,0.4s						
DEL	**Delary**	**5.18**	**345**	i P	**Pn**	**17 51 47.0**	**+0.9**
DEL				eS	**Sn**	**17 52 44.6**	**-2.0**
ABTA	**Abfaltersbach**	**5.34**	**209**	ePn	**Pb**	**17 52 00.5**	**-1.1**
	comp=Z,0.7nm,0.3s						
ABTA				Sg	**Sg**	**17 53 20.4**	**+1.5**
	comp=Z,5.7nm,0.5s						
FABU	**Falkenberg**	**5.90**	**341**	eP	**Pn**	**17 51 57.8**	**+1.8**
FABU				i S	**Sn**	**17 53 03.1**	**-1.0**
AKASG	**Malin Array Be**	**8.21**	**90**	Pn	**Pn**	**17 52 28.4**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=284,slow=12,SNR=3.1						
	comp=Z,0.3nm,0.5s						
HFS	**Hagfors**	**8.78**	**352**	Pn	**Pn**	**17 52 35.8**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=166,slow=14,SNR=4.1						
	comp=Z,0.5nm,0.5s						
NOA	**NORSAR Array B**	**9.97**	**346**	Pn	**Pn**	**17 52 50.5**	**-1.3**
	baz=175,slow=12,SNR=1.8						
	comp=Z,0.2nm,0.5s						
FINES	**FINESS Array B**	**11.35**	**25**	Pn	**Pn**	**17 53 10.4**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=213,slow=9.9,SNR=7.9						
	comp=Z,0.7nm,0.5s						
EKA	**Eskdalemuir Ar**	**12.19**	**296**	Pn	**Pn**	**17 53 21.1**	**-1.1**
	baz=98,slow=14						
	comp=Z,0.2nm,0.4s						
ARCES	**ARCESS Array B**	**18.63**	**10**	Pn	**P**	**17 54 44.6**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=193,slow=12,SNR=2.3						
	comp=Z,0.3nm,0.3s						

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*IDC **05** 17:52:10.3±5.3, 37°.94N×72°.36E, h122^{km}±42^{km}, mb3.6/7, mbtmp4.1/11, Error ellipse: s-maj=48.4km s-min=38.6km az=135.0*

*NNC **05** 17:52:11.7±3.3, 38°.32N×72°.03E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=25.8km s-min=17.7km az=166.0*

ISC 05 17:52:10.0±1.3**, 38°.0N**±0°.1×**72°.14E**±0°.09**, h113**^{km}**, n30, σ1^{s}69**/38**, mb4.0**/6**, 8C-3D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.33**	**16**	P	**Pn**	**17 53 15.6**	**+1.4**
	SNR=35						
UCH	**Uchtor**	**4.63**	**22**	P	**Pn**	**17 53 19.5**	**+1.1**
	SNR=7.8						
EKS2	**Erkin-Say**	**4.86**	**14**	P	**Pn**	**17 53 23.1**	**+2.0**
	SNR=17						
AAK	**Ala-Archa**	**5.01**	**20**	P	**Pn**	**17 53 24.9**	**+1.8**
	SNR=24						
AAK	**Ala-Archa**	**5.01**	**20**	P	**Pn**	**17 53 24.7**	**+1.6**
	28nm,0.4s,baz=188,slow=6.2,SNR=42						
AAK				S	**Sn**	**17 54 19.3**	**-0.6**
	64nm,0.8s,baz=335,slow=20,SNR=38						
AAK	**Ala-Archa**	**5.01**	**20**	⇑P	**Pn**	**17 53 24.6**	**+1.5**
	2.6nm,0.4s						
AAK				⇑S	**Sn**	**17 54 20.4**	**+0.5**
	68nm,0.9s						
KBK	**Karagaybulak**	**5.16**	**24**	P	**Pn**	**17 53 27.5**	**+2.3**
	SNR=11						
KK31	**Karatay Array**	**5.28**	**347**	⇑P	**Pn**	**17 53 29.0**	**+2.3**
	34nm,0.3s,baz=156,slow=11,SNR=498						
KK31				⇑S	**Sn**	**17 54 26.9**	**+0.5**
	18nm,0.2s,baz=218,slow=34,SNR=18						
ULHL	**Ulahol**	**5.31**	**35**	P	**Pn**	**17 53 27.2**	**-0.1**
	SNR=9.4						
CHMS	**Chumysh**	**5.41**	**21**	P	**Pn**	**17 53 29.9**	**+1.4**
	SNR=20						
CHMS	**Chumysh**	**5.41**	**21**	⇓P	**Pn**	**17 53 29.6**	**+1.1**
	19nm,0.5s						
CHMS				⇑S	**Sn**	**17 54 29.9**	**+0.4**
	55nm,0.8s						
USP	**Ospenovka**	**5.60**	**18**	P	**Pn**	**17 53 32.2**	**+1.2**
	SNR=7.8						
TKM2	**Tokmak 2**	**5.61**	**27**	P	**Pn**	**17 53 33.6**	**+2.3**
	SNR=6.3						
TKM2	**Tokmak 2**	**5.61**	**27**	⇑P	**Pn**	**17 53 32.9**	**+1.5**
	3.1nm,0.6s						
TKM2				⇑S	**Sn**	**17 54 35.9**	**+1.3**
	14nm,0.6s						
MKAR	**Makanchi Array**	**11.58**	**37**	P	**Pn**	**17 54 50.7**	**-1.0**
	1.2nm,0.5s,baz=227,slow=15,SNR=12						
KURBB	**Kurchatov Arra**	**13.45**	**18**	P	**Pn**	**17 55 13.1**	**-3.1**
	3.7nm,0.5s,baz=210,slow=12,SNR=29						
AB31	**Akbulak array**	**14.31**	**326**	P	**Pn**	**17 55 27.6**	**+0.3**
	0.9nm,0.3s,baz=131,slow=13,SNR=47						
AB31				⇓S	**Sn**	**17 58 03.5**	**-1.5**
	0.9nm,0.3s,baz=135,slow=26,SNR=18						
BVAR	**Borovoye Array**	**15.12**	**356**	P	**Pn**	**17 55 36.6**	**-0.7**
	2.0nm,0.4s,baz=156,slow=12,SNR=17						
AKTO	**Aktyubinsk**	**16.03**	**326**	P	**Pn**	**17 55 49.9**	**+1.1**
	3.2nm,0.3s,baz=124,slow=12,SNR=17						
AKTO				S	**Sn**	**17 58 40.2**	**-6.2**
	2.5nm,0.5s,baz=20,slow=17,SNR=5.4						
AKTO	**Aktyubinsk**	**16.03**	**326**	⇑P	**P**	**17 55 50.1**	**+0.1**
	2.8nm,0.6s						
AKTO				⇓S	**Sn**	**17 58 47.5**	**+1.2**
	1.3nm,0.5s						
ZALV	**Zalesovo Beam**	**18.21**	**25**	P	**P**	**17 56 12.7**	**-1.3**
	1.7nm,0.4s,baz=222,slow=10,SNR=10.0						
ARTI	**Arti**	**20.60**	**338**	P	**P**	**17 56 39.6**	**-0.2**
	2.3nm,0.5s,baz=162,slow=7.0,SNR=4.7						
	2.3nm,0.5s						
FINES	**FINESS Array B**	**36.80**	**325**	P	**P**	**17 59 07.2**	**+0.7**
	0.9nm,0.3s,baz=119,slow=9.2,SNR=18						
	0.9nm,0.3s						
ARCES	**ARCESS Array B**	**40.15**	**337**	P	**P**	**17 59 35.1**	**+0.6**
	1.0nm,0.5s,baz=111,slow=8.3,SNR=19						
	1.0nm,0.5s						
HFS	**Hagfors**	**42.49**	**321**	P	**P**	**17 59 54.3**	**+0.6**
	1.4nm,0.5s,baz=97,slow=12,SNR=11						
	1.4nm,0.5s						
NB2	**NORSAR Subarra**	**43.77**	**322**	P	**P**	**18 00 04.3**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=92,slow=7.9						
NOA	**NORSAR Array B**	**43.77**	**322**	P	**P**	**18 00 04.3**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=93,slow=7.7,SNR=6.1						
	comp=Z,0.7nm,0.5s						
SPITS	**Spitsbergen Ar**	**46.28**	**346**	P	**P**	**18 00 23.1**	**-0.6**
	comp=Z,7.8nm,1.1s,baz=135,slow=16,SNR=1.8						
	comp=Z,7.8nm,1.1s						
EKA	**Eskdalemuir Ar**	**51.88**	**315**	P	**P**	**18 01 06.9**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=73,slow=7.1,SNR=1.8						
	comp=Z,0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**66.66**	**269**	P	**P**	**18 02 48.3**	**-0.6**
	comp=Z,168nm,0.3s,baz=51,slow=5.9,SNR=1.3						

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*JMA **05** 17:57:04.3±0.3, 25°N±2°×122°.1E±0°.6, h89^{km}±3^{km}, MV2.3/11, TAIWAN REGION*

*TAP **05** 17:57:04.4, 24°.77N×122°.13E, h86^{km}, ML3.2, C*

ISC 05 17:57:03.3±1.3**, 24°.78N**±0°.03×**122°.15E**±0°.03**, h95**^{km}±6^{km}**, n129, σ1^{s}07**/239**, 12C-10D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		**0.21**	**288**	P	**Pn**	**17 57 17.1**	**+0.2**
TWB1	**Santiao Chiao**	**0.27**	**327**	⇓iP	**Pn**	**17 57 17.5**	**+0.3**
TWB1				S	**Sn**	**17 57 26.8**	**-0.8**
TWC	**Suao**	**0.32**	**239**	⇓P	**Pn**	**17 57 17.5**	**0.0**
TWC				S	**Sn**	**17 57 26.8**	**-1.2**

ESAO	**Su ao**	**0.34**	**234**	P	**Pn**	**17 57 17.8**	**+0.3**
ESAO				S	**Sn**	**17 57 27.2**	**-1.0**
TIPB	**Shuangxi**	**0.35**	**303**	⇓P	**Pn**	**17 57 17.9**	**+0.3**
TIPB				S	**Sn**	**17 57 27.5**	**-0.9**
EOS2	**EOS2**	**0.36**	**169**	⇓P	**Pn**	**17 57 18.7**	**+1.1**
EOS2				S	**Sn**	**17 57 29.3**	**+1.2**
ILA	**Ilan**	**0.37**	**268**	*e*S	**Sn**	**17 57 28.5**	**+0.1**
SXI1	**Grass Mountain**	**0.40**	**321**	⇓*i*P	**Pn**	**17 57 18.2**	**+0.1**
SXI1				S	**Sn**	**17 57 28.4**	**-0.6**
NDS	**Dongshan**	**0.42**	**250**	P	**Pn**	**17 57 17.6**	**-0.4**
NDS				*e*S	**Sn**	**17 57 27.4**	**-1.7**
TWE	**Neicheng**	**0.45**	**263**	*e*P	**Pn**	**17 57 18.6**	**+0.4**
TWE				*e*S	**Sn**	**17 57 28.5**	**-0.8**
NWF	**Wu-fen Shan**	**0.45**	**311**	*e*S	**Sn**	**17 57 28.5**	**-1.0**
WFSB	**Wu-fen Shan**	**0.45**	**311**	*e*S	**Sn**	**17 57 28.9**	**-0.4**
EWUT	**Wuta**	**0.47**	**226**	⇓P	**Pn**	**17 57 19.1**	**+0.7**
EWUT				*e*S	**Sn**	**17 57 29.6**	**-0.1**
TNOU	**National Taiwa**	**0.51**	**317**	*e*P	**Pn**	**17 57 18.8**	**+0.2**
TNOU				*e*S	**Sn**	**17 57 29.8**	**-0.3**
ENA	**Nanau**	**0.51**	**227**	⇑*i*P	**Pn**	**17 57 19.3**	**+0.6**
ENA				*e*S	**Sn**	**17 57 30.2**	**0.0**
EOS3	**EOS3**	**0.51**	**163**	*e*P	**Pn**	**17 57 19.9**	**+1.3**
EOS3				*e*S	**Sn**	**17 57 30.9**	**+1.0**
FUSB	**Fushanzhiwuyua**	**0.51**	**268**	⇓P	**Pn**	**17 57 19.1**	**+0.3**
FUSB				*e*S	**Sn**	**17 57 27.8**	**-2.5**
ENTT	**Nioudou**	**0.55**	**256**	*e*P	**Pn**	**17 57 19.7**	**+0.7**
ENTT				*e*S	**Sn**	**17 57 30.7**	**0.0**
TWA	**Mucha**	**0.55**	**291**	*e*P	**Pn**	**17 57 19.1**	**0.0**
TWA				*e*S	**Sn**	**17 57 29.9**	**-0.9**
EAHA	**Aohua**	**0.58**	**220**	*e*P	**Pn**	**17 57 19.7**	**+0.4**
EAHA				*e*S	**Sn**	**17 57 31.3**	**+0.1**
NWLT	**Wulai**	**0.59**	**270**	*e*P	**Pn**	**17 57 19.6**	**+0.2**
NWLT				*e*S	**Sn**	**17 57 29.8**	**-1.5**
NHDH	**Xindian Distri**	**0.60**	**288**	*e*P	**Pn**	**17 57 19.5**	**+0.1**
NHDH				*e*S	**Sn**	**17 57 30.4**	**-1.0**
LATG	**Datong**	**0.62**	**247**	⇑*i*P	**Pn**	**17 57 20.6**	**+0.9**
LATG				*e*S	**Sn**	**17 57 32.2**	**+0.3**
TAP	**Taipei**	**0.64**	**294**	*e*S	**Sn**	**17 57 30.9**	**-1.1**
YM01	**YM01**	**0.64**	**305**	⇑P	**Pn**	**17 57 20.0**	**+0.1**
YM01				*e*S	**Sn**	**17 57 31.4**	**-0.8**
YM08	**YM08**	**0.65**	**309**	*e*P	**Pn**	**17 57 19.9**	**0.0**
YM08				*e*S	**Sn**	**17 57 31.0**	**-1.3**
ZUZH	**Zhuzihu**	**0.67**	**305**	*e*P	**Pn**	**17 57 20.3**	**+0.2**
ZUZH				*e*S	**Sn**	**17 57 31.5**	**-1.1**
EOS4	**EOS4**	**0.67**	**167**	*e*P	**Pn**	**17 57 20.3**	**+0.6**
EOS4				*e*S	**Sn**	**17 57 31.9**	**0.0**
TWY	**Chenhua**	**0.70**	**315**	*e*P	**Pn**	**17 57 20.7**	**+0.4**
TWY				*e*S	**Sn**	**17 57 33.0**	**0.0**
YHNB	**Yeheng**	**0.71**	**261**	⇑*i*P	**Pn**	**17 57 21.2**	**+0.7**
YHNB				*e*S	**Sn**	**17 57 33.1**	**-0.2**
NTST	**Danshui**	**0.74**	**301**	*e*S	**Sn**	**17 57 33.3**	**-0.4**
NNSB	**Datong**	**0.78**	**244**	⇑*i*P	**Pn**	**17 57 22.1**	**+0.8**
NNSB				*e*S	**Sn**	**17 57 34.7**	**0.0**
ETL	**Fush Village**	**0.78**	**218**	*e*P	**Pn**	**17 57 21.2**	**0.0**
ETL				*e*S	**Sn**	**17 57 34.2**	**-0.3**
NNS	**Nan Shan**	**0.79**	**245**	⇑*i*P	**Pn**	**17 57 22.1**	**+0.9**
NNS				*e*S	**Sn**	**17 57 34.6**	**-0.1**
NACB	**Ninganchiao**	**0.79**	**220**	⇑P	**Pn**	**17 57 21.1**	**-0.1**
NACB				*e*S	**Sn**	**17 57 33.9**	**-0.6**
JYNG	**Yonagunijimaku**	**0.79**	**114**	P	**Pn**	**17 57 21.7**	**+0.5**
JYNG				*e*S	**Sn**	**17 57 34.7**	**+0.2**
ETLH	**Xiulin Townshi**	**0.83**	**227**	*e*P	**Pn**	**17 57 22.1**	**+0.4**
ETLH				*e*S	**Sn**	**17 57 35.0**	**-0.6**
YOJ	**Yonaguni jima**	**0.84**	**112**	*e*P	**Pn**	**17 57 22.3**	**+0.5**
YOJ				*e*S	**Sn**	**17 57 35.8**	**+0.3**
YOJ	**Yonaguni jima**	**0.84**	**112**	P	**Pn**	**17 57 22.2**	**+0.5**
YOJ				S	**Sn**	**17 57 35.5**	**0.0**
TWD	**Chiawan**	**0.86**	**216**	*e*P	**Pn**	**17 57 22.0**	**+0.1**
TWD				*e*S	**Sn**	**17 57 35.3**	**-0.5**
KSHI	**Guanxi Townshi**	**0.89**	**270**	*e*P	**Pn**	**17 57 23.2**	**+1.0**
KSHI				*e*S	**Sn**	**17 57 37.2**	**+0.9**
NCU	**National Centr**	**0.90**	**282**	*e*S	**Sn**	**17 57 35.5**	**-1.0**
NCUH	**Zhongli**	**0.90**	**282**	*e*P	**Pn**	**17 57 23.0**	**+0.7**
NCUH				*e*S	**Sn**	**17 57 37.0**	**+0.5**
HWA	**Hwalien**	**0.94**	**212**	*e*P	**Pn**	**17 57 23.2**	**+0.5**
HWA				S	**Sn**	**17 57 38.2**	**+0.9**
NFF	**Wufeng Townshi**	**0.95**	**261**	*e*P	**Pn**	**17 57 23.5**	**+0.6**
NFF				*e*S	**Sn**	**17 57 37.6**	**-0.1**
ETM	**Tongmen**	**1.01**	**217**	⇓P	**Pn**	**17 57 23.4**	**0.0**
ETM				*e*S	**Sn**	**17 57 37.5**	**-1.1**
LXIB	**Xiulin Townshi**	**1.01**	**222**	⇑*i*P	**Pn**	**17 57 23.5**	**-0.1**
LXIB				S	**Sn**	**17 57 38.0**	**-1.0**
WHF	**Hehuan Shan**	**1.02**	**232**	*e*P	**Pn**	**17 57 24.8**	**+0.7**
WHF				S	**Sn**	**17 57 39.5**	**-0.3**
TWT	**Tachien**	**1.03**	**240**	⇓*e*P	**Pn**	**17 57 25.4**	**+1.4**
TWT				*e*S	**Sn**	**17 57 40.0**	**+0.6**
TEYL	**Yanliau Villag**	**1.04**	**209**	P	**Pn**	**17 57 24.0**	**+0.2**
TEYL				*e*S	**Sn**	**17 57 38.9**	**-0.3**
LIOB	**Emei**	**1.04**	**263**	*e*P	**Pn**	**17 57 24.5**	**+0.7**
LIOB				*e*S	**Sn**	**17 57 39.3**	**-0.1**
TDCB	**Techi**	**1.05**	**240**	*e*P	**Pn**	**17 57 25.3**	**+1.2**
NSTT	**Nanjuang**	**1.06**	**262**	*e*P	**Pn**	**17 57 24.6**	**+0.6**
NSTT				*e*S	**Sn**	**17 57 39.6**	**0.0**
SHUL	**Shoufeng**	**1.12**	**209**	⇑*i*P	**Pn**	**17 57 25.1**	**+0.3**
SHUL				*e*S	**Sn**	**17 57 41.0**	**+0.1**
ESL	**Shilin**	**1.16**	**215**	*e*P	**Pn**	**17 57 24.8**	**-0.4**
ESL				*e*S	**Sn**	**17 57 40.1**	**-1.6**
TEGC	**Jichi Village**	**1.20**	**208**	*e*P	**Pn**	**17 57 26.0**	**+0.3**
TEGC				*e*S	**Sn**	**17 57 42.7**	**+0.1**
WHP	**Taichung City**	**1.21**	**246**	*e*P	**Pn**	**17 57 27.2**	**+1.4**
WHP				*e*S	**Sn**	**17 57 43.4**	**+0.6**
OWD	**Renai**	**1.21**	**228**	*e*P	**Pn**	**17 57 26.8**	**+0.8**
OWD				*e*S	**Sn**	**17 57 43.0**	**-0.1**
WUSB	**Renai**	**1.23**	**231**	⇑*i*P	**Pn**	**17 57 27.1**	**+1.0**
WUSB				S	**Sn**	**17 57 43.6**	**+0.3**
NMLH	**Miaoli**	**1.26**	**259**	*e*P	**Pn**	**17 57 26.7**	**+0.3**
NMLH				*e*S	**Sn**	**17 57 43.7**	**-0.1**
WARBT	**Fenglin Townsh**	**1.27**	**214**	⇑P	**Pn**	**17 57 25.8**	**-0.7**
WARBT				*e*S	**Sn**	**17 57 42.4**	**-1.6**
EGFH	**Guangfu**	**1.29**	**211**	*e*P	**Pn**	**17 57 26.7**	**0.0**
EGFH				*e*S	**Sn**	**17 57 43.6**	**-0.8**
NSY	**Sanyi**	**1.32**	**254**	*e*P	**Pn**	**17 57 28.6**	**+1.5**
NSY				*e*S	**Sn**	**17 57 45.5**	**+0.5**
WCS	**Beigang Elemen**	**1.34**	**238**	*e*P	**Pn**	**17 57 28.8**	**+1.5**
WCS				*e*S	**Sn**	**17 57 46.3**	**+0.8**
VWDT	**VWDT**	**1.38**	**222**	*e*P	**Pn**	**17 57 28.8**	**+1.0**
VWDT				*e*S	**Sn**	**17 57 46.4**	**+0.1**
WDJ	**Dajia District**	**1.44**	**253**	*e*P	**Pn**	**17 57 30.2**	**+1.6**
WDJ				*e*S	**Sn**	**17 57 48.0**	**+0.3**
HGSD	**Ruisui**	**1.44**	**208**	*e*P	**Pn**	**17 57 28.8**	**+0.2**
HGSD				*e*S	**Sn**	**17 57 47.8**	**0.0**
SMLT	**Sun Moon Lake**	**1.45**	**232**	*e*P	**Pn**	**17 57 30.7**	**+1.9**
SMLT				*e*S	**Sn**	**17 57 49.7**	**+1.6**
TYC	**Yuchr**	**1.47**	**234**	*e*P	**Pn**	**17 57 30.9**	**+2.0**
TYC				*e*S	**Sn**	**17 57 48.9**	**+0.6**
SSLB	**Suanglung**	**1.47**	**228**	*e*P	**Pn**	**17 57 30.4**	**+1.3**
SSLB				*e*S	**Sn**	**17 57 49.0**	**+0.5**
EHY	**Hungye**	**1.48**	**211**	*e*P	**Pn**	**17 57 28.8**	**-0.3**
EHY				*e*S	**Sn**	**17 57 47.1**	**-1.5**
EHYH	**Wanrong**	**1.48**	**210**	*e*P	**Pn**	**17 57 29.3**	**+0.2**
EHYH				*e*S	**Sn**	**17 57 46.8**	**-1.7**
TCU	**Taichung**	**1.48**	**245**	*e*S	**Sn**	**17 57 49.0**	**+0.3**
IRIF	**Iriomote-Funau**	**1.50**	**107**	*e*P	**Pn**	**17 57 30.0**	**+0.6**
IRIF				*e*S	**Sn**	**17 57 49.0**	**0.0**
YULB	**Yu-li**	**1.58**	**210**	*e*P	**Pn**	**17 57 29.7**	**-0.7**
YULB				*e*S	**Sn**	**17 57 49.2**	**-1.8**
ECBN	**Changbin**	**1.59**	**204**	⇓P	**Pn**	**17 57 30.6**	**+0.1**
ECBN				*e*S	**Sn**	**17 57 50.0**	**-1.1**
WHYT	**Xinyi Township**	**1.60**	**228**	*e*P	**Pn**	**17 57 32.6**	**+2.0**
WHYT				*e*S	**Sn**	**17 57 53.6**	**+2.2**
WCHH	**Zhanghua**	**1.61**	**245**	*e*P	**Pn**	**17 57 31.3**	**+0.6**
WCHH				*e*S	**Sn**	**17 57 52.0**	**+0.5**
WJS	**Zhushan**	**1.61**	**234**	*e*P	**Pn**	**17 57 32.6**	**+1.9**
WJS				*e*S	**Sn**	**17 57 54.1**	**+2.6**
TWF1	**Yuli**	**1.62**	**209**	*e*P	**Pn**	**17 57 30.6**	**-0.2**
TWF1				*e*S	**Sn**	**17 57 50.3**	**-1.4**
WCH1	**Changhua City**	**1.62**	**245**	*e*S	**Sn**	**17 57 52.5**	**+0.7**
CHKH	**Chenggong**	**1.72**	**204**	*e*P	**Pn**	**17 57 32.1**	**-0.1**
CHKH				*e*S	**Sn**	**17 57 52.5**	**-1.6**
FULB	**Fuli**	**1.76**	**207**	*e*P	**Pn**	**17 57 33.1**	**+0.5**
FULB				*e*S	**Sn**	**17 57 55.2**	**+0.3**
ALS	**Alishan**	**1.76**	**225**	*e*P	**Pn**	**17 57 34.8**	**+1.8**
ALS				*e*S	**Sn**	**17 57 57.1**	**+1.7**
JKRS	**Kuro-shima**	**1.77**	**107**	*e*S	**Sn**	**17 57 55.9**	**+0.7**
CHN5	**Tsauling**	**1.79**	**229**	*e*P	**Pn**	**17 57 34.8**	**+1.7**
CHN5				*e*S	**Sn**	**17 57 57.4**	**+1.7**
WGK	**Gukeng**	**1.81**	**233**	*e*P	**Pn**	**17 57 35.0**	**+1.7**
WGK				*e*S	**Sn**	**17 57 57.6**	**+1.5**
CHKT	**Chengkung**	**1.82**	**203**	*e*P	**Pn**	**17 57 33.0**	**-0.4**
CHKT				*e*S	**Sn**	**17 57 54.0**	**-2.3**
WDLH	**Douliu**	**1.83**	**234**	*e*S	**Sn**	**17 57 57.5**	**+1.0**
EHD	**Haiduan**	**1.84**	**208**	*e*P	**Pn**	**17 57 32.9**	**-0.8**
EHD				*e*S	**Sn**	**17 57 55.7**	**-1.0**
JIJ	**Ishigaki jima**	**1.86**	**102**	*e*P	**Pn**	**17 57 34.7**	**+0.8**
JIJ				*e*S	**Sn**	**17 57 57.0**	**-0.2**
ECS	**Chishang**	**1.88**	**207**	*e*P	**Pn**	**17 57 35.4**	**+1.2**
ECS				*e*S	**Sn**	**17 57 58.0**	**+0.4**
ELDTW	**Lidau**	**1.89**	**214**	*e*P	**Pn**	**17 57 34.6**	**+0.1**
ELDTW				*e*S	**Sn**	**17 57 57.4**	**-0.7**
WTK	**Tuku**	**1.94**	**236**	*e*P	**Pn**	**17 57 36.0**	**+1.0**
WTK				*e*S	**Sn**	**17 57 59.1**	**0.0**
WCKO	**Fanlu**	**1.94**	**227**	*e*P	**Pn**	**17 57 36.9**	**+1.8**
WCKO				*e*S	**Sn**	**17 58 01.2**	**+2.0**
EDH	**Donghe**	**1.96**	**204**	⇑P	**Pn**	**17 57 35.0**	**-0.2**
EDH				*e*S	**Sn**	**17 57 58.2**	**-1.3**
JISG	**Ishigakijimahi**	**1.97**	**95**	P	**Pn**	**17 57 36.5**	**+1.2**
JISG				*e*S	**Sn**	**17 58 00.2**	**+0.5**
TPUB	**Ta-pu**	**2.02**	**224**	*e*P	**Pn**	**17 57 37.3**	**+1.2**
TPUB				*e*S	**Sn**	**17 58 02.1**	**+1.1**
CHY	**Chiayi**	**2.03**	**231**	*e*P	**Pn**	**17 57 37.4**	**+1.3**
CHY				*e*S	**Sn**	**17 58 02.1**	**+1.0**
STYH	**Taoyuan**	**2.04**	**218**	*e*P	**Pn**	**17 57 36.7**	**+0.5**
STYH				*e*S	**Sn**	**17 58 01.3**	**+0.1**
WTP	**Ta-pu**	**2.08**	**223**	*e*P	**Pn**	**17 57 38.4**	**+1.6**
WTP				*e*S	**Sn**	**17 58 03.6**	**+1.4**
LONT	**Longtian**	**2.08**	**207**	*e*P	**Pn**	**17 57 36.5**	**-0.3**
LONT				*e*S	**Sn**	**17 58 01.5**	**-1.0**
WSF	**Szhu**	**2.10**	**238**	*e*S	**Sn**	**17 58 03.2**	**+0.5**
TWK	**Hsinying**	**2.14**	**226**	*e*P	**Pn**	**17 57 38.7**	**+1.1**
TWK				*e*S	**Sn**	**17 58 04.6**	**+0.8**
WSL	**Shuilin Townsh**	**2.16**	**235**	*e*P	**Pn**	**17 57 38.9**	**+1.1**
WSL				*e*S	**Sn**	**17 58 04.3**	**+0.2**
SNST	**Tainan City**	**2.17**	**225**	*e*P	**Pn**	**17 57 39.1**	**+1.2**
SNST				*e*S	**Sn**	**17 58 04.8**	**+0.5**
CHN1	**Nanshi**	**2.17**	**223**	*e*P	**Pn**	**17 57 39.2**	**+1.2**
CHN1				*e*S	**Sn**	**17 58 05.7**	**+1.1**
TWG	**Pinlang**	**2.19**	**207**	*e*P	**Pn**	**17 57 38.3**	**+0.2**
TWG				*e*S	**Sn**	**17 58 03.2**	**-1.6**
TWGBT	**Beinan**	**2.19**	**207**	*e*P	**Pn**	**17 57 38.7**	**+0.5**
TWGBT				*e*S	**Sn**	**17 58 03.1**	**-1.7**
LDUT	**Ludao**	**2.19**	**197**	*e*P	**Pn**	**17 57 37.4**	**-0.8**
LDUT				*e*S	**Sn**	**17 58 02.4**	**-2.4**
TTN	**Taitung**	**2.21**	**205**	*e*P	**Pn**	**17 57 40.4**	**+1.9**
SGST	**Jiashian**	**2.22**	**221**	*e*P	**Pn**	**17 57 39.7**	**+1.2**
SGST				*e*S	**Sn**	**17 58 06.2**	**+0.6**
ICHU	**Yijhu**	**2.22**	**231**	*e*S	**Sn**	**17 58 06.2**	**+0.7**
CHN8	**Yiju**	**2.28**	**232**	*e*S	**Sn**	**17 58 07.5**	**+0.6**
ECL	**Taimali**	**2.43**	**207**	*e*P	**Pn**	**17 57 41.1**	**-0.3**
ECL				*e*S	**Sn**	**17 58 08.2**	**-2.4**
SSD	**Sandimen**	**2.46**	**215**	*e*P	**Pn**	**17 57 43.9**	**+2.2**
SSD				*e*S	**Sn**	**17 58 12.4**	**+1.2**
VWUC	**VWUC**	**2.46**	**276**	*e*P	**Pn**	**17 57 41.4**	**-0.4**
VWUC				*e*S	**Sn**	**17 58 08.9**	**-2.4**
TSCK	**Chigu Township**	**2.49**	**230**	*e*P	**Pn**	**17 57 42.7**	**+0.5**
TSCK				*e*S	**Sn**	**17 58 11.9**	**-0.1**
MASBT	**Mashibuluo**	**2.57**	**213**	*e*P	**Pn**	**17 57 44.6**	**+1.4**
MASBT				*e*S	**Sn**	**17 58 14.5**	**+0.7**
PNG	**Penghu**	**2.66**	**244**	*e*S	**Sn**	**17 58 14.6**	**-1.4**
EAST	**Anshuo**	**2.67**	**207**	*e*P	**Pn**	**17 57 45.1**	**+0.5**
EAST				*e*S	**Sn**	**17 58 16.5**	**+0.3**
TAW	**Tawu**	**2.67**	**206**	*e*S	**Sn**	**17 58 14.3**	**-1.9**
PHUB	**P'eng-hu**	**2.67**	**242**	*e*P	**Pn**	**17 57 44.8**	**+0.2**
PHUB				*e*S	**Sn**	**17 58 14.4**	**-1.9**
TAWH	**Dawu Township**	**2.69**	**206**	*e*P	**Pn**	**17 57 45.5**	**+0.7**
WDGT	**Dungji**	**2.73**	**237**	*e*P	**Pn**	**17 57 45.8**	**+0.4**
WDGT				*e*S	**Sn**	**17 58 15.5**	**-2.3**
PTMZ	**Houxiangcun**	**2.77**	**276**	*e*P	**Pn**	**17 57 45.9**	**+0.1**
PTMZ				*e*S	**Sn**	**17 58 16.3**	**-2.2**
SCZT	**Fangliau**	**2.78**	**211**	*e*P	**Pn**	**17 57 47.5**	**+1.5**
SCZT				*e*S	**Sn**	**17 58 19.2**	**+0.4**
LAY	**Lan-yu**	**2.78**	**192**	*e*P	**Pn**	**17 57 45.3**	**-0.8**
LAY				*e*S	**Sn**	**17 58 16.2**	**-2.8**
LYUB	**Lan-yu**	**2.81**	**191**	*e*P	**Pn**	**17 57 44.8**	**-1.7**
LYUB				*e*S	**Sn**	**17 58 15.3**	**-4.4**

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*ROM **05** 18:22:19.9±0.2, 44°.99N±0°.01×6°.65E±0°.01, h9*^{km}*, ML1.5/14, Error ellipse: s-maj=1.4km s-min=1.0km az=24.0*

*GEN **05** 18:22:20.2, 45°.03N×6°.74E, h5*^{km}*, Ml1.3*

*LDG **05** 18:22:20.6±0.1, 45°.01N×6°.65E, h5*^{km}*, Md2.3/2, Ml2.1/10, Error ellipse: s-maj=1.0km s-min=0.8km az=60.0*

STR 05 18:22:20.8±0.2**, 45°N**±1°×°±°**, h5**^{km}**, MLv1.8**/10**, 1D, Error ellipse: s-maj=0.0km s-min=0.0km az=41.4, preliminary, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNI	**Bardonecchia**	**0.05**	**20**	P	Pg	18 22 22.3	+0.1
BNI				S	Sg	18 22 23.5	+0.2
BNI	**Bardonecchia**	**0.05**	**20**	⇓P	Pg	18 22 22.3	+0.1
BNI				S	Sg	18 22 23.4	+0.1
BNI				AML	AML		
	comp=E,254µm,1.2s						
BNI				AML	AML		
	comp=N,234µm,0.2s						
BNI				AML	AML		
	comp=E,266µm,1.2s						
BNI				AML	AML		
	comp=N,232µm,0.2s						
BNI				AML	AML		
	comp=N,700µm,0.1s						
BNI				AML	AML		
	comp=E,1733µm,0.1s						
BNI				AML	AML		
	comp=N,653µm,0.1s						
BNI				AML	AML		
	comp=E,1751µm,0.1s						
RRL	**Rocca Remolon**	**0.13**	**131**	Pg	Pg	18 22 23.4	0.0
RRL				Sg	Sg	18 22 25.7	+0.4
RRL	**Rocca Remolon**	**0.13**	**131**	P	Pg	18 22 23.4	0.0
RRL				S	Sg	18 22 25.6	+0.3
RRL	**Rocca Remolon**	**0.13**	**131**	P	Pg	18 22 23.4	-0.1
RRL				S	Sg	18 22 25.6	+0.3
RRL				AML	AML		
	comp=E,918µm,0.2s						
RRL				AML	AML		
	comp=N,638µm,0.2s						
RRL				AML	AML		
	comp=E,918µm,1.8s						
OGMO	**Fort Saint-Gob**	**0.20**	**6**	Pg	Pg	18 22 24.8	-0.1
OGMO				Sg	Sg	18 22 27.9	+0.3
OGMO	**Fort Saint-Gob**	**0.20**	**6**	P	Pg	18 22 24.8	-0.1
OGMO				S	Sg	18 22 27.9	+0.4
MBDF	**Montbardon**	**0.29**	**163**	*e*Pg	Pg	18 22 26.0	-0.4
MBDF				*e*Sg	Sg	18 22 29.9	-0.4
	comp=E,23nm,0.2s						
CREF	**Crivoux**	**0.46**	**183**	Pg	Pg	18 22 29.3	-0.2
CREF				Sg	Sg	18 22 35.6	0.0
BHB	**Bricherasio**	**0.46**	**110**	Sg	Sg	18 22 35.3	-0.4
BHB	**Bricherasio**	**0.46**	**110**	Pg	Pg	18 22 29.7	0.0
BHB	**Bricherasio**	**0.46**	**110**	P	Pg	18 22 28.6	-1.1
BHB				S	Sg	18 22 35.4	-0.3
BHB	**Bricherasio**	**0.46**	**110**	P	Pg	18 22 29.6	-0.1
BHB				S	Sg	18 22 35.5	-0.2
BHB				AML	AML		
	comp=N,99µm,1.3s						
BHB				AML	AML		
	comp=E,102µm,0.6s						
BHB				AML	AML		
	comp=N,88µm,0.1s						
BHB				AML	AML		
	comp=E,92µm,0.2s						
LPG	**La Plagne**	**0.50**	**8**	*e*Pg	Pg	18 22 30.2	-0.2
LPG				*e*Sg	Sg	18 22 36.6	-0.3
	comp=E,19nm,0.2s						
LPL	**La Plagne**	**0.52**	**6**	*e*Pg	Pg	18 22 30.5	-0.2
LPL				*e*Sg	Sg	18 22 37.1	-0.3
	comp=E,9.0nm,0.3s						
SURF	**Saint Ours**	**0.54**	**168**	Pg	Pg	18 22 30.9	-0.1
SURF				Sg	Sg	18 22 38.5	+0.4
SURF	**Saint Ours**	**0.54**	**168**	P	Pg	18 22 30.9	-0.2
SURF				S	Sg	18 22 38.4	+0.4
OGAG	**Argentiere**	**0.56**	**188**	Pg	Pg	18 22 25.3	-6.2
OGAG				Sg	Sg	18 22 28.4	-10
OGAG	**Argentiere**	**0.56**	**188**	P	Pg	18 22 25.2	-6.2
OGAG				S	Sg	18 22 28.3	-10
ORIF	**Oris-en-Rattie**	**0.56**	**261**	*e*Pg	Pg	18 22 31.1	-0.4
ORIF				*e*Sg	Sg	18 22 38.3	-0.4
	comp=E,9.3nm,0.2s						
ORIF	**Oris-en-Rattie**	**0.56**	**261**	Pg	Pg	18 22 31.3	-0.2
ORIF	**Oris-en-Rattie**	**0.56**	**261**	P	Pg	18 22 31.3	-0.2
ORIF				S	Sg	18 22 38.6	-0.1
ORIF				AML	AML		
	comp=N,25µm,0.4s						
ORIF				AML	AML		
	comp=E,17µm,0.2s						
JAUF	**Jausiers**	**0.58**	**173**	Pg	Pg	18 22 31.7	-0.2
JAUF				Sg	Sg	18 22 39.8	+0.3
RSL	**Roselend**	**0.68**	**358**	Pg	Pg	18 22 33.8	-0.1
RSL				Sg	Sg	18 22 43.5	+0.6
RSL	**Roselend**	**0.68**	**358**	P	Pg	18 22 33.6	-0.4
GRN	**Grenoble**	**0.69**	**291**	Pg	Pg	18 22 34.3	+0.4
GRN				Sg	Sg	18 22 43.7	+0.8
MRGE	**Morge**	**0.82**	**20**	P	Pg	18 22 36.0	-0.4
MRGE	**Morge**	**0.82**	**20**	P	Pg	18 22 36.0	-0.5
ISO	**Isola**	**0.87**	**161**	Pg	Pg	18 22 36.8	-0.6
ISO				Sg	Sg	18 22 49.0	+0.3
ISO	**Isola**	**0.87**	**161**	P	Pg	18 22 37.4	-0.1
ISO				S	Sb	18 22 49.6	-0.7
CIRO	**Champorcher**	**0.88**	**47**	Pg	Pg	18 22 37.4	-0.2
CIRO	**Champorcher**	**0.88**	**47**	Sg	Sg	18 22 49.0	-0.1
CIRO	**Champorcher**	**0.88**	**47**	P	Pg	18 22 37.5	-0.1
CIRO				S	Sg	18 22 47.9	-1.1
CIRO	**Champorcher**	**0.88**	**47**	P	Pg	18 22 37.4	-0.2
CIRO				AML	AML		
	comp=E,14µm,0.2s						
CIRO				AML	AML		
	comp=N,12µm,0.2s						
CIRO				AML	AML		
	comp=N,12µm,1.8s						
STV	**Sant Anna di V**	**0.90**	**147**	Pg	Pg	18 22 37.8	-0.2
STV	**Sant Anna di V**	**0.90**	**147**	Sg	Sg	18 22 50.1	+0.5
ENAUX	**Enaux**	**0.90**	**174**	Pg	Pg	18 22 37.8	-0.2
ENAUX				Sg	Sg	18 22 50.1	+0.4
OGSM	**Saint Maurice**	**0.91**	**312**	Pg	Pg	18 22 38.2	+0.1
OGSM				Sg	Sb	18 22 50.9	-0.5
TRAV	**Traversella**	**0.92**	**56**	Sg	Sg	18 22 50.4	-0.1
TRAV	**Traversella**	**0.92**	**56**	Pg	Pg	18 22 38.2	-0.3
TRAV	**Traversella**	**0.92**	**56**	P	Pg	18 22 38.2	-0.3
TRAV				S	Sg	18 22 50.6	+0.1
TRAV	**Traversella**	**0.92**	**56**	P	Pg	18 22 38.2	-0.3
TRAV				S	Sg	18 22 50.2	-0.3
TRAV				AML	AML		
	comp=E,20µm,0.2s						
TRAV				AML	AML		
	comp=N,26µm,0.1s						
ENR	**Entracque**	**0.95**	**145**	Pg	Pg	18 22 38.5	-0.5
ENR	**Entracque**	**0.95**	**145**	Sg	Sg	18 22 52.0	+0.7
SPIF	**crte de Spivo**	**1.04**	**156**	Pg	Pg	18 22 40.2	-0.4
SPIF				Sg	Sb	18 22 54.7	-0.4
SALSA	**La sagne**	**1.12**	**179**	Pg	Pg	18 22 42.5	+0.2
SALSA				Sg	Sb	18 22 58.0	+0.3
TURF	**col de Turini**	**1.16**	**153**	Pg	Pg	18 22 42.8	-0.2
TURF				Sg	Sb	18 22 58.4	-0.3
SMRF	**Simiane la Rot**	**1.29**	**217**	*e*Pg	Pg	18 22 45.3	-0.1
SMRF				*e*Sg	Sg	18 23 00.9	-1.2
	comp=N,2.7nm,0.3s						
VIVF	**Saint-Julien-l**	**1.42**	**265**	*e*Pg	Pb	18 22 47.7	0.0
VIVF				*e*Sg	Sb	18 23 05.5	-0.5
	comp=N,5.7nm,0.3s						
CABF	**La Chapelle**	**1.66**	**346**	*e*Pg	Pn	18 22 51.1	+0.5
CABF				*e*Sg	Sn	18 23 12.2	-0.1
	comp=N,5.2nm,0.4s						
LMR	**La Mourre**	**1.67**	**184**	*e*Pg	Pn	18 22 51.1	+0.4
LMR				*e*Sg	Sn	18 23 12.9	+0.4
	comp=N,2.0nm,0.2s						
LASF	**Ste Croix**	**2.21**	**246**	*e*Pn	Pn	18 22 55.1	-3.0
LASF				*e*Sn	Sn	18 23 22.4	-3.3
	comp=N,0.8nm,0.1s						
SMF	**Signal de Mont**	**2.56**	**311**	*e*Sg	Sb	18 23 40.6	+1.6
	comp=N,1.1nm,0.2s						
PGF	**Pioggiola**	**2.98**	**145**	*e*Pn	Pn	18 23 07.4	-1.4
PGF				*e*Sn	Sn	18 23 40.3	-4.8
	comp=N,2.7nm,0.3s						
BGF	**Bois d'Agland**	**3.08**	**302**	*e*P	Pn	18 23 10.7	+0.6
BGF				*e*Sn	Sn	18 23 43.5	-3.9
	comp=N,3.3nm,0.4s						

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*WEL **05** 18:49:21.8, 38°.04S×176°.76E, h9*^{km}*, ML3.4, Mw3.5, Moment Tensor Solution. s4 Moment tensor: Scale 10*^{14} *Nm;* M_{rr}*-0.14;* $M_{\theta\theta}$*-0.76;* $M_{\phi\phi}$*0.89;* $M_{r\theta}$*-0.49;* $M_{\theta\phi}$*1.90;* $M_{\phi r}$*-0.27; Fault plane solution:* M_0*2.14000×10*^{14} *NP1:* ϕ_s*258.00000°, δ87.00000°, λ14.00000°. NP2:* ϕ_s*168.00000°, δ76.00000°, λ177.00000°. Principal axes: T 2.2380, Plg12.0000°, Azm124.0000°; N -2.0370, Plg76.0000°, Azm269.0000°; P -0.2010, Plg8.0000°, Azm32.0000°; Stations used: TOZ BKZ MXZ HIZ STRIKE-SLIP FAULTING*

WEL 05 18:49:21.0±0.3**, 38°S**±2°×**17°7E**±°**, h5**^{km}**, M3.5**/31**, ML3.6**/31**, MLv3.5**/31 **Error ellipse: s-maj=2.9km s-min=2.4km az=172.3, confirmed, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAFS	**Kawerau Fire S**	**0.05**	**220**	P	Pg	18 49 21.1	-1.3
KAFS				S	Sg	18 49 22.5	-0.9
EDRZ	**Edgecumbe**	**0.06**	**189**	P	Pg	18 49 22.9	+0.3
EDRZ				S	Sg	18 49 24.1	+0.4
MARZ	**Manawahe**	**0.08**	**314**	P	Pg	18 49 23.3	+0.4
MKRZ	**Makatiti**	**0.24**	**247**	P	Pg	18 49 26.9	+1.1
OPRZ	**Ohinepanea**	**0.25**	**322**	P	Pg	18 49 26.2	+0.3
OPRZ				S	Sg	18 49 29.9	+0.6
WHRZ	**Whale Island**	**0.26**	**43**	P	Pg	18 49 26.6	+0.6
TARZ	**Mount Tarawera**	**0.27**	**225**	P	Pg	18 49 27.4	+1.0
LIRZ	**Lichensteins R**	**0.29**	**278**	P	Pg	18 49 27.3	+0.6
OMRZ	**Omania**	**0.31**	**258**	P	Pg	18 49 27.6	+0.6
RRRZ	**Republican Roa**	**0.35**	**212**	P	Pg	18 49 28.4	+0.5
URZ	**Urewera**	**0.36**	**127**	P	Pg	18 49 28.1	+0.1
HLRZ	**Highlands Stat**	**0.38**	**236**	P	Pg	18 49 29.2	+0.9
KARZ	**Kaharoa**	**0.40**	**273**	P	Pg	18 49 29.4	+0.6
KARZ				S	Sg	18 49 33.4	-0.7
MUGZ	**Murupara**	**0.43**	**178**	P	Pg	18 49 29.2	-0.3
NGRZ	**Ngongotaha**	**0.45**	**262**	P	Pg	18 49 30.6	+0.9
NGRZ				S	Sg	18 49 36.0	+0.4
UTU	**Utuhina**	**0.46**	**253**	P	Pb	18 49 31.8	+0.1
HSRZ	**Hossack Road**	**0.48**	**236**	P	Pg	18 49 31.1	+0.8
TGRZ	**Tauranga**	**0.50**	**309**	P	Pg	18 49 31.0	+0.3
HRRZ	**Handcock Road**	**0.51**	**227**	P	Pg	18 49 31.5	+0.7
PRRZ	**Plateau Road**	**0.54**	**212**	P	Pg	18 49 31.7	+0.4
PRRZ				S	Sg	18 49 39.4	+1.0
GRRZ	**Galatos Road**	**0.59**	**239**	P	Pb	18 49 33.8	-0.1
GRRZ				S	Sg	18 49 38.8	-1.3
RTZ	**Ruatahuna**	**0.60**	**163**	P	Pg	18 49 32.6	0.0
RTZ				S	Sg	18 49 38.8	-1.6
ALRZ	**Allen Road**	**0.61**	**212**	P	Pg	18 49 33.2	+0.4
WIZ	**White Island**	**0.62**	**34**	P	Pg	18 49 33.3	+0.4
WSRZ	**White Island S**	**0.62**	**33**	P	Pg	18 49 33.3	+0.3
WPRZ	**Whakapapatarin**	**0.66**	**224**	P	Pb	18 49 34.8	-0.4
KMRZ	**Kaimai**	**0.67**	**287**	P	Pg	18 49 34.3	+0.4
MWZ	**Matawai**	**0.68**	**116**	P	Pg	18 49 34.1	+0.1
RAGZ	**Rawiri**	**0.69**	**131**	P	Pg	18 49 34.6	+0.2
RUGZ	**Raukumara Rang**	**0.73**	**84**	P	Pg	18 49 35.0	-0.2
RUGZ				S	Sg	18 49 44.8	+0.1
MTHZ	**Maungataniwha**	**0.81**	**175**	P	Pg	18 49 36.5	-0.1
MRHZ	**Matea Rd**	**0.83**	**198**	P	Pg	18 49 36.7	-0.3
KUTZ	**Kaahu Road**	**0.86**	**238**	P	Pb	18 49 38.1	-0.3
HAZ	**Te Kaha**	**0.86**	**71**	P	Pg	18 49 37.4	-0.2
HAZ				S	Sg	18 49 49.1	+0.3
SNGZ	**Shannon Statio**	**0.87**	**148**	P	Pg	18 49 38.2	+0.4
WHTZ	**Whakaora**	**0.88**	**225**	P	Pb	18 49 38.6	-0.3
RAHZ	**Arahi**	**0.91**	**163**	P	Pg	18 49 38.8	+0.3
TKGZ	**Te Karaka**	**0.95**	**115**	P	Pb	18 49 40.3	+0.3
TWGZ	**Tauwhareparae**	**0.98**	**98**	P	Pb	18 49 40.6	+0.1
TLZ	**Tolley Road**	**1.00**	**253**	P	Pb	18 49 40.9	0.0
RIGZ	**Rimuhau**	**1.03**	**130**	P	Pn	18 49 42.2	-0.1
TOZ	**Tahuroa Road**	**1.04**	**287**	P	Pg	18 49 39.9	-1.0
WATZ	**Wairara**	**1.04**	**230**	P	Pb	18 49 41.6	+0.1
NMHZ	**Naumai**	**1.05**	**178**	P	Pb	18 49 41.8	-0.1
PKGZ	**Pakihiroa**	**1.06**	**81**	P	Pg	18 49 40.8	-0.7
WHHZ	**Waihua**	**1.10**	**160**	P	Pb	18 49 42.8	+0.2
RATZ	**Rangitukua**	**1.13**	**223**	P	Pg	18 49 42.8	+0.2
BKZ	**Black Stump Fm**	**1.14**	**190**	P	Pg	18 49 41.9	-1.0
RITZ	**Rihia Road**	**1.17**	**217**	P	Pb	18 49 43.6	-0.1
PUZ	**Puketiti**	**1.19**	**92**	P	Pb	18 49 44.1	0.0
KNZ	**Kokohu**	**1.22**	**144**	P	Pn	18 49 44.6	-0.1
CNGZ	**Carnagh Statio**	**1.23**	**111**	P	Pn	18 49 46.0	+1.1
ARHZ	**Aropaoanui**	**1.23**	**171**	P	Pn	18 49 45.0	+0.1
KATZ	**Kakaramea**	**1.25**	**221**	P	Pg	18 49 44.9	-0.1

PRGZ	Paritu Road	1.25	135	P	Pn	18 49 46.3	+1.1
MXZ	Matakaoa Point	1.32	69	P	Pg	18 49 47.9	+1.5
WMGZ	Waiomatatini S	1.33	81	P	Pg	18 49 46.8	+0.2
NTVZ	North Tongarir	1.35	218	P	Pn	18 49 46.1	-0.6
TMVZ	Te Maari	1.35	217	P	Pn	18 49 45.1	-1.6
KRVZ	Karewarewa	1.36	219	P	Pn	18 49 46.1	-0.8
MCHZ	McNeill Hill	1.40	182	P	Pb	18 49 47.6	-0.1
KWHZ	Kaweka Forest	1.40	190	P	Pn	18 49 46.3	-1.1
NNVZ	North Ngauruho	1.41	219	P	Pn	18 49 47.5	+0.1
OTVZ	Oturere	1.41	217	P	Pn	18 49 46.6	-0.9
WTVZ	West Tongariro	1.41	220	P	Pn	18 49 47.1	-0.3
MHGZ	Mahia Peninsul	1.43	141	P	Pn	18 49 47.6	-0.1
SNVZ	South Ngauruho	1.44	217	P	Pn	18 49 47.2	-0.7
NGZ	Ngauruhoe	1.45	218	P	Pn	18 49 48.2	+0.2
FWVZ	Far West T-bar	1.53	217	P	Pn	18 49 49.2	-0.1
KUZ	Kuaotunu	1.53	327	P	Pn	18 49 49.0	-0.1
WHVZ	Whangaehu Hut	1.54	216	P	Pn	18 49 49.7	+0.3
MAVZ	Matarangi	1.54	217	P	Pb	18 49 50.2	0.0
HIZ	Hauiti	1.56	252	P	Pn	18 49 48.3	-1.2
WNVZ	Wahianoa	1.57	215	P	Pn	18 49 49.7	0.0
TRVZ	Turoa	1.57	217	P	Pb	18 49 50.6	-0.1
MOVZ	Moawhango	1.57	210	P	Pn	18 49 49.6	-0.1
MKAZ	Moumakai	1.57	306	P	Pn	18 49 49.5	-0.1
KRHZ	Kereru	1.62	190	P	Pn	18 49 49.9	-0.5
PKVZ	Pokaka	1.66	221	P	Pg	18 49 53.1	+0.2
MTVZ	Mangateitei	1.67	216	P	Pb	18 49 52.6	+0.3
KAHZ	Kahuranaki	1.75	177	P	Pn	18 49 52.3	+0.2
WIAZ	Waiheke Island	1.79	314	P	Pb	18 49 53.6	-0.8
ETAZ	East Tamaki Re	1.81	306	P	Pb	18 49 54.0	-0.7
VRZ	Vera Road	1.90	235	P	Pb	18 49 56.0	-0.2
PNHZ	Pukenui	1.92	193	P	Pn	18 49 54.3	-0.1
AWAZ	Awhitu Peninsu	1.94	300	P	Pb	18 49 56.3	-0.6
MBAZ	Motutapu North	1.95	310	P	Pb	18 49 56.0	-1.0
PXZ	Pawanui	1.99	178	P	Pn	18 49 54.8	-0.5
WPHZ	Waipukurau	2.03	187	P	Pn	18 49 55.8	-0.2
TSZ	Takapari Road	2.10	197	P	Pn	18 49 56.9	-0.1
DVHZ	Dannevirke	2.30	191	P	Pn	18 49 58.7	-0.9
LREZ	Lake Rotokare	2.32	232	P	Pg	18 50 05.1	-0.4
NEZ	North Egmont	2.41	239	P	Pb	18 50 05.7	+0.6
ANWZ	Angora Road	2.42	185	P	Pn	18 50 00.2	-1.1
POWZ	Post Office Ro	2.47	198	P	Pn	18 50 01.9	0.0
KHEZ	Kahui Hut	2.48	239	P	Pb	18 50 07.2	+1.0
NBEZ	Newall Road No	2.57	241	P	Pb	18 50 08.0	+0.4
BFZ	Birch Farm	2.66	188	P	Pn	18 50 03.1	-1.6
MRZ	Mangatainoka R	2.77	199	P	Pn	18 50 04.9	-1.2
WCZ	Waipu Caves	2.85	317	P	Pn	18 50 06.8	-0.4
HOWZ	Holdsworth Sta	3.01	198	P	Pn	18 50 07.5	-1.9
OGWZ	Otaki Gorge	3.03	203	P	Pn	18 50 08.9	-0.7
KIW	Kapiti Island	3.15	206	P	Pn	18 50 10.4	-1.0
DUWZ	D'Urville Isla	3.52	218	P	Pb	18 50 20.6	-3.3
TCW	Tory Channel	3.70	210	P	Pn	18 50 17.0	-1.8
MRNZ	Matariki Terra	4.55	221	P	Pn	18 50 30.1	-0.5

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*SNET **05** 19:19:45.1±1.0, 13°.38N×90°.20W, h32^{km}±4^{km}, ML3.0*
*GCG **05** 19:19:45.9±1.4, 13°.54N×90°.28W, h36^{km}±351^{km}, MD3.7, ML3.5*
ISC 05 19:19:46.2±2.3**, 13°.4N**±0°.1×**90°.14W**±0°.05**, h32**^{km}±13^{km}**, n15, σ0^{s}80**/25**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NUBE	Las Nubes	0.64	34	eP	Pb	19 19 58.2	-0.9
NUBE	Las Nubes	0.64	34	eP	Pb	19 19 58.1	-0.9
NUBE				i S	Sn	19 20 08.4	0.0
CEVE	Cerro Verde	0.68	48	eP	Pb	19 19 59.9	+0.1
CEVE				eS	Sn	19 20 10.6	+1.1
SBLS	San Blas	0.69	47	eP	Pb	19 19 59.8	-0.2
SBLS				eP	Pn	19 19 59.9	-0.1
SBLS				eS	Sn	19 20 10.4	+0.7
LOAL	Lomas de Alarc	0.72	29	eP	Pn	19 19 58.7	-1.5
LOAL				eS	Sn	19 20 11.1	+0.9
SNJE	San Jose	0.72	46	eP	Pb	19 20 00.0	-0.4
SNJE				eP	Pb	19 20 00.1	-0.4
JAYA	Jayaque - finc	0.73	67	eP	Pn	19 20 00.1	-0.4
JAYA				eS	Sn	19 20 11.4	+0.7
JAYA				IAML		19 20 13.0	
	comp=Z,1µm,0.2s						
SLOZ	Alcaldia de Sa	0.74	28	eP	Pn	19 19 59.7	-0.8
SLOZ				eS	Sn	19 20 11.1	+0.4
SLOZ				IAML		19 20 15.3	
	comp=Z,270nm,0.3s						
UNIC	Universidad Ca	0.84	43	eP	Pn	19 20 01.1	-0.8
PMON	Piamonte	0.88	67	eP	Pn	19 20 02.1	-0.3
PMON				eS	Sb	19 20 15.7	+1.2
FG16	Alotenango, Sa	0.97	338	eP	Pb	19 20 05.3	+0.7
FG16				IAML		19 20 24.2	
	comp=N,2µm,0.2s						
FG8	Yepocapa, Chim	0.97	336	eP	Pb	19 20 05.5	+0.9
MTO3	Montecristo	1.28	36	eP	Pn	19 20 07.3	-0.8
MTO3	Montecristo	1.28	36	eP	Pn	19 20 07.3	-0.8
STG8	El Palmar, Qui	1.59	313	eP	Pb	19 20 14.6	-0.5
STG8				eS	Sb	19 20 35.2	+0.2
STG8				IAML		19 20 42.7	
	comp=E,418nm,0.2s						

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*NEIC **05** 19:27:20.0±1.8, 23°.82N±0°.04×121°.60E±0°.02, h19^{km}±5^{km}, mb4.5/60, Error ellipse: s-maj=6.1km s-min=2.8km az=168.0*
*BJI **05** 19:27:19.2, 23°.69N×121°.64E, h27^{km}, mB4.5/6, mb4.0/33, ML4.3/9, Ms3.9/22, Ms7 3.8/25*
*JMA **05** 19:27:19.9±0.1, 23°.8N±0°.4×12°2E±°, h27^{km}±1^{km}, MV4.0/18, TAIWAN REGION*
*TAP **05** 19:27:20.6, 23°.83N×121°.58E, h22^{km}, ML4.7, B*
*ASIES **05** 19:27:20.6, 23°.83N×121°.58E, h22^{km}, ML4.7, Mw4.2, Moment Tensor Solution. Moment tensor: Scale 10^{22}Nm; M$_{rr}$1.27; M$_{\theta\theta}$-0.93; M$_{\phi\phi}$-0.33; M$_{r\theta}$0.57; M$_{\theta\phi}$-0.60; M$_{\phi r}$1.73; Fault plane solution: M$_{0}$2.22843×10^{22} NP1: φ$_{s}$255.91000°, δ23.47000°, λ135.20000°. NP2: φ$_{s}$28.24000°, δ73.70000°, λ72.88000°. Principal axes: T Plg57.8920°, Azm275.1800°; N Plg16.4150°, Azm33.1810°; P Plg26.7550°, Azm131.7230°;*
*IDC **05** 19:27:23.0±2.5, 23°.86N×121°.74E, h49^{km}±25^{km}, mb3.6/20, mbtmp3.9/23, ML3.4/3, MS3.4/21 Error ellipse: s-maj=17.9km s-min=13.4km az=65.0*
ISC 05 19:27:20.7±0.6**, 23°.83N**±0°.01×**121°.60E**±0°.02**, h25**^{km}±3^{km}**, n478, σ1^{s}03**/560**, mb4.4**/54**, MS3.4**/20**, 30C-36D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEYL	Yanliau Villag	0.04	358	i P	Pb	19 27 25.1	+0.1
TEYL				eS	Sb	19 27 28.7	+0.7
SHUL	Shoufeng	0.05	220	⇑iP	Pb	19 27 25.0	-0.1
SHUL				S	Sb	19 27 28.6	+0.6
TEGC	Jichi Village	0.13	205	⇑iP	Pb	19 27 25.6	-0.1
TEGC				eS	Sb	19 27 30.3	+1.4
HWA	Hwalien	0.15	2	⇑iP	Pb	19 27 25.8	0.0
HWA				eS	Sb	19 27 29.6	+0.4
ESL	Shilin	0.15	265	⇓iP	Pb	19 27 25.3	-0.5
ESL				eS	Sb	19 27 28.3	-1.1
ETM	Tongmen	0.17	325	⇓iP	Pb	19 27 25.7	-0.3
ETM				eS	Sb	19 27 29.0	-0.7
EGFH	Guangfu	0.22	225	i P	Pb	19 27 26.3	-0.4
EGFH				eS	Sb	19 27 30.4	-0.3
WARBT	Fenglin Townsh	0.22	241	⇓iP	Pb	19 27 26.1	-0.6
WARBT				S	Sb	19 27 29.9	-0.9
TWD	Chiawan	0.25	359	⇑iP	Pb	19 27 26.8	-0.2
TWD				i S	Sb	19 27 31.7	+0.3
LXIB	Xiulin Townshi	0.26	318	⇓iP	Pb	19 27 26.6	-0.6
LXIB				eS	Sb	19 27 31.0	-0.8
ETL	Fush Village	0.33	4	⇑iP	Pb	19 27 28.0	-0.2
ETL				S	Sb	19 27 33.4	+0.1
NACB	Ninganchiao	0.34	359		Pb	19 27 27.2	-1.2
NACB	Ninganchiao	0.34	359	P	Pb	19 27 28.5	+0.1
NACB	Ninganchiao	0.34	359	⇓iP	Pb	19 27 28.1	-0.3
NACB				i S	Sb	19 27 33.5	-0.2
HGSD	Ruisui	0.37	206	⇑iP	Pb	19 27 29.2	+0.4
HGSD				S	Sn	19 27 36.1	-0.7
ETLH	Xiulin Townshi	0.39	344	⇓iP	Pb	19 27 28.8	-0.4
ETLH				S	Sb	19 27 34.7	-0.4
EHYH	Wanrong	0.41	215	eP	Pb	19 27 28.8	-0.6
EHYH				eS	Sb	19 27 35.1	-0.2
OWD	Renai	0.41	288	⇓iP	Pb	19 27 29.0	-0.6
OWD				S	Sb	19 27 34.6	-0.9
EHY	Hungye	0.41	218	⇑iP	Pb	19 27 28.6	-0.8
EHY				eS	Sb	19 27 34.4	-1.0
VWDT	VWDT	0.43	260	⇓iP	Pb	19 27 29.6	-0.1
VWDT				S	Sb	19 27 35.2	-0.6
WHF	Hehuan Shan	0.44	316	⇓iP	Pb	19 27 29.5	-0.7
WHF				i S	Sb	19 27 35.9	-0.8
WUSB	Renai	0.47	290	⇓iP	Pb	19 27 30.2	-0.3
WUSB				S	Sb	19 27 36.7	-0.5
EHP	Heping Village	0.50	15	eP	Pb	19 27 31.2	+0.3
EHP				eS	Sb	19 27 38.5	+0.7
EAHA	Aohua	0.52	14	⇑P	Pb	19 27 31.0	-0.2
EAHA				i S	Sb	19 27 39.1	+0.8
YULB	Yu-li	0.52	213		Pb	19 27 30.1	-1.1
YULB	Yu-li	0.52	213	P	Pb	19 27 31.9	+0.7
YULB	Yu-li	0.52	213	S	Sn	19 27 40.3	-0.2
YULB	Yu-li	0.52	213	⇑iP	Pb	19 27 30.2	-1.1
YULB				eS	Sb	19 27 37.7	-0.6
ECBN	Changbin	0.53	195	⇓iP	Pb	19 27 31.7	+0.4
ECBN				eS	Sb	19 27 39.8	+1.2
TWF1	Yuli	0.55	210	⇑iP	Pb	19 27 30.7	-1.0
TWF1				eS	Sb	19 27 39.0	-0.2
TWT	Tachien	0.57	318	⇓iP	Pb	19 27 32.2	-0.1
TWT				S	Sb	19 27 39.9	-0.3
TDCB	Techi	0.58	316	⇓iP	Pb	19 27 32.1	-0.3
TDCB				S	Sb	19 27 39.5	-0.9
SSLB	Suanglung	0.59	266		Pb	19 27 31.8	-0.7
SSLB	Suanglung	0.59	266	P	Pb	19 27 32.5	0.0
SSLB	Suanglung	0.59	266	S	Sb	19 27 40.3	-0.2
SSLB	Suanglung	0.59	266	⇓iP	Pb	19 27 31.8	-0.7
SSLB				eS	Sb	19 27 39.3	-1.2
ENA	Nanau	0.61	12	⇓iP	Pb	19 27 32.6	-0.2
ENA				eS	Sb	19 27 41.1	+0.1
NNSB	Datong	0.63	342	⇓iP	Pb	19 27 32.8	-0.4
NNSB				S	Sb	19 27 40.8	-0.9
EWUT	Wuta	0.64	15	⇓iP	Pb	19 27 33.1	-0.1
EWUT				eS	Sb	19 27 41.8	+0.1
NNS	Nan Shan	0.64	341	⇓iP	Pb	19 27 33.0	-0.4
NNS				i S	Sb	19 27 41.2	-0.9
SMLT	Sun Moon Lake	0.64	275	⇓iP	Pb	19 27 33.0	-0.4
SMLT				i S	Sb	19 27 42.0	-0.1
CHKH	Chenggong	0.66	196	⇓iP	Pb	19 27 33.6	-0.1
CHKH				eS	Sn	19 27 43.7	-0.3
WCS	Beigang Elemen	0.67	290	⇓iP	Pb	19 27 33.5	-0.2
WCS				eS	Sb	19 27 41.8	-0.9
TYC	Yuchr	0.68	276	⇓iP	Pb	19 27 33.6	-0.4
TYC				S	Sb	19 27 42.2	-0.9
FULB	Fuli	0.69	204	⇑P	Pb	19 27 33.6	-0.4
WHYT	Xinyi Township	0.70	259	⇑P	Pb	19 27 34.2	-0.1
WHYT				eS	Sb	19 27 43.0	-0.5
LATG	Datong	0.71	355	⇓iP	Pb	19 27 33.9	-0.6
LATG				i S	Sb	19 27 43.2	-0.6
EOS4	EOS4	0.72	66	eP	Pn	19 27 34.8	-0.1
EOS4				eS	Sn	19 27 45.3	+0.3
WHP	Taichung City	0.75	307	⇓iP	Pb	19 27 34.9	-0.2
WHP				eS	Sb	19 27 44.8	-0.2
CHKT	Chengkung	0.76	197	⇓eP	Pb	19 27 34.9	-0.3
CHKT				S	Sb	19 27 46.0	+0.9
EHD	Haiduan	0.77	208	⇑eP	Pb	19 27 33.6	-1.8
ESAO	Su ao	0.78	17	eP	Pn	19 27 35.9	-0.2
ESAO				eS	Sn	19 27 46.7	-0.2
ALS	Alishan	0.79	247	⇑iP	Pb	19 27 36.0	-0.1
ALS				S	Sb	19 27 46.3	-0.2
WJS	Zhushan	0.80	270	⇑P	Pn	19 27 36.5	+0.2
WJS				eS	Sn	19 27 47.9	+0.4
EOS3	EOS3	0.80	55	eP	Pn	19 27 36.3	+0.1
ECS	Chishang	0.81	206	eP	Pb	19 27 35.2	-0.9
ENTT	Nioudou	0.81	358	⇓iP	Pb	19 27 35.6	-0.6
ENTT				eS	Sb	19 27 46.5	-0.2
NDS	Dongshan	0.81	8	eP	Pb	19 27 35.2	-0.9
NDS				eS	Sb	19 27 46.2	-0.5
TWC	Suao	0.81	16	eP	Pb	19 27 36.0	-0.2
TWC				S	Sb	19 27 47.0	+0.3
EOS2	EOS2	0.82	44	eP	Pn	19 27 37.5	+0.9
ELDTW	Lidau	0.83	220	⇑iP	Pb	19 27 35.0	-1.5
ELDTW				eS	Sb	19 27 46.4	-1.0
WNT	Mingjian	0.84	274	⇑P	Pn	19 27 37.2	+0.3
WNT				i S	Sn	19 27 49.2	+0.8
YHNB	Yeheng	0.86	346		Pb	19 27 36.5	-0.6
YHNB	Yeheng	0.86	346	P	Pb	19 27 36.6	-0.6
YHNB	Yeheng	0.86	346	S	Sb	19 27 48.1	-0.2
YHNB	Yeheng	0.86	346	⇓iP	Pb	19 27 36.5	-0.6
YHNB				eS	Sb	19 27 46.8	-1.5
TWE	Neicheng	0.89	4	eP	Pb	19 27 36.9	-0.6
TWE				i S	Sn	19 27 49.8	0.0
EDH	Donghe	0.89	198	⇑P	Pb	19 27 36.5	-1.1
EDH				eS	Sb	19 27 48.6	-0.5
TCU	Taichung	0.90	291	⇑P	Pn	19 27 38.4	+0.7
TCU				i S	Sn	19 27 51.3	+1.3
NFF	Wufeng Townshi	0.91	331	⇓P	Pb	19 27 37.7	-0.2
TWQ1	Liyutan	0.92	305	⇓iP	Pn	19 27 38.6	+0.6
TWQ1				i S	Sn	19 27 51.0	+0.6
FUSB	Fushanzhiwuyua	0.93	359	⇓eP	Pb	19 27 37.5	-0.7
FUSB				S	Sb	19 27 49.3	-0.8
ILA	Ilan	0.94	8	eP	Pb	19 27 37.9	-0.5
NWLT	Wulai	0.95	355	eP	Pb	19 27 38.2	-0.3
NWLT				eS	Sb	19 27 49.9	-0.8
WGK	Gukeng	0.96	262	⇑iP	Pn	19 27 39.0	+0.4
WGK				eS	Sn	19 27 53.0	+1.6
NSY	Sanyi	0.96	308	⇓iP	Pn	19 27 40.5	+1.8
NSY				i S	Sn	19 27 53.3	+1.7
NSTT	Nanjuang	0.97	326	⇓iP	Pn	19 27 39.0	+0.3
NSTT				eS	Sn	19 27 51.5	-0.1
LIOB	Emei	0.97	327	⇓iP	Pn	19 27 39.2	+0.4
LIOB				eS	Sn	19 27 52.0	+0.2
WDL	Douliou City	0.98	264	eP	Pn	19 27 39.4	+0.6
WDL				eS	Sn	19 27 53.4	+1.5
WDLH	Douliu	0.98	262	⇑P	Pn	19 27 39.5	+0.6
WDLH				S	Sn	19 27 53.3	+1.3
WCHH	Zhanghua	0.98	285	⇑P	Pn	19 27 39.5	+0.6
WCHH				S	Sn	19 27 53.6	+1.6
WCKO	Fanlu	0.99	247	⇑iP	Pn	19 27 39.6	+0.6
WCKO				i S	Sn	19 27 53.2	+1.0
WCH1	Changhua City	0.99	284	eP	Pn	19 27 39.8	+0.7
WCH1				eS	Sn	19 27 52.7	+0.4
STYH	Taoyuan	1.00	229	⇑eP	Pn	19 27 37.3	-1.8
STYH				eS	Sb	19 27 50.7	-1.4
LONT	Longtian	1.01	205	eP	Pn	19 27 37.6	-1.7
STYT	Tauyuan	1.02	230	i P	Pn	19 27 39.4	-0.1
STYT				S	Sb	19 27 52.4	-0.3
WDJ	Dajia District	1.02	301	⇑iP	Pb	19 27 40.5	+0.8
WDJ				eS	Sn	19 27 53.9	+1.0
KSHI	Guanxi Townshi	1.02	338	⇓eP	Pb	19 27 40.2	+0.4
KSHI				eS	Sn	19 27 53.4	+0.5
NMLH	Miaoli	1.02	314	eP	Pb	19 27 40.4	+0.7
NMLH				i S	Sn	19 27 54.0	+1.0
TPUB	Ta-pu	1.03	240		Pn	19 27 39.8	+0.2
TPUB	Ta-pu	1.03	240	⇑iP	Pb	19 27 40.0	0.0
TPUB				eS	Sb	19 27 53.2	+0.1
NTC	Toucheng	1.04	12	eP	Pb	19 27 40.4	+0.3
NTC				eS	Sn	19 27 54.1	+0.7
EGS		1.06	17	eP	Pb	19 27 41.1	+0.8
CHN2	Minshiung	1.07	254	eP	Pb	19 27 41.0	+0.4
CHN2				eS	Sn	19 27 56.0	+1.8
WTP	Ta-pu	1.07	238	⇑iP	Pb	19 27 40.6	0.0
WTP				i S	Sn	19 27 55.6	+1.3
TWG	Pinlang	1.11	206	eP	Pn	19 27 38.8	-1.9
TWG				eS	Sb	19 27 52.9	-2.5
TWGBT	Beinan	1.11	205	⇑iP	Pn	19 27 38.6	-2.1
TWGBT				S	Sb	19 27 53.1	-2.2
WTK	Tuku	1.12	263	P	Pb	19 27 41.8	+0.4
WTK				eS	Sn	19 27 56.9	+1.6
CHY	Chiayi	1.13	253	P	Pb	19 27 41.7	+0.2
CHY				eS	Sn	19 27 56.9	+1.3
HSN	Hsinchu	1.13	329	i P	Pb	19 27 42.7	+1.2
HSN				i S	Sn	19 27 58.2	+2.7
NHDH	Xindian Distri	1.13	357	eP	Pb	19 27 41.6	0.0
NHDH				eS	Sn	19 27 56.3	+0.6
TATO	Taipei	1.15	355		Pb	19 27 41.7	-0.1
TATO	Taipei	1.15	355	P	Pb	19 27 42.4	+0.5
TATO	Taipei	1.15	355	S	Sn	19 27 57.6	+1.6
TTN	Taitung	1.15	201	eP	Pn	19 27 40.2	-0.9
TWA	Mucha	1.15	359	eP	Pb	19 27 41.8	-0.1
TWA				eS	Sb	19 27 55.6	-0.8
LDUT	Ludao	1.16	186	eP	Pn	19 27 39.7	-1.6
TIPB	Shuangxi	1.16	10	eP	Pb	19 27 42.2	+0.1
TWK	Hsinying	1.16	242	eP	Pb	19 27 42.1	-0.1
TWK				eS	Sb	19 27 58.3	+1.4
CHN1	Nanshi	1.17	237	⇑P	Pb	19 27 42.2	-0.1
CHN1				eS	Sb	19 27 58.5	+1.4
SNST	Tainan City	1.18	239	eP	Pb	19 27 42.5	+0.1
SNST				eS	Sb	19 27 58.6	+1.4
SGST	Jiashian	1.19	232	⇑iP	Pn	19 27 41.6	-0.2
SGST				eS	Sb	19 27 58.7	+1.0
NCUH	Zhongli	1.20	342	eP	Pb	19 27 42.9	+0.1
NCUH				i S	Sb	19 27 59.4	+1.7
NCU	National Centr	1.20	342	eP	Pn	19 27 41.0	-0.8
WTCT	Ta-ch'eng	1.21	272	eP	Pb	19 27 43.0	+0.1
WTCT				S	Sb	19 27 59.4	+1.3
TAP	Taipei	1.21	356	eP	Pb	19 27 43.0	+0.1
TAP				eS	Sb	19 27 57.7	-0.4
TWB1	Santiao Chiao	1.23	17	eP	Pb	19 27 44.2	+0.9
NWF	Wu-fen Shan	1.25	8	eP	Pb	19 27 43.8	+0.2
NWF				eS	Sb	19 27 59.6	+0.2
WFSB	Wu-fen Shan	1.25	8	eP	Pn	19 27 43.0	+0.4
WSF	Szhu	1.28	262	eP	Pb	19 27 43.8	-0.3
WSF				eS	Sb	19 28 01.3	+1.2
SXI1	Grass Mountain	1.28	11	eP	Pb	19 27 44.0	-0.3
SXI1				eS	Sb	19 28 00.1	-0.3
WSL	Shuilin Townsh	1.29	257	eP	Pb	19 27 44.3	-0.1
WSL				eS	Sb	19 28 02.5	+2.0
ICHU	Yijhu	1.30	249	⇓P	Pb	19 27 44.3	-0.1
ICHU				i S	Sb	19 28 02.0	+1.4
YM01	YM01	1.31	359	eP	Pb	19 27 44.1	-0.6
TNOU	National Taiwa	1.32	7	eP	Pn	19 27 44.0	+0.4
ZUZH	Zhuzihu	1.33	358	eP	Pn	19 27 43.8	+0.1
ZUZH				S	Sn	19 28 01.0	+0.3
NTST	Danshui	1.34	354	eP	Pb	19 27 44.7	-0.4
NTST				i S	Sb	19 28 02.7	+0.9
ANP	Anpu	1.35	357	eP	Pb	19 27 45.1	-0.3
YM08	YM08	1.35	360	eP	Pn	19 27 43.7	-0.4
CHN3	Shinhua	1.36	237	eP	Pb	19 27 46.0	+0.6
CHN3				eS	Sb	19 28 05.0	+2.6
CHN8	Yiju	1.36	250	eP	Pb	19 27 45.0	-0.5
CHN8				S	Sb	19 28 04.2	+1.8
ECL	Taimali	1.36	206	eP	Pn	19 27 42.0	-2.1
JYNG	Yonagunijimaku	1.38	63	eP	Pn	19 27 44.1	-0.2
JYNG				eS	Sn	19 28 00.8	-0.9
SCST	Cishan	1.38	228	i P	Pb	19 27 46.3	+0.5
SCST				eS	Sb	19 28 04.5	+1.4
SSHA	Shanhua	1.39	240	eP	Pb	19 27 46.2	+0.2
SSHA				eS	Sb	19 28 05.0	+1.8
SSD	Sandimen	1.40	220	eP	Pn	19 27 44.8	+0.2
SSD				S	Sb	19 28 04.8	+1.3
TSMG	Majia	1.42	218	eP	Pb	19 27 46.4	-0.2
TSMG				eS	Sb	19 28 05.9	+1.6
YOJ	Yonaguni jima	1.44	64		Pn	19 27 45.5	+0.4
YOJ	Yonaguni jima	1.44	64	P	Pn	19 27 45.7	+0.6
YOJ	Yonaguni jima	1.44	64	eP	Pn	19 27 45.2	+0.1
YOJ				eS	Sn	19 28 03.4	+0.2
YOJ	Yonaguni jima	1.44	64	eP	Pn	19 27 45.5	+0.4
TWY	Chenhua	1.44	0	eP	Pb	19 27 46.1	-0.8
SCLT	Jiali	1.45	244	eP	Pb	19 27 46.7	-0.2
SCLT				S	Sb	19 28 06.4	+1.5
TWM1	Shoushan	1.47	227	eP	Pb	19 27 48.5	+1.1
TWM1				eS	Sb	19 28 08.2	+2.5
TAI1	Yung-k'ang	1.48	238	eP	Pb	19 27 47.4	-0.1
SGLT	Jiouru	1.50	223	i P	Pb	19 27 48.8	+1.0
MASBT	Mashibuluo	1.50	216	eP	Pn	19 27 45.9	-0.1
TSCK	Chigu Township	1.55	244	eP	Pn	19 27 47.2	+0.6
SNJT	Kaohsiung City	1.58	228	eP	Pb	19 27 49.4	+0.2
EAST	Anshuo	1.60	206	eP	Pn	19 27 46.0	-1.3
TAW	Tawu	1.60	204	eP	Pn	19 27 45.9	-1.5
TAWH	Dawu Township	1.62	204	eP	Pn	19 27 46.3	-1.3
WSSB	Gushan	1.71	226	eP	Pb	19 27 50.7	-0.7
SCZT	Fangliau	1.71	212	eP	Pn	19 27 49.6	+0.7
LAY	Lan-yu	1.78	181	eP	Pn	19 27 48.3	-1.6
LYUB	Lan-yu	1.82	180	eP	Pn	19 27 48.0	-2.4
WLCH	Liuqiu	1.85	218	eP	Pb	19 27 53.6	-0.2
TWP	Hsiaoliuchiu	1.86	218	eP	Pb	19 27 53.5	-0.5
WDGT	Dungji	1.87	253	i P	Pn	19 27 51.5	+0.5
PHUB	P'eng-hu	1.89	261	eP	Pn	19 27 51.9	+0.6
PNG	Penghu	1.89	263	eP	Pn	19 27 52.0	+0.6
SMST	Manzhou Townsh	1.93	201	eP	Pn	19 27 52.5	+0.6
HEN	Hengchun	1.98	204	eP	Pn	19 27 54.5	+1.9
IRIF	Iriomote-Funau	2.01	75	eP	Pn	19 27 53.4	+0.4
IRIF				eS	Sn	19 28 17.9	+0.6
TWK1	Hengchun	2.01	201	eP	Pn	19 27 53.5	+0.4
TWKBT	Hengchun	2.01	201	eP	Pn	19 27 52.9	-0.1
TSEB	Hengchuen, Pin	2.02	199	eP	Pn	19 27 54.7	+1.5
HATJ	Hateruma jima	2.03	83	eP	Pn	19 27 53.5	+0.2
HATJ				eS	Sn	19 28 17.9	0.0
VCHM	Qimei	2.08	253	eP	Pn	19 27 54.2	+0.2
JKRS	Kuro-shima	2.24	79	eP	Pn	19 27 55.6	-0.6
JKRS				eS	Sn	19 28 23.2	+0.2
VWUC	VWUC	2.28	301	eP	Pn	19 27 56.2	-0.5
JIJ	Ishigaki jima	2.38	77	P	Pn	19 27 58.3	+0.2
JIJ				eS	Sn	19 28 26.4	-0.2
PTMZ	Houxiangcun	2.56	299	eP	Pn	19 28 00.5	-0.1
JISG	Ishigakijimahi	2.59	72	P	Pn	19 28 01.1	+0.1
JISG				eS	Sn	19 28 30.6	-1.1
MATB	Ma-tsu	2.76	327	eP	Pn	19 28 03.0	-0.3
JTJ	Tarama	2.95	73	eP	Pn	19 28 06.3	+0.4
JTJ				eS	Sn	19 28 40.9	+0.4
KNM	Kinmen	2.95	282	eP	Pn	19 28 07.7	+1.7
QZH	Quanzhou	2.96	293	⇓iPn	Pn	19 28 05.6	-0.5
QZH				Sn	Sn	19 28 37.6	-3.2
QZH				smax	smax		
	comp=N,770nm,0.9s						
QZH				smax	smax		
	comp=E,570nm,1.2s						
KNMB	Chin-men Tao	3.00	283		Pn	19 28 06.5	-0.1
KNMB	Chin-men Tao	3.00	283	eP	Pn	19 28 06.5	-0.1
MHZQ	Yeshan	3.25	315	eP	Pn	19 28 09.6	-0.4
XPSS	Dashiqiu	3.34	338	eP	Pn	19 28 10.9	-0.4
JIRB	Irabujima	3.41	72	eP	Pn	19 28 12.7	+0.4
JIRB				eS	Sn	19 28 51.2	-0.6
AXDP	Jialang	3.48	289	eP	Pn	19 28 13.2	0.0
JIKM	Ikemajima	3.50	71	eS	Sn	19 28 53.5	-0.6
JMJ	Miyako jima 2	3.51	73	P	Pn	19 28 16.0	+2.4
JMJ2	Miyako jima3	3.52	74	eP	Pn	19 28 14.5	+0.7
JMJ2				eS	Sn	19 28 53.0	-1.7
ZPLA	Ao Xicun	3.52	272	eP	Pn	19 28 14.3	+0.5
JOGS	Gusukube	3.59	74	eS	Sn	19 28 56.6	+0.1
DSXP	Dongshan	3.83	269	eP	Pn	19 28 18.1	+0.1
SXFK	Yanhouchang	4.40	306	eP	Pn	19 28 25.5	-0.5
JOW	Kunigami	6.74	62		Pn	19 28 56.8	-1.3
JOW	Kunigami	6.74	62	P	Pn	19 28 56.5	-1.6
	4.7nm,0.3s,baz=160,slow=12,SNR=27						
JOW				S	Sn	19 30 12.1	-1.9
	3.5nm,0.4s,baz=162,slow=19,SNR=1.0						
	11nm,0.2s						
HKPS	Hong Kong Po S	7.04	259	Pn	Pn	19 29 01.6	-0.5
GZH	Guangzhou	7.62	266	Pn	Pn	19 29 06.4	-3.7
GZH				Sn	Sn	19 30 30.4	-5.2
GZH				smax	smax		
	comp=N,240nm,0.9s						
GZH				smax	smax		
	comp=E,160nm,1.0s						
NJ2	Nanjing	8.54	344	eP	Pn	19 29 24.7	+1.9
NJ2				S	Sn	19 30 56.3	-2.1
NJ2				pmax	pmax		
	comp=Z,22nm,0.6s						
NJ2				smax	smax		
	comp=N,85nm,1.2s						
NJ2				smax	smax		
	comp=E,53nm,1.0s						
NJ2				LR	LR		
	comp=N,390nm,9.5s						
NJ2				LR	LR		
	comp=E,170nm,10.0s						
NJ2				LR	LR		
	comp=Z,440nm,9.0s						
CNSH	ChangSha	8.92	301	P	Pn	19 29 24.8	-3.2
CNSH				S	Sn	19 31 01.0	-6.7
CNSH				smax	smax		
	comp=N,110nm,1.1s						
CNSH				smax	smax		
	comp=E,130nm,1.4s						
WHN	Wuhan	9.29	318	P	Pn	19 29 38.9	+5.8
QIZ	Qiongzhong	11.94	249	P	Pn	19 30 08.1	-1.3
QIZ				S	Sn	19 32 22.9	+1.0
QIZ				LR	LR		
	comp=E,160nm,9.1s						
QIZ				LR	LR		
	comp=E,230nm,9.4s						
JNU	Nakatsue	12.34	39	P	Pn	19 30 16.3	+1.5
	comp=E,0.2nm,0.3s,baz=247,slow=9.5,SNR=2.2						
JNU				LR	LR	19 36 04.9	
	comp=E,113nm,19.7s,baz=305,slow=43						
	comp=E,3.3nm,0.9s						
GYA	Guiyang	13.78	284	P	Pn	19 30 36.8	+2.2
GYA				pmax	pmax		
	comp=E,10.0nm,1.5s						

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GYA                                   LR      LR
      comp=E,780nm,14.0s
KSRS  Korea Array       14.62  20    P       P       19 30 50.5 -1.5
      comp=E,7.7nm,0.7s,baz=202,slow=11,SNR=34
KS19  Wonju Array Si    14.65  20    P       P       19 30 51.9 -0.5
XAN   Xi'an             15.04 315    P       P       19 30 56.8  0.0
XAN                                  pmax    pmax
      comp=E,6.0nm,0.9s
PZH   PanZhiHua         18.17 283    P       P       19 31 32.1 +0.5
JCJ   Chichijima        18.87  76    LR      LR      19 38 10.3
      comp=E,67nm,20.3s,baz=114,slow=35
HHC   Hu-ho-hao-te      18.95 336    eP      Pn      19 31 43.0 +2.2
HHC                                  pmax    pmax
      comp=E,17nm,0.6s
MJAR  Matsushiro Arr    19.11  45    P       Pn      19 31 42.5 -0.2
      baz=232,slow=8.5,SNR=4.8
MJAR                                 LR      LR      19 39 57.8
      comp=E,69nm,19.6s,baz=217,slow=40
      comp=E,2.1nm,0.8s
LZH   Lanzhou           19.61 313    eP      Pn      19 31 52.7 +3.9
LZH                                  sP      sP      19 32 03.0 +5.0
LZH                                  pmax    pmax
      comp=E,17nm,1.1s
LZH                                  LR      LR
      comp=E,220nm,14.3s
LZH                                  LR      LR
      comp=E,300nm,11.7s
LZH                                  LR      LR
      comp=E,410nm,15.5s
CHTO  Chiang Mai        21.68 261    P       P       19 32 09.7  0.0
MDJ   Mudanjiang        21.74  16    P       P       19 32 12.3 +2.1
MDJ                                  pmax    pmax
      comp=E,7.0nm,1.0s
CMAR  Chiang Mai Arr    21.79 260    P       P       19 32 12.9 +2.1
      comp=E,1.4nm,0.7s,baz=66,slow=8.6,SNR=13
CMAR                                 LR      LR      19 41 29.5
      comp=E,93nm,18.5s,baz=75,slow=39
      comp=E,1.4nm,0.7s
USRK  Ussuriysk Ar.     22.03  20    P       P       19 32 10.7 -2.6
      comp=E,1.1nm,0.5s,baz=202,slow=11,SNR=2.9
      comp=E,1.1nm,0.5s
TOLI2 Tolitoli          22.60 182            P       19 32 18.2 -1.3
GTA   Gaotai            24.11 315    eP      P       19 32 36.1 +1.6
GTA                                  pP      pP      19 32 41.9 -0.1
GTA                                  pmax    pmax
      comp=E,2.0nm,1.5s
GTA                                  LR      LR
      comp=E,120nm,11.6s
GTA                                  LR      LR
      comp=E,240nm,13.5s
GTA                                  LR      LR
      comp=E,290nm,14.2s
GUMO  Guam              24.24 111    LR      LR      19 41 45.0
      comp=E,40nm,19.5s,baz=338,slow=36
ASAJ  Asahikawa         26.56  35    LR      LR      19 43 36.2
      comp=E,70nm,20.0s,baz=250,slow=37
ULN   Ulaanbaatar       26.64 338    P       P       19 32 56.2 -1.2
SONM  Songino Array     26.84 337    P       P       19 32 57.3 -1.9
SONM  Songino Array     26.84 337    P       P       19 32 59.0 -0.2
      comp=E,0.8nm,0.5s,baz=166,slow=11,SNR=3.8
SONM                                 LR      LR      19 45 03.9
      comp=E,110nm,19.1s,baz=140,slow=40
      comp=E,0.8nm,0.5s
BRDH  Bariadhala        27.53 274    LR      LR      19 46 22.0
      comp=E,61nm,18.8s,baz=212,slow=41
LSA   Lhasa             27.76 289    P       P       19 33 09.4 +1.3
LSA                                  IAmb    IAmb    19 33 17.1
      comp=Z,4.4nm,0.6s
WMQ   Urumqi            34.17 314    eP      P       19 34 04.0  0.0
WMQ                                  pmax    pmax
      comp=Z,14nm,1.1s
WMQ                                  LR      LR
      comp=Z,45nm,16.5s
MKAR  Makanchi Array    38.86 316    P       P       19 34 43.2 -0.6
MKAR  Makanchi Array    38.86 316    P       P       19 34 44.1 +0.2
      comp=Z,1.4nm,0.8s,baz=110,slow=10,SNR=12
MKAR                                 PcP     PcP     19 36 53.9 -0.7
      comp=Z,0.8nm,0.7s,baz=120,slow=3.2,SNR=5.0
MKAR                                 LR      LR      19 51 58.2
      comp=Z,64nm,20.0s,baz=143,slow=38
      comp=Z,1.4nm,0.8s
MAKZ  Makanchi          39.06 316    P       P       19 34 44.9 -0.7
ZAA0  Zalesovo Array    40.75 327    P       P       19 34 57.9 -1.5
ZALV  Zalesovo Beam     40.75 327    P       P       19 34 58.1 -1.3
ZALV  Zalesovo Beam     40.75 327    P       P       19 34 58.6 -0.8
      comp=Z,1.4nm,0.5s,baz=112,slow=9.6,SNR=7.1
ZALV                                 PcP     PcP     19 36 58.8 -1.6
      comp=Z,0.6nm,0.4s,baz=197,slow=4.6,SNR=2.2
ZALV                                 LR      LR      19 53 25.6
      comp=Z,55nm,18.9s,baz=126,slow=38
      comp=Z,1.4nm,0.5s
MA2   Magadan           41.17  22    LR      LR      19 53 41.9
      comp=Z,37nm,18.6s,baz=116,slow=38
KSH   Kashi             41.41 303    P       P       19 35 09.4 +4.1
KSH                                  pmax    pmax
      comp=Z,2.0nm,1.0s
H11N1 WAKE ISLAND Hy    42.13  87    T       T       20 20 18.5
      baz=283,slow=74,SNR=41
H11N2 WAKE ISLAND Hy    42.13  86    T       T       20 20 15.6
      baz=283,slow=74,SNR=44
H11N3 WAKE ISLAND Hy    42.15  86    T       T       20 20 21.6
      baz=283,slow=74,SNR=45
H11S3 WAKE ISLAND Hy    42.25  88    T       T       20 20 20.8
      baz=284,slow=74,SNR=77
H11S1 WAKE ISLAND Hy    42.26  88    T       T       20 20 23.7
      baz=284,slow=74,SNR=58
H11S2 WAKE ISLAND Hy    42.27  88    T       T       20 20 22.1
      baz=284,slow=74,SNR=38
PALK  Pallekele         42.50 254    LR      LR      19 53 45.8
      comp=Z,45nm,18.2s,baz=175,slow=37
KURK  Kurchatov         42.61 320    P       P       19 35 14.3 -0.4
KURBB Kurchatov Arra    42.62 320    P       P       19 35 15.2 +0.4
      comp=Z,0.5nm,0.5s,baz=111,slow=9.8,SNR=12
KURBB                                PcP     PcP     19 37 04.7 -1.9
      comp=Z,0.2nm,0.7s,baz=115,slow=3.9,SNR=4.4
      comp=Z,0.5nm,0.5s
AAK   Ala-Archa         43.02 308    LR      LR      19 55 33.3
      comp=Z,45nm,18.8s,baz=96,slow=39
SEY   Seymchan          44.18  20    LR      LR      19 56 03.8
      comp=Z,40nm,18.2s,baz=307,slow=39
WB0   Warramunga Arr    45.09 163    P       P       19 35 33.9 -1.0
WRA   Warramunga Arr    45.24 163    P       P       19 35 34.9 -1.2
      comp=Z,1.8nm,0.7s,baz=344,slow=8.7,SNR=9.7
      comp=Z,1.8nm,0.7s
WR8   Warramunga Arr    45.30 163    P       P       19 35 35.3 -1.3
WR8                                  IAmb    IAmb    19 35 48.4
      comp=Z,12nm,1.4s
KK31  Karatay Array     45.99 308    P       P       19 35 39.7 -2.2
KKAR  Karatay Array     45.99 308    P       P       19 35 40.4 -1.5
KKAR  Karatay Array     45.99 308    P       P       19 35 39.5 -2.4
KKAR                                 IAmb    IAmb    19 35 50.7
      comp=Z,1.7nm,0.8s
KBL   Kabul             46.66 296            P       19 35 48.7 +1.2
KBL                                  IAmb    IAmb    19 36 03.5
      comp=Z,4.4nm,1.0s
TIXI  Tiksi             48.03   3    LR      LR      19 57 47.6
      comp=Z,20nm,18.2s,baz=198,slow=38
BVAR  Borovoye Array    48.19 321    P       P       19 35 59.2 +0.3
      comp=Z,1.0nm,0.5s,baz=100,slow=11,SNR=4.8
BVAR                                 PcP     PcP     19 37 24.9 -1.0
      comp=Z,1.6nm,0.6s,baz=100,slow=3.2,SNR=8.6
      comp=Z,1.0nm,0.5s
ASAR  Alice Springs     48.70 165    P       P       19 36 02.6 -0.5
      comp=Z,1.4nm,0.8s,baz=343,slow=6.9,SNR=13
ASAR                                 PcP     PcP     19 37 27.1 -1.0
      comp=Z,0.3nm,0.8s,baz=344,slow=4.4,SNR=1.3
      comp=Z,1.4nm,0.8s
NRIK  Noril'sk          49.84 345    P       P       19 36 10.3 -1.0
      comp=Z,1.7nm,0.3s,baz=84,slow=4.9,SNR=2.9
      comp=Z,1.7nm,0.3s
AB31  Akbulak array     53.96 315    P       P       19 36 42.1 -0.2
ABKAR Akbulak array     53.96 315            P       19 36 41.9 -0.4
ARTI  Arti              55.71 323    LR      LR      20 01 24.9
      comp=Z,24nm,20.1s,baz=91,slow=37
STKA  Stephens Creek    58.60 160    P       P       19 37 15.0 -0.5
      comp=Z,1.3nm,0.5s,baz=314,slow=5.5,SNR=3.4
      comp=Z,1.3nm,0.5s
KIRV  Kirov             60.73 325    LR      LR      20 05 26.3
      comp=Z,35nm,18.4s,baz=95,slow=38
M11K  Mekoryuk          60.81  33    P       P       19 37 30.5 +0.1
      baz=267
G15K  Niukluk           62.06  28    P       P       19 37 39.6 +0.8
      baz=267
L14K  Kuka Creek        62.56  32    P       P       19 37 42.8 +0.7
      baz=270
D17K  Noatak River      62.62  25    P       P       19 37 43.3 +0.8
      baz=266
O14K  Tigyukauivet M    63.30  34    P       P       19 37 46.8 -0.3
      baz=272
C18K  Utukok River      63.38  24    P       P       19 37 47.7  0.0
      baz=267
I17K  Unalakleet        63.48  29    P       P       19 37 48.2  0.0
      baz=270
A19K  Wainwright        63.50  22    P       P       19 37 48.6 +0.3
      baz=267
J16K  Anvik River       63.52  30    P       P       19 37 48.7 +0.1
      baz=271
M15K  Kasigluk River    63.54  32    P       P       19 37 49.0 +0.3
      baz=272
E18K  Tukpahlearik C    63.56  25    P       P       19 37 49.1 +0.3
      baz=268
H17K  Granite Mounta    63.81  28    P       P       19 37 51.2 +0.7
      baz=270
N15K  Kwethluk River    63.85  33    P       P       19 37 51.2 +0.4
      baz=273
F18K  Selawik           63.92  26    P       P       19 37 51.7 +0.6
      baz=270
C19K  Lookout Ridge     63.98  23    P       P       19 37 52.4 +0.9
      baz=269
L16K  Owhat River       64.09  31    P       P       19 37 53.2 +0.8
      baz=272
J17K  VABM Dome         64.21  29    P       P       19 37 54.0 +0.9
J17K                                 IAmb    IAmb    19 37 56.4
      comp=Z,7.7nm,1.3s
J17K  VABM Dome         64.21  29    P       P       19 37 53.9 +0.8
      baz=272
G18K  Tagagawik         64.33  27    P       P       19 37 54.3 +0.4
      baz=271
M16K  Timber Creek      64.37  32    P       P       19 37 55.0 +0.8
M16K  Timber Creek      64.37  32    P       P       19 37 54.8 +0.7
      baz=273
N16K  Nishlik Lake      64.49  33    P       P       19 37 57.2 +2.1
      baz=274
CHNA  Chernabura Isl    64.50  39    P       P       19 37 55.7 +0.5
      baz=276
D19K  Kuna River        64.51  24    P       P       19 37 55.9 +0.8
      baz=270
K17K  Iditarod          64.59  30    P       P       19 37 56.7 +1.1
      baz=273
L17K  Donlin            64.62  31    P       P       19 37 56.7 +0.9
      baz=273
F19K  Shaleruckik Mo    64.66  26    P       P       19 37 57.0 +1.0
      baz=271
B20K  Meade River       64.84  22    P       P       19 37 58.2 +1.1
      baz=270
E19K  Redstone River    64.86  25    P       P       19 37 58.2 +0.9
      baz=272
O16K  Kokwok River B    64.89  34    P       P       19 37 58.5 +0.9
      baz=275
D20K  Etivluk River     65.06  23    P       P       19 37 59.2 +0.7
D20K  Etivluk River     65.06  23    P       P       19 37 59.8 +1.2
      baz=272
M17K  Holitna River     65.08  32    P       P       19 37 59.7 +0.9
      baz=274
E20K  Nigu River        65.23  24    P       P       19 38 00.4 +0.7
      baz=272
H19K  Roundabout Mou    65.25  27    IAmb    IAmb    19 38 01.9
      comp=Z,4.0nm,0.8s
H19K  Roundabout Mou    65.25  27    P       P       19 38 00.9 +1.0
      baz=273,SNR=5.2
J18K  Innoko River      65.27  29    P       P       19 38 01.0 +1.0
      baz=274
N17K  Nushagak Hills    65.27  33    P       P       19 38 01.4 +1.4
      baz=275
L18K  Granite Mounta    65.37  31    P       P       19 38 02.4 +1.7
L18K                                 IAmb    IAmb    19 38 20.8
      comp=Z,7.2nm,1.5s
L18K  Granite Mounta    65.37  31    P       P       19 38 01.7 +1.0
      baz=275
O17K  Koliganek Bris    65.38  33    P       P       19 38 01.8 +1.0
      baz=275
F20K  Avaraart Lake     65.46  25    P       P       19 38 02.4 +1.2
      baz=273
C21K  Knifeblade Rid    65.70  23    P       P       19 38 03.8 +1.0
      baz=273
J19K  Poorman           65.71  29    P       P       19 38 03.5 +0.6
      baz=275
B21K  Ikpikpuk River    65.73  22    P       P       19 38 04.1 +1.2
      baz=273
M18K  Stony River       65.84  31    P       P       19 38 04.6 +0.9
      baz=276
N18K  Kilae Creek       65.89  32    P       P       19 38 05.1 +1.0
      baz=276
H20K  Anotleneega Mo    65.91  27    P       P       19 38 04.9 +0.8
      baz=275,SNR=5.6
KBZ   Khabaz            66.00 309    P       P       19 38 05.9 +0.9
      comp=Z,1.0nm,0.6s,baz=66,slow=9.7,SNR=2.5
      comp=Z,1.0nm,0.6s
E21K  Killik River      66.04  24    P       P       19 38 05.9 +0.9
      baz=274
B22K  Teshekpuk Lake    66.10  22    P       P       19 38 06.7 +1.5
      baz=274
L19K  White Mountain    66.23  31    P       P       19 38 07.0 +0.7
      baz=276
F21K  Alatna River      66.32  25    P       P       19 38 07.7 +0.9
      baz=275
O18K  Koktuh Hills      66.32  33    P       P       19 38 07.7 +0.8
      baz=277
J20K  Nowinta River     66.34  28    IAmb    IAmb    19 38 09.1
      comp=Z,3.1nm,0.6s
J20K  Nowinta River     66.34  28    P       P       19 38 07.7 +0.8
      baz=276
G21K  Allakaket         66.38  26    IAmb    IAmb    19 38 09.0
      comp=Z,3.3nm,0.8s
G21K  Allakaket         66.38  26    P       P       19 38 07.8 +0.7
      baz=275
K20K  Telida            66.46  29    IAmb    IAmb    19 38 10.9
      comp=Z,2.9nm,0.7s
K20K  Telida            66.46  29    P       P       19 38 08.6 +0.9
      baz=276
D22K  Ayikyak River     66.47  23    P       P       19 38 08.4 +0.7
      baz=275
M19K  Big River Lodg    66.48  31    P       P       19 38 07.9 +0.1
      baz=277
N19K  Bonanza Creek     66.56  32    P       P       19 38 09.3 +0.8
      baz=277
Q18K  Katmai Hardscr    66.58  34    P       P       19 38 08.3 -0.3
      baz=278
L20K  Farewell, AK      66.65  30    P       P       19 38 09.2 +0.3
      baz=277
H21K  Melozitna Rive    66.75  27    P       P       19 38 09.9 +0.3
      baz=276,SNR=9.3
F22K  John River        66.80  25    P       P       19 38 10.3 +0.5
      baz=276
E22K  Anaktuvuk Pass    66.86  24    P       P       19 38 11.1 +0.9
      baz=276
M20K  Styx River        67.07  31    P       P       19 38 12.2 +0.4
      baz=278
G22K  Bettles           67.12  25    P       P       19 38 12.7 +0.8
      baz=277
I21K  Tanana            67.15  27    P       P       19 38 13.1 +1.0
      baz=277
CHUM  Lake Minchumin    67.18  29    P       P       19 38 13.3 +1.0
      baz=278
D23K  Nanushuk River    67.18  23    P       P       19 38 12.8 +0.6
      baz=277
H22K  Ishtalitna Cre    67.31  26    P       P       19 38 14.2 +1.1
      baz=278,SNR=6.4
SII   Sitkinak Islan    67.32  37    P       P       19 38 14.2 +0.9
      baz=279
CAST  Castle Rocks      67.34  29    IAmb    IAmb    19 38 16.5
      comp=Z,3.6nm,0.7s
CAST  Castle Rocks      67.34  29    P       P       19 38 14.0 +0.6
      baz=278,SNR=8.7
PPLA  Purkeypile        67.37  30    IAmb    IAmb    19 38 16.6
      comp=Z,4.0nm,0.7s
PPLA  Purkeypile        67.37  30    P       P       19 38 14.4 +0.7
      baz=278
COLD  Coldfoot          67.59  25    P       P       19 38 15.6 +0.8
      baz=278
N20K  Mount Spurr       67.61  32    P       P       19 38 15.9 +0.7
      baz=279
TOLK  Toolik Lake Re    67.62  23    P       P       19 38 15.9 +0.8
      baz=278
MLY   Manley            67.69  27    IAmb    IAmb    19 38 17.5
      comp=Z,3.0nm,0.7s
MLY   Manley            67.69  27    P       P       19 38 16.4 +0.8
      baz=278,SNR=5.7
E23K  Chandalar         67.69  24    P       P       19 38 15.9 +0.4
      baz=278
OHAK  Old Harbor        67.69  36    P       P       19 38 15.8 +0.2
      baz=280
BPAW  Bear Paw Mtn.     67.72  28    P       P       19 38 16.5 +0.7
      baz=279,SNR=5.5
G23K  Bananza Creek     67.73  25    IAmb    IAmb    19 38 17.6
      comp=Z,3.3nm,0.8s
G23K  Bananza Creek     67.73  25    P       P       19 38 15.8 +0.1
      baz=278
STLK  Strandline Lak    67.74  31    IAmb    IAmb    19 38 18.1
      comp=Z,2.0nm,0.6s
C24K  Franklin Bluff    67.78  22    P       P       19 38 16.7 +0.8
      baz=278
SKT   Skwentna          67.81  31    P       P       19 38 16.7 +0.4
      baz=279
D24K  Happy Valley      67.82  23    P       P       19 38 17.3 +1.0
      baz=279
H23K  Yukon River       68.06  26    P       P       19 38 19.0 +1.1
      baz=279,SNR=8.9
E24K  Your Creek        68.11  24    IAmb    IAmb    19 38 20.2
      comp=Z,3.0nm,0.6s
E24K  Your Creek        68.11  24    P       P       19 38 19.2 +1.1
      baz=279
TRF   Thorofare Moun    68.13  29    P       P       19 38 19.0 +0.4
      baz=280
I23K  Minto, Yukon-K    68.25  27    IAmb    IAmb    19 38 36.6
      comp=Z,7.1nm,1.4s
I23K  Minto, Yukon-K    68.25  27    P       P       19 38 19.8 +0.8
      baz=280
SUA   Susitna One       68.26  31    P       P       19 38 20.1 +0.8
      baz=280,SNR=8.1
F24K  Squaw Lake        68.43  24    P       P       19 38 21.0 +0.8
      baz=280,SNR=7.6
NEA2  Nenana            68.47  28    P       P       19 38 20.9 +0.6
      baz=280,SNR=7.2
MCK   McKinley          68.68  29    P       P       19 38 22.7 +0.9
      baz=281
G24K  Hadweenzic Riv    68.73  25    P       P       19 38 23.2 +1.1
      baz=281
H24K  Noodor Dome       68.73  26            P       19 38 22.9 +0.8
H24K                                 IAmb    IAmb    19 38 24.2
      comp=Z,2.4nm,0.8s
H24K  Noodor Dome       68.73  26    P       P       19 38 23.3 +1.2
      baz=281
WAT1  Susitna Watana    69.02  29    P       P       19 38 25.0 +1.1
      baz=281
POKR  Poker Plat Res    69.06  27    P       P       19 38 25.4 +1.4
      baz=281
SEW   Seward            69.14  32    P       P       19 38 25.8 +1.2
      baz=282
G25K  Bearman Lake      69.26  25    P       P       19 38 26.6 +1.4
      baz=282
F25K  Christian Rive    69.26  24    IAmb    IAmb    19 38 27.5
      comp=Z,3.2nm,0.8s
F25K  Christian Rive    69.26  24    P       P       19 38 26.2 +0.9
      baz=282
SML   Sawmill           69.33  31    P       P       19 38 26.5 +0.6
      baz=282
KNK   Knik Glacier      69.35  31    P       P       19 38 26.8 +0.8
      baz=282
ILAR  Eielson Array     69.35  27    P       P       19 38 25.2 -0.7
      comp=Z,0.8nm,0.6s,baz=297,slow=8.0,SNR=11
      comp=Z,0.8nm,0.6s
HDA   Harding Lake      69.40  28    P       P       19 38 27.0 +0.8
      baz=282
WAT6  Susitna Watana    69.44  30    P       P       19 38 27.4 +0.8
      baz=282
H25L  Birch Creek       69.47  26    P       P       19 38 27.6 +1.0
      baz=282
DHY   Denali Highway    69.50  29    P       P       19 38 27.8 +0.8
      baz=282
C27K  Jago River        69.51  22    P       P       19 38 26.9 +0.1
      baz=283
PWL   Port Wells        69.53  31    P       P       19 38 27.1 +0.1
      baz=282,SNR=6.0
M23K  Glacier View      69.61  30    P       P       19 38 28.4 +0.9
      baz=282
PRP   Porcupine Dome    69.75  26    P       P       19 38 28.6 +0.1
      baz=283
SCM   Sheep Creek Mo    69.79  30    P       P       19 38 29.0 +0.2
      baz=283,SNR=9.0
F26K  Sheenjek River    69.80  24    P       P       19 38 29.5 +0.9
      baz=283
ARCES ARCESS Array B    70.01 338    P       P       19 38 28.8 -1.0
      comp=Z,1.2nm,0.7s,baz=56,slow=5.5,SNR=2.7
      comp=Z,1.2nm,0.7s
J25K  Salcha River,     70.03  27    P       P       19 38 30.6 +0.5
      baz=283
K24K  Donnelly Dome     70.04  28    P       P       19 38 30.1  0.0
      baz=283
G26K  Porcupine Rive    70.11  25    P       P       19 38 30.6 +0.1
      baz=284
GLI   Glacier Island    70.11  31    P       P       19 38 31.1 +0.5
      baz=283
M24K  Tolsona, Glenn    70.26  30    P       P       19 38 31.7 +0.2
      baz=284,SNR=5.3
PAX   Paxson            70.37  29    P       P       19 38 32.6 +0.4
      baz=284
RIDG  Independent Ri    70.46  28    P       P       19 38 33.2 +0.5
      baz=284
KLU   Klutina           70.52  31    P       P       19 38 33.9 +0.7
      baz=284
HARP  HAARP             70.65  30    P       P       19 38 35.0 +1.1
      baz=284
SCRK  Sand Creek        70.77  28    P       P       19 38 34.8 +0.1
      baz=285
I26K  Coal Creek Min    70.77  26    P       P       19 38 35.2 +0.7
      baz=285
J26L  Joseph Creek      70.81  27    P       P       19 38 35.7 +0.7
      baz=285,SNR=5.3
Q23K  Middleton Isla    70.82  33    P       P       19 38 35.5 +0.6
      baz=284
EYAK  Cordova Ski Ar    70.83  32    P       P       19 38 35.9 +1.0
      baz=284
G27K  Doyon Strip       70.96  25    P       P       19 38 36.8 +1.1
      baz=286
N25K  Chitina, Valde    71.11  30    P       P       19 38 37.8 +1.1
      baz=285
H27K  Steamboat Moun    71.17  25    P       P       19 38 37.6 +0.5
      baz=286
E28M  Babbage River     71.22  23    P       P       19 38 38.4 +1.1
      baz=287
BMRM  Bremner River     71.27  31    P       P       19 38 38.2 +0.4
      baz=285
D28M  Stokes Point      71.28  22    P       P       19 38 38.4 +0.9
      baz=288
I27K  Kandik River      71.31  26    P       P       19 38 38.2 +0.3
      baz=286
F28M  Old Crow          71.39  24    P       P       19 38 39.1 +0.7
      baz=287
K27K  Chicken           71.56  27    P       P       19 38 40.1 +0.7
      baz=286
M26K  Nabesna, AK       71.62  29    IAmb    IAmb    19 38 42.4
      comp=Z,6.8nm,1.0s
M26K  Nabesna, AK       71.62  29    P       P       19 38 40.1 +0.3
      baz=286,SNR=9.6
MCARA McCarthy VSAT     71.89  30    P       P       19 38 41.8 +0.4
      baz=286
FINES FINESS Array B    71.94 330    P       P       19 38 41.0 -0.6
      comp=Z,0.8nm,0.7s,baz=50,slow=3.2,SNR=6.5
FINES                                LR      LR      20 13 16.4
      comp=Z,38nm,19.1s,baz=67,slow=38
      comp=Z,0.8nm,0.7s
L27K  Beaver Creek,     71.95  28            P       19 38 42.7 +0.9
L27K                                 IAmb    IAmb    19 38 44.5
      comp=Z,5.0nm,0.9s
L27K  Beaver Creek,     71.95  28    P       P       19 38 42.3 +0.5
      baz=287,SNR=9.1
BCAR  Beaver Creek A    71.96  28            P       19 38 42.0 +0.2
I28M  Miner Creek       72.02  26    IAmb    IAmb    19 38 46.0
      comp=Z,8.2nm,1.4s
I28M  Miner Creek       72.02  26    P       P       19 38 42.7 +0.5
      baz=288
CRQE  Cirque            72.04  31    P       P       19 38 42.6 +0.2
      baz=287
M27K  Edge Creek, AK    72.13  29    P       P       19 38 43.7 +0.7
      baz=287
G29M  Pine Creek        72.30  24    P       P       19 38 44.8 +1.0
      baz=289
H29M  Whitestone        72.39  25    P       P       19 38 45.0 +0.7
      baz=289
DAWY  Dawson            72.68  27    IAmb    IAmb    19 38 48.0
      comp=Z,6.1nm,1.1s
DAWY  Dawson            72.68  27    P       P       19 38 47.2 +1.1
      baz=289
I29M  Ogilvie Camp,     72.70  26    P       P       19 38 47.2 +1.0
      baz=289
CTG   Chitna Glacier    72.80  30    P       P       19 38 47.2 +0.2
      baz=288
F30M  Barrier River     72.87  23    P       P       19 38 48.0 +0.8
      baz=291
G30M  tAoh Zraii Nji    72.94  24    P       P       19 38 48.7 +1.1
      baz=291
YUK3  Moose Creek       72.94  30    P       P       19 38 49.0 +1.1
      baz=288
```

EPYK	**Eagle Plains**	**72.97**	**24**	P	**P**	**19 38 48.3**	**+0.5**
	baz=290						
AKASG	**Malin Array Be**	**73.39**	**318**	P	**P**	**19 38 49.2**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=64,slow=6.4,SNR=3.4						
	comp=Z,0.3nm,0.4s						
O28M	**Mount Upton**	**73.39**	**30**	P	**P**	**19 38 50.8**	**+0.1**
	baz=289						
INK	**Inuvik**	**73.41**	**22**	P	**P**	**19 38 50.8**	**+0.5**
	baz=293						
YUK8	**Steele Glacier**	**73.42**	**30**	P	**P**	**19 38 50.6**	**-0.3**
	baz=289						
I30M	**Mount Dempster**	**73.51**	**25**	IAmb	IAmb	19 38 52.9	
	comp=Z,3.9nm,0.9s						
I30M	**Mount Dempster**	**73.51**	**25**	P	**P**	**19 38 51.3**	**+0.2**
	baz=291						
L29M	**L29M**	**73.53**	**28**	IAmb	IAmb	19 38 54.0	
	comp=Z,6.4nm,0.9s						
L29M	**L29M**	**73.53**	**28**	P	**P**	**19 38 51.4**	**+0.2**
	baz=290,SNR=8.1						
K29M	**Barlow Dome**	**73.53**	**27**	P	**P**	**19 38 51.4**	**+0.2**
	baz=290						
M29M	**Somme Creek**	**73.61**	**29**	IAmb	IAmb	19 38 54.6	
	comp=Z,5.2nm,0.8s						
M29M	**Somme Creek**	**73.61**	**29**	P	**P**	**19 38 52.1**	**+0.4**
	baz=290,SNR=8.7						
F31M	**Tsiigehtchic**	**73.67**	**23**	P	**P**	**19 38 52.7**	**+0.9**
	baz=293						
G31M	**Satah River**	**73.68**	**23**	P	**P**	**19 38 52.7**	**+0.9**
	baz=292						
BR131	**Keskin Array S**	**73.69**	**307**		**P**	**19 38 52.2**	**-0.4**
J30M	**Hart River**	**73.76**	**26**	P	**P**	**19 38 53.0**	**+0.4**
	baz=291						
H31M	**Peel River**	**74.08**	**25**	P	**P**	**19 38 54.7**	**+0.4**
	baz=293						
A36M	**Sachs Harbour**	**74.35**	**17**	P	**P**	**19 38 55.9**	**+0.2**
	baz=299						
MMAI	**Mount Meron Ar**	**74.40**	**299**	LR	LR	20 17 06.5	
	comp=Z,29nm,19.5s,baz=224,slow=40						
N30M	**Aishikik Lake**	**74.57**	**29**	IAmb	IAmb	19 39 00.5	
	comp=Z,3.2nm,0.8s						
N30M	**Aishikik Lake**	**74.57**	**29**	P	**P**	**19 38 57.9**	**+0.6**
	baz=291						
HYT	**Haines Junctio**	**74.61**	**30**	IAmb	IAmb	19 39 00.1	
	comp=Z,3.7nm,0.9s						
HYT	**Haines Junctio**	**74.61**	**30**	P	**P**	**19 38 58.2**	**+0.6**
	baz=291						
P29M	**Windy Craggy**	**74.94**	**31**	P	**P**	**19 39 01.0**	**+1.6**
	baz=291						
N31M	**Braeburn, Yuko**	**75.14**	**29**	P	**P**	**19 39 01.8**	**+1.3**
	baz=292						
O30N	**Mendenhall**	**75.28**	**30**	IAmb	IAmb	19 39 04.3	
	comp=Z,4.2nm,1.0s						
O30N	**Mendenhall**	**75.28**	**30**	P	**P**	**19 39 02.3**	**+0.9**
	baz=292						
M31M	**Drury Creek, Y**	**75.47**	**28**	P	**P**	**19 39 03.7**	**+1.3**
	baz=293						
PLBC	**Pleasant Camp**	**75.65**	**31**	P	**P**	**19 39 04.7**	**+1.3**
	baz=292						
WHY	**Whitehorse**	**75.87**	**30**	P	**P**	**19 39 05.4**	**+0.6**
	baz=293						
FARO	**Faro, Yukon**	**75.90**	**28**	IAmb	IAmb	19 39 06.9	
	comp=Z,4.1nm,0.9s						
FARO	**Faro, Yukon**	**75.90**	**28**	P	**P**	**19 39 06.3**	**+1.4**
	baz=294						
SKAG	**Skagway**	**76.14**	**31**	P	**P**	**19 39 06.8**	**+0.6**
	baz=293						
S31K	**Pelican**	**76.29**	**32**	P	**P**	**19 39 07.5**	**+0.4**
	baz=293						
N32M	**Quiet Lake**	**76.47**	**29**	P	**P**	**19 39 08.5**	**+0.3**
	baz=295						
P32M	**Atlin**	**76.83**	**30**	IAmb	IAmb	19 39 12.7	
	comp=Z,4.0nm,1.0s						
P32M	**Atlin**	**76.83**	**30**	P	**P**	**19 39 10.9**	**+0.6**
	baz=295						
P33M	**Teslin, Yukon**	**76.98**	**30**	P	**P**	**19 39 11.9**	**+0.8**
	baz=295						
R32K	**Eaglecrest**	**77.00**	**32**	P	**P**	**19 39 11.7**	**+0.6**
	baz=294						
SIT	**Sitka**	**77.10**	**33**	P	**P**	**19 39 13.1**	**+1.4**
	baz=294						
S32K	**Killisnoo**	**77.30**	**33**	P	**P**	**19 39 13.5**	**+0.7**
	baz=294						
Q32M	**Nakina River**	**77.78**	**31**	P	**P**	**19 39 16.4**	**+0.6**
	baz=296						
HFS	**Hagfors**	**78.06**	**331**	P	**P**	**19 39 16.7**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=124,slow=7.9,SNR=4.9						
HFS				LR	LR	20 16 22.1	
	comp=Z,35nm,19.7s,baz=64,slow=38						
	comp=Z,0.8nm,0.6s						
R33M	**Jennings River**	**78.18**	**30**	P	**P**	**19 39 18.7**	**+0.8**
	baz=297						
U33K	**Whale Pass**	**78.60**	**33**	P	**P**	**19 39 20.6**	**+0.6**
	baz=296						
NOA	**NORSAR Array B**	**78.72**	**332**	P	**P**	**19 39 20.1**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=60,slow=5.3,SNR=3.5						
NOA				LR	LR	20 17 03.2	
	comp=Z,36nm,19.7s,baz=30,slow=38						
	comp=Z,0.4nm,0.7s						
S34M	**Telegraph Cree**	**78.78**	**31**	P	**P**	**19 39 22.4**	**+1.3**
	baz=297						
DLBC	**Dease Lake**	**79.06**	**31**	P	**P**	**19 39 23.7**	**+1.0**
	baz=298						
T35M	**Bob Quinn**	**79.63**	**32**	P	**P**	**19 39 27.1**	**+1.3**
	baz=298						
YKA	**Yellowknife Ar**	**83.15**	**23**	P	**P**	**19 39 44.0**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=318,slow=5.1,SNR=9.6						
	comp=Z,1.7nm,0.8s						
GERES	**GERESS Array B**	**83.36**	**321**	P	**P**	**19 39 45.7**	**0.0**
	comp=Z,0.2nm,0.4s,baz=87,slow=11,SNR=2.0						
	comp=Z,0.2nm,0.4s						

GCG 05 19:36:37.4±1.7, 15°.34N×90°.54W, h3^{km}±9^{km}, MD3.7, ML2.9, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AVCB	**Coban**	**0.19**	**45**	*i* S	Sg	19 36 45.1	+1.5
AVCB				IAML		19 36 45.5	
	comp=E,7µm,0.1s						
SOKI	**Kika Raxquin**	**0.98**	**238**	*i* P	Pn	19 36 58.2	-0.2
SOKI				*i* S	Sb	19 37 11.3	+0.6
MTO3	**Montecristo**	**1.48**	**129**	*i* P	Pn	19 37 05.3	+0.2
PETF	**Flores**	**1.70**	**22**	*e*P	Pn	19 37 08.5	+0.5
PETF				*i* S	Sb	19 37 31.4	+0.2
PETF				IAML		19 37 34.5	
	comp=E,119nm,0.2s						

*NIED **05** 20:15:09.7, 36°.05N×139°.93E, h43^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$3.31; M$_{\theta\theta}$-2.48; M$_{\phi\phi}$-0.84; M$_{r\theta}$2.07; M$_{\theta\phi}$-1.21; M$_{\phi r}$0.82; Fault plane solution: M$_0$3.91000×10^{14} NP1: φ$_s$239.00000°, δ28.00000°, λ84.00000°. NP2: φ$_s$66.00000°, δ62.00000°, λ93.00000°.*

*JMA **05** 20:15:09.7±0.1, 36°.1N±0°.2×139°.9E±0°.3, h43^{km}, MD3.8/37, MV3.8/37, SW IBARAKI PREF*

JMA Felt III J1 at SW IBARAKI PREF .

*IDC **05** 20:15:10.6±2.4, 36°.08N×139°.75E, h60^{km}±18^{km}, mb3.3/12, mbtmp3.5/15, MS2.4/1, Error ellipse: s-maj=22.3km s-min=19.5km az=78.0*

ISC 05 20:15:09.3±0.9, 36°.07N±0°.06×139°.92E±0°.06, h51^{km}±7^{km}, n35, σ0^{s}.88/28, mb3.6/12, 6D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.28**	**54**	P	**Pn**	**20 15 17.9**	**-0.4**
JYT				*e*S	**Sn**	**20 15 23.9**	**-0.9**
JYT	**Yasato**	**0.28**	**54**	A	A	20 15 17.9	
	comp=N,40nm,0.3s,comp=E,13nm,0.2s						
TOK	**Tokyo**	**0.40**	**199**	A	A	20 15 19.0	
	comp=N,14nm,0.5s,comp=E,14nm,0.4s						
JIHU	**Itakohorinouch**	**0.50**	**101**	A	A	20 15 20.3	
	comp=N,10.0nm,0.6s,comp=E,11nm,0.4s						
JAG	**Ashikaga**	**0.52**	**314**	⇓P	**Pn**	**20 15 21.1**	**+0.3**
JAG				⇓*e*S	**Sn**	**20 15 29.1**	**-0.1**
JAG	**Ashikaga**	**0.52**	**314**	A	A	20 15 21.1	
	comp=N,7.0nm,0.5s,comp=E,7.0nm,1.0s						
JRY	**Ryogami san**	**0.82**	**267**	⇓P	**Pn**	**20 15 24.9**	**+0.2**
JRY				⇓*e*S	**Sn**	**20 15 35.7**	**-0.3**
JKT	**Katashina**	**0.88**	**323**	⇓P	**Pn**	**20 15 25.9**	**+0.3**
JKT				⇓*e*S	**Sn**	**20 15 37.8**	**+0.3**
JOD2	**Odawara 2**	**1.05**	**220**	*e*P	**Pn**	**20 15 28.1**	**+0.4**
JOD2				*e*S	**Sn**	**20 15 41.8**	**+0.5**
JYN	**Shimob**	**1.25**	**243**	*e*P	**Pn**	**20 15 32.1**	**+1.6**
MJAR	**Matsushiro Arr**	**1.46**	**289**	P	**Pn**	**20 15 34.0**	**+0.7**
	comp=E,71nm,0.3s,baz=92,slow=8.8,SNR=397						
MJAR				S	**Sn**	**20 15 48.4**	**-2.9**
	comp=E,30nm,0.4s,baz=141,slow=14,SNR=5.5						
MJAR				LR	LR	20 16 11.6	
	comp=E,48nm,19.9s,baz=135,slow=46						
ASAJ	**Asahikawa**	**8.30**	**13**	P	**Pn**	**20 17 08.4**	**+1.6**
	comp=E,1.4nm,0.3s,baz=210,slow=12,SNR=7.7						
KSRS	**Korea Array**	**9.72**	**282**	P	**Pn**	**20 17 26.5**	**+0.1**
	comp=E,0.3nm,0.4s,baz=95,slow=15,SNR=1.5						
KSRS				LR	LR	20 20 56.0	
	comp=E,22nm,21.9s,baz=95,slow=36						
USRK	**Ussuriysk Ar.**	**10.13**	**326**	P	**Pn**	**20 17 32.2**	**+0.2**
	comp=E,0.9nm,0.7s,baz=150,slow=15,SNR=4.1						
SONM	**Songino Array**	**27.35**	**306**	P	**P**	**20 20 49.2**	**-0.3**
	comp=E,0.2nm,0.4s,baz=110,slow=7.8,SNR=1.8						
	comp=E,0.2nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**28.73**	**117**	T	T	20 51 16.3	
	baz=312,slow=75,SNR=11						
H11N1	**WAKE ISLAND Hy**	**28.74**	**117**	T	T	20 51 14.4	
	baz=312,slow=75,SNR=8.7						
H11N3	**WAKE ISLAND Hy**	**28.75**	**117**	T	T	20 51 14.5	
	baz=312,slow=75,SNR=7.5						
H11S3	**WAKE ISLAND Hy**	**29.39**	**119**	T	T	20 52 04.8	
	baz=314,slow=76,SNR=6.1						
H11S1	**WAKE ISLAND Hy**	**29.39**	**119**	T	T	20 52 02.4	
	baz=314,slow=76,SNR=18						
H11S2	**WAKE ISLAND Hy**	**29.41**	**119**	T	T	20 52 05.9	
	baz=314,slow=76,SNR=4.4						
ZALV	**Zalesovo Beam**	**41.69**	**313**	P	**P**	**20 22 52.1**	**-0.5**
	comp=E,1.3nm,0.6s,baz=60,slow=3.9,SNR=5.2						
	comp=E,1.3nm,0.6s						
MKAR	**Makanchi Array**	**43.62**	**303**	P	**P**	**20 23 08.5**	**+0.1**
	comp=E,0.2nm,0.5s,baz=84,slow=11,SNR=4.6						
	comp=E,0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**45.65**	**309**	P	**P**	**20 23 24.1**	**-0.5**
	comp=E,1.1nm,0.6s,baz=84,slow=7.5,SNR=6.9						
	comp=E,1.1nm,0.6s						
BVAR	**Borovoye Array**	**50.34**	**313**	P	**P**	**20 24 00.3**	**-0.4**
	comp=E,0.3nm,0.4s,baz=66,slow=9.8,SNR=3.8						
	comp=E,0.3nm,0.4s						
ILAR	**Eielson Array**	**50.95**	**32**	P	**P**	**20 24 05.4**	**+0.2**
	comp=E,0.5nm,0.8s,baz=283,slow=6.6,SNR=4.3						
	comp=E,0.5nm,0.8s						
WRA	**Warramunga Arr**	**55.95**	**186**	P	**P**	**20 24 41.7**	**-0.6**
	comp=E,0.4nm,0.4s,baz=0.3,slow=7.4,SNR=5.9						
	comp=E,0.4nm,0.4s						
ASAR	**Alice Springs**	**59.68**	**186**	P	**P**	**20 25 09.3**	**+0.9**
	comp=E,0.4nm,0.7s,baz=354,slow=7.3,SNR=1.9						
	comp=E,0.4nm,0.7s						
ARCES	**ARCESS Array B**	**64.47**	**339**	P	**P**	**20 25 39.1**	**-0.9**
	comp=E,1.0nm,0.8s,baz=56,slow=6.0,SNR=3.9						
	comp=E,1.0nm,0.8s						
FINES	**FINESS Array B**	**69.10**	**332**	P	**P**	**20 26 09.5**	**0.0**
	comp=E,0.4nm,0.5s,baz=152,slow=6.1,SNR=3.9						
	comp=E,0.4nm,0.5s						
AKASG	**Malin Array Be**	**74.32**	**322**	P	**P**	**20 26 41.4**	**+0.4**
	comp=E,0.2nm,0.3s,baz=54,slow=4.7,SNR=2.8						
	comp=E,0.2nm,0.3s						
NOA	**NORSAR Array B**	**74.60**	**337**	P	**P**	**20 26 42.7**	**+0.1**
	comp=E,0.2nm,0.6s,baz=39,slow=6.0,SNR=2.0						
	comp=E,0.2nm,0.6s						
H03N2	**Juan Fernandez**	**148.11**	**97**	T	T	23 20 07.8	
	baz=292						
H03N3	**Juan Fernandez**	**148.12**	**97**	T	T	23 20 09.8	
	baz=292						
H03N1	**Juan Fernandez**	**148.13**	**97**	T	T	23 20 09.7	
	baz=292						

*IDC **05** 20:21:18.0±1.0, 2°.49N×84°.11W, h0^{km}, mb4.0/10, mbtmp4.0/12, ML3.2/2, MS3.4/11, Error ellipse: s-maj=44.4km s-min=18.1km az=61.0*

*NEIC **05** 20:21:19.2±1.7, 2°.14N±0°.10×84°.3W±0°.1, h10^{km}±1^{km}, mb4.4/43, Error ellipse: s-maj=25.5km s-min=12.5km az=240.0*

ISC 05 20:21:22.6±0.7, 2°.34N±0°.09×84°.1W±0°.1, h35^{km}, n70, σ1^{s}.19/57, mb4.4/31, MS3.4/9, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUMC	**Tumaco**	**5.42**	**95**	Pn	**Pn**	**20 22 40.8**	**-0.1**
OTAV	**Otavalo**	**6.04**	**110**		**Pn**	**20 22 48.0**	**-1.9**
SLOR	**San Lorenzo -**	**6.40**	**118**	Pn	**Pn**	**20 22 53.9**	**-0.9**
COHC	**Cochancay**	**6.82**	**134**		**Pn**	**20 22 59.8**	**-0.3**
LCR2	**La Lucha 2**	**7.35**	**1**		**Pn**	**20 23 10.2**	**+2.4**
JTS	**Las Juntas de**	**7.94**	**354**		**Pn**	**20 23 16.9**	**+1.3**
JTS	**Las Juntas de**	**7.94**	**354**	Pn	**Pn**	**20 23 14.7**	**-1.0**
	0.2nm,0.3s,baz=191,slow=11,SNR=1.1						
JTS				Sn	**Sn**	**20 24 41.8**	**-2.5**
	0.9nm,0.3s,baz=280,slow=20,SNR=1.3						
	3.5nm,0.4s						
SOCE	**Pocosol**	**8.01**	**356**	Pn	**Pn**	**20 23 19.4**	**+2.9**
ATAH	**Atahualpa**	**11.01**	**149**	LR	LR	20 27 50.5	
	comp=Z,172nm,18.3s,baz=317,slow=35						
MTO3	**Montecristo**	**13.05**	**337**		**Pn**	**20 24 26.7**	**+0.9**
CZSB	**Cruzeiro do Su**	**15.16**	**131**	Pn	**Pn**	**20 24 52.7**	**-1.5**
CMIG	**Matias Romero**	**18.08**	**325**	P	**Pn**	**20 25 29.6**	**-1.5**
	0.1nm,0.3s,baz=170,slow=9.7,SNR=6.2						
CMIG				LR	LR	20 31 01.4	
	comp=Z,89nm,20.9s,baz=175,slow=32						
	6.3nm,1.0s						
SJG	**San Juan**	**23.59**	**47**	LR	LR	20 35 40.6	
	comp=Z,19nm,20.6s,baz=170,slow=37						
SAML	**Samuel**	**23.69**	**119**		**P**	**20 26 32.8**	**+1.4**
LPAZ	**La Paz**	**24.34**	**140**		**P**	**20 26 39.8**	**+1.8**
LPAZ	**La Paz**	**24.34**	**140**	P	**P**	**20 26 40.3**	**+2.3**
	4.6nm,0.9s,baz=336,slow=10,SNR=11						
	4.6nm,0.9s						
PB11	**IPOC Station P**	**26.16**	**148**	P	**P**	**20 26 53.7**	**-0.3**
PB11				IAmb	IAmb	20 26 59.0	
	comp=Z,18nm,1.1s						
SIV	**San Ignacio**	**29.17**	**129**	LR	LR	20 39 42.6	
	comp=Z,104nm,18.1s,baz=288,slow=38						
LRAL	**Lakeview Retre**	**30.65**	**355**		**P**	**20 27 35.3**	**+1.5**
LRAL				IAmb	IAmb	20 27 37.0	
	comp=Z,5.9nm,0.9s						
HODGE	**Hodges**	**31.78**	**3**	P	**P**	**20 27 45.3**	**+1.6**
BRDY	**Brady**	**32.04**	**336**	P	**P**	**20 27 45.9**	**-0.2**
BRDY				IAmb	IAmb	20 27 49.2	
	comp=Z,10nm,1.4s						
X48A	**Hartselle**	**32.06**	**355**		**PcP**	**20 30 34.2**	**-1.1**
PAULI	**Pauline**	**32.39**	**4**	P	**P**	**20 27 51.3**	**+2.2**
BG3	**Lake Jocassee**	**32.51**	**2**	P	**P**	**20 27 51.3**	**+1.1**
TXAR	**Lajitas Array**	**32.65**	**327**	P	**P**	**20 27 50.8**	**-0.8**
TXAR	**Lajitas Array**	**32.65**	**327**	P	**P**	**20 27 51.3**	**-0.3**
	comp=Z,0.8nm,0.9s,baz=146,slow=9.6,SNR=5.1						
	comp=Z,0.8nm,0.9s						
TX31	**Lajitas Ar. Si**	**32.65**	**327**	P	**P**	**20 27 51.0**	**-0.6**
KMSC	**Kings Mountain**	**32.74**	**4**	P	**P**	**20 27 54.2**	**+2.1**
KMSC				IAmb	IAmb	20 27 55.0	
	comp=Z,6.4nm,0.7s						
TKL	**Tuckaleechee C**	**33.15**	**1**	LR	LR	20 41 01.5	
	comp=Z,58nm,18.6s,baz=172,slow=36						
SN05	**Snyder 5**	**34.21**	**334**	P	**P**	**20 28 05.4**	**+0.3**
SN05				IAmb	IAmb	20 28 07.4	
	comp=Z,6.8nm,1.2s						
VHRN	**Van Horn**	**34.50**	**327**		**P**	**20 28 07.9**	**+0.2**
VHRN				IAmb	IAmb	20 28 10.4	
	comp=Z,7.9nm,1.0s						
DKNS	**Dickens**	**34.91**	**335**	P	**P**	**20 28 11.8**	**+0.7**
DKNS				IAmb	IAmb	20 28 12.5	
	comp=Z,4.3nm,0.7s						
T42A	**Van Buren**	**35.11**	**350**		**P**	**20 28 13.0**	**+0.3**
T42A				IAmb	IAmb	20 28 14.9	
	comp=Z,6.8nm,1.3s						
MNTX	**Cornudas Mount**	**35.42**	**328**		**P**	**20 28 15.3**	**-0.2**
MGMO	**Mountain Grove**	**35.45**	**349**	P	**P**	**20 28 16.6**	**+0.9**
MGMO				IAmb	IAmb	20 28 20.0	
	comp=Z,7.3nm,1.0s						
H03N2	**Juan Fernandez**	**35.92**	**173**	T	T	21 06 06.7	
	baz=351,slow=76,SNR=9.8						
H03N1	**Juan Fernandez**	**35.93**	**173**	T	T	21 06 11.6	
	baz=351,slow=76,SNR=13						
H03N3	**Juan Fernandez**	**35.94**	**173**	T	T	21 06 06.4	
	baz=351,slow=76,SNR=12						
AMTX	**Amarillo**	**36.27**	**335**	P	**P**	**20 28 23.0**	**+0.2**
AMTX				IAmb	IAmb	20 28 26.1	
	comp=Z,7.2nm,1.0s						
Q51A	**Peebles**	**36.52**	**1**	P	**P**	**20 28 26.1**	**+1.3**
Q51A				IAmb	IAmb	20 28 28.0	
	comp=Z,8.3nm,1.0s						
ANMO	**Albuquerque**	**38.52**	**330**		**P**	**20 28 42.7**	**+0.7**
PV02	**Paradox Valley**	**42.22**	**331**	P	**P**	**20 29 13.3**	**+0.7**
PV02				IAmb	IAmb	20 29 15.5	
	comp=Z,4.5nm,0.9s						
PV13	**Radium Mtn., P**	**42.22**	**331**	P	**P**	**20 29 13.5**	**+0.9**
SADO	**Sadowa**	**42.48**	**5**	LR	LR	20 46 43.8	
	comp=Z,54nm,18.4s,baz=128,slow=36						
ECSD	**EROS Data Cent**	**42.69**	**347**		**P**	**20 29 15.4**	**-0.7**
ECSD				IAmb	IAmb	20 29 16.9	
	comp=Z,9.3nm,1.2s						
HMU	**Henry Mountain**	**43.02**	**329**	IAmb	IAmb	20 29 23.4	
	comp=Z,5.0nm,1.0s						
PFO	**Pinyon Flats O**	**43.38**	**319**	LR	LR	20 45 27.2	
	comp=Z,43nm,18.0s,baz=112,slow=34						
PDAR	**Pinedale Array**	**46.22**	**334**	P	**P**	**20 29 43.7**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=139,slow=7.7,SNR=4.7						
PDAR				LR	LR	20 50 57.8	
	comp=Z,26nm,18.1s,baz=122,slow=39						
	comp=Z,0.7nm,0.8s						
ELK	**Elko**	**47.45**	**328**	LR	LR	20 48 58.3	
	comp=Z,44nm,18.5s,baz=89,slow=35						
NVAR	**Mina Array Bea**	**47.60**	**323**	P	**P**	**20 29 55.8**	**+0.3**
	comp=Z,1.3nm,0.9s,baz=141,slow=6.3,SNR=7.3						
	comp=Z,1.3nm,0.9s						
ULM	**Lac du Bonnet**	**48.77**	**350**	P	**P**	**20 30 03.5**	**-0.5**
	comp=Z,5.8nm,1.0s,baz=148,slow=7.1,SNR=7.1						
	comp=Z,5.8nm,1.0s						
BOZ	**Bozeman (W)**	**49.38**	**335**	IAmb	IAmb	20 30 11.1	
	comp=Z,4.0nm,1.3s						
NEW	**Newport**	**53.84**	**333**	LR	LR	20 53 47.9	
	comp=Z,26nm,18.6s,baz=150,slow=36						
SCHQ	**Schefferville**	**54.19**	**12**	P	**P**	**20 30 44.1**	**-0.4**
	comp=Z,2.5nm,0.9s,baz=255,slow=16,SNR=3.7						
	comp=Z,2.5nm,0.9s						
FRB	**Frobisher Bay**	**62.33**	**8**	LR	LR	20 58 36.4	
	comp=Z,66nm,18.1s,baz=261,slow=36						
YKA	**Yellowknife Ar**	**64.17**	**345**	P	**P**	**20 31 52.6**	**-0.8**
	comp=Z,1.3nm,0.9s,baz=139,slow=6.4,SNR=7.6						
	comp=Z,1.3nm,0.9s						
M29M	**Somme Creek**	**72.13**	**337**	P	**P**	**20 32 44.4**	**+0.9**
M29M				IAmb	IAmb	20 32 45.5	
	comp=Z,2.4nm,0.9s						
BMRM	**Bremner River**	**74.01**	**334**		**P**	**20 32 53.7**	**-0.9**
BMRM				IAmb	IAmb	20 32 56.3	
	comp=Z,7.3nm,1.0s						
J26L	**Joseph Creek**	**75.14**	**337**		**P**	**20 33 01.6**	**+0.5**
J26L				IAmb	IAmb	20 33 02.9	
	comp=Z,2.7nm,0.9s						
SUMG	**Summit**	**75.58**	**13**	P	**P**	**20 33 04.9**	**+1.0**
SUMG				IAmb	IAmb	20 33 06.1	
	comp=Z,6.2nm,1.1s						
ILAR	**Eielson Array**	**76.55**	**337**	P	**P**	**20 33 08.8**	**-0.2**
ILAR	**Eielson Array**	**76.55**	**337**	P	**P**	**20 33 09.0**	**-0.1**
	comp=Z,1.1nm,1.0s,baz=109,slow=6.1,SNR=7.5						
	comp=Z,1.1nm,1.0s						
RND	**Reindeer**	**76.81**	**335**	P	**P**	**20 33 10.6**	**0.0**
RND				IAmb	IAmb	20 33 13.8	
	comp=Z,6.1nm,1.2s						
BPAW	**Bear Paw Mtn.**	**77.95**	**336**	P	**P**	**20 33 17.0**	**+0.1**
BPAW				IAmb	IAmb	20 33 18.4	
	comp=Z,6.9nm,1.4s						
EKA	**Eskdalemuir Ar**	**82.94**	**35**	P	**P**	**20 33 44.3**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=258,slow=3.5,SNR=2.2						
	comp=Z,1.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**85.40**	**77**	P	**P**	**20 33 57.3**	**+0.1**
	comp=Z,155nm,0.3s,baz=279,slow=5.6,SNR=2.0						
QSPA	**South Pole Qui**	**92.37**	**180**	P	**P**	**20 34 30.5**	**+1.1**
	comp=Z,1.0nm,1.0s,baz=185,slow=5.7,SNR=1.8						
	comp=Z,1.0nm,1.0s						
SONM	**Songino Array**	**129.19**	**351**	PKP	**PKPdf**	**20 40 27.4**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=43,slow=2.8,SNR=1.9						
MKAR	**Makanchi Array**	**129.63**	**12**	PKP	**PKiKP**	**20 40 28.7**	**-0.4**
	comp=Z,0.2nm,0.7s,baz=326,slow=4.4,SNR=2.2						
PZH	**PanZhiHua**	**150.77**	**349**	PKPbc	**PKPdf**	**20 41 05.1**	**-1.6**

*IDC **05** 20:23:17.5±0.9, 37°.99N×14°.55E, h0^{km}, mb3.5/6, mbtmp3.4/11, ML2.9/2, Error ellipse: s-maj=25.3km s-min=10.2km az=105.0*

*ROM **05** 20:23:18.1±0.1, 37°.851N±0°.005×14°.555E±0°.006, h10^{km}, ML3.4/136, Mw3.6, Error ellipse: s-maj=0.6km s-min=0.1km az=333.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-2.78; M$_{\theta\theta}$2.75; M$_{\phi\phi}$0.03; M$_{r\theta}$-0.85; M$_{\theta\phi}$0.98; M$_{\phi r}$0.18; Fault plane solution: M$_0$3.05652×10^{14} NP1: φ$_s$81.00000°, δ53.00000°, λ-79.00000°. NP2: φ$_s$243.00000°, δ39.00000°, λ-104.00000°.*

ISC 05 20:23:18.5±0.8, 37°.86N±0°.02×14°.58E±0°.02, h15^{km}±5^{km}, n90, σ1^{s}.04/105, mb3.5/6, 27C-4D, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNO	**Monte Soro**	**0.12**	**50**	⇑P	**Pb**	**20 23 22.1**	**-0.5**
MNO				S	**Sb**	**20 23 25.3**	**-0.1**
MNO				AML	AML		
	comp=N,88100µm,0.5s						
MNO				AML	AML		
	comp=E,84100µm,0.3s						
MNO				AML	AML		
	comp=N,88105µm,0.5s						
MNO				AML	AML		
	comp=E,84144µm,0.3s						
GALF	**Gagliano Caste**	**0.14**	**183**	⇑P	**Pg**	**20 23 21.1**	**-1.4**
GALF				S	**Sg**	**20 23 23.8**	**-1.2**
GALF				AML	AML		
	comp=N,25200µm,0.5s						
GALF				AML	AML		
GALF				AML	AML		
GALF				AML	AML		
	comp=E,14250µm,0.5s						
GALF				AML	AML		
	comp=E,14250µm,0.5s						
GALF				AML	AML		
GALF				AML	AML		
GALF				AML	AML		
	comp=N,25212µm,0.5s						
GALF				AML	AML		
	comp=N,25200µm,0.5s						
GALF				AML	AML		
	comp=E,14272µm,0.5s						
MSFR	**San Fratello**	**0.18**	**3**	⇑P	**Pg**	**20 23 22.9**	**0.0**
MSFR				S	**Sg**	**20 23 26.0**	**+0.2**
MSFR				AML	AML		
	comp=N,5835µm,0.4s						
MSFR				AML	AML		
	comp=E,7270µm,0.3s						
MSFR				AML	AML		
	comp=E,7267µm,0.3s						
MSFR				AML	AML		
	comp=N,5834µm,0.4s						
EPZF	**Pizzo Felice**	**0.22**	**98**	⇓P	**Pg**	**20 23 24.0**	**+0.4**
EPZF				S	**Sg**	**20 23 28.8**	**+1.7**
EPZF				AML	AML		
	comp=E,22650µm,0.9s						
EPZF				AML	AML		
	comp=N,38250µm,1.6s						
EPZF				AML	AML		
	comp=N,38250µm,0.4s						
EPZF				AML	AML		
	comp=N,33598µm,0.4s						
EPZF				AML	AML		
	comp=E,22366µm,0.4s						
CAGR	**Agira**	**0.24**	**195**	⇑P	**Pg**	**20 23 23.1**	**-0.7**
CAGR				S	**Sg**	**20 23 28.8**	**+1.4**
CAGR				AML	AML		
	comp=E,44800µm,0.4s						
CAGR				AML	AML		
	comp=N,53041µm,0.6s						
CAGR				AML	AML		
	comp=N,53000µm,0.6s						
CAGR				AML	AML		
	comp=E,44800µm,1.6s						
CAGR				AML	AML		
	comp=E,44781µm,0.4s						
EMSG	**Monte Spagnolo**	**0.30**	**97**	⇓P	**Pg**	**20 23 25.2**	**+0.4**
EMSG				AML	AML		
	comp=N,39650µm,0.5s						
EMSG				AML	AML		
	comp=E,35750µm,0.6s						
EMSG				AML	AML		
	comp=E,35760µm,0.6s						
EMSG				AML	AML		
	comp=N,39641µm,0.5s						
MUCR	**Ucria**	**0.30**	**51**	⇑P	**Pg**	**20 23 24.9**	**0.0**
MUCR				S	**Sg**	**20 23 30.4**	**+1.2**
MUCR				AML	AML		
	comp=N,11750µm,1.0s						
MUCR				AML	AML		
	comp=E,14050µm,0.4s						
MUCR				AML	AML		
	comp=E,14026µm,0.4s						

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MUCR                              AML    AML
       comp=N,11750µm,1.0s
MUCR                              AML    AML
       comp=N,11256µm,0.4s
ESML   S. M. di Licod    0.34 135 ⇑P     Pg      20 23 25.6 +0.2
ESML                              AML    AML
       comp=N,20750µm,0.7s
ESML                              AML    AML
       comp=E,18600µm,0.4s
ESML                              AML    AML
       comp=N,20724µm,0.7s
ESML                              AML    AML
       comp=E,18584µm,0.4s
ESLN   Serra La Nave     0.35 117  P     Pg      20 23 26.6 +0.8
ESLN                              AML    AML
       comp=E,25650µm,1.5s
ESLN                              AML    AML
       comp=N,23400µm,0.5s
ESLN                              AML    AML
       comp=E,24931µm,0.4s
ESLN                              AML    AML
       comp=N,23369µm,0.5s
ESLN                              AML    AML
       comp=N,23400µm,1.5s
ESLN                              AML    AML
       comp=E,25650µm,0.5s
EMCN   Etna Monte Con    0.37 100  P     Pg      20 23 26.8 +0.7
EMCN                              AML    AML
       comp=E,23250µm,0.6s
EMCN                              AML    AML
       comp=N,18600µm,0.7s
EMCN                              AML    AML
       comp=N,18600µm,1.3s
EMCN                              AML    AML
       comp=E,23250µm,0.6s
EMCN                              AML    AML
       comp=E,23264µm,0.6s
EMCN                              AML    AML
       comp=N,18573µm,0.7s
PETRA  Petralia Sopra    0.37 267 ⇑P     Pg      20 23 25.1 -1.0
PETRA                              S     Sg      20 23 31.5 +0.3
PETRA                             AML    AML
       comp=E,4265µm,1.1s
PETRA                             AML    AML
       comp=N,3965µm,1.5s
PETRA                             AML    AML
       comp=E,2715µm,0.8s
PETRA                             AML    AML
       comp=N,2715µm,0.5s
PETRA                             AML    AML
       comp=E,9060µm,0.5s
PETRA                             AML    AML
       comp=N,6258µm,0.8s
PLLN   Pollina           0.37 292 ⇑P     Pg      20 23 25.4 -0.6
PLLN                              AML    AML
       comp=E,9630µm,0.5s
PLLN                              AML    AML
       comp=N,13450µm,0.5s
PLLN                              AML    AML
       comp=E,6130µm,1.6s
PLLN                              AML    AML
       comp=N,8250µm,0.5s
PLLN                              AML    AML
       comp=E,7680µm,0.3s
PLLN                              AML    AML
       comp=E,9652µm,0.5s
PLLN                              AML    AML
       comp=N,11650µm,0.5s
PLLN                              AML    AML
       comp=N,13470µm,0.5s
VAE    Valguarnera       0.40 199  Pg    Pg      20 23 28.1 +1.5
       comp=N,66nm,0.3s,baz=182,slow=3.2,SNR=127
VAE    Valguarnera       0.40 199  P     Pg      20 23 27.7 +1.2
VAE                               AML    AML
       comp=E,2640µm,0.8s
VAE                               AML    AML
       comp=N,2390µm,0.5s
VAE                               AML    AML
       comp=E,5908µm,1.1s
VAE                               AML    AML
       comp=N,4337µm,0.8s
VAE                               AML    AML
       comp=E,2640µm,1.2s
VAE                               AML    AML
       comp=E,4174µm,0.7s
VAE                               AML    AML
       comp=N,4229µm,0.7s
ENIC   Nicolosi          0.42 122 ⇑P     Pg      20 23 28.0 +1.0
ENIC                              AML    AML
       comp=N,7344µm,0.4s
ENIC                              AML    AML
       comp=E,7450µm,0.4s
ENIC                              AML    AML
       comp=N,7345µm,0.4s
ENIC                              AML    AML
       comp=E,7449µm,0.4s
CSLB   Castelbuono       0.42 281 ⇑P     Pg      20 23 25.8 -1.1
CSLB                               S     Sg      20 23 31.9 -0.8
CSLB                              AML    AML
       comp=E,1410µm,1.0s
CSLB                              AML    AML
       comp=N,1605µm,1.2s
CSLB                              AML    AML
       comp=E,1449µm,0.5s
CSLB                              AML    AML
       comp=E,1410µm,1.0s
CSLB                              AML    AML
       comp=N,2335µm,0.7s
ECTS   Castiglione       0.43  86 ⇑P     Pg      20 23 27.4 +0.3
ECTS                              AML    AML
       comp=E,8930µm,0.8s
ECTS                              AML    AML
       comp=N,8815µm,0.5s
ECTS                              AML    AML
       comp=E,8935µm,0.8s
ECTS                              AML    AML
       comp=E,8414µm,0.4s
ECTS                              AML    AML
       comp=N,8814µm,0.5s
GIB    Gibilmanna        0.46 287 ⇑P     Pg      20 23 26.8 -0.9
GIB                                S     Sg      20 23 35.1 +1.3
GIB                               AML    AML
       comp=E,5485µm,1.4s
GIB                               AML    AML
       comp=N,6880µm,0.4s
GIB                               AML    AML
       comp=E,5485µm,0.6s
GIB                               AML    AML
       comp=N,7910µm,0.5s
GIB                               AML    AML
       comp=E,4906µm,0.4s
RESU   Resuttano         0.46 243 ⇓P     Pg      20 23 28.2 +0.5
RESU                              AML    AML
       comp=E,2675µm,1.4s
RESU                              AML    AML
       comp=N,3125µm,1.3s
RESU                              AML    AML
       comp=E,2335µm,1.6s
RESU                              AML    AML
       comp=N,2755µm,1.2s
RESU                              AML    AML
       comp=E,4047µm,0.6s
RESU                              AML    AML
       comp=N,4259µm,0.8s
RESU                              AML    AML
       comp=E,2335µm,0.4s
RESU                              AML    AML
       comp=N,2755µm,0.8s
NOV    Novara            0.47  69 ⇑P     Pg      20 23 27.7 -0.3
NOV                                S     Sb      20 23 36.5 +1.1
NOV                               AML    AML
       comp=N,14800µm,0.5s
NOV                               AML    AML
       comp=N,14836µm,0.5s
NOV                               AML    AML
       comp=E,19650µm,0.8s
NOV                               AML    AML
       comp=E,19669µm,0.8s
EPOZ   Pozzillo          0.53 130  P     Pg      20 23 29.6 +0.7
AIO    Antillo           0.53  77 ⇑P     Pg      20 23 28.8 -0.2
AIO                               AML    AML
       comp=E,5430µm,0.4s
AIO                               AML    AML
       comp=N,6290µm,0.3s
AIO                               AML    AML
       comp=N,6290µm,0.3s
AIO                               AML    AML
       comp=E,5431µm,0.4s
CPTP   Pietraperzia      0.56 217  P     Pg      20 23 30.8 +1.3
CPTP                              AML    AML
       comp=N,1975µm,1.5s
CPTP                              AML    AML
       comp=N,1975µm,0.5s
CPTP                              AML    AML
       comp=E,1008µm,1.2s
CPTP                              AML    AML
       comp=E,2600µm,0.7s
CPTP                              AML    AML
       comp=N,3268µm,1.0s
HLNI   Lentini           0.56 155 ⇑P     Pg      20 23 28.8 -0.7
HLNI                               S     Sg      20 23 37.9 +1.0
HLNI                              AML    AML
       comp=E,2795µm,0.5s
HLNI                              AML    AML
       comp=N,2925µm,0.4s
HLNI                              AML    AML
       comp=N,2926µm,0.4s
HLNI                              AML    AML
       comp=E,2794µm,0.5s
VPL    Vulcano Piano     0.61  31 ⇑P     Pg      20 23 30.7 +0.1
VPL                               AML    AML
       comp=N,7995µm,0.4s
VPL                               AML    AML
       comp=E,6795µm,0.4s
VPL                               AML    AML
       comp=E,6793µm,0.4s
VPL                               AML    AML
       comp=E,6795µm,1.6s
VPL                               AML    AML
       comp=N,7995µm,1.6s
VPL                               AML    AML
       comp=N,7991µm,0.5s
IVGP   Vulcano Grotta    0.62  29 ⇑P     Pg      20 23 30.7  0.0
LLI    Lipari            0.66  26  P     Pg      20 23 31.7 +0.3
LLI                               AML    AML
       comp=N,49950µm,0.6s
LLI                               AML    AML
       comp=E,44550µm,0.5s
LLI                               AML    AML
       comp=E,44547µm,0.5s
LLI                               AML    AML
       comp=N,49956µm,0.6s
ALJA   Alia              0.66 261 ⇓P     Pg      20 23 30.8 -0.7
ALJA                              AML    AML
       comp=E,1905µm,1.4s
ALJA                              AML    AML
       comp=E,2755µm,1.3s
ALJA                              AML    AML
       comp=N,2080µm,1.4s
ALJA                              AML    AML
       comp=E,2755µm,0.7s
ALJA                              AML    AML
       comp=N,3228µm,0.6s
ALJA                              AML    AML
       comp=E,3084µm,0.5s
SCIAR  Sciara            0.66 278  P     Pg      20 23 30.5 -0.9
SCIAR                             AML    AML
       comp=E,2870µm,0.4s
SCIAR                             AML    AML
       comp=N,3100µm,0.5s
SCIAR                             AML    AML
       comp=N,4600µm,0.5s
SCIAR                             AML    AML
       comp=E,2870µm,1.6s
SCIAR                             AML    AML
       comp=E,2350µm,0.5s
SCIAR                             AML    AML
       comp=E,2350µm,0.5s
SCIAR                             AML    AML
       comp=N,3100µm,0.5s
SCIAR                             AML    AML
       comp=N,4601µm,0.5s
SCIAR                             AML    AML
       comp=E,2976µm,0.5s
MILZ   Milazzo           0.66  51 ⇑P     Pg      20 23 31.2 -0.2
MILZ                              AML    AML
       comp=N,7740µm,0.5s
MILZ                              AML    AML
       comp=E,14746µm,0.5s
MILZ                              AML    AML
       comp=E,14750µm,0.5s
MILZ                              AML    AML
       comp=N,7737µm,0.5s
MPNC   Port Mandanici    0.68  64  P     Pg      20 23 31.3 -0.5
MPNC                              AML    AML
       comp=E,8210µm,0.5s
MPNC                              AML    AML
       comp=N,10820µm,0.7s
MPNC                              AML    AML
       comp=N,10840µm,0.7s
MPNC                              AML    AML
       comp=N,10820µm,1.3s
MPNC                              AML    AML
       comp=E,8209µm,0.5s
HVZN   Vizzini           0.69 171  P     Pg      20 23 30.8 -1.1
IACL   Alicudi           0.70 346 ⇑P     Pg      20 23 32.2 +0.1
IACL                              AML    AML
       comp=E,5450µm,0.6s
IACL                              AML    AML
       comp=N,3185µm,0.4s
IACL                              AML    AML
       comp=E,5454µm,0.6s
IACL                              AML    AML
       comp=N,3488µm,0.7s
IFIL   Filicudi I Eol    0.71 359 ⇑P     Pb      20 23 32.3 -0.3
IFIL                              AML    AML
       comp=E,20500µm,0.5s
IFIL                              AML    AML
       comp=E,20516µm,0.5s
IFIL                              AML    AML
       comp=N,5946µm,0.6s
IFIL                              AML    AML
       comp=N,5950µm,0.6s
CMDO   Montedoro         0.71 237 AML    AML
       comp=E,197µm,1.3s
CMDO                              AML    AML
       comp=N,189µm,1.6s
HAGA   Augusta           0.73 141  P     Pb      20 23 31.6 -1.3
HAGA                               S     Sb      20 23 42.8 +0.1
MCT    Mte Cammarata     0.78 254  P     Pg      20 23 35.2 +1.5
MCT                               AML    AML
       comp=E,740µm,0.6s
MCT                               AML    AML
       comp=N,1340µm,0.6s
MCT                               AML    AML
       comp=E,740µm,1.4s
MCT                               AML    AML
       comp=N,1340µm,1.4s
MCT                               AML    AML
       comp=N,1459µm,1.1s
MCT                               AML    AML
       comp=E,1317µm,0.8s
AGST   Augusta-Monte     0.79 139 ⇑P     Pb      20 23 32.8 -1.2
AGST                               S     Sb      20 23 44.9 +0.5
AGST                              AML    AML
       comp=E,7050µm,1.4s
AGST                              AML    AML
       comp=N,8705µm,0.3s
AGST                              AML    AML
       comp=E,7022µm,0.4s
AGST                              AML    AML
       comp=N,8706µm,0.3s
AGST                              AML    AML
       comp=E,7050µm,0.6s
GEA    GELA              0.82 195  P     Pb      20 23 34.0 -0.6
ACATE  Acate (RG)        0.83 184  P     Pb      20 23 33.8 -0.9
MSRU   Castanea          0.84  61 ⇑P     Pb      20 23 34.3 -0.5
MSRU                              AML    AML
       comp=E,6195µm,0.8s
MSRU                              AML    AML
       comp=E,6194µm,0.8s
MSRU                              AML    AML
       comp=N,3978µm,0.5s
MSRU                              AML    AML
       comp=N,3980µm,0.5s
CLTA   Licata            0.85 215  P     Pb      20 23 35.3 +0.4
SOLUN  Solunto           0.86 286  P     Pb      20 23 33.9 -1.2
MTTG   Motta San Giov    0.90  80  P     Pb      20 23 35.3 -0.4
MTTG                              AML    AML
       comp=N,2825µm,0.6s
MTTG                              AML    AML
       comp=E,2625µm,0.7s
MTTG                              AML    AML
       comp=E,2625µm,0.7s
MTTG                              AML    AML
       comp=N,2825µm,0.6s
RCU    Reggio Calabri    0.90  73  P     Pb      20 23 35.5 -0.3
FAVR   Favara            0.93 231  P     Pn      20 23 37.9 +0.8
SICLA  Scilla            0.98  66  P     Pb      20 23 36.5 -0.7
SICLA                             AML    AML
       comp=E,2170µm,0.5s
SICLA                             AML    AML
       comp=N,2500µm,0.6s
SICLA                             AML    AML
       comp=E,2170µm,0.5s
SICLA                             AML    AML
       comp=N,2502µm,0.6s
CORL   Corleone          1.01 273  P     Pb      20 23 37.0 -0.7
MPG    Monte Pellegri    1.01 288  P     Pb      20 23 36.7 -1.0
GMB    Gambarie          1.04  72  P     Pb      20 23 37.6 -0.7
GMB                               AML    AML
       comp=N,5185µm,0.4s
GMB                               AML    AML
       comp=N,5185µm,0.4s
GMB                               AML    AML
       comp=E,5265µm,0.8s
GMB                               AML    AML
       comp=N,5185µm,1.6s
GMB                               AML    AML
       comp=E,4781µm,0.5s
ISPIC  ISPICA            1.10 166  P     Pn      20 23 37.7 -1.7
ISPIC                              S     Sb      20 23 54.1 +0.6
ISPIC                             AML    AML
       comp=E,4040µm,0.3s
ISPIC                             AML    AML
       comp=N,5275µm,0.7s
ISPIC                             AML    AML
       comp=E,3965µm,0.3s
ISPIC                             AML    AML
       comp=N,5245µm,0.7s
ISPIC                             AML    AML
       comp=N,5275µm,1.3s
ISPIC                             AML    AML
       comp=N,5245µm,1.3s
ISPIC                             AML    AML
       comp=E,4040µm,1.7s
ISPIC                             AML    AML
       comp=E,3965µm,1.7s
ISPIC                             AML    AML
       comp=E,4037µm,0.3s
ISPIC                             AML    AML
       comp=N,4476µm,0.3s
ISPIC                             AML    AML
       comp=N,4491µm,0.4s
ISPIC                             AML    AML
       comp=E,3965µm,0.3s
CEL    Celeste           1.11  68  P     Pb      20 23 38.8 -0.7
CEL                               AML    AML
       comp=E,1155µm,1.6s
CEL                               AML    AML
       comp=E,1210µm,1.6s
CEL                               AML    AML
       comp=N,1670µm,1.0s
CEL                               AML    AML
       comp=N,1605µm,0.6s
CEL                               AML    AML
       comp=N,1645µm,1.0s
CEL                               AML    AML
       comp=N,1670µm,1.0s
CEL                               AML    AML
       comp=E,1210µm,0.4s
CEL                               AML    AML
       comp=E,1155µm,0.4s
CEL                               AML    AML
       comp=E,1167µm,0.7s
CEL                               AML    AML
       comp=N,1608µm,0.6s
CEL                               AML    AML
       comp=E,1139µm,0.7s
CLTB   Caltabellotta     1.11 256  P     Pg      20 23 41.0 +1.0
SOI    Samo              1.19  79  P     Pn      20 23 40.0 -0.6
SOI                               AML    AML
       comp=E,1101µm,0.6s
SOI                               AML    AML
       comp=N,1385µm,0.7s
SOI                               AML    AML
       comp=N,1386µm,0.7s
SOI                               AML    AML
       comp=N,1385µm,1.3s
SOI                               AML    AML
       comp=E,1100µm,0.6s
HPAC   Pachino           1.23 160  P     Pn      20 23 40.4 -0.8
HPAC                               S     Sb      20 23 57.8 +0.7
HPAC                              AML    AML
       comp=E,4575µm,1.6s
HPAC                              AML    AML
       comp=N,5240µm,0.4s
HPAC                              AML    AML
       comp=E,4575µm,0.4s
HPAC                              AML    AML
       comp=N,5237µm,0.5s
HPAC                              AML    AML
       comp=E,3851µm,0.4s
CRJA   Costa Raja        1.25 268  P     Pb      20 23 42.6 +0.8
PPL1   Portopalo di C    1.25 159  P             20 23 40.5
JOPP   Joppolo           1.27  54  P     Pn      20 23 41.1 -0.7
JOPP                              AML    AML
       comp=E,701µm,0.7s
JOPP                              AML    AML
       comp=N,758µm,0.7s
JOPP                              AML    AML
       comp=E,701µm,0.7s
JOPP                              AML    AML
       comp=N,758µm,1.3s
JOPP                              AML    AML
       comp=N,758µm,0.7s
MBFT   Monte Bonifato    1.29 275  P     Pn      20 23 41.9 -0.1
PLAC   Placanica         1.58  67 ⇑P     Pn      20 23 46.9 +0.9
PLAC                              AML    AML
       comp=N,812µm,1.5s
PLAC                              AML    AML
       comp=E,814µm,1.5s
PLAC                              AML    AML
       comp=N,874µm,0.7s
PLAC                              AML    AML
       comp=E,839µm,0.7s
PLAC                              AML    AML
       comp=N,762µm,0.6s
PLAC                              AML    AML
       comp=N,812µm,0.5s
PLAC                              AML    AML
       comp=E,814µm,0.5s
PLAC                              AML    AML
       comp=E,840µm,0.7s
PLAC                              AML    AML
       comp=N,874µm,0.7s
PLAC                              AML    AML
       comp=E,781µm,0.6s
ERC    Erice             1.58 277  P     Pn      20 23 46.1 +0.1
MARS   Marsala (TP) I    1.60 267  P     Pb      20 23 47.8 +0.1
GRI    Girifalco         1.74  56  P     Pn      20 23 48.3 +0.1
GRI                               AML    AML
       comp=E,892µm,0.8s
GRI                               AML    AML
       comp=E,890µm,0.8s
GRI                               AML    AML
       comp=N,912µm,0.8s
GRI                               AML    AML
       comp=E,892µm,1.2s
GRI                               AML    AML
       comp=N,912µm,0.8s
CAR1   CAROLEI           1.89  42 ⇑P     Pn      20 23 49.7 -0.7
CAR1                              AML    AML
       comp=E,1014µm,0.8s
CAR1                              AML    AML
       comp=E,1270µm,0.5s
CAR1                              AML    AML
       comp=E,1270µm,0.5s
CAR1                              AML    AML
       comp=N,1240µm,0.5s
CAR1                              AML    AML
       comp=N,1242µm,0.5s
CAR1                              AML    AML
       comp=N,1455µm,0.5s
CAR1                              AML    AML
       comp=N,1456µm,0.5s
CAR1                              AML    AML
       comp=E,1012µm,0.8s
CET2   Cetraro           1.99  32  P     Pn      20 23 50.9 -0.7
CET2                              AML    AML
       comp=E,774µm,0.8s
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CET2				AML	AML		
	comp=N,1010µm,0.4s						
CET2				AML	AML		
	comp=E,774µm,1.2s						
CET2				AML	AML		
	comp=E,774µm,0.8s						
CET2				AML	AML		
	comp=N,1011µm,0.4s						
SPS2	**Spezzano della**	1.99	43	P	Pn	20 23 51.8	+0.1
SPS2				AML	AML		
	comp=E,155µm,0.6s						
SPS2				AML	AML		
	comp=N,183µm,0.8s						
SPS2				AML	AML		
	comp=E,156µm,0.6s						
SPS2				AML	AML		
	comp=N,162µm,0.4s						
TIP	**Timpagrande**	2.16	52	P	Pn	20 23 55.0	+1.0
TIP				AML	AML		
	comp=E,244µm,0.8s						
TIP				AML	AML		
	comp=N,183µm,1.0s						
TIP				AML	AML		
	comp=E,263µm,0.8s						
TIP				AML	AML		
	comp=N,198µm,0.9s						
TIP				AML	AML		
	comp=E,245µm,0.8s						
TIP				AML	AML		
	comp=N,183µm,1.0s						
TIP				AML	AML		
	comp=E,263µm,0.8s						
TIP				AML	AML		
	comp=N,198µm,0.9s						
TIP				AML	AML		
	comp=N,183µm,1.0s						
CELI	**Celico**	2.16	44	P	Pn	20 23 53.7	-0.4
CELI				AML	AML		
	comp=E,620µm,0.9s						
CELI				AML	AML		
	comp=N,716µm,0.9s						
CELI				AML	AML		
	comp=N,715µm,0.9s						
CELI				AML	AML		
	comp=N,716µm,1.1s						
CELI				AML	AML		
	comp=E,255µm,0.9s						
CELI				AML	AML		
	comp=N,279µm,0.7s						
CELI				AML	AML		
	comp=E,619µm,0.9s						
BULG	**Bulgheria - Ca**	2.31	15	⇑P	Pn	20 23 55.6	-0.4
PIPA	**Pietrapaola**	2.39	46	P	Pn	20 23 58.6	+1.5
PIPA				AML	AML		
	comp=E,312µm,1.6s						
PIPA				AML	AML		
	comp=N,318µm,0.7s						
PIPA				AML	AML		
	comp=E,236µm,1.6s						
PIPA				AML	AML		
	comp=N,308µm,0.7s						
PIPA				AML	AML		
	comp=E,212µm,0.7s						
PIPA				AML	AML		
	comp=N,308µm,0.7s						
PIPA				AML	AML		
	comp=E,237µm,0.7s						
PIPA				AML	AML		
	comp=E,236µm,0.4s						
PIPA				AML	AML		
	comp=E,312µm,0.4s						
PIPA				AML	AML		
	comp=N,319µm,0.7s						
PIPA				AML	AML		
	comp=E,222µm,1.5s						
MGR	**Morigerati**	2.40	18	⇑P	Pn	20 23 57.0	-0.3
MGR				AML	AML		
	comp=E,1010µm,1.6s						
MGR				AML	AML		
	comp=N,852µm,1.6s						
MGR				AML	AML		
	comp=E,137µm,0.6s						
MGR				AML	AML		
	comp=N,140µm,1.5s						
MGR				AML	AML		
	comp=N,585µm,0.8s						
MGR				AML	AML		
	comp=N,140µm,0.5s						
MGR				AML	AML		
	comp=E,1010µm,0.4s						
MGR				AML	AML		
	comp=N,852µm,0.4s						
MGR				AML	AML		
	comp=N,134µm,0.3s						
MGR				AML	AML		
	comp=E,137µm,0.6s						
LINA	**Linosa Island**	2.41	215	⇑P	Pn	20 23 57.1	-0.2
SALB	**San Lorenzo Be**	2.45	34	P	Pn	20 23 58.5	+0.5
SALB				AML	AML		
	comp=E,227µm,0.8s						
SALB				AML	AML		
	comp=N,224µm,0.7s						
SALB				AML	AML		
	comp=E,227µm,0.8s						
SALB				AML	AML		
	comp=E,227µm,1.2s						
SALB				AML	AML		
	comp=N,224µm,1.3s						
SALB				AML	AML		
	comp=N,223µm,0.7s						
SIRI	**Monte Sirino -**	2.53	23	P	Pn	20 23 59.5	+0.4
SIRI				AML	AML		
	comp=E,196µm,0.3s						
SIRI				AML	AML		
	comp=E,206µm,0.3s						
SIRI				AML	AML		
	comp=N,182µm,0.6s						
SIRI				AML	AML		
	comp=N,193µm,0.6s						
SIRI				AML	AML		
	comp=N,181µm,0.6s						
SIRI				AML	AML		
	comp=E,196µm,0.3s						
SIRI				AML	AML		
	comp=E,207µm,0.3s						
SIRI				AML	AML		
	comp=N,193µm,0.6s						
MCEL	**Monticello**	2.64	21	P	Pn	20 24 00.8	+0.1
MCEL				AML	AML		
	comp=E,109µm,0.4s						
MCEL				AML	AML		
	comp=N,104µm,0.7s						
MCEL				AML	AML		
	comp=E,109µm,1.6s						
MCEL				AML	AML		
	comp=N,104µm,1.3s						
MCEL				AML	AML		
	comp=N,104µm,0.7s						
MCEL				AML	AML		
	comp=N,111µm,0.7s						
MCEL				AML	AML		
	comp=E,109µm,0.4s						
MCEL				AML	AML		
	comp=E,109µm,0.4s						
CDRU	**Civita di Ruta**	2.69	12	P	Pn	20 24 01.0	-0.4
CDRU				AML	AML		
	comp=N,45µm,0.6s						
CDRU				AML	AML		
	comp=E,64µm,0.5s						
CDRU				AML	AML		
	comp=E,64µm,0.5s						
CDRU				AML	AML		
	comp=N,43µm,0.3s						
MIGL	**Miglionico**	3.10	27	P	Pn	20 24 09.5	+2.6
MIGL				AML	AML		
	comp=E,380µm,1.1s						
MIGL				AML	AML		
	comp=N,329µm,1.2s						
MIGL				AML	AML		
	comp=E,380µm,0.9s						
MIGL				AML	AML		
	comp=N,290µm,0.6s						
MIGL				AML	AML		
	comp=E,380µm,1.1s						
ACER	**Acerenza**	3.11	19	P	Pn	20 24 09.1	+2.0
ACER				AML	AML		
	comp=E,137µm,0.6s						
ACER				AML	AML		
	comp=N,158µm,0.6s						
ACER				AML	AML		
	comp=E,198µm,0.7s						
ACER				AML	AML		
	comp=N,158µm,0.6s						
ACER				AML	AML		
	comp=N,220µm,0.6s						
ACER				AML	AML		
	comp=E,137µm,0.6s						
PALZ	**Palazzo San Ge**	3.27	19	P	Pn	20 24 10.5	+1.3
PALZ				AML	AML		
	comp=E,124µm,1.6s						
PALZ				AML	AML		
	comp=N,118µm,0.8s						
PALZ				AML	AML		
	comp=E,124µm,0.4s						
PALZ				AML	AML		
	comp=N,119µm,0.8s						
KEST	**Kesra**	4.70	245	Pn	Pn	20 24 29.0	0.0
	comp=N,1.4nm,0.3s,baz=68,slow=8.4,SNR=29						
KEST				Sn	Sn	20 25 23.1	-0.2
	comp=N,1.6nm,0.3s,baz=58,slow=20,SNR=5.6						
	comp=N,21nm,0.9s						
IDI	**Anoyia**	8.68	104	Pn	Pn	20 25 26.1	+2.5
	comp=N,3.7nm,1.1s,baz=260,slow=17,SNR=1.5						
IDI				Sn	Sn	20 26 56.1	-5.2
	comp=N,0.6nm,0.3s,baz=323,slow=15,SNR=1.6						
GERES	**GERESS Array B**	11.00	357	Pn	Pn	20 25 56.3	+1.0
	baz=172,slow=16,SNR=2.1						
	comp=N,0.3nm,0.3s						
ESDC	**Sonseca Array**	14.58	283	Pn	Pn	20 26 46.1	+1.8
	comp=N,0.2nm,0.6s,baz=94,slow=21,SNR=1.2						
AKASG	**Malin Array Be**	16.54	34	Pn	Pn	20 27 09.2	-0.5
	comp=N,0.1nm,0.3s,baz=232,slow=10,SNR=1.8						
EKA	**Eskdalemuir Ar**	21.20	331	P	P	20 28 02.6	-0.7
	comp=N,1.9nm,0.8s,baz=149,slow=9.8,SNR=4.3						
	comp=N,1.9nm,0.8s						
HFS	**Hagfors**	22.30	359	P	P	20 28 14.1	-1.0
	comp=N,1.4nm,0.6s,baz=171,slow=10,SNR=6.6						
	comp=N,1.4nm,0.6s						
NOA	**NORSAR Array B**	23.30	356	P	P	20 28 25.0	-0.6
	comp=N,0.3nm,0.7s,baz=163,slow=10,SNR=2.9						
	comp=N,0.3nm,0.7s						
FINES	**FINESS Array B**	24.68	13	P	P	20 28 38.4	-0.1
	comp=N,3.2nm,0.8s,baz=152,slow=8.4,SNR=12						
	comp=N,3.2nm,0.8s						
MKAR	**Makanchi Array**	49.44	57	P	P	20 32 07.5	-0.3
	comp=N,0.1nm,0.4s,baz=284,slow=7.3,SNR=1.5						
	comp=N,0.1nm,0.4s						
TEIG	**Tepich**	87.44	294	P	P	20 36 06.9	+1.2
	comp=N,0.3nm,0.4s,baz=135,slow=23,SNR=3.3						
	comp=N,0.3nm,0.4s						

*IDC **05** 20:23:43.9±2.6, 38°.14N×74°.14E, h147^{km}±23^{km}, mb3.6/7, mbtmp4.1/11, MS4.0/4, Error ellipse: s-maj=25.4km s-min=19.7km az=73.0*

*NEIC **05** 20:23:45.8±1.1, 38°.24N±0°.04×74°.0E±0°.1, h157^{km}±9^{km}, mb4.4/9, Error ellipse: s-maj=12.6km s-min=3.8km az=114.0*

*SOME **05** 20:23:45.0, 38°.95N×72°.78E, h15^{km}*

ISC 05 20:23:43.4±0.6**, 38°.08N**±0°.05×**74°.06E**±0°.07**, h152^{km}, n64,** σ**1^{s}73**/66**, mb4.0**/10**, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	**Batken**	3.21	309		Pn	20 24 34.6	+1.1
ARSB	**Arslanbob**	3.35	346		Pn	20 24 36.0	+0.6
SIMJ	**Simiganj**	4.01	280		Pn	20 24 43.6	-0.4
SRNI	**Srinagar**	4.02	171	*e*P	Pn	20 24 44.4	+0.4
SRNI				*e*S	Sn	20 25 30.6	-0.4
SRNI				IAML		20 25 43.8	
	comp=E,578nm,0.2s						
SRNI				IAML		20 25 45.6	
	comp=N,647nm,0.6s						
AML	**Almayashu**	4.06	356	P	Pn	20 24 45.8	+0.9
	SNR=92						
NIL	**Nilore**	4.46	189		Pn	20 24 54.1	+4.2
AAK	**Ala-Archa**	4.57	4	P	Pn	20 24 54.7	+3.4
	SNR=6.9						
AAK	**Ala-Archa**	4.57	4		Pn	20 24 51.4	+0.2
AAK	**Ala-Archa**	4.57	4	P	Pn	20 24 50.7	-0.5
	comp=N,4.7nm,0.3s,baz=176,slow=7.2,SNR=15						
AAK				S	Sn	20 25 43.9	-0.3
	comp=N,19nm,0.4s,baz=198,slow=15,SNR=4.4						
EKS2	**Erkin-Say**	4.58	357	P	Pn	20 24 52.7	+1.3
	SNR=31						
KBK	**Karagaybulak**	4.62	8	P	Pn	20 24 53.7	+1.7
	SNR=14						
BOOM	**Boomskoye usch**	4.64	17	Pn	Pn	20 24 53.2	+1.0
TARG	**Taragay, Kyrgy**	4.65	37		Pn	20 24 53.5	+0.9
MRKS	**Merke**	4.71	352	*e*P	Pn	20 24 54.0	+1.0
	comp=N,69nm,0.3s						
MRKS				*e*S	Sn	20 25 44.1	-3.2
	comp=N,437nm,0.3s						
CHMS	**Chumysh**	4.95	6	P	Pn	20 24 57.6	+1.5
	SNR=6.7						
TKM2	**Tokmak 2**	4.98	13	P	Pn	20 24 58.0	+1.3
	SNR=33						
WUS	**Wushi**	5.06	50		Pn	20 24 59.2	+1.5
KST	**Kastek**	5.17	16	*e*P	Pn	20 25 12.2	+13
	comp=N,2.8nm,0.3s						
KST				*e*S	Sn	20 26 15.2	+17
	comp=N,30nm,0.8s						
USP	**Ospenovka**	5.20	4	P	Pn	20 25 01.0	+1.6
	SNR=7.5						
IZV	**Izvestkoviy**	5.32	21	*e*P	Pn	20 25 17.5	+16
	comp=N,6.3nm,0.5s						
IZV				*e*S	Sn	20 26 23.7	+22
	comp=N,27nm,0.7s						
KBL	**Kabul**	5.37	230		Pn	20 25 04.6	+2.6
JMU	**Jammu**	5.39	172	*e*P	Pn	20 25 00.8	-1.2
JMU				*e*S	Sn	20 25 59.3	-4.2
JMU				IAML		20 26 07.9	
	comp=E,466nm,0.5s						
JMU				IAmL		20 26 08.1	
	comp=N,471nm,0.5s						
CHM	**Chimkent**	5.44	323	*e*P	Pn	20 25 01.6	-1.0
	comp=N,435nm,0.3s						
CHM				*e*S	Sn	20 25 56.9	-7.7
	comp=N,424nm,0.3s						
PRZ	**Przheval'sk**	5.51	36		Pn	20 25 05.7	+1.9
KK31	**Karatay Array**	5.70	333		Pn	20 25 06.1	0.0
KKAR	**Karatay Array**	5.70	333		Pn	20 25 06.0	0.0
KKAR	**Karatay Array**	5.70	333		Pn	20 25 06.1	0.0
BRLS	**Borolday**	5.90	328	*e*P	Pn	20 25 07.2	-1.6
	comp=N,9.5nm,0.1s						
BRLS				*e*S	Sn	20 26 06.1	-10
	comp=N,96nm,0.4s						
DHRM	**DHARAMSHALA**	6.09	162	*e*P	Pn	20 25 11.7	0.0
DHRM				*e*S	Sn	20 26 17.6	-3.0
DHRM				IAML		20 26 27.1	
	comp=E,304nm,0.3s						
DHRM				IAML		20 26 27.4	
	comp=N,219nm,0.2s						
BHK	**Bhakra**	6.92	163	*e*P	Pn	20 25 24.7	+2.3
BHK				*e*S	Sn	20 26 40.2	+0.1
BHK				IAML		20 26 44.5	
	comp=E,459nm,0.9s						
BHK				IAML		20 26 44.7	
	comp=N,376nm,0.6s						
KLP	**Kalpa**	7.38	151	*e*P	Pn	20 25 29.6	+0.7
KLP				*e*S	Sn	20 26 47.3	-4.3
KLP				IAML		20 26 56.1	
	comp=N,304nm,0.4s						
KLP				IAML		20 26 58.0	
	comp=E,398nm,0.6s						
DDI	**Dehra Dun**	8.41	156	*e*P	Pn	20 25 42.6	+0.2
DDI				*e*S	Sn	20 27 11.1	-4.9
DDI				IAML		20 27 17.8	
	comp=N,320nm,0.4s						
DDI				IAML		20 27 19.7	
	comp=E,309nm,0.4s						
PTH	**Pithoragarh**	9.92	147	*e*P	Pn	20 26 03.1	+0.6
PTH				*e*S	Sn	20 27 44.8	-7.8
PTH				IAML		20 27 52.5	
	comp=N,218nm,0.4s						
MAKZ	**Makanchi**	10.50	31	Pn	Pn	20 26 09.7	-0.2
MKAR	**Makanchi Array**	10.62	32	P	Pn	20 26 10.9	-0.5
	comp=N,0.3nm,0.6s,baz=200,slow=12,SNR=3.1						
KURBB	**Kurchatov Arra**	12.94	13	P	Pn	20 26 39.6	-2.0
	comp=N,1.2nm,0.6s,baz=202,slow=12,SNR=8.0						
EVN	**Everest**	14.69	130		Pn	20 27 05.1	+0.5
AB31	**Akbulak array**	15.11	322		Pn	20 27 06.1	-2.8
ABKAR	**Akbulak array**	15.11	322		Pn	20 27 06.5	-2.5
BVAR	**Borovoye Array**	15.17	351	P	Pn	20 27 08.2	-1.3
	comp=N,7.9nm,0.6s,baz=160,slow=9.7,SNR=28						
BRVK	**Borovoye**	15.21	351		Pn	20 27 08.2	-1.9
BRVK				IAmb	IAmb	20 27 14.5	
	comp=Z,12nm,0.7s						
ZAA0	**Zalesovo Array**	17.51	22		P	20 27 36.7	-0.2
ZALV	**Zalesovo Beam**	17.51	22		P	20 27 36.5	-0.4
ZALV	**Zalesovo Beam**	17.51	22	P	P	20 27 37.6	+0.7
	comp=Z,5.6nm,0.4s,baz=217,slow=11,SNR=32						
WSAR	**Wadi Sarin**	19.83	226	P	P	20 28 04.7	+2.3
	baz=73,slow=20,SNR=5.1						
KVAR	**Kislovodsk Arr**	24.29	294	LR	LR	20 40 36.2	
	comp=Z,156nm,21.1s,slow=42						
FIA1	**FINESS Array S**	37.59	324	P	P	20 30 43.5	+0.8
FINES	**FINESS Array B**	37.59	324	P	P	20 30 43.5	+0.7
	comp=Z,1.1nm,0.5s,baz=116,slow=9.7,SNR=15						
	comp=Z,1.1nm,0.5s						
KEV	**Kevo**	40.28	337	P	P	20 31 06.1	+1.0
ARCES	**ARCESS Array B**	40.66	336	P	P	20 31 08.9	+0.7
ARCES				IAmb	IAmb	20 31 44.5	
	comp=Z,13nm,1.4s						
ARCES	**ARCESS Array B**	40.66	336	P	P	20 31 09.1	+0.9
	comp=Z,1.5nm,0.5s,baz=107,slow=8.2,SNR=34						
	comp=Z,1.5nm,0.5s						
HFS	**Hagfors**	43.37	321	P	P	20 31 30.7	+0.5
	comp=Z,1.6nm,0.6s,baz=97,slow=12,SNR=12						
	comp=Z,1.6nm,0.6s						
NC303	**NORSAR Array S**	44.55	322	P	P	20 31 40.3	+0.6
NC303				IAmb	IAmb	20 32 13.3	
	comp=Z,16nm,1.5s						
NB2	**NORSAR Subarra**	44.62	322	P	P	20 31 40.7	+0.5
	comp=Z,0.4nm,0.5s,baz=91,slow=7.9						
NOA	**NORSAR Array B**	44.62	322	P	P	20 31 40.8	+0.5
	comp=Z,0.6nm,0.6s,baz=92,slow=7.7,SNR=4.7						
	comp=Z,0.6nm,0.6s						
JOW	**Kunigami**	46.52	87	LR	LR	20 54 19.3	
	comp=Z,433nm,18.2s,baz=210,slow=40						
SPITS	**Spitsbergen Ar**	46.53	346	P	P	20 31 56.5	+1.4
	comp=Z,1.2nm,0.5s,baz=97,slow=12,SNR=1.5						
	comp=Z,1.2nm,0.5s						
JCJ	**Chichijima**	57.29	79	LR	LR	20 58 45.0	
	comp=Z,149nm,19.6s,baz=146,slow=37						
D19K	**Kuna River**	66.89	18	P	P	20 34 19.1	+0.4
D19K				IAmb	IAmb	20 34 50.6	
	comp=Z,9.2nm,1.4s						
TORD	**Torodi Ar. Bea**	68.18	270	P	P	20 34 27.1	-0.5
H29M	**Whitestone**	73.07	13	P	P	20 34 57.5	+1.1
H29M				IAmb	IAmb	20 35 02.0	
	comp=Z,6.1nm,1.4s						
WRA	**Warramunga Arr**	80.80	124	P	P	20 35 41.2	+0.9
	comp=Z,1.3nm,1.0s,baz=317,slow=5.6,SNR=2.4						
	comp=Z,1.3nm,1.0s						
BBTS	**Babate**	81.57	282	LR	LR	21 18 14.6	
	comp=Z,56nm,18.8s,baz=162,slow=40						
STKA	**Stephens Creek**	93.80	128	P	P	20 36 43.9	+0.8
	comp=Z,2.9nm,1.1s,baz=312,slow=14,SNR=3.1						
	comp=Z,2.9nm,1.1s						

*BJI **05** 20:41:43.7, 5°.98N×124°.53E, h470^{km}, mB5.5/54, mb5.9/99*

*MAN **05** 20:41:47.8, 6°.44N×124°.27E, h473^{km}, mb6.0, ML5.0, MS5.5*

*NEIC **05** 20:41:48.9, 6°.50N×124°.17E, h480^{km}*

*NEIC **05** 20:41:48.9, 6°.50N×124°.37E, h480^{km}, Moment Tensor Solution. Duration: 2^{s}8 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.25; M$_{\theta\theta}$-0.27; M$_{\phi\phi}$0.52; M$_{r\theta}$-1.00; M$_{\theta\phi}$-0.10; M$_{\phi r}$-1.89; Fault plane solution: M$_0$2.18000×10^{17} NP1: ϕ$_s$136.42000°, δ10.56000°, λ-160.76000°. NP2: ϕ$_s$27.49000°, δ86.54000°, λ-80.02000°. Principal axes: T 2.1975, Plg41.0000°, Azm108.0000°; N -0.0260, Plg10.0000°, Azm207.0000°; P -2.1715, Plg48.0000°, Azm308.0000°;*

*DJA **05** 20:41:49.1±0.2, 6°N±2°×12°4E±°, h446^{km}±2^{km}, M5.3/74, mB5.7/61, mb5.7/74, MLv6.4/12, Mw(mB)5.3/61, MwMwp5.0/19, Mwp5.3/19*

*IPGP **05** 20:41:49.0, 6°.49N×124°.17E, h469^{km}, Mw5.6, Fault plane solution: NP1:ϕ$_s$145.00000°, δ16.00000°, λ-162.00000°. NP2:ϕ$_s$37.00000°, δ85.00000°, λ-75.00000°.*

*NEIC **05** 20:41:49.6±1.8, 6°.48N±0°.08×124°.17E±0°.08, h470^{km}±3^{km}, mb5.4/366, Mww5.5/34, Error ellipse: s-maj=12.3km s-min=11.2km az=69.0*

*GCMT **05** 20:41:49.6±0.3, 6°.51N±0°.03×124°.02E±0°.02, h466^{km}±1^{km}, MW5.5/111, Moment Tensor Solution. s111,c166; Duration: 1^{s}4 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.63±.03; M$_{\theta\theta}$-0.00±.05; M$_{\phi\phi}$0.63±.06; M$_{r\theta}$-1.35±.06; M$_{\theta\phi}$0.16±.05; M$_{\phi r}$-1.99±.05; Best double couple: M$_0$2.49200×10^{17} NP1:ϕ$_s$176.00000°, δ9.00000°, λ-127.00000°. NP2:ϕ$_s$33.00000°, δ83.00000°, λ-85.00000°. Principal axes: T 2.4720, Plg38.0000°, Azm119.0000°; N 0.0400, Plg5.0000°, Azm213.0000°; P -2.5120, Plg52.0000°, Azm309.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

*IDC **05** 20:41:49.9±0.4, 6°.47N×124°.17E, h475^{km}±3^{km}, mb5.3/40, mbtmp6.1/43 Error ellipse: s-maj=6.8km s-min=4.4km az=78.0*

*MOS **05** 20:41:49.2±0.7, 6°.52N×124°.20E, h483^{km}, mb5.8/68, Error ellipse: s-maj=7.0km s-min=3.9km az=115.9*

ISC 05 20:41:49.1±0.2**, 6°.48N**±0°.02×**124°.21E**±0°.03**, h472^{km}**±1^{km}**, h473^{km}:pP-P, n1605,** σ**1^{s}50**/1797**, mb5.5**/368**, 56C-142D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	1.48	67	P	P	20 42 48.4	-0.9
DAV	**Davao City (W)**	1.48	67	P	P	20 42 48.8	-0.4
	3µm,0.5s,baz=83,slow=1.0,SNR=114						
DAV				S	S	20 43 37.1	-0.9
	7µm,0.7s,baz=85,slow=23,SNR=6.2						
DAV	**Davao City (W)**	1.48	67	P	P	20 42 48.1	-1.1
DAV				S	S	20 43 36.2	-1.7
DAV	**Davao City (W)**	1.48	67	P	P	20 42 48.8	-0.4
DAV	**Davao City (W)**	1.48	67	S	S	20 43 35.1	-2.8
SGSI	**Sangihe**	3.07	155	P	P	20 42 55.7	-2.8
SGSI				S	S	20 43 51.1	-3.6
KMSI	**Cibinong**	5.87	182	P	P	20 43 23.3	+0.2
KMSI				S	S	20 44 38.1	-1.7
TOLI2	**Tolitoli**	6.34	213		P	20 43 27.3	-0.5
TOLI2	**Tolitoli**	6.34	213	P	P	20 43 28.0	+0.2
MRSI	**Marisa**	6.38	201	P	P	20 43 27.9	-0.3
	8.4nm23µm3µm,0.6s						
MRSI				S	S	20 44 48.1	-1.0
	8.4nm23µm3µm,0.6s						
TNTI	**Ternate**	6.49	151		P	20 43 28.0	-1.3
TNTI	**Ternate**	6.49	151	P	P	20 43 28.4	-0.9
MPSI	**Mapaga**	7.47	215	P	P	20 43 38.8	-0.6
	1.3nm316nm,0.7s						
MPSI				S	S	20 45 09.2	-0.5
	1.3nm316nm,0.7s						
LUWI	**Luwuk**	7.61	191		P	20 43 40.1	-0.8
LUWI	**Luwuk**	7.61	191	P	P	20 43 41.2	+0.3
LUWI	**Luwuk**	7.61	191	S	S	20 45 11.3	-1.2
LUWI	**Luwuk**	7.61	191	P	P	20 43 41.1	+0.2
	15nm15µm1µm,1.0s						
LUWI				S	S	20 45 10.8	-1.7
	15nm15µm1µm,1.0s						
APSI	**Ampana**	7.78	199	P	P	20 43 43.1	+0.5
	9.0nm10µm1µm,0.7s						
KKM	**Kota Kinabalu**	7.96	267		P	20 43 44.9	+0.3
KKM	**Kota Kinabalu**	7.96	267	P	P	20 43 45.2	+0.6
TGY	**Tagaytay City**	8.23	337	P	P	20 43 48.3	+0.9
	3µm,0.8s,baz=180,slow=3.1,SNR=45						
TGY				S	S	20 45 22.4	-2.1
	516nm,0.6s,baz=19,slow=15,SNR=1.1						
PCI	**Palu**	8.54	211	P	P	20 43 50.5	-0.2
	6µm640nm,0.9s						
PCI				S	S	20 45 29.7	-0.8
	6µm640nm,0.9s						
SANI	**Sanana**	8.66	168	P	P	20 43 49.5	-2.5
SANI	**Sanana**	8.66	168	P	P	20 43 49.2	-2.8
	33µm2µm,0.6s						
SMKI	**Samarinda**	9.81	226	P	P	20 44 06.7	+2.4
	9µm803nm,1.2s						
NLAI	**Namlea**	10.08	163	P	P	20 44 07.8	+0.6
	12µm1µm,0.7s						
NLAI				S	S	20 46 01.0	+0.2
	12µm1µm,0.7s						
SWI	**Sorong**	10.14	136	P	P	20 44 08.3	+0.4
TTSI	**Tana Toraja**	10.43	205	P	P	20 44 11.6	+0.6
	7µm735nm,0.7s						
BKB	**Balikpapan**	10.60	224		P	20 44 13.9	+1.0
BKB	**Balikpapan**	10.60	224	P	P	20 44 13.5	+0.6

BKB	Balikpapan	10.60	224	P	P	20 44 14.1	+1.2
	7µm535nm,1.1s						
MSAI	Masohi	10.84	154	P	P	20 44 17.1	+1.6
	11µm886nm,0.7s						
AAI	Ambon	10.86	158	P	P	20 44 15.8	+0.2
	9µm664nm,0.5s						
SPSI	Sidrap Palu	11.28	203	P	P	20 44 21.9	+1.7
	14µm2µm,0.8s						
BNSI	Bone	11.56	201	P	P	20 44 25.9	+2.7
	16µm2µm,0.8s						
BBSI	Bau Bau	12.00	188	P	P	20 44 29.1	+1.1
	240nm,1.1s						
KAPI	Kappang	12.26	201		P	20 44 31.3	+0.7
KAPI	Kappang	12.26	201	P	P	20 44 32.3	+1.6
	658nm,1.1s,baz=19,slow=8.9,SNR=67						
KAPI				S	S	20 46 44.8	+0.9
	115nm,1.0s,baz=170,slow=23,SNR=13						
KAPI				ScP	ScP	20 52 19.7	-0.3
	17nm,0.6s,baz=184,slow=2.2,SNR=10						
KAPI	Kappang	12.26	201	P	P	20 44 32.2	+1.5
KAPI				S	S	20 46 46.9	+3.0
KAPI	Kappang	12.26	201	P	P	20 44 31.9	+1.2
KAPI	Kappang	12.26	201	c iP	P	20 44 31.4	+0.7
KAPI				pmax	pmax		
	comp=Z,288nm,0.7s						
FAKI	Fak Fak	12.32	139		P	20 44 32.0	+0.7
FAKI	Fak Fak	12.32	139	P	P	20 44 31.8	+0.5
FAKI	Fak Fak	12.32	139	P	P	20 44 31.6	+0.3
	comp=Z,3µmcomp=Z,15µmcomp=Z,1µm,1.0s						
BNDI	Bandanaira	12.32	152	P	P	20 44 32.6	+1.2
BNDI	Bandanaira	12.32	152	P	P	20 44 35.8	+4.4
RKPI	Ransiki, Papua	12.73	128	P	P	20 44 36.7	+0.9
	comp=Z,3µmcomp=Z,995nm,1.5s						
BSSI	Bau Bau, Buton	13.08	197	P	P	20 44 40.1	+0.6
KMPI	Kaimana, Papua	13.84	136	P	P	20 44 47.5	-0.1
	comp=Z,3µmcomp=Z,17µmcomp=Z,2µm,1.3s						
BAKI	Biak	14.11	122	P	P	20 44 51.7	+1.1
STKI	Sintang	14.21	244	P	P	20 44 52.2	+0.6
	comp=Z,237nm,1.0s						
SRPI	Serui, Papua	14.60	124	P	P	20 44 56.3	+0.6
	comp=Z,2µmcomp=Z,8µmcomp=Z,898nm,1.2s						
KSM	Kuching	14.73	251		P	20 44 57.0	-0.1
MMRI	Maumere	15.15	187		P	20 45 01.9	+0.4
MMRI	Maumere	15.15	187	P	P	20 45 01.7	+0.2
MMRI	Maumere	15.15	187	P	P	20 45 02.0	+0.5
	comp=Z,7µmcomp=Z,892nm,0.7s						
EDFI	Ende, Flores	15.34	189	P	P	20 45 04.2	+0.6
	comp=Z,4µmcomp=Z,600nm,0.9s						
SAUI	Saumlaki	16.02	154	P	P	20 45 09.1	-1.5
SAUI	Saumlaki	16.02	154	P	P	20 45 11.1	+0.4
	comp=Z,1µm,1.1s						
SOEI	Soe	16.13	180		P	20 45 11.1	-0.9
SOEI	Soe	16.13	180	P	P	20 45 12.9	+0.9
	comp=Z,6µmcomp=Z,558nm,0.8s						
DLV	Lat	16.43	290		P	20 45 15.5	+0.1
PLAI	Plampang	16.50	203	P	P	20 45 16.7	+0.8
	comp=Z,7µmcomp=Z,795nm,0.8s						
PLAI				S	S	20 48 08.7	+2.3
	comp=Z,7µmcomp=Z,795nm,0.8s						
WSI	Waingapu	16.51	194	P	P	20 45 16.2	+0.3
	comp=Z,421nm,0.7s						
TWGBT	Beinan	16.52	350	P	P	20 45 14.2	-1.7
TWG	Pinlang	16.52	350	P	P	20 45 13.5	-2.5
TWG					S	20 48 01.2	-5.3
BATI	Baumata	16.59	182	P	P	20 45 16.6	-0.2
SMPI	Sarmi	16.75	120	P	P	20 45 18.7	+0.3
	comp=Z,5µmcomp=Z,13µmcomp=Z,1µm,1.1s						
KMMI	Kalianget	16.89	217	P	P	20 45 19.2	-0.6
	comp=Z,4µmcomp=Z,440nm,0.9s						
SRBI	Singaraja	17.03	212	P	P	20 45 21.8	+0.5
	comp=Z,3µmcomp=Z,423nm,0.9s						
YULB	Yu-li	17.05	351	P	P	20 45 18.1	-3.4
YULB	Yu-li	17.05	351	P	P	20 45 19.1	-2.3
TPUB	Ta-pu	17.07	349		P	20 45 20.3	-1.4
SSLB	Suanglung	17.49	350		P	20 45 23.1	-2.8
DNP	Denpasar	17.53	211	P	P	20 45 27.4	+1.0
	comp=Z,2µm,1.0s						
GRJI	Gresik	17.72	222	P	P	20 45 29.1	+0.8
NACB	Ninganchiao	17.77	352	P	P	20 45 26.1	-2.6
NACB	Ninganchiao	17.77	352	P	P	20 45 26.7	-2.0
YOJ	Yonaguni jima	17.91	356		P	20 45 29.5	-0.6
YOJ	Yonaguni jima	17.91	356	P	P	20 45 29.5	-0.6
JAGI	Jajag, Banyuwa	17.92	214		P	20 45 29.8	-0.5
JAGI	Jajag, Banyuwa	17.92	214	P	P	20 45 31.5	+1.2
	comp=Z,5µmcomp=Z,446nm,0.9s						
GMJI	Gumukmas	18.17	216	P	P	20 45 33.8	+1.2
	comp=Z,182nm,1.0s						
YHNB	Yeheng	18.29	352	P	P	20 45 32.8	-0.9
YHNB	Yeheng	18.29	352	S	S	20 48 38.5	+1.3
GENI	Genyem	18.31	119	P	P	20 45 35.0	+1.0
TATO	Taipei	18.57	352	P	P	20 45 34.4	-1.9
TATO	Taipei	18.57	352	P	P	20 45 35.3	-1.0
MCO	Taipa Grande	18.64	328	P	P	20 45 38.0	+1.0
NGJI	Ngawi	18.73	223	P	P	20 45 40.7	+2.8
QIZ	Qiongzhong	18.73	313	P	P	20 45 38.6	+0.7
QIZ				sP	sP	20 47 39.8	-1.3
QIZ				S	S	20 48 43.0	-1.5
QIZ				pmax	pmax		
	comp=Z,860nm,1.1s						
QIZ	Qiongzhong	18.73	313	P	P	20 45 38.1	+0.2
JAY	Jayapura	18.74	118	P	P	20 45 38.6	+0.6
	comp=Z,700nm,0.7s,baz=272,slow=5.0,SNR=328						
JAY				S	S	20 48 46.7	+1.9
	comp=Z,13nm,1.0s,baz=196,slow=22,SNR=1.1						
JAY				ScP	ScP	20 52 32.0	-0.3
	comp=Z,48nm,0.8s,baz=272,slow=4.4,SNR=14						
JAY	Jayapura	18.74	118	P	P	20 45 39.2	+1.2
	comp=Z,12µmcomp=Z,1µm,1.1s						
TPI	Tanjungpandan	18.91	241	P	P	20 45 40.8	+1.3
	comp=Z,5µmcomp=Z,543nm,1.0s						
QZH	Quanzhou	19.13	344	⇓iP	P	20 45 42.2	+0.8
QZH				S	S	20 48 50.0	-0.7
QZH				pmax	pmax		
	comp=Z,3µm,2.5s						
SMRI	Semarang	19.22	226		P	20 45 42.0	-0.4
WOJI	Wonogiri, Jawa	19.44	223	P	P	20 45 46.1	+1.8
	comp=Z,388nm,1.2s						
GZH	Guangzhou	19.55	329	P	P	20 45 48.9	+3.7
GZH				sP	sP	20 47 54.8	+5.6
GZH				S	S	20 49 02.9	+5.4
GZH				pmax	pmax		
	comp=Z,2µm,0.8s						
UGM	Wanagama	19.77	224	P	P	20 45 49.4	+2.0
YOGI	Yogyakarta	19.86	225	P	P	20 45 49.4	+1.2
DRS	Darwin Rock St	19.93	160	P	P	20 45 49.0	+0.2
PPBI	Pangkal Pinang	19.98	245	P	P	20 45 50.5	+1.2
UBPT	Khong Chiam	20.36	297	P	P	20 45 53.2	+0.5
JMZ	Minamidaito 2	20.36	18		P	20 45 53.2	+0.6
JMZ	Minamidaito 2	20.36	18	P	P	20 45 53.7	+1.1
MTN	Manton Dam	20.40	160		P	20 45 52.6	-0.4
MTN	Manton Dam	20.40	160	P	P	20 45 52.3	-0.7
	comp=Z,716nm,0.9s						
MTN	Manton Dam	20.40	160	P	P	20 45 52.7	-0.4
JCJI	Jatiwangi	20.47	231	P	P	20 45 57.3	+3.6
	comp=Z,4µmcomp=Z,351nm,1.1s						
JOW	Kunigami	20.61	10	P	P	20 45 56.0	+1.2
	comp=Z,191nm,0.4s,baz=154,slow=11,SNR=208						
JOW				S	S	20 49 10.5	-4.1
	comp=Z,17nm,0.8s,baz=219,slow=9.2,SNR=4.1						
JOW				ScP	ScP	20 52 35.9	-0.6
	comp=Z,40nm,0.7s,baz=252,slow=4.7,SNR=14						
	comp=Z,191nm,0.4s						
JOW	Kunigami	20.61	10	P	P	20 45 55.8	+1.0
KDU	Kakadu	20.74	157	P	P	20 45 55.4	-0.8
	comp=Z,1µm,0.7s						
KDU	Kakadu	20.74	157	P	P	20 45 55.9	-0.3
LEM	Lembang	21.18	232	P	P	20 46 01.6	+1.2
	comp=Z,234nm,0.9s,baz=45,slow=9.0,SNR=46						
LEM				S	S	20 49 24.5	0.0
	comp=Z,12nm,0.6s,baz=149,slow=23,SNR=0.9						
LEM				ScP	ScP	20 52 37.5	-0.8
	comp=Z,54nm,1.0s,baz=147,slow=11,SNR=4.6						
	comp=Z,234nm,0.9s						
LEM	Lembang	21.18	232	P	P	20 46 01.5	+1.1
	comp=Z,242nm,0.9s						
GUMO	Guam	21.52	69	P	P	20 46 03.6	+0.3
	comp=Z,416nm,0.7s,baz=218,slow=4.9,SNR=20						
	comp=Z,416nm,0.7s						
PMBI	Palembang	21.54	245	P	P	20 46 03.4	0.0
PMBI	Palembang	21.54	245	P	P	20 46 06.2	+2.7
PMBI	Palembang	21.54	245	P	P	20 46 06.2	+2.7
	comp=Z,10µmcomp=Z,995nm,0.9s						
BBJI	Bungbulang	21.56	230	P	P	20 46 03.2	-0.5
CNJI	Cibinong	21.86	231	P	P	20 46 08.3	+1.9
KNRA	Kununurra	22.47	168		P	20 46 11.6	-0.2
KNRA	Kununurra	22.47	168	P	P	20 46 11.6	-0.2
	comp=Z,815nm,0.9s						
CGJI	Cibinong	22.60	235	P	P	20 46 15.0	+2.0
	comp=Z,2µmcomp=Z,233nm,0.8s						
MDSI	Maura Dua	22.77	242	P	P	20 46 15.5	+0.9
	comp=Z,2µmcomp=Z,189nm,0.9s						
LWLI	Liwa	23.13	241	P	P	20 46 19.6	+1.6
	comp=Z,6µmcomp=Z,626nm,1.1s						
KULM	Kulim	23.46	268		P	20 46 21.1	+0.3
KULM	Kulim	23.46	268	P	P	20 46 21.2	+0.3
MNAI	Manna	23.79	244		P	20 46 22.6	-1.1
MNAI	Manna	23.79	244	P	P	20 46 24.0	+0.2
MNAI	Manna	23.79	244	P	P	20 46 25.2	+1.4
	comp=Z,6µmcomp=Z,612nm,0.9s						
KSI	Kapahiang	23.81	246	P	P	20 46 25.3	+1.3
	comp=Z,3µmcomp=Z,312nm,1.1s						
BKNI	Bangkinang	23.91	256	P	P	20 46 25.1	+0.3
BKNI	Bangkinang	23.91	256	P	P	20 46 26.7	+1.9
	comp=Z,4µmcomp=Z,535nm,0.9s						
CNSH	ChangSha	24.08	335	P	P	20 46 27.3	+1.2
CNSH				S	S	20 50 17.1	+7.5
CNSH				pmax	pmax		
	comp=Z,110nm,0.9s						
FITZ	Fitzroy Crossi	24.46	177	P	P	20 46 29.9	+0.2
	comp=Z,176nm,0.5s,baz=7.8,slow=8.4,SNR=544						
FITZ				ScP	ScP	20 52 46.6	-0.1
	comp=Z,24nm,0.6s,baz=353,slow=5.1,SNR=7.1						
	comp=Z,176nm,0.5s						
SRIT	Nakonsritamara	24.48	276	P	P	20 46 31.4	+1.5
SLVN	Son La	24.57	309	P	P	20 46 31.3	+0.6
SLVN	Son La	24.57	309	P	P	20 46 32.1	+1.4
MANU	Manus Island	24.62	109		P	20 46 31.6	+0.4
SSE	Sheshan	24.65	354	P	P	20 46 31.5	+0.4
SSE				S	S	20 50 20.0	+1.6
SSE				pmax	pmax		
	comp=Z,50nm,1.1s						
SSE				pmax	pmax		
	comp=Z,490nm,3.5s						
PPI	Padang Panjang	24.74	255	P	P	20 46 33.7	+1.5
	comp=Z,7µmcomp=Z,875nm,0.8s						
MNSI	Mandailing Nat	25.21	258	P	P	20 46 37.3	+0.9
	comp=Z,2µmcomp=Z,266nm,0.9s						
PSI	Prapat	25.46	263	ScP	ScP	20 52 49.4	-0.5
	comp=Z,68nm,0.8s,baz=151,slow=2.2,SNR=30						
PSI				ScS	ScS	20 56 38.3	-1.9
	comp=Z,11nm,0.8s,baz=170,slow=21,SNR=24						
PSI	Prapat	25.46	263	P	P	20 46 39.1	+0.4
RPSI	Rantau Prapat	25.48	263		ScP	20 52 49.4	-0.4
WHN	Wuhan	25.66	340	⇓P	P	20 46 42.2	+2.1
WHN				sP	sP	20 48 57.2	+1.4
WHN				S	S	20 50 38.6	+4.2
WHN				ScP	ScP	20 52 49.6	-0.4
WHN				ScS	ScS	20 56 40.3	+0.2
WHN				pmax	pmax		
	comp=Z,4µm,1.3s						
TSI	Tuntungan	25.71	265	P	P	20 46 43.0	+2.2
	comp=Z,7µmcomp=Z,739nm,0.9s						
NJ2	Nanjing	25.93	350	⇓iP	P	20 46 44.1	+1.7
NJ2				sP	sP	20 49 00.2	+1.9
NJ2				S	S	20 50 40.6	+2.1
NJ2				ScP	ScP	20 52 51.8	+1.1
NJ2				ScS	ScS	20 56 42.5	+1.3
NJ2				pmax	pmax		
	comp=Z,340nm,0.7s						
GYA	Guiyang	25.96	322	⇓P	P	20 46 44.7	+1.7
GYA				sP	sP	20 48 56.4	-2.5
GYA				PcP	PcP	20 49 57.7	+1.2
GYA				S	S	20 50 41.5	+2.0
GYA				ScP	ScP	20 52 51.3	+0.2
GYA				ScS	ScS	20 56 40.1	-1.8
GYA				pmax	pmax		
	comp=Z,140nm,0.7s						
GYA				pmax	pmax		
	comp=Z,700nm,5.4s						
JCJ	Chichijima	26.69	38	P	P	20 46 49.0	-0.3
JCJ	Chichijima	26.69	38	P	P	20 46 49.4	+0.1
GSI	Gunungsitoli	27.05	260	P	P	20 46 52.0	-0.7
GSI	Gunungsitoli	27.05	260	P	P	20 46 53.9	+1.2
LHMI	Lhok Sumawe	27.14	269	P	P	20 46 54.9	+1.4
LHMI	Lhok Sumawe	27.14	269	P	P	20 46 55.6	+2.1
JNU	Nakatsue	27.22	12	ScP	ScP	20 52 55.3	+0.6
	comp=Z,15nm,0.9s,baz=119,slow=5.2,SNR=3.8						
JNU				ScS	ScS	20 56 47.5	+0.5
	comp=Z,5.5nm,1.1s,baz=54,slow=23,SNR=10						
JNU	Nakatsue	27.22	12	P	P	20 46 53.7	-0.2
CM31	Chiang Mai Arr	27.34	298	P	P	20 46 57.0	+1.8
	SNR=120						
CMAR	Chiang Mai Arr	27.34	298	P	P	20 46 55.8	+0.6
CMAR	Chiang Mai Arr	27.34	298	P	P	20 46 56.6	+1.5
	comp=Z,159nm,0.7s,baz=112,slow=7.0,SNR=908						
CMAR				PcP	PcP	20 50 00.8	+1.1
	comp=Z,28nm,0.8s,baz=153,slow=1.0,SNR=10.0						
CMAR				ScP	ScP	20 52 54.6	-0.7
	comp=Z,23nm,0.9s,baz=154,slow=2.9,SNR=20						
CMAR				PKiKP	PKiKP	20 57 36.4	0.0
	comp=Z,0.7nm,0.5s,baz=251,slow=2.0,SNR=4.7						
	comp=Z,159nm,0.7s						
ENH	Enshi	27.41	331	P	P	20 46 56.7	+1.0
CHTO	Chiang Mai	27.48	299		P	20 46 57.3	+1.0
CHTO	Chiang Mai	27.48	299	P	P	20 46 57.5	+1.1
CHTO	Chiang Mai	27.48	299	P	P	20 46 57.4	+1.0
CHTO	Chiang Mai	27.48	299	P	P	20 46 57.3	+1.0
KMI	Kunming	27.67	314	⇓P	P	20 47 00.2	+2.0
KMI				sP	sP	20 49 15.6	+1.6
KMI				PcP	PcP	20 50 01.9	+1.1
KMI				S	S	20 51 17.4	+11
KMI				ScP	ScP	20 52 56.6	+0.1
KMI				ScS	ScS	20 56 50.7	+0.9
KMI				pmax	pmax		
	comp=Z,240nm,1.1s						
KMI				pmax	pmax		
	comp=Z,830nm,4.2s						
COEN	Coen	27.69	137		P	20 46 57.3	-1.0
COEN	Coen	27.69	137	P	P	20 46 57.4	-0.8
	comp=Z,408nm,0.8s						
COEN	Coen	27.69	137	P	P	20 46 57.3	-1.0
PMG	Port Moresby	27.79	124		P	20 46 58.7	-0.5
PMG	Port Moresby	27.79	124	P	P	20 46 58.8	-0.3
PMG	Port Moresby	27.79	124	P	P	20 46 58.7	-0.5
PMG	Port Moresby	27.79	124	c iP	P	20 46 58.6	-0.5
PMG				pmax	pmax		
	comp=Z,477nm,1.0s						
MBWA	Marble Bar	27.82	189		P	20 46 58.8	-0.4
MBWA	Marble Bar	27.82	189	P	P	20 46 58.6	-0.7
	comp=Z,229nm,0.8s						
MBWA	Marble Bar	27.82	189	P	P	20 46 59.0	-0.3
MBWA	Marble Bar	27.82	189	P	P	20 46 58.6	-0.7
WRAB	Tennant Creek	28.08	159	P	P	20 47 00.9	-0.7
WRAB	Tennant Creek	28.08	159	c iP	P	20 47 01.0	-0.7
WRAB				pmax	pmax		
	comp=Z,287nm,1.0s						
WRA	Warramunga Arr	28.09	159		P	20 47 01.1	-0.5
WRA	Warramunga Arr	28.09	159	P	P	20 47 01.5	-0.2
	comp=Z,254nm,0.6s,baz=342,slow=9.3,SNR=325						
WRA				pP	pP	20 48 22.7	+0.5
	comp=Z,106nm,0.9s,baz=338,slow=10.0,SNR=6.5						
WRA				S	S	20 51 07.6	-5.1
	comp=Z,36nm,1.1s,baz=328,slow=17,SNR=7.9						
WRA				ScP	ScP	20 52 57.2	-0.3
	comp=Z,34nm,0.7s,baz=343,slow=3.3,SNR=13						
WRA				ScS	ScS	20 56 48.1	-3.2
	comp=Z,3.8nm,1.1s,baz=336,slow=7.5,SNR=4.8						
WRA				P3KPbc		21 19 07.3	
	comp=Z,4.9nm,0.8s,baz=157,slow=3.8,SNR=18						
	comp=Z,254nm,0.6s						
WRA	Warramunga Arr	28.09	159	i P	P	20 46 58.0	-3.7
WRA				pmax	pmax		
	comp=Z,309nm,0.6s						
WR8	Warramunga Arr	28.16	159		P	20 47 01.5	-0.8
PSA00	Pilbara Seismi	28.21	189	P	P	20 47 00.0	-2.6
PSA00	Pilbara Seismi	28.21	189	P	P	20 47 02.2	-0.5
	comp=Z,274nm,1.0s						
PSA00	Pilbara Seismi	28.21	189	P	P	20 47 02.3	-0.4
JTU	Tsushima	28.31	9	P	P	20 47 03.8	+0.4
JMN	Monobe	28.55	17	P	P	20 47 06.4	+0.8
PZH	PanZhiHua	29.23	315	P	P	20 47 12.5	+0.7
PZH				PcP	PcP	20 50 05.0	+0.4
PZH				S	S	20 51 30.8	+0.2
PZH				ScP	ScP	20 53 02.5	+1.3
PZH				PcS	PcS	20 53 47.2	-1.2
PZH				ScS	ScS	20 56 54.5	-2.3
PZH				pmax	pmax		
	comp=Z,150nm,1.1s						
PZH				pmax	pmax		
	comp=Z,760nm,5.5s						
RABL	Rabaul	29.86	110	P	P	20 47 18.1	+0.9
TJN	Taejon	29.89	5	P	P	20 47 17.8	+0.6
TJN	Taejon	29.89	5	d iP	P	20 47 17.1	-0.1
LYN	LuoYang	29.96	340	⇓iP	P	20 47 19.2	+1.4
LYN				pP	pP	20 48 41.1	+1.3
LYN				sP	sP	20 49 40.8	+6.0
LYN				PcP	PcP	20 50 08.0	+1.9
LYN				S	S	20 51 44.3	+2.9
LYN				ScP	ScP	20 53 04.4	+1.1
LYN				PcS	PcS	20 53 50.6	+0.4
LYN				sS	SS	20 54 22.2	-7.4
LYN				SS	SS	20 54 26.7	-2.9
LYN				ScS	ScS	20 57 01.0	+1.2
LYN				pmax	pmax		
	comp=Z,2µm,0.9s						
LYN				pmax	pmax		
	comp=Z,2µm,3.5s						
JHJ2	Mitsune	30.21	27	P	P	20 47 19.4	-0.6
TIA	Tai'an	30.29	349	P	P	20 47 21.3	+0.6
TIA				pP	pP	20 48 40.8	-2.0
TIA				PP	PP	20 48 45.2	-4.8
TIA				sP	sP	20 49 35.5	-2.4
TIA				S	S	20 51 46.8	+0.3
TIA				PcS	PcS	20 53 50.4	-0.9
TIA				pmax	pmax		
	comp=Z,470nm,0.8s						
TIA				pmax	pmax		
	comp=Z,920nm,3.5s						
GIRL	Giralia	30.55	198	P	P	20 47 23.9	+0.8
	comp=Z,325nm,0.8s						
GIRL	Giralia	30.55	198	P	P	20 47 24.2	+1.1
TNCH	TengChong	30.73	310	⇓P	P	20 47 25.8	+0.9
TNCH				PP	PP	20 48 49.7	-5.0
TNCH				PcP	PcP	20 50 10.2	+1.6
TNCH				S	S	20 51 57.6	+3.6
TNCH				ScP	ScP	20 53 06.3	0.0
TNCH				sS	sS	20 54 23.0	-4.2
TNCH				SS	SS	20 54 35.4	-9.1
TNCH				pmax	pmax		
	comp=Z,250nm,1.5s						
QIS	Mount Isa	30.84	151	P	P	20 47 25.4	-0.2
	comp=Z,434nm,1.1s						
QIS	Mount Isa	30.84	151	P	P	20 47 25.6	-0.1
XAN	Xi'an	30.86	335	⇓P	P	20 47 26.4	+0.7
XAN				S	S	20 51 54.7	-0.7
XAN				SS	SS	20 54 35.8	-11
XAN				pmax	pmax		
	comp=Z,2µm,0.6s						
XAN				pmax	pmax		
	comp=Z,3µm,4.2s						
INCN	Inchon	30.94	4		P	20 47 26.3	0.0
INCN				IAmb	IAmb	20 47 28.7	
	comp=Z,119nm,0.7s						
INCN	Inchon	30.94	4	P	P	20 47 26.7	+0.5
INCN	Inchon	30.94	4	P	P	20 47 26.3	0.0
INCN				pmax	pmax		
	comp=Z,119nm,0.7s						
CD2	Chengdu	30.95	324	⇓P	P	20 47 27.4	+0.8
CD2				pP	pP	20 48 49.0	+0.4
CD2				sP	sP	20 49 42.0	-1.4
CD2				PcP	PcP	20 50 09.6	+0.6
CD2				S	S	20 51 57.4	+0.4
CD2				ScP	ScP	20 53 07.3	+0.6
CD2				sS	sS	20 54 34.7	+4.5
CD2				pmax	pmax		
	comp=Z,230nm,0.6s						
CD2				pmax	pmax		
	comp=Z,1µm,4.5s						
KSAR	Wonju Array Be	31.00	6		P	20 47 27.5	+0.7
KSAR	Wonju Array Be	31.00	6	P	P	20 47 27.5	+0.7
KSRS	Korea Array	31.01	6	P	P	20 47 27.9	+1.0
	comp=Z,106nm,0.7s,baz=181,slow=10,SNR=375						
KSRS				PcP	PcP	20 50 09.9	+1.1
	comp=Z,5.8nm,0.6s,baz=184,slow=2.6,SNR=4.6						
KSRS				S	S	20 51 59.6	+2.1
	comp=Z,4.2nm,0.9s,baz=183,slow=17,SNR=6.0						
KSRS				ScP	ScP	20 53 07.0	+0.4
	comp=Z,14nm,0.8s,baz=188,slow=3.3,SNR=17						
	comp=Z,106nm,0.7s						
KS19	Wonju Array Si	31.06	6	IAmb	IAmb	20 47 29.1	
	comp=Z,160nm,0.9s						
JGF	Kuroka	31.40	21	IAmb	IAmb	20 47 33.0	
	comp=Z,124nm,0.9s						
JGF	Kuroka	31.40	21	P	P	20 47 30.2	-0.1
AS31	Alice Springs	31.43	163	P	P	20 47 30.5	-0.2
	comp=Z,0.0nmcomp=Z,337nm,0.7s						
ASAR	Alice Springs	31.43	163	P	P	20 47 30.9	+0.2
ASAR	Alice Springs	31.43	163	P	P	20 47 31.1	+0.4
	comp=Z,615nm,0.5s,baz=340,slow=7.3,SNR=8198						
ASAR				pP	pP	20 48 52.9	+0.4
	comp=Z,58nm,1.0s,baz=345,slow=9.7,SNR=2.8						
ASAR				PP	PP	20 49 04.3	+2.6
	comp=Z,39nm,0.9s,baz=339,slow=11,SNR=4.1						
ASAR				S	S	20 52 03.4	-1.0
	comp=Z,58nm,1.0s,baz=348,slow=12,SNR=18						
ASAR				ScP	ScP	20 53 07.8	-0.6
	comp=Z,17nm,0.4s,baz=341,slow=3.3,SNR=12						
ASAR				P3KPbc		21 18 53.1	
	comp=Z,2.0nm,0.7s,baz=157,slow=3.9,SNR=18						
	comp=Z,615nm,0.5s						
AS01	Alice Springs	31.44	163	P	P	20 47 31.1	+0.3
MTSU	Mount Surprise	31.50	141	P	P	20 47 31.2	-0.2
	comp=Z,69nm,0.7s						
MTSU	Mount Surprise	31.50	141	P	P	20 47 31.7	+0.3
HNS	HongShan	31.97	346	⇓P	P	20 47 36.2	+1.1
HNS				pP	pP	20 49 02.2	+4.3
HNS				PcP	PcP	20 50 13.1	+1.6
HNS				S	S	20 52 12.8	+0.6
HNS				ScP	ScP	20 53 10.4	+0.5
HNS				sS	sS	20 54 46.8	+0.9
HNS				ScS	ScS	20 57 11.0	+1.3
HNS				pmax	pmax		
	comp=Z,1µm,1.0s						
DL2	Dalian	32.36	356	P	P	20 47 39.2	+0.8
DL2				sP	sP	20 49 53.0	-3.0
DL2				S	S	20 52 18.3	+0.1
DL2				ScP	ScP	20 53 08.8	-2.5
DL2				PcS	PcS	20 53 52.7	-5.5
DL2				ScS	ScS	20 57 12.0	+0.3
DL2				pmax	pmax		
	comp=Z,860nm,0.8s						
DL2				pmax	pmax		
	comp=Z,1µm,4.0s						
MAJO	Matsushiro	32.55	21	P	P	20 47 39.2	-0.9
MAJO				IAmb	IAmb	20 47 40.7	
	comp=Z,180nm,0.9s						
MAJO	Matsushiro	32.55	21	P	P	20 47 39.5	-0.6
MAJO	Matsushiro	32.55	21	d iP	P	20 47 39.3	-0.8
MAJO				pmax	pmax		
	comp=Z,142nm,0.9s						
MAJO	Matsushiro	32.55	21	P	P	20 47 39.5	-0.6
MAJO				ScP	ScP	20 53 13.4	+1.3
MJAR	Matsushiro Arr	32.55	21	P	P	20 47 39.6	-0.5
	comp=Z,114nm,0.8s,baz=193,slow=9.0,SNR=339						
MJAR				PcP	PcP	20 50 14.0	+0.8
	comp=Z,12nm,0.8s,baz=196,slow=4.1,SNR=4.8						
MJAR				S	S	20 52 19.0	-2.2
	comp=Z,10nm,0.9s,baz=193,slow=17,SNR=8.0						
MJAR				ScP	ScP	20 53 11.6	-0.4
	comp=Z,47nm,0.8s,baz=195,slow=3.9,SNR=23						
	comp=Z,114nm,0.8s						
MJB9	Matsu-Tunnel	32.55	21	IAmb	IAmb	20 47 40.6	
	comp=Z,175nm,0.9s						
TIY	Taiyuan	32.88	343	P	P	20 47 44.2	+1.2
TIY				pP	pP	20 49 04.2	-2.0
TIY				sP	sP	20 49 59.5	-1.3
TIY				S	S	20 52 24.6	-1.8
TIY				pmax	pmax		
	comp=Z,980nm,0.7s						
TIY				pmax	pmax		
	comp=Z,1µm,5.0s						
MEEK	Meekatharra	33.37	189	P	P	20 47 46.7	-0.5
	comp=Z,508nm,1.2s						
MEEK	Meekatharra	33.37	189	P	P	20 47 47.2	0.0
PATS	Pohnpei	33.87	87	P	P	20 47 53.4	+1.7
	comp=Z,350nm,1.2s						
PATS	Pohnpei	33.87	87	P	P	20 47 52.8	+1.1
JSD	Sado	33.90	20	P	P	20 47 50.9	-0.7
BJT	Baijiatuau	34.16	349	P	P	20 47 54.8	+1.1
BJT	Baijiatuau	34.16	349	⇓P	P	20 47 54.7	+1.0
BJT				PcP	PcP	20 50 18.1	+0.4
BJT				ScP	ScP	20 53 17.8	+0.1
CTAO	Charters Tower	34.17	141	P	P	20 47 54.6	+0.5

CTAO	Charters Tower	34.17	141	P	P	20 47 54.9	+0.8
CTAO	Charters Tower	34.17	141	P	P	20 47 54.6	+0.5
CTAO				pmax	pmax		
	comp=Z,226nm,0.7s						
CTAO	Charters Tower	34.17	141	P	P	20 47 54.9	+0.8
CTAO				ScP	ScP	20 53 19.0	+0.9
BJI	Beijing	34.18	349	P	P	20 47 54.6	+0.7
BJI				pP	pP	20 49 21.9	+4.3
BJI				PP	PP	20 49 28.6	-0.2
BJI				sP	sP	20 50 14.3	+2.1
BJI				PcP	PcP	20 50 19.5	+1.8
BJI				S	S	20 52 45.7	-0.2
BJI				ScP	ScP	20 53 18.6	+0.9
BJI				ScS	ScS	20 57 22.5	+1.2
BJI				pmax	pmax		
	comp=Z,500nm,1.1s						
JMM	Marumori	34.69	23	P	P	20 47 58.8	+0.6
LZH	Lanzhou	34.88	330⇓	iP	P	20 48 02.1	+2.1
LZH				PcP	PcP	20 50 21.8	+1.6
LZH				S	S	20 52 52.9	-4.1
LZH				ScP	ScP	20 53 21.6	+1.1
LZH				ScS	ScS	20 57 27.0	+1.3
LZH				pmax	pmax		
	comp=Z,1μm,1.1s						
LZH				pmax	pmax		
	comp=Z,3μm,4.3s						
SNY	Shenyang	35.20	359 ⇓	P	P	20 48 02.8	+0.4
SNY				pP	pP	20 49 28.1	+1.7
SNY				S	S	20 53 03.6	+2.3
SNY				pmax	pmax		
	comp=Z,540nm,0.9s						
HHC	Hu-ho-hao-te	36.04	344⇓	iP	P	20 48 10.9	+1.3
HHC				S	S	20 53 18.4	+4.2
HHC				SS	SS	20 56 14.2	-4.1
HHC				pmax	pmax		
	comp=Z,540nm,0.9s						
HHC				pmax	pmax		
	comp=Z,430nm,5.9s						
MORW	Morawa	36.21	192	P	P	20 48 11.3	+0.3
	comp=Z,395nm,0.9s						
MORW	Morawa	36.21	192	P	P	20 48 11.1	+0.1
BTO	Baotou	36.27	342⇓	iP	P	20 48 13.3	+1.8
BTO				pP	pP	20 49 41.0	+4.8
BTO				S	S	20 53 24.9	+7.2
BTO				sS	sS	20 56 01.8	+8.1
BTO				SS	SS	20 56 21.8	-1.1
BTO				pmax	pmax		
	comp=Z,230nm,1.0s						
BTO				pmax	pmax		
	comp=Z,1μm,7.2s						
MSHR	Mys Shultsa	36.47	9d	iP	P	20 48 13.3	+0.3
MSHR				pmax	pmax		
	comp=Z,406nm,0.9s						
PSTR	Posyet	36.49	8d	iP	P	20 48 14.1	+1.0
VLA	Vladivostok	37.11	9c	iP	P	20 48 19.4	+1.1
VLA				pmax	pmax		
	comp=Z,145nm,0.9s						
CN2	Changchun	37.19	1	eP	P	20 48 18.5	-0.4
CN2				epP	pP	20 49 46.1	+2.2
CN2				eS	S	20 53 28.2	-2.8
CN2				SS	SS	20 56 37.8	-2.4
CN2				pmax	pmax		
	comp=Z,50nm,0.9s						
CN2				pmax	pmax		
	comp=Z,100nm,4.0s						
FORT	Forrest	37.23	175	P	P	20 48 19.6	+0.2
	comp=Z,1μm,0.7s						
FORT	Forrest	37.23	175	P	P	20 48 19.8	+0.4
JTM	Tenmabayashi	37.34	21	P	P	20 48 20.9	+0.7
BLDU	Ballidu	37.58	191	P	P	20 48 21.9	-0.5
	comp=Z,206nm,0.8s						
BLDU	Ballidu	37.58	191	P	P	20 48 22.1	-0.2
KMBL	Kambalda	37.70	183	P	P	20 48 23.0	-0.4
	comp=Z,689nm,0.8s						
KMBL	Kambalda	37.70	183	P	P	20 48 23.3	0.0
XLT	XiLinHaoTe	37.95	350	eP	P	20 48 25.9	+0.7
XLT				pP	pP	20 49 51.4	+0.6
XLT				PP	PP	20 50 03.9	-1.9
XLT				ScP	ScP	20 53 32.6	+0.9
XLT				S	S	20 53 41.7	-0.8
XLT				sS	sS	20 56 19.2	-0.3
XLT				SS	SS	20 56 51.2	-3.9
XLT				pmax	pmax		
	comp=Z,670nm,0.7s						
QLP	Quilpie	38.18	150	P	P	20 48 27.4	+0.1
	comp=Z,1μm,1.0s						
QLP	Quilpie	38.18	150	P	P	20 48 27.8	+0.5
USA0B	Ussuriysk Arra	38.18	9	IAmb	IAmb	20 48 30.3	
	comp=Z,129nm,0.8s						
USA0B	Ussuriysk Arra	38.18	9d	iP	P	20 48 27.6	+0.6
USRK	Ussuriysk Ar.	38.18	9	P	P	20 48 27.7	+0.7
USRK	Ussuriysk Ar.	38.18	9	P	P	20 48 27.9	+0.8
	comp=Z,119nm,0.8s,baz=196,slow=7.8,SNR=111						
USRK				PcP	PcP	20 50 30.4	+0.5
	comp=Z,8.1nm,0.5s,baz=198,slow=4.1,SNR=4.2						
USRK				ScP	ScP	20 53 31.8	-0.7
	comp=Z,5.6nm,0.6s,baz=223,slow=2.0,SNR=6.6						
	comp=Z,119nm,0.8s						
MDJ	Mudanjiang	38.27	6	P	P	20 48 28.5	+0.7
MDJ				S	S	20 53 45.2	-1.9
MDJ				sS	sS	20 56 23.2	-1.2
MDJ				SS	SS	20 56 59.6	-1.8
MDJ				ScS	ScS	20 57 39.4	-4.8
MDJ				pmax	pmax		
	comp=Z,250nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,650nm,3.9s						
MDJ	Mudanjiang	38.27	6	P	P	20 48 28.9	+1.1
MDJ	Mudanjiang	38.27	6	P	P	20 48 28.7	+0.9
KLBR	Kellerberrin	38.36	189	P	P	20 48 28.5	-0.2
	comp=Z,550nm,0.6s						
KLBR	Kellerberrin	38.36	189	P	P	20 48 28.6	-0.1
TATA	Tatamba Isabel	38.44	112	P	P	20 48 30.0	+0.3
LSA	Lhasa	38.75	311	P	P	20 48 34.6	+2.1
LSA				S	S	20 53 57.6	+2.1
LSA				pmax	pmax		
	comp=Z,370nm,0.8s						
LSA	Lhasa	38.75	311	P	P	20 48 34.1	+1.6
LSA	Lhasa	38.75	311	iP	P	20 48 34.4	+1.9
	SNR=300						
LSA	Lhasa	38.75	311	P	P	20 48 34.5	+1.9
HNR	Honiara	38.96	114	P	P	20 48 33.8	-0.1
HNR	Honiara	38.96	114	P	P	20 48 34.4	+0.5
HNR	Honiara	38.96	114	P	P	20 48 33.8	-0.1
HNR				pmax	pmax		
	comp=Z,475nm,0.7s						
HNR	Honiara	38.96	114	P	P	20 48 34.5	+0.5
MUN	Mundaring	39.00	191	P	P	20 48 33.9	0.0
	comp=Z,293nm,0.8s						
MUN	Mundaring	39.00	191	P	P	20 48 34.3	+0.4
MTKN	Mount Kenneth	39.04	191	P	P	20 48 35.1	+0.9
ERM	Erimo	39.18	23	P	P	20 48 36.0	+0.8
ERM				IAmb	IAmb	20 48 37.7	
	comp=Z,63nm,0.8s						
ERM	Erimo	39.18	23	P	P	20 48 36.6	+1.4
ERM	Erimo	39.18	23c	eP	P	20 48 37.4	+2.2
ERM				pmax	pmax		
	comp=Z,105nm,1.7s						
JEM	Erimo	39.18	23	P	P	20 48 36.7	+1.5
BNX	BinXian	39.21	4	P	P	20 48 35.3	-0.1
BNX				S	S	20 53 59.4	-1.4
BNX				pmax	pmax		
	comp=Z,100nm,0.8s						
RK1H	Rockhampton Ha	39.26	140	P	P	20 48 36.8	+0.7
ALEG	Aligegeo Malai	39.40	112	P	P	20 48 37.7	+0.3
GTA	Gaotai	39.47	330	P	P	20 48 39.7	+1.9
GTA				pP	pwP	20 50 06.7	+0.8
GTA				PcP	PcP	20 50 36.0	+1.7
GTA				sP	sP	20 50 59.0	+2.3
GTA				ScP	ScP	20 53 39.1	+1.3
GTA				S	S	20 54 08.2	+3.1
GTA				PcS	PcS	20 54 20.8	-4.3
GTA				sS	sS	20 56 44.5	+1.3
GTA				SS	SS	20 57 18.7	-5.8
GTA				ScS	ScS	20 57 50.8	-1.0
GTA				pmax	pmax		
	comp=Z,420nm,0.9s						
GTA				pmax	pmax		
	comp=Z,1μm,8.6s						
NWAO	Narrogin (SRO)	39.75	189	P	P	20 48 39.3	-0.6
NWAO	Narrogin (SRO)	39.75	189	P	P	20 48 40.2	+0.3
	comp=Z,816nm,0.9s						
NWAO	Narrogin (SRO)	39.75	189	P	P	20 48 40.7	+0.7
	comp=Z,279nm,0.7s,baz=21,slow=7.5,SNR=189						
	comp=Z,279nm,0.7s						
NWAO	Narrogin (SRO)	39.75	189	P	P	20 48 40.5	+0.6
NWAO	Narrogin (SRO)	39.75	189	P	P	20 48 40.4	+0.4
TEY	Ternei	39.89	14⇑	eP	P	20 48 40.5	-0.4
TEY				e		20 51 02.8	
TEY				e		20 54 07.0	
TEY				e		20 57 27.0	
TEY				pmax	pmax		
	comp=E,20nm,0.8s						
TEY				pmax	pmax		
	comp=N,110nm,0.9s						
TEY				pmax	pmax		
	comp=Z,190nm,0.9s						
TEY				pmax	pmax		
	comp=N,200nm,1.3s						
TEY				pmax	pmax		
	comp=Z,300nm,1.5s						
NGOA	Tingoa Renbel	39.92	117	P	P	20 48 42.2	+0.6
GOMU	GeErMu	39.98	322	P	P	20 48 44.1	+1.8
GOMU				pP	pP	20 50 09.0	+1.4
GOMU				PcP	PcP	20 50 36.8	+0.5
GOMU				S	S	20 54 14.9	+1.6
GOMU				SS	SS	20 57 36.7	+2.4
GOMU				pmax	pmax		
	comp=Z,220nm,1.1s						
GOMU				pmax	pmax		
	comp=Z,2μm,4.6s						
BBOO	Buckleboo	40.67	165	P	P	20 48 47.5	+0.1
BBOO	Buckleboo	40.67	165	P	P	20 48 47.5	+0.1
	comp=Z,713nm,1.0s						
BBOO	Buckleboo	40.67	165	P	P	20 48 47.7	+0.3
ASAJ	Asahikawa	40.80	20	P	P	20 48 49.4	+1.2
	comp=Z,202nm,0.8s,baz=232,slow=12,SNR=205						
ASAJ				ScP	ScP	20 53 43.0	+0.2
	comp=Z,16nm,0.8s,baz=270,slow=26,SNR=4.3						
ASAJ				S	S	20 54 25.4	+1.1
	comp=Z,13nm,1.0s,baz=66,slow=25,SNR=6.1						
	comp=Z,202nm,0.8s						
JKA	Kamikawa-asahi	40.80	20	P	P	20 48 48.8	+0.6
EIDS	Eidsvold	41.05	141	P	P	20 48 50.4	-0.1
EIDS	Eidsvold	41.05	141	P	P	20 48 50.5	-0.1
	comp=Z,658nm,0.9s						
EIDS	Eidsvold	41.05	141	P	P	20 48 50.8	+0.2
WHYH	Whyalla	41.30	163	P	P	20 48 53.4	+1.0
EVN	Everest	41.35	306	P	P	20 48 54.6	+0.9
RKGY	Rocky Gully	41.44	189	P	P	20 48 54.5	+1.0
	comp=Z,244nm,0.8s						
STKA	Stephens Creek	41.60	157	P	P	20 48 55.5	+0.7
STKA	Stephens Creek	41.60	157	P	P	20 48 55.3	+0.5
	comp=Z,2μm,0.8s						
STKA	Stephens Creek	41.60	157	P	P	20 48 55.7	+0.8
	comp=Z,361nm,0.8s,baz=334,slow=8.1,SNR=634						
STKA				PP	PP	20 50 44.0	+0.1
	comp=Z,55nm,0.7s,baz=326,slow=11,SNR=3.7						
STKA				ScP	ScP	20 53 45.5	-0.7
	comp=Z,52nm,0.8s,baz=343,slow=6.5,SNR=9.7						
STKA				PKP2ab		21 22 15.1	
	comp=Z,2.7nm,0.9s,baz=88,slow=4.8,SNR=3.2						
	comp=Z,361nm,0.8s						
STKA	Stephens Creek	41.60	157	P	P	20 48 55.6	+0.8
YUK	Yuzh-Kuril'sk	41.94	23d	iP	P	20 48 58.1	+0.8
HTT	Hallett	42.08	162	P	P	20 48 59.4	+0.7
	comp=Z,112nm,1.3s						
HTT	Hallett	42.08	162	P	P	20 48 59.8	+1.1
HTT	Hallett	42.08	162	P	P	20 48 59.8	+1.1
H01W3	Cape Leeuwin H	42.23	192	P	P	20 48 59.7	+0.2
	baz=55						
H01W1	Cape Leeuwin H	42.23	192	P	P	20 48 59.2	-0.3
	baz=55						
H01W2	Cape Leeuwin H	42.24	192	P	P	20 48 58.1	-1.4
	baz=55						
HIA	Hailar	42.80	356	P	P	20 49 05.5	+1.4
HIA	Hailar	42.80	356	P	P	20 49 05.3	+1.1
HIA				PcP	PcP	20 50 46.2	+1.2
HIA				ScP	ScP	20 53 51.9	+1.1
CMSA	Cobar Meteorol	43.02	153	P	P	20 49 07.6	+1.6
H11S3	WAKE ISLAND Hy	43.04	70	P	P	20 49 06.1	-0.2
	baz=74,slow=74						
H11S1	WAKE ISLAND Hy	43.06	70	P	P	20 49 07.3	+0.9
	baz=74,slow=74						
H11S2	WAKE ISLAND Hy	43.06	70	P	P	20 49 07.3	+0.9
	baz=74						
KLR	Kul'dur	43.08	7	P	P	20 49 06.4	+0.2
	comp=Z,130nm,0.6s,baz=205,slow=5.9,SNR=461						
KLR				ScP	ScP	20 53 51.2	-0.5
	comp=Z,10nm,1.0s,baz=197,slow=6.2,SNR=3.6						
	comp=Z,130nm,0.6s						
KLR	Kul'dur	43.08	7d	iP	P	20 49 06.3	+0.1
KLR				pmax	pmax		
	comp=Z,147nm,0.8s						
PALK	Pallekele	43.19	274	P	P	20 49 07.4	-0.4
PALK	Pallekele	43.19	274	P	P	20 49 08.8	+1.1
PALK	Pallekele	43.19	274d	iP	P	20 49 08.3	+0.6
PALK				pmax	pmax		
	comp=Z,79nm,1.0s						
PALK	Pallekele	43.19	274	P	P	20 49 08.5	+0.7
PALK				PcP	PcP	20 50 48.0	+0.9
PALK				ScP	ScP	20 53 54.1	+1.0
YSS	Yuzhno-Sakhali	43.36	19	P	P	20 49 08.5	+0.1
YSS				IAmb	IAmb	20 49 10.6	
	comp=Z,102nm,0.9s						
YSS	Yuzhno-Sakhali	43.36	19κ	iP	P	20 49 09.0	+0.6
YSS				eS	S	20 55 01.6	+0.6
YSS				e*SS	sS	20 57 39.1	-2.8
YSS				eSS	SS	20 58 23.0	-5.5
YSS				pmax	pmax		
	comp=Z,200nm,5.8s						
YSS				pmax	pmax		
	comp=N,100nm,4.3s						
YSS				pmax	pmax		
	comp=E,100nm,3.9s						
YSS				pmax	pmax		
	comp=Z,70nm,0.9s						
YSS				MLR	MLR		
	comp=Z,100nm,14.0s						
H11N1	WAKE ISLAND Hy	43.47	68	P	P	20 49 11.3	+1.8
	baz=245,slow=10.0,SNR=17						
H11N2	WAKE ISLAND Hy	43.47	68	P	P	20 49 11.4	+1.9
	baz=245,slow=10.0,SNR=17						
H11N3	WAKE ISLAND Hy	43.48	68	P	P	20 49 11.5	+1.9
	baz=245,slow=10.0,SNR=11						
HEH	HeiHe	43.71	3	eP	P	20 49 11.4	+0.3
HEH				sP	sP	20 51 30.5	-2.3
HEH				S	S	20 55 04.4	-1.5
HEH				ScS	ScS	20 58 15.6	-1.7
HEH				SS	SS	20 58 36.6	+2.5
HEH				pmax	pmax		
	comp=Z,1μm,3.6s						
KUR	Kuril'sk	43.74	24d	eP	P	20 49 11.6	+0.2
KUR				pmax	pmax		
	comp=Z,381nm,1.1s						
ULN	Ulaanbaatar	43.76	343	P	P	20 49 12.5	+0.7
ULN	Ulaanbaatar	43.76	343	P	P	20 49 12.7	+0.9
ULN	Ulaanbaatar	43.76	343d	iP	P	20 49 12.7	+0.9
ULN				pmax	pmax		
	comp=Z,635nm,1.1s						
ULN	Ulaanbaatar	43.76	343	P	P	20 49 13.1	+1.3
SONM	Songino Array	43.92	343	P	P	20 49 13.5	+0.4
SONM	Songino Array	43.92	343	P	P	20 49 14.0	+1.0
	comp=Z,374nm,0.8s,baz=158,slow=9.4,SNR=1468						
SONM				PcP	PcP	20 50 49.7	+0.7
	comp=Z,48nm,1.0s,baz=151,slow=3.3,SNR=3.7						
SONM				ScP	ScP	20 53 55.4	-0.1
	comp=Z,9.7nm,0.7s,baz=152,slow=3.6,SNR=4.4						
	comp=Z,374nm,0.8s						
LUES	Luesalemba Tem	44.88	112	P	P	20 49 21.7	+0.9
UGL	Uglegorsk	45.06	17	eP	P	20 49 17.2	-4.4
UGL				eS	S	20 55 20.1	-5.0
UGL				pmax	pmax		
	comp=Z,900nm,1.3s						
UGL				pmax	pmax		
	comp=Z,500nm,1.1s						
ARMA	Armidale	45.14	146	P	P	20 49 24.7	+2.0
GRNR	Gornyy	45.30	11⇓	iP	P	20 49 24.8	+1.3
GRNR				pmax	pmax		
	comp=E,20nm,0.7s						
GRNR				pmax	pmax		
	comp=N,60nm,1.2s						
GRNR				pmax	pmax		
	comp=Z,120nm,1.1s						
HYB	Hyderabad	45.85	288	eP	P	20 49 28.7	+0.3
HYB				IVmB_BB		20 49 29.6	
	comp=Z,4μm,0.6s						
HYB				ePcP	PcP	20 50 56.0	-0.3
HYB				ePP	PP	20 51 22.7	-0.4
HYB				eScP	ScP	20 54 03.6	-0.4
HYB				eS	S	20 55 37.3	-0.1
HYB				eScS	ScS	20 58 31.5	-1.1
ARPS	Mount Arapiles	46.09	160	P	P	20 49 30.7	+1.0
CIT	Chita	46.24	351	eP	P	20 49 32.0	+1.3
CIT				pmax	pmax		
	comp=Z,3μm,1.2s						
MGBR	Mount Gambier	46.55	162	P	P	20 49 34.2	+0.9
TYV	Tymovskoe	46.83	16	eP	P	20 49 36.4	+1.2
TYV				eS	S	20 55 54.1	+4.1
TYV				pmax	pmax		
	comp=Z,400nm,3.4s						
TYV				pmax	pmax		
	comp=Z,51nm,1.1s						
TYV				smax	smax		
	comp=N,200nm,7.0s						
TYV				smax	smax		
	comp=E,400nm,7.0s						
MGCD	Mangrove Creek	47.02	149	P	P	20 49 39.4	+2.5
ZAK	Zakamensk	47.13	342	eP	P	20 49 37.9	+0.3
ZAK				e		20 50 58.0	
ZAK				pmax	pmax		
	comp=Z,143nm,1.1s						
ZAK				pmax	pmax		
	comp=Z,62nm,1.1s						
ZEA	Zeya	47.18	2	eP	P	20 49 38.0	+0.2
ZEA				e		20 51 38.4	
ZEA				eS	S	20 55 52.0	-2.7
ZEA				e		20 58 39.1	
ZEA				pmax	pmax		
	comp=E,20nm,0.4s						
ZEA				pmax	pmax		
	comp=N,30nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,80nm,0.8s						
ZEA				pmax	pmax		
	comp=N,100nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,100nm,1.0s						
ZEA				smax	smax		
	comp=E,200nm,7.6s						
ZEA				MLR	MLR		
	comp=N,100nm,13.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,16.0s						
RIV	Riverview	47.53	149	P	P	20 49 39.1	-1.6
KOUNC	Koumac, New Ca	47.67	125	P	P	20 49 43.7	+1.7
CAN	Canberra	47.69	152	P	P	20 49 43.3	+1.3
CAN	Canberra	47.69	152	P	P	20 49 43.7	+1.7
CAN	Canberra	47.69	152	P	P	20 49 43.3	+1.3
CAN				pmax	pmax		
	comp=Z,383nm,0.9s						
CAN	Canberra	47.69	152 ⇑	P	P	20 49 43.7	+1.7
CAN				PcP	PcP	20 51 04.3	+1.9
CAN				ScP	ScP	20 54 12.5	+1.2
SANVU	Saraoutou	47.84	117	P	P	20 49 45.4	+2.0
CNB	Canberra Magne	47.85	152	P	P	20 49 44.8	+1.6
TOO	Toolangi	48.12	157	IAmb	IAmb	20 49 47.9	
	comp=Z,104nm,0.9s						
NKL	Nikolayevsk	48.44	13	eP	P	20 49 45.6	-1.6
NKL				eS	S	20 56 11.4	-0.7
NKL				pmax	pmax		
	comp=N,219nm,0.8s						
NKL				pmax	pmax		
	comp=E,147nm,1.3s						
NKL				pmax	pmax		
	comp=Z,715nm,1.3s						
NKL				smax	smax		
	comp=E,318nm,1.8s						
NKL				smax	smax		
	comp=N,285nm,2.6s						
NKL				MLR	MLR		
	comp=E,5μm,19.0s						
NKL				MLR	MLR		
	comp=N,2μm,22.0s						
NKL				MLR	MLR		
	comp=Z,5μm,24.0s						
IRK	Irkutsk	48.48	344	eP	P	20 49 48.0	+0.4
IRK				eS	S	20 56 18.8	+5.9
IRK				pmax	pmax		
	comp=Z,602nm,1.4s						
MOY	Mondy	48.97	341	eP	P	20 49 52.8	+1.4
MOY				pmax	pmax		
	comp=Z,937nm,1.6s						
WMQ	Urumqi	49.05	325 ⇓	P	P	20 49 53.4	+1.3
WMQ				PcP	PcP	20 51 08.2	+0.9
WMQ				ScP	ScP	20 54 17.3	+0.3
WMQ				S	S	20 56 23.4	+2.4
WMQ				ScS	ScS	20 58 50.9	-2.2
WMQ				pmax	pmax		
	comp=Z,210nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,1μm,5.1s						
NOUC	Port Laguerre	50.07	126	P	P	20 50 01.1	+1.2
DZM	Mont Dzumac	50.17	126	IAmb	IAmb	20 50 03.4	
	comp=Z,253nm,0.8s						
DZM	Mont Dzumac	50.17	126	eP	P	20 50 00.1	-0.6
	comp=Z,667nm,1.1s						
DZM				epP	pP	20 51 32.0	-0.1
	comp=Z,59nm,1.0s						
DZM				eS	S	20 56 37.6	+0.6
	comp=Z,259nm,29.9s						
DZM	Mont Dzumac	50.17	126	P	P	20 50 02.3	+1.5
DZM	Mont Dzumac	50.17	126 ⇑	P	P	20 50 02.2	+1.5
ONTNC	Ouen Toro	50.29	126	IAmb	IAmb	20 50 03.2	
	comp=Z,417nm,1.3s						
ONTNC	Ouen Toro	50.29	126	P	P	20 50 02.3	+0.8
LHI	Lord Howe Isla	50.35	141	IAmb	IAmb	20 50 04.4	
	comp=Z,339nm,1.1s						
YATNC	Mamie plateau,	50.52	125	P	P	20 50 05.5	+2.3
OUENC	Ouen Island, N	50.66	126	P	P	20 50 06.0	+1.8
HMDM	Hanimaadhoo	50.67	273	P	P	20 50 04.8	+0.4
KAAM	Kaadhehdhoo	51.43	265	P	P	20 50 09.6	-0.4
KAAM				IAmb	IAmb	20 50 11.5	
	comp=Z,166nm,1.0s						
KAAM	Kaadhehdhoo	51.43	265	P	P	20 50 10.4	+0.4
BOD	Bodaibo	51.82	353	eP	P	20 50 12.7	+0.6
BOD				pmax	pmax		
	comp=Z,289nm,1.3s						
ZSN	Zaisan	52.85	327	eP	P	20 50 20.4	+0.7
ZSN	Zaisan	52.85	327	eP	P	20 50 20.5	+0.7
WUS	Wushi	52.85	318	P	P	20 50 21.0	+1.0
WUS				PcP	PcP	20 51 22.2	+0.4
WUS				ScP	ScP	20 54 33.5	-0.1
MOO	Moorlands	53.00	159	P	P	20 50 21.7	+0.9
MOO	Moorlands	53.00	159	P	P	20 50 21.7	+0.9
H08S2	Diego Garcia H	53.45	256	P	P	20 50 23.3	-0.9
	baz=159,slow=76,SNR=19						
H08S3	Diego Garcia H	53.46	256	P	P	20 50 22.3	-2.0
	baz=159,slow=76,SNR=18						
TAU	Tasmania Unive	53.46	159	P	P	20 50 24.9	+0.8
TAU				IAmb	IAmb	20 50 26.5	
	comp=Z,97nm,0.8s						
TAU	Tasmania Unive	53.46	159	P	P	20 50 25.1	+1.0
TAU	Tasmania Unive	53.46	159	P	P	20 50 24.9	+0.8
TAU				pmax	pmax		
	comp=Z,97nm,0.9s						
H08S1	Diego Carcia H	53.47	256	P	P	20 50 23.5	-0.9
	baz=159,slow=76,SNR=16						
SHLS	Shalkode	53.64	320	eP	P	20 50 24.7	-0.8
SHLS	Shalkode	53.64	320	eP	P	20 50 24.8	-0.8
MK31	Makanchi Array	53.88	325c	eP	P	20 50 27.9	+0.8
MKAR	Makanchi Array	53.88	325	P	P	20 50 27.4	+0.3
MKAR	Makanchi Array	53.88	325	P	P	20 50 28.0	+0.9
	comp=Z,218nm,0.7s,baz=121,slow=8.2,SNR=1113						
MKAR				PcP	PcP	20 51 25.6	+0.2
	comp=Z,127nm,0.7s,baz=120,slow=4.1,SNR=14						
MKAR				ScP	ScP	20 54 37.2	-0.6
	comp=Z,31nm,0.8s,baz=112,slow=5.4,SNR=7.4						
MKAR				S	S	20 57 27.2	+1.3
	comp=Z,5.5nm,0.8s,baz=116,slow=16,SNR=7.3						
MKAR				PKPPKP	P'P'df	21 20 36.1	-1.8
	comp=Z,1.0nm,0.9s,baz=324,slow=3.5,SNR=6.4						
MKAR				P4KPbc		21 27 43.4	
	comp=Z,4.0nm,0.7s,baz=110,slow=5.0,SNR=37						
	comp=Z,218nm,0.7s						
PEA0B	Petropavlovsk-	53.91	24	IAmb	IAmb	20 50 29.6	
	comp=Z,188nm,1.0s						
PEA0B	Petropavlovsk-	53.91	24c	eP	P	20 50 28.7	+1.6
PETK	Petropavlovsk-	53.91	24	P	P	20 50 27.4	+0.3
PETK	Petropavlovsk-	53.91	24	P	P	20 50 27.6	+0.5
	comp=Z,76nm,0.6s,baz=199,slow=2.4,SNR=169						
PETK				PcP	PcP	20 51 25.7	+0.3
	comp=Z,22nm,0.8s,baz=225,slow=7.4,SNR=2.0						

PETK				ScP	ScP	20 54 38.0	+0.2
	comp=Z,21nm,0.8s,baz=195,slow=4.4,SNR=7.4						
	comp=Z,76nm,0.6s						
UZB	Uzynbulak	53.91	320	eP	P	20 50 28.4	+0.9
UZB	Uzynbulak	53.91	320	eP	P	20 50 28.4	+0.9
PRZ	Przheval'sk	53.99	319	IAmb	IAmb	20 50 32.0	
	comp=Z,228nm,0.7s						
MAKZ	Makanchi	54.06	325	P	P	20 50 28.7	+0.3
MAKZ	Makanchi	54.06	325	P	P	20 50 29.6	+1.2
MAKZ	Makanchi	54.06	325	P	P	20 50 29.4	+1.0
MAKZ				PcP	PcP	20 51 26.2	+0.1
MAKZ				ScP	ScP	20 54 38.0	-0.7
PET	Petropavlovsk	54.24	25	P	P	20 50 29.9	+0.5
PET				IAmb	IAmb	20 50 31.7	
	comp=Z,426nm,1.4s						
PET	Petropavlovsk	54.24	25	P	P	20 50 30.8	+1.4
PET	Petropavlovsk	54.24	25	eP	P	20 50 30.1	+0.7
PET				e*SP	sP	20 52 55.2	+0.4
PET				eS	S	20 57 31.6	+1.3
PET				e		20 59 27.7	
PET				pmax	pmax		
	comp=Z,500nm,2.0s						
PET				pmax	pmax		
	comp=Z,237nm,1.5s						
PET				pmax	pmax		
	comp=Z,100nm,8.5s						
PET	Petropavlovsk	54.24	25	P	P	20 50 30.9	+1.4
SATY	Saty	54.27	320	eP	P	20 50 31.0	+1.0
SATY	Saty	54.27	320	eP	P	20 50 31.1	+1.0
NIL	Nilore	54.27	307	P	P	20 50 31.0	+0.9
NIL	Nilore	54.27	307	P	P	20 50 31.0	+0.9
KPKS	Kokpek	54.28	320	eP	P	20 50 31.0	+0.9
KPKS	Kokpek	54.28	320	eP	P	20 50 31.0	+0.9
ZHN	Zhinishke	54.30	320	eP	P	20 50 31.2	+0.9
ZHN	Zhinishke	54.30	320	eP	P	20 50 31.2	+0.9
KSH	Kashi	54.33	315	P	P	20 50 32.8	+2.2
KSH				PcP	PcP	20 51 28.9	+1.4
KSH				sP	sP	20 52 57.0	+3.1
KSH				ScP	ScP	20 54 41.2	+1.0
KSH				S	S	20 57 39.0	+6.6
KSH				ScS	ScS	20 59 26.4	-4.2
KSH				pmax	pmax		
	comp=Z,92nm,1.0s						
MDOK	Medeo	55.19	319	eP	P	20 50 37.5	+0.9
MDOK	Medeo	55.19	319	eP	P	20 50 37.6	+0.9
TNSS	Tian-Shan	55.20	319	eP	P	20 50 37.4	+0.5
TNSS	Tian-Shan	55.20	319	eP	P	20 50 37.5	+0.5
TDK	Taldyqorghan	55.21	322	d iP	P	20 50 37.5	+1.0
TDK				pmax	pmax		
	comp=Z,273nm,0.9s						
TDK	Taldyqorghan	55.21	322	⇓iP	P	20 50 37.6	+1.0
	comp=Z,272nm,0.9s						
KNDC	Almaty	55.27	319	P	P	20 50 37.9	+0.9
KRAR	Krasnoyarsk	55.29	339	d iP	P	20 50 37.6	+0.8
AAA	Alma-Ata	55.30	319	eP	P	20 50 38.1	+0.9
AAA				pmax	pmax		
	comp=Z,155nm,0.7s						
AAA	Alma-Ata	55.30	319	eP	P	20 50 38.1	+0.9
	comp=Z,155nm,0.7s						
ULHL	Ulahol	55.31	318	P	P	20 50 39.5	+2.0
	SNR=6.0						
YAK	Yakutsk	55.58	3	P	P	20 50 38.6	-0.1
YAK	Yakutsk	55.58	3	P	P	20 50 39.3	+0.7
	comp=Z,327nm,0.7s,baz=190,slow=1.5,SNR=266						
YAK				ScP	ScP	20 54 45.3	+0.4
	comp=Z,28nm,0.8s,baz=188,slow=1.3,SNR=4.7						
YAK				S	S	20 57 46.7	-0.9
	comp=Z,17nm,0.9s,baz=326,slow=24,SNR=26						
	comp=Z,327nm,0.7s						
YAK	Yakutsk	55.58	3	d iP	P	20 50 39.1	+0.4
YAK				e		20 51 32.6	
YAK				e*PP	pP	20 52 15.1	+2.0
YAK				e		20 52 50.3	
YAK				i S	S	20 57 46.5	-1.1
YAK				e		20 59 34.8	
YAK				eSS	SS	21 01 46.1	+4.4
YAK				pmax	pmax		
	comp=Z,353nm,0.9s						
YAK				pmax	pmax		
	comp=E,55nm,1.3s						
YAK				pmax	pmax		
	comp=N,195nm,1.3s						
YAK				pmax	pmax		
	comp=Z,200nm,2.2s						
YAK				pmax	pmax		
	comp=E,22nm,1.1s						
YAK				pmax	pmax		
	comp=N,121nm,2.0s						
YAK				smax	smax		
	comp=E,464nm,2.1s						
YAK				smax	smax		
	comp=N,391nm,1.7s						
YAK	Yakutsk	55.58	3	P	P	20 50 39.4	+0.7
BOOM	Boomskoye usch	55.62	318	IAmb	IAmb	20 51 34.1	
	comp=Z,80nm,0.6s						
TKM2	Tokmak 2	56.03	318	P	P	20 50 43.6	+1.1
	SNR=240						
KBK	Karagaybulak	56.35	318	P	P	20 50 46.1	+1.4
	SNR=98						
UCH	Uchtor	56.46	317	P	P	20 50 47.6	+1.8
	SNR=36						
CHMS	Chumysh	56.63	318	P	P	20 50 47.2	+0.8
	SNR=77						
AAK	Ala-Archa	56.65	318	P	P	20 50 48.0	+1.3
	SNR=72						
AAK	Ala-Archa	56.65	318	P	P	20 50 47.4	+0.7
AAK				IAmb	IAmb	20 50 50.6	
	comp=Z,112nm,1.1s						
AAK	Ala-Archa	56.65	318	P	P	20 50 48.1	+1.3
	comp=Z,36nm,0.6s,baz=111,slow=5.3,SNR=101						
AAK				PcP	PcP	20 51 37.2	+0.7
	comp=Z,52nm,0.6s,baz=143,slow=3.3,SNR=10.0						
AAK				ScP	ScP	20 54 50.1	-0.2
	comp=Z,27nm,0.8s,baz=138,slow=4.7,SNR=8.2						
	comp=Z,36nm,0.6s						
AAK	Ala-Archa	56.65	318	P	P	20 50 47.8	+1.1
AAK	Ala-Archa	56.65	318	d iP	P	20 50 47.8	+1.1
AAK				pmax	pmax		
	comp=Z,217nm,1.7s						
AAK	Ala-Archa	56.65	318	i P	P	20 50 48.0	+1.3
	SNR=78						
AAK	Ala-Archa	56.65	318	P	P	20 50 48.1	+1.4
AAK				PcP	PcP	20 51 37.4	+0.8
AAK				ScP	ScP	20 54 50.1	-0.2
MA2	Magadan	56.71	16	P	P	20 50 47.3	+0.7
MA2				IAmb	IAmb	20 50 49.0	
	comp=Z,233nm,0.8s						
MA2	Magadan	56.71	16	P	P	20 50 48.0	+1.4
MA2	Magadan	56.71	16	d iP	P	20 50 47.7	+1.1
MA2				pmax	pmax		
	comp=Z,206nm,0.9s						
MA2	Magadan	56.71	16	P	P	20 50 48.0	+1.4
MA2				PcP	PcP	20 51 37.3	+1.2
FUNA	Funafuti	56.81	105	P	P	20 50 49.9	+1.7
SGDS	Sogindy	56.90	319	⇓iP	P	20 50 49.0	+0.7
USP	Ospenovka	56.91	318	P	P	20 50 49.3	+1.0
	SNR=203						
AML	Almayashu	56.98	317	P	P	20 50 50.8	+1.4
	SNR=203						
ZALV	Zalesovo Beam	57.02	333	P	P	20 50 48.4	-0.5
ZALV	Zalesovo Beam	57.02	333	P	P	20 50 48.8	0.0
	comp=Z,269nm,0.9s,baz=114,slow=6.6,SNR=604						
ZALV				PcP	PcP	20 51 36.7	-0.8
	comp=Z,27nm,0.7s,baz=113,slow=3.9,SNR=1.8						
ZALV				PP	PP	20 53 01.6	-0.6
	comp=Z,12nm,0.7s,baz=132,slow=8.9,SNR=2.1						
ZALV				S	S	20 58 06.9	+0.4
	comp=Z,17nm,1.0s,baz=130,slow=14,SNR=8.9						
ZALV				PKPPKP	P'P'df	21 20 24.6	-8.3
	comp=Z,3.1nm,0.9s,baz=318,slow=1.9,SNR=8.8						
ZALV				PKP2bc		21 20 42.6	
	comp=Z,1.0nm,0.6s,baz=263,slow=3.7,SNR=6.0						
ZALV				P4KPbc		21 27 54.5	
	comp=Z,0.5nm,0.4s,baz=116,slow=3.4,SNR=3.9						
	comp=Z,269nm,0.9s						
SEM	Semipalatinsk	57.05	328	eP	P	20 50 49.4	0.0
SEM	Semipalatinsk	57.05	328	eP	P	20 50 49.5	0.0
EKS2	Erkin-Say	57.14	317	P	P	20 50 51.4	+1.4
	SNR=276						
YSA	Yasawairara	57.58	114	P	P	20 50 55.5	+2.2
KBL	Kabul	57.87	307	P	P	20 50 55.3	0.0
KBL				IAmb	IAmb	20 50 56.9	
	comp=Z,116nm,0.7s						
KBL	Kabul	57.87	307	P	P	20 50 56.0	+0.7
	SNR=62						
KBL	Kabul	57.87	307	P	P	20 50 55.3	0.0
KBL				pmax	pmax		
	comp=Z,116nm,0.7s						
BTLS	Baital	57.97	320	eP	P	20 50 56.1	+0.6
BTLS	Baital	57.97	320	eP	P	20 50 56.2	+0.6
KURBB	Kurchatov Arra	58.08	328	P	P	20 50 57.1	+0.9
	comp=Z,552nm,1.0s,baz=125,slow=6.0,SNR=538						
KURBB				PcP	PcP	20 51 41.2	-0.6
	comp=Z,29nm,0.7s,baz=124,slow=4.2,SNR=1.3						
KURBB				PP	PP	20 53 11.2	-0.5
	comp=Z,44nm,1.2s,baz=124,slow=8.9,SNR=2.9						
KURBB				ScP	ScP	20 54 55.5	-0.8
	comp=Z,7.5nm,0.8s,baz=120,slow=5.6,SNR=2.6						
KURBB				S	S	20 58 15.8	-4.4
	comp=Z,11nm,1.2s,baz=124,slow=16,SNR=9.3						
KURBB				PKPPKP	P'P'df	21 20 21.4	-10
	comp=Z,1.3nm,0.8s,baz=280,slow=3.7,SNR=7.7						
KURBB				P4KPbc		21 28 00.8	
	comp=Z,0.5nm,0.2s,baz=138,slow=3.9,SNR=4.6						
	comp=Z,552nm,1.0s						
KURBB	Kurchatov Arra	58.08	328	P	P	20 50 56.0	-0.2
KURK	Kurchatov	58.09	328	P	P	20 50 56.3	+0.1
KURK	Kurchatov	58.09	328	P	P	20 50 57.0	+0.8
KURK	Kurchatov	58.09	328	d iP	P	20 50 56.7	+0.5
KURK				pmax	pmax		
	comp=Z,827nm,1.0s						
KURK	Kurchatov	58.09	328	P	P	20 50 57.0	+0.8
KURK				ScP	ScP	20 54 55.4	-0.9
MSVF	Nonsavu	58.34	115	P	P	20 51 00.5	+1.9
MSVF				IAmb	IAmb	20 51 02.2	
	comp=Z,215nm,1.0s						
MSVF	Nonsavu	58.34	115	P	P	20 51 01.1	+2.5
MSVF	Nonsavu	58.34	115	P	P	20 51 00.5	+1.9
MSVF				pmax	pmax		
	comp=Z,215nm,1.0s						
MSVF	Nonsavu	58.34	115	P	P	20 51 00.8	+2.2
SIMJ	Simiganj	59.08	311	P	P	20 51 03.4	0.0
SIMJ	Simiganj	59.08	311	P	P	20 51 03.9	+0.5
SIMJ				PcP	PcP	20 51 47.0	+0.7
DGTI	Dogotuki	59.41	113	P	P	20 51 07.9	+2.1
KK31	Karatay Array	59.52	317	IAmb	IAmb	20 51 08.8	
	comp=Z,211nm,0.9s						
KK31	Karatay Array	59.52	317	i P	P	20 51 06.8	+0.7
KKAR	Karatay Array	59.52	317	P	P	20 51 06.1	0.0
KKAR	Karatay Array	59.52	317	IAmb	IAmb	20 51 08.8	
	comp=Z,221nm,0.9s						
KKAR	Karatay Array	59.52	317	P	P	20 51 06.1	0.0
CHM	Chimkent	59.86	316	eP	P	20 51 09.2	+0.8
CHM				pmax	pmax		
	comp=Z,66nm,0.5s						
CHM	Chimkent	59.86	316	eP	P	20 51 09.3	+0.8
	comp=Z,66nm,0.5s						
BRLS	Borolday	59.95	316	eP	P	20 51 09.8	+0.8
BRLS	Borolday	59.95	316	eP	P	20 51 09.8	+0.8
SEY	Seymchan	59.97	14	d iP	P	20 51 10.1	+1.4
SEY				pmax	pmax		
	comp=Z,105nm,1.3s						
OTUK	Ortayu	60.43	323	P	P	20 51 12.5	+0.4
FUTU	Fugatoga	60.82	110	P	P	20 51 16.6	+1.4
FUTU				IAmb	IAmb	20 51 19.3	
	comp=Z,190nm,0.9s						
BRZS	Berezniki	61.01	325	d iP	P	20 51 16.6	+0.8
BRZS	Berezniki	61.01	325	⇓iP	P	20 51 16.7	+0.8
OUZ	Omahuta	62.28	135	P	P	20 51 27.0	+2.6
OUZ	Omahuta	62.28	135	P	P	20 51 26.8	+2.5
NGCH	Negor - Chabah	62.94	295	P	P	20 51 29.8	+0.8
WCZ	Waipu Caves	63.17	136	P	P	20 51 32.0	+1.8
BVA0	Borovoye Array	63.66	327	i P	P	20 51 33.5	+0.5
BVAR	Borovoye Array	63.66	327	P	P	20 51 33.5	+0.5
	comp=Z,609nm,0.9s,baz=124,slow=7.4,SNR=1249						
BVAR				PP	PP	20 54 01.9	+1.4
	comp=Z,7.3nm,0.7s,baz=117,slow=8.7,SNR=1.4						
BVAR				S	S	20 59 30.2	+0.5
	comp=Z,10nm,1.1s,baz=106,slow=14,SNR=6.6						
BVAR				PKP2bc		21 20 28.0	
	comp=Z,1.0nm,0.8s,baz=307,slow=3.0,SNR=6.2						
	comp=Z,609nm,0.9s						
BRVK	Borovoye	63.73	327	P	P	20 51 33.7	+0.2
BRVK	Borovoye	63.73	327	P	P	20 51 34.4	+0.9
BRVK	Borovoye	63.73	327	ceP	P	20 51 33.9	+0.4
BRVK				pmax	pmax		
	comp=Z,1µm,1.3s						
BRVK	Borovoye	63.73	327	⇓P	P	20 51 34.2	+0.7
GRZ	Great Barrier	64.11	136	P	P	20 51 38.1	+1.9
JLN	Jalan Bani Buh	64.26	291	P	P	20 51 37.2	-0.3
	SNR=6.9						
MSZ	Milford Sound	64.29	147	P	P	20 51 38.7	+1.5
JCZ	Jackson Bay	64.38	146	P	P	20 51 39.5	+1.6
JCZ	Jackson Bay	64.38	146	P	P	20 51 39.3	+1.4
DCZ	Deep Cove	64.39	148	IAmb	IAmb	20 51 39.6	
	comp=Z,117nm,0.8s						
DCZ	Deep Cove	64.39	148	P	P	20 51 38.9	+1.1
KUZ	Kuaotunu	64.54	136	P	P	20 51 40.9	+2.0
FOZ	Fox Glacier	64.62	145	P	P	20 51 40.1	+0.8
QRZ	Quartz Range	64.64	141	P	P	20 51 40.9	+1.4
QRZ	Quartz Range	64.64	141	P	P	20 51 41.1	+1.6
DSZ	Denniston Nort	64.72	142	P	P	20 51 41.0	+1.0
KHEZ	Kahui Hut	64.73	139	P	P	20 51 42.3	+2.1
MLZ	Mavora Lakes	64.84	147	P	P	20 51 41.2	+0.5
HIZ	Hauiti	64.86	138	P	P	20 51 43.2	+2.2
HIZ	Hauiti	64.86	138	P	P	20 51 43.5	+2.5
WVZ	Waitaha Valley	64.87	144	P	P	20 51 41.6	+0.7
TOZ	Tahuroa Road	64.89	137	IAmb	IAmb	20 51 43.7	
	comp=Z,69nm,0.8s						
TOZ	Tahuroa Road	64.89	137	P	P	20 51 43.3	+2.2
WKZ	Wanaka	64.98	146	P	P	20 51 42.3	+0.6
WSAR	Wadi Sarin	65.04	293	P	P	20 51 42.4	0.0
	SNR=12						
LREZ	Lake Rotokare	65.07	139	P	P	20 51 45.1	+2.9
INZ	Inchbonnie	65.08	143	IAmb	IAmb	20 51 44.8	
	comp=Z,88nm,0.9s						
WHZ	Wether Hill Ro	65.09	148	P	P	20 51 42.4	+0.2
WHZ				IAmb	IAmb	20 51 43.0	
	comp=Z,48nm,0.8s						
WHZ	Wether Hill Ro	65.09	148	P	P	20 51 42.5	+0.2
VRZ	Vera Road	65.12	139	P	P	20 51 44.9	+2.3
TLZ	Tolley Road	65.23	137	P	P	20 51 45.7	+2.4
LBZ	Lake Benmore	65.36	145	P	P	20 51 45.0	+1.0
NNZ	Nelson	65.39	141	P	P	20 51 44.4	+0.2
EAZ	Earnscleugh	65.40	147	P	P	20 51 44.2	0.0
THZ	Tophouse	65.40	142	P	P	20 51 44.5	+0.1
THZ	Tophouse	65.40	142	P	P	20 51 44.7	+0.4
RPZ	Rata Peaks	65.44	144	P	P	20 51 45.4	+0.8
RPZ	Rata Peaks	65.44	144	P	P	20 51 45.4	+0.8
JOHN	Johnston Islan	65.46	75	P	P	20 51 45.9	+0.8
JOHN	Johnston Islan	65.46	75	P	P	20 51 47.5	+2.4
JMDO	Jabal Madar	65.48	292	P	P	20 51 45.2	0.0
	SNR=17						
BIDO	Bidbid	65.52	293	P	P	20 51 46.0	+0.5
	SNR=41						
MHTO	MHTO	65.54	290	P	P	20 51 46.0	+0.4
	SNR=23						
TWVZ	Taurewa	65.55	138	P	P	20 51 46.9	+1.5
SMDO	Samad	65.57	292	P	P	20 51 46.0	+0.1
	SNR=12						
LTZ	Lake Taylor	65.61	143	IAmb	IAmb	20 51 47.3	
	comp=Z,124nm,0.9s						
LTZ	Lake Taylor	65.61	143	P	P	20 51 46.2	+0.6
WTVZ	West Tongariro	65.67	138	P	P	20 51 48.1	+1.9
COVZ	Chateau Observ	65.68	138	P	P	20 51 48.2	+1.9
KRVZ	Karewarewa	65.69	138	P	P	20 51 48.4	+2.1
NNVZ	North Ngauruho	65.69	138	P	P	20 51 48.4	+2.0
NGZ	Ngauruhoe	65.71	138	P	P	20 51 48.5	+2.0
NTVZ	North Tongarir	65.72	138	P	P	20 51 48.7	+2.2
APZ	The Paps	65.73	149	P	P	20 51 47.0	+0.7
TRVZ	Turoa	65.74	138	P	P	20 51 48.3	+1.6
TMVZ	Te Maari	65.75	138	P	P	20 51 48.8	+2.2
WHVZ	Whangaehu Hut	65.76	138	P	P	20 51 48.5	+1.6
ETVZ	East Tongariro	65.76	138	P	P	20 51 48.8	+2.0
WNVZ	Wahianoa	65.79	138	P	P	20 51 48.7	+1.7
OXZ	Oxford	65.79	144	IAmb	IAmb	20 51 47.6	
	comp=Z,117nm,0.7s						
OXZ	Oxford	65.79	144	P	P	20 51 46.9	+0.3
TMZ	Timaru	65.82	145	P	P	20 51 47.7	+0.7
KIWB	Kanaga Island	65.88	35	P	P	20 51 48.0	+0.9
DQM	DQM	65.90	289	P	P	20 51 49.0	+1.1
	SNR=36						
MOVZ	Moawhango	65.93	138	P	P	20 51 48.8	+1.0
TUZ	Tuapeka	66.03	147	P	P	20 51 49.1	+0.9
MRHZ	Matea Rd	66.08	138	P	P	20 51 49.8	+1.1
MUGZ	Murupara	66.13	137	P	P	20 51 49.9	+1.0
SYZ	Scrubby Hill	66.14	148	P	P	20 51 49.4	+0.6
SYZ	Scrubby Hill	66.14	148	P	P	20 51 49.3	+0.5
KIW	Kapiti Island	66.16	140	P	P	20 51 49.4	+0.3
ADK	Adak	66.16	36	P	P	20 51 49.6	+0.8
KHZ	Kahutara	66.16	142	IAmb	IAmb	20 51 49.6	
	comp=Z,76nm,0.6s						
KHZ	Kahutara	66.16	142	P	P	20 51 49.3	+0.3
KHZ	Kahutara	66.16	142	P	P	20 51 49.2	+0.2
GVZ	Greta Valley S	66.17	143	P	P	20 51 50.0	+0.9
URZ	Urewera	66.25	137	P	P	20 51 50.2	+0.5
URZ	Urewera	66.25	137	P	P	20 51 50.1	+0.5
SNZO	South Karori	66.27	141	P	P	20 51 49.3	-0.4
SNZO	South Karori	66.27	141	P	P	20 51 49.6	-0.1
HOQ	Hoqain	66.28	293	P	P	20 51 51.0	+0.8
	SNR=25						
BKZ	Black Stump Fm	66.30	138	P	P	20 51 51.0	+1.0
BKZ	Black Stump Fm	66.30	138	P	P	20 51 51.2	+1.1
BSY	Bisya	66.33	292	P	P	20 51 51.0	+0.4
	SNR=12						
RTZ	Ruatahuna	66.34	137	P	P	20 51 51.1	+0.7
MQZ	McQueen’s Vall	66.37	144	IAmb	IAmb	20 51 53.0	
	comp=Z,130nm,1.0s						
MQZ	McQueen’s Vall	66.37	144	P	P	20 51 51.1	+0.8
TSZ	Takapari Road	66.41	139	P	P	20 51 51.0	+0.4
HAZ	Te Kaha	66.47	136	P	P	20 51 52.1	+1.1
NMHZ	Naumai	66.47	138	P	P	20 51 52.9	+1.8
MRZ	Mangatainoka R	66.48	140	IAmb	IAmb	20 51 51.5	
	comp=Z,70nm,0.8s						
MRZ	Mangatainoka R	66.48	140	P	P	20 51 51.1	+0.1
PNHZ	Pukenui	66.49	139	P	P	20 51 51.8	+0.6
HOWZ	Holdsworth Sta	66.56	140	P	P	20 51 51.1	-0.5
MWZ	Matawai	66.58	137	P	P	20 51 52.5	+0.8
GSTR	Great Sitkin T	66.59	35	P	P	20 51 52.4	+0.8
MXZ	Matakaoa Point	66.74	136	P	P	20 51 53.9	+1.2
PLWZ	Palliser	66.76	141	P	P	20 51 53.2	+0.3
BFZ	Birch Farm	66.92	139	IAmb	IAmb	20 51 55.5	
	comp=Z,131nm,0.8s						
BFZ	Birch Farm	66.92	139	P	P	20 51 54.5	+0.7
BFZ	Birch Farm	66.92	139	P	P	20 51 54.5	+0.7
PXZ	Pawanui	66.98	138	P	P	20 51 55.1	+0.9
ARQ	Araqi	66.98	293	P	P	20 51 55.0	+0.3
	SNR=13						
KNZ	Kokohu	67.02	137	P	P	20 51 54.4	0.0
SOHO	SOHO	67.02	293	P	P	20 51 54.3	-0.4
SOHO	SOHO	67.02	293	i P	P	20 51 54.1	-0.6
	SNR=48						
NRIK	Noril'sk	67.18	347	P	P	20 51 55.2	+0.4
NRIK	Noril'sk	67.18	347	P	P	20 51 55.4	+0.4
	comp=Z,372nm,0.7s,baz=134,slow=6.0,SNR=382						
NRIK				S	S	21 00 11.2	0.0
	comp=Z,12nm,1.0s,baz=318,slow=19,SNR=17						
	comp=Z,372nm,0.7s						
NRIK	Noril'sk	67.18	347	⇑eP	P	20 51 55.3	+0.4
NRIK				pmax	pmax		
	comp=Z,322nm,0.8s						
MDH	Madha	67.30	295	P	P	20 51 56.0	-0.5
	SNR=9.4						
MDH	Madha	67.30	295	i P	P	20 51 55.1	-1.4
	SNR=14						
UOSS	Minazif	67.36	294	P	P	20 51 56.0	-0.9
UOSS				IAmb	IAmb	20 52 21.1	
	comp=Z,63nm,0.8s						
UOSS	Minazif	67.36	294	P	P	20 51 57.0	+0.1
UOSS	Minazif	67.36	294	i P	P	20 51 56.0	-0.9
	SNR=8.0						
UOSS	Minazif	67.36	294	P	P	20 51 56.6	-0.4
UOSS				PcP	PcP	20 52 20.1	-0.4
HATD	Hatta, Dubai	67.42	294	P	P	20 51 58.0	+0.7
	SNR=26						
HATD	Hatta, Dubai	67.42	294	i P	P	20 51 57.0	-0.3
	SNR=57						
MSFE	Esma-Masafi	67.43	295	i P	P	20 51 56.8	-0.6
	SNR=42						
MASF	Masafi	67.43	295	P	P	20 51 58.0	+0.6
	SNR=20						
ASHO	Ashiyiah	67.48	294	P	P	20 51 58.0	+0.3
	SNR=29						
ASHO	Ashiyiah	67.48	294	i P	P	20 51 57.5	-0.2
	SNR=32						
SHME	Shamm	67.49	295	P	P	20 51 58.5	+0.9
	SNR=25						
SHME	Shamm	67.49	295	i P	P	20 51 57.8	+0.1
	SNR=56						
BILL	Bilibino	67.58	16	P	P	20 51 57.1	-0.3
BILL	Bilibino	67.58	16	d iP	P	20 51 57.4	+0.1
BILL				pmax	pmax		
	comp=Z,83nm,1.7s						
BILL	Bilibino	67.58	16	P	P	20 51 57.5	+0.1
ATKA	Atka Island	67.71	36	P	P	20 51 59.4	+1.0
ALNE	Al Ain	67.73	293	P	P	20 51 59.7	+0.5
	SNR=58						
ALNE	Al Ain	67.73	293	i P	P	20 51 59.4	+0.2
	SNR=157						
NAZ	Nazwa, Dubai	67.86	294	P	P	20 52 00.0	+0.1
	SNR=15						
NAZ	Nazwa, Dubai	67.86	294	i P	P	20 51 59.7	-0.2
	SNR=23						
UMQ	Umm Al-Quwin	67.89	295	P	P	20 52 01.4	+1.3
	SNR=8.3						
UMQ	Umm Al-Quwin	67.89	295	i P	P	20 52 01.1	+1.0
	SNR=11						
FAQ	Al Faqa, Dubai	67.91	294	P	P	20 52 01.0	+0.7
	SNR=16						
FAQ	Al Faqa, Dubai	67.91	294	i P	P	20 51 59.9	-0.3
	SNR=38						
ASUD	Al Ashush, Dub	68.14	294	P	P	20 52 03.0	+1.3
	SNR=17						
ASUD	Al Ashush, Dub	68.14	294	i P	P	20 52 02.2	+0.5
	SNR=28						
UMZA	Um Al Zommool	68.21	292	P	P	20 52 02.3	+0.2
DMTO	DMTO	68.33	286	P	P	20 52 03.2	+0.3
AB31	Akbulak array	68.44	321	P	P	20 52 03.1	+0.1
AB31	Akbulak array	68.44	321	i P	P	20 52 03.5	+0.5
ABKAR	Akbulak array	68.44	321	P	P	20 52 02.9	-0.2
ABKAR	Akbulak array	68.44	321	IAmb	IAmb	20 52 04.7	
	comp=Z,346nm,0.9s						
AJN	Ajban	68.45	294	P	P	20 52 03.7	+0.2
	SNR=24						
AJN	Ajban	68.45	294	i P	P	20 52 03.6	0.0
	SNR=39						
RBK	Rabkut	69.03	286	P	P	20 52 08.0	+0.7
	SNR=11						
DOK	Doka	69.10	287	P	P	20 52 08.0	+0.3
	SNR=28						
MZWR	Madinat Zayed	69.42	293	P	P	20 52 10.0	+0.5
WHFO	Wadi Hawf	69.45	287	P	P	20 52 10.0	+0.2
	SNR=23						
MSEY	Mahe Island	69.50	263	P	P	20 52 08.8	-1.4
MSEY				IAmb	IAmb	20 52 10.9	
	comp=Z,96nm,1.3s						
MSEY	Mahe Island	69.50	263	P	P	20 52 09.6	-0.6
MSEY	Mahe Island	69.50	263	P	P	20 52 08.8	-1.4
MSEY				pmax	pmax		
	comp=Z,96nm,1.3s						
NIUE	Niue	69.64	113	P	P	20 52 07.0	-3.8
MZR	Muzera	69.77	292	P	P	20 52 12.4	+0.8
	SNR=114						
MZR	Muzera	69.77	292	i P	P	20 52 12.2	+0.7
	SNR=429						
ABTO	Aybut	69.90	286	P	P	20 52 13.0	+0.4
	SNR=18						
AKTO	Aktyubinsk	69.95	321	P	P	20 52 12.6	+0.5
	comp=Z,439nm,0.8s,baz=99,slow=5.7,SNR=1038						
AKTO				S	S	21 00 43.2	-0.9
	comp=Z,5.1nm,0.9s,baz=336,slow=21,SNR=12						
	comp=Z,439nm,0.8s						
SVE	Sverdlovsk	70.32	328	c iP	P	20 52 14.7	+0.6
SVE				eS	S	21 00 47.2	-0.7
SVE				pmax	pmax		
	comp=Z,1µm,0.9s						
GHWR	Ruwais	70.35	293	P	P	20 52 15.5	+0.5
JRN	Qarnain Island	70.40	294	P	P	20 52 15.6	+0.3
	SNR=56						
NIKH	Nikolski High	71.05	36	IAmb	IAmb	20 52 20.4	
	comp=Z,101nm,0.6s						
NIKH	Nikolski High	71.05	36	P	P	20 52 19.3	+0.7
NIKH	Nikolski High	71.05	36	P	P	20 52 18.9	+0.4
	baz=255,SNR=13						
ARTI	Arti	71.36	328	P	P	20 52 19.1	-1.2
ARTI	Arti	71.36	328	P	P	20 52 20.3	0.0
	comp=Z,441nm,0.7s,baz=112,slow=3.7,SNR=1039						
ARTI				S	S	21 00 58.5	-1.4
	comp=Z,11nm,1.1s,baz=258,slow=22,SNR=12						
	comp=Z,441nm,0.7s						
ARTI	Arti	71.36	328	d iP	P	20 52 20.0	-0.4
ARTI						20 52 38.1	
ARTI						20 55 04.1	

ARTI				PPP	PPP	20 56 50.9	
ARTI				S	S	21 00 58.4	-1.4
ARTI						21 01 33.3	
ARTI				SS	SS	21 05 43.8	-2.4
ARTI				SSS	SSS	21 09 06.1	
ARTI				pmax	pmax		
	comp=Z,491nm,0.7s						
ARTI	Arti	71.36	328	P	P	20 52 20.4	0.0
SLWR	Sila	71.44	293	P	P	20 52 21.9	+0.5
SPIA	Saint Paul Isl	71.45	32	IAmb	IAmb	20 52 23.2	
	comp=Z,235nm,1.3s						
SPIA	Saint Paul Isl	71.45	32	P	P	20 52 21.9	+1.1
	baz=253,SNR=6.2						
P08K	Saint George I	71.65	32	P	P	20 52 23.3	+1.4
	baz=253						
TRNA	Turayna	71.89	294	P	P	20 52 25.0	+0.9
	SNR=18						
SHMA	Al-Shehemyia	72.14	295	P	P	20 52 26.1	+0.6
	SNR=25						
SMRA	Abu-Samra	72.24	294	P	P	20 52 27.0	+0.9
	SNR=31						
SAKB	Bahrain	72.52	295	P	P	20 52 28.2	+0.5
UNV	Unalaska Valle	72.63	36	IAmb	IAmb	20 52 29.2	
	comp=Z,99nm,0.8s						
UNV	Unalaska Valle	72.63	36	P	P	20 52 28.4	+0.6
	baz=257,SNR=18						
GAMB	Gambell	72.94	25	P	P	20 52 30.3	+1.0
	baz=249						
CTZ	Chatham Island	73.03	139	P	P	20 52 31.8	+1.5
AKUT	Akutan	73.11	35	IAmb	IAmb	20 52 32.0	
	comp=Z,129nm,0.7s						
AKUT	Akutan	73.11	35	P	P	20 52 31.3	+0.8
CASY	Casey	73.26	186	P	P	20 52 31.0	0.0
CASY				IAmb	IAmb	20 52 32.5	
	comp=Z,54nm,0.8s						
M11K	Mekoryuk	74.37	29	P	P	20 52 38.5	+0.9
	baz=255						
TNA	Tin City	75.06	24	P	P	20 52 42.5	+1.1
	baz=252						
KBD	Kabd	75.11	298	P	P	20 52 42.8	+0.4
K13K	Kusilvak Mount	75.48	28	P	P	20 52 45.3	+1.5
	baz=256,SNR=9.1						
S12K	Black Hills	75.52	34	P	P	20 52 44.2	0.0
	baz=260						
F14K	Arctic Creek	75.67	24	P	P	20 52 46.4	+1.5
	baz=254,SNR=11						
M13K	Dall Lake	75.75	29	P	P	20 52 46.9	+1.6
	baz=258						
ANM	Nome	75.82	25	P	P	20 52 46.8	+1.1
	baz=255						
MAK	Makhachkala	75.88	313	*e*P	P	20 52 46.1	-0.3
MAK				*e**PP	pP	20 54 27.7	-0.9
MAK				*e**SP	sP	20 55 16.7	-1.2
MAK				*e*		20 55 47.1	
MAK				*e*PPP	PPP	20 57 34.2	
MAK				*e*S	S	21 01 50.5	+0.4
MAK				*e*SS	SS	21 06 57.2	+2.3
MAK				*e*SSS	SSS	21 10 19.2	
MAK				pmax	pmax		
	comp=Z,207nm,0.8s						
MAK				MLR	MLR		
	comp=Z,141nm,16.0s						
J14K	Nanvaranak Lak	76.17	27	P	P	20 52 48.9	+1.4
	baz=257,SNR=7.0						
L14K	Kuka Creek	76.26	28	IAmb	IAmb	20 52 50.8	
	comp=Z,73nm,1.1s						
L14K	Kuka Creek	76.26	28	P	P	20 52 49.7	+1.6
	baz=258,SNR=15						
SDPT	Sand Point	76.35	35	IAmb	IAmb	20 52 50.0	
	comp=Z,127nm,0.7s						
SDPT	Sand Point	76.35	35	P	P	20 52 49.3	+0.5
SDPT	Sand Point	76.35	35	P	P	20 52 49.2	+0.4
	baz=262,SNR=12						
F15K	North Star Dit	76.41	24	P	P	20 52 50.3	+1.3
	baz=255,SNR=10.0						
N14K	Kuskokwak Cree	76.47	30	IAmb	IAmb	20 52 51.6	
	comp=Z,110nm,0.7s						
N14K	Kuskokwak Cree	76.47	30	P	P	20 52 50.6	+1.3
	baz=259,SNR=9.1						
G15K	Niukluk	76.48	25	P	P	20 52 50.2	+0.9
	baz=256,SNR=8.0						
M14K	Bethel	76.49	29	IAmb	IAmb	20 52 51.9	
	comp=Z,69nm,0.8s						
M14K	Bethel	76.49	29	P	P	20 52 50.8	+1.4
	baz=259,SNR=15						
O14K	Tigyukauivet M	76.56	31	IAmb	IAmb	20 52 52.0	
	comp=Z,65nm,0.8s						
O14K	Tigyukauivet M	76.56	31	P	P	20 52 51.1	+1.2
	baz=260,SNR=8.5						
KIRV	Kirov	76.58	329	*d i*P	P	20 52 49.9	-0.1
BELG	Belogornoye	76.71	322	P	P	20 52 51.1	+0.4
	comp=Z,1µm,0.9s,baz=23,slow=0.4,SNR=559						
	comp=Z,1µm,0.9s						
BELG	Belogornoye	76.71	322	*d i*P	P	20 52 50.6	-0.2
BELG				pmax	pmax		
	comp=Z,294nm,1.0s						
CNBA	Chernabura Isl	76.78	35	IAmb	IAmb	20 52 52.8	
	comp=Z,66nm,1.0s						
CHNA	Chernabura Isl	76.79	35	P	P	20 52 51.8	+0.6
CHNA	Chernabura Isl	76.79	35	P	P	20 52 51.8	+0.6
	baz=262,SNR=14						
C16K	Lisburne Hills	76.83	21	IAmb	IAmb	20 52 53.4	
	comp=Z,80nm,1.1s						
C16K	Lisburne Hills	76.83	21	P	P	20 52 52.2	+1.0
	baz=254,SNR=21						
L15K	Ungalak Mounta	76.89	28	P	P	20 52 52.7	+1.0
	baz=259,SNR=10						
K15K	Wolf Creek Mou	76.99	27	P	P	20 52 53.9	+1.7
	baz=259,SNR=13						
S14K	Fog Glacier	77.00	34	P	P	20 52 54.1	+1.6
	baz=262						
M15K	Kasigluk River	77.10	29	P	P	20 52 53.8	+1.0
	baz=260,SNR=25						
RAYN	Ar Rayn	77.11	293	P	P	20 52 53.4	-0.3
RAYN	Ar Rayn	77.11	293	P	P	20 52 54.1	+0.4
RAYN	Ar Rayn	77.11	293	P	P	20 52 54.1	+0.4
RAYN	Ar Rayn	77.11	293	*i* P	P	20 52 53.8	+0.1
	SNR=448						
H16K	Elim	77.15	25	P	P	20 52 54.1	+1.1
	baz=258,SNR=7.7						
G16K	Koyuk River	77.26	24	P	P	20 52 54.7	+1.1
	baz=258,SNR=13						
O15K	Ungalikthiuk R	77.28	31	P	P	20 52 55.0	+1.2
	baz=261,SNR=6.7						
N15K	Kwethluk River	77.30	30	IAmb	IAmb	20 52 56.5	
	comp=Z,81nm,0.9s						
N15K	Kwethluk River	77.30	30	P	P	20 52 55.4	+1.4
	baz=261,SNR=17						
D17K	Noatak River	77.50	22	P	P	20 52 56.5	+1.6
	baz=256,SNR=48						
J16K	Anvik River	77.59	27	P	P	20 52 57.1	+1.6
	baz=260,SNR=16						
RDOG	Red Dog Mine	77.65	22	IAmb	IAmb	20 52 58.2	
	comp=Z,90nm,1.4s						
RDOG	Red Dog Mine	77.65	22	P	P	20 52 57.0	+1.3
	baz=256,SNR=11						
C17K	DeLong Mountai	77.65	21	P	P	20 52 56.9	+1.2
	baz=256,SNR=25						
I17K	Unalakleet	77.66	26	IAmb	IAmb	20 52 58.7	
	comp=Z,96nm,1.2s						
I17K	Unalakleet	77.66	26	P	P	20 52 57.5	+1.7
	baz=259,SNR=6.1						
GNI	Garni	77.80	310	P	P	20 52 58.0	+0.7
GNI				IAmb	IAmb	20 53 15.9	
	comp=Z,236nm,1.1s						
GNI	Garni	77.80	310	P	P	20 52 58.8	+1.5
GNI	Garni	77.80	310	*d i*P	P	20 52 58.2	+0.9
GNI				pmax	pmax		
	comp=Z,167nm,1.5s						
GNI	Garni	77.80	310	P	P	20 52 58.8	+1.5
E17K	Hotham Inlet	77.84	23	P	P	20 52 58.1	+1.4
	baz=258,SNR=8.9						
L16K	Owhat River	77.84	28	IAmb	IAmb	20 52 59.4	
	comp=Z,88nm,1.1s						
L16K	Owhat River	77.84	28	P	P	20 52 58.2	+1.4
	baz=261,SNR=49						
F17K	Baldwin Pennin	77.93	23	IAmb	IAmb	20 52 59.8	
	comp=Z,125nm,1.6s						
F17K	Baldwin Pennin	77.93	23	P	P	20 52 58.6	+1.4
	baz=258						
G17K	Kiwalik Mounta	77.98	24	P	P	20 52 59.1	+1.6
	baz=259,SNR=28						
M16K	Timber Creek	77.98	29	IAmb	IAmb	20 53 00.2	
	comp=Z,75nm,0.8s						
M16K	Timber Creek	77.98	29	P	P	20 52 59.1	+1.5
	baz=262,SNR=43						
N16K	Nishlik Lake	78.00	30	P	P	20 52 59.6	+1.9
	baz=262,SNR=36						
GUDG	Gudauri	78.08	312	P	P	20 53 00.1	+1.3
H17K	Granite Mounta	78.19	25	IAmb	IAmb	20 53 01.3	
	comp=Z,64nm,0.8s						
H17K	Granite Mounta	78.19	25	P	P	20 53 00.3	+1.6
	baz=260,SNR=40						
P16K	Nushagak River	78.20	31	P	P	20 52 59.9	+1.1
	baz=263						
O16K	Kokwok River B	78.22	31	IAmb	IAmb	20 53 01.3	
	comp=Z,62nm,0.9s						
O16K	Kokwok River B	78.22	31	P	P	20 53 00.3	+1.4
	baz=263,SNR=24						
J17K	VABM Dome	78.29	27	P	P	20 53 01.0	+1.7
	baz=261,SNR=23						
TRLG	Trialeti	78.33	311	P	P	20 53 01.2	+1.1
B18K	Kokolik River	78.34	20	P	P	20 53 01.3	+1.9
	baz=257,SNR=32						
E18K	Tukpahlearik C	78.37	22	IAmb	IAmb	20 53 02.3	
	comp=Z,61nm,0.8s						
E18K	Tukpahlearik C	78.37	22	P	P	20 53 01.2	+1.6
	baz=259,SNR=31						
C18K	Utukok River	78.40	21	IAmb	IAmb	20 53 01.6	
	comp=Z,46nm,0.7s						
C18K	Utukok River	78.40	21	P	P	20 53 00.9	+1.1
	baz=258,SNR=31						
L17K	Donlin	78.46	28	P	P	20 53 02.1	+2.0
	baz=262,SNR=32						
K17K	Iditarod	78.54	27	IAmb	IAmb	20 53 03.5	
	comp=Z,93nm,0.9s						
K17K	Iditarod	78.54	27	P	P	20 53 02.4	+1.9
	baz=262,SNR=38						
F18K	Selawik	78.59	23	P	P	20 53 01.9	+1.2
	baz=260,SNR=6.0						
O17K	Koliganek Bris	78.74	30	P	P	20 53 03.0	+1.3
	baz=264,SNR=16						
NCK	Nalchik	78.76	313	*d i*P	P	20 53 02.5	+0.3
NCK				pmax	pmax		
	comp=Z,186nm,0.9s						
M17K	Holitna River	78.77	29	P	P	20 53 03.9	+2.0
	baz=263,SNR=16						
A19K	Wainwright	78.78	20	P	P	20 53 03.7	+2.1
	baz=258						
N17K	Nushagak Hills	78.78	30	P	P	20 53 03.9	+2.0
	baz=263,SNR=16						
AIN	Ainahou	78.78	72	P	P	20 53 03.0	0.0
AIN				IAmb	IAmb	20 53 06.7	
	comp=Z,174nm,1.0s						
MLH	Mauna Loa	78.85	71	P	P	20 53 04.7	+1.3
G18K	Tagagawik	78.87	24	P	P	20 53 03.1	+0.8
	baz=261,SNR=17						
H18K	Honhosa River	78.87	25	P	P	20 53 03.7	+1.3
	baz=261,SNR=18						
HATHI	Halema‘uma‘u T	78.97	72	IAmb	IAmb	20 53 06.8	
	comp=Z,89nm,0.9s						
BYL	Byron's Ledge	78.97	72	IAmb	IAmb	20 53 07.2	
	comp=Z,104nm,0.9s						
P17K	Kvichak River	79.01	31	P	P	20 53 04.2	+1.1
	baz=264,SNR=12						
C19K	Lookout Ridge	79.06	21	IAmb	IAmb	20 53 06.3	
	comp=Z,109nm,0.8s						
C19K	Lookout Ridge	79.06	21	P	P	20 53 05.2	+1.9
	baz=259,SNR=59						
CHIR	Chirikof Islan	79.14	34	P	P	20 53 05.4	+1.5
CHIR	Chirikof Islan	79.14	34	P	P	20 53 05.2	+1.2
	baz=266						
GOF	Gofitskoye	79.20	315	*d i*P	P	20 53 04.8	+0.3
GOF				*e*S	S	21 02 26.6	+1.4
Q17K	Contact Creek	79.21	32	P	P	20 53 04.3	-0.1
	baz=265,SNR=24						
L18K	Granite Mounta	79.22	28	IAmb	IAmb	20 53 07.1	
	comp=Z,98nm,1.4s						
L18K	Granite Mounta	79.22	28	P	P	20 53 06.1	+1.9
	baz=263,SNR=33						
KBZ	Khabaz	79.28	313	P	P	20 53 05.6	+0.7
	comp=Z,80nm,0.8s,baz=106,slow=3.2,SNR=160						
KBZ				S	S	21 02 26.7	+0.7
	comp=Z,6.4nm,1.1s,baz=287,slow=20,SNR=6.6						
	comp=Z,80nm,0.8s						
KBZ	Khabaz	79.28	313	*d i*P	P	20 53 05.2	+0.3
KBZ				pmax	pmax		
	comp=Z,160nm,1.1s						
J18K	Innoko River	79.35	27	P	P	20 53 06.2	+1.2
	baz=263,SNR=43						
F19K	Shaleruckik Mo	79.36	23	P	P	20 53 05.7	+0.8
	baz=262,SNR=17						
KIV	Kislovodsk	79.43	313	P	P	20 53 05.7	-0.2
KIV	Kislovodsk	79.43	313	P	P	20 53 06.5	+0.6
KIV	Kislovodsk	79.43	313	⇑P	P	20 53 06.6	+0.7
KIV	Kislovodsk	79.43	313	*e*P	P	20 53 06.0	+0.2
KIV				*e**PP	pP	20 54 49.7	+0.5
KIV				*e*S	S	21 02 27.8	-0.1
KIV				pmax	pmax		
	comp=Z,69nm,3.2s						
KIV				pmax	pmax		
	comp=Z,297nm,1.1s						
KIV				smax	smax		
	comp=Z,148nm,19.0s						
KIV	Kislovodsk	79.43	313	*i* P	P	20 53 06.1	+0.2
	SNR=99						
N18K	Kilae Creek	79.43	30	P	P	20 53 07.1	+1.6
	baz=264,SNR=14						
GCSA	Galena City Sc	79.44	25	P	P	20 53 06.9	+1.6
	baz=263,SNR=9.9						
SHA1	Shidzhatmaz	79.45	313	*d i*P	P	20 53 06.3	+0.1
D19K	Kuna River	79.49	21	P	P	20 53 07.0	+1.4
	baz=261						
G19K	Purcell Mounta	79.54	24	IAmb	IAmb	20 53 08.4	
	comp=Z,83nm,1.1s						
G19K	Purcell Mounta	79.54	24	P	P	20 53 07.3	+1.5
	baz=262,SNR=42						
M18K	Stony River	79.55	29	P	P	20 53 07.8	+1.9
	baz=264,SNR=45						
P18K	Big Mountain,	79.65	31	P	P	20 53 07.0	+0.4
	baz=265,SNR=6.0						
E19K	Redstone River	79.66	23	P	P	20 53 08.0	+1.5
	baz=262						
O18K	Koktuh Hills	79.70	30	IAmb	IAmb	20 53 09.5	
	comp=Z,85nm,0.8s						
O18K	Koktuh Hills	79.70	30	P	P	20 53 08.3	+1.5
	baz=265,SNR=26						
Q18K	Katmai Hardscr	79.70	32	P	P	20 53 06.8	-0.2
	baz=266,SNR=9.9						
H19K	Roundabout Mou	79.72	25	IAmb	IAmb	20 53 09.7	
	comp=Z,133nm,0.9s						
H19K	Roundabout Mou	79.72	25	P	P	20 53 08.5	+1.7
	baz=263,SNR=102						
ABPO	Ambohimpanom	79.89	249	P	P	20 53 08.1	-0.8
ABPO	Ambohimpanom	79.89	249	P	P	20 53 08.1	-0.8
ABPO				pmax	pmax		
	comp=Z,44nm,0.8s						
J19K	Poorman	79.89	26	IAmb	IAmb	20 53 10.5	
	comp=Z,78nm,1.1s						
J19K	Poorman	79.89	26	P	P	20 53 09.4	+1.6
	baz=264,SNR=76						
R18K	Karluk	79.92	33	P	P	20 53 08.3	+0.4
	baz=266						
SII	Sitkinak Islan	80.00	34	IAmb	IAmb	20 53 10.9	
	comp=Z,71nm,0.7s						
SII	Sitkinak Islan	80.00	34	P	P	20 53 10.1	+1.6
SII	Sitkinak Islan	80.00	34	P	P	20 53 10.0	+1.5
	baz=267						
B20K	Meade River	80.06	20	IAmb	IAmb	20 53 11.1	
	comp=Z,116nm,0.8s						
B20K	Meade River	80.06	20	P	P	20 53 10.1	+1.7
	baz=262,SNR=27						
D20K	Etivluk River	80.06	21	P	P	20 53 10.1	+1.5
	baz=262						
L19K	White Mountain	80.07	28	IAmb	IAmb	20 53 11.5	
	comp=Z,70nm,0.9s						
L19K	White Mountain	80.07	28	P	P	20 53 10.4	+1.6
	baz=265,SNR=59						
N19K	Bonanza Creek	80.13	29	IAmb	IAmb	20 53 12.0	
	comp=Z,69nm,0.8s						
N19K	Bonanza Creek	80.13	29	P	P	20 53 11.0	+1.8
	baz=266,SNR=47						
E20K	Nigu River	80.16	22	P	P	20 53 10.6	+1.4
	baz=263						
O19K	Port Alsworth	80.17	30	P	P	20 53 10.2	+1.0
	baz=266,SNR=6.3						
F20K	Avaraart Lake	80.19	23	P	P	20 53 10.8	+1.6
	baz=263,SNR=61						
M19K	Big River Lodg	80.26	28	P	P	20 53 11.5	+1.8
	baz=266						
VRH	Novokhopyorsk	80.27	321	*e*P	P	20 53 09.4	-0.6
VRH				*e*S	S	21 02 32.1	-3.9
VRH				pmax	pmax		
	comp=Z,936nm,0.8s						
VRH				pmax	pmax		
	comp=Z,1µm,0.8s						
ATD	Arta Tunnel	80.30	281	IAmb	IAmb	20 53 13.6	
	comp=Z,138nm,1.1s						
ATD	Arta Tunnel	80.30	281	P	P	20 53 12.8	+1.8
	SNR=6.6						
H20K	Anotleneega Mo	80.36	25	P	P	20 53 11.8	+1.6
	baz=264,SNR=82						
A21K	Barrow	80.43	19	P	P	20 53 11.9	+1.5
	baz=262						
Q19K	Cape Douglas,	80.43	31	IAmb	IAmb	20 53 11.7	
	comp=Z,66nm,0.8s						
Q19K	Cape Douglas,	80.43	31	P	P	20 53 10.6	-0.1
	baz=267						
I20K	Naaghedeneel	80.47	25	IAmb	IAmb	20 53 13.7	
	comp=Z,145nm,0.8s						
I20K	Naaghedeneel	80.47	25	P	P	20 53 12.7	+2.0
	baz=265,SNR=22						
K20K	Telida	80.53	27	P	P	20 53 12.7	+1.6
	baz=266						
OHAK	Old Harbor	80.53	33	IAmb	IAmb	20 53 13.3	
	comp=Z,52nm,0.8s						
OHAK	Old Harbor	80.53	33	P	P	20 53 12.3	+1.2
OHAK	Old Harbor	80.53	33	P	P	20 53 12.4	+1.2
	baz=267,SNR=19						
L20K	Farewell, AK	80.55	28	P	P	20 53 13.0	+1.7
	baz=266,SNR=37						
J20K	Nowinta River	80.56	26	IAmb	IAmb	20 53 14.1	
	comp=Z,47nm,0.8s						
J20K	Nowinta River	80.56	26	P	P	20 53 13.1	+1.9
	baz=265,SNR=72						
C21K	Knifeblade Rid	80.78	21	P	P	20 53 14.0	+1.7
	baz=264,SNR=23						
VOI	Vohitsoka	80.82	247	IAmb	IAmb	20 53 13.9	
	comp=Z,110nm,0.9s						
VOI	Vohitsoka	80.82	247	P	P	20 53 13.1	-0.6
	SNR=5.1						
LABN	Labinsk	80.85	314	*e*P	P	20 53 13.7	+0.5
LABN				*e**PP	pP	20 55 00.2	+3.3
LABN				*e*S	S	21 02 43.3	+1.1
LABN				pmax	pmax		
	comp=Z,157nm,0.9s						
M20K	Styx River	80.86	28	P	P	20 53 14.6	+1.7
	baz=267						
IMAR	Indian Mountai	80.87	24	P	P	20 53 13.9	+1.1
B21K	Ikpikpuk River	80.89	21	IAmb	IAmb	20 53 15.5	
	comp=Z,123nm,0.8s						
B21K	Ikpikpuk River	80.89	21	P	P	20 53 14.6	+1.8
	baz=264,SNR=64						
A22K	Sinclair Lake	80.92	19	P	P	20 53 14.8	+1.9
	baz=264,SNR=17						
KDAK	Kodiak Island	80.93	33	P	P	20 53 14.1	+0.8
KDAK				IAmb	IAmb	20 53 15.4	
	comp=Z,53nm,0.7s						
KDAK	Kodiak Island	80.93	33	*d i*P	P	20 53 14.0	+0.8
KDAK				pmax	pmax		
	comp=Z,46nm,0.8s						
KDAK	Kodiak Island	80.93	33	P	P	20 53 14.5	+1.2
	baz=268						
RED	Redoubt Volcan	80.95	30	IAmb	IAmb	20 53 14.7	
	comp=Z,74nm,0.9s						
E21K	Killik River	81.00	22	IAmb	IAmb	20 53 16.0	
	comp=Z,90nm,0.9s						
E21K	Killik River	81.00	22	P	P	20 53 14.8	+1.3
	baz=265,SNR=73						
O20K	Slope Mountain	81.01	30	P	P	20 53 13.8	0.0
	baz=267						
G21K	Allakaket	81.01	24	P	P	20 53 15.2	+1.6
	baz=266,SNR=64						
ERBR	Yeremizino-Bor	81.02	315	*e*P	P	20 53 14.2	+0.2
ERBR				*e**PP	pP	20 54 57.5	-0.3
ERBR				*e*S	S	21 02 42.8	-1.0
ERBR				pmax	pmax		
	comp=Z,385nm,0.9s						
Q20K	Shuyak Island	81.06	32	P	P	20 53 14.7	+0.7
	baz=268,SNR=5.4						
SYI	Shuyak Island	81.06	32	IAmb	IAmb	20 53 16.8	
	comp=Z,42nm,0.6s						
F21K	Alatna River	81.08	23	P	P	20 53 14.9	+0.9
	baz=266,SNR=18						
H21K	Melozitna Rive	81.24	25	IAmb	IAmb	20 53 17.8	
	comp=Z,169nm,1.8s						
H21K	Melozitna Rive	81.24	25	P	P	20 53 16.4	+1.6
	baz=266,SNR=46						
FOMA	Nahampoana Res	81.24	244	P	P	20 53 15.1	-0.4
FOMA				IAmb	IAmb	20 53 16.4	
	comp=Z,71nm,0.9s						
N20K	Mount Spurr	81.26	29	P	P	20 53 15.7	+0.7
	baz=268,SNR=25						
SPCR	Spurr Chakacha	81.26	29	P	P	20 53 15.7	+0.6
	baz=268,SNR=17						
CHUM	Lake Minchumin	81.34	26	P	P	20 53 17.0	+1.7
	baz=267,SNR=24						
PPLA	Purkeypile	81.35	27	IAmb	IAmb	20 53 17.8	
	comp=Z,328nm,1.8s						
PPLA	Purkeypile	81.35	27	P	P	20 53 16.6	+1.1
	baz=267,SNR=32						
VSLR	Vesyoloye	81.36	313	*d i*P	P	20 53 15.9	+0.1
VSLR				pmax	pmax		
	comp=Z,237nm,0.8s						
B22K	Teshekpuk Lake	81.36	20	IAmb	IAmb	20 53 17.9	
	comp=Z,152nm,0.9s						
B22K	Teshekpuk Lake	81.36	20	P	P	20 53 16.7	+1.5
	baz=265,SNR=37						
CAST	Castle Rocks	81.42	27	IAmb	IAmb	20 53 18.1	
	comp=Z,89nm,1.0s						
CAST	Castle Rocks	81.42	27	P	P	20 53 16.9	+1.2
	baz=267,SNR=131						
HOM	Homer	81.49	31	P	P	20 53 16.6	+0.5
	baz=268						
D22K	Ayikyak River	81.50	21	P	P	20 53 18.1	+2.0
	baz=266,SNR=27						
I21K	Tanana	81.55	25	IAmb	IAmb	20 53 19.3	
	comp=Z,116nm,1.2s						
I21K	Tanana	81.55	25	P	P	20 53 18.2	+1.9
	baz=267,SNR=86						
SOC	Sochi	81.58	313	*e*P	P	20 53 15.0	-2.0
SOC				*e**PP	pP	20 55 00.3	-0.7
SOC				*e*		20 56 30.1	
SOC				*e*PPP	PPP	20 58 24.2	
SOC				*e*S	S	21 02 46.0	-3.6
SOC				*e*SS	SS	21 08 19.5	-0.1
SOC				*e*SSS	SSS	21 11 53.4	
SOC				pmax	pmax		
	comp=Z,104nm,0.7s						
F22K	John River	81.60	23	P	P	20 53 18.5	+1.9
	baz=267,SNR=7.0						
SKT	Skwentna	81.62	28	IAmb	IAmb	20 53 18.0	
	comp=Z,89nm,1.0s						
SKT	Skwentna	81.62	28	P	P	20 53 17.0	+0.2
	baz=268,SNR=68						
CNPM	China Poot	81.69	31	IAmb	IAmb	20 53 18.7	
	comp=Z,111nm,0.8s						
CAPN	Captain Cook N	81.76	30	P	P	20 53 19.0	+1.5
	baz=268						
E22K	Anaktuvuk Pass	81.78	22	IAmb	IAmb	20 53 20.6	
	comp=Z,169nm,1.6s						
E22K	Anaktuvuk Pass	81.78	22	P	P	20 53 19.2	+1.7
	baz=267,SNR=40						
KLMR	Klimovskoe	81.79	330	*c i*P	P	20 53 14.1	-3.5
KLMR				*e**PP	pP	20 54 58.1	-3.7
KLMR				*e*S	S	21 02 45.9	-5.1
KLMR				pmax	pmax		
	comp=Z,1µm,1.2s						
VORD	Divnogorie	81.80	320	*e*P	P	20 53 17.1	-0.8
VORD				*e*S	S	21 02 49.5	-2.0
VORD				pmax	pmax		
	comp=Z,320nm,0.6s						
VORD				pmax	pmax		
	comp=Z,780nm,1.4s						
VORD				smax	smax		
	comp=N,170nm,1.0s						
G22K	Bettles	81.83	23	P	P	20 53 19.2	+1.4
	baz=267						
H22K	Ishtalitna Cre	81.84	24	P	P	20 53 19.8	+1.9
	baz=268,SNR=74						
VORR	Voronezh	81.85	321	*e*P	P	20 53 17.9	-0.3
VORR				*e*S	S	21 02 48.6	-3.4
VORR				pmax	pmax		
	comp=Z,454nm,0.5s						
VORR				pmax	pmax		
	comp=Z,688nm,1.4s						
VORR				smax	smax		
	comp=N,171nm,1.1s						
BRLK	Bradley Lake	81.87	31	IAmb	IAmb	20 53 19.5	
	comp=Z,123nm,0.8s						
VSR	Storozhevoye	81.88	321	*e*P	P	20 53 17.7	-0.6

VSR				eS	S	21 02 47.6	-4.7
VSR				pmax	pmax		
	comp=Z,370nm,0.6s						
VSR				pmax	pmax		
	comp=Z,290nm,0.6s						
VSR				smax	smax		
	comp=N,190nm,1.0s						
BPAW	Bear Paw Mtn.	81.94	26	IAmb	IAmb	20 53 20.7	
	comp=Z,133nm,0.8s						
BPAW	Bear Paw Mtn.	81.94	26	P	P	20 53 19.5	+1.1
	baz=268,SNR=138						
BRSE	Bradley Lake S	81.94	31	P	P	20 53 18.9	+0.4
	baz=269,SNR=50						
KTH	Kantishna Hill	81.95	27	IAmb	IAmb	20 53 21.1	
	comp=Z,85nm,1.1s						
SUA	Susitna One	81.98	29	IAmb	IAmb	20 53 20.6	
	comp=Z,113nm,0.8s						
SUA	Susitna One	81.98	29	P	P	20 53 18.8	0.0
	baz=269,SNR=58						
LPSR	Galich'ya Gora	82.02	322	eP	P	20 53 18.8	-0.2
LPSR				eS	S	21 02 49.6	-4.0
LPSR				pmax	pmax		
	comp=Z,635nm,0.9s						
LPSR				pmax	pmax		
	comp=Z,552nm,0.9s						
MLY	Manley	82.07	25	IAmb	IAmb	20 53 21.6	
	comp=Z,96nm,0.9s						
MLY	Manley	82.07	25	P	P	20 53 20.4	+1.3
	baz=268,SNR=160						
SLKM	Skilak Lake	82.22	30	IAmb	IAmb	20 53 21.1	
	comp=Z,98nm,0.7s						
CUT	Chulitna	82.22	28	P	P	20 53 19.9	+0.1
	baz=269						
TRF	Thorofare Moun	82.23	27	IAmb	IAmb	20 53 21.7	
	comp=Z,92nm,0.9s						
TRF	Thorofare Moun	82.23	27	P	P	20 53 20.6	+0.5
	baz=269,SNR=81						
D23K	Nanushuk River	82.23	21	IAmb	IAmb	20 53 23.2	
	comp=Z,157nm,1.1s						
D23K	Nanushuk River	82.23	21	P	P	20 53 21.8	+2.0
	baz=268,SNR=45						
M22K	Willow	82.28	29	P	P	20 53 20.3	+0.2
	baz=269,SNR=15						
C23K	Itkillik River	82.29	20	P	P	20 53 21.9	+1.9
	baz=268,SNR=43						
COLD	Coldfoot	82.35	23	IAmb	IAmb	20 53 23.5	
	comp=Z,101nm,1.0s						
COLD	Coldfoot	82.35	23	P	P	20 53 22.2	+1.8
	baz=268,SNR=82						
G23K	Bananza Creek	82.41	24	IAmb	IAmb	20 53 24.0	
	comp=Z,108nm,1.0s						
G23K	Bananza Creek	82.41	24	P	P	20 53 22.6	+1.8
	baz=269,SNR=97						
RC01	Rabbit Creek A	82.46	29	IAmb	IAmb	20 53 22.4	
	comp=Z,75nm,0.8s						
RC01	Rabbit Creek A	82.46	29	P	P	20 53 21.2	+0.1
	baz=270,SNR=20						
O22K	Cooper Landing	82.46	30	P	P	20 53 21.5	+0.4
	baz=270						
H23K	Yukon River	82.59	24	IAmb	IAmb	20 53 24.6	
	comp=Z,104nm,0.8s						
H23K	Yukon River	82.59	24	P	P	20 53 23.5	+1.8
	baz=269,SNR=129						
E23K	Chandalar	82.60	22	IAmb	IAmb	20 53 25.0	
	comp=Z,161nm,0.9s						
E23K	Chandalar	82.60	22	P	P	20 53 23.8	+2.0
	baz=269,SNR=111						
SEW	Seward	82.60	30	IAmb	IAmb	20 53 23.4	
	comp=Z,77nm,0.7s						
SEW	Seward	82.60	30	P	P	20 53 22.4	+0.6
	baz=270,SNR=14						
TOLK	Toolik Lake Re	82.62	22	IAmb	IAmb	20 53 24.8	
	comp=Z,129nm,0.8s						
TOLK	Toolik Lake Re	82.62	22	P	P	20 53 23.8	+2.0
	baz=269,SNR=65						
I23K	Minto, Yukon-K	82.66	25	P	P	20 53 23.4	+1.5
	baz=270,SNR=159						
PMR	Palmer	82.75	29	IAmb	IAmb	20 53 23.9	
	comp=Z,89nm,1.3s						
PMR	Palmer	82.75	29	P	P	20 53 22.8	+0.3
	baz=270						
MOS	Moscow	82.76	325	eP	P	20 53 19.4	-3.3
MOS				e		20 56 39.7	
MOS				eS	SKSac	21 02 54.4	-4.1
MOS				pmax	pmax		
	comp=Z,1µm,1.3s						
MOS				pmax	pmax		
	comp=Z,850nm,1.0s						
MOS				pmax	pmax		
	comp=N,300nm,1.1s						
MOS				pmax	pmax		
	comp=E,200nm,1.0s						
MOS				pmax	pmax		
	comp=N,250nm,1.1s						
MOS				pmax	pmax		
	comp=E,245nm,1.1s						
MOS				smax	smax		
	comp=E,700nm,3.4s						
NEA2	Nenana	82.78	26	IAmb	IAmb	20 53 25.5	
	comp=Z,122nm,1.1s						
NEA2	Nenana	82.78	26	P	P	20 53 24.0	+1.3
	baz=270,SNR=128						
MCK	McKinley	82.84	27	P	P	20 53 23.5	+0.5
	baz=270,SNR=99						
D24K	Happy Valley	82.90	21	P	P	20 53 25.2	+2.1
	baz=270,SNR=112						
C24K	Franklin Bluff	82.95	21	P	P	20 53 25.1	+1.7
	baz=270						
WAT1	Susitna Watana	83.02	28	P	P	20 53 24.2	+0.3
	baz=271						
E24K	Your Creek	83.02	22	IAmb	IAmb	20 53 26.7	
	comp=Z,54nm,0.8s						
E24K	Your Creek	83.02	22	P	P	20 53 25.5	+1.6
	baz=270,SNR=48						
KNK	Knik Glacier	83.08	29	IAmb	IAmb	20 53 26.1	
	comp=Z,70nm,0.8s						
KNK	Knik Glacier	83.08	29	P	P	20 53 25.0	+0.8
	baz=271,SNR=25						
SML	Sawmill	83.13	29	IAmb	IAmb	20 53 26.3	
	comp=Z,82nm,0.8s						
SML	Sawmill	83.13	29	P	P	20 53 25.1	+0.5
	baz=271,SNR=41						
PWL	Port Wells	83.14	30	IAmb	IAmb	20 53 26.2	
	comp=Z,78nm,1.0s						
PWL	Port Wells	83.14	30	P	P	20 53 25.2	+0.6
	baz=271,SNR=39						
ANN	Anapa	83.19	314	d iP	P	20 53 24.5	-0.6
ANN				e*PP	pP	20 55 13.6	+4.1
ANN				eS	SKSac	21 03 00.0	-1.7
ANN				pmax	pmax		
	comp=N,174nm,0.7s						
ANN				pmax	pmax		
	comp=Z,765nm,0.7s						
ANN				pmax	pmax		
	comp=E,90nm,0.6s						
WRH	Wood River Hil	83.20	26	IAmb	IAmb	20 53 26.2	
	comp=Z,106nm,1.1s						
F24K	Squaw Lake	83.25	23	IAmb	IAmb	20 53 28.1	
	comp=Z,68nm,0.9s						
F24K	Squaw Lake	83.25	23	P	P	20 53 26.9	+1.9
	baz=271,SNR=60						
H24K	Noodor Dome	83.28	24	IAmb	IAmb	20 53 29.0	
	comp=Z,106nm,1.1s						
H24K	Noodor Dome	83.28	24	P	P	20 53 26.7	+1.5
	baz=271,SNR=138						
COLA	College	83.30	25	P	P	20 53 25.0	-0.2
COLA	College	83.30	25	P	P	20 53 25.6	+0.4
COLA	College	83.30	25	P	P	20 53 25.4	+0.2
	baz=271						
CCB	Clear Creek Bu	83.32	26	IAmb	IAmb	20 53 26.5	
	comp=Z,109nm,1.3s						
OBN	Obninsk	83.38	325	P	P	20 53 25.6	-0.2
OBN	Obninsk	83.38	325	⇑P	P	20 53 25.9	+0.1
OBN	Obninsk	83.38	325	d iP	P	20 53 25.6	-0.2
OBN				i *PP	pP	20 55 14.2	+3.8
OBN				i		20 56 48.7	
OBN				i SS	SS	21 08 41.1	-4.1
OBN				pmax	pmax		
	comp=Z,1µm,1.3s						
WAT6	Susitna Watana	83.39	28	P	P	20 53 26.5	+0.5
	baz=271,SNR=32						
M23K	Glacier View	83.42	29	P	P	20 53 26.4	+0.4
	baz=271,SNR=17						
G24K	Hadweenzic Riv	83.42	24	IAmb	IAmb	20 53 28.8	
	comp=Z,95nm,0.9s						
G24K	Hadweenzic Riv	83.42	24	P	P	20 53 27.5	+1.7
	baz=271,SNR=87						
POKR	Poker Plat Res	83.47	25	P	P	20 53 26.0	-0.1
	baz=271,SNR=7.6						
DHY	Denali Highway	83.55	27	P	P	20 53 27.1	+0.3
	baz=272,SNR=15						
SCM	Sheep Creek Mo	83.61	29	IAmb	IAmb	20 53 28.9	
	comp=Z,50nm,1.0s						
SCM	Sheep Creek Mo	83.61	29	P	P	20 53 27.5	+0.6
	baz=272,SNR=14						
P23K	Montague Islan	83.63	30	IAmb	IAmb	20 53 29.1	
	comp=Z,64nm,0.8s						
P23K					pP	20 55 11.6	-0.1
P23K	Montague Islan	83.63	30	P	P	20 53 27.8	+0.8
	baz=272,SNR=10						
HDA	Harding Lake	83.70	26	IAmb	IAmb	20 53 28.0	
	comp=Z,54nm,0.7s						
HDA	Harding Lake	83.70	26	P	P	20 53 26.9	-0.3
	baz=272,SNR=68						
ILAR	Eielson Array	83.72	26	P	P	20 53 26.0	-1.3
ILAR	Eielson Array	83.72	26	P	P	20 53 27.1	-0.3
	comp=Z,14nm,0.7s,baz=246,slow=4.4,SNR=95						
ILAR				pP	pP	20 55 12.2	-0.1
	comp=Z,3.9nm,0.9s,baz=260,slow=5.9,SNR=2.9						
ILAR				S	SKSac	21 03 04.0	-0.3
	comp=Z,1.8nm,1.1s,baz=275,slow=8.1,SNR=4.4						
	comp=Z,14nm,0.7s						
GLI	Glacier Island	83.75	29	IAmb	IAmb	20 53 29.4	
	comp=Z,47nm,0.6s						
GLI	Glacier Island	83.75	29	P	P	20 53 28.2	+0.6
	baz=272,SNR=21						
D25K	Kavik River	83.78	21	IAmb	IAmb	20 53 30.3	
	comp=Z,113nm,1.2s						
D25K	Kavik River	83.78	21	P	P	20 53 29.0	+1.4
	baz=272,SNR=37						
LVZ	Lovozero	83.87	338	P	P	20 53 27.7	-0.4
LVZ	Lovozero	83.87	338	d iP	P	20 53 27.5	-0.6
LVZ				pmax	pmax		
	comp=Z,111nm,0.8s						
G25K	Bearman Lake	83.97	24	P	P	20 53 30.2	+1.7
	baz=272,SNR=25						
FID	Port Fidalgo	84.06	30		pP	20 55 13.5	-0.6
H25L	Birch Creek	84.10	24	P	P	20 53 31.0	+1.8
	baz=273,SNR=63						
F25K	Christian Rive	84.11	23	P	P	20 53 31.0	+1.7
	baz=273,SNR=25						
E25K	Arctic Village	84.12	22	IAmb	IAmb	20 53 32.5	
	comp=Z,212nm,1.9s						
E25K	Arctic Village	84.12	22	P	P	20 53 31.0	+1.7
	baz=273,SNR=22						
M24K	Tolsona, Glenn	84.14	28	IAmb	IAmb	20 53 32.0	
	comp=Z,50nm,0.8s						
M24K	Tolsona, Glenn	84.14	28	P	P	20 53 31.0	+1.4
	baz=273,SNR=6.8						
K24K	Donnelly Dome	84.24	26	IAmb	IAmb	20 53 33.4	
	comp=Z,60nm,0.7s						
K24K	Donnelly Dome	84.24	26	P	P	20 53 30.2	+0.2
	baz=273,SNR=35						
PRP	Porcupine Dome	84.26	25	P	P	20 53 29.6	-0.6
	baz=273,SNR=16						
C26K	Camden Bay	84.26	20	P	P	20 53 32.0	+2.0
	baz=273,SNR=6.7						
KLU	Klutina	84.29	29	P	P	20 53 31.0	+0.7
	baz=273,SNR=13						
FYU	Fort Yukon	84.32	24	IAmb	IAmb	20 53 33.3	
	comp=Z,46nm,0.8s						
APA	Apatity	84.36	337	⇓iP	P	20 53 29.0	-1.5
APA				i		20 56 52.0	
APA				i S	S	21 03 13.0	-3.2
APA				i SS	SS	21 09 08.0	+8.9
APA				pmax	pmax		
	comp=Z,107nm,0.8s						
J25K	Salcha River,	84.37	26	P	P	20 53 30.3	-0.4
	baz=273,SNR=36						
PAX	Paxson	84.42	27	P	P	20 53 31.6	+0.6
	baz=273,SNR=8.1						
EYAK	Cordova Ski Ar	84.42	30	P	P	20 53 31.7	+0.8
	baz=273						
BMAR	Burnt Mountain	84.53	23	P	P	20 53 32.9	+1.5
FKH	Fakeheh	84.58	304	eP	P	20 53 33.5	+1.1
HARP	HAARP	84.60	28	P	P	20 53 32.5	+0.7
	baz=274						
RIDG	Independent Ri	84.66	27	IAmb	IAmb	20 53 33.9	
	comp=Z,71nm,1.0s						
RIDG	Independent Ri	84.66	27	P	P	20 53 32.5	+0.5
	baz=274,SNR=58						
F26K	Sheenjek River	84.68	23	P	P	20 53 33.6	+1.5
	baz=274,SNR=17						
C27K	Jago River	84.70	21	IAmb	IAmb	20 53 35.4	
	comp=Z,72nm,0.8s						
C27K	Jago River	84.70	21	P	P	20 53 34.0	+1.9
	baz=274,SNR=21						
BEIL	Beino	84.74	304	eP	P	20 53 34.0	+0.9
G26K	Porcupine Rive	84.87	23	IAmb	IAmb	20 53 36.8	
	comp=Z,42nm,0.9s						
G26K	Porcupine Rive	84.87	23	P	P	20 53 34.7	+1.7
	baz=274,SNR=20						
N25K	Chitina, Valde	84.92	29	P	P	20 53 34.4	+1.0
	baz=274						
BMRM	Bremner River	84.96	29	P	P	20 53 34.0	+0.4
	baz=274						
HWQ	Hawqa	84.96	304	eP	P	20 53 34.6	+0.3
SCRK	Sand Creek	85.02	26	P	P	20 53 34.5	+0.5
	baz=274,SNR=34						
ZAHL	Zahle	85.04	303	eP	P	20 53 35.4	+0.7
RCY	Rachaya	85.11	303	eP	P	20 53 36.0	+1.0
KAIM	Kayak Island	85.13	30	P	P	20 53 34.9	+0.5
	baz=274						
J26L	Joseph Creek	85.16	26	P	P	20 53 35.0	+0.4
	baz=275,SNR=50						
SHBL	Chebaa	85.20	303	eP	P	20 53 36.3	+0.8
BHL	Bhannes	85.23	303	eP	P	20 53 36.1	+0.5
QRWL	Qaraoun	85.24	303	eP	P	20 53 36.4	+0.8
I26K	Coal Creek Min	85.26	25	P	P	20 53 35.4	+0.4
	baz=275,SNR=33						
DQRL	Deir Qamar	85.32	303	eP	P	20 53 36.7	+0.7
MAW	Mawson	85.47	200	P	P	20 53 35.3	-0.5
	comp=Z,6.4nm,0.6s,baz=75,slow=5.4,SNR=16						
MAW				pP	pwP	20 55 22.5	-3.3
	comp=Z,7.3nm,0.8s,baz=42,slow=5.6,SNR=4.9						
MMAI	Mount Meron Ar	85.51	303	P	P	20 53 38.0	+1.0
	comp=Z,78nm,0.9s,baz=91,slow=7.5,SNR=77						
	comp=Z,78nm,0.9s						
SIM	Simferopol'	85.54	315	eP	P	20 53 36.4	-0.3
SIM				pmax	pmax		
	comp=Z,218nm,1.3s						
E27K	Coleen River	85.59	22	IAmb	IAmb	20 53 39.1	
	comp=Z,52nm,0.7s						
E27K	Coleen River	85.59	22	P	P	20 53 37.8	+1.3
	baz=276,SNR=29						
M26K	Nabesna, AK	85.60	28		pP	20 55 21.9	-0.2
M26K	Nabesna, AK	85.60	28	P	P	20 53 37.4	+0.7
	baz=276,SNR=14						
VADS	Vadso	85.60	340	eP	P	20 53 35.9	-0.6
MCARA	McCarthy VSAT	85.69	29	P	P	20 53 38.0	+0.9
	baz=276,SNR=6.5						
D27M	Malcolm River	85.70	21	IAmb	IAmb	20 53 39.8	
	comp=Z,38nm,0.7s						
D27M	Malcolm River	85.70	21	P	P	20 53 38.5	+1.4
	baz=277,SNR=12						
CRQE	Cirque	85.72	29	P	P	20 53 38.1	+0.7
	baz=276,SNR=11						
G27K	Doyon Strip	85.72	23	P	P	20 53 38.5	+1.4
	baz=276,SNR=36						
H27K	Steamboat Moun	85.84	24	P	P	20 53 39.4	+1.6
	baz=277,SNR=56						
TGL	Tana Glacier	85.84	29		pP	20 55 22.8	-0.6
K27K	Chicken	85.85	26	P	P	20 53 39.4	+1.6
	baz=276						
BZK	Bozkurt	85.87	312	⇑P	P	20 53 38.5	+0.2
I27K	Kandik River	85.87	25	P	P	20 53 39.4	+1.5
	baz=276,SNR=123						
HOPEN	Hopen	85.89	347	eP	P	20 53 37.9	+0.2
L27K	Beaver Creek,	86.07	27	P	P	20 53 40.2	+1.3
	baz=276,SNR=30						
BCAR	Beaver Creek A	86.09	27	P	P	20 53 39.3	+0.3
M27K	Edge Creek, AK	86.12	28		pP	20 55 25.2	+0.2
M27K	Edge Creek, AK	86.12	28	P	P	20 53 40.0	+0.6
	baz=276,SNR=18						
KIRS	Kirsehir-Merke	86.18	309	⇓P	P	20 53 39.9	-0.2
E28M	Babbage River	86.30	21	IAmb	IAmb	20 53 41.9	
	comp=Z,50nm,0.9s						
E28M	Babbage River	86.30	21	P	P	20 53 40.9	+1.1
	baz=278,SNR=20						
F28M	Old Crow	86.31	22	IAmb	IAmb	20 53 41.9	
	comp=Z,54nm,0.8s						
F28M	Old Crow	86.31	22	P	P	20 53 40.9	+1.0
	baz=278,SNR=55						
MESA	MESA	86.34	30	P	P	20 53 41.4	+0.9
	baz=277,SNR=5.6						
BR131	Keskin Array S	86.34	309	IAmb	IAmb	20 53 42.2	
	comp=Z,118nm,0.8s						
BRTR	Keskin Array B	86.34	309	P	P	20 53 39.7	-1.2
BRTR	Keskin Array B	86.34	309	P	P	20 53 39.7	-1.2
PUL	Pulkovo	86.41	330	ceP	P	20 53 40.7	+0.2
PUL				pmax	pmax		
	comp=Z,307nm,1.0s						
KIBK	Kibwezi	86.45	267	IAmb	IAmb	20 53 43.7	
	comp=Z,104nm,1.0s						
KIBK	Kibwezi	86.45	267	P	P	20 53 42.3	+0.5
	SNR=19						
KEV	Kevo	86.46	340	P	P	20 53 39.2	-1.3
KEV				IAmb	IAmb	20 53 40.9	
	comp=Z,73nm,0.8s						
KEV	Kevo	86.46	340	P	P	20 53 39.2	-1.3
KEV				pmax	pmax		
	comp=Z,73nm,0.8s						
VNDA	Vanda	86.46	172	IAmb	IAmb	20 53 41.8	
	comp=Z,38nm,0.8s						
VNDA	Vanda	86.46	172	P	P	20 53 40.7	+0.3
	comp=Z,45nm,0.9s,baz=317,slow=6.0,SNR=187						
VNDA				pP	pP	20 55 27.1	+2.9
	comp=Z,5.6nm,0.9s,baz=330,slow=5.8,SNR=2.6						
VNDA				PP	PP	20 57 09.1	-1.1
	comp=Z,3.6nm,0.8s,baz=33,slow=0.5,SNR=8.1						
VNDA				PKKPbc	PKKPbc	21 11 35.5	-2.4
	comp=Z,1.0nm,0.7s,baz=180,slow=4.0,SNR=5.2						
	comp=Z,45nm,0.9s						
D28M	Stokes Point	86.47	21	P	P	20 53 42.3	+1.7
	baz=279						
CTG	Chitna Glacier	86.54	29	P	P	20 53 42.6	+1.3
	baz=277,SNR=36						
CTGM	Chitina Glacie	86.55	29	IAmb	IAmb	20 53 43.6	
	comp=Z,50nm,0.7s						
I28M	Miner Creek	86.59	25	IAmb	IAmb	20 53 43.6	
	comp=Z,66nm,0.7s						
I28M	Miner Creek	86.59	25	P	P	20 53 42.6	+1.2
	baz=278,SNR=113						
BVCY	Beaver Creek	86.59	28	P	P	20 53 42.5	+1.1
	baz=277,SNR=5.2						
CIDE	Kastamonu/Cide	86.66	312	⇑P	P	20 53 41.8	-0.3
YUK3	Moose Creek	86.86	28	P	P	20 53 43.5	+0.6
	baz=278,SNR=10						
E29M	Blow River	86.93	22	P	P	20 53 43.5	+0.6
	baz=280,SNR=13						
ANTO	Ankara	86.98	310	P	P	20 53 43.1	-0.6
ANTO				IAmb	IAmb	20 53 44.5	
	comp=Z,83nm,0.8s						
ANTO	Ankara	86.98	310	P	P	20 53 43.6	-0.2
ANTO	Ankara	86.98	310	⇓P	P	20 53 43.2	-0.6
ANTO	Ankara	86.98	310	P	P	20 53 43.2	-0.6
SGF	Sodankyl	87.01	337	P	P	20 53 40.1	-3.1
ARA0	ARCESS Array S	87.01	340	i P	P	20 53 42.6	-0.6
ARCES	ARCESS Array B	87.01	340	P	P	20 53 42.2	-1.0
ARCES	ARCESS Array B	87.01	340	P	P	20 53 42.6	-0.6
	comp=Z,121nm,0.7s,baz=78,slow=6.3,SNR=398						
ARCES				S	SKSac	21 03 22.2	-2.4
	comp=Z,5.9nm,1.0s,baz=61,slow=6.0,SNR=4.7						
	comp=Z,121nm,0.7s						
DAWY	Dawson	87.02	26	P	P	20 53 44.1	+0.7
	baz=279,SNR=18						
CSS	Mathiatis	87.05	305	IAmb	IAmb	20 53 45.2	
	comp=Z,92nm,0.8s						
KMBO	Kilima Mbogo	87.10	269	P	P	20 53 45.4	+0.3
KMBO				IAmb	IAmb	20 53 47.0	
	comp=Z,98nm,1.1s						
KMBO	Kilima Mbogo	87.10	269	P	P	20 53 45.7	+0.6
KMBO	Kilima Mbogo	87.10	269	P	P	20 53 45.4	+0.3
KMBO				pmax	pmax		
	comp=Z,98nm,1.1s						
KMBO	Kilima Mbogo	87.10	269	i P	P	20 53 45.8	+0.6
	SNR=95						
H29M	Whitestone	87.11	24	IAmb	IAmb	20 53 45.5	
	comp=Z,51nm,0.8s						
H29M	Whitestone	87.11	24	P	P	20 53 44.6	+0.8
	baz=279,SNR=41						
O28M	Mount Upton	87.13	29	P	P	20 53 45.3	+1.0
	baz=278,SNR=28						
G29M	Pine Creek	87.13	23	IAmb	IAmb	20 53 45.7	
	comp=Z,61nm,0.9s						
G29M	Pine Creek	87.13	23	P	P	20 53 44.8	+0.9
	baz=280,SNR=37						
PINM	Pinnacle	87.19	30	P	P	20 53 45.3	+1.0
	baz=278,SNR=5.8						
YUK8	Steele Glacier	87.26	29	P	P	20 53 46.0	+1.1
	baz=278,SNR=18						
I29M	Ogilvie Camp,	87.27	25	IAmb	IAmb	20 53 46.2	
	comp=Z,46nm,0.9s						
I29M					pP	20 55 30.0	-0.5
I29M	Ogilvie Camp,	87.27	25	P	P	20 53 45.1	+0.6
	baz=280,SNR=46						
SPA0	Spitsbergen Ar	87.31	349	eP	P	20 53 44.4	-0.1
SPITS	Spitsbergen Ar	87.31	349	P	P	20 53 44.4	-0.1
	comp=Z,200nm,0.8s,baz=87,slow=8.5,SNR=109						
	comp=Z,200nm,0.8s						
SBA	Scott Base	87.39	172	P	P	20 53 45.7	+0.9
SBA				IAmb	IAmb	20 53 47.5	
	comp=Z,95nm,1.6s						
SBA	Scott Base	87.39	172	P	P	20 53 45.7	+0.9
SBA				pmax	pmax		
	comp=Z,95nm,1.7s						
HAMF	Hammerfest	87.41	341	eP	P	20 53 44.3	-0.7
J29N	Klondike Camp	87.46	25	P	P	20 53 46.7	+1.1
	baz=280						
OUL	Oulu	87.66	335	P	P	20 53 45.6	-0.7
PNL	Peninsula	87.68	30	P	P	20 53 47.6	+1.0
	baz=279						
M29M	Somme Creek	87.69	27	P	P	20 53 47.9	+1.2
	baz=280,SNR=40						
L29M	L29M	87.73	27	P	P	20 53 48.4	+1.6
	baz=280,SNR=47						
EPYK	Eagle Plains	87.74	23	IAmb	IAmb	20 53 48.1	
	comp=Z,62nm,1.1s						
EPYK	Eagle Plains	87.74	23	P	P	20 53 47.1	+0.3
	baz=281,SNR=26						
YUK4	Talbot Arm	87.78	29	P	P	20 53 48.5	+1.2
	baz=280,SNR=8.0						
G30M	tAoh Zraii Nji	87.81	23	P	P	20 53 47.1	0.0
	baz=281,SNR=10						
BJO1	Bjornoya	87.83	345	eP	P	20 53 45.0	-1.9
F30M	Barrier River	87.85	22	IAmb	IAmb	20 53 48.9	
	comp=Z,34nm,0.8s						
F30M	Barrier River	87.85	22	P	P	20 53 47.9	+0.7
	baz=282,SNR=18						
KBS	Kingsbay	87.86	350	P	P	20 53 46.7	-0.4
KBS				IAmb	IAmb	20 53 48.8	
	comp=Z,38nm,0.8s						
KBS	Kingsbay	87.86	350	deP	P	20 53 46.2	-0.9
KBS				pmax	pmax		
	comp=Z,42nm,0.9s						
KBS	Kingsbay	87.86	350	eP	P	20 53 46.8	-0.3
KBS	Kingsbay	87.86	350	i P	P	20 53 45.5	-1.6
HSPB	Hornsund (broa	87.87	348	eP	P	20 53 47.4	+0.3
K29M	Barlow Dome	87.87	26	P	P	20 53 48.5	+0.9
	baz=280,SNR=23						
KTK1	Kautokeino	87.91	339	eP	P	20 53 46.7	-0.8
YUK6	Outpost Mounta	87.98	29	P	P	20 53 49.4	+1.1
	baz=280,SNR=8.5						
O29M	Mount Kennedy	87.99	30	P	P	20 53 49.1	+0.9
	baz=280						
I30M	Mount Dempster	88.10	25	P	P	20 53 49.1	+0.5
	baz=281,SNR=28						
AKASG	Malin Array Be	88.19	321	P	P	20 53 47.7	-1.4
AKASG	Malin Array Be	88.19	321	P	P	20 53 48.1	-0.9
	comp=Z,55nm,0.9s,baz=71,slow=4.3,SNR=192						
AKASG				pP	pP	20 55 33.4	-1.8
	comp=Z,8.4nm,0.9s,baz=68,slow=4.9,SNR=4.7						
AKASG				S	SKSac	21 03 30.2	-2.1
	comp=Z,1.6nm,0.7s,baz=86,slow=6.9,SNR=7.9						
AKASG				SKKPbc	SKKPbc	21 14 22.4	-2.3
	comp=Z,0.5nm,0.5s,baz=272,slow=3.0,SNR=4.1						
	comp=Z,55nm,0.9s						
AKBB	Malin Array Si	88.19	321	d iP	P	20 53 48.0	-1.1
KIEV	Kiev	88.20	321	P	P	20 53 47.2	-1.9
KIEV				IAmb	IAmb	20 53 49.4	
	comp=Z,107nm,1.1s						
KIEV	Kiev	88.20	321	⇓P	P	20 53 48.4	-0.7
KIEV	Kiev	88.20	321	P	P	20 53 48.4	-0.7
KIEV	Kiev	88.20	321	i P	P	20 53 48.2	-0.9
	SNR=68						
FINES	FINESS Array B	88.23	332	P	P	20 53 48.1	-1.0
FINES	FINESS Array B	88.23	332	P	P	20 53 48.5	-0.5
	comp=Z,121nm,0.7s,baz=52,slow=5.4,SNR=830						
FINES				S	SKSac	21 03 30.5	-1.6
	comp=Z,1.5nm,0.7s,baz=96,slow=13,SNR=2.7						
FINES				PKKPbc	PKKPbc	21 11 30.5	-2.3

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        comp=Z,0.4nm,0.3s,baz=212,slow=1.3,SNR=6.2
FINES                                SKKPbc  SKKPbc  21 14 22.9  -2.1
        comp=Z,1.2nm,0.9s,baz=243,slow=1.6,SNR=4.0
        comp=Z,121nm,0.7s
J30M    Hart River         88.24  25  IAmb   IAmb    20 53 51.2
        comp=Z,58nm,1.7s
J30M    Hart River         88.24  25  P      P       20 53 50.0 +0.8
        baz=281,SNR=19
PURM    Purcari            88.32 316 ⇓P      P       20 53 49.7  -0.1
SAHE    Sakarya_HENDEK     88.34 311 ⇓P      P       20 53 49.3  -0.8
PPT     Papeete            88.34 108  P      P       20 53 55.1 +4.6
        comp=Z,59nm,0.7s,baz=322,slow=6.1,SNR=5.7
PPT2    Papeete2           88.35 108 eP      P       20 53 47.8  -2.8
        comp=Z,34nm,23.0s
PPT2                                 epP     pP      20 55 27.9  -7.6
        comp=Z,68nm,25.5s
PPT2                                 eS      S       21 03 55.4  -0.7
        comp=Z,168nm,27.0s
PPT2    Papeete2           88.35 108 eLQ     LQ      21 19 03.3
        comp=Z,261nm,29.5s
PAE     Paea               88.35 108 eP      P       20 53 51.8 +1.3
        comp=Z,45nm,1.3s
HYT     Haines Junctio     88.42  29  IAmb   IAmb    20 53 52.2
        comp=Z,26nm,0.7s
HYT     Haines Junctio     88.42  29  P      P       20 53 51.3 +1.2
        baz=280,SNR=38
VSU     Vasula             88.42 329ceP      P       20 53 48.3  -1.7
VSU                                   pmax   pmax
        comp=Z,396nm,1.7s
MNK     Minsk              88.44 325 i P     P       20 53 50.2 +0.1
        comp=E,43nm,1.0s
MNK                                  i P     P       20 53 50.2 +0.1
        comp=N,96nm,1.0s
MNK                                  i P     P       20 53 50.2 +0.1
        comp=Z,267nm,0.8s,baz=81
MNK                                  i pP    pP      20 55 35.1  -1.2
MNK                                  i sP    sP      20 56 21.1  -3.5
MNK                                  i PP    PP      20 57 26.1   0.0
MNK                                  i PPP   PPP     20 59 25.8
MNK                                  i S     SKSac   21 03 34.0 +0.4
MNK                                  i sS    sS      21 06 53.2   -11
MNK                                  i SS    SS      21 10 01.5 +2.8
MNK                                  i SSS   SSS     21 13 07.6
MNK                                  i LR    LR      21 30 16.8
MNK                                  i LRM   MLR     21 35 09.6
        comp=N,75nm,18.5s
MNK                                  i LRM   MLR     21 35 14.6
        comp=Z,73nm,14.9s
MNK                                  i LRM   MLR     21 35 31.4
        comp=E,65nm,16.9s
MNK     Minsk              88.44 325 i P     P       20 53 50.2 +0.1
MNK                                  i *PP   pP      20 55 35.0  -1.2
MNK                                  i               20 57 26.1
MNK                                  i PPP   PPP     20 59 25.8
MNK                                  i S     SKSac   21 03 34.0 +0.4
MNK                                  i SS    SS      21 10 01.4 +2.8
MNK                                   pmax   pmax
        comp=N,96nm,1.0s
MNK                                   pmax   pmax
        comp=E,43nm,1.0s
MNK                                   pmax   pmax
        comp=Z,267nm,0.8s
MNK                                   MLR    MLR
        comp=N,75nm,19.0s
MNK                                   MLR    MLR
        comp=Z,73nm,15.0s
MNK                                   MLR    MLR
        comp=E,65nm,17.0s
LODK    Lodwar             88.47 273  IAmb   IAmb    20 53 53.0
        comp=Z,64nm,1.5s
LODK    Lodwar             88.47 273  P      P       20 53 51.9 +0.6
        SNR=16
N30M    Aishikik Lake      88.50  28  P      P       20 53 51.7 +1.2
        baz=281,SNR=27
P29M    Windy Craggy       88.52  30  IAmb   IAmb    20 53 53.3
        comp=Z,36nm,0.8s
P29M    Windy Craggy       88.52  30  P      P       20 53 51.7 +1.2
        baz=280,SNR=25
INK     Inuvik             88.53  21  P      P       20 53 50.5 +0.2
        baz=284,SNR=16
G31M    Satah River        88.58  23  IAmb   IAmb    20 53 51.7
        comp=Z,31nm,0.8s
G31M    Satah River        88.58  23  P      P       20 53 50.7 +0.1
        baz=283,SNR=15
F31M    Tsiigehtchic       88.66  22  P      P       20 53 51.1 +0.2
        baz=284,SNR=8.3
TVO     Taravao            88.68 108 eP      P       20 53 54.8 +2.7
        comp=Z,51nm,0.9s
JETT    Jettan, Norway     88.75 340 eP      P       20 53 51.1  -0.4
H31M    Peel River         88.80  24  P      P       20 53 51.9 +0.2
        baz=283,SNR=15
P30M    Million Dollar     88.81  30  P      P       20 53 52.9 +1.0
        baz=281
ISP     Isparta            88.97 308  IAmb   IAmb    20 53 53.0
        comp=Z,84nm,0.8s
ISP     Isparta            88.97 308⇓iP      P       20 53 51.9  -1.3
ISP                                   pmax   pmax
        comp=Z,95nm,0.9s
KIS     Kishinev           88.97 317⇓iP      P       20 53 51.7  -1.2
        comp=Z,75nm,1.1s
KIS                                  epP     pP      20 55 37.0  -2.0
KIS     Kishinev           88.97 317 i PP    PP      20 57 32.0 +1.4
KIS                                  i SKS   SKSac   21 03 34.8  -2.3
KIS                                  eS      S       21 03 58.0  -2.6
KIS     Kishinev           88.97 317d iP     P       20 53 51.7  -1.2
KIS                                  e*PP    pP      20 55 37.0  -2.0
KIS                                  i               20 57 32.0
KIS                                  i               21 03 34.8
KIS                                  eS      S       21 03 58.0  -2.6
KIS                                   pmax   pmax
        comp=Z,75nm,1.1s
MILM    Milestii Mici      88.99 317⇓iP      P       20 53 51.4  -1.5
        comp=Z,220nm,1.3s
MILM                                 epP     pP      20 55 36.0  -3.0
MILM    Milestii Mici      88.99 317 i PP    PP      20 57 33.0 +2.3
MILM                                 i SKS   SKSac   21 03 33.0  -4.2
MILM                                 i S     S       21 03 57.0  -3.8
MILM    Milestii Mici      88.99 317 ⇓P      P       20 53 52.1  -0.9
MILM    Milestii Mici      88.99 317d iP     P       20 53 51.4  -1.5
MILM                                 e*PP    pP      20 55 36.0  -3.0
MILM                                 i               21 03 33.0
MILM                                  pmax   pmax
        comp=Z,220nm,1.3s
NACGM   Naroch             89.00 325 eP      P       20 53 52.4  -0.4
        comp=E,24nm,0.9s
O30N    Mendenhall         89.11  29  P      P       20 53 54.3 +1.0
        baz=282,SNR=18
N31M    Braeburn, Yuko     89.11  28  IAmb   IAmb    20 53 55.6
        comp=Z,30nm,0.8s
N31M    Braeburn, Yuko     89.11  28  P      P       20 53 54.6 +1.3
        baz=282,SNR=17
SORM    Soroca             89.12 318 ⇑P      P       20 53 53.0  -0.6
SORM    Soroca             89.12 318  P      P       20 53 52.9  -0.6
TBI     Tubuai             89.18 113 eP      P       20 53 49.9  -4.4
        comp=Z,452nm,31.8s
TBI     Tubuai             89.18 113 eP      P       20 53 55.9 +1.6
        comp=Z,244nm,1.0s
TBI                                  eS      SKSac   21 03 42.7 +3.6
        comp=Z,893nm,22.8s
TBI     Tubuai             89.18 113 eLQ     LQ      21 19 20.6
        comp=Z,770nm,33.2s
TBI                                  eLR     LR      21 23 09.9
        comp=Z,743nm,32.0s
SILT    Sile               89.21 311 ⇑P      P       20 53 53.7  -0.4
TRO     Tromso             89.23 340 eP      P       20 53 52.5  -1.1
PLBC    Pleasant Camp      89.24  30  P      P       20 53 54.5 +0.7
        baz=281,SNR=6.1
TLCR                       89.24 315 ⇑P      P       20 53 54.2   0.0
TLCR                       89.24 315  P      P       20 53 54.1   0.0
JURR    Jurilovca          89.26 315 ⇓P      P       20 53 53.7  -0.5
TSCT    Constanta Port     89.50 314 ⇓P      P       20 53 55.9 +0.5
TPGR    Topolog            89.57 315 ⇓P      P       20 53 55.3  -0.4
M31M    Drury Creek, Y     89.60  27  P      P       20 53 56.2 +0.7
        baz=283,SNR=14
TSMN    Mangalia Port-     89.60 314 ⇑P      P       20 53 56.0 +0.1
S31K    Pelican            89.60  32  P      P       20 53 56.4 +0.9
        baz=282
TIRR    Tirgusor           89.63 315  IAmb   IAmb    20 53 56.6
        comp=Z,48nm,0.9s
TIRR    Tirgusor           89.63 315 ⇓P      P       20 53 55.6  -0.4
TIRR    Tirgusor           89.63 315  P      P       20 53 55.5  -0.4
PMOR    Pomariorio Ree     89.64 105 eP      P       20 53 58.2 +1.7
        comp=Z,143nm,1.1s
KLYT    Kilyos             89.64 311 ⇓P      P       20 53 55.2  -0.9
VLDR    Vladesti           89.65 316 ⇓P      P       20 53 56.4 +0.3
ISK     Istanbul-Kandi     89.66 311  P      P       20 53 55.3  -0.9
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MFTR    Murfatlar          89.67 314 ⇑P      P       20 53 55.8  -0.3
WHY     Whitehorse         89.72  29  IAmb   IAmb    20 53 58.4
        comp=Z,68nm,0.7s
WHY     Whitehorse         89.72  29  P      P       20 53 57.4 +1.2
        baz=283,SNR=41
CFR     Carcaliu           89.72 315 ⇑P      P       20 53 56.2  -0.2
CFR     Carcaliu           89.72 315  P      P       20 53 56.1  -0.2
VASR    Vaslui             89.73 317 ⇓P      P       20 53 56.6 +0.3
SCTR    Scanteiesti        89.74 316 ⇑P      P       20 53 56.7 +0.2
SKAG    Skagway            89.75  30  IAmb   IAmb    20 53 58.5
        comp=Z,24nm,0.8s
SKAG    Skagway            89.75  30  P      P       20 53 57.4 +1.2
        baz=282,SNR=9.3
VARL    Varlezi            89.80 316 ⇑P      P       20 53 57.1 +0.4
NEGRR   Negrea             89.84 316 ⇑P      P       20 53 56.7  -0.2
SCHL    Schela             89.88 316 ⇑P      P       20 53 57.3 +0.3
SCHLR   Schela             89.88 316 ⇓P      P       20 53 56.4  -0.7
BIR     Birlad             89.90 316 ⇓P      P       20 53 57.5 +0.3
BIR     Birlad             89.90 316  P      P       20 53 57.5 +0.3
IZVR    Izvoarele          89.92 316 ⇓P      P       20 53 57.6 +0.4
HARR    Harsova            89.94 315 ⇑P      P       20 53 57.5 +0.1
HARR    Harsova            89.94 315  P      P       20 53 57.5 +0.1
PSN     Preselentsi        89.95 314 i P     P       20 53 57.4  -0.1
TUDR                       89.98 316 ⇓P      P       20 53 58.1 +0.6
FARO    Faro, Yukon        90.07  27  IAmb   IAmb    20 53 59.7
        comp=Z,57nm,0.9s
FARO                                         pP      20 55 43.4  -0.7
FARO    Faro, Yukon        90.07  27  P      P       20 53 58.6 +1.0
        baz=284,SNR=40
GHRR                       90.08 316 ⇑P      P       20 53 58.3 +0.2
A36M    Sachs Harbour      90.11  17         pP      20 55 45.3 +1.2
A36M    Sachs Harbour      90.11  17  P      P       20 53 57.9 +0.3
        baz=292
ICOR    Ion Corvin         90.12 314 ⇓P      P       20 53 58.2  -0.1
NOR     Nord               90.14 355 i P     P       20 53 56.4  -1.3
NOR                                   IAmb   IAmb    20 53 58.3
        comp=Z,94nm,1.0s
COSR    Cosmesti PH        90.18 316 ⇑P      P       20 53 59.7 +1.3
SIT     Sitka              90.27  32  P      P       20 53 59.7 +1.1
        baz=282
PANC    Panciu             90.29 316 ⇑P      P       20 53 59.6 +0.6
R32K    Eaglecrest         90.43  31  P      P       20 54 00.4 +1.0
        baz=283
N32M    Quiet Lake         90.46  28  P      P       20 54 00.5 +1.0
        baz=284
BAND    Balkesir-Ban       90.48 311 ⇑P      P       20 53 59.1  -1.0
GRER                       90.49 316 ⇓P      P       20 54 01.2 +1.2
TESR    Tescani            90.53 317 ⇓P      P       20 54 00.1   0.0
P32M    Atlin              90.53  30  P      P       20 54 00.8 +0.9
        baz=284,SNR=9.2
PRD     Provadia           90.55 313 i P     P       20 54 00.1  -0.1
PGOR    Pogoanele          90.57 315 ⇓P      P       20 54 01.1 +0.9
S32K    Killisnoo          90.58  32  P      P       20 54 00.7 +0.7
        baz=283
VRI     Vrincioaia         90.58 316 ⇓P      P       20 54 00.8 +0.3
VRI     Vrincioaia         90.58 316  P      P       20 54 00.7 +0.3
NEF     NEVSHA             90.63 314 i P     P       20 54 00.7   0.0
PLOR    Plostina           90.64 316 ⇓P      P       20 54 01.0 +0.3
PLOR    Plostina           90.64 316  P      P       20 54 00.9 +0.3
BISRR   Bisoca             90.65 316 ⇓P      P       20 54 01.4 +0.7
CICN    Ciocanesti         90.66 314 ⇑P      P       20 54 00.1  -0.6
PRAR    RASCA              90.66 318 ⇓P      P       20 54 00.2  -0.5
EDC     Edincik            90.66 311  P      P       20 54 00.0  -0.9
PHSR    Pinarhisar         90.72 312 ⇑P      P       20 54 00.8  -0.3
ONER    Baraj Valea Uz     90.73 317 ⇓P      P       20 54 01.0   0.0
P33M    Teslin, Yukon      90.81  29  P      P       20 54 01.9 +0.7
        baz=284
MMPY    Sheldon Lake,      90.91  27  IAmb   IAmb    20 54 03.9
        comp=Z,40nm,1.1s
MMPY    Sheldon Lake,      90.91  27  P      P       20 54 02.7 +1.2
        baz=286,SNR=36
NEHR    Nehoiu             90.96 316 ⇑P      P       20 54 02.6 +0.5
TURR    Turia              91.04 316 ⇓P      P       20 54 02.9 +0.4
STEI    Steigen            91.04 339 eP      P       20 54 01.0  -1.0
ARG     Arkhangelos        91.10 306  IAmb   IAmb    20 54 03.5
        comp=Z,84nm,1.1s
ARG     Arkhangelos        91.10 306  P      P       20 54 02.1  -0.8
SULR                       91.12 315 ⇓P      P       20 54 03.3 +0.4
OZUR                       91.19 316 ⇓P      P       20 54 03.2   0.0
MLR     Muntele Rosu       91.19 316 ⇑P      P       20 54 03.5 +0.1
MLR     Muntele Rosu       91.19 316  P      P       20 54 03.4 +0.1
FAUS    Fauske             91.22 339 eP      P       20 54 01.9  -0.9
SUW     Suwalki            91.24 325 eP      P       20 54 02.9  -0.3
BURAR   Bucovina Array     91.29 318  P      P       20 54 03.2  -0.5
BURAR   Bucovina Array     91.29 318 ⇑P      P       20 54 04.2 +0.4
BURAR   Bucovina Array     91.29 318  P      P       20 54 04.1 +0.4
JMB     Yambol             91.30 313 i P     P       20 54 03.4  -0.3
SGRR    Singureni          91.40 315 ⇓P      P       20 54 03.9  -0.3
Q32M    Nakina River       91.40  30  P      P       20 54 05.3 +1.2
        baz=285,SNR=9.3
C36M    Paulatuk           91.47  19  P      P       20 54 04.1 +0.2
        baz=293
DOPR    Dopca              91.48 316 ⇑P      P       20 54 04.5  -0.1
SZH     Strazhitsa         91.57 314 i P     P       20 54 04.8  -0.2
LOF     Lofoten            91.57 339 eP      P       20 54 03.0  -1.4
U33K    Whale Pass         91.67  33  P      P       20 54 06.2 +1.1
        baz=284,SNR=5.3
VOIR                       91.82 316 ⇑P      P       20 54 05.7  -0.5
VOIR                       91.82 316  P      P       20 54 05.7  -0.5
CRAG    Craig              91.83  34  P      P       20 54 06.9 +1.1
        baz=284
EZN     Ezine              91.91 310 ⇑P      P       20 54 06.2  -0.4
EZN     Ezine              91.91 310  P      P       20 54 06.2  -0.4
R33M    Jennings River     91.93  30  P      P       20 54 07.8 +1.3
        baz=286,SNR=26
ALN     Alexandroupoli     91.94 311  IAmb   IAmb    20 54 06.7
        comp=Z,56nm,1.1s
ALN     Alexandroupoli     91.94 311  P      P       20 54 05.6  -1.1
MOR8    Moi Rana           91.95 338 eP      P       20 54 04.3  -1.9
TGMR    Targu Mures        91.97 317 ⇑P      P       20 54 07.1 +0.4
ARCR    ARCALIA            91.97 318 ⇑P      P       20 54 07.6 +0.9
WRAK    Wrangell Islan     92.01  33  P      P       20 54 07.7 +1.1
        baz=285
HUMR    Humele             92.04 315 ⇓P      P       20 54 06.4  -0.7
DIM     Dimitrovgrad       92.08 313 i P     P       20 54 06.8  -0.5
ARR     Arges              92.12 316 ⇑P      P       20 54 07.7 +0.1
MDB     Medias             92.14 317 ⇓P      P       20 54 07.0  -0.5
MDB     Medias             92.14 317  P      P       20 54 07.0  -0.5
PVL     Pavlikeni          92.17 314 i P     P       20 54 07.6  -0.1
VAGH    Vaagaholmen        92.19 338 eP      P       20 54 06.2  -1.0
S34M    Telegraph Cree     92.26  31  P      P       20 54 09.3 +1.5
        baz=286,SNR=15
RDO     Rodhopi            92.27 312  IAmb   IAmb    20 54 08.1
        comp=Z,50nm,0.9s
TNR     Turnu Rosu         92.31 316 ⇓P      P       20 54 08.8 +0.5
KONS    Konsvik            92.33 338 eP      P       20 54 07.1  -0.8
BMR     Baia Mare          92.42 318 ⇓P      P       20 54 09.1 +0.3
BMR     Baia Mare          92.42 318  P      P       20 54 09.0 +0.3
STOK    Stokkvaagen        92.43 338 eP      P       20 54 07.2  -1.2
LEIR    Leirfjorden        92.48 338 eP      P       20 54 07.7  -0.9
KWP     Kalwaria Pacla     92.50 320 eP      P       20 54 09.2   0.0
VLAD    Vladila            92.55 315 ⇑P      P       20 54 09.5 +0.1
CJR     Cluj-Napoca        92.55 317 ⇓P      P       20 54 10.3 +0.8
CBBR    Cluj-Babes-Bol     92.57 317 ⇑P      P       20 54 10.3 +0.8
TGTN    Hyland Airport     92.57  27  P      P       20 54 10.3 +1.0
        baz=288,SNR=12
PLD     Plovdiv            92.66 313 i P     P       20 54 09.0  -1.0
DLBC    Dease Lake         92.67  30  P      P       20 54 11.0 +1.2
        baz=287,SNR=13
V35K    Ketchikan          92.70  34  P      P       20 54 10.4 +0.5
        baz=285
LOT     Lotru              92.70 316 ⇑P      P       20 54 10.5 +0.2
H02S1   DAWSON INLET T     92.76  36  P      P       20 54 10.4 +0.2
        SNR=5.8
RZN     Rozhen             92.76 312 i P     P       20 54 09.7  -1.0
WTLY    Watson Lake, Y     92.77  29  IAmb   IAmb    20 54 12.5
        comp=Z,58nm,1.1s
WTLY    Watson Lake, Y     92.77  29  P      P       20 54 11.5 +1.3
        baz=288,SNR=5.0
R9F13   Warsaw-Wawer       92.85 323 eP      P       20 54 10.8 +0.2
MARR    Marisel-Cluj       92.88 317 ⇓P      P       20 54 11.2 +0.1
MESR    Meseseni           92.89 318 ⇑P      P       20 54 10.8  -0.2
KOLS    Kolonicke sedl     92.94 320 eP      P       20 54 11.3 +0.2
KOLS                                  pmax   pmax
        comp=Z,46nm,1.0s
KOLS    Kolonicke sedl     92.94 320 eP      P       20 54 11.3 +0.2
T35M    Bob Quinn          92.98  32  P      P       20 54 12.6 +1.5
        baz=287,SNR=17
PGB     Panagyurishte      93.01 313 i P     P       20 54 16.0 +4.3
APE     Apeiranthos        93.02 308 ⇓P      P       20 54 10.2  -1.6
APE     Apeiranthos        93.02 308deP      P       20 54 09.7  -2.1
APE                                   pmax   pmax
        comp=Z,23nm,0.9s
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DRGR                       93.13 318 ⇑P      P       20 54 12.0  -0.1
MPEP    Malo Peshtene      93.15 314 i P     P       20 54 12.2   0.0
BEL     Belsk              93.16 323 eP      P       20 54 12.4 +0.3
DEV     Deva               93.20 317 ⇓P      P       20 54 12.8 +0.4
SRE     Strehaia           93.25 315 ⇑P      P       20 54 13.2 +0.5
VALD    Valchedram         93.30 314 i P     P       20 54 12.4  -0.5
GZR     Gura Zlata         93.39 316 ⇓P      P       20 54 13.4   0.0
GZR     Gura Zlata         93.39 316  P      P       20 54 13.1  -0.3
STHS    Stebnicka Huta     93.48 320 eP      P       20 54 13.3  -0.3
STHS                                  pmax   pmax
        comp=Z,34nm,0.7s
STHS    Stebnicka Huta     93.48 320 eP      P       20 54 13.3  -0.3
MMB     Musomishta         93.51 312 i P     P       20 54 13.1  -0.9
MBAR    Mbarara            93.52 270  P      P       20 54 13.5  -1.2
MBAR    Mbarara            93.52 270  P      P       20 54 14.5  -0.3
MBAR    Mbarara            93.52 270  P      P       20 54 13.5  -1.2
MBAR                                  pmax   pmax
        comp=Z,8.0nm,0.9s
NSS     Namsos             93.53 336 eP      P       20 54 12.1  -1.4
PUNG    Punghina           93.53 315 ⇓P      P       20 54 13.0  -1.0
PLNA    Plana              93.56 313 i P     P       20 54 14.0  -0.3
RMGR    Halanga-Turnu      93.61 316 ⇑P      P       20 54 15.3 +1.0
VTS     Vitosha            93.67 313 i P     P       20 54 14.1  -0.7
HERR    Herculane          93.75 316 ⇑P      P       20 54 14.9   0.0
SURR    Surduc             93.76 317 ⇓P      P       20 54 14.8  -0.2
IDI     Anoyia             93.85 306  IAmb   IAmb    20 54 16.1
        comp=Z,43nm,0.9s
KKB     Krupnik            93.91 313 i P     P       20 54 14.8  -1.0
WRGLY   Wrigley            94.07  25  P      P       20 54 16.9 +0.9
        baz=293
SYO     Syowa Base         94.07 201⇓eP      P       20 54 17.4 +1.6
NIE     Niedzica           94.07 321 eP      P       20 54 17.0 +0.7
BZS     Buzias             94.14 317 ⇓P      P       20 54 16.2  -0.5
BZS     Buzias             94.14 317  P      P       20 54 15.9  -0.8
OJC     Ojcow              94.18 321 eP      P       20 54 16.5  -0.3
KECS    Kecovo             94.19 320 eP      P       20 54 17.2 +0.3
KECS                                  pmax   pmax
        comp=Z,62nm,0.7s
KECS    Kecovo             94.19 320 eP      P       20 54 17.2 +0.3
DAG     Danmarks Havn      94.20 352  P      P       20 54 15.6  -0.7
DAG     Danmarks Havn      94.20 352 i P     P       20 54 15.4  -0.9
DAG                                   IAmb   IAmb    20 54 16.5
        comp=Z,89nm,0.9s
MDVR    Moldovita          94.27 316 ⇓P      P       20 54 17.4   0.0
LIRD    Liard River Hi     94.29  29  P      P       20 54 17.9 +0.8
        baz=290
HFS     Hagfors            94.43 332  P      P       20 54 16.9  -0.8
        comp=Z,41nm,0.7s,baz=71,slow=6.8,SNR=140
HFS                                   S      SKSac   21 04 02.6  -4.3
        comp=Z,1.3nm,0.6s,baz=80,slow=8.1,SNR=1.9
HFS                                   PKKP   PKKPdf  21 11 14.2  -0.7
        comp=Z,1.8nm,0.4s,baz=198,slow=4.2,SNR=25
        comp=Z,41nm,0.7s
VAY     Valandovo          94.43 312 i P     P       20 54 16.8  -1.3
BANR    Banloc             94.52 316 ⇓P      P       20 54 18.9 +0.5
BOVS    Bovan              94.53 315 ⇓P      P       20 54 18.0  -0.5
LANS    Liptovska Anna     94.67 320 eP      P       20 54 20.0 +0.9
LANS                                  pmax   pmax
        comp=Z,16nm,0.8s
LANS    Liptovska Anna     94.67 320 eP      P       20 54 20.0 +0.9
PSZ     Piszkesteto        94.72 319  IAmb   IAmb    20 54 20.2
        comp=Z,44nm,1.0s
PSZ     Piszkesteto        94.72 319 ⇓P      P       20 54 19.2  -0.2
LIT     Litokhoron         94.75 311  P      P       20 54 17.7  -2.0
GKP     Gorka Klasztor     94.85 325 eP      P       20 54 19.7   0.0
NC602   NORSAR Array S     95.19 333  IAmb   IAmb    20 54 20.9
        comp=Z,61nm,1.3s
NC602   NORSAR Array S     95.19 333 eP      P       20 54 20.0  -1.1
NORES   NORESS Array B     95.19 333  P      P       20 54 21.4 +0.3
NORES                                 pmax   pmax
        comp=Z,17nm,1.1s
NB2     NORSAR Subarra     95.22 333  P      P       20 54 20.0  -1.3
        comp=Z,66nm,0.7s,baz=67,slow=4.6
NB2                                   PKKP   PKKPdf  21 11 13.1  -0.6
        comp=Z,0.4nm,0.6s,baz=235,slow=2.4
NB2     NORSAR Subarra     95.22 333  P      P       20 54 20.0  -1.3
        baz=67,slow=4.6
NOA     NORSAR Array B     95.22 333  P      P       20 54 19.9  -1.3
        comp=Z,48nm,0.7s,baz=67,slow=4.6,SNR=300
NOA                                   PP     PP      20 58 19.0 +0.4
        comp=Z,5.1nm,0.8s,baz=56,slow=8.0,SNR=3.4
NOA                                   PKKP   PKKPdf  21 11 13.4  -0.3
        comp=Z,0.6nm,0.7s,baz=243,slow=2.0,SNR=3.6
NOA                                   SKKPbc SKKPbc  21 14 06.5  -2.2
        comp=Z,0.3nm,0.8s,baz=256,slow=2.2,SNR=3.6
        comp=Z,48nm,0.7s
NOA     NORSAR Array B     95.22 333  P      P       20 54 20.0  -1.3
VYHS    Vyhne              95.25 320 eP      P       20 54 21.6  -0.1
VYHS                                  pmax   pmax
        comp=Z,41nm,1.6s
VYHS    Vyhne              95.25 320 eP      P       20 54 21.6  -0.1
OKC     Ostrava-Krasne     95.31 321 eP      P       20 54 22.4 +0.5
OKC     Ostrava-Krasne     95.31 321 eP      P       20 54 22.4 +0.5
FNA     Florina            95.43 312  IAmb   IAmb    20 54 21.6
        comp=Z,24nm,0.9s
FRGS    Fruska Gora        95.48 316⇓iP      P       20 54 22.2  -0.7
STEB    Steborice          95.51 321 eP      P       20 54 23.1 +0.3
MAUC    Maruska            95.64 321 eP      P       20 54 24.3 +0.8
MAUC                                 eSKS    SKSac   21 04 12.9  -0.9
MORC    Moravsky Berou     95.70 321  IAmb   IAmb    20 54 25.1
        comp=Z,30nm,1.0s
MORC    Moravsky Berou     95.70 321 eP      P       20 54 22.7  -1.1
MORC    Moravsky Berou     95.70 321 ⇓P      P       20 54 23.8 +0.1
DOMB    Dombas             95.74 335 eP      P       20 54 23.0  -0.7
SRO     Srobarova          95.77 319 eP      P       20 54 24.3 +0.3
SRO                                   pmax   pmax
        comp=Z,33nm,0.8s
SRO     Srobarova          95.77 319 eP      P       20 54 24.3 +0.3
OHR     Ohrid              95.78 312 i P     P       20 54 22.9  -1.4
TEKS    Tekeris            95.83 316⇓iP      P       20 54 23.4  -1.0
SJES    Sjenica            95.85 315⇓iP      P       20 54 24.2  -0.5
OSL     Oslo               95.88 332 eP      P       20 54 23.6  -0.6
JAVC    Velka Javorina     95.89 320 eP      P       20 54 24.9 +0.3
MORH    Mrgy, Hungar       95.99 318 ⇓P      P       20 54 24.6  -0.4
KRLC    Kraliky            96.08 322 eP      P       20 54 25.8 +0.3
KRLC    Kraliky            96.08 322 eP      P       20 54 25.8 +0.3
BBLS    Lazi&#263i         96.09 315⇓iP      P       20 54 25.3  -0.4
SMOL    Smolenice          96.14 320 eP      P       20 54 26.0 +0.3
KSP     Ksiaz              96.14 323 eP      P       20 54 25.6   0.0
MOL     Molde              96.15 335 eP      P       20 54 25.2  -0.2
NEEM    North Greenlan     96.16 359 i P     P       20 54 24.7  -0.8
NEEM                                  IAmb   IAmb    20 54 26.8
        comp=Z,34nm,0.6s
RUDO    Rudo               96.18 315⇓iP      P       20 54 25.1  -0.9
MODS    Modra-Piesok       96.28 320 eP      P       20 54 26.3  -0.1
MODS                                  pmax   pmax
        comp=Z,61nm,1.5s
MODS    Modra-Piesok       96.28 320 eP      P       20 54 26.2  -0.1
DPC     Dobruska-Polom     96.28 322 eP      P       20 54 27.0 +0.6
DPC                                  ePP     PP      20 58 28.1 +1.1
DPC     Dobruska-Polom     96.28 322 eP      P       20 54 27.0 +0.6
DPC                                  e               20 58 28.1
OSTC    Ostas              96.28 322 eP      P       20 54 26.7 +0.4
OSTC    Ostas              96.28 322 eP      P       20 54 26.7 +0.4
HAPS    Han Pijesak,BI     96.35 316⇓iP      P       20 54 26.4  -0.5
CHVC    Chvalec            96.37 322 eP      P       20 54 27.1 +0.4
CHVC    Chvalec            96.37 322 eP      P       20 54 27.1 +0.4
QSPA    South Pole Qui     96.37 180  P      P       20 54 25.9  -0.5
QSPA                                  IAmb   IAmb    20 54 31.4
        comp=Z,11nm,0.8s
QSPA    South Pole Qui     96.37 180  P      P       20 54 26.2  -0.3
        comp=Z,11nm,0.8s,baz=311,slow=0.5,SNR=32
QSPA                                  pP     pP      20 56 13.8 +2.3
        comp=Z,4.2nm,0.9s,baz=307,slow=0.7,SNR=3.2
QSPA                                  S      SKSac   21 04 13.5  -3.4
        comp=Z,2.5nm,0.8s,baz=64,slow=20,SNR=14
QSPA                                  SKKP           21 14 02.2
        comp=Z,1.6nm,0.8s,baz=248,slow=0.8,SNR=2.5
        comp=Z,11nm,0.8s
TIR     Tirane             96.40 313 ⇑P      P       20 54 26.8  -0.3
TIR     Tirane             96.40 313  P      P       20 54 25.3  -1.7
UPC     Upice              96.42 322 eP      P       20 54 27.4 +0.5
UPC                                  eSKS    SKSac   21 04 15.8  -1.9
UPC     Upice              96.42 322 eP      P       20 54 27.4 +0.5
UPC                                  e               21 04 15.8
VRAC    Vranov             96.43 321  P      P       20 54 27.6 +0.5
        comp=Z,26nm,0.9s,baz=71,slow=4.4,SNR=36
        comp=Z,26nm,0.9s
VRAC    Vranov             96.43 321 eP      P       20 54 26.7  -0.3
VRAC                                 eSKS    SKSac   21 04 18.1 +0.3
VRAC    Vranov             96.43 321 ⇓P      P       20 54 27.5 +0.5
DBG     Daneborg           96.43 351 i P     P       20 54 25.7  -0.8
DBG                                   IAmb   IAmb    20 54 27.1
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        comp=Z,60nm,1.2s
KONO  Kongsberg        96.52 332   P        P        20 54 26.1 -1.0
KONO                               IAmb     IAmb     20 54 27.0
        comp=Z,25nm,0.8s
KONO  Kongsberg        96.52 332d iP        P        20 54 25.8 -1.3
KONO                               pmax     pmax
        comp=Z,19nm,0.8s
KONO  Kongsberg        96.52 332  eP        P        20 54 26.3 -0.8
AKN   Aaknes           96.55 335  eP        P        20 54 27.0 -0.3
PDG   Podgorica        96.57 314⇓iP        P        20 54 26.6 -1.1
PDG   Podgorica        96.57 314 ⇓P        P        20 54 26.8 -1.0
UPM   Unac-Piva        96.62 315  eP        P        20 54 26.7 -1.5
KRUC  Moravsky         96.63 321  eP        P        20 54 27.6 -0.3
KRUC                              eSKS      SKSac    21 04 19.1 +0.3
SKAR  Skarslia         96.66 334  eP        P        20 54 27.6 -0.3
COP   Copenhagen       96.68 328  i P       P        20 54 28.2 +0.3
COP                                IAmb     IAmb     20 54 30.8
        comp=Z,49nm,0.9s
DRME  Dracevica, Mon   96.68 314⇓iP        P        20 54 26.7 -1.6
KEK   Kerkira          96.86 311   IAmb     IAmb     20 54 30.5
        comp=Z,28nm,0.9s
SOP   Sopron           96.94 320   P        P        20 54 26.3 -3.0
BRY   Bratogost        96.96 315  eP        P        20 54 28.9 -0.8
RUE   Ruedersdorf      97.09 325  ePdiff    Pdif     20 54 30.2 +0.4
        comp=Z,88nm,0.6s
RONA  Rosalia, Austr   97.11 320  i Pdiff   P        20 54 29.7 -0.5
        comp=Z,25nm,1.1s,SNR=8.3
RONA                              eSKS      SKSac    21 04 19.5 -1.9
        comp=Z,103nm,2.5s
HCY   Herceg Novi      97.11 314  eP        P        20 54 24.5 -5.7
TREC  Trest            97.12 321  eP        Pdif     20 54 30.6 +0.5
TREC  Trest            97.12 321  eP        Pdif     20 54 30.6 +0.5
BEHE  Becsehely        97.16 318   IAmb     IAmb     20 54 31.5
        comp=Z,14nm,0.8s
OVD   Ostervraa, Den   97.19 330  i P       P        20 54 29.9 -0.3
OVD                                IAmb     IAmb     20 54 30.5
        comp=Z,72nm,0.7s
PVCC  Panska Ves       97.28 323  eP        Pdif     20 54 31.4 +0.6
PVCC  Panska Ves       97.28 323  eP        Pdif     20 54 31.4 +0.6
CONA  Conrad Observa   97.32 320  i Pdiff   P        20 54 30.9 -0.2
        comp=Z,72nm,2.2s,SNR=8.9
CONA                              ePP       PP       20 58 37.5 +2.4
        comp=Z,85nm,1.6s
CONA                               PKKP     PKKPbc   21 11 05.5 -3.8
        comp=Z,1.5nm,0.8s
GOPC  GO Pecny, Ondr   97.36 322  eP        Pdif     20 54 31.7 +0.5
GOPC  GO Pecny, Ondr   97.36 322  eP        Pdif     20 54 31.7 +0.5
HYA   Hoyanger         97.37 334  eP        P        20 54 30.5 -0.3
BLY   Banja Luka       97.39 317⇓iP        P        20 54 31.0 -0.4
LSZ   Lusaka           97.47 255   P        P        20 54 30.8 -1.7
LSZ                                IAmb     IAmb     20 54 32.4
        comp=Z,28nm,0.8s
LSZ   Lusaka           97.47 255   P        P        20 54 31.6 -0.9
LSZ   Lusaka           97.47 255   P        P        20 54 30.8 -1.7
LSZ                                pmax     pmax
        comp=Z,28nm,0.8s
PRU   Pruhonice        97.48 322  eP        Pdif     20 54 32.2 +0.5
PRU                               eSKS      SKSac    21 04 21.5 -1.6
PRU                                AMS      AMS      21 40 10.0
        comp=Z,200nm,21.9s
PRU   Pruhonice        97.48 322  eP        Pdif     20 54 32.2 +0.5
PRU                               e                  21 04 21.5
PRU                                MLR      MLR
        comp=Z,200nm,21.9s
A051A Mrakovica        97.50 317⇓iP        P        20 54 31.3 -0.7
KOGS  Kog              97.52 318  i P       P        20 54 31.4 -0.5
KOGS                              i PP      PP       20 58 39.6 +3.1
KOGS                              i SKSac   SKSac    21 04 20.5 -2.9
PRA   Prague           97.52 322  ePP       PP       20 58 36.1 -0.3
BRG   Berggiesshubel   97.54 323  ePdiff    P        20 54 32.3 +0.4
        comp=Z,32nm,0.7s
BRG   Berggiesshubel   97.54 323   sP       sP       20 57 09.0 +2.0
BRG   Berggiesshubel   97.54 323   S        S        21 05 21.0 +5.7
BRG   Berggiesshubel   97.54 323   sS       sS       21 08 31.0 +5.1
STON  Ston             97.56 315⇓iP        P        20 54 30.0 -2.1
RICC  Richard          97.56 323  eP        P        20 54 32.7 +0.7
FOO   Floro            97.64 335  eP        Pdif     20 54 31.9 -0.2
ARSA  Arzberg          97.75 319   IAmb     IAmb     20 54 33.8
        comp=Z,13nm,0.9s
ARSA  Arzberg          97.75 319  i Pdiff   Pdif     20 54 32.6 -0.3
        comp=Z,28nm,1.2s,SNR=5.4
ARSA                              ePKiKP    PKiKP    20 59 03.2 -0.8
        comp=Z,61nm,2.4s
ARSA                              ePKKP     PKKPbc   21 11 06.9 -1.0
        comp=Z,2.2nm,0.8s
ODD1  Odda             97.75 333  eP        Pdif     20 54 32.5 -0.3
ZVC   Zvikov           97.88 322  eP        P        20 54 34.0 +0.5
ZVC                               eSKS      SKSac    21 04 22.6 -2.5
A050A Klekovaca        97.91 316⇓iP        Pdif     20 54 32.1 -1.7
HSKC  Hora Svate Kat   97.94 323  eP        P        20 54 34.1 +0.3
CLL   Collm            97.95 324⇓iP        Pdif     20 54 33.5 -0.2
CLL                               e*PP      pP       20 56 20.0 -0.7
CLL                               e                  21 04 23.0
CLL                               eS        S        21 05 21.0 +2.4
CLL                                pmax     pmax
        comp=Z,80nm,1.6s
CLL   Collm            97.95 324  ePdiff    Pdif     20 54 33.6 -0.1
        comp=Z,17nm,0.6s
CLL                               eL        L        21 45 59.6
        comp=Z,112nm,19.1s
CLL   Collm            97.95 324⇓iPdif     Pdif     20 54 33.5 -0.2
        comp=Z,80nm,1.6s
CLL                               epP       pP       20 56 20.0 -0.7
CLL                               ex        x        20 56 49.0
CLL                               esP       sP       20 57 07.0 -1.8
CLL                               ex        x        20 57 14.0
CLL                               ex        x        20 57 57.0
CLL                               ex        x        20 58 30.0
CLL                               ePP       PP       20 58 41.0 +1.4
CLL                               ePPP      PPP      21 00 49.0
CLL                               ex        x        21 03 12.0
CLL                               eSKSac    SKSac    21 04 23.0 -2.4
CLL                               eSdif     Sdif     21 05 21.0 +2.3
CLL                               epSKKSac           21 07 20.0
CLL                               ePS       PS       21 07 41.0 -6.2
CLL                               esS       sS       21 08 30.0 +0.7
CLL                               ex        x        21 08 44.0
CLL                               e(SSSS)            21 19 00.0
YKAW3 Yellowknife Wh   97.99  24   IAmb     IAmb     20 54 35.4
        comp=Z,16nm,1.2s
CKRC  Cesky Krumlov    98.01 321  eP        P        20 54 34.6 +0.5
CKRC                              ePP       PP       20 58 42.2 +2.0
CKRC                              eSKS      SKSac    21 04 24.3 -1.6
CKRC                               AMS      AMS      21 41 30.0
        comp=Z,100nm,15.8s
CKRC  Cesky Krumlov    98.01 321  eP        P        20 54 34.6 +0.5
CKRC                              e                  20 58 42.2
CKRC                              e                  21 04 24.3
CKRC                               MLR      MLR
        comp=Z,100nm,15.8s
YKA   Yellowknife Ar   98.02  24   P        P        20 54 34.4 +0.6
        comp=Z,5.0nm,0.8s,baz=306,slow=5.2,SNR=27
YKA                                pP       pP       20 56 20.5 -0.7
        comp=Z,3.1nm,1.0s,baz=303,slow=5.5,SNR=4.9
YKA                                S        SKSac    21 04 16.8 -8.5
        comp=Z,1.5nm,0.9s,baz=315,slow=5.7,SNR=5.1
YKA                                PKKPbc   PKKPbc   21 11 03.6 -4.1
        comp=Z,0.7nm,0.9s,baz=123,slow=2.1,SNR=3.6
        comp=Z,5.0nm,0.8s
SUE   Sulen            98.03 335  eP        Pdif     20 54 33.4 -0.4
BLS5  Blasjo           98.06 333  eP        Pdif     20 54 34.0 -0.1
BER   Bergen           98.11 334  eP        Pdif     20 54 34.0 -0.1
ASK   Askoy            98.12 334  eP        P        20 54 34.3 +0.1
SNART Snartemo         98.20 332  eP        Pdif     20 54 33.6 -1.1
SSRD  Sdr. Stenderup   98.23 328  i P       P        20 54 35.0 +0.1
SSRD                               IAmb     IAmb     20 54 35.7
        comp=Z,143nm,1.4s
CRES  Cresnjevec Ost   98.23 318⇓iP        Pdif     20 54 34.4 -0.7
SOKA  Soboth           98.24 319  i Pdiff   Pdif     20 54 34.7 -0.6
        comp=Z,21nm,0.9s,SNR=12
MOA   Molln            98.36 320  i Pdiff   P        20 54 35.8 +0.1
        comp=Z,55nm,0.8s,SNR=28
KHC   Kasperske Hory   98.36 322  eP        P        20 54 36.0 +0.3
KHC                               ePP       PP       20 58 40.3 -2.5
KHC                               eSKS      SKSac    21 04 26.1 -1.5
KHC                                AMS      AMS      21 41 40.0
        comp=Z,100nm,14.4s
KHC   Kasperske Hory   98.36 322d iP        Pdif     20 54 35.5 -0.2
KHC                                pmax     pmax
        comp=Z,33nm,0.9s
GEC2  GERESS Array S   98.38 321  ePdiff    P        20 54 36.0 +0.1
        comp=Z,23nm,1.0s
GERES GERESS Array B   98.38 321   P        P        20 54 35.9 +0.1
        comp=Z,15nm,0.9s,baz=297,slow=5.8,SNR=59
GERES                              PP       PP       20 58 44.5 +1.5
        comp=Z,6.9nm,0.9s,baz=295,slow=7.2,SNR=5.3
        comp=Z,15nm,0.9s
BSEG  Bad Segeberg     98.48 327  ePdiff    P        20 54 36.4 +0.4
        comp=Z,30nm,0.8s
TANN  Tannenbergstha   98.59 323  ePdiff    P        20 54 36.8 +0.1
        comp=Z,16nm,0.8s
FLTG  Flechtingen      98.59 325  ePdiff    P        20 54 36.6 +0.1
        comp=Z,30nm,0.7s
OBKA  Obir             98.61 319⇓iP        Pdif     20 54 36.3 -0.6
OBKA  Obir             98.61 319  i Pdiff   Pdif     20 54 36.5 -0.4
        comp=Z,29nm,1.1s,SNR=8.2
KMY   Karmoy           98.70 333  eP        Pdif     20 54 35.8 -1.1
NEUB  Neuenburg        98.70 324  ePdiff    P        20 54 37.5 +0.4
        comp=Z,32nm,0.7s
LJU   Ljubljana        98.78 318  i P       Pdif     20 54 37.2 -0.3
LJU                               ePP       PP       20 58 49.1 +3.1
LJU                               i SKSac   SKSac    21 04 27.1 -2.6
WET   Wettzell         98.79 322  ePdiff    P        20 54 37.8 +0.2
        comp=Z,15nm,1.0s
BIOA  Bad Ischl, Aus   98.81 320  i Pdiff   Pdif     20 54 37.4 -0.3
        comp=Z,17nm,0.8s,SNR=6.8
CEY   Cerknica         98.94 318⇓iP        Pdif     20 54 37.8 -0.5
MANZ  Manzenberg       98.95 323  ePdiff    P        20 54 38.9 +0.5
        comp=Z,2.0nm,0.8s
ROTZ  Rotzenmuhle      98.97 323  ePdiff    P        20 54 38.9 +0.5
        comp=Z,5.4nm,1.0s
MOX   Moxa             99.01 323  ePdiff    Pdif     20 54 38.6 +0.2
        comp=Z,15nm,0.8s
MOX                               eP        Pdif     20 54 38.7 +0.2
        baz=68,slow=4.5
MOX                               eL        L        21 32 46.7
        comp=Z,76nm,20.3s
KULLO Kullorsuaq       99.07   0  i P       Pdif     20 54 37.7 -0.6
KULLO                              IAmb     IAmb     20 54 38.7
        comp=Z,29nm,1.1s
MYKA  Terra Mystica    99.17 319  ePP       PP       20 58 48.0 -1.0
        comp=Z,36nm,1.8s
NRDL  Niedersach Rie   99.17 326  ePdiff    Pdif     20 54 39.7 +0.7
        comp=Z,54nm,0.9s
KBA   Koelnbreinsper   99.21 320  i Pdiff   Pdif     20 54 38.6 -1.1
        comp=Z,19nm,1.1s,SNR=10
KBA                               i PP      PP       20 58 52.0 +2.6
        comp=Z,51nm,1.3s
CADS  Cadrg            99.24 319  i P       Pdif     20 54 38.5 -1.1
TIP   Timpagrande      99.27 311  ⇑P       Pdif     20 54 40.1 +0.1
RJOB  Jochberg         99.33 320  ePdiff    Pdif     20 54 40.0 -0.1
        comp=Z,16nm,0.9s
RETH  Rethem/Aller,    99.49 326  ePdiff    Pdif     20 54 41.1 +0.6
LESA  Schwarzleotal    99.51 320  i Pdiff   Pdif     20 54 40.3 -0.6
        comp=Z,24nm,0.8s,SNR=12
LESA                              eSKS      SKSac    21 04 29.3 -4.2
        comp=Z,139nm,2.9s
LESA                              ePKKP     PKKPbc   21 11 01.9 -1.2
        comp=Z,3.7nm,0.5s
GRF   Grafenberg Arr   99.60 323  eP        Pdif     20 54 41.7 +0.6
        baz=68,slow=4.5
GRF                               ePdiff             20 54 41.7
        comp=Z,17nm,1.0s
GRF                               eL        L        21 42 01.8
        comp=Z,118nm,21.4s
GTTG  Gottingen        99.62 325  ePdiff    Pdif     20 54 41.7 +0.5
ABTA  Abfaltersbach    99.86 320  i Pdiff   Pdif     20 54 41.2 -1.3
        comp=Z,30nm,1.1s,SNR=9.8
ABTA                              i PP      PP       20 58 55.0 +0.8
        comp=Z,62nm,2.6s
ABTA                              ePKiKP    PKiKP    20 59 06.6 -1.3
        comp=Z,63nm,2.4s
ABTA                              eSKS      SKSac    21 04 30.1 -5.1
        comp=Z,98nm,2.0s
SCO   Scoresbysund     99.89 349  i P       Pdif     20 54 41.7 -0.2
SCO                                IAmb     IAmb     20 54 44.0
        comp=Z,14nm,1.0s
UBBA  Unterbreizbach   99.89 324  ePdiff    Pdif     20 54 42.6 +0.3
WTTA  Wattenberg      100.23 320  i Pdiff   Pdif     20 54 43.7 -0.6
        comp=Z,48nm,0.8s,SNR=12
WTTA                              epPdiff   pPdif    20 56 29.9 -1.2
        comp=Z,14nm,1.6s
WTTA                               PP       PP       20 58 58.9 +1.8
        comp=Z,47nm,1.2s
WTTA                              i SKS     SKSac    21 04 33.6 -3.6
        comp=Z,85nm,1.7s
WTTA                              ePKKP     PKKPbc   21 10 54.1 -7.1
        comp=Z,0.9nm,0.4s
WATA  Walderalm       100.25 320  i Pdiff   Pdif     20 54 43.3 -0.9
        comp=Z,40nm,1.1s,SNR=13
WATA                              epPdiff   pPdif    20 56 29.3 -1.9
        comp=Z,5.7nm,1.4s
WATA                              ePP       PP       20 58 59.7 +2.6
        comp=Z,64nm,1.7s
WATA                              eSKS      SKSac    21 04 33.6 -3.6
        comp=Z,109nm,2.5s
SUMG  Summit          100.30 355  i P       Pdif     20 54 44.0 -0.3
SUMG                               IAmb     IAmb     20 54 45.9
        comp=Z,16nm,1.1s
SQTA  Sankt Quirin    100.52 320  i Pdiff   Pdif     20 54 45.0 -0.4
        comp=Z,49nm,0.9s,SNR=10
SQTA                              eSKS      SKSac    21 04 35.3 -3.1
        comp=Z,184nm,2.9s
MOTA  Moosalm         100.54 320  i Pdiff   Pdif     20 54 45.0 -0.6
        comp=Z,40nm,0.9s,SNR=19
MOTA                              i SKS     SKSac    21 04 35.6 -3.0
        comp=Z,254nm,3.2s
IBBN  Ibbenburen      100.56 326  ePdiff    Pdif     20 54 46.0 +0.7
        comp=Z,39nm,0.7s
KASTN Kahler Asten    100.65 325  ePdiff    Pdif     20 54 46.2 +0.4
        comp=Z,19nm,1.0s
RETA  Reutte          100.70 321  i SKS     SKSac    21 04 36.3 -2.9
        comp=Z,236nm,3.2s
FETA  Feichten        100.90 320  i Pdiff   Pdif     20 54 47.0 -0.2
        comp=Z,37nm,1.0s,SNR=7.3
FETA                              ePP       PP       20 59 03.4 +1.4
        comp=Z,141nm,3.0s
FETA                              eSKS      SKSac    21 04 38.1 -2.3
        comp=Z,212nm,2.8s
BOSA  Boshof          100.92 242   PKKPbc   PKKPbc   21 10 57.9 -0.6
        comp=Z,4.1nm,1.0s,baz=144,slow=6.8,SNR=3.0
TNS   Taunus Mts      101.04 324  ePdiff    Pdif     20 54 47.9 +0.3
        comp=Z,49nm,1.5s
BUG   Bochum--Univer  101.20 325  ePdiff    Pdif     20 54 48.9 +0.7
        comp=Z,34nm,0.9s
BTNL  Ternell         102.22 325  dPdif     Pdif     20 54 53.7 +0.9
        comp=Z,8.9nm,1.3s
MEM   Membach         102.28 325  dPdif     Pdif     20 54 54.0 +1.0
        comp=Z,10nm,1.2s
YBH   Yreka Blue Hor  102.55  45   SKKP              21 13 47.8
        comp=Z,142nm,0.3s,baz=175,slow=23,SNR=3.4
BSTI  Sart Tilman     102.55 325  dPdif     Pdif     20 54 54.7 +0.5
        comp=Z,4.2nm,1.2s
WLF   Walferdange     102.62 324  dPdif     Pdif     20 54 56.5 +2.0
        comp=Z,9.0nm,0.8s
BGES  Gesves          102.91 325  dPdif     Pdif     20 54 56.3 +0.5
BMRD  Maredsous       103.13 325  dPdif     Pdif     20 54 57.2 +0.4
        comp=Z,11nm,1.1s
UCC   Uccle           103.13 326  dPdif     Pdif     20 54 57.0 +0.3
DOU   Dourbes         103.32 325  dPdif     Pdif     20 54 57.9 +0.2
        comp=Z,8.1nm,0.8s
EKA   Eskdalemuir Ar  104.63 332   Pdiff    Pdif     20 55 02.9 -0.5
        comp=Z,5.8nm,0.8s,baz=56,slow=6.0,SNR=14
EKA                                PP       PP       20 59 28.5 -0.4
        comp=Z,2.1nm,0.7s,baz=45,slow=8.3,SNR=4.3
EKA                                PKKPbc   PKKPbc   21 10 46.7 -1.9
        comp=Z,0.7nm,0.3s,baz=242,slow=2.8,SNR=11
EKA                                SKKP              21 13 42.7
        comp=Z,0.8nm,0.5s,baz=232,slow=3.4,SNR=4.3
EKA   Eskdalemuir Ar  104.63 332   P        Pdif     20 55 04.0 +0.7
KEST  Kesra           105.94 310   PKiKP    PKiKP    20 59 20.8 +1.5
        comp=Z,4.6nm,0.9s,baz=319,slow=15,SNR=3.6
NVAR  Mina Array Bea  106.91  47   Pdiff    Pdif     20 55 13.7 -0.5
        comp=Z,0.8nm,0.7s,baz=308,slow=6.7,SNR=2.7
NVAR                               PP       PP       20 59 47.8 +1.4
        comp=Z,1.4nm,0.8s,baz=274,slow=6.4,SNR=3.6
NVAR                               SKP               21 02 11.7
        comp=Z,2.0nm,0.8s,baz=335,slow=2.4,SNR=4.2
NVAR                               PKKPbc   PKKPbc   21 10 40.0 -1.3
        comp=Z,0.9nm,0.7s,baz=102,slow=6.2,SNR=6.2
NVAR                               PKKPab   PKKPab   21 10 56.9 -1.5
        comp=Z,2.5nm,0.9s,baz=137,slow=5.0,SNR=9.3
SNAA  Sanae           107.20 195   Pdiff    Pdif     20 55 16.5 +2.0
        comp=Z,0.5nm,0.6s,baz=147,slow=8.6,SNR=1.9
SNAA                               PKKPbc   PKKPbc   21 10 38.5 -2.7
        comp=Z,2.9nm,0.6s,baz=276,slow=3.3,SNR=17
SNAA                               PKKPab   PKKPab   21 10 54.4 -1.2
        comp=Z,4.5nm,0.8s,baz=275,slow=3.3,SNR=9.5
ELK   Elko            108.11  44   SKP               21 02 14.0
        comp=Z,2.4nm,0.6s,baz=3.9,slow=1.0,SNR=5.6
ELK                                PKKP              21 10 50.6
        comp=Z,3.4nm,1.0s,baz=116,slow=4.3,SNR=9.1
PFO   Pinyon Flats O  110.15  51   SKP               21 02 17.3
        comp=Z,3.4nm,0.9s,baz=128,slow=2.5,SNR=3.6
PFO                                PKKP              21 10 42.5
        comp=Z,1.7nm,0.7s,baz=54,slow=4.3,SNR=3.5
PDAR  Pinedale Array  110.89  39   Pdiff    Pdif     20 55 32.1 +0.2
        comp=Z,0.2nm,0.4s,baz=284,slow=37,SNR=1.8
PDAR                               PKiKP    PKiKP    20 59 29.2 +0.5
        comp=Z,0.3nm,0.4s,baz=306,slow=7.3,SNR=2.6
PDAR                               PP       PP       21 00 15.3 +0.5
        comp=Z,0.8nm,0.8s,baz=302,slow=11,SNR=2.3
PDAR                               SKP               21 02 19.2
        comp=Z,0.8nm,0.5s,baz=137,slow=2.3,SNR=4.1
PDAR                               PKKPab   PKKPab   21 10 38.6 -2.2
        comp=Z,1.6nm,0.8s,baz=24,slow=0.9,SNR=9.8
ULM   Lac du Bonnet   113.71  27   PKiKP    PKiKP    20 59 33.2 -0.2
        comp=Z,4.0nm,0.6s,baz=289,slow=3.5,SNR=12
ULM                                SKP               21 02 22.3
        comp=Z,10nm,0.7s,baz=344,slow=2.1,SNR=12
ESDC  Sonseca Array   113.74 318   PKiKP    PKiKP    20 59 34.2 +0.3
        comp=Z,1.4nm,1.0s,baz=351,slow=3.5,SNR=6.2
ESDC                               PP       PP       21 00 35.6 +0.9
        comp=Z,5.6nm,1.0s,baz=49,slow=7.8,SNR=5.0
ESDC                               PKKPbc   PKKPbc   21 10 18.4 -1.0
        comp=Z,1.1nm,0.9s,baz=270,slow=2.6,SNR=4.8
ESDC                               SKKPbc   SKKPbc   21 13 16.1 -1.9
        comp=Z,0.6nm,0.9s,baz=248,slow=2.6,SNR=4.1
PBRG  Braganca        114.36 322  ePP       PP       21 00 39.6 +0.8
MVO   Moncorvo        114.90 321  ePKPdf    PKiKP    20 59 37.5 +1.4
MVO                               ePP       PP       21 00 45.2 +2.5
MVO                               eSKPdf    SKiKP    21 02 27.1 +0.5
PGAV  Gavieira, Arco  115.20 323  ePKPdf    PKiKP    20 59 37.4 +0.8
PCAB  Cabril          115.20 322  ePKPdf    PKiKP    20 59 38.0 +1.4
PCAB                              eSKPdf    SKiKP    21 02 27.6 +0.5
POLO  Lamas de Olo    115.25 322  ePKPdf    PKiKP    20 59 37.8 +1.0
POLO                              ePP       PP       21 00 45.0 -0.2
PVRL  Vila Real       115.26 322  ePKPdf    PKiKP    20 59 37.5 +0.8
PVRL                              eSKPdf    SKiKP    21 02 27.4 +0.1
MTE   Manteigas       115.65 321  ePKPdf    PKiKP    20 59 38.4 +0.9
MTE                               eSKPdf    SKiKP    21 02 28.1  0.0
PVIS  Viseu           115.69 321  ePKPdf    PKiKP    20 59 38.2 +0.6
PVIS                              eSKPdf    SKiKP    21 02 28.4 +0.3
PCBR  Castelo Branco  115.93 320  ePKPdf    PKiKP    20 59 38.9 +0.8
PCBR                              eSKPdf    SKiKP    21 02 28.9 +0.3
PMRV  Marv??o         116.11 320  ePKPdf    PKiKP    20 59 39.3 +0.9
PMRV                              ePP       PP       21 00 50.5 -0.5
PMRV                              eSKPdf    SKiKP    21 02 29.1 +0.1
PCAS  Casmilo, Conde  116.45 321  ePKPdf    PKiKP    20 59 39.7 +0.6
PCAS                              eSKPdf    SKiKP    21 02 29.7 +0.1
PSARD Sardoal         116.50 320  ePKPdf    PKiKP    20 59 40.3 +1.2
PSARD                             eSKPdf    SKiKP    21 02 29.9 +0.2
PESTR Estremoz        116.55 319  ePKPdf    PKiKP    20 59 40.6 +1.3
PBAR  Barrancos       116.57 319  ePKPdf    PKiKP    20 59 39.6 +0.3
PBAR                              eSKPdf    SKiKP    21 02 29.8  0.0
PMTG  Montargil       116.84 320  ePKPdf    PKiKP    20 59 40.6 +0.8
PSBE  So Bento        116.95 321  ePKPdf    PKiKP    20 59 40.9 +0.8
ANMO  Albuquerque     116.97  45   PKP      PKiKP    20 59 41.2 +0.7
        comp=Z,1.3nm,0.6s,baz=40,slow=3.0,SNR=3.7
ANMO                               SKP               21 02 30.7
        comp=Z,6.0nm,0.9s,baz=317,slow=4.1,SNR=6.5
EVO   Evora           117.01 319  ePKPdf    PKiKP    20 59 41.3 +1.2
EVO                               ePP       PP       21 00 58.7 +1.5
EVO                               eSKPdf    SKiKP    21 02 31.0 +0.3
MOE   Montemor        117.23 319  ePKPdf    PKiKP    20 59 41.6 +1.1
MOE                               ePP       PP       21 00 58.2 -0.6
MOE                               eSKPdf    SKiKP    21 02 31.4 +0.3
PARRA Arraiolos       117.51 320  ePKPdf    PKPdf    20 59 40.1 -0.9
PARRA                             eSKPdf    SKPdf    21 02 30.7 -0.8
PCVE  Castro Verde    117.53 318  ePKPdf    PKiKP    20 59 42.0 +0.8
PCVE                              eSKPdf    SKiKP    21 02 32.0 +0.2
MESJ  Messejana       117.53 319  ePKPdf    PKiKP    20 59 41.9 +0.7
MESJ                              ePP       PP       21 01 01.9 +1.1
MESJ  Messejana       117.53 319  ePKPdf    PKiKP    20 59 42.3 +1.1
MESJ                              ePP       PP       21 01 02.2 +1.4
MESJ                              eSKPdf    SKiKP    21 02 32.0 +0.3
MORF  Marmelete       118.12 318  ePKPdf    PKiKP    20 59 43.1 +0.7
MORF  Marmelete       118.12 318  ePKPdf    PKiKP    20 59 43.6 +1.2
MORF  Marmelete       118.12 318  ePKIKP    PKiKP    20 59 43.6 +1.2
SCHQ  Schefferville   118.22   7   PKP      PKiKP    20 59 42.4 +0.3
        comp=Z,8.3nm,0.6s,baz=302,slow=1.3,SNR=23
SCHQ                               SKP               21 02 32.6
        comp=Z,8.6nm,0.7s,baz=253,slow=1.0,SNR=5.1
SCHQ                               SKKPbc   SKKPbc   21 13 01.6 -3.2
        comp=Z,2.7nm,0.8s,baz=120,slow=4.2,SNR=4.1
PFVI  Vila Bisbo      118.33 318  ePKPdf    PKiKP    20 59 43.8 +1.1
TOA0  Torodi Ar. Sit  119.67 289   P        PKPdf    20 59 45.4 -0.4
TORD  Torodi Ar. Bea  119.67 289   PKP      PKPdf    20 59 45.5 -0.3
        comp=Z,92nm,0.3s,baz=36,slow=2.6,SNR=1.3
TORD                               SKKPbc   SKKPbc   21 12 59.9 +0.8
        comp=Z,105nm,0.3s,baz=325,slow=3.3,SNR=1.7
TXAR  Lajitas Array   121.83  50   PKP      PKiKP    20 59 51.0 +1.0
        comp=Z,1.0nm,0.7s,baz=250,slow=2.5,SNR=5.3
TXAR                               SKP               21 02 40.0
        comp=Z,3.0nm,0.7s,baz=202,slow=0.7,SNR=5.1
TXAR                               PKKPbc   PKKPbc   21 09 49.8 -0.8
        comp=Z,2.2nm,0.9s,baz=137,slow=6.2,SNR=13
WMOK  Wichita Mounta  122.34  42            PKiKP    20 59 51.3 +0.5
WMOK  Wichita Mounta  122.34  42   PKIKP    PKiKP    20 59 51.3 +0.5
CCM   Cathedral Cave  124.76  34            PKPdf    20 59 54.6 -0.4
CCM   Cathedral Cave  124.76  34   PKIKP    PKPdf    20 59 54.6 -0.4
WCI   Wyandotte Cave  127.24  30            PKPpre   20 59 51.7
WCI   Wyandotte Cave  127.24  30   PKIKP    PKPdf    20 59 51.7 -8.1
DBIC  Dimbokro        127.52 283            PKiKP    21 00 01.4 -0.1
DBIC  Dimbokro        127.52 283   PKP      PKiKP    21 00 01.3 -0.2
        comp=Z,40nm,0.8s,baz=82,slow=2.2,SNR=29
DBIC                               PP       PP       21 02 09.3 +0.5
        comp=Z,9.0nm,0.9s,baz=70,slow=9.6,SNR=3.2
DBIC                               SKPbc    SKPbc    21 02 34.3
        comp=Z,19nm,0.9s,baz=71,slow=4.7,SNR=7.2
DBIC  Dimbokro        127.52 283   PKIKP    PKiKP    21 00 01.5 -0.1
SSPA  Standing Stone  128.90  22            PKiKP    21 00 03.9 +0.3
TKL   Tuckaleechee C  130.51  30   PKP      PKiKP    21 00 07.1 +0.1
        comp=Z,13nm,0.7s,baz=117,slow=8.0,SNR=4.5
TKL                                SKPbc    SKPab    21 02 45.7  0.0
        comp=Z,71nm,0.6s,baz=170,slow=1.1,SNR=49
USHA  Ushuaia         130.73 170   SKPbc    SKPbc    21 02 45.5  0.0
        comp=Z,52nm,0.8s,baz=189,slow=6.0,SNR=22
USHA                               SKKPbc   SKKPbc   21 12 22.4 -1.7
        comp=Z,7.1nm,0.8s,baz=157,slow=1.9,SNR=5.0
CMIG  Matias Romero   134.82  58   PKP      PKiKP    21 00 15.6 -0.6
SACV  Santiago Islan  141.63 304            PKPdf    21 00 25.7 -1.5
PLCA  Paso Flores     143.43 161   PKP      PKPdf    21 00 29.2 -0.5
        comp=Z,30nm,0.7s,baz=247,slow=1.7,SNR=51
PLCA                               SKPbc    SKPbc    21 03 23.2 -0.2
        comp=Z,51nm,1.0s,baz=194,slow=3.8,SNR=18
PLCA                               SKKPbc   SKKPab   21 11 33.6 -1.5
        comp=Z,4.5nm,1.0s,baz=63,slow=6.8,SNR=3.0
TRQA  Tornquist       148.07 171            PKPbc    21 00 41.9 +0.4
TRQA  Tornquist       148.07 171   PKP2     PKPbc    21 00 41.9 +0.4
GRTK  Grand Turk      148.37  28            PKiKP    21 00 44.0 +0.1
PEL   Peldehue        150.08 154            PKiKP    21 00 47.2 +0.1
PEL   Peldehue        150.08 154   PKIKP    PKiKP    21 00 47.3 +0.1
CFA   Coronel Fontan  152.43 157   PKP      PKPdf    21 00 44.4 -0.2
        comp=Z,2.4nm,0.8s,baz=199,slow=2.9,SNR=4.4
CFA                                PKPbc    PKiKP    21 00 52.0  0.0
        comp=Z,12nm,0.4s,baz=212,slow=2.0,SNR=35
CFA                                PKPab    PKPab    21 01 05.0 +0.8
        comp=Z,4.7nm,0.4s,baz=186,slow=3.2,SNR=8.1
CFA                                pPKPbc   pPKPbc   21 02 45.6 +3.0
        comp=Z,3.8nm,0.7s,baz=213,slow=5.2,SNR=3.1
ATAH  Atahualpa       157.55  93   PKP      PKPdf    21 00 52.8 +0.4
        comp=Z,7.4nm,1.0s,baz=52,slow=1.4,SNR=6.3
ATAH                               PKPab    PKPab    21 01 27.8 +0.5
        comp=Z,20nm,0.8s,baz=216,slow=2.8,SNR=12
NNA   Nana            158.52 106   PKPab    PKPab    21 01 31.9 +0.9
        comp=Z,6.2nm,0.3s,baz=268,slow=5.4,SNR=3.7
SDV   Santo Domingo   158.74  44            PKPab    21 01 31.6 -0.4
SDV   Santo Domingo   158.74  44   PKP      PKPdf    21 00 54.3 +0.8
        comp=Z,6.0nm,0.7s,baz=319,slow=3.4,SNR=5.5
SDV                                PKPab    PKPab    21 01 30.9 -1.1
        comp=Z,8.5nm,0.7s,baz=17,slow=3.6,SNR=7.8
SDV                                SKP               21 03 40.7
        comp=Z,14nm,0.8s,baz=106,slow=0.7,SNR=4.8
CPUP  Villa Florida   160.21 176   PKP      PKPdf    21 00 54.8 +0.2
        comp=Z,0.9nm,0.7s,baz=27,slow=1.3,SNR=6.6
CPUP                               PKPab    PKPab    21 01 37.7  0.0
        comp=Z,4.1nm,1.1s,baz=47,slow=4.0,SNR=8.6
CPUP                               SKP               21 03 41.6
        comp=Z,1.1nm,0.7s,baz=351,slow=4.8,SNR=3.8
RCBR  Riachuelo       160.21 271            PKPab    21 01 38.4 -0.1
RCBR  Riachuelo       160.21 271   PKP2     PKPab    21 01 38.4 -0.1
LPAZ  La Paz          164.48 130   PKP      PKPdf    21 01 00.9 +1.1
        comp=Z,6.9nm,1.0s,baz=50,slow=3.4,SNR=14
LPAZ                               PKPab    PKPab    21 01 58.5 +0.8
        comp=Z,31nm,0.8s,baz=222,slow=2.8,SNR=40
```

LPAZ				SKP		21 03 46.8	
	comp=Z,2.8nm,0.8s,baz=248,slow=3.4,SNR=1.9						
MDP	Montagnes des	168.07	345	PKPab	PKPab	21 02 12.6	0.0
	comp=Z,78nm,0.9s,baz=1.6,slow=4.0,SNR=22						
MDP				PP	PP	21 06 02.5	+1.6
	comp=Z,19nm,1.0s,baz=74,slow=5.5,SNR=3.5						
BDFB	Brasilia	168.12	219	PKP	PKPdf	21 01 01.7	-0.3
	comp=Z,1.9nm,0.5s,baz=19,slow=3.8,SNR=2.2						
BDFB				PKPab	PKPab	21 02 13.2	+0.1
	comp=Z,8.8nm,1.0s,baz=70,slow=4.7,SNR=5.3						
BBSD	Serra de San D	168.37	157	*e*P	PKPdf	21 01 02.5	+0.5
SIV	San Ignacio	169.23	152	PKP	PKPdf	21 01 02.9	+0.3
	comp=Z,1.1nm,0.3s,baz=115,slow=1.3,SNR=9.8						
SIV				PKPab	PKPab	21 02 18.3	+0.6
	comp=Z,7.4nm,0.7s,baz=196,slow=4.4,SNR=17						

*CATAC **05** 20:45:37.5±0.5, 12°N±3°×8°8W±°, h34^{km}±4^{km}, M3.6/14, MLv3.6/14, Error ellipse: s-maj=7.6km s-min=2.4km az=31.6, confirmed*

*SNET **05** 20:45:39.4±1.1, 12°.55N×88°.10W, h18^{km}±6^{km}, ML3.5*

ISC 05 20:45:33.7±1.4**, 12°.40N**±0°.06×**87°.99W**±0°.04**, h11**^{km}±11^{km}**, n46,** σ0^{s}**96**/61**, 12C-4D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	Cosiguina Volc	0.71	36	⇑P	Pn	20 45 50.4	+0.7
CSGN				S	Sn	20 45 59.8	-0.8
POTN	Potosi Cosigui	0.76	38	⇓P	Pn	20 45 50.9	+0.6
POTN				S	Sn	20 46 01.0	-0.7
CNCH	Conchagua	0.89	10	*e*P	Pn	20 45 53.2	+1.1
CNCH				*e*S	Sn	20 46 05.2	+0.1
CNCH	Conchagua	0.89	10	S	Sn	20 46 04.7	-0.4
CNCH	Conchagua	0.89	10	⇑P	Pn	20 45 53.3	+1.1
LCND	La Caada	0.91	6	*e*P	Pn	20 45 53.5	+1.1
LCND				IAML		20 46 08.4	
	comp=Z,3μm,0.3s						
LCND	La Caada	0.91	6	⇑P	Pn	20 45 53.5	+1.1
CRIN	San Cristobal	0.96	72	S	Sn	20 46 07.5	+0.7
CRIN	San Cristobal	0.96	72	⇑P	Pn	20 45 54.3	+1.2
VSM	San Miguel	1.06	345	*e*P	Pn	20 45 56.7	+2.0
LCY	Lacayo	1.06	344	*e*P	Pn	20 45 56.3	+1.7
LCY				*e*S	Sn	20 46 09.6	+0.2
BLLM	Bellamira	1.07	347	*e*P	Pn	20 45 56.0	+1.4
ALJI	Alcalda de J	1.09	328	S	Sn	20 46 10.0	+0.2
PACA	Pacayal	1.11	343	*e*P	Pn	20 45 57.0	+1.7
PACA				*e*S	Sn	20 46 09.9	-0.8
PACA				IAML		20 46 16.4	
	comp=Z,7μm,0.2s						
PACA	Pacayal	1.11	343	S	Sn	20 46 11.0	+0.2
PACA	Pacayal	1.11	343	⇓P	Pn	20 45 56.8	+1.4
QUEN	Al S del Volca	1.12	80	⇑P	Pb	20 45 56.2	+1.1
HERN	Volcan Telica	1.15	79	S	Sb	20 46 10.2	-0.3
HERN	Volcan Telica	1.15	79	⇑P	Pb	20 45 56.2	+0.6
HOYN	Al Sur del Vol	1.15	80	⇑P	Pb	20 45 56.2	+0.6
HOYN				S	Sb	20 46 10.5	0.0
TECA	Tecapa	1.20	335	*e*P	Pn	20 45 58.0	+1.4
TECA				*e*P	Pg	20 45 58.3	+1.5
CNGA	Al SSO del Vol	1.26	85	⇓P	Pn	20 45 57.9	+0.7
CNGA				S	Sb	20 46 13.0	-0.6
CNGN	Cerro Negro	1.26	85	S	Sb	20 46 13.3	-0.4
CNGN	Cerro Negro	1.26	85	⇑P	Pn	20 45 57.8	+0.5
ILCN	San Idelfonso	1.27	82	⇓P	Pn	20 45 58.1	+0.8
ILCN				S	Sb	20 46 13.8	-0.1
CHOHN	Orocuina	1.34	37	S	Sb	20 46 15.0	-1.2
CHOHN	Orocuina	1.34	37	⇑P	Pn	20 45 58.8	+0.4
TECO	Alcaldia de Te	1.37	326	*e*P	Pg	20 46 00.3	+0.3
TECO				*e*S	Sn	20 46 16.1	-0.9
TECO	Alcaldia de Te	1.37	326	P	Pg	20 46 00.4	+0.4
COPN	Copaltepe	1.38	99	P	Pn	20 45 59.8	+1.0
MOMN	Momotombo	1.41	89	⇑P	Pn	20 45 59.9	+0.5
MOMN				S	Sn	20 46 17.1	-0.8
UESV	Universidad de	1.46	328	S	Sg	20 46 19.4	-1.3
SCLA	Alcaldia de Sa	1.48	331	*e*P	Pg	20 46 03.2	+1.0
SCLA				IAML		20 46 22.7	
	comp=Z,110nm,0.2s						
SCLA	Alcaldia de Sa	1.48	331	S	Sg	20 46 20.9	-0.6
COEG	Centro de Oper	1.50	324	S	Sg	20 46 20.4	-1.5
PAVA	Las Pavas	1.60	325	S	Sg	20 46 24.3	-1.0
LFRS	El Faro	1.61	319	*e*P	Pg	20 46 04.2	-0.4
LFRS				*e*S	Sg	20 46 24.1	-1.4
ABCN	Banco Central	1.66	99	S	Sn	20 46 23.0	-1.0
UNAN	Cigeo UNAN	1.70	99	S	Sn	20 46 24.3	-0.7
LIMN	Finca el Limon	1.71	67	⇑P	Pn	20 46 03.7	+0.2
MGAN	Managua	1.72	98	S	Sn	20 46 24.4	-1.0
MGAN				S	Sn	20 46 24.4	-1.0
TGUH	Tegucigalpa,Un	1.79	23	⇑P	Pn	20 46 05.6	+1.0
TGUH				S	Sn	20 46 25.8	-1.6
PMON	Piamonte	1.84	315	*e*P	Pb	20 46 07.7	+0.3
JAYA	Jayaque - finc	1.90	311	*e*P	Pb	20 46 08.1	-0.3
JAYA				IAML		20 46 34.9	
	comp=Z,362nm,0.2s						
SNJE	San Jose	2.15	313	*e*P	Pb	20 46 12.3	-0.4
NUBE	Las Nubes	2.30	311	*e*P	Pb	20 46 14.3	-1.0
NUBE				*e*S	Sn	20 46 40.3	+0.2

IDC 05 21:42:32.9±1.7**, 1°.82N**×**127°.24E, h0**^{km}**, mb3.7**/4**, mbtmp3.8**/5**, ML3.7**/1**, MS3.1**/1**, Error ellipse: s-maj=123.4km s-min=19.8km az=70.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.85	184	P	Pn	21 47 06.6	-0.5
	0.2nm,0.3s,baz=355,slow=12,SNR=1.5						
	2.8nm,0.7s						
WRA	Warramunga Arr	22.72	162	P	P	21 47 36.0	-0.5
	2.6nm,0.6s,baz=340,slow=11,SNR=14						
	2.6nm,0.6s						
ASAR	Alice Springs	26.15	166	P	P	21 48 09.0	0.0
	0.4nm,0.3s,baz=346,slow=9.3,SNR=9.4						
	0.4nm,0.3s						
HNR	Honiara	34.45	110	LR	LR	22 01 58.4	
	comp=Z,31nm,21.1s,baz=356,slow=34						
MKAR	Makanchi Array	59.41	326	P	P	21 52 37.6	+0.3
	0.4nm,0.6s,baz=120,slow=7.2,SNR=5.1						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	63.61	328	P	P	21 53 05.3	-0.2
	0.6nm,0.5s,baz=133,slow=6.2,SNR=8.7						
	0.6nm,0.5s						

*HEL **05** 22:08:16.5±0.4, 67°.15N×20°.57E, h0^{km}, ML1.3, Suspected explosion*

UPP 05 22:08:16.2±0.1**, 67°.19N**×**20°.68E, h0**^{km}**, ML1.7, Unknown, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	Dundret	0.08	213	P	Pg	22 08 18.0	+0.3
DUNU				S	Sg	22 08 19.2	+0.4
RATU	Laukkuluspa	0.76	327	P	Pg	22 08 30.5	-0.3
RATU				S	Sg	22 08 40.7	0.0
KUA	Kurravaara	0.78	350	P	Pg	22 08 30.8	-0.3
KUA				S	Sg	22 08 41.5	+0.3
SALU	Saltoluokta	0.87	284	P	Pg	22 08 32.4	-0.4
SALU				S	Sg	22 08 43.8	-0.1
ERTU	Ertsjaerv	0.87	136	P	Pg	22 08 32.4	-0.5
ERTU				S	Sg	22 08 44.3	+0.2
ERTU	Ertsjaerv	0.87	136	PG	Pg	22 08 32.4	-0.5
ERTU				SB	Sb	22 08 45.5	-0.9
PAJU	Pajala	0.97	99	P	Pg	22 08 34.3	-0.3
PAJU				S	Sg	22 08 47.3	+0.2
PAJU	Pajala	0.97	99	PG	Pg	22 08 34.5	-0.1
PAJU				SG	Sg	22 08 47.7	+0.6
LANU	Lannavaara	1.00	30	PG	Pb	22 08 36.9	+0.5
HARU	Harads	1.04	173	P	Pg	22 08 35.2	-0.8
HARU				S	Sg	22 08 49.3	-0.1
KOVU	Salmi	1.06	349	P	Pg	22 08 35.9	-0.5
KOVU				S	Sg	22 08 50.5	+0.4
KLF	Kolari	1.28	86	PG	Pg	22 08 40.5	-0.2
KLF				MSG		22 08 56.4	
	comp=Z,1.0nm,0.2s						
KLF				SB	Sb	22 08 58.1	0.0
HEF	Hetta	1.67	41	PG	Pn	22 08 47.2	+0.5
HEF				MSG		22 09 07.8	
	comp=Z,2.1nm,0.2s						
HEF				SG	Sn	22 09 08.5	-0.2
KALU	Kalix	1.71	140	P	Pn	22 08 47.2	0.0
KALU	Kalix	1.71	140	PG	Pn	22 08 47.7	+0.5
KALU				SN	Sg	22 09 11.2	+0.1
SJUU	Sjulsmark	1.73	167	P	Pn	22 08 47.5	+0.1
KIF	Kilpisjarvi	1.82	1	PG	Pb	22 08 50.4	0.0
KIF				MSG		22 09 13.0	
	comp=Z,3.7nm,0.2s						
KIF				SG	Sg	22 09 15.3	+0.6
TOF	Tornio	1.83	126	PG	Pb	22 08 49.8	-0.7
TOF				MSG		22 09 11.7	
	comp=Z,1.7nm,0.2s						
TOF				SG	Sg	22 09 14.7	-0.2
KTK1	Kautokeino	2.07	26	PG	Pb	22 08 54.7	+0.2
KTK1				SG	Sg	22 09 21.7	-0.8
RNF	Rovaniemi	2.18	103	PG	Pb	22 08 55.6	-0.9
RNF				SG	Sb	22 09 24.8	+0.8
TRO	Tromso	2.54	346	SG	Sb	22 09 35.2	+1.0
RANF	Ranua	2.71	113	SG	Sb	22 09 40.6	+1.5
ARA0	ARCESS Array S	2.96	35	SB	Sb	22 09 43.9	-2.4

IDC 05 22:08:31.1±8.4**, 19°.33S**×**169°.80E, h0**^{km}**, mb3.8**/3**, mbtmp3.7**/4**, ML3.0**/1**, MS3.5**/5**, Error ellipse: s-maj=211.4km s-min=32.4km az=123.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.16	228	Pn	Pn	22 09 36.1	+0.2
	1.0nm,0.3s,baz=75,slow=20,SNR=8.2						
DZM				Sn	Sn	22 10 24.0	-1.3
	2.0nm,0.3s,baz=120,slow=20,SNR=4.1						
DZM				LR	LR	22 10 55.7	
	comp=Z,90nm,19.1s,baz=74,slow=35						
	4.4nm,0.5s						
WRA	Warramunga Arr	33.36	263	P	P	22 15 11.1	-0.3
	0.7nm,0.8s,baz=96,slow=8.4,SNR=2.0						
	0.7nm,0.8s						
ASAR	Alice Springs	33.62	256	P	P	22 15 14.1	+0.5
	0.6nm,0.5s,baz=82,slow=9.2,SNR=9.3						
	0.6nm,0.5s						
USRK	Ussuriysk Ar.	72.06	332	P	P	22 19 56.8	-0.2
	1.1nm,0.6s,baz=126,slow=5.9,SNR=4.3						
	1.1nm,0.6s						
ILAR	Eielson Array	90.16	17	LR	LR	22 53 59.8	
	comp=Z,39nm,20.4s,baz=103,slow=30						
DLBC	Dease Lake	91.88	27	LR	LR	22 58 46.6	
	comp=Z,24nm,18.1s,baz=346,slow=33						
NEW	Newport	93.51	40	LR	LR	22 56 15.9	
	comp=Z,34nm,21.1s,baz=16,slow=31						
PDAR	Pinedale Array	96.29	47	LR	LR	22 57 11.4	
	comp=Z,29nm,21.2s,baz=18,slow=30						

*UCR **05** 22:09:28.3±0.8, 8°.85N×84°.02W, h4^{km}±31^{km}, MW3.6*

*CATAC **05** 22:09:29.2±0.6, 9°N±3°×8°4W±°, h1^{km}, M3.4/6, MLv3.4/6, Error ellipse: s-maj=7.2km s-min=3.2km az=38.3, confirmed*

ISC 05 22:09:29.1±1.6**, 8°.86N**±0°.07×**84°.00W**±0°.06**, h13**^{km}**, n32,** σ**1**^{s}**00**/34**, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCHAL	Ojochal	0.42	56	P	Pg	22 09 37.0	-0.5
OCHAL				S	Sg	22 09 44.0	+0.8
FIMO	Fila Mora	0.65	79	*e*P	Pg	22 09 41.8	-0.1
PIEC	Cerro El Cedra	0.76	3	*e*P	Pg	22 09 42.7	-1.2
PTJ1	Puerto Jimnez	0.76	115	S	Sb	22 09 56.3	+1.8
PAR1A	Puntarenas Pro	0.77	341	*e*P	Pg	22 09 43.6	-0.5
PAR1A				*e*S	Sb	22 09 56.4	+1.5
ABE2	San Pablo	0.84	356	*e*P	Pg	22 09 44.3	-1.2
DRK0	Durika	0.84	62	*e*P	Pg	22 09 45.0	-0.5
DRK0	Durika	0.84	62	P	Pg	22 09 44.7	-0.8
DRK0	Durika	0.84	62	S	Sg	22 09 57.1	+0.5
LCR2	La Lucha 2	0.88	360	*e*P	Pg	22 09 44.9	-1.3
LCR2	La Lucha 2	0.88	360	P	Pg	22 09 44.8	-1.3
LCR2	La Lucha 2	0.88	360	S	Sg	22 09 57.6	0.0
HDC	Heredia	1.14	354	S	Sb	22 10 06.0	+0.5
CDITO	Canoas	1.15	104	S	Sb	22 10 06.9	+1.1
ALCO	Alturas Coton,	1.16	86	*e*P	Pb	22 09 49.7	-1.4
CVTQ	Turrialba Volc	1.16	11	*e*P	Pb	22 09 50.4	-0.9
CVTV	Tajo	1.16	12	*e*P	Pb	22 09 51.0	-0.3
ABRB	Las Abras (San	1.17	14	*e*P	Pb	22 09 50.6	-0.8
VTR0	Volcan Turrial	1.17	12	*e*P	Pb	22 09 50.6	-0.9
CVTR	Volcan Turrial	1.18	12	*e*P	Pb	22 09 50.7	-0.9
VBV1	V. Barva	1.25	355	*e*P	Pn	22 09 51.7	-0.9
CEUA	Cerro Uatsi, L	1.29	54	*e*P	Pn	22 09 53.9	+1.0
BRU2	Volcan	1.29	93	S	Sb	22 10 11.3	+1.2
CLLRA	Cordillera,	1.37	95	*e*P	Pn	22 09 53.5	-0.7
SOCE	Pocosol	1.63	338	*e*P	Pn	22 09 58.4	+0.8
SOCE	Pocosol	1.63	338	P	Pn	22 09 58.4	+0.8
SOCE	Pocosol	1.63	338	S	Sg	22 10 22.1	+0.4
TRT2	Tortugero	1.71	9	*e*P	Pn	22 09 58.8	+0.3
TRT2	Tortugero	1.71	9	S	Sb	22 10 23.6	+1.9
TRT2	Tortugero	1.71	9	P	Pn	22 09 58.8	+0.3
RBALA	Bur	1.82	89	*e*P	Pn	22 09 59.8	-0.5
CARN	Rivas	2.76	327	P	Pn	22 10 14.3	+1.2

*NEIC **05** 22:25:21.2±0.8, 18°.73N±0°.10×67°.15W±0°.03, h63^{km}±5^{km}, ML2.2/22, Md2.4/16(RSPR), Error ellipse: s-maj=14.1km s-min=3.4km az=171.0*

*OSPL **05** 22:25:21.3±0.4, 18°.77N×67°.20W, h62^{km}±4^{km}, ML1.9*

*RSPR **05** 22:25:22.2, 18°.73N×67°.14W, h60^{km}±2^{km}, MD2.4/16*

*SDD **05** 22:25:23.5±2.3, 18°.70N×66°.96W, h57^{km}±17^{km}, MD3.1*

ISC 05 22:25:22.5±1.5**, 18°.68N**±0°.07×**67°.11W**±0°.03**, h56**^{km}±8^{km}**, n52,** σ0^{s}**72**/70**, 15C-9D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.21	181		Pn	22 25 31.1	-0.5
AGPR					Sn	22 25 38.6	+0.5
AGPR				IAML		22 25 38.8	
	comp=E,147nm,0.3s						
AGPR	Aguadilla, PR	0.21	181	⇓*e*P	Pn	22 25 31.2	-0.5
AGPR	Aguadilla, PR	0.21	181	⇑*e*Pg	Pn	22 25 31.0	-0.6
AGPR				⇓*e*Sg	Sn	22 25 38.6	+0.5
AGPR	Aguadilla, PR	0.21	181	*i* P	Pn	22 25 31.1	-0.5
AGPR				*e*S	Sn	22 25 38.4	+0.3
AGPR				IAML		22 25 39.1	
	comp=Z,57nm,0.3s						
IDE	Isla Desecheo	0.45	230		Pn	22 25 32.9	-0.8
IDE					Sn	22 25 42.1	+0.4
IDE	Isla Desecheo	0.45	230	⇓*e*P	Pn	22 25 32.9	-0.8
IDE	Isla Desecheo	0.45	230	*e*S	Sn	22 25 42.1	+0.4
AOPR	Arecibo Observ	0.47	135		Pn	22 25 33.5	-0.4
AOPR					Sn	22 25 42.5	+0.3
AOPR				IAML		22 25 43.7	
	comp=N,89nm,0.2s						
AOPR	Arecibo Observ	0.47	135	⇓*e*P	Pn	22 25 33.5	-0.4
AOPR	Arecibo Observ	0.47	135	*e*S	Sn	22 25 42.5	+0.3
AOPR	Arecibo Observ	0.47	135	⇓*e*Pg	Pn	22 25 33.5	-0.4
AOPR				⇑*e*Sg	Sn	22 25 42.5	+0.3
LSP	Las Mesas	0.50	178		Pn	22 25 34.0	-0.3
LSP					Sn	22 25 44.0	+1.3
LSP	Las Mesas	0.50	178	⇓*e*P	Pn	22 25 34.0	-0.3
LSP	Las Mesas	0.50	178	*e*S	Sn	22 25 44.0	+1.3
UUPR	Utuado, UPR, P	0.56	139		Pn	22 25 34.0	-0.8
UUPR					Sn	22 25 44.2	+0.4
UUPR	Utuado, UPR, P	0.56	139	⇑*e*P	Pn	22 25 34.1	-0.8
UUPR	Utuado, UPR, P	0.56	139	*e*S	Sn	22 25 44.3	+0.4
EMPR	Esperanza - Ma	0.59	110		Pn	22 25 35.0	-0.1
EMPR					Sn	22 25 45.6	+1.3
EMPR				IAML		22 25 47.3	
	comp=E,64nm,0.1s						
EMPR				IAML		22 25 48.5	
	comp=N,82nm,0.4s						
EMPR	Esperanza - Ma	0.59	110	⇑*e*P	Pn	22 25 35.2	+0.1
EMPR	Esperanza - Ma	0.59	110	*e*S	Sn	22 25 45.7	+1.4
CRPR	Cabo Rojo, PR	0.67	180		Pn	22 25 35.8	-0.4
CRPR					Sn	22 25 46.6	+0.5
CRPR	Cabo Rojo, PR	0.67	180	⇑*e*P	Pn	22 25 35.9	-0.4
CRPR	Cabo Rojo, PR	0.67	180	⇑*e*Pg	Pn	22 25 35.8	-0.4
CRPR				⇑*e*Sg	Sn	22 25 46.8	+0.7
CRPR	Cabo Rojo, PR	0.67	180	*i* P	Pn	22 25 35.9	-0.4
CRPR				*e*S	Sn	22 25 46.2	+0.1
CRPR				IAML		22 25 48.1	
	comp=Z,26nm,1.0s						
MLPR	Magueyes Islan	0.71	175	⇑*e*P	Pn	22 25 36.3	-0.4
MLPR	Magueyes Islan	0.71	175	*e*S	Sn	22 25 47.6	+0.6
MLPR	Magueyes Islan	0.71	175	*e*Pg	Pn	22 25 36.3	-0.4
MLPR				⇑*e*Sg	Sn	22 25 47.4	+0.5
CELP	Cerrillos	0.79	140		Pn	22 25 37.5	-0.2
CELP					Sn	22 25 48.4	-0.3
CELP				IAML		22 25 50.5	
	comp=E,46nm,0.2s						
CELP				IAML		22 25 51.1	
	comp=N,73nm,0.2s						
CELP	Cerrillos	0.79	140	⇓*e*P	Pn	22 25 37.6	0.0
CELP	Cerrillos	0.79	140	*e*S	Sn	22 25 48.2	-0.5
CELP	Cerrillos	0.79	140	⇑*e*Pg	Pn	22 25 37.4	-0.2
ECPR	Experimental S	0.80	117	⇓*e*P	Pn	22 25 37.5	-0.2
ECPR	Experimental S	0.80	117	*e*S	Sn	22 25 47.5	-1.4
OBIP	Obispado Ponce	0.80	143		Pn	22 25 38.0	+0.2
OBIP					Sn	22 25 48.8	-0.1
OBIP				IAML		22 25 51.1	
	comp=E,41nm,0.6s						
OBIP	Obispado Ponce	0.80	143	⇓*e*P	Pn	22 25 38.1	+0.4
OBIP	Obispado Ponce	0.80	143	*e*S	Sn	22 25 49.0	+0.1
GCPR	Guaynabo City	1.04	111		Pn	22 25 40.1	-0.8
GCPR	Guaynabo City	1.04	111		Sn	22 25 54.7	+0.1
GCPR	Guaynabo City	1.04	111	⇑*e*P	Pn	22 25 40.1	-0.8
GCPR	Guaynabo City	1.04	111	*e*S	Sn	22 25 54.5	-0.1
SJG	San Juan	1.07	122		Pn	22 25 41.2	-0.1
SJG					Sn	22 25 55.5	+0.2
SJG				IAML		22 25 56.6	
	comp=E,38nm,0.2s						
SJG				IAML		22 25 57.4	
	comp=E,32nm,0.2s						
SJG	San Juan	1.07	122	⇑*e*P	Pn	22 25 41.3	-0.1
SJG	San Juan	1.07	122	*e*S	Sn	22 25 54.8	-0.5
SJG	San Juan	1.07	122	*i* P	Pn	22 25 41.0	-0.4
SJG				*e*S	Sn	22 25 55.8	+0.5
SJG				IAML		22 25 56.6	
	comp=Z,23nm,0.3s						
PDPR	Patillas Dam,	1.23	122	Pn	Pn	22 25 43.1	-0.3
PDPR				IAML		22 26 01.8	
	comp=E,32nm,0.1s						
PDPR				IAML		22 26 02.4	
	comp=N,34nm,0.1s						
PDPR	Patillas Dam,	1.23	122	⇑*e*P	Pn	22 25 43.2	-0.2
PDPR	Patillas Dam,	1.23	122	*e*S	Sn	22 25 59.7	+0.7
HUMP	Col San Antoni	1.31	114		Pn	22 25 44.5	-0.1
HUMP					Sn	22 26 01.8	+0.8
HUMP				IAML		22 26 03.0	
	comp=N,37nm,0.2s						
HUMP	Col San Antoni	1.31	114	⇑*e*P	Pn	22 25 44.6	+0.1
HUMP	Col San Antoni	1.31	114	*e*S	Sn	22 26 01.9	+0.8
MIDR	Miches	1.86	280	⇑*e*Sg	Sn	22 26 17.5	+3.0
DR12	Loma Pena Alta	2.16	273	Pn	Pn	22 25 54.3	-1.8

IDC 05 22:32:56.2±1.5**, 2°.93S**×**138°.09E, h0**^{km}**, mb3.7**/2**, mbtmp3.9**/5**, ML3.8**/3**, Error ellipse: s-maj=35.7km s-min=27.2km az=117.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	2.64	81	Pn	Pn	22 33 40.3	+0.1
	19nm,0.3s,baz=239,slow=10.0,SNR=56						
JAY				Sn	Sn	22 34 09.9	-3.1
	12nm,0.3s,baz=198,slow=20,SNR=5.6						
	34nm,0.4s						
WRA	Warramunga Arr	17.30	192	P	Pn	22 36 57.8	-1.6
	0.6nm,0.3s,baz=10,slow=12,SNR=12						
	1.0nm,0.3s						
FITZ	Fitzroy Crossi	19.40	218	P	Pn	22 37 24.8	-0.2
	0.1nm,0.3s,baz=22,slow=10,SNR=1.8						
	5.8nm,1.0s						
ASAR	Alice Springs	21.01	191	P	P	22 37 41.9	+0.3
	2.2nm,0.4s,baz=18,slow=11,SNR=35						
	2.2nm,0.4s						
MKAR	Makanchi Array	69.59	323	P	P	22 44 07.2	-0.1
	0.3nm,0.5s,baz=125,slow=7.2,SNR=4.5						
	0.3nm,0.5s						

*NEIC **05** 22:33:23.7±1.6, 32°.79N±0°.03×118°.49W±0°.01, h10^{km}±2^{km}, Error ellipse: s-maj=4.9km s-min=3.1km az=189.0*

PAS 05 22:33:25.0±2.4**, 32°.81N**±0°.03×**118°.49W**±0°.03**, h6**^{km}±6^{km}**, ML3.3**/277**, ML2.9**/44(NEIC)**, Error ellipse: s-maj=5.3km s-min=2.2km az=223.0, Off coast of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CIAC	Catalina I. Ai	0.60	6		Pg	22 33 35.9	-0.6
CIAC					Sg	22 33 44.9	+0.6
SBI	Santa Barbara	0.81	326		Pg	22 33 40.2	-0.4
SBI					Sg	22 33 51.0	-0.1
FMP	Fort Macarthur	0.92	10		Pg	22 33 42.2	-0.4
FMP					Sg	22 33 53.5	-1.1
RPV	Rancho Palos V	0.94	4		Pg	22 33 42.9	-0.1
RPV					Sg	22 33 54.5	-0.7
SANC	Santa Ana	1.03	29		Sg	22 33 58.5	+0.3
CPE	Camp Elliot	1.17	86		Pg	22 33 46.3	-1.1
CPE					Sg	22 34 00.5	-2.0
ELS	Elsinore Mount	1.22	46		Pg	22 33 46.4	-2.1
ELS					Sg	22 34 02.0	-2.3
TJX	Tijuana	1.25	103		Pg	22 33 47.9	-0.9
TJX				Sg	Sg	22 34 04.1	-0.9
GVRC	Garvey Reservo	1.28	14		Pn	22 33 48.3	-1.1
PASC	Pasadena Art C	1.39	10		Pn	22 33 48.9	-2.0
PASC					Sb	22 34 04.8	-4.5
PASC				IAML		22 34 05.1	
	comp=E,143nm,0.4s						
PASC				IAML		22 34 05.3	
	comp=N,148nm,0.4s						
BLCC	Black Canyon	1.44	354		Pn	22 33 50.4	-1.3
MWC	Mount Wilson	1.46	14		Pn	22 33 50.1	-2.0
RVR	Riverside	1.51	38		Pn	22 33 51.1	-1.4
HMTC	Hemet	1.54	54		Pn	22 33 51.6	-1.4
BAR	Barrett	1.54	94		Pn	22 33 51.6	-1.3
CHFC	Chilao Flat St	1.57	14		Pn	22 33 51.6	-2.0
POB	Polly Butte	1.58	56		Pn	22 33 51.8	-1.8
TKX	Tecate	1.60	98		Pn	22 33 52.9	-1.0
TKX				IAML		22 34 16.4	
	comp=N,207nm,0.2s						
TKX				IAML		22 34 16.8	
	comp=E,185nm,0.3s						
CBX	Cerro Bola	1.62	107		Pn	22 33 53.4	-0.8
CBX				IAML		22 34 17.3	
	comp=N,225nm,0.5s						
SNDA	J Saunders Pla	1.74	64		Pn	22 33 55.4	-0.5
CCX	Cicese	1.81	121	Pn	Pn	22 33 56.3	-0.3
CCX				IAML		22 34 06.6	
	comp=N,110nm,0.1s						
CCX				IAML		22 34 06.7	
	comp=E,103nm,0.1s						
PFO	Pinyon Flats O	1.88	64		Pn	22 33 56.8	-1.0
PFO				IAML		22 34 22.7	
	comp=E,73nm,1.2s						
THC	Tehachapi Micr	2.10	356		Pn	22 34 00.5	-0.4
CRR	Carrizo Plain	2.12	87		Pn	22 34 00.5	-0.5
YUH	Yuha Desert	2.17	93		Pn	22 34 01.3	-0.3
BCW	Bitter Crk WRg	2.26	340		Pn	22 34 02.7	-0.4
BCW				IAML		22 34 45.1	
	comp=N,91nm,0.6s						
ESJX	Sierra Juarez	2.29	110		Pn	22 34 03.1	-0.4
CCAC	Calif City Air	2.37	9		Pn	22 34 03.0	-1.6
ISA	Isabella, Lake	2.85	0		Pn	22 34 10.2	-0.8
GSC	Goldstone, Bar	2.85	29		Pn	22 34 10.7	-0.5
GSC				IAML		22 34 54.2	
	comp=N,66nm,0.7s						
WORM	Onyx Ranch	2.89	4		Pb	22 34 17.4	+0.5
GLA	Glamis	3.09	84	Pn	Pn	22 34 13.6	-0.7
GLA				IAML		22 35 10.6	
	comp=E,38nm,0.8s						
GLA				IAML		22 35 11.6	
	comp=N,24nm,0.7s						
GWY	Greenwater Val	3.69	24		Pn	22 34 22.1	-0.6
GWY				IAML		22 35 28.3	
	comp=E,28nm,0.7s						
GWY				IAML		22 35 31.6	
	comp=N,26nm,0.6s						
V12A	Nelson	4.19	45		Pn	22 34 29.1	-0.4
V12A				IAML		22 35 37.9	
	comp=N,9.3nm,0.8s						
V12A				IAML		22 35 42.6	
	comp=E,9.8nm,0.9s						
W13A	Hualapai Mount	4.46	58		Pn	22 34 33.1	-0.2
TPNV	Topopah Spring	4.52	23		Pn	22 34 34.8	+0.6
TPNV				IAML		22 35 48.6	
	comp=E,14nm,0.7s						
TPNV				IAML		22 35 56.2	
	comp=E,14nm,0.6s						
GMN	Gold Mountain	4.60	12		Pn	22 34 35.4	+0.2
MZP	Montezuma Peak	4.97	10		Pn	22 34 40.4	+0.1

*IDC **05** 22:36:42.9±0.8, 29°.40S×178°.17W, h78^{km}±9^{km}, mb3.8/4,* *mbtmp4.1/4, Error ellipse: s-maj=30.6km s-min=25.2km az=163.0*

ISC 05 22:36:43.0±0.9, **29°2S**±0°3×**178°0W**±0°3, **h100**^{km}, **n14**, σ**1^{s}85**/13, **mb4.2**/4, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.06**	**120**	P	**Pn**	**22 36 53.7**	**-3.2**
	923nm,0.3s,baz=80,slow=18,SNR=3.0						
RAO				S	**Sn**	**22 37 05.9**	**-1.4**
	1μm,0.3s,baz=287,slow=19,SNR=7.1						
STKA	**Stephens Creek**	**34.78**	**255**	P	**P**	**22 43 22.8**	**-1.2**
	1.3nm,0.5s,baz=99,slow=12,SNR=4.6 1.3nm,0.5s						
ASAR	**Alice Springs**	**43.20**	**266**	P	P	22 44 35.3	+0.9
	0.8nm,0.5s,baz=103,slow=7.6,SNR=12 0.8nm,0.5s						
WRA	**Warramunga Arr**	**44.09**	**271**	P	P	22 44 43.1	+1.6
	2.2nm,0.4s,baz=111,slow=7.6,SNR=16 2.2nm,0.4s						
QSPA	**South Pole Qui**	**60.88**	**180**	P	**P**	**22 46 46.3**	**+1.4**
	2.1nm,0.7s,baz=50,slow=1.2,SNR=15 2.1nm,0.7s						
MKAR	**Makanchi Array**	**117.03**	**311**	PKP	**PKiKP**	**22 55 17.8**	**+1.8**
	0.3nm,0.8s,baz=81,slow=1.9,SNR=2.0						
KURBB	**Kurchatov Arra**	**120.29**	**314**	PKP	**PKiKP**	**22 55 24.0**	**+1.8**
	0.2nm,0.6s,baz=107,slow=1.9,SNR=4.6						
BVAR	**Borovoye Array**	**125.57**	**316**	PKP	**PKiKP**	**22 55 34.8**	**+2.3**
	0.5nm,0.4s,baz=76,slow=2.3,SNR=3.3						
FINES	**FINESS Array B**	**144.05**	**341**	PKP	**PKiKP**	**22 56 08.1**	**-1.7**
	3.3nm,0.6s,baz=52,slow=3.5,SNR=29						
NB2	**NORSAR Subarra**	**147.59**	**352**	PKP	**PKPab**	**22 56 18.3**	**+0.8**
	comp=Z,4.1nm,1.2s,baz=14,slow=4.3						
NOA	**NORSAR Array B**	**147.59**	**352**	PKPbc	**PKPab**	**22 56 17.5**	**0.0**
	comp=Z,0.4nm,0.9s,baz=17,slow=4.3,SNR=3.8						
HFS	**Hagfors**	**148.10**	**349**	PKPbc	**PKPab**	**22 56 19.9**	**+0.5**
	comp=Z,1.5nm,0.8s,baz=38,slow=2.6,SNR=2.7						
AKASG	**Malin Array Be**	**150.37**	**324**	PKPbc	**PKiKP**	**22 56 23.6**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=52,slow=2.7,SNR=7.1						
MMAI	**Mount Meron Ar**	**151.24**	**286**	PKPbc	**PKiKP**	**22 56 27.3**	**+1.8**
	comp=Z,3.2nm,0.9s,baz=87,slow=7.5,SNR=1.7						

*SNET **05** 23:03:33.0±8.3, 12°52N×89°20W, h35^{km}, ML3.6*
*CATAC **05** 23:03:38.1±0.6, 13°N±4°×8°9W±°, h27^{km}±3^{km}, M3.5/13, MLv3.5/13, Error ellipse: s-maj=7.9km s-min=4.1km az=19.7, confirmed*

ISC 05 23:03:37.7±2.2, **13°0N**±0°1×**89°50W**±0°06, **h43**^{km}, **n62**, σ**0^{s}94**/66, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.53**	**19**	*e*P	**Pn**	**23 03 49.1**	**+0.2**
LALI	**Alcalda de L**	**0.53**	**19**	P	**Pn**	**23 03 49.2**	**+0.2**
LALI	**Alcalda de L**	**0.53**	**19**	S	**Sn**	**23 03 56.5**	**-0.4**
JAYA	**Jayaque - finc**	**0.66**	**4**	*e*P	**Pn**	**23 03 50.9**	**0.0**
JAYA				*e*S	**Sn**	**23 03 59.3**	**-1.0**
JAYA	**Jayaque - finc**	**0.66**	**4**	P	**Pn**	**23 03 50.8**	**0.0**
PANCS	**Alcalda de**	**0.69**	**27**	P	**Pn**	**23 03 51.1**	**-0.1**
PANCS	**Alcalda de**	**0.69**	**27**	S	**Sn**	**23 04 00.4**	**-0.4**
ITCA	**Escuela Especi**	**0.71**	**18**	S	**Sn**	**23 04 01.4**	**0.0**
LOMA	**Loma Larga**	**0.72**	**26**	*e*P	**Pn**	**23 03 51.8**	**+0.1**
LOMA	**Loma Larga**	**0.72**	**26**	S	**Sn**	**23 04 01.8**	**0.0**
LOMA	**Loma Larga**	**0.72**	**26**	P	**Pn**	**23 03 51.9**	**+0.2**
PMON	**Piamonte**	**0.74**	**14**	*e*P	**Pn**	**23 03 52.0**	**+0.1**
PMON	**Piamonte**	**0.74**	**14**	P	**Pn**	**23 03 51.9**	**0.0**
PMON	**Piamonte**	**0.74**	**14**	S	**Sn**	**23 04 02.6**	**+0.5**
LFRS	**El Faro**	**0.76**	**34**	*e*P	**Pn**	**23 03 52.2**	**+0.1**
UTEC	**Universidad Te**	**0.76**	**22**	S	**Sn**	**23 04 02.5**	**-0.1**
UEES	**Universidad Ev**	**0.77**	**19**	S	**Sn**	**23 04 02.7**	**0.0**
BOQS	**Boqueron**	**0.77**	**16**	*e*P	**Pn**	**23 03 52.6**	**+0.2**
PIC2	**El Picacho**	**0.79**	**18**	*e*P	**Pn**	**23 03 53.0**	**+0.4**
CEVE	**Cerro Verde**	**0.84**	**352**	*e*P	**Pn**	**23 03 53.6**	**+0.2**
CEVE	**Cerro Verde**	**0.84**	**352**	P	**Pn**	**23 03 53.6**	**+0.2**
CEVE	**Cerro Verde**	**0.84**	**352**	S	**Sn**	**23 04 05.0**	**+0.3**
SBLS	**San Blas**	**0.85**	**352**	*e*P	**Pn**	**23 03 53.6**	**+0.1**
SBLS				*e*P	**Pn**	**23 03 53.7**	**+0.1**
LBRS	**Las Brisas**	**0.87**	**31**	*e*P	**Pn**	**23 03 54.4**	**+0.8**
COEG	**Centro de Oper**	**0.87**	**44**	*e*P	**Pn**	**23 03 53.7**	**0.0**
COEG				*e*S	**Sn**	**23 04 05.0**	**-0.2**
COEG	**Centro de Oper**	**0.87**	**44**	P	**Pn**	**23 03 53.6**	**0.0**
SNJE	**San Jose**	**0.88**	**353**	*e*P	**Pn**	**23 03 54.0**	**+0.2**
SNJE				*e*P	**Pn**	**23 03 54.0**	**+0.2**
TECO	**Alcaldia de Te**	**0.89**	**52**	*e*P	**Pn**	**23 03 53.8**	**0.0**
TECO	**Alcaldia de Te**	**0.89**	**52**	P	**Pn**	**23 03 53.6**	**-0.2**
TECO	**Alcaldia de Te**	**0.89**	**52**	S	**Sn**	**23 04 05.4**	**-0.1**
PAVA	**Las Pavas**	**0.90**	**37**	*e*P	**Pn**	**23 03 54.2**	**+0.1**
PAVA				*e*S	**Sn**	**23 04 06.5**	**+0.5**
PAVA	**Las Pavas**	**0.90**	**37**	P	**Pn**	**23 03 54.3**	**+0.1**
UESV	**Universidad de**	**0.95**	**47**	P	**Pn**	**23 03 54.6**	**0.0**
UESV	**Universidad de**	**0.95**	**47**	S	**Sn**	**23 04 07.0**	**0.0**
NUBE	**Las Nubes**	**0.95**	**343**	*e*P	**Pn**	**23 03 54.6**	**-0.1**
NUBE	**Las Nubes**	**0.95**	**343**	P	**Pn**	**23 03 54.7**	**-0.1**
NUBE	**Las Nubes**	**0.95**	**343**	S	**Sn**	**23 04 06.6**	**-0.6**
ALJI	**Alcalda de J**	**0.97**	**70**	S	**Sn**	**23 04 07.7**	**+0.3**
FAME	**Alcaldia de Sa**	**0.98**	**330**	P	**Pn**	**23 03 55.1**	**0.0**
FAME	**Alcaldia de Sa**	**0.98**	**330**	S	**Sn**	**23 04 07.4**	**-0.4**
SCLA	**Alcaldia de Sa**	**1.03**	**47**	*e*P	**Pn**	**23 03 56.3**	**+0.6**
SCLA	**Alcaldia de Sa**	**1.03**	**47**	P	**Pn**	**23 03 56.3**	**+0.6**
SCLA	**Alcaldia de Sa**	**1.03**	**47**	S	**Sn**	**23 04 10.0**	**+0.9**
SLOZ	**Alcaldia de Sa**	**1.07**	**345**	S	**Sn**	**23 04 10.0**	**0.0**
TECA	**Tecapa**	**1.09**	**63**	*e*P	**Pn**	**23 03 57.7**	**+0.9**
PQSS	**Presa 15 de Se**	**1.11**	**55**	S	**Sn**	**23 04 10.9**	**-0.1**
PACA	**Pacayal**	**1.24**	**67**	P	Pn	23 03 53.7	-5.0
PACA	**Pacayal**	**1.24**	**67**	S	**Sn**	**23 04 08.8**	**-5.5**
LCY	**Lacayo**	**1.25**	**70**	*e*P	**Pn**	**23 03 59.9**	**+1.1**
RANC	**El Ranchito**	**1.26**	**69**	S	**Sn**	**23 04 12.6**	**-2.3**
RANC	**El Ranchito**	**1.26**	**69**	P	**Pn**	**23 03 56.7**	**-2.3**
BLLM	**Bellamira**	**1.31**	**70**	*e*P	**Pn**	**23 04 00.4**	**+0.8**
MTO3	**Montecristo**	**1.41**	**6**	*i* P	**Pn**	**23 04 01.4**	**+0.3**
MTO3	**Montecristo**	**1.41**	**6**	P	**Pn**	**23 04 01.3**	**+0.3**
MTO3	**Montecristo**	**1.41**	**6**	S	**Sn**	**23 04 18.6**	**+0.1**
CAHU	**Cacacuatique**	**1.48**	**58**	*e*P	**Pn**	**23 04 02.4**	**+0.4**
ESQI	**Esquipulas**	**1.57**	**6**	*e*P	**Pn**	**23 04 03.5**	**+0.4**
LCND	**La Caada**	**1.60**	**78**	*e*P	**Pn**	**23 04 04.5**	**+1.0**
LCND	**La Caada**	**1.60**	**78**	P	**Pn**	**23 04 04.5**	**+1.0**
CNCH	**Conchagua**	**1.65**	**80**	*e*P	**Pn**	**23 04 05.0**	**+0.7**
CNCH	**Conchagua**	**1.65**	**80**	P	**Pn**	**23 04 05.1**	**+0.8**
CNCH	**Conchagua**	**1.65**	**80**	S	**Sn**	**23 04 25.9**	**+1.6**

*IDC **05** 23:08:29.4±4.6, 21°25S×174°93W, h131^{km}±38^{km}, mb3.5/8, mbtmp3.9/9, MS3.6/15, Error ellipse: s-maj=30.6km s-min=21.7km az=105.0*

ISC 05 23:08:25.9±0.9, **21°3S**±0°2×**174°8W**±0°2, **h100**^{km}, **n24**, σ**2^{s}11**/12, **mb3.9**/8, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.64**	**296**	P	**Pn**	**23 10 16.4**	**+1.8**
	30nm,0.9s,baz=128,slow=12,SNR=15						
MSVF				LR	LR	23 12 59.7	
	comp=Z,2μm,18.4s,baz=109,slow=36						
RAR	**Rarotonga**	**13.99**	**92**	LR	LR	23 17 03.5	
	comp=Z,135nm,18.9s,baz=292,slow=36						
DZM	**Mont Dzumac**	**17.47**	**264**	LR	LR	23 18 21.5	
	comp=Z,412nm,18.4s,baz=138,slow=34						
PPT	**Papeete**	**24.05**	**85**	LR	LR	23 22 27.6	
	comp=Z,117nm,18.4s,baz=294,slow=35						
HNR	**Honiara**	**27.03**	**292**	LR	LR	23 24 25.3	
	comp=Z,141nm,18.1s,baz=134,slow=36						
PMG	**Port Moresby**	**38.46**	**282**	LR	LR	23 30 44.4	
	comp=Z,235nm,18.2s,baz=174,slow=35						
STKA	**Stephens Creek**	**40.17**	**245**	P	**P**	**23 15 50.8**	**-1.7**
	1.9nm,0.9s,baz=185,slow=11,SNR=2.9						
STKA				LR	LR	23 30 35.6	
	comp=Z,92nm,20.6s,baz=37,slow=33 1.9nm,0.9s						
ASAR	**Alice Springs**	**47.27**	**257**	P	**P**	**23 16 48.0**	**-1.5**
	1.2nm,0.8s,baz=87,slow=8.0,SNR=8.2						
ASAR				LR	LR	23 36 08.9	
	comp=Z,106nm,18.1s,baz=92,slow=35 1.2nm,0.8s						
WRA	**Warramunga Arr**	**47.47**	**262**	P	**P**	**23 16 50.1**	**-1.0**
	0.6nm,0.3s,baz=101,slow=7.8,SNR=4.6 0.6nm,0.3s						
GUMO	**Guam**	**52.65**	**308**	LR	LR	23 36 39.9	
	comp=Z,29nm,21.8s,baz=105,slow=32						
VNDA	**Vanda**	**57.40**	**186**	P	**P**	**23 18 05.2**	**+1.7**
	0.4nm,0.8s,baz=63,slow=4.5,SNR=1.8 0.4nm,0.8s						
DAV	**Davao City (W)**	**64.94**	**289**	LR	LR	23 45 28.6	
	comp=Z,28nm,19.7s,baz=138,slow=34						
KAPI	**Kappang**	**65.35**	**274**	LR	LR	23 47 13.7	
	comp=Z,52nm,19.9s,baz=73,slow=36						
QSPA	**South Pole Qui**	**68.77**	**180**	P	**P**	**23 19 19.5**	**+0.4**
	0.5nm,0.6s,baz=36,slow=2.7,SNR=5.6 0.5nm,0.6s						
MJAR	**Matsushiro Arr**	**72.67**	**322**	P	**P**	**23 19 43.3**	**+0.4**
	1.8nm,0.8s,baz=145,slow=6.9,SNR=4.4						
MJAR				LR	LR	23 47 52.3	
	comp=Z,21nm,20.3s,baz=134,slow=33 1.8nm,0.8s						
JOW	**Kunigami**	**73.00**	**308**	LR	LR	23 46 40.3	
	comp=Z,42nm,20.6s,baz=229,slow=31						
ASAJ	**Asahikawa**	**75.90**	**330**	LR	LR	23 47 08.1	
	comp=Z,48nm,21.9s,baz=166,slow=31						
KSRS	**Korea Array**	**79.50**	**317**	LR	LR	23 50 29.5	
	comp=Z,16nm,21.5s,baz=215,slow=32						
NVAR	**Mina Array Bea**	**79.58**	**42**	P	P	23 20 21.1	-1.2
	0.6nm,0.6s,baz=239,slow=5.2,SNR=3.9 0.6nm,0.6s						
ILAR	**Eielson Array**	**88.46**	**12**	P	**P**	**23 21 05.2**	**-1.2**
	0.3nm,0.3s,baz=202,slow=4.6,SNR=2.5 0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**116.68**	**317**	PKP	**PKPdf**	**23 26 55.1**	**-3.1**
	0.1nm,0.3s,baz=62,slow=2.2,SNR=3.2						
AKASG	**Malin Array Be**	**145.13**	**333**	PKPbc	**PKPbc**	**23 27 50.3**	**-0.9**
	1.7nm,0.6s,baz=42,slow=3.9,SNR=15						
EKA	**Eskdalemuir Ar**	**145.44**	**8**	PKPbc	**PKPdf**	**23 27 52.4**	**+0.5**
	1.7nm,0.9s,baz=350,slow=3.8,SNR=4.2						
BRTR	**Keskin Array B**	**149.59**	**314**	PKPbc	**PKPdf**	**23 28 03.4**	**+3.9**
	0.5nm,0.7s,baz=125,slow=4.5,SNR=5.6						

*IDC **05** 23:13:47.2±0.6, 5°44S×35°84E, h0^{km}, mb4.0/16, mbtmp4.1/19, ML3.7/3, MS3.3/12, Error ellipse: s-maj=24.3km s-min=14.2km az=108.0*
*NEIC **05** 23:13:49.4±1.4, 5°40S±0°07×35°92E±0°09, h10^{km}±1^{km}, mb4.5/29, Error ellipse: s-maj=14.9km s-min=11.7km az=286.0*

ISC 05 23:13:48.6±0.5, **5°48S**±0°06×**35°91E**±0°08, **h9**^{km}, **n81**, σ**1^{s}72**/73, **mb4.4**/24, **MS3.3**/11, **Tanzania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIBK	**Kibwezi**	**3.78**	**34**		**Pn**	**23 14 45.9**	**-1.3**
I32KE	**NAIROBI INFRAS**	**4.31**	**12**	Pg	**Pb**	**23 15 06.6**	**+1.9**
	baz=185,slow=36						
KMBO	**Kilima Mbogo**	**4.53**	**17**		**Pn**	**23 14 55.7**	**-2.0**
MBAR	**Mbarara**	**7.08**	**313**	Pn	**Pn**	**23 15 31.1**	**-1.6**
LODK	**Lodwar**	**8.86**	**356**		**Pn**	**23 15 55.4**	**-1.7**
LSZ	**Lusaka**	**12.34**	**217**		**Pn**	**23 16 45.3**	**+0.5**
LSZ	**Lusaka**	**12.34**	**217**	Pn	**Pn**	**23 16 43.7**	**-1.1**
	0.1nm,0.3s,baz=35,slow=9.4,SNR=3.2						
LSZ				Sn	**Sn**	**23 18 59.8**	**-2.8**
	1.2nm,0.3s,baz=109,slow=23,SNR=4.1						
LSZ				Lg	Lg	23 20 12.3	
	5.6nm,0.3s,baz=337,slow=22,SNR=13						
LSZ				LR	LR	23 20 43.4	
	comp=Z,150nm,21.9s,baz=54,slow=34 5.6nm,0.7s						
LSZ	**Lusaka**	**12.34**	**217**	*i* P	**Pn**	**23 16 45.5**	**+0.8**
CHIPN	**CHIPINGE**	**15.00**	**192**	*i* P	Pn	23 17 11.5	-10
KSANE	**Kasane**	**16.13**	**220**		**Pn**	**23 17 34.4**	**-1.5**
KSANE				IAmb	IAmb	23 17 46.0	
	comp=Z,21nm,0.9s						
KSANE	**Kasane**	**16.13**	**220**	*i* P	**P**	**23 17 45.5**	**+6.3**
KSANE				IAML		23 22 38.1	
	comp=N,118nm,1.5s						
BLWY	**Bulawayo**	**16.21**	**205**	*i* P	**Pn**	**23 17 34.9**	**-2.0**
MATP	**Matopo**	**16.51**	**205**	Pn	**Pn**	**23 17 39.1**	**-1.6**
	comp=N,0.2nm,0.3s,baz=22,slow=12,SNR=11						
MATP				Lg	Lg	23 22 21.1	
	comp=N,0.2nm,0.3s,baz=120,slow=20,SNR=6.8 comp=N,2.2nm,0.7s						
OPO	**Ambohidratompo**	**17.04**	**141**	P	**Pn**	**23 17 49.0**	**+1.5**
	baz=318,slow=8.8,SNR=2.6 comp=N,5.4nm,0.8s						
ABPO	**Ambohimpanom**	**17.40**	**142**	Pn	**Pn**	**23 17 51.8**	**-0.3**
BROLN	**Tlhalogang**	**17.61**	**207**	*i* P	**P**	**23 17 56.4**	**+0.8**
BROLN				IAML		23 23 16.2	
	comp=E,65nm,1.8s						
MUSN	**Musina, Limpop**	**17.70**	**199**	*i* P	**Pn**	**23 17 49.4**	**-6.2**
ATD	**Arta Tunnel**	**18.25**	**22**	Lg	Lg	23 23 18.0	
	baz=144,slow=21,SNR=3.9						
PHDHD	**Phuduhudu**	**18.33**	**216**	P	**P**	**23 18 04.2**	**+0.7**
PHDHD				IAmb	IAmb	23 18 09.1	
	comp=Z,27nm,0.7s						
PHDHD	**Phuduhudu**	**18.33**	**216**	*i* P	**P**	**23 18 04.5**	**+1.0**
PHDHD				IAML		23 23 47.3	
	comp=N,225nm,1.0s						
MOPA	**Mopani**	**18.45**	**193**	*i* P	P	23 17 55.5	-9.2
MREMI	**Moremi**	**18.85**	**205**	P	**P**	**23 18 09.8**	**+0.5**
MREMI				IAmb	IAmb	23 18 16.5	
	comp=Z,21nm,0.8s						
VOI	**Vohitsoka**	**19.43**	**148**	P	**Pn**	**23 18 17.6**	**+0.8**
VOI				IAmb	IAmb	23 18 31.9	
	comp=Z,22nm,1.4s						
LPHEP	**Lephephe**	**20.25**	**208**	P	**P**	**23 18 23.8**	**-0.7**
LPHEP				IAmb	IAmb	23 18 31.1	
	comp=Z,23nm,1.0s						
LPHEP	**Lephephe**	**20.25**	**208**	*i* P	**P**	**23 18 24.4**	**-0.1**
LPHEP				IAML		23 24 41.2	
	comp=N,57nm,4.5s						
KDWAN	**Kaudwane**	**20.84**	**210**	P	**P**	**23 18 31.2**	**+0.3**
KDWAN				IAmb	IAmb	23 18 56.2	
	comp=Z,22nm,0.9s						
GRTLG	**Ghanzi**	**21.26**	**221**	P	**P**	**23 18 37.1**	**+1.6**
GRTLG				IAmb	IAmb	23 18 42.3	
	comp=Z,12nm,0.8s						
GRTLG	**Ghanzi**	**21.26**	**221**	*i* P	**P**	**23 18 37.4**	**+1.9**
GRTLG				IAML		23 25 35.2	
	comp=E,37nm,2.9s						
LBTB	**Lobatse**	**21.80**	**206**	P	**P**	**23 18 41.7**	**+0.5**
LBTB				IAmb	IAmb	23 18 49.3	
	comp=Z,31nm,1.1s						
LBTB	**Lobatse**	**21.80**	**206**	P	**P**	**23 18 41.5**	**+0.3**
	comp=Z,10nm,0.9s,baz=10.0,slow=11,SNR=9.8						
LBTB				Lg	Lg	23 25 04.4	
	comp=Z,0.1nm,0.3s,baz=114,slow=16,SNR=3.8						
LBTB				LR	LR	23 27 39.9	
	comp=Z,47nm,18.2s,baz=26,slow=38 comp=Z,10nm,0.9s						
LBTB	**Lobatse**	**21.80**	**206**	*i* P	**P**	**23 18 37.5**	**-3.7**
POGA	**Pongola**	**22.11**	**190**	P	**P**	**23 18 46.3**	**+1.9**
SKOMA	**Sekoma**	**22.15**	**210**	*i* P	**P**	**23 18 45.7**	**+0.7**
SKOMA				IAML		23 25 52.0	
	comp=E,36nm,3.3s						
TSUM	**Tsumeb**	**22.47**	**231**	P	**P**	**23 18 50.5**	**+2.0**
MAKGR	**Makgori**	**22.84**	**207**	P	**P**	**23 18 53.1**	**+0.7**
MAKGR	**Makgori**	**22.84**	**207**	*i* P	**P**	**23 18 52.5**	**+0.1**
MAKGR				IAML		23 25 58.5	
	comp=E,63nm,4.5s						
KOOLE	**Kule**	**23.09**	**220**	*i* P	**P**	**23 18 58.2**	**+3.2**
KOOLE				IAML		23 26 30.2	
	comp=E,41nm,2.2s						
BOSA	**Boshof**	**25.13**	**202**	P	**P**	**23 19 15.1**	**+0.9**
BOSA	**Boshof**	**25.13**	**202**	P	**P**	**23 19 14.0**	**-0.2**
	comp=E,14nm,1.1s,baz=40,slow=9.2,SNR=7.3						
BOSA				LR	LR	23 28 19.9	
	comp=E,83nm,19.3s,baz=290,slow=35 comp=E,14nm,1.1s						
BOSA	**Boshof**	**25.13**	**202**	*i* P	**P**	**23 19 08.6**	**-5.6**
MMAI	**Mount Meron Ar**	**38.29**	**359**	P	**P**	**23 21 10.4**	**+0.8**
	comp=E,0.4nm,0.5s,baz=172,slow=8.0,SNR=1.7 comp=E,0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**38.70**	**299**	P	**P**	**23 21 13.3**	**0.0**
TAM	**Tamanrasset**	**40.89**	**315**		**P**	**23 21 32.5**	**+0.9**
TAM				IAmb	IAmb	23 21 38.1	
	comp=Z,10nm,1.1s						
DBIC	**Dimbokro**	**42.44**	**286**	P	**P**	**23 21 43.0**	**-1.2**
	comp=Z,10nm,1.1s,baz=173,slow=7.3,SNR=3.9 comp=Z,10nm,1.1s						
GEVA	**Gevas**	**44.07**	**8**	P	**P**	**23 21 56.8**	**-0.5**
BRTR	**Keskin Array B**	**45.03**	**358**	P	**P**	**23 22 04.4**	**-0.4**
BRTR	**Keskin Array B**	**45.03**	**358**	P	**P**	**23 22 03.5**	**-1.3**
	comp=Z,0.2nm,0.4s,baz=177,slow=9.8,SNR=7.6 comp=Z,0.2nm,0.4s						
BR131	**Keskin Array S**	**45.03**	**358**	P	**P**	**23 22 04.6**	**-0.3**
MDUB	**Mudurnu**	**45.93**	**355**	P	**P**	**23 22 10.4**	**-1.5**
GNI	**Garni**	**46.13**	**9**	LR	LR	23 41 31.9	
	comp=Z,35nm,19.1s,baz=204,slow=36						
HRA	**Herat**	**46.80**	**30**	P	**P**	**23 22 18.7**	**-0.4**
HRA				IAmb	IAmb	23 22 23.1	
	comp=Z,5.1nm,1.4s						
VAE	**Valguarnera**	**47.20**	**337**	LR	LR	23 44 47.8	
	comp=Z,63nm,20.6s,baz=144,slow=40						
KBZ	**Khabaz**	**49.39**	**7**	P	**P**	**23 22 38.8**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=116,slow=3.8,SNR=4.2						
KBZ				LR	LR	23 42 54.7	
	comp=Z,28nm,18.3s,baz=177,slow=35 comp=Z,0.9nm,0.6s						
KIV	**Kislovodsk**	**49.59**	**6**	P	**P**	**23 22 39.7**	**-0.6**
KIV				IAmb	IAmb	23 22 46.9	
	comp=Z,8.2nm,1.1s						
BURAR	**Bucovina Array**	**53.70**	**351**	P	**P**	**23 23 11.0**	**0.0**
BTK	**Batken**	**55.55**	**32**	P	**P**	**23 23 24.5**	**0.0**
BTK				IAmb	IAmb	23 23 29.3	
	comp=Z,7.6nm,1.4s						
AKASG	**Malin Array Be**	**56.25**	**355**	P	**P**	**23 23 28.8**	**-0.4**
	comp=Z,1.8nm,0.8s,baz=179,slow=6.5,SNR=8.2 comp=Z,1.8nm,0.8s						
KK31	**Karatay Array**	**57.62**	**30**	P	**P**	**23 23 38.5**	**-0.6**
KK31				IAmb	IAmb	23 23 44.2	
	comp=Z,3.8nm,1.1s						
KKAR	**Karatay Array**	**57.62**	**30**		**P**	**23 23 38.4**	**-0.7**
ESDC	**Sonseca Array**	**58.04**	**324**	P	**P**	**23 23 42.2**	**+0.1**
ESDC	**Sonseca Array**	**58.04**	**324**	P	**P**	**23 23 41.5**	**-0.7**
	comp=Z,2.3nm,1.1s,baz=133,slow=6.6,SNR=8.3 comp=Z,2.3nm,1.1s						
BELG	**Belogornoye**	**58.51**	**8**	LR	LR	23 51 49.6	
	comp=Z,15nm,19.9s,baz=239,slow=39						
AAK	**Ala-Archa**	**59.33**	**32**	LR	LR	23 52 44.8	
	comp=Z,40nm,18.0s,baz=250,slow=39						
TARG	**Taragay, Kyrgy**	**60.55**	**35**	P	**P**	**23 23 59.5**	**-0.5**
TARG				IAmb	IAmb	23 24 00.8	
	comp=Z,2.4nm,0.7s						
ARTI	**Arti**	**64.36**	**14**	P	**P**	**23 24 24.1**	**-0.5**
BVAR	**Borovoye Array**	**65.16**	**22**	P	**P**	**23 24 29.6**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=243,slow=6.3,SNR=3.2						
BVAR				LR	LR	23 55 06.1	
	comp=Z,38nm,18.5s,baz=176,slow=38 comp=Z,0.5nm,0.6s						
MAKZ	**Makanchi**	**66.08**	**33**		**P**	**23 24 35.5**	**-0.6**
MKAR	**Makanchi Array**	**66.24**	**33**		**P**	**23 24 36.4**	**-0.7**
MKAR	**Makanchi Array**	**66.24**	**33**	P	**P**	**23 24 36.6**	**-0.5**
	comp=Z,3.0nm,0.8s,baz=234,slow=5.4,SNR=18 comp=Z,3.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**66.51**	**67**	P	**P**	**23 24 38.6**	**-0.8**
CMAR	**Chiang Mai Arr**	**66.51**	**67**	P	**P**	**23 24 38.7**	**-0.7**
	comp=Z,2.1nm,0.8s,baz=261,slow=7.6,SNR=10 comp=Z,2.1nm,0.8s						
KURBB	**Kurchatov Arra**	**66.83**	**28**	P	**P**	**23 24 40.8**	**0.0**
	comp=Z,1.5nm,0.9s,baz=229,slow=7.0,SNR=7.6 comp=Z,1.5nm,0.9s						
KURK	**Kurchatov**	**66.94**	**28**	P	**P**	**23 24 41.2**	**-0.2**
KURK				IAmb	IAmb	23 24 45.7	
	comp=Z,6.0nm,1.4s						
FINES	**FINESS Array B**	**67.16**	**355**	P	**P**	**23 24 43.4**	**+0.7**
	comp=Z,1.2nm,0.9s,baz=117,slow=6.6,SNR=3.8 comp=Z,1.2nm,0.9s						
NOA	**NORSAR Array B**	**69.06**	**347**	LR	LR	23 58 48.0	
	comp=Z,6.4nm,18.6s,baz=270,slow=39						
ZALV	**Zalesovo Beam**	**71.93**	**28**	P	**P**	**23 25 12.1**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=296,slow=7.9,SNR=2.2						
ZALV				LR	LR	00 00 48.7	
	comp=Z,18nm,21.7s,baz=198,slow=39 comp=Z,0.6nm,0.5s						
SONM	**Songino Array**	**81.15**	**40**	P	**P**	**23 26 06.3**	**+1.5**
	comp=Z,1.8nm,0.8s,baz=240,slow=2.7,SNR=5.6 comp=Z,1.8nm,0.8s						
NRIK	**Noril'sk**	**82.50**	**16**	LR	LR	00 06 45.3	
	comp=Z,21nm,18.6s,baz=140,slow=38						
QSPA	**South Pole Qui**	**84.58**	**180**	P	**P**	**23 26 23.5**	**+1.2**
QSPA	**South Pole Qui**	**84.58**	**180**	P	**P**	**23 26 23.6**	**+1.3**
	comp=Z,3.6nm,1.1s,baz=277,slow=2.9,SNR=6.8 comp=Z,3.6nm,1.1s						
NVAR	**Mina Array Bea**	**139.70**	**328**	PKP	**PKiKP**	**23 33 19.6**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=48,slow=2.2,SNR=4.1						

*IDC **05** 23:19:43.3±8.6, 21°38S×177°36W, h501^{km}±59^{km}, mb3.2/4, mbtmp4.0/5, Error ellipse: s-maj=151.8km s-min=28.0km az=139.0*

ISC 05 23:19:42.9±1.8, **21°4S**±0°3×**177°3W**±0°3, **h500**^{km}, **n10**, σ**0^{s}50**/9, **mb3.6**/4, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.71**	**309**	P	**P**	**23 21 16.7**	**+0.1**
	20nm,0.8s,baz=147,slow=9.0,SNR=14						
ASAR	**Alice Springs**	**44.94**	**258**	P	**P**	**23 27 13.2**	**+0.3**
	1.8nm,0.6s,baz=97,slow=7.6,SNR=18						
ASAR				PcP	**pP**	**23 28 44.8**	**+0.1**
	0.3nm,0.5s,baz=104,slow=3.3,SNR=4.1 1.8nm,0.6s						
WRA	**Warramunga Arr**	**45.12**	**263**	P	**P**	**23 27 13.4**	**-0.9**
	0.6nm,0.4s,baz=98,slow=8.5,SNR=9.1 0.6nm,0.4s						
ILAR	**Eielson Array**	**89.07**	**13**	P	**P**	**23 31 43.4**	**-0.4**
	0.3nm,0.5s,baz=201,slow=5.5,SNR=3.2 0.3nm,0.5s						
SONM	**Songino Array**	**96.87**	**319**	P	**P**	**23 32 20.3**	**+0.3**
	0.4nm,0.4s,baz=101,slow=5.7,SNR=2.0 0.4nm,0.4s						
BVAR	**Borovoye Array**	**120.20**	**320**	PKP	**PKPdf**	**23 37 36.5**	**+0.1**
	0.4nm,0.4s,baz=87,slow=3.8,SNR=4.5						
HFS	**Hagfors**	**140.55**	**351**	PKhKP	PKPpre	23 38 10.4	
	0.7nm,0.8s,baz=321,slow=1.8,SNR=1.7						
AKASG	**Malin Array Be**	**144.13**	**331**	PKP	PKPbc	23 38 19.0	-1.5
	1.1nm,0.5s,baz=43,slow=4.1,SNR=15						
BRTR	**Keskin Array B**	**147.93**	**312**	PKPbc	**PKPbc**	**23 38 31.8**	**-0.1**
	0.4nm,0.5s,baz=128,slow=4.7,SNR=5.7						
MMAI	**Mount Meron Ar**	**148.83**	**299**	PKPbc	**PKPbc**	**23 38 34.7**	**+0.5**
	0.6nm,0.4s,baz=9.5,slow=4.4,SNR=1.5						

*NEIC **06** 00:20:56.6±1.1, 34°05N±0°01×117°50W±0°02, h8^{km}±7^{km}, Error ellipse: s-maj=2.7km s-min=1.2km az=64.0*

PAS 06 00:20:57.2±1.2, **34°05N**±0°02×**117°51W**±0°03, **h5**^{km}±5^{km}, **ML3.2**/308, **ML3.0**/64(NEIC), **Error ellipse: s-maj=3.5km s-min=1.7km az=55.0, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSC	**Mira Loma**	**0.06**	**227**		Pg	00 20 59.9	+1.3
FON	**Fontana**	**0.08**	**47**		Pg	00 21 00.3	+1.5
CHNC	**Chino**	**0.15**	**252**		Pg	00 21 02.8	+2.5
SS2	**San Sevaine**	**0.16**	**2**		Pg	00 21 00.5	+0.1
RSBC	**Riverside Bore**	**0.17**	**117**		Pg	00 21 00.6	+0.1
RSBC	**Riverside Bore**	**0.17**	**117**		Pg	00 21 00.6	+0.2
RSBC					Sg	00 21 03.2	+0.6
CFSC	**Central Fire S**	**0.19**	**73**		Pg	00 21 01.4	+0.4
SSK	**Sunset Peak**	**0.23**	**316**		Pg	00 21 01.8	+0.1
BFSC	**Mount Baldy Ra**	**0.23**	**326**		Pg	00 21 01.6	-0.1
BFSC					Sg	00 21 04.8	+0.1
HLNC	**Highland**	**0.25**	**73**		Pg	00 21 02.3	+0.3
CFT	**Crafton Hills**	**0.33**	**92**		Pg	00 21 03.8	+0.2
CFT					Sg	00 21 08.3	+0.4
SVD	**Seven Oaks Dam**	**0.34**	**80**		Pg	00 21 04.0	+0.2
SVD					Sg	00 21 09.3	+0.9
ELS	**Elsinore Mount**	**0.40**	**171**	Pg	Pg	00 21 04.9	-0.1
ELS				IAML		00 21 10.8	
	comp=N,876nm,0.2s						
ELS				IAML		00 21 11.5	
	comp=E,1μm,0.2s						
ELS	**Elsinore Mount**	**0.40**	**171**		Sg	00 21 10.4	+0.1
RHC	**Rose Hills Cem**	**0.42**	**264**		Pg	00 21 05.5	+0.2
BBSC	**Beaumont Base**	**0.45**	**106**		Pg	00 21 05.8	-0.2
BBSC					Sg	00 21 13.1	+1.2
BREC	**Barre Substati**	**0.46**	**239**		Pb	00 21 07.1	-0.7
BREC					Sb	00 21 14.7	-0.3
MWC	**Mount Wilson**	**0.49**	**291**		Pg	00 21 06.5	-0.1
MWC					Sg	00 21 13.3	+0.3
HOLC	**Holcomb Ridge**	**0.50**	**326**		Pg	00 21 06.4	-0.3
HOLC					Sg	00 21 13.1	-0.1
ADO	**Adelanto Recei**	**0.51**	**7**		Pg	00 21 06.8	-0.1
ADO					Sg	00 21 14.4	+0.9
GVRC	**Garvey Reservo**	**0.51**	**270**		Pg	00 21 07.2	+0.2
GVRC					Sg	00 21 14.7	+1.1
MURC	**Murrieta**	**0.52**	**150**		Sg	00 21 14.3	+0.6
CHFC	**Chilao Flat St**	**0.52**	**304**		Sg	00 21 13.8	-0.1
CACC	**Caltech Cellar**	**0.52**	**280**		Pg	00 21 07.0	-0.2
CACC					Sg	00 21 14.3	+0.4
GSA	**Caltech--GSA**	**0.52**	**280**		Pg	00 21 07.2	-0.1
GSA					Sg	00 21 14.6	+0.5
BBRC	**Big Bear Solar**	**0.53**	**66**		Sg	00 21 14.4	+0.1
VTV	**Victorville**	**0.53**	**16**		Pg	00 21 07.0	-0.4
VTV					Sg	00 21 14.2	-0.2
HMTC	**Hemet**	**0.54**	**129**		Pg	00 21 07.1	-0.4
HMTC					Sg	00 21 14.4	-0.1
JNH	**Juniper Hills**	**0.55**	**317**		Pg	00 21 07.2	-0.5
JNH					Sg	00 21 14.2	-0.6
DGR	**Domenigoni Val**	**0.57**	**134**		Sg	00 21 15.3	-0.4

PASC	Pasadena Art C	0.58	283	Pg	Pg	00 21 07.9	-0.4
PASC				IAML		00 21 18.4	
	comp=E,517nm,0.3s						
PASC	Pasadena Art C	0.58	283		Sg	00 21 15.8	0.0
BACC	Bachelor Mtn.	0.58	138		Sg	00 21 15.6	-0.3
POB	Polly Butte	0.60	126		Pg	00 21 08.3	-0.4
POB					Sg	00 21 16.4	-0.2
WTT2	Watts, South G	0.63	261		Pg	00 21 09.9	+0.6
WTT2					Sb	00 21 19.8	-0.1
LRRC	Littlerock Res	0.64	318		Pg	00 21 09.1	-0.4
LRRC					Sg	00 21 17.9	-0.1
GR2C	Griffith Obs.	0.66	276		Pg	00 21 09.3	-0.6
GR2C					Sg	00 21 18.3	-0.2
SBB	Saddle Back Bu	0.69	338		Sg	00 21 18.6	-0.8
CJV	Casa Juvan	0.71	313		Pg	00 21 10.2	-0.7
CJV					Sg	00 21 19.6	-0.6
DECC	Green Verdugo	0.72	287		Sg	00 21 20.3	0.0
FMP	Fort Macarthur	0.74	243		Pg	00 21 10.9	-0.4
FMP					Sb	00 21 23.1	+0.2
DEVC	Devers	0.78	98		Sg	00 21 22.7	+0.5
GVDA	Garner Valley	0.79	118		Sg	00 21 22.3	-0.3
DJJ	Donna J Jenkin	0.79	275		Pg	00 21 11.5	-0.8
CRY	Cary Ranch	0.80	127		Sg	00 21 22.5	-0.4
RPV	Rancho Palos V	0.81	248		Pg	00 21 12.0	-0.6
RPV					Sb	00 21 25.3	+0.3
HYS	Haystack Butte	0.82	356		Pg	00 21 12.3	-0.6
HYS					Sg	00 21 23.0	-0.5
PLM	Palomar	0.88	142		Sg	00 21 24.4	-0.9
LEOC	Leona Valley	0.88	312		Pg	00 21 13.3	-0.8
BZNA	Buzz No.'s Pla	0.89	128		Sg	00 21 25.4	-0.5
SNDA	J Saunders Pla	0.89	123		Pg	00 21 13.9	-0.4
SNDA					Sg	00 21 25.4	-0.5
ALPC	Antelope	0.92	314		Pg	00 21 14.1	-0.7
ALPC					Sg	00 21 25.9	-0.8
EW2	E Wide Canyon	0.92	96		Pg	00 21 14.4	-0.4
EW2					Sg	00 21 26.4	-0.3
GORC	Green Oak Ranc	0.92	165		Sg	00 21 25.9	-0.9
EDW2	Edwards Air Fo	0.92	334		Pg	00 21 14.2	-0.7
BLAC	Blackrock camp	0.93	88		Sg	00 21 26.3	-0.7
RRX	Edison Barstow	0.93	27		Pg	00 21 14.7	-0.3
RRX					Sg	00 21 27.1	+0.1
FRD	Ford Ranch, An	0.93	126		Pg	00 21 14.5	-0.6
FRD					Sg	00 21 26.5	-0.7
OAT	Oat Mountain	0.96	288		Pg	00 21 15.8	+0.1
OAT					Sb	00 21 29.0	-0.6
PFO	Pinyon Flats O	0.97	116		Pg	00 21 14.8	-1.0
PFO	Pinyon Flats O	0.97	116		Pg	00 21 14.9	-0.9
PFO					Sg	00 21 27.6	-0.8
XPFO	Pinon Flat	0.98	116		Pg	00 21 14.9	-1.1
XPFO					Sg	00 21 27.6	-0.9
GTM	Goat Mountain	0.98	75		Pg	00 21 15.3	-0.7
GTM					Sg	00 21 28.3	-0.6
BLCC	Black Canyon	0.99	282		Pg	00 21 15.5	-0.6
BLCC					Sg	00 21 28.7	-0.3
CIAC	Catalina I. Ai	0.99	230		Pg	00 21 15.6	-0.6
CIAC					Sg	00 21 28.8	-0.4
PMD	Palm Desert	1.02	113		Pg	00 21 15.6	-1.1
PMD					Sg	00 21 28.8	-1.2
TPO	Tropico Hills	1.02	324		Pg	00 21 16.0	-0.8
BTPC	Burnt Peak	1.09	306		Pg	00 21 17.0	-1.1
DPP	Dos Picos Cty	1.15	156		Pg	00 21 17.4	-1.8
DPP					Sg	00 21 33.0	-1.0
CCAC	Calif City Air	1.18	339		Pg	00 21 18.9	-0.9
CCAC				IAML		00 21 37.1	
	comp=E,540nm,0.5s						
CCAC				IAML		00 21 38.2	
	comp=N,521nm,0.5s						
GSC	Goldstone, Bar	1.38	25		Pn	00 21 22.6	-0.6
TJX	Tijuana	1.58	166		Pn	00 21 25.5	-0.4
ISA	Isabella, Lake	1.80	334		Pn	00 21 28.4	-0.6
ISA				IAML		00 21 54.6	
	comp=E,92nm,0.8s						
BCW	Bitter Crk WRg	1.81	300		Pn	00 21 29.0	-0.2
CBX	Cerro Bola	1.87	158		Pn	00 21 29.7	-0.3
YUH	Yuha Desert	1.92	136		Pn	00 21 29.6	-1.0
YUH				IAML		00 21 57.7	
	comp=N,76nm,0.8s						
GWY	Greenwater Val	2.24	18		Pn	00 21 34.7	-0.4
CCX	Cicese	2.29	162		Pn	00 21 35.2	-0.4
CCX				IAML		00 22 09.4	
	comp=E,124nm,0.4s						
CCX				IAML		00 22 10.6	
	comp=N,104nm,0.4s						
ESJX	Sierra Juarez	2.42	147		Pn	00 21 37.8	+0.1
ESJX				IAML		00 22 15.5	
	comp=N,45nm,0.6s						
ESJX				IAML		00 22 17.7	
	comp=E,69nm,0.7s						
GLA	Glamis	2.45	113		Pn	00 21 37.3	-0.6
GLA				IAML		00 22 17.0	
	comp=E,130nm,0.7s						
GLA				IAML		00 22 26.6	
	comp=N,88nm,0.6s						
BLYC	Blythe	2.50	96		Pn	00 21 37.7	-0.8
V12A	Nelson	2.75	52		Pn	00 21 41.8	-0.4
V12A				IAML		00 22 26.6	
	comp=N,33nm,0.5s						
GRAC	Grapevine Rang	2.94	2		Pn	00 21 45.1	+0.4
GRAC				IAML		00 22 39.7	
	comp=N,67nm,0.6s						
GRAC				IAML		00 22 43.4	
	comp=E,57nm,0.7s						
TPNV	Topopah Spring	3.07	19		Pn	00 21 47.0	+0.4
TPNV				IAML		00 22 42.7	
	comp=E,67nm,0.6s						
SHPR	Sheep Range	3.11	37		Pn	00 21 47.5	+0.4
W13A	Hualapai Mount	3.17	70		Pn	00 21 47.6	-0.4
GMN	Gold Mountain	3.25	3		Pn	00 21 48.8	-0.3
DSP	Deep Springs	3.34	354		Pn	00 21 50.5	+0.5
PMPB	Monarch Peak	3.46	310	Pn	Pn	00 21 51.7	-0.1
PMPB				IAML		00 22 37.8	
	comp=N,46nm,2.5s						
MZP	Montezuma Peak	3.65	2		Pn	00 21 54.5	-0.1
Y14A	Wickenburg	3.74	90		Pn	00 21 55.4	-0.3
Y14A				IAML		00 22 57.1	
	comp=N,29nm,0.3s						
Y14A				IAML		00 23 03.0	
	comp=E,21nm,0.5s						
SFX	San Felipe	3.75	143	Pn	Pn	00 21 55.8	+0.1
SFX				IAML		00 22 56.9	
	comp=N,34nm,0.8s						
SFX				IAML		00 23 00.1	
	comp=E,41nm,0.8s						
PRN	Pahroc Range	3.90	30		Pn	00 21 58.7	+0.7
PRN				IAML		00 23 15.8	
	comp=N,22nm,0.6s						
PRN				IAML		00 23 19.5	
	comp=E,21nm,0.9s						
LCMT	Little Creek M	4.56	48		Pn	00 22 07.8	+0.7
KNB	Kanab	4.83	51		Pn	00 22 11.5	+0.7
U15A	North Rim	4.88	59		Pn	00 22 11.8	+0.3
PSUT	Pine Spring	5.36	32		Pn	00 22 19.3	+1.2

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*IDC **06** 00:43:49.2±1.9, 2°.53N×84°.02W, h0km, mb3.7/5, mbtmp3.7/5, MS3.2/7, Error ellipse: s-maj=169.2km s-min=25.6km az=58.0*

ISC 06 00:43:54.1±1.9, 2°.4N±0°.6×84°.2W±0°.8, h35km, n16, σ0s.24/6, mb3.7/5, MS3.2/5, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	Atahualpa	11.11	148	LR	LR	00 50 11.3	
	comp=Z,103nm,20.0s,baz=317,slow=34						
CMIG	Matias Romero	17.98	325	LR	LR	00 53 22.4	
	comp=Z,76nm,21.4s,baz=174,slow=32						
LPAZ	La Paz	24.44	140	P	P	00 49 10.5	0.0
	2.5nm,0.9s,baz=338,slow=11,SNR=8.5 2.5nm,0.9s						
SIV	San Ignacio	29.28	129	LR	LR	01 01 41.5	
	comp=Z,42nm,20.7s,baz=278,slow=37						
TXAR	Lajitas Array	32.56	327	P	P	00 50 22.2	0.0
	0.5nm,1.0s,baz=150,slow=6.9,SNR=3.5 0.5nm,1.0s						
TKL	Tuckaleechee C	33.11	1	LR	LR	01 03 32.2	
	comp=Z,34nm,18.2s,baz=122,slow=36						
H03N2	Juan Fernandez	35.98	172	T	T	01 28 35.0	
	baz=351,slow=76,SNR=5.6						
H03N1	Juan Fernandez	35.98	172	T	T	01 28 36.9	
	baz=351,slow=76,SNR=9.0						
H03N3	Juan Fernandez	35.99	172	T	T	01 28 35.2	
	baz=351,slow=76,SNR=8.6						
SADO	Sadowa	42.45	5	LR	LR	01 08 58.6	
	comp=Z,29nm,19.0s,baz=148,slow=36						
ULM	Lac du Bonnet	48.71	350	P	P	00 52 35.2	+0.1
	2.2nm,0.8s,baz=158,slow=6.8,SNR=3.4 2.2nm,0.8s						
FRB	Frobisher Bay	62.30	8	LR	LR	01 20 03.1	
	comp=Z,36nm,20.2s,baz=58,slow=35						
YKA	Yellowknife Ar	64.10	345	P	P	00 54 24.2	-0.3
	0.5nm,0.8s,baz=135,slow=7.0,SNR=3.7 0.5nm,0.8s						
ILAR	Eielson Array	76.47	337	P	P	00 55 40.4	+0.3
	0.7nm,1.1s,baz=111,slow=5.6,SNR=5.8 0.7nm,1.1s						
FINES	FINESS Array B	97.50	27	LR	LR	01 44 07.9	
	comp=Z,12nm,18.1s,baz=17,slow=37						
KURBB	Kurchatov Arra	125.17	13	PKP	PKPdf	01 02 51.0	-0.1
	0.1nm,0.3s,baz=311,slow=2.6,SNR=2.1						

GCG 06 00:44:14.8±0.3, 13°.14N×89°.57W, h58km±6km, MD3.5, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	0.53	13	*e*P	Pn	00 44 26.8	-0.3
JAYA				*i* S	Sn	00 44 36.2	+0.2
NUBE	Las Nubes	0.79	345	*i* P	Pn	00 44 30.5	+0.3
NUBE				*i* S	Sn	00 44 42.8	+1.3
MTO3	Montecristo	1.27	9	*i* P	Pn	00 44 37.1	+0.6

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*TEH **06** 01:17:06.7, 27°.73N×53°.13E, h6km±261km*

*DSN **06** 01:17:09.8±1.3, 27°.56N×53°.00E, h10km, ML2.7/6, Error ellipse: s-maj=20.9km s-min=7.0km az=14.0*

*OMAN **06** 01:17:10.0±0.1, 27°.58N×53°.01E, h10km, mb4.1/3, ml3.4/12, Error ellipse: s-maj=1.8km s-min=0.7km az=7.0*

*IDC **06** 01:17:12.7±38.0, 28°.50N×53°.01E, h0km, mb3.4/3, mbtmp3.3/4, ML2.9/1, MS2.7/1, Error ellipse: s-maj=695.1km s-min=96.7km az=172.0*

ISC 06 01:17:09.6±0.7, 27°.72N±0°.04×53°.07E±0°.05, h20km, n58, σ1s.12/66, mb3.6/3, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMD1	Lamerd	0.39	167	Pg	Pb	01 17 15.3	-2.5
QIR1	Qir	0.76	359	Pg	Pb	01 17 22.1	-2.1
JHRM	Jahrom	0.91	30	Pg	Pb	01 17 23.7	-3.0
LAR1	LAR	1.16	92	Pg	Pn	01 17 29.5	-1.3
DSBU	Dashti - Bushe	1.72	292	Pg	Pb	01 17 39.7	-0.8
SHI	Shiraz	1.98	346	Pn	Pb	01 17 44.2	-0.8
KAZ2	Kazeron-Fars-I	2.26	327	Pn	Pb	01 17 48.3	-1.4
SHMA	Al-Shehemyia	2.64	226	P	Pn	01 17 51.3	+0.3
JRN	Qarnain Island	2.77	184	P	Pn	01 17 53.0	+0.1
SAKB	Bahrain	2.85	233	P	Pn	01 17 53.3	-0.5
SHME	Shamm	3.21	120	P	Pn	01 17 59.7	+0.8
SHME	Shamm	3.21	120	P	Pn	01 18 00.1	+1.2
TRNA	Turayna	3.40	210	P	Pn	01 18 01.3	-0.2
NAZ	Nazwa, Dubai	3.58	139	P	Pn	01 18 05.4	+1.4
NAZ	Nazwa, Dubai	3.58	139	P	Pn	01 18 05.0	+1.0
AJN	Ajban	3.58	151	P	Pn	01 18 05.9	+1.9
ASUD	Al Ashush, Dub	3.69	146	P	Pn	01 18 06.7	+1.2
NGRK	Negar Kerman	3.75	58	Pn	Pn	01 18 07.1	+0.4
IMEH	Mehriz	3.90	20	Pn	Pn	01 18 10.0	+1.4
UOSS	Minazif	3.94	134	P	Pn	01 18 10.0	+1.0
UOSS				S	Sn	01 18 55.7	+1.0
UOSS	Minazif	3.94	134	P	Pn	01 18 08.8	-0.2
KRBR	Kerman	3.95	54	Pn	Pn	01 18 10.1	+0.8
KHGB	Koh Gabri	3.99	48	Pn	Pn	01 18 10.5	+0.6
MZWR	Madinat Zayed	4.01	169	P	Pn	01 18 11.4	+1.5
ASHO	Ashiyiah	4.04	138	P	Pn	01 18 11.5	+1.1
ASHO				S	Sn	01 18 58.7	+1.5
ASHO	Ashiyiah	4.04	138	P	Pn	01 18 11.0	+0.5
ASHO				S	Sn	01 18 57.7	+0.5
IRAM	Ramesheh	4.12	352	Pn	Pn	01 18 12.6	+0.9
ISAD	Sadrabad	4.22	7	Pn	Pn	01 18 14.3	+1.3
ALNE	Al Ain	4.38	146	P	Pn	01 18 16.2	+1.3
	SNR=5.2						
ALNE				S	Sn	01 19 06.2	+0.8
ALNE	Al Ain	4.38	146	P	Pn	01 18 15.8	+0.9
IBAF	Bafgh	4.43	29	Pn	Pn	01 18 17.2	+1.3
ICHK	Chekchek	4.66	14	Pn	Pn	01 18 20.5	+1.4
MZR	Muzera	4.71	175	P	Pn	01 18 20.0	+0.5
SOHO	SOHO	4.74	138	P	Pn	01 18 20.7	+0.7
SOHO				S	Sn	01 19 15.8	+1.5
SOHO	SOHO	4.74	138	P	Pn	01 18 19.8	-0.2
KBAM	BAM	4.95	72	Pn	Pn	01 18 23.7	+0.8
UMZA	Um Al Zommool	5.33	159	P	Pn	01 18 28.6	+0.6
UMZA				S	Sn	01 19 29.7	+0.8
ARQ	Araqi	5.36	144	P	Pn	01 18 29.2	+0.7
ARQ				S	Sn	01 19 31.2	+1.4
ANAR	Anarak	5.49	6	Pn	Pn	01 18 30.8	+0.5
HOQ	Hoqain	5.62	136	P	Pn	01 18 32.6	+0.4
HOQ				S	Sn	01 19 37.0	+0.9
BSY	Bisya	6.21	142	P	Pn	01 18 40.7	+0.5
BSY				S	Sn	01 19 52.0	+1.4
KRSH	Karshahi	6.28	353	Pn	Pn	01 18 42.9	+1.6
SMDO	Samad	6.47	135	P	Pn	01 18 44.7	+1.0
WSAR	Wadi Sarin	6.72	130	P	Pn	01 18 47.7	+0.5
RAYN	Ar Rayn	8.00	240	P	Pn	01 19 04.3	-0.5
RAYN	Ar Rayn	8.00	240	P	Pn	01 19 03.9	-0.9
MHTO	MHTO	8.05	145	P	Pn	01 19 06.5	+1.1
	SNR=5.2						
DQM	DQM	8.77	151	P	Pn	01 19 14.8	-0.5
DOK	Doka	9.11	174	P	Pn	01 19 19.2	-0.8
	SNR=5.6						
WHFO	Wadi Hawf	9.77	176	P	Pn	01 19 28.8	-0.3
	SNR=13						
DMTO	DMTO	10.10	170	P	Pn	01 19 32.3	-1.3
RBK	Rabkut	10.22	174	P	Pn	01 19 34.0	-1.2
ABTO	Aybut	10.32	179	P	Pn	01 19 36.9	+0.3
BRTR	Keskin Array B	20.07	312	P	P	01 21 41.6	-0.1
	baz=134,slow=11,SNR=5.2 0.4nm,0.8s						
MLR	Muntele Rosu	27.89	317	LR	LR	01 35 49.4	
	comp=Z,17nm,19.8s,baz=74,slow=41						
FINES	FINESS Array B	38.25	339	P	P	01 24 27.2	-0.8
	0.5nm,0.5s,baz=143,slow=10.0,SNR=5.2 0.5nm,0.5s						
NOA	NORSAR Array B	43.48	332	P	P	01 25 12.7	+1.4
	0.2nm,0.6s,baz=123,slow=7.0,SNR=1.4 0.2nm,0.6s						
ARCES	ARCESS Array B	44.80	347	P	P	01 25 21.6	-0.1
	0.9nm,0.9s,baz=167,slow=7.9,SNR=1.4 0.9nm,0.9s						

IDC 06 01:19:28.3±2.1, 1°.34N×126°.88E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=199.3km s-min=24.6km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.38	161	P	P	01 24 28.5	+0.1
	0.4nm,0.3s,baz=340,slow=11,SNR=4.8 0.4nm,0.3s						
ASAR	Alice Springs	25.78	165	P	P	01 25 01.1	-0.1
	0.2nm,0.4s,baz=336,slow=10,SNR=1.7 0.2nm,0.4s						
MKAR	Makanchi Array	59.60	326	P	P	01 29 34.0	0.0
	0.1nm,0.5s,baz=120,slow=5.5,SNR=1.3 0.1nm,0.5s						
KURBB	Kurchatov Arra	63.82	328	P	P	01 30 02.4	0.0
	0.1nm,0.3s,baz=128,slow=7.0,SNR=2.6 0.1nm,0.3s						

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*SNET **06** 01:41:21.9±0.9, 12°.52N×89°.20W, h35km, ML3.6*

*GCG **06** 01:41:22.3±1.6, 12°.57N×89°.46W, h14km±11km, MD4.3, ML3.7*

*CATAC **06** 01:41:22.5±0.5, 13°N±2°×8°9W±°, h30km±8km, M3.7/32, MLv3.7/32, Error ellipse: s-maj=6.3km s-min=2.5km az=37.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}1.32; $M_{\theta\theta}$-2.07; $M_{\phi\phi}$0.75; $M_{r\theta}$2.17; $M_{\theta\phi}$1.27; $M_{\phi r}$4.48; Fault plane solution: $M_0$5.44740×10^{14} NP1: ϕ_s296.18284°, δ8.51666°, λ173.82978°. NP2: ϕ_s32.28553°, δ89.08794°, λ81.53196°. Principal axes: T 6.2473, Plg45.2809°, Azm293.7754°; N -2.4893, Plg8.4670°, Azm32.4213°; P -3.7580, Plg43.4762°, Azm130.5355°; Moment Tensor Solution. Moment tensor: Scale 10^{14} Nm; M_{rr}1.11; $M_{\theta\theta}$-2.12; $M_{\phi\phi}$1.01; $M_{r\theta}$1.98; $M_{\theta\phi}$1.31; $M_{\phi r}$5.49; Fault plane solution: $M_0$6.26021×10^{14} NP1: ϕ_s199.68826°, δ89.06395°, λ-90.23306°. NP2: ϕ_s33.67033°, δ0.96463°, λ-76.01984°. Principal axes: T 7.1408, Plg44.0635°, Azm289.9176°; N -2.5973, Plg0.2330°, Azm199.6921°; P -4.5435, Plg45.9356°, Azm109.4513°; confirmed*

ISC 06 01:41:18.2±1.5, 12°.36N±0°.06×89°.13W±0°.04, h32km±12km, n93, σ1s.28/103, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALJI	Alcalda de J	1.10	30	*e*P	Pn	01 41 39.8	+2.3
ALJI				*e*S	Sn	01 41 53.0	+1.4
ALJI	Alcalda de J	1.10	30	P	Pn	01 41 39.6	+2.1
ALJI	Alcalda de J	1.10	30	S	Sn	01 41 54.8	+3.2
LALI	Alcalda de L	1.14	351	*e*P	Pb	01 41 39.1	-0.2
LALI	Alcalda de L	1.14	351	*e*P	Pb	01 41 39.2	-0.2
LALI	Alcalda de L	1.14	351	P	Pb	01 41 40.2	+0.8
LALI	Alcalda de L	1.14	351	S	Sn	01 41 53.3	+1.0
TECO	Alcaldia de Te	1.22	16	*e*P	Pb	01 41 40.5	-0.3
TECO				*e*S	Sb	01 41 54.7	-1.5
TECO	Alcaldia de Te	1.22	16	P	Pb	01 41 40.7	-0.1
TECO	Alcaldia de Te	1.22	16	S	Sb	01 41 55.1	-1.1
LFRS	El Faro	1.26	3	*e*P	Pb	01 41 41.2	-0.3
COEG	Centro de Oper	1.27	11	P	Pb	01 41 41.6	-0.1
COEG	Centro de Oper	1.27	11	S	Sb	01 41 56.2	-1.7
LOMA	Loma Larga	1.28	358	*e*P	Pb	01 41 41.6	-0.2
LOMA	Loma Larga	1.28	358	P	Pb	01 41 41.9	+0.1
LOMA	Loma Larga	1.28	358	S	Sn	01 41 57.5	+1.5
TECA	Tecapa	1.28	28	*i* P	Pb	01 41 42.2	+0.3
TECA				*e*P	Pb	01 41 42.3	+0.3
UESV	Universidad de	1.31	15	P	Pb	01 41 42.3	-0.1
UESV	Universidad de	1.31	15	S	Sn	01 41 57.3	+0.5
ITCA	Escuela Especi	1.31	354	P	Pn	01 41 41.5	+1.1
ITCA	Escuela Especi	1.31	354	S	Sb	01 41 58.3	-0.7
JAYA	Jayaque - finc	1.32	346	*e*P	Pn	01 41 41.6	+1.0
JAYA				*e*S	Sn	01 41 56.2	-1.0
JAYA	Jayaque - finc	1.32	346	*e*P	Pn	01 41 41.6	+1.0
JAYA				*e*S	Sn	01 41 57.7	+0.4
JAYA	Jayaque - finc	1.32	346	P	Pb	01 41 41.9	-0.7
JAYA	Jayaque - finc	1.32	346	S	Sn	01 41 58.1	+0.9
LCY	Lacayo	1.33	38	*e*P	Pb	01 41 43.3	+0.5
RANC	El Ranchito	1.34	38	P	Pn	01 41 40.2	-0.8
RANC	El Ranchito	1.34	38	S	Sn	01 41 57.5	-0.3
UDBS	Universidad Do	1.35	359	P	Pb	01 41 43.0	0.0
UDBS	Universidad Do	1.35	359	S	Sb	01 42 02.3	+2.4
VSM	San Miguel	1.35	38	*e*P	Pb	01 41 44.0	+0.8
UEES	Universidad Ev	1.35	356	P	Pb	01 41 42.4	-0.7
UEES	Universidad Ev	1.35	356	S	Sb	01 41 59.8	-0.3
PACA	Pacayal	1.35	35	P	Pn	01 41 38.5	-2.6
PACA	Pacayal	1.35	35	S	Sn	01 41 56.0	-2.0
PMON	Piamonte	1.35	352	P	Pb	01 41 42.7	-0.5
PMON	Piamonte	1.35	352	S	Sb	01 41 60.0	-0.2
PAVA	Las Pavas	1.36	8	*e*P	Pb	01 41 42.9	-0.3
PAVA	Las Pavas	1.36	8	P	Pb	01 41 43.0	-0.1
PAVA	Las Pavas	1.36	8	S	Sb	01 42 00.6	+0.3
PQSS	Presa 15 de Se	1.37	24	P	Pb	01 41 43.3	-0.1
PQSS	Presa 15 de Se	1.37	24	S	Sn	01 41 57.7	-0.5
BOQS	Boqueron	1.37	354	*e*P	Pb	01 41 43.4	-0.2
PIC2	El Picacho	1.38	355	*e*P	Pb	01 41 43.6	-0.1
BLLM	Bellamira	1.38	39	*e*P	Pb	01 41 44.0	+0.4
SCLA	Alcaldia de Sa	1.39	16	*e*P	Pb	01 41 43.5	-0.2
SCLA	Alcaldia de Sa	1.39	16	P	Pb	01 41 43.2	-0.5
SCLA	Alcaldia de Sa	1.39	16	S	Sn	01 41 58.5	-0.3
CNRM	Centro Naciona	1.45	40	P	Pb	01 41 44.6	-0.1
CEDA	San Andres	1.46	350	P	Pb	01 41 45.8	+0.9
CEDA	San Andres	1.46	350	S	Sn	01 42 01.6	+1.2
LCND	La Caada	1.53	52	P	Pb	01 41 46.6	+0.6
CEVE	Cerro Verde	1.54	342	*e*P	Pn	01 41 45.2	+1.5
CEVE				*e*S	Sn	01 42 04.1	+1.5
CEVE	Cerro Verde	1.54	342	P	Pn	01 41 44.9	+1.2
SBLS	San Blas	1.54	342	*e*P	Pn	01 41 45.0	+1.2
CNCH	Conchagua	1.56	54	*e*P	Pb	01 41 47.2	+0.6
CNCH	Conchagua	1.56	54	P	Pb	01 41 47.5	+0.9
CSGN	Cosiguina Volc	1.65	68	P	Pb	01 41 49.0	+0.8
CSGN				S	Sb	01 42 13.9	+5.3
NUBE	Las Nubes	1.66	338	*e*P	Pn	01 41 46.4	+1.1
NUBE	Las Nubes	1.66	338	*e*P	Pn	01 41 46.4	+1.1
NUBE				*e*S	Sn	01 42 04.3	-1.2
NUBE	Las Nubes	1.66	338	P	Pn	01 41 46.3	+1.1
CAHU	Cacacuatique	1.66	33	*e*P	Pb	01 41 49.0	+0.6
FAME	Alcaldia de Sa	1.71	330	P	Pn	01 41 47.4	+1.6
FAME	Alcaldia de Sa	1.71	330	S	Sn	01 42 07.1	+0.6
LOAL	Lomas de Alarc	1.75	339	P	Pb	01 41 49.8	+0.1
LOAL	Lomas de Alarc	1.75	339	S	Sb	01 42 10.5	-0.8
SLOZ	Alcaldia de Sa	1.77	339	P	Pb	01 41 49.3	-0.9
SLOZ	Alcaldia de Sa	1.77	339	S	Sb	01 42 10.8	-1.3
MTO3	Montecristo	2.04	354	*e*P	Pn	01 41 52.7	+2.1
MTO3	Montecristo	2.04	354	*e*P	Pn	01 41 52.7	+2.1
MTO3	Montecristo	2.04	354	P	Pb	01 41 53.7	-1.1
MTO3	Montecristo	2.04	354	S	Sn	01 42 14.6	-0.4
CRIN	San Cristobal	2.06	80	P	Pn	01 41 52.2	+1.5
CRIN	San Cristobal	2.06	80	S	Sn	01 42 15.4	+0.1
PKGN	Cerro Pekin	2.12	81	P	Pb	01 41 56.3	+0.1
ESQI	Esquipulas	2.19	355	P	Pb	01 41 56.5	-0.9
ESQI	Esquipulas	2.19	355	S	Sn	01 42 19.9	+1.2
CHOHN	Orocuina	2.22	60	P	Pb	01 41 56.8	-1.1
CHOHN	Orocuina	2.22	60	S	Sn	01 42 18.0	-1.3
POLN	Al Sur del Vol	2.28	83	P	Pb	01 41 58.2	-0.6
POLN				S	Sb	01 42 27.1	+0.4
PACN	Al O del Volca	2.29	86	P	Pb	01 41 58.7	-0.2
CNGA	Al SSO del Vol	2.38	87	P	Pb	01 42 00.3	-0.1
CNGN	Cerro Negro	2.38	86	P	Pb	01 42 00.5	0.0
ILCN	San Idelfonso	2.38	85	P	Pb	01 41 59.5	-1.0
MACN	El Madrono	2.40	87	P	Pb	01 42 00.2	-0.7
TGUH	Tegucigalpa,Un	2.47	47	P	Pb	01 42 00.3	-1.8
SAPS	Ciudad Sandino	2.67	94	P	Pn	01 42 00.2	+1.1
YUSH	Yuscaran	2.73	54	P	Pb	01 42 04.9	-1.6
LIMN	Finca el Limon	2.79	75	P	Pb	01 42 04.9	-2.5
STG8	El Palmar, Qui	3.00	314	*e*P	Pb	01 42 09.7	-1.4
STG8				*e*S	Sb	01 42 47.7	+0.3
STG8				IAML		01 42 53.0	
	comp=E,240nm,0.2s						
RCVN	Varillal2	3.11	67	P	Pb	01 42 10.4	-2.6
MATN	Matagalpa	3.18	79	P	Pn	01 42 05.7	-0.4
RCPN	Sur Rio San Ju	3.18	68	P	Pb	01 42 11.0	-3.1

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*IDC **06** 01:43:58.0±11.0, 4°.29N×126°.12E, h114km±100km, mb3.6/7, mbtmp3.9/7, Error ellipse: s-maj=103.6km s-min=22.1km az=64.0*

ISC 06 01:43:56.6±1.4, 4°.3N±0°.3×126°.1E±0°.7, h100km, n7, σ0s.48/8, mb3.8/7, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	22.27	181	P	P	01 48 45.8	+0.2
	13nm,0.9s,baz=4.9,slow=10,SNR=18 13nm,0.9s						
WRA	Warramunga Arr	25.43	162	P	P	01 49 14.9	-0.2
	2.8nm,0.5s,baz=341,slow=10,SNR=19 2.8nm,0.5s						
ASAR	Alice Springs	28.83	165	P	P	01 49 45.2	-0.3
	1.0nm,0.6s,baz=345,slow=7.6,SNR=15 1.0nm,0.6s						
STKA	Stephens Creek	38.89	159	P	P	01 51 13.1	+0.6
	2.7nm,0.6s,baz=315,slow=8.6,SNR=5.5 2.7nm,0.6s						
MKAR	Makanchi Array	56.72	325	P	P	01 53 30.4	+0.5
	0.2nm,0.5s,baz=122,slow=7.1,SNR=2.3						
MKAR				PcP	PcP	01 54 24.5	-0.4
	0.4nm,0.5s,baz=124,slow=4.0,SNR=4.6 0.2nm,0.5s						
KURBB	Kurchatov Arra	60.91	327	P	P	01 53 58.8	-0.1
	0.3nm,0.7s,baz=123,slow=6.8,SNR=2.8 0.3nm,0.7s						
VNDA	Vanda	84.08	173	P	P	01 56 15.2	-0.4
	0.6nm,0.5s,baz=324,slow=4.3,SNR=6.4 0.6nm,0.5s						

THE 06 01:52:54.2, 41°N±46°×2°1E±2°1, h0km±35km, M2.2/9, MLh2.2/9, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEST	Nestorio	0.16	128	P	Pg	01 52 56.9	-0.4
FNA	Florina	0.46	54	P	Pg	01 53 03.2	+0.1
OHR	Ohrid	0.60	354	P	Pg	01 53 05.9	+0.1
KPRO	Kipourio	0.67	146	P	Pg	01 53 04.6	-2.5
KZN	Kozani	0.71	107	P	Pg	01 53 08.2	+0.4
JAN	Janina	0.86	181	P	Pg	01 53 06.5	-4.1
IGT	Igoumenitsa	1.07	203	P	Pg	01 53 10.3	-4.3
KEK	Kerkira	1.15	226	P	Pg	01 53 14.0	-2.3

TYRN	**Tyrnavos**	**1.31**	**127**	P	Pg	01 53 18.7	-0.7
AMPL	**Ampelaki**	**1.61**	**171**	P	Pn	01 53 23.2	-0.7
KNT	**Kendrikon**	**1.66**	**66**	P	Pn	01 53 24.4	-0.2
TSLK	**Tsoukalades, L**	**1.70**	**186**	P	Pn	01 53 24.0	-1.0
LKD2	**Lefkada island**	**1.73**	**186**	P	Pn	01 53 23.8	-1.8
EVR	**Evrytania**	**1.75**	**156**	P	Pg	01 53 28.6	+0.8
AGG	**Agios Georgios**	**1.86**	**143**	P	Pn	01 53 28.1	+0.7
EVGI	**Lefkada island**	**1.90**	**185**	P	Pn	01 53 26.9	-0.9
PDO	**Prodromos**	**1.93**	**173**	P	Pn	01 53 28.2	0.0
ANX	**Ano Chora**	**2.08**	**157**	P	Pn	01 53 30.4	0.0

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*TIR **06** 01:53:13.8, 40°.42N×20°.77E, h15^{km}±1^{km}, Ml2.6/6*
*ATH **06** 01:53:14.4, 40°.39N×20°.78E, h12^{km}±1^{km}, ML2.2/7, Manual Solution by I.Dede First location: 2019/06/06 01:54:42, This location: 2019/06/06 08:45:20 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*
*BEO **06** 01:53:14.8±0.3, 40°.31N×20°.81E, h0^{km}, ML2.1/9*
ISC 06 01:53:13.6±1.1**, 40°.38N**±0°.02×**20°.74E**±0°.03**, h2**^{km}±11^{km}**, n25, σ1^{s}.28**/45**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEST	**Nestorio**	**0.23**	**82**	Pg	**Pg**	**01 53 18.9**	**+0.7**
NEST				Sg	**Sg**	**01 53 22.8**	**+1.6**
NEST				AML	AML	01 53 24.3	
	4.4nm,0.3s						
NEST	**Nestorio**	**0.23**	**82**	P	**Pg**	**01 53 18.8**	**+0.7**
NEST				S	**Sg**	**01 53 22.4**	**+1.1**
KBN	**Korca**	**0.24**	**8**	Pg	**Pg**	**01 53 18.1**	**-0.3**
KBN				Sg	**Sg**	**01 53 21.7**	**+0.2**
KBN				AML	AML	01 53 28.0	
	3.2nm,0.5s						
LSK	**Leskovik**	**0.26**	**205**	Pg	**Pg**	**01 53 19.1**	**+0.5**
LSK				Sg	**Sb**	**01 53 25.1**	**-0.9**
LSK				AML	AML	01 53 27.5	
	3.7nm,0.6s						
LSK				AML	AML	01 53 28.9	
	3.5nm,0.4s						
PENT	**Pentalofos**	**0.35**	**122**	P	**Pg**	**01 53 19.9**	**-0.5**
PENT				S	**Sg**	**01 53 25.9**	**+0.8**
FNA	**Florina**	**0.63**	**50**	Pg	**Pg**	**01 53 26.2**	**+0.6**
FNA				Sg	**Sb**	**01 53 34.7**	**-1.8**
FNA				AML	AML	01 53 38.8	
	1.4nm,0.3s						
FNA	**Florina**	**0.63**	**50**	*e*Pg	**Pg**	**01 53 26.3**	**+0.6**
FNA				*e*Sg	**Sb**	**01 53 34.8**	**-1.8**
FNA	**Florina**	**0.63**	**50**	P	**Pg**	**01 53 26.3**	**+0.6**
FNA				S	**Sg**	**01 53 34.4**	**+0.7**
KPRO	**Kipourio**	**0.64**	**132**	P	**Pg**	**01 53 26.5**	**+0.6**
KPRO				S	**Sg**	**01 53 35.2**	**+1.1**
OHR	**Ohrid**	**0.73**	**3**	*e*Pg	**Pg**	**01 53 27.7**	**+0.1**
OHR				*e*Sg	**Sb**	**01 53 38.9**	**-0.7**
JAN	**Janina**	**0.73**	**174**	P	**Pb**	**01 53 28.8**	**-0.2**
KZN	**Kozani**	**0.79**	**95**	P	**Pb**	**01 53 29.6**	**-0.5**
IGT	**Igoumenitsa**	**0.91**	**201**	*e*Pg	**Pg**	**01 53 30.8**	**-0.2**
IGT				*e*Sg	**Sg**	**01 53 41.7**	**-1.0**
TIR	**Tirane**	**1.17**	**326**	*e*Pg	**Pg**	**01 53 36.0**	**-0.1**
TIR				*e*Sg	**Sn**	**01 53 56.6**	**+3.0**
THL	**Klokotos Trika**	**1.27**	**130**	P	**Pn**	**01 53 37.7**	**-0.7**
PHP	**Peshkopia**	**1.32**	**350**	Pg	**Pn**	**01 53 38.5**	**-0.6**
PHP				Sg	**Sb**	**01 53 56.3**	**-0.3**
PHP				AML	AML	01 54 00.4	
	0.3nm,0.5s						
TYRN	**Tyrnavos**	**1.32**	**120**	P	**Pn**	**01 53 38.2**	**-0.9**
VAY	**Valandovo**	**1.67**	**55**	*e*Pg	**Pg**	**01 53 45.8**	**+0.1**
VAY				*e*Sg	**Sg**	**01 54 07.7**	**+0.3**
PUK	**Puka**	**1.78**	**339**	Pn	**Pg**	**01 53 47.5**	**-0.2**
PUK				Sn	**Sg**	**01 54 11.6**	**+0.9**
PUK				AML	AML	01 54 18.3	
	0.3nm,0.7s						
BCI	**Bajram Curri**	**2.05**	**346**	Pn	**Pb**	**01 53 52.1**	**+0.6**
BCI				Sn	**Sg**	**01 54 18.1**	**-1.2**
PDG	**Podgorica**	**2.33**	**332**	*e*Pn	**Pn**	**01 53 54.2**	**+1.2**
PDG				*e*Sn	**Sb**	**01 54 25.6**	**0.0**
BARS	**Barje**	**2.56**	**18**	*e*Pn	**Pb**	**01 53 57.9**	**-2.4**
BARS				*e*Sn	**Sb**	**01 54 31.5**	**-0.7**
SELS	**Selova**	**2.85**	**6**	*e*Pn	**Pb**	**01 54 03.0**	**-2.2**
SELS				*e*Sn	**Sb**	**01 54 38.0**	**-2.5**
SJES	**Sjenica**	**2.93**	**349**	*e*Pn	**Pn**	**01 54 03.2**	**+1.8**
SJES				*e*Sn	**Sb**	**01 54 40.5**	**-2.5**
IVAS	**Ivanjica**	**3.22**	**352**	*e*Pn	**Pn**	**01 54 07.8**	**+2.5**

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*GUC **06** 01:56:18.2±0.8, 22°.88S×68°.62W, h107^{km}±3^{km}, ML3.4*
*SJA **06** 01:56:19.1±1.8, 22°.89S×68°.62W, h82^{km}, ML3.3, MW3.5*
ISC 06 01:56:19.2±1.3**, 22°.88S**±0°.03×**68°.64W**±0°.04**, h108**^{km}±9^{km}**, n34, σ1^{s}.16**/54**, 8C-4D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AF01	**San Pedro de A**	**0.43**	**100**	⇓*e*P	**Pn**	**01 56 34.7**	**-1.1**
AF01				*e*S	**Sn**	**01 56 47.4**	**-0.9**
AF01				IAML		01 56 49.8	
	comp=E,3µm,0.2s						
AF01	**San Pedro de A**	**0.43**	**100**	*e*P	**Pn**	**01 56 34.7**	**-1.1**
AF01				IAML		01 56 34.9	
	comp=Z,2µm,0.3s						
AF01				*e*P		01 56 35.3	
PB06	**IPOC Station P**	**0.87**	**281**	⇑*e*P	**Pn**	**01 56 39.4**	**+0.2**
PB06				*e*S	**Sn**	**01 56 54.9**	**+0.7**
PB06				IAML		01 56 55.7	
	comp=N,3µm,0.5s						
PB06	**IPOC Station P**	**0.87**	**281**	*e*P	**Pn**	**01 56 39.3**	**+0.2**
PB06				*e*S	**Sn**	**01 56 55.5**	**+1.3**
PB06				IAML		01 56 58.1	
	comp=Z,1µm,0.2s						
PB09	**IPOC Station P**	**1.21**	**333**	⇓*e*P	**Pn**	**01 56 42.8**	**+0.1**
PB09				*e*S	**Sn**	**01 57 01.1**	**+0.6**
PB09				IAML		01 57 03.4	
	comp=E,412nm,0.5s						
PB09	**IPOC Station P**	**1.21**	**333**	*e*P	**Pn**	**01 56 42.9**	**+0.1**
PB09				*e*S	**Sn**	**01 57 00.9**	**+0.4**
PB09				IAML		01 57 02.7	
	comp=Z,339nm,0.8s						
PB03	**IPOC Station P**	**1.32**	**309**	⇑*e*P	**Pn**	**01 56 43.8**	**-0.1**
PB03				*e*S	**Sn**	**01 57 02.8**	**+0.1**
PB03				IAML		01 57 03.4	
	comp=N,1µm,0.4s						
PB03	**IPOC Station P**	**1.32**	**309**	*e*P	**Pn**	**01 56 43.8**	**-0.1**
PB03				*e*S	**Sn**	**01 57 02.9**	**+0.2**
PB03				IAML		01 57 03.5	
	comp=Z,704nm,0.3s						
PB05	**IPOC Station P**	**1.44**	**271**	⇑*e*P	**Pn**	**01 56 45.4**	**+0.1**
PB05				*e*S	**Sn**	**01 57 05.4**	**+0.3**
PB05				IAML		01 57 16.7	
	comp=N,332nm,0.2s						
PB05	**IPOC Station P**	**1.44**	**271**	*e*P	**Pn**	**01 56 45.5**	**+0.1**
PB05				*e*S	**Sn**	**01 57 07.0**	**+1.9**
PB05				IAML		01 57 07.5	
	comp=Z,192nm,0.2s						
PB10	**IPOC Station P**	**1.87**	**250**	⇑*e*P	**Pn**	**01 56 50.5**	**+0.1**
PB10				*e*S	**Sn**	**01 57 14.5**	**+0.2**
PB10				IAML		01 57 28.2	
	comp=N,202nm,0.5s						
PB10	**IPOC Station P**	**1.87**	**250**	*e*P	**Pn**	**01 56 51.3**	**+0.9**
PB10				IAML		01 57 22.5	
	comp=Z,129nm,0.4s						
PB01	**IPOC Station P**	**1.99**	**337**	⇑*e*P	**Pn**	**01 56 51.6**	**-0.4**
PB01				*e*S	**Sn**	**01 57 17.2**	**+0.1**
PB01				IAML		01 57 18.6	
	comp=E,558nm,0.4s						
PB01	**IPOC Station P**	**1.99**	**337**	*e*P	**Pn**	**01 56 51.9**	**-0.2**
PB01				*e*S	**Sn**	**01 57 17.4**	**+0.3**
PB01				IAML		01 57 18.2	
	comp=Z,332nm,0.2s						
PB14	**IPOC Station P**	**2.37**	**222**	⇑*e*P	**Pn**	**01 56 57.5**	**+0.3**
PB14				*e*S	**Sn**	**01 57 25.5**	**-0.8**
PB14				IAML		01 57 33.5	
	comp=E,160nm,0.5s						
PB14	**IPOC Station P**	**2.37**	**222**	*e*P	**Pn**	**01 56 57.6**	**+0.3**
PB14				*e*S	**Sn**	**01 57 26.9**	**+0.5**
PB14				IAML		01 57 33.4	
	comp=Z,221nm,0.6s						
GO02	**Mina Guanaco**	**2.43**	**201**	⇑*e*P	**Pn**	**01 56 58.2**	**+0.2**
GO02				*e*S	**Sn**	**01 57 28.9**	**+1.2**
GO02				IAML		01 57 37.0	
	comp=E,245nm,0.2s						
GO02	**Mina Guanaco**	**2.43**	**201**	*e*P	**Pn**	**01 56 57.5**	**-0.5**
GO02				*e*S	**Sn**	**01 57 29.3**	**+1.6**
SALTA		**2.50**	**123**	*e*P	Pn	01 56 41.3	-18
TA01	**Diego Aracena**	**2.71**	**328**	*e*P	**Pn**	**01 57 00.9**	**-0.4**
TA01				*e*S	**Sn**	**01 57 34.3**	**+0.6**
TA01				IAML		01 57 43.0	
	comp=N,154nm,0.4s						
TA01	**Diego Aracena**	**2.71**	**328**	*e*P	**Pn**	**01 57 02.6**	**+1.3**
TA01				*e*S	**Sn**	**01 57 28.9**	**-4.9**
TA01				IAML		01 57 41.4	
	comp=Z,69nm,0.7s						
PB08	**IPOC Station P**	**2.76**	**350**	⇑*e*P	**Pn**	**01 57 02.3**	**-0.1**
PB08				*e*S	**Sn**	**01 57 35.6**	**0.0**
PB08				IAML		01 57 42.7	
	comp=E,88nm,0.2s						
PB08	**IPOC Station P**	**2.76**	**350**	*e*P	**Pn**	**01 57 02.4**	**-0.1**
PB08				*e*S	**Sn**	**01 57 38.2**	**+2.6**
PB08				IAML		01 58 03.9	
	comp=Z,38nm,0.4s						
YJA	**Yavi**	**2.98**	**77**	*e*P	**Pn**	**01 57 05.9**	**+0.6**
YJA	**Yavi**	**2.98**	**77**	*e*P	Pn	01 57 00.4	-4.9
YJA				*e*S	Sn	01 57 12.4	-28
GO01	**Chusmiza**	**3.23**	**351**	*e*P	**Pn**	**01 57 08.3**	**-0.5**
GO01				*e*S	**Sn**	**01 57 48.0**	**+1.1**
GO01				IAML		01 57 51.9	
	comp=E,120nm,0.2s						
GO01	**Chusmiza**	**3.23**	**351**	*e*P	**Pn**	**01 57 08.4**	**-0.3**
GO01				*e*S	Sn	01 57 32.7	-14
PB11	**IPOC Station P**	**3.24**	**343**	*e*P	**Pn**	**01 57 06.8**	**-1.7**
PB11				IAML		01 57 53.5	
	comp=E,92nm,0.2s						
PB11	**IPOC Station P**	**3.24**	**343**	*e*P	**Pn**	**01 57 07.2**	**-1.4**
PB11				*e*S	Sn	01 57 37.7	-8.9
PB11				IAML		01 57 56.4	
	comp=Z,57nm,0.3s						
SLA	**San Lorenzo**	**3.41**	**123**	⇓*e*P	**Pn**	**01 57 13.0**	**+2.2**
AZAP	**Zapla**	**3.54**	**113**	*e*P	**Pn**	**01 57 12.5**	**-0.1**
AC01	**Pan de Azucar**	**3.71**	**208**	*e*P	**Pn**	**01 57 13.4**	**-1.2**
AC01				*e*S	**Sn**	**01 57 56.6**	**-1.0**
AC01				IAML		01 58 14.5	
	comp=Z,54nm,0.5s						
AC02	**Maricunga**	**3.96**	**186**	*e*P	**Pn**	**01 57 17.0**	**-1.5**
AC02				*e*S	Sn	01 57 54.0	-10
AC02				IAML		01 58 35.8	
	comp=Z,28nm,0.6s						
GO03	**Copiapo**	**4.91**	**197**	⇓*e*P	**Pn**	**01 57 29.3**	**-1.6**

NOU 06 01:59:55.2, 14°.73S×167°.10E, h82^{km}**, mb4.4**/16**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLAKA	**Lakatoro**	**1.40**	**167**	P	Pn	02 00 19.4	0.0
VLAKA	**Lakatoro**	**1.40**	**167**	P	Sn	02 00 38.4	+0.8
YATNC	**Mamie plateau,**	**7.29**	**182**	P	Pn	02 01 38.8	-0.3
DZM	**Mont Dzumac**	**7.33**	**185**	P	Pn	02 01 39.0	-0.7
DZM	**Mont Dzumac**	**7.33**	**185**	S	Sn	02 03 02.2	+0.8
ONTNC	**Ouen Toro**	**7.56**	**185**	P	Pn	02 01 43.0	+0.3
ONTNC	**Ouen Toro**	**7.56**	**185**	S	Sn	02 03 06.8	-0.1
OUENC	**Ouen Island, N**	**7.65**	**182**	P	Pn	02 01 44.4	+0.4
PINNC	**Pines Island,**	**7.85**	**178**	P	Pn	02 01 47.5	+0.9

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*NNC **06** 02:01:28.0±4.9, 38°.44N×72°.69E, h99^{km}±112^{km}, mb2.2, mpv2.5, Error ellipse: s-maj=44.2km s-min=34.4km az=9.0*
*SOME **06** 02:01:27.9, 39°.37N×72°.27E, h5^{km}*
ISC 06 02:01:24.9±2.6**, 39°.2N**±0°.1×**72°.37E**±0°.07**, h10**^{km}**, n7, σ1^{s}.66**/13**, 1C-2D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRKS	**Merke**	**3.56**	**10**	*e*P	**Pg**	**02 02 33.3**	**+0.1**
	2.3nm,0.3s						
MRKS				*e*S	**Sg**	**02 03 20.3**	**+0.9**
	13nm,0.3s						
AAK	**Ala-Archa**	**3.76**	**25**	⇑P	**Pb**	**02 02 32.2**	**+0.7**
	0.1nm,0.3s						
AAK				⇓S	**Sg**	**02 03 23.8**	**-1.9**
	5.8nm,0.8s						
KK31	**Karatay Array**	**4.11**	**341**	P	**Pg**	**02 02 41.4**	**-2.2**
	0.5nm,0.2s,baz=47,slow=43,SNR=4.7						
KK31				S	**Sg**	**02 03 35.9**	**-1.0**
	5.6nm,0.6s,baz=152,slow=19,SNR=11						
BRLS	**Borolday**	**4.24**	**334**	*e*P	**Pb**	**02 02 41.1**	**+1.4**
	4.3nm,0.2s						
BRLS				*e*S	**Sb**	**02 03 33.8**	**+2.9**
	0.6nm,0.2s						
KST	**Kastek**	**4.67**	**34**	*e*P	**Pg**	**02 02 54.1**	**-0.4**
	1.2nm,0.3s						
KST				*e*S	**Sg**	**02 03 55.4**	**+0.4**
	1.9nm,0.2s						
BTLS	**Baital**	**5.93**	**12**	*e*P	**Pg**	**02 03 16.4**	**-2.2**
	2.0nm,0.5s						
BTLS				*e*S	**Sg**	**02 04 34.1**	**-1.2**
	2.0nm,0.3s						
AB31	**Akbulak array**	**13.38**	**322**	⇓P	**P**	**02 04 44.0**	**-0.4**
	0.2nm,0.5s,baz=133,slow=13,SNR=5.8						

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*GCG **06** 02:07:28.8±0.3, 15°.72N×93°.44W, h59^{km}±25^{km}, MD3.8, ML2.7*
*MEX **06** 02:07:28.0±0.6, 15°.69N×93°.58W, h88^{km}±6^{km}, MD3.8*
ISC 06 02:07:25.1±1.5**, 15°.60N**±0°.06×**93°.54W**±0°.04**, h101**^{km}±14^{km}**, n13, σ1^{s}.85**/24**, 1C, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.32**	**72**	*e*P	**Pn**	**02 07 39.8**	**-0.1**
PCIG				*e*S	**Sn**	**02 07 49.9**	**-1.0**
TGIG		**1.23**	**19**	*i* P	**Pn**	**02 07 48.6**	**+0.3**
TGIG				*i* S	**Sn**	**02 08 03.8**	**-2.0**
TGIG		**1.23**	**19**	*i* P	**Pn**	**02 07 48.5**	**+0.2**
TGIG				*i* S	**Sn**	**02 08 03.6**	**-2.2**
TGIG				IAML		02 08 04.9	
	comp=N,72nm,0.1s						
PATR	**El Naranjo**	**1.35**	**111**	*e*P	**Pn**	**02 07 51.1**	**+1.4**
PATR				*e*S	**Sn**	**02 08 09.7**	**+1.2**
PAVE	**Pavencul**	**1.37**	**107**	*e*P	**Pn**	**02 07 52.1**	**+2.0**
PAVE				*e*S	**Sn**	**02 08 10.6**	**+1.6**
CCIG	**Comitan**	**1.51**	**63**	*e*P	**Pn**	**02 07 52.8**	**+1.1**
CCIG				*e*S	**Sn**	**02 08 12.2**	**+0.4**
CCIG	**Comitan**	**1.51**	**63**	*i* P	**Pn**	**02 07 52.6**	**+0.9**
CCIG				IAML		02 08 16.3	
	comp=N,96nm,0.4s						
CMIG	**Matias Romero**	**1.96**	**319**	*e*P	**Pn**	**02 07 58.5**	**+1.3**
CMIG				*e*S	**Sn**	**02 08 22.9**	**+1.1**
RTAL	**Retalhuleu**	**2.08**	**121**	*e*S	**Sn**	**02 08 25.6**	**+1.2**
STG8	**El Palmar, Qui**	**2.40**	**118**	*e*P	**Pn**	**02 08 01.7**	**-1.5**
STG8				⇑*i*S	**Sn**	**02 08 27.5**	**-4.9**
STG8				IAML		02 08 34.5	
	comp=N,126nm,0.2s						
HUIG	**Huatulco**	**2.48**	**274**	*e*P	**Pn**	**02 08 05.6**	**+1.6**
HUIG				*e*S	**Sn**	**02 08 33.3**	**-0.6**
NEUV	**Arroyo Zacate**	**3.02**	**314**	*e*P	**Pn**	**02 08 12.3**	**+1.2**
NEUV				*e*S	**Sn**	**02 08 45.8**	**-0.8**
PEIG	**Puerto Escondi**	**3.50**	**277**	*e*P	**Pn**	**02 08 18.3**	**+0.8**
PEIG				*e*S	**Sn**	**02 08 54.9**	**-3.2**

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*CATAC **06** 02:39:11.1±0.6, 14°N±4°×9°1W±°, h10^{km}±3^{km}, M3.6/13, MLv3.6/13, Error ellipse: s-maj=8.0km s-min=3.8km az=22.3, confirmed*
*GCG **06** 02:39:12.3±1.7, 13°.58N×91°.00W, h61^{km}±23^{km}, MD4.3, ML3.7, MW3.2*
*SNET **06** 02:39:13.1±1.0, 13°.48N×90°.84W, h15^{km}±5^{km}, ML3.3*
ISC 06 02:39:10.4±1.9**, 13°.46N**±0°.09×**90°.94W**±0°.05**, h20**^{km}±6^{km}**, n52, σ0^{s}.95**/60**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESSJ	**San Jos, E**	**0.44**	**77**	*i* P	**Pn**	**02 39 24.0**	**+2.4**
FG16	**Alotenango, Sa**	**0.91**	**28**	*i* P	**Pn**	**02 39 29.6**	**+1.4**
FG16				IAML		02 39 58.9	
	comp=N,6µm,0.3s						
ESSG	**Sabana Grande**	**0.92**	**7**	*e*P	**Pn**	**02 39 28.2**	**-0.2**
ESSG				IAML		02 39 43.0	
	comp=N,951nm,0.2s						
FAME	**Alcaldia de Sa**	**0.98**	**67**	P	**Pg**	**02 39 29.4**	**-0.1**
FAME	**Alcaldia de Sa**	**0.98**	**67**	S	**Sn**	**02 39 42.4**	**+0.1**
STG8	**El Palmar, Qui**	**1.06**	**338**	*i* P	**Pg**	**02 39 34.4**	**+3.4**
STG8				IAML		02 39 54.4	
	comp=N,1µm,0.1s						
NUBE	**Las Nubes**	**1.21**	**69**	*i* P	**Pb**	**02 39 32.9**	**+0.1**
NUBE				*e*S	**Sn**	**02 39 48.4**	**+0.1**
NUBE	**Las Nubes**	**1.21**	**69**	*i* P	**Pb**	**02 39 32.9**	**+0.1**
NUBE	**Las Nubes**	**1.21**	**69**	P	**Pb**	**02 39 32.8**	**+0.1**
NUBE	**Las Nubes**	**1.21**	**69**	S	**Sg**	**02 39 49.3**	**-0.6**
LOAL	**Lomas de Alarc**	**1.25**	**65**	*e*P	**Pb**	**02 39 33.7**	**+0.3**
LOAL				*e*S	**Sn**	**02 39 49.4**	**+0.3**
LOAL	**Lomas de Alarc**	**1.25**	**65**	P	**Pg**	**02 39 34.1**	**-0.5**
LOAL	**Lomas de Alarc**	**1.25**	**65**	S	**Sg**	**02 39 50.1**	**-0.9**
SLOZ	**Alcaldia de Sa**	**1.26**	**63**	*e*P	**Pg**	**02 39 34.0**	**-0.7**
SLOZ				*e*S	**Sn**	**02 39 49.5**	**+0.2**
SLOZ	**Alcaldia de Sa**	**1.26**	**63**	P	**Pg**	**02 39 34.3**	**-0.4**
SLOZ	**Alcaldia de Sa**	**1.26**	**63**	S	**Sg**	**02 39 50.7**	**-0.5**
RTAL	**Retalhuleu**	**1.28**	**325**	P	**Pn**	**02 39 32.7**	**-0.5**
RTAL	**Retalhuleu**	**1.28**	**325**	S	**Sb**	**02 39 47.6**	**-2.4**
CEVE	**Cerro Verde**	**1.33**	**74**	*e*P	**Pb**	**02 39 35.1**	**+0.2**
CEVE	**Cerro Verde**	**1.33**	**74**	P	**Pb**	**02 39 35.4**	**+0.5**
CEVE	**Cerro Verde**	**1.33**	**74**	S	**Sg**	**02 39 52.9**	**-0.8**
SBLS	**San Blas**	**1.34**	**74**	*e*P	**Pb**	**02 39 35.0**	**0.0**
SNJE	**San Jose**	**1.36**	**73**	*e*P	**Pb**	**02 39 35.4**	**+0.1**
SNJE				*e*P	**Pg**	**02 39 35.6**	**-1.2**
SOKI	**Kika Raxquin**	**1.42**	**342**	*e*P	**Pb**	**02 39 35.6**	**-0.9**
SOKI				*i* S	**Sn**	**02 39 53.0**	**-0.9**
SOKI				IAML		02 40 00.2	
	comp=N,879nm,0.4s						
UNIC	**Universidad Ca**	**1.45**	**69**	P	**Pb**	**02 39 36.9**	**+0.2**
UNIC	**Universidad Ca**	**1.45**	**69**	S	**Sb**	**02 39 54.8**	**-0.1**
JAYA	**Jayaque - finc**	**1.47**	**82**	*e*P	**Pb**	**02 39 36.8**	**-0.3**
JAYA	**Jayaque - finc**	**1.47**	**82**	*e*P	**Pb**	**02 39 36.9**	**-0.3**
JAYA				*i* S	**Sb**	**02 39 55.4**	**0.0**
JAYA	**Jayaque - finc**	**1.47**	**82**	P	**Pb**	**02 39 37.2**	**+0.1**
PMON	**Piamonte**	**1.60**	**81**	*e*P	**Pb**	**02 39 39.0**	**-0.4**
PMON				*e*S	**Sb**	**02 39 59.4**	**+0.1**
PMON	**Piamonte**	**1.60**	**81**	P	**Pb**	**02 39 39.6**	**+0.2**
PMON	**Piamonte**	**1.60**	**81**	S	**Sg**	**02 40 01.5**	**-0.8**
LOMA	**Loma Larga**	**1.73**	**84**	*e*P	**Pb**	**02 39 41.0**	**-0.6**
LOMA	**Loma Larga**	**1.73**	**84**	P	**Pb**	**02 39 41.5**	**-0.2**
LOMA	**Loma Larga**	**1.73**	**84**	S	**Sg**	**02 40 05.1**	**-1.3**
MTO3	**Montecristo**	**1.80**	**59**	*i* P	**Pb**	**02 39 42.3**	**-0.5**
MTO3	**Montecristo**	**1.80**	**59**	*i* P	**Pb**	**02 39 42.3**	**-0.5**
MTO3	**Montecristo**	**1.80**	**59**	P	**Pb**	**02 39 42.7**	**0.0**
MTO3	**Montecristo**	**1.80**	**59**	S	**Sb**	**02 40 06.0**	**+1.0**
LFRS	**El Faro**	**1.84**	**85**	*e*P	**Pb**	**02 39 42.9**	**-0.5**
ESQI	**Esquipulas**	**1.90**	**55**	*e*P	**Pb**	**02 39 44.0**	**-0.5**
PAVA	**Las Pavas**	**1.97**	**83**	P	**Pb**	**02 39 45.2**	**-0.4**
PAVA	**Las Pavas**	**1.97**	**83**	S	**Sb**	**02 40 09.0**	**-0.7**
COEG	**Centro de Oper**	**2.01**	**85**	*e*P	**Pb**	**02 39 45.6**	**-0.8**
COEG				*e*S	**Sb**	**02 40 10.2**	**-0.8**
COEG				IAML		02 40 12.4	
	comp=Z,230nm,0.3s						
COEG	**Centro de Oper**	**2.01**	**85**	P	**Pb**	**02 39 45.9**	**-0.5**
COEG	**Centro de Oper**	**2.01**	**85**	S	**Sb**	**02 40 12.0**	**+0.9**
TECO	**Alcaldia de Te**	**2.10**	**88**	*e*P	**Pb**	**02 39 46.6**	**-1.4**
TECO	**Alcaldia de Te**	**2.10**	**88**	P	**Pb**	**02 39 46.5**	**-1.4**
TECO	**Alcaldia de Te**	**2.10**	**88**	S	**Sb**	**02 40 14.4**	**+0.7**
SCLA	**Alcaldia de Sa**	**2.17**	**83**	*e*P	**Pb**	**02 39 47.7**	**-1.3**
SCLA	**Alcaldia de Sa**	**2.17**	**83**	P	**Pb**	**02 39 47.7**	**-1.3**
LCND	**La Caada**	**2.98**	**93**	*e*P	**Pn**	**02 39 58.2**	**+1.7**

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*GII **06** 02:39:45.3±0.0, 35°.562N±0°.003×27°.133E±0°.001, h5^{km}, Mws3.5, confirmed*
*HLW **06** 02:39:45.1, 36°.19N×27°.23E, h30^{km}±24^{km}, Md3.7, Ml3.6*
*IDC **06** 02:39:45.2±1.1, 35°.85N×27°.16E, h0^{km}, mb3.8/9, mbtmp3.7/14, ML3.2/5, MS2.9/3, Error ellipse: s-maj=24.0km s-min=14.6km az=177.0*
*ISK **06** 02:39:46.0, 35°.79N×27°.15E, h5^{km}, ML3.6/20*
*ATH **06** 02:39:46.3, 35°.79N×27°.13E, h10^{km}±2^{km}, ML3.3/8, Manual Solution by N.Liadopoulou First location: 2019/06/06 02:41:03, This location: 2020/06/29 17:09:14 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*AFAD **06** 02:39:46.7, 35°.78N×27°.16E, h14^{km}±1^{km}, MW3.8*
*THE **06** 02:39:47.6, 36°N±3°×2°7E±°, h10^{km}±8^{km}, M3.4/9, MLh3.4/9*
*NIC **06** 02:39:47.2, 35°.76N×27°.17E, h14^{km}, Ml3.5/10*
ISC 06 02:39:46.8±0.8**, 35°.79N**±0°.02×**27°.16E**±0°.02**, h13**^{km}±6^{km}**, n129, σ1^{s}.23**/168**, mb3.7**/9**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.24**	**180**	Pg	**Pg**	**02 39 51.7**	**-0.2**
KARP				Sg	**Sg**	**02 39 56.3**	**+0.9**
KARP	**Karpathos**	**0.24**	**180**	P	**Pg**	**02 39 51.8**	**-0.2**
KARP				S	**Sg**	**02 39 56.0**	**+0.7**
KARP	**Karpathos**	**0.24**	**180**	P	**Pg**	**02 39 51.7**	**-0.2**
KARP				S	**Sg**	**02 39 54.8**	**-0.6**
KARP	**Karpathos**	**0.24**	**180**	P	**Pg**	**02 39 51.7**	**-0.2**
KARP				S	**Sg**	**02 39 56.2**	**+0.8**
KARP				AML	AML	02 39 58.1	
	42nm,0.7s						
KARP				AML	AML	02 40 05.1	
	42nm,1.2s						
NISR	**Nisiros**	**0.82**	**358**	P	**Pb**	**02 40 03.1**	**+0.1**
NISR				S	**Sn**	**02 40 15.8**	**-0.3**
ARG	**Arkhangelos**	**0.89**	**61**	Pg	**Pb**	**02 40 03.9**	**-0.2**
ARG				Sg	**Sn**	**02 40 18.2**	**+0.4**
ARG	**Arkhangelos**	**0.89**	**61**	P	**Pb**	**02 40 04.0**	**-0.1**
ARG				S	**Sn**	**02 40 17.2**	**-0.6**
ARG	**Arkhangelos**	**0.89**	**61**	P	**Pb**	**02 40 03.9**	**-0.2**
ARG				S	**Sb**	**02 40 15.9**	**-0.1**
ARG	**Arkhangelos**	**0.89**	**61**	P	**Pb**	**02 40 03.7**	**-0.4**
ARG				S	**Sn**	**02 40 17.7**	**-0.1**
ARG				AML	AML	02 40 21.7	
	10.0nm,0.7s						
ARG				AML	AML	02 40 23.9	
	9.1nm,0.7s						
YAZI	**Mula-Dat§a-**	**0.93**	**15**	P	**Pb**	**02 40 04.3**	**-0.3**
YAZI				S	**Sn**	**02 40 18.7**	**+0.1**
ASTA	**Astypalaia**	**1.00**	**320**	P	**Pg**	**02 40 05.4**	**-0.7**
DAT	**Datca**	**1.00**	**20**	Pg	**Pn**	**02 40 06.4**	**-0.2**
DAT				Sg	**Sn**	**02 40 21.5**	**+0.9**
DAT	**Datca**	**1.00**	**20**	S	**Sn**	**02 40 21.8**	**+1.2**
ZKR	**Zakros**	**1.02**	**229**	Pg	**Pn**	**02 40 06.6**	**-0.1**
ZKR	**Zakros**	**1.02**	**229**	P	**Pn**	**02 40 07.3**	**+0.5**
ZKR	**Zakros**	**1.02**	**229**	P	**Pg**	**02 40 05.8**	**-0.6**
ZKR	**Zakros**	**1.02**	**229**	P	**Pb**	**02 40 06.1**	**-0.1**
ZKR				S	**Sn**	**02 40 21.4**	**+0.5**
ZKR				AML	AML	02 40 31.0	
	5.9nm,0.9s						
ZKR				AML	AML	02 40 34.0	
	2.1nm,0.7s						
DATC	**Datca-Mugla**	**1.05**	**22**	Pg	**Pn**	**02 40 07.2**	**0.0**
DATC				Sg	**Sn**	**02 40 22.9**	**+1.2**
RODB	**Rodos**	**1.08**	**52**	P	**Pn**	**02 40 07.6**	**0.0**
KLNA	**Kalymnos**	**1.18**	**353**	P	**Pb**	**02 40 08.7**	**-0.3**
BODT	**Bodrum**	**1.28**	**5**	Pn	**Pg**	**02 40 11.6**	**+0.2**
BODT				Sn	**Sn**	**02 40 30.2**	**+2.8**
BODT	**Bodrum**	**1.28**	**5**	P	**Pn**	**02 40 10.4**	**0.0**
BODT				S	**Sn**	**02 40 29.0**	**+1.6**
BDRM	**Kayabasi**	**1.30**	**10**	P	**Pb**	**02 40 11.0**	**-0.1**
BDRM				S	**Sg**	**02 40 28.7**	**+0.1**
TURN	**Turunc**	**1.32**	**41**	Pn	**Pg**	**02 40 11.9**	**-0.3**
TURN	**Turunc**	**1.32**	**41**	P	**Pg**	**02 40 11.8**	**-0.4**
TURN				S	**Sg**	**02 40 30.1**	**+0.7**
AMGA	**Amorgos Island**	**1.46**	**316**	P	**Pn**	**02 40 13.0**	**+0.1**
THR8	**Santorini-Mono**	**1.50**	**295**	P	**Pb**	**02 40 14.4**	**0.0**
THR6	**Thira Island,**	**1.54**	**292**	P	**Pb**	**02 40 15.0**	**-0.1**
THR2	**Thira island,**	**1.54**	**296**	P	**Pb**	**02 40 14.8**	**-0.5**
THR3	**Thira Island,**	**1.56**	**294**	P	**Pb**	**02 40 14.9**	**-0.5**
CMBO	**Columbo, Santo**	**1.58**	**296**	P	**Pn**	**02 40 15.0**	**+0.5**
CMBO	**Columbo, Santo**	**1.58**	**296**	P	**Pn**	**02 40 14.9**	**+0.5**
DALY	**Dalyan (Mula)**	**1.59**	**49**	Pn	**Pg**	**02 40 16.4**	**-0.8**
DALY				Sn	**Sg**	**02 40 38.6**	**+0.7**
MLSB	**Milas**	**1.59**	**18**	Pn	**Pg**	**02 40 16.5**	**-0.8**
SAP3	**Santorini-Thir**	**1.61**	**294**	P	**Pb**	**02 40 16.0**	**-0.3**
SAP3	**Santorini-Thir**	**1.61**	**294**	P	**Pn**	**02 40 15.4**	**+0.6**
DDIM	**Aydin, Didim**	**1.67**	**2**	P	**Pg**	**02 40 18.1**	**-0.7**
DDIM				S	**Sg**	**02 40 41.0**	**+0.5**
MULA	**Mugla, Merkez-**	**1.74**	**32**	P	**Pb**	**02 40 17.9**	**-0.7**
MULA				S	**Sb**	**02 40 40.3**	**-0.1**
FETY	**Fethiye**	**1.77**	**61**	Pn	**Pb**	**02 40 19.4**	**+0.3**
FETY	**Fethiye**	**1.77**	**61**	P	**Pg**	**02 40 20.6**	**-0.1**
FETY				S	**Sg**	**02 40 46.3**	**+2.5**
SABU	**Mula-Dalaman**	**1.79**	**54**	P	**Pg**	**02 40 20.2**	**-1.0**
SABU				S	**Sg**	**02 40 43.8**	**-0.7**
IZZE	**Mula-Seydike**	**1.79**	**68**	P	**Pb**	**02 40 19.6**	**+0.1**
IZZE				S	**Sg**	**02 40 44.6**	**+0.1**
APE	**Apeiranthos**	**1.83**	**315**	Pn	**Pn**	**02 40 18.2**	**+0.2**
APE	**Apeiranthos**	**1.83**	**315**	P	**Pn**	**02 40 17.7**	**-0.3**

APE	Apeiranthos	1.83	315	P	Pn	02 40 17.9	-0.1
IDI	Anoyia	1.92	256	Pn	Pn	02 40 19.5	+0.4
IDI	Anoyia	1.92	256	P	Pn	02 40 19.9	+0.8
IDI	Anoyia	1.92	256	Pn	Pn	02 40 19.6	+0.4
	7.3nm,0.3s,baz=73,slow=18,SNR=77						
IDI				Sn	Sb	02 40 45.2	-0.2
	25nm,0.3s,baz=177,slow=10,SNR=13						
IDI	Anoyia	1.92	256	P	Pn	02 40 18.6	-0.5
AYDN	Tasoluk	1.96	17	P	Pb	02 40 21.4	-0.9
AYDN				S	Sg	02 40 49.7	-0.1
AKAS	Kas	2.03	77	Pn	Pb	02 40 23.2	-0.4
CAME	Cameli-Denizli	2.08	56	Pn	Pb	02 40 24.1	-0.3
TMBK	Timbaki Herakl	2.08	251	P	Pn	02 40 22.3	+1.0
TMBK	Timbaki Herakl	2.08	251	P	Pn	02 40 21.2	-0.1
DNZT	Denizli-Tavas-	2.12	45	P	Pb	02 40 25.4	+0.3
DNZT				S	Sb	02 40 52.6	+1.3
TAVA	DENIZLI_Tavas	2.19	40	P	Pb	02 40 26.1	-0.3
TAVA				S	Sb	02 40 54.7	+1.3
CAEL	Denizli, Camel	2.19	52	P	Pb	02 40 26.2	-0.2
CAEL				S	Sg	02 41 00.1	+2.8
KNIK	Mula-Seydike	2.22	61	P	Pb	02 40 26.2	-0.5
KNIK				S	Sb	02 40 55.6	+1.4
ESEN	Aydn-Nazilli	2.22	25	P	Pn	02 40 24.6	+1.3
ESEN				S	Sg	02 40 56.4	-1.9
AYDB	Zeytinkoy-Aydi	2.24	15	Pn	Pb	02 40 26.3	-0.8
NAZL	Nazilli-Aydin	2.36	22	Pn	Pb	02 40 27.3	-1.8
DNIZ	Denizli-Tavas-	2.38	39	P	Pb	02 40 28.4	-1.1
DNIZ				S	Sb	02 40 59.0	+0.2
APMY	Acipayam-Deniz	2.41	45	Pn	Pb	02 40 28.2	-1.8
ELL	Elmali	2.42	66	Pn	Pb	02 40 28.6	-1.6
ELL	Elmali	2.42	66	P	Pn	02 40 26.3	+0.2
IZMR	zmir-demi	2.43	15	P	Pb	02 40 28.8	-1.6
IZMR				S	Sb	02 41 00.3	+0.1
IMMV	Iera Moni Meta	2.61	264	Pn	Pn	02 40 30.9	+2.3
GVD	Gavdhos	2.68	250	Pn	Pb	02 40 32.2	-2.4
ISP	Isparta	3.38	52	P	Pn	02 40 41.3	+2.0
AKMS	Akamas	4.30	99	P	Pn	02 40 52.5	+0.7
AKMS				S	Sn	02 41 42.6	+0.8
AKMS				AML	AML	02 41 46.9	
	0.3nm,0.6s						
AKMS				AML	AML	02 41 48.0	
	0.3nm,0.7s						
MATC	Matruh	4.43	179	P	Pn	02 40 55.9	+2.3
ALFC	Alefka	4.48	96	P	Pn	02 40 55.0	+0.6
ALFC				S	Sn	02 41 48.1	+1.6
ALFC				AML	AML	02 41 50.3	
	0.4nm,0.6s						
ALFC				AML	AML	02 41 55.4	
	0.3nm,0.5s						
NATA	Nata	4.54	101	P	Pn	02 40 56.1	+1.0
NATA				S	Sn	02 41 49.3	+1.6
NATA				AML	AML	02 41 55.5	
	0.6nm,0.5s						
NATA				AML	AML	02 41 56.3	
	0.7nm,0.7s						
SLUM	Salum	4.58	201	P	Pn	02 40 57.2	+1.5
TROD	Troodos	4.74	99	P	Pn	02 40 58.4	+0.4
TROD				S	Sn	02 41 54.2	+1.2
TROD				AML	AML	02 41 59.6	
	0.2nm,0.8s						
TROD				AML	AML	02 42 03.7	
	0.1nm,0.9s						
DB3	El Dabaa	4.88	166	P	Pn	02 41 01.2	+1.5
DB3				S	Sn	02 41 56.5	+0.5
ASGA	Asgata	5.08	100	P	Pn	02 41 03.7	+1.1
ASGA				AML	AML	02 42 05.3	
	0.2nm,0.5s						
ASGA				AML	AML	02 42 20.0	
	0.2nm,0.7s						
CSS	Mathiatis	5.11	97	P	Pn	02 41 03.2	+0.2
CSS	Mathiatis	5.11	97	S	Sn	02 42 02.2	+0.4
CSS	Mathiatis	5.11	97	P	Pn	02 41 02.8	-0.2
CSS				AML	AML	02 42 12.3	
	0.1nm,0.7s						
CSS				AML	AML	02 42 13.8	
	0.2nm,1.0s						
MVOU	Mavrovouni	5.34	96	P	Pn	02 41 07.6	+1.4
MVOU				AML	AML	02 42 11.6	
	0.1nm,0.7s						
MVOU				AML	AML	02 42 20.9	
	0.1nm,1.1s						
BRTR	Keskin Array B	6.47	51	Pn	Pn	02 41 22.9	+1.1
	0.1nm,0.3s,baz=210,slow=14,SNR=9.9						
	0.9nm,0.7s						
SWA2		6.68	193	P	Pn	02 41 27.0	+2.4
SWA2				S	Sn	02 42 42.2	+1.7
MMA0B	Mount Meron ar	7.35	110	P	Pn	02 41 33.5	-0.3
MMA0B	Mount Meron ar	7.35	110	S	Sn	02 42 56.8	-0.3
MMAI	Mount Meron Ar	7.35	110	Pn	Pn	02 41 33.3	-0.5
	1.7nm,0.3s,baz=318,slow=12,SNR=7.5						
MMAI				Sn	Sn	02 42 56.9	-0.3
	3.6nm,0.3s,baz=298,slow=29,SNR=8.4						
	0.8nm,0.3s						
GEM	Giv'at Ha'Em	7.47	108	P	Pn	02 41 35.1	-0.4
GEM	Giv'at Ha'Em	7.47	108	S	Sn	02 42 59.5	-0.5
MMLI	Mount Malkishu	7.62	114	P	Pn	02 41 36.7	-0.8
MMLI	Mount Malkishu	7.62	114	S	Sn	02 43 02.7	-1.1
HMDT	Nahal Hemdat	7.79	115	P	Pn	02 41 39.0	-0.7
HMDT	Nahal Hemdat	7.79	115	S	Sn	02 43 06.6	-1.1
YTIR	Yattir	7.97	121	P	Pn	02 41 41.5	-0.8
YTIR	Yattir	7.97	121	S	Sn	02 43 10.8	-1.6
ZNM	Zenema	8.00	141	P	Pn	02 41 44.3	+1.6
DSI	Dead Sea	8.04	119	P	Pn	02 41 42.4	-0.8
DSI	Dead Sea	8.04	119	S	Sn	02 43 12.0	-1.9
MSBI	Mazada	8.17	121	P	Pn	02 41 44.0	-0.9
MSBI	Mazada	8.17	121	S	Sn	02 43 15.0	-2.1
GHAJ	Ghor Haditha	8.32	120	P	Pn	02 41 46.3	-0.7
GHAJ	Ghor Haditha	8.32	120	S	Sn	02 43 18.7	-2.1
KRMI	Paran Flat	8.50	130	P	Pn	02 41 47.8	-1.8
KRMI	Paran Flat	8.50	130	S	Sn	02 43 22.7	-2.8
PRNI	Paran	8.52	127	P	Pn	02 41 48.6	-1.3
PRNI	Paran	8.52	127	S	Sn	02 43 23.5	-2.4
HRFI	Mount Harif	8.76	129	P	Pn	02 41 51.9	-1.2
HRFI	Mount Harif	8.76	129	S	Sn	02 43 29.1	-2.5
MBRI	Mt Berech	8.85	130	P	Pn	02 41 53.4	-0.9
MBRI	Mt Berech	8.85	130	S	Sn	02 43 31.4	-2.5
EIL	Elat	8.96	131	Pn	Pn	02 41 55.3	-0.5
	0.5nm,0.3s,baz=347,slow=4.5,SNR=11						
EIL				Sn	Sn	02 43 31.2	-5.3
	1.2nm,0.3s,baz=16,slow=21,SNR=6.6						
	1.9nm,0.4s						
EIL	Elat	8.96	131	P	Pn	02 41 54.1	-1.7
EIL	Elat	8.96	131	S	Sn	02 43 33.5	-3.0
VYHS	Vyhne	14.11	337	*e*PN	Pn	02 43 02.9	-3.3
KEST	Kesra	14.47	275	Pn	Pn	02 43 12.6	+1.3
	0.2nm,0.3s,baz=329,slow=0.2,SNR=8.8						
	4.6nm,1.2s						
GNI	Garni	14.53	67	LR	LR	02 49 51.9	
	comp=Z,24nm,19.8s,baz=282,slow=42						
GERES	GERESS Array B	16.38	327	Pn	P	02 43 38.5	-0.7
	baz=180,slow=9.3,SNR=6.4						
	0.9nm,0.7s						
DPC	Dobruska-Polom	16.54	335	*e*P	P	02 43 42.9	+2.0
ZVC	Zvikov	16.62	329	*e*P	P	02 43 42.6	+0.9
KHC	Kasperske Hory	16.65	327	*e*P	P	02 43 44.3	+2.2
ESDC	Sonseca Array	24.85	288	P	P	02 45 08.7	-0.3
	1.4nm,0.8s,baz=81,slow=9.7,SNR=14						
ESDC				LR	LR	02 54 53.9	
	comp=Z,15nm,18.5s,baz=112,slow=37						
	1.4nm,0.8s						
FINES	FINESS Array B	25.69	359	P	P	02 45 14.8	-1.3
	2.5nm,0.9s,baz=155,slow=15,SNR=7.2						
	2.5nm,0.9s						
HFS	Hagfors	25.87	345	P	P	02 45 16.2	-1.7
	1.4nm,0.8s,baz=133,slow=11,SNR=4.5						
	1.4nm,0.8s						
EKA	Eskdalemuir Ar	28.50	323	P	P	02 45 43.4	+1.8
	0.9nm,0.7s,baz=122,slow=9.0,SNR=3.6						
	0.9nm,0.7s						
ARCES	ARCESS Array B	33.82	359	P	P	02 46 27.3	-0.9
	1.5nm,0.9s,baz=164,slow=9.3,SNR=2.0						
	1.5nm,0.9s						
KURBB	Kurchatov Arra	39.46	52	P	P	02 47 17.5	+1.0
	0.8nm,0.7s,baz=277,slow=8.9,SNR=5.4						
KURBB				PcP	PcP	02 49 24.3	+0.1
	0.2nm,0.4s,baz=265,slow=3.9,SNR=5.7						
	0.8nm,0.7s						
MKAR	Makanchi Array	42.07	57	P	P	02 47 39.4	+1.2
	0.6nm,0.8s,baz=281,slow=7.9,SNR=4.8						
	0.6nm,0.8s						
ZALV	Zalesovo Beam	43.39	47	P	P	02 47 48.3	-0.4
	0.6nm,0.4s,baz=292,slow=7.6,SNR=2.2						
	0.6nm,0.4s						
PALK	Pallekele	56.46	107	LR	LR	03 13 59.2	
	comp=Z,36nm,19.5s,baz=166,slow=36						
KSRS	Korea Array	76.60	53	P	P	02 51 38.0	+1.0
	0.8nm,0.4s,baz=302,slow=2.5,SNR=4.1						
	0.8nm,0.4s						

KRSC 06 03:00:17.8±2.6**,49°.86N**×**156°.93E,h48**^{km}±26^{km}**,Ml3.9, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.98	328	*e*P	Pn	03 00 34.3	-0.8
SKR				*e*S	Sn	03 00 45.9	-2.0
PAU	Pauzhetka	1.61	357	*e*P	Pn	03 00 45.2	+1.5
PAU				*e*S	Sn	03 01 05.4	+2.0
ASAK	Asacha	2.60	13	*e*P	Pn	03 01 01.0	+3.6
MTVR	Mutnovka	2.75	16	*e*P	Pn	03 01 03.0	+3.6
MTVR				*e*S	Sn	03 01 36.4	+4.9
RUS	Russkaya	2.77	21	*e*P	Pn	03 01 02.5	+3.0
RUS				*e*S	Sn	03 01 35.3	+3.6
GRL	Gorelyy	2.79	15	*e*P	Pn	03 01 03.6	+3.6
GRL				*e*S	Sn	03 01 38.4	+5.9
UGLR	Uglovaya	3.56	19	*e*P	Pn	03 01 14.7	+4.1
AVH	Avacha	3.59	18	*e*P	Pn	03 01 16.1	+5.1
KOK	Koryaka	3.60	17	*e*P	Pn	03 01 15.9	+4.8
SMAR	Somma	3.61	18	*e*P	Pn	03 01 15.6	+4.3
SDLR	Sedlovina	3.64	19	*e*P	Pn	03 01 15.0	+3.3
KRX	Arik	3.67	16	*e*P	Pn	03 01 15.8	+3.7
SPN	Mys Shipunski	3.78	30	*e*P	Pn	03 01 17.2	+3.8
MKZ	Mys Kozlova	5.55	30	*e*P	Pn	03 01 40.1	+2.4

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*NEIC **06** 03:07:22.1±0.6,36°.939N±0°.010×97°.66W±0°.01,h5^{km}±1^{km}, mb_Lg2.1/17,ML2.4/37,ML2.5/44,Error ellipse: s-maj=2.4km s-min=1.6km az=333.0*

NEIC 06 03:07:22.1±0.9**,36°.935N**±0°.010×**97°.65W**±0°.01**,h6**^{km}±2^{km}**, Error ellipse: s-maj=1.5km s-min=1.2km az=177.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN17	Caldwell West	0.14	321		Pg	03 07 25.7	+0.6
KAN17					Sg	03 07 27.7	+0.7
KAN17				IAML		03 07 28.2	
	comp=N,2μm,0.3s						
KAN13	South Haven SW	0.16	61		Pg	03 07 26.0	+0.6
KAN13					Sg	03 07 28.5	+0.8
KAN13				IAML		03 07 28.6	
	comp=E,2μm,0.2s						
GC02	Grant County #	0.18	243		Pg	03 07 26.3	+0.5
GC02					Sg	03 07 29.0	+0.7
KAN09	Caldwell North	0.20	8		Pg	03 07 26.8	+0.6
KAN09					Sg	03 07 29.6	+0.6
KAN09				IAML		03 07 30.0	
	comp=E,930nm,0.1s						
KAN09				IAML		03 07 30.2	
	comp=N,792nm,0.3s						
KAN01	Argonia South	0.23	339		Pg	03 07 27.4	+0.6
KAN01					Sg	03 07 30.6	+0.7
KAN05	Bluff City Nor	0.25	315		Pg	03 07 27.5	+0.5
KAN05					Sg	03 07 31.2	+0.9
KAN05				IAML		03 07 31.9	
	comp=N,771nm,0.2s						
KAN14	Manchester OK	0.25	275		Pg	03 07 27.5	+0.5
KAN14					Sg	03 07 31.0	+0.6
KAN08	Anthony NE Sta	0.39	319		Pg	03 07 30.2	+0.6
KAN08					Sg	03 07 35.7	+0.9
KAN08				IAML		03 07 37.4	
	comp=E,390nm,0.4s						
KAN08				IAML		03 07 37.5	
	comp=N,568nm,0.3s						
BLOK	Blackwell	0.39	116		Pg	03 07 30.1	+0.4
BLOK					Sg	03 07 35.5	+0.6
KAN10	Anthony SW Sta	0.40	298		Pg	03 07 30.5	+0.5
KAN10					Sg	03 07 36.3	+1.1
KAN12	Harper NE Stat	0.46	323		Pg	03 07 31.5	+0.5
KAN12					Sg	03 07 37.8	+0.9
KAN12				IAML		03 07 41.6	
	comp=E,501nm,0.4s						
CROK	Carrier	0.51	212		Pg	03 07 32.2	+0.4
CROK					Sg	03 07 39.2	+0.7
CROK				IAML		03 07 41.4	
	comp=E,371nm,0.4s						
CROK				IAML		03 07 46.7	
	comp=N,280nm,0.3s						
OK051	E0350 and S346	0.78	123		Pg	03 07 37.3	+0.1
OK051					Sg	03 07 47.7	+0.3
OK051				IAML		03 07 50.0	
	comp=N,172nm,0.2s						
OK051				IAML		03 07 53.8	
	comp=N,153nm,0.1s						
T35A	Sooner Cattle	0.92	91		Pg	03 07 39.7	0.0
T35A					Sg	03 07 51.7	+0.1
T35A				IAML		03 07 52.0	
	comp=N,200nm,0.2s						
OK038	West end E0370	0.99	243		Pg	03 07 40.9	-0.2
OK038					Sg	03 07 54.3	+0.4
QUOK	Quay	1.08	135		Pg	03 07 42.8	0.0
QUOK					Sg	03 07 56.6	-0.1
QUOK				IAML		03 08 02.6	
	comp=E,123nm,0.2s						
OK029	Liberty Lake	1.15	172		Pg	03 07 43.9	-0.3
OK029					Sb	03 07 59.4	-0.1
OK029				IAML		03 08 05.9	
	comp=E,74nm,0.5s						
OK052	Battle Ridge R	1.16	144		Pg	03 07 44.1	-0.3
OK052					Sg	03 07 59.4	-0.1
OK052				IAML		03 08 04.0	
	comp=E,140nm,0.2s						
OK052				IAML		03 08 05.9	
	comp=E,135nm,0.4s						
DEOK	Depew	1.43	139		Pn	03 07 48.8	+0.1
DEOK					Sg	03 08 08.1	-0.1
CSTR	Hydro, Custer	1.54	213		Pn	03 07 49.7	-0.4
OKCSW	OKLAHOMA CITY	1.54	173		Pb	03 07 50.7	-0.3
OKCSW					Sg	03 08 11.7	+0.1
ELIS	Ellis County	1.67	239		Pn	03 07 51.8	-0.1
FNO	Franklin	1.69	173		Pn	03 07 51.8	-0.3
R32A	Long Quarter,	1.71	331		Pn	03 07 52.3	-0.2
TUL3	Leonard	1.82	124	Pn	Pn	03 07 53.2	-0.7
RLO	Rose Lookout	2.25	109		Pn	03 07 59.6	-0.3
X34A	Smith Ranch, M	2.33	184	Pn	Pn	03 08 00.5	-0.5
WMOK	Wichita Mounta	2.38	203		Pn	03 08 01.4	-0.2
AMTX	Amarillo	3.86	239	Pn	Pn	03 08 21.8	-0.3
P38A	Dawn	4.21	49	IAmb_Lg		03 09 36.2	
	comp=Z,6.7nm,0.7s						
DKNS	Dickens	4.22	220	IAmb_Lg		03 09 44.9	
	comp=Z,4.7nm,1.1s						
FCAR	Ozark Folk Cen	4.58	102	IAmb_Lg		03 09 45.0	
	comp=Z,4.7nm,0.9s						
N38A	Joes South For	5.17	40	IAmb_Lg		03 10 07.6	
	comp=Z,5.6nm,0.7s						
CCM	Cathedral Cave	5.22	76	IAmb_Lg		03 10 10.2	
	comp=Z,3.6nm,0.7s						
PBMO	Poplar Bluff	5.79	89	IAmb_Lg		03 10 36.6	
	comp=Z,3.7nm,0.8s						
OZNA	Ozona	6.66	207	IAmb_Lg		03 10 48.0	
	comp=Z,0.9nm,0.9s						

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*THE **06** 03:07:53.0,40°N±1°×2°1E±°,h0^{km}±2^{km},M2.2/6,MLh2.2/6*
*TIR **06** 03:07:53.1,40°.42N×20°.75E,h3^{km}±1^{km},Md2.3/1,Ml2.5/9*
*ATH **06** 03:07:53.7,40°.40N×20°.83E,h13^{km}±1^{km},ML2.2/9, Manual Solution by N.Liadopoulou First location: 2019/06/06 03:08:51, This location: 2019/06/06 08:23:13 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*BEO **06** 03:07:54.8±0.4,40°.36N×20°.94E,h0^{km},ML2.0/4*

ISC 06 03:07:53.8±1.0**,40°.42N**±0°.01×**20°.78E**±0°.02**,h3**^{km}±10^{km}**, n48,**σ**1^{s}.12**/79**,Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.20	2	Pg	Pg	03 07 57.3	-0.5
KBN				Sg	Sg	03 08 01.0	+0.5
KBN				AML	AML	03 08 01.2	
	5.0nm,0.4s						
KBN	Korca	0.20	2	Pg	Pg	03 07 57.3	-0.5
KBN				Sg	Sg	03 08 00.7	+0.3
KBN				AML	AML	03 08 06.2	
	3.3nm,0.7s						
NEST	Nestorio	0.21	92	Pg	Pg	03 07 58.3	+0.4
NEST				Sg	Sg	03 08 01.9	+1.3
NEST				AML	AML	03 08 04.9	
	2.9nm,0.4s						
NEST	Nestorio	0.21	92	Pg	Pg	03 07 58.3	+0.4
NEST				Sg	Sg	03 08 01.9	+1.3
NEST				AML	AML	03 08 04.9	
	2.9nm,0.4s						
NEST	Nestorio	0.21	92	P	Pg	03 07 58.3	+0.4
NEST				S	Sg	03 08 02.5	+1.9
NEST	Nestorio	0.21	92	P	Pg	03 07 58.1	+0.2
NEST				S	Sg	03 08 01.2	+0.6
LSK	Leskovik	0.30	207	Pg	Pg	03 07 58.9	-0.8
LSK				Sg	Sg	03 08 04.6	+1.0
LSK				AML	AML	03 08 07.6	
	6.5nm,0.3s						
LSK				AMd		03 08 29.9	
LSK	Leskovik	0.30	207	Pg	Pg	03 07 58.9	-0.8
LSK				Sg	Sg	03 08 03.2	-0.4
LSK				AML	AML	03 08 06.7	
	6.2nm,0.7s						
PENT	Pentalofos	0.36	129	P	Pg	03 08 00.8	+0.1
PENT				S	Sg	03 08 06.9	+1.5
PENT	Pentalofos	0.36	129	P	Pg	03 08 00.4	-0.3
FNA	Florina	0.58	51	Pg	Pg	03 08 05.3	+0.3
FNA				Sg	Sb	03 08 14.4	-0.9
FNA				AML	AML	03 08 18.9	
	0.7nm,0.3s						
FNA	Florina	0.58	51	Pg	Pg	03 08 05.4	+0.4
FNA				Sg	Sb	03 08 14.9	-0.5
FNA				AML	AML	03 08 18.9	
	0.7nm,0.3s						
FNA				AML	AML	03 08 20.2	
	1.1nm,0.4s						
FNA	Florina	0.58	51	P	Pg	03 08 04.8	-0.2
FNA				S	Sb	03 08 14.4	-0.9
FNA	Florina	0.58	51	*e*Pg	Pg	03 08 04.8	-0.2
FNA				*e*Sg	Sg	03 08 12.1	-0.5
FNA	Florina	0.58	51	P	Pg	03 08 05.1	+0.1
FNA				S	Sg	03 08 12.6	0.0
KPRO	Kipourio	0.65	136	P	Pg	03 08 05.8	-0.4
KPRO				S	Sb	03 08 16.7	-0.5
KPRO	Kipourio	0.65	136	P	Pg	03 08 05.5	-0.7
OHR	Ohrid	0.69	1	P	Pg	03 08 06.6	-0.4
OHR				S	Sb	03 08 17.2	-1.3
OHR	Ohrid	0.69	1	*e*Pg	Pg	03 08 07.3	+0.2
OHR				*e*Sg	Sb	03 08 17.7	-0.7
MSVA	Metsovo	0.72	154	P	Pb	03 08 08.2	-0.8
JAN	Janina	0.77	176	P	Pg	03 08 08.1	-0.4
KZN	Kozani	0.77	98	P	Pg	03 08 08.5	-0.1
KZN				S	Sb	03 08 21.2	+0.6
SRN	Sarande	0.80	228	Pg	Pg	03 08 08.7	-0.5
SRN				Sg	Sg	03 08 19.4	-0.2
SRN				AML	AML	03 08 24.1	
	0.3nm,0.6s						
SRN	Sarande	0.80	228	Pg	Pg	03 08 08.7	-0.5
SRN				Sg	Sb	03 08 20.9	-0.7
SRN				AML	AML	03 08 24.1	
	0.3nm,0.6s						
IGT	Igoumenitsa	0.95	201	Pg	Pb	03 08 12.6	-0.3
IGT				Sg	Sb	03 08 25.0	-0.8
IGT	Igoumenitsa	0.95	201	Pg	Pb	03 08 12.2	-0.7
IGT				Sg	Sb	03 08 25.4	-0.5
IGT	Igoumenitsa	0.95	201	*e*Pn	Pn	03 08 13.9	-0.1
IGT				*e*Sg	Sb	03 08 25.3	-0.5
IGT	Igoumenitsa	0.95	201	P	Pg	03 08 11.8	-0.2
KEK	Kerkira	1.03	227	P	Pb	03 08 14.1	-0.1
TETR	Tetrakomo, Epi	1.14	160	P	Pg	03 08 15.3	-0.3
TIR	Tirane	1.16	324	Pn	Pg	03 08 14.2	-1.7
TIR	Tirane	1.16	324	*e*Pg	Pn	03 08 18.3	+1.5
TIR				*e*Sg	Sn	03 08 36.1	+3.0
THL	Klokotos Trika	1.28	132	P	Pg	03 08 17.3	-1.1
THL				S	Sn	03 08 36.7	+0.6
THL	Klokotos Trika	1.28	132	P	Pg	03 08 17.1	-1.2
PHP	Peshkopia	1.29	349	Pg	Pg	03 08 17.7	-0.8
PHP				Sg	Sg	03 08 34.3	-0.9
PHP				AML	AML	03 08 39.6	
	0.2nm,0.5s						
PHP	Peshkopia	1.29	349	Pg	Pg	03 08 17.7	-0.8
TYRN	Tyrnavos	1.32	122	P	Pn	03 08 18.3	-0.8
TYRN	Tyrnavos	1.32	122	P	Pn	03 08 17.4	-1.7
LIT	Litokhoron	1.35	103	P	Pn	03 08 17.6	-1.9
LKD2	Lefkada island	1.63	183	Pn	Pg	03 08 25.6	+0.5
LKD2				Sn	Sg	03 08 49.4	+3.2
LKD2				AML	AML	03 08 58.2	
	0.2nm,0.5s						
LKD2	Lefkada island	1.63	183	Pn	Pg	03 08 24.6	-0.5
LKD2				Sn	Sg	03 08 48.5	+2.2
LKD2				AML	AML	03 08 58.2	
	0.2nm,0.5s						
PUK	Puka	1.75	338	Pn	Pb	03 08 26.6	0.0
PUK				Sg	Sg	03 08 53.3	+3.2
PUK				AML	AML	03 08 57.5	
	0.3nm,0.7s						
PUK	Puka	1.75	338	Pn	Pb	03 08 26.7	0.0
PUK				Sn	Sg	03 08 52.5	+2.4
PUK				AML	AML	03 08 57.5	
	0.3nm,0.7s						
BCI	Bajram Curri	2.02	345	Pn	Pb	03 08 31.4	+0.4
BCI				Sn	Sg	03 08 60.0	+1.4
BCI				AML	AML	03 09 05.3	
	0.2nm,0.8s						
BCI	Bajram Curri	2.02	345	Pn	Pg	03 08 31.7	-0.8
BARS	Barje	2.52	18	*e*Pn	Pn	03 08 36.6	+1.0
SELS	Selova	2.81	5	*e*Pn	Pb	03 08 43.0	-1.6
SJES	Sjenica	2.90	348	*e*Pn	Pb	03 08 43.6	-2.6

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*NIED **06** 03:13:57.1,39°.50N×143°.63E,h27^{km},MW4.2,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.70; $M_{\theta\theta}$-0.33; $M_{\phi\phi}$-1.37; $M_{r\theta}$0.52; $M_{\theta\phi}$-0.64; $M_{\phi r}$1.26; Fault plane solution: $M_0$2.16000×10^{15} NP1: ϕ_s207.00000°,δ26.00000°,λ93.00000°. NP2:ϕ_s24.00000°, δ64.00000°,λ88.00000°.*
*JMA **06** 03:13:57.1±0.2,39°.5N±0°.8×14°4E±°,h27^{km},MD4.5/27, MV4.4/27,FAR E OFF SANRIKU*
*IDC **06** 03:13:57.4±0.8,39°.49N×143°.36E,h0^{km},mb4.2/17, mbtmp4.2/23,ML3.5/6,MS3.5/26,Error ellipse: s-maj=19.9km s-min=16.1km az=115.0*
*MOS **06** 03:13:58.9±0.8,39°.50N×143°.49E,h25^{km},mb4.7/22,Error ellipse: s-maj=9.2km s-min=5.4km az=95.3*
*NEIC **06** 03:14:02.1±1.2,39°.46N±0°.07×143°.3E±0°.1,h26^{km}±7^{km}, mb4.6/23,Error ellipse: s-maj=14.7km s-min=8.8km az=119.0*

ISC 06 03:14:03.4±0.8**,39°.56N**±0°.06×**143°.42E**±0°.05**,h46**^{km}±5^{km}**, n154,**σ**1^{s}.90**/141**,mb4.5**/45**,MS3.7**/24**,12C-6D,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.23	271	*i* P	Pn	03 14 21.5	-2.8
MIYJ				S	Sn	03 14 38.6	-1.2
JTH	Tanohata	1.25	288	P	Pn	03 14 22.1	-2.5
JTH				S	Sn	03 14 40.9	+0.6
JTH	Tanohata	1.25	288	A	A	03 14 22.1	
	comp=N,8.0nm,1.2s,comp=E,6.0nm,0.7s						
OFUJ	Ofunato	1.44	251	*i* P	Pn	03 14 24.0	-3.1
OFUJ				*e*S	Sn	03 14 43.6	-1.2
OFUJ	Ofunato	1.44	251	A	A	03 14 24.0	
	comp=N,4.0nm,2.3s,comp=E,3.0nm,3.6s						
JKEN	Kujiedanarisaw	1.46	297	P	Pn	03 14 24.4	-3.0
JKEN	Kujiedanarisaw	1.46	297	A	A	03 14 24.4	
	comp=N,7.0nm,0.7s,comp=E,8.0nm,0.5s						
JOM	Ohasama	1.65	268	*e*P	Pn	03 14 27.8	-2.1
JOM				*e*S	Sn	03 14 50.8	+1.0
JOM	Ohasama	1.65	268	A	A	03 14 27.8	
	comp=N,8.0nm,0.6s,comp=E,7.0nm,0.4s						
JANG	Nango	1.67	300	*e*P	Pn	03 14 27.5	-2.7
JMK	Ichinoseki	1.81	251	P	Pn	03 14 29.6	-2.6
JSZI	Iwateshizukuis	1.91	276	A	A	03 14 31.3	
	comp=N,11nm,1.3s,comp=E,15nm,3.2s						
JRG	Rokugo	2.16	267	A	A	03 14 34.8	
	comp=N,6.0nm,1.0s,comp=E,6.0nm,1.0s						
JOFO	Osakifurukawao	2.17	245	A	A	03 14 34.5	
	comp=N,20nm,1.5s,comp=E,22nm,0.8s						
JTM	Tenmabayashi	2.18	305		Pn	03 14 35.1	-2.0
ERM	Erimo	2.46	355		Pn	03 14 40.2	-0.8
ERM	Erimo	2.46	355	*d i*P	Pn	03 14 40.0	-1.0
JYK	Kaneyama	2.46	256	*e*P	Pn	03 14 39.1	-2.0
JYW	Yuwa	2.48	271	A	A	03 14 39.5	
	comp=N,12nm,2.6s,comp=E,12nm,2.3s						

JHHS	Hirosakihyakuz	2.59	296	A	A	03 14 41.0	
	comp=N,7.0nm,2.1s,comp=E,6.0nm,1.7s						
JNTW	Noshirotokiwa	2.60	287	A	A	03 14 41.3	
	comp=N,15nm,1.8s,comp=E,10.0nm,6.5s						
JMM	Marumori	2.66	231		Pn	03 14 40.1	-3.7
JYYZ	Yamagatayuza	2.76	260	A	A	03 14 43.2	
	comp=N,6.0nm,1.4s,comp=E,8.0nm,2.4s						
JNBK	Urakawa-nobuka	2.76	350	eP	Pn	03 14 44.3	-0.9
JYA	Atsumi	3.04	253	A	A	03 14 47.1	
	comp=N,5.0nm,1.2s,comp=E,3.0nm,0.9s						
JCH	Churui	3.05	359	eP	Pn	03 14 47.7	-1.4
JCH				eS	Sn	03 15 23.3	-1.1
JOTO	OTAMA OYAMA	3.14	231	eP	Pn	03 14 47.9	-2.5
NMR	Nemuro--Hokkai	4.18	24	eP	Pn	03 15 02.1	-2.5
NMR				i S	Sn	03 15 48.5	-3.7
GLVR	Golovnino	4.46	20	eP	Pn	03 15 07.5	-1.0
GLVR				i S	Sn	03 15 56.8	-2.3
GLVR				pmax	pmax		
	comp=Z,56nm,0.1s						
GLVR				smax	smax		
	comp=E,291nm,0.2s						
GLVR				smax	smax		
	comp=N,500nm,0.3s						
JKA	Kamikawa-asahi	4.59	353		Pn	03 15 09.6	-0.7
ASAJ	Asahikawa	4.59	353	Pn	Pn	03 15 09.8	-0.5
	comp=N,1.7nm,0.3s,baz=209,slow=14,SNR=20						
ASAJ				Sn	Sn	03 16 09.0	+6.6
	comp=N,2.6nm,0.3s,baz=82,slow=33,SNR=3.8						
	comp=N,14nm,0.6s						
RUSJ	Misakicho	4.74	16	eP	Pn	03 15 11.5	-0.8
RUSJ				i S	Sn	03 16 05.1	-0.9
YUK	Yuzh-Kuril'sk	4.83	21	eP	Pn	03 15 11.6	-1.9
YUK				i S	Sn	03 16 04.6	-3.5
YUK				pmax	pmax		
	comp=N,92nm,0.2s						
YUK				pmax	pmax		
	comp=Z,266nm,0.2s						
YUK				pmax	pmax		
	comp=E,126nm,0.1s						
YUK				smax	smax		
	comp=N,298nm,0.4s						
YUK				smax	smax		
	comp=E,689nm,0.6s						
SHO	Shikotan	5.00	30	eP	Pn	03 15 13.6	-2.3
SHO				i S	Sn	03 16 07.9	-4.6
SHO				pmax	pmax		
	comp=Z,23nm,0.5s						
SHO				pmax	pmax		
	comp=N,17nm,0.4s						
SHO				pmax	pmax		
	comp=E,20nm,0.4s						
SHO				smax	smax		
	comp=E,140nm,0.4s						
SHO				smax	smax		
	comp=N,142nm,0.3s						
MJAR	Matsushiro Arr	5.10	235	Pn	Pn	03 15 15.5	-1.8
	comp=N,1.4nm,0.3s,baz=39,slow=12,SNR=213						
MJAR				LR	LR	03 17 26.1	
	comp=N,327nm,19.3s,baz=131,slow=42						
	comp=N,44nm,0.7s						
MAJO	Matsushiro	5.10	235		Pn	03 15 15.9	-1.4
MAJO	Matsushiro	5.10	235	P	Pn	03 15 15.9	-1.4
MJB9	Matsu-Tunnel	5.10	235		Pn	03 15 15.5	-1.8
JGF	Kuroka	6.23	232		Pn	03 15 30.5	-2.3
KUR	Kuril'sk	6.55	29	eP	Pn	03 15 38.3	+1.1
KUR				i S	Sn	03 16 47.6	-3.0
KUR				pmax	pmax		
	comp=Z,52nm,0.6s						
KUR				smax	smax		
	comp=N,80nm,0.5s						
KUR				smax	smax		
	comp=E,124nm,0.5s						
INU	Inuyama	6.60	232		Pn	03 15 35.3	-2.6
YSS	Yuzhno-Sakhali	7.41	356	eP	Pn	03 15 49.5	+0.7
YSS				eS	Sn	03 17 07.8	-3.6
YSS				pmax	pmax		
	comp=Z,20nm,0.4s						
TEY	Ternei	7.44	320	eP	Pn	03 15 50.4	+1.0
JMN	Monobe	9.62	236		Pn	03 16 16.6	-2.7
USRK	Ussuriysk Ar.	9.70	302		Pn	03 16 22.0	+1.7
USRK	Ussuriysk Ar.	9.70	302	Pn	Pn	03 16 19.9	-0.4
	comp=Z,0.8nm,0.3s,baz=96,slow=13,SNR=17						
USRK				LR	LR	03 19 54.9	
	comp=Z,251nm,20.2s,baz=135,slow=37						
	comp=Z,7.1nm,0.6s						
USRK	Ussuriysk Ar.	9.70	302	P	Pn	03 16 22.0	+1.7
JNU	Nakatsue	11.97	241	Pn	Pn	03 16 48.9	-2.6
	comp=Z,0.3nm,0.3s,baz=49,slow=6.6,SNR=4.9						
JNU				LR	LR	03 21 44.1	
	comp=Z,260nm,20.5s,baz=42,slow=39						
	comp=Z,3.5nm,0.6s						
KSRS	Korea Array	12.32	265	Pn	Pn	03 16 54.6	-1.5
	comp=Z,0.2nm,0.3s,baz=87,slow=12,SNR=13						
KSRS				LR	LR	03 21 19.9	
	comp=Z,183nm,18.6s,baz=75,slow=36						
	comp=Z,2.3nm,0.7s						
KSRS	Korea Array	12.32	265	eP	Pn	03 16 58.1	+2.0
KLR	Kul'dur	12.75	323	Pn	Pn	03 16 59.1	-2.9
	comp=Z,0.2nm,0.3s,baz=125,slow=10,SNR=4.4						
KLR				LR	LR	03 22 06.2	
	comp=Z,175nm,19.4s,baz=124,slow=38						
	comp=Z,0.9nm,0.4s						
KLR	Kul'dur	12.75	323	ceP	Pn	03 16 59.2	-2.8
KLR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BNX	BinXian	13.30	303	⇓P	Pn	03 17 08.8	-0.6
BNX				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PEA0B	Petropavlovsk-	16.71	31	⇑eP	P	03 17 58.5	+2.6
PETK	Petropavlovsk-	16.71	31	LR	LR	03 25 31.9	
	comp=Z,54nm,18.2s,baz=212,slow=41						
ZEA	Zeya	17.94	328	eP	Pn	03 18 07.9	-1.4
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ZEA				MLR	MLR		
	comp=Z,100nm,15.0s						
MA2	Magadan	20.57	11	P	P	03 18 37.8	-0.3
	comp=Z,4.3nm,0.3s,baz=170,slow=6.9,SNR=4.1						
	comp=Z,4.3nm,0.3s						
XLT	XiLinHaoTe	20.82	291	eP	P	03 18 38.2	-2.8
XLT				pP	pP	03 18 51.0	-0.5
XLT				pmax	pmax		
	comp=Z,15nm,1.0s						
YAK	Yakutsk	24.01	344	LR	LR	03 29 18.5	
	comp=Z,51nm,21.9s,baz=210,slow=38						
YAK	Yakutsk	24.01	344	eP	P	03 19 12.5	-1.1
YAK				pmax	pmax		
	comp=Z,13nm,0.9s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
SEY	Seymchan	24.02	10	⇓eP	P	03 19 15.1	+1.4
SEY				pmax	pmax		
	comp=Z,12nm,1.3s						
LYN	LuoYang	25.13	268	P	P	03 19 24.2	+0.1
LYN				pmax	pmax		
	comp=Z,26nm,1.0s						
LYN				pmax	pmax		
	comp=Z,150nm,6.6s						
LYN				LR	LR		
	comp=N,260nm,14.1s						
LYN				LR	LR		
	comp=E,390nm,15.1s						
LYN				LR	LR		
	comp=Z,550nm,14.1s						
BTO	Baotou	25.49	283	eP	P	03 19 28.4	+1.0
BTO				pP	sP	03 19 42.8	-1.4
BTO				sP	pP	03 19 50.2	+11
BTO				PP	PnPn	03 20 08.6	+4.2
BTO				S	S	03 23 48.9	-2.7
BTO				sS	sS	03 24 11.9	+1.5
BTO				SS	SnSn	03 24 52.1	+4.7
BTO				pmax	pmax		
	comp=Z,19nm,0.7s						
BTO				pmax	pmax		
	comp=Z,120nm,9.0s						
BTO				LR	LR		
	comp=N,170nm,13.6s						
BTO				LR	LR		
	comp=E,490nm,17.8s						
BTO				LR	LR		
	comp=Z,550nm,17.0s						
ULN	Ulaanbaatar	27.36	300		P	03 19 44.4	+0.1
ULN	Ulaanbaatar	27.36	300	ceP	P	03 19 44.3	+0.1
ULN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SONM	Songino Array	27.80	300		P	03 19 47.4	-0.7
SONM	Songino Array	27.80	300	P	P	03 19 48.6	+0.4
	comp=Z,3.7nm,0.8s,baz=98,slow=9.1,SNR=16						
	comp=Z,3.7nm,0.8s						
H11N2	WAKE ISLAND Hy	28.26	128	T	T	03 49 23.5	
	baz=318,slow=75,SNR=86						
H11N1	WAKE ISLAND Hy	28.27	128	T	T	03 49 23.5	
	baz=318,slow=75,SNR=69						
H11N3	WAKE ISLAND Hy	28.28	128	T	T	03 49 22.4	
	baz=318,slow=75,SNR=73						
H11S1	WAKE ISLAND Hy	29.08	129	T	T	03 50 22.0	
	baz=312,slow=74,SNR=9.4						
H11S3	WAKE ISLAND Hy	29.08	130	T	T	03 50 25.7	
	baz=312,SNR=7.5						
H11S2	WAKE ISLAND Hy	29.09	129	T	T	03 50 28.7	
	baz=312,slow=74,SNR=8.7						
ZAK	Zakamensk	30.04	304	eP	P	03 20 07.6	-0.4
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
BILL	Bilibino	31.16	16	ceP	P	03 20 18.2	+0.6
BILL				pmax	pmax		
	comp=Z,3.0nm,1.7s						
TIXI	Tiksi	33.00	352	LR	LR	03 35 29.1	
	comp=Z,46nm,18.0s,baz=196,slow=39						
GTA	Gaotai	33.41	284	eP	P	03 20 38.4	+0.7
GTA				pP	pP	03 20 49.4	+0.1
GTA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GTA				LR	LR		
	comp=N,140nm,14.9s						
GTA				LR	LR		
	comp=E,250nm,16.4s						
GTA				LR	LR		
	comp=Z,330nm,16.7s						
GOMU	GeErMu	38.14	281	P	P	03 21 17.6	-1.0
GOMU				pP	pP	03 21 23.0	-7.3
GOMU				sP	pwP	03 21 26.4	-6.5
GOMU				pmax	pmax		
	comp=Z,20nm,0.8s						
ZALV	Zalesovo Beam	41.43	310	P	P	03 21 46.1	+0.9
	comp=Z,4.4nm,0.4s,baz=86,slow=6.7,SNR=3.9						
ZALV				LR	LR	03 39 44.0	
	comp=Z,50nm,19.8s,baz=72,slow=37						
	comp=Z,4.4nm,0.4s						
NRIK	Noril'sk	41.67	334	LR	LR	03 40 42.6	
	comp=Z,77nm,19.3s,baz=111,slow=38						
H19K	Roundabout Mou	42.52	32	P	P	03 21 56.1	+2.2
CMAR	Chiang Mai Arr	43.68	254	P	P	03 22 03.2	-0.7
	comp=Z,0.9nm,0.3s,baz=52,slow=6.1,SNR=5.2						
CMAR				LR	LR	03 42 09.4	
	comp=Z,36nm,18.6s,baz=205,slow=39						
	comp=Z,0.9nm,0.3s						
CMAR	Chiang Mai Arr	43.68	254	eP	P	03 22 04.5	+0.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MK31	Makanchi Array	44.16	300	c iP	P	03 22 07.5	0.0
MKAR	Makanchi Array	44.16	300		P	03 22 07.4	-0.1
MKAR	Makanchi Array	44.16	300	P	P	03 22 07.7	+0.2
	comp=Z,3.8nm,0.6s,baz=86,slow=9.4,SNR=29						
MKAR				LR	LR	03 41 25.4	
	comp=Z,109nm,18.1s,baz=62,slow=37						
	comp=Z,3.8nm,0.6s						
MAKZ	Makanchi	44.37	300		P	03 22 09.0	-0.1
MAKZ				IAmb	IAmb	03 22 10.4	
	comp=Z,4.6nm,0.7s						
MAKZ	Makanchi	44.37	300	P	P	03 22 09.0	-0.1
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KTH	Kantishna Hill	44.78	35	P	P	03 22 14.8	+2.6
KURK	Kurchatov	45.66	306		P	03 22 18.9	-0.4
KURK				IAmb	IAmb	03 22 36.8	
	comp=Z,6.8nm,0.7s						
KURK	Kurchatov	45.66	306	c iP	P	03 22 19.4	+0.1
KURK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KURBB	Kurchatov Arra	45.73	306	P	P	03 22 20.0	+0.1
	comp=Z,8.0nm,0.6s,baz=80,slow=8.4,SNR=53						
	comp=Z,8.0nm,0.6s						
ILAR	Eielson Array	46.52	34	P	P	03 22 27.2	+1.3
	comp=Z,0.9nm,0.7s,baz=262,slow=7.1,SNR=15						
	comp=Z,0.9nm,0.7s						
EVN	Everest	47.76	274		P	03 22 36.2	-0.6
BOOM	Boomskoye usch	49.76	296		P	03 22 52.0	+0.5
BOOM				IAmb	IAmb	03 22 53.1	
	comp=Z,10nm,1.4s						
BOOM	Boomskoye usch	49.76	296	P	P	03 22 52.0	+0.5
BOOM				pmax	pmax		
	comp=Z,11nm,1.4s						
BVAR	Borovoye Array	50.07	311	P	P	03 22 53.9	+0.5
	comp=Z,4.5nm,0.6s,baz=74,slow=8.0,SNR=22						
BVAR				LR	LR	03 45 54.5	
	comp=Z,48nm,18.3s,baz=79,slow=38						
	comp=Z,4.5nm,0.6s						
BRVK	Borovoye	50.12	311		P	03 22 54.0	+0.2
BRVK				IAmb	IAmb	03 22 55.4	
	comp=Z,3.8nm,0.8s						
BRVK	Borovoye	50.12	311	ceP	P	03 22 54.3	+0.5
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AAK	Ala-Archa	50.71	297	LR	LR	03 45 40.3	
	comp=Z,74nm,18.7s,baz=107,slow=38						
I30M	Mount Dempster	50.90	32	P	P	03 23 01.3	+1.7
HYT	Haines Junctio	51.34	38	P	P	03 23 05.5	+2.5
HYT				IAmb	IAmb	03 23 11.2	
	comp=Z,5.4nm,1.1s						
ARSB	Arslanbob	52.25	296	P	P	03 23 10.5	+0.4
ARSB				IAmb	IAmb	03 23 25.7	
	comp=Z,6.9nm,0.8s						
ARSB	Arslanbob	52.25	296	P	P	03 23 10.5	+0.4
ARSB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PSI	Prapat	54.44	239	LR	LR	03 48 15.5	
	comp=Z,95nm,18.0s,baz=104,slow=38						
NIL	Nilore	55.34	287	P	P	03 23 33.0	+0.3
NIL				IAmb	IAmb	03 23 34.8	
	comp=Z,5.1nm,0.8s						
NIL	Nilore	55.34	287	P	P	03 23 33.0	+0.3
NIL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ARTI	Arti	55.64	318		P	03 23 35.0	+0.6
ARTI	Arti	55.64	318	LR	LR	03 49 58.1	
	comp=Z,100nm,18.6s,baz=72,slow=39						
ARTI	Arti	55.64	318	c iP	P	03 23 35.0	+0.6
ARTI						03 24 37.0	
ARTI						03 25 34.2	
ARTI				S	S	03 31 14.5	-2.4
ARTI				SS	SS	03 34 57.3	-4.6
ARTI				pmax	pmax		
	comp=Z,13nm,0.8s						
ARTI				MLR	MLR		
	comp=Z,138nm,15.0s						
AB31	Akbulak array	57.53	310	P	P	03 23 48.4	+0.4
AB31				IAmb	IAmb	03 23 49.2	
	comp=Z,3.4nm,0.8s						
ABKAR	Akbulak array	57.53	310		P	03 23 48.1	+0.1
ABKAR	Akbulak array	57.53	310		P	03 23 48.0	0.0
ABKAR				IAmb	IAmb	03 23 49.2	
	comp=Z,3.4nm,0.8s						
KIRV	Kirov	59.19	323	ceP	P	03 23 59.8	+0.4
WRA	Warramunga Arr	59.80	190	P	P	03 24 03.0	-1.0
	comp=Z,0.4nm,0.5s,baz=6.7,slow=6.8,SNR=6.0						
	comp=Z,0.4nm,0.5s						
WRA	Warramunga Arr	59.80	190	eP	P	03 24 08.4	+4.4
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	ARCESS Array B	62.19	339	P	P	03 24 18.4	-1.2
	comp=Z,1.8nm,0.8s,baz=38,slow=6.1,SNR=5.1						
ARCES				LR	LR	03 54 00.9	
	comp=Z,34nm,20.5s,baz=37,slow=39						
	comp=Z,1.8nm,0.8s						
ARCES	ARCESS Array B	62.19	339	eP	P	03 24 21.0	+1.4
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KLMR	Klimovskoe	62.47	328	eP	P	03 24 19.4	-2.2
KLMR				pmax	pmax		
	comp=Z,12nm,1.5s						
BELG	Belogornoye	63.03	317	LR	LR	03 54 16.7	
	comp=Z,51nm,18.1s,baz=43,slow=38						
BELG	Belogornoye	63.03	317	deP	P	03 24 25.9	+0.4
ASAR	Alice Springs	63.52	190	P	P	03 24 28.9	-0.2
	comp=Z,0.6nm,0.8s,baz=19,slow=8.9,SNR=3.3						
	comp=Z,0.6nm,0.8s						
OBN	Obninsk	67.02	323	⇓eP	P	03 24 53.1	+1.8
OBN						03 25 21.0	
OBN						03 27 18.0	
OBN				e*SS	sS	03 34 04.0	+1.6
OBN				pmax	pmax		
	comp=Z,4.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,79nm,15.0s						
FINES	FINESS Array B	67.31	332	P	P	03 24 53.8	+0.7
	comp=Z,2.3nm,0.6s,baz=46,slow=8.0,SNR=14						
FINES				LR	LR	03 57 20.6	
	comp=Z,76nm,18.1s,baz=45,slow=39						
	comp=Z,2.3nm,0.6s						
KIV	Kislovodsk	70.44	311		P	03 25 13.8	+0.9
KIV	Kislovodsk	70.44	311	eP	P	03 25 14.2	+1.2
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KIV				pmax	pmax		
	comp=Z,39nm,17.0s						
KBZ	Khabaz	70.45	311	P	P	03 25 14.0	+1.1
	comp=Z,3.3nm,0.8s,baz=340,slow=3.8,SNR=7.0						
	comp=Z,3.3nm,0.8s						
KBZ	Khabaz	70.45	311	deP	P	03 25 14.3	+1.4
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NVAR	Mina Array Bea	72.23	55	P	P	03 25 27.1	+3.0
	comp=Z,0.5nm,0.8s,baz=303,slow=6.2,SNR=3.6						
	comp=Z,0.5nm,0.8s						
HFS	Hagfors	72.43	336	P	P	03 25 25.0	+0.5
	comp=Z,2.8nm,0.6s,baz=54,slow=7.5,SNR=19						
HFS				LR	LR	04 00 27.7	
	comp=Z,36nm,19.5s,baz=28,slow=38						
	comp=Z,2.8nm,0.6s						
HFS	Hagfors	72.43	336	P	P	03 25 25.0	+0.5
NB2	NORSAR Subarra	72.46	338	P	P	03 25 25.3	+0.6
	comp=Z,1.9nm,0.6s,baz=36,slow=6.2						
NB2	NORSAR Subarra	72.46	338	P	P	03 25 25.6	+0.8
NOA	NORSAR Array B	72.46	338	P	P	03 25 25.4	+0.6
	comp=Z,1.9nm,0.7s,baz=37,slow=6.0,SNR=13						
NOA				LR	LR	04 02 59.3	
	comp=Z,29nm,18.1s,baz=35,slow=41						
	comp=Z,1.9nm,0.7s						
AKASG	Malin Array Be	73.25	323	P	P	03 25 29.9	+0.3
	comp=Z,1.0nm,0.5s,baz=44,slow=6.5,SNR=11						
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	73.25	323	i P	P	03 25 29.8	+0.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKBB	Malin Array Si	73.25	323	⇑eP	P	03 25 30.1	+0.5
MARD	Mardin	75.64	307	P	P	03 25 45.1	+1.2
MARD				IAmb	IAmb	03 25 46.1	
	comp=Z,5.4nm,0.8s						
ARPR	Arapgir-MALATY	76.00	309	P	P	03 25 46.9	+1.0
ARPR				IAmb	IAmb	03 25 49.0	
	comp=Z,9.8nm,1.0s						
PFO	Pinyon Flats O	76.34	58	⇑eP	P	03 25 53.9	+6.0
ILGA	Ilgaz	77.41	313		P	03 25 54.5	+0.6
BNN	Bunyan	77.64	310	P	P	03 25 56.6	+1.5
BNN				IAmb	IAmb	03 25 57.4	
	comp=Z,6.4nm,0.8s						
STHS	Stebnicka Huta	77.78	326	ePP	PP	03 28 49.7	-1.2
PV10	Paradox Valley	77.93	50	P	P	03 25 59.1	+2.1
PV10				IAmb	IAmb	03 26 00.8	
	comp=Z,7.5nm,1.0s						
MLR	Muntele Rosu	78.46	320	LR	LR	04 01 22.8	
	comp=Z,24nm,19.8s,baz=63,slow=36						
ANTO	Ankara	78.73	313	P	P	03 26 00.9	-0.2
ANTO	Ankara	78.73	313	P	P	03 26 00.9	-0.2
ANTO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VRAC	Vranov	79.84	328	LR	LR	04 04 59.7	
	comp=Z,31nm,18.4s,baz=38,slow=38						
MODS	Modra-Piesok	80.28	327	eP	P	03 26 02.5	-6.8
MODS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MODS	Modra-Piesok	80.28	327	eP	P	03 26 02.5	-6.8
MODS				ePP	PP	03 29 08.8	-2.8
KHC	Kasperske Hory	81.20	329	ceP	P	03 26 14.9	+0.7
KHC				pmax	pmax		
	comp=Z,8.0nm,1.7s						
GERES	GERESS Array B	81.38	329	LR	LR	04 07 02.1	
	comp=Z,34nm,18.1s,baz=74,slow=39						
DAVOX	Davos/Dischmat	84.56	330	LR	LR	04 07 57.0	
	comp=Z,48nm,18.3s,baz=83,slow=38						
ESDC	Sonseca Array	95.69	335	LR	LR	04 16 15.2	
	comp=Z,40nm,18.7s,baz=18,slow=39						

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*ISK **06** 03:24:11.9, 39°.26N×25°.51E, h9^{km}, ML3.6/29*
*AFAD **06** 03:24:12.4, 39°.24N×25°.53E, h7^{km}±2^{km}, MW3.5*
*ATH **06** 03:24:13.1, 39°.25N×25°.56E, h17^{km}±1^{km}, ML3.1/32, Manual Solution by N.Liadopoulou First location: 2019/06/06 03:25:17, This location: 2019/06/06 08:37:30 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*BEO **06** 03:24:13.2±0.8, 39°.12N×25°.19E, h0^{km}, ML3.0/7*
*THE **06** 03:24:13.4, 39°N±2°×2°6E±°, h15^{km}±3^{km}, M3.1/20, MLh3.1/20*
ISC 06 03:24:12.9±0.9**, 39°.24N**±0°.02×**25°.53E**±0°.02**, h16**^{km}±6^{km}**,**
n149, σ**0ˢ.83**/193**, 7C-11D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SIGR	SIGRI	0.26	95	Pg	Pg	03 24 18.5	0.0
SIGR				Sg	Sg	03 24 22.4	+0.1
SIGR	SIGRI	0.26	95	P	Pg	03 24 18.5	0.0
SIGR				S	Sg	03 24 21.9	-0.4
SIGR	SIGRI	0.26	95	P	Pg	03 24 18.5	0.0
SIGR				S	Sg	03 24 22.0	-0.2
EFSA	Agios Efstrati	0.52	306	P	Pg	03 24 23.4	+0.2
EFSA				S	Sb	03 24 30.8	-0.1
GPNR	Gulpinar-Canak	0.52	65	Pg	Pg	03 24 23.1	-0.1
KOCA	Canakkale, Ayv	0.54	60	P	Pg	03 24 23.4	-0.3
KOCA				S	Sg	03 24 31.0	+0.1
PRK	Paraskevi	0.58	89	P	Pg	03 24 24.3	0.0
PRK				S	Sb	03 24 32.3	-0.3
BOZC	Bozcaada	0.73	34	Pg	Pg	03 24 26.1	-1.0
BOZC	Bozcaada	0.73	34	P	Pg	03 24 26.2	-0.9
BOZC				P	Pg	03 24 26.3	-0.9
BOZC				S	Sb	03 24 37.0	+0.1
BOZC				S	Sb	03 24 37.1	+0.1
EAG2	Marmaro, Chios	0.82	147	P	Pb	03 24 28.9	0.0
EAG2				S	Sg	03 24 40.0	+0.2
EZNE	Ezine-Canakkal	0.83	51	Pg	Pb	03 24 28.3	-0.6
EZNE				Sg	Sb	03 24 39.8	-0.1
SKY	Skiros Island	0.84	245	P	Pg	03 24 29.5	+0.2
SKY				S	Sn	03 24 42.7	+0.5
SKY	Skiros Island	0.84	245	P	Pg	03 24 29.5	+0.2
SKY				S	Sn	03 24 41.5	-0.7
EZN	Ezine	0.85	46	Pg	Pb	03 24 28.5	-0.8
EZN				Sg	Sg	03 24 41.2	+0.5
EZN	Ezine	0.85	46	P	Pb	03 24 28.5	-0.8
EZN				S	Sg	03 24 40.9	+0.2
EZN	Ezine	0.85	46	⇑P	Pb	03 24 29.0	-0.3
EZN				⇓S	Sn	03 24 41.9	-0.5
KARB	zmir-Karabur	0.90	129	P	Pb	03 24 30.0	-0.1
AYVA	Ayvalik	0.90	85	P	Pb	03 24 30.1	-0.1
AYVA				S	Sg	03 24 42.8	+0.5
BAYC	CANAKKALE_Bayr	0.94	57	P	Pb	03 24 29.9	-0.9
BAYC				S	Sb	03 24 42.9	-0.1
CHOS	Chios island	0.94	154	Pg	Pg	03 24 31.2	0.0
CHOS				Sg	Sn	03 24 44.6	-0.1
CHOS	Chios island	0.94	154	P	Pg	03 24 31.3	+0.2
CHOS	Chios island	0.94	154	P	Pg	03 24 31.4	+0.2
ECEA	Canakkale, Ece	0.95	31	P	Pb	03 24 30.5	-0.5
ECEA				S	Sn	03 24 44.6	-0.2
GOAD	anakkale-G¶	0.97	18	P	Pb	03 24 30.5	-0.9
GOAD				S	Sg	03 24 44.7	+0.3
GADA	Gvkgeada	1.00	17	Pg	Pb	03 24 31.0	-0.8
GADA				Sg	Sg	03 24 45.4	+0.2
CAND	Candarli	1.03	105	Pg	Pn	03 24 32.6	-0.1
CNKL	anakkale-Mer	1.06	38	P	Pb	03 24 32.5	-0.4
CNKL				S	Sg	03 24 47.0	-0.3
CNKL				S	Sg	03 24 47.1	-0.3
DKL	Dikili	1.08	98	Pn	Pn	03 24 33.4	0.0
DKL	Dikili	1.08	98	P	Pg	03 24 33.9	0.0
CESE	eme	1.09	146	Pn	Pn	03 24 33.6	+0.2
IZMD	zmir-Dikili-	1.12	103	P	Pn	03 24 34.0	+0.1
IZMD				P	Pg	03 24 35.0	+0.5
COMU	Canakkale	1.13	40	Pn	Pb	03 24 33.8	-0.3
COMU				Sn	Sg	03 24 49.8	+0.3
URLA	Izmir	1.21	136	P	Pn	03 24 35.0	-0.1
URLA				S	Sg	03 24 52.3	+0.4
BUHA	Balikesir, Bur	1.23	77	P	Pn	03 24 35.3	-0.1

SMTH	Samothraki Isl	1.23	0	P	Pn	03 24 35.2	-0.3
SMTH				S	Sn	03 24 51.8	-0.1
SMTH	Samothraki Isl	1.23	0	P	Pn	03 24 35.0	-0.5
ZEDA	zmir-Bergama	1.23	102	P	Pn	03 24 35.6	+0.1
ZEYE	Izmir, Urla-Ze	1.25	142	P	Pn	03 24 35.5	-0.3
KYMI	Kymi, Euboea I	1.27	242	P	Pn	03 24 35.8	-0.2
KYMI				S	Sg	03 24 54.2	+0.4
KYMI	Kymi, Euboea I	1.27	242	P	Pn	03 24 35.6	-0.4
AOS	Alonnisos	1.28	268	P	Pb	03 24 36.7	+0.1
AOS				S	Sg	03 24 54.9	+0.5
GELI	Tayfur-Gelibol	1.37	32	Pn	Pn	03 24 37.4	0.0
GELI				Sn	Sb	03 24 55.8	+0.4
CANM	Can-anakkale	1.41	56	Pn	Pn	03 24 37.8	-0.1
ENZZ	Sultanice-Enez	1.45	19	Pn	Pn	03 24 38.5	+0.1
BLCB	Balcova	1.46	125	Pn	Pn	03 24 38.9	+0.4
KARY	Karystos	1.48	216	P	Pn	03 24 38.5	-0.3
KARY	Karystos	1.48	216	P	Pn	03 24 38.2	-0.6
LPK	Lapseki	1.48	39	Pn	Pn	03 24 38.9	0.0
LPK				Sn	Sb	03 24 58.9	+0.3
YENI	Yenice-Canakka	1.50	62	Pn	Pn	03 24 39.3	+0.2
THAS	Thassos island	1.50	336	P	Pn	03 24 38.8	-0.4
THAS				S	Sn	03 24 58.8	+0.3
THAS	Thassos island	1.50	336	P	Pn	03 24 38.7	-0.5
CAVK	Edirne/Enez-Ca	1.54	18	⇓P	Pb	03 24 40.9	-0.1
SOMA	Soma-Manisa	1.56	92	Pn	Pn	03 24 40.5	+0.5
ENEZ	Enez	1.57	18	Pn	Pn	03 24 40.3	+0.1
OUR	Ouranopolis	1.62	313	Pn	Pn	03 24 41.3	+0.5
OUR	Ouranopolis	1.62	313	P	Pn	03 24 41.0	+0.2
OUR	Ouranopolis	1.62	313	P	Pn	03 24 41.0	+0.2
ERIK	Erikli-Kesan	1.62	28	Pn	Pn	03 24 40.8	0.0
ALEX	Alexandroupoli	1.64	10	P	Pn	03 24 40.4	-0.7
BALY	Balya	1.69	72	P	Pn	03 24 41.9	0.0
DION	Dionisos Attik	1.70	228	P	Pn	03 24 41.9	-0.1
STEP	BALIKESIR_Sava	1.71	85	P	Pb	03 24 43.5	-0.4
STEP				S	Sg	03 25 07.8	0.0
ALN	Alexandroupoli	1.71	13	Pn	Pn	03 24 41.9	-0.1
ALN	Alexandroupoli	1.71	13	P	Pn	03 24 41.8	-0.1
ALN				S	Sn	03 25 04.0	+0.5
TNSA	Tinos	1.72	190	P	Pn	03 24 41.5	-0.7
PTL	Penteli	1.76	228	P	Pn	03 24 42.6	-0.2
PTL	Penteli	1.76	228	P	Pn	03 24 42.6	-0.2
KRBG	Karabiga-Canak	1.79	49	Pn	Pn	03 24 43.5	+0.4
KRBG				Sn	Sb	03 25 06.5	-0.9
NEO	Neokhori	1.79	273	P	Pn	03 24 43.5	+0.3
XANC	Avdira	1.80	346	P	Pn	03 24 43.1	-0.1
GONE	Gonen-Balikesi	1.85	63	Pn	Pn	03 24 44.5	+0.5
ATHU	Athens Univers	1.86	228	P	Pn	03 24 43.8	-0.3
ATH	Athens Observa	1.90	229	P	Pn	03 24 44.5	-0.2
RDO	Rodhopi	1.91	0	Pn	Pn	03 24 44.9	+0.1
RDO	Rodhopi	1.91	0	P	Pn	03 24 45.0	+0.1
RDO	Rodhopi	1.91	0	P	Pn	03 24 44.9	+0.1
KVLA	Kavala	1.91	333	P	Pn	03 24 44.8	0.0
KAVA	Kavala	1.92	336	P	Pn	03 24 45.0	+0.1
KAVA	Kavala	1.92	336	P	Pn	03 24 44.9	-0.1
RKY	Sarkoy-Tekirda	1.93	41	Pn	Pn	03 24 45.3	+0.2
PLG	Polygyros	1.97	306	P	Pn	03 24 45.9	+0.2
PLG	Polygyros	1.97	306	P	Pn	03 24 45.8	+0.2
KOKK	Kokkinochori,	1.97	324	P	Pn	03 24 45.7	0.0
KOKK	Kokkinochori,	1.97	324	P	Pn	03 24 45.8	+0.2
VIL2	Platees	2.04	241	P	Pn	03 24 46.5	-0.1
LKR	Lokris	2.06	254	P	Pn	03 24 47.1	+0.3
UKOP	Uzunkopru-Edir	2.07	24	Pn	Pn	03 24 47.7	+0.7
GORD	Gordes-Manisa	2.09	98	Pn	Pn	03 24 48.4	+1.1
EDC	Edincik	2.11	58	Pn	Pn	03 24 48.2	+0.6
APE	Apeiranthos	2.16	180	Pn	Pn	03 24 47.4	-0.9
APE	Apeiranthos	2.16	180	P	Pn	03 24 47.5	-0.9
APE	Apeiranthos	2.16	180	⇓P	Pb	03 24 50.8	-0.9
APE	Apeiranthos	2.16	180	P	Pn	03 24 47.2	-1.1
ODEM	Odemis-Izmir	2.21	115	Pn	Pn	03 24 49.8	+0.8
AYDB	Zeytinkoy-Aydi	2.25	124	Pn	Pn	03 24 50.2	+0.6
AXAR	Agios Charalam	2.29	259	P	Pn	03 24 50.5	+0.5
SOH	Sokhos	2.30	314	P	Pn	03 24 50.9	+0.6
HORT	Hortiatis	2.31	307	P	Pn	03 24 51.0	+0.5
HORT	Hortiatis	2.31	307	P	Pn	03 24 50.9	+0.5
MET4	Agioi Theodoro	2.32	227	P	Pn	03 24 50.2	-0.2
LTK	Loutraki	2.34	240	P	Pn	03 24 51.1	+0.3
MET5	Makryloggos,Me	2.35	227	P	Pn	03 24 52.1	+1.3
LOUT	Loutraki	2.36	239	P	Pn	03 24 51.6	+0.7
MET6	Megalochori,Me	2.37	227	P	Pn	03 24 52.1	+1.0
SRS	Serrai	2.40	322	P	Pn	03 24 51.8	+0.3
SRS	Serrai	2.40	322	*e*Pn	Pn	03 24 51.8	+0.3
SRS				*e*Sn	Sb	03 25 23.4	-1.5
SRS	Serrai	2.40	322	P	Pn	03 24 51.9	+0.4
AGG	Agios Georgios	2.50	266	P	Pn	03 24 54.0	+1.1
LIT	Litokhoron	2.50	291	P	Pn	03 24 54.0	+1.0
TYRN	Tyrnavos	2.59	282	P	Pn	03 24 54.9	+0.7
MAKR	Makrakomi, Fth	2.65	266	P	Pn	03 24 56.9	+1.9
THL	Klokotos Trika	2.74	278	P	Pn	03 24 57.0	+0.8
KNT	Kendrikon	2.79	315	P	Pn	03 24 57.9	+1.1
GUR	Goura	2.81	244	P	Pn	03 24 57.9	+0.6
SERG	Sergoula	2.83	254	P	Pn	03 24 58.4	+0.8
ANX	Ano Chora	2.89	258	P	Pn	03 24 59.2	+0.9
KLV	Kalavryta, Ach	2.90	247	P	Pn	03 24 59.0	+0.5
EVR	Evrytania	2.91	265	P	Pn	03 25 00.7	+2.0
EFP	Efpalio	2.94	255	P	Pn	03 25 00.0	+1.0
VAY	Valandovo	3.08	314	*e*Pn	Pn	03 25 02.0	+1.2
VAY				*e*Sn	Sn	03 25 38.3	+1.0
VLI	Veliai	3.24	220	P	Pn	03 25 03.0	-0.1
KLYT	Kilyos	3.36	52	⇑P	Pn	03 25 06.0	+1.3
ITM	Ithomi	3.50	235	P	Pn	03 25 08.1	+1.4
FNA	Florina	3.54	297	*e*Pn	Pn	03 25 08.8	+1.5
FNA				*e*Sn	Sn	03 25 45.7	-3.2
KARP	Karpathos	3.90	160	P	Pn	03 25 12.3	+0.1
BOSS	Bosilegrad	3.99	326	*e*Pn	Pn	03 25 15.2	+1.7
BOSS				*e*Sn	Sn	03 26 03.0	+3.0
IGT	Igoumenitsa	4.04	276	*e*Pn	Pn	03 25 12.6	-1.5
IGT				*e*Sn	Sn	03 25 56.4	-4.6
BARS	Barje	4.55	323	*e*Pn	Pn	03 25 22.4	+1.3
BARS				*e*Sn	Sn	03 26 14.0	+0.4
ZAPS	Zavoj	4.59	333	*e*Pn	Pn	03 25 23.3	+1.7
ZAPS				*e*Sn	Sn	03 26 14.6	0.0
ICOR	Ion Corvin	5.17	18	⇓P	Pn	03 25 30.2	+0.7
SELS	Selova	5.19	322	*e*Pn	Pn	03 25 31.1	+1.3
ZAGS	Zajecar	5.20	333	*e*Pn	Pn	03 25 30.7	+0.7
ZAGS				*e*Sn	Sn	03 26 29.1	-0.5
TIRR	Tirgusor	5.64	21	⇓P	Pn	03 25 37.3	+1.2
SJES	Sjenica	5.80	316	*e*Pn	Pn	03 25 39.8	+1.4
GRUS	Gruza	5.88	324	*e*Pn	Pn	03 25 40.1	+0.7
KUBS	Kucevo	5.92	332	*e*Pn	Pn	03 25 39.9	0.0
HERR	Herculane	6.10	339	⇓P	Pn	03 25 42.9	+0.6
VOIR		6.21	357	⇑P	Pn	03 25 44.6	+0.6
MDVR	Moldovita	6.23	334	⇓P	Pn	03 25 44.5	+0.3
CFR	Carcaliu	6.25	17	⇑P	Pn	03 25 44.5	+0.1
MLR	Muntele Rosu	6.26	3	⇓P	Pn	03 25 46.5	+1.8
GZR	Gura Zlata	6.48	343	⇑P	Pn	03 25 48.3	+0.6
VRSS	Vrsac	6.66	333	*e*Pn	Pn	03 25 50.5	+0.4
PLOR	Plostina	6.66	7	⇓P	Pn	03 25 51.6	+1.4
PLOR	Plostina	6.66	7	P	Pn	03 25 51.5	+1.4
DOPR	Dopca	6.73	359	⇓P	Pn	03 25 52.4	+1.4
OZUR		6.86	2	⇓P	Pn	03 25 54.4	+1.6
SURR	Surduc	6.98	340	⇑P	Pn	03 25 56.4	+2.0
TESR	Tescani	7.32	6	⇑P	Pn	03 26 00.8	+1.7

KRSC 06 03:26:23.7±1.7**, 53.°97N**×**168.°17E, h16**^{km}±32^{km}**, Ml3.8,**
Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	Bering	1.78	315	*e*P	Pn	03 26 54.1	+0.3
MKZ	Mys Kozlova	3.82	281	*e*P	Pn	03 27 24.9	+3.1
SPN	Mys Shipunski	4.94	263	*e*P	Pn	03 27 40.9	+3.8
SPN				*e*S	Sn	03 28 39.3	+5.5
KII	Karymskiy	5.15	274	*e*P	Pn	03 27 45.1	+5.1
SDLR	Sedlovina	5.57	267	*e*P	Pn	03 27 50.0	+4.1
UGLR	Uglovaya	5.62	266	*e*P	Pn	03 27 50.4	+3.9
SMAR	Somma	5.62	267	*e*P	Pn	03 27 51.6	+4.8
KRER	Koryakskii	5.65	267	*e*P	Pn	03 27 51.8	+4.8
AVH	Avacha	5.66	267	*e*P	Pn	03 27 51.5	+4.4
KRX	Arik	5.70	268	*e*P	Pn	03 27 52.0	+4.4
KOK	Koryaka	5.71	267	*e*P	Pn	03 27 52.4	+4.5
RUS	Russkaya	6.00	259	*e*P	Pn	03 27 57.2	+5.4
GNL	Ganaly	6.07	272	*e*P	Pn	03 27 57.8	+5.1
MTVR	Mutnovka	6.18	260	*e*P	Pn	03 27 58.7	+4.4
GRL	Gorelyy	6.22	261	*e*P	Pn	03 27 59.9	+5.0
ASAK	Asacha	6.38	260	*e*P	Pn	03 28 01.7	+4.8

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*CATAC **06** 03:29:17.0±0.5, 13°N±3°×8°9W±°, h37^{km}±3^{km}, M3.2/18, MLv3.2/18, Error ellipse: s-maj=7.8km s-min=3.8km az=24.1, confirmed*
*SNET **06** 03:29:17.1±0.7, 13.°09N×89.°47W, h44^{km}±22^{km}, ML3.0*
*GCG **06** 03:29:17.6±0.5, 13.°15N×89.°50W, h52^{km}±7^{km}, MD3.8*
ISC 06 03:29:15.9±2.1**, 13.°0N**±0.°1×**89.°49W**±0.°06**, h48**^{km}±22^{km}**,**
n63, σ0^{s}92/67**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.52	18	*i* P	Pn	03 29 27.5	+0.2
LALI				*i* S	Sn	03 29 35.2	-0.1
LALI	Alcalda de L	0.52	18	P	Pn	03 29 27.7	+0.5
JAYA	Jayaque - finc	0.66	3	*e*P	Pn	03 29 29.1	-0.1
JAYA	Jayaque - finc	0.66	3	*e*P	Pn	03 29 29.1	-0.1
JAYA				*i* S	Sn	03 29 38.1	-0.6
JAYA	Jayaque - finc	0.66	3	P	Pn	03 29 29.1	-0.1
PANCS	Alcalda de	0.68	26	P	Pn	03 29 38.8	+9.4
LOMA	Loma Larga	0.72	25	*e*P	Pn	03 29 30.1	+0.1
LOMA	Loma Larga	0.72	25	P	Pn	03 29 29.9	-0.1
LOMA	Loma Larga	0.72	25	S	Sn	03 29 40.6	+0.5
PMON	Piamonte	0.73	13	*i* P	Pn	03 29 30.1	-0.1
PMON	Piamonte	0.73	13	P	Pn	03 29 30.3	+0.2
PMON	Piamonte	0.73	13	S	Sn	03 29 41.0	+0.6
UTEC	Universidad Te	0.76	22	P	Pn	03 29 30.4	0.0
UTEC	Universidad Te	0.76	22	S	Sn	03 29 40.8	-0.1
UEES	Universidad Ev	0.76	19	P	Pn	03 29 30.9	+0.5
UEES	Universidad Ev	0.76	19	S	Sn	03 29 40.8	-0.2
BOQS	Boqueron	0.76	15	*i* P	Pn	03 29 30.8	+0.2
IGN	Direccin Gen	0.78	23	P	Pn	03 29 31.1	+0.4
IGN	Direccin Gen	0.78	23	S	Sn	03 29 41.3	-0.2
UDBS	Universidad Do	0.79	24	P	Pn	03 29 30.6	-0.2
UDBS	Universidad Do	0.79	24	S	Sn	03 29 41.1	-0.5
CEVE	Cerro Verde	0.84	351	*i* P	Pn	03 29 31.8	+0.1
CEVE				IAML		03 29 45.3	
	comp=Z,540nm,0.2s						
CEVE	Cerro Verde	0.84	351	P	Pn	03 29 31.9	+0.2
CEVE	Cerro Verde	0.84	351	S	Sn	03 29 43.4	+0.3
SBLS	San Blas	0.85	351	*i* P	Pn	03 29 32.0	+0.2
SBLS				*e*P		03 29 32.0	
COEG	Centro de Oper	0.86	43	*e*P	Pn	03 29 32.0	+0.2
COEG				*e*S	Sn	03 29 43.2	-0.1
COEG				IAML		03 29 45.4	
	comp=Z,452nm,0.2s						
COEG	Centro de Oper	0.86	43	P	Pn	03 29 32.0	+0.2
TECO	Alcaldia de Te	0.88	52	*e*P	Pn	03 29 31.8	-0.2
TECO				*e*S	Sn	03 29 43.5	-0.1
TECO	Alcaldia de Te	0.88	52	P	Pn	03 29 32.0	+0.1
PAVA	Las Pavas	0.89	37	*e*P	Pn	03 29 32.8	+0.5
PAVA				*e*S	Sn	03 29 44.9	+0.7
PAVA	Las Pavas	0.89	37	P	Pn	03 29 32.9	+0.7
UESV	Universidad de	0.94	47	P	Pn	03 29 32.9	+0.1
UESV	Universidad de	0.94	47	S	Sn	03 29 44.7	-0.4
NUBE	Las Nubes	0.95	343	*i* P	Pn	03 29 32.9	-0.1
NUBE				*e*S	Sn	03 29 44.9	-0.7
NUBE	Las Nubes	0.95	343	*e*P	Pn	03 29 32.9	-0.1
NUBE				*i* S	Sn	03 29 45.4	-0.2
NUBE	Las Nubes	0.95	343	P	Pn	03 29 33.0	-0.1
ALJI	Alcalda de J	0.95	70	P	Pn	03 29 33.7	+0.8
ALJI	Alcalda de J	0.95	70	S	Sn	03 29 45.6	+0.2
UNIC	Universidad Ca	0.98	357	P	Pn	03 29 33.5	0.0
UNIC	Universidad Ca	0.98	357	S	Sn	03 29 46.2	-0.1
FAME	Alcaldia de Sa	0.99	329	P	Pn	03 29 33.1	-0.4
FAME	Alcaldia de Sa	0.99	329	S	Sn	03 29 45.2	-1.1
SCLA	Alcaldia de Sa	1.02	46	P	Pn	03 29 34.7	+0.8
SLOZ	Alcaldia de Sa	1.07	344	*e*P	Pn	03 29 34.8	+0.2
SLOZ	Alcaldia de Sa	1.07	344	P	Pn	03 29 34.9	+0.4
SLOZ	Alcaldia de Sa	1.07	344	S	Sn	03 29 50.4	+2.1
PACA	Pacayal	1.23	67	P	Pn	03 29 32.1	-4.7
PACA	Pacayal	1.23	67	S	Sn	03 29 47.7	-4.7
LCY	Lacayo	1.24	70	*e*P	Pn	03 29 37.9	+0.9
RANC	El Ranchito	1.25	69	P	Pn	03 29 34.7	-2.4
RANC	El Ranchito	1.25	69	S	Sn	03 29 50.7	-2.2
VSM	San Miguel	1.26	70	*e*P	Pn	03 29 38.3	+0.9
BLLM	Bellamira	1.30	70	*i* P	Pn	03 29 38.8	+1.1
MTO3	Montecristo	1.40	5	*i* P	Pn	03 29 39.6	+0.3
MTO3	Montecristo	1.40	5	*e*P	Pn	03 29 39.5	+0.3
MTO3	Montecristo	1.40	5	P	Pn	03 29 39.6	+0.3
MTO3	Montecristo	1.40	5	S	Sn	03 29 55.9	-0.9
ESQI	Esquipulas	1.56	5	P	Pn	03 29 42.0	+0.6
LCND	La Caada	1.59	78	P	Pn	03 29 42.8	+1.2
FG16	Alotenango, Sa	1.61	322	*i* P	Pn	03 29 47.8	+5.7
FG16				*i* S	Sn	03 30 11.0	+9.1
CNCH	Conchagua	1.64	80	*e*P	Pn	03 29 43.1	+0.8
CNCH				*e*P		03 29 43.9	
CNCH	Conchagua	1.64	80	P	Pn	03 29 43.3	+0.9
CNCH	Conchagua	1.64	80	S	Sn	03 30 03.4	+1.1

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*ISK **06** 03:45:48.3, 41.°44N×28.°01E, h13^{km}, ML3.1/32*
*AFAD **06** 03:45:48.3, 41.°42N×27.°97E, h16^{km}±1^{km}, MW3.2*
*SOF **06** 03:45:49.6, 41.°46N±0.°02×27.°93E±0.°03, h17^{km}±2^{km}, MD3.0/8*
*CFUSG **06** 03:45:51.5, 41.°60N×28.°30E, h10^{km}, mb2.4/3, Western Turkey Magtype MSH 3.3 from 2 stations*
ISC 06 03:45:48.5±0.9**, 41.°45N**±0.°02×**28.°04E**±0.°02**, h16**^{km}±7^{km}**,**
n80, σ1^{s}05/107**, 9C-9D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTYL	Yalikoy Yolu	0.19	81	Pg	Pb	03 45 53.4	-0.2
CTYL				Sg	Sb	03 45 56.8	-0.2
VIZE	Kirklareli, Vi	0.20	312	P	Pg	03 45 53.3	+0.1
VIZE				S	Sg	03 45 56.1	-0.3
SLVT	Silivri	0.25	149	Pg	Pb	03 45 54.6	0.0
CRLT	Corlu	0.39	216	Pg	Pb	03 45 57.1	+0.1
CTKS	Kestanelik-??a	0.41	120	Pg	Pb	03 45 56.9	-0.4
ELBA	Catalca	0.42	135	P	Pb	03 45 57.3	-0.2
ELBA				S	Sg	03 46 02.4	-0.3
PHSR	Pinarhisar	0.43	296	Pg	Pg	03 45 57.1	0.0
PHSR	Pinarhisar	0.43	296	⇓P	Pg	03 45 57.4	+0.3
PHSR				⇑S	Sg	03 46 02.6	-0.4
TKR	Tekirdag	0.59	220	Pg	Pb	03 46 00.3	-0.1
TKR				Sg	Sb	03 46 08.4	-0.2
BGKT	Bogazkoy	0.61	115	Pg	Pb	03 46 01.1	+0.3
ARMN	Kirklareli, Me	0.62	313	P	Pg	03 46 00.6	-0.1
ARMN				S	Sg	03 46 08.6	-0.3
KLYT	Kilyos	0.78	104	Pg	Pn	03 46 04.4	-0.4
KLYT				Sg	Sn	03 46 15.2	-0.9
KLYT	Kilyos	0.78	104	⇓P	Pn	03 46 04.1	-0.7
KIRK	Kırklareli	0.78	296	P	Pb	03 46 03.2	-0.5
KIRK				S	Sb	03 46 13.1	-0.9
ISK	Istanbul-Kandi	0.86	116	Pg	Pn	03 46 05.5	-0.4
KAVV	Kandilli-Istan	0.86	116	Pg	Pg	03 46 05.0	-0.2
MRMT	Marmara Adasi	0.91	202	Pg	Pb	03 46 05.5	-0.3
SART	Tekirdag	1.00	221	P	Pb	03 46 07.0	-0.3
SART				S	Sg	03 46 20.6	-0.2
RKY	Sarkoy-Tekirda	1.00	221	Pg	Pb	03 46 07.1	-0.3
EDRB	Edirne	1.05	293	Pg	Pb	03 46 07.9	-0.3
ARMT	Armutlu	1.08	144	Pn	Pg	03 46 09.7	+0.4
BAND	Balkesir-Ban	1.09	178	P	Pg	03 46 09.3	-0.2
BAND				S	Sg	03 46 23.7	-0.1
BAND	Balkesir-Ban	1.09	178	⇑P	Pg	03 46 09.4	-0.2
BAND				⇑S	Sg	03 46 24.3	+0.5
EDC	Edincik	1.11	187	Pn	Pg	03 46 09.7	-0.1
EDC				Sn	Sg	03 46 24.6	+0.3
UKOP	Uzunkopru-Edir	1.11	254	Pn	Pn	03 46 09.6	+0.3
KRBG	Karabiga-Canak	1.19	208	Pn	Pb	03 46 10.6	-0.1
KESN	Edirne-Kesan	1.20	239	P	Pn	03 46 10.2	-0.7
KESN				S	Sb	03 46 25.5	-0.9
KCTX	Karacabey (Bur	1.20	168	Pn	Pg	03 46 11.4	-0.3
KURT	Yalova, Merkez	1.23	134	P	Pg	03 46 11.5	-0.7
SILT	Sile	1.24	103	Pn	Pg	03 46 12.5	0.0
SILT				Sn	Sg	03 46 29.4	+0.7
SILT	Sile	1.24	103	⇑P	Pg	03 46 12.6	+0.2
SILT				⇑S	Sg	03 46 30.7	+2.0
MDNY	Mudanya-Bursa	1.25	149	Pn	Pg	03 46 12.5	-0.1
YLV	Yalova	1.34	131	Pn	Pg	03 46 13.6	-0.7
ERIK	Erikli-Kesan	1.39	237	Pn	Pn	03 46 13.1	-0.1
SEMS	Kocaeli-K¶rfe	1.41	114	P	Pb	03 46 14.5	+0.2
LPK	Lapseki	1.45	223	Pn	Pn	03 46 14.1	+0.2
LPK				Sn	Sb	03 46 33.7	+0.6
JMB	Yambol	1.54	313	*i* P	Pg	03 46 17.8	-0.2
JMB				S	Sg	03 46 38.5	+0.5
GELI	Tayfur-Gelibol	1.58	229	Pn	Pn	03 46 16.1	+0.3
ENEZ	Enez	1.59	244	Pn	Pb	03 46 16.9	-0.6
ALN	Alexandroupoli	1.60	251	Pn	Pn	03 46 15.9	-0.2
CAVK	Edirne/Enez-Ca	1.60	243	P	Pb	03 46 16.9	-0.8
CAVK	Edirne/Enez-Ca	1.60	243	⇓P	Pb	03 46 17.4	-0.2
CAVK				⇓S	Sn	03 46 36.9	+0.5
CANM	Can-anakkale	1.62	208	Pn	Pb	03 46 17.2	-0.7
ADVT	Abdulvahap	1.64	128	Pn	Pb	03 46 17.8	-0.5
BKES	Balkesir-Mer	1.71	183	P	Pn	03 46 18.2	+0.6
ROIA	ROIAK	1.72	344	*e*P	Pb	03 46 20.2	+0.5
ROIA				S	Sb	03 46 41.4	+0.4
HISA	Bilecik-Osmane	1.73	124	P	Pb	03 46 19.4	-0.5
BALY	Balya	1.73	191	P	Pn	03 46 18.5	+0.5
PRD	Provadia	1.78	345	*i* P	Pb	03 46 20.6	0.0
PRD				S	Sb	03 46 43.2	+0.5
COMU	Canakkale	1.79	222	Pn	Pn	03 46 19.0	+0.2
CAVI	Cavuskoy	1.85	132	Pn	Pb	03 46 21.1	-0.8
SAUV	Serdivan-Sakar	1.87	111	Pn	Pb	03 46 21.1	-1.1
NEF	NEVSHA	1.90	343	*e*P	Pb	03 46 22.4	-0.4
NEF				S	Sb	03 46 46.2	-0.2
RDO	Rodhopi	1.91	262	Pn	Pn	03 46 20.8	+0.5
DIM	Dimitrovgrad	1.94	289	*i* P	Pb	03 46 24.1	+0.7
KDZ	Kurdzhali	2.03	276	Pn	Pn	03 46 22.2	+0.1
KDZ	Kurdzhali	2.03	276	*e*P	Pb	03 46 25.3	+0.3
KDZ				S	Sb	03 46 52.2	+2.1
GADA	Gvkgeada	2.05	233	Pn	Pn	03 46 22.3	0.0
GOAD	anakkale-G¶	2.06	232	P	Pn	03 46 22.7	+0.3
EZN	Ezine	2.08	219	Pn	Pn	03 46 22.9	+0.2
EZN	Ezine	2.08	219	⇑P	Pn	03 46 22.8	+0.2
GULT	Gulveren	2.13	118	Pn	Pb	03 46 25.4	-1.4
PSN	Preselentsi	2.19	2	*e*P	Pb	03 46 26.5	-1.2
PSN				S	Sb	03 46 53.6	-1.0
SAHE	Sakarya_HENDEK	2.21	105	⇑P	Pb	03 46 28.5	+0.5
TVSB	Tavsanli	2.27	151	Pn	Pn	03 46 26.6	+1.2
SZH	Strazhitsa	2.38	321	*i* P	Pn	03 46 28.3	+1.5
SZH				S	Sg	03 47 04.4	-0.4
RZN	Rozhen	2.49	277	S	Sg	03 47 07.9	-0.6
ICOR	Ion Corvin	2.67	356	⇓P	Pg	03 46 38.3	-1.4
TIRR	Tirgusor	3.02	5	⇓P	Pb	03 46 40.1	-1.8
TPGR	Topolog	3.42	5	⇓P	Pn	03 46 43.7	+2.5
MPEP	Malo Peshtene	3.71	302	*e*P	Pn	03 46 46.3	+1.2
MPEP				S	Sg	03 47 49.6	+2.0
VTS	Vitosha	3.76	290	*i* P	Pn	03 46 47.0	+1.0
TLCR		3.78	8	⇓P	Pn	03 46 48.3	+2.3
MLR	Muntele Rosu	4.32	340	⇑P	Pn	03 46 44.8	-8.8
PLOR	Plostina	4.52	348	⇑P	Pb	03 47 04.3	-3.1
VRI	Vrincioaia	4.52	348	⇓P	Pb	03 47 05.7	-1.7
TARU	Tarkhankut	5.11	38	*e*P	Pn	03 47 05.1	+0.8
TARU				Pm		03 47 06.7	
	comp=Z,5.0nm,0.3s						
TARU				*e*S	Sn	03 48 01.9	-1.1
TARU				Sm		03 48 03.9	
	comp=N,7.0nm,0.3s						
TARU				Sm		03 48 03.9	
	comp=E,4.0nm,0.1s						
SEV	Sevastopol'	5.16	51	Pm		03 47 08.4	
	comp=Z,1.0nm,0.2s						
SEV				*e*S	Sn	03 48 01.6	-2.6
SEV				Sm		03 48 03.6	
	comp=N,3.0nm,0.2s						
SEV				Sm		03 48 03.6	
	comp=E,2.0nm,0.2s						
YAL	Yalta	5.42	54	*e*P	Pn	03 47 09.2	+0.6
YAL				Pm		03 47 14.9	
	comp=Z,3.0nm,0.3s						
YAL				*e*S	Sn	03 48 08.2	-2.4
YAL				Sm		03 48 09.2	
	comp=N,5.0nm,0.3s						
YAL				Sm		03 48 09.2	
	comp=E,10.0nm,0.6s						
SUDU	Sudak	6.14	54	*e*P	Pn	03 47 23.0	+4.5
SUDU				*e*S	Sn	03 48 31.5	+3.1
SUDU				Sm		03 48 32.1	
	comp=N,10.0nm,0.4s,comp=E,5.0nm,0.4s						

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*JMA **06** 03:50:58.7±0.2, 22.°8N±0.°5×121.°7E±0.°7, h22^{km}, MV3.3/14, TAIWAN REGION*
*ASIES **06** 03:51:00.4, 22.°89N×121.°59E, h11^{km}, ML3.6, Mw3.2, Moment Tensor Solution. Moment tensor: Scale 10^{20}Nm; M_{rr}7.74; $M_{\theta\theta}$-1.10; $M_{\phi\phi}$-6.49; $M_{r\theta}$3.61; $M_{\theta\phi}$-3.94; $M_{\phi r}$-0.35; Fault plane solution: $M_0$8.95896×10^{20} NP1: ϕ_s187.32000°, δ44.24000°, λ57.75000°. NP2: ϕ_s48.69000°, δ53.84000°, λ117.46000°. Principal axes: T Plg67.4890°, Azm17.0780°; N Plg21.8570°, Azm211.6440°; P Plg5.1270°, Azm119.5820°;*
*TAP **06** 03:51:00.4, 22.°89N×121.°59E, h11^{km}, ML3.6, C*
ISC 06 03:50:59.0±1.0**, 22.°86N**±0.°02×**121.°64E**±0.°02**, h18**^{km}±4^{km}**,**
n149, σ0^{s}98/225**, 3C-2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LDUT	Ludao	0.24	220	⇓*i*P	Pb	03 51 06.2	+1.3
LDUT				*i* S	Sg	03 51 10.5	+2.0
EDH	Donghe	0.33	290	⇓*i*P	Pb	03 51 06.5	+0.1
EDH				*i* S	Sb	03 51 11.0	-0.3
CHKT	Chengkung	0.34	313	⇑*i*P	Pb	03 51 06.7	0.0
CHKT				*i* S	Sb	03 51 11.2	-0.7
CHKH	Chenggong	0.40	326	⇑*i*P	Pb	03 51 07.9	+0.2
CHKH				*i* S	Sb	03 51 13.3	-0.1
ECS	Chishang	0.45	301	*i* P	Pb	03 51 08.9	+0.4
ECS				*i* S	Sb	03 51 15.8	+0.8
FULB	Fuli	0.46	317	P	Pb	03 51 08.6	-0.1
FULB				S	Sb	03 51 14.8	-0.5
TTN	Taitung	0.47	257	*e*P	Pn	03 51 09.4	-1.4
TTN				S	Sn	03 51 16.6	-2.1
LONT	Longtian	0.47	276	P	Pn	03 51 09.6	-1.3
LONT				*e*S	Sb	03 51 15.7	+0.2
ECBN	Changbin	0.48	339	P	Pb	03 51 09.5	+0.4
ECBN				S	Sb	03 51 16.5	+0.6
EHD	Haiduan	0.49	306	*i* P	Pb	03 51 09.4	+0.2
EHD				S	Sb	03 51 16.3	+0.3
TWGBT	Beinan	0.52	265	P	Pn	03 51 10.2	-1.4
TWGBT	Beinan	0.52	265	P	Pb	03 51 09.7	+0.1
TWGBT	Beinan	0.52	265	S	Sn	03 51 18.8	-1.1
TWGBT	Beinan	0.52	265	P	Pb	03 51 09.8	+0.2
TWGBT				S	Sb	03 51 17.2	+0.5
TWG	Pinlang	0.52	266	P	Pb	03 51 09.7	0.0
TWG				S	Sb	03 51 17.3	+0.3
TWF1	Yuli	0.58	327	*i* P	Pb	03 51 11.0	+0.3
TWF1				S	Sb	03 51 18.3	-0.4
YULB	Yu-li	0.61	329	P	Pg	03 51 11.5	+0.2
YULB	Yu-li	0.61	329	P	Pg	03 51 11.4	+0.2
YULB	Yu-li	0.61	329	S	Sn	03 51 21.0	-1.4
YULB	Yu-li	0.61	329	P	Pg	03 51 11.6	+0.4
YULB				S	Sn	03 51 20.4	-2.0
HGSD	Ruisui	0.66	343	P	Pg	03 51 11.8	-0.3
ELDTW	Lidau	0.66	300	⇑*i*P	Pg	03 51 11.8	-0.3
ELDTW				*i* S	Sb	03 51 19.9	-1.0
ECL	Taimali	0.68	248	P	Pn	03 51 12.6	-1.2
ECL				S	Sg	03 51 21.9	+0.2
EHYH	Wanrong	0.69	337	P	Pn	03 51 12.9	-1.0
EHYH				S	Sn	03 51 23.1	-1.0
EHY	Hungye	0.70	336	*i* P	Pn	03 51 13.1	-1.1
LAY	Lan-yu	0.82	186	*i* P	Pg	03 51 14.8	-0.3
LAY				*e*S	Sg	03 51 25.7	-0.3
EGFH	Guangfu	0.83	347	*e*P	Pn	03 51 15.6	-0.2
TAW	Tawu	0.85	234	*e*P	Pn	03 51 16.5	+0.4
TEGC	Jichi Village	0.85	354	P	Pg	03 51 15.3	-0.3
STYH	Taoyuan	0.85	291	*e*P	Pb	03 51 14.0	-1.3
STYH				*e*S	Sb	03 51 25.0	-1.4
LYUB	Lan-yu	0.86	183	P	Pb	03 51 14.5	-0.9
LYUB				*e*S	Sb	03 51 26.0	-0.6
TAWH	Dawu Township	0.87	233	P	Pn	03 51 16.0	-0.4
TAWH				*e*S	Sn	03 51 27.6	-0.9
EAST	Anshuo	0.87	237	*e*P	Pn	03 51 15.9	-0.5
WARBT	Fenglin Townsh	0.88	345	*i* P	Pg	03 51 15.8	-0.5
WARBT				*e*S	Sg	03 51 27.3	-0.7
SHUL	Shoufeng	0.93	356	P	Pg	03 51 16.7	-0.4
SHUL				*e*S	Sn	03 51 29.4	-0.6
TSMG	Majia	0.93	261	P	Pn	03 51 16.6	-0.6
TSMG				S	Sg	03 51 28.3	-1.1
SSD	Sandimen	0.94	263	*e*P	Pg	03 51 16.6	-0.7
MASBT	Mashibuluo	0.96	255	P	Pg	03 51 17.3	-0.4
MASBT				*e*S	Sg	03 51 29.2	-1.2
ESL	Shilin	0.97	349	*e*P	Pn	03 51 17.2	-0.5
ESL				*e*S	Sb	03 51 29.5	-0.3
SGST	Jiashian	1.00	283	*e*P	Pn	03 51 17.7	-0.5
SGST				*e*S	Sn	03 51 31.8	-0.1
VWDT	VWDT	1.00	333	P	Pg	03 51 18.1	-0.3
VWDT				*e*S	Sn	03 51 31.2	-0.7
ALS	Alishan	1.00	310	*e*P	Pg	03 51 18.5	-0.1
ALS				*e*S	Sn	03 51 31.5	-0.9
TEYL	Yanliau Villag	1.00	358	*e*P	Pg	03 51 18.5	-0.1
TEYL				*e*S	Sn	03 51 33.3	+1.4
WTP	Ta-pu	1.02	292	*e*P	Pg	03 51 18.9	+0.1
WTP				*e*S	Sn	03 51 32.2	-0.2

TPUB	Ta-pu	1.03	295	P	Pg	03 51 18.8	-0.2
TPUB	Ta-pu	1.03	295	S	Sn	03 51 33.0	+0.4
TPUB	Ta-pu	1.03	295	P	Pg	03 51 18.9	-0.1
TPUB	Ta-pu	1.03	295	S	Sn	03 51 33.4	+0.8
TPUB	Ta-pu	1.03	295	eP	Pg	03 51 18.6	-0.4
TPUB				eS	Sn	03 51 32.8	+0.2
SCST	Cishan	1.05	272	eP	Pg	03 51 19.9	+0.3
SCZT	Fangliau	1.06	243	eP	Pg	03 51 19.3	-0.3
CHN1	Nanshi	1.07	288	P	Pg	03 51 20.2	+0.3
CHN1				i S	Sg	03 51 34.6	+0.7
CHN4	Tsaushan	1.08	297	eP	Pg	03 51 20.3	+0.3
CHN4				eS	Sg	03 51 34.9	+0.7
WHYT	Xinyi Township	1.10	319	eP	Pg	03 51 20.2	-0.2
WHYT				S	Sg	03 51 34.8	-0.1
ETM	Tongmen	1.11	353	P	Pn	03 51 19.3	-0.4
ETM				eS	Sb	03 51 33.0	-0.8
SNST	Tainan City	1.11	289	eP	Pg	03 51 20.8	+0.2
SNST				i S	Sg	03 51 36.1	+1.0
WCKO	Fanlu	1.11	301	P	Pg	03 51 20.9	+0.3
WCKO				eS	Sg	03 51 35.2	0.0
SSLB	Suanglung	1.12	326	P	Pg	03 51 20.0	-0.7
SSLB	Suanglung	1.12	326	S	Sg	03 51 34.9	-0.5
SSLB	Suanglung	1.12	326	P	Pg	03 51 20.1	-0.7
SSLB	Suanglung	1.12	326	P	Pg	03 51 20.0	-0.7
SMST	Manzhou Townsh	1.12	222	P	Pg	03 51 19.8	-0.9
SMST				eS	Sg	03 51 34.5	-0.8
TWM1	Shoushan	1.12	268	eP	Pg	03 51 22.3	+1.5
TWK	Hsinying	1.13	291	eP	Pg	03 51 21.1	0.0
TWK				eS	Sg	03 51 36.7	+0.8
CHN5	Tsauling	1.15	310	eP	Pg	03 51 21.4	+0.1
CHN5				eS	Sg	03 51 37.6	+1.2
OWD	Renai	1.17	339	eP	Pb	03 51 20.6	-0.2
LXIB	Xiulin Townshi	1.17	350	P	Pn	03 51 20.1	-0.6
LXIB				eS	Sb	03 51 34.4	-1.5
TSEB	Hengchuen, Pin	1.18	216	eP	Pg	03 51 21.6	-0.2
TSEB				eS	Sg	03 51 37.6	+0.4
CHN3	Shinhua	1.19	281	eP	Pg	03 51 23.6	+1.5
CHN3				eS	Sg	03 51 42.0	+4.3
TWKBT	Hengchun	1.19	220	eP	Pb	03 51 20.8	-0.3
TWKBT				eS	Sg	03 51 36.8	-1.0
TWK1	Hengchun	1.20	220	eP	Pg	03 51 21.5	-0.7
TWK1				eS	Sn	03 51 36.5	-0.2
TWD	Chiawan	1.21	358	eP	Pn	03 51 20.9	-0.2
SMLT	Sun Moon Lake	1.22	326	eP	Pg	03 51 22.4	-0.3
SMLT				eS	Sg	03 51 39.1	+0.4
WUSB	Renai	1.22	337	eP	Pb	03 51 21.6	-0.2
TYC	Yuchr	1.26	326	eP	Pg	03 51 23.2	-0.2
WLCH	Liuqiu	1.27	247	eP	Pg	03 51 25.9	+2.3
WJS	Zhushan	1.27	319	eP	Pg	03 51 24.2	+0.6
WJS				S	Sg	03 51 42.7	+2.4
CHY	Chiayi	1.28	300	P	Pg	03 51 24.0	+0.1
CHY				eS	Sg	03 51 41.4	+0.7
TWP	Hsiaoliuchiu	1.28	247	eP	Pg	03 51 24.7	+0.8
WGK	Gukeng	1.29	310	eS	Sg	03 51 42.5	+1.8
WSSB	Gushan	1.29	261	eP	Pg	03 51 25.2	+1.3
WDLH	Douliu	1.30	309	P	Pg	03 51 24.6	+0.3
WDLH				S	Sg	03 51 43.3	+2.0
NACB	Ninganchiao	1.31	358	P	Pn	03 51 21.9	-0.6
NACB	Ninganchiao	1.31	358	P	Pn	03 51 22.2	-0.2
NACB	Ninganchiao	1.31	358	P	Pn	03 51 22.0	-0.4
WHF	Hehuan Shan	1.32	345	eP	Pb	03 51 23.3	-0.4
WHF				eS	Sb	03 51 39.5	-0.9
WNT	Mingjian	1.34	319	eP	Pg	03 51 25.1	+0.1
WNT				eS	Sg	03 51 43.5	+1.1
ICHU	Yijhu	1.35	292	eP	Pg	03 51 25.3	+0.2
ICHU				S	Sg	03 51 42.7	+0.1
ETLH	Xiulin Townshi	1.35	354	eP	Pn	03 51 22.3	-0.7
ETLH				eS	Sn	03 51 39.3	-1.3
WCS	Beigang Elemen	1.36	331	eP	Pg	03 51 24.7	-0.8
SCLT	Jiali	1.37	284	eS	Sg	03 51 46.0	+2.7
CHN8	Yiju	1.40	290	eP	Pg	03 51 25.6	-0.5
CHN8				eS	Sg	03 51 45.6	+1.3
EOS4	EOS4	1.40	26	eP	Pb	03 51 24.3	-0.2
EOS4				eS	Sb	03 51 42.0	+0.1
WTK	Tuku	1.41	306	eP	Pg	03 51 26.5	+0.2
WTK				eS	Sg	03 51 45.9	+1.2
TWT	Tachien	1.45	343	eP	Pb	03 51 25.4	-0.3
TDCB	Techi	1.45	342	eP	Pb	03 51 25.8	+0.1
WSL	Shuilin Townsh	1.46	297	eP	Pg	03 51 26.1	-1.0
WSL				eS	Sg	03 51 46.1	0.0
TSCK	Chigu Township	1.46	282	eP	Pg	03 51 26.8	-0.4
TSCK				eS	Sg	03 51 47.4	+1.2
WSF	Szhu	1.52	301	eP	Pb	03 51 26.5	-0.1
WSF				eS	Sg	03 51 48.2	+0.2
WHP	Taichung City	1.55	336	eP	Pg	03 51 28.4	-0.5
EOS3	EOS3	1.55	24	eP	Pb	03 51 26.5	-0.6
EOS3				eS	Sb	03 51 45.7	-0.7
ENA	Nanau	1.56	3	eP	Pb	03 51 27.0	-0.5
NNSB	Datong	1.58	352	eP	Pb	03 51 26.9	-0.9
NNSB				eS	Sn	03 51 46.1	-0.2
EWUT	Wuta	1.58	5	eP	Pb	03 51 27.0	-0.8
EWUT				eS	Sn	03 51 44.7	-1.5
NNS	Nan Shan	1.59	351	eP	Pb	03 51 27.2	-0.9
EOS2	EOS2	1.64	19	eP	Pb	03 51 28.7	-0.1
EOS2				eS	Sb	03 51 48.8	-0.3
LATG	Datong	1.67	357	eP	Pb	03 51 28.3	-1.1
TWQ1	Liyutan	1.68	332	eP	Pg	03 51 30.5	-0.9
NSY	Sanyi	1.74	333	eP	Pg	03 51 31.6	-1.0
NSY				eS	Sg	03 51 55.5	+0.2
TWC	Suao	1.75	6	eP	Pn	03 51 28.8	+0.3
ENTT	Nioudou	1.77	358	eP	Pn	03 51 29.1	+0.2
YHNB	Yeheng	1.82	352	P	Pb	03 51 31.0	-0.8
YHNB	Yeheng	1.82	352	P	Pb	03 51 31.1	-0.8
YHNB	Yeheng	1.82	352	eP	Pb	03 51 30.5	-1.4
NFF	Wufeng Townshi	1.83	345	eP	Pb	03 51 31.7	-0.3
NFF				eS	Sb	03 51 53.5	-1.1
NMLH	Miaoli	1.84	335	eP	Pb	03 51 32.5	+0.3
NMLH				eS	Sg	03 51 57.4	-1.0
TWE	Neicheng	1.85	1	eP	Pb	03 51 31.1	-1.3
NSTT	Nanjuang	1.86	342	eP	Pb	03 51 32.4	-0.1
WDGT	Dungji	1.86	283	eP	Pn	03 51 30.6	+0.5
LIOB	Emei	1.87	342	eP	Pb	03 51 32.6	-0.1
FUSB	Fushanzhiwuyua	1.89	359	eP	Pb	03 51 31.8	-1.3
NWLT	Wulai	1.91	356	eP	Pn	03 51 31.6	+0.8
KSHI	Guanxi Townshi	1.95	348	eP	Pb	03 51 34.5	+0.4
JYNG	Yonagunijimaku	1.99	37	eP	Pn	03 51 31.5	-0.3
JYNG				eS	Sn	03 51 56.7	+0.5
EGS		1.99	8	eP	Pb	03 51 34.3	-0.5
PHUB	P'eng-hu	2.01	289	eP	Pb	03 51 35.2	+0.1
YOJ	Yonaguni jima	2.03	38	P	Pb	03 51 33.9	-1.5
YOJ	Yonaguni jima	2.03	38	eP	Pb	03 51 34.0	-1.4
YOJ				eS	Sb	03 51 59.1	-1.2
YOJ	Yonaguni jima	2.03	38	eP	Pb	03 51 33.9	-1.5
YOJ				eS	Sb	03 51 59.0	-1.4
PNG	Penghu	2.04	291	eP	Pb	03 51 34.0	-1.6
VCHM	Qimei	2.06	280	eP	Pb	03 51 33.9	-2.1
TIPB	Shuangxi	2.11	5	eP	Pb	03 51 36.0	-0.8
TWB1	Santiao Chiao	2.16	8	eP	Pb	03 51 37.8	+0.1
SXI1	Grass Mountain	2.23	6	eP	Pb	03 51 37.4	-1.6
ZUZH	Zhuzihu	2.29	358	eP	Pn	03 51 37.6	+1.5
HATJ	Hateruma jima	2.32	59	eP	Pn	03 51 37.9	+1.6
HATJ				eS	Sn	03 52 06.0	+1.6
IRIF	Iriomote-Funau	2.42	52	eP	Pn	03 51 39.5	+1.9
IRIF				eS	Sn	03 52 07.9	+1.1
JKRS	Kuro-shima	2.57	57	eP	Pn	03 51 41.8	+2.0
JKRS				eS	Sn	03 52 12.9	+2.2
JIJ	Ishigaki jima	2.74	56	eS	Sn	03 52 16.3	+1.4
VWUC	VWUC	2.92	317	eP	Pn	03 51 46.1	+1.6
VWUC				eS	Sn	03 52 20.8	+1.6
JISG	Ishigakijimahi	2.99	54	eS	Sn	03 52 22.3	+1.2
PTMZ	Houxiangcun	3.16	314	eP	Pn	03 51 49.1	+1.1
PTMZ				eS	Sn	03 52 26.9	+1.6
JTJ	Tarama	3.32	57	eS	Sn	03 52 30.9	+1.8
KNMB	Chin-men Tao	3.38	299	eP	Pn	03 51 51.8	+0.8
MATB	Ma-tsu	3.62	335	eP	Pn	03 51 53.8	-0.4
ZPLA	Ao Xicun	3.73	287	eP	Pn	03 51 57.3	+1.6
AXDP	Jialang	3.92	302	eP	Pn	03 51 59.4	+1.0
MHZQ	Yeshan	4.00	324	eP	Pn	03 52 02.1	+2.6
MHZQ				eS	Sn	03 52 46.6	+0.6
XPSS	Dashiqiu	4.26	342	eP	Pn	03 52 03.9	+0.9

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*IDC **06** 03:59:49.7±0.8, 21°.23S×174°.49W, h0^{km}, mb4.0/9, mbtmp4.0/10, ML4.3/1, MS3.6/28, Error ellipse: s-maj=30.3km s-min=21.1km az=109.0*
*NEIC **06** 04:00:38.7±1.0, 20°.84S±0°.08×179°.2W±0°.2, h468^{km}±8^{km}, mb4.4/24, Error ellipse: s-maj=25.5km s-min=11.8km az=88.0*

ISC 06 04:00:40.8±0.7**, 20°.9S**±0°.1×**179°.4W**±0°.1**, h500^{km}, n65, σ1ˢ.47**/31**, mb4.3**/21**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.93	322	P	P	04 01 55.3	-3.6
MSVF	Nonsavu	3.93	322	Pn	P	04 01 51.9	-6.9
	0.5nm,0.3s,baz=118,slow=12,SNR=14						
MSVF				LR	LR	04 04 38.7	
	comp=Z,1µm,18.2s,baz=137,slow=37						
DZM	Mont Dzumac	13.24	262	P	P	04 03 32.3	-0.4
TOZ	Tahuroa Road	17.40	194	P	P	04 04 15.2	-0.3
URZ	Urewera	17.61	189	P	P	04 04 06.3	-11
	0.9nm,0.3s,baz=274,slow=20,SNR=1.8						
	7.3nm,0.7s						
RAR	Rarotonga	18.32	95	LR	LR	04 06 52.3	
	comp=Z,136nm,19.4s,baz=260,slow=31						
BKZ	Black Stump Fm	18.60	190	P	P	04 04 23.4	-3.1
THZ	Tophouse	21.84	196	P	P	04 04 55.3	-0.7
HNR	Honiara	22.91	297	LR	LR	04 14 49.3	
	comp=Z,98nm,20.7s,baz=95,slow=33						
PPT	Papeete	28.32	89	LR	LR	04 13 17.4	
	comp=Z,43nm,18.6s,baz=257,slow=34						
PMG	Port Moresby	34.16	284	LR	LR	04 21 14.0	
	comp=Z,67nm,20.0s,baz=194,slow=33						
JAY	Jayapura	42.92	290	LR	LR	04 27 37.0	
	comp=Z,75nm,19.9s,baz=295,slow=35						
ASAR	Alice Springs	43.17	257	P	P	04 08 26.7	+30
	1.2nm,0.8s,baz=98,slow=8.2,SNR=8.6						
	1.2nm,0.8s						
WB0	Warramunga Arr	43.24	263	P	P	04 07 59.4	+1.7
WRA	Warramunga Arr	43.26	263	P	P	04 08 28.5	+31
	0.4nm,0.4s,baz=97,slow=7.9,SNR=6.3						
	0.4nm,0.4s						
GUMO	Guam	49.04	311	LR	LR	04 28 41.0	
	comp=Z,36nm,20.7s,baz=84,slow=33						
SBA	Scott Base	57.44	183	P	P	04 09 42.0	+1.3
VNDA	Vanda	57.45	185	P	P	04 09 41.8	+1.0
VNDA	Vanda	57.45	185	P	P	04 09 40.7	-0.1
	1.3nm,0.8s,baz=3.4,slow=6.8,SNR=6.8						
VNDA				LR	LR	04 35 21.5	
	comp=Z,62nm,18.0s,baz=171,slow=37						
	1.3nm,0.8s						
JCJ	Chichijima	60.47	320	LR	LR	04 34 50.5	
	comp=Z,41nm,19.7s,baz=3.5,slow=33						
DAV	Davao City (W)	60.74	291	LR	LR	04 37 44.9	
	comp=Z,16nm,19.2s,baz=0.5,slow=35						
KAPI	Kappang	61.02	276	LR	LR	04 39 01.3	
	comp=Z,29nm,19.2s,baz=63,slow=36						
QSPA	South Pole Qui	69.22	180	P	P	04 10 56.9	+0.2
QSPA				IAmb	IAmb	04 10 57.7	
	comp=Z,14nm,1.4s						
QSPA	South Pole Qui	69.22	180	P	P	04 10 55.8	-1.0
	comp=Z,4.6nm,1.1s,baz=224,slow=0.1,SNR=6.7						
	comp=Z,4.6nm,1.1s						
MJAR	Matsushiro Arr	69.73	325	P	P	04 11 20.2	+20
	comp=Z,1.1nm,0.3s,baz=163,slow=6.1,SNR=4.8						
MJAR				LR	LR	04 43 03.6	
	comp=Z,14nm,18.4s,baz=134,slow=36						
	comp=Z,1.1nm,0.3s						
ASAJ	Asahikawa	73.42	332	LR	LR	04 38 25.2	
	comp=Z,73nm,21.7s,baz=174,slow=30						
SHEM	Shemya Is, Ala	73.48	356	LR	LR	04 38 53.8	
	comp=Z,63nm,19.9s,baz=47,slow=32						
PETK	Petropavlovsk-	76.28	346	LR	LR	04 39 52.3	
	comp=Z,30nm,21.1s,baz=124,slow=31						
KSRS	Korea Array	76.29	319	P	P	04 11 59.1	+21
	comp=Z,0.8nm,0.9s,baz=141,slow=6.0,SNR=2.3						
KSRS				LR	LR	04 42 00.3	
	comp=Z,14nm,20.8s,baz=225,slow=32						
	comp=Z,0.8nm,0.9s						
PFO	Pinyon Flats O	80.78	49	LR	LR	04 39 06.1	
	comp=Z,18nm,19.4s,baz=225,slow=30						
KDAK	Kodiak Island	81.47	14	LR	LR	04 40 53.7	
	comp=Z,42nm,20.6s,baz=196,slow=30						
KLR	Kul'dur	82.17	330	LR	LR	04 43 32.2	
	comp=Z,42nm,21.5s,baz=148,slow=31						
NVAR	Mina Array Bea	82.18	44	P	P	04 11 56.9	-12
	comp=Z,2.0nm,0.8s,baz=227,slow=6.4,SNR=10						
	comp=Z,2.0nm,0.8s						
PRN	Pahroc Range	83.77	46	P	P	04 12 16.9	-0.3
MA2	Magadan	83.78	345	LR	LR	04 45 50.1	
	comp=Z,41nm,19.4s,baz=131,slow=32						
K15K	Wolf Creek Mou	84.07	8	P	P	04 12 20.6	+2.7
SUA	Susitna One	85.19	13	P	P	04 12 24.5	+0.9
BBB	Bella Bella	85.33	29	LR	LR	04 41 29.7	
	comp=Z,26nm,20.0s,baz=216,slow=30						
ELK	Elko	85.42	43	LR	LR	04 47 15.6	
	comp=Z,30nm,18.2s,baz=270,slow=34						
MVU	Marysvale	86.26	46		P	04 12 28.6	-0.8
J20K	Nowinta River	87.00	11		P	04 12 33.1	+1.1
J20K				IAmb	IAmb	04 12 46.5	
	comp=Z,8.2nm,1.1s						
TRF	Thorofare Moun	87.07	13		P	04 12 33.1	+0.6
TRF				IAmb	IAmb	04 12 34.6	
	comp=Z,5.2nm,0.8s						
H18K	Honhosa River	87.24	9	P	P	04 12 34.3	+1.2
H18K				IAmb	IAmb	04 12 46.8	
	comp=Z,8.9nm,1.3s						
PLID	Pearl Lake	87.31	39		P	04 12 34.1	-0.1
PLID				IAmb	IAmb	04 12 37.6	
	comp=Z,8.0nm,1.4s						
RND	Reindeer	87.33	13		P	04 12 34.8	+1.2
RND				IAmb	IAmb	04 12 47.4	
	comp=Z,6.7nm,0.9s						
XLT	XiLinHaoTe	87.35	319	eP	P	04 12 39.5	+5.3
XLT				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SNAA	Sanae	87.69	179	LR	LR	04 52 28.2	
	comp=Z,54nm,18.1s,baz=144,slow=36						
M26K	Nabesna, AK	87.85	16		P	04 12 36.8	+0.7
M26K				IAmb	IAmb	04 12 48.1	
	comp=Z,7.4nm,1.4s						
CRNM	Carthage	87.99	53	P	P	04 12 36.5	-1.1
M27K	Edge Creek, AK	88.11	17	P	P	04 12 38.4	+1.0
M27K				IAmb	IAmb	04 12 50.4	
	comp=Z,7.5nm,1.1s						
NEW	Newport	88.42	36	LR	LR	04 44 39.8	
	comp=Z,56nm,18.0s,baz=213,slow=31						
WRH	Wood River Hil	88.43	13	P	P	04 12 40.0	+1.3
WRH				IAmb	IAmb	04 12 52.2	
	comp=Z,8.8nm,1.2s						
HHC	Hu-ho-hao-te	88.67	315	eP	P	04 12 46.8	+6.3
HHC				pmax	pmax		
	comp=Z,15nm,0.7s						
HHC				pmax	pmax		
	comp=Z,71nm,5.5s						
ILAR	Eielson Array	88.95	13	P	P	04 12 42.6	+1.6
	comp=Z,0.6nm,0.9s,baz=197,slow=5.6,SNR=5.4						
ILAR				LR	LR	04 43 01.7	
	comp=Z,18nm,20.9s,baz=279,slow=29						
	comp=Z,0.6nm,0.9s						
CMAR	Chiang Mai Arr	89.01	290	LR	LR	04 54 38.3	
	comp=Z,12nm,19.0s,baz=190,slow=35						
CHTO	Chiang Mai	89.14	290	P	P	04 12 43.3	+0.2
J26L	Joseph Creek	89.47	15		P	04 12 44.8	+1.1
J26L				IAmb	IAmb	04 12 57.5	
	comp=Z,6.7nm,1.0s						
PZH	PanZhiHua	89.72	298	P	P	04 12 48.6	+2.8
L29M	L29M	89.74	17		P	04 12 45.5	+0.6
L29M				IAmb	IAmb	04 12 57.8	
	comp=Z,7.6nm,1.1s						
K29M	Barlow Dome	90.49	17		P	04 12 49.6	+1.2
K29M				IAmb	IAmb	04 13 00.8	
	comp=Z,7.1nm,1.1s						
I30M	Mount Dempster	91.87	17		P	04 12 55.1	+0.4
YKA	Yellowknife Ar	97.38	25	P	Pdif	04 13 18.6	-1.0
	comp=Z,0.3nm,0.7s,baz=250,slow=3.6,SNR=2.0						
YKA				LR	LR	04 48 43.6	
	comp=Z,25nm,21.7s,baz=300,slow=31						
	comp=Z,0.3nm,0.7s						
ULM	Lac du Bonnet	101.74	41	LR	LR	04 51 32.3	
	comp=Z,58nm,18.5s,baz=244,slow=31						
AKASG	Malin Array Be	142.67	330	PKPbc	PKiKP	04 19 27.9	+8.1
	comp=Z,2.8nm,0.8s,baz=43,slow=4.3,SNR=16						
BRTR	Keskin Array B	146.10	311	PKPbc	PKiKP	04 19 42.5	+15
	comp=Z,1.0nm,0.9s,baz=124,slow=2.2,SNR=6.2						

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*ATH **06** 04:18:54.8, 40°.37N×20°.78E, h8^{km}±1^{km}, ML2.6/9, Manual Solution by N.Liadopoulou First location: 2019/06/06 04:19:58, This location: 2019/06/06 09:23:35 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*SKO **06** 04:18:54.7, 40°.40N×20°.61E, h18^{km}, ML2.8*
*TIR **06** 04:18:54.2, 40°.42N×20°.74E, h7^{km}±1^{km}, Ml3.0/8*
*THE **06** 04:18:54.6, 40°N±1°×2°1E±°, h0^{km}±1^{km}, M2.6/9, MLh2.6/9*
*BEO **06** 04:18:55.0±0.3, 40°.37N×20°.91E, h2^{km}±2^{km}, ML2.5/9*

ISC 06 04:18:54.8±1.0**, 40°.40N**±0°.02×**20°.77E**±0°.02**, h6^{km}**±8^{km}**, n59, σ1ˢ.22**/88**, 1D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEST	Nestorio	0.21	85	Pg	Pg	04 18 59.2	+0.2
NEST				Sg	Sg	04 19 03.3	+1.4
NEST				AML	AML	04 19 04.6	
	8.7nm,0.3s						
NEST	Nestorio	0.21	85	P	Pg	04 18 59.2	+0.2
NEST				S	Sg	04 19 02.8	+0.9
NEST	Nestorio	0.21	85	P	Pg	04 18 59.3	+0.2
NEST				S	Sg	04 19 02.6	+0.7
KBN	Korca	0.23	4	Pg	Pg	04 18 58.3	-1.1
KBN				Sg	Sg	04 19 01.4	-1.0
KBN				AML	AML	04 19 02.2	
	17nm,0.4s						
KBN				AML	AML	04 19 05.5	
	14nm,0.6s						
LSK	Leskovik	0.28	208	Pg	Pg	04 18 59.6	-0.7
LSK				Sg	Sg	04 19 04.7	+0.8
LSK				AML	AML	04 19 07.5	
	13nm,0.7s						
PENT	Pentalofos	0.34	125	P	Pg	04 19 01.7	+0.1
PENT				S	Sb	04 19 07.3	-1.9
PENT	Pentalofos	0.34	125	P	Pg	04 19 01.5	-0.1
PENT				S	Sg	04 19 06.3	+0.1
KPRO	Kipourio	0.63	134	P	Pg	04 19 06.7	-0.3
KPRO				S	Sb	04 19 17.1	-0.4
KPRO	Kipourio	0.63	134	P	Pg	04 19 06.7	-0.3
MSVA	Metsovo	0.70	153	P	Pb	04 19 09.7	+0.2
OHR	Ohrid	0.72	2	P	Pg	04 19 08.0	-0.6
OHR				S	Sg	04 19 17.6	-0.4
OHR	Ohrid	0.72	2	⇓iPg	Pg	04 19 08.0	-0.6
OHR				i Sg	Sg	04 19 19.3	+1.3
OHR				eLg	Lg	04 19 19.3	
	comp=E,444nm,0.5s						
OHR				eLg	Lg	04 19 19.4	
	comp=N,178nm,0.5s						
OHR	Ohrid	0.72	2	ePg	Pg	04 19 07.8	-0.8
OHR				eSg	Sg	04 19 18.9	+1.0
JAN	Janina	0.74	175	P	Pg	04 19 08.9	-0.1
KZN	Kozani	0.77	96	P	Pg	04 19 09.7	+0.1
KZN				S	Sn	04 19 23.1	-1.2
KZN	Kozani	0.77	96	P	Pb	04 19 09.9	-0.8
SRN	Sarande	0.78	229	Pg	Pg	04 19 09.3	-0.5
SRN				Sg	Sb	04 19 22.1	+0.4
SRN				AML	AML	04 19 27.2	
	comp=N,0.5nm,0.4s						
IGT	Igoumenitsa	0.92	201	Pn	Pb	04 19 13.0	-0.2
IGT				Sn	Sn	04 19 26.8	-1.1
IGT	Igoumenitsa	0.92	201	P	Pb	04 19 12.9	-0.4
IGT	Igoumenitsa	0.92	201	i Pg	Pb	04 19 12.6	-0.7
IGT	Igoumenitsa	0.92	201	ePg	Pg	04 19 12.0	-0.5
IGT				eSg	Sn	04 19 26.4	-1.5
IGT	Igoumenitsa	0.92	201	P	Pb	04 19 12.6	-0.7
KEK	Kerkira	1.01	228	P	Pn	04 19 15.1	-0.4
TETR	Tetrakomo, Epi	1.12	159	P	Pn	04 19 17.0	-0.1
TIR	Tirane	1.17	325	i Pg	Pb	04 19 17.5	0.0
TIR	Tirane	1.17	325	ePg	Pb	04 19 16.4	-1.1
TIR				eSg	Sn	04 19 36.7	+2.6
THL	Klokotos Trika	1.27	130	P	Pg	04 19 18.9	-0.2
THL	Klokotos Trika	1.27	130	P	Pn	04 19 18.4	-0.6
PHP	Peshkopia	1.31	349	Pg	Pn	04 19 18.8	-1.0
PHP				Sg	Sb	04 19 37.4	+0.4
PHP				AML	AML	04 19 52.1	
	comp=N,0.8nm,0.7s						
TYRN	Tyrnavos	1.31	121	P	Pb	04 19 19.3	-0.6
LIT	Litokhoron	1.35	102	P	Pg	04 19 20.7	0.0
LIT				S	Sg	04 19 39.8	+1.6
LIT	Litokhoron	1.35	102	i Pg	Pg	04 19 21.2	+0.5
LIT	Litokhoron	1.35	102	P	Pb	04 19 20.2	-0.3
TSLK	Tsoukalades, L	1.57	183	P	Pn	04 19 23.0	-0.2
LKD2	Lefkada island	1.61	183	Pn	Pg	04 19 26.6	+1.0
LKD2				Sn	Sg	04 19 49.0	+2.6
LKD2				AML	AML	04 19 59.8	
	comp=N,0.5nm,0.9s						
LKD2	Lefkada island	1.61	183	P	Pg	04 19 26.5	+1.0
VAY	Valandovo	1.65	55	i Pn	Pn	04 19 24.0	-0.3
VAY	Valandovo	1.65	55	ePg	Pn	04 19 24.1	-0.2
VAY				eSg	Sn	04 19 45.8	-0.1
PUK	Puka	1.77	338	Pn	Pb	04 19 27.8	0.0
PUK				Sn	Sg	04 19 52.2	+0.3
PUK				AML	AML	04 19 56.2	
	comp=N,0.7nm,0.9s						
KNT	Kendrikon	1.79	64	i Pn	Pn	04 19 26.4	+0.1
BCI	Bajram Curri	2.04	345	Pn	Pb	04 19 32.2	-0.1
BCI				Sn	Sb	04 19 59.5	+1.5
BCI				AML	AML	04 20 06.2	
	comp=N,0.7nm,0.8s						
PDG	Podgorica	2.33	331		Pn	04 19 34.6	+0.9
PDG	Podgorica	2.33	331	ePn	Pn	04 19 34.5	+0.8
PDG				eSn	Sb	04 20 06.3	0.0
BOSS	Bosilegrad	2.46	31	ePn	Pn	04 19 35.2	-0.3
BOSS				eSn	Sn	04 20 06.7	+0.8
BARS	Barje	2.54	18	i Pn	Pn	04 19 36.1	-0.5
BARS	Barje	2.54	18	ePn	Pn	04 19 36.1	-0.5
BARS				eSn	Sn	04 20 09.4	+1.5
SELS	Selova	2.83	5	ePn	Pn	04 19 41.7	+1.0
SELS				eSn	Sn	04 20 16.2	+1.1
SJES	Sjenica	2.92	349	ePn	Pn	04 19 42.3	+0.3
SJES				eSn	Sn	04 20 19.8	+2.3
GOCS	Kraljevo Serbi	3.17	1	ePn	Pn	04 19 46.0	+0.7
ZAPS	Zavoj	3.20	25	ePn	Pn	04 19 47.3	+1.7
ZAPS				eSn	Sn	04 20 24.4	+0.3
IVAS	Ivanjica	3.21	352	ePn	Pn	04 19 46.4	+0.5
GRUS	Gruza	3.49	359	ePn	Pn	04 19 50.7	+1.0
ZAGS	Zajecar	3.58	17	ePn	Pn	04 19 51.3	+0.4
BBLS	Lazi&#263i	3.61	344	ePn	Pn	04 19 53.0	+1.6
TRUS	Trudelj	3.84	356	ePn	Pn	04 19 54.9	+0.5
TEKS	Tekeris	4.25	348	ePn	Pn	04 20 00.3	+0.2
VYHS	Vyhne	8.21	351	ePN	Pn	04 20 49.6	-4.9
MODS	Modra-Piesok	8.36	344	ePN	Pn	04 20 51.8	-4.7
MODS				ePG	Pg	04 21 31.2	-3.6
MODS				eSN	Sn	04 22 15.9	-15
MODS				eSG	Sg	04 23 24.8	+1.8
STHS	Stebnicka Huta	9.03	2	ePN	Pn	04 21 01.1	-4.6
STHS				ePG		04 21 46.6	

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*IDC **06** 04:24:57.1±2.0, 21°.12S×173°.80W, h0^{km}, mb3.6/3, mbtmp3.6/4, ML4.7/1, MS3.1/1, Error ellipse: s-maj=89.9km s-min=33.3km az=161.0*

ISC 06 04:25:01.2±1.6**, 21°.1S**±0°.4×**173°.9W**±0°.2**, h26^{km}, n6, σ0ˢ.92**/6**, mb3.6**/3**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.35	292	Pn	Pn	04 27 00.9	+0.1
	0.3nm,0.3s,baz=27,slow=14,SNR=3.9						
MSVF				LR	LR	04 29 46.4	
	comp=Z,126nm,18.7s,baz=135,slow=34						
	5.0nm,0.8s						
ASAR	Alice Springs	48.16	257	P	P	04 33 40.2	+0.6
	0.4nm,0.7s,baz=94,slow=7.9,SNR=1.9						
	0.4nm,0.7s						
WRA	Warramunga Arr	48.36	262	P	P	04 33 41.1	-0.1
	0.8nm,0.8s,baz=96,slow=8.1,SNR=2.1						
	0.8nm,0.8s						
NVAR	Mina Array Bea	78.85	41	P	P	04 37 03.0	+0.7
	0.3nm,0.5s,baz=246,slow=8.7,SNR=2.8						
	0.3nm,0.5s						
AKASG	Malin Array Be	145.34	334	PKPbc	PKPbc	04 44 35.6	-0.8
	0.7nm,0.5s,baz=42,slow=4.0,SNR=8.9						
BRTR	Keskin Array B	150.08	314	PKPbc	PKPbc	04 44 49.0	-1.0
	0.4nm,0.7s,baz=33,slow=3.4,SNR=3.8						

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*IDC **06** 04:25:34.2±7.1, 31°.99S×179°.53W, h107^{km}±57^{km}, mb3.3/3, mbtmp3.8/4, Error ellipse: s-maj=52.8km s-min=31.0km az=50.0*

ISC 06 04:25:33.4±1.4**, 31°.9S**±0°.1×**179°.5W**±0°.3**, h100^{km}, n7, σ1ˢ.06**/8**, mb3.7**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.88	203	P	Pn	04 27 12.5	+0.9
	14nm,0.9s,baz=358,slow=4.2,SNR=11						
URZ				S	Sn	04 28 27.2	-1.2
	7.9nm,0.4s,baz=227,slow=23,SNR=11						

ASAR	Alice Springs	41.75	269	P	P	04 33 13.1	+0.1
	0.7nm,0.8s,baz=107,slow=7.6,SNR=5.3 0.7nm,0.8s						
WRA	Warramunga Arr	42.88	275	P	P	04 33 22.6	+0.4
	0.5nm,0.4s,baz=112,slow=8.1,SNR=5.0 0.5nm,0.4s						
QSPA	South Pole Qui	58.18	180	P	P	04 35 17.0	+0.3
	1.1nm,0.9s,baz=39,slow=2.3,SNR=5.7 1.1nm,0.9s						
FINES	FINESS Array B	146.11	338	PKPbc	PKPdf	04 45 00.8	+0.8
	0.7nm,0.5s,baz=46,slow=4.0,SNR=5.7						
HFS	Hagfors	150.46	347	PKPbc	PKPbc	04 45 11.7	-0.9
	0.3nm,0.3s,baz=101,slow=1.5,SNR=5.6						
BRTR	Keskin Array B	152.13	296	PKPbc	PKPbc	04 45 16.0	-1.3
	0.3nm,0.5s,baz=102,slow=4.8,SNR=2.3						

DJA 06 04:53:50.0±0.2**, 1°S**±2°×**12°0E**±°**, h10^{km}, M3.7**/12**, mb4.2**/1**, MLv3.5**/12**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCI	Palu	0.61	332	P	Pg	04 54 00.9	-1.1
APSI	Ampana	1.61	71	P	Pn	04 54 18.4	-0.1
TTSI	Tana Toraja	1.61	191	P	Pn	04 54 16.5	-2.1
MPSI	Mapaga	1.79	353	P	Pn	04 54 19.7	-1.3
SPSI	Sidrap Palu	2.52	188	P	Pn	04 54 31.4	+0.3
SPSI				S	Sn	04 55 03.2	+1.3
MRSI	Marisa	2.63	43	P	Pn	04 54 32.5	-0.1
MRSI				S	Sn	04 55 05.5	+0.8
LUWI	Luwuk	2.67	81	P	Pn	04 54 33.6	+0.5
LUWI				S	Sn	04 55 06.6	+1.0
BNSI	Bone	2.93	180	P	Pn	04 54 38.2	+1.5

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*SDD **06** 04:59:46.6±1.8, 19°.11N×69°.08W, h22^{km}±11^{km}, MD3.4, ML2.5, MW3.0*

*OSPL **06** 04:59:48.4±3.7, 19°.08N×69°.12W, h0^{km}±32^{km}, ML2.4*

*RSPR **06** 04:59:51.5, 19°.46N×68°.71W, h129^{km}±14^{km}, MD3.8/10*

ISC 06 04:59:45.8±0.9**, 19°.08N**±0°.04×**69°.07W**±0°.02**, h14**^{km}±8^{km}**, n36,** σ**1^{s}17**/45**, 15C-5D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMDR	Samana, DR	0.24	333	⇑ePg	Pg	04 59 51.2	+0.3
SMDR				eSg	Sg	04 59 55.8	+1.3
SMDR				IAML		04 59 55.9	
	comp=N,330nm,0.6s						
SMDR				IAML		04 59 56.2	
	comp=E,369nm,0.6s						
HATOM	Hato Mayor del	0.41	225	⇓ePg	Pb	04 59 54.7	-0.1
HATOM				⇑eSg	Sg	05 00 00.5	+0.9
HATOM				IAML		05 00 01.2	
	comp=E,108nm,0.2s						
HATOM				IAML		05 00 01.2	
	comp=N,140nm,0.3s						
HIDR	Higuey Centro	0.59	145	ePg	Pb	04 59 58.4	+0.5
HIDR				⇑eSg	Sb	05 00 06.8	+0.7
HIDR				IAML		05 00 07.6	
	comp=E,309nm,0.3s						
HIDR				IAML		05 00 08.3	
	comp=N,460nm,0.2s						
NADR	Nagua	0.79	291	ePg	Pb	05 00 00.8	-0.5
NADR				IAML		05 00 14.5	
	comp=E,421nm,0.3s						
NADR				IAML		05 00 14.5	
	comp=N,634nm,0.2s						
SDD	Santo Domingo	1.01	232	i P	Pg	05 00 04.7	-0.6
BANI	BANI	1.39	241	⇑ePg	Pn	05 00 11.0	0.0
BANI				⇑eSg	Sb	05 00 28.8	-0.7
BANI				IAML		05 00 31.4	
	comp=E,53nm,0.2s						
BANI				IAML		05 00 33.4	
	comp=N,76nm,0.3s						
ABDR	Alto Bandera	1.49	260	ePg	Pn	05 00 11.9	-0.6
ABDR				⇑eSg	Sn	05 00 32.6	+0.6
ABDR				IAML		05 00 38.5	
	comp=N,40nm,0.2s						
ABDR				IAML		05 00 40.3	
	comp=E,46nm,0.3s						
SC01	Santiago de lo	1.60	283	⇑ePg	Pn	05 00 13.8	+0.1
SC01				IAML		05 00 39.9	
	comp=E,62nm,0.3s						
SC01				IAML		05 00 43.8	
	comp=N,54nm,0.8s						
SC01	Santiago de lo	1.60	283	i P	Pb	05 00 14.4	-0.8
SC01				eS	Sg	05 00 37.5	+0.1
SC01				IAML		05 00 47.2	
	comp=Z,33nm,0.3s						
LUDR	Luperon	1.95	295	ePg	Pn	05 00 18.7	+0.3
LUDR				eSg	Sb	05 00 44.1	-1.2
LUDR				IAML		05 00 49.3	
	comp=N,189nm,0.3s						
LUDR				IAML		05 00 51.2	
	comp=E,160nm,0.3s						
AGPR	Aguadilla, PR	1.96	108	⇑eP	Pg	05 00 22.4	-1.0
AGPR	Aguadilla, PR	1.96	108	i P	Pb	05 00 21.4	+0.2
AGPR				eS	Sg	05 00 46.7	-2.1
AGPR				IAML		05 00 52.9	
	comp=Z,33nm,1.1s						
LSP	Las Mesas	2.09	115	⇑eP	Pb	05 00 22.9	-0.6
LSP	Las Mesas	2.09	115	eS	Sb	05 00 50.3	+1.0
SDDR	Presa de Saban	2.10	268	⇑ePg	Pb	05 00 22.7	-1.0
SDDR				eSg	Sb	05 00 51.1	+1.5
SDDR				IAML		05 00 58.1	
	comp=N,30nm,0.5s						
SDDR	Presa de Saban	2.10	268	i P	Pb	05 00 22.6	-1.1
SDDR				IAML		05 00 57.9	
	comp=Z,12nm,0.4s						
CRPR	Cabo Rojo, PR	2.15	119	⇑eP	Pg	05 00 27.0	0.0
CRPR	Cabo Rojo, PR	2.15	119	eS	Sg	05 00 54.2	-0.6
CRPR	Cabo Rojo, PR	2.15	119	i P	Pb	05 00 24.5	0.0
CRPR				IAML		05 01 02.6	
	comp=Z,26nm,1.5s						
MLPR	Magueyes Islan	2.22	119	⇓eP	Pg	05 00 27.6	-0.8
MLPR	Magueyes Islan	2.22	119	eS	Sb	05 00 54.2	+1.2
AOPR	Arecibo Observ	2.32	108	⇑eP	Pb	05 00 27.4	0.0
AOPR	Arecibo Observ	2.32	108	eS	Sb	05 00 56.5	+0.6
UUPR	Utuado, UPR, P	2.38	110	⇓eP	Pb	05 00 27.9	-0.5
UUPR	Utuado, UPR, P	2.38	110	eS	Sb	05 00 58.1	+0.5
LODU1	El Espartillar	2.39	253	i P	Pb	05 00 27.8	-0.7
LODU1				IAML		05 01 04.8	
	comp=Z,29nm,1.1s						
OBIP	Obispado Ponce	2.56	113	⇓eP	Pb	05 00 30.4	-1.0
OBIP	Obispado Ponce	2.56	113	eS	Sb	05 01 00.7	-2.0
CELP	Cerrillos	2.57	112	⇑eP	Pb	05 00 30.9	-0.7
CELP	Cerrillos	2.57	112	eS	Sb	05 01 01.6	-1.6
ECPR	Experimental S	2.68	106	⇑eP	Pb	05 00 30.8	-2.8
ECPR	Experimental S	2.68	106	eS	Sn	05 01 02.2	+1.4
PDPR	Patillas Dam,	3.08	109	⇓eP	Pb	05 00 37.6	-2.8
PDPR	Patillas Dam,	3.08	109	eS	Sn	05 01 12.2	+1.5
HUMP	Col San Antoni	3.20	106	⇑eP	Pn	05 00 37.8	+2.1
HUMP	Col San Antoni	3.20	106	eS	Sn	05 01 14.9	+1.4

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*RSNC **06** 05:07:29.8±0.7, 3°S±3°×8°0W±°, h27^{km}±6^{km}, M3.6, mb3.4, ML3.1*

*IGQ **06** 05:07:31.5±0.2, 3°S±1°×8°0W±°, h22^{km}±1^{km}, MLv3.7/36*

ISC 06 05:07:32.3±1.3**, 2°.56S**±0°.03×**79°.67W**±0°.03**, h49**^{km}±9^{km}**, n99,** σ**1^{s}37**/106**, 12C-13D, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MILO	Milagro-Astudi	0.30	21	⇓P	Pn	05 07 41.5	+0.1
MILO				S	Sn	05 07 50.8	+2.9
COHC	Cochancay	0.42	77	⇓P	Pn	05 07 41.2	-1.4
COHC				S	Sn	05 07 49.9	-0.1
COHC	Cochancay	0.42	77	P	Pn	05 07 41.3	-1.4
COHC				S	Sn	05 07 49.8	-0.2
GYE3	Ecuador-Guayaq	0.47	330	P	Pn	05 07 41.1	-2.1
GYE3				S	Sn	05 07 49.7	-1.2
AC07	Ecuador-Guayaq	0.52	322	S	Sn	05 07 52.1	+0.1
AC07				⇓P	Pn	05 07 43.0	-0.8
AGUAY	Guayaquil	0.58	330	⇓P	Pn	05 07 43.3	-1.2
ISPG	Isla Puna-Puer	0.65	231	S	Sn	05 07 59.6	+4.7
ISPG				⇑P	Pn	05 07 46.5	+1.0
PCRA	Pucara 2	0.66	166	⇓P	Pn	05 07 45.2	-0.8
MORR	Playas El Morr	0.68	263	⇑P	Pn	05 07 45.8	0.0
ACH2	Ecuador-Machal	0.71	192	P	Pn	05 07 45.6	-0.7
ACUE	Ecuador-Cuenca	0.79	116	P	Pn	05 07 47.3	-0.2
AZOG	Ecuador-Azogue	0.84	103	P	Pn	05 07 47.5	-0.7
ARNL	Arenillas	1.06	202	⇓P	Pn	05 07 49.4	-1.5
JSCH	Cashca Tororas	1.08	39	P	Pn	05 07 49.3	-2.2
AGRD	Ecuador-Guaran	1.18	34	P	Pn	05 07 50.6	-2.3
BOSC	San Juan Bosco	1.31	117	⇑P	Pn	05 07 54.6	+0.2
CHSH	Refugio Sur-Vo	1.33	37	P	Pn	05 07 53.3	-1.7
TAMH	Tambohuasha Ch	1.34	41	⇓P	Pn	05 07 53.8	-1.4
SALI	Salinas	1.38	286	P	Pn	05 07 55.1	-0.1
PORT	Chimborazo Vol	1.41	39	⇓P	Pn	05 07 55.0	-1.1
IGUA	Igualata	1.48	44	P	Pn	05 07 56.3	-0.8
LAMO	ALAMOR	1.48	194	P	Pn	05 07 56.3	-0.6
ALJ1	Ecuador-Loja-U	1.49	162	P	Pn	05 07 56.7	-0.4
PPLP	Puerto Lpez	1.50	312	P	Pn	05 07 57.3	+0.5
PPLP	Puerto Lpez	1.50	312	P	Pn	05 07 57.4	+0.5
PPLP	Puerto Lpez	1.50	312	P	Pn	05 07 54.0	-2.9
PPLP				S	Sn	05 08 12.3	-3.0
AQUE	Quevedo	1.51	7	P	Pn	05 07 55.8	-1.3
BMAS	Trigal station	1.58	48	⇓P	Pn	05 07 55.4	-2.9
ARRY	Arrayan	1.60	49	P	Pn	05 07 57.6	-1.0
BBIL	Ulba Tungurahu	1.61	47	P	Pn	05 07 58.9	+0.2
BPAT	Tungurahua Vol	1.62	50	P	Pn	05 07 58.2	-0.7
JUI6	Juive	1.65	47	P	Pn	05 07 58.8	-0.3
POND	Pondoa	1.66	47	P	Pn	05 07 58.7	-0.7
BULB	Ulba Tungurahu	1.68	48	P	Pn	05 07 59.3	-0.4
GONZ	Gonzanam	1.69	171	P	Pn	05 07 59.2	-0.6
PECV	Mancha de Ca P	1.81	348	P	Pn	05 08 01.2	-0.1
AMCR	Ecuador-Macara	1.82	189	P	Pn	05 07 59.7	-1.6
MCRA	Macar, Loja	1.82	189	⇑P	Pn	05 07 59.6	-1.7
MCRA	Macar, Loja	1.82	189	P	Pn	05 07 59.5	-1.8
MCRA				S	Sn	05 08 21.3	-1.9
ACHN	Ecuador-Chone-	1.90	347	P	Pn	05 08 03.9	+1.5
ISPT	Isla de la Pla	1.91	313	P	Pn	05 08 03.4	+0.9
AMNT	Manta-Manabi	1.93	326	P	Pn	05 08 04.4	+1.6
PUYO	Puyo, Santa Ro	1.95	57	P	Pn	05 08 04.9	+1.7
PIS1	Pisayambo	1.97	41	⇓P	Pn	05 08 04.5	+0.8
APUY	Puyo	2.00	57	P	Pn	05 08 05.4	+1.7
ILLI	Illinizas Sur	2.06	27	P	Pn	05 08 05.3	+0.3
ABH3	Manabi, Bahia	2.09	339	P	Pn	05 08 07.0	+2.0
PIAT	Ana Tenorio	2.09	42	P	Pn	05 08 06.0	+0.6
PIAT	Ana Tenorio	2.09	42	P	Pn	05 08 05.6	+0.2
BRRN	Barrancas-Volc	2.13	34	⇓P	Pn	05 08 06.9	+0.9
SLOR	San Lorenzo -	2.16	33	P	Pn	05 08 07.3	+0.9
VCES	Cotopaxi	2.16	36	⇑P	Pn	05 08 07.1	+0.7
TAIS	Taisha	2.17	85	⇓P	Pn	05 08 06.8	+0.7
BMOR	Cotopaxi Volca	2.18	34	P	Pn	05 08 07.8	+1.0
FLF1	Flavio Alfaro-	2.20	355	P	Pn	05 08 05.1	-1.3
FLF1	Flavio Alfaro-	2.20	355	P	Pn	05 08 05.0	-1.5
BNAS	Cotopaxi Volca	2.22	32	P	Pn	05 08 09.3	+2.1
SUCR	Mariscal Sucre	2.24	32	⇑P	Pn	05 08 08.6	+1.2
BREF	Cotopaxi Volca	2.24	33	⇑P	Pn	05 08 08.8	+1.2
BTAM	Cotopaxi Volca	2.26	34	⇑P	Pn	05 08 08.8	+1.0
TAMB	Tambo	2.26	35	P	Pn	05 08 09.0	+1.2
BVC2	Cotopaxi Volca	2.27	34	⇑P	Pn	05 08 09.0	+1.1
PITA	Cotopaxi Volc	2.34	32	⇓P	Pn	05 08 10.2	+1.4
ZUMB	Zumba	2.34	167	⇑P	Pn	05 08 08.7	+0.1
TOMA	Boca Toma-Volc	2.39	31	P	Pn	05 08 10.8	+1.3
ARDO	Archidona, Ten	2.43	50	P	Pn	05 08 09.9	+0.2
ANTM	Antisana-La Mi	2.48	36	P	Pn	05 08 13.1	+2.4
ANTG	Antisana-Guama	2.48	35	P	Pn	05 08 12.3	+1.5
ANTS	Antisana-Sarah	2.54	36	P	Pn	05 08 12.1	+0.5
HPAL	Hacienda Las P	2.54	24	P	Pn	05 08 11.8	+0.4
GGPT	Toaza - Volcan	2.55	24	P	Pn	05 08 12.1	+0.5
JUA2	San Juan 2	2.56	24	P	Pn	05 08 12.3	+0.5
ANTI	Antisana	2.58	36	P	Pn	05 08 12.4	+0.1
GGPC	Guagua Pichinc	2.60	24	⇑P	Pn	05 08 13.3	+0.9
TERV	Terraza Guagua	2.60	24	P	Pn	05 08 13.1	+0.7
PINO	Pino	2.61	24	P	Pn	05 08 13.3	+0.7
YANA	Yana	2.66	24	⇑P	Pn	05 08 13.8	+0.6
BV15	Puerto Quito-O	2.74	9	P	Pn	05 08 11.5	-2.4
PULU	Pululahua	2.82	24	P	Pn	05 08 16.0	+0.7
PAC1	Pacto, Paraso	2.94	17	P	Pn	05 08 16.1	-0.6
PAC1	Pacto, Paraso	2.94	17	P	Pn	05 08 15.2	-1.6
OTAV	Otavalo	3.03	24	P	Pn	05 08 18.9	+0.5
OTAV	Otavalo	3.03	24	P	Pn	05 08 18.5	+0.2
CAYR	Refugio Cayamb	3.05	33	P	Pn	05 08 19.3	+0.6
ANGU	Angureal	3.08	33	P	Pn	05 08 19.7	+0.7
CUSE	Cuicocha Este	3.12	24	P	Pn	05 08 20.0	+0.6
CUSE	Cuicocha Este	3.12	24	P	Pn	05 08 20.0	+0.6
CUIC	Cuicocha-Domo	3.13	25	P	Pn	05 08 20.4	+0.8
COTA	Cotacachi	3.17	25	P	Pn	05 08 21.2	+1.0
IMBA	Imbabura, San	3.18	28	P	Pn	05 08 21.4	+1.1
URCU	Urcuqui	3.30	25	P	Pn	05 08 23.2	+1.3
CHL1	Volc¡n Chiles	3.75	27	P	Pn	05 08 30.1	+1.9
TULM	Tulcn-Chalpat	3.76	30	P	Pn	05 08 19.4	-8.9
CHMA	Chilma	3.76	25	P	Pn	05 08 29.6	+1.5
ECEN	Cerro Negro	3.77	27	P	Pn	05 08 31.2	+2.7
CHL2	Volc¡n Chiles	3.77	28	P	Pn	05 08 30.5	+2.0
TUMC	Tumaco	4.46	12	P	Pn	05 08 37.2	-0.2
BBAC	Balboa, Cauca	5.16	28	P	Pn	05 08 47.9	+0.7
POPC	Popayan, Colom	5.88	31	P	Pn	05 08 55.9	-1.3

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*GCG **06** 05:33:19.0±0.6, 12°.80N×90°.83W, h14^{km}, MD4.3*

*CATAC **06** 05:33:22.5±0.6, 13°N±3°×9°1W±°, h11^{km}±4^{km}, M3.3/16, MLv3.3/16, Error ellipse: s-maj=6.7km s-min=5.8km az=5.1, confirmed*

*SNET **06** 05:33:23.9±0.9, 13°.04N×90°.61W, h13^{km}±7^{km}, ML3.0*

ISC 06 05:33:23.6±2.8**, 13°.0N**±0°.1×**90°.7W**±0°.1**, h24**^{km}**, n50,** σ**0^{s}62**/54**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAME	Alcaldia de Sa	1.07	38	P	Pn	05 33 42.3	-0.9
FAME	Alcaldia de Sa	1.07	38	S	Sn	05 33 57.6	+0.3
NUBE	Las Nubes	1.26	44	eP	Pn	05 33 45.2	-0.8
NUBE	Las Nubes	1.26	44	eP	Pn	05 33 45.2	-0.8
NUBE	Las Nubes	1.26	44	P	Pn	05 33 45.1	-0.9
NUBE	Las Nubes	1.26	44	S	Sn	05 34 02.1	-0.2
FG16	Alotenango, Sa	1.29	8	i P	Pb	05 33 47.7	+0.4
CEVE	Cerro Verde	1.33	51	eP	Pn	05 33 46.4	-0.6
CEVE	Cerro Verde	1.33	51	P	Pn	05 33 46.5	-0.4
CEVE	Cerro Verde	1.33	51	S	Sn	05 34 04.2	+0.2
LOAL	Lomas de Alarc	1.33	41	P	Pn	05 33 46.5	-0.3
LOAL	Lomas de Alarc	1.33	41	S	Sn	05 34 04.1	+0.2
SBLS	San Blas	1.33	51	eP	Pn	05 33 46.2	-0.8
SBLS				eP	Pn	05 33 46.3	-0.8
SLOZ	Alcaldia de Sa	1.35	40	eP	Pn	05 33 46.4	-0.7
SLOZ				eS	Sn	05 34 03.8	-0.5
SLOZ	Alcaldia de Sa	1.35	40	P	Pn	05 33 46.7	-0.4
SLOZ	Alcaldia de Sa	1.35	40	S	Sb	05 34 05.3	0.0
SNJE	San Jose	1.37	50	eP	Pn	05 33 46.8	-0.6
SNJE				eP	Pn	05 33 46.9	-0.6
JAYA	Jayaque - finc	1.37	61	eP	Pn	05 33 46.5	-0.9
JAYA				IAML		05 34 09.1	
	comp=Z,293nm,0.4s						
JAYA	Jayaque - finc	1.37	61	eP	Pn	05 33 46.4	-1.0
JAYA	Jayaque - finc	1.37	61	P	Pn	05 33 46.9	-0.6
JAYA	Jayaque - finc	1.37	61	S	Sb	05 34 05.7	-0.3
UNIC	Universidad Ca	1.48	48	eP	Pn	05 33 48.3	-0.6
UNIC				eS	Sn	05 34 07.6	0.0
UNIC	Universidad Ca	1.48	48	P	Pn	05 33 48.3	-0.6
UNIC	Universidad Ca	1.48	48	S	Sn	05 34 08.2	+0.7
CEDA	San Andres	1.49	57	P	Pn	05 33 49.5	+0.5
CEDA	San Andres	1.49	57	S	Sb	05 34 10.6	+1.2
PMON	Piamonte	1.52	62	eP	Pn	05 33 49.7	+0.3
PMON	Piamonte	1.52	62	P	Pn	05 33 49.3	-0.1
PMON	Piamonte	1.52	62	S	Sb	05 34 09.5	-0.5
UEES	Universidad Ev	1.58	63	P	Pn	05 33 51.0	+0.7
LOMA	Loma Larga	1.61	66	eP	Pn	05 33 51.3	+0.6
LOMA	Loma Larga	1.61	66	P	Pb	05 33 52.4	-0.4
LOMA	Loma Larga	1.61	66	S	Sb	05 34 12.5	-0.3
PAVA	Las Pavas	1.85	67	P	Pb	05 33 56.6	-0.3
PAVA	Las Pavas	1.85	67	S	Sb	05 34 18.5	-1.1
COEG	Centro de Oper	1.87	70	eP	Pn	05 33 54.1	-0.1
COEG				IAML		05 34 01.3	
	comp=Z,148nm,0.2s						
COEG	Centro de Oper	1.87	70	P	Pn	05 33 54.6	+0.4
COEG	Centro de Oper	1.87	70	S	Sn	05 34 18.7	+1.7
MTO3	Montecristo	1.90	42	i P	Pn	05 33 54.8	-0.1
MTO3	Montecristo	1.90	42	i P	Pn	05 33 54.7	-0.1
MTO3	Montecristo	1.90	42	P	Pn	05 33 54.9	+0.1
MTO3	Montecristo	1.90	42	S	Sn	05 34 19.0	+0.9
TECO	Alcaldia de Te	1.93	73	P	Pn	05 33 54.7	-0.4
SCLA	Alcaldia de Sa	2.03	69	P	Pn	05 33 57.3	+0.8
ESQI	Esquipulas	2.04	40	eP	Pn	05 33 56.9	+0.3
PQSS	Presa 15 de Se	2.16	73	P	Pn	05 33 58.5	+0.3
LCND	La Caada	2.74	83	P	Pn	05 34 05.9	-0.3
INTHN	La Esperanza I	2.83	62	P	Pn	05 34 08.2	+0.5
CHOHN	Orocuina	3.47	82	P	Pn	05 34 16.2	-0.1
LIMN	Finca el Limon	4.21	89	P	Pn	05 34 26.0	-0.5

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*IGQ **06** 05:46:41.3±0.2, 0°N±1°×7°8W±°, h7^{km}±1^{km}, MLv3.5/31*

*RSNC **06** 05:46:43.4±0.2, 0°N±2°×7°8W±°, h0^{km}, M3.2, mb3.9, ML2.9*

ISC 06 05:46:42.0±0.8**, 0°.42N**±0°.02×**78°.05W**±0°.02**, h12**^{km}±5^{km}**, n91,** σ**1^{s}16**/117**, 22C-9D, Colombia-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YAHU	Yahuarcocha	0.05	203	⇑P	Pg	05 46 43.9	-1.0
YAHU				S	Sg	05 46 45.8	-1.1
AAT1	Ecuador-Atunta	0.18	243	S	Sg	05 46 48.6	-0.8
AAT1				⇑P	Pg	05 46 46.0	-0.4
IMBA	Imbabura, San	0.20	227	S	Sg	05 46 50.6	+0.6
IMBA				⇑P	Pg	05 46 46.6	-0.1
URCU	Urcuqui	0.20	277	S	Sg	05 46 50.2	+0.2
URCU				⇓P	Pg	05 46 46.4	-0.3
ACOT	Cotacachi (Cas	0.25	242	S	Sg	05 46 52.2	+1.0
ACOT				⇑P	Pg	05 46 47.3	-0.1
AOTA	Otavalo	0.27	229	S	Sb	05 46 53.2	-0.4
AOTA				⇑P	Pb	05 46 48.0	-1.0
COTA	Cotacachi	0.30	254	⇑P	Pg	05 46 48.3	-0.1
LNGL	El Angel-Carch	0.33	9	S	Sg	05 46 53.5	0.0
LNGL				P	Pg	05 46 47.8	-1.1
CUIC	Cuicocha-Domo	0.33	250	S	Sg	05 46 53.6	+0.1
CUIC				⇑P	Pg	05 46 48.3	-0.5
CAYA	Cayambe	0.35	170	S	Sg	05 46 54.1	0.0
CAYA				⇓P	Pg	05 46 48.6	-0.7
CUSE	Cuicocha Este	0.36	253	S	Sg	05 46 54.6	+0.1
CUSE				⇑P	Pg	05 46 48.8	-0.8
CUSE	Cuicocha Este	0.36	253	P	Pg	05 46 48.7	-0.8
CUSE				S	Sg	05 46 54.4	-0.1
ANGU	Angureal	0.37	173	S	Sg	05 46 54.7	0.0
ANGU				⇓P	Pg	05 46 49.2	-0.5
CAYR	Refugio Cayamb	0.40	173	S	Sg	05 46 55.5	-0.2
CAYR				P	Pg	05 46 49.6	-0.6
TULM	Tulcn-Chalpat	0.40	42	S	Sg	05 46 55.9	+0.3
TULM				⇑P	Pg	05 46 49.9	-0.3
TULM	Tulcn-Chalpat	0.40	42	P	Pg	05 46 49.8	-0.3
TULM				S	Sg	05 46 55.5	-0.2
CHL2	Volc¡n Chiles	0.41	19	⇑P	Pg	05 46 49.9	-0.4
OTAV	Otavalo	0.43	246	⇑P	Pg	05 46 49.3	-1.5
OTAV	Otavalo	0.43	246	P	Pg	05 46 49.5	-1.3
OTAV				S	Sg	05 46 56.1	-0.6
ATUL	Tulcn	0.48	43	⇑P	Pg	05 46 51.5	-0.1
ALIT	Ecuador-Imbabu	0.49	321	P	Pg	05 46 50.5	-1.1
LITE1	Lita	0.49	321	P	Pg	05 46 49.6	-2.0
BONI	La Bonita	0.53	86	⇓P	Pg	05 46 51.4	-1.1
BONI	La Bonita	0.53	86	P	Pg	05 46 51.3	-1.1
BONI				S	Sg	05 46 58.5	-0.9
CMBC	Cumbal	0.57	24	P	Pg	05 46 53.5	+0.2
CMBC	Cumbal	0.57	24	P	Pg	05 46 53.4	+0.1
AV11	Acelerografo,	0.58	213	P	Pb	05 46 53.4	-0.8
PULU	Pululahua	0.59	229	⇑P	Pg	05 46 52.6	-1.1
AIMS	Ecuador-Tababe	0.61	210	P	Pb	05 46 54.1	-0.7
REVN	San Rafael	0.65	139	⇓P	Pg	05 46 53.7	-1.0
LAV4	Lava4-Reventad	0.66	140	P	Pg	05 46 54.0	-0.9
REVS	Reventador Sur	0.67	140	⇓P	Pg	05 46 54.3	-0.9
FENY	Casa Vinicio C	0.70	218	P	Pg	05 46 55.5	-0.3
YANA	Yana	0.74	224	P	Pg	05 46 55.3	-1.2
PAC1	Pacto, Paraso	0.75	259	⇓P	Pg	05 46 55.1	-1.6
PAC1	Pacto, Paraso	0.75	259	P	Pg	05 46 55.0	-1.6
PAC1				S	Sg	05 47 04.9	-1.7
CIVI	Edificio de In	0.76	215	P	Pg	05 46 56.6	-0.3
CASC	Dorado de Casc	0.77	111	⇓P	Pg	05 46 56.2	-0.7
PINO	Pino	0.80	224	⇑P	Pg	05 46 56.6	-1.0
TING	Casa Alexandra	0.80	210	P	Pb	05 46 57.4	-0.6
GGPC	Guagua Pichinc	0.80	223	P	Pg	05 46 56.5	-1.2
TERV	Terraza Guagua	0.80	223	⇑P	Pg	05 46 56.6	-1.1
AV03	Acelerografo,	0.82	116	P	Pg	05 46 56.8	-1.1
JUA2	San Juan 2	0.83	222	⇑P	Pg	05 46 56.8	-1.5
GGPT	Toaza - Volcan	0.85	222	⇑P	Pg	05 46 57.2	-1.4
ANTI	Antisana	0.86	187	⇑P	Pg	05 46 57.9	-1.0
HPAL	Hacienda Las P	0.87	224	⇑P	Pg	05 46 57.6	-1.3
ANTS	Antisana-Sarah	0.91	187	⇑P	Pg	05 46 58.5	-1.3
ANTG	Antisana-Guama	0.93	192	⇑P	Pg	05 46 58.9	-1.3
ANTM	Antisana-La Mi	0.96	190	⇑P	Pg	05 46 59.3	-1.4
APR2	Miler	0.97	250	P	Pg	05 46 59.9	-1.0
TOMA	Boca Toma-Volc	0.98	203	P	Pg	05 47 00.3	-0.8
PITA	Cotopaxi Volc	1.04	201	P	Pg	05 47 01.2	-1.0
GCUF	Volcan Galeras	1.07	41	P	Pg	05 47 01.8	-1.0
GCUF				S	Sb	05 47 17.5	+0.6
VC1	Cotopaxi 1	1.11	198	P	Pb	05 47 03.0	-0.4
BVC2	Cotopaxi Volca	1.12	199	P	Pg	05 47 03.0	-0.8
BTAM	Cotopaxi Volca	1.14	198	P	Pg	05 47 03.1	-0.9
SUCR	Mariscal Sucre	1.14	203	P	Pg	05 47 03.1	-0.9
BREF	Cotopaxi Volca	1.15	200	P	Pg	05 47 03.3	-0.9
TAMB	Tambo	1.15	196	P	Pg	05 47 03.3	-0.8
APS1	Acelerografo,	1.18	105	P	Pg	05 47 03.8	-0.9
BV15	Puerto Quito-O	1.20	258	P	Pg	05 47 03.3	-1.8
BMOR	Cotopaxi Volca	1.21	200	P	Pg	05 47 04.2	-1.2
SLOR	San Lorenzo -	1.22	201	P	Pg	05 47 04.5	-1.1
VCES	Cotopaxi	1.25	196	P	Pg	05 47 05.2	-1.0
BRRN	Barrancas-Volc	1.26	200	P	Pg	05 47 05.1	-1.3
ILLI	Illinizas Sur	1.31	211	P	Pg	05 47 05.4	-1.9
PIAT	Ana Tenorio	1.42	188	P	Pn	05 47 07.2	-0.7
PIAT	Ana Tenorio	1.42	188	P	Pn	05 47 07.1	-0.8
PIAT				S	Sg	05 47 25.0	-2.8
ARDO	Archidona, Ten	1.42	170	⇓P	Pn	05 47 07.4	-0.3
AV18	Acelerografo,	1.43	266	P	Pn	05 47 08.4	+0.7
TUMC	Tumaco	1.55	334	P	Pn	05 47 09.9	+0.5
CRUC	La Cruz	1.59	44	P	Pn	05 47 11.3	+1.0
CRUC				S	Sg	05 47 33.9	+0.6
BBAC	Balboa, Cauca	1.79	27	P	Pb	05 47 15.1	+0.3
BBAC	Balboa, Cauca	1.79	27	P	Pb	05 47 14.7	-0.1
BBAC				S	Sg	05 47 41.2	+1.6
POND	Pondoa	1.87	192	P	Pg	05 47 17.3	-0.6
JUI6	Juive	1.87	193	P	Pg	05 47 17.3	-0.8
PUYO	Puyo, Santa Ro	1.90	179	P	Pg	05 47 19.0	+0.6
BPAT	Tungurahua Vol	1.94	191	P	Pg	05 47 19.6	+0.2
ARRY	Arrayan	1.95	192	P	Pb	05 47 18.2	+0.5
BMAS	Trigal station	1.95	193	P	Pn	05 47 16.2	+0.9
PORT	Chimborazo Vol	2.00	201	P	Pb	05 47 18.6	-0.1
CHSH	Refugio Sur-Vo	2.06	203	P	Pb	05 47 19.8	+0.1
TAMH	Tambohuasha Ch	2.08	201	P	Pb	05 47 19.8	-0.1
POPC	Popayan, Colom	2.52	33	P	Pb	05 47 26.0	-1.3
POPC				S	Sg	05 48 01.8	-1.3
FLOC	Florencia	2.67	64	P	Pb	05 47 29.8	+0.1
FLOC				S	Sb	05 48 04.0	+1.6
COHC	Cochancay	3.10	203	P	Pb	05 47 38.9	+1.7
JAMC	Jamundi, Valle	3.10	26	P	Pb	05 47 37.7	+0.4
JAMC				S	Sg	05 48 19.2	-2.7
GARC	Garzon, Huila	3.11	55	P	Pb	05 47 34.8	-2.5
GARC				S	Sg	05 48 19.3	-2.6
PPLP	Puerto Lpez	3.35	234	P	Pn	05 47 37.2	+3.0
MCRA	Macar, Loja	5.12	202	P	Pn	05 48 03.2	+4.6

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*NNC **06** 06:29:49.9±2.9, 54°.39N×87°.73E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=24.2km s-min=17.9km az=177.0, Suspected Mining explosion.*

*ASRS **06** 06:29:53.0±0.8, 54°.26N×87°.13E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*IDC **06** 06:29:54.7±3.1, 54°.26N×87°.33E, h0^{km}, mbtmp3.0/2, ML2.5/2, Error ellipse: s-maj=25.8km s-min=17.1km az=60.0*

ISC 06 06:29:51.6±3.8**, 54°.4N**±0°.2×**87°.5E**±0°.2**, h0**^{km}**, n8,** σ**2^{s}14**/8**, 4C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.62	255	I	I	06 38 40.0	
	0.1nm,0.8s,baz=76,slow=317,SNR=25						
ZAA0	Zalesovo Array	1.62	255	⇑P	Pb	06 30 20.8	-1.5
	0.4nm,0.5s,baz=75,slow=17						
ZAA0				⇓S	Sg	06 30 45.5	+1.9
	5.1nm,1.0s						
ZALV	Zalesovo Beam	1.62	255	Pg	Pg	06 30 21.3	-1.3
	2.0nm,0.3s,baz=79,slow=17,SNR=15						
ZALV				Lg	Lg	06 30 43.4	
	1.6nm,0.3s,baz=75,slow=25,SNR=10						
KURK	Kurchatov	6.54	239	⇓Pn	Pn	06 31 30.0	+1.1
	1.1nm,0.8s						
KURK				⇓Lg	Lg	06 33 20.8	
	3.7nm,1.1s						
KURBB	Kurchatov Arra	6.64	239	Pn	Pn	06 31 32.6	+2.3
	0.1nm,0.3s,baz=56,slow=14,SNR=12						
KURBB				Lg	Lg	06 33 18.6	
	baz=46,slow=31,SNR=6.8 1.5nm,0.4s						

KURBB	Kurchatov Arra	6.64	239	⇑Pn	Pn	06 31 32.2	+2.0
	4.2nm,0.9s						
KURBB				⇑Lg	Lg	06 33 22.5	
	8.2nm,1.1s						
MK31	Makanchi Array	8.29	205	⇑Lg	Lg	06 34 16.3	
	2.9nm,1.0s,baz=85,slow=45,SNR=2.8						
MKAR	Makanchi Array	8.29	205	Pn	Pn	06 31 54.7	+1.6
	0.1nm,0.3s,baz=25,slow=12,SNR=3.6						
MKAR				Sn	Sn	06 33 25.9	-1.5
	0.1nm,0.3s,baz=35,slow=25,SNR=5.8						
MKAR				Lg	Lg	06 34 10.7	
	baz=23,slow=30,SNR=3.8						
	0.2nm,0.5s						

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*SDD **06** 06:33:46.0±2.1, 20°.08N×70°.17W, h29km±30km, MD3.5, ML2.7, MW3.4*
*OSPL **06** 06:33:47.5±2.5, 19°.96N×70°.16W, h0km±23km, ML2.2*
*SSNC **06** 06:33:48.1±0.5, 19°.92N×70°.18W, h10km±5km, MD3.5, ML2.5*
ISC 06 06:33:45.0±2.1**, 19°.96N**±0°.03×**70°.20W**±0°.05**, h14**km±16km**, n18, σ0ˢ.76**/32**, 14C-1D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SODR	Sosua Marina B	0.41	240	⇑*e*Pg	Pb	06 33 54.6	+0.5
SODR				⇑*e*Sg	Sn	06 34 03.2	-0.8
SODR				IAML		06 34 04.2	
	comp=N,641nm,1.5s						
NADR	Nagua	0.68	152	⇑*e*Pg	Pn	06 33 59.8	-0.4
NADR				⇑*e*Sg	Sn	06 34 10.7	+0.1
NADR				IAML		06 34 21.5	
	comp=N,193nm,0.3s						
LUDR	Luperon	0.72	265	⇑*e*Pg	Pb	06 33 59.4	+0.2
LUDR				⇑*e*Sg	Sn	06 34 10.8	-0.6
LUDR				IAML		06 34 18.9	
	comp=N,1µm,0.3s						
SC01	Santiago de lo	0.73	224	⇑*e*Pg	Pb	06 33 59.5	0.0
SC01				⇑*e*Sg	Sn	06 34 12.7	+0.9
SC01				IAML		06 34 23.4	
	comp=N,120nm,0.3s						
SC01	Santiago de lo	0.73	224	*i* P	Pn	06 34 00.4	-0.5
SC01				*e*S	Sn	06 34 11.4	-0.4
SC01				IAML		06 34 26.9	
	comp=Z,82nm,0.7s						
ABDR	Alto Bandera	1.21	200	⇑*e*Pg	Pb	06 34 08.2	+0.2
ABDR				⇑*e*Sg	Sn	06 34 24.3	+0.1
ABDR				IAML		06 34 27.2	
	comp=N,99nm,0.8s						
SDDR	Presa de Saban	1.42	227	*e*P	Pn	06 34 10.9	+0.5
SDDR				*e*S	Sn	06 34 28.2	-0.7
SDDR				IAML		06 34 33.2	
	comp=N,25nm,0.7s						
SDDR				IAML		06 34 34.0	
	comp=N,29nm,0.3s						
SDDR	Presa de Saban	1.42	227	⇓*e*Pg	Pn	06 34 11.0	+0.6
SDDR				⇑*e*Sg	Sb	06 34 29.9	+0.7
SDDR				IAML		06 34 32.9	
	comp=N,37nm,0.6s						
SDDR	Presa de Saban	1.42	227	*i* P	Pn	06 34 10.9	+0.5
SDDR				IAML		06 34 32.9	
	comp=Z,32nm,1.1s						
BANI	BANI	1.56	186	⇑*e*Pg	Pb	06 34 14.4	+0.6
BANI				⇑*e*Sg	Sg	06 34 35.4	-0.2
BANI				IAML		06 34 40.5	
	comp=N,80nm,0.2s						
GRTK	Grand Turk	1.78	331	*e*P	Pb	06 34 17.0	-0.4
GRTK				*e*S	Sn	06 34 38.2	+0.6
GRTK				*e*Sg	Sb	06 34 40.6	+1.0
GRTK				IAML		06 34 42.1	
	comp=N,67nm,0.2s						
GRTK				IAML		06 34 42.5	
	comp=N,94nm,0.4s						
GRTK	Grand Turk	1.78	331	*i* P	Pb	06 34 17.0	-0.4
GRTK				*e*S	Sb	06 34 41.0	+1.5
GRTK				IAML		06 34 44.1	
	comp=Z,31nm,0.3s						
HIDR	Higuey Centro	1.95	134	⇑*e*Pg	Pb	06 34 20.0	-0.3
HIDR				IAML		06 34 51.9	
	comp=N,44nm,0.2s						
LODU1	El Espartillar	2.00	217	*i* P	Pb	06 34 22.1	+0.8
LODU1				IAML		06 34 53.0	
	comp=Z,87nm,1.7s						
LOVI	El Cajuil, Ovi	2.42	208	*i* P	Pb	06 34 27.6	-0.7
LOBH	Bahia de las A	2.49	213	*i* P	Pb	06 34 28.0	-1.6
MASC	Masc	3.80	274	*e*P	Pn	06 34 43.5	+0.4
MASC				*e*S	Sn	06 35 26.6	-1.1
QMBU	Quimbuelo	4.35	274	*e*P	Pn	06 34 49.5	-1.2
QMBU				*e*S	Sn	06 35 40.3	-0.9
QMBU				IAML		06 35 44.4	
	comp=N,4.4nm,0.3s						
QMBU				IAML		06 35 45.0	
	comp=E,3.1nm,0.3s						

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*ISN **06** 06:47:26.8±1.0, 34°.61N×46°.30E, h8km±12km, ML2.8*
*TEH **06** 06:47:27.6, 34°.58N×46°.30E, h7km±50km*
ISC 06 06:47:28.1±1.1**, 34°.56N**±0°.04×**46°.29E**±0°.03**, h11**km±11km**, n15, σ0ˢ.99**/20**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDHR	Dehrash	0.16	30	Pg	Pg	06 47 31.3	-0.5
IGHG	Ghaleghazi	0.33	136	Pg	Pg	06 47 35.0	+0.2
GLG1	Gilan-e-Gharb	0.55	215	Pg	Pg	06 47 38.5	-0.4
KGS1	Ghasr-e-Shirin	0.58	264	Pg	Pg	06 47 39.3	-0.2
ILIN	Lien	0.66	57	Pg	Pg	06 47 40.1	-0.8
KCHF	Cheshme Sefid,	0.68	115	Pg	Pg	06 47 40.8	-0.6
KCHF				Sg	Sb	06 47 51.4	-0.3
ILBA	Ilam Banvizeh	0.94	184	Pg	Pb	06 47 46.2	-0.3
SNQR	Sonqor, Kerman	1.14	75	Pg	Pg	06 47 49.4	-0.6
IBZA	Bozab	1.30	94	Pg	Pg	06 47 52.6	-0.5
IBDR	Badra	1.48	192	*e*Pn	Pg	06 47 56.0	-0.6
IBDR				*e*Sn	Sg	06 48 17.0	+1.2
IBDR				AML	AML	06 48 22.5	
	comp=E,118nm,0.5s						
IBDR				AML	AML	06 48 22.6	
	comp=N,116nm,0.7s						
IKFM	Kafar-mosalman	1.66	128	Pg	Pg	06 47 59.5	-0.4
IKRK	Kirkuk	1.81	298	*e*Pn	Pn	06 48 00.0	+0.8
IKRK				*e*Sn	Sb	06 48 24.0	+0.1
IKRK				AML	AML	06 48 33.1	
	comp=N,190nm,0.6s						
IKRK				AML	AML	06 48 33.8	
	comp=E,115nm,0.4s						
HSAM	Samen	1.94	100	Pn	Pb	06 48 03.9	+0.2
BHD	Baghdad	2.05	231	*e*Pn	Pb	06 48 04.0	-1.3
BHD				*e*Sn	Sb	06 48 31.0	+0.2
RAFI	Al-Rafai	2.84	183	*e*Pn	Pn	06 48 15.0	+1.6
RAFI				*e*Sn	Sb	06 48 51.0	-2.5

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*IDC **06** 07:01:07.7±0.9, 5°.51S×35°.93E, h0km, mb3.9/8, mbtmp3.9/8, MS3.4/10, Error ellipse: s-maj=38.1km s-min=21.3km az=100.0*
*NEIC **06** 07:01:08.3±1.7, 5°.43S±0°.06×35°.9E±0°.1, h10km±2km, mb4.5/12, Error ellipse: s-maj=24.3km s-min=6.3km az=112.0*
ISC 06 07:01:08.1±0.7**, 5°.53S**±0°.08×**36°.0E**±0°.1**, h9**km**, n41, σ1ˢ.40**/28**, mb4.4**/12**, MS3.4**/9**, Tanzania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIBK	Kibwezi	3.79	33	Pn	Pn	07 02 04.7	-2.1
MBAR	Mbarara	7.15	313	Pn	Pn	07 02 51.1	-2.0
LODK	Lodwar	8.91	356	Pn	Pn	07 03 16.3	-0.9
LSZ	Lusaka	12.34	218		Pn	07 04 03.4	-0.8
LSZ	Lusaka	12.34	218	LR	LR	07 08 48.7	
	comp=Z,153nm,18.0s,baz=152,slow=37						
LSZ	Lusaka	12.34	218	*i* P	Pn	07 03 52.2	-12
CHIPN	CHIPINGE	14.97	192	*i* P	Pn	07 04 35.8	-4.3
KSANE	Kasane	16.13	220		Pn	07 04 55.9	+0.5
BLWY	Bulawayo	16.19	206	*i* P	Pn	07 04 44.7	-11
MUSN	Musina, Limpop	17.68	199	*i* P	Pn	07 05 02.4	-12
PHDHD	Phuduhudu	18.33	216	P	Pn	07 05 22.0	-0.8
PHDHD				IAmb	IAmb	07 05 24.1	
	comp=Z,25nm,0.7s						
MOPA	Mopani	18.42	193	*i* P	P	07 05 11.9	-12
LPHEP	Lephephe	20.23	208	P	P	07 05 43.3	-0.5
LPHEP				IAmb	IAmb	07 05 45.9	
	comp=Z,28nm,1.1s						
GRTLG	Ghanzi	21.26	221	P	P	07 05 54.8	-0.2
GRTLG				IAmb	IAmb	07 05 59.9	
	comp=Z,20nm,1.1s						
LBTB	Lobatse	21.78	206	P	P	07 06 00.3	-0.2
LBTB				IAmb	IAmb	07 06 04.5	
	comp=Z,26nm,1.0s						
LBTB	Lobatse	21.78	206	LR	LR	07 14 48.3	
	comp=Z,72nm,19.6s,baz=44,slow=38						
POGA	Pongola	22.07	190	P	P	07 06 05.5	+1.9
MAKGR	Makgori	22.82	207	P	P	07 06 11.7	0.0
MAKGR				IAmb	IAmb	07 06 17.6	
	comp=Z,25nm,1.1s						
BOSA	Boshof	25.11	203	P	P	07 06 33.7	+0.2
BOSA	Boshof	25.11	203	P	P	07 06 34.2	+0.7
	comp=Z,7.9nm,0.8s,baz=26,slow=8.3,SNR=9.5						
	comp=Z,7.9nm,0.8s						
TORD	Torodi Ar. Bea	38.76	299	P	P	07 08 33.6	+0.4
DBIC	Dimbokro	42.50	286	LR	LR	07 26 07.7	
	comp=Z,43nm,21.0s,baz=151,slow=35						
PALK	Pallekele	46.42	75	LR	LR	07 26 13.4	
	comp=Z,42nm,19.6s,baz=202,slow=32						
MDT	Midelt	54.18	318	LR	LR	07 34 34.4	
	comp=Z,42nm,18.6s,baz=126,slow=37						
AKASG	Malin Array Be	56.30	355	P	P	07 10 49.1	+0.1
	comp=Z,0.1nm,0.3s,baz=182,slow=6.4,SNR=5.5						
	comp=Z,0.1nm,0.3s						
DAVOX	Davos/Dischmat	56.98	339	LR	LR	07 35 58.1	
	comp=Z,17nm,18.4s,baz=96,slow=37						
ESDC	Sonseca Array	58.10	324	P	P	07 11 03.1	+1.0
	comp=Z,0.6nm,0.7s,baz=126,slow=6.5,SNR=4.2						
ESDC				LR	LR	07 39 20.0	
	comp=Z,27nm,18.9s,baz=132,slow=40						
	comp=Z,0.6nm,0.7s						
MAKZ	Makanchi	66.09	33	P	P	07 11 55.7	+0.1
MAKZ				IAmb	IAmb	07 11 57.2	
	comp=Z,2.5nm,0.9s						
MKAR	Makanchi Array	66.25	33	P	P	07 11 56.0	-0.7
MKAR	Makanchi Array	66.25	33	P	P	07 11 57.5	+0.8
	comp=Z,1.9nm,0.8s,baz=229,slow=6.1,SNR=14						
	comp=Z,1.9nm,0.8s						
CMAR	Chiang Mai Arr	66.48	67	P	P	07 11 60.0	+1.3
	comp=Z,0.9nm,0.3s,baz=259,slow=7.2,SNR=4.4						
	comp=Z,0.9nm,0.3s						
KURK	Kurchatov	66.95	28	P	P	07 12 00.2	-0.8
FIA1	FINESS Array S	67.21	355	P	P	07 12 00.8	-1.6
FINES	FINESS Array B	67.21	355		P	07 12 01.3	-1.1
FINES	FINESS Array B	67.21	355	P	P	07 12 04.6	+2.2
	comp=Z,0.4nm,0.5s,baz=116,slow=6.3,SNR=2.3						
	comp=Z,0.4nm,0.5s						
NOA	NORSAR Array B	69.12	347	P	P	07 12 14.9	+0.4
	comp=Z,0.3nm,0.5s,baz=157,slow=6.0,SNR=4.4						
	comp=Z,0.3nm,0.5s						
NRIK	Noril'sk	82.53	16	LR	LR	07 55 41.7	
	comp=Z,28nm,18.2s,baz=128,slow=40						
SPITS	Spitsbergen Ar	84.27	356	LR	LR	07 55 24.4	
	comp=Z,15nm,18.2s,baz=142,slow=39						
QSPA	South Pole Qui	84.53	180	P	P	07 13 42.9	+1.4
	comp=Z,1.3nm,0.8s,baz=254,slow=1.6,SNR=9.4						
	comp=Z,1.3nm,0.8s						
MDP	Montagnes des	89.09	275	LR	LR	07 50 58.6	
	comp=Z,28nm,21.4s,baz=228,slow=34						
NVAR	Mina Array Bea	139.77	328	PKP	PKiKP	07 20 39.7	-0.1
	comp=Z,0.6nm,0.7s,baz=126,slow=2.6,SNR=4.7						

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*OSPL **06** 07:01:57.9±1.0, 18°.86N×70°.08W, h107km±6km, ML2.5*
*SDD **06** 07:01:59.6±1.6, 18°.79N×70°.20W, h97km±11km, MD3.0, ML2.5, MW2.9*
*SSNC **06** 07:02:29.3±2.7, 18°.82N×73°.24W, h120km±94km, MD3.2, ML1.7*
ISC 06 07:01:55.3±1.8**, 18°.83N**±0°.07×**70°.21W**±0°.04**, h120**km±11km**, n19, σ1ˢ.45**/29**, 1D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABDR	Alto Bandera	0.40	267	*e*Pg	Pn	07 02 12.9	-0.2
ABDR				*e*Sg	Sn	07 02 24.2	-2.3
ABDR				IAML		07 02 26.7	
	comp=N,90nm,0.2s						
BANI	BANI	0.46	198	*e*Pg	Pn	07 02 14.3	+1.1
BANI				*e*Sg	Sn	07 02 24.8	-1.9
BANI				IAML		07 02 28.2	
	comp=N,297nm,0.1s						
SDD	Santo Domingo	0.47	143	*i* P	Pn	07 02 13.3	+0.3
SDD				*e*S	Sn	07 02 24.0	-2.4
SC01	Santiago de lo	0.77	321	*e*Pg	Pn	07 02 17.2	+2.0
SC01				*e*Sg	Sn	07 02 29.5	-0.9
SC01				IAML		07 02 32.2	
	comp=N,143nm,0.3s						
SC01	Santiago de lo	0.77	321	*i* P	Pn	07 02 16.3	+1.0
SC01				*e*S	Sn	07 02 30.5	+0.2
SC01				IAML		07 02 34.3	
	comp=Z,46nm,0.2s						
HATOM	Hato Mayor del	0.79	93	⇓*e*Pg	Pn	07 02 15.5	0.0
HATOM				*e*Sg	Sn	07 02 29.8	-0.8
HATOM				IAML		07 02 30.6	
	comp=N,61nm,0.2s						
SDDR	Presa de Saban	1.03	279	*e*S	Sn	07 02 35.2	+0.6
SDDR	Presa de Saban	1.03	279	*e*Pg	Pn	07 02 20.0	+2.3
SDDR				*e*Sg	Sn	07 02 34.7	0.0
SDDR				IAML		07 02 39.7	
	comp=N,57nm,0.9s						
SDDR	Presa de Saban	1.03	279	*i* P	Pn	07 02 19.3	+1.6
SDDR				*e*S	Sn	07 02 35.1	+0.5
SDDR				IAML		07 02 39.6	
	comp=Z,29nm,0.7s						
SDDR	Presa de Saban	1.03	279	*e*P	Pn	07 02 18.9	+1.2
SMDR	Samana, DR	1.07	65	*e*Pg	Pn	07 02 19.7	+1.7
SMDR				*e*Sg	Sn	07 02 35.0	-0.2
SMDR				IAML		07 02 38.7	
	comp=N,42nm,0.3s						
HIDR	Higuey Centro	1.44	99	*e*Pg	Pn	07 02 23.5	+1.6
HIDR				*e*Sg	Sn	07 02 41.5	-0.8
HIDR				IAML		07 02 46.0	
	comp=N,67nm,0.2s						
LOVI	El Cajuil, Ovi	1.50	227	*i* P	Pn	07 02 24.6	+1.7
LOVI				IAML		07 02 45.7	
	comp=Z,64nm,1.0s						
LOBH	Bahia de las A	1.66	235	*i* P	Pn	07 02 27.3	+2.6
LOBH				IAML		07 02 58.4	
	comp=Z,34nm,1.3s						
GRTK	Grand Turk	2.81	342	*i* P	Pn	07 02 39.8	+0.7
GRTK				IAML		07 03 14.0	
	comp=Z,14nm,1.1s						
MASC	Masc	4.02	290	*e*P	Pn	07 02 55.3	+0.1
MASC				*e*S	Sn	07 03 21.6	-20
MASC				IAML		07 03 25.5	
	comp=N,1.1nm,0.3s						
MASC				IAML		07 03 25.7	
	comp=E,7.6nm,0.2s						
QMBU	Quimbuelo	4.55	288	*e*P	Pn	07 03 01.7	-0.5
QMBU				*e*S	Sn	07 03 26.4	-28
QMBU				IAML		07 03 29.3	
	comp=E,8.2nm,0.4s						
QMBU				IAML		07 03 29.4	
	comp=N,6.2nm,0.3s						
GTBY	Guantanamo Bay	4.75	284	*e*P	Pn	07 03 03.2	-1.8
GTBY				*e*S	Sn	07 03 28.6	-30
PINC	Pinares de May	5.51	288	*e*P	Pn	07 03 14.3	-0.8
PINC				*e*S	Sn	07 03 48.1	-29
PINC				IAML		07 03 55.3	
	comp=N,1.6nm,0.1s						
PINC				IAML		07 03 55.3	
	comp=E,2.1nm,0.1s						

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*IDC **06** 07:15:20.2±2.9, 38°.36N×142°.68E, h0km, mb3.6/3, mbtmp3.5/4, ML2.6/1, Error ellipse: s-maj=67.8km s-min=35.4km az=71.0*
*JMA **06** 07:15:31.8±0.1, 38°.3N±0°.3×141°.8E±0°.5, h64km, MV3.3/39, E OFF MIYAGI PREF*
ISC 06 07:15:30.9±1.4**, 38°.22N**±0°.05×**141°.90E**±0°.10**, h62**km±8km**, n24, σ0ˢ.47**/31**, mb3.7**/3**, 5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	0.35	285	*i* P	Pn	07 15 42.2	+0.5
JIKH				S	Sn	07 15 49.5	0.0
JIO	Ouri	0.49	299	*i* P	Pn	07 15 43.3	+0.4
JIO				*i* S	Sn	07 15 51.5	-0.3
JKMT	Kesennumamotoy	0.68	331	*i* P	Pn	07 15 45.4	+0.3
JKMT				S	Sn	07 15 55.1	-0.3
OFUJ	Ofunato	0.88	348	*i* P	Pn	07 15 47.8	+0.2
OFUJ				S	Sn	07 15 59.4	-0.3
JMK	Ichinoseki	0.91	324	*i* P	Pn	07 15 48.2	+0.3
JMK				S	Sn	07 15 60.0	-0.4
JMM	Marumori	0.94	248	⇓*i*P	Pn	07 15 48.2	-0.1
JMM				⇓S	Sn	07 16 00.4	-0.7
JOU	Okura	0.98	279	⇓*i*P	Pn	07 15 48.9	0.0
JOU				⇓S	Sn	07 16 01.5	-0.6
JFK	Kawauchi	1.18	224	P	Pn	07 15 51.7	+0.4
JFK				S	Sn	07 16 06.5	-0.1
JOM	Ohasama	1.34	339	*i* P	Pn	07 15 54.0	+0.4
JOM				S	Sn	07 16 10.4	-0.1
JYK	Kaneyama	1.40	301	*i* P	Pn	07 15 54.2	0.0
JYK				*e*S	Sn	07 16 11.3	-0.4
JOTO	OTAMA OYAMA	1.40	243	*i* P	Pn	07 15 54.8	+0.5
JOTO				S	Sn	07 16 11.9	-0.1
JYS	Shirataka	1.44	271	*i* P	Pn	07 15 55.1	+0.2
JYS				S	Sn	07 16 13.2	+0.2
JRG	Rokugo	1.54	320	*i* P	Pn	07 15 56.7	+0.5
JRG				S	Sn	07 16 15.6	+0.4
JYA	Atsumi	1.76	283	⇓P	Pn	07 15 59.2	+0.1
MJAR	Matsushiro Arr	3.38	241	Pn	Pn	07 16 22.5	+1.2
	0.4nm,0.3s,baz=60,slow=9.4,SNR=15						
	2.4nm,0.3s						
H11N2	WAKE ISLAND Hy	28.45	123	T	T	07 51 44.7	
	baz=316,slow=76,SNR=6.6						
H11N1	WAKE ISLAND Hy	28.46	123	T	T	07 51 41.6	
	baz=316,slow=76,SNR=6.5						
H11N3	WAKE ISLAND Hy	28.46	123	T	T	07 51 44.9	
	baz=316,slow=76,SNR=9.3						
H11S1	WAKE ISLAND Hy	29.20	125	T	T	07 52 40.4	
	baz=317,slow=75,SNR=4.9						
H11S3	WAKE ISLAND Hy	29.20	125	T	T	07 52 37.0	
	baz=317,slow=75,SNR=5.8						
H11S2	WAKE ISLAND Hy	29.22	125	T	T	07 52 42.5	
	baz=317,slow=75,SNR=6.0						
MKAR	Makanchi Array	43.83	301	P	P	07 23 31.2	+0.5
	0.4nm,0.6s,baz=86,slow=9.0,SNR=4.4						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	45.59	307	P	P	07 23 45.0	+0.4
	0.5nm,0.4s,baz=81,slow=8.2,SNR=5.5						
	0.5nm,0.4s						
WRA	Warramunga Arr	58.28	188	P	P	07 25 18.2	-1.0
	0.5nm,0.6s,baz=6.4,slow=7.2,SNR=2.4						
	0.5nm,0.6s						

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*ASRS **06** 07:35:11.0±0.6, 53°.96N×86°.58E, h0km, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*
IDC 06 07:35:15.8±2.8**, 53°.93N×86°.55E, h0**km**, mbtmp2.6**/2**, ML2.4**/2**, Error ellipse: s-maj=23.0km s-min=13.8km az=63.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.02	272	I	I	07 42 00.0	
	baz=93,slow=318,SNR=5.3						
ZALV	Zalesovo Beam	1.02	272	Pg	Pg	07 35 34.6	-0.8
	0.5nm,0.3s,baz=86,slow=17,SNR=5.4						
ZALV				Lg	Lg	07 35 49.6	
	1.4nm,0.3s,baz=90,slow=31,SNR=8.3						
KURBB	Kurchatov Arra	5.93	239	Pn	Pn	07 36 45.9	+1.1
	0.1nm,0.3s,baz=57,slow=13,SNR=4.5						
	0.2nm,0.3s						
MKAR	Makanchi Array	7.64	203	Pn	Pn	07 37 09.2	+0.9
	0.1nm,0.3s,baz=25,slow=14,SNR=4.2						
	0.1nm,0.3s						

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*IDC **06** 07:38:59.2±0.9, 21°.19S×174°.55W, h0km, mb4.0/10, mbtmp4.0/10, MS3.5/7, Error ellipse: s-maj=31.8km s-min=24.2km az=116.0*
ISC 06 07:39:03.4±0.9**, 21°.2S**±0°.2×**174°.6W**±0°.2**, h27**km**, n19, σ0ˢ.95**/12**, mb4.0**/10**, MS3.4**/4**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	7.76	295	Pn	Pn	07 41 00.5	+5.8
	0.7nm,0.3s,baz=126,slow=14,SNR=22						
MSVF				LR	LR	07 43 50.6	
	comp=Z,699nm,19.9s,baz=88,slow=38						
RAR	Rarotonga	13.80	93	LR	LR	07 48 21.8	
	comp=Z,136nm,18.1s,baz=289,slow=41						
DZM	Mont Dzumac	17.68	264	LR	LR	07 47 48.4	
	comp=Z,138nm,18.9s,baz=96,slow=30						
PPT	Papeete	23.84	86	LR	LR	07 53 19.1	
	comp=Z,126nm,18.0s,baz=292,slow=36						
HNR	Honiara	27.16	292	LR	LR	07 54 08.6	
	comp=Z,64nm,18.6s,baz=134,slow=34						
JAY	Jayapura	47.31	287	LR	LR	08 07 56.7	
	comp=Z,36nm,18.1s,baz=350,slow=37						
ASAR	Alice Springs	47.49	257	P	P	07 47 36.6	+0.2
	3.0nm,1.0s,baz=92,slow=8.0,SNR=13						
	3.0nm,1.0s						
WRA	Warramunga Arr	47.68	262	P	P	07 47 36.5	-1.5
	1.6nm,0.9s,baz=95,slow=8.1,SNR=8.2						
	1.6nm,0.9s						
VNDA	Vanda	57.54	186	P	P	07 48 50.3	+0.2
	0.5nm,0.9s,baz=56,slow=3.6,SNR=1.9						
	0.5nm,0.9s						
QSPA	South Pole Qui	68.89	180	P	P	07 50 05.4	-0.2
	0.6nm,0.8s,baz=326,slow=11,SNR=1.5						
	0.6nm,0.8s						
MJAR	Matsushiro Arr	72.69	322	P	P	07 50 28.9	-0.1
	1.0nm,0.4s,baz=161,slow=5.8,SNR=4.7						
	1.0nm,0.4s						
ASAJ	Asahikawa	75.89	330	LR	LR	08 22 43.3	
	comp=Z,21nm,18.6s,baz=158,slow=35						
PETK	Petropavlovsk-	77.80	343	P	P	07 50 57.2	-0.8
	1.0nm,0.5s,baz=99,slow=4.5,SNR=5.2						
	1.0nm,0.5s						
NVAR	Mina Array Bea	79.36	42	P	P	07 51 07.2	0.0
	0.9nm,0.8s,baz=228,slow=8.9,SNR=6.3						
	0.9nm,0.8s						
KSRS	Korea Array	79.55	317	P	P	07 51 09.5	+1.6
	0.6nm,0.3s,baz=122,slow=6.0,SNR=4.8						
	0.6nm,0.3s						
ILAR	Eielson Array	88.30	11	P	P	07 51 52.2	+0.2
	0.4nm,0.8s,baz=215,slow=5.6,SNR=5.9						
	0.4nm,0.8s						
CMAR	Chiang Mai Arr	93.37	288	P	P	07 52 18.0	+1.3
	0.6nm,0.3s,baz=114,slow=3.4,SNR=6.3						
	0.6nm,0.3s						
AKASG	Malin Array Be	145.11	333	PKPbc	PKPbc	07 58 37.1	-0.6
	0.4nm,0.4s,baz=45,slow=3.4,SNR=7.9						
BRTR	Keskin Array B	149.65	314	PKPbc	PKPbc	07 58 50.2	-0.7
	1.6nm,1.1s,baz=128,slow=2.0,SNR=5.6						

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*IDC **06** 07:39:00.9±6.2, 34°.29S×179°.04E, h164km±42km, mb3.4/4, mbtmp3.9/5, Error ellipse: s-maj=62.1km s-min=20.2km az=49.0*
*WEL **06** 07:39:04.9±0.9, 35°S±8°×17°9E±1°2, h274km±10km, M4.3/12, ML4.4/10, MLv4.3/12, Error ellipse: s-maj=17.0km s-min=6.9km az=117.0, confirmed*
*NOU **06** 07:39:41.4, 37°.53S×177°.85E, h170km, MLv4.1/9, Off E. Coast of N. Island, N.Z.*
ISC 06 07:39:09.7±1.3**, 35°.05S**±0°.09×**178°.9E**±0°.1**, h250**km**, n55, σ1ˢ.81**/88**, mb3.4**/4**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	2.56	191	P	Pn	07 39 54.5	-2.9
MXZ				S	S	07 40 32.7	-2.6
WMGZ	Waiomatatini S	2.80	189	P	Pn	07 39 57.4	-2.6
WMGZ				S	S	07 40 40.8	+1.0
HAZ	Te Kaha	2.86	199	P	Pn	07 39 58.6	-2.0
HAZ				S	S	07 40 39.9	-0.9
PKGZ	Pakihiroa	2.90	194	P	Pn	07 39 58.8	-2.2
PKGZ				S	S	07 40 42.7	+1.0
PUZ	Puketiti	3.07	190	P	Pn	07 39 59.8	-3.0
PUZ				S	S	07 40 44.7	-0.3
RUGZ	Raukumara Rang	3.08	199	P	Pn	07 40 00.9	-2.3
RUGZ				S	S	07 40 44.0	-1.5
TWGZ	Tauwhareparae	3.21	194	P	Pn	07 40 04.3	-0.2
TWGZ				S	S	07 40 50.3	+2.3
OPRZ	Ohinepanea	3.39	214	P	Pn	07 40 06.0	-0.3
OPRZ				S	S	07 40 53.7	+2.4
MWZ	Matawai	3.47	199	P	Pn	07 40 05.4	-2.0
MWZ				S	S	07 40 53.8	+0.7
CNGZ	Carnagh Statio	3.48	189	P	Pn	07 40 05.4	-2.0
TKGZ	Te Karaka	3.50	194	P	Pn	07 40 05.8	-1.8
TKGZ				S	S	07 40 55.3	+1.7
URZ	Urewera	3.52	204	P	Pn	07 40 06.6	-1.3
	14nm,0.3s,baz=26,slow=2.2,SNR=68						
URZ				S	S	07 40 53.5	-0.6

	29nm,0.5s,baz=115,slow=8.8,SNR=4.1						
URZ	Urewera	3.52	204	P	Pn	07 40 06.8	-1.1
URZ	Urewera	3.52	204	P	Pn	07 40 06.6	-1.3
URZ				S	S	07 40 55.2	+1.0
RAGZ	Rawiri	3.65	199	P	Pn	07 40 07.7	-1.8
RAGZ				S	S	07 40 59.0	+2.1
RIGZ	Rimuhau	3.77	194	P	Pn	07 40 07.8	-3.0
MUGZ	Murupara	3.84	206	P	Pn	07 40 10.7	-0.8
MUGZ				S	S	07 41 00.8	+0.1
WCZ	Waipu Caves	3.85	255	P	Pn	07 40 09.1	-2.6
RTZ	Ruatahuna	3.89	203	P	Pn	07 40 10.8	-1.4
RTZ				S	S	07 41 02.7	+0.8
SNGZ	Shannon Statio	3.94	198	P	Pn	07 40 10.9	-1.9
SNGZ				S	S	07 41 04.7	+1.9
PRGZ	Paritu Road	3.96	192	P	Pn	07 40 12.0	-1.0
PRRZ	Plateau Road	4.00	210	P	Pn	07 40 13.2	-0.3
PRRZ				S	S	07 41 06.6	+2.5
KNZ	Kokohu	4.09	194	P	Pn	07 40 13.5	-1.0
KNZ				S	S	07 41 07.2	+1.2
RAHZ	Arahi	4.13	200	P	Pn	07 40 13.8	-1.2
RAHZ				S	S	07 41 08.7	+1.7
MTHZ	Maungataniwha	4.15	203	P	Pn	07 40 14.0	-1.2
MTHZ				S	S	07 41 09.0	+1.7
MHGZ	Mahia Peninsul	4.18	191	P	Pn	07 40 14.3	-1.2
WHHZ	Waihua	4.24	198	P	Pn	07 40 15.1	-1.2
WHHZ				S	S	07 41 10.9	+1.6
MRHZ	Matea Rd	4.28	207	P	Pn	07 40 16.1	-0.7
MRHZ				S	S	07 41 12.5	+2.3
NMHZ	Naumai	4.38	202	P	Pn	07 40 17.9	-0.2
NMHZ				S	S	07 41 14.8	+2.3
ARHZ	Aropaoanui	4.48	200	P	Pn	07 40 17.3	-1.8
ARHZ				S	S	07 41 16.4	+2.0
BKZ	Black Stump Fm	4.55	205	P	Pn	07 40 18.2	-1.8
BKZ	Black Stump Fm	4.55	205	S	S	07 40 45.3	-31
BKZ	Black Stump Fm	4.55	205	P	Pn	07 40 18.9	-1.1
BKZ				S	S	07 41 16.5	+0.5
MCHZ	McNeill Hill	4.74	202	P	Pn	07 40 21.3	-0.9
MCHZ				S	S	07 41 22.8	+2.8
HIZ	Hauiti	4.76	222	P	Pn	07 40 25.0	+2.5
KAHZ	Kahuranaki	5.01	198	P	Pn	07 40 24.9	-0.7
KAHZ				S	S	07 41 27.9	+1.7
PXZ	Pawanui	5.24	198	P	Pn	07 40 26.4	-1.9
PXZ				S	S	07 41 30.8	-0.3
PNHZ	Pukenui	5.32	203	P	Pn	07 40 27.0	-2.4
PNHZ				S	S	07 41 32.9	-0.1
TSZ	Takapari Road	5.53	204	P	Pn	07 40 30.1	-1.9
MRZ	Mangatainoka R	6.20	204	P	Pn	07 40 38.2	-2.0
MRZ				S	S	07 41 50.8	-1.9
OGWZ	Otaki Gorge	6.48	206	P	Pn	07 40 41.8	-2.0
OGWZ				S	S	07 41 58.7	-0.5
KIW	Kapiti Island	6.62	208	P	Pn	07 40 42.9	-2.5
KIW				S	S	07 42 00.4	-1.8
MSWZ	Moikau Station	6.99	203	P	Pn	07 40 48.1	-2.0
MSWZ				S	S	07 42 08.0	-2.7
BHW	Baring Head	7.11	206	P	Pn	07 40 49.1	-2.5
BHW				S	S	07 42 12.4	-1.1
TCW	Tory Channel	7.16	209	P	Pn	07 40 49.4	-2.9
TCW				S	S	07 42 13.6	-1.1
QRZ	Quartz Range	7.67	219	P	Pn	07 40 59.0	+0.3
KHZ	Kahutara	8.48	208	P	Pn	07 41 05.8	-3.1
CTZ	Chatham Island	9.33	160	P	P	07 41 28.4	+2.0
ODZ	Otahua Downs	11.82	210	P	Pn	07 41 50.2	-0.8
JCZ	Jackson Bay	11.93	218	P	P	07 41 54.5	-1.0
ASAR	Alice Springs	40.55	274	P	P	07 46 24.6	-0.6
	0.5nm,0.4s,baz=113,slow=7.6,SNR=12						
	0.5nm,0.4s						
WRA	Warramunga Arr	41.97	279	P	P	07 46 35.7	-1.0
	0.4nm,0.3s,baz=118,slow=7.9,SNR=9.8						
	0.4nm,0.3s						
QSPA	South Pole Qui	55.07	180	P	P	07 48 21.7	+6.1
	2.2nm,0.5s,baz=252,slow=0.5,SNR=32						
	2.2nm,0.5s						
SNAA	Sanae	73.57	179	P	P	07 50 18.7	+3.7
	0.5nm,0.5s,baz=190,slow=11,SNR=7.3						
	0.5nm,0.5s						
FINES	FINESS Array B	148.45	335	PKPbc	PKPbc	07 58 23.8	-2.1
	0.6nm,0.7s,baz=90,slow=1.8,SNR=1.5						

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*ASRS **06** 08:00:47.0±0.9, 54°.12N×86°.40E, h0^{km}, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 06 08:00:49.6±2.8**, 54°.13N×86°.45E, h0^{km}, mbtmp2.8**/2**, ML2.7**/2**, Error ellipse: s-maj=22.9km s-min=13.4km az=59.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.98	260	I	I	08 07 10.0	
	baz=78,slow=312,SNR=2.0						
ZALV	Zalesovo Beam	0.98	260	Pg	Pg	08 01 07.0	-1.2
	1.1nm,0.3s,baz=79,slow=17,SNR=14						
ZALV				Lg	Lg	08 01 22.7	
	1.4nm,0.3s,baz=81,slow=29,SNR=5.6						
KURBB	Kurchatov Arra	5.98	237	Pn	Pn	08 02 20.1	+0.8
	0.1nm,0.3s,baz=54,slow=13,SNR=5.2						
	0.4nm,0.4s						
MKAR	Makanchi Array	7.80	202	Pn	Pn	08 02 45.6	+1.2
	0.2nm,0.3s,baz=21,slow=13,SNR=5.7						
	0.2nm,0.3s						

ASRS 06 08:01:27.0±1.1**, 55°.07N×83°.79E, h0^{km}, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

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*IDC **06** 08:04:26.0±0.8, 17°.75S×172°.13W, h0^{km}, mb4.1/8, mbtmp4.1/9, ML4.7/1, MS3.7/17, Error ellipse: s-maj=35.7km s-min=19.6km az=147.0*

*NEIC **06** 08:04:26.6±1.0, 17°.69S±0°.02×171°.84W±0°.08, h10^{km}±1^{km}, mb4.7/24, Error ellipse: s-maj=13.2km s-min=3.0km az=82.0*

ISC 06 08:04:26.6±0.5**, 17°.76S**±0°.08×**171°.89W**±0°.09**, h10^{km}, n67, σ1^{s}21**/47**, mb4.7**/20**, MS3.7**/15**, 1D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	2.27	125		Pn	08 05 03.6	-0.7
AFI	Afiamalu	3.83	2		Pn	08 05 22.4	-3.4
FUTU	Fugatoga	6.91	299	Pn	Pn	08 06 09.1	+1.1
MSVF	Nonsavu	9.59	269		Pn	08 06 45.0	+0.1
MSVF	Nonsavu	9.59	269	Pn	Pn	08 06 43.8	-1.1
	0.2nm,0.3s,baz=124,slow=13,SNR=9.4						
MSVF				LR	LR	08 09 55.6	
	comp=Z,728nm,19.7s,baz=71,slow=35						
	13nm,1.0s						
RAR	Rarotonga	11.93	109	LR	LR	08 10 48.4	
	comp=Z,326nm,20.2s,baz=292,slow=32						
RAO	Raoul Island	12.70	205	Pn	Pn	08 07 27.7	+0.3
RAO	Raoul Island	12.70	205	Pn	Pn	08 07 27.4	0.0
	153nm,0.3s,baz=316,slow=17,SNR=4.2						
DZM	Mont Dzumac	20.81	255	eLR	LR	08 14 04.2	
	428nm,25.1s						
DZM	Mont Dzumac	20.81	255	LR	LR	08 15 30.1	
	comp=Z,284nm,21.7s,baz=174,slow=32						
PPT2	Papeete2	21.26	93	eP	P	08 09 10.1	-3.2
	20nm,21.0s						
PPT2				eLR	LR	08 14 06.8	
	266nm,27.2s						
PPT2				eLR	LR	08 14 12.9	
	386nm,24.8s						
PPT2				eLR	LR	08 14 14.9	
	318nm,24.0s						
PPT	Papeete	21.26	93	LR	LR	08 15 23.5	
	comp=Z,123nm,18.7s,baz=284,slow=31						
TBI	Tubuai	21.71	109	eLR	LR	08 14 25.8	
	2μm,29.5s						
TOZ	Tahuroa Road	22.77	207	P	P	08 09 29.6	+0.4
BFZ	Birch Farm	25.03	202	P	P	08 09 52.6	+1.7
HNR	Honiara	28.57	283	LR	LR	08 20 25.3	
	comp=Z,124nm,18.7s,baz=76,slow=34						
TAOE	Nuku Hiva Isla	32.09	78	eLR	LR	08 19 07.4	
	222nm,25.8s						
RKT	Rikitea	34.93	105	eLR	LR	08 20 23.4	
	769nm,24.8s						
STKA	Stephens Creek	44.17	242	LR	LR	08 27 49.4	
	comp=Z,103nm,18.3s,baz=29,slow=32						
BBOO	Buckleboo	48.93	242	P	P	08 13 12.8	-0.4
BBOO				IAmb	IAmb	08 13 13.9	
	comp=Z,7.2nm,0.9s						
WR8	Warramunga Arr	50.61	258	P	P	08 13 25.0	-1.2
WRA	Warramunga Arr	50.76	258	P	P	08 13 25.3	-2.0
	comp=Z,2.8nm,0.8s,baz=98,slow=7.9,SNR=15						
WRA				LR	LR	08 32 51.8	
	comp=Z,114nm,19.8s,baz=20,slow=34						
	comp=Z,2.8nm,0.8s						
AS31	Alice Springs	50.80	254		P	08 13 26.9	-0.7
ASAR	Alice Springs	50.80	254		P	08 13 26.8	-0.9
ASAR	Alice Springs	50.80	254	P	P	08 13 26.6	-1.0
	comp=Z,15nm,0.8s,baz=91,slow=8.5,SNR=109						
ASAR				LR	LR	08 34 05.9	
	comp=Z,67nm,19.0s,baz=100,slow=35						
	comp=Z,15nm,0.8s						
PSA00	Pilbara Seismi	63.94	254	P	P	08 14 58.9	-1.6
NWAO	Narrogin (SRO)	64.75	241	LR	LR	08 40 39.9	
	comp=Z,34nm,20.6s,baz=68,slow=34						
DAV	Davao City (W)	66.47	286	LR	LR	08 41 05.1	
	comp=Z,24nm,21.2s,baz=182,slow=33						
QSPA	South Pole Qui	72.30	180	P	P	08 15 53.4	+1.1
QSPA	South Pole Qui	72.30	180	P	P	08 15 53.7	+1.4
	comp=Z,2.9nm,1.1s,baz=29,slow=0.9,SNR=3.2						
	comp=Z,2.9nm,1.1s						
NVAR	Mina Array Bea	75.13	41	P	P	08 16 10.5	+1.1
	comp=Z,0.8nm,0.9s,baz=238,slow=9.4,SNR=4.4						
	comp=Z,0.8nm,0.9s						
KSRS	Korea Array	78.85	315	P	P	08 16 31.4	+1.3
	comp=Z,2.3nm,1.1s,baz=125,slow=6.3,SNR=5.1						
	comp=Z,2.3nm,1.1s						
KSAR	Wonju Array Be	78.87	315		P	08 16 30.8	+0.6
O19K	Port Alsworth	78.98	9	P	P	08 16 30.6	+0.4
O19K				IAmb	IAmb	08 16 47.3	
	comp=Z,8.2nm,1.1s						
K15K	Wolf Creek Mou	80.21	5		P	08 16 38.2	+1.3
TXAR	Lajitas Array	80.74	55	P	P	08 16 43.0	+2.3
	comp=Z,2.0nm,1.1s,baz=205,slow=5.5,SNR=10.0						
TXAR				LR	LR	08 46 10.4	
	comp=Z,22nm,21.3s,baz=274,slow=31						
	comp=Z,2.0nm,1.1s						
ANMO	Albuquerque	81.22	49	LR	LR	08 44 21.0	
	comp=Z,43nm,20.5s,baz=26,slow=29						
BELA	Belgrano 2	81.47	172	P	P	08 16 44.6	+1.0
H03N2	Juan Fernandez	82.81	123	T	T	09 49 33.0	
	baz=248,slow=73,SNR=12						
H03N3	Juan Fernandez	82.81	123	T	T	09 49 34.3	
	baz=248,slow=73,SNR=10						
H03N1	Juan Fernandez	82.82	123	T	T	09 49 34.4	
	baz=248,slow=73,SNR=11						
J20K	Nowinta River	82.82	8		P	08 16 50.1	-0.7
J20K				IAmb	IAmb	08 16 52.7	
	comp=Z,6.7nm,1.1s						
PDAR	Pinedale Array	83.06	41	P	P	08 16 55.1	+2.4
	comp=Z,0.4nm,0.5s,baz=117,slow=2.3,SNR=4.3						
	comp=Z,0.4nm,0.5s						
WRH	Wood River Hil	84.00	10	P	P	08 16 56.4	-0.4
WRH				IAmb	IAmb	08 16 58.5	
	comp=Z,8.8nm,1.1s						
CCB	Clear Creek Bu	84.21	10		P	08 16 57.9	+0.1
CCB				IAmb	IAmb	08 17 08.7	
	comp=Z,6.4nm,1.2s						
G19K	Purcell Mounta	84.39	6	P	P	08 16 57.3	-1.4
G19K				IAmb	IAmb	08 17 01.1	
	comp=Z,6.7nm,1.1s						
COLA	College	84.41	10	P	P	08 16 58.8	0.0
I23K	Minto, Yukon-K	84.42	9	P	P	08 16 58.4	-0.5
I23K				IAmb	IAmb	08 17 18.5	
	comp=Z,4.1nm,1.1s						
ILAR	Eielson Array	84.48	10	P	P	08 16 58.4	-0.8
ILAR	Eielson Array	84.48	10	P	P	08 16 59.4	+0.2
	comp=Z,0.8nm,0.8s,baz=215,slow=5.7,SNR=9.2						
	comp=Z,0.8nm,0.8s						
IMAR	Indian Mountai	84.61	7	P	P	08 16 59.4	-0.4
L29M	L29M	84.82	15	P	P	08 17 00.6	-0.5
L29M				IAmb	IAmb	08 17 03.6	
	comp=Z,4.1nm,0.9s						
J26L	Joseph Creek	84.85	12		P	08 17 00.7	-0.5
F19K	Shaleruckik Mo	85.00	6		P	08 17 01.5	-0.3
F19K				IAmb	IAmb	08 17 03.8	
	comp=Z,7.5nm,0.9s						
G21K	Allakaket	85.15	7		P	08 17 02.6	+0.1
G21K				IAmb	IAmb	08 17 04.9	
	comp=Z,7.1nm,1.1s						
E18K	Tukpahlearik C	85.34	4		P	08 17 03.4	-0.1
E18K				IAmb	IAmb	08 17 05.9	
	comp=Z,9.3nm,1.1s						
DAWY	Dawson	85.35	14	P	P	08 17 03.1	-0.5
DAWY				IAmb	IAmb	08 17 06.0	
	comp=Z,4.2nm,1.0s						
K29M	Barlow Dome	85.59	15	P	P	08 17 05.5	+0.5
E19K	Redstone River	85.66	6		P	08 17 04.5	-0.6
SNAA	Sanae	90.48	177	LR	LR	08 57 43.1	
	comp=Z,42nm,18.2s,baz=308,slow=35						
SYO	Syowa Base	90.57	191	⇓eP	P	08 17 28.0	-0.7
NNA	Nana	91.11	103	LR	LR	08 50 03.8	
	comp=Z,38nm,18.2s,baz=194,slow=30						
ATAH	Atahualpa	91.16	98	LR	LR	08 49 05.8	
	comp=Z,47nm,21.3s,baz=260,slow=29						
CMAR	Chiang Mai Arr	94.72	288	LR	LR	08 56 25.9	
	comp=Z,19nm,21.3s,baz=260,slow=33						
LPAZ	La Paz	97.65	110	LR	LR	08 53 46.9	
	comp=Z,44nm,19.1s,baz=228,slow=30						
CLL	Collm	146.31	354	i (PKPbc)	PKPab	08 24 08.6	+0.4
	comp=Z,12nm,1.2s						
CLL				i x	x	08 24 17.7	
	comp=Z,13nm,1.2s						
CLL				ex	x	08 25 15.0	
BRTR	Keskin Array B	148.89	320	PKPbc	PKiKP	08 24 16.1	-0.4
	comp=Z,1.0nm,0.9s,baz=119,slow=1.5,SNR=6.2						

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*ASRS **06** 08:05:28.0±1.5, 53°.74N×91°.07E, h0^{km}, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 06 08:05:34.0±3.9**, 53°.59N×90°.88E, h0^{km}, mbtmp2.8**/3**, ML2.1**/3**, Error ellipse: s-maj=34.6km s-min=26.7km az=28.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	3.61	278	I	I	08 27 19.3	
	0.1nm,1.1s,baz=90,slow=314,SNR=35						
ZALV	Zalesovo Beam	3.61	278	Pn	Pn	08 06 31.7	+0.5
	0.2nm,0.3s,baz=90,slow=16,SNR=6.1						
ZALV				Lg	Lg	08 07 27.7	
	0.3nm,0.3s,baz=96,slow=24,SNR=5.9						
	1.3nm,0.6s						
KURBB	Kurchatov Arra	8.16	254	Pn	Pn	08 07 32.8	-0.8
	0.1nm,0.3s,baz=67,slow=15,SNR=2.3						
KURBB				Sn	Sn	08 09 06.3	-0.1
	baz=67,slow=26,SNR=4.8						
KURBB				Lg	Lg	08 09 52.5	
	baz=61,slow=33,SNR=8.5						
	0.3nm,0.3s						
MKAR	Makanchi Array	8.75	222	Pn	Pn	08 07 42.7	+1.0
	baz=40,slow=14,SNR=2.2						
MKAR				Lg	Lg	08 10 07.5	
	baz=36,slow=25						
	0.2nm,0.6s						

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*NOU **06** 08:07:55.7, 18°.57S×171°.88W, h200^{km}, mb4.3/9, Tonga Islands Region*

*IDC **06** 08:08:58.4±11.0, 20°.20S×176°.73W, h408^{km}±103^{km}, mb3.4/3, mbtmp4.3/4, Error ellipse: s-maj=89.8km s-min=36.7km az=47.0*

ISC 06 08:08:38.4±2.1**, 19°.6S**±0°.3×**175°.8W**±0°.2**, h250^{km}, n10, σ1^{s}26**/10**, mb3.5**/3**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKBA	Tubou, Lakemba	3.12	294	P	Pn	08 09 31.2	-1.0
MSVF	Nonsavu	6.09	286	P	Pn	08 10 09.2	+1.5
YATNC	Mamie plateau,	16.36	258	P	Pn	08 12 15.3	+0.5
OUENC	Ouen Island, N	16.44	257	P	Pn	08 12 16.1	+0.3
DZM	Mont Dzumac	16.77	258	P	Pn	08 12 19.9	+0.1
	23nm,0.6s,baz=83,slow=18,SNR=18						
DZM	Mont Dzumac	16.77	258	P	Pn	08 12 20.4	+0.7
ASAR	Alice Springs	46.73	256	P	P	08 16 41.6	-1.4
	5.0nm,0.7s,baz=97,slow=8.8,SNR=11						
	5.0nm,0.7s						
WRA	Warramunga Arr	46.77	261	P	P	08 16 41.6	-1.7
	1.7nm,0.7s,baz=96,slow=7.5,SNR=22						
	1.7nm,0.7s						
QSPA	South Pole Qui	70.52	180	P	P	08 19 26.3	+0.4
	0.8nm,0.7s,baz=278,slow=0.9,SNR=5.3						
	0.8nm,0.7s						
BRTR	Keskin Array B	147.67	315	PKPbc	PKPbc	08 27 55.3	+1.4
	0.3nm,0.4s,baz=93,slow=3.0,SNR=3.0						

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*NNC **06** 08:09:36.2±4.0, 54°.44N×86°.58E, h0^{km}, mb2.8, mpv2.6, Error ellipse: s-maj=108.7km s-min=22.1km az=161.0, Suspected Mining explosion.*

*ASRS **06** 08:09:37.0±0.7, 54°.03N×86°.54E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*IDC **06** 08:09:40.4±2.5, 54°.05N×86°.48E, h0^{km}, mbtmp3.2/2, ML2.9/2, Error ellipse: s-maj=20.7km s-min=12.6km az=62.0*

ISC 06 08:09:34.1±5.9**, 55°.0N**±0°.4×**83°.9E**±0°.1**, h0^{km}, n7, σ0^{s}66**/7**, 4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.21	153	I	I	08 16 10.0	
	baz=84,slow=315,SNR=4.9						
ZAA0	Zalesovo Array	1.21	153	⇓P	Pg	08 09 57.8	+0.5
	0.3nm,0.3s						
ZAA0				⇓S	Sb	08 10 13.8	-0.3
	0.5nm,0.3s						
ZALV	Zalesovo Beam	1.21	153	Pg	Pb	08 09 58.1	+0.3
	2.6nm,0.3s,baz=82,slow=17,SNR=23						
ZALV				Lg	Lg	08 10 12.9	
	1.2nm,0.3s,baz=85,slow=33,SNR=5.4						
KURBB	Kurchatov Arra	5.47	218	Pn	Pb	08 11 11.0	+0.6
	0.2nm,0.3s,baz=55,slow=13,SNR=8.0						
KURBB				Lg	Lg	08 12 51.2	
	baz=59,slow=33,SNR=4.2						
	1.3nm,0.3s						
KURBB	Kurchatov Arra	5.47	218	⇓Pn	Pb	08 11 10.6	+0.2
	1.3nm,0.3s						
MK31	Makanchi Array	8.30	188	⇓Pn	Pn	08 11 34.9	-0.7
	0.1nm,0.2s,baz=24,slow=12,SNR=12						
MKAR	Makanchi Array	8.30	188	Pn	Pn	08 11 35.0	-0.7
	0.2nm,0.3s,baz=26,slow=14,SNR=8.8						
	0.3nm,0.2s						

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*NEIC **06** 08:24:02.6±1.6, 4°.77N±0°.07×126°.1E±0°.1, h108^{km}±9^{km}, mb4.4/20, Error ellipse: s-maj=17.5km s-min=9.6km az=80.0*

*DJA **06** 08:24:02.2±0.5, 5°N±4°×12°6E±°, h100^{km}±5^{km}, M4.6/13, mB5.2/6, mb4.5/12, MLv4.7/13, Mw(mB)4.6/6*

*IDC **06** 08:24:03.1±2.4, 4°.80N×125°.66E, h125^{km}±21^{km}, mb3.8/19, mbtmp4.2/20, Error ellipse: s-maj=28.2km s-min=11.4km az=79.0*

ISC 06 08:24:00.5±0.5**, 4°.73N**±0°.04×**126°.04E**±0°.08**, h100^{km}, n66, σ1^{s}50**/69**, mb4.2**/28**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.16	206	P	Pn	08 24 24.0	+1.3
SGSI				S	Sn	08 24 40.5	+1.1
DAV	Davao City (W)	2.37	349	Pn	Pn	08 24 39.5	+1.5
DAV	Davao City (W)	2.37	349	P	Pn	08 24 40.2	+2.2
	127nm,0.3s,baz=165,slow=5.4,SNR=2.1						
DAV				S	Sn	08 25 09.4	+2.7
	453nm,0.6s,baz=266,slow=23,SNR=7.4						
TNTI	Ternate	4.15	161		Pn	08 25 02.5	+0.8
TNTI	Ternate	4.15	161	P	Pn	08 25 01.7	0.0
TNTI				S	Sn	08 25 47.9	-1.3
MRSI	Marisa	5.88	224	P	Pn	08 25 27.2	+1.9
MRSI				S	Sn	08 26 30.2	-1.2
TOLI2	Tolitoli	6.37	236		Pn	08 25 32.1	+0.2
LUWI	Luwuk	6.60	210		Pn	08 25 37.6	+2.7
LUWI	Luwuk	6.60	210	P	Pn	08 25 37.7	+2.7
SANI	Sanana	6.73	180	P	Pn	08 25 35.4	-1.4
	0.3nm2μm23nm,0.6s						
APSI	Ampana	7.12	218	P	Pn	08 25 43.1	+1.0
	2μm162nm,1.3s						
MYLDM	Lahad Datu	7.53	274		Pn	08 25 50.9	+3.2
MPSI	Mapaga	7.53	235	P	Pn	08 25 49.0	+1.3
	0.2nm39nm,0.9s						
NLAI	Namlea	7.98	172	P	Pn	08 25 52.5	-1.4
	0.4nm2μm32nm,0.4s						
PCI	Palu	8.35	228	P	Pn	08 26 00.5	+1.6
	35nm,1.2s						
KKM	Kota Kinabalu	9.87	278	Pn	Pn	08 26 21.9	+2.2
TTSI	Tana Toraja	9.91	219	P	Pn	08 26 22.4	+2.3
BKB	Balikpapan	10.90	237	Pn	Pn	08 26 36.4	+2.8
YULB	Yu-li	19.11	347	P	P	08 28 14.9	-0.8
YULB				IAmb	IAmb	08 28 50.0	
	comp=Z,14nm,1.0s						
KNRA	Kununurra	20.45	172	P	P	08 28 30.5	+0.3
FITZ	Fitzroy Crossi	22.68	181	P	P	08 28 54.7	+0.8
WRA	Warramunga Arr	25.84	162	P	P	08 29 24.7	+1.9
	comp=Z,1.1nm,0.6s,baz=339,slow=10,SNR=11						
	comp=Z,1.1nm,0.6s						
JNU	Nakatsue	28.61	8	P	P	08 29 46.7	-0.8
JNU				IAmb	IAmb	08 30 15.6	
	comp=Z,14nm,1.3s						
AS31	Alice Springs	29.24	165	P	P	08 29 55.2	+1.9
ASAR	Alice Springs	29.25	165	P	P	08 29 54.8	+1.5
	comp=Z,0.3nm,0.5s,baz=348,slow=7.4,SNR=7.9						
	comp=Z,0.3nm,0.5s						
JMN	Monobe	29.76	13	P	P	08 29 57.8	+0.1
JGF	Kuroka	32.45	17	P	P	08 30 21.6	+0.2
JGF				IAmb	IAmb	08 30 22.7	
	comp=Z,3.9nm,0.7s						
KSRS	Korea Array	32.62	3	P	P	08 30 22.4	-0.3
	comp=Z,1.8nm,0.5s,baz=178,slow=9.5,SNR=9.7						
	comp=Z,1.8nm,0.5s						
MJAR	Matsushiro Arr	33.58	18	P	P	08 30 29.9	-1.3
	comp=Z,1.2nm,0.5s,baz=202,slow=9.2,SNR=3.4						
	comp=Z,1.2nm,0.5s						
STKA	Stephens Creek	39.30	159	P	P	08 31 21.0	+1.1
STKA	Stephens Creek	39.30	159	P	P	08 31 22.1	+2.2
	comp=Z,1.8nm,0.8s,baz=340,slow=12,SNR=3.6						
	comp=Z,1.8nm,0.8s						
USRK	Ussuriysk Ar.	39.66	7	P	P	08 31 22.9	+0.3
USRK	Ussuriysk Ar.	39.66	7	P	P	08 31 22.4	-0.2
	comp=Z,3.1nm,0.7s,baz=205,slow=8.0,SNR=5.8						
	comp=Z,3.1nm,0.7s						
ASAJ	Asahikawa	41.85	18	P	P	08 31 41.7	+1.1
	comp=Z,5.3nm,0.8s,baz=239,slow=2.4,SNR=4.4						
	comp=Z,5.3nm,0.8s						
JKA	Kamikawa-asahi	41.85	18	P	P	08 31 41.8	+1.1
H11N1	WAKE ISLAND Hy	42.46	66	T	T	09 17 55.6	
	baz=254,slow=75,SNR=7.7						
H11N2	WAKE ISLAND Hy	42.47	66	T	T	09 17 45.4	
	baz=254,slow=75,SNR=7.9						
H11N3	WAKE ISLAND Hy	42.48	66	T	T	09 17 53.5	
	baz=254,slow=75,SNR=7.5						
KLR	Kul'dur	44.61	5	P	P	08 32 02.9	+0.1
	comp=Z,1.5nm,0.4s,baz=216,slow=5.7,SNR=4.8						
	comp=Z,1.5nm,0.4s						
SONM	Songino Array	46.14	342	PcP	PcP	08 33 49.6	0.0
	comp=Z,1.1nm,0.5s,baz=150,slow=4.2,SNR=4.4						
PEA0B	Petropavlovsk-	54.77	23	P	P	08 33 20.9	+1.0
PETK	Petropavlovsk-	54.77	23	P	P	08 33 20.3	+0.5
PETK	Petropavlovsk-	54.77	23	P	P	08 33 20.9	+1.0
	comp=Z,2.0nm,0.6s,baz=193,slow=3.3,SNR=16						
	comp=Z,2.0nm,0.6s						
MKAR	Makanchi Array	56.35	325	P	P	08 33 29.7	-1.6
MKAR	Makanchi Array	56.35	325	P	P	08 33 29.9	-1.4
	comp=Z,0.9nm,0.4s,baz=120,slow=6.9,SNR=11						
MKAR				PcP	PcP	08 34 26.1	-1.3
	comp=Z,0.7nm,0.6s,baz=142,slow=3.0,SNR=4.3						
	comp=Z,0.9nm,0.4s						
KURBB	Kurchatov Arra	60.53	327	P	P	08 33 58.4	-1.9
	comp=Z,2.2nm,0.6s,baz=128,slow=6.2,SNR=21						
KURBB				pP	pP	08 34 25.9	+1.5
	comp=Z,1.2nm,0.7s,baz=123,slow=6.5,SNR=5.7						
	comp=Z,2.2nm,0.6s						
KKAR	Karatay Array	62.04	317	P	P	08 34 08.8	-1.8
BVAR	Borovoye Array	66.11	327	P	P	08 34 35.2	-1.8
	comp=Z,1.5nm,0.6s,baz=120,slow=8.8,SNR=6.0						
	comp=Z,1.5nm,0.6s						
NRIK	Noril'sk	69.30	346	P	P	08 34 55.3	-1.4
	comp=Z,2.2nm,0.5s,baz=123,slow=8.0,SNR=4.6						
	comp=Z,2.2nm,0.5s						
AB31	Akbulak array	70.95	321	P	P	08 35 05.0	-2.1
H19K	Roundabout Mou	80.55	24		P	08 36 02.6	+1.1
H19K				IAmb	IAmb	08 36 05.3	
	comp=Z,4.0nm,0.8s						
CAST	Castle Rocks	82.15	27		P	08 36 10.5	+0.4
MLY	Manley	82.87	25	P	P	08 36 14.5	+0.7
MLY				IAmb	IAmb	08 36 15.9	
	comp=Z,5.0nm,1.1s						
H23K	Yukon River	83.42	24	P	P	08 36 17.9	+1.3
H23K				IAmb	IAmb	08 36 19.1	
	comp=Z,3.8nm,0.8s						
I23K	Minto, Yukon-K	83.46	25	P	P	08 36 18.1	+1.3
I23K				IAmb	IAmb	08 36 19.0	

	comp=Z,3.2nm,0.9s						
E23K	Chandalar	83.52	22		P	08 36 18.1	+1.0
E23K				IAmb	IAmb	08 36 20.0	
	comp=Z,5.6nm,0.8s						
F24K	Squaw Lake	84.15	23	P	P	08 36 21.9	+1.6
G24K	Hadweenzic Riv	84.29	24		P	08 36 22.1	+1.0
G24K				IAmb	IAmb	08 36 23.5	
	comp=Z,3.8nm,0.8s						
VNDA	Vanda	84.50	173	P	P	08 36 21.1	-0.6
	comp=Z,1.3nm,1.1s,baz=306,slow=3.6,SNR=2.7						
	comp=Z,1.3nm,1.1s						
ILAR	Eielson Array	84.50	25	P	P	08 36 22.2	+0.1
	comp=Z,0.4nm,0.5s,baz=254,slow=5.4,SNR=10						
	comp=Z,0.4nm,0.5s						
ARCES	ARCESS Array B	89.28	340	P	P	08 36 43.6	-1.6
	comp=Z,0.8nm,0.4s,baz=88,slow=6.1,SNR=9.9						
	comp=Z,0.8nm,0.4s						
SPITS	Spitsbergen Ar	89.37	349	P	P	08 36 44.2	-1.2
	comp=Z,1.6nm,0.3s,baz=96,slow=7.9,SNR=26						
	comp=Z,1.6nm,0.3s						
FINES	FINESS Array B	90.64	332	P	P	08 36 49.1	-2.5
	comp=Z,0.9nm,0.4s,baz=87,slow=4.8,SNR=10						
	comp=Z,0.9nm,0.4s						
FARO	Faro, Yukon	90.78	27	P	P	08 36 53.2	+0.9
FARO				IAmb	IAmb	08 36 53.8	
	comp=Z,2.3nm,0.7s						
QSPA	South Pole Qui	94.63	180	P	P	08 37 10.9	+0.9
	comp=Z,0.9nm,1.0s,baz=148,slow=3.7,SNR=1.6						
	comp=Z,0.9nm,1.0s						
TXAR	Lajitas Array	121.52	51	PKP	PKPdf	08 42 44.1	+0.9
	comp=Z,0.2nm,0.4s,baz=130,slow=0.2,SNR=5.0						

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*IDC **06** 08:27:31.6±2.9,56°.19S×23°.99W,h0^{km},mb3.8/3, mbtmp3.7/4,ML3.4/1,MS3.6/1,Error ellipse: s-maj=131.4km s-min=27.9km az=65.0*

ISC 06 08:27:33.7±2.5,**56°.3S**±0°.4×**24°.2W**±0°.6,**h10**^{km},**n10**, σ**1^{s}.16**/9,**mb3.8**/3,**4D,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	15.99	161	⇓P	Pn	08 31 17.7	-0.7
	comp=Z,0.2nm,0.2s						
VNA3	Neumayer Olymp	16.25	163	⇓P	Pn	08 31 20.8	-0.9
	comp=Z,0.1nm,0.1s						
VNA2	Neumayer--Watz	16.38	160	⇓P	Pn	08 31 22.8	-0.6
	comp=Z,0.1nm,0.2s,baz=320,slow=14						
SNAA	Sanae	17.88	158	⇓P	P	08 31 45.1	+2.3
	comp=Z,2.2nm,0.2s						
SNAA	Sanae	17.88	158	P	P	08 31 43.1	+0.2
	comp=Z,0.1nm,0.3s,baz=306,slow=10,SNR=9.0						
	comp=Z,1.9nm,1.1s						
PLCA	Paso Flores	33.67	278	LR	LR	08 49 30.6	
	comp=Z,100nm,18.1s,baz=228,slow=39						
QSPA	South Pole Qui	33.97	180	P	P	08 34 16.6	-0.4
	comp=Z,1.4nm,0.7s,baz=202,slow=2.3,SNR=13						
	comp=Z,1.4nm,0.7s						
VNDA	Vanda	46.41	182	P	P	08 35 59.9	+0.3
	comp=Z,0.5nm,0.7s,baz=198,slow=5.3,SNR=2.2						
	comp=Z,0.5nm,0.7s						
LPAZ	La Paz	51.88	302	P	P	08 36 43.3	+0.4
	comp=Z,0.6nm,0.4s,baz=140,slow=7.9,SNR=3.1						
	comp=Z,0.6nm,0.4s						
ILAR	Eielson Array	151.51	311	PKPbc	PKPbc	08 47 25.4	-1.0
	comp=Z,0.5nm,1.1s,baz=123,slow=1.5,SNR=4.2						

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*AFAD **06** 08:39:13.4,37°.67N×37°.45E,h7^{km}±3^{km},ML2.5*

*ISK **06** 08:39:13.3,37°.69N×37°.41E,h5^{km},ML2.2/9*

ISC 06 08:39:13.5±1.0,**37°.67N**±0°.02×**37°.44E**±0°.02,**h9**^{km}±9^{km}, **n26,**σ**0^{s}.47**/46,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKCA	Adyaman/G¶l	0.23	59	P	Pg	08 39 18.3	+0.1
AKCA				S	Sg	08 39 21.9	+0.5
AKCA				*i* IAML		08 39 23.0	
	comp=N,849nm,0.4s						
AKCA				*i* IAML		08 39 23.0	
	comp=E,669nm,0.7s						
GZT	Gaziantep	0.33	163	P	Pg	08 39 20.5	+0.3
GZT				S	Sg	08 39 24.8	+0.3
GZT				*i* IAML		08 39 25.0	
	comp=E,668nm,0.2s						
GZT				*i* IAML		08 39 26.0	
	comp=N,443nm,0.3s						
KHMN	Narli-Kahraman	0.36	219	Pg	Pg	08 39 20.9	+0.3
KAHM	Kahramanmaras,	0.39	247	P	Pg	08 39 21.2	-0.1
KAHM				S	Sg	08 39 25.3	-1.1
KMRS	Kahramanmaras	0.46	249	Pg	Pg	08 39 22.4	-0.1
KMRS				Sg	Sg	08 39 28.6	+0.1
GAZ	Gaziantep	0.53	200	Pg	Pg	08 39 24.1	+0.2
AZEY	Adyaman-Merk	0.66	78	P	Pg	08 39 26.4	+0.2
AZEY				S	Sg	08 39 34.8	0.0
NZIP	Nizip/Gaziante	0.66	163	P	Pb	08 39 26.9	-0.3
NZIP				S	Sg	08 39 34.6	-0.2
NZIP				*i* IAML		08 39 38.0	
	comp=E,199nm,0.8s						
ATAB	Bozova	0.71	106	P	Pg	08 39 27.6	+0.3
ATAB				S	Sg	08 39 36.3	-0.2
ATAB				*i* IAML		08 39 41.0	
	comp=E,282nm,0.3s						
ATAB				*i* IAML		08 39 42.0	
	comp=N,236nm,0.6s						
KAMA	Osmaniye	0.78	232	P	Pg	08 39 28.6	0.0
KAMA				S	Sb	08 39 40.1	-0.1
ANDN	Andirin	0.87	264	P	Pg	08 39 30.2	-0.2
ANDN				S	Sg	08 39 41.0	-0.7
ANDN				*i* IAML		08 39 47.0	
	comp=E,114nm,0.6s						
ANDN				*i* IAML		08 39 48.0	
	comp=N,122nm,0.3s						
DARE	Darende-Malaty	0.90	2	Pg	Pg	08 39 30.7	-0.1
DARE				Sg	Sb	08 39 43.5	0.0
KUZU	Kuzuini	0.94	198	P	Pb	08 39 32.2	+0.1
KUZU				S	Sb	08 39 44.9	+0.1
KUZU				*i* IAML		08 39 48.0	
	comp=N,237nm,0.7s						
KUZU				*i* IAML		08 39 52.0	
	comp=E,156nm,0.2s						
MAYA	Malatya/Merkez	1.01	50	P	Pg	08 39 32.8	-0.3
MAYA				S	Sb	08 39 47.1	+0.2
NARI	Adyaman-Kaht	1.07	78	P	Pg	08 39 33.9	-0.1
NARI				S	Sg	08 39 48.3	+0.4
HANM	anlurfa/Hi	1.15	94	P	Pg	08 39 35.3	-0.3
HANM				S	Sg	08 39 49.7	-0.8
HANM				*i* IAML		08 39 55.0	
	comp=N,100nm,0.5s						
HASA	Hatay-Hassa-Ha	1.20	220	P	Pn	08 39 37.2	+0.7
HASA				S	Sb	08 39 51.8	-0.2
HASA				*i* IAML		08 39 55.0	
	comp=E,150nm,0.3s						
HASA				*i* IAML		08 39 59.0	
	comp=N,181nm,0.5s						
SURC	SANLIURFA_SURC	1.23	130	P	Pn	08 39 37.2	+0.3
SURC				S	Sg	08 39 51.7	-1.3
SURC				*i* IAML		08 39 55.0	
	comp=N,175nm,0.7s						
SURC				*i* IAML		08 39 55.0	
	comp=E,147nm,0.5s						
HEKM	Malatya_Hekimh	1.27	19	P	Pb	08 39 37.8	0.0
HEKM				S	Sn	08 39 55.0	-0.1
KOZT	Kozan	1.30	262	Pn	Pg	08 39 38.0	-0.4
KOZT				Sn	Sn	08 39 56.3	+0.9
SANL	SANLIURFA_Merk	1.33	112	P	Pn	08 39 38.7	+0.3
SANL				S	Sb	08 39 55.3	-0.7
SANL				*i* IAML		08 39 58.0	
	comp=N,100nm,0.8s						
SANL				*i* IAML		08 40 00.0	
	comp=E,108nm,0.4s						
ELZG	Elazig	1.47	56	P	Pn	08 39 40.8	+0.4
ELZG				S	Sn	08 39 59.6	-0.4
CEYT	Ceyhan	1.50	244	Pn	Pb	08 39 41.3	-0.3
TAHT	Tahtakopru-Hat	1.64	218	Pn	Pb	08 39 43.4	-0.6
KARA	Karaisali	1.94	258	Pn	Pn	08 39 47.7	+0.9
CMRD	Camardi-Nigde	1.94	270	Pn	Pn	08 39 47.4	+0.5

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*IDC **06** 08:40:14.8±1.3,7°.34N×93°.95E,h0^{km},mb3.8/8, mbtmp3.8/10,ML4.1/2,MS3.1/3,Error ellipse: s-maj=56.2km s-min=18.0km az=57.0*

*BKK **06** 08:40:22.0±1.0,8°N±6°×9°5E±°,h10^{km},M4.3/6,mB5.1/1, mb4.4/4,Mjma4.0/6,ML4.3/4,MLv4.3/5,Mw(mB)4.4/1*

ISC 06 08:40:17.3±1.0,**7°.5N**±0°.1×**94°.2E**±0°.2,**h10**^{km},**n19,** σ**1^{s}.03**/12,**mb3.7**/8,**Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RNTT	Ranong	4.67	66	P	Pn	08 41 26.9	-1.0
PSI	Prapat	6.65	134	Pn	Pn	08 41 55.6	+0.3
	1.0nm,0.3s,baz=316,slow=13,SNR=6.5						
	4.3nm,0.5s						
CMAR	Chiang Mai Arr	11.85	23	Pn	Pn	08 43 07.6	+1.1
	0.8nm,0.3s,baz=215,slow=15,SNR=4.1						
CMAR				LR	LR	08 47 40.9	
	comp=Z,71nm,18.9s,baz=165,slow=37						
	0.8nm,0.3s						
PALK	Pallekele	13.35	270	LR	LR	08 48 04.0	
	comp=Z,74nm,20.6s,baz=111,slow=36						
H08S3	Diego Garcia H	26.32	236	T	T	09 12 29.0	
	baz=55,slow=76,SNR=74						
H08S2	Diego Garcia H	26.33	236	T	T	09 12 25.7	
	baz=55,slow=76,SNR=63						
H08S1	Diego Carcia H	26.34	236	T	T	09 12 27.9	
	baz=55,slow=76,SNR=22						
AAK	Ala-Archa	39.06	337	LR	LR	09 05 09.4	
	comp=Z,42nm,20.7s,baz=130,slow=38						
MKAR	Makanchi Array	40.46	347	P	P	08 47 55.1	-1.0
	0.4nm,0.4s,baz=161,slow=7.7,SNR=4.2						
	0.4nm,0.4s						
SONM	Songino Array	41.52	12	P	P	08 48 06.2	+1.2
	0.7nm,0.6s,baz=153,slow=5.5,SNR=2.7						
	0.7nm,0.6s						
KURBB	Kurchatov Arra	44.91	346	P	P	08 48 32.2	+0.1
	0.4nm,0.5s,baz=171,slow=7.1,SNR=6.8						
KURBB				PcP	PcP	08 50 14.1	+0.5
	0.2nm,0.3s,baz=163,slow=2.9,SNR=4.4						
	0.4nm,0.5s						
ZALV	Zalesovo Beam	46.93	352	P	P	08 48 48.5	+0.5
	1.7nm,0.3s,baz=180,slow=2.8,SNR=4.4						
	1.7nm,0.3s						
WRA	Warramunga Arr	48.03	125	P	P	08 48 55.7	-1.4
	0.5nm,0.3s,baz=301,slow=7.5,SNR=15						
	0.5nm,0.3s						
ASAR	Alice Springs	49.66	130	P	P	08 49 10.1	+0.5
	0.8nm,1.0s,baz=296,slow=7.3,SNR=4.8						
	0.8nm,1.0s						
H04N2	CROZET ISLANDS	65.42	211	T	T	10 01 37.1	
	baz=46,slow=75,SNR=14						
H04N1	CROZET ISLANDS	65.42	211	T	T	10 01 34.0	
	baz=46,slow=75,SNR=14						
H04N3	CROZET ISLANDS	65.43	211	T	T	10 01 32.3	
	baz=46,slow=75,SNR=18						
FINES	FINESS Array B	73.05	332	P	P	08 51 46.2	-1.2
	0.3nm,0.4s,baz=96,slow=12,SNR=4.1						
	0.3nm,0.4s						
HFS	Hagfors	78.79	330	P	P	08 52 19.3	-0.8
	0.7nm,0.7s,baz=79,slow=9.2,SNR=4.1						
	0.7nm,0.7s						

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*NEIC **06** 08:44:35.0±2.6,51°.32N±0°.09×173°.82W±0°.06,h10^{km}±1^{km}, mb4.4/84,ML4.2/8,ML4.0(AEIC),Error ellipse: s-maj=15.8km s-min=6.9km az=181.0*

*BJI **06** 08:44:35.9,51°.36N×173°.76W,h40^{km},mB4.8/5,mb4.6/23, Ms4.3/5,Ms7 4.2/6*

*MOS **06** 08:44:35.0±0.9,51°.53N×173°.79W,h19^{km},mb4.8/16, Error ellipse: s-maj=10.0km s-min=7.4km az=80.1*

*AEIC **06** 08:44:37.9±2.2,51°.5N±0°.1×173°.82W±0°.07,h26^{km}±5^{km}, Error ellipse: s-maj=15.5km s-min=6.0km az=176.0*

*IDC **06** 08:44:41.4±0.6,51°.69N×173°.84W,h51^{km}±4^{km},mb3.9/28, mbtmp4.2/31,MS3.8/63,Error ellipse: s-maj=17.2km s-min=10.0km az=175.0*

ISC 06 08:44:39.0±0.5,**51°.47N**±0°.08×**173°.79W**±0°.03,**h35**^{km}, **n563,**σ**1^{s}.15**/533,**mb4.5**/69,**MS3.9**/63,**1D,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	Atka Island	0.77	341		Pn	08 44 52.4	-1.0
ATKA	Atka Island	0.77	341	P	Pn	08 44 52.2	-1.2
GSTR	Great Sitkin T	1.54	295		Pn	08 45 03.2	-0.8
GSCK	Great Sitkin C	1.57	291		Pn	08 45 03.2	-1.1
GSCK					Sn	08 45 23.0	-0.4
GSTD	Great Sitkin T	1.58	293		Pn	08 45 03.6	-0.9
GSTD						08 45 04.0	
GSTD					Sn	08 45 24.6	+0.9
ADAG	Mount Adagdak	1.82	287		Pn	08 45 07.5	-0.2
ADK	Adak	1.85	284		Pn	08 45 06.3	-1.8
ADK				IAML		08 45 41.6	
	2μm,0.3s						
ADK				IAML		08 45 46.3	
	2μm,0.7s						
ADK	Adak	1.85	284	P	Pn	08 45 07.3	-0.8
ADK	Adak	1.85	284	S	Sn	08 45 31.2	+1.0
ADK	Adak	1.85	284	P	Pn	08 45 06.3	-1.8
ADK						08 45 30.4	
KIRH	Kanaga Island	2.10	283		Pn	08 45 11.4	-0.2
KIRH					Sn	08 45 38.1	+1.7
KIWB	Kanaga Island	2.13	282		Pn	08 45 09.5	-2.5
KIWB	Kanaga Island	2.13	282		Sn	08 45 37.9	+0.8
KICM	Kanaga Island	2.17	283		Pn	08 45 12.3	-0.2
TAFP	Tanaga Falls P	2.65	281		Pn	08 45 19.5	+0.4
TAFP					Sn	08 45 50.0	0.0
TASE	Tanaga Southea	2.67	279		Pn	08 45 19.7	+0.2
GALAA	Gareloi Lava P	3.12	277		Pn	08 45 26.9	+1.3
GANE	Gareloi Northe	3.13	278		Pn	08 45 26.8	+1.1
GANE					Sn	08 46 03.6	+1.8
GANO	Gareloi North	3.14	278		Pn	08 45 26.8	+0.8
GANO					Sn	08 46 03.8	+1.6
NIKH	Nikolski High	3.39	62		Pn	08 45 29.1	-0.1
NIKH				IAML		08 46 19.2	
	comp=E,449nm,0.7s						
NIKH	Nikolski High	3.39	62	P	Pn	08 45 29.6	+0.3
NIKH	Nikolski High	3.39	62	S	Sn	08 46 09.1	+0.9
NIKH	Nikolski High	3.39	62	P	Pn	08 45 29.4	+0.2
	baz=240						
OKSP	Okmok Steeple	3.81	60		Pn	08 45 35.9	+0.7
OKCE	Okmok Cone E	3.96	58		Pn	08 45 38.2	+1.0
OKNC	Okmok New Cone	3.99	58		Pn	08 45 38.8	+1.1
OKNC					Sn	08 46 23.4	+0.2
OKTU	Okmok Mt. Tuli	4.01	59		Pn	08 45 39.3	+1.5
MAPS	Pakushin South	4.78	58		Pn	08 45 49.6	+1.2
MAPS					Sn	08 46 43.5	+1.0
MGOD	Makushin Gods	4.81	58		Pn	08 45 49.9	+1.0
MREP	Makushin Rep't	4.89	59		Pn	08 45 51.1	+1.2
UNV	Unalaska Valle	5.03	59		Pn	08 45 52.4	+0.6
UNV				IAML		08 47 19.9	
	comp=E,119nm,1.6s						
UNV	Unalaska Valle	5.03	59	P	Pn	08 45 53.2	+1.4
UNV	Unalaska Valle	5.03	59	S	Sn	08 46 49.5	+0.8
UNV	Unalaska Valle	5.03	59	P	Pn	08 45 53.0	+1.2
	baz=241						
AKRB	Akutan Reef Bi	5.39	57		Pn	08 45 58.5	+1.8
LVA	Lava Point	5.42	57		Pn	08 45 58.2	+1.0
AKGG	Akutan Green G	5.46	57		Pn	08 45 59.4	+1.7
AKUT	Akutan	5.55	58		Pn	08 45 59.9	+1.0
AKUT	Akutan	5.55	58	P	Pn	08 45 59.5	+0.6
P08K	Saint George I	5.71	24	Pn	Pn	08 46 03.5	+2.4
P08K	Saint George I	5.71	24	P	Pn	08 46 03.0	+1.8
	baz=207						
SPIA	Saint Paul Isl	6.08	19		Pn	08 46 08.9	+2.7
SPIA	Saint Paul Isl	6.08	19	P	Pn	08 46 08.6	+2.4
	baz=201						
ISLZ	Isanotski Laza	6.89	58		Pn	08 46 18.6	+1.2
SHEM	Shemya Is, Ala	7.57	284	P	Pn	08 46 29.1	+2.5
	comp=E,13nm,0.3s,baz=98,slow=6.3,SNR=6.2						
SHEM				LR	LR	08 49 25.6	
	comp=E,618nm,21.4s,baz=114,slow=38						
S12K	Black Hills	8.16	54	Pn	Pn	08 46 36.5	+1.7
S12K	Black Hills	8.16	54	P	Pn	08 46 35.6	+0.8
	baz=241						
SDPT	Sand Point	8.85	59	Pn	Pn	08 46 44.4	+0.3
SDPT	Sand Point	8.85	59	P	Pn	08 46 44.3	+0.2
SDPT	Sand Point	8.85	59	P	Pn	08 46 43.8	-0.4
	baz=247						
CNBA	Chernabura Isl	9.17	63		Pn	08 46 48.2	-0.3
CHNA	Chernabura Isl	9.17	63	P	Pn	08 46 47.8	-0.8
CHNA	Chernabura Isl	9.17	63	P	Pn	08 46 48.0	-0.5
	baz=252						
M11K	Mekoryuk	9.89	22	Pn	Pn	08 47 01.3	+2.9
M11K	Mekoryuk	9.89	22	P	Pn	08 47 00.8	+2.4
	baz=208						
O14K	Tigyukauivet M	10.55	37	Pn	Pn	08 47 09.4	+2.0
O14K	Tigyukauivet M	10.55	37	P	Pn	08 47 09.1	+1.7
	baz=227						
M13K	Dall Lake	10.69	29	Pn	Pn	08 47 12.7	+3.4
M13K	Dall Lake	10.69	29	P	Pn	08 47 11.1	+1.8
	baz=217						
N14K	Kuskokwak Cree	10.86	34		Pn	08 47 14.5	+2.8
N14K	Kuskokwak Cree	10.86	34	P	Pn	08 47 14.0	+2.3
	baz=223						
O15K	Ungalikthiuk R	11.06	40	Pn	Pn	08 47 15.8	+1.3
O15K	Ungalikthiuk R	11.06	40	P	Pn	08 47 15.9	+1.4
	baz=231						
R16K	Pilot Point	11.21	51	P	Pn	08 47 17.7	+1.2
	baz=242						
M14K	Bethel	11.38	31		Pn	08 47 22.3	+3.5
M14K	Bethel	11.38	31	P	Pn	08 47 20.4	+1.6
	baz=220						
N15K	Kwethluk River	11.61	36		Pn	08 47 24.9	+3.0
N15K	Kwethluk River	11.61	36	P	Pn	08 47 22.9	+1.0
	baz=226						
K13K	Kusilvak Mount	11.61	22		Pn	08 47 24.6	+2.7
K13K	Kusilvak Mount	11.61	22	P	Pn	08 47 23.9	+2.0
	baz=209						
CHIR	Chirikof Islan	11.62	61	Pn	Pn	08 47 21.6	-0.4
L14K	Kuka Creek	11.63	27	Pn	Pn	08 47 23.6	+1.5
L14K	Kuka Creek	11.63	27	P	Pn	08 47 23.8	+1.6
	baz=216						
P16K	Nushagak River	11.75	44	Pn	Pn	08 47 26.4	+2.6
P16K	Nushagak River	11.75	44	P	Pn	08 47 24.2	+0.3
	baz=236						
M15K	Kasigluk River	11.76	33	P	Pn	08 47 25.5	+1.5
	baz=223,SNR=9.5						
O16K	Kokwok River B	12.02	41		Pn	08 47 29.3	+1.7
O16K	Kokwok River B	12.02	41	P	Pn	08 47 28.3	+0.7
	baz=233						
L15K	Ungalak Mounta	12.25	29	P	Pn	08 47 31.5	+0.8
	baz=218						
N16K	Nishlik Lake	12.30	37	P	Pn	08 47 32.7	+1.3
	baz=229						
Q17K	Contact Creek	12.33	50	P	Pn	08 47 32.3	+0.4
	baz=243						
GAMB	Gambell	12.39	4	P	Pn	08 47 34.9	+2.4
	baz=186						
P17K	Kvichak River	12.52	45	P	Pn	08 47 34.5	+0.3
	baz=238						
O17K	Koliganek Bris	12.54	42	P	Pn	08 47 35.6	+0.9
	baz=235						
ACHA	Angle Creek He	12.57	50		Pn	08 47 35.2	0.0
J14K	Nanvaranak Lak	12.58	22	Pn	Pn	08 47 36.2	+1.1
J14K	Nanvaranak Lak	12.58	22	P	Pn	08 47 36.6	+1.5
	baz=210						
SII	Sitkinak Islan	12.59	58	Pn	Pn	08 47 35.8	+0.4
SII	Sitkinak Islan	12.59	58	P	Pn	08 47 35.7	+0.4
SII	Sitkinak Islan	12.59	58	P	Pn	08 47 35.0	-0.3
	baz=253						
M16K	Timber Creek	12.60	35		Pn	08 47 36.1	+0.7
M16K	Timber Creek	12.60	35	P	Pn	08 47 37.1	+1.7
	baz=226,SNR=5.7						
K15K	Wolf Creek Mou	12.72	27		Pn	08 47 37.6	+0.5
K15K	Wolf Creek Mou	12.72	27	P	Pn	08 47 38.5	+1.4
	baz=216						
R18K	Karluk	12.76	54	P	Pn	08 47 36.8	-0.8
	baz=248						
L16K	Owhat River	12.90	32		Pn	08 47 41.5	+1.9
L16K	Owhat River	12.90	32	P	Pn	08 47 40.7	+1.1
	baz=223,SNR=6.3						
Q18K	Katmai Hardscr	12.91	49	P	Pn	08 47 40.1	+0.3
	baz=243						
N17K	Nushagak Hills	12.95	39		Pn	08 47 41.3	+1.1
N17K	Nushagak Hills	12.95	39	P	Pn	08 47 40.9	+0.7
	baz=232						
P18K	Big Mountain,	13.15	46	Pn	Pn	08 47 44.4	+1.4
P18K	Big Mountain,	13.15	46	P	Pn	08 47 43.2	+0.1
	baz=240						
OHAK	Old Harbor	13.25	56	P	Pn	08 47 43.8	-0.5
	baz=252						
O18K	Koktuh Hills	13.39	44		Pn	08 47 47.9	+1.6
O18K	Koktuh Hills	13.39	44	P	Pn	08 47 47.4	+1.1
	baz=238						
M17K	Holitna River	13.40	36	P	Pn	08 47 47.3	+0.9
	baz=229						
N18K	Kilae Creek	13.55	40	P	Pn	08 47 49.2	+0.7
	baz=234						
L17K	Donlin	13.60	32	P	Pn	08 47 49.9	+0.8
	baz=224						
Q19K	Cape Douglas,	13.67	49	Pn	Pn	08 47 49.2	-0.9
Q19K	Cape Douglas,	13.67	49	P	Pn	08 47 49.3	-0.9
	baz=244						
J16K	Anvik River	13.77	26	Pn	Pn	08 47 52.5	+1.1
J16K	Anvik River	13.77	26	P	Pn	08 47 52.3	+0.9
	baz=216						
KDAK	Kodiak Island	13.78	54	P	Pn	08 47 49.4	-2.1
	comp=E,3.2nm,0.3s,baz=146,slow=2.3,SNR=24						
KDAK	Kodiak Island	13.78	54	P	Pn	08 47 50.3	-1.2
	baz=250						
ANM	Nome	13.85	15	Pn	Pn	08 47 52.9	+0.5
ANM	Nome	13.85	15	P	Pn	08 47 52.9	+0.5
ANM	Nome	13.85	15	P	Pn	08 47 54.1	+1.7
	baz=202						
O19K	Port Alsworth	13.95	44	P	Pn	08 47 54.1	+0.2
	baz=239						
K17K	Iditarod	14.01	31	Pn	Pn	08 47 57.5	+2.7
K17K	Iditarod	14.01	31	P	Pn	08 47 55.3	+0.6
	baz=223						
M18K	Stony River	14.06	38	P	Pn	08 47 55.7	+0.3
	baz=232						
Q20K	Shuyak Island	14.15	51	P	Pn	08 47 55.3	-1.4
	baz=248						
P19K	Oil Pt	14.18	47	P	Pn	08 47 56.4	-0.6
	baz=243						
N19K	Bonanza Creek	14.20	41		Pn	08 47 58.4	+1.0
N19K	Bonanza Creek	14.20	41	P	Pn	08 47 56.4	-1.0
	baz=236						
L18K	Granite Mounta	14.21	34		Pn	08 47 59.4	+2.0
L18K	Granite Mounta	14.21	34	P	Pn	08 47 57.2	-0.1
	baz=228						
I17K	Unalakleet	14.24	24	P	Pn	08 47 58.3	+0.6
	baz=215						
J17K	VABM Dome	14.29	28		Pn	08 48 00.0	+1.5
J17K	VABM Dome	14.29	28	P	Pn	08 47 58.9	+0.4
	baz=220						
TNA	Tin City	14.45	10	Pn	Pn	08 48 03.4	+2.8
TNA	Tin City	14.45	10	P	Pn	08 48 01.3	+0.8
	baz=195						
G15K	Niukluk	14.47	17	P	Pn	08 48 01.6	+0.7
	baz=205						
H16K	Elim	14.51	20	P	Pn	08 48 01.2	-0.3
	baz=210						
F14K	Arctic Creek	14.56	12	P	Pn	08 48 02.5	+0.4
	baz=199						
O20K	Slope Mountain	14.64	46	P	Pn	08 48 03.1	-0.3
	baz=242						
L19K	White Mountain	14.85	36	P	Pn	08 48 06.6	+0.5
	baz=232,SNR=5.9						
M19K	Big River Lodg	14.86	38	P	Pn	08 48 06.1	-0.1
	baz=233						
HOM	Homer	14.91	48	P	Pn	08 48 06.0	-0.9
	baz=245						
F15K	North Star Dit	15.02	15	P	Pn	08 48 07.9	-0.5
	baz=202						
J18K	Innoko River	15.06	31	Pn	Pn	08 48 11.2	+2.4
J18K				IAmb	IAmb	08 48 34.4	
	comp=Z,16nm,0.8s						
J18K	Innoko River	15.06	31	P	Pn	08 48 08.4	-0.4
	baz=224,SNR=16						
G16K	Koyuk River	15.15	19	P	Pn	08 48 10.8	+0.8
	baz=208						
H17K	Granite Mounta	15.30	23		Pn	08 48 13.7	+1.8
H17K				IAmb	IAmb	08 48 37.3	
	comp=Z,9.7nm,0.8s						
H17K	Granite Mounta	15.30	23	P	Pn	08 48 12.7	+0.7
	baz=214						
M20K	Styx River	15.33	39	P	Pn	08 48 12.8	+0.2
	baz=236						
N20K	Mount Spurr	15.35	42	P	Pn	08 48 12.5	-0.3
	baz=239						
SPCR	Spurr Chakacha	15.35	42	P	Pn	08 48 12.5	-0.3
	baz=239						
BRSE	Bradley Lake S	15.36	48	P	Pn	08 48 12.8	0.0
	baz=246						
L20K	Farewell, AK	15.39	37	P	Pn	08 48 13.9	+0.6
	baz=233,SNR=8.3						
G17K	Kiwalik Mounta	15.60	21	P	Pn	08 48 16.5	+0.6
	baz=212						
CAPN	Captain Cook N	15.60	45	P	Pn	08 48 15.4	-0.5
	baz=242						
J19K	Poorman	15.78	30	P	Pn	08 48 18.9	+0.7
	baz=225,SNR=16						
H18K	Honhosa River	15.86	24	P	P	08 48 23.5	+0.9
H18K				IAmb	IAmb	08 48 34.2	
	comp=Z,28nm,1.4s						
H18K	Honhosa River	15.86	24	P	Pn	08 48 19.6	+0.3

	baz=217						
K20K	Telida	15.87	34	P	Pn	08 48 19.9	+0.5
	baz=230						
GCSA	Galena City Sc	15.95	27	P	Pn	08 48 20.7	+0.5
	baz=221						
SKT	Skwentna	16.03	40	P	Pn	08 48 23.5	+2.1
SKT	Skwentna	16.03	40	P	Pn	08 48 21.0	-0.4
	baz=238,SNR=5.7						
SUA	Susitna One	16.10	43	P	Pn	08 48 21.8	-0.6
	baz=241						
SEW	Seward	16.10	48	P	Pn	08 48 20.7	-1.6
	baz=247						
O22K	Cooper Landing	16.12	47	P	Pn	08 48 22.5	-0.1
	baz=246,SNR=7.9						
PPLA	Purkeypile	16.27	37	P	P	08 48 27.5	+0.2
PPLA	Purkeypile	16.27	37	P	Pn	08 48 24.6	0.0
	baz=234						
F17K	Baldwin Pennin	16.29	18	P	Pn	08 48 25.9	+1.3
	baz=209						
RC01	Rabbit Creek A	16.36	45	P	Pn	08 48 25.5	-0.2
	baz=244						
J20K	Nowinta River	16.38	31	P	Pn	08 48 27.2	+1.4
	baz=228,SNR=11						
G18K	Tagagawik	16.39	22	P	Pn	08 48 26.8	+0.9
	baz=215						
M22K	Willow	16.50	42	P	Pn	08 48 27.1	-0.2
	baz=241						
CAST	Castle Rocks	16.61	36	P	Pn	08 48 30.4	+1.6
CAST				IAmb	IAmb	08 48 43.2	
	comp=Z,26nm,1.5s						
CAST	Castle Rocks	16.61	36	P	Pn	08 48 28.2	-0.6
	baz=233,SNR=12						
H19K	Roundabout Mou	16.66	26	P	Pn	08 48 30.5	+1.2
	baz=220						
I20K	Naaghedeneel	16.69	30	P	Pn	08 48 30.4	+0.6
	baz=226						
E17K	Hotham Inlet	16.75	16	P	Pn	08 48 32.2	+1.7
	baz=207						
F18K	Selawik	16.75	20	P	Pn	08 48 31.9	+1.4
	baz=212						
CUT	Chulitna	16.75	40	P	Pn	08 48 31.4	+0.8
	baz=239						
CHUM	Lake Minchumin	16.81	34	P	Pn	08 48 32.0	+0.8
	baz=232						
PMR	Palmer	16.85	44	P	Pn	08 48 32.2	+0.5
PMR	Palmer	16.85	44	P	Pn	08 48 32.2	+0.5
PMR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
PMR	Palmer	16.85	44	P	Pn	08 48 33.3	+1.6
	baz=243						
PWL	Port Wells	16.90	46	P	Pn	08 48 32.2	-0.2
	baz=247						
PET	Petropavlovsk	16.91	286	*e*P	P	08 48 37.1	+2.8
PET				*e*S	Sn	08 51 37.2	-2.0
PET				pmax	pmax		
	comp=Z,100nm,13.5s						
G19K	Purcell Mounta	16.97	24	P	Pn	08 48 34.3	+1.1
	baz=218						
GHO	Glory Hole Cre	17.01	43	P	Pn	08 48 34.3	+0.4
GHO				IAmb	IAmb	08 48 35.4	
	comp=Z,13nm,0.4s						
P23K	Montague Islan	17.03	50	P	Pn	08 48 34.2	+0.1
	baz=251						
KNK	Knik Glacier	17.06	45	P	Pn	08 48 35.2	+0.7
	baz=245,SNR=5.3						
H20K	Anotleneega Mo	17.07	27	P	P	08 48 36.7	+0.7
	baz=223						
D17K	Noatak River	17.11	14	P	Pn	08 48 36.3	+1.3
	baz=203						
KTH	Kantishna Hill	17.11	36	P	P	08 48 37.5	+0.9
KTH				IAmb	IAmb	08 49 06.7	
	comp=Z,21nm,1.1s						
E18K	Tukpahlearik C	17.27	17	P	P	08 48 39.0	+0.8
E18K	Tukpahlearik C	17.27	17	P	Pn	08 48 37.8	+0.7
	baz=208						
SML	Sawmill	17.28	43	P	Pn	08 48 36.8	-0.5
SML	Sawmill	17.28	43	P	Pn	08 48 36.8	-0.5
SML				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SML	Sawmill	17.28	43	P	Pn	08 48 37.7	+0.5
	baz=244						
TRF	Thorofare Moun	17.29	37		Pn	08 48 38.2	+0.7
TRF	Thorofare Moun	17.29	37	P	Pn	08 48 38.4	+0.9
	baz=236						
C16K	Lisburne Hills	17.35	11	P	Pn	08 48 38.5	+0.5
	baz=198						
F19K	Shaleruckik Mo	17.36	21	P	Pn	08 48 39.0	+0.9
	baz=215,SNR=5.5						
Q23K	Middleton Isla	17.38	52	P	Pn	08 48 37.9	-0.5
	baz=254						
BPAW	Bear Paw Mtn.	17.41	35		P	08 48 40.6	+0.8
BPAW				IAmb	IAmb	08 48 42.9	
	comp=Z,36nm,1.3s						
BPAW	Bear Paw Mtn.	17.41	35	P	Pn	08 48 39.1	+0.4
	baz=234,SNR=16						
RDOG	Red Dog Mine	17.46	14	P	Pn	08 48 40.1	+0.7
	baz=203						
GLI	Glacier Island	17.47	47	P	Pn	08 48 37.6	-1.9
GLI	Glacier Island	17.47	47	P	Pn	08 48 38.5	-1.0
	baz=248						
PEA0B	Petropavlovsk-	17.47	287	P	Pn	08 48 37.8	-1.8
PEA0B	Petropavlovsk-	17.47	287	P	Pn	08 48 37.8	-1.8
PEA0B				pmax	pmax		
	comp=Z,18nm,1.2s						
PETK	Petropavlovsk-	17.47	287	P	Pn	08 48 37.8	-1.8
PETK	Petropavlovsk-	17.47	287	P	Pn	08 48 39.7	+0.1
	comp=Z,1.2nm,0.4s,baz=90,slow=14,SNR=6.0						
M23K	Glacier View	17.54	44	P	Pn	08 48 40.1	-0.3
	baz=245,SNR=13						
WAT1	Susitna Watana	17.66	40	P	Pn	08 48 42.3	+0.5
	baz=241						
FID	Port Fidalgo	17.71	48	P	Pn	08 48 39.6	-2.8
SCM	Sheep Creek Mo	17.73	44	P	Pn	08 48 41.5	-1.3
SCM				IAmb	IAmb	08 48 43.5	
	comp=Z,17nm,0.9s						
SCM	Sheep Creek Mo	17.73	44	P	Pn	08 48 41.5	-1.3
SCM				pmax	pmax		
	comp=Z,17nm,0.9s						
SCM	Sheep Creek Mo	17.73	44	P	Pn	08 48 41.9	-0.9
	baz=245,SNR=9.7						
I21K	Tanana	17.74	31	P	Pn	08 48 44.2	+1.4
I21K				IAmb	IAmb	08 48 46.5	
	comp=Z,16nm,0.9s						
I21K	Tanana	17.74	31	P	Pn	08 48 43.4	+0.7
	baz=229,SNR=18						
IMAR	Indian Mountai	17.75	27	P	P	08 48 45.1	+1.6
H21K	Melozitna Rive	17.80	29	P	Pn	08 48 44.6	+1.1
H21K	Melozitna Rive	17.80	29	P	Pn	08 48 44.7	+1.1
	baz=227,SNR=7.6						
C17K	DeLong Mountai	17.81	13	P	Pn	08 48 44.7	+0.9
	baz=202						
RND	Reindeer	17.82	38		Pn	08 48 42.9	-1.0
RND	Reindeer	17.82	38	P	Pn	08 48 42.9	-1.0
RND				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WAT6	Susitna Watana	17.87	41	P	Pn	08 48 44.7	+0.1
	baz=243						
MCK	McKinley	17.96	37	P	Pn	08 48 44.9	-0.6
	baz=238						
EYAK	Cordova Ski Ar	17.98	49	P	Pn	08 48 45.7	-0.2
EYAK	Cordova Ski Ar	17.98	49	P	Pn	08 48 45.7	-0.2
	baz=251						
E19K	Redstone River	17.99	21		P	08 48 47.5	+1.4
E19K	Redstone River	17.99	21	P	Pn	08 48 46.3	+0.3
	baz=215						
F20K	Avaraart Lake	18.02	23	P	Pn	08 48 47.4	+1.2
	baz=218						
MLY	Manley	18.05	32	P	Pn	08 48 47.6	+0.9
MLY				IAmb	IAmb	08 48 51.6	
	comp=Z,17nm,0.8s						
MLY	Manley	18.05	32	P	Pn	08 48 46.9	+0.2
	baz=232,SNR=34						
G21K	Allakaket	18.20	26		P	08 48 49.4	+0.9
G21K	Allakaket	18.20	26	P	P	08 48 49.2	+0.7
	baz=224						
KLU	Klutina	18.22	46	P	P	08 48 48.8	+0.1
	baz=248,SNR=5.3						
DHY	Denali Highway	18.25	40	P	P	08 48 48.7	-0.4
	baz=242						
C18K	Utukok River	18.27	15	P	P	08 48 49.9	+0.7
	baz=206						
M24K	Tolsona, Glenn	18.34	44	P	P	08 48 49.8	-0.3
	baz=246						
NEA2	Nenana	18.37	35	P	P	08 48 49.0	-1.4
NEA2	Nenana	18.37	35	P	P	08 48 49.3	-1.1
	baz=236,SNR=14						
H22K	Ishtalitna Cre	18.40	30	P	P	08 48 49.7	-0.9
	baz=229,SNR=12						
RAGM	Ragged Mountai	18.45	50	P	P	08 48 49.8	-1.5
RAGM				IAmb	IAmb	08 49 18.4	
	comp=Z,13nm,0.9s						
KAIM	Kayak Island	18.45	51	P	P	08 48 49.5	-1.8
	baz=255						
I23K	Minto, Yukon-K	18.59	33	P	P	08 48 52.9	+0.2
	baz=234,SNR=23						
BMRM	Bremner River	18.65	48	P	P	08 48 52.7	-0.8
	baz=252						
D19K	Kuna River	18.68	18		P	08 48 54.5	+0.7
D19K				IAmb	IAmb	08 49 03.0	
	comp=Z,14nm,0.7s						
D19K	Kuna River	18.68	18	P	P	08 48 54.6	+0.9
	baz=212,SNR=6.0						
F21K	Alatna River	18.72	25	P	P	08 48 55.5	+1.3
	baz=222,SNR=5.7						
B18K	Kokolik River	18.83	13	P	P	08 48 56.7	+1.4
	baz=204						
N25K	Chitina, Valde	18.85	46	P	P	08 48 55.3	-0.5
	baz=250						
E20K	Nigu River	18.88	20	P	P	08 48 57.1	+1.1
	baz=216,SNR=9.4						
HARP	HAARP	18.89	44	P	P	08 48 56.5	+0.4
	baz=247						
H23K	Yukon River	18.94	31	P	P	08 48 56.9	+0.3
	baz=232,SNR=13						
C19K	Lookout Ridge	18.94	16	P	P	08 48 57.4	+0.7
C19K				IAmb	IAmb	08 49 14.9	
	comp=Z,45nm,1.4s						
C19K	Lookout Ridge	18.94	16	P	P	08 48 56.9	+0.3
	baz=208						
COLA	College	18.97	35	P	P	08 48 56.5	-0.3
COLA				IAmb	IAmb	08 49 02.7	
	comp=Z,13nm,0.2s						
COLA	College	18.97	35	P	P	08 48 56.7	-0.1
COLA	College	18.97	35	P	P	08 48 56.5	-0.3
COLA				pmax	pmax		
	comp=Z,13nm,0.3s						
COLA	College	18.97	35	P	P	08 48 57.9	+1.1
	baz=237						
PAX	Paxson	18.98	42	P	P	08 48 57.2	0.0
	baz=245,SNR=9.1						
BGLC	Bering Glacier	19.05	51	P	P	08 48 57.9	+0.1
	baz=256						
G22K	Bettles	19.05	27	P	P	08 48 57.9	+0.2
	baz=226,SNR=6.7						
HDA	Harding Lake	19.05	37	P	P	08 48 57.1	-0.8
	baz=239,SNR=50						
D20K	Etivluk River	19.16	19		P	08 48 59.9	+0.9
D20K				IAmb	IAmb	08 49 20.9	
	comp=Z,10nm,0.8s						
D20K	Etivluk River	19.16	19	P	Pn	08 49 00.9	+0.8
	baz=214						
K24K	Donnelly Dome	19.22	39	P	P	08 48 59.4	-0.3
	baz=242,SNR=20						
BILL	Bilibino	19.25	337		P	08 49 00.8	+0.9
BILL				IAmb	IAmb	08 49 06.9	
	comp=Z,40nm,1.3s						
BILL	Bilibino	19.25	337	*e*P	P	08 49 00.8	+0.9
POKR	Poker Plat Res	19.25	35	P	P	08 49 00.5	+0.5
	baz=237						
ILAR	Eielson Array	19.26	36	P	P	08 48 57.6	-2.5
	comp=Z,3.9nm,0.3s,baz=236,slow=9.2,SNR=100						
ILAR				LR	LR	08 57 06.5	
	comp=Z,398nm,18.4s,baz=236,slow=39						
F22K	John River	19.28	25	P	P	08 49 01.8	+1.5
	baz=224						
CRQE	Cirque	19.30	49	P	P	08 49 01.1	+0.4
	baz=254						
WAX	Waxell Ridge	19.34	50	P	P	08 49 01.6	+0.5
WAX				IAmb	IAmb	08 49 06.0	
	comp=Z,30nm,1.1s						
G23K	Bananza Creek	19.35	29		P	08 49 02.0	+0.9
G23K	Bananza Creek	19.35	29	P	P	08 49 02.4	+1.4
	baz=229,SNR=15						
H24K	Noodor Dome	19.50	33		P	08 49 02.8	+0.1
H24K				IAmb	IAmb	08 49 04.6	
	comp=Z,22nm,1.0s						
H24K	Noodor Dome	19.50	33	P	P	08 49 03.4	+0.6
	baz=234,SNR=24						
MCARA	McCarthy VSAT	19.50	48	P	P	08 49 02.3	-0.5
	baz=253						
E21K	Killik River	19.53	22	P	P	08 49 03.6	+0.6
	baz=219						
RIDG	Independent Ri	19.56	40	P	P	08 49 02.4	-1.0
RIDG				IAmb	IAmb	08 49 04.4	
	comp=Z,15nm,0.4s						
RIDG	Independent Ri	19.56	40	P	P	08 49 03.0	-0.5
	baz=244,SNR=19						
COLD	Coldfoot	19.64	28	P	P	08 49 05.5	+1.4
	baz=228,SNR=8.0						
MENT	Mentasta	19.71	43	P	P	08 49 04.9	-0.1
MENT				IAmb	IAmb	08 49 17.0	
	comp=Z,6.2nm,0.5s						
MESA	MESA	19.71	51	P	P	08 49 04.4	-0.9
	baz=257						
J25K	Salcha River,	19.75	37	P	P	08 49 04.1	-1.4
	baz=241,SNR=65						
E22K	Anaktuvuk Pass	19.83	24	P	P	08 49 07.0	+0.7
	baz=223						
M26K	Nabesna, AK	19.83	45		P	08 49 06.2	-0.2
M26K				IAmb	IAmb	08 49 32.2	
	comp=Z,13nm,1.2s						
M26K	Nabesna, AK	19.83	45	P	P	08 49 07.0	+0.6
	baz=250,SNR=8.2						
YAH	Yahtse	19.85	51	P	P	08 49 07.3	+0.4
YAH				IAmb	IAmb	08 49 14.4	
	comp=Z,14nm,0.8s						
L26K	Log Cabin Wild	19.90	43	P	P	08 49 07.2	+0.1
	baz=248						
C21K	Knifeblade Rid	19.91	20	P	P	08 49 08.2	+1.0
	baz=216						
SCRK	Sand Creek	20.01	40	P	P	08 49 07.5	-0.8
	baz=245,SNR=51						
G24K	Hadweenzic Riv	20.13	31	P	P	08 49 10.3	+0.7
	baz=233,SNR=11						
PRP	Porcupine Dome	20.14	35	P	P	08 49 09.1	-0.7
	baz=239,SNR=11						
B20K	Meade River	20.15	17	P	P	08 49 10.6	+0.9
	baz=211						
D22K	Ayikyak River	20.17	22	P	P	08 49 09.6	-0.3
	baz=220,SNR=11						
CTG	Chitna Glacier	20.18	49	P	P	08 49 09.4	-0.9
	baz=256						
M27K	Edge Creek, AK	20.31	45	P	P	08 49 11.4	-0.3
	baz=252						
B21K	Ikpikpuk River	20.32	19	P	P	08 49 12.1	+0.5
	baz=216						
E23K	Chandalar	20.36	26	P	P	08 49 12.4	+0.2
	baz=227						
J26L	Joseph Creek	20.40	39		P	08 49 11.6	-1.0
J26L	Joseph Creek	20.40	39	P	P	08 49 11.2	-1.3
	baz=244,SNR=71						
H25L	Birch Creek	20.43	33	P	P	08 49 12.5	-0.4
	baz=237,SNR=12						
F24K	Squaw Lake	20.51	29		P	08 49 14.5	+0.8
F24K	Squaw Lake	20.51	29	P	P	08 49 13.6	0.0
	baz=231						
PINM	Pinnacle	20.53	52	P	P	08 49 13.6	-0.5
	baz=259						
L27K	Beaver Creek,	20.56	43	P	P	08 49 15.4	+1.1
	baz=250,SNR=11						
G25K	Bearman Lake	20.62	32	P	P	08 49 13.2	-1.6
	baz=235						
E24K	Your Creek	20.69	27	P	P	08 49 15.1	-0.5
	baz=229						
O28M	Mount Upton	20.69	50	P	P	08 49 15.5	-0.5
O28M				IAmb	IAmb	08 49 19.1	
	comp=Z,9.4nm,0.5s						
O28M	Mount Upton	20.69	50	P	P	08 49 15.7	-0.3
	baz=258,SNR=5.7						
D23K	Nanushuk River	20.72	24		P	08 49 15.4	-0.5
D23K				IAmb	IAmb	08 49 25.0	
	comp=Z,34nm,1.5s						
D23K	Nanushuk River	20.72	24	P	P	08 49 15.9	0.0
	baz=224						
TOLK	Toolik Lake Re	20.77	25	P	P	08 49 16.4	-0.2
	baz=226,SNR=11						
BVCY	Beaver Creek	20.78	46	P	P	08 49 16.9	+0.2
	baz=253,SNR=8.6						
YUK3	Moose Creek	20.79	47	P	P	08 49 16.6	-0.3
	baz=255						
K27K	Chicken	20.80	41	P	P	08 49 16.3	-0.5
	baz=247						
PNL	Peninsula	20.89	54	P	P	08 49 18.6	+0.7
PNL	Peninsula	20.89	54	P	P	08 49 16.3	-1.6
	baz=261,SNR=6.8						
I26K	Coal Creek Min	20.91	37	P	P	08 49 16.5	-1.5
	baz=243,SNR=21						
YUK8	Steele Glacier	21.00	49	P	P	08 49 18.0	-1.3
	baz=257						
B22K	Teshekpuk Lake	21.15	19	P	P	08 49 21.1	+0.7
	baz=217						
F25K	Christian Rive	21.24	30	P	P	08 49 21.8	+0.2
	baz=234						
D24K	Happy Valley	21.33	25	P	P	08 49 21.9	-0.5
D24K				IAmb	IAmb	08 49 23.4	
	comp=Z,35nm,1.5s						
D24K	Happy Valley	21.33	25	P	P	08 49 22.7	+0.3
	baz=226						
SEY	Seymchan	21.33	316	LR	LR	08 57 54.5	
	comp=Z,288nm,18.9s,baz=106,slow=38						
C23K	Itkillik River	21.37	22	P	P	08 49 23.3	+0.4
	baz=222						
A22K	Sinclair Lake	21.39	17	P	P	08 49 23.1	0.0
	baz=213						
O29M	Mount Kennedy	21.39	52	P	P	08 49 23.4	0.0
O29M				IAmb	IAmb	08 49 25.9	
	comp=Z,13nm,0.4s						
O29M	Mount Kennedy	21.39	52	P	P	08 49 23.2	-0.2
	baz=260,SNR=13						
BMAR	Burnt Mountain	21.48	31	P	P	08 49 26.1	+1.9
G26K	Porcupine Rive	21.49	33		P	08 49 24.7	+0.6
G26K				IAmb	IAmb	08 49 27.7	
	comp=Z,10.0nm,1.0s						
G26K	Porcupine Rive	21.49	33	P	P	08 49 24.5	+0.4
	baz=238,SNR=5.7						
YUK4	Talbot Arm	21.54	49	P	P	08 49 23.3	-1.8
	baz=258						
E25K	Arctic Village	21.57	29	P	P	08 49 26.8	+1.7
E25K				IAmb	IAmb	08 49 44.7	
	comp=Z,18nm,1.4s						
E25K	Arctic Village	21.57	29	P	P	08 49 26.1	+0.9
	baz=233						
YUK6	Outpost Mounta	21.60	50	P	P	08 49 24.9	-0.8
	baz=259						
I27K	Kandik River	21.62	37	P	P	08 49 25.4	-0.3
	baz=244,SNR=13						
P29M	Windy Craggy	21.73	54		P	08 49 26.8	0.0
P29M				IAmb	IAmb	08 49 53.4	
	comp=Z,16nm,1.1s						
P29M	Windy Craggy	21.73	54	P	P	08 49 25.3	-1.6
	baz=263						
C24K	Franklin Bluff	21.75	24	P	P	08 49 27.1	+0.1
	baz=225						
F26K	Sheenjek River	21.77	31	P	P	08 49 29.0	+1.8
F26K				IAmb	IAmb	08 49 57.9	
	comp=Z,17nm,1.3s						
F26K	Sheenjek River	21.77	31	P	P	08 49 26.3	-0.9
	baz=236,SNR=5.3						
M29M	Somme Creek	21.86	46	P	P	08 49 28.2	-0.2
	baz=256						
DAWY	Dawson	21.92	42	P	P	08 49 27.8	-1.1
DAWY	Dawson	21.92	42	P	P	08 49 28.0	-0.9
	baz=250,SNR=10						
H27K	Steamboat Moun	21.93	35	P	P	08 49 28.3	-0.6
	baz=243						
HYT	Haines Junctio	22.00	51		P	08 49 30.1	+0.2
HYT	Haines Junctio	22.00	51	P	P	08 49 28.8	-1.1
	baz=260,SNR=5.5						
D25K	Kavik River	22.09	26	P	P	08 49 30.5	-0.2
	baz=230						
G27K	Doyon Strip	22.15	34	P	P	08 49 30.9	-0.4
G27K	Doyon Strip	22.15	34	P	P	08 49 30.0	-1.3
	baz=241						
P30M	Million Dollar	22.17	53	P	P	08 49 29.5	-2.1
	baz=263						
L29M	L29M	22.18	45	P	P	08 49 30.9	-0.9
	baz=254,SNR=8.4						
I28M	Miner Creek	22.19	38	P	P	08 49 31.2	-0.7
	baz=247,SNR=19						
N30M	Aishikik Lake	22.30	49	P	P	08 49 33.0	0.0
	baz=259						
PLBC	Pleasant Camp	22.41	55	P	P	08 49 34.0	-0.1
	baz=265						
S31K	Pelican	22.41	58	P	P	08 49 33.0	-1.1
	baz=269						
K29M	Barlow Dome	22.64	43	P	P	08 49 36.7	0.0
	baz=253,SNR=10.0						
O30N	Mendenhall	22.68	51	P	P	08 49 36.2	-0.8
O30N	Mendenhall	22.68	51	P	P	08 49 37.3	+0.3
	baz=262						
R31K	City Hall, Gus	22.68	57	P	P	08 49 37.0	0.0
	baz=268						
E27K	Coleen River	22.85	31	P	P	08 49 38.6	-0.1
	baz=239						
C26K	Camden Bay	22.87	25	P	P	08 49 39.0	+0.1
	baz=231						
SIT	Sitka	22.92	61	P	P	08 49 41.8	+2.3
SIT	Sitka	22.92	61	P	P	08 49 38.6	-0.9
	baz=272						
N31M	Braeburn, Yuko	22.92	49	P	P	08 49 39.3	-0.3
	baz=261						
SKAG	Skagway	22.93	55	P	P	08 49 41.5	+1.9
SKAG	Skagway	22.93	55	P	P	08 49 39.6	0.0
	baz=266						
C27K	Jago River	23.02	27	P	P	08 49 40.2	-0.2
	baz=233						
H29M	Whitestone	23.09	37	P	P	08 49 40.0	-1.1
	baz=247,SNR=7.9						
F28M	Old Crow	23.14	33	P	P	08 49 41.4	-0.3
	baz=242						
S32K	Killisnoo	23.31	60	P	P	08 49 41.5	-1.9
	baz=271						
R32K	Eaglecrest	23.32	58	P	P	08 49 41.2	-2.4
	baz=269						
J30M	Hart River	23.34	41	P	P	08 49 42.8	-1.1
	baz=253,SNR=7.5						
JIS	Juneau Island	23.39	58	P	P	08 49 46.0	+1.8
G29M	Pine Creek	23.48	35	P	P	08 49 44.1	-1.0
	baz=246,SNR=6.9						
I30M	Mount Dempster	23.52	40		P	08 49 43.8	-1.8
I30M				IAmb	IAmb	08 50 03.2	
	comp=Z,8.1nm,0.8s						
I30M	Mount Dempster	23.52	40	P	P	08 49 43.2	-2.4
	baz=252,SNR=13						
D27M	Malcolm River	23.60	29	P	P	08 49 45.8	-0.5
	baz=238						
E28M	Babbage River	23.72	31	P	P	08 49 46.8	-0.5
	baz=241						
EPYK	Eagle Plains	23.76	37	P	P	08 49 46.5	-1.3
	baz=249,SNR=6.3						
P32M	Atlin	23.76	54	P	P	08 49 46.4	-1.5
	baz=267						
E29M	Blow River	24.15	32		P	08 49 51.3	-0.1
E29M				IAmb	IAmb	08 49 53.1	
	comp=Z,19nm,1.0s						
E29M	Blow River	24.15	32	P	P	08 49 51.1	-0.3
	baz=243,SNR=14						
G30M	tAoh Zraii Nji	24.17	36	P	P	08 49 49.7	-1.8
	baz=248						
FARO	Faro, Yukon	24.17	48	P	P	08 49 51.1	-0.5
	baz=262						
N32M	Quiet Lake	24.18	51	P	P	08 49 50.6	-1.0
	baz=264						
T33K	Petersburg	24.23	61	P	P	08 49 51.0	-1.1
	baz=274						
P33M	Teslin, Yukon	24.24	53	P	P	08 49 51.2	-1.1
	baz=266,SNR=5.2						
Q32M	Nakina River	24.50	56	P	P	08 49 54.0	-0.8
	baz=270,SNR=9.5						
H31M	Peel River	24.50	39		P	08 49 54.0	-0.6
H31M				IAmb	IAmb	08 50 07.6	
	comp=Z,16nm,1.3s						
H31M	Peel River	24.50	39	P	P	08 49 53.4	-1.2
	baz=253,SNR=6.6						
F30M	Barrier River	24.56	35	P	P	08 49 54.1	-1.0
	baz=247,SNR=6.6						
WRAK	Wrangell Islan	24.60	62	P	P	08 49 53.4	-2.0
	baz=275						
G31M	Satah River	24.87	37	P	P	08 49 56.8	-1.0
	baz=251						
S34M	Telegraph Cree	25.13	58	P	P	08 49 58.9	-1.4
	baz=273,SNR=6.3						
V35K	Ketchikan	25.15	65	P	P	08 49 58.2	-2.3
	baz=278						
R33M	Jennings River	25.16	55		P	08 50 00.5	-0.2
R33M				IAmb	IAmb	08 50 23.0	
	comp=Z,13nm,1.3s						
R33M	Jennings River	25.16	55	P	P	08 49 58.9	-1.8
	baz=270						
MMPY	Sheldon Lake,	25.18	47	P	P	08 49 59.6	-1.2
	baz=263,SNR=6.7						

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F31M  Tsiigehtchic      25.23  36  P      P       08 50 00.8 -0.3
      baz=250
INK   Inuvik            25.61  34         P       08 50 04.1 -0.4
INK                                IAmb   IAmb    08 50 10.8
      comp=Z,6.9nm,0.7s
INK   Inuvik            25.61  34  LR     LR      09 01 13.4
      comp=Z,286nm,18.9s,baz=236,slow=39
INK   Inuvik            25.61  34  P      P       08 50 04.1 -0.4
INK                                pmax   pmax
      comp=Z,7.0nm,0.7s
INK   Inuvik            25.61  34  P      P       08 50 03.6 -0.9
      baz=249,SNR=7.4
DLBC  Dease Lake        25.68  57  P      P       08 50 03.6 -1.8
      baz=273,SNR=7.5
T35M  Bob Quinn         25.69  60  P      P       08 50 03.7 -1.7
      baz=276,SNR=7.1
BBB   Bella Bella       27.88  70  LR     LR      09 01 17.5
      comp=Z,136nm,18.2s,baz=276,slow=36
TOAD  Toad River Com    28.15  56  P      P       08 50 24.9 -2.6
      baz=276
YSS   Yuzhno-Sakhali    28.42 278 eP      P       08 50 31.5 +1.5
YSS                                pmax   pmax
      comp=Z,10.0nm,1.0s
ASAJ  Asahikawa         29.84 273  LR     LR      09 03 00.1
      comp=Z,87nm,20.1s,baz=100,slow=37
YAK   Yakutsk           31.71 312  LR     LR      09 04 08.2
      comp=Z,348nm,18.3s,baz=92,slow=37
YKA   Yellowknife Ar    32.88  47  P      P       08 51 08.1 -1.0
      comp=Z,0.5nm,0.7s,baz=263,slow=14,SNR=10
YKA                                LR     LR      09 06 10.0
      comp=Z,327nm,18.9s,baz=290,slow=39
      comp=Z,0.5nm,0.7s
KLR   Kul'dur           34.15 288  P      P       08 51 19.5 -0.8
      comp=Z,3.2nm,0.5s,baz=72,slow=6.8,SNR=15
KLR                                LR     LR      09 05 14.1
      comp=Z,97nm,21.0s,baz=69,slow=36
      comp=Z,3.2nm,0.5s
H11N2 WAKE ISLAND Hy    35.13 213  T      T       09 29 24.4
      baz=21,slow=76,SNR=72
H11N3 WAKE ISLAND Hy    35.13 213  T      T       09 29 25.0
      baz=21,slow=76,SNR=66
H11N1 WAKE ISLAND Hy    35.15 213  T      T       09 29 27.3
      baz=21,slow=76,SNR=61
NEW   Newport           35.89  72  LR     LR      09 04 10.0
      comp=Z,84nm,20.1s,baz=295,slow=33
NEW   Newport           35.89  72  P      P       08 51 36.8 +1.4
NEW                                pmax   pmax
      comp=Z,10.0nm,0.9s
H11S1 WAKE ISLAND Hy    36.33 212  T      T       09 30 54.3
      baz=20,slow=76,SNR=176
H11S2 WAKE ISLAND Hy    36.34 212  T      T       09 30 47.7
      baz=20,slow=76,SNR=42
H11S3 WAKE ISLAND Hy    36.35 212  T      T       09 30 47.6
      baz=20,slow=76,SNR=20
USRK  Ussuriysk Ar.     36.38 280  P      P       08 51 39.3 -0.2
      comp=Z,3.1nm,0.5s,baz=55,slow=9.7,SNR=6.8
USRK                               LR     LR      09 05 45.2
      comp=Z,126nm,21.5s,baz=51,slow=35
      comp=Z,3.1nm,0.5s
MJAR  Matsushiro Arr    36.91 265  P      P       08 51 46.1 +1.9
      comp=Z,0.9nm,0.5s,baz=36,slow=6.9,SNR=2.0
MJAR                               pP     sP      08 51 58.7 +2.1
      comp=Z,2.5nm,0.7s,baz=48,slow=6.5,SNR=4.4
MJAR                               LR     LR      09 05 54.7
      comp=Z,115nm,20.6s,baz=54,slow=34
      comp=Z,0.9nm,0.5s
WVOR  Wild Horse Val    37.90  82  P      P       08 51 53.6 +1.0
WVOR                               pmax   pmax
      comp=Z,6.0nm,1.2s
RES   Resolute Bay      38.35  25  LR     LR      09 11 02.2
      comp=Z,188nm,18.8s,baz=238,slow=41
BNX   BinXian           38.39 285 ⇓P      P       08 51 57.9 +1.4
BNX                                pmax   pmax
      comp=Z,5.0nm,0.6s
NVAR  Mina Array Bea    40.42  86  P      P       08 52 15.3 +1.5
      comp=Z,0.8nm,0.7s,baz=313,slow=8.3,SNR=6.3
NVAR                               pP     pwP     08 52 29.3 +0.5
      comp=Z,1.8nm,0.8s,baz=300,slow=7.1,SNR=8.8
NVAR                               LR     LR      09 07 39.3
      comp=Z,73nm,19.4s,baz=228,slow=34
      comp=Z,0.8nm,0.7s
BOZ   Bozeman (W)       40.48  73  P      P       08 52 14.8 +0.7
BOZ                                IAmb   IAmb    08 52 29.7
      comp=Z,7.2nm,1.1s
BOZ   Bozeman (W)       40.48  73  P      P       08 52 14.8 +0.7
BOZ                                pmax   pmax
      comp=Z,7.0nm,1.1s
ELK   Elko              40.95  81  LR     LR      09 06 58.3
      comp=Z,41nm,19.1s,baz=309,slow=33
JCJ   Chichijima        41.02 251  LR     LR      09 05 19.3
      comp=Z,47nm,20.9s,baz=26,slow=30
YHH   Holmes Hill       41.37  74  P      P       08 52 21.2 -0.5
FFC   Flin Flon         41.51  56  P      P       08 52 22.0 -0.4
FFC                                pmax   pmax
      comp=Z,17nm,1.5s
RLMT  Red Lodge         42.14  72         P       08 52 27.2 -0.7
KSRS  Korea Array       42.77 274  P      P       08 52 34.1 +1.4
      comp=Z,5.1nm,1.0s,baz=58,slow=8.2,SNR=11
KSRS                               LR     LR      09 09 46.2
      comp=Z,64nm,20.2s,baz=65,slow=35
      comp=Z,5.1nm,1.0s
DUG   Dugway, Tooele    42.77  80         P       08 52 32.3 -0.7
DUG                                IAmb   IAmb    08 52 49.4
      comp=Z,8.8nm,1.1s
DUG   Dugway, Tooele    42.77  80  P      P       08 52 32.3 -0.7
DUG                                pmax   pmax
      comp=Z,9.0nm,1.1s
KSAR  Wonju Array Be    42.80 274  P      P       08 52 30.3 -2.7
KSAR  Wonju Array Be    42.80 274  P      P       08 52 30.3 -2.7
PDAR  Pinedale Array    43.27  75  P      P       08 52 36.5 -0.6
PDAR  Pinedale Array    43.27  75  P      P       08 52 37.8 +0.6
      comp=Z,2.8nm,0.9s,baz=303,slow=6.7,SNR=10
PDAR                               pP     sP      08 52 51.1 +1.5
      comp=Z,3.2nm,0.6s,baz=308,slow=4.7,SNR=8.5
PDAR                               LR     LR      09 10 39.4
      comp=Z,48nm,18.8s,baz=297,slow=36
      comp=Z,2.8nm,0.9s
FCC   Fort Churchill    43.60  48  P      P       08 52 39.6 +0.4
FCC                                IAmb   IAmb    08 53 07.5
      comp=Z,7.6nm,1.1s
FCC   Fort Churchill    43.60  48  P      P       08 52 39.6 +0.4
FCC                                pmax   pmax
      comp=Z,8.0nm,1.2s
JNU   Nakatsue          43.70 267  P      P       08 52 36.8 -3.7
JNU   Nakatsue          43.70 267  LR     LR      09 11 05.1
      comp=Z,46nm,20.6s,baz=131,slow=36
PFO   Pinyon Flats O    44.63  91  LR     LR      09 07 29.1
      comp=Z,63nm,21.2s,baz=290,slow=31
U15A  North Rim         45.41  84  P      P       08 52 53.3 -1.1
U15A                               IAmb   IAmb    08 53 12.8
      comp=Z,10nm,1.1s
NRIK  Noril'sk          45.89 331  P      P       08 52 57.0 -0.3
      comp=Z,1.2nm,0.2s,baz=75,slow=6.9,SNR=3.6
NRIK                               LR     LR      09 13 02.5
      comp=Z,57nm,21.6s,baz=26,slow=37
      comp=Z,1.2nm,0.2s
PV17  East Wray Mesa    46.31  80  P      P       08 53 01.5 +0.1
PV03  Paradox Valley    46.40  80  P      P       08 53 01.9 -0.2
PV03                               IAmb   IAmb    08 53 17.6
      comp=Z,6.3nm,0.8s
PV01  Paradox Valley    46.64  80  P      P       08 53 04.1 +0.1
ULM   Lac du Bonnet     46.98  59  P      P       08 53 06.1  0.0
      comp=Z,2.7nm,0.3s,baz=309,slow=7.2,SNR=7.7
ULM                                LR     LR      09 13 41.9
      comp=Z,114nm,20.8s,baz=319,slow=37
      comp=Z,2.7nm,0.3s
EPLO  Experimental L    48.45  59         P       08 53 17.2 -0.3
TUC   Tucson            49.05  88  P      P       08 53 21.2 -1.3
TUC                                pmax   pmax
      comp=Z,4.0nm,1.6s
SONM  Songino Array     49.38 299  P      P       08 53 25.1 +0.3
      comp=Z,0.9nm,0.4s,baz=52,slow=9.6,SNR=4.8
SONM                               LR     LR      09 15 22.9
      comp=Z,173nm,19.0s,baz=63,slow=37
      comp=Z,0.9nm,0.4s
ZAK   Zakamensk         49.56 303 eP      P       08 53 26.5 +0.3
ZAK                                pmax   pmax
      comp=Z,5.0nm,1.4s
ANMO  Albuquerque       49.99  82  LR     LR      09 12 31.5
      comp=Z,63nm,20.3s,baz=37,slow=33
ANMO  Albuquerque       49.99  82  P      P       08 53 31.0 +1.2
ANMO                               pmax   pmax
      comp=Z,5.0nm,1.5s
SPITS Spitsbergen Ar    50.47 357  P      P       08 53 32.2 -0.4
      comp=Z,6.4nm,0.9s,baz=42,slow=2.6,SNR=12
SPITS                              LR     LR      09 14 50.8
      comp=Z,108nm,20.0s,baz=332,slow=36
      comp=Z,6.4nm,0.9s
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FRB   Frobisher Bay     51.27  33  LR     LR      09 16 55.2
      comp=Z,312nm,18.1s,baz=308,slow=38
NJ2   Nanjing           51.94 275 eP      P       08 53 40.4 -3.7
NJ2                                pmax   pmax
      comp=Z,11nm,1.3s
MNTX  Cornudas Mount    52.83  84  P      P       08 53 50.6 -0.3
MNTX                               IAmb   IAmb    08 54 07.3
      comp=Z,6.1nm,1.2s
SFJD  Kangerlussuaq     54.34  24  LR     LR      09 20 42.3
      comp=Z,89nm,18.7s,baz=315,slow=40
WMOK  Wichita Mounta    54.84  77  P      P       08 54 05.1 -0.4
WMOK                               pmax   pmax
      comp=Z,6.0nm,1.2s
LPIG  La Paz            55.11  95  LR     LR      09 15 26.9
      comp=Z,66nm,18.0s,baz=207,slow=34
TXAR  Lajitas Array     55.53  85  P      P       08 54 09.7 -1.0
TXAR  Lajitas Array     55.53  85  P      P       08 54 10.9 +0.2
      comp=Z,0.6nm,0.5s,baz=305,slow=5.7,SNR=12
TXAR                               LR     LR      09 16 14.0
      comp=Z,26nm,19.3s,baz=308,slow=34
      comp=Z,0.6nm,0.5s
P40A  Paris             55.66  68         P       08 54 10.5 -0.8
ZALV  Zalesovo Beam     56.20 316  LR     LR      09 19 46.2
      comp=Z,83nm,18.4s,baz=42,slow=38
XAN   Xi'an             56.70 284  P      P       08 54 19.0 +0.1
XAN                                pmax   pmax
      comp=Z,16nm,1.2s
JMIC  Jan Mayen         57.39   6  LR     LR      09 17 50.8
      comp=Z,43nm,21.7s,baz=223,slow=35
SCHQ  Schefferville     57.94  41  LR     LR      09 21 48.1
      comp=Z,229nm,18.1s,baz=324,slow=38
MIAR  Mount Ida         58.12  73         P       08 54 28.6 -0.2
MIAR  Mount Ida         58.12  73  P      P       08 54 28.6 -0.2
MIAR                               pmax   pmax
      comp=Z,16nm,1.1s
LZH   Lanzhou           58.34 289 eP      P       08 54 22.2 -8.3
LZH                                sP     pP      08 54 35.8 -3.9
LZH                                pmax   pmax
      comp=Z,25nm,1.1s
LZH                                LR     LR
      comp=N,140nm,18.4s
LZH                                LR     LR
      comp=E,210nm,17.2s
LZH                                LR     LR
      comp=Z,280nm,17.0s
GTA   Gaotai            58.41 295 eP      P       08 54 31.1 +0.2
GTA                                pmax   pmax
      comp=Z,7.0nm,1.1s
GTA                                LR     LR
      comp=Z,200nm,14.5s
GTA                                LR     LR
      comp=Z,100nm,14.5s
GTA                                LR     LR
      comp=Z,140nm,15.3s
ARCES ARCESS Array B    58.48 352  P      P       08 54 30.4 -0.4
      comp=Z,0.3nm,0.4s,baz=24,slow=7.2,SNR=10
ARCES                              PcP    PcP     08 55 21.1 +0.1
      comp=Z,2.6nm,0.6s,baz=21,slow=4.7,SNR=9.0
      comp=Z,0.3nm,0.4s
O48B  Farmland          59.09  63         P       08 54 34.6 -0.9
SADO  Sadowa            59.23  56  LR     LR      09 22 00.8
      comp=Z,190nm,18.2s,baz=342,slow=38
T47A  Sharon Grove      60.24  67  P      P       08 54 43.0 -0.4
TRQ   Mont Tremblant    60.54  52  P      P       08 54 45.1 -0.4
OXF   Oxford            60.62  71  P      P       08 54 45.0 -1.1
OXF   Oxford            60.62  71  P      P       08 54 45.0 -1.1
OXF                                pmax   pmax
      comp=Z,38nm,1.2s
KURK  Kurchatov         61.17 316  P      P       08 54 49.9 +0.3
KURK  Kurchatov         61.17 316  P      P       08 54 49.9 +0.3
KURK                               pmax   pmax
      comp=Z,4.0nm,0.5s
KURBB Kurchatov Arra    61.28 316  P      P       08 54 49.7 -0.6
      comp=Z,2.1nm,0.4s,baz=44,slow=6.7,SNR=30
KURBB                              PcP    PcP     08 55 32.9 +0.3
      comp=Z,1.9nm,0.9s,baz=43,slow=4.1,SNR=6.7
KURBB                              LR     LR      09 23 07.5
      comp=Z,150nm,18.1s,baz=166,slow=38
      comp=Z,2.1nm,0.4s
P53A  Whipple           61.71  61  P      P       08 54 53.9 +0.5
O54A  Avella            61.77  60  P      P       08 54 54.3 +0.5
S51A  Beattyville       61.78  64  P      P       08 54 54.0 +0.1
WMQ   Urumqi            61.88 306 eP      P       08 54 54.5 -0.1
WMQ                                pmax   pmax
      comp=Z,25nm,0.9s
L56A  Greenwood         61.90  57  P      P       08 54 55.7 +1.0
K57A  Scipio Center     62.02  56  P      P       08 54 56.1 +0.6
MKAR  Makanchi Array    62.38 311  P      P       08 54 57.8 -0.1
MKAR  Makanchi Array    62.38 311  P      P       08 54 56.6 -1.2
      comp=Z,1.1nm,0.3s,baz=47,slow=6.8,SNR=24
MKAR                               LR     LR      09 22 37.3
      comp=Z,103nm,19.7s,baz=45,slow=37
      comp=Z,1.1nm,0.3s
MKAR  Makanchi Array    62.38 311  P      P       08 54 57.8 -0.1
BVAR  Borovoye Array    62.79 322  P      P       08 54 59.5 -0.9
      comp=Z,2.3nm,0.6s,baz=46,slow=7.5,SNR=9.2
BVAR                               PcP    PcP     08 55 38.5 -0.1
      comp=Z,2.5nm,0.6s,baz=57,slow=3.1,SNR=5.2
BVAR                               LR     LR      09 25 42.4
      comp=Z,177nm,18.3s,baz=46,slow=39
      comp=Z,2.3nm,0.6s
ARTI  Arti              64.20 331  P      P       08 55 08.4 -1.2
      comp=Z,3.0nm,0.5s,baz=183,slow=0.6,SNR=4.3
ARTI                               LR     LR      09 27 28.1
      comp=Z,148nm,18.0s,baz=44,slow=40
      comp=Z,3.0nm,0.5s
HNR   Honiara           64.76 209  LR     LR      09 17 44.4
      comp=Z,58nm,20.1s,baz=24,slow=30
KIRV  Kirov             64.79 337  LR     LR      09 27 36.4
      comp=Z,86nm,18.4s,baz=58,slow=40
FINES FINESS Array B    66.32 350  P      P       08 55 22.2 -1.1
      comp=Z,1.6nm,0.6s,baz=353,slow=7.7,SNR=8.8
FINES                              LR     LR      09 27 13.5
      comp=Z,56nm,20.1s,baz=42,slow=39
      comp=Z,1.6nm,0.6s
PZH   PanZhiHua         66.40 283  P      P       08 55 23.7 -0.8
PZH                                pmax   pmax
      comp=Z,6.0nm,0.7s
PZH                                pmax   pmax
      comp=Z,100nm,4.7s
DAV   Davao City (W)    66.43 251  LR     LR      09 25 30.1
      comp=Z,14nm,18.6s,baz=168,slow=37
TAOE  Nuku Hiva Isla    66.72 143 eLR     LR      09 15 14.6
      comp=Z,114nm,25.9s
NOA   NORSAR Array B    67.77 357  P      P       08 55 32.8 +0.2
      comp=Z,0.6nm,0.6s,baz=263,slow=4.1,SNR=5.3
NOA                                LR     LR      09 26 08.3
      comp=Z,41nm,18.7s,baz=0.0,slow=37
      comp=Z,0.6nm,0.6s
HFS   Hagfors           68.58 356  P      P       08 55 37.2 -0.4
      comp=Z,1.8nm,0.6s,baz=7.6,slow=4.5,SNR=10
HFS                                pP     sP      08 55 51.0 +0.3
      comp=Z,1.1nm,0.5s,baz=318,slow=2.0,SNR=2.6
      comp=Z,1.8nm,0.6s
AAK   Ala-Archa         69.16 313  P      P       08 55 41.5 -0.2
      comp=Z,1.4nm,0.3s,baz=74,slow=4.6,SNR=4.9
AAK                                LR     LR      09 28 22.2
      comp=Z,70nm,18.3s,baz=339,slow=38
      comp=Z,1.4nm,0.3s
MSVF  Nonsavu           69.28 188  LR     LR      09 23 04.9
      comp=Z,82nm,18.7s,baz=6.4,slow=33
PMG   Port Moresby      69.36 222  LR     LR      09 22 59.7
      comp=Z,72nm,19.8s,baz=166,slow=33
AKTO  Aktyubinsk        69.36 328  P      P       08 55 42.3 -0.3
      comp=Z,4.0nm,0.4s,baz=59,slow=6.7,SNR=13
AKTO                               LR     LR      09 29 45.3
      comp=Z,103nm,18.5s,baz=292,slow=39
      comp=Z,4.0nm,0.4s
ABKAR Akbulak array     69.69 326         P       08 55 44.7  0.0
CMIG  Matias Romero     69.94  88  LR     LR      09 22 08.6
      comp=Z,59nm,22.0s,baz=358,slow=32
KKAR  Karatay Array     70.57 316         P       08 55 50.2  0.0
KKAR  Karatay Array     70.57 316  P      P       08 55 50.2  0.0
BELG  Belogornoye       70.78 335  LR     LR      09 31 51.2
      comp=Z,68nm,18.3s,baz=330,slow=40
KSH   Kashi             70.90 310  P      P       08 55 56.8 +4.4
KSH                                sP     PcP     08 56 15.1 +2.3
KSH                                pmax   pmax
      comp=Z,5.0nm,0.6s
PPT   Papeete           71.94 156  LR     LR      09 21 32.1
      comp=Z,98nm,21.6s,baz=324,slow=31
PPT2  Papeete2          71.96 156 eLR     LR      09 17 32.7
      comp=Z,88nm,21.5s
PPT2                              eLR     LR      09 17 35.5
      comp=Z,106nm,23.0s
RAR   Rarotonga         73.41 166  LR     LR      09 22 57.8
      comp=Z,120nm,19.3s,baz=315,slow=31
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CMAR  Chiang Mai Arr    74.11 280  P      P       08 56 12.1 +0.5
      comp=Z,1.7nm,0.3s,baz=29,slow=6.9,SNR=4.2
CMAR                               LR     LR      09 33 37.5
      comp=Z,38nm,18.2s,baz=50,slow=40
      comp=Z,1.7nm,0.3s
EVN   Everest           74.12 295         P       08 56 11.9 -0.5
DZET  Dzherino          74.80 314  P      P       08 56 16.2 +0.7
DZET                               pmax   pmax
      comp=Z,10.0nm,0.5s
DZM   Mont Dzumac       75.26 199 eLR     LR      09 19 01.8
      comp=Z,76nm,20.6s
BRDH  Bariadhala        75.34 288  LR     LR      09 34 10.7
      comp=Z,74nm,18.4s,baz=82,slow=40
AK21  Malin Array Si    76.30 345  P      P       08 56 21.9 -1.8
AK22  Malin Array Si    76.31 345  P      P       08 56 22.7 -1.1
AK03  Malin Array Si    76.32 345  P      P       08 56 22.1 -1.7
RNPP5 Staryi Chortor    76.32 347  P      P       08 56 22.8 -1.0
AK20  Malin Array Si    76.34 345  P      P       08 56 22.7 -1.2
AKASG Malin Array Be    76.34 345  P      P       08 56 22.8 -1.1
      comp=Z,1.4nm,0.3s,baz=17,slow=5.8,SNR=7.8
AKASG                              pP     PcP     08 56 37.0 +1.2
      comp=Z,1.1nm,0.5s,baz=18,slow=6.3,SNR=2.3
AKASG                              LR     LR      09 38 18.4
      comp=Z,54nm,18.2s,baz=14,slow=42
      comp=Z,1.4nm,0.3s
KIEV  Kiev              76.35 345  P      P       08 56 23.1 -0.9
      comp=Z,14nm,0.6s
AK01  Malin Array Si    76.36 345  P      P       08 56 22.9 -1.1
AK19  Malin Array Si    76.36 345  P      P       08 56 23.1 -0.9
AK15  Malin Array Si    76.36 345  P      P       08 56 23.0 -1.1
AK13  Malin Array Si    76.45 345  P      P       08 56 24.1 -0.5
NIL   Nilore            76.89 308         P       08 56 27.8 +0.4
NIL   Nilore            76.89 308  P      P       08 56 27.8 +0.4
NIL                                pmax   pmax
      comp=Z,14nm,1.1s
LUBAR Lubar, Ukraine    77.33 346  P      P       08 56 27.9 -1.6
CLL   Collm             77.43 356 i P     P       08 56 30.6 +0.5
TBI   Tubuai            77.51 157 eLR     LR      09 20 12.9
      comp=Z,453nm,24.5s
DPC   Dobruska-Polom    78.19 353  P      P       08 56 34.2 -0.2
      comp=Z,4.0nm,0.9s
KBL   Kabul             78.19 311         P       08 56 34.2 -0.7
KBL   Kabul             78.19 311  P      P       08 56 34.2 -0.7
KBL                                pmax   pmax
      comp=Z,11nm,1.3s
KMPD  K-Podol'skiy      78.85 346  P      P       08 56 36.3 -1.7
VRAC  Vranov            79.21 353  LR     LR      09 37 00.5
      comp=Z,15nm,18.4s,baz=13,slow=40
BUR08 Bucovina Ar. S    79.93 347         P       08 56 43.5 -0.5
BURAR Bucovina Array    79.95 347  P      P       08 56 43.8 -0.3
BURAR                              IAmb   IAmb    08 56 45.8
      comp=Z,1.4nm,0.6s
KBZ   Khabaz            79.99 334  P      P       08 56 43.8 -0.4
      comp=Z,1.3nm,0.7s,baz=186,slow=6.7,SNR=4.0
KBZ                                LR     LR      09 35 18.0
      comp=Z,50nm,21.9s,baz=9.5,slow=38
      comp=Z,1.3nm,0.7s
KBA   Koelnbreinsper    81.64 355  P      P       08 56 53.9 +0.6
KBA                                pmax   pmax
      comp=Z,9.0nm,0.7s
RKT   Rikitea           81.72 144 eLR     LR      09 22 09.2
      comp=Z,356nm,24.5s
MLR   Muntele Rosu      81.92 346  LR     LR      09 38 59.9
      comp=Z,43nm,18.1s,baz=36,slow=40
GNI   Garni             82.75 331  LR     LR      09 40 13.7
      comp=Z,56nm,18.8s,baz=306,slow=40
WRA   Warramunga Arr    84.33 228  P      P       08 57 06.5 -0.7
      comp=Z,0.9nm,1.0s,baz=28,slow=5.3,SNR=2.9
      comp=Z,0.9nm,1.0s
BRTR  Keskin Array B    86.07 339  P      P       08 57 15.3 -0.7
      comp=Z,1.0nm,0.8s,baz=26,slow=3.1,SNR=7.8
BRTR                               pP     sP      08 57 30.6 +1.6
      comp=Z,1.6nm,1.0s,baz=62,slow=2.9,SNR=4.4
      comp=Z,1.0nm,0.8s
SJG   San Juan          86.51  65  LR     LR      09 39 33.6
      comp=Z,23nm,18.0s,baz=296,slow=38
ASAR  Alice Springs     87.75 227  P      P       08 57 24.4 +0.4
      comp=Z,1.0nm,0.9s,baz=57,slow=4.6,SNR=5.3
ASAR                               pP     sP      08 57 39.0 +2.0
      comp=Z,1.9nm,0.8s,baz=30,slow=4.5,SNR=8.0
ASAR                               LR     LR      09 33 27.7
      comp=Z,59nm,19.8s,baz=90,slow=33
      comp=Z,1.0nm,0.9s
VAE   Valguarnera       91.13 353  LR     LR      09 41 46.2
      comp=Z,41nm,19.2s,baz=148,slow=38
STKA  Stephens Creek    91.79 217  LR     LR      09 36 11.1
      comp=Z,102nm,19.5s,baz=26,slow=34
ROSC  El Rosal          92.13  80  LR     LR      09 42 51.6
      comp=Z,49nm,18.1s,baz=36,slow=38
EIL   Elat              95.34 335  LR     LR      09 48 17.6
      comp=Z,50nm,18.1s,baz=61,slow=40
QSPA  South Pole Qui   141.23 180  PKhKP  PKPpre  09 03 58.1
      comp=Z,0.9nm,0.8s,baz=272,slow=1.8,SNR=7.2
QSPA                               PKP    PKPdf   09 04 06.5 +2.2
      comp=Z,2.1nm,1.0s,baz=192,slow=1.3,SNR=7.9
MAW   Mawson           148.48 218  PKPbc  PKPbc   09 04 21.1 +0.8
      comp=Z,4.7nm,1.0s,baz=22,slow=5.3,SNR=4.7
BOSA  Boshof           153.07 321  PKPbc  PKPbc   09 04 32.8 +0.2
      comp=Z,2.9nm,0.8s,baz=6.5,slow=0.8,SNR=7.9
```

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*IDC **06** 08:49:52.8±4.0, 54°.27N×87°.45E, h0^{km}, mbtmp2.5/2, ML2.3/2, Error ellipse: s-maj=36.7km s-min=22.0km az=37.0*

ASRS 06 08:49:52.0±0.6**, 54°.12N×87°.21E, h0^{km}, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

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Code  Station Name       Δ°   AZ°   Phase ID        Time      Res
                                    Op     ISC      h  m  s   ISC
I46RU ZALESOVO INFRA    1.42 264    I      I        08 59 20.0
      baz=80,slow=321,SNR=20
ZALV  Zalesovo Beam     1.42 264    Pg     Pb       08 50 20.2 +0.9
      5.2nm,0.3s,baz=81,slow=21,SNR=4.3
ZALV                                Lg     Lg       08 50 43.9
      4.0nm,0.3s,baz=76,slow=36,SNR=3.8
KURBB Kurchatov Arra    6.36 240    Pn     Pn       08 51 30.2 +3.2
      baz=54,slow=14,SNR=2.8
      0.2nm,0.3s
MKAR  Makanchi Array    7.98 205    Pn     Pn       08 51 54.6 +5.5
      0.1nm,0.3s,baz=27,slow=16,SNR=1.4
      0.1nm,0.4s
```

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*IDC **06** 08:53:31.3±1.4, 28°.77N×142°.88E, h0^{km}, mb3.6/4, mbtmp3.6/5, ML2.9/1, Error ellipse: s-maj=41.1km s-min=21.3km az=87.0*

ISC 06 08:53:36.0±1.3**, 28°.75N**±0°.08×**142°.7E**±0°.3**, h35^{km}, n6, σ1ˢ.26**/7**, mb3.6**/4**, Bonin Islands region**

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Code  Station Name       Δ°   AZ°   Phase ID        Time      Res
                                    Op     ISC      h  m  s   ISC
JCJ   Chichijima        1.71 197    Pn     Pn       08 54 02.3 -1.1
      6.1nm,0.3s,baz=26,slow=23,SNR=5.8
JCJ                                 Sn     Sn       08 54 23.7 -0.4
      18nm,0.3s,baz=261,slow=23,SNR=8.2
MJAR  Matsushiro Arr    8.66 335    Pn     Pn       08 55 37.9 -0.9
      0.1nm,0.3s,baz=159,slow=11,SNR=6.2
      1.1nm,0.5s
WRA   Warramunga Arr   49.08 190    P      P        09 02 21.4 +1.4
      1.8nm,0.6s,baz=8.1,slow=8.6,SNR=12
      1.8nm,0.6s
MKAR  Makanchi Array   49.82 309    P      P        09 02 26.6 +1.1
      0.2nm,0.5s,baz=79,slow=9.1,SNR=2.3
      0.2nm,0.5s
KURBB Kurchatov Arra   52.25 314    P      P        09 02 44.5 +0.8
      0.7nm,0.6s,baz=90,slow=7.7,SNR=6.6
      0.7nm,0.6s
ILAR  Eielson Array    56.04  29    P      P        09 03 10.6 -0.5
      0.3nm,0.7s,baz=263,slow=6.2,SNR=2.4
      0.3nm,0.7s
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*SNET **06** 08:55:27.5±1.0, 13°.24N×89°.95W, h32^{km}±3^{km}, ML3.1*
*GCG **06** 08:55:27.5±0.3, 13°.27N×90°.00W, h30^{km}±3^{km}, MD3.5*
*CATAC **06** 08:55:29.3±0.7, 13°N±4°×9°0W±°, h24^{km}±3^{km}, M2.6/10, MLv2.6/10, Error ellipse: s-maj=9.7km s-min=7.0km az=56.0, confirmed*

ISC 06 08:55:30.0±2.3**, 13°.29N**±0°.09×**89°.80W**±0°.08**, h25^{km}**±13^{km}**, n32, σ1ˢ.45**/39**, El Salvador**

```
Code  Station Name       Δ°   AZ°   Phase ID        Time      Res
                                    Op     ISC      h  m  s   ISC
JAYA  Jayaque - finc    0.49  43  i P      Pb       08 55 40.1 -0.2
JAYA                              eS       Sn       08 55 49.6  0.0
JAYA                                IAML            08 55 52.2
```

	comp=Z,494nm,0.2s						
JAYA	Jayaque - finc	0.49	43	*e*P	Pb	08 55 40.1	-0.2
JAYA				*i* S	Sn	08 55 49.9	+0.4
JAYA	Jayaque - finc	0.49	43	P	Pb	08 55 40.3	0.0
JAYA	Jayaque - finc	0.49	43	S	Sn	08 55 50.0	+0.4
CEVE	Cerro Verde	0.56	18	*e*P	Pb	08 55 40.8	-0.7
CEVE				IAML		08 55 53.2	
	comp=Z,339nm,0.4s						
CEVE	Cerro Verde	0.56	18	P	Pb	08 55 40.9	-0.5
CEVE	Cerro Verde	0.56	18	S	Sn	08 55 52.3	+0.9
SBLS	San Blas	0.57	17	*e*P	Pb	08 55 40.9	-0.7
SBLS				*e*S	Sn	08 55 51.7	+0.1
SBLS				IAML		08 55 52.9	
	comp=Z,3μm,0.1s						
FAME	Alcaldia de Sa	0.59	339	P	Pn	08 55 44.9	+2.1
SNJE	San Jose	0.60	18	*e*P	Pb	08 55 41.3	-0.8
NUBE	Las Nubes	0.61	2	*e*P	Pb	08 55 40.8	-1.4
NUBE				*e*S	Sb	08 55 51.3	+0.8
NUBE	Las Nubes	0.61	2	*e*P	Pb	08 55 40.8	-1.4
NUBE				*e*S	Sb	08 55 51.3	+0.8
NUBE	Las Nubes	0.61	2	P	Pb	08 55 40.9	-1.3
PMON	Piamonte	0.63	48	*e*P	Pb	08 55 42.3	-0.2
PMON				*e*S	Sn	08 55 54.3	+1.4
PMON	Piamonte	0.63	48	P	Pb	08 55 42.5	-0.1
UEES	Universidad Ev	0.69	52	P	Sn	08 55 57.0	+2.7
LOMA	Loma Larga	0.70	60	P	Pb	08 55 41.8	-2.0
LOMA	Loma Larga	0.70	60	S	Sn	08 55 54.8	0.0
SLOZ	Alcaldia de Sa	0.73	1	*e*P	Pb	08 55 43.0	-1.2
SLOZ				*e*S	Sn	08 55 53.8	-1.5
SLOZ	Alcaldia de Sa	0.73	1	P	Sn	08 55 53.7	-1.5
PAVA	Las Pavas	0.94	63	P	Pb	08 55 47.1	-0.6
COEG	Centro de Oper	0.95	70	P	Pb	08 55 46.6	-1.3
TECO	Alcaldia de Te	1.02	76	P	Pn	08 55 47.0	-1.8
SCLA	Alcaldia de Sa	1.12	68	P	Sn	08 56 07.6	+2.8
MTO3	Montecristo	1.18	21	*e*P	Pn	08 55 50.1	-1.1
MTO3	Montecristo	1.18	21	P	Pn	08 55 50.3	-0.9
MTO3	Montecristo	1.18	21	S	Sb	08 56 08.0	+1.1
PQSS	Presa 15 de Se	1.25	74	P	Sn	08 56 09.2	+1.2
ESQI	Esquipulas	1.34	19	P	Pn	08 55 53.2	-0.1
ESQI	Esquipulas	1.34	19	S	Sn	08 56 10.2	-0.1
PACA	Pacayal	1.45	83	P	Sn	08 56 08.7	-4.4
APQ2	Apoyeque	3.56	107	P	Pn	08 56 25.6	+1.8

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*CATAC **06** 08:58:19.8±0.3, 13°N±2°×8°8W±°, h34^{km}±3^{km}, M3.4/35, MLv3.4/35, Error ellipse: s-maj=5.1km s-min=1.7km az=26.7, confirmed*

*GCG **06** 08:58:21.2±0.8, 12.°89N×88.°16W, h120^{km}±41^{km}, MD3.9*

*SNET **06** 08:58:22.2±1.5, 12.°75N×88.°19W, h14^{km}±999^{km}, ML3.2*

ISC 06 08:58:15.9±1.3**, 12.°64N**±0.°04×**87.°95W**±0.°02**, h0**^{km}±11^{km}**, n81, σ1.^{s}27**/95**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSGN	Cosiguina Volc	0.51	49	P	Pn	08 58 31.7	+1.2
CSGN				S	Sb	08 58 40.2	+4.4
POTN	Potosi Cosigui	0.56	51	P	Pn	08 58 32.3	+1.1
POTN				S	Sb	08 58 42.0	+4.8
CNCH	Conchagua	0.64	10	*e*P	Pn	08 58 33.5	+1.1
CNCH	Conchagua	0.64	10	P	Pn	08 58 33.5	+1.1
CNCH	Conchagua	0.64	10	S	Sn	08 58 44.3	+1.0
LCND	La Caada	0.67	5	*i* P	Pn	08 58 33.6	+1.0
LCND				IAML		08 58 46.7	
	comp=Z,3μm,0.3s						
LCND	La Caada	0.67	5	P	Pn	08 58 34.1	+1.4
LCND	La Caada	0.67	5	S	Sn	08 58 44.7	+0.9
BLLM	Bellamira	0.84	341	*e*P	Pn	08 58 35.9	+0.8
BLLM				IAML		08 58 49.6	
	comp=Z,367nm,0.3s						
LCY	Lacayo	0.84	337	*e*P	Pn	08 58 35.9	+0.8
RANC	El Ranchito	0.85	337	IAML		08 58 47.5	
	comp=Z,1μm,0.2s						
RANC	El Ranchito	0.85	337	P	Pg	08 58 32.8	+0.5
RANC	El Ranchito	0.85	337	S	Sb	08 58 45.0	-0.7
CNRM	Centro Naciona	0.85	346	P	Pn	08 58 35.9	+0.7
CNRM	Centro Naciona	0.85	346	S	Sn	08 58 48.7	+0.3
CRIN	San Cristobal	0.88	86	P	Pn	08 58 37.4	+1.7
CRIN	San Cristobal	0.88	86	S	Sn	08 58 50.3	+1.1
PACA	Pacayal	0.90	336	P	Pg	08 58 30.8	-2.4
PACA	Pacayal	0.90	336	S	Sg	08 58 43.3	-1.6
ALJI	Alcalda de J	0.91	319	P	Pb	08 58 36.0	+1.4
ALJI	Alcalda de J	0.91	319	S	Sb	08 58 48.4	+1.2
PKGN	Cerro Pekin	0.95	88	P	Pn	08 58 37.8	+1.3
PKGN				S	Sn	08 58 50.7	-0.1
TECA	Tecapa	1.00	328	*e*P	Pn	08 58 37.9	+0.5
QUEN	Al S del Volca	1.08	93	P	Pn	08 58 39.4	+1.1
QUEN				S	Sn	08 58 53.4	-0.6
HERN	Volcan Telica	1.09	92	P	Pn	08 58 39.1	+0.5
HERN	Volcan Telica	1.09	92	S	Sn	08 58 53.8	-0.7
TELN	Telica	1.09	92	P	Pb	08 58 38.0	+0.2
HOYN	Al Sur del Vol	1.10	92	P	Pn	08 58 39.4	+0.7
HOYN				S	Sn	08 58 54.1	-0.5
POLN	Al Sur del Vol	1.11	90	P	Pb	08 58 38.3	+0.2
POLN				S	Sn	08 58 53.5	-1.3
CHOHN	Orocuina	1.14	43	P	Pn	08 58 39.5	+0.3
CHOHN	Orocuina	1.14	43	S	Sn	08 58 55.3	-0.3
PQSS	Presa 15 de Se	1.14	329	P	Pn	08 58 39.7	+0.5
PQSS	Presa 15 de Se	1.14	329	S	Sn	08 58 54.7	-0.8
TECO	Alcaldia de Te	1.20	318	P	Pg	08 58 39.9	+1.0
TECO	Alcaldia de Te	1.20	318	S	Sg	08 58 55.0	+0.4
ILCN	San Idelfonso	1.22	93	P	Pn	08 58 40.9	+0.6
ILCN				S	Sn	08 58 56.9	-0.7
CNGA	Al SSO del Vol	1.23	97	P	Pn	08 58 41.1	+0.7
CNGA				S	Sn	08 58 57.2	-0.6
CNGN	Cerro Negro	1.23	96	P	Pn	08 58 40.9	+0.4
CNGN	Cerro Negro	1.23	96	S	Sn	08 58 57.4	-0.4
MACN	El Madrono	1.26	98	P	Pn	08 58 41.5	+0.7
MACN				S	Sb	08 58 57.3	-0.1
UESV	Universidad de	1.28	321	P	Pb	08 58 41.6	+0.7
UESV	Universidad de	1.28	321	S	Sb	08 58 58.1	+0.2
SCLA	Alcaldia de Sa	1.30	324	*e*P	Pn	08 58 41.9	+0.5
SCLA	Alcaldia de Sa	1.30	324	P	Pb	08 58 41.6	+0.4
SCLA	Alcaldia de Sa	1.30	324	S	Sb	08 58 58.5	+0.1
COEG	Centro de Oper	1.33	317	*e*P	Pg	08 58 42.2	+0.8
COEG	Centro de Oper	1.33	317	P	Pg	08 58 42.1	+0.7
COEG	Centro de Oper	1.33	317	S	Sg	08 58 58.6	0.0
MOMN	Momotombo	1.40	99	P	Pb	08 58 43.3	+0.3
MOMN				S	Sg	08 59 00.7	-0.2
COPN	Copaltepe	1.41	109	P	Pb	08 58 44.1	+1.0
PAVA	Las Pavas	1.43	318	P	Pb	08 58 45.1	+1.6
PAVA	Las Pavas	1.43	318	S	Sb	08 59 02.9	+0.4
MOM2	El Cardon	1.45	98	P	Pb	08 58 44.1	+0.3
LOMA	Loma Larga	1.55	310	*e*P	Pn	08 58 45.3	+0.4
LOMA				*e*S	Sn	08 59 03.0	-2.8
LOMA	Loma Larga	1.55	310	P	Pn	08 58 45.3	+0.4
LOMA	Loma Larga	1.55	310	S	Sn	08 59 03.7	-2.1
TGUH	Tegucigalpa,Un	1.55	25	P	Pb	08 58 45.7	0.0
TGUH				S	Sn	08 59 04.6	-1.2
LIMN	Finca el Limon	1.60	75	P	Pb	08 58 45.9	-0.5
LIMN	Finca el Limon	1.60	75	S	Sg	08 59 06.2	-1.3
APQ2	Apoyeque	1.65	105	P	Pn	08 58 47.0	+0.9
APQ2				S	Sn	08 59 06.5	-1.5
INTHN	La Esperanza I	1.67	355	P	Pb	08 58 47.2	-0.5
YUSH	Yuscaran	1.69	40	P	Pg	08 58 47.4	-1.0
PMON	Piamonte	1.70	309	P	Pn	08 58 48.0	+1.1
PMON	Piamonte	1.70	309	S	Sn	08 59 07.7	-1.8
CRUN	El Crucero	1.74	112	P	Pn	08 58 47.9	+0.4
JAYA	Jayaque - finc	1.77	305	*e*P	Pn	08 58 47.9	-0.1
JAYA				*e*S	Sn	08 59 10.0	-1.3
JAYA	Jayaque - finc	1.77	305	P	Pn	08 58 48.1	+0.1
JAYA	Jayaque - finc	1.77	305	S	Sn	08 59 09.1	-2.2
NANN	Nandasmo	1.92	111	P	Pn	08 58 51.4	+1.4
NANN	Nandasmo	1.92	111	S	Sn	08 59 13.7	-1.2
RCVN	Varillal2	1.95	61	P	Pb	08 58 51.2	-1.3
RCVN	Varillal2	1.95	61	S	Sb	08 59 15.1	-2.3
MATN	Matagalpa	2.00	82	P	Pn	08 58 50.4	-0.7
MATN	Matagalpa	2.00	82	S	Sn	08 59 14.2	-2.6
RCPN	Sur Rio San Ju	2.01	64	P	Pb	08 58 52.0	-1.5
NADN	Granada	2.08	115	P	Pn	08 58 53.0	+0.9
NUBE	Las Nubes	2.18	305	*e*P	Pn	08 58 54.3	+0.7
NUBE				*e*S	Sn	08 59 19.2	-2.1
NUBE	Las Nubes	2.18	305	P	Pn	08 58 54.4	+0.9
MTO3	Montecristo	2.22	322	*e*P	Pn	08 58 54.6	+0.4
MTO3	Montecristo	2.22	322	P	Pn	08 58 54.4	+0.2
BOAB	BOACO BROADBAN	2.24	95	P	Pn	08 58 54.6	+0.3

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*IDC **06** 09:02:03.0±1.7, 29.°42S×178.°52W, h0^{km}, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=56.6km s-min=42.3km az=34.0*

*WEL **06** 09:02:50.0±1.0, 31°S±18°×18°0W±5°0, h278^{km}±28^{km}, mB4.8/6, ML5.0/12, MLv4.9/6, Mw(mB)4.0/6, Error ellipse: s-maj=69.6km s-min=5.7km az=109.6, confirmed*

ISC 06 09:02:47.0±1.4**, 30.°6S**±0.°1×**179.°9E**±0.°2**, h300**^{km}**, n21, σ1.^{s}20**/32**, mb3.1**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	2.31	57	P	Pn	09 03 36.5	+0.2
GLKZ				S	S	09 04 15.5	-0.1
WMGZ	Waiomatatini S	7.35	189	P	Pn	09 04 34.2	+1.8
WMGZ				S	S	09 05 55.7	-2.2
HAZ	Te Kaha	7.39	193	P	Pn	09 04 34.6	+1.6
HAZ				S	S	09 05 58.7	-0.1
PKGZ	Pakihiroa	7.45	191	P	Pn	09 04 36.4	+2.7
PKGZ				S	S	09 06 00.2	+0.1
RUGZ	Raukumara Rang	7.61	193	P	Pn	09 04 37.3	+1.4
RUGZ				S	S	09 06 03.2	-0.8
PUZ	Puketiti	7.62	190	P	Pn	09 04 36.0	+0.2
PUZ				S	S	09 06 03.1	-0.8
MWZ	Matawai	8.00	193	P	Pn	09 04 40.7	+0.2
MWZ				S	S	09 06 11.8	-0.7
URZ	Urewera	8.02	196	P	Pn	09 04 41.1	+0.4
URZ				S	S	09 06 12.8	-0.1
CNGZ	Carnagh Statio	8.03	189	P	Pn	09 04 41.9	+1.1
CNGZ				S	S	09 06 12.5	-0.6
TKGZ	Te Karaka	8.04	191	P	Pn	09 04 40.5	-0.5
TKGZ				S	S	09 06 10.7	-2.7
RAGZ	Rawiri	8.18	194	P	Pn	09 04 42.9	+0.2
RAGZ				S	S	09 06 17.3	+0.7
MUGZ	Murupara	8.31	197	P	Pn	09 04 45.1	+0.9
MUGZ				S	S	09 06 18.4	-1.0
SNGZ	Shannon Statio	8.47	194	P	Pn	09 04 47.8	+1.6
SNGZ				S	S	09 06 22.1	-1.0
RAHZ	Arahi	8.65	195	P	Pn	09 04 50.0	+1.6
RAHZ				S	S	09 06 27.6	+0.4
ARHZ	Aropaoanui	9.01	194	P	Pn	09 04 53.8	+1.0
ARHZ				S	S	09 06 35.0	-0.2
ASAR	Alice Springs	41.27	268	P	P	09 10 02.0	-1.8
	0.2nm,0.5s,baz=110,slow=8.4,SNR=1.3						
	0.2nm,0.5s						
WRA	Warramunga Arr	42.27	273	P	P	09 10 09.4	-2.5
	0.6nm,0.4s,baz=111,slow=7.9,SNR=11						
	0.6nm,0.4s						
QSPA	South Pole Qui	59.56	180	P	P	09 12 16.0	-3.3
	0.5nm,0.8s,baz=50,slow=22,SNR=0.8						
	0.5nm,0.8s						
FINES	FINESS Array B	144.64	338	PKP	PKPbc	09 21 40.6	-6.1
	3.7nm,0.7s,baz=44,slow=3.5,SNR=20						
AKASG	Malin Array Be	150.29	321	PKPbc	PKPdf	09 21 56.2	-0.6
	0.2nm,0.3s,baz=60,slow=1.8,SNR=4.1						
BRTR	Keskin Array B	151.05	298	PKPbc	PKPdf	09 21 57.7	-0.9
	0.2nm,0.4s,baz=113,slow=2.2,SNR=2.6						

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*ASRS **06** 09:10:05.0±1.3, 53.°65N×87.°98E, h0^{km}, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 06 09:10:05.5±3.6**, 53.°67N**×**88.°02E, h0**^{km}**, mbtmp2.7**/2**, ML2.3**/2**, Error ellipse: s-maj=35.7km s-min=20.5km az=51.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.92	280	I	I	09 21 55.9	
	baz=97,slow=316,SNR=5.4						
ZALV	Zalesovo Beam	1.92	280	Pn	Pn	09 10 39.3	-0.1
	0.6nm,0.3s,baz=97,slow=14,SNR=4.3						
ZALV				Lg	Lg	09 11 06.0	
	1.3nm,0.3s,baz=96,slow=26,SNR=4.4						
KURBB	Kurchatov Arra	6.59	246	Pn	Pn	09 11 44.5	+0.9
	0.1nm,0.3s,baz=65,slow=15,SNR=4.8						
	0.4nm,0.3s						
MKAR	Makanchi Array	7.80	210	Pn	Pn	09 12 00.9	+0.7
	baz=31,slow=12,SNR=2.1						
	0.1nm,0.3s						

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*CATAC **06** 09:10:55.7±0.6, 13°N±3°×8°9W±°, h27^{km}±3^{km}, M2.8/19, MLv2.8/19, Error ellipse: s-maj=7.6km s-min=4.4km az=21.5, confirmed*

*SNET **06** 09:10:56.8±1.1, 13.°15N×89.°46W, h59^{km}±23^{km}, ML2.9*

*GCG **06** 09:10:57.1±0.3, 13.°13N×89.°54W, h52^{km}±8^{km}, MD3.8*

ISC 06 09:10:55.2±2.1**, 13.°01N**±0.°10×**89.°46W**±0.°06**, h25**^{km}±14^{km}**, n53, σ0.^{s}67**/59**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.50	16	P	Pn	09 11 07.2	+0.4
LALI	Alcalda de L	0.50	16	S	Sn	09 11 15.2	+0.6
JAYA	Jayaque - finc	0.64	1	*e*P	Pn	09 11 08.9	-0.1
JAYA				*e*S	Sn	09 11 18.1	-0.4
JAYA	Jayaque - finc	0.64	1	*e*P	Pn	09 11 08.8	-0.1
JAYA				*e*S	Sn	09 11 17.8	-0.7
JAYA	Jayaque - finc	0.64	1	P	Pn	09 11 08.9	-0.1
LOMA	Loma Larga	0.69	24	*e*P	Pn	09 11 09.7	+0.1
LOMA	Loma Larga	0.69	24	P	Pn	09 11 09.9	+0.3
LOMA	Loma Larga	0.69	24	S	Sn	09 11 20.0	+0.3
PMON	Piamonte	0.71	12	*i* P	Pn	09 11 09.9	0.0
PMON	Piamonte	0.71	12	P	Pn	09 11 09.9	0.0
UTEC	Universidad Te	0.73	20	*e*P	Pn	09 11 10.2	+0.1
UTEC	Universidad Te	0.73	20	P	Pn	09 11 10.4	+0.2
UTEC	Universidad Te	0.73	20	S	Sn	09 11 19.9	-0.7
UEES	Universidad Ev	0.74	17	P	Pn	09 11 10.1	-0.1
UEES	Universidad Ev	0.74	17	S	Sn	09 11 20.1	-0.6
BOQS	Boqueron	0.74	14	*e*P	Pn	09 11 10.5	+0.1
UDBS	Universidad Do	0.76	23	*e*P	Pn	09 11 10.7	+0.1
UDBS	Universidad Do	0.76	23	P	Pn	09 11 10.4	-0.1
UDBS	Universidad Do	0.76	23	S	Sn	09 11 22.3	+1.0
CEVE	Cerro Verde	0.83	349	P	Pn	09 11 11.7	0.0
CEVE	Cerro Verde	0.83	349	S	Sn	09 11 23.8	+0.6
COEG	Centro de Oper	0.83	43	*i* P	Pb	09 11 11.4	+0.3
COEG				IAML		09 11 12.2	
	comp=Z,223nm,0.3s						
COEG				*e*S	Sn	09 11 22.2	-0.8
COEG	Centro de Oper	0.83	43	P	Pb	09 11 11.5	+0.4
COEG	Centro de Oper	0.83	43	S	Sn	09 11 23.2	+0.2
SBLS	San Blas	0.84	349	*e*P	Pb	09 11 11.6	+0.2
SBLS				IAML		09 11 13.4	
	comp=Z,2μm,0.1s						
SBLS				*e*S	Sn	09 11 22.8	-0.7
TECO	Alcaldia de Te	0.85	52	P	Pb	09 11 11.7	+0.4
TECO	Alcaldia de Te	0.85	52	S	Sn	09 11 23.5	+0.2
SNJE	San Jose	0.86	351	*e*P	Pn	09 11 12.0	-0.1
SNJE				*e*S	Sn	09 11 24.3	+0.2
PAVA	Las Pavas	0.87	36	*i* P	Pn	09 11 12.3	+0.4
PAVA				*e*S	Sn	09 11 24.7	+0.7
PAVA	Las Pavas	0.87	36	P	Pn	09 11 12.4	+0.4
UESV	Universidad de	0.91	46	P	Pb	09 11 12.6	+0.3
UESV	Universidad de	0.91	46	S	Sn	09 11 24.8	0.0
NUBE	Las Nubes	0.94	341	*e*P	Pb	09 11 12.7	-0.3
NUBE				*i* S	Sn	09 11 25.1	-0.7
NUBE	Las Nubes	0.94	341	P	Pb	09 11 12.8	-0.2
UNIC	Universidad Ca	0.97	355	P	Pn	09 11 13.5	+0.1
UNIC	Universidad Ca	0.97	355	S	Sn	09 11 27.2	+0.8
FAME	Alcaldia de Sa	0.99	327	P	Pn	09 11 14.4	+0.8
SCLA	Alcaldia de Sa	0.99	46	P	Pn	09 11 14.3	+0.6
PQSS	Presa 15 de Se	1.07	55	P	Pn	09 11 14.8	+0.1
PQSS	Presa 15 de Se	1.07	55	S	Sn	09 11 29.1	+0.3
PACA	Pacayal	1.20	67	P	Pn	09 11 11.8	-4.8
LCY	Lacayo	1.21	70	*e*P	Pn	09 11 17.4	+0.6
RANC	El Ranchito	1.22	70	P	Pn	09 11 14.4	-2.4
RANC	El Ranchito	1.22	70	S	Sn	09 11 30.4	-2.3
BLLM	Bellamira	1.27	70	*e*P	Pn	09 11 18.1	+0.6
BLLM				IAML		09 11 18.7	
	comp=Z,60nm,0.3s						
MTO3	Montecristo	1.39	4	*i* P	Pn	09 11 19.4	+0.1
MTO3	Montecristo	1.39	4	P	Pn	09 11 19.4	+0.1
MTO3	Montecristo	1.39	4	S	Sb	09 11 37.2	-0.8
ESQI	Esquipulas	1.55	4	P	Pn	09 11 21.9	+0.6
LCND	La Caada	1.56	79	P	Pn	09 11 22.6	+1.2
LCND	La Caada	1.56	79	S	Sb	09 11 42.6	-0.2
CNCH	Conchagua	1.61	80	P	Pn	09 11 23.1	+0.9
CNCH	Conchagua	1.61	80	S	Sn	09 11 41.4	-0.9

RSNC 06 09:14:11.5±0.0**, 4°N**±2°×**7°7W**±°**, h20**^{km}±3^{km}**, M1.5, ML1.3, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOTC	Yotoco, Valle	0.55	131	P	Pb	09 14 21.7	-0.8
YOTC				S	Sb	09 14 30.5	+0.6
MALC	Bahia Malaga	0.66	241	P	Pb	09 14 23.5	-0.9
MALC				S	Sb	09 14 32.8	-0.3
PLMC	San Jos del P	0.74	40	P	Pb	09 14 24.9	-0.8
PLMC				S	Sb	09 14 34.3	-1.1
JAMC	Jamundi, Valle	1.12	176	P	Pn	09 14 27.5	-4.8
JAMC				S	Sb	09 14 42.0	-4.6
ORTC	Ortega, Tolima	1.57	106	P	Pn	09 14 37.8	-0.5
ORTC				S	Sb	09 14 59.4	0.0
GUY2C	Guyana, Caldas	1.64	58	P	Pn	09 14 39.6	-0.1
GUY2C				S	Sn	09 15 00.0	-0.5
CBOC	Ciudad Bolivar	1.69	26	P	Pn	09 14 39.2	-0.8
CBOC				S	Sb	09 15 02.4	-0.5
POPC	Popayan, Colom	1.79	177	P	Pn	09 14 38.3	-3.2
POPC				S	Sn	09 14 59.6	-4.2
PRAC	Prado	1.97	108	P	Pn	09 14 43.3	-0.5
PRAC				S	Sn	09 15 09.1	+1.1
NORC	Norcasia	2.24	57	P	Pb	09 14 52.4	+1.0

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*CATAC **06** 09:21:09.3±0.6, 13°N±3°×9°0W±°, h17^{km}±4^{km}, M3.2/18, MLv3.2/18, Error ellipse: s-maj=6.2km s-min=5.3km az=33.5, confirmed*

*SNET **06** 09:21:10.0±1.3, 13.°14N×89.°95W, h23^{km}±7^{km}, ML3.3*

*GCG **06** 09:21:11.2±1.1, 13.°28N×90.°06W, h27^{km}±7^{km}, MD4.0*

ISC 06 09:21:11.4±1.8**, 13.°18N**±0.°07×**89.°78W**±0.°04**, h12**^{km}±9^{km}**, n46, σ0.^{s}94**/55**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.54	55	P	Pg	09 21 19.9	-2.1
LALI	Alcalda de L	0.54	55	S	Sn	09 21 34.1	+0.1
JAYA	Jayaque - finc	0.57	34	*e*P	Pb	09 21 23.9	+0.5
JAYA				*e*S	Sn	09 21 34.3	-0.7
JAYA				IAML		09 21 34.9	
	comp=Z,1μm,0.2s						
JAYA	Jayaque - finc	0.57	34	*i* P	Pb	09 21 24.0	+0.5
JAYA				*i* S	Sn	09 21 33.9	-1.1
JAYA	Jayaque - finc	0.57	34	P	Pb	09 21 24.0	+0.5
CEVE	Cerro Verde	0.67	13	*e*P	Pg	09 21 24.6	+0.1
CEVE				*e*S	Sn	09 21 35.9	-1.5
CEVE				IAML		09 21 37.1	
	comp=Z,2μm,0.4s						
CEVE	Cerro Verde	0.67	13	P	Pg	09 21 24.9	+0.4
ITCA	Escuela Especi	0.69	44	P	Pb	09 21 26.1	+0.6
ITCA	Escuela Especi	0.69	44	S	Sn	09 21 38.6	+0.7
PMON	Piamonte	0.70	40	P	Pb	09 21 26.1	+0.5
PMON	Piamonte	0.70	40	S	Sn	09 21 38.3	+0.3
FAME	Alcaldia de Sa	0.70	341	P	Pg	09 21 23.7	-1.4
NUBE	Las Nubes	0.72	360	*i* P	Pg	09 21 24.7	-0.8
NUBE				*i* S	Sg	09 21 35.2	+0.2
NUBE	Las Nubes	0.72	360	P	Pg	09 21 24.8	-0.7
CEDA	San Andres	0.73	31	*e*P	Pg	09 21 25.5	-0.1
CEDA				*e*S	Sn	09 21 38.3	-0.3
CEDA				IAML		09 21 45.0	
	comp=Z,787nm,0.3s						
CEDA	San Andres	0.73	31	P	Pb	09 21 26.3	+0.3
BOQS	Boqueron	0.74	41	*e*P	Pb	09 21 27.0	+0.7
UEES	Universidad Ev	0.75	44	P	Pg	09 21 26.8	+0.7
UEES	Universidad Ev	0.75	44	S	Sn	09 21 39.8	+0.6
UDBS	Universidad Do	0.81	48	P	Pg	09 21 27.5	+0.4
UDBS	Universidad Do	0.81	48	S	Sn	09 21 41.3	+0.7
UNIC	Universidad Ca	0.83	15	P	Pg	09 21 27.0	-0.5
UNIC	Universidad Ca	0.83	15	S	Sn	09 21 40.5	-0.8
SLOZ	Alcaldia de Sa	0.85	360	P	Pg	09 21 26.9	-0.9
SLOZ	Alcaldia de Sa	0.85	360	S	Sb	09 21 39.7	+0.3
PAVA	Las Pavas	0.98	57	P	Pb	09 21 30.9	+0.5
PAVA	Las Pavas	0.98	57	S	Sn	09 21 46.7	+1.8
COEG	Centro de Oper	0.98	63	*e*P	Pb	09 21 30.4	0.0
COEG				*e*S	Sn	09 21 45.7	+0.9
COEG	Centro de Oper	0.98	63	P	Pb	09 21 30.4	0.0
TECO	Alcaldia de Te	1.03	70	P	Pb	09 21 30.8	-0.5
TECO	Alcaldia de Te	1.03	70	S	Sn	09 21 46.6	+0.4
UESV	Universidad de	1.07	64	P	Pb	09 21 31.6	-0.2
UESV	Universidad de	1.07	64	S	Sn	09 21 48.2	+1.2
SCLA	Alcaldia de Sa	1.15	63	P	Pb	09 21 33.3	+0.1
SCLA	Alcaldia de Sa	1.15	63	S	Sn	09 21 51.4	+2.4
PQSS	Presa 15 de Se	1.27	69	P	Pn	09 21 34.8	-0.1
PQSS	Presa 15 de Se	1.27	69	S	Sg	09 21 53.6	+1.3
MTO3	Montecristo	1.28	18	*i* P	Pn	09 21 34.1	-1.2
MTO3	Montecristo	1.28	18	P	Pn	09 21 34.1	-1.2
MTO3	Montecristo	1.28	18	S	Sb	09 21 51.9	-0.3
FG16	Alotenango, Sa	1.30	327	*e*P	Pn	09 21 35.7	0.0
FG16				*i* S	Sg	09 21 55.3	+1.7
ESQI	Esquipulas	1.44	17	*e*P	Pn	09 21 36.1	-1.3
ESQI				*e*S	Sb	09 21 56.8	+0.2
ESQI	Esquipulas	1.44	17	P	Pn	09 21 36.7	-0.7
ESQI	Esquipulas	1.44	17	S	Sn	09 21 56.0	-0.3
RANC	El Ranchito	1.47	80	P	Pn	09 21 35.6	-2.2
STG8	El Palmar, Qui	1.99	310	*i* P	Pn	09 21 45.4	+0.3
STG8				*e*S	Sn	09 22 10.5	+0.5

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*NEIC **06** 09:22:30.8±1.1, 18.°23N±0.°07×145.°7E±0.°1, h184^{km}±9^{km}, mb4.5/177, Error ellipse: s-maj=18.4km s-min=11.0km az=89.0*

*IDC **06** 09:22:30.2±0.7, 18.°25N×145.°71E, h193^{km}±6^{km}, mb3.7/20, mbtmp4.3/23, Error ellipse: s-maj=14.8km s-min=7.9km az=93.0*

ISC 06 09:22:31.4±0.4**, 18.°24N**±0.°04×**145.°59E**±0.°09**, h200**^{km}**, n427, σ0.^{s}85**/371**, mb4.5**/113**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	4.68	189	Pn	Pn	09 23 40.9	-0.9
GUMO	Guam	4.68	189	P	Pn	09 23 41.0	-0.8
	78nm,0.5s,baz=87,slow=3.7,SNR=11						
GUMO				S	Sn	09 24 34.7	-2.6
	128nm,0.4s,baz=348,slow=23,SNR=8.2						
JCJ	Chichijima	9.35	341	Pn	Pn	09 24 41.8	-0.5
JCJ	Chichijima	9.35	341	P	Pn	09 24 41.3	-0.9
	66nm,0.9s,baz=283,slow=23,SNR=6.1						
JCJ				S	Sn	09 26 21.1	-5.9
	32nm,0.4s,baz=271,slow=23,SNR=1.7						
PATS	Pohnpei	16.80	131	Pn	Pn	09 26 15.6	+0.1
JGF	Kuroka	18.77	339		Pn	09 26 36.3	-2.1
MJAR	Matsushiro Arr	19.36	342	P	P	09 26 42.7	+0.8
	3.7nm,0.5s,baz=167,slow=9.8,SNR=16						
MAJO	Matsushiro	19.36	342	P	P	09 26 42.9	+1.0
MJB9	Matsu-Tunnel	19.36	342	P	Pn	09 26 43.1	-2.4
JMM	Marumori	20.00	349	P	P	09 26 49.9	+1.2
H11S3	WAKE ISLAND Hy	20.02	86	T	T	09 48 05.4	
	baz=275,slow=74,SNR=4.4						
H11S1	WAKE ISLAND Hy	20.04	86	T	T	09 48 03.4	
	baz=275,slow=74,SNR=4.3						
H11S2	WAKE ISLAND Hy	20.04	86	T	T	09 48 03.2	
	baz=275,slow=74,SNR=4.7						
H11N1	WAKE ISLAND Hy	20.20	82	T	T	09 48 08.3	
	baz=266,slow=74,SNR=11						
H11N2	WAKE ISLAND Hy	20.20	82	T	T	09 48 29.3	
	baz=266,slow=74,SNR=9.6						
H11N3	WAKE ISLAND Hy	20.21	82	T	T	09 48 19.4	
	baz=266,slow=74,SNR=12						
JAY	Jayapura	21.18	194	P	P	09 27 01.9	+0.4
	12nm,0.8s,baz=31,slow=6.4,SNR=3.5						
	12nm,0.8s						
JTM	Tenmabayashi	22.80	351	P	P	09 27 17.3	+0.4
ERM	Erimo	23.78	356	P	P	09 27 27.1	+1.3
ERM				IAmb	IAmb	09 28 01.4	
	comp=Z,19nm,1.1s						
KSRS	Korea Array	24.62	325	P	P	09 27 33.1	-0.3
	comp=Z,0.9nm,0.7s,baz=149,slow=9.4,SNR=5.5						
	comp=Z,0.9nm,0.7s						
FAKI	Fak Fak	24.80	213	P	P	09 27 36.0	+0.7
JKA	Kamikawa-asahi	25.92	355	P	P	09 27 46.1	+1.1
JKA				IAmb	IAmb	09 27 48.3	
	comp=Z,9.9nm,0.8s						
NJ2	Nanjing	27.74	305	*e*P	P	09 28 02.7	+1.2
NJ2				pmax	pmax		
	comp=Z,11nm,1.2s						
COEN	Coen	32.09	184	P	P	09 28 38.7	-1.2
XLT	XiLinHaoTe	35.62	322	*e*P	P	09 29 13.7	+3.5
XLT				sP	sP	09 30 09.8	-3.1
XLT				pmax	pmax		
	comp=Z,9.0nm,0.4s						
PEA0B	Petropavlovsk-	36.05	12	P	P	09 29 14.6	+1.1
PETK	Petropavlovsk-	36.05	12	P	P	09 29 14.2	+0.7
PETK	Petropavlovsk-	36.05	12	P	P	09 29 13.5	-0.1
	comp=Z,3.6nm,0.6s,baz=160,slow=7.4,SNR=14						
	comp=Z,3.6nm,0.6s						
GYA	Guiyang	36.81	290	P	P	09 29 24.2	+3.7

GYA				pmax	pmax		
	comp=Z,16nm,0.6s						
HHC	Hu-ho-hao-te	36.85	315	*e*P	P	09 29 21.8	+1.2
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,61nm,5.4s						
KNRA	Kununurra	37.56	207	P	P	09 29 27.3	+0.6
CTAO	Charters Tower	38.10	179	P	P	09 29 32.5	+1.4
WB0	Warramunga Arr	39.34	197	P	P	09 29 41.8	+0.3
WB0				IAmb	IAmb	09 29 42.7	
	comp=Z,13nm,0.9s						
WR8	Warramunga Arr	39.49	197	P	P	09 29 43.1	+0.4
WR8				IAmb	IAmb	09 29 43.7	
	comp=Z,26nm,1.3s						
WRA	Warramunga Arr	39.52	197	P	P	09 29 42.8	-0.3
	comp=Z,10nm,0.6s,baz=18,slow=8.4,SNR=75						
WRA				ScP	ScP	09 35 14.1	-2.2
	comp=Z,1.0nm,0.7s,baz=18,slow=4.0,SNR=8.3						
	comp=Z,10nm,0.6s						
FITZ	Fitzroy Crossi	41.10	210	P	P	09 29 56.6	+0.7
PZH	PanZhiHua	41.21	290	P	P	09 29 58.4	+1.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,4.5s						
AS31	Alice Springs	43.19	196		P	09 30 13.1	+0.3
ASAR	Alice Springs	43.19	196	P	P	09 30 12.7	-0.1
	comp=Z,2.9nm,0.5s,baz=14,slow=6.9,SNR=94						
ASAR				ScP	ScP	09 35 29.4	-1.3
	comp=Z,0.6nm,0.6s,baz=16,slow=3.8,SNR=7.2						
ASAR				S	S	09 36 23.2	-1.2
	comp=Z,1.2nm,0.8s,baz=20,slow=19,SNR=4.6						
	comp=Z,2.9nm,0.5s						
SONM	Songino Array	43.43	322	P	P	09 30 15.1	+0.5
	comp=Z,0.8nm,0.5s,baz=128,slow=9.6,SNR=4.3						
	comp=Z,0.8nm,0.5s						
CMAR	Chiang Mai Arr	44.18	278	P	P	09 30 22.6	+1.8
	comp=Z,0.7nm,0.4s,baz=68,slow=6.7,SNR=12						
	comp=Z,0.7nm,0.4s						
ADK	Adak	44.76	33	P	P	09 30 25.7	+0.9
ATKA	Atka Island	46.22	33	P	P	09 30 36.9	+0.6
MBWA	Marble Bar	46.64	214	P	P	09 30 40.5	+0.6
PSA00	Pilbara Seismi	46.92	214	P	P	09 30 42.8	+0.7
NIKH	Nikolski High	49.44	35	P	P	09 31 00.9	-0.1
NIKH	Nikolski High	49.44	35	P	P	09 31 00.5	-0.5
	baz=243						
STKA	Stephens Creek	49.98	184	P	P	09 31 04.9	-0.5
STKA	Stephens Creek	49.98	184	P	P	09 31 04.4	-1.0
	comp=Z,1.3nm,0.3s,baz=346,slow=10.0,SNR=7.2						
	comp=Z,1.3nm,0.3s						
SPIA	Saint Paul Isl	50.78	29	P	P	09 31 11.9	+0.9
SPIA	Saint Paul Isl	50.78	29	P	P	09 31 10.7	-0.4
	baz=239						
P08K	Saint George I	50.82	30	P	P	09 31 11.3	0.0
	baz=240						
UNV	Unalaska Valle	51.09	34	P	P	09 31 13.3	0.0
UNV				IAmb	IAmb	09 31 41.1	
	comp=Z,18nm,1.1s						
UNV	Unalaska Valle	51.09	34	P	P	09 31 13.6	+0.3
	baz=245						
BILL	Bilibino	51.48	10		P	09 31 16.0	-0.1
BILL				IAmb	IAmb	09 31 17.4	
	comp=Z,12nm,1.2s						
BBOO	Buckleboo	51.58	190	P	P	09 31 17.5	+0.3
BBOO				IAmb	IAmb	09 31 19.4	
	comp=Z,9.6nm,0.8s						
AKUT	Akutan	51.60	34	P	P	09 31 17.2	0.0
GAMB	Gambell	53.91	22	P	P	09 31 34.4	+0.6
	baz=233						
S12K	Black Hills	54.19	34	P	P	09 31 35.8	-0.3
	baz=248						
M11K	Mekoryuk	54.22	27	P	P	09 31 36.1	-0.1
	baz=241						
WMQ	Urumqi	54.53	311	*e*P	P	09 31 42.8	+4.0
WMQ				LR	LR		
	comp=N,310nm,17.7s						
WMQ				LR	LR		
	comp=E,260nm,22.3s						
WMQ				LR	LR		
	comp=Z,55nm,24.2s						
SDPT	Sand Point	54.90	34		P	09 31 41.3	+0.2
SDPT	Sand Point	54.90	34	P	P	09 31 41.2	0.0
	baz=250						
MORW	Morawa	55.02	212	P	P	09 31 42.7	+0.3
CHNA	Chernabura Isl	55.21	35	P	P	09 31 43.5	+0.1
	baz=251						
M13K	Dall Lake	55.49	28	P	P	09 31 45.9	+0.6
	baz=244						
K13K	Kusilvak Mount	55.63	26	P	P	09 31 47.4	+1.1
K13K				IAmb	IAmb	09 31 48.3	
	comp=Z,9.6nm,0.8s						
K13K	Kusilvak Mount	55.63	26	P	P	09 31 47.1	+0.8
	baz=241						
S14K	Fog Glacier	55.71	33	P	P	09 31 47.3	+0.2
	baz=250						
O14K	Tigyukauivet M	55.96	30	P	P	09 31 48.9	+0.3
	baz=246						
N14K	Kuskokwak Cree	56.03	29	P	P	09 31 49.7	+0.6
	baz=246						
L14K	Kuka Creek	56.19	27	P	P	09 31 50.7	+0.5
	baz=244						
M14K	Bethel	56.25	28	P	P	09 31 51.5	+0.8
	baz=245						
TNA	Tin City	56.27	21	P	P	09 31 51.0	+0.3
	baz=236						
J14K	Nanvaranak Lak	56.47	25	P	P	09 31 52.7	+0.6
	baz=242						
O15K	Ungalikthiuk R	56.61	30	P	P	09 31 54.3	+1.0
O15K	Ungalikthiuk R	56.61	30	P	P	09 31 53.5	+0.3
	baz=248						
ANM	Nome	56.65	23	P	P	09 31 53.9	+0.5
	baz=239						
F14K	Arctic Creek	56.78	22	P	P	09 31 54.8	+0.4
	baz=238						
M15K	Kasigluk River	56.80	28	P	P	09 31 54.8	+0.2
	baz=246						
L15K	Ungalak Mounta	56.85	27	P	P	09 31 55.3	+0.4
	baz=245						
N15K	Kwethluk River	56.86	29	P	P	09 31 55.7	+0.6
	baz=247						
K15K	Wolf Creek Mou	57.10	26	P	P	09 31 57.1	+0.5
	baz=244						
G15K	Niukluk	57.36	23	P	P	09 31 58.8	+0.4
	baz=240						
P16K	Nushagak River	57.44	31	P	P	09 31 59.5	+0.4
	baz=250						
F15K	North Star Dit	57.50	22	P	P	09 31 59.7	+0.3
	baz=239						
O16K	Kokwok River B	57.59	30	P	P	09 32 00.4	+0.3
	baz=249						
N16K	Nishlik Lake	57.59	29	P	P	09 32 00.6	+0.5
	baz=248						
CHIR	Chirikof Islan	57.67	35	P	P	09 32 01.2	+0.4
	baz=254						
M16K	Timber Creek	57.71	28	P	P	09 32 01.0	+0.1
	baz=248						
L16K	Owhat River	57.74	27	P	P	09 32 01.2	+0.1
	baz=247						
H16K	Elim	57.87	24	P	P	09 32 02.4	+0.4
	baz=242						
J16K	Anvik River	57.91	26	P	P	09 32 03.0	+0.7
	baz=245						
O17K	Koliganek Bris	58.12	30	P	P	09 32 03.9	+0.1
	baz=250						
I17K	Unalakleet	58.13	25	P	P	09 32 04.2	+0.4
	baz=244						
G16K	Koyuk River	58.18	23	P	P	09 32 04.8	+0.7
	baz=242						
Q17K	Contact Creek	58.23	32	P	P	09 32 04.4	-0.4
	baz=252						
P17K	Kvichak River	58.25	31	P	P	09 32 05.3	+0.6
	baz=251						
ZALV	Zalesovo Beam	58.31	323	P	P	09 32 05.1	-0.1
	comp=Z,0.5nm,0.3s,baz=103,slow=9.0,SNR=1.5						
	comp=Z,0.5nm,0.3s						
N17K	Nushagak Hills	58.34	29		P	09 32 06.5	+1.2
N17K				IAmb	IAmb	09 32 07.3	
	comp=Z,9.3nm,0.8s						
N17K	Nushagak Hills	58.34	29	P	P	09 32 05.9	+0.6
	baz=250						
L17K	Donlin	58.42	27	P	P	09 32 06.7	+0.9
	baz=248						
M17K	Holitna River	58.53	28	P	P	09 32 07.4	+0.7
	baz=249						
J17K	VABM Dome	58.59	26	P	P	09 32 07.5	+0.5
	baz=246						
C16K	Lisburne Hills	58.62	19	P	P	09 32 07.5	+0.3
	baz=237						
SII	Sitkinak Islan	58.64	34	P	P	09 32 07.8	+0.3
	baz=255						
K17K	Iditarod	58.64	27		P	09 32 08.7	+1.4
K17K				IAmb	IAmb	09 32 09.5	
	comp=Z,14nm,1.1s						
K17K	Iditarod	58.64	27	P	P	09 32 08.0	+0.6
	baz=247,SNR=5.3						
MKAR	Makanchi Array	58.70	314	P	P	09 32 08.6	+0.4
	comp=Z,0.3nm,0.6s,baz=94,slow=9.4,SNR=5.9						
MKAR				pP	pP	09 32 51.5	-1.0
	comp=Z,0.6nm,0.6s,baz=89,slow=9.9,SNR=2.1						
	comp=Z,0.3nm,0.6s						
R18K	Karluk	58.77	33	P	P	09 32 07.0	-1.3
	baz=254						
Q18K	Katmai Hardscr	58.79	32	P	P	09 32 08.0	-0.7
	baz=253						
G17K	Kiwalik Mounta	58.86	23	P	P	09 32 09.2	+0.3
	baz=244						
H17K	Granite Mounta	58.89	24	P	P	09 32 10.2	+1.1
H17K				IAmb	IAmb	09 32 10.3	
	comp=Z,5.9nm,0.7s						
H17K	Granite Mounta	58.89	24	P	P	09 32 09.8	+0.7
	baz=244						
P18K	Big Mountain,	58.90	31	P	P	09 32 09.5	+0.2
	baz=252						
N18K	Kilae Creek	58.99	29		P	09 32 11.0	+1.2
N18K				IAmb	IAmb	09 32 11.7	
	comp=Z,7.6nm,1.0s						
N18K	Kilae Creek	58.99	29	P	P	09 32 10.7	+0.8
	baz=251						
D17K	Noatak River	59.05	20	P	P	09 32 10.8	+0.7
	baz=240						
O18K	Koktuh Hills	59.05	30	P	P	09 32 10.8	+0.5
	baz=252						
F17K	Baldwin Pennin	59.07	22	P	P	09 32 11.2	+1.0
	baz=242						
L18K	Granite Mounta	59.16	27	P	P	09 32 11.7	+0.8
	baz=249						
E17K	Hotham Inlet	59.17	21	P	P	09 32 11.1	+0.2
	baz=241						
OHAK	Old Harbor	59.28	34	P	P	09 32 12.1	+0.3
	baz=255						
M18K	Stony River	59.29	28	P	P	09 32 12.5	+0.6
	baz=250						
C17K	DeLong Mountai	59.41	20	P	P	09 32 13.4	+0.8
	baz=239						
Q19K	Cape Douglas,	59.55	32	P	P	09 32 13.9	+0.2
	baz=254						
H18K	Honhosa River	59.58	24	P	P	09 32 14.3	+0.4
	baz=246						
O19K	Port Alsworth	59.58	30	P	P	09 32 14.4	+0.6
	baz=253						
J18K	Innoko River	59.59	26	P	P	09 32 14.4	+0.5
	baz=249						
N19K	Bonanza Creek	59.69	29	IAmb	IAmb	09 32 16.5	
	comp=Z,7.2nm,0.8s						
N19K	Bonanza Creek	59.69	29	P	P	09 32 15.3	+0.6
	baz=252,SNR=6.2						
F18K	Selawik	59.72	22	P	P	09 32 15.4	+0.8
	baz=244						
E18K	Tukpahlearik C	59.75	21	P	P	09 32 15.6	+0.7
	baz=242						
G18K	Tagagawik	59.78	23	P	P	09 32 15.5	+0.4
	baz=245						
KDAK	Kodiak Island	59.79	33	P	P	09 32 15.6	+0.2
	baz=256						
L19K	White Mountain	59.95	28	P	P	09 32 16.7	+0.3
	baz=251						
GCSA	Galena City Sc	60.00	25	P	P	09 32 16.5	-0.1
	baz=248						
M19K	Big River Lodg	60.07	28	P	P	09 32 17.6	+0.4
	baz=252						
Q20K	Shuyak Island	60.09	32	P	P	09 32 17.1	-0.3
	baz=255						
C18K	Utukok River	60.13	20	P	P	09 32 18.1	+0.5
	baz=241						
J19K	Poorman	60.24	26	P	P	09 32 18.8	+0.5
	baz=249						
B18K	Kokolik River	60.29	19	P	P	09 32 19.3	+0.7
	baz=240						
O20K	Slope Mountain	60.36	31	P	P	09 32 19.5	+0.2
	baz=254						
G19K	Purcell Mounta	60.46	23		P	09 32 20.5	+0.8
G19K				IAmb	IAmb	09 32 21.1	
	comp=Z,7.2nm,0.8s						
G19K	Purcell Mounta	60.46	23	P	P	09 32 20.0	+0.2
	baz=247,SNR=5.5						
H19K	Roundabout Mou	60.47	24		P	09 32 20.7	+0.9
H19K				IAmb	IAmb	09 32 21.4	
	comp=Z,5.6nm,0.8s						
H19K	Roundabout Mou	60.47	24	P	P	09 32 20.5	+0.7
	baz=248,SNR=6.2						
L20K	Farewell, AK	60.48	28	P	P	09 32 20.3	+0.3
	baz=252						
F19K	Shaleruckik Mo	60.49	22	P	P	09 32 20.4	+0.5
	baz=246						
M20K	Styx River	60.63	28	P	P	09 32 21.6	+0.5
	baz=253						
K20K	Telida	60.67	27	IAmb	IAmb	09 32 22.7	
	comp=Z,4.4nm,0.7s						
K20K	Telida	60.67	27	P	P	09 32 21.9	+0.7
	baz=251						
HOM	Homer	60.73	31	P	P	09 32 22.1	+0.4
	baz=256						
C19K	Lookout Ridge	60.86	20	P	P	09 32 23.3	+0.8
C19K	Lookout Ridge	60.86	20	P	P	09 32 23.1	+0.7
	baz=243,SNR=5.3						
N20K	Mount Spurr	60.86	29	P	P	09 32 22.3	-0.3
	baz=254						
SPCR	Spurr Chakacha	60.86	29	P	P	09 32 22.4	-0.2
	baz=254						
CNPM	China Poot	60.90	31	P	P	09 32 22.8	0.0
J20K	Nowinta River	60.91	26	IAmb	IAmb	09 32 25.5	
	comp=Z,6.6nm,1.1s						
J20K	Nowinta River	60.91	26	P	P	09 32 23.6	+0.8
	baz=251,SNR=6.6						
A19K	Wainwright	60.93	18	P	P	09 32 23.3	+0.5
	baz=241						
E19K	Redstone River	60.94	22		P	09 32 23.8	+0.8
E19K	Redstone River	60.94	22	P	P	09 32 23.4	+0.5
	baz=246						
I20K	Naaghedeneel	60.98	25	P	P	09 32 23.8	+0.6
	baz=250						
H20K	Anotleneega Mo	61.06	24	P	P	09 32 24.5	+0.7
	baz=249						
D19K	Kuna River	61.07	21	P	P	09 32 24.5	+0.6
D19K				IAmb	IAmb	09 32 25.2	
	comp=Z,5.0nm,0.8s						
D19K	Kuna River	61.07	21	P	P	09 32 24.2	+0.3
	baz=244						
BRSE	Bradley Lake S	61.20	31	P	P	09 32 24.6	-0.3
	baz=256						
F20K	Avaraart Lake	61.32	22	IAmb	IAmb	09 32 27.1	
	comp=Z,4.0nm,0.7s						
F20K	Avaraart Lake	61.32	22	P	P	09 32 25.8	+0.3
	baz=248						
PPLA	Purkeypile	61.35	28	P	P	09 32 25.8	-0.2
	baz=253						
SKT	Skwentna	61.39	29	IAmb	IAmb	09 32 26.0	
	comp=Z,5.4nm,0.6s						
SKT	Skwentna	61.39	29	P	P	09 32 25.6	-0.4
	baz=254,SNR=8.0						
CAST	Castle Rocks	61.54	27	IAmb	IAmb	09 32 28.4	
	comp=Z,10nm,0.8s						
CAST	Castle Rocks	61.54	27	P	P	09 32 27.4	+0.3
	baz=253,SNR=20						
CHUM	Lake Minchumin	61.58	26	P	P	09 32 27.5	+0.2
	baz=253,SNR=6.2						
KURBB	Kurchatov Arra	61.59	318	P	P	09 32 27.3	-0.3
	comp=Z,1.5nm,0.4s,baz=93,slow=7.4,SNR=10						
KURBB				pP	pP	09 33 10.5	-2.0
	comp=Z,1.2nm,0.7s,baz=92,slow=7.5,SNR=2.3						
	comp=Z,1.5nm,0.4s						
SUA	Susitna One	61.61	29		P	09 32 27.5	-0.3
SUA				IAmb	IAmb	09 32 28.9	
	comp=Z,5.2nm,0.6s						
SUA	Susitna One	61.61	29	P	P	09 32 27.3	-0.4
	baz=255,SNR=5.6						
E20K	Nigu River	61.62	21	P	P	09 32 28.0	+0.4
	baz=247,SNR=10						
D20K	Etivluk River	61.66	21		P	09 32 28.6	+0.8
D20K	Etivluk River	61.66	21	P	P	09 32 28.3	+0.5
	baz=246,SNR=11						
O22K	Cooper Landing	61.86	31	P	P	09 32 29.4	+0.2
	baz=257,SNR=5.4						
SEW	Seward	61.91	31	P	P	09 32 29.6	0.0
SEW	Seward	61.91	31	P	P	09 32 29.5	-0.1
	baz=257,SNR=5.5						
H21K	Melozitna Rive	61.93	24	IAmb	IAmb	09 32 31.2	
	comp=Z,5.5nm,1.0s						
H21K	Melozitna Rive	61.93	24	P	P	09 32 30.3	+0.6
	baz=251,SNR=5.5						
G21K	Allakaket	61.95	23	P	P	09 32 29.9	+0.2
	baz=250						
M22K	Willow	61.98	29	P	P	09 32 29.7	-0.3
M22K	Willow	61.98	29	P	P	09 32 29.6	-0.3
	baz=256						
RC01	Rabbit Creek A	62.00	30	P	P	09 32 30.2	0.0
RC01	Rabbit Creek A	62.00	30	P	P	09 32 29.8	-0.3
	baz=257,SNR=7.1						
NRIK	Noril'sk	62.00	340	P	P	09 32 28.9	-1.1
	comp=Z,1.8nm,0.5s,baz=93,slow=7.1,SNR=4.5						
	comp=Z,1.8nm,0.5s						
B20K	Meade River	62.03	19	P	P	09 32 30.5	+0.3
	baz=245						
CUT	Chulitna	62.07	28	P	P	09 32 30.4	-0.1
	baz=255						
KTH	Kantishna Hill	62.08	27	IAmb	IAmb	09 32 31.7	
	comp=Z,9.8nm,1.0s						
I21K	Tanana	62.11	25	IAmb	IAmb	09 32 32.5	
	comp=Z,6.0nm,0.7s						
I21K	Tanana	62.11	25	P	P	09 32 31.1	+0.3
	baz=252						
F21K	Alatna River	62.20	23		P	09 32 32.0	+0.6
F21K	Alatna River	62.20	23	P	P	09 32 31.5	+0.1
	baz=250						
BPAW	Bear Paw Mtn.	62.20	26	IAmb	IAmb	09 32 32.7	
	comp=Z,8.2nm,0.8s						
BPAW	Bear Paw Mtn.	62.20	26	P	P	09 32 31.4	-0.1
	baz=254,SNR=13						
TRF	Thorofare Moun	62.33	27	IAmb	IAmb	09 32 33.0	
	comp=Z,7.9nm,1.0s						
TRF	Thorofare Moun	62.33	27	P	P	09 32 32.0	-0.5
	baz=255,SNR=6.3						
PMR	Palmer	62.40	29	IAmb	IAmb	09 32 33.0	
	comp=Z,4.9nm,0.6s						
PMR	Palmer	62.40	29	P	P	09 32 32.1	-0.6
	baz=257,SNR=7.9						
C21K	Knifeblade Rid	62.45	20	P	P	09 32 33.5	+0.5
	baz=248						
E21K	Killik River	62.45	21	P	P	09 32 33.3	+0.2
	baz=249						
GHO	Glory Hole Cre	62.53	29	P	P	09 32 33.7	-0.1
H22K	Ishtalitna Cre	62.57	24	P	P	09 32 34.4	+0.6
	baz=252						
MLY	Manley	62.57	25	IAmb	IAmb	09 32 35.1	
	comp=Z,7.0nm,0.6s						
MLY	Manley	62.57	25	P	P	09 32 34.3	+0.4
	baz=254,SNR=14						
PWL	Port Wells	62.61	30	P	P	09 32 34.2	-0.1
	baz=258						
KNK	Knik Glacier	62.67	30	P	P	09 32 34.6	0.0
	baz=258						
B21K	Ikpikpuk River	62.68	20	P	P	09 32 35.2	+0.7
	baz=248						
F22K	John River	62.77	23	P	P	09 32 35.5	+0.3
	baz=251						
SML	Sawmill	62.81	29	P	P	09 32 35.5	-0.1
SML	Sawmill	62.81	29	P	P	09 32 35.5	-0.1
	baz=258,SNR=8.9						
G22K	Bettles	62.83	23	P	P	09 32 36.0	+0.5
	baz=252						
P23K	Montague Islan	62.90	31	P	P	09 32 36.4	+0.3
	baz=259						
WAT1	Susitna Watana	62.94	28	P	P	09 32 36.1	-0.4
	baz=257						
RND	Reindeer	62.94	27		P	09 32 36.1	-0.4
RND				IAmb	IAmb	09 32 37.3	
	comp=Z,4.3nm,0.7s						
MCK	McKinley	62.99	27	P	P	09 32 37.1	+0.4
	baz=256						
D22K	Ayikyak River	63.05	21		P	09 32 38.2	+1.1
D22K	Ayikyak River	63.05	21	P	P	09 32 37.9	+0.9
	baz=250,SNR=7.3						
M23K	Glacier View	63.09	29	P	P	09 32 37.3	-0.1
	baz=258						
E22K	Anaktuvuk Pass	63.10	22	IAmb	IAmb	09 32 39.0	
	comp=Z,5.6nm,0.6s						
E22K	Anaktuvuk Pass	63.10	22	P	P	09 32 38.0	+0.6
	baz=251,SNR=5.6						
A22K	Sinclair Lake	63.11	18	P	P	09 32 38.1	+0.8
	baz=246						
NEA2	Nenana	63.14	26	IAmb	IAmb	09 32 38.7	
	comp=Z,3.5nm,0.6s						
NEA2	Nenana	63.14	26	P	P	09 32 38.1	+0.4
	baz=255						
I23K	Minto, Yukon-K	63.16	25	IAmb	IAmb	09 32 39.2	
	comp=Z,6.8nm,0.6s						
I23K	Minto, Yukon-K	63.16	25	P	P	09 32 38.3	+0.6
	baz=255,SNR=13						
GLI	Glacier Island	63.21	30	P	P	09 32 38.2	0.0
	baz=259						
WAT6	Susitna Watana	63.25	28	P	P	09 32 38.3	-0.3
	baz=258,SNR=7.0						
H23K	Yukon River	63.27	25	IAmb	IAmb	09 32 40.0	
	comp=Z,4.9nm,0.8s						
H23K	Yukon River	63.27	25	P	P	09 32 39.1	+0.6
	baz=254,SNR=5.9						
SCM	Sheep Creek Mo	63.29	29	P	P	09 32 39.1	+0.4
	baz=258,SNR=6.6						
G23K	Bananza Creek	63.33	24	P	P	09 32 39.4	+0.6
	baz=254						
B22K	Teshekpuk Lake	63.33	19	P	P	09 32 38.9	+0.1
	baz=248						
COLD	Coldfoot	63.41	23	P	P	09 32 40.3	+1.0
COLD				IAmb	IAmb	09 32 40.6	
	comp=Z,3.5nm,0.6s						
COLD	Coldfoot	63.41	23	P	P	09 32 40.1	+0.7
	baz=253						
DHY	Denali Highway	63.52	28	P	P	09 32 40.5	+0.1
	baz=258						
WRH	Wood River Hil	63.52	26	IAmb	IAmb	09 32 40.3	
	comp=Z,3.8nm,0.6s						
COLA	College	63.72	26	P	P	09 32 41.4	+0.1
	baz=256						
D23K	Nanushuk River	63.77	21	P	P	09 32 42.7	+1.0
	baz=252						
EYAK	Cordova Ski Ar	63.80	31	P	P	09 32 42.4	+0.4
	baz=260						
E23K	Chandalar	63.87	22		P	09 32 43.7	+1.2
E23K				IAmb	IAmb	09 32 44.4	
	comp=Z,12nm,1.2s						
E23K	Chandalar	63.87	22	P	P	09 32 43.4	+1.0
	baz=253,SNR=8.6						
M24K	Tolsona, Glenn	63.87	29	P	P	09 32 42.8	+0.2
	baz=259						
KLU	Klutina	63.88	30		P	09 32 43.2	+0.6
KLU				IAmb	IAmb	09 32 43.9	
	comp=Z,5.7nm,0.7s						
KLU	Klutina	63.88	30	P	P	09 32 42.6	0.0
	baz=260						
H24K	Noodor Dome	63.94	25		P	09 32 43.5	+0.6
H24K				IAmb	IAmb	09 32 44.1	
	comp=Z,3.6nm,0.5s						
H24K	Noodor Dome	63.94	25	P	P	09 32 43.2	+0.3
	baz=256,SNR=6.9						
POKR	Poker Plat Res	63.95	26	P	P	09 32 42.5	-0.4
	baz=257						
HDA	Harding Lake	63.99	27	IAmb	IAmb	09 32 42.6	
	comp=Z,4.0nm,0.8s						
HDA	Harding Lake	63.99	27	P	P	09 32 42.2	-1.0
	baz=258,SNR=6.4						
TOLK	Toolik Lake Re	64.05	22	P	P	09 32 44.2	+0.6
	baz=253,SNR=5.7						
C23K	Itkillik River	64.06	20	P	P	09 32 44.2	+0.7
	baz=251						
IL31		64.10	26	IAmb	IAmb	09 32 43.5	
	comp=Z,6.5nm,1.0s						
ILAR	Eielson Array	64.10	26		P	09 32 42.9	-1.0
ILAR	Eielson Array	64.10	26	P	P	09 32 42.6	-1.3
	comp=Z,3.3nm,0.6s,baz=251,slow=6.1,SNR=56						
	comp=Z,3.3nm,0.6s						
E24K	Your Creek	64.28	22	IAmb	IAmb	09 32 51.3	
	comp=Z,14nm,1.4s						
E24K	Your Creek	64.28	22	P	P	09 32 45.8	+0.7
	baz=254						
G24K	Hadweenzic Riv	64.30	24		P	09 32 46.0	+0.8
G24K	Hadweenzic Riv	64.30	24	P	P	09 32 45.9	+0.7
	baz=256						
F24K	Squaw Lake	64.35	23		P	09 32 46.4	+0.9
F24K	Squaw Lake	64.35	23	P	P	09 32 46.3	+0.7
	baz=255,SNR=5.4						
PAX	Paxson	64.35	28	IAmb	IAmb	09 32 46.5	
	comp=Z,5.7nm,0.6s						

PAX	Paxson	64.35	28	P	P	09 32 45.8	+0.1
	baz=260,SNR=9.0						
KAIM	Kayak Island	64.37	32	P	P	09 32 46.0	+0.3
	baz=262						
K24K	Donnelly Dome	64.37	27	P	P	09 32 45.8	+0.1
	baz=259						
HARP	HAARP	64.39	29	P	P	09 32 46.3	+0.4
	baz=260						
BMRM	Bremner River	64.42	30	IAmb	IAmb	09 32 48.2	
	comp=Z,9.1nm,0.9s						
BMRM	Bremner River	64.42	30	P	P	09 32 46.5	+0.4
	baz=261,SNR=5.5						
D24K	Happy Valley	64.46	21		P	09 32 47.3	+1.2
D24K	Happy Valley	64.46	21	P	P	09 32 47.0	+0.9
	baz=254,SNR=6.3						
N25K	Chitina, Valde	64.53	30	IAmb	IAmb	09 32 48.2	
	comp=Z,5.3nm,0.8s						
N25K	Chitina, Valde	64.53	30	P	P	09 32 47.3	+0.4
	baz=261						
C24K	Franklin Bluff	64.66	21	P	P	09 32 48.0	+0.5
	baz=253						
J25K	Salcha River,	64.70	26	P	P	09 32 47.5	-0.4
	baz=259,SNR=7.3						
RIDG	Independent Ri	64.77	27	P	P	09 32 48.2	-0.1
RIDG				IAmb	IAmb	09 32 49.0	
	comp=Z,8.2nm,0.8s						
RIDG	Independent Ri	64.77	27	P	P	09 32 48.1	-0.2
	baz=260,SNR=9.6						
PRP	Porcupine Dome	64.81	25	P	P	09 32 48.8	+0.1
	baz=258						
G25K	Bearman Lake	64.85	24	P	P	09 32 49.0	+0.3
	baz=257						
H25L	Birch Creek	64.85	25	P	P	09 32 49.2	+0.5
	baz=258,SNR=5.0						
DOT	Dot Lake	65.09	28	P	P	09 32 50.5	+0.1
DOT				IAmb	IAmb	09 32 51.1	
	comp=Z,9.2nm,0.9s						
CRQE	Cirque	65.13	31	P	P	09 32 49.7	-1.1
	baz=263,SNR=10						
FYU	Fort Yukon	65.14	24	IAmb	IAmb	09 32 51.8	
	comp=Z,6.1nm,0.6s						
SCRK	Sand Creek	65.18	27	IAmb	IAmb	09 32 51.8	
	comp=Z,5.9nm,1.0s						
SCRK	Sand Creek	65.18	27	P	P	09 32 50.9	-0.1
	baz=260,SNR=9.1						
F25K	Christian Rive	65.21	23	IAmb	IAmb	09 32 53.0	
	comp=Z,4.8nm,0.8s						
F25K	Christian Rive	65.21	23	P	P	09 32 51.9	+0.8
	baz=257,SNR=6.3						
MCARA	McCarthy VSAT	65.24	30	P	P	09 32 52.1	+0.8
MCARA				IAmb	IAmb	09 32 53.1	
	comp=Z,8.8nm,0.8s						
MCARA	McCarthy VSAT	65.24	30	P	P	09 32 51.8	+0.5
	baz=263						
L26K	Log Cabin Wild	65.32	28	P	P	09 32 52.0	+0.1
	baz=262,SNR=6.8						
D25K	Kavik River	65.34	21	P	P	09 32 52.2	+0.3
	baz=256						
E25K	Arctic Village	65.35	23	IAmb	IAmb	09 32 53.9	
	comp=Z,8.1nm,1.1s						
E25K	Arctic Village	65.35	23	P	P	09 32 52.9	+1.0
	baz=257						
M26K	Nabesna, AK	65.39	29	P	P	09 32 52.9	+0.6
	baz=262						
J26L	Joseph Creek	65.45	27	IAmb	IAmb	09 32 53.0	
	comp=Z,5.4nm,0.6s						
J26L	Joseph Creek	65.45	27	P	P	09 32 52.5	-0.2
	baz=261,SNR=12						
MESA	MESA	65.63	32	P	P	09 32 54.0	-0.1
	baz=264						
YAH	Yahtse	65.75	31	IAmb	IAmb	09 32 56.4	
	comp=Z,6.3nm,0.6s						
I26K	Coal Creek Min	65.75	26	P	P	09 32 54.3	-0.2
	baz=261						
GRNC	Granite Creek	65.78	31	IAmb	IAmb	09 32 56.4	
	comp=Z,8.7nm,0.7s						
G26K	Porcupine Rive	65.78	24	IAmb	IAmb	09 32 56.1	
	comp=Z,4.6nm,0.6s						
G26K	Porcupine Rive	65.78	24	P	P	09 32 55.5	+0.8
	baz=259,SNR=5.2						
F26K	Sheenjek River	65.79	23	IAmb	IAmb	09 32 56.8	
	comp=Z,7.3nm,0.8s						
F26K	Sheenjek River	65.79	23	P	P	09 32 55.7	+0.9
	baz=259,SNR=5.6						
M27K	Edge Creek, AK	65.90	29	P	P	09 32 55.9	+0.2
	baz=263						
C26K	Camden Bay	65.98	21	P	P	09 32 56.9	+1.0
	baz=257						
CTG	Chitna Glacier	66.00	31	P	P	09 32 57.0	+0.6
	baz=264,SNR=5.2						
CTGM	Chitina Glacie	66.01	31	IAmb	IAmb	09 32 58.0	
	comp=Z,8.3nm,0.7s						
L27K	Beaver Creek,	66.01	28	P	P	09 32 56.5	+0.2
	baz=263,SNR=6.2						
K27K	Chicken	66.02	27	P	P	09 32 56.5	+0.2
	baz=262						
LOGN	Logan Glacier	66.16	31	P	P	09 32 58.2	+0.8
LOGN				IAmb	IAmb	09 32 58.8	
	comp=Z,5.9nm,0.8s						
C27K	Jago River	66.33	21	P	P	09 32 59.1	+0.9
	baz=258						
BVCY	Beaver Creek	66.38	29	P	P	09 32 58.9	+0.2
	baz=264						
I27K	Kandik River	66.43	26	P	P	09 32 59.5	+0.5
	baz=262						
PINM	Pinnacle	66.47	32	P	P	09 32 59.5	+0.2
	baz=266						
YUK3	Moose Creek	66.50	30	P	P	09 32 59.9	+0.2
	baz=265,SNR=6.8						
O28M	Mount Upton	66.55	31	IAmb	IAmb	09 33 01.7	
	comp=Z,11nm,0.8s						
O28M	Mount Upton	66.55	31	P	P	09 33 00.5	+0.4
	baz=265,SNR=9.6						
H27K	Steamboat Moun	66.56	25	IAmb	IAmb	09 33 01.2	
	comp=Z,6.3nm,0.8s						
H27K	Steamboat Moun	66.56	25	P	P	09 33 00.2	+0.5
	baz=262,SNR=11						
G27K	Doyon Strip	66.59	24	P	P	09 33 00.6	+0.7
	baz=261						
BVAR	Borovoye Array	66.76	321	P	P	09 33 01.0	-0.2
	comp=Z,2.0nm,0.4s,baz=100,slow=8.2,SNR=8.0						
	comp=Z,2.0nm,0.4s						
YUK8	Steele Glacier	66.80	30	P	P	09 33 02.1	+0.5
	baz=266,SNR=9.7						
E27K	Coleen River	66.82	23	P	P	09 33 02.2	+0.8
	baz=261						
PNL	Peninsula	66.87	32	P	P	09 33 02.4	+0.6
	baz=267						
I28M	Miner Creek	67.11	26	P	P	09 33 03.6	+0.3
	baz=264,SNR=6.1						
DAWY	Dawson	67.20	27	P	P	09 33 04.2	+0.3
DAWY	Dawson	67.20	27	P	P	09 33 04.3	+0.5
	baz=265,SNR=6.4						
D27M	Malcolm River	67.22	22	P	P	09 33 04.5	+0.7
	baz=261						
O29M	Mount Kennedy	67.31	32	IAmb	IAmb	09 33 06.8	
	comp=Z,9.0nm,0.8s						
O29M	Mount Kennedy	67.31	32	P	P	09 33 05.7	+1.0
	baz=267,SNR=6.3						
YUK4	Talbot Arm	67.34	30	P	P	09 33 06.5	+1.6
	baz=267,SNR=12						
F28M	Old Crow	67.39	24	P	P	09 33 05.5	+0.6
	baz=263						
YUK6	Outpost Mounta	67.45	31	P	P	09 33 06.3	+0.6
	baz=267,SNR=5.9						
M29M	Somme Creek	67.49	29	IAmb	IAmb	09 33 07.5	
	comp=Z,7.1nm,0.8s						
M29M	Somme Creek	67.49	29	P	P	09 33 06.8	+1.0
	baz=266,SNR=9.5						
E28M	Babbage River	67.64	23	P	P	09 33 07.3	+0.9
	baz=263						
L29M	L29M	67.69	29	IAmb	IAmb	09 33 08.8	
	comp=Z,10nm,0.8s						
L29M	L29M	67.69	29	P	P	09 33 08.0	+1.1
	baz=266,SNR=13						
P29M	Windy Craggy	67.71	32	P	P	09 33 08.2	+1.2
	baz=268						
I29M	Ogilvie Camp,	67.78	26	P	P	09 33 07.4	+0.1
	baz=265						
H29M	Whitestone	67.83	25	IAmb	IAmb	09 33 08.6	
	comp=Z,4.4nm,0.7s						
H29M	Whitestone	67.83	25	P	P	09 33 08.6	+0.9
	baz=265						
HYT	Haines Junctio	67.87	31	IAmb	IAmb	09 33 10.2	
	comp=Z,10nm,0.8s						
HYT	Haines Junctio	67.87	31	P	P	09 33 09.3	+1.2
	baz=268,SNR=14						
K29M	Barlow Dome	68.01	28	IAmb	IAmb	09 33 10.6	
	comp=Z,5.9nm,0.8s						
K29M	Barlow Dome	68.01	28	P	P	09 33 09.8	+0.9
	baz=266,SNR=9.7						
G29M	Pine Creek	68.03	24	P	P	09 33 09.7	+0.8
	baz=265						
N30M	Aishikik Lake	68.09	30	IAmb	IAmb	09 33 11.2	
	comp=Z,7.6nm,0.8s						
N30M	Aishikik Lake	68.09	30	P	P	09 33 10.5	+1.0
	baz=268,SNR=10						
P30M	Million Dollar	68.11	32	P	P	09 33 10.8	+1.2
	baz=268						
E29M	Blow River	68.21	23	P	P	09 33 11.0	+1.0
	baz=264						
PLBC	Pleasant Camp	68.40	33	P	P	09 33 12.3	+1.0
	baz=269,SNR=7.3						
EPYK	Eagle Plains	68.50	25	P	P	09 33 12.1	+0.2
	baz=266						
O30N	Mendenhall	68.56	31	P	P	09 33 12.9	+0.5
	baz=269						
J30M	Hart River	68.57	27	P	P	09 33 12.9	+0.5
	baz=267,SNR=6.3						
I30M	Mount Dempster	68.58	26	P	P	09 33 12.7	+0.2
	baz=267						
MAYO	Mayo, Yukon	68.72	28	P	P	09 33 14.3	+1.1
	baz=268						
N31M	Braeburn, Yuko	68.72	30	IAmb	IAmb	09 33 15.2	
	comp=Z,7.9nm,0.8s						
N31M	Braeburn, Yuko	68.72	30	P	P	09 33 14.3	+1.0
	baz=269,SNR=6.8						
G30M	tAoh Zraii Nji	68.74	24	P	P	09 33 14.2	+0.9
	baz=266						
SKAG	Skagway	68.93	33	IAmb	IAmb	09 33 16.3	
	comp=Z,5.2nm,0.6s						
SKAG	Skagway	68.93	33	P	P	09 33 15.6	+1.0
	baz=270						
F30M	Barrier River	68.94	24	P	P	09 33 15.2	+0.7
	baz=267,SNR=6.4						
SIT	Sitka	68.97	35	P	P	09 33 15.8	+1.0
	baz=271						
WHY	Whitehorse	69.15	31	IAmb	IAmb	09 33 17.9	
	comp=Z,8.0nm,0.9s						
WHY	Whitehorse	69.15	31	P	P	09 33 16.8	+0.7
	baz=270						
S32K	Killisnoo	69.36	35	P	P	09 33 18.5	+1.3
	baz=272						
R32K	Eaglecrest	69.37	34	P	P	09 33 18.4	+1.1
	baz=271						
M31M	Drury Creek, Y	69.39	30	P	P	09 33 17.6	+0.2
	baz=270						
H31M	Peel River	69.45	26	P	P	09 33 18.3	+0.6
	baz=269						
G31M	Satah River	69.50	24	IAmb	IAmb	09 33 18.8	
	comp=Z,9.8nm,0.7s						
G31M	Satah River	69.50	24	P	P	09 33 18.2	+0.3
	baz=268,SNR=7.8						
F31M	Tsiigehtchic	69.72	24	IAmb	IAmb	09 33 19.8	
	comp=Z,6.0nm,0.9s						
F31M	Tsiigehtchic	69.72	24	P	P	09 33 19.0	-0.3
	baz=269						
P32M	Atlin	69.75	32	IAmb	IAmb	09 33 21.3	
	comp=Z,6.2nm,0.8s						
P32M	Atlin	69.75	32	P	P	09 33 20.3	+0.7
	baz=272,SNR=5.2						
INK	Inuvik	69.83	23		P	09 33 19.9	0.0
INK				IAmb	IAmb	09 33 20.5	
	comp=Z,6.0nm,0.8s						
INK	Inuvik	69.83	23	P	P	09 33 19.9	0.0
	baz=268						
FARO	Faro, Yukon	69.87	30	P	P	09 33 20.8	+0.5
	baz=271,SNR=5.7						
N32M	Quiet Lake	70.02	31	P	P	09 33 21.7	+0.4
	baz=272						
P33M	Teslin, Yukon	70.18	32	P	P	09 33 22.9	+0.5
	baz=272						
U33K	Whale Pass	70.22	36	P	P	09 33 23.2	+0.7
	baz=273						
Q32M	Nakina River	70.52	33	P	P	09 33 25.2	+0.7
	baz=273						
WRAK	Wrangell Islan	70.63	36	P	P	09 33 25.8	+0.8
	baz=274						
MMPY	Sheldon Lake,	70.83	29	P	P	09 33 27.2	+1.0
	baz=273						
V35K	Ketchikan	71.13	37	P	P	09 33 28.9	+0.9
	baz=275						
R33M	Jennings River	71.16	32	P	P	09 33 29.1	+0.8
	baz=274						
S34M	Telegraph Cree	71.19	34	IAmb	IAmb	09 33 30.2	
	comp=Z,7.4nm,0.9s						
S34M	Telegraph Cree	71.19	34	P	P	09 33 29.3	+1.0
	baz=274,SNR=5.5						
DLBC	Dease Lake	71.72	33	P	P	09 33 32.6	+1.0
DLBC				IAmb	IAmb	09 33 33.5	
	comp=Z,12nm,1.2s						
DLBC	Dease Lake	71.72	33	P	P	09 33 32.4	+0.8
	baz=275,SNR=5.7						
T35M	Bob Quinn	71.74	35	P	P	09 33 32.3	+0.6
	baz=275						
TGTN	Hyland Airport	72.31	30	P	P	09 33 35.6	+0.6
	baz=276						
A36M	Sachs Harbour	72.54	19	P	P	09 33 36.5	+0.4
A36M				IAmb	IAmb	09 33 37.0	
	comp=Z,11nm,0.8s						
A36M	Sachs Harbour	72.54	19	P	P	09 33 36.5	+0.4
	baz=275						
C36M	Paulatuk	73.20	22	P	P	09 33 39.8	-0.2
	baz=277						
BEAVL	Fort Liard	74.04	31	P	P	09 33 45.7	+0.6
	baz=279						
TOAD	Toad River Com	74.16	33	P	P	09 33 46.4	+0.5
	baz=279						
WRGLY	Wrigley	74.32	28	P	P	09 33 47.2	+0.6
	baz=279						
YKA	Yellowknife Ar	78.44	28	P	P	09 34 08.2	-1.5
	comp=Z,2.7nm,0.7s,baz=292,slow=5.9,SNR=17						
	comp=Z,2.7nm,0.7s						
SPITS	Spitsbergen Ar	79.60	351	P	P	09 34 15.3	-0.6
	comp=Z,3.5nm,0.9s,baz=114,slow=6.5,SNR=6.4						
	comp=Z,3.5nm,0.9s						
B08A	Colville Reser	79.88	42	IAmb	IAmb	09 34 19.0	
	comp=Z,9.6nm,0.8s						
J05D	Fort Rock, OR	79.97	48	IAmb	IAmb	09 34 20.3	
	comp=Z,12nm,0.9s						
WAH2	Wahluke Slope	80.17	44	P	P	09 34 20.2	+0.7
C09A	Chrisman Ranch	80.72	43	IAmb	IAmb	09 34 23.4	
	comp=Z,6.3nm,0.7s						
NEW	Newport	81.32	42		P	09 34 25.9	+0.3
MPK	Martis Peak	81.95	51	IAmb	IAmb	09 34 30.8	
	comp=Z,14nm,1.1s						
PNTR	Pine Nut	82.33	51	IAmb	IAmb	09 34 33.1	
	comp=Z,8.5nm,0.7s						
ARCES	ARCESS Array B	82.89	342	P	P	09 34 31.8	-1.5
	comp=Z,0.9nm,0.5s,baz=64,slow=8.2,SNR=7.9						
	comp=Z,0.9nm,0.5s						
NVAR	Mina Array Bea	83.50	52	P	P	09 34 37.9	+0.5
NVAR	Mina Array Bea	83.50	52	P	P	09 34 37.0	-0.3
	comp=Z,4.1nm,0.7s,baz=265,slow=6.0,SNR=36						
NVAR				pP	pP	09 35 25.2	+0.4
	comp=Z,1.4nm,0.7s,baz=266,slow=5.7,SNR=4.0						
	comp=Z,4.1nm,0.7s						
MFID	Camas Ranch	83.70	46	IAmb	IAmb	09 34 39.3	
	comp=Z,6.6nm,0.8s						
HLID	Hailey	84.62	46		P	09 34 43.2	+0.4
ELK	Elko	85.00	49	IAmb	IAmb	09 34 46.1	
	comp=Z,5.4nm,0.8s						
TPNV	Topopah Spring	85.52	53	IAmb	IAmb	09 34 48.4	
	comp=Z,4.4nm,0.7s						
YHL	Hebgen Lake	86.33	44		P	09 34 52.5	+1.1
YHL				IAmb	IAmb	09 34 53.1	
	comp=Z,9.3nm,1.1s						
FINES	FINESS Array B	87.25	335	P	P	09 34 53.0	-2.0
	comp=Z,1.3nm,0.4s,baz=68,slow=5.1,SNR=16						
	comp=Z,1.3nm,0.4s						
HWUT	Hardware Ranch	87.28	47		P	09 34 56.2	+0.3
HWUT				IAmb	IAmb	09 34 56.9	
	comp=Z,5.8nm,0.8s						
PDAR	Pinedale Array	88.22	45	P	P	09 34 59.2	-1.1
	comp=Z,0.5nm,0.4s,baz=175,slow=2.2,SNR=6.4						
	comp=Z,0.5nm,0.4s						
LPAZ	La Paz	147.76	92	PKPbc	PKiKP	09 41 54.5	-1.5
	comp=Z,2.7nm,0.5s,baz=3.4,slow=2.9,SNR=17						

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*OSPL **06** 09:28:01.0±1.5, 18°.85N×70°.25W, h105^{km}±15^{km}, ML2.5*
*SDD **06** 09:28:02.9±1.6, 19°.01N×70°.34W, h89^{km}±9^{km}, MD3.0, ML2.3, MW2.8*
ISC 06 09:28:00.7±1.7**, 18°.89N**±0°.06×**70°.31W**±0°.04**,**
h101^{km}±11^{km}**, n14, σ1**^{s}**63**/26**, 1D, Dominican Republic**

region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DR08	Loma La Naviza	0.28	75	*e*Pg	Pn	09 28 15.1	-0.3
DR08				*e*Sg	Sn	09 28 24.4	-2.0
DR08				IAML		09 28 25.6	
	comp=N,2µm,0.1s						
ABDR	Alto Bandera	0.31	255	*e*Pg	Pn	09 28 15.4	-0.5
ABDR				*e*Sg	Sn	09 28 26.6	-0.6
ABDR				IAML		09 28 28.2	
	comp=N,67nm,0.1s						
BANI	BANI	0.50	186	*e*Pg	Pn	09 28 17.6	+0.9
BANI				*e*Sg	Sn	09 28 29.6	+0.9
BANI				IAML		09 28 30.3	
	comp=N,62nm,0.6s						
SC01	Santiago de lo	0.66	323	*i* P	Pn	09 28 18.4	+0.5
SC01				*e*S	Sn	09 28 31.2	+0.4
SC01				IAML		09 28 32.1	
	comp=Z,43nm,0.3s						
HATOM	Hato Mayor del	0.88	97	*e*Pg	Pn	09 28 20.8	+0.8
HATOM				*e*Sg	Sn	09 28 34.0	-0.5
HATOM				IAML		09 28 35.6	
	comp=N,28nm,0.2s						
SDDR	Presa de Saban	0.93	276	*e*Pg	Pn	09 28 21.0	+0.5
SDDR				*e*Sg	Sn	09 28 32.9	-2.6
SDDR				IAML		09 28 40.4	
	comp=N,25nm,0.5s						
SDDR	Presa de Saban	0.93	276	*i* P	Pn	09 28 20.6	+0.1
SDDR				*e*S	Sn	09 28 34.2	-1.2
SDDR				IAML		09 28 39.8	
	comp=Z,14nm,0.3s						
REDR	Restauracion	1.06	285	*e*Pg	Pn	09 28 25.2	+3.4
REDR				*e*Sg	Sn	09 28 42.2	+4.4
REDR				IAML		09 28 48.0	
	comp=N,31nm,0.2s						
SMDR	Samana, DR	1.13	69⇓	*e*Pg	Pn	09 28 24.2	+1.7
SMDR				*e*Sg	Sn	09 28 38.3	-0.8
SMDR				IAML		09 28 43.4	
	comp=N,38nm,0.9s						
PODR	Polo	1.17	232	*i* P	Pn	09 28 22.6	-0.8
PODR				*e*S	Sn	09 28 39.6	-0.8
LOVI	El Cajuil, Ovi	1.48	223	*i* P	Pn	09 28 26.1	-0.7
LOVI				IAML		09 28 49.5	
	comp=Z,86nm,1.4s						
HIDR	Higuey Centro	1.54	101	*e*Pg	Pn	09 28 28.3	+0.9
HIDR				*e*Sg	Sn	09 28 47.3	-0.4
HIDR				IAML		09 28 52.9	
	comp=N,48nm,0.2s						
LOBH	Bahia de las A	1.63	231	*i* P	Pn	09 28 29.0	+0.4
LOBH				IAML		09 28 55.6	
	comp=Z,58nm,3.0s						
GRTK	Grand Turk	2.72	344	*i* P	Pn	09 28 42.0	-0.7
GRTK				*e*S	Sn	09 29 12.8	-2.2
GRTK				IAML		09 29 19.5	
	comp=Z,15nm,1.8s						

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*UCR **06** 09:31:57.8±1.5, 10°.72N×84°.94W, h141^{km}±3^{km}, MW3.9*
*CATAC **06** 09:32:00.1±0.4, 11°N±2°×8°5W±°, h115^{km}±3^{km}, M3.7/23, MLv3.7/23, Error ellipse: s-maj=5.8km s-min=3.6km az=51.3, confirmed*
ISC 06 09:31:59.5±1.4**, 10°.69N**±0°.04×**84°.92W**±0°.04**, h133**^{km}±7^{km}**,**
n149, σ0^{s}**56**/178**, 66C-3D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TENO	El Achiote	0.06	284⇑	*i*P	Pn	09 32 17.7	+0.1
QUEB	Quebradon, Cot	0.07	161⇑	*i*P	Pn	09 32 17.5	-0.1
TIMP	Tierras Morena	0.14	223⇑	*i*P	Pn	09 32 17.4	-0.3
MOTZ	Rio Naranjo	0.15	269⇑	*i*P	Pn	09 32 17.8	+0.1
TILA	Tilaran	0.23	193⇑	*i*P	Pn	09 32 17.6	-0.3
UPAL	Upala	0.23	336⇑	*i*P	Pn	09 32 17.8	0.0
VMAR	Armenia, Volca	0.23	303⇑	*e*P	Pn	09 32 17.7	-0.1
TABAC	Tabacon	0.24	142⇑	*i*P	Pn	09 32 18.2	+0.3
CUI	Cuipilapa	0.24	263⇑	*i*P	Pn	09 32 17.7	-0.2
CHIK	Chiripa	0.24	177⇑	*i*P	Pn	09 32 18.0	0.0
INVE	Universidad In	0.25	214⇑	*i*P	Pn	09 32 17.5	-0.4
HORNC	Hornillas	0.26	275⇑	*i*P	Pn	09 32 17.9	-0.1
MESS	Mesas	0.28	281⇑	*i*P	Pn	09 32 17.9	-0.1
COLC	Colonia	0.28	265⇑	*i*P	Pn	09 32 17.7	-0.3
CEDE	Laguna Cedeo	0.29	133⇑	*i*P	Pn	09 32 18.3	+0.2
ARE1	Arenal 1	0.30	139⇑	*i*P	Pn	09 32 18.5	+0.4
VARE2	V. Arenal	0.30	139⇑	*i*P	Pn	09 32 18.4	+0.3
CNAS	Canas	0.31	214⇑	*e*P	Pn	09 32 17.7	-0.3
CASO	Castillo	0.31	144⇑	*i*P	Pn	09 32 18.3	+0.2
VACR	Volcan Arenal	0.32	132⇑	*i*P	Pn	09 32 18.4	+0.3
FORC	Fortuna	0.33	132⇑	*i*P	Pn	09 32 18.4	+0.2
TUNA	La Fortuna	0.35	129⇑	*e*P	Pn	09 32 18.5	+0.3
BAGA	Bagaces	0.37	245⇑	*i*P	Pn	09 32 17.7	-0.5
MTEVE	Monteverde	0.38	166⇑	*i*P	Pn	09 32 18.4	-0.1
JTS	Las Juntas de	0.40	185⇑	*e*P	Pn	09 32 17.9	-0.5
JTS				*e*S	Sn	09 32 33.1	+0.3
LCHIL	Los Chiles	0.40	30⇑	*i*P	Pn	09 32 18.2	-0.2
LCHIL				*e*S	Sn	09 32 33.0	+0.3
JUNT	Juntas	0.41	186⇑	*e*P	Pn	09 32 17.9	-0.5
SOCE	Pocosol	0.42	136	*e*P	Pn	09 32 18.4	-0.2
SOCE	Pocosol	0.42	136	P	Pn	09 32 18.6	0.0
SOCE	Pocosol	0.42	136	S	Sn	09 32 31.2	-1.8
GPS2	Hotel Rincn d	0.43	278⇑	*i*P	Pn	09 32 18.4	-0.2
GPS1	Guardaparques	0.43	281⇑	*i*P	Pn	09 32 18.5	-0.2
PEJA	Penjamo Buenos	0.44	298⇑	*i*P	Pn	09 32 18.5	-0.1
VORI	VORI	0.44	287⇑	*i*P	Pn	09 32 18.9	0.0
BUAI	Buenos Aires	0.45	295⇑	*i*P	Pn	09 32 18.6	-0.1
VRLE	La Escondida,	0.45	283⇑	*i*P	Pn	09 32 18.5	-0.2
VRLE				*e*S	Sn	09 32 34.4	+1.1
COVE	Coope Vega, Sa	0.51	87	P	Pn	09 32 18.7	-0.3
COVE	Coope Vega, Sa	0.51	87	S	Sn	09 32 33.8	+0.1
LAPC	Finca la Perla	0.51	279⇑	*i*P	Pn	09 32 18.5	-0.5
LAPC				*e*S	Sn	09 32 34.2	+0.5
ERIA	Liberia	0.52	264⇑	*i*P	Pn	09 32 18.7	-0.2
QUEU	Ciudad Quesada	0.60	127⇑	*i*P	Pn	09 32 19.6	0.0
ALIBA	Liberia Airpor	0.62	261⇑	*i*P	Pn	09 32 19.4	-0.3
ELI1	Hacienda Flor	0.62	266	*e*P	Pn	09 32 19.3	-0.3
VPL2	V. Platanar	0.65	126⇑	*i*P	Pn	09 32 20.1	+0.1
ITAL	Pital	0.68	110⇑	*e*P	Pn	09 32 19.7	-0.3
ITAL				*e*S	Sn	09 32 36.0	+0.4
ENAS	Puntarenas	0.71	173⇑	*i*P	Pn	09 32 20.0	-0.3
ENAS				*e*S	Sn	09 32 36.6	+0.6
ZARE	Zarcero	0.72	134⇑	*i*P	Pn	09 32 20.7	0.0
ZARE				*e*S	Sn	09 32 37.5	+0.9
ROBF	Roble, Puntare	0.73	166	*e*P	Pn	09 32 19.9	-0.5
ARZA	Esparza	0.74	160⇑	*e*P	Pn	09 32 20.1	-0.4
ARZA				*e*S	Sn	09 32 36.7	+0.3
SRA1	San Ramn	0.74	144⇑	*i*P	Pn	09 32 20.2	-0.4
RAMO	San Ramon	0.75	143⇑	*i*P	Pn	09 32 20.4	-0.3
RAMO				*e*S	Sn	09 32 37.2	+0.5
NICO	Nicoya	0.76	223⇑	*i*P	Pn	09 32 19.8	-0.8
NICO				*e*S	Sn	09 32 37.0	+0.4
NYURE	Nandayure	0.76	206⇑	*e*P	Pn	09 32 19.9	-0.8
NYURE				*e*S	Sn	09 32 37.2	+0.5
ARTO	Ro Cuarto	0.77	116⇑	*i*P	Pn	09 32 20.5	-0.2
ARTO				*e*S	Sn	09 32 37.0	+0.1
CARN	Rivas	0.77	310⇑	*i*P	Pn	09 32 20.8	0.0
CARN	Rivas	0.77	310	P	Pn	09 32 20.7	0.0
CARN				S	Sn	09 32 36.5	-0.3
SACU	Santa Cruz	0.78	237	*e*P	Pn	09 32 19.9	-0.9
NARAN	Naranjo de Ala	0.79	138	*e*P	Pn	09 32 20.9	-0.1
LCRUZ	La Cruz	0.80	299⇑	*i*P	Pn	09 32 20.8	-0.1
LCRUZ				*e*S	Sn	09 32 38.9	+1.6
SARCI	Sarchi	0.82	137⇑	*i*P	Pn	09 32 21.3	0.0
CMARA	Lajas Hojancha	0.83	217⇑	*i*P	Pn	09 32 20.3	-1.0
CMARA	Lajas Hojancha	0.83	217	P	Pn	09 32 20.3	-1.0
CMARA	Lajas Hojancha	0.83	217	S	Sn	09 32 37.8	0.0
VPS8	V Poas	0.84	127	*e*P	Pn	09 32 21.3	-0.3
VPS8				*e*S	Sn	09 32 39.8	+1.4
VPS5	V. Poas	0.84	126	*e*P	Pn	09 32 21.1	-0.6
GREC	Grecia	0.86	135	*e*P	Pn	09 32 21.1	-0.5
OROT	Orotina	0.86	153⇑	*i*P	Pn	09 32 21.1	-0.4
PAQE	Paquera	0.86	181⇑	*i*P	Pn	09 32 20.7	-0.8
ATEO	Atenas	0.88	143⇑	*i*P	Pn	09 32 21.2	-0.5
ATEO				*e*S	Sn	09 32 38.4	-0.2
TCS1	Tacares	0.89	136⇑	*i*P	Pn	09 32 21.6	-0.2
TCS1	Tacares	0.89	136	P	Pn	09 32 21.7	-0.1
TCS1	Tacares	0.89	136	S	Sn	09 32 38.6	-0.1
POAS	San Pedro de P	0.90	132	*e*P	Pn	09 32 21.8	-0.1
VBV1	V. Barva	0.99	125⇑	*i*P	Pn	09 32 22.6	-0.3
INDI	Punta indio, G	1.00	215	P	Pn	09 32 21.4	-1.3
INDI	Punta indio, G	1.00	215	S	Sn	09 32 40.1	-0.1
BELE	Belen	1.01	135⇑	*i*P	Pn	09 32 22.5	-0.4
BELE				*e*S	Sn	09 32 40.5	-0.2
SANTA	Santa Ana	1.04	136⇑	*i*P	Pn	09 32 22.7	-0.5

HDC	Heredia	1.05	131	eP	Pn	09 32 22.4	-0.9
DOMI	Santo Domingo	1.08	131	⇑eP	Pn	09 32 23.4	-0.2
PAVB	Pavas, San Jos	1.08	133	eP	Pn	09 32 23.2	-0.4
BITO	Garabito Jaco	1.10	165	⇑iP	Pn	09 32 23.2	-0.5
BITO				eS	Sn	09 32 42.5	+0.4
TIBA	Tibas	1.10	131	eP	Pn	09 32 23.4	-0.4
CBL1	Cabuya	1.11	189	⇑iP	Pn	09 32 22.4	-1.3
MEXI	Barrio Mexico	1.11	132	eP	Pn	09 32 23.2	-0.6
CONN	Concepcion	1.11	321	P	Pn	09 32 22.8	-0.9
MORN	Al O del Volca	1.11	320	P	Pn	09 32 23.4	-0.4
LUPE	Guadalupe	1.12	131	eP	Pn	09 32 23.3	-0.7
LUJA	Lujan	1.13	132	⇑eP	Pn	09 32 23.6	-0.4
LUJA				eS	Sn	09 32 42.5	-0.2
ECI	Escuela Centro	1.13	131	⇑eP	Pn	09 32 23.8	-0.3
SJS3	Mercedes San J	1.13	131	eP	Pn	09 32 24.0	-0.1
CORON	Coronado	1.15	128	eP	Pn	09 32 24.2	-0.1
AMPA	Desamparados	1.16	133	eP	Pn	09 32 23.8	-0.5
AMPA				eS	Sn	09 32 43.0	-0.2
ACOS	Acosta	1.16	140	⇑eP	Pn	09 32 24.0	-0.4
ACOS				eS	Sn	09 32 43.0	-0.2
CVIMO	Finca Echandi	1.17	124	eP	Pn	09 32 24.1	-0.4
TRT2	Tortugero	1.17	96	⇓iP	Pn	09 32 23.9	-0.4
TRT2	Tortugero	1.17	96	P	Pn	09 32 23.9	-0.4
TRIO	Tres Rios	1.20	130	eP	Pn	09 32 22.0	-2.8
PILE	Guapiles	1.21	113	eP	Pn	09 32 24.2	-0.5
CARI	Cariari	1.21	105	eP	Pn	09 32 23.9	-0.8
PAR1A	Puntarenas Pro	1.27	149	⇑iP	Pn	09 32 25.5	+0.2
PAR1A				eS	Sn	09 32 46.8	+1.8
PICV	PH. Pirrs	1.27	146	iP	Pn	09 32 25.6	+0.2
ACON	Acoyapa	1.29	349	⇓iP	Pn	09 32 25.4	-0.2
ACON				eS	Sn	09 32 45.2	-0.3
ACON	Acoyapa	1.29	349	P	Pn	09 32 25.3	-0.2
ABE2	San Pablo	1.30	139	eP	Pn	09 32 25.7	-0.2
ABE2				eS	Sn	09 32 45.9	0.0
LCR2	La Lucha 2	1.30	136	⇑eP	Pn	09 32 25.6	-0.3
LCR2				eS	Sn	09 32 46.1	+0.1
LCR2	La Lucha 2	1.30	136	P	Pn	09 32 25.4	-0.5
VTLA	Turrialba Volc	1.32	121	eP	Pn	09 32 26.1	-0.1
VTR0	Volcan Turrial	1.32	120	eP	Pn	09 32 25.4	-0.9
CVTQ	Turrialba Volc	1.32	121	eP	Pn	09 32 25.9	-0.4
REPA	Paraso	1.34	130	eP	Pn	09 32 26.3	+0.1
PITB	Pirrs, San	1.35	139	eP	Pn	09 32 26.1	-0.3
RAZU	San Marcos de	1.35	139	eP	Pn	09 32 26.4	+0.1
VTCV	VTCV, Calle Va	1.37	121	eP	Pn	09 32 26.5	-0.1
RESJ	San Isidro (Tu	1.42	117	eP	Pn	09 32 26.9	-0.1
PIEC	Cerro El Cedra	1.42	138	eP	Pn	09 32 26.8	-0.4
TURIB	Turrialba	1.44	123	eP	Pn	09 32 27.1	-0.1
SVQ2	Quepos	1.45	149	eP	Pn	09 32 27.3	0.0
QUEP	Quepos	1.46	149	eP	Pn	09 32 27.3	0.0
ESPN	Las Esperanzas	1.61	22	P	Pn	09 32 28.6	-0.5
NANN	Nandasmo	1.71	317	P	Pn	09 32 31.5	+1.2
BLUN	Bluefields	1.72	41	⇓iP	Pn	09 32 29.8	-0.5
BLUN	Bluefields	1.72	41	P	Pn	09 32 29.8	-0.5
BLUN				S	Sn	09 32 53.2	-0.7
VERH	Veragua Rainfo	1.86	114	eP	Pn	09 32 31.3	-0.7
CRUN	El Crucero	1.87	314	P	Pn	09 32 31.5	-0.6
BOAB	BOACO BROADBAN	1.90	337	P	Pn	09 32 32.2	-0.2
BOAB	BOACO BROADBAN	1.90	337	S	Sn	09 32 57.3	-0.3
SAJE	San Jernim	1.93	134	eP	Pn	09 32 32.7	-0.2
UNAN	Cigeo UNAN	1.94	317	P	Pn	09 32 32.9	+0.1
UNAN				S	Sn	09 32 58.9	+0.4
MGAN	Managua	1.95	318	P	Pn	09 32 33.0	0.0
MGAN	Managua	1.95	318	S	Sn	09 32 58.2	-0.5
EDPE	Pejibaye, P	2.02	139	eP	Pn	09 32 34.2	+0.3
OCHAL	Ojochal	2.02	141	P	Pn	09 32 34.4	+0.6
APQ2	Apoyeque	2.04	318	P	Pn	09 32 33.0	-1.1
BURE	Buenos Aires	2.17	134	eP	Pn	09 32 36.2	+0.5
DRK0	Durika	2.17	131	eP	Pn	09 32 35.4	-0.6
COPN	Copaltepe	2.21	312	eP	Pn	09 32 34.8	-1.4
CNGA	Al SSO del Vol	2.50	316	P	Pn	09 32 40.8	+0.9
CNGA				S	Sn	09 33 10.9	-0.1
CNGN	Cerro Negro	2.51	316	eP	Pn	09 32 40.2	+0.2
CNGN	Cerro Negro	2.51	316	P	Pn	09 32 40.3	+0.4
CNGN	Cerro Negro	2.51	316	S	Sn	09 33 11.0	0.0
ILCN	San Idelfonso	2.56	317	P	Pn	09 32 40.7	+0.1
ILCN				S	Sn	09 33 12.5	+0.2
PACN	Al O del Volca	2.57	315	P	Pn	09 32 41.3	+0.5
HOYN	Al Sur del Vol	2.66	316	P	Pn	09 32 42.4	+0.4
HERN	Volcan Telica	2.67	316	P	Pn	09 32 43.0	+0.9
BRU2	Volcan	2.89	130	eP	Pn	09 32 45.5	+0.5
CLLRA	Cordillera,	2.98	130	eP	Pn	09 32 46.1	-0.1
BQTLY	Boquete Panama	3.09	128	eP	Pn	09 32 48.1	+0.5
PBNVO	Pueblo Nuevo,	3.23	123	eP	Pn	09 32 49.2	+0.1

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*ASRS **06** 09:39:59.0±0.9, 53°.64N×88°.00E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 06 09:40:01.1±3.0**, 53°.58N×87°.82E, h0^{km}, mbtmp2.8**/2**, ML2.4**/2**, Error ellipse: s-maj=27.0km s-min=17.8km az=60.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.82	283	I	I	09 51 46.4	
	baz=97,slow=318,SNR=11						
ZALV	Zalesovo Beam	1.82	283	Pn	Pn	09 40 33.8	+0.2
	1.0nm,0.3s,baz=101,slow=15,SNR=18						
ZALV				Lg	Lg	09 40 59.1	
	1.3nm,0.3s,baz=103,slow=25,SNR=28						
KURBB	Kurchatov Arra	6.45	246	Pn	Pn	09 41 37.1	0.0
	0.1nm,0.3s,baz=59,slow=14,SNR=4.9						
KURBB				Lg	Lg	09 43 25.1	
	baz=64,slow=33,SNR=5.7						
	0.8nm,0.5s						
MKAR	Makanchi Array	7.67	210	Pn	Pn	09 41 55.6	+1.7
	0.1nm,0.3s,baz=27,slow=13,SNR=2.9						
MKAR				Lg	Lg	09 44 04.3	
	0.3nm,0.3s,baz=36,slow=32,SNR=3.6						
	0.2nm,0.4s						
MODS	Modra-Piesok	43.05	293	ePG	P	09 48 02.8	+0.5
MODS				eSG		09 48 04.7	
MODS				eLG	Lg	09 48 07.0	

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*IDC **06** 09:40:29.9±4.7, 41°.82N×46°.73E, h0^{km}, mb3.2/3, mbtmp3.1/4, ML2.7/1, MS3.7/1, Error ellipse: s-maj=105.2km s-min=15.0km az=15.0*

*MOS **06** 09:40:36.7, 42°.83N×47°.12E, h10^{km}, MPVA4.0*

*NORS **06** 09:40:36.8, 42°.80N×47°.03E, h1^{km}, MPVA3.9*

*DRS **06** 09:40:36.9, 42°.87N×47°.15E, h15^{km}, FELT I=III MSK at Buynaksk*

ISC 06 09:40:37.9±0.8**, 42°.88N**±0°.02×**47°.15E**±0°.02**, h6^{km}**±6^{km}**, n66, σ1^{s}.35**/111**, mb3.1**/3**, 1C-4D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUJR	Buynaksk	0.06	209	ePg	Pg	09 40 38.9	-0.6
BUJR				eSg	Sg	09 40 40.7	0.0
BUJR	Buynaksk	0.06	209	⇓ePG	Pg	09 40 38.9	-0.6
KRNR	Karanay	0.19	253	iPg	Pg	09 40 41.1	-0.6
KRNR				eSg	Sg	09 40 44.1	0.0
KRNR	Karanay	0.19	253	iPG	Pg	09 40 41.1	-0.6
DBC	Dubki	0.27	301	iPG	Pg	09 40 43.2	-0.1
MAK	Makhachkala	0.27	73	iPg	Pg	09 40 43.7	+0.5
MAK				eSg	Sb	09 40 49.4	-0.8
MAK	Makhachkala	0.27	73	iPG	Pg	09 40 43.7	+0.5
MAK				eS	Sb	09 40 49.4	-0.8
ARKR	Arakani	0.30	202	⇓ePG	Pg	09 40 43.0	-0.8
ARKR				eS	Sg	09 40 47.2	-0.6
UNCR	Uncukul	0.31	238	iPg	Pg	09 40 43.4	-0.6
UNCR				eSg	Sg	09 40 48.1	0.0
UNCR	Uncukul	0.31	238	⇓iPG	Pg	09 40 43.3	-0.7
UNCR				eS	Sg	09 40 48.1	0.0
UNCR				pmax	pmax		
	comp=Z,405nm,0.4s						
KANR	Karaman	0.40	38	ePg	Pb	09 40 47.9	+0.4
KANR				eSg	Sb	09 40 55.2	+1.3
KANR	Karaman	0.40	38	ePG	Pb	09 40 47.9	+0.4
KANR				eS	Sb	09 40 55.2	+1.3
DLMR	Dylym	0.43	297	ePg	Pg	09 40 46.2	+0.1
DLMR				eSg	Sb	09 40 53.8	-0.8
DLMR	Dylym	0.43	297	ePG	Pg	09 40 46.0	-0.2
DLMR				eS	Sg	09 40 52.6	+0.9
DLMR				pmax	pmax		
	comp=Z,143nm,0.2s						
GNBR	Gunib	0.51	196	ePg	Pg	09 40 47.5	-0.3
GNBR				eSg	Sg	09 40 55.2	+0.8
GNBR	Gunib	0.51	196	ePG	Pg	09 40 47.4	-0.3
GNBR				eS	Sg	09 40 55.1	+0.7
GNBR				pmax	pmax		
	comp=Z,270nm,0.5s						
BTLR	Botlikh	0.72	253	ePg	Pg	09 40 51.3	-0.4
BTLR				eSg	Sg	09 41 01.6	+0.6
BTLR	Botlikh	0.72	253	ePG	Pg	09 40 50.3	-1.4
KMKR	Kumukh	0.75	183	ePg	Pg	09 40 52.0	-0.3
KMKR				eSg	Sg	09 41 03.5	+1.4
KMKR	Kumukh	0.75	183	ePG	Pg	09 40 52.0	-0.3
KMKR				eS	Sg	09 41 03.5	+1.4
DVE	Vedeno	0.76	276	ePg	Pg	09 40 53.2	+0.7
DVE				eSg	Sb	09 41 04.2	0.0
DVE	Vedeno	0.76	276	ePG	Pg	09 40 53.2	+0.7
DVE				eS	Sb	09 41 04.2	0.0
URKR	Urkarakh	0.80	153	ePg	Pg	09 40 53.3	0.0
URKR				eSg	Sg	09 41 05.6	+1.9
URKR	Urkarakh	0.80	153	ePG	Pg	09 40 53.2	-0.1
URKR				eS	Sg	09 41 04.3	+0.7
URKR				pmax	pmax		
	comp=Z,147nm,0.5s						
GROC	Groznyy	1.04	288	ePg	Pn	09 40 59.9	+0.8
GROC				eSg	Sn	09 41 15.0	+1.0
GROC	Groznyy	1.04	288	PG	Pg	09 40 57.4	-0.5
GROC				S	Sg	09 41 11.7	+0.2
KSMR	Kasumkent	1.47	150	ePg	Pn	09 41 05.7	+0.6
KSMR				eSg	Sn	09 41 24.9	+0.2
KSMR	Kasumkent	1.47	150	ePG	Pn	09 41 05.7	+0.6
KSMR				eS	Sn	09 41 24.9	+0.2
SEKA	Sheki	1.67	179	PG	Pg	09 41 10.9	+1.0
KMGR	Komgaron	1.69	277	ePN	Pg	09 41 10.6	+0.4
KMGR				eS	Sg	09 41 35.9	+3.8
VLKR	Vladikavkaz	1.82	276	ePN	Pg	09 41 13.3	+0.5
VLKR				eS	Sg	09 41 38.0	+1.5
TRKR	Terskaya	1.96	296	ePN	Pg	09 41 16.5	+1.1
TRKR				eS	Sg	09 41 43.5	+2.8
BTKR	Batakoyurt	1.97	285	ePg	Pb	09 41 14.2	-0.1
BTKR				eSg	Sg	09 41 43.5	+2.3
BTKR	Batakoyurt	1.97	285	ePN	Pb	09 41 14.2	-0.1
BTKR				eS	Sg	09 41 43.5	+2.3
GUDG	Gudauri	2.01	259	ePg	Pn	09 41 13.9	+1.2
GUDG				eSg	Sb	09 41 40.4	-0.1
GUDG	Gudauri	2.01	259	ePN	Pn	09 41 13.9	+1.2
LACR	Lac	2.10	270	ePg	Pb	09 41 16.0	-0.4
LACR				eSg	Sb	09 41 43.6	+0.8
LACR	Lac	2.10	270	ePN	Pb	09 41 15.8	-0.7
LACR				eS	Sb	09 41 44.3	+1.5
MNGR	Mingechevir, A	2.11	181	PN	Pn	09 41 15.4	+1.7
STDR	Stavd-Durt	2.31	283	ePn	Pb	09 41 19.6	-0.5
STDR				eSn	Sg	09 41 50.7	-1.4
STDR	Stavd-Durt	2.31	283	ePN	Pb	09 41 19.6	-0.5
STDR				eS	Sg	09 41 50.7	-1.4
GANJ	Ganja	2.32	196	PN	Pn	09 41 17.4	+0.7
LSNR	Lesken	2.47	280	ePN	Pb	09 41 22.9	+0.2
LSNR				eS	Sn	09 41 49.7	+0.4
AKH	Akhalkalaki	3.09	243	ePN	Pn	09 41 30.5	+3.0
AKH				eS	Sn	09 42 06.3	+1.5
PYA1	Pyatigorsk	3.18	293	iPN	Pn	09 41 30.4	+1.9
KBZ	Khabaz	3.22	287	Pn	Pn	09 41 25.9	-3.1
	comp=Z,0.7nm,0.3s,baz=134,slow=6.0,SNR=9.7						
KBZ				Pg	Pb	09 41 35.9	+0.4
	comp=Z,0.9nm,0.3s,baz=138,slow=14,SNR=6.4						
KBZ				Lg	Lg	09 42 18.4	
	comp=Z,2.3nm,0.3s,baz=296,slow=15,SNR=6.7						
	comp=Z,1.3nm,0.2s						
KBZ	Khabaz	3.22	287	iPN	Pn	09 41 28.0	-1.0
GNI	Garni	3.27	214	ePN	Pn	09 41 29.5	-0.5
GNI				eS	Sn	09 42 11.8	+2.5
NEUR	Neytrino	3.28	278	ePn	Pn	09 41 32.2	+2.1
NEUR				eSn	Sn	09 42 08.2	-1.4
NEUR	Neytrino	3.28	278	ePN	Pn	09 41 32.2	+2.1
NEUR				eS	Sn	09 42 08.2	-1.4
BEYR	Belyy Ugol+	3.35	291	ePn	Pn	09 41 32.1	+1.2
BEYR				eSn	Sn	09 42 09.7	-1.4
BEYR	Belyy Ugol+	3.35	291	ePN	Pn	09 41 32.1	+1.2
BEYR				eS	Sn	09 42 09.7	-1.4
SHA1	Shidzhatmaz	3.39	286	ePn	Pn	09 41 30.6	-1.0
SHA1				eSn	Sn	09 42 10.2	-2.1
SHA1	Shidzhatmaz	3.39	286	iPN	Pn	09 41 31.0	-0.6
KIV	Kislovodsk	3.42	290	ePn	Pn	09 41 33.8	+1.8
KIV				eSn	Sn	09 42 12.3	-0.6
KIV	Kislovodsk	3.42	290	ePN	Pn	09 41 33.8	+1.8
KIV				eS	Sn	09 42 12.3	-0.6
AB31	Akbulak array	10.93	50	⇓Pn	Pn	09 43 14.7	-0.2
	comp=Z,0.2nm,0.3s,baz=244,slow=15,SNR=5.2						
AB31				⇑Sn	Sn	09 45 11.0	-6.4
	comp=Z,0.4nm,0.3s,baz=242,slow=27,SNR=7.1						
ARTI	Arti	15.32	24	iP	P	09 44 17.4	-2.1
ARTI				pmax	pmax		
	comp=Z,4.0nm,1.5s						
KIRV	Kirov	15.79	4	iP	P	09 44 24.3	-0.3
BRVK	Borovoye	18.45	49	iP	P	09 44 51.9	-2.3
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES	FINESS Array B	22.45	333	P	P	09 45 37.7	+0.2
	comp=Z,0.3nm,0.5s,baz=134,slow=12,SNR=1.7						
	comp=Z,0.3nm,0.5s						
KURBB	Kurchatov Arra	22.72	59	P	P	09 45 41.1	+0.7
	comp=Z,0.5nm,0.5s,baz=265,slow=12,SNR=4.5						
	comp=Z,0.5nm,0.5s						
KURK	Kurchatov	22.79	59	P	P	09 45 41.1	0.0
MKAR	Makanchi Array	25.09	69	P	P	09 46 03.6	+0.4
	comp=Z,0.2nm,0.5s,baz=285,slow=5.7,SNR=2.0						
	comp=Z,0.2nm,0.5s						
TORD	Torodi Ar. Bea	49.04	247	LR	LR	10 13 28.4	
	comp=Z,71nm,19.3s,baz=164,slow=41						
CMLA	Cha da Macela	54.06	291	iP	P	09 50 04.6	+1.4

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*STR **06** 09:43:51.6±0.9, 48°N±5°×°±°, h0^{km}, MLv1.8/7, Error ellipse: s-maj=0.0km s-min=0.0km az=153.6, preliminary*

*BGR **06** 09:43:52.4±0.3, 47°.55N×8°.17E, h0^{km}, ML1.5/8, Error ellipse: s-maj=3.3km s-min=3.3km az=0.0, Mining explosion.*

*VIE **06** 09:43:52.4±1.0, 47°.51N×8°.16E, h10^{km}±26^{km}, ml2.6/1, Error ellipse: s-maj=5.2km s-min=2.9km az=12.0 32 km WNW of Zurich*

ISC 06 09:43:52.0±1.1**, 47°.55N**±0°.03×**8°.18E**±0°.02**, h0^{km}, n22, σ0^{s}.51**/30**, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
METMA	Mettma DE	0.17	18	ePg	Pg	09 43 54.9	-0.3
METMA				eSg	Sg	09 43 57.9	+0.4
SLE	Schleitheim	0.30	45	Pg	Pg	09 43 57.4	-0.4
SLE	Schleitheim	0.30	45	ePg	Pg	09 43 57.7	-0.1
SLE				eSg	Sg	09 44 02.0	+0.3
BERGE	Lenzkirch (DE)	0.32	0	ePg	Pg	09 43 57.9	-0.3
BERGE				eSg	Sg	09 44 02.8	+0.5
ENDD	Endenburg	0.34	299	Pg	Pg	09 43 57.9	-0.6
ENDD	Endenburg	0.34	299	Sg	Sg	09 44 03.5	+0.7
FELD	Feldberg im Sc	0.34	340	Pg	Pg	09 43 58.2	-0.4
FELD	Feldberg im Sc	0.34	340	Sg	Sg	09 44 03.9	+0.9
BALST	Balsthal	0.39	237	Pg	Pg	09 43 59.1	-0.4
BALST	Balsthal	0.39	237	ePg	Pg	09 43 59.1	-0.4
BALST				eSg	Sg	09 44 05.1	+0.6
KIZ	Kirchzarten	0.44	337	Pg	Pg	09 43 59.9	-0.5
KIZ	Kirchzarten	0.44	337	Sg	Sg	09 44 06.6	+0.5
WILA	Wila	0.52	105	ePg	Pg	09 44 01.8	0.0
WILA				eSg	Sg	09 44 09.2	+0.7
BOURR	Bourrignon	0.66	257	Sg	Sb	09 44 16.0	-0.2
BOURR	Bourrignon	0.66	257	Pg	Pg	09 44 04.9	+0.3
BFO	Black Forest	0.79	7	ePg	Pg	09 44 07.3	+0.3
BFO				eSg	Sg	09 44 18.1	+0.9
OPP	Oppenau	0.95	0	Pg	Pg	09 44 09.7	-0.4
OPP	Oppenau	0.95	0	Sn	Sb	09 44 24.2	-0.1
ECH	Echery	0.95	315	Pg	Pg	09 44 09.6	-0.6
ECH				Sg	Sg	09 44 22.9	+0.3
ECH	Echery	0.95	315	ePg	Pg	09 44 10.2	0.0
ECH				eSg	Sg	09 44 23.2	+0.5
DAVA	Damuels	1.19	102	eSg	Sb	09 44 30.8	-0.6
	5.6nm,0.2s						
DAVA	Damuels	1.19	102	eSg	Sb	09 44 30.7	-0.6

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*IDC **06** 09:44:31.8±6.0, 39°.31N×144°.25E, h0^{km}, mb3.9/4, mbtmp3.8/7, ML3.1/3, Error ellipse: s-maj=105.4km s-min=35.0km az=108.0*

*NIED **06** 09:44:37.6, 39°.48N×143°.53E, h28^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.26; $M_{\theta\theta}$-0.35; $M_{\phi\phi}$-1.90; $M_{r\theta}$0.94; $M_{\theta\phi}$-0.87; $M_{\phi r}$1.75; Fault plane solution: $M_0$3.02000×10^{14} NP1: ϕ_s201.00000°, δ25.00000°, λ85.00000°. NP2: ϕ_s27.00000°, δ66.00000°, λ92.00000°.*

*JMA **06** 09:44:37.6±0.4, 39°.5N±0°.8×14°4E±°, h28^{km}, MV3.6/32, FAR E OFF SANRIKU*

ISC 06 09:44:37.5±1.5**, 39°.37N**±0°.07×**143°.40E**±0°.09**, h11^{km}, n20, σ1^{s}.60**/25**, mb3.8**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.24	280	P	Pb	09 45 00.6	-0.3
JTH	Tanohata	1.32	296	P	Pn	09 45 01.3	-0.5
JTH				S	Sb	09 45 19.6	+0.5
OFUJ	Ofunato	1.38	258	P	Pb	09 45 03.2	0.0
JOM	Ohasama	1.64	274	P	Pb	09 45 07.0	-0.7
JMK	Ichinoseki	1.75	257	P	Pb	09 45 08.8	-0.8
JANG	Nango	1.76	305	eP	Pn	09 45 07.0	-1.0
JIO	Ouri	1.85	241	P	Pb	09 45 10.1	-1.1
JIO				eS	Sn	09 45 32.3	-0.1
JRG	Rokugo	2.15	272	P	Pb	09 45 14.4	-1.9
JTM	Tenmabayashi	2.28	309	P	Pn	09 45 15.0	0.0
JTM				S	Sn	09 45 41.9	-1.3
JYK	Kaneyama	2.41	260	P	Pb	09 45 18.7	-2.1
JNBK	Urakawa-nobuka	2.95	351	eP	Pn	09 45 24.1	-0.1
JOTO	OTAMA OYAMA	3.01	234	eP	Pn	09 45 27.1	+2.0
JOTO				S	Sn	09 46 03.1	+1.8
JCH	Churui	3.24	359	P	Pn	09 45 27.1	-1.1
ASAJ	Asahikawa	4.78	353	Pn	Pn	09 45 48.1	-1.2
	0.9nm,0.3s,baz=199,slow=16,SNR=8.9						
ASAJ				Sn	Sn	09 46 46.0	+1.2
	0.4nm,0.3s,baz=9.9,slow=26,SNR=1.7						
	2.0nm,0.3s						
MJAR	Matsushiro Arr	4.98	237	Pn	Pn	09 45 55.5	+3.2
	0.2nm,0.3s,baz=39,slow=11,SNR=15						
	3.5nm,0.7s						
USRK	Ussuriysk Ar.	9.79	303	Pn	Pn	09 47 02.3	+4.1
	0.2nm,0.3s,baz=101,slow=15,SNR=4.2						
	1.4nm,0.6s						
ZALV	Zalesovo Beam	41.55	310	P	P	09 52 26.5	+1.8
	0.5nm,0.3s,baz=86,slow=8.8,SNR=1.7						
	0.5nm,0.3s						
MKAR	Makanchi Array	44.25	300	P	P	09 52 46.4	-0.4
	0.5nm,0.6s,baz=86,slow=9.1,SNR=4.8						
	0.5nm,0.6s						
KURBB	Kurchatov Arra	45.84	306	P	P	09 52 59.2	-0.1
	2.0nm,0.2s,baz=79,slow=8.2,SNR=4.1						
	2.0nm,0.2s						
BVAR	Borovoye Array	50.19	311	P	P	09 53 33.1	+0.2
	0.5nm,0.4s,baz=79,slow=7.6,SNR=1.9						
	0.5nm,0.4s						

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*KOLA **06** 09:59:49.0, 64°.79N×30°.50E, h0^{km}, ML2.5, Error ellipse: s-maj=17.6km s-min=13.3km az=10.0, Kostomuksha, Karelia*

*HEL **06** 09:59:48.9±0.2, 64°.81N×30°.75E, h0^{km}, ML2.1, Explosion*

*IDC **06** 09:59:50.7±1.9, 64°.75N×30°.49E, h0^{km}, mbtmp3.0/4, ML2.2/4, Error ellipse: s-maj=24.5km s-min=8.4km az=102.0*

ISC 06 09:59:48.2±1.3**, 64°.81N**±0°.06×**30°.54E**±0°.07**, h0^{km}, n27, σ0^{s}.95**/30**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KU1	Kurvinen	0.86	332	eP	Pg	10 00 05.0	+0.3
KU1				eS	Sg	10 00 16.5	+0.7
PUF	PUOLANKA	1.08	263	eP	Pb	10 00 09.7	0.0
KU6	Riekki	1.25	348	eS	Sg	10 00 28.2	-0.1
MSF	Maaselka	1.27	331	eP	Pb	10 00 12.8	-0.2
KU2	Taivalkoski	1.33	314	eP	Pb	10 00 14.1	+0.2
OLKF	Oulanka, Finla	1.59	343	eP	Pb	10 00 18.1	-0.2
OLKF				eS	Sg	10 00 39.0	-0.2
OLKF				MSG		10 00 42.3	
	comp=Z,6.5nm,0.1s						
NIF	Nilsia	1.86	221	MSG		10 00 50.2	
	comp=Z,9.4nm,0.1s						
RANF	Ranua	1.98	309	eP	Pb	10 00 24.6	-0.4
OUL	Oulu	2.00	280	eP	Pb	10 00 25.1	-0.2
OUL				MSG		10 00 54.3	
	comp=Z,17nm,0.1s						
KVDA	Kovda	2.12	26	P	Pn	10 00 24.9	+0.2
KVDA				S	Sn	10 00 52.3	+0.6
OBF4	Vikkela, Lumij	2.33	273	eP	Pb	10 00 30.2	-0.7
OBF4				MSG		10 01 02.8	
	comp=Z,11nm,0.1s						
OUF	Merijarvi	2.55	263	MSG		10 01 09.0	
	comp=Z,6.8nm,0.1s						
RNF	Rovaniemi	2.60	316	MSG		10 01 10.8	
	comp=Z,6.3nm,0.2s						
APA0	Apatity Array	2.98	18	P	Pn	10 00 37.3	+0.7
APA0				S	Sn	10 01 12.8	-0.2
RUF	Ruokolahti	3.48	193	eP	Pn	10 00 44.5	+1.1
LVZ	Lovozero	3.52	26	S	Sn	10 01 24.8	-1.5
LVZ	Lovozero	3.52	26	eP	Pn	10 00 44.1	+0.2
FINES	FINESS Array B	3.94	213	Pn	Pn	10 00 51.2	+1.4
	comp=Z,0.2nm,0.3s,baz=33,slow=13,SNR=8.5						
FINES				Lg	Lg	10 01 50.9	
	comp=Z,1.5nm,0.3s,baz=33,slow=28,SNR=14						
	comp=Z,0.5nm,0.2s						
HEF	Hetta	4.54	326	eP	Pn	10 01 00.1	+2.1
PRVG	Vayda Guba	5.00	7	P	Pn	10 01 05.4	+1.1
PRVG				S	Sn	10 02 02.8	+0.1
KTK1	Kautokeino	5.10	329	eP	Pn	10 01 06.6	+0.8
ARCES	ARCESS Array B	5.13	340	Pn	Pn	10 01 06.9	+0.7
	comp=Z,0.5nm,0.3s,baz=154,slow=12,SNR=77						
ARCES				Sn	Sn	10 02 05.2	-0.9
	comp=Z,0.2nm,0.3s,baz=157,slow=25,SNR=2.4						
ARCES				Lg	Lg	10 02 31.9	
	comp=Z,0.4nm,0.3s,baz=157,slow=29,SNR=3.6						
	comp=Z,1.1nm,0.2s						
ARCES	ARCESS Array B	5.13	340	P	Pn	10 01 05.8	-0.3
ARCES				S	Sn	10 02 03.3	-2.7
VADS	Vadso	5.35	356	P	Pn	10 01 09.4	+0.3
I37NO	I37NO	6.34	318	I	I	10 36 30.0	
	baz=128,slow=313,SNR=3.0						
HFS	Hagfors	9.09	247	Pn	Pn	10 01 59.7	-0.7
	comp=Z,0.1nm,0.3s,baz=59,slow=15,SNR=5.9						
HFS				Lg	Lg	10 04 32.1	
	comp=Z,0.2nm,0.3s,baz=57,slow=27,SNR=3.4						
	comp=Z,0.9nm,0.6s						
NOA	NORSAR Array B	9.57	256	Pn	Pn	10 02 06.0	-1.0
	baz=62,slow=12,SNR=1.6						
NOA				Lg	Lg	10 04 50.3	
	baz=357,slow=4.9,SNR=3.4						
	comp=Z,0.2nm,0.5s						

HEL 06 10:12:25.8±0.1**, 60°.14N×23°.93E, h0^{km}, ML1.3, Suspected explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MEF	Metsahovi	0.25	72	PG	Pg	10 12 29.8	-0.7
	baz=253						
MEF				SG	Sg	10 12 32.6	-1.0
HEL1	Helsinki	0.48	85	PG	Pg	10 12 34.7	-0.3
NUR	Nurmijarvi	0.51	44	PG	Pg	10 12 35.0	-0.6
	baz=221						
NUR				MSG		10 12 42.4	
	comp=Z,3.9nm,0.2s						
PVF	Pernaja	1.04	66	PG	Pg	10 12 44.6	-1.2
PVF				MSG		10 12 57.7	
	comp=Z,3.0nm,0.2s						
RAF	Rauma	1.39	311	PG	Pg	10 12 50.6	-1.7
RAF				MSG		10 13 07.5	
	comp=Z,2.8nm,0.2s						
RAF				SG	Sg	10 13 09.0	-1.2
MTSE	Matsula	1.43	182	PG	Pn	10 12 51.6	-1.4
FIA0	FINESS Array S	1.68	38	PG	Pn	10 12 55.7	-0.7
FIA0				MSG		10 13 15.8	
	comp=Z,1.8nm,0.2s						
FIA0				SN	Sn	10 13 18.3	-0.3
KPF	Kankaanpaa	1.92	333	PG	Pn	10 13 00.4	+0.7
KPF				SG	Sn	10 13 25.2	+0.6
AAL	Aland	1.97	273	PG	Pn	10 13 00.8	+0.5
	baz=89						
AAL				SG	Sb	10 13 26.9	-0.5
KEF	Keuruu	2.08	12	PG	Pn	10 13 03.0	+1.0
	baz=196						
KEF				MSG		10 13 27.5	
	comp=Z,0.9nm,0.2s						
KEF				SG	Sb	10 13 30.7	-0.1
KAF	Kangasniemi	2.29	29	MSG		10 13 33.4	
	comp=Z,0.9nm,0.2s						
KAF				SG	Sb	10 13 36.3	-0.4

IDC 06 10:23:41.2±1.9,5°.19S×151°.12E,h0^{km},mb3.9/4,mbtmp4.0/4,Error ellipse: s-maj=88.5km s-min=30.7km az=122.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	21.95	227	P	P	10 28 37.2	+0.5
	5.1nm,0.5s,baz=51,slow=10,SNR=62						
	5.1nm,0.5s						
ASAR	**Alice Springs**	24.75	220	P	P	10 29 05.3	+0.5
	3.9nm,0.7s,baz=52,slow=8.8,SNR=52						
	3.9nm,0.7s						
STKA	**Stephens Creek**	28.01	197	P	P	10 29 32.6	-1.5
	2.0nm,0.9s,baz=18,slow=6.4,SNR=3.0						
	2.0nm,0.9s						
ILAR	**Eielson Array**	83.15	22	P	P	10 36 09.0	+0.1
	0.2nm,0.7s,baz=234,slow=7.7,SNR=2.4						
	0.2nm,0.7s						

SDD 06 10:27:23.1±2.3,18°.54N×68°.70W,h125^{km}±12^{km},MD3.7,ML4.2,MW3.9

RSPR 06 10:27:25.2,18°.54N×68°.95W,h108^{km}±1^{km},MD3.6/20

NEIC 06 10:27:25.5±2.5,18°.5N±0°.1×68°.92W±0°.04,h98^{km}±8^{km},ML3.8/32,Md3.6/20(RSPR),Error ellipse: s-maj=15.3km s-min=4.7km az=193.0

ISC 06 10:27:24.7±1.1,18°.59N±0°.06×68°.93W±0°.03,h108^{km}±8^{km},n101,σ1^{s}81/118,26C-17D,Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HIDR	**Higuey Centro**	0.20	90	⇓*e*P	Pn	10 27 40.1	+0.3
HIDR	**Higuey Centro**	0.20	90	*e*S	Sn	10 27 51.7	+0.4
HIDR	**Higuey Centro**	0.20	90	⇑*e*Pg	Pn	10 27 39.9	0.0
HIDR				⇑*e*Sg	Sn	10 27 51.9	+0.7
HIDR				IAML		10 27 54.3	
	comp=N,5µm,0.2s						
MIDR	**Miches**	0.41	343	⇑*e*Pg	Pn	10 27 41.2	+0.4
MIDR				⇑*e*Sg	Sn	10 27 53.8	+0.9
MIDR				IAML		10 27 55.1	
	comp=N,1µm,0.1s						
DR12	**Loma Pena Alta**	0.47	294		Pn	10 27 41.0	-0.3
HATOM	**Hato Mayor del**	0.47	294	⇑*e*Pg	Pn	10 27 41.0	-0.2
HATOM				⇑*e*Sg	Sn	10 27 53.8	+0.1
HATOM				IAML		10 27 54.3	
	comp=N,4µm,0.5s						
SMDR	**Samana, DR**	0.74	340	⇓*e*P	Pn	10 27 43.4	+0.2
SMDR	**Samana, DR**	0.74	340	*e*S	Sn	10 27 58.6	+1.4
SMDR	**Samana, DR**	0.74	340	⇓*e*Pg	Pn	10 27 43.4	+0.2
SMDR				⇑*e*Sg	Sn	10 27 59.0	+1.8
SMDR				IAML		10 28 03.4	
	comp=N,2µm,0.6s						
SDD	**Santo Domingo**	0.95	262		Pn	10 27 45.0	-0.1
SDD					Sn	10 28 00.6	0.0
SDD	**Santo Domingo**	0.95	262	⇓*e*P	Pn	10 27 45.0	-0.1
SDD	**Santo Domingo**	0.95	262	*e*S	Sn	10 28 00.6	0.0
DR08	**Loma La Naviza**	1.10	290	⇓*e*Pg	Pn	10 27 46.5	-0.4
DR08				IAML		10 28 05.8	
	comp=N,19µm,0.1s						
DR08				⇑*e*Sg	Sn	10 28 06.1	+2.4
NADR	**Nagua**	1.16	311	⇑*e*Pg	Pn	10 27 48.8	+1.3
NADR				⇑*e*Sg	Sn	10 28 07.6	+2.9
NADR				IAML		10 28 12.9	
	comp=N,6µm,0.2s						
BANI	**BANI**	1.38	262		Pn	10 27 50.1	+0.1
BANI	**BANI**	1.38	262	⇓*e*Pg	Pn	10 27 50.1	+0.1
BANI				⇑*e*Sg	Sn	10 28 11.5	+2.2
BANI				IAML		10 28 17.8	
	comp=N,2µm,0.2s						
IDE	**Isla Desecheo**	1.39	98		Pn	10 27 49.6	-0.5
IDE					Sn	10 28 09.8	+0.4
IDE	**Isla Desecheo**	1.39	98	⇓*e*P	Pn	10 27 49.6	-0.5
IDE	**Isla Desecheo**	1.39	98	*e*S	Sn	10 28 09.8	+0.4
CADR	**Cabrera**	1.44	318	⇑*e*Pg	Pn	10 27 49.8	-0.8
CADR				⇓*e*Sg	Sn	10 28 10.5	+0.2
CADR				IAML		10 28 11.9	
	comp=N,2µm,0.3s						
ABDR	**Alto Bandera**	1.63	278	⇑*e*Pg	Pn	10 27 53.3	0.0
ABDR				⇑*e*Sg	Sn	10 28 16.6	+1.6
ABDR				IAML		10 28 20.2	
	comp=N,796nm,0.2s						
AGPR	**Aguadilla, PR**	1.73	94		Pn	10 27 56.1	+2.0
AGPR					Sn	10 28 19.4	+2.8
AGPR	**Aguadilla, PR**	1.73	94	IAML		10 28 23.7	
	comp=E,882nm,0.3s						
AGPR				IAML		10 28 23.9	
	comp=N,792nm,0.4s						
AGPR	**Aguadilla, PR**	1.73	94	⇑*e*P	Pn	10 27 56.1	+2.0
AGPR	**Aguadilla, PR**	1.73	94	*e*S	Sn	10 28 19.4	+2.8
PRSN	**Puerto Rico Se**	1.73	102		Pn	10 27 55.6	+1.4
PRSN					Sn	10 28 19.4	+2.7
PRSN	**Puerto Rico Se**	1.73	102	IAML		10 28 24.9	
	comp=N,1µm,0.3s						
PRSN	**Puerto Rico Se**	1.73	102	⇑*e*P	Pn	10 27 55.6	+1.4
PRSN	**Puerto Rico Se**	1.73	102	*e*S	Sn	10 28 19.4	+2.7
LSP	**Las Mesas**	1.79	103		Pn	10 27 56.1	+1.1
LSP					Sn	10 28 18.8	+0.6
LSP	**Las Mesas**	1.79	103	⇓*e*P	Pn	10 27 56.1	+1.1
LSP	**Las Mesas**	1.79	103	*e*S	Sn	10 28 18.8	+0.6
CRPR	**Cabo Rojo, PR**	1.82	108		Pn	10 27 55.1	-0.2
CRPR					Sn	10 28 19.6	+0.9
CRPR	**Cabo Rojo, PR**	1.82	108	⇑*e*P	Pn	10 27 55.1	-0.2
CRPR	**Cabo Rojo, PR**	1.82	108	*e*S	Sn	10 28 19.6	+0.9
MLPR	**Magueyes Islan**	1.89	109	⇑*i*P	Pn	10 27 55.8	-0.5
MLPR	**Magueyes Islan**	1.89	109	*e*S	Sn	10 28 20.1	-0.2
SC01	**Santiago de lo**	1.90	296		Pn	10 27 57.4	+1.1
SC01					Sn	10 28 23.1	+2.7
SC01	**Santiago de lo**	1.90	296	IAML		10 28 29.0	
	comp=N,1µm,0.4s						
SC01	**Santiago de lo**	1.90	296	⇑*e*P	Pn	10 27 57.4	+1.1
SC01	**Santiago de lo**	1.90	296	*e*S	Sn	10 28 23.1	+2.7
SC01	**Santiago de lo**	1.90	296	⇑*e*Pg	Pn	10 27 57.5	+1.1
SC01				⇓*e*Sg	Sn	10 28 22.7	+2.3
SC01				IAML		10 28 28.9	
	comp=N,974nm,0.3s						
GBPR	**Guanica, Bosqu**	2.04	107		Pn	10 27 58.1	0.0
GBPR	**Guanica, Bosqu**	2.04	107	⇑*e*P	Pn	10 27 58.1	0.0
AOPR	**Arecibo Observ**	2.08	96		Pn	10 28 00.2	+1.6
AOPR					Sn	10 28 26.7	+2.2
AOPR	**Arecibo Observ**	2.08	96	IAML		10 28 30.5	
	comp=N,935nm,0.4s						
AOPR	**Arecibo Observ**	2.08	96	⇑*e*P	Pn	10 28 00.2	+1.6
AOPR	**Arecibo Observ**	2.08	96	*e*P	Pn	10 27 58.7	+0.1
AOPR				*e*S	Sn	10 28 26.9	+2.3
UUPR	**Utuado, UPR, P**	2.12	99		Pn	10 28 01.0	+1.8
UUPR					Sn	10 28 26.9	+1.4
UUPR	**Utuado, UPR, P**	2.12	99	⇓*e*P	Pn	10 28 01.0	+1.8
UUPR	**Utuado, UPR, P**	2.12	99	*e*S	Sn	10 28 26.9	+1.4
OBIP	**Obispado Ponce**	2.27	104		Pn	10 28 01.2	+0.1
OBIP					Sn	10 28 30.5	+1.5
OBIP	**Obispado Ponce**	2.27	104	⇓*e*P	Pn	10 28 01.2	+0.1
OBIP	**Obispado Ponce**	2.27	104	*e*S	Sn	10 28 30.5	+1.5
SDDR	**Presa de Saban**	2.27	280		Pn	10 28 01.8	+0.7
SDDR	**Presa de Saban**	2.27	280	IAML		10 28 35.7	
	comp=N,449nm,1.0s						
SDDR				IAML		10 28 37.0	
	comp=N,380nm,0.6s						
SDDR	**Presa de Saban**	2.27	280	*e*P	Pn	10 28 01.8	+0.7
SDDR				*e*S	Sn	10 28 30.3	+1.2
SDDR				IAML		10 28 36.4	
	comp=N,408nm,0.6s						
SDDR				IAML		10 28 37.2	
	comp=N,347nm,0.3s						
SDDR	**Presa de Saban**	2.27	280	⇓*e*P	Pn	10 28 01.8	+0.7
SDDR	**Presa de Saban**	2.27	280	*e*S	Sn	10 28 31.7	+2.7
SDDR	**Presa de Saban**	2.27	280	⇑*e*Pg	Pn	10 28 02.0	+0.8
SDDR				⇑*e*Sg	Sn	10 28 30.0	+0.9
SDDR				IAML		10 28 35.2	
	comp=N,414nm,1.6s						
EMPR	**Esperanza - Ma**	2.28	93		Pn	10 28 01.4	+0.3
EMPR					Sn	10 28 31.9	+2.9
EMPR	**Esperanza - Ma**	2.28	93	IAML		10 28 37.1	
	comp=N,464nm,0.3s						
EMPR	**Esperanza - Ma**	2.28	93	⇑*e*P	Pn	10 28 01.4	+0.3
EMPR	**Esperanza - Ma**	2.28	93	*e*S	Sn	10 28 31.9	+2.9
CELP	**Cerrillos**	2.29	103		Pn	10 28 01.2	0.0
CELP					Sn	10 28 30.4	+1.1
CELP	**Cerrillos**	2.29	103	IAML		10 28 35.5	
	comp=N,277nm,0.3s						
CELP				IAML		10 28 36.6	
	comp=E,218nm,0.3s						
CELP	**Cerrillos**	2.29	103	⇑*e*P	Pn	10 28 01.2	0.0
CELP	**Cerrillos**	2.29	103	*e*S	Sn	10 28 30.4	+1.1
ECPR	**Experimental S**	2.45	96	⇓*e*P	Pn	10 28 03.3	-0.1
ECPR	**Experimental S**	2.45	96	*e*S	Sn	10 28 35.0	+1.9
SJG	**San Juan**	2.68	100		Pn	10 28 05.5	-0.9
SJG	**San Juan**	2.68	100	IAML		10 28 43.4	
	comp=E,258nm,0.4s						
SJG				IAML		10 28 44.3	
	comp=E,234nm,0.5s						
SJG	**San Juan**	2.68	100	⇓*e*P	Pn	10 28 05.5	-0.9
SJG	**San Juan**	2.68	100	*e*S	Sn	10 28 39.0	+0.6
SJG	**San Juan**	2.68	100	*e*P	Pn	10 28 04.1	-2.3
SJG				*e*S	Sn	10 28 38.7	+0.2
GCPR	**Guaynabo City**	2.71	96		Pn	10 28 07.2	+0.4
GCPR					Sn	10 28 39.5	+0.2
GCPR	**Guaynabo City**	2.71	96	⇓*e*P	Pn	10 28 07.2	+0.4
GCPR	**Guaynabo City**	2.71	96	*e*S	Sn	10 28 39.5	+0.2
PDPR	**Patillas Dam,**	2.82	101		Pn	10 28 07.8	-0.4
PDPR				IAML		10 28 49.0	
	comp=E,170nm,0.1s						
PDPR				IAML		10 28 50.0	
	comp=N,168nm,0.2s						
PDPR	**Patillas Dam,**	2.82	101	⇑*e*P	Pn	10 28 08.5	+0.3
PDPR	**Patillas Dam,**	2.82	101	*e*S	Sn	10 28 43.1	+1.4
HUMP	**Col San Antoni**	2.96	98		Pn	10 28 10.4	+0.4
HUMP					Sn	10 28 45.3	+0.3
HUMP	**Col San Antoni**	2.96	98	IAML		10 28 49.7	
	comp=N,214nm,0.3s						
HUMP				IAML		10 28 51.5	
	comp=E,316nm,0.2s						
HUMP	**Col San Antoni**	2.96	98	⇓*e*P	Pn	10 28 10.4	+0.4
HUMP	**Col San Antoni**	2.96	98	*e*S	Sn	10 28 45.3	+0.3
PAPH	**Port-au-Prince**	3.20	269	*e*P	Pn	10 28 13.5	+0.1
GRTK	**Grand Turk**	3.57	325	Pn	Pn	10 28 16.4	-1.8
GRTK	**Grand Turk**	3.57	325	*e*P	Pn	10 28 16.3	-1.9
GRTK				*e*S	Sn	10 28 55.7	-4.0
GRTK				IAML		10 28 57.8	
	comp=E,714nm,0.3s						
GRTK				IAML		10 29 00.2	
	comp=E,686nm,0.1s						
MASC	**Masc**	5.25	288	*e*P	Pn	10 28 36.7	-4.2
MASC				*e*S	Sn	10 29 32.7	-7.5
MASC				IAML		10 29 40.7	
	comp=E,16nm,0.0s						
MASC				IAML		10 29 41.4	
	comp=N,16nm,0.1s						
QMBU	**Quimbuelo**	5.78	287	*e*P	Pn	10 28 43.6	-4.5
QMBU				*e*S	Sn	10 29 43.2	-10
QMBU				IAML		10 29 47.9	
	comp=E,35nm,0.1s						
QMBU				IAML		10 29 49.6	
	comp=N,27nm,0.2s						
GTBY	**Guantanamo Bay**	5.99	284	*e*S	Sn	10 29 50.0	-8.2
MBFL	**Flemmings, Mon**	6.66	105	*e*P	Pn	10 29 00.1	+0.1
MLYT	**Lee's Yard**	6.69	105	*e*P	Pn	10 29 00.5	+0.1
PINC	**Pinares de May**	6.74	287	*e*P	Pn	10 28 56.4	-4.7
PINC				*e*S	Sn	10 30 06.9	-10
ANWB	**Willy Bob**	6.85	97	*e*P	Pn	10 29 00.1	-2.5
ANWB	**Willy Bob**	6.85	97	*e*S	Sn	10 30 11.0	-8.1
ANBD	**Bethesda, Anti**	6.99	102	*e*P	Pn	10 29 02.3	-2.2
ANBD	**Bethesda, Anti**	6.99	102	*e*S	Sn	10 30 16.4	-6.1
DSLB	**Salisbury**	7.83	112	*e*P	Pn	10 29 16.4	+0.4
BAUV	**El Baul**	9.63	175		Pn	10 29 39.3	-1.1
RUSC	**La Rusia**	13.26	198		Pn	10 30 28.6	-0.6

IDC 06 10:44:30.1±2.6,39°.61N×96°.13E,h0^{km},mb3.6/2,mbtmp3.5/5,ML3.2/3,MS2.6/1,Error ellipse: s-maj=47.4km s-min=23.0km az=15.0,Gansu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	11.07	39	Pn	Pn	10 47 10.8	+1.1
	0.3nm,0.3s,baz=222,slow=14,SNR=2.5						
SONM				Lg	Lg	10 50 20.2	
	0.7nm,0.3s,baz=223,slow=30,SNR=3.5						
	0.9nm,0.3s						
MKAR	**Makanchi Array**	12.38	310	Pn	Pn	10 47 24.8	-2.7
	0.2nm,0.3s,baz=120,slow=14,SNR=5.2						
MKAR				Sn	Sn	10 49 35.1	-11
	0.3nm,0.3s,baz=121,slow=26,SNR=5.5						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	16.55	317	Pn	Pn	10 48 20.5	-2.9
	baz=125,slow=11,SNR=4.3						
	0.3nm,0.4s						
CMAR	**Chiang Mai Arr**	21.22	173	LR	LR	10 58 01.6	
	comp=Z,18nm,20.4s,baz=210,slow=38						
BVAR	**Borovoye Array**	22.12	316	P	P	10 49 26.1	-0.8
	1.0nm,0.5s,baz=119,slow=14,SNR=4.7						
	1.0nm,0.5s						
KSRS	**Korea Array**	24.90	85	P	P	10 49 54.2	-0.3
	1.7nm,0.8s,baz=273,slow=9.5,SNR=7.0						
	1.7nm,0.8s						

NEIC 06 11:25:35.2±1.6,32°.80N±0°.03×118°.46W±0°.03,h12^{km}±9^{km},Error ellipse: s-maj=5.9km s-min=2.8km az=215.0

PAS 06 11:25:36.3±2.0,32°.84N±0°.03×118°.48W±0°.03,h8^{km}±5^{km},ML3.5/144,ML3.1/40(NEIC),Error ellipse: s-maj=5.9km s-min=2.1km az=220.0,Off coast of California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CIAC	**Catalina I. Ai**	0.56	5		Pg	11 25 46.7	-0.5
SBI	**Santa Barbara**	0.79	324		Pg	11 25 51.1	-0.4
SBI					Sg	11 26 02.0	+0.2
FMP	**Fort Macarthur**	0.88	10		Pg	11 25 52.7	-0.6
FMP					Sg	11 26 03.8	-1.0
RPV	**Rancho Palos V**	0.90	4		Pg	11 25 53.2	-0.4
RPV					Sg	11 26 05.7	+0.2
SANC	**Santa Ana**	0.99	30		Sg	11 26 08.3	-0.1
BREC	**Barre Substati**	1.05	23		Sg	11 26 10.2	0.0
GORC	**Green Oak Ranc**	1.09	73		Pg	11 25 55.5	-1.8
GORC					Sg	11 26 10.3	-1.1
WTT2	**Watts, South G**	1.12	9		Sg	11 26 11.8	-0.7
SDMC	**San Diego Miss**	1.13	92		Pg	11 25 56.8	-1.2
SDMC					Sg	11 26 10.7	-1.9
LCGC	**La Cienega, Cu**	1.16	4		Sg	11 26 12.7	-1.0
ELS	**Elsinore Mount**	1.19	47		Pg	11 25 57.2	-2.0
ELS	**Elsinore Mount**	1.19	47		Sg	11 26 13.1	-1.6
TJX	**Tijuana**	1.24	105		Pn	11 25 59.0	-1.1
OLP	**Otay Lakes Par**	1.32	100		Pn	11 25 60.0	-1.2
PASC	**Pasadena Art C**	1.35	10		Pn	11 25 59.6	-1.9
PASC				IAML		11 26 16.2	
	comp=N,199nm,0.5s						
PASC				IAML		11 26 25.8	
	comp=E,229nm,0.9s						
CBX	**Cerro Bola**	1.62	108	IAML		11 26 26.3	
	comp=N,443nm,0.5s						
JNH	**Juniper Hills**	1.66	15		Pn	11 26 04.7	-1.3
PFO	**Pinyon Flats O**	1.86	65		Pn	11 26 07.7	-0.9
PFO				IAML		11 26 36.7	
	comp=N,102nm,0.6s						
YUH	**Yuha Desert**	2.16	94		Pn	11 26 12.4	-0.3
YUH				IAML		11 26 44.6	
	comp=E,110nm,0.4s						
YUH				IAML		11 26 48.5	
	comp=N,71nm,1.0s						
BCW	**Bitter Crk WRg**	2.24	340		Pn	11 26 12.9	-0.9
BCW				IAML		11 27 01.1	
	comp=N,143nm,1.2s						
BCW				IAML		11 27 02.9	
	comp=E,157nm,0.8s						
FIGC	**Figueroa Mtn.**	2.27	327		Pn	11 26 14.2	0.0
ESJX	**Sierra Juarez**	2.29	111		Pn	11 26 13.6	-1.1
ESJX				IAML		11 26 51.6	
	comp=E,69nm,0.2s						
CCAC	**Calif City Air**	2.34	9		Pn	11 26 14.8	-0.4
VTX	**Valle De La Tr**	2.70	122		Pn	11 26 20.0	-0.2
ISA	**Isabella, Lake**	2.82	0		Pn	11 26 21.6	-0.2
GSC	**Goldstone, Bar**	2.82	29		Pn	11 26 21.9	+0.1
GSC				IAML		11 27 11.9	
	comp=N,106nm,0.8s						
DPD	**Davis Peak**	3.06	322		Pn	11 26 28.0	+2.9
GLA	**Glamis**	3.08	85		Pn	11 26 24.6	-0.7
GLA				IAML		11 27 17.1	
	comp=E,68nm,0.7s						
GLA				IAML		11 27 27.9	
	comp=N,40nm,0.6s						
GWY	**Greenwater Val**	3.66	24		Pn	11 26 33.5	+0.1
GWY				IAML		11 27 36.6	
	comp=E,58nm,0.7s						
GWY				IAML		11 27 42.8	
	comp=N,41nm,0.6s						
113A	**Mohawk Valley,**	3.97	90		Pn	11 26 36.4	-1.1
V12A	**Nelson**	4.16	45		Pn	11 26 41.3	+1.0
V12A				IAML		11 27 53.6	
	comp=E,20nm,0.9s						
V12A				IAML		11 27 55.8	
	comp=N,13nm,0.5s						
W13A	**Hualapai Mount**	4.43	58		Pn	11 26 44.2	+0.2
W13A				IAML		11 27 56.0	
	comp=N,16nm,1.2s						
TPNV	**Topopah Spring**	4.49	23		Pn	11 26 45.8	+0.9
TPNV				IAML		11 28 00.6	
	comp=N,26nm,0.5s						
TPNV				IAML		11 28 01.5	
	comp=N,27nm,0.8s						
PRN	**Pahroc Range**	5.35	31		Pn	11 26 56.2	-0.4
X16A	**Lo Mia Camp, P**	6.08	73		Pn	11 27 07.8	+1.1
KNB	**Kanab**	6.24	47		Pn	11 27 10.1	+1.2

NOU 06 11:26:42.8,40°.86S×175°.94E,h38^{km},MLv3.5/11,North Island, New Zealand

WEL 06 11:26:42.7±0.5,41°S±3°×17°6E±°,h20^{km}±4^{km},M2.8/24,ML3.1/14,MLv2.8/24,Error ellipse: s-maj=4.1km s-min=3.2km az=157.0,confirmed

ISC 06 11:26:43.5±0.9,40°.73S±0°.03×175°.77E±0°.03,h29^{km}±6^{km},n53,σ0^{s}92/60,North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIWZ	**Tintock**	0.10	120	P	Pb	11 26 48.9	+0.2
TIWZ				S	Sb	11 26 53.4	+1.0
MRZ	**Mangatainoka R**	0.16	294	P	Pb	11 26 48.0	-1.1
MRZ				S	Sb	11 26 51.8	-1.2
TRMS	**Tiraumea**	0.18	72	P	Pn	11 26 49.4	-0.8
TRMS				S	Sb	11 26 54.2	+0.9
PRWZ	**Pori Road**	0.23	42	P	Pb	11 26 49.5	-0.4
PRWZ				S	Sb	11 26 54.6	+0.3
HOWZ	**Holdsworth Sta**	0.26	228	P	Pb	11 26 50.1	-0.3
HOWZ				S	Sb	11 26 55.1	+0.1
POWZ	**Post Office Ro**	0.33	360	P	Pb	11 26 49.9	-1.4
POWZ				S	Sb	11 26 55.2	-1.4
BFZ	**Birch Farm**	0.36	83	P	Pn	11 26 52.0	-0.8
BFZ	**Birch Farm**	0.36	83	P	Pn	11 26 52.2	-0.6
BFZ				S	Sn	11 26 59.4	+0.4
CPWZ	**Castlepoint**	0.38	119	P	Pn	11 26 53.5	+0.5
CPFS	**Castlepoint Fi**	0.38	117	P	Pn	11 26 54.0	+1.0
TMWZ	**Te Maipa**	0.39	167	P	Pn	11 26 53.2	-0.1
OGWZ	**Otaki Gorge**	0.47	259	P	Pb	11 26 52.5	-0.7
MTW	**Mount Morrison**	0.48	205	P	Pn	11 26 53.8	-0.6
DVHZ	**Dannevirke**	0.52	35	P	Pb	11 26 53.4	-0.8
ANWZ	**Angora Road**	0.60	64	P	Pn	11 26 55.6	-0.4
OHWZ	**Ohakea**	0.62	326	P	Pb	11 26 55.0	-0.9
CAW	**Cannon Point**	0.66	234	P	Pb	11 26 56.1	-0.4
KIW	**Kapiti Island**	0.67	258	P	Pb	11 26 55.9	-0.7
TRWZ	**Traveller**	0.67	185	P	Pn	11 26 57.2	+0.1
TSZ	**Takapari Road**	0.68	12	P	Pb	11 26 55.4	-1.5
PAWZ	**Paruwai Farm**	0.70	202	P	Pn	11 26 57.0	-0.6
MSWZ	**Moikau Station**	0.79	210	P	Pn	11 26 57.9	-0.8
WPHZ	**Waipukurau**	0.84	38	P	Pb	11 26 58.9	-0.6
PNHZ	**Pukenui**	0.88	22	P	Pn	11 26 58.9	-1.0
PLWZ	**Palliser**	0.93	205	P	Pn	11 26 59.7	-0.9
WEL	**Wellington**	0.94	233	P	Pn	11 27 00.1	-0.6
BHW	**Baring Head**	0.96	225	P	Pn	11 27 00.2	-0.8
SNZO	**South Karori**	0.99	234	P	Pn	11 27 00.5	-0.9
SNZO	**South Karori**	0.99	234	S	Sb	11 27 14.4	-0.4
PXZ	**Pawanui**	1.08	51	P	Pn	11 27 01.8	-0.9
WAZ	**Wanganui**	1.14	328	P	Pn	11 27 03.8	+0.3
TCW	**Tory Channel**	1.23	246	P	Pn	11 27 03.8	-0.9
KAHZ	**Kahuranaki**	1.26	43	P	Pn	11 27 04.2	-1.0
MTVZ	**Mangateitei**	1.36	350	P	Pn	11 27 06.9	+0.3
KWHZ	**Kaweka Forest**	1.39	21	P	Pn	11 27 06.1	-0.9
WNVZ	**Wahianoa**	1.40	355	P	Pn	11 27 07.2	-0.1
DUWZ	**D'Urville Isla**	1.41	266	P	Pn	11 27 07.2	+0.1
TRVZ	**Turoa**	1.44	353	P	Pn	11 27 07.9	+0.2
WHVZ	**Whangaehu Hut**	1.45	354	P	Pn	11 27 08.0	+0.1
MAVZ	**Matarangi**	1.47	354	P	Pn	11 27 08.4	+0.2
PKVZ	**Pokaka**	1.47	347	P	Pn	11 27 08.2	+0.1
FWVZ	**Far West T-bar**	1.48	353	P	Pn	11 27 08.3	0.0
COVZ	**Chateau Observ**	1.53	353	P	Pn	11 27 09.3	+0.4
TUWZ	**Tuamarina**	1.55	242	P	Pn	11 27 08.3	-0.8
NGZ	**Ngauruhoe**	1.55	355	P	Pn	11 27 09.5	+0.2
NNVZ	**North Ngauruho**	1.60	356	P	Pn	11 27 10.1	+0.2
BKZ	**Black Stump Fm**	1.65	20	P	Pn	11 27 09.3	-1.3
KHEZ	**Kahui Hut**	1.96	316	P	Pn	11 27 16.5	+1.6
HIZ	**Hauiti**	2.32	342	P	Pn	11 27 20.4	+0.7
HIZ	**Hauiti**	2.32	342	S	Sn	11 27 50.4	+3.2
KHZ	**Kahutara**	2.38	224	P	Pn	11 27 18.9	-1.6
QRZ	**Quartz Range**	2.46	267	P	Pn	11 27 23.4	+1.7
MXZ	**Matakaoa Point**	3.72	33	P	Pn	11 27 39.9	+0.9

IDC 06 12:02:17.4±1.4,4°.26N×97°.43E,h146^{km}±13^{km},mb3.5/13,mbtmp3.9/14,Error ellipse: s-maj=39.8km s-min=14.1km az=54.0

NEIC 06 12:02:20.0±1.9,4°.23N±0°.06×97°.60E±0°.08,h165^{km}±8^{km},mb4.3/5,Error ellipse: s-maj=11.8km s-min=7.9km az=66.0

DJA 06 12:02:20.0±0.5,4°N±3°×9°8E±°,h152^{km}±5^{km},M3.9/9,MLv3.9/9

ISC 06 12:02:19.2±0.7,4°.22N±0°.04×97°.60E±0°.05,h164^{km}±6^{km},n46,σ0^{s}96/45,mb3.7/17,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLSI	**Meulaboh, Aceh**	1.19	272	P	Pn	12 02 47.2	+0.3
LHMI	**Lhok Sumawe**	1.19	327		Pn	12 02 47.8	+0.9
LHMI				Sn	Sn	12 03 08.4	+0.1
LHMI	**Lhok Sumawe**	1.19	327	P	Pn	12 02 47.2	+0.3
LHMI				S	Sn	12 03 07.9	-0.4
TSI	**Tuntungan**	1.20	127	P	Pn	12 02 45.8	-1.2
TSI				S	Sn	12 03 08.7	+0.4
PSI	**Prapat**	1.93	137	P	Pn	12 02 56.2	+1.6
	9.1nm,0.4s,baz=286,slow=14,SNR=14						
PSI				S	Sn	12 03 22.7	+0.8
	47nm,0.5s,baz=229,slow=23,SNR=27						
RPSI	**Rantau Prapat**	2.01	139		Pn	12 02 56.2	+0.9
RPSI				Sn	Sn	12 03 23.2	-0.1
BSI	**Banda Aceh**	2.62	299	P	Pn	12 03 03.4	+0.9
BSI				S	Sn	12 03 36.1	+0.1
GSI	**Gunungsitoli**	2.90	180		Pn	12 03 05.5	-0.4
GSI				Sn	Sn	12 03 40.8	-1.4
GSI	**Gunungsitoli**	2.90	180	P	Pn	12 03 05.2	-0.7
GSI				S	Sn	12 03 41.1	-1.1
KULM	**Kulim**	3.22	71		Pn	12 03 10.5	+0.6
KULM				Sn	Sn	12 03 46.0	-3.3
MNSI	**Mandailing Nat**	3.94	150	P	Pn	12 03 19.6	+0.6
CMBY	**CAMPBELL BAY**	4.59	307	*e*P	Pn	12 03 45.9	+18
CMBY				IAmb	IAmb	12 03 47.7	
	comp=Z,101nm,1.2s						
CMBY				IAML		12 04 35.3	
	comp=E,488nm,0.3s						
CMBY				*e*S	Sn	12 04 35.6	+15
CMBY				IAML		12 04 37.6	
	comp=N,367nm,0.4s						
SRIT	**Nakonsritamara**	4.78	25		Pn	12 03 30.8	+0.8
BKNI	**Bangkinang**	5.18	138	Pn	Pn	12 03 36.6	+1.4
CMAR	**Chiang Mai Arr**	14.21	5	P	P	12 05 36.0	+0.2
	comp=N,2.6nm,0.6s,baz=194,slow=13,SNR=12						
MDRS	**Chennai**	19.26	298	*e*P	Pn	12 07 00.9	+27
MDRS				IAmb	IAmb	12 07 18.7	
	comp=Z,23nm,1.2s						
MDRS				*e*S	Sn	12 10 12.4	+0.4
RAGD	**RAYAGADA**	20.34	318	*e*P	Pn	12 07 14.0	+27
RAGD				IAmb	IAmb	12 07 14.2	
	comp=Z,6.8nm,0.8s						
RAGD				*e*S	Sn	12 10 37.6	0.0
IMP	**Imphal**	20.79	351	*e*P	Pn	12 07 21.7	+29
IMP				IAmb	IAmb	12 07 35.4	
	comp=Z,6.2nm,0.4s						
IMP				*e*S	Sn	12 10 48.5	0.0
TRD	**Trivandrum**	20.95	283	*e*P	Pn	12 07 21.1	+27
TRD				IAmb	IAmb	12 07 55.5	
	comp=Z,30nm,1.4s						
TRD				*e*S	Sn	12 10 51.1	-1.1
KOHI	**KOHIMA**	21.64	351	*e*P	P	12 07 32.7	+36
KOHI				IAmb	IAmb	12 07 36.4	
	comp=Z,3.4nm,0.6s						
KOHI				*e*S	Sn	12 11 09.4	+1.2
H08S2	**Diego Garcia H**	27.68	245	T	T	12 34 54.4	
	baz=64						
H08S3	**Diego Garcia H**	27.68	245	T	T	12 34 54.4	
	baz=64						

H08S1	**Diego Carcia H**	**27.70**	**245**	T	T	12 35 06.4	
	baz=64						
FITZ	**Fitzroy Crossi**	**35.45**	**130**	P	**P**	**12 08 59.7**	**-0.3**
FITZ				IAmb	IAmb	12 09 42.7	
	comp=Z,4.8nm,1.4s						
KSRS	**Korea Array**	**43.17**	**36**	P	**P**	**12 10 03.9**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=228,slow=10,SNR=2.1						
	comp=Z,0.5nm,0.5s						
WB0	**Warramunga Arr**	**43.32**	**125**	P	**P**	**12 10 05.1**	**-0.2**
WB0				IAmb	IAmb	12 10 11.9	
	comp=Z,14nm,1.3s						
WRA	**Warramunga Arr**	**43.36**	**125**	P	**P**	**12 10 06.6**	**+1.0**
	comp=Z,1.0nm,0.5s,baz=301,slow=9.2,SNR=16						
WRA				PcP	**PcP**	**12 11 52.7**	**+1.3**
	comp=Z,0.2nm,0.4s,baz=311,slow=3.1,SNR=1.9						
	comp=Z,1.0nm,0.5s						
WR8	**Warramunga Arr**	**43.50**	**125**	P	**P**	**12 10 07.9**	**+1.2**
WR8				IAmb	IAmb	12 10 51.0	
	comp=Z,16nm,1.5s						
SONM	**Songino Array**	**44.10**	**9**	P	**P**	**12 10 11.4**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=198,slow=7.8,SNR=3.7						
	comp=Z,0.7nm,0.4s						
MKAR	**Makanchi Array**	**44.44**	**345**	P	**P**	**12 10 13.4**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=168,slow=7.8,SNR=2.8						
	comp=Z,0.4nm,0.5s						
AS31	**Alice Springs**	**44.95**	**130**	P	**P**	**12 10 19.2**	**+0.9**
ASAR	**Alice Springs**	**44.95**	**130**	P	**P**	**12 10 18.9**	**+0.7**
ASAR	**Alice Springs**	**44.95**	**130**	P	**P**	**12 10 19.6**	**+1.3**
	comp=Z,1.8nm,0.7s,baz=301,slow=7.4,SNR=36						
	comp=Z,1.8nm,0.7s						
KURBB	**Kurchatov Arra**	**48.95**	**344**	P	**P**	**12 10 47.9**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=159,slow=6.9,SNR=1.9						
	comp=Z,0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**50.66**	**350**	P	**P**	**12 11 01.2**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=168,slow=6.5,SNR=4.4						
	comp=Z,0.8nm,0.3s						
BBOO	**Buckleboo**	**51.81**	**138**	P	**P**	**12 11 11.1**	**+0.6**
BVAR	**Borovoye Array**	**53.56**	**340**	P	**P**	**12 11 21.7**	**-1.4**
	comp=Z,0.6nm,0.4s,baz=131,slow=8.2,SNR=3.6						
	comp=Z,0.6nm,0.4s						
H04N2	**CROZET ISLANDS**	**64.49**	**214**	T	T	13 20 59.2	
	baz=52,slow=76,SNR=7.0						
H04N1	**CROZET ISLANDS**	**64.50**	**214**	T	T	13 20 59.8	
	baz=52,slow=76,SNR=6.8						
H04N3	**CROZET ISLANDS**	**64.51**	**214**	T	T	13 20 59.4	
	baz=52,slow=76,SNR=8.9						
BRTR	**Keskin Array B**	**67.41**	**311**	P	**P**	**12 12 56.5**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=131,slow=5.3,SNR=5.5						
	comp=Z,0.5nm,0.6s						
FINES	**FINESS Array B**	**77.53**	**332**	P	**P**	**12 13 56.2**	**-0.4**
FINES	**FINESS Array B**	**77.53**	**332**	P	**P**	**12 13 56.0**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=90,slow=5.7,SNR=7.2						
	comp=Z,1.0nm,0.6s						
ARCES	**ARCESS Array B**	**79.85**	**340**	P	**P**	**12 14 09.0**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=106,slow=4.3,SNR=4.8						
	comp=Z,0.8nm,0.6s						
HFS	**Hagfors**	**83.32**	**330**	P	**P**	**12 14 27.7**	**+0.2**
	comp=Z,3.1nm,0.9s,baz=127,slow=3.8,SNR=2.9						
	comp=Z,3.1nm,0.9s						
SPITS	**Spitsbergen Ar**	**84.09**	**348**	P	**P**	**12 14 30.2**	**-1.0**
	comp=Z,1.6nm,0.7s,baz=86,slow=8.8,SNR=1.1						
	comp=Z,1.6nm,0.7s						

AEIC ***06*** *12:05:52.8±2.5, 51°.66N±0°.08×174°.1W±0°.1, h41^{km}±9^{km}, Error ellipse: s-maj=12.5km s-min=7.4km az=149.0*

NEIC 06 12:05:50.8±1.2**, 51°.49N**±0°.08×**173°.83W**±0°.06**, h41**^{km}±27^{km}**, ML3.0**/8**, ML2.5**(AEIC)**, Error ellipse: s-maj=12.5km s-min=5.6km az=174.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATKA	**Atka Island**	**0.75**	**342**		Pn	12 06 04.2	-0.6
ATKA	**Atka Island**	**0.75**	**342**		Sn	12 06 14.0	-0.9
GSTR	**Great Sitkin T**	**1.51**	**294**		Pn	12 06 15.3	0.0
GSTR					Sn	12 06 33.0	-0.8
GSCK	**Great Sitkin C**	**1.54**	**291**		Pn	12 06 16.0	+0.3
GSTD	**Great Sitkin T**	**1.54**	**292**		Pn	12 06 15.9	+0.1
GSTD					Sn	12 06 33.2	-1.5
ADAG	**Mount Adagdak**	**1.79**	**287**		Pn	12 06 19.8	+0.6
ADAG					Sn	12 06 38.9	-1.7
ADK	**Adak**	**1.82**	**284**		Pn	12 06 19.4	-0.1
ADK				IAML		12 06 47.5	
	137nm,0.4s						
ADK				IAML		12 06 51.7	
	153nm,0.3s						
ADK	**Adak**	**1.82**	**284**		Sn	12 06 40.5	-0.9
KIWB	**Kanaga Island**	**2.10**	**281**		Pn	12 06 23.4	+0.1
TAFP	**Tanaga Falls P**	**2.62**	**281**		Pn	12 06 30.6	+0.1
TAFP					Sn	12 06 59.8	-1.3
TASE	**Tanaga Southea**	**2.64**	**279**		Pn	12 06 31.1	+0.2
TASE					Sn	12 06 59.8	-1.9
NIKH	**Nikolski High**	**3.40**	**62**	Pn	Pn	12 06 40.4	-0.8
UNV	**Unalaska Valle**	**5.04**	**59**	Pn	Pn	12 07 04.8	+1.0
UNV				IAML		12 08 04.4	
	comp=N,8.9nm,1.3s						
UNV				IAML		12 08 07.4	
	comp=E,7.4nm,1.3s						
IL31		**19.26**	**36**	P	P	12 10 11.3	-0.1
RIDG	**Independent Ri**	**19.56**	**40**	P	P	12 10 14.7	-0.1
J25K	**Salcha River,**	**19.75**	**37**	P	P	12 10 16.5	-0.4
SCRK	**Sand Creek**	**20.01**	**40**	P	P	12 10 19.8	+0.1
I28M	**Miner Creek**	**22.19**	**38**	P	P	12 10 43.5	+0.3

CATAC ***06*** *12:45:19.9±0.4, 13°N±2°×8°9W±°, h29^{km}±3^{km}, M3.6/34, MLv3.6/34, Error ellipse: s-maj=4.9km s-min=2.0km az=32.0, confirmed*

SNET ***06*** *12:45:20.3±1.5, 12°.76N×88°.67W, h26^{km}, ML3.5*

ISC 06 12:45:19.2±1.5**, 12°.66N**±0°.05×**88°.72W**±0°.03**, h25**^{km}±13^{km}**, n89, σ0^{s}.62**/106**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALJI	**Alcalda de J**	**0.68**	**13**	P	**Pn**	**12 45 33.2**	**-0.1**
ALJI	**Alcalda de J**	**0.68**	**13**	S	**Sn**	**12 45 42.9**	**-0.1**
LCY	**Lacayo**	**0.86**	**29**	*e*P	**Pb**	**12 45 34.9**	**-0.7**
TECO	**Alcaldia de Te**	**0.87**	**356**	P	**Pb**	**12 45 35.5**	**-0.2**
TECO	**Alcaldia de Te**	**0.87**	**356**	S	**Sn**	**12 45 47.0**	**-0.8**
BLLM	**Bellamira**	**0.91**	**31**	*e*P	**Pn**	**12 45 36.3**	**-0.1**
COEG	**Centro de Oper**	**0.96**	**351**	*e*P	**Pb**	**12 45 37.3**	**0.0**
COEG				*e*S	**Sb**	**12 45 49.2**	**-0.5**
COEG	**Centro de Oper**	**0.96**	**351**	P	**Pb**	**12 45 37.3**	**0.0**
COEG	**Centro de Oper**	**0.96**	**351**	S	**Sb**	**12 45 48.9**	**-0.8**
PQSS	**Presa 15 de Se**	**0.97**	**9**	P	**Pb**	**12 45 37.5**	**+0.1**
PQSS	**Presa 15 de Se**	**0.97**	**9**	S	**Sn**	**12 45 49.9**	**-0.3**
CNRM	**Centro Naciona**	**0.97**	**34**	P	**Pb**	**12 45 37.6**	**+0.2**
CNRM	**Centro Naciona**	**0.97**	**34**	S	**Sn**	**12 45 50.0**	**-0.2**
UESV	**Universidad de**	**0.97**	**356**	P	**Pb**	**12 45 37.4**	**0.0**
UESV	**Universidad de**	**0.97**	**356**	S	**Sn**	**12 45 49.7**	**-0.7**
LALI	**Alcalda de L**	**1.01**	**325**	*e*P	**Pb**	**12 45 38.5**	**+0.5**
LALI	**Alcalda de L**	**1.01**	**325**	P	**Pn**	**12 45 38.2**	**+0.5**
LALI	**Alcalda de L**	**1.01**	**325**	S	**Sb**	**12 45 50.2**	**-0.6**
LFRS	**El Faro**	**1.01**	**341**	*e*P	**Pn**	**12 45 37.6**	**-0.3**
SCLA	**Alcaldia de Sa**	**1.03**	**360**	P	**Pb**	**12 45 38.8**	**+0.3**
SCLA	**Alcaldia de Sa**	**1.03**	**360**	S	**Sn**	**12 45 51.9**	**0.0**
LCND	**La Caada**	**1.03**	**52**	*e*P	**Pn**	**12 45 37.8**	**-0.4**
LCND				*e*S	**Sn**	**12 45 51.4**	**-0.5**
LCND	**La Caada**	**1.03**	**52**	P	**Pb**	**12 45 38.3**	**-0.2**
PANCS	**Alcalda de**	**1.04**	**335**	P	**Pn**	**12 45 38.1**	**-0.2**
PANCS	**Alcalda de**	**1.04**	**335**	S	**Sn**	**12 45 51.7**	**-0.5**
CNCH	**Conchagua**	**1.06**	**55**	*e*P	**Pb**	**12 45 38.7**	**-0.2**
CNCH				*e*P	**Pn**	**12 45 40.9**	**+2.3**
CNCH	**Conchagua**	**1.06**	**55**	P	**Pb**	**12 45 39.0**	**+0.1**
CNCH	**Conchagua**	**1.06**	**55**	S	**Sn**	**12 45 53.1**	**+0.4**
PAVA	**Las Pavas**	**1.06**	**349**	*e*P	**Pn**	**12 45 38.9**	**+0.2**
PAVA				*e*S	**Sn**	**12 45 52.1**	**-0.7**
PAVA	**Las Pavas**	**1.06**	**349**	P	**Pb**	**12 45 39.1**	**+0.1**
LOMA	**Loma Larga**	**1.07**	**336**	*e*P	**Pn**	**12 45 38.8**	**0.0**
LOMA				*e*S	**Sb**	**12 45 53.0**	**+0.2**
LOMA	**Loma Larga**	**1.07**	**336**	P	**Pb**	**12 45 39.3**	**+0.1**
LOMA	**Loma Larga**	**1.07**	**336**	S	**Sb**	**12 45 53.0**	**+0.2**
UDBS	**Universidad Do**	**1.13**	**338**	P	**Pn**	**12 45 39.6**	**+0.1**
UDBS	**Universidad Do**	**1.13**	**338**	S	**Sb**	**12 45 54.0**	**-0.3**
IGN	**Direccin Gen**	**1.13**	**337**	*e*S	**Sb**	**12 45 54.4**	**-0.1**
IGN	**Direccin Gen**	**1.13**	**337**	P	**Pn**	**12 45 39.7**	**+0.1**
IGN	**Direccin Gen**	**1.13**	**337**	S	**Sb**	**12 45 54.4**	**-0.1**
UEES	**Universidad Ev**	**1.16**	**334**	P	**Pn**	**12 45 40.1**	**+0.1**
UEES	**Universidad Ev**	**1.16**	**334**	S	**Sb**	**12 45 55.5**	**+0.1**
CSGN	**Cosiguina Volc**	**1.18**	**75**	P	**Pn**	**12 45 40.0**	**-0.2**
CSGN				S	**Sn**	**12 45 54.7**	**-0.8**
PMON	**Piamonte**	**1.19**	**331**	*e*P	**Pn**	**12 45 40.5**	**+0.1**
PMON	**Piamonte**	**1.19**	**331**	P	**Pn**	**12 45 40.5**	**+0.1**
PMON	**Piamonte**	**1.19**	**331**	S	**Sn**	**12 45 55.1**	**-0.8**
PIC2	**El Picacho**	**1.19**	**334**	*e*P	**Pn**	**12 45 41.1**	**+0.6**
BOQS	**Boqueron**	**1.20**	**333**	*e*P	**Pn**	**12 45 40.9**	**+0.3**
CAHU	**Cacacuatique**	**1.21**	**24**	*e*P	**Pb**	**12 45 40.9**	**-0.6**
JAYA	**Jayaque - finc**	**1.21**	**324**	*e*P	**Pn**	**12 45 40.6**	**-0.1**
JAYA				*e*S	**Sn**	**12 45 55.6**	**-0.9**
JAYA	**Jayaque - finc**	**1.21**	**324**	P	**Pn**	**12 45 40.6**	**-0.1**
POTN	**Potosi Cosigui**	**1.23**	**74**	P	**Pn**	**12 45 41.0**	**+0.2**
POTN				S	**Sn**	**12 45 55.9**	**-0.8**
CEVE	**Cerro Verde**	**1.45**	**323**	*e*P	**Pn**	**12 45 45.2**	**+1.1**
CEVE				*e*S	**Sb**	**12 46 03.4**	**-0.5**
NUBE	**Las Nubes**	**1.60**	**320**	*e*P	**Pn**	**12 45 46.3**	**+0.2**
NUBE				*e*S	**Sn**	**12 46 05.5**	**-0.7**
NUBE	**Las Nubes**	**1.60**	**320**	P	**Pn**	**12 45 46.4**	**+0.2**
NUBE	**Las Nubes**	**1.60**	**320**	S	**Sn**	**12 46 06.0**	**-0.2**
CRIN	**San Cristobal**	**1.63**	**89**	P	**Pn**	**12 45 47.4**	**+0.9**
CRIN	**San Cristobal**	**1.63**	**89**	S	**Sn**	**12 46 07.2**	**+0.5**
SLOZ	**Alcaldia de Sa**	**1.70**	**323**	P	**Pn**	**12 45 47.5**	**+0.1**
SLOZ	**Alcaldia de Sa**	**1.70**	**323**	S	**Sn**	**12 46 09.1**	**+0.6**
PKGN	**Cerro Pekin**	**1.70**	**90**	P	**Pn**	**12 45 47.6**	**+0.3**
PKGN				S	**Sn**	**12 46 07.8**	**-0.6**
FAME	**Alcaldia de Sa**	**1.72**	**313**	P	**Pn**	**12 45 48.1**	**+0.5**
CHOHN	**Orocuina**	**1.73**	**62**	P	**Pn**	**12 45 47.8**	**0.0**
INTHN	**La Esperanza I**	**1.75**	**20**	P	**Pn**	**12 45 48.6**	**+0.3**
INTHN	**La Esperanza I**	**1.75**	**20**	S	**Sb**	**12 46 13.9**	**+1.5**
QUEN	**Al S del Volca**	**1.83**	**92**	P	**Pn**	**12 45 49.8**	**+0.7**
QUEN				S	**Sn**	**12 46 11.4**	**-0.1**
MTO3	**Montecristo**	**1.83**	**340**	*e*P	**Pn**	**12 45 49.6**	**+0.3**
MTO3				*e*S	**Sn**	**12 46 12.0**	**+0.1**
MTO3	**Montecristo**	**1.83**	**340**	P	**Pn**	**12 45 50.0**	**+0.6**
MTO3	**Montecristo**	**1.83**	**340**	S	**Sn**	**12 46 12.8**	**+0.9**
HERN	**Volcan Telica**	**1.85**	**91**	P	**Pn**	**12 45 49.8**	**+0.3**
HERN	**Volcan Telica**	**1.85**	**91**	S	**Sn**	**12 46 11.4**	**-0.6**
HOYN	**Al Sur del Vol**	**1.85**	**92**	P	**Pn**	**12 45 49.8**	**+0.3**
HOYN				S	**Sn**	**12 46 11.8**	**-0.4**
POLN	**Al Sur del Vol**	**1.86**	**90**	P	**Pn**	**12 45 48.9**	**-0.7**
POLN				S	**Sn**	**12 46 11.3**	**-1.1**
ILCN	**San Idelfonso**	**1.98**	**92**	P	**Pn**	**12 45 52.1**	**+0.9**
TGUH	**Tegucigalpa,Un**	**1.98**	**45**	P	**Pn**	**12 45 51.9**	**+0.6**
TGUH				S	**Sn**	**12 46 15.7**	**+0.3**
CNGA	**Al SSO del Vol**	**1.98**	**95**	P	**Pn**	**12 45 51.6**	**+0.4**
CNGA				S	**Sn**	**12 46 14.4**	**-0.9**
CNGN	**Cerro Negro**	**1.98**	**94**	P	**Pn**	**12 45 51.7**	**+0.5**
CNGN	**Cerro Negro**	**1.98**	**94**	S	**Sn**	**12 46 15.4**	**0.0**
MACN	**El Madrono**	**2.01**	**95**	P	**Pn**	**12 45 52.1**	**+0.5**
COPN	**Copaltepe**	**2.14**	**103**	P	**Pn**	**12 45 53.5**	**+0.2**
MOMN	**Momotombo**	**2.15**	**97**	P	**Pn**	**12 45 53.6**	**+0.1**
YUSH	**Yuscaran**	**2.23**	**55**	P	**Pn**	**12 45 55.2**	**+0.4**
YUSH	**Yuscaran**	**2.23**	**55**	S	**Sn**	**12 46 22.2**	**+0.6**
LIMN	**Finca el Limon**	**2.33**	**80**	P	**Pn**	**12 45 56.2**	**+0.1**
OCON	**Estacion meteo**	**2.39**	**66**	P	**Pn**	**12 45 56.9**	**0.0**
RCVN	**Varillal2**	**2.63**	**69**	P	**Pn**	**12 46 00.4**	**+0.1**
RCVN	**Varillal2**	**2.63**	**69**	S	**Sn**	**12 46 31.7**	**+0.2**
RCPN	**Sur Rio San Ju**	**2.70**	**71**	P	**Pn**	**12 46 02.2**	**+0.9**
MATN	**Matagalpa**	**2.74**	**84**	P	**Pn**	**12 46 01.1**	**-0.6**
MATN	**Matagalpa**	**2.74**	**84**	S	**Sn**	**12 46 31.9**	**-2.3**
BOAB	**BOACO BROADBAN**	**2.99**	**94**	P	**Pn**	**12 46 07.1**	**+2.0**

IDC ***06*** *12:45:45.5±0.6, 33°.04N×83°.36E, h0^{km}, mb3.9/19, mbtmp3.9/21, ML3.2/2, MS3.3/25, Error ellipse: s-maj=22.6km s-min=13.9km az=57.0*

ISC 06 12:45:51.5±0.5**, 33°.23N**±0°.05×**83°.40E**±0°.08**, h35**^{km}**, n54, σ1^{s}.04**/47**, mb4.0**/16**, MS3.3**/23**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYUN	**Piuthan**	**5.13**	**184**	Pn	**Pn**	**12 47 05.1**	**-0.9**
	baz=183,slow=0.0						
PYUN				Sn	**Sn**	**12 48 05.8**	**+1.7**
	164nm,0.7s,baz=183,slow=0.0						
GKN	**Gorkha**	**5.32**	**168**	Pn	**Pn**	**12 47 09.6**	**+1.0**
	baz=168,slow=0.0						
GKN				Sn	**Sn**	**12 48 10.7**	**+1.9**
	70nm,0.6s,baz=168,slow=0.0						
KOLN	**Koldanda**	**5.45**	**178**	Pn	**Pn**	**12 47 10.4**	**0.0**
	baz=178,slow=0.0						
KOLN	**Koldanda**	**5.45**	**178**	Pn	**Pn**	**12 47 10.9**	**+0.5**
	baz=178,slow=0.0						
KOLN				Sn	**Sn**	**12 48 13.3**	**+1.3**
	baz=178,slow=0.0						
KOLN				Sn	**Sn**	**12 48 13.3**	**+1.3**
	168nm,0.9s,baz=178,slow=0.0						
KKN	**Kakani**	**5.66**	**163**	Sn	**Sn**	**12 48 18.3**	**+1.0**
	baz=163,slow=0.0						
KKN				Sn	Sn	12 48 18.7	+1.4
	baz=163,slow=0.0						
KKN				Sn	Sn	12 48 19.9	+2.6
	123nm,0.9s,baz=163,slow=0.0						
GUN	**Gumba**	**5.72**	**157**	Pn	**Pn**	**12 47 14.5**	**+0.2**
	baz=158,slow=0.0						
GUN				Sn	**Sn**	**12 48 20.4**	**+1.5**
	81nm,0.7s,baz=158,slow=0.0						
DMN	**Daman**	**5.80**	**165**	Sn	**Sn**	**12 48 21.6**	**+0.9**
	502nm,1.2s,baz=165,slow=0.0						
PKIN	**Phulchoki**	**5.90**	**162**	Pn	**Pn**	**12 47 16.7**	**+0.1**
	baz=163,slow=0.0						
PKIN				Sn	**Sn**	**12 48 24.5**	**+1.4**
	121nm,0.6s,baz=163,slow=0.0						
PKI	**Pulchoki**	**5.91**	**162**	Pn	**Pn**	**12 47 16.9**	**+0.1**
	baz=163,slow=0.0						
PKI				Sn	**Sn**	**12 48 23.8**	**+0.4**
	82nm,0.7s,baz=163,slow=0.0						
RAMN	**Ramite**	**6.85**	**155**	Pn	**Pn**	**12 47 28.9**	**-0.8**
	baz=156,slow=0.0						
RAMN				Sn	**Sn**	**12 48 46.3**	**-0.3**
	246nm,0.8s,baz=156,slow=0.0						
ODAN	**Odare**	**7.23**	**150**	Pn	**Pn**	**12 47 34.1**	**-0.9**
	baz=151,slow=0.0						
ODAN	**Odare**	**7.23**	**150**	Pn	**Pn**	**12 47 34.3**	**-0.7**
	baz=151,slow=0.0						
ODAN				Sn	**Sn**	**12 48 55.6**	**-0.4**
	186nm,0.7s,baz=151,slow=0.0						
LSA	**Lhasa**	**7.50**	**116**	P	**Pn**	**12 47 39.3**	**+0.5**
LSA				S	Sn	12 49 41.4	+39
LSA				LR	LR		
	comp=N,380nm,10.2s						
LSA				LR	LR		
	comp=Z,700nm,7.3s						
WMQ	**Urumqi**	**11.09**	**16**	*e*P	**Pn**	**12 48 25.9**	**-1.7**
WMQ				LR	LR		
	comp=Z,160nm,23.9s						
MKAR	**Makanchi Array**	**13.57**	**357**	Pn	**Pn**	**12 49 01.5**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=185,slow=16,SNR=4.9						
MKAR				LR	LR	12 55 10.1	
	comp=Z,32nm,21.9s,baz=169,slow=41						
	comp=Z,1.1nm,0.9s						
TNCH	**TengChong**	**15.53**	**118**	*e*P	**P**	**12 49 33.1**	**+1.1**
TNCH				pmax	pmax		
	comp=Z,41nm,0.5s						
LZH	**Lanzhou**	**17.06**	**75**	*e*P	**P**	**12 49 50.3**	**+1.3**
LZH				pP	pP	12 49 57.8	-1.6
LZH				pmax	pmax		
	comp=Z,21nm,1.2s						
LZH				LR	LR		
	comp=N,500nm,12.4s						
LZH				LR	LR		
	comp=E,190nm,13.2s						
LZH				LR	LR		
	comp=Z,210nm,14.4s						
KURBB	**Kurchatov Arra**	**17.74**	**350**	P	**P**	**12 49 56.4**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=171,slow=11,SNR=24						
KURBB				LR	LR	12 57 12.4	
	comp=Z,52nm,21.4s,baz=164,slow=38						
	comp=Z,2.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**20.27**	**133**	P	**P**	**12 50 22.0**	**-2.1**
	comp=Z,6.0nm,0.8s,baz=311,slow=11,SNR=42						
CMAR				LR	LR	12 58 41.8	
	comp=Z,52nm,21.2s,baz=305,slow=38						
	comp=Z,6.0nm,0.8s						
ZALV	**Zalesovo Beam**	**20.73**	**2**	P	**P**	**12 50 29.1**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=216,slow=9.2,SNR=5.1						
	comp=Z,1.1nm,0.7s						
BVAR	**Borovoye Array**	**21.88**	**339**	P	**P**	**12 50 41.9**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=140,slow=12,SNR=6.4						
BVAR				LR	LR	12 59 28.6	
	comp=Z,57nm,19.3s,baz=148,slow=37						
	comp=Z,1.2nm,0.7s						
SONM	**Songino Array**	**22.65**	**43**	P	**P**	**12 50 51.0**	**+1.4**
	comp=Z,1.1nm,0.7s,baz=234,slow=10,SNR=5.2						
	comp=Z,1.1nm,0.7s						
AKTO	**Aktyubinsk**	**25.36**	**320**	LR	LR	13 01 49.0	
	comp=Z,78nm,21.8s,baz=352,slow=38						
PALK	**Pallekele**	**25.95**	**186**	LR	LR	13 01 20.0	
	comp=Z,46nm,18.4s,baz=57,slow=36						
ARTI	**Arti**	**28.87**	**331**	LR	LR	13 04 09.6	
	comp=Z,66nm,19.3s,baz=13,slow=38						
GNI	**Garni**	**31.57**	**294**	LR	LR	13 06 24.9	
	comp=Z,52nm,21.1s,baz=95,slow=39						
BELG	**Belogornoye**	**32.03**	**318**	LR	LR	13 06 09.0	
	comp=Z,34nm,18.5s,baz=72,slow=38						
KBZ	**Khabaz**	**33.10**	**300**	LR	LR	13 08 18.5	
	comp=Z,52nm,18.2s,baz=94,slow=41						
KIRV	**Kirov**	**34.04**	**328**	LR	LR	13 07 25.4	
	comp=Z,63nm,18.9s,baz=143,slow=38						
NRIK	**Noril'sk**	**36.23**	**2**	P	**P**	**12 52 50.2**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=180,slow=7.1,SNR=6.0						
	comp=Z,1.2nm,0.5s						
KSRS	**Korea Array**	**36.31**	**70**	LR	LR	13 07 45.4	
	comp=Z,29nm,20.1s,baz=240,slow=36						
JNU	**Nakatsue**	**39.47**	**77**	LR	LR	13 09 23.3	
	comp=Z,44nm,18.9s,baz=314,slow=36						
EIL	**Elat**	**41.19**	**279**	LR	LR	13 15 07.1	
	comp=Z,48nm,18.6s,baz=70,slow=43						
AKASG	**Malin Array Be**	**42.87**	**311**	P	**P**	**12 53 46.3**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=76,slow=8.9,SNR=4.1						
AKASG				LR	LR	13 13 24.2	
	comp=Z,50nm,21.9s,baz=72,slow=39						
	comp=Z,0.5nm,0.4s						
MLR	**Muntele Rosu**	**45.18**	**303**	P	**P**	**12 54 06.4**	**+1.4**
	comp=Z,4.3nm,0.8s,baz=102,slow=0.4,SNR=4.6						
MLR				LR	LR	13 14 54.5	
	comp=Z,54nm,21.5s,baz=74,slow=39						
	comp=Z,4.3nm,0.8s						
FINES	**FINESS Array B**	**45.91**	**326**	P	**P**	**12 54 11.0**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=156,slow=7.6,SNR=2.4						
FINES				LR	LR	13 14 07.9	
	comp=Z,57nm,20.6s,baz=354,slow=37						
	comp=Z,0.8nm,0.7s						
ASAJ	**Asahikawa**	**46.57**	**58**	LR	LR	13 15 00.0	
	comp=Z,51nm,18.3s,baz=286,slow=38						
ARCES	**ARCESS Array B**	**48.14**	**336**	P	**P**	**12 54 27.9**	**+0.2**
	comp=Z,2.2nm,0.7s,baz=107,slow=6.0,SNR=4.2						
	comp=Z,2.2nm,0.7s						
MA2	**Magadan**	**50.68**	**37**	LR	LR	13 17 17.4	
	comp=Z,31nm,18.4s,baz=263,slow=37						
VRAC	**Vranov**	**51.06**	**309**	LR	LR	13 19 18.4	
	comp=Z,23nm,19.0s,baz=81,slow=39						
HFS	**Hagfors**	**51.85**	**323**	P	**P**	**12 54 56.5**	**+0.6**
	comp=Z,1.4nm,0.7s,baz=74,slow=11,SNR=2.5						
	comp=Z,1.4nm,0.7s						
GERES	**GERESS Array B**	**53.01**	**309**	LR	LR	13 20 00.5	
	comp=Z,31nm,18.7s,baz=66,slow=39						
NOA	**NORSAR Array B**	**53.03**	**325**	P	**P**	**12 55 03.3**	**-1.5**
	comp=Z,0.8nm,0.7s,baz=86,slow=6.9,SNR=3.3						
NOA				LR	LR	13 18 07.0	
	comp=Z,46nm,21.2s,baz=85,slow=36						
	comp=Z,0.8nm,0.7s						
PETK	**Petropavlovsk-**	**55.12**	**45**	LR	LR	13 20 20.0	
	comp=Z,50nm,18.3s,baz=273,slow=38						
DAVOX	**Davos/Dischmat**	**55.97**	**307**	LR	LR	13 23 30.9	
	comp=Z,23nm,20.2s,baz=84,slow=40						
EKA	**Eskdalemuir Ar**	**61.55**	**320**	P	**P**	**12 56 05.2**	**+0.3**
	comp=Z,1.8nm,0.8s,baz=70,slow=7.3,SNR=2.6						
	comp=Z,1.8nm,0.8s						
ESDC	**Sonseca Array**	**67.87**	**304**	P	**P**	**12 56 46.4**	**-0.1**
	comp=Z,0.9nm,0.9s,baz=64,slow=3.0,SNR=3.2						
	comp=Z,0.9nm,0.9s						
WRA	**Warramunga Arr**	**71.83**	**130**	P	**P**	**12 57 09.9**	**-1.0**
	comp=Z,1.7nm,0.7s,baz=326,slow=6.3,SNR=20						
	comp=Z,1.7nm,0.7s						
ASAR	**Alice Springs**	**74.28**	**133**	P	**P**	**12 57 24.2**	**-1.1**
	comp=Z,2.2nm,0.8s,baz=316,slow=5.7,SNR=28						
	comp=Z,2.2nm,0.8s						
ILAR	**Eielson Array**	**74.73**	**20**	P	**P**	**12 57 27.9**	**+0.5**
	comp=Z,1.2nm,0.9s,baz=298,slow=4.6,SNR=12						
	comp=Z,1.2nm,0.9s						
TORD	**Torodi Ar. Bea**	**76.05**	**277**	P	**P**	**12 57 34.8**	**-1.0**
	comp=Z,1.0nm,0.4s,baz=39,slow=5.6,SNR=1.3						
	comp=Z,1.0nm,0.4s						
BOSA	**Boshof**	**82.58**	**229**	P	**P**	**12 58 09.9**	**-1.2**
	comp=Z,6.6nm,0.9s,baz=46,slow=5.3,SNR=5.2						
BOSA				LR	LR	13 34 51.2	
	comp=Z,33nm,18.1s,baz=210,slow=36						
	comp=Z,6.6nm,0.9s						
YKA	**Yellowknife Ar**	**83.51**	**8**	P	**P**	**12 58 16.5**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=342,slow=5.3,SNR=2.9						
	comp=Z,0.5nm,0.7s						
QSPA	**South Pole Qui**	**123.02**	**180**	PKP	**PKPdf**	**13 04 41.5**	**-1.8**
	comp=Z,1.6nm,0.9s,baz=333,slow=2.3,SNR=3.0						

NAO ***06*** *12:49:51.0, 36°.41N×21°.47E, h10^{km}, mb3.9*

IDC ***06*** *12:50:02.8±1.2, 37°.96N×20°.85E, h0^{km}, mb3.9/11, mbtmp3.9/13, ML0.5/1, MS2.7/2, Error ellipse: s-maj=24.1km s-min=18.8km az=56.0*

ATH ***06*** *12:50:02.8, 37°.72N×20°.52E, h6^{km}±1^{km}, Manual Solution by A.Andreou First location: 2019/06/06 12:51:03, This location: 2020/08/12 09:49:52 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

THE ***06*** *12:50:03.6, 38°N±1°×2°1E±°, h8^{km}±2^{km}, M3.7/16, MLh3.7/16*

PDG ***06*** *12:50:03.9±0.2, 37°.76N×20°.63E, h18^{km}, ML3.9/8, Error ellipse: s-maj=0.5km s-min=1.4km az=0.0*

ISC 06 12:50:03.6±0.9**, 37°.77N**±0°.03×**20°.60E**±0°.03**, h13**^{km}±5^{km}**, n96, σ1^{s}.08**/133**, mb4.0**/10**, 3C-3D, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ORTH	**Orthonies,Zaky**	**0.11**	**41**	P	**Pg**	**12 50 07.4**	**+0.6**
ORTH				S	**Sg**	**12 50 09.4**	**+0.3**
LTHK	**Lithakia**	**0.19**	**107**	P	**Pg**	**12 50 07.7**	**-0.3**
LTHK				S	**Sg**	**12 50 10.6**	**-0.3**
LTHK	**Lithakia**	**0.19**	**107**	P	**Pg**	**12 50 07.7**	**-0.3**
LTHK				S	**Sg**	**12 50 10.8**	**-0.1**
RTZL	**Ratzakli, Kefa**	**0.34**	**23**	P	**Pb**	**12 50 11.3**	**-0.2**
RTZL				S	**Sb**	**12 50 17.2**	**+0.4**
PSDA	**Pessada-Kefalo**	**0.35**	**358**	P	**Pb**	**12 50 11.5**	**-0.2**
PSDA				S	**Sb**	**12 50 17.6**	**+0.5**
PSDA	**Pessada-Kefalo**	**0.35**	**358**	P	**Pb**	**12 50 11.5**	**-0.2**
PSDA				S	**Sb**	**12 50 16.9**	**-0.2**
VLS	**Valsamata**	**0.41**	**359**	P	**Pg**	**12 50 12.4**	**+0.6**
VLS				S	**Sb**	**12 50 19.6**	**+0.7**
VLS	**Valsamata**	**0.41**	**359**	P	**Pb**	**12 50 12.6**	**-0.2**
VLS				S	**Sb**	**12 50 18.7**	**-0.2**
CLEM	**Kyllini,Ilia,G**	**0.44**	**73**	P	**Pb**	**12 50 13.0**	**-0.2**
CLEM				S	**Sb**	**12 50 19.9**	**+0.3**
SMHA	**Samh**	**0.49**	**4**	P	**Pg**	**12 50 13.0**	**-0.3**
SMHA				S	**Sb**	**12 50 21.0**	**-0.1**
DMLN	**Damoulianata-K**	**0.51**	**339**	P	**Pb**	**12 50 14.3**	**0.0**
DMLN				S	**Sb**	**12 50 22.7**	**+1.0**
DMLN	**Damoulianata-K**	**0.51**	**339**	P	**Pb**	**12 50 14.4**	**0.0**
DMLN				S	**Sg**	**12 50 20.1**	**-0.3**
LCHA	**Lechaina**	**0.55**	**72**	P	**Pb**	**12 50 14.9**	**-0.2**
LCHA				S	**Sb**	**12 50 24.2**	**+1.3**
ANDM	**Andravida**	**0.57**	**68**	P	**Pb**	**12 50 15.2**	**-0.3**
ANDM				S	**Sb**	**12 50 23.5**	**-0.1**
KTLO	**Katakolo**	**0.58**	**102**	P	**Pb**	**12 50 15.8**	**+0.1**
YRMI	**Loutra Irminis**	**0.68**	**60**	P	**Pb**	**12 50 17.1**	**-0.2**
YRMI				S	**Sb**	**12 50 27.6**	**+1.0**
FSK	**Fiskardo**	**0.69**	**357**	P	**Pg**	**12 50 17.4**	**+0.3**
FSK				S	**Sb**	**12 50 27.1**	**+0.1**
RLS	**Riolos of Patr**	**0.74**	**67**	P	**Pb**	**12 50 18.1**	**-0.3**
RLS				S	**Sb**	**12 50 29.6**	**+1.1**
RLS	**Riolos of Patr**	**0.74**	**67**	P	**Pb**	**12 50 18.5**	**+0.1**
RLS				S	**Sn**	**12 50 30.4**	**-0.5**
AXS	**Araxos**	**0.75**	**55**	P	**Pb**	**12 50 18.7**	**+0.3**
AXS				S	**Sb**	**12 50 30.2**	**+1.6**
KRES	**Krestena**	**0.83**	**102**	P	**Pb**	**12 50 20.2**	**+0.3**
EVGI	**Lefkada island**	**0.85**	**3**	P	**Pg**	**12 50 20.1**	**-0.1**
EVGI				S	**Sn**	**12 50 34.0**	**+0.2**
EVGI	**Lefkada island**	**0.85**	**3**	P	**Pg**	**12 50 20.3**	**+0.1**
ZARO	**Zacharo**	**0.88**	**108**	P	**Pb**	**12 50 21.1**	**+0.5**
ZARO				S	**Sn**	**12 50 34.0**	**-0.2**
AMT	**Artemida-Makis**	**0.91**	**105**	P	**Pb**	**12 50 21.4**	**+0.2**
AMT				S	**Sn**	**12 50 35.0**	**0.0**
DRAG	**Dragano-Lefkad**	**0.92**	**359**	P	**Pb**	**12 50 22.2**	**+0.8**
NYDR	**Nydri-Lefkada**	**0.95**	**5**	P	**Pg**	**12 50 21.7**	**-0.3**
NYDR				S	**Sn**	**12 50 37.8**	**+1.8**
NYDR	**Nydri-Lefkada**	**0.95**	**5**	P	**Pg**	**12 50 21.8**	**-0.2**
NYDR				S	**Sb**	**12 50 35.3**	**+0.9**
LKD2	**Lefkada island**	**1.02**	**2**	P	**Pg**	**12 50 22.9**	**-0.4**
LKD2				S	**Sn**	**12 50 39.0**	**+1.1**
LKD2	**Lefkada island**	**1.02**	**2**	P	**Pg**	**12 50 23.1**	**-0.2**
PATC	**Patra C**	**1.04**	**61**	P	**Pn**	**12 50 24.3**	**+0.4**
TSLK	**Tsoukalades, L**	**1.06**	**2**	P	**Pg**	**12 50 23.7**	**-0.4**
TSLK				S	**Sn**	**12 50 41.0**	**+2.2**

TSLK	Tsoukalades, L	1.06	2	P	Pg	12 50 24.0	0.0
TSLK				S	Sg	12 50 37.5	-0.4
UPR	University Cam	1.07	61	P	Pn	12 50 25.2	+0.9
PVO	Paravola	1.12	40	P	Pn	12 50 25.3	+0.3
PVO				S	Sn	12 50 42.9	+2.7
PVO	Paravola	1.12	40	P	Pn	12 50 25.6	+0.6
PVO				S	Sn	12 50 41.5	+1.3
ITM	Ithomi	1.21	119	P	Pb	12 50 25.5	-0.8
ITM	Ithomi	1.21	119	P	Pb	12 50 25.9	-0.4
EFP	Efpalio	1.22	57	P	Pb	12 50 26.6	+0.1
EFP	Efpalio	1.22	57	P	Pn	12 50 27.9	+1.5
KLV	Kalavryta, Ach	1.25	77	P	Pb	12 50 26.7	-0.4
KLV	Kalavryta, Ach	1.25	77	P	Pg	12 50 27.8	0.0
PYL	PYLOS	1.26	133	P	Pn	12 50 27.2	+0.3
MTHA	Methoni	1.29	137	P	Pg	12 50 28.6	+0.2
SERG	Sergoula	1.32	60	P	Pn	12 50 28.1	+0.4
SERG	Sergoula	1.32	60	P	Pg	12 50 28.5	-0.5
SERG				S	Sn	12 50 47.9	+2.7
ANX	Ano Chora	1.33	51	P	Pn	12 50 28.5	+0.5
ANX	Ano Chora	1.33	51	P	Pg	12 50 28.8	-0.4
ANX				S	Sn	12 50 48.0	+2.5
KALE	Kalithea	1.36	62	P	Pb	12 50 29.3	+0.3
GUR	Goura	1.39	82	P	Pb	12 50 29.5	+0.1
VLX	Vlachokerasia	1.47	105	P	Pb	12 50 31.1	+0.3
EVR	Evrytania	1.49	39	P	Pg	12 50 31.9	-0.4
DLFA	Delphi	1.65	64	P	Pg	12 50 35.2	-0.2
TETR	Tetrakomo, Epi	1.66	18	P	Pn	12 50 33.3	+0.8
IGT	Igoumenitsa	1.78	353	P	Pn	12 50 35.6	+1.5
AGG	Agios Georgios	1.85	47	P	Pn	12 50 36.4	+1.4
LTK	Loutraki	1.89	81	P	Pb	12 50 38.5	+0.6
LOUT	Loutraki	1.89	83	P	Pb	12 50 37.1	-0.8
AXAR	Agios Charalam	1.90	58	P	Pn	12 50 37.1	+1.3
KEK	Kerkira	2.04	342	P	Pn	12 50 38.2	+0.5
LKR	Lokris	2.08	64	P	Pb	12 50 41.1	-0.1
THL	Klokotos Trika	2.11	31	P	Pn	12 50 40.2	+1.6
VIL2	Platees	2.15	77	P	Pb	12 50 42.5	0.0
MET6	Megalochori,Me	2.19	94	P	Pn	12 50 41.4	+1.7
AIDA	Aidipsos	2.21	60	P	Pn	12 50 41.4	+1.5
MET4	Agioi Theodoro	2.22	93	P	Pn	12 50 41.8	+1.7
KPRO	Kipourio	2.27	15	P	Pn	12 50 42.4	+1.6
TYRN	Tyrnavos	2.32	33	P	Pn	12 50 42.5	+1.0
ATHU	Athens Univers	2.53	84	P	Pn	12 50 45.8	+1.5
NEO	Neokhori	2.57	52	P	Pb	12 50 47.6	-2.0
IDI	Anoyia	4.25	124	Pn	Pn	12 51 09.8	+1.8
	0.1nm,0.3s,baz=330,slow=20,SNR=1.4						
IDI				Sn	Sn	12 51 57.5	0.0
	2.0nm,0.3s,baz=270,slow=20,SNR=7.4 6.8nm,1.2s						
ULC	Ulcinj	4.32	346	⇓*i*Pn	Pn	12 51 10.2	+1.2
ULC				*i* Sn	Sn	12 52 00.0	+0.7
DRME	Dracevica, Mon	4.55	347	⇓*i*Pn	Pn	12 51 13.5	+1.4
DRME				*e*Sn	Sn	12 52 05.9	+1.1
PDG	Podgorica	4.77	348	⇑*i*Pn	Pn	12 51 13.5	-1.7
CEME	Cevo	4.95	345	⇑*i*Pn	Pn	12 51 17.6	-0.1
CEME				*i* Sn	Sn	12 52 15.2	+0.4
HCY	Herceg Novi	4.95	342	*e*Pn	Pn	12 51 19.1	+1.5
HCY				*i* Sn	Sn	12 52 15.3	+0.6
IVA	Berane	5.13	354	⇑*i*Pn	Pn	12 51 22.2	+2.0
KOME	Kolasin	5.15	351	*e*Pn	Pn	12 51 21.7	+1.3
KOME				*i* Sn	Sn	12 52 19.9	+0.2
BRY	Bratogost	5.37	344	⇓*i*Pn	Pn	12 51 25.2	+1.7
BRY				*e*Sn	Sn	12 52 25.0	-0.2
UPM	Unac-Piva	5.58	347	*e*Pn	Pn	12 51 23.4	-3.1
UPM				*i* Sn	Sn	12 52 30.9	+0.3
MLR	Muntele Rosu	8.69	26	Pn	Pn	12 52 11.6	+2.5
	0.5nm,0.3s,baz=284,slow=9.4,SNR=5.1						
MLR				LR	LR	12 55 56.0	
	comp=Z,34nm,19.7s,baz=248,slow=42						
KEST	Kesra	9.26	261	LR	LR	12 56 16.7	
	comp=Z,55nm,19.7s,baz=31,slow=39						
BRTR	Keskin Array B	10.37	75	Pn	Pn	12 52 37.4	+5.3
	0.1nm,0.3s,baz=266,slow=15,SNR=1.9						
AKASG	Malin Array Be	14.32	23	Pn	Pn	12 53 22.0	-3.9
	0.6nm,0.5s,baz=214,slow=13,SNR=4.2						
HFS	Hagfors	22.82	351	P	P	12 55 05.4	-0.6
	3.3nm,0.6s,baz=171,slow=10,SNR=14 3.3nm,0.6s						
EKA	Eskdalemuir Ar	23.80	325	P	P	12 55 16.6	+0.7
	4.2nm,0.9s,baz=131,slow=10,SNR=9.6 4.2nm,0.9s						
FINES	FINESS Array B	23.95	6	P	P	12 55 16.8	-0.4
	2.3nm,0.5s,baz=171,slow=9.9,SNR=14 2.3nm,0.5s						
NB2	NORSAR Subarra	24.03	349	P	P	12 55 18.6	+0.5
	comp=Z,1.7nm,0.6s,baz=160,slow=9.3						
NOA	NORSAR Array B	24.03	349	P	P	12 55 17.8	-0.3
	comp=Z,2.1nm,0.9s,baz=161,slow=10,SNR=5.2 comp=Z,2.1nm,0.9s						
TORD	Torodi Ar. Bea	29.75	220	P	P	12 56 13.3	+3.5
	comp=Z,1.2nm,0.4s,baz=35,slow=10,SNR=1.7 comp=Z,1.2nm,0.4s						
ARCES	ARCESS Array B	31.94	3	P	P	12 56 27.7	-1.0
	comp=Z,2.7nm,0.9s,baz=188,slow=8.5,SNR=4.4 comp=Z,2.7nm,0.9s						
BVAR	Borovoye Array	37.34	50	P	P	12 57 15.0	-0.5
	comp=Z,0.6nm,0.5s,baz=291,slow=8.9,SNR=3.6 comp=Z,0.6nm,0.5s						
KURBB	Kurchatov Arra	42.42	53	P	P	12 57 56.6	-1.1
	comp=Z,0.6nm,0.5s,baz=280,slow=8.8,SNR=6.2 comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	45.46	58	P	P	12 58 21.6	-0.7
	comp=Z,0.4nm,0.4s,baz=280,slow=7.7,SNR=6.5 comp=Z,0.4nm,0.4s						
ZALV	Zalesovo Beam	45.92	48	P	P	12 58 24.4	-1.3
	comp=Z,1.6nm,0.5s,baz=274,slow=8.8,SNR=7.2 comp=Z,1.6nm,0.5s						
CMAR	Chiang Mai Arr	69.88	82	P	P	13 01 13.5	-1.0
	comp=Z,0.7nm,0.5s,baz=306,slow=4.6,SNR=4.6 comp=Z,0.7nm,0.5s						

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*NEIC **06** 13:02:36.5±0.8, 19°.503N±0°.009×155°.91W±0°.02, h10^{km}±1^{km}, Error ellipse: s-maj=3.1km s-min=2.2km az=261.0*

HVO 06 13:02:36.2±0.9**, 19°.504N**±0°.009×**155°.92W**±0°.02**, h11**^{km}±2^{km}**, ML2.8**/42**, ML2.8**/48(NEIC)**, Error ellipse: s-maj=3.0km s-min=1.3km az=85.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPH	Captain Cook	0.02	168		Pg	13 02 38.4	+0.3
KKH	Kailua Kona	0.18	329		Pg	13 02 40.5	+0.4
KKH					Sg	13 02 43.6	+0.9
HUH	Hualalai	0.20	24		Pg	13 02 40.5	-0.1
HUH					Sg	13 02 44.3	+0.7
HUH	Hualalai	0.20	24	IAML		13 02 47.2	
	comp=E,2µm,0.2s						
HUH				IAML		13 02 47.8	
	comp=N,1µm,0.2s						
ALEP	Alea Permanent	0.26	82		Pg	13 02 42.1	+0.3
ALEP					Sg	13 02 46.5	+1.0
MWH	Mokuaweoweo	0.31	93		Pg	13 02 42.6	0.0
MWH					Sg	13 02 46.9	0.0
KHU	Kahuku	0.39	131		Pg	13 02 43.9	-0.1
KHU					Sg	13 02 49.2	+0.1
KHU	Kahuku	0.39	131	IAML		13 02 50.1	
	comp=E,958nm,0.5s						
KHU				IAML		13 02 50.2	
	comp=N,909nm,0.5s						
HMH	Humuʻula Sheep	0.42	77		Pg	13 02 44.5	-0.2
HMH					Sg	13 02 50.2	-0.1
HMH	Humuʻula Sheep	0.42	77	IAML		13 02 51.9	
	comp=E,1µm,0.5s						
HMH				IAML		13 02 57.8	
	comp=N,1µm,0.6s						
POHA	Pohakuloa	0.45	55		Pg	13 02 44.6	-0.4
POHA					Sg	13 02 50.7	-0.3
POHA	Pohakuloa	0.45	55	IAML		13 02 58.0	
	comp=N,920nm,0.8s						
POHA				IAML		13 02 59.2	
	comp=N,655nm,0.3s						
AIN	Ainahou	0.46	107		Pg	13 02 44.7	-0.5
AIN					Sg	13 02 50.9	-0.5
AIN	Ainahou	0.46	107	IAML		13 02 51.4	
	comp=E,1µm,0.3s						
AIN				IAML		13 02 57.0	
	comp=N,2µm,0.3s						
MLH	Mauna Loa	0.51	91		Pg	13 02 45.5	-0.7
MLH					Sg	13 02 52.2	-0.6
HPO	Honuapo	0.54	140		Pg	13 02 46.0	-0.7
HPO					Sg	13 02 53.3	-0.6
HTC	Hot Caves	0.56	118		Pg	13 02 46.2	-1.0
HPAH	Hawaii Prepara	0.56	22		Pg	13 02 46.2	-1.0
HPAH					Sg	13 02 53.4	-1.3
HPAH	Hawaii Prepara	0.56	22	IAML		13 02 54.4	
	comp=N,455nm,0.4s						
HPAH				IAML		13 02 59.8	
	comp=E,357nm,0.6s						
WRMHI	West Rim	0.59	99		Pg	13 02 46.4	-1.4
WRMHI					Sg	13 02 54.2	-1.5
UWE	Uwekahuna	0.60	98		Pg	13 02 46.6	-1.3
UWE					Sg	13 02 54.8	-1.0
SDHHI	Sand Hill	0.60	101		Pg	13 02 46.5	-1.5
SDHHI					Sg	13 02 54.6	-1.3
OBL	Observatory Le	0.61	98		Pg	13 02 46.6	-1.5
OBL					Sg	13 02 55.2	-0.9
RSD	Rainshed	0.61	94		Pg	13 02 46.9	-1.2
RSD					Sg	13 02 54.9	-1.3
UWB	Uwekahuna Bluf	0.61	97		Pg	13 02 46.6	-1.5
UWB					Sg	13 02 55.1	-1.1
HLP	Hilina Pali	0.61	110		Pg	13 02 46.8	-1.4
HLP					Sg	13 02 55.1	-1.2
HLP	Hilina Pali	0.61	110	IAML		13 02 56.5	
	comp=E,766nm,0.3s						
HLP				IAML		13 02 57.7	
	comp=N,724nm,0.2s						
RIM	Rim	0.62	100		Pg	13 02 46.7	-1.6
RIM					Sg	13 02 56.2	-0.3
SBLHI	Steaming Bluff	0.62	97		Pg	13 02 46.7	-1.6
SBLHI					Sg	13 02 55.3	-1.3
KKO	Keanakako'i	0.63	100		Pg	13 02 46.9	-1.5
KKO					Sg	13 02 55.2	-1.5
HATHI	Halemaʻumaʻu T	0.63	97		Pg	13 02 46.8	-1.7
HATHI					Sg	13 02 55.4	-1.3
HATHI	Halemaʻumaʻu T	0.63	97	IAML		13 03 05.2	
	comp=E,760nm,0.5s						
HATHI				IAML		13 03 07.7	
	comp=N,835nm,0.6s						
BYL	Byron's Ledge	0.63	98		Pg	13 02 46.9	-1.6
BYL					Sg	13 02 55.8	-1.1
BYL	Byron's Ledge	0.63	98	IAML		13 03 01.6	
	comp=N,448nm,0.6s						
BYL				IAML		13 03 10.0	
	comp=E,471nm,0.5s						
PUH	Pauahi	0.68	101		Pg	13 02 47.8	-1.6
PUH					Sg	13 02 57.3	-1.0
PUH	Pauahi	0.68	101	IAML		13 03 02.7	
	comp=E,314nm,0.3s						
PUH				IAML		13 03 05.3	
	comp=N,354nm,0.4s						
KNHH	Kane Nui o Ham	0.72	100		Pg	13 02 48.7	-1.5
STCH	Steam Cracks	0.76	99		Pg	13 02 48.5	-2.5
NPOC	North of Puʻu	0.77	98		Pg	13 02 48.6	-2.6
NPOC					Sg	13 02 59.4	-1.9
JCUZ	Jacuzzi	0.78	99		Pg	13 02 49.1	-2.3
JCUZ					Sg	13 02 59.5	-2.1
JOKA	Jonika Flow	0.87	94		Pg	13 02 50.1	-2.9
JOKA					Sg	13 03 00.7	-3.6
JOKA	Jonika Flow	0.87	94	IAML		13 03 18.0	
	comp=N,244nm,0.7s						
HLK	Haleakala	1.28	346		Sb	13 03 11.6	-5.7
KIP	Kipapa	2.74	315		Pn	13 03 16.2	-4.0
KIP					Sn	13 03 46.9	-6.4

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*IDC **06** 13:19:42.9±1.2, 2°.93N×127°.83E, h0^{km}, mb3.8/7, mbtmp3.8/7, MS4.4/1, Error ellipse: s-maj=90.9km s-min=16.8km az=69.0*

*DJA **06** 13:19:51.8±1.2, 3°N±5°×12°8E±1°4, h25^{km}±23^{km}, M4.0/7, mb4.5/1, MLv3.7/7*

ISC 06 13:19:54.7±1.2**, 2°.9N**±0°.1×**127°.9E**±0°.2**, h100**^{km}**, n11,** σ**0^{s}63**/12**, mb3.6**/6**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	2.13	194	P	Pn	13 20 28.0	-1.1
SGSI	Sangihe	2.49	289	P	Pn	13 20 32.8	-0.9
SGSI				S	Sn	13 21 04.4	+0.7
SANI	Sanana	5.23	201	P	Pn	13 21 11.0	+0.4
FITZ	Fitzroy Crossi	20.94	186	P	P	13 24 29.1	-0.6
	3.9nm,1.0s,baz=19,slow=12,SNR=1.6 3.9nm,1.0s						
WRA	Warramunga Arr	23.53	165	P	P	13 24 55.9	-0.2
	0.9nm,0.4s,baz=344,slow=11,SNR=20 0.9nm,0.4s						
ASAR	Alice Springs	27.01	168	P	P	13 25 27.6	+0.1
	0.4nm,0.5s,baz=351,slow=7.6,SNR=14						
ASAR				PcP	PcP	13 28 47.1	+0.3
	0.1nm,0.4s,baz=5.0,slow=2.4,SNR=1.3 0.4nm,0.5s						
STKA	Stephens Creek	36.92	160	P	P	13 26 54.1	+0.1
	2.1nm,0.3s,baz=336,slow=9.4,SNR=14 2.1nm,0.3s						
DZM	Mont Dzumac	45.09	125	LR	LR	13 46 56.6	
	comp=Z,462nm,20.7s,baz=344,slow=36						
MKAR	Makanchi Array	58.93	325	P	P	13 29 43.3	-0.2
	0.4nm,0.5s,baz=113,slow=8.6,SNR=7.1 0.4nm,0.5s						
KURBB	Kurchatov Arra	63.09	327	P	P	13 30 12.0	+0.5
	0.3nm,0.4s,baz=124,slow=5.9,SNR=5.9 0.3nm,0.4s						
BVAR	Borovoye Array	68.68	327	P	P	13 30 47.7	+0.3
	0.3nm,0.3s,baz=100,slow=4.4,SNR=1.8 0.3nm,0.3s						

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*DMN **06** 13:53:15.7±0.0, 28°.97N×86°.35E, h2^{km}, Ml4.0/8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

*IDC **06** 13:53:15.9±5.0, 28°.67N×85°.71E, h0^{km}, mb3.5/2, mbtmp3.5/4, ML3.8/2, MS3.3/2, Error ellipse: s-maj=225.9km s-min=26.1km az=63.0*

ISC 06 13:53:18.7±2.2**, 28°.84N**±0°.06×**86°.29E**±0°.05**, h13**^{km}±14^{km}**, n17,** σ**1^{s}19**/24**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUN	Gumba	0.99	201	Pg	Pb	13 53 36.8	-1.1
	baz=201,slow=0.0						
GUN				Sg	Sn	13 53 51.9	-0.8
	baz=201,slow=0.0						
KKN	Kakani	1.37	221	Pg	Pn	13 53 43.8	+0.1
	baz=219,slow=0.0						
KKN				Sg	Sb	13 54 01.4	-0.4
	baz=219,slow=0.0						
PKI	Pulchoki	1.48	212	Pg	Pn	13 53 45.8	+0.5
	baz=211,slow=0.0						
PKI				Sg	Sg	13 54 07.9	+1.5
	270nm,0.4s,baz=211,slow=0.0						
PKIN	Phulchoki	1.48	212	Pg	Pn	13 53 45.8	+0.5
	baz=211,slow=0.0						
PKIN				Sg	Sg	13 54 08.2	+1.7
	386nm,0.4s,baz=211,slow=0.0						
DMN	Daman	1.61	221	Pg	Pb	13 53 48.6	+0.2
	baz=219,slow=0.0						
DMN				Sg	Sg	13 54 11.5	+1.0
	364nm,0.6s,baz=219,slow=0.0						
GKN	Gorkha	1.68	241	Pg	Pb	13 53 49.2	-0.3
	baz=238,slow=0.0						
GKN				Sg	Sg	13 54 12.9	+0.3
	630nm,0.3s,baz=238,slow=0.0						
RAMN	Ramite	1.90	172	Pg	Pb	13 53 53.2	-0.2
	baz=174,slow=0.0						
RAMN				Sg	Sg	13 54 19.4	-0.4
	276nm,0.4s,baz=174,slow=0.0						
ODAN	Odare	2.20	153	Pg	Pb	13 53 58.9	+0.5
	baz=156,slow=0.0						
ODAN				Sg	Sg	13 54 28.2	-1.2
	420nm,0.5s,baz=156,slow=0.0						
KOLN	Koldanda	2.60	246	Sg	Sg	13 54 39.7	-2.5
	340nm,0.7s,baz=244,slow=0.0						
PYUN	Piuthan	3.00	257	Pn	Pn	13 54 07.5	+1.4
	baz=254,slow=0.0						
PYUN	Piuthan	3.00	257	Pg	Pb	13 54 13.2	+1.2
	baz=254,slow=0.0						
PYUN				Sg	Sg	13 54 52.4	-2.6
	173nm,0.6s,baz=254,slow=0.0						
CMAR	Chiang Mai Arr	15.52	129	Pn	P	13 57 01.1	-0.6
	0.2nm,0.3s,baz=321,slow=10,SNR=6.8 0.9nm,0.9s						
MKAR	Makanchi Array	18.20	351	P	Pn	13 57 30.2	-0.7
	0.2nm,0.3s,baz=166,slow=12,SNR=10 0.8nm,0.6s						
KURBB	Kurchatov Arra	22.54	347	P	P	13 58 18.4	+0.1
	0.8nm,0.6s,baz=167,slow=10,SNR=8.5 0.8nm,0.6s						
BELG	Belogornoye	36.97	320	LR	LR	14 17 30.0	
	comp=Z,21nm,20.3s,baz=358,slow=40						
DAV	Davao City (W)	42.90	113	LR	LR	14 20 05.8	
	comp=Z,94nm,20.1s,baz=328,slow=37						
WRA	Warramunga Arr	67.10	131	P	P	14 04 13.0	+0.8
	0.5nm,0.7s,baz=319,slow=6.8,SNR=4.9 0.5nm,0.7s						

IDC 06 13:53:35.5±37.0**, 7°.16N**×**126°.29E, h0**^{km}**, mb3.9**/3**, mbtmp3.9**/3**, Error ellipse: s-maj=623.5km s-min=218.9km az=158.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	28.07	164	P	P	13 59 28.1	-0.8
	0.6nm,0.3s,baz=343,slow=9.1,SNR=16 0.6nm,0.3s						
ASAR	Alice Springs	31.52	167	P	P	13 59 59.7	+0.2
	0.5nm,0.5s,baz=356,slow=8.1,SNR=9.9 0.5nm,0.5s						
STKA	Stephens Creek	41.47	160	P	P	14 01 25.1	+0.8
	0.9nm,0.4s,baz=324,slow=8.7,SNR=2.9 0.9nm,0.4s						

NNC 06 13:56:28.1±0.8**, 38°.51N**×**70°.12E, h101**^{km}±23^{km}**, mb3.0, mpv3.5, 4C-2D, Error ellipse: s-maj=6.9km s-min=4.7km az=8.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	4.60	4	P	Pn	13 57 35.3	0.0
	2.9nm,0.3s,baz=186,slow=14,SNR=22						
KK31				⇑S	Sn	13 58 28.1	+0.6
	6.3nm,0.6s,baz=182,slow=31,SNR=5.6						
AAK	Ala-Archa	5.30	38	⇓P	Pn	13 57 44.8	-0.2
	2.3nm,0.8s						
AAK				⇑S	Sn	13 58 45.7	+0.8
	2.6nm,0.7s						
TKM2	Tokmak 2	6.06	42	⇓P	Pn	13 57 55.5	+0.2
	6.5nm,0.5s						
TKM2				⇑S	Sn	13 59 03.8	+0.4
	8.1nm,1.1s						
AB31	Akbulak array	12.99	329	⇑P	Pn	13 59 28.8	+0.1
	1.5nm,0.7s,baz=171,slow=11,SNR=14						

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*CNRM **06** 13:58:04.9, 37°.04N×0°.32W, h176^{km}, ML2.6*

CRAAG 06 13:57:57.0, 36°.33N×1°.57E, Ml3.0, Algerie 07km NE Beni-Rached, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EBNR	Beni Rached	0.04	220	P	Pg	13 57 59.5	+1.7
EANR	'Ain N'Sour	0.53	225	P	Pb	13 58 08.3	-0.9
EKMS	Oued Kramis	0.75	269	P	Pb	13 58 12.1	-0.8
EBGR	Bougara	0.82	158	P	Pb	13 58 13.7	-0.4
EMHD	Djebel Mahouad	1.13	96	P	Pg	13 58 16.5	-2.1
CART	Cartagena	2.41	302	P	Pn	13 58 30.6	-7.1
CART	Cartagena	2.41	302	S	Sn	13 58 50.7	-17
JBK	JBK	3.92	241	P	Pn	13 58 57.7	-0.9
JBK	JBK	3.92	241	S	Sn	13 59 40.3	-5.1
AKLM	AKL	4.79	249	P	Pn	13 59 04.0	-6.5
AKLM	AKL	4.79	249	S	Sn	13 59 50.4	-16
MDT	Midelt	6.18	237	P	Pn	13 59 25.6	-4.0
MD31	MD31	6.25	238	P	Pn	13 59 26.0	-4.6

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*BER **06** 14:03:58.6±1.9, 59°.86N×21°.75E, h0^{km}, ML2.4(HEL), Suspected explosion*

*HEL **06** 14:03:59.6±0.1, 60°.10N×21°.42E, h0^{km}, ML2.4, Explosion*

*IDC **06** 14:03:59.3±1.5, 60°.03N×21°.46E, h0^{km}, mbtmp2.7/4, ML2.1/4, Error ellipse: s-maj=20.9km s-min=7.0km az=165.0*

*DNK **06** 14:04:00.3±0.8, 60°.07N×21°.26E, h0^{km}, ML2.6(UPP), Suspected explosion*

*UPP **06** 14:04:00.7±0.6, 60°.03N×21°.16E, h0^{km}, ML2.6*

ISC 06 14:03:58.0±0.8**, 60°.11N**±0°.04×**21°.45E**±0°.02**, h0**^{km}**, n74,** σ**1^{s}46**/76**, Finland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAL	Aland	0.73	276	P	Pg	14 04 12.2	+0.3
AAL				S	Sg	14 04 20.7	-0.7
AAL	Aland	0.73	276	P	Pg	14 04 12.2	+0.3
AAL				S	Sg	14 04 20.7	-0.7
AAL	Aland	0.73	276	*e*P	Pg	14 04 12.2	+0.3
AAL				*e*S	Sg	14 04 21.8	+0.4
RAF	Rauma	0.93	9	*e*P	Pg	14 04 16.6	+0.7
RAF	Rauma	0.93	9	*e*P	Pg	14 04 16.5	+0.6
RAF				MSG		14 04 28.6	
	comp=Z,28nm,0.2s						
TVF	Tvarminne	0.94	105	*e*P	Pg	14 04 16.6	+0.7
GRAU	Graesoe	1.47	280	P	Pn	14 04 24.8	-0.9
GRAU	Graesoe	1.47	280	P	Pn	14 04 24.8	-0.9
MEF	Metsahovi	1.48	84	*e*P	Pn	14 04 26.2	+0.5
MEF	Metsahovi	1.48	84	*e*P	Pb	14 04 26.8	+0.5
MEF				MSG		14 04 43.8	
	comp=Z,45nm,0.2s						
MEF				*e*S	Sg	14 04 45.4	0.0
NRTU	Norrtaelje	1.48	254	P	Pn	14 04 25.1	-0.7
NRTU	Norrtaelje	1.48	254	P	Pn	14 04 25.1	-0.7
NUR	Nurmijarvi	1.64	74	*e*P	Pn	14 04 29.0	+1.0
NUR				MSG		14 04 48.8	
	comp=Z,32nm,0.2s						
HEL1	Helsinki	1.72	86	*e*P	Pb	14 04 30.4	+0.1
KPF	Kankaanpaa	1.76	10	*e*P	Pn	14 04 30.9	+1.2
FLYU	Flymyra	1.79	272	P	Pn	14 04 30.0	0.0
FLYU	Flymyra	1.79	272	P	Pn	14 04 30.0	0.0
MTSE	Matsula	1.85	138	*e*P	Pn	14 04 30.8	0.0
MTSE	Matsula	1.85	138	*e*P	Pn	14 04 31.9	+1.1
UPP	Uppsala	1.94	264	P	Pn	14 04 33.3	+1.2
UPP	Uppsala	1.94	264	P	Pn	14 04 33.3	+1.2
FIBU	Brunna	2.07	266	P	Pn	14 04 34.9	+1.0
FIBU	Brunna	2.07	266	P	Pn	14 04 34.9	+1.0
NYNU	Nynaeshamn	2.07	239	P	Pn	14 04 35.2	+1.3
NYNU	Nynaeshamn	2.07	239	P	Pn	14 04 35.2	+1.3
OSTU	Oestervaala	2.16	275	P	Pn	14 04 36.3	+1.1
OSTU	Oestervaala	2.16	275	P	Pn	14 04 36.3	+1.1
IGGU	Iggoen	2.19	292	P	Pn	14 04 37.4	+1.8
IGGU	Iggoen	2.19	292	P	Pn	14 04 37.4	+1.8
BACU	Backbrunna	2.20	265	P	Pn	14 04 37.1	+1.5
BACU	Backbrunna	2.20	265	P	Pn	14 04 37.1	+1.5
PVF	Pernaja	2.24	77	MSG		14 05 05.9	
	comp=Z,26nm,0.2s						
SLIT	Slitere, Latvi	2.52	170	*e*P	Pn	14 04 38.9	-1.2
SLIT	Slitere, Latvi	2.52	170	*e*S	Sn	14 05 12.3	+0.9
ARNU	Arnoeviken	2.55	310	P	Pn	14 04 42.3	+1.8
ARNU	Arnoeviken	2.55	310	P	Pn	14 04 42.3	+1.8
FIA0	FINESS Array S	2.64	57	MSG		14 05 17.5	
	comp=Z,25nm,0.2s						
FINES	FINESS Array B	2.64	57	Pn	Pb	14 04 44.9	-1.1
	comp=Z,1.4nm,0.3s,baz=236,slow=13,SNR=98						
FINES				Sn	Sb	14 05 19.3	+0.4
	comp=Z,3.5nm,0.3s,baz=238,slow=21,SNR=31 comp=Z,2.9nm,0.2s						
KEF	Keuruu	2.65	37	*e*P	Pn	14 04 43.1	+1.2
KEF	Keuruu	2.65	37	MSG		14 05 18.0	
	comp=Z,15nm,0.2s						
VAF	Ylistaro	3.00	11	*e*P	Pn	14 04 47.7	+0.9
VAF	Ylistaro	3.00	11	MSG		14 05 28.1	
	comp=Z,8.4nm,0.2s						
KAF	Kangasniemi	3.10	47	MSG		14 05 31.0	
	comp=Z,9.4nm,0.2s						
HUSU	Husum	3.42	343	*e*P	Pn	14 04 54.7	+2.3
HUSU				*e*S	Sn	14 05 35.0	+1.4
UMAU	Umeaa	3.81	355	*e*P	Pn	14 04 59.4	+1.7
HFS	Hagfors	3.88	274	Pn	Pn	14 04 59.4	+0.6
	comp=Z,0.1nm,0.3s,baz=83,slow=15,SNR=1.0						
HFS				Pg	Pb	14 05 06.8	-0.4
	comp=Z,0.4nm,0.3s,baz=90,slow=20,SNR=19						
HFS				Lg	Lg	14 06 01.5	
	comp=Z,1.9nm,0.3s,baz=87,slow=30,SNR=15 comp=Z,0.2nm,0.3s						
NC602	NORSAR Array S	4.95	282	*e*P	Pn	14 05 14.2	+0.7
NC303	NORSAR Array S	5.08	287	*e*P	Pn	14 05 16.3	+1.0
NB201	NORSAR Array S	5.10	285	*e*P	Pn	14 05 16.4	+0.9
NOA	NORSAR Array B	5.13	285	Pn	Pn	14 05 15.9	-0.2
	baz=102,slow=6.5,SNR=5.8						
NOA				Sn	Sn	14 06 16.0	0.0
	baz=103,slow=16,SNR=1.3						
NOA				Lg	Lg	14 06 41.0	
	comp=Z,0.1nm,0.3s,baz=70,slow=20,SNR=4.6 comp=Z,0.1nm,0.3s						
BORU	Boraas	5.14	245	*i* P	Pn	14 05 21.2	+5.1
NAO01	NORSAR Array S	5.28	283	*e*P	Pn	14 05 19.4	+1.4
STRU	Stroemstad	5.33	263	*e*P	Pn	14 05 19.4	+0.7

STRU	**Stroemstad**	**5.33**	**263**	*i* P	**Pn**	**14 05 19.4**	**+0.7**
NBO00	**NORSAR Array S**	**5.35**	**285**	*e*P	**Pn**	**14 05 19.6**	**+0.7**
NC204	**NORSAR Array S**	**5.38**	**287**	*e*P	**Pn**	**14 05 20.0**	**+0.6**
DEL	**Delary**	**5.41**	**231**	*i* P	**Pn**	**14 05 20.6**	**+0.9**
TJOU	**Tjoern**	**5.48**	**252**	*i* P	**Pn**	**14 05 22.4**	**+1.7**
ONAU	**Onsala**	**5.66**	**245**	*i* P	**Pn**	**14 05 27.8**	**+4.7**
BJUU	**Bjuv**	**6.02**	**232**	*i* P	**Pn**	**14 05 29.0**	**+0.8**
LUNU	**Lund**	**6.19**	**227**	*i* P	**Pn**	**14 05 30.2**	**-0.3**
NSS	**Namsos**	**6.26**	**319**	*e*P	**Pn**	**14 05 32.3**	**+0.9**
MOR8	**Moi Rana**	**6.86**	**335**	*e*P	**Pn**	**14 05 42.9**	**+3.2**
HOMB	**Homborsund**	**6.90**	**260**	*e*P	**Pn**	**14 05 40.4**	**+0.2**
LEIR	**Leirfjorden**	**7.11**	**332**	*e*P	**Pn**	**14 05 44.2**	**+1.1**
MOL	**Molde**	**7.13**	**296**	*e*P	**Pn**	**14 05 45.3**	**+2.0**
STOK	**Stokkvaagen**	**7.31**	**332**	*e*P	**Pn**	**14 05 48.9**	**+3.0**
SALU	**Saltoluokta**	**7.42**	**351**	*e*P	**Pn**	**14 05 47.9**	**+0.6**
VAGH	**Vaagaholmen**	**7.59**	**335**	*e*P	**Pn**	**14 05 51.7**	**+2.1**
STEI	**Steigen**	**8.31**	**344**	*e*P	**Pn**	**14 06 00.8**	**+1.3**
HEF	**Hetta**	**8.39**	**6**	*e*P	**Pn**	**14 05 59.5**	**-1.2**
KIF	**Kilpisjarvi**	**8.94**	**358**	*e*P	**Pn**	**14 06 08.4**	**+0.2**
ARCES	**ARCESS Array B**	**9.62**	**9**	Pn	**Pn**	**14 06 16.8**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=190,slow=14,SNR=10						
ARCES				Sn	**Sn**	**14 08 00.2**	**-5.9**
	comp=Z,0.1nm,0.3s,baz=192,slow=24,SNR=2.4 comp=Z,1.0nm,0.8s						
SPA0	**Spitsbergen Ar**	**18.24**	**357**	*e*P	P	14 08 21.5	+9.2

IDC 06 14:44:12.3±2.2**, 4°.96N**×**123°.05E, h0^{km}, mb3.7**/3**,**
mbtmp3.7/3**, Error ellipse: s-maj=304.7km**
s-min=25.0km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**27.12**	**156**	P	P	14 49 57.2	0.0
	0.4nm,0.3s,baz=334,slow=9.7,SNR=6.8 0.4nm,0.3s						
ASAR	**Alice Springs**	**30.36**	**160**	P	P	14 50 26.1	0.0
	0.3nm,0.3s,baz=338,slow=7.3,SNR=10 0.3nm,0.3s						
MKAR	**Makanchi Array**	**54.49**	**327**	P	P	14 53 41.8	-0.1
	0.4nm,0.4s,baz=128,slow=8.2,SNR=9.2 0.4nm,0.4s						

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*IDC **06** 14:53:30.4±1.0, 13°.16S×45°.39E, h0^{km}, mb3.8/6,*
mbtmp4.0/8, ML4.9/2, MS2.9/2, Error ellipse: s-maj=36.1km
s-min=19.9km az=150.0

ISC 06 14:53:31.8±0.9**, 13°.15S**±0°.07×**45°.55E**±0°.10**, h10^{km}, n18,**
σ**1ˢ.67**/25**, mb4.0**/6**, Northwest of Madagascar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBV	**Sambava**	**4.27**	**95**	P	**Pn**	**14 54 35.7**	**-1.2**
SBV				S	Sn	14 55 21.5	-5.3
OPO	**Ambohidratompo**	**5.62**	**164**	Pn	**Pn**	**14 54 57.4**	**+1.7**
	4.9nm,0.3s,baz=334,slow=13,SNR=347						
OPO				Sn	**Sn**	**14 55 59.1**	**-1.3**
	1.5nm,0.3s,baz=295,slow=22,SNR=6.2						
OPO				LR	LR	14 56 19.5	
	comp=Z,55nm,19.7s,baz=129,slow=30						
OPO	**Ambohidratompo**	**5.62**	**164**	P	**Pn**	**14 54 57.7**	**+2.0**
OPO				S	**Sn**	**14 55 59.5**	**-1.0**
FIRM	**Firavahana**	**5.67**	**167**	P	**Pn**	**14 54 58.3**	**+1.9**
FIRM				S	**Sn**	**14 56 01.4**	**-0.3**
ATG	**Ambohiby**	**5.74**	**174**	P	**Pn**	**14 54 58.4**	**+1.2**
ATG				S	**Sn**	**14 56 02.3**	**-1.0**
ABPO	**Ambohimpanom**	**6.06**	**165**	P	**Pn**	**14 55 03.2**	**+1.6**
MDSM	**Mandiavato**	**6.08**	**167**	P	**Pn**	**14 55 03.7**	**+1.8**
MDSM				S	**Sn**	**14 56 09.5**	**-2.1**
AVY	**Angavokely**	**6.12**	**160**	P	**Pn**	**14 55 03.8**	**+1.2**
AVY				S	**Sn**	**14 56 09.6**	**-3.3**
DGRM	**Ambatolahisoa**	**6.14**	**172**	P	**Pn**	**14 55 04.2**	**+1.5**
DGRM				S	**Sn**	**14 56 12.1**	**-1.0**
ABM	**Ambohimiarambe**	**6.83**	**165**	P	**Pn**	**14 55 13.9**	**+1.6**
LSZ	**Lusaka**	**16.96**	**261**	Pn	**Pn**	**14 57 27.2**	**-2.3**
	0.6nm,0.3s,baz=89,slow=10,SNR=24 19nm,0.8s						
MATP	**Matopo**	**17.85**	**244**	P	**Pn**	**14 57 39.1**	**-1.4**
	2.3nm,0.8s,baz=68,slow=14,SNR=9.2						
LBTB	**Lobatse**	**22.21**	**235**	P	**P**	**14 58 27.6**	**-1.1**
	6.1nm,0.9s,baz=76,slow=8.7,SNR=5.6						
LBTB				LR	LR	15 07 38.0	
	comp=Z,63nm,18.1s,baz=56,slow=38 6.1nm,0.9s						
BOSA	**Boshof**	**24.36**	**228**	P	**P**	**14 58 48.9**	**-1.4**
	4.1nm,0.8s,baz=59,slow=9.4,SNR=4.3 4.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**61.30**	**60**	P	**P**	**15 03 49.0**	**+1.1**
	0.6nm,0.8s,baz=248,slow=6.3,SNR=5.2 0.6nm,0.8s						
MKAR	**Makanchi Array**	**68.15**	**26**	P	**P**	**15 04 33.5**	**+1.4**
	0.2nm,0.5s,baz=202,slow=6.3,SNR=1.9 0.2nm,0.5s						
ASAR	**Alice Springs**	**83.35**	**113**	P	**P**	**15 05 59.9**	**+0.1**
	0.7nm,0.8s,baz=263,slow=4.8,SNR=23 0.7nm,0.8s						
WRA	**Warramunga Arr**	**84.49**	**109**	P	**P**	**15 06 07.2**	**+1.5**
	1.3nm,1.0s,baz=268,slow=4.2,SNR=4.8 1.3nm,1.0s						

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*NNC **06** 15:04:56.8±3.7, 38°.49N×70°.41E, h0^{km}, mb4.0, mpv3.5,*
Error ellipse: s-maj=28.2km s-min=22.7km az=22.0
*SOME **06** 15:04:56.2, 38°.83N×72°.20E, h20^{km}*

ISC 06 15:05:07.5±3.2**, 39°.1N**±0°.1×**70°.5E**±0°.1**, h17^{km}, n11,**
σ**2ˢ.60**/17**, 6C, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**3.84**	**38**	P	**Pn**	**15 06 06.2**	**0.0**
	SNR=6.9						
BRLS	**Borolday**	**3.92**	**352**	*e*P	**Pb**	**15 06 15.9**	**-0.3**
	6.1nm,0.6s						
BRLS				*e*S	**Sg**	**15 07 13.4**	**-0.1**
	7.7nm,0.4s						
KK31	**Karatay Array**	**3.96**	**360**	⥣P	**Pn**	**15 06 07.0**	**-0.6**
	5.8nm,0.5s,baz=177,slow=12,SNR=33						
KK31				⥣S	**Sb**	**15 07 03.2**	**-1.4**
	12nm,0.8s,baz=174,slow=28,SNR=5.6						
MRKS	**Merke**	**4.14**	**29**	*e*P	**Pn**	**15 06 10.2**	**+0.1**
	3.1nm,0.4s						
MRKS				*e*S	**Sn**	**15 07 03.3**	**+5.2**
	9.5nm,0.5s						
AAK	**Ala-Archa**	**4.61**	**39**	P	**Pn**	**15 06 16.9**	**+0.3**
	SNR=7.2						
AAK	**Ala-Archa**	**4.61**	**39**	⥣P	**Pn**	**15 06 16.0**	**-0.5**
	1.4nm,0.6s						
AAK				⥣S	**Sb**	**15 07 18.1**	**-5.2**
	2.7nm,0.7s						
KBK	**Karagaybulak**	**4.85**	**42**	P	**Pn**	**15 06 21.1**	**+1.2**
	SNR=17						
USP	**Ospenovka**	**5.09**	**35**	P	**Pn**	**15 06 22.7**	**-0.4**
	SNR=11						
TKM2	**Tokmak 2**	**5.38**	**44**	P	**Pn**	**15 06 27.5**	**+0.3**
	SNR=18						
TKM2	**Tokmak 2**	**5.38**	**44**	⥣P	**Pn**	**15 06 26.6**	**-0.6**
	5.8nm,0.5s						
TKM2				⥣S	**Sn**	**15 07 34.4**	**+5.6**
	7.4nm,0.9s						
KST	**Kastek**	**5.66**	**45**	*e*P	**Pn**	**15 06 28.9**	**-2.1**
	1.4nm,0.2s						
KST				*e*S	**Sn**	**15 07 35.5**	**-0.1**
	1.9nm,0.4s						

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*MEX **06** 15:25:38.4±1.2, 15°.98N×98°.38W, h12^{km}±30^{km}, MD4.8*
*NEIC **06** 15:25:39.7±1.6, 16°.33N±0°.05×98°.16W±0°.03, h10^{km}±1^{km},*
mb4.7/310, Md4.8/167(MEX), Error ellipse: s-maj=10.3km
s-min=3.2km az=210.0
*IDC **06** 15:25:42.1±4.4, 16°.16N×98°.14W, h35^{km}±32^{km}, mb4.0/12,*
mbtmp4.2/15, ML3.9/2, MS3.8/13, Error ellipse:
s-maj=31.2km s-min=17.4km az=40.0

ISC 06 15:25:36.4±1.4**, 16°.00N**±0°.03×**98°.40W**±0°.02**, h6^{km}**±8^{km}**,**
n579, σ**2ˢ.11**/564**, mb4.7**/134**, MS3.8**/11**, 1C, Off coast of**
Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.47**	**33**		**Pg**	**15 25 46.0**	**+0.5**
PNIG	**Pinotepa**	**0.47**	**33**	⥣*e*P	**Pg**	**15 25 46.0**	**+0.5**
	baz=213,slow=14						
PNIG				*e*S	**Sg**	**15 25 53.0**	**+1.3**
CRIG	**Cruz Grande**	**1.02**	**316**		**Pb**	**15 25 54.6**	**-1.7**
CRIG					**Sb**	**15 26 06.2**	**-3.8**
CRIG	**Cruz Grande**	**1.02**	**316**	*e*P	**Pb**	**15 25 54.7**	**-1.7**
CRIG				*e*S	**Sb**	**15 26 07.0**	**-3.0**
YOIG	**Yosondua**	**1.18**	**44**		**Pn**	**15 25 57.6**	**-2.0**
YOIG					**Sb**	**15 26 13.7**	**-1.4**
YOIG	**Yosondua**	**1.18**	**44**	*e*P	**Pn**	**15 25 57.5**	**-2.2**
YOIG				*e*S	**Sb**	**15 26 14.6**	**-0.4**
PEIG	**Puerto Escondi**	**1.20**	**90**		**Pn**	**15 25 56.9**	**-2.8**
PEIG					**Sb**	**15 26 11.8**	**-3.5**
PEIG	**Puerto Escondi**	**1.20**	**90**	*e*P	**Pn**	**15 25 56.8**	**-2.8**
PEIG				*e*S	**Sb**	**15 26 11.8**	**-3.5**
TXIG	**Tlaxiaco**	**1.39**	**26**		**Pn**	**15 26 01.2**	**-1.3**
TXIG					**Sn**	**15 26 17.8**	**-3.5**
TXIG	**Tlaxiaco**	**1.39**	**26**	*i* P	**Pn**	**15 26 01.2**	**-1.3**
TXIG				*e*S	**Sn**	**15 26 20.2**	**-1.1**
TLIG	**Tlapa**	**1.57**	**354**		**Pn**	**15 26 02.9**	**-1.9**
TLIG	**Tlapa**	**1.57**	**354**	*e*P	**Pn**	**15 26 03.7**	**-1.1**
TLIG				*e*S	**Sn**	**15 26 24.3**	**-1.2**
DAIG	**Los Arroyos**	**1.58**	**310**		**Pn**	**15 26 03.0**	**-1.9**
DAIG					**Sn**	**15 26 21.2**	**-4.4**
DAIG	**Los Arroyos**	**1.58**	**310**	*e*P	**Pn**	**15 26 03.0**	**-1.9**
DAIG				*e*S	**Sn**	**15 26 21.2**	**-4.4**
VNTA	**La Mica**	**1.64**	**304**	*e*P	**Pn**	**15 26 03.4**	**-2.4**
VNTA				*e*S	**Sn**	**15 26 22.2**	**-4.9**
ACP2	**Acapulco**	**1.67**	**302**		**Pn**	**15 26 06.1**	**-0.1**
ACP2					**Sn**	**15 26 22.9**	**-5.0**
ACP2	**Acapulco**	**1.67**	**302**	*e*P	**Pn**	**15 26 06.1**	**-0.1**
ACP2				*e*S	**Sn**	**15 26 22.9**	**-5.0**
HMTT	**Tlapaneco**	**1.80**	**355**		**Pn**	**15 26 07.1**	**-0.9**
HMTT					**Sn**	**15 26 28.2**	**-3.0**
HMTT	**Tlapaneco**	**1.80**	**355**	*e*P	**Pn**	**15 26 07.1**	**-0.9**
HMTT				*e*S	**Sn**	**15 26 28.2**	**-3.0**
PANG	**Puerto Angel**	**1.88**	**100**		**Pn**	**15 26 07.9**	**-1.1**
PANG					**Sn**	**15 26 26.1**	**-7.0**
PANG	**Puerto Angel**	**1.88**	**100**	*e*P	**Pn**	**15 26 07.9**	**-1.1**
PANG				*e*S	**Sn**	**15 26 26.1**	**-7.0**
FTIG	**Fresnillo de T**	**1.92**	**8**		**Pn**	**15 26 08.8**	**-0.9**
FTIG					**Sn**	**15 26 30.5**	**-3.6**
FTIG	**Fresnillo de T**	**1.92**	**8**	*e*P	**Pn**	**15 26 08.8**	**-0.9**
FTIG				*e*S	**Sn**	**15 26 30.5**	**-3.6**
VHO	**Vista Hermosa**	**1.92**	**56**	*e*P	**Pn**	**15 26 07.9**	**-1.9**
VHO				*e*S	**Sn**	**15 26 30.0**	**-4.3**
OXIG	**Oaxaca**	**1.92**	**56**		**Pn**	**15 26 07.9**	**-1.9**
OXIG					**Sn**	**15 26 30.0**	**-4.4**
OXBJ	**Oaxaca**	**1.93**	**56**		**Pn**	**15 26 08.0**	**-1.9**
OXBJ					**Sn**	**15 26 30.2**	**-4.3**
OXBJ	**Oaxaca**	**1.93**	**56**	*e*P	**Pn**	**15 26 08.0**	**-1.9**
OXBJ				*e*S	**Sn**	**15 26 30.2**	**-4.3**
OXLC	**Oaxaca**	**1.94**	**57**	*e*P	**Pn**	**15 26 08.6**	**-1.5**
OXLC				*e*S	**Sn**	**15 26 32.1**	**-2.8**
CAIG	**El Cayaco**	**2.08**	**301**		**Pn**	**15 26 10.0**	**-1.7**
CAIG					**Sn**	**15 26 35.9**	**-2.0**
CAIG	**El Cayaco**	**2.08**	**301**	*e*P	**Pn**	**15 26 10.0**	**-1.7**
CAIG				*e*S	**Sn**	**15 26 35.9**	**-2.0**
HUIG	**Huatulco**	**2.21**	**96**		**Pn**	**15 26 11.6**	**-2.0**
HUIG					**Sn**	**15 26 37.2**	**-4.1**
HUIG	**Huatulco**	**2.21**	**96**	*e*P	**Pn**	**15 26 11.6**	**-2.0**
HUIG				*e*S	**Sn**	**15 26 37.2**	**-4.1**
MEIG	**Mezcala**	**2.25**	**329**		**Pn**	**15 26 13.8**	**-0.3**
MEIG					**Sn**	**15 26 38.8**	**-3.4**
MEIG	**Mezcala**	**2.25**	**329**	*e*P	**Pn**	**15 26 13.8**	**-0.3**
MEIG				*e*S	**Sn**	**15 26 38.8**	**-3.4**
ATYC	**Atoyac**	**2.29**	**302**	*e*P	**Pn**	**15 26 13.6**	**-1.1**
ATYC				*e*S	**Sn**	**15 26 37.8**	**-5.5**
TOIG	**Toxpalan**	**2.45**	**31**		**Pn**	**15 26 16.1**	**-0.8**
TOIG					**Sn**	**15 26 44.8**	**-2.4**
TOIG	**Toxpalan**	**2.45**	**31**	*e*P	**Pn**	**15 26 16.1**	**-0.8**
TOIG				*e*S	**Sn**	**15 26 44.8**	**-2.4**
PLIG	**Platanillo**	**2.61**	**336**		**Pn**	**15 26 19.2**	**+0.1**
PLIG					**Sn**	**15 26 48.9**	**-2.3**
PLIG	**Platanillo**	**2.61**	**336**	*e*P	**Pn**	**15 26 19.2**	**+0.1**
PLIG				*e*S	**Sn**	**15 26 48.9**	**-2.3**
TPIG	**Tehuac#an**	**2.61**	**22**		**Pn**	**15 26 18.5**	**-0.7**
TPIG					**Sn**	**15 26 49.4**	**-1.8**
TPIG	**Tehuac#an**	**2.61**	**22**	*e*P	**Pn**	**15 26 18.5**	**-0.7**
TPIG				*e*S	**Sn**	**15 26 49.4**	**-1.8**
THEZ	**Tehuacan**	**2.65**	**21**	*e*P	**Pn**	**15 26 21.0**	**+1.2**
THEZ				*e*S	**Sn**	**15 26 54.6**	**+2.2**
YAIG	**Yautepec**	**2.92**	**347**		**Pn**	**15 26 24.3**	**+0.8**
YAIG					**Sn**	**15 26 57.3**	**-1.7**
YAIG	**Yautepec**	**2.92**	**347**	*e*P	**Pn**	**15 26 24.3**	**+0.8**
YAIG				*e*S	**Sn**	**15 26 57.3**	**-1.7**
ARIG	**Puente Sto Nin**	**2.94**	**321**		**Pn**	**15 26 23.7**	**+0.1**
ARIG					**Sn**	**15 26 57.3**	**-1.9**
ARIG	**Puente Sto Nin**	**2.94**	**321**	*e*P	**Pn**	**15 26 23.7**	**+0.1**
ARIG				*e*S	**Sn**	**15 26 57.3**	**-1.9**
PPPT	**Popocatepetl**	**2.97**	**356**	*e*P	**Pb**	**15 26 28.3**	**-1.6**
PPPT				*e*S	**Sn**	**15 26 56.6**	**-4.0**
PBCV	**Popocatepetl**	**2.98**	**357**	*e*P	**Pn**	**15 26 26.3**	**+1.9**
PBCV				*e*S	**Sn**	**15 26 55.7**	**-4.9**
PBXN	**Popocatepetl**	**3.01**	**355**	*e*P	**Pb**	**15 26 28.8**	**-1.8**
PBXN				*e*S	**Sn**	**15 26 56.6**	**-4.9**
NEUV	**Arroyo Zacate**	**3.02**	**55**	*e*P	**Pn**	**15 26 23.3**	**-1.3**
NEUV				*e*S	**Sn**	**15 26 59.2**	**-1.8**
PBPN	**Popocatepetl**	**3.04**	**356**	*e*P	**Pn**	**15 26 28.4**	**+3.0**
PBPN				*e*P	**Pb**	**15 26 29.4**	**-1.7**
PBPN				*e*S	**Sn**	**15 26 57.4**	**-5.0**
PBPN				*e*S	**Sb**	**15 27 05.5**	**-3.2**
PHPU	**Puebla**	**3.04**	**4**		**Sn**	**15 26 58.7**	**-3.4**
PHPU	**Puebla**	**3.04**	**4**	*e*S	**Sn**	**15 26 58.7**	**-3.4**
PPM	**Popocatepetl**	**3.06**	**356**	*e*P	**Pn**	**15 26 25.5**	**-0.2**
PPM				*e*S	**Sn**	**15 27 00.8**	**-2.1**
PPIG	**Popocatepetl**	**3.06**	**356**		**Pn**	**15 26 25.5**	**-0.2**
PPIG					**Sn**	**15 27 00.8**	**-2.1**
AMVM	**AMECAMECA**	**3.14**	**353**		**Pn**	**15 26 25.5**	**-1.1**
AMVM					**Sn**	**15 27 04.9**	**+0.3**
AMVM	**AMECAMECA**	**3.14**	**353**	*e*P	**Pn**	**15 26 25.5**	**-1.1**
AMVM				*e*S	**Sn**	**15 27 04.9**	**+0.3**
PET2	**Petatlan**	**3.14**	**300**	*e*S	**Sn**	**15 27 01.5**	**-2.7**
MPVM	**San Francisco**	**3.24**	**350**	*e*P	**Pn**	**15 26 29.4**	**+1.4**
MPVM				*e*S	**Sb**	**15 27 11.3**	**-2.9**
TLVM	**San Miguel Top**	**3.28**	**347**	*e*P	**Pn**	**15 26 29.0**	**+0.5**
TLVM				*e*S	**Sn**	**15 27 07.1**	**-0.9**
XCVM	**Xochimilco**	**3.31**	**348**	*e*P	**Pb**	**15 26 34.3**	**-1.4**
XCVM				*e*S	**Sn**	**15 27 09.2**	**+0.5**
TEJU	**Tejupilco**	**3.34**	**330**	*e*P	**Pn**	**15 26 29.8**	**+0.5**
TEJU				*e*S	**Sn**	**15 27 10.8**	**+1.3**
ZIIG	**Zihuatanejo**	**3.34**	**299**		**Pn**	**15 26 31.8**	**+2.6**
ZIIG					**Sn**	**15 27 08.0**	**-1.2**
ZIIG	**Zihuatanejo**	**3.34**	**299**	*e*P	**Pn**	**15 26 31.8**	**+2.6**
ZIIG				*e*S	**Sn**	**15 27 08.0**	**-1.2**
AOVM	**Tlapan**	**3.37**	**345**		**Pn**	**15 26 30.2**	**+0.2**
AOVM					**Sn**	**15 27 09.6**	**-0.9**
AOVM	**Tlapan**	**3.37**	**345**	*e*P	**Pn**	**15 26 30.2**	**+0.2**
AOVM				*e*S	**Sn**	**15 27 09.6**	**-0.9**
CNCY	**Coyoacan**	**3.38**	**347**	*e*P	**Pb**	**15 26 36.1**	**-0.7**
CNCY				*e*S	**Sn**	**15 27 05.7**	**-4.8**
UNM	**Universidad Na**	**3.40**	**347**		**Pn**	**15 26 27.5**	**-2.6**
UNM	**Universidad Na**	**3.40**	**347**	*e*P	**Pn**	**15 26 32.9**	**+2.7**
UNM				*e*S	**Sn**	**15 27 09.8**	**-1.0**
CUP5	**Mexico City**	**3.40**	**347**	*e*P	**Pn**	**15 26 33.2**	**+3.1**
CUP5				*e*S	**Sn**	**15 27 09.5**	**-1.4**
INVM	**La Marquesa**	**3.41**	**344**	*e*P	**Pn**	**15 26 33.0**	**+2.7**
INVM				*e*S	**Sn**	**15 27 13.3**	**+2.0**
BJVM	**Benito Juarez**	**3.44**	**348**	*e*P	**Pb**	**15 26 35.9**	**-1.9**
BJVM				*e*S	**Sn**	**15 27 12.0**	**+0.1**
CJVM	**Cuajimalpa**	**3.45**	**346**	*e*P	**Pb**	**15 26 36.8**	**-1.3**
CJVM				*e*S	**Sn**	**15 27 12.5**	**+0.3**
TXVM	**Universitario**	**3.45**	**352**	*e*P	**Pn**	**15 26 35.4**	**+4.4**
TXVM				*e*S	**Sb**	**15 27 18.1**	**-2.3**
PBVM	**Pinon**	**3.49**	**349**		**Pn**	**15 26 32.2**	**+1.1**
PBVM					**Sn**	**15 27 12.8**	**0.0**
PBVM	**Pinon**	**3.49**	**349**	*e*P	**Pn**	**15 26 32.2**	**+1.1**
PBVM				*e*S	**Sn**	**15 27 12.8**	**0.0**
CMIG	**Matias Romero**	**3.54**	**72**		**Pn**	**15 26 29.3**	**-2.5**
CMIG					**Sn**	**15 27 11.1**	**-3.0**
CMIG	**Matias Romero**	**3.54**	**72**	Pn	**Pn**	**15 26 29.7**	**-2.2**
	7.3nm,0.3s,baz=267,slow=10,SNR=82						
CMIG				Pg	**Pb**	**15 26 41.7**	**+2.3**
	36nm,0.3s,baz=261,slow=14,SNR=20						
CMIG				Sn	**Sn**	**15 27 10.0**	**-4.1**
	50nm,0.3s,baz=349,slow=22,SNR=8.0						
CMIG				Lg	Lg	15 27 26.9	
	182nm,0.3s,baz=311,slow=5.4,SNR=31						
CMIG				LR	LR	15 28 11.4	
	comp=Z,2μm,18.7s,baz=164,slow=46 27nm,0.4s						
CMIG	**Matias Romero**	**3.54**	**72**	*e*P	**Pn**	**15 26 29.3**	**-2.5**
CMIG				*e*S	**Sn**	**15 27 11.1**	**-3.0**
APVM	**Azcapotzalco**	**3.56**	**348**		**Pn**	**15 26 33.5**	**+1.1**
APVM					**Sn**	**15 27 15.0**	**+0.1**
APVM	**Azcapotzalco**	**3.56**	**348**	*e*P	**Pn**	**15 26 33.5**	**+1.1**
APVM				*e*S	**Sn**	**15 27 15.0**	**+0.1**
AZVM	**Cuida Lopez Ma**	**3.67**	**347**		**Pb**	**15 26 40.5**	**-1.3**
AZVM					**Sn**	**15 27 16.6**	**-1.0**
AZVM	**Cuida Lopez Ma**	**3.67**	**347**	*e*P	**Pb**	**15 26 40.5**	**-1.3**
AZVM				*e*S	**Sn**	**15 27 16.6**	**-1.0**
JAUV	**Jalcomulco**	**3.68**	**24**	*e*P	**Pn**	**15 26 32.6**	**-1.2**
JAUV				*e*S	**Sn**	**15 27 13.4**	**-4.2**
VTVM	**Tizayuca**	**3.77**	**355**		**Pb**	**15 26 41.3**	**-2.2**
VTVM					**Sn**	**15 27 20.6**	**+0.5**
VTVM	**Tizayuca**	**3.77**	**355**	*e*P	**Pb**	**15 26 41.3**	**-2.2**
VTVM				*e*S	**Sn**	**15 27 20.6**	**+0.5**
ZUVM	**ZUMPANGO**	**3.86**	**350**		**Pn**	**15 26 41.3**	**+4.7**
ZUVM					**Sn**	**15 27 23.8**	**+1.4**
ZUVM	**ZUMPANGO**	**3.86**	**350**	*e*P	**Pn**	**15 26 41.3**	**+4.7**
ZUVM				*e*S	**Sn**	**15 27 23.8**	**+1.4**
ATVM	**ATLACOMULCO**	**3.99**	**340**		**Pn**	**15 26 40.3**	**+2.0**
ATVM					**Sn**	**15 27 27.3**	**+1.7**
ATVM	**ATLACOMULCO**	**3.99**	**340**	*e*P	**Pn**	**15 26 40.3**	**+2.0**
ATVM				*e*S	**Sn**	**15 27 27.3**	**+1.7**
PMUV	**Sontecomapan**	**4.03**	**51**	*e*P	**Pn**	**15 26 36.7**	**-2.0**
PMUV				*e*S	**Sn**	**15 27 23.3**	**-2.8**
ACIG	**Acambay**	**4.21**	**341**		**Pn**	**15 26 43.7**	**+2.6**
ACIG					**Sn**	**15 27 30.5**	**-0.2**
ACIG	**Acambay**	**4.21**	**341**	*e*P	**Pn**	**15 26 43.7**	**+2.6**
ACIG				*e*S	**Sn**	**15 27 30.5**	**-0.2**
CXUV	**Coxquihui**	**4.22**	**10**	*e*P	**Pn**	**15 26 42.7**	**+1.4**
CXUV				*e*S	**Sn**	**15 27 34.5**	**+3.5**
TUIG	**Tuzandepetl**	**4.31**	**61**	*e*P	**Pn**	**15 26 39.7**	**-2.7**
TUIG				*e*S	**Sn**	**15 27 28.2**	**-4.8**
DHIG	**Demacu**	**4.32**	**352**		**Pb**	**15 26 50.1**	**-2.8**
DHIG					**Sb**	**15 27 40.1**	**-5.4**
DEIG	**Demacu**	**4.32**	**352**	*e*P	**Pb**	**15 26 50.1**	**-2.8**
DEIG				*e*S	**Sb**	**15 27 40.1**	**-5.4**
MOIG	**Morelia**	**4.52**	**324**		**Pn**	**15 26 46.9**	**+1.3**
MOIG	**Morelia**	**4.52**	**324**	*e*P	**Pn**	**15 26 47.4**	**+1.8**
MOIG				*e*S	**Sn**	**15 27 37.7**	**-0.9**
PCIG		**4.99**	**93**		**Pn**	**15 26 50.7**	**-1.1**
PCIG					**Sn**	**15 27 45.5**	**-4.4**
PCIG		**4.99**	**93**	*e*P	**Pn**	**15 26 50.7**	**-1.1**
PCIG				*e*S	**Sn**	**15 27 45.5**	**-4.4**
JRQG	**Juriquilla Cam**	**5.07**	**338**		**Pn**	**15 26 53.0**	**-0.1**
JRQG	**Juriquilla Cam**	**5.07**	**338**	*e*P	**Pn**	**15 26 52.0**	**-1.2**
JRQG				*e*S	**Sn**	**15 27 51.4**	**-0.7**
TGIG		**5.12**	**81**		**Pn**	**15 26 57.2**	**+3.6**
TGIG					**Sn**	**15 27 48.0**	**-5.3**
TGIG		**5.12**	**81**	*e*P	**Pn**	**15 26 57.2**	**+3.6**
TGIG				*e*S	**Sn**	**15 27 48.0**	**-5.3**
CTUV	**Llano Grande**	**5.45**	**0**	*e*P	**Pn**	**15 26 57.6**	**-0.5**
CTUV				*e*S	**Sn**	**15 27 58.6**	**-2.4**
PATR	**El Naranjo**	**6.00**	**98**	*e*P	**Pn**	**15 27 05.5**	**-0.5**
PATR				*e*S	**Sn**	**15 28 07.6**	**-7.6**
CCIG	**Comitan**	**6.02**	**86**		**Pn**	**15 27 05.4**	**-0.8**
CCIG	**Comitan**	**6.02**	**86**	*e*P	**Pn**	**15 27 08.5**	**+2.3**
CCIG				*e*S	**Sn**	**15 28 09.9**	**-5.7**
RPIG	**Rio Verde**	**6.05**	**346**		Pn	15 27 13.9	+7.5
RPIG					**Sn**	**15 28 18.1**	**+2.1**
RPIG	**Rio Verde**	**6.05**	**346**	*e*P	Pn	15 27 13.9	+7.5
RPIG				*e*S	**Sn**	**15 28 18.1**	**+2.1**
PAVE	**Pavencul**	**6.05**	**97**	*e*P	**Pn**	**15 27 05.2**	**-1.3**
PAVE				*e*S	**Sn**	**15 28 12.2**	**-4.1**
MNGA	**Volcan de Coli**	**6.05**	**306**	*e*P	**Pn**	**15 27 07.8**	**+1.1**
MNGA				*e*S	**Sn**	**15 28 15.8**	**-0.7**
INCO	**Volcan de Coli**	**6.08**	**306**	*e*P	**Pn**	**15 27 08.4**	**+1.3**
INCO				*e*S	**Sn**	**15 28 16.1**	**-1.1**
SOMAC	**Volcano de Col**	**6.09**	**306**	*e*P	**Pn**	**15 27 09.5**	**+2.1**
SOMAC				*e*S	**Sn**	**15 28 15.5**	**-2.1**
CDAR	**Ciudad de Arme**	**6.10**	**299**	*e*P	**Pn**	**15 27 08.8**	**+1.7**
CDAR				*e*S	**Sn**	**15 28 15.8**	**-1.5**
CEGR	**Campo Tres**	**6.20**	**304**	*e*P	**Pn**	**15 27 11.1**	**+2.5**
CEGR				*e*S	**Sn**	**15 28 22.4**	**+2.4**
RTAL	**Retalhuleu**	**6.63**	**102**	Pn	**Pn**	**15 27 14.1**	**-0.3**
HUEH	**Huehuetenango**	**6.68**	**95**	Pn	**Pn**	**15 27 15.2**	**0.0**
CIHU	**Emiliano Zapat**	**6.86**	**299**	*e*P	**Pn**	**15 27 17.8**	**+0.2**
CIHU				*e*S	**Sn**	**15 28 32.6**	**-3.4**
AAIG	**Aguscalientes**	**7.03**	**328**		**Sn**	**15 28 39.4**	**-1.1**
AAIG	**Aguscalientes**	**7.03**	**328**	*e*S	**Sn**	**15 28 39.4**	**-1.1**
GTIG	**Gomez Farias**	**7.07**	**354**		**Pn**	**15 27 20.4**	**0.0**
GTIG					**Sn**	**15 28 35.4**	**-5.8**
GTIG	**Gomez Farias**	**7.07**	**354**	*e*P	**Pn**	**15 27 20.4**	**0.0**
GTIG				*e*S	**Sn**	**15 28 35.4**	**-5.8**
CJM	**Chamela**	**7.23**	**300**	*e*P	**Pn**	**15 27 24.4**	**+1.9**
CJM				*e*S	**Sn**	**15 28 36.9**	**-8.1**
ANIG	**Ahuacatlan**	**7.68**	**312**		**Pn**	**15 27 32.0**	**+3.1**
ANIG					**Sn**	**15 28 51.0**	**-5.3**
ANIG	**Ahuacatlan**	**7.68**	**312**	*e*P	**Pn**	**15 27 32.0**	**+3.1**
ANIG				*e*S	**Sn**	**15 28 51.0**	**-5.3**
ZAIG	**Zacatecas**	**7.80**	**330**	Pn	**Pn**	**15 27 31.2**	**+0.5**
ZAIG	**Zacatecas**	**7.80**	**330**	*e*P	**Pn**	**15 27 34.0**	**+3.4**
ZAIG				*e*S	**Sn**	**15 28 58.9**	**-0.6**
PETF	**Flores**	**8.24**	**82**	Pn	**Pn**	**15 27 33.4**	**-3.0**
PETF	**Flores**	**8.24**	**82**	*e*P	**Pn**	**15 27 33.8**	**-2.6**
ESQI	**Esquipulas**	**8.86**	**98**	Pn	**Pn**	**15 27 45.7**	**+0.7**
MTO3	**Montecristo**	**8.87**	**99**		**Pn**	**15 27 45.6**	**+0.4**
LNIG	**Linares**	**8.91**	**354**	*e*P	Pn	15 27 54.2	+8.5
LNIG				*e*S	**Sn**	**15 29 31.4**	**+5.0**
TEIG	**Tepich**	**10.50**	**65**		**Pn**	**15 28 04.3**	**-3.2**
BOAB	**BOACO BROADBAN**	**12.84**	**104**	Pn	**Pn**	**15 28 41.0**	**+1.5**
ACON	**Acoyapa**	**13.44**	**106**	Pn	**Pn**	**15 28 46.8**	**-1.0**
HNDO	**Hondo**	**13.49**	**357**	Pn	**Pn**	**15 28 45.2**	**-3.2**
DRIO	**Del Rio**	**13.52**	**352**	Pn	Pn	15 28 44.5	-4.2
TXAR	**Lajitas Array**	**14.13**	**341**	Pn	**Pn**	**15 28 53.5**	**-3.8**
TXAR	**Lajitas Array**	**14.13**	**341**	Pn	**Pn**	**15 28 59.3**	**+2.1**
	0.6nm,0.6s,baz=153,slow=14,SNR=7.0						
TXAR				LR	LR	15 35 04.0	
	comp=Z,458nm,19.4s,baz=146,slow=40						
JTS	**Las Juntas de**	**14.27**	**112**	Pn	**Pn**	**15 29 00.4**	**+1.3**
JTS	**Las Juntas de**	**14.27**	**112**	Pn	**Pn**	**15 28 59.9**	**+0.9**
	1.0nm,0.3s,baz=249,slow=12,SNR=3.6 5.7nm,0.7s						
SAND	**Sanderson**	**14.31**	**347**		**Pn**	**15 28 60.0**	**+0.4**
SOCE	**Pocosol**	**14.53**	**111**		**Pn**	**15 29 04.1**	**+1.5**
OZNA	**Ozona**	**15.07**	**351**		**Pn**	**15 29 08.7**	**-1.2**
ALPN	**Alpine**	**15.10**	**342**		**Pn**	**15 29 09.9**	**-0.5**
HDC	**Heredia**	**15.14**	**111**	Pn	**Pn**	**15 29 13.3**	**+2.3**
BRDY	**Brady**	**15.23**	**358**		**Pn**	**15 29 09.8**	**-2.2**
LCR2	**La Lucha 2**	**15.34**	**112**		**Pn**	**15 29 15.5**	**+1.8**
LCR2				IAmb	IAmb	15 29 22.8	
	comp=Z,48nm,1.2s						
MNHN	**Monahans**	**15.79**	**346**		**Pn**	**15 29 18.8**	**-0.5**
MNHN				IAmb	IAmb	15 29 25.9	
	comp=Z,20nm,0.8s						
VHRN	**Van Horn**	**15.91**	**339**		**Pn**	**15 29 21.6**	**+0.5**
SGCY	**Sterling City**	**16.04**	**352**		**Pn**	**15 29 21.3**	**-1.4**
SGCY				IAmb	IAmb	15 29 28.9	
	comp=Z,47nm,1.0s						
PECS	**Pecos**	**16.10**	**343**		**Pn**	**15 29 23.8**	**+0.4**
ABTX	**Abilene, Hawle**	**16.59**	**356**		**Pn**	**15 29 28.2**	**-1.5**
ABTX				IAmb	IAmb	15 29 34.2	
	comp=Z,50nm,0.8s						
PLPT	**Palo Pinto**	**16.74**	**0**		**Pn**	**15 29 28.3**	**-3.2**
PLPT				IAmb	IAmb	15 29 36.2	
	comp=Z,68nm,1.0s						
MNTX	**Cornudas Mount**	**16.88**	**339**		**Pn**	**15 29 32.4**	**-0.8**
SN05	**Snyder 5**	**16.96**	**353**		**Pn**	**15 29 32.8**	**-1.6**
FW03	**Perrin-Whitt E**	**16.97**	**1**		**Pn**	**15 29 31.1**	**-3.4**
SN07	**Snyder 07**	**17.17**	**353**	P	**Pn**	**15 29 36.5**	**-0.5**
POST	**Post**	**17.23**	**351**		**Pn**	**15 29 36.8**	**-0.9**
APMT	**Aspermont**	**17.32**	**355**		**Pn**	**15 29 37.2**	**-1.6**
DKNS	**Dickens**	**17.74**	**353**	P	**Pn**	**15 29 42.2**	**-1.9**
319A	**Douglas**	**18.25**	**329**		**Pn**	**15 29 50.2**	**-0.2**
MSTX	**Muleshoe**	**18.33**	**348**		**Pn**	**15 29 49.2**	**-2.2**
X34A	**Smith Ranch, M**	**18.53**	**1**		**P**	**15 29 52.4**	**-1.3**
WMOK	**Wichita Mounta**	**18.67**	**359**	P	**P**	**15 29 53.5**	**-1.6**
MIAR	**Mount Ida**	**18.97**	**12**		**P**	**15 29 56.1**	**-2.3**
AMTX	**Amarillo**	**19.04**	**352**	P	**P**	**15 29 58.2**	**-1.1**
DUN6	**Lazy B Ranch**	**19.13**	**331**	P	**P**	**15 30 01.1**	**+0.8**
DUN6				IAmb	IAmb	15 30 04.1	
	comp=Z,44nm,1.0s						
CRNM	**Carthage**	**19.39**	**339**		**P**	**15 30 01.8**	**-1.4**
Z47A	**Carrollton**	**19.51**	**27**	P	**P**	**15 30 01.6**	**-2.7**
TUC	**Tucson**	**19.76**	**327**		**P**	**15 30 07.4**	**+0.2**
LRAL	**Lakeview Retre**	**19.86**	**29**		**P**	**15 30 06.3**	**-1.8**
OK052	**Battle Ridge R**	**19.97**	**4**	IAmb	IAmb	15 30 15.1	
	comp=Z,20nm,0.8s						
TUL3	**Leonard**	**19.97**	**6**	P	**P**	**15 30 07.5**	**-1.8**
TUL3				IAmb	IAmb	15 30 38.7	
	comp=Z,21nm,0.7s						
OXF	**Oxford**	**20.13**	**22**	IAmb	IAmb	15 30 16.5	
	comp=Z,44nm,1.1s						
QUOK	**Quay**	**20.15**	**4**	P	**P**	**15 30 08.4**	**-2.9**
QUOK				IAmb	IAmb	15 30 18.3	

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      comp=Z,24nm,1.0s
ANMO  Albuquerque      20.21 341 P     P     15 30 11.6 -0.6
ANMO  Albuquerque      20.21 341 P     Pn    15 30 14.4 +0.3
      comp=Z,18nm,0.8s,baz=252,slow=12,SNR=21
      comp=Z,18nm,0.8s
OK038 West end E0370   20.40 359 P     P     15 30 11.9 -2.1
OK038                            IAmb  IAmb  15 30 19.7
      comp=Z,31nm,0.9s
CROK  Carrier          20.43   1 P     P     15 30 11.9 -2.4
CROK                             IAmb  IAmb  15 30 22.3
      comp=Z,25nm,0.9s
FCAR  Ozark Folk Cen   20.59  15 P     P     15 30 13.0 -3.1
HHAR  Hobbs            20.59  10 IAmb  IAmb  15 30 21.0
      comp=Z,21nm,0.9s
U38A  Gravette         20.67   9 P     P     15 30 14.6 -2.4
U38A                             IAmb  IAmb  15 30 21.6
      comp=Z,28nm,0.8s
RTBA  Rita Blanca      20.72 350 P     P     15 30 17.0 -0.6
RTBA                             IAmb  IAmb  15 30 24.0
      comp=Z,40nm,1.1s
Y49A  Blount Mountai   20.81  29 IAmb  IAmb  15 30 23.1
      comp=Z,15nm,0.7s
T35A  Sooner Cattle    20.90   4       P     15 30 17.0 -2.5
KAN13 South Haven SW   20.95   2 IAmb  IAmb  15 30 33.5
      comp=Z,30nm,1.0s
KAN17 Caldwell West    20.97   1 P     P     15 30 19.1 -1.1
KAN17                            IAmb  IAmb  15 30 24.3
      comp=Z,18nm,0.7s
LCAR  Lake Charles     21.01  17 IAmb  IAmb  15 30 24.8
      comp=Z,26nm,0.9s
X48A  Hartselle        21.02  27       P     15 30 17.7 -3.0
PLAL  Pickwick Lake    21.05  24 IAmb  IAmb  15 30 25.4
      comp=Z,27nm,0.8s
X18A  Snowflake        21.17 333 IAmb  IAmb  15 30 27.1
      comp=Z,35nm,1.3s
T25A  Trinidad         21.72 347       P     15 30 28.1 -0.4
T25A                             IAmb  IAmb  15 30 34.3
      comp=Z,56nm,1.2s
X16A  Lo Mia Camp, P   21.77 330 IAmb  IAmb  15 30 34.9
      comp=Z,18nm,1.0s
T42A  Van Buren        21.93  16       P     15 30 28.9 -1.6
T42A                             IAmb  IAmb  15 30 33.9
      comp=Z,22nm,0.9s
GOGA  Godfrey          21.97  35 IAmb  IAmb  15 30 30.5
      comp=Z,26nm,0.8s
Y52A  Lilburn          21.99  33 P     P     15 30 28.6 -2.6
X51A  Calhoun          22.13  31 IAmb  IAmb  15 30 32.3
      comp=Z,39nm,1.4s
WVT   Waverly          22.15  23       P     15 30 30.3 -2.6
WVT                              IAmb  IAmb  15 30 35.0
      comp=Z,42nm,0.9s
V48A  Smith Brothers   22.21  26 IAmb  IAmb  15 30 35.3
      comp=Z,34nm,1.1s
ESJX  Sierra Juarez    22.55 318 P     P     15 30 39.1 +1.6
SDCO  Great Sand Dun   22.56 345 P     P     15 30 36.7 -0.8
CGM3  Cape Girardeau   22.59  18 IAmb  IAmb  15 30 39.4
      comp=Z,42nm,1.0s
WUAZ  Wupatki          22.64 332 IAmb  IAmb  15 30 43.8
      comp=Z,18nm,0.9s
CBKS  Cedar Bluff      22.76 357 IAmb  IAmb  15 31 18.0
      comp=Z,26nm,1.0s
CCM   Cathedral Cave   22.86  15       P     15 30 37.8 -2.6
CCM                              IAmb  IAmb  15 30 42.0
      comp=Z,22nm,0.9s
MVCO  Mesa Verde       22.95 339 IAmb  IAmb  15 30 44.4
      comp=Z,25nm,1.1s
YUH   Yuha Desert      22.96 319 P     P     15 30 43.6 +2.1
FVM   French Village   23.00  16 IAmb  IAmb  15 30 43.2
      comp=Z,32nm,1.0s
CPCT  Cooper Cave      23.01  30 IAmb  IAmb  15 30 41.9
      comp=Z,21nm,0.8s
KSCO  Kaye Shedlock'   23.23 352 IAmb  IAmb  15 30 50.3
      comp=Z,28nm,1.0s
HODGE Hodges           23.25  36 P     P     15 30 43.1 -1.4
BG3   Lake Jocassee    23.45  33 IAmb  IAmb  15 30 46.5
      comp=Z,22nm,0.9s
TKL   Tuckaleechee C   23.54  31 IAmb  IAmb  15 30 49.1
      comp=Z,24nm,1.2s
TKL   Tuckaleechee C   23.54  31 LR    LR    15 42 29.5
      comp=Z,108nm,20.8s,baz=220,slow=43
PV01  Paradox Valley   23.81 340 IAmb  IAmb  15 30 59.0
      comp=Z,22nm,1.0s
U15A  North Rim        23.81 331       P     15 30 52.0 +1.7
U15A                             IAmb  IAmb  15 30 54.7
      comp=Z,15nm,0.9s
USIN  University of    23.84  21 P     P     15 30 48.9 -1.4
JSC   Jenkinsville     23.86  37 IAmb  IAmb  15 30 50.2
      comp=Z,19nm,0.8s
PV13  Radium Mtn., P   23.91 339 IAmb  IAmb  15 30 59.1
      comp=Z,12nm,0.8s
P38A  Dawn             23.92   9 IAmb  IAmb  15 30 51.7
      comp=Z,24nm,0.8s
PV02  Paradox Valley   23.93 340 IAmb  IAmb  15 30 59.5
      comp=Z,19nm,0.8s
PAULI Pauline          23.93  35 IAmb  IAmb  15 30 51.8
      comp=Z,31nm,1.0s
PFO   Pinyon Flats O   23.94 320 P     P     15 30 52.9 +1.4
PFO   Pinyon Flats O   23.94 320 LR    LR    15 40 37.2
      comp=Z,216nm,18.8s,baz=146,slow=37
PV15  Paradox Valley   23.96 340 IAmb  IAmb  15 31 00.7
      comp=Z,23nm,1.0s
PV03  Paradox Valley   24.01 339 P     P     15 30 52.8 +0.7
PV18  Skein Mesa, Pa   24.02 339 IAmb  IAmb  15 30 54.3
      comp=Z,19nm,0.9s
V53A  Saluda           24.03  32       P     15 30 50.3 -2.0
V53A                             IAmb  IAmb  15 30 52.9
      comp=Z,24nm,1.3s
PV11  David Mesa, Pa   24.06 339 IAmb  IAmb  15 30 59.1
      comp=Z,13nm,1.0s
PV17  East Wray Mesa   24.07 339 IAmb  IAmb  15 31 01.0
      comp=Z,26nm,1.3s
PV16  Nyswonger Mesa   24.08 339 IAmb  IAmb  15 30 59.3
      comp=Z,14nm,1.0s
PV07  Paradox Valley   24.11 340 IAmb  IAmb  15 31 00.7
      comp=Z,19nm,1.0s
PV20  West Nyswonger   24.13 339 IAmb  IAmb  15 31 09.5
      comp=Z,18nm,1.0s
T50A  Nancy            24.15  27 IAmb  IAmb  15 30 53.7
      comp=Z,11nm,0.7s
PV04  Paradox Valley   24.15 340 IAmb  IAmb  15 30 55.8
      comp=Z,12nm,1.0s
PV10  Paradox Valley   24.18 339 IAmb  IAmb  15 31 01.3
      comp=Z,19nm,1.0s
PV22  Blue Mesa, Par   24.24 340       P     15 30 55.3 +1.0
PV22                             IAmb  IAmb  15 31 01.7
      comp=Z,22nm,1.2s
PV23  Carpenter Ridg   24.24 339 IAmb  IAmb  15 31 01.0
      comp=Z,23nm,1.0s
TZTN  Tazewell         24.35  30 IAmb  IAmb  15 30 56.8
      comp=Z,30nm,1.1s
KNB   Kanab            24.54 331 IAmb  IAmb  15 31 15.8
      comp=Z,14nm,1.2s
ISCO  Idaho Springs    24.54 347 IAmb  IAmb  15 31 03.8
      comp=Z,27nm,1.0s
WCI   Wyandotte Cave   24.58  23       P     15 30 55.6 -1.6
R49A  Shelbyville      25.08  25 IAmb  IAmb  15 31 03.5
      comp=Z,32nm,1.4s
OTAV  Otavalo          25.15 127 P     P     15 31 05.0 +1.9
SRU   San Rafael Swe   25.36 338 IAmb  IAmb  15 31 13.4
      comp=Z,20nm,1.3s
R50A  Paris            25.42  26 P     P     15 31 01.9 -2.8
Q16A  Castle Valley    25.44 336 IAmb  IAmb  15 31 14.8
      comp=Z,15nm,1.1s
MVU   Marysvale        25.50 334 IAmb  IAmb  15 31 15.5
      comp=Z,19nm,1.4s
P18A  Preston Nutter   25.72 339 IAmb  IAmb  15 31 30.5
      comp=Z,23nm,1.3s
P48A  Milroy           25.98  23 IAmb  IAmb  15 31 10.7
      comp=Z,20nm,1.1s
ROSC  El Rosal         26.11 113       P     15 31 12.0 +0.4
ROSC                             IAmb  IAmb  15 31 26.6
      comp=Z,25nm,1.2s
TPNV  Topopah Spring   26.20 326 IAmb  IAmb  15 31 21.9
      comp=Z,19nm,1.5s
SFIN  Lafayette        26.21  20 P     P     15 31 10.7 -1.2
PSUT  Pine Spring      26.24 332       P     15 31 12.7 +0.2
BLA   Blacksburg       26.46  34 IAmb  IAmb  15 31 17.4
      comp=Z,21nm,1.1s
FLOC  Florencia        26.60 120 P     P     15 31 17.2 +1.4
FLOC                             IAmb  IAmb  15 31 36.5
      comp=Z,17nm,1.2s
L40A  Anamosa          26.70  12 IAmb  IAmb  15 31 17.3
      comp=Z,18nm,0.8s
BSUT  Blindstream Ca   26.71 339 IAmb  IAmb  15 31 29.8
      comp=Z,12nm,1.2s
RUSC  La Rusia         26.77 109       P     15 31 17.2 -0.6
RUSC                             IAmb  IAmb  15 31 24.8
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      comp=Z,18nm,1.3s
P51A  Williamsport     26.97  27 P     P     15 31 17.4 -1.4
R55A  Marlinton        27.42  32 P     P     15 31 22.9  0.0
R55A                             IAmb  IAmb  15 31 27.3
      comp=Z,16nm,0.9s
TCUT  Toone Canyon     27.45 338 IAmb  IAmb  15 31 34.3
      comp=Z,19nm,1.1s
P52A  Corning          27.50  28 IAmb  IAmb  15 31 28.2
      comp=Z,14nm,0.8s
Q54A  Coxs Mills       27.60  31 IAmb  IAmb  15 31 29.2
      comp=Z,23nm,1.0s
ACSO  Alum Creek Sta   27.62  26 IAmb  IAmb  15 31 24.9
      comp=Z,13nm,0.9s
S57A  Dark Hollow, R   27.65  35 IAmb  IAmb  15 31 26.6
      comp=Z,20nm,1.2s
BGU   Big Grassy Mou   27.89 336 IAmb  IAmb  15 31 35.0
      comp=Z,12nm,1.3s
T59A  Double "B" Far   27.89  38 IAmb  IAmb  15 31 29.0
      comp=Z,27nm,1.3s
PDAR  Pinedale Array   28.34 343       P     15 31 31.1 -0.2
PDAR  Pinedale Array   28.34 343 P     P     15 31 32.4 +1.1
      comp=Z,2.0nm,0.9s,baz=156,slow=7.8,SNR=12
      comp=Z,2.0nm,0.9s
LHV   Little Huntoon   28.37 325 P     P     15 31 33.9 +2.6
NVAR  Mina Array Bea   28.39 326 P     P     15 31 33.5 +1.8
NVAR  Mina Array Bea   28.39 326 P     P     15 31 34.0 +2.3
      comp=Z,1.9nm,0.8s,baz=160,slow=11,SNR=11
NVAR                             LR    LR    15 43 43.3
      comp=Z,163nm,20.4s,baz=168,slow=38
      comp=Z,1.9nm,0.8s
HVU   Hansel Valley    28.53 337 P     P     15 31 40.2 +7.4
TPAW  Teton Pass       29.42 341 IAmb  IAmb  15 32 01.8
      comp=Z,11nm,1.1s
LOHW  Long Hollow      29.42 342 IAmb  IAmb  15 31 48.3
      comp=Z,9.3nm,1.1s
G40A  Rib Lake         29.99  12 IAmb  IAmb  15 31 46.4
      comp=Z,12nm,1.2s
RLMT  Red Lodge        30.45 345 IAmb  IAmb  15 31 52.6
      comp=Z,5.4nm,0.6s
YHL   Hebgen Lake      30.72 342 IAmb  IAmb  15 31 57.7
      comp=Z,8.7nm,1.2s
WVOR  Wild Horse Val   31.55 331 IAmb  IAmb  15 32 07.5
      comp=Z,14nm,1.3s
DLMT  Dillon           31.62 341 IAmb  IAmb  15 32 08.3
      comp=Z,17nm,1.1s
PLID  Pearl Lake       32.57 337       P     15 32 09.6 +0.9
PLID                             IAmb  IAmb  15 32 11.6
      comp=Z,12nm,1.2s
L04D  Klamath Falls    33.23 327 IAmb  IAmb  15 32 34.2
      comp=Z,8.2nm,1.2s
EGMT  Eagleton         33.28 346 IAmb  IAmb  15 32 22.8
      comp=Z,9.2nm,1.1s
TBO   Thunder Bay      33.39  11 IAmb  IAmb  15 32 15.7
      comp=Z,10nm,1.1s
BUKO  Buck Lake        33.41  25 IAmb  IAmb  15 32 14.9
      comp=Z,10nm,1.0s
ULM   Lac du Bonnet    34.23   3 IAmb  IAmb  15 32 22.5
      comp=Z,6.7nm,1.0s
ULM   Lac du Bonnet    34.23   3 P     P     15 32 21.9 -0.8
      comp=Z,3.8nm,0.6s,baz=208,slow=6.4,SNR=6.2
ULM                              LR    LR    15 46 42.5
      comp=Z,95nm,18.5s,baz=152,slow=37
      comp=Z,3.8nm,0.6s
FFC   Flin Flon        38.75 357       P     15 33 01.2 -0.1
FFC                              IAmb  IAmb  15 33 07.2
      comp=Z,11nm,0.9s
BBB   Bella Bella      43.11 333 LR    LR    15 52 24.5
      comp=Z,175nm,18.9s,baz=148,slow=37
LPAZ  La Paz           43.83 136 P     P     15 33 45.6 +1.5
      comp=Z,0.7nm,0.3s,baz=338,slow=5.4,SNR=2.2
      comp=Z,0.7nm,0.3s
SCHQ  Schefferville    45.77  25 P     P     15 33 58.5  0.0
      comp=Z,14nm,0.9s,baz=221,slow=6.5,SNR=15
      comp=Z,14nm,0.9s
V35K  Ketchikan        46.80 335 P     P     15 34 08.4 +1.9
      baz=133
TOAD  Toad River Com   47.15 341 P     P     15 34 11.1 +1.8
      baz=143
T35M  Bob Quinn        47.43 337 P     P     15 34 13.6 +2.0
      baz=136
KUQ   Kuujjuuaa        47.60  21 P     P     15 34 12.5 -0.3
PB10  IPOC Station P   47.78 145 P     P     15 34 18.1 +3.5
YKAW1 Yellowknife Wh   47.80 350 IAmb  IAmb  15 34 15.1
      comp=Z,8.9nm,1.1s
YKA   Yellowknife Ar   47.83 350 P     P     15 34 15.0 +0.5
      comp=Z,3.3nm,1.0s,baz=161,slow=7.0,SNR=13
      comp=Z,3.3nm,1.0s
U33K  Whale Pass       47.96 335 P     P     15 34 17.2 +1.7
      baz=132
TAOE  Nuku Hiva Isla   48.15 242 eLR   LR    15 47 56.5
      comp=Z,175nm,25.8s
BEAVL Fort Liard       48.18 342 P     P     15 34 19.0 +1.7
      baz=144
BLKN  Baker Lake       48.30   1       P     15 34 18.0 -0.1
DLBC  Dease Lake       48.42 338 P     P     15 34 21.0 +1.8
      baz=137
S34M  Telegraph Cree   48.44 337 P     P     15 34 21.1 +1.8
      baz=135
R33M  Jennings River   49.46 339 IAmb  IAmb  15 34 30.6
      comp=Z,3.9nm,0.8s
R33M  Jennings River   49.46 339 P     P     15 34 28.3 +1.0
      baz=137
S32K  Killisnoo        49.47 335 P     P     15 34 28.5 +1.4
      baz=131
Q32M  Nakina River     49.61 338 P     P     15 34 29.9 +1.4
      baz=135
TGTN  Hyland Airport   50.21 342 P     P     15 34 34.2 +1.3
      baz=141
P32M  Atlin            50.58 338 P     P     15 34 37.2 +1.5
      baz=134
P33M  Teslin, Yukon    50.70 339 IAmb  IAmb  15 34 41.0
      comp=Z,8.2nm,1.5s
P33M  Teslin, Yukon    50.70 339 P     P     15 34 37.7 +1.1
      baz=135
SKAG  Skagway          51.09 337 P     P     15 34 40.9 +1.4
      baz=132
N32M  Quiet Lake       51.46 339 P     P     15 34 44.2 +1.9
      baz=135
PLBC  Pleasant Camp    51.49 336 P     P     15 34 44.5 +2.1
      baz=130
WHY   Whitehorse       51.74 338 P     P     15 34 46.0 +1.5
      baz=133
MMPY  Sheldon Lake,    51.95 341 IAmb  IAmb  15 34 49.9
      comp=Z,12nm,1.0s
MMPY  Sheldon Lake,    51.95 341 P     P     15 34 48.1 +2.1
      baz=138,SNR=11
P29M  Windy Craggy     52.13 336 P     P     15 34 49.3 +1.9
      baz=129
P30M  Million Dollar   52.15 337 P     P     15 34 49.5 +2.0
      baz=130
O30N  Mendenhall       52.26 338 P     P     15 34 50.2 +2.0
      baz=132
FARO  Faro, Yukon      52.32 340 P     P     15 34 50.6 +1.9
      baz=135
H03N2 Juan Fernandez   52.55 159 T     T     16 31 28.1
      baz=338,slow=77,SNR=369
H03N1 Juan Fernandez   52.56 159 T     T     16 31 29.2
      baz=338,slow=77,SNR=378
H03N3 Juan Fernandez   52.57 159 T     T     16 31 28.2
      baz=338,slow=77,SNR=363
N31M  Braeburn, Yuko   52.63 338 IAmb  IAmb  15 34 54.5
      comp=Z,13nm,1.1s
N31M  Braeburn, Yuko   52.63 338 P     P     15 34 52.8 +1.8
      baz=132,SNR=5.7
M31M  Drury Creek, Y   52.65 340 P     P     15 34 53.1 +2.0
      baz=134
HYT   Haines Junctio   52.81 337 IAmb  IAmb  15 34 56.6
      comp=Z,12nm,1.3s
HYT   Haines Junctio   52.81 337 P     P     15 34 54.5 +2.0
      baz=130
PNL   Peninsula        52.82 335 P     P     15 34 53.9 +1.5
      baz=127
RKT   Rikitea          52.83 224 eLR   LR    15 50 16.5
      comp=Z,627nm,26.0s
O29M  Mount Kennedy    52.89 336 P     P     15 34 54.9 +1.9
      baz=128
N30M  Aishikik Lake    53.08 338 P     P     15 34 55.5 +1.1
      baz=131
YUK6  Outpost Mounta   53.21 337 P     P     15 34 56.8 +1.3
      baz=129
PINM  Pinnacle         53.42 335 P     P     15 34 58.9 +2.0
      baz=126
YUK4  Talbot Arm       53.57 337 P     P     15 35 00.5 +2.4
      baz=129
O28M  Mount Upton      53.80 336 P     P     15 35 01.5 +1.5
      baz=127
YUK8  Steele Glacier   53.96 337 P     P     15 35 02.5 +1.5
      baz=128,SNR=5.4
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MESA  MESA             54.16 335 P     P     15 35 03.4 +1.0
      baz=125
M29M  Somme Creek      54.21 338 IAmb  IAmb  15 35 06.4
      comp=Z,6.8nm,1.0s
M29M  Somme Creek      54.21 338 P     P     15 35 04.7 +2.0
      baz=130,SNR=7.1
CTG   Chitna Glacier   54.37 336 P     P     15 35 05.1 +1.2
      baz=126
GRNC  Granite Creek    54.40 335 IAmb  IAmb  15 35 08.0
      comp=Z,11nm,1.1s
YUK3  Moose Creek      54.52 337 P     P     15 35 06.5 +1.4
      baz=127
L29M  L29M             54.53 339       P     15 35 06.5 +1.6
L29M  L29M             54.53 339 P     P     15 35 05.9 +1.0
      baz=130,SNR=11
K29M  Barlow Dome      54.82 340 P     P     15 35 08.4 +1.3
      baz=132
J30M  Hart River       54.94 341 P     P     15 35 09.7 +1.8
      baz=133
CRQE  Cirque           54.95 335 P     P     15 35 10.0 +1.9
      baz=124
BVCY  Beaver Creek     55.06 337 P     P     15 35 11.3 +2.5
      baz=127
H31M  Peel River       55.22 343 P     P     15 35 11.5 +1.6
      baz=136
MCARA McCarthy VSAT    55.28 336 P     P     15 35 12.3 +2.0
      baz=124
I30M  Mount Dempster   55.40 342 IAmb  IAmb  15 35 13.8
      comp=Z,5.0nm,1.0s
I30M  Mount Dempster   55.40 342 P     P     15 35 12.5 +1.2
      baz=134
M27K  Edge Creek, AK   55.41 337 P     P     15 35 12.5 +1.1
      baz=126
DAWY  Dawson           55.59 340 P     P     15 35 13.8 +1.2
      baz=130
BMRM  Bremner River    55.68 335 P     P     15 35 15.0 +1.7
      baz=122
BCAR  Beaver Creek A   55.80 338       P     15 35 15.9 +1.8
L27K  Beaver Creek,    55.81 338 IAmb  IAmb  15 35 17.4
      comp=Z,7.7nm,1.1s
L27K  Beaver Creek,    55.81 338 P     P     15 35 15.7 +1.5
      baz=126,SNR=8.0
M26K  Nabesna, AK      55.85 337 IAmb  IAmb  15 35 17.9
      comp=Z,5.5nm,1.0s
M26K  Nabesna, AK      55.85 337 P     P     15 35 16.3 +1.8
      baz=125,SNR=5.6
EYAK  Cordova Ski Ar   55.94 334 P     P     15 35 16.8 +1.8
      baz=121
G31M  Satah River      56.02 344 IAmb  IAmb  15 35 17.0
      comp=Z,5.7nm,0.9s
G31M  Satah River      56.02 344 P     P     15 35 16.5 +1.1
      baz=137
N25K  Chitina, Valde   56.03 335 IAmb  IAmb  15 35 19.6
      comp=Z,8.0nm,1.1s
N25K  Chitina, Valde   56.03 335 P     P     15 35 17.4 +1.5
      baz=123
I29M  Ogilvie Camp,    56.09 341 IAmb  IAmb  15 35 17.5
      comp=Z,4.8nm,1.0s
I29M  Ogilvie Camp,    56.09 341 P     P     15 35 17.1 +1.0
      baz=132
F31M  Tsiigehtchic     56.27 344 P     P     15 35 18.7 +1.5
      baz=138
EPYK  Eagle Plains     56.30 343 P     P     15 35 19.2 +1.6
      baz=134
L26K  Log Cabin Wild   56.35 337 P     P     15 35 20.0 +2.0
      baz=125
P23K  Montague Islan   56.37 333 P     P     15 35 19.6 +1.4
      baz=119
K27K  Chicken          56.48 339 P     P     15 35 20.4 +1.5
      baz=127
KLU   Klutina          56.50 335 IAmb  IAmb  15 35 22.7
      comp=Z,8.8nm,1.0s
KLU   Klutina          56.50 335 P     P     15 35 20.9 +1.7
      baz=121,SNR=5.1
I28M  Miner Creek      56.66 341 P     P     15 35 21.4 +1.1
      baz=130
GLI   Glacier Island   56.68 334 P     P     15 35 22.0 +1.6
      baz=120
H29M  Whitestone       56.69 342 IAmb  IAmb  15 35 22.2
      comp=Z,4.9nm,0.9s
H29M  Whitestone       56.69 342 P     P     15 35 21.8 +1.5
      baz=132
HARP  HAARP            56.69 336 P     P     15 35 22.0 +1.6
      baz=122
INK   Inuvik           56.86 345 IAmb  IAmb  15 35 22.9
      comp=Z,7.2nm,0.8s
INK   Inuvik           56.86 345 P     P     15 35 22.6 +1.2
      baz=138
F30M  Barrier River    56.93 344 P     P     15 35 23.4 +1.5
      baz=135
M24K  Tolsona, Glenn   56.93 335 P     P     15 35 24.3 +2.1
      baz=121
DOT   Dot Lake         56.97 338 IAmb  IAmb  15 35 25.6
      comp=Z,10nm,1.1s
G29M  Pine Creek       57.05 343 P     P     15 35 24.6 +1.6
      baz=133
PAX   Paxson           57.12 337 IAmb  IAmb  15 35 26.3
      comp=Z,6.1nm,0.9s
PAX   Paxson           57.12 337 P     P     15 35 25.0 +1.5
      baz=122,SNR=7.0
SCRK  Sand Creek       57.13 338 IAmb  IAmb  15 35 26.8
      comp=Z,5.0nm,0.9s
SCRK  Sand Creek       57.13 338 P     P     15 35 25.6 +1.9
      baz=125,SNR=8.1
PWL   Port Wells       57.19 334 P     P     15 35 25.3 +1.3
      baz=118
SCM   Sheep Creek Mo   57.26 335 P     P     15 35 26.0 +1.5
      baz=120
J26L  Joseph Creek     57.29 339 P     P     15 35 26.5 +1.8
      baz=125,SNR=16
I27K  Kandik River     57.30 340 P     P     15 35 26.6 +1.8
      baz=128
RIDG  Independent Ri   57.31 337 P     P     15 35 26.6 +1.7
RIDG  Independent Ri   57.31 337 P     P     15 35 25.9 +1.0
      baz=124,SNR=10
SEW   Seward           57.33 332 P     P     15 35 26.9 +2.0
      baz=117
KNK   Knik Glacier     57.52 334 P     P     15 35 27.8 +1.5
      baz=119
I26K  Coal Creek Min   57.63 340 IAmb  IAmb  15 35 29.4
      comp=Z,5.6nm,1.1s
I26K  Coal Creek Min   57.63 340 P     P     15 35 28.7 +1.7
      baz=126
SML   Sawmill          57.66 335 IAmb  IAmb  15 35 29.5
      comp=Z,9.1nm,1.2s
SML   Sawmill          57.66 335 P     P     15 35 28.8 +1.5
      baz=119
H27K  Steamboat Moun   57.66 341 P     P     15 35 28.9 +1.6
      baz=128
K24K  Donnelly Dome    57.69 337 P     P     15 35 29.7 +2.2
      baz=123
BRSE  Bradley Lake S   57.74 332 P     P     15 35 29.6 +1.7
      baz=115
WAT6  Susitna Watana   57.80 335 P     P     15 35 29.8 +1.4
      baz=120,SNR=7.2
KDAK  Kodiak Island    57.81 329 LR    LR    15 58 25.0
      comp=Z,66nm,18.7s,baz=147,slow=34
SLKM  Skilak Lake      57.85 333 IAmb  IAmb  15 35 31.3
      comp=Z,7.4nm,1.0s
GHO   Glory Hole Cre   57.88 334 IAmb  IAmb  15 35 31.6
      comp=Z,8.0nm,0.8s
RC01  Rabbit Creek A   57.91 333 P     P     15 35 30.5 +1.5
      baz=117
DHY   Denali Highway   57.91 336 P     P     15 35 30.2 +1.0
      baz=121
POIN  Pond Inlet       57.93   7 P     P     15 35 29.2 +0.3
POIN                             IAmb  IAmb  15 35 34.6
      comp=Z,12nm,1.2s
J25K  Salcha River,    57.99 338 P     P     15 35 30.9 +1.2
      baz=124
CPUP  Villa Florida    58.00 136 LR    LR    15 58 11.3
      comp=Z,15nm,19.3s,baz=198,slow=34
E29M  Blow River       58.04 344 P     P     15 35 31.2 +1.4
      baz=133
F28M  Old Crow         58.06 343 IAmb  IAmb  15 35 32.5
      comp=Z,7.1nm,0.9s
F28M  Old Crow         58.06 343 P     P     15 35 31.2 +1.1
      baz=131
G27K  Doyon Strip      58.07 341 P     P     15 35 31.2 +1.0
      baz=129
SII   Sitkinak Islan   58.16 327 P     P     15 35 32.6 +1.6
      baz=110
A36M  Sachs Harbour    58.18 350 P     P     15 35 31.5 +0.8
      baz=149
WAT1  Susitna Watana   58.25 336 P     P     15 35 32.6 +1.2
      baz=119
HDA   Harding Lake     58.45 338 IAmb  IAmb  15 35 34.5
      comp=Z,4.8nm,0.8s
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HDA	Harding Lake	58.45	338	P	P	15 35 34.0	+1.2
	baz=122						
SUA	Susitna One	58.51	334	P	P	15 35 34.9	+1.6
	baz=116,SNR=10.0						
PRP	Porcupine Dome	58.56	339	IAmb	IAmb	15 35 36.3	
	comp=Z,9.8nm,1.1s						
PRP	Porcupine Dome	58.56	339	P	P	15 35 35.1	+1.4
	baz=124,SNR=9.7						
IL31		58.62	338	IAmb	IAmb	15 35 36.4	
	comp=Z,13nm,1.2s						
ILAR	Eielson Array	58.62	338		P	15 35 34.5	+0.5
ILAR	Eielson Array	58.62	338	P	P	15 35 35.5	+1.5
	comp=Z,3.0nm,0.9s,baz=141,slow=4.8,SNR=28						
ILAR				LR	LR	16 03 49.6	
	comp=Z,207nm,18.2s,baz=98,slow=39						
	comp=Z,3.0nm,0.9s						
E28M	Babbage River	58.63	344	P	P	15 35 35.0	+1.1
	baz=132						
CUT	Chulitna	58.74	335	P	P	15 35 36.3	+1.5
	baz=117						
G26K	Porcupine Rive	58.82	341	P	P	15 35 36.6	+1.4
	baz=126						
MCK	McKinley	58.85	336	IAmb	IAmb	15 35 38.1	
	comp=Z,7.3nm,0.9s						
MCK	McKinley	58.85	336	P	P	15 35 37.1	+1.5
	baz=119						
E27K	Coleen River	58.93	343	IAmb	IAmb	15 36 10.3	
	comp=Z,12nm,1.4s						
E27K	Coleen River	58.93	343	P	P	15 35 37.6	+1.5
	baz=129						
STLK	Strandline Lak	58.99	333	IAmb	IAmb	15 35 39.2	
	comp=Z,5.4nm,1.0s						
POKR	Poker Plat Res	59.01	338	P	P	15 35 38.2	+1.6
	baz=122						
N20K	Mount Spurr	59.03	333	P	P	15 35 38.3	+1.3
	baz=115						
SPCR	Spurr Chakacha	59.03	333	P	P	15 35 38.2	+1.3
	baz=115						
FYU	Fort Yukon	59.06	340	IAmb	IAmb	15 35 40.3	
	comp=Z,10nm,1.2s						
SKT	Skwentna	59.08	334	IAmb	IAmb	15 35 39.7	
	comp=Z,7.1nm,0.9s						
SKT	Skwentna	59.08	334	P	P	15 35 38.6	+1.5
	baz=116,SNR=7.1						
H25L	Birch Creek	59.08	340	P	P	15 35 39.1	+2.0
	baz=124						
TRF	Thorofare Moun	59.24	336	P	P	15 35 39.8	+1.3
	baz=118,SNR=15						
NEA2	Nenana	59.33	337	IAmb	IAmb	15 35 41.3	
	comp=Z,8.9nm,1.4s						
NEA2	Nenana	59.33	337	P	P	15 35 40.2	+1.3
	baz=120						
F26K	Sheenjek River	59.38	341	P	P	15 35 41.1	+1.8
	baz=126						
G25K	Bearman Lake	59.46	340	P	P	15 35 40.9	+1.2
	baz=124						
H24K	Noodor Dome	59.55	339		P	15 35 41.5	+1.0
H24K	Noodor Dome	59.55	339	P	P	15 35 41.4	+1.0
	baz=122,SNR=12						
P18K	Big Mountain,	59.70	330	P	P	15 35 42.9	+1.4
	baz=111						
M20K	Styx River	59.72	333	IAmb	IAmb	15 35 44.0	
	comp=Z,8.1nm,0.9s						
M20K	Styx River	59.72	333	P	P	15 35 43.0	+1.3
	baz=114,SNR=6.4						
I23K	Minto, Yukon-K	59.72	338	P	P	15 35 42.8	+1.3
	baz=120,SNR=9.2						
PPLA	Purkeypile	59.76	335	P	P	15 35 43.1	+1.1
	baz=116						
F25K	Christian Rive	59.78	341	P	P	15 35 43.3	+1.3
	baz=125						
BPAW	Bear Paw Mtn.	59.82	336	IAmb	IAmb	15 35 43.8	
	comp=Z,4.4nm,0.9s						
BPAW	Bear Paw Mtn.	59.82	336	P	P	15 35 43.2	+0.9
	baz=117,SNR=5.7						
G24K	Hadweenzic Riv	59.88	340	P	P	15 35 43.5	+0.9
	baz=122,SNR=5.5						
N19K	Bonanza Creek	59.88	332		P	15 35 43.2	+0.3
N19K	Bonanza Creek	59.88	332	P	P	15 35 43.8	+0.9
	baz=112						
CAST	Castle Rocks	59.95	335	P	P	15 35 43.9	+0.7
	baz=116,SNR=10						
H23K	Yukon River	60.13	338	P	P	15 35 45.0	+0.6
	baz=120						
MLY	Manley	60.17	337	IAmb	IAmb	15 35 47.2	
	comp=Z,8.9nm,1.0s						
MLY	Manley	60.17	337	P	P	15 35 45.9	+1.1
	baz=118,SNR=7.3						
P17K	Kvichak River	60.21	330	P	P	15 35 46.3	+1.3
	baz=109						
CHUM	Lake Minchumin	60.24	336	P	P	15 35 46.2	+1.0
	baz=116						
M19K	Big River Lodg	60.27	333	P	P	15 35 46.4	+1.0
	baz=113,SNR=6.3						
L20K	Farewell, AK	60.28	334	P	P	15 35 46.4	+0.9
	baz=114						
C27K	Jago River	60.44	343	P	P	15 35 47.8	+1.4
	baz=128						
F24K	Squaw Lake	60.46	340	P	P	15 35 48.0	+1.4
	baz=122						
PPT2	Papeete2	60.47	239	*e*LR	LR	15 53 39.8	
	comp=Z,67nm,26.0s						
N18K	Kilae Creek	60.48	332	P	P	15 35 47.7	+0.9
	baz=111						
L19K	White Mountain	60.58	333	P	P	15 35 48.6	+1.0
	baz=112						
I21K	Tanana	60.71	337	P	P	15 35 49.4	+1.1
	baz=117,SNR=5.2						
O17K	Koliganek Bris	60.72	330	P	P	15 35 49.3	+0.9
	baz=109						
K20K	Telida	60.73	335	P	P	15 35 49.6	+1.1
	baz=114						
M18K	Stony River	60.74	332	P	P	15 35 49.8	+1.2
	baz=111						
G23K	Bananza Creek	60.74	339	P	P	15 35 49.4	+0.8
	baz=120						
H22K	Ishtalitna Cre	60.82	338	P	P	15 35 49.9	+0.8
	baz=118,SNR=6.2						
P16K	Nushagak River	60.91	329	P	P	15 35 50.7	+0.9
	baz=108						
S14K	Fog Glacier	60.92	326	P	P	15 35 51.0	+1.0
	baz=105						
E24K	Your Creek	60.95	341	P	P	15 35 51.4	+1.4
	baz=122						
D25K	Kavik River	61.01	342	P	P	15 35 51.1	+0.8
	baz=125						
N17K	Nushagak Hills	61.02	331	P	P	15 35 51.2	+0.7
	baz=109						
COLD	Coldfoot	61.07	340	IAmb	IAmb	15 35 58.4	
	comp=Z,11nm,1.4s						
COLD	Coldfoot	61.07	340	P	P	15 35 51.9	+1.2
	baz=120						
J20K	Nowinta River	61.10	336	IAmb	IAmb	15 35 52.9	
	comp=Z,6.8nm,0.9s						
J20K	Nowinta River	61.10	336	P	P	15 35 51.8	+0.8
	baz=114,SNR=7.0						
O16K	Kokwok River B	61.14	330	P	P	15 35 52.2	+0.8
	baz=108						
H21K	Melozitna Rive	61.23	337	IAmb	IAmb	15 35 53.7	
	comp=Z,6.7nm,1.1s						
H21K	Melozitna Rive	61.23	337	P	P	15 35 52.9	+1.0
	baz=116						
E23K	Chandalar	61.30	340	P	P	15 35 53.6	+1.1
	baz=121						
G22K	Bettles	61.36	339	P	P	15 35 53.8	+1.1
	baz=118						
L18K	Granite Mounta	61.39	333	P	P	15 35 53.7	+0.7
	baz=111						
M17K	Holitna River	61.44	332	P	P	15 35 53.7	+0.4
	baz=110						
I20K	Naaghedeneel	61.49	336	P	P	15 35 54.6	+1.0
	baz=114						
TOLK	Toolik Lake Re	61.59	341	P	P	15 35 55.0	+0.7
	baz=121						
J19K	Poorman	61.62	335		P	15 35 54.7	+0.2
J19K	Poorman	61.62	335	P	P	15 35 55.2	+0.7
	baz=113,SNR=7.5						
N16K	Nishlik Lake	61.74	331	P	P	15 35 56.6	+1.1
	baz=108						
O15K	Ungalikthiuk R	61.86	329	P	P	15 35 57.8	+1.6
	baz=106						
J18K	Innoko River	61.86	334	P	P	15 35 56.7	+0.5
	baz=111						
F22K	John River	61.87	339	P	P	15 35 56.9	+0.7
	baz=118						
G21K	Allakaket	61.88	338	P	P	15 35 57.3	+1.1
	baz=116						
C24K	Franklin Bluff	61.91	342	P	P	15 35 57.2	+0.9
	baz=122						
H20K	Anotleneega Mo	61.94	337	P	P	15 35 57.6	+0.9
	baz=114						
M16K	Timber Creek	62.01	331	P	P	15 35 58.3	+1.1
	baz=108						
E22K	Anaktuvuk Pass	62.05	340	P	P	15 35 58.6	+1.2
E22K				IAmb	IAmb	15 35 59.8	
	comp=Z,5.8nm,1.1s						
E22K	Anaktuvuk Pass	62.05	340	P	P	15 35 58.4	+1.0
	baz=119						
L17K	Donlin	62.07	333	P	P	15 35 58.5	+0.9
	baz=109						
D23K	Nanushuk River	62.11	341	P	P	15 35 58.7	+1.0
	baz=120						
S12K	Black Hills	62.14	325	P	P	15 35 58.8	+0.7
	baz=102						
F21K	Alatna River	62.19	339	P	P	15 35 59.1	+0.8
	baz=116,SNR=8.3						
K17K	Iditarod	62.27	333	P	P	15 35 59.9	+0.9
	baz=110						
L16K	Owhat River	62.46	332	P	P	15 36 01.2	+1.1
	baz=108						
C23K	Itkillik River	62.53	342	P	P	15 36 01.4	+0.9
	baz=121						
H19K	Roundabout Mou	62.55	337	P	P	15 36 01.7	+1.0
	baz=113						
D22K	Ayikyak River	62.69	341		P	15 36 02.9	+1.2
D22K	Ayikyak River	62.69	341	P	P	15 36 02.7	+1.0
	baz=118,SNR=5.0						
F20K	Avaraart Lake	62.90	338	IAmb	IAmb	15 36 04.9	
	comp=Z,6.0nm,1.1s						
F20K	Avaraart Lake	62.90	338	P	P	15 36 03.9	+0.9
	baz=114,SNR=6.0						
E21K	Killik River	62.91	340	P	P	15 36 04.1	+1.0
	baz=116						
G19K	Purcell Mounta	63.03	337	P	P	15 36 04.9	+1.0
	baz=112,SNR=5.3						
M14K	Bethel	63.33	331	P	P	15 36 07.1	+1.2
	baz=105						
L15K	Ungalak Mounta	63.36	332	P	P	15 36 07.8	+1.6
	baz=106						
TBI	Tubuai	63.41	233	*e*LR	LR	15 55 14.6	
	comp=Z,504nm,26.2s						
J16K	Anvik River	63.45	333	P	P	15 36 08.3	+1.5
	baz=108						
C21K	Knifeblade Rid	63.49	341	P	P	15 36 08.0	+1.0
	baz=116						
F19K	Shaleruckik Mo	63.55	338	IAmb	IAmb	15 36 09.1	
	comp=Z,7.0nm,1.1s						
F19K	Shaleruckik Mo	63.55	338	P	P	15 36 08.4	+1.0
	baz=112						
K15K	Wolf Creek Mou	63.56	332	P	P	15 36 08.7	+1.2
	baz=106						
E20K	Nigu River	63.57	339	P	P	15 36 08.6	+1.1
	baz=114						
E19K	Redstone River	63.60	338	P	P	15 36 08.6	+0.9
	baz=113						
B22K	Teshekpuk Lake	63.62	342	P	P	15 36 08.9	+1.1
	baz=118						
B21K	Ikpikpuk River	63.65	341	P	P	15 36 09.1	+1.2
	baz=116						
H17K	Granite Mounta	63.69	335	P	P	15 36 09.7	+1.3
	baz=109						
L14K	Kuka Creek	63.83	331	P	P	15 36 10.7	+1.5
	baz=105						
D20K	Etivluk River	63.90	340	P	P	15 36 10.8	+1.1
	baz=114						
G17K	Kiwalik Mounta	64.17	336	P	P	15 36 12.9	+1.4
	baz=108						
D19K	Kuna River	64.32	339	P	P	15 36 13.3	+0.9
	baz=112						
EUNU	Eureka	64.33	2	P	P	15 36 12.4	+0.1
EUNU				IAmb	IAmb	15 36 20.3	
	comp=Z,7.7nm,1.2s						
A22K	Sinclair Lake	64.39	342	P	P	15 36 13.8	+1.0
	baz=117						
J14K	Nanvaranak Lak	64.59	332	P	P	15 36 15.8	+1.6
	baz=104						
B20K	Meade River	64.61	341	P	P	15 36 15.3	+1.1
	baz=114						
F17K	Baldwin Pennin	64.71	337	P	P	15 36 16.0	+1.1
	baz=108						
E18K	Tukpahlearik C	64.80	338	P	P	15 36 16.7	+1.1
	baz=109						
A21K	Barrow	65.01	342	P	P	15 36 17.8	+1.0
	baz=115						
C19K	Lookout Ridge	65.04	340	P	P	15 36 18.4	+1.2
	baz=111						
E17K	Hotham Inlet	65.14	337	P	P	15 36 18.8	+1.0
	baz=108						
G15K	Niukluk	65.39	335	P	P	15 36 19.9	+0.6
	baz=105						
C18K	Utukok River	65.43	339	P	P	15 36 20.1	+0.4
	baz=109						
D17K	Noatak River	65.79	338	P	P	15 36 22.8	+0.8
	baz=107						
F15K	North Star Dit	65.82	335	P	P	15 36 23.3	+1.0
	baz=105						
B18K	Kokolik River	65.88	340	P	P	15 36 23.4	+1.0
	baz=109						
SUMG	Summit	66.03	17		P	15 36 23.7	-0.2
C17K	DeLong Mountai	66.06	339	P	P	15 36 24.8	+1.1
	baz=107						
F14K	Arctic Creek	66.44	335	P	P	15 36 27.1	+0.9
	baz=103						
BILL	Bilibino	77.28	337	P	P	15 37 31.8	+0.5
BILL				IAmb	IAmb	15 37 36.8	
	comp=Z,7.3nm,1.3s						
ESDC	Sonseca Array	83.30	51	P	P	15 38 04.4	+0.1
	comp=Z,1.3nm,0.8s,baz=286,slow=4.6,SNR=5.0						
	comp=Z,1.3nm,0.8s						
NOA	NORSAR Array B	85.29	27	P	P	15 38 14.6	+0.6
	comp=Z,0.9nm,0.8s,baz=296,slow=5.3,SNR=3.8						
	comp=Z,0.9nm,0.8s						
PETK	Petropavlovsk-	85.46	324	P	P	15 38 16.4	+1.5
	comp=Z,2.5nm,1.1s,baz=71,slow=6.2,SNR=1.8						
	comp=Z,2.5nm,1.1s						
ARCES	ARCESS Array B	86.12	17	P	P	15 38 16.3	-1.6
	comp=Z,1.6nm,0.8s,baz=308,slow=4.4,SNR=3.5						
	comp=Z,1.6nm,0.8s						
MA2	Magadan	86.47	332	LR	LR	16 17 46.5	
	comp=Z,38nm,19.0s,baz=98,slow=36						
YAK	Yakutsk	93.52	339	LR	LR	16 22 54.4	
	comp=Z,54nm,20.4s,baz=42,slow=37						
VAE	Valguarnera	97.51	48	LR	LR	16 22 57.3	
	comp=Z,86nm,18.2s,baz=316,slow=35						
DZM	Mont Dzumac	100.52	250	*e*LR	LR	16 12 30.0	
	comp=Z,78nm,23.1s						
XAN	Xi'an	123.85	333	Pdif	Pdif	15 41 04.7	-4.3
WRA	Warramunga Arr	129.84	257	PKP	PKiKP	15 44 48.7	+0.3
	comp=Z,1.4nm,0.9s,baz=86,slow=2.4,SNR=5.7						
ASAR	Alice Springs	130.43	252	PKP	PKiKP	15 44 49.6	0.0
	comp=Z,0.7nm,1.1s,baz=90,slow=1.9,SNR=1.7						
PZH	PanZhiHua	133.44	335	PKP	PKiKP	15 44 56.1	+0.4
MORW	Morawa	145.77	242	PKPdf	PKPbc	15 45 17.4	+0.4

MEX 06 15:26:31.0±0.8, 15.99°N×98.38°W, h16km±20km, MD4.0, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.46	31	*e*P	Pg	15 26 38.2	-2.2
PNIG				*e*S	Sg	15 26 45.2	-1.5
CRIG	Cruz Grande	1.03	316	*e*P	Pb	15 26 47.8	-2.7
CRIG				*e*S	Sb	15 27 00.8	-3.1
YOIG	Yosondua	1.17	43	*e*P	Pn	15 26 50.0	-3.1
YOIG				*e*S	Sb	15 27 04.0	-4.2
PEIG	Puerto Escondi	1.18	90	*e*P	Pn	15 26 48.8	-4.2
PEIG				*e*S	Sb	15 27 03.5	-4.8
TXIG	Tlaxiaco	1.38	25	*e*P	Pn	15 26 52.8	-3.2
TXIG				*e*S	Sn	15 27 09.3	-4.8
TLIG	Tlapa	1.57	353	*e*P	Pn	15 26 56.1	-2.3
TLIG				*e*S	Sn	15 27 14.5	-4.0
DAIG	Los Arroyos	1.59	310	*e*S	Sn	15 27 12.5	-6.3
VHO	Vista Hermosa	1.91	56	*e*S	Sn	15 27 26.4	-0.6
FTIG	Fresnillo de T	1.92	7	*e*S	Sn	15 27 22.5	-4.6
CAIG	El Cayaco	2.09	300	*e*S	Sn	15 27 32.6	+1.4
HUIG	Huatulco	2.20	96	*e*S	Sn	15 27 32.6	-1.2
MEIG	Mezcala	2.26	328	*e*S	Sn	15 27 35.2	-0.2
TOIG	Toxpalan	2.44	31	*e*S	Sn	15 27 41.9	+2.0
TPIG	Tehuac#an	2.60	22	*e*S	Sn	15 27 43.8	-0.3
PLIG	Platanillo	2.62	336	*e*S	Sn	15 27 45.9	+1.6
YAIG	Yautepec	2.93	347	*e*S	Sn	15 27 54.0	+1.9
ARIG	Puente Sto Nin	2.95	321	*e*S	Sn	15 27 53.0	+0.5
NEUV	Arroyo Zacate	3.00	55	*e*S	Sn	15 27 51.5	-2.2
ZIIG	Zihuatanejo	3.36	299	*e*S	Sn	15 28 03.7	+1.2
CMIG	Matias Romero	3.52	71	*e*S	Sn	15 28 07.1	+0.5

IDC 06 15:26:45.3±5.4, 15.66°N×98.10°W, h0km, mb4.2/4, mbtmp4.2/4, Error ellipse: s-maj=126.7km s-min=52.7km az=29.0

NEIC 06 15:26:49.9±2.1, 16.1°N±0.1°×98.0°W±0.1°, h10km±2km, mb4.4/74, Error ellipse: s-maj=23.5km s-min=16.5km az=224.0

ISC 06 15:26:48.3±2.1, 16.0°N±0.2°×98.12°W±0.09°, h10km, n82, σ0.89s/79, mb4.5/16, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	Tlapa	1.63	345	Pn	Pn	15 27 17.0	-0.3
CMIG	Matias Romero	3.29	70	Sn	Sn	15 28 20.6	+1.5
	103nm,0.3s,baz=5.3,slow=21,SNR=5.1						
CMIG				Lg	Lg	15 28 41.6	
	112nm,0.3s,baz=233,slow=7.1,SNR=5.0						
TEIG	Tepich	10.26	64	Pn	Pn	15 29 14.6	-1.1
MNHN	Monahans	15.87	345	P	P	15 30 35.8	+0.2
MNHN				IAmb	IAmb	15 30 37.5	
	comp=Z,16nm,0.8s						
WHTX	Lake Whitney,	15.95	2	P	Pn	15 30 32.8	-0.1
WHTX				IAmb	IAmb	15 30 42.9	
	comp=Z,22nm,0.7s						
VHRN	Van Horn	16.02	338	P	Pn	15 30 34.1	+0.1
237A	Washetta, Mont	16.09	7	P	P	15 30 37.0	-1.1
237A				IAmb	IAmb	15 30 43.8	
	comp=Z,38nm,1.0s						
SGCY	Sterling City	16.10	351	P	P	15 30 37.7	-0.6
SGCY				IAmb	IAmb	15 30 44.5	
	comp=Z,27nm,0.8s						
PECS	Pecos	16.20	342	P	P	15 30 38.3	-1.1
ABTX	Abilene, Hawle	16.63	355	P	P	15 30 43.4	-0.7
ABTX				IAmb	IAmb	15 30 50.5	
	comp=Z,27nm,0.8s						
FW07	Weatherford	16.65	1	P	P	15 30 44.7	+0.4
FW07				IAmb	IAmb	15 30 46.6	
	comp=Z,22nm,0.9s						
PLPT	Palo Pinto	16.76	359	P	Pn	15 30 43.8	+0.5
PLPT				IAmb	IAmb	15 30 51.9	
	comp=Z,42nm,1.0s						
TREL	Terrell	16.78	6	P	P	15 30 44.8	-0.9
TREL				IAmb	IAmb	15 30 49.4	
	comp=Z,33nm,1.0s						
FW03	Perrin-Whitt E	16.98	0	P	Pn	15 30 46.6	+0.5
FW03				IAmb	IAmb	15 30 54.6	
	comp=Z,18nm,0.8s						
MNTX	Cornudas Mount	16.99	338	P	P	15 30 47.6	-0.4
SN05	Snyder 5	17.01	352	P	Pn	15 30 47.6	+1.1
SN07	Snyder 07	17.22	352	P	P	15 30 50.3	-0.3
POST	Post	17.29	350	P	P	15 30 51.0	-0.4
APMT	Aspermont	17.36	354	P	Pn	15 30 51.5	+0.7
Z38A	Mt. Pleasant	17.44	9	P	P	15 30 52.3	-0.6
Z38A				IAmb	IAmb	15 30 54.6	
	comp=Z,26nm,0.8s						
HSIG		17.56	320	P	Pn	15 30 54.1	+0.8
DKNS	Dickens	17.79	352	P	Pn	15 30 54.6	-1.6
DKNS				IAmb	IAmb	15 31 03.5	
	comp=Z,17nm,0.8s						
MSTX	Muleshoe	18.40	348	P	Pn	15 31 02.5	-1.3
319A	Douglas	18.40	328	P	Pn	15 31 03.2	-0.6
DUN6	Lazy B Ranch	19.27	331	P	P	15 31 13.5	+0.2
Z47A	Carrollton	19.40	26	P	P	15 31 14.7	0.0
Z47A				IAmb	IAmb	15 31 17.9	
	comp=Z,26nm,1.3s						
BNM	Barren Site	19.65	339	P	P	15 31 18.3	+0.7
SBM	South Baldy	19.69	337	P	P	15 31 16.2	-2.0
LRAL	Lakeview Retre	19.74	29	P	Pn	15 31 19.2	-0.6
LENM	Lemitar	19.79	338	P	P	15 31 19.8	+0.8
DEOK	Depew	19.83	4	P	P	15 31 19.0	-0.3
DEOK				IAmb	IAmb	15 31 25.4	
	comp=Z,52nm,1.3s						
RLO	Rose Lookout	20.29	7	P	P	15 31 22.3	-2.0
ANMO	Albuquerque	20.32	340	P	P	15 31 23.8	-1.0
ANMO	Albuquerque	20.32	340	P	P	15 31 24.4	-0.4
ANMO				IAmb	IAmb	15 31 27.1	
	comp=Z,11nm,0.8s						
ANMO	Albuquerque	20.32	340	P	P	15 31 26.0	+1.2
	comp=Z,13nm,0.9s,baz=253,slow=12,SNR=4.9						
	comp=Z,13nm,0.9s						
CROK	Carrier	20.44	0	P	P	15 31 25.6	-0.4
CROK				IAmb	IAmb	15 31 36.2	
	comp=Z,24nm,1.0s						
HHAR	Hobbs	20.56	10	P	P	15 31 28.2	+1.0
HHAR				IAmb	IAmb	15 31 32.7	
	comp=Z,14nm,1.0s						
Y49A	Blount Mountai	20.69	29	P	P	15 31 28.4	-0.3
T35A	Sooner Cattle	20.90	4	P	P	15 31 29.6	-1.3
T35A				IAmb	IAmb	15 31 32.9	
	comp=Z,17nm,1.0s						
X48A	Hartselle	20.91	26	P	P	15 31 29.6	-1.5
X48A				IAmb	IAmb	15 31 38.9	
	comp=Z,13nm,0.9s						
PLAL	Pickwick Lake	20.95	24	P	P	15 31 31.0	-0.5
PLAL				IAmb	IAmb	15 31 42.0	
	comp=Z,19nm,1.0s						
KAN13	South Haven SW	20.96	1	P	P	15 31 29.2	-2.3
KAN13				IAmb	IAmb	15 31 34.2	
	comp=Z,24nm,1.0s						
KAN17	Caldwell West	20.98	1	P	P	15 31 29.7	-2.1
KAN17				IAmb	IAmb	15 31 37.8	
	comp=Z,22nm,0.9s						
X18A	Snowflake	21.31	332	P	P	15 31 34.5	-1.1
X18A				IAmb	IAmb	15 31 38.6	
	comp=Z,22nm,1.2s						
154A	Montrose	21.43	37	P	P	15 31 37.9	+1.2
PBMO	Poplar Bluff	21.81	17	P	P	15 31 41.9	+1.2
GOGA	Godfrey	21.82	35	P	P	15 31 40.1	-0.8
GOGA				IAmb	IAmb	15 31 42.7	
	comp=Z,18nm,0.9s						
Y52A	Lilburn	21.85	33	P	P	15 31 40.4	-0.8
X16A	Lo Mia Camp, P	21.92	329	P	P	15 31 41.4	-0.7
X16A				IAmb	IAmb	15 31 46.5	
	comp=Z,11nm,0.9s						
Y14A	Wickenburg	22.36	326	P	P	15 31 46.6	0.0
WUAZ	Wupatki	22.78	331		P	15 31 51.4	+0.1
WUAZ				IAmb	IAmb	15 31 55.4	
	comp=Z,13nm,0.9s						
CCM	Cathedral Cave	22.81	14	P	P	15 31 51.5	+0.1
CCM				IAmb	IAmb	15 31 53.0	
	comp=Z,20nm,1.1s						
CPCT	Cooper Cave	22.89	30	P	P	15 31 52.5	+0.3
CPCT				IAmb	IAmb	15 31 53.6	
	comp=Z,12nm,0.9s						
W52A	Murphy	22.89	31	P	P	15 31 53.0	+0.8
FVM	French Village	22.95	16	P	P	15 31 52.6	-0.2
FVM				IAmb	IAmb	15 31 54.9	
	comp=Z,15nm,0.9s						
S44A	Carbondale	23.00	18	P	P	15 31 53.7	+0.4
SIUC	Southern Illin	23.03	18	P	P	15 31 53.3	-0.3
HODGE	Hodges	23.10	35	P	P	15 31 54.9	+0.4
HODGE				IAmb	IAmb	15 31 56.0	
	comp=Z,19nm,0.9s						
U49A	Red Boiling Sp	23.21	26	P	P	15 31 55.1	-0.4
BG3	Lake Jocassee	23.32	33	P	P	15 31 56.5	-0.2
BG3				IAmb	IAmb	15 31 58.2	
	comp=Z,14nm,0.8s						
JSC	Jenkinsville	23.70	37	P	P	15 32 00.4	-0.1
JSC				IAmb	IAmb	15 32 06.2	
	comp=Z,20nm,1.1s						
W13A	Hualapai Mount	23.71	326	P	P	15 32 01.1	+0.4
USIN	University of	23.76	21	P	P	15 32 01.1	+0.2
PAULI	Pauline	23.79	35	P	P	15 32 01.6	+0.3
P38A	Dawn	23.89	9	P	P	15 32 01.0	-1.2
P38A				IAmb	IAmb	15 32 08.2	
	comp=Z,13nm,0.9s						
PV13	Radium Mtn., P	24.02	339	P	P	15 32 03.8	+0.1
PV13				IAmb	IAmb	15 32 05.5	
	comp=Z,13nm,1.0s						
P40A	Paris	24.05	12	P	P	15 32 02.4	-1.3
V55A	Taylorsville	24.88	34	P	P	15 32 11.8	+0.5
W57A	Gilead	25.06	37	P	P	15 32 13.1	+0.2
V58A	Windy Hill, Pi	26.02	37	P	P	15 32 22.4	+0.8
SCIA	State Center	26.18	8	P	P	15 32 23.1	0.0
T57A	Hurt	26.79	35	P	P	15 32 30.2	+1.6
N47A	Urbana	27.05	21	P	P	15 32 30.9	0.0
MZP	Montezuma Peak	27.52	326	P	P	15 32 34.9	-0.6
TCUT	Toone Canyon	27.57	338	P	P	15 32 35.8	0.0
NV11	Mina Array Sit	28.47	326	P	P	15 32 44.2	+0.3
NV11				IAmb	IAmb	15 32 46.1	
	comp=Z,7.1nm,1.2s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCHQ	Schefferville	45.67	25	P	P	15 35 10.1	+0.9
	comp=Z,8.4nm,0.9s,baz=218,slow=5.8,SNR=4.1						
	comp=Z,8.4nm,0.9s						
H03N2	Juan Fernandez	52.44	160	T	T	16 32 44.4	
	baz=338,slow=77,SNR=9.7						
H03N1	Juan Fernandez	52.45	160	T	T	16 32 40.5	
	baz=338,slow=77,SNR=7.7						
H03N3	Juan Fernandez	52.46	160	T	T	16 32 45.0	
	baz=338,slow=77,SNR=7.3						
ILAR	Eielson Array	58.74	338	P	P	15 36 47.0	+0.9
	comp=Z,1.4nm,0.9s,baz=141,slow=4.5,SNR=4.6						
	comp=Z,1.4nm,0.9s						
ESDC	Sonseca Array	83.09	51	P	P	15 39 14.1	-0.5
	comp=Z,1.0nm,0.8s,baz=277,slow=5.2,SNR=2.3						
	comp=Z,1.0nm,0.8s						

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*NEIC **06** 15:30:59.0±1.5, 18°.3S±0°.1×178°.0W±0°.2, h583km±10km, mb4.5/17, Error ellipse: s-maj=26.1km s-min=20.0km az=107.0*

*IDC **06** 15:30:59.3±1.8, 18°.25S×178°.13W, h581km±19km, mb3.2/8, mbtmp4.1/9, Error ellipse: s-maj=23.5km s-min=18.2km az=107.0*

ISC 06 15:31:00.4±0.7**, 18°.2S**±0°.1×**178°.2W**±0°.1**, h600**km**, n32, σ1s10**/35**, mb4.3**/15**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.60	277		P	15 32 21.9	-1.4
MSVF	Nonsavu	3.60	277	P	P	15 32 22.2	-1.1
	24nm,0.6s,baz=143,slow=4.5,SNR=30						
FUTU	Fugatoga	3.88	1	P	P	15 32 22.7	-2.5
URZ	Urewera	20.39	191	P	P	15 34 55.1	-2.4
	9.3nm,0.9s,baz=354,slow=2.9,SNR=7.0						
	9.3nm,0.9s						
BKZ	Black Stump Fm	21.39	191	P	P	15 35 04.3	-2.2
BKZ				IAmb	IAmb	15 35 09.6	
	comp=Z,31nm,1.5s						
MRZ	Mangatainoka R	23.01	192	P	P	15 35 18.9	-2.0
CTAO	Charters Tower	33.60	261	P	P	15 36 52.9	+0.1
COEN	Coen	37.31	271	P	P	15 37 24.3	+0.8
STKA	Stephens Creek	38.66	242	P	P	15 37 35.3	+1.0
	comp=Z,1.8nm,0.6s,baz=94,slow=7.6,SNR=3.9						
	comp=Z,1.8nm,0.6s						
BBOO	Buckleboo	43.44	241	P	P	15 38 12.7	+0.8
BBOO				IAmb	IAmb	15 38 13.3	
	comp=Z,19nm,1.2s						
WR8	Warramunga Arr	44.62	260	P	P	15 38 20.7	-0.5
WR8				IAmb	IAmb	15 38 42.3	
	comp=Z,12nm,1.4s						
WB0	Warramunga Arr	44.74	260	P	P	15 38 21.8	-0.4
WRA	Warramunga Arr	44.77	260	P	P	15 38 22.5	+0.1
	comp=Z,1.6nm,0.5s,baz=96,slow=7.5,SNR=28						
WRA				PcP	PcP	15 39 51.7	+0.4
	comp=Z,0.3nm,0.7s,baz=93,slow=3.0,SNR=4.9						
	comp=Z,1.6nm,0.5s						
AS31	Alice Springs	44.90	255		P	15 38 23.7	+0.3
AS31				IAmb	IAmb	15 38 24.8	
	comp=Z,3.0nm,0.5s						
ASAR	Alice Springs	44.90	255	P	P	15 38 22.9	-0.5
ASAR				PcP	PcP	15 39 52.0	+0.3
ASAR	Alice Springs	44.90	255	P	P	15 38 23.8	+0.4
	comp=Z,7.9nm,0.7s,baz=87,slow=9.0,SNR=120						
ASAR				PcP	PcP	15 39 52.4	+0.6
	comp=Z,0.5nm,0.4s,baz=91,slow=3.6,SNR=7.2						
	comp=Z,7.9nm,0.7s						
MTN	Manton Dam	48.99	269	P	P	15 38 53.5	-0.6
MTN				IAmb	IAmb	15 39 02.4	
	comp=Z,47nm,1.4s						
KNRA	Kununurra	50.66	264	P	P	15 39 06.1	-0.1
KNRA				IAmb	IAmb	15 39 14.0	
	comp=Z,37nm,1.4s						
FITZ	Fitzroy Crossi	53.18	261	P	P	15 39 24.7	+0.5
JAGI	Jajag, Banyuwa	66.23	269	P	P	15 40 50.1	-0.6
UGM	Wanagama	69.84	268	P	P	15 41 13.0	+0.4
QSPA	South Pole Qui	71.84	180	P	P	15 41 24.8	+1.3
QSPA	South Pole Qui	71.84	180	P	P	15 41 24.9	+1.4
	comp=Z,2.1nm,1.0s,baz=239,slow=0.7,SNR=7.3						
	comp=Z,2.1nm,1.0s						
PEA0B	Petropavlovsk-	74.02	345	P	P	15 41 36.0	+0.2
PEA0B				IAmb	IAmb	15 42 17.6	
	comp=Z,20nm,1.4s						
PETK	Petropavlovsk-	74.02	345	P	P	15 41 36.2	+0.4
PETK	Petropavlovsk-	74.02	345	P	P	15 41 36.1	+0.3
	comp=Z,0.6nm,0.6s,baz=157,slow=5.1,SNR=4.9						
	comp=Z,0.6nm,0.6s						
Q19K	Cape Douglas,	79.47	13	P	P	15 42 07.0	+1.6
Q19K				IAmb	IAmb	15 42 41.3	
	comp=Z,46nm,1.2s						
N15K	Kwethluk River	79.47	9	P	P	15 42 05.9	+0.6
TXAR	Lajitas Array	85.99	58	P	P	15 42 40.1	+1.3
	comp=Z,0.2nm,0.5s,baz=250,slow=4.7,SNR=1.7						
	comp=Z,0.2nm,0.5s						
ILAR	Eielson Array	86.14	13	P	P	15 42 38.0	-0.5
	comp=Z,0.3nm,0.4s,baz=208,slow=4.8,SNR=7.6						
	comp=Z,0.3nm,0.4s						
BRTR	Keskin Array B	145.14	315	PKPbc	PKPab	15 49 32.8	-0.5
	comp=Z,0.8nm,0.8s,baz=90,slow=1.4,SNR=5.5						
GERES	GERESS Array B	147.95	345	PKPbc	PKiKP	15 49 39.7	-0.9
	comp=Z,0.6nm,0.5s,baz=30,slow=4.5,SNR=2.3						

IDC 06 15:34:44.7±60.0**, 16°.73S**×**175°.94W, h548**km±95km**, mb3.4**/3**, mbtmp4.2**/4**, Error ellipse: s-maj=954.5km s-min=117.1km az=78.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.83	259	P	P	15 36 21.8	0.0
	9.4nm,0.7s,baz=119,slow=10,SNR=6.3						
STKA	Stephens Creek	41.26	241	P	P	15 41 42.3	-0.2
	2.0nm,0.5s,baz=86,slow=9.0,SNR=8.4						
	2.0nm,0.5s						
WRA	Warramunga Arr	47.18	258	P	P	15 42 28.0	-0.3
	1.0nm,0.5s,baz=94,slow=6.9,SNR=13						
	1.0nm,0.5s						
ASAR	Alice Springs	47.39	253	P	P	15 42 30.0	+0.1
	7.0nm,0.5s,baz=89,slow=7.8,SNR=104						
	7.0nm,0.5s						

MEX 06 15:37:56.8±1.0**, 15°.80N**×**98°.40W, h16**km±63km**, MD4.1, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.64	24	*i* P	Pg	15 38 06.5	-3.0
PNIG				*i* S	Sg	15 38 14.7	-3.4
CRIG	Cruz Grande	1.17	323	*e*S	Sb	15 38 29.2	-4.3
PEIG	Puerto Escondi	1.22	80	*e*P	Pn	15 38 16.0	-3.1
PEIG				*e*S	Sb	15 38 30.0	-4.9
YOIG	Yosondua	1.33	38	*e*P	Pn	15 38 17.7	-3.2
YOIG				*e*S	Sb	15 38 34.7	-3.8
TXIG	Tlaxiaco	1.57	23	*e*P	Pn	15 38 21.2	-3.0
TXIG				*e*S	Sn	15 38 40.0	-4.3
DAIG	Los Arroyos	1.71	315	*e*P	Pn	15 38 25.9	-0.1
DAIG				*e*S	Sn	15 38 40.3	-7.2
VHO	Vista Hermosa	2.04	51	*e*P	Pn	15 38 28.1	-2.5
VHO				*e*S	Sn	15 38 53.4	-2.4
FTIG	Fresnillo de T	2.11	7	*e*P	Pn	15 38 29.3	-2.3
FTIG				*e*S	Sn	15 38 55.2	-2.3
HUIG	Huatulco	2.20	90	*e*P	Pn	15 38 29.1	-3.6
HUIG				*e*S	Sn	15 38 55.0	-4.6
MEIG	Mezcala	2.42	331	*e*P	Pn	15 38 31.3	-4.4
MEIG				*e*S	Sn	15 39 01.5	-3.5
TOIG	Toxpalan	2.62	29	*e*P	Pn	15 38 36.2	-2.3
TOIG				*e*S	Sn	15 39 09.0	-1.0
TPIG	Tehuac#an	2.79	21	*e*P	Pn	15 38 40.6	-0.3
TPIG				*e*S	Sn	15 39 13.4	-0.9
PLIG	Platanillo	2.79	338	*e*P	Pn	15 38 41.6	+0.8
PLIG				*e*S	Sn	15 39 13.3	-0.8
ARIG	Puente Sto Nin	3.10	323	*e*P	Pn	15 38 44.9	-0.1
ARIG				*e*S	Sn	15 39 17.5	-4.2
YAIG	Yautepec	3.11	348	*e*P	Pn	15 38 43.5	-1.9
YAIG				*e*S	Sn	15 39 16.2	-6.1
NEUV	Arroyo Zacate	3.13	52	*e*P	Pn	15 38 46.6	+1.2
NEUV				*e*S	Sn	15 39 22.4	0.0
PPPT	Popocatepetl	3.16	356	*e*P	Pn	15 38 46.6	+0.2
PBXN	Popocatepetl	3.20	356	*e*P	Pn	15 38 46.6	-0.3
PBPN	Popocatepetl	3.23	356	*e*P	Pn	15 38 49.7	+2.4
PPM	Popocatepetl	3.26	356	*e*P	Pn	15 38 47.8	+0.1
PPM				*e*S	Sn	15 39 24.9	-1.5

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*NOU **06** 15:58:30.8, 43°.35S×173°.32E, h3km, MLv3.7/10, Off E. Coast of S. Island, N.Z.*

*WEL **06** 15:58:33.2±0.5, 43°S±2°×17°3E±°, h22km±3km, M3.1/13, ML3.3/13, MLv3.1/13, Error ellipse: s-maj=5.9km s-min=3.0km az=99.5, confirmed*

ISC 06 15:58:32.0±1.4**, 43°.32S**±0°.03×**173°.30E**±0°.04**, h13**km±12km**, n61, σ0s79**/69**, Off east coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVZ	Greta Valley S	0.40	331	P	Pn	15 58 42.3	-1.1
GVZ				S	Sb	15 58 48.0	+1.1
MNZS	Menzies Bay Ba	0.40	217	P	Pn	15 58 43.3	-0.1
OKCZ	Okains Bay	0.44	203	P	Pn	15 58 44.1	+0.1
OKCZ				S	Sb	15 58 50.8	+2.6
AMBC	Amberley HDC	0.45	291	P	Pb	15 58 42.4	+0.8
NBLC	New Brighton L	0.46	245	P	Pn	15 58 43.0	-1.2
GODS	Godley Drive	0.47	236	P	Pb	15 58 42.7	+0.6
SCAC	Scargill	0.47	323	P	Pb	15 58 42.0	-0.1
KPOC	Kaiapoi North	0.47	262	P	Pn	15 58 43.2	-1.2
SUMS	Sumner	0.47	237	P	Pn	15 58 43.9	-0.5
PARS	Panorama Road	0.47	238	P	Pb	15 58 42.6	+0.5
BWHS	Burwood Hospit	0.48	250	P	Pb	15 58 42.9	+0.6
AMCZ	Amberley	0.50	286	S	Sb	15 58 50.9	+1.3
CECS	Cheviot Emerge	0.50	358	P	Pn	15 58 44.1	-0.7
CECS				S	Sb	15 58 51.4	+1.5
WAKC	Waikari	0.56	309	P	Pn	15 58 44.4	-1.2
WAKC				S	Sb	15 58 52.0	+0.4
MQZ	McQueen's Vall	0.61	230	P	Pn	15 58 45.5	-0.8
AKCZ	Akaroa Harbour	0.62	207	P	Pn	15 58 46.4	-0.1
AKCZ				S	Sn	15 58 55.0	-1.4
KHZ	Kahutara	0.92	11	P	Pg	15 58 49.8	+0.1
KHZ	Kahutara	0.92	11	S	Sg	15 59 01.5	-0.2
KHZ	Kahutara	0.92	11	P	Pg	15 58 49.7	+0.1
OXZ	Oxford	0.92	269	P	Pb	15 58 49.6	-0.2
LTZ	Lake Taylor	0.93	305	P	Pb	15 58 50.0	+0.1
LTZ				S	Sg	15 59 01.1	-0.9
RACZ	Rakaia	0.94	244	P	Pn	15 58 50.4	-0.4
RACZ				S	Sb	15 59 01.9	-0.5
WACZ	Wakanui South	1.23	239	P	Pb	15 58 54.7	-0.4
WACZ				S	Sb	15 59 09.8	-1.1
MHCZ	Mount Hutt	1.28	260	P	Pn	15 58 54.9	-0.7
INZ	Inchbonnie	1.49	293	P	Pn	15 58 57.8	-0.5
THZ	Tophouse	1.58	349	P	Pn	15 58 59.2	-0.5
BSWZ	Blackbirch Sta	1.66	15	P	Pn	15 59 00.7	0.0
ARCZ	Arundel	1.67	247	P	Pn	15 59 00.4	-0.5
RPZ	Rata Peaks	1.68	256	P	Pn	15 59 00.7	-0.4
RPZ	Rata Peaks	1.68	256	P	Pn	15 59 00.6	-0.5
WVZ	Waitaha Valley	1.89	276	P	Pn	15 59 04.2	+0.3
DSZ	Denniston Nort	1.92	324	P	Pn	15 59 04.3	-0.1
TUWZ	Tuamarina	1.94	14	P	Pn	15 59 05.0	+0.4
MRNZ	Matariki Terra	1.96	348	P	Pn	15 59 05.2	+0.4
TMZ	Timaru	1.97	237	P	Pn	15 59 05.0	-0.1
NNZ	Nelson	2.10	2	P	Pn	15 59 06.8	+0.1
GCSZ	Gaunt Creek Bo	2.17	269	P	Pn	15 59 08.6	+0.8
TCW	Tory Channel	2.23	19	P	Pn	15 59 07.8	-0.7
BHW	Baring Head	2.23	32	P	Pn	15 59 07.7	-0.9
SNZO	South Karori	2.26	28	P	Pn	15 59 08.7	-0.2
PLWZ	Palliser	2.27	40	P	Pn	15 59 08.0	-1.1
TKNZ	Takaka Hill	2.30	354	P	Pn	15 59 10.0	+0.5
WEL	Wellington	2.30	29	P	Pn	15 59 09.0	-0.6
MSWZ	Moikau Station	2.38	38	P	Pn	15 59 09.7	-1.1
LBZ	Lake Benmore	2.50	244	P	Pn	15 59 12.4	+0.2
FOZ	Fox Glacier	2.55	264	P	Pn	15 59 14.4	+1.4
DUWZ	D'Urville Isla	2.56	11	P	Pn	15 59 13.2	+0.1
QRZ	Quartz Range	2.56	347	P	Pn	15 59 13.2	+0.2
QRZ	Quartz Range	2.56	347	P	Pn	15 59 13.4	+0.4
CAW	Cannon Point	2.57	31	P	Pn	15 59 12.4	-0.8
ODZ	Otahua Downs	2.58	227	P	Pn	15 59 13.1	-0.2
ODZ	Otahua Downs	2.58	227	P	Pn	15 59 13.3	0.0
MTW	Mount Morrison	2.71	38	P	Pn	15 59 13.5	-1.6
KIW	Kapiti Island	2.73	27	P	Pn	15 59 15.1	-0.3
OGWZ	Otaki Gorge	2.86	30	P	Pn	15 59 16.3	-0.9
MRZ	Mangatainoka R	3.15	33	P	Pn	15 59 19.9	-1.3
JCZ	Jackson Bay	3.36	255	P	Pn	15 59 24.2	0.0
JCZ	Jackson Bay	3.36	255	P	Pn	15 59 24.4	+0.1
BFZ	Birch Farm	3.43	41	P	Pn	15 59 24.9	-0.1
BKZ	Black Stump Fm	4.79	31	P	Pn	15 59 44.3	+0.4
HIZ	Hauiti	4.94	14	P	Pn	15 59 46.4	+0.6

GCG 06 15:59:20.6±0.9**, 14°.92N**×**92°.12W, h86**km±7km**, MD3.6, ML3.1, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMCA	Catarina	0.07	143	*e*P	Pn	15 59 32.6	-0.2
SMCA				*e*S	Sn	15 59 42.5	+0.7
SMCA				IAML		15 59 43.6	
	comp=N,427nm,0.3s						
STG8	El Palmar, Qui	0.88	122	*e*P	Pn	15 59 35.6	-3.2
STG8				*e*S	Sn	15 59 48.6	-3.9
STG8				IAML		15 59 50.5	
	comp=E,709nm,0.2s						
FG16	Alotenango, Sa	1.68	112	*e*P	Pn	15 59 44.7	-4.0
FG16				*i* S	Sn	16 00 03.3	-6.8
FG16				IAML		16 00 11.6	
	comp=N,362nm,0.2s						

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*NEIC **06** 16:02:17.5±1.3, 18°.8S±0°.2×177°.5W±0°.2, h621km±27km, mb4.5/12, Error ellipse: s-maj=36.0km s-min=20.8km az=191.0*

*IDC **06** 16:02:19.6±5.4, 18°.70S×177°.86W, h627km±29km, mb3.3/3, mbtmp4.2/4, Error ellipse: s-maj=123.0km s-min=78.3km az=141.0*

ISC 06 16:02:17.1±1.1**, 18°.8S**±0°.2×**177°.5W**±0°.2**, h621**km**, n19, σ0s72**/20**, mb4.4**/9**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.35	283	P	P	16 03 46.8	+0.2
MSVF	Nonsavu	4.35	283	P	P	16 03 47.0	+0.4
	12nm,0.7s,baz=159,slow=22,SNR=10						
AFI	Afiamalu	7.32	49	P	P	16 04 11.1	0.0
MRZ	Mangatainoka R	22.61	194	P	P	16 06 32.1	-0.8
CAN	Canberra	33.88	234	P	P	16 08 11.9	+1.4
CTAO	Charters Tower	34.16	262	P	P	16 08 12.5	-0.5
CTAO				IAmb	IAmb	16 08 13.5	
	comp=Z,13nm,0.9s						
COEN	Coen	37.98	271	P	P	16 08 44.2	-0.1
COEN				IAmb	IAmb	16 09 14.8	
	comp=Z,32nm,1.3s						
STKA	Stephens Creek	38.98	242	P	P	16 08 53.1	+1.0
STKA	Stephens Creek	38.98	242	P	P	16 08 52.2	+0.1
	comp=Z,1.7nm,0.5s,baz=77,slow=8.7,SNR=4.9						
	comp=Z,1.7nm,0.5s						
BBOO	Buckleboo	43.75	242	P	P	16 09 29.8	+0.3
BBOO				IAmb	IAmb	16 09 32.2	
	comp=Z,11nm,1.2s						
WR8	Warramunga Arr	45.17	260	P	P	16 09 40.0	-0.6
WR8				IAmb	IAmb	16 10 04.7	
	comp=Z,22nm,1.4s						
WB0	Warramunga Arr	45.30	261	P	P	16 09 41.0	-0.6
WB0				IAmb	IAmb	16 10 16.7	
	comp=Z,22nm,1.4s						
WRA	Warramunga Arr	45.33	260	P	P	16 09 41.4	-0.4
	comp=Z,2.5nm,0.4s,baz=97,slow=7.4,SNR=43						
	comp=Z,2.5nm,0.4s						
AS31	Alice Springs	45.39	255	P	P	16 09 41.9	-0.4
ASAR	Alice Springs	45.39	255	P	P	16 09 41.3	-1.0
ASAR	Alice Springs	45.39	255	P	P	16 09 42.2	-0.1
	comp=Z,3.6nm,0.5s,baz=89,slow=7.8,SNR=125						
ASAR				PcP	PcP	16 11 08.6	+0.6
	comp=Z,0.7nm,0.9s,baz=96,slow=4.1,SNR=2.8						
	comp=Z,3.6nm,0.5s						
MTN	Manton Dam	49.64	269	P	P	16 10 12.6	-1.3
KNRA	Kununurra	51.26	265	P	P	16 10 25.7	0.0
KNRA				IAmb	IAmb	16 11 00.7	
	comp=Z,25nm,1.3s						
FITZ	Fitzroy Crossi	53.74	261	P	P	16 10 43.7	+0.5

DJA 06 16:25:02.1±0.7**, 8°S**±4°×**10°9E**±°**, h23**km±6km**, M3.7**/16**, mb4.0**/2**, MLv3.5**/16**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMJI	Cimerak	0.81	316	P	Pn	16 25 18.4	+0.3
CMJI				S	Sn	16 25 29.0	-0.5
YOGI	Yogyakarta	1.38	67	P	Pn	16 25 25.7	-0.2
UGM	Wanagama	1.56	73	P	Pn	16 25 28.1	-0.3
SMRI	Semarang	1.93	47	P	Pn	16 25 34.2	+0.7
SMRI				S	Sn	16 25 57.5	+0.5
WOJI	Wonogiri, Jawa	1.96	74	P	Pn	16 25 32.0	-1.9
LEM	Lembang	2.07	318	P	Pn	16 25 36.1	+0.5
PCJI	Pacitan	2.14	85	P	Pn	16 25 37.0	+0.6
CNJI	Cibinong	2.15	299	P	Pn	16 25 36.5	-0.1
NGJI	Ngawi	2.62	68	P	Pn	16 25 43.2	+0.2
GRJI	Gresik	3.72	67	P	Pn	16 25 58.2	0.0
CGJI	Cibinong	3.73	298	P	Pn	16 25 58.8	+0.5
GMJI	Gumukmas	4.38	89	P	Pn	16 26 07.4	+0.2
JAGI	Jajag, Banyuwa	5.08	91	P	Pn	16 26 16.8	-0.1
	37nm,2.1s						
TPI	Tanjungpandan	5.74	346	P	Pn	16 26 25.5	-0.5

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*JMA **06** 17:04:08.5±0.1, 40°.3N±0°.3×142°.4E±0°.6, h23km±1km, MV3.5/40, NE OFF IWATE PREF*

*NIED **06** 17:04:08.5, 40°.34N×142°.40E, h23km, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.02; $M_{\theta\theta}$1.31; $M_{\phi\phi}$-1.29; $M_{r\theta}$0.50; $M_{\theta\phi}$-1.25; $M_{\phi r}$0.10; Fault plane solution: $M_0$1.87000×10^{14} NP1: ϕ_s157.00000°, δ75.00000°, λ3.00000°. NP2:ϕ_s67.00000°, δ87.00000°, λ165.00000°.*

*IDC **06** 17:04:08.9±1.7, 40°.39N×142°.16E, h0km, mb3.5/5, mbtmp3.4/7, ML3.0/2, MS2.6/2 Error ellipse: s-maj=47.1km s-min=20.5km az=84.0*

ISC 06 17:04:09.0±1.9**, 40°.37N**±0°.04×**142°.19E**±0°.07**, h1**km±13km**, n23, σ0s92**/26**, mb3.5**/5**, 12D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKEN	Kujiedanarisaw	0.40	247	⇓*i*P	Pb	17 04 19.0	+0.2
JKEN				⇓*e*S	Sb	17 04 26.8	+1.3
JTH	Tanohata	0.49	211	*i* P	Pb	17 04 19.8	-0.7
JTH				S	Sb	17 04 28.1	0.0
JANG	Nango	0.52	271	⇓P	Pb	17 04 21.2	+0.4
JANG				⇓*e*S	Sb	17 04 30.5	+1.7
JKZ	Kuzumaki	0.76	240	⇓*i*P	Pb	17 04 24.8	-0.2
JKZ				⇓S	Sb	17 04 36.6	+0.7
JARK	Aomorirokkasho	0.90	316	*e*P	Pb	17 04 27.2	-0.1
JARK				S	Sn	17 04 41.0	-1.4
JTM	Tenmabayashi	0.95	297	⇓*i*P	Pn	17 04 28.7	-0.8
JTM				⇓S	Sn	17 04 43.5	-0.3
JOM	Ohasama	1.13	218	⇓*i*P	Pg	17 04 30.1	-0.5
JOM				⇓*e*S	Sg	17 04 45.9	+0.7
JAH	Hinai	1.20	262	⇓P	Pn	17 04 32.6	-0.4
JAH				⇓*e*S	Sn	17 04 49.3	-0.6
JOT	Ohata	1.33	320	P	Pn	17 04 34.1	-0.7
JOT				*e*S	Sn	17 04 53.1	0.0
ASAJ	Asahikawa	3.76	4	Pn	Pn	17 05 08.1	-0.1
	2.1nm,0.3s,baz=203,slow=14,SNR=32						
ASAJ				Sn	Sn	17 05 55.2	+2.1
	baz=0.0,slow=33						
	5.3nm,0.3s						
MJAR	Matsushiro Arr	4.93	221	Pn	Pn	17 05 25.4	+1.2
	0.1nm,0.3s,baz=32,slow=12,SNR=8.1						
MJAR				LR	LR	17 07 41.6	
	comp=Z,65nm,18.5s,baz=87,slow=43						
	0.5nm,0.5s						
PETK	Petropavlovsk-	16.55	34	LR	LR	17 13 38.7	
	comp=Z,22nm,19.3s,baz=124,slow=34						
H11N2	WAKE ISLAND Hy	29.50	127	T	T	17 41 00.7	
	baz=320,slow=75,SNR=145						
H11N1	WAKE ISLAND Hy	29.51	127	T	T	17 40 59.7	
	baz=320,slow=75,SNR=145						
H11N3	WAKE ISLAND Hy	29.52	127	T	T	17 41 01.7	
	baz=320,slow=75,SNR=172						
H11S1	WAKE ISLAND Hy	30.32	129	T	T	17 42 03.2	
	baz=322,slow=76,SNR=22						
H11S3	WAKE ISLAND Hy	30.32	129	T	T	17 42 04.5	
	baz=322,slow=76,SNR=19						
H11S2	WAKE ISLAND Hy	30.33	129	T	T	17 42 05.9	
	baz=322,slow=76,SNR=12						
ZALV	Zalesovo Beam	40.19	310	P	P	17 11 47.0	+0.4
	0.5nm,0.5s,baz=88,slow=8.8,SNR=2.0						
	0.5nm,0.5s						
MKAR	Makanchi Array	42.94	299	P	P	17 12 08.6	-0.8
	0.7nm,0.9s,baz=81,slow=8.7,SNR=4.4						
	0.7nm,0.9s						
KURBB	Kurchatov Arra	44.50	305	P	P	17 12 21.0	-0.7
	0.5nm,0.6s,baz=78,slow=8.5,SNR=7.1						
	0.5nm,0.6s						
WRA	Warramunga Arr	60.44	188	P	P	17 14 19.3	-0.9
	0.4nm,0.8s,baz=6.5,slow=6.6,SNR=1.5						
	0.4nm,0.8s						
ASAR	Alice Springs	64.17	188	P	P	17 14 45.9	+0.7
	0.3nm,0.8s,baz=0.9,slow=6.7,SNR=4.8						
	0.3nm,0.8s						

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*ISK **06** 17:14:17.6, 39°.72N×25°.56E, h1km, ML3.7/33*

*THE **06** 17:14:19.6, 40°N±1°×2°6E±°, h11km±1km, M3.4/16, MLh3.4/16*

*AFAD **06** 17:14:20.2, 39°.73N×25°.69E, h14km±2km, MW3.7*

*SOF **06** 17:14:28.7, 40°.5N±0°.3×25°.40E±0°.09, h5km±39km, MD3.3/12*

ISC 06 17:14:18.8±1.0**, 39°.70N**±0°.02×**25°.57E**±0°.02**, h10**km±8km**, n117, σ1s19**/164**, 15C-7D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIA	Limnos Island	0.36	304	P	Pg	17 14 26.7	+0.9
LIA				S	Sb	17 14 32.2	-0.7
BOZC	Bozcaada	0.40	69	Pg	Pg	17 14 26.4	-0.2
BOZC	Bozcaada	0.40	69	P	Pg	17 14 26.5	-0.2
BOZC				S	Sg	17 14 31.1	-0.8
BOZC				*i* IAML		17 14 36.0	
	comp=N,4μm,0.5s						
BOZC				*i* IAML		17 14 39.0	
	comp=E,3μm,0.6s						
KOCA	Canakkale, Ayv	0.48	114	P	Pg	17 14 28.8	+0.7
KOCA				S	Sg	17 14 34.6	+0.1
KOCA				*i* IAML		17 14 41.0	
	comp=E,4μm,0.6s						
KOCA				*i* IAML		17 14 43.0	
	comp=N,3μm,0.4s						
GPNR	Gulpinar-Canak	0.50	119	Pg	Pg	17 14 28.6	+0.1
GPNR				Sg	Sb	17 14 36.8	-0.1
GOAD	anakkale-G¶	0.53	29	P	Pg	17 14 29.4	+0.3
GOAD				S	Sg	17 14 32.8	-3.3
GOAD				*i* IAML		17 14 42.0	
	comp=N,5μm,0.4s						
GOAD				*i* IAML		17 14 42.0	
	comp=E,8μm,0.4s						
SIGR	SIGRI	0.54	156	Pg	Pg	17 14 29.7	+0.5
SIGR				Sg	Sb	17 14 38.2	+0.2
SIGR	SIGRI	0.54	156	P	Pg	17 14 29.7	+0.5
SIGR				S	Sb	17 14 37.9	-0.1
GADA	Gvkgeada	0.55	27	Pg	Pg	17 14 29.5	0.0
ECEA	Canakkale, Ece	0.58	53	P	Pb	17 14 32.0	+1.0
ECEA				S	Sb	17 14 40.5	+1.3
ECEA				*i* IAML		17 14 43.0	
	comp=N,4μm,0.8s						
ECEA				*i* IAML		17 14 49.0	
	comp=E,3μm,0.7s						
EZN	Ezine	0.59	78	Pg	Pg	17 14 29.9	-0.4
EZN	Ezine	0.59	78	⇓P	Pg	17 14 29.9	-0.4
EZN				⇑S	Sg	17 14 38.2	0.0
EZNE	Ezine-Canakkal	0.62	85	Pg	Pg	17 14 30.7	0.0
EZNE				Sg	Sg	17 14 39.4	+0.6
PRK	Paraskevi	0.71	130	P	Pg	17 14 32.9	+0.5
PRK				S	Sb	17 14 43.1	+0.2
CNKL	anakkale-Mer	0.73	60	P	Pg	17 14 32.8	0.0
CNKL				S	Sg	17 14 41.5	-0.9
CNKL				*i* IAML		17 14 47.0	
	comp=N,1μm,0.4s						
CNKL				*i* IAML		17 14 55.0	
	comp=E,1μm,1.2s						
BAYC	CANAKKALE_Bayr	0.75	87	P	Pg	17 14 33.2	-0.1
BAYC				S	Sg	17 14 43.7	+0.5
BAYC				*i* IAML		17 14 47.0	
	comp=N,1μm,0.3s						
BAYC				*i* IAML		17 14 52.0	
	comp=E,875nm,0.3s						
AYVA	Ayvalik	0.95	114	P	Pg	17 14 37.1	0.0
AYVA				S	Sg	17 14 49.3	-0.1
AYVA				*i* IAML		17 14 53.0	
	comp=N,2μm,0.5s						
AYVA				*i* IAML		17 14 59.0	
	comp=E,1μm,0.6s						
GELI	Tayfur-Gelibol	0.98	45	Pg	Pg	17 14 37.0	-0.7
GELI				Sg	Sb	17 14 51.6	+0.7

ENZZ	Sultanice-Enez	1.01	26	Pg	Pg	17 14 37.8	-0.3
ENZZ				Sg	Sn	17 14 52.6	-0.5
CAVK	Edirne/Enez-Ca	1.09	25	P	Pb	17 14 39.5	-0.2
CAVK				S	Sb	17 14 52.9	-1.1
CAVK				i IAML		17 15 04.0	
	comp=E,1µm,0.6s						
CAVK				i IAML		17 15 10.0	
	comp=N,2µm,0.7s						
CAVK	Edirne/Enez-Ca	1.09	25	⇑P	Pb	17 14 39.5	-0.2
CAVK				⇑S	Sn	17 14 55.0	-0.2
THAS	Thassos island	1.12	324	P	Pb	17 14 40.0	-0.1
THAS				S	Sg	17 14 55.0	+0.3
ENEZ	Enez	1.13	23	Pn	Pb	17 14 40.0	-0.3
LPK	Lapseki	1.13	53	Pn	Pb	17 14 39.9	-0.5
BUHA	Balikesir, Bur	1.18	99	P	Pb	17 14 41.4	+0.2
BUHA				S	Sb	17 14 55.5	-1.1
BUHA				i IAML		17 15 02.0	
	comp=E,2µm,0.4s						
BUHA				i IAML		17 15 03.0	
	comp=N,2µm,0.5s						
CANM	Can-anakkale	1.18	74	Pn	Pb	17 14 41.3	0.0
ERIK	Erikli-Kesan	1.21	36	Pn	Pn	17 14 41.0	-0.7
ERIK				Sn	Sn	17 14 58.4	+0.3
DKL	Dikili	1.21	121	Pn	Pg	17 14 42.4	+0.4
CAND	Candarli	1.21	128	Pn	Pg	17 14 42.4	+0.4
KARB	zmir-Karabur	1.23	147	P	Pg	17 14 43.0	+0.8
KARB				S	Sb	17 14 55.9	-1.9
KARB				i IAML		17 15 00.0	
	comp=E,699nm,0.5s						
KARB				i IAML		17 15 04.0	
	comp=N,381nm,0.5s						
ALN	Alexandroupoli	1.25	17	Pn	Pn	17 14 41.8	-0.4
ALN	Alexandroupoli	1.25	17	P	Pn	17 14 41.8	-0.4
ALN				S	Sb	17 14 58.5	-0.1
IZMD	zmir-Dikili-	1.27	124	P	Pb	17 14 43.3	+0.4
IZMD				S	Sb	17 14 54.2	-5.1
IZMD				i IAML		17 15 09.0	
	comp=E,395nm,1.3s						
YENI	Yenice-Canakka	1.31	79	Pn	Pn	17 14 43.1	0.0
CHOS	Chios island	1.36	164	Pn	Pn	17 14 44.1	+0.2
CHOS	Chios island	1.36	164	P	Pn	17 14 44.1	+0.2
CHOS				S	Sg	17 15 03.0	+0.3
OUR	Ouranopolis	1.37	298	Pn	Pn	17 14 44.2	+0.3
OUR	Ouranopolis	1.37	298	P	Pn	17 14 44.3	+0.3
ZEDA	zmir-Bergama	1.38	122	P	Pb	17 14 44.8	+0.2
ZEDA				S	Sn	17 15 00.5	-1.8
ZEDA				i IAML		17 15 11.0	
	comp=N,603nm,0.5s						
ZEDA				i IAML		17 15 11.0	
	comp=E,468nm,0.4s						
KESN	Edirne-Kesan	1.41	37	P	Pn	17 14 45.0	+0.2
KESN				S	Sb	17 15 00.8	-2.7
KESN				i IAML		17 15 10.0	
	comp=E,2µm,0.5s						
KESN				i IAML		17 15 12.0	
	comp=N,2µm,1.0s						
AOS	Alonnisos	1.41	249	P	Pb	17 14 45.2	+0.1
RDO	Rodhopi	1.45	359	Pn	Pn	17 14 44.9	0.0
RDO	Rodhopi	1.45	359	P	Pn	17 14 44.9	0.0
PAIG	Paliouri	1.47	279	Pn	Pn	17 14 45.4	+0.1
PAIG	Paliouri	1.47	279	P	Pn	17 14 45.5	+0.1
KRBG	Karabiga-Canak	1.50	62	Pn	Pb	17 14 46.4	-0.2
KAVA	Kavala	1.53	328	P	Pn	17 14 46.1	+0.1
KAVA				S	Sn	17 15 05.0	-1.0
URLA	Izmir	1.56	149	P	Pn	17 14 47.0	+0.5
URLA				S	Sn	17 15 03.6	-3.2
URLA				i IAML		17 15 22.0	
	comp=N,498nm,1.0s						
URLA				i IAML		17 15 23.0	
	comp=E,371nm,0.9s						
KYMI	Kymi, Euboea I	1.56	227	P	Pn	17 14 46.5	0.0
KYMI				S	Sb	17 15 08.0	+0.5
RKY	Sarkoy-Tekirda	1.58	51	Pn	Pn	17 14 47.3	+0.5
RKY				Sn	Sg	17 15 09.1	-0.4
SART	Tekirdag	1.58	51	P	Pb	17 14 47.7	-0.4
SART				S	Sn	17 15 07.0	-0.4
SART				i IAML		17 15 15.0	
	comp=N,1µm,0.7s						
SART				i IAML		17 15 15.0	
	comp=E,1µm,0.4s						
BALY	Balya	1.58	88	P	Pb	17 14 47.7	-0.4
BALY				S	Sn	17 15 05.7	-1.7
BALY				i IAML		17 15 15.0	
	comp=N,1µm,0.6s						
BALY				i IAML		17 15 22.0	
	comp=E,620nm,0.5s						
SOMA	Soma-Manisa	1.61	109	Pn	Pn	17 14 47.8	+0.5
SOMA				Sn	Sg	17 15 10.4	-0.3
ZEYE	Izmir, Urla-Ze	1.63	153	P	Pg	17 14 50.3	+0.3
ZEYE				S	Sn	17 15 06.3	-2.2
ZEYE				i IAML		17 15 18.0	
	comp=E,388nm,0.5s						
ZEYE				i IAML		17 15 28.0	
	comp=N,327nm,0.6s						
UKOP	Uzunkopru-Edir	1.64	29	Pn	Pn	17 14 48.3	+0.7
GONE	Gonen-Balikesi	1.67	77	Pn	Pb	17 14 48.9	-0.6
STEP	BALIKESIR_Sava	1.69	100	P	Pn	17 14 49.2	+0.9
STEP				S	Sn	17 15 09.3	-0.8
STEP				i IAML		17 15 23.0	
	comp=N,953nm,0.6s						
STEP				i IAML		17 15 28.0	
	comp=E,613nm,0.7s						
BLCB	Balcova	1.74	138	Pn	Pb	17 14 50.6	-0.2
MRMT	Marmara Adasi	1.79	59	Pn	Pn	17 14 50.6	+0.8
BLKS	Balkesir-Sus	1.86	84	P	Pn	17 14 51.5	+0.8
BLKS				S	Sn	17 15 12.1	-2.0
BLKS				i IAML		17 15 26.0	
	comp=N,404nm,0.9s						
EDC	Edincik	1.88	69	Pn	Pn	17 14 51.9	+1.0
KARY	Karystos	1.89	208	P	Pn	17 14 50.9	-0.1
AKHS	Akhisar	1.93	115	P	Pn	17 14 52.5	+1.0
AKHS				S	Sn	17 15 16.5	+0.7
AKHS				i IAML		17 15 28.0	
	comp=E,341nm,0.5s						
GMLD	Gumuldur	1.93	147	Pn	Pn	17 14 52.6	+1.0
TKR	Tekirdag	1.98	49	Pn	Pn	17 14 53.0	+0.7
BAND	Balkesir-Ban	2.05	71	P	Pb	17 14 56.4	+0.4
BAND				S	Sb	17 15 20.4	-1.2
BAND				i IAML		17 15 32.0	
	comp=E,342nm,0.4s						
BAND				i IAML		17 15 34.0	
	comp=N,371nm,0.5s						
BAND	Balkesir-Ban	2.05	71	⇑P	Pn	17 14 53.8	+0.6
BAND				⇑S	Sb	17 15 21.6	0.0
DION	Dionisos Attik	2.06	219	P	Pn	17 14 54.1	+0.6
SRS	Serrai	2.07	314	P	Pn	17 14 54.0	+0.4
RZN	Rozhen	2.09	343	P	Pn	17 14 54.3	+0.3
GORD	Gordes-Manisa	2.17	111	Pn	Pn	17 14 55.7	+0.7
CRLT	Corlu	2.18	49	Pn	Pn	17 14 56.2	+1.1
KCTX	Karacabey (Bur	2.21	74	Pn	Pn	17 14 56.6	+1.1
DURS	Dursunbey	2.24	92	P	Pn	17 14 56.7	+0.7
DURS				S	Sn	17 15 20.6	-3.2
DURS				i IAML		17 15 39.0	
	comp=N,319nm,0.5s						
DURS				i IAML		17 15 41.0	
	comp=E,296nm,0.5s						
MMB	Musomishta	2.31	324	P	Pn	17 14 57.6	+0.8
MMB	Musomishta	2.31	324	P	Pn	17 14 57.8	+0.9
DIM	Dimitrovgrad	2.34	0	P	Pn	17 14 57.5	+0.2
DST	Dursunbey	2.36	91	Pn	Pn	17 14 58.3	+0.8
KIRK	Kırklareli	2.38	29	P	Pn	17 14 59.7	+1.9
KIRK				S	Sn	17 15 28.9	+1.9
KIRK				i IAML		17 15 39.0	
	comp=E,131nm,0.9s						
KIRK				i IAML		17 15 44.0	
	comp=N,70nm,0.5s						
GCAM	G?zelcaml?	2.38	146	Pn	Pn	17 14 59.0	+1.2
ODEM	Odemis-Izmir	2.42	125	Pn	Pn	17 14 59.3	+1.0
IZMR	zmir-demi	2.43	129	P	Pn	17 14 59.4	+1.0
IZMR				S	Sn	17 15 29.2	+1.0
IZMR				i IAML		17 15 43.0	
	comp=E,138nm,0.7s						
AYDB	Zeytinkoy-Aydi	2.52	133	Pn	Pn	17 15 00.6	+0.8
PLD	Plovdiv	2.52	346	P	Pn	17 15 01.4	+1.7
DEMI	Demirci	2.52	104	P	Pn	17 15 00.8	+0.9
DEMI				S	Sn	17 15 32.5	+1.8
DEMI				i IAML		17 15 51.0	
	comp=E,336nm,0.7s						
DEMI				i IAML		17 15 52.0	
	comp=N,191nm,0.5s						
VIZE	Kirklareli, Vi	2.55	42	P	Pn	17 15 02.2	+2.0
VIZE				S	Sn	17 15 33.0	+1.8
VIZE				i IAML		17 15 47.0	
	comp=E,172nm,0.8s						
VIZE				i IAML		17 15 48.0	
	comp=N,236nm,0.6s						
ARMN	Kirklareli, Me	2.58	33	P	Pn	17 15 02.2	+1.6
ORLT	Orhaneli	2.58	81	Pn	Pn	17 15 01.7	+1.1
ELBA	Catalca	2.62	56	P	Pn	17 15 02.2	+1.1
ELBA				S	Sn	17 15 34.1	+1.2
ELBA				i IAML		17 15 50.0	
	comp=N,119nm,0.4s						
ELBA				i IAML		17 15 50.0	
	comp=E,166nm,0.5s						
APE	Apeiranthos	2.63	181	⇑P	Pn	17 15 02.1	+0.9
KIRA	zmir-Kiraz	2.67	123	P	Pn	17 15 03.3	+1.4
KULA	Kula-Manisa	2.68	115	Pn	Pn	17 15 03.1	+1.1
SIMA	Simav-Kutahya	2.71	102	Pn	Pn	17 15 03.9	+1.4
KKB	Krupnik	2.83	320	P	Pb	17 15 07.9	-1.5
JMB	Yambol	2.88	14	P	Pn	17 15 07.3	+2.6
KURT	Yalova, Merkez	2.93	71	P	Pb	17 15 12.6	+1.6
KURT				S	Sb	17 15 44.9	-1.9
PGB	Panagyurishte	3.00	340	P	Pn	17 15 07.0	+0.6
KLYT	Kilyos	3.07	59	⇑P	Pn	17 15 08.9	+1.7
PLNA	Plana	3.21	330	P	Pn	17 15 12.3	+2.9
VTS	Vitosha	3.41	330	P	Pn	17 15 13.2	+1.1
SILT	Sile	3.43	64	⇓P	Pn	17 15 13.9	+1.7
PVL	Pavlikeni	3.43	355	P	Pn	17 15 13.0	+0.7
SZH	Strazhitsa	3.58	5	P	Pn	17 15 14.6	+0.4
MPEP	Malo Peshtene	3.90	340	P	Pn	17 15 19.6	+0.9
TIRR	Tirgusor	5.20	23	⇑P	Pn	17 15 38.6	+2.0
TPGR	Topolog	5.57	21	⇓P	Pn	17 15 43.6	+2.0
HERR	Herculane	5.68	337	⇑P	Pn	17 15 45.0	+1.9
ARR	Arges	5.71	353	⇑P	Pn	17 15 44.7	+1.1
VOIR		5.75	356	⇓P	Pn	17 15 45.2	+1.0
CFR	Carcaliu	5.79	18	⇓P	Pn	17 15 46.5	+1.9
MLR	Muntele Rosu	5.79	3	⇑P	Pn	17 15 46.0	+1.2
MDVR	Moldovita	5.83	332	⇓P	Pn	17 15 46.5	+1.3
GZR	Gura Zlata	6.05	341	⇑P	Pn	17 15 48.6	+0.3
PLOR	Plostina	6.20	7	⇓P	Pn	17 15 52.1	+1.8
VRI	Vrincioaia	6.22	7	⇑P	Pn	17 15 52.9	+2.3
TURR	Turia	6.36	3	⇑P	Pn	17 15 55.0	+2.5
BZS	Buzias	6.59	335	⇑P	Pn	17 15 57.7	+2.1

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*TIR **06** 17:14:21.6, 40°.47N×20°.79E, h13^{km}, Md2.6/5, Ml2.8/5*
*THE **06** 17:14:22.8, 40°N±1°×2°1E±°, h0^{km}±1^{km}, M2.5/8, MLh2.5/8*
*SKO **06** 17:14:23.6, 40°.47N×20°.76E, h13^{km}, ML2.4*
*PDG **06** 17:14:23.9±0.2, 40°.41N×20°.85E, h11^{km}±1^{km}, ML2.8/8, Error ellipse: s-maj=0.9km s-min=0.6km az=90.0*
*ATH **06** 17:14:24.6, 40°.45N×20°.99E, h7^{km}±1^{km}, Manual Solution by A.Andreou First location: 2019/06/06 17:15:23, This location: 2020/08/12 10:14:48 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
ISC 06 17:14:22.4±0.9, 40°.48N±0°.02×20°.80E±0°.02, h10^{km}±7^{km}, n53, σ0^{s}.99/78, 4C-1D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KBN	Korca	0.15	356	Pg	Pg	17 14 25.6	-0.2
KBN				Sg	Sg	17 14 27.8	-0.3
KBN				AML	AML	17 14 29.8	
	13nm,0.3s						
NEST	Nestorio	0.20	108	Pg	Pg	17 14 26.5	-0.2
NEST				Sg	Sg	17 14 30.0	+0.5
NEST				AML	AML	17 14 31.7	
	8.0nm,0.4s						
NEST				AMd		17 15 02.8	
NEST	Nestorio	0.20	108	P	Pg	17 14 26.9	+0.3
NEST				S	Sg	17 14 30.2	+0.7
NEST	Nestorio	0.20	108	P	Pg	17 14 26.9	+0.3
LSK	Leskovik	0.36	205	Pg	Pg	17 14 28.6	-1.0
LSK				Sg	Sg	17 14 34.2	-0.2
LSK				AML	AML	17 14 39.7	
	8.2nm,0.6s						
LSK				AMd		17 15 12.8	
PENT	Pentalofos	0.38	137	P	Pg	17 14 29.9	-0.1
PENT				S	Sg	17 14 34.6	-0.5
OHR	Ohrid	0.63	360	P	Pb	17 14 35.4	-0.4
OHR				S	Sb	17 14 44.8	+0.1
OHR	Ohrid	0.63	360	i Pg	Pb	17 14 35.5	-0.2
OHR				i Sg	Sb	17 14 45.3	+0.6
OHR				eLg	Lg	17 14 46.3	
	comp=N,92nm,0.5s						
OHR				eLg	Lg	17 14 46.7	
	comp=E,228nm,0.6s						
KPRO	Kipourio	0.68	140	P	Pg	17 14 35.0	-0.5
KPRO				S	Sb	17 14 45.4	-0.4
KPRO	Kipourio	0.68	140	P	Pg	17 14 35.0	-0.5
KPRO				S	Sb	17 14 45.0	-0.8
KZN	Kozani	0.76	103	P	Pg	17 14 37.1	-0.1
KZN				S	Sn	17 14 49.3	-1.6
KZN	Kozani	0.76	103	P	Pg	17 14 37.0	-0.1
JAN	Janina	0.82	177	P	Pn	17 14 40.3	+0.1
SRN	Sarande	0.85	226	Pg	Pg	17 14 38.6	-0.3
SRN				Sg	Sb	17 14 51.4	+0.5
SRN				AML	AML	17 15 00.0	
	comp=E,0.3nm,0.5s						
SRN				AMd		17 15 31.3	
IGT	Igoumenitsa	1.01	201	Pg	Pg	17 14 41.2	-0.7
IGT				Sg	Sb	17 14 55.9	+0.5
IGT				AMd		17 15 39.9	
IGT	Igoumenitsa	1.01	201	P	Pg	17 14 41.9	0.0
IGT	Igoumenitsa	1.01	201	i Pg	Pg	17 14 41.6	-0.2
KEK	Kerkira	1.08	226	P	Pn	17 14 47.1	+3.4
TIR	Tirane	1.12	321	Pn	Pb	17 14 43.5	-0.5
TIR				Sn	Sn	17 14 59.8	0.0
TIR				AML	AML	17 15 07.8	
	comp=E,0.4nm,0.7s						
TIR				AMd		17 15 37.0	
TIR	Tirane	1.12	321	i Pg	Pb	17 14 43.4	-0.5
TETR	Tetrakomo, Epi	1.19	162	P	Pg	17 14 46.4	+1.1
TETR				S	Sn	17 15 01.4	-0.1
THL	Klokotos Trika	1.30	134	P	Pb	17 14 46.8	-0.2
THL				S	Sg	17 15 06.7	+2.3
THL	Klokotos Trika	1.30	134	P	Pg	17 14 47.6	+0.2
THL				S	Sb	17 15 02.6	-1.2
TYRN	Tyrnavos	1.34	124	P	Pg	17 14 47.7	-0.4
TYRN				S	Sg	17 15 07.2	+1.7
TYRN	Tyrnavos	1.34	124	P	Pg	17 14 47.7	-0.4
LIT	Litokhoron	1.34	106	P	Pg	17 14 48.4	+0.1
LIT				S	Sg	17 15 07.6	+1.9
LIT	Litokhoron	1.34	106	i Pg	Pg	17 14 48.2	-0.1
LIT	Litokhoron	1.34	106	P	Pb	17 14 47.3	-0.5
TSLK	Tsoukalades, L	1.65	184	P	Pg	17 14 54.2	0.0
LKD2	Lefkada island	1.69	184	P	Pg	17 14 55.2	+0.3
LKD2	Lefkada island	1.69	184	P	Pg	17 14 55.4	+0.5
KNT	Kendrikon	1.73	66	P	Pb	17 14 53.6	-0.8
HORT	Hortiatis	1.75	85	P	Pb	17 14 53.7	-1.1
HORT	Hortiatis	1.75	85	P	Pb	17 14 53.7	-1.1
NYDR	Nydri-Lefkada	1.76	183	P	Pg	17 14 55.6	-0.6
MAKR	Makrakomi, Fth	1.79	145	P	Pb	17 14 54.6	-0.7
EVGI	Lefkada island	1.86	184	P	Pg	17 14 57.5	-0.5
AGG	Agios Georgios	1.87	140	P	Pb	17 14 55.6	-1.1
ULC	Ulcinj	1.89	322	⇑iPn	Pg	17 14 58.0	-0.8
ULC				i Sn	Sg	17 15 25.8	+2.5
SOH	Sokhos	1.97	79	P	Pn	17 14 55.7	-0.3
FSK	Fiskardo	2.02	185	P	Pb	17 14 58.7	-0.6
DRME	Dracevica, Mon	2.10	325	⇓iPn	Pb	17 15 00.8	+0.2
DRME				i Sn	Sg	17 15 29.9	0.0
DMLN	Damoulianata-K	2.26	189	P	Pb	17 15 01.9	-1.5
PDG	Podgorica	2.27	330	ePn	Pb	17 15 04.7	+1.1
PDG				i Sn	Sg	17 15 33.9	-1.5
AXS	Araxos	2.32	169	P	Pb	17 15 03.7	-0.7
BUM	Brajici-Budva	2.32	322	⇑iPn	Pb	17 15 03.2	-1.2
BUM				eSn	Sg	17 15 35.5	-1.5
PSDA	Pessada-Kefalo	2.37	184	P	Pb	17 15 03.2	-2.0
YRMI	Loutra Irminis	2.41	170	P	Pb	17 15 05.1	-0.8
IVA	Berane	2.49	344	ePn	Pb	17 15 07.7	+0.4
CEME	Cevo	2.51	326	⇑iPn	Pb	17 15 05.7	-1.9
CEME				i Sn	Sb	17 15 39.5	+0.9
KOME	Kolasin	2.56	338	ePn	Pb	17 15 07.7	-0.9
KOME				i Sn	Sb	17 15 41.0	+0.9
HCY	Herceg Novi	2.62	319	⇑iPn	Pb	17 15 09.6	0.0
BRY	Bratogost	2.96	326	ePn	Pb	17 15 13.6	-1.7
BRY				i Sn	Sb	17 15 50.9	-0.7

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*TRN **06** 17:14:23.8, 18°.44N×63°.35W, h29^{km}, MD3.6, North-west of Anguilla.*
*NEIC **06** 17:14:24.2±1.8, 18°.55N±0°.06×63°.23W±0°.07, h35^{km}±2^{km}, ML3.0/24, Md3.4/4(RSPR), Error ellipse: s-maj=12.5km s-min=8.7km az=225.0*
*RSPR **06** 17:14:31.1, 18°.00N×63°.51W, h66^{km}±3^{km}, MD3.4/4*
ISC 06 17:14:25.8±2.2, 18°.4N±0°.1×63°.32W±0°.05, h32^{km}±15^{km}, n37, σ1^{s}.19/44, 3C-3D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SABA	Saba	0.82	175		Sb	17 14 51.5	-1.0
SABA	Saba	0.82	175		Pn	17 14 40.6	-0.5
SABA				IAML		17 14 54.1	
	comp=N,583nm,0.3s						
SABA	Saba	0.82	175	⇓eP	Pb	17 14 42.6	+0.9
SABA	Saba	0.82	175	eS	Sb	17 14 51.5	-1.0
SEUS	St. Eustatius	1.00	161	Pn	Pn	17 14 40.6	-2.9
SEUS				IAML		17 14 56.8	
	comp=E,521nm,0.5s						
SEUS				IAML		17 15 02.3	
	comp=N,492nm,0.1s						
SKI	Saint Kitts	1.23	153	eP	Pn	17 14 46.5	-0.3
SKI				eS	Sn	17 15 02.9	+0.5
ANWB	Willy Bob	1.65	118	Pn	Pn	17 14 49.9	-2.7
ANWB	Willy Bob	1.65	118	eP	Pn	17 14 53.1	+0.5
ANWB				eS	Sn	17 15 14.4	+1.8
MBFL	Flemmings, Mon	1.99	148	eP	Pn	17 14 57.6	+0.3
MBFL				eS	Sn	17 15 22.0	+1.0
ANBD	Bethesda, Anti	2.03	133	eP	Pn	17 14 57.2	-0.5
ANBD				eS	Sn	17 15 22.5	+0.5
HUMP	Col San Antoni	2.42	263		Sn	17 15 31.8	0.0
HUMP	Col San Antoni	2.42	263		Pn	17 15 03.1	-0.1
HUMP				IAML		17 15 34.8	
	comp=N,54nm,0.2s						
HUMP				IAML		17 15 40.3	
	comp=E,38nm,0.2s						
HUMP	Col San Antoni	2.42	263	⇑eP	Pn	17 15 05.0	+1.8
HUMP	Col San Antoni	2.42	263	eS	Sn	17 15 31.8	0.0
PDPR	Patillas Dam,	2.60	261	Pn	Pn	17 15 06.0	+0.3
PDPR				IAML		17 15 49.9	
	comp=E,37nm,0.1s						
PDPR				IAML		17 16 03.8	
	comp=N,44nm,0.1s						
GDHS	Morne Mazeau,	2.62	145	Pn	Pn	17 15 04.5	-1.5
ABD	La Joyeuse, An	2.62	138	Pn	Pn	17 15 05.0	-0.9
ABD				IAML		17 15 58.0	
	comp=N,74nm,1.5s						
ABD				IAML		17 16 26.1	
	comp=E,92nm,1.6s						
GCPR	Guaynabo City	2.63	268	Pn	Pn	17 15 05.2	-0.8
GCPR					Sn	17 15 35.2	-1.6
GDSD	La Dsirade Is	3.02	134	Pn	Pn	17 15 10.3	-1.2
GDSD				IAML		17 16 38.8	
	comp=N,32nm,3.2s						
GDSD				IAML		17 16 46.6	
	comp=E,35nm,2.1s						
TBG	Guadaloupe-3	3.03	148	eP	Pn	17 15 12.9	+1.3
TDBA	Terre de Bas,	3.04	148	Pn	Pn	17 15 11.9	+0.3
CELP	Cerrillos	3.12	264		Pn	17 15 14.3	+1.5
CELP	Cerrillos	3.12	264		Sn	17 15 48.7	-0.3
CELP	Cerrillos	3.12	264	IAML		17 15 40.3	
	comp=N,12nm,2.6s						
CELP	Cerrillos	3.12	264	⇓eP	Pn	17 15 14.3	+1.5
CELP	Cerrillos	3.12	264	eS	Sn	17 15 48.7	-0.3
MAGL	Barre de l'ile	3.15	142	eP	Pn	17 15 14.1	+0.8
MAGL				eS	Sn	17 15 50.2	+0.4
AOPR	Arecibo Observ	3.26	269		Pn	17 15 12.8	-2.0
AOPR				IAML		17 16 10.4	
	comp=N,32nm,0.5s						
AOPR	Arecibo Observ	3.26	269		Sn	17 15 51.8	-0.8
AOPR	Arecibo Observ	3.26	269	⇓eP	Pn	17 15 17.0	+2.2
AOPR	Arecibo Observ	3.26	269	eS	Sn	17 15 51.8	-0.8
AOPR	Arecibo Observ	3.26	269	eP	Pn	17 15 13.9	-0.9
AOPR				eS	Sn	17 15 52.1	-0.5
MLPR	Magueyes Islan	3.57	263	⇑eP	Pn	17 15 19.1	+0.1
MLPR	Magueyes Islan	3.57	263	eS	Sn	17 16 01.7	+1.6
IDE	Isla Desecheo	3.94	270		Pn	17 15 23.9	-0.3
IDE					Sn	17 16 08.8	-0.5
IDE	Isla Desecheo	3.94	270	⇑eP	Pn	17 15 23.9	-0.3
IDE	Isla Desecheo	3.94	270	eS	Sn	17 16 08.8	-0.5

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*SNET **06** 17:20:53.8±1.1, 13°.07N×89°.48W, h53^{km}±24^{km}, ML2.7*
*GCG **06** 17:20:53.9±0.3, 13°.12N×89°.56W, h60^{km}±6^{km}, MD3.5*
ISC 06 17:20:51.7±2.8, 13°.1N±0°.1×89°.4W±0°.1, h3^{km}±15^{km}, n12, σ0^{s}.63/18, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	0.57	358	eP	Pn	17 21 06.3	-0.5
JAYA				eS	Sn	17 21 15.5	-1.3
JAYA				IAML		17 21 17.8	
	comp=Z,323nm,0.2s						
JAYA	Jayaque - finc	0.57	358	i P	Pn	17 21 06.3	-0.5
JAYA				i S	Sn	17 21 15.8	-0.9
LFRS	El Faro	0.64	34	eP	Pn	17 21 08.1	+0.3
COEG	Centro de Oper	0.75	45	eS	Sn	17 21 21.0	-0.2
COEG				IAML		17 21 24.3	
	comp=Z,122nm,0.2s						
CEVE	Cerro Verde	0.76	346	eP	Pn	17 21 09.3	-0.3
CEVE				eS	Sn	17 21 22.5	+0.8
CEVE				IAML		17 21 29.2	
	comp=Z,382nm,0.3s						
PAVA	Las Pavas	0.79	37	eP	Pn	17 21 09.9	+0.2
PAVA				eS	Sn	17 21 22.0	-0.1
NUBE	Las Nubes	0.88	337	eP	Pb	17 21 10.2	+0.4
NUBE				eS	Sb	17 21 22.6	+0.6
NUBE	Las Nubes	0.88	337	i P	Pb	17 21 09.9	+0.2
NUBE				i S	Sb	17 21 22.6	+0.6
MTO3	Montecristo	1.31	3	eP	Pg	17 21 16.6	-0.2
MTO3	Montecristo	1.31	3	i P	Pg	17 21 16.5	-0.3
LCND	La Caada	1.51	81	eP	Pn	17 21 19.9	+0.3
CNCH	Conchagua	1.56	83	eP	Pn	17 21 19.8	-0.6

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*IDC **06** 17:46:20.9±1.7, 30°.19S×177°.81W, h47^{km}±14^{km}, mb3.7/3, mbtmp4.0/4, ML3.3/1, Error ellipse: s-maj=35.0km s-min=14.5km az=100.0*
ISC 06 17:46:20.8±1.3, 30°.22S±0°.08×177°.7W±0°.2, h50^{km}, n9, σ1^{s}.65/12, mb4.0/4, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RAO	Raoul Island	0.98	350	P	Pn	17 46 38.5	+0.3
	5µm,0.3s,baz=99,slow=7.9,SNR=74						
RAO				LR	LR	17 46 42.2	
	comp=Z,424nm,18.1s,baz=358,slow=23						
RAO				S	Sn	17 46 50.4	-0.6
	3µm,0.3s,baz=269,slow=23,SNR=5.8						
URZ	Urewera	9.09	207	P	Pn	17 48 27.7	-1.6
	0.4nm,0.3s,baz=244,slow=14,SNR=1.9						
URZ				S	Sn	17 50 09.2	-1.0
	16nm,0.7s,baz=275,slow=22,SNR=22 10nm,1.0s						
STKA	Stephens Creek	34.76	257	P	P	17 53 09.0	+2.5
	1.3nm,0.7s,baz=100,slow=12,SNR=4.3						
ASAR	Alice Springs	43.36	267	P	P	17 54 19.2	+0.7
	0.6nm,0.5s,baz=104,slow=6.8,SNR=29						
ASAR				PcP	PcP	17 56 07.0	+0.6
	0.2nm,0.7s,baz=122,slow=3.6,SNR=1.8 0.6nm,0.5s						
WRA	Warramunga Arr	44.33	272	P	P	17 54 25.0	-1.3
	1.2nm,0.4s,baz=112,slow=8.2,SNR=20 1.2nm,0.4s						
QSPA	South Pole Qui	59.89	180	P	P	17 56 23.5	+2.1
	1.7nm,1.0s,baz=108,slow=1.1,SNR=7.2 1.7nm,1.0s						
FINES	FINESS Array B	145.06	340	PKPbc	PKPbc	18 05 49.5	-1.8
	1.4nm,0.4s,baz=53,slow=4.3,SNR=19						
AKASG	Malin Array Be	151.30	323	PKPbc	PKPbc	18 06 06.5	-1.9
	0.3nm,0.3s,baz=51,slow=3.1,SNR=4.3						
MMAI	Mount Meron Ar	151.72	284	PKPbc	PKPbc	18 06 09.9	-0.2
	0.2nm,0.3s,baz=79,slow=7.5,SNR=3.5						

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*SJA **06** 17:51:27.1±0.6, 24°.31S×67°.20W, h200^{km}, ML4.2, MW3.8*
*IDC **06** 17:51:28.1±1.9, 24°.27S×67°.00W, h169^{km}±19^{km}, mb3.4/2, mbtmp3.9/8, MS3.1/1, Error ellipse: s-maj=30.9km s-min=15.7km az=109.0*
*NEIC **06** 17:51:28.2±1.4, 24°.33S±0°.08×67°.3W±0°.1, h194^{km}±11^{km}, mb4.6/4, Mwr4.5(GUC), Error ellipse: s-maj=14.3km s-min=11.0km az=93.0*
*GUC **06** 17:51:29.0±0.5, 24°.28S×67°.22W, h183^{km}±5^{km}, ML4.2*

ISC 06 17:51:28.3±0.7, 24°.30S±0°.04×67°.22W±0°.04, h186km±7km, n80, σ1s.44/103, mb3.8/3, 10C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AF01	San Pedro de A	1.60	327		Pn	17 52 03.6	+1.5
AF01	San Pedro de A	1.60	327⇓	eP	Pn	17 52 03.7	+1.5
AF01				eS	Sn	17 52 30.2	+1.9
AF01	San Pedro de A	1.60	327	eP	Pn	17 52 02.1	-0.1
AF01				eS	Sn	17 52 29.6	+1.3
SLA	San Lorenzo	1.62	105⇓	eP	Pn	17 52 02.4	+0.3
SLA				eS	Sn	17 52 27.6	-0.7
SLA	San Lorenzo	1.62	105	eP	Pn	17 52 02.7	+0.6
SLA				eS	Sn	17 52 28.4	+0.1
AZAP	Zapla	1.97	88	eP	Pn	17 52 05.5	-0.2
FSA	Cafayete	2.13	148	eP	Pn	17 52 07.6	+0.2
GO02	Mina Guanaco	2.32	248		Pn	17 52 10.5	+0.8
GO02	Mina Guanaco	2.32	248⇑	eP	Pn	17 52 10.5	+0.8
GO02				eS	Sn	17 52 42.1	+0.3
GO02				IAML		17 52 43.2	
	comp=N,910nm,0.1s						
GO02	Mina Guanaco	2.32	248	eP	Pn	17 52 09.9	+0.2
GO02				eS	Sn	17 52 42.7	+0.9
ASTB	Santa Barbara	2.55	83	eP	Pn	17 52 17.6	+5.5
YJA	Yavi	2.63	37⇑	eP	Pn	17 52 13.8	+0.4
YJA				eS	Sn	17 52 48.0	-0.4
YJA	Yavi	2.63	37	eP	Pn	17 52 13.9	+0.6
PB06	IPOC Station P	2.68	306		Pn	17 52 14.1	+0.5
PB06	IPOC Station P	2.68	306⇑	eP	Pn	17 52 14.5	+0.9
PB06				eS	Sn	17 52 48.0	-0.8
PB06				IAML		17 52 50.0	
	comp=N,1μm,0.3s						
PB06	IPOC Station P	2.68	306	eP	Pn	17 52 14.3	+0.7
PB06				eS	Sn	17 52 48.3	-0.6
PB06				IAML		17 52 50.7	
	comp=Z,783nm,0.1s						
PB14	IPOC Station P	2.92	263		Pn	17 52 16.7	+0.1
PB14	IPOC Station P	2.92	263⇑	eP	Pn	17 52 16.9	+0.3
PB14				eS	Sn	17 52 53.1	-1.1
PB14	IPOC Station P	2.92	263	eP	Pn	17 52 16.9	+0.3
PB14				eS	Sn	17 52 53.4	-0.8
ALOL	LOMAS DE OLMED	3.00	81	eP	Pn	17 52 17.1	-0.1
AC02	Maricunga	3.06	214		Pn	17 52 19.4	+0.9
AC02	Maricunga	3.06	214⇑	eP	Pn	17 52 19.3	+0.9
AC02				eS	Sn	17 52 58.6	+1.0
AC02				IAML		17 53 04.1	
	comp=E,213nm,0.3s						
AC02	Maricunga	3.06	214	eP	Pn	17 52 19.4	+0.9
AC02				eS	Sn	17 53 02.5	+4.9
PB05	IPOC Station P	3.09	297		Pn	17 52 18.9	+0.4
PB05	IPOC Station P	3.09	297⇑	eP	Pn	17 52 18.9	+0.4
PB05				eS	Sn	17 52 55.5	-2.1
PB05				IAML		17 52 57.8	
	comp=E,396nm,0.3s						
PB05	IPOC Station P	3.09	297	eP	Pn	17 52 18.8	+0.3
PB05				eS	Sn	17 52 56.9	-0.7
PB05				IAML		17 53 04.5	
	comp=Z,224nm,0.5s						
PB09	IPOC Station P	3.11	323		Pn	17 52 19.8	+1.1
PB09	IPOC Station P	3.11	323⇑	eP	Pn	17 52 19.8	+1.1
PB09				eS	Sn	17 52 58.3	+0.2
PB09				IAML		17 52 58.7	
	comp=N,679nm,0.4s						
PB09	IPOC Station P	3.11	323	eP	Pn	17 52 19.9	+1.1
PB09				eS	Sn	17 52 58.4	+0.3
PB09				IAML		17 52 58.6	
	comp=Z,517nm,0.5s						
PB10	IPOC Station P	3.15	284		Pn	17 52 19.8	+0.7
PB10	IPOC Station P	3.15	284⇑	eP	Pn	17 52 19.7	+0.7
PB10				eS	Sn	17 52 58.1	-0.6
PB10				IAML		17 53 01.0	
	comp=E,244nm,0.2s						
PB10	IPOC Station P	3.15	284	eP	Pn	17 52 19.8	+0.7
PB10				eS	Sn	17 53 00.1	+1.4
PB03	IPOC Station P	3.23	313		Pn	17 52 20.7	+0.4
PB03	IPOC Station P	3.23	313⇑	eP	Pn	17 52 20.7	+0.4
PB03				eS	Sn	17 52 59.0	-1.7
PB03	IPOC Station P	3.23	313	eP	Pn	17 52 20.8	+0.4
PB03				eS	Sn	17 53 00.1	-0.7
PB03				IAML		17 53 03.4	
	comp=Z,473nm,0.2s						
AC01	Pan de Azucar	3.57	238		Pn	17 52 23.7	-0.5
AC01	Pan de Azucar	3.57	238⇑	eP	Pn	17 52 23.8	-0.5
AC01				eS	Sn	17 53 05.6	-2.5
AC01	Pan de Azucar	3.57	238	eP	Pn	17 52 23.8	-0.5
AC01				eS	Sn	17 53 06.7	-1.4
AC01				IAML		17 53 08.0	
	comp=Z,228nm,0.3s						
PB01	IPOC Station P	3.86	327		Pn	17 52 27.6	-0.4
PB01	IPOC Station P	3.86	327	eP	Pn	17 52 27.1	-0.9
PB01				eS	Sn	17 53 13.1	-1.5
PB01				IAML		17 53 14.9	
	comp=Z,309nm,0.6s						
AC06	Mina Casimiro	4.16	222		Pn	17 52 30.6	-1.0
GO03	Copiapo	4.26	219		Pn	17 52 32.0	-0.9
GO03	Copiapo	4.26	219	eP	Pn	17 52 32.3	-0.6
GO03				eS	Sn	17 53 21.4	-2.4
PB08	IPOC Station P	4.51	336		Pn	17 52 36.8	+0.3
VCA	Vinchina	4.51	191	eP	Pn	17 52 35.0	-1.2
TA01	Diego Aracena	4.61	323	Pn	Pn	17 52 37.1	-0.4
GO01	Chusmiza	4.96	338		Pn	17 52 42.2	-0.2
GO01	Chusmiza	4.96	338	eP	Pn	17 52 42.9	+0.5
GO01				eS	Sn	17 53 41.2	+0.8
PB11	IPOC Station P	5.05	333		Pn	17 52 41.9	-1.3
PB11	IPOC Station P	5.05	333	eP	Pn	17 52 24.2	-19
PB11				eS	Sn	17 53 39.4	-2.8
PB11				IAML		17 53 39.5	
	comp=Z,84nm,0.5s						
ACLC	CERRO LA CRUZ	5.11	177	eP	Pn	17 52 43.7	-0.3
AC04	Llanos de Chal	5.21	221	Pn	Pn	17 52 43.5	-1.6
AC04	Llanos de Chal	5.21	221	eS	Sn	17 53 31.5	-14
AC04				IAML		17 53 45.4	
	comp=Z,158nm,0.6s						
AC05	El Transito	5.28	211		Pn	17 52 45.5	-0.7
AC05	El Transito	5.28	211	eP	Pn	17 52 46.0	-0.1
AC05				IAML		17 53 52.8	
	comp=Z,85nm,0.5s						
AGUA	GUANDACOL	5.29	192	eP	Pn	17 52 41.9	-4.4
AGUA				eS	Sn	17 53 44.4	-3.3
LCO	Las Campanas	5.63	213	Pn	Pn	17 52 49.3	-1.5
PB16	IPOC Station P	6.30	340		Pn	17 52 59.5	-0.4
GO04	Tololo Observa	6.66	208	Pn	Pn	17 53 03.4	-0.8
CFA	Coronel Fontan	7.33	187	P	Pn	17 53 12.2	-0.6
	comp=Z,1.7nm,0.3s,baz=49,slow=22,SNR=8.7						
CFA				S	Sn	17 54 30.1	-5.7
	comp=Z,2.0nm,0.3s,baz=300,slow=23,SNR=5.7						
CO02	Combarbal	7.65	205	Pn	Pn	17 53 15.7	-1.4
LPAZ	La Paz	8.01	354		Pn	17 53 22.6	+0.2
LPAZ	La Paz	8.01	354	P	Pn	17 53 22.9	+0.5
	comp=Z,4.6nm,0.3s,baz=164,slow=4.4,SNR=34						
LPAZ				S	Sn	17 54 48.4	-4.5
	comp=Z,2.0nm,0.6s,baz=357,slow=15,SNR=4.0						
CPUP	Villa Florida	9.18	105	P	Pn	17 53 35.9	-1.1
	comp=Z,0.5nm,0.6s,baz=139,slow=12,SNR=2.8						
SIV	San Ignacio	10.08	36	P	Pn	17 53 46.2	-2.7
	comp=Z,4.1nm,0.5s,baz=246,slow=9.0,SNR=15						
TRCB	Terra Rica	13.46	87	P	P	17 54 35.2	0.0
PLCA	Paso Flores	16.63	189	P	Pn	17 55 11.7	+0.9
	comp=Z,1.0nm,0.4s,baz=355,slow=9.8,SNR=3.6						
VAO	Valinhos	18.60	90	P	P	17 55 31.1	-0.7
LL02	Futaleuf	19.23	190		Pn	17 55 42.5	+1.1
BDFB	Brasilia	19.98	68		P	17 55 45.8	-0.9
BDFB				IAmb	IAmb	17 55 47.5	
	comp=Z,19nm,1.1s						
BDFB	Brasilia	19.98	68	P	P	17 55 45.9	-0.8
	comp=Z,13nm,0.8s,baz=246,slow=9.2,SNR=11						
RUSC	La Rusia	30.55	348	P	P	17 57 25.2	+0.2
RUSC				IAmb	IAmb	17 57 31.8	
	comp=Z,16nm,0.9s						
SDV	Santo Domingo	33.15	354	LR	LR	18 14 41.3	
	comp=Z,32nm,18.7s,baz=66,slow=42						
SNAA	Sanae	59.14	161	P	P	18 01 10.6	+1.6
	comp=Z,1.0nm,1.1s,baz=33,slow=17,SNR=1.4						
	comp=Z,1.0nm,1.1s						
U54A	Nelsons Funny	62.04	347		pP	18 02 10.0	-3.7
QSPA	South Pole Qui	65.91	180	P	P	18 01 56.0	+2.0
	comp=Z,0.8nm,0.5s,baz=310,slow=2.1,SNR=17						
	comp=Z,0.8nm,0.5s						
TKX	Tecate	73.60	318		pP	18 03 30.2	+2.9
TORD	Torodi Ar. Bea	76.86	69	P	P	18 02 59.8	-0.4
	comp=Z,108nm,0.3s,baz=247,slow=5.0,SNR=5.0						
GMARE	Gumare	81.70	107		pP	18 04 12.8	-0.8
MKAR	Makanchi Array	146.88	40	PKPbc	PKPab	18 10 49.9	-0.5
	comp=Z,0.6nm,0.5s,baz=320,slow=3.0,SNR=9.1						

IDC 06 18:54:27.7±1.4, 3°.84N×123°.89E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=190.9km s-min=23.0km az=67.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.77	157	P	P	19 00 00.5	+0.1
	0.3nm,0.5s,baz=337,slow=8.9,SNR=4.6						
	0.3nm,0.5s						
ASAR	Alice Springs	29.03	161	P	P	19 00 29.6	-0.1
	0.3nm,0.9s,baz=337,slow=7.5,SNR=6.0						
	0.3nm,0.9s						
SONM	Songino Array	46.34	344	P	P	19 02 55.8	+0.1
	0.3nm,0.4s,baz=148,slow=8.4,SNR=2.4						
	0.3nm,0.4s						
MKAR	Makanchi Array	55.88	327	P	P	19 04 07.0	-0.3
	0.1nm,0.4s,baz=122,slow=7.2,SNR=5.1						
	0.1nm,0.4s						

IDC 06 18:57:54.4±4.8, 4°.80S×152°.42E, h0km, mb3.5/5, mbtmp3.6/5, Error ellipse: s-maj=151.8km s-min=27.2km az=106.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.16	228	P	P	19 03 03.1	+0.5
	1.0nm,0.8s,baz=52,slow=9.6,SNR=8.1						
	1.0nm,0.8s						
ASAR	Alice Springs	25.89	222	P	P	19 03 27.8	-0.5
	0.3nm,0.4s,baz=57,slow=9.2,SNR=13						
	0.3nm,0.4s						
SONM	Songino Array	66.12	328	P	P	19 08 42.1	-1.6
	0.1nm,0.4s,baz=133,slow=6.3,SNR=1.4						
	0.1nm,0.4s						
MKAR	Makanchi Array	80.08	319	P	P	19 10 06.9	+0.7
	0.4nm,0.5s,baz=99,slow=6.9,SNR=7.7						
	0.4nm,0.5s						
ZALV	Zalesovo Beam	80.94	326	P	P	19 10 11.4	+0.8
	0.4nm,0.3s,baz=103,slow=6.5,SNR=2.0						
	0.4nm,0.3s						

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*NEIC **06** 19:09:56.5±0.5, 19°.34N±0°.02×155°.143W±0°.008, h5km±1km, Error ellipse: s-maj=4.0km s-min=2.4km az=345.0*

HVO 06 19:09:55.9±0.5, 19°.33N±0°.02×155°.139W±0°.005, h6km±2km, ML2.5/41, ML2.5/42(NEIC), Error ellipse: s-maj=2.7km s-min=0.6km az=175.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STCH	Steam Cracks	0.05	14		Pg	19 09 57.9	+0.4
STCH				IAML		19 09 59.5	
	comp=E,5μm,0.1s						
STCH	Steam Cracks	0.05	14		Sg	19 09 59.1	+0.5
KNHH	Kane Nui o Ham	0.05	327		Pg	19 09 58.0	+0.5
JCUZ	Jacuzzi	0.06	35		Pg	19 09 58.0	+0.4
JCUZ					Sg	19 09 59.6	+0.8
NPOC	North of Pu‘u	0.06	25		Pg	19 09 58.0	+0.4
NPOC					Sg	19 09 59.6	+0.8
PUH	Pauahi	0.08	298		Pg	19 09 58.4	+0.4
PUH					Sg	19 10 00.2	+0.9
PUH	Pauahi	0.08	298	IAML		19 10 00.3	
	comp=E,3μm,0.2s						
PUH				IAML		19 10 00.4	
	comp=N,3μm,0.2s						
KKO	Keanakako'i	0.14	298		Pg	19 09 59.2	+0.4
KKO					Sg	19 10 01.5	+0.8
BYL	Byron's Ledge	0.14	304		Pg	19 09 59.2	+0.4
BYL					Sg	19 10 01.7	+0.9
BYL	Byron's Ledge	0.14	304	IAML		19 10 02.0	
	comp=N,2μm,0.3s						
BYL				IAML		19 10 02.4	
	comp=E,1μm,0.2s						
RIM	Rim	0.14	295		Pg	19 09 59.3	+0.4
RIM					Sg	19 10 01.7	+0.8
HATHI	Halema‘uma‘u T	0.14	307		Pg	19 09 59.3	+0.3
HATHI					Sg	19 10 01.8	+0.8
HATHI	Halema‘uma‘u T	0.14	307	IAML		19 10 02.1	
	comp=N,864nm,0.2s						
HATHI				IAML		19 10 02.2	
	comp=E,867nm,0.5s						
SBLHI	Steaming Bluff	0.15	307		Pg	19 09 59.3	+0.2
SBLHI					Sg	19 10 02.0	+0.8
SDHHI	Sand Hill	0.16	291		Pg	19 09 59.5	+0.3
SDHHI					Sg	19 10 02.3	+0.9
UWB	Uwekahuna Bluf	0.16	304		Pg	19 09 59.5	+0.3
UWB					Sg	19 10 02.3	+0.8
OBL	Observatory Le	0.16	301		Pg	19 09 59.6	+0.4
OBL					Sg	19 10 02.4	+0.9
JOKA	Jonika Flow	0.16	52		Pg	19 09 59.3	+0.1
JOKA					Sg	19 10 02.1	+0.7
JOKA	Jonika Flow	0.16	52	IAML		19 10 02.5	
	comp=N,606nm,0.8s						
JOKA				IAML		19 10 02.5	
	comp=E,308nm,0.5s						
HLP	Hilina Pali	0.17	257		Pg	19 09 59.8	+0.6
HLP					Sg	19 10 02.8	+1.3
HLP	Hilina Pali	0.17	257	IAML		19 10 03.1	
	comp=E,1μm,0.2s						
HLP				IAML		19 10 04.2	
	comp=N,1μm,0.2s						
WRMHI	West Rim	0.17	295		Pg	19 09 59.6	+0.2
WRMHI					Sg	19 10 02.7	+1.0
UWE	Uwekahuna	0.17	301		Pg	19 09 59.7	+0.3
UWE					Sg	19 10 02.5	+0.8
UWE	Uwekahuna	0.17	301	IAML		19 10 05.6	
	comp=N,590nm,0.5s						
UWE				IAML		19 10 05.7	
	comp=E,458nm,0.2s						
RSD	Rainshed	0.18	314		Pg	19 09 59.9	+0.3
RSD					Sg	19 10 03.1	+0.9
HTC	Hot Caves	0.26	249		Pg	19 10 01.7	+0.6
MLH	Mauna Loa	0.28	304		Pg	19 10 01.7	+0.2
MLH					Sg	19 10 06.5	+1.1
MLH	Mauna Loa	0.28	304	IAML		19 10 09.6	
	comp=E,516nm,0.2s						
MLH				IAML		19 10 11.0	
	comp=N,576nm,0.3s						
AIN	Ainahou	0.30	277		Pg	19 10 02.1	+0.2
AIN					Sg	19 10 07.1	+1.1
AIN	Ainahou	0.30	277	IAML		19 10 08.7	
	comp=E,2μm,0.3s						
AIN				IAML		19 10 08.7	
	comp=N,3μm,0.1s						
HMH	Humu‘ula Sheep	0.42	309		Pg	19 10 04.0	-0.1
HMH					Sg	19 10 10.5	+0.8
HMH	Humu‘ula Sheep	0.42	309	IAML		19 10 11.6	
	comp=E,2μm,0.3s						
HMH				IAML		19 10 11.6	
	comp=N,1μm,0.3s						
MWH	Mokuaweoweo	0.46	289		Pg	19 10 04.6	-0.3
MWH					Sg	19 10 11.0	0.0
MWH	Mokuaweoweo	0.46	289	IAML		19 10 13.7	
	comp=E,551nm,0.7s						
MWH				IAML		19 10 15.3	
	comp=N,654nm,0.6s						
KHU	Kahuku	0.46	259		Pg	19 10 04.5	-0.3
KHU	Kahuku	0.46	259	IAML		19 10 13.0	
	comp=N,310nm,0.4s						
KHU				IAML		19 10 13.8	
	comp=E,308nm,0.1s						
HPO	Honuapo	0.46	238		Sg	19 10 11.2	+0.4
HPO	Honuapo	0.46	238		Pg	19 10 05.0	+0.1
ALEP	Alea Permanent	0.52	293		Pg	19 10 05.5	-0.5
ALEP					Sg	19 10 12.9	+0.1
POHA	Pohakuloa	0.56	319		Pg	19 10 06.2	-0.6
POHA					Sg	19 10 13.9	-0.2
POHA	Pohakuloa	0.56	319	IAML		19 10 14.8	
	comp=E,374nm,0.3s						
POHA				IAML		19 10 15.6	
	comp=E,384nm,0.2s						
HUH	Hualalai	0.74	298		Pg	19 10 08.8	-1.5
HUH					Sg	19 10 18.6	-1.4
CPH	Captain Cook	0.75	282		Pg	19 10 09.1	-1.2
HPAH	Hawaii Prepara	0.87	323		Pg	19 10 10.2	-2.5
HPAH	Hawaii Prepara	0.87	323	IAML		19 10 24.9	
	comp=E,245nm,0.3s						
HPAH				IAML		19 10 25.7	
	comp=N,113nm,0.1s						
MHA	Mahukona	1.11	320		Pg	19 10 13.9	-3.4

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*IDC **06** 19:36:56.0±1.1, 32°.47S×79°.95E, h0km, mb3.8/10, mbtmp3.8/10, MS3.3/3, Error ellipse: s-maj=39.7km s-min=27.5km az=60.0*

ISC 06 19:36:57.9±1.0, 32°.5S±0°.2×80°.0E±0°.3, h10km, n26, σ0s.41/11, mb3.8/10, MS3.3/3, Broken Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H04N2	CROZET ISLANDS	25.59	229	T	T	20 09 06.2	
	baz=68,slow=74,SNR=109						
H04N1	CROZET ISLANDS	25.61	230	T	T	20 09 09.7	
	baz=68,slow=74,SNR=134						
H04N3	CROZET ISLANDS	25.61	229	T	T	20 09 05.2	
	baz=68,slow=74,SNR=115						
H08S2	Diego Garcia H	25.67	343	T	T	20 09 09.1	
	baz=166,slow=75						
H08S1	Diego Carcia H	25.67	343	T	T	20 09 09.5	
	baz=166,slow=75						
H08S3	Diego Garcia H	25.68	343	T	T	20 09 10.6	
	baz=166,slow=75						
H04S1	CROZET ISLANDS	25.79	228	T	T	20 09 15.6	
	baz=68,slow=76,SNR=4.9						
H04S3	CROZET ISLANDS	25.80	228	T	T	20 09 17.0	
	baz=68,slow=76,SNR=3.1						
H04S2	CROZET ISLANDS	25.80	228	T	T	20 09 18.1	
	baz=68,slow=76,SNR=3.0						
H01W2	Cape Leeuwin H	28.43	104	T	T	20 12 36.3	
	baz=265,slow=74,SNR=13						
H01W3	Cape Leeuwin H	28.43	104	T	T	20 12 41.5	
	baz=265,slow=74,SNR=22						
H01W1	Cape Leeuwin H	28.44	104	T	T	20 12 42.6	
	baz=265,slow=74,SNR=18						
NWAO	Narrogin (SRO)	31.23	101	LR	LR	19 52 19.9	
	comp=Z,64nm,21.5s,baz=348,slow=30						
LBTB	Lobatse	47.85	264	LR	LR	20 02 07.6	
	comp=Z,24nm,18.3s,baz=135,slow=32						
ASAR	Alice Springs	47.94	94	P	P	19 45 36.6	-0.2
	0.7nm,0.8s,baz=225,slow=6.6,SNR=6.2						
	0.7nm,0.8s						
WRA	Warramunga Arr	49.85	90	P	P	19 45 52.1	+0.6
	0.8nm,0.8s,baz=247,slow=6.7,SNR=2.7						
	0.8nm,0.8s						
CMAR	Chiang Mai Arr	53.78	22	P	P	19 46 20.4	-0.3
	0.6nm,0.7s,baz=214,slow=7.4,SNR=4.3						
	0.6nm,0.7s						
QSPA	South Pole Qui	57.68	180	P	P	19 46 48.1	-0.2
	2.2nm,1.1s,baz=290,slow=3.4,SNR=2.7						
	2.2nm,1.1s						
GUMO	Guam	77.03	65	LR	LR	20 17 13.4	
	comp=Z,18nm,20.6s,baz=110,slow=31						
MKAR	Makanchi Array	78.92	2	P	P	19 49 00.9	-0.3
	1.0nm,0.9s,baz=167,slow=5.7,SNR=4.8						
	1.0nm,0.9s						
KURBB	Kurchatov Arra	82.74	359	P	P	19 49 21.7	+0.2
	0.6nm,0.9s,baz=188,slow=5.1,SNR=4.1						
	0.6nm,0.9s						
SONM	Songino Array	83.37	18	P	P	19 49 24.9	-0.1
	0.5nm,0.8s,baz=229,slow=5.5,SNR=2.7						
	0.5nm,0.8s						
BRTR	Keskin Array B	83.70	326	P	P	19 49 27.0	+0.1
	0.5nm,0.9s,baz=120,slow=4.9,SNR=3.5						
	0.5nm,0.9s						
BVAR	Borovoye Array	85.55	354	P	P	19 49 36.3	+0.6
	0.6nm,0.6s,baz=157,slow=7.8,SNR=4.9						
	0.6nm,0.6s						
ZALV	Zalesovo Beam	86.16	3	P	P	19 49 38.3	-0.4
	0.5nm,0.3s,baz=165,slow=6.0,SNR=6.3						
	0.5nm,0.3s						
YKA	Yellowknife Ar	148.54	13	PKPbc	PKPdf	19 56 41.0	+0.4
	0.5nm,0.6s,baz=352,slow=2.9,SNR=3.1						

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*SFS **06** 19:45:15.9, 37°.34N×1°.97W, h3km, ML2.6/4, ML1.9/4, MLv1.5/4*

*MDD **06** 19:45:16.1±0.6, 37°.31N×1°.91W, h8km±5km, mb_Lg1.9/4, Error ellipse: s-maj=4.7km s-min=3.4km az=129.0*

ISC 06 19:45:15.5±1.1, 37°.33N±0°.06×1°.95W±0°.07, h10km±14km, n7, σ1s.00/13, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENIJ	Nijar	0.42	210	Pg	Pg	19 45 23.6	-0.1
ENIJ				Sg	Sg	19 45 28.8	-0.5
ENIJ				i IVmb_Lg		19 45 30.4	
EZAR	Zarzadilla de	0.58	20	Pg	Pg	19 45 26.1	-0.7
EZAR				Sg	Sg	19 45 34.1	-0.3
EZAR				i IVmb_Lg		19 45 36.6	
CART	Cartagena	0.80	71	Pg	Pg	19 45 31.0	+0.1
CART				Sg	Sg	19 45 41.4	+0.2
EQES	Quesada	1.01	298	Pg	Pb	19 45 36.2	+1.0
EQES				Sg	Sb	19 45 50.6	+2.0
EADA	Adamuz	2.24	293	Pn	Pn	19 45 52.3	-0.5
EADA				Sn	Sn	19 46 19.4	-1.2
EADA	Adamuz	2.24	293	Pn	Pn	19 45 52.4	-0.5
ECAB	El Cabril	2.85	286	Pn	Pn	19 46 00.4	-0.7
ECAB				Sn	Sn	19 46 34.7	-0.8

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*NOU **06** 19:47:42.7, 39°.21S×175°.50E, h104km, MLv4.3/21, North Island, New Zealand*

*NEIC **06** 19:47:44.0±1.4, 39°.19S±0°.05×175°.43E±0°.07, h94km±6km, mb4.7/12, Error ellipse: s-maj=8.1km s-min=6.7km az=93.0*

*WEL **06** 19:47:44.9±0.5, 39°S±3°×17°6E±°, h91km±5km, M3.9/93, ML3.9/17, MLv3.9/93, Error ellipse: s-maj=4.6km s-min=3.8km az=153.9, confirmed*

*IDC **06** 19:47:46.5±18.0, 38°.83S×175°.65E, h131km±155km, mb4.0/6, mbtmp4.4/6, Error ellipse: s-maj=88.9km s-min=17.9km az=58.0*

ISC 06 19:47:44.1±0.6, 39°.17S±0°.03×175°.49E±0°.03, h106km±4km, n201, σ1s.01/216, mb4.4/14, 6D, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COVZ	Chateau Observ	0.05	126	P	Pn	19 47 58.3	-0.6
NGZ	Ngauruhoe	0.08	92	P	Pn	19 47 58.4	-0.6
WTVZ	West Tongariro	0.09	53	P	Pn	19 47 58.0	-0.9
WTVZ				S	Sn	19 48 09.0	-1.1
FWVZ	Far West T-bar	0.10	151	P	Pn	19 47 58.5	-0.6
FWVZ				S	Sn	19 48 09.4	-0.9
NNVZ	North Ngauruho	0.10	67	P	Pn	19 47 58.1	-0.9
NNVZ				S	Sn	19 48 09.5	-0.7
MAVZ	Matarangi	0.11	151	P	Pn	19 47 58.7	-0.6
MAVZ				S	Sn	19 48 09.4	-1.2
TWVZ	Taurewa	0.11	337	P	Pn	19 47 58.2	-0.8
SNVZ	South Ngauruho	0.12	97	P	Pn	19 47 58.3	-0.7
SNVZ				S	Sn	19 48 09.5	-0.8
WHVZ	Whangaehu Hut	0.13	146	P	Pn	19 47 58.7	-0.5
OTVZ	Oturere	0.13	86	P	Pn	19 47 58.3	-0.7
TRVZ	Turoa	0.13	161	P	Pn	19 47 58.7	-0.5
KRVZ	Karewarewa	0.14	56	P	Pn	19 47 58.3	-0.7
TUVZ	Tukino	0.16	127	P	Pn	19 47 58.7	-0.4
TUVZ				S	Sn	19 48 09.5	-0.9
NTVZ	North Tongarir	0.16	63	P	Pn	19 47 58.6	-0.5
PKVZ	Pokaka	0.16	224	P	Pn	19 47 58.6	-0.5
ETVZ	East Tongariro	0.17	78	P	Pn	19 47 58.4	-0.7
ETVZ				S	Sn	19 48 09.4	-1.0
TMVZ	Te Maari	0.17	71	P	Pn	19 47 58.3	-0.9
TMVZ				S	Sn	19 48 08.9	-1.4
WNVZ	Wahianoa	0.17	152	P	Pn	19 47 58.6	-0.6
MTVZ	Mangateitei	0.21	185	P	Pn	19 47 58.8	-0.4
MTVZ				S	Sn	19 48 09.6	-0.9
KATZ	Kakaramea	0.25	39	P	Pn	19 47 58.5	-0.9
MOVZ	Moawhango	0.31	139	P	Pn	19 47 58.9	-0.7
MOVZ				S	Sn	19 48 09.5	-1.7
RITZ	Rihia Road	0.34	56	P	Pn	19 47 59.0	-0.6
RATZ	Rangitukua	0.38	36	P	Pn	19 47 58.9	-1.0
WATZ	Wairara	0.50	22	P	Pn	19 47 59.8	-0.8
VRZ	Vera Road	0.57	275	P	Pn	19 48 01.0	0.0
WHTZ	Whakaora	0.62	36	P	Pn	19 48 01.0	-0.6
WAZ	Wanganui	0.70	214	P	Pn	19 48 02.5	+0.4
KUTZ	Kaahu Road	0.73	21	P	Pn	19 48 01.7	-0.7
KWHZ	Kaweka Forest	0.76	110	P	Pn	19 48 02.4	-0.3
BKZ	Black Stump Fm	0.78	90		Pn	19 48 02.0	-0.8
BKZ	Black Stump Fm	0.78	90	P	Pn	19 48 01.9	-0.9
BKZ	Black Stump Fm	0.78	90	S	Sn	19 48 16.2	-0.7
BKZ	Black Stump Fm	0.78	90	P	Pn	19 48 01.9	-0.9
BKZ				S	Sn	19 48 15.9	-1.1
MRHZ	Matea Rd	0.80	65	P	Pn	19 48 01.9	-1.1
HIZ	Hauiti	0.82	323		Pn	19 48 02.6	-0.6

HIZ	Hauiti	0.82	323	P	Pn	19 48 02.6	-0.6
HIZ	Hauiti	0.82	323	P	Sn	19 48 17.2	-0.4
HIZ	Hauiti	0.82	323	P	Pn	19 48 02.5	-0.6
KRHZ	Kereru	0.83	125	P	Pn	19 48 03.1	-0.2
WPRZ	Whakapapatarin	0.83	39	P	Pn	19 48 02.5	-0.9
TLZ	Tolley Road	0.84	2	P	Pn	19 48 02.6	-0.8
LREZ	Lake Rotokare	0.89	251	P	Pn	19 48 04.3	+0.4
ALRZ	Allen Road	0.90	48	P	Pn	19 48 02.9	-1.0
MHEZ	Mangahewa	0.92	276	P	Pn	19 48 04.7	+0.7
PNHZ	Pukenui	0.92	144	P	Pn	19 48 04.1	-0.1
GRRZ	Galatos Road	0.95	31	P	Pn	19 48 04.0	-0.6
TSZ	Takapari Road	0.96	158	P	Pn	19 48 04.7	+0.2
TSZ				S	Sn	19 48 19.2	-0.8
MCHZ	McNeill Hill	0.97	107	P	Pn	19 48 05.4	+0.8
PRRZ	Plateau Road	0.97	47	P	Pn	19 48 03.8	-0.9
HRRZ	Handcock Road	1.00	39	P	Pn	19 48 04.4	-0.6
DREZ	Durham Road	1.00	269	P	Pn	19 48 05.4	+0.4
OHWZ	Ohakea	1.04	188	P	Pn	19 48 06.6	+1.2
HSRZ	Hossack Road	1.04	35	P	Pn	19 48 04.9	-0.6
PREZ	Palmer Road	1.05	260	P	Pn	19 48 06.3	+0.8
NEZ	North Egmont	1.09	264	P	Pn	19 48 06.6	+0.6
MTHZ	Maungataniwha	1.10	74	P	Pn	19 48 05.2	-0.9
UTU	Utuhina	1.14	29	P	Pn	19 48 06.1	-0.3
HLRZ	Highlands Stat	1.14	36	P	Pn	19 48 06.5	-0.1
RRRZ	Republican Roa	1.15	44	P	Pn	19 48 06.0	-0.6
WPHZ	Waipukurau	1.15	141	P	Pn	19 48 06.8	+0.2
KHEZ	Kahui Hut	1.15	263	P	Pn	19 48 06.8	+0.1
KHEZ	Kahui Hut	1.15	263	P	Pn	19 48 07.2	+0.5
ARHZ	Aropaoanui	1.17	95	P	Pn	19 48 06.6	-0.2
PKE	Pukeiti	1.17	268	P	Pn	19 48 07.1	+0.3
MUGZ	Murupara	1.22	56	P	Pn	19 48 06.2	-1.1
TARZ	Mount Tarawera	1.23	41	P	Pn	19 48 07.1	-0.4
POWZ	Post Office Ro	1.24	170	P	Pn	19 48 07.6	+0.1
KAHZ	Kahuranaki	1.24	121	P	Pn	19 48 07.8	+0.2
DVHZ	Dannevirke	1.24	155	P	Pn	19 48 07.5	-0.1
NBEZ	Newall Road No	1.27	265	P	Pn	19 48 08.1	+0.2
RAHZ	Arahi	1.27	79	P	Pn	19 48 07.4	-0.5
NMEZ	Namu Road	1.28	259	P	Pn	19 48 08.5	+0.5
MKRZ	Makatiti	1.28	37	P	Pn	19 48 07.6	-0.6
RTZ	Ruatahuna	1.29	65		Pn	19 48 07.1	-1.2
RTZ				Sn	Sn	19 48 24.7	-1.8
RTZ	Ruatahuna	1.29	65	P	Pn	19 48 07.4	-0.8
RTZ				S	Sn	19 48 24.6	-1.9
KARZ	Kaharoa	1.29	27	P	Pn	19 48 07.9	-0.3
CKHZ	Cape Kidnapper	1.32	112	P	Pn	19 48 08.8	+0.3
WHHZ	Waihua	1.36	87	P	Pn	19 48 09.3	+0.3
LIRZ	Lichensteins R	1.36	31	P	Pn	19 48 08.6	-0.4
PWZ	Pawanui	1.36	129	P	Pn	19 48 09.1	+0.1
PXZ	Pawanui	1.36	129	P	Pn	19 48 09.0	0.0
PXZ				S	Sn	19 48 27.1	-0.7
KMRZ	Kaimai	1.37	15	P	Pn	19 48 08.8	-0.4
PRHZ	Porangahau	1.40	141	P	Pn	19 48 09.6	+0.1
PRWZ	Pori Road	1.43	165	P	Pn	19 48 10.1	+0.3
TOZ	Tahuroa Road	1.44	0		Pn	19 48 09.3	-0.6
TOZ	Tahuroa Road	1.44	0	P	Pn	19 48 09.3	-0.6
EDRZ	Edgecumbe	1.44	43	P	Pn	19 48 09.3	-0.7
MRZ	Mangatainoka R	1.49	177		Pn	19 48 10.5	0.0
MRZ	Mangatainoka R	1.49	177	P	Pn	19 48 10.5	0.0
ANWZ	Angora Road	1.49	150	P	Pn	19 48 10.9	+0.3
SNGZ	Shannon Statio	1.49	75	P	Pn	19 48 09.9	-0.7
MARZ	Manawahe	1.50	38	P	Pn	19 48 10.3	-0.4
URZ	Urewera	1.56	55	P	Pn	19 48 10.2	-1.2
URZ	Urewera	1.56	55	P	Pn	19 48 10.2	-1.2
TGRZ	Tauranga	1.56	23	P	Pn	19 48 11.0	-0.4
OPRZ	Ohinepanea	1.57	32	P	Pn	19 48 10.8	-0.6
BFZ	Birch Farm	1.61	159		Pn	19 48 11.9	-0.2
BFZ	Birch Farm	1.61	159	P	Pn	19 48 11.8	-0.2
BFZ	Birch Farm	1.61	159	S	Sn	19 48 31.6	-1.7
BFZ	Birch Farm	1.61	159	P	Pn	19 48 11.9	-0.2
TIWZ	Tintock	1.63	169	P	Pn	19 48 12.2	0.0
RAGZ	Rawiri	1.65	66	P	Pn	19 48 11.6	-0.9
OGWZ	Otaki Gorge	1.66	188	P	Pn	19 48 12.7	+0.1
KNZ	Kokohu	1.70	86	P	Pn	19 48 12.4	-0.7
HOWZ	Holdsworth Sta	1.72	179	P	Pn	19 48 13.1	-0.3
KIW	Kapiti Island	1.75	195	P	Pn	19 48 13.4	-0.3
MWZ	Matawai	1.80	63	P	Pn	19 48 13.4	-1.0
CPWZ	Castlepoint	1.82	163	P	Pn	19 48 14.8	+0.3
RIGZ	Rimuhau	1.83	76	P	Pn	19 48 14.3	-0.5
MHGZ	Mahia Peninsul	1.88	90	P	Pn	19 48 14.7	-0.6
PRGZ	Paritu Road	1.88	83	P	Pn	19 48 14.6	-0.7
TMWZ	Te Maipa	1.96	171	P	Pn	19 48 15.9	-0.4
MYRZ	Mayor Island	1.98	18	P	Pn	19 48 16.7	+0.1
TKGZ	Te Karaka	1.98	69	P	Pn	19 48 16.0	-0.6
MTW	Mount Morrison	1.98	180	P	Pn	19 48 16.0	-0.6
DUWZ	D'Urville Isla	2.03	216	P	Pn	19 48 16.6	-0.6
MKAZ	Moumakai	2.08	353	P	Pn	19 48 17.2	-0.7
RUGZ	Raukumara Rang	2.09	56	P	Pn	19 48 16.7	-1.5
WEL	Wellington	2.18	194	P	Pn	19 48 18.3	-0.9
TWGZ	Tauwhareparae	2.19	64	P	Pn	19 48 18.6	-0.7
PAWZ	Paruwai Farm	2.21	181	P	Pn	19 48 18.7	-0.9
AWAZ	Awhitu Peninsu	2.21	342	P	Pn	19 48 19.7	+0.1
SNZO	South Karori	2.22	196	Pn	Pn	19 48 18.6	-1.0
SNZO	South Karori	2.22	196	P	Pn	19 48 18.6	-1.0
TRWZ	Traveller	2.23	176	P	Pn	19 48 19.0	-0.8
CNGZ	Carnagh Statio	2.23	73	P	Pn	19 48 19.0	-0.9
TCW	Tory Channel	2.24	204		Pn	19 48 19.0	-1.0
TCW	Tory Channel	2.24	204	P	Pn	19 48 19.1	-0.8
MSWZ	Moikau Station	2.25	185		Pn	19 48 19.1	-1.0
MSWZ	Moikau Station	2.25	185	P	Pn	19 48 19.3	-0.8
ETAZ	East Tamaki Re	2.26	348	P	Pn	19 48 19.8	-0.4
BHW	Baring Head	2.28	192	Pn	Pn	19 48 19.5	-1.0
BHW	Baring Head	2.28	192	P	Pn	19 48 19.5	-1.0
HAZ	Te Kaha	2.29	53	P	Pn	19 48 18.7	-1.8
WTAZ	Waiatarua	2.35	342	P	Pn	19 48 21.4	0.0
WIAZ	Waiheke Island	2.39	353	P	Pn	19 48 21.3	-0.6
PLWZ	Palliser	2.40	184	Pn	Pn	19 48 20.7	-1.4
PLWZ	Palliser	2.40	184	P	Pn	19 48 21.0	-1.1
PKGZ	Pakihiroa	2.41	58	P	Pn	19 48 21.0	-1.2
PUZ	Puketiti	2.43	64	P	Pn	19 48 20.9	-1.5
KUZ	Kuaotunu	2.43	4	P	Pn	19 48 21.7	-0.7
KUZ	Kuaotunu	2.43	4	S	Sn	19 48 51.5	-0.3
KUZ	Kuaotunu	2.43	4	P	Pn	19 48 21.7	-0.7
TUWZ	Tuamarina	2.55	207		Pn	19 48 23.4	-0.6
TUWZ	Tuamarina	2.55	207	P	Pn	19 48 23.4	-0.6
NNZ	Nelson	2.61	218		Pn	19 48 23.7	-1.1
NNZ	Nelson	2.61	218	P	Pn	19 48 23.5	-1.2
ABAZ	Army Bay	2.62	348	P	Pn	19 48 25.1	+0.1
WMGZ	Waiomatatini S	2.66	60	P	Pn	19 48 24.0	-1.5
TKNZ	Takaka Hill	2.69	225		Pn	19 48 24.5	-1.3
TKNZ	Takaka Hill	2.69	225	P	Pn	19 48 24.8	-1.0
MXZ	Matakaoa Point	2.73	55		Pn	19 48 25.4	-1.0
MXZ	Matakaoa Point	2.73	55	P	Pn	19 48 25.4	-1.0
MXZ	Matakaoa Point	2.73	55	S	Sn	19 48 58.1	-0.9
MXZ	Matakaoa Point	2.73	55	P	Pn	19 48 25.9	-0.6
CMWZ	Cape Campbell	2.75	200	Pn	Pn	19 48 25.9	-0.8
QRZ	Quartz Range	2.81	233		Pn	19 48 26.6	-0.8
QRZ	Quartz Range	2.81	233	P	Pn	19 48 26.0	-1.4
QRZ	Quartz Range	2.81	233	S	Sn	19 48 59.2	-1.6
QRZ	Quartz Range	2.81	233	P	Pn	19 48 26.5	-1.0
BSWZ	Blackbirch Sta	2.82	205		Pn	19 48 26.1	-1.4
BSWZ	Blackbirch Sta	2.82	205	P	Pn	19 48 26.2	-1.4
GRZ	Great Barrier	2.92	359	P	Pn	19 48 28.2	-0.7
MRNZ	Matariki Terra	3.05	222		Pn	19 48 29.2	-1.4
MRNZ	Matariki Terra	3.05	222	P	Pn	19 48 29.3	-1.3
THZ	Tophouse	3.25	217	P	Pn	19 48 31.8	-1.6
KHZ	Kahutara	3.56	204	P	Pn	19 48 35.2	-2.2
KHZ	Kahutara	3.56	204	S	Sn	19 49 16.7	-2.0
OUZ	Omahuta	4.23	338	P	Pn	19 48 45.9	-0.5
INZ	Inchbonnie	4.69	220		Sn	19 49 41.7	-4.1
RPZ	Rata Peaks	5.63	215	P	Pn	19 49 02.8	-2.5
ODZ	Otahua Downs	6.88	210	P	Pn	19 49 19.1	-3.2
CTZ	Chatham Island	7.47	130	P	Pn	19 49 28.6	-1.7
BBOO	Buckleboo	32.34	269	P	P	19 54 01.4	-1.8
BBOO				IAmb	IAmb	19 54 30.8	
	comp=Z,24nm,1.4s						
AS31	Alice Springs	38.36	281	P	P	19 54 55.0	+0.1
AS31				IAmb	IAmb	19 54 56.1	
	comp=Z,3.0nm,0.3s						
ASAR	Alice Springs	38.36	281	P	P	19 54 55.1	+0.3
	comp=Z,2.5nm,0.5s,baz=116,slow=6.1,SNR=114						
	comp=Z,2.5nm,0.5s						
VNDA	Vanda	38.89	185	P	P	19 55 00.7	+2.1
FORT	Forrest	39.39	267	P	P	19 55 03.7	+0.4
WR8	Warramunga Arr	40.06	287	P	P	19 55 08.5	-0.5
WR8				IAmb	IAmb	19 55 09.5	
	comp=Z,26nm,1.4s						
WRA	Warramunga Arr	40.19	286	P	P	19 55 10.2	+0.1
	comp=Z,3.3nm,0.4s,baz=125,slow=8.1,SNR=46						
	comp=Z,3.3nm,0.4s						
WB0	Warramunga Arr	40.26	287	P	P	19 55 10.5	-0.1
WB0				IAmb	IAmb	19 55 11.0	
	comp=Z,15nm,1.3s						
CASY	Casey	44.89	211	P	P	19 55 47.1	-0.4
KNRA	Kununurra	46.99	286	P	P	19 56 05.1	+0.5
FITZ	Fitzroy Crossi	47.86	281	P	P	19 56 11.1	-0.2
FITZ	Fitzroy Crossi	47.86	281	P	P	19 56 11.9	+0.5
	comp=Z,7.4nm,0.4s,baz=127,slow=7.6,SNR=31						
	comp=Z,7.4nm,0.4s						
PSA00	Pilbara Seismi	50.34	273	P	P	19 56 29.2	-1.0
PSA00				IAmb	IAmb	19 56 30.7	
	comp=Z,16nm,1.2s						
QSPA	South Pole Qui	50.95	180	P	P	19 56 36.6	+2.2
QSPA				IAmb	IAmb	19 56 43.1	
	comp=Z,2.5nm,0.8s						
QSPA	South Pole Qui	50.95	180	P	P	19 56 36.5	+2.0
	comp=Z,1.3nm,0.3s,baz=360,slow=4.6,SNR=28						
	comp=Z,1.3nm,0.3s						
SOEI	Soe	54.14	289	P	P	19 57 00.4	+1.9
MAW	Mawson	62.19	204	P	P	19 57 54.6	+0.9
	comp=Z,1.9nm,0.5s,baz=149,slow=7.5,SNR=2.5						
	comp=Z,1.9nm,0.5s						
SYO	Syowa Base	67.31	196	⇓*e*P	P	19 58 28.4	+1.5
TROLL	Troll, Antarti	69.01	182	⇓P	P	19 58 38.6	+0.9
	comp=Z,94nm,0.4s						
SNAA	Sanae	69.45	181	⇓P	P	19 58 42.4	+2.1
	comp=Z,19nm,0.4s						
SNAA	Sanae	69.45	181	P	P	19 58 42.9	+2.6
	comp=Z,0.6nm,0.4s,baz=194,slow=7.6,SNR=19						
	comp=Z,0.6nm,0.4s						
VNA3	Neumayer Olymp	69.83	178	⇓P	P	19 58 42.8	+0.3
	comp=Z,2.0nm,0.6s						
VNA2	Neumayer--Watz	70.19	179	⇓P	P	19 58 45.4	+0.7
	comp=Z,2.1nm,0.7s,baz=170,slow=6.3						
VNA1	Neumayer--Stat	70.45	179	⇓P	P	19 58 46.8	+0.5
	comp=Z,0.1nm,0.2s						
ARCES	ARCESS Array B	145.65	342	PKPbc	PKPdf	20 07 07.5	-1.2
	comp=Z,2.4nm,0.6s,baz=43,slow=4.1,SNR=13						
MMAI	Mount Meron Ar	147.36	272	PKPbc	PKPbc	20 07 15.1	-0.3
	comp=Z,0.4nm,0.4s,baz=104,slow=6.1,SNR=1.1						
BRTR	Keskin Array B	150.68	283	PKPab	PKPab	20 07 29.8	-1.2
	comp=Z,1.2nm,0.9s,baz=131,slow=4.0,SNR=8.3						
FINES	FINESS Array B	150.84	330	PKPbc	PKPbc	20 07 20.4	-2.6
	comp=Z,0.5nm,0.6s,baz=30,slow=4.6,SNR=6.0						

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*IDC **06** 19:50:11.0±2.0, 4°.63N×127°.64E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=113.3km s-min=26.0km az=69.0*

*DJA **06** 19:50:17.6±1.0, 5°N±9°×12°7E±°, h61km±8km, M4.0/9, mb4.2/3, MLv4.0/9*

ISC 06 19:50:23.2±1.4, **4°.2N**±0°.1×**126°.82E**±0°.09, **h100km, n10,** σ**1s.93**/11, **mb3.6**/5, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.40	247	P	Pn	19 50 46.0	-2.3
SGSI				S	Sn	19 51 06.8	-0.5
TNTI	Ternate	3.49	171	P	Pn	19 51 14.9	-0.6
SANI	Sanana	6.30	188	P	Pn	19 51 52.7	-1.0
	63nm,1.0s						
LUWI	Luwuk	6.63	218	P	Pn	19 51 56.4	-1.7
SWI	Sorong	6.73	139	P	Pn	19 51 56.6	-2.9
	0.0nm5.0nm,0.8s						
FITZ	Fitzroy Crossi	22.23	183	P	P	19 55 15.0	+3.2
	1.4nm,0.5s,baz=356,slow=10,SNR=1.2						
	1.4nm,0.5s						
WRA	Warramunga Arr	25.14	163	P	P	19 55 39.5	+0.3
	1.5nm,0.7s,baz=344,slow=10.0,SNR=5.0						
	1.5nm,0.7s						
ASAR	Alice Springs	28.58	166	P	P	19 56 09.9	-0.1
	0.5nm,0.9s,baz=349,slow=9.3,SNR=1.7						
	0.5nm,0.9s						
STKA	Stephens Creek	38.57	160	P	P	19 57 36.5	+0.1
	0.7nm,0.3s,baz=338,slow=13,SNR=4.0						
	0.7nm,0.3s						
MKAR	Makanchi Array	57.19	325	P	P	20 00 01.1	+1.1
	0.2nm,0.5s,baz=114,slow=8.1,SNR=4.3						
	0.2nm,0.5s						

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*SJA **06** 19:51:53.3±0.7, 21°.92S×67°.32W, h214km±6km, ML3.6, MW3.6*

*SCB **06** 19:51:57.1±1.1, 21°.93S×67°.33W, h166km±13km, ML3.7/2, MW3.1, Error ellipse: s-maj=9.2km s-min=5.3km az=0.0*

ISC 06 19:51:54.3±1.6, **21°.99S**±0°.04×**67°.33W**±0°.04, **h202**km±13km, **n45,** σ**1s.36**/65, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AF01	San Pedro de A	1.24	219	*e*P	Pn	19 52 27.5	+1.2
YJA	Yavi	1.69	97	Pg	Pn	19 52 31.2	+0.8
YJA	Yavi	1.69	97	*e*P	Pn	19 52 31.2	+0.8
YJA				*e*S	S	19 52 48.4	-9.5
MOCB	Mochara	1.74	65	Pg	Pn	19 52 31.1	+0.2
MOCB				Sg	S	19 52 56.6	-2.1
MOCB				IAML		19 52 57.5	
	164nm,0.4s						
PB09	IPOC Station P	1.79	276	*e*P	Pn	19 52 31.6	+0.5
PB09				*e*S	S	19 52 59.7	+0.7
PB09				IAML		19 53 02.0	
	comp=N,521nm,0.1s						
PB09	IPOC Station P	1.79	276	Pg	Pn	19 52 31.9	+0.9
PB09	IPOC Station P	1.79	276	*e*P	Pn	19 52 31.8	+0.7
PB09				*e*S	S	19 52 59.6	+0.6
PB09				IAML		19 53 02.7	
	comp=Z,178nm,0.1s						
PB06	IPOC Station P	2.20	251	*e*P	Pn	19 52 35.5	+0.3
PB06				*e*S	S	19 53 06.1	-0.3
PB06				IAML		19 53 08.2	
	comp=E,545nm,0.1s						
PB06	IPOC Station P	2.20	251	*e*P	Pn	19 52 35.9	+0.7
PB06				*e*S	S	19 53 07.6	+1.2
PB06				IAML		19 53 07.9	
	comp=Z,141nm,0.4s						
PB01	IPOC Station P	2.22	295	*e*P	Pn	19 52 35.5	+0.1
PB01	IPOC Station P	2.22	295	Pg	Pn	19 52 35.9	+0.5
PB01				Sg	S	19 53 05.9	-0.8
PB01				IAML		19 53 06.6	
	comp=Z,929nm,0.3s						
PB01	IPOC Station P	2.22	295	*e*P	Pn	19 52 35.6	+0.2
PB01				*e*S	S	19 53 06.0	-0.7
PB01				IAML		19 53 07.4	
	comp=Z,335nm,0.2s						
PB03	IPOC Station P	2.25	268	*e*P	Pn	19 52 35.7	-0.1
PB03				*e*S	S	19 53 06.3	-1.1
PB03				IAML		19 53 07.2	
	comp=N,730nm,0.1s						
PB03	IPOC Station P	2.25	268	*e*P	Pn	19 52 36.2	+0.4
PB03				*e*S	S	19 53 06.7	-0.7
PB08	IPOC Station P	2.51	317	*e*P	Pn	19 52 39.6	+0.8
PB08				IAML		19 53 13.9	
	comp=E,168nm,0.3s						
PB08	IPOC Station P	2.51	317	Pg	Pn	19 52 39.7	+0.8
PB08	IPOC Station P	2.51	317	*e*P	Pn	19 52 39.5	+0.6
PB08				*e*S	S	19 53 12.9	0.0
PB08				IAML		19 53 13.6	
	comp=Z,63nm,0.8s						
PB05	IPOC Station P	2.79	252	*e*P	Pn	19 52 42.4	+0.6
PB05				*e*S	S	19 53 16.6	-1.6
PB05				IAML		19 53 18.1	
	comp=N,234nm,0.4s						
PB05	IPOC Station P	2.79	252	*e*P	Pn	19 52 42.3	+0.6
PB05				*e*S	S	19 53 17.3	-0.9
PB05				IAML		19 53 19.4	
	comp=Z,105nm,0.3s						
GO01	Chusmiza	2.90	323	*e*P	Pn	19 52 43.6	+0.3
GO01	Chusmiza	2.90	323	Pg	Pn	19 52 43.9	+0.5
GO01	Chusmiza	2.90	323	*e*P	Pn	19 52 43.7	+0.3
GO01				*e*S	S	19 53 23.2	+2.3
TA01	Diego Aracena	3.02	298	*e*P	Pn	19 52 43.8	-0.4
TA01				IAML		19 53 21.8	
	comp=N,396nm,0.4s						
TA01	Diego Aracena	3.02	298	*e*P	Pn	19 52 44.5	+0.3
TA01				*e*S	S	19 53 20.4	-2.1
TA01				IAML		19 53 22.1	
	comp=Z,119nm,0.5s						
AZAP	Zapla	3.04	137	*e*P	Pn	19 52 46.1	+1.3
AZAP				*e*S	S	19 53 19.0	-4.7
PB11	IPOC Station P	3.11	315	*e*P	Pn	19 52 44.9	-0.7
PB11				*e*S	S	19 53 23.3	-1.6
PB11				IAML		19 53 23.9	
	comp=Z,141nm,0.2s						
TA02	Huaiquique	3.13	303	*e*S	S	19 53 22.6	-2.3
TA02				IAML		19 53 25.8	
	comp=Z,237nm,0.1s						
SLA	San Lorenzo	3.19	149	*e*P	Pn	19 52 50.6	+4.2
ASTB	Santa Barbara	3.29	127	*e*S	S	19 53 39.2	+10
PB10	IPOC Station P	3.34	242	*e*P	Pn	19 52 47.6	-0.5
PB10				IAML		19 53 29.1	
	comp=N,132nm,0.2s						
PB10	IPOC Station P	3.34	242	*e*P	Pn	19 52 48.5	+0.5
PB10				*e*S	S	19 53 28.4	-1.2
PB10				IAML		19 53 28.7	
	comp=Z,62nm,0.6s						
SOEO	Opoqueri	3.45	351	Pg	Pn	19 52 51.0	+1.0
ALOL	LOMAS DE OLMED	3.58	121	*e*P	Pn	19 52 51.1	+0.1
GO02	Mina Guanaco	3.78	213	*e*P	Pn	19 52 55.0	+1.3
GO02	Mina Guanaco	3.78	213	*e*P	Pn	19 52 55.0	+1.3
GO02				*e*S	S	19 53 40.2	+0.4
PB14	IPOC Station P	3.86	227	*e*P	Pn	19 52 55.5	+0.8
PB14				*e*S	S	19 53 40.1	-1.4
PB14				IAML		19 53 43.5	
	comp=Z,160nm,0.3s						
PB16	IPOC Station P	4.17	330	Pg	Pn	19 52 59.9	+1.0
PB16	IPOC Station P	4.17	330	*e*P	Pn	19 52 59.3	+0.3
PB16				*e*S	S	19 53 31.4	-18
PB16				IAML		19 53 55.5	
	comp=Z,30nm,3.7s						
BBOJ	La Paz, Jacaqu	5.06	351	Pg	Pn	19 53 12.1	+2.1
SOEJ	Jacaque	5.06	351	Pg	Pn	19 53 12.1	+2.1
AC02	Maricunga	5.09	198	*e*P	Pn	19 53 11.8	+1.4
AC02				*e*S	S	19 54 08.8	-1.2
AC02				IAML		19 54 14.7	
	comp=Z,24nm,2.2s						
AC01	Pan de Azucar	5.11	215	*e*P	Pn	19 53 10.1	0.0
AC01				*e*S	S	19 54 07.5	-2.0
AC01				IAML		19 54 16.4	
	comp=Z,63nm,1.7s						
BBOE	La Paz, Chanca	5.19	353	Pg	Pn	19 53 13.9	+2.1
BBOD	La Paz, Gloria	5.46	347	Pg	Pn	19 53 16.7	+1.5
BBOB	La Paz, Bander	5.87	352	Pg	Pn	19 53 21.1	+0.6

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*BER **06** 20:44:58.8±0.8, 59°.99N×21°.97E, h0km, Suspected explosion*

*HEL **06** 20:45:01.1±0.0, 60°.09N×21°.42E, h0km, ML2.3, Explosion*

*DNK **06** 20:45:01.2±1.9, 60°.09N×21°.40E, h0km±11km*

*IDC **06** 20:45:01.8±1.5, 60°.15N×21°.36E, h0km, mbtmp2.7/4, ML2.1/4, Error ellipse: s-maj=21.4km s-min=7.7km az=165.0*

*UPP **06** 20:45:02.1±0.4, 60°.05N×21°.22E, h0km, ML2.6*

ISC 06 20:44:59.7±0.9, **60°.10N**±0°.03×**21°.44E**±0°.03, **h0km, n78,** σ**1s.58**/83, **Finland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAL	Aland	0.73	277	P	Pg	20 45 14.1	+0.5
AAL				S	Sg	20 45 23.1	+0.2
AAL	Aland	0.73	277	P	Pg	20 45 14.1	+0.5
AAL				S	Sg	20 45 23.1	+0.2
AAL	Aland	0.73	277	*e*P	Pg	20 45 14.1	+0.5
AAL				*e*S	Sg	20 45 23.3	+0.3
RAF	Rauma	0.94	10	*e*P	Pg	20 45 18.3	+0.6
RAF	Rauma	0.94	10	*e*P	Pg	20 45 18.1	+0.5
RAF				MSG		20 45 29.9	
	comp=Z,29nm,0.2s						
TVF	Tvarminne	0.95	105	*e*P	Pg	20 45 18.0	+0.2
GRAU	Graesoe	1.47	281	P	Pn	20 45 26.5	-0.8
GRAU	Graesoe	1.47	281	P	Pn	20 45 26.5	-0.8
NRTU	Norrtaelje	1.48	255	P	Pn	20 45 27.0	-0.5
NRTU	Norrtaelje	1.48	255	P	Pn	20 45 27.0	-0.5
MEF	Metsahovi	1.48	84	*e*P	Pn	20 45 27.8	+0.2
MEF	Metsahovi	1.48	84	*e*P	Pn	20 45 27.8	+0.2
MEF				MSG		20 45 45.7	
	comp=Z,50nm,0.2s						
NUR	Nurmijarvi	1.65	74	*e*P	Pn	20 45 30.7	+0.8
NUR				MSG		20 45 50.6	
	comp=Z,26nm,0.2s						
KPF	Kankaanpaa	1.77	10	*e*P	Pn	20 45 32.5	+1.1
FLYU	Flymyra	1.78	272	P	Pn	20 45 31.8	+0.1
FLYU	Flymyra	1.78	272	P	Pn	20 45 31.8	+0.1
MTSE	Matsula	1.85	138	*e*P	Pn	20 45 33.9	+1.3
MTSE	Matsula	1.85	138	*e*P	Pn	20 45 33.6	+1.1
UPP	Uppsala	1.93	264	P	Pn	20 45 34.5	+0.8
UPP	Uppsala	1.93	264	P	Pn	20 45 34.5	+0.8
FIBU	Brunna	2.06	266	P	Pn	20 45 36.8	+1.3
FIBU	Brunna	2.06	266	P	Pn	20 45 36.8	+1.3
NYNU	Nynaeshamn	2.06	239	P	Pn	20 45 37.0	+1.5
NYNU	Nynaeshamn	2.06	239	P	Pn	20 45 37.0	+1.5
OSTU	Oestervaala	2.15	275	P	Pn	20 45 38.2	+1.4
OSTU	Oestervaala	2.15	275	P	Pn	20 45 38.2	+1.4
IGGU	Iggoen	2.18	293	P	Pn	20 45 39.1	+1.9
IGGU	Iggoen	2.18	293	P	Pn	20 45 39.1	+1.9
BACU	Backbrunna	2.19	265	P	Pn	20 45 38.8	+1.6
BACU	Backbrunna	2.19	265	P	Pn	20 45 38.8	+1.6
PVF	Pernaja	2.25	77	*e*P	Pn	20 45 40.0	+2.0
PVF				MSG		20 46 07.7	
	comp=Z,14nm,0.2s						
SLIT	Slitere, Latvi	2.52	169	*e*P	Pn	20 45 43.0	+1.2
SLIT	Slitere, Latvi	2.52	169	*e*P	Pn	20 45 42.6	+0.8
ARNU	Arnoeviken	2.55	311	P	Pn	20 45 44.1	+2.0
ARNU	Arnoeviken	2.55	311	P	Pn	20 45 44.1	+2.0
FIA0	FINESS Array S	2.65	57	MSG		20 46 19.1	
	comp=Z,13nm,0.2s						
FINES	FINESS Array B	2.65	57	Pn	Pn	20 45 46.6	+3.1
	comp=Z,1.6nm,0.3s,baz=240,slow=13,SNR=136						
FINES				Sn	Sb	20 46 21.1	+0.2
	comp=Z,3.1nm,0.3s,baz=242,slow=23,SNR=30						
	comp=Z,3.0nm,0.2s						
KEF	Keuruu	2.66	37	*e*P	Pn	20 45 45.5	+1.7
KEF	Keuruu	2.66	37	MSG		20 46 19.6	
	comp=Z,14nm,0.2s						
ESKU	Eskilstuna	2.70	253	P	Pn	20 45 46.0	+1.7
ESKU	Eskilstuna	2.70	253	P	Pn	20 45 46.0	+1.7
GOTU	Gotland	2.84	213	P	Pn	20 45 47.1	+0.9
GOTU	Gotland	2.84	213	P	Pn	20 45 47.1	+0.9
VIKU	Vikbolandet	2.91	239	P	Pn	20 45 49.0	+1.8
VIKU	Vikbolandet	2.91	239	P	Pn	20 45 49.0	+1.8
VAF	Ylistaro	3.01	11	*e*P	Pn	20 45 50.5	+2.0
VAF	Ylistaro	3.01	11	MSG		20 46 29.7	
	comp=Z,5.4nm,0.2s						
HEMU	Hemsoen	3.06	329	P	Pn	20 45 51.6	+2.4
HEMU	Hemsoen	3.06	329	P	Pn	20 45 51.6	+2.4
ROTU	Roteberg	3.06	298	P	Pn	20 45 50.2	+0.9
ROTU	Roteberg	3.06	298	P	Pn	20 45 50.2	+0.9
KAF	Kangasniemi	3.11	47	MSG		20 46 32.5	
	comp=Z,9.5nm,0.2s						
HASU	Hassela	3.12	313	P	Pn	20 45 52.0	+2.0
HASU	Hassela	3.12	313	P	Pn	20 45 52.0	+2.0
VSU	Vasula	3.18	119	*e*P	Pn	20 45 52.3	+1.5
HUSU	Husum	3.42	343	*e*S	Sn	20 46 36.1	+0.7
SOLU	Sollefteaa	3.73	330	P	Pn	20 46 00.6	+2.1
SOLU	Sollefteaa	3.73	330	P	Pn	20 46 00.6	+2.1
UMAU	Umeaa	3.81	355	*e*S	Sn	20 46 46.1	+1.0
HFS	Hagfors	3.87	274	Pn	Pn	20 46 01.3	+0.9
	comp=Z,0.3nm,0.3s,baz=88,slow=16,SNR=6.7						
HFS				Lg	Lg	20 47 00.4	
	comp=Z,1.7nm,0.3s,baz=86,slow=30,SNR=12						
	comp=Z,1.4nm,0.9s						
BLEU	Blekinge	4.83	220	*i* P	Pn	20 46 14.2	+0.8
BLEU				*i* S	Sn	20 47 09.3	-0.7
NC602	NORSAR Array S	4.95	282	*e*P	Pn	20 46 16.2	+1.0
NC303	NORSAR Array S	5.08	287	*e*P	Pn	20 46 17.8	+0.8
NB201	NORSAR Array S	5.09	285	*e*P	Pn	20 46 18.1	+1.0
NOA	NORSAR Array B	5.13	285	Pn	Pn	20 46 18.6	+0.9
	baz=90,slow=13,SNR=4.3						
NOA				Sn	Sn	20 47 16.4	-1.2
	baz=44,slow=26,SNR=1.4						
NOA				Lg	Lg	20 47 36.9	
	comp=Z,0.1nm,0.3s,baz=70,slow=20,SNR=4.9						
	comp=Z,0.4nm,0.8s						
BORU	Boraas	5.13	245	*i* P	Pn	20 46 19.6	+2.0
BORU				*i* S	Sn	20 47 18.7	+1.2
NAO01	NORSAR Array S	5.27	283	*e*P	Pn	20 46 20.1	+0.5
STRU	Stroemstad	5.32	263	*e*P	Pn	20 46 20.9	+0.6
STRU	Stroemstad	5.32	263	*i* P	Pn	20 46 23.6	+3.3
NBO00	NORSAR Array S	5.34	285	*e*P	Pn	20 46 21.4	+0.8
NC204	NORSAR Array S	5.38	287	*e*P	Pn	20 46 21.6	+0.5
DEL	Delary	5.40	231	*i* P	Pn	20 46 21.9	+0.6
DEL				*i* S	Sn	20 47 23.1	-1.1
TJOU	Tjoern	5.47	252	*i* P	Pn	20 46 24.8	+2.5
BJUU	Bjuv	6.01	232	*i* P	Pn	20 46 30.8	+1.0
LUNU	Lund	6.18	227	*i* P	Pn	20 46 32.6	+0.5
SKAR	Skarslia	6.54	281	*e*P	Pn	20 46 38.1	+1.1
HOMB	Homborsund	6.89	260	*e*P	Pn	20 46 41.1	-0.7
ARCES	ARCESS Array B	9.63	9	Pn	Pn	20 47 18.4	-0.9
	comp=Z,0.1nm,0.3s,baz=190,slow=14,SNR=19						

ARCES				Sn	Sn	20 49 00.9	-7.1
	comp=Z,0.1nm,0.3s,baz=193,slow=24,SNR=2.2 comp=Z,0.2nm,0.3s						

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*NORS **06** 20:46:49.7, 42°.21N×42°.82E, h13^{km}, MPVA3.0*
*AFAD **06** 20:46:51.6, 42°.08N×42°.51E, h7^{km}±1^{km}, ML2.5*
ISC 06 20:46:48.8±1.2, **42°.22N**±0°.03×**42°.70E**±0°.05, **h11**^{km}±11^{km}, **n14**, σ**0^{s}.46**/27, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EPOS	Posof	0.71	178	P	Pb	20 47 03.2	-0.1
EPOS				S	Sg	20 47 12.4	+0.4
DIGR	Digorskoe uzhe	0.94	43	*e*Pg	Pg	20 47 06.7	-0.3
DIGR				*e*Sg	Sg	20 47 18.7	-0.6
AHAN	Ardahan-Merkez	1.05	183	P	Pb	20 47 09.6	+0.4
AHAN				S	Sg	20 47 23.2	+0.4
DBOC	Borcka	1.17	222	P	Pb	20 47 11.1	+0.2
DBOC				S	Sg	20 47 26.1	-0.2
DBOC				*i* IAML		20 47 28.0	
	comp=E,201nm,0.3s						
DAGI	Agillar	1.28	208	P	Pb	20 47 13.3	+0.3
DAGI				S	Sb	20 47 28.9	-0.6
LACR	Lac	1.33	62	*e*Pg	Pn	20 47 13.7	+0.3
LACR				*e*Sg	Sb	20 47 30.3	-0.6
KORR	Kora	1.33	49	*e*Pg	Pn	20 47 13.6	+0.3
KORR				*e*Sg	Sn	20 47 31.6	+0.5
GUDG	Gudauri	1.34	79	*e*Pg	Pn	20 47 13.6	0.0
GUDG				*e*Sg	Sb	20 47 30.3	-0.9
LSNR	Lesken	1.34	38	*e*Pg	Pb	20 47 14.2	+0.2
LSNR				*e*Sg	Sg	20 47 32.2	+0.1
GOLE	Ardahan-G¶lle	1.38	183	P	Pb	20 47 15.2	+0.5
DBAD	Bademkaya	1.42	213	P	Pb	20 47 15.2	0.0
DBAD				S	Sb	20 47 32.5	-0.8
DBAD				*i* IAML		20 47 35.0	
	comp=N,64nm,0.4s						
DBAD				*i* IAML		20 47 36.0	
	comp=E,79nm,0.3s						
DDEM	Demirkent	1.50	209	P	Pb	20 47 16.9	+0.2
DDEM				S	Sn	20 47 35.5	+0.1
DDEM				*i* IAML		20 47 39.0	
	comp=E,117nm,0.2s						
DDEM				*i* IAML		20 47 39.0	
	comp=N,159nm,0.3s						
ARNR	Ardon	1.51	50	*e*Pg	Pb	20 47 17.1	+0.2
ARNR				*e*Sg	Sg	20 47 37.9	+0.4
SHA1	Shidzhatmaz	1.52	359	*e*Pg	Pb	20 47 17.2	0.0
SHA1				*e*Sg	Sg	20 47 38.4	+0.7

IDC 06 20:58:04.8±2.1, **0°.04S**×**125°.74E**, **h0**^{km}, **mb3.2**/3, **mbtmp3.3**/3, **MS3.0**/2, **Error ellipse: s-maj=215.4km s-min=27.9km az=64.0**, **Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.49	157	P	P	21 02 54.4	-1.0
	0.6nm,0.7s,baz=335,slow=11,SNR=2.8 0.6nm,0.7s						
ASAR	Alice Springs	24.78	162	P	P	21 03 29.4	+0.7
	0.4nm,0.8s,baz=342,slow=7.9,SNR=4.4 0.4nm,0.8s						
NWAO	Narrogin (SRO)	33.68	193	LR	LR	21 19 15.6	
	comp=Z,34nm,20.6s,baz=100,slow=38						
ASAJ	Asahikawa	46.47	17	LR	LR	21 27 20.9	
	comp=Z,11nm,19.2s,baz=196,slow=38						
MKAR	Makanchi Array	60.12	327	P	P	21 08 14.1	-0.1
	0.2nm,0.4s,baz=127,slow=7.3,SNR=4.8 0.2nm,0.4s						

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*SNET **06** 21:08:48.9±1.4, 12°.81N×88°.68W, h46^{km}, ML3.9*
*GCG **06** 21:08:49.4±0.7, 12°.82N×88°.75W, h52^{km}±20^{km}, MD4.2*
*CATAC **06** 21:08:49.1±0.3, 13°N±2°×8°9W±°, h35^{km}±3^{km}, M4.1/32, MLv4.1/32, Error ellipse: s-maj=5.5km s-min=1.7km az=27.5, confirmed*
ISC 06 21:08:49.1±1.4, **12°.79N**±0°.07×**88°.69W**±0°.04, **h49**^{km}±20^{km}, **n84**, σ**0^{s}.40**/98, **8C-7D**, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALJI	Alcalda de J	0.55	12	*e*P	Pn	21 09 00.8	-0.1
ALJI				*e*S	Sn	21 09 09.9	+0.6
ALJI	Alcalda de J	0.55	12	P	Pn	21 09 00.8	-0.1
ALJI	Alcalda de J	0.55	12	S	Sn	21 09 10.1	+0.8
TECO	Alcaldia de Te	0.75	353	S	Sn	21 09 13.6	-0.3
TECO	Alcaldia de Te	0.75	353	⇑P	Pn	21 09 03.3	-0.2
PACA	Pacayal	0.77	28	S	Sn	21 09 14.5	0.0
PACA	Pacayal	0.77	28	P	Pn	21 09 03.6	-0.2
BLLM	Bellamira	0.79	34	*e*P	Pn	21 09 03.9	-0.1
PQSS	Presa 15 de Se	0.84	9	P	Pn	21 09 04.9	+0.2
PQSS	Presa 15 de Se	0.84	9	S	Sn	21 09 16.0	0.0
COEG	Centro de Oper	0.85	347	*e*P	Pn	21 09 04.8	-0.1
COEG				*e*S	Sn	21 09 16.3	0.0
COEG	Centro de Oper	0.85	347	P	Pn	21 09 04.7	-0.1
UESV	Universidad de	0.85	354	S	Sn	21 09 16.4	+0.1
UESV	Universidad de	0.85	354	⇑P	Pn	21 09 04.7	-0.1
CNRM	Centro Naciona	0.85	37	S	Sn	21 09 16.5	+0.2
CNRM	Centro Naciona	0.85	37	P	Pn	21 09 04.8	0.0
SCLA	Alcaldia de Sa	0.91	358	S	Sn	21 09 18.3	+0.5
SCLA	Alcaldia de Sa	0.91	358	⇑P	Pn	21 09 05.9	+0.3
LALI	Alcalda de L	0.93	319	*e*P	Pn	21 09 05.3	-0.5
LALI				*e*S	Sn	21 09 17.8	-0.2
LALI	Alcalda de L	0.93	319	*i* P	Pn	21 09 05.3	-0.5
LALI				*e*S	Sn	21 09 17.4	-0.7
LALI	Alcalda de L	0.93	319	P	Pn	21 09 05.5	-0.3
LCND	La Caada	0.94	56	S	Sn	21 09 18.6	+0.3
LCND	La Caada	0.94	56	⇓P	Pn	21 09 05.6	-0.3
PANCS	Alcalda de	0.95	330	P	Pn	21 09 05.8	-0.4
PANCS	Alcalda de	0.95	330	S	Sn	21 09 18.6	-0.1
PAVA	Las Pavas	0.95	345	S	Sn	21 09 19.4	+0.6
PAVA	Las Pavas	0.95	345	⇑P	Pn	21 09 06.2	-0.1
CNCH	Conchagua	0.97	60	S	Sn	21 09 19.2	-0.1
CNCH	Conchagua	0.97	60	P	Pn	21 09 06.4	-0.1
LOMA	Loma Larga	0.97	331	S	Sn	21 09 19.8	+0.4
LOMA	Loma Larga	0.97	331	⇑P	Pn	21 09 06.2	-0.3
UDBS	Universidad Do	1.02	334	P	Pn	21 09 07.1	-0.1
UDBS	Universidad Do	1.02	334	S	Sn	21 09 20.6	0.0
IGN	Direccin Gen	1.03	333	S	Sn	21 09 20.8	+0.1
IGN	Direccin Gen	1.03	333	P	Pn	21 09 07.0	-0.3
UTEC	Universidad Te	1.03	331	P	Pn	21 09 07.0	-0.3
UTEC	Universidad Te	1.03	331	S	Sn	21 09 20.7	-0.1
SEMO	Seminario San	1.05	330	S	Sn	21 09 20.8	-0.3
SEMO	Seminario San	1.05	330	P	Pn	21 09 07.2	-0.3
ITCA	Escuela Especi	1.05	327	P	Pn	21 09 07.5	-0.1
ITCA	Escuela Especi	1.05	327	S	Sn	21 09 20.7	-0.5
UEES	Universidad Ev	1.06	330	S	Sn	21 09 21.1	-0.5
UEES	Universidad Ev	1.06	330	P	Pn	21 09 07.6	-0.2
PMON	Piamonte	1.10	327	S	Sn	21 09 22.8	+0.4
PMON	Piamonte	1.10	327	⇑P	Pn	21 09 08.0	-0.3
BOQS	Boqueron	1.10	329	*e*P	Pn	21 09 08.4	0.0
BOQS				*e*S	Sn	21 09 22.1	-0.6
CSGN	Cosiguina Volc	1.12	80	⇓P	Pn	21 09 07.9	-0.6
CSGN				S	Sn	21 09 23.1	+0.2
JAYA	Jayaque - finc	1.13	319	*e*P	Pn	21 09 08.2	-0.6
JAYA				*e*S	Sn	21 09 23.0	-0.4
JAYA	Jayaque - finc	1.13	319	*i* P	Pn	21 09 08.1	-0.6
JAYA				*i* S	Sn	21 09 23.3	-0.1
JAYA	Jayaque - finc	1.13	319	⇑P	Pn	21 09 08.2	-0.6
POTN	Potosi Cosigui	1.18	80	⇓P	Pn	21 09 08.9	-0.3
POTN				S	Sn	21 09 24.3	+0.3
CEDA	San Andres	1.22	326	P	Pn	21 09 09.6	-0.2
CEDA	San Andres	1.22	326	S	Sn	21 09 25.6	+0.4
CEVE	Cerro Verde	1.38	319	*e*P	Pn	21 09 12.5	+0.3
CEVE				*e*S	Sn	21 09 30.3	+1.0
CEVE	Cerro Verde	1.38	319	P	Pn	21 09 12.3	+0.2
CEVE	Cerro Verde	1.38	319	S	Sn	21 09 29.9	+0.6
UNIC	Universidad Ca	1.45	325	S	Sn	21 09 31.1	+0.2
UNIC	Universidad Ca	1.45	325	P	Pn	21 09 12.9	-0.1
NUBE	Las Nubes	1.53	316	*i* P	Pn	21 09 14.0	-0.1
NUBE				*i* S	Sn	21 09 32.6	-0.4
NUBE	Las Nubes	1.53	316	⇑P	Pn	21 09 14.0	-0.1
LOAL	Lomas de Alarc	1.60	319	S	Sn	21 09 35.2	+0.5
LOAL	Lomas de Alarc	1.60	319	P	Pn	21 09 14.8	-0.2
CRIN	San Cristobal	1.60	93	S	Sn	21 09 35.6	+0.9
CRIN	San Cristobal	1.60	93	⇓P	Pn	21 09 15.5	+0.4
SLOZ	Alcaldia de Sa	1.62	319	S	Sn	21 09 36.5	+1.3
SLOZ	Alcaldia de Sa	1.62	319	P	Pn	21 09 16.0	+0.7
CHOHN	Orocuina	1.64	65	S	Sn	21 09 35.4	-0.3
CHOHN	Orocuina	1.64	65	⇓P	Pn	21 09 15.5	-0.2
FAME	Alcaldia de Sa	1.66	309	P	Pn	21 09 16.0	+0.2
MTO3	Montecristo	1.73	338	*e*P	Pn	21 09 17.2	+0.3
MTO3	Montecristo	1.73	338	S	Sn	21 09 38.1	+0.1
MTO3	Montecristo	1.73	338	P	Pn	21 09 17.0	0.0
QUEN	Al S del Volca	1.81	96	P	Pn	21 09 18.0	+0.1
QUEN				S	Sn	21 09 39.9	+0.3
HERN	Volcan Telica	1.82	95	S	Sn	21 09 40.1	0.0
HERN	Volcan Telica	1.82	95	⇓P	Pn	21 09 17.8	-0.3
HOYN	Al Sur del Vol	1.83	96	P	Pn	21 09 17.8	-0.4
HOYN				S	Sn	21 09 40.0	-0.2
POLN	Al Sur del Vol	1.84	94	⇓P	Pn	21 09 18.1	-0.2
POLN				S	Sn	21 09 40.0	-0.4
CNGA	Al SSO del Vol	1.96	98	P	Pn	21 09 19.7	-0.3
CNGA				S	Sn	21 09 44.4	+0.9
CNGN	Cerro Negro	1.97	98	P	Pn	21 09 20.0	0.0
CNGN	Cerro Negro	1.97	98	S	Sn	21 09 43.8	+0.3
COPN	Copaltepe	2.14	106	P	Pn	21 09 22.2	-0.1
YUSH	Yuscaran	2.14	57	P	Pn	21 09 22.1	-0.4
YUSH	Yuscaran	2.14	57	S	Sn	21 09 47.1	-0.8
FG16	Alotenango, Sa	2.30	310	*i* S	Sn	21 10 01.8	+10

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*SNET **06** 21:30:08.6±1.2, 13°.06N×89°.54W, h39^{km}, ML3.8*
*GCG **06** 21:30:09.5±0.8, 13°.13N×89°.62W, h32^{km}±4^{km}, MD3.8, ML3.7*
ISC 06 21:30:11.0±1.7, **13°.15N**±0°.09×**89°.46W**±0°.06, **h34**^{km}±3^{km}, **n17**, σ**1^{s}.25**/28, **El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.36	22	*e*P	Pb	21 30 19.5	-0.2
LALI				*e*S	Sn	21 30 26.9	+1.3
LALI	Alcalda de L	0.36	22	*i* P	Pb	21 30 19.4	-0.2
LALI				*i* S	Sb	21 30 26.6	+1.1
LALI				IAML		21 30 28.2	
	comp=E,3μm,0.3s						
JAYA	Jayaque - finc	0.50	1	*e*P	Pb	21 30 20.9	-0.9
JAYA				*e*S	Sn	21 30 29.7	+0.2
JAYA	Jayaque - finc	0.50	1	*i* P	Pb	21 30 20.9	-0.9
JAYA				*i* S	Sn	21 30 29.1	-0.4
BOQS	Boqueron	0.60	17	*e*P	Pn	21 30 22.7	-0.7
LFRS	El Faro	0.61	40	*e*P	Pn	21 30 22.7	-0.6
CEDA	San Andres	0.65	5	*e*P	Pn	21 30 22.9	-0.9
CEDA				*e*S	Sn	21 30 33.9	+0.9
CEVE	Cerro Verde	0.69	347	*e*P	Pb	21 30 23.6	-1.3
CEVE				*e*S	Sn	21 30 35.0	+0.7
LBRS	Las Brisas	0.71	35	*e*P	Pn	21 30 24.5	-0.2
COEG	Centro de Oper	0.73	50	*e*P	Pn	21 30 24.1	-0.9
COEG				*e*S	Sn	21 30 36.0	+1.0
NUBE	Las Nubes	0.81	337	*i* P	Pn	21 30 24.5	-1.7
NUBE				*i* S	Sb	21 30 36.3	-1.2
ALJI	Alcalda de J	0.88	79	*e*P	Pn	21 30 26.2	-0.9
ALJI				*e*S	Sn	21 30 39.0	+0.3
BLLM	Bellamira	1.22	76	*e*P	Pn	21 30 31.3	-0.5
MTO3	Montecristo	1.24	4	*i* P	Pn	21 30 31.4	-0.8
FG16	Alotenango, Sa	1.51	318	*e*P	Pb	21 30 38.9	+0.3
FG16				*i* S	Sb	21 31 01.7	+4.2
FG16				IAML		21 31 13.5	
	comp=N,3μm,0.2s						
LCND	La Caada	1.54	84	*e*P	Pn	21 30 35.6	-0.5
CNCH	Conchagua	1.59	85	*e*P	Pn	21 30 35.8	-1.1
CNCH				*e*S	Sn	21 30 57.2	+0.8

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*IDC **06** 21:50:48.2±0.6, 8°.55S×146°.54E, h0^{km}, mb3.9/14, mbtmp4.0/17, ML4.1/3, MS3.4/8, Error ellipse: s-maj=21.6km s-min=9.0km az=60.0*
*NEIC **06** 21:50:50.6±2.6, 8°.60S±0°.07×146°.6E±0°.1, h9^{km}±6^{km}, mb4.5/16, Error ellipse: s-maj=19.5km s-min=5.8km az=65.0*
ISC 06 21:50:53.1±0.6, **8°.62S**±0°.06×**146°.62E**±0°.08, **h35**^{km}, **n40**, σ**0^{s}.93**/39, **mb4.0**/18, **MS3.5**/5, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	0.95	146		Pn	21 51 09.2	-0.7
PMG				Sg	Sn	21 51 22.1	-0.2
PMG	Port Moresby	0.95	146	Pg	Pn	21 51 09.3	-0.7
	82nm,0.3s,baz=308,slow=5.7,SNR=175						
PMG				Lg	Lg	21 51 23.0	
	531nm,0.3s,baz=312,slow=23,SNR=24						
COEN	Coen	6.29	212	Pn	Pn	21 52 22.4	-1.1
COEN				Sn	Sn	21 53 33.1	-1.1
JAY	Jayapura	8.45	316	Pn	Pn	21 52 51.0	-2.1
	0.7nm,0.3s,baz=132,slow=14,SNR=4.6 3.4nm,0.6s						
CTAO	Charters Tower	11.41	182	Pn	Pn	21 53 35.1	+1.4
HNR	Honiara	13.19	95	LR	LR	21 58 32.3	
	comp=Z,175nm,19.1s,baz=272,slow=35						
SAUI	Saumlaki	15.17	271	P	P	21 54 27.8	-1.8
FAKI	Fak Fak	15.37	291	P	P	21 54 32.6	+0.8
FAKI				IAmb	IAmb	21 54 33.7	
	comp=Z,43nm,1.1s						
MTN	Manton Dam	15.78	253	Pn	Pn	21 54 32.3	-0.6
MTN				P	P	21 54 37.6	+1.2
WB0	Warramunga Arr	16.22	226	Pn	Pn	21 54 38.6	+0.1
WB0				IAmb	IAmb	21 54 43.8	
	comp=Z,20nm,0.9s						
WR8	Warramunga Arr	16.27	225	Pn	Pn	21 54 38.3	-0.7
WRA	Warramunga Arr	16.37	225	Pn	Pn	21 54 39.9	-0.5
	comp=Z,0.7nm,0.3s,baz=46,slow=11,SNR=23						
WRA				LR	LR	22 01 31.9	
	comp=Z,164nm,21.0s,baz=59,slow=39 comp=Z,10nm,0.7s						
EIDS	Eidsvold	17.20	166	P	P	21 54 52.5	+0.5
KNRA	Kununurra	18.81	246	P	Pn	21 55 10.8	+0.3
KNRA				IAmb	IAmb	21 55 12.2	
	comp=Z,31nm,0.8s						
AS31	Alice Springs	19.29	218	P	Pn	21 55 16.9	+0.5
AS31				IAmb	IAmb	21 55 17.9	
	comp=Z,7.0nm,0.6s						
ASAR	Alice Springs	19.29	218	P	Pn	21 55 16.6	+0.3
	comp=Z,1.6nm,0.3s,baz=38,slow=11,SNR=144						
ASAR				LR	LR	22 02 15.4	
	comp=Z,99nm,20.8s,baz=91,slow=36 comp=Z,11nm,0.6s						
FITZ	Fitzroy Crossi	22.46	243	P	P	21 55 48.6	-0.8
	comp=Z,4.0nm,0.6s,baz=56,slow=9.4,SNR=12						
FITZ				LR	LR	22 05 28.4	
	comp=Z,170nm,19.1s,baz=46,slow=39 comp=Z,4.0nm,0.6s						
STKA	Stephens Creek	23.61	191	P	P	21 55 60.0	-1.0
	comp=Z,2.6nm,0.7s,baz=357,slow=10,SNR=5.3						
STKA				LR	LR	22 05 42.1	
	comp=Z,43nm,18.5s,baz=26,slow=38 comp=Z,2.6nm,0.7s						
CAN	Canberra	26.67	176	P	P	21 56 27.5	-1.4
CAN				IAmb	IAmb	21 56 32.7	
	comp=Z,15nm,1.1s						
MBWA	Marble Bar	28.76	241	P	P	21 56 49.8	+2.0
MYLDM	Lahad Datu	31.21	295	P	P	21 57 09.8	+0.3
MYLDM				IAmb	IAmb	21 57 19.5	
	comp=Z,5.7nm,1.0s						
MSVF	Nonsavu	31.87	110	LR	LR	22 08 09.4	
	comp=Z,96nm,21.3s,baz=224,slow=33						
JCJ	Chichijima	35.76	353	LR	LR	22 11 20.3	
	comp=Z,20nm,21.1s,baz=4.5,slow=34						
MJAR	Matsushiro Arr	45.61	351	P	P	21 59 10.6	+0.6
	comp=Z,0.4nm,0.3s,baz=173,slow=8.8,SNR=1.7 comp=Z,0.4nm,0.3s						
KSRS	Korea Array	49.06	340	P	P	21 59 36.9	+0.1
	comp=Z,1.5nm,0.8s,baz=163,slow=6.8,SNR=3.5 comp=Z,1.5nm,0.8s						
CMAR	Chiang Mai Arr	54.19	300	P	P	22 00 16.4	+0.8
	comp=Z,4.9nm,0.7s,baz=122,slow=5.6,SNR=29 comp=Z,4.9nm,0.7s						
CHTO	Chiang Mai	54.34	300	P	P	22 00 16.8	+0.1
CHTO				IAmb	IAmb	22 00 17.9	
	comp=Z,6.1nm,0.8s						
KLR	Kul'dur	59.06	349	P	P	22 00 50.4	+0.8
	comp=Z,0.5nm,0.5s,baz=162,slow=3.2,SNR=1.9 comp=Z,0.5nm,0.5s						
PETK	Petropavlovsk-	62.20	8	P	P	22 01 10.6	-0.4
	comp=Z,0.8nm,0.7s,baz=197,slow=7.0,SNR=1.7 comp=Z,0.8nm,0.7s						
PPT	Papeete	62.54	105	LR	LR	22 24 38.0	
	comp=Z,30nm,19.8s,baz=244,slow=32						
SONM	Songino Array	66.50	332	P	P	22 01 39.4	0.0
	comp=Z,0.4nm,0.6s,baz=144,slow=5.2,SNR=3.0 comp=Z,0.4nm,0.6s						
VNDA	Vanda	69.34	176	P	P	22 01 57.3	+0.6
MKAR	Makanchi Array	79.27	321	P	P	22 02 55.0	-0.1
	comp=Z,1.0nm,0.8s,baz=108,slow=6.8,SNR=6.8 comp=Z,1.0nm,0.8s						
ZALV	Zalesovo Beam	81.02	328	P	P	22 03 02.9	-1.3
	comp=Z,0.8nm,0.6s,baz=114,slow=5.1,SNR=3.7 comp=Z,0.8nm,0.6s						
NIL	Nilore	81.14	306	P	P	22 03 05.7	+0.3
NIL				IAmb	IAmb	22 03 06.3	
	comp=Z,5.3nm,0.7s						
QSPA	South Pole Qui	81.37	180	P	P	22 03 06.5	+0.3
QSPA				IAmb	IAmb	22 03 07.1	
	comp=Z,3.1nm,0.9s						
QSPA	South Pole Qui	81.37	180	P	P	22 03 06.2	+0.1
	comp=Z,3.2nm,1.1s,baz=299,slow=1.1,SNR=8.5 comp=Z,3.2nm,1.1s						
KURBB	Kurchatov Arra	83.09	323	P	P	22 03 14.8	-0.3
	comp=Z,0.6nm,0.8s,baz=113,slow=4.8,SNR=4.1 comp=Z,0.6nm,0.8s						
ILAR	Eielson Array	88.02	23	P	P	22 03 39.7	+0.3
	comp=Z,0.7nm,0.7s,baz=246,slow=4.5,SNR=5.3 comp=Z,0.7nm,0.7s						
BVAR	Borovoye Array	88.65	324	P	P	22 03 41.4	-1.3
	comp=Z,0.6nm,0.7s,baz=111,slow=3.7,SNR=4.2 comp=Z,0.6nm,0.7s						

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*IDC **06** 22:05:01.3±2.5, 28°.16N×52°.83E, h0^{km}, mb3.5/8, mbtmp3.5/9, ML3.3/1, MS2.6/2, Error ellipse: s-maj=53.2km s-min=23.7km az=161.0*
*TEH **06** 22:05:06.9, 28°.26N×52°.38E, h13^{km}±19^{km}*
*DSN **06** 22:05:10.4±2.0, 27°.84N×52°.33E, h10^{km}, ML3.0/9, Error ellipse: s-maj=30.5km s-min=10.7km az=8.0*
ISC 06 22:05:05.9±0.7, **28°.23N**±0°.05×**52°.36E**±0°.05, **h10**^{km}, **n39**, σ**2^{s}.22**/36, **mb3.3**/8, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QIR1	Qir	0.65	67	Pg	Pg	22 05 19.1	+0.6
DSBU	Dashti - Bushe	0.98	278	Pg	Pb	22 05 26.3	+1.3
JHRM	Jahrom	1.11	75	Pg	Pn	22 05 28.2	+0.7
LMD1	Lamerd	1.14	141	Pg	Pn	22 05 29.7	+1.8
LMD1				Sg	Sn	22 05 48.4	+4.9
SHI	Shiraz	1.42	5	Pg	Pg	22 05 33.7	+0.6
KAZ2	Kazeron-Fars-I	1.51	336	Pg	Pg	22 05 35.7	+0.8
LAR1	LAR	1.87	107	Pn	Pb	22 05 41.0	+0.9
KLNJ	Kolanjah	2.85	347	Pn	Pn	22 05 54.8	+3.1
IRAM	Ramesheh	3.57	0	Pn	Pn	22 06 04.1	+2.6
IMEH	Mehriz	3.71	31	Pn	Pn	22 06 06.7	+3.2
KRBR	Kerman	4.23	65	Pn	Pn	22 06 12.7	+2.0
JHBN	Jahan bin	4.25	340	Pn	Pn	22 06 14.3	+3.3
IBAF	Bafgh	4.36	39	Pn	Pn	22 06 15.1	+2.8
NAZ	Nazwa, Dubai	4.38	137	P	Pn	22 06 14.2	+1.8
ICHK	Chekchek	4.38	23	Pn	Pn	22 06 15.4	+2.8
MSFE	Esma-Masafi	4.44	129	P	Pn	22 06 14.2	+0.8
MDH	Madha	4.57	129	P	Pn	22 06 16.6	+1.5
UOSS	Minazif	4.75	133	P	Pn	22 06 19.0	+1.5
HATD	Hatta, Dubai	4.78	134	P	Pn	22 06 20.2	+2.2
ASHO	Ashiyiah	4.84	136	P	Pn	22 06 20.5	+1.6
ASHO				S	Sn	22 07 12.4	-2.6
KRM1	Kerman Provinc	4.85	61	Pn	Pn	22 06 22.2	+3.1
ANAR	Anarak	5.08	13	Pn	Pn	22 06 25.3	+3.0
ALNE	Al Ain	5.15	143	P	Pn	22 06 24.8	+1.7
MZR	Muzera	5.30	169	P	Pn	22 06 26.9	+1.7
SOHO	SOHO	5.54	136	P	Pn	22 06 28.4	0.0
KRSH	Karshahi	5.73	358	Pn	Pn	22 06 34.0	+2.8
RAYN	Ar Rayn	7.75	234	P	Pn	22 06 58.4	-0.5
GNI	Garni	13.45	334	LR	LR	22 14 51.8	
	comp=Z,19nm,20.0s,baz=92,slow=43						
EIL	Elat	15.31	280	LR	LR	22 15 15.6	
	comp=Z,33nm,20.6s,baz=250,slow=39						
BRTR	Keskin Array B	19.26	311	P	Pn	22 09 32.4	+0.7
	0.1nm,0.3s,baz=133,slow=13,SNR=9.6 0.9nm,0.7s						
BVAR	Borovoye Array	28.14	23	P	P	22 10 54.9	-3.1
	0.2nm,0.4s,baz=224,slow=8.0,SNR=4.6 0.2nm,0.4s						
AKASG	Malin Array Be	28.46	328	P	P	22 10 58.7	-2.2
	0.1nm,0.3s,baz=137,slow=11,SNR=1.8 0.1nm,0.3s						
MKAR	Makanchi Array	29.86	44	P	P	22 11 08.4	-5.0
	0.2nm,0.7s,baz=234,slow=6.8,SNR=2.2 0.2nm,0.7s						
KURBB	Kurchatov Arra	29.87	34	P	P	22 11 08.8	-4.6
	0.2nm,0.7s,baz=230,slow=8.3,SNR=1.7 0.2nm,0.7s						
ZALV	Zalesovo Beam	34.95	34	P	P	22 11 52.5	-5.4
	0.4nm,0.3s,baz=224,slow=10,SNR=1.7 0.4nm,0.3s						
FINES	FINESS Array B	37.55	340	P	P	22 12 19.6	-0.3
	0.7nm,0.7s,baz=138,slow=8.9,SNR=3.8 0.7nm,0.7s						
HFS	Hagfors	41.22	332	P	P	22 12 50.1	-0.6
	1.7nm,0.8s,baz=120,slow=8.8,SNR=5.7 1.7nm,0.8s						
EKA	Eskdalemuir Ar	47.81	321	P	P	22 13 41.3	-2.0
	0.1nm,0.3s,baz=78,slow=7.9,SNR=1.8 0.1nm,0.3s						
TORD	Torodi Ar. Bea	49.37	263	P	P	22 13 56.1	+0.2
	52nm,0.3s,baz=62,slow=8.9,SNR=6.4						

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*IDC **06** 22:08:56.1±0.9, 24°.52N×121°.57E, h0^{km}, mb3.5/10, mbtmp3.5/11, ML3.1/1, MS3.0/3, Error ellipse: s-maj=43.4km s-min=17.5km az=69.0*
*ASIES **06** 22:08:57.9, 24°.91N×122°.28E, h15^{km}, ML3.8, Mw3.7, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}-2.88; $M_{\theta\theta}$3.46; $M_{\phi\phi}$-0.58; $M_{r\theta}$3.02; $M_{\theta\phi}$1.12; $M_{\phi r}$-0.96; Fault plane solution: $M_0$4.64403×10^{21} NP1:ϕ_s50.96000°, δ30.22000°, λ-133.02000°. NP2:ϕ_s278.16000°, δ68.40000°, λ-68.32000°. Principal axes: T Plg20.5370°, Azm351.9690°; N Plg20.0840°, Azm89.8410°; P Plg60.6000°, Azm220.2990°;*
*JMA **06** 22:08:57.5±0.1, 24°.9N±0°.6×122°.4E±0°.2, h44^{km}±2^{km}, MD3.7/11, MV3.5/11, TAIWAN REGION*
*TAP **06** 22:08:57.9, 24°.91N×122°.28E, h15^{km}, ML3.8, C*
ISC 06 22:08:55.5±1.2, **24°.95N**±0°.03×**122°.36E**±0°.02, **h7**^{km}±8^{km}, **n163**, σ**0^{s}.80**/212, **mb3.5**/10, **2C**, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.34	279	⇑*i*P	Pb	22 09 04.3	+0.2
TWB1				*i* S	Sb	22 09 08.6	-1.1
EGS		0.41	255	*e*P	Pb	22 09 05.6	+0.5
EGS				*i* S	Sb	22 09 10.2	-1.3
SXI1	Grass Mountain	0.47	288	*i* P	Pb	22 09 07.1	+1.0
SXI1				S	Sb	22 09 13.1	-0.2
TIPB	Shuangxi	0.49	272	*i* P	Pb	22 09 07.0	+0.5
TIPB				S	Sb	22 09 13.2	-0.8
NWF	Wu-fen Shan	0.54	283	*i* P	Pb	22 09 08.4	+1.0
NWF				S	Sb	22 09 15.4	-0.1
WFSB	Wu-fen Shan	0.54	283	*i* P	Pn	22 09 08.4	-1.3
WFSB				S	Sb	22 09 15.5	+0.1
EOS2	EOS2	0.55	193	⇑*i*P	Pb	22 09 08.0	+0.7
EOS2				*i* S	Sb	22 09 15.6	+0.3
TNOU	National Taiwa	0.57	290	*i* P	Pn	22 09 09.0	-1.1
TNOU				S	Sb	22 09 15.9	-0.3
TWC	Suao	0.58	234	*i* P	Pb	22 09 07.6	-0.4
TWC				*i* S	Sg	22 09 15.2	+0.9
ILA	Ilan	0.59	252	P	Pb	22 09 08.9	+0.8
ILA				*e*S	Sb	22 09 18.1	+1.3
ESAO	Su ao	0.60	232	P	Pb	22 09 08.2	-0.2
ESAO				S	Sg	22 09 14.8	-0.3
EOS3	EOS3	0.67	184	*i* P	Pb	22 09 10.2	+0.8
EOS3				S	Sb	22 09 19.9	+1.1
NDS	Dongshan	0.67	242	P	Pb	22 09 08.9	-0.7
NDS				S	Sg	22 09 17.7	+0.5
TWE	Neicheng	0.67	250	P	Pb	22 09 09.8	+0.1
TWE				S	Sb	22 09 18.3	-0.9
TWA	Mucha	0.71	272	*i* P	Pn	22 09 11.4	-0.6
TWA				S	Sb	22 09 20.3	+0.1
JYNG	Yonagunijimaku	0.73	133	*i* P	Pb	22 09 10.8	+0.3
JYNG	Yonagunijimaku	0.73	133	A	A	22 09 10.8	
	comp=N,8.0nm,1.5s,comp=E,8.0nm,0.4s						
FUSB	Fushanzhiwuyua	0.73	255	*i* P	Pb	22 09 11.1	+0.5
FUSB				S	Sb	22 09 20.4	-0.5
EWUT	Wuta	0.73	227	P	Pb	22 09 10.5	-0.1
EWUT				S	Sg	22 09 19.3	+0.1
NHDH	Xindian Distri	0.76	271	*i* P	Pn	22 09 12.3	-0.4
NHDH				*i* S	Sb	22 09 22.2	+0.5
TWY	Chenhua	0.76	295	P	Pn	22 09 12.4	-0.3
TWY				S	Sb	22 09 22.8	+1.0
YOJ	Yonaguni jima	0.77	130	P	Pb	22 09 11.1	-0.1
YOJ	Yonaguni jima	0.77	130	P	Pb	22 09 11.3	+0.1
YOJ				*e*S	Sg	22 09 21.3	+1.2
YOJ	Yonaguni jima	0.77	130	A	A	22 09 11.3	
	comp=N,5.0nm,3.0s,comp=E,5.0nm,0.8s						

YOJ	Yonaguni jima	0.77	130	iP	Pb	22 09 11.3	+0.1
YOJ				S	Sb	22 09 21.7	-0.1
ENA	Nanau	0.77	227	P	Pb	22 09 11.2	-0.1
ENA				S	Sg	22 09 19.9	-0.5
ZUZH	Zhuzihu	0.77	286	eP	Pn	22 09 12.4	-0.6
TAP	Taipei	0.78	276	P	Pn	22 09 12.8	-0.3
TAP				S	Sb	22 09 22.7	+0.3
ENTT	Nioudou	0.79	247	eP	Pb	22 09 11.8	+0.2
ENTT				S	Sb	22 09 22.8	+0.2
TATO	Taipei	0.80	272	P	Pn	22 09 12.6	-0.6
TATO	Taipei	0.80	272	S	Sb	22 09 23.3	+0.6
ANP	Anpu	0.80	287	P	Pn	22 09 12.6	-0.7
ANP				eS	Sb	22 09 23.1	+0.2
NWLT	Wulai	0.80	258	eP	Pn	22 09 12.6	-0.7
NWLT				eS	Sb	22 09 22.5	-0.4
EOS4	EOS4	0.83	183	eP	Pb	22 09 12.6	+0.5
EOS4				S	Sb	22 09 23.8	+0.5
NTST	Danshui	0.86	284	P	Pn	22 09 14.3	+0.3
NTST				S	Sn	22 09 25.9	-0.9
LATG	Datong	0.87	242	P	Pb	22 09 13.3	+0.3
LATG				S	Sb	22 09 24.4	-0.5
YHNB	Yeheng	0.94	253	P	Pb	22 09 14.3	+0.1
YHNB	Yeheng	0.94	253	eP	Pb	22 09 14.6	+0.3
YHNB				S	Sb	22 09 26.8	-0.2
NSK	Sanguang	0.95	253	P	Pb	22 09 14.9	+0.4
NSK				S	Sg	22 09 26.0	-0.3
NNSB	Datong	1.03	240	P	Pb	22 09 16.1	+0.2
NNSB				S	Sg	22 09 29.1	+0.3
NNS	Nan Shan	1.04	241	P	Pn	22 09 16.3	-0.3
NNS				eS	Sg	22 09 29.2	+0.3
ETL	Fush Village	1.04	221	P	Pb	22 09 15.9	0.0
ETL				eS	Sg	22 09 28.9	0.0
NACB	Ninganchiao	1.04	222	P	Pg	22 09 15.7	+0.1
NACB	Ninganchiao	1.04	222	iP	Pg	22 09 15.6	+0.1
NACB				S	Sg	22 09 28.7	-0.5
NCU	National Centr	1.07	271	eP	Pb	22 09 16.5	+0.2
NCU				eS	Sg	22 09 28.9	-1.0
NCUH	Zhongli	1.07	271	eP	Pn	22 09 17.3	+0.4
NCUH				eS	Sb	22 09 30.5	-0.1
KSHI	Guanxi Townshi	1.09	261	P	Pn	22 09 17.6	+0.3
KSHI				S	Sn	22 09 32.7	0.0
ETLH	Xiulin Townshi	1.09	227	P	Pb	22 09 17.2	+0.4
ETLH				S	Sg	22 09 30.5	-0.3
TWD	Chiawan	1.12	219	iP	Pb	22 09 17.2	0.0
TWD				eS	Sg	22 09 31.0	-0.4
NFF	Wufeng Townshi	1.18	254	iP	Pn	22 09 18.6	+0.1
NFF				eS	Sb	22 09 33.5	-0.3
HWA	Hwalien	1.19	216	eP	Pn	22 09 19.4	+0.8
SBCB	Hsinchu	1.26	263	eP	Pg	22 09 19.4	-0.3
LIOB	Emei	1.26	256	eP	Pn	22 09 19.8	+0.2
ETM	Tongmen	1.26	219	eP	Pn	22 09 20.1	+0.5
ETM				eS	Sb	22 09 36.6	+0.4
LXIB	Xiulin Townshi	1.27	223	P	Pg	22 09 19.7	-0.2
LXIB				eS	Sn	22 09 37.7	+0.5
HSN	Hsinchu	1.28	264	eP	Pg	22 09 19.4	-0.6
HSN				S	Sg	22 09 34.9	-1.7
NSTT	Nanjuang	1.28	256	eP	Pb	22 09 20.1	+0.1
WHF	Hehuan Shan	1.28	231	eP	Pb	22 09 20.4	+0.1
WHF				eS	Sg	22 09 36.7	-0.2
TEYL	Yanliau Villag	1.29	213	eP	Pn	22 09 20.0	0.0
TWT	Tachien	1.29	237	eP	Pn	22 09 21.0	+0.8
TWT				eS	Sn	22 09 38.6	+0.9
TDCB	Techi	1.30	238	P	Pb	22 09 20.7	+0.3
TDCB				S	Sb	22 09 37.5	+0.1
SHUL	Shoufeng	1.37	212	P	Pn	22 09 21.4	+0.2
IRIF	Iriomote-Funau	1.39	116	eP	Pn	22 09 20.3	-1.0
ESL	Shilin	1.42	217	eP	Pn	22 09 21.8	0.0
TEGC	Jichi Village	1.45	211	eP	Pn	22 09 22.5	+0.4
WHP	Taichung City	1.46	243	eP	Pg	22 09 23.9	+0.4
WHP				eS	Sg	22 09 42.2	-0.1
OWD	Renai	1.47	228	iP	Pg	22 09 23.8	+0.1
OWD				eS	Sn	22 09 42.5	+0.3
WUSB	Renai	1.48	230	iP	Pg	22 09 24.1	+0.1
WUSB				eS	Sn	22 09 42.4	-0.2
NMLH	Miaoli	1.49	254	eP	Pb	22 09 23.6	0.0
WARBT	Fenglin Townsh	1.52	216	P	Pn	22 09 22.8	-0.4
EGFH	Guangfu	1.54	214	eP	Pn	22 09 23.4	0.0
NSY	Sanyi	1.55	250	eP	Pb	22 09 24.7	0.0
TWQ1	Liyutan	1.57	248	eP	Pg	22 09 25.5	-0.1
HATJ	Hateruma jima	1.59	124	eP	Pn	22 09 23.5	-0.6
WCS	Beigang Elemen	1.60	236	P	Pg	22 09 26.2	+0.1
WCS				eS	Sg	22 09 48.1	+1.3
JKRS	Kuro-shima	1.66	115	eP	Pn	22 09 24.6	-0.5
HGSD	Ruisui	1.69	211	eP	Pn	22 09 25.7	+0.2
SMLT	Sun Moon Lake	1.71	232	eP	Pb	22 09 27.7	+0.3
JIJ	Ishigaki jima	1.72	110	eP	Pn	22 09 25.0	-0.9
EHYH	Wanrong	1.73	213	eP	Pn	22 09 25.7	-0.3
EHY	Hungye	1.73	214	P	Pn	22 09 25.6	-0.5
TYC	Yuchr	1.73	233	eP	Pb	22 09 27.1	-0.4
SSLB	Suanglung	1.73	228	P	Pb	22 09 27.6	-0.2
SSLB	Suanglung	1.73	228	eP	Pb	22 09 27.5	-0.2
TCU	Taichung	1.73	243	eP	Pg	22 09 29.2	+0.5
ECBN	Changbin	1.83	207	P	Pn	22 09 27.0	-0.4
YULB	Yu-li	1.83	212	P	Pn	22 09 27.0	-0.5
YULB	Yu-li	1.83	212	P	Pn	22 09 26.6	-0.9
WCHH	Zhanghua	1.86	243	eP	Pb	22 09 29.6	-0.3
WHYT	Xinyi Township	1.86	228	P	Pb	22 09 30.1	+0.2
TWF1	Yuli	1.87	212	eP	Pn	22 09 27.6	-0.4
WNT	Mingjian	1.87	235	eP	Pb	22 09 30.1	+0.1
WJS	Zhushan	1.87	233	eP	Pg	22 09 30.7	-0.7
CHKH	Chenggong	1.96	207	eP	Pn	22 09 29.2	-0.1
CHKH				eS	Sn	22 09 53.8	-0.4
FULB	Fuli	2.00	209	eP	Pn	22 09 29.6	-0.3
ALS	Alishan	2.02	225	eP	Pb	22 09 32.2	-0.6
CHKT	Chengkung	2.06	207	eP	Pn	22 09 29.8	-0.7
WGK	Gukeng	2.07	233	eP	Pn	22 09 31.4	+0.6
EHD	Haiduan	2.08	211	eP	Pn	22 09 30.3	-0.7
WDLH	Douliu	2.09	233	eP	Pb	22 09 33.4	-0.3
ECS	Chishang	2.12	210	eP	Pn	22 09 32.2	+0.7
ELDTW	Lidau	2.15	215	eP	Pn	22 09 31.9	0.0
EDH	Donghe	2.20	206	eP	Pn	22 09 30.9	-1.6
WTK	Tuku	2.20	235	eP	Pb	22 09 34.3	-1.3
WCKO	Fanlu	2.20	227	eP	Pb	22 09 35.2	-0.5
CHN2	Minshiung	2.23	231	eP	Pb	22 09 35.6	-0.6
CHN4	Tsaushan	2.27	226	P	Pb	22 09 36.2	-0.7
TPUB	Ta-pu	2.28	224	P	Pb	22 09 36.1	-1.0
TPUB	Ta-pu	2.28	224	P	Pb	22 09 36.0	-1.2
CHY	Chiayi	2.29	231	P	Pb	22 09 35.9	-1.3
STYH	Taoyuan	2.29	220	eP	Pn	22 09 33.5	-0.3
LONT	Longtian	2.33	209	eP	Pn	22 09 33.7	-0.6
WTP	Ta-pu	2.33	224	eP	Pn	22 09 36.2	+1.8
TWK	Hsinying	2.40	226	eP	Pb	22 09 38.0	-1.1
LDUT	Ludao	2.41	200	eP	Pn	22 09 34.2	-1.2
LDUT				eS	Sn	22 10 02.6	-2.7
WSL	Shuilin Townsh	2.42	234	eP	Pb	22 09 37.5	-1.8
SNST	Tainan City	2.43	225	eP	Pb	22 09 37.9	-1.7
TWGBT	Beinan	2.43	209	P	Pn	22 09 35.7	0.0
TWGBT	Beinan	2.43	209	P	Pn	22 09 35.4	-0.3
TWG	Pinlang	2.43	209	eP	Pn	22 09 35.4	-0.3
CHN1	Nanshi	2.43	224	eP	Pb	22 09 38.1	-1.5
SGST	Jiashian	2.47	222	eP	Pn	22 09 37.3	+1.0
ICHU	Yijhu	2.48	231	eP	Pn	22 09 38.2	+1.9
MATB	Ma-tsu	2.49	299	eP	Pn	22 09 36.3	-0.2
MATB				eS	Sn	22 10 05.3	-1.8
CHN8	Yiju	2.54	231	eP	Pb	22 09 39.7	-1.7
VWUC	VWUC	2.65	271	eP	Pn	22 09 37.6	-1.0
ECL	Taimali	2.68	209	eP	Pn	22 09 39.0	-0.1
SSD	Sandimen	2.71	216	eP	Pn	22 09 41.2	+1.7
TSMG	Majia	2.74	215	eP	Pn	22 09 42.0	+2.1
TSCK	Chigu Township	2.75	230	eP	Pn	22 09 41.8	+1.7
XPSS	Dashiqiu	2.78	316	eP	Pn	22 09 40.6	+0.2
MASBT	Mashibuluo	2.82	215	eP	Pn	22 09 42.8	+1.8
PNG	Penghu	2.91	242	eP	Pn	22 09 43.2	+0.9
EAST	Anshuo	2.91	209	eP	Pn	22 09 42.8	+0.5
PHUB	P'eng-hu	2.92	241	eP	Pn	22 09 42.9	+0.5
TAWH	Dawu Township	2.93	208	eP	Pn	22 09 42.6	0.0
PTMZ	Houxiangcun	2.94	272	eP	Pn	22 09 42.2	-0.6
WDGT	Dungji	2.99	236	eP	Pn	22 09 44.3	+0.9
LAY	Lan-yu	3.00	195	eP	Pn	22 09 42.0	-1.5
LAY				S	Sn	22 10 16.4	-3.3
LYUB	Lan-yu	3.02	194	eP	Pn	22 09 42.1	-1.8
SCZT	Fangliau	3.03	212	eP	Pn	22 09 45.7	+1.8
VCHM	Qimei	3.19	238	eP	Pn	22 09 46.5	+0.3
MHZQ	Yeshan	3.22	291	eP	Pn	22 09 46.8	+0.2
TWK1	Hengchun	3.32	206	eP	Pn	22 09 48.6	+0.7
TWKBT	Hengchun	3.32	206	eP	Pn	22 09 48.1	+0.2
KNMB	Chin-men Tao	3.65	263	eP	Pn	22 09 51.7	-0.7
AXDP	Jialang	3.99	270	eP	Pn	22 09 56.9	-0.2
ZPLA	Ao Xicun	4.33	257	eP	Pn	22 10 01.3	-0.5
SXFK	Yanhouchang	4.50	290	eP	Pn	22 10 04.0	-0.1
KSRS	Korea Array	13.33	20	Pn	P	22 12 14.6	-0.4
	comp=E,0.1nm,0.3s,baz=204,slow=12,SNR=1.7						
	comp=E,0.5nm,0.5s						
MJAR	Matsushiro Arr	17.83	46	LR	LR	22 20 31.1	
	comp=E,26nm,18.9s,baz=194,slow=37						
DAV	Davao City (W)	18.05	170	LR	LR	22 18 47.4	
	comp=E,31nm,20.6s,baz=14,slow=33						
KLR	Kul'dur	25.32	14	P	P	22 14 30.9	+8.0
	comp=E,1.1nm,0.8s,baz=186,slow=10,SNR=4.2						
	comp=E,1.1nm,0.8s						
SONM	Songino Array	26.10	335	P	P	22 14 32.6	+2.5
	comp=E,0.5nm,0.6s,baz=159,slow=7.7,SNR=5.2						
	comp=E,0.5nm,0.6s						
MKAR	Makanchi Array	38.55	315	P	P	22 16 20.1	+1.2
	comp=E,0.3nm,0.5s,baz=100,slow=10,SNR=6.8						
	comp=E,0.3nm,0.5s						
ZALV	Zalesovo Beam	40.20	326	P	P	22 16 33.0	+0.6
	comp=E,0.4nm,0.5s,baz=131,slow=8.6,SNR=5.2						
	comp=E,0.4nm,0.5s						
KURBB	Kurchatov Arra	42.23	319	P	P	22 16 48.9	-0.2
	comp=E,0.1nm,0.3s,baz=107,slow=7.9,SNR=1.3						
	comp=E,0.1nm,0.3s						
WRA	Warramunga Arr	46.12	164	P	P	22 17 20.0	-0.7
	comp=E,1.7nm,0.7s,baz=346,slow=8.7,SNR=9.6						
	comp=E,1.7nm,0.7s						
BVAR	Borovoye Array	47.77	320	P	P	22 17 34.1	+0.8
	comp=E,0.3nm,0.5s,baz=120,slow=8.8,SNR=3.6						
	comp=E,0.3nm,0.5s						
ASAR	Alice Springs	49.61	166	P	P	22 17 48.1	+0.4
	comp=E,0.7nm,0.7s,baz=344,slow=8.4,SNR=8.8						
	comp=E,0.7nm,0.7s						
FINES	FINESS Array B	71.33	330	P	P	22 20 15.9	+0.2
	comp=E,0.6nm,0.8s,baz=57,slow=5.1,SNR=1.5						
	comp=E,0.6nm,0.8s						
BRTR	Keskin Array B	73.58	307	P	P	22 20 29.8	0.0
	comp=E,0.3nm,0.8s,baz=90,slow=5.8,SNR=1.9						
	comp=E,0.3nm,0.8s						
EIL	Elat	75.98	296	LR	LR	23 00 24.6	
	comp=E,29nm,18.4s,baz=46,slow=41						

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*IDC **06** 22:17:07.8±1.4, 29°.56N×142°.01E, h0^{km}, mb3.5/5, mbtmp3.5/7, ML2.7/1, Error ellipse: s-maj=53.0km s-min=20.0km az=68.0*

ISC 06 22:17:11.4±1.6**, 29°.6N**±0°.1×**142°.2E**±0°.3**, h30^{km}, n12,** σ**0^{s}.80**/9**, mb3.5**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	2.50	180	Pn	Pn	22 17 48.6	-1.4
	1.7nm,0.3s,baz=298,slow=17,SNR=2.6						
JCJ				Sn	Sn	22 18 20.4	+0.9
	2.9nm,0.3s,baz=294,slow=23,SNR=1.5						
	39nm,0.9s						
MJAR	Matsushiro Arr	7.68	335	Pn	Pn	22 18 56.6	-4.5
	0.1nm,0.3s,baz=157,slow=11,SNR=7.9						
KSRS	Korea Array	14.23	307	Pn	Pn	22 20 30.7	0.0
	1.1nm,0.7s,baz=111,slow=11,SNR=2.2						
SONM	Songino Array	32.95	314	P	P	22 23 43.0	-0.3
	0.3nm,0.6s,baz=111,slow=7.9,SNR=2.0						
	0.3nm,0.6s						
MKAR	Makanchi Array	48.91	308	P	P	22 25 54.6	+0.1
	0.4nm,0.7s,baz=87,slow=7.5,SNR=4.1						
	0.4nm,0.7s						
WRA	Warramunga Arr	49.84	190	P	P	22 26 02.6	+0.8
	0.3nm,0.8s,baz=9.2,slow=7.7,SNR=1.1						
	0.3nm,0.8s						
KURBB	Kurchatov Arra	51.31	313	P	P	22 26 12.4	-0.2
	0.3nm,0.5s,baz=87,slow=8.4,SNR=1.9						
	0.3nm,0.5s						
BVAR	Borovoye Array	56.22	316	P	P	22 26 49.0	+0.5
	0.7nm,0.6s,baz=92,slow=8.7,SNR=6.0						
	0.7nm,0.6s						
H03N2	Juan Fernandez	144.91	107	T	T	01 19 44.1	
	baz=275,slow=78,SNR=17						
H03N3	Juan Fernandez	144.91	107	T	T	01 19 50.4	
	baz=275,slow=78,SNR=14						
H03N1	Juan Fernandez	144.92	107	T	T	01 19 44.0	
	baz=275,slow=78,SNR=21						
LPAZ	La Paz	149.21	71	PKPbc	PKiKP	22 36 59.7	+0.1
	1.3nm,0.5s,baz=315,slow=2.4,SNR=10						

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*IDC **06** 22:25:18.0±2.1, 21°.60N×143°.20E, h303^{km}±19^{km}, mb3.2/10, mbtmp3.9/12, Error ellipse: s-maj=35.9km s-min=14.9km az=82.0*

ISC 06 22:25:19.0±1.2**, 21°.68N**±0°.10×**143°.1E**±0°.3**, h311^{km}, n12,** σ**1^{s}.62**/14**, mb3.3**/9**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	5.45	352	P	Pn	22 26 42.7	+0.6
	17nm,0.3s,baz=300,slow=21,SNR=6.9						
JCJ				S	S	22 27 49.1	0.0
	8.9nm,0.4s,baz=267,slow=23,SNR=1.2						
MJAR	Matsushiro Arr	15.40	345	P	P	22 28 41.0	+1.1
	0.7nm,0.3s,baz=179,slow=12,SNR=1.9						
MJAR				S	S	22 31 21.9	-4.6
	1.6nm,0.4s,baz=228,slow=21,SNR=5.7						
KSRS	Korea Array	20.46	324	P	P	22 29 35.2	+1.4
	2.0nm,0.6s,baz=147,slow=8.9,SNR=7.0						
	2.0nm,0.6s						
WRA	Warramunga Arr	42.24	192	P	P	22 32 41.8	-0.9
	0.8nm,0.6s,baz=17,slow=8.9,SNR=7.9						
	0.8nm,0.6s						
ASAR	Alice Springs	45.95	192	P	P	22 33 10.6	-1.2
	0.5nm,0.7s,baz=9.4,slow=8.5,SNR=2.4						
	0.5nm,0.7s						
ZALV	Zalesovo Beam	54.16	322	P	P	22 34 13.1	+0.4
	0.5nm,0.4s,baz=101,slow=7.6,SNR=2.3						
	0.5nm,0.4s						
MKAR	Makanchi Array	54.63	313	P	P	22 34 16.9	+0.7
	0.3nm,0.6s,baz=91,slow=8.6,SNR=4.7						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	57.46	317	P	P	22 34 36.5	+0.5
	1.2nm,0.4s,baz=94,slow=7.5,SNR=9.9						
	1.2nm,0.4s						
ILAR	Eielson Array	62.10	27	P	P	22 35 07.2	+0.1
	0.4nm,0.6s,baz=268,slow=6.1,SNR=3.4						
	0.4nm,0.6s						
BVAR	Borovoye Array	62.61	320	P	P	22 35 11.5	+0.8
	2.8nm,0.3s,baz=98,slow=7.8,SNR=26						
	2.8nm,0.3s						
ARCES	ARCESS Array B	78.90	341	P	P	22 36 48.6	+0.6
	1.0nm,0.6s,baz=82,slow=9.1,SNR=6.4						
	1.0nm,0.6s						
FINES	FINESS Array B	83.15	334	P	P	22 37 10.0	-0.3
	0.6nm,0.3s,baz=68,slow=4.8,SNR=9.5						
	0.6nm,0.3s						

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*NEIC **06** 22:36:17.4±2.1, 20°.38S±0°.06×177°.6W±0°.1, h491^{km}±6^{km}, mb4.4/31, Error ellipse: s-maj=16.2km s-min=6.7km az=72.0*

*IDC **06** 22:36:17.7±2.1, 20°.38S×177°.65W, h490^{km}±18^{km}, mb3.5/7, mbtmp4.3/8, Error ellipse: s-maj=26.5km s-min=18.3km az=108.0*

ISC 06 22:36:17.6±0.5**, 20°.44S**±0°.07×**177°.63W**±0°.08**, h500^{km}, n66,** σ**1^{s}.25**/64**, mb4.2**/21**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.89	303	P	P	22 37 43.6	-0.2
MSVF	Nonsavu	4.89	303	P	P	22 37 43.3	-0.5
	24nm,0.4s,baz=137,slow=4.6,SNR=56						
MSVF				S	S	22 38 52.7	-1.3
	3.7nm,0.7s,baz=216,slow=23,SNR=0.8						
NIUE	Niue	7.38	81	P	P	22 38 06.8	-0.9
AFI	Afiamalu	8.57	42	P	P	22 38 18.7	-1.4
RAO	Raoul Island	8.78	182	P	P	22 38 20.6	-1.4
PINNC	Pines Island,	14.06	258	P	P	22 39 16.3	-1.6
URZ	Urewera	18.34	193	P	P	22 39 58.6	-2.3
	7.1nm,0.8s,baz=0.0,slow=14,SNR=1.4						
URZ				S	S	22 42 57.1	-5.8
	9.3nm,1.0s,baz=279,slow=4.3,SNR=3.1						
BFZ	Birch Farm	20.85	193	P	P	22 40 24.7	+1.0
MRNZ	Matariki Terra	22.43	199	P	P	22 40 39.7	+1.6
LTZ	Lake Taylor	23.84	199	P	P	22 40 51.4	+0.6
ARMA	Armidale	29.41	244	P	P	22 41 40.4	+0.4
ARMA				IAmb	IAmb	22 42 16.1	
	comp=Z,24nm,1.2s						
TOO	Toolangi	36.21	234	P	P	22 42 38.0	+0.3
TOO				IAmb	IAmb	22 43 19.4	
	comp=Z,13nm,1.4s						
STKA	Stephens Creek	38.13	244	P	P	22 42 54.2	+0.8
STKA				IAmb	IAmb	22 42 54.8	
	comp=Z,30nm,1.1s						
STKA	Stephens Creek	38.13	244	P	P	22 42 54.0	+0.5
	comp=Z,3.2nm,0.5s,baz=89,slow=9.0,SNR=8.5						
	comp=Z,3.2nm,0.5s						
BBOO	Buckleboo	42.88	243	P	P	22 43 31.5	0.0
BBOO				IAmb	IAmb	22 43 53.1	
	comp=Z,32nm,1.4s						
WR8	Warramunga Arr	44.80	262	P	P	22 43 47.0	+0.4
WR8				IAmb	IAmb	22 43 50.9	
	comp=Z,18nm,1.4s						
AS31	Alice Springs	44.87	257	P	P	22 43 47.7	+0.6
ASAR	Alice Springs	44.87	257	P	P	22 43 47.4	+0.2
	comp=Z,3.2nm,0.5s,baz=98,slow=7.6,SNR=35						
ASAR				PcP	pP	22 45 19.1	+0.2
	comp=Z,0.7nm,0.5s,baz=98,slow=3.8,SNR=5.7						
	comp=Z,3.2nm,0.5s						
WB0	Warramunga Arr	44.93	262	P	P	22 43 47.8	+0.2
WB0				IAmb	IAmb	22 44 06.8	
	comp=Z,14nm,1.2s						
WB2	Warramunga Arr	44.94	262	P	P	22 43 48.0	+0.3
WB2				IAmb	IAmb	22 43 52.3	
	comp=Z,19nm,1.4s						
WRA	Warramunga Arr	44.95	262	P	P	22 43 48.1	+0.3
	comp=Z,1.4nm,0.4s,baz=98,slow=8.1,SNR=29						
	comp=Z,1.4nm,0.4s						
FORT	Forrest	49.64	247	P	P	22 44 22.3	-0.6
FITZ	Fitzroy Crossi	53.38	262	P	P	22 44 51.1	+0.9
SOEI	Soe	56.84	272	P	P	22 45 16.6	+1.9
SBA	Scott Base	57.96	184	P	P	22 45 23.8	+2.7
VNDA	Vanda	58.00	185	P	P	22 45 23.5	+2.1
PSA00	Pilbara Seismi	58.02	257	P	P	22 45 22.3	-0.2
PSA00				IAmb	IAmb	22 45 24.3	
	comp=Z,52nm,1.4s						
MBWA	Marble Bar	58.20	257	P	P	22 45 23.6	-0.2
MBWA				IAmb	IAmb	22 46 02.7	
	comp=Z,52nm,1.4s						
MORW	Morawa	60.17	248	P	P	22 45 36.9	0.0
MORW				IAmb	IAmb	22 45 45.4	
	comp=Z,30nm,1.4s						
CASY	Casey	64.17	205	P	P	22 46 03.0	+0.9
CASY				IAmb	IAmb	22 46 21.2	
	comp=Z,9.0nm,1.4s						
QSPA	South Pole Qui	69.63	180	P	P	22 46 37.9	+1.9
QSPA				IAmb	IAmb	22 46 38.6	
	comp=Z,5.7nm,0.8s						
QSPA	South Pole Qui	69.63	180	P	P	22 46 37.5	+1.5
	comp=Z,4.6nm,0.7s,baz=328,slow=0.6,SNR=33						
	comp=Z,4.6nm,0.7s						
PETK	Petropavlovsk-	76.30	345	P	P	22 47 14.8	+0.5
	comp=Z,2.2nm,0.7s,baz=120,slow=8.8,SNR=3.6						
	comp=Z,2.2nm,0.7s						
MNAI	Manna	78.58	270	P	P	22 47 26.8	-0.8
JCC	Jacoby Creek,	78.68	39	P	P	22 47 28.5	+1.1
MLY	Manley	87.67	11	P	P	22 48 11.7	-0.3
CCB	Clear Creek Bu	87.88	12	P	P	22 48 13.2	+0.3
CCB				IAmb	IAmb	22 48 13.5	
	comp=Z,2.1nm,0.5s						
H21K	Melozitna Rive	87.89	10	P	P	22 48 14.2	+1.3
H21K				IAmb	IAmb	22 48 30.6	
	comp=Z,4.1nm,1.3s						
SNAA	Sanae	88.06	178	P	P	22 48 14.0	+0.1
SNAA				IAmb	IAmb	22 48 14.7	
	comp=Z,5.8nm,1.5s						
ILAR	Eielson Array	88.18	13	P	P	22 48 13.9	-0.4
	comp=Z,0.5nm,0.7s,baz=207,slow=5.6,SNR=3.5						
	comp=Z,0.5nm,0.7s						
M29M	Somme Creek	88.23	17	P	P	22 48 14.7	-0.1
J25K	Salcha River,	88.36	13	P	P	22 48 15.6	+0.3
J25K				IAmb	IAmb	22 48 32.8	
	comp=Z,6.2nm,1.5s						
LRM	Limekiln Ridge	88.44	39	P	P	22 48 14.9	-1.5
G21K	Allakaket	88.57	9	P	P	22 48 16.9	+0.8
CMAR	Chiang Mai Arr	90.42	289	P	P	22 48 27.8	+1.9
	comp=Z,1.7nm,0.6s,baz=109,slow=4.9,SNR=10.0						
	comp=Z,1.7nm,0.6s						
MKAR	Makanchi Array	111.41	313	PKiKP	PKiKP	22 53 54.3	-0.2
	comp=Z,0.4nm,0.5s,baz=184,slow=1.1,SNR=7.1						
KURBB	Kurchatov Arra	114.23	317	PKP	PKiKP	22 53 59.6	-0.1
	comp=Z,0.5nm,0.3s,baz=64,slow=4.2,SNR=1.5						
BVAR	Borovoye Array	119.25	320	PKP	PKiKP	22 54 09.5	+0.1
	comp=Z,1.7nm,0.5s,baz=99,slow=1.4,SNR=9.9						
ARTI	Arti	125.45	326	PKP	PKiKP	22 54 21.1	-0.4
	comp=Z,1.5nm,0.6s,baz=37,slow=3.8,SNR=3.9						
ARCES	ARCESS Array B	128.92	350	PKP	PKiKP	22 54 28.2	+0.1
	comp=Z,2.5nm,0.8s,baz=103,slow=4.2,SNR=7.7						
FINES	FINESS Array B	135.81	344	PKhKP	PKPpre	22 54 37.0	
	comp=Z,0.6nm,0.6s,baz=56,slow=2.5,SNR=5.6						
HFS	Hagfors	139.53	351	PKhKP	PKPpre	22 54 39.7	
	comp=Z,0.5nm,0.4s,baz=35,slow=5.4,SNR=7.9						
MARD	Mardin	142.69	305		PKPdf	22 54 52.4	-1.5
AKASG	Malin Array Be	143.12	331	PKhKP	PKPpre	22 54 51.8	
	comp=Z,5.8nm,0.6s,baz=44,slow=4.4,SNR=51						
AK01	Malin Array Si	143.14	331	PKP	PKPbc	22 54 51.8	-0.3
KIEV	Kiev	143.14	331		PKPbc	22 54 52.1	0.0
ARPR	Arapgir-MALATY	143.97	309		PKPdf	22 54 57.2	+1.0
RNPP9	Sopachiv	144.01	335	PKP	PKPdf	22 54 55.1	-0.5
EKA	Eskdalemuir Ar	144.91	5	PKP	PKPab	22 54 57.8	-0.4
	comp=Z,1.1nm,0.7s,baz=344,slow=3.1,SNR=2.2						
BNN	Bunyan	145.86	310		PKPab	22 55 01.7	-1.0
BRTR	Keskin Array B	147.05	313	PKPbc	PKiKP	22 55 04.9	-1.3
	comp=Z,1.5nm,0.6s,baz=141,slow=5.0,SNR=14						
CLL	Collm	148.08	347 ⇓	iPKPbc	PKiKP	22 55 07.4	-0.3
	comp=Z,8.0nm,0.8s						
MMAI	Mount Meron Ar	148.08	300	PKPbc	PKiKP	22 55 08.6	+0.1
	comp=Z,4.0nm,0.6s,baz=74,slow=6.2,SNR=12						
GERES	GERESS Array B	150.23	345	PKPbc	PKiKP	22 55 12.4	0.0
	comp=Z,1.1nm,0.8s,baz=115,slow=7.8,SNR=6.2						
CONA	Conrad Observa	150.48	341	iPKP	PKiKP	22 55 13.3	+0.3
	comp=Z,1.1nm,0.5s						
RONA	Rosalia, Austr	150.55	341	ePKP	PKiKP	22 55 12.7	-0.3
	comp=Z,2.2nm,0.4s						

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*IDC **06** 22:36:16.6±2.9, 20°.91S×69°.00W, h67^{km}±28^{km}, mb3.7/1, mbtmp3.9/5, ML4.0/4, Error ellipse: s-maj=48.7km s-min=22.5km az=107.0*

*SJA **06** 22:36:18.1±0.6, 20°.90S×69°.08W, h114^{km}±2^{km}, ML3.8, MW3.8*

*GUC **06** 22:36:19.3±0.6, 20°.90S×69°.09W, h115^{km}±3^{km}, ML3.8*

ISC 06 22:36:18.2±0.9**, 20°.92S**±0°.03×**69°.08W**±0°.06**, h120^{km}**±7^{km}**, n35,** σ**1^{s}.64**/55**, 2C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.40	252 ⇑	eP	Pn	22 36 35.5	-0.2
PB01				eS	Sn	22 36 47.7	-1.3
PB01				IAML		22 36 48.6	
	comp=N,8μm,0.2s						
PB01	IPOC Station P	0.40	252	eP	Pn	22 36 35.4	-0.4
PB01				eS	Sn	22 36 48.4	-0.6
PB01				IAML		22 36 49.4	
	comp=Z,3μm,0.2s						
PB08	IPOC Station P	0.78	355	eP	Pn	22 36 38.7	0.0
PB08				IAML		22 36 53.4	
	comp=E,5μm,0.2s						
PB08	IPOC Station P	0.78	355	eP	Pn	22 36 38.6	-0.1
PB08				eS	Sn	22 36 53.5	-0.7
PB08				IAML		22 36 58.0	
	comp=Z,2μm,0.4s						
PB09	IPOC Station P	0.88	190	eP	Pn	22 36 40.1	+0.7
PB09				eS	Sn	22 36 55.7	+0.2
PB09				IAML		22 36 58.1	
	comp=E,3μm,0.5s						
PB09	IPOC Station P	0.88	190	eP	Pn	22 36 39.8	+0.3
PB09				eS	Sn	22 36 56.0	+0.5
PB09				IAML		22 36 58.7	
	comp=Z,2μm,0.4s						
TA01	Diego Aracena	1.09	289	eP	Pn	22 36 41.4	+0.2
TA01				eS	Sn	22 36 57.8	-0.7
TA01				IAML		22 36 59.4	
	comp=N,2μm,0.2s						
TA01	Diego Aracena	1.09	289	eP	Pn	22 36 41.4	+0.2
TA01				eS	Sn	22 36 58.4	-0.1
TA01				IAML		22 37 01.3	
	comp=Z,893nm,0.5s						
TA02	Huaiquique	1.18	303	eP	Pn	22 36 42.3	+0.2
TA02				eS	Sn	22 36 59.8	-0.4
TA02	Huaiquique	1.18	303	eP	Pn	22 36 42.1	0.0
TA02				eS	Sn	22 36 59.9	-0.2
TA02				IAML		22 37 02.1	
	comp=Z,2μm,0.3s						
GO01	Chusmiza	1.25	355	eP	Pn	22 36 43.6	+0.2
GO01				IAML		22 37 03.5	
	comp=N,2μm,0.2s						
GO01	Chusmiza	1.25	355	eP	Pn	22 36 43.5	+0.1
GO01				eS	Sn	22 37 02.9	+0.4

PB11	IPOC Station P	1.27	335	eP	Pn	22 36 43.5	+0.1
PB11				eS	Sn	22 37 01.6	-0.7
PB11	IPOC Station P	1.27	335	eP	Pn	22 36 43.4	0.0
PB11				eS	Sn	22 37 02.0	-0.4
PB11				IAML		22 37 02.6	
	comp=Z,1μm,0.5s						
PB03	IPOC Station P	1.28	209	⇑eP	Pn	22 36 44.5	+1.0
PB03				IAML		22 37 04.2	
	comp=E,1μm,0.4s						
PB03	IPOC Station P	1.28	209	eP	Pn	22 36 43.9	+0.5
PB03				eS	Sn	22 37 03.4	+0.8
PB03				IAML		22 37 06.8	
	comp=Z,1μm,0.1s						
PB06	IPOC Station P	1.83	194	eP	Pn	22 36 51.1	+1.2
PB06				eS	Sn	22 37 14.5	+0.5
PB06				IAML		22 37 17.1	
	comp=E,1μm,0.3s						
PB06	IPOC Station P	1.83	194	eP	Pn	22 36 50.8	+0.9
PB06				eS	Sn	22 37 15.7	+1.7
PB06				IAML		22 37 23.8	
	comp=Z,813nm,0.4s						
PB05	IPOC Station P	2.19	208	eP	Pn	22 36 55.3	+1.2
PB05				IAML		22 37 23.4	
	comp=N,400nm,0.4s						
PB05	IPOC Station P	2.19	208	eP	Pn	22 36 55.2	+1.0
PB05				eS	Sn	22 37 21.6	-0.1
PB05				IAML		22 37 32.2	
	comp=Z,287nm,0.4s						
AF01	San Pedro de A	2.19	158	eP	Pn	22 37 09.2	+15
AF01				eS	Sn	22 37 21.3	-0.7
AF01				IAML		22 37 51.1	
	comp=Z,488nm,0.5s						
PB16	IPOC Station P	2.60	351	eP	Pn	22 37 01.0	+1.0
PB16				IAML		22 37 36.2	
	comp=E,165nm,0.5s						
PB16	IPOC Station P	2.60	351	eP	Pn	22 37 00.7	+0.8
PB16				eS	Sn	22 37 21.8	-10
PB10	IPOC Station P	2.92	208	eP	Pn	22 37 04.5	+1.0
PB10				eS	Sn	22 37 36.9	-1.5
PB18	Visviri	3.33	353	⇓eP	Pn	22 37 12.6	+3.1
PB14	IPOC Station P	3.88	198	eP	Pn	22 37 18.8	+2.3
PB14	IPOC Station P	3.88	198	eP	Pn	22 37 17.8	+1.3
PB14				eS	Sn	22 38 02.0	+0.3
PB14				IAML		22 38 09.2	
	comp=Z,69nm,0.5s						
GO02	Mina Guanaco	4.25	186	eP	Pn	22 37 22.5	+1.2
GO02				eS	Sn	22 38 11.1	+0.7
LPAZ	La Paz	4.70	11	P	Pn	22 37 25.4	-2.3
	comp=Z,2.1nm,0.3s,baz=183,slow=13,SNR=19						
LPAZ				S	Sn	22 38 12.8	-8.8
	comp=Z,14nm,0.9s,baz=206,slow=11,SNR=5.4						
	comp=Z,6.2nm,0.4s						
AZAP	Zapla	4.96	132	eP	Pn	22 37 33.6	+2.8
AZAP				IAML		22 38 37.1	
	comp=Z,28nm,3.0s						
SIV	San Ignacio	9.04	58	P	Pn	22 38 23.5	-2.4
	comp=Z,0.1nm,0.3s,baz=230,slow=12,SNR=15						
	comp=Z,2.5nm,0.4s						
CFA	Coronel Fontan	10.67	176	P	Pn	22 38 45.3	-2.4
	comp=Z,0.4nm,0.3s,baz=351,slow=13,SNR=4.6						
CFA				S	Sn	22 40 36.9	-8.4
	comp=Z,0.6nm,0.3s,baz=9.9,slow=20,SNR=1.7						
	comp=Z,1.5nm,0.5s						
PLCA	Paso Flores	19.79	183	P	Pn	22 40 42.5	+0.8
	comp=Z,0.2nm,0.3s,baz=3.0,slow=13,SNR=6.1						
	comp=Z,2.4nm,0.6s						
BDFB	Brasilia	20.68	79	P	P	22 40 50.6	+1.7
	comp=Z,2.7nm,0.4s,baz=219,slow=6.5,SNR=5.7						
	comp=Z,2.7nm,0.4s						
MKAR	Makanchi Array	145.26	35	PKPbc	PKiKP	22 55 45.2	-0.5
	comp=Z,2.2nm,0.7s,baz=320,slow=4.0,SNR=18						

*KRNET **06** 22:42:46.1±0.1, 39.°98N×77.°65E, mb3.1*
*SOME **06** 22:42:54.5, 40.°47N×77.°77E, h15^{km}*
*NNC **06** 22:42:55.8±0.9, 40.°54N×77.°77E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=6.0km s-min=4.5km az=167.0*
ISC 06 22:42:50.9±1.7**, 40.°16N**±0.°07×**77.°48E**±0.°05**, h10^{km}, n43, σ1.§55**/63**, 20C-18D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn	1.69	319	⇑eP	Pb	22 43 21.8	-0.5
NRN				⇑eS	Sg	22 43 48.1	+2.7
KDJ	Kajisay	1.98	354	⇑eP	Pb	22 43 25.7	-1.4
KDJ				⇑eS	Sg	22 43 54.4	-0.1
ULHL	Ulahol	2.28	336	⇓iP	Pb	22 43 30.8	-1.5
ULHL				⇓iS	Sb	22 44 02.5	+1.9
PRZ	Przheval'sk	2.42	16	⇓iP	Pn	22 43 31.3	+0.6
PRZ				⇓iS	Sb	22 44 04.2	-0.4
BOOM	Boomskoye usch	2.60	334	⇑iP	Pn	22 43 34.6	+1.5
BOOM				⇑iS	Sb	22 44 10.1	+0.4
SALK	Salom-Alik	2.88	286	⇓eP	Pn	22 43 37.8	+0.8
SALK				⇓iS	Sb	22 44 16.1	-1.7
ARLS	Aral	2.93	306	⇑eP	Pn	22 43 39.4	+1.7
ARLS				⇑eS	Sb	22 44 17.8	-1.4
IZV	Izvestkoviy	2.94	348	Pg	Pb	22 43 43.7	+0.2
IZV				Lg	Lg	22 44 18.8	
	44nm,0.5s						
SATY	Saty	2.98	13	Pg	Pb	22 43 42.9	-1.1
	19nm,0.6s						
SATY				Lg	Lg	22 44 18.0	
	11nm,0.4s						
MDOK	Medeo	3.02	354	⇑Pn	Pn	22 43 40.7	+1.9
	10nm,0.6s						
MDOK				Pg	Pb	22 43 44.5	-0.2
	14nm,0.4s						
MDOK				Lg	Lg	22 44 20.4	
	28nm,0.6s						
MDOK				⇑Lg	Lg	22 44 22.8	
	33nm,0.6s						
SFK	Sufi-Kurgan	3.05	268	⇑iP	Pn	22 43 39.7	+0.3
SFK				⇑iS	Sn	22 44 18.9	+2.7
MTBS	Maitube	3.07	345	Pg	Pb	22 43 45.8	+0.2
	4.1nm,0.1s						
MTBS				Lg	Lg	22 44 22.6	
	23nm,0.5s						
MTBS	Maitube	3.07	345	eP	Pb	22 43 45.9	+0.2
	4.1nm,0.1s						
MTBS				eS	Sb	22 44 22.6	-0.5
	23nm,0.5s						
AAA	Alma-Ata	3.07	352	Pg	Pb	22 43 46.1	+0.4
	29nm,0.4s						
AAA				Lg	Lg	22 44 23.5	
	14nm,0.4s						
AAA	Alma-Ata	3.07	352	eP	Pb	22 43 46.1	+0.4
	29nm,0.4s						
AAA				eS	Sb	22 44 23.5	+0.2
	14nm,0.4s						
KNDC	Almaty	3.08	353	⇑Lg	Lg	22 44 23.4	
	115nm,0.5s						
KOTS	Kotyrbulak	3.08	355	Pg	Pb	22 43 45.8	-0.1
	6.0nm,0.3s						
KOTS				Lg	Lg	22 44 22.8	
	66nm,0.3s						
KOTS	Kotyrbulak	3.08	355	eP	Pb	22 43 45.8	-0.1
	6.0nm,0.3s						
KOTS				eS	Sb	22 44 22.8	-0.8
	66nm,0.3s						
KST	Kastek	3.09	339	Pg	Pb	22 43 46.1	0.0
	1.5nm,0.3s						
KST				Lg	Lg	22 44 23.0	
	18nm,0.4s						
KST	Kastek	3.09	339	eP	Pb	22 43 46.1	0.0
	1.5nm,0.3s						
KST				eS	Sb	22 44 23.0	-0.9
	18nm,0.4s						
TKM2	Tokmak 2	3.10	333	⇓Pn	Pb	22 43 43.5	-2.7
	1.7nm,0.4s						
TKM2				⇓Lg	Lg	22 44 29.2	
	18nm,0.6s						
TKM2	Tokmak 2	3.10	333	⇓iP	Pn	22 43 42.3	+2.3
TKM2				⇓iS	Sb	22 44 23.6	-0.5
KBK	Karagaybulak	3.13	323	⇓iP	Pn	22 43 42.7	+2.2
KBK				⇓iS	Sb	22 44 24.4	-0.8
UZB	Uzynbulak	3.20	21	Pg	Pb	22 43 46.5	-1.4
	8.7nm,0.4s						
UZB				Lg	Lg	22 44 24.3	
	4.2nm,0.8s						
AAK	Ala-Archa	3.34	319	⇑Pg	Pg	22 43 54.4	-0.4
	0.7nm,0.6s						
AAK				⇑Lg	Lg	22 44 39.1	
	5.0nm,0.9s						
AAK	Ala-Archa	3.34	319	⇑iP	Pn	22 43 45.4	+2.1
AAK				⇑iS	Sb	22 44 29.3	-1.7
SHLS	Shalkode	3.34	26	Pg	Pb	22 43 50.8	+0.5
	8.4nm,0.4s						
SHLS				Lg	Lg	22 44 31.4	
	18nm,0.7s						
SHLS	Shalkode	3.34	26	eP	Pb	22 43 50.8	+0.5
	8.4nm,0.4s						
SHLS				eS	Sb	22 44 31.4	+0.4
	18nm,0.7s						
KPKS	Kokpek	3.42	15	Pg	Pb	22 43 50.2	-1.5
	4.4nm,0.3s						
KPKS				Lg	Lg	22 44 30.3	
	18nm,0.5s						
AML	Almayashu	3.47	306	⇓iP	Pn	22 43 47.1	+1.8
AML				⇓iS	Sb	22 44 32.1	-2.9
CHMS	Chumysh	3.49	325	⇓Pg	Pg	22 43 55.5	-2.3
	2.0nm,0.5s						
CHMS				⇑Lg	Lg	22 44 43.3	
	12nm,0.6s						
CHMS	Chumysh	3.49	325	⇓iP	Pn	22 43 47.5	+2.2
CHMS				⇓iS	Sb	22 44 33.0	-2.4
PDGK	Podgornoye	3.50	25	⇑Pn	Pn	22 43 45.9	+0.4
	3.8nm,0.3s						
PDGK				⇓Lg	Lg	22 44 34.8	
	23nm,0.8s						
KUU	Kurty	3.82	348	Pg	Pb	22 44 00.5	+2.1
	1.1nm,0.1s						
KUU				Lg	Lg	22 44 47.6	
	5.5nm,0.1s						
KUU	Kurty	3.82	348	eP	Pb	22 44 00.5	+2.1
	1.1nm,0.1s						
KUU				eS	Sb	22 44 47.6	+2.8
	5.5nm,0.1s						
SGDS	Sogindy	3.92	328	Pg	Pg	22 44 05.2	-0.6
	0.7nm,0.2s						
SGDS				Lg	Lg	22 44 55.7	
	6.8nm,0.8s						
BLB	Baldybastay	4.00	10	Pg	Pb	22 44 01.2	-0.3
	26nm,0.6s						
BLB				Lg	Lg	22 44 49.3	
	11nm,0.6s						
MRKS	Merke	4.11	310	Pg	Pg	22 44 09.5	-0.1
	1.5nm,0.1s						
MRKS				Lg	Lg	22 45 03.3	
	3.5nm,0.2s						
MRKS	Merke	4.11	310	eP	Pg	22 44 09.5	-0.1
	1.5nm,0.1s						
MRKS				eS	Sg	22 45 03.3	+0.5
	3.5nm,0.2s						
KNOS	Konyrlen	4.38	16	Pg	Pb	22 44 07.5	-0.5
	3.0nm,0.4s						
KNOS				Lg	Lg	22 44 60.0	
	4.2nm,0.1s						
BTLS	Baital	5.49	334	Pg	Pg	22 44 33.2	-2.8
	1.5nm,0.5s						
BTLS				Lg	Lg	22 45 43.7	
	4.1nm,0.6s						
BTLS	Baital	5.49	334	eP	Pg	22 44 33.2	-2.8
	1.5nm,0.5s						
BTLS				eS	Sg	22 45 43.7	-3.4
	4.1nm,0.6s						
KK31	Karatay Array	5.99	302	⇑Lg	Lg	22 46 05.9	
	0.6nm,0.4s,baz=104,slow=30,SNR=4.0						

*IDC **06** 22:52:49.4±1.7, 18.°14S×178.°33W, h598^{km}±15^{km}, mb2.6/5, mbtmp3.6/6, Error ellipse: s-maj=40.3km s-min=26.1km az=143.0*
ISC 06 22:52:49.4±1.0**, 18.°1S**±0.°2×**178.°4W**±0.°2**, h600^{km}, n8, σ1.§10**/9**, mb3.0**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.42	275	P	P	22 54 10.5	-0.7
	43nm,0.5s,baz=155,slow=4.2,SNR=61						
MSVF				S	S	22 55 19.2	+1.4
	9.1nm,1.0s,baz=136,slow=22,SNR=1.7						
WRA	Warramunga Arr	44.63	260	P	P	23 00 08.7	-1.6
	0.3nm,0.6s,baz=95,slow=8.0,SNR=1.5						
	0.3nm,0.6s						
ASAR	Alice Springs	44.78	254	P	P	23 00 12.2	+0.9
	0.5nm,0.5s,baz=87,slow=8.1,SNR=8.9						
	0.5nm,0.5s						
QSPA	South Pole Qui	71.97	180	P	P	23 03 13.0	-0.2
	0.2nm,0.5s,baz=348,slow=2.1,SNR=0.9						
	0.2nm,0.5s						
ILAR	Eielson Array	86.05	13	P	P	23 04 26.2	-0.8
	0.3nm,0.4s,baz=217,slow=5.1,SNR=4.1						
	0.3nm,0.4s						
TXAR	Lajitas Array	86.06	58	P	P	23 04 28.7	+0.7
	0.2nm,0.6s,baz=243,slow=5.0,SNR=2.4						
	0.2nm,0.6s						
BRTR	Keskin Array B	144.93	315	PKPbc	PKPbc	23 11 20.9	+0.6
	0.2nm,0.4s,baz=45,slow=4.3,SNR=2.5						
GERES	GERESS Array B	147.79	345	PKPbc	PKPbc	23 11 28.2	+0.4
	0.4nm,0.4s,baz=300,slow=1.9,SNR=3.6						

*UCR **06** 22:53:28.5±1.1, 11.°66N×85.°98W, h173^{km}±14^{km}, MW4.1*
*IDC **06** 22:53:28.5±1.4, 11.°37N×86.°07W, h198^{km}±24^{km}, mb3.3/4, mbtmp3.8/5, Error ellipse: s-maj=57.2km s-min=22.4km az=23.0*
*CATAC **06** 22:53:30.3±0.3, 12°N±2°×8°6W±°, h159^{km}±2^{km}, M3.7/38, MLv3.7/38, Error ellipse: s-maj=6.4km s-min=2.8km az=44.8, confirmed*
ISC 06 22:53:28.0±0.8**, 11.°65N**±0.°05×**85.°99W**±0.°05**, h180^{km}**±5^{km}**, n106, σ0.§86**/122**, mb3.5**/4**, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NADN	Granada	0.11	337	eP	Pn	22 53 51.7	-0.1
ARIN	Rivas	0.24	142	P	Pn	22 53 52.5	+0.5
ARIN	Rivas	0.24	142	S	Sn	22 54 10.3	-0.1
NANN	Nandasmo	0.32	336	P	Pn	22 53 53.8	+1.6
NANN	Nandasmo	0.32	336	S	Sn	22 54 10.7	-0.3
JAPN	Al SSO del Vol	0.33	112	eP	Pn	22 53 53.4	+1.2
JAPN	Al SSO del Vol	0.33	112	P	Pn	22 53 53.6	+1.3
JAPN				S	Sn	22 54 10.1	-0.6
CONN	Concepcion	0.37	103	P	Pn	22 53 53.2	+0.8
CONN				S	Sn	22 54 10.9	-0.1
MASN	Masaya	0.37	335	eP	Pn	22 53 53.3	+0.9
MASN	Masaya	0.37	335	P	Pn	22 53 53.3	+0.9
MASN				S	Sn	22 54 10.6	-0.7
MAS3	Al N del Volca	0.42	334	P	Pn	22 53 53.1	+0.6
MAS3				S	Sn	22 54 10.9	-0.6
CRUN	El Crucero	0.45	318	P	Pn	22 53 53.4	+0.6
MAFN	Magfor	0.51	331	P	Pn	22 53 53.9	+1.1
ENAN	Enatrel Managu	0.53	330	P	Pn	22 53 54.0	+1.0
UNAN	Cigeo UNAN	0.54	329	P	Pn	22 53 53.7	+0.7
UNAN				S	Sn	22 54 12.4	+0.1
MGAN	Managua	0.56	333	eP	Pn	22 53 53.8	+0.7
MGAN	Managua	0.56	333	P	Pn	22 53 53.7	+0.7
MGAN	Managua	0.56	333	S	Sn	22 54 12.2	-0.2
MGAN	Managua	0.56	333	P	Pn	22 53 53.8	+0.7
TISN	Laguna Tiscapa	0.56	331	P	Pn	22 53 54.0	+0.9
ALLN	Telcor Managua	0.57	331	P	Pn	22 53 54.2	+1.1
APQ2	Apoyeque	0.64	329	P	Pn	22 53 54.5	+1.1
CARN	Rivas	0.65	135	P	Pn	22 53 54.4	+0.9
CARN				S	Sn	22 54 13.8	+0.7
SBEN	San Benito	0.66	354	P	Pn	22 53 54.6	+1.0
SBEN	San Benito	0.66	354	S	Sn	22 54 13.1	-0.3
SAPS	Ciudad Sandino	0.66	322	P	Pn	22 53 54.3	+0.7
SAPS	Ciudad Sandino	0.66	322	S	Sn	22 54 13.4	+0.1
LCRUZ	La Cruz	0.67	148	eP	Pn	22 53 54.0	+0.4
COPN	Copaltepe	0.79	312	eP	Pn	22 53 54.5	+0.2
COPN	Copaltepe	0.79	312	P	Pn	22 53 54.8	+0.4
BC86	Nagarote	0.83	317	S	Sn	22 54 14.5	-0.6
BC86	Nagarote	0.83	317	P	Pn	22 53 55.2	+0.6
BOAB	BOACO BROADBAN	0.86	22	P	Pn	22 53 55.5	+0.7
BOAB	BOACO BROADBAN	0.86	22	S	Sn	22 54 14.6	-0.9
ACON	Acoyapa	0.86	68	eP	Pn	22 53 55.2	+0.4
ACON	Acoyapa	0.86	68	S	Sn	22 54 14.8	-0.5
ACON	Acoyapa	0.86	68	P	Pn	22 53 55.4	+0.7
BC87	San Francisco	0.90	341	P	Pn	22 53 55.6	+0.6
BC87	San Francisco	0.90	341	S	Sn	22 54 15.6	-0.4
BC84	Volcan Momotom	0.92	324	P	Pn	22 53 55.6	+0.5
BC84	Volcan Momotom	0.92	324	S	Sn	22 54 15.5	-0.6
MOMN	Momotombo	0.93	325	P	Pn	22 53 55.7	+0.4
MOMN				S	Sn	22 54 15.6	-0.8
PG27	Guanacaste Pro	1.00	144	eP	Pn	22 53 56.7	+0.8
PEJA	Penjamo Buenos	1.00	138	eP	Pn	22 53 56.7	+0.9
LAPC	Finca la Perla	1.03	148	eP	Pn	22 53 56.4	+0.3
VORI	VORI	1.04	143	eP	Pn	22 53 57.7	+1.4
VRLE	La Escondida,	1.05	144	eP	Pn	22 53 57.0	+0.7
GPS1	Guardaparques	1.07	144	eP	Pn	22 53 57.3	+0.9
ELI1	Hacienda Flor	1.08	157	eP	Pn	22 53 57.5	+1.1
GPS2	Hotel Rincn d	1.09	145	eP	Pn	22 53 57.1	+0.6
CNGA	Al SSO del Vol	1.09	320	P	Pn	22 53 57.0	+0.5
CNGA				S	Sn	22 54 17.5	-1.1
CNGN	Cerro Negro	1.09	321	eP	Pn	22 53 56.9	+0.4
CNGN	Cerro Negro	1.09	321	P	Pn	22 53 57.0	+0.5
CNGN	Cerro Negro	1.09	321	S	Sn	22 54 18.1	-0.5
ALIBA	Liberia Airpor	1.14	157	eP	Pn	22 53 58.0	+1.2
PACN	Al O del Volca	1.16	317	P	Pn	22 53 58.0	+1.0
PACN				S	Sn	22 54 19.0	-0.4
ILCN	San Idelfonso	1.16	323	P	Pn	22 53 57.5	+0.6
ILCN				S	Sn	22 54 18.5	-0.8
MESS	Mesas	1.19	139	eP	Pn	22 53 58.0	+0.7
VMAR	Armenia, Volca	1.20	134	eP	Pn	22 53 58.0	+0.6
HORNC	Hornillas	1.22	139	eP	Pn	22 53 58.5	+0.9
HOYN	Al Sur del Vol	1.25	319	P	Pn	22 53 58.5	+0.7
HOYN				S	Sn	22 54 20.6	-0.3
HERN	Volcan Telica	1.26	319	P	Pn	22 53 58.6	+0.7
HERN	Volcan Telica	1.26	319	S	Sn	22 54 20.9	-0.2
QUEN	Al S del Volca	1.26	318	P	Pn	22 53 58.4	+0.6
QUEN				S	Sn	22 54 20.2	-0.8
CUI	Cuipilapa	1.27	140	eP	Pn	22 53 59.0	+1.0
MATN	Matagalpa	1.27	3	P	Pn	22 53 58.0	0.0
MATN	Matagalpa	1.27	3	S	Sn	22 54 20.6	-0.8
POLN	Al Sur del Vol	1.28	321	P	Pn	22 53 58.7	+0.7
POLN				S	Sn	22 54 20.2	-1.1
AESN	El Sauce Leon	1.34	336	P	Pn	22 53 59.5	+0.9
ELVJ	El Viejo (Barb	1.36	151	eP	Pn	22 53 59.4	+0.7
TIMP	Tierras Morena	1.42	138	eP	Pn	22 53 59.9	+0.5
PLVR	Palo Verde	1.44	154	eP	Pn	22 54 00.1	+0.5
LIMN	Finca el Limon	1.45	345	P	Pn	22 54 00.6	+0.9
CRIN	San Cristobal	1.47	315	eP	Pn	22 54 00.3	+0.5
CRIN	San Cristobal	1.47	315	S	Sn	22 54 23.6	-0.8
CRIN	San Cristobal	1.47	315	P	Pn	22 54 00.7	+0.9
INVE	Universidad In	1.48	142	eP	Pn	22 54 00.5	+0.7
QUEB	Quebradon, Cot	1.48	133	eP	Pn	22 54 00.2	+0.3
JTS	Las Juntas de	1.69	143	P	Pn	22 54 02.4	+0.5
	16nm,0.3s,baz=114,slow=23,SNR=24						
JTS				S	Sn	22 54 25.2	-2.9
	168nm,0.4s,baz=282,slow=20,SNR=19						
JTS	Las Juntas de	1.69	143	eP	Pn	22 54 02.2	+0.3
CMARA	Lajas Hojancha	1.71	161	eP	Pn	22 54 02.7	+0.5
CMARA	Lajas Hojancha	1.71	161	P	Pn	22 54 03.1	+0.9
CMARA	Lajas Hojancha	1.71	161	S	Sn	22 54 28.1	-0.6
ARE1	Arenal 1	1.72	133	eP	Pn	22 54 02.9	+0.7
ESPN	Las Esperanzas	1.74	72	eP	Pn	22 54 02.5	+0.2
ESPN	Las Esperanzas	1.74	72	P	Pn	22 54 03.0	+0.6
ESPN	Las Esperanzas	1.74	72	S	Sn	22 54 28.8	-0.1
NYURE	Nandayure	1.79	156	eP	Pn	22 54 03.4	+0.5
INDI	Punta indio, G	1.83	165	S	Sn	22 54 29.8	-1.0
INDI	Punta indio, G	1.83	165	P	Pn	22 54 04.5	+1.1
SOCE	Pocosol	1.84	133	eP	Pn	22 54 03.7	+0.3
SOCE	Pocosol	1.84	133	P	Pn	22 54 04.4	+0.9
SOCE	Pocosol	1.84	133	S	Sn	22 54 30.7	-0.2
POTN	Potosi Cosigui	2.00	312	P	Pn	22 54 06.1	+1.0
POTN				S	Sn	22 54 33.7	-0.2
CSGN	Cosiguina Volc	2.02	311	P	Pn	22 54 06.2	+0.8
CSGN				S	Sn	22 54 34.6	+0.1
TRT2	Tortugero	2.46	116	P	Pn	22 54 11.2	+0.9
PICV	PH. Pirrs	2.67	139	eP	Pn	22 54 13.6	+0.8
ABE2	San Pablo	2.71	135	eP	Pn	22 54 16.6	+3.1
PIEC	Cerro El Cedra	2.84	135	eP	Pn	22 54 16.4	+1.4
SDV	Santo Domingo	15.36	99	P	Pn	22 56 54.8	-1.1
	3.1nm,0.6s,baz=284,slow=12,SNR=3.6						
PCRV	Puerto La Cruz	21.02	92	P	P	22 57 58.0	+0.1
	23nm,1.0s,baz=270,slow=5.2,SNR=5.7						
	23nm,1.0s						
TKL	Tuckaleechee C	23.99	4	P	P	22 58 28.4	+2.2
	2.4nm,0.8s,baz=194,slow=8.3,SNR=2.2						
	2.4nm,0.8s						
TXAR	Lajitas Array	24.10	320	P	P	22 58 27.7	+0.3
	0.2nm,0.5s,baz=145,slow=11,SNR=4.0						
	0.2nm,0.5s						
NVAR	Mina Array Bea	39.24	318	P	P	23 00 38.3	-1.0
	0.3nm,0.5s,baz=124,slow=6.3,SNR=1.8						
	0.3nm,0.5s						
ASAR	Alice Springs	140.29	247	PKP	PKPdf	23 12 35.9	-0.5
	0.4nm,0.6s,baz=59,slow=2.1,SNR=2.3						
WRA	Warramunga Arr	140.41	253	PKP	PKPdf	23 12 35.8	-0.9
	0.2nm,0.5s,baz=95,slow=2.1,SNR=5.4						

IDC 06 22:57:44.5±30.0**, 31.°80N**×**93.°39E, h0^{km}, mb3.2**/2**, mbtmp3.3**/4**, ML3.3**/2**, Error ellipse: s-maj=443.0km s-min=64.4km az=1.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	17.23	333	P	Pn	23 01 46.2	-0.3
	baz=144,slow=14,SNR=4.1						
	0.4nm,0.6s						
SONM	Songino Array	18.83	28	P	P	23 02 05.7	-0.2
	0.3nm,0.3s,baz=213,slow=10,SNR=5.5						
	0.9nm,0.7s						
KURBB	Kurchatov Arra	21.80	334	P	P	23 02 37.6	-0.3
	0.8nm,0.6s,baz=142,slow=11,SNR=6.5						
	0.8nm,0.6s						
ZALV	Zalesovo Beam	22.97	347	P	P	23 02 51.0	+0.6
	0.2nm,0.3s,baz=178,slow=9.9,SNR=1.7						
	0.2nm,0.3s						

*HEL **06** 23:15:00.9±0.1, 60.°10N×21.°41E, h0^{km}, ML2.2, Explosion*
*UPP **06** 23:15:01.8±0.5, 60.°05N×21.°19E, h0^{km}, ML2.5*
*DNK **06** 23:15:01.5±0.9, 60.°09N×21.°26E, h0^{km}, ML2.5(UPP), Suspected explosion*
ISC 06 23:14:59.5±0.9**, 60.°09N**±0.°04×**21.°43E**±0.°03**, h0^{km}, n61, σ1.§20**/60**, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAL	Aland	0.73	278	P	Pg	23 15 13.5	+0.1
AAL				S	Sg	23 15 22.0	-0.8
AAL	Aland	0.73	278	P	Pg	23 15 13.5	+0.1
AAL				S	Sg	23 15 22.0	-0.8
AAL	Aland	0.73	278	eP	Pg	23 15 13.4	+0.1
TVF	Tvarminne	0.95	104	eP	Pg	23 15 17.8	+0.2
RAF	Rauma	0.96	10	eP	Pg	23 15 17.7	-0.2
RAF	Rauma	0.96	10	eP	Pg	23 15 17.6	-0.2
RAF				MSG		23 15 29.5	
	comp=Z,22nm,0.2s						
GRAU	Graesoe	1.47	281	P	Pn	23 15 25.9	-1.3
GRAU	Graesoe	1.47	281	P	Pn	23 15 25.9	-1.3
NRTU	Norrtaelje	1.47	255	P	Pn	23 15 26.4	-0.8
NRTU	Norrtaelje	1.47	255	P	Pn	23 15 26.4	-0.8
MEF	Metsahovi	1.49	84	eP	Pn	23 15 27.4	-0.1
MEF	Metsahovi	1.49	84	eP	Pn	23 15 27.4	-0.1
MEF				MSG		23 15 45.0	
	comp=Z,22nm,0.2s						
NUR	Nurmijarvi	1.66	74	eP	Pn	23 15 30.4	+0.6
NUR				MSG		23 15 50.0	
	comp=Z,19nm,0.2s						
FLYU	Flymyra	1.78	273	P	Pn	23 15 31.2	-0.2
FLYU	Flymyra	1.78	273	P	Pn	23 15 31.2	-0.2
KPF	Kankaanpaa	1.78	10	eP	Pn	23 15 32.1	+0.5
MTSE	Matsula	1.84	137	eP	Pn	23 15 33.4	+1.1
UPP	Uppsala	1.93	265	P	Pn	23 15 34.0	+0.4
UPP	Uppsala	1.93	265	P	Pn	23 15 34.0	+0.4
NYNU	Nynaeshamn	2.05	240	P	Pn	23 15 36.5	+1.3
NYNU	Nynaeshamn	2.05	240	P	Pn	23 15 36.5	+1.3
FIBU	Brunna	2.06	267	P	Pn	23 15 36.2	+0.9
FIBU	Brunna	2.06	267	P	Pn	23 15 36.2	+0.9
OSTU	Oestervaala	2.15	276	P	Pn	23 15 37.7	+1.1
OSTU	Oestervaala	2.15	276	P	Pn	23 15 37.7	+1.1
IGGU	Iggoen	2.19	293	P	Pn	23 15 38.6	+1.5
IGGU	Iggoen	2.19	293	P	Pn	23 15 38.6	+1.5
BACU	Backbrunna	2.19	266	P	Pn	23 15 38.4	+1.3
BACU	Backbrunna	2.19	266	P	Pn	23 15 38.4	+1.3
PVF	Pernaja	2.25	76	eP	Pb	23 15 39.9	-1.1
PVF				MSG		23 16 06.8	
	comp=Z,19nm,0.2s						
SLIT	Slitere, Latvi	2.50	169	eP	Pn	23 15 42.1	+0.7
SLIT	Slitere, Latvi	2.50	169	eP	Pn	23 15 42.6	+1.1
SLIT				eS	Sn	23 16 13.4	+0.8
ARNU	Arnoeviken	2.56	311	P	Pn	23 15 43.5	+1.4
ARNU	Arnoeviken	2.56	311	P	Pn	23 15 43.5	+1.4
FIA0	FINESS Array S	2.66	57	MSG		23 16 18.4	
	comp=Z,13nm,0.2s						
KEF	Keuruu	2.67	37	eP	Pn	23 15 44.3	+0.5
KEF	Keuruu	2.67	37	MSG		23 16 19.0	
	comp=Z,10nm,0.2s						
ESKU	Eskilstuna	2.70	254	P	Pn	23 15 45.5	+1.4
ESKU	Eskilstuna	2.70	254	P	Pn	23 15 45.5	+1.4

VAF	Ylistaro	3.03	11	eP	Pn	23 15 49.2	+0.6
VAF	Ylistaro	3.03	11	MSG		23 16 29.3	
	comp=Z,4.9nm,0.2s						
ROTU	Roteberg	3.07	298	P	Pn	23 15 49.5	+0.4
ROTU	Roteberg	3.07	298	P	Pn	23 15 49.5	+0.4
KAF	Kangasniemi	3.12	47	MSG		23 16 31.9	
	comp=Z,6.8nm,0.2s						
HASU	Hassela	3.13	314	P	Pn	23 15 51.5	+1.5
HASU	Hassela	3.13	314	P	Pn	23 15 51.5	+1.5
VSU	Vasula	3.17	119	eP	Pn	23 15 51.8	+1.2
HUSU	Husum	3.43	343	eS	Sn	23 16 35.5	0.0
UMAU	Umeaa	3.83	355	eP	Pn	23 16 01.5	+1.9
PBUR	Paburge	4.08	176	eP	Pn	23 16 04.4	+1.3
BLEU	Blekinge	4.82	221	i P	Pn	23 16 13.6	+0.4
BORU	Boraas	5.12	245	i P	Pn	23 16 18.4	+1.0
STRU	Stroemstad	5.32	263	i P	Pn	23 16 22.6	+2.5
DEL	Delary	5.39	231	i P	Pn	23 16 20.0	-1.1
TJOU	Tjoern	5.46	252	i P	Pn	23 16 24.4	+2.3
FABU	Falkenberg	5.51	240	i P	Pn	23 16 26.8	+4.1
ONAU	Onsala	5.64	246	i P	Pn	23 16 26.2	+1.7
BJUU	Bjuv	6.00	232	i P	Pn	23 16 29.2	-0.3
LUNU	Lund	6.17	227	i P	Pn	23 16 31.0	-0.8
HOMB	Homborsund	6.89	260	i P	Pn	23 16 41.1	-0.5
HEF	Hetta	8.41	6	eP	Pn	23 17 02.0	-0.5

*IDC **06** 23:24:11.6±2.1, 6°.22S×147°.60E, h80^{km}±17^{km}, mb3.7/4, mbtmp4.0/7, MS3.1/1, Error ellipse: s-maj=32.1km s-min=14.8km az=100.0*

*NEIC **06** 23:24:12.0±1.6, 6°.22S±0°.08×147°.67E±0°.05, h76^{km}±9^{km}, mb4.3/18, Error ellipse: s-maj=11.4km s-min=7.0km az=200.0*

ISC 06 23:24:11.7±0.7**, 6°.23S**±0°.07×**147°.60E**±0°.09**, h77^{km}, n29, σ0^{s}.87**/31**, mb4.2**/8**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.19	188		Pn	23 24 59.7	0.0
PMG				Sn	Sn	23 25 37.2	+0.6
PMG	Port Moresby	3.19	188	P	Pn	23 24 59.2	-0.4
	72nm,0.7s,baz=16,slow=15,SNR=15						
PMG				S	Sn	23 25 37.1	+0.5
	74nm,0.3s,baz=197,slow=21,SNR=11						
RABL	Rabaul	4.97	66	Pn	Pn	23 25 23.4	-0.6
JAY	Jayapura	7.80	298	P	Pn	23 26 02.4	-0.2
	2.4nm,0.3s,baz=144,slow=17,SNR=5.1						
COEN	Coen	8.83	209	Pn	Pn	23 26 17.7	+1.1
COEN				Sn	Sn	23 27 52.6	-2.0
FAKI	Fak Fak	15.65	281	Pn	Pn	23 27 49.0	+1.1
FAKI				IAmb	IAmb	23 27 58.0	
	comp=Z,18nm,1.1s						
SAUI	Saumlaki	16.27	263	Pn	Pn	23 27 55.6	-0.1
MTN	Manton Dam	17.52	247		Pn	23 28 11.3	+0.3
MTN				IAmb	IAmb	23 28 26.9	
	comp=Z,15nm,1.1s						
WB0	Warramunga Arr	18.60	222	P	P	23 28 23.7	+0.6
WB0				IAmb	IAmb	23 28 25.9	
	comp=Z,11nm,0.9s						
WR8	Warramunga Arr	18.66	222	P	P	23 28 23.8	+0.1
WRAB	Tennant Creek	18.75	222	P	P	23 28 17.1	-7.5
WRAB				IAmb	IAmb	23 28 18.2	
	comp=Z,34nm,0.7s						
WRA	Warramunga Arr	18.76	222	P	P	23 28 24.5	-0.3
	comp=Z,5.6nm,0.6s,baz=48,slow=11,SNR=39						
KNRA	Kununurra	20.73	242	P	P	23 28 46.5	+0.4
KNRA				IAmb	IAmb	23 28 49.2	
	comp=Z,15nm,0.9s						
AS31	Alice Springs	21.78	216	P	P	23 28 58.0	+0.7
ASAR	Alice Springs	21.78	216	P	P	23 28 57.8	+0.4
	comp=Z,3.1nm,0.6s,baz=50,slow=9.0,SNR=49						
ASAR				S	S	23 32 53.9	-0.3
	comp=Z,2.2nm,1.0s,baz=31,slow=22,SNR=4.8						
	comp=Z,3.1nm,0.6s						
ARMA	Armidale	24.36	172	P	P	23 29 22.8	+0.1
ARMA				IAmb	IAmb	23 29 34.1	
	comp=Z,12nm,1.1s						
FITZ	Fitzroy Crossi	24.46	239	P	P	23 29 24.1	+0.5
FITZ				IAmb	IAmb	23 29 24.9	
	comp=Z,6.2nm,0.6s						
DAV	Davao City (W)	25.64	301	LR	LR	23 41 02.4	
	comp=Z,39nm,19.0s,baz=198,slow=39						
STKA	Stephens Creek	26.13	192	P	P	23 29 40.1	+1.4
STKA				IAmb	IAmb	23 29 54.5	
	comp=Z,27nm,1.1s						
STKA	Stephens Creek	26.13	192	P	P	23 29 40.1	+1.4
	comp=Z,1.9nm,0.5s,baz=6.9,slow=12,SNR=3.7						
	comp=Z,1.9nm,0.5s						
BBOO	Buckleboo	28.55	201	P	P	23 29 59.9	-0.4
BBOO				IAmb	IAmb	23 30 08.6	
	comp=Z,5.9nm,0.9s						
MBWA	Marble Bar	30.80	238	P	P	23 30 19.7	-0.7
MBWA				IAmb	IAmb	23 30 33.3	
	comp=Z,8.9nm,1.1s						
NWAO	Narrogin (SRO)	38.77	223	P	P	23 31 28.3	-0.5
PETK	Petropavlovsk-	59.73	7	P	P	23 34 07.0	-1.2
	comp=Z,0.8nm,0.6s,baz=228,slow=7.6,SNR=2.1						
	comp=Z,0.8nm,0.6s						
VNDA	Vanda	71.65	177	P	P	23 35 24.5	-0.2
P08K	Saint George I	71.74	23	P	P	23 35 26.6	+1.2
STLK	Strandline Lak	81.96	25	P	P	23 36 24.4	+1.5
QSPA	South Pole Qui	83.74	180	P	P	23 36 31.6	-0.6
QSPA	South Pole Qui	83.74	180	P	P	23 36 31.0	-1.2
	comp=Z,0.7nm,0.7s,baz=312,slow=2.8,SNR=1.7						
	comp=Z,0.7nm,0.7s						

*NEIC **06** 23:40:02.3±0.9, 18°.906N±0°.009×155°.23W±0°.01, h10^{km}±2^{km}, Error ellipse: s-maj=3.1km s-min=2.5km az=311.0*

HVO 06 23:40:02.0±1.5**, 18°.86N**±0°.01×**155°.23W**±0°.02**, h10^{km}**±8^{km}**, ML2.5**/20**, ML2.5**/36(NEIC)**, Error ellipse: s-maj=2.8km s-min=2.0km az=108.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HPO	Honuapo	0.39	306		Pg	23 40 09.9	+0.2
HPO					Sg	23 40 14.8	0.0
HTC	Hot Caves	0.41	337		Pg	23 40 10.1	0.0
HLP	Hilina Pali	0.44	350		Pg	23 40 10.6	-0.1
HLP					Sg	23 40 17.0	+0.4
PUH	Pauahi	0.51	1		Pg	23 40 11.4	-0.7
PUH				IAML		23 40 27.0	
	comp=N,255nm,1.4s						
PUH	Pauahi	0.51	1		Sg	23 40 18.2	-0.6
KNHH	Kane Nui o Ham	0.52	6		Pg	23 40 11.5	-0.7
SDHHI	Sand Hill	0.53	353		Pg	23 40 11.6	-0.9
STCH	Steam Cracks	0.53	10		Pg	23 40 11.7	-0.7
STCH	Steam Cracks	0.53	10		Sg	23 40 18.8	-0.7
KHU	Kahuku	0.53	316		Pg	23 40 11.5	-1.0
KHU	Kahuku	0.53	316		Sg	23 40 18.3	-1.3
KHU				IAML		23 40 21.6	
	comp=E,230nm,1.0s						
KHU				IAML		23 40 26.7	
	comp=N,332nm,1.5s						
JCUZ	Jacuzzi	0.53	13		Pg	23 40 11.9	-0.6
JCUZ					Sg	23 40 18.4	-1.1
RIM	Rim	0.53	355		Pg	23 40 11.7	-0.8
RIM					Sg	23 40 19.2	-0.4
KKO	Keanakako'i	0.54	356		Pg	23 40 11.8	-0.8
NPOC	North of Pu‘u	0.54	12		Pg	23 40 11.7	-0.9
NPOC					Sg	23 40 18.9	-0.9
WRMHI	West Rim	0.55	353		Pg	23 40 11.8	-0.9
BYL	Byron's Ledge	0.55	357		Pg	23 40 11.8	-1.0
BYL	Byron's Ledge	0.55	357	IAML		23 40 29.9	
	comp=N,241nm,2.0s						
BYL				IAML		23 40 29.9	
	comp=E,274nm,1.2s						
AIN	Ainahou	0.55	337		Pg	23 40 12.3	-0.6
AIN				IAML		23 40 25.9	
	comp=E,362nm,0.3s						
AIN	Ainahou	0.55	337		Sg	23 40 19.8	-0.4
HATHI	Halema‘uma‘u T	0.56	357		Pg	23 40 12.2	-0.8
HATHI				IAML		23 40 32.6	
	comp=N,347nm,0.7s						
HATHI				IAML		23 40 32.9	
	comp=E,313nm,0.7s						
UWE	Uwekahuna	0.56	354		Pg	23 40 12.2	-0.8
UWE	Uwekahuna	0.56	354	IAML		23 40 31.8	
	comp=E,368nm,0.4s						
UWB	Uwekahuna Bluf	0.56	355		Pg	23 40 12.1	-1.0
RSD	Rainshed	0.60	355		Pg	23 40 13.5	-0.3
JOKA	Jonika Flow	0.61	20		Pg	23 40 12.7	-1.2
JOKA					Sg	23 40 20.4	-1.5
MLH	Mauna Loa	0.65	347		Pg	23 40 13.4	-1.3
MLH	Mauna Loa	0.65	347		Sg	23 40 22.0	-1.3
MLH				IAML		23 40 26.6	
	comp=E,160nm,0.3s						
MLH				IAML		23 40 33.3	
	comp=N,264nm,2.2s						
MWH	Mokuaweoweo	0.71	331		Pg	23 40 14.5	-1.5
MWH					Sg	23 40 24.2	-1.3
MWH				IAML		23 40 39.8	
	comp=E,258nm,1.4s						
MWH				IAML		23 40 41.6	
	comp=N,225nm,1.1s						
HMH	Humu‘ula Sheep	0.78	342		Pg	23 40 15.8	-1.4
HMH					Sg	23 40 25.1	-2.3
HMH				IAML		23 40 34.0	
	comp=E,144nm,2.3s						
ALEP	Alea Permanent	0.78	330		Pg	23 40 15.1	-2.2
HUH	Hualalai	1.00	325		Pg	23 40 18.4	-3.0

*IDC **06** 23:43:43.7±1.1, 36°.55N×141°.54E, h0^{km}, mb3.8/8, mbtmp3.8/12, ML3.5/4, MS2.7/4, Error ellipse: s-maj=30.3km s-min=18.6km az=67.0*

*NIED **06** 23:43:50.9, 36°.48N×141°.03E, h44^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$2.99; M$_{\theta\theta}$-0.75; M$_{\phi\phi}$-2.24; M$_{r\theta}$-3.38; M$_{\theta\phi}$-2.91; M$_{\phi r}$-1.58; Fault plane solution: M$_{0}$5.40000×10^{14} NP1: φ$_{s}$10.00000°, δ30.00000°, λ44.00000°. NP2: φ$_{s}$240.00000°, δ70.00000°, λ113.00000°.*

*JMA **06** 23:43:50.9±0.1, 36°.5N±0°.3×141°.0E±0°.8, h44^{km}±1^{km}, MD3.8/40, MV3.8/40, E OFF IBARAKI PREF*

JMA Felt II J1 at E OFF IBARAKI PREF .

ISC 06 23:43:49.1±1.4**, 36°.50N**±0°.04×**141°.16E**±0°.07**, h31^{km}**±9^{km}**, n43, σ1^{s}.61**/40**, mb3.8**/8**, 11D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.49	283	⇓iP	Pn	23 44 00.4	+0.4
JHO				⇓S	Sb	23 44 06.8	+0.3
JHO	Hitachi	0.49	283	A	A	23 44 00.4	
	comp=N,13nm,0.3s,comp=E,18nm,0.4s						
JHYU	Hitachinakayam	0.49	251	⇓iP	Pn	23 44 00.4	+0.3
JHYU				⇓S	Sb	23 44 06.9	+0.4
ONAJ	Iwakimizuishiy	0.67	334	⇓iP	Pn	23 44 03.3	+0.8
ONAJ				⇓S	Sn	23 44 12.1	+0.1
ONAJ	Iwakimizuishiy	0.67	334	A	A	23 44 03.3	
	comp=N,7.0nm,0.4s,comp=E,6.0nm,0.4s						
JIHU	Itakohorinouch	0.74	224	P	Pn	23 44 04.5	+1.0
JIHU				eS	Sb	23 44 13.5	+0.1
JYT	Yasato	0.83	251	⇓iP	Pb	23 44 04.5	-0.5
JYT				⇓S	Sb	23 44 14.2	-1.7
JYT	Yasato	0.83	251	A	A	23 44 04.5	
	comp=N,8.0nm,0.4s,comp=E,7.0nm,0.3s						
JFK	Kawauchi	0.89	345	i P	Pn	23 44 06.5	+0.9
JFK				S	Sn	23 44 17.6	+0.1
JFK	Kawauchi	0.89	345	A	A	23 44 06.5	
	comp=N,2.0nm,3.4s,comp=E,2.0nm,1.6s						
JSB	Shiboa	1.10	295	A	A	23 44 09.1	
	comp=N,4.0nm,1.3s,comp=E,6.0nm,1.5s						
JOTO	OTAMA OYAMA	1.25	328	i P	Pb	23 44 12.5	+0.4
JOTO				S	Sb	23 44 27.9	0.0
JOTO	OTAMA OYAMA	1.25	328	A	A	23 44 12.5	
	comp=N,9.0nm,0.7s,comp=E,14nm,1.2s						
JAG	Ashikaga	1.38	267	⇓iP	Pn	23 44 12.5	+0.2
JAG				⇓S	Sn	23 44 27.7	-1.9
JMM	Marumori	1.39	348	P	Pb	23 44 13.9	-0.6
JMM				S	Sb	23 44 30.9	-1.1
JFY	Yanaizu	1.48	308	⇓iP	Pb	23 44 14.9	-1.0
JKT	Katashina	1.56	280	P	Pn	23 44 16.0	+1.1
JKT				S	Sn	23 44 34.3	+0.1
MJAR	Matsushiro Arr	2.38	272	Pn	Pn	23 44 27.4	+1.3
	comp=E,4.3nm,0.3s,baz=95,slow=9.1,SNR=90						
MJAR				Sn	Sn	23 44 53.5	-0.7
	comp=E,3.6nm,0.3s,baz=80,slow=16,SNR=6.5						
MJAR				LR	LR	23 45 47.6	
	comp=E,56nm,20.2s,baz=87,slow=46						
	comp=E,17nm,0.3s						
MAJO	Matsushiro	2.38	272	P	Pn	23 44 28.4	+2.3
JSD	Sado	2.78	304	P	Pn	23 44 33.2	+1.7
JGF	Kuroka	3.21	255	P	Pn	23 44 40.3	+2.8
INU	Inuyama	3.56	252	P	Pn	23 44 46.4	+4.2
JHJ2	Mitsune	3.56	199	P	Pn	23 44 44.8	+2.6
JTM	Tenmabayashi	4.28	359	P	Pn	23 44 55.5	+3.4
JCJ	Chichijima	9.42	174	Pn	Pn	23 46 00.7	-2.0
	comp=E,3.5nm,0.3s,baz=349,slow=22,SNR=7.7						
JCJ				Sn	Sn	23 47 36.5	-11
	comp=E,3.2nm,0.3s,baz=285,slow=18,SNR=2.1						
	comp=E,11nm,0.4s						
USRK	Ussuriysk Ar.	10.39	321	Pn	Pn	23 46 14.5	-1.6
	comp=E,0.3nm,0.3s,baz=135,slow=14,SNR=6.5						
USRK				LR	LR	23 49 58.1	
	comp=E,54nm,21.4s,baz=179,slow=36						
	comp=E,0.5nm,0.4s						
KSRS	Korea Array	10.64	279	Pn	Pn	23 46 21.9	+2.5
	comp=E,0.2nm,0.3s,baz=92,slow=15,SNR=1.9						
	comp=E,1.1nm,0.7s						
KLR	Kul'dur	14.46	335	LR	LR	23 51 58.7	
	comp=E,26nm,20.5s,baz=168,slow=34						
SONM	Songino Array	27.92	305	P	P	23 49 37.1	+0.5
	comp=E,1.6nm,0.7s,baz=100,slow=9.4,SNR=7.9						
	comp=E,1.6nm,0.7s						
H11N2	WAKE ISLAND Hy	28.05	120	T	T	00 18 57.3	
	baz=311,slow=75						
H11N1	WAKE ISLAND Hy	28.06	120	T	T	00 19 02.4	
	baz=311,slow=75						
H11N3	WAKE ISLAND Hy	28.07	120	T	T	00 19 13.0	
	baz=311,slow=75						
H11S1	WAKE ISLAND Hy	28.74	122	T	T	00 19 48.5	
	baz=314,slow=75						
H11S3	WAKE ISLAND Hy	28.75	122	T	T	00 19 48.9	
	baz=314,slow=75						
H11S2	WAKE ISLAND Hy	28.76	122	T	T	00 19 50.0	
	baz=314,slow=75						
ZALV	Zalesovo Beam	42.13	313	P	P	23 51 39.9	+1.6
	comp=E,0.5nm,0.3s,baz=92,slow=9.6,SNR=2.7						
	comp=E,0.5nm,0.3s						
MKAR	Makanchi Array	44.23	303	P	P	23 51 56.6	+1.1
	comp=E,0.2nm,0.5s,baz=79,slow=11,SNR=4.2						
	comp=E,0.2nm,0.5s						
KURBB	Kurchatov Arra	46.17	308	P	P	23 52 11.5	+0.7
	comp=E,0.9nm,0.3s,baz=84,slow=8.0,SNR=5.6						
	comp=E,0.9nm,0.3s						
ILAR	Eielson Array	50.05	32	P	P	23 52 37.6	-2.9
	comp=E,0.2nm,0.5s,baz=272,slow=8.2,SNR=1.7						
	comp=E,0.2nm,0.5s						
AAK	Ala-Archa	50.57	299	LR	LR	00 14 08.5	
	comp=E,25nm,18.5s,baz=156,slow=36						
WRA	Warramunga Arr	56.51	188	P	P	23 53 28.4	0.0
	comp=E,1.2nm,0.5s,baz=2.5,slow=7.3,SNR=12						
	comp=E,1.2nm,0.5s						
ASAR	Alice Springs	60.23	188	P	P	23 53 54.0	-0.5
	comp=E,0.5nm,0.6s,baz=2.9,slow=6.9,SNR=2.3						
	comp=E,0.5nm,0.6s						
FINES	FINESS Array B	69.19	332	P	P	23 54 52.9	+0.6
	comp=E,1.2nm,0.8s,baz=63,slow=9.5,SNR=2.4						
	comp=E,1.2nm,0.8s						

*SDD **06** 23:47:13.7±2.6, 18°.52N×69°.14W, h143^{km}±9^{km}, MD3.7, ML3.7, MW3.6*

*OSPL **06** 23:47:14.1±2.4, 18°.50N×69°.09W, h141^{km}±19^{km}, ML3.3*

ISC 06 23:47:10.2±1.4**, 18°.59N**±0°.06×**69°.12W**±0°.03**, h152^{km}**±9^{km}**, n47, σ2^{s}.10**/70**, 33C-2D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATOM	Hato Mayor del	0.32	309	⇑ePg	Pn	23 47 31.2	+0.1
HATOM				⇑eSg	Sn	23 47 46.1	-0.9
HATOM				IAML		23 47 46.2	
	comp=N,1µm,0.3s						
HIDR	Higuey Centro	0.39	89	⇑ePg	Pn	23 47 31.7	+0.4
HIDR				⇑eSg	Sn	23 47 46.2	-1.1
HIDR				IAML		23 47 48.5	
	comp=N,6µm,0.2s						
MIDR	Miches	0.40	10	⇑ePg	Pn	23 47 32.6	+1.2
MIDR				⇑eSg	Sn	23 47 47.7	+0.2
MIDR				IAML		23 47 48.1	
	comp=N,1µm,0.3s						
SMDR	Samana, DR	0.70	355	⇑ePg	Pn	23 47 34.0	+1.0
SMDR				⇑eSg	Sn	23 47 50.5	+0.2
SMDR				IAML		23 47 55.6	
	comp=N,1µm,0.7s						
PCDR	Punta Cana, DR	0.71	96	⇑ePg	Pn	23 47 34.0	+1.1
PCDR				⇑eSg	Sn	23 47 51.0	+0.8
PCDR				IAML		23 47 55.2	
	comp=N,914nm,0.5s						
SDD	Santo Domingo	0.76	260	⇑ePg	Pn	23 47 32.3	-1.0
SDD				⇑eSg	Sn	23 47 49.8	-1.1
SDD				IAML		23 47 50.2	
	comp=N,123nm,0.3s						
SDD	Santo Domingo	0.76	260	i P	Pn	23 47 34.0	+0.7
SDD				eS	Sn	23 47 49.6	-1.3
DR08	Loma La Naviza	0.93	294	⇑ePg	Pn	23 47 36.0	+1.4
DR08				⇑eSg	Sn	23 47 52.8	-0.5
DR08				IAML		23 47 55.5	
	comp=N,25µm,0.2s						
NADR	Nagua	1.03	318	⇑ePg	Pn	23 47 36.4	+1.0
NADR				⇑eSg	Sn	23 47 55.9	+1.2
NADR				IAML		23 48 00.1	
	comp=N,2µm,0.2s						
BANI	BANI	1.19	261	⇑ePg	Pn	23 47 38.3	+1.4
BANI				IAML		23 47 59.6	
	comp=N,3µm,0.2s						
CADR	Cabrera	1.32	324	⇓ePg	Pn	23 47 39.4	+1.3
CADR				⇑eSg	Sn	23 48 00.2	+0.6
CADR				IAML		23 48 01.0	
	comp=N,1µm,0.6s						
ABDR	Alto Bandera	1.44	279	⇑ePg	Pn	23 47 41.5	+1.8
ABDR				IAML		23 48 06.1	
	comp=N,341nm,0.4s						
SC01	Santiago de lo	1.73	299	⇑ePg	Pn	23 47 45.6	+3.2
SC01				IAML		23 48 14.9	
	comp=N,308nm,0.5s						
SC01	Santiago de lo	1.73	299	i P	Pn	23 47 45.2	+2.8
SC01				eS	Sn	23 48 10.1	+3.0
SC01				IAML		23 48 17.2	
	comp=Z,166nm,0.7s						
SODR	Sosua Marina B	1.80	310	IAML		23 48 26.7	
	comp=N,264nm,0.5s						
AGPR	Aguadilla, PR	1.91	93	⇑ePg	Pn	23 47 46.6	+2.2
AGPR				IAML		23 48 20.5	
	comp=N,388nm,0.3s						
AGPR	Aguadilla, PR	1.91	93	i P	Pn	23 47 46.8	+2.4
AGPR				IAML		23 48 17.0	
	comp=Z,181nm,0.2s						
CRPR	Cabo Rojo, PR	2.00	107	⇑ePg	Pn	23 47 46.5	+1.1
CRPR				⇑eSg	Sn	23 48 13.3	+0.8
CRPR				IAML		23 48 22.3	
	comp=N,88nm,0.7s						
CRPR	Cabo Rojo, PR	2.00	107	i P	Pn	23 47 46.7	+1.3
CRPR				IAML		23 48 22.1	
	comp=Z,154nm,0.3s						
MLPR	Magueyes Islan	2.07	107	⇑ePg	Pn	23 47 47.1	+0.9
MLPR				IAML		23 48 24.6	
	comp=N,31nm,0.7s						
SDDR	Presa de Saban	2.09	281	eP	Pn	23 47 49.4	+2.9
SDDR				eS	Sn	23 48 15.9	+1.4
SDDR				IAML		23 48 21.2	
	comp=N,143nm,0.0s						
SDDR				IAML		23 48 24.3	
	comp=N,107nm,0.5s						
SDDR	Presa de Saban	2.09	281	eP	Pn	23 47 50.5	+4.0
SDDR	Presa de Saban	2.09	281	⇑ePg	Pn	23 47 49.2	+2.7
SDDR				IAML		23 48 24.5	
	comp=N,114nm,0.8s						
SDDR	Presa de Saban	2.09	281	i P	Pn	23 47 49.3	+2.7
SDDR				IAML		23 48 25.9	
	comp=Z,69nm,0.4s						
PODR	Polo	2.09	259	⇑ePg	Pn	23 47 48.8	+2.1
PODR				⇑eSg	Sn	23 48 14.7	-0.1
PODR				IAML		23 48 18.8	
	comp=N,362nm,0.2s						
PODR	Polo	2.09	259	i P	Pn	23 47 48.8	+2.1
PODR				eS	Sn	23 48 13.7	-1.1
LUDR	Luperon	2.16	307	ePg	Pn	23 47 48.8	+1.5
LUDR				⇑eSg	Sn	23 48 17.7	+1.8
LUDR				IAML		23 48 19.8	
	comp=N,818nm,0.2s						
LODU1	El Espartillar	2.24	264	i P	Pn	23 47 50.5	+2.2
LODU1				IAML		23 48 20.6	
	comp=Z,182nm,0.3s						
AOPR	Arecibo Observ	2.26	96	eP	Pn	23 47 50.1	+1.6
AOPR				eS	Sn	23 48 18.7	+0.6
AOPR	Arecibo Observ	2.26	96	⇑ePg	Pn	23 47 49.6	+1.1
AOPR				⇓eSg	Sn	23 48 18.6	+0.6
AOPR				IAML		23 48 27.2	
	comp=N,752nm,0.3s						
CELP	Cerrillos	2.47	102	⇑ePg	Pn	23 47 52.5	+1.5
CELP				IAML		23 48 31.1	
	comp=N,125nm,0.3s						
LOBH	Bahia de las A	2.50	254	i P	Pn	23 47 53.1	+1.8
LOBH				eS	Sn	23 48 22.5	-0.7
LOBH				IAML		23 48 28.1	
	comp=Z,147nm,0.5s						
JIDR	Jimani	2.59	268	⇑ePg	Pn	23 47 53.3	+0.8
JIDR				IAML		23 48 27.8	
	comp=N,69nm,0.3s						
MCDR	Montecristi	2.72	299	IAML		23 48 34.6	
	comp=N,141nm,0.5s						
SJG	San Juan	2.86	99	e	Pn	23 47 58.2	+2.3
JAKH	Jacmel	3.24	264	eP	Pn	23 48 03.0	+2.3
GRTK	Grand Turk	3.47	327	eP	Pn	23 48 04.9	+1.3
GRTK				eS	Sn	23 48 44.0	-1.1
GRTK				IAML		23 48 45.5	
	comp=N,280nm,0.3s						
GRTK				IAML		23 48 47.6	
	comp=N,141nm,0.1s						
GRTK	Grand Turk	3.47	327	⇑ePg	Pn	23 48 04.7	+1.2
GRTK				⇑eSg	Sn	23 48 43.6	-1.5
GRTK				IAML		23 48 47.5	
	comp=N,138nm,0.1s						
GRTK	Grand Turk	3.47	327	i P	Pn	23 48 05.4	+1.8
GRTK				eS	Sn	23 48 44.3	-0.7
GRTK				IAML		23 48 46.6	
	comp=Z,32nm,0.2s						
MASC	Masc	5.07	289	eP	Pn	23 48 24.8	+0.2
QMBU	Quimbuelo	5.60	288	eP	Pn	23 48 30.6	-1.1
QMBU				eS	Sn	23 49 31.1	-4.3
QMBU				IAML		23 49 35.0	
	comp=N,15nm,0.2s						
QMBU				IAML		23 49 35.7	
	comp=E,10nm,0.2s						
GTBY	Guantanamo Bay	5.81	284	eP	Pn	23 48 33.6	-0.8
GTBY				eS	Sn	23 49 37.9	-2.4
GTBY				IAML		23 49 41.0	
	comp=E,7.0nm,0.7s						
GTBY				IAML		23 49 43.1	
	comp=E,4.7nm,0.5s						
NMDO	Nuevo Mundo	5.86	291	eP	Pn	23 48 33.6	-1.5
NMDO				eS	Sn	23 49 37.2	-4.3
NMDO				IAML		23 49 41.1	
	comp=E,5.9nm,0.3s						
NMDO				IAML		23 49 43.2	
	comp=N,8.7nm,0.1s						
ANWB	Willy Bob	7.04	96	eP	Pn	23 48 48.9	-1.8
ANWB	Willy Bob	7.04	96	eS	Sn	23 50 01.7	-7.9
ANBD	Bethesda, Anti	7.17	101	eP	Pn	23 48 53.6	+1.1
ANBD	Bethesda, Anti	7.17	101	eS	Sn	23 50 08.6	-4.4

*JMA **07** 00:01:18.7±0.5, 44°N±2°×14°8E±°, h0^{km}, MV3.5/15, E OFF HOKKAIDO*

*SKHL **07** 00:01:19.1±0.2, 44°.10N×148°.30E, h36^{km}±2^{km}, mb4.6/4*

ISC 07 00:01:16.6±3.2**, 44°.1N**±0°.1×**148°.5E**±0°.2**, h47^{km}, n15, σ1^{s}.54**/28**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	1.21	262	i P	Pn	00 01 37.4	+0.3
SHO				AMB	AMB	00 01 39.7	
	150nm,0.4s						
SHO				i S	Sn	00 01 51.0	-1.4
SHO				A	A	00 01 53.7	
	640nm,0.3s						
SHO				A	A	00 01 53.7	
	630nm,0.3s						
KUR	Kuril'sk	1.27	340	eP	Pn	00 01 38.0	+0.2
KUR				AMB	AMB	00 01 39.1	
	140nm,0.3s						
KUR				eS	Sn	00 01 52.3	-1.3
KUR				A	A	00 01 58.2	
	260nm,0.3s						
KUR				A	A	00 01 58.2	
	270nm,0.3s						
YUK	Yuzh-Kuril'sk	1.90	270	eP	Pn	00 01 46.9	+0.5
YUK				AMB	AMB	00 01 52.0	
	190nm,0.2s						

YUK				eS	Sn	00 02 07.7	-1.4
YUK				A	A	00 02 14.3	
	590nm,0.4s						
YUK				A	A	00 02 14.3	
	320nm,0.4s						
NEM2	Nemuro 2	2.11	252	P	Pn	00 01 49.5	+0.2
NEM2				eS	Sn	00 02 11.6	-2.6
NMR	Nemuro--Hokkai	2.12	252	eP	Pn	00 01 49.7	+0.3
NMR				iS	Sn	00 02 12.6	-1.9
GLVR	Golovnino	2.17	263	eP	Pn	00 01 51.1	+0.9
GLVR				AMB	AMB	00 01 54.2	
	60nm,0.2s						
GLVR				iS	Sn	00 02 15.4	-0.4
GLVR				A	A	00 02 20.3	
	380nm,0.4s						
GLVR				A	A	00 02 20.3	
	570nm,0.4s						
JRA	Rausu	2.43	269	P	Pn	00 01 57.0	+3.2
JRA				eS	Sn	00 02 22.6	+0.3
JNSB	Nemuroshibetsu	2.53	265	eP	Pn	00 01 56.2	+1.0
JNSB				eS	Sn	00 02 24.1	-0.7
JKHN	Kushirohamanak	2.61	249	P	Pn	00 01 56.9	+0.7
JKHN				S	Sn	00 02 24.3	-2.2
JNK	Nakash	2.77	262	eP	Pn	00 01 59.4	+1.0
JNK				eS	Sn	00 02 29.1	-1.5
AKK	Akkeshi	2.85	250	eP	Pn	00 02 01.3	+1.8
JAK	Akkeshi	2.95	250	eP	Pn	00 02 01.4	+0.5
JAK				eS	Sn	00 02 33.4	-1.7
JTKR	Abashiri--Toko	3.31	270	eP	Pn	00 02 07.7	+1.9
JAR	Ashorobuto	3.51	259	P	Pn	00 02 10.3	+1.8
JAR				eS	Sn	00 02 48.7	-0.1
JCH	Churui	4.01	251	eP	Pn	00 02 17.8	+2.4
JCH				eS	Sn	00 02 59.7	-1.3

*IDC **07** 00:06:22.0±1.0, 34°.66S×73°.61W, h0^{km}, mb4.2/4, mbtmp4.0/8, ML3.9/4, MS3.2/5, Error ellipse: s-maj=36.0km s-min=19.2km az=90.0*

*GUC **07** 00:06:24.7±0.8, 34°.59S×73°.40W, h34^{km}±5^{km}, ML3.9*

*SJA **07** 00:06:25.1±1.2, 34°.42S×73°.23W, h15^{km}±74^{km}, ML3.6, MW3.4*

ISC 07 00:06:27.0±0.9, **34°.61S**±0°.05×**73°.38W**±0°.08, **h35^{km}, n54, σ1^{s}33**/67, **mb4.3**/4, **MS3.5**/3, **17C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	Hualane	1.26	109	⇑iP	Pn	00 06 46.8	-1.4
GO05				iS	Sn	00 07 02.4	-1.4
GO05				IAML		00 07 04.7	
	comp=N,2μm,0.1s						
VA05	Santo Domingo	1.74	58	⇑iP	Pn	00 06 53.2	-1.5
VA05				iS	Sn	00 07 15.3	-0.5
VA05				IAML		00 07 17.2	
	comp=N,3μm,0.3s						
BO01	Tunca	1.91	84	⇑iP	Pn	00 06 55.9	-1.1
MT01	Popeta	1.91	68	⇑iP	Pn	00 06 55.5	-1.6
MT01				iS	Sn	00 07 19.2	-0.7
MT01				IAML		00 07 20.3	
	comp=E,947nm,0.2s						
ML02	Panimavida	1.98	126	⇑iP	Pn	00 06 57.4	-0.5
ML02				iS	Sn	00 07 21.3	-0.2
ML02				IAML		00 07 27.8	
	comp=E,1μm,0.5s						
BO02	Sierra Bellavi	2.15	96	⇑iP	Pn	00 07 00.0	-0.4
BO02				iS	Sn	00 07 25.9	0.0
BO02				IAML		00 07 28.1	
	comp=N,2μm,0.2s						
MT09	Talagante	2.15	68	⇑iP	Pn	00 06 59.1	-1.4
MT09				iS	Sn	00 07 25.6	-0.4
MT09				IAML		00 07 29.2	
	comp=N,746nm,0.1s						
MT02	Curacav	2.30	55	⇑iP	Pn	00 07 00.8	-1.7
MT02				iS	Sn	00 07 28.7	-0.8
MT02				IAML		00 07 31.5	
	comp=N,291nm,0.4s						
BO04	La Punta	2.37	76	⇑iP	Pn	00 07 03.1	-0.4
BO04				eS	Sn	00 07 31.1	-0.3
BO04				IAML		00 07 35.8	
	comp=N,418nm,0.7s						
MT12	Pirque	2.50	70	⇑iP	Pn	00 07 04.8	-0.5
MT12				iS	Sn	00 07 34.2	-0.4
MT12				IAML		00 07 41.0	
	comp=E,753nm,0.4s						
MT05	Renca	2.51	62	iP	Pn	00 07 04.4	-1.0
MT05				iS	Sn	00 07 34.4	-0.4
MT05				IAML		00 07 38.8	
	comp=E,886nm,0.2s						
ROC1	El Roble	2.55	51	eP	Pn	00 07 05.1	-1.1
ROC1				eS	Sn	00 07 36.1	-0.1
ROCH	El Roble	2.56	51	⇑iP	Pn	00 07 04.8	-1.4
ROCH				IAML		00 07 40.3	
	comp=N,506nm,0.3s						
BI02	San Fabin de	2.67	141	iP	Pn	00 07 06.4	-1.2
BI02				iS	Sn	00 07 35.2	-3.6
BI02				IAML		00 07 39.4	
	comp=N,419nm,0.4s						
PEL	Peldehue	2.67	58	⇑iP	Pn	00 07 07.2	-0.5
PEL				eS	Sn	00 07 37.7	-1.1
PEL				IAML		00 07 41.6	
	comp=N,431nm,0.5s						
PEL	Peldehue	2.67	58	eP	Pn	00 07 07.2	-0.5
PEL				eS	Sn	00 07 38.1	-0.7
VA06	Catapilco	2.68	41	⇑iP	Pn	00 07 05.8	-1.9
VA06				iS	Sn	00 07 36.7	-2.2
VA06				IAML		00 07 40.4	
	comp=E,947nm,0.3s						
MT13	San Alfonso	2.71	72	iP	Pn	00 07 07.7	-0.4
MT10	Hacienda Santa	2.71	61	⇑iP	Pn	00 07 07.7	-0.6
MT10				iS	Sn	00 07 40.7	+0.8
MT10				IAML		00 07 44.9	
	comp=N,997nm,0.3s						
LMEL	Las Melosas	2.74	75	⇑iP	Pn	00 07 08.4	-0.2
FCH	Farellones	2.87	64	⇑iP	Pn	00 07 09.8	-0.7
FCH				iS	Sn	00 07 43.9	-0.1
FCH				IAML		00 07 47.1	
	comp=N,588nm,0.2s						
MT04	Ro Olivares	2.95	67	⇑iP	Pn	00 07 10.9	-0.7
MT04				iS	Sn	00 07 45.9	0.0
VA03	San Esteban	2.99	53	eP	Pn	00 07 10.9	-1.2
VA03				iS	Sn	00 07 46.1	-0.7
VA03				IAML		00 07 51.0	
	comp=E,816nm,0.3s						
VA03	San Esteban	2.99	53	eP	Pn	00 07 11.4	-0.6
VA03				eS	Sn	00 07 46.9	+0.2
AAGR	Agrelo	4.08	69	eP	Pn	00 07 28.4	+1.4
AAGR				IAML		00 08 29.8	
	comp=Z,37nm,1.0s						
AUSP	Uspallata	4.10	56	eP	Pn	00 07 29.1	+1.7
ARCO	CERRO ARCO	4.10	66	eP	Pn	00 07 29.8	+2.4
ARCO				IAML		00 08 28.0	
	comp=Z,36nm,0.6s						
RTLS	Leoncito	4.42	52	eP	Pn	00 07 33.1	+1.2
RTLS				IAML		00 08 34.1	
	comp=Z,83nm,0.4s						
H03S1	Juan Fernandez	4.64	278	T	T	00 12 18.5	
	baz=101,slow=73,SNR=10						
H03S3	Juan Fernandez	4.65	278	T	T	00 12 05.1	
	baz=101,slow=73,SNR=4.6						
H03S2	Juan Fernandez	4.66	278	T	T	00 12 05.9	
	baz=101,slow=73,SNR=7.6						
ZON	Zonda	4.99	54	eP	Pn	00 07 40.4	+1.0
CFA	Coronel Fontan	5.25	57	Pn	Pn	00 07 43.6	+0.6
	comp=Z,8.1nm,0.3s,baz=230,slow=11,SNR=133						
CFA				Sn	Sn	00 08 44.2	+1.8
	comp=Z,4.4nm,0.3s,baz=148,slow=21,SNR=5.1						
	comp=Z,21nm,0.3s						
RTLL	Cerro Villicun	5.26	53	eP	Pn	00 07 44.2	+1.0
ACCO	Cerro Coronel	5.42	43	eP	Pn	00 07 51.1	+5.5
AROD	Rodeo	5.53	38	eP	Pn	00 07 48.0	+0.9
ACDV	Cuesta del Vie	5.71	40	eP	Pn	00 07 50.6	+1.1
ACDV				IAML		00 08 59.7	
	comp=Z,18nm,0.5s						
PLCA	Paso Flores	6.51	161	Pn	Pn	00 07 59.9	-0.5
	comp=Z,0.7nm,0.3s,baz=323,slow=9.4,SNR=17						
PLCA				LR	LR	00 10 23.5	
	comp=Z,84nm,19.2s,baz=335,slow=37						
	comp=Z,3.1nm,0.5s						
AGUA	GUANDACOL	6.58	40	eP	Pn	00 08 01.5	+0.1
AGUA				IAML		00 09 19.5	
	comp=Z,32nm,0.4s						
VCA	Vinchina	7.33	38	eP	Pn	00 08 12.0	+0.3
VCA				IAML		00 09 44.9	
	comp=Z,21nm,0.4s						
ACLC	CERRO LA CRUZ	7.51	48	eP	Pn	00 08 08.3	-6.0
ACLC				IAML		00 09 44.4	
	comp=Z,5.6nm,1.1s						
CYA	Choya	8.92	48	eP	Pn	00 08 29.4	-4.0
CYA				IAML		00 09 55.5	
	comp=Z,3.5nm,0.6s						
FSA	Cafayete	10.61	39	eP	Pn	00 08 51.9	-4.8
CPUP	Villa Florida	16.10	63	Pn	P	00 10 14.1	+0.5
	comp=Z,0.1nm,0.3s,baz=105,slow=9.2,SNR=10						
CPUP				LR	LR	00 16 58.3	
	comp=Z,32nm,20.4s,baz=84,slow=39						
	comp=Z,2.1nm,0.8s						
LPAZ	La Paz	18.84	16	P	Pn	00 10 46.0	+0.7
	comp=Z,0.1nm,0.3s,baz=175,slow=8.2,SNR=7.2						
	comp=Z,1.9nm,0.8s						
BDFB	Brasilia	29.59	57	LR	LR	00 24 24.0	
	comp=Z,76nm,18.2s,baz=231,slow=36						
SNAA	Sanae	51.44	158	P	P	00 15 28.7	+0.4
	comp=Z,2.5nm,0.7s,baz=272,slow=8.1,SNR=8.9						
	comp=Z,2.5nm,0.7s						
QSPA	South Pole Qui	55.63	180	P	P	00 15 59.2	0.0
	comp=Z,4.2nm,0.9s,baz=118,slow=1.0,SNR=22						
	comp=Z,4.2nm,0.9s						
TXAR	Lajitas Array	69.74	332	P	P	00 17 33.9	+0.4
	comp=Z,0.7nm,0.6s,baz=151,slow=8.6,SNR=10						
	comp=Z,0.7nm,0.6s						
MAW	Mawson	72.91	164	P	P	00 17 52.5	+0.5
	comp=Z,3.1nm,1.1s,baz=255,slow=12,SNR=1.9						
	comp=Z,3.1nm,1.1s						
DBIC	Dimbokro	76.42	72	LR	LR	00 50 36.9	
	comp=Z,22nm,18.3s,baz=140,slow=35						
LBTB	Lobatse	83.05	115	LR	LR	00 48 28.5	
	comp=Z,26nm,21.5s,baz=159,slow=30						
BVAR	Borovoye Array	148.48	43	PKPbc	PKPbc	00 26 08.3	-1.1
	comp=Z,0.4nm,0.4s,baz=298,slow=2.5,SNR=3.2						
MKAR	Makanchi Array	158.00	49	PKPab	PKPab	00 26 53.8	+0.6
	comp=Z,0.3nm,0.6s,baz=291,slow=4.3,SNR=2.2						

*SDD **07** 00:26:53.3±2.5, 18°.18N×68°.29W, h200^{km}±23^{km}, MD3.5, ML2.1, MW2.3*

*RSPR **07** 00:27:06.8, 18°.57N×68°.32W, h41^{km}±15^{km}, MD2.7/3*

*NEIC **07** 00:27:06.6±0.7, 18°.6N±0°.1×68°.27W±0°.05, h35^{km}±2^{km}, ML2.3/10, Md2.7/3(RSPR), Error ellipse: s-maj=24.3km s-min=3.1km az=19.0*

ISC 07 00:26:59.9±1.3, **18°.5N**±0°.2×**68°.17W**±0°.06, **h150^{km}, n23, σ1^{s}90**/24, **8C-2D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HIDR	Higuey Centro	0.52	277	⇑eSg	Sn	00 27 39.6	+1.9
HIDR				IAML		00 27 40.0	
	comp=N,82nm,0.2s						
MIDR	Miches	0.95	299	⇑ePg	Pn	00 27 20.4	-3.8
MIDR				⇑eSg	Sn	00 27 43.3	+0.5
MIDR				IAML		00 28 22.1	
	comp=N,8.5nm,1.4s						
PRSN	Puerto Rico Se	1.02	107	Pn	Pn	00 27 26.3	+1.4
PRSN				IAML		00 28 02.2	
	comp=N,91nm,0.1s						
PRSN				IAML		00 28 10.4	
	comp=E,52nm,0.2s						
CRPR	Cabo Rojo, PR	1.13	117		Pn	00 27 27.5	+1.7
CRPR	Cabo Rojo, PR	1.13	117		Sn	00 27 43.0	-2.7
CRPR	Cabo Rojo, PR	1.13	117	⇓eP	Pn	00 27 27.0	+1.1
CRPR	Cabo Rojo, PR	1.13	117	eS	Sn	00 27 43.0	-2.7
CRPR	Cabo Rojo, PR	1.13	117	⇑eSg	Sn	00 27 43.3	-2.3
CRPR				IAML		00 28 25.1	
	comp=N,19nm,2.8s						
DR12	Loma Pena Alta	1.18	283	Pn	Pn	00 27 24.3	-2.1
HATOM	Hato Mayor del	1.18	283	ePg	Pn	00 27 24.4	-1.9
HATOM				IAML		00 28 04.7	
	comp=N,13nm,3.8s						
MLPR	Magueyes Islan	1.21	117	⇑eSg	Sn	00 27 45.4	-1.4
MLPR				IAML		00 28 27.7	
	comp=N,4.8nm,2.2s						
AOPR	Arecibo Observ	1.36	97		Pn	00 27 30.5	+2.4
AOPR					Sn	00 27 48.3	-1.3
AOPR	Arecibo Observ	1.36	97	IAML		00 27 49.4	
	comp=E,21nm,0.4s						
AOPR				IAML		00 27 52.2	
	comp=N,13nm,0.8s						
AOPR	Arecibo Observ	1.36	97	⇓eP	Pn	00 27 30.5	+2.4
AOPR	Arecibo Observ	1.36	97	eS	Sn	00 27 48.3	-1.3
AOPR	Arecibo Observ	1.36	97	ePg	Pn	00 27 25.9	-2.1
AOPR				⇑eSg	Sn	00 27 49.7	+0.1
AOPR				IAML		00 27 50.3	
	comp=N,9.0nm,0.5s						
UUPR	Utuado, UPR, P	1.41	101		Pn	00 27 30.7	+2.2
UUPR					Sn	00 27 49.8	-0.6
UUPR	Utuado, UPR, P	1.41	101	IAML		00 27 51.6	
	comp=N,66nm,0.4s						
UUPR				IAML		00 27 52.3	
	comp=E,59nm,0.3s						
UUPR	Utuado, UPR, P	1.41	101	⇑eP	Pn	00 27 30.7	+2.2
UUPR	Utuado, UPR, P	1.41	101	eS	Sn	00 27 49.8	-0.6
CELP	Cerrillos	1.58	106	⇑eSg	Sn	00 27 51.8	-1.8
CELP				IAML		00 28 35.1	
	comp=N,5.1nm,1.1s						
SDD	Santo Domingo	1.65	268	Pn	Pn	00 27 32.3	+1.2
BANI	BANI	2.08	267	Pn	Pn	00 27 37.7	+1.6

*IDC **07** 01:18:54.5±2.5, 22°.55N×143°.56E, h108^{km}±21^{km}, mb3.7/13, mbtmp4.1/15, Error ellipse: s-maj=47.1km s-min=13.3km az=78.0*

*NEIC **07** 01:18:56.7±1.8, 22°.56N±0°.05×143°.7E±0°.2, h133^{km}±7^{km}, mb4.4/20, Error ellipse: s-maj=21.0km s-min=6.2km az=75.0*

*JMA **07** 01:18:58.8±0.2, 22°.7N±0°.8×143°.3E±0°.9, h170^{km}, MV4.6/7, IOTO ISLANDS REGION*

ISC 07 01:18:55.3±0.7, **22°.52N**±0°.07×**143°.6E**±0°.1, **h118^{km}, n42, σ0^{s}86**/44, **mb4.2**/18, **Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	4.29	343	P	Pn	01 20 00.7	+2.0
JHH2				eS	Sn	01 20 48.7	+0.8
CBIJ	Chichi jima	4.73	345	P	Pn	01 20 06.2	+1.6
CBIJ				eS	Sn	01 20 58.9	+0.4
JCJ	Chichijima	4.73	345		Pn	01 20 06.0	+1.4
JCJ	Chichijima	4.73	345	P	Pn	01 20 04.2	-0.3
	40nm,0.3s,baz=108,slow=20,SNR=21						
JCJ				S	Sn	01 20 56.0	-2.4
	120nm,0.5s,baz=143,slow=20,SNR=12						
BSO1	Boso 1	12.31	350	eP	Pn	01 21 46.7	+0.7
JRY	Ryogami san	14.06	344	eP	Pn	01 22 08.4	-0.8
JGF	Kuroka	14.12	339	Pn	Pn	01 22 09.6	-0.4
MJAR	Matsushiro Arr	14.73	343	P	Pn	01 22 16.8	-1.0
	0.8nm,0.3s,baz=161,slow=12,SNR=5.8						
JMM	Marumori	15.49	352		P	01 22 28.4	-0.7
JMM				IAmb	IAmb	01 23 01.9	
	comp=Z,36nm,1.5s						
KSRS	Korea Array	20.10	321	P	P	01 23 19.6	0.0
	comp=Z,2.0nm,0.5s,baz=143,slow=9.4,SNR=22						
	comp=Z,2.0nm,0.5s						
KS19	Wonju Array Si	20.16	321	P	P	01 23 19.5	-0.8
KS19				IAmb	IAmb	01 23 37.7	
	comp=Z,27nm,1.4s						
YULB	Yu-li	20.54	277	P	P	01 23 24.7	+0.2
YULB				IAmb	IAmb	01 23 27.6	
	comp=Z,35nm,1.5s						
SSLB	Suanglung	20.85	278	P	Pn	01 23 29.3	-2.1
SSLB				IAmb	IAmb	01 23 32.0	
	comp=Z,21nm,1.4s						
KLR	Kul'dur	28.26	344	P	P	01 24 38.9	+1.7
	comp=Z,6.6nm,0.6s,baz=161,slow=7.3,SNR=30						
	comp=Z,6.6nm,0.6s						
SONM	Songino Array	38.95	320	P	P	01 26 10.0	+0.1
	comp=Z,0.5nm,0.6s,baz=119,slow=8.8,SNR=3.0						
	comp=Z,0.5nm,0.6s						
WB0	Warramunga Arr	42.97	193	P	P	01 26 42.5	-0.4
WR8	Warramunga Arr	43.14	193	P	P	01 26 43.7	-0.5
WR8				IAmb	IAmb	01 27 01.2	
	comp=Z,13nm,1.4s						
WRA	Warramunga Arr	43.16	193	P	P	01 26 44.3	0.0
	comp=Z,0.9nm,0.3s,baz=16,slow=9.3,SNR=16						
	comp=Z,0.9nm,0.3s						
FITZ	Fitzroy Crossi	44.02	205	P	P	01 26 50.7	-0.5
ASAR	Alice Springs	46.86	192	P	P	01 27 14.2	+0.5
	comp=Z,0.3nm,0.5s,baz=15,slow=14,SNR=5.9						
	comp=Z,0.3nm,0.5s						
UNV	Unalaska Valle	48.73	37	P	P	01 27 28.0	+0.2
ZALV	Zalesovo Beam	53.80	321	P	P	01 28 05.2	-0.4
	comp=Z,1.0nm,0.4s,baz=112,slow=9.0,SNR=5.7						
	comp=Z,1.0nm,0.4s						
STKA	Stephens Creek	54.12	182	P	P	01 28 08.7	+0.6
STKA	Stephens Creek	54.12	182	P	P	01 28 08.4	+0.3
	comp=Z,0.8nm,0.4s,baz=358,slow=5.5,SNR=3.5						
	comp=Z,0.8nm,0.4s						
MK31	Makanchi Array	54.42	312	P	P	01 28 10.8	+0.5
MKAR	Makanchi Array	54.42	312	P	P	01 28 10.8	+0.6
	comp=Z,1.1nm,0.6s,baz=87,slow=8.6,SNR=9.3						
	comp=Z,1.1nm,0.6s						
MAKZ	Makanchi	54.64	312	P	P	01 28 12.2	+0.4
KURK	Kurchatov	57.13	317	P	P	01 28 29.7	+0.2
KURK				IAmb	IAmb	01 28 30.3	
	comp=Z,3.3nm,0.9s						
KURBB	Kurchatov Arra	57.18	317	P	P	01 28 29.9	+0.1
	comp=Z,5.0nm,0.8s,baz=94,slow=7.7,SNR=46						
	comp=Z,5.0nm,0.8s						
BOOM	Boomskoye usch	58.91	307	P	P	01 28 42.2	-0.1
BVAR	Borovoye Array	62.29	319	P	P	01 29 05.2	+0.3
	comp=Z,4.9nm,0.6s,baz=90,slow=7.5,SNR=27						
	comp=Z,4.9nm,0.6s						
BRVK	Borovoye	62.36	319	P	P	01 29 04.8	-0.4
BRVK				IAmb	IAmb	01 29 06.3	
	comp=Z,2.6nm,0.8s						
KBL	Kabul	65.27	299	P	P	01 29 24.6	-0.3
KBL				IAmb	IAmb	01 29 25.4	
	comp=Z,2.4nm,0.6s						
G31M	Satah River	66.44	25	P	P	01 29 31.6	+0.1
G31M				IAmb	IAmb	01 30 10.5	
	comp=Z,7.0nm,1.4s						
ARTI	Arti	68.93	324	P	P	01 29 46.8	-0.6
ABKAR	Akbulak array	69.22	316	P	P	01 29 49.1	-0.2
ARCES	ARCESS Array B	78.27	342	P	P	01 30 42.1	+0.4
	comp=Z,0.6nm,0.5s,baz=65,slow=6.3,SNR=1.7						
	comp=Z,0.6nm,0.5s						
RYN	Ryan	82.11	52	P	P	01 31 02.6	-0.6
RYN				IAmb	IAmb	01 31 03.2	
	comp=Z,4.7nm,0.7s						
FIA1	FINESS Array S	82.60	335	P	P	01 31 03.8	-1.3
FINES	FINESS Array B	82.60	335	P	P	01 31 04.2	-0.8
	comp=Z,0.6nm,0.4s,baz=63,slow=4.5,SNR=20						
	comp=Z,0.6nm,0.4s						
HFS	Hagfors	88.12	337	P	P	01 31 30.8	-1.6
	comp=Z,0.6nm,0.4s,baz=54,slow=4.9,SNR=8.5						
	comp=Z,0.6nm,0.4s						
PLCA	Paso Flores	146.01	130	PKPbc	PKPab	01 38 22.6	+0.4
	comp=Z,1.0nm,0.8s,baz=211,slow=4.2,SNR=3.0						

*IDC **07** 01:24:58.9±1.4, 56°.45N×148°.60W, h0^{km}, mb3.7/8, mbtmp3.7/13, ML3.6/5, MS3.2/23, Error ellipse: s-maj=27.7km s-min=22.2km az=165.0*

*NEIC **07** 01:24:58.0±2.2, 56°.46N±0°.04×148°.6W±0°.1, h10^{km}±2^{km}, mb4.2/5, ML3.9/88, ML3.7(AEIC), Error ellipse: s-maj=11.2km s-min=4.5km az=121.0*

*AEIC **07** 01:25:03.7±2.6, 56°.54N±0°.08×148°.60W±0°.10, h11^{km}±7^{km}, Error ellipse: s-maj=11.8km s-min=7.2km az=163.0*

ISC 07 01:24:58.7±0.7, **56°.50N**±0°.07×**148°.57W**±0°.05, **h10^{km}, n138, σ1^{s}68**/100, **mb3.9**/10, **MS3.1**/19, **Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDAK	Kodiak Island	2.54	302		Pn	01 25 39.1	-0.8
KDAK				Sn	Sn	01 26 06.7	-4.1
KDAK	Kodiak Island	2.54	302	Pn	Pn	01 25 39.1	-0.8
	12nm,0.3s,baz=122,slow=4.1,SNR=54						
KDAK				Sn	Sn	01 26 07.4	-3.4
	9.9nm,0.3s,baz=44,slow=21,SNR=16						
KDAK				LR	LR	01 26 53.3	
	comp=Z,596nm,20.2s,baz=102,slow=45						
	50nm,0.5s						
OHAK	Old Harbor	2.69	288		Pn	01 25 40.9	-1.1
SYI	Shuyak Island	2.95	317		Pn	01 25 45.1	-0.5
SII	Sitkinak Islan	3.11	273		Pn	01 25 46.6	-1.2
SII				IAML		01 26 32.3	
	comp=E,322nm,0.8s						
SII				IAML		01 26 35.4	
	comp=N,380nm,0.8s						
SII	Sitkinak Islan	3.11	273		Sn	01 26 21.4	-3.6
Q23K	Middleton Isla	3.17	21		Pn	01 25 47.6	-1.0
Q23K				IAML		01 26 31.6	
	comp=E,338nm,0.1s						
CNPM	China Poot	3.35	336		Pn	01 25 50.5	-0.6
CNPM	China Poot	3.35	336		Sn	01 26 28.5	-2.4
R18K	Karluk	3.39	291		Pn	01 25 51.3	-0.3
R18K					Sn	01 26 26.9	-4.9
R18K	Karluk	3.39	291	IAML		01 26 29.8	
	comp=N,367nm,0.5s						
R18K				IAML		01 26 36.6	
	comp=E,360nm,0.4s						
BRSE	Bradley Lake S	3.45	341		Pn	01 25 51.7	-0.8
BRLK	Bradley Lake	3.50	340		Pn	01 25 52.2	-1.0
HOM	Homer	3.56	334		Pn	01 25 53.6	-0.4
HOM				IAML		01 27 07.0	
	comp=N,281nm,0.9s						
P23K	Montague Islan	3.57	9		Pn	01 25 53.3	-0.8
P23K	Montague Islan	3.57	9	IAML		01 26 40.5	
	comp=N,142nm,0.8s						
P23K				IAML		01 26 43.7	
	comp=E,170nm,0.7s						
SEW	Seward	3.65	353		Pn	01 25 54.6	-0.5
Q19K	Cape Douglas,	3.65	314		Pn	01 25 56.0	+0.7
KAHG	Katmai Hook Gl	3.79	304		Pn	01 25 57.6	+0.3
AU22	Augustine Moun	3.85	320		Pn	01 25 57.6	-0.3
CHIR	Chirikof Islan	4.00	263		Pn	01 26 00.4	+0.4
CHIR					Sn	01 26 42.1	-4.7
CHIR	Chirikof Islan	4.00	263	IAML		01 26 45.8	
	comp=N,177nm,0.8s						
CHIR				IAML		01 26 46.9	
	comp=E,156nm,0.8s						
P19K	Oil Pt	4.02	324		Pn	01 26 00.0	-0.3
P19K				IAML		01 26 48.4	
	comp=N,243nm,0.5s						
ACHA	Angle Creek He	4.04	298		Pn	01 26 01.7	+1.1
O22K	Cooper Landing	4.04	352		Pn	01 26 01.0	+0.4
HIN	Hinchinbrook I	4.06	15		Pn	01 26 00.5	-0.4
HIN				IAML		01 26 48.9	
	comp=N,237nm,0.6s						
HIN				IAML		01 26 50.4	
	comp=E,190nm,1.0s						
HIN	Hinchinbrook I	4.06	15		Sn	01 26 44.5	-3.9
KAIM	Kayak Island	4.08	31		Pn	01 26 00.9	-0.2
SLKM	Skilak Lake	4.12	349		Pn	01 26 00.8	-0.8
SLKM				IAML		01 26 48.1	
	comp=N,113nm,0.4s						
SLKM				IAML		01 26 51.6	
	comp=E,127nm,0.5s						
ILSW	Iliamna Southw	4.25	327	IAML		01 26 59.1	
	comp=E,105nm,0.7s						
ILSW				IAML		01 27 09.8	
	comp=N,80nm,0.7s						
EYAK	Cordova Ski Ar	4.33	19	IAML		01 26 54.6	
	comp=N,167nm,0.7s						
EYAK				IAML		01 26 58.1	
	comp=E,135nm,0.8s						
PWL	Port Wells	4.38	2	IAML		01 26 56.1	
	comp=E,92nm,0.5s						
PWL				IAML		01 26 57.7	
	comp=N,85nm,0.7s						
SUCK	Suckling Hills	4.39	33	IAML		01 26 59.4	
	comp=E,136nm,0.6s						
SUCK				IAML		01 27 09.1	
	comp=N,167nm,0.7s						
FID	Port Fidalgo	4.41	14		Pn	01 26 04.9	-0.6
FID	Port Fidalgo	4.41	14	IAML		01 27 07.4	
	comp=N,72nm,0.6s						
FID				IAML		01 27 09.4	
	comp=E,87nm,0.7s						
GLI	Glacier Island	4.46	9	IAML		01 26 56.3	
	comp=N,63nm,0.7s						
GLI				IAML		01 27 05.5	
	comp=E,91nm,0.6s						
RED	Redoubt Volcan	4.51	332	IAML		01 27 08.2	
	comp=N,105nm,0.6s						
RED				IAML		01 27 13.1	
	comp=E,75nm,0.7s						
P18K	Big Mountain,	4.58	312		Pn	01 26 07.5	-0.5
O18K	Koktuh Hills	4.86	317	IAML		01 27 11.3	
	comp=N,70nm,0.8s						
DIV	Divide	4.87	16	IAML		01 27 24.6	
	comp=N,51nm,0.7s						
BMRM	Bremner River	4.94	23	IAML		01 27 20.5	
	comp=N,68nm,0.7s						
BMRM				IAML		01 27 25.0	

	comp=E,73nm,0.7s						
MESA	MESA	5.08	41		Pn	01 26 14.4	-0.6
MESA	MESA	5.08	41	IAML		01 29 33.8	
	comp=E,113nm,0.4s						
SUA	Susitna One	5.11	348	IAML		01 27 21.1	
	comp=E,41nm,1.0s						
PMR	Palmer	5.12	357	IAML		01 27 11.3	
	comp=N,46nm,1.0s						
PMR				IAML		01 27 12.8	
	comp=E,56nm,0.8s						
CRQM	Cirque	5.13	31	IAML		01 27 19.8	
	comp=E,80nm,0.8s						
CRQM				IAML		01 27 24.4	
	comp=N,89nm,0.8s						
KLU	Klutina	5.20	14	IAML		01 27 18.7	
	comp=E,51nm,0.9s						
KLU				IAML		01 27 24.9	
	comp=N,53nm,1.0s						
TGL	Tana Glacier	5.22	33	IAML		01 27 14.9	
	comp=N,76nm,0.5s						
YAH	Yahtse	5.28	40		Pn	01 26 17.4	-0.4
YAH	Yahtse	5.28	40	IAML		01 27 30.2	
	comp=N,52nm,0.9s						
YAH				IAML		01 27 30.5	
	comp=E,35nm,0.8s						
GHO	Glory Hole Cre	5.30	358		Pn	01 26 18.1	+0.3
CHX	Chaix Hills	5.32	45		Pn	01 26 18.5	+0.4
N19K	Bonanza Creek	5.32	327		Pn	01 26 17.2	-0.9
ANPB	Aniakchak Plen	5.37	277		Pn	01 26 18.6	-0.2
SAMH	Samovar Hills	5.49	45		Pn	01 26 20.3	-0.2
P16K	Nushagak River	5.64	301		Pn	01 26 22.0	-0.6
MCARA	McCarthy VSAT	5.68	28		Pn	01 26 22.4	-0.7
PNL	Peninsula	5.81	53		Pn	01 26 25.1	+0.2
BCPM	Bancas Point	5.86	50		Pn	01 26 25.6	+0.1
VNHG	Veniaminof 1	5.89	272		Pn	01 26 26.6	+0.4
WACK	Wrangell Chich	5.92	20		Pn	01 26 26.2	-0.3
O16K	Kokwok River B	5.93	306		Pn	01 26 27.0	+0.5
HARP	HAARP	6.17	15		Pn	01 26 30.0	+0.2
CNBA	Chernabura Isl	6.46	260		Pn	01 26 33.6	-0.1
O29M	Mount Kennedy	6.49	50		Pn	01 26 34.8	+0.4
P29M	Windy Craggy	6.55	57		Pn	01 26 35.2	+0.2
O15K	Ungalikthiuk R	6.58	299		Pn	01 26 35.8	+0.3
DHY	Denali Highway	6.63	5		Pn	01 26 35.9	-0.3
M27K	Edge Creek, AK	6.80	27		Pn	01 26 37.6	-0.9
N15K	Kwethluk River	7.09	306		Pn	01 26 42.9	+0.4
BVCY	Beaver Creek	7.11	30		Pn	01 26 42.9	+0.1
PLBC	Pleasant Camp	7.14	60		Pn	01 26 43.7	+0.7
CAST	Castle Rocks	7.16	347		Pn	01 26 42.3	-1.1
HYT	Haines Junctio	7.22	48		Pn	01 26 45.3	+1.0
RIDG	Independent Ri	7.50	13		Pn	01 26 49.5	+1.4
L16K	Owhat River	7.66	317		Pn	01 26 47.8	-2.4
N30M	Aishikik Lake	7.74	45		Pn	01 26 51.6	+0.3
O30N	Mendenhall	7.79	51		Pn	01 26 51.8	-0.3
R32K	Eaglecrest	7.80	71		Pn	01 26 52.5	+0.3
M29M	Somme Creek	7.87	37		Pn	01 26 53.2	0.0
J20K	Nowinta River	8.18	343		Pn	01 26 57.3	-0.1
N31M	Braeburn, Yuko	8.28	48		Pn	01 27 00.1	+1.4
ILAR	Eielson Array	8.34	5	Pn	Pn	01 27 00.3	+0.7
	comp=E,0.3nm,0.3s,baz=186,slow=13,SNR=11						
ILAR				Sn	Sn	01 28 29.1	-4.7
	comp=E,0.7nm,0.3s,baz=187,slow=25,SNR=9.8						
	comp=E,0.7nm,0.5s						
L29M	L29M	8.46	34		Pn	01 27 01.5	+0.3
U33K	Whale Pass	8.60	86		Pn	01 27 01.0	-2.1
P33M	Teslin, Yukon	9.07	59		Pn	01 27 09.7	0.0
K29M	Barlow Dome	9.19	32		Pn	01 27 11.5	+0.3
I27K	Kandik River	9.73	17		Pn	01 27 18.1	-0.5
R33M	Jennings River	9.79	65		Pn	01 27 20.2	+0.6
J30M	Hart River	10.08	32		Pn	01 27 25.1	+1.6
DLBC	Dease Lake	10.17	71		Pn	01 27 26.3	+1.6
DLBC	Dease Lake	10.17	71	Pn	Pn	01 27 26.5	+1.8
	comp=E,1.0nm,0.3s,baz=214,slow=10,SNR=8.3						
DLBC				Sn	Sn	01 29 13.3	-5.5
	comp=E,0.3nm,0.3s,baz=240,slow=26,SNR=1.6						
	comp=E,2.2nm,0.3s						
G24K	Hadweenzic Riv	10.25	2		Pn	01 27 25.6	-0.2
G23K	Bananza Creek	10.27	357		Pn	01 27 26.8	+0.7
G21K	Allakaket	10.32	349		Pn	01 27 27.1	+0.4
I30M	Mount Dempster	10.56	29		Pn	01 27 32.2	+2.2
MMPY	Sheldon Lake,	10.69	48		Pn	01 27 33.1	+1.4
BBB	Bella Bella	12.68	101	LR	LR	01 31 46.6	
	comp=E,150nm,18.6s,baz=338,slow=32						
INK	Inuvik	13.69	24	Pn	Pn	01 28 13.8	+1.2
	comp=E,0.1nm,0.3s,baz=116,slow=16,SNR=2.4						
INK				LR	LR	01 33 50.9	
	comp=E,70nm,18.9s,baz=231,slow=39						
	comp=E,1.6nm,0.8s						
C36M	Paulatuk	16.86	30	Pn	Pn	01 28 54.0	-0.4
C36M				IAmb	IAmb	01 29 37.9	
	comp=Z,18nm,1.5s						
ADK	Adak	17.02	266	Pn	Pn	01 28 55.0	-1.6
A04D	Lummi Island	17.45	106	Pn	Pn	01 29 00.5	-1.5
A04D				IAmb	IAmb	01 29 01.6	
	comp=Z,31nm,0.7s						
YKA	Yellowknife Ar	18.09	57	P	P	01 29 11.8	+1.7
	comp=Z,0.1nm,0.3s,baz=270,slow=11,SNR=8.6						
YKA				LR	LR	01 35 56.5	
	comp=Z,50nm,18.4s,baz=351,slow=36						
	comp=Z,1.4nm,0.9s						
A36M	Sachs Harbour	18.33	23		Pn	01 29 10.1	-2.5
NEW	Newport	20.74	100	LR	LR	01 36 32.2	
	comp=Z,77nm,20.5s,baz=312,slow=33						
BILL	Bilibino	23.35	318	P	P	01 30 08.1	+1.3
BILL				IAmb	IAmb	01 30 09.5	
	comp=Z,5.1nm,0.9s						
ELK	Elko	26.74	112	LR	LR	01 39 23.7	
	comp=Z,47nm,20.9s,baz=312,slow=32						
PDAR	Pinedale Array	28.32	102	LR	LR	01 40 38.8	
	comp=Z,13nm,18.5s,baz=296,slow=33						
SEY	Seymchan	29.49	307	LR	LR	01 44 03.9	
	comp=Z,72nm,18.3s,baz=44,slow=39						
PETK	Petropavlovsk-	30.49	287	LR	LR	01 43 51.7	
	comp=Z,19nm,19.1s,baz=68,slow=37						
MA2	Magadan	31.28	301	LR	LR	01 44 07.8	
	comp=Z,61nm,20.3s,baz=88,slow=37						
PFO	Pinyon Flats O	31.74	122	LR	LR	01 41 46.3	
	comp=Z,67nm,19.0s,baz=34,slow=32						
ANMO	Albuquerque	35.66	109	LR	LR	01 44 55.5	
	comp=Z,32nm,18.3s,baz=44,slow=34						
TIXI	Tiksi	35.70	327	LR	LR	01 46 35.1	
	comp=Z,23nm,19.6s,baz=172,slow=36						
FRB	Frobisher Bay	38.00	45	LR	LR	01 47 58.0	
	comp=Z,68nm,19.2s,baz=29,slow=36						
YAK	Yakutsk	39.52	313	LR	LR	01 49 34.9	
	comp=Z,29nm,18.8s,baz=59,slow=37						
TXAR	Lajitas Array	41.53	112	LR	LR	01 49 30.2	
	comp=Z,16nm,18.2s,baz=334,slow=35						
SFJD	Kangerlussuaq	42.69	35	LR	LR	01 50 38.8	
	comp=Z,108nm,18.1s,baz=346,slow=36						
KLR	Kul'dur	46.09	296	LR	LR	01 55 10.9	
	comp=Z,26nm,18.0s,baz=35,slow=39						
TKL	Tuckaleechee C	47.53	87	LR	LR	01 53 33.1	
	comp=Z,37nm,20.4s,baz=342,slow=36						
H11N2	WAKE ISLAND Hy	49.33	241	T	T	02 27 28.2	
	baz=30,slow=76,SNR=10.0						
H11N3	WAKE ISLAND Hy	49.34	241	T	T	02 27 48.8	
	baz=30,slow=76,SNR=6.4						
H11N1	WAKE ISLAND Hy	49.35	241	T	T	02 27 41.4	
	baz=30,slow=76,SNR=6.6						
H11S1	WAKE ISLAND Hy	50.47	240	T	T	02 28 58.9	
	baz=29,slow=76,SNR=12						
H11S2	WAKE ISLAND Hy	50.49	240	T	T	02 29 20.4	
	baz=29,slow=76,SNR=3.7						
H11S3	WAKE ISLAND Hy	50.49	240	T	T	02 29 12.8	
	baz=29,slow=76,SNR=6.9						
SONM	Songino Array	58.80	310	P	P	01 34 59.3	+2.3
	comp=Z,0.3nm,0.3s,baz=37,slow=6.3,SNR=4.2						
	comp=Z,0.3nm,0.3s						
ZALV	Zalesovo Beam	61.59	327	P	P	01 35 17.5	+1.7
	comp=Z,0.6nm,0.5s,baz=12,slow=7.6,SNR=5.8						
	comp=Z,0.6nm,0.5s						
FINES	FINESS Array B	62.32	3	P	P	01 35 21.9	+1.3
	comp=Z,0.5nm,0.6s,baz=4.0,slow=6.5,SNR=3.9						
	comp=Z,0.5nm,0.6s						
ARTI	Arti	65.38	344	LR	LR	02 06 14.1	
	comp=Z,17nm,20.1s,baz=30,slow=38						
BVAR	Borovoye Array	66.25	335	P	P	01 35 48.4	+2.0
	comp=Z,1.1nm,0.6s,baz=34,slow=5.6,SNR=7.5						
BVAR				LR	LR	02 09 46.3	
	comp=Z,26nm,18.2s,baz=51,slow=40						
	comp=Z,1.1nm,0.6s						
KURBB	Kurchatov Arra	66.36	329	P	P	01 35 48.6	+1.5
	comp=Z,0.4nm,0.5s,baz=29,slow=6.8,SNR=7.8						
	comp=Z,0.4nm,0.5s						
MKAR	Makanchi Array	68.65	325	P	P	01 36 04.3	+2.6
	comp=Z,0.4nm,0.7s,baz=42,slow=5.6,SNR=4.4						
	comp=Z,0.4nm,0.7s						
AKASG	Malin Array Be	73.15	1	P	P	01 36 31.5	+2.6
	comp=Z,0.3nm,0.5s,baz=3.2,slow=5.5,SNR=1.7						
AKASG				LR	LR	02 11 18.8	
	comp=Z,10nm,19.4s,baz=53,slow=38						
	comp=Z,0.3nm,0.5s						
DAVOX	Davos/Dischmat	75.52	15	LR	LR	02 11 00.2	
	comp=Z,6.8nm,21.7s,baz=260,slow=36						
BRTR	Keskin Array B	84.13	358	P	P	01 37 32.4	+2.6
	comp=Z,0.4nm,0.8s,baz=0.0,slow=4.9,SNR=3.1						
	comp=Z,0.4nm,0.8s						
LPAZ	La Paz	98.25	107	P	P	01 38 33.8	-3.1
	comp=Z,0.6nm,0.4s,baz=321,slow=0.7,SNR=5.0						
QSPA	South Pole Qui	146.29	180	PKPbc	PKPab	01 44 39.1	+0.2
	comp=Z,2.7nm,1.2s,baz=88,slow=4.0,SNR=2.4						

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*AEIC **07** 01:29:08.1±1.0, 56°.52N±0°.08×148°.6W±0°.1, h12^{km}±6^{km}, Error ellipse: s-maj=12.2km s-min=8.6km az=160.0*

NEIC 07 01:29:03.4±1.1**, 56°.53N**±0°.09×**148°.62W**±0°.04**, h10**^{km}±2^{km}**, ML3.5**/68**, ML3.3**(AEIC)**, Error ellipse: s-maj=16.3km s-min=3.0km az=167.0, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDAK	Kodiak Island	2.50	302		Pn	01 29 43.7	-0.4
KDAK	Kodiak Island	2.50	302		Sn	01 30 10.5	-4.1
OHAK	Old Harbor	2.66	287		Pn	01 29 45.5	-0.7
OHAK					Sn	01 30 14.2	-4.2
SYI	Shuyak Island	2.91	317		Pn	01 29 49.6	-0.1
CNPM	China Poot	3.31	336		Pn	01 29 55.1	-0.2
R18K	Karluk	3.35	291		Pn	01 29 55.7	-0.1
R18K	Karluk	3.35	291	IAML		01 30 34.2	
	comp=N,160nm,0.4s						
BRSE	Bradley Lake S	3.41	342		Pn	01 29 56.1	-0.6
BRSE					Sn	01 30 33.7	-3.5
P23K	Montague Islan	3.54	10		Pn	01 29 57.7	-0.7
P23K	Montague Islan	3.54	10	IAML		01 30 42.2	
	comp=E,89nm,0.3s						
P23K				IAML		01 30 46.5	
	comp=N,60nm,0.4s						
Q19K	Cape Douglas,	3.61	314		Pn	01 30 00.0	+0.6
Q19K	Cape Douglas,	3.61	314	IAML		01 30 54.5	
	comp=N,110nm,0.7s						
SEW	Seward	3.61	353		Pn	01 29 58.6	-0.8
SEW	Seward	3.61	353	IAML		01 30 39.7	
	comp=E,54nm,0.3s						
AU22	Augustine Moun	3.81	320		Pn	01 30 01.9	-0.2
P19K	Oil Pt	3.98	324		Pn	01 30 04.4	0.0
CHIR	Chirikof Islan	3.98	263		Pn	01 30 03.5	-0.9
CHIR	Chirikof Islan	3.98	263	IAML		01 30 48.6	
	comp=E,66nm,1.1s						
CHIR				IAML		01 30 50.5	
	comp=N,66nm,1.1s						
ACHA	Angle Creek He	4.00	298		Pn	01 30 05.2	+0.4
HIN	Hinchinbrook I	4.04	15		Pn	01 30 04.9	-0.3
HIN				IAML		01 30 51.8	
	comp=E,52nm,0.6s						
KAHC	Katmai Hardscr	4.04	304		Pn	01 30 06.1	+0.7
KAIM	Kayak Island	4.07	31		Pn	01 30 05.6	-0.1
KAIM	Kayak Island	4.07	31	IAML		01 30 57.5	
	comp=N,79nm,0.6s						
ILSW	Iliamna Southw	4.21	327	IAML		01 30 60.0	
	comp=N,40nm,0.5s						
ILSW				IAML		01 30 60.0	
	comp=E,44nm,0.6s						
CNTC	Contact Creek	4.30	297		Pn	01 30 09.7	+0.7
EYAK	Cordova Ski Ar	4.30	19		Pn	01 30 08.8	0.0
EYAK				IAML		01 30 58.6	
	comp=E,41nm,0.8s						
EYAK				IAML		01 31 00.9	
	comp=N,51nm,0.7s						
PWL	Port Wells	4.35	2	IAML		01 30 57.4	
	comp=N,38nm,0.3s						
SUCK	Suckling Hills	4.38	34		Pn	01 30 10.1	+0.2
SUCK				IAML		01 30 59.5	
	comp=N,54nm,0.6s						
SUCK				IAML		01 31 03.5	
	comp=E,58nm,0.6s						
RAGM	Ragged Mountai	4.39	27		Pn	01 30 10.2	+0.1
GLI	Glacier Island	4.43	10	IAML		01 30 59.6	
	comp=E,31nm,0.5s						
GLI				IAML		01 31 00.3	
	comp=N,37nm,0.5s						
HMT	Hamilton	4.45	29		Pn	01 30 11.3	+0.3
RED	Redoubt Volcan	4.47	333	IAML		01 31 02.7	
	comp=E,47nm,0.4s						
RED				IAML		01 31 03.1	
	comp=N,44nm,0.5s						
BMRM	Bremner River	4.92	23		Pn	01 30 17.5	+0.1
BMRM				IAML		01 31 18.0	
	comp=N,21nm,0.6s						
BMRM				IAML		01 31 27.6	
	comp=E,24nm,0.6s						
P17K	Kvichak River	4.96	306		Pn	01 30 17.9	0.0
CRQM	Cirque	5.12	32	IAML		01 33 23.6	
	comp=N,37nm,0.2s						
CRQM				IAML		01 33 23.7	
	comp=E,40nm,0.3s						
KLU	Klutina	5.17	15		Pn	01 30 21.2	+0.3
KLU				IAML		01 31 21.7	
	comp=N,22nm,0.5s						
KLU				IAML		01 31 22.1	
	comp=E,23nm,0.4s						
TGL	Tana Glacier	5.21	33	IAML		01 31 19.3	
	comp=N,36nm,0.4s						
STLK	Strandline Lak	5.25	343	IAML		01 31 24.1	
	comp=E,17nm,0.7s						
STLK				IAML		01 31 24.8	
	comp=N,24nm,0.6s						
GHO	Glory Hole Cre	5.26	358		Pn	01 30 22.7	+0.6
GHO				IAML		01 31 22.9	
	comp=E,33nm,0.6s						
GHO				IAML		01 31 24.5	
	comp=N,40nm,0.6s						
YAH	Yahtse	5.27	40	IAML		01 31 33.5	
	comp=N,18nm,0.8s						
SML	Sawmill	5.30	1	IAML		01 31 23.7	
	comp=N,29nm,0.6s						
SML				IAML		01 31 25.0	
	comp=E,20nm,0.6s						
M23K	Glacier View	5.30	5		Pn	01 30 23.1	+0.6
SAMH	Samovar Hills	5.49	46		Pn	01 30 25.5	+0.3
N25K	Chitina, Valde	5.50	20		Pn	01 30 25.9	+0.6
PCA	Pinnacle	5.67	47		Pn	01 30 27.7	-0.1
LOGN	Logan Glacier	5.86	40		Pn	01 30 30.1	-0.3
O16K	Kokwok River B	5.89	305		Pn	01 30 30.4	-0.3
HARP	HAARP	6.15	15		Pn	01 30 34.7	+0.5
CNBA	Chernabura Isl	6.44	259		Pn	01 30 38.4	+0.2
O29M	Mount Kennedy	6.49	50		Pn	01 30 39.3	+0.3
O15K	Ungalikthiuk R	6.54	299		Pn	01 30 40.3	+0.7
P29M	Windy Craggy	6.55	57		Pn	01 30 40.1	+0.3
DHY	Denali Highway	6.60	5		Pn	01 30 41.1	+0.6
YUK8	Steele Glacier	6.61	40		Pn	01 30 41.9	+1.1
YUK3	Moose Creek	6.73	35		Pn	01 30 43.2	+0.9
S31K	Pelican	6.88	73		Pn	01 30 42.9	-1.3
YUK6	Outpost Mounta	6.93	46		Pn	01 30 46.0	+0.9
M29M	Somme Creek	7.86	37		Pn	01 30 57.5	-0.3
WHY	Whitehorse	8.28	54		Pn	01 31 04.5	+1.0
J26L	Joseph Creek	8.38	15		Pn	01 31 04.2	-0.6
L29M	L29M	8.45	34		Pn	01 31 05.6	-0.1
U33K	Whale Pass	8.63	86		Pn	01 31 06.2	-2.0
ISLZ	Isanotski Laza	8.73	264		Pn	01 31 09.9	+0.3
P33M	Teslin, Yukon	9.08	59		Pn	01 31 14.9	+0.4

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*SNET **07** 01:30:02.6±2.4, 12°.52N×88°.17W, h23^{km}, ML3.6*

*CATAC **07** 01:30:03.1±0.3, 12°N±3°×8°8W±°, h29^{km}, M3.6/25, MLv3.6/25, Error ellipse: s-maj=7.3km s-min=2.5km az=29.3, confirmed*

*GCG **07** 01:30:04.7±0.4, 12°.53N×88°.41W, h86^{km}±28^{km}, MD4.1*

ISC 07 01:30:01.7±1.6**, 12°.43N**±0°.07×**88°.23W**±0°.04**, h25**^{km}±14^{km}**, n64, σ0^{s}.67**/80**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
POTN	Potosi Cosigui	0.91	51	P	Pb	01 30 19.3	+0.5
POTN				S	Sn	01 30 30.7	-0.5
CNCH	Conchagua	0.93	24	P	Pb	01 30 19.8	+0.5
CNCH	Conchagua	0.93	24	S	Sn	01 30 32.6	+0.6
ALJI	Alcalda de J	0.95	340	*e*P	Pn	01 30 19.2	-0.4
ALJI				*e*S	Sb	01 30 30.8	-1.1
ALJI	Alcalda de J	0.95	340	P	Pb	01 30 20.2	+0.6
ALJI	Alcalda de J	0.95	340	S	Sn	01 30 32.9	+0.5
LCY	Lacayo	0.99	356	*e*P	Pb	01 30 20.7	+0.4
VSM	San Miguel	1.00	357	*e*P	Pb	01 30 21.2	+0.7
BLLM	Bellamira	1.01	360	*e*P	Pb	01 30 20.9	+0.3
PACA	Pacayal	1.04	355	*e*P	Pb	01 30 21.5	+0.4
PACA				*e*S	Sb	01 30 35.3	+0.8
PACA	Pacayal	1.04	355	P	Pb	01 30 21.6	+0.4
CNRM	Centro Naciona	1.04	3	*e*P	Pb	01 30 21.5	+0.4
TECA	Tecapa	1.09	346	*e*P	Pb	01 30 21.9	-0.2
TECA				*e*P	Pn	01 30 22.1	+0.5
TECA				*e*S	Sb	01 30 35.4	-0.7
TECA				*e*S	Sn	01 30 36.2	+0.1
CRIN	San Cristobal	1.18	77	P	Pb	01 30 23.7	+0.2
TECO	Alcaldia de Te	1.23	334	*e*P	Pn	01 30 23.7	+0.3
TECO				*e*S	Sn	01 30 38.6	-0.5
TECO	Alcaldia de Te	1.23	334	P	Pn	01 30 23.6	+0.2
UESV	Universidad de	1.32	336	*e*P	Pn	01 30 25.1	+0.4
UESV	Universidad de	1.32	336	P	Pn	01 30 25.1	+0.4
UESV	Universidad de	1.32	336	S	Sb	01 30 41.9	-0.5
COEG	Centro de Oper	1.35	332	*e*P	Pn	01 30 25.6	+0.5
COEG				*e*S	Sn	01 30 41.8	-0.4
COEG	Centro de Oper	1.35	332	P	Pn	01 30 25.5	+0.5
COEG	Centro de Oper	1.35	332	S	Sb	01 30 42.4	-0.7
QUEN	Al S del Volca	1.35	83	P	Pn	01 30 25.4	+0.3
SCLA	Alcaldia de Sa	1.36	339	*e*P	Pb	01 30 26.1	-0.5
SCLA	Alcaldia de Sa	1.36	339	P	Pb	01 30 26.0	-0.5
SCLA	Alcaldia de Sa	1.36	339	S	Sb	01 30 43.7	+0.2
HERN	Volcan Telica	1.38	82	P	Pn	01 30 25.6	+0.1
HERN	Volcan Telica	1.38	82	S	Sb	01 30 43.5	-0.6
HOYN	Al Sur del Vol	1.38	83	P	Pn	01 30 25.6	+0.1
HOYN				S	Sn	01 30 43.3	+0.3
POLN	Al Sur del Vol	1.40	81	P	Pn	01 30 25.9	+0.2
POLN				S	Sn	01 30 43.6	+0.2
LFRS	El Faro	1.44	326	*e*P	Pn	01 30 27.0	+0.7
PAVA	Las Pavas	1.45	332	*e*P	Pn	01 30 27.3	+0.8
PAVA				*e*S	Sn	01 30 43.9	-0.9
PAVA	Las Pavas	1.45	332	P	Pn	01 30 27.3	+0.8
PAVA	Las Pavas	1.45	332	S	Sb	01 30 45.9	-0.4
CNGA	Al SSO del Vol	1.49	87	P	Pn	01 30 27.1	+0.1
CNGN	Cerro Negro	1.50	87	P	Pn	01 30 27.1	+0.1
LALI	Alcalda de L	1.50	315	*e*P	Pn	01 30 27.2	+0.2
ILCN	San Idelfonso	1.50	84	P	Pn	01 30 27.3	+0.2
LOMA	Loma Larga	1.52	323	*e*P	Pn	01 30 27.9	+0.4
LOMA	Loma Larga	1.52	323	P	Pn	01 30 27.9	+0.4
LOMA	Loma Larga	1.52	323	S	Sb	01 30 47.4	-0.9
COPN	Copaltepe	1.62	99	P	Pn	01 30 28.8	+0.1
PIC2	El Picacho	1.65	323	*e*P	Pn	01 30 30.7	+1.3
MOMN	Momotombo	1.65	90	P	Pn	01 30 29.3	+0.1
MOMN				S	Sn	01 30 49.3	-0.3
PMON	Piamonte	1.66	321	*e*P	Pb	01 30 31.1	-0.5
PMON				*e*S	Sn	01 30 50.6	+0.6
PMON	Piamonte	1.66	321	P	Pb	01 30 31.4	-0.3
JAYA	Jayaque - finc	1.70	316	*e*P	Pn	01 30 30.1	+0.2
JAYA				*e*S	Sn	01 30 50.4	-0.7
JAYA	Jayaque - finc	1.70	316	*i* P	Pn	01 30 30.3	+0.2
JAYA				*i* S	Sn	01 30 50.6	-0.5
JAYA	Jayaque - finc	1.70	316	P	Pn	01 30 30.2	+0.2
SAPS	Ciudad Sandino	1.80	98	P	Pn	01 30 31.5	+0.3
TGUH	Tegucigalpa,Un	1.87	30	P	Pb	01 30 33.5	-1.7
LIMN	Finca el Limon	1.92	71	P	Pn	01 30 33.4	+0.4
CEVE	Cerro Verde	1.95	316	P	Pn	01 30 35.6	+2.1
NUBE	Las Nubes	2.11	314	*e*P	Pn	01 30 36.1	+0.6
NUBE	Las Nubes	2.11	314	*i* P	Pn	01 30 36.4	+0.9
NUBE				*e*S	Sn	01 31 00.8	-0.3
NUBE	Las Nubes	2.11	314	P	Pn	01 30 36.5	+0.9
NANN	Nandasmo	2.12	103	P	Pn	01 30 36.9	+1.3
FAME	Alcaldia de Sa	2.24	309	P	Pn	01 30 38.4	+1.1
MTO3	Montecristo	2.25	331	*e*P	Pn	01 30 38.5	+0.9
MTO3	Montecristo	2.25	331	*e*P	Pn	01 30 38.7	+1.2
MTO3	Montecristo	2.25	331	P	Pn	01 30 38.5	+0.9
RCVN	Varillal2	2.29	60	P	Pn	01 30 39.2	+1.1
MATN	Matagalpa	2.30	77	P	Pn	01 30 37.7	-0.5
BOAB	BOACO BROADBAN	2.50	89	P	Pn	01 30 41.1	+0.3

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*AEIC **07** 01:39:08.7±0.9, 55°.2N±0°.1×163°.4W±0°.1, h157^{km}±5^{km}, Error ellipse: s-maj=17.6km s-min=5.9km az=144.0*

NEIC 07 01:39:06.8±0.5**, 55°.2N**±0°.1×**163°.5W**±0°.2**, h168**^{km}±6^{km}**, ML2.5**(AEIC)**, Error ellipse: s-maj=22.6km s-min=6.8km az=150.0, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISNN	Isanotski Nort	0.41	207		Pn	01 39 29.9	0.0
ISLZ	Isanotski Laza	0.50	198		Pn	01 39 29.9	-0.3
ISLZ					Sn	01 39 47.4	-0.7
SSLS	Shishaldin Sou	0.58	213		Pn	01 39 30.4	-0.2
HAG	Hague Volcano	0.89	82		Pn	01 39 33.0	+0.6
HAG					Sn	01 39 51.3	-0.9
S12K	Black Hills	0.94	57		Pn	01 39 32.8	0.0
S12K					Sn	01 39 51.8	-1.0
WEBT	Westdahl Beart	0.97	232		Pn	01 39 32.9	-0.1
WECS	Westdahl Cape	1.02	229		Pn	01 39 33.6	+0.2
SDPT	Sand Point	1.71	84		Pn	01 39 39.9	+0.1
SDPT					Sn	01 40 04.6	-0.7
LVA	Lava Point	1.82	236	Pn	Pn	01 39 40.9	-0.2
ZRO	Akutan Zero	1.84	234		Pn	01 39 41.5	+0.2
AKMO	Akutan Morgan	1.85	234		Pn	01 39 41.7	+0.3
UNV	Unalaska Valle	2.24	234		Pn	01 39 45.4	-0.2
MTBL	Makushin Table	2.25	238		Pn	01 39 46.2	+0.3
CNBA	Chernabura Isl	2.26	98		Pn	01 39 45.8	0.0
MGOD	Makushin Gods	2.44	236		Pn	01 39 48.1	0.0
MAPS	Pakushin South	2.46	237		Pn	01 39 48.2	-0.1
MAPS					Sn	01 40 21.4	+0.8
VNHG	Veniaminof 1	2.63	65		Pn	01 39 51.7	+1.3
OKTU	Okmok Mt. Tuli	3.25	238		Pn	01 39 58.3	+0.4
NIKH	Nikolski High	3.88	237		Pn	01 40 05.9	0.0
CHIR	Chirikof Islan	4.50	79		Pn	01 40 14.0	+0.3
KAHC	Katmai Hardscr	5.77	50		Pn	01 40 31.6	+0.9
Q19K	Cape Douglas,	6.53	51		Pn	01 40 41.6	+1.2
KDAK	Kodiak Island	6.55	62		Pn	01 40 40.2	-0.5
SYI	Shuyak Island	6.95	56		Pn	01 40 46.1	0.0
CNPM	China Poot	7.90	52		Pn	01 40 58.5	-0.1
PWL	Port Wells	9.81	49		Pn	01 41 23.3	-0.5
HIN	Hinchinbrook I	10.42	53		Pn	01 41 31.5	-0.3
FID	Port Fidalgo	10.57	51		Pn	01 41 32.5	-1.3

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*ISN **07** 01:39:15.8±0.5, 34°.41N×45°.65E, h20^{km}±38^{km}, ML2.6*

*TEH **07** 01:39:15.4, 34°.39N×45°.67E, h10^{km}±76^{km}*

ISC 07 01:39:15.5±1.1**, 34°.40N**±0°.04×**45°.67E**±0°.05**, h12**^{km}±11^{km}**, n11, σ0^{s}.47**/15**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KGS1	Ghasr-e-Shirin	0.13	328	Pg	Pg	01 39 19.0	+0.3
GLG1	Gilan-e-Gharb	0.35	145	Pg	Pg	01 39 22.7	+0.2
IDHR	Dehrash	0.66	63	Pg	Pg	01 39 28.2	-0.2
IGHG	Ghaleghazi	0.75	95	Pg	Pg	01 39 30.2	+0.2
IGHG				Sg	Sb	01 39 41.6	+0.8
ILBA	Ilam Banvizeh	0.89	150	Pg	Pb	01 39 32.1	-0.8
KCHF	Cheshme Sefid,	1.14	96	Pg	Pg	01 39 38.1	+0.6
ILIN	Lien	1.19	64	Pg	Pn	01 39 37.9	-0.2
IBDR	Badra	1.30	170	*e*Pg	Pb	01 39 40.0	+0.1
IBDR				*e*Sg	Sn	01 39 57.0	+0.2
IKRK	Kirkuk	1.48	313	*e*Pn	Pb	01 39 43.0	0.0
IKRK				*e*Sn	Sg	01 40 03.0	-0.2
IKRK				AML	AML	01 40 08.0	
	comp=E,118nm,0.1s						
IKRK				AML	AML	01 40 08.5	
	comp=N,82nm,0.6s						
BHD	Baghdad	1.56	224	*e*Pn	Pb	01 39 44.0	-0.2
BHD				*e*Sn	Sg	01 40 05.0	-0.5
SNQR	Sonqor, Kerman	1.68	74	Pg	Pg	01 39 47.5	-0.2

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*CATAC **07** 02:00:50.8±0.8, 13°N±5°×9°0W±°, h27^{km}±5^{km}, M3.1/14, MLv3.1/14, Error ellipse: s-maj=12.4km s-min=5.7km az=28.4, confirmed*

*SNET **07** 02:00:52.6±1.3, 13°.16N×89°.45W, h51^{km}±9^{km}, ML3.3*

*GCG **07** 02:00:52.1±1.2, 13°.11N×89°.57W, h51^{km}±11^{km}, MD3.5, ML2.8*

ISC 07 02:00:50.4±1.9**, 13°.03N**±0°.08×**89°.51W**±0°.05**, h20**^{km}±6^{km}**, n58, σ0^{s}.35**/74**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.49	22	*e*P	Pn	02 01 02.5	+0.2
LALI				*e*S	Sn	02 01 09.8	-0.3
LALI	Alcalda de L	0.49	22	*i* P	Pn	02 01 02.7	+0.4
LALI				*i* S	Sn	02 01 10.9	+0.7

LALI					IAML	02 01 12.6	
	comp=N,154nm,0.2s						
LALI	Alcalda de L	0.49	22	P	Pn	02 01 02.1	-0.2
JAYA	Jayaque - finc	0.62	5	*e*P	Pn	02 01 04.0	-0.2
JAYA				*e*S	Sb	02 01 12.1	+0.9
JAYA					IAML	02 01 14.6	
	comp=Z,2μm,0.2s						
JAYA	Jayaque - finc	0.62	5	*i* P	Pn	02 01 04.1	-0.2
JAYA				*i* S	Sn	02 01 14.0	+0.3
JAYA	Jayaque - finc	0.62	5	P	Pn	02 01 03.9	-0.4
JAYA	Jayaque - finc	0.62	5	S	Sn	02 01 13.3	-0.4
PANCS	Alcalda de	0.66	29	P	Pb	02 01 03.9	+0.6
LOMA	Loma Larga	0.69	28	*e*P	Pn	02 01 05.0	-0.2
PMON	Piamonte	0.70	15	*e*P	Pn	02 01 04.9	-0.4
PMON	Piamonte	0.70	15	P	Pn	02 01 05.1	-0.2
UEES	Universidad Ev	0.73	21	*e*P	Pn	02 01 05.8	+0.1
UEES	Universidad Ev	0.73	21	P	Pb	02 01 05.1	+0.6
LFRS	El Faro	0.73	36	*e*P	Pn	02 01 05.3	-0.4
LFRS				*e*S	Sn	02 01 15.5	-0.9
BOQS	Boqueron	0.73	17	*e*P	Pn	02 01 05.6	-0.2
BOQS				*e*S	Sn	02 01 16.4	-0.2
PIC2	El Picacho	0.75	19	*e*P	Pn	02 01 05.9	-0.2
CEDA	San Andres	0.78	8	*e*P	Pn	02 01 06.0	-0.3
CEDA				*e*S	Sn	02 01 16.8	-0.5
CEVE	Cerro Verde	0.80	352	*e*P	Pn	02 01 06.7	-0.1
CEVE				*e*S	Sn	02 01 17.9	-0.3
CEVE					IAML	02 01 19.4	
	comp=Z,938nm,0.2s						
CEVE	Cerro Verde	0.80	352	P	Pn	02 01 06.9	+0.1
CEVE	Cerro Verde	0.80	352	S	Sn	02 01 18.1	-0.1
LFU	La Fuente	0.81	28	*e*P	Pn	02 01 06.6	-0.1
LFU				*e*S	Sn	02 01 18.1	-0.1
SBLS	San Blas	0.81	352	*e*P	Pn	02 01 06.8	-0.1
LBRS	Las Brisas	0.83	33	*e*P	Pn	02 01 07.0	-0.1
SNJE	San Jose	0.84	353	*e*P	Pb	02 01 07.1	+0.7
COEG	Centro de Oper	0.84	46	*e*P	Pb	02 01 06.7	+0.3
COEG					IAML	02 01 20.0	
	comp=Z,571nm,0.1s						
COEG	Centro de Oper	0.84	46	P	Pn	02 01 06.9	-0.3
TECO	Alcaldia de Te	0.87	54	*e*P	Pb	02 01 06.9	+0.1
TECO				*e*S	Sb	02 01 17.7	-0.3
TECO	Alcaldia de Te	0.87	54	P	Pb	02 01 06.9	+0.1
RTR	El Retiro	0.87	351	*e*P	Pb	02 01 07.4	+0.4
PAVA	Las Pavas	0.88	39	*e*P	Pn	02 01 07.5	-0.2
PAVA				*e*S	Sb	02 01 17.6	-0.7
PAVA	Las Pavas	0.88	39	P	Pn	02 01 07.6	0.0
PAVA	Las Pavas	0.88	39	S	Sn	02 01 20.0	+0.1
NUBE	Las Nubes	0.91	343	*e*P	Pb	02 01 07.6	+0.1
NUBE				*e*S	Sb	02 01 18.6	-0.7
NUBE	Las Nubes	0.91	343	*i* P	Pb	02 01 07.7	+0.1
NUBE				*i* S	Sb	02 01 19.6	+0.4
NUBE	Las Nubes	0.91	343	P	Pb	02 01 07.6	+0.1
UESV	Universidad de	0.92	49	*e*P	Pb	02 01 08.0	+0.2
UESV				*e*S	Sb	02 01 19.2	-0.4
UESV	Universidad de	0.92	49	P	Pb	02 01 07.9	+0.1
FAME	Alcaldia de Sa	0.95	329	P	Pb	02 01 07.9	-0.3
FAME	Alcaldia de Sa	0.95	329	S	Sb	02 01 20.2	0.0
LOAL	Lomas de Alarc	1.00	345	*e*P	Pn	02 01 09.8	+0.5
LOAL				*e*S	Sb	02 01 21.5	-0.3
SCLA	Alcaldia de Sa	1.01	49	*e*P	Pn	02 01 09.5	0.0
SCLA	Alcaldia de Sa	1.01	49	P	Pn	02 01 09.4	0.0
SLOZ	Alcaldia de Sa	1.03	345	*e*P	Pb	02 01 09.8	+0.3
TECA	Tecapa	1.08	65	*e*P	Pn	02 01 10.8	+0.2
PACA	Pacayal	1.23	69	*e*P	Pb	02 01 13.2	+0.1
PACA	Pacayal	1.23	69	P	Pb	02 01 13.2	+0.1
PACA	Pacayal	1.23	69	S	Sn	02 01 29.0	+0.3
LCY	Lacayo	1.24	72	*e*P	Pn	02 01 12.8	0.0
VSM	San Miguel	1.26	72	*e*P	Pn	02 01 13.5	+0.4
BLLM	Bellamira	1.30	72	*e*P	Pn	02 01 13.7	+0.2
MTO3	Montecristo	1.37	6	*e*P	Pn	02 01 14.2	-0.3
MTO3	Montecristo	1.37	6	*i* P	Pn	02 01 14.3	-0.2
MTO3				*i* S	Sn	02 01 31.6	-0.6
MTO3	Montecristo	1.37	6	P	Pn	02 01 14.2	-0.3
ESQI	Esquipulas	1.53	6	*e*P	Pn	02 01 16.6	0.0
ESQI	Esquipulas	1.53	6	P	Pn	02 01 16.5	-0.2
CNCH	Conchagua	1.65	81	*e*P	Pn	02 01 18.4	0.0
CNCH	Conchagua	1.65	81	P	Pn	02 01 18.2	-0.1
CSGN	Cosiguina Volc	1.90	91	P	Pn	02 01 21.6	-0.1

IDC 07 02:02:03.8±5.8**, 4°.80S**×**152°.57E, h0^{km}, mb3.5**/4**, mbtmp3.5**/4**, MS4.0**/1**, Error ellipse: s-maj=177.5km s-min=31.6km az=106.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.27	228	P	P	02 07 12.7	-0.6
	0.6nm,0.5s,baz=54,slow=10,SNR=2.8						
	0.6nm,0.5s						
ASAR	Alice Springs	26.00	222	P	P	02 07 39.4	+0.7
	0.2nm,0.4s,baz=59,slow=9.5,SNR=5.2						
	0.2nm,0.4s						
RPZ	Rata Peaks	42.05	160	LR	LR	02 28 28.0	
	comp=Z,178nm,18.2s,baz=134,slow=38						
SONM	Songino Array	66.21	328	P	P	02 12 54.6	+0.9
	0.5nm,0.6s,baz=112,slow=6.4,SNR=1.7						
	0.5nm,0.6s						
MKAR	Makanchi Array	80.18	319	P	P	02 14 15.2	-1.0
	0.6nm,0.5s,baz=99,slow=6.4,SNR=4.8						
	0.6nm,0.5s						

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*IDC **07** 02:20:01.5±1.1, 1°.72S×122°.49E, h0^{km}, mb3.7/5, mbtmp3.8/6, ML4.3/1, Error ellipse: s-maj=38.2km s-min=20.0km az=73.0*

*DJA **07** 02:20:02.5±0.6, 2°S±2°×12°3E±°, h11^{km}±5^{km}, M4.1/13, MLv4.1/13*

ISC 07 02:20:03.1±0.8**, 1°.82S**±0°.04×**122°.68E**±0°.06**, h10^{km}, n18,** σ**1^s.69**/23**, mb3.8**/6**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	0.78	7	P	Pb	02 20 18.5	-0.2
LUWI				S	Sb	02 20 29.5	+0.1
APSI	Ampana	1.37	311	P	Pn	02 20 26.8	-1.5
MRSI	Marisa	2.40	342	P	Pn	02 20 41.1	-1.3
MRSI				S	Sn	02 21 12.8	+0.9
PCI	Palu	2.98	288	P	Pn	02 20 51.2	+0.7
TTSI	Tana Toraja	3.10	247	P	Pn	02 20 51.5	-0.6
SANI	Sanana	3.32	94	P	Pn	02 20 53.9	-1.2
MPSI	Mapaga	3.51	308	P	Pn	02 20 56.6	-1.1
SPSI	Sidrap Palu	3.60	234	P	Pn	02 20 58.5	-0.5
SPSI				S	Sn	02 21 41.3	-0.3
BNSI	Bone	3.63	225	P	Pn	02 20 58.6	-0.7
BNSI				S	Sn	02 21 42.1	-0.1
BBSI	Bau Bau	3.64	182	P	Pn	02 20 58.4	-1.2
KAPI	Kappang	4.31	223	Pn	Pn	02 21 08.9	+0.1
	18nm,0.3s,baz=20,slow=8.1,SNR=51						
KAPI				Sn	Sn	02 21 57.2	-1.9
	9.9nm,0.3s,baz=37,slow=20,SNR=9.9						
	52nm,0.4s						
BSSI	Bau Bau, Buton	4.81	207	P	Pn	02 21 14.8	-0.9
WRA	Warramunga Arr	21.32	148	P	P	02 24 52.7	+2.4
	2.1nm,0.7s,baz=332,slow=9.9,SNR=16						
	2.1nm,0.7s						
ASAR	Alice Springs	24.29	154	P	P	02 25 21.8	+0.9
	1.6nm,0.6s,baz=332,slow=8.2,SNR=18						
	1.6nm,0.6s						
XLT	XiLinHaoTe	45.90	353	*e*P	P	02 28 35.0	+9.1
XLT				ScP	ScP	02 34 01.7	+5.3
XLT				pmax	pmax		
	comp=Z,10.0nm,0.7s						
XLT				pmax	pmax		
	comp=Z,88nm,4.4s						
SONM	Songino Array	51.46	346	P	P	02 29 09.2	+0.5
	comp=Z,0.5nm,0.4s,baz=148,slow=8.5,SNR=2.3						
	comp=Z,0.5nm,0.4s						
MKAR	Makanchi Array	59.99	329	P	P	02 30 08.6	-1.3
	comp=Z,0.4nm,0.6s,baz=120,slow=8.0,SNR=2.7						
	comp=Z,0.4nm,0.6s						
KURBB	Kurchatov Arra	64.37	331	P	P	02 30 36.9	-2.3
	comp=Z,0.8nm,1.0s,baz=134,slow=5.3,SNR=3.6						
	comp=Z,0.8nm,1.0s						

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*NEIC **07** 02:26:59.5±1.1, 31°.65N±0°.01×104°.30W±0°.05, h6^{km}±5^{km}, Error ellipse: s-maj=6.2km s-min=1.2km az=77.0*

*NEIC **07** 02:26:59.7±1.0, 31°.64N±0°.01×104°.33W±0°.05, h5^{km}±1^{km}, mb_Lg2.6/34, ML2.2/15, ML2.4/20, Error ellipse: s-maj=6.6km s-min=2.9km az=261.0*

*TXNET **07** 02:26:59.5, 31°.7N±0°.8×104°.3W±1°.0, h6^{km}±1^{km}, ML2.7/15, Error ellipse: s-maj=1.6km s-min=1.0km az=63.0, final*

ISC 07 02:27:00.0±1.0**, 31°.63N**±0°.02×**104°.29W**±0°.02**, h7^{km}**±9^{km}**, n69,** σ**0^s.89**/95**, 7C, Western Texas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPB09	Culberson Coun	0.14	355	⇑P	Pg	02 27 03.2	0.0
TPB09				S	Sg	02 27 05.3	0.0
TPB11	China Draw	0.37	36	⇑P	Pg	02 27 07.2	-0.1
TPB11				S	Sg	02 27 12.5	+0.2
PECS	Pecos	0.45	126		Pb	02 27 09.3	-0.9
PECS				Sg	Sg	02 27 15.5	+1.0
PECS	Pecos	0.45	126	P	Pb	02 27 09.3	-0.9
PECS				S	Sg	02 27 15.6	+1.0
TPB12	Southwest of T	0.50	146	⇑P	Pg	02 27 10.3	+0.5
TPB12				S	Sg	02 27 17.5	+1.1
TPB07	Mentone	0.53	96	P	Pb	02 27 11.2	-0.6
TPB07				S	Sb	02 27 18.9	-0.8
GDL2	Guadalupe Moun	0.57	354		Pg	02 27 10.8	-0.3
GDL2	Guadalupe Moun	0.57	354	P	Pg	02 27 10.9	-0.3
TPB10	Southeast of T	0.57	127	⇑P	Pb	02 27 11.7	-0.8
TPB10				S	Sb	02 27 19.9	-0.9
PCOS	Crockett Middl	0.70	108		Sb	02 27 24.0	-0.4
PCOS	Crockett Middl	0.70	108		Sb	02 27 24.1	-0.4
PCOS	Crockett Middl	0.70	108	S	Sb	02 27 24.1	-0.4
PCOS	Crockett Middl	0.70	108	S	Sb	02 27 24.0	-0.4
CLNB	Carlsbad	0.72	29		Pg	02 27 13.6	-0.3
CLNB	Carlsbad	0.72	29	P	Pg	02 27 13.9	-0.1
CLNB				S	Sg	02 27 23.5	+0.2
TPB01	Permian Basin	0.81	148	⇑P	Pg	02 27 15.5	-0.2
TPB01				S	Sg	02 27 26.3	+0.1
CBET	Carlsbad E Tow	0.83	18		Pg	02 27 15.6	-0.4
CBET	Carlsbad E Tow	0.83	18	P	Pg	02 27 15.6	-0.4
TPB03	Saragosa	0.86	129	⇑P	Pb	02 27 16.9	-0.4
TPB03				S	Sb	02 27 28.7	-0.3
CLN7	Carlsbad 7	0.88	28		Pg	02 27 16.5	-0.5
CLN7	Carlsbad 7	0.88	28	P	Pg	02 27 16.4	-0.6
TPB06	Permian Basin	0.91	89	P	Pb	02 27 17.9	-0.3
TPB06				S	Sb	02 27 30.2	-0.4
MNTX	Cornudas Mount	0.94	274		Pb	02 27 17.6	-0.9
MNTX	Cornudas Mount	0.94	274	P	Pb	02 27 17.6	-0.9
MNTX				S	Sg	02 27 29.9	-0.3
TPB04	Verhalen	0.98	117	P	Pb	02 27 19.0	-0.3
TPB04				S	Sb	02 27 33.3	+0.8
HTMS	Hat Mesa	1.00	33		Pg	02 27 18.8	-0.6
HTMS	Hat Mesa	1.00	33	P	Pg	02 27 18.7	-0.6
HTMS				S	Sb	02 27 32.6	-0.8
TPB16	Coyonosa	1.02	119	P	Pb	02 27 19.9	-0.2
TPB16				S	Sb	02 27 33.5	-0.2
VHRN	Van Horn	1.03	215		Pg	02 27 19.6	-0.3
VHRN					Sb	02 27 33.9	-0.2
VHRN				IAML		02 27 38.7	
	79nm,0.4s						
VHRN				IAML		02 27 39.1	
	104nm,0.4s						
VHRN	Van Horn	1.03	215	P	Pg	02 27 19.6	-0.3
VHRN				S	Sb	02 27 33.9	-0.2
NM01	Eunice	1.04	46	P	Pg	02 27 19.8	-0.3
NM01				S	Sb	02 27 33.7	-0.7
TPB19	West of Imperi	1.07	108	P	Pb	02 27 20.9	+0.1
TPB05	Hovey Rd	1.09	130	⇑P	Pg	02 27 20.8	-0.1
TPB05				S	Sb	02 27 35.5	-0.1
MNHN	Monahans	1.34	102		Pn	02 27 24.9	-0.3
MNHN	Monahans	1.34	102	P	Pn	02 27 25.1	-0.1
MNHN				S	Sn	02 27 43.6	+0.5
ALPN	Alpine	1.37	156		Pn	02 27 25.1	-0.6
ALPN	Alpine	1.37	156	P	Pn	02 27 25.0	-0.6
ALPN				S	Sb	02 27 43.1	-0.7
TPB08	Permian Basin	1.39	122	S	Sg	02 27 46.4	+1.5
CPRX	Cap Rock	1.44	14		Pb	02 27 26.5	-0.8
CPRX	Cap Rock	1.44	14	P	Pb	02 27 26.5	-0.8
ODSA	Odessa	1.56	71		Pn	02 27 28.0	-0.2
ODSA					Sb	02 27 49.0	-0.2
ODSA	Odessa	1.56	71	P	Pb	02 27 28.7	-0.6
ODSA				S	Sb	02 27 49.0	-0.2
TMB04	Seminole	1.82	57	P	Pb	02 27 33.0	-0.8
TMB04				Sg	Sg	02 27 58.5	-0.1
TMB01	Midkiff	1.88	88	P	Pb	02 27 34.8	0.0
TMB01				S	Sg	02 27 59.5	-1.0
TMB02	Rankin	1.97	102	P	Pb	02 27 35.4	-0.9
TMB02				Pg	Pg	02 27 36.1	-1.8
TMB02				S	Sb	02 28 02.1	+1.1
TMB06	Greenwood	2.15	80	P	Pb	02 27 38.6	-0.7
TMB06				S	Sb	02 28 06.3	+0.2
TMB05	Klondike	2.29	64	P	Pb	02 27 40.8	-0.9
TMB05				S	Sg	02 28 11.8	-1.7
TX31	Lajitas Ar. Si	2.35	167	Pn	Pn	02 27 40.8	+1.6
TX31	Lajitas Ar. Si	2.35	167	P	Pn	02 27 40.7	+1.6
TX31				Pg	Pb	02 27 42.8	0.0
TX31				S	Sg	02 28 14.9	-0.8
SAND	Sanderson	2.50	131		Pb	02 27 43.4	-2.0
SAND				IAmb_Lg		02 28 23.2	
	comp=Z,26nm,0.8s						
MSTX	Muleshoe	2.66	28		Pn	02 27 45.1	+1.8
SGCY	Sterling City	2.71	83		Pn	02 27 45.5	+1.5
SGCY				IAmb_Lg		02 28 27.0	
	comp=Z,20nm,0.7s						
SGCY	Sterling City	2.71	83	P	Pn	02 27 45.5	+1.5
SGCY				S	Sb	02 28 23.9	+1.7
POST	Post	2.76	58		Pn	02 27 46.8	+2.0
CRNM	Carthage	3.10	319	Pn	Pn	02 27 50.7	+1.2
SN05	Snyder 5	3.14	66	IAmb_Lg		02 28 45.7	
	comp=Z,13nm,0.7s						
BNM	Barren Site	3.19	323	Pn	Pn	02 27 52.1	+1.3
SN07	Snyder 07	3.22	62	IAmb_Lg		02 28 44.6	
	comp=Z,18nm,0.7s						
SBM	South Baldy	3.38	315	Pn	Pn	02 27 55.4	+2.0
DKNS	Dickens	3.49	54	Pn	Pn	02 27 56.7	+1.9
DKNS				IAmb_Lg		02 28 53.2	
	comp=Z,12nm,0.7s						
ANMO	Albuquerque	3.77	332	Pn	Pn	02 28 00.5	+1.7
ANMO				IAML		02 28 56.4	
	comp=Z,11nm,0.6s						
ANMO				IAML		02 29 00.5	
	comp=Z,5.0nm,0.3s						
ANMO	Albuquerque	3.77	332	Pn	Pn	02 27 58.2	-0.6
ANMO				IAML		02 28 56.5	
	comp=Z,14nm,0.5s						
ANMO				IAmb_Lg		02 28 59.0	
	comp=Z,14nm,1.1s						
ANMO				IAML		02 28 59.1	
	comp=Z,12nm,0.8s						
ANMO	Albuquerque	3.77	332	IAmb_Lg		02 29 01.6	
	comp=Z,10nm,0.7s						
DRIO	Del Rio	3.86	124	Pn	Pn	02 28 00.5	+0.7
DRIO				IAmb_Lg		02 29 10.3	
	comp=Z,14nm,1.0s						
APMT	Aspermont	3.91	63	Pn	Pn	02 28 01.6	+1.1
APMT				IAmb_Lg		02 29 11.4	
	comp=Z,15nm,0.8s						
BRDY	Brady	4.53	93	IAmb_Lg		02 29 32.1	
	comp=Z,10.0nm,0.9s						
RTBA	Rita Blanca	4.96	15	IAmb_Lg		02 29 48.8	
	comp=Z,6.7nm,0.8s						
FW03	Perrin-Whitt E	5.45	73	IAmb_Lg		02 30 04.4	
	comp=Z,9.3nm,0.8s						
WMOK	Wichita Mounta	5.56	55	Pn	Pn	02 28 24.4	+1.2
WMOK				IAmb_Lg		02 30 03.9	
	comp=Z,7.7nm,0.9s						

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*TEH **07** 02:36:08.5, 28°.26N×52°.42E, h12^{km}±34^{km}*

*DSN **07** 02:36:12.7±1.1, 27°.71N×52°.30E, h10^{km}, ML2.9/8, Error ellipse: s-maj=18.9km s-min=5.3km az=10.0*

ISC 07 02:36:08.6±1.1**, 28°.21N**±0°.05×**52°.40E**±0°.05**, h15^{km}, n26,** σ**1^s.53**/27**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QIR1	Qir	0.62	65	Pg	Pg	02 36 19.7	-1.2
DSBU	Dashti - Bushe	1.02	279	Pg	Pn	02 36 27.6	-0.8
JHRM	Jahrom	1.07	74	Pg	Pg	02 36 29.0	-0.4
LMD1	Lamerd	1.10	142	Pg	Pg	02 36 30.8	+0.9
SHI	Shiraz	1.43	4	Pg	Pg	02 36 34.5	-1.6
KAZ2	Kazeron-Fars-I	1.54	335	Pg	Pg	02 36 38.1	-0.1
LAR1	LAR	1.83	107	Pn	Pg	02 36 41.7	-2.0
KLNJ	Kolanjah	2.87	346	Pn	Pn	02 36 55.4	+1.2
IRAM	Ramesheh	3.58	360	Pn	Pn	02 37 05.7	+1.9
IMEH	Mehriz	3.70	31	Pn	Pn	02 37 07.8	+2.3
NGRK	Negar Kerman	4.05	68	Pn	Pn	02 37 11.8	+1.4
NAZ	Nazwa, Dubai	4.34	137	P	Pn	02 37 15.2	+1.2
ICHK	Chekchek	4.37	23	Pn	Pn	02 37 16.2	+1.4
MSFE	Esma-Masafi	4.40	129	P	Pn	02 37 15.9	+1.0
ASUD	Al Ashush, Dub	4.43	143	P	Pn	02 37 16.4	+1.1
MDH	Madha	4.53	129	P	Pn	02 37 17.6	+0.9
IZEF	Zefreh	4.67	359	Pn	Pn	02 37 20.6	+1.8
UOSS	Minazif	4.71	133	P	Pn	02 37 20.2	+1.1
HATD	Hatta, Dubai	4.75	134	P	Pn	02 37 21.0	+1.4
ASHO	Ashiyiah	4.80	136	P	Pn	02 37 21.6	+1.1
ASHO				S	Sn	02 38 14.5	-1.4
ALNE	Al Ain	5.12	143	P	Pn	02 37 25.9	+1.1
IKLH	Kolahrood	5.14	352	Pn	Pn	02 37 26.7	+1.5
KBAM	BAM	5.39	79	Pn	Pn	02 37 31.0	+2.4
SOHO	SOHO	5.50	137	P	Pn	02 37 30.9	+0.9
KRSH	Karshahi	5.74	358	Pn	Pn	02 37 36.3	+2.8
RAYN	Ar Rayn	7.77	235	P	Pn	02 38 00.7	-0.6

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*IDC **07** 02:58:13.5±1.1, 37°.16N×142°.40E, h58^{km}±8^{km}, mb3.6/9, mbtmp3.9/12, MS2.9/6, Error ellipse: s-maj=17.9km s-min=13.3km az=156.0*

*NIED **07** 02:58:14.0, 37°.19N×142°.29E, h64^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.25; $M_{\theta\theta}$1.39; $M_{\phi\phi}$-0.14; $M_{r\theta}$0.47; $M_{\theta\phi}$0.24; $M_{\phi r}$0.56; Fault plane solution: $M_0$1.54000×10^{15} NP1: ϕ_s100.00000°, δ37.00000°, λ-58.00000°. NP2: ϕ_s243.00000°, δ59.00000°, λ-112.00000°.*

*JMA **07** 02:58:14.0±0.2, 37°.2N±0°.6×14°2E±°, h64^{km}±4^{km}, MD4.3/35, MV4.7/35, E OFF FUKUSHIMA PREF*

JMA Felt I J1 at E OFF FUKUSHIMA PREF .

ISC 07 02:58:12.7±0.9**, 37°.15N**±0°.05×**142°.48E**±0°.07**, h56^{km}**±8^{km}**, n63,** σ**1^s.16**/51**, mb4.0**/9**, MS3.1**/3**, 13D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	1.30	280	⇓*i*P	Pn	02 58 34.4	-0.2
JFK				⇓*e*S	Sn	02 58 49.3	-1.7
JFK	Kawauchi	1.30	280	A	A	02 58 34.4	
	comp=N,3.0nm,0.6s,comp=E,6.0nm,0.6s						
ONAJ	Iwakimizuishiy	1.34	269	⇓*i*P	Pn	02 58 35.1	-0.1
ONAJ				⇓S	Sn	02 58 50.0	-2.1
ONAJ	Iwakimizuishiy	1.34	269	A	A	02 58 35.1	
	comp=N,28nm,0.3s,comp=E,21nm,0.3s						
JMST	Minamisoumatoc	1.39	295	⇓*i*P	Pn	02 58 35.6	-0.1
JMST				⇓*e*S	Sn	02 58 51.2	-1.9
JMST	Minamisoumatoc	1.39	295	A	A	02 58 35.6	
	comp=N,6.0nm,0.4s,comp=E,6.0nm,0.9s						
JIKH	Ishinomakikobu	1.41	326	⇓*i*P	Pn	02 58 36.3	+0.3
JIKH				⇓S	Sn	02 58 52.7	-0.9
JMM	Marumori	1.52	299	P	Pn	02 58 37.7	+0.2
JMM	Marumori	1.52	299	⇓*i*P	Pn	02 58 37.6	+0.2
JMM				⇓S	Sn	02 58 54.6	-1.6
JMM	Marumori	1.52	299	A	A	02 58 37.6	
	comp=N,6.0nm,0.2s,comp=E,8.0nm,0.3s						
JFFD	Fukushimafurud	1.54	268	A	A	02 58 37.7	
	comp=N,5.0nm,0.7s,comp=E,8.0nm,0.7s						
JIO	Ouri	1.58	326	*i* P	Pn	02 58 38.9	+0.5
JIO				S	Sn	02 58 56.3	-1.4
JHYU	Hitachinakayam	1.72	243	A	A	02 58 40.8	
	comp=N,8.0nm,0.4s,comp=E,6.0nm,0.4s						
JOTO	OTAMA OYAMA	1.76	284	*i* P	Pn	02 58 41.3	+0.5
JOTO				S	Sn	02 59 01.3	-0.8
JOTO	OTAMA OYAMA	1.76	284	A	A	02 58 41.3	
	comp=N,17nm,0.3s,comp=E,15nm,0.5s						
JOU	Okura	1.88	311	⇓*i*P	Pn	02 58 42.8	+0.3
JOU				⇓*e*S	Sn	02 59 04.5	-0.7
JOU	Okura	1.88	311	A	A	02 58 42.8	
	comp=N,9.0nm,0.6s,comp=E,5.0nm,0.9s						
JOFO	Osakifurukawao	1.91	320	A	A	02 58 43.1	
	comp=N,13nm,1.1s,comp=E,14nm,1.6s						
JIHU	Itakohorinouch	1.97	234	A	A	02 58 44.5	
	comp=N,10.0nm,0.4s,comp=E,12nm,2.5s						
JYAR	Yonezawaarcadi	2.01	293	A	A	02 58 44.1	
	comp=N,8.0nm,0.3s,comp=E,10.0nm,0.4s						
JYT	Yasato	2.05	244	A	A	02 58 45.4	
	comp=N,6.0nm,0.6s,comp=E,17nm,0.4s						
JSB	Shiboa	2.06	266	A	A	02 58 45.0	
	comp=N,4.0nm,1.1s,comp=E,4.0nm,2.3s						
JMK	Ichinoseki	2.06	331	*i* P	Pn	02 58 45.5	+0.7
JMK				S	Sn	02 59 08.3	-1.1
JYS	Shirataka	2.19	300	*i* P	Pn	02 58 47.2	+0.5
JYS				S	Sn	02 59 12.4	-0.4
JYS	Shirataka	2.19	300	A	A	02 58 47.2	
	comp=N,4.0nm,1.0s,comp=E,5.0nm,0.4s						
JFY	Yanaizu	2.23	277	⇓*i*P	Pn	02 58 47.5	+0.3
JYK	Kaneyama	2.44	317	*i* P	Pn	02 58 50.8	+0.8
JYK				S	Sn	02 59 17.9	-0.7
JOM	Ohasama	2.50	338	A	A	02 58 52.0	
	comp=N,3.0nm,0.3s,comp=E,4.0nm,0.3s						
JYA	Atsumi	2.62	304	A	A	02 58 52.9	
	comp=N,2.0nm,1.1s,comp=E,3.0nm,0.7s						
JRG	Rokugo	2.67	328	A	A	02 58 54.1	
	comp=N,4.0nm,2.9s,comp=E,3.0nm,0.4s						
JYW	Yuwa	2.98	324	A	A	02 58 58.3	
	comp=N,4.0nm,4.5s,comp=E,4.0nm,7.7s						
JSD	Sado	3.47	286	P	Pn	02 59 04.0	-0.1
MJAR	Matsushiro Arr	3.48	261	P	Pn	02 59 05.0	+0.7
	comp=E,11nm,0.3s,baz=77,slow=14,SNR=39						
MJAR				S	Sn	02 59 43.5	-0.8
	comp=E,21nm,0.3s,baz=249,slow=43,SNR=3.9						
MJAR				LR	LR	03 00 53.0	
	comp=E,50nm,20.5s,baz=53,slow=47						
MAJO	Matsushiro	3.48	261	P	Pn	02 59 05.0	+0.7
JTM	Tenmabayashi	3.80	344	P	Pn	02 59 09.2	+0.6
JGF	Kuroka	4.41	251	P	Pn	02 59 19.3	+2.2
JHJ2	Mitsune	4.58	209	P	Pn	02 59 19.3	-0.1
INU	Inuyama	4.77	250	P	Pn	02 59 23.2	+1.3
ERM	Erimo	4.89	6	P	Pn	02 59 23.7	+0.1
JEM	Erimo	4.89	6	P	Pn	02 59 23.8	+0.2
ASAJ	Asahikawa	6.96	1	P	Pn	02 59 52.1	+0.2
	comp=E,60nm,0.4s,baz=213,slow=12,SNR=112						
ASAJ				S	Sn	03 01 05.5	-4.2
	comp=E,15nm,0.6s,baz=181,slow=21,SNR=1.6						
JCJ	Chichijima	10.03	182	P	Pn	03 00 31.5	-2.5
	comp=E,32nm,0.4s,baz=292,slow=23,SNR=16						
JCJ				S	Sn	03 02 15.7	-9.3
	comp=E,26nm,0.3s,baz=274,slow=23,SNR=5.2						
USRK	Ussuriysk Ar.	10.63	315	P	Pn	03 00 43.6	+1.5
	comp=E,2.8nm,0.5s,baz=118,slow=14,SNR=7.9						
USRK				LR	LR	03 04 49.4	
	comp=E,66nm,19.3s,baz=203,slow=37						
KLR	Kul'dur	14.37	331	LR	LR	03 06 56.5	
	comp=E,39nm,19.5s,baz=88,slow=36						
H11N2	WAKE ISLAND Hy	27.48	122	T	T	03 33 35.8	
	baz=315						
H11N1	WAKE ISLAND Hy	27.49	122	T	T	03 33 23.5	
	baz=315						
H11N3	WAKE ISLAND Hy	27.50	122	T	T	03 33 31.4	
	baz=315						
H11S1	WAKE ISLAND Hy	28.21	125	T	T	03 34 29.6	
	baz=316						
H11S3	WAKE ISLAND Hy	28.21	125	T	T	03 34 49.6	
	baz=316						
H11S2	WAKE ISLAND Hy	28.23	125	T	T	03 34 22.4	
	baz=316						
SONM	Songino Array	28.43	304	P	P	03 04 02.1	0.0
	comp=E,1.3nm,0.8s,baz=107,slow=7.2,SNR=5.4						
SONM				pP	pP	03 04 16.4	+0.5
	comp=E,1.0nm,0.6s,baz=94,slow=7.7,SNR=3.7						
	comp=E,1.3nm,0.8s						
DAV	Davao City (W)	33.66	211	LR	LR	03 18 43.8	
	comp=E,30nm,19.7s,baz=144,slow=37						
ZALV	Zalesovo Beam	42.47	312	P	P	03 06 02.2	+0.2
	comp=E,1.0nm,0.4s,baz=94,slow=8.8,SNR=4.0						
	comp=E,1.0nm,0.4s						
MKAR	Makanchi Array	44.78	302	P	P	03 06 20.5	-0.2
	comp=E,0.6nm,0.7s,baz=82,slow=8.9,SNR=5.0						
MKAR				pP	pP	03 06 36.0	+1.1
	comp=E,1.5nm,0.7s,baz=87,slow=9.7,SNR=7.6						
	comp=E,0.6nm,0.7s						
KURBB	Kurchatov Arra	46.60	308	P	P	03 06 34.8	-0.2
	comp=E,1.0nm,0.2s,baz=81,slow=8.1,SNR=5.3						
	comp=E,1.0nm,0.2s						
ILAR	Eielson Array	48.94	32	P	P	03 06 53.7	+0.9
	comp=E,0.3nm,0.8s,baz=270,slow=8.2,SNR=3.4						
ILAR				pP	pP	03 07 08.4	+1.3
	comp=E,0.3nm,0.6s,baz=278,slow=6.5,SNR=2.5						
	comp=E,0.3nm,0.8s						
WRA	Warramunga Arr	57.30	189	P	P	03 07 54.6	-0.1
	comp=E,1.2nm,0.5s,baz=7.6,slow=7.1,SNR=12						
	comp=E,1.2nm,0.5s						
KIRV	Kirov	60.67	323	LR	LR	03 36 55.9	
	comp=E,12nm,18.4s,baz=115,slow=38						
ASAR	Alice Springs	61.03	189	P	P	03 08 21.0	+0.5
	comp=E,1.4nm,0.8s,baz=7.3,slow=6.4,SNR=8.6						
	comp=E,1.4nm,0.8s						

FINES	FINESS Array B	69.11	333	P	P	03 09 11.3	-1.1
	comp=E,1.6nm,0.9s,baz=45,slow=7.7,SNR=3.0						
	comp=E,1.6nm,0.9s						
MMAI	Mount Meron Ar	82.59	306	LR	LR	03 48 45.6	
	comp=E,26nm,21.4s,baz=117,slow=37						
TXAR	Lajitas Array	89.37	53	P	P	03 11 04.6	+1.0
	comp=E,0.3nm,0.7s,baz=316,slow=4.7,SNR=2.7						
	comp=E,0.3nm,0.7s						
LPAZ	La Paz	145.90	61	PKPbc	PKPab	03 17 48.3	+0.8
	comp=E,1.2nm,0.6s,baz=14,slow=12,SNR=7.9						

IDC 07 02:58:57.9±1.1, 1.°26N×97.°00E, h0^{km}, mb4.0/14, mbtmp4.0/16, ML3.9/2, MS3.2/4, Error ellipse: s-maj=29.3km s-min=18.2km az=45.0

NEIC 07 02:59:00.3±1.7, 1.°32N±0.°03×96.°92E±0.°04, h10^{km}±1^{km}, mb4.4/10, Error ellipse: s-maj=6.7km s-min=5.2km az=54.0

DJA 07 02:59:02.6±0.7, 1°N±3°×9°7E±°, h15^{km}±3^{km}, M4.2/10, mb4.3/1, MLv4.2/10

ISC 07 02:59:02.6±0.7, 1.°28N±0.°07×97.°11E±0.°06, h28^{km}, n60, σ1.^{s}57/56, mb4.4/25, MS3.5/3, 1D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.47	87		Pn	02 59 13.6	+0.1
GSI					Sn	02 59 21.6	+0.7
GSI	Gunungsitoli	0.47	87	P	Pn	02 59 13.3	-0.2
GSI				S	Sb	02 59 18.8	-0.4
RPSI	Rantau Prapat	2.30	52		Pn	02 59 38.9	+0.2
RPSI	Rantau Prapat	2.30	52		Pn	02 59 38.7	+0.1
PSI	Prapat	2.36	50	Pn	Pn	02 59 38.9	-0.8
	6.5nm,0.3s,baz=224,slow=5.1,SNR=41						
PSI				LR	LR	03 00 27.9	
	comp=Z,242nm,21.4s,baz=300,slow=38						
	36nm,0.6s						
MNSI	Mandailing Nat	2.52	101	P	Pn	02 59 43.0	+1.3
MNSI				S	Sn	03 00 14.1	+2.6
TSI	Tuntungan	2.64	33	P	Pn	02 59 43.6	+0.2
PPI	Padang Panjang	3.71	118	P	Pn	02 59 59.8	+1.6
LHMI	Lhok Sumawe	3.92	358	Pn	Pn	02 59 59.9	-1.2
LHMI	Lhok Sumawe	3.92	358	P	Pn	03 00 00.6	-0.5
LHMI				S	Sn	03 00 45.8	-0.5
BKNI	Bangkinang	4.04	104		Pn	03 00 04.2	+1.4
BKNI	Bangkinang	4.04	104	P	Pn	03 00 03.9	+1.2
KULM	Kulim	5.33	42		Pn	03 00 20.0	-0.3
CMBY	CAMPBELL BAY	6.52	331	*e*P	Pn	03 00 39.1	+2.4
CMBY				*e*S	Sn	03 01 54.4	+4.3
CMBY				IAML		03 01 57.2	
	comp=E,527nm,1.6s						
CMBY				IAML		03 01 58.8	
	comp=N,483nm,0.5s						
MNAI	Manna	8.10	134	Pn	Pn	03 00 59.9	+1.4
CMAR	Chiang Mai Arr	17.16	6	P	Pn	03 02 58.5	-2.1
	comp=N,0.5nm,0.3s,baz=201,slow=11,SNR=8.0						
	comp=N,1.2nm,0.3s						
MDRS	Chennai	20.40	306	*e*P	P	03 03 37.9	+0.4
MDRS				IAmb	IAmb	03 03 40.0	
	comp=Z,20nm,0.7s						
MDRS				*e*S	S	03 07 25.9	+1.1
SLVN	Son La	21.01	18		P	03 03 43.6	-0.5
SLVN				IAmb	IAmb	03 03 44.7	
	comp=Z,16nm,0.8s						
BRDH	Bariadhala	21.92	346	P	P	03 03 53.2	-0.7
	comp=Z,132nm,0.3s,baz=217,slow=14,SNR=3.1						
AZL	Aizawl	22.73	349	*e*P	P	03 04 04.5	+1.8
AZL				IAmb	IAmb	03 04 11.3	
	comp=Z,12nm,1.1s						
AZL				*e*S	S	03 08 14.4	+4.5
IMP	Imphal	23.61	353	*e*P	P	03 04 13.1	+1.6
IMP				IAmb	IAmb	03 04 13.9	
	comp=Z,11nm,0.7s						
IMP				*e*S	S	03 08 28.7	+4.3
TOLI2	Tolitoli	23.67	90	P	P	03 04 11.0	-1.1
KOHI	KOHIMA	24.47	353	*e*P	P	03 04 21.9	+2.3
KOHI				IAmb	IAmb	03 04 23.2	
	comp=Z,5.8nm,0.3s						
KOHI				*e*S	S	03 08 42.7	+4.3
H08S2	Diego Garcia H	26.10	250	T	T	03 31 37.4	
	baz=70,slow=76,SNR=3945						
H08S3	Diego Garcia H	26.11	250	T	T	03 31 33.8	
	baz=70,slow=76,SNR=7239						
H08S1	Diego Carcia H	26.12	250	T	T	03 31 34.8	
	baz=70,slow=76,SNR=3351						
EVN	Everest	28.30	341	P	P	03 04 55.2	+0.6
H01W3	Cape Leeuwin H	39.35	158	T	T	03 48 08.7	
	baz=333,slow=76,SNR=20						
H01W2	Cape Leeuwin H	39.37	158	T	T	03 48 24.7	
	baz=333,slow=76,SNR=22						
H01W1	Cape Leeuwin H	39.37	158	T	T	03 48 28.5	
	baz=333,slow=76,SNR=12						
WB0	Warramunga Arr	42.13	122	P	P	03 06 52.4	-0.5
WB0				IAmb	IAmb	03 06 55.8	
	comp=Z,9.8nm,1.1s						
WRA	Warramunga Arr	42.16	122	P	P	03 06 52.9	-0.3
	comp=Z,0.9nm,0.7s,baz=297,slow=8.1,SNR=7.9						
	comp=Z,0.9nm,0.7s						
WR8	Warramunga Arr	42.30	122	P	P	03 06 53.9	-0.4
WR8				IAmb	IAmb	03 07 05.9	
	comp=Z,10nm,1.2s						
ASAR	Alice Springs	43.52	127	P	P	03 07 04.5	+0.3
	comp=Z,0.4nm,0.5s,baz=299,slow=7.7,SNR=4.8						
	comp=Z,0.4nm,0.5s						
BOOM	Boomskoye usch	45.21	338	P	P	03 07 16.2	-1.3
BOOM				IAmb	IAmb	03 07 33.4	
	comp=Z,4.8nm,1.0s						
SIMJ	Simiganj	45.23	329	P	P	03 07 16.4	-1.3
SIMJ				IAmb	IAmb	03 07 30.3	
	comp=Z,2.6nm,0.8s						
SONM	Songino Array	47.07	9	P	P	03 07 31.9	-0.1
	comp=Z,2.7nm,0.7s,baz=197,slow=8.1,SNR=12						
SONM				PcP	PcP	03 09 03.3	-0.5
	comp=Z,0.4nm,0.5s,baz=184,slow=4.0,SNR=2.3						
	comp=Z,2.7nm,0.7s						
MKAR	Makanchi Array	47.14	346	P	P	03 07 32.4	-0.1
	comp=Z,1.4nm,0.5s,baz=157,slow=8.9,SNR=17						
	comp=Z,1.4nm,0.5s						
KURBB	Kurchatov Arra	51.63	345	P	P	03 08 06.4	-0.2
	comp=Z,1.2nm,0.4s,baz=166,slow=7.2,SNR=5.5						
	comp=Z,1.2nm,0.4s						
BNX	BinXian	51.66	27	⇓P	P	03 08 06.3	-0.6
BNX				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KURK	Kurchatov	51.69	345	P	P	03 08 07.3	+0.2
USRK	Ussuriysk Ar.	52.75	31	P	P	03 08 15.2	+0.1
	comp=Z,6.3nm,0.8s,baz=225,slow=7.6,SNR=11						
USRK				LR	LR	03 32 51.0	
	comp=Z,46nm,18.6s,baz=234,slow=38						
	comp=Z,6.3nm,0.8s						
ZAA0	Zalesovo Array	53.47	351	P	P	03 08 19.7	-0.4
ZALV	Zalesovo Beam	53.47	351	P	P	03 08 19.8	-0.4
	comp=Z,4.8nm,0.5s,baz=163,slow=7.7,SNR=16						
	comp=Z,4.8nm,0.5s						
BVAR	Borovoye Array	56.14	341	P	P	03 08 38.5	-1.1
	comp=Z,2.6nm,0.7s,baz=146,slow=7.6,SNR=9.5						
	comp=Z,2.6nm,0.7s						
KLR	Kul'dur	56.22	27	P	P	03 08 39.9	-0.3
	comp=Z,5.2nm,0.9s,baz=248,slow=7.6,SNR=19						
	comp=Z,5.2nm,0.9s						
ABKAR	Akbulak array	57.40	332	P	P	03 08 47.4	-1.2
ABKAR				IAmb	IAmb	03 08 48.5	
	comp=Z,3.1nm,0.8s						
H04N2	CROZET ISLANDS	61.79	214	T	T	04 16 11.9	
	baz=54,slow=75,SNR=768						
H04N1	CROZET ISLANDS	61.80	214	T	T	04 16 12.9	
	baz=54,slow=75,SNR=840						
H04N3	CROZET ISLANDS	61.81	214	T	T	04 16 11.0	
	baz=54,slow=75,SNR=849						
H04S1	CROZET ISLANDS	62.13	213	T	T	04 16 35.5	
	baz=53,slow=75,SNR=130						
H04S3	CROZET ISLANDS	62.14	213	T	T	04 16 35.1	
	baz=53,slow=75,SNR=136						
H04S2	CROZET ISLANDS	62.15	213	T	T	04 16 39.7	
	baz=53,slow=75,SNR=88						
KBZ	Khabaz	63.95	319	P	P	03 09 33.1	-0.2
	comp=Z,0.8nm,0.6s,baz=234,slow=7.9,SNR=1.9						
	comp=Z,0.8nm,0.6s						
BRTR	Keskin Array B	68.99	312	P	P	03 10 05.6	-0.3
	comp=Z,0.1nm,0.3s,baz=110,slow=5.5,SNR=1.6						
	comp=Z,0.1nm,0.3s						
TIXI	Tiksi	73.12	10	LR	LR	03 44 34.6	
	comp=Z,25nm,19.5s,baz=202,slow=37						
AKASG	Malin Array Be	75.14	322	P	P	03 10 41.3	-1.0
	comp=Z,0.1nm,0.2s,baz=86,slow=5.9,SNR=4.8						
	comp=Z,0.1nm,0.2s						
MLR	Muntele Rosu	75.94	317	LR	LR	03 49 24.4	
	comp=Z,13nm,18.5s,baz=86,slow=40						
FINES	FINESS Array B	79.89	333	P	P	03 11 07.8	-0.8
	comp=Z,0.7nm,0.5s,baz=98,slow=5.8,SNR=3.7						
	comp=Z,0.7nm,0.5s						
ARCES	ARCESS Array B	82.43	340	P	P	03 11 21.8	-0.3
	comp=Z,1.4nm,0.7s,baz=91,slow=5.2,SNR=4.7						
	comp=Z,1.4nm,0.7s						

GCG 07 03:02:38.9±0.4, 13.°09N×89.°57W, h54^{km}±5^{km}, MD3.7

CATAC 07 03:02:38.1±0.7, 13°N±4°×9°0W±°, h27^{km}±4^{km}, M2.8/11, MLv2.8/11, Error ellipse: s-maj=9.6km s-min=5.1km az=20.5, confirmed

SNET 07 03:02:39.7±1.2, 13.°13N×89.°44W, h49^{km}±11^{km}, ML2.3

ISC 07 03:02:38.9±2.2, 13.°0N±0.°1×89.°51W±0.°06, h42^{km}±22^{km}, n49, σ0.^{s}54/64, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.49	22	*e*P	Pn	03 02 49.5	-0.1
LALI				*e*S	Sn	03 02 57.4	+0.3
LALI	Alcalda de L	0.49	22	*i* P	Pn	03 02 49.7	+0.1
LALI				*i* S	Sn	03 02 58.4	+1.3
LALI	Alcalda de L	0.49	22	P	Pn	03 02 48.9	-0.7
JAYA	Jayaque - finc	0.62	5	*e*P	Pn	03 02 51.3	-0.2
JAYA				*e*S	Sn	03 02 60.0	-0.6
JAYA	Jayaque - finc	0.62	5	*i* P	Pn	03 02 51.3	-0.2
JAYA				*i* S	Sn	03 03 00.9	+0.4
JAYA	Jayaque - finc	0.62	5	P	Pn	03 02 51.0	-0.5
LOMA	Loma Larga	0.69	28	*e*P	Pn	03 02 52.0	-0.4
LOMA	Loma Larga	0.69	28	P	Pn	03 02 52.0	-0.4
LOMA	Loma Larga	0.69	28	S	Sn	03 03 02.5	+0.4
PMON	Piamonte	0.70	15	*e*P	Pn	03 02 52.2	-0.3
PMON				*e*S	Sn	03 03 02.7	+0.3
PMON	Piamonte	0.70	15	P	Pn	03 02 52.1	-0.5
UEES	Universidad Ev	0.73	21	*e*P	Pn	03 02 52.0	-0.9
UEES				*e*S	Sn	03 03 03.3	+0.3
LFRS	El Faro	0.73	36	*e*P	Pn	03 02 52.5	-0.5
LFRS				*e*S	Sn	03 03 02.4	-0.7
BOQS	Boqueron	0.74	17	*e*P	Pn	03 02 52.8	-0.3
BOQS				*e*S	Sn	03 03 02.9	-0.4
PIC2	El Picacho	0.75	19	*e*P	Pn	03 02 53.4	+0.1
CEVE	Cerro Verde	0.80	352	*e*P	Pn	03 02 54.0	+0.1
CEVE	Cerro Verde	0.80	352	P	Pn	03 02 53.9	-0.1
CEVE	Cerro Verde	0.80	352	S	Sn	03 03 06.0	+1.1
LFU	La Fuente	0.81	28	*e*P	Pn	03 02 54.1	+0.1
SBLS	San Blas	0.81	352	*e*P	Pn	03 02 54.1	-0.1
LBRS	Las Brisas	0.84	33	*e*P	Pn	03 02 54.5	+0.2
COEG	Centro de Oper	0.85	46	*e*P	Pn	03 02 53.8	-0.6
COEG	Centro de Oper	0.85	46	P	Pn	03 02 53.8	-0.6
COEG	Centro de Oper	0.85	46	S	Sn	03 03 05.8	+0.1
TECO	Alcaldia de Te	0.87	54	*e*P	Pn	03 02 53.9	-0.8
TECO				*e*S	Sn	03 03 05.5	-0.7
TECO	Alcaldia de Te	0.87	54	P	Pn	03 02 53.8	-0.9
RTR	El Retiro	0.87	351	*e*P	Pn	03 02 56.0	+1.1
PAVA	Las Pavas	0.88	39	*e*P	Pn	03 02 54.8	-0.1
PAVA				*e*S	Sn	03 03 06.2	-0.4
PAVA	Las Pavas	0.88	39	P	Pn	03 02 54.6	-0.3
PAVA	Las Pavas	0.88	39	S	Sn	03 03 07.2	+0.6
NUBE	Las Nubes	0.91	343	*e*P	Pn	03 02 55.0	-0.3
NUBE				*e*S	Sn	03 03 06.8	-0.6
NUBE				IAML		03 03 08.8	
	comp=Z,86nm,0.1s						
NUBE	Las Nubes	0.91	343	*i* P	Pn	03 02 55.1	-0.3
NUBE				*i* S	Sn	03 03 07.4	0.0
NUBE	Las Nubes	0.91	343	P	Pn	03 02 54.9	-0.5
UESV	Universidad de	0.93	49	*e*P	Pn	03 02 54.9	-0.6
FAME	Alcaldia de Sa	0.95	329	P	Pn	03 02 55.3	-0.4
FAME	Alcaldia de Sa	0.95	329	S	Sn	03 03 07.4	-0.8
SLOZ	Alcaldia de Sa	1.03	345	*e*P	Pn	03 02 57.1	+0.2
SLOZ				*e*S	Sn	03 03 11.0	+0.9
TECA	Tecapa	1.08	65	*e*P	Pn	03 02 57.1	-0.7
PACA	Pacayal	1.23	69	*e*P	Pn	03 03 00.5	+0.7
PACA	Pacayal	1.23	69	P	Pn	03 03 00.8	+1.0
PACA	Pacayal	1.23	69	S	Sn	03 03 15.5	+0.2
LCY	Lacayo	1.24	71	*e*P	Pn	03 02 60.0	+0.1
BLLM	Bellamira	1.30	71	*e*P	Pn	03 03 01.3	+0.7
BLLM				*e*S	Sn	03 03 16.8	-0.1
MTO3	Montecristo	1.37	6	*e*P	Pn	03 03 01.7	0.0
MTO3	Montecristo	1.37	6	*i* P	Pn	03 03 01.7	0.0
MTO3				*i* S	Sn	03 03 19.6	+0.8
MTO3	Montecristo	1.37	6	P	Pn	03 03 01.5	-0.2
LCND	La Caada	1.60	80	*e*P	Pn	03 03 04.8	+0.2
LCND	La Caada	1.60	80	P	Pn	03 03 04.7	0.0
CNCH	Conchagua	1.65	81	*e*P	Pn	03 03 05.3	-0.2

IDC 07 03:28:22.0±6.0, 17.°83S×178.°02W, h530^{km}±28^{km}, mb3.0/4, mbtmp3.9/5, Error ellipse: s-maj=166.4km s-min=40.2km az=27.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.75	271	P	P	03 29 40.7	0.0
	6.4nm,0.5s,baz=144,slow=14,SNR=9.2						
STKA	Stephens Creek	39.00	241	P	P	03 35 03.1	+0.3
	0.8nm,0.4s,baz=90,slow=11,SNR=3.2						
	0.8nm,0.4s						
WRA	Warramunga Arr	45.02	259	P	P	03 35 50.0	-0.5
	0.6nm,0.7s,baz=96,slow=7.5,SNR=9.4						
	0.6nm,0.7s						
ASAR	Alice Springs	45.17	254	P	P	03 35 51.6	0.0
	3.4nm,0.6s,baz=95,slow=8.3,SNR=34						
	3.4nm,0.6s						
QSPA	South Pole Qui	72.23	180	P	P	03 38 53.1	0.0
	1.0nm,0.9s,baz=358,slow=16,SNR=1.7						
	1.0nm,0.9s						

NEIC 07 03:30:58.6±1.9, 19.°58N±0.°08×68.°02W±0.°05, h10^{km}±2^{km}, ML2.0/8, Md2.8/6(RSPR), Error ellipse: s-maj=14.8km s-min=4.5km az=27.0

RSPR 07 03:31:01.1, 19.°63N×68.°05W, h72^{km}±4^{km}, MD2.8/6

SDD 07 03:31:01.1±1.0, 19.°40N×68.°10W, h22^{km}±97^{km}, MD3.2, ML1.9, MW2.8

ISC 07 03:30:58.3±2.0, 19.°5N±0.°1×68.°02W±0.°04, h17^{km}±10^{km}, n34, σ1.^{s}21/43, 3C-6D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMDR	Samana, DR	1.13	258	⇓*e*P	Pg	03 31 20.6	+0.4
SMDR	Samana, DR	1.13	258	*e*S	Sg	03 31 36.6	+1.7
HIDR	Higuey Centro	1.14	215	*e*Pg	Pn	03 31 18.8	-0.8
HIDR				*e*Sg	Sn	03 31 31.4	-3.5
HIDR				IAML		03 31 32.4	
	comp=N,18nm,1.2s						
IDE	Isla Desecheo	1.25	156		Pn	03 31 20.9	-0.2
IDE					Sn	03 31 36.8	-0.8
IDE	Isla Desecheo	1.25	156	⇓*e*P	Pn	03 31 20.9	-0.2
IDE	Isla Desecheo	1.25	156	*e*S	Sn	03 31 36.8	-0.8
AGPR	Aguadilla, PR	1.36	141		Pg	03 31 24.0	-0.5
AGPR	Aguadilla, PR	1.36	141		Sb	03 31 41.6	+1.0
AGPR	Aguadilla, PR	1.36	141	IAML		03 31 41.0	
	comp=N,41nm,1.9s						
AGPR	Aguadilla, PR	1.36	141	⇓*e*P	Pg	03 31 24.0	-0.5
AGPR	Aguadilla, PR	1.36	141	*e*S	Sb	03 31 41.6	+1.0
AGPR	Aguadilla, PR	1.36	141	⇓*e*Pg	Pg	03 31 24.1	-0.5
AGPR				*e*Sg	Sn	03 31 41.2	+0.9
AGPR				IAML		03 32 17.1	
	comp=N,34nm,2.0s						
DR12	Loma Pena Alta	1.48	240		Pb	03 31 25.2	-0.3
DR12					Sn	03 31 44.1	+0.7
HATOM	Hato Mayor del	1.48	240	*e*Pg	Pb	03 31 25.4	-0.1
HATOM				*e*Sg	Sn	03 31 41.6	-1.8
HATOM				IAML		03 32 22.7	
	comp=N,14nm,1.6s						
LSP	Las Mesas	1.61	147		Pb	03 31 28.1	+0.4
LSP					Sb	03 31 49.4	+1.6
LSP	Las Mesas	1.61	147	⇑*e*P	Pb	03 31 28.1	+0.4
LSP	Las Mesas	1.61	147	*e*S	Sb	03 31 49.4	+1.6
AOPR	Arecibo Observ	1.68	134		Pb	03 31 28.2	-0.6
AOPR				IAML		03 32 17.3	
	comp=E,18nm,1.9s						
AOPR	Arecibo Observ	1.68	134		Sg	03 31 52.8	+0.3
AOPR	Arecibo Observ	1.68	134	⇓*e*P	Pb	03 31 28.2	-0.6
AOPR	Arecibo Observ	1.68	134	*e*S	Sg	03 31 52.8	+0.3
AOPR	Arecibo Observ	1.68	134	*e*Pg	Pg	03 31 29.7	-0.9
AOPR				*e*Sg	Sb	03 31 50.4	+0.7
AOPR				IAML		03 32 02.2	
	comp=N,9.1nm,0.8s						
CRPR	Cabo Rojo, PR	1.74	150	Pn	Pb	03 31 28.5	-1.4
CRPR				Sn	Sn	03 31 52.0	+2.3
CRPR				IAML		03 31 55.4	
	comp=E,14nm,2.8s						
CRPR				IAML		03 32 30.9	
	comp=N,18nm,2.6s						
CRPR	Cabo Rojo, PR	1.74	150	*e*Pg	Pb	03 31 30.0	+0.1
CRPR				*e*Sg	Sn	03 31 52.1	+2.3
CRPR				IAML		03 32 30.2	
	comp=N,20nm,2.6s						
UUPR	Utuado, UPR, P	1.77	136	Sn	Sb	03 31 52.6	+0.4
MLPR	Magueyes Islan	1.81	149	⇓*e*P	Pb	03 31 31.0	0.0
MLPR	Magueyes Islan	1.81	149	*e*S	Sb	03 31 55.0	+1.7
ECPR	Experimental S	1.98	127	⇑*e*P	Pb	03 31 33.0	-0.9
ECPR	Experimental S	1.98	127	*e*S	Sb	03 32 00.2	+1.9
CELP	Cerrillos	1.99	136		Pb	03 31 33.6	-0.5
CELP				IAML		03 32 02.8	
	comp=E,11nm,3.1s						
CELP	Cerrillos	1.99	136		Sb	03 31 58.3	-0.3
CELP	Cerrillos	1.99	136	⇑*e*P	Pg	03 31 34.7	-1.8
CELP	Cerrillos	1.99	136	*e*S	Sb	03 31 58.3	-0.3
CELP	Cerrillos	1.99	136	*e*Pg	Pb	03 31 34.2	+0.1
CELP				*e*Sg	Sb	03 31 59.6	+1.0
CELP				IAML		03 32 38.7	
	comp=N,8.6nm,3.8s						

HEL 07 04:07:34.6±0.4, 67.°66N×33.°72E, h0^{km}, ML1.3, Explosion

KOLA 07 04:07:33.9, 67.°62N×33.°82E, h0^{km}, ML1.6, Error ellipse: s-maj=5.8km s-min=1.5km az=140.0, Khibiny, mines Rasvumchorr, Central, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA	Apatity	0.17	253	P	Pg	04 07 36.9	-0.2
APA				S	Sg	04 07 39.4	+0.2
APA0	Apatity Array	0.32	268	P	Pg	04 07 39.4	-0.5
APA0				S	Sg	04 07 43.5	-0.5
LVZ	Lovozero	0.42	48	S	Sg	04 07 47.5	0.0
LVZ	Lovozero	0.42	48	PG	Pg	04 07 42.5	+0.5
LVZ				SG	Sg	04 07 45.7	-1.8
KVDA	Kovda	1.00	202	S	Sg	04 08 05.8	-0.3
VRF	Varrio	1.61	277	PG	Pn	04 08 03.0	-0.6
VRF				MSG		04 08 21.8	
	comp=Z,1.9nm,0.2s						
VRF				SG	Sn	04 08 22.8	-2.2
TERR	Teriberka	1.66	16	P	Pn	04 08 03.4	-0.8
TERR				S	Sn	04 08 24.3	-1.9
OLKF	Oulanka, Finla	2.17	235	MSG		04 08 38.6	
	comp=Z,1.7nm,0.2s						
OLKF				SG	Sb	04 08 41.7	+0.3
KU6	Riekki	2.23	226	PG	Pb	04 08 14.4	-0.7
KU6				MSG		04 08 40.7	
	comp=Z,1.1nm,0.2s						
KU6				SG	Sb	04 08 43.2	+0.1
RAJF	Raja-Jooseppi	2.24	295	PB	Pn	04 08 12.5	+0.3
RAJF				SB	Sn	04 08 40.9	+0.3
MSF	Maaselka	2.56	230	SG	Sb	04 08 51.4	-1.1
KU2	Taivalkoski	2.94	232	SN	Sn	04 08 54.8	-2.9
VADS	Vadso	2.99	329	S	Sn	04 08 57.1	-1.8
RNF	Rovaniemi	3.21	255	PN	Pn	04 08 25.7	+0.1
	baz=73						
RNF				SN	Sn	04 09 05.5	+1.0
KEV	Kevo	3.28	314	PN	Pn	04 08 26.5	0.0
KEV				SG	Sb	04 09 12.2	-1.2
ARA0	ARCESS Array S	3.60	306	PN	Pn	04 08 30.2	-0.8
ARCES	ARCESS Array B	3.60	306	P	Pn	04 08 30.2	-0.8
ARCES				S	Sn	04 09 11.1	-3.1
HEF	Hetta	3.90	286	PB	Pb	04 08 41.3	-2.2

UCR 07 04:30:23.4±0.7, 8.°32N×82.°82W, h25^{km}±3^{km}, MW3.7, Fault plane solution: NP1:ϕ_s147.18000°, δ51.62000°, λ70.72000°.

UPA 07 04:30:24.5±0.9, 8.°39N×82.°78W, h19^{km}±2^{km}, MW3.6

ISC 07 04:30:23.6±1.0, 8.°33N±0.°04×82.°82W±0.°03, h28^{km}±8^{km}, n42, σ0.^{s}75/60, 3C-20D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMNES	Limones	0.23	190	⇑*e*P	Pb	04 30 30.3	+0.3
MCANO	Manzana, Boque	0.34	45	⇓*e*P	Pb	04 30 31.4	-0.2
NELY	Ciudad Neily	0.34	339	⇑*e*P	Pb	04 30 31.0	-0.5
NELY				*e*S	Sb	04 30 37.0	+0.1
DVD	David	0.38	74	⇓*i*P	Pb	04 30 31.9	-0.2
DVD				*e*S	Sb	04 30 37.8	0.0
CSTBL	De las Acacias	0.38	78	⇓*e*P	Pb	04 30 31.9	-0.3
CSTBL				*e*S	Sb	04 30 37.4	-0.5
PEDE3	Pedregal, Chir	0.40	82	*e*P	Pb	04 30 32.0	-0.3
PEDE3				*e*S	Sb	04 30 38.0	-0.2
LOCO3	Loma Colorada,	0.41	78	*e*P	Pb	04 30 32.3	-0.2
LOCO3				*e*S	Sb	04 30 38.3	-0.2
LOMA3	Las Lomas, Chi	0.44	76	⇓*i*P	Pb	04 30 32.6	-0.3
LOMA3				*e*S	Sb	04 30 38.8	-0.5
FITO	Golfito	0.44	312	⇓*e*P	Pb	04 30 31.6	-1.4
FITO				*e*S	Sb	04 30 38.1	-1.4
MLIR3	Monte Lirio, C	0.46	359	*e*P	Pb	04 30 33.4	0.0
MLIR3				*e*S	Sb	04 30 40.5	+0.4
EDAD	Golfito	0.47	313	⇓*e*P	Pb	04 30 32.3	-1.2
EDAD				*e*S	Sb	04 30 39.2	-1.1
BRU2	Volcan	0.48	15	⇓*e*P	Pb	04 30 33.2	-0.5
BRU2				*e*S	Sb	04 30 40.6	-0.1
BRU2	Volcan	0.48	15	⇓*i*P	Pb	04 30 33.3	-0.5
BRU2				*e*S	Sb	04 30 40.9	+0.3
PTAR3	Potrerillos Ar	0.48	41	⇓*i*P	Pb	04 30 33.4	-0.4
PTAR3				*e*S	Sb	04 30 39.8	-0.9
DHOFF	Oeste 158, Vol	0.48	22	⇓*e*P	Pb	04 30 33.2	-0.7
CHIR3	Chiriqui UPA,	0.49	82	⇓*i*P	Pb	04 30 33.3	-0.4
CHIR3				*e*S	Sb	04 30 40.3	-0.3
RSRNO	Rio Sereno	0.49	355	*e*P	Pb	04 30 33.8	-0.1
TBS2		0.49	19	⇓*e*P	Pb	04 30 34.2	+0.3
SCLRA	Santa Clara, W	0.50	4	⇓*e*P	Pb	04 30 33.8	-0.3
VITO	San Vito	0.51	343	⇓*e*P	Pb	04 30 34.2	0.0
PTJ1	Puerto Jimnez	0.52	293	⇓*e*P	Pb	04 30 33.6	-0.7
PTJ1	Puerto Jimnez	0.52	293	*e*P	Pb	04 30 33.7	-0.7
PTJ1				*e*S	Sn	04 30 43.5	+0.4
BC3P	Paso Ancho	0.53	23	⇓*i*P	Pb	04 30 33.9	-0.7
BC3P				*e*S	Sb	04 30 41.6	-0.4
JIME	Puerto Jimenez	0.54	293	*e*P	Pb	04 30 34.3	-0.3
BQTLY	Boquete Panama	0.56	40	⇓*e*P	Pb	04 30 34.3	-0.7
BQSF3	Alto Boquete,	0.56	43	⇓*i*P	Pb	04 30 34.3	-0.8
BQSF3				*e*S	Sb	04 30 42.8	-0.1
ALCO	Alturas Coton,	0.62	359	⇓*e*P	Pb	04 30 35.0	-1.0
EDP2	Potrero Grande	0.77	333	*e*P	Pb	04 30 38.0	-0.5
PBNVO	Pueblo Nuevo,	0.83	48	⇓*e*P	Pb	04 30 38.1	-1.5
FIMO	Fila Mora	0.84	321	*e*P	Pb	04 30 39.1	-0.7
RMDIO	Remedios, Chir	0.98	96	*e*P	Pb	04 30 40.9	-1.1
DRK0	Durika	1.02	336	⇑*e*P	Pb	04 30 41.3	-1.5
DRK0	Durika	1.02	336	*e*P	Pb	04 30 41.4	-1.5
DRK0				*e*S	Sb	04 30 55.1	-0.8
EDPE	Pejibaye, P	1.11	318	*e*P	Pn	04 30 43.2	-0.1
PDCAN	Manzana , Fuen	1.11	92	*e*P	Pn	04 30 42.8	-0.5
SAJE	San Jernim	1.22	326	*e*P	Pn	04 30 44.5	-0.4
BRIBI	Bribri	1.28	0	*e*P	Pb	04 30 47.0	-0.1
CEUA	Cerro Uatsi, L	1.29	355	*e*P	Pn	04 30 46.6	+0.8
VERH	Veragua Rainfo	1.63	347	*e*P	Pn	04 30 51.5	+1.0
PIEC	Cerro El Cedra	1.71	319	*e*P	Pn	04 30 52.1	+0.4
CVTQ	Turrialba Volc	1.91	331	*e*P	Pn	04 30 55.8	+1.2
JTS	Las Juntas de	2.87	313	*e*P	Pn	04 31 08.6	+1.1
JTS				*e*S	Sn	04 31 43.0	+1.8

NEIC 07 04:36:04.7±0.3, 39.°261N±0.°009×119.°72W±0.°02, h10^{km}±1^{km}, Error ellipse: s-maj=2.8km s-min=2.3km az=109.0

REN 07 04:36:05.0±0.3, 39.°264N±0.°010×119.°72W±0.°02, h10^{km}±3^{km}, ML2.4/8, ML2.3/22(NEIC), Error ellipse: s-maj=2.1km s-min=1.4km az=102.0, Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNTR	Pine Nut	0.20	151		Pg	04 36 09.3	0.0
MPK	Martis Peak	0.24	278		Pg	04 36 10.2	+0.2
MPK				IAML		04 36 14.3	
	comp=N,868nm,0.4s						
MPK				IAML		04 36 14.8	
	comp=E,870nm,0.5s						
PEAR	Peavine Mounta	0.39	332		Pg	04 36 12.8	0.0
PEAR					Sg	04 36 18.5	+0.4
DONR	Donner Summit	0.47	281		Pg	04 36 14.2	-0.1
DONR					Sg	04 36 20.8	+0.2

PAHR	Pah Rah Range	0.52	31		Pg	04 36 14.8	-0.3
PAHR				IAML		04 36 22.4	
	comp=E,226nm,0.2s						
PAHR	Pah Rah Range	0.52	31		Sg	04 36 21.9	0.0
WAKR	Walker	0.79	163		Pg	04 36 20.0	-0.3
WAKR				IAML		04 36 31.2	
	comp=N,149nm,0.3s						
WAKR				IAML		04 36 31.4	
	comp=E,148nm,0.5s						
WAKR	Walker	0.79	163		Sg	04 36 30.9	+0.3
AFDM	Forest Hills D	1.02	252		Pg	04 36 23.9	-0.8
AFDM				IAML		04 36 42.2	
	comp=E,89nm,0.4s						
AFDM				IAML		04 36 42.4	
	comp=N,98nm,0.3s						
CMB	Columbia Colle	1.33	203	Pn	Pn	04 36 29.6	-0.2
CMB				IAML		04 36 50.2	
	comp=N,31nm,0.3s						
LHV	Little Huntoon	1.39	136		Pb	04 36 30.9	-0.1
NV08	Mina Array Sit	1.39	128		Pn	04 36 30.5	-0.2
ORV	Oroville	1.41	282		Pn	04 36 30.5	-0.2
NV11	Mina Array Sit	1.48	124		Pn	04 36 31.9	+0.1
NV11	Mina Array Sit	1.48	124	IAML		04 36 53.8	
	comp=E,27nm,0.4s						
NV11				IAML		04 36 53.8	
	comp=N,32nm,0.6s						
MGNR	McGee Canyon	1.66	151		Pb	04 36 35.8	0.0
MDPB	Devils Postpil	1.71	163		Pb	04 36 36.8	+0.2
BENR	Benton	1.79	149		Pb	04 36 38.0	-0.1
TPH	Tonopah	2.29	120		Pb	04 36 45.3	-1.3
ELK	Elko	3.75	65		Pn	04 37 03.5	+0.3

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*NEIC **07** 04:42:22.6±0.3, 36°.763N±0°.008×98°.08W±0°.01, h5^{km}±1^{km}, mb_Lg2.4/38, ML2.5/28, ML2.6/38, Error ellipse: s-maj=2.6km s-min=1.8km az=131.0*

NEIC 07 04:42:22.8±0.3**, 36°.762N**±0°.009×**98°.07W**±0°.01**, h7**^{km}±2^{km}**, Error ellipse: s-maj=2.1km s-min=0.4km az=124.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.19	62		Pg	04 42 27.1	+0.4
KAN14	Manchester OK	0.21	24		Pg	04 42 27.4	+0.4
KAN14				IAML		04 42 30.9	
	comp=N,2µm,0.1s						
CROK	Carrier	0.27	165		Pg	04 42 28.3	+0.3
CROK				IAML		04 42 32.5	
	comp=E,2µm,0.3s						
CROK				IAML		04 42 33.7	
	comp=N,788nm,0.2s						
KAN10	Anthony SW Sta	0.36	357		Pg	04 42 30.2	+0.3
KAN10					Sg	04 42 35.5	+0.8
KAN17	Caldwell West	0.37	41		Pg	04 42 30.4	+0.3
KAN17					Sg	04 42 35.7	+0.7
KAN17				IAML		04 42 35.8	
	comp=E,609nm,0.4s						
KAN17				IAML		04 42 37.9	
	comp=N,507nm,0.3s						
KAN05	Bluff City Nor	0.38	25		Pg	04 42 30.4	+0.2
KAN05					Sg	04 42 36.2	+0.9
KAN01	Argonia South	0.46	32		Pg	04 42 32.0	+0.3
KAN01					Sg	04 42 38.5	+0.6
KAN08	Anthony NE Sta	0.47	10		Pg	04 42 32.2	+0.3
KAN08					Sb	04 42 39.8	-0.9
KAN09	Caldwell North	0.52	44		Pg	04 42 33.0	+0.1
KAN09					Sg	04 42 40.0	+0.4
KAN09				IAML		04 42 42.4	
	comp=N,568nm,0.3s						
KAN09				IAML		04 42 45.9	
	comp=E,647nm,0.3s						
KAN13	South Haven SW	0.54	62		Pg	04 42 33.2	0.0
KAN13					Sg	04 42 40.7	+0.5
KAN13				IAML		04 42 40.9	
	comp=N,362nm,0.3s						
KAN13				IAML		04 42 41.0	
	comp=E,376nm,0.3s						
KAN12	Harper NE Stat	0.54	6		Pg	04 42 33.4	+0.2
KAN12					Sg	04 42 41.0	+0.8
KAN12				IAML		04 42 50.0	
	comp=E,381nm,0.3s						
OK038	West end E0370	0.61	243		Pg	04 42 34.5	-0.1
OK038					Sg	04 42 43.4	+0.9
OK038				IAML		04 42 50.4	
	comp=E,456nm,0.6s						
OK038				IAML		04 42 55.7	
	comp=E,347nm,0.3s						
BLOK	Blackwell	0.69	90		Pg	04 42 36.0	0.0
BLOK					Sg	04 42 45.9	+0.9
OK051	E0350 and S346	1.03	104		Pg	04 42 42.0	-0.5
OK051					Sb	04 42 56.5	0.0
OK029	Liberty Lake	1.08	153		Pg	04 42 43.1	-0.5
OK029				IAML		04 42 59.2	
	comp=E,144nm,0.2s						
OK029				IAML		04 43 04.1	
	comp=E,126nm,0.3s						
QUOK	Quay	1.25	118		Pn	04 42 46.0	-0.6
T35A	Sooner Cattle	1.26	83		Pn	04 42 46.2	-0.6
T35A				IAML		04 43 05.3	
	comp=E,106nm,0.1s						
T35A				IAML		04 43 07.2	
	comp=E,137nm,0.3s						
DEOK	Depew	1.57	125		Pn	04 42 51.1	+0.1
R32A	Long Quarter,	1.73	343		Pb	04 42 54.4	-0.6
TUL3	Leonard	2.03	114		Pn	04 42 58.6	+1.3
WMOK	Wichita Mounta	2.10	196		Pn	04 42 59.7	+1.3
X34A	Smith Ranch, M	2.17	175	IAmb_Lg		04 43 33.5	
	comp=Z,16nm,0.8s						
CBKS	Cedar Bluff	2.44	328	IAmb_Lg		04 43 43.5	
	comp=Z,11nm,0.9s						
HHAR	Hobbs	3.36	97	IAmb_Lg		04 44 12.0	
	comp=Z,9.0nm,0.8s						
AMTX	Amarillo	3.48	238	IAmb_Lg		04 44 21.9	
	comp=Z,9.1nm,0.7s						
DKNS	Dickens	3.87	218	IAmb_Lg		04 44 30.6	
	comp=Z,10nm,0.9s						
KSCO	Kaye Shedlock'	4.25	303	IAmb_Lg		04 44 48.2	
	comp=Z,6.5nm,0.8s						
MIAR	Mount Ida	4.28	120	IAmb_Lg		04 44 37.8	
	comp=Z,7.3nm,0.8s						
SN05	Snyder 5	4.51	212	IAmb_Lg		04 44 49.3	
	comp=Z,11nm,0.9s						
P38A	Dawn	4.58	50	IAmb_Lg		04 44 56.9	
	comp=Z,7.3nm,0.7s						
BGNE	Belgrade	4.64	359	IAmb_Lg		04 45 02.5	
	comp=Z,10nm,1.0s						
POST	Post	4.64	218	IAmb_Lg		04 45 01.0	
	comp=Z,8.5nm,0.9s						
MSTX	Muleshoe	4.75	235	IAmb_Lg		04 44 51.2	
	comp=Z,5.8nm,1.2s						
WHAR	Wooly Hollow	4.91	106	IAmb_Lg		04 45 05.0	
	comp=Z,8.5nm,0.9s						
UALR	University of	5.06	111	IAmb_Lg		04 45 08.9	
	comp=Z,9.2nm,0.8s						
T25A	Trinidad	5.09	276	IAmb_Lg		04 45 15.5	
	comp=Z,7.4nm,0.8s						
OGNE	Ogallala	5.20	325	IAmb_Lg		04 45 20.4	
	comp=Z,9.4nm,0.8s						
N38A	Joes South For	5.52	42	IAmb_Lg		04 45 31.6	
	comp=Z,9.2nm,0.7s						
CCM	Cathedral Cave	5.58	75	IAmb_Lg		04 45 26.9	
	comp=Z,5.4nm,0.8s						
PBMO	Poplar Bluff	6.13	88	IAmb_Lg		04 45 50.2	
	comp=Z,5.4nm,0.8s						

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*IDC **07** 04:49:41.2±3.1, 39°.29N×120°.14W, h0^{km}, mbtmp2.9/2, ML3.7/2, Error ellipse: s-maj=29.6km s-min=13.5km az=54.0*

*NEIC **07** 04:49:46.4±1.0, 39°.27N±0°.01×119°.72W±0°.03, h10^{km}±2^{km}, Error ellipse: s-maj=4.2km s-min=2.9km az=278.0*

*NEIC **07** 04:49:46, 39°.26N×119°.72W, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.36; $M_{\theta\theta}$-1.09; $M_{\phi\phi}$2.44; $M_{r\theta}$1.44; $M_{\theta\phi}$1.00; $M_{\phi r}$0.05; Fault plane solution: $M_0$2.75000×10^{14} NP1:ϕ_s230.00000°, δ65.00000°, λ-40.00000°. NP2:ϕ_s340.00000°, δ54.00000°, λ-149.00000°. Principal axes: T 2.7538, Plg6.0000°, Azm287.0000°; N -0.0044, Plg44.0000°, Azm23.0000°; P -2.7495, Plg45.0000°, Azm190.0000°;*

*REN **07** 04:49:46.7±0.5, 39°.26N±0°.01×119°.72W±0°.03, h11^{km}±6^{km}, ML3.7/7, ML3.3/22(NEIC), Mwr3.6/28(SLM) Error ellipse: s-maj=2.9km s-min=1.7km az=76.0*

ISC 07 04:49:46.9±0.9**, 39°.25N**±0°.03×**119°.74W**±0°.03**, h11**^{km}±8^{km}**, n42, σ1^s.08**/47**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNTR	Pine Nut	0.20	146		Pg	04 49 51.1	-0.2
PNTR				Sg	Sg	04 49 54.5	+0.2
MPK	Martis Peak	0.23	281		Pg	04 49 52.0	+0.1
MPK				Sg	Sg	04 49 55.9	+0.6
MPK				IAML		04 49 57.8	
	comp=N,12µm,0.4s						
REN	Reno	0.29	349		Pg	04 49 52.7	-0.3
PEAR	Peavine Mounta	0.39	334		Pg	04 49 54.6	-0.2
PEAR					Sg	04 50 00.4	+0.2
BABR	Babbit Peak	0.45	321		Pg	04 49 55.6	-0.3
DONR	Donner Summit	0.46	283		Pg	04 49 56.0	-0.1
PAHR	Pah Rah Range	0.53	31		Pg	04 49 56.6	-0.7
PAHR				Sg	Sg	04 50 03.8	-0.6
WAKR	Walker	0.78	162		Pg	04 50 01.8	-0.3
WAKR					Sg	04 50 12.7	+0.3
WAKR				IAML		04 50 13.2	
	comp=E,2µm,0.7s						
WAKR				IAML		04 50 15.9	
	comp=N,1µm,0.7s						
AFDM	Forest Hills D	1.01	253		Pg	04 50 05.7	-0.7
RYN	Ryan	1.14	123		Pb	04 50 07.6	-1.0
CMB	Columbia Colle	1.32	203		Pn	04 50 11.0	-0.3
LHV	Little Huntoon	1.39	136		Pb	04 50 12.6	-0.3
LHV	Little Huntoon	1.39	136		Sg	04 50 35.0	+3.3
NVAR	Mina Array Bea	1.39	126	Pg	Pn	04 50 12.0	-0.4
	comp=N,487nm,0.3s,baz=301,slow=20,SNR=1875						
NVAR				Lg	Lg	04 50 34.2	
	comp=N,347nm,0.3s,baz=302,slow=31,SNR=16						
ORV	Oroville	1.40	283		Pn	04 50 12.1	-0.2
ORV				IAML		04 50 33.6	
	comp=N,352nm,0.6s						
ORV				IAML		04 50 34.4	
	comp=E,311nm,0.4s						
MDYM	Dry Creek	1.69	160		Pb	04 50 18.0	-0.2
MLAC	Mammoth, Mammo	1.77	156		Pg	04 50 26.2	+5.4
BENR	Benton	1.79	149		Pn	04 50 18.6	+0.7
Q09A	Carvers	2.04	101		Pb	04 50 23.0	-1.0
Q09A	Carvers	2.04	101		Sg	04 50 52.0	-0.4
HATC	Hat Creek Radi	2.05	320		Pb	04 50 24.1	-0.1
HATC				IAML		04 51 01.0	
	comp=N,236nm,1.2s						
HATC				IAML		04 51 08.1	
	comp=E,298nm,1.7s						
BHPR	Bishop	2.19	153		Pn	04 50 24.2	+0.8
TPH	Tonopah	2.29	120		Pb	04 50 26.9	-1.5
DSP	Deep Springs	2.34	143		Pn	04 50 25.9	+0.7
LTIM	Timbered Crate	2.34	326		Pb	04 50 29.6	+0.4
MZP	Montezuma Peak	2.41	129		Pn	04 50 27.1	+0.6
MZP	Montezuma Peak	2.41	129		Pb	04 50 29.6	-0.9
O02D	Mt. Diablo Mer	2.53	292		Pb	04 50 32.0	-0.3
O02D				IAML		04 51 20.9	
	comp=N,80nm,0.9s						
HOPS	Hopland Field	2.61	265		Pb	04 50 31.7	-1.9
HOPS				IAML		04 51 07.2	
	comp=N,107nm,1.9s						
HOPS				IAML		04 51 07.5	
	comp=E,75nm,1.6s						
SAO	San Andreas Ge	2.83	209		Pn	04 50 33.2	+1.2
BBGB	Big Mountain B	2.86	201		Pn	04 50 34.2	+1.7
LKVW	Lakeview	3.01	351		Pg	04 50 45.8	+1.3
SGV	South Grapevin	3.11	136		Pn	04 50 36.5	+0.4
SGV					Pg	04 50 46.0	-0.6
R11B	Troy Canyon, C	3.37	104		Pn	04 50 39.5	-0.1
NSP	Numbskull Pass	3.76	131		Pn	04 50 46.9	+2.0
ELK	Elko	3.76	65		Pn	04 50 44.8	-0.3
PRN	Pahroc Range	4.12	115		Pn	04 50 50.1	+0.2
PSUT	Pine Spring	4.65	97		Pn	04 50 57.7	+0.5
BGU	Big Grassy Mou	5.41	70		Pn	04 51 08.2	+0.6
DUG	Dugway, Tooele	5.42	78		Pn	04 51 08.8	+1.0
PDAR	Pinedale Array	8.46	62	Pn	Pn	04 51 53.0	+3.4
	comp=E,0.2nm,0.3s,baz=244,slow=13,SNR=1.5						
PDAR				Lg	Lg	04 54 10.9	
	comp=E,0.3nm,0.3s,baz=243,slow=28,SNR=2.4						
	comp=E,0.3nm,0.3s						
TXAR	Lajitas Array	16.54	122	Pn	P	04 53 40.3	-1.1
	baz=313,slow=27,SNR=4.8						
	comp=E,0.1nm,0.7s						

IDC 07 04:51:19.8±4.4**, 5°.23S**×**128°.78E, h250**^{km}±43^{km}**, mb3.2**/2**, mbtmp3.9**/5**, Error ellipse: s-maj=70.6km s-min=13.6km az=72.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.16	193	P	Pn	04 54 17.4	-0.4
	3.5nm,1.0s,baz=18,slow=20,SNR=1.5						
FITZ				S	S	04 56 44.9	+1.0
	5.0nm,0.9s,baz=344,slow=15,SNR=1.4						
WRA	Warramunga Arr	15.60	160	P	P	04 54 44.5	-1.9
	0.9nm,0.5s,baz=340,slow=12,SNR=30						
WRA				S	S	04 57 32.7	-5.3
	1.3nm,0.5s,baz=344,slow=22,SNR=11						
ASAR	Alice Springs	18.99	165	P	P	04 55 24.3	+1.1
	2.4nm,0.3s,baz=348,slow=11,SNR=38						
ASAR				S	S	04 58 46.0	+0.7
	1.1nm,0.8s,baz=350,slow=20,SNR=4.3						
MKAR	Makanchi Array	66.09	327	P	P	05 01 40.9	+0.7
	0.4nm,0.4s,baz=126,slow=7.3,SNR=6.2						
	0.4nm,0.4s						
KURBB	Kurchatov Arra	70.37	329	P	P	05 02 06.0	-0.6
	0.6nm,0.6s,baz=139,slow=5.5,SNR=7.6						
	0.6nm,0.6s						

GCG 07 04:53:43.8±0.5**, 14°.25N**×**90°.96W, h95**^{km}±4^{km}**, MD3.6, ML3.2, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESSG	Sabana Grande	0.18	44	*i* P	Pn	04 53 57.6	+0.1
ESSG				IAML		04 54 11.0	
	comp=N,378nm,0.1s						
STG8	El Palmar, Qui	0.42	298	*e*P	Pn	04 54 02.3	+3.5
STG8				*i* S	Sn	04 54 17.1	+7.0
STG8				IAML		04 54 17.8	
	comp=N,1µm,0.2s						
FG16	Alotenango, Sa	0.44	87	*i* P	Pn	04 53 58.4	-0.5
FG16				*i* S	Sn	04 54 10.1	-0.1
FG16				IAML		04 54 13.4	
	comp=E,2µm,0.2s						
SOKI	Kika Raxquin	0.71	323	*e*P	Pn	04 54 02.5	+1.1
SOKI				*e*S	Sn	04 54 16.5	+2.0
NUBE	Las Nubes	1.20	107	*e*P	Pn	04 54 06.8	+0.5
NUBE				*e*S	Sn	04 54 24.5	+1.2

NNC 07 05:10:43.4±2.7**, 38°.07N**×**69°.83E, h0**^{km}**, mb3.9, mpv3.6, 8C-4D, Error ellipse: s-maj=21.0km s-min=15.6km az=169.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	4.08	2	Pg	Pb	05 11 58.0	+1.9
	75nm,0.4s						
IUG				Lg	Lg	05 12 54.7	
	160nm,0.5s						
BRLS	Boroldày	4.96	0	Pg	Pb	05 12 09.1	-2.0
	3.6nm,0.3s						
BRLS				Lg	Lg	05 13 13.2	
	86nm,0.8s						
KK31	Karatay Array	5.06	6	⇓Pn	Pn	05 11 59.5	-1.0
	0.4nm,0.1s,baz=78,slow=41,SNR=20						
KK31				Pg	Pb	05 12 15.8	+3.0
	2.7nm,0.3s,baz=188,slow=18,SNR=19						
KK31				Sn	Sn	05 13 01.7	+2.1
	2.6nm,0.3s,baz=201,slow=25,SNR=2.9						
KK31				⇑Lg	Lg	05 13 24.1	
	23nm,0.5s,baz=193,slow=30,SNR=7.7						
MRKS	Merke	5.34	28	Pg	Pb	05 12 20.5	+2.8
	9.2nm,0.6s						
MRKS				Lg	Lg	05 13 32.0	
	35nm,0.7s						
AAK	Ala-Archa	5.79	37	⇑Pn	Pn	05 12 12.2	+1.5
	0.6nm,0.4s						
AAK				⇑Pg	Pb	05 12 29.8	+4.5
	1.2nm,0.5s						
AAK				⇑Sn	Sn	05 13 18.6	+0.7
	3.6nm,0.8s						
AAK				⇑Lg	Lg	05 13 44.5	
	6.7nm,0.8s						
TKM2	Tokmak 2	6.54	40	⇑Pn	Pn	05 12 20.2	-0.9
	0.8nm,0.4s						
TKM2				⇓Pg	Pg	05 12 43.8	-5.0
	3.2nm,0.5s						
TKM2				⇑Sn	Sn	05 13 41.7	+5.1
	4.7nm,0.7s						
TKM2				⇓Lg	Lg	05 14 08.8	
	13nm,0.8s						
KST	Kastek	6.82	41	Pg	Pg	05 12 48.5	-5.6
	2.2nm,0.5s						
KST				Lg	Lg	05 14 20.4	
	16nm,0.6s						
MDOK	Medeo	7.49	45	Pg	Pb	05 12 58.4	+4.2
	2.8nm,0.4s						
MDOK				Lg	Lg	05 14 37.4	
	4.1nm,0.5s						
KUU	Kurty	7.62	38	Pg	Pb	05 12 59.5	+3.0
	1.0nm,0.1s						
KUU				Lg	Lg	05 14 39.2	
	10nm,0.6s						
KTBS	Karatobe	7.66	40	Pg	Pb	05 13 01.3	+4.1
	3.2nm,0.8s						
KTBS				Lg	Lg	05 14 42.3	
	9.0nm,0.8s						
AB31	Akbulak array	13.26	331	⇓P	Pn	05 13 48.3	-4.5
	0.1nm,0.2s,baz=167,slow=12,SNR=11						
AKTO	Aktyubinsk	14.96	330	⇑P	P	05 14 20.1	-1.7
	1.3nm,0.6s						

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*IDC **07** 05:13:52.6±0.9, 26°.17S×71°.43E, h0^{km}, mb3.9/11, mbtmp3.9/11, MS3.5/6, Error ellipse: s-maj=33.1km s-min=21.9km az=83.0*

ISC 07 05:13:54.2±0.9**, 26°.2S**±0°.2×**71°.4E**±0°.2**, h10**^{km}**, n24, σ0^s.99**/11**, mb4.1**/11**, MS3.5**/6**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	18.44	3	T	T	05 37 23.5	
	baz=183,slow=76,SNR=22						
H08S2	Diego Garcia H	18.44	3	T	T	05 37 20.0	
	baz=183,slow=76,SNR=21						
H08S3	Diego Garcia H	18.46	3	T	T	05 37 24.2	
	baz=183,slow=76,SNR=24						
H04N2	CROZET ISLANDS	25.35	213	T	T	05 45 40.6	
	baz=45,slow=74,SNR=140						
H04N1	CROZET ISLANDS	25.36	213	T	T	05 45 41.4	
	baz=45,slow=74,SNR=128						
H04N3	CROZET ISLANDS	25.37	213	T	T	05 45 36.7	
	baz=45,slow=74,SNR=112						
PALK	Pallekele	34.44	16	LR	LR	05 31 36.0	
	comp=Z,79nm,18.5s,baz=196,slow=31						
H01W2	Cape Leeuwin H	37.60	114	T	T	06 00 33.9	
	baz=271,slow=75,SNR=6.4						
H01W3	Cape Leeuwin H	37.60	114	T	T	06 00 34.7	
	baz=271,slow=75,SNR=6.0						
H01W1	Cape Leeuwin H	37.61	114	T	T	06 00 34.6	
	baz=271,slow=75,SNR=7.6						
BOSA	Boshof	40.85	256	LR	LR	05 34 34.4	
	comp=Z,68nm,19.4s,baz=132,slow=30						
LBTB	Lobatse	41.16	261	LR	LR	05 35 51.1	
	comp=Z,60nm,19.1s,baz=124,slow=32						
MAW	Mawson	41.79	185	LR	LR	05 34 49.2	
	comp=Z,85nm,19.6s,baz=26,slow=30						
CMAR	Chiang Mai Arr	51.80	34	P	P	05 23 03.9	+1.5
	0.6nm,0.3s,baz=181,slow=5.6,SNR=1.3						
CMAR				LR	LR	05 40 39.6	
	comp=Z,22nm,21.4s,baz=195,slow=31						
	0.6nm,0.3s						
ASAR	Alice Springs	56.26	102	P	P	05 23 34.8	-0.3
	1.5nm,0.9s,baz=250,slow=7.0,SNR=7.1						
	1.5nm,0.9s						
WRA	Warramunga Arr	57.77	98	P	P	05 23 45.2	-0.7
	1.9nm,0.9s,baz=254,slow=6.3,SNR=5.6						
	1.9nm,0.9s						
SNAA	Sanae	60.45	200	P	P	05 24 04.3	+0.6
	1.8nm,1.0s,baz=84,slow=7.0,SNR=3.7						
SNAA				LR	LR	05 46 47.9	
	comp=Z,27nm,19.1s,baz=268,slow=33						
	1.8nm,1.0s						
QSPA	South Pole Qui	63.98	180	P	P	05 24 27.4	-0.1
	1.2nm,1.0s,baz=291,slow=3.3,SNR=3.1						
	1.2nm,1.0s						
MKAR	Makanchi Array	73.27	8	P	P	05 25 25.8	+0.3
	1.3nm,0.7s,baz=194,slow=6.3,SNR=8.2						
	1.3nm,0.7s						
BRTR	Keskin Array B	74.40	331	P	P	05 25 32.6	+0.2
	0.3nm,0.6s,baz=153,slow=4.8,SNR=2.2						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	76.70	5	P	P	05 25 46.2	+1.0
	1.5nm,0.8s,baz=193,slow=5.5,SNR=9.4						
	1.5nm,0.8s						
BVAR	Borovoye Array	78.85	359	P	P	05 25 55.3	-1.8
	0.5nm,0.4s,baz=141,slow=9.9,SNR=1.7						
	0.5nm,0.4s						
SONM	Songino Array	80.09	23	P	P	05 26 03.9	-0.3
	0.3nm,0.4s,baz=218,slow=9.1,SNR=2.1						
	0.3nm,0.4s						
ZALV	Zalesovo Beam	80.61	8	P	P	05 26 06.3	-0.3
	0.7nm,0.4s,baz=186,slow=7.2,SNR=3.9						
	0.7nm,0.4s						

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*FUNV **07** 05:17:09.7, 10°.40N×72°.60W, h2^{km}, MW3.0*

*RSNC **07** 05:17:10.1±0.0, 10°N±1°×7°3W±°, h19^{km}±2^{km}, M2.1, ML2.0*

ISC 07 05:17:09.0±2.1**, 10°.31N**±0°.03×**72°.60W**±0°.03**, h15**^{km}±16^{km}**, n15, σ1^s.33**/26**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCQV	Machiques	0.26	167	*e*P	Pb	05 17 16.5	+1.0
MCQV				*e*S	Sb	05 17 22.0	+2.2
CRJC	Cerrejon, Guaj	0.76	338	P	Pn	05 17 25.6	+0.2
CRJC				S	Sn	05 17 37.6	+0.9
URIC	Uribia, Colomb	1.51	23	P	Pb	05 17 36.3	-0.4
URIC				S	Sg	05 17 57.7	+0.1
ARGC	Ariguani, Magd	1.69	255	P	Pn	05 17 37.3	-0.7
ARGC				S	Sn	05 17 57.6	-1.7
SMRC	Santa Marta, M	1.81	298	P	Pn	05 17 38.5	-1.2
SMRC				S	Sn	05 18 03.9	+1.4
SDV	Santo Domingo	2.40	126	P	Pb	05 17 51.2	-0.8
SDV				S	Sn	05 18 14.8	-2.3
CAPV	Capacho	2.44	173	*e*P	Pb	05 17 52.2	-0.6
CAPV				*e*S	Sb	05 18 22.6	-0.2
SJCC	San Jacinto, C	2.58	261	P	Pn	05 17 51.2	+0.9
SJCC				S	Sn	05 18 23.2	+1.8
SOCV	Socops	2.64	139	*e*P	Pn	05 17 53.2	+2.1
SOCV				*e*S	Sb	05 18 26.3	-2.1
TEPV	Terepaima	3.37	95	*e*P	Pn	05 18 01.7	+0.5
TEPV				*e*S	Sn	05 18 42.0	+1.0
ZARC	Zaragoza, Cauc	3.58	219	P	Pn	05 18 04.1	0.0
ZARC				S	Sn	05 18 45.7	-0.4
PTBC	PUERTO BERRIO,	4.17	206	P	Pn	05 18 11.5	-0.7
BAUV	El Baul	4.69	106	*e*P	Pn	05 18 19.0	-0.3
BAUV				*e*S	Sn	05 19 12.3	-1.2
BENV	Beln	4.93	94	*e*P	Pn	05 18 24.3	+1.6
CACV	CAICARA DEL OR	6.57	114	*e*P	Pn	05 18 52.5	+7.3
CACV				*e*S	Sn	05 20 08.7	+8.8

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*IDC **07** 05:27:10.6±2.2, 42°.12N×48°.91E, h48^{km}±22^{km}, mb4.1/20, mbtmp4.4/29, ML5.0/5, MS3.0/29, Error ellipse: s-maj=15.6km s-min=10.4km az=162.0*

*NEIC **07** 05:27:12.6±1.9, 42°.28N±0°.08×48°.99E±0°.10, h59^{km}±8^{km}, mb4.5/37, Error ellipse: s-maj=11.4km s-min=10.2km az=149.0*

*MOS **07** 05:27:13.2, 42°.20N×49°.01E, h23^{km}, MPVA5.5*

*NNC **07** 05:27:16.8±4.9, 42°.41N×49°.37E, h52^{km}±40^{km}, mb4.5, Error ellipse: s-maj=69.3km s-min=32.0km az=115.0*

*DRS **07** 05:27:16.5, 42°.18N×48°.90E, h54^{km}, FELT I=II-III MSK at Makhachkala*

ISC 07 05:27:11.8±0.6**, 42°.22N**±0°.03×**49°.00E**±0°.03**, h58**^{km}±6^{km}**, n436, σ2^s.47**/462**, mb4.3**/53**, MS3.0**/17**, 34C-13D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSMR	Kasumkent	0.90	227	*i* Pg	Pn	05 27 31.4	+2.9
KSMR				*e*Sg	Sn	05 27 44.2	+3.5
KSMR	Kasumkent	0.90	227	*i* P	Pn	05 27 31.4	+2.9
KSMR				*e*S	Sn	05 27 44.2	+3.5
URKR	Urkarakh	1.01	267	*e*P	Pn	05 27 33.7	+3.6
URKR				*e*S	Sn	05 27 47.8	+4.2
MAK	Makhachkala	1.33	304	*e*Pg	Pn	05 27 38.8	+4.6
MAK				*e*Sg	Sn	05 27 56.6	+5.9

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MAK   Makhachkala       1.33 304⇑iP   Pn     05 27 38.7 +4.6
MAK                             eS    Sn     05 27 56.8 +6.0
MAK                              pmax pmax
      comp=Z,901nm,0.4s
MAK                              smax smax
      comp=E,18µm,0.4s
KMKR  Kumukh            1.41 267 ePg  Pn     05 27 39.6 +4.1
KMKR                             eSg  Sn     05 27 59.2 +6.0
KMKR  Kumukh            1.41 267 eP   Pn     05 27 39.6 +4.1
KMKR                             eS   Sn     05 27 59.2 +6.0
KANR  Karaman           1.48 312 eP   Pn     05 27 41.4 +5.3
KANR                             eS   Sn     05 27 59.9 +5.5
GNBR  Gunib             1.52 277 ePg  Pn     05 27 41.4 +4.7
GNBR                             eSg  Sn     05 28 01.9 +6.4
GNBR  Gunib             1.52 277 eP   Pn     05 27 41.4 +4.7
GNBR                             eS   Sn     05 28 01.9 +6.4
BUJR  Buynaksk          1.52 294 ePg  Pn     05 27 41.4 +4.6
BUJR                             eSg  Sn     05 28 00.2 +4.7
BUJR  Buynaksk          1.52 294 eP   Pn     05 27 41.4 +4.6
BUJR                             eS   Sn     05 28 00.2 +4.7
ARKR  Arakani           1.53 285 ePg  Pn     05 27 41.4 +4.5
ARKR                             eSg  Sn     05 28 02.5 +6.6
ARKR  Arakani           1.53 285 eP   Pn     05 27 41.4 +4.5
ARKR                             eS   Sn     05 28 02.5 +6.6
KRNR  Karanay           1.66 292 ePg  Pn     05 27 42.6 +3.9
KRNR                             eSg  Sn     05 28 04.2 +5.1
KRNR  Karanay           1.66 292 eP   Pn     05 27 42.9 +4.2
KRNR                             eS   Sn     05 28 05.5 +6.5
KRNR                              pmax pmax
      comp=Z,2µm,0.4s
UNCR  Uncukul           1.70 288 eP   Pn     05 27 44.4 +5.2
UNCR                             eS   Sn     05 28 06.8 +6.8
HNZR  Khunzah           1.72 282 eP   Pn     05 27 44.6 +5.0
HNZR                             eS   Sn     05 28 07.5 +6.8
HNZR                              pmax pmax
      comp=Z,1µm,0.5s
XNZR  Khunzakh          1.73 281 ePg  Pn     05 27 44.5 +4.8
XNZR                             eSg  Sn     05 28 07.7 +6.9
DLMR  Dylym             1.94 297 ePg  Pn     05 27 46.9 +4.5
DLMR                             eSg  Sn     05 28 10.5 +4.8
DLMR  Dylym             1.94 297 eP   Pn     05 27 46.9 +4.5
DLMR                             eS   Sn     05 28 10.5 +4.8
BTLR  Botlikh           2.10 283 ePg  Pn     05 27 49.3 +4.7
BTLR                             eSg  Sn     05 28 16.8 +7.0
BTLR  Botlikh           2.10 283 eP   Pn     05 27 49.4 +4.7
BTLR                             eS   Sn     05 28 16.7 +7.0
BTLR                              pmax pmax
      comp=Z,1µm,0.5s
VSHL  Vashlovani        2.18 244  P   Pn     05 27 53.6 +7.8
VSHL                              S   Sn     05 28 24.6  +13
DVE   Vedeno            2.24 290 ePg  Pn     05 27 51.5 +4.9
DVE                              eSg  Sn     05 28 20.2 +7.0
DVE   Vedeno            2.24 290 eP   Pn     05 27 51.5 +4.9
DVE                              eS   Sn     05 28 20.2 +7.0
GROC  Groznyy           2.56 294 ePn  Pn     05 27 57.0 +6.2
GROC                             eSn  Sn     05 28 28.2 +7.5
GROC  Groznyy           2.56 294 i P  Pn     05 27 56.6 +5.8
DGRG  David-gareji      2.81 255  P   Pn     05 27 57.0 +2.6
DGRG                              S   Sn     05 28 30.1 +2.9
DGRG  David-gareji      2.81 255 ePn  Pn     05 27 57.0 +2.6
DGRG                             eSn  Sn     05 28 30.1 +2.9
DGRG  David-gareji      2.81 255 eP   Pn     05 27 57.0 +2.6
DGRG                             eS   Sn     05 28 30.1 +2.9
SHTL  Shatili           2.88 280  P   Pn     05 27 58.8 +3.4
SHTL  Shatili           2.88 280  P   Pn     05 27 58.7 +3.4
CHRG  Chargali          3.02 273  P   Pn     05 28 00.4 +3.1
SEAG  Tbilisi Sea       3.16 263  P   Pn     05 28 01.3 +2.2
SEAG                              S   Sn     05 28 36.8 +1.2
SEAG  Tbilisi Sea       3.16 263  P   Pn     05 28 01.3 +2.2
SEAG                              S   Sn     05 28 36.8 +1.2
BTNK  Botanikuri        3.18 262  P   Pn     05 28 01.3 +1.9
BTNK                              S   Sn     05 28 36.5 +0.5
TBLG  Delisi            3.21 263  P   Pn     05 28 01.7 +1.8
TBLG                              S   Sn     05 28 37.4 +0.4
TBLG  Delisi            3.21 263  P   Pn     05 28 01.6 +1.8
TBLG                              S   Sn     05 28 37.3 +0.4
VLKR  Vladikavkaz       3.29 286 ePn  Pn     05 28 06.1 +5.2
VLKR                             eSn  Sn     05 28 42.2 +3.3
VLKR  Vladikavkaz       3.29 286 eP   Pn     05 28 06.1 +5.2
VLKR                             eS   Sn     05 28 42.2 +3.3
GUDG  Gudauri           3.36 276  P   Pn     05 28 07.4 +5.4
GUDG  Gudauri           3.36 276  P   Pn     05 28 07.4 +5.4
TRKR  Terskaya          3.47 297 ePn  Pn     05 28 07.5 +4.2
TRKR                             eSn  Sn     05 28 47.6 +4.4
TRKR  Terskaya          3.47 297 eP   Pn     05 28 07.5 +4.2
TRKR                             eS   Sn     05 28 47.6 +4.4
BTKR  Batakoyurt        3.48 291 eP   Pn     05 28 07.6 +4.2
BTKR                             eS   Sn     05 28 48.5 +5.2
LACR  Lac               3.53 281 ePn  Pn     05 28 07.0 +2.8
LACR                             eSn  Sn     05 28 47.0 +2.3
LACR  Lac               3.53 281 eP   Pn     05 28 07.0 +2.8
LACR                             eS   Sn     05 28 47.0 +2.3
KZRT  Kazreti           3.54 258  P   Pn     05 28 04.3 -0.1
KZRT                              S   Sn     05 28 41.0 -3.9
KZRT  Kazreti           3.54 258  P   Pn     05 28 04.2 -0.1
KZRT                              S   Sn     05 28 41.0 -3.9
TRLG  Trialeti          3.72 261  P   Pn     05 28 08.3 +1.4
TRLG                              S   Sn     05 28 48.1 -1.5
TRLG  Trialeti          3.72 261  P   Pn     05 28 08.3 +1.4
TRLG                              S   Sn     05 28 48.0 -1.5
STDR  Stavd-Durt        3.81 289 ePn  Pn     05 28 11.8 +3.8
STDR                             eSn  Sn     05 28 55.3 +3.8
STDR  Stavd-Durt        3.81 289 eP   Pn     05 28 11.8 +3.8
STDR                             eS   Sn     05 28 55.3 +3.8
GNI   Garni             3.82 239      Pn     05 28 10.2 +1.9
GNI   Garni             3.82 239  P   Pn     05 28 09.7 +1.4
      comp=Z,99nm,0.5s,baz=53,slow=8.8,SNR=42
GNI                               S   Sn     05 28 51.3 -0.7
      comp=Z,99nm,0.4s,baz=66,slow=18,SNR=3.7
GNI   Garni             3.82 239  P   Pn     05 28 10.2 +1.9
GNI                               S   Sn     05 28 51.4 -0.6
GNI   Garni             3.82 239 ePn  Pn     05 28 10.2 +1.9
GNI                              eSn  Sn     05 28 53.7 +1.6
GNI   Garni             3.82 239 i P  Pn     05 28 10.0 +1.7
GNI   Garni             3.82 239  P   Pn     05 28 10.2 +1.9
ALIG  Mtskhetisjvari    3.98 270  P   Pn     05 28 12.5 +2.2
ALIG                              S   Sn     05 28 55.6 -0.1
ALIG  Mtskhetisjvari    3.98 270  P   Pn     05 28 12.5 +2.2
ALIG                              S   Sn     05 28 55.6 -0.1
DIGR  Digorskoe uzhe    4.06 281 ePn  Pn     05 28 14.2 +2.6
DIGR                             eSn  Sn     05 28 57.0 -0.9
DIGR  Digorskoe uzhe    4.06 281 eP   Pn     05 28 14.2 +2.6
DIGR                             eS   Sn     05 28 57.0 -0.9
GARIG Gari              4.11 277  P   Pn     05 28 16.3 +4.1
BGD   Bogdanovka        4.15 258  P   Pn     05 28 15.0 +2.2
BGD   Bogdanovka        4.15 258  P   Pn     05 28 15.0 +2.2
NCK   Nalchik           4.17 290 ePn  Pn     05 28 16.4 +3.4
NCK                              eSn  Sn     05 29 01.4 +1.0
NCK   Nalchik           4.17 290 i P  Pn     05 28 13.5 +0.6
AKH   Akhalkalaki       4.19 261  P   Pn     05 28 16.2 +2.8
AKH   Akhalkalaki       4.19 261 ePn  Pn     05 28 15.3 +1.9
AKH                              eSn  Sn     05 29 01.0 -0.2
AKH   Akhalkalaki       4.19 261 eP   Pn     05 28 15.3 +1.9
AKH                              eS   Sn     05 29 01.0 -0.2
KBTC  Kuba-Taba         4.40 293 ePn  Pn     05 28 18.8 +2.7
KBTC                             eSn  Sn     05 29 06.9 +0.9
KBTC  Kuba-Taba         4.40 293 eP   Pn     05 28 18.8 +2.7
KBTC                             eS   Sn     05 29 06.9 +0.9
TKB   Tkibuli           4.46 274  P   Pn     05 28 19.5 +2.7
TKB   Tkibuli           4.46 274  P   Pn     05 28 19.5 +2.7
PYA1  Pyatigorsk        4.69 295 i P  Pn     05 28 22.1 +2.0
KBZ   Khabaz            4.72 291  P   Pn     05 28 21.0 +0.6
      comp=Z,62nm,0.3s,baz=118,slow=9.6,SNR=285
KBZ                               S   Sn     05 29 12.0 -1.9
      comp=Z,65nm,0.3s,baz=325,slow=16,SNR=6.4
KBZ                               LR  LR     05 30 50.6
      comp=Z,110nm,21.6s,baz=110,slow=47
KBZ   Khabaz            4.72 291ceP   Pn     05 28 22.2 +1.8
KARS  Kars              4.73 252  Pn  Pn     05 28 23.0 +2.3
KARS  Kars              4.73 252  P   Pn     05 28 23.0 +2.3
SHA1  Shidzhatmaz       4.89 290 i P  Pn     05 28 24.5 +1.5
KVAR  Kislovodsk Arr    4.93 293  P   Pn     05 28 24.4 +1.0
      comp=Z,49nm,0.3s,baz=90,slow=20,SNR=25
KVAR                              S   Sn     05 29 18.5 -0.7
      comp=Z,294nm,0.3s,baz=184,slow=14,SNR=11
KIV   Kislovodsk        4.94 293      Pn     05 28 24.2 +0.7
KIV   Kislovodsk        4.94 293  P   Pn     05 28 26.0 +2.5
KIV                               S   Sn     05 29 18.6 -0.7
KIV   Kislovodsk        4.94 293 eP   Pn     05 28 25.5 +2.0
KIV                              eS   Sn     05 29 21.5 +2.2
KIV                               pmax pmax
      comp=Z,293nm,1.0s
KIV                               MLR MLR
      comp=Z,18nm,9.0s
KIV   Kislovodsk        4.94 293 i P  Pn     05 28 25.2 +1.7
      SNR=68
GOF   Gofitskoye        5.17 305ceP   Pn     05 28 17.4 -9.2
GOF                              eS   Sn     05 29 25.9 +1.1
DOMR  Dombai            5.53 284 i P  Pn     05 28 31.6 -0.1
ARXR  Arkhyz            5.83 286 i P  Pn     05 28 38.9 +3.1
GEVA  Gevas             5.99 231      Pn     05 28 39.5 +1.5
GURO  Guroymak-BITLI    6.46 238  Pn  Pn     05 28 47.3 +2.9
RPOR  Krasnaya Polya    6.57 286 i P  Pn     05 28 50.5 +4.6
VSLR  Vesyoloye         6.71 284 i P  Pn     05 28 49.9 +2.3
GUZR  Guzeripl'         6.74 288 i P  Pn     05 28 52.0 +3.9
SOC   Sochi             6.95 284 eP   Pn     05 28 51.9 +0.9
SOC                              e           05 30 09.4
SOC                               MLR MLR
      comp=Z,44nm,16.0s
GOYR  Goytkh            7.31 289 i P  Pn     05 28 59.4 +3.5
MARD  Mardin            8.00 235      Pn     05 29 07.2 +1.7
ARPR  Arapgir-MALATY    8.69 252  Pn  Pn     05 29 18.4 +3.6
BELG  Belogornoye      10.22 355  P   Pn     05 29 36.4 +0.8
      comp=Z,159nm,0.3s,baz=184,slow=0.9,SNR=84
BELG                              S   Sn     05 31 23.8 -4.7
      comp=Z,231nm,0.6s,baz=162,slow=20,SNR=16
BELG                              LR  LR     05 34 39.0
      comp=Z,86nm,21.7s,baz=89,slow=44
BELG  Belogornoye      10.22 355 i P  Pn     05 29 37.0 +1.4
DIKM  Dikmen           10.26 271 ⇓P   Pn     05 29 40.0 +3.8
VRH   Novokhopyorsk    10.27 333 eP   Pn     05 29 37.0 +0.6
VRH                              eS   Sn     05 31 24.3 -5.6
VRH                               pmax pmax
      comp=Z,58nm,0.5s
VRH                               smax smax
      comp=E,300nm,0.6s
AKTO  Aktyubinsk       10.31  34  P   Pn     05 29 37.1 +0.2
      comp=E,7.0nm,0.3s,baz=206,slow=13,SNR=45
AKTO                              S   Sn     05 31 27.1 -3.6
      comp=E,44nm,0.3s,baz=68,slow=19,SNR=13
AKTO                              LR  LR     05 34 38.1
      comp=E,61nm,20.5s,baz=258,slow=43
      comp=E,17nm,0.3s
AKTO  Aktyubinsk       10.31  34 ⇑P   Pn     05 29 37.3 +0.4
      comp=E,17nm,0.8s
AKTO                             ⇑S   Sn     05 31 28.3 -2.5
      comp=E,41nm,0.5s
AKTO  Aktyubinsk       10.31  34  P   Pn     05 29 37.2 +0.4
AKTO                                         05 31 28.3
AB31  Akbulak array    10.39  44  Pn  Pn     05 29 38.3 +0.4
AB31  Akbulak array    10.39  44  P   Pn     05 29 39.2 +1.2
      comp=E,5.0nm,0.3s,baz=232,slow=12,SNR=235
AB31                             ⇓S   Sn     05 31 31.1 -1.6
      comp=E,44nm,0.7s,baz=226,slow=20,SNR=9.6
AB31  Akbulak array    10.39  44  P   Pn     05 29 39.1 +1.2
AB31                             e           05 31 31.0
ABKAR Akbulak array    10.39  44      Pn     05 29 39.2 +1.3
VORD  Divnogorie       10.99 326 eP   Pn     05 29 45.4 -0.8
VORD                              pmax pmax
      comp=Z,10.0nm,0.3s
BZK   Bozkurt          11.15 274  Pn  Pn     05 29 52.1 +3.7
VSR   Storozhevoye     11.24 327 eP   Pn     05 29 48.6 -0.9
VSR                              eS   Sn     05 31 50.5 -2.9
VSR                               pmax pmax
      comp=Z,60nm,0.4s
VSR                               smax smax
      comp=N,200nm,0.9s
VORR  Voronezh         11.57 328 eP   Pn     05 29 52.8 -1.3
VORR                              pmax pmax
      comp=Z,103nm,0.5s
BR131 Keskin Array S   11.88 263  P   Pn     05 30 02.2 +3.7
BR131 Keskin Array S   11.88 263 i P  Pn     05 30 00.3 +1.8
BRTR  Keskin Array B   11.88 263  P   Pn     05 29 57.0 -1.4
      comp=Z,0.7nm,0.8s,baz=90,slow=8.4,SNR=19
BRTR  Keskin Array B   11.88 263 i P  Pn     05 30 03.0 +4.5
BRTR                              pmax pmax
      comp=Z,2.0nm,0.6s
BR104 Keskin Array S   11.88 263  P   Pn     05 30 02.0 +3.5
      comp=Z,30nmcomp=Z,3.4nm,0.7s
BR106 Keskin Array S   11.89 263  P   Pn     05 30 02.0 +3.4
      comp=Z,28nmcomp=Z,3.4nm,0.7s
BR105 Keskin Array S   11.89 263  P   Pn     05 30 02.9 +4.2
      comp=Z,39nmcomp=Z,3.9nm,0.7s
LPSR  Galich'ya Gora   12.41 330 eP   Pn     05 30 04.7 -0.8
LPSR                             eS   Sn     05 32 15.1 -6.9
LPSR                              pmax pmax
      comp=Z,112nm,0.8s
LPSR                              smax smax
      comp=E,300nm,1.6s
ANTO  Ankara           12.46 265      Pn     05 30 07.8 +1.4
ANTO  Ankara           12.46 265  P   Pn     05 30 07.8 +1.4
KBD   Kabd             13.06 185  P   Pn     05 30 14.5  0.0
ASF   Jabal al Asfar   13.90 228  P   Pn     05 30 26.4 +0.4
      comp=E,3.8nm,1.0s,baz=53,slow=5.1,SNR=3.1
ASF                               LR  LR     05 36 24.0
      comp=E,45nm,21.9s,baz=43,slow=40
MMAI  Mount Meron Ar   14.14 234  P   Pn     05 30 29.4 +0.1
      comp=E,2.2nm,0.4s,baz=55,slow=12,SNR=8.2
MMAI                              LR  LR     05 36 19.7
      comp=E,66nm,19.9s,baz=14,slow=39
BORA  Eskisehir        14.19 267  Pn  Pn     05 30 30.2 +0.5
CSS   Mathiatis        14.22 245  P   P      05 30 35.8 -0.1
      comp=E,28nm,1.0s
TIRR  Tirgusor         15.14 285 ⇓P   Pn     05 30 43.4 +1.4
TIRR  Tirgusor         15.14 285 ⇓P   Pn     05 30 43.4 +1.4
TPGR  Topolog          15.15 287 ⇑P   Pn     05 30 44.2 +2.0
CHM   Chimkent         15.26  83 eP   P      05 30 45.8 -1.6
CHM   Chimkent         15.26  83 eP   P      05 30 45.8 -1.6
OBN   Obninsk          15.26 332      Pn     05 30 42.2 -1.3
OBN   Obninsk          15.26 332  P   Pn     05 30 43.5 +0.1
      comp=E,14nm,0.3s,baz=113,slow=18,SNR=9.1
OBN                               S   Sn     05 33 22.9 -8.3
      comp=E,17nm,0.3s,baz=98,slow=19,SNR=1.4
      comp=E,42nm,0.5s
OBN   Obninsk          15.26 332deP   Pn     05 30 42.5 -0.9
OBN                              i S  Sn     05 33 31.4 +0.2
OBN                               pmax pmax
      comp=Z,43nm,0.7s
OBN                               MLR MLR
      comp=Z,63nm,19.0s
OBN   Obninsk          15.26 332  P   Pn     05 30 44.4 +1.0
      comp=Z,1µmcomp=Z,108nm,0.5s
GHAJ  Ghor Haditha     15.29 229      Pn     05 30 43.1 -1.0
GHAJ                              IAmb IAmb  05 30 49.2
      comp=Z,22nm,0.7s
MOS   Moscow           15.42 335 eP   Pn     05 30 42.4 -3.1
MOS                              eS   Sn     05 33 26.2 -8.9
MOS                               pmax pmax
      comp=Z,36nm,0.7s
ARTI  Arti             15.42  20      Pn     05 30 44.9 -0.7
ARTI  Arti             15.42  20  P   Pn     05 30 44.4 -1.2
      comp=Z,5.9nm,0.3s,baz=201,slow=11,SNR=21
ARTI                              S   Sn     05 33 23.9  -11
      comp=Z,26nm,0.5s,baz=336,slow=20,SNR=7.0
ARTI                              LR  LR     05 37 51.2
      comp=Z,50nm,18.7s,baz=2.5,slow=41
      comp=Z,16nm,0.3s
ARTI  Arti             15.42  20  P   Pn     05 30 45.0 -0.6
ARTI                              S   Sn     05 33 33.3 -1.9
DZET  Dzherino         15.46  96  P   P      05 30 48.4 -1.4
DZET                              pmax pmax
      comp=Z,19nm,0.7s
HARR  Harsova          15.49 286 ⇑P   P      05 30 49.9  0.0
HARR  Harsova          15.49 286 ⇑P   P      05 30 49.9  0.0
IUG   Iuzhnay          15.59  83 eP   P      05 30 50.1 -1.1
IUG   Iuzhnay          15.59  83 eP   P      05 30 50.1 -1.1
SIMJ  Simiganj         15.64  96      P      05 30 49.5 -2.3
ELL   Elmali           15.71 256      Pn     05 30 50.7 +1.2
ELL   Elmali           15.71 256  P   Pn     05 30 50.7 +1.2
ELL                               pmax pmax
      comp=Z,93nm,0.7s
KK31  Karatay Array    15.85  80  Pn  Pn     05 30 51.1 -0.1
KK31                              IAmb IAmb  05 31 13.1
      comp=Z,19nm,0.5s
KK31  Karatay Array    15.85  80  P   Pn     05 30 51.4 +0.2
      comp=Z,1.9nm,0.3s,baz=276,slow=14,SNR=58
KK31  Karatay Array    15.85  80 i P  Pn     05 30 51.4 +0.2
KKAR  Karatay Array    15.85  80      Pn     05 30 51.6 +0.4
KKAR                              IAmb IAmb  05 31 13.2
      comp=Z,20nm,0.5s
KKAR  Karatay Array    15.85  80  P   Pn     05 30 51.6 +0.4
KKAR                              pmax pmax
      comp=Z,19nm,0.5s
AKASG Malin Array Be   16.01 309  P   Pn     05 30 52.1 -1.0
      comp=Z,9.8nm,0.3s,baz=118,slow=12,SNR=24
AKASG                             S   Sn     05 33 41.6 -8.0
      comp=Z,0.6nm,0.3s,baz=225,slow=32,SNR=1.9
AKASG                             LR  LR     05 38 55.1
      comp=Z,31nm,19.5s,baz=102,slow=44
      comp=Z,4.6nm,0.3s
AKASG Malin Array Be   16.01 309 i P  Pn     05 30 52.7 -0.4
AKASG                             pmax pmax
      comp=Z,5.0nm,0.3s
AKBB  Malin Array Si   16.01 309ceP   Pn     05 30 53.4 +0.3
AKBB  Malin Array Si   16.01 309  P   Pn     05 30 53.3 +0.2
KIEV  Kiev             16.02 309      Pn     05 30 53.1 -0.1
KIEV                              IAmb IAmb  05 30 56.6
      comp=Z,28nm,0.9s
KIEV  Kiev             16.02 309 ⇑P   Pn     05 30 53.3 +0.1
KIEV  Kiev             16.02 309 ⇑P   Pn     05 30 53.3 +0.1
KIEV  Kiev             16.02 309 i P  Pn     05 30 53.1 -0.1
      SNR=29
SAKB  Bahrain          16.25 175  P   P      05 30 58.3 -0.1
KIRV  Kirov            16.39   1  P   Pn     05 30 57.3 -0.5
      comp=Z,5.7nm,0.3s,baz=164,slow=3.3,SNR=17
KIRV                              S   Sn     05 33 48.7  -10
      comp=Z,19nm,0.6s,baz=198,slow=20,SNR=2.6
KIRV                              LR  LR     05 38 54.2
      comp=Z,62nm,19.8s,baz=186,slow=43
      comp=Z,27nm,0.4s
KIRV  Kirov            16.39   1ceP   Pn     05 30 57.1 -0.6
SHMA  Al-Shehemyia     16.40 174  P   Pn     05 30 59.8 +1.6
VRI   Vrincioaia       16.41 290 ⇓P   Pn     05 31 00.2 +2.0
VRI   Vrincioaia       16.41 290 ⇓P   Pn     05 31 00.2 +2.0
SVE   Sverdlovsk       16.42  23 eP   Pn     05 30 57.9 -0.3
SVE                              eS   Sn     05 33 49.8  -10
PLOR  Plostina         16.46 290 ⇑P   Pn     05 31 00.9 +2.0
PLOR  Plostina         16.46 290 ⇑P   Pn     05 31 00.9 +2.0
TESR  Tescani          16.53 293 ⇑P   P      05 31 01.9 +0.5
BTK   Batken           16.58  90      P      05 31 01.4 -0.7
BTK                               IAmb IAmb  05 31 15.1
      comp=Z,16nm,0.7s
BTK   Batken           16.58  90  P   P      05 31 01.4 -0.7
BTK                               pmax pmax
      comp=Z,16nm,0.7s
LUBAR Lubar, Ukraine   16.59 305  P   Pn     05 31 01.6 +1.2
MI29  MI29, Kamyanyy   16.71 307  P   Pn     05 31 02.7 +0.8
      comp=Z,152nm,0.9s
EIL   Elat             16.89 227  P   Pn     05 31 01.1 -3.2
      comp=Z,2.4nm,0.6s,baz=350,slow=18,SNR=3.0
EIL                               LR  LR     05 38 36.8
      comp=Z,77nm,18.6s,baz=61,slow=41
TURR  Turia            16.92 291 ⇑P   Pn     05 31 06.4 +1.8
MLR   Muntele Rosu     16.93 289  P   Pn     05 31 06.3 +1.4
      comp=Z,5.9nm,0.7s,baz=132,slow=12,SNR=5.7
MLR                               LR  LR     05 39 38.9
      comp=Z,35nm,21.5s,baz=90,slow=44
MLR   Muntele Rosu     16.93 289 ⇑P   P      05 31 08.1 +2.1
MLR   Muntele Rosu     16.93 289 ⇑P   P      05 31 08.1 +2.1
MI28  Mi28,Pidlybu     17.01 308  P   Pn     05 31 04.7 -0.9
KMPD  K-Podol'skiy     17.02 300  P   Pn     05 31 07.2 +1.4
SHME  Shamm            17.17 158  P   P      05 31 09.6 +1.0
SHME  Shamm            17.17 158  P   P      05 31 08.8 +0.2
ARG   Arkhangelos      17.23 257  P   Pn     05 31 09.1 +0.6
ARG                               IAmb IAmb  05 31 46.7
      comp=Z,69nm,1.4s
ARG   Arkhangelos      17.23 257  P   Pn     05 31 09.1 +0.6
ARG                               pmax pmax
      comp=Z,69nm,1.4s
BANOM Banah            17.33 157  P   P      05 31 10.7 +0.2
BANOM                             S   Sn     05 34 22.8 +0.9
BANOM Banah            17.33 157 i P  Pn     05 31 10.4 +0.6
      SNR=13
DOPR  Dopca            17.35 290 ⇓P   P      05 31 12.0 +1.5
OTUK  Ortayu           17.48  62 ⇓P   P      05 31 13.4 +1.4
      comp=Z,42nm,0.8s
OTUK  Ortayu           17.48  62  P   P      05 31 13.3 +1.4
SMRA  Abu-Samra        17.50 174  P   Pn     05 31 11.0 -0.7
JRN   Qarnain Island   17.53 168  P   P      05 31 13.5 +1.0
TRNA  Turayna          17.54 173  P   Pn     05 31 13.0 +0.8
      SNR=15
VOIR                   17.56 289 ⇓P   P      05 31 14.5 +1.6
VOIR                   17.56 289 ⇓P   P      05 31 14.5 +1.6
BURAR Bucovina Array   17.66 296 ⇑P   Pn     05 31 13.4 -0.3
BURAR Bucovina Array   17.66 296 ⇑P   Pn     05 31 13.4 -0.3
BUR08 Bucovina Ar. S   17.67 296  P   Pn     05 31 12.8 -1.1
MASF  Masafi           17.82 158  P   P      05 31 16.9 +1.1
MSFE  Esma-Masafi      17.83 158 i P  P      05 31 16.6 +0.7
      SNR=7.7
ARR   Arges            17.85 288 ⇑P   P      05 31 18.1 +2.0
ARSB  Arslanbob        17.91  85  P   P      05 31 17.3 +0.5
ARSB  Arslanbob        17.91  85  P   P      05 31 17.3 +0.5
ARSB                              pmax pmax
      comp=Z,14nm,0.8s
BRVK  Borovoye         17.91  45      P      05 31 16.0 -0.6
BRVK                              IAmb IAmb  05 31 36.2
      comp=Z,77nm,0.9s
BRVK  Borovoye         17.91  45  P   P      05 31 18.6 +2.0
BRVK  Borovoye         17.91  45ceP   P      05 31 17.9 +1.3
BRVK                              pmax pmax
      comp=Z,7.0nm,0.6s
MDH   Madha            17.92 158  P   P      05 31 17.9 +0.9
MDH   Madha            17.92 158  P   P      05 31 17.8 +0.9
BVA0  Borovoye Array   17.95  46  P   P      05 31 17.3 +0.2
      comp=Z,55nm,0.8s,baz=234,slow=7.5,SNR=38
BVA0  Borovoye Array   17.95  46 i P  P      05 31 17.2 +0.2
BVAR  Borovoye Array   17.95  46  P   P      05 31 16.9 -0.1
      comp=Z,4.4nm,0.4s,baz=238,slow=14,SNR=21
BVAR                              S   Sn     05 34 26.7  -10
      comp=Z,22nm,0.8s,baz=234,slow=24,SNR=9.0
BVAR                              LR  LR     05 39 07.5
      comp=Z,39nm,19.1s,baz=256,slow=40
NAZ   Nazwa, Dubai     18.05 160  P   P      05 31 19.3 +1.0
NAZ   Nazwa, Dubai     18.05 160 i P  P      05 31 20.0 +1.7
      SNR=9.5
BRZS  Berezniki        18.11  57 eP   P      05 31 20.4 +1.5
BRZS  Berezniki        18.11  57 eP   P      05 31 20.4 +1.5
RNPP5 Staryi Chortor   18.16 308  P   P      05 31 19.1 -0.3
RNPP8 Varash           18.22 308  P   P      05 31 20.7 +0.7
RNPP9 Sopachiv         18.23 308  P   P      05 31 19.7 -0.4
UOSS  Minazif          18.23 159      Pn     05 31 21.8 +1.0
UOSS  Minazif          18.23 159  P   P      05 31 20.8 +0.5
UOSS  Minazif          18.23 159 i P  Pn     05 31 21.4 +0.6
      SNR=6.2
KARP  Karpathos        18.23 256      P      05 31 20.0 -0.4
AJN   Ajban            18.30 162  P   P      05 31 21.6 +0.5
AJN   Ajban            18.30 162 i P  Pn     05 31 21.9 +0.4
      SNR=6.6
ASUD  Al Ashush, Dub   18.32 161  P   P      05 31 21.7 +0.5
ASUD  Al Ashush, Dub   18.32 161  P   Pn     05 31 22.1 +0.3
HATD  Hatta, Dubai     18.33 159  P   Pn     05 31 22.3 +0.4
HATD  Hatta, Dubai     18.33 159 i P  Pn     05 31 23.0 +1.1
      SNR=11
BTLS  Baital           18.33  73 eP   Pn     05 31 23.0 +1.2
BTLS  Baital           18.33  73 eP   Pn     05 31 23.1 +1.2
ASHO  Ashiyiah         18.44 159  P   P      05 31 23.3 +0.6
ASHO  Ashiyiah         18.44 159 i P  P      05 31 22.9 +0.2
      SNR=17
GHWR  Ruwais           18.49 169  P   P      05 31 23.8 +0.6
MNK   Minsk            18.56 319 i P  P      05 31 21.9 -1.8
      comp=E,22nm,0.9s
MNK                              i P  P      05 31 21.9 -1.8
      comp=N,35nm,1.0s
MNK                              i P  P      05 31 21.9 -1.8
      comp=Z,28nm,0.9s,baz=122
MNK                              i pP sP     05 31 37.0 -6.5
MNK                              i S  Sn     05 34 49.4 -1.7
MNK                              i LQ LQ     05 36 50.3
MNK                              i LR LR     05 38 10.7
MNK                              i LRM MLR   05 39 20.2
      comp=E,26nm,17.4s
MNK                              i LRM MLR   05 39 23.4
      comp=Z,47nm,20.3s
MNK                              i LRM MLR   05 40 14.0
      comp=N,48nm,21.8s
MNK   Minsk            18.56 319 i P  P      05 31 21.8 -1.8
MNK                              i S  Sn     05 34 49.3 -1.7
MNK                               pmax pmax
      comp=E,22nm,0.9s
MNK                               pmax pmax
      comp=Z,28nm,0.9s
MNK                               pmax pmax
      comp=N,35nm,1.0s
MNK                               MLR MLR
      comp=E,26nm,17.0s
MNK                               MLR MLR
      comp=Z,47nm,20.0s
MNK                               MLR MLR
      comp=N,48nm,22.0s
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AAK	Ala-Archa	18.81	80	P	Pn	05 31 30.5	+2.7
	comp=N,5.4nm,0.7s,baz=257,slow=7.1,SNR=11						
AAK				S	Sn	05 34 54.3	-3.3
	comp=N,1.3nm,0.3s,baz=280,slow=6.1,SNR=1.9						
AAK				LR	LR	05 40 06.0	
	comp=N,43nm,18.6s,baz=274,slow=41						
AAK	Ala-Archa	18.81	80	P	Pn	05 31 29.6	+1.8
AAK	Ala-Archa	18.81	80	ceP	Pn	05 31 29.0	+1.2
AAK				pmax	pmax		
	comp=Z,14nm,1.3s						
SGDS	Sogindy	18.82	78	eP	Pn	05 31 28.5	+0.7
MZWR	Madinat Zayed	18.85	166	P	P	05 31 27.5	+0.4
RAYN	Ar Rayn	18.87	190	P	P	05 31 26.6	-0.8
RAYN				IAmb	IAmb	05 31 30.3	
	comp=Z,29nm,1.1s						
RAYN	Ar Rayn	18.87	190	P	P	05 31 26.5	-1.0
RAYN	Ar Rayn	18.87	190	P	P	05 31 28.1	+0.7
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
RAYN	Ar Rayn	18.87	190	P	P	05 31 26.3	-1.1
ALNE	Al Ain	18.96	161	P	P	05 31 28.4	+0.1
ALNE	Al Ain	18.96	161	i P	P	05 31 28.5	+0.1
	SNR=12						
MARR	Marisel-Cluj	18.97	292	⇑P	P	05 31 28.7	+0.3
SOHO	SOHO	19.09	159	P	P	05 31 30.5	+0.8
SOHO	SOHO	19.09	159	i P	P	05 31 30.2	+0.5
	SNR=12						
GZR	Gura Zlata	19.16	288	⇑P	P	05 31 31.4	+0.9
GZR	Gura Zlata	19.16	288	⇑P	P	05 31 31.4	+0.9
DRGR		19.26	293	⇓P	P	05 31 32.5	+1.0
DRGR		19.26	293	⇓P	P	05 31 32.5	+1.0
NACGM	Naroch	19.31	319	eP	P	05 31 33.0	+1.0
	comp=Z,18nm,0.6s,baz=122						
MZR	Muzera	19.53	168	P	P	05 31 34.9	+0.4
KLMR	Klimovskoe	19.53	346	eP	P	05 31 34.5	+0.2
KLMR				e		05 35 12.5	
KLMR				pmax	pmax		
	comp=Z,23nm,0.5s						
NGCH	Negor - Chabah	19.58	145	P	P	05 31 35.5	+0.5
SURR	Surduc	19.62	290	⇑P	P	05 31 35.5	+0.1
KOLS	Kolonicke sedl	19.81	299	eP	Pn	05 31 42.7	+3.3
KOLS	Kolonicke sedl	19.81	299	eP	Pn	05 31 42.7	+3.3
HOQ	Hoqain	19.83	157	P	P	05 31 39.0	+1.1
ARQ	Araqi	19.85	159	P	P	05 31 39.3	+1.2
	SNR=11						
MDVR	Moldovita	19.92	287	⇑P	P	05 31 39.0	+0.3
BZS	Buzias	19.98	289	⇑P	P	05 31 40.1	+0.8
BZS	Buzias	19.98	289	⇑P	P	05 31 40.1	+0.8
ISAL	Salakas	19.99	320	eP	P	05 31 40.2	+0.9
IDI	Anoyia	20.00	258	P	P	05 31 38.3	-1.4
IDI				IAmb	IAmb	05 31 43.2	
	comp=Z,14nm,0.8s						
IDI	Anoyia	20.00	258	P	P	05 31 37.5	-2.2
	comp=Z,7.4nm,0.4s,baz=72,slow=13,SNR=16						
IDI				S	S	05 35 11.2	-10
	comp=Z,2.5nm,0.5s,baz=29,slow=19,SNR=2.1						
UMZA	Um Al Zommool	20.12	163	P	P	05 31 41.1	+0.1
AAA	Alma-Ata	20.50	78	eP	Pn	05 31 46.8	-0.9
AAA				pmax	pmax		
	comp=Z,14nm,0.4s						
AAA	Alma-Ata	20.50	78	eP	Pn	05 31 46.8	-0.9
	comp=Z,14nm,0.4s						
SMDO	Samad	20.55	156	P	P	05 31 46.2	+0.4
KSH	Kashi	20.55	88	P	P	05 31 46.2	+0.5
KSH				pP	sP	05 31 59.3	-6.0
KSH				pmax	pmax		
	comp=Z,7.0nm,0.7s						
STHS	Stebnicka Huta	20.56	300	eP	Pn	05 31 50.3	+2.0
WSAR	Wadi Sarin	20.56	154	P	P	05 31 47.0	+1.3
	comp=Z,0.1nm,0.6s,baz=0.0,slow=20,SNR=14						
WSAR	Wadi Sarin	20.56	154	P	P	05 31 47.0	+1.3
BSY	Bisya	20.60	158	P	P	05 31 46.8	+0.6
MDOK	Medeo	20.61	78	eP	Pn	05 31 47.9	-1.1
MDOK	Medeo	20.61	78	eP	Pn	05 31 47.9	-1.1
SUW	Suwalki	20.75	314	eP	P	05 31 47.7	+0.1
SUW	Suwalki	20.75	314	P	P	05 31 46.4	-1.2
SUW	Suwalki	20.75	314	P	P	05 31 46.4	-1.2
NIL	Nilore	20.90	106		P	05 31 50.0	+0.6
NIL	Nilore	20.90	106	P	P	05 31 48.5	-1.0
NIL	Nilore	20.90	106	P	P	05 31 50.0	+0.6
NIL				pmax	pmax		
	comp=Z,13nm,1.0s						
PABE	Paberze	21.01	318		P	05 31 50.0	-0.3
PABE	Paberze	21.01	318	eP	P	05 31 51.5	+1.2
NIE	Niedzica	21.17	300	eP	P	05 31 57.1	+4.9
JMDO	Jabal Madar	21.21	156	P	P	05 31 53.1	+0.3
PSZ	Piszkesteto	21.25	296	P	P	05 31 52.8	-0.3
PSZ	Piszkesteto	21.25	296	P	P	05 31 52.8	-0.3
PSZ				pmax	pmax		
	comp=Z,12nm,1.1s						
VSU	Vasula	21.43	327	ceP	P	05 31 54.1	-0.6
VSU				pmax	pmax		
	comp=Z,21nm,0.6s						
VSU	Vasula	21.43	327	eP	P	05 31 54.2	-0.6
SATY	Saty	21.61	78	eP	P	05 31 58.6	+1.6
SATY	Saty	21.61	78	eP	P	05 31 58.7	+1.6
ZHN	Zhinishke	21.61	77	eP	P	05 31 58.3	+1.3
ZHN	Zhinishke	21.61	77	eP	P	05 31 58.3	+1.3
OJC	Ojcow	21.62	302	P	P	05 31 55.7	-1.2
OJC	Ojcow	21.62	302	P	P	05 31 55.7	-1.2
LANS	Liptovska Anna	21.67	299	eP	P	05 32 03.3	+5.8
IGT	Igoumenitsa	21.80	273	P	P	05 31 59.7	+0.8
IGT				pmax	pmax		
	comp=Z,19nm,0.4s						
JLN	Jalan Bani Buh	21.83	153	P	P	05 32 00.2	+0.8
KURBB	Kurchatov Arra	21.91	57	P	P	05 32 01.0	+1.1
	comp=Z,2.0nm,0.7s,baz=260,slow=11,SNR=14						
KURBB				S	S	05 36 01.1	+2.6
	comp=Z,0.6nm,0.5s,baz=221,slow=19,SNR=2.2						
KURBB				LR	LR	05 41 57.1	
	comp=Z,45nm,19.2s,baz=164,slow=40						
	comp=Z,2.0nm,0.7s						
KURBB	Kurchatov Arra	21.91	57	⇑P	P	05 32 03.1	+3.1
	comp=Z,19nm,0.6s						
KURBB	Kurchatov Arra	21.91	57	P	P	05 32 03.0	+3.1
PDG	Podgorica	21.94	281	⇑P	P	05 32 02.7	+2.3
KURK	Kurchatov	21.98	57	P	P	05 32 00.2	-0.6
KURK				IAmb	IAmb	05 32 26.1	
	comp=Z,21nm,0.8s						
KURK	Kurchatov	21.98	57	P	P	05 32 03.5	+2.7
KURK	Kurchatov	21.98	57	ceP	P	05 32 02.6	+1.8
KURK				pmax	pmax		
	comp=Z,11nm,1.3s						
VYHS	Vyhne	22.01	297	eP	P	05 32 07.3	+6.2
KEK	Kerkira	22.14	273		P	05 32 03.6	+1.0
KEK				IAmb	IAmb	05 32 06.0	
	comp=Z,29nm,0.7s						
PBUR	Paburge	22.27	318	eP	P	05 32 05.0	+1.2
SHLS	Shalkode	22.36	77	eP	P	05 32 09.8	+4.7
SHLS	Shalkode	22.36	77	eP	P	05 32 09.8	+4.7
MHTO	MHTO	22.48	158	P	P	05 32 05.8	-0.5
MTSE	Matsula	22.79	325	eP	P	05 32 09.9	+0.6
SLIT	Slitere, Latvi	22.88	322	eP	P	05 32 11.1	+0.9
DQM	DQM	23.37	159	P	P	05 32 15.4	0.0
MEF	Metsahovi	23.47	329	eP	P	05 32 16.7	+0.7
KRLC	Kraliky	23.52	301	eP	P	05 32 23.9	+7.3
VRAC	Vranov	23.56	299	LR	LR	05 43 07.5	
	comp=Z,37nm,18.0s,baz=96,slow=41						
FINES	FINESS Array B	23.67	332	P	P	05 32 17.5	-0.2
	comp=Z,9.9nm,0.4s,baz=133,slow=10,SNR=52						
FINES				S	S	05 36 24.5	-3.6
	comp=Z,8.0nm,0.9s,baz=132,slow=21,SNR=4.6						
FINES				LR	LR	05 42 42.1	
	comp=Z,54nm,19.1s,baz=174,slow=39						
	comp=Z,9.9nm,0.4s						
DPC	Dobruska-Polom	23.85	301	eP	P	05 32 23.5	+3.9
MAKZ	Makanchi	23.85	68	P	P	05 32 20.7	+1.0
MAKZ	Makanchi	23.85	68	P	P	05 32 20.7	+1.0
MAKZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
DOK	Doka	23.93	168	P	P	05 32 20.2	-0.3
	SNR=9.0						
OSTC	Ostas	23.94	302	eP	P	05 32 31.9	+11
MK31	Makanchi Array	24.07	68	P	P	05 32 23.6	+1.9
	comp=Z,3.7nm,0.5s,baz=270,slow=8.1,SNR=27						
MK31	Makanchi Array	24.07	68	i P	P	05 32 23.7	+2.1
MKAR	Makanchi Array	24.07	68	P	P	05 32 22.9	+1.2
	comp=Z,3.2nm,0.6s,baz=272,slow=7.3,SNR=22						
MKAR				S	S	05 36 38.0	+3.1
	comp=Z,0.3nm,0.6s,baz=303,slow=19,SNR=1.4						
MKAR				LR	LR	05 43 23.9	
	comp=Z,24nm,18.1s,baz=257,slow=40						
	comp=Z,3.2nm,0.6s						
SOKA	Soboth	24.53	292	eP	P	05 32 27.8	+1.9
	comp=Z,4.0nm,1.2s						
TIP	Timpagrande	24.55	274	P	P	05 32 24.6	-1.6
WHFO	Wadi Hawf	24.56	169	P	P	05 32 26.0	-0.3
	SNR=34						
KEF	Keuruu	24.58	333	eP	P	05 32 26.9	+0.8
OBKA	Obir	24.87	292	eP	P	05 32 33.8	+4.7
	comp=Z,4.7nm,1.2s						
DMTO	DMTO	24.95	166	P	P	05 32 29.6	-0.2
RAF	Rauma	24.99	328	eP	P	05 32 30.5	+0.7
CUC	Castrocucco	25.02	276	P	P	05 32 30.1	-0.2
CUC				IAmb	IAmb	05 32 33.0	
	comp=Z,14nm,1.1s						
CKRC	Cesky Krumlov	25.03	297	eP	P	05 32 32.9	+2.6
CKRC	Cesky Krumlov	25.03	297	eP	P	05 32 32.9	+2.6
RBK	Rabkut	25.03	168	P	P	05 32 31.1	+0.5
	SNR=8.3						
ABTO	Aybut	25.06	170	P	P	05 32 30.7	-0.1
	SNR=19						
GERES	GERESS Array B	25.43	297	P	P	05 32 33.5	-0.6
	comp=Z,0.7nm,0.4s,baz=88,slow=11,SNR=5.1						
GERES				LR	LR	05 44 19.4	
	comp=Z,20nm,21.4s,baz=69,slow=40						
	comp=Z,0.7nm,0.4s						
KHC	Kasperske Hory	25.52	298	eP	P	05 32 37.5	+2.7
KHC	Kasperske Hory	25.52	298	i P	P	05 32 36.6	+1.8
KHC				pmax	pmax		
	comp=Z,19nm,2.2s						
BLEU	Blekinge	25.53	315	i P	P	05 32 34.7	0.0
KBA	Koelnbreinsper	25.68	293	eP	P	05 32 36.9	+0.5
	comp=Z,1.1nm,0.4s						
ZSN	Zaisan	25.81	66	eP	P	05 32 38.7	+1.3
ZSN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZSN	Zaisan	25.81	66	eP	P	05 32 38.8	+1.3
	comp=Z,10.0nm,1.1s						
VAF	Ylistaro	25.93	332	eP	P	05 32 39.2	+0.9
CLL	Collm	26.05	303	i sP	sP	05 32 59.4	-1.1
LESA	Schwarzleotal	26.12	294	eP	P	05 32 36.5	-3.8
	comp=Z,1.6nm,0.5s						
ZALV	Zalesovo Beam	26.36	51	P	P	05 32 42.5	+0.3
	comp=Z,12nm,0.3s,baz=294,slow=11,SNR=10						
ZALV				LR	LR	05 44 39.9	
	comp=Z,48nm,19.6s,baz=336,slow=40						
	comp=Z,12nm,0.3s						
LUNU	Lund	26.60	313	i P	P	05 32 45.9	+1.5
DEL	Delary	26.61	315	i P	P	05 32 45.3	+0.8
VAE	Valguarnera	26.86	271	P	P	05 32 46.6	-0.4
	comp=Z,12nm,0.3s,baz=63,slow=16,SNR=1.2						
	comp=Z,12nm,0.3s						
BJUU	Bjuv	26.95	313	i P	P	05 32 48.9	+1.3
SQTA	Sankt Quirin	27.13	294	eP	P	05 32 44.0	-5.4
	comp=Z,2.0nm,0.4s						
FABU	Falkenberg	27.37	315	eP	P	05 32 53.0	+1.7
BORU	Boraas	27.54	317	i P	P	05 32 53.1	+0.3
ONAU	Onsala	27.90	316	i P	P	05 32 58.4	+2.4
HFS	Hagfors	27.99	322	P	P	05 32 57.3	+0.5
	comp=Z,3.9nm,0.3s,baz=110,slow=9.0,SNR=30						
HFS				LR	LR	05 45 14.2	
	comp=Z,34nm,18.7s,baz=130,slow=39						
	comp=Z,3.9nm,0.3s						
DAVOX	Davos/Dischmat	28.07	293	LR	LR	05 46 05.6	
	comp=Z,31nm,19.1s,baz=83,slow=40						
WMQ	Urumqi	28.17	73	eP	P	05 33 01.2	+2.5
WMQ				pmax	pmax		
	comp=Z,13nm,1.5s						
TJOU	Tjoern	28.24	317	i P	P	05 32 59.1	+0.1
STRU	Stroemstad	28.78	319	i P	P	05 33 03.4	-0.4
NC602	NORSAR Array S	29.21	322	eP	P	05 33 08.1	+0.4
NORES	NORESS Array B	29.21	322	P	P	05 33 08.5	+0.8
NB2	NORSAR Subarra	29.47	323	P	P	05 33 10.0	-0.1
	comp=Z,4.2nm,0.6s,baz=113,slow=8.6						
NB2	NORSAR Subarra	29.47	323	P	P	05 33 14.4	+4.4
NB2	NORSAR Subarra	29.47	323	P	P	05 33 10.0	-0.1
	baz=113,slow=8.6						
NOA	NORSAR Array B	29.47	323	P	P	05 33 09.9	-0.1
	comp=Z,0.3nm,0.3s,baz=115,slow=8.8,SNR=11						
NOA				LR	LR	05 46 10.9	
	comp=Z,27nm,19.0s,baz=105,slow=39						
	comp=Z,0.3nm,0.3s						
NAO01	NORSAR Array S	29.55	322	P	P	05 33 10.5	-0.2
NAO01				IAmb	IAmb	05 33 29.9	
	comp=Z,12nm,0.8s						
VADS	Vadso	29.72	347	eP	P	05 33 13.2	+1.1
KONO	Kongsberg	29.75	319	eP	P	05 33 12.7	+0.3
HOMB	Homborsund	29.90	316	eP	P	05 33 14.1	+0.3
ARCES	ARCESS Array B	29.96	344	P	P	05 33 14.7	+0.5
	comp=Z,0.9nm,0.4s,baz=146,slow=9.1,SNR=26						
ARCES				LR	LR	05 46 01.1	
	comp=Z,25nm,18.9s,baz=148,slow=38						
	comp=Z,0.9nm,0.4s						
KTK1	Kautokeino	30.05	342	eP	P	05 33 16.3	+1.3
BNI	Bardonecchia	30.51	290	P	P	05 33 18.4	-1.1
BNI				IAmb	IAmb	05 33 38.3	
	comp=Z,9.3nm,1.2s						
BNI	Bardonecchia	30.51	290	P	P	05 33 18.4	-1.1
BNI				pmax	pmax		
	comp=Z,9.0nm,1.3s						
MOR8	Moi Rana	30.65	333	eP	P	05 33 20.9	+0.6
LEIR	Leirfjorden	31.07	332	eP	P	05 33 25.0	+1.1
FAUS	Fauske	31.09	335	eP	P	05 33 24.6	+0.4
STOK	Stokkvaagen	31.22	333	eP	P	05 33 26.1	+0.8
KEST	Kesra	31.29	271	P	P	05 33 26.2	-0.2
KEST	Kesra	31.29	271	P	P	05 33 26.1	-0.2
	comp=Z,2.3nm,0.5s,baz=71,slow=2.5,SNR=9.1						
	comp=Z,2.3nm,0.5s						
KEST	Kesra	31.29	271	P	P	05 33 25.7	-0.7
VAGH	Vaagaholmen	31.35	334	eP	P	05 33 27.9	+1.4
STEI	Steigen	31.43	336	eP	P	05 33 28.1	+1.0
TRO	Tromso	31.55	340	eP	P	05 33 29.4	+1.2
LOF	Lofoten	32.07	336	eP	P	05 33 32.8	+0.1
CEST	Esterri de Car	34.88	287	P	P	05 33 56.6	-1.1
CEST				IAmb	IAmb	05 34 09.7	
	comp=Z,11nm,1.1s						
EKA	Eskdalemuir Ar	35.92	310	P	P	05 34 06.2	0.0
	comp=Z,1.5nm,0.3s,baz=90,slow=8.2,SNR=39						
	comp=Z,1.5nm,0.3s						
ESK	Eskdalemuir	35.95	310	P	P	05 34 06.8	+0.3
ESK	Eskdalemuir	35.95	310	P	P	05 34 06.8	+0.3
ESK				pmax	pmax		
	comp=Z,29nm,1.5s						
GTA	Gaotai	38.10	77	eP	P	05 34 27.0	+1.8
GTA				pP	sP	05 34 45.5	-0.7
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SPITS	Spitsbergen Ar	38.36	350	P	P	05 34 28.3	+1.5
	comp=Z,2.2nm,0.5s,baz=104,slow=12,SNR=17						
	comp=Z,2.2nm,0.5s						
ESDC	Sonseca Array	39.55	285	P	P	05 34 36.0	-1.2
	comp=Z,0.6nm,0.4s,baz=72,slow=7.6,SNR=7.3						
	comp=Z,0.6nm,0.4s						
SONM	Songino Array	40.15	62	LR	LR	05 53 21.2	
	comp=Z,36nm,20.9s,baz=234,slow=39						
LODK	Lodwar	40.51	201	P	P	05 34 45.7	+0.3
LODK				IAmb	IAmb	05 34 47.3	
	comp=Z,5.2nm,1.0s						
ULN	Ulaanbaatar	40.57	61	i P	P	05 34 45.4	-0.2
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TAM	Tamanrasset	40.95	256		P	05 34 49.8	+0.8
TAM	Tamanrasset	40.95	256	P	P	05 34 49.8	+0.8
TAM				pmax	pmax		
	comp=Z,11nm,0.5s						
LZH	Lanzhou	42.35	79	eP	P	05 35 03.4	+3.0
LZH				pP	sP	05 35 19.7	-1.9
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
PVAQ	Vaqueiros	43.15	283	P	P	05 35 06.1	-0.5
BORG	Borgarnes	44.60	325	LR	LR	05 53 36.6	
	comp=Z,22nm,20.1s,baz=34,slow=36						
PZH	PanZhiHua	45.56	93	P	P	05 35 26.8	+0.6
PZH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC	Hu-ho-hao-te	45.91	70	eP	P	05 35 28.6	-0.1
HHC				pmax	pmax		
	comp=Z,13nm,0.5s						
HHC				pmax	pmax		
	comp=Z,33nm,3.7s						
XAN	Xi'an	46.99	79	P	P	05 35 38.9	+1.7
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KMI	Kunming	47.09	94	P	P	05 35 39.6	+1.3
KMI				sP	sP	05 36 03.6	+4.0
KMI				pmax	pmax		
	comp=Z,12nm,0.7s						
TIXI	Tiksi	47.44	25	LR	LR	05 58 15.5	
	comp=Z,24nm,18.8s,baz=24,slow=39						
CMAR	Chiang Mai Arr	48.36	104	P	P	05 35 48.3	+0.4
	comp=Z,1.2nm,0.5s,baz=307,slow=8.0,SNR=8.7						
	comp=Z,1.2nm,0.5s						
TORD	Torodi Ar. Bea	50.06	249	P	P	05 35 59.5	-1.4
	comp=Z,3.2nm,0.5s,baz=52,slow=7.0,SNR=11						
	comp=Z,3.2nm,0.5s						
NJ2	Nanjing	55.19	76	eP	P	05 36 38.4	-0.3
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
SFJD	Kangerlussuaq	55.47	332	LR	LR	06 00 39.0	
	comp=Z,34nm,18.4s,baz=115,slow=36						
USRK	Ussuriysk Ar.	57.97	57	P	P	05 36 57.6	-0.7
	comp=Z,0.6nm,0.5s,baz=254,slow=8.3,SNR=1.4						
	comp=Z,0.6nm,0.5s						
KSRS	Korea Array	58.74	66	P	P	05 37 04.0	+0.3
	comp=Z,0.7nm,0.5s,baz=310,slow=6.1,SNR=2.1						
	comp=Z,0.7nm,0.5s						
KSRS	Korea Array	58.74	66	P	P	05 37 04.0	+0.3
DBIC	Dimbokro	59.17	249	P	P	05 37 06.0	-0.9
DBIC	Dimbokro	59.17	249	P	P	05 37 05.8	-1.1
	comp=Z,10nm,0.5s,baz=46,slow=9.1,SNR=19						
	comp=Z,10nm,0.5s						
DBIC	Dimbokro	59.17	249	P	P	05 37 06.0	-0.9
DBIC				pmax	pmax		
	comp=Z,13nm,0.7s						
MA2	Magadan	60.05	35	LR	LR	06 06 06.3	
	comp=Z,28nm,18.2s,baz=260,slow=39						
MJAR	Matsushiro Arr	66.10	62	LR	LR	06 08 35.8	
	comp=Z,38nm,18.8s,baz=268,slow=38						
GRTLG	Ghanzi	68.28	208		P	05 38 07.3	+0.5
GRTLG				IAmb	IAmb	05 38 08.3	
	comp=Z,6.9nm,0.7s						
SCHQ	Schefferville	68.97	326	P	P	05 38 10.8	+0.2
	comp=Z,1.4nm,0.7s,baz=43,slow=18,SNR=1.8						
	comp=Z,1.4nm,0.7s						
MAKGR	Makgori	71.29	203	P	P	05 38 25.2	0.0
MAKGR				IAmb	IAmb	05 38 26.5	
	comp=Z,12nm,1.1s						
ILAR	Eielson Array	72.62	7	P	P	05 38 32.4	-0.3
	comp=Z,0.1nm,0.5s,baz=354,slow=8.6,SNR=1.4						
I30M	Mount Dempster	72.81	2	P	P	05 38 35.3	+1.3
I30M				IAmb	IAmb	05 38 56.2	
	comp=Z,5.9nm,0.9s						
BOSA	Boshof	73.81	202	P	P	05 38 40.0	-0.1
	comp=Z,7.9nm,0.6s,baz=16,slow=6.5,SNR=24						
	comp=Z,7.9nm,0.6s						
BOSA	Boshof	73.81	202	P	P	05 38 40.0	-0.1
SJG	San Juan	95.36	300	LR	LR	06 18 54.8	
	comp=Z,10nm,21.4s,baz=128,slow=33						
QSPA	South Pole Qui	132.04	180	PKP	PKPdf	05 46 16.0	-1.8
	comp=Z,1.4nm,0.7s,baz=254,slow=2.6,SNR=6.4						

GCG 07 05:30:19.1±0.9, 14.°52N×90.°72W, h1km±5km, MD3.5, ML2.8, MW2.6, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESSG	Sabana Grande	0.17	218	i P	Pg	05 30 23.3	+0.9
ESSG				i S	Sg	05 30 26.0	+1.4
ESSG				IAML		05 30 26.5	
	comp=E,3μm,0.1s						
GCG4	OSOP	0.20	70	i P	Pg	05 30 23.5	+0.6
GCG4				i S	Sg	05 30 26.5	+1.0
GCG4				IAML		05 30 29.0	
	comp=N,2μm,0.4s						
FG16	Alotenango, Sa	0.32	140	i P	Pg	05 30 23.2	-2.1
FG16				i S	Sg	05 30 26.1	-3.3
FG16				IAML		05 30 26.4	
	comp=E,8μm,0.2s						
MTO3	Montecristo	1.32	95	eP	Pg	05 30 43.7	-0.8
JAYA	Jayaque - finc	1.50	125	eP	Pn	05 30 46.9	-0.5

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*ATH **07** 05:32:02.7, 40.°58N×20.°63E, h18km±6km, ML2.3/6, Manual Solution by N.Liadopoulou First location: 2019/06/07 05:33:22, This location: 2019/06/07 06:19:49 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 12 km; Longitude uncertainty: 4 km*

*TIR **07** 05:32:05.0, 40.°53N×20.°73E, h0km±7km, Ml2.9/3*

*SKO **07** 05:32:05.1, 40.°67N×20.°77E, h15km, ML2.1*

ISC 07 05:32:03.8±0.9, 40.°62N±0.°03×20.°73E±0.°04, h14km±6km, n19, σ1.s84/26, 1C, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.04	81	Pg	Pg	05 32 06.3	-0.1
KBN				Sg	Sg	05 32 08.6	+0.3
KBN				AML	AML	05 32 09.3	
	26nm,0.2s						
NEST	Nestorio	0.32	130	⇑Pg	Pg	05 32 10.5	+0.2
NEST				Sg	Sg	05 32 15.7	+0.9
NEST				AML	AML	05 32 16.8	
	3.5nm,0.4s						
NEST	Nestorio	0.32	130	P	Pg	05 32 10.5	+0.2
NEST				S	Sg	05 32 16.0	+1.2
LSK	Leskovik	0.48	192	Pg	Pg	05 32 12.6	-0.7
LSK				Sg	Sg	05 32 19.8	+0.2
LSK				AML	AML	05 32 21.9	
	6.5nm,0.4s						
OHR	Ohrid	0.50	6	i Pg	Pg	05 32 14.1	+0.4
OHR				i Sg	Sb	05 32 22.8	+1.2
OHR				eLg	Lg	05 32 23.4	
	comp=E,170nm,0.4s						
OHR				eLg	Lg	05 32 23.7	
	comp=N,81nm,0.4s						
PENT	Pentalofos	0.52	143	P	Pg	05 32 13.9	-0.2
KPRO	Kipourio	0.82	144	P	Pb	05 32 19.9	0.0
KZN	Kozani	0.85	111	P	Pg	05 32 20.4	+0.1
JAN	Janina	0.96	175	P	Pb	05 32 20.8	-1.6
TIR	Tirane	0.98	318	i Pg	Pb	05 32 23.5	+0.9
TIR	Tirane	0.98	318	P	Pb	05 32 21.0	-1.6
IGT	Igoumenitsa	1.13	196	P	Pg	05 32 27.7	+2.2
IGT	Igoumenitsa	1.13	196	i Pg	Pg	05 32 28.6	+3.1
IGT				i Sg	Sg	05 32 44.3	+4.1
IGT	Igoumenitsa	1.13	196	P	Pn	05 32 23.0	-2.2
KEK	Kerkira	1.15	219	P	Pn	05 32 22.9	-2.7
TETR	Tetrakomo, Epi	1.34	162	P	Pn	05 32 25.7	-2.5
LIT	Litokhoron	1.44	110	i Pg	Pb	05 32 31.5	+1.0
VAY	Valandovo	1.56	63	i Pn	Pg	05 32 33.6	-0.1
VAY				i Sg	Sg	05 32 57.7	+3.6
VAY				eLg	Lg	05 32 57.9	
	comp=N,22nm,0.5s						
VAY				eLg	Lg	05 32 58.1	
	comp=E,17nm,0.6s						
KNT	Kendrikon	1.73	71	i Pn	Pb	05 32 35.3	-0.1

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*IDC **07** 05:34:11.0±1.9, 55.°95S×27.°67W, h138km±15km, mb4.0/10, mbtmp4.5/12, MS3.1/5, Error ellipse: s-maj=17.2km s-min=13.0km az=69.0*

ISC 07 05:34:07.7±0.5, 55.°88S±0.°09×27.°7W±0.°1, h112km, n41, σ1.s22/37, mb4.3/9, 6C-2D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	17.06	158	⇑P	P	05 37 58.8	-0.1
	comp=Z,22nm,0.7s						
VNA3	Neumayer Olymp	17.25	160	⇑P	P	05 38 00.6	-0.4
	comp=Z,49nm,0.8s						
VNA3				⇑S	S	05 41 25.8	+11
VNA2	Neumayer--Watz	17.46	158	⇑P	P	05 38 02.4	-0.9
	comp=Z,34nm,0.5s,baz=311,slow=13						
VNA2				⇓S	S	05 41 28.9	+10
	baz=244,slow=33						
SNAA	Sanae	19.02	156	⇑P	P	05 38 20.2	-0.2
	comp=Z,766nm,0.4s						
SNAA	Sanae	19.02	156	P	P	05 38 20.2	-0.2
	comp=Z,29nm,0.4s,baz=313,slow=12,SNR=392						
PMSA	Palmer Station	19.80	229	P	Pn	05 38 30.6	-0.9
	comp=Z,12nm,0.7s,baz=84,slow=8.4,SNR=4.6						
TROLL	Troll, Antarti	20.53	154	⇑P	P	05 38 36.4	-0.4
	comp=Z,1μm,0.6s						
TROLL				⇓S	S	05 42 23.0	+3.0
PLCA	Paso Flores	31.69	280	P	P	05 40 22.0	+1.6
	comp=Z,0.9nm,0.5s,baz=194,slow=17,SNR=3.9						
PLCA				LR	LR	05 53 11.1	
	comp=Z,27nm,18.7s,baz=116,slow=36						
	comp=Z,0.9nm,0.5s						
QSPA	South Pole Qui	34.38	180	P	P	05 40 43.8	+0.2
	comp=Z,6.9nm,0.7s,baz=188,slow=2.3,SNR=57						
QSPA				PcP	PcP	05 43 15.9	-0.6
	comp=Z,1.3nm,0.6s,baz=225,slow=1.4,SNR=1.8						

	comp=Z,6.9nm,0.7s						
CPUP	**Villa Florida**	**36.48**	**312**	P	**P**	**05 41 01.9**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=161,slow=7.5,SNR=3.5						
CPUP				LR	LR	05 54 10.4	
	comp=Z,7.4nm,20.7s,baz=56,slow=33						
	comp=Z,0.4nm,0.5s						
MAW	**Mawson**	**40.46**	**144**	P	**P**	**05 41 34.7**	**+0.2**
	comp=Z,13nm,0.8s,baz=241,slow=10,SNR=17						
MAW				PcP	**PcP**	**05 43 34.5**	**-0.4**
	comp=Z,3.7nm,0.8s,baz=262,slow=7.1,SNR=2.2						
MAW				LR	LR	05 57 06.0	
	comp=Z,29nm,18.1s,baz=215,slow=34						
	comp=Z,13nm,0.8s						
BOSA	**Boshof**	**46.20**	**76**	P	**P**	**05 42 21.1**	**-0.2**
	comp=Z,3.9nm,1.0s,baz=213,slow=11,SNR=2.1						
BOSA				LR	LR	05 57 34.1	
	comp=Z,26nm,18.3s,baz=194,slow=30						
	comp=Z,3.9nm,1.0s						
VNDA	**Vanda**	**46.73**	**183**	P	**P**	**05 42 25.3**	**+0.6**
	comp=Z,3.9nm,0.8s,baz=195,slow=6.9,SNR=35						
	comp=Z,3.9nm,0.8s						
H04S2	**CROZET ISLANDS**	**47.88**	**114**	T	T	06 35 09.2	
	baz=232						
H04S3	**CROZET ISLANDS**	**47.88**	**114**	T	T	06 35 17.1	
	baz=232						
H04S1	**CROZET ISLANDS**	**47.89**	**114**	T	T	06 35 02.5	
	baz=232						
H10S2	**ASCENSION HYDR**	**47.92**	**17**	T	T	06 34 31.5	
	baz=31,slow=74,SNR=22						
H10S3	**ASCENSION HYDR**	**47.92**	**17**	T	T	06 34 23.0	
	baz=189,slow=74,SNR=23						
H10N1	**ASCENSION HYDR**	**49.03**	**17**	T	T	06 35 35.7	
	baz=204,slow=75,SNR=12						
H10N3	**ASCENSION HYDR**	**49.03**	**17**	T	T	06 35 43.7	
	baz=204,slow=75,SNR=19						
H10N2	**ASCENSION HYDR**	**49.05**	**17**	T	T	06 35 55.4	
	baz=204,slow=75,SNR=17						
LPAZ	**La Paz**	**50.05**	**306**	P	**P**	**05 42 52.3**	**+0.8**
	comp=Z,3.4nm,0.7s,baz=150,slow=7.0,SNR=12						
	comp=Z,3.4nm,0.7s						
DBIC	**Dimbokro**	**65.13**	**25**	P	**P**	**05 44 37.6**	**+1.3**
	comp=Z,3.7nm,0.6s,baz=192,slow=7.2,SNR=6.6						
	comp=Z,3.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**73.04**	**30**	P	**P**	**05 45 26.5**	**+1.2**
	comp=Z,11nm,0.6s,baz=198,slow=6.0,SNR=54						
	comp=Z,11nm,0.6s						
SDV	**Santo Domingo**	**73.69**	**315**	LR	LR	06 19 31.7	
	comp=Z,30nm,19.2s,baz=109,slow=37						
ESDC	**Sonseca Array**	**97.30**	**18**	P	**P**	**05 47 25.5**	**-1.9**
	comp=Z,0.4nm,0.4s,baz=197,slow=7.5,SNR=2.3						
ASAR	**Alice Springs**	**99.24**	**163**	P	**Pdif**	**05 47 34.9**	**-1.8**
	comp=Z,1.8nm,1.0s,baz=191,slow=3.8,SNR=8.2						
ASAR				PP	**PP**	**05 51 37.8**	**-2.0**
	comp=Z,1.7nm,1.0s,baz=190,slow=8.3,SNR=5.6						
	comp=Z,1.8nm,1.0s						
WRA	**Warramunga Arr**	**102.96**	**163**	P	**Pdif**	**05 47 52.0**	**-1.2**
	comp=Z,0.7nm,0.9s,baz=195,slow=4.8,SNR=2.4						
FINES	**FINESS Array B**	**124.36**	**28**	PKP	**PKPdf**	**05 52 51.7**	**-0.1**
	comp=Z,2.8nm,0.6s,baz=232,slow=1.6,SNR=13						
CMAR	**Chiang Mai Arr**	**125.39**	**111**	PKP	**PKPdf**	**05 52 55.1**	**-0.1**
	comp=Z,1.3nm,0.3s,baz=212,slow=1.9,SNR=8.0						
ARCES	**ARCESS Array B**	**130.88**	**22**	PKP	**PKPdf**	**05 53 04.0**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=194,slow=2.5,SNR=9.1						
BVAR	**Borovoye Array**	**134.92**	**58**	PKP	**PKPdf**	**05 53 12.3**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=211,slow=1.7,SNR=6.4						
YKA	**Yellowknife Ar**	**135.85**	**318**	PKP	**PKPdf**	**05 53 11.8**	**-1.8**
	comp=Z,1.0nm,0.7s,baz=130,slow=1.8,SNR=7.0						
YKA				SKPbc	**SKPbc**	**05 56 31.3**	**-3.3**
	comp=Z,0.4nm,0.7s,baz=104,slow=2.6,SNR=4.4						
YKA				SKP		05 56 34.7	
	comp=Z,0.3nm,0.7s,baz=101,slow=3.2,SNR=4.8						
MKAR	**Makanchi Array**	**137.10**	**72**	PKP	**PKiKP**	**05 53 18.0**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=224,slow=4.0,SNR=2.9						
KURBB	**Kurchatov Arra**	**137.48**	**65**	PKP	**PKiKP**	**05 53 18.8**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=247,slow=3.7,SNR=4.8						
RES	**Resolute Bay**	**137.59**	**339**	PKP	**PKPdf**	**05 53 16.5**	**0.0**
	comp=Z,2.5nm,1.0s,baz=97,slow=1.2,SNR=6.6						
ZALV	**Zalesovo Beam**	**142.54**	**64**	PKP	**PKPdf**	**05 53 27.7**	**+1.7**
	comp=Z,0.6nm,0.2s,baz=212,slow=4.6,SNR=0.7						
INK	**Inuvik**	**145.49**	**321**	PKPbc	**PKPdf**	**05 53 30.9**	**+0.2**
	comp=Z,5.3nm,0.6s,baz=103,slow=4.7,SNR=25						
ILAR	**Eielson Array**	**149.79**	**312**	PKPbc	**PKPbc**	**05 53 42.3**	**-0.6**
	comp=Z,11nm,0.9s,baz=127,slow=1.5,SNR=61						
SONM	**Songino Array**	**151.00**	**87**	PKPbc	**PKPbc**	**05 53 46.3**	**-0.1**
	comp=Z,7.1nm,0.5s,baz=227,slow=2.7,SNR=26						
MJAR	**Matsushiro Arr**	**158.42**	**148**	PKP	**PKPdf**	**05 53 52.6**	**+1.5**
	comp=Z,0.7nm,0.4s,baz=214,slow=2.2,SNR=1.7						

*IDC **07** 05:47:00.1±4.7, 24°.32S×179°.80E, h561^{km}±50^{km}, mb3.1/8, mbtmp4.0/9, Error ellipse: s-maj=30.1km s-min=22.2km az=73.0*

ISC 07 05:46:59.0±0.7**, 24°.3S**±0°.2×**179°.9E**±0°.1**, h550**^{km}**, n18,** σ**1**^{s}**13**/18**, mb3.7**/8**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.55**	**278**	P	**P**	**05 49 44.0**	**+0.6**
	17nm,1.0s,baz=99,slow=19,SNR=5.7						
STKA	**Stephens Creek**	**34.45**	**249**	P	**P**	**05 53 01.1**	**-0.1**
	1.4nm,0.4s,baz=98,slow=10,SNR=4.3						
	1.4nm,0.4s						
ASAR	**Alice Springs**	**41.84**	**261**	P	**P**	**05 54 00.8**	**-0.7**
	0.9nm,0.8s,baz=95,slow=7.9,SNR=5.7						
	0.9nm,0.8s						
WRA	**Warramunga Arr**	**42.26**	**267**	P	**P**	**05 54 04.2**	**-0.5**
	1.7nm,0.6s,baz=104,slow=7.9,SNR=13						
	1.7nm,0.6s						
FITZ	**Fitzroy Crossi**	**50.67**	**266**	P	**P**	**05 55 08.8**	**+0.4**
	3.7nm,0.9s,baz=103,slow=18,SNR=2.2						
	3.7nm,0.9s						
QSPA	**South Pole Qui**	**65.74**	**180**	P	**P**	**05 56 49.8**	**+0.3**
	2.0nm,1.0s,baz=89,slow=5.8,SNR=9.5						
	2.0nm,1.0s						
SNAA	**Sanae**	**84.23**	**179**	P	**P**	**05 58 31.8**	**-0.7**
	0.5nm,0.5s,baz=183,slow=18,SNR=1.6						
	0.5nm,0.5s						
TXAR	**Lajitas Array**	**90.77**	**58**	P	**P**	**05 59 05.8**	**+1.7**
	0.7nm,0.8s,baz=241,slow=4.7,SNR=0.1						
	0.7nm,0.8s						
ILAR	**Eielson Array**	**92.49**	**14**	P	**P**	**05 59 10.5**	**-0.5**
	0.2nm,0.8s,baz=205,slow=4.0,SNR=2.2						
	0.2nm,0.8s						
MKAR	**Makanchi Array**	**112.36**	**313**	PKiKP	**PKiKP**	**06 04 32.6**	**0.0**
	0.2nm,0.5s,baz=90,slow=1.4,SNR=2.2						
ARCES	**ARCESS Array B**	**132.29**	**348**	PKP	**PKPdf**	**06 05 09.2**	**-0.8**
	3.2nm,0.9s,baz=39,slow=2.2,SNR=2.5						
HFS	**Hagfors**	**142.95**	**349**	PKP	**PKPdf**	**06 05 27.9**	**-1.9**
	2.6nm,0.4s,baz=25,slow=4.8,SNR=20						
AKASG	**Malin Array Be**	**145.27**	**327**	PKPbc	**PKPdf**	**06 05 34.1**	**0.0**
	0.4nm,0.4s,baz=45,slow=4.1,SNR=5.7						
BRTR	**Keskin Array B**	**147.74**	**307**	PKPbc	**PKPdf**	**06 05 41.3**	**+2.5**
	0.4nm,0.6s,baz=116,slow=3.4,SNR=3.9						
MMAI	**Mount Meron Ar**	**147.77**	**294**	PKPbc	**PKPbc**	**06 05 43.7**	**+1.0**
	0.7nm,0.4s,baz=54,slow=3.7,SNR=1.8						
EKA	**Eskdalemuir Ar**	**148.96**	**3**	PKPbc	**PKPbc**	**06 05 44.2**	**-0.6**
	0.3nm,0.4s,baz=0.5,slow=3.0,SNR=4.6						
ESDC	**Sonseca Array**	**164.38**	**11**	PKPab	**PKPab**	**06 06 56.6**	**-1.5**
	3.6nm,1.2s,baz=298,slow=5.4,SNR=4.2						
TORD	**Torodi Ar. Bea**	**168.73**	**189**	PKPab	**PKPab**	**06 07 17.7**	**-0.1**
	0.3nm,0.4s,baz=188,slow=3.6,SNR=2.1						

*IDC **07** 05:47:07.3±1.1, 0°.58S×124°.94E, h0^{km}, mb3.9/5, mbtmp3.9/5, Error ellipse: s-maj=141.6km s-min=19.9km az=65.0*

*DJA **07** 05:47:10.4±0.5, 0°N±3°×12°7E±°, h12^{km}±4^{km}, M3.9/10, mb4.1/4, MLv3.8/10*

ISC 07 05:47:11.8±0.9**, 0°.36N**±0°.06×**126°.99E**±0°.06**, h35**^{km}**, n12,** σ**1**^{s}**01**/16**, mb4.0**/5**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.56**	**43**	P	**Pn**	**05 47 23.7**	**+0.4**
TNTI				S	**Sn**	**05 47 32.2**	**+0.9**
SANI	**Sanana**	**2.59**	**203**	P	**Pn**	**05 47 51.7**	**+0.5**
SANI				S	**Sn**	**05 48 22.9**	**+1.4**
KMSI	**Cibinong**	**3.02**	**274**	P	**Pn**	**05 47 56.8**	**-0.2**
KMSI				S	**Sn**	**05 48 33.1**	**+1.1**
NLAI	**Namlea**	**3.57**	**178**	P	**Pn**	**05 48 04.9**	**+0.2**
APSI	**Ampana**	**5.49**	**257**	P	**Pn**	**05 48 31.3**	**+0.3**
	0.1nm25nm,1.0s						
FAKI	**Fak Fak**	**6.18**	**122**	P	**Pn**	**05 48 41.5**	**+0.8**
	0.1nm32nm,1.2s						
TTSI	**Tana Toraja**	**7.92**	**245**	P	**Pn**	**05 49 05.1**	**+0.6**
WRA	**Warramunga Arr**	**21.42**	**161**	P	**P**	**05 51 55.4**	**-1.5**
	1.9nm,0.4s,baz=331,slow=11,SNR=24						
	1.9nm,0.4s						

ASAR	**Alice Springs**	**24.81**	**165**	P	**P**	**05 52 29.5**	**-1.2**
	2.2nm,0.7s,baz=341,slow=10,SNR=14						
	2.2nm,0.7s						
SONM	**Songino Array**	**50.56**	**342**	P	**P**	**05 56 08.2**	**+1.2**
	0.7nm,0.3s,baz=147,slow=8.6,SNR=2.9						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**60.47**	**326**	P	**P**	**05 57 17.7**	**-0.5**
	0.5nm,0.3s,baz=127,slow=7.6,SNR=9.6						
MKAR				PcP	**PcP**	**05 58 01.2**	**-1.4**
	0.2nm,0.5s,baz=126,slow=2.5,SNR=2.0						
	0.5nm,0.3s						
KURBB	**Kurchatov Arra**	**64.71**	**328**	P	**P**	**05 57 45.8**	**-0.6**
	0.7nm,0.6s,baz=121,slow=5.6,SNR=7.4						
	0.7nm,0.6s						

*GUC **07** 05:51:01.9±0.8, 30°.27S×71°.63W, h37^{km}±3^{km}, ML3.7*

*SJA **07** 05:51:01.9±1.1, 30°.36S×71°.60W, h14^{km}±4^{km}, ML3.5, MW3.4*

ISC 07 05:51:01.6±1.5**, 30°.31S**±0°.03×**71°.59W**±0°.05**, h7**^{km}±10^{km}**, n32,** σ**1**^{s}**63**/54**, 1C-5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.37**	**186**	⇑*i*P	**Pb**	**05 51 10.8**	**+0.3**
CO06				*e*S	**Sb**	**05 51 16.9**	**+0.5**
CO06				IAML		05 51 17.7	
	comp=E,8µm,0.1s						
CO05	**La Serena**	**0.49**	**38**	⇓*i*P	**Pg**	**05 51 12.0**	**+0.9**
CO05				*e*S	**Sg**	**05 51 18.8**	**+1.3**
CO05				IAML		05 51 19.7	
	comp=E,4µm,0.2s						
GO04	**Tololo Observa**	**0.70**	**79**	⇓*i*P	**Pb**	**05 51 16.0**	**-0.2**
GO04				*e*S	**Sb**	**05 51 26.1**	**-0.1**
GO04				IAML		05 51 33.1	
	comp=N,5µm,0.5s						
CO03	**El Pedregal**	**0.94**	**125**	⇓*i*P	**Pb**	**05 51 19.7**	**-0.6**
CO03				*e*S	**Sb**	**05 51 32.7**	**-0.3**
CO03				IAML		05 51 33.3	
	comp=E,4µm,0.3s						
CO03	**El Pedregal**	**0.94**	**125**	*e*P	**Pb**	**05 51 19.8**	**-0.6**
CO03				*e*S	**Sb**	**05 51 32.9**	**-0.2**
CO03				IAML		05 51 34.1	
	comp=Z,2µm,0.5s						
CO02	**Combarbal**	**1.03**	**151**	⇓*i*P	**Pb**	**05 51 21.3**	**-0.5**
CO02				*e*S	**Sb**	**05 51 35.6**	**0.0**
CO02				IAML		05 51 36.2	
	comp=N,7µm,0.4s						
CO02	**Combarbal**	**1.03**	**151**	*e*P	**Pb**	**05 51 21.3**	**-0.5**
CO02				*e*S	**Sb**	**05 51 35.2**	**-0.4**
CO02				IAML		05 51 36.0	
	comp=Z,2µm,0.5s						
CO01	**Juntas del Tor**	**1.34**	**76**	⇓*i*P	**Pg**	**05 51 26.4**	**-0.8**
CO01				*e*S	**Sb**	**05 51 44.2**	**-0.5**
LCO	**Las Campanas**	**1.51**	**31**	*e*P	**Pn**	**05 51 27.7**	**-1.6**
LCO				IAML		05 51 51.4	
	comp=Z,2µm,0.3s						
AROD	**Rodeo**	**1.84**	**86**	*e*P	**Pb**	**05 51 35.5**	**-0.3**
AROD				*e*S	**Sg**	**05 52 00.5**	**-0.2**
AC05	**El Transito**	**1.86**	**38**	*e*P	**Pn**	**05 51 32.9**	**-1.1**
AC05				*e*S	**Sn**	**05 51 56.3**	**-1.7**
ACDV	**Cuesta del Vie**	**2.14**	**87**	*e*P	**Pb**	**05 51 40.4**	**-0.5**
ACDV				*e*S	**Sg**	**05 52 09.3**	**-1.1**
ACDV				IAML		05 52 10.8	
	comp=Z,200nm,0.4s						
ACCO	**Cerro Coronel**	**2.20**	**98**	*e*P	**Pg**	**05 51 45.9**	**+2.2**
DOCA	**Reserva Natura**	**2.25**	**107**	*e*P	**Pb**	**05 51 41.4**	**-1.5**
DOCA				*e*S	**Sg**	**05 52 12.3**	**-1.8**
DOCA				IAML		05 52 16.4	
	comp=Z,126nm,0.9s						
VA06	**Catapilco**	**2.26**	**174**	*e*P	**Pn**	**05 51 38.5**	**-1.0**
VA06				IAML		05 52 19.9	
	comp=E,860nm,0.5s						
RTLS	**Leoncito**	**2.47**	**128**	*e*P	**Pb**	**05 51 44.5**	**-1.9**
RTLS				*e*S	**Sb**	**05 52 16.1**	**-1.1**
RTLS				IAML		05 52 28.4	
	comp=Z,368nm,0.4s						
VA03	**San Esteban**	**2.60**	**160**	*e*P	**Pn**	**05 51 44.6**	**+0.3**
VA03				IAML		05 52 32.6	
	comp=N,482nm,0.6s						
VA03	**San Esteban**	**2.60**	**160**	*e*P	**Pn**	**05 51 44.9**	**+0.6**
VA03				*e*S	**Sn**	**05 52 16.5**	**+0.2**
VA03				IAML		05 52 32.5	
	comp=Z,321nm,0.6s						
AUSP	**Uspallata**	**2.69**	**136**	*e*P	**Pn**	**05 51 47.5**	**+1.9**
AUSP				*e*S	**Sb**	**05 52 21.2**	**-2.2**
ROC1	**El Roble**	**2.71**	**170**	*e*P	**Pn**	**05 51 45.2**	**-0.6**
ROC1				*e*S	**Sn**	**05 52 19.0**	**0.0**
ZON	**Zonda**	**2.79**	**117**	*e*P	**Pb**	**05 51 49.4**	**-2.4**
ZON				IAML		05 52 40.6	
	comp=Z,92nm,0.7s						
AGUA	**GUANDACOL**	**2.81**	**74**	*e*P	**Pb**	**05 51 50.2**	**-2.1**
AGUA				IAML		05 52 38.1	
	comp=Z,206nm,0.9s						
RTLL	**Cerro Villicun**	**2.87**	**112**	*e*P	**Pn**	**05 51 50.0**	**+2.1**
RTLL				*e*S	**Sb**	**05 52 26.6**	**-1.9**
PEL	**Peldehue**	**2.93**	**165**	*e*P	**Pn**	**05 51 48.3**	**-0.4**
GO03	**Copiapo**	**2.95**	**24**	*e*P	**Pn**	**05 51 47.2**	**-1.8**
GO03				*e*S	**Sn**	**05 52 28.8**	**+4.0**
VCA	**Vinchina**	**3.34**	**63**	*e*P	**Pn**	**05 51 57.2**	**+2.8**
VCA				*e*S	**Sn**	**05 52 38.0**	**+3.5**
VCA				IAML		05 52 54.8	
	comp=Z,146nm,0.5s						
ARCO	**CERRO ARCO**	**3.40**	**139**	*e*P	**Pn**	**05 51 58.1**	**+2.9**
ARCO				IAML		05 52 56.2	
	comp=Z,84nm,0.9s						
AAGR	**Agrelo**	**3.63**	**140**	*e*P	**Pn**	**05 52 00.5**	**+2.1**
AAGR				IAML		05 53 11.6	
	comp=Z,82nm,0.7s						
AC02	**Maricunga**	**4.08**	**33**	*e*P	**Pn**	**05 52 04.4**	**-0.5**
AC02				*e*S	**Sb**	**05 53 04.8**	**+1.0**
AC02				IAML		05 53 16.2	
	comp=Z,39nm,0.8s						
ACLC	**CERRO LA CRUZ**	**4.12**	**79**	*e*P	**Pn**	**05 52 06.5**	**+1.3**
ACLC				*e*S	**Sn**	**05 52 56.0**	**+2.2**
ACLC				IAML		05 53 12.7	
	comp=Z,46nm,0.8s						
CYA	**Choya**	**5.38**	**71**	*e*P	**Pn**	**05 52 22.9**	**+0.5**
CYA				*e*S	**Sn**	**05 53 21.0**	**-3.7**
CYA				IAML		05 53 34.9	
	comp=Z,47nm,0.8s						
FSA	**Cafayete**	**6.48**	**51**	*e*P	**Pn**	**05 52 38.9**	**+1.3**

RSNC 07 05:52:41.0±0.0**, 7°N**±1°×**7°6W**±°**, h-1**^{km}±2^{km}**, M2.8, mb4.2, mB4.6, ML2.5, Mw(mB)3.8, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBBC	**Dabeiba**	**0.20**	**27**	P	Pg	05 52 45.0	+0.2
DBBC				S	Sg	05 52 49.2	+1.8
CBOC	**Ciudad Bolivar**	**1.01**	**164**	P	Pg	05 52 58.7	-1.7
CBOC				S	Sg	05 53 12.4	-1.1
APAC	**Apartado, Choc**	**1.09**	**345**	P	Pg	05 53 02.1	+0.2
APAC				S	Sn	05 53 18.6	-0.7
UREC	**San Jos de Ur**	**1.18**	**40**	P	Pg	05 53 02.5	-1.2
UREC				S	Sg	05 53 18.3	-0.8
SOLC	**Bahia Solano**	**1.26**	**241**	P	Pg	05 53 04.8	-0.4
SOLC				S	Sg	05 53 20.3	-1.2
PTAC	**Punta Ardita,**	**1.53**	**282**	P	Pn	05 53 07.3	-2.3
PTAC				S	Sg	05 53 28.7	-1.5
ZARC	**Zaragoza, Cauc**	**1.57**	**66**	P	Pn	05 53 07.7	-2.5
ZARC				S	Sn	05 53 28.0	-3.3
GUY2C	**Guyana, Caldas**	**1.85**	**150**	P	Pn	05 53 13.0	-1.5
GUY2C				S	Sn	05 53 38.4	-0.5
PTBC	**PUERTO BERRIO,**	**1.85**	**99**	P	Pn	05 53 12.4	-1.7
PTBC				S	Sn	05 53 36.8	-1.5
NORC	**Norcasia**	**1.91**	**132**	P	Pn	05 53 13.7	-1.1
NORC				S	Sn	05 53 37.4	-2.2
PLMC	**San Jos del P**	**1.92**	**179**	P	Pn	05 53 14.3	-0.8
PLMC				S	Sn	05 53 40.6	+0.6
LCBC	**Los crdobas,**	**2.00**	**358**	P	Pn	05 53 15.0	-1.2
LCBC				S	Sn	05 53 41.7	-0.3
CAPC	**Capurgana**	**2.07**	**330**	P	Pn	05 53 16.4	-0.6
CAPC				S	Sn	05 53 44.0	+0.5
ANIL	**Santa Ana**	**2.50**	**159**	P	Pn	05 53 24.6	+1.4
ANIL				S	Sb	05 53 59.8	+1.4
SPBC	**San Pablo de B**	**2.51**	**118**	P	Pn	05 53 23.0	-0.2
SPBC				S	Sn	05 53 55.7	+1.1
BRJC	**Barrancabermej**	**2.54**	**87**	P	Pn	05 53 23.8	+0.3
BRJC				S	Sn	05 53 55.5	+0.3
ROSC	**El Rosal**	**2.80**	**135**	P	Pn	05 53 28.6	+1.2
ROSC				S	Sb	05 54 06.4	-0.7
YOTC	**Yotoco, Valle**	**2.84**	**181**	P	Pn	05 53 24.1	-3.6
YOTC				S	Sn	05 53 57.9	-4.8
ORTC	**Ortega, Tolima**	**3.10**	**160**	P	Pn	05 53 32.8	+1.6
ORTC				S	Sb	05 54 16.2	+0.8
BARC	**Barichara**	**3.11**	**94**	P	Pn	05 53 30.3	-1.2
BARC				S	Sn	05 54 08.6	-0.9
CVER	**Cruz Verde, Cu**	**3.20**	**136**	P	Pn	05 53 31.6	-1.4
CVER				S	Sb	05 54 18.5	-0.2
SJCC	**San Jacinto, C**	**3.23**	**20**	P	Pn	05 53 30.0	-3.1
SJCC				S	Sn	05 54 07.0	-5.4
RUSC	**La Rusia**	**3.33**	**106**	P	Pn	05 53 34.2	-0.7
RUSC				S	Sn	05 54 16.6	+1.2
CHIC	**Chingaza**	**3.37**	**131**	P	Pn	05 53 38.1	+2.8
CHIC				S	Sb	05 54 20.3	-3.3
PRAC	**Prado**	**3.41**	**156**	P	Pn	05 53 36.0	+0.5
PRAC				S	Sb	05 54 25.0	+0.6
PAMC	**Pamplona, Colo**	**3.61**	**82**	P	Pn	05 53 39.2	+0.6
PAMC				S	Sn	05 54 21.6	-0.6
JAMC	**Jamundi, Valle**	**3.62**	**186**	P	Pn	05 53 37.8	-0.8
JAMC				S	Sn	05 54 17.9	-4.3
ARGC	**Ariguani, Magd**	**3.62**	**34**	P	Pn	05 53 41.8	+3.4
ARGC				S	Sg	05 54 37.7	+0.2
VILC	**Villavicencio,**	**3.75**	**136**	P	Pn	05 53 40.4	+0.1
VILC				S	Sb	05 54 35.6	+1.2
URMC	**La Uribe, Meta**	**4.05**	**152**	P	Pb	05 53 52.3	-1.0
BCIP	**Isla Barro Col**	**4.20**	**304**	P	Pn	05 53 43.4	-2.9
BCIP				S	Sn	05 54 34.2	-1.9
POPC	**Popayan, Colom**	**4.29**	**185**	P	Pn	05 53 47.8	0.0
POPC				S	Sn	05 54 38.7	0.0
CRJC	**Cerrejon, Guaj**	**5.35**	**39**	P	Pn	05 54 01.1	-1.2
CRJC				S	Sn	05 54 58.1	-6.7

*IDC **07** 06:08:56.6±1.3, 38°.65N×30°.66W, h0^{km}, mb3.7/7, mbtmp3.8/7, MS3.4/16, Error ellipse: s-maj=31.2km s-min=16.0km az=34.0*

*SVSA **07** 06:08:56.1±0.8, 40°.16N×29°.98W, h10^{km}, ML2.9(INMG), Error ellipse: s-maj=9.7km s-min=3.8km az=40.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Crista Mdia Atlntico N*

*INMG **07** 06:08:56.1±0.8, 40°.16N×29°.98W, h10^{km}, ML2.9, Error ellipse: s-maj=9.7km s-min=3.8km az=40.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Crista Mdia Atlntico N*

ISC 07 06:08:59.5±0.9**, 39°.0N**±0°.2×**30°.31W**±0°.08**, h10**^{km}**, n46,** σ**1**^{s}**85**/53**, mb3.8**/6**, MS3.4**/16**, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H07S1	**FLORES T-PHASE**	**0.78**	**297**	*e*P	**Pn**	**06 09 14.7**	**-1.9**
H07S1	**FLORES T-PHASE**	**0.78**	**297**	Pn	**Pn**	**06 09 14.9**	**-1.7**
H07S1				Sn	**Sn**	**06 09 30.7**	**+2.3**
H07S1	**FLORES T-PHASE**	**0.78**	**297**	*e*P	**Pn**	**06 09 14.7**	**-1.9**
CALA	**Caldeira**	**1.33**	**109**	*e*P	**Pn**	**06 09 23.5**	**-0.7**
CALA				*e*S	**Sn**	**06 09 44.5**	**+2.5**
CALA				*i* IAML		06 09 47.1	
CALA				*i* IAML		06 09 48.2	
CALA				*i* IAML		06 09 48.8	
CALA	**Caldeira**	**1.33**	**109**	*e*P	**Pn**	**06 09 23.5**	**-0.7**
CALA				*e*S	**Sn**	**06 09 44.5**	**+2.5**
CALA				*i* IAML		06 09 47.1	
CALA				*i* IAML		06 09 48.2	
CALA				*i* IAML		06 09 48.8	
CALA	**Caldeira**	**1.33**	**109**	*e*P	**Pn**	**06 09 23.5**	**-0.7**
CALA				*e*S	**Sn**	**06 09 44.5**	**+2.5**
CALA				*i* AML	AML	06 09 47.1	
CALA				*i* AML	AML	06 09 48.2	
CALA				*i* AML	AML	06 09 48.8	
HOR	**Horta**	**1.40**	**110**	*e*P	**Pn**	**06 09 24.6**	**-0.5**
HOR				*e*S	**Sn**	**06 09 45.8**	**+2.1**
HOR				*i* IAML		06 09 48.2	
HOR				*i* IAML		06 09 48.8	
HOR				*i* IAML		06 09 49.7	
HOR	**Horta**	**1.40**	**110**	*e*P	**Pn**	**06 09 24.6**	**-0.5**
HOR				*e*S	**Sn**	**06 09 45.8**	**+2.1**
HOR				*i* IAML		06 09 48.2	
HOR				*i* IAML		06 09 48.8	
HOR				*i* IAML		06 09 49.7	
HOR	**Horta**	**1.40**	**110**	*e*P	**Pn**	**06 09 24.6**	**-0.5**
HOR				*e*S	**Sn**	**06 09 45.8**	**+2.1**
HOR				*i* AML	AML	06 09 48.2	
HOR				*i* AML	AML	06 09 48.8	
HOR				*i* AML	AML	06 09 49.7	
PCAN	**Candelaria**	**1.53**	**111**	*e*P	**Pn**	**06 09 25.9**	**-1.0**
PCAN				*e*S	**Sn**	**06 09 48.4**	**+1.5**
PCAN				*i* IAML		06 09 49.1	
PCAN				*i* IAML		06 09 51.4	
PCAN				*i* IAML		06 09 54.5	
PCAN	**Candelaria**	**1.53**	**111**	*e*P	**Pn**	**06 09 25.9**	**-1.0**
PCAN				*e*S	**Sn**	**06 09 48.4**	**+1.5**
PCAN				*i* IAML		06 09 49.1	
PCAN				*i* IAML		06 09 51.4	
PCAN				*i* IAML		06 09 54.5	
PCAN	**Candelaria**	**1.53**	**111**	*e*P	**Pn**	**06 09 25.9**	**-1.0**
PCAN				*e*S	**Sn**	**06 09 48.4**	**+1.5**
PCAN				*i* AML	AML	06 09 49.1	
PCAN				*i* AML	AML	06 09 51.4	
PCAN				*i* AML	AML	06 09 54.5	
PICO	**Pico**	**1.56**	**109**	*e*P	**Pn**	**06 09 25.8**	**-1.6**
PICO				*e*S	**Sn**	**06 09 48.7**	**+1.0**
PICO				*i* IAML		06 09 56.4	
PICO				*i* IAML		06 09 57.1	
PICO				*i* IAML		06 09 57.1	
PICO	**Pico**	**1.56**	**109**	*e*P	**Pn**	**06 09 25.8**	**-1.6**
PICO				*e*S	**Sn**	**06 09 48.7**	**+1.0**
PICO				*i* IAML		06 09 56.4	
PICO				*i* IAML		06 09 57.1	
PICO				*i* IAML		06 09 57.1	
PICO	**Pico**	**1.56**	**109**	*e*P	**Pn**	**06 09 25.8**	**-1.6**
PICO				*e*S	**Sn**	**06 09 48.7**	**+1.0**
PICO				*i* AML	AML	06 09 56.4	
PICO				*i* AML	AML	06 09 57.1	
PICO				*i* AML	AML	06 09 57.1	
ROSA	**Rosais**	**1.64**	**100**	*e*P	**Pn**	**06 09 25.3**	**-3.1**
ROSA				*e*S	**Sn**	**06 09 47.0**	**-2.6**
ROSA				*i* IAML		06 09 47.7	
ROSA				*i* IAML		06 09 50.0	
ROSA				*i* IAML		06 09 56.9	
ROSA	**Rosais**	**1.64**	**100**	*e*P	**Pn**	**06 09 25.3**	**-3.1**
ROSA				*e*S	**Sn**	**06 09 47.0**	**-2.6**
ROSA				*i* IAML		06 09 47.7	
ROSA				*i* IAML		06 09 50.0	
ROSA				*i* IAML		06 09 56.9	
ROSA	**Rosais**	**1.64**	**100**	*e*P	**Pn**	**06 09 25.3**	**-3.1**
ROSA				*e*S	**Sn**	**06 09 47.0**	**-2.6**
ROSA				*i* AML	AML	06 09 47.7	
ROSA				*i* AML	AML	06 09 50.0	
ROSA				*i* AML	AML	06 09 56.9	
PPNO	**Prainha do Nor**	**1.69**	**108**	*e*P	**Pn**	**06 09 27.5**	**-1.6**
PPNO				*e*S	**Sn**	**06 09 50.9**	**+0.1**
PPNO				*i* IAML		06 09 52.0	
PPNO				*i* IAML		06 09 54.8	
PPNO	**Prainha do Nor**	**1.69**	**108**	*e*P	**Pn**	**06 09 27.5**	**-1.6**
PPNO				*e*S	**Sn**	**06 09 50.9**	**+0.1**
PPNO				*i* IAML		06 09 52.0	
PPNO				*i* IAML		06 09 54.8	
PPNO	**Prainha do Nor**	**1.69**	**108**	*e*P	**Pn**	**06 09 27.5**	**-1.6**
PPNO				*e*S	**Sn**	**06 09 50.9**	**+0.1**
PPNO				*i* AML	AML	06 09 52.0	
PPNO				*i* AML	AML	06 09 54.8	
PID	**Ribeirinha**	**1.81**	**108**	*e*P	**Pn**	**06 09 28.6**	**-2.0**
PID				*e*S	**Sn**	**06 09 53.1**	**-0.6**
PID				*i* IAML		06 09 54.4	
PID				*i* IAML		06 09 59.3	
PID				*i* IAML		06 10 05.6	
PID	**Ribeirinha**	**1.81**	**108**	*e*P	**Pn**	**06 09 28.6**	**-2.0**
PID				*e*S	**Sn**	**06 09 53.1**	**-0.6**
PID				*i* IAML		06 09 54.4	
PID				*i* IAML		06 09 59.3	
PID				*i* IAML		06 10 05.6	
PID	**Ribeirinha**	**1.81**	**108**	*e*P	**Pn**	**06 09 28.6**	**-2.0**
PID				*e*S	**Sn**	**06 09 53.1**	**-0.6**
PID				*i* AML	AML	06 09 54.4	
PID				*i* AML	AML	06 09 59.3	
PID				*i* AML	AML	06 10 05.6	
ESDC	**Sonseca Array**	**20.36**	**80**	P	Pn	06 13 39.8	+1.6
	3.6nm,1.1s,baz=277,slow=11,SNR=7.7						
	3.6nm,1.1s						
EKA	**Eskdalemuir Ar**	**24.40**	**39**	P	**P**	**06 14 22.2**	**+4.4**

	2.0nm,0.8s,baz=241,slow=8.8,SNR=4.8						
	2.0nm,0.8s						
BBTS	Babate	27.13	150	LR	LR	06 22 34.4	
	comp=Z,65nm,20.5s,baz=226,slow=30						
SCHQ	Schefferville	29.12	315	LR	LR	06 24 39.4	
	comp=Z,98nm,22.0s,baz=83,slow=32						
SFJD	Kangerlussuaq	30.26	344	LR	LR	06 25 03.9	
	comp=Z,63nm,18.9s,baz=151,slow=32						
FRB	Frobisher Bay	33.51	330	LR	LR	06 25 56.2	
	comp=Z,70nm,19.3s,baz=55,slow=30						
SADO	Sadowa	36.35	295	LR	LR	06 30 45.0	
	comp=Z,29nm,18.2s,baz=162,slow=36						
TORD	Torodi Ar. Bea	38.26	124	P	P	06 16 18.3	-1.7
	0.8nm,0.7s,baz=307,slow=8.0,SNR=4.6						
	0.8nm,0.7s						
DBIC	Dimbokro	39.56	138	LR	LR	06 30 37.2	
	comp=Z,59nm,21.1s,baz=316,slow=33						
ARCES	ARCESS Array B	42.19	26	LR	LR	06 31 18.6	
	comp=Z,25nm,19.0s,baz=62,slow=32						
AKASG	Malin Array Be	42.68	54	P	P	06 16 57.7	+1.5
	0.8nm,0.5s,baz=274,slow=8.3,SNR=8.5						
AKASG				LR	LR	06 32 56.4	
	comp=Z,13nm,21.1s,baz=208,slow=33						
	0.8nm,0.5s						
YKA	Yellowknife Ar	53.75	325	LR	LR	06 38 59.9	
	comp=Z,34nm,18.3s,baz=264,slow=34						
PDAR	Pinedale Array	57.91	301	P	P	06 18 50.8	-1.2
	0.4nm,0.5s,baz=68,slow=7.2,SNR=2.8						
PDAR				LR	LR	06 43 08.8	
	comp=Z,36nm,18.5s,baz=59,slow=36						
	0.4nm,0.5s						
ANMO	Albuquerque	59.28	292	LR	LR	06 43 51.6	
	comp=Z,25nm,19.6s,baz=195,slow=35						
TXAR	Lajitas Array	59.97	285	P	P	06 19 04.6	-1.6
	0.3nm,0.9s,baz=64,slow=6.1,SNR=2.8						
NEW	Newport	60.30	310	LR	LR	06 44 26.7	
	comp=Z,53nm,18.4s,baz=64,slow=35						
BBB	Bella Bella	64.59	318	LR	LR	06 45 42.6	
	comp=Z,50nm,20.3s,baz=95,slow=34						
NVAR	Mina Array Bea	65.82	301	LR	LR	06 46 58.6	
	comp=Z,38nm,21.8s,baz=285,slow=35						
KURBB	Kurchatov Arra	71.14	40	P	P	06 20 19.0	+1.0
	0.5nm,0.7s,baz=310,slow=5.8,SNR=4.2						
	0.5nm,0.7s						
MKAR	Makanchi Array	75.52	41	P	P	06 20 45.5	+1.5
	1.0nm,0.9s,baz=316,slow=4.0,SNR=5.8						
	1.0nm,0.9s						
LSZ	Lusaka	76.78	122	LR	LR	06 55 09.1	
	comp=Z,70nm,18.6s,baz=184,slow=36						
PETK	Petropavlovsk-	87.98	355	LR	LR	07 02 09.5	
	comp=Z,21nm,18.6s,baz=172,slow=36						

GCG 07 06:15:28.3±0.9**, 14°.82N×91°.23W, h173**^{km}±10^{km}**, MD3.6, ML3.2, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG8	El Palmar, Qui	0.39	198	eP	Pn	06 15 52.1	-0.1
STG8				IAML		06 15 57.5	
	comp=E,260nm,0.3s						
HUEH	Huehuetenango	0.56	332	i P	Pn	06 15 53.9	+1.1
HUEH				i S	Sn	06 16 13.0	+1.2
HUEH				IAML		06 16 15.4	
	comp=N,439nm,0.7s						
SMCA	Catarina	0.82	273	i P	Pn	06 15 54.1	+0.1

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*RSNC **07** 06:23:02.8±0.4, 10°N±3°×8°3W±°, h0^{km}, M2.2, ML2.2*

*CATAC **07** 06:23:04.0±0.5, 10°N±2°×8°3W±°, h8^{km}±3^{km}, M3.2/9, MLv3.2/9, Error ellipse: s-maj=5.7km s-min=3.1km az=66.1, confirmed*

*UPA **07** 06:23:11.6±1.0, 9°.15N×83°.72W, h57^{km}±48^{km}, ML3.7, MW3.7*

ISC 07 06:23:05.4±1.2**, 10°.10N**±0°.03×**83°.05W**±0°.03**, h25**^{km}±14^{km}**, n30, σ1^{s}13**/43**, 1D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRT2	Tortugero	0.81	304	P	Pb	06 23 20.5	-0.3
TRT2	Tortugero	0.81	304	S	Sb	06 23 31.4	0.0
DRK0	Durika	0.86	193	P	Pn	06 23 21.9	-0.2
DRK0	Durika	0.86	193	S	Sb	06 23 32.8	-0.1
LCR2	La Lucha 2	1.01	249	P	Pb	06 23 23.3	-0.9
LCR2	La Lucha 2	1.01	249	S	Sb	06 23 36.8	-0.4
OCHAL	Ojochal	1.16	210	P	Pb	06 23 27.1	+0.3
OCHAL	Ojochal	1.16	210	S	Sn	06 23 43.1	+2.0
BRU2	Volcan	1.35	165	P	Pn	06 23 29.1	+0.3
BRU2	Volcan	1.35	165	S	Sb	06 23 46.7	-0.4
BRU2	Volcan	1.35	165	⇓iP	Pb	06 23 29.5	-0.6
BRU2				eS	Sn	06 23 45.6	-0.4
BC3P	Paso Ancho	1.35	161	eP	Pb	06 23 32.3	+2.1
BC3P				eS	Sb	06 23 47.0	-0.2
COVE	Coope Vega, Sa	1.46	295	P	Pb	06 23 31.1	-0.8
COVE	Coope Vega, Sa	1.46	295	S	Sb	06 23 49.7	-0.5
BQSF3	Alto Boquete,	1.48	156	eP	Pb	06 23 34.1	+1.8
BQSF3				eS	Sb	06 23 50.9	0.0
CDITO	Canoas	1.53	173	P	Pb	06 23 33.2	+0.1
CDITO	Canoas	1.53	173	S	Sb	06 23 53.4	+1.3
SOCE	Pocosol	1.57	280	P	Pb	06 23 33.1	-0.6
SOCE	Pocosol	1.57	280	S	Sb	06 23 54.0	+0.8
DVD	David	1.76	160	eP	Pb	06 23 36.1	-0.9
DVD				eS	Sn	06 23 53.2	-2.7
JTS	Las Juntas de	1.88	276	P	Pb	06 23 38.3	-0.8
JTS				S	Sb	06 24 02.7	+0.5
JTS	Las Juntas de	1.88	276	eP	Pb	06 23 38.3	-0.8
JTS				AMP		06 23 39.6	
	comp=Z,797nm,0.1s						
JTS				eS	Sn	06 23 59.1	+0.1
BLUN	Bluefields	2.02	339	P	Pn	06 23 37.9	0.0
BLUN				S	Sn	06 24 02.8	+0.5
BLUN	Bluefields	2.02	339	P	Pn	06 23 38.2	+0.3
BLUN				S	Sn	06 24 01.7	-0.7
ESPN	Las Esperanzas	2.41	330	P	Pn	06 23 43.5	+0.2
ESPN				S	Sn	06 24 14.4	+2.3
SAIC	Isla e San And	2.75	28	P	Pn	06 23 49.2	+1.2
SAIC				S	Sn	06 24 19.9	-0.6
ACON	Acoyapa	2.79	312	P	Pn	06 23 48.8	+0.3
ACON				S	Sb	06 24 26.9	-1.4
BCIP	Isla Barro Col	3.30	106	P	Pn	06 23 55.3	-0.3
BCIP				S	Sn	06 24 31.3	-2.8
PRVC	Isla de Provid	3.65	27	P	Pn	06 24 02.1	+1.8
PRVC				S	Sn	06 24 41.7	-0.9
LIMN	Finca el Limon	4.38	312	P	Pn	06 24 11.5	+1.1

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*IDC **07** 06:49:47.0±3.4, 53°.84N×88°.05E, h0^{km}, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=27.7km s-min=17.3km az=58.0*

ASRS 07 06:49:44.0±1.5**, 53°.78N×88°.26E, h0**^{km}**, M2.8, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	2.04	276	I	I	07 02 15.7	
	0.2nm,0.9s,baz=90,slow=315,SNR=3.5						
ZALV	Zalesovo Beam	2.04	276	Pg	Pb	06 50 21.3	-0.7
	2.8nm,0.3s,baz=95,slow=16,SNR=13						
ZALV				Lg	Lg	06 50 48.8	
	5.9nm,0.3s,baz=90,slow=25,SNR=24						
KURBB	Kurchatov Arra	6.76	246	Pn	Pn	06 51 26.1	+1.7
	0.1nm,0.3s,baz=61,slow=14,SNR=6.1						
KURBB				Lg	Lg	06 53 19.4	
	baz=55,slow=31,SNR=8.5						
	0.3nm,0.3s						
MKAR	Makanchi Array	7.97	211	Pn	Pn	06 51 46.2	+5.2
	0.1nm,0.3s,baz=29,slow=14,SNR=1.9						
MKAR				Sn	Sn	06 53 13.0	+1.2
	0.2nm,0.3s,baz=22,slow=13,SNR=3.1						
MKAR				Lg	Lg	06 53 57.1	
	0.1nm,0.3s,baz=25,slow=27,SNR=1.7						
	0.2nm,0.3s						

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*CATAC **07** 06:53:57.3±1.2, 12°N±9°×9°0W±°, h1^{km}, M3.0/10, MLv3.0/10, Error ellipse: s-maj=18.4km s-min=16.6km az=177.9, confirmed*

*SNET **07** 06:53:59.8±0.8, 12°.49N×89°.90W, h23^{km}±35^{km}, ML3.0*

*GCG **07** 06:53:59.1±0.6, 12°.52N×90°.06W, h10^{km}±14^{km}, MD3.8*

ISC 07 06:53:58.6±3.6**, 12°.5N**±0°.1×**89°.9W**±0°.1**, h14**^{km}±13^{km}**, n32, σ0^{s}68**/37**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAYA	Jayaque - finc	1.26	21	eP	Pn	06 54 21.6	-0.4
JAYA				eS	Sb	06 54 38.2	-0.4
JAYA				IAML		06 54 41.9	
	comp=Z,164nm,0.2s						
JAYA	Jayaque - finc	1.26	21	i P	Pn	06 54 21.7	-0.4
JAYA				eS	Sg	06 54 39.3	-0.2
PMON	Piamonte	1.37	25	P	Pn	06 54 22.6	-0.9
LOMA	Loma Larga	1.38	31	eP	Pn	06 54 23.5	-0.1
LOMA	Loma Larga	1.38	31	P	Pn	06 54 23.1	-0.4
CEVE	Cerro Verde	1.38	11	eP	Pn	06 54 23.8	0.0
CEVE				IAML		06 54 44.3	
	comp=Z,336nm,0.3s						
CEVE	Cerro Verde	1.38	11	P	Pn	06 54 24.1	+0.3
SBLS	San Blas	1.40	11	eP	Pn	06 54 23.7	-0.3
CEDA	San Andres	1.42	20	P	Pg	06 54 26.1	+0.1
PIC2	El Picacho	1.42	26	eP	Pn	06 54 25.0	+0.7
SNJE	San Jose	1.43	12	eP	Pn	06 54 24.2	-0.2
NUBE	Las Nubes	1.44	5	eP	Pn	06 54 23.9	-0.5
NUBE				eS	Sb	06 54 42.7	-0.9
NUBE	Las Nubes	1.44	5	i P	Pn	06 54 24.3	-0.1
RTR	El Retiro	1.45	10	eP	Pn	06 54 25.2	+0.6
COEG	Centro de Oper	1.52	41	eP	Pn	06 54 25.2	-0.3
COEG	Centro de Oper	1.52	41	P	Pn	06 54 25.5	-0.1
TECO	Alcaldia de Te	1.53	46	eP	Pn	06 54 25.1	-0.6
TECO				eS	Sn	06 54 45.4	0.0
TECO	Alcaldia de Te	1.53	46	P	Pn	06 54 25.6	-0.1
SLOZ	Alcaldia de Sa	1.56	4	eP	Pn	06 54 25.7	-0.3
PAVA	Las Pavas	1.56	37	P	Pn	06 54 26.5	+0.4
PAVA	Las Pavas	1.56	37	S	Sb	06 54 47.6	+0.5
SCLA	Alcaldia de Sa	1.68	43	eP	Pn	06 54 28.3	+0.6
SCLA	Alcaldia de Sa	1.68	43	P	Pn	06 54 28.4	+0.6
PQSS	Presa 15 de Se	1.75	48	eP	Pn	06 54 27.8	-0.8
PQSS	Presa 15 de Se	1.75	48	P	Pn	06 54 28.4	-0.2
PACA	Pacayal	1.84	57	eP	Pn	06 54 30.6	+0.7
PACA				eS	Sn	06 54 53.5	+0.4
PACA	Pacayal	1.84	57	P	Pn	06 54 31.4	+1.4
RANC	El Ranchito	1.85	58	P	Pn	06 54 28.0	-2.1
MTO3	Montecristo	2.00	15	eP	Pn	06 54 32.5	+0.3
MTO3	Montecristo	2.00	15	i P	Pn	06 54 32.9	+0.7
MTO3	Montecristo	2.00	15	P	Pn	06 54 33.0	+0.7
ESQI	Esquipulas	2.15	15	P	Pn	06 54 35.4	+1.1

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*NEIC **07** 07:17:54.1±0.8, 19°.45N±0°.08×145°.5E±0°.2, h136^{km}±11^{km}, mb4.3/15, Error ellipse: s-maj=25.9km s-min=11.6km az=84.0*

*IDC **07** 07:17:54.6±3.8, 19°.51N×145°.64E, h153^{km}±34^{km}, mb3.3/7, mbtmp3.8/8, Error ellipse: s-maj=37.2km s-min=15.4km az=93.0*

ISC 07 07:17:53.8±0.8**, 19°.45N**±0°.09×**145°.6E**±0°.2**, h147**^{km}**, n25, σ1^{s}16**/26**, mb4.0**/14**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	8.22	338	Pn	Pn	07 19 49.5	-0.7
JCJ	Chichijima	8.22	338	P	Pn	07 19 52.3	+2.1
	6.2nm,0.3s,baz=99,slow=23,SNR=1.6						
JCJ				S	Sn	07 21 19.8	-1.9
	12nm,0.4s,baz=155,slow=19,SNR=5.0						
PATS	Pohnpei	17.62	134	P	P	07 21 47.6	-1.6
JGF	Kuroka	17.65	337	P	Pn	07 21 50.5	-0.2
JGF				IAmb	IAmb	07 21 52.8	
	comp=Z,40nm,1.4s						
JMM	Marumori	18.82	348	P	P	07 22 02.5	+0.4
JMM				IAmb	IAmb	07 22 22.4	
	comp=Z,31nm,1.5s						
SSLB	Suanglung	23.27	285	P	P	07 22 47.8	-0.7
SSLB				IAmb	IAmb	07 22 53.0	
	comp=Z,7.7nm,0.9s						
WB0	Warramunga Arr	40.48	196	P	P	07 25 18.8	+0.5
WRA	Warramunga Arr	40.66	196	P	P	07 25 20.3	+0.5
WRA	Warramunga Arr	40.66	196	P	P	07 25 20.4	+0.6
	comp=Z,0.8nm,0.5s,baz=24,slow=8.6,SNR=12						
	comp=Z,0.8nm,0.5s						
FITZ	Fitzroy Crossi	42.13	209	P	P	07 25 31.9	+0.1
AS31	Alice Springs	44.33	195	P	P	07 25 49.2	-0.2
ASAR	Alice Springs	44.33	195	P	P	07 25 50.5	+1.0
ASAR	Alice Springs	44.33	195	P	P	07 25 50.1	+0.7
	comp=Z,0.6nm,0.7s,baz=20,slow=6.4,SNR=8.8						
	comp=Z,0.6nm,0.7s						
N18K	Kilae Creek	57.97	30	P	P	07 27 32.8	+2.1
N18K				IAmb	IAmb	07 27 46.4	
	comp=Z,4.0nm,1.2s						
C19K	Lookout Ridge	59.75	20	P	P	07 27 44.4	+1.6
C19K				IAmb	IAmb	07 27 49.1	
	comp=Z,8.0nm,1.4s						
CNPM	China Poot	59.90	32	P	P	07 27 44.5	+0.6
D19K	Kuna River	59.96	21	P	P	07 27 45.7	+1.4
D19K				IAmb	IAmb	07 28 04.9	
	comp=Z,4.8nm,1.4s						
SKT	Skwentna	60.35	29	P	P	07 27 47.7	+0.6
SKT				IAmb	IAmb	07 27 52.1	
	comp=Z,3.3nm,1.4s						
D20K	Etivluk River	60.55	21	P	P	07 27 50.0	+1.7
D20K				IAmb	IAmb	07 27 55.0	
	comp=Z,11nm,1.5s						
KURBB	Kurchatov Arra	60.68	318	P	P	07 27 49.9	+0.4
	comp=Z,0.4nm,0.4s,baz=93,slow=7.4,SNR=6.8						
	comp=Z,0.4nm,0.4s						
ILAR	Eielson Array	63.03	26	P	P	07 28 05.2	+0.3
	comp=Z,0.6nm,0.8s,baz=247,slow=5.6,SNR=7.5						
	comp=Z,0.6nm,0.8s						
E24K	Your Creek	63.18	23	P	P	07 28 07.1	+1.2
E24K				IAmb	IAmb	07 28 34.8	
	comp=Z,5.0nm,1.5s						
BVAR	Borovoye Array	65.82	320	P	P	07 28 23.9	+0.6
	comp=Z,0.5nm,0.3s,baz=92,slow=7.8,SNR=2.4						
	comp=Z,0.5nm,0.3s						
FINES	FINESS Array B	86.16	335	P	P	07 30 17.0	-1.1
	comp=Z,0.4nm,0.4s,baz=73,slow=6.6,SNR=4.4						
	comp=Z,0.4nm,0.4s						
PDAR	Pinedale Array	87.39	45	P	P	07 30 23.9	-1.0
	comp=Z,0.2nm,0.4s,baz=313,slow=8.0,SNR=1.6						
	comp=Z,0.2nm,0.4s						

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*IDC **07** 07:25:18.9±3.8, 53°.45N×87°.55E, h0^{km}, mbtmp2.5/2, ML2.2/2, Error ellipse: s-maj=42.9km s-min=21.6km az=84.0*

ASRS 07 07:25:16.0±1.3**, 53°.48N×87°.46E, h0**^{km}**, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.64	288	I	I	07 35 20.0	
	baz=105,slow=326,SNR=1.9						
ZALV	Zalesovo Beam	1.64	288	Pn	Pg	07 25 49.5	+2.2
	1.5nm,0.3s,baz=108,slow=14,SNR=10.0						
ZALV				Sn	Sg	07 26 13.8	+5.2
	0.9nm,0.3s,baz=108,slow=26,SNR=5.2						
KURBB	Kurchatov Arra	6.21	246	Pn	Pn	07 26 52.5	+3.7
	baz=60,slow=13,SNR=3.0						
	0.2nm,0.4s						
MKAR	Makanchi Array	7.47	208	Pn	Pn	07 27 10.3	+4.2
	0.1nm,0.3s,baz=21,slow=12,SNR=2.0						
	0.1nm,0.4s						

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*ASRS **07** 07:27:05.0±1.3, 54°.12N×87°.08E, h0^{km}, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 07 07:27:06.1±3.5**, 54°.23N×87°.39E, h0**^{km}**, mbtmp2.7**/2**, ML2.4**/2**, Error ellipse: s-maj=29.8km s-min=17.9km az=58.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.54	260	I	I	07 35 50.0	
	baz=78,slow=322,SNR=6.1						
ZALV	Zalesovo Beam	1.54	260	Pg	Pn	07 27 33.0	-1.8
	0.9nm,0.3s,baz=75,slow=11,SNR=7.6						
ZALV				Lg	Lg	07 27 56.1	
	1.3nm,0.3s,baz=78,slow=29,SNR=6.2						
KURBB	Kurchatov Arra	6.51	240	Pn	Pn	07 28 43.5	+0.4
	baz=55,slow=13,SNR=4.3						
	0.3nm,0.3s						
MKAR	Makanchi Array	8.12	206	Pn	Pn	07 29 07.4	+2.2
	0.1nm,0.3s,baz=25,slow=13,SNR=2.9						
MKAR				Sn	Sn	07 30 36.0	-1.8
	0.1nm,0.3s,baz=26,slow=26,SNR=3.5						
	0.1nm,0.3s						

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*ASRS **07** 07:40:02.0±1.1, 54°.20N×87°.11E, h0^{km}, M2.9, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 07 07:40:03.8±2.5**, 54°.23N×87°.25E, h0**^{km}**, mbtmp3.3**/3**, ML2.5**/3**, Error ellipse: s-maj=21.3km s-min=14.0km az=61.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.46	260	I	I	07 48 57.9	
	0.2nm,0.9s,baz=75,slow=318,SNR=12						
ZALV	Zalesovo Beam	1.46	260	Pg	Pn	07 40 29.7	-1.7
	1.7nm,0.3s,baz=73,slow=15,SNR=18						
ZALV				Lg	Lg	07 40 50.5	
	1.6nm,0.3s,baz=73,slow=27,SNR=8.5						
KURBB	Kurchatov Arra	6.44	239	Pn	Pn	07 41 39.7	-0.1
	0.1nm,0.3s,baz=57,slow=14,SNR=26						
KURBB				Sn	Sn	07 42 53.7	-0.2
	baz=52,slow=20,SNR=0.8						
KURBB				Lg	Lg	07 43 27.1	
	baz=50,slow=31,SNR=4.9						
	4.9nm,0.8s						
MKAR	Makanchi Array	8.08	205	Pn	Pn	07 42 03.9	+1.5
	0.1nm,0.3s,baz=28,slow=14,SNR=7.0						
MKAR				Sn	Sn	07 43 32.8	-1.6
	0.1nm,0.3s,baz=27,slow=27,SNR=5.2						
MKAR				Lg	Lg	07 44 19.9	
	baz=26,slow=29,SNR=3.6						
	0.8nm,0.8s						
BVAR	Borovoye Array	10.09	270	Pn	Pn	07 42 30.0	+0.2
	baz=78,slow=15,SNR=4.4						
BVAR				Sn	Sn	07 44 19.1	-4.5
	baz=73,slow=20,SNR=3.5						
	0.9nm,0.6s						

NNC 07 07:44:20.9±12.0**, 37°.34N×70°.26E, h0**^{km}**, mb3.7, mpv3.2, 2C-2D, Error ellipse: s-maj=107.7km s-min=76.9km az=144.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	5.76	2	⇑Pn	Pn	07 45 45.7	-2.0
	0.8nm,0.3s,baz=180,slow=13,SNR=10						
KK31				⇓Sn	Sn	07 46 55.8	+1.4
	1.7nm,0.4s,baz=183,slow=24						
AB31	Akbulak array	14.06	331	⇓P	Pn	07 47 39.7	-1.6
	0.7nm,0.7s,baz=145,slow=11,SNR=7.9						
AKTO	Aktyubinsk	15.76	330	⇑P	P	07 48 08.0	-0.2
	1.0nm,0.5s						

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*ASRS **07** 07:45:08.0±1.4, 53°.61N×88°.01E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 07 07:45:09.9±3.5**, 53°.60N×88°.01E, h0**^{km}**, mbtmp2.8**/2**, ML2.4**/2**, Error ellipse: s-maj=35.9km s-min=22.4km az=82.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.93	282	I	I	07 57 05.6	
	0.1nm,0.8s,baz=96,slow=309,SNR=6.3						
ZALV	Zalesovo Beam	1.93	282	Pn	Pn	07 45 43.6	-0.3
	1.5nm,0.3s,baz=104,slow=12,SNR=10.0						
ZALV				Sn	Sb	07 46 09.9	-0.5
	2.4nm,0.3s,baz=102,slow=25,SNR=13						
KURBB	Kurchatov Arra	6.56	247	Pn	Pn	07 46 47.9	+0.4
	0.1nm,0.3s,baz=63,slow=14,SNR=2.7						
KURBB				Lg	Lg	07 48 38.3	
	baz=61,slow=33,SNR=3.2						
	0.4nm,0.3s						
MKAR	Makanchi Array	7.74	211	Pn	Pn	07 47 05.0	+1.3
	0.1nm,0.3s,baz=27,slow=13,SNR=4.2						
MKAR				Lg	Lg	07 49 14.6	
	0.1nm,0.3s,baz=27,slow=30,SNR=2.7						
	0.2nm,0.4s						

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*HLW **07** 08:14:04.2, 37°.17N×30°.69E, h30^{km}±21^{km}, Md4.5, Ml3.4*

*GII **07** 08:14:06.8±0.0, 36°.944N±0°.002×30°.448E±0°.001, h83^{km}, Mws3.3, confirmed*

*ISK **07** 08:14:07.9, 37°.21N×30°.53E, h96^{km}, ML3.1/32*

*AFAD **07** 08:14:08.0, 37°.17N×30°.55E, h83^{km}±6^{km}, ML3.2*

*NIC **07** 08:14:10.7, 37°.12N×30°.93E, h40^{km}±31^{km}, Ml3.1/8*

ISC 07 08:14:06.0±1.3**, 37°.17N**±0°.04×**30°.59E**±0°.03**, h109**^{km}±7^{km}**, n119, σ1^{s}51**/144**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUCA	Burdur, Bucak-	0.16	352	P	Pn	08 14 21.4	+0.1
BUCA				S	Sn	08 14 30.1	-2.7
BUCA				i IAML		08 14 31.0	
	comp=N,1µm,0.3s						
BUCA				i IAML		08 14 31.0	
	comp=E,1µm,0.3s						
KORT	Korkueli	0.25	229	Pg	Pn	08 14 22.4	+0.8
KORT				Sg	Sn	08 14 33.1	-0.2
KORT	Korkueli	0.25	229	P	Pn	08 14 22.9	+1.3
KORT				S	Sn	08 14 33.7	+0.4
ANTB	Antalya	0.27	169	Pg	Pn	08 14 22.5	+1.0
BCK	Bucak	0.29	0	Pg	Pn	08 14 22.2	+0.5
BCK				Sg	Sn	08 14 32.3	-1.2
KEMT	Kemer-ANTALYA	0.56	183	Pg	Pn	08 14 24.4	+1.3
ISP	Isparta	0.66	355	Pg	Pn	08 14 24.7	+0.7
ISP				Sg	Sn	08 14 37.6	0.0
ISP	Isparta	0.66	355	P	Pn	08 14 24.5	+0.5
ISP				S	Sn	08 14 38.8	+1.2
BRDR	BURDUR-Merkez	0.68	322	P	Pn	08 14 24.2	+0.1
BRDR				S	Sn	08 14 36.7	-1.1
BRDR				i IAML		08 14 37.0	
	comp=N,255nm,0.5s						
ELL	Elmali	0.69	233	Pg	Pn	08 14 26.3	+2.0
ELL				Sg	Sn	08 14 38.5	+0.5
MNVG	Manavgat-Antal	0.76	119	Pg	Pn	08 14 26.9	+2.2
GOLH	Golhisar	0.82	275	P	Pn	08 14 26.0	+0.6
BAGO	Egridir - ISPA	0.84	11	P	Pn	08 14 26.6	+1.0
AKUM	Antalya-Kumluc	0.86	193	P	Pn	08 14 27.1	+1.4
AKUM				S	Sn	08 14 42.9	+2.4
AKUM				i IAML		08 14 44.0	
	comp=N,652nm,0.3s						
AKUM				i IAML		08 14 44.0	
	comp=E,823nm,0.3s						
BASM	Basmaki-Afyon	0.87	331	Pg	Pn	08 14 26.8	+1.0
KNIK	Mula-Seydike	0.87	249	P	Pn	08 14 27.7	+1.8
KNIK				S	Sn	08 14 42.0	+1.1
KNIK				i IAML		08 14 44.0	
	comp=E,217nm,0.6s						
INCE	Denizli-Bozkur	0.97	304	P	Pn	08 14 27.7	+0.8
SEDI	Konya, Seydise	0.97	73	P	Pn	08 14 28.5	+1.6
SEDI				i IAML		08 14 44.0	
	comp=N,807nm,0.4s						
SEDI				S	Sn	08 14 44.1	+1.3
CAEL	Denizli, Camel	1.01	268	P	Pn	08 14 28.8	+1.4
CAEL				S	Sn	08 14 44.5	+0.9
CAEL				i IAML		08 14 47.0	
	comp=N,210nm,0.6s						
CAEL				i IAML		08 14 49.0	
	comp=E,380nm,0.6s						
SEYD	Seydisehir-KON	1.02	76	Pg	Pn	08 14 29.5	+2.0
CAME	Cameli-Denizli	1.05	258	Pg	Pn	08 14 29.9	+2.1
APMY	Acipayam-Deniz	1.07	287	Pg	Pn	08 14 29.2	+1.3
DEMR	Demre-Antalya	1.08	211	Pn	Pn	08 14 29.9	+2.0
AFYN	Afyon-Dinar-K	1.11	357	P	Pn	08 14 29.2	+0.9
AFYN				P		08 14 29.8	
KZIL	AFYON_Kizioren	1.15	342	P	Pn	08 14 29.8	+1.0
AKAS	Kas	1.22	221	Pn	Pn	08 14 31.1	+1.5
AKAS	Kas	1.22	221	P	Pn	08 14 30.6	+1.0
AKAS				S	Sn	08 14 48.1	+0.6
AKAS				i IAML		08 14 52.0	
	comp=N,576nm,0.2s						
AKAS				i IAML		08 14 56.0	
	comp=E,574nm,0.3s						
DNZT	Denizli-Tavas-	1.25	276	P	Pn	08 14 31.8	+1.9
DOGA	KONYA_Doganhis	1.27	42	P	Pn	08 14 32.1	+1.9
IZZE	Mula-Seydike	1.31	237	P	Pn	08 14 32.2	+1.6
DNIZ	Denizli-Tavas-	1.32	291	P	Pn	08 14 32.1	+1.5
DNIZ				S	Sn	08 14 48.7	-0.6
DNIZ				i IAML		08 14 51.0	
	comp=E,598nm,0.3s						
FETY	Fethiye	1.32	247	Pn	Pn	08 14 32.2	+1.6
FETY	Fethiye	1.32	247	P	Pn	08 14 32.6	+2.0
FETY				S	Sn	08 14 50.3	+1.1

SABU	Mula-Dalaman	1.34	256	P	Pn	08 14 31.5	+0.7
SABU				S	Sn	08 14 48.9	-0.8
SABU				i IAML		08 14 57.0	
	comp=N,232nm,0.4s						
TAVA	DENIZLI_Tavas	1.37	283	P	Pn	08 14 33.2	+1.9
SHUT	Suhut-Afyon	1.39	359	Pn	Pn	08 14 33.4	+1.9
HDMB	Hadim	1.53	97	Pn	Pn	08 14 36.2	+2.9
DALY	Dalyan (Mula)	1.59	258	Pn	Pn	08 14 35.2	+1.5
KONT	Konya--Tatoy	1.61	61	Pn	Pn	08 14 36.7	+2.6
GAZI	Gazipasa	1.67	123	Pn	Pn	08 14 37.5	+2.7
GAZI	Gazipasa	1.67	123	P	Pn	08 14 37.2	+2.4
LADK	Ladik-KONYA	1.75	53	Pn	Pn	08 14 38.1	+2.3
TURN	Turunc	1.92	259	Pn	Pn	08 14 39.5	+1.7
TURN	Turunc	1.92	259	P	Pn	08 14 39.6	+1.8
TURN				S	Sn	08 15 01.8	-0.3
TURN				i IAML		08 15 03.0	
	comp=E,77nm,0.3s						
KIZT	Kizilcal	1.99	30	Pn	Pn	08 14 40.9	+2.0
KULA	Kula-Manisa	2.04	312	Pn	Pn	08 14 41.1	+1.7
GEDZ	Gediz	2.09	334	Pn	Pn	08 14 41.8	+1.6
BOZY	Bozyazi-Mersin	2.19	118	Pn	Pn	08 14 44.9	+3.6
ARG	Arkhangelos	2.19	245	Pn	Pn	08 14 43.5	+2.1
BERE	Bereket-Mersin	2.27	110	Pn	Pn	08 14 46.4	+3.9
TEKE	Tekeli-Mersin	2.27	116	Pn	Pn	08 14 46.2	+3.8
ODEM	Odemis-Izmir	2.28	300	Pn	Pn	08 14 44.4	+1.8
SIMA	Simav-Kutahya	2.30	327	Pn	Pn	08 14 44.3	+1.5
CHBY	Cihanbeyli	2.31	51	Pn	Pn	08 14 45.7	+2.8
TVSB	Tavsanli	2.45	339	Pn	Pn	08 14 47.1	+2.3
DAT	Datca	2.45	261	Pn	Pn	08 14 46.7	+1.9
AKMS	Akamas	2.57	146	P	Pn	08 14 47.8	+1.5
AKMS				S	Sn	08 15 16.4	-0.8
AKMS				AML	AML	08 15 30.8	
	0.6nm,0.3s						
AKMS				AML	AML	08 15 36.9	
	0.6nm,0.5s						
ALFC	Alefka	2.58	140	P	Pn	08 14 47.3	+0.8
ALFC				S	Sn	08 15 16.0	-1.6
ALFC				AML	AML	08 15 21.9	
	0.7nm,0.2s						
ALFC				AML	AML	08 15 32.8	
	0.6nm,0.2s						
BODT	Bodrum	2.62	269	Pn	Pn	08 14 49.2	+2.2
NATA	Nata	2.87	145	P	Pn	08 14 51.8	+1.5
NATA				S	Sn	08 15 24.3	-0.1
NATA				AML	AML	08 15 42.5	
	1.0nm,0.4s						
NATA				AML	AML	08 15 43.2	
	1.2nm,0.5s						
TROD	Troodos	2.88	140	P	Pn	08 14 51.7	+1.1
TROD				S	Sn	08 15 24.3	-0.6
TROD				AML	AML	08 15 45.6	
	0.2nm,0.3s						
TROD				AML	AML	08 15 48.2	
	0.1nm,0.4s						
APOL	The Sanctuary	3.10	143	P	Pn	08 14 54.7	+1.4
APOL				S	Sn	08 15 29.8	+0.1
APOL				AML	AML	08 15 33.8	
	0.2nm,0.2s						
APOL				AML	AML	08 15 38.7	
	0.2nm,0.1s						
CSS	Mathiatis	3.12	134	P	Pn	08 14 53.2	-0.5
CSS	Mathiatis	3.12	134	P	Pn	08 14 54.8	+1.1
CSS				S	Sn	08 15 29.6	-0.7
CSS				AML	AML	08 15 43.3	
	0.1nm,0.4s						
CSS				AML	AML	08 15 45.0	
	0.1nm,0.4s						
ASGA	Asgata	3.21	137	P	Pn	08 14 56.5	+1.8
ASGA				S	Sn	08 15 32.8	+0.5
ASGA				AML	AML	08 15 43.0	
	0.1nm,0.2s						
ASGA				AML	AML	08 15 47.4	
	0.1nm,0.3s						
MVOU	Mavrovouni	3.27	130	P	Pn	08 14 56.8	+1.3
MVOU				S	Sn	08 15 32.6	-1.1
MVOU				AML	AML	08 15 40.1	
	0.1nm,0.3s						
MVOU				AML	AML	08 15 41.9	
	0.1nm,0.4s						
APE	Apeiranthos	4.04	270	P	Pn	08 15 05.3	-0.6
APE	Apeiranthos	4.04	270	S	Sn	08 15 50.1	-2.3
HNTI	Hanita	5.54	136	P	Pn	08 15 26.3	+0.2
HNTI	Hanita	5.54	136	S	Sn	08 16 27.8	-0.7
MMC7	Mount Meron ar	5.71	135	P	Pn	08 15 28.4	0.0
MMC7	Mount Meron ar	5.71	135	S	Sn	08 16 31.2	-1.5
MMA0B	Mount Meron ar	5.72	135	P	Pn	08 15 28.8	+0.2
MMA0B	Mount Meron ar	5.72	135	S	Sn	08 16 32.6	-0.3
GEM	Giv'at Ha'Em	5.73	132	P	Pn	08 15 28.6	0.0
GEM	Giv'at Ha'Em	5.73	132	S	Sn	08 16 32.2	-0.9
NATI	Neve Ativ	5.74	131	P	Pn	08 15 29.0	+0.3
NATI	Neve Ativ	5.74	131	S	Sn	08 16 32.6	-0.6
OFRI	`Ofer	5.80	140	P	Pn	08 15 29.2	-0.4
OFRI	`Ofer	5.80	140	S	Sn	08 16 33.9	-0.9
BLGI	Bet Lehem HaGe	5.82	138	P	Pn	08 15 29.7	-0.2
BLGI	Bet Lehem HaGe	5.82	138	S	Sn	08 16 34.5	-0.7
SLTI	Sal'it	6.13	142	P	Pn	08 15 33.6	-0.5
SLTI	Sal'it	6.13	142	S	Sn	08 16 41.2	-1.6
MMLI	Mount Malkishu	6.17	138	P	Pn	08 15 34.5	-0.2
MMLI	Mount Malkishu	6.17	138	S	Sn	08 16 42.9	-0.9
DB3	El Dabaa	6.34	196	P	Pn	08 15 36.9	-0.1
HMDT	Nahal Hemdat	6.37	139	P	Pn	08 15 38.4	+1.1
HMDT	Nahal Hemdat	6.37	139	S	Sn	08 16 47.0	-1.5
AMAZ	Amatzia	6.66	146	P	Pn	08 15 40.7	-0.6
AMAZ	Amatzia	6.66	146	S	Sn	08 16 54.7	-1.0
DSI	Dead Sea	6.84	143	P	Pn	08 15 43.8	+0.1
DSI	Dead Sea	6.84	143	S	Sn	08 16 58.5	-1.7
YTIR	Yattir	6.89	146	P	Pn	08 15 44.3	-0.3
YTIR	Yattir	6.89	146	S	Sn	08 16 59.5	-2.0
KZIT	Kziot	7.00	152	P	Pn	08 15 44.7	-1.2
KZIT	Kziot	7.00	152	S	Sn	08 17 01.6	-2.3
MSBI	Mazada	7.05	145	P	Pn	08 15 45.7	-0.8
MSBI	Mazada	7.05	145	S	Sn	08 17 03.1	-2.0
GHAJ	Ghor Haditha	7.15	143	P	Pn	08 15 47.2	-0.8
GHAJ	Ghor Haditha	7.15	143	S	Sn	08 17 06.4	-1.2
SLUM	Salum	7.20	220	P	Pn	08 15 48.6	+0.1
KOT	Kottamia	7.29	171	P	Pn	08 15 50.5	+0.6
HHAG	Hagoal	7.30	170	P	Pn	08 15 53.4	+3.4
HMYD	Mayadein	7.35	179	P	Pn	08 15 49.8	-0.9
HNAT	Natroun	7.51	180	P	Pn	08 15 52.2	-0.6
PRNI	Paran	7.72	150	P	Pn	08 15 55.3	-0.5
PRNI	Paran	7.72	150	S	Sn	08 17 20.0	-1.7
KRMI	Paran Flat	7.83	153	P	Pn	08 15 56.1	-1.0
KRMI	Paran Flat	7.83	153	S	Sn	08 17 21.8	-2.3
HRFI	Mount Harif	8.02	151	P	Pn	08 15 58.9	-0.9
HRFI	Mount Harif	8.02	151	S	Sn	08 17 27.1	-1.7
RYAN	Fayoum	8.06	182	P	Pn	08 15 60.0	-0.4
MBRI	Mt Berech	8.19	153	P	Pn	08 16 01.1	-1.0
MBRI	Mt Berech	8.19	153	S	Sn	08 17 31.0	-2.0
EIL2	Elat	8.31	153	P	Pn	08 16 03.0	-0.7
EIL2	Elat	8.31	153	S	Sn	08 17 33.9	-2.0
SWA2		8.99	210	P	Pn	08 16 13.4	+0.5
HFRF	Wahat Farafira	10.17	192	P	Pn	08 16 28.6	-0.3

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*ASRS **07** 08:14:45.0±0.7,54°.46N×86°.85E,h0^{km},M2.7,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 07 08:14:43.9±3.4**,54°.55N**×**87°.32E,h0**^{km}**,mbtmp3.2**/2**, ML2.7**/2**,Error ellipse: s-maj=26.4km s-min=19.3km az=52.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.59	249	I	I	08 23 00.0	
	baz=66,slow=317,SNR=4.3						
ZALV	Zalesovo Beam	1.59	249	Pg	Pn	08 15 11.4	-1.9
	1.1nm,0.3s,baz=65,slow=16,SNR=14						
ZALV				Lg	Lg	08 15 34.8	
	1.7nm,0.3s,baz=68,slow=27,SNR=6.6						
KURBB	Kurchatov Arra	6.65	237	Pn	Pn	08 16 23.4	+0.7
	0.2nm,0.3s,baz=55,slow=14,SNR=5.9						
KURBB				Lg	Lg	08 18 15.4	
	0.2nm,0.3s,baz=47,slow=27,SNR=4.6						
	1.7nm,0.2s						
MKAR	Makanchi Array	8.40	204	Pn	Pn	08 16 48.1	+1.4
	0.1nm,0.3s,baz=30,slow=12,SNR=1.9						
MKAR				Sn	Sn	08 18 20.6	-1.7
	0.1nm,0.3s,baz=24,slow=32,SNR=2.9						
MKAR				Lg	Lg	08 19 13.5	
	baz=23,slow=30,SNR=2.6						
	0.2nm,0.4s						

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*IDC **07** 08:16:55.6±1.1,32°.08N×141°.83E,h0^{km},mb3.7/5, mbtmp3.7/7,ML3.3/2,MS2.8/1,Error ellipse: s-maj=38.7km s-min=18.6km az=77.0*

*JMA **07** 08:16:56.9±0.3,32°N±1°×14°2E±°,h81^{km},MV3.6/11,E OFF HACHIJOJIMA ISLAND*

ISC 07 08:16:58.3±0.9**,32°.15N**±0°.06×**142°.1E**±0°.1**,h29**^{km}**,n15, σ1^{s}98**/20**,mb3.8**/5**,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	2.13	297	*e*P	Pn	08 17 30.4	-1.5
JHJ2				*e*S	Sn	08 17 55.7	-1.6
BSO1	Boso 1	2.66	340	*e*P	Pn	08 17 38.2	-0.4
BSO3	Boso 3	2.95	334	*e*P	Pn	08 17 42.9	0.0
JHO	Hitachi	4.62	345	*e*P	Pn	08 18 05.7	-0.4
JAG	Ashikaga	4.78	334	*e*S	Sn	08 19 01.4	-1.3
CBIJ	Chichi jima	5.04	179	*e*P	Pn	08 18 11.3	-0.6
CBIJ				*e*S	Sn	08 19 07.9	-1.3
JCJ	Chichijima	5.04	179	Pn	Pn	08 18 11.3	-0.6
	6.3nm,0.3s,baz=42,slow=22,SNR=33						
JCJ				Sn	Sn	08 19 06.0	-3.2
	5.5nm,0.3s,baz=288,slow=20,SNR=4.1						
	14nm,0.3s						
JFK	Kawauchi	5.29	350	*e*P	Pn	08 18 14.2	-1.2
MJAR	Matsushiro Arr	5.42	325	Pn	Pn	08 18 17.5	+0.3
	0.2nm,0.3s,baz=163,slow=11,SNR=5.7						
MJAR				Sn	Sn	08 19 18.0	-0.6
	0.1nm,0.3s,baz=140,slow=27,SNR=4.2						
MJAR				LR	LR	08 20 37.5	
	comp=Z,90nm,18.4s,baz=178,slow=41						
	1.4nm,0.6s						
JMK	Ichinoseki	6.82	354	P	Pn	08 18 35.6	-0.7
JMK				*e*S	Sn	08 19 47.4	-5.6
SONM	Songino Array	31.17	311	P	P	08 23 16.5	+1.7
	0.4nm,0.4s,baz=87,slow=6.2,SNR=2.1						
	0.4nm,0.4s						
MKAR	Makanchi Array	47.30	306	P	P	08 25 29.0	-0.2
	0.9nm,0.8s,baz=94,slow=9.7,SNR=7.0						
	0.9nm,0.8s						
WRA	Warramunga Arr	52.33	189	P	P	08 26 08.6	+1.1
	2.3nm,0.8s,baz=6.7,slow=7.5,SNR=10						
	2.3nm,0.8s						
ILAR	Eielson Array	53.37	30	P	P	08 26 17.6	+2.8
	0.8nm,0.7s,baz=266,slow=6.0,SNR=8.2						
	0.8nm,0.7s						
ASAR	Alice Springs	56.05	189	P	P	08 26 35.5	+0.9
	0.5nm,0.9s,baz=9.4,slow=7.1,SNR=5.4						
	0.5nm,0.9s						

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*NEIC **07** 08:17:50.6±1.1,66°.14N±0°.02×141°.87W±0°.01,h9^{km}±6^{km}, Error ellipse: s-maj=2.7km s-min=0.8km az=189.0*

*AEIC **07** 08:17:50.5±0.9,66°.14N±0°.02×141°.84W±0°.04,h8^{km}±6^{km}, ML3.0,ML3.2/136(NEIC),Error ellipse: s-maj=2.7km s-min=2.2km az=59.0*

*ANF **07** 08:17:50.1±0.2,66°.15N×141°.85W,h5^{km}±1^{km},ML3.5/54, Error ellipse: s-maj=1.1km s-min=1.0km az=95.0*

ISC 07 08:17:50.4±0.9**,66°.15N**±0°.02×**141°.85W**±0°.02**,h7**^{km}±8^{km}**, n206,σ0^{s}76**/245**,Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H27K	Steamboat Moun	0.16	58		Pg	08 17 53.8	+0.2
H27K				Sg	Sg	08 17 56.4	+0.5
H27K				IAML		08 17 56.6	
	comp=E,5μm,0.6s						
H27K				IAML		08 17 57.2	
	comp=N,6μm,0.7s						
H27K	Steamboat Moun	0.16	58	P	Pg	08 17 53.5	-0.1
	baz=236,SNR=1000						
H27K				S	Sg	08 17 56.3	+0.5
	baz=236						
I27K	Kandik River	0.56	170		Pg	08 18 01.2	+0.1
I27K					Sg	08 18 09.0	+0.6
I27K	Kandik River	0.56	170	P	Pg	08 18 01.0	-0.2
	baz=350,SNR=1000						
I27K				S	Sg	08 18 08.4	0.0
	baz=350						
G27K	Doyon Strip	0.67	7		Pg	08 18 02.7	-0.6
G27K	Doyon Strip	0.67	7	P	Pg	08 18 02.7	-0.6
	baz=187,SNR=1000						
G27K				S	Sg	08 18 12.4	+0.5
	baz=187						
I26K	Coal Creek Min	1.00	213		Pb	08 18 10.0	-0.1
I26K					Sb	08 18 23.3	-0.2
I26K	Coal Creek Min	1.00	213	IAML		08 18 25.3	
	comp=E,779nm,0.4s						
I26K	Coal Creek Min	1.00	213	P	Pg	08 18 09.6	0.0
	baz=32,SNR=1000						
I26K				S	Sb	08 18 22.9	-0.5
	baz=32						
I28M	Miner Creek	1.06	131		Pg	08 18 10.3	-0.3
I28M				Sg	Sg	08 18 23.3	-1.1
I28M				IAML		08 18 26.6	
	comp=N,771nm,0.5s						
I28M				IAML		08 18 27.9	
	comp=E,569nm,0.5s						
I28M	Miner Creek	1.06	131	P	Pg	08 18 10.2	-0.5
	baz=312,SNR=882						
I28M				S	Sb	08 18 24.6	-0.5
	baz=312						
G26K	Porcupine Rive	1.12	317		Pg	08 18 11.3	-0.5
G26K				IAML		08 18 28.5	
	comp=N,646nm,0.5s						
G26K	Porcupine Rive	1.12	317		Sb	08 18 27.3	+0.6
G26K	Porcupine Rive	1.12	317	P	Pg	08 18 11.1	-0.7
	baz=135,SNR=1000						
G26K				S	Sg	08 18 26.3	0.0
	baz=135						
H29M	Whitestone	1.42	86		Pb	08 18 16.9	-0.3
H29M				IAML		08 18 37.9	
	comp=N,413nm,0.7s						
H29M				IAML		08 18 39.5	
	comp=E,379nm,0.4s						
H29M	Whitestone	1.42	86		Sg	08 18 35.7	-0.2
H29M	Whitestone	1.42	86	P	Pn	08 18 16.2	-0.4
	baz=268,SNR=1000						
H29M				S	Sg	08 18 35.7	-0.2
	baz=268						
FYU	Fort Yukon	1.43	289		Pn	08 18 16.4	-0.3
FYU	Fort Yukon	1.43	289		Sg	08 18 36.4	+0.2
H25L	Birch Creek	1.61	276		Pn	08 18 18.7	-0.6
H25L	Birch Creek	1.61	276	P	Pn	08 18 18.7	-0.6
	baz=93,SNR=265						
H25L				Sb	Sg	08 18 42.6	+0.4
	baz=93						
PRP	Porcupine Dome	1.64	249		Pn	08 18 19.1	-0.7
PRP	Porcupine Dome	1.64	249	P	Pn	08 18 18.8	-1.0
	baz=66						
PRP				S	Sb	08 18 41.8	-0.1
	baz=66						
I29M	Ogilvie Camp,	1.66	117		Pn	08 18 20.1	+0.1
I29M				IAML		08 18 48.9	
	comp=E,332nm,0.9s						
I29M	Ogilvie Camp,	1.66	117	Pb	Pb	08 18 21.2	-0.2
	baz=300						
I29M				Sb	Sg	08 18 43.5	-0.3
	baz=300						
F28M	Old Crow	1.67	27		Pn	08 18 20.4	+0.4
F28M	Old Crow	1.67	27		Sb	08 18 42.6	-0.1
F28M	Old Crow	1.67	27	P	Pn	08 18 19.9	-0.2
	baz=209,SNR=405						
F28M				S	Sb	08 18 42.5	-0.1
	baz=209						
G29M	Pine Creek	1.71	62		Pn	08 18 20.6	-0.1
G29M	Pine Creek	1.71	62	P	Pn	08 18 20.8	+0.1
	baz=245,SNR=334						
G29M				Sb	Sg	08 18 45.1	-0.4
	baz=245						
F26K	Sheenjek River	1.80	331		Pn	08 18 21.8	-0.1
F26K				IAML		08 18 48.5	
	comp=N,158nm,0.6s						
F26K	Sheenjek River	1.80	331	P	Pn	08 18 21.2	-0.6
	baz=149,SNR=461						
F26K				S	Sb	08 18 45.8	-0.6
	baz=149						
J26L	Joseph Creek	1.80	204		Pn	08 18 21.9	-0.1
J26L	Joseph Creek	1.80	204	P	Pn	08 18 21.6	-0.4
	baz=23,SNR=220						
J26L				S	Sb	08 18 45.8	-0.8
	baz=23						
G25K	Bearman Lake	1.81	292		Pn	08 18 21.6	-0.4
G25K	Bearman Lake	1.81	292	P	Pn	08 18 21.5	-0.5
	baz=108,SNR=93						
G25K				Sb	Sg	08 18 48.6	-0.1
	baz=108						
E27K	Coleen River	2.05	3		Pn	08 18 25.4	+0.1
E27K	Coleen River	2.05	3	P	Pn	08 18 25.0	-0.3
	baz=183,SNR=122						
E27K				Sb	Sb	08 18 54.8	+1.2
	baz=183						
F25K	Christian Rive	2.08	316		Pn	08 18 27.0	+1.2
F25K	Christian Rive	2.08	316	IAML		08 18 57.4	
	comp=E,178nm,0.9s						
F25K				IAML		08 18 59.8	
	comp=N,150nm,0.7s						
F25K	Christian Rive	2.08	316	P	Pn	08 18 25.5	-0.4
	baz=132,SNR=66						
F25K				Sb	Sb	08 18 55.6	+0.9
	baz=132						
EPYK	Eagle Plains	2.09	82		Pn	08 18 25.7	-0.2
EPYK	Eagle Plains	2.09	82	P	Pn	08 18 25.3	-0.6
	baz=266,SNR=36						
EPYK				Sb	Sb	08 18 55.5	+0.7
	baz=266						
K27K	Chicken	2.13	183		Pn	08 18 26.6	+0.2
K27K	Chicken	2.13	183	P	Pn	08 18 26.3	-0.1
	baz=2.5						
K27K				Sb	Sb	08 18 57.0	+1.1
	baz=2.5						
J25K	Salcha River,	2.13	225		Pn	08 18 26.2	-0.3
J25K				IAML		08 18 59.9	
	comp=N,106nm,0.6s						
J25K				IAML		08 19 06.5	
	comp=E,121nm,0.8s						
J25K	Salcha River,	2.13	225	P	Pn	08 18 26.1	-0.4
	baz=42,SNR=76						
J25K				S	Sn	08 18 53.9	+0.6
	baz=42						
J29N	Klondike Camp	2.29	136	Pb	Pb	08 18 31.5	-0.6
	baz=320						
J29N				Sb	Sb	08 19 01.6	+1.1
	baz=320						
G24K	Hadweenzic Riv	2.33	286		Pn	08 18 29.1	-0.1
G24K				IAML		08 19 06.4	
	comp=N,146nm,0.6s						
G24K	Hadweenzic Riv	2.33	286	P	Pn	08 18 28.6	-0.5
	baz=101,SNR=88						
G24K				Sb	Sb	08 19 03.4	+1.8
	baz=101						
DAWY	Dawson	2.34	152		Pn	08 18 29.6	+0.3
DAWY				IAML		08 19 06.5	
	comp=E,88nm,0.5s						
DAWY	Dawson	2.34	152	P	Pn	08 18 29.0	-0.3
	baz=335,SNR=46						
DAWY				S	Sn	08 18 58.6	+0.3
	baz=335						
SCRK	Sand Creek	2.36	203		Pn	08 18 29.9	+0.2
SCRK				IAML		08 19 06.3	
	comp=E,86nm,0.4s						
SCRK	Sand Creek	2.36	203	P	Pn	08 18 29.2	-0.5
	baz=22,SNR=53						
SCRK				Sb	Sg	08 19 04.3	-1.9
	baz=22						
G30M	tAoh Zraii Nji	2.40	67		Pn	08 18 29.8	-0.4
G30M				IAML		08 19 04.3	
	comp=E,157nm,0.6s						
G30M				IAML		08 19 05.4	
	comp=N,109nm,0.5s						
G30M	tAoh Zraii Nji	2.40	67	P	Pn	08 18 29.5	-0.7
	baz=252,SNR=40						
G30M				S	Sn	08 18 59.8	0.0
	baz=252						
I30M	Mount Dempster	2.45	110		Pn	08 18 30.8	-0.1
I30M	Mount Dempster	2.45	110	P	Pn	08 18 30.6	-0.4
	baz=295,SNR=71						
I30M				S	Sn	08 19 01.0	-0.1
	baz=295						
E25K	Arctic Village	2.46	325		Pn	08 18 30.9	0.0
E25K				IAML		08 19 13.3	
	comp=N,84nm,0.8s						
E25K	Arctic Village	2.46	325	P	Pn	08 18 30.8	-0.1
	baz=142,SNR=47						
E25K				Sb	Sb	08 19 06.3	+1.0
	baz=142						
H24K	Noodor Dome	2.48	266		Pn	08 18 29.6	-1.7
H24K				IAML		08 19 12.9	
	comp=E,89nm,0.5s						
H24K				IAML		08 19 14.3	
	comp=N,110nm,0.9s						
H24K	Noodor Dome	2.48	266	P	Pn	08 18 30.1	-1.2
	baz=80						
H24K				Sb	Sb	08 19 07.9	+1.7
	baz=80						
IL31		2.52	239		Pn	08 18 30.2	-1.5
ILAR	Eielson Array	2.52	239		Pn	08 18 31.3	-0.4
POKR	Poker Plat Res	2.54	248		Pn	08 18 31.7	-0.3
POKR	Poker Plat Res	2.54	248	IAML		08 19 17.0	
	comp=N,121nm,0.9s						
POKR				IAML		08 19 17.2	
	comp=E,126nm,0.6s						
POKR	Poker Plat Res	2.54	248	P	Pn	08 18 31.7	-0.3
	baz=64						
POKR				Sb	Sb	08 19 09.2	+1.7
	baz=64						
E28M	Babbage River	2.62	19		Pn	08 18 32.6	-0.6
E28M				IAML		08 19 17.4	
	comp=E,72nm,1.0s						
E28M	Babbage River	2.62	19	P	Pn	08 18 32.8	-0.4
	baz=201,SNR=14						
E28M				S	Sn	08 19 06.2	+0.9
	baz=201						
E29M	Blow River	2.73	33		Pn	08 18 34.5	-0.1
E29M				IAML		08 19 21.8	
	comp=E,65nm,0.9s						
E29M				IAML		08 19 22.2	
	comp=N,63nm,0.7s						
E29M	Blow River	2.73	33	P	Pn	08 18 34.4	-0.1
	baz=216,SNR=45						
E29M				S	Sn	08 19 08.5	+0.8
	baz=216						
RIDG	Independent Ri	2.73	209		Pn	08 18 34.6	-0.1
RIDG	Independent Ri	2.73	209	P	Pn	08 18 34.6	-0.1
	baz=26,SNR=11						
RIDG				Sb	Sb	08 19 15.4	+2.1
	baz=26						
F24K	Squaw Lake	2.75	303		Pn	08 18 36.1	+1.1
F24K				IAML		08 19 20.1	
	comp=E,70nm,0.6s						
F24K	Squaw Lake	2.75	303	P	Pn	08 18 35.5	+0.5
	baz=117,SNR=26						
F24K				Sb	Sg	08 19 16.5	-2.3
	baz=117						
HDA	Harding Lake	2.76	233		Pn	08 18 35.2	+0.1
HDA				IAML		08 19 25.9	
	comp=N,104nm,0.7s						
HDA	Harding Lake	2.76	233	P	Pn	08 18 35.3	+0.1
	baz=49						
HDA				Sb	Sb	08 19 15.7	+1.6
	baz=49						
J30M	Hart River	2.80	122		Pn	08 18 36.0	+0.3
J30M				IAML		08 19 27.6	
	comp=E,66nm,0.8s						
J30M	Hart River	2.80	122	P	Pn	08 18 35.6	-0.1
	baz=307,SNR=74						
J30M				S	Sn	08 19 10.0	+0.2
	baz=307						
COLA	College	2.81	246		Pn	08 18 35.2	-0.5
COLA	College	2.81	246	Sb	Sb	08 19 17.3	+2.0
	baz=60						
F30M	Barrier River	2.81	56		Pn	08 18 35.9	+0.2
F30M	Barrier River	2.81	56	P	Pn	08 18 35.6	-0.1
	baz=241,SNR=71						
F30M				Sb	Sb	08 19 16.7	+1.3
	baz=241						
K24K	Donnelly Dome	2.89	217		Pn	08 18 37.4	+0.6
K24K	Donnelly Dome	2.89	217	P	Pn	08 18 37.2	+0.4
	baz=34,SNR=6.0						
K24K				Sb	Sb	08 19 19.9	+2.2
	baz=34						
CCB	Clear Creek Bu	2.91	242		Pn	08 18 36.9	-0.2
CCB				IAML		08 19 26.2	
	comp=E,76nm,0.5s						
K29M	Barlow Dome	2.96	140		Pn	08 18 37.9	+0.1
K29M				IAML		08 19 31.7	
	comp=E,68nm,0.7s						
K29M				IAML		08 19 33.0	
	comp=N,81nm,1.0s						
K29M	Barlow Dome	2.96	140	P	Pn	08 18 38.7	+0.8
	baz=324						
K29M				S	Sn	08 19 14.0	+0.3

	baz=324						
H31M	Peel River	3.09	93		Pn	08 18 38.8	-0.8
H31M				IAML		08 19 32.7	
	comp=E,70nm,1.1s						
H31M				IAML		08 19 39.2	
	comp=N,62nm,1.0s						
H31M	Peel River	3.09	93	P	Pn	08 18 38.6	-1.1
	baz=280,SNR=18						
H31M				Sb	Sb	08 19 24.2	+0.6
	baz=280						
BCAR	Beaver Creek A	3.10	179		Pn	08 18 39.6	-0.1
L27K	Beaver Creek,	3.10	180		Pn	08 18 39.6	-0.2
L27K	Beaver Creek,	3.10	180	P	Pn	08 18 39.8	+0.1
	baz=360,SNR=34						
WRH	Wood River Hil	3.11	240		Pn	08 18 39.2	-0.7
WRH				IAML		08 19 31.7	
	comp=N,64nm,1.0s						
WRH				IAML		08 19 36.6	
	comp=E,54nm,0.8s						
D27M	Malcolm River	3.13	6		Pn	08 18 40.6	+0.4
D27M	Malcolm River	3.13	6	P	Pn	08 18 40.5	+0.4
	baz=187						
G31M	Satah River	3.13	72		Pn	08 18 39.5	-0.6
G31M	Satah River	3.13	72	P	Pn	08 18 39.2	-0.9
	baz=259,SNR=87						
G31M				Sb	Sb	08 19 25.9	+1.2
	baz=259						
H23K	Yukon River	3.16	268		Pn	08 18 39.0	-1.6
H23K				IAML		08 19 41.9	
	comp=N,59nm,0.8s						
H23K	Yukon River	3.16	268	P	Pn	08 18 39.3	-1.3
	baz=81						
L26K	Log Cabin Wild	3.20	192		Pn	08 18 41.1	0.0
L26K	Log Cabin Wild	3.20	192	P	Pn	08 18 41.3	+0.2
	baz=11,SNR=20						
E24K	Your Creek	3.23	310	P	Pn	08 18 41.6	-0.1
	baz=124						
I23K	Minto, Yukon-K	3.27	256		Pn	08 18 40.4	-1.6
I23K	Minto, Yukon-K	3.27	256	P	Pn	08 18 41.0	-1.0
	baz=69						
MENT	Mentasta	3.32	195		Pn	08 18 43.0	+0.2
G23K	Bananza Creek	3.33	283		Pn	08 18 43.1	+0.2
G23K	Bananza Creek	3.33	283	IAML		08 19 44.4	
	comp=N,50nm,0.7s						
G23K	Bananza Creek	3.33	283	P	Pn	08 18 42.4	-0.5
	baz=96						
NEA2	Nenana	3.40	246		Pn	08 18 43.6	-0.3
NEA2				IAML		08 19 41.5	
	comp=E,59nm,1.0s						
NEA2	Nenana	3.40	246	P	Pn	08 18 43.6	-0.3
	baz=60						
D28M	Stokes Point	3.41	19	P	Pn	08 18 43.7	-0.2
	baz=202,SNR=41						
L29M	L29M	3.45	151		Pn	08 18 44.9	+0.4
L29M	L29M	3.45	151	P	Pn	08 18 44.5	-0.1
	baz=334,SNR=18						
F31M	Tsiigehtchic	3.46	64		Pn	08 18 43.4	-1.2
F31M				IAML		08 19 40.7	
	comp=N,56nm,0.7s						
F31M				IAML		08 19 41.0	
	comp=E,66nm,0.6s						
F31M	Tsiigehtchic	3.46	64	P	Pn	08 18 43.6	-1.1
	baz=252,SNR=44						
COLD	Coldfoot	3.49	292		Pn	08 18 46.0	+0.9
COLD				IAML		08 19 43.2	
	comp=N,60nm,0.4s						
COLD				IAML		08 19 49.3	
	comp=E,33nm,0.9s						
COLD	Coldfoot	3.49	292	P	Pn	08 18 46.0	+0.9
	baz=104,SNR=6.1						
PAX	Paxson	3.55	208		Pn	08 18 47.2	+1.2
PAX	Paxson	3.55	208	IAML		08 19 48.8	
	comp=E,32nm,0.8s						
PAX	Paxson	3.55	208	P	Pn	08 18 46.9	+0.9
	baz=24						
C27K	Jago River	3.56	349		Pn	08 18 47.8	+1.7
C27K	Jago River	3.56	349	P	Pn	08 18 47.1	+1.0
	baz=168						
E23K	Chandalar	3.59	306		Pn	08 18 47.0	+0.5
E23K				IAML		08 19 46.9	
	comp=E,30nm,0.4s						
E23K	Chandalar	3.59	306	P	Pn	08 18 47.4	+0.9
	baz=119						
D25K	Kavik River	3.62	334		Pn	08 18 48.5	+1.5
D25K				IAML		08 19 48.2	
	comp=N,36nm,0.7s						
D25K				IAML		08 19 48.2	
	comp=E,57nm,0.7s						
D25K	Kavik River	3.62	334	P	Pn	08 18 47.6	+0.7
	baz=150						
BVCY	Beaver Creek	3.77	173	P	Pn	08 18 49.5	+0.5
	baz=354,SNR=28						
M26K	Nabesna, AK	3.80	188		Pn	08 18 48.7	-0.7
M26K				IAML		08 19 58.5	
	comp=E,32nm,0.5s						
M26K	Nabesna, AK	3.80	188	P	Pn	08 18 49.4	0.0
	baz=7.1,SNR=9.2						
M27K	Edge Creek, AK	3.81	180		Pn	08 18 49.3	-0.2
M27K				IAML		08 19 55.6	
	comp=N,39nm,0.5s						
M27K				IAML		08 19 56.0	
	comp=E,42nm,1.0s						
M27K	Edge Creek, AK	3.81	180	P	Pn	08 18 49.3	-0.2
	baz=0.2,SNR=20						
MLY	Manley	3.86	257		Pn	08 18 48.8	-1.4
MLY				IAML		08 19 56.2	
	comp=N,27nm,0.9s						
MLY	Manley	3.86	257	P	Pn	08 18 48.7	-1.4
	baz=69						
MCK	McKinley	3.87	234		Pn	08 18 50.2	-0.1
MCK				IAML		08 19 58.5	
	comp=N,25nm,0.9s						
MCK				IAML		08 20 00.1	
	comp=E,34nm,0.7s						
TOLK	Toolik Lake Re	3.89	314		Pn	08 18 52.3	+1.7
TOLK				IAML		08 20 05.2	
	comp=N,33nm,1.1s						
TOLK				IAML		08 20 07.8	
	comp=E,37nm,0.9s						
TOLK	Toolik Lake Re	3.89	314	P	Pn	08 18 51.5	+0.9
	baz=126						
DHY	Denali Highway	3.90	220		Pn	08 18 51.1	+0.4
DHY				IAML		08 19 54.6	
	comp=E,38nm,0.8s						
DHY				IAML		08 19 54.6	
	comp=N,38nm,0.8s						
DHY	Denali Highway	3.90	220	P	Pn	08 18 51.2	+0.4
	baz=35,SNR=6.1						
INK	Inuvik	3.90	52		Pn	08 18 50.7	+0.1
INK				IAML		08 19 56.8	
	comp=E,25nm,0.9s						
INK				IAML		08 19 59.0	
	comp=N,31nm,1.1s						
INK	Inuvik	3.90	52	P	Pn	08 18 50.4	-0.2
	baz=240,SNR=51						
H22K	Ishtalitna Cre	3.90	271	P	Pn	08 18 50.3	-0.4
	baz=82						
G22K	Bettles	3.94	286	P	Pn	08 18 50.7	-0.6
	baz=97						
M29M	Somme Creek	4.00	157	P	Pn	08 18 52.3	+0.1
	baz=340,SNR=14						
D24K	Happy Valley	4.02	322	P	Pn	08 18 52.8	+0.4
	baz=135						
HARP	HAARP	4.03	202	P	Pn	08 18 52.8	+0.2
	baz=20						
RND	Reindeer	4.07	231		Pn	08 18 52.9	-0.1
F22K	John River	4.30	293	P	Pn	08 18 57.6	+1.4
	baz=104						
I21K	Tanana	4.30	262	P	Pn	08 18 56.9	+0.6
	baz=72						
E22K	Anaktuvuk Pass	4.37	302	P	Pn	08 18 57.9	+0.7
	baz=112						
BPAW	Bear Paw Mtn.	4.37	246		Pn	08 18 56.0	-1.3
BPAW				IAML		08 20 14.2	
	comp=N,26nm,1.0s						
BPAW				IAML		08 20 17.2	
	comp=E,20nm,1.0s						
BPAW	Bear Paw Mtn.	4.37	246	P	Pn	08 18 56.2	-1.0
	baz=58						
WAT6	Susitna Watana	4.40	218	P	Pn	08 18 57.9	+0.2
	baz=33						
D23K	Nanushuk River	4.41	314	P	Pn	08 18 59.0	+1.3
	baz=126						
C24K	Franklin Bluff	4.42	327	Pn	Pn	08 18 58.6	+0.8
C24K				IAML		08 20 09.3	
	comp=N,21nm,1.0s						
C24K				IAML		08 20 22.6	
	comp=E,22nm,0.9s						
C24K	Franklin Bluff	4.42	327	P	Pn	08 18 58.6	+0.8
	baz=141						
YUK3	Moose Creek	4.43	171	P	Pn	08 18 58.1	-0.2
	baz=353,SNR=15						
M24K	Tolsona, Glenn	4.48	207	P	Pn	08 18 58.2	-0.5
	baz=23						
TRF	Thorofare Moun	4.51	237		Pn	08 18 59.4	+0.1
TRF				IAML		08 20 22.5	
	comp=N,20nm,0.8s						
TRF	Thorofare Moun	4.51	237	P	Pn	08 18 59.3	+0.1
	baz=49						
H21K	Melozitna Rive	4.52	269	P	Pn	08 18 59.6	+0.4
	baz=79						
KTH	Kantishna Hill	4.66	240		Pn	08 19 01.1	-0.1
KTH				IAML		08 20 24.1	
	comp=E,25nm,0.9s						
KTH				IAML		08 20 29.4	
	comp=N,23nm,1.0s						
G21K	Allakaket	4.71	280		Pn	08 19 02.0	+0.2
G21K				IAML		08 20 28.9	
	comp=N,21nm,0.8s						
G21K	Allakaket	4.71	280	P	Pn	08 19 02.0	+0.2
	baz=89						
N25K	Chitina, Valde	4.72	196	P	Pn	08 19 03.0	+0.9
	baz=14						
F21K	Alatna River	4.75	288	P	Pn	08 19 03.1	+0.7
	baz=98						
IMAR	Indian Mountai	4.85	273		Pn	08 19 03.3	-0.4
C23K	Itkillik River	4.95	322	P	Pn	08 19 06.1	+0.9
	baz=134						
SCM	Sheep Creek Mo	4.96	212	P	Pn	08 19 06.5	+1.2
	baz=27						
YUK8	Steele Glacier	4.97	168	P	Pn	08 19 04.8	-0.8
	baz=350,SNR=6.9						
CHUM	Lake Minchumin	4.98	248	P	Pn	08 19 05.3	-0.3
	baz=58						
YUK4	Talbot Arm	5.03	162	P	Pn	08 19 05.3	-1.1
	baz=344,SNR=21						
N30M	Aishikik Lake	5.16	154	P	Pn	08 19 07.7	-0.4
	baz=338,SNR=11						
CAST	Castle Rocks	5.16	243	P	Pn	08 19 07.5	-0.6
	baz=54						
SML	Sawmill	5.21	216	P	Pn	08 19 09.1	+0.4
	baz=30						
CTG	Chitna Glacier	5.21	177	P	Pn	08 19 08.9	+0.1
	baz=358						
H20K	Anotleneega Mo	5.40	269	P	Pn	08 19 10.3	-0.9
	baz=77						
I20K	Naaghedeneel	5.43	261	P	Pn	08 19 10.8	-0.9
	baz=70						
O28M	Mount Upton	5.45	171	Pn	Pn	08 19 12.7	+0.4
O28M	Mount Upton	5.45	171	P	Pn	08 19 12.5	+0.3
	baz=353						
YUK6	Outpost Mounta	5.45	162	P	Pn	08 19 11.8	-0.5
	baz=345,SNR=9.9						
PPLA	Purkeypile	5.53	239	Pn	Pn	08 19 12.2	-1.0
J20K	Nowinta River	5.55	255		Pn	08 19 11.8	-1.5
J20K	Nowinta River	5.55	255	P	Pn	08 19 11.9	-1.4
	baz=64,SNR=9.4						
F20K	Avaraart Lake	5.60	286	P	Pn	08 19 14.5	+0.5
	baz=93						
HYT	Haines Junctio	5.69	158		Pn	08 19 15.3	-0.1
HYT	Haines Junctio	5.69	158	P	Pn	08 19 15.5	+0.1
	baz=342						
MMPY	Sheldon Lake,	5.80	123		Pn	08 19 16.7	-0.1
K20K	Telida	5.93	247	Pn	Pn	08 19 18.0	-0.6
K20K	Telida	5.93	247	P	Pn	08 19 18.3	-0.3
	baz=56						
O30N	Mendenhall	5.98	152	P	Pn	08 19 19.7	+0.4
	baz=337						
H19K	Roundabout Mou	6.03	271	Pn	Pn	08 19 19.8	0.0
H19K	Roundabout Mou	6.03	271	P	Pn	08 19 19.3	-0.5
	baz=78						
J19K	Poorman	6.21	256		Pn	08 19 21.0	-1.4
J19K	Poorman	6.21	256	P	Pn	08 19 21.0	-1.4
	baz=64						
WHY	Whitehorse	6.33	147	Pn	Pn	08 19 24.0	-0.2
D19K	Kuna River	6.71	298	Pn	Pn	08 19 29.7	+0.4
D19K	Kuna River	6.71	298	P	Pn	08 19 29.7	+0.4
	baz=103						
J18K	Innoko River	6.89	254	Pn	Pn	08 19 30.6	-1.1
C19K	Lookout Ridge	7.38	302	Pn	Pn	08 19 39.1	+0.7
C36M	Paulatuk	7.46	57	P	Pn	08 19 38.5	-1.0
	baz=253,SNR=14						
H17K	Granite Mounta	7.59	269	Pn	Pn	08 19 40.6	-0.7
H17K	Granite Mounta	7.59	269	P	Pn	08 19 41.0	-0.3
	baz=73						
J17K	VABM Dome	7.85	257	Pn	Pn	08 19 44.8	-0.1
A36M	Sachs Harbour	8.32	38	Pn	Pn	08 19 50.3	-0.9
J16K	Anvik River	8.51	259	Pn	Pn	08 19 53.3	-0.7

IDC ***07*** *08:19:09.1±3.5, 54.°20N×87.°57E, h0^{km}, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=27.6km s-min=18.1km az=53.0*

ASRS 07 08:19:08.0±0.7**, 54.°12N×87.°10E, h0**^{km}**, M2.8, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.36	264	I	I	08 28 03.6	
	baz=79,slow=320,SNR=3.8						
ZALV	Zalesovo Beam	1.36	264	Pg	Pb	08 19 38.8	+4.5
	2.2nm,0.3s,baz=81,slow=18,SNR=17						
ZALV				Lg	Lg	08 20 01.0	
	1.1nm,0.3s,baz=82,slow=14,SNR=4.6						
KURBB	Kurchatov Arra	6.31	240	Pn	Pn	08 20 47.8	+5.6
	0.1nm,0.3s,baz=56,slow=13,SNR=1.3						
KURBB				Lg	Lg	08 22 38.3	
	0.1nm,0.3s,baz=54,slow=30,SNR=1.4						
	0.9nm,0.3s						
MKAR	Makanchi Array	7.95	205	Pn	Pn	08 21 09.2	+4.5
	0.1nm,0.3s,baz=26,slow=15,SNR=2.3						
MKAR				Sn	Sn	08 22 40.7	+5.4
	0.1nm,0.3s,baz=23,slow=27,SNR=1.7						
MKAR				Lg	Lg	08 23 27.2	
	0.1nm,0.3s,baz=21,slow=28,SNR=2.4						
	0.1nm,0.4s						

ASRS ***07*** *08:23:02.0±1.2, 53.°58N×87.°98E, h0^{km}, M2.8, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 07 08:23:03.6±4.3**, 53.°62N×88.°03E, h0**^{km}**, mbtmp3.0**/2, **ML2.6**/1**, Error ellipse: s-maj=46.9km s-min=20.6km az=84.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.93	281	I	I	08 34 50.0	
	0.1nm,0.8s,baz=98,slow=323,SNR=12						
ZALV	Zalesovo Beam	1.93	281	Pn	Pn	08 23 37.1	-0.6
	3.1nm,0.3s,baz=100,slow=16,SNR=4.9						
ZALV				Sn	Sb	08 24 04.7	+0.3
	4.7nm,0.3s,baz=101,slow=25,SNR=9.7						
KURBB	Kurchatov Arra	6.57	247	Pn	Pn	08 24 41.7	+0.3
	1.2nm,0.2s,baz=64,slow=13,SNR=2.2						
MKAR	Makanchi Array	7.76	211	Pn	Pn	08 24 59.2	+1.4
	0.1nm,0.3s,baz=27,slow=13,SNR=2.2						
MKAR				Sn	Sn	08 26 25.9	-0.3
	0.1nm,0.3s,baz=30,slow=27,SNR=2.4						
	0.2nm,0.4s						

BER ***07*** *08:27:13.5±2.3, 73.°66N×8.°70E, h10^{km}, Mw3.7, ML3.0(NAO), Confirmed Earthquake*

NAO ***07*** *08:27:13.2±4.2, 73.°84N×9.°61E, ML3.0*

KOLA ***07*** *08:27:21.3, 73.°57N×10.°22E, h0^{km}, ML1.9, Norwegian sea*

ISC 07 08:27:00.4±0.9**, 73.°86N**±0.°05×**11.°17E**±0.°06**, h10**^{km}**, n21, σ2.^{s}58**/28**, Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HSPB	Hornsund (broa	3.35	17	Pn	Pg	08 28 09.1	+4.7
BRBA	Barentsburg A	4.29	9	Pn	Pg	08 28 20.9	-1.5
BRBB	Barentsburg B	4.32	8	Pn	Pg	08 28 21.3	-1.8
BRBB	Barentsburg B	4.32	8	*e*P	Pg	08 28 21.5	-1.6
HOPEN	Hopen	4.43	47	Pn	Pg	08 28 26.8	+1.7
HOPEN				Sn	Sg	08 29 21.4	-1.1
HOPEN	Hopen	4.43	47	*e*P	Pg	08 28 27.2	+2.1
HOPEN				IAML		08 28 28.6	
	comp=Z,6.1nm,0.5s						
SPA0	Spitsbergen Ar	4.52	14	Pn	Pg	08 28 25.6	-1.2
	baz=190,slow=16						
SPA0	Spitsbergen Ar	4.52	14	*e*P	Pg	08 28 25.5	-1.4
SPA0				IAML		08 28 26.3	
	comp=Z,8.2nm,0.4s						
KBS	Kingsbay	5.10	2	Pn	Pb	08 28 30.2	+0.7
KBS	Kingsbay	5.10	2	*e*P	Pb	08 28 30.6	+1.0
KBS				IAML		08 28 35.0	
	comp=Z,3.2nm,0.5s						
KIF	Kilpisjarvi	5.76	143	Pn	Pb	08 28 42.9	+2.1
KIF				Sn	Sb	08 29 46.8	-2.9
KIF	Kilpisjarvi	5.76	143	Pn	Pb	08 28 42.9	+2.1
KIF				Sn	Sb	08 29 46.8	-2.9
ARA0	ARCESS Array S	6.25	127	Pn	Pb	08 28 51.2	+2.1
	baz=321,slow=12						
ARA0				Sn	Sb	08 30 00.5	-3.3
	baz=319,slow=18						
ARA0	ARCESS Array S	6.25	127	Pn	Pb	08 28 51.2	+2.1
	baz=321,slow=12						
ARA0				Sn	Sb	08 30 00.5	-3.3
	baz=319,slow=18						
ARCES	ARCESS Array B	6.25	127	P	Pb	08 28 52.6	+3.5
ARCES				S	Sb	08 30 03.6	-0.2
JNE	Jan Mayen East	6.54	254	*e*P	Pn	08 28 37.0	+0.6
JNW	Jan Mayen West	6.55	254	*e*P	Pn	08 28 37.4	+0.7
JNW				IAML		08 28 40.9	
	comp=Z,7.6nm,0.6s						
JMIC	Jan Mayen	6.60	254	*e*P	Pn	08 28 37.6	+0.3
JMIC				IAML		08 28 39.3	
	comp=Z,10nm,0.4s						
VADS	Vadso	6.75	115	S	Sb	08 30 16.6	-1.5
PRVG	Vayda Guba	7.73	112	P	Pb	08 29 15.5	+1.2
PRVG				S	Sb	08 30 39.4	-6.8
SCO	Scoresbysund	10.59	268	*i* P	Pn	08 29 30.0	-1.9

DJA 07 08:33:13.8±0.9**, 7°S**±5°×**10°5E**±°**, h11**^{km}±7^{km}**, M3.9**/7, **mb4.3**/1**, MLv3.6**/7**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CGJI	Cibinong	0.76	28	P	Pg	08 33 28.4	-0.2
CGJI				S	Sg	08 33 37.0	-1.6
SKJI	Sukabumi	1.25	77	P	Pb	08 33 37.4	0.0
CNJI	Cibinong	1.79	91	P	Pn	08 33 44.6	0.0
CNJI				S	Sn	08 34 07.6	+0.3
KASI	Kota Agung	1.94	335	P	Pn	08 33 47.0	+0.3
MDSI	Maura Dua	3.01	338	P	Pn	08 34 01.3	-0.2
CMJI	Cimerak	3.13	99	P	Pn	08 34 03.4	+0.3
PCJI	Pacitan	5.86	99	P	Pn	08 34 41.1	+0.4

ASRS ***07*** *08:49:55.0±1.2, 54.°16N×87.°11E, h0^{km}, M2.8, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 07 08:49:58.2±3.0**, 54.°24N×87.°21E, h0**^{km}**, mbtmp2.9**/2, **ML2.4**/2**, Error ellipse: s-maj=25.8km s-min=16.7km az=65.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.44	259	I	I	08 58 46.1	
	0.1nm,0.8s,baz=75,slow=321,SNR=12						
ZALV	Zalesovo Beam	1.44	259	Pg	Pn	08 50 23.3	-2.2
	1.3nm,0.3s,baz=82,slow=15,SNR=6.8						
ZALV				Lg	Lg	08 50 45.3	
	1.2nm,0.3s,baz=80,slow=26,SNR=8.7						
KURBB	Kurchatov Arra	6.43	239	Pn	Pn	08 51 34.5	+0.5
	0.1nm,0.3s,baz=55,slow=14,SNR=10						
KURBB				Lg	Lg	08 53 19.8	
	baz=52,slow=32,SNR=4.1						
	2.6nm,1.0s						
MKAR	Makanchi Array	8.09	205	Pn	Pn	08 51 58.7	+1.8
	baz=17,slow=15,SNR=1.6						
MKAR				Sn	Sn	08 53 28.2	-0.7
	0.1nm,0.3s,baz=22,slow=23,SNR=2.6						
MKAR				Lg	Lg	08 54 13.9	
	0.1nm,0.3s,baz=17,slow=30,SNR=2.4						
	0.2nm,0.4s						

WEL 07 08:54:08.9±1.0**, 46°S**±4°×**16°6E**±°**, h12**^{km}**, M3.4**/8, **ML3.9**/13**, MLv3.4**/8**, Error ellipse: s-maj=8.3km s-min=4.8km az=69.6, confirmed, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYZ	Puysegur Point	0.19	115	P	Pb	08 54 15.2	+0.9
PYZ				S	Sg	08 54 19.1	+3.2
RRKS	Rarakau	0.72	95	P	Pb	08 54 23.5	+0.1
RRKS				S	Sb	08 54 34.5	+1.2
DCZ	Deep Cove	0.80	39	P	Pg	08 54 23.7	-0.7
DCZ				S	Sg	08 54 34.8	-0.1
WHZ	Wether Hill Ro	1.07	80	P	Pb	08 54 29.2	-0.2
WHZ				S	Sn	08 54 44.1	-0.4
TAFS	Te Anau Fire S	1.12	54	P	Pb	08 54 29.2	-1.0
TAFS				S	Sn	08 54 47.2	+1.4
APZ	The Paps	1.31	125	P	Pn	08 54 31.4	-1.6
APZ				S	Sb	08 54 48.3	-1.9
MLZ	Mavora Lakes	1.38	59	P	Pb	08 54 34.4	-0.3
MLZ				S	Sg	08 54 55.1	+1.7
MSZ	Milford Sound	1.76	37	P	Pn	08 54 38.6	-0.6
SYZ	Scrubby Hill	1.93	104	P	Pn	08 54 41.5	+0.1
SYZ				S	Sn	08 55 05.4	-0.1
EAZ	Earnscleugh	2.19	68	P	Pn	08 54 46.5	+1.3
WKZ	Wanaka	2.21	56	P	Pb	08 54 47.5	-1.4
TUZ	Tuapeka	2.23	88	P	Pn	08 54 46.3	+0.7
TUZ				S	Sn	08 55 14.7	+1.6
JCZ	Jackson Bay	2.61	40	P	Pb	08 54 53.8	-2.0
ODZ	Otahua Downs	3.13	72	P	Pn	08 54 57.5	-0.6
ODZ				S	Sn	08 55 35.5	+0.1
LBZ	Lake Benmore	3.15	59	P	Pn	08 54 58.6	+0.3
FOZ	Fox Glacier	3.51	44	P	Pn	08 55 05.2	+1.9
TMZ	Timaru	3.65	64	P	Pn	08 55 04.8	-0.4
GCSZ	Gaunt Creek Bo	3.92	46	P	Pn	08 55 09.2	+0.3
GCSZ				S	Sn	08 55 56.9	+2.1
ARCZ	Arundel	3.98	59	P	Pn	08 55 09.0	-0.8
RPZ	Rata Peaks	4.05	56	P	Pn	08 55 10.2	-0.5
WVZ	Waitaha Valley	4.30	47	P	Pn	08 55 17.4	+3.2
INZ	Inchbonnie	4.92	49	P	Pn	08 55 23.0	+0.4
INZ				S	Sn	08 56 20.2	+0.9
LTZ	Lake Taylor	5.33	54	P	Pn	08 55 29.0	+0.7
LTZ				S	Sn	08 56 29.7	+0.2
THZ	Tophouse	6.36	49	P	Pn	08 55 44.5	+2.0
MRNZ	Matariki Terra	6.55	47	P	Pn	08 55 46.7	+1.6

IDC 07 09:17:33.6±10.0**, 15.°30S×173.°77W, h0**^{km}**, mb3.5**/3, **mbtmp3.5**/3**, Error ellipse: s-maj=449.6km s-min=39.8km az=139.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	49.52	257	P	P	09 26 26.7	+0.1
	1.0nm,1.1s,baz=91,slow=7.1,SNR=1.9						
	1.0nm,1.1s						
ASAR	Alice Springs	49.80	252	P	P	09 26 28.4	-0.3
	0.3nm,0.5s,baz=90,slow=7.9,SNR=6.7						
	0.3nm,0.5s						
ILAR	Eielson Array	82.42	11	P	P	09 29 57.3	0.0
	0.2nm,0.6s,baz=208,slow=4.9,SNR=4.1						
	0.2nm,0.6s						

ASRS ***07*** *09:29:57.0±1.1, 53.°59N×87.°77E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 07 09:30:01.4±2.9**, 53.°58N×87.°69E, h0**^{km}**, mbtmp3.0**/2, **ML2.6**/2**, Error ellipse: s-maj=25.1km s-min=15.1km az=67.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.74	283	I	I	09 41 07.6	
	0.1nm,0.8s,baz=100,slow=318,SNR=6.3						
ZALV	Zalesovo Beam	1.74	283	Pn	Pb	09 30 33.5	-0.6
	0.7nm,0.3s,baz=100,slow=14,SNR=13						
ZALV				Lg	Lg	09 30 55.4	
	3.1nm,0.3s,baz=100,slow=31,SNR=11						
KURBB	Kurchatov Arra	6.37	246	Pn	Pn	09 31 38.0	+1.7
	0.1nm,0.3s,baz=60,slow=13,SNR=4.1						
KURBB				Lg	Lg	09 33 21.4	
	0.3nm,0.3s,baz=60,slow=30,SNR=5.1						

	0.8nm,0.5s						
MKAR	**Makanchi Array**	**7.62**	**209**	Pn	Pn	09 31 53.7	+0.1
	0.1nm,0.3s,baz=27,slow=12,SNR=5.5						
MKAR				Sn	Sn	09 33 21.4	+0.8
	0.2nm,0.3s,baz=30,slow=27,SNR=4.6						
MKAR				Lg	Lg	09 34 02.4	
	0.1nm,0.3s,baz=29,slow=30,SNR=3.5						
	0.4nm,0.4s						

ASRS ***07*** *09:35:08.0±1.0,54°.25N×87°.12E,h0^{km},M3.0,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 07 09:35:10.8±2.9**,54°.35N×87°.21E,h0**^{km}**,mbtmp3.3**/3**, ML2.7**/3**,Error ellipse: s-maj=24.5km s-min=14.8km az=62.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.46**	**255**	I	I	09 44 02.9	
	0.1nm,0.8s,baz=74,slow=322,SNR=4.4						
ZALV	**Zalesovo Beam**	**1.46**	**255**	Pg	Pn	09 35 36.6	-1.8
	2.6nm,0.3s,baz=77,slow=17,SNR=12						
ZALV				Lg	Lg	09 35 57.6	
	2.1nm,0.3s,baz=75,slow=27,SNR=4.0						
KURBB	**Kurchatov Arra**	**6.48**	**238**	Pn	Pn	09 36 47.5	+0.1
	0.1nm,0.3s,baz=52,slow=13,SNR=5.3						
KURBB				Lg	Lg	09 38 40.4	
	baz=51,slow=34,SNR=4.1						
	1.8nm,0.2s						
MKAR	**Makanchi Array**	**8.18**	**204**	Pn	Pn	09 37 11.9	+1.2
	0.2nm,0.3s,baz=28,slow=14,SNR=3.3						
MKAR				Sn	Sn	09 38 43.6	-0.2
	0.2nm,0.3s,baz=20,slow=30,SNR=2.6						
MKAR				Lg	Lg	09 39 31.0	
	0.2nm,0.3s,baz=27,slow=29,SNR=2.4						
	0.2nm,0.3s						
BVAR	**Borovoye Array**	**10.07**	**269**	Pn	Pn	09 37 36.6	+0.1
	0.1nm,0.3s,baz=69,slow=7.9,SNR=3.1						
BVAR				Sn	Sn	09 39 23.7	-6.4
	baz=68,slow=25,SNR=4.5						
	0.7nm,0.4s						

IDC ***07*** *09:54:20.8±1.0,2°.51S×139°.87E,h0^{km},mb3.6/4, mbtmp3.7/5,ML3.6/1,Error ellipse: s-maj=23.6km s-min=10.1km az=2.0*

ISC 07 09:54:18.8±1.7**,2°.5S**±0°.2×**141°.7E**±0°.2**,h29**^{km}**,n7,σ0^{s}.39**/7**, mb3.7**/4**,Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.04**	**271**	LR	LR	09 54 37.4	
	comp=Z,34nm,19.0s,baz=300,slow=20						
JAY				Pg	**Pn**	**09 54 37.5**	**0.0**
	51nm,0.3s,baz=264,slow=11,SNR=171						
JAY				Lg	Lg	09 54 48.0	
	162nm,0.3s,baz=139,slow=18,SNR=26						
WRA	**Warramunga Arr**	**18.75**	**202**	P	**Pn**	**09 58 36.0**	**-0.1**
	0.2nm,0.3s,baz=18,slow=12,SNR=12						
	1.5nm,0.7s						
ASAR	**Alice Springs**	**22.33**	**199**	P	**P**	**09 59 14.6**	**+0.2**
	0.9nm,0.7s,baz=27,slow=10,SNR=11						
	0.9nm,0.7s						
MKAR	**Makanchi Array**	**71.53**	**321**	P	**P**	**10 05 36.7**	**-0.4**
	0.5nm,0.7s,baz=127,slow=7.0,SNR=4.3						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**75.35**	**324**	P	**P**	**10 05 59.3**	**-0.2**
	0.4nm,0.6s,baz=114,slow=6.8,SNR=3.1						
	0.4nm,0.6s						
BVAR	**Borovoye Array**	**80.92**	**325**	P	**P**	**10 06 30.9**	**+0.5**
	0.5nm,0.4s,baz=103,slow=5.0,SNR=2.4						
	0.5nm,0.4s						
DBIC	**Dimbokro**	**146.46**	**278**	PKP	**PKPab**	**10 13 58.9**	**-0.3**
	3.0nm,0.6s,baz=91,slow=4.2,SNR=5.3						

ASRS 07 09:54:35.0±0.6**,53°.56N×87°.64E,h0**^{km}**,M2.4,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.,Southwestern Siberia**

ASRS ***07*** *09:54:43.0±1.2,53°.55N×87°.65E,h0^{km},M2.9,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 07 09:54:46.1±3.5**,53°.51N×87°.74E,h0**^{km}**,mbtmp3.0**/2**, ML2.7**/2**,Error ellipse: s-maj=35.1km s-min=22.0km az=80.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.79**	**285**	I	I	10 05 38.8	
	0.1nm,0.6s,baz=101,slow=327,SNR=2.5						
ZALV	**Zalesovo Beam**	**1.79**	**285**	Pn	Pn	09 55 17.7	-0.5
	1.1nm,0.3s,baz=102,slow=14,SNR=7.8						
ZALV				Sn	Sg	09 55 43.1	-0.3
	2.0nm,0.3s,baz=109,slow=23,SNR=8.4						
KURBB	**Kurchatov Arra**	**6.37**	**247**	Pn	Pn	09 56 21.8	+0.7
	0.1nm,0.3s,baz=62,slow=14,SNR=5.0						
KURBB				Lg	Lg	09 58 06.8	
	baz=63,slow=32,SNR=12						
	0.9nm,0.5s						
MKAR	**Makanchi Array**	**7.58**	**210**	Pn	Pn	09 56 39.0	+1.3
	0.3nm,0.3s,baz=24,slow=9.4,SNR=3.8						
MKAR				Lg	Lg	09 58 45.7	
	0.1nm,0.3s,baz=27,slow=29,SNR=2.7						
	0.7nm,0.7s						

NIED ***07*** *10:08:41.4,35°.88N×140°.73E,h22^{km},MW3.4,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.08; M$_{\theta\theta}$-0.74; M$_{\phi\phi}$0.83; M$_{r\theta}$-0.40; M$_{\theta\phi}$-1.08; M$_{\phi r}$1.10; Fault plane solution: M$_{0}$1.67000×10^{14} NP1: φ$_{s}$283.00000°,δ62.00000°,λ166.00000°. NP2: φ$_{s}$19.00000°,δ78.00000°,λ29.00000°.*

JMA ***07*** *10:08:41.4±0.2,35°.9N±0°.4×140°.7E±0°.6,h22^{km}±1^{km}, MD4.0/20,MV3.7/20,SOUTHERN IBARAKI PREF*

JMA Felt II J1 at SOUTHERN IBARAKI PREF .

ISC 07 10:08:41.0±1.2**,35°.86N**±0°.04×**140°.57E**±0°.08**,h31**^{km}±9^{km}**, n15,σ0^{s}.87**/15**,5D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIHU	**Itakohorinouch**	**0.11**	**343**	⇓P	**Pn**	**10 08 47.0**	**+0.3**
JIHU				⇓S	**Sb**	**10 08 51.2**	**+0.8**
JIHU	**Itakohorinouch**	**0.11**	**343**	A	A	10 08 47.0	
	comp=N,44nm,0.6s,comp=E,27nm,1.7s						
JSMT	**Sammumatsuo**	**0.24**	**204**	P	**Pn**	**10 08 49.2**	**+0.8**
JSMT				S	**Sn**	**10 08 53.8**	**+0.8**
JSMT	**Sammumatsuo**	**0.24**	**204**	A	A	10 08 49.2	
	comp=N,30nm,0.3s,comp=E,15nm,1.0s						
JYT	**Yasato**	**0.48**	**321**	P	**Pn**	**10 08 52.0**	**+0.4**
JYT				S	**Sn**	**10 08 59.4**	**+0.5**
JYT	**Yasato**	**0.48**	**321**	A	A	10 08 52.0	
	comp=N,23nm,0.4s,comp=E,12nm,0.3s						
JHYU	**Hitachinakayam**	**0.48**	**2**	⇓P	**Pb**	**10 08 51.0**	**-0.2**
JHYU				⇓S	**Sb**	**10 08 57.8**	**-0.3**
JHYU	**Hitachinakayam**	**0.48**	**2**	A	A	10 08 51.0	
	comp=N,12nm,0.2s,comp=E,12nm,0.4s						
JHO	**Hitachi**	**0.75**	**0**	⇓*i*P	**Pn**	**10 08 54.6**	**-0.8**
JMM	**Marumori**	**2.01**	**5**	P	**Pn**	**10 09 12.9**	**+0.1**
JMM	**Marumori**	**2.01**	**5**	S	**Sn**	**10 09 37.9**	**+1.1**
MAJO	**Matsushiro**	**2.03**	**290**	P	**Pb**	**10 09 16.2**	**-1.0**
JGF	**Kuroka**	**2.62**	**265**	P	**Pb**	**10 09 26.5**	**-0.8**
JHJ2	**Mitsune**	**2.81**	**193**	P	**Pb**	**10 09 29.1**	**-1.4**
INU	**Inuyama**	**2.94**	**261**	P	**Pb**	**10 09 32.0**	**-0.6**

JMA ***07*** *10:27:48.6±0.2,24°N±1°×122°.4E±0°.4,h25^{km}±4^{km}, MV2.6/12,TAIWAN REGION*

TAP ***07*** *10:27:48.8,24°.04N×122°.40E,h26^{km},ML3.0,C*

ISC 07 10:27:48.5±0.9**,23°.96N**±0°.02×**122°.40E**±0°.02**,h26**^{km}±7^{km}**, n96,σ0^{s}.71**/148**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS4	**EOS4**	**0.17**	**336**	P	**Pb**	**10 27 53.5**	**-0.1**
EOS4				S	**Sb**	**10 27 57.2**	**+0.2**
EOS3	**EOS3**	**0.33**	**348**	*i* P	**Pb**	**10 27 56.0**	**+0.1**
EOS3				*i* S	**Sb**	**10 28 01.3**	**+0.3**
EOS2	**EOS2**	**0.48**	**342**	P	**Pn**	**10 27 58.7**	**-1.0**
EOS2				S	**Sn**	**10 28 05.8**	**-1.3**
JYNG	**Yonagunijimaku**	**0.70**	**46**	P	**Pb**	**10 28 01.8**	**-0.3**
JYNG				S	**Sb**	**10 28 10.5**	**-0.9**
EAHA	**Aohua**	**0.70**	**302**	*e*P	**Pn**	**10 28 03.4**	**+0.6**
EAHA				*e*S	**Sn**	**10 28 13.0**	**+0.2**
ETL	**Fush Village**	**0.73**	**286**	*e*P	**Pb**	**10 28 02.6**	**-0.1**
TEYL	**Yanliau Villag**	**0.73**	**263**	*e*P	**Pb**	**10 28 01.8**	**-0.9**
TEYL				*e*S	**Sn**	**10 28 14.7**	**+1.0**
EWUT	**Wuta**	**0.74**	**311**	*e*P	**Pb**	**10 28 02.4**	**-0.4**
EWUT				*e*S	**Sn**	**10 28 13.0**	**-0.8**
TWD	**Chiawan**	**0.74**	**279**	*e*P	**Pb**	**10 28 02.4**	**-0.4**
TWD				*e*S	**Sb**	**10 28 12.8**	**+0.2**
YOJ	**Yonaguni jima**	**0.75**	**48**	P	**Pb**	**10 28 02.8**	**-0.2**
YOJ	**Yonaguni jima**	**0.75**	**48**	*e*P	**Pb**	**10 28 02.8**	**-0.2**
YOJ				S	**Sb**	**10 28 12.2**	**-0.6**
YOJ	**Yonaguni jima**	**0.75**	**48**	*e*P	**Pb**	**10 28 03.0**	**0.0**
YOJ				*e*S	**Sb**	**10 28 12.7**	**-0.1**
ENA	**Nanau**	**0.76**	**308**	P	**Pb**	**10 28 02.7**	**-0.4**
ENA				S	**Sb**	**10 28 13.0**	**0.0**
NACB	**Ninganchiao**	**0.76**	**286**	P	**Pb**	**10 28 03.1**	**-0.1**
NACB	**Ninganchiao**	**0.76**	**286**	S	**Sn**	**10 28 14.4**	**+0.1**
NACB	**Ninganchiao**	**0.76**	**286**	*e*P	**Pb**	**10 28 03.0**	**-0.2**
NACB				*e*S	**Sb**	**10 28 12.8**	**-0.3**
SHUL	**Shoufeng**	**0.78**	**257**	*e*P	**Pb**	**10 28 03.6**	**+0.1**
SHUL				*i* S	**Sn**	**10 28 15.4**	**+0.6**
ESAO	**Su ao**	**0.79**	**321**	*e*P	**Pn**	**10 28 03.8**	**-0.3**
TWC	**Suao**	**0.81**	**322**	P	**Pb**	**10 28 03.2**	**-0.9**
TWC				S	**Sb**	**10 28 13.3**	**-1.4**
TEGC	**Jichi Village**	**0.82**	**252**	*e*S	**Sn**	**10 28 16.0**	**+0.2**
ETM	**Tongmen**	**0.82**	**270**	*e*P	**Pb**	**10 28 03.8**	**-0.5**
ETLH	**Xiulin Townshi**	**0.87**	**286**	*i* P	**Pb**	**10 28 04.7**	**-0.4**
ETLH				*e*S	**Sb**	**10 28 16.6**	**+0.2**
NDS	**Dongshan**	**0.91**	**317**	*e*P	**Pb**	**10 28 04.7**	**-1.0**
NDS				*e*S	**Sb**	**10 28 15.8**	**-1.6**
EGFH	**Guangfu**	**0.93**	**252**	*e*P	**Pb**	**10 28 07.0**	**+0.9**
EGFH				*i* S	**Sb**	**10 28 17.8**	**-0.2**
WARBT	**Fenglin Townsh**	**0.95**	**255**	*e*P	**Pn**	**10 28 05.5**	**-0.8**
WARBT				*e*S	**Sb**	**10 28 18.2**	**-0.5**
EGS		**0.97**	**334**	P	**Pb**	**10 28 06.3**	**-0.5**
EGS				S	**Sn**	**10 28 19.8**	**+0.3**
LATG	**Datong**	**0.98**	**306**	*e*P	**Pb**	**10 28 06.7**	**-0.2**
LATG				*e*S	**Sn**	**10 28 20.9**	**+1.1**
ILA	**Ilan**	**0.99**	**324**	*e*P	**Pb**	**10 28 08.4**	**+1.3**
HGSD	**Ruisui**	**1.00**	**242**	*e*P	**Pn**	**10 28 06.5**	**-0.5**
HGSD				*e*S	**Sb**	**10 28 19.6**	**-0.5**
TWE	**Neicheng**	**1.01**	**319**	P	**Pn**	**10 28 06.4**	**-0.6**
TWE				*e*S	**Sn**	**10 28 20.4**	**+0.1**
ENTT	**Nioudou**	**1.01**	**312**	*e*P	**Pn**	**10 28 06.6**	**-0.6**
ENTT				*e*S	**Sn**	**10 28 21.3**	**+0.8**
NNSB	**Datong**	**1.03**	**297**	*i* P	**Pb**	**10 28 07.6**	**-0.3**
NNSB				*e*S	**Sn**	**10 28 21.6**	**+0.3**
NNS	**Nan Shan**	**1.05**	**297**	*i* P	**Pb**	**10 28 07.8**	**-0.3**
NNS				S	**Sn**	**10 28 21.8**	**+0.2**
WHF	**Hehuan Shan**	**1.05**	**280**	*e*P	**Pn**	**10 28 07.7**	**-0.3**
EHYH	**Wanrong**	**1.07**	**244**	*e*P	**Pn**	**10 28 08.0**	**+0.1**
EHYH				S	**Sn**	**10 28 22.1**	**+0.2**
ECBN	**Changbin**	**1.08**	**234**	*e*P	**Pn**	**10 28 07.0**	**-1.0**
ECBN				*e*S	**Sn**	**10 28 21.4**	**-0.7**
EHY	**Hungye**	**1.08**	**245**	*e*P	**Pn**	**10 28 07.9**	**-0.2**
FUSB	**Fushanzhiwuyua**	**1.08**	**317**	*e*P	**Pb**	**10 28 08.7**	**0.0**
FUSB				*e*S	**Sn**	**10 28 22.4**	**0.0**
TWB1	**Santiao Chiao**	**1.10**	**341**	*e*P	**Pb**	**10 28 09.1**	**+0.1**
TWB1				*e*S	**Sb**	**10 28 23.3**	**+0.3**
OWD	**Renai**	**1.11**	**270**	*e*P	**Pn**	**10 28 09.0**	**+0.3**
OWD				*e*S	**Sn**	**10 28 22.6**	**-0.7**
TIPB	**Shuangxi**	**1.13**	**333**	*e*P	**Pb**	**10 28 09.0**	**-0.4**
TIPB				*e*S	**Sb**	**10 28 24.0**	**+0.2**
NWLT	**Wulai**	**1.15**	**315**	*e*P	**Pb**	**10 28 10.6**	**+0.8**
NWLT				*e*S	**Sb**	**10 28 25.8**	**+1.5**
YULB	**Yu-li**	**1.16**	**241**	P	**Pn**	**10 28 08.7**	**-0.4**
YULB	**Yu-li**	**1.16**	**241**	*i* P	**Pn**	**10 28 08.9**	**-0.2**
YULB				*i* S	**Sn**	**10 28 23.7**	**-0.4**
TDCB	**Techi**	**1.17**	**285**	*e*P	**Pb**	**10 28 10.6**	**+0.5**
VWDT	**VWDT**	**1.17**	**260**	*e*P	**Pn**	**10 28 09.6**	**+0.4**
VWDT				*e*S	**Sb**	**10 28 25.0**	**+0.3**
YHNB	**Yeheng**	**1.17**	**307**	P	**Pb**	**10 28 09.6**	**-0.5**
YHNB	**Yeheng**	**1.17**	**307**	*i* P	**Pb**	**10 28 09.8**	**-0.3**
YHNB				S	**Sb**	**10 28 24.5**	**-0.3**
WUSB	**Renai**	**1.17**	**272**	*e*P	**Pb**	**10 28 09.9**	**-0.2**
TWF1	**Yuli**	**1.18**	**239**	P	**Pn**	**10 28 09.0**	**-0.4**
TWF1				*e*S	**Sn**	**10 28 24.6**	**+0.1**
NSK	**Sanguang**	**1.18**	**307**	*e*P	**Pn**	**10 28 08.4**	**-1.1**
NSK				*e*S	**Sn**	**10 28 24.4**	**-0.5**
CHKH	**Chenggong**	**1.20**	**230**	*e*P	**Pn**	**10 28 07.8**	**-1.8**
CHKH				*e*S	**Sn**	**10 28 24.6**	**-0.4**
SXI1	**Grass Mountain**	**1.22**	**337**	*e*P	**Pb**	**10 28 11.6**	**+0.6**
SXI1				*i* S	**Sb**	**10 28 27.0**	**+0.6**
TWA	**Mucha**	**1.25**	**324**	*e*P	**Pb**	**10 28 11.5**	**-0.1**
TWA				*e*S	**Sb**	**10 28 28.8**	**+1.4**
FULB	**Fuli**	**1.26**	**233**	P	**Pn**	**10 28 10.3**	**-0.3**
FULB				*e*S	**Sn**	**10 28 26.7**	**-0.1**
NHDH	**Xindian Distri**	**1.27**	**322**	*e*P	**Pb**	**10 28 11.4**	**-0.5**
CHKT	**Chengkung**	**1.28**	**228**	*e*P	**Pn**	**10 28 09.9**	**-0.8**
CHKT				*i* S	**Sn**	**10 28 25.1**	**-1.9**
HATJ	**Hateruma jima**	**1.29**	**86**	*e*S	**Sb**	**10 28 28.6**	**+0.2**
TATO	**Taipei**	**1.30**	**321**	P	**Pb**	**10 28 12.6**	**+0.2**
SSLB	**Suanglung**	**1.33**	**263**	P	**Pb**	**10 28 13.6**	**+0.7**
NFF	**Wufeng Townshi**	**1.34**	**300**	P	**Pb**	**10 28 12.9**	**-0.2**
EHD	**Haiduan**	**1.36**	**234**	*e*P	**Pn**	**10 28 11.8**	**-0.1**
WHP	**Taichung City**	**1.36**	**284**	*i* P	**Pb**	**10 28 14.3**	**+0.8**
WHP				*e*S	**Sb**	**10 28 31.8**	**+1.3**
SMLT	**Sun Moon Lake**	**1.37**	**267**	*e*P	**Pb**	**10 28 13.7**	**+0.2**
KSHI	**Guanxi Townshi**	**1.38**	**306**	*e*P	**Pb**	**10 28 13.8**	**+0.2**
EDH	**Donghe**	**1.41**	**226**	*e*P	**Pn**	**10 28 12.0**	**-0.5**
EDH				*i* S	**Sn**	**10 28 28.5**	**-1.7**
TYC	**Yuchr**	**1.41**	**268**	*e*P	**Pb**	**10 28 14.9**	**+0.8**
ZUZH	**Zhuzihu**	**1.42**	**327**	*e*P	**Pb**	**10 28 14.1**	**-0.4**
LIOB	**Emei**	**1.43**	**299**	P	**Pb**	**10 28 14.7**	**+0.1**
NSTT	**Nanjuang**	**1.44**	**298**	*e*P	**Pb**	**10 28 14.5**	**-0.2**
WHYT	**Xinyi Township**	**1.44**	**260**	*e*P	**Pn**	**10 28 14.0**	**+1.0**
TWY	**Chenhua**	**1.50**	**331**	*e*P	**Pb**	**10 28 15.8**	**+0.2**
JKRS	**Kuro-shima**	**1.50**	**79**	*e*P	**Pb**	**10 28 14.8**	**-0.9**
ALS	**Alishan**	**1.52**	**253**	*e*P	**Pb**	**10 28 15.7**	**-0.7**
LDUT	**Ludao**	**1.54**	**214**	*e*P	**Pn**	**10 28 14.2**	**-0.2**
LONT	**Longtian**	**1.57**	**228**	*e*P	**Pn**	**10 28 14.6**	**-0.1**
LONT				*e*S	**Sn**	**10 28 34.1**	**-0.1**
JIJ	**Ishigaki jima**	**1.65**	**76**	*e*P	**Pn**	**10 28 16.4**	**+0.5**
JIJ				*e*S	**Sn**	**10 28 37.0**	**+0.8**
TWGBT	**Beinan**	**1.66**	**227**	P	**Pn**	**10 28 16.1**	**0.0**
TWGBT	**Beinan**	**1.66**	**227**	*e*P	**Pn**	**10 28 16.1**	**0.0**
TWGBT				*i* S	**Sn**	**10 28 37.3**	**+0.7**
TWG	**Pinlang**	**1.66**	**227**	*e*P	**Pn**	**10 28 16.0**	**-0.1**
TWG				*i* S	**Sn**	**10 28 35.8**	**-0.9**
STYH	**Taoyuan**	**1.68**	**242**	*e*P	**Pn**	**10 28 17.0**	**+0.7**
WDLH	**Douliu**	**1.72**	**261**	*e*P	**Pb**	**10 28 19.1**	**-0.4**
TPUB	**Ta-pu**	**1.75**	**248**	P	**Pb**	**10 28 20.4**	**+0.4**
TPUB	**Ta-pu**	**1.75**	**248**	*e*P	**Pb**	**10 28 19.8**	**-0.2**
TPUB				S	**Sb**	**10 28 41.6**	**+0.1**
CHN4	**Tsaushan**	**1.76**	**250**	*e*P	**Pb**	**10 28 19.6**	**-0.6**
WTP	**Ta-pu**	**1.78**	**247**	*e*P	**Pb**	**10 28 19.7**	**-0.9**
JISG	**Ishigakijimahi**	**1.86**	**70**	*e*P	**Pn**	**10 28 19.3**	**+0.6**
JISG				*e*S	**Sn**	**10 28 41.7**	**+0.4**
WTK	**Tuku**	**1.86**	**262**	*e*P	**Pb**	**10 28 20.6**	**-1.2**
CHN1	**Nanshi**	**1.88**	**246**	*e*P	**Pb**	**10 28 22.6**	**+0.4**
CHN1				S	**Sb**	**10 28 44.7**	**-0.6**
SGST	**Jiashian**	**1.88**	**243**	*e*P	**Pn**	**10 28 19.7**	**+0.6**
TWK	**Hsinying**	**1.88**	**249**	*e*P	**Pb**	**10 28 21.3**	**-0.9**
SNST	**Tainan City**	**1.89**	**247**	*e*P	**Pb**	**10 28 21.8**	**-0.6**
TSMG	**Majia**	**2.04**	**232**	*e*P	**Pn**	**10 28 22.2**	**+1.0**
MASBT	**Mashibuluo**	**2.10**	**231**	*e*P	**Pn**	**10 28 22.1**	**-0.1**
EAST	**Anshuo**	**2.12**	**222**	*e*P	**Pn**	**10 28 23.7**	**+1.3**
TWKBT	**Hengchun**	**2.48**	**216**	*e*P	**Pn**	**10 28 30.3**	**+2.9**
TWKBT				*i* S	**Sn**	**10 28 57.8**	**+0.9**

AZER ***07*** *10:37:15.7,38°.75N×48°.55E,h20^{km},ml2.8*

TEH ***07*** *10:37:16.9,38°.57N×48°.43E,h10^{km}*

ISC 07 10:37:17.4±1.0**,38°.68N**±0°.04×**48°.53E**±0°.04**,h26**^{km}±7^{km}**, n18,σ1^{s}.13**/32**,Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LRK	**Lerik**	**0.15**	**256**	P	**Pb**	**10 37 22.7**	**-0.1**
LRK				S	**Sb**	**10 37 27.6**	**+1.1**
LKRN	**Lenkeran, Azer**	**0.20**	**81**	P	**Pb**	**10 37 22.0**	**-1.1**
LKRN				S	**Sb**	**10 37 26.8**	**-0.2**
ASTR	**Astara**	**0.24**	**120**	P	**Pb**	**10 37 22.7**	**-0.9**
ASTR				S	**Sb**	**10 37 27.9**	**+0.1**
YRD	**Yardimli**	**0.33**	**316**	P	**Pb**	**10 37 24.1**	**-1.0**
YRD				S	**Sb**	**10 37 30.2**	**-0.1**
GAS1	**Astara - Iran**	**0.38**	**140**	Pg	**Pb**	**10 37 24.5**	**-1.1**
GRMI	**Germi**	**0.51**	**285**	Pg	**Pb**	**10 37 26.7**	**-1.3**
GLBA	**Clilabad**	**0.57**	**349**	P	**Pb**	**10 37 27.3**	**-1.5**
GLBA				S	**Sb**	**10 37 36.5**	**-0.1**
IHRS	**Heris**	**1.22**	**253**	Pg	**Pn**	**10 37 38.3**	**-0.7**
IHRS				Sg	**Sb**	**10 37 55.2**	**-0.1**
QRD	**Qoradiz**	**1.22**	**310**	P	**Pn**	**10 37 37.7**	**-1.1**
QRD				S	**Sn**	**10 37 54.2**	**-0.3**
BLQ	**Beylaqan**	**1.28**	**324**	P	**Pn**	**10 37 38.4**	**-1.2**
BLQ				S	**Sn**	**10 37 55.3**	**-0.7**
AGDM	**Agdam**	**1.80**	**323**	Pn	**Pn**	**10 37 46.2**	**-0.6**
AGDM				Sn	**Sn**	**10 38 09.8**	**+1.0**
BRDA	**Brd**	**1.90**	**327**	Pn	**Pn**	**10 37 48.0**	**0.0**
BRDA				Sn	**Sb**	**10 38 14.1**	**-0.4**
ORD	**Ordubad**	**2.00**	**278**	Pn	**Pn**	**10 37 50.0**	**+0.5**
ORD				Sn	**Sb**	**10 38 16.7**	**-0.9**
NAX	**Nakhchivan**	**2.42**	**283**	Sn	**Sb**	**10 38 29.9**	**+0.2**
SBZ	**Shahbuz**	**2.43**	**288**	Pn	**Pn**	**10 37 57.5**	**+2.1**
SBZ				Sn	**Sb**	**10 38 30.0**	**+0.1**
XNQ	**Khinaliq**	**2.51**	**353**	Pn	**Pn**	**10 37 58.9**	**+2.3**
XNQ				Sn	**Sn**	**10 38 28.2**	**+1.7**
GANJ	**Ganja**	**2.60**	**320**	Sn	**Sn**	**10 38 29.8**	**+1.3**
GDB	**GEDABAY**	**2.96**	**314**	Pn	**Pn**	**10 38 02.8**	**0.0**
GDB				Sn	**Sn**	**10 38 40.0**	**+2.5**

CATAC ***07*** *10:46:05.1±0.8,13°N±5°×8°9W±°,h30^{km}±8^{km},M2.9/12, MLv2.9/12,Error ellipse: s-maj=10.8km s-min=5.4km az=30.2,confirmed*

SNET ***07*** *10:46:06.2±0.8,12°.85N×88°.93W,h37^{km}±64^{km},ML2.9*

GCG ***07*** *10:46:06.4±0.3,12°.85N×89°.00W,h58^{km}±14^{km},MD3.7*

ISC 07 10:46:04.7±1.9**,12°.74N**±0°.08×**88°.95W**±0°.05**,h31**^{km}±13^{km}**, n47,σ0^{s}.43**/59**,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALJI	**Alcalda de J**	**0.69**	**32**	*e*P	**Pb**	**10 46 18.3**	**0.0**
ALJI				*e*S	**Sb**	**10 46 27.3**	**-0.3**
ALJI	**Alcalda de J**	**0.69**	**32**	P	**Pb**	**10 46 18.2**	**-0.1**
ALJI	**Alcalda de J**	**0.69**	**32**	S	**Sb**	**10 46 28.7**	**+1.1**
TECO	**Alcaldia de Te**	**0.81**	**11**	*e*P	**Pn**	**10 46 19.8**	**-0.2**
TECO				*e*S	**Sb**	**10 46 29.9**	**-1.1**
TECO	**Alcaldia de Te**	**0.81**	**11**	P	**Pn**	**10 46 19.7**	**-0.3**
TECA	**Tecapa**	**0.87**	**30**	*e*P	**Pn**	**10 46 20.9**	**0.0**
TECA				*e*P		10 46 20.9	
COEG	**Centro de Oper**	**0.88**	**4**	*e*P	**Pn**	**10 46 20.6**	**-0.3**
COEG				*e*S	**Sn**	**10 46 32.0**	**-0.8**
COEG				IAML		10 46 35.8	
	comp=Z,90nm,0.1s						
COEG	**Centro de Oper**	**0.88**	**4**	P	**Pn**	**10 46 20.4**	**-0.6**
LFRS	**El Faro**	**0.89**	**353**	*e*P	**Pn**	**10 46 20.8**	**-0.3**
LFRS				*e*S	**Sn**	**10 46 32.7**	**-0.3**
UESV	**Universidad de**	**0.91**	**10**	*e*P	**Pn**	**10 46 21.3**	**0.0**
UESV	**Universidad de**	**0.91**	**10**	P	**Pn**	**10 46 21.3**	**0.0**
UESV	**Universidad de**	**0.91**	**10**	S	**Sn**	**10 46 33.7**	**+0.3**
LOMA	**Loma Larga**	**0.93**	**346**	*e*P	**Pn**	**10 46 21.6**	**-0.1**
LOMA	**Loma Larga**	**0.93**	**346**	P	**Pn**	**10 46 21.6**	**-0.1**
LOMA	**Loma Larga**	**0.93**	**346**	S	**Sn**	**10 46 34.4**	**+0.3**
LCY	**Lacayo**	**0.93**	**43**	*e*P	**Pn**	**10 46 22.3**	**+0.5**
PACA	**Pacayal**	**0.95**	**40**	*e*P	**Pn**	**10 46 22.3**	**+0.4**
PACA	**Pacayal**	**0.95**	**40**	P	**Pn**	**10 46 22.3**	**+0.4**
PACA	**Pacayal**	**0.95**	**40**	S	**Sn**	**10 46 34.8**	**+0.3**
PQSS	**Presa 15 de Se**	**0.96**	**23**	*e*P	**Pn**	**10 46 22.5**	**+0.5**
PQSS				IAML		10 46 37.0	
	comp=Z,448nm,0.2s						
PAVA	**Las Pavas**	**0.97**	**0**	*e*P	**Pn**	**10 46 22.2**	**0.0**
PAVA				*e*S	**Sn**	**10 46 34.4**	**-0.7**
PAVA	**Las Pavas**	**0.97**	**0**	P	**Pn**	**10 46 22.3**	**0.0**
PAVA	**Las Pavas**	**0.97**	**0**	S	**Sn**	**10 46 35.3**	**+0.2**
SCLA	**Alcaldia de Sa**	**0.98**	**12**	*e*P	**Pn**	**10 46 22.6**	**+0.3**
SCLA				*e*S	**Sn**	**10 46 35.6**	**+0.3**
SCLA	**Alcaldia de Sa**	**0.98**	**12**	P	**Pn**	**10 46 22.7**	**+0.3**
PMON	**Piamonte**	**1.03**	**340**	*e*P	**Pn**	**10 46 23.1**	**0.0**
PMON				*e*S	**Sn**	**10 46 36.2**	**-0.4**
PMON	**Piamonte**	**1.03**	**340**	P	**Pn**	**10 46 23.2**	**+0.1**
JAYA	**Jayaque - finc**	**1.03**	**332**	*e*P	**Pn**	**10 46 23.3**	**0.0**
JAYA				*e*S	**Sn**	**10 46 35.9**	**-0.8**
JAYA				IAML		10 46 37.3	
	comp=Z,748nm,0.1s						
JAYA	**Jayaque - finc**	**1.03**	**332**	*i* P	**Pn**	**10 46 23.3**	**0.0**
JAYA				*e*S	**Sn**	**10 46 36.3**	**-0.5**
JAYA	**Jayaque - finc**	**1.03**	**332**	P	**Pn**	**10 46 23.2**	**0.0**
BOQS	**Boqueron**	**1.04**	**342**	*e*P	**Pn**	**10 46 23.7**	**+0.3**
BOQS				*e*S	**Sn**	**10 46 37.6**	**+0.6**
PIC2	**El Picacho**	**1.04**	**343**	*e*P	**Pn**	**10 46 23.6**	**+0.2**
LCND	**La Caada**	**1.18**	**61**	*e*P	**Pn**	**10 46 25.2**	**+0.2**
LCND				IAML		10 46 44.7	
	comp=Z,272nm,0.3s						
LCND	**La Caada**	**1.18**	**61**	P	**Pn**	**10 46 25.1**	**+0.2**
CNCH	**Conchagua**	**1.21**	**64**	*e*P	**Pn**	**10 46 25.8**	**+0.2**
CNCH	**Conchagua**	**1.21**	**64**	P	**Pn**	**10 46 25.7**	**+0.2**
CEVE	**Cerro Verde**	**1.27**	**329**	*e*P	**Pn**	**10 46 27.0**	**+0.5**
CEVE				IAML		10 46 46.5	
	comp=Z,239nm,0.3s						
SBLS	**San Blas**	**1.28**	**329**	*e*P	**Pn**	**10 46 27.4**	**+0.8**
SNJE	**San Jose**	**1.29**	**330**	*e*P	**Pn**	**10 46 27.1**	**+0.3**
CSGN	**Cosiguina Volc**	**1.37**	**80**	P	**Pn**	**10 46 28.2**	**+0.4**
NUBE	**Las Nubes**	**1.41**	**325**	*e*P	**Pn**	**10 46 28.4**	**0.0**
NUBE				*e*S	**Sn**	**10 46 46.2**	**+0.2**
NUBE	**Las Nubes**	**1.41**	**325**	*i* P	**Pn**	**10 46 28.8**	**+0.4**
NUBE				*i* S	**Sn**	**10 46 46.5**	**+0.4**
NUBE	**Las Nubes**	**1.41**	**325**	P	**Pn**	**10 46 28.7**	**+0.3**
MTO3	**Montecristo**	**1.70**	**346**	*i* P	**Pn**	**10 46 33.1**	**+0.6**
MTO3	**Montecristo**	**1.70**	**346**	P	**Pn**	**10 46 32.9**	**+0.5**
POLN	**Al Sur del Vol**	**2.08**	**92**	S	**Sn**	**10 47 01.7**	**-0.7**
COPN	**Copaltepe**	**2.37**	**103**	P	**Pn**	**10 46 41.3**	**-0.1**

BGSI ***07*** *10:51:59.7±0.6,23°.61S×26°.66E,h229^{km}±10^{km},ML2.5*

PRE ***07*** *10:52:07.4±1.1,23°.79S×27°.67E,h0^{km},ML1.8,Suspected explosion*

ISC 07 10:51:60.0±0.9**,23°.54S**±0°.04×**27°.64E**±0°.04**,h0**^{km}**,n8, σ0^{s}.81**/14**,South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEPH	**Lephalale, Lim**	**0.35**	**155**	*e*P	**Pb**	**10 52 09.1**	**0.0**
LEPH				*e*S	**Sg**	**10 52 12.1**	**+0.8**
LEPH				IAML		10 52 27.1	
	comp=Z,116nm,0.4s						
MREMI	**Moremi**	**0.98**	**350**	*i* P	Pn	10 52 32.9	+12
MREMI				IAML		10 52 48.7	
	comp=N,116nm,0.3s						
LPHEP	**Lephephe**	**1.64**	**276**	*i* P	**Pn**	**10 52 29.8**	**-0.4**
LPHEP				*i* S	**Sg**	**10 52 52.7**	**0.0**
LPHEP				IAML		10 53 05.3	
	comp=N,37nm,0.3s						
HRAO	**HartRAO**	**2.34**	**179**	*e*P	**Pg**	**10 52 45.4**	**+0.6**
HRAO				*e*S	**Sb**	**10 53 11.8**	**-0.9**
HRAO				IAML		10 53 22.9	
	comp=Z,10nm,0.2s						
LBTB	**Lobatse**	**2.37**	**231**	*e*P	**Pg**	**10 52 46.5**	**+1.1**
LBTB				*e*S	**Sg**	**10 53 15.5**	**-0.7**
LBTB				IAML		10 53 21.7	
	comp=Z,8.6nm,0.2s						
BROLN	**Tlhalogang**	**2.44**	**353**	*i* P	**Pb**	**10 52 45.1**	**+0.2**
BROLN				*i* S	**Sg**	**10 53 18.1**	**-0.4**
BROLN				IAML		10 53 33.5	
	comp=E,18nm,0.7s						
PILG	**Pilgrimsrest,**	**3.13**	**117**	*e*P	**Pb**	**10 52 56.7**	**0.0**
PILG				*e*S	**Sb**	**10 53 34.0**	**-1.5**
PILG				IAML		10 53 55.0	
	comp=Z,5.9nm,0.6s						
MOPA	**Mopani**	**3.45**	**90**	*e*P	**Pb**	**10 53 02.9**	**+0.9**
MOPA				*e*S	**Sb**	**10 53 44.0**	**-0.6**
MOPA				IAML		10 54 07.1	
	comp=Z,11nm,0.3s						

CATAC ***07*** *10:53:50.6±0.9,13°N±6°×8°9W±°,h28^{km}±6^{km},M3.1/11, MLv3.1/11,Error ellipse: s-maj=12.9km s-min=5.3km az=9.6,confirmed*

SNET ***07*** *10:53:51.4±0.8,13°.13N×89°.47W,h50^{km}±7^{km},ML3.2*

GCG ***07*** *10:53:51.8±0.8,13°.12N×89°.56W,h46^{km}±13^{km},MD3.7, ML2.7*

ISC 07 10:53:50.4±2.4**,13°.0N**±0°.1×**89°.53W**±0°.07**,h42**^{km}±28^{km}**, n52,σ0^{s}.33**/62**,El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.51**	**23**	*e*P	**Pn**	**10 54 01.6**	**+0.3**
LALI				*e*S	**Sn**	**10 54 09.2**	**+0.2**
LALI	**Alcalda de L**	**0.51**	**23**	*i* P	**Pn**	**10 54 01.7**	**+0.3**

LALI				IAML		10 54 10.3	
	comp=N,271nm,0.3s						
JAYA	Jayaque - finc	0.64	7	eP	Pn	10 54 03.2	0.0
JAYA				eS	Sn	10 54 11.9	-0.4
JAYA	Jayaque - finc	0.64	7	i P	Pn	10 54 03.2	0.0
JAYA				i S	Sn	10 54 12.6	+0.2
JAYA	Jayaque - finc	0.64	7	P	Pn	10 54 03.0	-0.2
PMON	Piamonte	0.72	16	eP	Pn	10 54 04.1	-0.2
PMON				eS	Sn	10 54 14.5	+0.2
PMON	Piamonte	0.72	16	P	Pn	10 54 04.1	-0.2
UEES	Universidad Ev	0.75	22	eP	Pn	10 54 04.5	-0.1
UEES				eS	Sn	10 54 15.1	+0.2
UEES				IAML		10 54 17.2	
	comp=Z,694nm,0.1s						
UEES	Universidad Ev	0.75	22	P	Pn	10 54 04.5	-0.1
BOQS	Boqueron	0.76	18	eP	Pn	10 54 04.9	+0.1
BOQS				eS	Sn	10 54 15.2	0.0
LFRS	El Faro	0.76	37	eP	Pn	10 54 04.7	0.0
LFRS				eS	Sn	10 54 14.5	-0.6
UESS	Universidad de	0.77	24	eP	Pn	10 54 04.8	-0.1
PIC2	El Picacho	0.77	20	eP	Pn	10 54 05.3	+0.2
CEVE	Cerro Verde	0.81	353	eP	Pn	10 54 05.9	+0.2
CEVE	Cerro Verde	0.81	353	P	Pn	10 54 05.8	+0.2
SBLS	San Blas	0.82	353	eP	Pn	10 54 06.1	+0.3
SNJE	San Jose	0.85	355	eP	Pn	10 54 06.3	+0.1
COEG	Centro de Oper	0.87	46	eP	Pn	10 54 05.9	-0.4
COEG	Centro de Oper	0.87	46	P	Pn	10 54 05.8	-0.5
COEG	Centro de Oper	0.87	46	S	Sn	10 54 17.7	-0.1
RTR	El Retiro	0.89	352	eP	Pn	10 54 06.9	+0.3
TECO	Alcaldia de Te	0.89	54	eP	Pn	10 54 06.1	-0.4
TECO	Alcaldia de Te	0.89	54	P	Pn	10 54 06.0	-0.5
TECO	Alcaldia de Te	0.89	54	S	Sn	10 54 17.9	-0.3
PAVA	Las Pavas	0.90	39	eP	Pn	10 54 06.9	+0.2
PAVA				IAML		10 54 19.8	
	comp=Z,1µm,0.3s						
PAVA	Las Pavas	0.90	39	P	Pn	10 54 06.8	0.0
PAVA	Las Pavas	0.90	39	S	Sn	10 54 18.7	+0.1
NUBE	Las Nubes	0.92	344	eP	Pn	10 54 07.0	0.0
NUBE				eS	Sn	10 54 17.9	-1.1
NUBE	Las Nubes	0.92	344	i P	Pn	10 54 07.0	0.0
NUBE				i S	Sn	10 54 19.3	+0.2
NUBE	Las Nubes	0.92	344	P	Pn	10 54 06.8	-0.2
NUBE	Las Nubes	0.92	344	S	Sn	10 54 18.7	-0.3
UESV	Universidad de	0.95	49	eP	Pn	10 54 07.0	-0.2
UESV	Universidad de	0.95	49	P	Pn	10 54 06.9	-0.4
UESV	Universidad de	0.95	49	S	Sn	10 54 19.0	-0.7
FAME	Alcaldia de Sa	0.95	330	P	Pn	10 54 07.3	-0.1
ALJI	Alcalda de J	0.98	71	eP	Pn	10 54 07.4	-0.3
ALJI				eS	Sn	10 54 20.3	-0.1
SCLA	Alcaldia de Sa	1.03	49	eP	Pn	10 54 08.8	+0.3
SCLA	Alcaldia de Sa	1.03	49	P	Pn	10 54 08.6	+0.1
SCLA	Alcaldia de Sa	1.03	49	S	Sn	10 54 22.3	+0.5
SLOZ	Alcaldia de Sa	1.04	346	eP	Pn	10 54 08.7	+0.2
SLOZ				eS	Sn	10 54 21.8	0.0
PACA	Pacayal	1.25	69	eP	Pn	10 54 12.1	+0.5
PACA	Pacayal	1.25	69	P	Pn	10 54 11.9	+0.3
PACA	Pacayal	1.25	69	S	Sn	10 54 27.4	+0.1
LCY	Lacayo	1.27	71	eP	Pn	10 54 12.0	+0.3
BLLM	Bellamira	1.32	71	eP	Pn	10 54 12.8	+0.4
MTO3	Montecristo	1.39	7	eP	Pn	10 54 13.8	+0.3
MTO3	Montecristo	1.39	7	i P	Pn	10 54 13.8	+0.3
MTO3	Montecristo	1.39	7	P	Pn	10 54 13.6	+0.1
ESQI	Esquipulas	1.55	7	eP	Pn	10 54 16.1	+0.6
LCND	La Caada	1.62	79	eP	Pn	10 54 16.4	-0.1
CNCH	Conchagua	1.67	81	eP	Pn	10 54 17.5	+0.2
STG8	El Palmar, Qui	2.28	309	eP	Pn	10 54 31.6	+5.9
STG8				IAML		10 55 04.6	
	comp=N,69nm,0.2s						

IDC ***07*** *10:59:05.0±0.6, 6°.75N×72°.99W, h157km±9km, mb3.5/8, mbtmp4.2/12, Error ellipse: s-maj=24.5km s-min=6.9km az=133.0*
RSNC ***07*** *10:59:06.2±0.0, 7°N±1°×7°3W±°, h150km±2km, M4.3, mB5.1, mb4.7, ML3.9, Mw(mB)4.4*
NEIC ***07*** *10:59:07.4±1.4, 6°.5N±0°.1×73°.1W±0°.1, h186km±7km, mb4.1/100, Error ellipse: s-maj=21.5km s-min=15.2km az=110.0*
ISC 07 10:59:05.3±0.6**, 6°.86N**±0°.03×**73°.12W**±0°.04**, h159**km±5km**,**
n178, σ1s.61/210**, mb4.1**/54**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.27	193	P	Pn	10 59 26.5	-0.7
BARC				S	Sn	10 59 41.9	-1.9
BRJC	Barrancabermej	0.63	280	P	Pn	10 59 28.1	-0.2
BRJC				S	Sn	10 59 45.2	-0.7
PAMC	Pamplona, Colo	0.63	41	P	Pn	10 59 29.4	+0.4
PAMC				S	Sn	10 59 46.3	-0.7
RUSC	La Rusia	0.96	178	P	Pn	10 59 30.4	-0.8
RUSC				S	Sn	10 59 49.4	-1.6
PTBC	PUERTO BERRIO,	1.36	257	P	Pn	10 59 32.8	-1.4
PTBC				S	Sn	10 59 54.1	-2.3
TAMC	Tame, Arauca	1.39	108	P	Pn	10 59 35.0	+0.5
TAMC				S	Sn	10 59 56.3	-0.5
SPBC	San Pablo de B	1.53	218	P	Pn	10 59 35.2	-0.8
SPBC				S	Sn	10 59 57.4	-2.1
ZARC	Zaragoza, Cauc	1.83	290	P	Pn	10 59 38.4	-0.7
ZARC				S	Sn	11 00 04.3	-0.9
NORC	Norcasia	2.16	234	P	Pn	10 59 42.0	-1.0
NORC				S	Sn	11 00 11.1	-0.9
CHIC	Chingaza	2.30	195	P	Pn	10 59 44.4	-0.5
CHIC				S	Sn	11 00 13.8	-1.6
ROSC	El Rosal	2.33	211		Pn	10 59 46.1	+0.8
ROSC				Sn	Sn	11 00 16.6	+0.5
ROSC	El Rosal	2.33	211	P	Pn	10 59 46.1	+0.8
	856nm,0.4s,baz=301,slow=14,SNR=299						
ROSC				S	Sn	11 00 15.4	-0.7
	1µm,0.3s,baz=12,slow=23,SNR=18						
ROSC	El Rosal	2.33	211	P	Pn	10 59 46.0	+0.8
ROSC				S	Sn	11 00 16.4	+0.3
CVER	Cruz Verde, Cu	2.51	202	P	Pn	10 59 47.9	+0.4
CVER				S	Sn	11 00 19.5	-0.5
UREC	San Jos de Ur	2.55	290	P	Pn	10 59 46.0	-1.5
UREC				S	Sn	11 00 17.1	-3.0
GUY2C	Guyana, Caldas	2.76	234	P	Pn	10 59 50.3	-0.3
GUY2C				S	Sn	11 00 24.6	-0.9
VILC	Villavicencio,	2.79	192	P	Pn	10 59 49.7	-0.9
VILC				S	Sn	11 00 23.8	-1.8
NIZA	Niza - Manizal	2.94	233	P	Pn	10 59 53.5	+0.9
NIZA				S	Sn	11 00 32.1	+2.9
CBOC	Ciudad Bolivar	3.04	251	P	Pn	10 59 54.0	+0.3
CBOC				S	Sn	11 00 29.6	-1.6
DBBC	Dabeiba	3.07	273	P	Pn	10 59 53.9	-0.1
DBBC				S	Sn	11 00 28.8	-2.9
ARGC	Ariguani, Magd	3.18	340	P	Pn	10 59 56.5	+1.2
ARGC				S	Sn	11 00 35.2	+1.0
SDV	Santo Domingo	3.18	51	P	Pn	10 59 56.1	+0.5
	94nm,0.3s,baz=136,slow=2.3,SNR=93						
SDV				S	Sn	11 00 33.3	-1.2
	384nm,0.4s,baz=60,slow=22,SNR=42						
SDV	Santo Domingo	3.18	51	P	Pn	10 59 56.0	+0.5
SDV				S	Sn	11 00 33.8	-0.7
ANIL	Santa Ana	3.27	224	P	Pn	10 59 56.7	-0.1
ANIL				S	Sn	11 00 37.1	+0.5
APAC	Apartado, Choc	3.58	287	P	Pn	11 00 00.1	-0.3
APAC				S	Sn	11 00 40.5	-2.8
PRAC	Prado	3.59	209	P	Pn	11 00 00.3	-0.3
PRAC				S	Sn	11 00 42.5	-1.0
ORTC	Ortega, Tolima	3.62	216	P	Pn	11 00 00.1	-0.8
ORTC				S	Sn	11 00 43.3	-0.9
SJCC	San Jacinto, C	3.64	326	P	Pn	10 59 59.9	-1.4
SJCC				S	Sn	11 00 41.4	-3.4
PLMC	San Jos del P	3.70	238	P	Pn	11 00 01.8	-0.2
PLMC				S	Sn	11 00 45.6	-0.4
LCBC	Los crdobas,	3.78	302	P	Pn	10 59 59.1	-3.9
LCBC				S	Sn	11 00 44.2	-3.6
URMC	La Uribe, Meta	3.80	199	P	Pn	11 00 03.8	+0.4
URMC				S	Sn	11 00 46.9	-1.6
CRJC	Cerrejon, Guaj	4.14	3	P	Pn	11 00 06.8	-1.0
CRJC				S	Sn	11 00 53.3	-3.1
YOTC	Yotoco, Valle	4.30	228	P	Pn	11 00 08.9	-0.9
GUVC	San Jose del G	4.32	173	P	Pn	11 00 08.9	-1.1
GUVC				S	Sn	11 00 57.2	-3.2
SMRC	Santa Marta, M	4.41	346	Pn	Pn	11 00 11.4	+0.2
SMRC	Santa Marta, M	4.41	346	P	Pn	11 00 11.1	-0.1
SMRC				S	Sn	11 00 59.5	-3.2
PTAC	Punta Ardita,	4.66	274	P	Pn	11 00 14.0	-0.5
MACC	Macarena, Meta	4.74	189	P	Pn	11 00 13.6	-2.0
BETC	Betania	4.75	209	P	Pn	11 00 14.8	-0.9
URIC	Uribia, Colomb	4.94	13	P	Pn	11 00 17.0	-1.1
MALC	Bahia Malaga	5.06	236	P	Pn	11 00 20.8	+1.1
	269nm,1.3s						
JAMC	Jamundi, Valle	5.06	225	P	Pn	11 00 19.2	-0.8
	2µm72nm,0.8s						
GARC	Garzon, Huila	5.21	207	P	Pn	11 00 20.6	-1.4
BAUV	El Baul	5.44	67	Pn	Pn	11 00 22.9	-1.8
POPC	Popayan, Colom	5.56	220	P	Pn	11 00 26.5	-0.1
	939nm73nm,0.7s						
FLOC	Florencia	5.82	206	Pn	Pn	11 00 28.6	-1.2
FLOC	Florencia	5.82	206	P	Pn	11 00 28.9	-0.9
	1µm128nm,1.1s						
GR1C	Gorgona, Isla	6.32	233	P	Pn	11 00 34.3	-2.1
BBAC	Balboa, Cauca	6.33	221	P	Pn	11 00 37.5	+0.8
	2µm72nm,0.7s						
GCUF	Volcan Galeras	7.00	217	P	Pn	11 00 46.6	+0.6
BCIP	Isla Barro Col	7.03	289	Pn	Pn	11 00 44.3	-1.6
BCIP	Isla Barro Col	7.03	289	P	Pn	11 00 44.1	-1.8
OTAV	Otavalo	8.46	219	Pn	Pn	11 00 57.9	-7.4
PCRV	Puerto La Cruz	9.02	68	P	Pn	11 01 12.7	+0.4
	3.2nm,0.3s,baz=325,slow=5.9,SNR=7.1						
PCRV				S	Sn	11 02 49.9	-2.7
	9.1nm,0.4s,baz=103,slow=18,SNR=2.2						
COHC	Cochancay	11.10	214	Pn	Pn	11 01 37.7	-2.1
LCR2	La Lucha 2	11.14	286	Pn	Pn	11 01 42.1	+1.6
HDC	Heredia	11.31	287	Pn	Pn	11 01 45.4	+2.8
HOJ	Hope	11.63	343	i P	P	11 01 54.8	+1.2
STH	Stony Hill	11.71	342	i P	Pn	11 01 50.0	+2.3
STH				i S	Sn	11 03 45.5	-12
SOCE	Pocosol	11.89	288	Pn	P	11 01 53.9	-2.7
MTDJ	Mount Denham	12.09	340	Pn	Pn	11 01 54.8	+2.2
MTDJ	Mount Denham	12.09	340	i P	Pn	11 01 55.3	+2.6
SDDR	Presa de Saban	12.18	8	Pn	Pn	11 01 54.3	+0.5
CELP	Cerrillos	12.84	29	Pn	Pn	11 02 01.4	-0.9
PDPR	Patillas Dam,	13.07	31	Pn	Pn	11 02 04.4	-0.8
SJG	San Juan	13.09	31	P	Pn	11 02 04.4	-0.9
	15nm,0.2s,baz=203,slow=17,SNR=4.7						
GTBY	Guantanamo Bay	13.13	352	Pn	Pn	11 02 07.5	+1.6
EMPR	Esperanza - Ma	13.21	28	Pn	Pn	11 02 06.2	-0.8
BOAV	Boa Vista	13.32	109	Pn	Pn	11 02 01.2	-7.2
TGUH	Tegucigalpa,Un	15.64	298		P	11 02 40.2	+2.0
MTO3	Montecristo	17.62	296		Pn	11 03 01.8	+0.2
MTO3				IAmb	IAmb	11 03 04.8	
	comp=Z,7.3nm,0.7s						
TEIG	Tepich	19.81	314	P	Pn	11 03 26.0	-1.0
CCIG	Comitan	20.83	298	P	P	11 03 35.8	+1.0
Y49A	Blount Mountai	29.55	337	P	P	11 04 57.0	+1.9
Y49A				IAmb	IAmb	11 05 16.9	
	comp=Z,8.0nm,1.4s						
V48A	Smith Brothers	31.37	338	P	P	11 05 13.3	+2.1
V48A				IAmb	IAmb	11 05 43.8	
	comp=Z,8.4nm,1.3s						
HBVL	Hebbronville	31.51	313	P	P	11 05 12.8	+0.3
HBVL				IAmb	IAmb	11 05 14.2	
	comp=Z,5.6nm,0.8s						
WVT	Waverly	32.10	337	P	P	11 05 19.2	+1.8
WVT				IAmb	IAmb	11 05 19.7	
	comp=Z,2.5nm,0.7s						
WHAR	Wooly Hollow	33.33	331	P	P	11 05 29.0	+0.7
WHAR				IAmb	IAmb	11 05 30.4	
	comp=Z,3.4nm,0.9s						
WCI	Wyandotte Cave	33.43	341	P	P	11 05 29.5	+0.4
WCI				IAmb	IAmb	11 06 03.6	
	comp=Z,4.1nm,0.7s						
FCAR	Ozark Folk Cen	33.74	332	P	P	11 05 32.1	+0.4
FCAR				IAmb	IAmb	11 05 33.7	
	comp=Z,2.7nm,0.7s						
CGM3	Cape Girardeau	33.83	336	P	P	11 05 34.1	+1.5
CGM3				IAmb	IAmb	11 05 34.2	
	comp=Z,3.3nm,0.5s						
T42A	Van Buren	34.21	334	P	P	11 05 37.8	+2.0
T42A				IAmb	IAmb	11 05 38.0	
	comp=Z,5.6nm,1.2s						
MGMO	Mountain Grove	34.84	333	P	P	11 05 42.9	+1.7
MGMO				IAmb	IAmb	11 06 20.7	
	comp=Z,5.8nm,1.4s						
HHAR	Hobbs	34.93	330	P	P	11 05 42.9	+0.8
HHAR				IAmb	IAmb	11 05 43.2	
	comp=Z,2.7nm,0.5s						
CCM	Cathedral Cave	35.14	335		P	11 05 45.1	+1.4
CCM				IAmb	IAmb	11 05 45.9	
	comp=Z,5.3nm,0.8s						
TXAR	Lajitas Array	36.44	312	P	P	11 05 56.5	+1.4
TXAR	Lajitas Array	36.44	312	P	P	11 05 56.3	+1.2
	comp=Z,1.4nm,0.6s,baz=129,slow=9.0,SNR=24						
	comp=Z,1.4nm,0.6s						
TX31	Lajitas Ar. Si	36.44	312		P	11 05 56.4	+1.3
WMOK	Wichita Mounta	36.45	323	P	P	11 05 55.8	+0.8
J57A	Williamstown	36.49	356	P	P	11 05 57.3	+2.1
SN07	Snyder 07	36.68	319	P	P	11 05 57.6	+0.6
SN07				IAmb	IAmb	11 05 58.4	
	comp=Z,2.6nm,0.6s						
P40A	Paris	36.71	335	P	P	11 05 57.5	+0.3
P40A				IAmb	IAmb	11 05 58.5	
	comp=Z,3.0nm,0.7s						
POST	Post	37.06	319	P	P	11 06 01.2	+1.0
POST				IAmb	IAmb	11 06 02.0	
	comp=Z,4.3nm,0.9s						
P38A	Dawn	37.43	334	P	P	11 06 04.2	+1.0
SMWD	Samnorwood	37.58	322	P	P	11 06 05.5	+0.9
SMWD				IAmb	IAmb	11 06 06.3	
	comp=Z,4.9nm,0.7s						
DELO	Deloro Mine	37.72	355	P	P	11 06 06.9	+1.4
DELO				IAmb	IAmb	11 06 46.9	
	comp=Z,8.6nm,1.5s						
EMMW	East Machias	38.02	7	P	P	11 06 10.2	+2.1
WBO	Williamsburg	38.04	358	P	P	11 06 10.6	+2.4
VHRN	Van Horn	38.17	313	P	P	11 06 10.0	+0.3
G62A	West of Eustis	38.28	3	P	P	11 06 12.7	+2.5
G62A				IAmb	IAmb	11 06 13.6	
	comp=Z,6.7nm,0.9s						
PKME	Peaks-Kenny Pk	38.40	4	P	P	11 06 13.1	+1.8
G65A	Princeton	38.50	6	P	P	11 06 13.7	+1.6
GGN	Saint George	38.50	7	P	P	11 06 14.6	+2.6
MNTX	Cornudas Mount	38.94	314		P	11 06 17.6	+1.6
MNTX				IAmb	IAmb	11 06 18.3	
	comp=Z,7.5nm,1.4s						
JFWS	Jewell Farm	38.96	340	P	P	11 06 16.7	+0.8
JFWS				IAmb	IAmb	11 06 17.4	
	comp=Z,5.0nm,0.9s						
F64A	Sherman	39.08	5	P	P	11 06 18.3	+1.5
LMN	Caledonia Moun	39.51	9	P	P	11 06 22.1	+1.7
GBN	Guysborough	39.70	13	P	P	11 06 23.1	+1.1
E62A	Clayton Lake	39.73	4	P	P	11 06 24.6	+2.3
RTBA	Rita Blanca	39.98	322	P	P	11 06 26.4	+1.7
D62A	Allapoint, All	40.23	4	P	P	11 06 28.2	+1.9
D62A				IAmb	IAmb	11 06 29.0	
	comp=Z,5.5nm,0.5s						
E46A	Sault Ste Mari	40.52	348	P	P	11 06 30.5	+1.7
E46A				IAmb	IAmb	11 07 02.3	
	comp=Z,4.5nm,1.1s						
LMQ	La Malbaie	40.61	3	P	P	11 06 31.7	+2.2
LMQ				IAmb	IAmb	11 06 32.2	
	comp=Z,5.5nm,0.7s						
BATG	Bathurst New B	40.72	7	P	P	11 06 32.0	+1.6
LDAQ	Lac Daran	40.99	2	P	P	11 06 34.9	+2.2
LDAQ				IAmb	IAmb	11 06 35.2	
	comp=Z,5.4nm,0.5s						
CRNM	Carthage	41.12	316	P	P	11 06 35.9	+1.7
ECSD	EROS Data Cent	42.11	334	P	P	11 06 42.5	+0.7
SDCO	Great Sand Dun	42.52	321		P	11 06 47.4	+1.8
ICQ	Pointe Anglais	42.80	6	P	P	11 06 48.9	+1.6
EYMN	Ely	43.83	342	P	P	11 06 56.5	+0.9
PV15	Paradox Valley	44.76	320	P	P	11 07 05.8	+2.4
PV15				IAmb	IAmb	11 07 05.9	
	comp=Z,3.5nm,0.6s						
PV13	Radium Mtn., P	44.87	319	P	P	11 07 06.5	+2.2
PV22	Blue Mesa, Par	45.07	320	P	P	11 07 07.3	+1.5
WUAZ	Wupatki	45.19	315		P	11 07 07.5	+0.7
WUAZ				IAmb	IAmb	11 07 10.0	
	comp=Z,4.3nm,0.9s						
TRQA	Tornquist	45.88	168	P	P	11 07 08.1	-3.7
TRQA				IAmb	IAmb	11 07 19.6	
	comp=Z,7.0nm,1.4s						
EPLO	Experimental L	46.05	341	P	P	11 07 13.1	0.0
EPLO				IAmb	IAmb	11 07 40.5	
	comp=Z,7.2nm,1.4s						
U15A	North Rim	46.29	315	P	P	11 07 16.7	+1.1
KNB	Kanab	46.95	316	P	P	11 07 22.9	+2.3
LCMT	Little Creek M	47.24	315		P	11 07 24.2	+1.5
ULM	Lac du Bonnet	47.25	340	P	P	11 07 22.1	-0.3
	comp=Z,1.7nm,0.5s,baz=150,slow=7.8,SNR=4.4						
	comp=Z,1.7nm,0.5s						
BSUT	Blindstream Ca	47.46	321	P	P	11 07 26.0	+1.3
V12A	Nelson	47.78	313	P	P	11 07 26.2	-0.7
PDAR	Pinedale Array	48.05	324	P	P	11 07 29.1	+0.1
PDAR	Pinedale Array	48.05	324	P	P	11 07 29.4	+0.5
	comp=Z,0.6nm,0.5s,baz=115,slow=6.2,SNR=2.5						
	comp=Z,0.6nm,0.5s						
SCHQ	Schefferville	48.10	5	P	P	11 07 30.1	+1.3
	comp=Z,7.3nm,0.5s,baz=190,slow=7.2,SNR=19						
	comp=Z,7.3nm,0.5s						
PRN	Pahroc Range	48.70	315	P	P	11 07 35.1	+1.2
VA02	Isla de Pascua	48.78	225	P	P	11 07 31.4	-3.0
BGU	Big Grassy Mou	49.11	320	P	P	11 07 37.7	+0.7
BGU				IAmb	IAmb	11 07 38.9	
	comp=Z,2.6nm,0.6s						
SNOW	Snow King Moun	49.16	324	P	P	11 07 37.4	-0.1
LOHW	Long Hollow	49.17	324	P	P	11 07 37.3	-0.2
TPAW	Teton Pass	49.30	324	P	P	11 07 40.0	+1.5
DSP	Deep Springs	50.76	313	P	P	11 07 51.2	+1.9
MCMT	McKenzie Canyo	51.19	324	P	P	11 07 54.5	+1.8
NVAR	Mina Array Bea	51.45	315	P	P	11 07 56.0	+1.2
	comp=Z,0.5nm,0.7s,baz=103,slow=5.5,SNR=2.5						
	comp=Z,0.5nm,0.7s						
BPMT	Black Pine Rid	52.47	326	P	P	11 08 03.3	+1.2
FFC	Flin Flon	53.05	339	P	P	11 08 06.5	+0.5
FFC				IAmb	IAmb	11 08 08.4	
	comp=Z,7.6nm,1.3s						
WVOR	Wild Horse Val	53.50	319	P	P	11 08 10.9	+1.3
WVOR				IAmb	IAmb	11 08 13.0	
	comp=Z,4.5nm,1.3s						
I07A	Izee	54.84	320	P	P	11 08 20.7	+1.4
I07A				IAmb	IAmb	11 09 02.7	
	comp=Z,5.0nm,1.5s						
G08A	Pilot Rock	55.09	322	P	P	11 08 21.1	+0.1
G08A				IAmb	IAmb	11 08 22.7	
	comp=Z,2.2nm,0.7s						
KRMB	Red Mountain	56.65	316	P	P	11 08 32.9	+0.7
KSXB	Camp Six Broad	56.75	316	P	P	11 08 34.0	+1.1
H04A	Detroit Lake	56.82	320	P	P	11 08 34.5	+1.2
KBO	Bosley Butte	57.14	317	P	P	11 08 35.9	+0.2
KEBM	Edson Butte	57.47	317	P	P	11 08 39.4	+1.4
YKA	Yellowknife Ar	63.23	340	P	P	11 09 17.3	+0.8
	comp=Z,0.7nm,0.7s,baz=136,slow=6.0,SNR=8.8						
	comp=Z,0.7nm,0.7s						
SUMG	Summit	68.95	11	P	P	11 09 54.2	+0.9
N31M	Braeburn, Yuko	71.16	333	P	P	11 10 08.9	+2.4
N31M				IAmb	IAmb	11 10 39.5	
	comp=Z,5.3nm,1.4s						
N30M	Aishikik Lake	71.74	333	P	P	11 10 11.9	+1.9
N30M				IAmb	IAmb	11 10 51.4	
	comp=Z,4.1nm,1.4s						
A36M	Sachs Harbour	72.40	345	P	P	11 10 13.6	-0.1
A36M				IAmb	IAmb	11 10 49.3	
	comp=Z,6.4nm,1.1s						
F31M	Tsiigehtchic	72.70	339	P	P	11 10 16.4	+0.8
F31M				IAmb	IAmb	11 10 35.7	
	comp=Z,4.4nm,1.3s						
L29M	L29M	72.76	334	P	P	11 10 15.4	-0.7
L29M				IAmb	IAmb	11 10 56.7	
	comp=Z,5.1nm,1.4s						
INK	Inuvik	72.99	340	P	P	11 10 18.2	+0.9
EPYK	Eagle Plains	73.35	338	P	P	11 10 20.2	+0.8
EPYK				IAmb	IAmb	11 10 36.4	
	comp=Z,2.9nm,1.1s						
F30M	Barrier River	73.48	339	P	P	11 10 20.9	+0.7
F30M				IAmb	IAmb	11 10 42.9	
	comp=Z,7.8nm,1.4s						
H29M	Whitestone	73.92	337	P	P	11 10 23.6	+0.9
H29M				IAmb	IAmb	11 11 03.0	
	comp=Z,3.1nm,1.1s						
I28M	Miner Creek	74.27	336	P	P	11 10 24.9	-0.1
E29M	Blow River	74.52	340	P	P	11 10 27.3	+1.1
E29M				IAmb	IAmb	11 11 04.8	
	comp=Z,5.6nm,1.3s						
ILAR	Eielson Array	76.93	335	P	P	11 10 40.7	+0.8
	comp=Z,0.2nm,0.5s,baz=91,slow=5.8,SNR=2.0						
	comp=Z,0.2nm,0.5s						
PPLA	Purkeypile	78.95	333	P	P	11 10 51.5	+0.2
PPLA				IAmb	IAmb	11 11 16.6	
	comp=Z,8.6nm,1.3s						
L19K	White Mountain	80.11	332	P	P	11 10 58.0	+0.6
L19K				IAmb	IAmb	11 11 10.6	
	comp=Z,3.6nm,1.2s						
N18K	Kilae Creek	80.51	330	P	P	11 11 00.2	+0.6
N18K				IAmb	IAmb	11 11 21.7	
	comp=Z,6.2nm,1.4s						
B21K	Ikpikpuk River	80.64	339	P	P	11 11 01.4	+1.3
B21K				IAmb	IAmb	11 11 15.0	
	comp=Z,6.4nm,1.4s						
ARCES	ARCESS Array B	86.64	20	P	P	11 11 31.0	+0.4
	comp=Z,2.9nm,0.9s,baz=267,slow=3.5,SNR=3.9						
	comp=Z,2.9nm,0.9s						
KAAM	Kaadhehdhoo	145.41	79	PKPdf	PKPdf	11 18 19.8	-5.8
ASAR	Alice Springs	149.13	234	PKPbc	PKPdf	11 18 35.1	+3.6
	comp=Z,0.5nm,0.4s,baz=121,slow=3.3,SNR=8.8						
WRA	Warramunga Arr	150.35	241	PKPbc	PKPbc	11 18 38.1	-0.7
	comp=Z,0.6nm,0.3s,baz=107,slow=2.8,SNR=32						
SAUI	Saumlaki	155.76	266	PKPab	PKPab	11 19 04.4	-4.3
MNAI	Manna	175.37	58	PKPdf	PKPdf	11 18 52.0	-5.5

IDC ***07*** *11:29:19.3±0.5, 49°.25N×155°.55E, h0km, mb4.4/27, mbtmp4.4/33, ML5.3/3, MS3.7/59, Error ellipse: s-maj=13.2km s-min=11.4km az=126.0*
BJI ***07*** *11:29:22.5, 49°.26N×156°.02E, h60km, mB4.7/11, mb4.6/37, Ms4.3/17, Ms7 4.1/19*
KRSC ***07*** *11:29:22.8±2.0, 49°.08N×155°.98E, h61km±32km, Ml5.1, Felt [III-IV] at Severo-Kurilsk.*
NEIC ***07*** *11:29:24.5±2.2, 49°.10N±0°.08×155°.7E±0°.1, h35km±1km, mb4.7/265, Error ellipse: s-maj=16.0km s-min=10.5km az=142.0*
MOS ***07*** *11:29:24.9±1.1, 49°.18N×155°.66E, h55km, mb5.0/59, Error ellipse: s-maj=6.3km s-min=3.0km az=78.1*
MOS Felt (II) at Severo-Kuril'sk.
SKHL ***07*** *11:29:25.0±0.2, 49°.00N×156°.00E, h61km±3km, mb5.4/7, ms4.2/5, msh4.8/1*
ISC 07 11:29:26.2±0.5**, 49°.15N**±0°.05×**155°.73E**±0°.04**, h55**km±4km**,**
h55km:pP-P, n852, σ1s.19/787**, mb4.7**/226**, MS3.8**/62**,**
23C-35D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.56	9	⇓iPN	Pn	11 29 50.4	-1.2
SKR				i S	Sn	11 30 08.9	-1.8
SKR				pmax	pmax		
	comp=Z,3µm,0.5s						
SKR				smax	smax		
	comp=N,3µm,0.5s						
SKR				smax	smax		
	comp=E,7µm,0.6s						
SKR	Severo-Kuril's	1.56	9	i P	Pn	11 29 50.4	-1.2
SKR				eS	Sn	11 30 08.8	-1.8
SKR	Severo-Kuril's	1.56	9	eP	Pn	11 29 50.4	-1.2
SKR				AMB	AMB	11 29 54.0	
	comp=E,3µm,0.4s						
SKR				eS	Sn	11 30 09.3	-1.4
SKR				A	A	11 30 14.2	
	comp=E,6µm,0.4s						
SKR				A	A	11 30 14.2	
	comp=E,11µm,0.4s						
PAU	Pauzhetka	2.42	16	PN	Pn	11 30 02.8	-0.6
PAU				S	Sn	11 30 31.0	-0.8
PAU	Pauzhetka	2.42	16	eP	Pn	11 30 02.8	-0.6
PAU				eS	Sn	11 30 31.1	-0.8
PAU	Pauzhetka	2.42	16	eP	Pn	11 30 02.8	-0.6
PAU				AMB	AMB	11 30 14.6	
	comp=E,880nm,0.9s						
PAU				eS	Sn	11 30 31.4	-0.4
PAU				A	A	11 30 43.7	
	comp=E,4µm,0.4s						
PAU				A	A	11 30 43.7	
	comp=E,5µm,0.4s						
MIPR	Malaya Ipel'ka	3.20	11	PN	Pn	11 30 13.7	-0.3
MIPR	Malaya Ipel'ka	3.20	11	eP	Pn	11 30 13.7	-0.3
ASAK	Asacha	3.52	22	PN	Pn	11 30 18.5	+0.1
ASAK	Asacha	3.52	22	eP	Pn	11 30 18.5	+0.1
MTVR	Mutnovka	3.69	24	PN	Pn	11 30 20.4	-0.3
MTVR				S	Sn	11 31 01.1	-1.8
MTVR	Mutnovka	3.69	24	eP	Pn	11 30 20.5	-0.3
MTVR				eS	Sn	11 31 01.1	-1.8
GRL	Gorelyy	3.72	23	PN	Pn	11 30 21.5	+0.3
GRL	Gorelyy	3.72	23	eP	Pn	11 30 21.5	+0.3
RUS	Russkaya	3.73	27	PN	Pn	11 30 20.4	-0.9
RUS				S	Sn	11 31 01.9	-2.0

RUS	Russkaya	3.73	27	eP	Pn	11 30 20.4	-0.9
RUS				eS	Sn	11 31 01.9	-2.0
APC	Apacha	3.89	13	PN	Pn	11 30 24.7	+1.3
APC	Apacha	3.89	13	eP	Pn	11 30 24.8	+1.3
PEA0B	Petropavlovsk-	4.16	17		Pn	11 30 27.1	+0.1
PEA0B	Petropavlovsk-	4.16	17	c iPN	Pn	11 30 28.4	+1.3
PETK	Petropavlovsk-	4.16	17		Pn	11 30 27.4	+0.3
PETK	Petropavlovsk-	4.16	17	Pn	Pn	11 30 27.9	+0.8
	comp=E,12nm,0.3s,baz=170,slow=11,SNR=156						
PETK				Sn	Sn	11 31 13.5	-0.9
	comp=E,5.4nm,0.3s,baz=174,slow=16,SNR=3.6						
PETK				LR	LR	11 32 20.9	
	comp=E,1µm,19.3s,baz=200,slow=44						
PETK	Petropavlovsk-	4.16	17	PN	Pn	11 30 27.4	+0.3
PET	Petropavlovsk	4.30	24		Pn	11 30 28.9	-0.1
PET				Sn	Sn	11 31 17.4	-0.4
PET	Petropavlovsk	4.30	24	c iPN	Pn	11 30 29.8	+0.8
PET				pmax	pmax		
	comp=Z,99nm,1.7s						
PET	Petropavlovsk	4.30	24	eP	Pn	11 30 29.1	+0.1
PET				eS	Sn	11 31 17.7	-0.1
PET	Petropavlovsk	4.30	24	eP	Pn	11 30 29.3	+0.3
PET				AMB	AMB	11 30 35.3	
	comp=Z,70nm,0.2s						
PET				eS	Sn	11 31 17.2	-0.6
PET				A	A	11 31 20.7	
	comp=Z,420nm,0.5s						
PET				A	A	11 31 20.7	
	comp=Z,380nm,0.5s						
PET				AMS	AMS	11 32 22.5	
	comp=Z,860nm,10.0s						
PET				AMS	AMS	11 32 22.5	
	comp=Z,650nm,10.0s						
PET	Petropavlovsk	4.30	24	P	Pn	11 30 29.4	+0.4
INSR	Institute	4.32	24	PN	Pn	11 30 30.7	+1.4
INSR	Institute	4.32	24	eP	Pn	11 30 30.7	+1.4
DALK	Dalny	4.33	25	PN	Pn	11 30 29.6	+0.2
DALK				S	Sn	11 31 18.8	+0.2
DALK	Dalny	4.33	25	eP	Pn	11 30 29.6	+0.2
DALK				eS	Sn	11 31 18.9	+0.2
UGLR	Uglovaya	4.51	24	PN	Pn	11 30 32.8	+0.8
UGLR	Uglovaya	4.51	24	eP	Pn	11 30 32.9	+0.8
KOK	Koryaka	4.54	23	PN	Pn	11 30 34.0	+1.7
KOK	Koryaka	4.54	23	eP	Pn	11 30 34.1	+1.7
AVH	Avacha	4.54	23	PN	Pn	11 30 33.9	+1.6
AVH	Avacha	4.54	23	eP	Pn	11 30 34.0	+1.6
SMAR	Somma	4.55	24	PN	Pn	11 30 33.6	+0.9
SMAR	Somma	4.55	24	eP	Pn	11 30 33.7	+0.9
KRER	Koryakskii	4.58	23	PN	Pn	11 30 34.3	+1.3
KRER	Koryakskii	4.58	23	eP	Pn	11 30 34.3	+1.3
SDLR	Sedlovina	4.59	24	PN	Pn	11 30 33.2	+0.1
SDLR	Sedlovina	4.59	24	eP	Pn	11 30 33.2	+0.1
KRX	Arik	4.60	22	PN	Pn	11 30 34.5	+1.2
KRX	Arik	4.60	22	eP	Pn	11 30 34.5	+1.2
NLC	Nalytchevo	4.63	28	PN	Pn	11 30 31.9	-1.5
NLC	Nalytchevo	4.63	28	eP	Pn	11 30 32.0	-1.5
GNL	Ganaly	4.76	16	PN	Pn	11 30 37.3	+1.9
GNL	Ganaly	4.76	16	eP	Pn	11 30 37.4	+1.9
SPN	Mys Shipunski	4.79	33	PN	Pn	11 30 34.9	-0.8
SPN	Mys Shipunski	4.79	33	eP	Pn	11 30 35.0	-0.8
SPN				eS	Sn	11 31 28.1	-1.8
KII	Karymskiy	5.42	24	PN	Pn	11 30 46.0	+1.6
KII	Karymskiy	5.42	24	eP	Pn	11 30 46.0	+1.6
MKZ	Mys Kozlova	6.57	32	PN	Pn	11 30 58.3	-1.7
MKZ	Mys Kozlova	6.57	32	eP	Pn	11 30 58.4	-1.7
KUR	Kuril'sk	6.63	237	ePN	Pn	11 31 02.7	+1.6
KUR				i S	Sn	11 32 18.8	+3.6
KUR				pmax	pmax		
	comp=Z,106nm,0.7s						
KUR				smax	smax		
	comp=N,1µm,1.9s						
KUR				smax	smax		
	comp=E,2µm,1.9s						
KUR				smax	smax		
	comp=E,242nm,0.9s						
KUR				smax	smax		
	comp=N,200nm,0.7s						
KUR	Kuril'sk	6.63	237	eP	Pn	11 31 02.6	+1.6
KUR	Kuril'sk	6.63	237	eP	Pn	11 31 02.1	+1.1
KUR				AMB	AMB	11 31 07.8	
	comp=N,110nm,0.6s						
KUR				eS	Sn	11 32 14.2	-1.0
KUR				A	A	11 32 43.8	
	comp=N,200nm,0.6s						
KUR				A	A	11 32 43.8	
	comp=N,240nm,0.6s						
KUR				AMS	AMS	11 33 11.0	
	comp=N,890nm,12.0s						
KUR				AMS	AMS	11 33 11.0	
	comp=N,850nm,12.0s						
TUMD	Tumrok D	6.71	24	PN	Pn	11 31 02.5	+0.5
TUMD	Tumrok D	6.71	24	eP	Pn	11 31 02.6	+0.5
ESO	Esso	7.03	14	PN	Pn	11 31 07.7	+1.3
ESO	Esso	7.03	14	eP	Pn	11 31 07.7	+1.3
KMNR	Kamenistaya	7.17	21	PN	Pn	11 31 09.7	+1.3
KMNR	Kamenistaya	7.17	21	eP	Pn	11 31 09.7	+1.3
KIRR	Kirishev	7.37	21	PN	Pn	11 31 12.7	+1.5
KIRR	Kirishev	7.37	21	eP	Pn	11 31 12.8	+1.5
BZWR	Bezymyannyi-We	7.42	21	PN	Pn	11 31 13.2	+1.3
BZWR	Bezymyannyi-We	7.42	21	eP	Pn	11 31 13.3	+1.3
BZGR	Bezymyannyi-Gr	7.45	22	PN	Pn	11 31 13.6	+1.4
BZGR	Bezymyannyi-Gr	7.45	22	eP	Pn	11 31 13.7	+1.4
SRDR	Sredinnyy	7.58	17	PN	Pn	11 31 15.9	+2.0
SRDR	Sredinnyy	7.58	17	eP	Pn	11 31 16.0	+2.0
KLY	Klyuchi	7.77	21	PN	Pn	11 31 17.8	+1.3
KLY	Klyuchi	7.77	21	eP	Pn	11 31 17.8	+1.3
SHO	Shikotan	8.09	233	ePN	Pn	11 31 19.7	-1.3
SHO				pmax	pmax		
	comp=Z,44nm,0.3s						
SHO				pmax	pmax		
	comp=N,10.0nm,0.2s						
SHO	Shikotan	8.09	233	eP	Pn	11 31 19.8	-1.1
SHO	Shikotan	8.09	233	eP	Pn	11 31 19.7	-1.3
SHO				AMB	AMB	11 31 26.2	
	comp=N,40nm,0.3s						
SHO				eS	Sn	11 32 49.1	-1.9
SHO				AMS	AMS	11 34 06.1	
	comp=N,570nm,15.0s						
SHO				AMS	AMS	11 34 06.1	
	comp=N,480nm,15.0s						
SMKR	Semkarok	8.21	23	PN	Pn	11 31 23.1	+0.5
SMKR	Semkarok	8.21	23	eP	Pn	11 31 23.2	+0.5
KBTR	Krutoberegovo	8.28	29	PN	Pn	11 31 22.4	-1.0
KBTR	Krutoberegovo	8.28	29	eP	Pn	11 31 22.5	-1.0
YUK	Yuzh-Kuril'sk	8.50	237	ePN	Pn	11 31 26.1	-0.5
YUK				pmax	pmax		
	comp=N,45nm,0.3s						
YUK				pmax	pmax		
	comp=Z,346nm,0.3s						
YUK				pmax	pmax		
	comp=E,80nm,0.2s						
YUK	Yuzh-Kuril'sk	8.50	237	eP	Pn	11 31 26.9	+0.3
YUK	Yuzh-Kuril'sk	8.50	237	eP	Pn	11 31 26.9	+0.3
YUK				AMB	AMB	11 31 28.2	
	comp=E,430nm,0.4s						
YUK				eS	Sn	11 32 59.7	-1.3
YUK				A	A	11 33 02.2	
	comp=E,140nm,0.5s						
YUK				A	A	11 33 02.2	
	comp=E,130nm,0.5s						
TYV	Tymovskoe	8.60	286	ePN	Pn	11 31 30.8	+2.9
TYV				eS	Sn	11 33 05.0	+1.7
TYV				pmax	pmax		
	comp=Z,26nm,1.0s						
TYV				pmax	pmax		
	comp=Z,100nm,5.4s						
TYV				smax	smax		
	comp=N,5.0nm,1.1s						
TYV				smax	smax		
	comp=E,10.0nm,1.1s						
TYV				smax	smax		
	comp=N,100nm,3.6s						
TYV				smax	smax		
	comp=E,100nm,3.6s						
TYV				MLR	MLR		
	comp=Z,600nm,16.0s						
TYV	Tymovskoe	8.60	286	eP	Pn	11 31 30.1	+2.2
TYV				eS	Sn	11 33 03.5	+0.2
TYV				AMS	AMS	11 34 12.0	
	comp=Z,2µm,15.0s						
TYV				AMS	AMS	11 34 12.0	
	comp=Z,920nm,15.0s						
BKI	Bering	8.73	42	PN	Pn	11 31 28.0	-1.7
BKI	Bering	8.73	42	eP	Pn	11 31 28.1	-1.7
RUSJ	Misakicho	8.80	239	ePN	Pn	11 31 32.9	+2.3
RUSJ				eS	Sn	11 33 14.4	+6.1
YSS	Yuzhno-Sakhali	8.97	261	Pn	Pn	11 31 30.8	-2.1
YSS	Yuzhno-Sakhali	8.97	261	ePN	Pn	11 31 34.8	+1.9
YSS				eS	Sn	11 33 14.5	+2.1
YSS				pmax	pmax		
	comp=Z,100nm,3.4s						
YSS				pmax	pmax		
	comp=Z,40nm,0.7s						
YSS				MLR	MLR		
	comp=Z,400nm,16.0s						
YSS	Yuzhno-Sakhali	8.97	261	eP	Pn	11 31 34.8	+1.9
YSS				eS	Sn	11 33 11.9	-0.5
UGL	Uglegorsk	8.97	275	ePN	Pn	11 31 38.3	+5.4
UGL				pmax	pmax		
	comp=Z,176nm,0.7s						
UGL	Uglegorsk	8.97	275	eP	Pn	11 31 34.9	+2.0
UGL				AMB	AMB	11 31 39.0	
	comp=Z,180nm,0.7s						
UGL				eS	Sn	11 33 12.3	-0.1
UGL				A	A	11 33 41.0	
	comp=Z,300nm,9.0s						
UGL				A	A	11 33 41.0	
	comp=Z,700nm,9.0s						
NMR	Nemuro--Hokkai	9.02	234	ePN	Pn	11 31 30.7	-2.9
NMR	Nemuro--Hokkai	9.02	234	eP	Pn	11 31 31.0	-2.6
OKH	Okha	9.14	304	AMS	AMS	11 36 09.1	
	comp=Z,300nm,16.0s						
OKH				AMS	AMS	11 36 09.1	
	comp=Z,500nm,16.0s						
NKL	Nikolayevsk	10.27	299	eP	Pn	11 31 52.5	+1.8
NKL				erx	rx	11 34 17.9	
JKA	Kamikawa-asahi	10.33	246		Pn	11 31 51.6	-0.1
ASAJ	Asahikawa	10.34	246	Pn	Pn	11 31 53.8	+2.2
	comp=Z,3.9nm,0.3s,baz=68,slow=12,SNR=30						
ASAJ				Sn	Sn	11 33 55.9	+10
	comp=Z,0.2nm,0.3s,baz=314,slow=30,SNR=6.1						
ASAJ				LR	LR	11 35 22.7	
	comp=Z,474nm,21.7s,baz=60,slow=35						
ASAJ	Asahikawa	10.34	246	PN	Pn	11 31 51.6	-0.1
MA2	Magadan	10.84	346		Pn	11 31 59.0	+0.6
MA2	Magadan	10.84	346	Pn	Pn	11 31 58.4	-0.1
	comp=Z,3.2nm,0.3s,baz=157,slow=8.6,SNR=26						
MA2				LR	LR	11 36 55.2	
	comp=Z,293nm,18.3s,baz=174,slow=43						
	comp=Z,25nm,0.6s						
MA2	Magadan	10.84	346	cePN	Pn	11 31 58.2	-0.3
MA2	Magadan	10.84	346	P	Pn	11 31 58.9	+0.4
	comp=Z,36nm,0.7s						
ERM	Erimo	11.33	236		Pn	11 32 03.4	-1.8
ERM	Erimo	11.33	236	cePN	Pn	11 32 03.0	-2.2
SHEM	Shemya Is, Ala	12.12	66	Pn	Pn	11 32 15.3	-0.7
SHEM	Shemya Is, Ala	12.12	66	Pn	Pn	11 32 15.1	-0.9
	comp=Z,5.9nm,0.3s,baz=223,slow=3.3,SNR=7.8						
SHEM				Sn	Sn	11 34 19.0	-10
	comp=Z,4.8nm,0.3s,baz=293,slow=21,SNR=6.4						
SHEM				LR	LR	11 36 30.9	
	comp=Z,218nm,22.0s,baz=312,slow=35						
	comp=Z,30nm,0.5s						
SMY	Shemya	12.12	66	Pn	Pn	11 32 15.3	-0.7
SMY	Shemya	12.12	66	PN	Pn	11 32 15.3	-0.7
TEY	Ternei	13.66	260	eP	Pn	11 32 39.1	+2.1
TEY				e		11 35 12.1	
SEY	Seymchan	13.94	354	Pn	Pn	11 32 41.8	+1.1
	comp=Z,4.6nm,0.5s,baz=169,slow=11,SNR=12						
SEY				LR	LR	11 38 28.9	
	comp=Z,258nm,21.0s,baz=156,slow=40						
SEY	Seymchan	13.94	354	⇑eP	Pn	11 32 43.5	+2.8
KLR	Kul'dur	15.67	279	Pn	P	11 33 05.2	-1.2
	comp=Z,0.2nm,0.3s,baz=82,slow=12,SNR=8.6						
KLR				LR	LR	11 39 42.5	
	comp=Z,410nm,18.2s,baz=84,slow=40						
KLR	Kul'dur	15.67	279	ceP	P	11 33 05.9	-0.5
KLR	Kul'dur	15.67	279	eP	Pn	11 33 02.0	-1.2
USA0B	Ussuriysk Arra	17.00	262	Pn	Pn	11 33 18.7	-1.3
USA0B	Ussuriysk Arra	17.00	262	⇓eP	Pn	11 33 19.5	-0.5
USRK	Ussuriysk Ar.	17.00	262	P	Pn	11 33 19.2	-0.8
USRK	Ussuriysk Ar.	17.00	262	Pn	Pn	11 33 18.4	-1.7
	comp=Z,3.4nm,0.7s,baz=67,slow=15,SNR=10.0						
USRK				LR	LR	11 39 23.4	
	comp=Z,198nm,20.6s,baz=51,slow=36						
USRK	Ussuriysk Ar.	17.00	262	P	Pn	11 33 19.2	-0.8
ADK	Adak	17.71	71	Pn	Pn	11 33 26.9	-1.8
ADK				IAmb	IAmb	11 33 40.6	
	comp=Z,63nm,1.4s						
ADK	Adak	17.71	71	P	Pn	11 33 26.9	-1.8
ADK				pmax	pmax		
	comp=Z,63nm,1.4s						
MJAR	Matsushiro Arr	17.94	232	P	P	11 33 29.7	-1.9
	comp=Z,4.8nm,0.8s,baz=23,slow=11,SNR=9.5						
MJAR				LR	LR	11 41 09.7	
	comp=Z,195nm,19.9s,baz=40,slow=40						
MJB9	Matsu-Tunnel	17.94	232		P	11 33 29.6	-2.0
MAJO	Matsushiro	17.94	232		P	11 33 29.8	-1.8
MAJO	Matsushiro	17.94	232	⇑eP	P	11 33 30.2	-1.4
ZEA	Zeya	18.27	295	eP	Pn	11 33 36.9	+1.4
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ZEA				MLR	MLR		
	comp=E,100nm,15.0s						
ZEA	Zeya	18.27	295	eP	Pn	11 33 37.8	+2.3
HEH	HeiHe	18.31	284	eP	Pn	11 33 36.2	+0.2
HEH				S	S	11 37 02.1	+0.4
HEH				pmax	pmax		
	comp=E,42nm,1.0s						
HEH				pmax	pmax		
	comp=E,120nm,3.7s						
HEH				LR	LR		
	comp=E,290nm,16.2s						
HEH				LR	LR		
	comp=E,430nm,17.1s						
HEH				LR	LR		
	comp=E,540nm,17.0s						
MDJ	Mudanjiang	18.39	266	P	Pn	11 33 39.0	+1.9
MDJ				pmax	pmax		
	comp=E,11nm,0.8s						
PSTR	Posyet	18.48	259	⇓eP	Pn	11 33 39.9	+1.8
PSTR	Posyet	18.48	259	eP	Pn	11 33 39.9	+1.8
JGF	Kuroka	19.10	232	P	P	11 33 44.0	-0.4
JGF				IAmb	IAmb	11 33 51.4	
	comp=Z,33nm,1.0s						
YAK	Yakutsk	19.40	321	P	P	11 33 47.6	+0.3
YAK	Yakutsk	19.40	321	P	P	11 33 45.1	-2.2
	comp=Z,7.5nm,0.3s,baz=111,slow=5.0,SNR=12						
YAK				LR	LR	11 41 04.6	
	comp=Z,238nm,21.7s,baz=124,slow=37						
	comp=Z,20nm,0.3s						
YAK	Yakutsk	19.40	321	eP	P	11 33 46.6	-0.7
YAK				eS	S	11 37 21.6	-1.8
YAK				pmax	pmax		
	comp=N,2.0nm,0.6s						
YAK				pmax	pmax		
	comp=Z,19nm,0.8s						
YAK				pmax	pmax		
	comp=E,12nm,1.1s						
YAK				smax	smax		
	comp=N,56nm,1.5s						
YAK				smax	smax		
	comp=E,59nm,2.3s						
BNX	BinXian	19.41	271	⇑P	P	11 33 46.0	-1.6
BNX				pmax	pmax		
	comp=E,7.0nm,0.7s						
INU	Inuyama	19.47	232	P	P	11 33 47.5	-0.9
INU				IAmb	IAmb	11 33 54.9	
	comp=Z,26nm,0.8s						
BILL	Bilibino	19.67	12	deP	P	11 33 50.0	-0.3
BILL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KSRS	Korea Array	23.23	250	P	P	11 34 28.0	-0.4
	comp=Z,8.6nm,0.8s,baz=45,slow=10,SNR=20						
	comp=Z,8.6nm,0.8s						
KSAR	Wonju Array Be	23.26	250	P	P	11 34 28.3	-0.5
KSAR	Wonju Array Be	23.26	250	P	P	11 34 28.3	-0.5
M11K	Mekoryuk	24.31	48	P	P	11 34 38.0	-0.1
	baz=260						
JNU	Nakatsue	24.47	238	P	P	11 34 38.2	-1.8
JNU				IAmb	IAmb	11 35 05.2	
	comp=Z,48nm,1.5s						
JNU	Nakatsue	24.47	238	LR	LR	11 44 13.1	
	comp=Z,81nm,19.0s,baz=70,slow=37						
TNA	Tin City	25.06	36	P	P	11 34 46.0	+1.1
	baz=247						
K13K	Kusilvak Mount	25.34	45	P	P	11 34 48.6	+1.1
	baz=258						
F14K	Arctic Creek	25.64	36	P	P	11 34 51.0	+0.8
	baz=249						
M13K	Dall Lake	25.71	49	P	P	11 34 52.3	+1.4
	baz=263						
ANM	Nome	25.72	39	P	P	11 34 52.2	+1.3
	baz=252						
TIXI	Tiksi	25.72	341	LR	LR	11 45 52.7	
	comp=Z,111nm,20.6s,baz=160,slow=39						
J14K	Nanvaranak Lak	26.02	43	P	P	11 34 52.0	-1.6
J14K	Nanvaranak Lak	26.02	43	P	P	11 34 54.7	+1.1
	baz=258						
L14K	Kuka Creek	26.16	47	P	P	11 34 56.5	+1.6
	baz=262						
S12K	Black Hills	26.23	59	P	P	11 34 57.7	+2.0
	baz=274						
F15K	North Star Dit	26.38	36	P	P	11 34 55.8	-1.1
F15K	North Star Dit	26.38	36	P	P	11 34 57.5	+0.6
	baz=251						
G15K	Niukluk	26.39	38	P	P	11 34 58.0	+1.0
	baz=253						
M14K	Bethel	26.43	48	P	P	11 34 58.4	+1.1
	baz=264						
N14K	Kuskokwak Cree	26.48	50	P	P	11 34 59.5	+1.6
	baz=266						
O14K	Tigyukauivet M	26.65	51	P	P	11 35 01.2	+1.8
	baz=267						
L15K	Ungalak Mounta	26.78	46	P	P	11 35 01.7	+1.2
	baz=262						
K15K	Wolf Creek Mou	26.85	45	P	P	11 35 02.2	+1.0
	baz=261						
M15K	Kasigluk River	27.05	48	P	P	11 35 04.2	+1.2
	baz=265						
C16K	Lisburne Hills	27.11	31		P	11 35 02.8	-0.6
C16K	Lisburne Hills	27.11	31	P	P	11 35 04.1	+0.7
	baz=245						
SDPT	Sand Point	27.15	60	P	P	11 35 05.4	+1.5
	baz=276						
G16K	Koyuk River	27.19	38	P	P	11 35 05.0	+0.9
	baz=254						
N15K	Kwethluk River	27.30	49	P	P	11 35 06.2	+1.0
	baz=266						
O15K	Ungalikthiuk R	27.39	52	P	P	11 35 07.3	+1.3
	baz=269						
J16K	Anvik River	27.45	43	P	P	11 35 07.5	+1.1
	baz=260						
S14K	Fog Glacier	27.59	58	P	P	11 35 09.4	+1.4
	baz=274						
D17K	Noatak River	27.66	33	P	P	11 35 09.5	+1.1
	baz=249,SNR=11						
CHNA	Chernabura Isl	27.71	61	P	P	11 35 11.1	+2.2
	baz=277						
L16K	Owhat River	27.73	46	P	P	11 35 07.7	-1.4
RDOG	Red Dog Mine	27.85	32	P	P	11 35 10.7	+0.6
	baz=249						
E17K	Hotham Inlet	27.90	34	P	P	11 35 10.7	+0.2
	baz=252,SNR=5.9						
G17K	Kiwalik Mounta	27.90	38	P	P	11 35 10.9	+0.4
	baz=256						
M16K	Timber Creek	27.92	48	P	P	11 35 08.5	-2.3
M16K	Timber Creek	27.92	48	P	P	11 35 11.4	+0.7
	baz=266						
C17K	DeLong Mountai	27.92	31	P	P	11 35 10.9	+0.2
	baz=248						
F17K	Baldwin Pennin	27.93	36	P	P	11 35 10.0	-0.7
F17K				IAmb	IAmb	11 35 14.0	
	comp=Z,17nm,0.9s						
F17K	Baldwin Pennin	27.93	36	P	P	11 35 11.0	+0.3
	baz=253						
N16K	Nishlik Lake	27.98	49	P	P	11 35 12.0	+0.7
	baz=267						
H17K	Granite Mounta	28.07	39	P	P	11 35 10.9	-1.2
H17K	Granite Mounta	28.07	39	P	P	11 35 12.5	+0.4
	baz=258						
J17K	VABM Dome	28.14	43		P	11 35 11.6	-1.1
J17K				IAmb	IAmb	11 35 29.4	
	comp=Z,15nm,1.4s						
J17K	VABM Dome	28.14	43	P	P	11 35 13.4	+0.7
	baz=261						
P16K	Nushagak River	28.33	52	P	P	11 35 15.4	+1.0
	baz=271						
L17K	Donlin	28.33	45	P	P	11 35 15.5	+1.1
	baz=264						
K17K	Iditarod	28.40	44	P	P	11 35 14.2	-0.8
K17K	Iditarod	28.40	44	P	P	11 35 15.8	+0.8
	baz=263						
E18K	Tukpahlearik C	28.46	34	P	P	11 35 14.7	-0.8
E18K	Tukpahlearik C	28.46	34	P	P	11 35 16.1	+0.6
	baz=252						
F18K	Selawik	28.58	36	P	P	11 35 17.0	+0.5
	baz=255						
R16K	Pilot Point	28.59	55	P	P	11 35 17.9	+1.1
	baz=274						
C18K	Utukok River	28.66	31		P	11 35 16.7	-0.7
C18K	Utukok River	28.66	31	P	P	11 35 18.2	+0.8
	baz=250,SNR=5.7						
M17K	Holitna River	28.68	47	P	P	11 35 16.3	-1.2
M17K				IAmb	IAmb	11 35 37.4	
	comp=Z,15nm,1.2s						
M17K	Holitna River	28.68	47	P	P	11 35 18.2	+0.7
	baz=267						
B18K	Kokolik River	28.73	30	P	P	11 35 18.0	+0.2
	baz=248						
N17K	Nushagak Hills	28.76	49	P	P	11 35 17.2	-1.0
N17K	Nushagak Hills	28.76	49	P	P	11 35 18.9	+0.7
	baz=268						
H18K	Honhosa River	28.76	39	P	P	11 35 17.0	-1.2
H18K	Honhosa River	28.76	39	P	P	11 35 18.6	+0.3
	baz=259						
O17K	Koliganek Bris	28.79	50	P	P	11 35 19.5	+1.0
	baz=270						
G18K	Tagagawik	28.80	38		P	11 35 18.2	-0.3
G18K	Tagagawik	28.80	38	P	P	11 35 19.1	+0.5
	baz=257,SNR=6.3						
L18K	Granite Mounta	29.09	45	P	P	11 35 19.4	-1.7
L18K	Granite Mounta	29.09	45	P	P	11 35 22.3	+1.2
	baz=266						
P17K	Kvichak River	29.13	52	P	P	11 35 22.5	+1.0
	baz=272						
J18K	Innoko River	29.20	43	P	P	11 35 22.2	+0.1
J18K	Innoko River	29.20	43	P	P	11 35 22.9	+0.7
	baz=264						
A19K	Wainwright	29.29	28	P	P	11 35 23.6	+0.8
	baz=247						
F19K	Shaleruckik Mo	29.37	36		P	11 35 23.1	-0.4
F19K	Shaleruckik Mo	29.37	36	P	P	11 35 24.7	+1.2
	baz=257						
C19K	Lookout Ridge	29.37	31	P	P	11 35 23.4	-0.2
C19K	Lookout Ridge	29.37	31	P	P	11 35 24.5	+0.9
	baz=251						
N18K	Kilae Creek	29.40	49	P	P	11 35 24.1	+0.2
N18K	Kilae Creek	29.40	49	P	P	11 35 25.0	+1.1
	baz=269						
Q17K	Contact Creek	29.45	53	P	P	11 35 25.4	+0.9
	baz=274						
M18K	Stony River	29.46	47	P	P	11 35 25.2	+0.8
	baz=268						
G19K	Purcell Mounta	29.48	37	P	P	11 35 24.8	+0.2
G19K	Purcell Mounta	29.48	37	P	P	11 35 24.7	+0.2
	baz=258						
H19K	Roundabout Mou	29.62	39		P	11 35 26.2	+0.4
H19K				IAmb	IAmb	11 35 27.8	
	comp=Z,8.8nm,0.8s						
H19K	Roundabout Mou	29.62	39	P	P	11 35 26.4	+0.6
	baz=260						
D19K	Kuna River	29.68	32		P	11 35 26.1	-0.3
D19K				IAmb	IAmb	11 35 29.8	
	comp=Z,8.1nm,0.8s						
D19K	Kuna River	29.68	32	P	P	11 35 26.6	+0.2
	baz=253,SNR=8.9						
E19K	Redstone River	29.72	35	P	P	11 35 27.1	+0.4
	baz=256,SNR=6.5						
O18K	Koktuh Hills	29.74	50	P	P	11 35 27.5	+0.5
	baz=271						
P18K	Big Mountain,	29.75	51	P	P	11 35 27.3	+0.3
	baz=272						
J19K	Poorman	29.75	42		P	11 35 27.4	+0.4
J19K	Poorman	29.75	42	P	P	11 35 27.3	+0.4
	baz=264,SNR=5.7						
Q18K	Katmai Hardscr	29.89	53	P	P	11 35 29.2	+0.8
	baz=274						
L19K	White Mountain	29.95	46	P	P	11 35 29.5	+0.8
	baz=268						
N19K	Bonanza Creek	30.09	48	P	P	11 35 31.2	+1.1
	baz=270						
M19K	Big River Lodg	30.16	46	P	P	11 35 31.7	+1.1
	baz=269						
O19K	Port Alsworth	30.18	50	P	P	11 35 32.1	+1.3

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      baz=272
F20K  Avaraart Lake     30.20  36  P     P     11 35 30.9  0.0
F20K  Avaraart Lake     30.20  36  P     P     11 35 31.7 +0.8
      baz=258
H20K  Anotleneega Mo    30.26  39  P     P     11 35 31.9 +0.4
      baz=262,SNR=6.0
D20K  Etivluk River     30.27  32        P     11 35 31.9 +0.4
D20K                               IAmb  IAmb  11 35 33.2
      comp=Z,12nm,0.7s
D20K  Etivluk River     30.27  32  P     P     11 35 32.0 +0.4
      baz=255,SNR=17
E20K  Nigu River        30.31  33  P     P     11 35 32.1 +0.2
      baz=256,SNR=21
I20K  Naaghedeneel      30.34  40  P     P     11 35 32.8 +0.7
      baz=264
K20K  Telida            30.38  43  P     P     11 35 32.6 +0.1
K20K  Telida            30.38  43  P     P     11 35 33.1 +0.6
      baz=266
J20K  Nowinta River     30.41  42        P     11 35 33.8 +1.0
J20K                               IAmb  IAmb  11 35 35.5
      comp=Z,10.0nm,1.1s
J20K  Nowinta River     30.41  42  P     P     11 35 33.6 +0.8
      baz=265,SNR=8.7
L20K  Farewell, AK      30.42  45  P     P     11 35 33.4 +0.5
      baz=268
B20K  Meade River       30.47  30  P     P     11 35 34.0 +0.8
B20K                               IAmb  IAmb  11 35 34.4
      comp=Z,12nm,0.7s
B20K  Meade River       30.47  30  P     P     11 35 33.7 +0.5
      baz=252
SII   Sitkinak Islan    30.53  57  P     P     11 35 35.0 +1.0
      baz=278
Q19K  Cape Douglas,     30.58  52  P     P     11 35 35.3 +0.9
      baz=274
H11N2 WAKE ISLAND Hy    30.69 159  T     T     12 08 09.0
      baz=346,slow=76,SNR=141
H11N1 WAKE ISLAND Hy    30.70 159  T     T     12 08 12.0
      baz=346,slow=76,SNR=221
H11N3 WAKE ISLAND Hy    30.70 159  T     T     12 08 08.0
      baz=346,slow=76,SNR=155
P19K  Oil Pt            30.75  51  P     P     11 35 36.5 +0.6
      baz=273
M20K  Styx River        30.75  46  P     P     11 35 35.9  0.0
      baz=270
JOW   Kunigami          30.77 234  LR    LR    11 48 02.6
      comp=Z,132nm,21.8s,baz=156,slow=37
IMAR  Indian Mountai    30.79  38  P     P     11 35 37.2 +1.1
G21K  Allakaket         30.97  37  P     P     11 35 38.2 +0.4
      baz=262,SNR=8.1
C21K  Knifeblade Rid    31.03  32  P     P     11 35 38.3 +0.1
      baz=256,SNR=8.3
O20K  Slope Mountain    31.04  50  P     P     11 35 39.1 +0.6
      baz=273
F21K  Alatna River      31.09  36  P     P     11 35 39.3 +0.4
F21K  Alatna River      31.09  36  P     P     11 35 39.1 +0.3
      baz=260
H21K  Melozitna Rive    31.14  39  P     P     11 35 39.8 +0.6
      baz=264,SNR=7.6
E21K  Killik River      31.15  33  P     P     11 35 39.3  0.0
E21K  Killik River      31.15  33  P     P     11 35 39.7 +0.4
      baz=258
CHUM  Lake Minchumin    31.19  42  P     P     11 35 40.5 +0.8
      baz=267
N20K  Mount Spurr       31.20  47  P     P     11 35 40.7 +0.8
      baz=272
SPCR  Spurr Chakacha    31.20  47  P     P     11 35 40.8 +0.9
      baz=272
B21K  Ikpikpuk River    31.20  31        P     11 35 39.7  0.0
B21K  Ikpikpuk River    31.20  31  P     P     11 35 40.2 +0.5
      baz=255,SNR=19
PPLA  Purkeypile        31.21  44  P     P     11 35 40.8 +0.8
      baz=269
KDAK  Kodiak Island     31.25  54  P     P     11 35 41.3 +1.1
      baz=277
Q20K  Shuyak Island     31.26  53  P     P     11 35 41.2 +0.9
      baz=276
CAST  Castle Rocks      31.27  43        P     11 35 40.1 -0.4
CAST  Castle Rocks      31.27  43  P     P     11 35 41.2 +0.8
      baz=268,SNR=6.1
I21K  Tanana            31.43  40  P     P     11 35 42.5 +0.7
I21K  Tanana            31.43  40  P     P     11 35 42.5 +0.7
      baz=265
A22K  Sinclair Lake     31.48  28  P     P     11 35 42.4 +0.3
      baz=253
SKT   Skwentna          31.51  46  P     P     11 35 43.1 +0.6
      baz=271
HOM   Homer             31.55  50  P     P     11 35 43.7 +0.8
      baz=275
D22K  Ayikyak River     31.70  33        P     11 35 44.3 +0.1
D22K  Ayikyak River     31.70  33  P     P     11 35 44.8 +0.6
      baz=259
H22K  Ishtalitna Cre    31.75  38  P     P     11 35 44.8 +0.2
      baz=265,SNR=6.6
B22K  Teshekpuk Lake    31.79  30  IAmb  IAmb  11 35 46.4
      comp=Z,12nm,0.7s
B22K  Teshekpuk Lake    31.79  30  P     P     11 35 44.8  0.0
      baz=256,SNR=6.5
BPAW  Bear Paw Mtn.     31.79  42  P     P     11 35 46.0 +1.0
      baz=268,SNR=9.4
KTH   Kantishna Hill    31.80  43        P     11 35 44.7 -0.4
KTH                                IAmb  IAmb  11 35 47.7
      comp=Z,13nm,1.0s
G22K  Bettles           31.81  37  P     P     11 35 45.7 +0.6
      baz=263
H11S1 WAKE ISLAND Hy    31.82 160  T     T     12 09 36.1
      baz=346,slow=76,SNR=2514
H11S3 WAKE ISLAND Hy    31.83 160  T     T     12 09 31.0
      baz=346,slow=76,SNR=3552
H11S2 WAKE ISLAND Hy    31.84 160  T     T     12 09 37.6
      baz=346,slow=76,SNR=1425
E22K  Anaktuvuk Pass    31.88  34        P     11 35 46.0 +0.3
E22K  Anaktuvuk Pass    31.88  34  P     P     11 35 46.0 +0.3
      baz=261,SNR=24
SUA   Susitna One       31.89  47  P     P     11 35 46.8 +0.7
      baz=272,SNR=6.0
HHC   Hu-ho-hao-te      31.93 272 eP     P     11 35 45.2 -1.3
HHC                                pmax  pmax
      comp=Z,18nm,0.5s
HHC                                pmax  pmax
      comp=Z,69nm,4.9s
HHC                                LR    LR
      comp=Z,110nm,14.1s
HHC                                LR    LR
      comp=Z,120nm,14.5s
HHC                                LR    LR
      comp=Z,190nm,14.9s
MLY   Manley            31.95  40  P     P     11 35 47.0 +0.6
      baz=267,SNR=9.6
BRSE  Bradley Lake S    32.00  50  P     P     11 35 47.9 +1.0
      baz=275
TRF   Thorofare Moun    32.08  43        P     11 35 48.4 +0.7
TRF   Thorofare Moun    32.08  43  P     P     11 35 48.5 +0.7
      baz=270
SONM  Songino Array     32.26 287  LR    LR    11 50 19.1
      comp=Z,248nm,18.2s,baz=79,slow=39
COLD  Coldfoot          32.36  36  IAmb  IAmb  11 35 51.8
      comp=Z,6.1nm,0.8s
COLD  Coldfoot          32.36  36  P     P     11 35 50.5 +0.6
      baz=264,SNR=9.4
G23K  Bananza Creek     32.37  37  P     P     11 35 50.5 +0.4
      baz=265,SNR=7.5
NJ2   Nanjing           32.40 252 eP     P     11 35 50.6  0.0
NJ2                                pmax  pmax
      comp=Z,9.0nm,0.5s
RC01  Rabbit Creek A    32.40  48  P     P     11 35 51.4 +1.1
      baz=274
D23K  Nanushuk River    32.43  33  IAmb  IAmb  11 35 52.6
      comp=Z,12nm,1.1s
D23K  Nanushuk River    32.43  33  P     P     11 35 51.1 +0.6
      baz=261,SNR=6.4
H23K  Yukon River       32.49  39  IAmb  IAmb  11 35 53.6
      comp=Z,7.0nm,0.8s
H23K  Yukon River       32.49  39  P     P     11 35 52.1 +0.9
      baz=267,SNR=9.9
I23K  Minto, Yukon-K    32.53  40  P     P     11 35 52.3 +0.9
      baz=268
C23K  Itkillik River    32.61  31  P     P     11 35 52.7 +0.6
      baz=259,SNR=11
SEW   Seward            32.62  49  P     P     11 35 53.1 +0.9
      baz=276
NEA2  Nenana            32.64  41  P     P     11 35 53.3 +0.9
NEA2                               IAmb  IAmb  11 35 55.2
      comp=Z,8.4nm,0.8s
NEA2  Nenana            32.64  41  P     P     11 35 53.3 +0.9
      baz=269,SNR=16
PMR   Palmer            32.66  47  P     P     11 35 54.0 +1.4
      baz=274
E23K  Chandalar         32.68  35  P     P     11 35 53.4 +0.5
      baz=263,SNR=20
MCK   McKinley          32.69  43        P     11 35 53.8 +1.0
MCK                                IAmb  IAmb  11 35 54.6
      comp=Z,8.7nm,0.8s
MCK   McKinley          32.69  43  P     P     11 35 53.8 +1.0
MCK                                pmax  pmax
      comp=Z,9.0nm,0.8s
MCK   McKinley          32.69  43  P     P     11 35 53.4 +0.6
      baz=270
RND   Reindeer          32.73  43  IAmb  IAmb  11 35 54.6
      comp=Z,10nm,1.0s
TOLK  Toolik Lake Re    32.78  34        P     11 35 54.6 +1.0
TOLK  Toolik Lake Re    32.78  34  P     P     11 35 54.3 +0.7
      baz=262,SNR=12
WAT1  Susitna Watana    32.88  44  P     P     11 35 55.2 +0.7
      baz=272
KNK   Knik Glacier      33.00  47  P     P     11 35 55.7 +0.2
      baz=274
SML   Sawmill           33.03  46  P     P     11 35 57.0 +1.1
SML   Sawmill           33.03  46  P     P     11 35 56.0 +0.1
SML                                pmax  pmax
      comp=Z,22nm,0.6s
SML   Sawmill           33.03  46  P     P     11 35 56.5 +0.6
      baz=274,SNR=15
PWL   Port Wells        33.10  48  IAmb  IAmb  11 35 57.5
      comp=Z,5.0nm,0.7s
PWL   Port Wells        33.10  48  P     P     11 35 57.1 +0.7
      baz=275
E24K  Your Creek        33.10  35  IAmb  IAmb  11 35 58.7
      comp=Z,13nm,0.8s
E24K  Your Creek        33.10  35  P     P     11 35 56.7 +0.2
      baz=264
D24K  Happy Valley      33.12  33  P     P     11 35 57.0 +0.5
      baz=262,SNR=9.5
COLA  College           33.17  41  P     P     11 35 57.8 +0.8
COLA  College           33.17  41 c iP   P     11 35 57.7 +0.8
COLA  College           33.17  41  P     P     11 35 57.7 +0.8
      baz=270
H24K  Noodor Dome       33.18  39  P     P     11 35 58.0 +0.9
      baz=268,SNR=10
CCB   Clear Creek Bu    33.19  41  IAmb  IAmb  11 35 59.0
      comp=Z,7.9nm,1.0s
C24K  Franklin Bluff    33.25  32  P     P     11 35 58.0 +0.5
      baz=261
WAT6  Susitna Watana    33.26  45  P     P     11 35 58.9 +0.9
      baz=273
F24K  Squaw Lake        33.28  36        P     11 35 58.9 +0.9
F24K                               IAmb  IAmb  11 36 01.4
      comp=Z,5.5nm,0.6s
F24K  Squaw Lake        33.28  36  P     P     11 35 58.4 +0.5
      baz=266,SNR=7.1
POKR  Poker Plat Res    33.35  40  IAmb  IAmb  11 36 01.1
      comp=Z,15nm,0.9s
POKR  Poker Plat Res    33.35  40  P     P     11 35 59.6 +1.1
      baz=270,SNR=5.7
G24K  Hadweenzic Riv    33.38  37  P     P     11 35 59.6 +0.8
      baz=267,SNR=26
DHY   Denali Highway    33.41  44  IAmb  IAmb  11 36 00.7
      comp=Z,7.9nm,1.1s
DHY   Denali Highway    33.41  44  P     P     11 35 59.9 +0.6
      baz=273,SNR=5.8
SCM   Sheep Creek Mo    33.50  46  IAmb  IAmb  11 36 17.7
      comp=Z,18nm,1.3s
SCM   Sheep Creek Mo    33.50  46  P     P     11 36 00.6 +0.5
      baz=275
HDA   Harding Lake      33.56  41  P     P     11 36 00.9 +0.5
      baz=271,SNR=8.5
IL31                    33.58  41  IAmb  IAmb  11 36 02.1
      comp=Z,7.2nm,0.9s
ILAR  Eielson Array     33.58  41        P     11 36 01.2 +0.6
ILAR  Eielson Array     33.58  41  P     P     11 36 00.9 +0.4
      comp=Z,3.5nm,0.9s,baz=261,slow=9.1,SNR=34
ILAR                               LR    LR    11 50 46.3
      comp=Z,62nm,19.5s,baz=256,slow=38
      comp=Z,3.5nm,0.9s
ILAR  Eielson Array     33.58  41  P     P     11 36 01.0 +0.4
P23K  Montague Islan    33.65  49  P     P     11 36 02.2 +0.9
      baz=278
G25K  Bearman Lake      33.93  37  P     P     11 36 04.6 +1.0
      baz=268,SNR=5.5
D25K  Kavik River       34.01  33  P     P     11 36 04.9 +0.6
D25K  Kavik River       34.01  33  P     P     11 36 04.9 +0.6
      baz=264,SNR=25
M24K  Tolsona, Glenn    34.02  46  P     P     11 36 05.4 +0.8
      baz=275
H25L  Birch Creek       34.03  38  P     P     11 36 05.3 +0.9
      baz=269,SNR=7.0
K24K  Donnelly Dome     34.09  42  IAmb  IAmb  11 36 06.8
      comp=Z,14nm,0.9s
K24K  Donnelly Dome     34.09  42  P     P     11 36 05.7 +0.7
      baz=273,SNR=8.1
F25K  Christian Rive    34.14  36  IAmb  IAmb  11 36 08.1
      comp=Z,14nm,1.5s
F25K  Christian Rive    34.14  36  P     P     11 36 06.5 +1.0
      baz=268,SNR=5.8
PRP   Porcupine Dome    34.15  39  IAmb  IAmb  11 36 07.9
      comp=Z,13nm,0.8s
PRP   Porcupine Dome    34.15  39  P     P     11 36 06.4 +0.7
      baz=271,SNR=21
E25K  Arctic Village    34.20  35  IAmb  IAmb  11 36 08.5
      comp=Z,18nm,1.4s
E25K  Arctic Village    34.20  35  P     P     11 36 06.9 +1.0
      baz=267,SNR=8.5
KLU   Klutina           34.20  47  IAmb  IAmb  11 36 16.1
      comp=Z,13nm,1.4s
KLU   Klutina           34.20  47  P     P     11 36 06.8 +0.7
      baz=276
J25K  Salcha River,     34.23  41  P     P     11 36 06.3  0.0
      baz=272,SNR=7.4
PAX   Paxson            34.28  44  P     P     11 36 07.3 +0.5
      baz=275
EYAK  Cordova Ski Ar    34.40  48  P     P     11 36 08.4 +0.8
      baz=278
RIDG  Independent Ri    34.51  43  IAmb  IAmb  11 36 10.4
      comp=Z,16nm,1.1s
RIDG  Independent Ri    34.51  43  P     P     11 36 09.2 +0.6
      baz=274,SNR=13
BMAR  Burnt Mountain    34.55  36        P     11 36 10.4 +1.4
F26K  Sheenjek River    34.72  36  IAmb  IAmb  11 36 13.1
      comp=Z,8.3nm,1.2s
F26K  Sheenjek River    34.72  36  P     P     11 36 11.3 +0.9
      baz=269,SNR=5.2
N25K  Chitina, Valde    34.82  46        P     11 36 12.5 +1.0
N25K                               IAmb  IAmb  11 36 13.6
      comp=Z,4.6nm,0.7s
N25K  Chitina, Valde    34.82  46  P     P     11 36 12.5 +1.0
      baz=277
G26K  Porcupine Rive    34.85  37  IAmb  IAmb  11 36 14.4
      comp=Z,14nm,0.9s
G26K  Porcupine Rive    34.85  37  P     P     11 36 12.7 +1.2
      baz=270,SNR=13
DOT   Dot Lake          34.86  43  IAmb  IAmb  11 36 25.5
      comp=Z,4.9nm,0.8s
SCRK  Sand Creek        34.87  42  IAmb  IAmb  11 36 13.7
      comp=Z,9.2nm,1.0s
SCRK  Sand Creek        34.87  42  P     P     11 36 12.4 +0.5
      baz=274,SNR=14
BMRM  Bremner River     34.90  47  IAmb  IAmb  11 36 34.8
      comp=Z,16nm,1.2s
BMRM  Bremner River     34.90  47  P     P     11 36 12.8 +0.7
      baz=278
RAGM  Ragged Mountai    34.95  48  IAmb  IAmb  11 36 16.8
      comp=Z,6.5nm,0.9s
C27K  Jago River        34.97  32  P     P     11 36 13.1 +0.6
      baz=266
KAIM  Kayak Island      35.15  49  P     P     11 36 15.9 +1.8
      baz=280
L26K  Log Cabin Wild    35.24  44  P     P     11 36 16.4 +1.5
      baz=276
M26K  Nabesna, AK       35.47  45  IAmb  IAmb  11 36 34.8
      comp=Z,11nm,1.1s
M26K  Nabesna, AK       35.47  45  P     P     11 36 18.6 +1.6
      baz=277,SNR=9.2
CRQE  Cirque            35.66  48  P     P     11 36 20.2 +1.4
      baz=280,SNR=5.3
E27K  Coleen River      35.69  35  P     P     11 36 20.2 +1.5
      baz=270
G27K  Doyon Strip       35.69  37  P     P     11 36 20.2 +1.4
G27K  Doyon Strip       35.69  37  P     P     11 36 20.2 +1.4
      baz=272
K27K  Chicken           35.70  42  P     P     11 36 19.9 +1.0
      baz=276
H27K  Steamboat Moun    35.77  38  IAmb  IAmb  11 36 23.2
      comp=Z,17nm,1.3s
H27K  Steamboat Moun    35.77  38  P     P     11 36 20.9 +1.4
      baz=273,SNR=11
I27K  Kandik River      35.77  39  P     P     11 36 20.7 +1.2
      baz=274
WAX   Waxell Ridge      35.83  48  IAmb  IAmb  11 36 22.7
      comp=Z,7.4nm,0.7s
D27M  Malcolm River     35.92  33  IAmb  IAmb  11 36 23.1
      comp=Z,16nm,0.9s
D27M  Malcolm River     35.92  33  P     P     11 36 22.4 +1.6
      baz=270
L27K  Beaver Creek,     35.92  43  IAmb  IAmb  11 36 23.8
      comp=Z,16nm,1.1s
L27K  Beaver Creek,     35.92  43  P     P     11 36 22.9 +2.0
      baz=278,SNR=23
BCAR  Beaver Creek A    35.94  43  P     P     11 36 22.8 +1.7
M27K  Edge Creek, AK    35.99  45  IAmb  IAmb  11 36 24.5
      comp=Z,6.9nm,0.9s
M27K  Edge Creek, AK    35.99  45  P     P     11 36 23.2 +1.7
      baz=278,SNR=6.8
WHN   Wuhan             36.25 255  P     P     11 36 23.9  0.0
WHN                                pmax  pmax
      comp=Z,36nm,0.7s
GRNC  Granite Creek     36.31  47  P     P     11 36 25.6 +1.1
GRNC                               IAmb  IAmb  11 36 26.9
      comp=Z,7.4nm,0.8s
MESA  MESA              36.32  48  P     P     11 36 26.1 +1.7
      baz=281
F28M  Old Crow          36.35  36  IAmb  IAmb  11 36 27.2
      comp=Z,9.2nm,0.8s
F28M  Old Crow          36.35  36  P     P     11 36 25.8 +1.4
      baz=273,SNR=13
YAH   Yahtse            36.39  48  IAmb  IAmb  11 36 27.8
      comp=Z,9.3nm,0.8s
E28M  Babbage River     36.45  34  IAmb  IAmb  11 36 27.9
      comp=Z,14nm,1.4s
E28M  Babbage River     36.45  34  P     P     11 36 26.5 +1.3
      baz=272
BVCY  Beaver Creek      36.45  44  P     P     11 36 27.1 +1.8
      baz=279
CTG   Chitna Glacier    36.47  47  P     P     11 36 27.0 +1.4
      baz=281,SNR=7.4
CTGM  Chitina Glacie    36.48  47  IAmb  IAmb  11 36 28.3
      comp=Z,10nm,0.8s
I28M  Miner Creek       36.48  39  IAmb  IAmb  11 36 28.5
      comp=Z,16nm,1.2s
I28M  Miner Creek       36.48  39  P     P     11 36 27.3 +1.7
      baz=276,SNR=13
GUMO  Guam              36.57 198  LR    LR    11 48 48.2
      comp=Z,47nm,20.7s,baz=44,slow=32
LOGN  Logan Glacier     36.66  47  IAmb  IAmb  11 36 29.7
      comp=Z,5.7nm,0.8s
YUK3  Moose Creek       36.74  45  P     P     11 36 29.3 +1.2
      baz=280,SNR=8.5
DAWY  Dawson            36.87  42  P     P     11 36 30.2 +1.3
      baz=278
H29M  Whitestone        37.05  38        P     11 36 31.9 +1.6
H29M                               IAmb  IAmb  11 36 40.9
      comp=Z,16nm,1.3s
H29M  Whitestone        37.05  38  P     P     11 36 31.8 +1.6
      baz=276,SNR=7.8
E29M  Blow River        37.06  34  IAmb  IAmb  11 36 33.8
      comp=Z,13nm,1.1s
E29M  Blow River        37.06  34  P     P     11 36 31.5 +1.1
      baz=274,SNR=12
O28M  Mount Upton       37.06  47  IAmb  IAmb  11 36 33.2
      comp=Z,8.4nm,0.8s
O28M  Mount Upton       37.06  47  P     P     11 36 32.3 +1.5
      baz=282,SNR=12
G29M  Pine Creek        37.12  37  P     P     11 36 32.6 +1.7
      baz=276,SNR=13
YUK8  Steele Glacier    37.16  46  P     P     11 36 33.2 +1.5
      baz=282
I29M  Ogilvie Camp,     37.17  39  IAmb  IAmb  11 36 34.2
      comp=Z,13nm,1.2s
I29M  Ogilvie Camp,     37.17  39  P     P     11 36 32.9 +1.5
      baz=277,SNR=14
PINM  Pinnacle          37.17  48  P     P     11 36 32.4 +0.9
      baz=283
XAN   Xi'an             37.49 264  P     P     11 36 35.3 +0.8
XAN                                pmax  pmax
      comp=Z,6.0nm,0.8s
M29M  Somme Creek       37.55  44  P     P     11 36 36.6 +1.9
      baz=281,SNR=8.0
L29M  L29M              37.58  43  IAmb  IAmb  11 36 56.7
      comp=Z,11nm,1.1s
L29M  L29M              37.58  43  P     P     11 36 36.6 +1.7
      baz=280,SNR=12
YUK4  Talbot Arm        37.68  46  P     P     11 36 37.5 +1.6
      baz=282
EPYK  Eagle Plains      37.69  38  IAmb  IAmb  11 36 38.4
      comp=Z,24nm,1.4s
EPYK  Eagle Plains      37.69  38  P     P     11 36 37.8 +2.0
      baz=277,SNR=7.2
K29M  Barlow Dome       37.72  42  P     P     11 36 37.4 +1.2
      baz=280
G30M  tAoh Zraii Nji    37.82  37        P     11 36 37.7 +0.9
G30M  tAoh Zraii Nji    37.82  37  P     P     11 36 37.9 +1.1
      baz=277
YUK6  Outpost Mounta    37.90  47  P     P     11 36 39.0 +1.2
      baz=283
F30M  Barrier River     37.91  35  IAmb  IAmb  11 36 41.5
      comp=Z,24nm,1.2s
F30M  Barrier River     37.91  35  P     P     11 36 39.0 +1.3
      baz=276,SNR=8.2
I30M  Mount Dempster    37.99  39  IAmb  IAmb  11 36 40.8
      comp=Z,19nm,1.4s
I30M  Mount Dempster    37.99  39  P     P     11 36 39.6 +1.1
      baz=279,SNR=15
J30M  Hart River        38.12  40  P     P     11 36 41.3 +1.8
      baz=280
HYT   Haines Junctio    38.34  47  P     P     11 36 42.9 +1.5
      baz=284,SNR=7.6
N30M  Aishikik Lake     38.39  45  P     P     11 36 43.0 +1.2
      baz=283
MAYO  Mayo, Yukon       38.48  42  P     P     11 36 44.2 +1.8
      baz=282
P29M  Windy Craggy      38.51  48  P     P     11 36 44.0 +1.2
      baz=285
G31M  Satah River       38.59  36  IAmb  IAmb  11 36 46.2
      comp=Z,17nm,1.4s
G31M  Satah River       38.59  36  P     P     11 36 44.8 +1.6
      baz=279,SNR=6.6
INK   Inuvik            38.68  34  IAmb  IAmb  11 36 46.4
      comp=Z,14nm,1.2s
INK   Inuvik            38.68  34  P     P     11 36 45.1 +1.1
INK                                pmax  pmax
      comp=Z,9.0nm,1.1s
INK   Inuvik            38.68  34  P     P     11 36 45.4 +1.4
      baz=278,SNR=10
F31M  Tsiigehtchic      38.72  36  P     P     11 36 44.7 +0.4
F31M                               IAmb  IAmb  11 36 46.6
      comp=Z,12nm,1.1s
F31M  Tsiigehtchic      38.72  36  P     P     11 36 45.3 +1.0
      baz=278,SNR=10
H31M  Peel River        38.73  38  P     P     11 36 46.1 +1.5
      baz=280
P30M  Million Dollar    38.77  48  P     P     11 36 47.0 +2.1
      baz=285
CNSH  ChangSha          38.77 253  P     P     11 36 45.3 +0.1
CNSH                               pmax  pmax
      comp=Z,40nm,0.9s
N31M  Braeburn, Yuko    38.99  45  P     P     11 36 48.8 +2.0
      baz=284
O30N  Mendenhall        39.02  46  P     P     11 36 49.3 +2.2
      baz=285,SNR=7.8
PLBC  Pleasant Camp     39.23  48  P     P     11 36 50.9 +2.2
      baz=286
M31M  Drury Creek, Y    39.46  44  P     P     11 36 52.6 +2.0
      baz=284
LZH   Lanzhou           39.60 271 eP     P     11 36 47.8 -4.5
LZH                                pmax  pmax
      comp=Z,13nm,1.0s
LZH                                LR    LR
      comp=Z,160nm,13.9s
LZH                                LR    LR
      comp=Z,190nm,13.9s
LZH                                LR    LR
      comp=Z,270nm,14.4s
WHY   Whitehorse        39.62  46  IAmb  IAmb  11 37 15.8
      comp=Z,18nm,1.3s
WHY   Whitehorse        39.62  46  P     P     11 36 54.5 +2.4
      baz=286
SKAG  Skagway           39.74  48  P     P     11 36 55.5 +2.5
      baz=287
FARO  Faro, Yukon       39.92  44  P     P     11 36 56.7 +2.2
      baz=285
GTA   Gaotai            40.36 278 eP     P     11 36 58.3 -0.2
GTA                                pmax  pmax
      comp=Z,6.0nm,0.9s
GTA                                LR    LR
      comp=Z,140nm,14.5s
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GTA				LR	LR		
	comp=Z,120nm,14.5s						
GTA				LR	LR		
	comp=Z,250nm,17.1s						
P32M	**Atlin**	**40.49**	**48**	P	**P**	**11 37 01.2**	**+1.9**
	baz=288						
R32K	**Eaglecrest**	**40.50**	**50**	P	**P**	**11 37 01.4**	**+2.1**
	baz=289						
P33M	**Teslin, Yukon**	**40.73**	**47**		**P**	**11 37 03.6**	**+2.3**
P33M	**Teslin, Yukon**	**40.73**	**47**	P	**P**	**11 37 03.2**	**+1.9**
	baz=288,SNR=7.3						
MMPY	**Sheldon Lake,**	**40.76**	**43**	P	**P**	**11 37 03.0**	**+1.5**
	baz=286						
A36M	**Sachs Harbour**	**40.92**	**28**		**P**	**11 37 03.9**	**+1.3**
A36M	**Sachs Harbour**	**40.92**	**28**	P	**P**	**11 37 03.8**	**+1.3**
	baz=280,SNR=19						
Q32M	**Nakina River**	**41.39**	**48**	P	**P**	**11 37 08.5**	**+1.6**
	baz=290						
C36M	**Paulatuk**	**41.86**	**32**		**P**	**11 37 11.5**	**+1.2**
C36M	**Paulatuk**	**41.86**	**32**	P	**P**	**11 37 11.6**	**+1.4**
	baz=284,SNR=21						
R33M	**Jennings River**	**41.88**	**47**	P	**P**	**11 37 12.5**	**+1.7**
	baz=290,SNR=8.4						
WRAK	**Wrangell Islan**	**42.25**	**52**	P	**P**	**11 37 15.4**	**+1.8**
	baz=292						
S34M	**Telegraph Cree**	**42.32**	**49**	P	**P**	**11 37 15.9**	**+1.7**
	baz=291						
ZALV	**Zalesovo Beam**	**42.67**	**304**	P	**P**	**11 37 16.0**	**-1.1**
	comp=Z,0.9nm,0.3s,baz=66,slow=7.2,SNR=4.9						
ZALV				PcP	**PcP**	**11 39 09.1**	**+1.1**
	comp=Z,1.4nm,0.5s,baz=70,slow=4.9,SNR=7.8						
ZALV				LR	LR	11 56 08.6	
	comp=Z,84nm,18.4s,baz=43,slow=38						
	comp=Z,0.9nm,0.3s						
DLBC	**Dease Lake**	**42.67**	**48**	P	**P**	**11 37 20.7**	**+3.5**
DLBC	**Dease Lake**	**42.67**	**48**	P	**P**	**11 37 19.0**	**+1.8**
	baz=292						
V35K	**Ketchikan**	**43.05**	**53**	P	**P**	**11 37 21.4**	**+1.4**
	baz=294						
T35M	**Bob Quinn**	**43.10**	**50**	P	**P**	**11 37 22.6**	**+2.0**
	baz=293						
WRGLY	**Wrigley**	**43.95**	**40**	P	**P**	**11 37 29.0**	**+1.7**
	baz=291						
LIRD	**Liard River Hi**	**44.20**	**46**	P	**P**	**11 37 31.0**	**+1.7**
	baz=293						
BEAVL	**Fort Liard**	**44.38**	**45**	P	**P**	**11 37 33.1**	**+2.4**
	baz=293						
TOAD	**Toad River Com**	**44.83**	**46**	P	**P**	**11 37 36.4**	**+2.0**
	baz=294,SNR=12						
ZSN	**Zaisan**	**45.58**	**296**	*e*P	**P**	**11 37 40.3**	**-0.1**
ZSN				pmax	pmax		
	comp=Z,14nm,0.9s						
ZSN	**Zaisan**	**45.58**	**296**	*e*P	**P**	**11 37 40.3**	**-0.1**
	comp=Z,14nm,0.9s						
WMQ	**Urumqi**	**45.72**	**290**	*e*P	**P**	**11 37 42.4**	**+0.7**
WMQ				LR	LR		
	comp=Z,53nm,24.0s						
BBB	**Bella Bella**	**46.29**	**56**	LR	LR	11 57 31.4	
	comp=Z,31nm,19.0s,baz=282,slow=36						
EUNU	**Eureka**	**46.42**	**12**		**P**	**11 37 47.4**	**+0.7**
SEM	**Semipalatinsk**	**46.77**	**302**	*e*P	**P**	**11 37 49.8**	**-0.2**
SEM	**Semipalatinsk**	**46.77**	**302**	*e*P	**P**	**11 37 49.9**	**-0.2**
PZH	**PanZhiHua**	**47.10**	**262**	P	**P**	**11 37 53.4**	**+0.6**
PZH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,100nm,5.1s						
MK31	**Makanchi Array**	**47.42**	**297**	P	**P**	**11 37 54.2**	**-0.7**
MK31				PcP	**PcP**	**11 39 24.5**	**-0.1**
MK31	**Makanchi Array**	**47.42**	**297***c*	*i*P	**P**	**11 37 54.4**	**-0.5**
MKAR	**Makanchi Array**	**47.42**	**297**		**P**	**11 37 54.6**	**-0.3**
MKAR				PcP	**PcP**	**11 39 25.3**	**+0.8**
MKAR	**Makanchi Array**	**47.42**	**297**	P	**P**	**11 37 54.5**	**-0.5**
	comp=Z,3.1nm,0.7s,baz=61,slow=7.5,SNR=19						
MKAR				PcP	**PcP**	**11 39 25.2**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=52,slow=6.3,SNR=4.0						
MKAR				LR	LR	11 59 18.7	
	comp=Z,272nm,18.4s,baz=38,slow=38						
	comp=Z,3.1nm,0.7s						
MKAR	**Makanchi Array**	**47.42**	**297**	P	**P**	**11 37 54.6**	**-0.3**
MKAR						11 39 25.3	
KURK	**Kurchatov**	**47.52**	**303**		**P**	**11 37 55.2**	**-0.4**
KURK				IAmb	IAmb	11 37 56.8	
	comp=Z,8.4nm,0.8s						
KURK	**Kurchatov**	**47.52**	**303***c*	*e*P	**P**	**11 37 54.6**	**-1.0**
KURK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KURK	**Kurchatov**	**47.52**	**303**	*e*P	**P**	**11 37 54.6**	**-1.0**
KURBB	**Kurchatov Arra**	**47.62**	**303**	P	**P**	**11 37 55.9**	**-0.5**
	comp=Z,5.5nm,0.7s,baz=64,slow=8.0,SNR=24						
KURBB				PcP	**PcP**	**11 39 25.4**	**+0.3**
	comp=Z,3.0nm,0.9s,baz=60,slow=3.2,SNR=9.1						
KURBB				LR	LR	11 58 53.7	
	comp=Z,94nm,21.0s,baz=172,slow=37						
	comp=Z,5.5nm,0.7s						
YKAW3	**Yellowknife Wh**	**47.92**	**39**		**P**	**11 37 58.6**	**+0.2**
YKAW3				IAmb	IAmb	11 38 01.6	
	comp=Z,2.7nm,0.8s						
YKA	**Yellowknife Ar**	**47.95**	**39**	P	**P**	**11 38 00.1**	**+1.4**
	comp=Z,1.8nm,0.8s,baz=287,slow=16,SNR=8.5						
	comp=Z,1.8nm,0.8s						
RES	**Resolute Bay**	**47.99**	**20**		**P**	**11 37 59.6**	**+0.7**
RES				IAmb	IAmb	11 38 03.2	
	comp=Z,7.2nm,1.4s						
RES	**Resolute Bay**	**47.99**	**20**	LR	LR	11 59 43.0	
	comp=Z,60nm,20.9s,baz=355,slow=38						
RES	**Resolute Bay**	**47.99**	**20**	P	**P**	**11 37 59.6**	**+0.7**
RES				pmax	pmax		
	comp=Z,7.0nm,1.4s						
SLVN	**Son La**	**49.37**	**255**		**P**	**11 38 11.0**	**+0.8**
SPITS	**Spitsbergen Ar**	**50.56**	**350**	P	**P**	**11 38 16.4**	**-2.1**
	comp=Z,7.6nm,1.0s,baz=44,slow=11,SNR=6.8						
	comp=Z,7.6nm,1.0s						
TDK	**Taldyqorghan**	**50.67**	**297**	*e*P	**P**	**11 38 19.6**	**-0.2**
TDK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TDK	**Taldyqorghan**	**50.67**	**297**	*e*P	**P**	**11 38 19.6**	**-0.2**
	comp=Z,4.9nm,0.6s						
BVAR	**Borovoye Array**	**50.71**	**309**	P	**P**	**11 38 19.5**	**-0.4**
	comp=Z,6.2nm,0.6s,baz=58,slow=8.4,SNR=27						
BVAR				PcP	**PcP**	**11 39 36.8**	**+0.4**
	comp=Z,3.4nm,0.8s,baz=57,slow=5.5,SNR=7.1						
BVAR				LR	LR	12 00 49.0	
	comp=Z,140nm,20.8s,baz=69,slow=37						
	comp=Z,6.2nm,0.6s						
BRVK	**Borovoye**	**50.75**	**309**		**P**	**11 38 19.3**	**-0.9**
BRVK				IAmb	IAmb	11 38 20.4	
	comp=Z,7.5nm,0.8s						
BRVK	**Borovoye**	**50.75**	**309**	P	**P**	**11 38 19.3**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BRVK	**Borovoye**	**50.75**	**309**	*e*P	**P**	**11 38 19.3**	**-0.9**
SHLS	**Shalkode**	**51.09**	**294**	*e*P	**P**	**11 38 20.7**	**-2.4**
SHLS	**Shalkode**	**51.09**	**294**	*e*P	**P**	**11 38 20.8**	**-2.4**
BRZS	**Berezniki**	**51.15**	**305**	*e*P	**P**	**11 38 23.1**	**-0.2**
BRZS	**Berezniki**	**51.15**	**305**	*e*P	**P**	**11 38 23.2**	**-0.2**
UZB	**Uzynbulak**	**51.36**	**294**	*e*P	**P**	**11 38 24.6**	**-0.5**
UZB	**Uzynbulak**	**51.36**	**294**	*e*P	**P**	**11 38 24.6**	**-0.5**
KPKS	**Kokpek**	**51.38**	**295**	*e*P	**P**	**11 38 24.8**	**-0.4**
KPKS	**Kokpek**	**51.38**	**295**	*e*P	**P**	**11 38 24.8**	**-0.4**
SATY	**Saty**	**51.78**	**294**	*e*P	**P**	**11 38 27.9**	**-0.3**
SATY	**Saty**	**51.78**	**294**	*e*P	**P**	**11 38 28.0**	**-0.3**
MDOK	**Medeo**	**52.53**	**295**	*e*P	**P**	**11 38 33.4**	**-0.4**
MDOK	**Medeo**	**52.53**	**295**	*e*P	**P**	**11 38 33.4**	**-0.4**
BLKN	**Baker Lake**	**53.90**	**31**	IAmb	IAmb	11 38 45.5	
	comp=Z,12nm,0.9s						
NEW	**Newport**	**54.34**	**55**	LR	LR	12 00 02.6	
	comp=Z,23nm,21.8s,baz=297,slow=34						
AAK	**Ala-Archa**	**54.35**	**296**	LR	LR	12 03 38.3	
	comp=Z,188nm,18.7s,baz=55,slow=38						
AAK	**Ala-Archa**	**54.35**	**296**⇑	*e*P	**P**	**11 38 48.3**	**+1.1**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
AAK	**Ala-Archa**	**54.35**	**296**	*e*P	**P**	**11 38 48.3**	**+1.1**
CHTO	**Chiang Mai**	**54.38**	**257**		**P**	**11 38 48.6**	**+1.2**
CHTO	**Chiang Mai**	**54.38**	**257**	P	**P**	**11 38 48.6**	**+1.2**
CHTO				pmax	pmax		
	comp=Z,26nm,1.0s						
ILON	**Igloolik, Nuna**	**54.52**	**22**	IAmb	IAmb	11 38 49.1	
	comp=Z,13nm,0.9s						
ARTI	**Arti**	**54.54**	**317**		**P**	**11 38 47.3**	**-0.8**
ARTI	**Arti**	**54.54**	**317**	LR	LR	12 04 13.6	
	comp=Z,83nm,19.2s,baz=27,slow=38						
ARTI	**Arti**	**54.54**	**317**	*i* P	**P**	**11 38 47.2**	**-1.0**
ARTI				pmax	pmax		
	comp=Z,20nm,0.8s						
CMAR	**Chiang Mai Arr**	**54.64**	**257**	P	**P**	**11 38 50.2**	**+0.9**
CMAR	**Chiang Mai Arr**	**54.64**	**257**	P	**P**	**11 38 50.8**	**+1.4**
	comp=Z,10nm,0.8s,baz=31,slow=7.4,SNR=52						
CMAR				LR	LR	12 03 41.5	
	comp=Z,52nm,18.9s,baz=60,slow=38						
	comp=Z,10nm,0.8s						
KSH	**Kashi**	**55.37**	**292**	P	**P**	**11 38 58.0**	**+3.5**
KSH				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KSH				LR	LR		
	comp=Z,710nm,16.8s						
KSH				LR	LR		
	comp=Z,390nm,15.1s						
KSH				LR	LR		
	comp=Z,240nm,15.1s						
APA	**Apatity**	**55.83**	**337**⇓	*i*P	P	11 38 47.8	-9.4
APA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ARCES	**ARCESS Array B**	**56.16**	**341**	P	**P**	**11 38 58.8**	**-0.8**
ARCES				IAmb	IAmb	11 39 35.8	
	comp=Z,9.7nm,1.4s						
ARCES				PcP	**PcP**	**11 39 57.5**	**+0.7**
ARCES	**ARCESS Array B**	**56.16**	**341**	P	**P**	**11 38 58.7**	**-0.9**
	comp=Z,1.2nm,0.5s,baz=21,slow=7.8,SNR=6.9						
ARCES				PcP	**PcP**	**11 39 56.8**	**0.0**
	comp=Z,1.4nm,0.6s,baz=28,slow=5.5,SNR=4.1						
ARCES				LR	LR	12 06 11.0	
	comp=Z,85nm,21.8s,baz=48,slow=40						
	comp=Z,1.2nm,0.5s						
HATC	**Hat Creek Radi**	**56.39**	**65**	P	**P**	**11 39 02.3**	**+0.5**
HATC				PcP	**PcP**	**11 39 58.2**	**-0.1**
KIRV	**Kirov**	**56.92**	**323**	LR	LR	12 05 06.1	
	comp=Z,65nm,20.1s,baz=38,slow=38						
KIRV	**Kirov**	**56.92**	**323**⇑	*i*P	**P**	**11 39 04.5**	**-0.6**
WVOR	**Wild Horse Val**	**57.04**	**62**	P	**P**	**11 39 07.0**	**+0.6**
WVOR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
IUG	**Iuzhnay**	**57.26**	**298**	*e*P	**P**	**11 39 07.6**	**-0.3**
IUG	**Iuzhnay**	**57.26**	**298**	*e*P	**P**	**11 39 07.6**	**-0.3**
BTK	**Batken**	**58.12**	**296**	IAmb	IAmb	11 39 16.4	
	comp=Z,4.3nm,0.8s						
BTK	**Batken**	**58.12**	**296**	P	**P**	**11 39 14.2**	**+0.2**
SUMG	**Summit**	**58.17**	**5**		**P**	**11 39 14.5**	**+0.2**
SUMG	**Summit**	**58.17**	**5**	P	**P**	**11 39 14.5**	**+0.2**
SUMG				pmax	pmax		
	comp=Z,9.0nm,0.7s						
AB31	**Akbulak array**	**58.24**	**310**	P	**P**	**11 39 13.8**	**-0.7**
AB31				IAmb	IAmb	11 39 14.8	
	comp=Z,7.0nm,0.6s						
ABKAR	**Akbulak array**	**58.24**	**310**		**P**	**11 39 14.0**	**-0.5**
AKTO	**Aktyubinsk**	**58.44**	**312**	LR	LR	12 07 17.8	
	comp=Z,45nm,20.1s,baz=85,slow=39						
HNR	**Honiara**	**58.44**	**175**	LR	LR	12 02 02.7	
	comp=Z,55nm,20.5s,baz=335,slow=34						
BOZ	**Bozeman (W)**	**58.95**	**55**	IAmb	IAmb	11 39 37.6	
	comp=Z,8.6nm,1.2s						
KLMR	**Klimovskoe**	**58.96**	**329**	*e*P	**P**	**11 39 16.2**	**-3.1**
KLMR				pmax	pmax		
	comp=Z,19nm,1.5s						
NVAR	**Mina Array Bea**	**59.79**	**65**	P	**P**	**11 39 27.4**	**+1.7**
	comp=Z,1.1nm,0.7s,baz=296,slow=6.7,SNR=7.5						
NVAR				LR	LR	12 03 42.6	
	comp=Z,29nm,19.4s,baz=314,slow=34						
	comp=Z,1.1nm,0.7s						
NV11	**Mina Array Sit**	**59.88**	**65**	P	**P**	**11 39 27.4**	**+1.2**
NV11				IAmb	IAmb	11 39 28.9	
	comp=Z,8.9nm,1.4s						
SIMJ	**Simiganj**	**60.09**	**296**		**P**	**11 39 27.3**	**-0.5**
SIMJ				IAmb	IAmb	11 39 28.2	
	comp=Z,6.0nm,0.9s						
RLMT	**Red Lodge**	**60.52**	**54**		**P**	**11 39 30.8**	**+0.1**
RLMT				IAmb	IAmb	11 39 49.7	
	comp=Z,9.2nm,1.1s						
TPH	**Tonopah**	**60.67**	**65**	P	**P**	**11 39 32.7**	**+1.0**
TPH	**Tonopah**	**60.67**	**65**	P	**P**	**11 39 32.7**	**+1.0**
TPH				pmax	pmax		
	comp=Z,16nm,1.1s						
TPAW	**Teton Pass**	**60.69**	**56**	IAmb	IAmb	11 39 50.8	
	comp=Z,6.5nm,1.0s						
NIL	**Nilore**	**60.81**	**289**		**P**	**11 39 30.7**	**-1.9**
NIL				IAmb	IAmb	11 39 34.5	
	comp=Z,8.4nm,0.8s						
NIL	**Nilore**	**60.81**	**289**	P	**P**	**11 39 30.7**	**-1.9**
NIL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SPR3	**Spring Creek 3**	**61.75**	**62**	IAmb	IAmb	11 39 59.1	
	comp=Z,6.3nm,1.1s						
DUG	**Dugway, Tooele**	**61.83**	**60**	IAmb	IAmb	11 39 58.4	
	comp=Z,7.2nm,1.2s						
DUG	**Dugway, Tooele**	**61.83**	**60**	P	**P**	**11 39 41.9**	**+2.4**
DUG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BW06	**Boulder Array**	**61.93**	**56**	P	**P**	**11 39 41.8**	**+1.6**
BW06				IAmb	IAmb	11 39 58.1	
	comp=Z,6.2nm,0.9s						
PD31	**Pinedale Array**	**61.93**	**56**	P	**P**	**11 39 41.7**	**+1.5**
PD31				IAmb	IAmb	11 39 58.1	
	comp=Z,6.3nm,0.9s						
PDAR	**Pinedale Array**	**61.93**	**56**	P	**P**	**11 39 41.7**	**+1.5**
PDAR	**Pinedale Array**	**61.93**	**56**	P	**P**	**11 39 42.2**	**+2.0**
	comp=Z,2.6nm,0.9s,baz=310,slow=3.3,SNR=12						
	comp=Z,2.6nm,0.9s						
TPNV	**Topopah Spring**	**61.99**	**65**	P	**P**	**11 39 42.2**	**+1.5**
TPNV				IAmb	IAmb	11 39 58.8	
	comp=Z,3.9nm,0.9s						
TPNV	**Topopah Spring**	**61.99**	**65**	P	**P**	**11 39 42.2**	**+1.5**
TPNV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
FRB	**Frobisher Bay**	**62.20**	**21**	LR	LR	12 09 34.9	
	comp=Z,50nm,18.9s,baz=16,slow=39						
SFJD	**Kangerlussuaq**	**62.47**	**11**	LR	LR	12 09 22.3	
	comp=Z,34nm,19.3s,baz=346,slow=38						
FINES	**FINESS Array B**	**62.61**	**335**	P	**P**	**11 39 42.9**	**-1.2**
	comp=Z,1.6nm,0.3s,baz=37,slow=6.8,SNR=25						
FINES				LR	LR	12 09 48.8	
	comp=Z,122nm,19.9s,baz=48,slow=39						
	comp=Z,1.6nm,0.3s						
ULM	**Lac du Bonnet**	**63.56**	**43**	P	**P**	**11 39 51.0**	**+0.4**
	comp=Z,3.5nm,1.0s,baz=288,slow=6.4,SNR=2.9						
ULM				LR	LR	12 10 36.7	
	comp=Z,55nm,18.7s,baz=320,slow=39						
	comp=Z,3.5nm,1.0s						
SRU	**San Rafael Swe**	**63.87**	**60**	IAmb	IAmb	11 40 11.1	
	comp=Z,8.9nm,1.1s						
RSSD	**Black Hills**	**63.95**	**52**		**P**	**11 39 54.8**	**+1.2**
RSSD				IAmb	IAmb	11 39 55.9	
	comp=Z,9.7nm,0.8s						
RSSD	**Black Hills**	**63.95**	**52**	P	**P**	**11 39 54.8**	**+1.2**
RSSD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KNB	**Kanab**	**63.97**	**63**	IAmb	IAmb	11 40 13.4	
	comp=Z,5.6nm,1.0s						
PFO	**Pinyon Flats O**	**64.12**	**68**	LR	LR	12 02 29.9	
	comp=Z,46nm,22.0s,baz=306,slow=31						
OBN	**Obninsk**	**64.31**	**326**	LR	LR	12 12 09.4	
	comp=Z,86nm,18.1s,baz=16,slow=40						
OBN	**Obninsk**	**64.31**	**326**⇓	*e*P	**P**	**11 39 54.4**	**-1.0**
OBN				*e**PP	**pP**	**11 40 08.7**	**-1.8**
OBN				*e**SP	**sP**	**11 40 17.3**	**+0.5**
OBN				*e*		11 40 29.6	
OBN				*e*		11 42 16.7	
OBN				*e*PPP	PPP	11 43 51.2	
OBN				*e*S	**S**	**11 48 29.4**	**+0.5**
OBN				*e*SS	**SS**	**11 52 41.2**	**+2.9**
OBN				pmax	pmax		
	comp=Z,12nm,0.5s						
OBN				MLR	MLR		
	comp=Z,75nm,19.0s						
OBN	**Obninsk**	**64.31**	**326**	*e*P	**P**	**11 39 54.4**	**-1.0**
VSU	**Vasula**	**64.89**	**333**⇑	*e*P	**P**	**11 39 57.6**	**-1.5**
VSU				pmax	pmax		
	comp=Z,7.0nm,0.6s						
EPLO	**Experimental L**	**64.93**	**42**	IAmb	IAmb	11 40 01.1	
	comp=Z,7.0nm,1.1s						
PV23	**Carpenter Ridg**	**65.18**	**59**	P	**P**	**11 40 02.0**	**+0.3**
PV23				IAmb	IAmb	11 40 19.7	
	comp=Z,9.6nm,0.9s						
PV22	**Blue Mesa, Par**	**65.25**	**59**	P	**P**	**11 40 03.2**	**+1.1**
PV22				IAmb	IAmb	11 40 19.9	
	comp=Z,5.2nm,0.9s						
VRH	**Novokhopyorsk**	**65.28**	**321**	*e*P	**P**	**11 39 58.1**	**-3.7**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LPSR	**Galich'ya Gora**	**65.35**	**323**	*e*P	**P**	**11 39 58.9**	**-3.4**
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
PV05	**Paradox Valley**	**65.39**	**60**	P	**P**	**11 40 04.4**	**+1.4**
PV05				IAmb	IAmb	11 40 21.0	
	comp=Z,13nm,1.2s						
PV03	**Paradox Valley**	**65.41**	**60**	IAmb	IAmb	11 40 21.7	
	comp=Z,13nm,1.4s						
PV13	**Radium Mtn., P**	**65.49**	**60**	IAmb	IAmb	11 40 21.6	
	comp=Z,14nm,1.2s						
ISCO	**Idaho Springs**	**66.13**	**56**	IAmb	IAmb	11 40 26.2	
	comp=Z,9.9nm,1.1s						
ISCO	**Idaho Springs**	**66.13**	**56**	P	**P**	**11 40 10.0**	**+2.1**
ISCO				pmax	pmax		
	comp=Z,9.0nm,1.2s						
VSR	**Storozhevoye**	**66.32**	**322**	*e*P	**P**	**11 40 04.9**	**-3.6**
VSR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BORG	**Borgarnes**	**66.42**	**359**	LR	LR	12 10 22.6	
	comp=Z,18nm,18.6s,baz=0.1,slow=37						
VORD	**Divnogorie**	**66.46**	**322**	*e*P	**P**	**11 40 06.2**	**-3.2**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NOA	**NORSAR Array B**	**66.51**	**342**	P	**P**	**11 40 08.6**	**-1.0**
	comp=Z,1.4nm,0.8s,baz=23,slow=8.1,SNR=3.7						
NOA				LR	LR	12 13 34.2	
	comp=Z,88nm,19.9s,baz=40,slow=40						
	comp=Z,1.4nm,0.8s						
F33A	**5 Mile Ranch,**	**66.57**	**46**	IAmb	IAmb	11 40 12.0	
	comp=Z,5.9nm,0.9s						
X16A	**Lo Mia Camp, P**	**66.57**	**64**	IAmb	IAmb	11 40 29.2	
	comp=Z,5.5nm,1.2s						
HFS	**Hagfors**	**66.81**	**340**	P	**P**	**11 40 10.2**	**-1.3**
	comp=Z,1.4nm,0.4s,baz=64,slow=3.4,SNR=9.2						
HFS				LR	LR	12 12 59.1	
	comp=Z,41nm,18.3s,baz=352,slow=39						
	comp=Z,1.4nm,0.4s						
S22A	**4UR Ranch, Cre**	**66.90**	**59**	IAmb	IAmb	11 40 31.4	
	comp=Z,6.4nm,1.1s						
EYMN	**Ely**	**67.21**	**42**	P	**P**	**11 40 14.7**	**+0.4**
EYMN				IAmb	IAmb	11 40 29.5	
	comp=Z,6.9nm,1.1s						
MNK	**Minsk**	**67.81**	**330**	*i* P	**P**	**11 40 16.1**	**-1.9**
	comp=E,18nm,0.8s						
MNK				*i* P	**P**	**11 40 16.1**	**-1.9**
	comp=N,11nm,0.7s						
MNK				*i* P	**P**	**11 40 16.1**	**-1.9**
	comp=Z,21nm,0.8s,baz=34						
MNK				*i* pP	**pP**	**11 40 33.3**	**+0.1**
MNK				*i* PP	**PP**	**11 42 45.9**	**-1.4**
MNK				*i* PPP	PPP	11 44 23.7	
MNK				*i* S	**S**	**11 49 10.9**	**-0.6**
MNK				*i* SS	**SS**	**11 53 35.0**	**+2.4**
MNK				*i* SSS	SSS	11 56 52.8	
MNK				*i* LQ	LQ	12 04 19.1	
MNK				*i* LRM	MLR	12 14 16.7	
	comp=N,938nm,19.1s						
MNK				*i* LRM	MLR	12 14 28.1	
	comp=E,1µm,20.0s						
MNK	**Minsk**	**67.81**	**330**	*i* P	**P**	**11 40 16.0**	**-1.9**
MNK				*i* *PP	**pP**	**11 40 33.2**	**+0.1**
MNK				*i*		11 42 45.9	
MNK				*i* PPP	PPP	11 44 23.7	
MNK				*i* S	**S**	**11 49 10.8**	**-0.6**
MNK				*i* SS	**SS**	**11 53 35.0**	**+2.4**
MNK				pmax	pmax		
	comp=E,18nm,0.8s						
MNK				pmax	pmax		
	comp=N,11nm,0.7s						
MNK				pmax	pmax		
	comp=Z,21nm,0.8s						
ECSD	**EROS Data Cent**	**67.96**	**48**		**P**	**11 40 19.7**	**+0.6**
ECSD				IAmb	IAmb	11 40 20.3	
	comp=Z,5.8nm,0.8s						
E38A	**The Farm, Brul**	**68.19**	**43**	P	**P**	**11 40 21.4**	**+0.9**
E38A				IAmb	IAmb	11 40 21.7	
	comp=Z,8.1nm,0.8s						
PABE	**Paberze**	**68.20**	**333**	P	**P**	**11 40 20.0**	**-0.3**
ANMO	**Albuquerque**	**69.10**	**61**	LR	LR	12 12 10.8	
	comp=Z,19nm,18.1s,baz=51,slow=37						
ANMO	**Albuquerque**	**69.10**	**61**	P	**P**	**11 40 28.0**	**+1.4**
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MSVF	**Nonsavu**	**69.47**	**157**	LR	LR	12 07 09.1	
	comp=Z,25nm,21.9s,baz=162,slow=33						
319A	**Douglas**	**70.01**	**65**	IAmb	IAmb	11 40 50.4	
	comp=Z,8.9nm,1.0s						
ERBR	**Yeremizino-Bor**	**70.01**	**318**	*e*P	**P**	**11 40 29.4**	**-2.3**
ERBR				*e**PP	**pP**	**11 40 46.7**	**-0.3**
ERBR				*e*S	**S**	**11 49 35.7**	**-2.0**
ERBR				pmax	pmax		
	comp=Z,21nm,0.7s						
NCK	**Nalchik**	**70.29**	**314**⇓	*e*P	**P**	**11 40 34.8**	**+1.3**
NCK				pmax	pmax		
	comp=Z,36nm,0.5s						
KIV	**Kislovodsk**	**70.37**	**315**	*e*P	**P**	**11 40 34.9**	**+0.8**
KIV				pmax	pmax		
	comp=Z,16nm,1.1s						
KIV				MLR	MLR		
	comp=Z,34nm,18.0s						
KIV	**Kislovodsk**	**70.37**	**315**	*e*P	**P**	**11 40 34.9**	**+0.8**
SCHQ	**Schefferville**	**70.41**	**25**	P	**P**	**11 40 34.1**	**+0.1**
	comp=Z,3.6nm,0.8s,baz=328,slow=6.7,SNR=5.9						
SCHQ				LR	LR	12 14 24.7	
	comp=Z,42nm,19.9s,baz=323,slow=38						
	comp=Z,3.6nm,0.8s						
KBZ	**Khabaz**	**70.44**	**315**	P	**P**	**11 40 34.2**	**-0.1**
	comp=Z,11nm,0.8s,baz=64,slow=3.6,SNR=21						
KBZ				LR	LR	12 16 26.0	
	comp=Z,82nm,19.0s,baz=26,slow=40						
	comp=Z,11nm,0.8s						
KBZ	**Khabaz**	**70.44**	**315***c*	*i*P	**P**	**11 40 34.6**	**+0.2**
KBZ				pmax	pmax		
	comp=Z,14nm,1.0s						
KBZ	**Khabaz**	**70.44**	**315**	*e*P	**P**	**11 40 34.6**	**+0.2**
AKASG	**Malin Array Be**	**70.51**	**327**	P	**P**	**11 40 33.4**	**-1.3**
	comp=Z,3.4nm,0.6s,baz=34,slow=6.2,SNR=15						
AKASG				LR	LR	12 14 38.1	
	comp=Z,75nm,18.5s,baz=55,slow=39						
	comp=Z,3.4nm,0.6s						
AKBB	**Malin Array Si**	**70.51**	**327**	P	**P**	**11 40 33.3**	**-1.3**
AKBB				IAmb	IAmb	11 40 38.1	
	comp=Z,5.7nm,0.9s						
AKBB	**Malin Array Si**	**70.51**	**327**⇓	*i*P	**P**	**11 40 33.4**	**-1.3**
AKBB				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KIEV	**Kiev**	**70.52**	**327**	P	**P**	**11 40 33.5**	**-1.3**
KIEV				IAmb	IAmb	11 40 38.1	
	comp=Z,5.1nm,0.9s						
KIEV	**Kiev**	**70.52**	**327**	P	**P**	**11 40 33.5**	**-1.3**
KIEV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SHA1	**Shidzhatmaz**	**70.55**	**315***d*	*e*P	**P**	**11 40 35.6**	**+0.3**
N35A	**Tabor**	**70.58**	**50**	P	**P**	**11 40 36.1**	**+0.8**
N35A				IAmb	IAmb	11 40 36.9	
	comp=Z,11nm,1.0s						
I40A	**Norwalk**	**70.69**	**45**	P	**P**	**11 40 36.8**	**+0.8**
I40A				IAmb	IAmb	11 40 37.3	
	comp=Z,12nm,1.1s						
LABN	**Labinsk**	**70.73**	**317**	*e*P	**P**	**11 40 33.8**	**-2.4**
LABN				*e**PP	**pP**	**11 40 51.4**	**-0.1**
LABN				*e*S	**S**	**11 49 44.4**	**-1.8**
LABN				pmax	pmax		
	comp=Z,12nm,0.4s						
RNPP5	**Staryi Chortor**	**71.22**	**329**	P	**P**	**11 40 39.5**	**+0.5**
WRA	**Warramunga Arr**	**71.37**	**201**	P	**P**	**11 40 40.1**	**0.0**
	comp=Z,2.4nm,0.9s,baz=17,slow=6.6,SNR=12						
	comp=Z,2.4nm,0.9s						
WRA	**Warramunga Arr**	**71.37**	**201**	*i* P	**P**	**11 40 40.9**	**+0.7**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
DZM	**Mont Dzumac**	**71.53**	**170**	*e*LR	LR	12 02 39.9	
	comp=Z,101nm,23.8s						
ANN	**Anapa**	**72.06**	**319**	*e*P	**P**	**11 40 41.7**	**-2.4**
ANN				*e**PP	**pP**	**11 40 59.1**	**-0.4**
ANN				*e*S	**S**	**11 49 59.6**	**-1.9**
ANN				pmax	pmax		
	comp=Z,16nm,0.7s						
GNI	**Garni**	**72.30**	**311**	LR	LR	12 14 56.3	
	comp=Z,79nm,21.6s,baz=53,slow=38						
GNI	**Garni**	**72.30**	**311**⇓	*e*P	**P**	**11 40 46.7**	**+0.8**
GNI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
P38A	**Dawn**	**72.57**	**49**		**P**	**11 40 48.0**	**+0.7**
P38A				IAmb	IAmb	11 40 48.8	
	comp=Z,7.0nm,0.7s						
VHRN	**Van Horn**	**72.97**	**63**	IAmb	IAmb	11 41 08.0	
	comp=Z,7.4nm,1.2s						
P40A	**Paris**	**73.38**	**48**	IAmb	IAmb	11 40 53.7	

	comp=Z,8.1nm,1.0s						
WMOK	Wichita Mounta	73.54	56	P	P	11 40 54.0	+0.9
WMOK	Wichita Mounta	73.54	56	P	P	11 40 54.0	+0.9
WMOK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
OJC	Ojcow	74.04	332	eP	P	11 40 56.3	+0.5
OJC	Ojcow	74.04	332	P	P	11 40 56.4	+0.6
OJC				pmax	pmax		
	comp=Z,12nm,1.1s						
STHS	Stebnicka Huta	74.30	331	eP	P	11 40 58.1	+0.8
STHS				pmax	pmax		
	comp=Z,14nm,1.5s						
STHS	Stebnicka Huta	74.30	331	eP	P	11 40 58.1	+0.8
KOLS	Kolonicke sedl	74.39	330	eP	P	11 40 58.2	+0.4
KOLS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KOLS	Kolonicke sedl	74.39	330	eP	P	11 40 58.2	+0.4
EKA	Eskdalemuir Ar	74.40	348	P	P	11 40 57.4	-0.3
	comp=Z,1.5nm,0.4s,baz=17,slow=4.9,SNR=18						
	comp=Z,1.5nm,0.4s						
BUR08	Bucovina Ar. S	74.51	328		P	11 40 58.3	-0.4
BUR08				IAmb	IAmb	11 41 26.8	
	comp=Z,7.9nm,1.3s						
KSP	Ksiaz	74.52	335	eP	P	11 40 59.0	+0.5
KSP	Ksiaz	74.52	335	P	P	11 40 59.1	+0.5
KSP				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KSP	Ksiaz	74.52	335	P	P	11 40 59.0	+0.5
	comp=Z,8.0nm,1.0s						
BURAR	Bucovina Array	74.53	328	P	P	11 40 58.4	-0.4
BURAR	Bucovina Array	74.53	328	⇑P	P	11 40 58.8	0.0
BURAR	Bucovina Array	74.53	328	⇑P	P	11 40 58.8	0.0
NIE	Niedzica	74.59	332	P	P	11 40 59.0	-0.1
NIE				pmax	pmax		
	comp=Z,4.0nm,1.1s						
LPIG	La Paz	74.64	71	LR	LR	12 09 19.7	
	comp=Z,16nm,18.9s,baz=200,slow=32						
TX31	Lajitas Ar. Si	74.80	63		P	11 41 02.0	+1.3
TX31				IAmb	IAmb	11 41 18.1	
	comp=Z,8.4nm,1.0s						
TXAR	Lajitas Array	74.81	63		P	11 41 01.9	+1.2
TXAR	Lajitas Array	74.81	63	P	P	11 41 02.3	+1.6
	comp=Z,2.7nm,0.7s,baz=302,slow=4.4,SNR=26						
	comp=Z,2.7nm,0.7s						
TXAR	Lajitas Array	74.81	63	P	P	11 41 01.9	+1.2
BERU	Beregovo	74.87	330	P	P	11 41 01.0	+0.4
STEB	Steborice	74.90	333	eP	P	11 41 01.8	+1.0
CCM	Cathedral Cave	74.92	49	P	P	11 41 01.6	+0.6
CCM				IAmb	IAmb	11 41 02.5	
	comp=Z,6.5nm,1.1s						
CCM	Cathedral Cave	74.92	49	P	P	11 41 01.6	+0.6
CCM				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SADO	Sadowa	74.92	37	LR	LR	12 15 46.5	
	comp=Z,35nm,20.2s,baz=336,slow=37						
HHAR	Hobbs	74.93	52	P	P	11 41 01.8	+0.6
HHAR				IAmb	IAmb	11 41 02.5	
	comp=Z,8.3nm,1.4s						
DPC	Dobruska-Polom	74.95	334	AMS	AMS	12 17 10.0	
	comp=Z,100nm,17.1s						
DPC	Dobruska-Polom	74.95	334	P	P	11 41 01.8	+0.7
DPC	Dobruska-Polom	74.95	334	P	P	11 41 02.1	+1.0
	comp=Z,10nm,1.2s						
CLL	Collm	74.98	337	IAmb	IAmb	11 41 02.3	
	comp=Z,14nm,1.1s						
CLL	Collm	74.98	337	⇓iP	P	11 41 01.1	-0.1
CLL				pmax	pmax		
	comp=Z,9.0nm,0.6s						
CLL	Collm	74.98	337	⇓iP	P	11 41 01.1	-0.1
	comp=Z,9.0nm,0.6s						
CLL				AMS	AMS	12 17 00.0	
	comp=Z,100nm,19.9s						
ASAR	Alice Springs	75.06	201	P	P	11 41 02.9	+1.0
ASAR	Alice Springs	75.06	201	P	P	11 41 03.0	+1.2
	comp=Z,1.3nm,0.7s,baz=15,slow=5.5,SNR=18						
ASAR				LR	LR	12 16 07.9	
	comp=Z,26nm,18.6s,baz=84,slow=37						
	comp=Z,1.3nm,0.7s						
ASAR	Alice Springs	75.06	201	P	P	11 41 02.9	+1.0
KRLC	Kraliky	75.07	334	eP	P	11 41 02.4	+0.6
KRLC	Kraliky	75.07	334	eP	P	11 41 02.4	+0.6
LANS	Liptovska Anna	75.09	332	eP	P	11 41 03.6	+1.7
LANS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
LANS	Liptovska Anna	75.09	332	eP	P	11 41 03.6	+1.7
MORC	Moravsky Berou	75.11	333		P	11 41 02.4	+0.3
MORC	Moravsky Berou	75.11	333	eP	P	11 41 01.5	-0.5
MORC	Moravsky Berou	75.11	333	⇓P	P	11 41 03.0	+0.9
MORC	Moravsky Berou	75.11	333	P	P	11 41 02.4	+0.3
MORC				pmax	pmax		
	comp=Z,16nm,1.0s						
FW03	Perrin-Whitt E	75.20	57	P	P	11 41 04.5	+1.7
FW03				IAmb	IAmb	11 41 04.7	
	comp=Z,8.3nm,0.8s						
HSKC	Hora Svate Kat	75.51	336	eP	P	11 41 05.1	+0.8
TPGR	Topolog	75.70	324	⇓P	P	11 41 06.2	+0.8
GOPC	GO Pecny, Ondr	75.77	335	AMS	AMS	12 17 20.0	
	comp=Z,200nm,18.3s						
PRU	Pruhonice	75.77	335	eP	P	11 41 06.4	+0.6
PRU				AMS	AMS	12 17 10.0	
	comp=Z,200nm,20.1s						
PRU	Pruhonice	75.77	335	eP	P	11 41 06.4	+0.6
PRU				MLR	MLR		
	comp=Z,200nm,20.1s						
VRAC	Vranov	75.81	334	LR	LR	12 17 30.3	
	comp=Z,113nm,20.4s,baz=30,slow=38						
VRAC	Vranov	75.81	334	eP	P	11 41 06.7	+0.7
VRAC	Vranov	75.81	334	⇓P	P	11 41 06.6	+0.7
VRAC	Vranov	75.81	334	⇓P	P	11 41 06.6	+0.6
VYHS	Vyhne	75.86	332	eP	P	11 41 07.0	+0.7
VYHS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VYHS	Vyhne	75.86	332	eP	P	11 41 07.0	+0.7
JAVC	Velka Javorina	75.89	333	eP	P	11 41 07.4	+0.8
TIRR	Tirgusor	76.03	324	⇑P	P	11 41 07.8	+0.5
TIRR	Tirgusor	76.03	324	⇑P	P	11 41 07.8	+0.5
PSZ	Piszkesteto	76.04	331	IAmb	IAmb	11 41 08.9	
	comp=Z,7.5nm,1.0s						
PSZ	Piszkesteto	76.04	331	P	P	11 41 06.2	-1.2
PSZ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MLR	Muntele Rosu	76.08	326	LR	LR	12 18 25.3	
	comp=Z,62nm,20.0s,baz=68,slow=39						
MLR	Muntele Rosu	76.08	326	⇓P	P	11 41 09.6	+1.8
MLR	Muntele Rosu	76.08	326	⇓P	P	11 41 09.6	+1.8
KRUC	Moravsky	76.09	334	eP	P	11 41 07.7	+0.1
KRUC	Moravsky	76.09	334	P	P	11 41 08.0	+0.4
KRUC				pmax	pmax		
	comp=Z,14nm,1.1s						
FCAR	Ozark Folk Cen	76.16	51	P	P	11 41 08.5	+0.3
FCAR				IAmb	IAmb	11 41 09.3	
	comp=Z,4.3nm,0.7s						
JCT	Junction City	76.17	59	P	P	11 41 10.1	+1.7
JCT				IAmb	IAmb	11 41 26.5	
	comp=Z,8.7nm,1.2s						
JCT	Junction City	76.17	59	P	P	11 41 10.1	+1.7
JCT				pmax	pmax		
	comp=Z,9.0nm,1.2s						
SMOL	Smolenice	76.27	333	eP	P	11 41 10.0	+1.4
ZVC	Zvikov	76.37	335	eP	P	11 41 10.1	+0.9
MODS	Modra-Piesok	76.44	333	eP	P	11 41 10.9	+1.3
MODS				pmax	pmax		
	comp=Z,31nm,1.2s						
MODS	Modra-Piesok	76.44	333	eP	P	11 41 10.9	+1.3
MARD	Mardin	76.45	312	P	P	11 41 11.3	+1.3
MIAR	Mount Ida	76.45	53	IAmb	IAmb	11 41 11.8	
	comp=Z,6.4nm,1.1s						
VOIR		76.46	327	⇓P	P	11 41 10.7	+0.9
VOIR		76.46	327	⇓P	P	11 41 10.7	+0.9
KHC	Kasperske Hory	76.82	336	eP	P	11 41 12.7	+1.0
KHC				AMS	AMS	12 18 10.0	
	comp=Z,200nm,22.0s						
KHC	Kasperske Hory	76.82	336	c iP	P	11 41 12.3	+0.6
KHC				pmax	pmax		
	comp=Z,31nm,0.8s						
KHC	Kasperske Hory	76.82	336	P	P	11 41 12.8	+1.0
	comp=Z,19nm,1.0s						
CKRC	Cesky Krumlov	76.90	335	eP	P	11 41 13.2	+1.0
CKRC	Cesky Krumlov	76.90	335	eP	P	11 41 13.2	+1.0
WET	Wettzell	76.99	336	P	P	11 41 13.9	+1.2
WET				pmax	pmax		
	comp=Z,14nm,1.0s						
GEC2	GERESS Array S	77.04	335	IAmb	IAmb	11 41 14.1	
	comp=Z,5.6nm,0.7s						
GERES	GERESS Array B	77.04	335	P	P	11 41 12.7	-0.4
	comp=Z,3.9nm,0.6s,baz=60,slow=8.1,SNR=22						
GERES				LR	LR	12 19 00.4	
	comp=Z,145nm,20.5s,baz=43,slow=39						
	comp=Z,3.9nm,0.6s						
SURR	Surduc	77.21	329	⇑P	P	11 41 14.7	+0.7
CONA	Conrad Observa	77.26	334	i P	P	11 41 15.5	+1.2
	comp=Z,15nm,0.7s,SNR=6.2						
BTNL	Ternell	77.29	341	dP	P	11 41 15.0	+0.7
	comp=Z,12nm,1.1s						
MEM	Membach	77.29	341	dP	P	11 41 14.7	+0.4
	comp=Z,20nm,1.0s						
GZR	Gura Zlata	77.30	328	⇓P	P	11 41 14.7	+0.2
GZR	Gura Zlata	77.30	328	⇓P	P	11 41 14.7	+0.2
RONA	Rosalia, Austr	77.34	333	i P	P	11 41 16.1	+1.4
	comp=Z,13nm,0.9s,SNR=5.7						
MPLH	Magyarpolny	77.44	332	P	P	11 41 16.3	+1.1
	comp=Z,58nm,1.1s						
BZS	Buzias	77.50	329	⇓P	P	11 41 15.9	+0.3
BZS	Buzias	77.50	329	⇓P	P	11 41 15.9	+0.3
BCLA	Clavier	77.62	341	dP	P	11 41 17.0	+0.8
	comp=Z,16nm,1.1s						
MOA	Molln	77.79	335	eP	P	11 41 18.0	+0.8
	comp=Z,7.1nm,0.8s						
BR131	Keskin Array S	77.82	318		P	11 41 17.7	+0.1
BR131				IAmb	IAmb	11 41 19.5	
	comp=Z,9.1nm,1.0s						
BR131	Keskin Array S	77.82	318	d iP	P	11 41 18.0	+0.4
BRTR	Keskin Array B	77.82	318		P	11 41 17.8	+0.1
BRTR	Keskin Array B	77.82	318	P	P	11 41 18.1	+0.5
	comp=Z,5.4nm,0.9s,baz=60,slow=3.0,SNR=33						
	comp=Z,5.4nm,0.9s						
BRTR	Keskin Array B	77.82	318	P	P	11 41 17.8	+0.1
BR106	Keskin Array S	77.82	318	P	P	11 41 18.2	+0.5
BMRD	Maredsous	77.85	341	dP	P	11 41 18.1	+0.6
	comp=Z,19nm,1.0s						
HERR	Herculane	77.87	328	⇓P	P	11 41 17.5	-0.1
ARSA	Arzberg	77.97	334	eP	P	11 41 19.3	+1.1
	comp=Z,14nm,1.4s						
ANTO	Ankara	78.07	319	P	P	11 41 19.9	+1.0
ANTO				pmax	pmax		
	comp=Z,11nm,1.1s						
DOU	Dourbes	78.08	341	dP	P	11 41 19.2	+0.5
	comp=Z,8.4nm,1.0s						
BIOA	Bad Ischl, Aus	78.11	335	eP	P	11 41 19.9	+0.9
	comp=Z,10nm,0.8s						
MDVR	Moldovita	78.20	328	⇓P	P	11 41 19.4	-0.2
LESA	Schwarzleotal	78.62	335	eP	P	11 41 23.2	+1.3
	comp=Z,12nm,0.8s						
SOKA	Soboth	78.63	334	i P	P	11 41 22.8	+0.9
	comp=Z,17nm,0.8s,SNR=16						
GROS	Grobnik	78.69	333	i P	P	11 41 22.4	+0.1
KBA	Koelnbreinsper	78.75	335	P	P	11 41 24.2	+1.5
KBA				pmax	pmax		
	comp=Z,98nm,0.9s						
KBA	Koelnbreinsper	78.75	335	i P	P	11 41 24.1	+1.4
	comp=Z,57nm,0.7s,SNR=24						
PHSR	Pinarhisar	78.77	323	⇓P	P	11 41 23.4	+0.7
T50A	Nancy	78.82	45	IAmb	IAmb	11 41 24.3	
	comp=Z,4.4nm,0.8s						
BFO	Black Forest	78.90	339		P	11 41 22.6	-0.7
BFO	Black Forest	78.90	339	P	P	11 41 22.6	-0.7
BFO				pmax	pmax		
	comp=Z,16nm,0.9s						
OBKA	Obir	78.93	334	eP	P	11 41 24.2	+0.6
	comp=Z,9.6nm,0.6s						
WATA	Walderalm	79.00	336	i P	P	11 41 25.2	+1.1
	comp=Z,41nm,1.3s,SNR=6.6						
WTTA	Wattenberg	79.05	336	P	P	11 41 25.4	+1.0
WTTA				pmax	pmax		
	comp=Z,43nm,1.0s						
WTTA	Wattenberg	79.05	336	i P	P	11 41 25.3	+1.0
	comp=Z,25nm,0.8s,SNR=10						
RETA	Reutte	79.07	337	eP	P	11 41 25.4	+1.0
	comp=Z,15nm,1.0s						
MYKA	Terra Mystica	79.08	334	i P	P	11 41 24.9	+0.6
	comp=Z,8.3nm,0.7s,SNR=5.3						
MOTA	Moosalm	79.12	336	i P	P	11 41 25.7	+1.0
	comp=Z,38nm,1.0s,SNR=13						
GCIS	Gornji Cirnik	79.19	333	i P	P	11 41 25.0	+0.1
SQTA	Sankt Quirin	79.20	336	i P	P	11 41 26.4	+1.3
	comp=Z,32nm,1.2s,SNR=7.3						
BOVS	Bovan	79.21	328	⇓P	P	11 41 25.0	-0.1
ECH	Echery	79.28	339	IAmb	IAmb	11 41 26.7	
	comp=Z,11nm,0.8s						
ECH	Echery	79.28	339	P	P	11 41 26.1	+0.7
ECH				pmax	pmax		
	comp=Z,16nm,1.1s						
ABTA	Abfaltersbach	79.29	335	i P	P	11 41 26.2	+0.7
	comp=Z,17nm,0.8s,SNR=5.5						
DAVA	Damuels	79.49	337	i P	P	11 41 27.6	+0.9
	comp=Z,21nm,0.9s,SNR=5.4						
FETA	Feichten	79.51	336	i P	P	11 41 27.9	+1.0
	comp=Z,23nm,1.2s,SNR=5.2						
STAL	STALIGIAL	79.68	335	IAmb	IAmb	11 41 27.8	
	comp=Z,12nm,0.8s						
CIMO	Cimolais	79.71	335	P	P	11 41 27.6	-0.2
CIMO				IAmb	IAmb	11 41 31.6	
	comp=Z,5.2nm,0.6s						
GBRS	Gornja Briga	79.74	333	i P	P	11 41 27.8	-0.2
DAVOX	Davos/Dischmat	79.96	337	LR	LR	12 22 17.3	
	comp=Z,74nm,18.0s,baz=83,slow=40						
TAOE	Nuku Hiva Isla	80.33	116	eLR	LR	12 06 44.2	
	comp=Z,156nm,23.2s						
TKL	Tuckaleechee C	80.42	45	LR	LR	12 18 46.1	
	comp=Z,36nm,20.4s,baz=338,slow=37						
EZN	Ezine	80.79	323	⇑P	P	11 41 33.1	-0.5
EZN	Ezine	80.79	323	⇑P	P	11 41 33.1	-0.5
TEOL	Teolo	80.79	335	P	P	11 41 33.7	+0.1
LOR	Lormes	80.92	341	P	P	11 41 34.3	+0.1
LOR				pmax	pmax		
	comp=Z,26nm,1.2s						
CSS	Mathiatis	81.88	316	P	P	11 41 39.4	-0.2
ELL	Elmali	81.92	319	P	P	11 41 39.6	-0.2
ELL	Elmali	81.92	319	P	P	11 41 39.6	-0.2
ELL				pmax	pmax		
	comp=Z,56nm,0.8s						
LIT	Litokhoron	82.02	326	P	P	11 41 39.2	-1.0
LIT				IAmb	IAmb	11 41 40.0	
	comp=Z,9.6nm,0.8s						
LIT	Litokhoron	82.02	326	P	P	11 41 39.2	-1.0
LIT				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PPT2	Papeete2	82.21	128	eLR	LR	12 07 28.8	
	comp=Z,35nm,23.0s						
MSSA	Maissana	82.34	336	P	P	11 41 41.1	-0.7
BNI	Bardonecchia	82.37	338	IAmb	IAmb	11 41 44.1	
	comp=Z,9.9nm,0.9s						
GUMA	Gualdo di Mace	82.42	333	P	P	11 41 42.1	-0.2
ASF	Jabal al Asfar	82.47	311	LR	LR	12 22 44.5	
	comp=Z,44nm,19.3s,baz=327,slow=39						
MMAI	Mount Meron Ar	82.51	313	P	P	11 41 43.8	+0.9
	comp=Z,19nm,0.5s,baz=34,slow=6.1,SNR=38						
MMAI				LR	LR	12 23 56.8	
	comp=Z,26nm,18.4s,baz=322,slow=40						
AQU	L'Aquila	83.05	333	P	P	11 41 47.4	+1.8
AQU				pmax	pmax		
	comp=Z,31nm,0.9s						
CESX	Cesi	83.06	334	P	P	11 41 44.9	-0.7
CESX				IAmb	IAmb	11 41 47.1	
	comp=Z,11nm,0.9s						
ISO	Isola	83.09	338	P	P	11 41 47.1	+1.3
ISO				pmax	pmax		
	comp=Z,20nm,1.1s						
INTR	Introdacqua	83.21	332		P	11 41 46.3	-0.1
MATE	Matera	83.56	330	⇓P	P	11 41 48.5	+0.4
CUC	Castrocucco	84.44	330	IAmb	IAmb	11 41 53.4	
	comp=Z,11nm,1.1s						
RAYN	Ar Rayn	84.78	300		P	11 41 55.1	+0.4
RAYN	Ar Rayn	84.78	300	P	P	11 41 55.1	+0.4
RAYN				pmax	pmax		
	comp=Z,19nm,0.8s						
ITM	Ithomi	84.79	325	P	P	11 41 53.8	-0.7
TIP	Timpagrande	84.87	329	P	P	11 41 54.9	0.0
EIL	Elat	85.47	311	LR	LR	12 24 25.9	
	comp=Z,36nm,18.1s,baz=250,slow=39						
VSL	Villasalto	86.86	335	P	P	11 42 04.8	+0.1
TBI	Tubuai	87.10	131	eLR	LR	12 09 47.8	
	comp=Z,396nm,24.5s						
VAE	Valguarnera	87.18	330	LR	LR	12 25 03.6	
	comp=Z,74nm,18.6s,baz=3.0,slow=38						
ESDC	Sonseca Array	89.75	344		P	11 42 17.9	-0.5
ESDC				IAmb	IAmb	11 42 19.3	
	comp=Z,2.7nm,0.9s						
ESDC	Sonseca Array	89.75	344	P	P	11 42 18.1	-0.5
	comp=Z,2.8nm,0.8s,baz=10,slow=4.5,SNR=10						
ESDC				LR	LR	12 27 51.3	
	comp=Z,60nm,20.0s,baz=357,slow=39						
	comp=Z,2.8nm,0.8s						
KEST	Kesra	90.37	333	P	P	11 42 21.5	+0.1
	comp=Z,5.5nm,0.8s,baz=23,slow=3.6,SNR=6.9						
KEST				LR	LR	12 26 33.9	
	comp=Z,102nm,21.3s,baz=339,slow=38						
	comp=Z,5.5nm,0.8s						
H03N2	Juan Fernandez	136.99	90	T	T	14 21 25.3	
	baz=312,slow=77,SNR=13						
H03N1	Juan Fernandez	137.00	90	T	T	14 21 26.6	
	baz=312,slow=77,SNR=14						
H03N3	Juan Fernandez	137.00	90	T	T	14 21 20.4	
	baz=312,slow=77,SNR=14						
QSPA	South Pole Qui	138.88	180	PKP	PKiKP	11 48 46.7	-0.4
	comp=Z,3.9nm,1.0s,baz=279,slow=2.0,SNR=8.9						
VA01	Torpederas	141.50	83	PKPdf	PKPdf	11 48 51.3	+0.6
LR05	Currie	145.42	93		PKPdf	11 48 57.2	-0.1
CPUP	Villa Florida	145.75	60	PKPdf	PKPdf	11 48 57.4	-0.9
CPUP	Villa Florida	145.75	60	PKIKP	PKPdf	11 48 57.4	-0.9
PLCA	Paso Flores	146.63	93	PKPbc	PKPdf	11 48 59.8	+0.4
	comp=Z,3.3nm,1.0s,baz=297,slow=2.3,SNR=3.8						
ITAB	Concordia	149.34	55	PKPdf	PKPdf	11 49 04.0	-0.2
BELA	Belgrano 2	150.89	176	PKPbc	PKPbc	11 49 11.0	+0.1
SMAI	San Martin Ant	151.60	148	PKPbc	PKiKP	11 49 14.2	+1.1
SNAA	Sanae	155.35	196	PKPab	PKPab	11 49 38.1	+0.5
	comp=Z,3.7nm,1.1s,baz=132,slow=2.9,SNR=7.1						

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*IDC **07** 12:21:33.3±1.0, 35°.83N×28°.08E, h0^{km}, mb3.8/13, mbtmp3.8/20, ML3.6/7, MS2.9/9, Error ellipse: s-maj=19.3km s-min=15.1km az=16.0*

*HLW **07** 12:21:37.7, 35°.59N×28°.36E, h11^{km}±8^{km}, Md4.1, Ml4.1*

*MOS **07** 12:21:37.2±2.1, 35°.52N×28°.26E, h53^{km}, mb4.5/10, Error ellipse: s-maj=7.3km s-min=4.1km az=99.7*

*ATH **07** 12:21:38.5, 35°.62N×28°.34E, h13^{km}±4^{km}, ML3.8/22, Manual Solution by A.Andreou First location: 2019/06/07 12:23:07, This location: 2019/06/07 12:46:18 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

*ISK **07** 12:21:38.9, 35°.72N×28°.25E, h24^{km}, ML3.9/25*

*NIC **07** 12:21:39.4, 35°.71N×28°.36E, h35^{km}±22^{km}, Ml3.9/11*

*GII **07** 12:21:39.8±0.0, 35°.550N±0°.001×28°.390E±0°.001, h60^{km}, Mws4.4, confirmed*

*NEIC **07** 12:21:40.0±1.4, 35°.76N±0°.05×28°.30E±0°.03, h49^{km}±6^{km}, mb4.3/72, Error ellipse: s-maj=6.7km s-min=3.8km az=175.0*

*THE **07** 12:21:40.8, 36°N±6°×2°8E±°, h51^{km}±8^{km}, M3.9/28, mb4.2/7, MLh3.6/28*

*MCSM **07** 12:21:40.0±1.7, 36°N±8°×2°8E±°, h29^{km}±19^{km}, mb3.9, mB3.8, MLv3.8, Mw(mB)2.8*

*AFAD **07** 12:21:41.0, 35°.84N×28°.22E, h30^{km}±29^{km}, MW3.8*

ISC 07 12:21:38.6±0.7, **35°.66N**±0°.03×**28°.32E**±0°.02, **h43**^{km}±7^{km}, **n425, σ1^{s}50**/460, **mb4.3**/48, **MS2.8**/5, **7C-3D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ARG	Arkhangelos	0.58	344	Pg	Pn	12 21 50.4	-0.1
ARG				Sg	Sn	12 21 57.9	-1.1
ARG	Arkhangelos	0.58	344		Pn	12 21 50.7	+0.2
ARG				Sn	Sn	12 21 58.7	-0.3
ARG	Arkhangelos	0.58	344	P	Pn	12 21 51.1	+0.6
ARG				S	Sn	12 21 59.1	+0.1
ARG	Arkhangelos	0.58	344	P	Pn	12 21 51.1	+0.6
ARG	Arkhangelos	0.58	344	P	Pn	12 21 50.6	+0.2
ARG				S	Sn	12 21 59.0	0.0
ARG	Arkhangelos	0.58	344	P	Pn	12 21 50.7	+0.2
ARG				S	Sn	12 21 59.1	+0.1
ARG				AML	AML	12 22 02.4	
	45nm,0.4s						
ARG				AML	AML	12 22 04.4	
	29nm,0.8s						
RODB	Rodos	0.79	354	P	Pn	12 21 54.1	+0.8
RODB				S	Sn	12 22 05.7	+1.7
KARP	Karpathos	0.95	263	Pg	Pn	12 21 56.9	+1.3
KARP				Sg	Sn	12 22 09.5	+1.4
KARP	Karpathos	0.95	263		Pn	12 21 56.9	+1.3
KARP				Sn	Sn	12 22 09.7	+1.6
KARP	Karpathos	0.95	263	P	Pn	12 21 56.9	+1.3
KARP				S	Sn	12 22 10.1	+2.1
KARP	Karpathos	0.95	263	P	Pn	12 21 56.9	+1.3
KARP				S	Sn	12 22 09.9	+1.8
KARP	Karpathos	0.95	263	P	Pn	12 21 56.9	+1.3
KARP				S	Sn	12 22 10.2	+2.1
KARP				AML	AML	12 22 13.0	
	19nm,0.8s						
KARP				AML	AML	12 22 13.1	
	13nm,0.4s						
IZZE	Mula-Seydike	1.06	43	P	Pn	12 21 57.8	+0.7
TURN	Turunc	1.11	357	Pg	Pn	12 21 58.7	+0.9
TURN				Sg	Sn	12 22 13.3	+1.4
TURN	Turunc	1.11	357	P	Pn	12 21 58.9	+1.1
TURN				S	Sn	12 22 11.3	-0.6
TURN				i IAML		12 22 15.0	
	comp=N,4μm,0.4s						
TURN				i IAML		12 22 15.0	
	comp=E,3μm,0.3s						
FETY	Fethiye	1.15	32	Pn	Pn	12 21 59.5	+1.2
FETY	Fethiye	1.15	32	P	Pn	12 22 01.7	+3.4
DALY	Dalyan (Mula)	1.18	13	Pn	Pn	12 22 00.0	+1.3
AKAS	Kas	1.19	61	Pn	Pn	12 22 00.9	+2.0
AKAS				Sn	Sn	12 22 16.6	+2.7
AKAS	Kas	1.19	61		Pn	12 22 00.9	+2.0
AKAS	Kas	1.19	61	P	Pn	12 22 00.0	+1.1
DAT	Datca	1.22	331	Pn	Pn	12 21 59.9	+0.5
DAT				Sn	Sn	12 22 15.7	+0.9
DAT	Datca	1.22	331	P	Pn	12 22 00.2	+0.8
DAT				S	Sn	12 22 15.6	+0.8
DAT				i IAML		12 22 21.0	
	comp=N,3μm,0.3s						
YAZI	Mula-Dat§a-	1.24	326	P	Pn	12 21 60.0	+0.5
YAZI				S	Sn	12 22 14.1	-0.9
YAZI				i IAML		12 22 19.0	
	comp=N,875nm,0.3s						
SABU	Mula-Dalaman	1.27	24	P	Pn	12 22 01.1	+1.1
NISR	Nisiros	1.35	315	P	Pn	12 22 01.5	+0.5
DEMR	Demre-Antalya	1.41	65	Pn	Pn	12 22 04.3	+2.5
CAME	Cameli-Denizli	1.50	31	Pn	Pn	12 22 04.9	+1.6
CAME				Sn	Sn	12 22 23.7	+1.9
KNIK	Mula-Seydike	1.55	40	P	Pn	12 22 05.5	+1.6
BDRM	Kayabasi	1.57	333	P	Pn	12 22 03.4	-0.6
BODT	Bodrum	1.62	330	Pn	Pn	12 22 04.8	+0.1
BODT	Bodrum	1.62	330	P	Pn	12 22 04.7	-0.1
BODT				S	Sn	12 22 23.5	-1.0
CAEL	Denizli, Camel	1.67	29	P	Pn	12 22 07.5	+2.0
ELL	Elmali	1.68	49	Pn	Pn	12 22 07.9	+2.2
ELL	Elmali	1.68	49	Pn	Pn	12 22 08.4	+2.7
ELL	Elmali	1.68	49	P	Pn	12 22 08.4	+2.7
ELL	Elmali	1.68	49	P	Pn	12 22 08.4	+2.7
ELL				S	Sn	12 22 30.6	+4.6
YKAV	Yalikavak-Bodr	1.69	330	Pn	Pn	12 22 05.9	+0.3
MLSB	Milas	1.69	345	Pn	Pn	12 22 06.2	+0.5
DNZT	Denizli-Tavas-	1.71	19	P	Pn	12 22 07.8	+1.7
DNZT				P		12 22 08.0	
DNZT				S	Sn	12 22 26.5	-0.2
DNZT				S		12 22 27.4	
DNZT				i IAML		12 22 29.0	
	comp=N,420nm,0.6s						
DNZT				i IAML		12 22 29.0	
	comp=N,414nm,0.6s						
ZKR	Zakros	1.81	253	Pn	Pn	12 22 09.3	+2.0
ZKR	Zakros	1.81	253	P	Pn	12 22 09.6	+2.3
ZKR	Zakros	1.81	253	P	Pn	12 22 09.6	+2.3
ZKR	Zakros	1.81	253	P	Pn	12 22 09.3	+2.0
ZKR				S	Sn	12 22 31.8	+2.8
ZKR				AML	AML	12 22 53.0	
	2.6nm,0.8s						
ZKR				AML	AML	12 22 53.1	
	1.5nm,0.9s						
GOLH	Golhisar	1.86	32	P	Pn	12 22 10.5	+2.4
GOLH				S	Sn	12 22 32.6	+2.1
GOLH				i IAML		12 22 34.0	
	comp=E,898nm,0.4s						
TAVA	DENIZLI_Tavas	1.86	15	P	Pn	12 22 09.4	+1.3
APMY	Acipayam-Deniz	1.97	23	Pn	Pn	12 22 11.3	+1.7
DDIM	Aydin, Didim	1.99	334	P	Pn	12 22 10.0	+0.1
AYDN	Tasoluk	2.03	350	P	Pn	12 22 11.9	+1.5
DNIZ	Denizli-Tavas-	2.04	16	P	Pn	12 22 12.2	+1.5
KORT	Korkueli	2.11	50	Pn	Pn	12 22 14.8	+3.2

ESEN	Aydn-Nazilli	2.13	1	P	Pn	12 22 13.0	+1.3
GCAM	G?zelcaml?	2.21	337	Pn	Pn	12 22 14.2	+1.3
GCAM	G?zelcaml?	2.21	337	P	Pn	12 22 13.3	+0.4
ANTB	Antalya	2.25	56	Pn	Pn	12 22 16.3	+2.9
INCE	Denizli-Bozkur	2.28	26	P	Pn	12 22 15.5	+1.6
NAZL	Nazilli-Aydin	2.30	359	Pn	Pn	12 22 15.4	+1.3
AYDB	Zeytinkoy-Aydi	2.31	351	Pn	Pn	12 22 15.4	+1.1
THR8	Santorini-Mono	2.42	289	P	Pn	12 22 15.6	-0.2
THR3	Thira Island,	2.48	288	P	Pn	12 22 17.4	+0.8
IZMR	zmir-demi	2.49	353	P	Pn	12 22 16.3	-0.3
CMBO	Columbo, Santo	2.50	290	P	Pn	12 22 17.8	+1.1
THR5	Thira Island,	2.53	288	P	Pn	12 22 18.3	+1.1
KIRA	zmir-Kiraz	2.53	1	P	Pn	12 22 17.7	+0.4
SAP3	Santorini-Thir	2.53	289	P	Pn	12 22 20.2	+2.9
BCK	Bucak	2.56	45	Pn	Pn	12 22 20.2	+2.5
BCK	Bucak	2.56	45	P	Pn	12 22 20.2	+2.5
ODEM	Odemis-Izmir	2.62	356	Pn	Pn	12 22 19.2	+0.7
BASM	Basmaki-Afyon	2.65	31	Pn	Pn	12 22 20.9	+2.0
APE	Apeiranthos	2.66	303	Pn	Pn	12 22 19.7	+0.7
APE	Apeiranthos	2.66	303	P	Pn	12 22 19.0	+0.1
APE	Apeiranthos	2.66	303	*c i*P	Pn	12 22 19.1	+0.1
APE	Apeiranthos	2.66	303	P	Pn	12 22 19.0	+0.1
APE	Apeiranthos	2.66	303	P	Pn	12 22 19.3	+0.3
ISP	Isparta	2.79	39	Pn	Pn	12 22 23.5	+2.6
ISP	Isparta	2.79	39		Pn	12 22 22.9	+2.0
ISP	Isparta	2.79	39	*d i*P	Pn	12 22 22.7	+1.8
ISP	Isparta	2.79	39	P	Pn	12 22 22.9	+2.0
ISP	Isparta	2.79	39	P	Pn	12 22 22.8	+2.0
ISP				S	Sn	12 22 55.0	+1.7
IDI	Anoyia	2.83	263	P	Pn	12 22 23.2	+1.8
IDI	Anoyia	2.83	263	Pn	Pn	12 22 22.6	+1.3
	10nm,0.3s,baz=114,slow=8.6,SNR=60						
IDI				Sn	Sn	12 22 49.7	-4.5
	20nm,0.3s,baz=10,slow=19,SNR=6.1						
IDI	Anoyia	2.83	263	P	Pn	12 22 23.8	+2.5
MANT	Manisa	2.83	4	Pn	Pn	12 22 21.6	0.0
KULA	Kula-Manisa	2.86	5	Pn	Pn	12 22 23.5	+1.7
KULA	Kula-Manisa	2.86	5	P	Pn	12 22 22.0	+0.1
BLCB	Balcova	2.91	340	Pn	Pn	12 22 23.9	+1.5
BLCB	Balcova	2.91	340	P	Pn	12 22 23.0	+0.6
ZEYE	Izmir, Urla-Ze	2.96	331	P	Pn	12 22 23.5	+0.4
URLA	Izmir	3.03	333	P	Pn	12 22 23.2	-0.9
GORD	Gordes-Manisa	3.24	358	Pn	Pn	12 22 28.6	+1.5
CHOS	Chios island	3.27	327	P	Pn	12 22 27.3	-0.1
AKMS	Akamas	3.34	100	P	Pn	12 22 30.1	+1.7
AKMS	Akamas	3.34	100	P	Pn	12 22 30.0	+1.6
AKMS				S	Sn	12 23 07.8	+1.0
AKMS				AML	AML	12 23 10.9	
	1.1nm,0.2s						
AKMS				AML	AML	12 23 11.9	
	1.9nm,0.2s						
ALFC	Alefka	3.53	97	P	Pn	12 22 32.6	+1.6
ALFC	Alefka	3.53	97	P	Pn	12 22 32.3	+1.4
ALFC				S	Sn	12 23 13.0	+1.6
ALFC				AML	AML	12 23 14.3	
	1.5nm,0.2s						
ALFC				AML	AML	12 23 15.4	
	1.0nm,0.2s						
IMMV	Iera Moni Meta	3.55	268	P	Pn	12 22 34.0	+2.8
IMMV	Iera Moni Meta	3.55	268	P	Pn	12 22 33.7	+2.5
GVD	Gavdhos	3.56	258	P	Pn	12 22 33.3	+1.9
GVD	Gavdhos	3.56	258	P	Pn	12 22 33.3	+1.9
DKL	Dikili	3.59	342	P	Pn	12 22 34.2	+2.5
NATA	Nata	3.59	103	P	Pn	12 22 34.0	+2.3
NATA	Nata	3.59	103	P	Pn	12 22 33.6	+1.9
NATA				S	Sn	12 23 14.4	+1.6
NATA				AML	AML	12 23 16.9	
	2.3nm,0.3s						
NATA				AML	AML	12 23 18.9	
	3.5nm,0.3s						
TROD	Troodos	3.78	100	P	Pn	12 22 36.1	+1.5
TROD	Troodos	3.78	100	P	Pn	12 22 35.6	+1.0
TROD				S	Sn	12 23 19.2	+1.3
TROD				AML	AML	12 23 26.7	
	0.6nm,0.5s						
TROD				AML	AML	12 23 26.9	
	0.7nm,0.4s						
KNDR	Palaiochora Ch	3.81	265	P	Pn	12 22 36.5	+1.8
APOL	The Sanctuary	3.85	104	P	Pn	12 22 37.1	+1.8
APOL				S	Sn	12 23 21.5	+2.3
APOL				AML	AML	12 23 22.2	
	1.5nm,0.2s						
APOL				AML	AML	12 23 23.0	
	0.9nm,0.4s						
KARY	Karystos	3.91	308	P	Pn	12 22 37.3	+1.0
KARY	Karystos	3.91	308	P	Pn	12 22 37.5	+1.3
PRK	Paraskevi	3.93	336	P	Pn	12 22 36.6	+0.1
PRK	Paraskevi	3.93	336	P	Pn	12 22 36.6	+0.1
PRK	Paraskevi	3.93	336	P	Pn	12 22 36.8	+0.3
SIGR	SIGRI	4.05	332	P	Pn	12 22 38.1	0.0
SIGR	SIGRI	4.05	332	P	Pn	12 22 38.5	+0.5
ANKY	Antikythira Is	4.09	274	P	Pn	12 22 40.1	+1.4
ANKY	Antikythira Is	4.09	274	P	Pn	12 22 40.3	+1.7
ASGA	Asgata	4.12	101	P	Pn	12 22 40.7	+1.6
ASGA	Asgata	4.12	101	P	Pn	12 22 40.7	+1.6
ASGA				S	Sn	12 23 28.1	+2.0
ASGA				AML	AML	12 23 28.9	
	1.1nm,0.3s						
ASGA				AML	AML	12 23 31.8	
	0.5nm,0.3s						
CSS	Mathiatis	4.15	98	Pn	Pn	12 22 40.8	+1.2
CSS	Mathiatis	4.15	98	P	Pn	12 22 40.3	+0.8
CSS	Mathiatis	4.15	98	P	Pn	12 22 41.2	+1.7
CSS	Mathiatis	4.15	98	P	Pn	12 22 40.9	+1.4
CSS				S	Sn	12 23 28.0	+1.2
CSS				AML	AML	12 23 32.5	
	0.3nm,0.4s						
CSS				AML	AML	12 23 34.2	
	0.3nm,0.6s						
DION	Dionisos Attik	4.27	306	P	Pn	12 22 42.4	+1.3
DION	Dionisos Attik	4.27	306	P	Pn	12 22 42.4	+1.3
ATHU	Athens Univers	4.31	304	P	Pn	12 22 43.4	+1.7
KTHA	Kythira Island	4.31	279	P	Pn	12 22 42.5	+0.8
MVOU	Mavrovouni	4.39	97	P	Pn	12 22 44.1	+1.4
MVOU	Mavrovouni	4.39	97	P	Pn	12 22 43.9	+1.1
MVOU				S	Sn	12 23 34.1	+1.5
MVOU				AML	AML	12 23 38.9	
	0.4nm,0.2s						
MVOU				AML	AML	12 23 39.6	
	0.3nm,0.2s						
MATC	Matruh	4.40	192	P	Pn	12 22 44.3	+1.4
MET5	Makryloggos,Me	4.45	298	P	Pn	12 22 46.2	+2.6
VLI	Veliai	4.48	285	P	Pn	12 22 45.3	+1.2
VLI	Veliai	4.48	285	P	Pn	12 22 45.2	+1.2
KYMI	Kymi, Euboea I	4.49	313	P	Pn	12 22 45.2	+1.1
BORA	Eskisehir	4.54	21	Pn	Pn	12 22 44.4	-0.5
DB3	El Dabaa	4.62	178	P	Pn	12 22 47.0	+1.2
VILL	Villia	4.73	303	P	Pn	12 22 48.9	+1.4
VIL2	Platees	4.78	304	P	Pn	12 22 49.4	+1.2
LOUT	Loutraki	4.88	300	P	Pn	12 22 51.4	+1.9
LTK	Loutraki	4.90	300	P	Pn	12 22 51.3	+1.5
SLUM	Salum	4.90	213	P	Pn	12 22 50.7	+0.9
LIA	Limnos Island	4.91	330	P	Pn	12 22 49.8	-0.1
LIA	Limnos Island	4.91	330	P	Pn	12 22 50.5	+0.7
GUR	Goura	5.31	297	P	Pn	12 22 57.3	+1.9
	0.1nm33nm,0.8s						
GUR	Goura	5.31	297	P	Pn	12 22 57.4	+1.9
MDUB	Mudurnu	5.31	24	Pn	Pn	12 22 55.0	-0.5
ITM	Ithomi	5.38	288		Pn	12 22 57.0	+0.7
ITM	Ithomi	5.38	288	P	Pn	12 22 59.0	+2.7
PYL	PYLOS	5.46	285	P	Pn	12 23 00.4	+3.0
AXAR	Agios Charalam	5.48	306	P	Pn	12 23 00.2	+2.4
ANTO	Ankara	5.49	39	Pn	Pn	12 22 57.2	-0.8
ANTO	Ankara	5.49	39	P	Pn	12 22 57.2	-0.8
ALN	Alexandroupoli	5.53	342		Pn	12 22 58.3	0.0
ALN	Alexandroupoli	5.53	342	P	Pn	12 22 59.0	+0.7
ALN	Alexandroupoli	5.53	342	P	Pn	12 22 58.3	0.0
AMT	Artemida-Makis	5.64	291	P	Pn	12 23 03.4	+3.4
EFP	Efpalio	5.83	300	P	Pn	12 23 05.1	+2.6
AGG	Agios Georgios	5.83	307	P	Pn	12 23 04.9	+2.3
	0.0nm15nm,0.9s						
AGG	Agios Georgios	5.83	307	P	Pn	12 23 05.0	+2.4
BR131	Keskin Array S	5.85	45		Pn	12 23 02.6	-0.3
BR131	Keskin Array S	5.85	45	*ce*P	Pn	12 23 04.9	+2.0
BRTR	Keskin Array B	5.85	45		Pn	12 23 03.1	+0.2
BRTR	Keskin Array B	5.85	45	Pn	Pn	12 23 03.7	+0.8
	0.4nm,0.3s,baz=224,slow=14,SNR=12						
BRTR				Sn	Sn	12 24 05.7	-3.0
	1.6nm,0.3s,baz=216,slow=27,SNR=9.4						
	1.0nm,0.4s						
BRTR	Keskin Array B	5.85	45	*i* P	Pn	12 23 04.8	+1.9
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ANX	Ano Chora	5.89	302	P	Pn	12 23 05.6	+2.1
	comp=Z,0.1nmcomp=Z,29nm,0.8s						
ANX	Ano Chora	5.89	302	P	Pn	12 23 06.1	+2.7
RDO	Rodhopi	5.90	339		Pn	12 23 03.4	0.0
RDO	Rodhopi	5.90	339	P	Pn	12 23 04.1	+0.7
	comp=Z,14nm,0.7s						
RDO	Rodhopi	5.90	339	P	Pn	12 23 05.1	+1.7
MAKR	Makrakomi, Fth	5.96	306	P	Pn	12 23 07.0	+2.6
	comp=Z,0.7nmcomp=Z,33nm,1.6s						
MAKR	Makrakomi, Fth	5.96	306	P	Pn	12 23 07.2	+2.8
RLS	Riolos of Patr	6.00	296	P	Pn	12 23 08.4	+3.6
PVO	Paravola	6.18	301	P	Pn	12 23 11.2	+3.9
HMYD	Mayadein	6.21	160	P	Pn	12 23 08.6	+0.8
HNTI	Hanita	6.22	112	P	Pn	12 23 08.4	+0.5
HNTI	Hanita	6.22	112	S	Sn	12 24 17.3	-0.5
OFRI	`Ofer	6.30	117	P	Pn	12 23 09.1	0.0
OFRI	`Ofer	6.30	117	S	Sn	12 24 19.1	-0.6
HNAT	Natroun	6.32	162	P	Pn	12 23 09.9	+0.7
BLGI	Bet Lehem HaGe	6.39	115	P	Pn	12 23 10.3	0.0
BLGI	Bet Lehem HaGe	6.39	115	S	Sn	12 24 21.4	-0.6
LIT	Litokhoron	6.40	316	Pn	Pn	12 23 10.0	-0.3
LIT	Litokhoron	6.40	316	P	Pn	12 23 10.0	-0.3
HWQ	Hawqa	6.41	100	*e*P	Pn	12 23 12.2	+1.6
MMC7	Mount Meron ar	6.41	112	P	Pn	12 23 10.8	+0.2
MMA0B	Mount Meron ar	6.42	112	P	Pn	12 23 11.2	+0.4
MMA0B	Mount Meron ar	6.42	112	S	Sn	12 24 22.5	-0.3
MMAI	Mount Meron Ar	6.42	112	Pn	Pn	12 23 11.2	+0.4
	comp=Z,6.0nm,0.3s,baz=305,slow=12,SNR=32						
MMAI				Sn	Sn	12 24 19.6	-3.2
	comp=Z,26nm,0.3s,baz=328,slow=22,SNR=11						
	comp=Z,4.2nm,0.3s						
QRWL	Qaraoun	6.42	107	*e*P	Pn	12 23 12.1	+1.3
KOT	Kottamia	6.43	152	P	Pn	12 23 11.3	+0.4
HHAG	Hagoal	6.52	150	P	Pn	12 23 13.1	+1.0
GEM	Giv'at Ha'Em	6.54	110	P	Pn	12 23 12.4	+0.1
GEM	Giv'at Ha'Em	6.54	110	S	Sn	12 24 25.0	-0.6
BEIL	Beino	6.54	98	*e*P	Pn	12 23 13.4	+1.1
SLTI	Sal'it	6.54	120	P	Pn	12 23 12.1	-0.2
SLTI	Sal'it	6.54	120	S	Sn	12 24 24.8	-0.8
RCY	Rachaya	6.56	107	*e*P	Pn	12 23 13.8	+1.1
NATI	Neve Ativ	6.57	109	P	Pn	12 23 13.0	+0.3
NATI	Neve Ativ	6.57	109	S	Sn	12 24 26.0	-0.4
PSDA	Pessada-Kefalo	6.67	294	P	Pn	12 23 16.8	+2.8
PSDA	Pessada-Kefalo	6.67	294	P	Pn	12 23 16.9	+3.0
VLS	Valsamata	6.69	294	P	Pn	12 23 16.8	+2.6
	comp=Z,0.1nmcomp=Z,29nm,1.1s						
VLS	Valsamata	6.69	294	P	Pn	12 23 17.1	+2.8
MMLI	Mount Malkishu	6.71	117	P	Pn	12 23 14.4	-0.3
MMLI	Mount Malkishu	6.71	117	S	Sn	12 24 28.9	-0.9
RYAN	Fayoum	6.76	165	P	Pn	12 23 15.9	+0.5
EVGI	Lefkada island	6.80	298	P	Pn	12 23 19.0	+3.2
FSK	Fiskardo	6.80	297	P	Pn	12 23 18.7	+2.8
	comp=Z,0.1nmcomp=Z,30nm,1.1s						
FSK	Fiskardo	6.80	297	P	Pn	12 23 18.9	+3.0
SWA2		6.84	202	P	Pn	12 23 17.3	+0.9
DMLN	Damoulianata-K	6.87	294	P	Pn	12 23 19.4	+2.7
DMLN	Damoulianata-K	6.87	294	P	Pn	12 23 19.7	+3.0
LKD2	Lefkada island	6.87	299	P	Pn	12 23 19.5	+2.7
LKD2	Lefkada island	6.87	299	P	Pn	12 23 19.9	+3.2
AMAZ	Amatzia	6.87	125	P	Pn	12 23 16.8	-0.1
AMAZ	Amatzia	6.87	125	S	Sn	12 24 32.3	-1.5
HMDT	Nahal Hemdat	6.88	118	P	Pn	12 23 17.2	+0.2
HMDT	Nahal Hemdat	6.88	118	S	Sn	12 24 33.5	-0.5
TSLK	Tsoukalades, L	6.88	300	P	Pn	12 23 19.8	+2.9
KZIT	Kziot	6.95	131	P	Pn	12 23 18.5	+0.5
KZIT	Kziot	6.95	131	S	Sn	12 24 34.4	-1.4
YTIR	Yattir	7.11	125	P	Pn	12 23 20.3	+0.1
YTIR	Yattir	7.11	125	S	Sn	12 24 38.5	-1.2
DSI	Dead Sea	7.16	123	P	Pn	12 23 20.5	-0.3
DSI	Dead Sea	7.16	123	S	Sn	12 24 39.8	-1.1
MDBI	Mazsada	7.30	124	P	Pn	12 23 22.2	-0.5
MDBI	Mazsada	7.30	124	S	Sn	12 24 42.7	-1.6
MSBI	Mazada	7.30	124	P	Pn	12 23 22.4	-0.3
MSBI	Mazada	7.30	124	S	Sn	12 24 43.3	-0.9
GAZ	Gaziantep	7.32	76	Pn	Pn	12 23 23.6	+0.6
IGT	Igoumenitsa	7.43	304	P	Pn	12 23 28.4	+4.0
IGT				pmax	pmax		
	comp=Z,8.0nm,0.5s						
IGT	Igoumenitsa	7.43	304	P	Pn	12 23 27.8	+3.3
GHAJ	Ghor Haditha	7.45	124		Pn	12 23 26.6	+1.9
GHAJ	Ghor Haditha	7.45	124	P	Pn	12 23 24.5	-0.2
GHAJ	Ghor Haditha	7.45	124	S	Sn	12 24 46.8	-1.0
ZFRI	Zfri	7.68	130	P	Pn	12 23 27.3	-0.6
ZFRI	Zfri	7.68	130	S	Sn	12 24 52.1	-1.5
BZK	Bozkurt	7.69	33	Pn	Pn	12 23 27.8	-0.2
PRNI	Paran	7.71	131	P	Pn	12 23 28.3	-0.2
PRNI	Paran	7.71	131	S	Sn	12 24 53.1	-1.4
KRMI	Paran Flat	7.71	134	P	Pn	12 23 28.4	-0.1
KRMI	Paran Flat	7.71	134	S	Sn	12 24 52.5	-2.0
ASF	Jabal al Asfar	7.93	114	Pn	Pn	12 23 32.8	+1.4
	comp=Z,1.4nm,0.3s,baz=67,slow=5.4,SNR=14						
ASF				Sn	Sn	12 24 57.6	-2.3
	comp=Z,1.9nm,0.3s,baz=115,slow=20,SNR=4.8						
	comp=Z,1.6nm,0.3s						
HRFI	Mount Harif	7.96	133	P	Pn	12 23 31.8	0.0
HRFI	Mount Harif	7.96	133	S	Sn	12 24 59.4	-1.1
MBRI	Mt Berech	8.06	135	P	Pn	12 23 33.2	-0.1
MBRI	Mt Berech	8.06	135	S	Sn	12 25 02.5	-0.7
EIL2	Elat	8.18	135	P	Pn	12 23 34.6	-0.2
EIL2	Elat	8.18	135	S	Sn	12 25 04.4	-1.4
EIL	Elat	8.18	135	Pn	Pn	12 23 35.0	+0.3
	comp=Z,1.2nm,0.3s,baz=318,slow=4.5,SNR=36						
EIL				Sn	Sn	12 25 01.9	-3.9
	comp=Z,6.3nm,0.3s,baz=47,slow=3.1,SNR=13						
	comp=Z,3.7nm,0.3s						
EIL	Elat	8.18	135	P	Pn	12 23 35.7	+0.9
HBST	Basata	8.40	138	P	Pn	12 23 38.9	+1.1
HFRF	Wahat Farafira	8.49	180	P	Pn	12 23 39.5	+0.5
NUB	Nuweibaa	8.51	139	P	Pn	12 23 40.7	+1.4
HKAT	Jabal Katrina	8.59	144	P	Pn	12 23 40.9	+0.3
HDHB	Dhahab	8.73	141	P	Pn	12 23 43.7	+1.3
SCTE	Santa Cesarea	8.95	302	Pn	Pn	12 23 45.7	+0.4
TIP	Timpagrande	9.85	294	Pn	Pn	12 23 57.1	-0.5
MLR	Muntele Rosu	9.98	350	Pn	Pn	12 23 57.4	-2.2
	comp=Z,0.2nm,0.3s,baz=185,slow=12,SNR=1.6						
MLR				LR	LR	12 28 42.8	
	comp=Z,88nm,19.1s,baz=196,slow=44						
	comp=Z,0.8nm,0.3s						
CEL	Celeste	10.28	288		Pn	12 24 02.7	-0.9
CUC	Castrocucco	10.79	297		Pn	12 24 10.7	+0.1
ANN	Anapa	11.47	35	*e*P	Pn	12 24 19.8	+0.1
ANN				*e*S	Sn	12 26 28.9	+2.5
ANN				pmax	pmax		
	comp=Z,5.0nm,0.4s						
SGRT	San Giovanni R	11.55	306	Pn	Pn	12 24 20.9	-0.1
NRCA	Norcia	13.78	306	Pn	Pn	12 24 50.4	-0.9
KIV	Kislovodsk	13.79	49	*e*P	Pn	12 24 51.4	-0.1
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KBZ	Khabaz	13.80	50	Pn	P	12 24 55.8	-3.2
	comp=Z,0.1nm,0.3s,baz=254,slow=7.0,SNR=4.8						
	comp=Z,0.8nm,0.5s						
KBZ	Khabaz	13.80	50⇓	*e*P	P	12 24 57.3	-1.7
FDMO	Fiordimonte	13.89	307	Pn	Pn	12 24 52.9	+0.1
VYHS	Vyhne	14.61	334	*e*P	P	12 25 09.1	+1.0
VYHS	Vyhne	14.61	334	*e*P	P	12 25 09.1	+1.0
SOKA	Soboth	14.85	322	*i* P	P	12 25 10.5	-0.4
	comp=Z,3.0nm,0.6s						
KIEV	Kiev	15.04	2	P	Pn	12 25 06.4	-1.7
KIEV	Kiev	15.04	2	P	Pn	12 25 06.4	-1.7
AKASG	Malin Array Be	15.05	2	Pn	Pn	12 25 09.2	+1.0
	comp=Z,2.6nm,0.3s,baz=190,slow=11,SNR=14						
AKASG				LR	LR	12 31 46.5	
	comp=Z,34nm,20.5s,baz=232,slow=41						
AKASG	Malin Array Be	15.05	2	*ce*P	P	12 25 13.3	+0.5
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
AKBB	Malin Array Si	15.05	2		Pn	12 25 07.6	-0.6
AKBB	Malin Array Si	15.05	2	*d i*P	P	12 25 13.2	+0.4
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MODS	Modra-Piesok	15.10	331	*e*P	P	12 25 13.8	+0.3
MODS	Modra-Piesok	15.10	331	*e*P	P	12 25 13.8	+0.3
JAVC	Velka Javorina	15.34	333	*e*P	P	12 25 16.0	-0.3
KEST	Kesra	15.42	276	Pn	Pn	12 25 15.1	+1.8
	comp=Z,0.6nm,0.3s,baz=129,slow=3.2,SNR=12						
PRED	Cave del Predi	15.46	319	P	Pn	12 25 12.8	-1.0
MYKA	Terra Mystica	15.54	319	*i* Pn	Pn	12 25 15.3	+0.6
	comp=Z,4.5nm,0.7s						
MAUC	Maruska	15.71	334	*e*P	P	12 25 21.9	+1.6
STAL	STALIGIAL	15.82	317		Pn	12 25 18.2	0.0
TEOL	Teolo	15.92	313	Pn	Pn	12 25 18.8	-0.7
TEOL				IAmb	IAmb	12 25 23.7	
	comp=Z,19nm,0.6s						
KBA	Koelnbreinsper	15.98	320	P	P	12 25 23.8	+0.3
KBA				pmax	pmax		
	comp=Z,18nm,0.8s						
KBA	Koelnbreinsper	15.98	320	*i* Pn	Pn	12 25 21.8	+1.2
	comp=Z,4.0nm,0.5s						
CIMO	Cimolais	16.00	317		Pn	12 25 20.4	-0.2
KRUC	Moravsky	16.00	330	*e*P	P	12 25 23.4	-0.1
KRUC	Moravsky	16.00	330	P	P	12 25 23.5	-0.1
KRUC				pmax	pmax		
	comp=Z,28nm,0.8s						
VRAC	Vranov	16.12	331	Pn	Pn	12 25 23.1	+1.0
	comp=Z,0.7nm,0.3s,baz=133,slow=13,SNR=12						
VRAC				LR	LR	12 32 21.3	
	comp=Z,33nm,19.4s,baz=156,slow=41						
VRAC	Vranov	16.12	331	*e*P	P	12 25 25.1	+0.3
VRAC	Vranov	16.12	331	P	P	12 25 25.5	+0.7
VRAC				pmax	pmax		
	comp=Z,18nm,1.0s						
MORC	Moravsky Berou	16.15	334	Pn	Pn	12 25 21.3	-1.2
MORC	Moravsky Berou	16.15	334	*e*P	P	12 25 26.2	+1.0
MORC	Moravsky Berou	16.15	334	P	Pn	12 25 21.3	-1.2
MORC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ABTA	Abfaltersbach	16.22	318	*i* Pn	P	12 25 25.2	-0.8
	comp=Z,9.5nm,0.7s						
CTI	Castel Tesino	16.30	315		Pn	12 25 22.6	-1.9
CTI	Castel Tesino	16.30	315	P	Pn	12 25 22.6	-1.9
CTI				pmax	pmax		
	comp=Z,11nm,0.8s						
LESA	Schwarzleotal	16.56	320	*i* P	P	12 25 28.8	-0.9
	comp=Z,4.7nm,0.5s						
TREC	Trest	16.56	329	P	P	12 25 30.3	+0.6
TREC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KRLC	Kraliky	16.68	333	*e*P	P	12 25 31.6	+0.6
KRLC	Kraliky	16.68	333	*e*P	P	12 25 31.6	+0.6
MSSA	Maissana	16.78	307		Pn	12 25 31.2	+0.7
MSSA				IAmb	IAmb	12 25 31.8	
	comp=Z,15nm,0.7s						
GEC2	GERESS Array S	17.01	325	Pn	Pn	12 25 31.2	-2.1
GERES	GERESS Array B	17.01	325	Pn	Pn	12 25 30.9	-2.5
	baz=141,slow=17,SNR=7.7						
GERES				LR	LR	12 32 41.8	
	comp=Z,30nm,20.0s,baz=105,slow=40						
	comp=Z,1.1nm,0.6s						
GERES	GERESS Array B	17.01	325	*e*P	P	12 25 34.9	+0.1
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WTTA	Wattenberg	17.01	318	P	P	12 25 36.1	+1.2
WTTA				pmax	pmax		
	comp=Z,18nm,1.1s						
WTTA	Wattenberg	17.01	318	*i* P	P	12 25 34.5	-0.4
	comp=Z,8.2nm,0.9s						
DPC	Dobruska-Polom	17.07	333	*e*P	P	12 25 37.1	+1.7
DPC	Dobruska-Polom	17.07	333	*e*P	P	12 25 37.1	+1.7
WATA	Walderalm	17.09	318	*i* Pn	Pn	12 25 33.4	-1.0
	comp=Z,6.7nm,0.9s						
KHC	Kasperske Hory	17.27	326	*e*P	P	12 25 39.5	+1.9
KHC				*e*x	x	12 25 59.0	
KHC	Kasperske Hory	17.27	326	*ce*P	P	12 25 37.1	-0.5
KHC				pmax	pmax		
	comp=Z,20nm,2.5s						
MOTA	Moosalm	17.35	318	*i* P	P	12 25 38.2	-0.4
	comp=Z,1.4nm,0.4s						
FETA	Feichten	17.37	316	*i* P	P	12 25 39.9	+1.1
	comp=Z,19nm,1.1s						
FUORN	Ofenpass-Fuorn	17.42	314	Pn	Pn	12 25 36.9	-1.7
DAVOX	Davos/Dischmat	17.73	314	LR	LR	12 33 29.0	
	comp=Z,46nm,21.3s,baz=67,slow=41						
PVCC	Panska Ves	17.89	330	P	P	12 25 45.0	+0.7
PVCC				pmax	pmax		
	comp=Z,18nm,1.3s						
BRG	Berggiesshubel	18.41	330	*e*P	Pn	12 25 50.8	+0.3
BRG				Amp		12 25 51.4	
	comp=Z,4.2nm,0.9s						
SENIN	Lac Senin/Sane	19.07	311	P	P	12 25 57.3	-0.3
SENIN				IAmb	IAmb	12 26 03.2	
	comp=Z,11nm,0.6s						
CLL	Collm	19.12	330	P	P	12 25 56.5	-1.4
CLL	Collm	19.12	330	*i* P	P	12 25 58.0	+0.1
CLL	Collm	19.12	330	*i* P	P	12 25 58.0	+0.1
	comp=Z,7.0nm,0.7s						
MOX	Moxa	19.24	326	P	Pn	12 26 01.5	+1.1
MOX				pmax	pmax		
	comp=Z,11nm,1.1s						
BFO	Black Forest	19.45	317	P	P	12 25 59.8	-1.7
BFO				IAmb	IAmb	12 26 04.0	
	comp=Z,6.0nm,0.5s						
BFO	Black Forest	19.45	317	P	P	12 25 59.8	-1.7
BFO				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ECH	Echery	20.05	315	P	P	12 26 06.8	-1.3
ECH	Echery	20.05	315	P	P	12 26 06.8	-1.3
ECH				pmax	pmax		
	comp=Z,7.0nm,1.1s						
OBN	Obninsk	20.27	14	*e*P	Pn	12 26 14.3	+1.8
OBN				*e*		12 26 31.9	
OBN				*e*		12 30 22.6	
OBN				pmax	pmax		
	comp=Z,12nm,0.5s						
OBN				MLR	MLR		
	comp=Z,36nm,19.0s						
TNS	Taunus Mts	20.49	321	P	Pn	12 26 15.9	+0.7
TNS				pmax	pmax		
	comp=Z,16nm,1.9s						
ESBB	Sonseca Array	25.79	289	P	P	12 27 04.8	-0.8
ESBB				IAmb	IAmb	12 27 45.4	
	comp=Z,9.0nm,1.1s						
ESDC	Sonseca Array	25.79	289	P	P	12 27 04.6	-1.0
ESDC	Sonseca Array	25.79	289	P	P	12 27 04.2	-1.5
	comp=Z,3.0nm,0.7s,baz=82,slow=9.0,SNR=15						
	comp=Z,3.0nm,0.7s						
FINES	FINESS Array B	25.84	358	P	P	12 27 04.7	-1.0
FINES	FINESS Array B	25.84	358	P	P	12 27 04.5	-1.2
	comp=Z,1.6nm,0.5s,baz=161,slow=12,SNR=16						
FINES				LR	LR	12 37 35.0	
	comp=Z,21nm,21.8s,baz=232,slow=38						
	comp=Z,1.6nm,0.5s						
FINES	FINESS Array B	25.84	358	P	P	12 27 04.7	-1.0
FIA1	FINESS Array S	25.84	358	P	P	12 27 04.5	-1.3
FIA1				IAmb	IAmb	12 27 35.9	
	comp=Z,7.7nm,0.9s						
AKTO	Aktyubinsk	26.03	46	P	P	12 27 08.4	+0.8
	comp=Z,0.7nm,0.3s,baz=266,slow=6.9,SNR=3.6						
	comp=Z,0.7nm,0.3s						
PAB	San Pablo	26.09	288	P	P	12 27 07.2	-1.2
PAB				IAmb	IAmb	12 27 14.4	
	comp=Z,12nm,1.2s						
PAB	San Pablo	26.09	288	P	P	12 27 07.2	-1.2
PAB				pmax	pmax		
	comp=Z,12nm,1.3s						
KLMR	Klimovskoe	26.21	12	*e*P	P	12 27 07.1	-2.0
KLMR				*e**SP	pP	12 27 20.5	+1.1
KLMR				pmax	pmax		
	comp=Z,13nm,0.9s						
HFS	Hagfors	26.25	343	P	P	12 27 07.2	-2.3
	comp=Z,1.4nm,0.5s,baz=151,slow=11,SNR=8.2						
HFS				LR	LR	12 39 05.7	
	comp=Z,24nm,19.1s,baz=142,slow=40						
	comp=Z,1.4nm,0.5s						
AB31	Akbulak array	26.77	50	P	P	12 27 13.8	-0.5
ABKAR	Akbulak array	26.77	50	P	P	12 27 13.9	-0.4
KIRV	Kirov	26.83	25⇑	*e*P	P	12 27 18.1	+3.5
NC602	NORSAR Array S	27.30	342	P	P	12 27 17.7	-1.2
NC602				IAmb	IAmb	12 27 30.5	
	comp=Z,11nm,1.4s						
NORES	NORESS Array B	27.30	342	P	P	12 27 18.5	-0.4
NAO01	NORSAR Array S	27.56	342	P	P	12 27 19.3	-2.0
NB201	NORSAR Array S	27.64	342	P	P	12 27 20.4	-1.6
NB201				IAmb	IAmb	12 27 30.0	
	comp=Z,12nm,1.3s						
NOA	NORSAR Array B	27.65	342	P	P	12 27 19.5	-2.6
	comp=Z,0.8nm,0.9s,baz=154,slow=9.2,SNR=2.1						
NOA				LR	LR	12 40 21.4	
	comp=Z,14nm,19.7s,baz=145,slow=41						
	comp=Z,0.8nm,0.9s						
EKA	Eskdalemuir Ar	29.18	322	P	P	12 27 33.0	-2.7
	comp=Z,0.1nm,0.3s,baz=109,slow=8.7,SNR=1.7						
	comp=Z,0.1nm,0.3s						
EKA	Eskdalemuir Ar	29.18	322	P	P	12 27 33.0	-2.7
TORD	Torodi Ar. Bea	32.83	234	P	P	12 28 09.2	+1.0
TORD	Torodi Ar. Bea	32.83	234	P	P	12 28 09.0	+0.8
	comp=Z,1.6nm,0.7s,baz=35,slow=10,SNR=5.6						

	comp=Z,1.6nm,0.7s						
KKAR	Karatay Array	33.16	64	P	P	12 28 09.5	-1.5
KKAR	Karatay Array	33.16	64	P	P	12 28 09.5	-1.5
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KBL	Kabul	33.17	80	P	P	12 28 11.1	-0.2
KBL	Kabul	33.17	80	P	P	12 28 11.1	-0.2
KBL				pmax	pmax		
	comp=Z,9.0nm,0.5s						
ARCES	ARCESS Array B	33.97	358	P	P	12 28 17.6	0.0
ARCES	ARCESS Array B	33.97	358	P	P	12 28 15.8	-1.8
	comp=Z,0.6nm,0.4s,baz=173,slow=8.3,SNR=9.8						
	comp=Z,0.6nm,0.4s						
ARCES	ARCESS Array B	33.97	358	eP	P	12 28 16.3	-1.3
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AAK	Ala-Archa	36.11	65⇑	eP	P	12 28 39.5	+2.9
AAK				pmax	pmax		
	comp=Z,11nm,3.7s						
KURBB	Kurchatov Arra	38.79	51	P	P	12 28 59.9	+0.9
	comp=Z,0.3nm,0.4s,baz=276,slow=8.9,SNR=4.0						
	comp=Z,0.3nm,0.4s						
KURK	Kurchatov	38.85	51	P	P	12 28 59.9	+0.4
MK31	Makanchi Array	41.34	57⇑	eP	P	12 29 22.7	+2.5
MKAR	Makanchi Array	41.34	57	P	P	12 29 20.2	0.0
MKAR	Makanchi Array	41.34	57	P	P	12 29 21.9	+1.8
	comp=Z,0.5nm,0.5s,baz=270,slow=7.7,SNR=6.8						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	41.34	57	eP	P	12 29 23.3	+3.1
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BORG	Borgarnes	41.37	330	LR	LR	12 47 48.3	
	comp=Z,23nm,18.4s,baz=36,slow=38						
ZALV	Zalesovo Beam	42.79	47	P	P	12 29 34.0	+2.2
	comp=Z,0.4nm,0.3s,baz=297,slow=6.3,SNR=1.7						
	comp=Z,0.4nm,0.3s						
ZALV	Zalesovo Beam	42.79	47	P	P	12 29 34.0	+2.2
SPB2	Spitsbergen Ar	42.92	356	P	P	12 29 32.5	-0.2
SPITS	Spitsbergen Ar	42.93	356	P	P	12 29 31.9	-0.8
	comp=Z,1.4nm,0.4s,baz=143,slow=12,SNR=16						
	comp=Z,1.4nm,0.4s						
SPITS	Spitsbergen Ar	42.93	356	P	P	12 29 32.6	-0.1
SPITS				pmax	pmax		
	comp=Z,29nm,1.4s						
KBS	Kingsbay	43.90	355	P	P	12 29 40.5	0.0
KBS	Kingsbay	43.90	355	P	P	12 29 40.5	0.0
KBS				pmax	pmax		
	comp=Z,12nm,1.0s						
SUMG	Summit	49.45	339	P	P	12 30 24.1	-0.3
SUMG				IAmb	IAmb	12 30 24.3	
	comp=Z,2.9nm,0.6s						
SUMG	Summit	49.45	339	P	P	12 30 24.1	-0.3
SUMG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
EUNU	Eureka	59.18	349	P	P	12 31 34.6	0.0
EUNU				IAmb	IAmb	12 31 56.8	
	comp=Z,3.6nm,1.2s						
ICQ	Pointe Anglais	67.14	315	P	P	12 32 28.0	+0.2
LMN	Caledonia Moun	67.42	311	P	P	12 32 29.4	-0.2
BATG	Bathurst New B	67.50	313	P	P	12 32 30.4	+0.3
D62A	Allapoint, All	69.37	314	P	P	12 32 42.2	+0.4
EMMW	East Machias	69.61	311	P	P	12 32 43.5	+0.2
E62A	Clayton Lake	69.89	313	P	P	12 32 44.7	-0.3
A36M	Sachs Harbour	71.05	352	P	P	12 32 51.9	+0.2
C36M	Paulatuk	73.34	350	P	P	12 33 05.3	0.0
VLDQ	Val d'Or	73.60	318	P	P	12 33 08.5	+1.3
B22K	Teshekpuk Lake	74.30	1	P	P	12 33 12.0	+1.1
C23K	Itkillik River	74.81	360	P	P	12 33 14.7	+0.8
C23K				IAmb	IAmb	12 33 42.9	
	comp=Z,4.9nm,1.2s						
B21K	Ikpikpuk River	75.00	1	P	P	12 33 16.0	+0.9
B21K				IAmb	IAmb	12 33 34.0	
	comp=Z,7.0nm,1.3s						
INK	Inuvik	75.46	353	P	P	12 33 17.2	-0.5
INK				IAmb	IAmb	12 33 31.2	
	comp=Z,4.1nm,1.2s						
INK	Inuvik	75.46	353	P	P	12 33 17.2	-0.5
INK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
E28M	Babbage River	75.65	355	P	P	12 33 19.7	+0.9
D23K	Nanushuk River	75.68	360	P	P	12 33 20.3	+1.3
D23K				IAmb	IAmb	12 33 53.9	
	comp=Z,5.2nm,1.2s						
E29M	Blow River	75.75	355	P	P	12 33 20.1	+0.8
C18K	Utukok River	75.76	4	P	P	12 33 20.6	+1.1
C18K				IAmb	IAmb	12 34 00.9	
	comp=Z,5.6nm,1.4s						
D20K	Etivluk River	75.87	2	P	P	12 33 21.1	+1.0
D19K	Kuna River	76.05	2	P	P	12 33 22.1	+1.0
D19K				IAmb	IAmb	12 33 39.7	
	comp=Z,8.2nm,1.5s						
E21K	Killik River	76.20	1	P	P	12 33 22.6	+0.6
E21K				IAmb	IAmb	12 33 26.6	
	comp=Z,5.8nm,1.4s						
F31M	Tsiigehtchic	76.32	353	P	P	12 33 22.7	+0.2
F31M				IAmb	IAmb	12 33 23.6	
	comp=Z,2.7nm,0.9s						
E25K	Arctic Village	76.43	358	P	P	12 33 23.9	+0.6
E25K				IAmb	IAmb	12 33 45.6	
	comp=Z,6.7nm,1.4s						
E22K	Anaktuvuk Pass	76.52	0	P	P	12 33 24.6	+0.8
E22K				IAmb	IAmb	12 33 45.1	
	comp=Z,3.2nm,1.2s						
G31M	Satah River	76.87	353	P	P	12 33 25.7	0.0
G31M				IAmb	IAmb	12 33 26.0	
	comp=Z,1.9nm,0.6s						
F25K	Christian Rive	76.96	358	P	P	12 33 27.8	+1.4
F25K				IAmb	IAmb	12 34 00.0	
	comp=Z,4.1nm,1.4s						
F24K	Squaw Lake	77.10	359	P	P	12 33 28.5	+1.4
F24K				IAmb	IAmb	12 33 46.3	
	comp=Z,3.9nm,1.4s						
E19K	Redstone River	77.11	2	P	P	12 33 27.9	+0.8
E19K				IAmb	IAmb	12 33 31.6	
	comp=Z,2.7nm,1.1s						
G29M	Pine Creek	77.22	355	P	P	12 33 28.1	+0.3
G29M				IAmb	IAmb	12 33 50.4	
	comp=Z,3.4nm,1.1s						
EPYK	Eagle Plains	77.64	354	P	P	12 33 29.9	-0.3
EPYK				IAmb	IAmb	12 34 05.5	
	comp=Z,6.9nm,1.4s						
F19K	Shaleruckik Mo	77.72	2	P	P	12 33 31.1	+0.6
F19K				IAmb	IAmb	12 34 04.5	
	comp=Z,3.0nm,1.2s						
H29M	Whitestone	77.92	355	P	P	12 33 32.0	+0.4
H29M				IAmb	IAmb	12 33 32.2	
	comp=Z,2.1nm,0.7s						
H27K	Steamboat Moun	78.13	356	P	P	12 33 34.2	+1.3
IMAR	Indian Mountai	78.67	1	P	P	12 33 36.7	+1.0
I30M	Mount Dempster	78.73	353	P	P	12 33 36.1	-0.2
I30M				IAmb	IAmb	12 33 37.0	
	comp=Z,2.8nm,0.7s						
I28M	Miner Creek	78.80	355	P	P	12 33 36.9	+0.2
I28M				IAmb	IAmb	12 33 56.6	
	comp=Z,3.0nm,1.3s						
H23K	Yukon River	78.83	359	P	P	12 33 37.1	+0.4
H23K				IAmb	IAmb	12 34 14.7	
	comp=Z,3.5nm,1.2s						
H21K	Melozitna Rive	79.00	0	P	P	12 33 38.4	+0.7
H19K	Roundabout Mou	79.07	2	P	P	12 33 38.4	+0.5
H19K				IAmb	IAmb	12 34 15.4	
	comp=Z,5.7nm,1.5s						
I26K	Coal Creek Min	79.14	356	P	P	12 33 39.0	+0.7
I26K				IAmb	IAmb	12 34 20.0	
	comp=Z,5.6nm,1.4s						
J30M	Hart River	79.36	353	P	P	12 33 40.7	+0.9
J30M				IAmb	IAmb	12 33 41.0	
	comp=Z,3.6nm,0.7s						
MLY	Manley	79.64	360	P	P	12 33 42.6	+1.4
MLY				IAmb	IAmb	12 34 04.5	
	comp=Z,3.8nm,1.4s						
ILAR	Eielson Array	79.83	358	P	P	12 33 42.2	+0.1
	comp=Z,0.2nm,0.7s,baz=9.2,slow=5.6,SNR=2.9						
	comp=Z,0.2nm,0.7s						
ILAR	Eielson Array	79.83	358	P	P	12 33 42.3	+0.2
J26L	Joseph Creek	79.96	356	P	P	12 33 43.4	+0.4
CCB	Clear Creek Bu	79.98	358	P	P	12 33 43.0	+0.1

IDC 07 12:35:59.7±403.0**, 52°.74N×32°.79E, h0km, Error ellipse: s-maj=164.8km s-min=101.4km az=23.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC

I43RU	DUBNA INFRASON	4.74	31	I	I	13 04 27.3	
	baz=215,slow=312,SNR=3.0						
I26DE	FREYUNG INFRAS	12.67	260	I	I	13 50 10.0	
	baz=63,slow=319,SNR=1.1						
I37NO	I37NO	17.69	343	I	I	14 27 40.0	
	baz=151,slow=315,SNR=0.7						

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*IDC **07** 13:00:52.9±28.0, 37°.65N×21°.04E, h0km, mb3.6/5, mbtmp3.6/5, MS3.0/1, Error ellipse: s-maj=539.9km s-min=44.9km az=36.0*

*THE **07** 13:00:53.6, 37°N±2°×2°1E±°, h0km±1km, M3.3/24, MLh3.3/24*

*ATH **07** 13:00:53.5, 37°.29N×20°.65E, h7km±1km, ML3.4/37, Manual Solution by A.Andreou First location: 2019/06/07 13:01:51, This location: 2019/06/07 13:19:56 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

ISC 07 13:00:53.6±1.3**, 37°.30N**±0°.04×**20°.68E**±0°.04**, h13**km±8km**, n103,** σ1^{s}**23**/132**, mb3.6**/5**, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LTHK	Lithakia	0.42	17	P	Pg	13 01 01.7	-0.4
LTHK				S	Sg	13 01 08.2	+0.5
LTHK	Lithakia	0.42	17	P	Pg	13 01 02.1	+0.1
LTHK				S	Sg	13 01 08.4	+0.7
ORTH	Orthonies,Zaky	0.55	1	P	Pg	13 01 04.5	+0.1
ORTH				S	Sg	13 01 12.1	+0.4
KTLO	Katakolo	0.61	56	P	Pg	13 01 05.8	+0.3
CLEM	Kyllini,Ilia,G	0.69	31	P	Pg	13 01 06.9	-0.1
CLEM				S	Sg	13 01 16.0	-0.1
RTZL	Ratzakli, Kefa	0.78	5	P	Pg	13 01 08.3	-0.4
RTZL				S	Sb	13 01 20.0	+0.5
LCHA	Lechaina	0.78	36	P	Pb	13 01 09.4	+0.3
LCHA				S	Sb	13 01 19.9	+0.2
ZARO	Zacharo	0.79	76	P	Pg	13 01 09.2	+0.3
KRES	Krestena	0.80	69	P	Pg	13 01 09.2	0.0
KRES				S	Sg	13 01 19.7	-0.1
PSDA	Pessada-Kefalo	0.81	355	P	Pg	13 01 09.1	-0.3
PSDA				S	Sb	13 01 21.3	+0.8
PSDA	Pessada-Kefalo	0.81	355	P	Pg	13 01 09.3	-0.1
PSDA				S	Sb	13 01 21.2	+0.6
ANDM	Andravida	0.83	34	P	Pg	13 01 08.7	-0.9
AMT	Artemida-Makis	0.85	74	P	Pg	13 01 09.6	-0.4
AMT				S	Sb	13 01 22.4	+0.8
VLS	Valsamata	0.88	355	P	Pg	13 01 10.1	-0.4
VLS				S	Sb	13 01 23.1	+0.7
VLS	Valsamata	0.88	355	P	Pg	13 01 10.2	-0.4
VLS				S	Sg	13 01 22.1	+0.1
PYL	PYLOS	0.94	115	P	Pg	13 01 11.2	-0.5
PYL				S	Sb	13 01 25.5	+1.3
PYL	PYLOS	0.94	115	P	Pg	13 01 11.6	-0.2
PYL				S	Sb	13 01 25.0	+0.9
SMHA	Samh	0.95	358	P	Pg	13 01 10.3	-1.6
SMHA				S	Sg	13 01 24.5	+0.2
MTHA	Methoni	0.95	120	P	Pb	13 01 12.6	+0.7
MTHA				S	Sb	13 01 25.3	+0.9
YRMI	Loutra Irminis	0.96	33	P	Pg	13 01 11.6	-0.5
YRMI				S	Sg	13 01 24.4	-0.3
DMLN	Damoulianata-K	0.96	345	P	Pg	13 01 12.0	-0.3
DMLN	Damoulianata-K	0.96	345	P	Pg	13 01 11.8	-0.5
DMLN				S	Sb	13 01 26.1	+1.2
RLS	Riolos of Patr	0.98	39	P	Pg	13 01 11.8	-0.7
RLS	Riolos of Patr	0.98	39	P	Pg	13 01 11.8	-0.7
RLS				S	Sg	13 01 25.3	+0.1
ITM	Ithomi	1.00	97	P	Pg	13 01 12.5	-0.4
ITM	Ithomi	1.00	97	P	Pg	13 01 12.8	-0.1
ITM				S	Sb	13 01 26.7	+0.7
AXS	Araxos	1.05	32	P	Pg	13 01 13.4	-0.5
AXS	Araxos	1.05	32	P	Pg	13 01 13.3	-0.5
AXS				S	Sg	13 01 26.9	-0.6
FSK	Fiskardo	1.16	355	P	Pg	13 01 15.0	-0.9
FSK				S	Sg	13 01 30.9	-0.1
FSK	Fiskardo	1.16	355	P	Pg	13 01 15.0	-0.9
FSK				S	Sb	13 01 31.4	+1.0
EVGI	Lefkada island	1.32	359	P	Pg	13 01 17.6	-1.3
EVGI	Lefkada island	1.32	359	P	Pg	13 01 17.6	-1.3
EVGI				S	Sg	13 01 34.8	-1.2
PDO	Prodromos	1.35	17	P	Pg	13 01 18.5	-1.2
VLX	Vlachokerasia	1.35	87	P	Pg	13 01 18.9	-0.8
VLX	Vlachokerasia	1.35	87	P	Pg	13 01 18.6	-1.0
VLX				S	Sn	13 01 38.3	+2.1
DRAG	Dragano-Lefkad	1.38	357	P	Pg	13 01 19.3	-0.8
DRAG				S	Sn	13 01 38.6	+1.8
NYDR	Nydri-Lefkada	1.41	1	P	Pn	13 01 19.3	+0.3
NYDR	Nydri-Lefkada	1.41	1	P	Pn	13 01 18.9	0.0
NYDR				S	Sg	13 01 37.5	-1.5
GUR	Goura	1.46	64	P	Pn	13 01 19.8	0.0
PVO	Paravola	1.47	27	P	Pn	13 01 21.0	+1.2
PVO	Paravola	1.47	27	P	Pn	13 01 21.3	+1.4
EFP	Efpalio	1.48	40	P	Pn	13 01 21.2	+1.2
EFP	Efpalio	1.48	40	P	Pn	13 01 20.9	+0.9
EFP				S	Sn	13 01 42.6	+3.4
LKD2	Lefkada island	1.48	359	P	Pn	13 01 20.5	+0.4
LKD2	Lefkada island	1.48	359	P	Pn	13 01 20.7	+0.6
LKD2				S	Sg	13 01 40.4	-1.0
TSLK	Tsoukalades, L	1.52	359	P	Pn	13 01 21.6	+1.1
TSLK	Tsoukalades, L	1.52	359	P	Pn	13 01 21.5	+1.0
TSLK				S	Sn	13 01 43.3	+3.1
SERG	Sergoula	1.55	44	P	Pn	13 01 21.6	+0.5
SERG	Sergoula	1.55	44	P	Pn	13 01 21.6	+0.5
KALE	Kalithea	1.59	46	P	Pb	13 01 23.4	+0.6
ANX	Ano Chora	1.62	37	P	Pn	13 01 22.8	+0.8
ANX	Ano Chora	1.62	37	P	Pn	13 01 23.1	+1.1
AMPL	Ampelaki	1.67	14	P	Pn	13 01 23.9	+1.3
EVR	Evrytania	1.84	29	P	Pb	13 01 28.1	+0.9
DLFA	Delphi	1.85	50	P	Pn	13 01 27.3	+2.1
VLI	Veliai	1.90	107	P	Pn	13 01 27.7	+2.0
VLI	Veliai	1.90	107	P	Pn	13 01 27.5	+1.8
LOUT	Loutraki	1.94	69	P	Pn	13 01 27.5	+1.1
LTK	Loutraki	1.95	68	P	Pn	13 01 27.2	+0.7
LTK	Loutraki	1.95	68	P	Pn	13 01 27.1	+0.6
MAKR	Makrakomi, Fth	2.06	33	P	Pb	13 01 30.6	-0.2
MAKR	Makrakomi, Fth	2.06	33	P	Pn	13 01 30.3	+2.4
TETR	Tetrakomo, Epi	2.09	13	P	Pn	13 01 30.4	+1.9
AXAR	Agios Charalam	2.14	46	P	Pn	13 01 30.7	+1.7
AXAR	Agios Charalam	2.14	46	P	Pn	13 01 30.4	+1.3
MET6	Megalochori,Me	2.15	81	P	Pn	13 01 29.1	0.0
AGG	Agios Georgios	2.15	37	P	Pn	13 01 31.3	+2.0
AGG	Agios Georgios	2.15	37	P	Pn	13 01 31.2	+2.0
MET5	Makryloggos,Me	2.15	81	P	Pn	13 01 29.7	+0.5
KTHA	Kythira Island	2.18	118	P	Pn	13 01 31.0	+1.4
VIL2	Platees	2.24	65	P	Pn	13 01 30.8	+0.3
IGT	Igoumenitsa	2.24	353	P	Pn	13 01 31.5	+1.0
VILL	Villia	2.26	67	P	Pn	13 01 30.7	0.0
LKR	Lokris	2.27	53	P	Pn	13 01 31.8	+1.0
LKR	Lokris	2.27	53	P	Pn	13 01 31.9	+1.0
THL	Klokotos Trika	2.49	24	P	Pn	13 01 35.5	+1.7
KEK	Kerkira	2.50	344	P	Pn	13 01 36.7	+2.6
ANKY	Antikythira Is	2.55	123	P	Pn	13 01 36.6	+2.0
ATHU	Athens Univers	2.55	74	P	Pn	13 01 34.9	+0.2
PTL	Penteli	2.63	73	P	Pn	13 01 37.0	+1.1
DION	Dionisos Attik	2.69	72	P	Pn	13 01 37.2	+0.5
TYRN	Tyrnavos	2.69	26	P	Pn	13 01 37.8	+1.1
TYRN	Tyrnavos	2.69	26	P	Pn	13 01 37.8	+1.1
KPRO	Kipourio	2.70	11	P	Pn	13 01 39.3	+2.5
KPRO	Kipourio	2.70	11	P	Pn	13 01 39.3	+2.5
NEO	Neokhori	2.83	44	P	Pn	13 01 39.1	+0.6
NEO	Neokhori	2.83	44	P	Pn	13 01 39.4	+0.9
PENT	Pentalofos	2.91	7	P	Pn	13 01 42.6	+2.9
KYMI	Kymi, Euboea I	3.01	63	P	Pn	13 01 41.2	+0.2
KARY	Karystos	3.07	75	P	Pn	13 01 41.9	+0.1
KZN	Kozani	3.12	16	P	Pn	13 01 44.6	+2.0
NEST	Nestorio	3.12	5	P	Pn	13 01 45.1	+2.5
NEST	Nestorio	3.12	5	P	Pn	13 01 44.9	+2.2
LIT	Litokhoron	3.13	26	P	Pn	13 01 43.4	+0.7
AOS	Alonnisos	3.13	53	P	Pn	13 01 42.8	+0.1
APE	Apeiranthos	3.88	92	P	Pn	13 01 52.3	-0.7
KNT	Kendrikon	4.22	23	P	Pn	13 01 58.6	+1.0
HFS	Hagfors	23.28	351	P	P	13 05 58.9	-1.9
	0.7nm,0.6s,baz=170,slow=9.6,SNR=1.2						
	0.7nm,0.6s						
FINES	FINESS Array B	24.40	6	P	P	13 06 09.2	-2.3
	1.4nm,0.9s,baz=174,slow=15,SNR=2.6						
	1.4nm,0.9s						
KIRV	Kirov	28.32	32	LR	LR	13 17 05.4	
	comp=Z,29nm,20.8s,baz=352,slow=35						

KURBB	Kurchatov Arra	42.65	53	P	P	13 08 47.5	-2.1
	0.4nm,0.4s,baz=279,slow=8.7,SNR=6.6						
	0.4nm,0.4s						
MKAR	Makanchi Array	45.66	58	P	P	13 09 11.5	-2.4
	0.4nm,0.5s,baz=272,slow=8.4,SNR=4.7						
	0.4nm,0.5s						
ZALV	Zalesovo Beam	46.18	47	P	P	13 09 15.6	-2.3
	0.4nm,0.3s,baz=269,slow=7.9,SNR=2.0						
	0.4nm,0.3s						

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*IDC **07** 13:05:37.4±2.1, 24°.44N×143°.72E, h167km±17km, mb3.1/6, mbtmp3.6/7, MS3.0/1, Error ellipse: s-maj=37.8km s-min=18.0km az=80.0*

ISC 07 13:05:35.8±1.2**, 24°.3N**±0°.1×**143°.7E**±0°.3**, h150**km**, n8,** σ1^{s}**12**/8**, mb3.4**/6**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	3.11	334	P	Pn	13 06 25.4	+0.8
	23nm,0.3s,baz=128,slow=24,SNR=31						
JCJ				S	Sn	13 07 03.2	+0.9
	62nm,0.3s,baz=279,slow=23,SNR=7.6						
JAY	Jayapura	26.82	187	LR	LR	13 22 11.3	
	comp=Z,30nm,18.9s,baz=358,slow=37						
WRA	Warramunga Arr	44.92	193	P	P	13 13 36.2	+0.5
	0.3nm,0.3s,baz=9.3,slow=8.2,SNR=20						
	0.3nm,0.3s						
ASAR	Alice Springs	48.63	192	P	P	13 14 05.6	+1.0
	0.3nm,0.9s,baz=12,slow=6.4,SNR=1.8						
	0.3nm,0.9s						
MKAR	Makanchi Array	53.34	311	P	P	13 14 38.6	-1.0
	0.2nm,0.5s,baz=96,slow=8.2,SNR=2.2						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	56.00	316	P	P	13 14 57.5	-1.0
	0.4nm,0.6s,baz=91,slow=8.3,SNR=6.9						
	0.4nm,0.6s						
BVAR	Borovoye Array	61.05	319	P	P	13 15 32.2	-1.3
	0.5nm,0.5s,baz=90,slow=8.6,SNR=3.0						
	0.5nm,0.5s						
NVAR	Mina Array Bea	81.14	52	P	P	13 17 35.0	0.0
	0.4nm,0.5s,baz=306,slow=6.3,SNR=3.8						
	0.4nm,0.5s						

KRSC 07 13:07:09.2±1.0**, 48°.23N×156°.85E, h17**km±30km**, Ml3.9, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.50	349	eS	Sn	13 08 21.1	+1.9
PAU	Pauzhetka	3.25	360	eS	Sn	13 08 41.4	+3.9
ASAK	Asacha	4.22	9	eP	Pn	13 08 16.5	+3.8
RUS	Russkaya	4.34	14	eP	Pn	13 08 17.7	+3.3
RUS				eS	Sn	13 09 09.5	+4.9
MTVR	Mutnovka	4.35	11	eP	Pn	13 08 18.3	+3.7
MTVR				eS	Sn	13 09 10.5	+5.6
GRL	Gorelyy	4.40	10	eP	Pn	13 08 19.5	+4.2
DALK	Dalny	4.96	13	eP	Pn	13 08 26.9	+4.1
DALK				eS	Sn	13 09 25.9	+6.1
UGLR	Uglovaya	5.14	13	eP	Pn	13 08 30.0	+4.5
SMAR	Somma	5.19	13	eP	Pn	13 08 31.0	+4.7
KOK	Koryaka	5.20	12	eP	Pn	13 08 30.8	+4.6
SDLR	Sedlovina	5.22	14	eP	Pn	13 08 30.5	+3.9
KRX	Arik	5.26	12	eP	Pn	13 08 32.0	+4.8
SPN	Mys Shipunski	5.28	21	eS	Sn	13 09 33.8	+6.2

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*NEIC **07** 13:08:03.5±0.7, 35°.734N±0°.008×97°.56W±0°.01, h6km±3km, Error ellipse: s-maj=1.5km s-min=1.2km az=100.0*

NEIC 07 13:08:03.6±0.7**, 35°.731N**±0°.008×**97°.55W**±0°.01**, h6**km±3km**, mb_Lg2.3**/23**, ML2.3**/45**, ML2.5**/42**, Error ellipse: s-maj=1.4km s-min=1.2km az=96.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BCOK	Bluff Creek, N	0.09	212		Pg	13 08 05.7	+0.1
OK029	Liberty Lake	0.10	51		Pg	13 08 06.2	+0.3
OK029					Sg	13 08 08.4	+0.9
OK029				IAML		13 08 08.5	
	2μm,0.4s						
OK029				IAML		13 08 08.5	
	1μm,0.2s						
ADOK	Arcadia Dam	0.17	118		Pg	13 08 07.6	+0.6
OK004	Okla Sci Mus	0.22	163		Pg	13 08 08.3	+0.4
OK004					Sg	13 08 12.0	+1.2
OKCSW	OKLAHOMA CITY	0.34	164		Pg	13 08 10.5	+0.4
OKCSW				IAML	Sg	13 08 15.9	+1.3
	comp=N,429nm,0.4s						
OKCSW					Sg	13 08 15.9	+1.3
OKCSW				IAML		13 08 18.5	
	comp=E,779nm,0.4s						
FNO	Franklin	0.49	165		Pg	13 08 13.2	+0.2
FNO					Sg	13 08 20.5	+1.1
OK052	Battle Ridge R	0.66	66		Pg	13 08 16.4	0.0
OK052				IAML		13 08 25.8	
	comp=E,210nm,0.2s						
OK052				IAML		13 08 25.8	
	comp=E,334nm,0.3s						
QUOK	Quay	0.81	57		Pg	13 08 19.1	-0.2
QUOK				IAML		13 08 30.7	
	comp=N,132nm,0.3s						
QUOK				IAML		13 08 36.0	
	comp=E,146nm,0.3s						
CROK	Carrier	0.85	336		Pg	13 08 19.5	-0.4
CROK					Sg	13 08 31.1	+0.3
DEOK	Depew	0.87	82		Pg	13 08 20.0	-0.2
DEOK				IAML		13 08 32.0	
	comp=E,196nm,0.3s						
DEOK				IAML		13 08 39.0	
	comp=N,183nm,0.2s						
CSTR	Hydro, Custer	0.93	265		Pg	13 08 21.1	-0.3
CSTR					Sg	13 08 34.0	+0.5
OK051	E0350 and S346	0.97	37		Pg	13 08 21.8	-0.4
OK051					Sg	13 08 34.7	-0.1
OK051				IAML		13 08 37.8	
	comp=N,200nm,0.1s						
BLOK	Blackwell	1.06	15		Pg	13 08 23.6	-0.4
BLOK					Sg	13 08 37.7	-0.1
GC02	Grant County #	1.15	348		Pg	13 08 24.9	-0.6
GC02					Sg	13 08 40.3	-0.1
X34A	Smith Ranch, M	1.15	192		Pg	13 08 25.5	-0.1
X34A				IAML		13 08 42.6	
	comp=N,159nm,0.5s						
X34A				IAML		13 08 42.6	
	comp=E,163nm,0.5s						
OK038	West end E0370	1.22	308		Pg	13 08 26.1	-0.8
OK038					Sg	13 08 42.5	-0.2
KAN14	Manchester OK	1.27	345		Pn	13 08 26.9	-0.9
KAN14					Sg	13 08 43.7	-0.6
KAN13	South Haven SW	1.28	3		Pn	13 08 27.7	-0.3
KAN05	Bluff City Nor	1.40	350		Pn	13 08 29.6	0.0
KAN09	Caldwell North	1.40	358		Pn	13 08 29.8	+0.1
WMOK	Wichita Mounta	1.41	226		Pn	13 08 29.2	-0.6
KAN01	Argonia South	1.43	353		Pn	13 08 30.0	0.0
TUL3	Leonard	1.44	82		Pn	13 08 29.4	-0.8
T35A	Sooner Cattle	1.45	35		Pn	13 08 30.1	-0.2
ELIS	Ellis County	1.55	283		Pn	13 08 31.8	+0.1
LOOK	Love County	1.76	170		Pb	13 08 35.6	-0.6
WTFS	Witchita Falls	2.10	201		Pb	13 08 41.0	-1.1
RLO	Rose Lookout	2.10	77		Pn	13 08 40.5	+1.2
SMWD	Samnorwood	2.28	255		Pn	13 08 42.8	+0.9
SMWD				IAmb_Lg		13 09 21.1	
	comp=Z,9.1nm,0.7s						
APMT	Aspermont	3.20	222	IAmb_Lg		13 09 53.0	
	comp=Z,4.1nm,0.7s						
DKNS	Dickens	3.46	234	IAmb_Lg		13 09 56.9	
	comp=Z,3.9nm,0.8s						
MIAR	Mount Ida	3.47	109	IAmb_Lg		13 09 58.2	
	comp=Z,6.9nm,0.8s						
CBKS	Cedar Bluff	3.54	331	IAmb_Lg		13 10 03.0	
	comp=Z,8.0nm,0.7s						
SN07	Snyder 07	3.81	227	IAmb_Lg		13 10 08.1	
	comp=Z,7.5nm,0.9s						
SN05	Snyder 5	3.96	225	IAmb_Lg		13 10 12.2	
	comp=Z,12nm,0.8s						
X40A	Basin Creek Fa	4.06	106	IAmb_Lg		13 10 17.1	
	comp=Z,11nm,0.8s						
POST	Post	4.21	232	IAmb_Lg		13 10 17.5	
	comp=Z,6.1nm,0.9s						
WHAR	Wooly Hollow	4.32	94	IAmb_Lg		13 10 20.0	
	comp=Z,6.6nm,0.9s						
FCAR	Ozark Folk Cen	4.42	86	IAmb_Lg		13 10 31.7	
	comp=Z,6.0nm,0.8s						
JCT	Junction City	5.57	200	IAmb_Lg		13 11 05.0	

	comp=Z,7.7nm,0.8s						
N41A	Harden Midland	7.24	45	IAmb_Lg		13 12 07.6	
	comp=Z,6.1nm,0.7s						

AEIC 07 13:09:11.5±1.1, 51°.34N±0°.07×178°.16W±0°.06, h34km±8km,
Error ellipse: s-maj=11.1km s-min=5.1km az=195.0
NEIC 07 13:09:10.8±0.7, 51°.27N±0°.06×178°.22W±0°.07, h35km±2km,
mb3.4/13, ML3.0(AEIC), Error ellipse: s-maj=11.2km
s-min=6.5km az=197.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAKI	Gareloi-Kavalg	0.47	307		Pn	13 09 21.0	-0.1
TASE	Tanaga Southea	0.58	11		Pn	13 09 22.6	0.0
GALAA	Gareloi Lava P	0.60	325		Pn	13 09 23.2	+0.2
GAEA	Gareloi East	0.61	327		Pn	13 09 23.2	+0.1
GASW	Gareloi Southw	0.65	322		Pn	13 09 23.5	-0.1
TAFP	Tanaga Falls P	0.65	13		Pn	13 09 23.4	-0.2
TAFP					Sn	13 09 32.9	+0.3
TANO	Tanaga North	0.65	5		Pn	13 09 23.5	0.0
TANO					Sn	13 09 32.3	-0.3
GANO	Gareloi North	0.66	326		Pn	13 09 23.6	-0.2
KIWB	Kanaga Island	0.88	48		Pn	13 09 26.5	-0.3
KICM	Kanaga Island	0.91	44		Pn	13 09 27.3	+0.2
KIRH	Kanaga Island	0.94	48		Pn	13 09 27.5	-0.1
ADK	Adak	1.14	57		Pn	13 09 29.9	-0.3
ADK	Adak	1.14	57		Sn	13 09 44.4	-0.1
GSCK	Great Sitkin C	1.48	59		Pn	13 09 35.5	+0.6
GSTD	Great Sitkin T	1.51	58		Sn	13 09 55.2	+1.2
GSSP	Great Sitkin S	1.51	56		Pn	13 09 36.1	+0.7
GSTR	Great Sitkin T	1.57	58		Pn	13 09 36.5	+0.2
ATKA	Atka Island	2.67	68		Pn	13 09 51.4	+0.2
PET	Petropavlovsk	14.30	286	Pn	Pn	13 12 30.5	0.0
L16K	Owhat River	14.65	37	P	P	13 12 40.1	-1.0
G19K	Purcell Mounta	18.36	28	P	P	13 13 21.8	-0.2
CAST	Castle Rocks	18.45	39	P	Pn	13 13 23.3	-0.1
KTH	Kantishna Hill	18.97	39	P	P	13 13 29.3	+0.3
KTH				IAmb	IAmb	13 13 32.1	
	comp=Z,1.9nm,0.8s						
BPAW	Bear Paw Mtn.	19.21	38	P	P	13 13 31.7	+0.3
BPAW				IAmb	IAmb	13 13 51.0	
	comp=Z,1.5nm,0.8s						
G21K	Allakaket	19.69	30	P	P	13 13 37.2	+0.6
G21K				IAmb	IAmb	13 13 38.8	
	comp=Z,1.4nm,0.9s						
RND	Reindeer	19.74	41	P	P	13 13 37.1	-0.3
F21K	Alatna River	20.15	28	P	P	13 13 41.9	+0.2
F21K				IAmb	IAmb	13 13 44.8	
	comp=Z,3.6nm,1.2s						
DHY	Denali Highway	20.23	42	P	P	13 13 41.8	-0.9
DHY				IAmb	IAmb	13 14 14.2	
	comp=Z,4.3nm,1.3s						
D20K	Etivluk River	20.35	23	P	P	13 13 43.7	-0.1
E21K	Killik River	20.83	25	P	P	13 13 48.5	-0.5
E21K				IAmb	IAmb	13 13 53.5	
	comp=Z,2.7nm,1.2s						
B21K	Ikpikpuk River	21.50	22	P	P	13 13 55.8	-0.3
RIDG	Independent Ri	21.53	42	P	P	13 13 55.4	-1.2
SCRK	Sand Creek	21.97	42	P	P	13 14 01.1	-0.3
SCRK				IAmb	IAmb	13 14 03.7	
	comp=Z,3.1nm,1.5s						

GCG 07 13:31:13.3±4.1, 14°.81N×94°.30W, h35km±26km, MD4.4,
ML3.6
MEX 07 13:31:16.3±0.5, 14°.99N×94°.25W, h22km±31km, MD4.1
ISC 07 13:31:07.7±1.5, 14°.85N±0°.05×94°.35W±0°.02, h17km±11km,
n26, σ1s.73/50, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		1.38	52	eP	Pg	13 31 35.5	+1.1
PCIG				eS	Sn	13 31 49.8	-0.3
HUIG	Huatulco	1.93	298	eP	Pg	13 31 45.7	+0.9
HUIG				eS	Sb	13 32 06.4	+0.2
HUIG	Huatulco	1.93	298	i P	Pg	13 31 45.9	+1.1
HUIG				i S	Sb	13 32 06.6	+0.3
HUIG				IAML		13 32 08.6	
	comp=N,67nm,0.3s						
THIG		2.01	88	eP	Pg	13 31 46.5	0.0
THIG				eS	Sn	13 32 05.3	-0.3
PATR	El Naranjo	2.06	82	eP	Pb	13 31 45.7	+0.9
PATR				eS	Sn	13 32 08.1	+0.9
PAVE	Pavencul	2.12	80	eP	Pb	13 31 46.7	+0.8
PAVE				eS	Sn	13 32 09.7	+1.0
TGIG		2.25	31	eP	Pb	13 31 48.9	+0.9
TGIG				eS	Sb	13 32 14.8	-0.7
TGIG		2.25	31	i P	Pg	13 31 50.4	-0.6
TGIG				i S	Sb	13 32 16.3	+0.7
TGBT	Tuxtla Gutierr	2.27	32	eP	Pb	13 31 49.2	+1.0
TGBT				eS	Sn	13 32 12.9	+1.0
CMIG	Matias Romero	2.29	347	eP	Pg	13 31 49.8	-1.9
CMIG				eS	Sb	13 32 14.9	-1.6
CCIG	Comitan	2.56	56	eP	Pb	13 31 54.1	+0.8
CCIG				eS	Sn	13 32 22.5	+3.0
CCIG	Comitan	2.56	56	i P	Pb	13 31 54.9	+1.5
CCIG				i S	Sb	13 32 22.7	-2.0
CCIG				IAML		13 32 28.7	
	comp=N,580nm,0.5s						
RTAL	Retalhuleu	2.59	97	eP	Pb	13 31 53.1	-0.6
RTAL				i S	Sn	13 32 17.9	-1.9
HUEH	Huehuetenango	2.79	80	eP	Pn	13 31 51.9	+0.1
HUEH				i S	Sn	13 32 24.4	-0.7
STG8	El Palmar, Qui	2.93	97	i P	Pn	13 31 55.0	+1.3
STG8				i S	Sn	13 32 24.2	-4.4
STG8				IAML		13 32 25.9	
	comp=N,748nm,0.2s						
PEIG	Puerto Escondi	2.93	293	eP	Pb	13 32 00.0	+0.5
PEIG				eS	Sn	13 32 29.7	+1.3
NEUV	Arroyo Zacate	3.17	334	eP	Pb	13 32 02.0	-1.7
NEUV				eS	Sn	13 32 36.7	+2.5
VHO	Vista Hermosa	3.19	314	eP	Pg	13 32 09.2	+0.3
VHO				i S	Sn	13 32 34.7	-0.2
VHO				eS	Sb	13 32 39.7	-2.9
YOIG	Yosondua	3.67	303	eP	Pb	13 32 12.8	+0.6
YOIG				eS	Sn	13 32 48.6	+1.7
PNIG	Pinotepa	3.95	293	eP	Pb	13 32 14.4	-2.6
PNIG				eS	Sn	13 32 55.1	+1.5
TXIG	Tlaxiaco	4.06	306	eP	Pb	13 32 16.7	-2.4
TXIG				eS	Sn	13 32 57.7	+0.9
TOIG	Toxpalan	4.15	321	eP	Pb	13 32 20.4	0.0
TOIG				eS	Sn	13 32 59.3	+0.7
FTIG	Fresnillo de T	4.74	310	eP	Pb	13 32 29.1	-1.3
FTIG				eS	Sn	13 33 13.0	-0.1
MGIG	Malinaltepec	4.75	300	eS	Sn	13 33 19.1	+5.5
CRIG	Cruz Grande	4.97	293	eP	Pb	13 32 27.8	-6.6
CRIG				eS	Sn	13 33 18.2	-0.6
JAUV	Jalcomulco	5.07	333	eP	Pb	13 32 29.3	-6.7
JAUV				eS	Sn	13 33 18.2	-3.0

ECX 07 13:41:34.2±0.3, 31°.01N×114°.23W, h6km±5km, ML3.5
MEX 07 13:41:34.5±0.4, 31°.27N×114°.47W, h3km±3km, MD4.0
ISC 07 13:41:34.3±1.1, 31°.11N±0°.05×114°.28W±0°.03, h22km±9km,
n10, σ1s.78/19, 3C-2D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPXB	Puerto Peasco	0.59	68	⇓eP	Pb	13 41 45.0	-1.1
PPXB				eS	Sb	13 41 53.2	-0.9
PPXB				IAML		13 41 53.5	
	comp=N,2μm,0.3s						
PPXB				IAML		13 41 53.5	
	comp=E,4μm,0.3s						
PPXB				⇑e		13 41 53.5	
EDOMX	El Doctor, EDO	0.94	335	eP	Pb	13 41 53.6	+1.7
EDOMX				eS	Sn	13 42 07.7	+2.8
EDOMX				e		13 42 10.7	
EDOMX				IAML		13 42 10.7	
	comp=N,1μm,0.5s						
EDOMX				⇓e		13 42 10.9	
EDOMX				IAML		13 42 10.9	
	comp=E,950nm,0.6s						
SPIG	San Pedro Mart	1.02	267	⇑eP	Pn	13 41 52.8	-0.9
SPIG				eS	Sn	13 42 07.3	-0.3
SPIG	San Pedro Mart	1.02	267	eP	Pn	13 41 52.8	-0.9
SPIG				eS	Sn	13 42 07.1	-0.5
RHX	Rio Hardy	1.34	320	eP	Pn	13 41 56.4	-1.3
RHX				eS	Sb	13 42 15.7	+0.3
SQX	San Quintin	1.48	249	⇑eP	Pn	13 42 00.5	+0.9
SQX				eS	Sb	13 42 20.4	+1.0
TJIG	Tijuana	2.43	303	eP	Pn	13 42 12.2	-0.6
TJIG				eS	Sn	13 42 38.8	-3.1
TUC	Tucson	3.21	67	eP	Pn	13 42 26.2	+2.8
TUC				eS	Sb	13 43 07.8	-1.4
HSIG		3.56	125	eS	Sb	13 43 21.7	+2.4
NZIG	Nacozari, Sono	4.13	99	eP	Pb	13 42 45.9	-0.5
NZIG				eS	Sb	13 43 34.0	-2.0

ISN 07 14:13:08.1±0.6, 34°.67N×46°.31E, h14km±9km, ML2.5
TEH 07 14:13:09.2, 34°.65N×46°.25E, h10km±39km
ISC 07 14:13:09.1±1.0, 34°.67N±0°.05×46°.25E±0°.05, h13km±10km,
n7, σ0s.82/11, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDHR	Dehrash	0.12	74	Pg	Pg	14 13 12.6	+0.1
IDHR				Sg	Sg	14 13 15.3	+0.3
IGHG	Ghaleghazi	0.43	141	Pg	Pb	14 13 17.6	-1.0
GLG1	Gilan-e-Gharb	0.62	207	Pg	Pg	14 13 21.1	0.0
ILIN	Lien	0.64	67	Pg	Pb	14 13 21.7	-0.5
IBDR	Badra	1.57	190	ePn	Pb	14 13 38.0	0.0
IBDR				eSn	Sg	14 13 59.0	-0.7
IBDR				AML	AML	14 14 12.8	
	comp=N,4.5nm,0.9s						
IKRK	Kirkuk	1.73	296	ePn	Pb	14 13 40.0	-0.6
IKRK				eSn	Sg	14 14 04.0	-0.6
IKRK				AML	AML	14 14 14.5	
	comp=N,6.1nm,0.8s						
BHD	Baghdad	2.08	229	ePn	Pn	14 13 45.0	+1.4
BHD				eSn	Sb	14 14 12.0	-0.4

IDC 07 14:25:02.7±0.7, 3°.64S×134°.74E, h0km, mb4.1/9,
mbtmp4.2/12, ML4.2/3, MS3.5/9, Error ellipse:
s-maj=30.8km s-min=18.2km az=69.0
NEIC 07 14:25:03.5±1.8, 3°.56S±0°.05×134°.71E±0°.06, h10km±1km,
mb4.4/23, Error ellipse: s-maj=12.9km s-min=5.4km
az=126.0
DJA 07 14:25:04.6±0.2, 4°S±3°×13°5E±°, h10km, M4.6/14, mB5.1/6,
mb4.6/13, MLv4.7/14, Mw(mB)4.5/6
ISC 07 14:25:05.2±0.5, 3°.62S±0°.05×134°.77E±0°.06, h25km, n82,
σ2s.12/76, mb4.2/16, MS3.5/8, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMPI	Kaimana, Papua	1.06	268	P	Pb	14 25 25.8	+0.8
RKPI	Ransiki, Papua	2.17	344	P	Pb	14 25 42.2	-1.7
SRPI	Serui, Papua	2.27	40	P	Pn	14 25 41.5	+0.3
FAKI	Fak Fak	2.61	285		Pn	14 25 46.2	+0.4
FAKI	Fak Fak	2.61	285	P	Pn	14 25 46.6	+0.8
FAKI	Fak Fak	2.61	285	P	Pn	14 25 46.2	+0.4
BAKI	Biak	2.75	29	P	Pn	14 25 49.9	+2.1
SMPI	Sarmi	4.25	68	P	Pn	14 26 11.8	+3.4
SWI	Sorong	4.45	308	P	Pn	14 26 11.1	0.0
BNDI	Bandanaira	4.94	259	P	Pn	14 26 18.8	+1.0
GENI	Genyem	5.48	79	P	Pn	14 26 28.3	+2.9
GENI	Genyem	5.48	79	P	Pn	14 26 27.9	+2.5
	0.5nm137nm,1.1s						
MSAI	Masohi	5.84	272	P	Pn	14 26 30.8	+0.6
JAY	Jayapura	6.03	80	Pn	Pn	14 26 33.4	+0.6
	2.5nm,0.3s,baz=240,slow=9.5,SNR=9.5						
	14nm,0.4s						
JAY	Jayapura	6.03	80	P	Pn	14 26 34.1	+1.3
	27nm,0.8s						
TNTI	Ternate	8.59	300	Pn	Pn	14 27 05.9	-2.1
SANI	Sanana	8.91	280	P	Pn	14 27 11.6	-0.8
	40nm,0.8s						
DRS	Darwin Rock St	9.56	203	P	Pn	14 27 22.7	+1.4
MTN	Manton Dam	9.85	201		Pn	14 27 25.1	-0.2
MTN	Manton Dam	9.85	201	P	Pn	14 27 27.6	+2.3
SOEI	Soe	12.08	239	Pn	Pn	14 27 53.1	-2.9
SOEI	Soe	12.08	239	P	Pn	14 27 56.1	+0.1
	43nm,1.1s						
LUWI	Luwuk	12.26	282	Pn	Pn	14 27 54.7	-3.6
LUWI	Luwuk	12.26	282	P	Pn	14 27 58.8	+0.5
	1μm56nm,0.9s						
MANU	Manus Island	12.68	83	Pn	Pn	14 28 02.1	-2.0
COEN	Coen	13.21	142	Pn	Pn	14 28 09.4	-1.8
KNRA	Kununurra	13.36	206		Pn	14 28 10.6	-2.8
APSI	Ampana	13.38	281	P	Pn	14 28 14.7	+1.0
	33nm,0.6s						
PMG	Port Moresby	13.58	116	Pn	Pn	14 28 13.5	-2.9
PMG	Port Moresby	13.58	116	LR	LR	14 34 37.0	
	comp=Z,166nm,18.2s,baz=246,slow=42						
EDFI	Ende, Flores	13.96	248	P	Pn	14 28 22.1	+0.4
	20nm,0.9s						
SPSI	Sidrap Palu	14.97	268	P	Pn	14 28 36.8	+1.4
WB0	Warramunga Arr	16.06	181	Pn	Pn	14 28 44.0	-5.5
WB0				IAmb	IAmb	14 29 09.3	
	comp=Z,23nm,1.3s						
WB2	Warramunga Arr	16.23	181	Pn	Pn	14 28 46.8	-4.9
WB2				IAmb	IAmb	14 29 11.9	
	comp=Z,16nm,1.0s						
WRA	Warramunga Arr	16.23	181	Pn	Pn	14 28 48.0	-3.7
WRA	Warramunga Arr	16.23	181	Pn	Pn	14 28 47.7	-4.0
	comp=Z,0.2nm,0.3s,baz=353,slow=14,SNR=7.4						
WR8	Warramunga Arr	16.24	181	Pn	Pn	14 28 46.0	-5.8
WR0	Warramunga Arr	16.25	181	Pn	Pn	14 28 48.7	-3.2
FITZ	Fitzroy Crossi	16.95	211	Pn	Pn	14 28 57.0	-3.7
FITZ	Fitzroy Crossi	16.95	211	Pn	Pn	14 28 59.4	-1.3
	comp=Z,0.8nm,0.3s,baz=35,slow=11,SNR=18						
FITZ				Sn	Sn	14 31 54.0	-14
	comp=Z,0.5nm,0.3s,baz=136,slow=7.1,SNR=4.1						
	comp=Z,5.8nm,0.7s						
MTSU	Mount Surprise	17.19	148	P	P	14 29 07.6	+2.3
QIS	Mount Isa	17.48	165	P	P	14 29 11.8	+3.3
CTAO	Charters Tower	19.84	147	P	P	14 29 32.2	-2.1
CTAO				IAmb	IAmb	14 29 39.2	
	comp=Z,20nm,0.9s						
AS01	Alice Springs	19.95	182	P	Pn	14 29 37.1	-0.2
AS31	Alice Springs	19.95	182	P	P	14 29 36.2	+0.6
AS31				IAmb	IAmb	14 29 41.0	
	comp=Z,12nm,0.7s						
ASAR	Alice Springs	19.95	182	P	P	14 29 35.6	0.0
ASAR	Alice Springs	19.95	182	P	P	14 29 36.2	+0.6
	comp=Z,0.9nm,0.3s,baz=8.0,slow=11,SNR=80						
ASAR				LR	LR	14 37 58.7	
	comp=Z,184nm,18.3s,baz=290,slow=39						
	comp=Z,27nm,0.7s						
KKM	Kota Kinabalu	20.87	297	P	P	14 29 44.3	-1.4
KKM				IAmb	IAmb	14 30 04.1	
	comp=Z,14nm,0.9s						
MBWA	Marble Bar	22.76	219	P	P	14 30 03.8	-2.0
MBWA				IAmb	IAmb	14 30 42.9	
	comp=Z,34nm,1.4s						
QLP	Quilpie	24.57	159	P	P	14 30 27.6	+4.3
STKA	Stephens Creek	28.84	168	LR	LR	14 43 54.8	
	comp=Z,144nm,19.9s,baz=359,slow=39						
JOW	Kunigami	30.91	349	LR	LR	14 42 57.6	
	comp=Z,39nm,20.2s,baz=288,slow=35						
NWAO	Narrogin (SRO)	33.46	207	LR	LR	14 47 27.4	
	comp=Z,82nm,18.2s,baz=65,slow=40						
JNU	Nakatsue	36.72	355	LR	LR	14 48 08.9	
	comp=Z,29nm,18.7s,baz=118,slow=38						
JHJ2	Mitsune	36.84	7	P	P	14 32 11.6	+0.1
KSRS	Korea Array	41.35	352	LR	LR	14 50 02.4	
	comp=Z,7μm,20.1s,baz=220,slow=36						
CMAR	Chiang Mai Arr	41.55	303	P	P	14 32 53.0	+1.9
	comp=Z,1.1nm,0.6s,baz=125,slow=6.5,SNR=7.9						
CMAR				LR	LR	14 52 27.1	
	comp=Z,15nm,18.1s,baz=205,slow=40						
	comp=Z,1.1nm,0.6s						
JKA	Kamikawa-asahi	48.03	8	P	P	14 33 42.9	+0.5
EVN	Everest	55.80	307	P	P	14 34 40.8	-0.5
SONM	Songino Array	56.95	338	P	P	14 34 48.8	+0.2
	comp=Z,0.6nm,0.6s,baz=152,slow=7.7,SNR=1.7						
	comp=Z,0.6nm,0.6s						
MK31	Makanchi Array	68.16	324	P	P	14 36 02.1	-1.2
MK31				IAmb	IAmb	14 36 10.6	
	comp=Z,2.3nm,0.7s						
MKAR	Makanchi Array	68.16	324	P	P	14 36 01.6	-1.7
MKAR	Makanchi Array	68.16	324	P	P	14 36 05.1	+1.7
	comp=Z,2.6nm,0.5s,baz=110,slow=7.8,SNR=16						
	comp=Z,2.6nm,0.5s						
MAKZ	Makanchi	68.35	324	P	P	14 36 04.3	-0.3
ZAA0	Zalesovo Array	70.79	331	P	P	14 36 18.7	-0.7
ZAA0				IAmb	IAmb	14 36 25.1	
	comp=Z,2.6nm,0.8s						
ZALV	Zalesovo Beam	70.79	331	P	P	14 36 18.4	-0.9
ZALV	Zalesovo Beam	70.79	331	P	P	14 36 20.2	+0.8
	comp=Z,1.3nm,0.6s,baz=104,slow=6.3,SNR=5.5						
	comp=Z,1.3nm,0.6s						
KURK	Kurchatov	72.24	326	P	P	14 36 28.3	+0.1
KURK				IAmb	IAmb	14 36 34.8	
	comp=Z,4.2nm,1.1s						
KURBB	Kurchatov Arra	72.24	326	P	P	14 36 29.4	+1.2
	comp=Z,1.0nm,0.5s,baz=121,slow=5.2,SNR=9.9						
	comp=Z,1.0nm,0.5s						
KK31	Karatay Array	74.05	317	P	P	14 36 38.5	-0.6
KKAR	Karatay Array	74.05	317	P	P	14 36 38.7	-0.5
VNDA	Vanda	75.26	174	P	P	14 36 46.4	+0.9
	comp=Z,0.7nm,0.8s,baz=333,slow=4.7,SNR=1.8						
VNDA				LR	LR	15 09 38.0	
	comp=Z,89nm,18.3s,baz=350,slow=36						
	comp=Z,0.7nm,0.8s						
BVAR	Borovoye Array	77.83	326	P	P	14 37 02.4	+1.9
	comp=Z,4.5nm,1.1s,baz=119,slow=5.8,SNR=11						
	comp=Z,4.5nm,1.1s						
AB31	Akbulak array	82.89	320	P	P	14 37 26.0	-1.7
AB31				IAmb	IAmb	14 37 54.7	
	comp=Z,2.9nm,1.4s						
ABKAR	Akbulak array	82.89	320	P	P	14 37 25.9	-1.9
ABKAR				IAmb	IAmb	14 37 54.7	
	comp=Z,2.9nm,1.4s						
QSPA	South Pole Qui	86.34	180	P	P	14 37 46.4	+1.3
QSPA				IAmb	IAmb	14 38 16.5	
	comp=Z,8.0nm,1.4s						
QSPA	South Pole Qui	86.34	180	P	P	14 37 46.5	+1.5
	comp=Z,2.1nm,1.0s,baz=340,slow=2.8,SNR=3.4						
QSPA				LR	LR	15 16 34.0	
	comp=Z,90nm,18.1s,baz=15,slow=36						
	comp=Z,2.1nm,1.0s						
MLY	Manley	86.76	24	P	P	14 37 48.1	+1.1
MLY				IAmb	IAmb	14 38 13.7	
	comp=Z,1.7nm,1.0s						
I23K	Minto, Yukon-K	87.35	24	P	P	14 37 51.2	+1.5
ILAR	Eielson Array	88.29	25	P	P	14 37 56.2	+1.9
	comp=Z,0.5nm,0.9s,baz=267,slow=5.7,SNR=5.0						
	comp=Z,0.5nm,0.9s						
CPUP	Villa Florida	148.01	159	PKPbc	PKiKP	14 44 51.5	+0.3
	comp=Z,0.6nm,0.7s,baz=59,slow=3.5,SNR=4.5						
LPAZ	La Paz	149.94	132	PKPbc	PKiKP	14 44 56.6	+0.5
	comp=Z,1.9nm,0.8s,baz=78,slow=3.1,SNR=6.6						

AZER 07 14:25:45.1, 40°.41N×51°.98E, h39km, ml3.3
IDC 07 14:25:48.8±6.7, 41°.58N×51°.68E, h0km, mb3.5/1,
mbtmp3.5/4, ML2.8/2, Error ellipse: s-maj=121.6km
s-min=24.4km az=178.0
ISC 07 14:25:41.7±1.1, 40°.46N±0°.06×52°.34E±0°.07, h35km, n30,
σ2s.21/49, 3C-1D, Turkmenistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GALA	Gala	1.67	269	Pg	Pn	14 26 11.9	+3.5
GALA				Sg	Sn	14 26 29.2	+0.6
ALIB	&Aumlli-Bayram	2.60	260	Sn	Sn	14 26 50.5	-1.1
ATGJ	Altiaghaj	2.62	280	Sn	Sn	14 26 54.1	+1.8
SIZA	Siyzn	2.69	284	Pn	Pn	14 26 24.9	+2.4
SIZA				Sn	Sn	14 26 56.5	+2.7
PQL	Pirkuli	2.87	278	Pn	Pn	14 26 26.7	+1.6
PQL				Sn	Sn	14 26 59.8	+1.3
QUBA	Quba, Azerbaij	3.05	288	Pn	Pn	14 26 29.2	+1.8
QUBA				Sn	Sn	14 27 02.1	-0.7
LKRN	Lenkeran, Azer	3.26	239	Pn	Pn	14 26 31.5	+1.2
LKRN				Sn	Sn	14 27 06.1	-1.7
QSAR	Qusar	3.26	290	Pn	Pn	14 26 32.1	+1.8
QSAR				Sn	Sn	14 27 07.3	-0.7
XNQ	Khinaliq	3.27	284	Pn	Pn	14 26 32.0	+1.4
XNQ				Sn	Sn	14 27 06.7	-1.7
GLBA	Clilabad	3.27	249	Pn	Pn	14 26 31.1	+0.6
GLBA				Sn	Sn	14 27 06.9	-1.2
ASTR	Astara	3.34	237	Pn	Pn	14 26 32.2	+0.9
ASTR				Sn	Sn	14 27 07.5	-2.2
QBL	Gabala	3.46	280	Sn	Sn	14 27 11.8	-1.1
YRD	Yardimli	3.52	245	Pn	Pn	14 26 35.8	+1.8
YRD				Sn	Sn	14 27 11.1	-3.4
LRK	Lerik	3.58	241	Pn	Pn	14 26 37.4	+2.5
LRK				Sn	Sn	14 27 13.3	-2.8
BLQ	Beylaqan	3.74	260	Pn	Pn	14 26 39.4	+2.5
BLQ				Sn	Sn	14 27 18.4	-1.3
SEKA	Sheki	3.97	283	Pn	Pn	14 26 41.1	+1.0
SEKA				Sn	Sn	14 27 24.4	-1.1
QRD	Qoradiz	3.98	257	Sn	Sn	14 27 23.2	-2.5
AGDM	Agdam	4.02	267	Sn	Sn	14 27 24.5	-2.1
ZKTA	Zakatala	4.48	287	Sn	Sn	14 27 37.1	-1.0
GANJ	Ganja	4.59	274	Sn	Sn	14 27 36.9	-3.8
GDB	GEDABAY	5.02	275	Pn	Pn	14 26 55.9	+1.2
GDB				Sn	Sn	14 27 46.9	-4.7
ORD	Ordubad	5.13	255	Pn	Pn	14 26 57.4	+1.3
ORD				Sn	Sn	14 27 51.7	-2.4
SBZ	Shahbuz	5.33	261	Pn	Pn	14 27 01.1	+2.3
SBZ				Sn	Sn	14 27 58.3	-0.7
QZX	Qazax, Azerbai	5.33	279	Pn	Pn	14 27 00.2	+1.4
QZX				Sn	Sn	14 27 55.3	-3.5
KBZ	Khabaz	7.75	298	Pn	Pn	14 27 30.6	-1.2
	0.1nm,0.3s,baz=114,slow=10.0,SNR=1.4						
KBZ				Sn	Sn	14 28 47.6	-11
	0.5nm,0.3s,baz=300,slow=11,SNR=4.4						
	0.5nm,0.3s						
AB31	Akbulak array	10.31	29	⇑Pn	Pn	14 28 07.1	+0.1
	0.2nm,0.4s,baz=209,slow=15,SNR=9.7						
AB31				⇑Sn	Sn	14 29 58.5	-2.8
	1.6nm,0.4s,baz=214,slow=22,SNR=10						
AKTO	Aktyubinsk	10.74	20	⇑Pn	Pn	14 28 14.6	+1.7
	0.6nm,0.5s						
AKTO				⇓Sn	Sn	14 30 06.9	-4.9
	4.4nm,0.7s						
BVAR	Borovoye Array	17.57	38	P	P	14 29 47.0	+2.5
	0.1nm,0.3s,baz=228,slow=13,SNR=9.6						
	1.5nm,0.5s						
AKASG	Malin Array Be	19.07	310	P	P	14 29 59.3	-1.7
	0.6nm,0.4s,baz=108,slow=11,SNR=6.7						
FINES	FINESS Array B	26.41	331	P	P	14 31 16.6	+1.9
	0.9nm,0.8s,baz=136,slow=10,SNR=5.4						
	0.9nm,0.8s						

SNET 07 14:38:31.6±2.2, 13°.03N×89°.52W, h35km±33km, ML3.1
GCG 07 14:38:32.4±0.3, 13°.11N×89°.60W, h51km±5km, MD3.6,
ML2.2
CATAC 07 14:38:32.7±1.4, 13°N±9°×9°0W±°, h27km±8km, M3.3/7,
MLv3.3/7, Error ellipse: s-maj=22.6km s-min=10.0km
az=32.8, confirmed
ISC 07 14:38:30.8±2.6, 13°.0N±0°.1×89°.54W±0°.08, h29km±13km,
n23, σ0s.72/29, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.55	23	P	Sn	14 38 50.1	-0.8
JAYA	Jayaque - finc	0.68	8	eP	Pb	14 38 44.4	+0.2
JAYA				eS	Sb	14 38 53.2	-0.1
JAYA				IAML		14 38 54.5	
	comp=Z,1μm,0.1s						
JAYA	Jayaque - finc	0.68	8	i P	Pb	14 38 44.4	+0.2
JAYA				i S	Sb	14 38 53.6	+0.2
JAYA	Jayaque - finc	0.68	8	P	Pb	14 38 44.5	+0.2
LOMA	Loma Larga	0.75	29	P	Pb	14 38 45.9	+0.5
PMON	Piamonte	0.76	17	P	Pb	14 38 45.7	+0.1
PMON	Piamonte	0.76	17	S	Sb	14 38 55.3	-0.3
BOQS	Boqueron	0.79	19	eP	Pb	14 38 46.1	-0.1
CEVE	Cerro Verde	0.85	355	eP	Pb	14 38 47.5	+0.4
CEVE				eS	Sb	14 38 59.5	+1.2
CEVE				IAML		14 38 59.7	
	comp=Z,458nm,0.2s						
CEVE	Cerro Verde	0.85	355	P	Pb	14 38 47.1	0.0
COEG	Centro de Oper	0.91	45	eP	Pb	14 38 47.5	-0.5
COEG				eS	Sb	14 38 59.2	-0.5
COEG				IAML		14 39 00.6	
	comp=Z,539nm,0.1s						
COEG	Centro de Oper	0.91	45	P	Pb	14 38 47.5	-0.5
TECO	Alcaldia de Te	0.93	53	P	Sn	14 38 59.8	-0.4
PAVA	Las Pavas	0.94	39	P	Pb	14 38 48.4	-0.2
NUBE	Las Nubes	0.95	346	i P	Pb	14 38 48.1	-0.6
NUBE				i S	Sb	14 39 00.3	-0.6
NUBE	Las Nubes	0.95	346	P	Pb	14 38 48.5	-0.2
PACA	Pacayal	1.28	68	P	Pn	14 38 53.8	+1.0
BLLM	Bellamira	1.35	70	eP	Pn	14 38 54.4	+0.6
MTO3	Montecristo	1.42	7	i P	Pn	14 38 54.9	0.0
MTO3				IAML		14 38 55.1	
	comp=Z,38nm,0.2s						
MTO3				i S	Sn	14 39 12.7	0.0
MTO3	Montecristo	1.42	7	P	Pn	14 38 54.9	0.0
LCND	La Caada	1.64	78	eP	Pn	14 38 58.6	+0.9
CNCH	Conchagua	1.69	80	eP	Pn	14 38 56.4	-2.1
CNCH				eP		14 38 59.1	

CNCH				*e*S	Sn	14 39 20.6	+1.4
HOYN	Al Sur del Vol	2.67	98	P	Pn	14 39 05.6	-6.4

TEH ***07*** *14:52:05.8, 38°.43N×46°.67E, h10^{km}±135^{km}*
AZER ***07*** *14:52:06.5, 38°.50N×46°.65E, h10^{km}, ml2.7*
ISC 07 14:52:06.3±1.1**, 38°.41N**±0°.03×**46°.65E**±0°.02**, h7**^{km}±10^{km}**,**
n24, σ1^{s}26/40**, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IHRS	Heris	0.33	107	Pg	Pg	14 52 12.6	-0.2
IHRS				Sg	Sg	14 52 17.2	+0.1
ITBZ	Tabriz	0.43	246	Pg	Pg	14 52 15.0	+0.3
ORD	Ordubad	0.72	315	P	Pb	14 52 21.2	-0.1
ORD				S	Sb	14 52 31.5	0.0
ISHB	Shabestar	0.82	261	Pg	Pg	14 52 22.3	+0.3
IAZR	Azarshahr	0.90	216	Pg	Pg	14 52 24.7	+1.0
GRMI	Germi	1.05	68	Pg	Pb	14 52 26.1	-0.8
QRD	Qoradiz	1.17	26	P	Pn	14 52 29.5	+0.4
QRD				S	Sn	14 52 45.9	+0.5
NAX	Nakhchivan	1.18	311	P	Pn	14 52 29.9	+0.6
NAX				S	Sn	14 52 46.7	+1.1
IHSH	Hashtrud	1.21	156	Pg	Pn	14 52 28.7	-1.2
SBZ	Shahbuz	1.30	319	P	Pg	14 52 31.3	+0.1
SBZ				S	Sn	14 52 50.6	+1.9
YRD	Yardimli	1.35	68	P	Pg	14 52 31.4	-0.7
YRD				S	Sg	14 52 49.6	0.0
LRK	Lerik	1.35	80	P	Pg	14 52 32.1	0.0
LRK				S	Sg	14 52 49.8	+0.1
BLQ	Beylaqan	1.49	28	P	Pg	14 52 36.3	+1.5
BLQ				S	Sg	14 52 55.8	+1.7
GLBA	Clilabad	1.60	58	P	Pg	14 52 37.3	+0.4
GLBA				S	Sg	14 52 59.6	+2.0
ASTR	Astara	1.69	84	P	Pg	14 52 38.4	-0.3
ASTR				S	Sg	14 53 00.9	+0.3
LKRN	Lenkeran, Azer	1.70	79	P	Pg	14 52 39.2	+0.3
LKRN				S	Sg	14 53 01.6	+0.7
AGDM	Agdam	1.73	12	P	Pg	14 52 40.2	+0.7
AGDM				S	Sg	14 53 03.3	+1.4
MAKU	Maku	1.80	302	Pn	Pg	14 52 39.9	-0.8
HYR	Heyderabad	1.91	314	P	Pg	14 52 42.1	-0.8
HYR				S	Sg	14 53 08.8	+1.1
ZRD	Zardab	2.03	23	S	Sg	14 53 14.4	+2.8
GANJ	Ganja	2.24	354	P	Pg	14 52 47.4	-2.0
GANJ				S	Sg	14 53 15.8	-2.6
GDB	GEDABAY	2.41	344	P	Pb	14 52 50.2	+0.1
GDB				S	Sg	14 53 22.0	-1.6
PQL	Pirkuli	2.81	32	P	Pb	14 52 55.6	-1.3
PQL				S	Sb	14 53 32.1	+0.5
QZX	Qazax, Azerbai	2.82	340	S	Sb	14 53 28.7	-3.0

IDC ***07*** *14:57:27.4±0.5, 58°.50N×151°.62W, h0^{km}, mb4.6/33, mbtmp4.6/37, ML4.3/4, MS3.8/60, Error ellipse: s-maj=12.4km s-min=9.9km az=168.0*
ANF ***07*** *14:57:29.9±0.1, 58°.33N×151°.26W, h15^{km}, ML5.4/76, Error ellipse: s-maj=1.4km s-min=0.9km az=155.0*
MOS ***07*** *14:57:30.7±0.9, 58°.45N×151°.62W, h34^{km}, mb5.1/70, Error ellipse: s-maj=9.8km s-min=4.2km az=96.9*
NEIC ***07*** *14:57:31.9, 58°.28N×151°.19W, h30^{km}*
NEIC ***07*** *14:57:31.3±1.8, 58°.28N±0°.03×151°.24W±0°.07, h29^{km}±3^{km}, mb4.9/127, ML5.0/158, Mww4.8/83, ML4.8(AEIC), Error ellipse: s-maj=6.1km s-min=4.1km az=123.0*
NEIC ***07*** *14:57:31.9, 58°.48N×151°.38W, h30^{km}, Moment Tensor Solution. Duration: 1^{s}4 Moment tensor: Scale 10^{16}Nm; M_{rr}0.26; $M_{\theta\theta}$-2.08; $M_{\phi\phi}$1.82; $M_{r\theta}$0.82; $M_{\theta\phi}$0.95; $M_{\phi r}$0.33; Fault plane solution: $M_0$2.34000×10^{16} NP1: ϕ_s328.38000°, δ68.03000°, λ179.49000°. NP2: ϕ_s58.57000°, δ89.53000°, λ21.98000°. Principal axes: T 2.1811, Plg16.0000°, Azm286.0000°; N 0.3118, Plg68.0000°, Azm60.0000°; P -2.4929, Plg15.0000°, Azm191.0000°;*
AEIC ***07*** *14:57:33.8±1.8, 58°.28N±0°.04×151°.18W±0°.07, h25^{km}±4^{km} Error ellipse: s-maj=6.2km s-min=3.8km az=135.0*
GCMT ***07*** *14:57:34.3±0.3, 58°.32N±0°.02×151°.42W±0°.03, h32^{km}±1^{km}, MW4.9/97, Moment Tensor Solution. s34,c37; s97,c134; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.06±.14; $M_{\theta\theta}$-2.38±.10; $M_{\phi\phi}$2.44±.10; $M_{r\theta}$1.20±.13; $M_{\theta\phi}$0.82±.10; $M_{\phi r}$0.42±.12; Best double couple: $M_0$2.83900×10^{16} NP1:ϕ_s326.00000°, δ65.00000°, λ-174.00000°. NP2: ϕ_s233.00000°, δ85.00000°, λ-25.00000°. Principal axes: T 2.7220, Plg13.0000°, Azm282.0000°; N 0.2330, Plg64.0000°, Azm42.0000°; P -2.9560, Plg22.0000°, Azm187.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 07 14:57:31.1±0.5**, 58°.33N**±0°.03×**151°.32W**±0°.03**, h31**^{km}±3^{km}**,**
h31^{km}**:pP-P, n911, σ1^{s}01**/889**, mb4.9**/168**, MS4.0**/70**,**
34C-20D, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SYI	Shuyak Island	0.63	297		Pb	14 57 44.3	+0.6
SYI				Sg	Sn	14 57 53.9	+1.1
SYI				IAML		14 57 55.0	
	comp=E,75µm,0.7s						
SYI				IAML		14 57 55.0	
	comp=N,51µm,0.6s						
Q20K	Shuyak Island	0.63	297	P	Pb	14 57 44.3	+0.6
	baz=112,SNR=1000						
Q20K				S	Sb	14 57 53.4	+1.1
	baz=112						
KDAK	Kodiak Island	0.86	231		Pb	14 57 47.9	+0.4
KDAK					Sb	14 57 59.4	+0.7
KDAK	Kodiak Island	0.86	231	IAML		14 58 00.5	
	comp=N,56µm,0.7s						
KDAK				IAML		14 58 01.7	
	comp=N,50µm,0.9s						
KDAK	Kodiak Island	0.86	231	Pn	Pn	14 57 47.7	+0.6
	comp=N,3µm,0.3s,baz=36,slow=9.4						
KDAK				Sn	Sb	14 57 58.8	0.0
	comp=N,9µm,0.3s,baz=190,slow=20,SNR=46						
KDAK	Kodiak Island	0.86	231	*d i*P	Pb	14 57 48.0	+0.4
KDAK	Kodiak Island	0.86	231	P	Pb	14 57 48.0	+0.4
	baz=48						
KDAK				S	Sb	14 57 59.5	+0.7
	baz=48						
CNPM	China Poot	1.21	2		Pb	14 57 52.8	-0.6
CNPM					Sb	14 58 10.7	+2.2
CNPM				IAML		14 58 10.8	
	comp=E,33µm,0.4s						
HOM	Homer	1.35	353		Pb	14 57 55.2	-0.5
HOM	Homer	1.35	353		Sb	14 58 12.8	+0.3
HOM	Homer	1.35	353	P	Pb	14 57 55.1	-0.6
	baz=172,SNR=1000						
HOM				Sb	Sb	14 58 14.6	+2.0
	baz=172						
Q19K	Cape Douglas,	1.36	297		Pn	14 57 55.0	+1.1
Q19K	Cape Douglas,	1.36	297		Sb	14 58 14.6	+1.7
Q19K	Cape Douglas,	1.36	297	P	Pn	14 57 54.9	+1.1
	baz=113,SNR=1000						
Q19K				Sb	Sb	14 58 15.0	+2.1
	baz=113						
BRSE	Bradley Lake S	1.45	12		Pn	14 57 55.6	+0.4
BRSE	Bradley Lake S	1.45	12	P	Pn	14 57 55.7	+0.6
	baz=192,SNR=1000						
BRSE				S	Sn	14 58 13.3	+0.2
	baz=192						
BRLK	Bradley Lake	1.46	9		Pn	14 57 55.9	+0.6
AU22	Augustine Moun	1.49	316		Pn	14 57 57.0	+1.4
AUCH	Augustine Cone	1.52	314		Pn	14 57 57.6	+1.5
OHAK	Old Harbor	1.53	224		Pn	14 57 56.5	+0.4
OHAK				IAML		14 58 31.1	
	comp=E,16µm,1.1s						
OHAK	Old Harbor	1.53	224	P	Pn	14 57 56.6	+0.4
OHAK	Old Harbor	1.53	224	P	Pn	14 57 56.5	+0.4
	baz=41,SNR=956						
OHAK				S	Sn	14 58 15.0	+0.1
	baz=41						
KAPH	Katmai Pasha	1.61	281		Pn	14 57 58.7	+1.3
P19K	Oil Pt	1.66	324		Pn	14 57 59.5	+1.5
P19K	Oil Pt	1.66	324	P	Pn	14 57 59.5	+1.5
	baz=141,SNR=1000						
P19K				Sb	Sb	14 58 24.1	+2.6
	baz=141						
KAHG	Katmai Hook Gl	1.71	277		Pn	14 58 00.0	+1.3
R18K	Karluk	1.83	247		Pn	14 58 01.4	+1.0
R18K				IAML		14 58 39.5	
	comp=E,19µm,0.9s						
R18K	Karluk	1.83	247	P	Pn	14 58 01.3	+0.9
	baz=63						
ILS	Iliamna Low So	1.87	332		Pn	14 58 02.1	+1.1
O20K	Slope Mountain	1.89	340		Pn	14 58 02.4	+1.3
O20K	Slope Mountain	1.89	340	P	Pn	14 58 02.5	+1.3
	baz=158,SNR=1000						
O20K				Sb	Sb	14 58 30.3	+2.3
	baz=158						
ILSW	Iliamna Southw	1.91	331		Pn	14 58 02.6	+1.1
ILSW				IAML		14 58 36.5	
	comp=N,16µm,0.7s						
ILSW				IAML		14 58 40.2	
	comp=E,11µm,0.7s						
KAHC	Katmai Hardscr	1.96	281		Pn	14 58 03.2	+0.9
Q18K	Katmai Hardscr	1.96	281	P	Pn	14 58 03.2	+1.0
	baz=96,SNR=944						
SEW	Seward	2.03	28		Pn	14 58 02.9	-0.1
SEW	Seward	2.03	28	P	Pn	14 58 02.9	-0.1
	baz=210,SNR=975						
SEW				S	Sn	14 58 26.0	-1.2
	baz=210						
ACHA	Angle Creek He	2.12	269		Pn	14 58 05.7	+1.3
ANCK	Angle Creek	2.21	268		Pn	14 58 06.7	+1.1
RED	Redoubt Volcan	2.23	341		Pn	14 58 06.5	+0.7
RED				IAML		14 58 43.3	
	comp=N,9µm,0.9s						
RED				IAML		14 58 46.5	
	comp=E,11µm,0.8s						
SLKM	Skilak Lake	2.26	14		Pn	14 58 06.6	+0.3
SLKM				IAML		14 58 54.8	
	comp=N,7µm,0.8s						
SLKM				IAML		14 58 59.6	
	comp=E,9µm,1.0s						
P18K	Big Mountain,	2.29	299		Pn	14 58 07.0	+0.3
P18K	Big Mountain,	2.29	299	P	Pn	14 58 07.1	+0.3
	baz=115,SNR=201						
RDWB	Redoubt West	2.30	341		Pn	14 58 07.6	+0.6
O22K	Cooper Landing	2.31	20		Pn	14 58 07.2	+0.3
O22K	Cooper Landing	2.31	20	P	Pn	14 58 07.2	+0.3
	baz=202,SNR=516						
SII	Sitkinak Islan	2.35	222		Pn	14 58 07.5	0.0
SII				IAML		14 58 58.9	
	comp=E,10µm,1.1s						
SII	Sitkinak Islan	2.35	222	P	Pn	14 58 07.8	+0.3
SII	Sitkinak Islan	2.35	222	P	Pn	14 58 07.6	0.0
	baz=39,SNR=61						
DFR	Drift River	2.38	344		Pn	14 58 08.4	+0.5
RDJH	Redoubt Jeurge	2.40	342		Pn	14 58 09.0	+0.8
CNTC	Contact Creek	2.41	270		Pn	14 58 09.4	+1.0
Q17K	Contact Creek	2.41	270	P	Pn	14 58 09.5	+1.1
	baz=85,SNR=528						
O19K	Port Alsworth	2.43	322		Pn	14 58 09.4	+0.9
O19K	Port Alsworth	2.43	322	P	Pn	14 58 09.4	+0.9
	baz=138,SNR=313						
CAPN	Captain Cook N	2.45	2		Pn	14 58 10.7	+1.9
CAPN	Captain Cook N	2.45	2	P	Pn	14 58 10.8	+1.9
	baz=182,SNR=229						
O18K	Koktuh Hills	2.52	309		Pn	14 58 10.4	+0.5
O18K				IAML		14 59 00.7	
	comp=E,8µm,0.7s						
O18K	Koktuh Hills	2.52	309	P	Pn	14 58 10.4	+0.5
	baz=125,SNR=240						
P23K	Montague Islan	2.62	49		Pn	14 58 10.8	-0.4
P23K				IAML		14 59 11.3	
	comp=N,5µm,1.4s						
P23K				IAML		14 59 17.1	
	comp=E,5µm,0.9s						
P23K	Montague Islan	2.62	49	P	Pn	14 58 10.8	-0.4
	baz=233,SNR=48						
P17K	Kvichak River	2.81	290		Pn	14 58 14.5	+0.8
P17K	Kvichak River	2.81	290	P	Pn	14 58 14.4	+0.7
	baz=105,SNR=458						
Q23K	Middleton Isla	2.81	65		Pn	14 58 13.6	-0.1
Q23K	Middleton Isla	2.81	65	P	Pn	14 58 13.4	-0.4
	baz=250,SNR=12						
Q16K	King Salmon	2.82	279		Pn	14 58 15.3	+1.4
Q16K	King Salmon	2.82	279	P	Pn	14 58 14.6	+0.7
	baz=94,SNR=84						
PLK1	Peulik 1	2.86	262		Pn	14 58 15.5	+1.1
FIS	Fire Island	2.88	11		Pn	14 58 16.0	+1.2
RC01	Rabbit Creek A	2.89	15		Pn	14 58 15.2	+0.4
RC01				IAML		14 59 06.7	
	comp=E,5µm,1.4s						
RC01				IAML		14 59 11.8	
	comp=N,4µm,0.6s						
RC01	Rabbit Creek A	2.89	15	P	Pn	14 58 15.3	+0.4
	baz=197,SNR=875						
RC01				S	Sn	14 58 48.0	-0.4
	baz=197						
N20K	Mount Spurr	2.92	352	P	Pn	14 58 15.7	+0.3
	baz=171,SNR=236						
SPCR	Spurr Chakacha	2.92	352		Pn	14 58 15.7	+0.3
SPCR	Spurr Chakacha	2.92	352	P	Pn	14 58 15.7	+0.3
	baz=171						
CKL	Chakachamna La	2.93	350		Pn	14 58 15.9	+0.4
SPCN	Chakachatna No	2.94	352		Pn	14 58 16.5	+0.9
PWL	Port Wells	2.96	30		Pn	14 58 16.0	+0.2
PWL				IAML		14 58 49.8	
	comp=E,6µm,0.6s						
PWL				IAML		14 59 12.7	
	comp=N,5µm,0.9s						
PWL	Port Wells	2.96	30	P	Pn	14 58 16.1	+0.2
	baz=213,SNR=1000						
PWL				S	Sn	14 58 48.5	-1.8
	baz=213						
N19K	Bonanza Creek	2.97	329		Pn	14 58 16.9	+0.9
N19K				IAML		14 59 07.7	
	comp=E,5µm,0.8s						
N19K				IAML		14 59 13.3	
	comp=N,4µm,1.1s						
N19K	Bonanza Creek	2.97	329	P	Pn	14 58 17.0	+1.0
	baz=145,SNR=286						
SUA	Susitna One	3.16	5		Pn	14 58 19.0	+0.2
SUA				IAML		14 59 16.2	
	comp=N,3µm,0.8s						
SUA				IAML		14 59 27.2	
	comp=E,4µm,0.8s						
SUA	Susitna One	3.16	5	P	Pn	14 58 18.9	+0.2
	baz=186,SNR=1000						
STLK	Strandline Lak	3.19	356		Pn	14 58 19.9	+0.8
HIN	Hinchinbrook I	3.23	48		Pn	14 58 19.4	-0.1
HIN				IAML		14 58 56.1	
	comp=E,5µm,0.8s						
HIN				IAML		14 58 56.4	
	comp=N,4µm,1.0s						
N18K	Kilae Creek	3.32	317		Pn	14 58 21.5	+0.8
N18K	Kilae Creek	3.32	317	IAML		14 59 22.4	
	comp=N,4µm,1.1s						
N18K				IAML		14 59 23.6	
	comp=E,4µm,0.9s						
N18K	Kilae Creek	3.32	317	P	Pn	14 58 21.3	+0.6
	baz=133,SNR=140						
O17K	Koliganek Bris	3.32	298	P	Pn	14 58 21.3	+0.6
	baz=113,SNR=105						
GLI	Glacier Island	3.34	38		Pn	14 58 20.6	-0.5
GLI	Glacier Island	3.34	38	P	Pn	14 58 20.6	-0.5
	baz=222,SNR=84						
KNK	Knik Glacier	3.42	24	IAML		14 59 26.6	
	comp=E,4µm,0.9s						
KNK				IAML		14 59 27.6	
	comp=N,3µm,0.8s						
KNK	Knik Glacier	3.42	24	P	Pn	14 58 22.2	+0.1
	baz=207,SNR=182						
R16K	Pilot Point	3.42	260		Pn	14 58 22.7	+0.6
R16K	Pilot Point	3.42	260	IAML		14 59 31.7	
	comp=E,3µm,1.1s						
R16K				IAML		15 00 16.9	
	comp=N,3µm,1.7s						
R16K	Pilot Point	3.42	260	P	Pn	14 58 23.3	+1.2
	baz=74						
CHIR	Chirikof Islan	3.44	225		Pn	14 58 21.9	-0.5
CHIR				IAML		14 59 38.3	
	comp=N,4µm,1.4s						
CHIR				IAML		14 59 46.0	
	comp=E,4µm,1.2s						
CHIR	Chirikof Islan	3.44	225	P	Pn	14 58 22.7	+0.3
CHIR	Chirikof Islan	3.44	225	P	Pn	14 58 21.9	-0.5
	baz=41						
PMR	Palmer	3.46	18		Pn	14 58 22.7	+0.1
PMR				IAML		14 59 24.2	
	comp=E,3µm,0.8s						
PMR	Palmer	3.46	18	P	Pn	14 58 22.7	+0.1
PMR	Palmer	3.46	18	P	Pn	14 58 22.7	+0.1
PMR	Palmer	3.46	18	P	Pn	14 58 22.7	+0.1
	baz=200,SNR=211						
M22K	Willow	3.49	9	P	Pn	14 58 23.4	+0.3
	baz=191,SNR=136						
P16K	Nushagak River	3.55	284	IAML		14 59 43.0	
	comp=E,4µm,0.9s						
P16K				IAML		14 59 47.1	
	comp=N,4µm,1.4s						
P16K	Nushagak River	3.55	284	P	Pn	14 58 25.3	+1.3
	baz=98,SNR=40						
EYAK	Cordova Ski Ar	3.62	50		Pn	14 58 24.4	-0.4
EYAK	Cordova Ski Ar	3.62	50	P	Pn	14 58 24.7	-0.1
EYAK	Cordova Ski Ar	3.62	50	P	Pn	14 58 24.4	-0.4
	baz=235,SNR=236						
SKT	Skwentna	3.67	358	IAML		14 59 23.4	
	comp=E,4µm,1.1s						
SKT	Skwentna	3.67	358	P	Pn	14 58 26.2	+0.6
	baz=178,SNR=500						
M20K	Styx River	3.68	347	IAML		14 59 25.5	
	comp=E,2µm,0.8s						
M20K	Styx River	3.68	347	P	Pn	14 58 26.4	+0.6
	baz=165,SNR=409						
N17K	Nushagak Hills	3.72	309	IAML		14 59 38.9	
	comp=N,3µm,1.0s						
N17K				IAML		14 59 43.6	
	comp=E,2µm,1.4s						
N17K	Nushagak Hills	3.72	309	P	Pn	14 58 26.9	+0.6
	baz=123,SNR=90						
O16K	Kokwok River B	3.73	293	P	Pn	14 58 27.1	+0.7
	baz=106,SNR=74						
SML	Sawmill	3.80	22	IAML		14 59 52.5	
	comp=N,3µm,0.8s						
SML	Sawmill	3.80	22	P	Pn	14 58 27.7	+0.2
	baz=205,SNR=369						
M18K	Stony River	3.90	326	P	Pn	14 58 29.4	+0.7
	baz=142,SNR=1000						
KAIM	Kayak Island	3.90	63		Pn	14 58 28.9	+0.1
KAIM				IAML		14 59 17.0	
	comp=N,3µm,0.9s						
KAIM				IAML		14 59 18.8	
	comp=E,2µm,0.5s						
KAIM	Kayak Island	3.90	63	P	Pn	14 58 28.9	+0.1
	baz=249,SNR=48						
KAIM				S	Sn	14 59 11.7	-1.8
	baz=249						
M19K	Big River Lodg	3.91	338		Pn	14 58 29.9	+1.1
M19K	Big River Lodg	3.91	338	IAML		14 59 38.5	
	comp=E,2µm,1.0s						
M19K	Big River Lodg	3.91	338	P	Pn	14 58 29.4	+0.6
	baz=155						
M23K	Glacier View	3.92	26	P	Pn	14 58 29.5	+0.4
	baz=209,SNR=534						
M23K				S	Sn	14 59 12.1	-1.8
	baz=209						
DIV	Divide	3.98	43	IAML		14 59 15.6	
	comp=N,2µm,0.6s						
RAGM	Ragged Mountai	3.98	56		Pn	14 58 29.8	-0.1
RAGM	Ragged Mountai	3.98	56	IAML		14 59 18.2	
	comp=E,2µm,0.5s						
RAGM				IAML		14 59 44.0	
	comp=N,3µm,0.6s						
SCM	Sheep Creek Mo	4.05	28	IAML		14 59 18.4	
	comp=N,3µm,0.6s						
SCM	Sheep Creek Mo	4.05	28	P	Pn	14 58 31.6	+0.8
	baz=212,SNR=1000						
SCM				S	Sn	14 59 15.2	-2.0
	baz=212						
GOAT	Goat Mountain	4.05	53		Pn	14 58 31.1	+0.1
CUT	Chulitna	4.13	7		Pn	14 58 32.9	+1.1
CUT	Chulitna	4.13	7	P	Pn	14 58 33.1	+1.2
	baz=188,SNR=35						
HMT	Hamilton	4.14	58	IAML		14 59 19.7	
	comp=N,2µm,0.4s						
KLU	Klutina	4.18	38	P	Pn	14 58 32.9	+0.2
	baz=223,SNR=1000						
KLU				S	Sn	14 59 17.6	-2.8
	baz=223						
L19K	White Mountain	4.25	337	IAML		14 59 50.3	
	comp=E,2µm,1.4s						
L19K				IAML		14 59 55.9	
	comp=N,2µm,1.0s						
L19K	White Mountain	4.25	337	P	Pn	14 58 34.2	+0.7
	baz=154,SNR=285						
SUCK	Suckling Hills	4.26	62		Pn	14 58 33.6	0.0
BMRM	Bremner River	4.32	49	IAML		14 59 22.4	
	comp=E,2µm,0.7s						
BMRM				IAML		14 59 22.6	
	comp=N,2µm,1.0s						
BMRM	Bremner River	4.32	49	P	Pn	14 58 34.6	+0.1
	baz=236,SNR=481						
BMRM				S	Sn	14 59 20.6	-3.2
	baz=236						
L20K	Farewell, AK	4.36	344	P	Pn	14 58 35.3	+0.3
	baz=162,SNR=62						
M17K	Holitna River	4.36	318	P	Pn	14 58 36.1	+1.0
	baz=132,SNR=203						
N16K	Nishlik Lake	4.37	303	P	Pn	14 58 36.2	+0.9
	baz=116,SNR=89						
BGLC	Bering Glacier	4.50	63	P	Pn	14 58 37.9	+0.9
	baz=250						
BGLC				S	Sn	14 59 26.8	-1.4
	baz=250						
O15K	Ungalikthiuk R	4.51	285	P	Pn	14 58 38.3	+1.2
	baz=97,SNR=119						
M24K	Tolsona, Glenn	4.58	32	P	Pn	14 58 39.3	+1.2
	baz=217						
PPLA	Purkeypile	4.61	355	IAML		15 00 00.5	
	comp=E,1µm,1.4s						
PPLA				IAML		15 00 08.4	
	comp=N,2µm,1.5s						
PPLA	Purkeypile	4.61	355	P	Pn	14 58 38.9	+0.3
	baz=174,SNR=73						
WAT6	Susitna Watana	4.62	21	P	Pn	14 58 39.1	+0.2
	baz=204,SNR=1000						
N25K	Chitina, Valde	4.71	43		Pn	14 58 39.7	-0.3
N25K	Chitina, Valde	4.71	43	P	Pn	14 58 40.0	0.0
	baz=229,SNR=200						
WAT1	Susitna Watana	4.72	16	P	Pn	14 58 40.5	+0.4
	baz=198						
M16K	Timber Creek	4.72	308		Pn	14 58 41.1	+1.1
M16K				IAML		15 00 05.9	
	comp=E,2µm,0.9s						
M16K				IAML		15 00 20.3	
	comp=N,1µm,1.6s						
M16K	Timber Creek	4.72	308	P	Pn	14 58 41.1	+1.1
	baz=121,SNR=89						
L18K	Granite Mounta	4.73	328	IAML		15 00 11.7	
	comp=E,1µm,1.6s						
L18K	Granite Mounta	4.73	328	P	Pn	14 58 40.7	+0.5
	baz=143,SNR=118						
CRQM	Cirque	4.83	56	IAML		14 59 35.7	
	comp=N,867nm,1.0s						
WAX	Waxell Ridge	4.83	60		Pn	14 58 41.4	-0.1
WAX				IAML		14 59 34.9	
	comp=E,1µm,0.3s						
CRQE	Cirque	4.84	56	P	Pn	14 58 42.2	+0.4
	baz=244,SNR=236						
N15K	Kwethluk River	4.87	296		Pn	14 58 43.5	+1.5
N15K				IAML		15 00 19.2	
	comp=N,2µm,0.8s						
N15K				IAML		15 00 23.7	
	comp=E,2µm,0.8s						
N15K	Kwethluk River	4.87	296	P	Pn	14 58 43.6	+1.5
	baz=108,SNR=144						
VNSS	Veniaminof 8	4.89	248		Pn	14 58 43.5	+1.0
S14K	Fog Glacier	4.91	249	P	Pn	14 58 43.7	+1.0
	baz=61,SNR=16						
VNFG	Fog Glacier, M	4.91	249		Pn	14 58 43.8	+1.1
VNFG	Fog Glacier, M	4.91	249		Pn	14 58 44.2	+1.4
VNFG				IAML		15 00 23.1	
	comp=N,2µm,1.1s						
VNFG				IAML		15 00 28.4	
	comp=E,2µm,1.1s						
TGL	Tana Glacier	4.96	57		Pn	14 58 43.5	+0.1
WASW	Wrangell South	5.08	42		Pn	14 58 45.2	0.0
HARP	HAARP	5.10	34		Pn	14 58 46.4	+1.1
HARP	HAARP	5.10	34	P	Pn	14 58 46.2	+0.9
	baz=220,SNR=59						
CAST	Castle Rocks	5.12	356		Pn	14 58 46.2	+0.7
CAST				IAML		15 00 15.6	
	comp=E,820nm,1.5s						
CAST	Castle Rocks	5.12	356	P	Pn	14 58 45.8	+0.2
	baz=175,SNR=78						
DHY	Denali Highway	5.14	20		Pn	14 58 46.9	+0.9
DHY				IAML		15 00 02.6	
	comp=N,886nm,0.8s						
DHY				IAML		15 00 17.8	
	comp=E,1µm,0.8s						
DHY	Denali Highway	5.14	20	P	Pn	14 58 46.4	+0.4

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      baz=204,SNR=622
MESA  MESA              5.16  65 Pn    Pn    14 58 46.7 +0.5
MESA                             IAML        14 59 47.5
      comp=N,845nm,0.7s
MESA                             IAML        14 59 47.5
      comp=E,823nm,0.7s
MESA  MESA              5.16  65 P     Pn    14 58 46.5 +0.4
      baz=254,SNR=16
L17K  Donlin            5.16 321 P     Pn    14 58 46.7 +0.6
      baz=134,SNR=133
TRF   Thorofare Moun    5.17   5 IAML        15 00 39.5
      comp=E,1µm,1.3s
TRF   Thorofare Moun    5.17   5 P     Pn    14 58 46.7 +0.4
      baz=186,SNR=115
MCARA McCarthy VSAT     5.18  50       Pn    14 58 46.5 +0.1
MCARA McCarthy VSAT     5.18  50 P     Pn    14 58 46.4 +0.1
      baz=238,SNR=40
WAZA  Wrangell Mount    5.19  41       Pn    14 58 46.4 -0.3
K20K  Telida            5.22 346       Pn    14 58 47.3 +0.3
K20K  Telida            5.22 346 IAML        15 00 20.6
      comp=N,936nm,1.0s
K20K                             IAML        15 00 21.0
      comp=E,835nm,1.6s
K20K  Telida            5.22 346 P     Pn    14 58 47.2 +0.3
      baz=164
RND   Reindeer          5.24  12 IAML        15 00 26.7
      comp=E,895nm,1.3s
RND                              IAML        15 00 29.4
      comp=N,919nm,1.0s
KTH   Kantishna Hill    5.25   2       Pn    14 58 48.0 +0.6
KTH                              IAML        15 00 22.0
      comp=E,1µm,0.9s
O14K  Tigyukauivet M    5.25 284 IAML        15 00 30.2
      comp=N,736nm,1.5s
O14K                             IAML        15 00 30.9
      comp=E,647nm,1.6s
O14K  Tigyukauivet M    5.25 284 P     Pn    14 58 48.2 +0.8
      baz=95,SNR=43
YAH   Yahtse            5.31  63       Pn    14 58 48.2 -0.1
YAH   Yahtse            5.31  63 IAML        14 59 50.4
      comp=E,848nm,0.6s
L16K  Owhat River       5.31 313 IAML        15 00 24.2
      comp=N,1µm,1.1s
L16K                             IAML        15 00 31.6
      comp=E,1µm,1.6s
L16K  Owhat River       5.31 313 P     Pn    14 58 48.8 +0.7
      baz=126,SNR=131
M15K  Kasigluk River    5.33 300 P     Pn    14 58 49.1 +0.8
      baz=112,SNR=31
PAX   Paxson            5.47  29 P     Pn    14 58 51.0 +0.5
      baz=215,SNR=259
MCK   McKinley          5.55  11       Pn    14 58 51.9 +0.5
MCK   McKinley          5.55  11 P     Pn    14 58 51.9 +0.5
MCK   McKinley          5.55  11 P     Pn    14 58 51.8 +0.5
      baz=193,SNR=109
N14K  Kuskokwak Cree    5.57 291 P     Pn    14 58 52.8 +1.2
      baz=102,SNR=93
K17K  Iditarod          5.59 325 P     Pn    14 58 52.7 +0.8
      baz=138,SNR=222
CHUM  Lake Minchumin    5.60 355       Pn    14 58 53.2 +1.1
CHUM  Lake Minchumin    5.60 355 P     Pn    14 58 52.2 +0.2
      baz=175,SNR=79
CTG   Chitna Glacier    5.71  58 P     Pn    14 58 54.2 +0.4
      baz=247,SNR=104
CTGM  Chitina Glacie    5.71  58       Pn    14 58 54.2 +0.4
CHNA  Chernabura Isl    5.76 236 P     Pn    14 58 54.3 +0.1
CHNA  Chernabura Isl    5.76 236 P     Pn    14 58 53.9 -0.3
      baz=49,SNR=15
CNBA  Chernabura Isl    5.76 236       Pn    14 58 54.0 -0.3
J18K  Innoko River      5.79 335 P     Pn    14 58 55.1 +0.5
      baz=150,SNR=166
BPAW  Bear Paw Mtn.     5.80   1 P     Pn    14 58 54.7 -0.1
      baz=182,SNR=105
M26K  Nabesna, AK       5.81  42 P     Pn    14 58 55.0  0.0
      baz=229,SNR=57
SDPT  Sand Point        5.84 243       Pn    14 58 55.8 +0.4
SDPT  Sand Point        5.84 243 P     Pn    14 58 55.6 +0.2
SDPT  Sand Point        5.84 243 P     Pn    14 58 55.5 +0.2
      baz=55,SNR=6.1
M14K  Bethel            5.93 299 P     Pn    14 58 57.6 +1.0
      baz=109,SNR=16
MENT  Mentasta          5.95  36       Pn    14 58 57.1 +0.2
MENT  Mentasta          5.95  36 P     Pn    14 58 57.5 +0.6
PINM  Pinnacle          5.96  68 P     Pn    14 58 57.4 +0.3
      baz=258,SNR=49
J20K  Nowinta River     6.03 348 P     Pn    14 58 57.7 -0.3
      baz=166,SNR=111
J19K  Poorman           6.05 342 P     Pn    14 58 58.7 +0.4
      baz=158,SNR=132
L15K  Ungalak Mounta    6.11 308 P     Pn    14 58 59.7 +0.7
      baz=118,SNR=72
K24K  Donnelly Dome     6.12  24       Pn    14 59 00.1 +0.8
K24K  Donnelly Dome     6.12  24 P     Pn    14 58 59.8 +0.5
      baz=209,SNR=213
L26K  Log Cabin Wild    6.13  36       Pn    14 58 58.9 -0.4
L26K  Log Cabin Wild    6.13  36 P     Pn    14 59 00.0 +0.7
      baz=224,SNR=65
O28M  Mount Upton       6.17  62 P     Pn    14 59 00.6 +0.4
      baz=252,SNR=216
M27K  Edge Creek, AK    6.19  45 P     Pn    14 59 00.5 +0.2
      baz=234,SNR=36
BCPM  Bancas Point      6.23  70       Pn    14 59 00.8 +0.1
RIDG  Independent Ri    6.28  27 P     Pn    14 59 01.5 +0.1
      baz=213,SNR=121
PNL   Peninsula         6.31  73 P     Pn    14 59 02.0 +0.2
PNL   Peninsula         6.31  73 P     Pn    14 59 02.0 +0.2
      baz=263,SNR=155
J17K  VABM Dome         6.34 327 P     Pn    14 59 02.4 +0.2
      baz=140,SNR=67
NEA2  Nenana            6.38   9 P     Pn    14 59 02.0 -0.8
      baz=191,SNR=164
PS1A  Pavlof South-1    6.41 247       Pn    14 59 03.3 +0.1
S12K  Black Hills       6.43 250       Pn    14 59 04.2 +0.7
S12K  Black Hills       6.43 250 P     Pn    14 59 04.2 +0.7
      baz=61
K15K  Wolf Creek Mou    6.44 312 P     Pn    14 59 04.4 +0.7
      baz=123,SNR=37
YUK3  Moose Creek       6.44  53       Pn    14 59 04.2 +0.4
YUK3  Moose Creek       6.44  53 P     Pn    14 59 04.7 +0.8
      baz=243,SNR=112
HDA   Harding Lake      6.46  17 P     Pn    14 59 04.1 +0.3
      baz=201,SNR=294
L14K  Kuka Creek        6.47 303 P     Pn    14 59 05.1 +1.0
      baz=112,SNR=48
M13K  Dall Lake         6.50 294 P     Pn    14 59 05.3 +0.9
      baz=103,SNR=23
PS4A  Pavlof South-4    6.51 247       Pn    14 59 05.4 +0.9
YUK8  Steele Glacier    6.54  58 P     Pn    14 59 05.5 +0.2
      baz=248,SNR=138
HAG   Hague Volcano     6.54 247       Pn    14 59 05.5 +0.4
HAG   Hague Volcano     6.54 247 P     Pn    14 59 05.5 +0.4
BVCY  Beaver Creek      6.61  47       Pn    14 59 06.0  0.0
BVCY  Beaver Creek      6.61  47 P     Pn    14 59 06.3 +0.3
      baz=237,SNR=27
L27K  Beaver Creek,     6.65  40 P     Pn    14 59 06.3 -0.2
      baz=229,SNR=59
I20K  Naaghedeneel      6.67 348       Pn    14 59 07.0 +0.3
I20K  Naaghedeneel      6.67 348 P     Pn    14 59 06.4 -0.2
      baz=165,SNR=15
BCAR  Beaver Creek A    6.67  41       Pn    14 59 06.5 -0.3
SCRK  Sand Creek        6.69  29 P     Pn    14 59 06.3 -0.8
      baz=216,SNR=43
J16K  Anvik River       6.73 322 P     Pn    14 59 07.8 +0.2
      baz=133,SNR=68
MLY   Manley            6.74   2 P     Pn    14 59 07.0 -0.7
      baz=183,SNR=95
COLA  College           6.78  13       Pn    14 59 07.8 -0.4
COLA  College           6.78  13 P     Pn    14 59 08.7 +0.5
COLA  College           6.78  13diP    Pn    14 59 07.5 -0.7
COLA  College           6.78  13 P     Pn    14 59 08.3 +0.1
      baz=196
ILAR  Eielson Array     6.80  16 Pn    Pn    14 59 07.9 -0.7
      comp=E,16nm,0.3s,baz=200,slow=14,SNR=326
ILAR                             Sn    Sn    15 00 22.0 -2.9
      comp=E,31nm,0.3s,baz=224,slow=7.4,SNR=8.1
ILAR                             LR    LR    15 02 04.3
      comp=E,684nm,19.0s,baz=194,slow=41
O29M  Mount Kennedy     6.82  68       Pn    14 59 09.8 +0.9
O29M  Mount Kennedy     6.82  68 P     Pn    14 59 08.3 -0.6
      baz=259,SNR=265
I21K  Tanana            6.89 358       Pn    14 59 09.9 +0.2
I21K  Tanana            6.89 358 P     Pn    14 59 09.1 -0.6
      baz=177
I23K  Minto, Yukon-K    6.91   7       Pn    14 59 10.2 +0.2
I23K  Minto, Yukon-K    6.91   7 P     Pn    14 59 09.1 -1.0
      baz=189,SNR=238
J25K  Salcha River,     6.92  22 P     Pn    14 59 10.2 -0.1
      baz=207,SNR=161
GCSA  Galena City Sc    6.97 340 P     Pn    14 59 10.8  0.0
      baz=155,SNR=25
POKR  Poker Plat Res    7.06  13 P     Pn    14 59 11.8 -0.3
      baz=197,SNR=167
YUK4  Talbot Arm        7.07  59 P     Pn    14 59 13.4 +1.0
      baz=250,SNR=63
YUK6  Outpost Mounta    7.07  63 P     Pn    14 59 12.8 +0.3
      baz=254,SNR=27
P29M  Windy Craggy      7.14  74       Pn    14 59 13.1 -0.2
P29M  Windy Craggy      7.14  74 P     Pn    14 59 13.4 +0.1
      baz=266,SNR=94
I17K  Unalakleet        7.19 325 P     Pn    14 59 14.5 +0.6
      baz=136,SNR=16
J26L  Joseph Creek      7.22  28 P     Pn    14 59 13.9 -0.5
      baz=215,SNR=152
K27K  Chicken           7.25  34       Pn    14 59 15.0 +0.2
H20K  Anotleneega Mo    7.38 348 P     Pn    14 59 16.5 -0.1
      baz=165,SNR=19
H21K  Melozitna Rive    7.39 355 P     Pn    14 59 16.5 -0.1
      baz=174,SNR=198
HYT   Haines Junctio    7.45  65 P     Pn    14 59 17.1 -0.4
      baz=257,SNR=10
J14K  Nanvaranak Lak    7.48 311 P     Pn    14 59 18.4 +0.6
      baz=120,SNR=16
H23K  Yukon River       7.57   6 P     Pn    14 59 18.4 -0.8
      baz=187,SNR=102
K13K  Kusilvak Mount    7.57 304       Pn    14 59 20.3 +1.2
K13K  Kusilvak Mount    7.57 304 P     Pn    14 59 18.9 -0.2
      baz=112,SNR=20
P30M  Million Dollar    7.58  70       Pn    14 59 18.6 -0.7
P30M  Million Dollar    7.58  70 P     Pn    14 59 19.2 -0.2
      baz=263
M29M  Somme Creek       7.59  52       Pn    14 59 19.9 +0.5
M29M  Somme Creek       7.59  52 P     Pn    14 59 19.9 +0.5
      baz=243,SNR=125
H22K  Ishtalitna Cre    7.60 360 P     Pn    14 59 19.0 -0.5
      baz=180,SNR=67
H18K  Honhosa River     7.62 337       Pn    14 59 20.6 +0.9
H18K  Honhosa River     7.62 337 P     Pn    14 59 20.1 +0.4
      baz=151
H19K  Roundabout Mou    7.62 344 P     Pn    14 59 19.1 -0.6
      baz=159,SNR=18
H24K  Noodor Dome       7.71  11 P     Pn    14 59 20.4 -0.7
      baz=194,SNR=48
PRP   Porcupine Dome    7.71  18 P     Pn    14 59 20.9 -0.3
      baz=204,SNR=132
ISNN  Isanotski Nort    7.72 248       Pn    14 59 22.4 +1.3
ISLZ  Isanotski Laza    7.74 248       Pn    14 59 21.8 +0.3
IMAR  Indian Mountai    7.77 353       Pn    14 59 20.5 -1.3
H17K  Granite Mounta    7.79 332 P     Pn    14 59 22.3 +0.2
      baz=144,SNR=40
N30M  Aishikik Lake     7.81  60       Pn    14 59 22.7 +0.2
N30M  Aishikik Lake     7.81  60 P     Pn    14 59 23.0 +0.5
      baz=253,SNR=27
PLBC  Pleasant Camp     7.83  75       Pn    14 59 23.3 +0.6
PLBC  Pleasant Camp     7.83  75 P     Pn    14 59 23.4 +0.7
      baz=268,SNR=258
M11K  Mekoryuk          7.88 291 P     Pn    14 59 23.4 +0.2
      baz=98
SSBA  Shishaldin        7.92 249       Pn    14 59 24.1 +0.2
I26K  Coal Creek Min    7.99  25 P     Pn    14 59 24.4 -0.5
      baz=213,SNR=55
S31K  Pelican           7.99  86       Pn    14 59 24.0 -0.9
S31K  Pelican           7.99  86 P     Pn    14 59 24.1 -0.8
      baz=279,SNR=68
L29M  L29M              8.04  48 P     Pn    14 59 25.8 +0.2
      baz=240,SNR=34
O30N  Mendenhall        8.12  66       Pn    14 59 26.3 -0.3
O30N  Mendenhall        8.12  66 P     Pn    14 59 26.8 +0.2
      baz=260,SNR=16
DAWY  Dawson            8.13  40       Pn    14 59 27.2 +0.3
DAWY  Dawson            8.13  40 P     Pn    14 59 26.7 -0.1
      baz=231,SNR=26
G21K  Allakaket         8.28 354       Pn    14 59 29.8 +1.0
G21K  Allakaket         8.28 354 P     Pn    14 59 28.2 -0.6
      baz=172
G19K  Purcell Mounta    8.29 344 P     Pn    14 59 28.9  0.0
      baz=158,SNR=35
WEBT  Westdahl Beart    8.32 249       Pn    14 59 30.3 +0.9
G18K  Tagagawik         8.33 339       Pn    14 59 30.1 +0.6
G18K  Tagagawik         8.33 339 P     Pn    14 59 29.7 +0.1
      baz=152,SNR=25
SKAG  Skagway           8.36  75       Pn    14 59 30.4 +0.5
SKAG  Skagway           8.36  75 P     Pn    14 59 31.3 +1.4
SKAG  Skagway           8.36  75 P     Pn    14 59 30.4 +0.5
      baz=270,SNR=101
H25L  Birch Creek       8.37  15       Pn    14 59 30.5 +0.5
H25L  Birch Creek       8.37  15 P     Pn    14 59 30.1 +0.1
      baz=200,SNR=136
N31M  Braeburn, Yuko    8.42  61       Pn    14 59 30.2 -0.6
N31M  Braeburn, Yuko    8.42  61 P     Pn    14 59 31.2 +0.4
      baz=255,SNR=14
G17K  Kiwalik Mounta    8.43 333 P     Pn    14 59 30.8 -0.1
      baz=144,SNR=9.9
G23K  Bananza Creek     8.44   4 P     Pn    14 59 30.1 -0.9
      baz=185,SNR=234
G24K  Hadweenzic Riv    8.59  10       Pn    14 59 33.0  0.0
G24K  Hadweenzic Riv    8.59  10 P     Pn    14 59 32.5 -0.6
      baz=194,SNR=70
I27K  Kandik River      8.60  28       Pn    14 59 33.5 +0.2
I27K  Kandik River      8.60  28 P     Pn    14 59 33.1 -0.2
      baz=217,SNR=22
G22K  Bettles           8.63 360 P     Pn    14 59 33.2 -0.3
      baz=179,SNR=32
BESE  Bessie Mountai    8.64  81       Pn    14 59 34.6 +0.8
SIT   Sitka             8.66  92       Pn    14 59 32.7 -1.4
SIT   Sitka             8.66  92 P     Pn    14 59 32.7 -1.4
SIT   Sitka             8.66  92 P     Pn    14 59 32.7 -1.4
      baz=286
K29M  Barlow Dome       8.67  45       Pn    14 59 34.1 -0.1
K29M  Barlow Dome       8.67  45 P     Pn    14 59 33.9 -0.3
      baz=237,SNR=22
WHY   Whitehorse        8.68  67 P     Pn    14 59 34.7 +0.3
      baz=262,SNR=96
FYU   Fort Yukon        8.73  16       Pn    14 59 35.0  0.0
J29N  Klondike Camp     8.78  40 P     Pn    14 59 36.5 +0.8
      baz=232
G16K  Koyuk River       8.79 328       Pn    14 59 36.2 +0.5
G16K  Koyuk River       8.79 328 P     Pn    14 59 35.9 +0.2
      baz=138,SNR=5.4
G25K  Bearman Lake      8.80  14 P     Pn    14 59 35.4 -0.6
      baz=198,SNR=37
R32K  Eaglecrest        8.85  83 P     Pn    14 59 36.5 -0.2
      baz=278,SNR=28
JIS   Juneau Island     8.92  83       Pn    14 59 36.8 -0.8
JIS   Juneau Island     8.92  83 P     Pn    14 59 38.0 +0.4
I28M  Miner Creek       8.93  32       Pn    14 59 37.9 +0.1
I28M  Miner Creek       8.93  32 P     Pn    14 59 37.6 -0.1
      baz=222,SNR=126
COLD  Coldfoot          8.95   3       Pn    14 59 37.9 -0.1
COLD  Coldfoot          8.95   3 P     Pn    14 59 37.7 -0.3
      baz=184,SNR=99
S32K  Killisnoo         8.96  88       Pn    14 59 37.9 -0.3
S32K  Killisnoo         8.96  88 P     Pn    14 59 37.7 -0.4
      baz=283,SNR=18
F20K  Avaraart Lake     8.98 349 P     Pn    14 59 38.3 -0.1
      baz=165,SNR=22
F21K  Alatna River      8.98 355       Pn    14 59 38.2 -0.3
F21K  Alatna River      8.98 355 P     Pn    14 59 38.2 -0.3
      baz=173,SNR=59
G15K  Niukluk           9.00 323       Pn    14 59 39.7 +1.1
G15K  Niukluk           9.00 323 P     Pn    14 59 39.5 +0.8
      baz=132,SNR=24
F19K  Shaleruckik Mo    9.04 344 P     Pn    14 59 39.0 -0.1
      baz=158,SNR=25
AHB   Akutan Harbor     9.11 249       Pn    14 59 40.6 +0.4
H27K  Steamboat Moun    9.14  26       Pn    14 59 40.4 -0.3
H27K  Steamboat Moun    9.14  26 P     Pn    14 59 40.2 -0.4
      baz=214,SNR=43
F18K  Selawik           9.15 339 P     Pn    14 59 40.9 +0.3
      baz=151
AKBBA Akutan Broad B    9.17 249       Pn    14 59 41.8 +0.7
ANM   Nome              9.17 319       Pn    14 59 41.4 +0.4
ANM   Nome              9.17 319 P     Pn    14 59 41.4 +0.4
ANM   Nome              9.17 319 P     Pn    14 59 41.4 +0.4
      baz=126,SNR=7.0
P32M  Atlin             9.18  75 P     Pn    14 59 41.1 -0.2
      baz=270,SNR=47
AKMO  Akutan Morgan     9.21 249       Pn    14 59 41.6  0.0
F22K  John River        9.23 358       Pn    14 59 42.5 +0.7
F22K  John River        9.23 358 P     Pn    14 59 41.7  0.0
      baz=177
M31M  Drury Creek, Y    9.26  58 P     Pn    14 59 42.3 +0.1
      baz=253,SNR=11
G26K  Porcupine Rive    9.32  19 P     Pn    14 59 42.8 -0.2
      baz=205,SNR=31
F17K  Baldwin Pennin    9.34 335       Pn    14 59 43.3  0.0
F17K  Baldwin Pennin    9.34 335 P     Pn    14 59 42.8 -0.5
      baz=146,SNR=9.3
I29M  Ogilvie Camp,     9.34  36 P     Pn    14 59 43.7 +0.3
      baz=227,SNR=141
F24K  Squaw Lake        9.36   8 P     Pn    14 59 43.0 -0.6
      baz=191,SNR=18
J30M  Hart River        9.51  43       Pn    14 59 46.1 +0.3
J30M  Hart River        9.51  43 P     Pn    14 59 46.0 +0.3
      baz=236,SNR=42
E19K  Redstone River    9.55 346       Pn    14 59 47.0 +0.8
UNV   Unalaska Valle    9.59 249       Pn    14 59 47.0 +0.2
UNV   Unalaska Valle    9.59 249 P     Pn    14 59 46.5 -0.3
      baz=56
G27K  Doyon Strip       9.60  24 P     Pn    14 59 46.4 -0.4
      baz=212,SNR=66
N32M  Quiet Lake        9.63  65       Pn    14 59 46.6 -0.7
N32M  Quiet Lake        9.63  65 P     Pn    14 59 47.6 +0.3
      baz=261
BMAR  Burnt Mountain    9.63  16       Pn    14 59 46.6 -0.8
F25K  Christian Rive    9.65  13 P     Pn    14 59 47.0 -0.6
      baz=198,SNR=34
P33M  Teslin, Yukon     9.65  71       Pn    14 59 46.5 -1.2
P33M  Teslin, Yukon     9.65  71 P     Pn    14 59 47.1 -0.7
      baz=267,SNR=14
F15K  North Star Dit    9.68 325       Pn    14 59 48.8 +0.8
F15K  North Star Dit    9.68 325 P     Pn    14 59 48.3 +0.4
      baz=134,SNR=12
FARO  Faro, Yukon       9.73  59 P     Pn    14 59 48.9 +0.1
      baz=255,SNR=15
E23K  Chandalar         9.80   4       Pn    14 59 50.1 +0.4
E23K  Chandalar         9.80   4 P     Pn    14 59 49.3 -0.4
      baz=185,SNR=34
MGOD  Makushin Gods     9.80 249       Pn    14 59 50.1 +0.3
E22K  Anaktuvuk Pass    9.85 359       Pn    14 59 50.8 +0.5
E22K  Anaktuvuk Pass    9.85 359 P     Pn    14 59 50.6 +0.3
      baz=178,SNR=13
E24K  Your Creek        9.87   6 P     Pn    14 59 49.9 -0.7
      baz=189,SNR=26
I30M  Mount Dempster    9.87  39 P     Pn    14 59 51.1 +0.3
      baz=233,SNR=24
H29M  Whitestone        9.93  32       Pn    14 59 51.1 -0.4
H29M  Whitestone        9.93  32 P     Pn    14 59 50.8 -0.7
      baz=223
F26K  Sheenjek River    9.94  16       Pn    14 59 50.8 -0.8
F26K  Sheenjek River    9.94  16 P     Pn    14 59 51.0 -0.6
      baz=202,SNR=86
Q32M  Nakina River      9.95  78       Pn    14 59 51.8 -0.1
Q32M  Nakina River      9.95  78 P     Pn    14 59 51.8 -0.1
      baz=275,SNR=40
E17K  Hotham Inlet     10.01 336 P     Pn    14 59 53.3 +0.9
      baz=146,SNR=34
E18K  Tukpahlearik C   10.05 339 P     Pn    14 59 53.6 +0.6
      baz=151
F14K  Arctic Creek     10.05 322 P     Pn    14 59 53.0  0.0
      baz=128,SNR=6.2
U33K  Whale Pass       10.11  95       Pn    14 59 52.2 -1.7
U33K  Whale Pass       10.11  95 P     Pn    14 59 52.5 -1.4
      baz=290,SNR=5.1
E25K  Arctic Village   10.16  12       Pn    14 59 54.0 -0.6
E25K  Arctic Village   10.16  12 P     Pn    14 59 53.7 -0.9
      baz=198,SNR=18
E20K  Nigu River       10.20 350 P     Pn    14 59 55.2  0.0
      baz=165
E21K  Killik River     10.22 354 P     Pn    14 59 55.2 -0.3
      baz=172
CRAG  Craig            10.35  98       Pn    14 59 55.7 -1.5
CRAG  Craig            10.35  98 P     Pn    14 59 56.3 -0.9
      baz=294
TOLK  Toolik Lake Re   10.38   4 P     Pn    14 59 57.3 -0.3
      baz=185,SNR=17
WRAK  Wrangell Islan   10.42  92       Pn    14 59 57.8 -0.3
WRAK  Wrangell Islan   10.42  92 P     Pn    14 59 57.4 -0.7
      baz=289
EPYK  Eagle Plains     10.51  34 P     Pn    14 59 58.9 -0.5
      baz=227,SNR=9.9
G29M  Pine Creek       10.54  30 P     Pn    15 00 00.3 +0.6
      baz=222,SNR=10
R33M  Jennings River   10.59  76       Pn    15 00 00.6  0.0
R33M  Jennings River   10.59  76 P     Pn    15 00 00.5  0.0
      baz=273,SNR=66
D22K  Ayikyak River    10.61 357       Pn    15 00 01.8 +1.1
D22K  Ayikyak River    10.61 357 P     Pn    15 00 01.1 +0.4
      baz=176,SNR=25
TNA   Tin City         10.63 320       Pn    15 00 03.3 +2.3
TNA   Tin City         10.63 320 P     Pn    15 00 00.7 -0.3
      baz=125
D19K  Kuna River       10.64 346 P     Pn    15 00 00.9 -0.2
      baz=160
F28M  Old Crow         10.65  24 P     Pn    15 00 00.9 -0.4
      baz=215,SNR=11
S34M  Telegraph Cree   10.68  84 P     Pn    15 00 02.0 +0.2
      baz=281,SNR=13
D20K  Etivluk River    10.69 350 P     Pn    15 00 01.9 +0.2
      baz=165
D23K  Nanushuk River   10.69   1 P     Pn    15 00 01.3 -0.5
      baz=182,SNR=25
MMPY  Sheldon Lake,    10.77  58       Pn    15 00 03.5 +0.5
MMPY  Sheldon Lake,    10.77  58 P     Pn    15 00 03.0  0.0
      baz=256,SNR=11
D17K  Noatak River     10.79 335 P     Pn    15 00 03.8 +0.7
      baz=145,SNR=8.3
E27K  Coleen River     10.80  20 P     Pn    15 00 03.0 -0.4
      baz=208,SNR=10
H31M  Peel River       10.90  40       Pn    15 00 06.4 +1.7
H31M  Peel River       10.90  40 P     Pn    15 00 05.1 +0.3
      baz=235,SNR=10
D24K  Happy Valley     10.93   5 P     Pn    15 00 05.2 +0.2
      baz=187,SNR=13
C21K  Knifeblade Rid   10.98 353 P     Pn    15 00 05.4 -0.3
      baz=170,SNR=9.7
RDOG  Red Dog Mine     11.05 337 P     Pn    15 00 07.5 +0.8
      baz=146
G30M  tAoh Zraii Nji   11.08  32 P     Pn    15 00 06.9 -0.2
      baz=226,SNR=13
DLBC  Dease Lake       11.17  80       Pn    15 00 09.5 +1.1
DLBC  Dease Lake       11.17  80 Pn    Pn    15 00 09.8 +1.3
      comp=E,3.6nm,0.3s,baz=276,slow=8.5,SNR=40
DLBC                             LR    LR    15 04 37.8
      comp=E,551nm,18.9s,baz=292,slow=38
      comp=E,24nm,0.7s
DLBC  Dease Lake       11.17  80 P     Pn    15 00 09.0 +0.5
      baz=279,SNR=42
V35K  Ketchikan        11.20  97 P     Pn    15 00 08.6 -0.1
      baz=294
C18K  Utukok River     11.24 341       Pn    15 00 11.2 +1.9
C18K  Utukok River     11.24 341 P     Pn    15 00 08.9 -0.4
      baz=152,SNR=14
D25K  Kavik River      11.25   9       Pn    15 00 09.8 +0.4
D25K  Kavik River      11.25   9 P     Pn    15 00 08.8 -0.6
      baz=194,SNR=11
NIKH  Nikolski High    11.25 249 P     Pn    15 00 08.8 -0.7
      baz=54
GAMB  Gambell          11.26 308 P     Pn    15 00 09.6 +0.2
      baz=110
T35M  Bob Quinn        11.36  88 P     Pn    15 00 11.3 +0.3
      baz=286,SNR=34
C19K  Lookout Ridge    11.41 345 P     Pn    15 00 11.1 -0.5
      baz=157
B21K  Ikpikpuk River   11.43 354 P     Pn    15 00 11.0 -0.9
      baz=171
C17K  DeLong Mountai   11.46 338 P     Pn    15 00 11.9 -0.3
      baz=147
C24K  Franklin Bluff   11.50   5 P     Pn    15 00 12.6 -0.2
      baz=187
E28M  Babbage River    11.55  22 P     Pn    15 00 13.1 -0.5
      baz=213
C23K  Itkillik River   11.56   1 P     Pn    15 00 13.2 -0.4
      baz=182
G31M  Satah River      11.61  35 P     Pn    15 00 14.2 -0.1
      baz=230,SNR=19
F30M  Barrier River    11.65  31 P     Pn    15 00 14.7 -0.2
      baz=224
E29M  Blow River       11.72  25 P     Pn    15 00 15.5 -0.3
      baz=217
C16K  Lisburne Hills   11.77 334       Pn    15 00 18.9 +2.4
C16K  Lisburne Hills   11.77 334 P     Pn    15 00 16.8 +0.3
      baz=141
C27K  Jago River       11.81  13 P     Pn    15 00 16.5 -0.6
      baz=200
D27M  Malcolm River    11.85  18 P     Pn    15 00 17.3 -0.4
      baz=208
C26K  Camden Bay       11.96  11 P     Pn    15 00 19.8 +0.8
      baz=196
B18K  Kokolik River    11.98 342 P     Pn    15 00 19.8 +0.4
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       baz=152
B20K   Meade River      11.99 350    P      Pn     15 00 18.5  -1.0
       baz=165,SNR=8.0
B22K   Teshekpuk Lake   12.10 357    P      Pn     15 00 19.6  -1.4
       baz=175
F31M   Tsiigehtchic     12.11  34    P      Pn     15 00 20.3  -0.8
       baz=230
D28M   Stokes Point     12.32  21    P      Pn     15 00 23.9  -0.1
       baz=213
INK    Inuvik           12.75  31           Pn     15 00 30.5  +0.7
INK    Inuvik           12.75  31    Pn     Pn     15 00 29.9  +0.1
       comp=E,1.0nm,0.3s,baz=264,slow=16,SNR=10
INK                                  Sn     Sn     15 02 55.2  +4.9
       baz=278,slow=5.3
INK                                  LR     LR     15 05 58.4
       comp=E,466nm,18.0s,baz=218,slow=40
       comp=E,12nm,1.0s
INK    Inuvik           12.75  31    P      Pn     15 00 30.5  +0.7
INK    Inuvik           12.75  31    P      Pn     15 00 28.9  -0.9
       baz=227,SNR=6.4
A22K   Sinclair Lake    12.82 355    P      Pn     15 00 29.9  -0.9
       baz=171
BEAVL  Fort Liard       13.52  71    P      Pn     15 00 41.5  +1.0
       baz=274,SNR=7.3
TOAD   Toad River Com   13.59  77    P      Pn     15 00 43.0  +1.6
       baz=279,SNR=12
KOTAN  Kotaneelee Air   14.04  71    P      Pn     15 00 48.2  +0.7
       baz=275,SNR=6.4
BBB    Bella Bella      14.55 105    Pn     P      15 00 58.8  -1.8
       comp=E,0.3nm,0.3s,baz=305,slow=10,SNR=4.4
BBB                                  LR     LR     15 05 41.7
       comp=E,591nm,18.7s,baz=310,slow=34
       comp=E,13nm,1.0s
C36M   Paulatuk         16.13  36    P      Pn     15 01 12.8  -2.3
       baz=240,SNR=24
A36M   Sachs Harbour    17.30  27           Pn     15 01 29.2  -0.5
A36M                                 IAmb   IAmb   15 01 34.1
       comp=Z,79nm,0.8s
A36M   Sachs Harbour    17.30  27    P      Pn     15 01 29.5  -0.3
       baz=231,SNR=23
OZB    Mount Ozzard     17.85 110           Pn     15 01 35.5  -1.3
OZB                                  IAmb   IAmb   15 01 41.5
       comp=Z,67nm,1.1s
YKAW3  Yellowknife Wh   18.42  61    P      Pn     15 01 44.4  +0.8
YKAW3                                IAmb   IAmb   15 01 55.1
       comp=Z,29nm,0.7s
YKA    Yellowknife Ar   18.43  61    P      Pn     15 01 43.8  +0.1
YKA    Yellowknife Ar   18.43  61    P      Pn     15 01 44.8  +1.1
       comp=Z,0.7nm,0.3s,baz=275,slow=12,SNR=39
YKA                                  LR     LR     15 09 54.2
       comp=Z,330nm,20.4s,baz=240,slow=40
       comp=Z,9.7nm,0.8s
YKA    Yellowknife Ar   18.43  61  i P      Pn     15 01 44.7  +1.0
YKA                                  pmax   pmax
       comp=Z,10.0nm,0.8s
YKAW1  Yellowknife Wh   18.48  61    P      Pn     15 01 44.5  +0.2
YKAW1                                IAmb   IAmb   15 01 55.8
       comp=Z,27nm,0.7s
SHEM   Shemya Is, Ala   20.20 269    P      P      15 02 01.7  -1.1
SHEM   Shemya Is, Ala   20.20 269    P      P      15 02 02.4  -0.4
       comp=Z,67nm,0.9s,baz=84,slow=9.2,SNR=2.4
       comp=Z,67nm,0.9s
SMY    Shemya           20.20 269    P      P      15 02 01.6  -1.2
SMY    Shemya           20.20 269    P      P      15 02 01.6  -1.2
SMY                                  pmax   pmax
       comp=Z,185nm,1.2s
BILL   Bilibino         20.99 315    P      P      15 02 10.9  -0.4
BILL                                 IAmb   IAmb   15 02 14.7
       comp=Z,46nm,1.1s
BILL   Bilibino         20.99 315  i P      P      15 02 10.6  -0.8
BILL                                 pmax   pmax
       comp=Z,51nm,1.1s
MXC    Moxie City       22.04 109    P      P      15 02 22.1  -0.7
E07A   Sunnyside        22.28 108    P      P      15 02 25.0  -0.3
E07A                                 IAmb   IAmb   15 02 40.2
       comp=Z,133nm,1.9s
WAH2   Wahluke Slope    22.29 107    P      P      15 02 25.4   0.0
D08A   Wollman Farm,    22.41 106    P      P      15 02 28.6  +1.9
G05A   Wamic            22.48 112    P      P      15 02 28.1  +0.6
G05A                                 IAmb   IAmb   15 02 45.4
       comp=Z,25nm,0.9s
NEW    Newport          22.54 102    P      P      15 02 30.7  +2.5
NEW                                  IAmb   IAmb   15 02 46.1
       comp=Z,46nm,1.4s
NEW    Newport          22.54 102    LR     LR     15 10 14.5
       comp=Z,541nm,20.1s,baz=306,slow=34
NEW    Newport          22.54 102    P      P      15 02 30.7  +2.5
NEW                                  pmax   pmax
       comp=Z,46nm,1.4s
HAWA   Hanford          22.55 108    P      P      15 02 27.6  -0.7
I04A   Tendick Farm,    23.03 117    P      P      15 02 33.0  -0.4
I04A                                 IAmb   IAmb   15 02 46.9
       comp=Z,60nm,1.2s
I05D   Terrebonne, OR   23.13 114    P      P      15 02 33.9  -0.5
I05D                                 IAmb   IAmb   15 02 47.8
       comp=Z,42nm,1.3s
BBOR   Butler Butte     23.60 118    P      P      15 02 39.0   0.0
BBOR                                 IAmb   IAmb   15 02 53.3
       comp=Z,30nm,1.2s
G08A   Pilot Rock       23.61 109    P      P      15 02 40.5  +1.4
PINE   Pine Mountain    23.73 114    P      P      15 02 41.8  +1.4
PINE                                 IAmb   IAmb   15 03 00.5
       comp=Z,22nm,0.9s
J05D   Fort Rock, OR    23.97 116    P      P      15 02 41.4  -1.2
J05D                                 IAmb   IAmb   15 02 58.0
       comp=Z,31nm,1.2s
I07A   Izee             24.21 112    P      P      15 02 45.2  +0.5
I07A                                 IAmb   IAmb   15 02 59.6
       comp=Z,66nm,1.9s
JTMT   Jette            24.34 100    P      P      15 02 44.5  -1.5
KRPM   Rodgers          24.36 123    P      P      15 02 46.6  +0.5
KRPM                                 IAmb   IAmb   15 03 03.0
       comp=Z,34nm,1.0s
YBH    Yreka Blue Hor   24.49 120    P      P      15 02 46.6  -0.6
YBH                                  IAmb   IAmb   15 03 03.2
       comp=Z,24nm,1.1s
YBH    Yreka Blue Hor   24.49 120    P      P      15 02 46.7  -0.6
YBH                                  pmax   pmax
       comp=Z,24nm,1.1s
PLID   Pearl Lake       25.24 106    P      P      15 02 53.3  -0.9
J08A   Circle Bar Ran   25.25 112    P      P      15 02 53.8  -0.4
OVMT   Ovando           25.45  99    P      P      15 02 56.7  +0.7
BPMT   Black Pine Rid   25.63 101    P      P      15 02 58.1  +0.3
HATC   Hat Creek Radi   25.79 120    P      P      15 02 59.5  +0.5
HATC                                 IAmb   IAmb   15 03 27.1
       comp=Z,40nm,1.0s
WVOR   Wild Horse Val   25.86 114    P      P      15 02 58.8  -1.0
WVOR                                 IAmb   IAmb   15 03 15.5
       comp=Z,26nm,1.1s
WVOR   Wild Horse Val   25.86 114    P      P      15 02 58.8  -1.0
WVOR                                 pmax   pmax
       comp=Z,26nm,1.1s
RES    Resolute Bay     26.30  30    P      P      15 03 04.3  +1.0
RES    Resolute Bay     26.30  30    P      P      15 03 04.3  +1.0
RES                                  pmax   pmax
       comp=Z,15nm,1.0s
BLKN   Baker Lake       26.44  54    P      P      15 03 06.1  +1.5
BLKN                                 IAmb   IAmb   15 03 19.5
       comp=Z,21nm,0.9s
MFID   Camas Ranch      26.52 109    P      P      15 03 04.2  -1.5
EGMT   Eagleton         26.54  95    P      P      15 03 06.6  +0.8
EGMT                                 IAmb   IAmb   15 03 23.5
       comp=Z,26nm,0.9s
LRM    Limekiln Ridge   26.55 101    P      P      15 03 06.2   0.0
DLMT   Dillon           26.79 102    P      P      15 03 07.2  -1.0
MCMT   McKenzie Canyo   27.03 103    P      P      15 03 12.2  +1.8
HLID   Hailey           27.12 107    P      P      15 03 11.8  +0.6
BOZ    Bozeman (W)      27.13 101    P      P      15 03 12.4  +1.2
BOZ    Bozeman (W)      27.13 101    P      P      15 03 12.4  +1.2
BOZ                                  pmax   pmax
       comp=Z,21nm,1.6s
SEY    Seymchan         27.21 304    P      P      15 03 10.5  -1.1
       comp=Z,27nm,0.9s,baz=91,slow=9.4,SNR=40
SEY                                  LR     LR     15 14 27.0
       comp=Z,303nm,19.9s,baz=84,slow=38
       comp=Z,27nm,0.9s
SEY    Seymchan         27.21 304c iP      P      15 03 10.4  -1.2
SEY                                  pmax   pmax
       comp=Z,30nm,0.9s
PAHR   Pah Rah Range    27.63 118    P      P      15 03 13.8  -1.9
PET    Petropavlovsk    28.15 281deP      P      15 03 20.0   0.0
PET                                  pmax   pmax
       comp=Z,46nm,1.4s
PEA0B  Petropavlovsk-   28.60 282    P      P      15 03 23.1  -0.9
PEA0B                                IAmb   IAmb   15 03 24.1
       comp=Z,25nm,0.7s
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PEA0B  Petropavlovsk-   28.60 282c iP      P      15 03 23.1  -0.9
PETK   Petropavlovsk-   28.60 282    P      P      15 03 23.6  -0.4
PETK   Petropavlovsk-   28.60 282    P      P      15 03 23.1  -0.9
       comp=Z,20nm,0.7s,baz=72,slow=13,SNR=34
PETK                                 LR     LR     15 15 48.4
       comp=Z,82nm,18.4s,baz=89,slow=39
       comp=Z,20nm,0.7s
PETK   Petropavlovsk-   28.60 282    P      P      15 03 23.6  -0.4
ELK    Elko             28.80 112    LR     LR     15 13 15.1
       comp=Z,385nm,22.0s,baz=321,slow=33
EUNU   Eureka           28.90  19    P      P      15 03 26.7  +0.1
MA2    Magadan          29.09 298    P      P      15 03 28.4  +0.1
MA2                                  IAmb   IAmb   15 03 30.0
       comp=Z,30nm,0.9s
MA2    Magadan          29.09 298    P      P      15 03 27.1  -1.2
       comp=Z,24nm,0.8s,baz=65,slow=11,SNR=12
MA2                                  LR     LR     15 16 11.1
       comp=Z,307nm,19.5s,baz=88,slow=39
       comp=Z,24nm,0.8s
MA2    Magadan          29.09 298c iP      P      15 03 27.9  -0.4
MA2                                  pmax   pmax
       comp=Z,34nm,0.9s
NVAR   Mina Array Bea   29.16 119    P      P      15 03 33.1  +3.7
       comp=Z,2.0nm,0.8s,baz=318,slow=9.4,SNR=7.1
NVAR                                 LR     LR     15 13 55.7
       comp=Z,229nm,18.2s,baz=342,slow=34
       comp=Z,2.0nm,0.8s
TPH    Tonopah          29.95 118    P      P      15 03 35.5  -0.9
TPH                                  IAmb   IAmb   15 03 50.1
       comp=Z,38nm,1.1s
TPH    Tonopah          29.95 118    P      P      15 03 35.5  -0.9
TPH                                  pmax   pmax
       comp=Z,38nm,1.1s
PDAR   Pinedale Array   30.17 103    P      P      15 03 40.4  +2.1
       comp=Z,1.4nm,0.7s,baz=306,slow=7.3,SNR=8.3
PDAR                                 LR     LR     15 14 28.7
       comp=Z,101nm,21.8s,baz=324,slow=34
       comp=Z,1.4nm,0.7s
R11B   Troy Canyon, C   30.50 115    P      P      15 03 43.0  +1.7
ILON   Igloolik, Nuna   30.70  41    P      P      15 03 44.2  +1.7
SKR    Severo-Kuril's   30.74 279⇑iP      P      15 03 41.4  -1.6
POIN   Pond Inlet       31.16  34    P      P      15 03 47.7  +1.3
TPNV   Topopah Spring   31.31 118    P      P      15 03 47.7  -0.7
TPNV   Topopah Spring   31.31 118    P      P      15 03 47.7  -0.7
TPNV                                 pmax   pmax
       comp=Z,7.0nm,0.9s
SRU    San Rafael Swe   32.39 108    P      P      15 04 00.1  +2.3
SRU                                  IAmb   IAmb   15 04 15.2
       comp=Z,18nm,0.9s
SRU    San Rafael Swe   32.39 108    P      P      15 04 00.2  +2.3
SRU                                  pmax   pmax
       comp=Z,19nm,0.9s
ULM    Lac du Bonnet    32.50  80    P      P      15 03 59.3  +0.8
ULM                                  IAmb   IAmb   15 04 10.7
       comp=Z,9.5nm,0.8s
ULM    Lac du Bonnet    32.50  80    P      P      15 04 00.0  +1.5
       comp=Z,2.8nm,0.5s,baz=306,slow=8.4,SNR=4.3
ULM                                  LR     LR     15 17 38.3
       comp=Z,290nm,18.3s,baz=294,slow=37
       comp=Z,2.8nm,0.5s
ULM    Lac du Bonnet    32.50  80⇑eP      P      15 04 00.4  +1.9
O20A   White River Ci   32.77 105    P      P      15 04 01.9  +0.7
O20A                                 IAmb   IAmb   15 04 14.6
       comp=Z,36nm,1.4s
TIXI   Tiksi            33.35 325    P      P      15 04 04.4  -1.3
       comp=Z,9.7nm,0.7s,baz=91,slow=9.9,SNR=10
TIXI                                 LR     LR     15 20 28.2
       comp=Z,123nm,18.2s,baz=60,slow=42
       comp=Z,9.7nm,0.7s
PV23   Carpenter Ridg   33.65 107    P      P      15 04 10.0  +1.0
AGMN   Agassiz Nation   33.69  83    P      P      15 04 09.1  +0.3
AGMN                                 IAmb   IAmb   15 04 21.4
       comp=Z,16nm,0.7s
PV22   Blue Mesa, Par   33.70 107    P      P      15 04 09.9  +0.5
PV22                                 IAmb   IAmb   15 04 22.7
       comp=Z,27nm,1.3s
PV04   Paradox Valley   33.75 107    P      P      15 04 09.8  +0.1
PV04                                 IAmb   IAmb   15 04 23.1
       comp=Z,35nm,1.5s
PV11   David Mesa, Pa   33.84 108    P      P      15 04 10.9  +0.4
PV11                                 IAmb   IAmb   15 04 24.5
       comp=Z,18nm,1.1s
EPLO   Experimental L   33.95  79    P      P      15 04 12.0  +0.8
EPLO                                 IAmb   IAmb   15 04 23.6
       comp=Z,6.5nm,0.7s
PFO    Pinyon Flats O   33.97 121    LR     LR     15 15 52.9
       comp=Z,327nm,20.2s,baz=338,slow=32
PV13   Radium Mtn., P   33.97 108    P      P      15 04 12.5  +0.8
PV13                                 IAmb   IAmb   15 04 25.2
       comp=Z,32nm,1.3s
PV15   Paradox Valley   34.00 107    P      P      15 04 10.2  -1.8
PV15                                 IAmb   IAmb   15 04 24.7
       comp=Z,22nm,1.1s
PV01   Paradox Valley   34.12 107    P      P      15 04 12.7  -0.3
PV01                                 IAmb   IAmb   15 04 26.5
       comp=Z,26nm,1.3s
YUH    Yuha Desert      35.02 122    P      P      15 04 20.9  +0.3
YUH                                  IAmb   IAmb   15 04 34.7
       comp=Z,11nm,1.1s
KULLO  Kullorsuaq       36.06  27  i P      P      15 04 29.3  +0.3
KULLO                                IAmb   IAmb   15 05 11.4
       comp=Z,13nm,1.0s
NEEM   North Greenlan   36.07  21  i P      P      15 04 29.4  -0.1
NEEM                                 IAmb   IAmb   15 04 43.1
       comp=Z,49nm,1.1s
EYMN   Ely              36.18  80    P      P      15 04 31.3  +0.9
EYMN                                 IAmb   IAmb   15 04 43.0
       comp=Z,15nm,0.7s
ECSD   EROS Data Cent   36.28  89    P      P      15 04 30.4  -0.9
YAK    Yakutsk          37.19 310    P      P      15 04 37.4  -1.4
YAK    Yakutsk          37.19 310    LR     LR     15 20 35.5
       comp=Z,284nm,21.6s,baz=54,slow=38
YAK    Yakutsk          37.19 310c iP      P      15 04 37.5  -1.3
YAK                                e*PP     pP     15 04 42.8  -5.1
YAK                                e               15 06 01.5
YAK                                e               15 06 59.1
YAK                                eS       S      15 10 20.3  -2.8
YAK                                e*SS     pS     15 10 35.2  +2.1
YAK                                eSS      SnSn   15 12 54.3  -4.6
YAK                                e               15 14 50.6
YAK                                  pmax   pmax
       comp=Z,44nm,0.9s
YAK                                  pmax   pmax
       comp=N,7.0nm,0.9s
YAK                                  pmax   pmax
       comp=E,13nm,0.9s
YAK                                  pmax   pmax
       comp=Z,42nm,2.7s
YAK                                  pmax   pmax
       comp=N,17nm,2.8s
YAK                                  pmax   pmax
       comp=E,28nm,2.7s
YAK                                  smax   smax
       comp=E,43nm,3.2s
YAK                                  smax   smax
       comp=N,25nm,3.0s
YAK                                  MLR    MLR
       comp=Z,281nm,20.0s
YAK                                  MLR    MLR
       comp=N,282nm,21.0s
YAK                                  MLR    MLR
       comp=E,171nm,22.0s
TYV    Tymovskoe        37.53 288  eP      P      15 04 41.6  -0.2
TYV                                  pmax   pmax
       comp=Z,100nm,2.4s
TYV                                  pmax   pmax
       comp=Z,30nm,0.7s
ANMO   Albuquerque      37.66 108    LR     LR     15 18 44.5
       comp=Z,131nm,20.9s,baz=58,slow=34
ANMO   Albuquerque      37.66 108⇓eP      P      15 04 45.9  +2.6
ANMO                                 pmax   pmax
       comp=Z,2.0nm,1.0s
FRB    Frobisher Bay    37.78  46    LR     LR     15 21 26.2
       comp=Z,160nm,19.5s,baz=296,slow=38
NOR    Nord             38.21  10  i P      P      15 04 54.7  +7.5
NOR                                  IAmb   IAmb   15 04 59.7
       comp=Z,12nm,1.3s
RTBA   Rita Blanca      38.39 103    P      P      15 04 49.1  -0.2
RTBA                                 IAmb   IAmb   15 05 03.1
       comp=Z,18nm,1.0s
G40A   Rib Lake         38.61  82    P      P      15 04 51.9  +0.9
G40A                                 IAmb   IAmb   15 05 03.4
       comp=Z,12nm,0.7s
YSS    Yuzhno-Sakhali   39.98 283    P      P      15 05 02.4  +0.1
YSS                                  IAmb   IAmb   15 05 03.8
       comp=Z,13nm,0.9s
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YSS    Yuzhno-Sakhali   39.98 283c iP      P      15 05 01.7  -0.6
YSS                                  pmax   pmax
       comp=Z,16nm,0.9s
JFWS   Jewell Farm      40.20  85    P      P      15 05 05.2  +0.9
JFWS                                 IAmb   IAmb   15 05 15.9
       comp=Z,24nm,0.7s
JFWS   Jewell Farm      40.20  85    P      P      15 05 05.2  +0.9
JFWS                                 pmax   pmax
       comp=Z,24nm,0.7s
L40A   Anamosa          40.28  87    P      P      15 05 06.0  +1.1
GRNR   Gornyy           40.68 292⇑iP      P      15 05 07.3  -0.9
GRNR                                 pmax   pmax
       comp=Z,10.0nm,0.7s
GRNR                                 MLR    MLR
       comp=N,50nm,10.0s
GRNR                                 MLR    MLR
       comp=Z,90nm,15.0s
MNTX   Cornudas Mount   40.80 110    P      P      15 05 10.7  +1.3
P38A   Dawn             40.82  91    P      P      15 05 10.5  +1.1
SUMG   Summit           41.56  25    P      P      15 05 16.1  +0.5
SUMG                                 IAmb   IAmb   15 05 17.7
       comp=Z,13nm,0.6s
SUMG   Summit           41.56  25    P      P      15 05 16.1  +0.5
SUMG                                 pmax   pmax
       comp=Z,13nm,0.6s
SUMG   Summit           41.56  25  i P      P      15 05 15.6   0.0
SUMG                                 IAmb   IAmb   15 05 34.6
       comp=Z,14nm,0.8s
VHRN   Van Horn         41.74 111    P      P      15 05 18.4  +1.1
WMOK   Wichita Mounta   41.74 101    P      P      15 05 18.3  +1.2
WMOK                                 IAmb   IAmb   15 05 30.4
       comp=Z,20nm,0.8s
WMOK   Wichita Mounta   41.74 101    P      P      15 05 18.3  +1.2
WMOK                                 pmax   pmax
       comp=Z,19nm,0.9s
DAG    Danmarks Havn    41.90  15    P      P      15 05 18.2  +0.4
DAG                                  pmax   pmax
       comp=Z,28nm,0.9s
DAG    Danmarks Havn    41.90  15  i P      P      15 05 18.0  +0.2
JKA    Kamikawa-asahi   41.98 280    P      P      15 05 18.8   0.0
JKA                                  IAmb   IAmb   15 05 19.5
       comp=Z,13nm,0.8s
ASAJ   Asahikawa        41.98 280    LR     LR     15 23 18.7
       comp=Z,127nm,20.9s,baz=78,slow=37
ASAJ   Asahikawa        41.98 280    P      P      15 05 18.8  -0.1
ASAJ                                 pmax   pmax
       comp=Z,13nm,0.8s
SFJD   Kangerlussuaq    42.05  35    LR     LR     15 21 55.9
       comp=Z,115nm,21.1s,baz=310,slow=35
SFJD   Kangerlussuaq    42.05  35  i P      P      15 05 23.3  +4.3
U38A   Gravette         42.73  95    P      P      15 05 26.4  +1.3
U38A                                 IAmb   IAmb   15 05 51.6
       comp=Z,14nm,0.9s
ZEA    Zeya             43.11 301  eP      P      15 05 26.7  -1.2
ZEA                                  pmax   pmax
       comp=Z,10.0nm,1.4s
ZEA                                  MLR    MLR
       comp=N,100nm,14.0s
ZEA                                  MLR    MLR
       comp=Z,100nm,16.0s
ERM    Erimo            43.16 278    P      P      15 05 29.0  +0.5
ERM                                  IAmb   IAmb   15 05 29.3
       comp=Z,30nm,1.0s
ERM    Erimo            43.16 278c iP      P      15 05 28.1  -0.4
ERM                                  pmax   pmax
       comp=Z,35nm,1.1s
SPITS  Spitsbergen Ar   43.54   4    P      P      15 05 31.4  +0.3
       comp=Z,2.0nm,0.4s,baz=21,slow=5.4,SNR=25
       comp=Z,2.0nm,0.4s
SPITS  Spitsbergen Ar   43.54   4    P      P      15 05 31.5  +0.3
SPITS                                pmax   pmax
       comp=Z,91nm,1.6s
SPB2   Spitsbergen Ar   43.54   4    P      P      15 05 32.0  +0.9
TXAR   Lajitas Array    43.58 111    P      P      15 05 35.8  +3.7
       comp=Z,1.9nm,0.8s,baz=324,slow=8.2,SNR=9.7
TXAR                                 LR     LR     15 22 44.4
       comp=Z,96nm,19.9s,baz=312,slow=35
       comp=Z,1.9nm,0.8s
FVM    French Village   43.66  90    P      P      15 05 33.3  +0.7
FVM                                  IAmb   IAmb   15 05 44.3
       comp=Z,19nm,1.3s
FVM    French Village   43.66  90    P      P      15 05 33.3  +0.7
FVM                                  pmax   pmax
       comp=Z,19nm,1.3s
DBG    Daneborg         43.70  17  i P      P      15 05 32.1  -0.3
ICESG  Greenland Ices   43.71  29  i P      P      15 05 32.0  -0.9
ICESG                                IAmb   IAmb   15 05 46.1
       comp=Z,22nm,1.1s
SCHQ   Schefferville    43.77  56    P      P      15 05 34.3  +1.1
       comp=Z,1.5nm,0.4s,baz=302,slow=7.2,SNR=5.9
SCHQ                                 LR     LR     15 24 35.8
       comp=Z,174nm,19.2s,baz=324,slow=37
       comp=Z,1.5nm,0.4s
KLR    Kul'dur          43.97 293    LR     LR     15 25 22.4
       comp=Z,133nm,19.6s,baz=52,slow=38
KLR    Kul'dur          43.97 293c iP      P      15 05 34.2  -0.7
KLR                                  pmax   pmax
       comp=Z,28nm,0.9s
SADO   Sadowa           44.66  75    LR     LR     15 24 47.8
       comp=Z,243nm,18.7s,baz=324,slow=37
LPIG   La Paz           44.86 122    LR     LR     15 21 45.4
       comp=Z,115nm,21.2s,baz=1.0,slow=32
DRIO   Del Rio          45.03 107    P      P      15 05 45.1  +1.5
DRIO                                 IAmb   IAmb   15 05 56.1
       comp=Z,16nm,0.7s
HEH    HeiHe            45.35 297  eP      P      15 05 43.9  -2.0
HEH                                  pmax   pmax
       comp=Z,21nm,1.0s
HEH                                  LR     LR
       comp=Z,150nm,15.5s
HEH                                  LR     LR
       comp=Z,220nm,14.5s
HEH                                  LR     LR
       comp=Z,180nm,16.3s
SOEG   Soedalen         46.40  27  i P      P      15 05 53.0  -0.9
SOEG                                 IAmb   IAmb   15 06 12.9
       comp=Z,12nm,0.8s
ISOG   Isortoq, Green   46.46  32  i P      P      15 05 53.2  -1.2
SCO    Scoresbysund     46.56  21    P      P      15 05 56.8  +1.7
SCO                                  IAmb   IAmb   15 06 15.4
       comp=Z,12nm,1.4s
SCO    Scoresbysund     46.56  21    P      P      15 05 56.8  +1.7
SCO                                  pmax   pmax
       comp=Z,12nm,1.4s
SCO    Scoresbysund     46.56  21  i P      P      15 05 55.8  +0.7
SCO                                  IAmb   IAmb   15 06 14.1
       comp=Z,12nm,1.4s
R50A   Paris            46.66  85    P      P      15 05 57.8  +1.5
ANGG   Ammassalik, Gr   46.78  31  i P      P      15 05 54.0  -2.9
USA0B  Ussuriysk Arra   47.35 288c iP      P      15 05 59.9  -1.7
USRK   Ussuriysk Ar.    47.35 288    P      P      15 06 00.1  -1.5
       comp=Z,3.2nm,0.6s,baz=45,slow=8.2,SNR=3.2
USRK                                 LR     LR     15 26 01.5
       comp=Z,139nm,21.7s,baz=56,slow=36
       comp=Z,3.2nm,0.6s
JMM    Marumori         47.43 275    P      P      15 06 02.5  +0.2
S51A   Beattyville      47.52  85    P      P      15 06 03.6  +0.5
X48A   Hartselle        48.12  91    P      P      15 06 08.7  +1.0
SWET   Sewanee          48.12  89    P      P      15 06 09.2  +1.4
BNX    BinXian          48.52 292  ⇑P      P      15 06 10.0  -0.6
BNX                                  pmax   pmax
       comp=Z,24nm,1.1s
Z47A   Carrollton       48.54  93    P      P      15 06 12.4  +1.4
Y49A   Blount Mountai   48.91  91    P      P      15 06 14.9  +1.1
TKL    Tuckaleechee C   48.92  87    LR     LR     15 27 25.1
       comp=Z,339nm,18.3s,baz=330,slow=37
MSHR   Mys Shultsa      48.94 287⇑iP      P      15 06 12.3  -1.6
MSHR                                 pmax   pmax
       comp=Z,42nm,1.3s
F64A   Sherman          49.25  66    P      P      15 06 17.3  +1.1
V53A   Saluda           49.42  86    P      P      15 06 19.3  +1.6
MJAR   Matsushiro Arr   49.79 276    P      P      15 06 20.1  -0.4
       comp=Z,3.6nm,0.8s,baz=351,slow=8.2,SNR=10
MJAR                                 LR     LR     15 27 03.6
       comp=Z,110nm,22.0s,baz=54,slow=36
       comp=Z,3.6nm,0.8s
MJB9   Matsu-Tunnel     49.79 276    P      P      15 06 21.0  +0.5
MJB9                                 IAmb   IAmb   15 06 21.8
       comp=Z,17nm,0.8s
MAJO   Matsushiro       49.79 276    P      P      15 06 20.8  +0.3
MAJO   Matsushiro       49.79 276    P      P      15 06 20.8  +0.3
MAJO                                 pmax   pmax
       comp=Z,17nm,0.8s
CIT    Chita            50.30 307  eP      P      15 06 24.6  +0.3
CIT                                e               15 07 49.4
CIT                                e               15 08 20.2
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CIT                                   pmax     pmax
       comp=Z,49nm,1.5s
CN2    Changchun          50.88 292 eP      P        15 06 27.6 -1.1
CN2                                 eS      S        15 13 38.2 -4.4
CN2                                   pmax     pmax
       comp=Z,30nm,0.6s
CN2                                   pmax     pmax
       comp=Z,110nm,4.0s
CN2                                   LR       LR
       comp=Z,190nm,16.0s
CN2                                   LR       LR
       comp=Z,130nm,16.0s
CN2                                   LR       LR
       comp=Z,120nm,17.0s
JGF    Kuroka             50.95 276   P        P     15 06 29.8 +0.4
LMN    Caledonia Moun     50.95  64   P        P     15 06 30.0 +0.8
LMN                                   IAmb     IAmb  15 06 45.6
       comp=Z,15nm,1.0s
BORG   Borgarnes          51.55  25   LR       LR    15 29 47.8
       comp=Z,67nm,19.6s,baz=345,slow=38
KEV    Kevo               52.21   1   P        P     15 06 39.1 +0.9
KEV    Kevo               52.21   1   P        P     15 06 39.1 +0.9
KEV                                   pmax     pmax
       comp=Z,132nm,1.9s
ARCES  ARCESS Array B     52.42   1   P        P     15 06 39.7 -0.1
       comp=Z,1.9nm,0.3s,baz=6.2,slow=9.2,SNR=2.3
ARCES                                 LR       LR    15 32 17.1
       comp=Z,64nm,18.1s,baz=328,slow=40
       comp=Z,1.9nm,0.3s
LVZ    Lovozero           54.01 357   P        P     15 06 52.5 +1.0
LVZ    Lovozero           54.01 357⇓eP        P     15 06 51.1 -0.4
LVZ                                   pmax     pmax
       comp=Z,24nm,1.1s
APA    Apatity            54.37 358⇓iP        P     15 06 50.0 -4.1
APA                                   pmax     pmax
       comp=Z,6.0nm,1.2s
KS19   Wonju Array Si     54.41 285   P        P     15 06 55.9 +1.0
KSRS   Korea Array        54.42 285   P        P     15 06 55.2 +0.4
       comp=Z,12nm,0.6s,baz=41,slow=7.1,SNR=49
KSRS                                  LR       LR    15 32 58.8
       comp=Z,32µm,18.1s,baz=55,slow=39
       comp=Z,12nm,0.6s
KSAR   Wonju Array Be     54.45 285   P        P     15 06 55.4 +0.3
KRAR   Krasnoyarsk        54.98 322⇑eP        P     15 06 58.5 -0.2
JCJ    Chichijima         55.08 266   P        P     15 06 59.6 -0.1
TJN    Taejon             55.53 285   P        P     15 07 03.5 +0.6
TJN    Taejon             55.53 285   P        P     15 07 03.5 +0.6
TJN                                   pmax     pmax
       comp=Z,144nm,1.2s
MOY    Mondy              55.61 314 eP        P     15 07 04.1 +0.6
MOY                                   pmax     pmax
       comp=Z,16nm,2.3s
ZAK    Zakamensk          55.75 312 eP        P     15 07 04.1 -0.3
ZAK                                   pmax     pmax
       comp=Z,5.0nm,1.4s
MSF    Maaselka           56.08 360   P        P     15 07 11.4 +4.9
MSF                                   pmax     pmax
       comp=Z,21nm,0.7s
ULN    Ulaanbaatar        56.19 307   P        P     15 07 08.5 +0.8
ULN                                   IAmb     IAmb  15 07 08.8
       comp=Z,15nm,1.1s
ULN    Ulaanbaatar        56.19 307   P        P     15 07 08.5 +0.8
ULN                                   pmax     pmax
       comp=Z,15nm,1.1s
JNU    Nakatsue           56.25 279   LR       LR    15 31 10.5
       comp=Z,131nm,22.0s,baz=84,slow=36
SONM   Songino Array      56.49 308   P        P     15 07 10.6 +0.8
SONM   Songino Array      56.49 308   P        P     15 07 10.1 +0.3
       comp=Z,16nm,0.8s,baz=45,slow=7.3,SNR=67
SONM                                  LR       LR    15 33 10.1
       comp=Z,216nm,19.6s,baz=34,slow=38
       comp=Z,16nm,0.8s
SONM   Songino Array      56.49 308   P        P     15 07 10.6 +0.8
SONM                                  pmax     pmax
       comp=Z,26nm,1.0s
BJI    Beijing            58.22 296   P        P     15 07 21.6 -0.3
BJI                                   pmax     pmax
       comp=Z,4.0nm,0.7s
BJI                                   pmax     pmax
       comp=Z,31nm,4.1s
BJI                                   LR       LR
       comp=Z,98nm,19.3s
BJI                                   LR       LR
       comp=Z,64nm,18.8s
BJI                                   LR       LR
       comp=Z,69nm,23.1s
ZAA0   Zalesovo Array     59.24 325   P        P     15 07 28.9 +0.1
ZALV   Zalesovo Beam      59.24 325   P        P     15 07 28.9 +0.1
ZALV   Zalesovo Beam      59.24 325   P        P     15 07 28.7 -0.1
       comp=Z,25nm,0.7s,baz=25,slow=7.4,SNR=84
ZALV                                  LR       LR    15 37 18.5
       comp=Z,87nm,18.2s,baz=36,slow=40
       comp=Z,25nm,0.7s
ZALV   Zalesovo Beam      59.24 325 i P        P     15 07 28.7 -0.1
ZALV                                  pmax     pmax
       comp=Z,26nm,0.6s
HHC    Hu-ho-hao-te       59.74 299 eP        P     15 07 32.7 +0.1
HHC                                   pmax     pmax
       comp=Z,21nm,0.7s
HHC                                   pmax     pmax
       comp=Z,61nm,3.6s
HHC                                   LR       LR
       comp=Z,92nm,12.7s
HHC                                   LR       LR
       comp=Z,170nm,12.8s
HHC                                   LR       LR
       comp=Z,200nm,14.7s
NB2    NORSAR Subarra     60.19  10   P        P     15 07 35.9 +0.6
       comp=Z,12nm,1.2s,baz=352,slow=6.9
NOA    NORSAR Array B     60.19  10   P        P     15 07 36.1 +0.7
       comp=Z,0.9nm,0.7s,baz=350,slow=6.9,SNR=5.2
NOA                                   LR       LR    15 34 51.3
       comp=Z,22nm,18.4s,baz=0.0,slow=37
       comp=Z,0.9nm,0.7s
FIA1   FINESS Array S     60.55   1   P        P     15 07 38.3 +0.7
FINES  FINESS Array B     60.55   1   P        P     15 07 38.2 +0.5
FINES  FINESS Array B     60.55   1   P        P     15 07 38.1 +0.4
       comp=Z,4.5nm,0.7s,baz=356,slow=10,SNR=23
       comp=Z,4.5nm,0.7s
FINES  FINESS Array B     60.55   1   P        P     15 07 38.2 +0.5
BTO    Baotou             60.64 300 eP        P     15 07 38.2 -0.6
BTO                                   pP       pP    15 07 47.9 -0.5
BTO                                   PP       PP    15 09 54.8 +2.6
BTO                                   S        S     15 15 51.7 -1.2
BTO                                   pmax     pmax
       comp=Z,12nm,0.5s
BTO                                   pmax     pmax
       comp=Z,200nm,4.6s
BTO                                   LR       LR
       comp=Z,350nm,9.9s
BTO                                   LR       LR
       comp=Z,530nm,10.6s
BTO                                   LR       LR
       comp=Z,420nm,22.0s
KLMR   Klimovskoe         60.85 354 eP        P     15 07 37.2 -2.6
KLMR                                e*PP      pP    15 07 47.1 -2.2
KLMR                                  pmax     pmax
       comp=Z,24nm,1.0s
HNS    HongShan           61.01 295 ⇑P        P     15 07 41.6 +0.4
HNS                                   pmax     pmax
       comp=Z,19nm,0.7s
HNS                                   LR       LR
       comp=Z,160nm,19.2s
HNS                                   LR       LR
       comp=Z,210nm,19.4s
HNS                                   LR       LR
       comp=Z,190nm,17.5s
HFS    Hagfors            61.30   8   P        P     15 07 42.7 -0.1
       comp=Z,1.8nm,0.6s,baz=60,slow=4.1,SNR=13
HFS                                   LR       LR    15 32 38.9
       comp=Z,49nm,21.9s,baz=358,slow=34
       comp=Z,1.8nm,0.6s
PUL    Pulkovo            62.23 359⇑eP        P     15 07 49.7 +0.6
PUL                                   pmax     pmax
       comp=Z,59nm,0.9s
KIRV   Kirov              62.28 348   LR       LR    15 37 41.3
       comp=Z,102nm,21.1s,baz=24,slow=39
KIRV   Kirov              62.28 348ceP        P     15 07 48.8 -0.6
SVE    Sverdlovsk         62.39 341 eP        P     15 07 49.6 -0.6
SVE                                   pmax     pmax
       comp=Z,16nm,1.4s
JOW    Kunigami           62.61 277   LR       LR    15 35 37.7
       comp=Z,32nm,20.8s,baz=321,slow=37
ARTI   Arti               63.19 342   P        P     15 07 55.9 +0.4
ARTI   Arti               63.19 342   LR       LR    15 39 14.4
       comp=Z,116nm,18.4s,baz=26,slow=40
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ARTI   Arti               63.19 342d iP       P     15 07 54.9 -0.6
ARTI                                 *PP      pP    15 08 05.3 +0.2
ARTI                                                15 08 32.2
ARTI                                                15 10 11.8
ARTI                                  S        S     15 16 25.4 +1.1
ARTI                                  SS       SS    15 20 28.3 -1.3
ARTI                                  pmax     pmax
       comp=Z,13nm,0.8s
NJ2    Nanjing            63.26 288 eP        P     15 07 57.7 +1.4
NJ2                                   pmax     pmax
       comp=Z,10.0nm,0.6s
VSU    Vasula             63.55   1ceP        P     15 07 57.2 -0.6
VSU                                   pmax     pmax
       comp=Z,29nm,1.0s
EKA    Eskdalemuir Ar     63.83  20   P        P     15 08 00.7 +0.9
       comp=Z,1.8nm,0.6s,baz=324,slow=5.6,SNR=9.3
       comp=Z,1.8nm,0.6s
KURK   Kurchatov          63.91 327   P        P     15 07 59.9 -0.4
KURK   Kurchatov          63.91 327c iP       P     15 07 59.7 -0.6
KURK                                  pmax     pmax
       comp=Z,12nm,0.6s
BRVK   Borovoye           63.95 334   P        P     15 08 00.3 -0.3
BRVK   Borovoye           63.95 334c iP       P     15 08 00.1 -0.5
BRVK                                  pmax     pmax
       comp=Z,22nm,0.9s
BVA0   Borovoye Array     63.96 333 i P        P     15 07 59.3 -1.4
BVAR   Borovoye Array     63.96 333   P        P     15 08 00.2 -0.5
       comp=Z,21nm,0.7s,baz=38,slow=7.5,SNR=104
BVAR                                  LR       LR    15 40 08.8
       comp=Z,123nm,18.5s,baz=25,slow=40
       comp=Z,21nm,0.7s
KURBB  Kurchatov Arra     64.02 327   P        P     15 08 00.7 -0.4
       comp=Z,12nm,0.5s,baz=28,slow=6.7,SNR=108
KURBB                                 LR       LR    15 38 09.2
       comp=Z,151nm,21.7s,baz=172,slow=38
       comp=Z,12nm,0.5s
LYN    LuoYang            64.38 294   P        P     15 08 04.0 +0.3
LYN                                   pmax     pmax
       comp=Z,37nm,0.7s
ZSN    Zaisan             64.88 321 eP        P     15 08 06.3 -0.5
ZSN                                   pmax     pmax
       comp=Z,8.0nm,0.5s
ZSN    Zaisan             64.88 321 eP        P     15 08 06.3 -0.5
       comp=Z,8.4nm,0.5s
GTA    Gaotai             66.11 307 eP        P     15 08 14.7 -0.3
GTA                                   pP       sP    15 08 27.0 -1.3
GTA                                   pmax     pmax
       comp=Z,17nm,0.8s
GTA                                   LR       LR
       comp=Z,190nm,18.2s
GTA                                   LR       LR
       comp=Z,320nm,20.4s
GTA                                   LR       LR
       comp=Z,160nm,17.8s
BRZS   Berezniki          66.19 331 eP        P     15 08 14.6 -0.6
BRZS   Berezniki          66.19 331 eP        P     15 08 14.6 -0.6
MK31   Makanchi Array     66.29 323c iP       P     15 08 15.2 -0.7
MKAR   Makanchi Array     66.29 323   P        P     15 08 15.2 -0.7
       comp=Z,7.4nm,0.7s,baz=41,slow=6.4,SNR=67
MKAR                                  LR       LR    15 37 30.1
       comp=Z,84nm,19.5s,baz=13,slow=36
       comp=Z,7.4nm,0.7s
MAKZ   Makanchi           66.38 323   P        P     15 08 15.8 -0.7
XAN    Xi'an              66.48 297 ⇑P        P     15 08 16.6 -0.8
XAN                                   sP       pP    15 08 28.8 +1.8
XAN                                   pmax     pmax
       comp=Z,14nm,0.5s
WHN    Wuhan              66.72 291   P        P     15 08 19.6 +0.7
WHN                                   pmax     pmax
       comp=Z,40nm,0.9s
OBN    Obninsk            66.73 355 eP        P     15 08 17.4 -1.1
OBN                                 e*PP      pP    15 08 28.2  0.0
OBN                                 e*SP      sP    15 08 34.5 +2.7
OBN                                 e                15 08 45.7
OBN                                 e                15 10 46.6
OBN                                 ePPP      PPP   15 12 21.8
OBN                                   pmax     pmax
       comp=Z,39nm,1.5s
OBN                                   MLR      MLR
       comp=Z,103nm,22.0s
WMQ    Urumqi             67.08 318 eP        P     15 08 22.0 +1.0
WMQ                                   pmax     pmax
       comp=Z,19nm,0.7s
WMQ                                   LR       LR
       comp=Z,250nm,17.1s
WMQ                                   LR       LR
       comp=Z,250nm,18.5s
WMQ                                   LR       LR
       comp=Z,93nm,15.9s
LZH    Lanzhou            67.12 302 eP        P     15 08 21.4 -0.2
LZH                                   pP       sP    15 08 33.7 -1.2
LZH                                   sP       PcP   15 08 42.8 -6.8
LZH                                   pmax     pmax
       comp=Z,24nm,1.1s
LZH                                   LR       LR
       comp=Z,190nm,16.8s
LZH                                   LR       LR
       comp=Z,290nm,16.8s
LZH                                   LR       LR
       comp=Z,360nm,16.7s
MNK    Minsk              67.53   1 i P        P     15 08 21.9 -1.7
       comp=E,18nm,1.0s
MNK                                 i P        P     15 08 21.9 -1.7
       comp=N,12nm,1.0s
MNK                                 i P        P     15 08 21.9 -1.7
       comp=Z,14nm,1.1s,baz=360
MNK                                 i PP       PP    15 10 49.6 -2.2
MNK                                 i PPP      PPP   15 12 28.7
MNK                                 i S        S     15 17 16.8 -0.6
MNK                                 i SS       SS    15 21 37.5 +0.5
MNK                                 i SSS      SSS   15 24 52.3
MNK                                 i LQ       LQ    15 33 31.8
MNK    Minsk              67.53   1 i P        P     15 08 21.8 -1.7
MNK                                 i                15 10 49.6
MNK                                 i PPP      PPP   15 12 28.6
MNK                                 i S        S     15 17 16.8 -0.6
MNK                                 i SS       SS    15 21 37.4 +0.5
MNK                                   pmax     pmax
       comp=N,12nm,1.0s
MNK                                   pmax     pmax
       comp=E,18nm,1.0s
MNK                                   pmax     pmax
       comp=Z,14nm,1.1s
TAOE   Nuku Hiva Isla     67.56 168 eLR       LR    15 28 42.6
       comp=Z,202nm,26.7s
OTUK   Ortayu             67.88 330   P        P     15 08 25.4 -0.6
BELG   Belogornoye        68.56 348   LR       LR    15 42 28.7
       comp=Z,90nm,18.6s,baz=310,slow=40
BELG   Belogornoye        68.56 348c iP       P     15 08 29.9 -0.2
BELG                                  pmax     pmax
       comp=Z,15nm,1.1s
AKTO   Aktyubinsk         68.97 340   LR       LR    15 44 01.4
       comp=Z,83nm,18.1s,baz=76,slow=41
AKTO   Aktyubinsk         68.97 340   P        P     15 08 31.7 -1.0
YULB   Yu-li              69.05 281   P        P     15 08 33.6  0.0
YULB                                  IAmb     IAmb  15 08 42.0
       comp=Z,12nm,0.8s
TDK    Taldyqorghan       69.10 325 eP        P     15 08 33.2 -0.5
TDK                                   pmax     pmax
       comp=Z,12nm,1.0s
TDK    Taldyqorghan       69.10 325 eP        P     15 08 33.2 -0.5
       comp=Z,12nm,1.0s
LPSR   Galich'ya Gora     69.12 353 eP        P     15 08 33.8 +0.2
LPSR                                  pmax     pmax
       comp=Z,23nm,1.6s
ENH    Enshi              69.32 294   P        P     15 08 34.7 -0.5
AB31   Akbulak array      69.74 339 i P        P     15 08 36.9 -0.6
CLL    Collm              69.98  10 i P        P     15 08 39.9 +1.0
CLL    Collm              69.98  10 i P        P     15 08 39.9 +1.0
ARXS   Arharly            69.99 325 eP        P     15 08 39.0 -0.3
VORR   Voronezh           70.03 353   P        P     15 08 39.4 +0.2
VORR                                  pmax     pmax
       comp=Z,12nm,1.5s
PDGK   Podgornoye         70.27 323   P        P     15 08 40.8 -0.3
VRH    Novokhopyorsk      70.31 351 eP        P     15 08 40.4 -0.5
VRH                                   pmax     pmax
       comp=Z,11nm,1.4s
BTLS   Baital             70.35 328 eP        P     15 08 41.0 -0.3
BTLS   Baital             70.35 328 eP        P     15 08 41.0 -0.3
KPKS   Kokpek             70.40 324 eP        P     15 08 41.5 -0.3
KPKS   Kokpek             70.40 324 eP        P     15 08 41.6 -0.3
SHLS   Shalkode           70.44 323 eP        P     15 08 40.8 -1.2
SHLS                                  pmax     pmax
       comp=Z,13nm,0.8s
SHLS   Shalkode           70.44 323 eP        P     15 08 40.8 -1.2
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       comp=Z,13nm,0.8s
VSR    Storozhevoye       70.48 353 eP        P     15 08 40.0 -2.0
VSR                                   pmax     pmax
       comp=Z,10.0nm,0.9s
BRG    Berggiesshubel     70.50  10 eP        P     15 08 43.2 +1.2
BRG                                   Amp            15 08 44.0
       comp=Z,4.4nm,0.9s
UZB    Uzynbulak          70.59 323 eP        P     15 08 42.5 -0.5
UZB    Uzynbulak          70.59 323 eP        P     15 08 42.6 -0.5
RNPP9  Sopachiv           70.60   2   P        P     15 08 44.0 +1.3
RNPP8  Varash             70.67   2   P        P     15 08 44.1 +0.9
HSKC   Hora Svate Kat     70.71  10 eP        P     15 08 49.1 +5.6
VORD   Divnogorie         70.72 353 eP        P     15 08 41.4 -2.0
VORD                                  pmax     pmax
       comp=Z,10.0nm,0.9s
RNPP5  Staryi Chortor     70.78   2   P        P     15 08 44.6 +0.8
SATY   Saty               70.86 324 eP        P     15 08 44.1 -0.5
SATY   Saty               70.86 324 eP        P     15 08 44.2 -0.5
GOMU   GeErMu             70.92 308   P        P     15 08 45.9 +0.5
GOMU                                  pP       sP    15 08 57.9 -0.9
GOMU                                  sP       PcP   15 09 07.0 +1.2
GOMU                                  pmax     pmax
       comp=Z,15nm,0.9s
MI28   Mi28,Pidlybu       71.10   1   P        P     15 08 46.3 +0.5
AAA    Alma-Ata           71.18 325 eP        P     15 08 46.1 -0.4
AAA                                   pmax     pmax
       comp=Z,8.0nm,0.4s
AAA    Alma-Ata           71.18 325 eP        P     15 08 46.2 -0.4
       comp=Z,8.3nm,0.4s
MDOK   Medeo              71.18 325 eP        P     15 08 46.0 -0.6
MDOK   Medeo              71.18 325 eP        P     15 08 46.0 -0.6
DPC    Dobruska-Polom     71.21   8 eP        P     15 08 48.5 +2.0
DPC    Dobruska-Polom     71.21   8 eP        P     15 08 48.5 +2.0
AKASG  Malin Array Be     71.33 360   P        P     15 08 47.7 +0.5
AKASG  Malin Array Be     71.33 360   P        P     15 08 47.1 -0.1
       comp=Z,3.4nm,0.6s,baz=2.2,slow=5.8,SNR=18
AKASG                                 LR       LR    15 40 30.4
       comp=Z,36nm,21.1s,baz=24,slow=36
       comp=Z,3.4nm,0.6s
AKASG  Malin Array Be     71.33 360   P        P     15 08 47.7 +0.5
AKASG                                 pmax     pmax
       comp=Z,6.0nm,1.5s
AKBB   Malin Array Si     71.33 360ceP        P     15 08 47.1 -0.1
AKBB                                  pmax     pmax
       comp=Z,19nm,1.6s
AKBB   Malin Array Si     71.33 360   P        P     15 08 47.4 +0.2
KIEV   Kiev               71.34 360 ⇑P        P     15 08 47.2  0.0
KIEV   Kiev               71.34 360   P        P     15 08 47.2  0.0
KRLC   Kraliky            71.52   8 eP        P     15 08 49.7 +1.3
KRLC   Kraliky            71.52   8 eP        P     15 08 49.7 +1.3
SGDS   Sogindy            71.64 327 eP        P     15 08 48.7 -0.5
TKM2   Tokmak 2           71.84 326   P        P     15 08 51.0 +0.4
       SNR=9.3
USP    Ospenovka          71.85 327   P        P     15 08 51.2 +0.7
       SNR=7.4
MORC   Moravsky Berou     71.87   8 eP        P     15 08 50.1 -0.4
MORC   Moravsky Berou     71.87   8 ⇑P        P     15 08 50.6  0.0
MORC   Moravsky Berou     71.87   8   P        P     15 08 50.5  0.0
CHMS   Chumysh            72.02 326   P        P     15 08 52.0 +0.5
       SNR=5.4
KDJ    Kajisay            72.08 324   P        P     15 08 52.7 +0.6
KDJ                                   IAmb     IAmb  15 08 53.6
       comp=Z,21nm,1.4s
KDJ    Kajisay            72.08 324   P        P     15 08 52.7 +0.6
KDJ                                   pmax     pmax
       comp=Z,21nm,1.4s
BOOM   Boomskoye usch     72.13 325   P        P     15 08 51.6 -0.8
BOOM   Boomskoye usch     72.13 325   P        P     15 08 51.6 -0.8
BOOM                                  pmax     pmax
       comp=Z,7.0nm,1.0s
KHC    Kasperske Hory     72.19  10 eP        P     15 08 58.4 +6.0
KHC    Kasperske Hory     72.19  10 eP        P     15 08 58.4 +6.0
TARG   Taragay, Kyrgy     72.25 324   P        P     15 08 53.9 +0.5
TARG   Taragay, Kyrgy     72.25 324   P        P     15 08 53.9 +0.5
TARG                                  pmax     pmax
       comp=Z,6.0nm,0.9s
SJG    San Juan           72.26  84   LR       LR    15 41 02.5
       comp=Z,67nm,21.3s,baz=76,slow=36
VRAC   Vranov             72.27   8   LR       LR    15 42 45.3
       comp=Z,20nm,19.2s,baz=7.5,slow=38
VRAC   Vranov             72.27   8 eP        P     15 08 54.3 +1.4
KBK    Karagaybulak       72.28 326   P        P     15 08 54.1 +0.8
       SNR=5.5
WUS    Wushi              72.28 322   P        P     15 08 53.8 +0.5
NIE    Niedzica           72.40   6   P        P     15 08 55.4 +1.7
NIE                                   pmax     pmax
       comp=Z,3.0nm,1.0s
AAK    Ala-Archa          72.43 326   LR       LR    15 42 18.3
       comp=Z,147nm,21.2s,baz=19,slow=37
AAK    Ala-Archa          72.43 326c iP       P     15 08 54.4 +0.3
AAK                                   pmax     pmax
       comp=Z,12nm,1.3s
STHS   Stebnicka Huta     72.45   5 eP        P     15 08 55.1 +1.2
STHS   Stebnicka Huta     72.45   5 eP        P     15 08 55.1 +1.2
GERES  GERESS Array B     72.48  10   P        P     15 08 54.5 +0.3
       comp=Z,0.8nm,0.7s,baz=62,slow=6.9,SNR=4.4
       comp=Z,0.8nm,0.7s
KRUC   Moravsky           72.50   8 eP        P     15 08 54.7 +0.5
EKS2   Erkin-Say          72.61 327   P        P     15 08 55.7 +0.6
       SNR=12
LANS   Liptovska Anna     72.62   6 eP        P     15 08 57.3 +2.3
LANS                                  pmax     pmax
       comp=Z,4.0nm,1.1s
LANS   Liptovska Anna     72.62   6 eP        P     15 08 57.3 +2.3
KOLS   Kolonicke sedl     72.97   4 eP        P     15 08 58.5 +1.4
KOLS                                  pmax     pmax
       comp=Z,5.0nm,1.0s
KOLS   Kolonicke sedl     72.97   4 eP        P     15 08 58.5 +1.4
KK31   Karatay Array      73.12 329 i P        P     15 08 57.4 -0.6
KKAR   Karatay Array      73.12 329   P        P     15 08 57.5 -0.5
KKAR   Karatay Array      73.12 329   P        P     15 08 57.5 -0.5
VYHS   Vyhne              73.23   7 eP        P     15 08 59.3 +0.7
VYHS                                  pmax     pmax
       comp=Z,5.0nm,1.1s
VYHS   Vyhne              73.23   7 eP        P     15 08 59.3 +0.7
MODS   Modra-Piesok       73.25   8 eP        P     15 09 00.3 +1.6
MODS                                  pmax     pmax
       comp=Z,18nm,1.4s
MODS   Modra-Piesok       73.25   8 eP        P     15 09 00.3 +1.6
BRLS   Borolday           73.37 330 eP        P     15 09 00.6 +1.1
BRLS   Borolday           73.37 330 eP        P     15 09 00.6 +1.1
CONA   Conrad Observa     73.58   9 eP        P     15 09 01.8 +1.1
       comp=Z,0.2nm,0.4s
RONA   Rosalia, Austr     73.84   9 eP        P     15 09 03.8 +1.6
       comp=Z,2.2nm,0.8s
GYA    Guiyang            73.86 294   P        P     15 09 03.0 +0.3
GYA                                   pmax     pmax
       comp=Z,21nm,0.8s
PSZ    Piszkesteto        73.87   6 ⇓P        P     15 09 03.8 +1.3
PSZ    Piszkesteto        73.87   6   P        P     15 09 03.7 +1.3
DAVOX  Davos/Dischmat     74.11  13   LR       LR    15 42 50.8
       comp=Z,30nm,20.1s,baz=337,slow=37
IUG    Iuzhnay            74.14 329 eP        P     15 09 03.7 -0.4
IUG                                   pmax     pmax
       comp=Z,7.0nm,0.5s
IUG    Iuzhnay            74.14 329 eP        P     15 09 03.7 -0.4
       comp=Z,6.9nm,0.5s
KBA    Koelnbreinsper     74.20  11   P        P     15 09 05.9 +1.4
KBA                                   pmax     pmax
       comp=Z,16nm,1.1s
KBA    Koelnbreinsper     74.20  11 eP        P     15 09 05.0 +0.5
       comp=Z,3.9nm,0.7s
ARSA   Arzberg            74.23   9 i P        P     15 09 05.9 +1.4
       comp=Z,1.7nm,0.7s
BURAR  Bucovina Array     74.39   2   P        P     15 09 05.8 +0.3
BURAR  Bucovina Array     74.39   2 ⇓P        P     15 09 05.7 +0.3
BURAR  Bucovina Array     74.39   2   P        P     15 09 05.7 +0.3
SOKA   Soboth             74.75  10 i P        P     15 09 08.2 +0.6
       comp=Z,1.8nm,1.0s
OBKA   Obir               74.88  10 i P        P     15 09 09.0 +0.7
       comp=Z,6.0nm,0.7s
PPT    Papeete            75.62 178   LR       LR    15 36 36.9
       comp=Z,102nm,18.6s,baz=334,slow=31
PPT2   Papeete2           75.65 178 eLR       LR    15 32 32.2
       comp=Z,150nm,23.8s
PPT2                                eLR       LR    15 32 33.3
       comp=Z,115nm,25.0s
SURR   Surduc             76.14   5 ⇓P        P     15 09 16.3 +0.9
PZH    PanZhiHua          76.16 298   P        P     15 09 17.3 +1.3
PZH                                   pmax     pmax
       comp=Z,9.0nm,0.7s
PZH                                   pmax     pmax
       comp=Z,110nm,5.3s
VRI    Vrincioaia         76.16   1 ⇑P        P     15 09 16.5 +0.8
```

VRI	Vrincioaia	76.16	1	P	P	15 09 16.4	+0.8
PLOR	Plostina	76.17	1	⇑P	P	15 09 16.3	+0.5
PLOR	Plostina	76.17	1	P	P	15 09 16.2	+0.5
BZS	Buzias	76.26	5	⇑P	P	15 09 16.1	-0.1
BZS	Buzias	76.26	5	P	P	15 09 16.0	-0.1
GZR	Gura Zlata	76.53	4	⇓P	P	15 09 18.4	+0.6
GZR	Gura Zlata	76.53	4	P	P	15 09 18.4	+0.6
ARR	Arges	76.62	3	⇓P	P	15 09 19.7	+1.4
TLCR		76.85	360	⇑P	P	15 09 20.6	+1.1
TLCR		76.85	360	P	P	15 09 20.5	+1.1
CFR	Carcaliu	76.86	0	⇑P	P	15 09 20.1	+0.6
CFR	Carcaliu	76.86	0	P	P	15 09 20.0	+0.6
ISR	Istrita	76.91	2	⇓P	P	15 09 20.4	+0.5
ISR	Istrita	76.91	2	P	P	15 09 20.4	+0.5
ANN	Anapa	76.98	354	eP	P	15 09 17.1	-3.1
ANN				e*PP	pP	15 09 27.2	-2.8
ANN				eS	S	15 19 02.5	-3.4
ANN				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HARR	Harsova	77.35	1	⇓P	P	15 09 22.9	+0.6
HARR	Harsova	77.35	1	P	P	15 09 22.8	+0.6
KVAR	Kislovodsk Arr	77.42	350	LR	LR	15 45 40.7	
	comp=Z,52nm,21.5s,slow=38						
KIV	Kislovodsk	77.42	350	eP	P	15 09 23.3	+0.5
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,44nm,19.0s						
TIRR	Tirgusor	77.58	0	P	P	15 09 24.4	+0.9
TIRR				IAmb	IAmb	15 09 35.1	
	comp=Z,8.1nm,1.1s						
TIRR	Tirgusor	77.58	0	⇓P	P	15 09 23.9	+0.4
TIRR	Tirgusor	77.58	0	P	P	15 09 24.4	+0.9
TIRR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SDV	Santo Domingo	77.60	93	LR	LR	15 46 04.0	
	comp=Z,87nm,18.4s,baz=263,slow=38						
KBZ	Khabaz	77.62	349	P	P	15 09 23.9	+0.1
	comp=Z,4.8nm,0.8s,baz=317,slow=3.0,SNR=8.1						
KBZ				LR	LR	15 45 32.4	
	comp=Z,87nm,22.0s,baz=13,slow=37						
	comp=Z,4.8nm,0.8s						
KBZ	Khabaz	77.62	349	d iP	P	15 09 24.8	+1.0
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SHA1	Shidzhatmaz	77.64	350	⇓eP	P	15 09 24.4	+0.2
NCK	Nalchik	77.79	349	⇓eP	P	15 09 24.0	-0.8
NCK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MAK	Makhachkala	77.87	346	eP	P	15 09 24.9	-0.3
MAK				e		15 12 18.7	
MAK				eS	S	15 19 16.0	+0.4
MAK				pmax	pmax		
	comp=Z,57nm,0.7s						
LSA	Lhasa	78.08	308	P	P	15 09 28.5	+1.3
LSA				IAmb	IAmb	15 09 29.4	
	comp=Z,17nm,1.0s						
LSA	Lhasa	78.08	308	P	P	15 09 28.5	+1.3
LSA				pmax	pmax		
	comp=Z,17nm,1.0s						
ESDC	Sonseca Array	78.62	25	P	P	15 09 30.4	+0.9
ESDC	Sonseca Array	78.62	25	P	P	15 09 29.8	+0.2
	comp=Z,2.5nm,1.1s,baz=346,slow=4.8,SNR=7.1						
	comp=Z,2.5nm,1.1s						
ROSC	El Rosal	79.08	99	LR	LR	15 50 21.2	
	comp=Z,61nm,18.4s,baz=167,slow=40						
SLVN	Son La	79.53	294	P	P	15 09 35.0	+0.3
RAR	Rarotonga	79.55	188	LR	LR	15 44 11.6	
	comp=Z,17nm,18.4s,baz=353,slow=35						
DAV	Davao City (W)	80.40	268	LR	LR	15 41 39.8	
	comp=Z,25nm,21.5s,baz=334,slow=33						
PHSR	Pinarhisar	80.40	1	⇑P	P	15 09 39.6	+0.6
RDO	Rodhopi	80.86	2	P	P	15 09 42.4	+0.9
RDO				IAmb	IAmb	15 10 09.0	
	comp=Z,8.1nm,0.9s						
GNI	Garni	80.97	348	LR	LR	15 51 07.6	
	comp=Z,38nm,18.7s,baz=14,slow=40						
NIL	Nilore	81.08	324	P	P	15 09 43.1	+0.2
NIL				IAmb	IAmb	15 09 44.4	
	comp=Z,18nm,0.9s						
NIL	Nilore	81.08	324	P	P	15 09 43.1	+0.2
TBI	Tubuai	81.38	178	eLR	LR	15 35 15.3	
	comp=Z,446nm,24.0s						
KBL	Kabul	81.51	327	P	P	15 09 44.1	-1.3
KBL	Kabul	81.51	327	P	P	15 09 44.1	-1.3
KBL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LIT	Litokhoron	81.80	5	P	P	15 09 47.1	+0.5
LIT				IAmb	IAmb	15 10 01.4	
	comp=Z,9.4nm,0.8s						
LIT	Litokhoron	81.80	5	P	P	15 09 47.1	+0.5
LIT				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ANTO	Ankara	82.11	357	P	P	15 09 49.6	+1.3
ANTO				IAmb	IAmb	15 10 04.1	
	comp=Z,8.1nm,0.8s						
ANTO	Ankara	82.11	357	P	P	15 09 49.6	+1.3
ANTO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BORA	Eskisehir	82.14	359	P	P	15 09 48.2	-0.3
BORA				IAmb	IAmb	15 11 23.9	
	comp=Z,10nm,0.9s						
BR131	Keskin Array S	82.22	356	P	P	15 09 48.7	-0.2
BR131	Keskin Array S	82.22	356	⇓iP	P	15 09 49.6	+0.6
BRTR	Keskin Array B	82.22	356	P	P	15 09 49.4	+0.4
	comp=Z,2.0nm,0.8s,baz=15,slow=3.4,SNR=16						
	comp=Z,2.0nm,0.8s						
BRTR	Keskin Array B	82.22	356	i P	P	15 09 49.7	+0.7
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
RKT	Rikitea	82.27	165	eLR	LR	15 35 29.3	
	comp=Z,621nm,34.2s						
PMG	Port Moresby	83.66	241	LR	LR	15 41 31.1	
	comp=Z,75nm,21.4s,baz=64,slow=32						
CHTO	Chiang Mai	84.06	296	P	P	15 09 58.1	-0.5
CHTO				IAmb	IAmb	15 09 59.1	
	comp=Z,8.9nm,1.1s						
CHTO	Chiang Mai	84.06	296	P	P	15 09 58.1	-0.5
CHTO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CMAR	Chiang Mai Arr	84.36	296	P	P	15 10 00.2	0.0
CMAR	Chiang Mai Arr	84.36	296	P	P	15 10 00.3	+0.2
	comp=Z,6.9nm,0.9s,baz=17,slow=5.6,SNR=37						
CMAR				LR	LR	15 50 06.8	
	comp=Z,58nm,18.7s,baz=60,slow=38						
	comp=Z,6.9nm,0.9s						
KEST	Kesra	84.91	16	P	P	15 10 03.8	+1.0
KEST				IAmb	IAmb	15 10 12.1	
	comp=Z,13nm,1.0s						
KEST	Kesra	84.91	16	P	P	15 10 03.5	+0.7
	comp=Z,7.4nm,0.9s,baz=344,slow=3.6,SNR=7.6						
	comp=Z,7.4nm,0.9s						
MMAI	Mount Meron Ar	88.83	354	P	P	15 10 22.2	+0.3
	comp=Z,0.8nm,0.5s,baz=323,slow=2.2,SNR=1.7						
	comp=Z,0.8nm,0.5s						
RAO	Raoul Island	90.04	203	LR	LR	15 42 11.0	
	comp=Z,821nm,21.1s,baz=297,slow=30						
MDP	Montagnes des	90.25	80	LR	LR	15 49 49.0	
	comp=Z,65nm,21.0s,baz=10,slow=35						
KAPI	Kappang	93.66	266	LR	LR	15 48 22.7	
	comp=Z,29nm,20.0s,baz=72,slow=33						
WRA	Warramunga Arr	98.86	246	P	P	15 11 06.6	-1.2
	comp=Z,0.9nm,0.9s,baz=27,slow=5.1,SNR=3.2						
	comp=Z,0.9nm,0.9s						
ASAR	Alice Springs	102.24	245	P	Pdif	15 11 23.9	+1.2
	comp=Z,0.6nm,1.0s,baz=23,slow=5.0,SNR=2.4						
QSPA	South Pole Qui	148.12	180	PKPbc	PKPbc	15 17 12.1	+0.1
	comp=Z,3.3nm,0.8s,baz=53,slow=3.0,SNR=8.4						
BOSA	Boshof	150.20	6	PKPbc	PKPbc	15 17 18.0	-0.5
	comp=Z,4.0nm,0.8s,baz=7.8,slow=4.1,SNR=5.1						
SYO	Syowa Base	168.26	200	⇓ePKPdf	PKPdf	15 17 38.2	+5.6
SYO	Syowa Base	168.26	200	⇑esPKPdf	sPKPdf	15 17 49.1	+2.7

IDC ***07*** *15:01:32.6±1.1, 58°.47N×151°.51W, h0^{km}, mb4.1/14, mbtmp4.1/15, ML4.1/1, Error ellipse: s-maj=27.7km s-min=14.2km az=130.0*

NEIC ***07*** *15:01:36.8±1.2, 58°.28N±0°.04×151°.24W±0°.06, h32^{km}±10^{km}, Error ellipse: s-maj=5.6km s-min=3.8km az=143.0*

AEIC ***07*** *15:01:38.3±1.8, 58°.28N±0°.02×151°.19W±0°.07, h4^{km}±6^{km}, ML3.9, ML4.1/128(NEIC), Error ellipse: s-maj=5.7km s-min=3.0km az=113.0*

ISC 07 15:01:36.3±1.4, **58°.29N**±0°.04×**151°.26W**±0°.05, **h31**^{km}±10^{km}, **n159**, σ0^{s}.**83**/145, **mb4.1**/14, **Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SYI	Shuyak Island	0.68	299		Pn	15 01 49.2	-0.5
SYI					Sn	15 01 59.6	+0.4
SYI	Shuyak Island	0.68	299	IAML		15 01 59.8	
	comp=N,7µm,0.6s						
SYI				IAML		15 02 00.2	
	comp=E,10µm,0.7s						
KDAK	Kodiak Island	0.87	235	IAML		15 02 05.9	
	comp=E,14µm,0.6s						
KDAK				IAML		15 02 06.2	
	comp=E,15µm,0.8s						
KDAK	Kodiak Island	0.87	235	Pn	Pn	15 01 52.9	+0.6
	comp=E,180nm,0.3s,baz=1.0,slow=4.2,SNR=15						
KDAK				Sn	Sn	15 02 04.2	+0.4
	comp=E,825nm,0.3s,baz=40,slow=22,SNR=7.8						
CNPM	China Poot	1.24	0		Pn	15 01 58.0	+0.5
CNPM					Sn	15 02 13.3	+0.1
CNPM	China Poot	1.24	0	IAML		15 02 15.8	
	comp=E,3µm,0.6s						
HOM	Homer	1.39	352		Pn	15 02 00.3	+0.9
Q19K	Cape Douglas,	1.41	298		Pb	15 02 01.7	-0.3
Q19K					Sn	15 02 18.8	+1.6
Q19K					Sb	15 02 19.1	-0.4
BRSE	Bradley Lake S	1.48	10		Pn	15 02 01.0	+0.2
BRLK	Bradley Lake	1.50	7		Pn	15 02 01.2	+0.2
OHAK	Old Harbor	1.52	226		Pn	15 02 01.4	+0.1
OHAK				IAML		15 02 34.8	
	comp=N,2µm,0.6s						
OHAK				IAML		15 02 35.5	
	comp=E,2µm,1.0s						
OHAK	Old Harbor	1.52	226		Sn	15 02 19.9	-0.1
OHAK					Sb	15 02 24.7	+2.0
OHAK	Old Harbor	1.52	226	P	Pn	15 02 01.6	+0.3
AU22	Augustine Moun	1.54	316		Pn	15 02 02.4	+0.9
AU22					Sn	15 02 21.5	+1.0
AUJK	Augustine Jueg	1.55	315		Pn	15 02 02.3	+0.7
AUCH	Augustine Cone	1.57	314		Pn	15 02 03.3	+1.2
AUCH					Sn	15 02 22.3	+1.0
AUCH					Sb	15 02 22.6	-1.5
P19K	Oil Pt	1.71	324		Pn	15 02 04.3	+0.4
KAHG	Katmai Hook Gl	1.75	278		Pn	15 02 05.8	+1.3
R18K	Karluk	1.85	248		Pn	15 02 06.3	+0.5
ILSW	Iliamna Southw	1.96	331		Pn	15 02 07.5	+0.1
ILSW	Iliamna Southw	1.96	331	IAML		15 02 38.1	
	comp=E,2µm,0.8s						
ILSW				IAML		15 02 41.0	
	comp=N,2µm,0.7s						
KAHC	Katmai Hardscr	2.00	282		Pn	15 02 09.3	+1.3
SEW	Seward	2.05	26		Pn	15 02 08.5	0.0
ACHA	Angle Creek He	2.15	270		Pb	15 02 14.0	-0.6
ANCK	Angle Creek	2.24	270		Pn	15 02 13.0	+1.7
RED	Redoubt Volcan	2.28	341		Pn	15 02 11.8	+0.1
RED					Sn	15 02 39.7	+1.0
RED	Redoubt Volcan	2.28	341	IAML		15 02 46.9	
	comp=N,1µm,0.8s						
RED				IAML		15 02 51.2	
	comp=E,1µm,0.5s						
SLKM	Skilak Lake	2.29	13		Pn	15 02 11.6	-0.3
SLKM	Skilak Lake	2.29	13	IAML		15 02 51.9	
	comp=E,908nm,0.6s						
SLKM				IAML		15 02 53.9	
	comp=N,889nm,0.7s						
P18K	Big Mountain,	2.34	300		Pn	15 02 13.8	+1.2
SII	Sitkinak Islan	2.35	224		Pn	15 02 12.7	0.0
SII				IAML		15 03 07.3	
	comp=E,2µm,0.9s						
SII				IAML		15 03 10.8	
	comp=N,2µm,0.7s						
SII	Sitkinak Islan	2.35	224	P	Pn	15 02 12.6	0.0
CNTC	Contact Creek	2.44	271		Pn	15 02 14.5	+0.5
O19K	Port Alsworth	2.48	322		Pn	15 02 14.8	+0.4
P23K	Montague Islan	2.62	48		Pn	15 02 15.2	-1.2
P23K	Montague Islan	2.62	48	IAML		15 03 19.2	
	comp=N,580nm,0.8s						
P23K				IAML		15 03 28.8	
	comp=E,572nm,1.1s						
Q23K	Middleton Isla	2.79	64		Pn	15 02 19.5	+0.8
PLK1	Peulik 1	2.89	263		Pn	15 02 22.3	+2.3
FIS	Fire Island	2.92	10		Pn	15 02 21.1	+0.7
RC01	Rabbit Creek A	2.92	15	IAML		15 03 16.5	
	comp=E,584nm,1.0s						
RC01				IAML		15 03 17.3	
	comp=N,505nm,0.6s						
CKL	Chakachamna La	2.97	350		Pn	15 02 21.5	+0.2
PWL	Port Wells	2.98	29		Pn	15 02 21.5	+0.2
PWL	Port Wells	2.98	29	IAML		15 03 11.6	
	comp=E,639nm,0.8s						
PWL				IAML		15 03 16.3	
	comp=N,691nm,0.7s						
SPCN	Chakachatna No	2.98	351		Pn	15 02 21.5	+0.1
PLBL	Peulik Blue Cr	3.02	261		Pn	15 02 22.7	+0.9
N19K	Bonanza Creek	3.02	328		Pn	15 02 22.1	+0.1
N19K	Bonanza Creek	3.02	328	IAML		15 03 11.9	
	comp=E,429nm,0.9s						
N19K				IAML		15 03 19.1	
	comp=N,477nm,0.9s						
SPWE	Spurr West	3.07	348		Pn	15 02 23.0	+0.3
SUA	Susitna One	3.20	4		Pn	15 02 24.3	-0.1
SUA	Susitna One	3.20	4	IAML		15 03 16.5	
	comp=N,367nm,0.8s						
SUA				IAML		15 03 32.5	
	comp=E,356nm,1.1s						
HIN	Hinchinbrook I	3.23	47		Pn	15 02 25.0	+0.3
HIN	Hinchinbrook I	3.23	47	IAML		15 03 01.8	
	comp=N,563nm,1.0s						
HIN				IAML		15 03 42.3	
	comp=E,453nm,0.8s						
STLK	Strandline Lak	3.24	355		Pn	15 02 25.5	+0.6
STLK	Strandline Lak	3.24	355	IAML		15 03 16.9	
	comp=N,352nm,0.9s						
GLI	Glacier Island	3.35	37		Pn	15 02 25.8	-0.6
GLI	Glacier Island	3.35	37	IAML		15 03 36.9	
	comp=N,359nm,1.0s						
CHIR	Chirikof Islan	3.43	226	P	Pn	15 02 27.2	-0.3
KNK	Knik Glacier	3.44	23		Pn	15 02 27.2	-0.4
KNK	Knik Glacier	3.44	23	IAML		15 03 34.1	
	comp=N,503nm,1.1s						
KNK				IAML		15 03 43.0	
	comp=E,436nm,0.8s						
FID	Port Fidalgo	3.47	43		Pn	15 02 27.3	-0.7
PMR	Palmer	3.48	17	IAML		15 03 31.8	
	comp=E,309nm,0.7s						
PMR	Palmer	3.48	17	P	Pn	15 02 28.0	-0.2
M22K	Willow	3.52	9	Pn	Pn	15 02 29.1	+0.4
EYAK	Cordova Ski Ar	3.61	49		Pn	15 02 30.1	+0.1
EYAK	Cordova Ski Ar	3.61	49	P	Pn	15 02 30.2	+0.2
GHO	Glory Hole Cre	3.69	18		Pn	15 02 31.4	+0.3
GHO	Glory Hole Cre	3.69	18	IAML		15 03 56.7	
	comp=N,483nm,0.7s						
SKT	Skwentna	3.71	358		Pn	15 02 31.7	+0.3
SKT	Skwentna	3.71	358	IAML		15 03 34.2	
	comp=N,234nm,0.5s						
SKT				IAML		15 03 41.7	
	comp=E,391nm,0.7s						
M20K	Styx River	3.73	346	Pn	Pn	15 02 31.9	+0.3
M20K				IAML		15 03 30.7	
	comp=E,339nm,0.7s						
N17K	Nushagak Hills	3.77	309	Pn	Pn	15 02 32.1	-0.1
N17K				IAML		15 03 44.3	
	comp=E,219nm,0.7s						
N17K				IAML		15 03 45.3	
	comp=N,276nm,0.8s						
SML	Sawmill	3.82	21		Pn	15 02 33.1	+0.2
SML	Sawmill	3.82	21	IAML		15 03 41.5	
	comp=N,372nm,0.8s						
SML				IAML		15 03 45.4	
	comp=E,304nm,1.0s						
KAIM	Kayak Island	3.89	62	Pn	Pn	15 02 34.7	+0.9
KAIM				IAML		15 03 22.4	
	comp=N,301nm,0.8s						
KAIM				IAML		15 03 22.5	
	comp=E,243nm,0.7s						
M19K	Big River Lodg	3.95	338	Pn	Pn	15 02 34.8	+0.1
RAGM	Ragged Mountai	3.97	55	Pn	Pn	15 02 35.2	+0.2
RAGM				IAML		15 03 22.2	
	comp=E,239nm,0.7s						
DIV	Divide	3.98	42		Pn	15 02 35.3	+0.2
SCM	Sheep Creek Mo	4.07	27		Pn	15 02 36.9	+0.6
HMT	Hamilton	4.13	57	Pn	Pn	15 02 37.5	+0.3
HMT				IAML		15 03 27.4	
	comp=N,242nm,0.5s						
CUT	Chulitna	4.16	6	Pn	Pn	15 02 38.8	+1.3
KLU	Klutina	4.19	38		Pn	15 02 38.0	0.0
KLU	Klutina	4.19	38	IAML		15 03 46.4	
	comp=N,156nm,0.8s						
SUCK	Suckling Hills	4.24	62	Pn	Pn	15 02 40.2	+1.5
L19K	White Mountain	4.30	337		Pn	15 02 40.2	+0.8
L19K	White Mountain	4.30	337	IAML		15 04 01.7	
	comp=E,199nm,0.7s						
BMRM	Bremner River	4.32	49		Pn	15 02 40.0	+0.3
BMRM	Bremner River	4.32	49	IAML		15 03 27.9	
	comp=E,254nm,0.7s						
BMRM				IAML		15 03 28.0	
	comp=N,223nm,0.7s						
BERG	Berg Lake	4.41	58	Pn	Pn	15 02 41.0	+0.1
BERG				IAML		15 03 44.9	
	comp=N,187nm,1.0s						
BERG				IAML		15 03 50.0	
	comp=E,176nm,0.8s						
M17K	Holitna River	4.41	318	Pn	Pn	15 02 41.4	+0.4
GRIN	Grindle Hills	4.54	60		Pn	15 02 43.5	+0.8
O15K	Ungalikthiuk R	4.55	285		Pn	15 02 45.0	+2.1
M24K	Tolsona, Glenn	4.59	31	Pn	Pn	15 02 44.8	+1.3
WAT6	Susitna Watana	4.65	21		Pn	15 02 45.0	+0.6
PPLA	Purkeypile	4.65	355	Pn	Pn	15 02 44.8	+0.4
PPLA				IAML		15 04 13.8	
	comp=E,142nm,1.1s						
PPLA				IAML		15 04 17.8	
	comp=N,157nm,1.0s						
N25K	Chitina, Valde	4.72	42		Pn	15 02 46.4	+1.1
N25K	Chitina, Valde	4.72	42	IAML		15 03 39.3	
	comp=E,104nm,0.6s						
WAT1	Susitna Watana	4.75	15		Pn	15 02 46.6	+1.0
L18K	Granite Mounta	4.78	328	Pn	Pn	15 02 46.3	+0.2
L18K				IAML		15 04 09.7	
	comp=E,160nm,1.2s						
L18K				IAML		15 04 16.1	
	comp=N,185nm,0.9s						
WAX	Waxell Ridge	4.81	60	IAML		15 03 40.5	
	comp=E,219nm,0.3s						
CRQM	Cirque	4.82	56	Pn	Pn	15 02 47.8	+1.0
CRQM				IAML		15 03 44.7	
	comp=N,112nm,1.2s						
TGL	Tana Glacier	4.95	56	Pn	Pn	15 02 48.6	+0.1
BARK	Barkley Ridge	4.96	61		Pn	15 02 49.5	+0.9
WACK	Wrangell Chich	5.07	40		Pn	15 02 50.8	+0.5
WASW	Wrangell South	5.09	41		Pn	15 02 50.7	+0.2
DHY	Denali Highway	5.17	20	Pn	Pn	15 02 52.7	+1.2
DHY				IAML		15 04 06.4	
	comp=N,99nm,0.7s						
DHY				IAML		15 04 19.2	
	comp=E,113nm,0.8s						
TRF	Thorofare Moun	5.20	5	Pn	Pn	15 02 53.1	+1.1
TRF				IAML		15 04 11.3	
	comp=N,144nm,1.1s						
TRF				IAML		15 04 29.1	
	comp=E,164nm,1.1s						
RND	Reindeer	5.27	12	Pn	Pn	15 02 53.5	+0.7
RND				IAML		15 04 37.5	
	comp=N,87nm,1.2s						
RND				IAML		15 04 38.9	
	comp=E,93nm,0.9s						
KTH	Kantishna Hill	5.29	2	Pn	Pn	15 02 53.5	+0.4
KTH				IAML		15 04 12.6	
	comp=E,167nm,0.8s						
KTH				IAML		15 04 46.4	
	comp=N,159nm,1.1s						
YAH	Yahtse	5.30	63	Pn	Pn	15 02 54.0	+0.7
YAH				IAML		15 03 55.9	
	comp=E,119nm,0.9s						
GRNC	Granite Creek	5.42	59	Pn	Pn	15 02 55.8	+0.8
MCK	McKinley	5.58	11		Pn	15 02 57.9	+0.9
K17K	Iditarod	5.64	325		Pn	15 02 58.5	+0.6
CTGM	Chitina Glacie	5.71	58	Pn	Pn	15 02 59.1	+0.2
LOGN	Logan Glacier	5.80	60	Pn	Pn	15 03 01.5	+1.3
M26K	Nabesna, AK	5.82	41	Pn	Pn	15 03 00.1	-0.2
BPAW	Bear Paw Mtn.	5.83	1		Pn	15 03 01.0	+0.4
SDPT	Sand Point	5.86	244	P	Pn	15 03 02.0	+1.2
PCA	Pinnacle	5.94	68	Pn	Pn	15 03 03.0	+1.0
K24K	Donnelly Dome	6.14	23	Pn	Pn	15 03 06.5	+1.8
O28M	Mount Upton	6.16	61	Pn	Pn	15 03 05.4	+0.2
BCPM	Bancas Point	6.21	69	Pn	Pn	15 03 06.4	+0.7
PNL	Peninsula	6.29	72		Pn	15 03 07.0	+0.3
PNL	Peninsula	6.29	72	P	Pn	15 03 07.4	+0.7
WRH	Wood River Hil	6.39	12		Pn	15 03 08.5	+0.4
NEA2	Nenana	6.42	8	Pn	Pn	15 03 08.3	-0.2
CCB	Clear Creek Bu	6.59	13	Pn	Pn	15 03 10.7	-0.2
MLY	Manley	6.77	2	Pn	Pn	15 03 13.6	+0.2
O29M	Mount Kennedy	6.80	67	Pn	Pn	15 03 15.5	+1.6
COLA	College	6.81	12	Pn	Pn	15 03 14.3	+0.5
COLA	College	6.81	12	P	Pn	15 03 14.2	+0.5
IL31		6.83	16	Pn	Pn	15 03 13.3	-0.9
ILAR	Eielson Array	6.83	16	Pn	Pn	15 03 13.2	-1.0
	comp=E,3.7nm,0.3s,baz=206,slow=14,SNR=4.6						
J25K	Salcha River,	6.94	21	Pn	Pn	15 03 15.7	-0.1
I23K	Minto, Yukon-K	6.95	7	Pn	Pn	15 03 15.6	-0.1
H17K	Granite Mounta	7.84	332	Pn	Pn	15 03 27.3	-0.7
FYU	Fort Yukon	8.76	16	Pn	Pn	15 03 41.3	+0.7
S32K	Killisnoo	8.93	88	Pn	Pn	15 03 43.2	+0.3
P32M	Atlin	9.16	74	Pn	Pn	15 03 47.9	+1.8
UNV	Unalaska Valle	9.61	249	Pn	Pn	15 03 51.9	-0.3
Q32M	Nakina River	9.92	78	Pn	Pn	15 03 58.3	+1.6
F26K	Sheenjek River	9.97	16	Pn	Pn	15 03 57.7	+0.5
U33K	Whale Pass	10.07	95	Pn	Pn	15 03 57.5	-1.1
R33M	Jennings River	10.57	75	Pn	Pn	15 04 06.8	+1.3
DLBC	Dease Lake	11.14	80	Pn	Pn	15 04 14.7	+1.4
DLBC	Dease Lake	11.14	80	Pn	Pn	15 04 14.8	+1.5
	comp=E,0.6nm,0.3s,baz=261,slow=13,SNR=1.1						
	comp=E,1.8nm,0.4s						
SEY	Seymchan	27.26	304	P	P	15 07 16.0	-1.2
	comp=E,1.4nm,0.5s,baz=74,slow=12,SNR=5.3						
	comp=E,1.4nm,0.5s						
PETK	Petropavlovsk-	28.64	282	P	P	15 07 28.4	-1.2
	comp=E,3.2nm,0.8s,baz=70,slow=12,SNR=4.5						
	comp=E,3.2nm,0.8s						
SPITS	Spitsbergen Ar	43.58	4	P	P	15 09 36.5	-0.1
	comp=E,4.3nm,0.8s,baz=16,slow=6.9,SNR=8.4						
	comp=E,4.3nm,0.8s						
ARCES	ARCESS Array B	52.46	1	P	P	15 10 44.5	-0.7
	comp=E,2.6nm,0.3s,baz=4.1,slow=7.3,SNR=1.6						
	comp=E,2.6nm,0.3s						
KSRS	Korea Array	54.46	285	P	P	15 11 00.7	+0.3
	comp=E,1.3nm,0.6s,baz=39,slow=7.5,SNR=7.0						
	comp=E,1.3nm,0.6s						
SONM	Songino Array	56.54	308	P	P	15 11 15.0	-0.4
	comp=E,0.9nm,0.5s,baz=46,slow=7.3,SNR=3.4						
	comp=E,0.9nm,0.5s						
ZALV	Zalesovo Beam	59.30	325	P	P	15 11 33.9	-0.5
	comp=E,1.5nm,0.5s,baz=24,slow=6.4,SNR=4.9						
	comp=E,1.5nm,0.5s						
FINES	FINESS Array B	60.59	1	P	P	15 11 43.1	0.0
	comp=E,1.6nm,0.8s,baz=12,slow=9.8,SNR=3.8						
	comp=E,1.6nm,0.8s						
HFS	Hagfors	61.33	9	P	P	15 11 47.8	-0.4
	comp=E,1.9nm,0.9s,baz=35,slow=6.0,SNR=2.4						
	comp=E,1.9nm,0.9s						
EKA	Eskdalemuir Ar	63.86	20	P	P	15 12 05.0	-0.1
	comp=E,0.6nm,0.6s,baz=345,slow=6.5,SNR=2.1						
	comp=E,0.6nm,0.6s						
BVAR	Borovoye Array	64.01	333	P	P	15 12 05.9	-0.3
	comp=E,1.0nm,0.6s,baz=36,slow=8.0,SNR=4.2						
	comp=E,1.0nm,0.6s						
KURBB	Kurchatov Arra	64.07	327	P	P	15 12 06.1	-0.5
	comp=E,1.1nm,0.4s,baz=27,slow=6.8,SNR=10.0						
	comp=E,1.1nm,0.4s						
MKAR	Makanchi Array	66.34	323	P	P	15 12 20.6	-0.8
	comp=E,0.5nm,0.5s,baz=37,slow=7.2,SNR=4.5						
	comp=E,0.5nm,0.5s						
AKASG	Malin Array Be	71.37	360	P	P	15 12 54.6	+2.0
	comp=E,0.2nm,0.4s,baz=8.5,slow=6.9,SNR=2.2						
	comp=E,0.2nm,0.4s						

NEIC ***07*** *15:07:34.9±0.7, 35°.739N±0°.006×97°.55W±0°.01, h8^{km}±4^{km}, mb_Lg2.2/16, ML2.4/27, ML2.5/44, Error ellipse: s-maj=1.5km s-min=0.5km az=124.0*

NEIC 07 15:07:34.8±0.5, **35°.734N**±0°.008×**97°.56W**±0°.01, **h7**^{km}±1^{km}, **Error ellipse: s-maj=1.3km s-min=1.3km az=83.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCOK	Bluff Creek, N	0.09	207		Pg	15 07 37.0	+0.2
BCOK					Sg	15 07 38.7	+0.5
OK029	Liberty Lake	0.11	54		Pg	15 07 37.6	+0.4
OK029					Sg	15 07 39.7	+0.9

OK029				IAML		15 07 39.8	
	1µm,0.3s						
OK029				IAML		15 07 39.8	
	2µm,0.3s						
ADOK	Arcadia Dam	0.17	118		Pg	15 07 38.0	-0.3
OK004	Okla Sci Mus	0.22	162		Pg	15 07 39.6	+0.4
OK004					Sg	15 07 43.4	+1.2
OKCSW	OKLAHOMA CITY	0.34	163		Pg	15 07 40.1	-1.4
OKCSW					Sg	15 07 47.0	+1.0
OKCSW				IAML		15 07 47.5	
	comp=N,392nm,0.4s						
OKCSW				IAML		15 07 49.8	
	comp=E,740nm,0.3s						
FNO	Franklin	0.49	165		Pg	15 07 44.5	+0.2
FNO					Sg	15 07 51.8	+1.1
FNO				IAML		15 07 52.2	
	comp=E,244nm,0.3s						
OK052	Battle Ridge R	0.67	67		Pg	15 07 47.8	+0.1
OK052					Sg	15 07 57.0	+0.6
OK052				IAML		15 07 57.4	
	comp=E,196nm,0.2s						
QUOK	Quay	0.82	57		Pg	15 07 50.3	-0.2
QUOK					Sg	15 08 01.7	+0.6
QUOK				IAML		15 08 04.3	
	comp=N,156nm,0.1s						
QUOK				IAML		15 08 08.0	
	comp=E,137nm,0.2s						
CROK	Carrier	0.84	336		Pg	15 07 50.8	-0.2
CROK					Sg	15 08 02.4	+0.4
CROK				IAML		15 08 02.8	
	comp=N,207nm,0.3s						
DEOK	Depew	0.87	83		Pg	15 07 51.0	-0.5
DEOK					Sg	15 08 03.3	+0.4
DEOK				IAML		15 08 06.1	
	comp=N,175nm,0.5s						
DEOK				IAML		15 08 10.1	
	comp=E,139nm,0.2s						
CSTR	Hydro, Custer	0.92	265		Pg	15 07 52.5	0.0
CSTR					Sb	15 08 05.5	-0.2
OK051	E0350 and S346	0.97	37		Pg	15 07 53.2	-0.2
OK051					Sb	15 08 06.9	-0.1
OK051				IAML		15 08 14.2	
	comp=E,181nm,0.2s						
GC02	Grant County #	1.14	348		Pg	15 07 56.1	-0.7
X34A	Smith Ranch, M	1.15	191		Pg	15 07 56.7	-0.2
X34A				IAML		15 08 13.9	
	comp=N,145nm,0.5s						
OK038	West end E0370	1.21	308		Pg	15 07 57.2	-0.9
WMOK	Wichita Mounta	1.41	226		Pn	15 08 00.6	-0.4
TUL3	Leonard	1.45	82	Pn	Pn	15 08 00.4	-1.1
TUL3				IAmb_Lg		15 08 23.9	
	comp=Z,19nm,0.9s						
T35A	Sooner Cattle	1.45	35		Pn	15 08 01.4	-0.2
RLO	Rose Lookout	2.10	77		Pn	15 08 11.8	+1.4
SMWD	Samnorwood	2.28	255		Pn	15 08 12.3	-0.6
SMWD				IAmb_Lg		15 08 47.4	
	comp=Z,7.3nm,0.7s						
DKNS	Dickens	3.45	234	IAmb_Lg		15 09 26.4	
	comp=Z,6.0nm,0.9s						
MIAR	Mount Ida	3.47	109	IAmb_Lg		15 09 28.2	
	comp=Z,9.7nm,1.1s						
CBKS	Cedar Bluff	3.53	331	IAmb_Lg		15 09 35.5	
	comp=Z,8.0nm,0.7s						
BRDY	Brady	4.60	196	IAmb_Lg		15 10 03.4	
	comp=Z,4.4nm,0.9s						
DRIO	Del Rio	6.80	203	IAmb_Lg		15 11 20.5	
	comp=Z,4.3nm,0.9s						

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*KRNET **07** 15:37:46.3±0.1, 42°.35N×70°.67E, h10^{km}, mb3.0*

*SOME **07** 15:37:46.1, 42°.30N×70°.63E, h10^{km}*

*NNC **07** 15:37:46.2±0.4, 42°.39N×70°.63E, h0^{km}, mb3.3, mpv3.0, Error ellipse: s-maj=3.7km s-min=2.3km az=161.0*

*ISU **07** 15:37:48, 42°.36N×70°.51E, h10^{km}*

ISC 07 15:37:45.8±1.0, **42°.36N**±0°.02×**70°.66E**±0°.02, **h7**^{km}±10^{km}, **n31**, σ**1^{s}48**/55, **21C-1D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	0.51	246	P	Pg	15 37 56.0	+0.3
	42nm,0.1s						
IUG				S	Sg	15 38 03.4	+0.9
	763nm,0.3s						
IUG	Iuzhnay	0.51	246	eP	Pg	15 37 56.0	+0.3
IUG				eS	Sg	15 38 03.4	+0.9
DZA	Taraz	0.73	43	eP	Pg	15 38 00.3	+0.5
DZA				eS	Sg	15 38 10.5	+1.2
DZA	Taraz	0.73	43	eP	Pg	15 38 00.3	+0.5
	64nm,0.1s						
DZA				eS	Sg	15 38 10.5	+1.2
	503nm,0.2s						
KK31	Karatay Array	0.75	352	⇓P	Pg	15 38 00.7	+0.4
	2.5nm,0.1s,baz=177,slow=16,SNR=513						
KK31				⇑S	Sg	15 38 10.4	+0.3
	16nm,0.2s,baz=170,slow=29,SNR=76						
KKAR	Karatay Array	0.75	352	⇑iP	Pg	15 38 00.6	+0.3
KKAR				⇑iS	Sg	15 38 11.3	+1.2
CHRV	Charvak	0.89	217	P	Pg	15 38 02.9	-0.1
CHRV				S	Sg	15 38 14.1	-0.4
BRLS	Borolday	0.90	318	P	Pg	15 38 01.6	-1.6
	9.9nm,0.2s						
BRLS				S	Sg	15 38 12.8	-2.1
	62nm,0.2s						
BRLS	Borolday	0.90	318	eP	Pg	15 38 01.6	-1.6
BRLS				eS	Sg	15 38 12.8	-2.1
BRLS	Borolday	0.90	318	eP	Pg	15 38 01.6	-1.6
	9.9nm,0.2s						
BRLS				eS	Sg	15 38 12.8	-2.1
	62nm,0.2s						
TRKS	Terek-Say	0.90	156	⇑iP	Pn	15 38 04.9	-0.2
TRKS				⇑iS	Sn	15 38 18.0	-0.5
CHMG	Chimgan	0.94	211	P	Pg	15 38 03.9	0.0
CHMG				S	Sg	15 38 16.0	-0.2
ARK	Arkit	1.12	120	⇑eP	Pg	15 38 07.2	-0.1
ARK				⇑eS	Sn	15 38 23.3	-0.5
TGS	TashGRES	1.27	223	S	Sn	15 38 30.4	+3.2
MNAS	Manas	1.37	84	⇑iP	Pb	15 38 12.1	+0.2
MNAS				⇑iS	Sg	15 38 30.7	+0.8
MRKS	Merke	1.94	78	Pg	Pg	15 38 22.7	-0.2
	5.2nm,0.4s						
MRKS				Lg	Lg	15 38 49.3	
	15nm,0.3s						
MRKS	Merke	1.94	78	eP	Pg	15 38 22.7	-0.2
	5.2nm,0.4s						
MRKS				eS	Sg	15 38 49.2	+1.3
	15nm,0.3s						
ARSB	Arslanbob	2.02	120	⇑eP	Pb	15 38 22.9	-0.1
ARSB				⇑eS	Sg	15 38 50.1	-0.6
FRG	Fergana	2.16	157	S	Sg	15 38 56.5	+1.4
CHMI	Chimion	2.19	162	P	Pg	15 38 28.7	+0.9
CHMI				S	Sg	15 38 56.7	+0.6
AML	Almayashu	2.26	95	⇑iP	Pb	15 38 26.8	-0.5
AML				⇑iS	Sb	15 38 56.2	+0.6
BTK	Batken	2.30	177	⇑iP	Pb	15 38 26.9	-0.8
BTK				⇑iS	Sb	15 38 56.4	0.0
ARLS	Aral	2.77	99	⇑eP	Pb	15 38 33.6	-2.2
ARLS				⇑eS	Sb	15 39 08.2	-1.8
SALK	Salom-Alik	2.79	121	⇑eP	Pb	15 38 33.9	-2.2
SALK				⇑iS	Sb	15 39 08.5	-2.1
DRK	Karamyk	3.00	163	⇑eP	Pn	15 38 36.5	+2.4
DRK				⇑eS	Sb	15 39 14.1	-2.7
SGDS	Sogindy	3.11	68	Pg	Pb	15 38 42.8	+1.2
	1.4nm,0.4s						
SGDS				Lg	Lg	15 39 23.5	
	3.4nm,0.3s						
BTLS	Baital	3.63	41	Pg	Pb	15 38 52.5	+2.2
	1.5nm,0.3s						
BTLS				Lg	Lg	15 39 40.5	
	1.0nm,0.4s						
BTLS	Baital	3.63	41	eP	Pb	15 38 52.5	+2.2
	1.5nm,0.3s						
BTLS				eS	Sg	15 39 40.5	-2.1
	1.0nm,0.4s						
DGS	Degeres	3.86	75	Pg	Pb	15 38 56.9	+2.5
	1.0nm,0.6s						
DGS				Lg	Lg	15 39 47.8	
	5.5nm,0.2s						
KST	Kastek	3.97	78	Pg	Pg	15 38 59.4	-2.4
	1.2nm,0.4s						
KST				Lg	Lg	15 39 52.0	
	3.9nm,0.6s						
KST	Kastek	3.97	78	eP	Pg	15 38 59.4	-2.4
	1.2nm,0.4s						
KST				eS	Sg	15 39 52.0	-1.2
	3.9nm,0.6s						

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*ISN **07** 15:53:42.6±0.8, 33°.64N×45°.62E, h3^{km}±4^{km}, ML3.2*

*TEH **07** 15:53:44.4, 33°.68N×45°.70E, h10^{km}±58^{km}*

ISC 07 15:53:43.2±1.6, **33°.68N**±0°.03×**45°.66E**±0°.05, **h0**^{km}±16^{km}, **n13**, σ**0^{s}79**/18, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILBA	Ilam Banvizeh	0.46	96	Pg	Pg	15 53 52.9	+0.8
GLG1	Gilan-e-Gharb	0.49	26	Pg	Pg	15 53 52.6	0.0
IBDR	Badra	0.61	158	ePg	Pg	15 53 55.0	+0.1
IBDR				eSg	Sg	15 54 03.0	+0.2
KGS1	Ghasr-e-Shirin	0.83	356	Pg	Pn	15 54 01.5	-0.7
KGS1				Sg	Sb	15 54 12.7	+0.3
IGHG	Ghaleghazi	1.00	49	Pg	Pn	15 54 04.6	-0.2
BHD	Baghdad	1.14	250	ePn	Pn	15 54 07.0	+0.6
BHD				eSn	Sn	15 54 24.0	+1.3
IDHR	Dehrash	1.19	30	Pg	Pn	15 54 07.4	0.0
KCHF	Cheshme Sefid,	1.30	62	Pg	Pg	15 54 09.1	+1.0
ILIN	Lien	1.65	41	Pg	Pb	15 54 14.2	-0.4
RAFI	Al-Rafai	1.98	169	ePn	Pb	15 54 19.0	-1.2
RAFI				eSn	Sb	15 54 45.0	-0.5
IBZA	Bozab	1.99	66	Pn	Pb	15 54 19.6	-1.0
SNQR	Sonqor, Kerman	2.02	54	Pn	Pb	15 54 20.2	-0.7
IKRK	Kirkuk	2.04	328	epn	Pb	15 54 20.0	-1.1
IKRK				eSn	Sb	15 54 47.0	0.0
IKRK				AML	AML	15 54 52.2	
	comp=E,206nm,0.6s						
IKRK				AML	AML	15 54 52.6	
	comp=N,274nm,0.2s						

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*CNRM **07** 16:21:01.9, 35°.57N×3°.81W, h14^{km}, ML2.9*

*MDD **07** 16:21:03.6±0.9, 35°.39N×3°.87W, h4^{km}±6^{km}, mb_Lg2.7/8, Error ellipse: s-maj=7.2km s-min=4.3km az=0.0*

*SFS **07** 16:21:04.2, 35°.32N×3°.83W, h32^{km}, ML2.8/5, ML2.6/7, MLv2.4/7*

*INMG **07** 16:21:07.1±1.1, 35°.44N×3°.77W, h31^{km}±11^{km}, ML2.1, Error ellipse: s-maj=4.3km s-min=3.2km az=99.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NE Al Hoceima (MARR)*

ISC 07 16:21:03.8±1.0, **35°.43N**±0°.02×**3°.80W**±0°.03, **h21**^{km}±3^{km}, **n42**, σ**1^{s}27**/55, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	Palemas	0.24	207	P	Pb	16 21 09.3	-0.6
PALE	Palemas	0.24	207	S	Sb	16 21 14.6	+0.6
GOG	Mont Gurugu	0.69	108	P	Pb	16 21 16.8	-0.5
GOG	Mont Gurugu	0.69	108	S	Sb	16 21 27.0	+0.6
WMELI	Melilla	0.70	99	Pg	Pn	16 21 17.2	-1.3
WMELI				Sg	Sb	16 21 27.1	+0.5
AKLM	AKL	0.92	183	P	Pn	16 21 20.7	-0.9
AKLM	AKL	0.92	183	S	Sb	16 21 34.1	+1.2
TAF	Taforalt	1.29	118	P	Pn	16 21 26.3	-0.4
TAF	Taforalt	1.29	118	S	Sb	16 21 45.3	+1.6
CHEFC	Chefchaouen	1.30	256	P	Pn	16 21 26.2	-0.7
SMIR	Smir Dam	1.31	281	P	Pn	16 21 25.7	-1.2
SMIR	Smir Dam	1.31	281	S	Sb	16 21 44.2	+0.2
ECEU	Ceuta	1.36	290	Sn	Sn	16 21 42.7	-2.4
ECEU				Pn	Pn	16 21 26.5	-1.1
ECEU	Ceuta	1.36	290	Pn	Pn	16 21 26.6	-1.0
ECEU				Sn	Sn	16 21 43.6	-1.5
ECEU				i IVmb_Lg		16 21 46.8	
EMIJ	Mijas	1.38	325	Pn	Pn	16 21 27.5	-0.4
EMIJ	Mijas	1.38	325	Pn	Pn	16 21 27.0	-0.9
EMIJ				Sn	Sb	16 21 45.8	-0.2
EMIJ				i IVmb_Lg		16 21 50.8	
EMAL	Malaga-Limoner	1.42	339	Sn	Sn	16 21 46.5	0.0
JBK	JBK	1.49	137	P	Pn	16 21 29.1	-0.5
JBK	JBK	1.49	137	S	Sb	16 21 50.5	+0.9
EJIF	Jimena Fronter	1.69	307	Pn	Pb	16 21 33.8	-0.4
EJIF				Sn	Sn	16 21 53.7	+0.5
EGOR	Sierra Gorda,	1.69	352	Sn	Sn	16 21 52.7	-0.7
EGOR				Pg	Pb	16 21 33.7	-0.6
EGOR	Sierra Gorda,	1.69	352	Pn	Pb	16 21 33.8	-0.5
EGOR				Sn	Sb	16 21 55.1	-0.1
EGOR				i IVmb_Lg		16 22 02.6	
EQTA	Presa de Quent	1.79	9	Sn	Sn	16 21 56.6	+0.7
LCRM	LCR	1.95	207	P	Pb	16 21 38.3	-0.4
ENIJ	Nijar	2.00	40	Sn	Sn	16 21 59.5	-1.5
ENIJ				Pn	Pn	16 21 37.1	+0.6
ENIJ	Nijar	2.00	40	Pn	Pn	16 21 37.4	+0.9
ENIJ				Sn	Sn	16 22 00.2	-0.8
ENIJ				i IVmb_Lg		16 22 00.8	
E0803	Jimena (Jaen)	2.41	6	Sn	Sb	16 22 14.6	-1.2
EQES	Quesada	2.44	14	Pn	Pb	16 21 45.4	-1.6
EQES				Sn	Sb	16 22 14.8	-1.8
EQES				i IVmb_Lg		16 22 18.5	
CZD	Col de Zad	2.61	204	P	Pn	16 21 45.5	+0.5
CZD	Col de Zad	2.61	204	S	Sb	16 22 19.2	-2.4
MD31	MD31	2.68	197	P	Pn	16 21 46.4	+0.6
MDT	Midelt	2.70	195	P	Pn	16 21 46.8	+0.7
PVAQ	Vaqueiros	3.72	303	eP	Pn	16 22 02.2	+2.1
PBAR	Barrancos	3.77	317	eP	Pn	16 22 02.3	+1.6
PBAR				eS	Sn	16 22 44.9	+0.3
PBAR				i AML	AML	16 22 49.4	
PBAR				i AML	AML	16 22 49.5	
PBAR				i AML	AML	16 22 50.7	
PBDV	Barranco-do-Ve	3.79	300	eP	Pn	16 22 01.8	+0.8
PBDV				eS	Sn	16 22 45.0	0.0
PBDV				i AML	AML	16 22 48.4	
PBDV				i AML	AML	16 22 53.8	
PBDV				i AML	AML	16 22 54.0	
MESJ	Messejana	4.29	305	eS	Sn	16 22 56.7	-0.6
MESJ				i AML	AML	16 23 00.9	
MESJ				i AML	AML	16 23 02.9	
MESJ				i AML	AML	16 23 05.2	
PMRV	Marv??o	4.91	325	eP	Pn	16 22 18.6	+2.2
PMTG	Montargil	5.06	317	eP	Pn	16 22 20.8	+2.3
PMTG				eS	Sn	16 23 17.0	+0.7
OUZM	OUZ	5.15	210	P	Pn	16 22 22.4	+2.5
PARRA	Arraiolos	5.38	310	eP	Pn	16 22 16.8	-6.0
PARRA				eS	Sn	16 23 08.3	-16
PARRA				i AML	AML	16 23 12.2	
PARRA				i AML	AML	16 23 13.3	
PARRA				i AML	AML	16 23 18.8	
PSARD	Sardoal	5.41	321	eP	Pn	16 22 25.9	+2.6
PSARD				eS	Sn	16 23 25.4	+0.3
MVO	Moncorvo	6.26	337	eP	Pn	16 22 37.5	+2.5

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*THE **07** 16:24:08.8, 41°N±1°×2°1E±°, h0^{km}±2^{km}, M2.3/6, MLh2.3/6*

*TIR **07** 16:24:08.4, 40°.55N×20°.68E, h16^{km}±2^{km}, Md3.1/5, Ml2.4/7*

*SKO **07** 16:24:12.7, 40°.67N×20°.79E, h8^{km}, ML2.1*

*ATH **07** 16:24:12.0, 40°.52N×20°.91E, h10^{km}±1^{km}, Manual Solution by A.Andreou First location: 2019/06/07 16:25:22, This location: 2020/08/12 10:57:00 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*

ISC 07 16:24:10.1±0.8, **40°.59N**±0°.02×**20°.77E**±0°.02, **h9**^{km}±5^{km}, **n37**, σ**1^{s}31**/52, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.03	27	Pg	Pg	16 24 11.7	-0.3
KBN				Sg	Sg	16 24 13.2	-0.1
KBN				AML	AML	16 24 14.5	
	18nm,0.3s						
KBN	Korca	0.03	27	P	Pg	16 24 11.6	-0.4
KBN				S	Sg	16 24 13.8	+0.5
NEST	Nestorio	0.28	130	Pg	Pg	16 24 15.4	-0.3
NEST				Sg	Sg	16 24 20.4	+0.9
NEST				AML	AML	16 24 23.6	
	1.4nm,0.2s						
NEST				AMd		16 25 02.3	
NEST	Nestorio	0.28	130	P	Pg	16 24 15.8	+0.1
NEST				S	Sb	16 24 21.4	-0.7
NEST	Nestorio	0.28	130	P	Pg	16 24 15.8	+0.1
PENT	Pentalofos	0.49	144	P	Pg	16 24 19.3	-0.3
PENT	Pentalofos	0.49	144	P	Pg	16 24 19.3	-0.3
PENT				S	Sg	16 24 24.6	-1.4
OHR	Ohrid	0.52	3	P	Pg	16 24 19.7	-0.5
OHR				S	Sb	16 24 27.3	-1.8
OHR	Ohrid	0.52	3	i Pg	Pb	16 24 21.2	-0.2
OHR				i Sg	Sb	16 24 27.8	-1.2
OHR				eLg	Lg	16 24 28.3	
	comp=E,178nm,0.5s						
OHR				eLg	Lg	16 24 28.4	
	comp=N,75nm,0.4s						
KPRO	Kipourio	0.78	144	P	Pg	16 24 24.8	-0.4
KPRO				S	Sg	16 24 34.0	-1.4
KZN	Kozani	0.82	110	P	Pg	16 24 25.6	-0.1
KZN				S	Sn	16 24 39.5	-0.6
KZN	Kozani	0.82	110	P	Pg	16 24 25.7	-0.1
SRN	Sarande	0.92	220	Pg	Pg	16 24 25.5	-2.3
SRN				Sg	Sg	16 24 38.5	-1.3
SRN				AML	AML	16 24 42.6	
	comp=N,0.1nm,0.3s						
SRN				AMd		16 25 17.0	
TIR	Tirane	1.02	318	P	Pn	16 24 34.0	+3.5
KTI	Kastanea	1.05	101	P	Pb	16 24 30.1	-0.3
IGT	Igoumenitsa	1.11	198	Sg	Sg	16 24 43.8	-2.1
IGT				AML	AML	16 24 54.5	
	comp=N,0.1nm,0.5s						
IGT	Igoumenitsa	1.11	198	P	Pg	16 24 30.1	-1.3
IGT	Igoumenitsa	1.11	198	i Pg	Pn	16 24 33.8	+2.0
IGT				i Sg	Sn	16 24 51.1	+3.9
IGT	Igoumenitsa	1.11	198	P	Pn	16 24 33.0	+1.1
KEK	Kerkira	1.15	220	P	Pn	16 24 34.5	+2.2
TETR	Tetrakomo, Epi	1.31	163	P	Pb	16 24 35.5	+0.6
THL	Klokotos Trika	1.40	137	P	Pn	16 24 35.9	+0.1
THL	Klokotos Trika	1.40	137	P	Pn	16 24 36.1	+0.3
LIT	Litokhoron	1.41	110	P	Pb	16 24 36.4	-0.1
LIT	Litokhoron	1.41	110	i Pg	Pg	16 24 36.8	-0.2
LIT				i Sg	Sg	16 24 58.7	+3.5
LIT	Litokhoron	1.41	110	P	Pn	16 24 36.0	+0.1
TYRN	Tyrnavos	1.43	128	P	Pn	16 24 36.4	+0.2
PUK	Puka	1.59	336	Pn	Pn	16 24 38.3	-0.2
PUK				Sn	Sg	16 25 01.0	-0.3
PUK				AML	AML	16 25 08.2	
	comp=N,0.2nm,0.6s						
PUK				AMd		16 25 41.1	
KNT	Kendrikon	1.71	70	P	Pb	16 24 40.5	-1.2
TSLK	Tsoukalades, L	1.77	183	P	Pn	16 24 41.9	+1.0
HORT	Hortiatis	1.77	89	P	Pb	16 24 41.6	-1.2
LKD2	Lefkada island	1.81	183	Pn	Pn	16 24 41.5	+0.1
LKD2				Sn	Sn	16 25 05.1	+0.7
LKD2				AML	AML	16 25 12.1	
	comp=N,0.1nm,1.0s						
LKD2				AMd		16 25 50.3	
LKD2	Lefkada island	1.81	183	P	Pn	16 24 42.5	+1.1
SCTE	Santa Cesarea	1.83	254	Pn	Pn	16 24 41.3	-0.5
SCTE				Sn	Sn	16 25 05.9	+0.9
SCTE				AML	AML	16 25 09.6	
	comp=N,0.1nm,0.3s						
SCTE				AMd		16 25 53.1	
SCTE	Santa Cesarea	1.83	254	P	Pb	16 24 44.6	+0.8
AGG	Agios Georgios	1.98	142	P	Pn	16 24 44.2	+0.4
PLG	Polygyros	2.05	95	P	Pn	16 24 45.1	+0.3

IDC 07 16:25:11.7±8.3, **6°.07S**×**129°.83E**, **h137**^{km}±84^{km}, **mb2.8**/1, **mbtmp3.6**/5, **Error ellipse: s-maj=80.8km s-min=25.0km az=54.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	10.09	275	P	Pn	16 27 33.4	+0.3
	7.0nm,0.7s,baz=72,slow=20,SNR=2.4						
FITZ	Fitzroy Crossi	12.64	199	P	Pn	16 28 07.8	+1.1
	9.8nm,1.3s,baz=22,slow=19,SNR=1.1						
FITZ				S	Sn	16 30 22.5	-3.7
	5.4nm,1.1s,baz=242,slow=23,SNR=2.4						
WRA	Warramunga Arr	14.47	163	P	Pn	16 28 30.6	+0.4
	0.3nm,0.8s,baz=347,slow=12,SNR=5.9						
WRA				S	Sn	16 31 07.6	-2.9
	0.5nm,1.1s,baz=347,slow=15,SNR=1.5						
ASAR	Alice Springs	17.93	168	P	Pn	16 29 12.7	+0.1
	0.6nm,0.6s,baz=347,slow=9.7,SNR=14						
MKAR	Makanchi Array	67.36	327	P	P	16 35 51.7	-0.5
	0.2nm,0.6s,baz=108,slow=5.8,SNR=2.1						
	0.2nm,0.6s						

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*CNRM **07** 16:35:45.8, 35°.52N×3°.83W, h20^{km}, ML3.1*

*SFS **07** 16:35:46.2, 35°.42N×3°.89W, h0^{km}, ML3.0/7, ML2.8/9, MLv2.7/9*

*MDD **07** 16:35:46.9±0.6, 35°.39N×3°.83W, h5^{km}±5^{km}, mb_Lg2.8/18, Error ellipse: s-maj=4.7km s-min=3.3km az=162.0*

*IGIL **07** 16:35:47.3, 35°.39N×3°.83W, h0^{km}, ML2.6*

*INMG **07** 16:35:49.4±1.6, 35°.43N×3°.87W, h16^{km}±9^{km}, ML2.5, Error ellipse: s-maj=4.8km s-min=4.2km az=110.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NE Al Hoceima (MARR)*

ISC 07 16:35:47.0±1.1, **35°.42N**±0°.03×**3°.82W**±0°.03, **h18**^{km}±5^{km}, **n72**, σ**1^{s}35**/105, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	Palemas	0.23	206	P	Pg	16 35 51.7	-0.6
PALE	Palemas	0.23	206	S	Sg	16 35 57.5	+1.5
GOG	Mont Gurugu	0.70	106	P	Pg	16 36 00.1	-0.7
GOG	Mont Gurugu	0.70	106	S	Sg	16 36 10.7	+0.6
WMELI	Melilla	0.72	98	Pg	Pg	16 35 59.5	-1.5
WMELI				Sg	Sg	16 36 09.5	-1.1
AKLM	AKL	0.91	182	P	Pb	16 36 04.0	-0.2
AKLM	AKL	0.91	182	S	Sb	16 36 16.6	+0.5
CHEFC	Chefchaouen	1.28	256	P	Pn	16 36 09.0	-1.1
SMIR	Smir Dam	1.30	282	P	Pn	16 36 08.7	-1.5
SMIR	Smir Dam	1.30	282	S	Sb	16 36 26.4	-0.8
TAF	Taforalt	1.30	117	P	Pn	16 36 10.2	-0.1
TAF	Taforalt	1.30	117	S	Sn	16 36 27.1	-0.2
ECEU	Ceuta	1.35	291	Sg	Sn	16 36 25.6	-2.9
ECEU				Pg	Pn	16 36 09.7	-1.3
ECEU	Ceuta	1.35	291	Pn	Pn	16 36 09.9	-1.1
ECEU				Sn	Sn	16 36 26.7	-1.8
ECEU				i IVmb_Lg		16 36 28.6	
EMIJ	Mijas	1.38	326	Pn	Pn	16 36 10.1	-1.3
EMIJ				Sg	Sn	16 36 27.3	-1.8
EMIJ	Mijas	1.38	326	Pn	Pn	16 36 10.5	-0.9
EMIJ				Sn	Sn	16 36 28.1	-1.0
EMIJ				i IVmb_Lg		16 36 34.0	
JBK	JBK	1.50	136	P	Pn	16 36 12.3	-0.8
EJIF	Jimena Fronter	1.69	308	Pn	Pn	16 36 16.9	+1.3
EJIF				Sn	Sn	16 36 36.8	+0.1
EGOR	Sierra Gorda,	1.70	352	Pn	Pn	16 36 15.9	0.0
EGOR	Sierra Gorda,	1.70	352	Pn	Pn	16 36 16.3	+0.4
EGOR				Sn	Sn	16 36 37.4	+0.1
EGOR				i IVmb_Lg		16 36 43.2	
EQUE	Quentar	1.81	10	Pn	Pn	16 36 19.0	+1.7
EQUE				Sn	Sn	16 36 40.4	+0.5
EQUE				i IVmb_Lg		16 36 42.9	
EQTA	Presa de Quent	1.81	10	Pn	Pn	16 36 18.6	+1.3
EQTA				Sn	Sn	16 36 39.5	-0.3
LCRM	LCR	1.93	207	P	Pn	16 36 20.9	+1.8
LCRM	LCR	1.93	207	S	Sb	16 36 47.5	+1.9
ENIJ	Nijar	2.02	40	Sn	Sn	16 36 43.7	-1.4
ENIJ				i IVmb_Lg		16 36 43.9	
IFR	Ifrane	2.19	210	Pn	Pn	16 36 22.9	+0.3
IFR				Sn	Sn	16 36 48.5	-0.8
ESPR	Espera	2.19	312	Sn	Sn	16 36 51.5	+2.4
ESPR				i IVmb_Lg		16 36 58.0	
E0803	Jimena (Jaen)	2.42	7	Sn	Sn	16 36 57.1	+2.1
EQES	Quesada	2.45	14	Pn	Pn	16 36 28.3	+2.1
EQES				Sn	Sn	16 36 58.0	+2.3
EQES				i IVmb_Lg		16 37 01.7	
CZD	Col de Zad	2.59	203	P	Pn	16 36 27.9	-0.4
MD31	MD31	2.67	197	P	Pn	16 36 30.0	+0.9
MD31	MD31	2.67	197	S	Sn	16 37 01.9	+0.9
MDT	Midelt	2.68	194	P	Pn	16 36 30.2	+0.8
EADA	Adamuz	2.81	348	Pn	Pn	16 36 32.0	+1.1
EADA	Adamuz	2.81	348	Pn	Pn	16 36 32.4	+1.4
EADA				Sn	Sn	16 37 06.2	+1.8
EADA				i IVmb_Lg		16 37 19.9	
ECAB	El Cabril	2.94	335	Pn	Pn	16 36 34.2	+1.4
ECAB				Sn	Sn	16 37 08.7	+1.0
ECAB	El Cabril	2.94	335	Pn	Pn	16 36 33.7	+0.9
ECAB				Sn	Sn	16 37 08.3	+0.5
ECAB				i IVmb_Lg		16 37 17.2	
ZHG	ZHG	3.05	231	P	Pn	16 36 36.3	+1.9
CART	Cartagena	3.13	46	P	Pn	16 36 34.5	-1.0
CART	Cartagena	3.13	46	S	Sn	16 37 08.7	-3.7
EMIN	Mina Concepcio	3.28	316	Pn	Pn	16 36 37.2	-0.3
EMIN				Sn	Sn	16 37 15.4	-0.6
EMIN				i IVmb_Lg		16 37 20.3	
PSIM	Granatula de C	3.39	1	Pn	Pn	16 36 40.8	+1.7

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PSIM                              Sn        Sn     16 37 19.1 +0.2
EGRO  El Granado        3.63 307  Pn        Pn     16 36 42.9 +0.7
EGRO                              Sn        Sn     16 37 22.5 -2.1
EGRO  El Granado        3.63 307  Pn        Pn     16 36 42.2  0.0
EGRO                              Sn        Sn     16 37 23.6 -1.0
EGRO                             i IVmb_Lg         16 37 26.6
PVAQ  Vaqueiros         3.71 303 eP         Pn     16 36 44.1 +0.7
PVAQ                             i AML      AML    16 37 27.2
PVAQ  Vaqueiros         3.71 303  P         Pn     16 36 41.3 -2.1
PVAQ  Vaqueiros         3.71 303  S         Sn     16 37 26.4 -0.3
PBAR  Barrancos         3.77 318 eP         Pn     16 36 45.1 +0.9
PBAR                             eS         Sn     16 37 27.4 -0.8
PBAR                             i AML      AML    16 37 30.7
PBAR                             i AML      AML    16 37 33.8
PBAR                             i AML      AML    16 37 33.9
PBDV  Barranco-do-Ve    3.78 300 eP         Pn     16 36 45.7 +1.3
PBDV                             eS         Sn     16 37 28.0 -0.5
PBDV                             i AML      AML    16 37 30.8
PBDV                             i AML      AML    16 37 31.1
PBDV                             i AML      AML    16 37 33.3
PAB   San Pablo         4.14 354  Pn        Pn     16 36 50.7 +1.4
PAB                               Sn        Sn     16 37 35.7 -1.7
PBEJ  Beja              4.16 310 eP         Pn     16 36 51.4 +1.8
PBEJ                             eS         Sn     16 37 37.8  0.0
PBEJ                             i AML      AML    16 37 41.4
PBEJ                             i AML      AML    16 37 41.7
PBEJ                             i AML      AML    16 37 42.2
EBAD  Badajoz           4.19 323  Pn        Pn     16 36 50.2 +0.1
EBAD                              Sn        Sn     16 37 37.2 -1.4
EBAD                             i IVmb_Lg         16 37 44.7
MESJ  Messejana         4.28 306 eP         Pn     16 36 51.9 +0.6
MESJ                             eS         Sn     16 37 39.3 -1.5
MESJ                              IAML             16 37 42.8
      comp=N,7.9nm,0.2s
MESJ  Messejana         4.28 306 eP         Pn     16 36 52.3 +1.1
MESJ                             eS         Sn     16 37 39.8 -0.9
MESJ                             i AML      AML    16 37 44.6
MESJ                             i AML      AML    16 37 46.5
MESJ                             i AML      AML    16 37 46.5
MORF  Marmelete         4.33 297 eS         Sn     16 37 40.3 -1.7
MORF                              IAML             16 37 44.9
      comp=E,19nm,0.4s
MORF  Marmelete         4.33 297 eS         Sn     16 37 40.9 -1.1
MORF                             i AML      AML    16 37 43.6
MORF                             i AML      AML    16 37 45.6
MORF                             i AML      AML    16 37 47.4
PFVI  Vila Bisbo        4.39 294 eS         Sn     16 37 43.4 -0.1
PFVI                             i AML      AML    16 37 44.3
PFVI                             i AML      AML    16 37 44.7
PFVI                             i AML      AML    16 37 45.4
PTEO  Sao Teotonio      4.48 300 eP         Pn     16 36 55.9 +1.9
PTEO                             eS         Sn     16 37 45.6 -0.1
PTEO                             i AML      AML    16 37 49.5
PTEO                             i AML      AML    16 37 49.8
PTEO                             i AML      AML    16 37 50.0
PESTR Estremoz          4.57 320 eP         Pn     16 36 57.5 +2.2
PESTR                            eS         Sn     16 37 46.4 -1.5
PESTR                            i AML      AML    16 37 47.9
PESTR                            i AML      AML    16 37 48.4
PESTR                            i AML      AML    16 37 53.6
EVO   Evora             4.57 314 eP         Pn     16 36 56.8 +1.6
EVO                              eS         Sn     16 37 47.7 -0.2
EVO                              i AML      AML    16 37 48.4
EVO                              i AML      AML    16 37 51.3
EVO                              i AML      AML    16 37 51.7
MOE   Montemor          4.77 312 eP         Pn     16 36 59.5 +1.6
MOE                              eS         Sn     16 37 52.6 -0.1
MOE                              i AML      AML    16 38 02.3
MOE                              i AML      AML    16 38 07.6
MOE                              i AML      AML    16 38 09.9
PMRV  Marv??o           4.91 326 eP         Pn     16 37 01.4 +1.6
PMRV                             eS         Sn     16 37 54.7 -1.4
PMRV                             i AML      AML    16 37 57.2
PMRV                             i AML      AML    16 37 58.5
EPLA  Plasencia         4.97 340  Pn        Pn     16 37 01.6 +0.9
EPLA                              Sn        Sn     16 37 56.5 -1.2
PMTG  Montargil         5.06 317 eP         Pn     16 37 03.1 +1.2
PMTG                             eS         Sn     16 37 58.5 -1.4
PMTG                             i AML      AML    16 38 00.1
PMTG                             i AML      AML    16 38 00.9
PMTG                             i AML      AML    16 38 03.2
OUZM  OUZ               5.13 210  P         Pn     16 37 04.4 +1.4
PCBR  Castelo Branco    5.28 328 eP         Pn     16 37 06.4 +1.5
PCBR                             eS         Sn     16 38 04.0 -1.4
TIO   Tiouine           5.33 214  P         Pn     16 37 06.4 +0.6
PARRA Arraiolos         5.37 311 eP         Pn     16 36 59.0 -7.2
PARRA                            eS         Sn     16 37 51.6  -16
PARRA                            i AML      AML    16 37 54.6
PARRA                            i AML      AML    16 37 56.9
PARRA                            i AML      AML    16 37 57.0
PSARD Sardoal           5.41 322 eP         Pn     16 37 08.1 +1.3
PSARD                            eS         Sn     16 38 07.9 -0.8
PSARD                            i AML      AML    16 38 10.9
PSARD                            i AML      AML    16 38 12.4
PSARD                            i AML      AML    16 38 25.9
MVO   Moncorvo          6.26 337 eP         Pn     16 37 20.6 +2.0
PBRG  Braganca          6.77 341 eP         Pn     16 37 27.7 +2.3
PGAV  Gavieira, Arco    7.40 333 eP         Pn     16 37 36.1 +1.9
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AEIC ***07*** *16:43:25.1±1.6, 69°.57N±0°.05×144°.96W±0°.09, h10^{km}±6^{km}, ML3.3, ML3.3/122(NEIC), Error ellipse: s-maj=7.3km s-min=4.3km az=181.0*

NEIC ***07*** *16:43:26.9±1.2, 69°.64N±0°.05×144°.95W±0°.09, h10^{km}±2^{km}, Error ellipse: s-maj=8.7km s-min=5.0km az=7.0*

IDC ***07*** *16:43:26.2±1.4, 69°.74N×144°.54W, h0^{km}, mb3.6/3, mbtmp3.5/9, ML3.3/6, Error ellipse: s-maj=25.6km s-min=17.5km az=97.0*

ISC 07 16:43:25.8±0.7**, 69°.67N**±0°.04×**144°.93W**±0°.03**, h10**^{km}**, n112,** σ1s**53**/88**, mb3.6**/3**, Northern Alaska**

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Code  Station Name       Δ°  AZ°     Phase ID          Time      Res
                                   Op        ISC    h  m  s     ISC
C26K  Camden Bay        0.25   1            Pg     16 43 32.3 +1.5
C26K                                        Sg     16 43 32.6 -1.6
C26K  Camden Bay        0.25   1   IAML            16 43 39.1
      comp=N,2µm,0.8s
C26K                               IAML            16 43 43.4
      comp=E,3µm,0.7s
C27K  Jago River        0.43  95            Pg     16 43 33.9 -0.2
C27K                               IAML            16 43 42.7
      comp=N,3µm,0.5s
C27K  Jago River        0.43  95            Sg     16 43 40.0 +0.3
D25K  Kavik River       0.62 236            Pg     16 43 35.8 -1.9
D25K  Kavik River       0.62 236            Sg     16 43 43.9 -2.0
C24K  Franklin Bluff    1.32 274            Pn     16 43 50.4 +0.2
C24K  Franklin Bluff    1.32 274   IAML            16 44 11.5
      comp=E,547nm,0.7s
C24K                               IAML            16 44 11.6
      comp=N,614nm,0.4s
D27M  Malcolm River     1.46 105            Pn     16 43 52.3 +0.1
D27M                               IAML            16 44 15.5
      comp=E,448nm,0.6s
D27M                               IAML            16 44 17.1
      comp=N,539nm,0.7s
D27M  Malcolm River     1.46 105            Sb     16 44 13.0 +1.3
D24K  Happy Valley      1.47 251            Pn     16 43 52.8 +0.5
D24K                               IAML            16 44 17.4
      comp=N,568nm,0.7s
D24K  Happy Valley      1.47 251            Sn     16 44 13.1 +1.5
E25K  Arctic Village    1.57 189            Sn     16 44 14.5 +0.4
E27K  Coleen River      1.92 140            Pn     16 43 59.0 +0.6
E27K                               IAML            16 44 27.5
      comp=E,250nm,0.8s
E27K  Coleen River      1.92 140            Sn     16 44 24.2 +1.6
TOLK  Toolik Lake Re    1.96 240            Pb     16 44 02.6 +1.2
TOLK                               IAML            16 44 29.9
      comp=E,294nm,0.7s
TOLK                               IAML            16 44 38.4
      comp=N,271nm,0.8s
C23K  Itkillik River    1.99 277            Pn     16 44 00.3 +0.9
C23K                               IAML            16 44 42.8
      comp=E,334nm,0.7s
F26K  Sheenjek River    2.00 171            Pn     16 44 00.3 +0.7
F26K                               IAML            16 44 31.1
      comp=E,231nm,0.6s
E24K  Your Creek        2.06 221            Pn     16 44 01.2 +0.8
E24K                               IAML            16 44 32.2
      comp=E,226nm,0.6s
F25K  Christian Rive    2.10 188            Pn     16 44 01.4 +0.4
F25K                               IAML            16 44 32.4
      comp=N,237nm,0.8s
D23K  Nanushuk River    2.16 254            Pn     16 44 02.9 +1.1
D23K                               IAML            16 44 48.2
      comp=E,203nm,1.1s
D28M  Stokes Point      2.21  96            Pn     16 44 04.5 +2.1
E28M  Babbage River     2.21 116            Pn     16 44 03.8 +1.4
BMAR  Burnt Mountain    2.25 177            Pn     16 44 03.5 +0.4
E23K  Chandalar         2.35 229            Pn     16 44 05.0 +0.6
E23K                               IAML            16 44 46.1
      comp=N,195nm,0.8s
E23K                               IAML            16 44 47.5
      comp=E,161nm,0.7s
F24K  Squaw Lake        2.42 208            Pn     16 44 06.2 +0.9
G26K  Porcupine Rive    2.77 171            Pn     16 44 10.5 +0.4
G26K  Porcupine Rive    2.77 171   IAML            16 45 02.0
      comp=E,142nm,0.8s
F28M  Old Crow          2.77 136   IAML            16 44 58.8
      comp=N,117nm,0.9s
F28M                               IAML            16 45 02.8
      comp=E,124nm,0.6s
E29M  Blow River        2.84 114            Pn     16 44 12.8 +1.8
E29M                               IAML            16 44 56.6
      comp=E,96nm,0.5s
D22K  Ayikyak River     2.87 258   IAML            16 45 07.2
      comp=E,124nm,1.2s
E22K  Anaktuvuk Pass    2.93 242            Pn     16 44 12.7 +0.3
E22K                               IAML            16 45 10.0
      comp=N,90nm,0.9s
B22K  Teshekpuk Lake    3.00 287            Pn     16 44 14.1 +0.9
FYU   Fort Yukon        3.12 182            Pn     16 44 16.2 +1.3
FYU                                IAML            16 45 11.5
      comp=E,129nm,0.9s
FYU                                IAML            16 45 18.8
      comp=N,104nm,1.0s
G27K  Doyon Strip       3.12 155            Pn     16 44 15.4 +0.4
G24K  Hadweenzic Riv    3.13 199            Pn     16 44 15.3 +0.2
COLD  Coldfoot          3.13 221            Pn     16 44 16.2 +1.2
COLD                               IAML            16 45 15.2
      comp=N,88nm,0.7s
F22K  John River        3.43 234            Pn     16 44 20.1 +0.8
H25L  Birch Creek       3.44 186            Pn     16 44 19.6 +0.4
E21K  Killik River      3.48 253            Pn     16 44 20.3 +0.5
E21K  Killik River      3.48 253   IAML            16 45 31.3
      comp=E,65nm,0.7s
G23K  Bananza Creek     3.53 215            Pn     16 44 21.3 +0.7
G23K  Bananza Creek     3.53 215   IAML            16 45 22.3
      comp=E,85nm,0.8s
G23K                               IAML            16 45 30.6
      comp=N,59nm,0.9s
A22K  Sinclair Lake     3.65 296            Pn     16 44 23.6 +1.5
H27K  Steamboat Moun    3.69 158            Pn     16 44 23.4 +0.6
H27K  Steamboat Moun    3.69 158   IAML            16 45 31.5
      comp=E,60nm,0.8s
G29M  Pine Creek        3.77 134   IAML            16 45 30.1
      comp=N,70nm,1.0s
F30M  Barrier River     3.93 117            Pn     16 44 28.1 +2.0
F30M                               IAML            16 45 40.3
      comp=N,64nm,0.8s
F30M                               IAML            16 45 40.4
      comp=E,59nm,1.0s
F21K  Alatna River      4.00 236            Pn     16 44 27.4 +0.4
F21K  Alatna River      4.00 236   IAML            16 45 35.9
      comp=N,51nm,0.7s
F21K                               IAML            16 45 41.1
      comp=E,47nm,0.9s
H24K  Noodor Dome       4.01 198   IAML            16 45 37.4
      comp=E,40nm,0.9s
PRP   Porcupine Dome    4.18 183            Pn     16 44 29.9 +0.3
PRP                                IAML            16 45 21.2
      comp=N,40nm,0.5s
G30M  tAoh Zraii Nji    4.21 126            Pn     16 44 30.5 +0.6
G30M  tAoh Zraii Nji    4.21 126   IAML            16 45 51.4
      comp=N,32nm,0.8s
H23K  Yukon River       4.24 207   IAML            16 45 51.0
      comp=N,42nm,0.7s
B20K  Meade River       4.25 280            Pn     16 44 31.8 +1.4
B20K                               IAML            16 45 55.3
      comp=E,48nm,1.2s
A21K  Barrow            4.25 298            Pn     16 44 32.1 +1.6
H29M  Whitestone        4.25 141            Pn     16 44 31.4 +0.9
D20K  Etivluk River     4.28 263            Pn     16 44 32.1 +1.3
D20K  Etivluk River     4.28 263   IAML            16 45 58.3
      comp=N,37nm,1.1s
E20K  Nigu River        4.30 256            Pn     16 44 31.7 +0.6
INK   Inuvik            4.33 103   Pn       Pn     16 44 31.5 +0.1
      comp=N,0.9nm,0.3s,baz=300,slow=12,SNR=7.2
INK                                Sn       Sn     16 45 18.8 -3.0
      comp=N,2.0nm,0.3s,baz=69,slow=27,SNR=6.8
      comp=N,1.9nm,0.4s
I26K  Coal Creek Min    4.44 170   IAML            16 45 53.0
      comp=E,37nm,1.0s
G21K  Allakaket         4.51 229   IAML            16 45 53.4
      comp=N,36nm,1.1s
I28M  Miner Creek       4.65 153            Pn     16 44 37.0 +1.0
I28M                               IAML            16 45 33.4
      comp=N,30nm,0.5s
I28M                               IAML            16 46 08.2
      comp=E,28nm,1.1s
F20K  Avaraart Lake     4.78 242            Pn     16 44 38.7 +0.9
F20K  Avaraart Lake     4.78 242   IAML            16 46 06.6
      comp=E,25nm,0.8s
F20K                               IAML            16 46 19.1
      comp=N,27nm,0.8s
I23K  Minto, Yukon-K    4.85 203   IAML            16 46 02.6
      comp=E,31nm,0.7s
I23K                               IAML            16 46 15.9
      comp=N,31nm,1.1s
D19K  Kuna River        4.87 262   IAML            16 46 27.3
      comp=N,31nm,1.1s
IL31                    4.98 190            Pn     16 44 41.0 +0.6
ILAR  Eielson Array     4.98 190            Pn     16 44 41.5 +1.1
ILAR  Eielson Array     4.98 190   Pn       Pn     16 44 40.8 +0.3
      comp=N,0.7nm,0.3s,baz=3.1,slow=12,SNR=32
ILAR                               Sn       Sn     16 45 38.9 +0.8
      comp=N,1.7nm,0.3s,baz=4.7,slow=23,SNR=7.1
      comp=N,2.8nm,0.6s
IMAR  Indian Mountai    4.98 226            Pn     16 44 41.3 +0.8
I29M  Ogilvie Camp,     5.02 146   IAML            16 45 40.5
      comp=N,30nm,0.6s
I29M                               IAML            16 46 17.4
      comp=E,24nm,1.1s
H21K  Melozitna Rive    5.02 220   IAML            16 46 11.6
      comp=E,20nm,0.8s
H21K                               IAML            16 46 19.0
      comp=N,18nm,1.2s
E19K  Redstone River    5.03 250   IAML            16 46 25.0
      comp=E,28nm,0.9s
C19K  Lookout Ridge     5.21 271   IAML            16 45 46.9
      comp=E,15nm,0.5s
J26L  Joseph Creek      5.22 174            Pn     16 44 44.6 +0.7
J26L  Joseph Creek      5.22 174   IAML            16 45 48.3
      comp=E,18nm,0.6s
J26L                               IAML            16 45 52.0
      comp=N,18nm,0.7s
HDA   Harding Lake      5.34 189            Pn     16 44 46.1 +0.6
HDA   Harding Lake      5.34 189   IAML            16 46 21.1
      comp=E,23nm,0.9s
NEA2  Nenana            5.35 200   IAML            16 45 50.6
      comp=N,15nm,0.5s
NEA2                               IAML            16 46 19.3
      comp=E,15nm,1.1s
WRH   Wood River Hil    5.37 195   IAML            16 46 19.0
      comp=N,16nm,0.8s
WRH                                IAML            16 46 20.0
      comp=E,17nm,1.1s
C18K  Utukok River      5.89 268            Pn     16 44 53.5 +0.5
K24K  Donnelly Dome     5.90 184            Pn     16 44 53.7 +0.5
RIDG  Independent Ri    5.96 180            Pn     16 44 54.9 +1.0
H19K  Roundabout Mou    6.05 232            Pn     16 44 55.0 -0.1
DOT   Dot Lake          6.06 176            Pn     16 44 56.1 +0.8
K29M  Barlow Dome       6.54 150            Pn     16 45 02.9 +0.9
DHY   Denali Highway    6.70 190            Pn     16 45 05.7 +1.6
PAX   Paxson            6.73 182            Pn     16 45 05.6 +1.0
BCAR  Beaver Creek A    6.75 168            Pn     16 45 05.8 +0.9
A36M  Sachs Harbour     6.87  61            Pn     16 45 07.7 +1.4
CAST  Castle Rocks      6.89 208            Pn     16 45 07.3 +0.6
WAT7  Susitna Watana    7.04 195            Pn     16 45 09.6 +0.7
L29M  L29M              7.13 154            Pn     16 45 10.1 +0.2
WAT6  Susitna Watana    7.21 190            Pn     16 45 12.1 +0.9
PPLA  Purkeypile        7.40 207            Pn     16 45 14.4 +0.6
M27K  Edge Creek, AK    7.45 169            Pn     16 45 15.1 +0.6
C16K  Lisburne Hills    7.46 269            Pn     16 45 14.8 +0.3
YUK3  Moose Creek       8.14 165            Pn     16 45 24.9 +1.0
PTPK  Patty Peak        8.58 172            Pn     16 45 31.8 +1.8
O28M  Mount Upton       9.15 165            Pn     16 45 39.9 +2.0
YUK6  Outpost Mounta    9.18 160            Pn     16 45 39.0 +0.8
HYT   Haines Junctio    9.40 157            Pn     16 45 41.4 +0.2
KDAK  Kodiak Island    12.39 199   Pn       Pn     16 46 19.5 -2.3
      baz=20,slow=23,SNR=1.8
      comp=E,2.5nm,1.0s
DLBC  Dease Lake       12.96 143   Pn       Pn     16 46 26.9 -3.0
      comp=E,0.1nm,0.3s,baz=342,slow=9.3,SNR=3.7
      comp=E,0.9nm,0.6s
YKA   Yellowknife Ar   14.09 106   Pn       Pn     16 46 40.6 -4.5
      comp=E,0.2nm,0.3s,baz=315,slow=13,SNR=4.7
YKA                                Sn       Sn     16 49 09.4  -12
      comp=E,0.2nm,0.3s,baz=352,slow=28,SNR=4.3
      comp=E,0.6nm,0.6s
RES   Resolute Bay     15.65  49   Pn       Pn     16 47 04.5 -1.4
      comp=E,0.2nm,0.3s,baz=252,slow=11,SNR=6.8
RES                                Sn       Sn     16 49 49.9 -9.2
      comp=E,0.2nm,0.3s,baz=353,slow=23,SNR=6.8
      comp=E,0.6nm,0.5s
PDAR  Pinedale Array   32.46 127   P        P      16 49 58.1 +2.0
      comp=E,0.5nm,0.6s,baz=324,slow=8.5,SNR=3.7
      comp=E,0.5nm,0.6s
FINES FINESS Array B   49.02   6   P        P      16 52 13.4 +1.5
      comp=E,0.3nm,0.5s,baz=263,slow=8.3,SNR=1.3
      comp=E,0.3nm,0.5s
HFS   Hagfors          49.59  14   P        P      16 52 17.3 +0.9
      comp=E,0.5nm,0.5s,baz=72,slow=4.8,SNR=5.7
      comp=E,0.5nm,0.5s
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CNRM ***07*** *16:45:06.0, 35°.56N×3°.85W, h14^{km}, ML2.7*

SFS ***07*** *16:45:07.8, 35°.22N×3°.89W, h28^{km}, ML2.8/8, ML2.4/8, MLv2.3/8*

MDD ***07*** *16:45:09.1±1.1, 35°.42N×3°.77W, h12^{km}±9^{km}, mb_Lg2.6/4, Error ellipse: s-maj=6.4km s-min=5.6km az=126.0*

INMG ***07*** *16:45:11.9±1.4, 35°.57N×3°.94W, h6^{km}±14^{km}, ML2.0, Error ellipse: s-maj=8.0km s-min=7.2km az=136.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Alboran*

ISC 07 16:45:06.7±1.2**, 35°.46N**±0°.02×**3°.76W**±0°.03**, h11**^{km}±9^{km}**, n38,** σ1s**50**/50**, Strait of Gibraltar**

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Code  Station Name       Δ°  AZ°     Phase ID          Time      Res
                                   Op        ISC    h  m  s     ISC
PALE  Palemas           0.28 211   P        Pb     16 45 13.1 -0.6
PALE  Palemas           0.28 211   S        Sg     16 45 17.0 +0.7
GOG   Mont Gurugu       0.67 110   P        Pn     16 45 21.0 -1.1
GOG   Mont Gurugu       0.67 110   S        Sn     16 45 31.7 -0.9
WMELI Melilla           0.68 102   Pg       Pn     16 45 21.3 -0.9
WMELI                              Sg       Sn     16 45 32.2 -0.5
AKLM  AKL               0.95 185   P        Pb     16 45 25.6 +0.4
AKLM  AKL               0.95 185   S        Sb     16 45 37.9 +0.1
TAF   Taforalt          1.28 120   P        Pn     16 45 31.0 +0.5
TAF   Taforalt          1.28 120   S        Sn     16 45 49.1 +1.5
SMIR  Smir Dam          1.34 280   P        Pn     16 45 31.0 -0.3
SMIR  Smir Dam          1.34 280   S        Sb     16 45 45.2 -3.7
EMIJ  Mijas             1.38 324   Pn       Pn     16 45 31.5 -0.3
EMIJ                               Sn       Sb     16 45 48.3 -1.7
EMIJ  Mijas             1.38 324   Pn       Pn     16 45 31.5 -0.3
EMIJ                               Sn       Sb     16 45 49.8 -0.2
EMIJ                              i IVmb_Lg        16 45 56.5
ECEU  Ceuta             1.39 289   Pn       Pn     16 45 30.1 -1.9
ECEU                               Sn       Sb     16 45 47.1 -3.3
EMAL  Malaga-Limoner    1.41 338   Pg       Pg     16 45 35.1 +1.3
EMAL                               Sn       Sn     16 45 53.1 +2.3
JBK   JBK               1.49 138   P        Pn     16 45 33.5  0.0
EGOR  Sierra Gorda,     1.67 350   Pn       Pb     16 45 37.5 -0.1
EGOR  Sierra Gorda,     1.67 350   Pn       Pb     16 45 37.1 -0.5
EGOR                               Sn       Sn     16 45 57.6 +0.1
EQTA  Presa de Quent    1.77   8   Pn       Pg     16 45 39.5 -1.1
EQTA                               Sn       Sn     16 46 00.6 +0.8
ENIJ  Nijar             1.97  39   Pn       Pb     16 45 42.4 -0.1
ENIJ  Nijar             1.97  39   Sn       Sn     16 46 04.7 +0.1
ENIJ                              i IVmb_Lg        16 46 05.0
LCRM  LCR               1.98 207   P        Pb     16 45 43.0  0.0
LCRM  LCR               1.98 207   S        Sg     16 46 09.8 -0.8
EQES  Quesada           2.41  13   Pn       Pn     16 45 47.4 +1.3
EQES                               Sn       Sn     16 46 17.4 +1.8
EQES                              i IVmb_Lg        16 46 23.2
CZD   Col de Zad        2.64 204   P        Pn     16 45 49.8 +0.3
CZD   Col de Zad        2.64 204   S        Sn     16 46 23.2 +1.5
MD31  MD31              2.71 198   P        Pn     16 45 50.9 +0.7
MDT   Midelt            2.73 195   P        Pn     16 45 51.6 +1.1
EADA  Adamuz            2.78 347   Pn       Pn     16 45 53.6 +2.4
EADA                               Sn       Sn     16 46 26.9 +2.1
EADA  Adamuz            2.78 347   Pn       Pb     16 45 54.0 -2.4
EADA                               Sn       Sn     16 46 25.8 +1.1
ECAB  El Cabril         2.93 334   Pn       Pn     16 45 55.5 +2.2
ECAB                               Sn       Sn     16 46 29.8 +1.4
PBAR  Barrancos         3.78 317  eP        Pn     16 46 06.4 +1.6
PBAR                              eS        Sn     16 46 48.7 -0.6
PBAR                              i AML     AML    16 46 51.6
PBAR                              i AML     AML    16 46 52.1
PBAR                              i AML     AML    16 46 53.7
PBDV  Barranco-do-Ve    3.81 299  eP        Pn     16 46 07.4 +2.1
PBDV                              eS        Sn     16 46 49.1 -1.0
PBDV                              i AML     AML    16 46 51.2
PBDV                              i AML     AML    16 46 53.6
PBDV                              i AML     AML    16 46 55.7
PMRV  Marv??o           4.90 325  eS        Sn     16 47 16.1 -0.9
PMTG  Montargil         5.07 317  eP        Pn     16 46 25.0 +2.5
OUZM  OUZ               5.19 210   P        Pn     16 46 26.0 +1.7
PARRA Arraiolos         5.39 310  eP        Pn     16 46 21.1 -5.9
PARRA                             eS        Sn     16 47 13.0  -16
PARRA                             i AML     AML    16 47 15.6
PARRA                             i AML     AML    16 47 22.6
PARRA                             i AML     AML    16 47 25.1
PSARD Sardoal           5.42 321  eP        Pn     16 46 29.7 +2.4
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TAP 07 17:03:58.2, 23°.64N×120°.70E, h13^{km}, ML2.2, B, Taiwan

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Code  Station Name       Δ°  AZ°     Phase ID          Time      Res
                                   Op        ISC    h  m  s     ISC
WGK   Gukeng            0.14 291  eP        Pb     17 04 02.4 -0.2
WGK                                S        Sb     17 04 05.8 +0.2
WHYT  Xinyi Township    0.15  68   P        Pb     17 04 02.6 -0.3
WHYT                               S        Sb     17 04 05.8 -0.3
WDLH  Douliu            0.16 289   P        Pb     17 04 02.8 -0.2
WDLH                              eS        Sb     17 04 06.3 +0.1
ALS   Alishan           0.16 143  i P       Pb     17 04 03.1 -0.1
ALS                               i S       Sb     17 04 06.4 -0.1
WDL   Douliou City      0.17 297  eP        Pb     17 04 05.2 +2.1
WJS   Zhushan           0.18   8   P        Pb     17 04 03.3 -0.2
WCKO  Fanlu             0.22 204   P        Pb     17 04 03.6 -0.4
WCKO                               S        Sb     17 04 07.7 -0.3
CHN2  Minshiung         0.23 243  eS        Sb     17 04 08.8 +0.5
WNT   Mingjian          0.24 356   P        Pb     17 04 04.3 -0.1
WNT                                S        Sb     17 04 08.8 +0.2
SSLB  Suanglung         0.28  57   P        Pb     17 04 04.8 -0.3
SSLB                               S        Sb     17 04 09.1 -0.6
CHY   Chiayi            0.29 241  eP        Pb     17 04 05.0 -0.2
CHY                               eS        Sb     17 04 09.8 -0.1
WTK   Tuku              0.29 280  eP        Pb     17 04 04.8 -0.4
WTK                               eS        Sb     17 04 10.7 +0.7
TYC   Yuchr             0.30  28   P        Pb     17 04 05.5  0.0
TYC                               eS        Sb     17 04 10.8 +0.5
CHN4  Tsaushan          0.30 199  eP        Pb     17 04 05.3 -0.2
SMLT  Sun Moon Lake     0.30  37   P        Pb     17 04 05.5 -0.2
SMLT                              eS        Sb     17 04 11.2 +0.6
TPUB  Ta-pu             0.34 191   P        Pb     17 04 05.8 -0.4
TPUB                              eS        Sb     17 04 12.4 +0.9
WTP   Ta-pu             0.40 191  eP        Pb     17 04 06.8 -0.4
TWK   Hsinying          0.42 208  eP        Pb     17 04 07.4 -0.1
VWDT  VWDT              0.42  74  eP        Pb     17 04 07.7 +0.2
VWDT                              eS        Sb     17 04 14.0 +0.3
WSF   Szhu              0.44 270  eP        Pb     17 04 07.5 -0.3
WSF                               eS        Sb     17 04 14.5 +0.2
WTCT  Ta-ch'eng         0.45 300  eS        Sb     17 04 14.6 +0.1
WSL   Shuilin Townsh    0.45 255  eP        Pb     17 04 07.8 -0.1
WSL                                S        Sb     17 04 15.6 +1.0
SNST  Tainan City       0.46 204  eP        Pb     17 04 07.9 -0.2
WCS   Beigang Elemen    0.46  25  eP        Pb     17 04 08.2  0.0
CHN1  Nanshi            0.48 199  eP        Pb     17 04 08.4 -0.1
WUSB  Renai             0.52  47  eP        Pg     17 04 08.8 +0.3
WUSB                               S        Sb     17 04 16.2 -0.6
CHN8  Yiju              0.54 237  eP        Pb     17 04 09.5 +0.1
CHN8                              eS        Sb     17 04 18.1 +1.0
OWD   Renai             0.54  54   P        Pb     17 04 09.5 -0.1
OWD                               eS        Sb     17 04 17.1 -0.2
EHY   Hungye            0.59 103  eP        Pb     17 04 10.9 +0.6
YULB  Yu-li             0.60 114   P        Pb     17 04 10.6  0.0
EHYH  Wanrong           0.61 104  eP        Pb     17 04 11.2 +0.5
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WARBT	Fenglin Townsh	0.63	83	eP	Pb	17 04 11.5	+0.3
WARBT				eS	Sb	17 04 19.8	-0.1
WHP	Taichung City	0.68	19	P	Pb	17 04 12.1	+0.2
WHP				eS	Sb	17 04 21.9	+0.7

TAP 07 17:04:04.3, 22°.96N × 120°.89E, h8^{km}±1^{km}, ML2.2, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWG	Pinlang	0.22	129	i P	Pg	17 04 09.7	+0.9
TWG				S	Sg	17 04 12.9	+1.2
TWGBT	Beinan	0.23	128	i P	Pg	17 04 09.7	+0.8
TWGBT				S	Sg	17 04 12.8	+0.8
LONT	Longtian	0.23	103	P	Pg	17 04 09.8	+0.8
LONT				S	Sg	17 04 13.2	+1.1
STYH	Taoyuan	0.23	334	eP	Pg	17 04 08.4	-0.6
STYH				eS	Sg	17 04 12.3	+0.1
STYH	Taoyuan	0.23	334	eP	Pg	17 04 08.4	-0.6
STYH				eS	Sg	17 04 12.0	-0.2
STYT	Tauyuan	0.23	330	P	Pg	17 04 09.7	+0.7
STYT				S	Sg	17 04 13.1	+0.9
ELDTW	Lidau	0.26	28	P	Pg	17 04 09.8	+0.3
ELDTW	Lidau	0.26	28	P	Pg	17 04 09.8	+0.3
ELDTW				eS	Sg	17 04 13.8	+0.8
SGST	Jiashian	0.30	294	eP	Pg	17 04 10.8	+0.5
SGST	Jiashian	0.30	294	eP	Pg	17 04 10.7	+0.4
SGST				eS	Sg	17 04 15.5	+1.1
SSD	Sandimen	0.32	228	P	Pg	17 04 10.8	+0.2
SSD				eS	Sg	17 04 14.8	+0.1
TTN	Taitung	0.32	130	eS	Sb	17 04 17.6	0.0
ECS	Chishang	0.34	66	eP	Pg	17 04 11.7	+0.7
TSMG	Majia	0.34	221	eP	Pg	17 04 11.2	+0.3
TSMG				eS	Sg	17 04 15.2	-0.2
EHD	Haiduan	0.35	57	i P	Pg	17 04 11.6	+0.4
EHD				S	Sg	17 04 16.6	+0.8
ECL	Taimali	0.37	170	P	Pg	17 04 11.9	+0.4
ECL				eS	Sg	17 04 17.1	+0.8
SCST	Cishan	0.37	259	P	Pb	17 04 12.9	-0.3
SCST				eS	Sb	17 04 18.5	-0.6
WTP	Ta-pu	0.38	319	eP	Pb	17 04 13.1	-0.3
EDH	Donghe	0.39	88	eP	Pb	17 04 13.1	-0.4
EDH				eS	Sb	17 04 19.2	-0.4
TPUB	Ta-pu	0.41	325	eP	Pb	17 04 13.8	-0.1
TPUB				eS	Sb	17 04 20.1	-0.4
MASBT	Mashibuluo	0.42	214	i P	Pg	17 04 12.7	+0.2
MASBT				eS	Sg	17 04 18.0	+0.1
SGLT	Jiouru	0.43	237	eP	Pb	17 04 14.5	+0.2
SNST	Tainan City	0.44	306	eP	Pb	17 04 15.3	+0.8
SNST				eS	Sb	17 04 23.1	+1.9
FULB	Fuli	0.45	58	P	Pg	17 04 13.6	+0.6
FULB				eS	Sb	17 04 21.2	-0.1
TWM1	Shoushan	0.45	253	eP	Pb	17 04 15.0	+0.5
CHKT	Chengkung	0.46	72	eP	Pb	17 04 14.6	-0.2
CHKT				eS	Sb	17 04 22.3	+0.5
CHKH	Chenggong	0.52	64	eP	Pb	17 04 15.3	-0.5
WCKO	Fanlu	0.54	332	eS	Sb	17 04 25.3	+1.1
TWF1	Yuli	0.54	44	P	Pg	17 04 15.2	+0.3
TWF1				eS	Sg	17 04 22.2	+0.2
ALS	Alishan	0.55	352	eS	Sb	17 04 25.1	+0.3
EAST	Anshuo	0.57	184	i P	Pb	17 04 16.1	-0.6
EAST				eS	Sg	17 04 23.1	+0.1
YULB	Yu-li	0.57	41	eP	Pg	17 04 15.6	+0.2
LDUT	Ludao	0.61	118	S	Sb	17 04 26.7	+0.7
SCZT	Fangliau	0.63	203	i P	Pg	17 04 16.9	+0.3
SCZT				eS	Sg	17 04 25.3	+0.5
EHY	Hungye	0.68	36	eP	Pg	17 04 17.8	+0.4
EHY				eS	Sg	17 04 26.2	0.0
EHYH	Wanrong	0.68	38	eP	Pg	17 04 17.6	+0.2
EHYH				eS	Sg	17 04 26.7	+0.4
HGSD	Ruisui	0.73	43	P	Pb	17 04 19.2	0.0
HGSD				eS	Sb	17 04 30.2	+0.8

DJA 07 17:08:17.2±0.8, 3°S±3°×13°6E±°, h20^{km}±13^{km}, M4.0/7, mB5.3/2, mb4.2/4, MLv3.9/7, Mw(mB)4.7/2, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRPI	Serui, Papua	0.69	15	P	Pb	17 08 31.1	+0.5
SRPI				S	Sn	17 08 41.4	-0.6
RKPI	Ransiki, Papua	2.14	298	P	Pn	17 08 51.9	+0.1
FAKI	Fak Fak	3.83	264	P	Pn	17 09 14.2	-0.8
SWI	Sorong	5.08	289	P	Pn	17 09 32.4	+0.2
	0.2nm620nm19nm,0.5s						

ISN 07 17:30:43.2±1.0, 32°.75N×47°.76E, h24^{km}±7^{km}, ML2.6
TEH 07 17:30:43.1, 32°.78N×47°.67E, h10^{km}±118^{km}
ISC 07 17:30:43.6±1.5, 32°.79N±0°.07×47°.67E±0°.07, h10^{km}, n9, σ1.^{s}00/13, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKFM	Kafar-mosalman	0.75	11	Pg	Pg	17 30 56.9	-1.2
IKFM				Sg	Sb	17 31 09.5	+0.5
ILBA	Ilam Banvizeh	1.48	305	Pg	Pn	17 31 10.2	-0.2
IBDR	Badra	1.50	283	ePg	Pg	17 31 12.0	-0.3
IBDR				eSg	Sg	17 31 32.0	+0.3
IBDR				AML	AML	17 31 35.0	
	comp=N,92nm,0.7s						
IBDR				AML	AML	17 31 35.4	
	comp=E,77nm,0.4s						
IBZA	Bozab	1.69	5	Pg	Pg	17 31 15.2	-0.7
RAFI	Al-Rafai	1.69	232	ePn	Pb	17 31 14.0	-0.8
RAFI				eSn	Sb	17 31 36.0	-0.1
GLG1	Gilan-e-Gharb	1.98	312	Pn	Pb	17 31 19.1	-0.7
IDHR	Dehrash	2.19	331	Pn	Pb	17 31 22.5	-0.9
BHD	Baghdad	2.80	281	ePn	Pn	17 31 29.0	+0.5
BHD				eSn	Sn	17 32 04.0	+1.7
HGHA	Hamedan- Ghaye	2.87	20	Pn	Pn	17 31 31.3	+1.6

IDC 07 17:40:04.4±6.2, 16°.45N×99°.39W, h0^{km}, mb3.8/4, mbtmp3.7/6, ML3.4/2, MS3.2/12, Error ellipse: s-maj=128.2km s-min=103.4km az=74.0
MEX 07 17:40:11.3±0.6, 16°.61N×100°.67W, h16^{km}±9^{km}, MD4.4
ISC 07 17:40:07.8±1.6, 16°.53N±0°.05×100°.64W±0°.03, h8^{km}±9^{km}, n73, σ2.^{s}80/107, mb3.8/4, MS3.2/10, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.63	35	i P	Pg	17 40 20.6	+0.6
CAIG				eS	Sg	17 40 28.2	-0.1
ATYC	Atoyac	0.71	16	eP	Pg	17 40 21.8	+0.2
ATYC				i S	Sg	17 40 30.5	-0.4
ACP2	Acapulco	0.80	64	eP	Pb	17 40 24.3	+0.3
ACP2				eS	Sb	17 40 34.2	-0.7
VNTA	La Mica	0.88	64	eP	Pb	17 40 24.7	-0.6
VNTA				eS	Sb	17 40 35.8	-1.3
DAIG	Los Arroyos	1.07	62	i P	Pb	17 40 27.5	-1.1
DAIG				eS	Sb	17 40 40.1	-2.5
PET2	Petatlan	1.17	329	eP	Pb	17 40 29.2	-1.1
PET2				eS	Sb	17 40 41.2	-4.3
ZIIG	Zihuatanejo	1.33	324	eP	Pn	17 40 30.4	-2.3
ZIIG				eS	Sb	17 40 45.1	-5.2
CRIG	Cruz Grande	1.46	82	i P	Pn	17 40 33.6	-0.9
CRIG				eS	Sn	17 40 53.5	-0.4
MEIG	Mezcala	1.70	35	eP	Pn	17 40 36.9	-0.9
MEIG				eS	Sn	17 40 56.1	-3.7
ARIG	Puente Sto Nin	1.77	9	eP	Pn	17 40 37.3	-1.4
ARIG				eS	Sn	17 40 57.2	-4.2
MGIG	Malinaltepec	2.05	70	eP	Pn	17 40 42.3	-0.4
MGIG				eS	Sn	17 41 05.8	-2.7
PLIG	Platanillo	2.15	30	eP	Pn	17 40 43.0	-1.1
PLIG				eS	Sn	17 41 11.0	0.0
TLIG	Tlapa	2.23	62	eP	Pn	17 40 45.0	-0.3
PNIG	Pinotepa	2.42	93	eP	Pn	17 40 47.6	0.0
PNIG				eS	Sn	17 41 13.8	-3.6
MAVM	Malinalco, Edo	2.65	24	eP	Pn	17 40 50.7	-0.3
MAVM				i S	Sn	17 41 20.5	-3.0
FTIG	Fresnillo de T	2.76	60	eP	Pn	17 40 52.5	0.0
FTIG				eS	Sn	17 41 25.0	-1.1
YAIG	Yautepec	2.77	33	eP	Pn	17 40 52.0	-0.6
YAIG				eS	Sn	17 41 23.0	-3.2
TXIG	Tlaxiaco	2.84	75	eP	Pn	17 40 53.8	0.0
TXIG				eS	Sn	17 41 27.5	-0.9
YOIG	Yosondua	2.98	83	eP	Pn	17 40 55.6	-0.1
YOIG				eS	Sn	17 41 29.6	-2.2
INVM	La Marquesa	3.00	23	eP	Pn	17 40 56.5	+0.5
INVM				eS	Sn	17 41 26.6	-5.7
AOVM	Tlapan	3.00	25	eP	Pn	17 40 55.8	-0.3
AOVM				eS	Sn	17 41 32.7	+0.2
TLVM	San Miguel Top	3.02	28	eP	Pn	17 40 55.7	-0.6
TLVM				eS	Sn	17 41 28.8	-4.0
XCVM	Xochimilco	3.08	28	eP	Pn	17 40 55.9	-1.0
XCVM				eS	Sn	17 41 27.9	-6.1
MPVM	San Francisco	3.08	30	eP	Pn	17 40 55.0	-2.0
MPVM				eS	Sn	17 41 28.7	-5.4
CJVM	Cuajimalpa	3.10	24	eS	Sn	17 41 30.8	-3.9
PPPT	Popocatepetl	3.10	38	eP	Pn	17 40 56.7	-0.8
PPPT				eS	Sn	17 41 37.2	+2.1
PBXN	Popocatepetl	3.11	37	eP	Pn	17 40 57.2	-0.4
PBXN				eS	Sn	17 41 39.2	+4.0
UNM	Universidad Na	3.12	26	eS	Sn	17 41 37.8	+2.8
MMIG	Aquila	3.12	305	eP	Pn	17 40 56.8	-0.6
MMIG				eS	Sn	17 41 30.7	-4.1
AMVM	AMECAMECA	3.14	34	eP	Pn	17 40 57.0	-0.8
AMVM				eS	Sn	17 41 32.7	-2.9
COVM	Coyoacan	3.14	26	eP	Pn	17 40 56.6	-1.3
COVM				eS	Sn	17 41 39.0	+3.2
PBCV	Popocatepetl	3.15	39	eP	Pn	17 40 57.0	-1.0
PBCV				eS	Sn	17 41 33.1	-2.9
PBPN	Popocatepetl	3.15	37	eP	Pn	17 40 57.5	-0.8
PBPN				eP	Pb	17 40 57.6	-6.8
PBPN				eS	Sn	17 41 36.2	-0.1
PBPN				eS	Sb	17 41 37.3	-5.9
BJVM	Benito Juarez	3.16	26	eS	Sn	17 41 32.3	-3.9
PPM	Popocatepetl	3.17	37	eP	Pn	17 40 56.9	-1.6
PPM				eS	Sn	17 41 34.5	-2.2
MOIG	Morelia	3.18	351	eP	Pn	17 41 02.2	+3.8
MOIG				eS	Sn	17 41 33.7	-2.8
APVM	Azcapotzalco	3.25	25	eS	Sn	17 41 40.5	+2.3
PBVM	Pinon	3.25	27	eP	Pn	17 40 57.1	-2.1
PBVM				eS	Sn	17 41 30.6	-7.5
AZVM	Cuida Lopez Ma	3.30	23	eP	Pn	17 41 02.0	+1.9
AZVM				eS	Sn	17 41 39.2	-0.5
ATVM	ATLACOMULCO	3.31	13	eP	Pn	17 41 04.8	+4.7
ATVM				eS	Sn	17 41 36.2	-3.6
PEIG	Puerto Escondi	3.40	98	eS	Sn	17 41 35.6	-6.0
ACIG	Acambay	3.51	12	eP	Pn	17 41 07.9	+5.1
ACIG				eS	Sn	17 41 44.6	-0.1
ZUVM	ZUMPANGO	3.60	24	eP	Pn	17 40 59.7	-4.5
ZUVM				eS	Sn	17 41 45.6	-1.4
TPIG	Tehuac#an	3.65	58	eS	Sn	17 41 52.4	+4.2
VTVM	Tizayuca	3.68	29	eP	Pn	17 40 59.2	-6.2
VTVM				eS	Sn	17 41 44.2	-4.9
TOIG	Toxpalan	3.75	65	eP	Pn	17 41 06.0	-0.2
TOIG				eS	Sn	17 41 52.2	+1.6
JRQG	Juriquilla Cam	4.16	2	eS	Sn	17 41 58.9	-1.8
HUIG	Huatulco	4.42	99	eP	Pn	17 41 23.4	+8.2
HUIG				eS	Sn	17 42 03.6	-3.3
JAUV	Jalcomulco	4.62	52	eP	Pn	17 41 17.4	-0.6
JAUV				eS	Sn	17 42 16.6	+4.8
CXUV	Coxquihui	4.64	38	eP	Pn	17 41 17.0	-1.3
CXUV				eS	Sn	17 42 13.7	+1.4
CIHU	Emiliano Zapat	4.76	306	eP	Pn	17 41 19.9	+0.1
CIHU				eS	Sn	17 42 12.7	-2.4
NEUV	Arroyo Zacate	4.77	75	eP	Pn	17 41 19.1	-0.9
NEUV				eS	Sn	17 42 10.9	-4.7
RPIG	Rio Verde	5.37	7	eS	Sn	17 42 29.6	-0.8
CTUV	Llano Grande	5.37	23	eP	Pn	17 41 35.8	+7.5
CTUV				eS	Sn	17 42 32.5	+2.2
CMIG	Matias Romero	5.54	83	eP	Pn	17 41 29.9	-0.7
CMIG				eS	Sn	17 42 30.2	-4.4
AAIG	Aguscalientes	5.66	343	eP	Pn	17 41 34.4	+2.0
AAIG				eS	Sn	17 42 43.0	+5.3
ZAIG	Zacatecas	6.47	344	eS	Sn	17 42 56.6	-1.2
GTIG	Gomez Farias	6.65	12	eP	Pn	17 41 50.4	+4.5
GTIG				eS	Sn	17 43 07.6	+5.7
TXAR	Lajitas Array	13.05	348	Pn	Pn	17 43 17.4	+3.8
	baz=166,slow=14,SNR=1.7						
TXAR				LR	LR	17 48 10.4	
	comp=Z,83nm,19.3s,baz=154,slow=36						
	0.1nm,0.3s						
ANMO	Albuquerque	19.07	345	P	Pn	17 44 33.3	+1.7
	0.1nm,0.3s,baz=284,slow=8.3,SNR=4.3						
ANMO				LR	LR	17 52 27.5	
	comp=Z,197nm,19.8s,baz=272,slow=38						
	2.6nm,0.8s						
NVAR	Mina Array Bea	26.77	328	P	P	17 45 52.5	+4.2
	1.1nm,0.6s,baz=146,slow=12,SNR=6.6						
	1.1nm,0.6s						
PDAR	Pinedale Array	27.24	346	P	P	17 45 54.5	+1.8
	1.4nm,0.7s,baz=134,slow=11,SNR=6.4						
PDAR				LR	LR	17 56 09.8	
	comp=Z,36nm,18.1s,baz=174,slow=35						
	1.4nm,0.7s						
ELK	Elko	27.24	335	LR	LR	17 59 05.4	
	comp=Z,37nm,20.3s,baz=151,slow=41						
SADO	Sadowa	33.47	28	LR	LR	18 02 00.2	
	comp=Z,38nm,20.9s,baz=4.5,slow=40						
NEW	Newport	34.42	340	LR	LR	18 01 57.4	
	comp=Z,54nm,20.8s,baz=167,slow=38						
SCHQ	Schefferville	46.23	26	LR	LR	18 12 17.8	
	comp=Z,36nm,18.1s,baz=152,slow=42						
YKA	Yellowknife Ar	46.95	351	P	P	17 48 38.7	-0.2
	1.5nm,0.9s,baz=164,slow=7.2,SNR=7.7						
	1.5nm,0.9s						
FRB	Frobisher Bay	52.08	17	LR	LR	18 15 41.5	
	comp=Z,26nm,18.2s,baz=120,slow=41						
ILAR	Eielson Array	57.34	338	P	P	17 49 57.4	+1.3
	0.5nm,0.9s,baz=115,slow=6.9,SNR=5.2						
	0.5nm,0.9s						
SFJD	Kangerlussuaq	59.85	20	LR	LR	18 16 37.1	
	comp=Z,28nm,19.9s,baz=232,slow=37						
BORG	Borgarnes	70.63	27	LR	LR	18 23 14.6	
	comp=Z,6.8nm,20.8s,baz=275,slow=37						
NOA	NORSAR Array B	85.80	27	LR	LR	18 33 27.5	
	comp=Z,7.0nm,18.2s,baz=170,slow=38						
FINES	FINESS Array B	91.58	23	LR	LR	18 35 24.1	
	comp=Z,16nm,18.8s,baz=292,slow=36						

IDC 07 17:47:31.2±50.0, 19°.79S×179°.27W, h653^{km}±453^{km}, mb2.2/2, mbtmp3.3/2, Error ellipse: s-maj=439.3km s-min=218.7km az=102.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	43.52	262	P	P	17 54 40.4	+0.2
	0.3nm,0.4s,baz=96,slow=8.1,SNR=10						
	0.3nm,0.4s						
ASAR	Alice Springs	43.52	256	P	P	17 54 40.1	-0.1
	0.4nm,0.9s,baz=92,slow=7.8,SNR=7.5						
ASAR				PcP	PcP	17 56 12.7	0.0
	0.3nm,0.8s,baz=95,slow=4.1,SNR=1.7						
	0.4nm,0.9s						
AKASG	Malin Array Be	141.81	331	PKP	PKPdf	18 05 48.9	-1.3
	0.5nm,0.3s,baz=46,slow=4.0,SNR=6.9						

CNRM 07 17:51:59.5, 35°.53N×3°.81W, h16^{km}, ML2.1
SFS 07 17:51:59.9, 35°.35N×3°.94W, h0^{km}, ML2.8/4, ML2.3/4, MLv2.0/4
MDD 07 17:52:00.9±1.2, 35°.40N×3°.85W, h0^{km}±9^{km}, mb_Lg2.4/4, Error ellipse: s-maj=7.0km s-min=5.5km az=118.0
ISC 07 17:51:59.7±1.1, 35°.51N±0°.02×3°.85W±0°.03, h19^{km}±3^{km}, n23, σ1.^{s}78/29, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	Palemas	0.30	194	P	Pg	17 52 06.0	-0.5
PALE	Palemas	0.30	194	S	Sg	17 52 09.8	-1.3
GOG	Mont Gurugu	0.75	112	P	Pg	17 52 13.7	-0.9
GOG	Mont Gurugu	0.75	112	S	Sb	17 52 24.0	-0.1
WMELI	Melilla	0.76	105	Pg	Pb	17 52 14.2	-0.1
AKLM	AKL	1.00	181	P	Pb	17 52 18.6	+0.1
AKLM	AKL	1.00	181	S	Sb	17 52 31.6	+0.4
SMIR	Smir Dam	1.26	278	P	Pn	17 52 22.9	+0.6
SMIR	Smir Dam	1.26	278	S	Sb	17 52 39.1	+0.4
CHEFC	Chefchaouen	1.29	252	P	Pg	17 52 24.6	0.0
EMIJ	Mijas	1.29	325	Pn	Pg	17 52 24.9	+0.1
EMIJ				Sn	Sg	17 52 42.9	+1.3
EMIJ				i IVmb_Lg		17 52 46.1	
TAF	Taforalt	1.36	120	P	Pb	17 52 24.4	-0.3
JBK	JBK	1.58	138	P	Pn	17 52 27.3	+0.5
JBK	JBK	1.58	138	S	Sn	17 52 43.6	-3.1
EGOR	Sierra Gorda,	1.61	353	Pn	Pg	17 52 30.4	-0.4
EGOR				Sn	Sg	17 52 53.2	+1.4
EGOR	Sierra Gorda,	1.61	353	Pn	Pg	17 52 30.6	-0.2
EGOR				Sn	Sg	17 52 54.7	+2.9
EQES	Quesada	2.37	15	Pn	Pb	17 52 42.6	+0.7
EQES				Sn	Sb	17 53 12.5	+1.7
EQES				i IVmb_Lg		17 53 15.4	
MD31	MD31	2.74	196	P	Pn	17 52 45.0	+2.2
MDT	Midelt	2.76	193	P	Pn	17 52 45.4	+2.4
ECAB	El Cabril	2.85	334	Pn	Pb	17 52 47.9	-2.1
ECAB				Sn	Sb	17 53 22.8	-1.7
ECAB	El Cabril	2.85	334	Pn	Pb	17 52 48.1	-1.9
ECAB				Sn	Sb	17 53 23.6	-1.0
PBAR	Barrancos	3.69	317	eS	Sn	17 53 42.2	+3.5
PARRA	Arraiolos	5.30	310	eP	Pn	17 53 13.8	-4.0

NEIC 07 18:19:24.3±1.6, 5°.44N±0°.06×125°.27E±0°.08, h45^{km}±8^{km}, mb4.4/28, Error ellipse: s-maj=11.7km s-min=8.6km az=92.0
IDC 07 18:19:29.1±1.4, 5°.45N×125°.40E, h99^{km}±13^{km}, mb3.5/11, mbtmp3.9/12, MS3.0/8, Error ellipse: s-maj=23.3km s-min=12.2km az=73.0
ISC 07 18:19:29.1±0.5, 5°.43N±0°.06×125°.39E±0°.09, h100^{km}, n68, σ1.^{s}19/49, mb4.2/23, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.64	7	Pn	Pn	18 19 50.6	-6.6
DAV	Davao City (W)	1.64	7	P	Pn	18 19 56.0	-1.2
	202nm,0.2s,baz=276,slow=7.2,SNR=5.4						
DAV				S	Sn	18 20 18.2	-0.3
	328nm,0.3s,baz=244,slow=20,SNR=4.1						
TNTI	Ternate	5.03	157		Pn	18 20 37.0	-5.4
TOLI2	Tolitoli	6.29	227		Pn	18 20 53.1	-6.3
LUWI	Luwuk	6.94	202		Pn	18 21 02.6	-5.6
KKM	Kota Kinabalu	9.14	274	Pn	Pn	18 21 30.0	-8.3
FAKI	Fak Fak	10.76	140	Pn	Pn	18 21 57.6	-2.7
BKB	Balikpapan	10.77	232	Pn	Pn	18 21 54.2	-6.2
KAPI	Kappang	11.80	209	LR	LR	18 26 44.8	
	comp=Z,56nm,18.2s,baz=58,slow=37						
JAY	Jayapura	17.22	117	P	P	18 23 24.1	+0.4
	16nm,1.0s,baz=311,slow=19,SNR=1.9						
GUMO	Guam	20.84	66	LR	LR	18 33 22.2	
	comp=Z,13nm,18.8s,baz=62,slow=40						
KNRA	Kununurra	21.24	171	P	P	18 24 06.2	-1.0
KNRA				IAmb	IAmb	18 24 18.4	
	comp=Z,51nm,1.5s						
LEM	Lembang	21.51	236	P	P	18 24 11.2	+0.8
	comp=Z,7.8nm,0.7s,baz=304,slow=7.5,SNR=3.8						
	comp=Z,7.8nm,0.7s						
FITZ	Fitzroy Crossi	23.38	179	P	P	18 24 27.9	-1.2
KULM	Kulim	24.63	271	P	P	18 24 40.2	-0.3
KULM				IAmb	IAmb	18 24 43.4	
	comp=Z,21nm,1.4s						
COEN	Coen	26.13	138	P	P	18 24 56.0	+1.9
COEN				IAmb	IAmb	18 25 22.7	
	comp=Z,13nm,1.1s						
PMG	Port Moresby	26.23	124	LR	LR	18 35 59.5	
	comp=Z,43nm,19.9s,baz=203,slow=38						
PSI	Prapat	26.52	265	LR	LR	18 37 14.9	
	comp=Z,40nm,18.6s,baz=56,slow=40						
WB0	Warramunga Arr	26.56	161	P	P	18 24 56.9	-1.0
WB0				IAmb	IAmb	18 25 00.5	
	comp=Z,11nm,1.1s						
WRA	Warramunga Arr	26.71	161	P	P	18 24 57.1	-2.1
WRA	Warramunga Arr	26.71	161	P	P	18 24 58.6	-0.7
	comp=Z,1.1nm,0.6s,baz=341,slow=10,SNR=32						
	comp=Z,1.1nm,0.6s						
WR8	Warramunga Arr	26.77	161	P	P	18 24 58.5	-1.3
WR8				IAmb	IAmb	18 25 18.4	
	comp=Z,11nm,1.4s						
JCJ	Chichijima	26.84	35	P	P	18 24 59.6	-0.8
GSI	Gunungsitoli	28.06	263	P	P	18 25 10.6	-0.8
GSI				IAmb	IAmb	18 25 11.1	
	comp=Z,8.5nm,0.9s						
CM31	Chiang Mai Arr	28.87	299		pP	18 25 29.4	-11
CMAR	Chiang Mai Arr	28.87	299		P	18 25 29.1	+11
CMAR	Chiang Mai Arr	28.87	299	P	P	18 25 19.2	+0.6
	comp=Z,0.3nm,0.4s,baz=167,slow=6.9,SNR=9.0						
CMAR				LR	LR	18 38 08.4	
	comp=Z,19nm,18.0s,baz=180,slow=39						
	comp=Z,0.3nm,0.4s						
AS31	Alice Springs	30.09	164	P	P	18 25 28.9	-0.4
ASAR	Alice Springs	30.09	164	P	P	18 25 29.2	-0.1
	comp=Z,0.7nm,0.3s,baz=342,slow=7.3,SNR=62						
ASAR				PcP	PcP	18 28 29.7	+0.8
	comp=Z,0.3nm,0.4s,baz=349,slow=2.6,SNR=4.5						
	comp=Z,0.7nm,0.3s						
JMM	Marumori	35.21	21	P	P	18 26 13.2	-0.5
BBOO	Buckleboo	39.36	166	P	P	18 26 48.9	0.0
STKA	Stephens Creek	40.19	158	P	P	18 26 56.3	+0.5
	comp=Z,1.5nm,0.3s,baz=333,slow=6.8,SNR=3.5						
	comp=Z,1.5nm,0.3s						
ASAJ	Asahikawa	41.39	19	LR	LR	18 42 15.6	
	comp=Z,16nm,20.6s,baz=178,slow=33						
JKA	Kamikawa-asahi	41.40	19	P	P	18 27 05.9	+0.4
JKA				IAmb	IAmb	18 27 17.8	
	comp=Z,6.1nm,1.1s						
H11S3	WAKE ISLAND Hy	42.32	68	T	T	19 12 21.0	
	baz=257,slow=75,SNR=7.5						
H11S1	WAKE ISLAND Hy	42.33	68	T	T	19 12 21.4	
	baz=257,slow=75,SNR=10						
H11S2	WAKE ISLAND Hy	42.34	68	T	T	19 12 21.1	
	baz=257,slow=75,SNR=7.9						
H11N1	WAKE ISLAND Hy	42.78	67	T	T	19 13 09.8	
	baz=255						
H11N2	WAKE ISLAND Hy	42.79	67	T	T	19 13 15.4	
	baz=255						
H11N3	WAKE ISLAND Hy	42.80	67	T	T	19 13 13.7	
	baz=255						
EVN	Everest	42.91	306	P	P	18 27 18.7	-0.2
SONM	Songino Array	45.27	342	P	P	18 27 36.8	0.0
	comp=Z,0.2nm,0.4s,baz=147,slow=8.2,SNR=2.2						
	comp=Z,0.2nm,0.4s						
CAN	Canberra	46.22	153	P	P	18 27 46.4	+2.0
PETK	Petropavlovsk-	54.39	23	P	P	18 28 46.5	+0.9
PETK	Petropavlovsk-	54.39	23	P	P	18 28 46.0	+0.3
	comp=Z,1.5nm,0.8s,baz=171,slow=3.3,SNR=6.2						
	comp=Z,1.5nm,0.8s						
MKAR	Makanchi Array	55.40	325	P	P	18 28 52.6	-0.5
MKAR	Makanchi Array	55.40	325	P	P	18 28 52.5	-0.6
	comp=Z,0.5nm,0.4s,baz=119,slow=7.8,SNR=17						
	comp=Z,0.5nm,0.4s						
KDJ	Kajisay	56.19	318	P	P	18 28 58.7	-0.4
MA2	Magadan	57.41	15	P	P	18 29 06.9	-0.1
AAK	Ala-Archa	58.21	318	LR	LR	18 55 18.6	
	comp=Z,26nm,18.1s,baz=143,slow=37						
KURBB	Kurchatov Arra	59.59	327	P	P	18 29 21.2	-1.1
	comp=Z,0.3nm,0.4s,baz=124,slow=7.4,SNR=1.4						
	comp=Z,0.3nm,0.4s						
KK31	Karatay Array	61.08	317	P	P	18 29 31.6	-1.2
KKAR	Karatay Array	61.08	317	P	P	18 29 32.1	-0.7
KKAR	Karatay Array	61.08	317	P	P	18 29 31.5	-1.3
KKAR				IAmb	IAmb	18 30 07.6	
	comp=Z,1.9nm,1.1s						
LTZ	Lake Taylor	64.07	143	P	P	18 29 53.2	+0.6
BVAR	Borovoye Array	65.17	327	P	P	18 30 00.2	+0.6
	comp=Z,0.3nm,0.5s,baz=113,slow=7.3,SNR=2.4						
	comp=Z,0.3nm,0.5s						
O14K	Tigyukauivet M	76.87	30	P	P	18 31 12.9	+2.8
E18K	Tukpahlearik C	78.89	22	P	P	18 31 22.1	+0.9
E18K				IAmb	IAmb	18 31 40.2	
	comp=Z,5.5nm,1.4s						
C19K	Lookout Ridge	79.63	21	P	P	18 31 26.6	+1.3
C19K				IAmb	IAmb	18 31 36.6	
	comp=Z,5.4nm,1.2s						
D19K	Kuna River	80.03	21	P	P	18 31 28.7	+1.3
D19K				IAmb	IAmb	18 31 29.5	
	comp=Z,1.8nm,0.5s						
H19K	Roundabout Mou	80.18	24	P	P	18 31 29.8	+1.7
H19K				IAmb	IAmb	18 32 01.7	
	comp=Z,4.8nm,1.4s						
IMAR	Indian Mountai	81.35	24	P	P	18 31 35.2	+0.8
C23K	Itkillik River	82.86	20	P	P	18 31 43.8	+1.5
D24K	Happy Valley	83.46	21	P	P	18 31 47.0	+1.7
GLI	Glacier Island	84.08	29	P	P	18 31 50.0	+1.3
ILAR	Eielson Array	84.15	25	P	P	18 31 48.4	-0.6
	comp=Z,0.4nm,0.6s,baz=233,slow=4.8,SNR=5.7						
	comp=Z,0.4nm,0.6s						
BMAR	Burnt Mountain	85.04	23	P	P	18 31 55.5	+2.1
NOA	NORSAR Array B	96.68	333	LR	LR	19 19 37.4	
	comp=Z,13nm,19.1s,baz=290,slow=37						

SJA 07 18:30:07.6±0.7, 21°.01S×67°.44W, h207^{km}±5^{km}, ML3.6, MW3.5

*SCB **07** 18:30:09.8±1.2, 21°.01S×67°.45W, h182km±11km, ML3.7/5, MW3.1, Error ellipse: s-maj=5.5km s-min=4.3km az=0.0*

ISC 07 18:30:08.0±1.7**, 21°.02S**±0°.04×**67°.48W**±0°.04**, h206km**±14km**, n34, σ1s.30**/49**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCB	Mochara	1.73	98	Pg	Pn	18 30 45.2	+0.3
MOCB				Sg	Sn	18 31 11.0	-2.5
MOCB				IAML		18 31 11.9	
	908nm,0.4s						
PB08	IPOC Station P	1.80	299	Pg	Pn	18 30 46.4	+0.9
PB08				Sg	Sn	18 31 14.0	-0.5
PB08				IAML		18 31 17.7	
	97nm,0.6s						
PB08	IPOC Station P	1.80	299	eP	Pn	18 30 46.1	+0.6
PB08				IAML		18 31 16.7	
	comp=Z,133nm,0.2s						
PB09	IPOC Station P	1.81	245	Pg	Pn	18 30 46.6	+1.2
PB09				Sg	Sn	18 31 13.7	-0.7
PB09				IAML		18 31 20.2	
	comp=Z,110nm,0.4s						
PB09	IPOC Station P	1.81	245	eP	Pn	18 30 46.6	+1.2
PB09				IAML		18 31 19.9	
	comp=Z,136nm,0.6s						
PB01	IPOC Station P	1.88	269	Pg	Pn	18 30 46.3	+0.4
PB01				Sg	Sn	18 31 14.4	-0.9
PB01				IAML		18 31 15.7	
	comp=Z,276nm,0.6s						
PB01	IPOC Station P	1.88	269	eP	Pn	18 30 46.1	+0.2
PB01				eS	Sn	18 31 15.2	-0.1
PB01				IAML		18 31 18.2	
	comp=Z,243nm,0.2s						
AF01	San Pedro de A	2.03	199	eP	Pn	18 30 50.3	+2.7
AF01				eS		18 31 03.1	
AF01				IAML		18 31 50.6	
	comp=Z,100nm,0.6s						
GO01	Chusmiza	2.10	310	Pg	Pn	18 30 49.2	+0.6
GO01	Chusmiza	2.10	310	eP	Pn	18 30 48.9	+0.3
YJA	Yavi	2.16	123	Pg	Pn	18 30 49.7	+0.6
YJA	Yavi	2.16	123	eP	Pn	18 30 49.8	+0.6
YJA				eS	Sn	18 31 20.4	-0.7
PB03	IPOC Station P	2.35	244	eP	Pn	18 30 51.5	+0.7
PB03				eS	Sn	18 31 23.8	-0.4
PB03				IAML		18 31 24.1	
	comp=Z,327nm,0.4s						
PB11	IPOC Station P	2.40	301	Pg	Pn	18 30 51.7	+0.3
PB11				Sg	Sn	18 31 23.8	-1.4
PB11				IAML		18 31 26.2	
	comp=Z,1μm,0.5s						
PB11	IPOC Station P	2.40	301	eP	Pn	18 30 50.8	-0.6
PB11				IAML		18 31 26.2	
	comp=Z,572nm,0.1s						
SOEO	Opoqueri	2.48	351	Pg	Pn	18 30 53.4	+0.8
PB06	IPOC Station P	2.57	229	eP	Pn	18 30 54.0	+0.8
PB06				eS	Sn	18 31 28.7	+0.1
PB06				IAML		18 31 31.9	
	comp=Z,204nm,0.1s						
TA01	Diego Aracena	2.57	280	eP	Pn	18 30 53.0	-0.1
TA01				eS	Sn	18 31 27.4	-0.8
TA01				IAML		18 31 29.6	
	comp=Z,132nm,0.2s						
TA02	Huaiquique	2.59	286	eP	Pn	18 30 53.8	+0.4
TA02				eS	Sn	18 31 27.9	-0.8
TA02				IAML		18 31 33.0	
	comp=Z,345nm,0.1s						
PB05	IPOC Station P	3.12	234	eP	Pn	18 31 00.3	+0.8
PB05				IAML		18 31 41.2	
	comp=Z,84nm,0.4s						
PB16	IPOC Station P	3.29	324	Pg	Pn	18 31 03.4	+1.4
PB16	IPOC Station P	3.29	324	eP	Pn	18 31 02.6	+0.6
AP01	Chacalluta	3.77	314	eP	Pn	18 31 08.8	+1.5
AP01				eS	Sn	18 31 52.4	-1.4
PB10	IPOC Station P	3.78	228	eP	Pn	18 31 07.9	+0.6
PB10				eS	Sn	18 31 52.1	-1.8
PB10				IAML		18 32 01.1	
	comp=Z,49nm,1.3s						
BBOJ	La Paz, Jacaqu	4.08	350	Pg	Pn	18 31 13.6	+1.9
SOEJ	Jacaque	4.08	350	Pg	Pn	18 31 13.0	+1.4
BBOE	La Paz, Chanca	4.21	353	Pg	Pn	18 31 15.2	+1.9
BBOD	La Paz, Gloria	4.49	346	Pg	Pn	18 31 18.6	+1.9
PB14	IPOC Station P	4.49	216	eP	Pn	18 31 16.9	+0.5
PB14				eS	Sn	18 32 07.7	-2.7
PB14				IAML		18 32 10.4	
	comp=Z,76nm,0.3s						
GO02	Mina Guanaco	4.56	205	eP	Pn	18 31 17.2	0.0
GO02				eS	Sn	18 32 10.4	-1.5
LPAZ	La Paz	4.75	352	Pg	Pn	18 31 20.9	+0.8
LPAZ	La Paz	4.75	352	eP	Pn	18 31 21.0	+0.8
BBOB	La Paz, Bander	4.89	353	Pg	Pn	18 31 22.4	+0.6
FSA	Cafayete	5.25	165	eP	Pn	18 31 29.6	+3.7

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*IDC **07** 18:46:29.0±1.1, 33°.92S×179°.13W, h0km, mb3.7/3, mbtmp4.0/5, ML4.1/2, MS2.8/1, Error ellipse: s-maj=34.6km s-min=26.9km az=104.0*

*WEL **07** 18:46:31.0±0.9, 34°S±7°×17°8W±1°3, h33km, M4.4/11, mB4.9/5, ML4.7/16, MLv4.4/11, Mw(mB)4.2/5, Error ellipse: s-maj=18.2km s-min=5.5km az=114.4, confirmed*

*NEIC **07** 18:46:58.5±2.0, 35°.5S±0°.1×179°.0E±0°.2, h155km±10km, mb4.4/7, Error ellipse: s-maj=18.9km s-min=17.8km az=70.0*

ISC 07 18:46:32.8±0.9**, 34°.12S**±0°.09×**178°.8W**±0°.1**, h35km, n44, σ1s.65**/55**, mb4.3**/6**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.15	214	Pn	Pn	18 47 33.5	-0.2
MXZ	Matakaoa Point	4.15	214	P	Pn	18 47 33.5	-0.2
MXZ				S	Sn	18 48 20.9	-0.1
WMGZ	Waiomatatini S	4.32	211	P	Pn	18 47 36.8	+0.9
WMGZ				S	Sn	18 48 27.8	+2.6
PKGZ	Pakihiroa	4.51	213	P	Pn	18 47 38.9	+0.3
PKGZ				S	Sn	18 48 30.6	+0.9
HAZ	Te Kaha	4.56	216	P	Pn	18 47 40.0	+0.7
HAZ				S	Sn	18 48 33.3	+2.3
PUZ	Puketiti	4.60	210	P	Pn	18 47 39.8	-0.1
PUZ				S	Sn	18 48 32.4	+0.3
RUGZ	Raukumara Rang	4.77	216	P	Pn	18 47 43.2	+0.9
TWGZ	Tauwhareparae	4.81	212	P	Pn	18 47 43.0	+0.3
TWGZ				S	Sn	18 48 37.8	+0.6
GLKZ	Green Lake	4.91	9	P	Pn	18 47 41.9	-2.2
CNGZ	Carnagh Statio	4.97	208	P	Pn	18 47 44.9	0.0
TKGZ	Te Karaka	5.08	211	P	Pn	18 47 46.2	-0.2
TKGZ				S	Sn	18 48 43.5	-0.4
KUZ	Kuaotunu	5.17	238	P	Pn	18 47 49.8	+2.0
URZ	Urewera	5.28	217	Pn	Pn	18 47 48.7	-0.5
	7.3nm,0.3s,baz=346,slow=4.6,SNR=45						
URZ				Sn	Sn	18 48 48.1	-0.8
	6.7nm,0.3s,baz=167,slow=22,SNR=10						
URZ				LR	LR	18 49 44.8	
	comp=Z,87nm,19.1s,baz=54,slow=37						
	34nm,0.6s						
RAGZ	Rawiri	5.32	214	P	Pn	18 47 49.0	-0.8
RAGZ				S	Sn	18 48 48.0	-1.9
RIGZ	Rimuhau	5.34	210	P	Pn	18 47 49.1	-1.0
RIGZ				S	Sn	18 48 50.1	-0.4
PRGZ	Paritu Road	5.48	208	P	Pn	18 47 50.6	-1.4
PRGZ				S	Sn	18 48 52.5	-1.3
SNGZ	Shannon Statio	5.59	213	P	Pn	18 47 52.4	-1.1
SNGZ				S	Sn	18 48 56.0	-0.4
MUGZ	Murupara	5.62	218	P	Pn	18 47 53.5	-0.4
RTZ	Ruatahuna	5.62	216		Pn	18 47 52.3	-1.7
MHGZ	Mahia Peninsul	5.67	207	P	Pn	18 47 53.1	-1.5
MHGZ				S	Sn	18 48 56.7	-1.7
MKAZ	Moumakai	5.74	237	P	Pn	18 47 57.6	+2.1
TOZ	Tahuroa Road	5.85	230	Pn	Pn	18 47 52.7	-4.4
WCZ	Waipu Caves	5.90	250	P	Pn	18 48 06.6	+8.9
BKZ	Black Stump Fm	6.29	216	Pn	Pn	18 48 01.6	-1.6
OUZ	Omahuta	6.35	258	P	Pn	18 48 06.9	+3.0
MRZ	Mangatainoka R	7.91	213	Pn	Pn	18 48 21.0	-4.2
KHZ	Kahutara	10.23	214	Pn	Pn	18 48 53.3	-3.8
RPZ	Rata Peaks	12.40	216	Pn	Pn	18 49 24.9	-1.8
	1.1nm,0.3s,baz=45,slow=4.3,SNR=6.4						
RPZ				Sn	Sn	18 51 31.3	-12
	0.5nm,0.3s,baz=318,slow=22,SNR=1.3						
	19nm,0.9s						
PINNC	Pines Island,	16.65	310	P	P	18 50 40.6	+15
FUNA	Funafuti	25.54	355	P	P	18 52 24.7	+26
AS31	Alice Springs	42.37	271	P	P	18 54 22.6	-1.3
ASAR	Alice Springs	42.37	271	P	P	18 54 22.7	-1.2
ASAR	Alice Springs	42.37	271	P	P	18 54 23.5	-0.4
	0.6nm,0.7s,baz=110,slow=7.0,SNR=14						
ASAR				PcP	PcP	18 56 15.5	-1.4
	0.2nm,0.4s,baz=117,slow=3.9,SNR=5.0						
	0.6nm,0.7s						
WR8	Warramunga Arr	43.55	277	P	P	18 54 32.5	-1.0
WR8				IAmb	IAmb	18 54 48.2	
	comp=Z,21nm,1.4s						
WB2	Warramunga Arr	43.68	276	P	P	18 54 33.6	-0.9
WB2				IAmb	IAmb	18 55 13.6	
	comp=Z,16nm,1.4s						
WRA	Warramunga Arr	43.69	276	P	P	18 54 33.6	-1.0
	comp=Z,0.7nm,0.4s,baz=118,slow=7.6,SNR=20						
	comp=Z,0.7nm,0.4s						
WB0	Warramunga Arr	43.73	277	P	P	18 54 34.0	-0.9
WB0				IAmb	IAmb	18 54 39.9	
	comp=Z,9.6nm,1.2s						
QSPA	South Pole Qui	56.00	180	P	P	18 56 10.9	+3.3
QSPA				IAmb	IAmb	18 56 21.3	
	comp=Z,10nm,1.4s						
QSPA	South Pole Qui	56.00	180	P	P	18 56 11.4	+3.8
	comp=Z,0.8nm,0.8s,baz=17,slow=18,SNR=9.0						
	comp=Z,0.8nm,0.8s						
FINES	FINESS Array B	148.35	337	PKPbc	PKPbc	19 06 15.6	+1.0
	comp=Z,1.6nm,0.4s,baz=60,slow=3.4,SNR=30						
MMAI	Mount Meron Ar	151.55	277	PKPbc	PKiKP	19 06 24.0	+0.2
	comp=Z,0.7nm,0.4s,baz=97,slow=6.0,SNR=5.6						
NB2	NORSAR Subarra	152.30	350	PKP	PKiKP	19 06 25.2	+0.7
	comp=Z,0.4nm,0.7s,baz=17,slow=2.6						
NOA	NORSAR Array B	152.30	350	PKPbc	PKiKP	19 06 24.8	+0.3
	comp=Z,0.6nm,0.7s,baz=14,slow=4.1,SNR=3.8						
HFS	Hagfors	152.72	346	PKPbc	PKiKP	19 06 25.7	+0.5
	comp=Z,0.7nm,0.6s,baz=25,slow=3.4,SNR=1.6						
HFS				PKPab	PKPab	19 06 36.8	+0.9
	comp=Z,0.5nm,0.4s,baz=32,slow=4.6,SNR=1.5						

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*NNC **07** 19:01:47.0±4.2, 38°.88N×69°.37E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=39.6km s-min=24.5km az=176.0*

ISC 07 19:01:44.3±4.4**, 38°.5N**±0°.3×**69°.4E**±0°.1**, h10km, n9, σ0s.64**/11**, 6C-1D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	4.64	10	⇑Pn	Pn	19 02 54.5	0.0
	0.8nm,0.2s,baz=194,slow=13						
KK31				⇑Pg	Pb	19 03 06.3	+0.5
	2.8nm,0.3s,baz=187,slow=18						
KK31				⇑Lg	Lg	19 04 05.1	
	14nm,0.7s,baz=197,slow=31						
AML	Almayashu	4.88	41	P	Pn	19 02 57.8	-0.2
	SNR=6.2						
EKS2	Erkin-Say	5.31	38	P	Pn	19 03 03.7	-0.1
	SNR=7.1						
AAK	Ala-Archa	5.65	42	P	Pn	19 03 09.4	+0.9
	SNR=5.7						
AAK	Ala-Archa	5.65	42	⇑Pn	Pn	19 03 09.4	+0.9
	0.4nm,0.4s						
AAK				⇑Lg	Lg	19 04 35.3	
	1.8nm,0.7s						
USP	Ospenovka	6.11	38	P	Pn	19 03 14.2	-0.6
	SNR=5.9						
TKM2	Tokmak 2	6.44	45	P	Pn	19 03 19.6	+0.2
	SNR=8.1						
TKM2	Tokmak 2	6.44	45	⇓Pn	Pn	19 03 18.7	-0.6
	2.8nm,0.6s						
TKM2				⇑Sn	Sn	19 04 32.5	-0.5
	11nm,0.8s						
AB31	Akbulak array	12.68	331	P	Pn	19 04 44.3	-0.3
	0.3nm,0.3s,baz=159,slow=11,SNR=22						

IDC 07 19:09:43.3±1.6**, 50°.04N**×**114°.87W, h0km, mbtmp3.1**/3**, ML3.3**/3**, Error ellipse: s-maj=31.7km s-min=9.7km az=118.0, Alberta**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEW	Newport	2.31	221	Pn	Pn	19 10 24.1	+1.5
	3.3nm,0.3s,baz=42,slow=7.5,SNR=18						
NEW				Lg	Lg	19 10 55.2	
	6.8nm,0.3s,baz=227,slow=18,SNR=18						
	10nm,0.4s						
I56US	NEWPORT INFRAS	2.31	221	I	I	19 24 10.0	
	baz=35,slow=328,SNR=2.7						
NVAR	Mina Array Bea	11.86	193	Pn	Pn	19 12 33.8	0.0
	0.1nm,0.3s,baz=356,slow=14,SNR=3.2						
	0.3nm,0.6s						
YKA	Yellowknife Ar	12.49	1	Pn	Pn	19 12 38.2	-3.8
	0.2nm,0.3s,baz=181,slow=18,SNR=5.5						
YKA				Lg	Lg	19 16 11.5	
	0.1nm,0.3s,baz=170,slow=30,SNR=2.1						
	0.4nm,0.6s						

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*SNET **07** 19:16:27.1±0.6, 13°.90N×90°.63W, h92km±5km, ML3.4*

*GCG **07** 19:16:28.7±1.1, 13°.97N×90°.53W, h85km±7km, MD3.6, ML3.5*

ISC 07 19:16:30.8±2.1**, 13°.87N**±0°.10×**90°.46W**±0°.06**, h84km**±14km**, n16, σ1s.93**/26**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESSJ	San Jos, E	0.31	187	iP	Pn	19 16 41.7	-2.0
FG8	Yepocapa, Chim	0.40	346	eP	Pn	19 16 44.3	-0.1
FG8				eS	Sn	19 16 56.7	+2.2
FG16	Alotenango, Sa	0.40	353	eP	Pn	19 16 43.9	-0.6
FG16				eS	Sn	19 16 56.6	+1.9
FG16				IAML		19 16 58.3	
	comp=E,3μm,0.2s						
ESSG	Sabana Grande	0.62	325	eP	Pn	19 16 43.0	-3.1
ESSG				eS	Sn	19 16 54.8	-2.8
ESSG				IAML		19 16 58.2	
	comp=E,448nm,0.1s						
NUBE	Las Nubes	0.66	87	eP	Pn	19 16 45.5	-1.1
NUBE				eS	Sn	19 16 59.1	+0.7
NUBE	Las Nubes	0.66	87	eP	Pn	19 16 45.5	-1.1
NUBE				iS	Sn	19 16 59.2	+0.7
LOAL	Lomas de Alarc	0.67	79	eS	Sn	19 16 59.7	+1.3
LOAL				eS		19 16 59.9	
CEVE	Cerro Verde	0.82	93	eP	Pn	19 16 47.4	-1.0
CEVE				eS	Sn	19 17 03.7	+2.4
CEVE				IAML		19 17 06.2	
	comp=Z,658nm,0.2s						
JAYA	Jayaque - finc	1.01	102	eP	Pn	19 16 49.1	-1.3
JAYA				eS	Sn	19 17 06.2	+1.1
JAYA				IAML		19 17 07.7	
	comp=Z,599nm,0.3s						
JAYA	Jayaque - finc	1.01	102	eP	Pn	19 16 49.3	-1.1
JAYA				eS	Sn	19 17 05.9	+0.8
STG8	El Palmar, Qui	1.03	304	eP	Pn	19 16 52.0	+1.2
STG8				iS	Sn	19 17 10.4	+4.7
STG8				IAML		19 17 12.8	
	comp=E,1μm,0.2s						
MTO3	Montecristo	1.19	64	eP	Pn	19 16 51.4	-1.3
MTO3	Montecristo	1.19	64	eP	Pn	19 16 51.4	-1.3
ESQI	Esquipulas	1.28	58	eP	Pn	19 16 52.7	-1.0
SOKI	Kika Raxquin	1.31	316	eP	Pn	19 16 53.0	-1.3
SOKI				iS	Sn	19 17 11.1	-0.8
LFRS	El Faro	1.38	100	eS	Sn	19 17 15.4	+2.2

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*DJA **07** 19:47:23.6±0.3, 1°S±2°×12°7E±°, h62km±18km, M3.8/12, mB5.2/2, mb4.3/3, MLv3.6/12, Mw(mB)4.5/2*

*IDC **07** 19:47:25.2±9.5, 0°.59S×127°.13E, h121km±90km, mb3.1/4, mbtmp3.6/5, ML3.6/1, Error ellipse: s-maj=72.2km s-min=19.7km az=52.0*

ISC 07 19:47:21.8±1.4**, 0°.53S**±0°.07×**127°.32E**±0°.07**, h41km, n15, σ2s.49**/17**, mb3.7**/3**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.30	2	P	Pn	19 47 46.1	+2.6
SANI	Sanana	2.01	222	P	Pn	19 47 54.8	+1.5
SANI				S	Sn	19 48 18.5	+1.2
NLAI	Namlea	2.70	185	P	Pn	19 48 05.5	+2.8
NLAI				S	Sn	19 48 36.6	+2.4
AAI	Ambon	3.25	164	P	Pn	19 48 10.2	-0.2
KMSI	Cibinong	3.52	288	P	Pn	19 48 15.3	+1.3
KMSI				S	Sn	19 48 55.8	+1.4
SWI	Sorong	3.95	95	P	Pn	19 48 22.6	+2.6
LUWI	Luwuk	4.58	264	P	Pn	19 48 29.5	+0.9
MRSI	Marisa	5.47	281	P	Pn	19 48 41.1	+0.2
	0.1nm7.1nm,0.7s						
APSI	Ampana	5.69	266	P	Pn	19 48 45.2	+1.4
SPSI	Sidrap Palu	8.28	246	P	Pn	19 49 21.9	+2.4
KAPI	Kappang	8.77	239	P	Pn	19 49 28.4	+2.2
	0.8nm,0.3s,baz=52,slow=16,SNR=6.5						
KAPI				S	Sn	19 51 00.0	-3.8
	5.3nm,0.9s,baz=221,slow=23,SNR=1.9						
	3.0nm,0.2s						
WRA	Warramunga Arr	20.48	161	P	P	19 51 52.6	-3.7
	0.3nm,0.3s,baz=340,slow=11,SNR=9.2						
	0.3nm,0.3s						
ASAR	Alice Springs	23.87	165	P	P	19 52 28.4	-3.2
	0.4nm,0.4s,baz=341,slow=9.9,SNR=21						
	0.4nm,0.4s						
MKAR	Makanchi Array	61.39	326	P	P	19 57 28.4	-5.5
	0.4nm,0.3s,baz=114,slow=8.1,SNR=8.9						
	0.4nm,0.3s						
KURBB	Kurchatov Arra	65.64	328	P	P	19 57 55.8	-6.0
	0.5nm,0.6s,baz=129,slow=6.2,SNR=6.7						
	0.5nm,0.6s						

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*LDG **07** 19:52:36.6±0.1, 45°.44N×6°.35E, h2km, Md1.8/3, Ml2.1/2, Error ellipse: s-maj=2.6km s-min=1.4km az=123.0*

STR 07 19:52:37.2±0.4**, 45°N**±2°×°±°**, h8km**±5km**, MLv1.8**/11**, Error ellipse: s-maj=0.0km s-min=0.0km az=81.5, preliminary, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPL	La Plagne	0.31	70	ePg	Pg	19 52 42.5	-0.9
LPL				eSg	Sg	19 52 46.0	-1.6
	17nm,0.4s						
LPG	La Plagne	0.32	74	ePg	Pg	19 52 42.8	-0.8
LPG				eSg	Sg	19 52 46.0	-1.8
	14nm,0.2s						
OGMO	Fort Saint-Gob	0.33	127	Pg	Pg	19 52 43.4	-0.3
OGMO				Sg	Sg	19 52 48.0	0.0
RSL	Roselend	0.35	38	Pg	Pg	19 52 42.8	-1.4
RSL				Sg	Sg	19 52 46.9	-2.0
OGMY	Moye	0.56	328	Pg	Pg	19 52 47.9	-0.1
OGMY				Sg	Sg	19 52 55.6	+0.2
ORIF	Oris-en-Rattie	0.58	212	ePg	Pg	19 52 48.3	-0.1
ORIF				eSg	Sg	19 52 55.8	-0.1
	5.1nm,0.2s						
ORIF	Oris-en-Rattie	0.58	212	Pg	Pg	19 52 48.2	-0.2
ORIF	Oris-en-Rattie	0.58	212	Sg	Sg	19 52 56.1	+0.2
RRL	Rocca Remolon	0.59	145	Sg	Sg	19 52 56.7	+0.3
RRL	Rocca Remolon	0.59	145	Pg	Pg	19 52 48.6	-0.1
MBDF	Montbardon	0.75	154	eSg	Sg	19 53 02.0	+0.5
	2.5nm,0.3s						
OG35	Corcelles	0.82	321	Pg	Pg	19 52 52.9	-0.1
OG35				Sg	Sg	19 53 03.7	0.0
CABF	La Chapelle	1.21	353	eP	Pn	19 53 00.8	+0.2
CABF				eSg	Sb	19 53 16.6	+0.2
	3.1nm,0.2s						
SSB	Saint Sauveur	1.26	265	Pg	Pg	19 53 01.8	+0.5
SSB				Sn	Sn	19 53 18.0	-0.3
VIVF	Saint-Julien-l	1.29	245	ePg	Pg	19 53 02.4	+0.5
VIVF				eSg	Sn	19 53 19.6	+0.6
	4.5nm,0.3s						
BRANT	Les Verrieres	1.53	4	Pg	Pb	19 53 05.9	-0.1
BRANT				Sg	Sg	19 53 26.5	0.0

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*IDC **07** 19:55:07.2±16.0, 3°.53N×122°.88E, h401km±202km, mb3.2/9, mbtmp3.9/9, Error ellipse: s-maj=99.8km s-min=31.4km az=67.0*

*NEIC **07** 19:55:16.5±0.7, 3°.5N±0°.1×123°.0E±0°.2, h517km±12km, mb4.1/15, Error ellipse: s-maj=25.6km s-min=16.1km az=48.0*

ISC 07 19:55:17.4±0.7**, 3°.34N**±0°.09×**122°.9E**±0°.1**, h545km, n29, σ1s.34**/29**, mb3.8**/16**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOLI2	Tolitoli	3.04	223	P	P	19 56 30.2	-2.1
LUWI	Luwuk	4.35	181		P	19 56 39.5	-2.2
TNTI	Ternate	5.17	119		P	19 56 45.3	-3.1
KKM	Kota Kinabalu	7.16	292		P	19 57 03.9	-2.9
JAGI	Jajag, Banyuwa	14.60	216	P	P	19 58 23.6	+0.6
MTN	Manton Dam	18.05	153	P	P	19 58 54.9	-1.2
KNRA	Kununurra	19.77	163	P	P	19 59 12.1	+0.3
FITZ	Fitzroy Crossi	21.48	173	P	P	19 59 27.6	+0.5
FITZ				IAmb	IAmb	19 59 27.7	
	comp=Z,4.3nm,1.5s						
FITZ	Fitzroy Crossi	21.48	173	P	P	19 59 26.0	-1.1
	comp=Z,1.7nm,0.5s,baz=89,slow=17,SNR=1.7						
	comp=Z,1.7nm,0.5s						
WB0	Warramunga Arr	25.60	154	P	P	20 00 03.6	-0.3
WB0				IAmb	IAmb	20 00 46.9	
	comp=Z,15nm,1.3s						
WRA	Warramunga Arr	25.73	154	P	P	20 00 04.9	-0.1
	comp=Z,0.8nm,0.3s,baz=336,slow=9.6,SNR=15						
	comp=Z,0.8nm,0.3s						
WR8	Warramunga Arr	25.82	154	P	P	20 00 05.5	-0.3
WR8				IAmb	IAmb	20 00 30.9	
	comp=Z,14nm,1.3s						
ASAR	Alice Springs	28.91	159	P	P	20 00 33.4	+0.5
	comp=Z,0.7nm,0.3s,baz=334,slow=7.7,SNR=20						
	comp=Z,0.7nm,0.3s						
BBOO	Buckleboo	38.06	162	P	P	20 01 50.6	+0.9
STKA	Stephens Creek	39.29	154	P	P	20 02 00.9	+1.4
STKA	Stephens Creek	39.29	154	P	P	20 02 00.6	+1.0
	comp=Z,0.8nm,0.4s,baz=325,slow=12,SNR=1.7						
	comp=Z,0.8nm,0.4s						
EVN	Everest	42.19	309	P	P	20 02 24.3	+0.7
EVN				IAmb	IAmb	20 02 25.1	
	comp=Z,2.2nm,0.6s						
CAN	Canberra	45.60	150	P	P	20 02 50.0	+0.9
CAN				IAmb	IAmb	20 03 29.2	
	comp=Z,20nm,1.4s						
SONM	Songino Array	46.55	345	P	P	20 02 55.0	-1.2
	comp=Z,0.5nm,0.5s,baz=163,slow=8.1,SNR=3.0						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	55.74	327	P	P	20 04 03.6	+0.9
	comp=Z,1.1nm,0.4s,baz=127,slow=7.6,SNR=29						
	comp=Z,1.1nm,0.4s						
MAKZ	Makanchi	55.92	327	P	P	20 04 04.4	+0.5
KDJ	Kajisay	56.12	320	P	P	20 04 07.0	+1.3
ZALV	Zalesovo Beam	59.25	335	P	P	20 04 26.1	-0.3
	comp=Z,0.4nm,0.3s,baz=141,slow=6.8,SNR=2.3						
	comp=Z,0.4nm,0.3s						
KURBB	Kurchatov Arra	60.04	329	P	P	20 04 32.2	+0.5
	comp=Z,0.8nm,0.5s,baz=135,slow=6.6,SNR=20						
	comp=Z,0.8nm,0.5s						
KURK	Kurchatov	60.05	329	P	P	20 04 32.4	+0.6
KURK				IAmb	IAmb	20 04 32.9	
	comp=Z,2.8nm,0.6s						
BVAR	Borovoye Array	65.58	328	P	P	20 05 08.4	+1.0
	comp=Z,0.4nm,0.4s,baz=154,slow=8.5,SNR=2.2						
	comp=Z,0.4nm,0.4s						
C19K	Lookout Ridge	82.46	21	P	P	20 06 44.3	+1.7
D19K	Kuna River	82.88	21	P	P	20 06 45.2	+0.5
D19K				IAmb	IAmb	20 07 18.8	
	comp=Z,6.6nm,1.5s						
B21K	Ikpikpuk River	84.28	20	P	P	20 06 52.6	+1.1
B21K				IAmb	IAmb	20 07 15.4	
	comp=Z,7.8nm,1.4s						

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*IDC **07** 20:00:32.8±8.3, 5°.06S×152°.91E, h95km±64km, mb3.3/6, mbtmp3.7/7, ML1.7/1, MS3.6/1, Error ellipse: s-maj=63.8km s-min=31.1km az=87.0*

ISC 07 20:00:27.0±1.4**, 5°.0S**±0°.2×**153°.2E**±0°.2**, h50km, n8, σ1s.08**/8**, mb3.6**/6**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.46	234	P	Pn	20 02 14.5	+1.3
	0.7nm,0.3s,baz=350,slow=11,SNR=1.6						
PMG				S	Sn	20 03 36.0	-0.5
	22nm,0.8s,baz=139,slow=20,SNR=8.1						
	12nm,0.8s						
WRA	Warramunga Arr	23.65	229	P	P	20 05 32.6	-1.4
	0.5nm,0.8s,baz=40,slow=8.8,SNR=5.6						
	0.5nm,0.8s						
ASAR	Alice Springs	26.30	223	P	P	20 05 57.2	-1.0
	0.3nm,0.8s,baz=41,slow=10,SNR=1.9						
	0.3nm,0.8s						
RPZ	Rata Peaks	41.64	160	LR	LR	20 25 37.3	
	comp=Z,66nm,18.5s,baz=327,slow=36						
MKAR	Makanchi Array	80.76	319	P	P	20 12 35.9	+0.6
	0.4nm,0.9s,baz=90,slow=7.2,SNR=3.3						
	0.4nm,0.9s						
ZALV	Zalesovo Beam	81.56	326	P	P	20 12 38.8	-0.5
	0.5nm,0.4s,baz=103,slow=6.5,SNR=2.2						
	0.5nm,0.4s						
QSPA	South Pole Qui	84.97	180	P	P	20 12 57.2	+0.3

	0.5nm,0.5s,baz=54,slow=17,SNR=9.3						
	0.5nm,0.5s						
BVAR	**Borovoye Array**	**89.66**	**323**	P	**P**	**20 13 19.1**	**-0.5**
	0.2nm,0.4s,baz=117,slow=5.0,SNR=2.8						
	0.2nm,0.4s						

IDC 07 20:07:28.3±2.5**,7°.49N×93°.54E,h0^{km},mb3.4**/4**, mbtmp3.4**/5**,ML3.8**/1**,Error ellipse: s-maj=90.4km s-min=25.2km az=63.0,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**12.10**	**25**	Pn	Pn	20 10 21.4	-0.7
	0.2nm,0.3s,baz=211,slow=11,SNR=1.5						
	0.3nm,0.3s						
H08S3	**Diego Garcia H**	**25.82**	**235**	T	T	20 39 52.9	
	baz=59,slow=74						
H08S2	**Diego Garcia H**	**25.82**	**235**	T	T	20 39 48.9	
	baz=59,slow=74						
H08S1	**Diego Carcia H**	**25.83**	**235**	T	T	20 39 53.1	
	baz=59						
MKAR	**Makanchi Array**	**40.33**	**348**	P	P	20 15 08.2	+0.6
	0.5nm,0.7s,baz=165,slow=10.0,SNR=4.6						
	0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**46.86**	**353**	P	P	20 15 59.1	-0.9
	0.3nm,0.3s,baz=169,slow=8.7,SNR=1.6						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**48.53**	**125**	P	P	20 16 14.5	+0.9
	0.6nm,1.0s,baz=300,slow=8.0,SNR=4.9						
	0.6nm,1.0s						
ASAR	**Alice Springs**	**50.13**	**129**	P	P	20 16 24.5	-1.3
	0.3nm,0.9s,baz=303,slow=8.3,SNR=1.7						
	0.3nm,0.9s						
H04N2	**CROZET ISLANDS**	**65.09**	**211**	T	T	21 28 54.6	
	baz=44						
H04N1	**CROZET ISLANDS**	**65.10**	**211**	T	T	21 28 54.0	
	baz=44						
H04N3	**CROZET ISLANDS**	**65.11**	**211**	T	T	21 28 52.4	
	baz=44						

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*TEH **07** 20:21:04.5,29°.68N×51°.12E,h8^{km}±25^{km}*
*OMAN **07** 20:21:09.7±1.0,29°.51N×51°.40E,h10^{km},mb4.2/15, ml3.2/1,Error ellipse: s-maj=9.2km s-min=6.3km az=149.0*
ISC 07 20:21:05.8±0.8**,29°.72N**±0°.03×**51°.19E**±0°.05**,h10^{km},n62, σ1^{s}.77**/70**,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAZ2	**Kazeron-Fars-I**	**0.42**	**104**	Pg	**Pb**	**20 21 14.5**	**-0.9**
SHI	**Shiraz**	**1.15**	**93**	Pg	**Pg**	**20 21 28.9**	**+1.0**
KLNJ	**Kolanjah**	**1.33**	**15**	Pg	**Pg**	**20 21 32.1**	**+0.6**
DSBU	**Dashti - Bushe**	**1.35**	**177**	Pg	**Pg**	**20 21 30.7**	**-1.0**
QIR1	**Qir**	**2.04**	**127**	Pn	**Pb**	**20 21 42.3**	**-0.7**
IBRJ	**Brojen**	**2.19**	**2**	Pn	**Pb**	**20 21 44.9**	**-0.7**
IRAM	**Ramesheh**	**2.32**	**26**	Pn	**Pb**	**20 21 47.3**	**-0.7**
ZNGN	**Zangian**	**2.41**	**353**	Pn	**Pb**	**20 21 48.0**	**-1.5**
JHBN	**Jahan bin**	**2.55**	**350**	Pn	**Pb**	**20 21 50.0**	**-1.9**
IPIR	**Pirpir**	**2.97**	**355**	Pn	**Pb**	**20 21 55.7**	**-3.3**
ISAD	**Sadrabad**	**3.07**	**44**	Pn	**Pb**	**20 21 58.2**	**-2.5**
IZEF	**Zefreh**	**3.32**	**17**	Pn	**Pb**	**20 22 01.4**	**-3.5**
IMEH	**Mehriz**	**3.39**	**60**	Pn	**Pn**	**20 22 02.0**	**+3.0**
IKLH	**Kolahrood**	**3.61**	**5**	Pn	**Pn**	**20 22 04.6**	**+2.5**
ICHK	**Chekchek**	**3.74**	**47**	Pn	**Pn**	**20 22 06.7**	**+2.9**
SAKB	**Bahrain**	**3.77**	**189**	P	**Pn**	**20 22 05.1**	**+1.1**
SAKB				S	**Sn**	**20 22 49.9**	**+1.5**
SHMA	**Al-Shehemyia**	**3.85**	**183**	P	**Pn**	**20 22 06.2**	**+1.1**
	SNR=7.9						
ANAR	**Anarak**	**4.08**	**31**	Pn	**Pn**	**20 22 11.1**	**+2.6**
IBAF	**Bafgh**	**4.21**	**63**	Pn	**Pn**	**20 22 13.2**	**+3.0**
KRSH	**Karshahi**	**4.32**	**10**	Pn	**Pn**	**20 22 14.3**	**+2.7**
KHGB	**Koh Gabri**	**4.63**	**81**	Pn	**Pn**	**20 22 18.9**	**+2.8**
ISFB	**Sefidab**	**4.71**	**11**	Pn	**Pn**	**20 22 19.1**	**+2.1**
IKFM	**Kafar-mosalman**	**4.75**	**324**	Pn	**Pn**	**20 22 19.7**	**+2.3**
NGRK	**Negar Kerman**	**4.82**	**89**	Pn	**Pn**	**20 22 21.5**	**+2.7**
KRBR	**Kerman**	**4.84**	**85**	Pn	**Pn**	**20 22 21.5**	**+2.5**
TRNA	**Turayna**	**4.96**	**180**	P	**Pn**	**20 22 21.7**	**+1.3**
	SNR=9.3						
TRNA				S	**Sn**	**20 23 19.3**	**+1.4**
SMRA	**Abu-Samra**	**4.96**	**184**	P	**Pn**	**20 22 21.5**	**+1.1**
JRN	**Qarnain Island**	**4.98**	**162**	P	**Pn**	**20 22 22.3**	**+1.7**
HSAM	**Samen**	**4.99**	**335**	Pn	**Pn**	**20 22 22.9**	**+1.8**
IVRN	**Varamin**	**5.28**	**5**	Pn	**Pn**	**20 22 27.6**	**+2.7**
HAGD	**Aghdareh**	**5.38**	**342**	Pn	**Pn**	**20 22 28.3**	**+2.0**
SLWR	**Sila**	**5.64**	**175**	P	**Pn**	**20 22 31.0**	**+1.2**
SLWR				S	**Sn**	**20 23 35.0**	**+0.3**
SHME	**Shamm**	**5.70**	**129**	P	**Pn**	**20 22 31.5**	**+0.9**
TPRV	**Parvadeh(Tabas**	**5.74**	**54**	Pn	**Pn**	**20 22 34.1**	**+2.8**
UMQ	**Umm Al-Quwin**	**5.76**	**135**	P	**Pn**	**20 22 32.4**	**+1.1**
ILBA	**Ilam Banvizeh**	**5.76**	**314**	Pn	**Pn**	**20 22 33.1**	**+1.6**
AJN	**Ajban**	**6.15**	**146**	P	**Pn**	**20 22 38.0**	**+1.3**
NAZ	**Nazwa, Dubai**	**6.16**	**139**	P	**Pn**	**20 22 38.0**	**+1.1**
MASF	**Masafi**	**6.18**	**133**	P	**Pn**	**20 22 38.0**	**+0.9**
TNSJ	**Nastanj**	**6.26**	**46**	Pn	**Pn**	**20 22 41.3**	**+3.0**
ASUD	**Al Ashush, Dub**	**6.27**	**143**	P	**Pn**	**20 22 39.6**	**+1.2**
	SNR=13						
MDH	**Madha**	**6.32**	**133**	P	**Pn**	**20 22 40.0**	**+1.0**
MZWR	**Madinat Zayed**	**6.40**	**157**	P	**Pn**	**20 22 41.6**	**+1.5**
IDHR	**Dehrash**	**6.42**	**322**	Pn	**Pn**	**20 22 42.1**	**+1.4**
UOSS	**Minazif**	**6.51**	**136**	P	**Pn**	**20 22 42.2**	**+0.4**
HATD	**Hatta, Dubai**	**6.56**	**137**	P	**Pn**	**20 22 43.3**	**+0.9**
ASHO	**Ashiyiah**	**6.62**	**138**	P	**Pn**	**20 22 44.2**	**+0.9**
ALNE	**Al Ain**	**6.95**	**143**	P	**Pn**	**20 22 48.9**	**+1.1**
	SNR=7.2						
ALNE				S	**Sn**	**20 24 06.1**	**-0.9**
MZR	**Muzera**	**6.99**	**162**	P	**Pn**	**20 22 49.5**	**+1.1**
	SNR=16						
SOHO	**SOHO**	**7.32**	**138**	P	**Pn**	**20 22 53.4**	**+0.5**
SOHO				S	**Sn**	**20 24 14.8**	**-1.3**
UMZA	**Um Al Zommool**	**7.83**	**152**	P	**Pn**	**20 23 00.5**	**+0.7**
ARQ	**Araqi**	**7.95**	**142**	P	**Pn**	**20 23 02.1**	**+0.6**
	SNR=6.2						
ARQ				P	**Pn**	**20 23 02.4**	**+1.0**
HOQ	**Hoqain**	**8.20**	**137**	P	**Pn**	**20 23 05.5**	**+0.6**
HOQ				S	**Sn**	**20 24 34.8**	**-2.9**
BSY	**Bisya**	**8.79**	**141**	P	**Pn**	**20 23 13.4**	**+0.4**
SMDO	**Samad**	**9.04**	**136**	P	**Pn**	**20 23 16.8**	**+0.3**
SMDO				S	**Sn**	**20 24 55.3**	**-3.1**
JMDO	**Jabal Madar**	**9.60**	**138**	P	**Pn**	**20 23 24.8**	**+0.7**
NGCH	**Negor - Chabah**	**9.83**	**114**	P	**Pn**	**20 23 26.5**	**-0.8**
MHTO	**MHTO**	**10.63**	**143**	P	**Pn**	**20 23 38.0**	**-0.3**
DOK	**Doka**	**11.37**	**166**	P	**Pn**	**20 23 48.0**	**-0.3**
WHFO	**Wadi Hawf**	**11.98**	**168**	P	**Pn**	**20 23 56.3**	**-0.5**
DMTO	**DMTO**	**12.43**	**163**	P	**Pn**	**20 24 01.2**	**-1.7**
ABTO	**Aybut**	**12.46**	**171**	P	**Pn**	**20 24 02.5**	**-0.8**

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*IDC **07** 20:28:01.6±3.2,5°.31S×147°.04E,h251^{km}±28^{km},mb3.1/3, mbtmp3.8/5,Error ellipse: s-maj=42.9km s-min=31.3km az=119.0*
ISC 07 20:27:53.5±2.2**,4°.8S**±0°.2×**147°.2E**±0°.4**,h200^{km},n7, σ0^{s}.56**/6**,mb3.6**/4**,Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.56**	**180**	P	Pn	20 29 08.1	+5.8
	12nm,0.3s,baz=0.0,slow=12,SNR=13						
PMG				S	**Sn**	**20 29 56.8**	**+0.3**
	13nm,0.5s,baz=311,slow=20,SNR=1.8						
WRA	**Warramunga Arr**	**19.54**	**219**	P	**P**	**20 32 05.6**	**-0.5**
	1.3nm,0.3s,baz=40,slow=10,SNR=22						
ASAR	**Alice Springs**	**22.69**	**213**	P	**P**	**20 32 38.2**	**+0.1**
	1.5nm,0.6s,baz=35,slow=7.9,SNR=27						
	1.5nm,0.6s						
FITZ	**Fitzroy Crossi**	**24.84**	**236**	P	**P**	**20 32 58.0**	**+0.3**
	12nm,0.4s,baz=56,slow=8.9,SNR=59						
MKAR	**Makanchi Array**	**76.70**	**320**	P	P	20 39 26.8	+4.3
	0.2nm,0.5s,baz=106,slow=7.1,SNR=2.3						
	0.2nm,0.5s						
QSPA	**South Pole Qui**	**85.14**	**180**	P	**P**	**20 40 06.5**	**-0.4**
	0.8nm,0.9s,baz=22,slow=15,SNR=1.7						
	0.8nm,0.9s						
TORD	**Torodi Ar. Bea**	**144.94**	**286**	PKP	**PKPdf**	**20 47 08.3**	**+0.5**
	1.3nm,0.3s,baz=84,slow=3.4,SNR=1.4						

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*TEH **07** 20:54:31.3,32°.62N×47°.81E,h10^{km}±999^{km}*
*ISN **07** 20:54:33.2±1.4,32°.83N×47°.78E,h24^{km}±10^{km},ML2.5*
ISC 07 20:54:30.8±1.4**,32°.55N**±0°.09×**47°.81E**±0°.05**,h10^{km},n6, σ1^{s}.32**/9**,Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**0.97**	**2**	Pg	**Pb**	**20 54 48.8**	**-0.9**
IBDR	**Badra**	**1.68**	**290**	*e*Pg	**Pn**	**20 55 01.0**	**+0.7**
	baz=100						
IBDR				*e*Sg	**Sb**	**20 55 23.0**	**0.0**
IBDR				AML	AML	20 55 33.2	
	comp=N,12nm,0.4s						
HSAM	**Samen**	**1.78**	**22**	Pg	**Pg**	**20 55 04.2**	**-0.8**
HSAM				Sg	**Sg**	**20 55 29.1**	**+0.9**
IPIR	**Pirpir**	**2.60**	**86**	Pn	**Pb**	**20 55 16.1**	**-1.6**
BHD	**Baghdad**	**2.97**	**285**	*e*Pn	**Pn**	**20 55 19.0**	**+0.9**
BHD				*e*Sn	**Sn**	**20 55 54.0**	**+0.2**
IZEF	**Zefreh**	**3.82**	**84**	Pn	**Pn**	**20 55 32.0**	**+2.0**

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*NEIC **07** 20:59:44.7±1.6,31°.61N±0°.02×116°.02W±0°.02,h7^{km}±3^{km}, Error ellipse: s-maj=3.0km s-min=2.0km az=221.0*
*PAS **07** 20:59:45.6±1.6,31°.63N±0°.01×116°.00W±0°.02,h10^{km}±8^{km}, ML3.1/118,ML2.8/26(NEIC),Error ellipse: s-maj=2.7km s-min=1.6km az=81.0*
*ECX **07** 20:59:46.1±0.5,31°.63N×115°.98W,h5^{km}±4^{km},MD2.9, ML3.1*
ISC 07 20:59:45.2±0.9**,31°.61N**±0°.03×**116°.01W**±0°.03**,h25^{km}**±7^{km}**, n43,**σ**1^{s}.15**/66**,7C-9D,Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJX	**San Joaquin**	**0.16**	**15**	⇓*i*P	**Pn**	**20 59 52.9**	**+0.8**
SJX				*e*S	**Sb**	**20 59 58.0**	**+4.0**
SJX				IAML		20 59 58.5	
	comp=E,2μm,0.1s						
SJX				⇓*e*		20 59 58.5	
SJX				⇓*e*		20 59 59.1	
SJX				IAML		20 59 59.1	
	comp=N,2μm,0.1s						
VTX	**Valle De La Tr**	**0.29**	**138**		**Pb**	**20 59 51.5**	**-0.6**
VTX					**Sb**	**20 59 55.0**	**-1.8**
VTX	**Valle De La Tr**	**0.29**	**138**	⇑*i*P	**Pb**	**20 59 51.5**	**-0.6**
VTX				*e*S	**Sb**	**20 59 55.6**	**-1.2**
ESJX	**Sierra Juarez**	**0.40**	**7**		**Pb**	**20 59 52.9**	**-1.1**
ESJX					**Sb**	**20 59 57.9**	**-2.0**
ESJX				IAML		20 59 59.4	
	comp=N,2μm,0.1s						
ALAMX	**Rancho Alamar**	**0.47**	**33**	⇓*i*P	**Pb**	**20 59 54.1**	**-0.9**
ALAMX				*e*S	**Sb**	**20 59 60.0**	**-1.8**
ALAMX				⇑*e*		21 00 00.2	
ALAMX				IAML		21 00 00.2	
	comp=N,1μm,0.2s						
ALAMX				IAML		21 00 00.6	
	comp=E,2μm,0.2s						
ALAMX				⇓*e*		21 00 00.6	
CCX	**Cicese**	**0.62**	**295**	Pg	**Pb**	**20 59 55.6**	**-1.7**
CCX					**Sb**	**21 00 05.3**	**-0.3**
CCX				IAML		21 00 06.8	
	comp=N,614nm,0.3s						
CCX				IAML		21 00 06.8	
	comp=E,647nm,0.3s						
CCX	**Cicese**	**0.62**	**295**	*e*P	**Pb**	**20 59 57.3**	**-0.1**
CCX				*e*S	**Sb**	**21 00 06.0**	**+0.4**
PBX	**Punta Banda**	**0.62**	**283**	⇑*i*P	**Pb**	**20 59 57.8**	**+0.2**
PBX				*e*S	**Sb**	**21 00 06.3**	**+0.4**
SPIG	**San Pedro Mart**	**0.73**	**140**	⇓*e*P	**Pb**	**20 59 59.3**	**-0.2**
SPIG				*e*S	**Sb**	**21 00 09.0**	**-0.1**
SPIG				IAML		21 00 09.9	
	comp=N,508nm,0.2s						
SPIG				IAML		21 00 10.3	
	comp=E,352nm,0.3s						
SPIG				⇑*e*		21 00 10.3	
RHX	**Rio Hardy**	**0.81**	**49**	⇑*e*P	**Pb**	**21 00 00.1**	**-0.5**
CBX	**Cerro Bola**	**0.90**	**322**		**Pb**	**21 00 01.7**	**-0.6**
CBX				IAML		21 00 18.7	
	comp=N,492nm,0.6s						
CBX				IAML		21 00 20.3	
	comp=E,417nm,0.6s						
CBX	**Cerro Bola**	**0.90**	**322**		**Sb**	**21 00 13.4**	**-0.5**
CBX	**Cerro Bola**	**0.90**	**322**	*e*P	**Pb**	**21 00 01.7**	**-0.6**
CBX				*e*S	**Sb**	**21 00 13.7**	**-0.1**
RMX	**La Rumorosa**	**0.99**	**357**		**Pn**	**21 00 02.6**	**-1.1**
RMX					**Sb**	**21 00 14.4**	**-2.3**
RMX	**La Rumorosa**	**0.99**	**357**	*e*P	**Pn**	**21 00 02.5**	**-1.2**
RMX				*e*S	**Sb**	**21 00 14.9**	**-1.8**
SQX	**San Quintin**	**1.03**	**174**	*e*P	**Pn**	**21 00 04.2**	**+0.1**
SQX				*e*S	**Sb**	**21 00 18.3**	**+0.7**
SQX				IAML		21 00 20.5	
	comp=N,536nm,0.1s						
SQX				⇓*e*		21 00 20.5	
SQX				IAML		21 00 21.2	
	comp=E,415nm,0.1s						
SQX				⇑*e*		21 00 21.2	
YUH	**Yuha Desert**	**1.04**	**4**	Pg	**Pn**	**21 00 03.9**	**-0.3**
YUH				Sg	**Sb**	**21 00 16.6**	**-1.2**
YUH				IAML		21 00 18.1	
	comp=N,248nm,0.1s						
YUH				IAML		21 00 21.1	
	comp=E,160nm,0.1s						
YUH2	**Yuha Desert**	**1.04**	**4**	⇓*e*P	**Pn**	**21 00 04.0**	**-0.2**
IKP	**In-Ko-Pah, Jac**	**1.04**	**355**		**Pn**	**21 00 04.5**	**+0.1**
IKP	**In-Ko-Pah, Jac**	**1.04**	**355**	⇓*e*P	**Pn**	**21 00 04.4**	**+0.1**
GUVIX	**Guadalupe Vict**	**1.05**	**49**		**Pb**	**21 00 05.4**	**+0.6**
GUVIX					**Sb**	**21 00 20.3**	**+2.1**
SGL	**Mount Signal**	**1.07**	**13**		**Pn**	**21 00 04.7**	**+0.1**
SGL					**Sn**	**21 00 17.9**	**-0.7**
TKX	**Tecate**	**1.08**	**332**	Pg	**Pn**	**21 00 04.1**	**-0.7**
TKX					**Sn**	**21 00 18.2**	**-1.0**
WESC	**Westside Schoo**	**1.17**	**12**		**Pb**	**21 00 07.0**	**+0.2**
DUZA	**Dulzura**	**1.19**	**327**		**Pn**	**21 00 06.5**	**+0.2**
DUZA					**Sn**	**21 00 21.1**	**-0.6**
BAR	**Barrett**	**1.21**	**332**		**Pn**	**21 00 06.7**	**+0.2**
BAR					**Sn**	**21 00 21.8**	**-0.4**
BAR	**Barrett**	**1.21**	**332**	*e*P	**Pn**	**21 00 06.8**	**+0.2**
OLP	**Otay Lakes Par**	**1.27**	**322**		**Pn**	**21 00 08.0**	**+0.6**
OLP					**Sb**	**21 00 24.2**	**-0.1**
CRR	**Carrizo Plain**	**1.28**	**2**		**Pb**	**21 00 08.7**	**+0.1**
CRR					**Sb**	**21 00 24.5**	**-0.1**
MONP2	**Monument Peak**	**1.33**	**345**		**Pb**	**21 00 09.3**	**-0.3**
MONP2					**Sb**	**21 00 25.7**	**-0.6**
MONP2	**Monument Peak**	**1.33**	**345**	⇑*e*P	**Pb**	**21 00 09.3**	**-0.3**
SDRC	**San Diego Road**	**1.38**	**325**		**Sn**	**21 00 26.7**	**+0.5**
CPE	**Camp Elliot**	**1.58**	**324**	IAML		21 00 33.6	
	comp=E,225nm,0.2s						
GLA	**Glamis**	**1.75**	**34**	Pn	**Pn**	**21 00 14.4**	**+0.3**
PFO	**Pinyon Flats O**	**2.04**	**349**		**Pn**	**21 00 18.2**	**+0.2**
PFO					**Sb**	**21 00 47.1**	**+0.5**
PFO				IAML		21 00 50.6	
	comp=E,44nm,0.5s						
CRY	**Cary Ranch**	**2.05**	**343**		**Pb**	**21 00 22.0**	**+0.2**
113A	**Mohawk Valley,**	**2.23**	**58**	Pn	**Pn**	**21 00 21.3**	**+0.8**
113A					**Sn**	**21 00 46.0**	**-1.2**
ELS	**Elsinore Mount**	**2.36**	**330**		**Pn**	**21 00 23.8**	**+1.4**
ELS				IAML		21 00 59.1	
	comp=E,61nm,0.5s						
ELS				IAML		21 01 01.3	
	comp=N,39nm,0.4s						
214A	**Organ Pipe Nat**	**2.75**	**82**	Pn	**Pn**	**21 00 27.9**	**+0.2**
Y14A	**Wickenburg**	**3.44**	**47**	Pn	**Pn**	**21 00 39.2**	**+2.0**
GSC	**Goldstone, Bar**	**3.75**	**350**		**Pn**	**21 00 44.5**	**+3.0**
GSC				IAML		21 01 47.6	
	comp=E,17nm,1.1s						
GSC				IAML		21 01 48.5	
	comp=N,13nm,0.9s						
GWY	**Greenwater Val**	**4.60**	**353**		**Pn**	**21 00 55.5**	**+2.2**
X16A	**Lo Mia Camp, P**	**4.75**	**53**	Pn	**Pn**	**21 00 56.8**	**+1.4**

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*IDC **07** 21:26:28.5±1.7,3°.12N×127°.78E,h0^{km},mb3.4/6, mbtmp3.5/6,Error ellipse: s-maj=113.4km s-min=21.1km az=69.0*
ISC 07 21:26:35.1±1.6**,3°.1N**±0°.3×**127°.9E**±0°.6**,h50^{km},n6,σ0^{s}.70**/6**, mb3.4**/6**,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.19**	**186**	P	**P**	**21 31 16.6**	**0.0**
	2.1nm,0.8s,baz=0.0,slow=6.1,SNR=1.4						
	2.1nm,0.8s						
WRA	**Warramunga Arr**	**23.78**	**165**	P	**P**	**21 31 42.5**	**-0.8**
	0.4nm,0.5s,baz=343,slow=10,SNR=6.1						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**27.26**	**168**	P	**P**	**21 32 14.5**	**-0.4**
	0.1nm,0.4s,baz=347,slow=10,SNR=4.6						
	0.1nm,0.4s						
STKA	**Stephens Creek**	**37.17**	**160**	P	**P**	**21 33 42.0**	**+0.5**
	1.9nm,0.7s,baz=332,slow=12,SNR=3.9						
	1.9nm,0.7s						
MKAR	**Makanchi Array**	**58.70**	**325**	P	**P**	**21 36 27.4**	**-0.4**
	0.1nm,0.5s,baz=121,slow=8.0,SNR=1.5						
	0.1nm,0.5s						
KURBB	**Kurchatov Arra**	**62.86**	**327**	P	**P**	**21 36 56.3**	**+0.4**
	0.3nm,0.8s,baz=127,slow=6.0,SNR=2.6						
	0.3nm,0.8s						

IDC 07 21:32:39.8±3.7**,13°.23N×125°.57E,h0^{km},mb3.3**/4**, mbtmp3.3**/4**,Error ellipse: s-maj=308.8km s-min=23.4km az=65.0,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**34.07**	**165**	P	P	21 39 25.5	-0.7
	0.4nm,0.8s,baz=344,slow=8.0,SNR=19						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**37.56**	**167**	P	P	21 39 56.6	+0.5
	0.3nm,0.6s,baz=349,slow=7.7,SNR=6.3						
	0.3nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**39.84**	**77**	T	T	22 24 02.8	
	baz=264,slow=77,SNR=6.0						
H11S1	**WAKE ISLAND Hy**	**39.85**	**77**	T	T	22 24 03.0	
	baz=264,slow=77,SNR=3.2						
H11S2	**WAKE ISLAND Hy**	**39.85**	**77**	T	T	22 23 57.9	
	baz=264,slow=77,SNR=5.0						
H11N1	**WAKE ISLAND Hy**	**40.07**	**75**	T	T	22 24 09.6	
	baz=267,slow=75,SNR=45						
H11N2	**WAKE ISLAND Hy**	**40.08**	**75**	T	T	22 24 18.5	
	baz=267,slow=75,SNR=32						
H11N3	**WAKE ISLAND Hy**	**40.09**	**75**	T	T	22 24 10.8	
	baz=267,slow=75,SNR=44						
MKAR	**Makanchi Array**	**49.28**	**322**	P	P	21 41 30.6	+0.1
	0.2nm,0.7s,baz=118,slow=7.1,SNR=2.5						
	0.2nm,0.7s						
KURBB	**Kurchatov Arra**	**53.27**	**324**	P	P	21 42 00.0	-0.3
	0.2nm,0.4s,baz=124,slow=7.4,SNR=2.6						
	0.2nm,0.4s						

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*AZER **07** 21:42:00.2,38°.39N×46°.70E,h6^{km},ml4.2*
*NSSP **07** 21:42:01.5,38°.43N×46°.65E,h10^{km},Ms4.0*
*TEH **07** 21:42:01.8,38°.40N×46°.68E,h6^{km}±35^{km}*
*IDC **07** 21:42:02.0±0.8,38°.41N×46°.70E,h0^{km},mb3.9/19, mbtmp3.9/29,ML2.1/5,MS2.7/5,Error ellipse: s-maj=14.5km s-min=8.7km az=19.0*
*MOS **07** 21:42:03.3±1.7,38°.48N×46°.80E,h10^{km},mb4.2/16,Error ellipse: s-maj=7.1km s-min=4.8km az=115.1*
*THR **07** 21:42:04.2±0.0,38°.36N×46°.57E,h10^{km}±11^{km},ML4.2*
ISC 07 21:42:02.7±1.0**,38°.45N**±0°.02×**46°.71E**±0°.02**,h4^{km}**±7^{km}**, n232,**σ**1^{s}.89**/277**,mb4.1**/37**,MS2.8**/3**,20C-19D, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IHRS	**Heris**	**0.29**	**116**	Pg	**Pg**	**21 42 07.8**	**-0.6**
ITBZ	**Tabriz**	**0.49**	**245**	Pg	**Pg**	**21 42 10.4**	**-1.8**
ITBZ				Sg	**Sg**	**21 42 16.9**	**-1.7**
ORD	**Ordubad**	**0.74**	**311**	Pg	**Pg**	**21 42 16.1**	**-0.8**
ORD	**Ordubad**	**0.74**	**311**	P	**Pg**	**21 42 16.5**	**-0.4**
ORD				S	**Sb**	**21 42 27.6**	**-1.2**
EGVZ	**Egvard**	**0.79**	**350**	*e*P	**Pg**	**21 42 18.1**	**+0.2**
EGVZ				*e*S	**Sb**	**21 42 29.7**	**-0.6**
ISHB	**Shabestar**	**0.88**	**260**	Pg	**Pg**	**21 42 17.6**	**-2.0**
IAZR	**Azarshahr**	**0.96**	**217**	Pg	**Pg**	**21 42 19.3**	**-1.8**
GRMI	**Germi**	**0.99**	**68**	Pg	**Pg**	**21 42 21.1**	**-0.7**
GRS	**Goris**	**1.09**	**344**	⇑*i*P	**Pn**	**21 42 28.0**	**+3.0**
GRS				⇑*i*S	**Sn**	**21 42 43.0**	**+2.4**
QRD	**Qoradiz**	**1.12**	**25**	P	**Pb**	**21 42 24.3**	**-0.3**
QRD				S	**Sn**	**21 42 42.1**	**+1.0**
NAX	**Nakhchivan**	**1.20**	**308**	Pg	**Pb**	**21 42 25.0**	**-1.0**
NAX	**Nakhchivan**	**1.20**	**308**	P	**Pb**	**21 42 25.0**	**-1.0**
NAX				S	**Sn**	**21 42 42.2**	**-0.9**
NAX	**Nakhchivan**	**1.20**	**308**	PG	**Pb**	**21 42 25.0**	**-1.0**
IHSH	**Hashtrud**	**1.22**	**159**	Pg	**Pb**	**21 42 23.8**	**-2.8**
YRD	**Yardimli**	**1.29**	**68**	Pg	**Pn**	**21 42 26.8**	**-0.8**
YRD	**Yardimli**	**1.29**	**68**	P	**Pn**	**21 42 26.9**	**-0.8**
YRD				S	**Sn**	**21 42 45.3**	**-0.1**
LRK	**Lerik**	**1.29**	**81**	Pg	**Pn**	**21 42 26.6**	**-1.1**
LRK	**Lerik**	**1.29**	**81**	P	**Pn**	**21 42 26.6**	**-1.1**
LRK				S	**Sn**	**21 42 45.3**	**-0.3**
SBZ	**Shahbuz**	**1.31**	**317**	Pg	**Pn**	**21 42 26.7**	**-1.2**
SBZ	**Shahbuz**	**1.31**	**317**	P	**Pn**	**21 42 26.6**	**-1.4**
SBZ				S	**Sg**	**21 42 46.0**	**+1.1**
BLQ	**Beylaqan**	**1.43**	**27**	Pg	**Pg**	**21 42 30.1**	**-0.1**
BLQ	**Beylaqan**	**1.43**	**27**	P	**Pg**	**21 42 30.1**	**-0.1**
BLQ				S	**Sg**	**21 42 51.9**	**+3.1**
GLBA	**Clilabad**	**1.54**	**58**	Pg	**Pg**	**21 42 32.1**	**-0.1**
GLBA	**Clilabad**	**1.54**	**58**	P	**Pg**	**21 42 32.1**	**-0.1**
GLBA				P	**Pg**	**21 42 32.1**	**-0.1**
GLBA				S	**Sg**	**21 42 55.0**	**+2.9**
VAYK	**Vayk**	**1.60**	**322**	*e*P	**Pn**	**21 42 31.6**	**-0.3**
VAYK				*e*S	**Sg**	**21 42 54.2**	**+0.1**
ASTR	**Astara**	**1.64**	**85**	P	**Pb**	**21 42 33.0**	**-0.4**
ASTR				S	**Sg**	**21 42 56.5**	**+1.3**
LKRN	**Lenkeran, Azer**	**1.64**	**80**	P	**Pb**	**21 42 33.3**	**-0.2**
LKRN				S	**Sg**	**21 42 56.4**	**+0.9**
LKRN	**Lenkeran, Azer**	**1.64**	**80**	PG	**Pb**	**21 42 33.3**	**-0.2**
GAS1	**Astara - Iran**	**1.67**	**91**	Pg	**Pb**	**21 42 33.2**	**-0.9**
AGDM	**Agdam**	**1.69**	**10**	P	**Pb**	**21 42 34.1**	**-0.2**
AGDM				S	**Sg**	**21 42 58.5**	**+1.5**
MAKU	**Maku**	**1.82**	**300**	Pn	**Pn**	**21 42 34.7**	**-0.3**
BRDA	**Brd**	**1.85**	**11**	P	**Pg**	**21 42 37.6**	**-0.6**
BRDA				S	**Sg**	**21 43 05.7**	**+3.5**
MAHB	**Mahabad**	**1.86**	**206**	Pg	**Pn**	**21 42 35.0**	**-0.5**
HYR	**Heyderabad**	**1.93**	**312**	P	**Pb**	**21 42 37.0**	**-1.5**
HYR				S	**Sg**	**21 43 03.5**	**-1.1**
SAAT	**Saatly**	**1.94**	**43**	P	**Pb**	**21 42 37.9**	**-0.7**
SAAT				S	**Sg**	**21 43 05.1**	**0.0**
ZRD	**Zardab**	**1.98**	**22**	P	**Pb**	**21 42 39.8**	**+0.5**
ZRD				S	**Sg**	**21 43 07.3**	**+0.9**
CSN1	**Caspian**	**2.08**	**114**	Pn	**Pb**	**21 42 39.7**	**-1.3**
GANJ	**Ganja**	**2.22**	**352**	P	**Pb**	**21 42 42.1**	**-1.3**
GANJ				S	**Sb**	**21 43 11.7**	**+0.5**
GANJ	**Ganja**	**2.22**	**352**	PN	**Pn**	**21 42 40.9**	**+0.6**
NRKZ	**NAREK**	**2.22**	**315**	*e*P	**Pb**	**21 42 42.2**	**-1.4**
NRKZ				*e*S	**Sb**	**21 43 12.2**	**+0.8**
KDMR	**Kurdemir**	**2.24**	**30**	P	**Pb**	**21 42 42.8**	**-0.9**
KDMR				S	**Sb**	**21 43 11.9**	**+0.2**
GNI	**Garni**	**2.29**	**319**	*e*P	**Pb**	**21 42 43.6**	**-1.1**
GNI				*e*S	**Sb**	**21 43 14.4**	**+1.1**
GNI	**Garni**	**2.29**	**319**	Pn	**Pb**	**21 42 44.2**	**-0.5**
	883nm,0.7s,baz=153,slow=6.0,SNR=440						
GNI				Sn	**Sg**	**21 43 15.7**	**-0.5**
	97nm,0.3s,baz=82,slow=14,SNR=7.6						
GNI				LR	LR	21 43 20.0	
	comp=Z,61nm,19.1s,baz=212,slow=34						
GNI	**Garni**	**2.29**	**319**	*d i*PN	**Pb**	**21 42 43.8**	**-0.9**
ALIB	**&Aumlli-Bayram**	**2.34**	**49**	P	**Pb**	**21 42 45.8**	**+0.5**
ALIB				S	**Sg**	**21 43 18.0**	**+0.2**
MNGR	**Mingechevir, A**	**2.34**	**7**	P	**Pn**	**21 42 42.5**	**+0.5**
MNGR				S	**Sg**	**21 43 18.1**	**+0.2**
MNGR	**Mingechevir, A**	**2.34**	**7**	PN	**Pn**	**21 42 43.1**	**+1.1**
GDB	**GEDABAY**	**2.39**	**342**	P	**Pb**	**21 42 44.9**	**-1.5**
GDB				S	**Sg**	**21 43 18.0**	**-1.5**
KAPZ	**Kaputan**	**2.44**	**321**	*e*P	**Pb**	**21 42 47.5**	**+0.3**
KAPZ				*e*S	**Sg**	**21 43 21.6**	**+0.5**
SRSL	**SARDASHT**	**2.45**	**205**	*e*PnA		21 42 44.6	
SRSL				IAML		21 43 26.2	
	comp=Z,1.0nm,1.0s						
IML	**Ismayilli**	**2.60**	**25**	P	**Pb**	**21 42 47.8**	**-2.2**
IML				S	**Sb**	**21 43 22.3**	**0.0**
QBL	**Gabala**	**2.64**	**19**	P	**Pb**	**21 42 48.3**	**-2.4**
QBL				S	**Sb**	**21 43 23.4**	**-0.1**
GBS	**Qobustan**	**2.71**	**39**	P	**Pb**	**21 42 50.6**	**-1.2**
GBS				S	**Sb**	**21 43 25.2**	**-0.2**
AMBZ	**Amberd**	**2.71**	**316**	*e*P	**Pb**	**21 42 51.0**	**-1.0**
AMBZ				*e*S	**Sb**	**21 43 27.0**	**+1.3**
LSVT	**Lusahovit**	**2.73**	**335**	*e*P	**Pb**	**21 42 52.8**	**+0.6**
LSVT				*e*S	**Sg**	**21 43 30.4**	**-0.1**
ARUZ	**Aruch**	**2.74**	**313**	*e*P	**Pb**	**21 42 50.5**	**-1.7**
ARUZ				*e*S	**Sb**	**21 43 26.6**	**+0.3**
PQL	**Pirkuli**	**2.75**	**31**	P	**Pb**	**21 42 50.1**	**-2.5**
PQL				S	**Sb**	**21 43 26.8**	**+0.1**
SEKA	**Sheki**	**2.79**	**8**	P	**Pb**	**21 42 50.2**	**-3.0**
SEKA				S	**Sb**	**21 43 25.9**	**-1.7**
SEKA	**Sheki**	**2.79**	**8**	PN	**Pb**	**21 42 50.1**	**-3.0**
VNNZ	**Vanand**	**2.79**	**307**	*e*P	**Pb**	**21 42 51.5**	**-1.7**
VNNZ				*e*S	**Sb**	**21 43 28.1**	**+0.4**
VSHL	**Vashlovani**	**2.79**	**355**	P	**Pb**	**21 42 51.8**	**-1.4**
VSHL				S	**Sg**	**21 43 32.9**	**+0.5**

QZX Qazax, Azerbai 2.81 339 P Pn 21 42 49.6 +1.2
QZX S Sb 21 43 30.2 +2.1
XNQ Khinaliq 2.94 22 P Pn 21 42 52.0 +1.6
XNQ S Sb 21 43 30.0 -2.1
LHJ2 Lahijan - Gila 2.94 115 Pn Pn 21 42 51.5 +1.3
GIDE GILAN DEYLAMAN 2.96 120 *e*PnA 21 42 54.8
GIDE IAML 21 43 45.6
comp=Z,3.3nm,1.0s
ATGJ Altiaghaj 2.96 35 P Pb 21 42 53.8 -2.3
ATGJ S Sb 21 43 33.1 +0.4
JIR1 Jirandeh 3.01 124 Pn Pn 21 42 52.8 +1.5
SIZA Siyzn 3.12 32 P Pb 21 42 56.0 -2.8
SIZA S Sb 21 43 34.3 -2.9
DGRG David-gareji 3.17 342 P Pb 21 43 00.4 +0.7
DGRG David-gareji 3.17 342 PN Pb 21 43 00.4 +0.7
ZKTA Zakatala 3.19 359 P Pb 21 42 57.1 -2.8
ZKTA S Sb 21 43 38.5 -0.7
QUBA Quba, Azerbaij 3.21 25 P Pb 21 42 57.2 -3.1
QUBA S Sb 21 43 38.8 -1.1
QSAR Qusar 3.29 21 P Pb 21 42 58.0 -3.6
QSAR S Sb 21 43 38.5 -3.6
SNGE Sanandaj 3.38 171 *e*PnA 21 42 58.1
SNGE IAML 21 44 05.9
comp=Z,0.4nm,1.0s
HGHA Hamedan- Ghaye 3.42 149 Pn Pn 21 42 58.2 +1.2
KZRT Kazreti 3.43 330 P Pb 21 43 03.9 -0.2
KZRT S Sg 21 43 50.2 -2.8
KZRT Kazreti 3.43 330 PN Pb 21 43 03.9 -0.2
IGZV Ghazvin 3.47 125 Pn Pn 21 42 58.5 +0.8
ILIN Lien 3.53 177 Pn Pn 21 42 59.6 +1.1
QABG Abgarm-Qazvin 3.57 139 Pn Pn 21 42 59.9 +0.8
TBLG Delisi 3.61 336 P Pb 21 43 08.1 +0.9
TBLG S Sg 21 43 56.6 -2.2
TBLG Delisi 3.61 336 PN Pb 21 43 08.1 +0.9
SNQR Sonqor, Kerman 3.66 168 Pn Pn 21 43 01.6 +1.3
TRLG Trialeti 3.68 328 P Pb 21 43 09.2 +0.8
TRLG S Sg 21 43 58.4 -2.6
TRLG Trialeti 3.68 328 PN Pb 21 43 09.2 +0.8
BGD Bogdanovka 3.70 321 P Pb 21 43 09.6 +0.9
BGD Bogdanovka 3.70 321 PN Pb 21 43 09.6 +0.9
IDHR Dehrash 3.75 184 Pn Pn 21 43 02.4 +0.9
KLST Kelardasht - M 3.96 118 Pn Pn 21 43 05.2 +0.8
IBZA Bozab 4.08 167 Pn Pn 21 43 07.6 +1.5
HAGD Aghdareh 4.11 151 Pn Pn 21 43 07.2 +0.7
CHRG Chargali 4.11 341 P Pb 21 43 15.0 -0.8
KCHF Cheshme Sefid, 4.17 176 Pn Pn 21 43 08.2 +0.9
THKV Tehran--Karaj 4.18 126 *e*Pn Pb 21 43 12.6 -4.3
ALIG Mtskhetisjvari 4.34 328 P Pb 21 43 20.3 +0.7
ALIG S Sg 21 44 18.3 -3.9
ALIG Mtskhetisjvari 4.34 328 PN Pb 21 43 20.3 +0.7
CHTH Charan 4.34 124 *e*Pn Pn 21 43 12.2 +2.5
CHTH IAML 21 44 26.3
comp=Z,0.2nm,1.0s
MZPU Pul - Mazandar 4.35 116 Pn Pn 21 43 11.1 +1.3
GLG1 Gilan-e-Gharb 4.37 189 Pn Pn 21 43 10.7 +0.7
HSAM Samen 4.49 160 Pn Pn 21 43 13.0 +1.2
MAK Makhachkala 4.55 7*d i*PN Pn 21 43 09.2 -3.1
MAK *e*S Sn 21 44 01.9 -3.7
MAK pmax pmax
comp=Z,41nm,0.6s
MAK MLR MLR
comp=Z,154nm,7.0s
ASAO Ashtian 4.72 145 *e*Pn Pn 21 43 16.3 +1.4
ASAO IAML 21 44 56.5
comp=Z,0.1nm,1.0s
TKB Tkibuli 4.82 325 P Pb 21 43 28.7 +0.9
TKB S Sg 21 44 34.3 -3.3
TKB Tkibuli 4.82 325 PN Pb 21 43 28.7 +0.9
ILBA Ilam Banvizeh 4.83 185 Pn Pn 21 43 17.5 +1.3
ILBA Ilam Banvizeh 4.83 185 *e*Pn Pn 21 43 18.3 +2.1
ILBA IAML 21 44 26.4
comp=Z,0.0nm,1.0s
GARIG Gari 4.83 330 P Pb 21 43 29.0 +1.1
IPRN Peran 4.99 114 Pn Pn 21 43 19.7 +1.2
IKFM Kafar-mosalman 5.00 169 Pn Pn 21 43 20.4 +2.0
IQOM Qom 5.02 134 Pn Pn 21 43 20.3 +1.2
IDMV Damavand 5.13 122 Pn Pn 21 43 21.5 +0.9
IVRN Varamin 5.30 129 Pn Pn 21 43 23.8 +1.1
KHMZ Khomeyn 5.38 150 *e*PnA 21 43 26.7
KHMZ IAML 21 44 56.0
comp=Z,0.1nm,1.0s
IALA Alasht 5.41 114 Pn Pn 21 43 26.1 +1.7
IGLO Ghaloghah 5.99 107 Pn Pn 21 43 34.0 +1.7
KBZ Khabaz 6.01 333 Pn Pn 21 43 36.7 +4.3
comp=Z,0.1nm,0.3s,baz=212,slow=19,SNR=1.3
KBZ Pg Pb 21 43 50.0 +2.0
comp=Z,0.4nm,0.3s,baz=164,slow=12,SNR=7.7
KBZ Lg Lg 21 45 12.8
comp=Z,0.4nm,0.3s,baz=141,slow=6.5,SNR=7.6
comp=Z,0.4nm,0.4s
ISFB Sefidab 6.05 131 Pn Pn 21 43 33.6 +0.6
SHA1 Shidzhatmaz 6.11 331⇓*e*P Pn 21 43 38.5 +4.5
KRSH Karshahi 6.26 134 Pn Pn 21 43 36.7 +0.8
GTMR Gotvand 6.28 161 *e*Pn Pn 21 43 37.0 +0.9
GTMR IAML 21 45 47.2
comp=Z,0.1nm,1.0s
KVAR Kislovodsk Arr 6.28 332 Pn Pn 21 43 40.3 +4.1
baz=165,slow=19
KVAR Lg Lg 21 45 20.9
baz=154,slow=18
comp=Z,1.8nm,0.6s
KIV Kislovodsk 6.29 332 *e*P Pn 21 43 41.2 +5.0
KIV *e*S Sn 21 44 54.7 +6.2
KIV pmax pmax
comp=Z,7.0nm,1.0s
KIV MLR MLR
comp=Z,11nm,12.0s
IKLH Kolahrood 6.46 141 Pn Pn 21 43 40.4 +1.5
IPIR Pirpir 6.68 148 Pn Pn 21 43 43.1 +1.2
SOC Sochi 7.37 316 *e*P Pn 21 43 54.8 +3.8
SOC *e* 21 45 20.3
SOC MLR MLR
comp=Z,73nm,13.0s
MRVT Maraveh tapeh 7.44 93 Pn Pn 21 43 52.3 +0.2
ANAR Anarak 7.74 131 Pn Pn 21 43 57.9 +1.5
SHRO Shahrood 7.81 105 *e*Pn Pn 21 44 00.9 +3.6
SHRO IAML 21 44 50.8
comp=Z,0.0nm,1.0s
IRAM Ramesheh 8.09 143 Pn Pn 21 44 02.9 +1.7
YZKH Yazd 8.82 131 *e*Pn Pn 21 44 14.0 +2.9
SBZV Sabzevar 8.91 100 Pn Pn 21 44 13.7 +1.3
ISFR Sfrayin 9.05 95 Pn Pn 21 44 15.5 +1.1
IAKL Akhelmad 9.74 97 Pn Pn 21 44 25.0 +1.1
IPAY Payeh 9.97 98 Pn Pn 21 44 27.7 +0.8
ASF Jabal al Asfar 10.17 235 Pn Pn 21 44 34.8 +5.2
baz=132,slow=12,SNR=1.2
ASF Lg Lg 21 47 23.1
comp=Z,0.1nm,0.3s,baz=106,slow=18,SNR=2.5
BR131 Keskin Array S 10.24 281⇑*e*P Pn 21 44 35.5 +4.9
BRTR Keskin Array B 10.24 281 Pn Pn 21 44 33.3 +2.7
comp=Z,0.1nm,0.3s,baz=102,slow=13,SNR=13
comp=Z,1.4nm,0.7s
BRTR Keskin Array B 10.24 281 *e*P Pn 21 44 35.4 +4.8
BRTR pmax pmax
comp=Z,2.0nm,0.8s
IKRD Kardeh 10.29 95 Pn Pn 21 44 32.1 +0.7
IMOG Moghan 10.33 99 Pn Pn 21 44 32.9 +1.0
IMYA Miami 10.86 97 Pn Pn 21 44 40.8 +1.8
BELG Belogornoye 13.96 2 Pn Pn 21 45 20.6 -0.6
comp=Z,13nm,0.8s,baz=275,slow=1.6,SNR=5.4
BELG Sn Sn 21 47 50.5 -6.1
comp=Z,0.2nm,0.3s,baz=276,slow=19,SNR=1.7
BELG Belogornoye 13.96 2 *i* P Pn 21 45 20.7 -0.5
AB31 Akbulak array 14.39 37 ⇓P Pn 21 45 24.6 -2.6
comp=Z,2.4nm,0.6s,baz=231,slow=15,SNR=27
AB31 ⇓S Sn 21 48 01.0 -6.1
comp=Z,1.1nm,0.5s,baz=228,slow=24,SNR=6.6
AB31 Akbulak array 14.39 37 P Pn 21 45 24.6 -2.6
AB31 S Sn 21 48 01.0 -6.1
AKTO Aktyubinsk 14.43 30 Pn Pn 21 45 25.2 -2.4
comp=Z,4.2nm,0.4s,baz=196,slow=9.0,SNR=15
AKTO Sn Sn 21 47 59.0 -9.0
comp=Z,0.2nm,0.3s,baz=182,slow=24,SNR=2.6
AKTO Aktyubinsk 14.43 30 ⇓P Pn 21 45 24.6 -3.1
comp=Z,2.8nm,0.6s
AKTO ⇓S Sn 21 47 59.1 -9.0
comp=Z,2.8nm,0.6s
AKTO Aktyubinsk 14.43 30 P Pn 21 45 24.5 -3.1
AKTO S Sn 21 47 59.5 -8.5
VRI Vrincioaia 16.54 303 ⇓P P 21 45 58.4 +0.2
PLOR Plostina 16.59 303 ⇑P P 21 46 00.1 +1.4
PLOR Plostina 16.59 303 ⇑P P 21 46 00.1 +1.4
TESR Tescani 16.82 305 ⇑P P 21 46 01.3 +0.1
ONER Baraj Valea Uz 16.92 304 ⇓P P 21 46 04.2 +1.8
MLR Muntele Rosu 16.95 301 Pn Pn 21 46 00.6 -0.1
comp=Z,0.7nm,0.5s,baz=156,slow=18
MLR LR LR 21 54 26.5
comp=Z,20nm,18.2s,baz=122,slow=44
MLR Muntele Rosu 16.95 301 ⇑P P 21 46 02.5 -0.3
MLR Muntele Rosu 16.95 301 P P 21 46 02.4 -0.3
AKASG Malin Array Be 17.42 320 P P 21 46 06.2 -1.6
comp=Z,0.1nm,0.3s,baz=129,slow=12,SNR=4.7
AKASG LR LR 21 53 36.1
comp=Z,38nm,18.5s,baz=98,slow=40
AKBB Malin Array Si 17.42 320⇑*i*P P 21 46 10.7 +2.9
DOPR Dopca 17.46 302 ⇓P P 21 46 09.8 +1.4
VOIR 17.54 300 ⇓P P 21 46 10.6 +1.4
VOIR 17.54 300 P P 21 46 10.6 +1.4
IDI Anoyia 17.74 266 P P 21 46 11.3 -0.2
comp=Z,0.2nm,0.3s,baz=147,slow=20,SNR=2.4
comp=Z,4.9nm,0.9s
OBN Obninsk 18.03 341 *e*P P 21 46 15.4 +1.0
OBN pmax pmax
comp=Z,3.0nm,0.8s
BURAR Bucovina Array 18.14 307 ⇓P P 21 46 17.2 +1.3
BURAR Bucovina Array 18.14 307 ⇓P P 21 46 17.2 +1.3
WSAR Wadi Sarin 18.26 143 P P 21 46 17.7 +0.4
baz=270,slow=20,SNR=2.2
LOT Lotru 18.41 300 ⇓P Pn 21 46 20.7 +1.9
TRKS Terek-Say 18.95 73 P Pn 21 46 25.8 +0.2
TRKS pmax pmax
comp=Z,1.0nm,1.0s
MARR Marisel-Cluj 19.18 303 ⇑P Pn 21 46 31.0 +2.9
ARTI Arti 19.56 20 P P 21 46 30.9 -0.4
comp=Z,4.2nm,0.5s,baz=187,slow=7.5,SNR=11
ARTI Arti 19.56 20*d i*P Pn 21 46 31.2 -1.4
ARTI S S 21 50 09.0 -3.5
ARTI pmax pmax
comp=Z,6.0nm,0.8s
SURR Surduc 19.60 300 ⇑P Pn 21 46 34.1 +1.0
MDVR Moldovita 19.69 297 ⇓P Pn 21 46 33.0 -1.3
BZS Buzias 19.92 299 ⇑P Pn 21 46 35.8 -1.1
BZS Buzias 19.92 299 ⇑P Pn 21 46 35.8 -1.1
KIRV Kirov 20.23 4 P P 21 46 38.4 -0.1
comp=Z,9.4nm,0.8s,baz=237,slow=0.5,SNR=7.1
comp=Z,9.4nm,0.8s
KIRV Kirov 20.23 4*ce*P Pn 21 46 38.8 -1.6
KOLS Kolonicke sedl 20.46 309 *e*P Pn 21 46 44.1 +0.8
KOLS Kolonicke sedl 20.46 309 *e*PN Pn 21 46 44.1 +0.8
MNK Minsk 20.54 328 *i* P Pn 21 46 42.5 -1.6
comp=E,12nm,0.9s
MNK *i* P Pn 21 46 42.5 -1.6
comp=N,8.0nm,0.8s
MNK *i* P Pn 21 46 42.5 -1.6
comp=Z,5.0nm,0.8s,baz=133
MNK *i* PP PnPn 21 46 57.6 -1.6
MNK *i* PPP PPP 21 47 06.9
MNK *i* S Sn 21 50 34.3 -1.4
MNK *i* SS SnSn 21 50 53.7 +3.3
MNK *i* SSS SSS 21 51 07.7
MNK *i* LQ LQ 21 52 50.0
MNK *i* LR LR 21 54 11.3
MNK *i* LRM MLR 21 55 28.8
comp=Z,27nm,21.9s
MNK *i* LRM MLR 21 55 35.9
comp=N,20nm,19.1s
MNK *i* LRM MLR 21 55 52.3
comp=E,44nm,37.2s
MNK Minsk 20.54 328 *i* P Pn 21 46 42.5 -1.6
MNK *i* PPP PPP 21 47 06.9
MNK *i* S Sn 21 50 34.3 -1.4
MNK *i* SS SnSn 21 50 53.6 +3.3
MNK *i* SSS SSS 21 51 07.6
MNK pmax pmax
comp=E,12nm,0.9s
MNK pmax pmax
comp=Z,5.0nm,0.8s
MNK pmax pmax
comp=N,8.0nm,0.8s
MNK MLR MLR
comp=Z,27nm,22.0s
MNK MLR MLR
comp=N,20nm,19.0s
MNK MLR MLR
comp=E,44nm,37.0s
SVE Sverdlovsk 20.57 22 *e*P Pn 21 46 43.2 -1.3
SVE pmax pmax
comp=Z,13nm,1.2s
PDG Podgorica 21.23 290 ⇓P P 21 46 43.9 -5.7
ARLS Aral 21.34 72 P P 21 46 52.5 +1.6
ARLS pmax pmax
comp=Z,5.0nm,0.8s
AAK Ala-Archa 21.48 70 P P 21 46 51.5 -1.0
comp=Z,1.5nm,0.6s,baz=206,slow=11,SNR=6.6
comp=Z,1.5nm,0.6s
AAK Ala-Archa 21.48 70⇑*e*P P 21 46 55.0 +2.6
AAK pmax pmax
comp=Z,5.0nm,1.0s
BRVK Borovoye 21.86 40⇑*e*P P 21 46 56.2 0.0
BRVK pmax pmax
comp=Z,4.0nm,0.6s
BVAR Borovoye Array 21.89 41 P P 21 46 56.6 0.0
comp=Z,2.2nm,0.8s,baz=243,slow=9.5,SNR=11
comp=Z,2.2nm,0.8s
NIL Nilore 21.95 94 P P 21 47 02.3 +4.9
NIL pmax pmax
comp=Z,11nm,1.4s
MORH Mrgy, Hungar 22.07 300 ⇓P P 21 46 59.3 +0.7
VYHS Vyhne 22.47 306 *e*P P 21 47 05.4 +2.6
VYHS Vyhne 22.47 306 *e*PN P 21 47 05.4 +2.6
BOOM Boomskoye usch 22.55 70 P P 21 47 06.8 +2.9
BOOM pmax pmax
comp=Z,7.0nm,1.1s
KLMR Klimovskoe 22.88 351 *e*P P 21 47 05.3 -1.7
KLMR pmax pmax
comp=Z,19nm,1.6s
KDJ Kajisay 23.47 71 P P 21 47 15.3 +1.9
KDJ pmax pmax
comp=Z,6.0nm,1.0s
VSU Vasula 23.84 334⇑*e*P P 21 47 18.2 +1.5
VSU pmax pmax
comp=Z,5.0nm,0.7s
RONA Rosalia, Austr 23.94 303 *i* P P 21 47 18.6 +0.9
comp=Z,4.9nm,0.8s
CONA Conrad Observa 24.27 303 *i* P P 21 47 21.6 +0.7
comp=Z,2.3nm,0.8s
ARSA Arzberg 24.37 301 *i* P P 21 47 22.9 +1.1
comp=Z,2.9nm,0.6s
SOKA Soboth 24.61 300 *i* P P 21 47 25.1 +1.0
comp=Z,3.5nm,0.8s
OBKA Obir 24.92 299 *i* P P 21 47 27.7 +0.9
comp=Z,2.0nm,0.6s
MOA Molln 25.31 302 *i* P P 21 47 32.8 +2.6
comp=Z,1.1nm,0.5s
KURBB Kurchatov Arra 25.53 51 P P 21 47 33.4 +1.2
comp=Z,5.3nm,0.7s,baz=261,slow=9.5,SNR=52
comp=Z,5.3nm,0.7s
KURK Kurchatov 25.61 51*c i*P P 21 47 34.1 +1.2
KURK pmax pmax
comp=Z,9.0nm,0.9s
KBA Koelnbreinsper 25.81 300 P P 21 47 36.2 +1.2
KBA Koelnbreinsper 25.81 300 *e*P P 21 47 36.9 +1.8
comp=Z,6.9nm,0.7s
GERES GERESS Array B 25.86 304 P P 21 47 35.5 +0.2
comp=Z,3.4nm,0.6s,baz=102,slow=11,SNR=14
comp=Z,3.4nm,0.6s
KHC Kasperske Hory 26.00 305⇑*e*P P 21 47 40.6 +4.1
KHC pmax pmax
comp=Z,33nm,2.8s
FINES FINESS Array B 26.34 338 P P 21 47 41.3 +1.9
comp=Z,0.8nm,0.6s,baz=134,slow=11,SNR=4.3
comp=Z,0.8nm,0.6s
FINES FINESS Array B 26.34 338 *e*P P 21 47 43.9 +4.4
FINES pmax pmax
comp=Z,1.0nm,0.6s
WET Wettzell 26.45 305 P P 21 47 43.9 +3.3
WET pmax pmax
comp=Z,7.0nm,1.4s
CLL Collm 26.87 310 *e*P P 21 47 45.0 +0.7
CLL pmax pmax
comp=Z,6.0nm,1.3s
MK31 Makanchi Array 27.29 61⇑*i*P P 21 47 48.9 +0.7
MKAR Makanchi Array 27.29 61 P P 21 47 49.0 +0.8
comp=Z,1.0nm,0.9s,baz=264,slow=7.2,SNR=6.6
comp=Z,1.0nm,0.9s
MKAR Makanchi Array 27.29 61 P P 21 47 49.0 +0.8
HFS Hagfors 30.05 327 P P 21 48 11.8 -0.8
comp=Z,1.3nm,0.8s,baz=125,slow=12,SNR=4.8
HFS LR LR 22 00 30.3
comp=Z,23nm,19.3s,baz=86,slow=37
comp=Z,1.3nm,0.8s
ZALV Zalesovo Beam 30.16 47 P P 21 48 13.8 +0.3
comp=Z,0.6nm,0.4s,baz=286,slow=11,SNR=3.7
comp=Z,0.6nm,0.4s
ZALV Zalesovo Beam 30.16 47 *e*P P 21 48 15.1 +1.5
ZALV pmax pmax
comp=Z,1.0nm,0.4s
NOA NORSAR Array B 31.56 327 P P 21 48 25.3 -0.7
comp=Z,0.5nm,0.7s,baz=122,slow=8.3,SNR=2.3
NOA LR LR 22 02 10.7
comp=Z,17nm,18.1s,baz=120,slow=38
comp=Z,0.5nm,0.7s
EKA Eskdalemuir Ar 37.12 314 P P 21 49 12.7 -1.4
comp=Z,1.1nm,0.7s,baz=101,slow=7.7,SNR=3.5
comp=Z,1.1nm,0.7s
ESDC Sonseca Array 38.94 288 P P 21 49 30.7 +0.9
comp=Z,0.4nm,0.7s,baz=86,slow=8.5,SNR=2.0
comp=Z,0.4nm,0.7s
SPITS Spitsbergen Ar 41.79 351 P P 21 49 54.0 +1.2
comp=Z,1.3nm,0.6s,baz=153,slow=9.7,SNR=1.4
comp=Z,1.3nm,0.6s
SPITS Spitsbergen Ar 41.79 351 P P 21 49 54.0 +1.2
SONM Songino Array 43.56 58 P P 21 50 08.3 +0.6
comp=Z,0.4nm,0.7s,baz=305,slow=5.2,SNR=2.8
comp=Z,0.4nm,0.7s
ULN Ulaanbaatar 43.99 57*d i*P P 21 50 12.8 +1.6
ULN pmax pmax
comp=Z,5.0nm,1.0s
TORD Torodi Ar. Bea 47.10 250 P P 21 50 36.0 0.0
comp=Z,1.3nm,0.3s,baz=39,slow=8.0,SNR=1.4
comp=Z,1.3nm,0.3s
CMAR Chiang Mai Arr 49.36 99 P P 21 50 53.2 -0.2
comp=Z,1.9nm,0.8s,baz=301,slow=8.3,SNR=11
comp=Z,1.9nm,0.8s
CMAR Chiang Mai Arr 49.36 99 *e*P P 21 50 53.5 +0.1
CMAR pmax pmax
comp=Z,2.0nm,0.8s
KLR Kul'dur 59.20 49⇑*e*P P 21 52 04.7 0.0
KLR pmax pmax
comp=Z,6.0nm,2.3s
USRK Ussuriysk Ar. 61.53 55 P P 21 52 20.2 -0.5
comp=Z,1.4nm,0.7s,baz=316,slow=4.0,SNR=3.0
comp=Z,1.4nm,0.7s
KSRS Korea Array 61.94 63 P P 21 52 23.4 -0.1
comp=Z,0.7nm,0.6s,baz=284,slow=6.5,SNR=2.5
comp=Z,0.7nm,0.6s
YKA Yellowknife Ar 78.28 351 P P 21 54 02.9 -0.6
comp=Z,0.5nm,0.7s,baz=17,slow=5.4,SNR=3.3
comp=Z,0.5nm,0.7s

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*ATH **07** 21:44:32.1, 37°.65N×20°.68E, h15^{km}, ML2.5/18, Manual Solution by A.Papageorgiou First location: 2019/06/07 21:45:28, This location: 2021/06/07 06:40:44 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*

ISC 07 21:44:32.1±1.3**, 37°.65N**±0°.05×**20°.68E**±0°.04**, h12**^{km}±6^{km}**, n43,** σ**0^s.44**/65**, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LTHK	**Lithakia**	**0.14**	**66**	P	**Pg**	**21 44 35.0**	**-0.4**
LTHK				S	**Sg**	**21 44 36.3**	**-1.6**
ORTH	**Orthonies,Zaky**	**0.20**	**4**	P	**Pg**	**21 44 37.0**	**+0.6**
ORTH				S	**Sg**	**21 44 40.5**	**+1.0**
KYPS	**Kipseli, Zakin**	**0.20**	**35**	P	**Pg**	**21 44 36.8**	**+0.3**
KYPS				S	**Sg**	**21 44 40.2**	**+0.7**
RTZL	**Ratzakli, Kefa**	**0.43**	**10**	P	**Pg**	**21 44 41.1**	**+0.6**
RTZL				S	**Sb**	**21 44 47.8**	**-0.1**
CLEM	**Kyllini,Ilia,G**	**0.43**	**57**	P	**Pg**	**21 44 40.9**	**+0.3**
CLEM				S	**Sg**	**21 44 47.3**	**+0.9**
PSDA	**Pessada-Kefalo**	**0.47**	**351**	P	**Pb**	**21 44 42.0**	**-0.2**
PSDA				S	**Sb**	**21 44 49.6**	**+0.6**
PSDA	**Pessada-Kefalo**	**0.47**	**351**	P	**Pb**	**21 44 42.0**	**-0.2**
PSDA				S	**Sb**	**21 44 49.3**	**+0.3**
KTLO	**Katakolo**	**0.51**	**91**	P	**Pg**	**21 44 42.3**	**+0.2**
KTLO				S	**Sb**	**21 44 50.2**	**0.0**
VLS	**Valsamata**	**0.53**	**352**	P	**Pb**	**21 44 43.0**	**-0.3**
VLS				S	**Sb**	**21 44 51.2**	**+0.4**
VLS	**Valsamata**	**0.53**	**352**	P	**Pb**	**21 44 42.9**	**-0.3**
VLS				S	**Sb**	**21 44 51.3**	**+0.4**
ARG2	**Argostoli**	**0.55**	**344**	P	**Pb**	**21 44 43.5**	**0.0**
ARG2				S	**Sb**	**21 44 51.4**	**+0.1**
ANDM	**Andravida**	**0.57**	**55**	P	**Pg**	**21 44 42.3**	**-0.9**
ANDM				S	**Sg**	**21 44 50.9**	**0.0**
SMHA	**Samh**	**0.60**	**358**	P	**Pg**	**21 44 43.3**	**-0.4**
SMHA				S	**Sg**	**21 44 50.8**	**-0.8**
DMLN	**Damoulianata-K**	**0.63**	**338**	P	**Pb**	**21 44 45.3**	**+0.2**
DMLN	**Damoulianata-K**	**0.63**	**338**	P	**Pb**	**21 44 45.3**	**+0.2**
DMLN				S	**Sb**	**21 44 53.8**	**-0.1**
YRMI	**Loutra Irminis**	**0.69**	**50**	P	**Pg**	**21 44 44.8**	**-0.8**
YRMI				S	**Sb**	**21 44 55.6**	**+0.1**
RLS	**Riolos of Patr**	**0.74**	**57**	P	**Pg**	**21 44 46.5**	**+0.1**
RLS	**Riolos of Patr**	**0.74**	**57**	P	**Pg**	**21 44 46.6**	**+0.1**
RLS				S	**Sg**	**21 44 56.6**	**+0.4**
KRES	**Krestena**	**0.75**	**94**	P	**Pb**	**21 44 47.0**	**0.0**
KRES				S	**Sb**	**21 44 57.4**	**+0.2**
AXS	**Araxos**	**0.77**	**45**	P	**Pg**	**21 44 46.5**	**-0.5**
AXS				S	**Sb**	**21 44 57.8**	**0.0**
ZARO	**Zacharo**	**0.79**	**102**	P	**Pb**	**21 44 47.8**	**+0.1**
FSK	**Fiskardo**	**0.81**	**353**	P	**Pb**	**21 44 47.6**	**-0.4**
FSK				S	**Sb**	**21 44 59.1**	**+0.2**
AMT	**Artemida-Makis**	**0.83**	**98**	P	**Pg**	**21 44 48.3**	**+0.3**
AMT				S	**Sb**	**21 44 59.8**	**+0.3**
EVGI	**Lefkada island**	**0.96**	**359**	P	**Pb**	**21 44 50.5**	**-0.2**
EVGI				S	**Sg**	**21 45 03.7**	**+0.4**
NYDR	**Nydri-Lefkada**	**1.06**	**1**	P	**Pb**	**21 44 51.9**	**-0.3**
NYDR				S	**Sg**	**21 45 06.4**	**+0.2**
LKD2	**Lefkada island**	**1.13**	**359**	P	**Pb**	**21 44 53.3**	**-0.3**
LKD2	**Lefkada island**	**1.13**	**359**	P	**Pb**	**21 44 53.4**	**-0.3**
PYL	**PYLOS**	**1.14**	**131**	P	**Pg**	**21 44 53.9**	**0.0**
TSLK	**Tsoukalades, L**	**1.17**	**359**	P	**Pn**	**21 44 53.7**	**-0.5**
TSLK	**Tsoukalades, L**	**1.17**	**359**	P	**Pb**	**21 44 54.1**	**-0.1**
PVO	**Paravola**	**1.17**	**34**	P	**Pb**	**21 44 54.2**	**+0.1**
PVO	**Paravola**	**1.17**	**34**	P	**Pb**	**21 44 54.3**	**+0.1**
KLV	**Kalavryta, Ach**	**1.23**	**71**	P	**Pn**	**21 44 54.7**	**-0.3**
KLV	**Kalavryta, Ach**	**1.23**	**71**	P	**Pb**	**21 44 55.3**	**+0.1**
EFP	**Efpalio**	**1.24**	**51**	P	**Pn**	**21 44 54.7**	**-0.5**
EFP	**Efpalio**	**1.24**	**51**	P	**Pn**	**21 44 54.9**	**-0.2**
AMPL	**Ampelaki**	**1.33**	**18**	P	**Pn**	**21 44 56.4**	**-0.1**
GUR	**Goura**	**1.35**	**77**	P	**Pb**	**21 44 57.2**	**-0.1**
ANX	**Ano Chora**	**1.35**	**46**	P	**Pn**	**21 44 56.9**	**0.0**
KALE	**Kalithea**	**1.37**	**57**	P	**Pn**	**21 44 56.9**	**-0.1**
EVR	**Evrytania**	**1.54**	**35**	P	**Pb**	**21 45 00.6**	**-0.1**
MAKR	**Makrakomi, Fth**	**1.77**	**40**	P	**Pn**	**21 45 03.1**	**+0.5**
IGT	**Igoumenitsa**	**1.90**	**352**	P	**Pb**	**21 45 06.1**	**-0.5**

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*IDC **07** 21:46:49.2±5.5, 26°.99N×93°.20E, h0^{km}, mb3.7/2, mbtmp3.7/4, ML3.5/1, Error ellipse: s-maj=107.0km s-min=55.7km az=135.0*

*DMN **07** 21:46:52.5±0.0, 26°.71N×92°.53E, h188^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 07 21:46:50.7±1.4**, 27°.1N**±0°.1×**92°.66E**±0°.10**, h35**^{km}**, n18,** σ**2^s.00**/28**, Eastern Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRDH	**Bariadhala**	**4.50**	**192**	Pn	**Pn**	**21 47 59.2**	**+2.9**
	51nm,0.4s,baz=25,slow=17,SNR=1.1						
BRDH				Sn	**Sn**	**21 48 46.9**	**-0.5**
	46nm,0.3s,baz=53,slow=20,SNR=11						
ODAN	**Odare**	**4.71**	**268**	Pg	**Pn**	**21 48 01.6**	**+2.1**
	baz=273,slow=0.0						
ODAN	**Odare**	**4.71**	**268**	Pg	**Pn**	**21 48 01.7**	**+2.3**
	baz=273,slow=0.0						
ODAN	**Odare**	**4.71**	**268**	Pg	**Pn**	**21 48 01.8**	**+2.3**
	baz=273,slow=0.0						
ODAN				Sg	**Sn**	**21 48 53.7**	**+0.7**
	44nm,0.2s,baz=273,slow=0.0						
RAMN	**Ramite**	**5.41**	**270**	Pn	**Pn**	**21 48 11.1**	**+2.0**
	baz=274,slow=0.0						
RAMN				Sn	**Sn**	**21 49 09.5**	**-0.8**
	27nm,0.2s,baz=274,slow=0.0						
GUN	**Gumba**	**6.08**	**279**	Pn	**Pn**	**21 48 21.2**	**+2.8**
	baz=283,slow=0.0						
GUN				Sn	**Sn**	**21 49 26.2**	**-0.7**
	25nm,0.2s,baz=283,slow=0.0						
PKI	**Pulchoki**	**6.47**	**276**	Pn	**Pn**	**21 48 25.5**	**+1.8**
	baz=279,slow=0.0						
PKI				Sn	**Sn**	**21 49 35.6**	**-0.9**
	13nm,0.2s,baz=279,slow=0.0						

PKIN	Phulchoki baz=279,slow=0.0	6.48	276	Pn	Pn	21 48 25.4	+1.6
PKIN	16nm,0.2s,baz=279,slow=0.0			Sn	Sn	21 49 35.7	-1.0
KKN	Kakani baz=281,slow=0.0	6.60	278	Pg	Pn	21 48 27.4	+2.1
KKN	Kakani baz=281,slow=0.0	6.60	278	Pg	Pn	21 48 27.5	+2.1
KKN	25nm,0.2s,baz=281,slow=0.0			Sg	Sn	21 49 38.3	-1.2
DMN	Daman baz=279,slow=0.0	6.74	276	Pn	Pn	21 48 29.1	+1.7
GKN	Gorkha baz=282,slow=0.0	7.18	279	Pn	Pn	21 48 34.9	+1.6
GKN	23nm,0.2s,baz=282,slow=0.0			Sn	Sn	21 49 52.3	-1.5
KOLN	Koldanda baz=280,slow=0.0	8.08	277	Pg	Pn	21 48 46.9	+1.2
KOLN	Koldanda baz=280,slow=0.0	8.08	277	Pg	Pn	21 48 47.0	+1.2
KOLN	10nm,0.2s,baz=280,slow=0.0			Sg	Sn	21 50 13.1	-2.9
PYUN	Piuthan baz=281,slow=0.0	8.64	279	Pn	Pn	21 48 53.4	0.0
PYUN	32nm,0.6s,baz=281,slow=0.0			Sn	Sn	21 50 25.5	-4.2
CMAR	Chiang Mai Arr 0.1nm,0.3s,baz=320,slow=13,SNR=1.2 0.2nm,0.3s	10.37	145	Pn	Pn	21 49 14.6	-2.3
WRA	Warramunga Arr 0.6nm,0.6s,baz=323,slow=7.2,SNR=12 0.6nm,0.6s	61.78	135	P	P	21 57 07.1	+1.0
ASAR	Alice Springs 0.4nm,0.6s,baz=324,slow=6.3,SNR=6.3 0.4nm,0.6s	64.29	138	P	P	21 57 24.1	+1.4

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*IDC **07** 21:47:04.8±0.7, 42.°08N×80.°66E, h0^{km}, mb4.0/20, mbtmp4.0/26, ML3.4/7, MS3.2/23, Error ellipse: s-maj=14.1km s-min=11.8km az=62.0*

*BJI **07** 21:47:04.1, 42.°23N×80.°45E, h9^{km}, mB4.5/8, mb4.2/25, ML4.5/10, Ms3.9/11, Ms7 3.6/12*

*SOME **07** 21:47:04.4, 42.°20N×80.°43E, h5^{km}, MS3.7*

*NNC **07** 21:47:06.9±1.5, 42.°31N×80.°50E, h0^{km}, mb4.9, mpv4.7, Error ellipse: s-maj=10.2km s-min=8.1km az=131.0*

*MOS **07** 21:47:06.4±1.4, 42.°27N×80.°57E, h11^{km}, mb4.4/11, Error ellipse: s-maj=6.0km s-min=4.2km az=36.6*

*KRNET **07** 21:47:07.5±0.1, 42.°14N×80.°34E, mb4.7*

*NEIC **07** 21:47:08.1±2.4, 42.°21N±0.°07×80.°63E±0.°05, h10^{km}±1^{km}, mb4.6/18, Error ellipse: s-maj=11.3km s-min=6.4km az=169.0*

ISC 07 21:47:07.1±0.3, **42.°26N**±0.°03×**80.°48E**±0.°02, **h10**^{km}, **n233**, σ**2.^{s}16**/294, **mb4.2**/44, **MS3.2**/22, **44C-42D,**
Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	Shalkode 618nm,0.3s	1.17	320	P	Pb	21 47 25.2	-4.2
SHLS	2µm,0.3s			S	Sb	21 47 40.2	-4.5
SHLS	Shalkode	1.17	320	*e*PG	Pb	21 47 25.2	-4.2
SHLS	Shalkode 432nm,0.1s	1.17	320	*e*P	Pb	21 47 25.0	-4.4
SHLS	2µm,0.3s			*e*S	Sb	21 47 39.8	-4.9
KTMS	Ketmen 59nm,0.5s	1.19	356	P	Pb	21 47 28.0	-1.8
KTMS	606nm,0.5s			S	Sg	21 47 44.6	-0.7
KTMS	Ketmen 59nm,0.5s	1.19	356	*e*P	Pb	21 47 28.0	-1.8
KTMS	606nm,0.5s			*e*S	Sg	21 47 44.6	-0.7
PDGK	Podgornoye 569nm,0.6s	1.29	326	⇑P	Pn	21 47 30.0	-1.4
PDGK	2µm,0.8s			⇑S	Sb	21 47 47.1	-1.2
PDGK	Podgornoye	1.29	326	PG	Pn	21 47 30.0	-1.4
PDGK				S	Sn	21 47 47.9	-0.9
UZB	Uzynbulak 191nm,0.7s	1.39	310	P	Pn	21 47 31.6	-1.1
UZB	576nm,0.4s			S	Sg	21 47 51.3	-0.6
PRZ	Przheval'sk	1.56	279	Pn	Pb	21 47 34.8	-1.3
PRZ				Sn	Sg	21 47 56.9	-0.3
PRZ	Przheval'sk	1.56	279	⇑*e*P	Pn	21 47 34.5	-0.5
PRZ				⇑*e*S	Sb	21 47 55.4	-0.5
PRZ	Przheval'sk	1.56	279	PN	Pb	21 47 34.8	-1.3
PRZ				S	Sg	21 47 56.9	-0.3
SATY	Saty 691nm,0.6s	1.72	298	P	Pb	21 47 38.5	-0.5
SATY	790nm,0.3s			S	Sg	21 48 03.8	+1.3
ZHN	Zhinishke 576nm,0.4s	1.76	302	P	Pb	21 47 39.0	-0.5
ZHN	3µm,0.3s			S	Sg	21 48 03.9	+0.3
ZHN	Zhinishke	1.76	302	*e*PN	Pb	21 47 38.5	-1.0
ZHN	Zhinishke 485nm,0.3s	1.76	302	*e*P	Pb	21 47 38.4	-1.1
ZHN	3µm,0.3s			*e*S	Sg	21 48 02.7	-0.9
KPKS	Kokpek 305nm,0.4s	1.79	313	Pg	Pg	21 47 40.0	-1.4
KPKS	3µm,0.5s			Lg	Lg	21 48 06.0	
KPKS	Kokpek	1.79	313	*e*PN	Pb	21 47 38.7	-1.3
TARG	Taragay, Kyrgy	2.06	256	PN	Pb	21 47 43.1	-1.8
KNOS	Konyrlen 467nm,0.5s	2.30	336	Pg	Pb	21 47 48.0	-0.8
KNOS	2µm,0.9s			Lg	Lg	21 48 19.6	
BLB	Baldybastay 2µm,0.2s	2.35	322	Pg	Pb	21 47 48.8	-0.8
BLB	4µm,0.4s			Lg	Lg	21 48 20.6	
KDJ	Kajisay	2.45	268	Pn	Pb	21 47 50.0	-1.4
KDJ				Sn	Sb	21 48 22.5	+0.7
KDJ	Kajisay	2.45	268	⇑*e*P	Pb	21 47 48.9	-2.5
KDJ				⇑*i*S	Sn	21 48 18.9	+1.4
KDJ	Kajisay	2.45	268	PN	Pb	21 47 50.0	-1.4
KDJ						21 48 22.5	
KOTS	Kotyrbulak 624nm,0.6s	2.66	293	Pg	Pb	21 47 54.3	-0.7
KOTS	3µm,0.7s			Lg	Lg	21 48 31.1	
KOTS	Kotyrbulak 624nm,0.6s	2.66	293	*e*P	Pb	21 47 54.3	-0.7
KOTS	3µm,0.7s			*e*S	Sg	21 48 31.1	-1.5
MDOK	Medeo 542nm,0.5s	2.68	291	⇓Pn	Pb	21 47 53.4	-1.9
MDOK	666nm,0.4s			Pg	Pg	21 47 53.8	-4.8
MDOK	2µm,1.1s			⇑Sn	Sb	21 48 29.8	+1.4
MDOK	1µm,1.0s			Lg	Lg	21 48 30.0	
MDOK	Medeo	2.68	291	PN	Pb	21 47 53.4	-1.9
MDOK				S	Sb	21 48 29.8	+1.4
ARXS	Arharly 321nm,0.7s	2.75	316	Pg	Pb	21 47 55.3	-1.1
ARXS	1µm,0.8s			Lg	Lg	21 48 32.2	
ARXS	Arharly	2.75	316	*e*PN	Pb	21 47 53.1	-3.3
KNDC	Almaty 2µm,0.8s	2.76	291	⇑Pn	Pb	21 47 54.8	-1.7
KNDC	1µm,0.5s			⇓Lg	Lg	21 48 33.7	
KNDC	Almaty	2.76	291	PN	Pb	21 47 54.8	-1.7
AAA	Alma-Ata 1µm,0.7s	2.79	291	Pg	Pb	21 47 56.8	-0.4
AAA	325nm,0.7s			Lg	Lg	21 48 34.4	
AAA	Alma-Ata	2.79	291	*e*PN	Pb	21 47 56.7	-0.4
AAA	Alma-Ata 1µm,0.7s	2.79	291	*e*P	Pb	21 47 56.8	-0.4
AAA	325nm,0.7s			*e*S	Sg	21 48 34.5	-2.3
IZV	Izvestkoviy 320nm,0.6s	2.95	286	Pg	Pb	21 47 57.9	-2.0
IZV	1µm,0.5s			Lg	Lg	21 48 37.2	
IZV	Izvestkoviy 320nm,0.6s	2.95	286	*e*P	Pb	21 47 57.9	-2.0
IZV	1µm,0.5s			*e*S	Sb	21 48 37.2	+1.0
KASK	Kaskelen 317nm,0.5s	2.98	290	⇑Pg	Pb	21 48 00.6	+0.2
KASK	2µm,0.7s			⇑Lg	Lg	21 48 39.8	
MTBS	Maitube 224nm,0.6s	3.11	288	Pg	Pb	21 48 00.9	-1.6
MTBS	688nm,0.6s			Lg	Lg	21 48 42.0	
MTBS	Maitube 224nm,0.6s	3.11	288	*e*P	Pb	21 48 00.9	-1.6
MTBS	688nm,0.6s			*e*S	Sb	21 48 42.0	+1.5
TDK	Taldyqorghan 514nm,0.6s	3.12	332	Pg	Pb	21 48 01.8	-0.9
TDK	978nm,1.1s			Lg	Lg	21 48 43.5	
TDK	Taldyqorghan 514nm,0.6s	3.12	332	*e*P	Pb	21 48 01.8	-0.9
TDK	978nm,1.1s			*e*S	Sg	21 48 43.5	-4.0
KTBS	Karatobe 196nm,0.6s	3.14	299	Pg	Pb	21 48 02.4	-0.7
KTBS	3.9nm,0.6s			Lg	Lg	21 48 44.4	
ULHL	Ulahol SNR=34	3.15	271	P	Pn	21 47 59.1	+2.2
ULHL	Ulahol	3.15	271	⇑*i*P	Pn	21 47 58.7	+1.8
ULHL				⇑*i*S	Sn	21 48 36.1	+1.5
ULHL	Ulahol	3.15	271	*i* PN	Pn	21 47 59.0	+2.1
ULHL				*i* S	Sn	21 48 34.0	-0.6
BOOM	Boomskoye usch	3.37	275		Pn	21 48 02.2	+2.2
BOOM				Sn	Sb	21 48 48.6	+0.4
BOOM	Boomskoye usch	3.37	275	⇓*i*P	Pn	21 48 01.8	+1.8
BOOM				⇓*i*S	Sn	21 48 41.4	+1.3
BOOM	Boomskoye usch	3.37	275	PN	Pn	21 48 02.2	+2.2
BOOM						21 48 48.6	
KST	Kastek 292nm,0.6s	3.42	285	Pg	Pb	21 48 06.7	-1.2
KST	1µm,0.7s			Lg	Lg	21 48 50.7	
KST	Kastek 292nm,0.6s	3.42	285	*e*P	Pb	21 48 06.7	-1.2
KST	1µm,0.7s			*e*S	Sb	21 48 50.7	+1.1
KUU	Kurty 164nm,0.6s	3.44	300	Pg	Pb	21 48 07.3	-0.9
KUU	504nm,0.6s			Lg	Lg	21 48 52.6	
KUU	Kurty 164nm,0.6s	3.44	300	*e*P	Pb	21 48 07.3	-0.9
KUU				*e*S	Sb	21 48 52.6	+2.5
NRN	Naryn	3.45	258		Pn	21 48 03.1	+2.0
NRN					Sg	21 48 54.0	-3.9
NRN	Naryn	3.45	258	⇑*e*P	Pn	21 48 02.6	+1.4
NRN				⇑*i*S	Sn	21 48 43.1	+0.9
NRN	Naryn	3.45	258	*e*PN	Pg	21 48 12.7	-0.5
DGS	Degeres 95nm,0.8s	3.60	287	Pg	Pb	21 48 10.0	-0.9
DGS	660nm,0.7s			Lg	Lg	21 48 57.6	
TKM2	Tokmak 2 SNR=69	3.66	282	P	Pb	21 48 07.3	-4.7
TKM2	Tokmak 2 124nm,0.6s	3.66	282	⇓Pn	Pb	21 48 07.6	-4.5
TKM2	536nm,0.6s			⇓Lg	Lg	21 48 59.6	
TKM2	Tokmak 2	3.66	282	⇑*i*P	Pn	21 48 06.1	+2.1
TKM2				⇑*i*S	Sn	21 48 48.8	+1.4
TKM2	Tokmak 2	3.66	282	*i* PN	Pb	21 48 07.4	-4.7
TKM2				*i* S	Sn	21 48 48.0	+0.6
KBK	Karagaybulak SNR=51	4.11	277	P	Pn	21 48 13.3	+3.2
KBK	Karagaybulak	4.11	277	⇓*i*P	Pn	21 48 12.1	+1.9
KBK				⇓*i*S	Sn	21 48 59.3	+0.9
KBK	Karagaybulak	4.11	277	⇓*i*PN	Pn	21 48 13.2	+3.0
KBK				*i* S	Sn	21 48 58.1	-0.3
CHMS	Chumysh SNR=18	4.29	282	P	Pn	21 48 16.1	+3.6
CHMS	Chumysh	4.29	282	⇓*i*P	Pn	21 48 14.5	+2.0
CHMS				⇓*i*S	Sn	21 49 03.4	+0.8
FRU1	Bishkek	4.36	279		Pn	21 48 16.3	+2.9
FRU1	Bishkek	4.36	279	⇓*i*P	Pn	21 48 15.8	+2.4
FRU1				⇓*i*S	Sn	21 49 05.5	+1.2
FRU1	Bishkek	4.36	279	PN	Pn	21 48 16.3	+2.9
KSH	Kashi	4.38	233	Pn	Pb	21 48 23.2	-1.0
KSH				Sn	Sg	21 49 25.5	-2.2
KSH	comp=N,350nm,1.0s			smax	smax		
KSH	comp=E,340nm,1.1s			smax	smax		
UCH	Uchtor SNR=10.0	4.43	272	P	Pn	21 48 19.1	+4.3
UCH	Uchtor	4.43	272	⇓*i*P	Pn	21 48 16.5	+1.7
UCH				⇓*i*S	Sn	21 49 07.0	+0.4
UCH	Uchtor	4.43	272	⇓*i*PN	Pn	21 48 17.5	+2.7
AAK	Ala-Archa SNR=17	4.44	277	P	Pn	21 48 17.9	+3.2
AAK	Ala-Archa	4.44	277		Pn	21 48 17.2	+2.4
AAK	Ala-Archa comp=E,4.8nm,0.3s,baz=113,slow=8.2,SNR=21	4.44	277	Pn	Pn	21 48 18.4	+3.7
AAK	comp=E,17nm,0.3s,baz=97,slow=8.7,SNR=29			Pg	Pb	21 48 26.6	+1.3
AAK	comp=E,15nm,0.3s,baz=99,slow=14,SNR=7.0 comp=E,12nm,0.3s			Sn	Sb	21 49 17.2	-1.8
AAK	Ala-Archa comp=E,1.9nm,0.6s	4.44	277	⇑Pn	Pn	21 48 16.6	+2.0
AAK	comp=E,19nm,0.5s			⇑Pg	Pb	21 48 26.8	+1.4
AAK	comp=E,200nm,0.8s			⇑Lg	Lg	21 49 23.2	
AAK	Ala-Archa	4.44	277	⇓*i*P	Pn	21 48 16.7	+2.0
AAK				⇓*i*S	Sn	21 49 07.2	+0.6
AAK	Ala-Archa	4.44	277	*d i*PN	Pn	21 48 18.3	+3.6
AAK	comp=Z,11nm,0.6s			pmax	pmax		
SGDS	Sogindy comp=Z,52nm,0.9s	4.46	287	Pg	Pb	21 48 25.0	-0.5
SGDS	comp=Z,247nm,0.7s			Lg	Lg	21 49 23.0	
USP	Ospenovka SNR=20	4.51	285	P	Pn	21 48 18.7	+3.1
USP	Ospenovka	4.51	285	⇓*i*P	Pn	21 48 17.9	+2.3
USP				⇓*i*S	Sn	21 49 09.2	+1.1
ARLS	Aral	4.60	267	⇓*i*P	Pn	21 48 18.5	+1.6
ARLS				⇓*i*S	Sn	21 49 10.3	-0.1
ARLS	Aral	4.60	267	*i* PN	Pn	21 48 19.0	+2.1
MAKZ	Makanchi	4.67	13		Pn	21 48 19.6	+1.9
MAKZ	Makanchi	4.67	13	⇓PN	Pn	21 48 19.8	+2.1
MK31	Makanchi Array comp=Z,13nm,0.3s,baz=203,slow=14,SNR=775	4.71	15	Pn	Pn	21 48 19.6	+1.4
MK31	comp=Z,227nm,0.8s,baz=189,slow=20,SNR=6.6			⇓Lg	Lg	21 49 33.6	
MK31	Makanchi Array	4.71	15	*de*PN	Pn	21 48 19.6	+1.4
MKAR	Makanchi Array comp=Z,5.9nm,0.3s,baz=187,slow=12,SNR=117	4.71	15	Pn	Pn	21 48 19.7	+1.4
MKAR	comp=Z,16nm,0.3s,baz=186,slow=17,SNR=4.3			Sn	Sn	21 49 16.4	+3.4
MKAR	comp=Z,21nm,0.3s,baz=193,slow=31,SNR=5.0 comp=Z,29nm,0.6s			Lg	Lg	21 49 35.8	
MKAR	Makanchi Array	4.71	15	*i* PN	Pn	21 48 19.7	+1.4
MKAR	comp=Z,27nm,0.6s			pmax	pmax		
EKS2	Erkin-Say SNR=10	4.97	277	P	Pn	21 48 25.4	+3.4
EKS2	Erkin-Say	4.97	277	⇓*i*P	Pn	21 48 23.9	+1.9
EKS2				⇓*i*S	Sn	21 49 19.6	0.0
EKS2	Erkin-Say	4.97	277	*i* PN	Pn	21 48 25.0	+3.0
AML	Almayashu SNR=20	5.04	271	P	Pg	21 48 39.5	-4.2
AML	Almayashu	5.04	271	⇓*i*P	Pn	21 48 25.0	+1.9
AML				⇓*i*S	Sn	21 49 21.6	0.0
AML	Almayashu	5.04	271	*i* PN	Pn	21 48 25.7	+2.6
MRKS	Merke comp=Z,56nm,0.7s	5.38	278	Pg	Pb	21 48 42.8	+1.5
MRKS	comp=Z,262nm,0.8s			Lg	Lg	21 49 53.4	
MRKS	Merke comp=Z,56nm,0.7s	5.38	278	*e*P	Pb	21 48 42.8	+1.5
MRKS	comp=Z,262nm,0.8s			*e*S	Sg	21 49 53.4	-6.5
BTLS	Baital comp=Z,62nm,1.3s	5.43	303	Pg	Pb	21 48 44.8	+2.8
BTLS	comp=Z,54nm,1.3s			Lg	Lg	21 49 57.1	
BTLS	Baital	5.43	303	*e*PN	Pn	21 48 30.9	+2.8
BTLS	Baital comp=Z,62nm,1.3s	5.43	303	*e*P	Pb	21 48 44.8	+2.8
BTLS	comp=Z,54nm,1.3s			*e*S	Sg	21 49 57.1	-4.3
WMQ	Urumqi	5.51	71	Pn	Pn	21 48 30.7	+1.4
WMQ	comp=Z,370nm,0.9s			smax	smax		
WMQ	comp=Z,600nm,0.9s			smax	smax		
ARSB	Arslanbob	5.68	263		Pn	21 48 33.9	+2.2
ARSB	Arslanbob	5.68	263	⇑*i*P	Pn	21 48 33.3	+1.6
ARSB				⇑*i*S	Sn	21 49 36.0	-1.1
ARSB	Arslanbob	5.68	263	PN	Pn	21 48 33.9	+2.2
SFK	Sufi-Kurgan	5.72	249	⇑*i*P	Pn	21 48 33.5	+1.1
SFK				⇑*i*S	Sn	21 49 36.3	-2.0
SFK	Sufi-Kurgan	5.72	249	*i* PN	Pn	21 48 33.1	+0.7
MNAS	Manas	5.91	275	⇑*i*P	Pn	21 48 36.8	+1.9
MNAS				⇑*i*S	Sn	21 49 41.8	-0.9
MNAS	Manas	5.91	275	⇓*e*PN	Pn	21 48 37.6	+2.7
OHH	Osh	6.04	256	⇑*i*P	Pn	21 48 38.0	+1.4
OHH				⇑*i*S	Sn	21 49 43.9	-1.9
ZSN	Zaisan comp=Z,66nm,0.6s	6.05	30	Pg	Pg	21 48 58.7	-4.2
ZSN	Zaisan comp=Z,66nm,0.6s	6.05	30	*e*P	Pg	21 48 58.7	-4.2
ZSN	comp=Z,162nm,0.8s			*e*S	Sg	21 50 20.5	-0.8
ARK	Arkit	6.36	269	⇑*e*P	Pn	21 48 42.4	+1.4
ARK				⇑*e*S	Sn	21 49 51.8	-1.9
TRKS	Terek-Say	7.01	267	⇑*i*P	Pn	21 48 51.5	+1.6
TRKS				⇑*i*S	Sn	21 50 07.1	-2.6
TRKS	Terek-Say	7.01	267	*i* PN	Pn	21 48 51.6	+1.6
DRK	Karamyk	7.14	250		Pn	21 48 54.8	+2.9
DRK	Karamyk	7.14	250	⇑*e*P	Pn	21 48 52.8	+0.9
DRK				⇑*e*S	Sn	21 50 09.9	-3.3
DRK	Karamyk	7.14	250	P	Pn	21 48 54.8	+2.9
KK31	Karatay Array comp=Z,15nm,0.6s	7.39	280	⇑Pg	Pb	21 49 20.1	+4.6
KK31	comp=Z,115nm,0.7s			⇓Lg	Lg	21 50 56.7	
KKAR	Karatay Array	7.39	280		Pn	21 48 57.5	+2.4
KKAR	Karatay Array	7.39	280	⇓*i*P	Pn	21 48 57.1	+2.0
KKAR				⇓*i*S	Sn	21 50 17.1	-1.9
KKAR	Karatay Array	7.39	280	P	Pn	21 48 57.5	+2.4
BTK	Batken	7.61	256		Pn	21 48 60.0	+1.8
BTK	Batken	7.61	256	⇑*i*P	Pn	21 48 59.5	+1.3
BTK				⇑*i*S	Sn	21 50 21.2	-3.4
BTK	Batken	7.61	256	P	Pn	21 49 00.0	+1.8
BRLS	Borolday comp=Z,6.9nm,0.7s	7.88	279	Pg	Pg	21 49 32.9	-5.1
BRLS	Borolday comp=Z,6.9nm,0.7s	7.88	279	*e*P	Pg	21 49 32.9	-5.1
BRLS	comp=Z,54nm,0.6s			*e*S	Sg	21 51 19.2	-0.8
OTUK	Ortayu comp=Z,14nm,0.8s	8.29	319	⇓Pn	Pn	21 49 06.8	-0.5
OTUK	comp=Z,43nm,0.8s			⇑Sn	Sn	21 50 49.6	+8.7
OTUK	comp=Z,156nm,1.1s			⇑Lg	Lg	21 51 21.6	
OTUK	Ortayu	8.29	319	P	Pn	21 49 06.8	-0.5
KURBB	Kurchatov Arra comp=Z,0.2nm,0.3s,baz=178,slow=12,SNR=12	8.47	352	Pn	Pn	21 49 10.4	+0.6
KURBB	comp=Z,0.4nm,0.3s,baz=172,slow=13,SNR=4.4			Sn	Sn	21 50 48.7	+3.4
KURBB	comp=Z,0.7nm,0.3s,baz=165,slow=30,SNR=4.6			Lg	Lg	21 51 32.1	
KURK	Kurchatov	8.55	352		Pn	21 49 13.4	+2.5
KURK	Kurchatov	8.55	352	⇓*e*P	Pn	21 49 13.6	+2.7
SIMJ	Simiganj	9.45	251		Pn	21 49 24.4	+0.9
DZET	Dzherino	9.52	253	P	Pn	21 49 25.3	+1.0
DZET	comp=Z,20nm,0.7s			pmax	pmax		
NIL	Nilore	10.31	216		Pn	21 49 35.1	-0.1
NIL	Nilore	10.31	216	P	Pn	21 49 35.1	-0.1
ZALV	Zalesovo Beam comp=Z,0.4nm,0.3s,baz=194,slow=12,SNR=12	12.04	12	Pn	Pn	21 49 58.3	-0.4
ZALV	comp=Z,1.4nm,0.3s,baz=190,slow=24,SNR=5.6			Sn	Sn	21 52 12.0	-1.0
ZALV	baz=191,slow=23			Lg	Lg	21 53 25.5	
ZALV	comp=Z,49nm,18.2s,baz=54,slow=37 comp=Z,4.6nm,0.5s			LR	LR	21 54 37.5	
ZALV	Zalesovo Beam	12.04	12	*i* P	Pn	21 49 58.5	-0.2
ZALV	comp=Z,5.0nm,0.6s			pmax	pmax		
GOMU	GeErMu	12.65	114	P	Pn	21 50 03.3	-4.1
GOMU				pP		21 50 08.9	
GOMU				sP		21 50 16.6	
GOMU				S	Sn	21 52 20.4	-8.1
GOMU				sS		21 52 36.3	
GOMU	comp=Z,170nm,9.9s			LR	LR		
GOMU	comp=Z,160nm,8.2s			LR	LR		
GOMU	comp=Z,170nm,9.9s			LR	LR		
BVA0	Borovoye Array	12.72	331	P	Pn	21 50 15.1	+7.1
BVAR	Borovoye Array comp=Z,0.1nm,0.3s,baz=145,slow=11,SNR=7.2	12.72	331	Pn	Pn	21 50 09.2	+1.2
BVAR	baz=124,slow=24,SNR=1.2			Sn	Sn	21 52 27.2	-2.4
BVAR	comp=Z,0.1nm,0.3s,baz=129,slow=27,SNR=7.1			Lg	Lg	21 53 42.8	
BVAR	comp=Z,119nm,18.3s,baz=143,slow=37 comp=Z,0.5nm,0.4s			LR	LR	21 55 06.8	
BRVK	Borovoye	12.79	331		Pn	21 50 10.5	+1.7
BRVK	Borovoye	12.79	331	⇑*e*P	Pn	21 50 08.6	-0.2
GTA	Gaotai	14.91	95	*e*P	Pn	21 50 36.8	-1.2
GTA	comp=Z,4.0nm,0.6s			pmax	pmax		
GTA	comp=Z,180nm,9.8s			LR	LR		
GTA	comp=Z,120nm,8.7s			LR	LR		
GTA	comp=Z,170nm,10.2s			LR	LR		
EVN	Everest	15.18	158	P	P	21 50 46.8	-0.5
AB31	Akbulak array comp=Z,6.0nm,0.8s,baz=109,slow=13,SNR=20	15.92	303	Pn	Pn	21 50 49.1	-2.0
AB31	Akbulak array	15.92	303	P	Pn	21 50 49.7	-1.4
ABKAR	Akbulak array	15.92	303		Pn	21 50 49.3	-1.8
MOY	Mondy	16.82	49	*e*P	P	21 51 03.8	-1.0
MOY	comp=Z,13nm,2.0s			pmax	pmax		
AKTO	Aktyubinsk comp=Z,0.3nm,0.3s,baz=110,slow=13,SNR=8.3	17.48	306	P	P	21 51 10.9	-1.1
AKTO	comp=Z,0.1nm,0.3s,baz=195,slow=19,SNR=3.9			Lg	Lg	21 56 19.0	
AKTO	comp=Z,120nm,19.1s,baz=63,slow=37 comp=Z,3.7nm,0.7s			LR	LR	21 58 07.3	
AKTO	Aktyubinsk comp=Z,3.1nm,0.7s	17.48	306	⇓Pn	P	21 51 11.4	-0.6
SONM	Songino Array comp=Z,0.2nm,0.3s,baz=261,slow=12,SNR=8.1	19.09	64	P	Pn	21 51 29.7	-1.0
SONM	baz=257,slow=23			Lg	Lg	21 57 10.5	
SONM	comp=Z,12nm,21.0s,baz=266,slow=41 comp=Z,1.3nm,0.7s			LR	LR	22 00 00.4	
LZH	Lanzhou	19.11	101	*e*P	P	21 51 29.3	-0.9
LZH				sP	sP	21 51 35.0	-0.9
LZH				S	S	21 55 06.1	-0.9
LZH	comp=Z,20nm,1.0s			pmax	pmax		
LZH	comp=Z,350nm,14.3s			LR	LR		
LZH	comp=Z,200nm,12.4s			LR	LR		
LZH	comp=Z,120nm,13.4s			LR	LR		
ULN	Ulaanbaatar	19.54	64	*de*P	Pn	21 51 36.3	+0.2
ULN	comp=Z,9.0nm,1.0s			pmax	pmax		
ARTI	Arti	20.05	322	P	P	21 51 40.0	-0.2
ARTI	comp=Z,9.8nm,0.5s			IAmb	IAmb	21 52 03.9	

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ARTI  Arti              20.05 322 P        Pn      21 51 40.6  -1.3
      comp=Z,5.0nm,0.8s,baz=141,slow=6.9,SNR=6.1
ARTI                              S        S       21 55 18.7  -6.6
      comp=Z,0.8nm,0.4s,baz=106,slow=22,SNR=1.2
ARTI                              Lg       Lg      21 57 37.2
      comp=Z,0.1nm,0.3s,baz=221,slow=20,SNR=4.8
ARTI                              LR       LR      21 59 48.0
      comp=Z,100nm,20.6s,baz=131,slow=38
      comp=Z,5.0nm,0.8s
ARTI  Arti              20.05 322 P        Pn      21 51 40.9  -1.0
ARTI                                               21 51 56.8
ARTI                              S        Sn      21 55 30.5  +3.2
ARTI                              SS       SnSn    21 55 48.7  +7.1
BTO   Baotou            22.16  84 eP       P       21 52 01.5  -1.7
BTO                               pP       pP      21 52 06.2  -1.1
BTO                               PP       PnPn    21 52 24.0  -1.3
BTO                               S        S       21 56 04.2  -3.2
BTO                               pmax     pmax
      comp=Z,15nm,0.5s
BTO                               pmax     pmax
      comp=Z,140nm,6.3s
BTO                               LR       LR
      comp=Z,360nm,4.5s
BTO                               LR       LR
      comp=Z,88nm,2.6s
BTO                               LR       LR
      comp=Z,98nm,7.0s
HHC   Hu-ho-hao-te      23.24  83 eP       P       21 52 14.0  -0.6
HHC                               pmax     pmax
      comp=Z,4.0nm,0.5s
HHC                               pmax     pmax
      comp=Z,56nm,6.8s
XAN   Xi'an             23.75 101 ⇑P       P       21 52 18.2  -1.4
XAN                               PP       PnPn    21 52 51.7  +4.7
XAN                               S        S       21 56 35.2  +0.4
XAN                               pmax     pmax
      comp=Z,5.0nm,0.5s
XAN                               pmax     pmax
      comp=Z,160nm,3.8s
XAN                               LR       LR
      comp=Z,140nm,4.5s
XAN                               LR       LR
      comp=Z,190nm,4.6s
XAN                               LR       LR
      comp=Z,95nm,4.3s
MAK   Makhachkala       24.20 283 eP       P       21 52 24.6  +1.0
MAK                               eS       S       21 56 48.0  +6.3
MAK                               pmax     pmax
      comp=Z,79nm,1.3s
MAK                               MLR      MLR
      comp=Z,102nm,13.0s
BELG  Belogornoye       24.27 306 P        P       21 52 24.4  +0.1
      comp=Z,12nm,0.9s,baz=47,slow=3.2,SNR=5.0
BELG                              LR       LR      22 02 24.2
      comp=Z,81nm,19.4s,baz=144,slow=38
      comp=Z,12nm,0.9s
BELG  Belogornoye       24.27 306⇓iP       P       21 52 26.8  +2.6
BELG                              pmax     pmax
      comp=Z,2.0nm,0.9s
KIRV  Kirov             25.33 321 P        P       21 52 36.0  +2.2
      comp=Z,6.0nm,0.6s,baz=171,slow=5.4,SNR=4.1
KIRV                              LR       LR      22 03 03.2
      comp=Z,86nm,18.4s,baz=150,slow=38
      comp=Z,6.0nm,0.6s
KIRV  Kirov             25.33 321deP       P       21 52 36.2  +2.4
WSAR  Wadi Sarin        26.28 231 P        P       21 52 46.4  +3.7
      baz=73,slow=19,SNR=2.2
KBZ   Khabaz            27.38 286 P        P       21 52 54.0  +1.6
      comp=Z,0.6nm,0.5s,baz=134,slow=12,SNR=1.8
KBZ                               LR       LR      22 05 36.5
      comp=Z,52nm,19.1s,baz=78,slow=40
      comp=Z,0.6nm,0.5s
KBZ   Khabaz            27.38 286 P        P       21 52 54.0  +1.6
KIV   Kislovodsk        27.49 286 eP       P       21 52 53.8  +0.2
KIV                               pmax     pmax
      comp=Z,3.0nm,1.1s
KIV                               MLR      MLR
      comp=Z,35nm,15.0s
CMAR  Chiang Mai Arr    28.45 141 P        P       21 52 58.4  -3.9
      comp=Z,0.4nm,0.5s,baz=292,slow=16,SNR=1.5
CMAR                              LR       LR      22 07 03.3
      comp=Z,31nm,18.2s,baz=315,slow=42
      comp=Z,0.4nm,0.5s
CMAR  Chiang Mai Arr    28.45 141ceP       P       21 53 06.0  +3.7
CMAR                              pmax     pmax
      comp=Z,1.0nm,0.8s
KLMR  Klimovskoe        30.83 321 eP       P       21 53 22.8  -0.1
KLMR                              pmax     pmax
      comp=Z,8.0nm,1.0s
OBN   Obninsk           31.16 310 eP       P       21 53 29.1  +3.2
OBN                               e                21 54 29.8
OBN                               ePPP     PPP     21 54 39.4
OBN                               e                21 56 22.5
OBN                               pmax     pmax
      comp=Z,3.0nm,1.0s
NJ2   Nanjing           32.00  96 eP       P       21 53 33.2  -0.3
NJ2                               pmax     pmax
      comp=Z,6.0nm,0.6s
ZEA   Zeya              32.75  53 eP       P       21 53 36.4  -3.5
ZEA                               e                22 04 11.6
HEH   HeiHe             32.95  60 eP       P       21 53 44.4  +2.7
QIZ   Qiongzhong        33.98 124 P        P       21 53 51.4  +0.4
QIZ                               S        S       21 59 16.6  +0.5
QIZ                               LR       LR
      comp=Z,82nm,4.2s
QIZ                               LR       LR
      comp=Z,120nm,7.1s
YAK   Yakutsk           34.96  39 LR       LR      22 08 44.8
      comp=Z,38nm,21.3s,baz=254,slow=37
BRTR  Keskin Array B    35.10 282 P        P       21 53 59.3  -1.4
      comp=Z,0.2nm,0.4s,baz=96,slow=9.0,SNR=2.3
      comp=Z,0.2nm,0.4s
AKASG Malin Array Be    35.65 302 P        P       21 54 05.0  -0.1
      comp=Z,0.5nm,0.5s,baz=74,slow=8.6,SNR=4.9
AKASG                             LR       LR      22 09 27.5
      comp=Z,38nm,21.1s,baz=79,slow=37
      comp=Z,0.5nm,0.5s
AKASG Malin Array Be    35.65 302ceP       P       21 54 09.1  +4.0
AKASG                             pmax     pmax
      comp=Z,1.0nm,0.5s
AKBB  Malin Array Si    35.65 302⇓eP       P       21 54 07.6  +2.5
AKBB                              pmax     pmax
      comp=Z,3.0nm,0.9s
KLR   Kul'dur           35.86  61 LR       LR      22 08 44.7
      comp=Z,24nm,18.0s,baz=264,slow=36
KLR   Kul'dur           35.86  61⇑eP       P       21 54 07.0  +0.1
KLR                               pmax     pmax
      comp=Z,10.0nm,2.1s
MNK   Minsk             36.17 308 i P      P       21 54 08.3  -1.2
MNK                               i P      P       21 54 08.3  -1.2
      comp=N,8.0nm,1.1s
MNK                               i P      P       21 54 08.3  -1.2
      comp=Z,7.0nm,0.6s,baz=87
MNK                               i PP     PP      21 55 30.2  -1.3
MNK                               i PPP    PPP     21 55 44.5
MNK                               i S      S       21 59 50.4  +1.3
MNK                               i SS     SnSn    22 02 17.9  +3.4
MNK                               i SSS    SSS     22 02 34.6
MNK                               i LQ     LQ      22 06 14.8
MNK                               i LR     LR      22 08 21.5
MNK                               i LRM    MLR     22 08 57.4
      comp=E,76nm,23.9s
MNK                               i LRM    MLR     22 08 59.3
      comp=N,71nm,19.9s
MNK                               i LRM    MLR     22 09 51.6
      comp=Z,35nm,17.8s
MNK   Minsk             36.17 308 i P      P       21 54 08.2  -1.2
MNK                               i                21 55 30.2
MNK                               i S      S       21 59 50.3  +1.3
MNK                               i SS     SnSn    22 02 17.8  +3.4
MNK                               pmax     pmax
      comp=Z,7.0nm,0.6s
MNK                               pmax     pmax
      comp=N,8.0nm,1.1s
MNK                               MLR      MLR
      comp=E,76nm,24.0s
MNK                               MLR      MLR
      comp=N,71nm,20.0s
MNK                               MLR      MLR
      comp=Z,35nm,18.0s
MMAI  Mount Meron Ar    36.51 270 P        P       21 54 14.6  +1.9
      comp=Z,2.4nm,0.8s,baz=45,slow=9.2,SNR=2.4
      comp=Z,2.4nm,0.8s
FINES FINESS Array B    37.32 320 P        P       21 54 19.4  +0.3
      comp=Z,2.0nm,0.6s,baz=98,slow=9.1,SNR=15
FINES                             LR       LR      22 10 24.3
      comp=Z,32nm,19.9s,baz=90,slow=37
      comp=Z,2.0nm,0.6s
FINES FINESS Array B    37.32 320 i P      P       21 54 22.6  +3.5
FINES                             pmax     pmax
      comp=Z,3.0nm,0.5s
TIXI  Tiksi             37.66  23 LR       LR      22 10 20.7
      comp=Z,36nm,21.3s,baz=207,slow=37
MLR   Muntele Rosu      38.81 294 P        P       21 54 33.7  +1.6
      comp=Z,2.7nm,0.9s,baz=137,slow=12,SNR=4.9
MLR                               LR       LR      22 12 49.9
      comp=Z,50nm,19.9s,baz=96,slow=40
      comp=Z,2.7nm,0.9s
ARCES ARCESS Array B    39.01 333 P        P       21 54 36.2  +2.9
      comp=Z,12nm,0.3s,baz=100,slow=7.0,SNR=2.4
JNU   Nakatsue          40.41  86 LR       LR      22 13 03.1
      comp=Z,49nm,20.6s,baz=294,slow=39
IDI   Anoyia            43.24 280 P        P       21 55 10.5  +1.9
      comp=Z,1.6nm,0.6s,baz=24,slow=18,SNR=1.1
      comp=Z,1.6nm,0.6s
HFS   Hagfors           43.40 318 P        P       21 55 10.3  +0.8
      comp=Z,1.5nm,0.4s,baz=108,slow=9.5,SNR=11
HFS                               LR       LR      22 13 56.0
      comp=Z,47nm,21.2s,baz=84,slow=37
      comp=Z,1.5nm,0.4s
VRAC  Vranov            43.91 302 LR       LR      22 16 43.7
      comp=Z,28nm,19.7s,baz=70,slow=40
NORES NORESS Array B    44.38 319 P        P       21 55 21.6  +4.2
NB2   NORSAR Subarra    44.50 320 P        P       21 55 19.1  +0.7
      comp=Z,1.7nm,0.6s,baz=83,slow=8.6
NB2   NORSAR Subarra    44.50 320 P        P       21 55 18.5  +0.1
NOA   NORSAR Array B    44.50 320 P        P       21 55 19.3  +0.9
      comp=Z,1.5nm,0.5s,baz=83,slow=7.9,SNR=16
NOA                               LR       LR      22 14 37.6
      comp=Z,37nm,18.3s,baz=80,slow=37
      comp=Z,1.5nm,0.5s
CLL   Collm             45.56 306 eP       P       21 55 28.0  +1.1
CLL   Collm             45.56 306 eP       P       21 55 28.0  +1.1
GERES GERESS Array B    45.86 302 P        P       21 55 32.2  +2.7
      comp=Z,0.3nm,0.5s,baz=92,slow=4.4,SNR=2.6
GERES                             LR       LR      22 15 27.7
      comp=Z,29nm,19.1s,baz=96,slow=37
      comp=Z,0.3nm,0.5s
DAVOX Davos/Dischmat    48.99 301 LR       LR      22 18 15.9
      comp=Z,46nm,18.7s,baz=83,slow=38
DAG   Danmarks Havn     51.33 343 i P      P       21 56 12.0  +1.1
DAG                               IAmb     IAmb    21 56 21.1
      comp=Z,2.0nm,0.8s
DBG   Daneborg          52.61 340 i P      P       21 56 15.4  -5.1
DBG                               IAmb     IAmb    21 56 31.9
      comp=Z,0.9nm,2.0s
EKA   Eskdalemuir Ar    53.35 315 P        P       21 56 27.4  +1.1
      comp=Z,1.4nm,0.7s,baz=79,slow=8.7,SNR=4.5
      comp=Z,1.4nm,0.7s
NEEM  North Greenlan    56.90 349 i P      P       21 56 53.6  +1.7
NEEM                              IAmb     IAmb    21 56 59.5
      comp=Z,6.4nm,1.1s
EUNU  Eureka            57.71 357 P        P       21 56 59.7  +2.2
C16K  Lisburne Hills    59.42  23 P        P       21 57 10.0  +0.6
KULLO Kullorsuaq        60.08 348 i P      P       21 57 11.9  -1.9
KULLO                             IAmb     IAmb    21 57 21.9
      comp=Z,22nm,1.4s
C18K  Utukok River      60.36  22 P        P       21 57 18.2  +2.3
C18K                              IAmb     IAmb    21 57 30.1
      comp=Z,5.1nm,1.2s
C19K  Lookout Ridge     60.49  21 P        P       21 57 18.7  +1.9
C19K                              IAmb     IAmb    21 57 23.0
      comp=Z,6.7nm,1.4s
B20K  Meade River       60.49  20          P       21 57 19.3  +2.6
B20K                              IAmb     IAmb    21 57 21.0
      comp=Z,5.8nm,0.8s
B22K  Teshekpuk Lake    61.15  18 P        P       21 57 23.4  +2.3
B22K                              IAmb     IAmb    21 57 37.9
      comp=Z,8.2nm,1.2s
ESDC  Sonseca Array     61.21 299 P        P       21 57 21.0  -1.2
      comp=Z,0.7nm,0.8s,baz=34,slow=6.8,SNR=1.5
ESDC                              LR       LR      22 26 59.5
      comp=Z,13nm,18.2s,baz=128,slow=39
      comp=Z,0.7nm,0.8s
F15K  North Star Dit    61.26  25 P        P       21 57 23.8  +1.8
F15K                              IAmb     IAmb    21 57 59.8
      comp=Z,5.4nm,1.1s
D19K  Kuna River        61.30  21 P        P       21 57 23.6  +1.4
D19K                              IAmb     IAmb    21 57 35.4
      comp=Z,4.8nm,1.0s
E18K  Tukpahlearik C    61.35  23          P       21 57 23.5  +1.0
E18K                              IAmb     IAmb    21 57 26.6
      comp=Z,2.9nm,0.7s
E18K  Tukpahlearik C    61.35  23 P        P       21 57 23.2  +0.6
      baz=125
B21K  Ikpikpuk River    61.39  19 P        P       21 57 25.2  +2.4
B21K                              IAmb     IAmb    21 57 39.7
      comp=Z,8.8nm,1.4s
PAB   San Pablo         61.53 299 P        P       21 57 25.9  +1.6
PAB   San Pablo         61.53 299 P        P       21 57 25.9  +1.6
PAB                               pmax     pmax
      comp=Z,11nm,1.5s
D20K  Etivluk River     61.54  20 P        P       21 57 22.2  -1.7
C23K  Itkillik River    62.17  18 P        P       21 57 26.6  -1.4
FRB   Frobisher Bay     71.51 346 LR       LR      22 32 46.2
      comp=Z,36nm,18.0s,baz=354,slow=38
TORD  Torodi Ar. Bea    73.02 272 P        P       21 58 36.8  -0.5
      comp=Z,1.6nm,0.3s,baz=37,slow=5.6,SNR=1.5
      comp=Z,1.6nm,0.3s
YKA   Yellowknife Ar    74.89   7 P        P       21 58 49.1  +1.6
      comp=Z,1.3nm,0.9s,baz=344,slow=5.9,SNR=6.8
      comp=Z,1.3nm,0.9s
YKA   Yellowknife Ar    74.89   7ceP       P       21 58 49.4  +1.8
YKA                               pmax     pmax
      comp=Z,1.0nm,0.9s
WRAB  Tennant Creek     79.36 129⇓eP       P       21 59 15.3  +2.1
WRAB                              pmax     pmax
      comp=Z,41nm,2.6s
WRA   Warramunga Arr    79.36 129 P        P       21 59 11.8  -1.4
      comp=Z,1.2nm,0.9s,baz=328,slow=5.6,SNR=5.0
      comp=Z,1.2nm,0.9s
WRA   Warramunga Arr    79.36 129 i P      P       21 59 14.1  +0.9
WRA                               pmax     pmax
      comp=Z,1.0nm,0.9s
ASAR  Alice Springs     82.06 132 P        P       21 59 25.6  -2.1
      comp=Z,0.6nm,0.6s,baz=321,slow=5.5,SNR=4.6
      comp=Z,0.6nm,0.6s
QSPA  South Pole Qui   132.04 180 PKP      PKPdf   22 06 18.7  -1.1
      comp=Z,0.8nm,0.8s,baz=257,slow=4.1,SNR=1.7
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*AEIC **07** 21:55:45.3±2.9, 63.°28N±0.°02×148.°79W±0.°04, h15^{km}±3^{km}, ML2.9, ML3.1/260(NEIC), Error ellipse: s-maj=2.5km s-min=2.2km az=54.0*

*ANF **07** 21:55:45.8±0.1, 63.°25N×148.°83W, h0^{km}, ML3.3/112, Error ellipse: s-maj=0.9km s-min=0.9km az=49.0*

*NEIC **07** 21:55:46.6±1.8, 63.°26N±0.°01×148.°82W±0.°02, h10^{km}±1^{km}, Error ellipse: s-maj=2.9km s-min=2.5km az=232.0*

ISC 07 21:55:45.6±0.8**, 63.°28N**±0.°01×**148.°80W**±0.°01**, h12**^{km}±6^{km}**, n304,** σ1^{s}75/338**, Central Alaska**

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Code  Station Name       Δ°   AZ°   Phase ID          Time        Res
                                  Op       ISC      h  m  s     ISC
RND   Reindeer           0.13 350          Pg      21 55 48.9  -0.2
RND                               Sg       Sg      21 55 51.0  -0.6
RND                               IAML             21 55 51.1
      comp=N,7µm,0.3s
WAT7  Susitna Watana     0.44 183          Pg      21 55 54.4   0.0
WAT7                                       Sg      21 56 00.6  +0.3
WAT1  Susitna Watana     0.46 166          Pg      21 55 54.9  +0.2
WAT1                                       Sg      21 56 01.4  +0.5
WAT1  Susitna Watana     0.46 166 P        Pg      21 55 54.9  +0.2
      baz=347
WAT1                              S        Sg      21 56 01.1  +0.2
      baz=347
MCK   McKinley           0.46 353          Pb      21 55 55.1  -0.6
MCK                               Sg       Sb      21 56 01.5  -1.0
MCK                               IAML             21 56 03.4
      comp=E,960nm,0.8s
MCK   McKinley           0.46 353 P        Pb      21 55 55.1  -0.6
      baz=171,SNR=220
MCK                               S        Sb      21 56 01.6  -1.0
      baz=171
DHY   Denali Highway     0.68 107 Pg       Pg      21 55 58.9  +0.1
DHY                               Sg       Sb      21 56 08.6  -0.2
DHY   Denali Highway     0.68 107 P        Pg      21 55 59.0  +0.1
      baz=287,SNR=208
DHY                               S        Sb      21 56 08.5  -0.2
      baz=287
TRF   Thorofare Moun     0.69 285          Pg      21 55 58.9  -0.2
TRF                               Sg       Sg      21 56 08.4  +0.3
TRF                               IAML             21 56 08.8
      comp=E,694nm,0.4s
TRF   Thorofare Moun     0.69 285 P        Pg      21 55 59.0  -0.2
      baz=105,SNR=494
TRF                               S        Sg      21 56 08.5  +0.3
      baz=105
WAT6  Susitna Watana     0.85 145          Pg      21 56 01.7  -0.3
WAT6                                       Sg      21 56 13.3  +0.1
WAT6  Susitna Watana     0.85 145 P        Pg      21 56 01.8  -0.3
      baz=326,SNR=507
WAT6                              S        Sg      21 56 13.2  +0.1
      baz=326
BWN   Browne             0.95 342          Pg      21 56 03.8  -0.1
BWN                                        Sn      21 56 17.1  -1.0
BWN                               IAML             21 56 17.9
      comp=N,580nm,0.4s
BWN                               IAML             21 56 22.2
      comp=E,656nm,0.5s
KTH   Kantishna Hill     0.99 287          Pb      21 56 04.1  -0.6
KTH                                        Sn      21 56 18.3  -1.0
CUT   Chulitna           1.10 218          Pb      21 56 06.4  -0.1
CUT                                        Sg      21 56 21.2   0.0
CUT                               IAML             21 56 25.8
      comp=N,642nm,0.5s
CUT                               IAML             21 56 34.2
      comp=E,663nm,0.4s
CUT   Chulitna           1.10 218 P        Pb      21 56 06.2  -0.3
      baz=38,SNR=9.0
CUT                               S        Sg      21 56 21.3  +0.2
      baz=38
WRH   Wood River Hil     1.24  14          Pg      21 56 09.3  -0.2
WRH                               Sg       Sg      21 56 26.9  +1.2
BPAW  Bear Paw Mtn.      1.28 311          Pg      21 56 09.9  -0.2
BPAW                              Sg       Sg      21 56 27.4  +0.6
BPAW                              IAML             21 56 29.1
      comp=E,270nm,0.6s
BPAW                              IAML             21 56 29.1
      comp=N,453nm,0.6s
BPAW  Bear Paw Mtn.      1.28 311 P        Pg      21 56 09.7  -0.5
      baz=130,SNR=90
BPAW                              S        Sg      21 56 27.3  +0.6
      baz=130
NEA2  Nenana             1.33 355          Pg      21 56 10.6  -0.5
NEA2                              Sg       Sg      21 56 29.1  +0.8
NEA2                              IAML             21 56 29.7
      comp=N,212nm,0.4s
NEA2  Nenana             1.33 355 P        Pg      21 56 10.6  -0.5
      baz=174,SNR=109
NEA2                              S        Sg      21 56 29.3  +0.9
      baz=174
HDA   Harding Lake       1.40  35          Pg      21 56 12.3  -0.3
HDA                               Sg       Sg      21 56 31.0  +0.2
HDA                               IAML             21 56 32.7
      comp=E,389nm,0.5s
HDA   Harding Lake       1.40  35 P        Pg      21 56 12.4  -0.1
      baz=216,SNR=135
HDA                               S        Sg      21 56 31.3  +0.5
      baz=216
CCB   Clear Creek Bu     1.45  17          Pb      21 56 12.5  +0.1
CCB                                        Sg      21 56 31.6  -0.5
K24K  Donnelly Dome      1.46  67          Pg      21 56 13.6  +0.1
K24K                              Sn       Sg      21 56 35.0  +2.6
K24K  Donnelly Dome      1.46  67 P        Pg      21 56 13.3  -0.2
      baz=249,SNR=60
CAST  Castle Rocks       1.49 277          Pb      21 56 13.1   0.0
CAST                              Sg       Sg      21 56 32.8  -0.7
CAST                              IAML             21 56 35.7
      comp=E,333nm,0.4s
CAST                              IAML             21 56 37.5
      comp=N,289nm,0.5s
CAST  Castle Rocks       1.49 277 P        Pb      21 56 13.0   0.0
      baz=95,SNR=231
CAST                              S        Sb      21 56 32.3  +0.4
      baz=95
SML   Sawmill            1.49 171          Pb      21 56 12.8  -0.4
SML                               Sn       Sb      21 56 32.4  +0.4
SML                               IAML             21 56 34.8
      comp=N,312nm,0.6s
SML   Sawmill            1.49 171 P        Pb      21 56 12.8  -0.4
      baz=352,SNR=105
SML                               S        Sb      21 56 32.5  +0.5
      baz=352
GHO   Glory Hole Cre     1.51 182 Pn       Pb      21 56 13.1  -0.5
GHO                               Sg       Sb      21 56 33.2  +0.6
GHO                               IAML             21 56 35.8
      comp=N,373nm,0.5s
GHO                               IAML             21 56 36.2
      comp=E,319nm,0.7s
PAX   Paxson             1.54 100          Pb      21 56 13.9  -0.2
PAX                               Sg       Sg      21 56 35.0  -0.3
PAX   Paxson             1.54 100 P        Pb      21 56 14.0  -0.2
      baz=282,SNR=122
PAX                               S        Sg      21 56 34.7  -0.6
      baz=282
M23K  Glacier View       1.57 161 P        Pb      21 56 14.0  -0.5
      baz=342,SNR=40
M23K                              S        Sb      21 56 34.9  +0.7
      baz=342
PPLA  Purkeypile         1.59 258          Pg      21 56 15.3  -0.7
PPLA                              Sn       Sg      21 56 36.4  -0.2
PPLA                              IAML             21 56 39.0
      comp=N,341nm,0.6s
PPLA                              IAML             21 56 40.5
      comp=E,319nm,0.4s
PPLA  Purkeypile         1.59 258 Pb       Pb      21 56 15.2  +0.3
      baz=75,SNR=100
PPLA                              S        Sg      21 56 36.4  -0.2
      baz=75
SCM   Sheep Creek Mo     1.60 154          Pb      21 56 14.8  -0.3
SCM                               Sn       Sg      21 56 36.0  -1.0
SCM   Sheep Creek Mo     1.60 154 P        Pb      21 56 14.8  -0.3
      baz=336,SNR=53
SCM                               S        Sg      21 56 36.1  -1.0
      baz=336
M22K  Willow             1.65 202          Pb      21 56 15.2  -0.5
M22K                              Sn       Sg      21 56 37.8  -0.7
M22K  Willow             1.65 202 P        Pb      21 56 15.3  -0.4
      baz=22,SNR=46
M22K                              S        Sg      21 56 37.7  -0.8
      baz=22
COLA  College            1.66  14 Pn       Pb      21 56 16.2  +0.2
COLA                              Sn       Sg      21 56 38.3  -0.6
COLA                              IAML             21 56 39.7
      comp=E,344nm,0.5s
CHUM  Lake Minchumin     1.69 293          Pb      21 56 16.4  -0.1
CHUM  Lake Minchumin     1.69 293 P        Pb      21 56 16.3  -0.2
      baz=110,SNR=65
CHUM                              S        Sg      21 56 38.7  -1.1
      baz=110
M24K  Tolsona, Glenn     1.69 133          Pb      21 56 16.9  +0.4
M24K                              Sn       Sg      21 56 39.2  -0.5
M24K  Tolsona, Glenn     1.69 133 Pb       Pb      21 56 17.0  +0.5
      baz=315,SNR=108
M24K                              Sb       Sg      21 56 40.5  +0.7
      baz=315
PMR   Palmer             1.70 185          Pb      21 56 16.3  -0.4
PMR                               IAML             21 56 38.9
      comp=E,262nm,0.4s
PMR                               IAML             21 56 39.8
      comp=N,196nm,0.3s
PMR   Palmer             1.70 185 P        Pb      21 56 16.2  -0.4
      baz=5.7,SNR=37
PMR                               S        Sb      21 56 38.5  +0.6
      baz=5.7
IL31                     1.72  28          Pn      21 56 15.8  +0.5
SKT   Skwentna           1.81 225          Pb      21 56 17.9  -0.7
SKT                               IAML             21 56 45.5
      comp=N,284nm,0.2s
SKT   Skwentna           1.81 225 P        Pb      21 56 17.9  -0.7
      baz=44,SNR=125
SKT                               S        Sb      21 56 41.6  +0.4
      baz=44
RIDG  Independent Ri     1.83  73          Pg      21 56 19.7  -1.1
RIDG                              IAML             21 56 46.6
      comp=N,277nm,0.7s
RIDG  Independent Ri     1.83  73 Pb       Pg      21 56 20.1  -0.7
      baz=256,SNR=146
RIDG                              Sb       Sg      21 56 45.3  +0.8
      baz=256
KNK   Knik Glacier       1.88 175          Pb      21 56 18.5  -1.2
KNK   Knik Glacier       1.88 175 P        Pb      21 56 19.0  -0.7
      baz=356,SNR=22
KNK                               S        Sb      21 56 43.3  +0.2
      baz=356
HARP  HAARP              1.89 116          Pb      21 56 20.1  +0.2
HARP  HAARP              1.89 116 Pb       Pg      21 56 20.8  -1.1
      baz=299,SNR=41
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HARP				Sb	Sg	21 56 46.3	0.0
	baz=299						
I23K	Minto, Yukon-K	1.90	353		Pn	21 56 17.0	-0.7
I23K				IAML		21 56 47.0	
	comp=E,194nm,1.1s						
I23K				IAML		21 56 48.1	
	comp=N,172nm,0.9s						
I23K	Minto, Yukon-K	1.90	353	P	Pb	21 56 18.9	-1.2
	baz=172,SNR=34						
I23K				S	Sg	21 56 45.4	-1.1
	baz=172						
POKR	Poker Plat Res	1.94	17		Pn	21 56 18.4	0.0
POKR	Poker Plat Res	1.94	17	P	Pb	21 56 19.7	-1.2
	baz=198,SNR=21						
POKR				S	Sb	21 56 46.1	+1.0
	baz=198						
MLY	Manley	1.96	335		Pb	21 56 19.8	-1.4
MLY				IAML		21 56 47.6	
	comp=N,205nm,0.5s						
MLY	Manley	1.96	335	P	Pb	21 56 19.7	-1.4
	baz=153,SNR=56						
MLY				S	Sg	21 56 46.8	-1.6
	baz=153						
J25K	Salcha River,	2.02	47		Pb	21 56 21.4	-0.9
J25K				IAML		21 56 50.9	
	comp=E,118nm,0.5s						
J25K				IAML		21 56 51.6	
	comp=N,129nm,0.8s						
J25K	Salcha River,	2.02	47	P	Pb	21 56 21.2	-1.1
	baz=229,SNR=58						
J25K				S	Sb	21 56 48.3	+0.8
	baz=229						
SUA	Susitna One	2.03	207		Pb	21 56 21.3	-1.2
SUA				IAML		21 56 51.2	
	comp=E,132nm,0.6s						
SUA				IAML		21 56 53.2	
	comp=N,166nm,0.6s						
SUA	Susitna One	2.03	207	P	Pb	21 56 21.1	-1.3
	baz=26,SNR=192						
SUA				Sb	Sg	21 56 49.7	-1.2
	baz=26						
DOT	Dot Lake	2.16	78		Pb	21 56 25.2	+0.6
DOT				IAML		21 56 57.4	
	comp=E,174nm,0.6s						
KLU	Klutina	2.24	142		Pb	21 56 25.4	-0.6
KLU				IAML		21 56 55.0	
	comp=E,162nm,0.5s						
KLU				IAML		21 57 00.9	
	comp=N,151nm,0.4s						
KLU	Klutina	2.24	142	P	Pb	21 56 25.3	-0.6
	baz=324,SNR=28						
KLU				S	Sb	21 56 53.4	-0.1
	baz=324						
RC01	Rabbit Creek A	2.24	192		Pb	21 56 24.8	-1.1
RC01	Rabbit Creek A	2.24	192	IAML		21 56 55.8	
	comp=N,180nm,0.4s						
RC01	Rabbit Creek A	2.24	192	P	Pb	21 56 25.0	-0.8
	baz=11,SNR=53						
FIS	Fire Island	2.24	198		Pb	21 56 26.9	+1.0
FIS				IAML		21 57 01.9	
	comp=N,170nm,0.9s						
SCRK	Sand Creek	2.26	70		Pb	21 56 25.4	-1.0
SCRK				IAML		21 57 00.4	
	comp=N,98nm,0.9s						
SCRK				IAML		21 57 00.4	
	comp=E,100nm,0.8s						
SCRK	Sand Creek	2.26	70	P	Pb	21 56 25.2	-1.2
	baz=253,SNR=50						
SCRK				S	Sb	21 56 54.4	0.0
	baz=253						
STLK	Strandline Lak	2.27	220		Pb	21 56 25.8	-0.7
STLK				IAML		21 56 57.7	
	comp=E,110nm,0.6s						
STLK				IAML		21 57 00.7	
	comp=N,125nm,0.5s						
MENT	Mentasta	2.33	96		Pb	21 56 27.3	-0.3
MENT				IAML		21 57 03.5	
	comp=N,161nm,0.4s						
I21K	Tanana	2.36	325	P	Pn	21 56 25.8	+1.7
	baz=142						
K20K	Telida	2.38	274		Pn	21 56 25.8	+1.4
K20K				IAML		21 57 01.1	
	comp=N,116nm,0.6s						
K20K				IAML		21 57 02.3	
	comp=E,111nm,0.7s						
K20K	Telida	2.38	274	P	Pn	21 56 25.7	+1.4
	baz=90						
PWL	Port Wells	2.43	175		Pb	21 56 28.7	-0.5
PWL				IAML		21 57 02.6	
	comp=E,148nm,0.6s						
PWL	Port Wells	2.43	175	P	Pb	21 56 28.3	-1.0
	baz=355,SNR=17						
M20K	Styx River	2.44	237		Pn	21 56 26.9	+1.6
M20K				IAML		21 57 03.5	
	comp=E,118nm,0.5s						
M20K	Styx River	2.44	237	P	Pn	21 56 26.7	+1.4
	baz=54						
L20K	Farewell, AK	2.46	253		Pb	21 56 28.1	-1.6
L20K	Farewell, AK	2.46	253	P	Pb	21 56 27.5	-2.2
	baz=69,SNR=26						
L20K				Sb	Sg	21 57 02.9	-1.7
	baz=69						
L26K	Log Cabin Wild	2.49	93	Pb	Pb	21 56 31.1	+0.9
	baz=278,SNR=25						
L26K				Sb	Sg	21 57 04.4	-1.1
	baz=278						
GLI	Glacier Island	2.54	161		Pb	21 56 29.5	-1.5
GLI	Glacier Island	2.54	161	P	Pb	21 56 29.5	-1.5
	baz=342						
J20K	Nowinta River	2.54	293		Pn	21 56 28.1	+1.5
J20K				IAML		21 57 06.3	
	comp=E,62nm,0.7s						
J20K	Nowinta River	2.54	293	P	Pn	21 56 28.0	+1.5
	baz=109,SNR=21						
J20K				Sb	Sg	21 57 05.6	-1.6
	baz=109						
N25K	Chitina, Valde	2.57	129		Pn	21 56 26.8	-0.3
N25K				IAML		21 57 09.0	
	comp=N,51nm,0.5s						
N25K	Chitina, Valde	2.57	129	Pb	Pb	21 56 31.1	-0.6
	baz=312,SNR=22						
DIV	Divide	2.58	145		Pn	21 56 25.9	-1.3
DIV				IAML		21 57 09.0	
	comp=E,108nm,0.5s						
DIV				IAML		21 57 09.8	
	comp=N,125nm,0.6s						
H23K	Yukon River	2.58	353		Pn	21 56 28.9	+1.7
H23K	Yukon River	2.58	353	P	Pn	21 56 28.8	+1.7
	baz=172,SNR=9.1						
H23K				Sb	Sg	21 57 07.2	-1.2
	baz=172						
SPCN	Chakachatna No	2.59	219		Pb	21 56 30.6	-1.4
H24K	Noodor Dome	2.60	8		Pn	21 56 26.9	-0.6
H24K	Noodor Dome	2.60	8	P	Pn	21 56 29.1	+1.7
	baz=189,SNR=11						
N20K	Mount Spurr	2.62	219	Pb	Pb	21 56 32.0	-0.5
	baz=36,SNR=18						
N20K				Sb	Sb	21 57 06.7	+2.1
	baz=36						
SPCR	Spurr Chakacha	2.62	219		Pb	21 56 30.3	-2.2
SPCR	Spurr Chakacha	2.62	219	Sb	Sb	21 57 06.6	+2.0
	baz=36						
J26L	Joseph Creek	2.62	60		Pn	21 56 27.6	-0.2
J26L				IAML		21 57 04.6	
	comp=N,68nm,0.5s						
J26L				IAML		21 57 05.7	
	comp=E,68nm,0.6s						
J26L	Joseph Creek	2.62	60	P	Pb	21 56 30.5	-2.1
	baz=244,SNR=24						
J26L				S	Sb	21 57 02.9	-1.8
	baz=244						
PRP	Porcupine Dome	2.66	31		Pn	21 56 30.2	+1.8
PRP				IAML		21 57 11.2	
	comp=N,58nm,0.6s						
PRP	Porcupine Dome	2.66	31	P	Pn	21 56 30.2	+1.8
	baz=213,SNR=21						
CAPN	Captain Cook N	2.75	205		Pb	21 56 34.4	-0.1
CAPN	Captain Cook N	2.75	205	Pb	Pb	21 56 34.9	+0.3
	baz=23						
FID	Port Fidalgo	2.76	156		Pb	21 56 32.8	-2.0
FID	Port Fidalgo	2.76	156	IAML		21 57 13.9	
	comp=N,114nm,0.5s						
M26K	Nabesna, AK	2.80	106		Pb	21 56 34.7	-0.9
M26K				IAML		21 57 22.2	
	comp=N,90nm,0.5s						
M26K				IAML		21 57 23.1	
	comp=E,72nm,0.5s						
M26K	Nabesna, AK	2.80	106	Pb	Pb	21 56 36.0	+0.4
	baz=290						
O22K	Cooper Landing	2.84	189		Pb	21 56 35.3	-0.8
H22K	Ishtalitna Cre	2.85	338		Pn	21 56 33.1	+2.2
H22K	Ishtalitna Cre	2.85	338	P	Pn	21 56 33.0	+2.1
	baz=156						
SLKM	Skilak Lake	2.86	194		Pb	21 56 34.7	-1.8
SLKM				IAML		21 57 16.1	
	comp=E,62nm,0.5s						
SLKM				IAML		21 57 19.6	
	comp=N,39nm,0.5s						
I20K	Naaghedeneel	2.93	304		Pn	21 56 32.4	+0.5
I20K	Naaghedeneel	2.93	304	P	Pn	21 56 33.6	+1.8
	baz=119						
M19K	Big River Lodg	2.93	244		Pb	21 56 35.9	-1.8
M19K				IAML		21 57 17.7	
	comp=N,93nm,0.3s						
M19K	Big River Lodg	2.93	244	P	Pn	21 56 33.4	+1.5
	baz=60						
H21K	Melozitna Rive	2.95	326		Pn	21 56 34.3	+2.0
H21K				IAML		21 57 18.1	
	comp=E,44nm,0.7s						
H21K				IAML		21 57 19.2	
	comp=N,43nm,0.6s						
H21K	Melozitna Rive	2.95	326	P	Pn	21 56 34.3	+2.0
	baz=142,SNR=9.1						
H21K				Sb	Sg	21 57 17.5	-2.9
	baz=142						
L19K	White Mountain	3.00	251	IAML		21 57 21.7	
	comp=N,64nm,1.0s						
L19K				IAML		21 57 22.1	
	comp=E,59nm,0.9s						
L19K	White Mountain	3.00	251	P	Pn	21 56 34.5	+1.7
	baz=66						
BMRM	Bremner River	3.04	138		Pb	21 56 36.4	-3.2
BMRM	Bremner River	3.04	138	Pb	Pb	21 56 38.4	-1.2
	baz=322						
HIN	Hinchinbrook I	3.09	158		Pb	21 56 38.9	-1.5
HIN				IAML		21 57 30.6	
	comp=N,59nm,0.5s						
EYAK	Cordova Ski Ar	3.09	151		Pb	21 56 39.2	-1.2
EYAK				IAML		21 57 25.1	
	comp=E,51nm,0.7s						
EYAK	Cordova Ski Ar	3.09	151	Pb	Pb	21 56 40.1	-0.4
	baz=334						
EYAK				Sb	Sg	21 57 21.4	-3.5
	baz=334						
K27K	Chicken	3.09	73	IAML		21 57 24.9	
	comp=N,62nm,0.7s						
K27K	Chicken	3.09	73	P	Pn	21 56 36.7	+2.5
	baz=258						
J19K	Poorman	3.13	286		Pn	21 56 36.1	+1.5
J19K				IAML		21 57 34.8	
	comp=N,38nm,0.8s						
J19K				IAML		21 57 35.6	
	comp=E,48nm,0.8s						
J19K	Poorman	3.13	286	P	Pn	21 56 36.1	+1.5
	baz=100,SNR=18						
L27K	Beaver Creek,	3.17	91		Pn	21 56 38.1	+2.9
L27K				IAML		21 57 29.9	
	comp=N,32nm,0.3s						
L27K	Beaver Creek,	3.17	91	P	Pn	21 56 38.0	+2.7
	baz=277,SNR=45						
I26K	Coal Creek Min	3.20	48		Pn	21 56 37.9	+2.3
I26K				IAML		21 57 34.3	
	comp=N,70nm,0.6s						
I26K				IAML		21 57 37.5	
	comp=E,67nm,0.9s						
I26K	Coal Creek Min	3.20	48	P	Pn	21 56 37.9	+2.3
	baz=232,SNR=13						
SEW	Seward	3.20	186	Pn	Pn	21 56 38.6	+3.1
SEW				IAML		21 57 33.6	
	comp=E,38nm,0.8s						
SEW	Seward	3.20	186	P	Pn	21 56 36.8	+1.3
	baz=5.6						
DFR	Drift River	3.26	216		Pn	21 56 38.7	+2.2
H25L	Birch Creek	3.27	22	P	Pn	21 56 38.7	+2.2
	baz=204,SNR=5.3						
MCARA	McCarthy VSAT	3.30	123		Pb	21 56 42.5	-1.4
MCARA				IAML		21 57 40.3	
	comp=N,41nm,0.4s						
MCARA				IAML		21 57 41.6	
	comp=E,61nm,0.6s						
MCARA	McCarthy VSAT	3.30	123	P	Pn	21 56 39.5	+2.6
	baz=308						
M27K	Edge Creek, AK	3.31	103		Pb	21 56 42.3	-1.9
M27K				IAML		21 57 37.5	
	comp=E,43nm,0.9s						
M27K				IAML		21 57 38.5	
	comp=N,59nm,0.9s						
M27K	Edge Creek, AK	3.31	103	P	Pn	21 56 40.4	+3.1
	baz=289						
P23K	Montague Islan	3.36	168		Pb	21 56 43.2	-1.7
P23K				IAML		21 57 36.3	
	comp=N,56nm,1.1s						
P23K				IAML		21 57 45.1	
	comp=E,48nm,1.0s						
P23K	Montague Islan	3.36	168	P	Pn	21 56 41.1	+3.3
	baz=349						
RDWB	Redoubt West	3.39	216		Pn	21 56 40.8	+2.4
RED	Redoubt Volcan	3.43	215		Pn	21 56 39.3	+0.4
RED				IAML		21 57 33.9	
	comp=N,25nm,0.9s						
RED				IAML		21 57 38.6	
	comp=E,31nm,0.8s						
H20K	Anotleneega Mo	3.45	313	P	Pn	21 56 41.2	+2.1
	baz=127,SNR=14						
G24K	Hadweenzic Riv	3.49	9		Pn	21 56 41.5	+1.9
G24K				IAML		21 57 39.2	
	comp=E,24nm,0.8s						
G24K	Hadweenzic Riv	3.49	9	P	Pn	21 56 41.3	+1.7
	baz=190,SNR=7.5						
G23K	Bananza Creek	3.49	352		Pn	21 56 41.2	+1.7
G23K	Bananza Creek	3.49	352	P	Pn	21 56 41.3	+1.7
	baz=171						
RAGM	Ragged Mountai	3.50	144		Pb	21 56 47.0	-0.4
J18K	Innoko River	3.57	277		Pn	21 56 42.8	+2.1
J18K	Innoko River	3.57	277	P	Pn	21 56 42.1	+1.4
	baz=90						
PTPK	Patty Peak	3.63	122		Pn	21 56 44.6	+2.9
FYU	Fort Yukon	3.64	23		Pn	21 56 43.9	+2.3
FYU				IAML		21 57 46.7	
	comp=N,25nm,0.4s						
FYU				IAML		21 57 54.4	
	comp=E,30nm,1.1s						
N19K	Bonanza Creek	3.64	230		Pn	21 56 43.0	+1.2
N19K				IAML		21 57 42.7	
	comp=N,46nm,0.6s						
N19K				IAML		21 57 47.0	
	comp=E,48nm,0.9s						
N19K	Bonanza Creek	3.64	230	P	Pn	21 56 43.4	+1.6
	baz=45						
HMT	Hamilton	3.65	142		Pb	21 56 49.8	-0.2
BRLK	Bradley Lake	3.66	197		Pn	21 56 41.8	-0.2
BRSE	Bradley Lake S	3.67	196	P	Pn	21 56 44.6	+2.6
	baz=14						
CRQM	Cirque	3.67	131		Pn	21 56 41.7	-0.6
CRQM				IAML		21 57 20.8	
	comp=E,42nm,0.4s						
O20K	Slope Mountain	3.69	211		Pn	21 56 44.7	+2.4
O20K	Slope Mountain	3.69	211	P	Pn	21 56 45.3	+3.0
	baz=28						
G25K	Bearman Lake	3.69	17		Pn	21 56 43.6	+1.3
G25K	Bearman Lake	3.69	17	P	Pn	21 56 44.6	+2.3
	baz=199						
M18K	Stony River	3.73	244	P	Pn	21 56 44.5	+1.7
	baz=59						
BERG	Berg Lake	3.77	138		Pn	21 56 42.4	-1.1
L18K	Granite Mounta	3.78	257		Pn	21 56 47.3	+3.7
L18K				IAML		21 57 47.2	
	comp=N,28nm,0.8s						
L18K				IAML		21 57 54.8	
	comp=E,22nm,1.1s						
L18K	Granite Mounta	3.78	257	P	Pn	21 56 45.5	+1.9
	baz=71						
TGL	Tana Glacier	3.78	129	Pn	Pb	21 56 48.9	-3.4
TGL				IAML		21 57 51.1	
	comp=E,44nm,1.0s						
G21K	Allakaket	3.82	330		Pn	21 56 46.6	+2.5
G21K				IAML		21 57 44.8	
	comp=E,28nm,0.6s						
G21K				IAML		21 57 50.3	
	comp=N,21nm,1.0s						
G21K	Allakaket	3.82	330	P	Pn	21 56 46.4	+2.3
	baz=146						
KHIT	Khitrov Hills	3.87	135		Pn	21 56 47.5	+2.6
HOM	Homer	3.88	202	Pn	Pn	21 56 49.1	+4.2
I27K	Kandik River	3.89	50		Pn	21 56 46.6	+1.4
I27K	Kandik River	3.89	50	P	Pn	21 56 47.6	+2.4
	baz=236						
ILSW	Iliamna Southw	3.90	214		Pb	21 56 50.9	-3.3
CNPM	China Poot	3.94	198		Pn	21 56 49.4	+3.6
CNPM	China Poot	3.94	198	IAML		21 57 49.2	
	comp=N,18nm,0.8s						
CNPM				IAML		21 57 55.5	
	comp=E,18nm,0.5s						
WAX	Waxell Ridge	4.00	132		Pn	21 56 48.6	+1.9
WAX	Waxell Ridge	4.00	132		Pb	21 56 54.2	-1.6
WAX				IAML		21 57 50.9	
	comp=E,46nm,0.5s						
WAX				IAML		21 57 59.8	
	comp=N,68nm,0.6s						
SUCK	Suckling Hills	4.01	141	Pn	Pb	21 56 53.5	-2.6
SUCK				IAML		21 57 51.5	
	comp=E,38nm,0.8s						
COLD	Coldfoot	4.01	352		Pn	21 56 49.2	+2.4
COLD	Coldfoot	4.01	352	P	Pn	21 56 49.0	+2.3
	baz=171						
H19K	Roundabout Mou	4.01	308		Pn	21 56 48.7	+2.0
H19K				IAML		21 57 54.7	
	comp=E,24nm,0.7s						
H19K				IAML		21 58 02.3	
	comp=N,18nm,0.9s						
H19K	Roundabout Mou	4.01	308	P	Pn	21 56 49.0	+2.2
	baz=121						
O19K	Port Alsworth	4.05	223		Pb	21 56 55.8	-1.0
YUK3	Moose Creek	4.15	108	P	Pb	21 56 54.6	-4.0
	baz=295						
GRNC	Granite Creek	4.19	124	IAML		21 57 58.2	
	comp=N,18nm,0.6s						
CTG	Chitna Glacier	4.20	120	P	Pn	21 56 54.0	+4.6
	baz=307						
CTGM	Chitina Glacie	4.20	120		Pn	21 56 51.2	+1.7
P19K	Oil Pt	4.21	212		Pn	21 56 51.3	+1.8
P19K	Oil Pt	4.21	212	IAML		21 58 09.1	
	comp=E,32nm,0.6s						
P19K				IAML		21 58 11.7	
	comp=N,21nm,0.8s						
P19K	Oil Pt	4.21	212	P	Pn	21 56 53.6	+4.1
	baz=29						
N18K	Kilae Creek	4.24	235		Pn	21 56 51.1	+1.3
N18K	Kilae Creek	4.24	235	IAML		21 58 00.0	
	comp=E,23nm,0.7s						
N18K				IAML		21 58 02.9	
	comp=N,33nm,0.7s						
N18K	Kilae Creek	4.24	235	P	Pn	21 56 50.9	+1.0
	baz=49						
G26K	Porcupine Rive	4.25	28	IAML		21 57 59.4	
	comp=N,15nm,1.1s						
G26K				IAML		21 58 03.2	
	comp=E,24nm,1.0s						
G26K	Porcupine Rive	4.25	28	P	Pn	21 56 51.3	+1.3
	baz=212						
DAWY	Dawson	4.27	75		Pn	21 56 52.9	+2.6
DAWY	Dawson	4.27	75	IAML		21 58 04.5	
	comp=E,30nm,1.1s						
DAWY				IAML		21 58 05.4	
	comp=N,28nm,0.5s						
DAWY	Dawson	4.27	75	P	Pn	21 56 52.7	+2.4
	baz=263						
F24K	Squaw Lake	4.28	5	P	Pn	21 56 52.5	+2.0
	baz=185						
H27K	Steamboat Moun	4.30	43	IAML		21 58 02.1	
	comp=E,31nm,1.1s						
H27K				IAML		21 58 02.6	
	comp=N,18nm,1.1s						
H27K	Steamboat Moun	4.30	43	P	Pn	21 56 52.7	+1.9
	baz=229						
K17K	Iditarod	4.37	267	IAML		21 58 16.4	
	comp=E,23nm,0.8s						
K17K				IAML		21 58 18.9	
	comp=N,20nm,1.1s						
K17K	Iditarod	4.37	267	P	Pn	21 56 53.2	+1.6
	baz=79						
F21K	Alatna River	4.42	336		Pn	21 56 54.7	+2.2
F21K	Alatna River	4.42	336	IAML		21 57 48.3	
	comp=N,13nm,0.5s						
F21K	Alatna River	4.42	336	P	Pn	21 56 54.7	+2.2
	baz=151,SNR=8.4						
I28M	Miner Creek	4.43	57		Pn	21 56 55.1	+2.5
I28M	Miner Creek	4.43	57	IAML		21 58 13.2	
	comp=N,27nm,0.9s						
I28M				IAML		21 58 18.6	
	comp=E,22nm,0.6s						
I28M	Miner Creek	4.43	57	P	Pn	21 56 55.0	+2.5
	baz=244,SNR=9.2						
YAH	Yahtse	4.44	128	IAML		21 58 11.6	
	comp=N,15nm,1.1s						
YAH				IAML		21 58 12.7	
	comp=E,13nm,1.1s						
M17K	Holitna River	4.44	249	P	Pn	21 56 53.8	+1.1
	baz=62						
L17K	Donlin	4.52	260	P	Pn	21 56 55.2	+1.4
	baz=71						
F25K	Christian Rive	4.53	16	P	Pn	21 56 56.1	+2.2
	baz=198						
G19K	Purcell Mounta	4.57	313	IAML		21 58 36.5	
	comp=N,22nm,0.2s						
G19K	Purcell Mounta	4.57	313	P	Pn	21 56 56.2	+1.8
	baz=125						
H18K	Honhosa River	4.58	299	P	Pn	21 56 56.7	+2.1
	baz=110,SNR=6.2						
O18K	Koktuh Hills	4.60	225	IAML		21 58 15.3	
	comp=N,21nm,1.2s						
O18K				IAML		21 58 20.5	
	comp=E,15nm,1.1s						
O18K	Koktuh Hills	4.60	225	P	Pn	21 56 57.5	+2.6
	baz=39						
J17K	VABM Dome	4.63	276	IAML		21 58 25.1	
	comp=E,10nm,1.0s						
J17K				IAML		21 58 27.9	
	comp=N,12nm,1.1s						
J17K	VABM Dome	4.63	276	P	Pn	21 56 56.4	+1.2
	baz=87						
G27K	Doyon Strip	4.66	37	IAML		21 58 19.3	
	comp=E,9.6nm,1.1s						
G27K	Doyon Strip	4.66	37	P	Pn	21 56 57.4	+1.6
	baz=223						
YUK8	Steele Glacier	4.67	111	P	Pn	21 57 00.7	+4.7
	baz=299						
O28M	Mount Upton	4.77	118		Pn	21 56 59.0	+1.6
O28M	Mount Upton	4.77	118	P	Pn	21 57 03.1	+5.6
	baz=305						
F20K	Avaraart Lake	4.78	325	P	Pn	21 56 59.5	+2.2
	baz=139						
M29M	Somme Creek	4.81	95		Pn	21 56 59.3	+1.5
M29M	Somme Creek	4.81	95	IAML		21 58 25.1	
	comp=N,16nm,1.1s						
M29M				IAML		21 58 26.4	
	comp=E,12nm,0.5s						
M29M	Somme Creek	4.81	95	P	Pn	21 56 59.9	+2.1
	baz=284						
E24K	Your Creek	4.82	1	P	Pn	21 56 59.9	+2.0
	baz=182						
N17K	Nushagak Hills	4.83	239	P	Pn	21 56 59.4	+1.4
	baz=52						
L29M	L29M	4.84	87		Pn	21 57 00.6	+2.4
L29M	L29M	4.84	87	P	Pn	21 57 00.3	+2.2
	baz=276						
F26K	Sheenjek River	4.84	22	P	Pn	21 57 00.2	+2.0
	baz=206,SNR=11						
Q19K	Cape Douglas,	4.95	210		Pn	21 57 01.8	+2.1
Q19K	Cape Douglas,	4.95	210	P	Pn	21 57 02.2	+2.5
	baz=26						
P18K	Big Mountain,	4.97	221	P	Pn	21 57 02.7	+2.7
	baz=36						
G18K	Tagagawik	4.99	306	P	Pn	21 57 02.7	+2.5
	baz=117,SNR=9.3						
SYI	Shuyak Island	5.00	202		Pn	21 57 03.4	+3.1
SYI	Shuyak Island	5.00	202	IAML		21 58 11.2	
	comp=N,9.0nm,1.1s						
Q20K	Shuyak Island	5.00	202	P	Pn	21 57 03.7	+3.4
	baz=19						
I29M	Ogilvie Camp,	5.02	61	IAML		21 58 29.9	
	comp=N,16nm,0.9s						
I29M				IAML		21 58 34.8	
	comp=E,16nm,0.7s						
E22K	Anaktuvuk Pass	5.04	347		Pn	21 57 02.4	+1.5
E22K	Anaktuvuk Pass	5.04	347	P	Pn	21 57 03.5	+2.7
	baz=164,SNR=5.7						
E25K	Arctic Village	5.05	14	P	Pn	21 57 02.9	+2.0
	baz=197						
K29M	Barlow Dome	5.08	79		Pn	21 57 03.2	+1.7

K29M	Barlow Dome	5.08	79	IAML		21 58 30.9	
	comp=E,16nm,1.1s						
K29M	Barlow Dome	5.08	79	P	Pn	21 57 03.8	+2.3
	baz=268						
H17K	Granite Mounta	5.15	294		Pn	21 57 04.2	+1.9
H17K	Granite Mounta	5.15	294	IAML		21 58 07.0	
	comp=N,7.2nm,0.7s						
H17K				IAML		21 58 07.0	
	comp=E,18nm,0.7s						
H17K	Granite Mounta	5.15	294	P	Pn	21 57 04.5	+2.2
	baz=104,SNR=7.6						
L16K	Owhat River	5.19	257	P	Pn	21 57 04.5	+1.6
	baz=68						
F19K	Shaleruckik Mo	5.21	317	IAML		21 58 32.8	
	comp=N,6.6nm,1.0s						
F19K	Shaleruckik Mo	5.21	317	P	Pn	21 57 05.4	+2.2
	baz=129						
J16K	Anvik River	5.33	275	P	Pn	21 57 06.1	+1.3
	baz=85						
I17K	Unalakleet	5.35	282	P	Pn	21 57 07.1	+2.1
	baz=91						
H29M	Whitestone	5.35	52	IAML		21 58 42.1	
	comp=N,13nm,0.9s						
H29M	Whitestone	5.35	52	P	Pn	21 57 07.7	+2.5
	baz=241						
TOLK	Toolik Lake Re	5.40	357	IAML		21 58 42.1	
	comp=E,6.6nm,1.1s						
TOLK				IAML		21 58 51.2	
	comp=N,6.9nm,1.0s						
TOLK	Toolik Lake Re	5.40	357	P	Pn	21 57 09.0	+3.2
	baz=176						
YUK6	Outpost Mounta	5.43	111		Pn	21 57 07.6	+1.1
E19K	Redstone River	5.48	324	P	Pn	21 57 09.4	+2.5
	baz=136						
P17K	Kvichak River	5.51	225	P	Pn	21 57 09.4	+2.1
	baz=39						
KAHC	Katmai Hardscr	5.54	216		Pn	21 57 10.7	+2.9
Q18K	Katmai Hardscr	5.54	216	P	Pn	21 57 10.6	+2.8
	baz=31						
G17K	Kiwalik Mounta	5.60	299	P	Pn	21 57 10.9	+2.3
	baz=108						
J30M	Hart River	5.65	71		Pn	21 57 11.6	+2.1
J30M	Hart River	5.65	71	P	Pn	21 57 12.7	+3.3
	baz=262						
F18K	Selawik	5.69	311	P	Pn	21 57 12.6	+2.9
	baz=121						
F28M	Old Crow	5.73	37	P	Pn	21 57 12.0	+1.7
	baz=224						
N30M	Aishikik Lake	5.75	103		Pn	21 57 12.3	+1.6
N30M	Aishikik Lake	5.75	103	P	Pn	21 57 13.7	+3.1
	baz=294						
I30M	Mount Dempster	5.76	65	P	Pn	21 57 13.5	+2.7
	baz=256						
KDAK	Kodiak Island	5.82	200	P	Pn	21 57 13.4	+1.9
	baz=17						
D22K	Ayikyak River	5.85	346	P	Pn	21 57 14.8	+2.9
	baz=162						
E20K	Nigu River	5.85	332		Pn	21 57 14.7	+2.7
E20K	Nigu River	5.85	332	P	Pn	21 57 15.6	+3.6
	baz=145						
K15K	Wolf Creek Mou	5.92	266	P	Pn	21 57 14.6	+1.6
	baz=75						
EPYK	Eagle Plains	6.02	54	P	Pn	21 57 16.8	+2.5
	baz=244						
L15K	Ungalak Mounta	6.09	260	P	Pn	21 57 17.8	+2.5
	baz=69						
CNTC	Contact Creek	6.11	218		Pn	21 57 17.7	+2.1
Q17K	Contact Creek	6.11	218	P	Pn	21 57 18.8	+3.2
	baz=32						
D25K	Kavik River	6.15	8	P	Pn	21 57 19.0	+2.8
	baz=190						
G16K	Koyuk River	6.26	296		Pn	21 57 20.0	+2.4
G16K	Koyuk River	6.26	296	P	Pn	21 57 19.2	+1.7
	baz=104						
D20K	Etivluk River	6.32	333	P	Pn	21 57 21.4	+3.0
	baz=146						
G30M	tAoh Zraii Nji	6.47	49	P	Pn	21 57 23.2	+2.6
	baz=241						
D19K	Kuna River	6.48	328	P	Pn	21 57 23.1	+2.6
	baz=140						
C23K	Itkillik River	6.63	355	P	Pn	21 57 26.0	+3.3
	baz=173						
E17K	Hotham Inlet	6.68	311	P	Pn	21 57 25.6	+2.3
	baz=119						
H31M	Peel River	6.73	61	P	Pn	21 57 26.5	+2.4
	baz=254						
J14K	Nanvaranak Lak	6.74	272	P	Pn	21 57 26.2	+2.1
	baz=79						
E29M	Blow River	6.80	36	P	Pn	21 57 27.1	+2.1
	baz=226						
G31M	Satah River	7.14	53	P	Pn	21 57 31.4	+1.8
	baz=246						
F15K	North Star Dit	7.26	297	P	Pn	21 57 33.4	+2.1
	baz=102						
F14K	Arctic Creek	7.91	294	P	Pn	21 57 42.5	+2.4
	baz=98						

IDC ***07*** *22:02:08.8±10.0, 0°.06N×123°.43E, h161^{km}±102^{km}, mb3.1/4, mbtmp3.6/6, Error ellipse: s-maj=93.8km s-min=20.7km az=55.0*

ISC 07 22:02:08.3±1.4**, 0°.1N**±0°.1×**123°.5E**±0°.2**, h157^{km}, n6, σ0^{s}.94**/7**, mb3.5**/4**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	6.26	216	P	Pn	22 03 37.9	-0.7
	1.3nm,0.3s,baz=30,slow=20,SNR=1.1						
KAPI				S	Sn	22 04 50.1	+0.7
	3.7nm,0.5s,baz=38,slow=18,SNR=1.8						
FITZ	Fitzroy Crossi	18.19	173	P	P	22 06 09.1	-0.1
	4.4nm,0.9s,baz=347,slow=12,SNR=1.4						
WRA	Warramunga Arr	22.58	152	P	P	22 06 54.5	-1.1
	1.0nm,0.5s,baz=334,slow=9.7,SNR=21						
	1.0nm,0.5s						
ASAR	Alice Springs	25.69	157	P	P	22 07 25.1	+1.0
	0.2nm,0.5s,baz=339,slow=7.9,SNR=4.9						
	0.2nm,0.5s						
STKA	Stephens Creek	36.12	153	P	P	22 08 55.7	+0.4
	1.0nm,0.4s,baz=327,slow=9.3,SNR=3.5						
	1.0nm,0.4s						
MKAR	Makanchi Array	58.78	328	P	P	22 11 50.1	+0.1
	0.2nm,0.4s,baz=127,slow=8.8,SNR=5.0						
	0.2nm,0.4s						

DJA 07 22:51:01.1±0.4**, 9°S**±6°×**11°6E**±°**, h21^{km}**±4^{km}**, M4.1**/12**, mb4.4**/2**, MLv3.9**/12**, Bali region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DNP	Denpasar	0.57	252	P	Pb	22 51 13.2	+0.7
SRBI	Singaraja	0.68	307	P	Pb	22 51 14.7	+0.4
JAGI	Jajag, Banyuwa	1.59	271	P	Pn	22 51 26.9	-1.2
PLAI	Plampang	2.02	99	P	Pn	22 51 34.7	+0.7
KMMI	Kalianget	2.29	309	P	Pn	22 51 38.9	+1.3
GMJI	Gumukmas	2.30	275	P	Pn	22 51 37.3	-0.5
GRJI	Gresik	3.61	296	P	Pn	22 51 55.2	-0.7
WBSI	Waikabubak, Su	3.76	108	P	Pn	22 51 57.6	-0.4
PCJI	Pacitan	4.54	273	P	Pn	22 52 08.4	-0.3
WOJI	Wonogiri, Jawa	4.83	277	P	Pn	22 52 12.9	+0.2
BSSI	Bau Bau, Buton	5.24	64	P	Pn	22 52 17.9	-0.4
	73nm,1.2s						

SNET ***07*** *23:15:53.9±1.3, 12°.95N×88°.96W, h51^{km}, ML3.8*

CATAC ***07*** *23:15:53.9±0.8, 13°N±5°×8°9W±°, h28^{km}±6^{km}, M3.7/23, MLv3.7/23, Error ellipse: s-maj=11.3km s-min=4.5km az=24.6, confirmed*

GCG ***07*** *23:15:55.6±0.6, 13°.07N×88°.94W, h45^{km}±11^{km}, MD4.0, ML3.7*

ISC 07 23:15:54.3±1.5**, 12°.92N**±0°.08×**88°.96W**±0°.04**, h43^{km}**±26^{km}**, n69, σ0^{s}.64**/88**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALJI	Alcalda de J	0.56	44	*e*P	Pn	23 16 06.0	0.0
ALJI				*e*S	Sn	23 16 15.3	+1.1
ALJI	Alcalda de J	0.56	44	P	Pn	23 16 06.0	0.0
TECO	Alcaldia de Te	0.64	16	*e*P	Pn	23 16 06.8	-0.3
TECO				*e*S	Sn	23 16 16.1	0.0
TECO	Alcaldia de Te	0.64	16	P	Pn	23 16 06.8	-0.3
LALI	Alcalda de L	0.66	328	*e*P	Pn	23 16 07.3	0.0
LALI				*e*S	Sn	23 16 16.2	-0.5
LALI	Alcalda de L	0.66	328	*e*P	Pn	23 16 07.3	0.0
LALI				*e*S	Sn	23 16 16.2	-0.5
SNVI	San Vicente	0.70	10	*e*P	Pn	23 16 07.8	-0.2
COEG	Centro de Oper	0.70	7	*e*P	Pn	23 16 07.6	-0.3
COEG				*e*S	Sn	23 16 17.4	-0.3
COEG	Centro de Oper	0.70	7	S	Sn	23 16 18.0	+0.3
COEG	Centro de Oper	0.70	7	P	Pn	23 16 07.8	-0.2
LFRS	El Faro	0.70	352	*e*P	Pn	23 16 07.6	-0.4
PANCS	Alcalda de	0.72	343	P	Sn	23 16 17.4	-0.7
TECA	Tecapa	0.73	38	*e*P	Pn	23 16 08.4	0.0
TECA				*i* P	Pn	23 16 08.4	0.0
TECA				*e*S	Sn	23 16 19.1	+0.7
UESV	Universidad de	0.73	14	*e*P	Pn	23 16 08.2	-0.2
UESV				*e*S	Sn	23 16 18.8	+0.4
UESV	Universidad de	0.73	14	P	Pn	23 16 08.1	-0.2
LOMA	Loma Larga	0.75	344	*e*P	Pn	23 16 08.4	-0.3
LOMA				*e*S	Sn	23 16 18.9	0.0
LOMA	Loma Larga	0.75	344	P	Pn	23 16 08.5	-0.1
PAVA	Las Pavas	0.79	2	*e*P	Pn	23 16 09.1	-0.1
PAVA				*e*S	Sn	23 16 20.4	+0.5
PAVA	Las Pavas	0.79	2	P	Pn	23 16 09.0	-0.1
PQSS	Presa 15 de Se	0.80	29	*e*P	Pn	23 16 09.4	+0.1
PQSS				*e*S	Sn	23 16 20.9	+0.9
PQSS	Presa 15 de Se	0.80	29	P	Pn	23 16 09.6	+0.4
ITCA	Escuela Especi	0.81	338	P	Sn	23 16 19.6	-0.8
UTEC	Universidad Te	0.81	343	P	Sn	23 16 21.0	+0.7
SCLA	Alcaldia de Sa	0.81	16	*e*P	Pn	23 16 09.6	+0.2
SCLA				*e*S	Sn	23 16 21.3	+1.0
SCLA	Alcaldia de Sa	0.81	16	P	Pn	23 16 09.4	0.0
UDBS	Universidad Do	0.81	347	P	Pn	23 16 15.3	+5.8
IGN	Direccin Gen	0.81	346	P	Sn	23 16 20.4	0.0
SEMO	Seminario San	0.82	342	P	Sn	23 16 19.8	-0.7
PACA	Pacayal	0.83	49	*e*P	Pn	23 16 09.7	0.0
PACA				*e*S	Sn	23 16 21.3	+0.5
PACA	Pacayal	0.83	49	P	Pn	23 16 09.9	+0.2
RANC	El Ranchito	0.83	52	P	Pn	23 16 05.8	-4.0
UEES	Universidad Ev	0.83	341	P	Sn	23 16 20.5	-0.5
LFU	La Fuente	0.83	350	*e*P	Pn	23 16 09.7	-0.1
PMON	Piamonte	0.86	337	*e*P	Pn	23 16 09.8	-0.2
PMON				*e*S	Sn	23 16 21.9	+0.4
PMON	Piamonte	0.86	337	P	Pn	23 16 09.9	-0.2
BOQS	Boqueron	0.86	339	*e*P	Pn	23 16 10.2	-0.1
JAYA	Jayaque - finc	0.87	327	*e*P	Pn	23 16 09.9	-0.4
JAYA				*e*S	Sn	23 16 21.7	-0.2
JAYA	Jayaque - finc	0.87	327	*e*P	Pn	23 16 09.8	-0.4
JAYA				*i* S	Sn	23 16 21.1	-0.8
JAYA	Jayaque - finc	0.87	327	P	Pn	23 16 09.9	-0.4
BLLM	Bellamira	0.88	54	*e*P	Pn	23 16 10.1	-0.2
CEVE	Cerro Verde	1.11	325	*e*P	Pn	23 16 14.3	+0.6
CEVE				*e*S	Sn	23 16 28.6	+0.8
CEVE	Cerro Verde	1.11	325	P	Pn	23 16 14.3	+0.6
LCND	La Caada	1.11	70	*e*P	Pn	23 16 13.6	+0.1
LCND	La Caada	1.11	70	P	Pn	23 16 13.4	-0.1
SBLS	San Blas	1.11	325	*e*P	Pn	23 16 13.8	+0.1
SBLS				*e*S	Sn	23 16 28.9	+0.8
CAHU	Cacacuatique	1.12	41	*e*P	Pn	23 16 13.7	0.0
SNJE	San Jose	1.13	327	*e*P	Pn	23 16 13.9	0.0
SNJE				*e*S	Sn	23 16 29.0	+0.6
CNCH	Conchagua	1.16	72	*e*P	Pn	23 16 13.8	-0.4
CNCH				*e*S	Sn	23 16 27.3	-1.6
CNCH	Conchagua	1.16	72	P	Pn	23 16 13.9	-0.3
LLGN	La Laguna	1.23	1	P	Pn	23 16 15.1	-0.2
NUBE	Las Nubes	1.26	321	*e*P	Pn	23 16 15.6	0.0
NUBE				*e*S	Sn	23 16 31.5	0.0
NUBE	Las Nubes	1.26	321	*e*P	Pn	23 16 15.5	0.0
NUBE				*e*S	Sn	23 16 31.3	-0.1
NUBE	Las Nubes	1.26	321	P	Pn	23 16 15.6	0.0
CSGN	Cosiguina Volc	1.37	88	P	Pn	23 16 16.9	-0.1
FAME	Alcaldia de Sa	1.37	312	P	Pn	23 16 17.1	0.0
POTN	Potosi Cosigui	1.42	87	P	Pn	23 16 18.0	+0.3
MTO3	Montecristo	1.52	345	*i* P	Pn	23 16 19.0	-0.2
MTO3	Montecristo	1.52	345	P	Pn	23 16 19.1	-0.2
MARCA	Marcala la Paz	1.53	36	*e*P	Pn	23 16 19.1	-0.2
TGUH	Tegucigalpa,Un	2.00	55	P	Pn	23 16 25.6	-0.1
FG16	Alotenango, Sa	2.02	312	*i* P	Pn	23 16 32.1	+6.0
FG16				*i* S	Sn	23 17 00.9	+11
FG16				IAML		23 17 13.5	
	comp=N,983nm,0.3s						
FG8	Yepocapa, Chim	2.04	311	*i* P	Pn	23 16 33.0	+6.6
POLN	Al Sur del Vol	2.12	97	P	Pn	23 16 25.8	-1.5
CNGA	Al SSO del Vol	2.25	101	P	Pn	23 16 29.7	+0.6
CNGN	Cerro Negro	2.25	100	P	Pn	23 16 29.6	+0.5
MOMN	Momotombo	2.42	102	P	Pn	23 16 31.9	+0.4
COPN	Copaltepe	2.43	107	P	Pn	23 16 32.1	+0.5
LIMN	Finca el Limon	2.54	87	P	Pn	23 16 32.9	-0.3
RCPN	Sur Rio San Ju	2.86	78	P	Pn	23 16 37.7	+0.1

IDC 07 23:27:44.6±2.0**, 1°.67N**×**127°.24E, h0^{km}, mb3.5**/4**, mbtmp3.5**/4**, Error ellipse: s-maj=184.1km s-min=23.0km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.58	162	P	P	23 32 46.7	-0.2
	0.5nm,0.3s,baz=342,slow=10,SNR=5.5						
	0.5nm,0.3s						
ASAR	Alice Springs	26.01	166	P	P	23 33 19.4	-0.1
	0.8nm,0.6s,baz=339,slow=7.2,SNR=20						
	0.8nm,0.6s						
MKAR	Makanchi Array	59.53	326	P	P	23 37 50.1	+0.2
	0.2nm,0.4s,baz=116,slow=8.8,SNR=2.5						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	63.74	328	P	P	23 38 18.2	0.0
	0.3nm,0.5s,baz=133,slow=7.5,SNR=1.9						
	0.3nm,0.5s						

IDC ***07*** *23:36:06.2±0.6, 47°.76S×102°.96E, h0^{km}, mb4.3/13, mbtmp4.3/13, MS4.1/39, Error ellipse: s-maj=25.6km s-min=14.8km az=117.0*

BJI ***07*** *23:36:08.4, 47°.50S×103°.25E, h9^{km}, mB5.1/7, mb4.8/24, Ms4.8/13, Ms7 4.5/13*

NEIC ***07*** *23:36:08.8±3.0, 47°.8S±0°.1×102°.5E±0°.2, h10^{km}±1^{km}, mb5.0/21, Error ellipse: s-maj=20.3km s-min=17.6km az=268.0*

GCMT ***07*** *23:36:09.8±0.2, 47°.70S±0°.01×102°.85E±0°.02, h13^{km}±1^{km}, MW4.9/108, Moment Tensor Solution. s28,c35; s108,c156; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.53±.11; $M_{\theta\theta}$3.10±.13; $M_{\phi\phi}$-2.57±.11; $M_{r\theta}$-0.63±.29; $M_{\theta\phi}$1.35±.10; $M_{\phi r}$0.31±.25; Best double couple: $M_0$3.21800×10^{16} NP1:ϕ_s212.00000°, δ77.00000°, λ-178.00000°. NP2:ϕ_s122.00000°, δ88.00000°, λ-13.00000°. Principal axes: T 3.4790, Plg8.0000°, Azm168.0000°; N -0.5160, Plg77.0000°, Azm294.0000°; P -2.9580, Plg11.0000°, Azm76.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 23:36:08.2±0.3**, 47°.87S**±0°.07×**102°.78E**±0°.09**, h10^{km}, n206, σ1^{s}.00**/162**, mb4.9**/35**, MS4.2**/43**, 7C-2D, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	15.48	37	T	T	23 55 24.7	
	baz=209,slow=74,SNR=524						
H01W1	Cape Leeuwin H	15.50	37	T	T	23 55 25.7	
	baz=209,slow=74,SNR=469						
H01W3	Cape Leeuwin H	15.50	37	T	T	23 55 25.9	
	baz=209,slow=74,SNR=406						
NWAO	Narrogin (SRO)	18.50	41		Pn	23 40 25.2	+0.7
NWAO	Narrogin (SRO)	18.50	41	LR	LR	23 45 26.9	
	comp=Z,222nm,21.1s,baz=167,slow=31						
CASY	Casey	18.91	170		Pn	23 40 30.1	+1.0
MORW	Morawa	21.39	33	P	P	23 40 56.4	+0.4
MORW				IAmb	IAmb	23 41 06.0	
	comp=Z,135nm,1.6s						
FORT	Forrest	25.78	58	P	P	23 41 40.3	+1.1
FORT				IAmb	IAmb	23 42 02.6	
	comp=Z,65nm,1.3s						
MAW	Mawson	28.26	211	P	P	23 42 02.0	+0.9
	comp=Z,8.0nm,1.2s,baz=59,slow=8.9,SNR=3.7						
MAW				LR	LR	23 50 10.3	
	comp=Z,297nm,21.1s,baz=53,slow=30						
	comp=Z,8.0nm,1.2s						
MBWA	Marble Bar	29.95	33	P	P	23 42 15.1	-1.3
MBWA				IAmb	IAmb	23 42 21.7	
	comp=Z,25nm,1.2s						
STKA	Stephens Creek	33.40	76	P	P	23 42 44.8	-1.9
	comp=Z,3.2nm,0.9s,baz=239,slow=4.6,SNR=3.4						
STKA				LR	LR	23 53 41.3	
	comp=Z,616nm,20.9s,baz=214,slow=32						
	comp=Z,3.2nm,0.9s						
ASAR	Alice Springs	34.55	57	P	P	23 42 54.8	-2.1
	comp=Z,2.8nm,1.0s,baz=219,slow=7.9,SNR=8.4						
ASAR				PcP	PcP	23 45 30.1	-1.5
	comp=Z,1.8nm,0.9s,baz=196,slow=2.0,SNR=8.6						
ASAR				LR	LR	23 54 57.4	
	comp=Z,403nm,20.4s,baz=238,slow=33						
	comp=Z,2.8nm,1.0s						
FITZ	Fitzroy Crossi	35.08	40	P	P	23 43 01.1	-0.3
	comp=Z,3.1nm,1.0s,baz=152,slow=11,SNR=1.7						
FITZ				LR	LR	23 55 57.9	
	comp=Z,137nm,21.1s,baz=210,slow=34						
	comp=Z,3.1nm,1.0s						
SYO	Syowa Base	36.95	212	⇓*e*P	P	23 43 17.2	+0.3
SYO	Syowa Base	36.95	212	⇑*e*pP	pP	23 43 21.4	+2.4
VNDA	Vanda	37.16	162	P	P	23 43 19.3	+0.6
	comp=Z,6.9nm,1.0s,baz=292,slow=9.1,SNR=32						
VNDA				LR	LR	23 57 22.3	
	comp=Z,971nm,19.7s,baz=290,slow=34						
	comp=Z,6.9nm,1.0s						
WRA	Warramunga Arr	37.77	53	P	P	23 43 22.1	-2.4
	comp=Z,3.4nm,0.9s,baz=215,slow=8.1,SNR=9.3						
WRA				PcP	PcP	23 45 38.3	-2.9
	comp=Z,0.7nm,0.7s,baz=226,slow=2.7,SNR=4.6						
WRA				LR	LR	23 57 12.7	
	comp=Z,580nm,19.8s,baz=12,slow=34						
	comp=Z,3.4nm,0.9s						
SBA	Scott Base	38.26	162		P	23 43 29.2	+1.3
LEM	Lembang	41.10	7	LR	LR	23 56 56.6	
	comp=Z,339nm,20.9s,baz=166,slow=30						
QSPA	South Pole Qui	42.27	180		P	23 44 01.2	-0.3
QSPA	South Pole Qui	42.27	180	P	P	23 44 02.0	+0.5
	comp=Z,7.1nm,0.8s,baz=315,slow=2.7,SNR=23						
QSPA				LR	LR	00 00 31.7	
	comp=Z,460nm,19.3s,baz=303,slow=35						
	comp=Z,7.1nm,0.8s						
DCZ	Deep Cove	43.09	112	P	P	23 44 08.7	+0.5
RER	Riviere de l’E	46.08	289	P	P	23 44 29.6	-2.9
H08S2	Diego Garcia H	47.62	317	T	T	00 35 28.1	
	baz=152,slow=76,SNR=46						
H08S1	Diego Carcia H	47.63	317	T	T	00 35 29.1	
	baz=152,slow=76,SNR=40						
H08S3	Diego Garcia H	47.64	317	T	T	00 35 24.8	
	baz=152,slow=76,SNR=78						
TROLL	Troll, Antarti	48.28	204	⇑P	P	23 44 49.7	+0.7
	comp=Z,104nm,0.8s						
SNAA	Sanae	49.91	203	⇑P	P	23 45 02.3	+0.9
	comp=Z,320nm,0.8s						
SNAA	Sanae	49.91	203		P	23 45 00.7	-0.7
SNAA				IAmb	IAmb	23 45 04.7	
	comp=Z,18nm,0.9s						
SNAA	Sanae	49.91	203	P	P	23 45 02.1	+0.7
	comp=Z,14nm,0.8s,baz=124,slow=11,SNR=35						
SNAA				LR	LR	00 04 10.5	
	comp=Z,320nm,19.6s,baz=104,slow=34						
	comp=Z,14nm,0.8s						
PSI	Prapat	50.57	355	LR	LR	00 03 12.2	
	comp=Z,172nm,20.3s,baz=174,slow=32						
VNA2	Neumayer--Watz	51.54	203	⇑P	P	23 45 14.5	+0.9
	comp=Z,15nm,0.7s,baz=131,slow=8.0						
BELA	Belgrano 2	51.84	190	P	P	23 45 15.2	-0.7
BELA				IAmb	IAmb	23 45 18.4	
	comp=Z,13nm,0.9s						
VNA1	Neumayer--Stat	51.94	203	⇑P	P	23 45 18.3	+1.7
	comp=Z,16nm,1.1s						
VNA3	Neumayer Olymp	51.94	202	⇑P	P	23 45 17.4	+0.7
	comp=Z,8.9nm,1.0s						
URZ	Urewera	53.20	109	LR	LR	00 04 27.9	
	comp=Z,237nm,19.5s,baz=324,slow=32						
PMG	Port Moresby	53.49	59	LR	LR	00 06 16.1	
	comp=Z,176nm,20.4s,baz=184,slow=34						
CTZ	Chatham Island	53.91	118	P	P	23 45 32.2	+0.6
KKM	Kota Kinabalu	54.97	16	P	P	23 45 37.6	-1.9
KKM				IAmb	IAmb	23 45 44.7	
	comp=Z,15nm,1.1s						
JAY	Jayapura	55.75	48	LR	LR	00 10 29.7	
	comp=Z,99nm,18.9s,baz=239,slow=37						
DZM	Mont Dzumac	56.41	86	*e*LR	LR	00 02 16.7	
	comp=Z,466nm,23.9s						
PALK	Pallekele	58.27	334	LR	LR	00 05 04.4	
	comp=Z,353nm,20.9s,baz=166,slow=30						
HNR	Honiara	61.28	71	LR	LR	00 10 08.8	
	comp=Z,284nm,20.8s,baz=158,slow=33						
BOSA	Boshof	61.31	258	P	P	23 46 23.8	-0.2
	comp=Z,3.8nm,1.1s,baz=165,slow=12,SNR=3.2						
BOSA				LR	LR	00 08 17.7	
	comp=Z,189nm,18.0s,baz=168,slow=31						
	comp=Z,3.8nm,1.1s						
RAO	Raoul Island	62.05	104	LR	LR	00 08 28.9	
	comp=Z,634nm,21.7s,baz=282,slow=31						
LBTB	Lobatse	63.48	261	LR	LR	00 10 44.4	
	comp=Z,46nm,18.0s,baz=140,slow=33						
CMAR	Chiang Mai Arr	66.11	356	P	P	23 46 54.5	-0.9
	comp=Z,3.3nm,0.8s,baz=190,slow=6.2,SNR=14						
CMAR				LR	LR	00 14 26.6	
	comp=Z,202nm,18.1s,baz=185,slow=35						
	comp=Z,3.3nm,0.8s						
QIZ	Qiongzhong	66.89	7	P	P	23 47 01.5	+1.1
QIZ				S	S	23 55 57.2	+4.1
QIZ				LR	LR		
	comp=Z,87nm,8.0s						
QIZ				LR	LR		
	comp=Z,240nm,14.3s						
PMSA	Palmer Station	67.23	186	LR	LR	00 17 15.9	
	comp=Z,303nm,18.3s,baz=172,slow=37						
MSVF	Nonsavu	67.23	92	LR	LR	00 10 14.7	
	comp=Z,98nm,20.6s,baz=173,slow=30						
HYB	Hyderabad	68.52	335	*e*P	P	23 47 10.4	-0.3
LSZ	Lusaka	68.52	271		P	23 47 11.3	+0.2
LSZ				IAmb	IAmb	23 47 14.0	
	comp=Z,27nm,1.8s						
LSZ	Lusaka	68.52	271	LR	LR	00 12 09.6	
	comp=Z,180nm,20.6s,baz=148,slow=32						
KSANE	Kasane	68.77	267	P	P	23 47 11.9	-0.7
KSANE				IAmb	IAmb	23 47 14.5	
	comp=Z,8.8nm,0.9s						
QNGWA	Qangwa	70.22	263		P	23 47 21.9	+0.3
QNGWA				IAmb	IAmb	23 47 24.4	
	comp=Z,17nm,1.4s						
BRDH	Bariadhala	70.93	349	LR	LR	00 14 38.8	
	comp=Z,184nm,20.4s,baz=151,slow=33						
GUMO	Guam	71.75	43	LR	LR	00 19 10.0	
	comp=Z,20nm,18.6s,baz=108,slow=36						
KMI	Kunming	72.65	360	P	P	23 47 37.3	+1.3
KMI				pmax	pmax		
	comp=Z,12nm,1.2s						
TSUM	Tsumeb	72.84	260	LR	LR	00 15 12.8	
	comp=Z,224nm,18.7s,baz=156,slow=32						
PZH	PanZhiHua	74.03	359	P	P	23 47 47.3	+3.3
PZH				pmax	pmax		
	comp=Z,11nm,0.9s						
PZH				pmax	pmax		
	comp=Z,120nm,4.8s						
EVN	Everest	76.83	346		P	23 48 00.3	-0.4
EVN				IAmb	IAmb	23 48 10.0	
	comp=Z,13nm,1.1s						
JOW	Kunigami	77.81	23	LR	LR	00 20 27.3	
	comp=Z,41nm,21.7s,baz=290,slow=34						
ENH	Enshi	78.02	6	P	P	23 48 06.8	+0.3
ENH				IAmb	IAmb	23 48 56.5	
	comp=Z,17nm,1.4s						
RAR	Rarotonga	79.37	110	LR	LR	00 19 25.4	
	comp=Z,92nm,19.9s,baz=244,slow=33						
ATD	Arta Tunnel	79.41	300	LR	LR	00 17 42.8	
	comp=Z,5.4nm,20.2s,baz=156,slow=31						
NJ2	Nanjing	80.86	14	*e*P	P	23 48 25.0	+3.1
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
XAN	Xi'an	81.72	5	⇑P	P	23 48 26.5	-0.1
XAN				pP	sP	23 48 30.0	+0.3
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,130nm,4.7s						
LZH	Lanzhou	83.59	1	*e*P	P	23 48 37.0	+0.6
LZH				sP	pwP	23 48 41.9	-0.8
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
LZH				LR	LR		
	comp=Z,150nm,19.3s						
LZH				LR	LR		
	comp=Z,150nm,18.3s						
LZH				LR	LR		
	comp=Z,240nm,21.3s						
TBI	Tubuai	84.11	118	*e*LR	LR	00 15 07.3	
	comp=Z,420nm,25.0s						
JNU	Nakatsue	84.47	23	LR	LR	00 27 20.9	
	comp=Z,17nm,19.4s,baz=172,slow=36						

NIL	Nilore	85.36	336		P	23 48 44.2	-1.0
HNS	HongShan	85.56	10	⇓P	P	23 48 47.5	+1.5
HNS				pmax	pmax		
	comp=Z,13nm,1.3s						
GTA	Gaotai	86.94	358	*e*P	P	23 48 53.0	0.0
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				LR	LR		
	comp=Z,180nm,18.2s						
GTA				LR	LR		
	comp=Z,110nm,16.4s						
GTA				LR	LR		
	comp=Z,230nm,19.3s						
KSRS	Korea Array	87.86	20	P	P	23 48 57.4	+0.1
	comp=Z,0.9nm,0.7s,baz=224,slow=6.9,SNR=2.4						
	comp=Z,0.9nm,0.7s						
PPT2	Papeete2	88.43	115	*e*LR	LR	00 17 06.5	
	comp=Z,107nm,26.5s						
PPT	Papeete	88.44	115	LR	LR	00 23 57.6	
	comp=Z,38nm,18.4s,baz=186,slow=32						
HHC	Hu-ho-hao-te	88.68	7	*e*P	P	23 49 03.8	+2.5
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,42nm,5.4s						
MJAR	Matsushiro Arr	89.80	28	P	P	23 49 05.6	-1.0
	comp=Z,0.7nm,0.5s,baz=171,slow=8.6,SNR=1.9						
	comp=Z,0.7nm,0.5s						
KSH	Kashi	90.21	340	P	P	23 49 11.7	+3.2
KSH				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PLCA	Paso Flores	91.58	185	LR	LR	00 29 53.0	
	comp=Z,152nm,18.1s,baz=188,slow=35						
WMQ	Urumqi	92.27	349	*e*P	P	23 49 19.8	+1.9
WMQ				LR	LR		
	comp=Z,140nm,14.9s						
WMQ				LR	LR		
	comp=Z,90nm,21.7s						
BOOM	Boomskoye usch	93.05	340	P	P	23 49 21.9	+0.2
TRQA	Tornquist	93.38	192	P	P	23 49 22.0	-1.5
CN2	Changchun	93.45	16	*e*P	P	23 49 24.3	+1.1
AAK	Ala-Archa	93.53	339	LR	LR	00 27 39.1	
	comp=Z,137nm,19.5s,baz=172,slow=33						
USRK	Ussuriysk Ar.	95.22	21	LR	LR	00 36 55.6	
	comp=Z,33nm,18.0s,baz=213,slow=38						
SONM	Songino Array	95.37	2	P	P	23 49 30.7	-1.5
	comp=Z,0.7nm,0.7s,baz=204,slow=3.3,SNR=3.8						
SONM				LR	LR	00 32 38.2	
	comp=Z,129nm,19.6s,baz=180,slow=36						
	comp=Z,0.7nm,0.7s						
MKAR	Makanchi Array	95.96	346	LR	LR	00 32 06.4	
	comp=Z,81nm,18.7s,baz=135,slow=35						
ASAJ	Asahikawa	98.07	28	LR	LR	00 31 10.0	
	comp=Z,31nm,21.2s,baz=238,slow=34						
EIL	Elat	98.22	305	LR	LR	00 27 48.9	
	comp=Z,89nm,18.7s,baz=93,slow=32						
ASF	Jabal al Asfar	99.12	308	LR	LR	00 28 58.8	
	comp=Z,36nm,20.4s,baz=178,slow=32						
KLR	Kul'dur	99.92	19	LR	LR	00 35 58.3	
	comp=Z,34nm,19.9s,baz=244,slow=36						
TAOE	Nuku Hiva Isla	100.94	116	*e*LR	LR	00 22 54.4	
	comp=Z,96nm,22.9s						
GERES	GERESS Array B	123.22	308	PKP	PKPdf	23 55 04.1	-0.3
	comp=Z,0.5nm,0.7s,baz=75,slow=15,SNR=2.5						
FINES	FINESS Array B	125.03	325	PKP	PKPdf	23 55 07.2	-0.1
	comp=Z,1.0nm,0.9s,baz=172,slow=3.9,SNR=4.8						
ESDC	Sonseca Array	128.31	290	PKP	PKiKP	23 55 15.3	+0.3
	comp=Z,0.8nm,0.9s,baz=66,slow=1.6,SNR=4.4						
M18K	Stony River	135.44	42	P	PKiKP	23 55 28.9	+0.3
	baz=250						
Q19K	Cape Douglas,	135.57	46	P	PKiKP	23 55 28.6	-0.4
	baz=250						
G18K	Tagagawik	135.67	36	P	PKiKP	23 55 29.4	+0.4
	baz=253						
J18K	Innoko River	135.70	39	P	PKiKP	23 55 29.1	-0.1
	baz=252						
P19K	Oil Pt	136.02	45	P	PKiKP	23 55 29.5	-0.5
	baz=250						
L19K	White Mountain	136.10	41	P	PKiKP	23 55 29.7	-0.3
	baz=252						
M19K	Big River Lodg	136.22	42	P	PKiKP	23 55 29.5	-0.8
	baz=252						
F19K	Shaleruckik Mo	136.28	34	P	PKiKP	23 55 29.8	-0.4
	baz=254						
J19K	Poorman	136.33	39	P	PKiKP	23 55 29.8	-0.6
	baz=253						
G19K	Purcell Mounta	136.35	35	P	PKiKP	23 55 30.2	-0.2
	baz=254						
H19K	Roundabout Mou	136.43	36	P	PKiKP	23 55 30.6	+0.1
	baz=254						
D19K	Kuna River	136.60	32	P	PKiKP	23 55 30.4	-0.5
	baz=256						
L20K	Farewell, AK	136.63	41	P	PKiKP	23 55 31.1	0.0
	baz=253						
E19K	Redstone River	136.65	34	P	PKiKP	23 55 30.8	-0.2
	baz=255						
K20K	Telida	136.80	40	P	PKiKP	23 55 30.7	-0.7
	baz=254						
J20K	Nowinta River	137.00	39	P	PKiKP	23 55 31.4	-0.3
	baz=254						
I20K	Naaghedeneel	137.03	38	P	PKiKP	23 55 30.9	-0.8
	baz=255						
H20K	Anotleneega Mo	137.05	37	P	PKiKP	23 55 31.4	-0.5
	baz=255						
F20K	Avaraart Lake	137.12	34	P	PKiKP	23 55 31.6	-0.3
	baz=256						
D20K	Etivluk River	137.19	32	P	PKiKP	23 55 31.8	-0.2
	baz=257						
E20K	Nigu River	137.23	33	P	PKiKP	23 55 31.9	-0.3
	baz=257						
B20K	Meade River	137.28	30	P	PKiKP	23 55 32.0	-0.1
	baz=258						
SKT	Skwentna	137.54	42	P	PKiKP	23 55 32.5	-0.4
	baz=254						
CAST	Castle Rocks	137.68	40	P	PKiKP	23 55 32.6	-0.6
	baz=255						
A21K	Barrow	137.72	28	P	PKiKP	23 55 32.3	-0.7
	baz=260						
SUA	Susitna One	137.75	43	P	PKiKP	23 55 32.6	-0.9
	baz=254						
G21K	Allakaket	137.85	35	P	PKiKP	23 55 32.8	-0.6
	baz=257						
C21K	Knifeblade Rid	137.93	31	P	PKiKP	23 55 33.0	-0.6
	baz=259						
H21K	Melozitna Rive	137.93	37	P	PKiKP	23 55 33.3	-0.3
	baz=257						
F21K	Alatna River	138.01	34	P	PKiKP	23 55 33.1	-0.7
	baz=258						
B21K	Ikpikpuk River	138.07	31	P	PKiKP	23 55 33.2	-0.6
	baz=260						
E21K	Killik River	138.08	33	P	PKiKP	23 55 33.5	-0.4
	baz=259						
TRF	Thorofare Moun	138.47	40	P	PKiKP	23 55 34.8	-0.2
	baz=257						
H22K	Ishtalitna Cre	138.56	37	P	PKiKP	23 55 34.9	0.0
	baz=258						
B22K	Teshekpuk Lake	138.60	30	P	PKiKP	23 55 34.8	0.0
	baz=262						
D22K	Ayikyak River	138.62	32	P	PKiKP	23 55 34.2	-0.8
	baz=261						
MLY	Manley	138.64	38		PKPdf	23 55 33.5	+0.5
MLY	Manley	138.64	38	P	PKiKP	23 55 34.8	-0.3
	baz=258						
G22K	Bettles	138.71	35	P	PKiKP	23 55 35.4	+0.3
	baz=260						
SML	Sawmill	138.95	43	P	PKiKP	23 55 35.6	-0.3
	baz=256						
I23K	Minto, Yukon-K	139.23	38	P	PKiKP	23 55 35.2	-1.0
	baz=259						
NEA2	Nenana	139.25	39	P	PKiKP	23 55 35.7	-0.6
	baz=259						
COLD	Coldfoot	139.27	35	P	PKiKP	23 55 36.1	-0.2
	baz=261						
Q23K	Middleton Isla	139.30	47	P	PKiKP	23 55 36.0	-0.6
	baz=255						
D23K	Nanushuk River	139.35	32	P	PKiKP	23 55 36.0	-0.5
	baz=262						
WAT6	Susitna Watana	139.40	42	P	PKPdf	23 55 35.6	+0.9
	baz=258						
E23K	Chandalar	139.61	34		PKiKP	23 55 36.1	-1.0
E23K	Chandalar	139.61	34	P	PKiKP	23 55 36.0	-1.1
	baz=262						
DHY	Denali Highway	139.67	41	P	PKiKP	23 55 36.5	-1.0
	baz=258						
TOLK	Toolik Lake Re	139.71	33	P	PKiKP	23 55 36.3	-1.0
	baz=263						
H24K	Noodor Dome	139.96	37	P	PKiKP	23 55 37.3	-0.5
	baz=261						
E24K	Your Creek	140.04	34	P	PKiKP	23 55 37.3	-0.6
	baz=263						
ILAR	Eielson Array	140.20	39	PKP	PKPdf	23 55 36.4	+0.6
	comp=Z,0.4nm,0.8s,baz=273,slow=3.1,SNR=4.3						
M29M	Somme Creek	143.63	43		PKPbc	23 55 40.6	+0.9
L29M	L29M	143.84	42		PKPdf	23 55 41.3	-1.1
CRIN	San Cristobal	143.99	164		PKPdf	23 55 43.2	-1.0
S31K	Pelican	144.13	51	P	PKPdf	23 55 43.9	+1.0
	baz=260						
EPYK	Eagle Plains	144.53	37	P	PKPbc	23 55 42.5	+0.3
	baz=272,SNR=9.6						
O30N	Mendenhall	144.59	46	P	PKPbc	23 55 42.7	+0.2
	baz=264,SNR=8.1						
I30M	Mount Dempster	144.68	39	P	PKPbc	23 55 42.7	-0.1
	baz=270,SNR=12						
J30M	Hart River	144.70	40	P	PKPbc	23 55 43.3	+0.3
	baz=270,SNR=12						
G30M	tAoh Zraii Nji	144.70	36	P	PKPbc	23 55 43.1	+0.4
	baz=273,SNR=9.7						
N31M	Braeburn, Yuko	144.81	45	P	PKPdf	23 55 43.9	-0.2
	baz=266,SNR=9.8						
SKAG	Skagway	144.82	49	P	PKPdf	23 55 44.0	-0.1
	baz=263						
F30M	Barrier River	144.83	35		PKPdf	23 55 43.5	-0.4
F30M	Barrier River	144.83	35	P	PKPab	23 55 42.8	-0.2
	baz=274,SNR=8.2						
S32K	Killisnoo	144.92	52	P	PKPdf	23 55 44.2	-0.1
	baz=261						
R32K	Eaglecrest	145.08	51	P	PKPdf	23 55 44.4	-0.3
	baz=262						
MTO3	Montecristo	145.14	159		PKPdf	23 55 46.1	-0.2
WHY	Whitehorse	145.17	47	P	PKPdf	23 55 45.2	+0.3
	baz=265,SNR=6.2						
CRAG	Craig	145.36	56	P	PKPab	23 55 45.3	+0.1
	baz=259						
G31M	Satah River	145.47	36	P	PKPab	23 55 45.2	-0.2
	baz=275,SNR=14						
U33K	Whale Pass	145.48	55	P	PKPab	23 55 45.5	-0.2
	baz=260						
M31M	Drury Creek, Y	145.51	44	P	PKPdf	23 55 45.2	-0.1
	baz=268						
H31M	Peel River	145.52	38		PKPdf	23 55 45.0	-0.2
H31M	Peel River	145.52	38	P	PKPdf	23 55 45.1	-0.1
	baz=273,SNR=12						
INK	Inuvik	145.61	33		PKPab	23 55 45.8	-0.1
INK	Inuvik	145.61	33	P	PKPbc	23 55 45.5	0.0
	baz=278,SNR=7.3						
SCO	Scoresbysund	145.62	331		PKPab	23 55 45.9	+0.1
F31M	Tsiigehtchic	145.63	35	P	PKPdf	23 55 45.3	+0.1
	baz=276						
P32M	Atlin	145.65	49		PKPab	23 55 47.2	+0.9
P32M	Atlin	145.65	49	P	PKPab	23 55 46.3	0.0
	baz=265,SNR=5.3						
FARO	Faro, Yukon	146.00	44	P	PKPbc	23 55 46.9	-0.1
	baz=269,SNR=8.6						
P33M	Teslin, Yukon	146.16	48	P	PKPbc	23 55 47.8	+0.2
	baz=266						
V35K	Ketchikan	146.18	57	P	PKPab	23 55 48.1	-0.3
	baz=260						
Q32M	Nakina River	146.33	50	P	PKPab	23 55 49.0	-0.2
	baz=265						
S34M	Telegraph Cree	146.82	52	P	PKPab	23 55 50.1	-0.7
	baz=264						
MMPY	Sheldon Lake,	146.97	43	P	PKPbc	23 55 50.4	+0.6
	baz=271,SNR=6.9						
R33M	Jennings River	147.03	49	P	PKPab	23 55 51.0	-0.7
	baz=266						
T35M	Bob Quinn	147.18	54	P	PKPbc	23 55 51.2	+0.6
	baz=263						
A36M	Sachs Harbour	147.43	25	P	PKPbc	23 55 51.3	+0.6
	baz=292						
DLBC	Dease Lake	147.45	51	P	PKPbc	23 55 52.2	+0.9
	baz=266						
TGTN	Hyland Airport	148.40	45	P	PKPbc	23 55 53.7	-0.1
	baz=272						
C36M	Paulatuk	148.72	30	P	PKPbc	23 55 53.9	-0.3
	baz=289						
PAHR	Pah Rah Range	148.81	89	PKPdf	PKPdf	23 55 51.5	-0.3
PDPR	Patillas Dam,	148.85	201		PKPbc	23 55 56.1	+0.1
NVAR	Mina Array Bea	148.90	92	PKPbc	PKPbc	23 55 55.5	-0.5
	comp=Z,6.5nm,0.8s,baz=218,slow=4.9,SNR=15						
J05D	Fort Rock, OR	149.17	82		PKiKP	23 55 57.9	+0.3
TOAD	Toad River Com	149.97	51	P	PKiKP	23 55 58.3	-0.3
	baz=270						
SHPR	Sheep Range	149.97	98		PKPab	23 56 04.8	+0.5
BEAVL	Fort Liard	150.02	48	P	PKiKP	23 55 58.8	+0.1
	baz=273						
WRGLY	Wrigley	150.47	42	P	PKiKP	23 55 59.5	+0.1
	baz=280						
G08A	Pilot Rock	151.44	79		PKiKP	23 56 03.7	+1.5
TXAR	Lajitas Array	152.47	123	PKPbc	PKPbc	23 56 02.8	-1.8
	comp=Z,0.9nm,0.8s,baz=215,slow=4.1,SNR=5.0						
VHRN	Van Horn	152.78	119		PKPbc	23 56 05.3	0.0
MNTX	Cornudas Mount	153.20	117	PKPdf	PKPdf	23 55 59.1	+0.6
YKA	Yellowknife Ar	154.59	41	PKPbc	PKPbc	23 56 06.1	-1.8
	comp=Z,0.8nm,0.8s,baz=294,slow=2.8,SNR=5.3						
ANMO	Albuquerque	154.72	110		PKPab	23 56 25.5	+1.1
ANMO	Albuquerque	154.72	110		PKPab	23 56 23.3	-1.1
PV01	Paradox Valley	155.24	102		PKPdf	23 56 11.2	+10

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*HVO **07** 23:49:47.0±0.7, 19°.406N±0°.009×155°.294W±0°.008, h-0^{km}±3^{km}, ML2.0/13, ML1.5/25(NEIC), Error ellipse: s-maj=1.6km s-min=0.5km az=218.0*

NEIC 07 23:49:46.5±1.4**, 19°.47N**±0°.03×**155°.24W**±0°.04**, h5**^{km}±1^{km}**, Error ellipse: s-maj=7.0km s-min=2.5km az=232.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSD	Rainshed	0.04	257		Pg	23 49 47.9	+0.1
SBLHI	Steaming Bluff	0.05	211		Pg	23 49 48.3	+0.4
SBLHI					Sg	23 49 49.3	+0.4
HATHI	Halema‘uma‘u T	0.05	203		Pg	23 49 48.3	+0.3
HATHI					Sg	23 49 49.5	+0.6
UWB	Uwekahuna Bluf	0.06	218		Pg	23 49 48.1	0.0
UWB					Sg	23 49 48.9	-0.2
BYL	Byron's Ledge	0.06	198		Pg	23 49 48.5	+0.4
OBL	Observatory Le	0.07	218		Pg	23 49 47.8	-0.3
OBL					Sg	23 49 48.6	-0.7
UWE	Uwekahuna	0.07	225		Pg	23 49 47.8	-0.5
UWE					Sg	23 49 48.3	-1.2
KKO	Keanakako'i	0.08	199		Pg	23 49 48.3	0.0
KKO					Sg	23 49 49.2	-0.4
RIM	Rim	0.08	203		Pg	23 49 48.1	-0.3
RIM					Sg	23 49 48.5	-1.1
WRMHI	West Rim	0.09	221		Pg	23 49 47.4	-1.1
WRMHI					Sg	23 49 47.7	-2.1
SDHHI	Sand Hill	0.10	212		Pg	23 49 47.9	-0.7
SDHHI					Sg	23 49 48.6	-1.4
PUH	Pauahi	0.10	167		Pg	23 49 49.2	+0.6
PUH					Sg	23 49 51.0	+0.9
KNHH	Kane Nui o Ham	0.11	144		Pg	23 49 50.1	+1.2
STCH	Steam Cracks	0.14	128	Pg	Pg	23 49 50.7	+1.3
STCH				IAML		23 49 54.7	
	comp=E,92nm,0.5s						
MLH	Mauna Loa	0.14	279		Pg	23 49 50.6	+1.2
MLH				IAML		23 49 51.8	
	comp=N,120nm,0.5s						
MLH					Sg	23 49 53.5	+2.2
MLH				IAML		23 49 53.8	
	comp=E,317nm,0.9s						
NPOC	North of Pu‘u	0.14	122		Pg	23 49 51.2	+1.8
HLP	Hilina Pali	0.19	200		Pg	23 49 50.0	-0.1
HLP				IAML		23 49 52.0	
	comp=E,175nm,1.2s						
HLP					Sg	23 49 52.6	-0.1
HLP				IAML		23 49 52.8	
	comp=N,254nm,0.2s						
JOKA	Jonika Flow	0.23	99	Pg	Pg	23 49 52.7	+1.7
JOKA				IAML		23 50 00.8	
	comp=N,116nm,1.5s						
JOKA				IAML		23 50 00.9	
	comp=E,117nm,2.2s						
AIN	Ainahou	0.23	244		Pg	23 49 51.2	+0.2
AIN				IAML		23 49 54.0	
	comp=E,108nm,0.7s						
AIN	Ainahou	0.23	244		Sg	23 49 54.9	+0.9
HMH	Humu‘ula Sheep	0.26	300		Pg	23 49 52.8	+1.0
HMH				IAML		23 49 59.0	
	comp=E,121nm,2.9s						
HMH				IAML		23 49 59.6	
	comp=N,115nm,3.0s						
MWH	Mokuaweoweo	0.34	272	Pg	Pg	23 49 53.6	+0.4
MWH				IAML		23 49 57.1	
	comp=N,96nm,2.4s						
ALEP	Alea Permanent	0.39	280		Pg	23 49 54.6	+0.5
ALEP					Sg	23 50 00.3	+1.0
POHA	Pohakuloa	0.40	316	Pg	Pb	23 49 56.0	-0.2
POHA				IAML		23 50 01.2	
	comp=N,58nm,3.3s						
KHU	Kahuku	0.42	238	Pg	Pg	23 49 54.4	-0.3
HUH	Hualalai	0.60	291	Pg	Pg	23 49 58.7	+0.6

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*IDC **07** 23:54:17.4±2.5, 24°.30S×179°.61E, h606^{km}±37^{km}, mb2.9/4, mbtmp4.0/5, Error ellipse: s-maj=39.5km s-min=29.4km az=12.0*

ISC 07 23:54:16.9±1.5**, 24°.3S**±0°.2×**179°.6E**±0°.3**, h600**^{km}**, n6, σ0^{s}.45**/6**, mb3.7**/4**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.74	347	P	P	23 56 05.0	+0.2
	4.4nm,0.5s,baz=188,slow=16,SNR=4.1						
STKA	Stephens Creek	34.25	249	P	P	00 00 14.4	-0.1
	1.6nm,0.5s,baz=66,slow=8.8,SNR=4.8						
	1.6nm,0.5s						
ASAR	Alice Springs	41.63	261	P	P	00 01 14.6	+0.1
	0.7nm,0.8s,baz=98,slow=6.7,SNR=6.1						
	0.7nm,0.8s						
WRA	Warramunga Arr	42.04	267	P	P	00 01 17.8	+0.1
	1.3nm,0.5s,baz=100,slow=8.3,SNR=10						
	1.3nm,0.5s						
QSPA	South Pole Qui	65.74	180	P	P	00 04 03.6	+0.2
	2.9nm,1.0s,baz=92,slow=1.1,SNR=7.6						
	2.9nm,1.0s						
HFS	Hagfors	142.91	348	PKP	PKPdf	00 12 41.9	-0.7
	0.6nm,0.4s,baz=55,slow=7.6,SNR=6.3						

IDC 08 00:00:44.7±1.3**, 20°.03S**×**176°.55W, h0**^{km}**, mb3.9**/5**, mbtmp3.9**/5**, Error ellipse: s-maj=50.1km s-min=30.3km az=156.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	45.95	256	P	P	00 09 10.1	+0.3
	2.4nm,0.5s,baz=92,slow=7.6,SNR=46						
	2.4nm,0.5s						
WRA	Warramunga Arr	46.02	261	P	P	00 09 10.1	-0.2
	2.3nm,0.3s,baz=97,slow=7.0,SNR=59						
	2.3nm,0.3s						
QSPA	South Pole Qui	70.04	180	P	P	00 11 57.9	-0.5
	1.1nm,1.0s,baz=36,slow=5.5,SNR=3.1						
	1.1nm,1.0s						
TXAR	Lajitas Array	85.66	57	P	P	00 13 26.9	+1.1
	0.2nm,0.9s,baz=223,slow=5.3,SNR=2.1						
	0.2nm,0.9s						
ILAR	Eielson Array	87.56	12	P	P	00 13 33.1	-1.0
	0.2nm,0.6s,baz=223,slow=2.2,SNR=1.7						
	0.2nm,0.6s						

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*IDC **08** 00:10:53.6±2.5, 6°.58S×130°.01E, h0^{km}, mb3.5/1, mbtmp3.6/3, ML3.9/2, Error ellipse: s-maj=141.2km s-min=33.1km az=69.0*

ISC 08 00:11:09.5±0.9**, 7°.28S**±0°.08×**129°.7E**±0°.1**, h150**^{km}**, n11, σ3^{s}.54**/13**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	5.01	30	P	Pn	00 12 20.8	-2.3
DRS	Darwin Rock St	5.25	167	P	Pn	00 12 29.0	+2.8
MTN	Manton Dam	5.70	166	P	Pn	00 12 34.1	+1.9
SOEI	Soe	5.93	245	P	Pn	00 12 34.5	-0.8
KDU	Kakadu	6.02	153	P	Pn	00 12 38.1	+1.7
PLAI	Plampang	11.93	262	P	Pn	00 13 55.1	+0.2
WRA	Warramunga Arr	13.36	161	Pn	Pn	00 14 11.7	-1.7
	0.7nm,0.3s,baz=346,slow=13,SNR=18						
WRA				Sn	Sn	00 16 36.0	-5.4
	1.2nm,0.3s,baz=332,slow=22,SNR=12						
	1.8nm,0.7s						
COEN	Coen	14.79	118	P	P	00 14 36.7	+3.2
QIS	Mount Isa	16.31	145	P	P	00 14 56.6	+6.4
ASAR	Alice Springs	16.78	167	P	Pn	00 14 58.5	+2.7
	0.3nm,0.3s,baz=351,slow=11,SNR=16						
ASAR				S	S	00 17 58.5	-4.0
	0.9nm,0.6s,baz=322,slow=16,SNR=8.2						
	0.6nm,0.4s						
MKAR	Makanchi Array	68.31	327	P	P	00 21 54.0	-0.4
	0.3nm,0.5s,baz=113,slow=8.0,SNR=2.7						
	0.3nm,0.5s						

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*AZER **08** 00:19:06.4, 38°.43N×45°.27E, h5^{km}, ml3.6*
*TEH **08** 00:19:06.9, 38°.35N×45°.41E, h5^{km}*
*NSSP **08** 00:19:08.2, 38°.52N×45°.38E, h10^{km}, Ms3.9*

ISC 08 00:19:06.9±1.2**, 38°.42N**±0°.02×**45°.40E**±0°.02**, h1**^{km}±10^{km}**, n60, σ1^{s}.53**/104**, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISHB	Shabestar	0.22	129	Pg	Pg	00 19 10.6	-0.5
ITBZ	Tabriz	0.62	107	Pg	Pg	00 19 17.7	-1.0
ITBZ				Sg	Sg	00 19 26.4	-0.3
ORD	Ordubad	0.69	42	P	Pb	00 19 21.6	-0.2
ORD				S	Sb	00 19 31.9	+0.1
NAX	Nakhchivan	0.76	6	P	Pn	00 19 23.6	-1.2
NAX				S	Sn	00 19 35.7	-1.3
IAZR	Azarshahr	0.87	148	Pg	Pg	00 19 23.3	-0.3
SBZ	Shahbuz	0.98	7	P	Pn	00 19 27.4	-0.6
SBZ				S	Sn	00 19 42.2	-0.4
MAKU	Maku	1.09	329	Pg	Pn	00 19 28.6	-0.8
EGVZ	Egvard	1.20	48	*e*P	Pg	00 19 20.3	-10
EGVZ				*e*S	Sb	00 19 46.5	-0.2
VAYK	Vayk	1.27	1	*i* P	Pn	00 19 32.4	+0.5
VAYK				*i* S	Sn	00 19 49.9	+0.2
IHRS	Heris	1.29	94	Pg	Pg	00 19 31.5	-0.2
HYR	Heyderabad	1.36	342	P	Pg	00 19 34.0	+0.9
HYR				S	Sn	00 19 54.1	+2.2
HAKT	HAKKARI	1.59	238	P	Pg	00 19 37.9	+0.5
HAKT				S	Sg	00 19 59.8	+1.8
MAHB	Mahabad	1.67	172	Pg	Pn	00 19 36.7	-0.7
MAHB				Sg	Sn	00 19 58.1	-1.5
AYRK	Ayrk	1.72	10	*e*P	Pg	00 19 40.3	+0.4
AYRK				*e*S	Sg	00 20 03.6	+1.4
IGDI	IGDIR	1.77	325	P	Pb	00 19 39.6	-0.7
IGDI				S	Sg	00 20 04.3	+0.4
GNI	Garni	1.80	344	*e*P	Pg	00 19 41.8	+0.4
GNI				*e*S	Sg	00 20 06.4	+1.7
GNI	Garni	1.80	344	Pn	Pg	00 19 41.0	-0.4
QRD	Qoradiz	1.82	55	P	Pb	00 19 41.2	+0.1
QRD				S	Sg	00 20 09.2	+3.8
IHSH	Hashtrud	1.85	126	Pg	Pn	00 19 40.1	0.0
KAPZ	Kaputan	1.98	344	*e*P	Pg	00 19 44.4	-0.3
KAPZ				*e*S	Sg	00 20 10.9	+0.6
GRMI	Germi	1.99	78	Pn	Pb	00 19 43.3	-0.7
VNNZ	Vanand	2.08	324	*e*P	Pg	00 19 45.8	-1.0
VNNZ				*e*S	Sg	00 20 13.3	-0.4
ARUZ	Aruch	2.12	332	*e*P	Pb	00 19 46.0	-0.2
ARUZ				*e*S	Sg	00 20 13.8	-1.2
BLQ	Beylaqan	2.12	52	P	Pg	00 19 47.0	-0.6
BLQ				S	Sg	00 20 15.0	-0.1
AGDM	Agdam	2.15	38	P	Pg	00 19 47.3	-0.7
AGDM				S	Sg	00 20 17.0	+1.2
AMBZ	Amberd	2.15	336	*e*P	Pg	00 19 47.2	-1.0
AMBZ				*e*S	Sg	00 20 15.5	-0.6
YRD	Yardimli	2.28	77	S	Sg	00 20 20.3	+0.2
BRDA	Brd	2.30	36	P	Pb	00 19 48.9	-0.3
BRDA				S	Sg	00 20 24.0	+3.2
GDB	GEDABAY	2.31	7	P	Pb	00 19 49.3	-0.2
GDB				S	Sg	00 20 21.4	+0.2
LRK	Lerik	2.32	84	P	Pb	00 19 49.4	-0.2
LRK				S	Sg	00 20 21.4	+0.1
GANJ	Ganja	2.33	18	P	Pb	00 19 49.8	0.0
GANJ				S	Sg	00 20 22.4	+0.5
GLBA	Clilabad	2.48	70	P	Pb	00 19 52.7	+0.5
GLBA				S	Sg	00 20 26.2	-0.3
LSVT	Lusahovit	2.50	356	*e*P	Pg	00 19 53.9	-0.8
LSVT				*e*S	Sg	00 20 27.4	+0.2
ZRD	Zardab	2.57	43	P	Pb	00 19 54.7	+1.0
ZRD				S	Sg	00 20 28.0	-1.3
QZX	Qazax, Azerbai	2.63	360	P	Pb	00 19 53.3	-1.6
QZX				S	Sb	00 20 27.7	-0.1
ASTR	Astara	2.67	86	P	Pb	00 19 53.7	-1.7
ASTR				S	Sb	00 20 30.5	+1.9
LKRN	Lenkeran, Azer	2.67	83	P	Pb	00 19 55.2	-0.2
LKRN				S	Sb	00 20 29.8	+1.2

MNGR	**Mingechevir, A**	2.69	28	P	Pb	00 19 55.1	-0.7
MNGR				S	Sb	00 20 30.0	+0.7
GAS1	**Astara - Iran**	2.70	90	Pn	Pn	00 19 53.2	+1.7
SAAT	**Saatly**	2.76	58	P	Pb	00 19 55.4	-1.5
SAAT				S	Sb	00 20 32.0	+0.8
SRTK	**Saratovka**	2.77	343	*e*P	Pg	00 19 58.9	-1.0
SRTK				*e*S	Sg	00 20 35.9	0.0
KDMR	**Kurdemir**	2.91	47	P	Pb	00 19 57.8	-1.8
KDMR				S	Sb	00 20 37.9	+2.2
VSHL	**Vashlovani**	2.91	15	P	Pg	00 20 03.0	+0.4
VSHL				S	Sg	00 20 45.0	+4.6
DGRG	**David-gareji**	3.03	360	P	Pg	00 20 04.3	-0.6
SEKA	**Sheki**	3.11	26	P	Pb	00 20 01.6	-1.4
SEKA				S	Sb	00 20 43.1	+1.6
QBL	**Gabala**	3.15	36	P	Pb	00 20 01.9	-1.7
QBL				S	Sb	00 20 43.1	+0.6
IML	**Ismayilli**	3.20	41	P	Pb	00 20 01.2	-3.4
IML				S	Sb	00 20 44.7	+0.6
TRLG	**Trialeti**	3.27	343	P	Pb	00 20 07.2	+1.4
ZKTA	**Zakatala**	3.35	16	P	Pb	00 20 06.7	-0.3
ZKTA				S	Sb	00 20 47.4	-0.9
PQL	**Pirkuli**	3.42	45	P	Pb	00 20 05.2	-3.1
PQL				S	Sb	00 20 49.9	-0.6
GBS	**Qobustan**	3.46	51	P	Pn	00 20 04.6	+2.7
GBS				S	Sb	00 20 49.6	-2.0
XNQ	**Khinaliq**	3.47	37	P	Pb	00 20 06.7	-2.5
XNQ				S	Sb	00 20 48.1	-3.8
ATGJ	**Altiaghaj**	3.66	47	P	Pb	00 20 09.3	-3.2
ATGJ				S	Sb	00 20 55.9	-1.5
ILIN	**Lien**	3.71	160	Pn	Pn	00 20 07.1	+1.5
QUBA	**Quba, Azerbaij**	3.78	38	P	Pn	00 20 09.5	+3.2
QUBA				S	Sb	00 20 59.3	-1.3
SIZA	**Siyzn**	3.78	44	P	Pb	00 20 10.6	-3.9
SIZA				S	Sb	00 20 59.2	-1.7
QSAR	**Qusar**	3.79	35	P	Pb	00 20 11.4	-3.2
QSAR				S	Sb	00 20 59.1	-2.1
IDHR	**Dehrash**	3.80	168	Pn	Pn	00 20 07.5	+0.7
JIR1	**Jirandeh**	3.89	115	Pn	Pn	00 20 09.2	+1.1
HGHA	**Hamedan- Ghaye**	4.03	136	Pn	Pn	00 20 11.0	+1.1

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*JMA **08** 00:23:32.1±0.2, 33°N±2°×13°8E±°, h334^{km}, MV3.4/27, FAR S OFF TOKAI DISTRICT*

*IDC **08** 00:23:35.8±1.5, 33°.12N×138°.18E, h298^{km}±11^{km}, mb3.4/14, mbtmp4.0/19, Error ellipse: s-maj=18.6km s-min=17.2km az=98.0*

ISC 08 00:23:34.5±0.6**, 32°.97N**±0°.06×**138°.35E**±0°.07**, h300^{km}, n39, σ1§42**/47**, mb3.7**/15**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTO3	**TONANKAI O.B.S**	1.20	319	*e*P	Pn	00 24 18.1	+2.4
JHJ2	**Mitsune**	1.24	83	*e*P	Pn	00 24 18.1	+1.9
TTO1	**TONANKAI O.B.S**	1.46	297	P	Pn	00 24 18.3	+1.3
JIE	**Ise**	1.97	317	P	Pn	00 24 21.3	+0.3
JOD2	**Odawara 2**	2.37	15	*e*P	Pn	00 24 24.9	+0.5
JOD2				*e*S	S	00 25 05.5	+1.4
JTNC	**Tanabenakahech**	2.44	291	P	Pn	00 24 24.8	-0.3
JYN	**Shimob**	2.53	4	*e*P	Pn	00 24 27.0	+1.1
JWY	**Kouya**	2.62	299	P	Pn	00 24 26.9	+0.3
BSO1	**Boso 1**	2.76	52	P	Pn	00 24 27.1	-0.2
BSO1				*e*S	S	00 25 08.6	-0.9
JRY	**Ryogami san**	3.08	8	P	Pn	00 24 31.7	+0.7
JRY				*e*S	S	00 25 16.1	-0.1
JAI	**Aioi**	3.36	285	P	Pn	00 24 33.7	-0.2
JWT	**Wachi**	3.36	314	P	Pn	00 24 33.5	-0.4
JAG	**Ashikaga**	3.57	14	P	Pn	00 24 35.0	-1.0
JAG				S	S	00 25 20.5	-4.7
MJAR	**Matsushiro Arr**	3.57	358	P	Pn	00 24 35.8	-0.3
	7.4nm,0.7s,baz=172,slow=11,SNR=19						
MJAR				S	S	00 25 23.1	-2.2
	4.7nm,0.6s,baz=140,slow=17,SNR=4.6						
MAT	**Matsushiro**	3.57	358	P	Pn	00 24 36.3	+0.3
JMN	**Monobe**	3.82	283	P	Pn	00 24 38.9	+0.1
JTO	**Tosashimizu**	4.67	270	P	Pn	00 24 48.2	0.0
JHS	**Saijyo**	4.80	296	P	Pn	00 24 49.6	-0.1
JNU	**Nakatsue**	6.28	273	P	Pn	00 25 06.5	-0.6
	9.2nm,0.9s,baz=81,slow=11,SNR=2.1						
JCJ	**Chichijima**	6.73	149	P	Pn	00 25 11.3	-1.4
	17nm,0.4s,baz=2.1,slow=20,SNR=12						
JCJ				S	S	00 26 27.0	-5.0
	59nm,0.3s,baz=296,slow=23,SNR=9.1						
KSRS	**Korea Array**	9.63	301	P	Pn	00 25 48.4	+0.3
	8.9nm,0.7s,baz=114,slow=12,SNR=22						
USRK	**Ussuriysk Ar.**	12.27	338	P	Pn	00 26 18.4	-1.7
	3.0nm,0.4s,baz=144,slow=9.3,SNR=7.4						
KLR	**Kul'dur**	16.98	345	P	P	00 27 11.8	-1.2
	3.1nm,0.6s,baz=211,slow=2.2,SNR=8.6						
SONM	**Songino Array**	28.27	311	P	P	00 29 01.2	+0.5
	2.0nm,0.6s,baz=105,slow=7.7,SNR=9.5 2.0nm,0.6s						
ZALV	**Zalesovo Beam**	42.93	316	P	P	00 31 03.6	-0.5
	1.5nm,0.4s,baz=95,slow=9.8,SNR=7.1						
ZALV				PcP	PcP	00 32 49.1	+0.4
	0.4nm,0.4s,baz=116,slow=3.4,SNR=4.0 1.5nm,0.4s						
MKAR	**Makanchi Array**	44.27	305	P	P	00 31 14.8	-0.2
	0.8nm,0.3s,baz=86,slow=9.3,SNR=20						
MKAR				PcP	PcP	00 32 54.4	+0.9
	0.3nm,0.8s,baz=100,slow=6.0,SNR=2.1 0.8nm,0.3s						
KURBB	**Kurchatov Arra**	46.63	311	P	P	00 31 32.6	-0.6
	2.2nm,0.5s,baz=88,slow=6.6,SNR=28 2.2nm,0.5s						
BVAR	**Borovoye Array**	51.53	314	P	P	00 32 09.8	-0.2
	1.0nm,0.3s,baz=103,slow=8.8,SNR=12 1.0nm,0.3s						
WRA	**Warramunga Arr**	52.75	185	P	P	00 32 21.5	+2.2
	0.2nm,0.4s,baz=1.4,slow=7.4,SNR=6.2 0.2nm,0.4s						
ILAR	**Eielson Array**	54.27	31	P	P	00 32 31.4	+1.6
	0.4nm,0.7s,baz=268,slow=4.9,SNR=4.9 0.4nm,0.7s						
ARCES	**ARCESS Array B**	66.91	339	P	P	00 33 55.3	+0.8
	255nm,0.3s,baz=58,slow=5.8,SNR=5.5						
FINES	**FINESS Array B**	71.22	332	P	P	00 34 21.1	+0.2
	2.2nm,0.6s,baz=68,slow=5.0,SNR=34 2.2nm,0.6s						
KBZ	**Khabaz**	71.63	310	P	P	00 34 23.9	+0.2
	1.1nm,0.6s,baz=157,slow=1.8,SNR=3.6 1.1nm,0.6s						
AKASG	**Malin Array Be**	75.95	322	P	P	00 34 47.9	-0.6
	0.8nm,0.5s,baz=64,slow=2.2,SNR=5.5 0.8nm,0.5s						
HFS	**Hagfors**	76.73	335	P	P	00 34 52.7	0.0
	1.3nm,0.4s,baz=83,slow=4.6,SNR=14 1.3nm,0.4s						
NB2	**NORSAR Subarra**	76.93	337	P	P	00 34 54.2	+0.3
	comp=Z,0.6nm,0.4s,baz=43,slow=5.6						
NOA	**NORSAR Array B**	76.93	337	P	P	00 34 54.3	+0.3
	comp=Z,1.1nm,0.5s,baz=44,slow=5.6,SNR=8.0 comp=Z,1.1nm,0.5s						
BRTR	**Keskin Array B**	79.62	311	P	P	00 35 09.7	+0.5
	comp=Z,0.3nm,0.4s,baz=127,slow=6.0,SNR=5.2 comp=Z,0.3nm,0.4s						
TXAR	**Lajitas Array**	94.62	51	P	P	00 36 23.5	+1.5
	comp=Z,0.3nm,0.8s,baz=331,slow=6.5,SNR=4.4 comp=Z,0.3nm,0.8s						

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*AFAD **08** 00:34:00.4, 38°.44N×45°.52E, h1^{km}±2^{km}, ML3.4*

*IDC **08** 00:34:00.3±2.0, 37°.85N×45°.37E, h0^{km}, mb3.4/4, mbtmp3.3/7, ML3.0/3, Error ellipse: s-maj=30.7km s-min=19.3km az=15.0*

*NSSP **08** 00:34:02.9, 38°.45N×45°.45E, h10^{km}, Ms4.1*

*TEH **08** 00:34:02.6, 38°.36N×45°.46E, h7^{km}±29^{km}*

*AZER **08** 00:34:04.0, 38°.48N×45°.44E, h11^{km}, ml3.8*

ISC 08 00:34:04.3±0.6**, 38°.37N**±0°.02×**45°.38E**±0°.02**, h10^{km}, n106, σ1§61**/159**, mb3.2**/4**, 8C-2D, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISHB	**Shabestar**	0.21	113	Pg	Pg	00 34 05.8	-2.9
ITBZ	**Tabriz**	0.62	102	Pg	Pg	00 34 12.8	-3.5
ORD	**Ordubad**	0.74	41	Pg	Pg	00 34 16.6	-2.0
ORD	**Ordubad**	0.74	41	P	Pg	00 34 16.6	-2.0
ORD				S	Sg	00 34 26.8	-1.5
NAX	**Nakhchivan**	0.81	7	Pg	Pg	00 34 18.6	-1.3
NAX	**Nakhchivan**	0.81	7	P	Pg	00 34 18.7	-1.3
NAX				S	Sg	00 34 29.9	-0.7
IAZR	**Azarshahr**	0.83	145	Pg	Pg	00 34 18.1	-2.3
SBZ	**Shahbuz**	1.04	8	Pg	Pg	00 34 22.3	-2.0
SBZ	**Shahbuz**	1.04	8	P	Pg	00 34 22.3	-2.0
SBZ				S	Sg	00 34 37.5	-0.4
MAKU	**Maku**	1.13	332	Pg	Pg	00 34 23.6	-2.3
YOVA	**Hakkari_Yksek**	1.16	228	P	Pb	00 34 25.8	-0.7
YOVA				S	Sn	00 34 43.5	+0.8
YOVA	**Hakkari_Yksek**	1.16	228	Pg	Pb	00 34 25.7	-0.7
EGVZ	**Egvard**	1.25	46	⇑*i*P	Pn	00 34 25.2	-2.8
EGVZ				⇑*i*S	Sb	00 34 41.3	-3.0
IHRS	**Heris**	1.31	92	Pg	Pn	00 34 26.2	-2.7
VAYK	**Vayk**	1.33	2	*i* P	Pn	00 34 27.4	-1.6
VAYK				*i* S	Sb	00 34 45.1	-1.3
GRS	**Goris**	1.36	33	⇑*i*P	Pg	00 34 32.0	+1.7
GRS				⇑*i*S	Sg	00 34 50.0	+2.0
CLDR	**Caldiran**	1.38	305	P	Pn	00 34 27.2	-2.6
CLDR				S	Sg	00 34 48.1	-0.6
CLDR				*i* IAML		00 34 56.0	
	comp=E,571nm,0.6s						
HYR	**Heyderabad**	1.41	343	Pn	Pn	00 34 29.0	-1.1
HYR				Sn	Sg	00 34 49.1	-0.6
NGD1	**Naghade .Az. G**	1.42	179	Pg	Pn	00 34 29.5	-0.8
HAKT	**HAKKARI**	1.55	239	P	Pn	00 34 32.1	0.0
HAKT	**HAKKARI**	1.55	239	Pg	Pn	00 34 32.0	0.0
HAKT	**HAKKARI**	1.55	239	Pn	Pb	00 34 33.1	0.0
HAKT				Sn	Sg	00 34 54.4	+0.4
MAHB	**Mahabad**	1.62	171	Pg	Pn	00 34 31.5	-1.5
DYDN	**Diyadin**	1.77	312	P	Pn	00 34 34.5	-0.6
DYDN				S	Sb	00 34 59.0	-0.1
DYDN				*i* IAML		00 35 10.0	
	comp=N,302nm,0.7s						
AYRK	**Ayrk**	1.78	10	⇓*i*P	Pn	00 34 34.9	-0.3
AYRK				⇑*i*S	Sn	00 34 58.7	+0.6
IGDI	**IGDIR**	1.81	326	P	Pn	00 34 34.5	-1.0
IGDI	**IGDIR**	1.81	326	Pn	Pn	00 34 36.0	+0.4
IGDI				Sn	Sn	00 34 58.1	-0.5
GEVA	**Gevas**	1.82	269	P	Pb	00 34 37.3	-0.5
GEVA				S	Sg	00 35 06.0	+3.1
GEVA	**Gevas**	1.82	269	Pn	Pb	00 34 37.3	-0.5
IHSH	**Hashtrud**	1.83	125	Pg	Pn	00 34 34.8	-1.3
GNI	**Garni**	1.85	345	⇑*i*P	Pn	00 34 36.6	+0.4
GNI				⇑*i*S	Sb	00 35 01.2	-0.3
QRD	**Qoradiz**	1.87	54	Pn	Pn	00 34 36.0	-0.3
QRD				Sn	Sn	00 35 00.6	+0.6
GRMI	**Germi**	2.02	77	Pn	Pn	00 34 38.0	-0.5
KAPZ	**Kaputan**	2.02	345	*e*P	Pn	00 34 39.4	+0.8
KAPZ				*e*S	Sb	00 35 05.9	-0.6
VNNZ	**Vanand**	2.11	326	*e*P	Pb	00 34 41.6	-1.1
VNNZ				*e*S	Sg	00 35 10.0	-2.2
ADCV	**BITLIS_Adilcev**	2.12	283	P	Pb	00 34 42.3	-0.6
ARUZ	**Aruch**	2.16	333	*e*P	Pn	00 34 41.2	+0.8
ARUZ				*e*S	Sb	00 35 09.4	-1.0
BLQ	**Beylaqan**	2.17	51	Pn	Pn	00 34 41.0	+0.5
BLQ				Sn	Sn	00 35 09.0	+1.5
AMBZ	**Amberd**	2.20	337	*e*P	Pn	00 34 41.7	+0.7
AMBZ				*e*S	Sb	00 35 10.4	-1.2
AGDM	**Agdam**	2.20	37	Pn	Pn	00 34 41.3	+0.4
AGDM				Sn	Sn	00 35 09.8	+1.6
KOTA	**Agri, Merkez-K**	2.22	311	P	Pn	00 34 41.9	+0.6
DORK	**Agr/Tutak/Do**	2.27	298	P	Pg	00 34 46.2	-1.5
PERV	**Siirt/Pervari-**	2.27	260	P	Pb	00 34 44.0	-1.5
YRD	**Yardimli**	2.31	75	Pn	Pn	00 34 43.4	+0.8
YRD				Sn	Sb	00 35 14.0	-0.8
LRK	**Lerik**	2.34	82	Pn	Pn	00 34 43.5	+0.6
LRK				Sn	Sn	00 35 13.8	+1.9
BRDA	**Brd**	2.36	36	Pn	Pn	00 34 43.9	+0.9
BRDA				Sn	Sn	00 35 13.3	+1.4
GDB	**GEDABAY**	2.37	7	Pn	Pn	00 34 43.9	+0.5
GDB				Sn	Sn	00 35 14.2	+1.6
GANJ	**Ganja**	2.39	18	Pn	Pn	00 34 44.8	+1.3
GANJ				Sn	Sb	00 35 15.3	-1.7
SIRN	**Sırnak**	2.50	251	P	Pb	00 34 47.6	-1.7
GLBA	**Clilabad**	2.52	69	Pn	Pn	00 34 46.2	+1.0
GLBA				Sn	Sn	00 35 18.4	+2.6
LSVT	**Lusahovit**	2.55	357	⇓*i*P	Pb	00 34 48.6	-1.6
LSVT				⇑*i*S	Sb	00 35 21.9	+0.3
BLIS	**Bitlis-Merkez**	2.56	272	P	Pn	00 34 47.7	+1.7
ZRD	**Zardab**	2.62	42	Pn	Pn	00 34 47.8	+1.2
ZRD				Sn	Sn	00 35 20.6	+2.2
ASTR	**Astara**	2.69	85	Pn	Pn	00 34 49.0	+1.4
ASTR				Sn	Sn	00 35 22.2	+2.0
QZX	**Qazax, Azerbai**	2.69	360	Pn	Pn	00 34 48.7	+1.1
QZX				Sn	Sn	00 35 22.4	+2.1
LKRN	**Lenkeran, Azer**	2.69	82	Pn	Pn	00 34 48.6	+1.0
LKRN				Sn	Sn	00 35 23.1	+2.9
EAK	**Akyaka**	2.69	330	P	Pn	00 34 49.2	+1.4
EATA	**Eleskirt**	2.70	305	P	Pb	00 34 50.9	-1.9
GAS1	**Astara - Iran**	2.72	88	Pn	Pn	00 34 47.9	-0.2
MNGR	**Mingechevir, A**	2.74	28	Pn	Pn	00 34 49.4	+1.0
MNGR				Sn	Sn	00 35 24.0	+2.5
SRTM	**Siirt_Merkez**	2.75	263	P	Pn	00 34 48.4	-0.1
SRTM				S	Sg	00 35 36.7	+4.2
SAAT	**Saatly**	2.80	57	Pn	Pn	00 34 50.9	+1.8
SAAT				Sn	Sb	00 35 27.5	-1.2
SRTK	**Saratovka**	2.82	344	*e*P	Pb	00 34 53.5	-1.2
SRTK				*e*S	Sb	00 35 30.7	+1.3
KARS	**Kars**	2.88	323	Pn	Pn	00 34 49.4	-0.9
BOZK	**Kars-Merkez-Bo**	2.90	321	P	Pb	00 34 55.8	-0.4
KDMR	**Kurdemir**	2.96	46	Pn	Pn	00 34 52.9	+1.6
KDMR				Sn	Sn	00 35 29.2	+2.3
VSHL	**Vashlovani**	2.97	15	P	Pb	00 34 57.9	+0.7
VSHL				S	Sg	00 35 39.6	0.0
MUSM	**Mu-Merkez**	3.05	278	P	Pb	00 34 55.8	-3.0
DGRG	**David-gareji**	3.08	360	P	Pb	00 34 58.9	-0.3
DGRG				S	Sg	00 35 41.6	-1.7
SEKA	**Sheki**	3.17	26	Pn	Pn	00 34 57.1	+2.9
SEKA				Sn	Sn	00 35 34.5	+2.4
HOMI	**Horasan**	3.18	303	P	Pb	00 35 01.5	+0.6
QBL	**Gabala**	3.20	36	Pn	Pn	00 34 56.5	+1.8
QBL				Sn	Sn	00 35 35.7	+2.8
BGD	**Bogdanovka**	3.20	335	P	Pb	00 35 00.1	-1.2
ALIB	**&Aumlli-Bayram**	3.24	59	Pn	Pn	00 34 56.1	+0.9
IML	**Ismayilli**	3.25	41	Pn	Pn	00 34 57.2	+1.8
IML				Sn	Sn	00 35 36.0	+1.9
GOLE	**Ardahan-G¶lle**	3.27	320	P	Pb	00 35 03.1	+0.6
MIDY	**Mardin/Midyat-**	3.29	254	P	Pn	00 34 53.3	-2.6
TRLG	**Trialeti**	3.32	343	P	Pb	00 35 02.2	-1.1
TRLG				S	Sg	00 35 47.6	-3.2
TBLG	**Delisi**	3.40	352	P	Pn	00 34 58.2	+0.9
TBLG				S	Sb	00 35 48.5	+2.5
ZKTA	**Zakatala**	3.41	16	Pn	Pn	00 34 59.1	+1.6
ZKTA				Sn	Sn	00 35 40.0	+2.1
PQL	**Pirkuli**	3.47	45	Pn	Pn	00 34 60.0	+1.5
PQL				Sn	Sn	00 35 41.3	+1.6
GBS	**Qobustan**	3.51	51	Pn	Pn	00 34 59.2	+0.3
GBS				Sn	Sn	00 35 42.3	+1.7
XNQ	**Khinaliq**	3.52	36	Pn	Pn	00 35 00.9	+1.7
XNQ				Sn	Sn	00 35 42.9	+1.8
ETEKE	**Tekederesi - E**	3.59	295	P	Pb	00 35 09.6	+1.6
ATGJ	**Altiaghaj**	3.71	47	Pn	Pn	00 35 03.7	+1.9
ATGJ				Sn	Sn	00 35 46.7	+1.1
IDHR	**Dehrash**	3.75	167	Pn	Pn	00 35 04.2	+1.9
QUBA	**Quba, Azerbaij**	3.83	38	Pn	Pn	00 35 05.5	+2.1
QUBA				Sn	Sn	00 35 49.9	+1.5
SIZA	**Siyzn**	3.83	44	Pn	Pn	00 35 04.7	+1.2
SIZA				Sn	Sn	00 35 50.3	+1.7
QSAR	**Qusar**	3.85	34	Pn	Pn	00 35 04.8	+1.2
QSAR				Sn	Sn	00 35 50.1	+1.2
KGS1	**Ghasr-e-Shirin**	3.85	177	Pn	Pn	00 35 05.4	+1.8
JIR1	**Jirandeh**	3.89	114	Pn	Pn	00 35 04.4	+0.2
GOBA	**Gobu**	3.94	58	Sn	Sn	00 35 52.9	+1.8
CHRG	**Chargali**	3.98	355	P	Pb	00 35 14.5	0.0
HGHA	**Hamedan- Ghaye**	4.00	135	Pn	Pn	00 35 06.2	+0.3
QABG	**Abgarm-Qazvin**	4.28	127	Pn	Pn	00 35 10.5	+0.8
IGZV	**Ghazvin**	4.33	116	Pn	Pn	00 35 10.9	+0.5
ILBA	**Ilam Banvizeh**	4.78	172	Pn	Pn	00 35 17.7	+1.4
HSAM	**Samen**	4.89	147	Pn	Pn	00 35 19.8	+1.6
IKFM	**Kafar-mosalman**	5.23	157	Pn	Pn	00 35 24.4	+1.9
KBZ	**Khabaz**	5.68	342	Pn	Pb	00 35 37.4	-6.0
	0.1nm,0.3s,baz=191,slow=16,SNR=1.8						
KBZ				Pg	Pg	00 35 49.0	-4.0
	0.2nm,0.3s,baz=143,slow=15,SNR=5.7						
KBZ				Lg	Lg	00 37 14.0	
	0.1nm,0.3s,baz=193,slow=9.1,SNR=1.6 1.0nm,0.5s						
BRTR	**Keskin Array B**	9.23	282	Pn	Pn	00 36 19.2	+1.7
	0.1nm,0.3s,baz=118,slow=14,SNR=1.9 0.2nm,0.3s						
AKASG	**Malin Array Be**	16.83	322	Pn	P	00 38 01.3	-0.6
	0.5nm,0.3s,baz=138,slow=11,SNR=4.6 0.2nm,0.3s						
BVAR	**Borovoye Array**	22.65	42	P	P	00 39 07.2	+1.9
	0.2nm,0.4s,baz=224,slow=10,SNR=2.1 0.2nm,0.4s						
FINES	**FINESS Array B**	26.03	339	P	P	00 39 37.9	+0.7
	0.6nm,0.6s,baz=145,slow=12,SNR=7.6 0.6nm,0.6s						
KURBB	**Kurchatov Arra**	26.40	52	P	P	00 39 40.8	+0.1
	0.4nm,0.5s,baz=263,slow=9.3,SNR=6.2 0.4nm,0.5s						
MKAR	**Makanchi Array**	28.24	61	P	P	00 39 57.6	+0.2
	0.2nm,0.6s,baz=273,slow=7.9,SNR=2.3 0.2nm,0.6s						

GCG 08 00:40:05.6±0.5**, 13°.38N×90°.60W, h23^{km}**±7^{km}**, MD3.9, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NUBE	**Las Nubes**	0.95	57	*i* P	Pb	00 40 23.3	-0.2
JAYA	**Jayaque - finc**	1.15	76	*i* P	Pn	00 40 25.9	-0.6
JAYA				*e*S	Sn	00 40 41.6	-0.1
STG8	**El Palmar, Qui**	1.29	326	*e*P	Pb	00 40 34.0	+4.6
MTO3	**Montecristo**	1.57	50	*e*P	Pn	00 40 33.0	+0.6

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*TEH **08** 00:54:44.6, 38°.40N×45°.39E, h6^{km}±70^{km}*

*AZER **08** 00:54:47.3, 38°.47N×45°.33E, h7^{km}, ml2.6*

ISC 08 00:54:47.6±1.1**, 38°.43N**±0°.03×**45°.45E**±0°.03**, h8^{km}**±10^{km}**, n27, σ1§29**/45**, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISHB	**Shabestar**	0.20	137	Pg	Pg	00 54 50.4	-1.3
ITBZ	**Tabriz**	0.58	109	Pg	Pg	00 54 57.6	-1.3
ORD	**Ordubad**	0.66	40	P	Pg	00 55 01.1	+0.8
ORD				S	Sb	00 55 10.9	+0.2
NAX	**Nakhchivan**	0.75	3	P	Pn	00 55 03.4	-1.1
NAX				S	Sn	00 55 14.4	-1.7
IAZR	**Azarshahr**	0.86	150	Pg	Pg	00 55 02.9	-1.2
SBZ	**Shahbuz**	0.97	5	P	Pn	00 55 07.2	-0.5
SBZ				S	Sn	00 55 21.9	+0.2
MAKU	**Maku**	1.10	327	Pg	Pb	00 55 08.1	-1.0
IHRS	**Heris**	1.26	94	Pg	Pn	00 55 11.2	-0.5
HYR	**Heyderabad**	1.37	340	P	Pg	00 55 13.6	-0.3
HYR				S	Sg	00 55 33.5	+1.8
HAKT	**HAKKARI**	1.62	238	P	Pg	00 55 18.4	-0.3
HAKT				S	Sg	00 55 42.4	+2.6
QRD	**Qoradiz**	1.79	54	P	Pb	00 55 21.3	+0.7
QRD				S	Sg	00 55 46.4	+1.3
IGDI	**IGDIR**	1.79	324	P	Pb	00 55 20.6	-0.1
IGDI				S	Sg	00 55 45.9	+0.7
IHSH	**Hashtrud**	1.82	127	Pn	Pn	00 55 19.5	0.0
GRMI	**Germi**	1.95	78	Pn	Pb	00 55 23.1	-0.4
AGDM	**Agdam**	2.12	37	P	Pb	00 55 27.1	+0.9
AGDM				S	Sg	00 55 56.5	+0.8
YRD	**Yardimli**	2.24	77	P	Pb	00 55 28.2	-0.2
YRD				S	Sg	00 56 00.8	+1.2
BRDA	**Brd**	2.27	36	S	Sg	00 56 01.5	+0.8
LRK	**Lerik**	2.28	84	P	Pb	00 55 30.0	+0.9
LRK				S	Sg	00 56 02.2	+1.4
GDB	**GEDABAY**	2.30	6	P	Pb	00 55 29.3	-0.2
GDB				S	Sg	00 56 01.6	-0.1
GANJ	**Ganja**	2.32	17	P	Pb	00 55 29.4	-0.3
GANJ				S	Sg	00 56 02.5	+0.4
GLBA	**Clilabad**	2.44	70	S	Sb	00 56 04.1	+2.1
ASTR	**Astara**	2.63	86	P	Pb	00 55 36.2	+1.3
ASTR				S	Sg	00 56 11.4	-0.6
QZX	**Qazax, Azerbai**	2.63	359	P	Pb	00 55 34.9	-0.1
QZX				S	Sb	00 56 07.4	0.0
VSHL	**Vashlovani**	2.90	14	P	Pg	00 55 42.6	-0.5
VSHL				S	Sg	00 56 24.0	+3.5
SEKA	**Sheki**	3.09	25	P	Pb	00 55 43.0	+0.1
SEKA				S	Sg	00 56 25.2	-1.6
QBL	**Gabala**	3.12	35	P	Pb	00 55 42.8	-0.5
QBL				S	Sg	00 56 25.1	-2.7
IML	**Ismayilli**	3.17	41	P	Pb	00 55 42.4	-1.8
IML				S	Sb	00 56 25.4	+2.4

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*NSSP **08** 01:10:58.9, 38°.48N×45°.38E, h10^{km}, Ms3.4*

*AZER **08** 01:10:58.1, 38°.42N×45°.29E, h10^{km}, ml3.1*

*TEH **08** 01:10:58.2, 38°.37N×45°.44E, h6^{km}±32^{km}*

ISC 08 01:10:58.4±1.2**, 38°.34N**±0°.02×**45°.44E**±0°.02**, h2^{km}**±10^{km}**, n45, σ1§53**/81**, 8C, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISHB	**Shabestar**	0.15	112	Pg	Pg	01 11 01.8	+0.4
ISHB				Sg	Sg	01 11 04.6	+1.3
ITBZ	**Tabriz**	0.57	101	Pg	Pg	01 11 08.9	-0.3
ITBZ				Sg	Sg	01 11 17.4	+0.8
ORD	**Ordubad**	0.73	36	P	Pg	01 11 12.6	+0.2
ORD				S	Sg	01 11 22.5	+0.7
IAZR	**Azarshahr**	0.79	147	Pg	Pb	01 11 14.3	-0.6
NAX	**Nakhchivan**	0.83	3	P	Pg	01 11 14.7	+0.3
NAX				S	Sb	01 11 26.5	-0.9
SBZ	**Shahbuz**	1.06	5	P	Pg	01 11 18.5	-0.2
SBZ				S	Sb	01 11 33.4	-0.5
MAKU	**Maku**	1.17	330	Pg	Pg	01 11 19.6	-1.3
EGVZ	**Egvard**	1.24	44	⇑*i*P	Pn	01 11 21.3	-1.5
EGVZ				⇑*i*S	Sb	01 11 37.5	-1.4
IHRS	**Heris**	1.26	90	Pg	Pn	01 11 22.4	-0.8
GRS	**Goris**	1.35	31	⇑*i*P	Pg	01 11 29.0	+4.7
GRS				⇑*i*S	Sg	01 11 47.0	+5.2
VAYK	**Vayk**	1.35	360	*i* P	Pn	01 11 23.4	-1.0
VAYK				*i* S	Sb	01 11 41.0	-1.3
HYR	**Heyderabad**	1.45	342	P	Pg	01 11 26.0	-0.2
HYR				S	Sg	01 11 45.9	+0.9
HAKT	**HAKKARI**	1.58	241	P	Pg	01 11 29.0	+0.5
HAKT				S	Sg	01 11 51.0	+2.0
MAHB	**Mahabad**	1.58	172	Pg	Pb	01 11 28.0	-0.5
NRKZ	**NAREK**	1.77	340	*e*P	Pb	01 11 30.2	-1.3
NRKZ				*e*S	Sb	01 11 53.1	-1.1
IHSH	**Hashtrud**	1.78	125	Pg	Pb	01 11 31.0	-0.8
AYRK	**Ayrk**	1.79	9	⇑*i*P	Pb	01 11 31.2	-0.9
AYRK				⇑*i*S	Sb	01 11 54.6	-0.5
QRD	**Qoradiz**	1.85	52	P	Pb	01 11 32.1	-0.7
QRD				S	Sb	01 11 56.8	+0.4
IGDI	**IGDIR**	1.86	326	P	Pb	01 11 31.5	-1.6
IGDI				S	Sb	01 11 55.1	-1.7
GNI	**Garni**	1.89	344	⇑*i*P	Pb	01 11 33.1	-0.6
GNI				⇑*i*S	Sg	01 11 59.2	+0.2
GRMI	**Germi**	1.98	76	Pn	Pb	01 11 34.6	-0.7
KAPZ	**Kaputan**	2.06	344	*e*P	Pb	01 11 35.8	-0.9
KAPZ				*e*S	Sb	01 12 02.8	+0.1
BLQ	**Beylaqan**	2.15	49	P	Pb	01 11 37.3	-0.8
BLQ				S	Sb	01 12 05.6	+0.4
AGDM	**Agdam**	2.19	36	P	Pb	01 11 36.9	-1.9
AGDM				S	Sg	01 12 08.1	-0.6
AMBZ	**Amberd**	2.24	336	*e*P	Pb	01 11 38.6	-1.1
AMBZ				*e*S	Sb	01 12 07.6	-0.4
YRD	**Yardimli**	2.27	74	P	Pb	01 11 40.0	-0.2
YRD				S	Sg	01 12 11.3	0.0
LRK	**Lerik**	2.30	82	P	Pb	01 11 41.0	+0.3
LRK				S	Sg	01 12 13.0	+0.8
BRDA	**Brd**	2.35	35	P	Pb	01 11 40.2	-1.2
BRDA				S	Sg	01 12 13.9	+0.2
GDB	**GEDABAY**	2.39	6	P	Pb	01 11 40.4	-1.8
GDB				S	Sb	01 12 12.6	+0.3
GANJ	**Ganja**	2.40	16	P	Pb	01 11 41.8	-0.5
GANJ				S	Sb	01 12 13.1	+0.7
GLBA	**Clilabad**	2.48	68	S	Sn	01 12 11.3	+0.7
LSVT	**Lusahovit**	2.58	356	*e*P	Pb	01 11 44.7	-0.7
LSVT				*e*S	Sb	01 12 18.3	+0.6
ZRD	**Zardab**	2.60	41	S	Sb	01 12 17.0	-1.2
ASTR	**Astara**	2.64	84	P	Pb	01 11 45.1	-1.3
ASTR				S	Sg	01 12 21.2	-2.0
LKRN	**Lenkeran, Azer**	2.65	81	P	Pg	01 11 47.7	-1.4
LKRN				S	Sg	01 12 21.9	-1.4
QZX	**Qazax, Azerbai**	2.71	359	P	Pn	01 11 41.7	-1.4
QZX				S	Sb	01 12 18.0	-3.4
MNGR	**Mingechevir, A**	2.74	27	P	Pg	01 11 50.7	-0.3
MNGR				S	Sb	01 12 21.9	-0.3
SRTK	**Saratovka**	2.86	343	*e*P	Pb	01 11 49.8	-0.3
SRTK				*e*S	Sb	01 12 26.8	+1.2
KDMR	**Kurdemir**	2.94	45	S	Sb	01 12 25.9	-2.0
SEKA	**Sheki**	3.17	25	P	Pb	01 11 53.5	-2.0
SEKA				S	Sb	01 12 32.3	-2.3
QBL	**Gabala**	3.19	35	P	Pb	01 11 52.9	-2.9
QBL				S	Sn	01 12 30.8	+2.5

IML	Ismayilli	3.24	40	P	Pn	01 11 51.3	+1.0
IML				S	Sb	01 12 34.6	-2.0
ZKTA	Zakatala	3.42	15	P	Pb	01 11 57.8	-1.8
ZKTA				S	Sb	01 12 42.4	+0.8
PQL	Pirkuli	3.45	44	P	Pn	01 11 55.8	+2.5
PQL				S	Sb	01 12 40.6	-2.2
XNQ	Khinaliq	3.51	36	P	Pn	01 11 55.6	+1.4
XNQ				S	Sn	01 12 39.5	+3.1

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*NSSP **08** 01:12:22.4, 38°.45N×45°.48E, h10^{km}, Ms3.3*
*AZER **08** 01:12:22.0, 38°.40N×45°.22E, h10^{km}, ml2.9*
*TEH **08** 01:12:22.5, 38°.38N×45°.45E, h8^{km}±50^{km}*
ISC 08 01:12:22.8±1.1**, 38°.39N**±0°.03×**45°.44E**±0°.02**, h6**^{km}±10^{km}**,**
n39, σ1^s.23/60**, 5C-3D, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISHB	Shabestar	0.17	128	Pg	Pg	01 12 26.3	0.0
ITBZ	Tabriz	0.57	106	Pg	Pg	01 12 33.5	-0.4
ITBZ				Sg	Sg	01 12 42.0	+0.7
ORD	Ordubad	0.69	39	P	Pb	01 12 37.3	0.0
ORD				S	Sb	01 12 47.4	+0.3
NAX	Nakhchivan	0.78	3	P	Pn	01 12 39.3	-1.2
NAX				S	Sn	01 12 50.7	-2.0
IAZR	Azarshahr	0.83	149	Pg	Pb	01 12 38.8	-1.0
SBZ	Shahbuz	1.01	5	P	Pn	01 12 43.2	-0.5
SBZ				S	Sn	01 12 57.9	-0.4
MAKU	Maku	1.13	329	Pg	Pn	01 12 44.3	-1.1
EGVZ	Egvard	1.20	45	⇑*i*P	Pn	01 12 45.9	-0.4
EGVZ				⇓*i*S	Sn	01 13 02.2	-0.7
IHRS	Heris	1.26	93	Pg	Pb	01 12 47.2	+0.1
VAYK	Vayk	1.30	359	*i* P	Pg	01 12 48.0	+0.2
VAYK				*i* S	Sn	01 13 05.8	+0.3
GRS	Goris	1.31	32	⇑*i*P	Pg	01 12 53.0	+5.1
GRS				⇑*i*S	Sn	01 13 11.0	+5.3
HYR	Heyderabad	1.40	341	P	Pg	01 12 49.5	-0.2
HYR				S	Sg	01 13 09.6	+1.6
HAKT	HAKKARI	1.60	239	P	Pn	01 12 51.3	-0.6
HAKT				S	Sg	01 13 16.5	+2.1
MAHB	Mahabad	1.64	173	Pg	Pb	01 12 53.0	-0.5
NRKZ	NAREK	1.72	339	*e*P	Pg	01 12 56.0	+0.3
NRKZ				*e*S	Sg	01 13 19.7	+1.7
AYRK	Ayrk	1.74	9	⇑*i*P	Pg	01 12 55.8	-0.4
AYRK				⇑*i*S	Sg	01 13 19.2	+0.4
IHSH	Hashtrud	1.80	126	Pg	Pb	01 12 55.7	-0.8
QRD	Qoradiz	1.81	53	P	Pg	01 12 57.0	-0.6
QRD				S	Sg	01 13 21.4	+0.3
IGDI	IGDIR	1.82	325	P	Pb	01 12 54.7	-1.8
IGDI				S	Sg	01 13 21.6	+0.4
GNI	Garni	1.84	343	⇓*i*P	Pg	01 12 57.5	-0.6
GNI				⇓*i*S	Sg	01 13 23.3	+1.4
GRMI	Germi	1.96	77	Pn	Pb	01 12 59.2	+0.1
KAPZ	Kaputan	2.01	344	*e*P	Pg	01 13 01.3	-0.1
KAPZ				*e*S	Sg	01 13 28.8	+1.3
BLQ	Beylaqan	2.12	50	P	Pb	01 13 01.8	+0.3
BLQ				S	Sg	01 13 29.7	-1.1
AGDM	Agdam	2.15	36	S	Sg	01 13 32.8	+1.0
AMBZ	Amberd	2.19	336	*e*P	Pn	01 12 04.5	-56
AMBZ				*e*S	Sg	01 13 34.6	+1.3
YRD	Yardimli	2.25	76	P	Pb	01 13 04.1	+0.1
YRD				S	Sg	01 13 35.4	+0.2
LRK	Lerik	2.29	83	P	Pb	01 13 05.1	+0.5
LRK				S	Sg	01 13 37.7	+1.5
BRDA	Brd	2.30	35	S	Sg	01 13 36.0	-0.7
GDB	GEDABAY	2.34	6	P	Pb	01 13 05.0	-0.5
GDB				S	Sb	01 13 34.8	+0.1
GANJ	Ganja	2.35	17	P	Pb	01 13 06.0	+0.4
GANJ				S	Sg	01 13 37.8	-0.6
GLBA	Clilabad	2.46	69	S	Sg	01 13 39.7	-1.9
LSVT	Lusahovit	2.53	356	*e*P	Pb	01 13 09.2	+0.5
LSVT				*e*S	Sg	01 13 42.3	-1.8
ASTR	Astara	2.63	85	P	Pb	01 13 10.8	+0.4
ASTR				S	Sg	01 13 47.5	+0.2
QZX	Qazax, Azerbai	2.66	359	S	Sb	01 13 44.1	+0.2
MNGR	Mingechevir, A	2.70	28	S	Sg	01 13 47.1	-2.3
KDMR	Kurdemir	2.91	46	S	Sb	01 13 53.1	+2.3
SEKA	Sheki	3.12	25	S	Sb	01 13 56.9	-0.2
QBL	Gabala	3.15	35	S	Sb	01 13 58.5	+0.6
IML	Ismayilli	3.20	41	S	Sb	01 14 00.2	+0.9

RSNC 08 01:38:45.7±0.0**, 6°N**±1°×**7°4W**±°**, h66**^{km}±2^{km}**, M2.5, mb3.6,**
ML2.2, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTBC	PUERTO BERRIO,	0.26	293	P	Pn	01 38 55.1	-1.1
PTBC				S	Sn	01 39 03.5	-0.3
VMM10	El Carmen	0.59	57	P	Pn	01 38 58.5	-0.6
VMM10				S	Sn	01 39 08.9	0.0
BRJC	Barrancabermej	0.71	42	P	Pn	01 38 59.6	-0.9
BRJC				S	Sn	01 39 11.5	+0.2
SPBC	San Pablo de B	0.80	169	P	Pn	01 39 00.2	-1.4
SPBC				S	Sn	01 39 12.1	-1.2
VMM07	Puerto Wilches	0.98	22	P	Pn	01 39 03.3	-0.5
VMM07				S	Sn	01 39 17.0	-0.3
BARC	Barichara	1.04	82	P	Pn	01 39 04.0	-0.8
BARC				S	Sn	01 39 18.9	0.0
NORC	Norcasia	1.08	217	P	Pn	01 39 03.9	-1.3
NORC				S	Sn	01 39 18.7	-0.9
VMM09	Lebrija	1.15	53	P	Pn	01 39 05.1	-1.0
VMM09				S	Sn	01 39 21.1	-0.1
ZARC	Zaragoza, Cauc	1.22	329	P	Pn	01 39 05.9	-1.0
ZARC				S	Sn	01 39 22.0	-0.8
RUSC	La Rusia	1.25	116	P	Pn	01 39 06.2	-1.6
RUSC				S	Sn	01 39 23.5	-0.7
EZNC	La Esperanza	1.48	37	P	Pn	01 39 09.5	-0.8
EZNC				S	Sn	01 39 28.1	-0.8
ROSC	El Rosal	1.59	184	P	Pn	01 39 11.1	-1.1
ROSC				S	Sn	01 39 30.9	-1.2
GUY2C	Guyana, Caldas	1.66	223	P	Pn	01 39 12.3	-0.8
GUY2C				S	Sn	01 39 33.5	-0.3
PAMC	Pamplona, Colo	1.75	59	P	Pn	01 39 13.7	-0.7
PAMC				S	Sn	01 39 35.0	-1.1
UREC	San Jos de Ur	1.84	315	P	Pn	01 39 13.1	-2.1
UREC				S	Sn	01 39 35.7	-1.9
CHIC	Chingaza	1.86	165	P	Pn	01 39 15.2	-0.6
CHIC				S	Sn	01 39 39.0	+0.4
CBOC	Ciudad Bolivar	1.87	252	P	Pn	01 39 15.3	-0.4
CVER	Cruz Verde, Cu	1.91	176	P	Pn	01 39 16.1	-0.4
CVER				S	Sn	01 39 40.9	+1.0
AGCC	Aguachica	2.15	17	P	Pn	01 39 17.8	-1.6
AGCC				S	Sn	01 39 44.7	-0.4
ANIL	Santa Ana	2.27	211	P	Pn	01 39 21.6	+0.4
ANIL				S	Sn	01 39 49.0	+0.8
VILC	Villavicencio,	2.37	167	P	Pn	01 39 22.3	-0.2
VILC				S	Sn	01 39 51.8	+1.2
PLMC	San Jos del P	2.56	234	P	Pn	01 39 24.6	-0.3
PLMC				S	Sn	01 39 55.0	0.0
ORTC	Ortega, Tolima	2.71	202	P	Pn	01 39 26.5	-0.5
ORTC				S	Sn	01 39 59.6	+0.8
APAC	Apartado, Choc	2.75	302	P	Pn	01 39 26.4	-1.1
APAC				S	Sn	01 39 59.1	-0.6
PRAC	Prado	2.79	194	P	Pn	01 39 27.0	-1.1
PRAC				S	Sn	01 40 01.6	+1.0
PTGC	Puerto Gaitan,	3.04	137	P	Pn	01 39 29.8	-1.7
PTGC				S	Sn	01 40 05.2	-1.6
URMC	La Uribe, Meta	3.18	183	P	Pn	01 39 32.8	-0.6
URMC				S	Sn	01 40 09.7	-0.4
SJCC	San Jacinto, C	3.56	345	P	Pn	01 39 36.3	-2.4
SJCC				S	Sn	01 40 15.6	-4.0
CAPC	Capurgana	3.79	305	P	Pn	01 39 38.5	-3.2
CAPC				S	Sn	01 40 20.0	-5.2
MACC	Macarena, Meta	4.28	175	P	Pn	01 39 45.7	-2.8
MACC				S	Sn	01 40 32.5	-4.7
GARC	Garzon, Huila	4.41	197	P	Pn	01 39 50.1	-0.3
GARC				S	Sn	01 40 40.4	-0.3
CRJC	Cerrejon, Guaj	4.74	16	P	Pn	01 39 54.6	-0.2
CRJC				S	Sn	01 40 46.9	-1.6
URIC	Uribia, Colomb	5.67	23	P	Pn	01 40 06.5	-0.9

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*MDD **08** 01:48:11.0±0.6, 41°.00N×9°.25W, h2^{km}±3^{km}, mb_Lg2.6/13, Error ellipse: s-maj=4.5km s-min=2.2km az=83.0*
*INMG **08** 01:48:12.5±1.7, 40°.96N×9°.34W, h16^{km}±3^{km}, ML2.0, Error ellipse: s-maj=5.3km s-min=1.8km az=95.0, #DIST_RANGE: LOCAL #IPMA_REGION: W Espinho*
ISC 08 01:48:10.4±1.2**, 40°.96N**±0°.02×**9°.29W**±0°.04**, h17**^{km}±9^{km}**,**
n41, σ1^s.38/91**, 1C, Portugal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTO	Porto	0.55	71	⇑*i*Pg	Pg	01 48 20.8	-0.6
PTO				*e*Sg	Sb	01 48 28.5	-0.8
PTO				*i* AML	AML	01 48 28.7	
PTO				*i* AML	AML	01 48 28.8	
PTO				*i* AML	AML	01 48 30.4	
COI	Coimbra	1.01	138	*e*Pg	Pn	01 48 30.9	+1.1
COI				*e*Sg	Sn	01 48 44.5	+1.0
COI				*i* AML	AML	01 48 46.2	
COI				*i* AML	AML	01 48 46.4	
COI				*i* AML	AML	01 48 47.5	
PCAS	Casmilo, Conde	1.09	146	*e*P	Pn	01 48 32.2	+1.3
PCAS				*e*S	Sn	01 48 46.5	+0.9
PCAS				*i* AML	AML	01 48 49.0	
PCAS				*i* AML	AML	01 48 49.8	
PCAS				*i* AML	AML	01 48 51.5	
PVIS	Viseu	1.09	102	*e*P	Pn	01 48 32.2	+1.3
PVIS				*e*S	Sn	01 48 46.9	+1.2
POLO	Lamas de Olo	1.21	69	*e*P	Pb	01 48 33.1	+0.2
POLO				*e*S	Sn	01 48 49.7	+1.1
POLO				*i* AML	AML	01 48 50.3	
POLO				*i* AML	AML	01 48 51.0	
POLO				*i* AML	AML	01 48 52.9	
PCAB	Cabril	1.21	51	*e*P	Pn	01 48 32.9	+0.2
PCAB				*e*S	Sg	01 48 49.7	0.0
PCAB				*i* AML	AML	01 48 52.2	
PCAB				*i* AML	AML	01 48 57.7	
PCAB				*i* AML	AML	01 48 58.1	
PVRL	Vila Real	1.23	75	*e*P	Pg	01 48 34.2	0.0
PVRL				*e*S	Sg	01 48 50.7	+0.4
PVRL				*i* AML	AML	01 48 51.1	
PVRL				*i* AML	AML	01 48 51.5	
PVRL				*i* AML	AML	01 48 52.3	
PGAV	Gavieira, Arco	1.27	37	*e*P	Pn	01 48 33.9	+0.4
PGAV				*e*S	Sb	01 48 50.6	+0.6
PGAV				*i* AML	AML	01 48 51.0	
PGAV				*i* AML	AML	01 48 51.5	
EZAM	Zamans	1.27	20	Pg	Pn	01 48 33.7	+0.2
EZAM				Sg	Sb	01 48 49.3	-0.7
EZAM				*i* IVmb_Lg		01 48 53.3	
ELOB	Lobios	1.30	45	Pg	Pn	01 48 34.3	+0.4
ELOB				Sg	Sb	01 48 50.4	-0.4
ELOB				*i* IVmb_Lg		01 48 53.4	
MTE	Manteigas	1.44	112	*e*Pg	Pg	01 48 38.2	0.0
MTE				*e*Sg	Sg	01 48 57.3	+0.3
MTE				*i* AML	AML	01 48 57.6	
MTE				*i* AML	AML	01 48 58.2	
MTE				*i* AML	AML	01 49 03.1	
PSBE	So Bento	1.49	165	*e*Pg	Pg	01 48 39.3	+0.2
PSBE				*e*Sg	Sg	01 48 58.7	+0.1
PSBE				*i* AML	AML	01 48 59.1	
PSBE				*i* AML	AML	01 49 02.0	
PSBE				*i* AML	AML	01 49 07.8	
PSARD	Sardoal	1.61	147	*e*Pg	Pg	01 48 40.9	-0.4
PSARD				Sg	Sg	01 49 01.4	-0.9
PSARD				*i* AML	AML	01 49 08.7	
PSARD				*i* AML	AML	01 49 09.3	
PSARD				*i* AML	AML	01 49 12.4	
MVO	Moncorvo	1.73	82	*e*Pg	Pg	01 48 43.6	0.0
MVO				Sg	Sg	01 49 05.2	-0.8
MVO				*i* AML	AML	01 49 06.5	
MVO				*i* AML	AML	01 49 06.9	
MVO				*i* AML	AML	01 49 07.2	
PCBR	Castelo Branco	1.78	128	*e*Pn	Pb	01 48 42.5	-0.1
PCBR				*e*Pg	Pg	01 48 44.7	+0.1
PCBR				Sg	Sg	01 49 06.8	-0.9
PCBR				*i* AML	AML	01 49 09.8	
PCBR				*i* AML	AML	01 49 11.7	
PCBR				*i* AML	AML	01 49 13.9	
PMAFR	Mafra	2.00	180	*e*Sn	Sn	01 49 06.2	-1.9
PMAFR				*e*Sg	Sb	01 49 13.6	+2.6
PMAFR				*i* AML	AML	01 49 14.8	
PMAFR				*i* AML	AML	01 49 14.9	
PMAFR				*i* AML	AML	01 49 18.9	
EMAZ	Mazaricos	2.00	7	Pg	Pb	01 48 46.8	+0.4
EMAZ				Sg	Sb	01 49 13.3	+2.2
EMAZ				*i* IVmb_Lg		01 49 14.4	
EAGO	Agolada(Pontev	2.05	26	Pn	Pn	01 48 45.1	+1.0
EAGO				Sg	Sb	01 49 14.8	+2.3
EAGO				*i* IVmb_Lg		01 49 19.7	
PMTG	Montargil	2.06	156	*e*Pn	Pn	01 48 45.6	+1.4
PMTG				*e*Sn	Sn	01 49 08.5	-1.0
PMTG				*e*Sg	Sg	01 49 15.4	-1.2
PMTG				*i* AML	AML	01 49 18.4	
PMTG				*i* AML	AML	01 49 19.1	
PMTG				*i* AML	AML	01 49 19.9	
PBRG	Braganca	2.10	65	*e*Pn	Pb	01 48 47.0	-1.0
PBRG				*e*Pg	Pg	01 48 50.5	-0.2
PBRG				*e*Sg	Sg	01 49 16.5	-1.4
PBRG				*i* AML	AML	01 49 20.7	
PBRG				*i* AML	AML	01 49 22.0	
PBRG				*i* AML	AML	01 49 22.7	
PMRV	Marv??o	2.11	136	*e*Pn	Pn	01 48 45.7	+0.7
PMRV				*e*Sg	Sg	01 49 18.6	+0.2
PMRV				*i* AML	AML	01 49 20.2	
PMRV				*i* AML	AML	01 49 20.6	
PMRV				*i* AML	AML	01 49 21.6	
PARRA	Arraiolos	2.15	175	*e*Pn	Pb	01 48 48.5	-0.4
PARRA				*e*Sg	Sg	01 49 24.0	+4.4
PARRA				*i* AML	AML	01 49 24.8	
PARRA				*i* AML	AML	01 49 29.1	
PARRA				*i* AML	AML	01 49 31.3	
ECAL	Calabor	2.16	62	Pn	Pn	01 48 46.1	+0.4
ECAL				Pg	Pb	01 48 49.3	+0.2
ECAL				Sn	Sn	01 49 12.7	+0.6
ECAL				Sg	Sg	01 49 18.6	-1.2
ECAL				*i* IVmb_Lg		01 49 23.8	
PESTR	Estremoz	2.47	147	*e*Pn	Pn	01 48 50.8	+0.9
PESTR				*e*Pg	Pg	01 48 56.9	-0.8
PESTR				*e*Sg	Sg	01 49 28.8	-0.9
PESTR				*i* AML	AML	01 49 36.8	
PESTR				*i* AML	AML	01 49 39.4	
PESTR				*i* AML	AML	01 49 39.5	
MOE	Montemor	2.54	163	*e*Pn	Pn	01 48 51.1	+0.3
MOE				*e*Sn	Sn	01 49 19.6	-1.7
MOE				*e*Sg	Sg	01 49 30.6	-1.4
MOE				*i* AML	AML	01 49 33.2	
MOE				*i* AML	AML	01 49 33.9	
MOE				*i* AML	AML	01 49 39.0	
EJUZ	Juzbado, Salam	2.58	86	Sg	Sg	01 49 32.1	-1.2
EPLA	Plasencia	2.61	109	Pn	Pn	01 48 53.0	+1.2
EPLA				Pg	Pb	01 48 57.9	+1.2
EPLA				Sn	Sn	01 49 22.4	-0.7
EPLA				Sg	Sg	01 49 33.5	-0.7
EPLA				*i* IVmb_Lg		01 49 36.9	
EVO	Evora	2.62	157	*e*Sn	Sn	01 49 20.4	-2.9
EVO				*e*Sg	Sg	01 49 33.2	-1.3
EVO				*i* AML	AML	01 49 35.0	
EVO				*i* AML	AML	01 49 35.2	
EVO				*i* AML	AML	01 49 41.1	
EBAD	Badajoz	2.81	141	Pn	Pn	01 48 55.4	+0.8
EBAD				Pg	Pb	01 49 02.1	+1.9
EBAD				Sg	Sg	01 49 41.6	+0.8
EBAD				*i* IVmb_Lg		01 49 43.6	
EPON	Pontenova	2.85	33	Pn	Pn	01 48 55.5	+0.3
EPON				Sg	Sg	01 49 40.8	-1.2
EPON				*i* IVmb_Lg		01 49 54.8	
PBEJ	Beja	3.13	159	*e*Sn	Sn	01 49 32.5	-3.4
PBEJ				*e*Sg	Sg	01 49 49.5	-1.4
MESJ	Messejana	3.22	165	*e*Pn	Pn	01 49 00.9	+0.6
MESJ				*e*Sn	Sn	01 49 35.2	-3.1
MESJ				*e*Sg	Sg	01 49 51.7	-2.2
MESJ				*i* AML	AML	01 49 57.1	
MESJ				*i* AML	AML	01 49 59.1	
MESJ				*i* AML	AML	01 50 03.3	
PBAR	Barrancos	3.28	147	*e*Pn	Pn	01 49 01.6	+0.5
PBAR				*e*Sg	Sg	01 49 54.1	-1.6
PBAR				*i* AML	AML	01 49 56.6	
PBAR				*i* AML	AML	01 49 58.3	
PBAR				*i* AML	AML	01 50 04.7	
PCVE	Castro Verde	3.46	163	*e*Sn	Sn	01 49 41.6	-2.5
PCVE				*e*Sg	Sg	01 49 59.2	-2.3
PBDV	Barranco-do-Ve	3.86	164	*e*Sn	Sn	01 49 51.5	-2.5
GUD	Guadarrama	3.91	93	Sg	Sg	01 50 14.9	-1.2
GUD				*i* IVmb_Lg		01 50 20.1	
PAB	San Pablo	4.04	109	Pn	Pn	01 49 11.8	+0.3
PAB				Sn	Sn	01 49 55.7	-2.8
PAB				Sg	Sg	01 50 18.5	-1.6
PAB				*i* IVmb_Lg		01 50 20.7	
ECAB	El Cabril	4.16	133	Pn	Pn	01 49 14.3	+1.2
ECAB				Sn	Sn	01 50 00.7	-0.6
ECAB				Sg	Sg	01 50 24.0	+0.2
ECAB				*i* IVmb_Lg		01 50 33.3	
ESDC	Sonseca Array	4.27	106	Pn	Pn	01 49 15.9	+1.2
ESDC				*i* IVmb_Lg		01 50 01.8	
EADA	Adamuz	4.59	126	Pn	Pn	01 49 20.8	+1.8
EADA				Sn	Sn	01 50 11.7	-0.3
EADA				*i* IVmb_Lg		01 50 14.0	
EADA				Sg	Sg	01 50 37.7	0.0
PSIM	Granatula de C	4.76	115	Sn	Sn	01 50 14.6	-1.7

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*AZER **08** 01:56:49.5, 38°.40N×45°.30E, h10^{km}, ml2.5*
*TEH **08** 01:56:50.3, 38°.38N×45°.42E, h8^{km}±58^{km}*
ISC 08 01:56:50.5±1.3**, 38°.37N**±0°.05×**45°.42E**±0°.05**, h12**^{km}±10^{km}**,**
n15, σ1^s.11/22**, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISHB	Shabestar	0.18	119	Pg	Pg	01 56 54.2	-0.5
ITBZ	Tabriz	0.59	103	Pg	Pg	01 57 01.7	-0.3
ORD	Ordubad	0.72	39	P	Pb	01 57 05.1	+0.2
ORD				S	Sb	01 57 15.9	+1.2
NAX	Nakhchivan	0.80	4	P	Pn	01 57 07.2	-0.6
NAX				S	Sn	01 57 18.7	-1.0
IAZR	Azarshahr	0.82	147	Pg	Pb	01 57 06.8	0.0
SBZ	Shahbuz	1.03	6	P	Pn	01 57 11.1	+0.3
SBZ				S	Sn	01 57 25.5	+0.2
MAKU	Maku	1.14	330	Pg	Pn	01 57 12.2	-0.2
IHRS	Heris	1.28	92	Pg	Pg	01 57 15.3	+0.2
HYR	Heyderabad	1.42	342	P	Pg	01 57 17.4	-0.3
HYR				S	Sg	01 57 39.6	+3.6
IHSH	Hashtrud	1.81	125	Pn	Pb	01 57 23.4	-0.3
AGDM	Agdam	2.18	37	S	Sg	01 58 00.8	+0.4
YRD	Yardimli	2.28	75	P	Pb	01 57 32.4	+0.8
YRD				S	Sg	01 58 03.1	-0.6
LRK	Lerik	2.31	82	P	Pb	01 57 32.2	+0.1
LRK				S	Sg	01 58 05.4	+0.7
GDB	GEDABAY	2.36	6	P	Pb	01 57 31.7	-1.3
GDB				S	Sg	01 58 05.2	-1.1
GANJ	Ganja	2.38	17	S	Sg	01 58 05.7	-1.2

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*DJA **08** 01:56:57.6±0.8, 3°S±4°×12°8E±°, h21^{km}±9^{km}, M3.8/8, MLv3.8/8*
*IDC **08** 01:57:05.9±4.6, 2°.96S×128°.13E, h106^{km}±42^{km}, mb3.3/4, mbtmp3.8/6, MS3.1/2, Error ellipse: s-maj=89.1km s-min=11.7km az=70.0*
ISC 08 01:56:58.9±0.9**, 2°.83S**±0°.07×**128°.09E**±0°.05**, h38**^{km}**, n15,**
σ1^s.78/17**, mb3.6**/4**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	0.86	173	P	Pn	01 57 14.1	-0.4
MSAI	Masohi	0.98	122	P	Pn	01 57 16.5	+0.3
MSAI				S	Sn	01 57 32.1	+3.2
NLAI	Namlea	1.07	247	P	Pn	01 57 19.0	+1.7
SANI	Sanana	2.24	290	P	Pn	01 57 33.0	-0.4
SANI				S	Sn	01 57 59.4	-0.3
BNDI	Bandanaira	2.48	133	P	Pn	01 57 37.1	+0.5
SWI	Sorong	3.72	58	P	Pn	01 57 54.1	+0.3
FAKI	Fak Fak	4.16	91	P	Pn	01 57 58.4	-1.4
KAPI	Kappang	8.60	255	LR	LR	02 02 42.1	
	comp=Z,101nm,19.3s,baz=68,slow=39						
FITZ	Fitzroy Crossi	15.37	189	P	P	02 00 36.1	-1.1
	4.5nm,1.0s,baz=28,slow=11,SNR=6.7						
WRA	Warramunga Arr	18.07	161	P	Pn	02 01 05.8	-1.3
	1.2nm,0.4s,baz=338,slow=12,SNR=26						
WRA				S	Sn	02 04 29.9	+1.9
	0.9nm,0.9s,baz=337,slow=21,SNR=1.1						
ASAR	Alice Springs	21.47	165	P	P	02 01 44.1	-0.2
	5.1nm,0.6s,baz=346,slow=11,SNR=53						
ASAR				S	S	02 05 36.6	-3.9
	1.3nm,0.7s,baz=349,slow=21,SNR=4.9 5.1nm,0.6s						
ASAJ	Asahikawa	48.51	14	LR	LR	02 26 07.7	
	comp=Z,25nm,21.8s,baz=206,slow=36						
MKAR	Makanchi Array	63.71	327	P	P	02 07 29.0	+2.4
	0.5nm,0.8s,baz=138,slow=6.7,SNR=2.8 0.5nm,0.8s						
KURBB	Kurchatov Arra	67.98	328	P	P	02 07 54.3	+0.3
	0.4nm,0.8s,baz=136,slow=4.6,SNR=4.2 0.4nm,0.8s						
BVAR	Borovoye Array	73.54	328	P	P	02 08 26.8	-1.0
	0.2nm,0.4s,baz=128,slow=5.1,SNR=1.9 0.2nm,0.4s						

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*AEIC **08** 02:23:48.3±1.5, 54°.16N±0°.06×163°.67W±0°.09, h45^{km}±9^{km}, Error ellipse: s-maj=9.7km s-min=5.5km az=138.0*
NEIC 08 02:23:47.8±1.3**, 54°.08N**±0°.05×**163°.56W**±0°.08**, h35**^{km}±2^{km}**,**
ML2.5/12**, ML2.4**(AEIC)**, Error ellipse: s-maj=9.5km s-min=5.8km az=315.0, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISLZ	Isanotski Laza	0.66	352		Pn	02 24 00.7	0.0
ISLZ					Sn	02 24 10.2	+0.4
SSLS	Shishaldin Sou	0.69	338		Pn	02 24 00.9	-0.2
ISNN	Isanotski Nort	0.77	351		Pn	02 24 02.2	0.0
ISNN					Sn	02 24 12.3	-0.3
WEBT	Westdahl Beart	0.87	307		Pn	02 24 02.9	-0.7
WEBT					Sn	02 24 14.3	-0.7
AKUT	Akutan	1.30	274		Pn	02 24 09.9	+0.4
AKUT					Sn	02 24 26.7	+1.0
AKUT				IAML		02 24 27.2	
	comp=E,82nm,0.5s						
AKUT				IAML		02 24 27.6	
	comp=N,80nm,0.3s						
ZRO	Akutan Zero	1.43	272		Pn	02 24 11.5	+0.3
AKMO	Akutan Morgan	1.44	272		Pn	02 24 11.8	+0.3
LVA	Lava Point	1.46	274	Pn	Pn	02 24 11.9	+0.2
LVA				Sn	Sn	02 24 29.4	-0.1
LVA				IAML		02 24 32.4	
	comp=E,63nm,0.7s						
UNV	Unalaska Valle	1.76	264		Pn	02 24 16.0	+0.3
UNV					Sn	02 24 36.3	-0.5
S12K	Black Hills	1.85	27		Pn	02 24 16.1	-0.9
S12K	Black Hills	1.85	27	IAML		02 24 37.6	
	comp=N,65nm,0.3s						
S12K				IAML		02 24 39.5	
	comp=E,60nm,0.2s						
MREP	Makushin Rep't	1.90	263		Pn	02 24 18.4	+0.6
MAPS	Pakushin South	2.02	264		Pn	02 24 19.6	+0.3
SDPT	Sand Point	2.20	53	Pn	Pn	02 24 22.1	+0.3
SDPT				IAML		02 25 08.8	
	comp=E,25nm,1.1s						
O14K	Tigyukauivet M	5.34	13	Pn	Pn	02 25 03.2	-1.8
O15K	Ungalikthiuk R	5.51	20	Pn	Pn	02 25 06.1	-1.2
N14K	Kuskokwak Cree	5.95	9	Pn	Pn	02 25 11.7	-1.6
O16K	Kokwok River B	6.29	26	Pn	Pn	02 25 16.9	-1.0
M13K	Dall Lake	6.36	1	Pn	Pn	02 25 17.8	-1.0
M16K	Timber Creek	7.39	18	Pn	Pn	02 25 31.6	-1.5

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*IDC **08** 02:59:36.9±1.0, 9°.02S×158°.78E, h0^{km}, mb3.7/6, mbtmp3.7/6, Error ellipse: s-maj=33.5km s-min=17.6km az=13.0*
ISC 08 02:59:43.3±0.9**, 9°.2S**±0°.2×**158°.8E**±0°.1**, h50**^{km}**, n13,**
σ0^s.98/8**, mb3.5**/6**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.13	105	Pn	Pn	03 00 02.2	-0.7
	371nm,0.3s,baz=270,slow=7.1,SNR=33						
HNR				Sn	Sn	03 00 18.6	+1.3
	519nm,0.3s,baz=270,slow=20,SNR=16						
HNR				LR	LR	03 00 28.9	
	comp=Z,223nm,21.2s,baz=218,slow=42						
WRA	Warramunga Arr	25.99	243	P	P	03 05 11.6	-0.1
	0.8nm,0.7s,baz=71,slow=9.6,SNR=4.8 0.8nm,0.7s						
ASAR	Alice Springs	27.86	236	P	P	03 05 28.0	-0.6
	0.2nm,0.6s,baz=61,slow=9.0,SNR=1.2 0.2nm,0.6s						
H11S3	WAKE ISLAND Hy	28.54	16	T	T	03 34 35.5	
	baz=194,slow=76,SNR=6.4						
H11S2	WAKE ISLAND Hy	28.54	16	T	T	03 34 25.4	
	baz=194,slow=76,SNR=10						

H11S1	WAKE ISLAND Hy	28.55	16	T	T	03 34 26.4	
	baz=194,slow=76,SNR=4.3						
H11N1	WAKE ISLAND Hy	29.76	15	T	T	03 36 06.8	
	baz=194,slow=75,SNR=6.4						
H11N3	WAKE ISLAND Hy	29.77	15	T	T	03 36 01.1	
	baz=194,slow=75,SNR=4.9						
H11N2	WAKE ISLAND Hy	29.77	15	T	T	03 36 07.5	
	baz=194,slow=75,SNR=6.2						
CMAR	Chiang Mai Arr	65.14	295	P	P	03 10 20.5	+0.9
	1.7nm,0.3s,baz=125,slow=5.9,SNR=1.7 1.7nm,0.3s						
SONM	Songino Array	73.21	326	P	P	03 11 09.4	+0.2
	0.3nm,0.3s,baz=125,slow=5.9,SNR=2.0 0.3nm,0.3s						
ILAR	Eielson Array	84.01	20	P	P	03 12 07.0	-1.1
	0.2nm,0.7s,baz=230,slow=5.9,SNR=4.3 0.2nm,0.7s						
MKAR	Makanchi Array	87.53	318	P	P	03 12 26.4	+0.5
	0.3nm,0.8s,baz=92,slow=3.5,SNR=2.1 0.3nm,0.8s						

RSNC 08 03:07:36.3±0.0**,8°N**±1°×**7°5W**±°**,h7^{km}**±2^{km}**,M3.1,mb4.2, ML2.8,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UREC	San Jos de Ur	0.45	243	P	Pg	03 07 44.2	-0.8
UREC				S	Sg	03 07 50.7	-0.2
ZARC	Zaragoza, Cauc	0.54	150	P	Pg	03 07 46.2	-0.5
ZARC				S	Sg	03 07 54.0	+0.3
DBBC	Dabeiba	1.42	229	P	Pn	03 08 00.3	-2.4
DBBC				S	Sb	03 08 18.6	-3.0
APAC	Apartado, Choc	1.44	268	P	Pn	03 08 00.6	-2.2
APAC				S	Sn	03 08 21.3	-0.6
LCBC	Los crdobas,	1.52	306	P	Pn	03 08 02.3	-1.6
LCBC				S	Sb	03 08 24.4	+0.2
PTBC	PUERTO BERRIO,	1.56	155	P	Pn	03 08 01.7	-2.8
PTBC				S	Sn	03 08 23.0	-2.0
BRJC	Barrancabermej	1.69	125	P	Pn	03 08 04.9	-1.3
BRJC				S	Sn	03 08 28.6	+0.5
SJCC	San Jacinto, C	1.93	359	P	Pn	03 08 06.7	-2.9
SJCC				S	Sn	03 08 31.6	-2.5
ARGC	Ariguani, Magd	2.08	25	P	Pb	03 08 13.6	-0.8
ARGC				S	Sn	03 08 36.9	-0.9
CBOC	Ciudad Bolivar	2.26	203	P	Pn	03 08 11.8	-2.5
CBOC				S	Sn	03 08 40.2	-2.3
CAPC	Capurgana	2.30	287	P	Pn	03 08 10.5	-4.2
BARC	Barichara	2.36	125	P	Pn	03 08 14.7	-1.0
BARC				S	Sn	03 08 45.9	+0.8
NORC	Norcasia	2.40	174	P	Pn	03 08 11.8	-4.2
NORC				S	Sn	03 08 45.3	-0.4
PAMC	Pamplona, Colo	2.49	104	P	Pn	03 08 16.9	-0.8
PAMC				S	Sn	03 08 48.5	0.0
SPBC	San Pablo de B	2.52	155	P	Pn	03 08 15.9	-1.9
SPBC				S	Sn	03 08 46.4	-2.5
GUY2C	Guyana, Caldas	2.73	185	P	Pn	03 08 19.2	-1.8
GUY2C				S	Sn	03 08 52.1	-2.4
RUSC	La Rusia	2.89	135	P	Pn	03 08 21.9	-1.3
RUSC				S	Sn	03 08 58.4	-0.1
ROSC	El Rosal	3.20	165	P	Pn	03 08 25.4	-2.0
ROSC				S	Sn	03 09 04.1	-2.0
PLMC	San Jos del P	3.24	201	P	Pn	03 08 26.3	-1.4
CVER	Cruz Verde, Cu	3.57	163	P	Pn	03 08 31.0	-1.6
CHIC	Chingaza	3.59	157	P	Pn	03 08 31.8	-1.0
CHIC				S	Sn	03 09 14.8	-0.9
TAMC	Tame, Arauca	3.64	114	P	Pn	03 08 32.7	-0.5
TAMC				S	Sn	03 09 15.6	-0.9
CRJC	Cerrejon, Guaj	3.76	36	P	Pn	03 08 33.7	-1.2
CRJC				S	Sn	03 09 15.0	-4.5
ORTC	Ortega, Tolima	4.03	182	P	Pn	03 08 38.7	+0.2
VILC	Villavicencio,	4.08	159	P	Pn	03 08 37.3	-2.0
VILC				S	Sn	03 09 28.2	+0.8
YOTC	Yotoco, Valle	4.13	197	P	Pn	03 08 37.9	-2.1
PRAC	Prado	4.22	177	P	Pn	03 08 41.7	+0.5
SDV	Santo Domingo	4.54	78	P	Pn	03 08 45.6	-0.1
SDV				S	Sn	03 09 36.7	-2.2
PTGC	Puerto Gaitan,	4.78	141	P	Pn	03 08 45.8	-3.0
PTGC				S	Sn	03 09 43.0	-1.5
BCIP	Isla Barro Col	4.81	285	P	Pn	03 08 46.0	-3.2
URIC	Uribia, Colomb	4.83	39	P	Pn	03 08 47.0	-2.6
URIC				S	Sn	03 09 41.5	-4.4
MACC	Macarena, Meta	5.92	167	P	Pn	03 09 01.0	-3.5
MACC				S	Sn	03 10 08.1	-4.5

IDC ***08*** *03:08:14.4±1.6, 1.°45N×126.°21E, h0^{km}, mb3.7/4, mbtmp3.8/5, ML3.5/1, MS2.3/1, Error ellipse: s-maj=126.4km s-min=19.6km az=68.0*

NEIC ***08*** *03:08:17.0±1.7, 1.°57N±0.°06×126.°46E±0.°07, h10^{km}±1^{km}, mb4.5/12, Error ellipse: s-maj=11.2km s-min=9.6km az=263.0*

DJA ***08*** *03:08:18.3±0.3, 2°N±3°×12°6E±°, h10^{km}, M3.9/8, mB4.6/1, mb3.9/1, MLv3.9/8, Mw(mB)3.9/1*

ISC 08 03:08:20.8±0.7**,1.°57N**±0.°06×**126.°47E**±0.°07**,h47^{km},n31,** σ**1.^{s}63**/30**,mb4.2**/10**,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.20	132		Pn	03 08 39.9	-1.2
SGSI	Sangihe	2.30	336	P	Pn	03 08 56.5	+0.3
KMSI	Cibinong	2.68	248	P	Pn	03 09 01.2	-0.2
SANI	Sanana	3.63	188	P	Pn	03 09 13.9	-0.6
LUWI	Luwuk	4.52	235	Pn	Pn	03 09 26.4	-0.3
LUWI	Luwuk	4.52	235	P	Pn	03 09 25.4	-1.3
MRSI	Marisa	4.66	257	P	Pn	03 09 28.7	+0.1
APSI	Ampana	5.42	243	P	Pn	03 09 39.9	+0.9
DAV	Davao City (W)	5.53	351	LR	LR	03 12 14.3	
	comp=Z,33nm,20.6s,baz=169,slow=43						
TOLI2	Tolitoli	5.71	265	Pn	Pn	03 09 41.4	-1.7
MPSI	Mapaga	6.69	259	P	Pn	03 09 54.8	-1.7
FITZ	Fitzroy Crossi	19.57	182	P	P	03 12 43.4	-1.5
FITZ	Fitzroy Crossi	19.57	182	P	P	03 12 41.8	-3.0
	0.1nm,0.3s,baz=324,slow=23,SNR=2.0 4.5nm,1.1s						
WB0	Warramunga Arr	22.59	160	P	P	03 13 15.3	-2.2
WB0				IAmb	IAmb	03 13 21.0	
	comp=Z,16nm,1.4s						
WRA	Warramunga Arr	22.73	161	P	P	03 13 18.0	-1.0
WRA	Warramunga Arr	22.73	161	P	P	03 13 17.2	-1.7
	comp=Z,1.9nm,0.5s,baz=339,slow=10,SNR=16 comp=Z,1.9nm,0.5s						
WR8	Warramunga Arr	22.80	160	P	P	03 13 19.5	-0.2
WR8				IAmb	IAmb	03 13 26.7	
	comp=Z,14nm,1.4s						
YOJ	Yonaguni jima	23.00	352	P	P	03 13 21.4	-0.3
AS31	Alice Springs	26.11	164	P	P	03 13 52.8	+2.4
ASAR	Alice Springs	26.11	164	P	P	03 13 54.4	+3.9
ASAR	Alice Springs	26.11	164	P	P	03 13 50.5	0.0
	comp=Z,0.5nm,0.4s,baz=341,slow=9.3,SNR=11 comp=Z,0.5nm,0.4s						
RABL	Rabaul	26.30	103	P	P	03 13 52.0	-0.3
STKA	Stephens Creek	36.23	158	P	P	03 15 21.8	+2.4
ARMA	Armidale	39.84	145	P	P	03 15 51.3	+1.3
ARMA				IAmb	IAmb	03 16 01.9	
	comp=Z,23nm,1.3s						
JKA	Kamikawa-asahi	44.72	17	P	P	03 16 27.1	-2.2
JKA				IAmb	IAmb	03 16 54.1	
	comp=Z,11nm,1.3s						
MKAR	Makanchi Array	59.18	326	P	P	03 18 15.8	-1.2
MKAR	Makanchi Array	59.18	326	P	P	03 18 16.9	-0.1
	comp=Z,0.4nm,0.5s,baz=121,slow=7.7,SNR=4.6 comp=Z,0.4nm,0.5s						
KURBB	Kurchatov Arra	63.41	328	P	P	03 18 45.5	+0.1
	comp=Z,1.1nm,0.6s,baz=130,slow=6.0,SNR=11 comp=Z,1.1nm,0.6s						
ABKAR	Akbulak array	73.65	321	P	P	03 19 48.7	-0.8
D19K	Kuna River	83.21	21	P	P	03 20 43.6	+1.8
D19K				IAmb	IAmb	03 21 08.5	
	comp=Z,5.7nm,1.5s						
D20K	Etivluk River	83.80	21	P	P	03 20 46.7	+1.9
D20K				IAmb	IAmb	03 20 52.1	
	comp=Z,4.0nm,1.5s						

NIED ***08*** *03:45:58.6, 36.°19N×139.°97E, h52^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$2.37; M$_{\theta\theta}$-2.43; M$_{\phi\phi}$0.06; M$_{r\theta}$4.44; M$_{\theta\phi}$-1.40; M$_{\phi r}$3.31; Fault plane solution: M$_0$6.18000×10^{14} NP1: ϕ_s263.00000°, δ14.00000°, λ118.00000°. NP2: ϕ_s54.00000°, δ77.00000°, λ83.00000°.*

NEIC ***08*** *03:45:58.8±2.4, 36.°17N±0.°07×140.°09E±0.°09, h76^{km}±16^{km}, ML3.7/14 Error ellipse: s-maj=11.8km s-min=8.7km az=122.0*

JMA ***08*** *03:45:58.6±0.1, 36.°2N±0.°3×140.°0E±0.°4, h52^{km}, MD4.0/37, MV4.0/37, SW IBARAKI PREF*

JMA Felt III J1 at SW IBARAKI PREF .

IDC ***08*** *03:45:58.7±2.2, 36.°08N×139.°76E, h62^{km}±18^{km}, mb3.4/14, mbtmp3.7/15, MS3.1/2, Error ellipse: s-maj=20.8km s-min=17.1km az=73.0*

ISC 08 03:45:58.0±0.7**,36.°16N**±0.°04×**140.°00E**±0.°05**,h56^{km}**±6^{km}**, n56,** σ**1.^{s}63**/51**,mb3.7**/14**,9D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYT	Yasato	0.17	66	P	Pn	03 46 07.1	+0.3
JYT				S	Sn	03 46 13.1	0.0
JYT	Yasato	0.17	66	A	A	03 46 07.1	
	comp=N,44nm,0.3s,comp=E,73nm,0.3s						
JHYU	Hitachinakayam	0.51	69	A	A	03 46 10.2	
	comp=N,31nm,0.3s,comp=E,9.0nm,0.5s						
TOK	Tokyo	0.51	203	A	A	03 46 10.3	
	comp=N,32nm,0.4s,comp=E,17nm,0.4s						
JAG	Ashikaga	0.52	301	⇓P	Pn	03 46 09.9	0.0
JAG				⇓S	Sn	03 46 17.9	-0.6
JAG	Ashikaga	0.52	301	A	A	03 46 09.9	
	comp=N,24nm,0.3s,comp=E,20nm,0.3s						
JHO	Hitachi	0.64	45	A	A	03 46 11.7	
	comp=N,10.0nm,1.2s,comp=E,10.0nm,0.2s						
JSB	Shiboa	0.81	355	A	A	03 46 13.6	
	comp=N,11nm,0.8s,comp=E,9.0nm,0.9s						
JKT	Katashina	0.86	315	⇓*i*P	Pn	03 46 13.8	-0.3
JKT				⇓*e*S	Sn	03 46 25.6	-0.3
JKT	Katashina	0.86	315	A	A	03 46 13.8	
	comp=N,7.0nm,1.7s,comp=E,8.0nm,0.6s						
JRY	Ryogami san	0.90	261	⇓*i*P	Pn	03 46 15.0	+0.4
JRY				⇓*e*S	Sn	03 46 26.7	-0.1
JOD2	Odawara 2	1.16	220	*e*P	Pn	03 46 18.9	+0.8
JOD2				*e*S	Sn	03 46 34.0	+1.0
JFY	Yanaizu	1.27	349	⇓P	Pn	03 46 19.6	+0.1
JFY				⇓*e*S	Sn	03 46 35.3	-0.3
JUON	Uonuma	1.29	324	P	Pn	03 46 19.9	0.0
JYN	Shimob	1.35	241	⇓*i*P	Pn	03 46 22.8	+2.1
JFK	Kawauchi	1.40	30	P	Pn	03 46 21.1	-0.1
JFK				*e*S	Sn	03 46 38.0	-0.7
JOTO	OTAMA OYAMA	1.42	11	*i* P	Pn	03 46 22.0	+0.4
MJAR	Matsushiro Arr	1.50	285	P	Pn	03 46 22.1	-0.5
	comp=E,72nm,0.4s,baz=86,slow=3.4,SNR=356						
MJAR				S	Sn	03 46 36.9	-4.1
	comp=E,105nm,0.4s,baz=84,slow=18,SNR=11						
MJAR				LR	LR	03 47 00.6	
	comp=E,101nm,18.9s,baz=137,slow=46						
MAJO	Matsushiro	1.50	285		Pn	03 46 23.3	+0.8
MJB9	Matsu-Tunnel	1.50	285		Pn	03 46 23.0	+0.4
JMM	Marumori	1.82	20		Pn	03 46 26.8	-0.1
JMM				IAML		03 46 50.8	
	comp=N,1µm,0.5s						
JSG	Sagara	2.10	226		Pn	03 46 33.8	+3.1
JSG				IAML		03 47 06.6	
	comp=E,712nm,0.6s						
JSG				IAML		03 47 13.3	
	comp=N,629nm,0.8s						
JGF	Kuroka	2.22	256		Pn	03 46 34.7	+2.3
JGF				Sn	Sn	03 47 01.6	+2.9
JGF				IAML		03 47 06.5	
	comp=N,377nm,0.6s						
JGF				IAML		03 47 06.7	
	comp=E,346nm,0.8s						
INU	Inuyama	2.56	252		Pn	03 46 39.3	+2.3
INU				IAML		03 47 22.3	
	comp=N,182nm,0.8s						
JHJ2	Mitsune	3.04	183	Pn	Pn	03 46 43.5	-0.2
JTM	Tenmabayashi	4.70	10	Pn	Pn	03 47 07.3	+1.0
JTM				IAML		03 48 35.1	
	comp=E,39nm,1.2s						
JTM				IAML		03 49 59.5	
	comp=N,77nm,1.8s						
JMN	Monobe	5.58	246	Pn	Pn	03 47 21.1	+2.6
ERM	Erimo	6.34	22	Pn	Pn	03 47 29.4	+0.6
JCJ	Chichijima	9.22	168	Pn	Pn	03 48 05.2	-3.1
JCJ	Chichijima	9.22	168	P	Pn	03 48 04.0	-4.3
	comp=N,19nm,0.3s,baz=359,slow=22,SNR=8.0						
JCJ				S	Sn	03 49 47.1	-3.6
	comp=N,33nm,0.8s,baz=284,slow=22,SNR=1.6						
KSRS	Korea Array	9.77	281	P	Pn	03 48 15.0	-0.8
	comp=N,0.5nm,0.5s,baz=93,slow=14,SNR=4.1						
USRK	Ussuriysk Ar.	10.10	325	P	Pn	03 48 23.6	+3.4
	comp=N,1.8nm,0.7s,baz=129,slow=11,SNR=4.4						
KLR	Kul'dur	14.39	338	P	P	03 49 23.8	-0.2
	comp=N,0.8nm,0.6s,baz=137,slow=12,SNR=5.6						
KLR				LR	LR	03 54 21.2	
	comp=N,37nm,19.0s,baz=154,slow=35						
PETK	Petropavlovsk-	21.02	31	P	P	03 50 40.6	+3.9
	comp=N,0.9nm,0.4s,baz=256,slow=11,SNR=1.7 comp=N,0.9nm,0.4s						
SONM	Songino Array	27.35	306	P	P	03 51 38.3	+0.5
	comp=N,0.5nm,0.6s,baz=101,slow=6.0,SNR=2.5 comp=N,0.5nm,0.6s						
TGY	Tagaytay City	27.83	223	LR	LR	04 01 34.9	
	comp=N,83nm,21.8s,baz=24,slow=34						
H11N2	WAKE ISLAND Hy	28.71	118	T	T	04 21 59.9	
	baz=310,slow=75						
H11N1	WAKE ISLAND Hy	28.72	118	T	T	04 22 00.1	
	baz=310,slow=75						
H11N3	WAKE ISLAND Hy	28.73	118	T	T	04 21 58.2	
	baz=310,slow=75						
H11S1	WAKE ISLAND Hy	29.38	120	T	T	04 22 51.8	
	baz=314,slow=76,SNR=52						
H11S3	WAKE ISLAND Hy	29.38	120	T	T	04 22 48.8	
	baz=314,slow=76,SNR=33						
H11S2	WAKE ISLAND Hy	29.39	120	T	T	04 22 44.4	
	baz=314,slow=76,SNR=26						
ZALV	Zalesovo Beam	41.67	313	P	P	03 53 40.4	-0.5
	comp=N,1.3nm,0.6s,baz=111,slow=8.1,SNR=4.9 comp=N,1.3nm,0.6s						
MKAR	Makanchi Array	43.63	303	P	P	03 53 54.8	-2.0
MKAR	Makanchi Array	43.63	303	P	P	03 53 56.7	-0.1
	comp=N,1.3nm,0.7s,baz=88,slow=9.7,SNR=8.5 comp=N,1.3nm,0.7s						
KURBB	Kurchatov Arra	45.65	308	P	P	03 54 12.1	-0.7
	comp=N,1.6nm,0.6s,baz=85,slow=8.2,SNR=14 comp=N,1.6nm,0.6s						
BVAR	Borovoye Array	50.32	313	P	P	03 54 47.6	-1.3
	comp=N,0.4nm,0.4s,baz=82,slow=10,SNR=2.5 comp=N,0.4nm,0.4s						
ILAR	Eielson Array	50.84	32	P	P	03 54 52.5	-0.1
	comp=N,0.5nm,0.7s,baz=277,slow=6.3,SNR=8.4 comp=N,0.5nm,0.7s						
WRA	Warramunga Arr	56.05	186	P	P	03 55 30.6	-0.7
	comp=N,1.1nm,0.4s,baz=1.8,slow=7.6,SNR=34 comp=N,1.1nm,0.4s						
ASAR	Alice Springs	59.78	186	P	P	03 55 56.2	-1.2
	comp=N,0.3nm,0.5s,baz=3.6,slow=6.2,SNR=6.9 comp=N,0.3nm,0.5s						
FINES	FINESS Array B	69.05	332	P	P	03 56 57.4	-0.1
	comp=N,0.5nm,0.6s,baz=46,slow=5.7,SNR=4.1 comp=N,0.5nm,0.6s						
AKASG	Malin Array Be	74.29	322	P	P	03 57 28.4	-0.7
	comp=N,0.1nm,0.3s,baz=47,slow=7.5,SNR=5.6 comp=N,0.1nm,0.3s						
NB2	NORSAR Subarra	74.55	337	P	P	03 57 30.0	-0.6
	comp=Z,0.8nm,0.6s,baz=41,slow=5.9						
NOA	NORSAR Array B	74.55	337	P	P	03 57 29.9	-0.6
	comp=Z,0.5nm,0.6s,baz=41,slow=5.9,SNR=4.1 comp=Z,0.5nm,0.6s						
NVAR	Mina Array Bea	76.42	52	P	P	03 57 42.9	+1.0
	comp=Z,0.2nm,0.3s,baz=338,slow=7.4,SNR=1.5 comp=Z,0.2nm,0.3s						
TXAR	Lajitas Array	91.56	52	P	P	03 58 59.8	+0.8
	comp=Z,0.2nm,0.7s,baz=330,slow=9.0,SNR=2.4 comp=Z,0.2nm,0.7s						

IDC ***08*** *03:52:57.0±1.2, 24.°48S×178.°49E, h570^{km}±12^{km}, mb3.6/14, mbtmp4.5/16, Error ellipse: s-maj=16.6km s-min=12.9km az=124.0*

NOU ***08*** *03:52:58.3, 24.°47S×178.°65E, h600^{km}, mb4.6/27, South of Fiji Islands*

NEIC ***08*** *03:52:58.1±2.5, 24.°6S±0.°1×178.°5E±0.°1, h576^{km}±7^{km}, mb4.5/52, Error ellipse: s-maj=21.4km s-min=17.4km az=132.0*

ISC 08 03:52:58.9±0.4**,24.°55S**±0.°06×**178.°50E**±0.°06**,h600^{km}, n161,** σ**1.^{s}61**/156**,mb4.4**/43**,1C-3D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	5.68	147	P	P	03 54 38.9	+1.8
LKBA	Tubou, Lakemba	6.77	22	P	P	03 54 44.4	-2.5
MSVF	Nonsavu	6.80	356	P	P	03 54 43.9	-3.4
	4.2nm,0.4s,baz=206,slow=17,SNR=6.1						
MSVF				S	S	03 56 10.8	-5.0
	11nm,0.9s,baz=115,slow=22,SNR=1.3						
MSVF	Nonsavu	6.80	356	P	P	03 54 45.3	-2.0
TAVE	Taveuni	7.95	11	P	P	03 54 56.5	-1.3
PINNC	Pines Island,	10.32	279	P	P	03 55 20.9	+0.1
FUTU	Fugatoga	10.68	18	P	P	03 55 22.2	-2.3
YATNC	Mamie plateau,	10.95	281	P	P	03 55 28.1	+0.9
DZM	Mont Dzumac	11.35	280	P	P	03 55 30.7	-0.5
DZM	Mont Dzumac	11.35	280	P	P	03 55 30.1	-1.2
	22nm,0.7s,baz=109,slow=10,SNR=12						
DZM	Mont Dzumac	11.35	280	P	P	03 55 31.4	+0.1
OUZ	Omahuta	11.45	201	P	P	03 55 33.0	+1.1
OUZ	Omahuta	11.45	201	P	P	03 55 32.5	+0.6
NIUE	Niue	12.05	65	P	P	03 55 36.2	-2.0
NIUE	Niue	12.05	65	S	S	03 57 46.6	-2.5
MKAZ	Moumakai	12.84	192	P	P	03 55 45.6	-0.3
AWAZ	Awhitu Peninsu	12.90	194	P	P	03 55 46.3	-0.2
WMGZ	Waiomatatini S	13.23	180	P	P	03 55 48.8	-1.0
TWGZ	Tauwhareparae	13.59	182	P	P	03 55 52.8	-0.7
TWGZ				S	S	03 58 11.3	-5.4
URZ	Urewera	13.72	185	P	P	03 55 50.9	-3.8
	6.6nm,0.3s,baz=340,slow=4.0,SNR=6.8						
URZ				S	S	03 58 13.8	-5.0
	7.3nm,0.5s,baz=308,slow=19,SNR=6.9						
URZ	Urewera	13.72	185	P	P	03 55 53.3	-1.4
URZ				S	S	03 58 13.9	-4.9
MWZ	Matawai	13.77	183	P	P	03 55 52.2	-3.1
MWZ				S	S	03 58 16.5	-3.3
BKZ	Black Stump Fm	14.67	186	P	P	03 56 00.4	-3.5
VRZ	Vera Road	14.87	191	P	P	03 56 06.3	+0.6
KWHZ	Kaweka Forest	14.93	186	P	P	03 56 05.1	-1.2
MRZ	Mangatainoka R	16.25	188	P	P	03 56 17.0	-1.3
OGWZ	Otaki Gorge	16.46	189	P	P	03 56 18.9	-1.3
HOWZ	Holdsworth Sta	16.49	188	P	P	03 56 18.6	-2.0
DUWZ	D'Urville Isla	16.65	192	P	P	03 56 21.5	-0.5
CAW	Cannon Point	16.76	189	P	P	03 56 22.4	-0.5
QRZ	Quartz Range	16.98	196	P	P	03 56 24.5	-0.5
QRZ	Quartz Range	16.98	196	P	P	03 56 25.3	+0.3
SNZO	South Karori	17.01	190	P	P	03 56 25.9	+0.7
TKNZ	Takaka Hill	17.08	194	P	P	03 56 25.9	0.0
NNZ	Nelson	17.16	193	P	P	03 56 26.2	-0.4
TUWZ	Tuamarina	17.26	192	P	P	03 56 27.2	-0.3
MRNZ	Matariki Terra	17.47	195	P	P	03 56 29.1	-0.3
THZ	Tophouse	17.79	194	P	P	03 56 32.0	-0.4
DSZ	Denniston Nort	18.03	196	P	P	03 56 35.4	+0.8
KHZ	Kahutara	18.29	192	P	P	03 56 36.4	-0.4
KHZ	Kahutara	18.29	192	P	P	03 56 36.4	-0.4
WVZ	Waitaha Valley	19.55	197	P	P	03 56 48.1	-0.2
JCZ	Jackson Bay	21.03	200	P	P	03 57 02.7	+0.9
ARMA	Armidale	24.51	250	P	P	03 57 34.6	+1.6
EIDS	Eidsvold	24.86	262	P	P	03 57 36.3	+0.4
EIDS	Eidsvold	24.86	262	P	P	03 57 36.6	+0.7
MGCD	Mangrove Creek	25.43	244	P	P	03 57 42.8	+1.9
CNB	Canberra Magne	27.34	240	P	P	03 57 58.2	+0.5
CAN	Canberra	27.63	240	P	P	03 57 58.3	-1.9
CAN	Canberra	27.63	240	P	P	03 58 00.1	-0.1
CMSA	Cobar Meteorol	29.70	249	P	P	03 58 18.3	+0.2
CMSA	Cobar Meteorol	29.70	249	P	P	03 58 18.4	+0.3
CTAO	Charters Tower	30.12	272		P	03 58 22.1	+0.3
CTAO	Charters Tower	30.12	272	P	P	03 58 21.8	0.0
CTAO	Charters Tower	30.12	272	P	P	03 58 22.4	+0.6
QLP	Quilpie	30.93	259	P	P	03 58 28.9	+0.3
QLP	Quilpie	30.93	259	P	P	03 58 29.7	+1.1
TOO	Toolangi	30.95	237		P	03 58 29.4	+0.7
TOO				IAmb	IAmb	03 58 30.2	
	comp=Z,13nm,1.1s						
TAU	Tasmania Unive	31.49	227	P	P	03 58 27.6	-5.6
TAU	Tasmania Unive	31.49	227	P	P	03 58 34.7	+1.5
STKA	Stephens Creek	33.21	249		P	03 58 48.3	+0.5
STKA	Stephens Creek	33.21	249	P	P	03 58 48.0	+0.1
	comp=Z,10nm,0.4s,baz=94,slow=10,SNR=41 comp=Z,10nm,0.4s						
STKA	Stephens Creek	33.21	249	P	P	03 58 48.2	+0.3
COEN	Coen	34.88	281	P	P	03 59 02.5	+0.6
COEN	Coen	34.88	281	P	P	03 58 59.4	-2.6
COEN	Coen	34.88	281	P	P	03 59 03.1	+1.1
HTT	Hallett	35.56	246	P	P	03 59 07.7	+0.3
QIS	Mount Isa	36.06	268	P	P	03 59 11.4	-0.3
BBOO	Buckleboo	37.93	248		P	03 59 26.2	-0.5
BBOO	Buckleboo	37.93	248	P	P	03 59 26.3	-0.5
BBOO	Buckleboo	37.93	248	P	P	03 59 26.6	-0.2
AS01	Alice Springs	40.54	262	P	P	03 59 47.7	-0.1
AS31	Alice Springs	40.58	262		P	03 59 48.1	-0.1
AS31				IAmb	IAmb	03 59 48.8	
	comp=Z,12nm,0.8s						
ASAR	Alice Springs	40.58	262	P	P	03 59 48.1	-0.1
	comp=Z,48nm,1.0s,baz=90,slow=6.8,SNR=185						
ASAR				ScP	ScP	04 04 32.5	+4.0
	comp=Z,1.1nm,0.7s,baz=99,slow=4.1,SNR=7.7						
ASAR				S	S	04 05 12.5	-3.4
	comp=Z,0.5nm,0.7s,baz=96,slow=16,SNR=2.2 comp=Z,48nm,1.0s						
WR8	Warramunga Arr	40.85	267		P	03 59 49.6	-0.8
WB0	Warramunga Arr	41.00	268		P	03 59 50.7	-0.8
WRA	Warramunga Arr	41.00	267	P	P	03 59 50.9	-0.6
	comp=Z,16nm,0.4s,baz=97,slow=8.5,SNR=1024						
WRA				ScP	ScP	04 04 34.8	+4.6
	comp=Z,0.9nm,0.7s,baz=100,slow=3.5,SNR=4.6						
WRA				S	S	04 05 18.5	-3.4
	comp=Z,1.5nm,1.1s,baz=109,slow=14,SNR=3.5 comp=Z,16nm,0.4s						
FORT	Forrest	44.80	250	P	P	04 00 20.1	-0.7
FORT	Forrest	44.80	250	P	P	04 00 20.1	-0.7
MTN	Manton Dam	46.15	276	P	P	04 00 30.3	-0.9
DRS	Darwin Rock St	46.51	276	P	P	04 00 33.7	-0.3
KNRA	Kununurra	47.32	271		P	04 00 40.0	0.0
FITZ	Fitzroy Crossi	49.42	267		P	04 00 55.8	+0.2
FITZ	Fitzroy Crossi	49.42	267	P	P	04 00 55.9	+0.4
KMBL	Kambalda	50.01	249	P	P	04 00 59.4	-0.3
KLBR	Kellerberrin	53.48	248	P	P	04 01 24.2	-0.3
MEEK	Meekatharra	53.62	254	P	P	04 01 25.6	0.0
VNDA	Vanda	53.62	184	P	P	04 01 26.3	+1.5
VNDA	Vanda	53.62	184	P	P	04 01 26.0	+1.2
	comp=Z,0.7nm,0.9s,baz=9.7,slow=6.3,SNR=2.6 comp=Z,0.7nm,0.9s						
PSA00	Pilbara Seismi	53.70	261	P	P	04 01 25.6	-0.7
PSA00				IAmb	IAmb	04 01 52.5	
	comp=Z,34nm,1.4s						
PSA00	Pilbara Seismi	53.70	261	P	P	04 01 24.9	-1.4
PSA00				IAmb	IAmb	04 01 26.6	
	comp=Z,18nm,1.5s						
NWAO	Narrogin (SRO)	53.72	246	P	P	04 01 25.9	-0.3
MBWA	Marble Bar	53.91	261	P	P	04 01 26.9	-0.9
MBWA				IAmb	IAmb	04 01 33.5	
	comp=Z,28nm,1.3s						
MBWA	Marble Bar	53.91	261	P	P	04 01 27.4	-0.4
BLDU	Ballidu	54.52	249	P	P	04 01 30.9	-1.0
MUN	Mundaring	54.72	247	P	P	04 01 32.6	-0.6
MORW	Morawa	55.37	251	P	P	04 01 37.3	-0.5
MORW				IAmb	IAmb	04 01 37.7	
	comp=Z,20nm,1.1s						
MORW	Morawa	55.37	251	P	P	04 01 37.9	+0.1
CASY	Casey	58.93	206	P	P	04 02 01.4	+0.1
PLAI	Plampang	59.79	274	P	P	04 02 08.1	+0.2
TOLI2	Tolitoli	61.42	286		P	04 02 17.1	-1.5
QSPA	South Pole Qui	65.53	180	P	P	04 02 45.5	+1.5
QSPA	South Pole Qui	65.53	180	P	P	04 02 45.4	+1.4
	comp=Z,5.1nm,1.0s,baz=72,slow=1.5,SNR=8.9 comp=Z,5.1nm,1.0s						
MAW	Mawson	76.66	201	P	P	04 03 48.7	-0.1
	comp=Z,2.2nm,0.8s,baz=51,slow=14,SNR=1.8 comp=Z,2.2nm,0.8s						
PETK	Petropavlovsk-	79.42	347	P	P	04 04 03.6	0.0
	comp=Z,2.9nm,0.8s,baz=114,slow=9.1,SNR=5.5 comp=Z,2.9nm,0.8s						
NJ2	Nanjing	80.06	312	*e*P	P	04 04 11.3	+3.9
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
SNAA	Sanae	84.03	180	P	P	04 04 27.4	+0.5
SNAA	Sanae	84.03	180	P	P	04 04 27.0	0.0
	comp=Z,2.2nm,1.0s,baz=205,slow=6.9,SNR=9.6 comp=Z,2.2nm,1.0s						
VNA3	Neumayer Olymp	84.30	177	⇑P	P	04 04 28.6	+0.4
	comp=Z,0.7nm,0.2s						
O02D	Mt. Diablo Mer	84.44	41	P	P	04 04 32.0	+2.6
O02D				IAmb	IAmb	04 04 33.1	
	comp=Z,9.0nm,0.9s						
VNA2	Neumayer--Watz	84.70	178	⇓P	P	04 04 30.4	+0.2
	comp=Z,0.2nm,0.2s,baz=192,slow=5.0						

VNA1	**Neumayer--Stat**	**84.94**	**178**	⇓P	**P**	**04 04 31.6**	**+0.3**
	comp=Z,0.4nm,0.3s						
NVAR	**Mina Array Bea**	**86.17**	**45**	P	**P**	**04 04 39.8**	**+1.8**
NVAR	**Mina Array Bea**	**86.17**	**45**	P	**P**	**04 04 39.2**	**+1.3**
	comp=Z,3.4nm,0.8s,baz=227,slow=7.2,SNR=13						
	comp=Z,3.4nm,0.8s						
N15K	**Kwethluk River**	**86.21**	**11**	P	**P**	**04 04 38.7**	**+1.4**
N15K				IAmb	IAmb	04 04 39.8	
	comp=Z,7.9nm,0.8s						
J05D	**Fort Rock, OR**	**87.28**	**39**		**P**	**04 04 45.1**	**+2.2**
J05D				IAmb	IAmb	04 04 46.1	
	comp=Z,8.8nm,0.9s						
PRN	**Pahroc Range**	**87.72**	**47**	IAmb	IAmb	04 04 48.4	
	comp=Z,7.1nm,1.2s						
PINE	**Pine Mountain**	**87.75**	**39**	IAmb	IAmb	04 04 48.5	
	comp=Z,10nm,0.9s						
WVOR	**Wild Horse Val**	**88.30**	**41**	IAmb	IAmb	04 04 50.7	
	comp=Z,5.7nm,0.9s						
CMAR	**Chiang Mai Arr**	**88.47**	**291**	P	**P**	**04 04 50.8**	**+1.9**
	comp=Z,1.3nm,0.3s,baz=87,slow=7.9,SNR=4.1						
	comp=Z,1.3nm,0.3s						
319A	**Douglas**	**88.64**	**55**	IAmb	IAmb	04 04 53.3	
	comp=Z,7.2nm,0.9s						
I07A	**Izee**	**88.76**	**40**	IAmb	IAmb	04 04 53.3	
	comp=Z,4.8nm,1.1s						
PLCA	**Paso Flores**	**88.79**	**135**	P	**P**	**04 04 52.0**	**+1.8**
	comp=Z,4.4nm,1.1s,baz=232,slow=0.6,SNR=3.4						
	comp=Z,4.4nm,1.1s						
J08A	**Circle Bar Ran**	**88.93**	**41**	IAmb	IAmb	04 04 53.5	
	comp=Z,11nm,1.4s						
KNB	**Kanab**	**89.01**	**48**	IAmb	IAmb	04 04 54.4	
	comp=Z,6.5nm,1.1s						
U15A	**North Rim**	**89.06**	**49**		**P**	**04 04 53.9**	**+2.3**
ELK	**Elko**	**89.43**	**44**	IAmb	IAmb	04 04 55.7	
	comp=Z,5.1nm,0.9s						
PZH	**PanZhiHua**	**89.80**	**299**	P	**P**	**04 04 56.9**	**+1.9**
J18K	**Innoko River**	**89.88**	**11**		**P**	**04 04 55.4**	**+1.1**
J18K				IAmb	IAmb	04 04 56.1	
	comp=Z,3.9nm,0.8s						
HHC	**Hu-ho-hao-te**	**89.92**	**316**	*e*P	**P**	**04 04 55.8**	**+0.6**
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,51nm,3.8s						
Q16A	**Castle Valley**	**91.11**	**47**	IAmb	IAmb	04 05 04.9	
	comp=Z,5.8nm,0.9s						
SRU	**San Rafael Swe**	**91.64**	**47**	IAmb	IAmb	04 05 05.9	
	comp=Z,5.7nm,0.9s						
TXAR	**Lajitas Array**	**91.94**	**59**	P	**P**	**04 05 06.7**	**+1.9**
	comp=Z,1.4nm,0.8s,baz=213,slow=7.2,SNR=15						
	comp=Z,1.4nm,0.8s						
M27K	**Edge Creek, AK**	**92.20**	**17**	IAmb	IAmb	04 05 07.2	
	comp=Z,4.1nm,1.0s						
BSUT	**Blindstream Ca**	**92.21**	**46**	IAmb	IAmb	04 05 08.8	
	comp=Z,5.6nm,0.9s						
ILAR	**Eielson Array**	**92.99**	**14**	P	**P**	**04 05 08.2**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=232,slow=5.4,SNR=6.1						
	comp=Z,0.4nm,0.7s						
E18K	**Tukpahlearik C**	**93.02**	**8**		**P**	**04 05 08.8**	**+0.1**
E18K				IAmb	IAmb	04 05 10.6	
	comp=Z,3.2nm,0.8s						
M29M	**Somme Creek**	**93.22**	**19**	IAmb	IAmb	04 05 11.9	
	comp=Z,2.2nm,0.8s						
E19K	**Redstone River**	**93.51**	**9**	IAmb	IAmb	04 05 12.7	
	comp=Z,4.0nm,0.8s						
SONM	**Songino Array**	**96.71**	**320**	P	**P**	**04 05 26.0**	**0.0**
	comp=Z,0.3nm,0.5s,baz=134,slow=4.2,SNR=1.3						
	comp=Z,0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**114.77**	**316**	PKP	**PKiKP**	**04 10 31.4**	**-0.5**
	comp=Z,0.1nm,0.2s,baz=65,slow=2.6,SNR=4.7						
BVAR	**Borovoye Array**	**120.02**	**318**	PKP	**PKiKP**	**04 10 42.5**	**+0.4**
	comp=Z,1.2nm,0.3s,baz=114,slow=2.5,SNR=6.4						
SPITS	**Spitsbergen Ar**	**125.66**	**356**	PKP	**PKiKP**	**04 10 52.8**	**+0.2**
	comp=Z,5.6nm,0.9s,baz=93,slow=4.2,SNR=6.2						
FINES	**FINESS Array B**	**138.61**	**340**	PKhKP	PKPpre	04 11 08.2	
	comp=Z,1.2nm,1.0s,baz=96,slow=2.8,SNR=5.0						
FINES				PKP	**PKPdf**	**04 11 16.9**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=59,slow=4.9,SNR=6.3						
FINES				SKPbc	**SKiKP**	**04 13 58.8**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=39,slow=3.8,SNR=12						
NB2	**NORSAR Subarra**	**142.49**	**350**	PKP	**PKPdf**	**04 11 21.2**	**-2.7**
	comp=Z,2.1nm,0.9s,baz=16,slow=3.1						
NOA	**NORSAR Array B**	**142.49**	**350**	PKhKP	PKPpre	04 11 21.4	
	comp=Z,2.4nm,0.8s,baz=16,slow=4.8,SNR=11						
HFS	**Hagfors**	**142.90**	**347**	PKP	**PKPdf**	**04 11 22.6**	**-2.0**
	comp=Z,3.7nm,0.3s,baz=82,slow=3.1,SNR=65						
PABE	**Paberze**	**143.86**	**335**		**PKPdf**	**04 11 26.7**	**+0.4**
AKASG	**Malin Array Be**	**144.75**	**326**	PKP	**PKPab**	**04 11 28.6**	**-1.0**
	comp=Z,1.1nm,0.4s,baz=46,slow=4.2,SNR=12						
AKBB	**Malin Array Si**	**144.75**	**326**	PKPdf	**PKPab**	**04 11 29.0**	**-0.5**
KIEV	**Kiev**	**144.77**	**326**	PKPdf	**PKPab**	**04 11 29.1**	**-0.5**
ILGA	**Ilgaz**	**146.41**	**308**	PKPbc	**PKiKP**	**04 11 35.3**	**-0.9**
MMAI	**Mount Meron Ar**	**146.71**	**293**	PKPbc	**PKiKP**	**04 11 35.8**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=74,slow=6.2,SNR=1.8						
BRTR	**Keskin Array B**	**146.86**	**306**	PKPbc	**PKiKP**	**04 11 35.5**	**-1.6**
	comp=Z,0.3nm,0.5s,baz=160,slow=4.6,SNR=2.3						
EKA	**Eskdalemuir Ar**	**149.23**	**2**	PKPbc	**PKiKP**	**04 11 40.4**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=354,slow=3.0,SNR=13						
STHS	**Stebnicka Huta**	**149.47**	**330**	*e*PKP	**PKiKP**	**04 11 42.0**	**+0.1**
KSP	**Ksiaz**	**150.37**	**337**	*e*PKPbc	**PKiKP**	**04 11 44.6**	**+0.9**
CLL	**Collm**	**151.05**	**341**	⇓*i*PKPbc	**PKiKP**	**04 11 45.6**	**+0.5**
	comp=Z,8.0nm,0.9s						
CLL				*e*PKPab	**PKPab**	**04 11 56.0**	**+0.8**
VYHS	**Vyhne**	**151.22**	**331**	*e*PKP	**PKPbc**	**04 11 42.9**	**-2.4**
ESBB	**Sonseca Array**	**164.78**	**7**	PKPdf	**PKPdf**	**04 11 54.8**	**-0.3**
TORD	**Torodi Ar. Bea**	**168.26**	**195**	PKPdf	**PKPdf**	**04 11 58.8**	**+0.4**

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*IDC **08** 04:29:39.2±0.7, 17°.10N×147°.30E, h0^{km}, mb4.0/13, mbtmp4.0/14, ML4.7/1, MS3.0/2, Error ellipse: s-maj=24.6km s-min=15.5km az=97.0*

*NEIC **08** 04:29:40.4±2.2, 17°.0N±0°.1×147°.7E±0°.1, h10^{km}±1^{km}, mb4.4/7, Error ellipse: s-maj=24.8km s-min=16.8km az=128.0*

ISC 08 04:29:44.9±0.7**, 17°.06N**±0°.09×**147°.3E**±0°.1**, h41**^{km}**, n31,** σ**0**^{s}**.84**/31**, mb4.2**/17**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.16**	**214**	Pn	**Pn**	**04 30 46.6**	**+0.7**
GUMO	**Guam**	**4.16**	**214**	Pn	**Pn**	**04 30 46.4**	**+0.5**
	39nm,0.3s,baz=40,slow=6.4,SNR=4.1						
GUMO				Sn	**Sn**	**04 31 33.0**	**-0.2**
	49nm,0.3s,baz=344,slow=24,SNR=2.7						
	69nm,0.3s						
PATS	**Pohnpei**	**14.82**	**132**	Pn	Pn	04 33 05.3	-6.6
JOW	**Kunigami**	**20.10**	**302**	LR	LR	04 41 13.8	
	comp=Z,68nm,20.5s,baz=330,slow=34						
JGF	**Kuroka**	**20.47**	**336**	P	**P**	**04 34 18.9**	**-0.3**
JGF				IAmb	IAmb	04 34 21.2	
	comp=Z,21nm,1.1s						
MJAR	**Matsushiro Arr**	**21.00**	**339**	P	**P**	**04 34 24.7**	**-0.2**
	comp=Z,2.8nm,0.5s,baz=167,slow=10,SNR=8.2						
	comp=Z,2.8nm,0.5s						
WB0	**Warramunga Arr**	**38.72**	**200**	P	**P**	**04 37 03.6**	**-1.7**
WR8	**Warramunga Arr**	**38.86**	**199**	P	**P**	**04 37 06.1**	**-0.4**
WR8				IAmb	IAmb	04 37 23.7	
	comp=Z,14nm,1.2s						
WRA	**Warramunga Arr**	**38.90**	**200**	P	**P**	**04 37 06.5**	**-0.3**
	comp=Z,3.0nm,0.7s,baz=22,slow=8.7,SNR=63						
WRA				PcP	**PcP**	**04 39 17.9**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=23,slow=3.4,SNR=5.1						
	comp=Z,3.0nm,0.7s						
FITZ	**Fitzroy Crossi**	**40.91**	**212**	P	**P**	**04 37 23.2**	**-0.3**
FITZ				IAmb	IAmb	04 37 43.3	
	comp=Z,4.7nm,1.5s						
AS31	**Alice Springs**	**42.53**	**198**	P	**P**	**04 37 35.1**	**-1.6**
ASAR	**Alice Springs**	**42.53**	**198**	P	**P**	**04 37 34.8**	**-1.9**
ASAR	**Alice Springs**	**42.53**	**198**	P	**P**	**04 37 36.9**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=24,slow=7.7,SNR=9.6						
ASAR				PcP	**PcP**	**04 39 29.9**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=30,slow=3.3,SNR=5.6						
	comp=Z,0.3nm,0.4s						
SONM	**Songino Array**	**45.35**	**322**	P	**P**	**04 37 59.8**	**+0.5**
	comp=Z,0.5nm,0.4s,baz=142,slow=7.7,SNR=2.1						
	comp=Z,0.5nm,0.4s						
CMAR	**Chiang Mai Arr**	**45.94**	**279**	P	**P**	**04 38 05.2**	**+1.0**
	comp=Z,1.1nm,0.3s,baz=87,slow=8.1,SNR=1.5						
CMAR				LR	LR	04 58 27.3	
	comp=Z,8.5nm,18.1s,baz=165,slow=38						
	comp=Z,1.1nm,0.3s						
ZALV	**Zalesovo Beam**	**60.22**	**323**	P	**P**	**04 39 49.6**	**+0.8**
	comp=Z,0.7nm,0.3s,baz=67,slow=12,SNR=3.7						
	comp=Z,0.7nm,0.3s						
MKAR	**Makanchi Array**	**60.67**	**314**	P	**P**	**04 39 51.2**	**-0.9**
MKAR	**Makanchi Array**	**60.67**	**314**	P	**P**	**04 39 52.3**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=86,slow=8.7,SNR=6.1						
	comp=Z,0.9nm,0.7s						
KURBB	**Kurchatov Arra**	**63.53**	**318**	P	**P**	**04 40 11.1**	**0.0**
	comp=Z,1.4nm,0.5s,baz=98,slow=7.0,SNR=15						
	comp=Z,1.4nm,0.5s						
ILAR	**Eielson Array**	**64.46**	**26**	P	**P**	**04 40 16.4**	**-0.6**
	comp=Z,1.0nm,0.9s,baz=261,slow=5.4,SNR=8.6						
	comp=Z,1.0nm,0.9s						
BMAR	**Burnt Mountain**	**66.02**	**23**	P	**P**	**04 40 26.6**	**-0.5**
H29M	**Whitestone**	**68.22**	**25**	P	**P**	**04 40 42.1**	**+1.0**
H29M				IAmb	IAmb	04 40 42.9	
	comp=Z,1.7nm,0.8s						
BVAR	**Borovoye Array**	**68.69**	**321**	P	**P**	**04 40 43.9**	**-0.2**
	comp=Z,1.5nm,0.5s,baz=98,slow=8.0,SNR=9.1						
	comp=Z,1.5nm,0.5s						
G31M	**Satah River**	**69.92**	**24**	P	**P**	**04 40 51.3**	**-0.2**
G31M				IAmb	IAmb	04 40 52.2	
	comp=Z,5.8nm,1.4s						
ABKAR	**Akbulak array**	**75.55**	**317**	P	**P**	**04 41 24.5**	**-0.8**
YKA	**Yellowknife Ar**	**78.73**	**28**	P	**P**	**04 41 43.2**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=295,slow=5.9,SNR=7.6						
	comp=Z,0.8nm,0.8s						
NVAR	**Mina Array Bea**	**82.96**	**52**	P	**P**	**04 42 06.9**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=302,slow=4.4,SNR=2.4						
	comp=Z,0.6nm,0.8s						
FINES	**FINESS Array B**	**88.99**	**336**	P	**P**	**04 42 34.0**	**-1.2**
	comp=Z,0.9nm,0.6s,baz=67,slow=4.6,SNR=7.6						
	comp=Z,0.9nm,0.6s						
TORD	**Torodi Ar. Bea**	**134.65**	**309**	PKP	**PKiKP**	**04 49 01.0**	**-0.5**
	comp=Z,1.3nm,0.4s,baz=25,slow=1.5,SNR=2.9						
DBIC	**Dimbokro**	**143.74**	**308**	PKP	PKPbc	04 49 14.5	+0.3
	comp=Z,5.5nm,1.1s,baz=291,slow=3.3,SNR=3.8						
LPAZ	**La Paz**	**146.10**	**94**	PKPbc	**PKPab**	**04 49 23.3**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=300,slow=2.4,SNR=8.9						

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*IDC **08** 04:58:06.6±0.7, 9°.93S×78°.80W, h0^{km}, mb3.9/8, mbtmp3.9/10, ML4.0/2, MS3.3/4, Error ellipse: s-maj=38.1km s-min=16.8km az=58.0*

*NEIC **08** 04:58:15.0±1.9, 10°.01S±0°.08×78°.7W±0°.1, h56^{km}±5^{km}, mb4.4/23, Error ellipse: s-maj=18.9km s-min=10.3km az=75.0*

*RSNC **08** 04:58:18.7±1.0, 10°S±5°×7°8W±°, h103^{km}±17^{km}, M4.5, mB5.2, mb4.8, ML4.6, Mw(mB)4.5*

*VAO **08** 04:58:25.3±1.1, 9°.62S×77°.98W, h117^{km}±7^{km}, mb4.3*

ISC 08 04:58:13.9±0.6**, 10°.01S**±0°.05×**78°.71W**±0°.07**, h50**^{km}**, n89,** σ**1**^{s}**.90**/85**, mb4.3**/14**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
NNA	**Nana**	**2.69**	**137**		**Pn**	**04 58 55.6**	**+0.7**
NNA	**Nana**	**2.69**	**137**	Pn	**Pn**	**04 58 54.6**	**-0.2**
	63nm,0.3s,baz=330,slow=8.7,SNR=48						
NNA				Sn	**Sn**	**04 59 27.7**	**+1.5**
	146nm,0.3s,baz=217,slow=22,SNR=14						
	139nm,0.3s						
ATAH	**Atahualpa**	**2.87**	**6**	Pn	**Pn**	**04 58 59.0**	**+1.4**
	79nm,0.3s,baz=163,slow=3.3,SNR=263						
ATAH				Sn	**Sn**	**04 59 35.0**	**+3.9**
	70nm,0.3s,baz=71,slow=18,SNR=10						
ATAH				LR	LR	05 00 15.2	
	comp=Z,169nm,20.6s,baz=187,slow=46						
CZSB	**Cruzeiro do Su**	**6.35**	**70**		**Pn**	**04 59 45.7**	**+0.6**
CZSB	**Cruzeiro do Su**	**6.35**	**70**	*e*P	**Pn**	**04 59 45.8**	**+0.8**
CZSB	**Cruzeiro do Su**	**6.35**	**70**	P	**Pn**	**04 59 45.6**	**+0.6**
	9µm797nm,0.6s						
CZSB				S	**Sn**	**05 00 57.9**	**+1.7**
	9µm797nm,0.6s						
COHC	**Cochancay**	**7.51**	**356**	P	**Pn**	**05 00 02.4**	**+1.5**
	3µm38nm,0.6s						
COHC				S	**Sn**	**05 01 24.2**	**-0.6**
	3µm38nm,0.6s						
PIAT	**Ana Tenorio**	**8.96**	**3**	P	**Pn**	**05 00 22.6**	**+1.4**
	964nm86nm,0.6s						
PIAT				S	**Sn**	**05 02 00.0**	**-1.0**
	964nm86nm,0.6s						
SLOR	**San Lorenzo -**	**9.22**	**1**		**Pn**	**05 00 26.8**	**+2.0**
OTAV	**Otavalo**	**10.18**	**1**		**Pn**	**05 00 40.0**	**+2.1**
OTAV	**Otavalo**	**10.18**	**1**	*e*P	**Pn**	**05 00 42.5**	**+4.6**
OTAV	**Otavalo**	**10.18**	**1**	P	**Pn**	**05 00 40.4**	**+2.5**
	13nm,0.8s						
OTAV				S	**Sn**	**05 02 39.1**	**+8.1**
	13nm,0.8s						
PAC1	**Pacto, Paraso**	**10.21**	**360**	P	**Pn**	**05 00 40.5**	**+2.5**
PAC1				S	**Sn**	**05 02 33.4**	**+2.2**
TBTG	**Tabatinga, AM**	**10.47**	**57**		**Pn**	**05 00 39.6**	**-1.9**
TBTG	**Tabatinga, AM**	**10.47**	**57**	*e*P	**Pn**	**05 00 42.6**	**+1.2**
TBTG	**Tabatinga, AM**	**10.47**	**57**	P	**Pn**	**05 00 41.0**	**-0.5**
	59nm,0.5s						
TULM	**Tulcn-Chalpat**	**10.69**	**5**	P	**Pn**	**05 00 48.6**	**+3.6**
	808nm45nm,1.1s						
FLOC	**Florencia**	**11.91**	**15**		**Pn**	**05 00 59.5**	**-1.7**
LPAZ	**La Paz**	**12.04**	**122**	Pn	**Pn**	**05 01 05.2**	**+1.6**
	0.1nm,0.3s,baz=303,slow=8.7,SNR=3.6						
LPAZ				LR	LR	05 06 24.9	
	comp=Z,106nm,20.5s,baz=286,slow=41						
LPAZ	**La Paz**	**12.04**	**122**	*e*P	Pn	05 01 08.7	+5.2
GARC	**Garzon, Huila**	**12.53**	**15**	P	**Pn**	**05 01 07.9**	**-2.0**
GARC				S	**Sn**	**05 03 20.9**	**-7.3**
POPC	**Popayan, Colom**	**12.63**	**9**	P	**Pn**	**05 01 13.6**	**+2.4**
	8.1nm,1.4s						
MACC	**Macarena, Meta**	**13.01**	**22**	P	**Pn**	**05 01 15.3**	**-0.9**
	43nm,0.6s						
VILC	**Villavicencio,**	**14.89**	**20**	P	**Pn**	**05 01 42.2**	**+0.6**
ROSC	**El Rosal**	**15.38**	**17**	Pn	**Pn**	**05 01 50.8**	**+2.5**
	1.0nm,0.3s,baz=216,slow=19,SNR=2.0						
TEFE	**Tefe**	**15.39**	**66**	*e*P	**Pn**	**05 01 45.8**	**-2.2**
RUSC	**La Rusia**	**16.76**	**20**	P	**P**	**05 02 08.0**	**+0.6**
RUSC				IAmb	IAmb	05 02 23.4	
	comp=Z,15nm,0.9s						
SIV	**San Ignacio**	**18.18**	**111**	P	**P**	**05 02 23.7**	**+1.0**
	baz=289,slow=12,SNR=5.7						
	comp=Z,1.0nm,0.5s						
VILB	**Vilhena**	**18.37**	**101**	*e*P	**P**	**05 02 24.9**	**+0.1**
BBSD	**Serra de San D**	**18.97**	**114**	*e*P	**P**	**05 02 32.1**	**+0.8**
MACA	**Manacapuru-AM**	**19.14**	**70**	*e*P	**P**	**05 02 31.7**	**-1.6**
PTLB	**Pontes e Lacer**	**19.84**	**108**	*e*P	**P**	**05 02 41.2**	**+0.4**
SDV	**Santo Domingo**	**20.42**	**23**	*e*P	**P**	**05 02 47.2**	**-0.1**
BAUV	**El Baul**	**21.61**	**30**	P	**P**	**05 02 59.9**	**0.0**
PDRB	**Porto dos Gac**	**21.65**	**96**	*e*P	**P**	**05 02 59.3**	**-1.1**
BOAV	**Boa Vista**	**21.90**	**57**	*e*P	**P**	**05 03 01.5**	**-1.6**
SALV	**Santo Antonio**	**23.17**	**107**	*e*P	**P**	**05 03 15.1**	**-1.4**
NPGB	**Novo Progresso**	**23.27**	**85**	*e*P	**P**	**05 03 15.5**	**-2.0**
H03N2	**Juan Fernandez**	**23.32**	**180**	T	T	05 27 18.5	
	baz=0.5,slow=76,SNR=42						
H03N1	**Juan Fernandez**	**23.32**	**180**	T	T	05 27 18.8	
	baz=0.5,slow=76,SNR=30						
MURT	**Porto Murtinho**	**23.34**	**122**	*e*P	**P**	**05 03 19.5**	**+1.5**
H03N3	**Juan Fernandez**	**23.34**	**180**	T	T	05 27 17.6	
	baz=0.5,slow=76,SNR=35						
ITTB	**Itaituba**	**23.46**	**78**	*e*P	**P**	**05 03 17.4**	**-1.9**
PCRV	**Puerto La Cruz**	**24.45**	**35**	LR	LR	05 14 39.5	
	comp=Z,63nm,19.2s,slow=41						
AQDB	**Aquidauana**	**24.48**	**118**	*e*P	**P**	**05 03 29.3**	**+0.7**
CPUP	**Villa Florida**	**25.93**	**132**	*e*P	**P**	**05 03 44.8**	**+3.0**
TRCB	**Terra Rica**	**28.00**	**120**	*e*P	**P**	**05 04 01.9**	**+1.6**
DIAM	**Diamantina, MG**	**34.91**	**108**	*e*P	**P**	**05 05 00.8**	**-0.5**
DRIO	**Del Rio**	**44.53**	**332**	P	**P**	**05 06 20.3**	**-0.6**
TXAR	**Lajitas Array**	**45.92**	**329**	P	**P**	**05 06 32.2**	**+0.1**
TXAR	**Lajitas Array**	**45.92**	**329**	P	**P**	**05 06 32.0**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=153,slow=8.7,SNR=9.7						
	comp=Z,0.5nm,0.6s						
TX31	**Lajitas Ar. Si**	**45.92**	**329**	P	**P**	**05 06 32.4**	**+0.3**
APMT	**Aspermont**	**47.67**	**336**	P	**P**	**05 06 46.0**	**+0.5**
VHRN	**Van Horn**	**47.77**	**329**	P	**P**	**05 06 46.1**	**-0.3**
T42A	**Van Buren**	**48.21**	**347**	P	**P**	**05 06 48.0**	**-1.6**
T42A				IAmb	IAmb	05 07 03.5	
	comp=Z,2.5nm,0.5s						
DKNS	**Dickens**	**48.30**	**335**	P	**P**	**05 06 51.2**	**+0.7**
DKNS				IAmb	IAmb	05 06 51.3	
	comp=Z,5.7nm,0.8s						
WMOK	**Wichita Mounta**	**48.40**	**338**	P	**P**	**05 06 50.3**	**-0.9**
SMWD	**Samnorwood**	**49.28**	**337**	P	**P**	**05 06 57.8**	**-0.1**
R32A	**Long Quarter,**	**51.67**	**340**	P	**P**	**05 07 15.6**	**-0.3**
ANMO	**Albuquerque**	**51.85**	**331**	P	**P**	**05 07 18.0**	**+0.4**
ANMO				IAmb	IAmb	05 07 18.6	
	comp=Z,2.1nm,0.6s						
ANMO	**Albuquerque**	**51.85**	**331**	P	**P**	**05 07 18.0**	**+0.4**
ANMO				IAmb	IAmb	05 07 18.5	
	comp=Z,2.2nm,0.6s						
ANMO	**Albuquerque**	**51.85**	**331**	P	**P**	**05 07 18.0**	**+0.4**
ANMO				IAmb	IAmb	05 07 18.5	
	comp=Z,2.0nm,0.6s						
I42A	**Draeger Farm,**	**54.44**	**351**	P	**P**	**05 07 34.8**	**-1.3**
PV15	**Paradox Valley**	**55.55**	**332**	P	**P**	**05 07 44.5**	**-0.1**
PV15				IAmb	IAmb	05 07 46.7	
	comp=Z,5.1nm,0.8s						
PV02	**Paradox Valley**	**55.56**	**331**	P	**P**	**05 07 45.3**	**+0.6**
PV02				IAmb	IAmb	05 07 45.6	
	comp=Z,5.1nm,0.7s						
PV13	**Radium Mtn., P**	**55.56**	**331**	IAmb	IAmb	05 08 05.8	
	comp=Z,3.2nm,1.0s						
ECSD	**EROS Data Cent**	**55.91**	**344**	P	**P**	**05 07 45.1**	**-1.7**
ECSD				IAmb	IAmb	05 07 45.8	
	comp=Z,1.9nm,0.6s						
NVAR	**Mina Array Bea**	**60.71**	**325**	P	**P**	**05 08 20.1**	**-0.5**
NVAR	**Mina Array Bea**	**60.71**	**325**	P	**P**	**05 08 19.9**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=123,slow=8.4,SNR=7.0						
	comp=Z,0.7nm,0.5s						
ULM	**Lac du Bonnet**	**61.85**	**348**	P	**P**	**05 08 26.3**	**-1.5**
	comp=Z,1.6nm,0.4s,baz=164,slow=5.5,SNR=3.5						
	comp=Z,1.6nm,0.4s						
LYMT	**Lyon Mountain**	**64.14**	**335**	P	**P**	**05 08 44.8**	**+1.4**
SNAA	**Sanae**	**76.12**	**162**	P	**P**	**05 09 55.5**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=281,slow=8.2,SNR=5.2						
SNAA				LR	LR	05 40 49.8	
	comp=Z,97nm,18.4s,baz=50,slow=34						
	comp=Z,0.7nm,0.6s						
YKA	**Yellowknife Ar**	**77.43**	**344**	P	**P**	**05 10 02.1**	**-1.4**
	comp=Z,0.3nm,0.7s,baz=142,slow=5.3,SNR=5.7						
	comp=Z,0.3nm,0.7s						
YKAW3	**Yellowknife Wh**	**77.49**	**344**	P	**P**	**05 10 02.9**	**-1.0**
YKAW3				IAmb	IAmb	05 10 15.9	
	comp=Z,2.6nm,1.4s						
QSPA	**South Pole Qui**	**80.11**	**180**	P	**P**	**05 10 19.6**	**+1.0**
QSPA				IAmb	IAmb	05 10 19.9	
	comp=Z,1.8nm,0.6s						
QSPA	**South Pole Qui**	**80.11**	**180**	P	**P**	**05 10 19.3**	**+0.8**
	comp=Z,1.3nm,0.5s,baz=38,slow=20,SNR=19						
	comp=Z,1.3nm,0.5s						
TORD	**Torodi Ar. Bea**	**83.05**	**75**	P	**P**	**05 10 34.6**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=265,slow=3.6,SNR=1.4						
	comp=Z,0.8nm,0.3s						
ESDC	**Sonseca Array**	**84.82**	**48**	P	**P**	**05 10 43.2**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=249,slow=4.8,SNR=1.6						
	comp=Z,0.3nm,0.7s						
BCAR	**Beaver Creek A**	**87.17**	**336**	P	**P**	**05 10 54.0**	**-0.5**
H11N3	**WAKE ISLAND Hy**	**116.17**	**287**	T	T	07 23 29.5	
	baz=92,slow=75,SNR=8.8						
H11N2	**WAKE ISLAND Hy**	**116.18**	**287**	T	T	07 23 23.6	
	baz=92,slow=75,SNR=10						
H11N1	**WAKE ISLAND Hy**	**116.18**	**287**	T	T	07 23 25.2	
	baz=92,slow=75,SNR=7.1						
H11S2	**WAKE ISLAND Hy**	**116.32**	**286**	T	T	07 23 43.3	
	baz=94,slow=74,SNR=9.7						
H11S1	**WAKE ISLAND Hy**	**116.32**	**286**	T	T	07 23 38.7	
	baz=94,slow=74,SNR=6.4						
H11S3	**WAKE ISLAND Hy**	**116.34**	**286**	T	T	07 23 38.4	
	baz=94,slow=74,SNR=4.7						
AKTO	**Aktyubinsk**	**126.25**	**33**	PKP	**PKPdf**	**05 17 10.4**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=278,slow=0.5,SNR=1.2						
ASAR	**Alice Springs**	**133.78**	**223**	PKP	**PKPdf**	**05 17 25.5**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=120,slow=1.8,SNR=5.0						
KURBB	**Kurchatov Arra**	**135.37**	**21**	PKP	**PKPdf**	**05 17 28.3**	**0.0**
	comp=Z,0.2nm,0.3s,baz=26,slow=2.4,SNR=1.8						
WRA	**Warramunga Arr**	**135.91**	**228**	PKP	**PKPdf**	**05 17 29.8**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=120,slow=1.9,SNR=10						

NOU 08 05:27:20.2, 16°.12S×**167°.78E, h20**^{km}**, mb4.1**/11**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
VLAKA	**Lakatoro**	**0.34**	**272**	P	Pn	05 27 29.0	-1.1
VLAKA	**Lakatoro**	**0.34**	**272**	S	Sn	05 27 35.2	-1.2
YATNC	**Mamie plateau,**	**5.97**	**188**	P	Pn	05 28 47.4	-0.1
DZM	**Mont Dzumac**	**6.05**	**192**	P	Pn	05 28 49.4	+0.7
OUENC	**Ouen Island, N**	**6.33**	**188**	P	Pn	05 28 53.0	+0.6

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*NEIC **08** 05:46:22.8±0.9, 16°.38N±0°.05×119°.9E±0°.1, h10^{km}±1^{km}, mb4.5/26, Error ellipse: s-maj=21.4km s-min=3.3km az=245.0*

*IDC **08** 05:46:33.0±1.3, 16°.22N×120°.18E, h112^{km}±14^{km}, mb3.6/17, mbtmp4.0/18, MS3.1/10, Error ellipse: s-maj=21.4km s-min=11.8km az=72.0*

ISC 08 05:46:25.4±0.6**, 16°.35N**±0°.06×**119°.9E**±0°.1**, h35**^{km}**, n162,** σ**1**^{s}**.48**/152**, mb4.4**/31**, MS3.1**/7**, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**2.44**	**156**	P	Pn	05 47 07.5	+4.7
	845nm,0.6s,baz=282,slow=3.8,SNR=13						
TGY				S	**Sn**	**05 47 38.4**	**+6.8**
	1µm,0.6s,baz=259,slow=12,SNR=6.0						
TWG	**Pinlang**	**6.53**	**9**	Pn	**Pn**	**05 47 58.5**	**-0.5**
YULB	**Yu-li**	**7.13**	**10**	Pn	**Pn**	**05 48 05.8**	**-1.5**
SSLB	**Suanglung**	**7.47**	**7**	Pn	**Pn**	**05 48 10.1**	**-1.8**
NACB	**Ninganchiao**	**7.95**	**11**	Pn	**Pn**	**05 48 16.7**	**-1.7**
YOJ	**Yonaguni jima**	**8.58**	**19**	Pn	**Pn**	**05 48 26.1**	**-1.0**
DAV	**Davao City (W)**	**10.76**	**148**	LR	LR	05 54 11.9	
	comp=Z,66nm,19.8s,baz=304,slow=44						
MYLDM	**Lahad Datu**	**11.18**	**187**	Pn	**Pn**	**05 49 02.0**	**-0.8**
JOW	**Kunigami**	**13.01**	**35**	LR	LR	05 54 24.7	
	comp=Z,50nm,21.5s,baz=226,slow=36						
TNTI	**Ternate**	**17.13**	**154**		**P**	**05 50 23.0**	**-0.6**
JNU	**Nakatsue**	**19.42**	**29**	P	**Pn**	**05 50 49.3**	**-0.8**
JNU	**Nakatsue**	**19.42**	**29**	P	**Pn**	**05 50 50.4**	**+0.3**
	12nm,0.8s,baz=213,slow=8.1,SNR=5.3						
JNU				LR	LR	05 58 39.7	
	comp=Z,35nm,18.4s,baz=149,slow=37						
CMAR	**Chiang Mai Arr**	**20.12**	**279**	P	Pn	05 51 00.4	+1.9
	0.8nm,0.3s,baz=99,slow=9.1,SNR=9.0						
CMAR				LR	LR	05 58 47.9	
	comp=Z,35nm,20.9s,baz=110,slow=36						
	0.8nm,0.3s						
KSRS	**Korea Array**	**22.18**	**17**	P	**P**	**05 51 18.2**	**-0.2**
	1.7nm,0.7s,baz=201,slow=10,SNR=6.3						
	1.7nm,0.7s						
BJT	**Baijiatuau**	**23.81**	**353**		**P**	**05 51 35.6**	**+0.6**
PSI	**Prapat**	**24.65**	**239**	LR	LR	06 00 11.7	
	comp=Z,60nm,19.0s,baz=309,slow=33						
JGF	**Kuroka**	**24.70**	**36**	P	**P**	**05 51 43.4**	**+0.1**
SONM	**Songino Array**	**33.32**	**343**	P	**P**	**05 53 01.7**	**+1.7**
	1.7nm,0.5s,baz=163,slow=12,SNR=8.7						
	1.7nm,0.5s						
KLR	**Kul'dur**	**34.19**	**14**	LR	LR	06 07 22.7	
	comp=Z,21nm,20.5s,baz=182,slow=36						
WB0	**Warramunga Arr**	**38.61**	**158**	P	**P**	**05 53 42.9**	**-2.4**
WB0				IAmb	IAmb	05 54 02.5	
	comp=Z,9.9nm,1.2s						
WRA	**Warramunga Arr**	**38.75**	**158**	P	**P**	**05 53 43.5**	**-3.1**
	comp=Z,0.9nm,0.7s,baz=340,slow=8.3,SNR=6.1						
	comp=Z,0.9nm,0.7s						
AS31	**Alice Springs**	**42.05**	**161**	P	**P**	**05 54 13.8**	**-0.1**
ASAR	**Alice Springs**	**42.05**	**161**	P	**P**	**05 54 11.2**	**-2.7**
	comp=Z,0.4nm,0.3s,baz=338,slow=7.1,SNR=11						
ASAR				PcP	**PcP**	**05 56 08.6**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=336,slow=3.4,SNR=2.2						
	comp=Z,0.4nm,0.3s						
MKAR	**Makanchi Array**	**43.47**	**322**	P	**P**	**05 54 26.5**	**+1.3**
MKAR	**Makanchi Array**	**43.47**	**322**	P	P	05 54 27.1	+1.9
	comp=Z,0.4nm,0.5s,baz=132,slow=9.0,SNR=5.4						
MKAR				PcP	**PcP**	**05 56 13.1**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=123,slow=5.3,SNR=3.5						
	comp=Z,0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**46.37**	**332**	P	**P**	**05 54 49.5**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=142,slow=5.4,SNR=1.6						
	comp=Z,0.4nm,0.3s						
PEA0B	**Petropavlovsk-**	**47.11**	**30**	P	**P**	**05 54 54.3**	**+0.4**
PETK	**Petropavlovsk-**	**47.11**	**30**	P	**P**	**05 54 54.7**	**+0.8**
PETK	**Petropavlovsk-**	**47.11**	**30**	P	**P**	**05 54 53.7**	**-0.2**
	comp=Z,5.3nm,0.8s,baz=198,slow=5.3,SNR=13						
PETK				LR	LR	06 15 19.4	
	comp=Z,23nm,19.3s,baz=215,slow=37						
	comp=Z,5.3nm,0.8s						
KURK	**Kurchatov**	**47.58**	**325**	P	**P**	**05 54 58.0**	**+0.4**
KURK				IAmb	IAmb	05 55 00.1	
	comp=Z,2.3nm,0.6s						
KURBB	**Kurchatov Arra**	**47.59**	**325**	P	**P**	**05 54 59.3**	**+1.7**
	comp=Z,1.1nm,0.6s,baz=124,slow=8.8,SNR=7.9						
	comp=Z,1.1nm,0.6s						
MA2	**Magadan**	**48.68**	**20**	LR	LR	06 17 15.2	
	comp=Z,23nm,18.3s,baz=78,slow=38						
STKA	**Stephens Creek**	**52.27**	**157**	P	**P**	**05 55 29.7**	**-3.6**
	comp=Z,2.3nm,0.9s,baz=339,slow=14,SNR=3.5						
	comp=Z,2.3nm,0.9s						
BVAR	**Borovoye Array**	**53.17**	**325**	P	**P**	**05 55 40.1**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=99,slow=8.9,SNR=2.7						
	comp=Z,0.7nm,0.5s						
TIXI	**Tiksi**	**55.55**	**3**	LR	LR	06 23 36.2	
	comp=Z,27nm,18.2s,baz=346,slow=40						

KIRV	Kirov	66.04	327	LR	LR	06 25 42.2	
	comp=Z,34nm,21.4s,baz=160,slow=35						
C16K	Lisburne Hills	69.29	23	P	P	05 57 30.7	+2.0
	baz=262						
D17K	Noatak River	70.06	23	P	P	05 57 36.0	+2.5
	baz=264						
C17K	DeLong Mountai	70.11	22	P	P	05 57 35.9	+2.1
	baz=264						
B18K	Kokolik River	70.69	22	P	P	05 57 39.5	+2.1
	baz=265						
I17K	Unalakleet	70.79	27	P	P	05 57 40.1	+2.1
	baz=268						
C18K	Utukok River	70.85	22	P	P	05 57 39.2	+0.8
	baz=266						
G17K	Kiwalik Mounta	70.88	26	P	P	05 57 40.5	+2.0
	baz=267						
E18K	Tukpahlearik C	70.99	24	P	P	05 57 40.8	+1.6
	baz=267						
H17K	Granite Mounta	71.16	26	P	P	05 57 42.6	+2.3
	baz=268						
C19K	Lookout Ridge	71.46	22	P	P	05 57 43.3	+1.2
C19K				IAmb	IAmb	05 57 44.7	
	comp=Z,4.9nm,1.0s						
C19K	Lookout Ridge	71.46	22	P	P	05 57 43.9	+1.8
	baz=267						
J17K	VABM Dome	71.50	28		P	05 57 43.9	+1.5
J17K				IAmb	IAmb	05 57 44.8	
	comp=Z,4.9nm,0.8s						
J17K	VABM Dome	71.50	28	P	P	05 57 44.3	+2.0
	baz=270,SNR=5.2						
G18K	Tagagawik	71.71	25	P	P	05 57 44.6	+1.0
G18K	Tagagawik	71.71	25	P	P	05 57 44.5	+1.0
	baz=269						
K17K	Iditarod	71.85	29	P	P	05 57 46.1	+1.7
K17K	Iditarod	71.85	29	P	P	05 57 46.4	+1.9
	baz=270						
D19K	Kuna River	71.97	23		P	05 57 46.4	+1.2
D19K	Kuna River	71.97	23	P	P	05 57 46.6	+1.5
	baz=269,SNR=6.0						
M17K	Holitna River	72.28	30	P	P	05 57 49.5	+2.4
	baz=272						
E19K	Redstone River	72.29	24	P	P	05 57 48.0	+1.0
E19K	Redstone River	72.29	24	P	P	05 57 48.2	+1.2
	baz=270						
B20K	Meade River	72.34	21	P	P	05 57 48.6	+1.3
B20K				IAmb	IAmb	05 57 49.5	
	comp=Z,4.7nm,0.8s						
B20K	Meade River	72.34	21	P	P	05 57 48.3	+1.0
	baz=269						
D20K	Etivluk River	72.53	22		P	05 57 49.4	+1.0
D20K	Etivluk River	72.53	22	P	P	05 57 50.0	+1.5
	baz=270,SNR=8.4						
J18K	Innoko River	72.56	28	P	P	05 57 50.0	+1.2
	baz=272						
L18K	Granite Mounta	72.61	29	P	P	05 57 50.0	+1.0
L18K				IAmb	IAmb	05 57 51.4	
	comp=Z,3.2nm,0.7s						
L18K	Granite Mounta	72.61	29	P	P	05 57 50.9	+1.9
	baz=272,SNR=5.0						
H19K	Roundabout Mou	72.63	26		P	05 57 50.3	+1.3
H19K				IAmb	IAmb	05 57 51.4	
	comp=Z,3.6nm,0.7s						
H19K	Roundabout Mou	72.63	26	P	P	05 57 50.7	+1.7
	baz=271,SNR=5.3						
E20K	Nigu River	72.69	23	P	P	05 57 50.7	+1.3
	baz=271,SNR=6.1						
F20K	Avaraart Lake	72.88	24	P	P	05 57 51.5	+1.0
F20K				IAmb	IAmb	05 57 52.6	
	comp=Z,4.8nm,1.0s						
F20K	Avaraart Lake	72.88	24	P	P	05 57 52.0	+1.5
	baz=271						
M18K	Stony River	73.05	30	P	P	05 57 52.9	+1.3
	baz=273						
C21K	Knifeblade Rid	73.18	22	P	P	05 57 53.8	+1.5
	baz=272						
B21K	Ikpikpuk River	73.23	21	P	P	05 57 54.0	+1.4
	baz=272						
H20K	Anotleneega Mo	73.28	26	P	P	05 57 54.4	+1.4
	baz=273,SNR=6.0						
O18K	Koktuh Hills	73.46	32	P	P	05 57 55.9	+1.8
	baz=274						
L19K	White Mountain	73.47	29	P	P	05 57 55.3	+1.2
L19K				IAmb	IAmb	05 57 56.3	
	comp=Z,3.2nm,0.8s						
L19K	White Mountain	73.47	29	P	P	05 57 56.1	+1.9
	baz=274						
I20K	Naaghedeneel	73.49	26	P	P	05 57 56.1	+2.0
	baz=273						
E21K	Killik River	73.50	23	P	P	05 57 55.4	+1.2
	baz=273						
B22K	Teshekpuk Lake	73.61	21	P	P	05 57 56.1	+1.4
	baz=273						
J20K	Nowinta River	73.67	27		P	05 57 56.5	+1.2
J20K				IAmb	IAmb	05 57 57.5	
	comp=Z,4.4nm,0.6s						
J20K	Nowinta River	73.67	27	P	P	05 57 56.9	+1.7
	baz=274,SNR=7.4						
M19K	Big River Lodg	73.71	29	P	P	05 57 57.2	+1.6
	baz=274						
F21K	Alatna River	73.75	24	P	P	05 57 57.7	+2.0
	baz=273						
K20K	Telida	73.75	28	P	P	05 57 57.5	+1.7
	baz=274						
G21K	Allakaket	73.79	25	P	P	05 57 56.9	+1.0
G21K				IAmb	IAmb	05 57 58.0	
	comp=Z,5.1nm,0.9s						
G21K	Allakaket	73.79	25	P	P	05 57 57.5	+1.6
	baz=274,SNR=7.9						
L20K	Farewell, AK	73.91	29	P	P	05 57 58.5	+1.8
	baz=274						
D22K	Ayikyak River	73.95	22	P	P	05 57 57.9	+1.1
	baz=274						
H21K	Melozitna Rive	74.13	25		P	05 57 59.4	+1.5
H21K				IAmb	IAmb	05 57 59.9	
	comp=Z,2.6nm,0.7s						
H21K	Melozitna Rive	74.13	25	P	P	05 57 59.3	+1.4
	baz=274						
F22K	John River	74.24	24	P	P	05 57 58.3	-0.2
	baz=275						
M20K	Styx River	74.31	29	P	P	05 58 00.5	+1.4
M20K				IAmb	IAmb	05 58 00.9	
	comp=Z,6.8nm,1.1s						
M20K	Styx River	74.31	29	P	P	05 58 01.0	+1.9
	baz=275						
E22K	Anaktuvuk Pass	74.33	23	P	P	05 58 00.1	+1.1
	baz=275						
CHUM	Lake Minchumin	74.49	27	P	P	05 58 01.4	+1.4
	baz=275,SNR=5.3						
I21K	Tanana	74.52	26	P	P	05 58 01.1	+1.0
I21K				IAmb	IAmb	05 58 02.6	
	comp=Z,7.4nm,1.3s						
I21K	Tanana	74.52	26	P	P	05 58 01.5	+1.4
	baz=275						
G22K	Bettles	74.55	24	P	P	05 58 01.1	+0.8
	baz=275						
C23K	Itkillik River	74.61	21	P	P	05 58 01.2	+0.6
	baz=275						
CAST	Castle Rocks	74.64	28		P	05 58 01.9	+0.9
CAST	Castle Rocks	74.64	28	P	P	05 58 02.1	+1.2
	baz=276,SNR=17						
D23K	Nanushuk River	74.67	22	P	P	05 58 03.0	+2.1
	baz=276						
H22K	Ishtalitna Cre	74.70	25	P	P	05 58 03.0	+1.7
	baz=276						
BPAW	Bear Paw Mtn.	75.05	27	P	P	05 58 04.5	+1.2
	baz=277,SNR=7.5						
MLY	Manley	75.05	26	P	P	05 58 04.8	+1.5
	baz=276,SNR=9.5						
E23K	Chandalar	75.15	23	P	P	05 58 05.7	+1.8
	baz=277						
D24K	Happy Valley	75.31	22	P	P	05 58 06.0	+1.3
	baz=277						
H23K	Yukon River	75.45	25	P	P	05 58 07.4	+1.8
	baz=277						
SUA	Susitna One	75.48	30	P	P	05 58 06.6	+0.6
	baz=278						
E24K	Your Creek	75.57	23	P	P	05 58 07.6	+1.3
	baz=278						
I23K	Minto, Yukon-K	75.62	26	P	P	05 58 08.3	+1.9
	baz=278						
F24K	Squaw Lake	75.88	23	P	P	05 58 09.4	+1.4
	baz=278						
H24K	Noodor Dome	76.13	25	P	P	05 58 11.1	+1.6
	baz=279						
D25K	Kavik River	76.15	21	P	P	05 58 09.9	+0.4
	baz=279						
G24K	Hadweenzic Riv	76.16	24	P	P	05 58 10.7	+1.1
	baz=279						
PMR	Palmer	76.23	29	P	P	05 58 10.0	0.0
	baz=279						
ARCES	ARCESS Array B	76.36	339	P	P	05 58 11.3	+0.7
	comp=Z,4.7nm,0.3s,baz=77,slow=4.9,SNR=1.3						
F25K	Christian Rive	76.71	23	P	P	05 58 14.2	+1.4
	baz=280						
ILAR	Eielson Array	76.72	26	P	P	05 58 11.8	-1.0
	comp=Z,0.4nm,0.6s,baz=269,slow=4.3,SNR=6.1						
	comp=Z,0.4nm,0.6s						
WAT6	Susitna Watana	76.72	28	P	P	05 58 13.1	+0.1
	baz=280						
DHY	Denali Highway	76.80	28	P	P	05 58 12.5	-1.0
	baz=280						
SPITS	Spitsbergen Ar	76.86	348	P	P	05 58 14.3	+1.0
	comp=Z,2.4nm,0.6s,baz=94,slow=6.2,SNR=6.2						
	comp=Z,2.4nm,0.6s						
H25L	Birch Creek	76.89	24	P	P	05 58 15.3	+1.6
	baz=281						
SCM	Sheep Creek Mo	77.04	29	P	P	05 58 15.6	+0.9
	baz=280						
PRP	Porcupine Dome	77.15	25	P	P	05 58 16.2	+0.9
	baz=281						
P23K	Montague Islan	77.34	31	P	P	05 58 17.5	+1.2
	baz=281						
K24K	Donnelly Dome	77.37	27	P	P	05 58 15.1	-1.4
	baz=281						
J25K	Salcha River,	77.39	26	P	P	05 58 13.3	-3.3
	baz=281						
FINES	FINESS Array B	77.62	331	P	P	05 58 17.9	+0.1
	comp=Z,1.6nm,0.7s,baz=59,slow=5.7,SNR=6.5						
	comp=Z,1.6nm,0.7s						
PAX	Paxson	77.67	28	P	P	05 58 19.0	+0.8
	baz=282						
RIDG	Independent Ri	77.79	27	P	P	05 58 19.2	+0.3
	baz=282						
I26K	Coal Creek Min	78.16	25	P	P	05 58 20.9	0.0
	baz=283						
H27K	Steamboat Moun	78.59	24	P	P	05 58 25.0	+1.7
	baz=284						
L26K	Log Cabin Wild	78.61	28	P	P	05 58 24.6	+1.2
	baz=284						
I27K	Kandik River	78.71	25	P	P	05 58 25.2	+1.2
	baz=284						
E28M	Babbage River	78.72	22	P	P	05 58 24.6	+0.8
	baz=286						
F28M	Old Crow	78.86	23	P	P	05 58 25.8	+1.1
	baz=286						
M26K	Nabesna, AK	78.91	28	P	P	05 58 26.5	+1.4
	baz=284						
K27K	Chicken	78.92	26	P	P	05 58 25.9	+0.9
	baz=284						
L27K	Beaver Creek,	79.27	27	P	P	05 58 29.0	+2.0
	baz=285						
E29M	Blow River	79.36	22	P	P	05 58 28.3	+1.0
	baz=287						
M27K	Edge Creek, AK	79.43	28	P	P	05 58 29.5	+1.5
	baz=285						
I28M	Miner Creek	79.43	25	P	P	05 58 29.3	+1.3
	baz=286						
G29M	Pine Creek	79.75	23	P	P	05 58 30.1	+0.5
	baz=288						
H29M	Whitestone	79.83	24	P	P	05 58 30.2	+0.2
	baz=287						
DAWY	Dawson	80.05	26	P	P	05 58 32.0	+0.7
	baz=287						
I29M	Ogilvie Camp,	80.11	25	P	P	05 58 32.0	+0.5
	baz=288						
F30M	Barrier River	80.36	22	P	P	05 58 33.4	+0.6
	baz=289						
G30M	tAoh Zraii Nji	80.40	23	P	P	05 58 33.3	+0.2
	baz=289						
EPYK	Eagle Plains	80.42	23	P	P	05 58 33.8	+0.6
	baz=289						
L29M	L29M	80.87	27	P	P	05 58 37.3	+1.6
	baz=288						
K29M	Barlow Dome	80.90	26	P	P	05 58 36.9	+1.0
	baz=288						
INK	Inuvik	80.91	21	P	P	05 58 35.8	+0.1
	baz=291						
I30M	Mount Dempster	80.92	24	P	P	05 58 36.4	+0.4
	baz=289						
M29M	Somme Creek	80.93	27	P	P	05 58 37.6	+1.5
	baz=288						
F31M	Tsiigehtchic	81.15	22	P	P	05 58 37.3	+0.3
	baz=291						
H31M	Peel River	81.52	24	P	P	05 58 39.7	+0.7
	baz=291						
HFS	Hagfors	83.80	331	P	P	05 58 50.5	-0.5
	comp=Z,0.5nm,0.5s,baz=64,slow=9.8,SNR=1.7						
	comp=Z,0.5nm,0.5s						
NB2	NORSAR Subarra	84.57	332	P	P	05 58 55.4	+0.5
	comp=Z,0.6nm,0.6s,baz=64,slow=4.6						
NOA	NORSAR Array B	84.57	332	P	P	05 58 54.6	-0.3
	comp=Z,0.8nm,0.7s,baz=66,slow=4.7,SNR=6.9						
	comp=Z,0.8nm,0.7s						
YKA	Yellowknife Ar	90.63	22	P	P	05 59 22.6	-1.4
	comp=Z,0.4nm,0.9s,baz=324,slow=3.1,SNR=5.6						
	comp=Z,0.4nm,0.9s						

*IDC **08** 06:06:28.5±7.0, 3°.65S×151°.57E, h415^{km}±75^{km}, mb3.2/11, mbtmp3.9/11, Error ellipse: s-maj=38.9km s-min=20.1km az=92.0*

*NEIC **08** 06:06:32.9±1.0, 3°.7S±0°.1×151°.5E±0°.1, h455^{km}±9^{km}, mb4.0/14, Error ellipse: s-maj=22.6km s-min=11.5km az=128.0*

ISC 08 06:06:32.2±0.7**, 3°.66S**±0°.10×**151°.5E**±0°.1**, h450^{km}, n30, σ0^{s}.91**/30**, mb3.8**/18**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	0.86	128		P	06 07 29.0	+0.8
MANU	Manus Island	4.41	291	P	P	06 07 52.3	+1.1
COEN	Coen	13.11	218	P	P	06 09 24.8	+1.6
CTAO	Charters Tower	17.11	197	P	P	06 10 06.4	+0.7
WR8	Warramunga Arr	23.16	224	P	P	06 11 01.6	-0.8
WR8				IAmb	IAmb	06 11 26.8	
	comp=Z,14nm,1.5s						
WRA	Warramunga Arr	23.27	225	P	P	06 11 02.6	-0.8
WRA	Warramunga Arr	23.27	225	P	P	06 11 02.6	-0.8
	comp=Z,1.3nm,0.4s,baz=48,slow=8.9,SNR=28						
	comp=Z,1.3nm,0.4s						
ASAR	Alice Springs	26.15	219	P	P	06 11 27.5	-1.5
	comp=Z,0.8nm,0.3s,baz=51,slow=8.2,SNR=16						
	comp=Z,0.8nm,0.3s						
FITZ	Fitzroy Crossi	29.09	239	P	P	06 11 53.4	-1.5
JNU	Nakatsue	41.46	334	P	P	06 13 38.1	-0.2
PETK	Petropavlovsk-	56.80	4	P	P	06 15 31.2	-1.0
	comp=Z,1.3nm,0.5s,baz=184,slow=7.1,SNR=4.6						
	comp=Z,1.3nm,0.5s						
SONM	Songino Array	64.67	328	P	P	06 16 25.6	+0.9
SONM				IAmb	IAmb	06 16 26.5	
	comp=Z,4.1nm,1.4s						
SONM	Songino Array	64.67	328	P	P	06 16 25.7	+1.1
	comp=Z,0.6nm,0.5s,baz=152,slow=2.0,SNR=4.3						
	comp=Z,0.6nm,0.5s						
O15K	Ungalikthiuk R	73.45	24	P	P	06 17 18.4	+1.0
O15K				IAmb	IAmb	06 17 34.3	
	comp=Z,16nm,1.5s						
VNDA	Vanda	74.01	178	P	P	06 17 20.1	-0.2
VNDA	Vanda	74.01	178	P	P	06 17 20.7	+0.4
	comp=Z,0.4nm,0.7s,baz=332,slow=6.2,SNR=2.4						
	comp=Z,0.4nm,0.7s						
N17K	Nushagak Hills	75.33	24	P	P	06 17 29.1	+1.1
N17K				IAmb	IAmb	06 17 30.6	
	comp=Z,2.7nm,0.9s						
CNPM	China Poot	77.27	26	P	P	06 17 38.9	+0.1
G18K	Tagagawik	78.09	19	P	P	06 17 43.4	+0.2
G18K				IAmb	IAmb	06 18 24.9	
	comp=Z,3.8nm,1.5s						
J20K	Nowinta River	78.60	21	P	P	06 17 46.8	+0.8
J20K				IAmb	IAmb	06 18 24.6	
	comp=Z,5.7nm,1.5s						
MKAR	Makanchi Array	78.61	319	P	P	06 17 46.6	+0.2
MKAR	Makanchi Array	78.61	319	P	P	06 17 46.5	+0.1
	comp=Z,0.3nm,0.4s,baz=94,slow=8.6,SNR=6.0						
	comp=Z,0.3nm,0.4s						
CAST	Castle Rocks	78.95	22	P	P	06 17 47.9	+0.1
ZALV	Zalesovo Beam	79.48	326	P	P	06 17 50.0	-0.8
	comp=Z,1.0nm,0.4s,baz=91,slow=6.7,SNR=3.8						
	comp=Z,1.0nm,0.4s						
E19K	Redstone River	79.50	18	P	P	06 17 51.4	+0.7
E19K				IAmb	IAmb	06 17 52.8	
	comp=Z,2.7nm,0.9s						
TRF	Thorofare Moun	79.66	23	P	P	06 17 52.2	+0.4
TRF				IAmb	IAmb	06 18 29.0	
	comp=Z,2.8nm,1.1s						
ILAR	Eielson Array	81.61	22	P	P	06 18 00.6	-1.2
	comp=Z,1.1nm,0.9s,baz=247,slow=5.1,SNR=14						
	comp=Z,1.1nm,0.9s						
KURBB	Kurchatov Arra	82.10	322	P	P	06 18 03.8	-0.7
	comp=Z,0.4nm,0.6s,baz=107,slow=3.8,SNR=3.5						
	comp=Z,0.4nm,0.6s						
QSPA	South Pole Qui	86.29	180	P	P	06 18 25.1	0.0
	comp=Z,1.1nm,0.8s,baz=0.0,slow=1.0,SNR=2.7						
	comp=Z,1.1nm,0.8s						
BVAR	Borovoye Array	87.55	323	P	P	06 18 29.9	-1.3
	comp=Z,1.1nm,0.5s,baz=79,slow=7.7,SNR=5.7						
	comp=Z,1.1nm,0.5s						

*IDC **08** 06:41:31.7±0.9, 33°.63S×56°.53E, h0^{km}, mb4.1/6, mbtmp4.1/6, MS3.3/3, Error ellipse: s-maj=30.8km s-min=27.9km az=66.0*

ISC 08 06:41:33.0±0.9**, 33°.6S**±0°.2×**56°.5E**±0°.2**, h10^{km}, n17, σ0^{s}.45**/8**, mb4.2**/5**, MS3.3**/3**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H04N2	CROZET ISLANDS	13.07	195	T	T	06 58 04.0	
	baz=20,slow=74,SNR=16						
H04N1	CROZET ISLANDS	13.07	195	T	T	06 57 53.8	
	baz=20,slow=74,SNR=17						
H04N3	CROZET ISLANDS	13.08	195	T	T	06 58 03.1	
	baz=20,slow=74,SNR=17						
LBTB	Lobatse	28.18	279	LR	LR	06 55 34.9	
	comp=Z,52nm,18.8s,baz=136,slow=30						
H08S1	Diego Carcia H	29.75	33	T	T	07 18 53.0	
	baz=206,slow=76						
H08S2	Diego Garcia H	29.76	33	T	T	07 18 52.4	
	baz=206						
H08S3	Diego Garcia H	29.77	33	T	T	07 18 52.5	
	baz=206,slow=76						
SNAA	Sanae	48.92	201	P	P	06 50 19.3	+0.4
	2.6nm,1.0s,baz=87,slow=9.3,SNR=4.4						
	2.6nm,1.0s						
QSPA	South Pole Qui	56.59	180	P	P	06 51 15.3	-0.4
	1.8nm,0.9s,baz=280,slow=6.1,SNR=7.8						
	1.8nm,0.9s						
CMAR	Chiang Mai Arr	65.71	45	LR	LR	07 15 08.4	
	comp=Z,22nm,21.5s,baz=235,slow=31						
ASAR	Alice Springs	67.27	104	P	P	06 52 28.1	0.0
	1.2nm,0.7s,baz=232,slow=6.4,SNR=10						
	1.2nm,0.7s						
WRA	Warramunga Arr	69.40	101	P	P	06 52 41.2	-0.2
	2.0nm,0.8s,baz=239,slow=5.5,SNR=11						
	2.0nm,0.8s						
TORD	Torodi Ar. Bea	69.85	302	P	P	06 52 43.7	-0.4
	1.5nm,0.3s,baz=142,slow=5.3,SNR=1.8						
	1.5nm,0.3s						
GNI	Garni	74.17	351	LR	LR	07 23 32.7	
	comp=Z,25nm,20.2s,baz=164,slow=34						
BVAR	Borovoye Array	87.09	8	P	P	06 54 18.5	+0.1
	0.3nm,0.4s,baz=176,slow=5.8,SNR=1.7						
	0.3nm,0.4s						
ILAR	Eielson Array	145.68	18	PKPbc	PKPab	07 01 11.5	0.0
	0.3nm,0.7s,baz=325,slow=5.0,SNR=5.0						
YKA	Yellowknife Ar	150.52	352	PKPbc	PKiKP	07 01 25.5	+0.7
	0.8nm,0.8s,baz=3.9,slow=2.9,SNR=11						

*IDC **08** 06:41:33.9±3.7, 20°.54S×178°.78W, h604^{km}±28^{km}, mb3.2/5, mbtmp4.0/6, Error ellipse: s-maj=97.4km s-min=19.9km az=150.0*

ISC 08 06:41:33.1±1.3**, 20°.7S**±0°.4×**178°.7W**±0°.2**, h600^{km}, n14, σ0^{s}.96**/14**, mb3.8**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.21	313	P	P	06 43 00.4	+0.3
	5.7nm,0.6s,baz=129,slow=6.5,SNR=5.3						
ASAR	Alice Springs	43.82	257	P	P	06 48 47.9	+0.3
	2.6nm,0.5s,baz=92,slow=8.0,SNR=30						
ASAR				PcP	PcP	06 50 20.7	+0.2
	0.5nm,0.8s,baz=92,slow=3.7,SNR=5.6						
	2.6nm,0.5s						
WRA	Warramunga Arr	43.90	262	P	P	06 48 48.4	+0.1
	1.2nm,0.3s,baz=97,slow=7.5,SNR=35						
	1.2nm,0.3s						
TXAR	Lajitas Array	87.72	58	P	P	06 53 20.0	+0.5
	0.4nm,0.8s,baz=215,slow=5.2,SNR=6.1						
	0.4nm,0.8s						
ILAR	Eielson Array	88.62	13	P	P	06 53 22.4	-0.3
	0.4nm,0.5s,baz=217,slow=5.3,SNR=6.3						
	0.4nm,0.5s						
PDAR	Pinedale Array	89.54	43	P	P	06 53 28.1	+0.3
	0.6nm,0.5s,baz=240,slow=7.9,SNR=2.5						
	0.6nm,0.5s						
BVAR	Borovoye Array	118.75	320	PKP	PKPdf	06 59 12.9	-0.9
	1.0nm,0.4s,baz=86,slow=2.6,SNR=3.3						
ARCES	ARCESS Array B	128.94	349	PKP	PKPdf	06 59 32.6	-0.2
	0.9nm,0.8s,baz=347,slow=3.7,SNR=0.9						
FINES	FINESS Array B	135.72	343	PKP	PKPdf	06 59 47.0	+1.3
	0.3nm,0.5s,baz=50,slow=4.3,SNR=4.6						
HFS	Hagfors	139.58	350	PKhKP	PKPpre	06 59 45.4	
	0.6nm,0.4s,baz=46,slow=4.3,SNR=7.7						
AKASG	Malin Array Be	142.81	330	PKP	PKPdf	06 59 56.4	-2.5
	1.9nm,0.4s,baz=44,slow=4.2,SNR=21						
BRTR	Keskin Array B	146.43	312	PKPbc	PKPbc	07 00 07.9	-0.4
	0.6nm,0.5s,baz=75,slow=6.1,SNR=4.4						
MMAI	Mount Meron Ar	147.29	299	PKPbc	PKPbc	07 00 11.2	+0.6
	1.5nm,0.5s,baz=64,slow=4.0,SNR=2.6						
GERES	GERESS Array B	150.16	343	PKPbc	PKPbc	07 00 17.7	+0.5
	0.5nm,0.5s,baz=293,slow=13,SNR=2.0						

*IDC **08** 06:42:08.5±1.7, 5°.33S×146°.45E, h0^{km}, mb3.6/4, mbtmp3.6/6, ML2.8/2, Error ellipse: s-maj=64.6km s-min=30.5km az=112.0*

ISC 08 06:42:21.6±1.3**, 5°.8S**±0°.1×**146°.6E**±0°.3**, h100^{km}, n6, σ1^{s}.75**/7**, mb3.4**/4**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.66	171	Pn	Pn	06 43 14.8	-1.4
	5.8nm,0.3s,baz=328,slow=13,SNR=8.4						
PMG				Sn	Sn	06 43 58.8	+0.3
	7.8nm,0.3s,baz=335,slow=19,SNR=7.2						
	10nm,0.3s						
WRA	Warramunga Arr	18.46	219	P	P	06 46 27.6	-2.1
	0.1nm,0.3s,baz=39,slow=12,SNR=6.3						
	0.8nm,0.8s						
ASAR	Alice Springs	21.59	213	P	P	06 47 05.1	+1.6
	1.0nm,0.8s,baz=41,slow=8.9,SNR=6.8						
	1.0nm,0.8s						
VNDA	Vanda	72.17	177	P	P	06 53 36.3	+1.2
	0.7nm,0.9s,baz=322,slow=4.3,SNR=4.1						
	0.7nm,0.9s						
QSPA	South Pole Qui	84.20	180	P	P	06 54 42.8	+1.1
	1.6nm,1.1s,baz=7.7,slow=2.2,SNR=2.2						
	1.6nm,1.1s						
ILAR	Eielson Array	85.42	23	P	P	06 54 46.9	-0.8
	0.2nm,0.6s,baz=251,slow=4.6,SNR=3.0						
	0.2nm,0.6s						

*CATAC **08** 06:50:10.0±0.4, 13°N±2°×9°0W±°, h28^{km}±2^{km}, M3.6/29, MLv3.6/29, Error ellipse: s-maj=5.4km s-min=3.2km az=38.1, confirmed*

*SNET **08** 06:50:11.2±1.4, 13°.11N×89°.48W, h54^{km}, ML3.3*

*GCG **08** 06:50:11.5±0.8, 13°.10N×89°.56W, h48^{km}±9^{km}, MD4.0, ML3.1*

ISC 08 06:50:10.2±1.8**, 12°.98N**±0°.08×**89°.53W**±0°.06**, h41^{km}**±25^{km}**, n87, σ0^{s}.67**/99**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.55	21	*i* P	Pn	06 50 21.7	0.0
LALI	Alcalda de L	0.55	21	*e*P	Pn	06 50 21.7	0.0
LALI				*e*S	Sn	06 50 30.4	+0.7
LALI				IAML		06 50 31.2	
	comp=E,298nm,0.2s						
LALI	Alcalda de L	0.55	21	P	Pn	06 50 21.6	0.0
LALI	Alcalda de L	0.55	21	S	Sn	06 50 29.8	+0.1
JAYA	Jayaque - finc	0.68	6	*i* P	Pn	06 50 23.2	-0.3
JAYA				*e*S	Sn	06 50 32.6	-0.5
JAYA	Jayaque - finc	0.68	6	*e*P	Pn	06 50 23.2	-0.3
JAYA				*e*S	Sn	06 50 32.9	-0.2
JAYA	Jayaque - finc	0.68	6	P	Pn	06 50 23.1	-0.4
PANCS	Alcalda de	0.72	28	P	Sn	06 50 34.0	+0.1
ITCA	Escuela Especi	0.73	19	P	Pn	06 50 23.9	-0.3
ITCA	Escuela Especi	0.73	19	S	Sn	06 50 34.3	-0.1
LOMA	Loma Larga	0.75	27	*e*P	Pn	06 50 24.2	-0.3

LOMA				*e*S	Sn	06 50 35.2	+0.5
LOMA	Loma Larga	0.75	27	P	Pn	06 50 24.1	-0.4
PMON	Piamonte	0.76	16	*i* P	Pn	06 50 24.3	-0.3
PMON	Piamonte	0.76	16	P	Pn	06 50 24.4	-0.2
PMON	Piamonte	0.76	16	S	Sn	06 50 35.3	+0.4
SEMO	Seminario San	0.78	22	S	Sn	06 50 35.2	-0.2
SEMO	Seminario San	0.78	22	P	Pn	06 50 24.8	0.0
LFRS	El Faro	0.79	35	*i* P	Pn	06 50 24.9	-0.1
UTEC	Universidad Te	0.79	24	P	Pn	06 50 24.8	-0.2
UTEC	Universidad Te	0.79	24	S	Sn	06 50 35.9	+0.4
UEES	Universidad Ev	0.79	21	P	Pn	06 50 24.8	-0.1
BOQS	Boqueron	0.79	17	*e*P	Pn	06 50 25.0	-0.2
IGN	Direccin Gen	0.81	25	P	Pn	06 50 25.1	-0.2
IGN	Direccin Gen	0.81	25	S	Sn	06 50 36.7	+0.5
UDBS	Universidad Do	0.82	26	S	Sn	06 50 37.0	+0.7
UDBS	Universidad Do	0.82	26	P	Pn	06 50 25.1	-0.3
AEIL	Aeropuerto Ilo	0.82	29	*e*P	Pn	06 50 25.8	+0.4
CEDA	San Andres	0.83	9	*e*P	Pn	06 50 25.3	-0.2
CEDA	San Andres	0.83	9	P	Pn	06 50 25.2	-0.2
CEDA	San Andres	0.83	9	S	Sn	06 50 36.9	+0.2
CEVE	Cerro Verde	0.85	354	*e*P	Pn	06 50 26.1	+0.1
CEVE	Cerro Verde	0.85	354	S	Sn	06 50 38.3	+0.8
CEVE	Cerro Verde	0.85	354	P	Pn	06 50 26.0	+0.1
SBLS	San Blas	0.86	354	*e*P	Pn	06 50 26.0	-0.1
LFU	La Fuente	0.87	27	*e*P	Pn	06 50 26.2	+0.2
LBRS	Las Brisas	0.89	32	*i* P	Pn	06 50 26.7	+0.3
COEG	Centro de Oper	0.90	44	*i* P	Pn	06 50 26.0	-0.4
COEG				*e*S	Sn	06 50 37.8	-0.5
COEG	Centro de Oper	0.90	44	P	Pn	06 50 26.2	-0.2
TECO	Alcaldia de Te	0.91	52	S	Sn	06 50 37.8	-0.8
TECO	Alcaldia de Te	0.91	52	P	Pn	06 50 25.9	-0.7
PAVA	Las Pavas	0.93	38	*i* P	Pn	06 50 26.9	0.0
PAVA				*e*S	Sn	06 50 39.5	+0.4
PAVA	Las Pavas	0.93	38	P	Pn	06 50 26.7	-0.2
NUBE	Las Nubes	0.95	345	*i* P	Pn	06 50 27.1	-0.2
NUBE				*e*S	Sn	06 50 39.3	-0.5
NUBE	Las Nubes	0.95	345	*i* P	Pn	06 50 27.1	-0.2
NUBE				*i* S	Sn	06 50 39.3	-0.5
NUBE	Las Nubes	0.95	345	P	Pn	06 50 27.2	-0.1
UESV	Universidad de	0.97	47	S	Sn	06 50 39.7	-0.4
UESV	Universidad de	0.97	47	P	Pn	06 50 27.1	-0.4
FAME	Alcaldia de Sa	0.98	331	S	Sn	06 50 38.6	-1.7
FAME	Alcaldia de Sa	0.98	331	P	Pn	06 50 27.4	-0.2
ALJI	Alcalda de J	0.99	69	*e*P	Pn	06 50 27.9	+0.2
ALJI				*e*S	Sn	06 50 40.6	+0.1
ALJI	Alcalda de J	0.99	69	P	Pn	06 50 27.8	+0.2
UNIC	Universidad Ca	1.00	359	P	Pn	06 50 27.7	-0.1
UNIC	Universidad Ca	1.00	359	S	Sn	06 50 41.4	+0.6
LOAL	Lomas de Alarc	1.05	346	P	Pn	06 50 28.5	0.0
LOAL	Lomas de Alarc	1.05	346	S	Sn	06 50 42.8	+0.9
SCLA	Alcaldia de Sa	1.06	47	P	Pn	06 50 28.6	0.0
SLOZ	Alcaldia de Sa	1.07	346	S	Sn	06 50 43.9	+1.3
SLOZ	Alcaldia de Sa	1.07	346	P	Pn	06 50 29.1	+0.2
PQSS	Presa 15 de Se	1.14	55	*e*P	Pn	06 50 29.6	-0.1
PQSS				*e*S	Sn	06 50 43.5	-0.6
PQSS	Presa 15 de Se	1.14	55	P	Pn	06 50 29.8	+0.2
PACA	Pacayal	1.27	67	*e*P	Pn	06 50 32.1	+0.6
PACA				*e*S	Sn	06 50 48.6	+1.1
PACA	Pacayal	1.27	67	S	Sn	06 50 47.7	+0.3
PACA	Pacayal	1.27	67	P	Pn	06 50 32.2	+0.6
LCY	Lacayo	1.28	70	*e*P	Pn	06 50 32.2	+0.5
RANC	El Ranchito	1.29	69	P	Pn	06 50 28.2	-3.7
RANC	El Ranchito	1.29	69	S	Sn	06 50 45.0	-2.9
LLGN	La Laguna	1.31	25	S	Sn	06 50 48.8	+0.4
LLGN	La Laguna	1.31	25	P	Pn	06 50 31.7	-0.4
BLLM	Bellamira	1.34	70	*e*P	Pn	06 50 33.0	+0.5
MTO3	Montecristo	1.42	6	*i* P	Pn	06 50 33.7	-0.1
MTO3				*e*S	Sn	06 50 51.4	-0.1
MTO3	Montecristo	1.42	6	*i* P	Pn	06 50 33.7	-0.1
MTO3	Montecristo	1.42	6	P	Pn	06 50 33.8	-0.1
ESQI	Esquipulas	1.58	6	*i* P	Pn	06 50 36.2	+0.3
ESQI				*e*S	Sn	06 50 55.8	+0.5
ESQI	Esquipulas	1.58	6	P	Pn	06 50 36.2	+0.3
FG16	Alotenango, Sa	1.61	323	*i* P	Pn	06 50 41.4	+5.1
FG16				*i* S	Sn	06 51 04.5	+8.6
FG16				IAML		06 51 08.4	
	comp=E,1µm,0.2s						
FG8	Yepocapa, Chim	1.63	322	*i* P	Pn	06 50 42.0	+5.5
LCND	La Caada	1.63	78	P	Pn	06 50 37.0	+0.6
CNCH	Conchagua	1.67	80	*e*P	Pn	06 50 37.3	+0.2
CNCH				*e*S	Sn	06 50 58.1	+0.6
CNCH	Conchagua	1.67	80	P	Pn	06 50 37.1	0.0
CSGN	Cosiguina Volc	1.92	90	P	Pn	06 50 40.5	+0.1
CSGN				S	Sn	06 51 03.9	+0.5
POTN	Potosi Cosigui	1.97	89	P	Pn	06 50 42.0	+0.9
STG8	El Palmar, Qui	2.30	310	*i* P	Pn	06 50 51.5	+5.7
STG8				IAML		06 51 24.1	
	comp=Z,62nm,0.1s						
CNGN	Cerro Negro	2.80	99	P	Pn	06 50 52.7	+0.2
COPN	Copaltepe	2.97	105	P	Pn	06 50 55.2	+0.3
LIMN	Finca el Limon	3.08	88	P	Pn	06 50 56.5	0.0
RCVN	Varillal2	3.30	79	P	Pn	06 50 59.6	+0.1
MATN	Matagalpa	3.51	90	P	Pn	06 51 01.2	-1.2

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*IDC **08** 07:10:24.1±1.2, 52°.65N×175°.42W, h0^{km}, mb3.4/4, mbtmp3.4/6, ML3.9/2, Error ellipse: s-maj=55.9km s-min=20.2km az=146.0*

*AEIC **08** 07:10:48.0±2.1, 52°.4N±0°.3×174°.4W±0°.3, h201^{km}±7^{km}, Error ellipse: s-maj=52.7km s-min=21.0km az=160.0*

*NEIC **08** 07:10:47.2±1.0, 52°.7N±0°.2×174°.4W±0°.2, h196^{km}±13^{km}, mb3.9/20, ML3.7/12, ML3.3(AEIC), Error ellipse: s-maj=25.5km s-min=7.8km az=153.0*

ISC 08 07:10:46.3±0.8**, 52°.6N**±0°.1×**174°.41W**±0°.08**, h200**^{km}**, n57, σ0^{s}.95**/58**, mb3.1**/4**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	Atka Island	0.42	162		Pn	07 11 13.8	+0.6
ATKA				Sn	Sn	07 11 33.7	-0.1
GSTR	Great Sitkin T	1.13	244		Pn	07 11 17.8	+0.8
GSCK	Great Sitkin C	1.23	242		Pn	07 11 18.3	+0.6
GSCK					Sn	07 11 42.0	0.0
ADAG	Mount Adagdak	1.48	246		Pn	07 11 20.3	+0.5
ADK	Adak	1.57	244		Pn	07 11 21.1	+0.5
ADK				Sn	Sn	07 11 45.9	-1.3
ADK				IAML		07 11 50.3	
	440nm,0.2s						
ADK				IAML		07 11 51.7	
	477nm,0.3s						
KIRH	Kanaga Island	1.79	248		Pn	07 11 23.4	+0.7
KICM	Kanaga Island	1.84	249		Pn	07 11 24.0	+0.8
KIWB	Kanaga Island	1.84	247		Pn	07 11 23.6	+0.4
TAFP	Tanaga Falls P	2.31	254		Pn	07 11 28.5	+0.5
TAFP					Sn	07 12 00.2	-0.3
TASE	Tanaga Southea	2.36	252		Pn	07 11 28.6	0.0
GANE	Gareloi Northe	2.80	255		Pn	07 11 34.3	+0.8
GANO	Gareloi North	2.81	256		Pn	07 11 34.6	+0.9
NIKH	Nikolski High	3.39	82	Pn	Pn	07 11 40.5	0.0
NIKH				IAML		07 12 32.1	
	comp=N,119nm,2.9s						
NIKH				IAML		07 13 20.4	
	comp=E,88nm,2.3s						
MAPS	Pakushin South	4.65	72		Pn	07 11 57.6	+1.5
UNV	Unalaska Valle	4.91	72	Pn	Pn	07 11 59.7	+0.3
UNV				IAML		07 15 22.5	
	comp=E,31nm,4.2s						
AKMO	Akutan Morgan	5.25	70		Pn	07 12 05.4	+1.6
LVA	Lava Point	5.25	69	Pn	Pn	07 12 04.3	+0.5
AKUT	Akutan	5.40	70	Pn	Pn	07 12 06.4	+0.8
AKUT				IAML		07 13 14.4	
	comp=N,62nm,2.6s						
SDPT	Sand Point	8.66	66	Pn	Pn	07 12 46.1	-1.8
O15K	Ungalikthiuk R	10.50	45	Pn	Pn	07 13 12.6	+0.9
ACHA	Angle Creek He	12.19	55	Pn	Pn	07 13 34.2	+0.8
N17K	Nushagak Hills	12.35	43	Pn	Pn	07 13 35.5	+0.2
KDAK	Kodiak Island	13.48	59	Pn	Pn	07 13 44.2	-5.2
	comp=N,0.9nm,0.3s,baz=294,slow=10,SNR=30						
KDAK				Sn	S	07 16 17.0	-2.4
	comp=N,0.1nm,0.3s,baz=297,slow=17,SNR=1.8						
	comp=N,2.1nm,0.5s						
L18K	Granite Mounta	13.52	38	Pn	Pn	07 13 50.5	+0.6
P19K	Oil Pt	13.72	51		P	07 13 54.3	-0.4
L19K	White Mountain	14.20	40	P	P	07 13 59.8	-0.2
BRLK	Bradley Lake	14.87	52	P	Pn	07 14 06.2	-0.5
STLK	Strandline Lak	15.10	45	P	P	07 14 11.8	+1.8
STLK				IAmb	IAmb	07 14 14.2	
	comp=Z,3.1nm,0.7s						
SKT	Skwentna	15.44	44		Pn	07 14 14.1	+0.5
SKT				IAmb	IAmb	07 14 18.8	
	comp=Z,9.3nm,1.1s						
PPLA	Purkeypile	15.62	40	P	P	07 14 17.8	+1.9
PPLA				IAmb	IAmb	07 14 23.2	
	comp=Z,5.5nm,1.0s						
J20K	Nowinta River	15.63	34	P	P	07 14 16.6	+0.8
J20K				IAmb	IAmb	07 14 35.5	
	comp=Z,7.3nm,1.4s						
CAST	Castle Rocks	15.94	38		Pn	07 14 20.6	+1.1
KTH	Kantishna Hill	16.45	39		Pn	07 14 26.1	+0.3
TRF	Thorofare Moun	16.65	40	P	Pn	07 14 28.8	+0.6
BPAW	Bear Paw Mtn.	16.72	37	P	P	07 14 28.7	+0.9
PETK	Petropavlovsk-	16.81	283	P	P	07 14 29.5	+0.6
H21K	Melozitna Rive	17.02	31	Pn	Pn	07 14 33.1	+0.7
RND	Reindeer	17.20	41		P	07 14 34.0	+1.0
MLY	Manley	17.32	35	P	P	07 14 34.3	-0.1
DHY	Denali Highway	17.66	43	P	P	07 14 38.3	+0.1
CCB	Clear Creek Bu	18.19	38	P	P	07 14 42.7	-1.0
SUCK	Suckling Hills	18.42	54	P	Pn	07 14 49.3	+0.4
ILAR	Eielson Array	18.59	38	P	P	07 14 45.5	-2.6
	comp=Z,0.2nm,0.3s,baz=234,slow=10,SNR=14						
	comp=Z,0.3nm,0.6s						
H24K	Noodor Dome	18.77	35	P	P	07 14 50.6	+0.5
H24K				IAmb	IAmb	07 14 53.3	
	comp=Z,4.2nm,1.1s						
RIDG	Independent Ri	18.96	42	P	P	07 14 51.8	-0.4
RIDG				IAmb	IAmb	07 14 57.3	
	comp=Z,5.8nm,1.4s						
J25K	Salcha River,	19.11	40		P	07 14 52.9	-0.9
J25K				IAmb	IAmb	07 14 57.7	
	comp=Z,2.0nm,0.5s						
DOT	Dot Lake	19.26	43	P	P	07 14 55.5	+0.2
DOT				IAmb	IAmb	07 14 59.6	
	comp=Z,2.8nm,0.7s						
SCRK	Sand Creek	19.41	42		P	07 14 57.1	+0.1
SCRK				IAmb	IAmb	07 14 59.0	
	comp=Z,3.3nm,0.8s						
J26L	Joseph Creek	19.77	41		P	07 15 01.3	+0.3
J26L				IAmb	IAmb	07 15 03.9	
	comp=Z,3.8nm,0.6s						
BCAR	Beaver Creek A	20.04	46	P	P	07 15 04.5	+0.7
YKA	Yellowknife Ar	32.41	48	P	P	07 16 57.8	+1.0
	comp=Z,0.1nm,0.8s,baz=298,slow=8.4,SNR=1.9						
	comp=Z,0.1nm,0.8s						
H11N2	WAKE ISLAND Hy	35.88	211	T	T	07 55 04.8	
	baz=18						
H11N3	WAKE ISLAND Hy	35.89	211	T	T	07 55 02.8	
	baz=18						
H11N1	WAKE ISLAND Hy	35.90	211	T	T	07 55 08.5	
	baz=18						
MKAR	Makanchi Array	61.35	310	P	P	07 20 39.0	-1.6
	comp=Z,0.1nm,0.4s,baz=34,slow=8.2,SNR=1.9						
	comp=Z,0.1nm,0.4s						
WRA	Warramunga Arr	84.81	227	P	P	07 22 57.5	-0.5
	comp=Z,0.2nm,0.4s,baz=26,slow=5.2,SNR=1.1						
	comp=Z,0.2nm,0.4s						
ASAR	Alice Springs	88.26	226	P	P	07 23 15.2	+0.5
	comp=Z,0.7nm,0.7s,baz=26,slow=4.7,SNR=8.7						
	comp=Z,0.7nm,0.7s						

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*CATAC **08** 07:45:25.6±0.5, 13°N±3°×8°9W±°, h28^{km}±2^{km}, M3.3/23, MLv3.3/23, Error ellipse: s-maj=6.1km s-min=3.7km az=29.2, confirmed*

*SNET **08** 07:45:26.4±0.9, 13°.06N×89°.49W, h45^{km}, ML3.2*

*GCG **08** 07:45:27.0±0.7, 13°.13N×89°.55W, h52^{km}±8^{km}, MD3.9, ML3.2*

ISC 08 07:45:25.9±1.6**, 13°.02N**±0°.07×**89°.47W**±0°.04**, h26**^{km}±12^{km}**, n69, σ0^{s}.92**/80**, 1D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.49	17	*i* P	Pn	07 45 37.1	-0.2
LALI				*e*S	Sn	07 45 45.9	+1.0
LALI	Alcalda de L	0.49	17	*e*P	Pn	07 45 37.0	-0.2
LALI				*i* S	Sn	07 45 46.1	+1.2
LALI	Alcalda de L	0.49	17	P	Pn	07 45 37.1	-0.2
JAYA	Jayaque - finc	0.64	1	*e*P	Pb	07 45 38.6	+0.1
JAYA				*e*S	Sb	07 45 47.6	+0.4
JAYA	Jayaque - finc	0.64	1	*e*P	Pb	07 45 38.6	+0.1
JAYA				*i* P	Pb	07 45 38.6	+0.1
JAYA				⇓*i*S	Sb	07 45 47.5	+0.3
JAYA	Jayaque - finc	0.64	1	S	Sb	07 45 48.1	+1.0
JAYA	Jayaque - finc	0.64	1	P	Pb	07 45 38.5	0.0
PANCS	Alcalda de	0.66	25	P	Pn	07 45 49.0	+9.4
ITCA	Escuela Especi	0.68	16	P	Pb	07 45 39.2	0.0
ITCA	Escuela Especi	0.68	16	S	Sn	07 45 49.8	0.0
LOMA	Loma Larga	0.69	25	*e*P	Pb	07 45 39.6	+0.2
LOMA				*e*S	Sn	07 45 50.1	+0.1
LOMA	Loma Larga	0.69	25	P	Pb	07 45 39.7	+0.3
PMON	Piamonte	0.71	12	P	Pb	07 45 39.7	0.0
PMON	Piamonte	0.71	12	S	Sn	07 45 51.1	+0.7
LFRS	El Faro	0.72	33	*i* P	Pb	07 45 40.2	+0.3
SEMO	Seminario San	0.72	19	S	Sn	07 45 50.7	-0.1
SEMO	Seminario San	0.72	19	P	Pb	07 45 39.8	-0.1
UTEC	Universidad Te	0.73	21	P	Pb	07 45 40.1	+0.1
UTEC	Universidad Te	0.73	21	S	Sn	07 45 50.9	0.0
UEES	Universidad Ev	0.73	18	P	Pb	07 45 40.0	-0.1
IGN	Direccin Gen	0.75	22	P	Pb	07 45 39.9	-0.6
IGN	Direccin Gen	0.75	22	S	Sn	07 45 51.6	+0.2
CEDA	San Andres	0.79	5	*e*P	Pb	07 45 40.7	-0.3
CEDA				*e*S	Sb	07 45 52.0	+0.7
CEVE	Cerro Verde	0.82	349	*e*P	Pb	07 45 41.4	-0.3
CEVE				*e*S	Sn	07 45 53.8	+0.3
CEVE	Cerro Verde	0.82	349	P	Pb	07 45 41.2	-0.5
COEG	Centro de Oper	0.83	43	*e*P	Pb	07 45 41.4	-0.3
COEG				*e*S	Sn	07 45 53.2	-0.2
COEG	Centro de Oper	0.83	43	P	Pb	07 45 41.6	-0.1
TECO	Alcaldia de Te	0.84	52	S	Sn	07 45 53.7	0.0
TECO	Alcaldia de Te	0.84	52	P	Pb	07 45 41.7	-0.2
PAVA	Las Pavas	0.86	36	P	Pb	07 45 42.1	-0.3
PAVA	Las Pavas	0.86	36	S	Sn	07 45 54.7	+0.4
UESV	Universidad de	0.90	47	S	Sb	07 45 55.0	+0.4
UESV	Universidad de	0.90	47	P	Pb	07 45 42.4	-0.6
ALJI	Alcalda de J	0.93	70	*e*P	Pn	07 45 43.2	0.0
ALJI				*e*S	Sn	07 45 55.9	+0.2
ALJI	Alcalda de J	0.93	70	P	Pb	07 45 42.9	-0.4
ALJI	Alcalda de J	0.93	70	S	Sn	07 45 56.1	+0.5
NUBE	Las Nubes	0.93	341	*i* P	Pb	07 45 42.4	-1.2
NUBE				*e*S	Sb	07 45 54.7	-0.9
NUBE	Las Nubes	0.93	341	*e*P	Pb	07 45 42.4	-1.2
NUBE				*i* S	Sb	07 45 54.7	-0.9
NUBE	Las Nubes	0.93	341	P	Pb	07 45 42.3	-1.2
UNIC	Universidad Ca	0.96	355	S	Sb	07 45 56.8	+0.4
UNIC	Universidad Ca	0.96	355	P	Pb	07 45 43.6	-0.4
FAME	Alcaldia de Sa	0.98	327	P	Pb	07 45 43.2	-1.1
SCLA	Alcaldia de Sa	0.99	46	P	Pb	07 45 44.2	-0.3
SCLA	Alcaldia de Sa	0.99	46	S	Sb	07 45 57.0	-0.1
SLOZ	Alcaldia de Sa	1.05	343	S	Sb	07 45 59.0	+0.1
SLOZ	Alcaldia de Sa	1.05	343	P	Pb	07 45 44.2	-1.3
PQSS	Presa 15 de Se	1.07	55	P	Pn	07 45 45.2	0.0
PQSS	Presa 15 de Se	1.07	55	S	Sb	07 45 59.1	-0.2
PACA	Pacayal	1.20	68	S	Sn	07 46 04.0	+1.4
PACA	Pacayal	1.20	68	P	Pb	07 45 47.6	-0.5
LCY	Lacayo	1.21	70	*e*P	Pn	07 45 47.6	+0.3
RANC	El Ranchito	1.22	70	P	Pn	07 45 43.6	-3.8
LLGN	La Laguna	1.25	24	S	Sn	07 46 03.7	0.0
LLGN	La Laguna	1.25	24	P	Pn	07 45 47.2	-0.5
BLLM	Bellamira	1.27	70	*e*P	Pn	07 45 48.3	+0.3
MTO3	Montecristo	1.38	4	*i* P	Pn	07 45 49.1	-0.6
MTO3				*e*P		07 45 49.1	
MTO3	Montecristo	1.38	4	P	Pn	07 45 49.0	-0.6
MTO3	Montecristo	1.38	4	S	Sn	07 46 06.6	-0.6
ESQI	Esquipulas	1.54	4	S	Sn	07 46 10.6	-0.4
ESQI	Esquipulas	1.54	4	P	Pn	07 45 51.5	-0.3
LCND	La Caada	1.56	79	*e*P	Pn	07 45 52.3	+0.3
LCND	La Caada	1.56	79	P	Pn	07 45 52.1	+0.1
CNCH	Conchagua	1.61	81	P	Pn	07 45 52.9	+0.1
CNCH	Conchagua	1.61	81	S	Sn	07 46 13.6	+0.9
FG16	Alotenango, Sa	1.61	321	*i* S	Sb	07 46 20.3	+5.1
FG16				IAML		07 46 36.7	
	comp=N,672nm,0.2s						
STG8	El Palmar, Qui	2.32	308	*e*P	Pb	07 46 07.1	-0.2
LIMN	Finca el Limon	3.02	89	P	Pn	07 46 12.0	-0.1
RCVN	Varillal2	3.23	80	P	Pn	07 46 15.1	0.0
MATN	Matagalpa	3.45	91	P	Pn	07 46 16.6	-1.4

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*IDC **08** 07:50:45.8±0.8, 13°.00N×143°.87E, h140^{km}±8^{km}, mb3.7/13, mbtmp4.1/13, Error ellipse: s-maj=20.4km s-min=14.3km az=101.0*

*NEIC **08** 07:50:46.1±1.4, 13°.02N±0°.08×143°.7E±0°.1, h138^{km}±5^{km}, mb4.2/31, Error ellipse: s-maj=17.3km s-min=12.0km az=99.0*

ISC 08 07:50:45.6±0.5**, 13°.01N**±0°.09×**143°.77E**±0°.09**, h138**^{km}**, n58, σ0^{s}.72**/52**, mb4.2**/30**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.21	61		Pn	07 51 11.5	+0.2
GUMO	Guam	1.21	61	P	Pn	07 51 11.1	-0.2
	248nm,0.3s,baz=193,slow=0.6,SNR=47						
GUMO				S	Sn	07 51 30.1	-0.8
	834nm,0.3s,baz=51,slow=20,SNR=14						
GUMO				LR	LR	07 51 44.8	
	comp=Z,60nm,19.9s,baz=85,slow=52						
PATS	Pohnpei	15.57	112	Pn	Pn	07 54 17.2	-0.7
H11S3	WAKE ISLAND Hy	22.71	73	T	T	08 19 02.4	
	baz=261						
H11S1	WAKE ISLAND Hy	22.72	73	T	T	08 19 24.8	
	baz=261						
H11S2	WAKE ISLAND Hy	22.73	73	T	T	08 19 10.7	
	baz=261						
H11N1	WAKE ISLAND Hy	23.15	70	T	T	08 19 29.1	
	baz=255,slow=75,SNR=6.5						
H11N2	WAKE ISLAND Hy	23.16	70	T	T	08 19 30.9	
	baz=255,slow=75,SNR=3.8						
H11N3	WAKE ISLAND Hy	23.17	70	T	T	08 19 25.9	
	baz=255,slow=75,SNR=8.3						
YULB	Yu-li	23.68	299	P	P	07 55 44.4	-0.5
YULB				IAmb	IAmb	07 55 47.5	
	comp=Z,9.4nm,0.7s						
MJAR	Matsushiro Arr	23.96	349	P	P	07 55 48.2	+1.0
	comp=Z,1.8nm,0.6s,baz=164,slow=8.7,SNR=7.2						
	comp=Z,1.8nm,0.6s						
MJB9	Matsu-Tunnel	23.97	349	P	P	07 55 46.3	-1.0
MJB9				IAmb	IAmb	07 56 08.3	
	comp=Z,13nm,1.2s						
SSLB	Suanglung	24.12	300	P	P	07 55 47.7	-1.2
JMM	Marumori	24.90	354	P	P	07 55 55.1	-0.6
WB0	Warramunga Arr	33.85	196	P	P	07 57 14.6	-0.5
WB0				IAmb	IAmb	07 57 41.5	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	34.03	196	P	P	07 57 16.4	-0.3
	comp=Z,1.2nm,0.7s,baz=17,slow=9.4,SNR=7.5						
	comp=Z,1.2nm,0.7s						
AS31	Alice Springs	37.70	195	P	P	07 57 47.2	-0.7
ASAR	Alice Springs	37.70	195	P	P	07 57 47.6	-0.3
ASAR	Alice Springs	37.70	195	P	P	07 57 47.9	-0.1
	comp=Z,0.6nm,0.6s,baz=19,slow=13,SNR=15						
	comp=Z,0.6nm,0.6s						
DZM	Mont Dzumac	41.35	147	P	P	07 58 19.3	+1.1
CMAR	Chiang Mai Arr	43.41	283	P	P	07 58 36.4	+1.4
	comp=Z,1.3nm,0.3s,baz=89,slow=8.0,SNR=7.9						
	comp=Z,1.3nm,0.3s						
STKA	Stephens Creek	44.67	183	P	P	07 58 43.9	-0.8
SONM	Songino Array	46.60	326	P	P	07 58 59.5	-0.5
	comp=Z,1.0nm,0.6s,baz=139,slow=6.4,SNR=4.1						
	comp=Z,1.0nm,0.6s						
CAN	Canberra	48.31	174	P	P	07 59 13.3	+0.1
TOO	Toolangi	50.33	178	P	P	07 59 28.1	-0.4
TOO				IAmb	IAmb	07 59 50.3	
	comp=Z,7.0nm,1.4s						
MKAR	Makanchi Array	61.17	316	P	P	08 00 45.7	0.0
MKAR	Makanchi Array	61.17	316	P	P	08 00 46.2	+0.5
	comp=Z,1.7nm,0.6s,baz=90,slow=8.3,SNR=16						
	comp=Z,1.7nm,0.6s						
MAKZ	Makanchi	61.38	316	P	P	08 00 47.6	+0.5
MAKZ				IAmb	IAmb	08 00 48.3	
	comp=Z,2.2nm,0.6s						
ZALV	Zalesovo Beam	61.48	325	P	P	08 00 47.5	0.0
	comp=Z,0.7nm,0.5s,baz=108,slow=9.3,SNR=1.7						
	comp=Z,0.7nm,0.5s						
KURBB	Kurchatov Arra	64.38	320	P	P	08 01 07.0	+0.1
	comp=Z,1.7nm,0.6s,baz=104,slow=6.5,SNR=18						
	comp=Z,1.7nm,0.6s						
E18K	Tukpahlearik C	65.24	21	P	P	08 01 13.2	+1.1
E18K				IAmb	IAmb	08 01 47.6	
	comp=Z,3.6nm,1.4s						
C18K	Utukok River	65.63	19	P	P	08 01 15.0	+0.3
C18K				IAmb	IAmb	08 01 34.0	
	comp=Z,5.5nm,1.4s						
G19K	Purcell Mounta	65.94	22	P	P	08 01 17.6	+0.9
G19K				IAmb	IAmb	08 01 23.6	
	comp=Z,4.6nm,1.4s						
CNPM	China Poot	66.27	30	P	P	08 01 18.7	-0.2
C19K	Lookout Ridge	66.36	19	P	P	08 01 20.0	+0.7
C19K				IAmb	IAmb	08 02 02.3	
	comp=Z,4.5nm,1.5s						
D19K	Kuna River	66.56	20	P	P	08 01 21.2	+0.6
D19K				IAmb	IAmb	08 01 54.9	
	comp=Z,4.1nm,1.3s						
CAST	Castle Rocks	66.99	26	P	P	08 01 23.4	0.0
B20K	Meade River	67.53	19	P	P	08 01 26.9	+0.3
B20K				IAmb	IAmb	08 01 52.3	
	comp=Z,7.0nm,1.4s						
E21K	Killik River	67.95	21	P	P	08 01 29.6	+0.3
E21K				IAmb	IAmb	08 01 52.7	
	comp=Z,4.4nm,1.3s						
D22K	Ayikyak River	68.54	20	P	P	08 01 34.5	+1.5
D22K				IAmb	IAmb	08 01 51.8	
	comp=Z,4.3nm,1.2s						
E22K	Anaktuvuk Pass	68.59	21	P	P	08 01 34.6	+1.3
E22K				IAmb	IAmb	08 02 18.0	
	comp=Z,4.6nm,1.2s						
KKAR	Karatay Array	69.03	311	P	P	08 01 36.2	-0.3
ILAR	Eielson Array	69.55	25	P	P	08 01 38.1	-1.1
	comp=Z,0.6nm,0.6s,baz=249,slow=5.9,SNR=16						
	comp=Z,0.6nm,0.6s						
BVAR	Borovoye Array	69.72	322	P	P	08 01 40.7	+0.1
	comp=Z,2.1nm,0.5s,baz=100,slow=8.0,SNR=9.6						
	comp=Z,2.1nm,0.5s						
DOT	Dot Lake	70.53	27	P	P	08 01 45.0	-0.3
DOT				IAmb	IAmb	08 01 50.1	
	comp=Z,5.5nm,1.4s						
D25K	Kavik River	70.84	21	P	P	08 01 47.4	+0.3
D25K				IAmb	IAmb	08 01 51.9	
	comp=Z,10nm,1.4s						
BMAR	Burnt Mountain	71.05	23	P	P	08 01 49.8	+1.4
H27K	Steamboat Moun	72.02	24	P	P	08 01 54.9	+0.7
K29M	Barlow Dome	73.44	27	P	P	08 02 03.6	+0.8
AB31	Akbulak array	76.26	318	P	P	08 02 18.2	-0.8
ABKAR	Akbulak array	76.26	318		P	08 02 18.4	-0.7
CASY	Casey	82.80	193	P	P	08 02 53.8	-0.1
YKA	Yellowknife Ar	83.86	27	P	P	08 02 59.8	+0.1
	comp=Z,0.7nm,0.5s,baz=292,slow=5.7,SNR=33						
	comp=Z,0.7nm,0.5s						
BEKR	Beckworth	86.21	50	P	P	08 03 12.6	+0.5
BEKR				IAmb	IAmb	08 03 13.8	
	comp=Z,3.1nm,0.8s						
NVAR	Mina Array Bea	88.11	51	P	P	08 03 22.1	+0.8
	comp=Z,2.7nm,0.7s,baz=260,slow=5.7,SNR=14						
	comp=Z,2.7nm,0.7s						
FINES	FINESS Array B	91.24	335	P	P	08 03 34.4	-0.6
	comp=Z,0.9nm,0.7s,baz=49,slow=4.2,SNR=3.8						
	comp=Z,0.9nm,0.7s						
TORD	Torodi Ar. Bea	134.30	303	PKP	PKPdf	08 09 48.7	+0.5
	comp=Z,0.5nm,0.4s,baz=32,slow=2.6,SNR=5.4						
DBIC	Dimbokro	143.21	300	PKP	PKPbc	08 10 01.5	-0.3
	comp=Z,2.9nm,0.5s,baz=59,slow=1.7,SNR=5.1						

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*NEIC **08** 08:10:57.3±2.1, 16°.95N±0°.03×100°.82W±0°.04, h10^{km}±1^{km}, mb4.1/42, Md4.4/165(MEX), Error ellipse: s-maj=7.3km s-min=4.8km az=126.0*

*MEX **08** 08:10:58.3±0.8, 16°.80N×100°.91W, h16^{km}±999^{km}, MD4.5*

*IDC **08** 08:11:05.5±10.0, 16°.99N×100°.36W, h84^{km}±82^{km}, mb3.7/6, mbtmp3.9/8, ML3.3/2, MS3.2/9, Error ellipse: s-maj=70.9km s-min=50.3km az=117.0*

ISC 08 08:10:54.3±1.3**, 16°.79N**±0°.04×**100°.89W**±0°.03**, h2**^{km}±8^{km}**, n193, σ2^{s}.21**/286**, mb4.2**/11**, MS3.1**/8**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATYC	Atoyac	0.61	46	*e*P	Pb	08 11 08.2	+0.4
ATYC				*e*S	Sb	08 11 16.6	-0.3
CAIG	El Cayaco	0.65	66		Pb	08 11 09.1	+0.6
CAIG	El Cayaco	0.65	66	*i* P	Pb	08 11 09.1	+0.6
CAIG				*e*S	Sb	08 11 17.1	-0.9
PET2	Petatlan	0.83	334	*i* P	Pg	08 11 11.0	+0.8
PET2				*e*S	Sg	08 11 20.9	0.0
ACP2	Acapulco	0.96	85		Pg	08 11 13.8	+1.0
ACP2					Sg	08 11 25.7	+0.3
ACP2	Acapulco	0.96	85	*e*P	Pg	08 11 13.8	+1.0
ACP2				*e*S	Sg	08 11 25.7	+0.3
ZIIG	Zihuatanejo	0.98	326		Pg	08 11 13.2	0.0

ZIIG	Zihuatanejo	0.98	326	eP	Pg	08 11 13.2	0.0
ZIIG				eS	Sg	08 11 24.5	-1.5
VNTA	La Mica	1.03	83	eP	Pg	08 11 14.8	+0.6
VNTA				eS	Sg	08 11 27.3	-0.2
DAIG	Los Arroyos	1.21	79		Pg	08 11 17.5	0.0
DAIG					Sg	08 11 31.4	-1.8
DAIG	Los Arroyos	1.21	79	eP	Pg	08 11 17.5	0.0
DAIG				eS	Sg	08 11 31.4	-1.8
UON	La Union	1.47	323	eP	Pn	08 11 21.1	-0.8
UON				eS	Sn	08 11 36.8	-5.0
ARIG	Puente Sto Nin	1.57	19		Pn	08 11 22.5	-0.9
ARIG					Sn	08 11 41.0	-3.4
ARIG	Puente Sto Nin	1.57	19	eP	Pn	08 11 22.5	-0.9
ARIG				eS	Sn	08 11 41.0	-3.4
MEIG	Mezcala	1.66	47		Pn	08 11 24.2	-0.4
MEIG					Sn	08 11 44.3	-2.3
MEIG	Mezcala	1.66	47	eP	Pn	08 11 24.2	-0.4
MEIG				eS	Sn	08 11 44.3	-2.3
CRIG	Cruz Grande	1.69	91		Pn	08 11 24.2	-0.6
CRIG	Cruz Grande	1.69	91	eP	Pn	08 11 24.2	-0.6
CRIG				eS	Sn	08 11 42.3	-4.8
PLIG	Platanillo	2.07	39		Pn	08 11 29.7	-0.6
PLIG					Sb	08 11 59.3	+0.2
PLIG	Platanillo	2.07	39	eP	Pn	08 11 29.7	-0.6
PLIG				eS	Sb	08 11 59.3	+0.2
TEJU	Tejupilco	2.22	18	eP	Pn	08 11 31.4	-1.0
TEJU				eS	Sn	08 12 00.8	+0.3
TLIG	Tlapa	2.35	70		Pn	08 11 34.4	+0.2
TLIG	Tlapa	2.35	70	eP	Pn	08 11 34.7	+0.5
TLIG				eS	Sn	08 12 02.1	-1.7
HMTT	Tlapaneco	2.44	65		Pn	08 11 36.0	+0.6
HMTT					Sn	08 12 05.0	-1.0
HMTT	Tlapaneco	2.44	65	eP	Pn	08 11 36.0	+0.6
HMTT				eS	Sn	08 12 05.0	-1.0
MAVM	Malinalco, Edo	2.54	31		Pn	08 11 35.9	-0.9
MAVM					Sn	08 12 04.7	-3.7
MAVM	Malinalco, Edo	2.54	31	eP	Pn	08 11 35.9	-0.9
MAVM				eS	Sn	08 12 04.7	-3.7
PNIG	Pinotepa	2.68	98		Pn	08 11 38.7	+0.1
PNIG	Pinotepa	2.68	98	eP	Pn	08 11 38.7	+0.1
PNIG				eS	Sn	08 12 06.6	-5.0
YAIG	Yautepec	2.70	40		Pn	08 11 38.1	-0.9
YAIG					Sn	08 12 11.4	-0.9
YAIG	Yautepec	2.70	40	eP	Pn	08 11 38.1	-0.9
YAIG				eS	Sn	08 12 11.4	-0.9
MMIG	Aquila	2.78	303	eP	Pn	08 11 38.2	-1.7
MMIG				eS	Sn	08 12 10.3	-3.9
URUA	Uruapan	2.85	337		Pn	08 11 40.8	-0.3
URUA					Sn	08 12 13.7	-2.5
URUA	Uruapan	2.85	337	eP	Pn	08 11 40.8	-0.3
URUA				eS	Sn	08 12 13.7	-2.5
FTIG	Fresnillo de T	2.86	67		Pn	08 11 41.9	+0.7
FTIG					Sn	08 12 14.9	-1.3
FTIG	Fresnillo de T	2.86	67	eP	Pn	08 11 41.9	+0.7
FTIG				eS	Sn	08 12 14.9	-1.3
INVM	La Marquesa	2.87	30	eP	Pn	08 11 39.9	-1.8
INVM				eS	Sn	08 12 12.7	-4.3
AOVM	Tlapan	2.88	31		Pn	08 11 40.5	-1.3
AOVM					Sn	08 12 19.1	+1.7
AOVM	Tlapan	2.88	31	eP	Pn	08 11 40.5	-1.3
AOVM				eS	Sn	08 12 19.1	+1.7
MOIG	Morelia	2.89	354		Pn	08 11 40.8	-0.9
MOIG	Morelia	2.89	354	eP	Pn	08 11 40.9	-0.9
MOIG				eS	Sn	08 12 17.4	+0.2
TLVM	San Miguel Top	2.92	34	eP	Pn	08 11 42.2	0.0
TLVM				eS	Sn	08 12 17.6	-0.6
XCVM	Xochimilco	2.98	34	eP	Pn	08 11 42.3	-0.7
XCVM				eS	Sn	08 12 20.3	+0.9
CJVM	Cuajimalpa	2.98	31	eP	Pn	08 11 38.5	-4.5
CJVM				eS	Sn	08 12 14.5	-5.0
MPVM	San Francisco	2.99	36	eP	Pn	08 11 42.2	-0.9
MPVM				eS	Sn	08 12 18.8	-0.9
CNCY	Coyoacan	3.00	33	eP	Pn	08 11 45.0	+1.8
CNCY				eS	Sb	08 12 22.6	-3.2
CUP5	Mexico City	3.01	32	eP	Pn	08 11 45.3	+2.0
CUP5				eS	Sn	08 12 21.3	+1.1
UNM	Universidad Na	3.01	33		Pn	08 11 41.6	-1.7
UNM	Universidad Na	3.01	33	eP	Pn	08 11 41.6	-1.7
UNM				eS	Sb	08 12 22.9	-3.3
TXIG	Tlaxiaco	3.02	81		Pn	08 11 44.3	+0.7
TXIG					Sn	08 12 17.7	-2.8
TXIG	Tlaxiaco	3.02	81	eP	Pn	08 11 44.3	+0.7
TXIG				eS	Sn	08 12 17.7	-2.8
BJVM	Benito Juarez	3.05	32	eP	Pn	08 11 44.8	+0.9
BJVM				eS	Sn	08 12 20.5	-0.7
PPPT	Popocatepetl	3.06	44	eP	Pn	08 11 43.3	-1.1
PPPT				eS	Sn	08 12 19.8	-2.1
PBXN	Popocatepetl	3.07	44	eP	Pn	08 11 43.9	-0.5
PBXN				eS	Sn	08 12 20.6	-1.4
CTVM	Cuauhtemoc	3.11	32	eS	Sn	08 12 22.5	-0.2
PBCV	Popocatepetl	3.12	45	eP	Pn	08 11 44.4	-0.5
PBCV				eS	Sn	08 12 22.2	-0.7
ATVM	ATLACOMULCO	3.12	18		Pn	08 11 43.3	-1.7
ATVM					Sn	08 12 21.5	-1.5
ATVM	ATLACOMULCO	3.12	18	eP	Pn	08 11 43.3	-1.7
ATVM				eS	Sn	08 12 21.5	-1.5
HLIG	Huajuapan de L	3.12	70		Pn	08 11 45.5	+0.6
HLIG					Sn	08 12 20.7	-2.2
HLIG	Huajuapan de L	3.12	70	eP	Pn	08 11 45.5	+0.6
HLIG				eS	Sn	08 12 20.7	-2.2
APVM	Azcapotzalco	3.13	30		Pn	08 11 45.1	+0.1
APVM					Sb	08 12 26.1	-3.5
APVM	Azcapotzalco	3.13	30	eP	Pn	08 11 45.1	+0.1
APVM				eS	Sb	08 12 26.1	-3.5
PPIG	Popocatepetl	3.13	43		Pn	08 11 44.3	-0.9
PPIG					Sn	08 12 23.0	-0.5
PPM	Popocatepetl	3.13	43	eP	Pn	08 11 44.3	-1.0
PPM				eS	Sn	08 12 23.0	-0.5
PBVM	Pinon	3.15	33		Pn	08 11 46.3	+1.2
PBVM					Sn	08 12 19.1	-4.2
PBVM	Pinon	3.15	33	eP	Pn	08 11 46.3	+1.2
PBVM				eS	Sn	08 12 19.1	-4.2
AZVM	Cuida Lopez Ma	3.17	29		Pn	08 11 45.8	+0.1
AZVM					Sn	08 12 19.8	-4.5
AZVM	Cuida Lopez Ma	3.17	29	eP	Pn	08 11 45.8	+0.1
AZVM				eS	Sn	08 12 19.8	-4.5
YOIG	Yosondua	3.20	88		Pn	08 11 46.8	+0.7
YOIG	Yosondua	3.20	88	eP	Pn	08 11 46.8	+0.7
YOIG				eS	Sn	08 12 20.6	-4.4
TXVM	Universitario	3.23	35	eP	Pn	08 11 48.8	+2.3
TXVM				eS	Sn	08 12 21.5	-4.2
ACIG	Acambay	3.32	17		Pn	08 11 46.5	-1.1
ACIG					Sb	08 12 34.1	-0.9
ACIG	Acambay	3.32	17	eP	Pn	08 11 46.5	-1.1
ACIG				eS	Sb	08 12 34.1	-0.9
PHPU	Puebla	3.43	49		Pn	08 11 48.8	-0.3
PHPU					Sn	08 12 28.8	-1.7
PHPU	Puebla	3.43	49	eP	Pn	08 11 48.8	-0.3
PHPU				eS	Sn	08 12 28.8	-1.7
ZUVM	ZUMPANGO	3.48	29		Pn	08 11 51.1	+1.3
ZUVM					Sn	08 12 31.0	-0.9
ZUVM	ZUMPANGO	3.48	29	eP	Pn	08 11 51.1	+1.3
ZUVM				eS	Sn	08 12 31.0	-0.9
VTVM	Tizayuca	3.58	34		Pn	08 11 52.3	+1.0
VTVM					Sn	08 12 30.6	-3.9
VTVM	Tizayuca	3.58	34	eP	Pn	08 11 52.3	+1.0
VTVM				eS	Sn	08 12 30.6	-3.9
CDAR	Ciudad de Arme	3.66	306	eP	Pn	08 11 51.3	-0.8
CDAR				eS	Sn	08 12 32.1	-3.9
PEIG	Puerto Escondi	3.68	102		Pn	08 11 53.3	+1.0
PEIG	Puerto Escondi	3.68	102	eP	Pn	08 11 53.3	+1.0
PEIG				eS	Sn	08 12 29.9	-6.5
MNGA	Volcan de Coli	3.72	316	eP	Pn	08 11 54.2	+1.0
MNGA				eS	Sb	08 12 42.5	-4.3
TPIG	Tehuac#an	3.73	64		Pn	08 11 53.6	+0.3
TPIG					Sn	08 12 36.0	-2.0
TPIG	Tehuac#an	3.73	64	eP	Pn	08 11 53.6	+0.3
TPIG				eS	Sn	08 12 36.0	-2.0
THEZ	Tehuacan	3.74	63	eP	Pn	08 11 53.0	-0.4
THEZ				eS	Sn	08 12 37.7	-0.5
INCO	Volcan de Coli	3.75	317	eP	Pn	08 11 55.2	+1.4
INCO				eS	Sn	08 12 42.1	+3.4
SOMAC	Volcano de Col	3.77	317	eP	Pn	08 11 54.3	+0.4
SOMAC				eS	Sn	08 12 41.7	+2.6
CEGR	Campo Tres	3.83	313	eP	Pn	08 11 55.2	+0.6
CEGR				eS	Sn	08 12 33.4	-7.0
TOIG	Toxpalan	3.88	70		Pn	08 11 55.4	+0.3
TOIG					Sn	08 12 39.4	-2.0
TOIG	Toxpalan	3.88	70	eP	Pn	08 11 55.4	+0.3
TOIG				eS	Sn	08 12 39.4	-2.0
DHIG	Demacu	3.91	26		Pn	08 11 54.3	-1.5
DEIG	Demacu	3.91	26	eP	Pn	08 11 54.3	-1.5
DEIG				eS	Sn	08 12 44.8	+2.3
JRQG	Juriquilla Cam	3.92	6		Pn	08 11 52.5	-3.4
JRQG	Juriquilla Cam	3.92	6	eP	Pn	08 11 57.4	+1.6
JRQG				eS	Sn	08 12 45.2	+2.6
IGIG	Irapuato, Guan	3.97	354		Pn	08 11 55.8	-0.7
IGIG					Sn	08 12 43.4	-0.4
IGIG	Irapuato, Guan	3.97	354	eP	Pn	08 11 55.8	-0.7
IGIG				eS	Sn	08 12 43.4	-0.4
OXIG	Oaxaca	3.99	85		Pn	08 11 58.2	+1.4
OXIG					Sn	08 12 40.9	-3.4
VHO	Vista Hermosa	3.99	85	eP	Pn	08 11 58.2	+1.4
VHO				eS	Sn	08 12 40.9	-3.4
CIHU	Emiliano Zapat	4.41	305	eP	Pn	08 12 03.5	+1.0
CIHU				eS	Sn	08 12 49.9	-4.5
CXUV	Coxquihui	4.60	42	eP	Pn	08 12 04.1	-1.0
CXUV				eS	Sn	08 12 55.5	-3.6
JAUV	Jalcomulco	4.66	56	eP	Pn	08 12 03.2	-2.6
JAUV				eS	Sn	08 12 55.0	-5.6
HUIG	Huatulco	4.70	102		Pn	08 12 07.6	+1.2
HUIG	Huatulco	4.70	102	eP	Pn	08 12 07.6	+1.2
HUIG				eS	Sn	08 12 54.0	-7.6
CJM	Chamela	4.78	305	eP	Pn	08 12 08.9	+1.3
CJM				eS	Sn	08 12 58.8	-4.8
NEUV	Arroyo Zacate	4.95	79	eP	Pn	08 12 10.3	+0.5
NEUV				eS	Sn	08 13 05.4	-2.3
RPIG	Rio Verde	5.14	9	eP	Pb	08 12 21.8	-3.4
RPIG				eS	Sn	08 13 16.3	+3.7
CTUV	Llano Grande	5.24	27	eP	Pn	08 12 12.7	-1.1
CTUV				eS	Sn	08 13 18.7	+3.8
AAIG	Aguscalientes	5.34	345	eS	Sn	08 13 12.9	-4.9
ANIG	Ahuacatlan	5.46	322	eP	Pb	08 12 24.8	-5.8
ANIG				eS	Sn	08 13 26.9	+6.4
CMIG	Matias Romero	5.75	86		Pn	08 12 21.9	+0.9
CMIG	Matias Romero	5.75	86	eP	Pn	08 12 21.9	+0.9
CMIG				eS	Sn	08 13 22.1	-5.5
PMUV	Sontecomapan	5.77	72	eP	Pn	08 12 19.8	-1.4
PMUV				eS	Sn	08 13 25.6	-2.4
ZAIG	Zacatecas	6.16	345	eP	Pn	08 12 18.5	-8.2
GTIG	Gomez Farias	6.45	14		Pn	08 12 28.7	-1.8
GTIG	Gomez Farias	6.45	14	eP	Pn	08 12 28.7	-1.8
TGIG		7.44	89		Pn	08 12 44.6	+0.5
TGIG		7.44	89	eP	Pn	08 12 44.6	+0.5
TGIG				i S	Sn	08 14 00.5	-8.7
PCIG		7.45	97		Pn	08 12 46.2	+2.1
PCIG					Sn	08 14 05.2	-4.1
PCIG		7.45	97	eP	Pn	08 12 46.2	+2.1
PCIG				eS	Sn	08 14 05.2	-4.1
LNIG	Linares	8.18	9	eP	Pn	08 12 58.6	+4.4
CCIG	Comitan	8.41	92	Pn	Pn	08 12 57.6	+0.1
PATR	El Naranjo	8.49	100	eP	Pn	08 13 01.0	+2.3
PATR				eS	Sn	08 14 33.3	-2.0
PAVE	Pavencul	8.53	99	eP	Pn	08 13 02.6	+3.4
PAVE				eS	Sn	08 14 34.0	-2.2
RTAL	Retalhuleu	9.14	103	Pn	Pn	08 13 11.1	+3.7
SLBS	Sierra La Lagu	10.92	310	Pn	Pn	08 13 32.1	+0.3
DRIO	Del Rio	12.58	1		Pn	08 13 54.4	-0.1
TXAR	Lajitas Array	12.75	349	P	Pn	08 14 04.0	+7.1
	baz=158,slow=11,SNR=3.8						
	0.2nm,0.6s						
TGUH	Tegucigalpa,Un	13.41	100		Pn	08 14 08.1	+2.2
OZNA	Ozona	14.07	359	Pn	Pn	08 14 15.5	+0.5
VHRN	Van Horn	14.43	346		Pn	08 14 18.7	-1.2
BRDY	Brady	14.54	6		Pn	08 14 19.9	-1.3
PECS	Pecos	14.77	350		Pn	08 14 25.1	+0.6
HSIG		15.29	325		Pn	08 14 32.6	+1.2
HSIG				IAmb	IAmb	08 14 40.9	
	comp=Z,11nm,0.9s						
BOAB	BOACO BROADBAN	15.35	104		Pn	08 14 34.5	+2.3
ABTX	Abilene, Hawle	15.81	4		Pn	08 14 37.3	-0.9
ABTX				IAmb	IAmb	08 14 42.5	
	comp=Z,7.7nm,0.9s						
FW13	Cleburne	15.81	11		Pn	08 14 36.8	-1.4
FW13				IAmb	IAmb	08 14 42.8	
	comp=Z,21nm,1.1s						
237A	Washetta, Mont	15.83	16		Pn	08 14 36.8	-1.7
NATX	Nacogdoches	15.95	20		Pn	08 14 39.5	-0.5
NATX				IAmb	IAmb	08 14 44.6	
	comp=Z,19nm,0.8s						
SN05	Snyder 5	16.02	0		Pn	08 14 39.7	-1.3
SN05				IAmb	IAmb	08 14 45.4	
	comp=Z,16nm,0.5s						
FW06	Azle	16.39	10		Pn	08 14 46.3	+0.6
FW06				IAmb	IAmb	08 14 50.5	
	comp=Z,8.9nm,0.8s						
APMT	Aspermont	16.48	2		Pn	08 14 46.2	-0.6
APMT				IAmb	IAmb	08 14 50.7	
	comp=Z,16nm,0.8s						
MSTX	Muleshoe	17.19	355		Pn	08 14 54.9	-1.1
MSTX				IAmb	IAmb	08 14 56.4	
	comp=Z,8.0nm,0.7s						
Z38A	Mt. Pleasant	17.25	17		Pn	08 14 56.3	-0.2
Z38A				IAmb	IAmb	08 14 59.5	
	comp=Z,20nm,0.6s						
DUN6	Lazy B Ranch	17.36	336	P	Pn	08 14 58.4	+0.3
DUN6				IAmb	IAmb	08 15 01.5	
	comp=Z,19nm,1.0s						
TUC	Tucson	17.87	332		P	08 15 05.7	+0.7
CRNM	Carthage	17.88	344	P	Pn	08 15 04.3	-0.2
WMOK	Wichita Mounta	17.98	6	P	Pn	08 15 04.0	-1.6
AMTX	Amarillo	18.04	358		Pn	08 15 05.9	-0.5
AMTX				IAmb	IAmb	08 15 06.9	
	comp=Z,11nm,1.0s						
SMWD	Samnorwood	18.25	2	P	Pn	08 15 07.6	-1.4
SMWD				IAmb	IAmb	08 15 12.3	
	comp=Z,7.5nm,0.6s						
214A	Organ Pipe Nat	18.58	327	P	Pn	08 15 14.4	+1.5
ANMO	Albuquerque	18.76	346	P	Pn	08 15 15.8	+0.5
ANMO	Albuquerque	18.76	346	P	P	08 15 15.1	+0.1
ANMO				IAmb	IAmb	08 15 20.1	
	comp=Z,8.5nm,1.2s						
ANMO	Albuquerque	18.76	346	P	Pn	08 15 16.4	+1.0
	comp=Z,0.2nm,0.3s,baz=240,slow=11,SNR=16						
ANMO				LR	LR	08 23 52.4	
	comp=Z,64nm,19.1s,baz=256,slow=41						
	comp=Z,5.6nm,1.0s						
TUL3	Leonard	19.58	12		P	08 15 22.6	-1.1
TUL3				IAmb	IAmb	08 15 23.4	
	comp=Z,11nm,0.7s						
RTBA	Rita Blanca	19.64	356	P	P	08 15 24.2	-0.3
X16A	Lo Mia Camp, P	19.95	334	P	P	08 15 28.6	+0.6
X16A				IAmb	IAmb	08 15 33.5	
	comp=Z,6.1nm,0.9s						
Y14A	Wickenburg	20.25	330	P	Pn	08 15 33.1	0.0
T35A	Sooner Cattle	20.42	10	P	P	08 15 31.7	-1.3
T35A				IAmb	IAmb	08 15 32.6	
	comp=Z,6.7nm,0.5s						
FCAR	Ozark Folk Cen	20.56	21	P	P	08 15 33.7	-0.7
FCAR				IAmb	IAmb	08 15 34.5	
	comp=Z,11nm,0.8s						
LCAR	Lake Charles	21.07	22	P	P	08 15 39.2	-0.7
LCAR				IAmb	IAmb	08 15 40.4	
	comp=Z,4.8nm,0.9s						
PFO	Pinyon Flats O	21.84	323	P	P	08 15 52.2	+3.8
	comp=Z,1.4nm,0.8s,baz=144,slow=14,SNR=3.6						
PFO				LR	LR	08 24 04.3	
	comp=Z,44nm,19.1s,baz=198,slow=35						
	comp=Z,1.4nm,0.8s						
T42A	Van Buren	21.95	21		P	08 15 50.0	+0.6
T42A				IAmb	IAmb	08 15 53.8	
	comp=Z,8.2nm,0.9s						
PBMO	Poplar Bluff	21.96	23	P	P	08 15 48.0	-1.6
PBMO				IAmb	IAmb	08 15 53.5	
	comp=Z,15nm,1.3s						
V12A	Nelson	22.59	329	P	P	08 15 56.8	+0.4
SHPR	Sheep Range	23.36	330		P	08 16 06.6	+2.0
TKL	Tuckaleechee C	24.20	36	LR	LR	08 26 42.9	
	comp=Z,22nm,18.9s,baz=210,slow=40						
T50A	Nancy	24.65	32		P	08 16 15.2	-1.4
T50A				IAmb	IAmb	08 16 16.1	
	comp=Z,3.2nm,0.6s						
NVAR	Mina Array Bea	26.42	328	P	P	08 16 35.1	+2.3
NVAR	Mina Array Bea	26.42	328	P	P	08 16 35.3	+2.5
	comp=Z,3.0nm,0.7s,baz=146,slow=11,SNR=11						
	comp=Z,3.0nm,0.7s						
ELK	Elko	26.91	335	LR	LR	08 27 28.0	
	comp=Z,44nm,20.0s,baz=160,slow=36						
PDAR	Pinedale Array	26.93	346	P	P	08 16 39.0	+1.6
PDAR	Pinedale Array	26.93	346	P	P	08 16 38.5	+1.1
	comp=Z,1.7nm,0.7s,baz=141,slow=9.6,SNR=11						
PDAR				LR	LR	08 28 23.7	
	comp=Z,28nm,19.7s,baz=174,slow=39						
	comp=Z,1.7nm,0.7s						
LRM	Limekiln Ridge	30.52	344		P	08 17 10.3	+0.9
AGMN	Agassiz Nation	31.70	6		P	08 17 18.6	-0.7
SJG	San Juan	33.14	82	P	P	08 17 33.8	+1.4
SADO	Sadowa	33.36	29	LR	LR	08 34 18.2	
	comp=Z,34nm,18.2s,baz=140,slow=42						
ULM	Lac du Bonnet	33.62	6	P	P	08 17 35.0	-1.2
	comp=Z,2.8nm,0.5s,baz=167,slow=9.3,SNR=4.3						
	comp=Z,2.8nm,0.5s						
NEW	Newport	34.10	341	LR	LR	08 32 25.3	
	comp=Z,58nm,19.0s,baz=162,slow=38						
J61A	Chester	35.77	36	P	P	08 17 54.6	-0.2
D62A	Allapoint, All	40.03	34	P	P	08 18 30.5	-0.4
LPAZ	La Paz	46.08	134	P	P	08 19 22.6	+1.7
LPAZ				IAmb	IAmb	08 19 41.9	
	comp=Z,3.1nm,1.4s						
YKAW1	Yellowknife Wh	46.63	351		P	08 19 24.2	+0.2
YKAW1				IAmb	IAmb	08 19 25.4	
	comp=Z,4.8nm,1.1s						
YKA	Yellowknife Ar	46.66	351	P	P	08 19 24.1	0.0
	comp=Z,1.8nm,0.8s,baz=162,slow=7.0,SNR=20						
	comp=Z,1.8nm,0.8s						
YKAW3	Yellowknife Wh	46.73	351	P	P	08 19 24.8	+0.1
YKAW3				IAmb	IAmb	08 19 25.7	
	comp=Z,3.5nm,0.8s						
DLBC	Dease Lake	46.83	339	LR	LR	08 39 17.3	
	comp=Z,72nm,20.6s,baz=194,slow=36						
BLKN	Baker Lake	47.60	3		P	08 19 31.4	-0.1
WTLY	Watson Lake, Y	47.75	342	P	P	08 19 35.1	+2.3
ILAR	Eielson Array	57.01	338	P	P	08 20 43.1	+1.8
	comp=Z,0.9nm,0.8s,baz=146,slow=5.1,SNR=9.1						
	comp=Z,0.9nm,0.8s						
ASAJ	Asahikawa	96.25	320	LR	LR	09 05 20.1	
	comp=Z,39nm,20.4s,baz=300,slow=34						
WRA	Warramunga Arr	127.68	258	PKP	PKPdf	08 30 02.6	+0.3
	comp=Z,1.1nm,0.7s,baz=83,slow=2.2,SNR=10						
ASAR	Alice Springs	128.38	253	PKP	PKPdf	08 30 03.7	+0.2
	comp=Z,1.0nm,1.1s,baz=80,slow=2.6,SNR=4.1						
PZH	PanZhiHua	131.67	333	PKP	PKPdf	08 30 10.6	+0.6

MEX 08 08:11:14.3±1.3, 23°.02N×99°.99W, h5^{km}, MD3.6, 1D, Central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTIG	Gomez Farias	0.76	86⇓	eP	Pg	08 11 28.1	-0.8
	baz=268,slow=22						
GTIG				i S	Sg	08 11 37.2	-1.6
RPIG	Rio Verde	1.13	180	i P	Pg	08 11 33.6	-2.4
RPIG				i S	Sg	08 11 48.2	-2.4
LNIG	Linares	1.93	14	eP	Pn	08 11 44.8	-3.1
LNIG				eS	Sn	08 12 08.6	-3.9
JRQG	Juriquilla Cam	2.34	190	eP	Pn	08 11 53.2	-0.5
DEIG	Demacu	2.85	162	eS	Sn	08 12 37.0	+1.5

IDC 08 08:21:14.3±10.0, 15°.04S×179°.04W, h418^{km}±38^{km}, mb3.2/4, mbtmp3.9/5, Error ellipse: s-maj=178.1km s-min=40.0km az=28.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.88	226	P	P	08 22 26.5	+0.1
	4.7nm,0.4s,baz=53,slow=23,SNR=2.6						
STKA	Stephens Creek	39.56	238	P	P	08 28 08.5	+1.0
	1.6nm,0.8s,baz=66,slow=8.3,SNR=3.2						
	1.6nm,0.8s						
WRA	Warramunga Arr	44.63	257	P	P	08 28 47.2	-0.8
	0.8nm,1.1s,baz=94,slow=8.4,SNR=6.3						
	0.8nm,1.1s						
ASAR	Alice Springs	45.06	251	P	P	08 28 51.2	-0.1
	3.2nm,0.4s,baz=83,slow=8.6,SNR=64						
	3.2nm,0.4s						
QSPA	South Pole Qui	75.00	180	P	P	08 32 11.4	+0.1
	1.6nm,0.9s,baz=55,slow=6.9,SNR=2.4						
	1.6nm,0.9s						

*IDC **08** 08:25:42.5±1.3, 15°.33N×94°.32W, h0^{km}, mb4.0/11, mbtmp4.0/12, ML3.7/1, MS3.4/15, Error ellipse: s-maj=45.8km s-min=19.4km az=53.0*

*MEX **08** 08:25:45.9±1.2, 15°.15N×94°.63W, h24^{km}±57^{km}, MD4.5*

*NEIC **08** 08:25:47.0±2.0, 15°.22N±0°.03×94°.63W±0°.05, h35^{km}±2^{km}, mb4.2/27, Md4.5/134(MEX), Error ellipse: s-maj=7.9km s-min=4.3km az=252.0*

*GCG **08** 08:25:46.2±0.8, 15°.33N×94°.71W, h36^{km}±999^{km}, MD4.9*

*CATAC **08** 08:25:47.6±0.7, 15°N±12°×9°5W±1°0, h11^{km}±12^{km}, M4.8/7, mb5.2/2, mB5.1/2, MLv4.6/7, Mw(mB)4.4/2, Error ellipse: s-maj=25.4km s-min=21.7km az=173.0, confirmed*

ISC 08 08:25:46.4±1.7, 15°.15N±0°.05×94°.65W±0°.03, h34^{km}±5^{km}, n185, σ2^{s}23/241, mb4.1/16, MS3.4/13, 1D, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.48	68	i P	Pn	08 26 08.1	-2.6
PCIG				eS	Sn	08 26 25.4	-3.6
HUIG	Huatulco	1.54	294		Pn	08 26 09.8	-1.6
HUIG	Huatulco	1.54	294	eP	Pn	08 26 09.8	-1.6
HUIG				eS	Sn	08 26 26.9	-3.3
HUIG	Huatulco	1.54	294	i P	Pn	08 26 09.7	-1.7
HUIG				i S	Sn	08 26 27.0	-3.3
PANG	Puerto Angel	1.83	287		Pn	08 26 14.0	-1.5
PANG	Puerto Angel	1.83	287	eP	Pn	08 26 14.0	-1.5
PANG				eS	Sn	08 26 33.9	-3.7
CMIG	Matias Romero	1.94	353		Pn	08 26 15.1	-2.0
CMIG	Matias Romero	1.94	353	eP	Pn	08 26 15.1	-2.0
CMIG				eS	Sn	08 26 37.0	-3.3
TGIG		2.19	42		Pn	08 26 19.1	-1.3
TGIG		2.19	42	eP	Pn	08 26 19.1	-1.3
TGIG				eS	Sn	08 26 44.2	-2.1
TGIG		2.19	42	i P	Pn	08 26 19.3	-1.1
TGIG				i S	Sn	08 26 44.6	-1.7
TGBT	Tuxtla Gutierr	2.21	43		Pn	08 26 19.6	-1.0
TGBT					Sn	08 26 45.1	-1.6
TGBT	Tuxtla Gutierr	2.21	43	eP	Pn	08 26 19.6	-1.0
TGBT				eS	Sn	08 26 45.1	-1.6
THIG		2.31	96		Pn	08 26 23.5	+1.4
THIG					Sn	08 26 48.6	-0.8
THIG		2.31	96	eP	Pn	08 26 23.5	+1.4
THIG				eS	Sn	08 26 48.6	-0.8
THIG		2.31	96	i P	Pn	08 26 23.2	+1.1
PATR	El Naranjo	2.33	90	eP	Pn	08 26 20.6	-2.0
PATR				eS	Sn	08 26 45.9	-4.3
PAVE	Pavencul	2.39	89	eP	Pn	08 26 21.6	-1.8
PAVE				eS	Sn	08 26 49.2	-2.3
PEIG	Puerto Escondi	2.55	290		Pn	08 26 24.3	-1.1
PEIG	Puerto Escondi	2.55	290	eP	Pn	08 26 24.3	-1.1
PEIG				eS	Sn	08 26 51.3	-4.0
CCIG	Comitan	2.67	65	Pn	Pn	08 26 27.6	+0.4
CCIG	Comitan	2.67	65	eP	Pn	08 26 28.0	+0.8
CCIG				eS	Sn	08 26 59.2	+0.8
CCIG	Comitan	2.67	65	i P	Pn	08 26 28.0	+0.8
OXLC	Oaxaca	2.74	314	eP	Pn	08 26 28.1	-0.1
OXLC				eS	Sn	08 27 00.6	+0.3
OXBJ	Oaxaca	2.76	314		Pn	08 26 26.9	-1.5
OXBJ					Sn	08 26 60.0	-0.8
OXBJ	Oaxaca	2.76	314	eP	Pn	08 26 26.9	-1.5
OXBJ				eS	Sn	08 26 60.0	-0.8
OXIG	Oaxaca	2.77	314		Pn	08 26 28.7	+0.1
OXIG					Sn	08 27 00.7	-0.2
VHO	Vista Hermosa	2.77	314	eP	Pn	08 26 28.7	+0.1
VHO				eS	Sn	08 27 00.7	-0.2
NEUV	Arroyo Zacate	2.78	337	eP	Pn	08 26 26.3	-2.3
NEUV				eS	Sn	08 26 59.1	-1.8
MIHL	Minatitlan	2.83	2	eP	Pn	08 26 27.4	-1.7
MIHL				eS	Sn	08 27 03.9	+1.8
TUIG	Tuzandepetl	2.88	4	eP	Pn	08 26 28.9	-1.0
TUIG				eS	Sn	08 27 01.9	-1.4
RTAL	Retalhuleu	2.92	102		Pn	08 26 30.6	+0.1
RTAL	Retalhuleu	2.92	102	eP	Pn	08 26 28.7	-1.8
RTAL				eS	Sn	08 27 03.6	-0.9
RTAL	Retalhuleu	2.92	102	S	Sn	08 27 07.4	+2.9
RTAL	Retalhuleu	2.92	102	P	Pn	08 26 31.7	+1.1
HUEH	Huehuetenango	3.04	86	Pn	Pn	08 26 32.7	+0.4
HUEH	Huehuetenango	3.04	86	eP	Pn	08 26 33.3	+0.9
HUEH				eS	Sn	08 27 09.6	+1.9
HUEH	Huehuetenango	3.04	86	eP	Pn	08 26 33.0	+0.6
HUEH				i S	Sn	08 27 09.9	+2.2
HUEH	Huehuetenango	3.04	86	P	Pn	08 26 33.5	+1.1

HUEH	Huehuetenango	3.04	86	S	Sn	08 27 10.1	+2.4
VHSA	Villahermosa	3.26	30	*e*P	Pn	08 26 35.9	+0.8
VHSA				*e*S	Sn	08 27 12.2	-0.5
YOIG	Yosondua	3.26	302		Pn	08 26 36.8	+1.4
YOIG					Sn	08 27 11.5	-1.7
YOIG	Yosondua	3.26	302	*e*P	Pn	08 26 36.8	+1.4
YOIG				*e*S	Sn	08 27 11.5	-1.7
PMUV	Sontecomapan	3.41	352	*e*P	Pn	08 26 31.8	-5.4
PMUV				*e*S	Sn	08 27 13.3	-3.3
PNIG	Pinotepa	3.57	291		Pn	08 26 39.1	-0.3
PNIG	Pinotepa	3.57	291	*e*P	Pn	08 26 39.1	-0.3
PNIG				*e*S	Sn	08 27 16.3	-4.2
TXIG	Tlaxiaco	3.66	305		Pn	08 26 41.6	+0.8
TXIG	Tlaxiaco	3.66	305	*e*P	Pn	08 26 41.6	+0.8
TXIG				*e*S	Sn	08 27 24.9	+2.0
TOIG	Toxpalan	3.73	322		Sn	08 27 24.5	-0.2
TOIG	Toxpalan	3.73	322	*e*P	Pn	08 26 44.0	+2.2
TOIG				*e*S	Sn	08 27 24.5	-0.2
HLIG	Huajuapan de L	4.03	312		Sn	08 27 32.2	0.0
HLIG	Huajuapan de L	4.03	312	*e*P	Pn	08 26 48.0	+2.0
HLIG				*e*S	Sn	08 27 32.2	0.0
FG8	Yepocapa, Chim	4.05	102	*i* P	Pn	08 26 42.6	-3.5
FG16	Alotenango, Sa	4.10	102	*i* P	Pn	08 26 43.3	-3.6
TPIG	Tehuac#an	4.16	322		Pn	08 26 49.0	+1.3
TPIG					Sn	08 27 37.0	+1.7
TPIG	Tehuac#an	4.16	322	*e*P	Pn	08 26 49.0	+1.3
TPIG				*e*S	Sn	08 27 37.0	+1.7
THEZ	Tehuacan	4.22	322	*e*P	Pn	08 26 50.6	+2.1
THEZ				*e*S	Sn	08 27 33.8	-3.0
FTIG	Fresnillo de T	4.32	310		Pn	08 26 51.5	+1.6
FTIG					Sn	08 27 38.0	-1.2
FTIG	Fresnillo de T	4.32	310	*e*P	Pn	08 26 51.5	+1.6
FTIG				*e*S	Sn	08 27 38.0	-1.2
TLIG	Tlapa	4.46	303		Pn	08 26 53.5	+1.7
TLIG	Tlapa	4.46	303	*e*P	Pn	08 26 52.9	+1.1
TLIG				*e*S	Sn	08 27 43.0	+0.3
CRIG	Cruz Grande	4.59	291		Pn	08 26 52.4	-1.1
CRIG	Cruz Grande	4.59	291	*e*P	Pn	08 26 52.4	-1.1
CRIG				*e*S	Sn	08 27 39.7	-5.9
FAME	Alcaldia de Sa	4.67	106	P	Pn	08 26 56.5	+1.9
JAUV	Jalcomulco	4.67	334	*e*P	Pn	08 26 49.0	-5.6
JAUV				*e*S	Sn	08 27 43.1	-4.6
SLOZ	Alcaldia de Sa	4.84	103	P	Pn	08 26 59.8	+2.9
SLOZ	Alcaldia de Sa	4.84	103	S	Sn	08 27 55.4	+3.6
NUBE	Las Nubes	4.88	104	⇓*i*P	Pn	08 26 59.7	+2.2
NUBE	Las Nubes	4.88	104	P	Pn	08 26 59.5	+2.0
PETF	Flores	4.92	68		Pn	08 26 57.9	-0.1
PETF	Flores	4.92	68	*e*P	Pn	08 26 57.6	-0.4
PETF				*e*S	Sn	08 27 50.8	-3.0
PETF	Flores	4.92	68	*i* P	Pn	08 26 58.1	+0.1
SCIG	Sabancuy	5.04	41	*e*P	Pn	08 26 58.4	-1.2
SCIG				*e*S	Sn	08 27 53.1	-3.6
SCIG	Sabancuy	5.04	41	*e*P	Pn	08 26 58.7	-0.9
DAIG	Los Arroyos	5.16	292		Pn	08 27 02.0	+0.8
DAIG	Los Arroyos	5.16	292	*e*P	Pn	08 27 02.0	+0.8
DAIG				*e*S	Sn	08 27 54.1	-5.5
ESQI	Esquipulas	5.17	96		Pn	08 27 01.7	+0.2
MTO3	Montecristo	5.17	98		Pn	08 27 02.1	+0.5
JAYA	Jayaque - finc	5.25	106	*i* P	Pn	08 27 04.5	+1.8
JAYA	Jayaque - finc	5.25	106	P	Pn	08 27 05.4	+2.7
JAYA	Jayaque - finc	5.25	106	S	Sn	08 28 05.9	+3.7
PBCV	Popocatepetl	5.34	316	*e*P	Pn	08 27 06.9	+2.8
PBCV				*e*S	Sn	08 28 05.9	+1.2
PMON	Piamonte	5.36	105	P	Pn	08 27 07.2	+3.0
PPPT	Popocatepetl	5.38	316	*e*P	Pn	08 27 08.2	+3.4
PPPT				*e*S	Sn	08 28 08.4	+2.6
PBXN	Popocatepetl	5.42	316	*e*P	Pn	08 27 08.7	+3.3
PBXN				*e*S	Sn	08 28 10.9	+4.0
PPM	Popocatepetl	5.45	316	*e*P	Pn	08 27 08.6	+3.0
PPM				*e*S	Sn	08 28 06.9	-0.5
PPIG	Popocatepetl	5.45	316		Sn	08 28 06.9	-0.5
MEIG	Mezcala	5.51	301		Sn	08 28 09.1	+0.7
MEIG	Mezcala	5.51	301	*e*P	Pn	08 27 08.2	+2.0
MEIG				*e*S	Sn	08 28 09.1	+0.7
YAIG	Yautepec	5.61	312		Pn	08 27 09.1	+1.4
YAIG					Sn	08 28 09.1	-1.9
YAIG	Yautepec	5.61	312	*e*P	Pn	08 27 09.1	+1.4
YAIG				*e*S	Sn	08 28 09.1	-1.9
PLIG	Platanillo	5.66	305		Sn	08 28 10.2	-1.9
PLIG	Platanillo	5.66	305	*e*P	Pn	08 27 10.3	+2.1
PLIG				*e*S	Sn	08 28 10.2	-1.9
CAIG	El Cayaco	5.72	290		Pn	08 27 09.8	+0.8
CAIG	El Cayaco	5.72	290	*e*P	Pn	08 27 09.8	+0.8
CAIG				*e*S	Sn	08 28 06.2	-7.3
CXUV	Coxquihui	5.73	331	*e*P	Pn	08 27 06.6	-2.6
CXUV				*e*S	Sn	08 28 11.2	-2.5
MPVM	San Francisco	5.80	315	*e*P	Pn	08 27 14.5	+4.2
MPVM				*e*S	Sn	08 28 16.5	+0.8
TLVM	San Miguel Top	5.90	314	*e*P	Pn	08 27 10.7	-1.1
TLVM				*e*S	Sn	08 28 21.4	+2.9
XCVM	Xochimilco	5.91	314	*e*P	Pn	08 27 06.0	-5.7
XCVM				*e*S	Sn	08 28 19.5	+1.1
MAVM	Malinalco, Edo	5.99	310		Sn	08 28 19.8	-0.5
MAVM	Malinalco, Edo	5.99	310	*e*P	Pn	08 27 15.7	+2.9
MAVM				*e*S	Sn	08 28 19.8	-0.5
AOVM	Tlapan	6.06	313		Pn	08 27 14.9	+0.8
AOVM					Sn	08 28 19.8	-2.7
AOVM	Tlapan	6.06	313	*e*P	Pn	08 27 14.9	+0.8
AOVM				*e*S	Sn	08 28 19.8	-2.7
INVM	La Marquesa	6.12	313	*e*P	Pn	08 27 18.1	+3.2
INVM				*e*S	Sn	08 28 22.5	-1.3
ZUVM	ZUMPANGO	6.28	318	*e*P	Pn	08 27 13.9	-3.1
ZUVM				*e*S	Sn	08 28 19.5	-8.2
ARIG	Puente Sto Nin	6.29	300		Sn	08 28 25.9	-1.6
ARIG	Puente Sto Nin	6.29	300	*e*P	Pn	08 27 19.4	+2.6
ARIG				*e*S	Sn	08 28 25.9	-1.6
DEIG	Demacu	6.61	321	*e*P	Pn	08 27 24.8	+3.3
ACIG	Acambay	6.93	315	*e*P	Pn	08 27 30.1	+4.4
ACIG				*e*S	Sn	08 28 48.4	+4.9
ZIIG	Zihuatanejo	6.98	291		Pn	08 27 25.7	-0.7
ZIIG	Zihuatanejo	6.98	291	*e*P	Pn	08 27 25.7	-0.7
ZIIG				*e*S	Sn	08 28 40.1	-4.5
CTUV	Llano Grande	7.21	331	*e*P	Pn	08 27 36.1	+6.7
CTUV				*e*S	Sn	08 28 55.4	+5.3
TGUH	Tegucigalpa,Un	7.22	98		Pn	08 27 29.7	-0.1
MYIG	Merida	7.43	38	*e*P	Pn	08 27 30.1	-2.3
MYIG				*e*S	Sn	08 28 50.9	-4.6
MOIG	Morelia	7.70	307		Pn	08 27 37.4	+1.0
TEIG	Tepich	7.90	49		Pn	08 27 37.1	-1.8
TEIG	Tepich	7.90	49	LR	LR	08 31 24.3	
	comp=Z,7.0nm,20.5s,baz=219,slow=45						
TEIG	Tepich	7.90	49	*e*P	Pn	08 27 36.4	-2.5
TEIG				*e*S	Sn	08 29 01.2	-5.9
CNGN	Cerro Negro	8.16	108		Pn	08 27 43.7	+1.2
RPIG	Rio Verde	8.39	324	*e*P	Pn	08 27 49.2	+3.4
GTIG	Gomez Farias	8.96	332		Sn	08 29 31.3	-1.9
GTIG	Gomez Farias	8.96	332	*e*P	Pn	08 27 57.2	+3.7
GTIG				*e*S	Sn	08 29 31.3	-1.9
MNGA	Volcan de Coli	9.58	298	*e*P	Pn	08 28 06.7	+4.5
INCO	Volcan de Coli	9.59	298	*e*P	Pn	08 28 06.0	+3.5
SOMAC	Volcano de Col	9.62	298	*e*P	Pn	08 28 07.4	+4.6
ACON	Acoyapa	9.74	108	Pn	Pn	08 28 03.3	-0.8
CEGR	Campo Tres	9.76	297	*e*P	Pn	08 28 08.6	+4.0
CEGR				*e*S	Sn	08 29 52.1	-0.9
CIHU	Emiliano Zapat	10.47	294	*e*P	Pn	08 28 16.9	+2.7
CJM	Chamela	10.83	295	*e*P	Pn	08 28 19.3	+0.3
LCR2	La Lucha 2	11.70	116		Pn	08 28 32.5	+1.3
SOR	Soroa	13.37	54		Pn	08 28 51.3	-2.6
833A	Chaparral WMA,	13.83	342		Pn	08 28 59.4	-0.6
HNDO	Hondo	14.94	344		Pn	08 29 14.7	-0.5
435B	Jarrell	15.79	351		Pn	08 29 23.6	-2.7
435B				IAmb	IAmb	08 29 41.6	
	comp=Z,20nm,0.9s						
JCT	Junction City	15.98	344		Pn	08 29 27.4	-1.3
JCT				IAmb	IAmb	08 29 48.5	
	comp=Z,9.6nm,0.6s						
JCT	Junction City	15.98	344	*e*P	P	08 29 31.6	-0.3
TXAR	Lajitas Array	16.39	331	Pn	P	08 29 35.9	-0.6
	comp=Z,0.1nm,0.3s,baz=155,slow=13,SNR=9.3						
TXAR				LR	LR	08 36 30.1	
	comp=Z,29nm,19.7s,baz=86,slow=40						
	comp=Z,0.8nm,0.7s						
LPIG	La Paz	17.22	304	LR	LR	08 35 55.0	
	comp=Z,72nm,18.6s,baz=224,slow=35						
ALPN	Alpine	17.26	333	P	Pn	08 29 45.9	+0.9
143A	Socs Landing,	17.72	9	P	Pn	08 29 48.9	-1.6
143A				IAmb	IAmb	08 29 56.8	
	comp=Z,16nm,0.8s						
PLPT	Palo Pinto	17.90	350		Pn	08 29 52.0	-0.8
PLPT				IAmb	IAmb	08 30 10.7	
	comp=Z,14nm,0.8s						
Z41A	Richland Creek	18.11	5	P	Pn	08 29 53.9	-1.3
Z41A				IAmb	IAmb	08 30 00.3	
	comp=Z,13nm,0.9s						
PECS	Pecos	18.22	334	P	P	08 29 56.4	-0.3
PECS				IAmb	IAmb	08 30 13.7	
	comp=Z,7.3nm,0.5s						
SN05	Snyder 5	18.54	343		Pn	08 30 01.7	+1.1
SN05				IAmb	IAmb	08 30 10.8	
	comp=Z,8.8nm,0.6s						
WTFS	Witchita Falls	18.86	350		P	08 30 02.8	-0.9
WTFS				IAmb	IAmb	08 30 24.4	
	comp=Z,12nm,0.9s						
POST	Post	18.89	342	P	P	08 30 03.4	-0.8
POST				IAmb	IAmb	08 30 22.9	
	comp=Z,11nm,0.7s						
MNTX	Cornudas Mount	19.17	331	*e*P	P	08 30 06.5	-0.6
MIAR	Mount Ida	19.34	3		P	08 30 08.0	-0.9
UALR	University of	19.65	6		P	08 30 12.1	-0.2
UALR				IAmb	IAmb	08 30 13.5	
	comp=Z,13nm,0.7s						
SMWD	Samnorwood	20.50	347	P	P	08 30 22.4	+0.8
GOGA	Godfrey	20.82	27	P	P	08 30 24.5	-0.5
GOGA				IAmb	IAmb	08 30 31.8	
	comp=Z,7.1nm,0.8s						
U38A	Gravette	21.20	1		P	08 30 28.1	-1.0
V48A	Smith Brothers	21.67	17	P	P	08 30 33.2	-0.9
WVT	Waverly	21.77	15	P	P	08 30 33.7	-1.4
PBMO	Poplar Bluff	21.87	9	P	P	08 30 34.7	-1.5
PBMO				IAmb	IAmb	08 30 46.6	
	comp=Z,7.4nm,0.9s						
ROSC	El Rosal	22.46	115	P	P	08 30 42.9	-0.4
	comp=Z,3.0nm,0.4s,baz=270,slow=8.1,SNR=6.4						
	comp=Z,3.0nm,0.4s						
TKL	Tuckaleechee C	22.63	24	LR	LR	08 42 07.6	
	comp=Z,94nm,18.2s,baz=194,slow=44						
CCM	Cathedral Cave	23.02	7		P	08 30 47.7	-0.7
RUSC	La Rusia	23.09	111		P	08 30 48.5	-1.4
FLOC	Florencia	23.09	124	P	P	08 30 49.6	+0.1
FLOC				IAmb	IAmb	08 30 56.9	
	comp=Z,11nm,1.2s						
T25A	Trinidad	23.56	340		P	08 30 53.3	-0.8
T25A				IAmb	IAmb	08 31 15.6	
	comp=Z,14nm,1.3s						
SDV	Santo Domingo	24.29	102	LR	LR	08 42 36.6	
	comp=Z,59nm,18.1s,baz=35,slow=42						
PFO	Pinyon Flats O	26.96	317	LR	LR	08 43 34.4	
	comp=Z,69nm,19.1s,baz=212,slow=40						
PDAR	Pinedale Array	30.36	338	P	P	08 31 57.9	+2.6
	comp=Z,0.5nm,0.5s,baz=141,slow=8.3,SNR=1.9						
	comp=Z,0.5nm,0.5s						
ELK	Elko	31.16	329	LR	LR	08 46 54.7	
	comp=Z,89nm,18.6s,baz=157,slow=41						
NVAR	Mina Array Bea	31.19	323	P	P	08 32 05.3	+2.7
	comp=Z,1.7nm,0.9s,baz=152,slow=8.1,SNR=6.2						
NVAR				LR	LR	08 44 01.7	
	comp=Z,44nm,20.1s,baz=254,slow=35						
	comp=Z,1.7nm,0.9s						
SADO	Sadowa	32.32	21	LR	LR	08 48 31.0	
	comp=Z,49nm,18.2s,baz=176,slow=43						
EPLO	Experimental L	34.44	1		P	08 32 28.6	-2.0
ULM	Lac du Bonnet	35.02	359	P	P	08 32 34.3	-1.4
	comp=Z,3.4nm,0.7s,baz=163,slow=8.7,SNR=5.3						
	comp=Z,3.4nm,0.7s						
FFC	Flin Flon	39.90	353		P	08 33 16.7	-0.2
MDP	Montagnes des	42.46	99	LR	LR	08 52 07.9	
	comp=Z,77nm,19.0s,baz=236,slow=38						
SCHQ	Schefferville	45.09	22	LR	LR	08 55 01.9	
	comp=Z,90nm,19.6s,baz=292,slow=39						
YKAW1	Yellowknife Wh	49.31	348		P	08 34 31.7	-0.2
YKAW1				IAmb	IAmb	08 34 34.0	
	comp=Z,3.2nm,0.8s						
YKA	Yellowknife Ar	49.35	348	P	P	08 34 31.4	-0.7
	comp=Z,1.2nm,0.7s,baz=155,slow=6.7,SNR=18						
	comp=Z,1.2nm,0.7s						
YKAW3	Yellowknife Wh	49.41	348		P	08 34 31.5	-1.1
YKAW3				IAmb	IAmb	08 34 36.8	
	comp=Z,2.2nm,0.7s						
DLBC	Dease Lake	50.58	337	LR	LR	08 57 14.3	
	comp=Z,83nm,18.3s,baz=268,slow=37						
PLCA	Paso Flores	59.93	159	P	P	08 35 50.1	+0.8
	comp=Z,2.8nm,0.9s,baz=349,slow=12,SNR=4.2						
PLCA				LR	LR	08 55 43.9	
	comp=Z,30nm,19.1s,baz=167,slow=30						
	comp=Z,2.8nm,0.9s						
ILAR	Eielson Array	60.78	337	P	P	08 35 55.1	+0.4
	comp=Z,0.9nm,0.9s,baz=129,slow=3.7,SNR=9.0						
	comp=Z,0.9nm,0.9s						
BORG	Borgarnes	69.30	26	LR	LR	09 06 22.8	
	comp=Z,16nm,18.1s,baz=299,slow=35						
EKA	Eskdalemuir Ar	78.53	36	P	P	08 37 43.4	-0.9
	comp=Z,2.4nm,0.8s,baz=279,slow=7.1,SNR=3.7						
	comp=Z,2.4nm,0.8s						
ESDC	Sonseca Array	81.01	51	P	P	08 37 57.5	-0.5
	comp=Z,1.3nm,0.9s,baz=270,slow=5.3,SNR=4.5						
	comp=Z,1.3nm,0.9s						
NB2	NORSAR Subarra	84.35	28	P	P	08 38 15.7	+0.7
	comp=Z,2.7nm,1.1s,baz=291,slow=5.3						
NOA	NORSAR Array B	84.35	28	P	P	08 38 14.9	-0.1
	comp=Z,0.9nm,0.8s,baz=291,slow=5.2,SNR=4.5						
NOA				LR	LR	09 13 56.1	
	comp=Z,16nm,21.9s,baz=30,slow=34						
	comp=Z,0.9nm,0.8s						
ARCES	ARCESS Array B	85.84	18	P	P	08 38 23.2	+0.9
	comp=Z,449nm,0.4s,baz=302,slow=5.2,SNR=38						
FINES	FINESS Array B	90.53	24	P	P	08 38 45.2	+0.4
	comp=Z,0.5nm,0.7s,baz=284,slow=5.6,SNR=1.2						
FINES				LR	LR	09 18 15.3	
	comp=Z,21nm,21.3s,baz=260,slow=35						
	comp=Z,0.5nm,0.7s						

IDC 08 08:36:19.8±2.0, 3°.84S×149°.64E, h0km, mb3.8/4,
mbtmp3.8/4, MS3.6/24, Error ellipse: s-maj=82.6km
s-min=26.8km az=113.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	9.02	278	LR	LR	08 41 30.4	
	comp=Z,524nm,18.1s,baz=334,slow=34						
HNR	Honiara	11.65	119	LR	LR	08 43 57.0	
	comp=Z,267nm,18.9s,baz=297,slow=39						
GUMO	Guam	17.95	345	LR	LR	08 45 53.4	
	comp=Z,207nm,20.7s,baz=160,slow=32						
WRA	Warramunga Arr	21.88	222	P	P	08 41 13.5	-1.0
	5.8nm,0.8s,baz=46,slow=11,SNR=21						
	5.8nm,0.8s						
ASAR	Alice Springs	24.89	216	P	P	08 41 45.2	+0.7
	3.6nm,0.8s,baz=55,slow=9.0,SNR=26						
ASAR				LR	LR	08 52 14.4	
	comp=Z,273nm,19.6s,baz=61,slow=38						
	3.6nm,0.8s						
DAV	Davao City (W)	26.35	294	LR	LR	08 51 55.2	
	comp=Z,129nm,18.4s,baz=174,slow=36						
H11S3	WAKE ISLAND Hy	27.84	37	T	T	09 11 48.4	
	baz=220,slow=74,SNR=8.6						
H11S2	WAKE ISLAND Hy	27.84	37	T	T	09 12 19.7	
	baz=220,slow=74,SNR=4.8						
H11S1	WAKE ISLAND Hy	27.85	37	T	T	09 11 53.2	
	baz=220,slow=74,SNR=5.5						
STKA	Stephens Creek	28.90	194	LR	LR	08 53 26.6	
	comp=Z,228nm,19.9s,baz=28,slow=36						
H11N1	WAKE ISLAND Hy	28.91	35	T	T	09 13 02.4	
	baz=219,slow=76,SNR=2.9						
H11N3	WAKE ISLAND Hy	28.92	35	T	T	09 13 08.9	
	baz=219,slow=76,SNR=3.8						
H11N2	WAKE ISLAND Hy	28.92	35	T	T	09 13 04.3	
	baz=219,slow=76,SNR=4.8						
JCJ	Chichijima	31.59	347	LR	LR	08 53 56.1	
	comp=Z,102nm,21.1s,baz=122,slow=33						
JOW	Kunigami	36.83	327	LR	LR	08 55 02.6	
	comp=Z,116nm,21.1s,baz=306,slow=30						
MJAR	Matsushiro Arr	41.57	346	LR	LR	09 01 32.8	
	comp=Z,64nm,18.6s,baz=174,slow=36						
NWAO	Narrogin (SRO)	41.88	222	LR	LR	09 03 08.5	
	comp=Z,159nm,20.6s,baz=88,slow=38						
USRK	Ussuriysk Ar.	50.38	344	LR	LR	09 04 40.5	
	comp=Z,51nm,20.4s,baz=155,slow=34						
PETK	Petropavlovsk-	57.14	6	LR	LR	09 06 22.0	
	comp=Z,77nm,21.6s,baz=186,slow=32						
MA2	Magadan	63.23	1	LR	LR	09 10 53.2	
	comp=Z,36nm,22.0s,baz=266,slow=33						
SONM	Songino Array	63.86	329	P	P	08 46 54.3	0.0
	0.2nm,0.3s,baz=132,slow=2.1,SNR=1.6						
SONM				LR	LR	09 16 56.9	
	comp=Z,22nm,18.0s,baz=98,slow=38						
	0.2nm,0.3s						
PALK	Pallekele	69.67	279	LR	LR	09 21 31.0	
	comp=Z,34nm,19.6s,baz=132,slow=39						
VNDA	Vanda	73.91	177	LR	LR	09 16 09.4	
	comp=Z,69nm,19.9s,baz=262,slow=32						
KDAK	Kodiak Island	76.77	28	LR	LR	09 16 04.4	
	comp=Z,47nm,19.7s,baz=240,slow=31						
ZALV	Zalesovo Beam	78.62	327	LR	LR	09 22 13.3	
	comp=Z,21nm,21.5s,baz=84,slow=35						
ILAR	Eielson Array	82.48	23	P	P	08 48 43.9	-0.1
	0.3nm,0.7s,baz=259,slow=5.3,SNR=2.9						
ILAR				LR	LR	09 23 11.1	
	comp=Z,28nm,19.2s,baz=218,slow=34						
	0.3nm,0.7s						
BBB	Bella Bella	88.26	38	LR	LR	09 23 32.5	
	comp=Z,31nm,18.5s,baz=202,slow=32						
INK	Inuvik	88.70	21	LR	LR	09 22 44.4	
	comp=Z,28nm,21.0s,baz=250,slow=31						
NEW	Newport	95.00	42	LR	LR	09 29 11.8	
	comp=Z,18nm,18.2s,baz=255,slow=33						
YKA	Yellowknife Ar	96.05	28	LR	LR	09 30 02.7	
	comp=Z,41nm,19.9s,baz=332,slow=34						
KIRV	Kirov	98.59	329	LR	LR	09 36 13.4	
	comp=Z,34nm,21.9s,baz=65,slow=36						

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*NEIC **08** 08:41:04.0±0.8, 18°.84N±0°.04×155°.22W±0°.02, h10km±2km,*
Error ellipse: s-maj=6.5km s-min=3.1km az=333.0
HVO 08 08:41:05.1±1.1, 18°.84N±0°.04×155°.27W±0°.02, h12km±9km,
ML2.4/20, ML2.5/38(NEIC), Error ellipse: s-maj=6.1km
s-min=2.4km az=154.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HPO	Honuapo	0.36	313		Sg	08 41 17.8	+0.5
HPO	Honuapo	0.36	313	Pg	Pg	08 41 11.8	-0.6
HTC	Hot Caves	0.41	343		Pg	08 41 12.9	-0.4
HLP	Hilina Pali	0.45	355		Pg	08 41 13.8	-0.3
HLP	Hilina Pali	0.45	355		Sg	08 41 20.7	+0.6
KHU	Kahuku	0.52	321		Pg	08 41 14.3	-1.0
KHU				IAML		08 41 32.8	
	comp=E,316nm,0.9s						
KHU	Kahuku	0.52	321		Sg	08 41 21.5	-0.7
PUH	Pauahi	0.53	6		Pg	08 41 14.3	-1.3
PUH				IAML		08 41 31.6	
	comp=N,295nm,0.4s						
PUH				IAML		08 41 32.6	
	comp=E,273nm,0.7s						
KNHH	Kane Nui o Ham	0.54	10		Pg	08 41 14.7	-1.1
SDHHI	Sand Hill	0.55	358		Pg	08 41 14.7	-1.1
SDHHI					Sg	08 41 22.5	-0.6
KKO	Keanakako'i	0.55	0		Pg	08 41 14.8	-1.2
KKO					Sg	08 41 22.8	-0.6
AIN	Ainahou	0.56	341		Pg	08 41 15.1	-1.0
AIN	Ainahou	0.56	341		Sg	08 41 23.6	+0.1
STCH	Steam Cracks	0.56	14		Pg	08 41 14.8	-1.2
STCH	Steam Cracks	0.56	14		Sg	08 41 22.4	-1.1
WRMHI	West Rim	0.56	357		Pg	08 41 14.9	-1.3
BYL	Byron's Ledge	0.57	1		Pg	08 41 14.8	-1.5
BYL				IAML		08 41 33.0	
	comp=N,259nm,1.5s						
BYL				IAML		08 41 36.7	
	comp=E,306nm,0.9s						
NPOC	North of Pu‘u	0.57	15		Pg	08 41 15.1	-1.2
NPOC					Sg	08 41 22.6	-1.2
OBL	Observatory Le	0.57	359		Pg	08 41 15.0	-1.3
UWE	Uwekahuna	0.58	358		Pg	08 41 15.0	-1.4
UWE				IAML		08 41 29.6	
	comp=N,381nm,1.5s						
UWE	Uwekahuna	0.58	358		Sg	08 41 23.4	-0.8
HATHI	Halema‘uma‘u T	0.58	1		Pg	08 41 14.9	-1.5
HATHI				IAML		08 41 34.5	
	comp=N,290nm,0.5s						
UWB	Uwekahuna Bluf	0.58	359		Pg	08 41 15.0	-1.5
SBLHI	Steaming Bluff	0.58	0		Pg	08 41 15.1	-1.5
SBLHI					Sg	08 41 22.8	-1.5
RSD	Rainshed	0.62	359		Pg	08 41 16.0	-1.2
RSD	Rainshed	0.62	359		Sg	08 41 23.3	-2.1
JOKA	Jonika Flow	0.64	23		Pg	08 41 15.9	-1.7
JOKA	Jonika Flow	0.64	23		Sg	08 41 24.1	-1.9
MLH	Mauna Loa	0.66	350		Pg	08 41 16.5	-1.5
MLH				IAML		08 41 28.0	
	comp=E,183nm,0.5s						
MLH				IAML		08 41 35.2	
	comp=N,245nm,0.5s						
MWH	Mokuaweoweo	0.71	334		Pg	08 41 17.1	-1.9
MWH	Mokuaweoweo	0.71	334	IAML		08 41 33.2	
	comp=N,195nm,1.4s						
MWH				IAML		08 41 45.3	
	comp=E,231nm,1.3s						
ALEP	Alea Permanent	0.78	333		Pg	08 41 17.9	-2.4
ALEP					Sg	08 41 28.0	-2.6
HMH	Humu‘ula Sheep	0.78	345		Pg	08 41 18.3	-2.0
HMH	Humu‘ula Sheep	0.78	345	IAML		08 41 34.8	
	comp=N,137nm,0.7s						
CPH	Captain Cook	0.89	317		Pg	08 41 19.3	-3.0
HUH	Hualalai	0.99	328	Pg	Pg	08 41 21.3	-3.0
HUH				IAML		08 41 52.0	
	comp=E,197nm,0.7s						

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*CNRM **08** 08:51:22.6, 36°.25N×9°.57W, h10km*
*MDD **08** 08:51:24.8±1.3, 36°.45N×9°.88W, h30km, mb_Lg2.5/6,*
Error ellipse: s-maj=10.1km s-min=6.7km az=78.0
*IGIL **08** 08:51:27.8, 36°.54N×9°.69W, h15km, ML1.6*
*INMG **08** 08:51:27.2±1.4, 36°.55N×9°.74W, h14km±6km, ML1.7, Error*
ellipse: s-maj=10.5km s-min=7.6km az=111.0,
#DIST_RANGE: LOCAL #IPMA_REGION: SW Cabo
S.Vicente
ISC 08 08:51:24.8±2.6, 36°.30N±0°.04×9°.56W±0°.09, h24km±21km,
n24, σ1s.71/37, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	1.02	35	*e*P	Pn	08 51 44.2	+0.7
PFVI				*e*S	Sb	08 51 56.5	-0.2
PFVI				*i* AML	AML	08 51 57.4	
PFVI				*i* AML	AML	08 51 57.8	
PFVI	Vila Bisbo	1.02	35	P	Pn	08 51 43.2	-0.3
PFVI	Vila Bisbo	1.02	35	S	Sn	08 51 57.5	+0.5
MORF	Marmelete	1.24	36	*e*P	Pn	08 51 47.3	+0.7
MORF				*e*S	Sn	08 52 01.8	-0.7
MORF				IAML		08 52 02.9	
	comp=N,12nm,0.1s						
MORF	Marmelete	1.24	36	*e*P	Pn	08 51 47.3	+0.7
MORF				*e*S	Sn	08 52 02.4	-0.2
MORF				*i* AML	AML	08 52 02.8	
MORF				*i* AML	AML	08 52 03.1	
MORF				*i* AML	AML	08 52 06.2	
PTEO	Sao Teotonio	1.41	28	*e*S	Sn	08 52 05.8	-0.9
PTEO				*i* AML	AML	08 52 05.9	
PTEO				*i* AML	AML	08 52 08.8	
PTEO				*i* AML	AML	08 52 10.8	
PBDV	Barranco-do-Ve	1.61	54	*e*P	Pn	08 51 53.7	+2.0
PBDV				*e*S	Sb	08 52 13.3	-0.5
PCVE	Castro Verde	1.80	42	*e*P	Pn	08 51 56.1	+1.8
PCVE				*e*S	Sn	08 52 17.1	+0.7
PCVE				*i* AML	AML	08 52 17.8	
PCVE				*i* AML	AML	08 52 17.9	
PCVE				*i* AML	AML	08 52 18.8	
MESJ	Messejana	1.87	35	*e*P	Pn	08 51 56.0	+0.7
MESJ				*e*S	Sn	08 52 16.4	-1.7
MESJ				IAML		08 52 19.3	
	comp=N,3.5nm,0.2s						
MESJ	Messejana	1.87	35	*e*S	Sn	08 52 17.1	-1.0
MESJ				*i* AML	AML	08 52 19.2	
MESJ				*i* AML	AML	08 52 19.7	
MESJ				*i* AML	AML	08 52 29.2	
EGRO	El Granado	2.07	53	P	Pn	08 51 58.6	+0.7
EGRO				S	Sn	08 52 24.1	+1.1
EGRO				*i* IVmb_Lg		08 52 26.9	
PARRA	Arraiolos	2.54	9	*e*P	Pn	08 52 07.9	+3.4
PARRA				*e*S	Sn	08 52 37.9	+3.2
EMIN	Mina Concepcio	2.73	57	P	Pn	08 52 08.5	+1.4
EMIN				S	Sn	08 52 40.9	+1.4
EMIN				*i* IVmb_Lg		08 52 45.1	
PBAR	Barrancos	2.75	46	*e*S	Sn	08 52 39.5	-0.2
PBAR				*i* AML	AML	08 52 41.7	
PBAR				*i* AML	AML	08 52 42.5	
EBAD	Badajoz	3.18	39	P	Pn	08 52 12.4	-0.8
EBAD				S	Sn	08 52 47.9	-2.4
EBAD				*i* IVmb_Lg		08 52 52.8	
PMRV	Marv??o	3.56	28	*e*P	Pn	08 52 18.4	-0.1
PMRV				*e*S	Sn	08 52 55.7	-4.1

ZHG	ZHG	3.73	139	P	Pn	08 52 22.1	+1.2
ZHG	ZHG	3.73	139	S	Sn	08 53 05.2	+1.2
ECAB	El Cabril	3.75	61	P	Pn	08 52 22.3	+1.2
ECAB				S	Sn	08 53 04.1	-0.5
ECAB				*i* IVmb_Lg		08 53 05.5	
EADA	Adamuz	4.39	63	P	Pn	08 52 30.5	+0.6
EADA				S	Sn	08 53 19.8	-0.5
EADA				*i* IVmb_Lg		08 53 23.6	
EPLA	Plasencia	4.65	35	S	Sn	08 53 22.4	-4.3
EPLA				*i* IVmb_Lg		08 53 27.1	
TTIG	Tnine Tigouga,	5.82	170	P	Pn	08 52 47.1	-2.5
OUZM	OUZ	5.87	156	P	Pn	08 52 50.7	+0.4
OUZM	OUZ	5.87	156	S	Sn	08 53 57.2	+0.3

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*CUPWA **08** 09:04:25.8±1.7, 31°.17S×117°.28E, h4^{km}±85^{km}, Region: WESTERN AUSTRALIA*
*AUST **08** 09:04:25.4±0.3, 31°S±2°×11°7E±°, h10^{km}, ML2.5/4, Error ellipse: s-maj=7.6km s-min=3.8km az=60.3*
ISC 08 09:04:24.6±0.9**, 31°.15S**±0°.03×**117°.30E**±0°.05**, h15^{km}, n14, σ0^{s}.53**/18**, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOO6	Koorda	0.36	26	P	Pb	09 04 32.8	+0.1
KOO6	Koorda	0.36	26	S	Sb	09 04 38.3	+0.1
KLBR	Kellerberrin	0.59	139	S	Sb	09 04 44.0	-0.7
KLBR	Kellerberrin	0.59	139	P	Pb	09 04 36.5	-0.1
KLBR	Kellerberrin	0.59	139	P	Pb	09 04 36.5	-0.1
KLBR				S	Sg	09 04 43.5	-0.5
BLDU	Ballidu	0.74	316	P	Pg	09 04 39.5	+0.5
BLDU	Ballidu	0.74	316	P	Pg	09 04 39.3	+0.3
BLDU				S	Sg	09 04 48.7	0.0
MUN	Mundaring	1.25	228	P	Pn	09 04 47.6	+0.1
MUN	Mundaring	1.25	228	*e*P	Pn	09 04 47.6	+0.1
MUN				S	Sb	09 05 03.2	-0.5
NWAO	Narrogin (SRO)	1.77	182	P	Pb	09 04 56.9	+0.1
NWAO	Narrogin (SRO)	1.77	182	S	Sb	09 05 19.7	+0.8
MORW	Morawa	2.35	332	S	Sb	09 05 35.7	+0.3
MORW	Morawa	2.35	332	P	Pb	09 05 05.7	-0.9
MORW	Morawa	2.35	332	*e*P	Pb	09 05 05.8	-0.9
MORW				S	Sb	09 05 36.0	+0.7

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*GCG **08** 09:48:05.9±0.8, 14°.57N×94°.06W, h35^{km}±999^{km}, MD4.3*
*MEX **08** 09:48:05.9±0.9, 14°.62N×94°.07W, h9^{km}±29^{km}, MD4.1*
ISC 08 09:47:57.7±1.7**, 14°.65N**±0°.06×**94°.12W**±0°.03**, h1**^{km}±12^{km}**, n25, σ2^{s}.13**/43**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.36	39	*e*P	Pb	09 48 27.0	+2.9
PCIG				*e*S	Sn	09 48 44.2	+1.5
THIG		1.81	82	*e*P	Pg	09 48 33.7	+1.2
THIG				*e*S	Sb	09 48 54.0	-0.9
THIG		1.81	82	*i* P	Pg	09 48 33.5	+1.1
PATR	El Naranjo	1.88	75	*e*P	Pg	09 48 34.0	+0.2
PATR				*e*S	Sb	09 48 55.9	-1.2
PAVE	Pavencul	1.95	74	*e*P	Pg	09 48 35.3	+0.1
PAVE				*e*S	Sb	09 48 58.1	-1.1
HUIG	Huatulco	2.22	300	*e*P	Pb	09 48 40.0	+1.3
HUIG				*e*S	Sn	09 49 03.1	-0.8
TGIG		2.33	24	*e*P	Pg	09 48 42.3	0.0
TGIG				*e*S	Sg	09 49 11.5	-1.0
TGIG		2.33	24	*i* P	Pg	09 48 42.5	+0.2
TGIG				*i* S	Sg	09 49 11.5	-1.0
RTAL	Retalhuleu	2.35	93	*e*P	Pb	09 48 41.1	+0.2
RTAL				*e*S	Sn	09 49 08.0	+0.9
CCIG	Comitan	2.51	49	*e*P	Pg	09 48 45.4	-0.4
CCIG				*e*S	Sg	09 49 16.1	-2.2
CCIG	Comitan	2.51	49	*i* P	Pg	09 48 45.7	-0.1
CMIG	Matias Romero	2.54	343	*e*P	Pb	09 48 44.6	+0.4
CMIG				*e*S	Sb	09 49 14.4	-1.6
HUEH	Huehuetenango	2.61	75	*e*P	Pb	09 48 46.7	+1.2
HUEH				*e*S	Sb	09 49 17.0	-1.3
PEIG	Puerto Escondi	3.22	295	*e*P	Pn	09 48 53.6	+4.1
PEIG				*e*S	Sn	09 49 26.2	-2.3
NEUV	Arroyo Zacate	3.45	332	*e*P	Pn	09 48 55.8	+3.1
NEUV				*e*S	Sn	09 49 36.0	+1.7
FG8	Yepocapa, Chim	3.47	96	*i* P	Pn	09 48 52.0	-1.0
VHO	Vista Hermosa	3.49	314	*e*P	Pb	09 48 60.0	-0.5
VHO				*e*S	Sn	09 49 37.7	+2.2
FG16	Alotenango, Sa	3.51	96	*i* P	Pn	09 48 53.1	-0.7
YOIG	Yosondua	3.97	304	*e*P	Pb	09 49 10.0	+1.4
YOIG				*e*S	Sn	09 49 48.5	+1.2
PNIG	Pinotepa	4.24	295	*e*S	Sn	09 49 48.5	-5.2
TXIG	Tlaxiaco	4.36	307	*e*P	Pb	09 49 14.0	-1.5
TXIG				*e*S	Sn	09 49 59.1	+1.9
TOIG	Toxpalan	4.45	321	*e*P	Pb	09 49 14.6	-2.1
TOIG				*e*S	Sn	09 49 58.2	-0.8
HLIG	Huajuapan de L	4.75	312	*e*P	Pb	09 49 18.1	-3.9
HLIG				*e*S	Sn	09 50 01.6	-5.0
FTIG	Fresnillo de T	5.04	311	*e*P	Pb	09 49 22.8	-4.1
FTIG				*e*S	Sn	09 50 15.0	+1.4
JAUV	Jalcomulco	5.35	332	*e*P	Pn	09 49 21.5	+2.6
JAUV				*e*S	Sn	09 50 15.9	-5.4

MEX 08 09:48:56.1±0.6**, 16°.28N×98°.21W, h14**^{km}±3^{km}**, MD3.3, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.14	34	*e*P	Pg	09 48 59.1	-0.8
PNIG				*e*S	Sg	09 49 01.6	-0.7
YOIG	Yosondua	0.86	48	*e*S	Sg	09 49 20.1	-4.0
PEIG	Puerto Escondi	1.06	105	*e*P	Pb	09 49 13.2	-3.0
TXIG	Tlaxiaco	1.06	23	*e*P	Pb	09 49 12.9	-3.4
TXIG				*e*S	Sb	09 49 26.8	-3.4

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*SSNC **08** 10:18:07.8±2.2, 18°.87N×70°.26W, h120^{km}±16^{km}, MD3.5, ML3.3*
*SDD **08** 10:18:11.6±2.4, 18°.83N×70°.29W, h97^{km}±11^{km}, MD3.5, ML3.6, MW3.6*
*OSPL **08** 10:18:12.7±2.8, 18°.87N×70°.27W, h89^{km}±14^{km}, ML3.2*
ISC 08 10:18:08.2±1.4**, 18°.90N**±0°.04×**70°.29W**±0°.03**, h112**^{km}±7^{km}**, n37, σ1^{s}.87**/69**, 14C-12D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DR08	Loma La Naviza	0.26	77	⇑*e*Pg	Pn	10 18 23.7	-0.5
DR08				⇑*e*Sg	Sn	10 18 33.2	-3.0
DR08				IAML		10 18 33.7	
	comp=N,60µm,0.1s						
ABDR	Alto Bandera	0.33	254	⇓*e*Pg	Pn	10 18 24.4	-0.5
ABDR				⇓*e*Sg	Sn	10 18 35.5	-1.9
ABDR				⇓*e*		10 18 35.5	
ABDR				IAML		10 18 37.2	
	comp=N,2µm,0.2s						
BANI	BANI	0.51	188	⇑*e*Pg	Pn	10 18 26.4	+0.8
BANI				⇑*e*Sg	Sn	10 18 38.1	-0.5
BANI				IAML		10 18 42.0	
	comp=N,2µm,0.2s						
SDD	Santo Domingo	0.57	141	⇑*e*Pg	Pn	10 18 25.7	-0.1
SDD				⇑*e*Sg	Sn	10 18 36.7	-2.3
SDD				IAML		10 18 40.4	
	comp=N,83nm,0.4s						
SDD	Santo Domingo	0.57	141	*i* P	Pn	10 18 25.6	-0.1
SDD				*e*S	Sn	10 18 36.7	-2.3
NADR	Nagua	0.61	42	⇑*e*Pg	Pn	10 18 27.2	+1.2
NADR				⇑*e*Sg	Sn	10 18 40.7	+1.2
NADR				IAML		10 18 41.4	
	comp=N,14µm,0.3s						
LONA1	Toro Cenizo, N	0.62	40	*i* P	Pn	10 18 25.2	-1.0
LONA1				*e*S	Sn	10 18 37.3	-2.4
LONA1				IAML		10 18 42.5	
	comp=Z,2µm,0.4s						
SC01	Santiago de lo	0.67	321	⇓*e*Pg	Pn	10 18 27.7	+1.1
SC01				⇑*e*Sg	Sn	10 18 40.0	-0.4
SC01				IAML		10 18 42.2	
	comp=N,2µm,0.4s						
SC01	Santiago de lo	0.67	321	*i* P	Pn	10 18 27.7	+1.1
SC01				*e*S	Sn	10 18 40.5	+0.1
SC01				IAML		10 18 46.1	
	comp=Z,609nm,0.3s						
HATOM	Hato Mayor del	0.87	97	⇑*e*Pg	Pn	10 18 28.6	+0.2
HATOM				⇓*e*Sg	Sn	10 18 41.8	-1.8
HATOM				IAML		10 18 43.9	
	comp=N,756nm,0.2s						
SODR	Sosua Marina B	0.89	342	⇑*e*Pg	Pn	10 18 29.8	+1.2
SODR				*e*Sg	Sn	10 18 45.0	+1.2
SODR				IAML		10 18 53.1	
	comp=N,743nm,0.3s						
SDDR	Presa de Saban	0.95	275	*e*P	Pn	10 18 29.9	+0.8
SDDR				*e*S	Sn	10 18 44.5	-0.5
SDDR				IAML		10 18 48.6	
	comp=N,689nm,0.6s						
SDDR				IAML		10 18 49.5	
	comp=N,556nm,0.4s						
SDDR	Presa de Saban	0.95	275	⇓*e*Pg	Pn	10 18 30.1	+0.9
SDDR				⇓*e*Sg	Sn	10 18 45.1	+0.1
SDDR				IAML		10 18 49.8	
	comp=N,648nm,0.4s						
SDDR	Presa de Saban	0.95	275	*i* P	Pn	10 18 30.2	+1.0
SDDR				*e*S	Sn	10 18 45.1	+0.1
SDDR				IAML		10 18 51.7	
	comp=Z,391nm,0.5s						
MADR	Mao Valverde	1.01	311	⇑*e*Pg	Pn	10 18 31.1	+1.3
MADR				⇓*e*Sg	Sn	10 18 46.5	+0.4
MADR				IAML		10 18 51.1	
	comp=N,1µm,0.6s						
REDR	Restauracion	1.08	284	⇓*e*Pg	Pn	10 18 34.9	+4.5
REDR				*e*Sg	Sn	10 18 54.1	+6.9
REDR				IAML		10 18 57.4	
	comp=N,604nm,0.1s						
SMDR	Samana, DR	1.11	70	⇓*e*Pg	Pn	10 18 32.0	+1.3
SMDR				⇓*e*Sg	Sn	10 18 48.9	+1.1
SMDR				IAML		10 18 54.1	
	comp=N,688nm,0.3s						
MIDR	Miches	1.17	86	⇑*e*Pg	Pn	10 18 33.5	+2.1
MIDR				⇓*e*Sg	Sn	10 18 50.0	+1.0
MIDR				IAML		10 18 51.7	
	comp=N,325nm,0.4s						
PODR	Polo	1.19	232	⇑*e*Pg	Pn	10 18 33.0	+1.1
PODR				*e*Sg	Sn	10 18 49.2	-0.6
PODR				IAML		10 18 54.1	
	comp=N,174nm,0.9s						
LODU1	El Espartillar	1.25	244	*i* P	Pn	10 18 33.6	+1.3
LODU1				IAML		10 18 57.5	
	comp=Z,125nm,0.3s						
LODA1	ITESIL, Dajabo	1.48	296	*i* P	Pn	10 18 38.3	+3.3
LODA1				IAML		10 18 55.7	
	comp=Z,967nm,3.5s						
LODA1				*e*S	Sn	10 18 56.0	+0.7
LOVI	El Cajuil, Ovi	1.50	223	*i* P	Pn	10 18 36.3	+1.1
LOVI				*e*S	Sn	10 18 55.4	-0.4
LOVI				IAML		10 18 58.6	
	comp=Z,69nm,0.4s						
LOBH	Bahia de las A	1.65	231	*i* P	Pn	10 18 38.9	+1.9
LOBH				*e*S	Sn	10 19 00.7	+1.8
LOBH				IAML		10 19 06.3	
	comp=Z,104nm,0.5s						
PAPH	Port-au-Prince	1.94	259	*e*P	Pn	10 18 42.2	+1.6
PAPH				*e*S	Sn	10 19 07.3	+1.9
PAPH				IAML		10 19 09.5	
	comp=N,59nm,0.4s						
PAPH				IAML		10 19 10.8	
	comp=E,42nm,0.3s						
PAPH	Port-au-Prince	1.94	259	*i* P	Pn	10 18 42.6	+2.0
GRTK	Grand Turk	2.71	343	*e*P	Pn	10 18 51.7	+1.2
GRTK				*e*S	Sn	10 19 21.2	-1.9
GRTK				IAML		10 19 24.1	
	comp=E,74nm,0.3s						
GRTK				IAML		10 19 24.6	
	comp=E,147nm,0.4s						
GRTK	Grand Turk	2.71	343	*i* P	Pn	10 18 51.8	+1.2
AGPR	Aguadilla, PR	3.04	98	*i* P	Pn	10 18 57.9	+3.1
AGPR				IAML		10 19 44.3	
	comp=Z,64nm,0.6s						
CRPR	Cabo Rojo, PR	3.15	106	*i* P	Pn	10 19 00.2	+4.0
CRPR				IAML		10 19 50.6	
	comp=Z,49nm,0.6s						
MASC	Masc	3.93	289	*e*P	Pn	10 19 06.3	-0.4
MASC				*e*S	Sn	10 19 51.2	-0.8
MASC				IAML		10 19 55.3	
	comp=E,25nm,0.4s						
MASC				IAML		10 19 57.8	
	comp=N,20nm,0.4s						
QMBU	Quimbuelo	4.46	288	*e*P	Pn	10 19 13.1	-0.8
QMBU				*e*S	Sn	10 20 01.2	-3.5
QMBU				IAML		10 20 04.4	
	comp=E,32nm,0.1s						
QMBU				IAML		10 20 06.0	
	comp=N,35nm,0.2s						
GTBY	Guantanamo Bay	4.67	283	*e*P	Pn	10 19 17.0	+0.4
GTBY				*i* S	Sn	10 20 08.1	-1.6
GTBY				*e*S	Sn	10 20 08.1	-1.6
NMDO	Nuevo Mundo	4.72	291	*e*P	Pn	10 19 15.7	-1.6
NMDO				*e*S	Sn	10 20 08.7	-2.3
NMDO				IAML		10 20 10.8	
	comp=N,11nm,0.3s						
NMDO				IAML		10 20 12.1	
	comp=E,10nm,0.2s						
RCC	Rio Carpintero	5.22	283	*e*P	Pn	10 19 23.8	-0.3
RCC				*e*S	Sn	10 20 21.6	-1.5
RCC				IAML		10 20 26.1	
	comp=E,9.5nm,0.6s						
RCC				IAML		10 20 42.8	
	comp=N,13nm,1.2s						
PINC	Pinares de May	5.42	288	*e*P	Pn	10 19 24.6	-2.2
PINC				*e*S	Sn	10 20 25.4	-2.5
PINC				IAML		10 20 29.4	
	comp=N,7.5nm,0.3s						
PINC				IAML		10 20 30.3	
	comp=E,7.6nm,0.1s						
HLGC	Holguin	5.78	291	*e*P	Pn	10 19 31.8	+0.1
HLGC				*e*S	Sn	10 20 38.1	+1.4
HLGC				IAML		10 20 40.5	
	comp=N,7.1nm,0.6s						
HLGC				IAML		10 20 41.4	
	comp=E,7.2nm,0.7s						
YAR	Yar	5.91	285	*e*P	Pn	10 19 31.6	-1.8
YAR				*e*S	Sn	10 20 36.6	-3.2
YAR				IAML		10 20 37.4	
	comp=E,14nm,2.6s						
YAR				IAML		10 20 46.0	
	comp=N,16nm,2.2s						

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*MOS **08** 10:19:51.7±0.8, 6°.15S×154°.76E, h51^{km}, mb5.4/45, Error ellipse: s-maj=8.0km s-min=6.0km az=120.8*
*BJI **08** 10:19:54.2, 5°.86S×155°.13E, h77^{km}, mB5.0/13, mb5.1/69, Ms4.5/15, Ms7 4.2/19*
*IDC **08** 10:19:54.5±0.4, 6°.19S×154°.80E, h65^{km}±3^{km}, mb4.9/22, mbtmp5.2/26, MS4.1/24, Error ellipse: s-maj=10.6km s-min=8.6km az=106.0*
*NEIC **08** 10:19:55.1±1.5, 6°.23S±0°.08×154°.80E±0°.07, h63^{km}±5^{km}, mb5.1/333, Mww5.0/14, Error ellipse: s-maj=11.8km s-min=9.6km az=221.0*
*NEIC **08** 10:19:55.8, 6°.22S×154°.80E, h60^{km}*
*NEIC **08** 10:19:55.8, 6°.32S×154°.91E, h60^{km}, Moment Tensor Solution. Duration: 1^{s}.5 Moment tensor: Scale 10^{16}Nm; M_{rr}4.19; $M_{\theta\theta}$-2.18; $M_{\phi\phi}$-2.00; $M_{r\theta}$-0.56; $M_{\theta\phi}$2.34; $M_{\phi r}$0.14; Fault plane solution: $M_0$4.35000×10^{16} NP1: ϕ_s138.03000°, δ41.83000°, λ96.15000°. NP2: ϕ_s309.81000°, δ48.46000°, λ84.52000°. Principal axes: T 4.2375, Plg85.0000°, Azm173.0000°; N 0.2228, Plg4.0000°, Azm313.0000°; P -4.4602, Plg3.0000°, Azm44.0000°;*
*GCMT **08** 10:19:56.1±0.2, 6°.38S±0°.01×154°.68E±0°.01, h54^{km}, MW5.1/96, Moment Tensor Solution. s96,c128; s92,c134; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.53±.14; $M_{\theta\theta}$-2.71±.11; $M_{\phi\phi}$-2.82±.11; $M_{r\theta}$-0.38±.10; $M_{\theta\phi}$2.86±.08; $M_{\phi r}$0.69±.10; Best double couple: $M_0$5.63400×10^{16} NP1: ϕ_s133.00000°, δ41.00000°, λ87.00000°. NP2: ϕ_s318.00000°, δ49.00000°, λ93.00000°. Principal axes: T 5.5900, Plg86.0000°, Azm256.0000°; N 0.0870, Plg2.0000°, Azm136.0000°; P -5.6770, Plg4.0000°, Azm46.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **08** 10:19:58.2±0.7, 6°S±4°×15°5E±°, h93^{km}±6^{km}, M5.3/63, mB5.8/31, mb5.4/63, MLv5.0/1, Mw(mB)5.3/31*
ISC 08 10:19:55.0±0.3**, 6°.21S**±0°.03×**154°.83E**±0°.04**, h68**^{km}±2^{km}**, h68^{km}:pP-P, n902, σ1^{s}.13**/804**, mb5.1**/286**, 17C-7D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	3.33	307		Pn	10 20 45.2	+0.5
TATA	Tatamba Isabel	5.39	114	P	Pn	10 21 12.8	0.0
SAVO	Savo Central	5.74	121	P	Pn	10 21 18.6	+1.0
HNR	Honiara	6.00	123	P	Pn	10 21 21.9	+0.8
	2µm,0.9s,baz=247,slow=3.1,SNR=20						
HNR				S	Sn	10 22 31.2	+2.7
	5µm,1.1s,baz=280,slow=14,SNR=11						
HNR				LR	LR	10 23 41.1	
	comp=Z,2µm,22.0s,baz=296,slow=38						
HNR	Honiara	6.00	123	P	Pn	10 21 23.2	+2.0
HNR	Honiara	6.00	123	P	Pn	10 21 22.0	+0.8
ALEG	Aligegeo Malai	6.34	114	P	Pn	10 21 25.4	-0.5
ALEG	Aligegeo Malai	6.34	114	S	Sn	10 22 39.4	+2.5
HURO	Huro Makira	8.18	122	P	Pn	10 21 53.6	+2.6
HURO	Huro Makira	8.18	122	S	Sn	10 23 24.8	+2.9
PMG	Port Moresby	8.24	247		Pn	10 21 51.9	0.0
PMG	Port Moresby	8.24	247	P	Pn	10 21 52.3	+0.5
	568nm,0.8s,baz=43,slow=8.0,SNR=60						
PMG				S	Sn	10 23 24.7	+1.2
	250nm,0.9s,baz=340,slow=22,SNR=7.4						
PMG				LR	LR	10 24 56.2	
	comp=Z,2µm,21.6s,baz=56,slow=37						
PMG	Port Moresby	8.24	247	P	Pn	10 21 53.0	+1.1
PMG	Port Moresby	8.24	247	S	Sn	10 23 24.1	+0.6
PMG	Port Moresby	8.24	247	P	Pn	10 21 53.2	+1.3
PMG	Port Moresby	8.24	247	S	Sn	10 23 25.8	+2.3
PMG	Port Moresby	8.24	247	*d i*P	Pn	10 21 52.1	+0.2
MANU	Manus Island	8.52	299	Pn	Pn	10 21 56.8	+1.2
LUES	Luesalemba Tem	11.82	113	P	Pn	10 22 41.2	+0.4
PATS	Pohnpei	13.41	15		Pn	10 23 02.9	+0.4
PATS	Pohnpei	13.41	15	P	Pn	10 23 02.6	+0.2
PATS	Pohnpei	13.41	15	P	Pn	10 23 02.8	+0.4
COEN	Coen	13.82	235		Pn	10 23 08.6	+0.9
COEN	Coen	13.82	235	P	Pn	10 23 08.8	+1.0
	comp=Z,54nm,1.5s						
COEN	Coen	13.82	235	P	Pn	10 23 08.4	+0.6
JAY	Jayapura	14.55	284	P	Pn	10 23 17.1	-0.4
	comp=Z,33nm,1.0s,baz=168,slow=20,SNR=3.4						
JAY				LR	LR	10 28 42.6	
	comp=Z,992nm,21.5s,baz=60,slow=36						
MTSU	Mount Surprise	15.68	220	P	Pn	10 23 33.3	+1.4
	comp=Z,21nm,1.2s						
MTSU	Mount Surprise	15.68	220	P	Pn	10 23 33.4	+1.5
VLAKA	Lakatoro	15.78	130	P	P	10 23 35.2	-0.6
CTAO	Charters Tower	16.12	210		Pn	10 23 36.7	-0.8
CTAO	Charters Tower	16.12	210	P	Pn	10 23 38.6	+1.1
CTAO	Charters Tower	16.12	210	P	Pn	10 23 36.7	-0.8
CTAO				pmax	pmax		
	comp=Z,63nm,1.3s						
INH	Isangel	19.32	135	P	P	10 24 15.7	+1.0
BAKI	Biak	19.33	284	P	Pn	10 24 18.8	+2.1
	comp=Z,110nm,1.0s						
DZM	Mont Dzumac	19.36	146		P	10 24 14.9	-0.4
DZM	Mont Dzumac	19.36	146	*e*P	P	10 24 14.4	-0.9
	comp=Z,374nm,1.0s						
DZM				*e*S	S	10 27 51.3	+0.4
	comp=Z,1µm,33.5s						
DZM				*e*LR	LR	10 28 52.3	
	comp=Z,2µm,26.4s						
DZM	Mont Dzumac	19.36	146	P	P	10 24 15.8	+0.5
	comp=Z,138nm,0.8s,baz=271,slow=11,SNR=44						
DZM				LR	LR	10 30 49.4	
	comp=Z,1µm,19.1s,baz=348,slow=34						
DZM	Mont Dzumac	19.36	146	P	Pn	10 24 16.9	-0.1
EIDS	Eidsvold	19.39	190		P	10 24 15.8	+0.3
EIDS	Eidsvold	19.39	190	P	P	10 24 15.9	+0.4
	comp=Z,44nm,1.3s						
EIDS	Eidsvold	19.39	190	P	Pn	10 24 17.8	+0.6
ONTNC	Ouen Toro	19.55	146	P	P	10 24 17.1	-0.2
ONTNC	Ouen Toro	19.55	146	P	P	10 24 17.5	+0.2
YATNC	Mamie plateau,	19.60	145	P	P	10 24 18.9	+1.1
MARNC	Mare, Loyalty	19.84	141	P	P	10 24 22.1	+1.6
OUENC	Ouen Island, N	19.85	145	P	P	10 24 21.6	+1.0
PINNC	Pines Island,	20.35	145	P	P	10 24 26.2	+0.2
PINNC				IAmb	IAmb	10 24 31.6	
	comp=Z,99nm,0.9s						
QIS	Mount Isa	20.54	225	P	P	10 24 28.5	+0.5
	comp=Z,53nm,1.3s						
QIS	Mount Isa	20.54	225	P	P	10 24 28.9	+0.9
RKPI	Ransiki, Papua	21.12	282	P	P	10 24 35.8	+1.4
	comp=Z,5µmcomp=Z,87nm,0.9s						
GC1S	Gold Coast 1 S	21.87	183	P	P	10 24 43.2	+1.0
GUMO	Guam	22.02	333	LR	LR	10 32 49.2	
	comp=Z,178nm,20.3s,baz=159,slow=35						
QLP	Quilpie	22.64	205	P	P	10 24 50.3	-0.2
	comp=Z,166nm,0.9s						
QLP	Quilpie	22.64	205	P	P	10 24 51.3	+0.8
FAKI	Fak Fak	22.74	277		P	10 24 51.6	-0.2
FAKI	Fak Fak	22.74	277	P	P	10 24 52.4	+0.6
FAKI	Fak Fak	22.74	277	P	P	10 24 52.8	+1.0
	comp=Z,2µmcomp=Z,183nm,0.9s						
KDU	Kakadu	22.96	252	P	P	10 24 53.6	-0.4
	comp=Z,62nm,1.1s						
KDU	Kakadu	22.96	252	P	P	10 24 53.9	-0.1
WR0	Warramunga Arr	23.99	233	P	P	10 25 03.5	0.0
WB0	Warramunga Arr	24.01	234		P	10 25 04.1	+0.5
WB0				IAmb	IAmb	10 25 05.1	
	comp=Z,95nm,0.8s						
WR8	Warramunga Arr	24.02	233		P	10 25 03.9	+0.2
SWI	Sorong	24.11	282	P	P	10 25 05.0	+0.4
	comp=Z,156nm,1.1s						
WRAB	Tennant Creek	24.13	234		P	10 25 04.8	+0.1
WRAB				IAmb	IAmb	10 25 06.2	
	comp=Z,102nm,0.9s						
WRAB	Tennant Creek	24.13	234	*c i*P	P	10 25 04.4	-0.3
WRAB				pmax	pmax		
	comp=Z,116nm,0.9s						
WRA	Warramunga Arr	24.14	234	P	P	10 25 04.9	+0.1
WRA	Warramunga Arr	24.14	234	P	P	10 25 03.3	-1.5
	comp=Z,102nm,0.9s,baz=57,slow=9.2,SNR=8.2						
WRA				pP	pP	10 25 19.6	+0.5
	comp=Z,57nm,1.0s,baz=57,slow=9.6,SNR=6.1						
WRA				PcP	PcP	10 28 43.8	-0.7
	comp=Z,11nm,0.9s,baz=53,slow=1.9,SNR=7.2						
WRA				S	S	10 29 19.0	+0.8
	comp=Z,12nm,1.1s,baz=72,slow=13,SNR=6.6						
WRA				ScP	ScP	10 32 17.4	+0.1
	comp=Z,1.2nm,1.0s,baz=51,slow=3.1,SNR=3.2						
WRA				LR	LR	10 34 19.9	
	comp=Z,888nm,20.1s,baz=110,slow=36						
	comp=Z,102nm,0.9s						
MTN	Manton Dam	24.27	252		P	10 25 05.8	-0.3
MTN	Manton Dam	24.27	252	P	P	10 25 06.4	+0.4
	comp=Z,127nm,0.9s						
MTN	Manton Dam	24.27	252	P	P	10 25 06.6	+0.6
ARMA	Armidale	24.27	187		P	10 25 05.3	-0.7
ARMA				IAmb	IAmb	10 25 07.5	
	comp=Z,49nm,0.8s						
ARMA	Armidale	24.27	187	P	P	10 25 05.5	-0.5
	comp=Z,79nm,1.0s						
ARMA	Armidale	24.27	187	P	P	10 25 06.8	+0.8
DRS	Darwin Rock St	24.40	254	P	P	10 25 07.9	+0.7
MSVF	Nonsavu	25.40	119	P	P	10 25 16.0	-0.4
MSVF				IAmb	IAmb	10 25 42.5	
	comp=Z,56nm,1.2s						
MSVF	Nonsavu	25.40	119	LR	LR	10 34 23.3	
	comp=Z,681nm,21.5s,baz=298,slow=34						
MSVF	Nonsavu	25.40	119	P	P	10 25 17.8	+1.4
MSVF	Nonsavu	25.40	119	*i* P	P	10 25 16.8	+0.4
MSVF				pmax	pmax		
	comp=Z,16nm,0.9s						
LHI	Lord Howe Isla	25.49	172	P	P	10 25 15.9	-1.0
LHI				IAmb	IAmb	10 25 17.8	
	comp=Z,68nm,0.8s						
LHI	Lord Howe Isla	25.49	172	P	P	10 25 16.7	-0.2
	comp=Z,88nm,0.9s						
AS17	Alice Springs	26.51	227	P	P	10 25 26.3	-0.1
	comp=Z,46nm,0.8s						
AS01	Alice Springs	26.54	227	P	P	10 25 26.8	+0.2
AS31	Alice Springs	26.58	227	P	P	10 25 26.3	-0.6
AS31	Alice Springs	26.58	227	P	P	10 25 26.5	-0.4
	comp=Z,16nm,0.7s						
ASAR	Alice Springs	26.58	227	P	P	10 25 26.5	-0.4
ASAR	Alice Springs	26.58	227	P	P	10 25 26.4	-0.6
	comp=Z,32nm,0.7s,baz=57,slow=9.0,SNR=434						
ASAR				pP	pP	10 25 42.9	+1.2
	comp=Z,16nm,1.0s,baz=58,slow=8.3,SNR=3.9						
ASAR				PcP	PcP	10 28 50.2	+0.3
	comp=Z,9.2nm,0.8s,baz=55,slow=3.0,SNR=12						
ASAR				S	S	10 29 59.2	+2.2
	comp=Z,0.9nm,0.8s,baz=53,slow=15,SNR=1.4						
ASAR				ScP	ScP	10 32 24.6	+0.4
	comp=Z,0.4nm,0.8s,baz=51,slow=4.9,SNR=1.6						
ASAR				LR	LR	10 35 22.3	
	comp=Z,829nm,20.9s,baz=102,slow=35						
	comp=Z,32nm,0.7s						

CMSA	Cobar Meteorol	26.61	198	P	P	10 25 26.6	-0.6
	comp=Z,36nm,1.3s						
CMSA	Cobar Meteorol	26.61	198	P	P	10 25 26.5	-0.6
H11S3	WAKE ISLAND Hy	27.19	25	T	T	10 53 46.8	
	baz=206,slow=75,SNR=28						
H11S2	WAKE ISLAND Hy	27.19	25	T	T	10 53 33.4	
	baz=206,slow=75,SNR=24						
H11S1	WAKE ISLAND Hy	27.21	25	T	T	10 53 37.0	
	baz=206,slow=75,SNR=27						
KNRA	Kununurra	27.24	248	P	P	10 25 33.0	+0.1
KNRA	Kununurra	27.24	248	P	P	10 25 32.9	+0.1
	comp=Z,38nm,0.7s						
RIV	Riverview	27.70	187	P	P	10 25 36.7	0.0
	comp=Z,88nm,1.0s						
STKA	Stephens Creek	28.38	204	P	P	10 25 42.2	-0.7
STKA	Stephens Creek	28.38	204	P	P	10 25 42.0	-0.9
	comp=Z,105nm,1.0s						
STKA	Stephens Creek	28.38	204	P	P	10 25 42.0	-0.9
	comp=Z,14nm,0.7s,baz=34,slow=13,SNR=29						
STKA				pP	pP	10 25 58.4	+0.7
	comp=Z,4.5nm,0.4s,baz=6.9,slow=13,SNR=4.2						
STKA				PcP	PcP	10 28 53.2	-0.8
	comp=Z,8.4nm,0.8s,baz=60,slow=5.5,SNR=4.9						
STKA				LR	LR	10 37 10.8	
	comp=Z,714nm,19.4s,baz=22,slow=36						
	comp=Z,14nm,0.7s						
STKA	Stephens Creek	28.38	204	P	P	10 25 42.4	-0.5
STKA	Stephens Creek	28.38	204	*i* P	P	10 25 42.4	-0.5
YNG	Young	28.58	191	P	P	10 25 44.3	-0.4
	comp=Z,15nm,1.1s						
SANI	Sanana	29.06	277	P	P	10 25 51.3	+2.2
SANI	Sanana	29.06	277	P	P	10 25 50.1	+1.0
	comp=Z,933nmcomp=Z,118nm,0.8s						
CNB	Canberra Magne	29.40	189	P	P	10 25 51.7	-0.4
	comp=Z,22nm,1.0s						
CNB	Canberra Magne	29.40	189	P	P	10 25 52.9	+0.9
CAN	Canberra	29.47	190	P	P	10 25 52.7	+0.1
CAN	Canberra	29.47	190	P	P	10 25 50.4	-2.2
	comp=Z,17nm,0.9s						
CAN	Canberra	29.47	190	P	P	10 25 53.5	+0.9
CAN	Canberra	29.47	190	P	P	10 25 52.7	+0.1
CAN				pmax	pmax		
	comp=Z,11nm,0.9s						
SOEI	Soe	30.46	261	P	P	10 26 02.6	+0.9
SOEI	Soe	30.46	261	P	P	10 26 14.2	+12
FITZ	Fitzroy Crossi	30.83	245	P	P	10 26 04.4	-0.3
FITZ	Fitzroy Crossi	30.83	245	P	P	10 26 04.1	-0.7
FITZ	Fitzroy Crossi	30.83	245	LR	LR	10 39 13.8	
	comp=Z,819nm,19.6s,baz=82,slow=38						
FITZ	Fitzroy Crossi	30.83	245	P	P	10 26 04.6	-0.2
HTT	Hallett	30.86	207	P	P	10 26 04.5	-0.4
	comp=Z,9.0nm,1.1s						
HTT	Hallett	30.86	207	P	P	10 26 06.7	+1.8
MILA	Mila	31.14	189	P	P	10 26 07.2	-0.1
	comp=Z,7.9nm,1.6s						
WHYH	Whyalla	31.15	209	P	P	10 26 07.2	-0.2
KMSI	Cibinong	31.52	281	P	P	10 26 11.9	+1.0
BBOO	Buckleboo	31.72	211	P	P	10 26 11.5	-1.0
BBOO				IAmb	IAmb	10 26 12.3	
	comp=Z,18nm,0.8s						
BBOO	Buckleboo	31.72	211	P	P	10 26 11.6	-0.8
	comp=Z,29nm,1.5s						
BBOO	Buckleboo	31.72	211	P	P	10 26 14.1	+1.7
DAV	Davao City (W)	32.03	294	LR	LR	10 37 12.4	
	comp=Z,192nm,21.2s,baz=120,slow=32						
TOO	Toolangi	32.36	194	P	P	10 26 17.8	-0.3
	comp=Z,8.6nm,1.2s						
LUWI	Luwuk	32.39	278	P	P	10 26 19.5	+0.9
LUWI	Luwuk	32.39	278	P	P	10 26 20.1	+1.5
	comp=Z,2µmcomp=Z,219nm,1.1s						
MMRI	Maumere	32.41	264	P	P	10 26 17.5	-1.2
MMRI	Maumere	32.41	264	P	P	10 26 19.6	+0.9
MMRI	Maumere	32.41	264	P	P	10 26 18.7	0.0
ARPS	Mount Arapiles	32.66	200	P	P	10 26 20.4	-0.2
	comp=Z,83nm,0.9s						
ARPS	Mount Arapiles	32.66	200	P	P	10 26 21.6	+1.0
BRAT	Ballarat	32.74	196	P	P	10 26 22.5	+1.2
EDFI	Ende, Flores	32.95	264	P	P	10 26 22.4	-1.2
GEXS	Deakin Univers	33.26	195	P	P	10 26 27.4	+1.6
MRSI	Marisa	33.50	280	P	P	10 26 27.8	-0.4
	comp=Z,807nmcomp=Z,49nm,0.8s						
APSI	Ampana	33.52	278	P	P	10 26 29.7	+1.3
	comp=Z,1µmcomp=Z,105nm,1.1s						
AFI	Afiamalu	33.72	106	P	P	10 26 30.1	-0.1
AFI	Afiamalu	33.72	106	P	P	10 26 30.1	-0.1
AFI				pmax	pmax		
	comp=Z,54nm,1.2s						
WSI	Waingapu	34.37	262	P	P	10 26 36.8	+1.1
TOLI2	Tolitoli	34.76	281	P	P	10 26 38.2	-1.0
TOLI2	Tolitoli	34.76	281	P	P	10 26 39.1	-0.1
KAPI	Kappang	34.93	270	P	P	10 26 40.1	-0.5
KAPI				IAmb	IAmb	10 26 41.7	
	comp=Z,16nm,0.8s						
KAPI	Kappang	34.93	270	LR	LR	10 42 51.9	
	comp=Z,93nm,21.8s,baz=88,slow=40						
KAPI	Kappang	34.93	270	P	P	10 26 40.1	-0.5
KAPI				pmax	pmax		
	comp=Z,17nm,0.8s						
SPSI	Sidrap Palu	34.99	272	P	P	10 26 42.4	+1.3
	comp=Z,29nm,0.9s						
FORT	Forrest	35.05	222	P	P	10 26 40.7	-0.7
FORT	Forrest	35.05	222	P	P	10 26 40.9	-0.6
	comp=Z,123nm,0.8s						
FORT	Forrest	35.05	222	P	P	10 26 42.4	+0.9
GLAD	Gladstone	35.16	189	P	P	10 26 43.2	+1.0
WBSI	Waikabubak, Su	35.26	262	P	P	10 26 44.3	+0.8
	comp=Z,2µmcomp=Z,149nm,0.7s						
JCJ	Chichijima	35.30	340	LR	LR	10 38 32.3	
	comp=Z,116nm,21.6s,baz=126,slow=32						
PCI	Palu	35.31	277	P	P	10 26 46.2	+2.3
	comp=Z,202nm,1.0s						
MPSI	Mapaga	35.47	279	P	P	10 26 44.5	-0.8
	comp=Z,1µmcomp=Z,124nm,0.8s						
TOZ	Tahuroa Road	36.58	152		P	10 26 56.1	+1.7
TOZ	Tahuroa Road	36.58	152	P	P	10 26 55.7	+1.3
NIUE	Niue	36.60	114	P	P	10 26 54.3	-0.5
	comp=Z,340nm,1.6s						
MOO	Moorlands	36.72	189	P	P	10 26 55.2	-0.3
	comp=Z,51nm,1.0s						
PLAI	Plampang	36.82	264	P	P	10 26 56.3	-0.5
PLAI	Plampang	36.82	264	P	P	10 26 55.4	-1.4
TGRZ	Tauranga	36.94	151	P	P	10 27 02.0	+4.5
PSAC2	Pilbara Seismi	37.06	242	P	P	10 26 58.3	-0.5
	comp=Z,41nm,0.8s						
MBWA	Marble Bar	37.08	243	P	P	10 26 57.9	-1.1
MBWA				IAmb	IAmb	10 26 59.1	
	comp=Z,24nm,0.7s						
MBWA	Marble Bar	37.08	243	P	P	10 26 58.3	-0.6
	comp=Z,36nm,1.6s						
MBWA	Marble Bar	37.08	243	P	P	10 26 58.9	0.0
MBWA	Marble Bar	37.08	243	P	P	10 26 58.3	-0.6
MBWA				PcP	PcP	10 29 18.1	-0.3
PSAD1	Pilbara Seismi	37.09	242	P	P	10 26 58.5	-0.5
	comp=Z,71nm,0.7s						
PSA00	Pilbara Seismi	37.11	242	P	P	10 26 58.5	-0.7
PSA00	Pilbara Seismi	37.11	242	P	P	10 26 58.9	-0.3
	comp=Z,49nm,1.2s						
PSA00	Pilbara Seismi	37.11	242	P	P	10 26 59.2	0.0
TAU	Tasmania Unive	37.15	189	P	P	10 26 60.0	+0.8
TAU	Tasmania Unive	37.15	189	P	P	10 27 01.4	+2.2
TAU	Tasmania Unive	37.15	189	P	P	10 27 00.0	+0.8
TAU				pmax	pmax		
	comp=Z,58nm,0.8s						
OPRZ	Ohinepanea	37.17	151	P	P	10 26 60.0	+0.5
OMRZ	Omania	37.29	151	P	P	10 27 02.0	+1.4
TWSI	Taliwang, Sumb	37.70	264	P	P	10 27 03.4	-0.9
	comp=Z,67nm,0.9s						
HAZ	Te Kaha	37.71	150	P	P	10 27 04.5	+0.6
URZ	Urewera	37.77	151	LR	LR	10 41 02.3	
	comp=Z,238nm,19.8s,baz=47,slow=34						
URZ	Urewera	37.77	151	P	P	10 27 06.3	+1.8
URZ	Urewera	37.77	151	P	P	10 27 05.0	+0.6
RUGZ	Raukumara Rang	37.82	150	P	P	10 27 04.4	-0.7
MXZ	Matakaoa Point	37.83	149	P	P	10 27 05.4	+0.4
MXZ	Matakaoa Point	37.83	149	P	P	10 27 06.0	+1.0
QRZ	Quartz Range	37.93	158	P	P	10 27 06.9	+1.0
RTZ	Ruatahuna	37.99	151	P	P	10 27 06.7	+0.3
MYLDM	Lahad Datu	37.99	287		P	10 27 06.0	-0.7
MYLDM	Lahad Datu	37.99	287	P	P	10 27 08.3	+1.6
WAZ	Wanganui	38.01	154	P	P	10 27 11.5	+4.9
MWZ	Matawai	38.03	150	P	P	10 27 07.1	+0.3
MTHZ	Maungataniwha	38.11	152	P	P	10 27 07.8	+0.3
TWGZ	Tauwhareparae	38.13	150	P	P	10 27 08.3	+0.7
PUZ	Puketiti	38.19	150	P	P	10 27 08.0	-0.1
BKZ	Black Stump Fm	38.20	152	P	P	10 27 08.0	-0.1
BKZ	Black Stump Fm	38.20	152	P	P	10 27 08.1	-0.1
TKGZ	Te Karaka	38.27	150	P	P	10 27 08.8	+0.1
SNGZ	Shannon Statio	38.29	151	P	P	10 27 09.4	+0.5
NNZ	Nelson	38.59	157	P	P	10 27 14.2	+2.8
TSZ	Takapari Road	38.68	154	P	P	10 27 12.0	-0.2
THZ	Tophouse	38.89	158		P	10 27 14.5	+0.6
THZ	Tophouse	38.89	158	P	P	10 27 13.6	-0.3
MRZ	Mangatainoka R	39.01	155	P	P	10 27 14.3	-0.6
INZ	Inchbonnie	39.23	161	P	P	10 27 16.5	-0.2
BFZ	Birch Farm	39.32	154	P	P	10 27 17.2	-0.2
LTZ	Lake Taylor	39.56	160	P	P	10 27 19.0	-0.5
JCZ	Jackson Bay	39.65	164	P	P	10 27 20.4	+0.1
KHZ	Kahutara	39.69	158	P	P	10 27 19.3	-1.2
OXZ	Oxford	39.96	160	P	P	10 27 22.2	-0.6
GVZ	Greta Valley S	39.99	159	P	P	10 27 22.4	-0.6
MSZ	Milford Sound	39.99	165	P	P	10 27 24.2	+1.3
RPZ	Rata Peaks	39.99	162	LR	LR	10 43 13.5	
	comp=Z,576nm,18.0s,baz=317,slow=35						
RPZ	Rata Peaks	39.99	162	P	P	10 27 21.9	-1.1
MEEK	Meekatharra	40.02	235	P	P	10 27 23.0	-0.5
	comp=Z,141nm,0.8s						
MEEK	Meekatharra	40.02	235	P	P	10 27 23.9	+0.3
LBZ	Lake Benmore	40.34	163	P	P	10 27 24.3	-1.5
JAGI	Jajag, Banyuwa	40.40	264	P	P	10 27 24.5	-2.3
JAGI	Jajag, Banyuwa	40.40	264	P	P	10 27 27.0	+0.2
JAGI	Jajag, Banyuwa	40.40	264	P	P	10 27 25.0	-1.8
	comp=Z,2µmcomp=Z,121nm,1.0s						
KKM	Kota Kinabalu	40.42	287	P	P	10 27 26.4	-0.7
KKM	Kota Kinabalu	40.42	287	P	P	10 27 28.8	+1.7
MLZ	Mavora Lakes	40.69	166	P	P	10 27 28.7	-0.1
MLZ	Mavora Lakes	40.69	166	P	P	10 27 28.0	-0.8
EAZ	Earnscleugh	40.87	164	P	P	10 27 29.7	-0.5
ODZ	Otahua Downs	41.07	163	P	P	10 27 30.9	-0.9
JOW	Kunigami	41.72	323	P	P	10 27 37.9	+0.5
JOW				IAmb	IAmb	10 27 41.4	
	comp=Z,40nm,0.8s						
JOW	Kunigami	41.72	323	LR	LR	10 42 12.8	
	comp=Z,170nm,21.8s,baz=324,slow=32						
GIRL	Giralia	42.40	243	P	P	10 27 43.3	+0.2
KLBR	Kellerberrin	42.87	229	P	P	10 27 45.8	-1.0
	comp=Z,217nm,0.8s						
KLBR	Kellerberrin	42.87	229	P	P	10 27 46.6	-0.2
MORW	Morawa	43.09	233	P	P	10 27 47.7	-0.9
MORW				IAmb	IAmb	10 27 49.8	
	comp=Z,50nm,0.9s						
MORW	Morawa	43.09	233	P	P	10 27 48.0	-0.6
	comp=Z,64nm,0.9s						
MORW	Morawa	43.09	233	P	P	10 27 48.8	+0.2
BLDU	Ballidu	43.22	231	P	P	10 27 48.7	-0.9
	comp=Z,51nm,1.8s						
PCJI	Pacitan	43.34	265	P	P	10 27 50.8	0.0
	comp=Z,192nm,1.2s						
STKI	Sintang	43.72	277	P	P	10 27 56.4	+2.5
NWAO	Narrogin (SRO)	43.90	228	LR	LR	10 46 03.7	
	comp=Z,601nm,20.2s,baz=80,slow=36						
UGM	Wanagama	43.99	265	P	P	10 27 55.8	-0.3
YULB	Yu-li	44.03	313	IAmb	IAmb	10 27 58.3	
	comp=Z,23nm,0.8s						
YULB	Yu-li	44.03	313	P	P	10 27 56.9	+0.7
SMRI	Semarang	44.09	266	IAmb	IAmb	10 27 58.3	
	comp=Z,36nm,0.9s						
SMRI	Semarang	44.09	266	P	P	10 27 58.0	+1.1
MUN	Mundaring	44.22	230	P	P	10 27 56.9	-0.7
	comp=Z,120nm,1.5s						
NACB	Ninganchiao	44.29	314	P	P	10 27 58.7	+0.4
NACB				IAmb	IAmb	10 27 60.0	
	comp=Z,40nm,0.9s						
NACB	Ninganchiao	44.29	314	P	P	10 27 59.7	+1.4
TPUB	Ta-pu	44.46	312	IAmb	IAmb	10 28 03.9	
	comp=Z,35nm,0.7s						
TPUB	Ta-pu	44.46	312	P	P	10 28 00.0	+0.4
SSLB	Suanglung	44.52	313		P	10 27 59.6	-0.5
SSLB				IAmb	IAmb	10 28 04.1	
	comp=Z,36nm,0.9s						
SSLB	Suanglung	44.52	313	P	P	10 28 01.2	+1.1
YHNB	Yeheng	44.76	315	P	P	10 28 02.8	+0.7
CTZ	Chatham Island	45.01	151	P	P	10 28 04.3	+0.6
KSM	Kuching	45.10	278	P	P	10 28 05.5	+0.6
JNU	Nakatsue	45.25	331	P	P	10 28 05.8	0.0
JNU	Nakatsue	45.25	331	P	P	10 28 06.1	+0.3
MJAR	Matsushiro Arr	45.29	341	P	P	10 28 04.5	-1.5
	comp=Z,1.4nm,0.5s,baz=173,slow=7.7,SNR=11						
MJAR				PcP	PcP	10 29 43.9	-0.9
	comp=Z,2.5nm,0.8s,baz=159,slow=3.6,SNR=4.2						
MJAR				LR	LR	10 45 58.0	
	comp=Z,40nm,19.9s,baz=166,slow=34						
CMJI	Cimerak	46.05	265	P	P	10 28 11.7	-0.7
	comp=Z,1µmcomp=Z,195nm,0.8s						
RAR	Rarotonga	46.37	113	LR	LR	10 44 22.4	
	comp=Z,253nm,19.8s,baz=265,slow=32						
BBJI	Bungbulang	46.85	266	P	P	10 28 18.6	-0.1
CNJI	Cibinong	47.37	266	P	P	10 28 21.9	-0.8
	comp=Z,1µmcomp=Z,163nm,0.9s						
JTM	Tenmabayashi	48.44	346	P	P	10 28 30.6	+0.1
CGJI	Cibinong	48.82	267	P	P	10 28 32.5	-1.4
	comp=Z,3µmcomp=Z,188nm,0.9s						
DLV	Lat	49.49	291	P	P	10 28 40.3	+1.1
TJN	Taejon	49.57	331	P	P	10 28 39.7	+0.5
TJN	Taejon	49.57	331	P	P	10 28 39.5	+0.3
TJN				pmax	pmax		
	comp=Z,105nm,0.7s						
KSRS	Korea Array	50.17	332	P	P	10 28 43.6	-0.1
	comp=Z,10nm,0.9s,baz=148,slow=8.0,SNR=41						
KSRS				pP	pP	10 29 00.2	-0.9
	comp=Z,3.0nm,0.8s,baz=151,slow=8.7,SNR=2.8						
KSRS				PcP	PcP	10 30 02.4	+0.2
	comp=Z,1.4nm,0.7s,baz=148,slow=3.6,SNR=4.7						
KSRS				LR	LR	10 48 17.0	
	comp=Z,27µm,21.4s,baz=140,slow=34						
	comp=Z,10nm,0.9s						
KSAR	Wonju Array Be	50.18	332	P	P	10 28 43.6	-0.2
KSAR	Wonju Array Be	50.18	332	P	P	10 28 43.6	-0.2
KS19	Wonju Array Si	50.24	332	P	P	10 28 44.0	-0.3
KS19				IAmb	IAmb	10 28 47.2	
	comp=Z,11nm,0.8s						
MDSI	Maura Dua	50.45	269	P	P	10 28 45.0	-1.3
	comp=Z,45nm,1.1s						
LWLI	Liwa	50.53	269	P	P	10 28 47.2	+0.1
	comp=Z,94nm,0.7s						
INCN	Inchon	50.81	331	P	P	10 28 48.5	-0.1
INCN	Inchon	50.81	331	P	P	10 28 49.3	+0.7
INCN	Inchon	50.81	331	P	P	10 28 48.5	-0.1
INCN				pmax	pmax		
	comp=Z,33nm,0.7s						
QIZ	Qiongzhong	50.92	301	P	P	10 28 51.0	+1.2
QIZ				S	S	10 36 02.6	+0.9
QIZ				pmax	pmax		
	comp=Z,30nm,0.8s						
QIZ				LR	LR		
	comp=Z,130nm,15.9s						
QIZ				LR	LR		
	comp=Z,170nm,14.4s						
QIZ	Qiongzhong	50.92	301	P	P	10 28 50.6	+0.8
NJ2	Nanjing	51.21	320	*e*P	P	10 28 53.8	+2.1
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ASAJ	Asahikawa	51.29	349	LR	LR	10 48 49.5	
	comp=Z,183nm,20.5s,baz=170,slow=34						
CNSH	ChangSha	52.93	312	P	P	10 29 05.9	+1.4
CNSH				pmax	pmax		
	comp=Z,26nm,0.9s						
MSHR	Mys Shultsa	53.12	338	*i* P	P	10 29 06.5	+0.8
MSHR				pmax	pmax		
	comp=Z,18nm,1.0s						
WHN	Wuhan	53.27	316	P	P	10 29 07.8	+0.8
WHN				pmax	pmax		
	comp=Z,90nm,1.1s						
YSS	Yuzhno-Sakhali	54.00	350	*e*P	P	10 29 12.3	+0.3
YSS				*e**SP	sP	10 29 34.3	-3.2
YSS				*e*		10 31 11.7	
YSS				*e*S	S	10 36 42.6	-0.2
YSS				*e*SS	SS	10 40 28.6	+3.3
YSS				*e*SSS	SSS	10 42 21.8	
YSS				pmax	pmax		
	comp=Z,10.0nm,1.4s						
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
BKNI	Bangkinang	54.08	275	P	P	10 29 13.9	+0.7
BKNI	Bangkinang	54.08	275	P	P	10 29 13.0	-0.2
USA0B	Ussuriysk Arra	54.24	340	P	P	10 29 13.9	0.0
USA0B				IAmb	IAmb	10 29 15.3	
	comp=Z,14nm,1.1s						
USA0B	Ussuriysk Arra	54.24	340	*c i*P	P	10 29 13.8	0.0
USRK	Ussuriysk Ar.	54.24	340	P	P	10 29 13.4	-0.4
USRK	Ussuriysk Ar.	54.24	340	P	P	10 29 13.8	0.0
	comp=Z,8.2nm,1.0s,baz=156,slow=7.9,SNR=18						
USRK				pP	pP	10 29 30.6	-0.8
	comp=Z,0.6nm,0.3s,baz=157,slow=7.4,SNR=1.7						
USRK				LR	LR	10 49 03.0	
	comp=Z,92nm,22.0s,baz=118,slow=32						
	comp=Z,8.2nm,1.0s						
TIA	Tai'an	55.04	323	P	P	10 29 19.6	-0.2
TIA				pmax	pmax		
	comp=Z,16nm,0.8s						
KULM	Kulim	55.28	281	IAmb	IAmb	10 29 22.5	
	comp=Z,29nm,1.0s						
KULM	Kulim	55.28	281	P	P	10 29 22.2	+0.3
PPT	Papeete	55.38	107	LR	LR	10 48 05.5	
	comp=Z,59nm,21.0s,baz=221,slow=30						
PPT2	Papeete2	55.38	107	*e*P	P	10 29 21.5	-1.2
	comp=Z,54nm,28.0s						
PPT2				*e*S	S	10 36 56.7	-5.8
	comp=Z,113nm,26.2s						
PPT2				*e*SS	SS	10 40 51.0	+2.9
	comp=Z,85nm,26.5s						
PPT2				*e*LR	LR	10 45 32.7	
	comp=Z,177nm,32.5s						
PPT2				*e*LR	LR	10 45 35.9	
	comp=Z,195nm,26.8s						
PPT2				*e*LR	LR	10 45 39.4	
	comp=Z,244nm,27.5s						
MDJ	Mudanjiang	55.45	338	P	P	10 29 22.4	-0.2
MDJ				PP	PP	10 31 26.8	-0.5
MDJ				S	S	10 37 05.7	+3.3
MDJ				pmax	pmax		
	comp=Z,18nm,1.2s						
MDJ				LR	LR		
	comp=Z,160nm,16.1s						
MDJ				LR	LR		
	comp=Z,140nm,17.5s						
MDJ				LR	LR		
	comp=Z,190nm,17.9s						
MNSI	Mandailing Nat	55.59	275	P	P	10 29 22.9	-1.3
	comp=Z,115nm,0.8s						
SISI	Saibi	55.81	273	P	P	10 29 40.9	+15
TBI	Tubuai	56.14	114	*e*LQ	LQ	10 43 32.5	
	comp=Z,1µm,42.8s						
TBI				*e*LR	LR	10 45 58.9	
	comp=Z,4µm,29.8s						
CN2	Changchun	56.41	335	*e*P	P	10 29 29.6	+0.1
CN2				PcP	PcP	10 30 24.9	-0.9
CN2				*e*S	S	10 37 13.9	-1.3
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
PSI	Prapat	56.54	277	P	P	10 29 30.7	-0.4
PSI	Prapat	56.54	277	P	P	10 29 29.3	-1.8
PSI				pmax	pmax		
	comp=Z,23nm,1.6s						
ENH	Enshi	56.59	313	P	P	10 29 31.1	+0.1
LYN	LuoYang	56.93	318	⇓*i*P	P	10 29 33.6	+0.3
LYN				pmax	pmax		
	comp=Z,21nm,0.9s						
SLVN	Son La	56.95	300	P	P	10 29 35.1	+1.3
TSI	Tuntungan	57.01	278	P	P	10 29 35.2	+1.0
	comp=Z,36nm,0.9s						
BNX	BinXian	57.23	337	⇑P	P	10 29 34.9	-0.3
BNX				pmax	pmax		
	comp=Z,21nm,1.0s						
HNS	HongShan	57.28	322	⇓P	P	10 29 36.2	+0.5
HNS				pmax	pmax		
	comp=Z,20nm,1.1s						
HNS				LR	LR		
	comp=Z,170nm,19.9s						
GSI	Gunungsitoli	57.64	275	P	P	10 29 37.2	-1.6
GSI	Gunungsitoli	57.64	275	P	P	10 29 38.4	-0.4
GSI	Gunungsitoli	57.64	275	P	P	10 29 37.7	-1.1
	comp=Z,92nm,0.9s						
TYV	Tymovskoe	57.80	351	*e*P	P	10 29 40.1	+1.0
TYV				*e*S	S	10 37 34.4	+1.2
TYV				pmax	pmax		
	comp=Z,11nm,0.7s						
TYV				pmax	pmax		
	comp=Z,100nm,4.5s						
TYV				smax	smax		
	comp=N,200nm,7.5s						
TYV				smax	smax		
	comp=E,100nm,7.5s						
KLR	Kul'dur	58.77	343	*ce*P	P	10 29 46.0	+0.1
KLR				pmax	pmax		
	comp=Z,20nm,1.1s						
XAN	Xi'an	59.03	316	⇑P	P	10 29 47.8	-0.3
XAN				pmax	pmax		
	comp=Z,40nm,0.8s						
XAN				pmax	pmax		
	comp=Z,150nm,7.1s						
PET	Petropavlovsk	59.09	3	P	P	10 29 48.2	+0.2
PET	Petropavlovsk	59.09	3	P	P	10 29 49.2	+1.2
PET	Petropavlovsk	59.09	3	*e*P	P	10 29 50.7	+2.7
PET				*e**PP	pP	10 30 07.8	+1.5
PET				*e*S	S	10 37 57.2	+7.3
PET				pmax	pmax		
	comp=Z,200nm,6.1s						
PET				pmax	pmax		
	comp=Z,100nm,6.0s						
PET				pmax	pmax		
	comp=Z,57nm,0.7s						
PEA0B	Petropavlovsk-	59.14	2	P	P	10 29 49.8	+1.4
PEA0B	Petropavlovsk-	59.14	2	*ce*P	P	10 29 49.2	+0.8
PETK	Petropavlovsk-	59.14	2	P	P	10 29 48.7	+0.3
PETK	Petropavlovsk-	59.14	2	P	P	10 29 49.3	+0.9
	comp=Z,35nm,0.7s,baz=175,slow=6.8,SNR=48						
PETK				pP	pP	10 30 06.3	-0.3
	comp=Z,11nm,0.9s,baz=177,slow=8.9,SNR=3.9						
PETK				sP	sP	10 30 12.8	-1.7
	comp=Z,6.0nm,0.6s,baz=144,slow=5.7,SNR=2.8						
	comp=Z,35nm,0.7s						
KMI	Kunming	59.45	304	⇑P	P	10 29 52.6	+1.2
KMI				pmax	pmax		
	comp=Z,54nm,1.1s						
KMI				LR	LR		
	comp=Z,89nm,18.9s						
KMI				LR	LR		
	comp=Z,150nm,22.6s						
KMI				LR	LR		
	comp=Z,170nm,24.3s						
CM31	Chiang Mai Arr	60.30	295	P	P	10 29 58.0	+0.9
CMAR	Chiang Mai Arr	60.30	295	P	P	10 29 58.1	+1.0
CMAR	Chiang Mai Arr	60.30	295	P	P	10 29 58.4	+1.3
	comp=Z,84nm,0.8s,baz=118,slow=5.2,SNR=255						
CMAR				pP	pP	10 30 14.5	-0.3
	comp=Z,6.6nm,0.9s,baz=117,slow=15,SNR=3.1						
	comp=Z,84nm,0.8s						
CMAR	Chiang Mai Arr	60.30	295	P	P	10 29 58.1	+1.0
CHTO	Chiang Mai	60.41	296	P	P	10 29 58.1	+0.3
CHTO	Chiang Mai	60.41	296	P	P	10 29 59.3	+1.4
CHTO	Chiang Mai	60.41	296	P	P	10 29 58.2	+0.3
CHTO				pmax	pmax		
	comp=Z,69nm,1.0s						
CHTO	Chiang Mai	60.41	296	P	P	10 29 58.9	+1.0
PZH	PanZhiHua	60.83	305	P	P	10 30 00.8	+0.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
XLT	XiLinHaoTe	60.90	329	*e*P	P	10 30 00.6	-0.2
XLT				pP	pP	10 30 21.8	+3.1
XLT				PcP	PcP	10 30 43.3	-0.5
XLT				pmax	pmax		
	comp=Z,46nm,0.8s						
HEH	HeiHe	61.04	340	*e*P	P	10 30 01.0	-0.5
HEH				PcP	PcP	10 30 42.9	-1.1
HEH				pmax	pmax		
	comp=Z,11nm,0.8s						
DRV	Dumont d’Urvil	61.22	187	P	P	10 30 01.9	-0.6
HHC	Hu-ho-hao-te	61.37	324	*e*P	P	10 30 06.0	+2.0
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,57nm,3.5s						
HHC				LR	LR		
	comp=Z,91nm,17.1s						
HHC				LR	LR		
	comp=Z,71nm,16.4s						
HHC				LR	LR		
	comp=Z,180nm,19.0s						
BTO	Baotou	62.14	323	*e*P	P	10 30 10.4	+1.2
BTO				pP	pP	10 30 25.7	-1.4
BTO				sP	sP	10 30 38.0	+3.3
BTO				S	S	10 38 30.3	+0.8
BTO				pmax	pmax		
	comp=Z,19nm,0.6s						

BTO				pmax	pmax		
	comp=Z,160nm,4.0s						
BTO				LR	LR		
	comp=Z,140nm,5.1s						
BTO				LR	LR		
	comp=Z,170nm,5.3s						
BTO				LR	LR		
	comp=Z,210nm,14.7s						
ADK	**Adak**	**62.78**	**19**	P	**P**	**10 30 14.5**	**+1.4**
ADK	**Adak**	**62.78**	**19**	P	**P**	**10 30 15.0**	**+1.9**
ADK	**Adak**	**62.78**	**19**	P	**P**	**10 30 14.5**	**+1.4**
ADK				pmax	pmax		
	comp=Z,75nm,0.8s						
ADK	**Adak**	**62.78**	**19**	P	**P**	**10 30 14.8**	**+1.7**
TNCH	**TengChong**	**62.93**	**302**	⇑P	**P**	**10 30 15.0**	**+0.1**
TNCH				S	**S**	**10 38 35.8**	**-4.4**
TNCH				pmax	pmax		
	comp=Z,45nm,0.4s						
TNCH				pmax	pmax		
	comp=Z,180nm,4.5s						
HIA	**Hailar**	**63.14**	**335**	P	**P**	**10 30 16.4**	**+0.8**
LZH	**Lanzhou**	**63.64**	**315**	*e*P	**P**	**10 30 20.2**	**+0.8**
LZH				pP	pP	10 30 35.9	-1.4
LZH				sP	sP	10 30 46.2	+1.3
LZH				pmax	pmax		
	comp=Z,29nm,1.5s						
LZH				LR	LR		
	comp=Z,200nm,14.6s						
LZH				LR	LR		
	comp=Z,160nm,14.9s						
LZH				LR	LR		
	comp=Z,190nm,15.2s						
ZEA	**Zeya**	**64.08**	**342**	*e*P	**P**	**10 30 22.0**	**+0.3**
ZEA				*e*		10 30 37.1	
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
MA2	**Magadan**	**65.65**	**358**	P	**P**	**10 30 31.9**	**+0.1**
MA2	**Magadan**	**65.65**	**358**	P	**P**	**10 30 32.5**	**+0.7**
MA2	**Magadan**	**65.65**	**358**	*i* P	**P**	**10 30 31.5**	**-0.3**
MA2				pmax	pmax		
	comp=Z,27nm,0.7s						
MA2	**Magadan**	**65.65**	**358**	P	**P**	**10 30 32.2**	**+0.4**
MA2				pP	**pP**	**10 30 48.0**	**-1.8**
NIKH	**Nikolski High**	**66.49**	**23**	P	**P**	**10 30 37.5**	**+0.3**
	baz=220						
CASY	**Casey**	**67.29**	**198**	P	**P**	**10 30 41.7**	**-0.4**
CASY				IAmb	IAmb	10 30 42.5	
	comp=Z,19nm,1.1s						
CASY	**Casey**	**67.29**	**198**	P	**P**	**10 30 41.9**	**-0.3**
CASY				PcP	**PcP**	**10 31 08.6**	**-0.8**
GTA	**Gaotai**	**68.06**	**317**	*e*P	**P**	**10 30 48.6**	**+0.9**
GTA				sP	PcP	10 31 16.6	+3.2
GTA				pmax	pmax		
	comp=Z,26nm,1.0s						
GTA				LR	LR		
	comp=Z,110nm,14.2s						
GTA				LR	LR		
	comp=Z,66nm,14.9s						
GTA				LR	LR		
	comp=Z,140nm,16.7s						
UNV	**Unalaska Valle**	**68.07**	**24**	P	**P**	**10 30 48.2**	**+1.0**
	baz=222						
ULN	**Ulaanbaatar**	**68.26**	**328**	P	**P**	**10 30 48.5**	**-0.2**
ULN	**Ulaanbaatar**	**68.26**	**328**	*i* P	**P**	**10 30 49.1**	**+0.3**
ULN				pmax	pmax		
	comp=Z,15nm,1.0s						
SONM	**Songino Array**	**68.59**	**327**	P	**P**	**10 30 51.3**	**+0.5**
SONM				IAmb	IAmb	10 30 52.3	
	comp=Z,18nm,1.1s						
SONM	**Songino Array**	**68.59**	**327**	P	**P**	**10 30 51.2**	**+0.5**
	comp=Z,11nm,0.9s,baz=131,slow=5.7,SNR=45						
SONM				pP	**pP**	**10 31 07.7**	**-1.4**
	comp=Z,2.8nm,0.6s,baz=125,slow=4.2,SNR=4.1						
	comp=Z,11nm,0.9s						
SONM	**Songino Array**	**68.59**	**327**	P	**P**	**10 30 51.3**	**+0.5**
SONM				pmax	pmax		
	comp=Z,18nm,1.1s						
SEY	**Seymchan**	**68.97**	**359**	*ce*P	**P**	**10 30 53.4**	**+0.8**
SEY				pmax	pmax		
	comp=Z,16nm,1.0s						
P08K	**Saint George I**	**69.05**	**20**	P	**P**	**10 30 54.3**	**+1.1**
	baz=218						
SPIA	**Saint Paul Isl**	**69.27**	**19**	P	**P**	**10 30 55.7**	**+1.0**
	baz=217						
GOMU	**GeErMu**	**70.20**	**312**	P	**P**	**10 30 59.8**	**-1.5**
GOMU				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YAK	**Yakutsk**	**70.76**	**348**	P	**P**	**10 31 04.5**	**+0.9**
YAK				IAmb	IAmb	10 31 07.0	
	comp=Z,28nm,0.8s						
YAK	**Yakutsk**	**70.76**	**348**	*e*P	**P**	**10 31 02.5**	**-1.1**
YAK				*e*		10 31 22.1	
YAK				*e**PP	**PcP**	**10 31 23.6**	**-0.4**
YAK				*e*		10 33 40.9	
YAK				*e*S	**S**	**10 40 11.5**	**-1.3**
YAK				*e**SS	**sS**	**10 40 47.3**	**+3.5**
YAK				*e*		10 41 00.1	
YAK				pmax	pmax		
	comp=Z,41nm,1.1s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,59nm,3.0s						
YAK				pmax	pmax		
	comp=N,52nm,3.5s						
YAK				pmax	pmax		
	comp=E,34nm,3.2s						
YAK				smax	smax		
	comp=N,44nm,3.7s						
YAK				smax	smax		
	comp=E,22nm,2.5s						
CCD	**Concordia, Ant**	**71.16**	**188**	P	**P**	**10 31 06.4**	**0.0**
CCD				sP	**sP**	**10 31 31.9**	**-0.1**
S12K	**Black Hills**	**71.19**	**24**	P	**P**	**10 31 06.8**	**+0.3**
	baz=226						
VNDA	**Vanda**	**71.37**	**178**	P	**P**	**10 31 07.6**	**+0.4**
VNDA	**Vanda**	**71.37**	**178**	P	**P**	**10 31 07.1**	**-0.1**
	comp=E,5.7nm,0.8s,baz=328,slow=6.4,SNR=45						
VNDA				pP	**pP**	**10 31 25.1**	**-0.4**
	comp=E,4.1nm,0.8s,baz=338,slow=6.3,SNR=5.6						
	comp=E,5.7nm,0.8s						
VNDA	**Vanda**	**71.37**	**178**	P	**P**	**10 31 07.6**	**+0.4**
VNDA				pmax	pmax		
	comp=Z,11nm,1.1s						
VNDA	**Vanda**	**71.37**	**178**	P	**P**	**10 31 07.3**	**+0.1**
VNDA				PcP	**PcP**	**10 31 27.1**	**+0.6**
SDPT	**Sand Point**	**71.61**	**25**	P	**P**	**10 31 09.1**	**+0.2**
	baz=227						
CHNA	**Chernabura Isl**	**71.64**	**26**	P	**P**	**10 31 09.3**	**+0.2**
	baz=228						
ZAK	**Zakamensk**	**71.74**	**328**	*e*P	**P**	**10 31 09.4**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,19nm,1.0s						
SBA	**Scott Base**	**71.88**	**177**	P	**P**	**10 31 11.6**	**+1.4**
SBA	**Scott Base**	**71.88**	**177**	P	**P**	**10 31 11.6**	**+1.4**
SBA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
S14K	**Fog Glacier**	**72.62**	**25**	P	**P**	**10 31 15.6**	**+0.5**
	baz=228						
MOY	**Mondy**	**73.66**	**328**	*e*P	**P**	**10 31 21.5**	**+0.1**
MOY				pmax	pmax		
	comp=Z,19nm,1.0s						
EVN	**Everest**	**73.79**	**301**	P	**P**	**10 31 23.0**	**-0.3**
EVN				IAmb	IAmb	10 31 28.0	
	comp=Z,13nm,0.8s						
O14K	**Tigyukauivet M**	**73.98**	**22**	P	**P**	**10 31 24.1**	**+1.2**
	baz=226,SNR=7.8						
CHIR	**Chirikof Islan**	**74.01**	**27**	P	**P**	**10 31 23.9**	**+0.8**
	baz=232						
M13K	**Dall Lake**	**74.07**	**20**	P	**P**	**10 31 25.1**	**+1.7**
	baz=224,SNR=6.4						
GAMB	**Gambell**	**74.20**	**15**	IAmb	IAmb	10 31 28.1	
	comp=Z,24nm,0.8s						
GAMB	**Gambell**	**74.20**	**15**	P	**P**	**10 31 25.3**	**+1.3**
	baz=215,SNR=5.5						
R16K	**Pilot Point**	**74.29**	**24**	P	**P**	**10 31 25.4**	**+0.7**
	baz=230						
N14K	**Kuskokwak Cree**	**74.30**	**21**	IAmb	IAmb	10 31 26.9	
	comp=Z,31nm,0.9s						
N14K	**Kuskokwak Cree**	**74.30**	**21**	P	**P**	**10 31 25.9**	**+1.2**
	baz=225						
O15K	**Ungalikthiuk R**	**74.47**	**22**	P	**P**	**10 31 27.2**	**+1.5**
O15K				IAmb	IAmb	10 31 27.9	
	comp=Z,15nm,0.8s						
O15K	**Ungalikthiuk R**	**74.47**	**22**	P	**P**	**10 31 27.0**	**+1.2**
	baz=227,SNR=5.4						
BILL	**Bilibino**	**74.51**	**4**	P	**P**	**10 31 26.9**	**+1.1**
BILL	**Bilibino**	**74.51**	**4**	*ce*P	**P**	**10 31 26.5**	**+0.7**
BILL				pmax	pmax		
	comp=Z,50nm,1.0s						
K13K	**Kusilvak Mount**	**74.76**	**19**	IAmb	IAmb	10 31 29.9	
	comp=Z,25nm,0.8s						
K13K	**Kusilvak Mount**	**74.76**	**19**	P	**P**	**10 31 28.9**	**+1.5**
	baz=222,SNR=14						
M14K	**Bethel**	**74.79**	**20**	P	**P**	**10 31 29.7**	**+2.2**
M14K	**Bethel**	**74.79**	**20**	P	**P**	**10 31 29.1**	**+1.6**
	baz=225,SNR=9.5						
L14K	**Kuka Creek**	**74.97**	**20**	P	**P**	**10 31 30.2**	**+1.7**
	baz=224,SNR=18						
N15K	**Kwethluk River**	**75.05**	**21**	IAmb	IAmb	10 31 31.6	
	comp=Z,24nm,0.9s						
N15K	**Kwethluk River**	**75.05**	**21**	P	**P**	**10 31 30.5**	**+1.4**
	baz=227,SNR=8.0						
P16K	**Nushagak River**	**75.08**	**23**	P	**P**	**10 31 29.6**	**+0.3**
	baz=229						
SII	**Sitkinak Islan**	**75.10**	**26**	P	**P**	**10 31 30.3**	**+0.8**
	baz=233						
PALK	**Pallekele**	**75.16**	**279**	P	**P**	**10 31 30.9**	**+0.2**
PALK	**Pallekele**	**75.16**	**279**	P	**P**	**10 31 30.9**	**+0.2**
PALK				pmax	pmax		
	comp=Z,45nm,0.9s						
M15K	**Kasigluk River**	**75.20**	**21**	P	**P**	**10 31 31.0**	**+1.1**
	baz=226,SNR=11						
O16K	**Kokwok River B**	**75.41**	**23**	P	**P**	**10 31 31.5**	**+0.4**
	baz=229						
Q17K	**Contact Creek**	**75.42**	**24**	P	**P**	**10 31 31.6**	**+0.2**
	baz=231,SNR=17						
R18K	**Karluk**	**75.60**	**26**	P	**P**	**10 31 32.8**	**+0.5**
	baz=233						
L15K	**Ungalak Mounta**	**75.61**	**20**	P	**P**	**10 31 33.3**	**+1.0**
	baz=225						
J14K	**Nanvaranak Lak**	**75.71**	**18**	P	**P**	**10 31 34.4**	**+1.6**
	baz=223,SNR=19						
N16K	**Nishlik Lake**	**75.74**	**22**	P	**P**	**10 31 34.9**	**+1.8**
	baz=228,SNR=11						
P17K	**Kvichak River**	**75.79**	**24**	P	**P**	**10 31 32.9**	**-0.4**
	baz=230						
OHAK	**Old Harbor**	**75.89**	**26**	P	**P**	**10 31 36.6**	**+2.7**
OHAK	**Old Harbor**	**75.89**	**26**	P	**P**	**10 31 34.6**	**+0.6**
	baz=234,SNR=5.5						
O17K	**Koliganek Bris**	**75.91**	**23**	P	**P**	**10 31 34.5**	**+0.5**
	baz=230,SNR=5.8						
Q18K	**Katmai Hardscr**	**76.03**	**24**	P	**P**	**10 31 35.2**	**+0.4**
	baz=232,SNR=18						
K15K	**Wolf Creek Mou**	**76.03**	**19**	P	**P**	**10 31 36.2**	**+1.5**
	baz=225,SNR=17						
M16K	**Timber Creek**	**76.04**	**21**	P	**P**	**10 31 36.4**	**+1.6**
	baz=228,SNR=23						
L16K	**Owhat River**	**76.33**	**21**	IAmb	IAmb	10 31 38.5	
	comp=Z,14nm,0.8s						
L16K	**Owhat River**	**76.33**	**21**	P	**P**	**10 31 37.5**	**+1.1**
	baz=227,SNR=12						
N17K	**Nushagak Hills**	**76.36**	**22**	IAmb	IAmb	10 31 39.6	
	comp=Z,42nm,1.5s						
N17K	**Nushagak Hills**	**76.36**	**22**	P	**P**	**10 31 38.4**	**+1.8**
	baz=229,SNR=9.2						
P18K	**Big Mountain,**	**76.40**	**24**	P	**P**	**10 31 36.9**	**+0.1**
	baz=232						
ANM	**Nome**	**76.53**	**17**	P	**P**	**10 31 39.2**	**+1.8**
ANM				IAmb	IAmb	10 31 39.9	
	comp=Z,25nm,0.8s						
ANM	**Nome**	**76.53**	**17**	P	**P**	**10 31 39.2**	**+1.8**
ANM				pmax	pmax		
	comp=Z,25nm,0.8s						
ANM	**Nome**	**76.53**	**17**	P	**P**	**10 31 38.9**	**+1.5**
	baz=221						
KDAK	**Kodiak Island**	**76.53**	**26**	P	**P**	**10 31 38.3**	**+0.7**
	baz=234						
TNA	**Tin City**	**76.61**	**15**	IAmb	IAmb	10 31 43.5	
	comp=Z,13nm,0.8s						
TNA	**Tin City**	**76.61**	**15**	P	**P**	**10 31 38.7**	**+0.9**
	baz=218						
O18K	**Koktuh Hills**	**76.70**	**23**	P	**P**	**10 31 39.5**	**+1.0**
	baz=231						
Q19K	**Cape Douglas,**	**76.76**	**25**	P	**P**	**10 31 39.5**	**+0.6**
	baz=233						
M17K	**Holitna River**	**76.84**	**21**	IAmb	IAmb	10 31 42.3	
	comp=Z,20nm,0.9s						
M17K	**Holitna River**	**76.84**	**21**	P	**P**	**10 31 41.0**	**+1.7**
	baz=229,SNR=13						
N18K	**Kilae Creek**	**76.95**	**23**	IAmb	IAmb	10 31 42.7	
	comp=Z,32nm,0.9s						
N18K	**Kilae Creek**	**76.95**	**23**	P	**P**	**10 31 41.6**	**+1.6**
	baz=231,SNR=15						
F14K	**Arctic Creek**	**76.96**	**16**	P	**P**	**10 31 41.3**	**+1.4**
	baz=220,SNR=8.0						
L17K	**Donlin**	**77.02**	**21**	P	**P**	**10 31 41.9**	**+1.7**
	baz=228,SNR=12						
J16K	**Anvik River**	**77.04**	**19**	IAmb	IAmb	10 31 42.7	
	comp=Z,21nm,0.9s						
J16K	**Anvik River**	**77.04**	**19**	P	**P**	**10 31 42.1**	**+1.8**
	baz=226,SNR=16						
Q20K	**Shuyak Island**	**77.10**	**25**	P	**P**	**10 31 42.5**	**+1.8**
	baz=234						
G15K	**Niukluk**	**77.23**	**17**	P	**P**	**10 31 42.5**	**+1.2**
	baz=222,SNR=5.6						
O19K	**Port Alsworth**	**77.26**	**23**	P	**P**	**10 31 42.4**	**+0.8**
	baz=232						
P19K	**Oil Pt**	**77.37**	**24**	P	**P**	**10 31 42.7**	**+0.5**
	baz=233						
K17K	**Iditarod**	**77.41**	**20**	IAmb	IAmb	10 31 45.1	
	comp=Z,23nm,0.9s						
K17K	**Iditarod**	**77.41**	**20**	P	**P**	**10 31 44.1**	**+1.7**
	baz=228,SNR=12						
I17K	**Unalakleet**	**77.43**	**19**	IAmb	IAmb	10 31 45.5	
	comp=Z,22nm,0.9s						
I17K	**Unalakleet**	**77.43**	**19**	P	**P**	**10 31 44.4**	**+1.9**
	baz=226,SNR=11						
M18K	**Stony River**	**77.49**	**22**	P	**P**	**10 31 44.6**	**+1.7**
	baz=231,SNR=9.8						
N19K	**Bonanza Creek**	**77.58**	**23**	P	**P**	**10 31 44.3**	**+0.8**
	baz=232						
F15K	**North Star Dit**	**77.59**	**16**	IAmb	IAmb	10 31 45.7	
	comp=Z,21nm,1.0s						
F15K	**North Star Dit**	**77.59**	**16**	P	**P**	**10 31 44.8**	**+1.4**
	baz=221,SNR=9.4						
ILSW	**Iliamna Southw**	**77.60**	**24**	IAmb	IAmb	10 31 46.4	
	comp=Z,22nm,1.1s						
J17K	**VABM Dome**	**77.61**	**19**	IAmb	IAmb	10 31 46.3	
	comp=Z,23nm,0.8s						
J17K	**VABM Dome**	**77.61**	**19**	P	**P**	**10 31 45.2**	**+1.6**
	baz=227,SNR=21						
L18K	**Granite Mounta**	**77.65**	**21**	IAmb	IAmb	10 31 46.6	
	comp=Z,27nm,1.0s						
L18K	**Granite Mounta**	**77.65**	**21**	P	**P**	**10 31 45.6**	**+1.8**
	baz=230,SNR=21						
O20K	**Slope Mountain**	**77.87**	**24**	P	**P**	**10 31 46.3**	**+1.2**
	baz=234						
G16K	**Koyuk River**	**78.00**	**17**	P	**P**	**10 31 47.1**	**+1.5**
	baz=224						
HOM	**Homer**	**78.02**	**25**	P	**P**	**10 31 47.2**	**+1.3**
	baz=235						
WMQ	**Urumqi**	**78.14**	**317**	*e*P	**P**	**10 31 48.8**	**+1.8**
WMQ				LR	LR		
	comp=Z,110nm,20.3s						
M19K	**Big River Lodg**	**78.29**	**22**	P	**P**	**10 31 49.1**	**+1.8**
	baz=232						
L19K	**White Mountain**	**78.29**	**22**	IAmb	IAmb	10 31 49.8	
	comp=Z,22nm,0.8s						
L19K	**White Mountain**	**78.29**	**22**	P	**P**	**10 31 48.7**	**+1.3**
	baz=231,SNR=24						
H17K	**Granite Mounta**	**78.41**	**18**	IAmb	IAmb	10 31 51.7	
	comp=Z,14nm,0.8s						
H17K	**Granite Mounta**	**78.41**	**18**	P	**P**	**10 31 49.4**	**+1.4**
	baz=226,SNR=19						
BRSE	**Bradley Lake S**	**78.45**	**25**	P	**P**	**10 31 49.2**	**+0.9**
	baz=236						
J18K	**Innoko River**	**78.45**	**20**	IAmb	IAmb	10 32 12.9	
	comp=Z,17nm,1.0s						
J18K	**Innoko River**	**78.45**	**20**	P	**P**	**10 31 49.2**	**+1.0**
	baz=229,SNR=18						
G17K	**Kiwalik Mounta**	**78.58**	**17**	P	**P**	**10 31 50.4**	**+1.5**
	baz=225,SNR=17						
M20K	**Styx River**	**78.75**	**22**	P	**P**	**10 31 51.1**	**+1.1**
	baz=233						
L20K	**Farewell, AK**	**78.83**	**22**	P	**P**	**10 31 51.6**	**+1.3**
	baz=232,SNR=14						
HYB	**Hyderabad**	**78.86**	**289**	*e*P	**P**	**10 31 51.3**	**-0.1**
H18K	**Honhosa River**	**79.04**	**18**	P	**P**	**10 31 51.8**	**+0.4**
	baz=228						
F17K	**Baldwin Pennin**	**79.08**	**16**	IAmb	IAmb	10 32 02.4	
	comp=Z,26nm,1.1s						
F17K	**Baldwin Pennin**	**79.08**	**16**	P	**P**	**10 31 52.9**	**+1.3**
	baz=225						
SLKM	**Skilak Lake**	**79.09**	**24**	IAmb	IAmb	10 32 21.2	
	comp=Z,42nm,1.2s						
J19K	**Poorman**	**79.17**	**20**	P	**P**	**10 31 53.4**	**+1.3**
	baz=230,SNR=14						
SEW	**Seward**	**79.19**	**25**	IAmb	IAmb	10 32 18.6	
	comp=Z,28nm,1.1s						
SEW	**Seward**	**79.19**	**25**	P	**P**	**10 31 52.9**	**+0.6**
	baz=237,SNR=9.6						
GCSA	**Galena City Sc**	**79.24**	**19**	P	**P**	**10 31 53.5**	**+1.1**
	baz=229						
O22K	**Cooper Landing**	**79.28**	**25**	P	**P**	**10 31 53.6**	**+0.8**
	baz=236						
K20K	**Telida**	**79.30**	**21**	P	**P**	**10 31 54.2**	**+1.3**
	baz=232,SNR=13						
C16K	**Lisburne Hills**	**79.36**	**14**	P	**P**	**10 31 53.7**	**+0.7**
	baz=220						
E17K	**Hotham Inlet**	**79.38**	**16**	P	**P**	**10 31 54.4**	**+1.3**
	baz=224,SNR=13						
SKT	**Skwentna**	**79.41**	**23**	P	**P**	**10 31 52.7**	**-0.8**
	baz=234						
SUA	**Susitna One**	**79.42**	**23**	IAmb	IAmb	10 31 56.9	
	comp=Z,12nm,0.7s						
SUA	**Susitna One**	**79.42**	**23**	P	**P**	**10 31 53.6**	**-0.1**
	baz=235						
G18K	**Tagagawik**	**79.45**	**18**	P	**P**	**10 31 54.5**	**+0.9**
	baz=227,SNR=16						
D17K	**Noatak River**	**79.49**	**15**	P	**P**	**10 31 55.0**	**+1.2**
	baz=223,SNR=10.0						
RC01	**Rabbit Creek A**	**79.61**	**24**	P	**P**	**10 31 55.1**	**+0.5**
	baz=236						
F18K	**Selawik**	**79.64**	**17**	P	**P**	**10 31 55.6**	**+1.0**
	baz=226						
PPLA	**Purkeypile**	**79.70**	**22**	IAmb	IAmb	10 32 16.6	
	comp=Z,29nm,1.4s						
PPLA	**Purkeypile**	**79.70**	**22**	P	**P**	**10 31 55.5**	**+0.3**
	baz=234						
J20K	**Nowinta River**	**79.78**	**20**	P	**P**	**10 31 56.9**	**+1.4**
	baz=232,SNR=18						
RDOG	**Red Dog Mine**	**79.80**	**15**	IAmb	IAmb	10 31 57.7	
	comp=Z,25nm,0.8s						
RDOG	**Red Dog Mine**	**79.80**	**15**	P	**P**	**10 31 56.7**	**+1.2**
	baz=223						
M22K	**Willow**	**79.83**	**23**	IAmb	IAmb	10 31 58.5	
	comp=Z,33nm,1.0s						
M22K	**Willow**	**79.83**	**23**	P	**P**	**10 31 55.6**	**-0.1**
	baz=236,SNR=7.2						
H19K	**Roundabout Mou**	**79.89**	**19**	IAmb	IAmb	10 31 58.2	
	comp=Z,30nm,0.9s						
H19K	**Roundabout Mou**	**79.89**	**19**	P	**P**	**10 31 57.1**	**+1.2**
	baz=229,SNR=35						
E18K	**Tukpahlearik C**	**79.95**	**16**	P	**P**	**10 31 57.6**	**+1.3**
	baz=225,SNR=9.8						
P23K	**Montague Islan**	**80.00**	**26**	P	**P**	**10 31 57.4**	**+0.7**
	baz=239						
C17K	**DeLong Mountai**	**80.04**	**15**	P	**P**	**10 31 57.8**	**+1.0**
	baz=222,SNR=8.0						
CAST	**Castle Rocks**	**80.05**	**21**	P	**P**	**10 31 57.0**	**0.0**
	baz=234,SNR=20						
I20K	**Naaghedeneel**	**80.06**	**20**	IAmb	IAmb	10 31 59.5	
	comp=Z,25nm,0.9s						
I20K	**Naaghedeneel**	**80.06**	**20**	P	**P**	**10 31 58.2**	**+1.3**
	baz=231,SNR=12						
PWL	**Port Wells**	**80.06**	**25**	P	**P**	**10 31 57.9**	**+0.8**
	baz=238,SNR=11						
G19K	**Purcell Mounta**	**80.09**	**18**	IAmb	IAmb	10 32 22.2	
	comp=Z,32nm,1.1s						
G19K	**Purcell Mounta**	**80.09**	**18**	P	**P**	**10 31 58.3**	**+1.2**
	baz=229,SNR=31						
PMR	**Palmer**	**80.14**	**24**	IAmb	IAmb	10 31 58.8	
	comp=Z,27nm,1.3s						
PMR	**Palmer**	**80.14**	**24**	P	**P**	**10 31 58.4**	**+1.0**
PMR	**Palmer**	**80.14**	**24**	P	**P**	**10 31 57.8**	**+0.4**
	baz=237,SNR=13						
CHUM	**Lake Minchumin**	**80.25**	**21**	P	**P**	**10 31 58.7**	**+0.7**
	baz=234,SNR=13						
KNK	**Knik Glacier**	**80.31**	**24**	IAmb	IAmb	10 32 00.4	
	comp=Z,20nm,1.2s						
KNK	**Knik Glacier**	**80.31**	**24**	P	**P**	**10 31 59.0**	**+0.6**
	baz=237						
GHO	**Glory Hole Cre**	**80.32**	**24**	IAmb	IAmb	10 32 23.1	
	comp=Z,19nm,1.0s						
F19K	**Shaleruckik Mo**	**80.35**	**17**	P	**P**	**10 31 59.2**	**+0.8**
	baz=228,SNR=14						
H20K	**Anotleneega Mo**	**80.36**	**19**	P	**P**	**10 31 59.7**	**+1.1**
	baz=231,SNR=16						
SML	**Sawmill**	**80.57**	**24**	IAmb	IAmb	10 32 24.3	
	comp=Z,36nm,0.9s						
SML	**Sawmill**	**80.57**	**24**	P	**P**	**10 32 00.5**	**+0.7**
	baz=238,SNR=18						
GLI	**Glacier Island**	**80.59**	**25**	IAmb	IAmb	10 32 01.6	
	comp=Z,48nm,1.4s						
GLI	**Glacier Island**	**80.59**	**25**	P	**P**	**10 32 00.2**	**+0.4**
	baz=239,SNR=8.7						
C18K	**Utukok River**	**80.67**	**15**	IAmb	IAmb	10 32 25.1	
	comp=Z,23nm,1.3s						
C18K	**Utukok River**	**80.67**	**15**	P	**P**	**10 32 00.9**	**+0.7**
	baz=224,SNR=9.7						
TRF	**Thorofare Moun**	**80.73**	**22**	P	**P**	**10 32 00.4**	**-0.4**
	baz=236,SNR=9.7						
FID	**Port Fidalgo**	**80.78**	**25**	IAmb	IAmb	10 32 02.5	
	comp=Z,30nm,1.4s						
BPAW	**Bear Paw Mtn.**	**80.85**	**21**	P	**P**	**10 32 00.9**	**-0.3**
	baz=235,SNR=6.4						
E19K	**Redstone River**	**80.92**	**17**	IAmb	IAmb	10 32 03.8	
	comp=Z,27nm,0.8s						
E19K	**Redstone River**	**80.92**	**17**	P	**P**	**10 32 02.7**	**+1.1**
	baz=228,SNR=37						
EYAK	**Cordova Ski Ar**	**80.99**	**26**	P	**P**	**10 32 04.9**	**+2.9**
EYAK	**Cordova Ski Ar**	**80.99**	**26**	P	**P**	**10 32 02.8**	**+0.9**
	baz=240						
SCM	**Sheep Creek Mo**	**80.99**	**24**	IAmb	IAmb	10 32 04.1	
	comp=Z,36nm,1.4s						
SCM	**Sheep Creek Mo**	**80.99**	**24**	P	**P**	**10 32 03.0**	**+0.9**
	baz=238,SNR=9.3						
B18K	**Kokolik River**	**81.04**	**14**	P	**P**	**10 32 03.1**	**+1.1**
	baz=224,SNR=6.3						
IMAR	**Indian Mountai**	**81.04**	**19**	P	**P**	**10 32 03.1**	**+1.0**
WAT1	**Susitna Watana**	**81.04**	**23**	P	**P**	**10 32 02.5**	**+0.2**
	baz=237						
F20K	**Avaraart Lake**	**81.10**	**18**	P	**P**	**10 32 03.5**	**+1.1**
	baz=230						
I21K	**Tanana**	**81.14**	**20**	P	**P**	**10 32 03.6**	**+1.0**
	baz=234						
H21K	**Melozitna Rive**	**81.15**	**19**	P	**P**	**10 32 03.7**	**+0.9**
	baz=233,SNR=14						
WAT6	**Susitna Watana**	**81.22**	**23**	P	**P**	**10 32 03.8**	**+0.4**
	baz=238,SNR=9.5						
ZSN	**Zaisan**	**81.24**	**320**	*e*P	**P**	**10 32 03.2**	**-0.5**
ZSN				pmax	pmax		
	comp=Z,12nm,0.7s						
ZSN	**Zaisan**	**81.24**	**320**	*e*P	**P**	**10 32 03.2**	**-0.5**
	comp=Z,12nm,0.7s						
RND	**Reindeer**	**81.24**	**22**	IAmb	IAmb	10 32 06.1	
	comp=Z,15nm,0.8s						
KAIM	**Kayak Island**	**81.26**	**26**	P	**P**	**10 32 04.5**	**+1.0**
	baz=241						
DIV	**Divide**	**81.27**	**25**	IAmb	IAmb	10 32 32.2	
	comp=Z,17nm,0.9s						
D19K	**Kuna River**	**81.38**	**16**	IAmb	IAmb	10 32 05.7	
	comp=Z,16nm,0.8s						
D19K	**Kuna River**	**81.38**	**16**	P	**P**	**10 32 04.6**	**+0.7**
	baz=227,SNR=16						
MCK	**McKinley**	**81.39**	**22**	IAmb	IAmb	10 32 06.8	
	comp=Z,32nm,0.8s						
MCK	**McKinley**	**81.39**	**22**	P	**P**	**10 32 03.7**	**-0.4**
	baz=237,SNR=22						
KLU	**Klutina**	**81.39**	**25**	IAmb	IAmb	10 32 08.2	
	comp=Z,33nm,1.2s						
KLU	**Klutina**	**81.39**	**25**	P	**P**	**10 32 05.1**	**+0.9**
	baz=240,SNR=19						
C19K	**Lookout Ridge**	**81.41**	**15**	IAmb	IAmb	10 32 06.4	
	comp=Z,23nm,1.0s						
C19K	**Lookout Ridge**	**81.41**	**15**	P	**P**	**10 32 05.3**	**+1.2**
	baz=226,SNR=21						
G21K	**Allakaket**	**81.45**	**19**	IAmb	IAmb	10 32 34.0	
	comp=Z,12nm,0.8s						
G21K	**Allakaket**	**81.45**	**19**	P	**P**	**10 32 05.1**	**+0.8**
	baz=232,SNR=18						
MLY	**Manley**	**81.47**	**20**	P	**P**	**10 32 05.0**	**+0.4**
	baz=235,SNR=21						
HMT	**Hamilton**	**81.53**	**26**	IAmb	IAmb	10 32 07.1	
	comp=Z,22nm,1.2s						
M24K	**Tolsona, Glenn**	**81.60**	**24**	P	**P**	**10 32 06.4**	**+1.1**
	baz=239,SNR=8.7						
DHY	**Denali Highway**	**81.63**	**23**	P	**P**	**10 32 06.0**	**+0.5**
	baz=238,SNR=12						

BMRM	Bremner River	81.69	25	IAmb	IAmb	10 32 10.3	
	comp=Z,19nm,1.1s						
BMRM	Bremner River	81.69	25	P	P	10 32 06.5	+0.7
	baz=241,SNR=11						
E20K	Nigu River	81.75	17	P	P	10 32 07.2	+1.2
	baz=229,SNR=30						
H22K	Ishtalitna Cre	81.76	20	P	P	10 32 07.0	+1.0
	baz=234,SNR=15						
NEA2	Nenana	81.82	21	P	P	10 32 05.9	-0.4
	baz=236,SNR=17						
A19K	Wainwright	81.82	14	P	P	10 32 07.2	+1.1
	baz=224						
F21K	Alatna River	81.89	18	P	P	10 32 07.3	+0.6
	baz=232,SNR=11						
D20K	Etivluk River	81.93	16	IAmb	IAmb	10 32 08.8	
	comp=Z,37nm,1.5s						
D20K	Etivluk River	81.93	16	P	P	10 32 07.6	+0.7
	baz=229,SNR=14						
N25K	Chitina, Valde	82.00	25	IAmb	IAmb	10 32 26.4	
	comp=Z,24nm,1.3s						
N25K	Chitina, Valde	82.00	25	P	P	10 32 08.4	+1.0
	baz=241,SNR=7.9						
I23K	Minto, Yukon-K	82.02	21	P	P	10 32 07.4	+0.1
	baz=236						
HARP	HAARP	82.16	24	P	P	10 32 08.9	+0.8
	baz=240						
WAX	Waxell Ridge	82.20	26	IAmb	IAmb	10 32 10.8	
	comp=Z,23nm,1.1s						
CRQM	Cirque	82.22	26	IAmb	IAmb	10 32 11.4	
	comp=Z,22nm,1.0s						
CRQE	Cirque	82.24	26	P	P	10 32 09.5	+0.8
	baz=242,SNR=8.4						
PAX	Paxson	82.32	23	P	P	10 32 09.4	+0.3
	baz=240						
G22K	Bettles	82.33	19	P	P	10 32 09.6	+0.7
	baz=234						
H23K	Yukon River	82.34	20	P	P	10 32 09.9	+0.9
	baz=236,SNR=14						
COLA	College	82.41	21	P	P	10 32 08.9	-0.4
COLA				IAmb	IAmb	10 32 11.7	
	comp=Z,20nm,0.8s						
COLA	College	82.41	21	P	P	10 32 09.7	+0.4
COLA	College	82.41	21	P	P	10 32 09.0	-0.4
COLA				pmax	pmax		
	comp=Z,21nm,0.9s						
COLA	College	82.41	21	P	P	10 32 10.1	+0.8
	baz=238						
F22K	John River	82.47	18	P	P	10 32 10.8	+1.1
	baz=233						
MESA	MESA	82.48	27	IAmb	IAmb	10 32 14.0	
	comp=Z,13nm,0.8s						
MESA	MESA	82.48	27	P	P	10 32 11.3	+1.2
	baz=244,SNR=6.2						
HDA	Harding Lake	82.49	22	P	P	10 32 09.5	-0.3
	baz=238,SNR=13						
E21K	Killik River	82.50	17	P	P	10 32 10.7	+0.9
	baz=231						
MCARA	McCarthy VSAT	82.56	25	IAmb	IAmb	10 32 13.6	
	comp=Z,23nm,1.1s						
MCARA	McCarthy VSAT	82.56	25	P	P	10 32 11.2	+1.0
	baz=242,SNR=8.1						
K24K	Donnelly Dome	82.62	23	P	P	10 32 10.9	+0.3
	baz=240,SNR=7.4						
B20K	Meade River	82.65	15	P	P	10 32 11.3	+0.8
	baz=228						
G23K	Bananza Creek	82.68	19	P	P	10 32 11.8	+0.9
	baz=235,SNR=15						
POKR	Poker Plat Res	82.69	21	P	P	10 32 10.2	-0.6
	baz=238						
IL31		82.70	22	P	P	10 32 10.6	-0.3
ILAR	Eielson Array	82.70	22	P	P	10 32 10.5	-0.5
ILAR	Eielson Array	82.70	22	P	P	10 32 09.9	-1.0
	comp=Z,6.2nm,0.8s,baz=240,slow=5.1,SNR=44						
ILAR				pP	pP	10 32 28.9	-0.7
	comp=Z,5.1nm,0.9s,baz=243,slow=5.0,SNR=3.4						
	comp=Z,6.2nm,0.8s						
ILAR	Eielson Array	82.70	22	P	P	10 32 10.5	-0.5
MK31	Makanchi Array	82.71	319	*ce*P	P	10 32 11.1	-0.3
MKAR	Makanchi Array	82.71	319	P	P	10 32 11.2	-0.2
	comp=Z,27nm,0.8s,baz=102,slow=5.0,SNR=122						
	comp=Z,27nm,0.8s						
MKAR	Makanchi Array	82.71	319	*i* P	P	10 32 11.1	-0.3
MKAR				pmax	pmax		
	comp=Z,27nm,0.8s						
C21K	Knifeblade Rid	82.73	16	P	P	10 32 12.1	+1.1
	baz=230,SNR=10						
H24K	Noodor Dome	82.92	20	P	P	10 32 12.8	+0.7
	baz=237,SNR=5.8						
COLD	Coldfoot	82.92	19	P	P	10 32 13.0	+1.0
	baz=235,SNR=14						
MAKZ	Makanchi	82.92	319	P	P	10 32 12.1	-0.4
MAKZ	Makanchi	82.92	319	P	P	10 32 12.1	-0.4
MAKZ				pmax	pmax		
	comp=Z,38nm,0.9s						
RIDG	Independent Ri	82.95	23	IAmb	IAmb	10 32 16.3	
	comp=Z,27nm,1.2s						
RIDG	Independent Ri	82.95	23	P	P	10 32 12.6	+0.4
	baz=240,SNR=22						
E22K	Anaktuvuk Pass	82.95	18	P	P	10 32 13.0	+0.8
	baz=234,SNR=11						
MENT	Mentasta	83.00	24	P	P	10 32 14.8	+2.2
M26K	Nabesna, AK	83.04	25	P	P	10 32 13.4	+0.6
	baz=242,SNR=7.5						
B21K	Ikpikpuk River	83.07	16	IAmb	IAmb	10 32 14.6	
	comp=Z,16nm,1.1s						
B21K	Ikpikpuk River	83.07	16	P	P	10 32 13.5	+0.8
	baz=231,SNR=9.9						
CTG	Chitna Glacier	83.10	26	P	P	10 32 14.1	+0.8
	baz=244,SNR=13						
CTGM	Chitina Glacie	83.10	26	IAmb	IAmb	10 32 15.4	
	comp=Z,36nm,1.4s						
D22K	Ayikyak River	83.15	17	IAmb	IAmb	10 32 15.6	
	comp=Z,24nm,1.0s						
D22K	Ayikyak River	83.15	17	P	P	10 32 14.5	+1.3
	baz=233,SNR=14						
J25K	Salcha River,	83.18	22	IAmb	IAmb	10 32 16.6	
	comp=Z,17nm,0.8s						
J25K	Salcha River,	83.18	22	P	P	10 32 13.7	+0.2
	baz=240,SNR=35						
L26K	Log Cabin Wild	83.19	24	P	P	10 32 14.5	+0.9
	baz=242						
DOT	Dot Lake	83.21	23	IAmb	IAmb	10 32 38.0	
	comp=Z,19nm,1.1s						
PCA	Pinnacle	83.21	27	IAmb	IAmb	10 32 15.8	
	comp=Z,35nm,1.4s						
PINM	Pinnacle	83.21	27	P	P	10 32 14.8	+1.1
	baz=245,SNR=6.6						
SCRK	Sand Creek	83.40	23	P	P	10 32 15.1	+0.4
	baz=241,SNR=13						
PNL	Peninsula	83.42	28	P	P	10 32 16.8	+2.0
PNL	Peninsula	83.42	28	P	P	10 32 15.7	+0.9
	baz=246,SNR=5.6						
ZAA0	Zalesovo Array	83.44	326	P	P	10 32 13.7	-1.3
ZAA0				IAmb	IAmb	10 32 14.6	
	comp=Z,22nm,0.8s						
ZALV	Zalesovo Beam	83.44	326	P	P	10 32 13.6	-1.3
	comp=Z,24nm,0.8s,baz=104,slow=6.3,SNR=70						
	comp=Z,24nm,0.8s						
M27K	Edge Creek, AK	83.49	25	IAmb	IAmb	10 32 45.2	
	comp=Z,29nm,1.0s						
M27K	Edge Creek, AK	83.49	25	P	P	10 32 16.6	+1.4
	baz=243,SNR=27						
G24K	Hadweenzic Riv	83.52	20	P	P	10 32 15.9	+0.8
	baz=238,SNR=7.0						
O28M	Mount Upton	83.52	27	P	P	10 32 16.8	+1.2
	baz=245,SNR=12						
E23K	Chandalar	83.58	18	IAmb	IAmb	10 32 17.6	
	comp=Z,20nm,1.1s						
E23K	Chandalar	83.58	18	P	P	10 32 16.5	+1.0
	baz=236,SNR=16						
PRP	Porcupine Dome	83.58	21	P	P	10 32 16.7	+1.0
	baz=240						
SHLS	Shalkode	83.65	315	*e*P	P	10 32 14.4	-2.0
SHLS	Shalkode	83.65	315	*e*P	P	10 32 14.4	-2.0
A21K	Barrow	83.66	14	P	P	10 32 16.1	+0.4
	baz=229						
QSPA	South Pole Qui	83.76	180	P	P	10 32 16.4	-0.2
	comp=Z,66nm,0.9s,baz=243,slow=0.8,SNR=171						
	comp=Z,66nm,0.9s						
D23K	Nanushuk River	83.78	17	P	P	10 32 17.9	+1.5
	baz=234,SNR=15						
J26L	Joseph Creek	83.81	23	P	P	10 32 17.4	+0.7
	baz=242,SNR=12						
L27K	Beaver Creek,	83.83	24	P	P	10 32 18.0	+1.2
	baz=243,SNR=14						
F24K	Squaw Lake	83.83	19	IAmb	IAmb	10 32 19.1	
	comp=Z,15nm,0.9s						
F24K	Squaw Lake	83.83	19	P	P	10 32 18.0	+1.3
	baz=237,SNR=15						
YUK3	Moose Creek	83.83	26	P	P	10 32 18.1	+1.0
	baz=245,SNR=7.5						
B22K	Teshekpuk Lake	83.84	16	IAmb	IAmb	10 32 18.2	
	comp=Z,19nm,0.9s						
B22K	Teshekpuk Lake	83.84	16	P	P	10 32 17.2	+0.6
	baz=232,SNR=5.6						
A22K	Sinclair Lake	83.86	15	P	P	10 32 17.3	+0.6
	baz=230						
H25L	Birch Creek	83.86	20	P	P	10 32 17.5	+0.7
	baz=239						
TOLK	Toolik Lake Re	83.92	18	IAmb	IAmb	10 32 19.1	
	comp=Z,14nm,0.9s						
TOLK	Toolik Lake Re	83.92	18	P	P	10 32 18.1	+0.9
	baz=236,SNR=12						
YUK8	Steele Glacier	83.93	26	P	P	10 32 18.8	+1.2
	baz=245,SNR=12						
BVCY	Beaver Creek	83.94	25	P	P	10 32 18.7	+1.3
	baz=244						
E24K	Your Creek	83.94	18	P	P	10 32 17.9	+0.6
	baz=237						
UZB	Uzynbulak	83.96	314	*e*P	P	10 32 17.5	-0.6
UZB	Uzynbulak	83.96	314	*e*P	P	10 32 17.6	-0.6
G25K	Bearman Lake	84.02	20	P	P	10 32 18.6	+1.0
	baz=239,SNR=7.0						
O29M	Mount Kennedy	84.06	27	P	P	10 32 19.1	+1.0
	baz=246,SNR=5.4						
K27K	Chicken	84.16	23	P	P	10 32 19.7	+1.3
	baz=243						
P29M	Windy Craggy	84.18	28	P	P	10 32 19.6	+1.0
	baz=247						
PRZ	Przheval'sk	84.25	314	P	P	10 32 20.9	+1.3
PRZ				pmax	pmax		
	comp=Z,40nm,1.2s						
KPKS	Kokpek	84.28	315	*e*P	P	10 32 19.0	-0.6
KPKS	Kokpek	84.28	315	*e*P	P	10 32 19.1	-0.6
S31K	Pelican	84.28	30	P	P	10 32 20.0	+0.9
	baz=249						
C23K	Itkillik River	84.31	16	P	P	10 32 19.9	+0.9
	baz=234,SNR=9.7						
I26K	Coal Creek Min	84.35	22	P	P	10 32 19.6	+0.3
	baz=242,SNR=6.1						
SATY	Saty	84.38	314	*e*P	P	10 32 19.7	-0.5
SATY				*e*S	SKSac	10 42 36.2	-2.0
SATY	Saty	84.38	314	*e*P	P	10 32 19.7	-0.5
SATY				*e*S	SKSac	10 42 36.2	-2.0
ZHN	Zhinishke	84.38	314	*e*P	P	10 32 19.5	-0.6
ZHN	Zhinishke	84.38	314	*e*P	P	10 32 19.6	-0.6
YUK6	Outpost Mounta	84.41	27	P	P	10 32 21.2	+1.2
	baz=247,SNR=8.6						
SIT	Sitka	84.42	31	P	P	10 32 20.9	+1.1
	baz=250						
D24K	Happy Valley	84.44	17	P	P	10 32 20.8	+1.1
	baz=236,SNR=5.9						
YUK4	Talbot Arm	84.44	26	P	P	10 32 22.0	+1.8
	baz=246,SNR=5.6						
TARG	Taragay, Kyrgy	84.50	313	IAmb	IAmb	10 32 33.3	
	comp=Z,11nm,0.8s						
TARG	Taragay, Kyrgy	84.50	313	P	P	10 32 21.8	+0.6
TARG				pmax	pmax		
	comp=Z,16nm,0.9s						
F25K	Christian Rive	84.60	19	P	P	10 32 21.8	+1.2
	baz=239,SNR=6.9						
R31K	City Hall, Gus	84.69	30	P	P	10 32 22.2	+1.1
	baz=249						
P30M	Million Dollar	84.73	28	P	P	10 32 22.6	+1.2
	baz=248						
HYT	Haines Junctio	84.75	27	P	P	10 32 22.4	+0.8
HYT				IAmb	IAmb	10 32 23.6	
	comp=Z,13nm,0.8s						
HYT	Haines Junctio	84.75	27	P	P	10 32 23.0	+1.3
	baz=247,SNR=17						
PLBC	Pleasant Camp	84.76	29	P	P	10 32 22.6	+1.1
	baz=248						
C24K	Franklin Bluff	84.79	17	P	P	10 32 22.8	+1.3
	baz=236						
TDK	Taldyqorghan	84.84	316	*e*P	P	10 32 21.7	-0.6
TDK				pmax	pmax		
	comp=Z,16nm,1.1s						
TDK	Taldyqorghan	84.84	316	*e*P	P	10 32 21.8	-0.6
	comp=Z,16nm,1.1s						
BMAR	Burnt Mountain	84.87	20	P	P	10 32 22.6	+0.6
G26K	Porcupine Rive	84.91	20	P	P	10 32 23.5	+1.4
	baz=241,SNR=30						
S32K	Killisnoo	84.94	31	P	P	10 32 23.8	+1.4
	baz=250						
M29M	Somme Creek	84.97	25	P	P	10 32 23.9	+1.2
	baz=246,SNR=9.5						
KDJ	Kajisay	85.05	313	P	P	10 32 23.7	+0.1
KDJ				pmax	pmax		
	comp=Z,32nm,1.0s						
CRAG	Craig	85.05	33	P	P	10 32 24.2	+1.1
	baz=252						
I27K	Kandik River	85.05	22	P	P	10 32 23.9	+1.0
	baz=243,SNR=14						
MAW	Mawson	85.06	203	P	P	10 32 22.8	-0.1
	comp=Z,40nm,0.7s,baz=98,slow=5.9,SNR=46						
	comp=Z,40nm,0.7s						
F26K	Sheenjek River	85.15	20	P	P	10 32 24.5	+1.2
	baz=241,SNR=7.0						
N30M	Aishikik Lake	85.18	27	P	P	10 32 24.8	+1.1
	baz=248						
DAWY	Dawson	85.24	24	P	P	10 32 24.5	+0.5
DAWY				IAmb	IAmb	10 32 26.6	
	comp=Z,16nm,1.5s						
DAWY	Dawson	85.24	24	P	P	10 32 25.3	+1.3
	baz=246,SNR=9.7						
R32K	Eaglecrest	85.25	30	P	P	10 32 25.2	+1.2
	baz=250						
U33K	Whale Pass	85.26	32	IAmb	IAmb	10 32 31.3	
	comp=Z,36nm,1.4s						
U33K	Whale Pass	85.26	32	P	P	10 32 25.3	+1.2
	baz=252						
SKAG	Skagway	85.26	29	P	P	10 32 25.3	+1.3
	baz=249						
D25K	Kavik River	85.26	18	P	P	10 32 24.4	+0.4
	baz=239,SNR=6.9						
H27K	Steamboat Moun	85.37	21	P	P	10 32 25.7	+1.2
	baz=243,SNR=14						
MDOK	Medeo	85.37	314	*e*P	P	10 32 24.5	-0.7
MDOK	Medeo	85.37	314	*e*P	P	10 32 24.5	-0.7
L29M	L29M	85.37	25	IAmb	IAmb	10 32 29.2	
	comp=Z,8.9nm,0.8s						
L29M	L29M	85.37	25	P	P	10 32 26.0	+1.4
	baz=247,SNR=15						
O30N	Mendenhall	85.37	27	P	P	10 32 25.8	+1.2
	baz=249,SNR=7.0						
KSH	Kashi	85.38	310	P	P	10 32 27.8	+2.5
KSH				pmax	pmax		
	comp=Z,22nm,1.0s						
AAA	Alma-Ata	85.47	314	*e*P	P	10 32 24.9	-0.7
AAA	Alma-Ata	85.47	314	*e*P	P	10 32 25.0	-0.7
T33K	Petersburg	85.57	32	P	P	10 32 26.7	+1.2
	baz=252						
G27K	Doyon Strip	85.58	21	P	P	10 32 26.8	+1.2
	baz=243,SNR=9.6						
I28M	Miner Creek	85.61	22	P	P	10 32 26.5	+0.7
	baz=245,SNR=9.0						
WRAK	Wrangell Islan	85.76	32	IAmb	IAmb	10 32 29.0	
	comp=Z,28nm,1.2s						
WRAK	Wrangell Islan	85.76	32	P	P	10 32 28.0	+1.4
	baz=252						
N31M	Braeburn, Yuko	85.77	27	IAmb	IAmb	10 32 31.6	
	comp=Z,20nm,0.9s						
N31M	Braeburn, Yuko	85.77	27	P	P	10 32 28.1	+1.5
	baz=249,SNR=15						
V35K	Ketchikan	85.83	33	IAmb	IAmb	10 32 29.1	
	comp=Z,15nm,0.9s						
V35K	Ketchikan	85.83	33	P	P	10 32 28.1	+1.1
	baz=253						
J29N	Klondike Camp	85.87	24	IAmb	IAmb	10 32 31.7	
	comp=Z,18nm,1.0s						
J29N	Klondike Camp	85.87	24	P	P	10 32 28.7	+1.6
	baz=246						
WHY	Whitehorse	85.89	28	P	P	10 32 27.5	+0.2
WHY				IAmb	IAmb	10 32 29.4	
	comp=Z,16nm,1.2s						
WHY	Whitehorse	85.89	28	P	P	10 32 28.3	+1.0
	baz=250,SNR=5.7						
K29M	Barlow Dome	85.91	24	IAmb	IAmb	10 32 31.8	
	comp=Z,20nm,0.9s						
K29M	Barlow Dome	85.91	24	P	P	10 32 28.7	+1.4
	baz=247,SNR=33						
C26K	Camden Bay	86.01	17	P	P	10 32 29.0	+1.5
	baz=240						
BOOM	Boomskoye usch	86.02	313	P	P	10 32 28.6	+0.2
BOOM				IAmb	IAmb	10 32 33.0	
	comp=Z,17nm,0.7s						
BOOM	Boomskoye usch	86.02	313	P	P	10 32 28.7	+0.2
BOOM				pmax	pmax		
	comp=Z,17nm,0.7s						
P32M	Atlin	86.08	29	P	P	10 32 29.4	+1.2
	baz=251,SNR=6.4						
KURK	Kurchatov	86.12	322	P	P	10 32 27.3	-1.2
KURK				IAmb	IAmb	10 32 28.3	
	comp=Z,20nm,1.1s						
KURK	Kurchatov	86.12	322	*ce*P	P	10 32 27.2	-1.2
KURK				pmax	pmax		
	comp=Z,23nm,1.3s						
KURBB	Kurchatov Arra	86.15	322	P	P	10 32 27.7	-0.9
	comp=Z,5.1nm,0.6s,baz=104,slow=4.0,SNR=49						
KURBB				sP	sP	10 32 52.7	-2.1
	comp=Z,1.8nm,0.8s,baz=120,slow=5.8,SNR=2.1						
	comp=Z,5.1nm,0.6s						
I29M	Ogilvie Camp,	86.20	23	IAmb	IAmb	10 32 31.8	
	comp=Z,13nm,0.9s						
I29M	Ogilvie Camp,	86.20	23	P	P	10 32 29.4	+0.7
	baz=246,SNR=22						
C27K	Jago River	86.23	18	P	P	10 32 30.0	+1.3
	baz=241,SNR=5.4						
E27K	Coleen River	86.23	20	IAmb	IAmb	10 32 31.1	
	comp=Z,22nm,0.9s						
E27K	Coleen River	86.23	20	P	P	10 32 30.0	+1.2
	baz=243,SNR=11						
NIL	Nilore	86.43	304	P	P	10 32 29.7	-0.8
NIL	Nilore	86.43	304	P	P	10 32 29.7	-0.8
NIL				pmax	pmax		
	comp=Z,16nm,0.5s						
MAYO	Mayo, Yukon	86.49	25	P	P	10 32 31.7	+1.6
	baz=249,SNR=9.1						
H29M	Whitestone	86.52	22	IAmb	IAmb	10 32 55.3	
	comp=Z,13nm,1.2s						
H29M	Whitestone	86.52	22	P	P	10 32 31.3	+1.1
	baz=246						
F28M	Old Crow	86.56	20	IAmb	IAmb	10 32 32.5	
	comp=Z,12nm,0.9s						
F28M	Old Crow	86.56	20	P	P	10 32 31.4	+1.0
	baz=245,SNR=12						
Q32M	Nakina River	86.58	30	IAmb	IAmb	10 32 36.0	
	comp=Z,15nm,1.3s						
Q32M	Nakina River	86.58	30	P	P	10 32 32.1	+1.2
	baz=252						
M31M	Drury Creek, Y	86.64	26	P	P	10 32 31.5	+0.7
	baz=250,SNR=13						
J30M	Hart River	86.67	24	IAmb	IAmb	10 32 35.4	
	comp=Z,14nm,0.8s						
J30M	Hart River	86.67	24	P	P	10 32 32.2	+1.1
	baz=248,SNR=39						
P33M	Teslin, Yukon	86.71	28	P	P	10 32 32.0	+0.7
	baz=252						
S34M	Telegraph Cree	86.84	31	IAmb	IAmb	10 32 34.5	
	comp=Z,19nm,0.9s						
S34M	Telegraph Cree	86.84	31	P	P	10 32 33.6	+1.7
	baz=253,SNR=14						
N32M	Quiet Lake	86.88	28	P	P	10 32 33.3	+1.3
	baz=251						
I30M	Mount Dempster	86.89	23	IAmb	IAmb	10 32 35.8	
	comp=Z,14nm,1.1s						
I30M	Mount Dempster	86.89	23	P	P	10 32 33.0	+0.8
	baz=248,SNR=23						
D27M	Malcolm River	86.91	19	P	P	10 32 33.5	+1.4
	baz=244						
G29M	Pine Creek	86.93	21	P	P	10 32 33.1	+1.0
	baz=247,SNR=15						
T35M	Bob Quinn	87.03	32	IAmb	IAmb	10 32 35.4	
	comp=Z,14nm,1.1s						
T35M	Bob Quinn	87.03	32	P	P	10 32 34.2	+1.3
	baz=254,SNR=9.5						
ARLS	Aral	87.07	312	P	P	10 32 34.0	+0.4
ARLS				pmax	pmax		
	comp=Z,15nm,0.8s						
AAK	Ala-Archa	87.10	313	P	P	10 32 33.8	+0.1
AAK				IAmb	IAmb	10 32 38.0	
	comp=Z,9.0nm,0.7s						
AAK	Ala-Archa	87.10	313	*ce*P	P	10 32 33.5	-0.2
AAK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
E28M	Babbage River	87.10	20	P	P	10 32 34.0	+1.1
	baz=245						
FARO	Faro, Yukon	87.11	26	IAmb	IAmb	10 32 34.9	
	comp=Z,10.0nm,1.1s						
FARO	Faro, Yukon	87.11	26	P	P	10 32 33.9	+0.7
	baz=251,SNR=13						
EPYK	Eagle Plains	87.20	22	P	P	10 32 34.1	+0.6
EPYK	Eagle Plains	87.20	22	P	P	10 32 34.3	+0.8
	baz=248,SNR=28						
R33M	Jennings River	87.35	30	P	P	10 32 35.9	+1.4
	baz=253,SNR=8.1						
DLBC	Dease Lake	87.55	31	IAmb	IAmb	10 32 37.9	
	comp=Z,20nm,1.2s						
DLBC	Dease Lake	87.55	31	P	P	10 32 36.9	+1.5
	baz=254,SNR=14						
E29M	Blow River	87.56	20	P	P	10 32 35.7	+0.5
	baz=247						
G30M	tAoh Zraii Nji	87.61	22	IAmb	IAmb	10 32 37.0	
	comp=Z,18nm,1.2s						
G30M	tAoh Zraii Nji	87.61	22	P	P	10 32 35.9	+0.4
	baz=248,SNR=10						
BTLS	Baital	87.87	316	*e*P	P	10 32 36.1	-1.0
BTLS	Baital	87.87	316	*e*P	P	10 32 36.2	-1.0
H31M	Peel River	87.89	23	IAmb	IAmb	10 32 40.3	
	comp=Z,11nm,0.8s						
H31M	Peel River	87.89	23	P	P	10 32 37.5	+0.7
	baz=250,SNR=15						
ARSB	Arslanbob	87.97	312	IAmb	IAmb	10 32 44.7	
	comp=Z,15nm,1.2s						
F30M	Barrier River	88.00	21	IAmb	IAmb	10 32 39.0	
	comp=Z,26nm,1.1s						
F30M	Barrier River	88.00	21	P	P	10 32 38.0	+0.8
	baz=249,SNR=11						
MMPY	Sheldon Lake,	88.16	26	IAmb	IAmb	10 32 57.3	
	comp=Z,14nm,1.3s						
MMPY	Sheldon Lake,	88.16	26	P	P	10 32 39.1	+0.9
	baz=253,SNR=9.0						
CBB	Campbell River	88.20	39	IAmb	IAmb	10 32 40.8	
	comp=Z,17nm,1.0s						
G31M	Satah River	88.31	22	IAmb	IAmb	10 32 40.4	
	comp=Z,17nm,1.1s						
G31M	Satah River	88.31	22	P	P	10 32 39.1	+0.5
	baz=250,SNR=8.1						
WTLY	Watson Lake, Y	88.60	29	IAmb	IAmb	10 32 59.5	
	comp=Z,17nm,1.4s						
WTLY	Watson Lake, Y	88.60	29	P	P	10 32 41.4	+1.1
	baz=255,SNR=5.7						
F31M	Tsiigehtchic	88.68	21	P	P	10 32 40.7	+0.3
	baz=250						
INK	Inuvik	89.04	21	IAmb	IAmb	10 32 43.3	
	comp=Z,12nm,1.2s						
INK	Inuvik	89.04	21	P	P	10 32 42.2	+0.1
INK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
INK	Inuvik	89.04	21	P	P	10 32 42.2	+0.1
	baz=251,SNR=6.3						
TGTN	Hyland Airport	89.21	28	P	P	10 32 44.1	+1.0
	baz=256						
AFDM	Forest Hills D	89.36	51	P	P	10 32 44.4	+0.1
AFDM				IAmb	IAmb	10 32 48.1	
	comp=Z,8.7nm,0.9s						
BTK	Batken	89.39	310	IAmb	IAmb	10 32 52.1	
	comp=Z,7.4nm,0.7s						
BTK	Batken	89.39	310	P	P	10 32 44.1	-0.4
BTK				pmax	pmax		
	comp=Z,11nm,1.1s						
DZA	Taraz	89.44	313	*e*P	P	10 32 43.7	-0.9
DZA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
DZA	Taraz	89.44	313	*e*P	P	10 32 43.8	-0.9
	comp=Z,6.0nm,0.6s						
LIRD	Liard River Hi	89.76	30	P	P	10 32 46.7	+1.0
	baz=258						
J05D	Fort Rock, OR	89.81	47	IAmb	IAmb	10 32 49.5	
	comp=Z,9.6nm,0.9s						
KBL	Kabul	90.02	305	P	P	10 32 46.9	-0.9
KBL				IAmb	IAmb	10 32 50.6	
	comp=Z,5.3nm,0.7s						
KBL	Kabul	90.02	305	P	P	10 32 46.9	-0.9
KBL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KK31	Karatay Array	90.06	313	P	P	10 32 46.9	-0.6
KK31	Karatay Array	90.06	313	P	P	10 32 46.9	-0.6
KK31				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KKAR	Karatay Array	90.06	313	P	P	10 32 46.3	-1.2
KKAR	Karatay Array	90.06	313	P	P	10 32 46.3	-1.2

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TOAD  Toad River Com   90.08  31 P         P       10 32 47.9 +0.6
      baz=258,SNR=7.6
PINE  Pine Mountain    90.09  46 IAmb      IAmb    10 32 50.4
      comp=Z,11nm,1.3s
BEAVL Fort Liard       90.44  29 P         P       10 32 49.8 +1.0
      baz=258
PNTR  Pine Nut         90.44  51 IAmb      IAmb    10 32 52.0
      comp=Z,14nm,0.9s
WAKR  Walker           90.49  51 IAmb      IAmb    10 32 52.2
      comp=Z,6.5nm,0.8s
LLLB  Lillooet         90.50  39 IAmb      IAmb    10 32 51.7
      comp=Z,6.3nm,0.9s
BRLS  Borolday         90.54 313 eP        P       10 32 49.1 -0.6
BRLS  Borolday         90.54 313 eP        P       10 32 49.2 -0.6
SIMJ  Simiganj         90.58 309 P         P       10 32 49.2 -1.0
SIMJ                             IAmb      IAmb    10 32 51.5
      comp=Z,12nm,1.1s
CHM   Chimkent         90.61 312 eP        P       10 32 49.1 -1.0
CHM   Chimkent         90.61 312 eP        P       10 32 49.2 -1.0
PAHR  Pah Rah Range    90.69  50 IAmb      IAmb    10 32 54.4
      comp=Z,9.7nm,0.9s
DZET  Dzherino         90.74 309 P         P       10 32 51.1 +0.2
DZET                             pmax      pmax
      comp=Z,11nm,0.5s
KOTAN Kotaneelee Air   90.92  30 P         P       10 32 51.9 +0.8
      baz=259
I07A  Izee             91.16  46 IAmb      IAmb    10 32 54.5
      comp=Z,11nm,1.4s
NVAR  Mina Array Bea   91.36  52 P         P       10 32 55.0 +1.1
NVAR  Mina Array Bea   91.36  52 P         P       10 32 54.7 +0.7
      comp=Z,15nm,0.9s,baz=252,slow=6.4,SNR=23
NVAR                             pP        pP      10 33 11.5 -1.4
      comp=Z,11nm,1.0s,baz=249,slow=5.6,SNR=8.4
NVAR                             LR        LR      11 08 28.5
      comp=Z,117nm,19.9s,baz=259,slow=32
      comp=Z,15nm,0.9s
ELS   Elsinore Mount   91.52  56 IAmb      IAmb    10 32 57.0
      comp=Z,8.5nm,1.1s
BVAR  Borovoye Array   91.57 323 P         P       10 32 52.6 -1.6
      comp=Z,19nm,0.8s,baz=98,slow=6.1,SNR=60
      comp=Z,19nm,0.8s
WVOR  Wild Horse Val   91.58  48 IAmb      IAmb    10 32 56.5
      comp=Z,5.2nm,0.9s
BRVK  Borovoye         91.64 323 P         P       10 32 53.3 -1.3
BRVK  Borovoye         91.64 323ceP        P       10 32 53.0 -1.6
BRVK                             pmax      pmax
      comp=Z,13nm,0.7s
G08A  Pilot Rock       91.70  45 IAmb      IAmb    10 32 57.2
      comp=Z,12nm,1.2s
WRGLY Wrigley          91.77  27 IAmb      IAmb    10 32 57.0
      comp=Z,8.6nm,0.8s
WRGLY Wrigley          91.77  27 P         P       10 32 55.5 +0.6
      baz=260
J08A  Circle Bar Ran   91.81  47 IAmb      IAmb    10 32 58.3
      comp=Z,3.6nm,0.7s
B08A  Colville Reser   91.83  42 IAmb      IAmb    10 32 56.6
      comp=Z,11nm,1.2s
GSC   Goldstone, Bar   92.21  55 IAmb      IAmb    10 33 00.1
      comp=Z,9.1nm,0.9s
PFO   Pinyon Flats O   92.32  57 P         P       10 32 58.6 +0.2
      comp=Z,10nm,1.1s,baz=265,slow=4.8,SNR=9.9
      comp=Z,10nm,1.1s
GWY   Greenwater Val   92.41  54 IAmb      IAmb    10 33 00.9
      comp=Z,7.4nm,0.9s
ESJX  Sierra Juarez    92.59  58 IAmb      IAmb    10 33 04.6
      comp=Z,14nm,1.5s
C36M  Paulatuk         92.63  21 P         P       10 32 58.8 +0.1
      baz=260
YUH   Yuha Desert      92.67  58 IAmb      IAmb    10 33 02.6
      comp=Z,16nm,1.4s
A36M  Sachs Harbour    92.75  18 IAmb      IAmb    10 33 00.1
      comp=Z,9.4nm,0.8s
A36M  Sachs Harbour    92.75  18 P         P       10 32 59.2  0.0
      baz=258
SYO   Syowa Base       93.01 199⇓eP        P       10 33 00.2 -0.4
SYO   Syowa Base       93.01 199⇑ipP       pP      10 33 17.9 -1.6
NEW   Newport          93.28  42 IAmb      IAmb    10 33 05.1
      comp=Z,12nm,1.2s
NEW   Newport          93.28  42 P         P       10 33 02.3  0.0
      comp=Z,8.4nm,1.0s,baz=225,slow=2.0,SNR=6.8
NEW                              LR        LR      11 08 08.9
      comp=Z,453nm,21.5s,baz=268,slow=31
      comp=Z,8.4nm,1.0s
R11B  Troy Canyon, C   93.48  52 IAmb      IAmb    10 33 22.1
      comp=Z,10nm,1.1s
SHPR  Sheep Range      93.65  54 IAmb      IAmb    10 33 07.2
      comp=Z,6.9nm,0.9s
V12A  Nelson           93.84  55 IAmb      IAmb    10 33 07.7
      comp=Z,7.8nm,0.9s
ELK   Elko             93.95  50 P         P       10 33 06.6 +0.7
      comp=Z,3.8nm,1.0s,baz=239,slow=5.0,SNR=6.9
ELK                              pP        pP      10 33 23.4 -1.7
      comp=Z,1.6nm,0.9s,baz=263,slow=4.7,SNR=3.1
      comp=Z,3.8nm,1.0s
PSUT  Pine Spring      94.85  52 IAmb      IAmb    10 33 16.7
      comp=Z,6.3nm,0.9s
LCMT  Little Creek M   95.23  53 IAmb      IAmb    10 33 30.6
      comp=Z,8.3nm,1.3s
KNB   Kanab            95.56  53 IAmb      IAmb    10 33 16.1
      comp=Z,8.5nm,1.1s
YKA   Yellowknife Ar   95.72  28 P         P       10 33 13.2 +0.1
YKA   Yellowknife Ar   95.72  28 P         P       10 33 13.4 +0.3
      comp=Z,3.4nm,0.7s,baz=276,slow=4.9,SNR=49
YKA                              pP        pP      10 33 30.6 -1.7
      comp=Z,1.3nm,0.8s,baz=275,slow=5.0,SNR=3.8
YKA                              PKKP      PKKPbc  10 50 01.7 -4.0
      comp=Z,0.8nm,0.8s,baz=72,slow=2.2,SNR=6.6
      comp=Z,3.4nm,0.7s
YKA   Yellowknife Ar   95.72  28 i P       P       10 33 13.8 +0.7
YKA                              pmax      pmax
      comp=Z,4.0nm,0.7s
YKAW3 Yellowknife Wh   95.72  28 IAmb      IAmb    10 33 14.7
      comp=Z,6.1nm,0.8s
YKAW1 Yellowknife Wh   95.78  28 IAmb      IAmb    10 33 14.9
      comp=Z,6.1nm,0.8s
BELA  Belgrano 2       95.87 178 P         P       10 33 12.0 -1.6
HVU   Hansel Valley    95.87  49 IAmb      IAmb    10 33 16.3
      comp=Z,6.5nm,1.0s
U15A  North Rim        95.95  54 IAmb      IAmb    10 33 18.0
      comp=Z,5.8nm,0.9s
WUAZ  Wupatki          96.65  55 IAmb      IAmb    10 33 22.6
      comp=Z,6.4nm,1.1s
YHL   Hebgen Lake      97.16  46 IAmb      IAmb    10 33 23.4
      comp=Z,4.9nm,1.1s
ABKAR Akbulak array    97.85 319 P         P       10 33 20.9 -2.2
PDAR  Pinedale Array   98.29  48 P         P       10 33 25.0 -0.5
PDAR  Pinedale Array   98.29  48 P         P       10 33 25.5  0.0
      comp=Z,1.1nm,0.6s,baz=250,slow=3.0,SNR=7.0
      comp=Z,1.1nm,0.6s
ARTI  Arti             98.70 326c iP       P       10 33 23.8 -2.9
ARTI                                               10 37 24.5
ARTI                             S         SKSac   10 43 55.2 -3.5
ARTI                             pmax      pmax
      comp=Z,6.0nm,0.9s
PV16  Nyswonger Mesa   98.71  52 IAmb      IAmb    10 33 30.2
      comp=Z,6.5nm,1.2s
PV04  Paradox Valley   98.72  52 IAmb      IAmb    10 33 29.7
      comp=Z,8.2nm,1.1s
PV02  Paradox Valley   98.85  52 IAmb      IAmb    10 33 31.3
      comp=Z,9.1nm,1.1s
TROLL Troll, Antarti   99.87 188 ⇓P        Pdif    10 33 31.3 -0.5
      comp=Z,294nm,0.8s
Y22D  IRIS PASSCAL I  100.27  57 P         Pdif    10 33 33.6 -0.9
      baz=269
ANMO  Albuquerque     100.66  56 i P       Pdif    10 33 36.1 -0.1
SNAA  Sanae           100.90 187 P         Pdif    10 33 35.2 -1.2
      comp=Z,1.3nm,0.9s,baz=131,slow=7.2,SNR=3.7
SNAA  Sanae           100.90 187 i P       Pdif    10 33 37.9 +1.5
SNAA                             pmax      pmax
      comp=Z,3.0nm,0.9s
VNA3  Neumayer Olymp  102.02 185 ⇓P        Pdif    10 33 40.4 -0.9
      comp=Z,4.8nm,0.8s
VNA2  Neumayer--Watz  102.11 186 ⇓P        Pdif    10 33 41.1 -0.6
      comp=Z,3.6nm,0.8s,baz=160,slow=4.8
TXAR  Lajitas Array   103.03  61 PKiKP     PKiKP   10 38 06.4 -0.2
      comp=Z,0.2nm,0.4s,baz=274,slow=5.0,SNR=4.6
TXAR                             PKKPbc    PKKPbc  10 49 43.1 -0.8
      comp=Z,1.5nm,0.8s,baz=58,slow=3.8,SNR=9.3
KLMR  Klimovskoe      107.56 332 eP        Pdif    10 34 02.1 -3.9
KLMR                             pmax      pmax
      comp=Z,10.0nm,1.3s
OBN   Obninsk         111.00 327c iPKIKP   PKiKP   10 38 20.9 +0.5
OBN                              e                 10 38 58.7
OBN                              ePPP      PPP     10 41 20.5
OBN                              pmax      pmax
      comp=Z,3.0nm,0.9s
FINES FINESS Array B  113.16 336 PKKPbc    PKKPbc  10 49 09.2 -3.7
      comp=Z,0.3nm,0.3s,baz=204,slow=1.9,SNR=5.5
FINES                            PKKPab    PKKPab  10 49 17.1 -1.3
      comp=Z,0.8nm,0.7s,baz=180,slow=30,SNR=3.8
VSU   Vasula          114.44 333 i PKIKP   PKPdf   10 38 27.7 +0.8
E46A  Sault Ste Mari  115.51  41           PKiKP   10 38 29.1 -0.2
AKASG Malin Array Be  116.81 325 PKP       PKPdf   10 38 30.7 -1.0
      comp=Z,0.5nm,0.5s,baz=59,slow=2.3,SNR=4.3
AKASG Malin Array Be  116.81 325 i PKIKP   PKPdf   10 38 31.1 -0.6
AKASG                            pmax      pmax
      comp=Z,1.0nm,0.5s
BRTR  Keskin Array B  117.74 312 PKP       PKPdf   10 38 32.9 -1.2
      comp=Z,0.7nm,0.7s,baz=92,slow=1.3,SNR=5.4
W50A  Signal Mountai  117.84  53           PKPdf   10 38 33.6 -0.7
NB2   NORSAR Subarra  118.91 341 PKPdf     PKPdf   10 38 34.4 -1.1
      comp=Z,0.2nm,0.5s,baz=44,slow=1.9
NOA   NORSAR Array B  118.91 341 PKP       PKPdf   10 38 34.0 -1.5
      comp=Z,0.8nm,0.8s,baz=46,slow=2.0,SNR=4.0
BOSA  Boshof          120.38 232 PKP       PKPdf   10 38 38.7 -0.8
      comp=Z,3.3nm,0.6s,baz=87,slow=3.2,SNR=10
L56A  Greenwood       121.54  44           PKPdf   10 38 39.9 -1.3
VYHS  Vyhne           123.77 326 ePKIKP    PKPdf   10 38 44.9 -0.3
VYHS  Vyhne           123.77 326 ePKP      PKPdf   10 38 44.9 -0.3
BRG   Berggiesshubel  124.88 331 ePKP      PKPdf   10 38 46.9 -0.4
BRG                              Amp               10 38 48.2
      comp=Z,2.8nm,0.8s
CLL   Collm           125.05 332 ePKIKP    PKPdf   10 38 47.0 -0.5
CLL   Collm           125.05 332 ePKPdf    PKPdf   10 38 47.0 -0.5
GERES GERESS Array B  126.30 329 PKP       PKPdf   10 38 49.2 -0.9
      comp=Z,1.5nm,0.8s,baz=116,slow=2.3,SNR=5.8
EKA   Eskdalemuir Ar  127.94 344 PKP       PKPdf   10 38 52.4 -0.5
      comp=Z,0.6nm,0.6s,baz=29,slow=1.8,SNR=3.7
ROSC  El Rosal        131.07  89 PKP       PKPdf   10 39 00.6  0.0
      comp=Z,5.2nm,0.4s,baz=155,slow=20,SNR=7.7
LPAZ  La Paz          131.97 118 PKP       PKPdf   10 39 01.1 -1.5
      comp=Z,3.7nm,0.9s,baz=7.2,slow=2.9,SNR=8.6
MTE   Manteigas       142.46 338 ePKP      PKPdf   10 39 20.5  0.0
PMRV  Marv??o         143.25 337 ePKP      PKPab   10 39 18.1 +0.5
PSARD Sardoal         143.39 338 ePKP      PKPab   10 39 18.7 +0.5
PBAR  Barrancos       144.17 335 ePKP      PKPab   10 39 21.3 +0.1
MOE   Montemor        144.40 337 ePKP      PKPab   10 39 22.4 +0.3
MESJ  Messejana       144.94 336 ePKP      PKPab   10 39 24.2 +0.2
MESJ  Messejana       144.94 336 ePKP      PKPab   10 39 24.4 +0.2
MESJ  Messejana       144.94 336 ePKIKP    PKPab   10 39 24.3 +0.2
PCVE  Castro Verde    145.05 336 ePKP      PKPbc   10 39 24.8 +0.3
PVAQ  Vaqueiros       145.11 335 ePKP      PKPbc   10 39 24.9 +0.2
BDFB  Brasilia        148.64 134 PKPbc     PKPdf   10 39 31.6 -0.2
      comp=Z,12nm,0.8s,baz=272,slow=1.7,SNR=7.2
TORD  Torodi Ar. Bea  152.66 287 PKPbc     PKPbc   10 39 43.6 -1.3
      comp=Z,12nm,0.8s,baz=40,slow=2.5,SNR=6.6
DBIC  Dimbokro        159.81 272 PKPab     PKPab   10 40 26.2 -0.3
      comp=Z,16nm,0.9s,baz=100,slow=3.8,SNR=11
```

IDC 08 10:33:17.4±2.5**, 7°.41S×155°.49E, h0^{km}, mb3.6**/7**, mbtmp3.7**/7**, Error ellipse: s-maj=83.2km s-min=26.2km az=124.0, Bougainville-Solomon Islands region**

```
Code  Station Name      Δ°    AZ°   Phase ID              Time     Res
                                  Op        ISC        h  m  s     ISC
WRA   Warramunga Arr   23.99 237  P         P         10 38 34.4 +0.3
      1.8nm,0.8s,baz=58,slow=9.1,SNR=6.0
      1.8nm,0.8s
ASAR  Alice Springs    26.27 230  P         P         10 38 54.9  0.0
      0.4nm,0.8s,baz=58,slow=8.3,SNR=4.8
      0.4nm,0.8s
PETK  Petropavlovsk-   60.31   2  P         P         10 43 28.9 +1.0
      0.9nm,0.8s,baz=147,slow=5.6,SNR=4.0
      0.9nm,0.8s
CMAR  Chiang Mai Arr   61.41 296  P         P         10 43 36.8 +0.8
      0.6nm,0.4s,baz=119,slow=4.9,SNR=4.2
      0.6nm,0.4s
ILAR  Eielson Array    83.58  21  P         P         10 45 47.4 +0.1
      0.2nm,0.7s,baz=226,slow=4.9,SNR=2.0
      0.2nm,0.7s
MKAR  Makanchi Array   84.04 319  P         P         10 45 49.1 -1.0
      0.7nm,0.7s,baz=104,slow=6.1,SNR=5.1
      0.7nm,0.7s
KURBB Kurchatov Arra   87.49 322  P         P         10 46 05.5 -1.6
      0.4nm,0.7s,baz=92,slow=4.6,SNR=2.2
      0.4nm,0.7s
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*IDC **08** 10:49:18.1±0.6, 3°.95S×149°.56E, h0^{km}, mb4.8/21, mbtmp4.8/23, ML3.0/2, MS4.6/50, Error ellipse: s-maj=20.2km s-min=9.2km az=110.0*

*NEIC **08** 10:49:19.7±1.2, 3°.74S±0°.03×149°.54E±0°.06, h10^{km}±1^{km}, mb5.1/182, Error ellipse: s-maj=11.0km s-min=3.9km az=63.0*

*MOS **08** 10:49:19.1±1.0, 3°.81S×149°.45E, h14^{km}, mb5.2/39, MS4.6/6, Error ellipse: s-maj=9.8km s-min=5.7km az=102.5*

*BJI **08** 10:49:20.3, 3°.57S×149°.57E, h13^{km}, mB5.1/27, mb4.9/76, Ms4.8/68, Ms7 4.6/69*

*GCMT **08** 10:49:22.7±0.1, 3°.88S±0°.01×149°.47E±0°.01, h12^{km}, MW5.3/144, Moment Tensor Solution. s91,c148; s144,c267; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.29±.01; $M_{\theta\theta}$1.24±.01; $M_{\phi\phi}$-0.95±.01; $M_{r\theta}$-0.01±.03; $M_{\theta\phi}$-0.05±.01; $M_{\phi r}$-0.15±.04; Best double couple: $M_0$1.11600×10^{17} NP1:ϕ_s316.00000°, δ81.00000°, λ-9.00000°. NP2:ϕ_s47.00000°, δ81.00000°, λ-171.00000°. Principal axes: T 1.2410, Plg0.0000°, Azm181.0000°; N -0.2550, Plg78.0000°, Azm91.0000°; P -0.9900, Plg12.0000°, Azm271.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **08** 10:49:26.2±0.9, 4°S±4°×14°9E±°, h47^{km}±7^{km}, M5.2/47, mB5.6/24, mb5.2/47, MLv5.2/1, Mw(mB)5.2/24, MwMwp5.0/7, Mwp5.3/7*

ISC 08 10:49:19.9±0.3**, 3°.88S**±0°.03×**149°.58E**±0°.04**, h10^{km}, h10^{km}:pP-P, n690, σ1^{s}35**/638**, mb5.1**/190**, MS4.7**/77**, 13C-4D, Bismarck Sea**

```
Code  Station Name      Δ°    AZ°   Phase ID              Time     Res
                                  Op        ISC        h  m  s     ISC
RABL  Rabaul            2.59  97            Pn        10 50 02.2 +0.2
MANU  Manus Island      2.87 310            Pn        10 50 03.1 -2.7
PMG   Port Moresby      5.99 204            Pn        10 50 49.8 +1.1
PMG   Port Moresby      5.99 204  Pn        Pn        10 50 48.8 +0.1
      11nm,0.3s,baz=51,slow=7.0,SNR=28
PMG                               Sn        Sn        10 51 57.6 +0.2
      6.9nm,0.3s,baz=314,slow=14,SNR=3.6
      106nm,0.8s
PMG   Port Moresby      5.99 204  P         Pn        10 50 50.6 +1.9
PMG   Port Moresby      5.99 204 i P        Pn        10 50 51.5 +2.8
JAY   Jayapura          8.97 278  Pn        Pn        10 51 28.4 -1.3
      0.5nm,0.3s,baz=90,slow=6.9,SNR=3.9
JAY                               LR        LR        10 54 29.5
      comp=Z,8µm,18.2s,baz=72,slow=35
      34nm,1.1s
JAY   Jayapura          8.97 278  P         Pn        10 51 46.0  +16
GENI  Genyem            9.49 277  P         Pn        10 51 37.3 +0.6
GENI  Genyem            9.49 277  P         Pn        10 51 38.4 +1.7
      4µm4µm276nm,1.3s
SMPI  Sarmi            11.02 280  P         Pn        10 51 59.9 +2.2
      5µm7µm234nm,1.4s
TATA  Tatamba Isabel   11.10 114  P         Pn        10 52 06.8 +7.9
HNR   Honiara          11.68 119  LR        LR        10 56 57.0
      comp=Z,3µm,19.6s,baz=286,slow=39
COEN  Coen             11.84 212            Pn        10 52 09.2 +0.2
COEN  Coen             11.84 212  P         Pn        10 52 09.9 +0.9
      comp=Z,70nm,1.7s
COEN  Coen             11.84 212  P         Pn        10 52 11.7 +2.7
NGOA  Tingoa Renbel    12.88 127  P         Pn        10 52 30.4 +7.2
PATS  Pohnpei          13.76  39            Pn        10 52 31.9 -3.4
PATS  Pohnpei          13.76  39  P         P         10 52 41.7 -2.2
HURO  Huro Makira      13.86 119  P         P         10 52 42.1 -2.9
MTSU  Mount Surprise   15.07 200  P         Pn        10 52 54.8 +1.7
      comp=Z,135nm,0.9s
MTSU  Mount Surprise   15.07 200  P         Pn        10 52 55.3 +2.2
TV1H  Townsville Har   15.53 190  P         P         10 53 02.1 -1.4
RKPI  Ransiki, Papua   15.56 278  P         Pn        10 53 00.8 +1.1
      comp=Z,2µmcomp=Z,192nm,1.3s
CTAO  Charters Tower   16.43 191            P         10 53 12.5 -1.1
CTAO                              IAmb      IAmb      10 53 19.2
      comp=Z,212nm,1.1s
CTAO  Charters Tower   16.43 191  P         P         10 53 13.6 +0.1
CTAO  Charters Tower   16.43 191  P         P         10 53 12.5 -1.1
CTAO                              pmax      pmax
      comp=Z,212nm,1.1s
FAKI  Fak Fak          17.33 273            Pn        10 53 20.2 -1.9
FAKI  Fak Fak          17.33 273  P         Pn        10 53 20.9 -1.2
FAKI  Fak Fak          17.33 273  P         Pn        10 53 21.6 -0.5
      comp=Z,3µmcomp=Z,3µmcomp=Z,188nm,1.5s
LUES  Luesalemba Tem   17.54 113  P         P         10 53 29.5 +3.7
GUMO  Guam             17.98 345  LR        LR        10 59 37.2
      comp=Z,2µm,18.9s,baz=160,slow=34
SWI   Sorong           18.55 279  P         P         10 53 36.0 -1.0
      comp=Z,3µmcomp=Z,2µmcomp=Z,131nm,1.1s
KDU   Kakadu           19.04 242  P         P         10 53 41.2 -1.2
      comp=Z,178nm,1.1s
KDU   Kakadu           19.04 242  P         P         10 53 41.3 -1.1
QIS   Mount Isa        19.21 210  P         P         10 53 44.9 +0.6
      comp=Z,0.0nmcomp=Z,229nm,1.1s
QIS   Mount Isa        19.21 210  P         Pn        10 53 45.1 -0.1
GD1S  Gladstone Soft   19.90 176  P         Pn        10 53 54.0 +0.6
MTN   Manton Dam       20.29 243            P         10 53 55.6 -0.5
MTN   Manton Dam       20.29 243  P         P         10 53 55.9 -0.2
      comp=Z,86nm,1.9s
MTN   Manton Dam       20.29 243  P         P         10 53 56.5 +0.4
DRS   Darwin Rock St   20.33 244  P         P         10 53 57.0 +0.5
VLAKA Lakatoro         21.33 126  P         P         10 54 11.2 +3.9
AAI   Ambon            21.34 270  P         P         10 54 21.2  +14
EIDS  Eidsvold         21.41 176  P         P         10 54 09.4 +1.3
EIDS  Eidsvold         21.41 176  P         P         10 54 09.9 +1.8
      comp=Z,246nm,1.1s
EIDS  Eidsvold         21.41 176  P         P         10 54 10.8 +2.7
WB0   Warramunga Arr   21.65 222  P         P         10 54 10.5 -0.2
WR8   Warramunga Arr   21.71 221  P         P         10 54 10.9 -0.5
WRAB  Tennant Creek    21.80 222  P         P         10 54 11.3 -1.0
WRAB  Tennant Creek    21.80 222 i P        P         10 54 11.8 -0.5
WRAB                              pmax      pmax
      comp=Z,240nm,1.1s
WRA   Warramunga Arr   21.81 222  P         P         10 54 11.3 -1.1
WRA   Warramunga Arr   21.81 222  P         P         10 54 11.3 -1.1
      comp=Z,146nm,1.0s,baz=45,slow=11,SNR=129
WRA                               S         S         10 58 12.6 -1.2
      comp=Z,3.0nm,1.0s,baz=43,slow=17,SNR=7.2
WRA                               LR        LR        11 03 27.6
      comp=Z,1µm,19.7s,baz=44,slow=39
      comp=Z,146nm,1.0s
WRA   Warramunga Arr   21.81 222ceP         P         10 54 11.6 -0.9
WRA                               pmax      pmax
      comp=Z,142nm,1.0s
TNTI  Ternate          22.68 281  P         P         10 54 19.7 -2.1
TNTI  Ternate          22.68 281  P         P         10 54 21.3 -0.5
TNTI  Ternate          22.68 281  P         P         10 54 21.7 -0.1
      comp=Z,1µmcomp=Z,125nm,1.2s
QLP   Quilpie          23.14 192  P         P         10 54 27.1 +0.5
      comp=Z,428nm,1.0s
QLP   Quilpie          23.14 192  P         P         10 54 26.6 +0.1
KNRA  Kununurra        23.59 239  P         P         10 54 29.8 -1.4
KNRA                              IAmb      IAmb      10 54 56.8
      comp=Z,94nm,1.2s
KNRA  Kununurra        23.59 239  P         P         10 54 30.2 -0.9
      comp=Z,64nm,0.9s
SANI  Sanana           23.63 274  P         P         10 54 31.7 +0.1
SANI  Sanana           23.63 274  P         P         10 54 39.5 +7.9
DZM   Mont Dzumac      24.38 139  P         P         10 54 37.8 -0.8
DZM   Mont Dzumac      24.38 139 eP         P         10 54 39.0 +0.4
      comp=Z,365nm,1.2s
DZM                              eS         S         10 58 59.4 +1.0
      comp=Z,885nm,26.1s
DZM                              eLR        LR        11 00 42.8
      comp=Z,3µm,26.4s
DZM   Mont Dzumac      24.38 139  LR        LR        11 02 22.4
      comp=Z,3µm,19.1s,baz=333,slow=32
DZM   Mont Dzumac      24.38 139  P         P         10 54 41.1 +2.5
YATNC Mamie plateau,   24.66 139  P         P         10 54 44.0 +2.9
AS06  Alice Springs    24.77 216  P         P         10 54 41.9 -0.1
      comp=Z,181nm,1.0s
AS01  Alice Springs    24.79 216  P         P         10 54 42.0 -0.3
AS31  Alice Springs    24.82 216  P         P         10 54 42.2 -0.3
AS31                              IAmb      IAmb      10 54 46.0
      comp=Z,36nm,0.8s
AS31  Alice Springs    24.82 216  P         P         10 54 42.2 -0.3
      comp=Z,47nm,0.9s
ASAR  Alice Springs    24.82 216  P         P         10 54 42.1 -0.4
      comp=Z,112nm,0.9s,baz=54,slow=8.1,SNR=122
ASAR                              S         S         10 59 06.1 +0.7
      comp=Z,17nm,1.2s,baz=28,slow=22,SNR=7.4
ASAR                              LR        LR        11 04 53.2
      comp=Z,4µm,20.3s,baz=42,slow=38
      comp=Z,112nm,0.9s
KMSI  Cibinong         25.96 279  P         P         10 54 58.9 +5.9
DAV   Davao City (W)   26.31 294  LR        LR        11 04 54.6
      comp=Z,2µm,18.2s,baz=99,slow=36
ARMA  Armidale         26.46 176  P         P         10 54 57.5  0.0
ARMA  Armidale         26.46 176  P         P         10 54 57.7 +0.2
      comp=Z,68nm,1.4s
ARMA  Armidale         26.46 176  P         P         10 54 58.3 +0.9
BATI  Baumata          26.46 255  P         P         10 55 11.9  +14
LUWI  Luwuk            26.93 275  P         P         10 55 00.2 -1.5
FITZ  Fitzroy Crossi   27.36 237  P         P         10 55 05.1 -0.4
FITZ                              IAmb      IAmb      10 55 13.4
      comp=Z,38nm,1.0s
FITZ  Fitzroy Crossi   27.36 237  P         P         10 55 05.2 -0.4
FITZ  Fitzroy Crossi   27.36 237  P         P         10 55 05.2 -0.4
      comp=Z,85nm,1.0s,baz=62,slow=9.9,SNR=58
FITZ                              LR        LR        11 06 49.3
      comp=Z,3µm,18.6s,baz=62,slow=38
      comp=Z,85nm,1.0s
CMSA  Cobar Meteorol   27.75 187  P         P         10 55 08.5 -0.3
      comp=Z,41nm,1.0s
CMSA  Cobar Meteorol   27.75 187  P         P         10 55 08.9  0.0
EDFI  Ende, Flores     28.13 259  P         P         10 55 12.0 -0.6
      comp=Z,801nmcomp=Z,32nm,1.1s
STKA  Stephens Creek   28.84 194  P         P         10 55 18.2 -0.4
STKA  Stephens Creek   28.84 194  P         P         10 55 17.2 -1.4
      comp=Z,103nm,1.0s
STKA  Stephens Creek   28.84 194  P         P         10 55 17.4 -1.2
      comp=Z,4.2nm,0.8s,baz=355,slow=8.0,SNR=7.1
STKA                              LR        LR        11 06 59.1
      comp=Z,2µm,20.3s,baz=12,slow=37
      comp=Z,4.2nm,0.8s
STKA  Stephens Creek   28.84 194  P         P         10 55 18.0 -0.6
STKA  Stephens Creek   28.84 194 i P        P         10 55 19.8 +1.2
TOLI2 Tolitoli         29.21 279  P         P         10 55 19.1 -3.0
TOLI2                             IAmb      IAmb      10 55 49.0
      comp=Z,29nm,1.0s
BNSI  Bone             29.40 268  P         P         10 55 33.8  +10
SPSI  Sidrap Palu      29.74 269  P         P         10 55 37.0  +10
KAPI  Kappang          29.76 267  P         P         10 55 27.8 +0.8
      comp=Z,8.6nm,0.7s,baz=120,slow=7.2,SNR=3.6
KAPI                              LR        LR        11 08 05.4
      comp=Z,605nm,20.7s,baz=89,slow=38
      comp=Z,8.6nm,0.7s
KAPI  Kappang          29.76 267  P         P         10 55 27.7 +0.8
PCI   Palu             29.86 275  P         P         10 55 31.0 +3.1
MPSI  Mapaga           29.96 277  P         P         10 55 27.4 -1.3
      comp=Z,42nm,0.9s
YNG   Young            30.28 182  P         P         10 55 31.8 +0.4
      comp=Z,28nm,1.4s
HTT   Hallett          31.04 197  P         P         10 55 36.8 -1.3
      comp=Z,7.7nm,1.5s
HTT   Hallett          31.04 197  P         P         10 55 37.8 -0.3
MSVF  Nonsavu          31.10 118  LR        LR        11 07 14.9
      comp=Z,2µm,20.8s,baz=298,slow=35
WHYH  Whyalla          31.10 200  P         P         10 55 38.8 +0.3
CNB   Canberra Magne   31.28 180  P         P         10 55 40.9 +0.6
      comp=Z,26nm,0.8s
CNB   Canberra Magne   31.28 180  P         P         10 55 41.3 +1.1
CAN   Canberra         31.29 181  P         P         10 55 41.4 +1.1
CAN                               IAmb      IAmb      10 55 43.6
      comp=Z,27nm,1.1s
CAN   Canberra         31.29 181  P         P         10 55 40.0 -0.3
      comp=Z,29nm,2.2s
CAN   Canberra         31.29 181  P         P         10 55 41.2 +0.9
CAN   Canberra         31.29 181  P         P         10 55 41.4 +1.1
CAN                               pmax      pmax
      comp=Z,27nm,1.1s
BBOO  Buckleboo        31.44 202  P         P         10 55 40.9 -0.7
BBOO                              IAmb      IAmb      10 55 56.4
      comp=Z,26nm,0.9s
BBOO  Buckleboo        31.44 202  P         P         10 55 41.1 -0.5
      comp=Z,41nm,0.9s
BBOO  Buckleboo        31.44 202  P         P         10 55 42.0 +0.4
JCJ   Chichijima       31.62 347  P         P         10 55 39.5 -3.7
JCJ   Chichijima       31.62 347  LR        LR        11 07 49.4
      comp=Z,594nm,19.8s,baz=148,slow=35
DGTI  Dogotuki         32.09 115  P         P         10 55 51.4 +3.9
MYLDM Lahad Datu       32.33 286  P         P         10 55 47.9 -1.7
MYLDM Lahad Datu       32.33 286  P         P         10 55 50.4 +0.8
MILA  Mila             33.02 181  P         P         10 55 56.4 +0.9
      comp=Z,9.1nm,1.6s
ARPS  Mount Arapiles   33.49 191  P         P         10 55 59.4 -0.2
      comp=Z,40nm,1.0s
ARPS  Mount Arapiles   33.49 191  P         P         10 55 59.8 +0.3
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TGY	Tagaytay City	33.56	303	LR	LR	11 09 20.6	
	comp=Z,345nm,20.0s,baz=82,slow=36						
FORT	Forrest	33.58	215	P	P	10 55 59.9	-0.5
FORT	Forrest	33.58	215	P	P	10 55 57.5	-2.9
	comp=Z,74nm,0.8s						
FORT	Forrest	33.58	215	P	P	10 56 01.4	+1.0
MBWA	Marble Bar	33.71	237	P	P	10 56 01.3	-0.4
	comp=Z,35nm,1.0s						
TOO	Toolangi	33.74	186	P	P	10 56 01.9	+0.2
TOO	Toolangi	33.74	186	P	P	10 56 02.4	+0.7
	comp=Z,15nm,1.1s						
TOO	Toolangi	33.74	186	P	P	10 56 01.9	+0.2
TOO				pmax	pmax		
	comp=Z,13nm,1.0s						
PSAC2	Pilbara Seismi	33.75	236	P	P	10 56 00.5	-1.5
	comp=Z,45nm,1.4s						
PSA00	Pilbara Seismi	33.80	236	P	P	10 56 01.7	-0.8
PSA00				IAmb	IAmb	10 56 12.8	
	comp=Z,21nm,1.1s						
PSA00	Pilbara Seismi	33.80	236	IAmb	IAmb	10 56 12.8	
	comp=Z,37nm,1.1s						
PSA00	Pilbara Seismi	33.80	236	P	P	10 56 01.1	-1.3
	comp=Z,40nm,1.1s						
PSA00	Pilbara Seismi	33.80	236	P	P	10 56 02.2	-0.2
BRAT	Ballarat	33.91	188	P	P	10 56 04.2	+1.1
GEXS	Deakin Univers	34.50	187	P	P	10 56 09.5	+1.3
KKM	Kota Kinabalu	34.75	286	P	P	10 56 07.8	-3.1
JAGI	Jajag, Banyuwa	35.50	261	P	P	10 56 15.4	-1.8
JOW	Kunigami	36.83	327	LR	LR	11 08 13.3	
	comp=Z,631nm,21.1s,baz=93,slow=31						
MEEK	Meekatharra	37.27	230	P	P	10 56 31.2	-1.1
	comp=Z,87nm,0.8s						
MEEK	Meekatharra	37.27	230	P	P	10 56 32.2	-0.1
STKI	Sintang	38.28	275	P	P	10 56 42.4	+1.5
	comp=Z,30nm,1.0s						
MOO	Moorlands	38.45	183	P	P	10 56 43.4	+1.4
YULB	Yu-li	38.68	316	P	P	10 56 45.4	+1.3
TAU	Tasmania Unive	38.91	183	P	P	10 56 46.7	+0.9
TAU				IAmb	IAmb	10 57 00.5	
	comp=Z,52nm,1.1s						
TAU	Tasmania Unive	38.91	183	P	P	10 56 46.7	+0.9
TAU				pmax	pmax		
	comp=Z,52nm,1.2s						
KSM	Kuching	39.61	277	P	P	10 56 50.4	-1.7
KSM				IAmb	IAmb	10 56 54.0	
	comp=Z,44nm,1.2s						
KSM	Kuching	39.61	277	P	P	10 56 51.4	-0.7
KLBR	Kellerberrin	40.67	224	P	P	10 56 59.0	-1.7
	comp=Z,90nm,0.8s						
KLBR	Kellerberrin	40.67	224	P	P	10 57 00.7	+0.1
JNU	Nakatsue	40.84	336		P	10 57 01.9	-0.1
JNU				IAmb	IAmb	10 57 04.5	
	comp=Z,55nm,1.1s						
JNU	Nakatsue	40.84	336	P	P	10 57 04.2	+2.1
CMJI	Cimerak	41.09	263	P	P	10 57 04.7	+0.4
	comp=Z,88nm,1.1s						
QZH	Quanzhou	41.56	315	*e*P	P	10 57 06.4	-1.6
QZH				S	S	11 03 24.8	+0.6
QZH				LR	LR		
	comp=Z,600nm,16.5s						
QZH				LR	LR		
	comp=Z,380nm,15.5s						
QZH				LR	LR		
	comp=Z,580nm,15.5s						
MJAR	Matsushiro Arr	41.60	346	P	P	10 57 06.2	-1.9
	comp=Z,5.5nm,0.9s,baz=162,slow=8.9,SNR=10						
MJAR				LR	LR	11 11 57.8	
	comp=Z,748nm,21.3s,baz=163,slow=33						
	comp=Z,5.5nm,0.9s						
NWAO	Narrogin (SRO)	41.81	222	LR	LR	11 15 49.2	
	comp=Z,1µm,18.9s,baz=56,slow=38						
BBJI	Bungbulang	41.86	263	P	P	10 57 09.1	-1.7
TPI	Tanjungpandan	41.87	270	P	P	10 57 12.2	+1.4
	comp=Z,779nmcomp=Z,68nm,1.0s						
LEM	Lembang	41.87	264	LR	LR	11 16 32.2	
	comp=Z,331nm,21.3s,baz=84,slow=39						
QRZ	Quartz Range	42.18	154	P	P	10 57 15.3	+2.4
CNJI	Cibinong	42.37	263	P	P	10 57 15.2	+0.3
	comp=Z,562nmcomp=Z,51nm,1.1s						
URZ	Urewera	42.44	147	LR	LR	11 12 12.3	
	comp=Z,1µm,20.7s,baz=35,slow=32						
RKGY	Rocky Gully	43.00	221	P	P	10 57 19.4	-0.3
	comp=Z,35nm,2.6s						
CGJI	Cibinong	43.78	265	P	P	10 57 26.8	+0.6
	comp=Z,46nm,1.4s						
DLV	Lat	43.78	292	P	P	10 57 24.8	-1.6
DLV	Lat	43.78	292	P	P	10 57 26.5	0.0
RPZ	Rata Peaks	43.98	158	LR	LR	11 14 54.5	
	comp=Z,887nm,18.2s,baz=320,slow=35						
QIZ	Qiongzhong	45.25	302	P	P	10 57 38.0	+0.1
QIZ				S	S	11 04 23.5	+5.0
QIZ				pmax	pmax		
	comp=Z,21nm,1.2s						
QIZ				LR	LR		
	comp=Z,360nm,18.6s						
QIZ				LR	LR		
	comp=Z,470nm,25.8s						
QIZ	Qiongzhong	45.25	302	P	P	10 57 39.0	+1.1
MDSI	Maura Dua	45.28	268	P	P	10 57 36.5	-1.8
	comp=Z,48nm,1.2s						
KSRS	Korea Array	45.80	336	P	P	10 57 41.9	-0.1
	comp=Z,4.7nm,0.8s,baz=154,slow=8.7,SNR=21						
	comp=Z,4.7nm,0.8s						
KSAR	Wonju Array Be	45.80	336	P	P	10 57 40.2	-1.8
KSAR	Wonju Array Be	45.80	336	P	P	10 57 40.2	-1.8
NJ2	Nanjing	46.15	323	*e*P	P	10 57 44.2	-0.6
NJ2				S	S	11 04 33.3	+2.3
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,140nm,5.0s						
NJ2				LR	LR		
	comp=Z,500nm,18.9s						
NJ2				LR	LR		
	comp=Z,340nm,16.1s						
NJ2				LR	LR		
	comp=Z,880nm,17.1s						
INCN	Inchon	46.36	335	P	P	10 57 44.1	-2.3
INCN	Inchon	46.36	335	P	P	10 57 48.6	+2.2
INCN	Inchon	46.36	335	P	P	10 57 44.1	-2.3
INCN				pmax	pmax		
	comp=Z,70nm,1.3s						
CNSH	ChangSha	47.54	314	P	P	10 57 57.1	+1.3
CNSH				pmax	pmax		
	comp=Z,13nm,1.3s						
WHN	Wuhan	48.00	318	P	P	10 58 01.7	+2.4
WHN				S	S	11 05 00.6	+3.1
WHN				LR	LR		
	comp=Z,1µm,18.3s						
JKA	Kamikawa-asahi	48.19	353	P	P	10 57 58.9	-1.7
ASAJ	Asahikawa	48.19	353	P	P	10 57 58.9	-1.7
ASAJ				pmax	pmax		
	comp=Z,115nm,1.7s						
BKNI	Bangkinang	48.69	274	P	P	10 58 03.4	-1.5
BKNI	Bangkinang	48.69	274	P	P	10 58 04.6	-0.3
BKNI	Bangkinang	48.69	274	P	P	10 58 06.7	+1.8
	comp=Z,66nm,1.2s						
MSHR	Mys Shultsa	49.17	342	*i* P	P	10 58 06.6	-1.5
MSHR				pmax	pmax		
	comp=Z,14nm,0.9s						
PPI	Padang Panjang	49.26	273	P	P	10 58 08.0	-1.3
	comp=Z,40nm,1.0s						
PSTR	Posyet	49.35	342	*i* P	P	10 58 09.2	-0.2
VLA	Vladivostok	49.45	343	*i* P	P	10 58 09.5	-0.7
VLA				pmax	pmax		
	comp=Z,25nm,1.0s						
KULM	Kulim	49.72	280	IAmb	IAmb	10 58 14.7	
	comp=Z,20nm,1.1s						
KULM	Kulim	49.72	280	P	P	10 58 12.5	-0.3
DL2	Dalian	49.79	331	P	P	10 58 12.5	-0.4
DL2				S	S	11 05 24.2	+1.7
DL2				pmax	pmax		
	comp=Z,59nm,1.2s						
DL2				pmax	pmax		
	comp=Z,360nm,6.1s						
DL2				LR	LR		
	comp=Z,560nm,18.4s						
DL2				LR	LR		
	comp=Z,640nm,17.4s						
DL2				LR	LR		
	comp=Z,620nm,20.2s						
TIA	Tai'an	50.11	326	P	P	10 58 16.6	+1.2
TIA				S	S	11 05 27.7	+0.6
TIA				pmax	pmax		
	comp=Z,18nm,0.7s						
TIA				LR	LR		
	comp=Z,430nm,18.2s						
TIA				LR	LR		
	comp=Z,300nm,18.6s						
TIA				LR	LR		
	comp=Z,630nm,16.1s						
MNSI	Mandailing Nat	50.18	274	P	P	10 58 17.2	+0.8
	comp=Z,32nm,1.0s						
USA0B	Ussuriysk Arra	50.41	344	P	P	10 58 15.0	-2.5
USA0B				IAmb	IAmb	10 58 20.5	
	comp=Z,20nm,0.9s						
USA0B	Ussuriysk Arra	50.41	344	*i* P	P	10 58 17.3	-0.2
USRK	Ussuriysk Ar.	50.41	344		P	10 58 15.0	-2.5
USRK	Ussuriysk Ar.	50.41	344	P	P	10 58 17.6	+0.1
	comp=Z,16nm,0.9s,baz=164,slow=7.8,SNR=20						
USRK				LR	LR	11 17 38.1	
	comp=Z,600nm,20.8s,baz=148,slow=34						
	comp=Z,16nm,0.9s						
YSS	Yuzhno-Sakhali	50.98	354	P	P	10 58 19.4	-2.3
YSS				IAmb	IAmb	10 58 24.6	
	comp=Z,26nm,1.0s						
YSS	Yuzhno-Sakhali	50.98	354	P	P	10 58 22.5	+0.7
YSS	Yuzhno-Sakhali	50.98	354	*e*P	P	10 58 22.4	+0.7
YSS				*e*S	S	11 05 36.6	-2.1
YSS				*e*SS	SS	11 09 16.1	+2.2
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				pmax	pmax		
	comp=Z,100nm,2.8s						
YSS				smax	smax		
	comp=N,200nm,7.7s						
YSS				smax	smax		
	comp=E,100nm,7.3s						
RPSI	Rantau Prapat	51.05	277	P	P	10 58 20.4	-2.5
RPSI				IAmb	IAmb	10 58 24.4	
	comp=Z,20nm,1.0s						
PSI	Prapat	51.06	277	LR	LR	11 24 07.2	
	comp=Z,243nm,18.9s,baz=110,slow=41						
PSI	Prapat	51.06	277	P	P	10 58 21.7	-1.4
PSI	Prapat	51.06	277	P	P	10 58 20.4	-2.7
PSI				pmax	pmax		
	comp=Z,20nm,1.0s						
ENH	Enshi	51.20	314	P	P	10 58 22.1	-1.8
ENH				IAmb	IAmb	10 58 41.4	
	comp=Z,21nm,1.2s						
ENH	Enshi	51.20	314	P	P	10 58 24.5	+0.7
SLVN	Son La	51.27	301	P	P	10 58 25.4	+0.9
SRIT	Nakonsritamara	51.35	284		P	10 58 25.2	0.0
SRIT				IAmb	IAmb	10 58 25.5	
	comp=Z,25nm,0.9s						
SRIT	Nakonsritamara	51.35	284	P	P	10 58 25.2	0.0
MDJ	Mudanjiang	51.50	342	P	P	10 58 26.4	+0.7
MDJ				S	S	11 05 48.8	+2.8
MDJ				SS	SS	11 09 19.0	-3.3
MDJ				pmax	pmax		
	comp=Z,26nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,190nm,3.8s						
MDJ				LR	LR		
	comp=Z,540nm,24.7s						
MDJ				LR	LR		
	comp=Z,430nm,24.1s						
MDJ				LR	LR		
	comp=Z,2µm,23.9s						
LYN	LuoYang	51.78	321	*e*P	P	10 58 29.5	+1.5
LYN				S	S	11 05 49.6	-0.6
LYN				pmax	pmax		
	comp=Z,20nm,1.1s						
LYN				LR	LR		
	comp=Z,740nm,18.9s						
LYN				LR	LR		
	comp=Z,670nm,19.6s						
LYN				LR	LR		
	comp=Z,810nm,21.6s						
RAR	Rarotonga	52.08	114	LR	LR	11 18 10.9	
	comp=Z,118nm,19.7s,baz=275,slow=33						
CN2	Changchun	52.20	338	*e*P	P	10 58 32.6	+1.6
CN2				pP	pwP	10 58 42.6	+6.4
CN2				*e*S	S	11 05 53.5	-2.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=Z,340nm,20.0s						
CN2				LR	LR		
	comp=Z,550nm,20.0s						
CN2				LR	LR		
	comp=Z,700nm,21.0s						
GSI	Gunungsitoli	52.23	275	P	P	10 58 29.7	-2.1
GSI	Gunungsitoli	52.23	275	P	P	10 58 30.5	-1.3
GSI	Gunungsitoli	52.23	275	P	P	10 58 31.4	-0.4
	comp=Z,89nm,1.3s						
HNS	HongShan	52.32	325	⇓P	P	10 58 32.4	+0.4
HNS				S	S	11 05 58.0	+0.4
HNS				pmax	pmax		
	comp=Z,25nm,1.0s						
HNS				LR	LR		
	comp=Z,460nm,18.8s						
HNS				LR	LR		
	comp=Z,540nm,18.4s						
HNS				LR	LR		
	comp=Z,640nm,18.6s						
BNX	BinXian	53.20	341	⇓P	P	10 58 38.5	+0.2
BNX				pP	sP	10 58 41.9	0.0
BNX				sP	pwP	10 58 43.4	-0.2
BNX				S	S	11 06 10.3	+1.0
BNX				sS	sS	11 06 14.9	+1.5
BNX				pmax	pmax		
	comp=Z,30nm,1.3s						
BNX				pmax	pmax		
	comp=Z,190nm,4.9s						
BNX				LR	LR		
	comp=Z,340nm,24.9s						
BNX				LR	LR		
	comp=Z,460nm,21.7s						
BNX				LR	LR		
	comp=Z,1µm,32.5s						
BJT	Baijiatuau	53.38	328	P	P	10 58 41.9	+2.1
BJI	Beijing	53.39	328	P	P	10 58 41.4	+1.5
BJI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BJI				pmax	pmax		
	comp=Z,56nm,4.0s						
BJI				LR	LR		
	comp=Z,260nm,16.1s						
BJI				LR	LR		
	comp=Z,130nm,16.4s						
BJI				LR	LR		
	comp=Z,330nm,17.1s						
MLSI	Meulaboh, Aceh	53.74	278	P	P	10 58 45.5	+2.6
XAN	Xi'an	53.77	318	⇑P	P	10 58 41.4	-1.4
XAN				S	S	11 06 16.6	-1.0
XAN				SS	SKiKP	11 09 56.2	-1.6
XAN				pmax	pmax		
	comp=Z,29nm,1.1s						
XAN				pmax	pmax		
	comp=Z,380nm,6.3s						
XAN				LR	LR		
	comp=Z,390nm,17.2s						
XAN				LR	LR		
	comp=Z,390nm,12.7s						
XAN				LR	LR		
	comp=Z,550nm,18.5s						
KMI	Kunming	53.83	305	P	P	10 58 44.7	+1.1
KMI				S	S	11 06 20.5	+1.6
KMI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KMI				LR	LR		
	comp=Z,250nm,18.3s						
KMI				LR	LR		
	comp=Z,170nm,21.7s						
KMI				LR	LR		
	comp=Z,230nm,17.5s						
TIY	Taiyuan	53.86	324	P	P	10 58 51.4	+7.9
TIY				S	S	11 06 22.6	+3.9
TIY				pmax	pmax		
	comp=Z,190nm,4.9s						
TIY				LR	LR		
	comp=N,340nm,21.3s						
TIY				LR	LR		
	comp=E,350nm,20.6s						
TIY				LR	LR		
	comp=Z,480nm,22.0s						
CM31	Chiang Mai Arr	54.59	296	P	P	10 58 47.1	-1.9
CM31				IAmb	IAmb	10 59 08.7	
	comp=Z,19nm,1.1s						
CMAR	Chiang Mai Arr	54.59	296	P	P	10 58 47.2	-1.8
CMAR	Chiang Mai Arr	54.59	296	P	P	10 58 49.9	+0.9
	comp=Z,7.0nm,0.9s,baz=115,slow=5.4,SNR=21						
CMAR				LR	LR	11 21 12.2	
	comp=Z,138nm,19.2s,baz=120,slow=35						
	comp=Z,7.0nm,0.9s						
CMAR	Chiang Mai Arr	54.59	296	*ce*P	P	10 58 49.9	+0.9
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SKR	Severo-Kuril's	54.64	5	*e*P	P	10 58 48.3	-0.4
SKR				*e*S	S	11 06 31.5	+2.9
SKR				pmax	pmax		
	comp=Z,100nm,3.4s						
SKR				pmax	pmax		
	comp=Z,200nm,6.0s						
CHTO	Chiang Mai	54.70	296	P	P	10 58 47.8	-2.1
CHTO				IAmb	IAmb	10 59 09.9	
	comp=Z,19nm,1.3s						
CHTO	Chiang Mai	54.70	296	P	P	10 58 50.6	+0.8
CHTO	Chiang Mai	54.70	296	P	P	10 58 47.8	-2.1
CHTO				pmax	pmax		
	comp=Z,19nm,1.3s						
TYV	Tymovskoe	54.86	355	*e*P	P	10 58 51.1	+0.8
TYV				*e*S	S	11 06 29.3	-2.2
TYV				pmax	pmax		
	comp=Z,13nm,1.0s						
TYV				pmax	pmax		
	comp=Z,100nm,2.0s						
TYV				smax	smax		
	comp=N,100nm,3.9s						
TYV				smax	smax		
	comp=E,100nm,3.9s						
KLR	Kul'dur	55.12	346	LR	LR	11 21 30.5	
	comp=E,459nm,19.8s,baz=164,slow=35						
KLR	Kul'dur	55.12	346	*i* P	P	10 58 52.0	-0.3
KLR				pmax	pmax		
	comp=Z,14nm,1.0s						
PZH	PanZhiHua	55.23	306	P	P	10 58 54.4	+0.7
PZH				S	S	11 06 40.0	+2.3
PZH				LR	LR		
	comp=Z,250nm,14.9s						
PZH				LR	LR		
	comp=Z,160nm,15.7s						
PZH				LR	LR		
	comp=Z,320nm,20.1s						
GRNR	Gornyy	55.60	350	⇓*i*P	P	10 58 56.6	+0.9
GRNR				pmax	pmax		
	comp=Z,3.0nm,1.2s						
CD2	Chengdu	55.72	312	P	P	10 58 58.6	+1.5
CD2				pmax	pmax		
	comp=Z,20nm,1.1s						
CD2				LR	LR		
	comp=Z,380nm,20.8s						
XLT	XiLinHaoTe	56.29	331	*e*P	P	10 59 01.1	+0.1
XLT				sP	pwP	10 59 08.5	+2.3
XLT				S	S	11 06 52.1	+0.9
XLT				SS	SS	11 10 37.2	-1.0
XLT				pmax	pmax		
	comp=Z,21nm,1.1s						
XLT				LR	LR		
	comp=Z,490nm,18.4s						
XLT				LR	LR		
	comp=Z,690nm,21.1s						
HHC	Hu-ho-hao-te	56.46	326	*e*P	P	10 59 03.6	+1.3
HHC				pP	pwP	10 59 07.7	+0.2
HHC				S	S	11 06 52.1	-1.5
HHC				sS	pS	11 06 56.8	+0.2
HHC				pmax	pmax		
	comp=Z,16nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,3.8s						
HHC				LR	LR		
	comp=Z,320nm,16.6s						
HHC				LR	LR		
	comp=Z,360nm,17.6s						
HHC				LR	LR		
	comp=Z,630nm,18.2s						
BTO	Baotou	57.18	325	*e*P	P	10 59 10.4	+3.1
BTO				pmax	pmax		
	comp=Z,16nm,0.6s						
BTO				pmax	pmax		
	comp=Z,170nm,3.8s						
BTO				LR	LR		
	comp=Z,780nm,15.9s						
BTO				LR	LR		
	comp=Z,900nm,21.4s						
BTO				LR	LR		
	comp=Z,950nm,20.8s						
PEA0B	Petropavlovsk-	57.19	6	P	P	10 59 06.0	-1.0
PEA0B	Petropavlovsk-	57.19	6	*ce*P	P	10 59 07.5	+0.5
PETK	Petropavlovsk-	57.19	6	P	P	10 59 06.5	-0.5
PETK	Petropavlovsk-	57.19	6	P	P	10 59 08.0	+1.0
	comp=Z,12nm,0.9s,baz=180,slow=4.4,SNR=26						
PETK				LR	LR	11 19 21.3	
	comp=Z,1µm,21.9s,baz=201,slow=32						
	comp=Z,12nm,0.9s						
HEH	HeiHe	57.21	343	*e*P	P	10 59 07.3	+0.1
HEH				pP	pwP	10 59 11.6	-0.9
HEH				S	S	11 07 03.5	+0.7
HEH				pmax	pmax		
	comp=Z,21nm,0.9s						
HEH				LR	LR		
	comp=Z,330nm,20.6s						
HEH				LR	LR		
	comp=Z,340nm,19.6s						
HEH				LR	LR		
	comp=Z,710nm,20.0s						
PET	Petropavlovsk	57.21	7	*e*P	P	10 59 11.7	+4.6
PET				*e*S	S	11 07 07.3	+4.6
PET						11 13 08.4	
PET				pmax	pmax		
	comp=Z,21nm,1.2s						
PET				MLR	MLR		
	comp=Z,400nm,18.0s						
TNCH	TengChong	57.28	303	P	P	10 59 08.7	+0.3
TNCH				S	S	11 07 02.0	-3.0
TNCH				pmax	pmax		
	comp=Z,36nm,0.4s						
TNCH				LR	LR		
	comp=Z,260nm,9.9s						
TNCH				LR	LR		
	comp=Z,220nm,10.9s						
TNCH				LR	LR		
	comp=Z,360nm,27.0s						
LZH	Lanzhou	58.36	317	*e*P	P	10 59 17.4	+1.6
LZH				pP	pwP	10 59 21.9	+0.8
LZH				S	S	11 07 22.0	+3.2
LZH				SS	SS	11 11 09.7	-1.4
LZH				pmax	pmax		
	comp=Z,46nm,1.3s						
LZH				pmax	pmax		
	comp=Z,85nm,4.9s						
LZH				LR	LR		
	comp=Z,380nm,17.8s						
LZH				LR	LR		
	comp=Z,230nm,16.5s						
LZH				LR	LR		
	comp=Z,390nm,20.3s						
HIA	Hailar	58.93	338	P	P	10 59 20.4	+1.1
HIA	Hailar	58.93	338	*i* P	P	10 59 19.2	-0.1
HIA				pmax	pmax		
	comp=Z,18nm,1.0s						
SHEM	Shemya Is, Ala	60.09	17	LR	LR	11 19 57.7	
	comp=Z,566nm,21.4s,baz=214,slow=31						
ZEA	Zeya	60.39	345	*e*P	P	10 59 30.6	+1.4
ZEA				*e*S	S	11 07 48.0	+4.0
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZEA				smax	smax		
	comp=E,100nm,11.5s						
PPT	Papeete	61.06	108	LR	LR	11 24 25.7	
	comp=E,88nm,18.1s,baz=278,slow=34						
PPT2	Papeete2	61.06	108	*e*S	S	11 07 50.2	-3.9
	comp=E,315nm,27.2s						
PPT2				*e*SS	SS	11 11 59.2	+5.3
	comp=E,122nm,29.0s						
PPT2				*e*LQ	LQ	11 14 58.0	
	comp=E,613nm,30.2s						
PPT2				*e*LR	LR	11 17 38.6	
	comp=E,583nm,34.5s						
PPT2				*e*LR	LR	11 17 40.6	
	comp=E,918nm,31.0s						
TBI	Tubuai	61.86	114	*e*P	P	10 59 37.6	-2.2
	comp=E,318nm,30.2s						
TBI				*e*S	S	11 08 03.2	-0.7
	comp=E,423nm,30.5s						
TBI				*e*SS	SS	11 11 58.8	-7.3
	comp=E,556nm,27.5s						

TBI				*e*LQ	LQ	11 15 28.8	
	comp=E,8μm,35.8s						
TBI				*e*LR	LR	11 17 58.2	
	comp=E,5μm,32.2s						
TBI				*e*LR	LR	11 18 01.3	
	comp=E,1μm,31.8s						
BRDH	**Bariadhala**	**62.40**	**298**	LR	LR	11 27 26.5	
	comp=E,175nm,19.2s,baz=134,slow=37						
GTA	**Gaotai**	**62.83**	**318**	*e*P	**P**	**10 59 47.9**	**+1.7**
GTA				S	**S**	**11 08 19.8**	**+4.0**
GTA				pmax	pmax		
	comp=E,10.0nm,1.5s						
GTA				LR	LR		
	comp=E,260nm,20.7s						
GTA				LR	LR		
	comp=E,330nm,20.4s						
GTA				LR	LR		
	comp=E,430nm,18.5s						
MA2	**Magadan**	**63.27**	**1**	P	**P**	**10 59 47.8**	**-0.8**
MA2	**Magadan**	**63.27**	**1**	LR	LR	11 27 05.3	
	comp=E,394nm,19.3s,baz=188,slow=36						
MA2	**Magadan**	**63.27**	**1**	P	**P**	**10 59 51.2**	**+2.6**
MA2	**Magadan**	**63.27**	**1**	P	**P**	**10 59 47.8**	**-0.8**
MA2				pmax	pmax		
	comp=Z,27nm,1.1s						
MA2	**Magadan**	**63.27**	**1**	P	**P**	**10 59 50.5**	**+1.9**
	comp=Z,25nm,1.2s						
MA2				pP	**pwP**	**10 59 53.8**	**0.0**
	comp=Z,25nm,1.2s						
ULN	**Ulaanbaatar**	**63.55**	**329**	P	**P**	**10 59 49.4**	**-1.5**
ULN	**Ulaanbaatar**	**63.55**	**329**	*i* P	**P**	**10 59 50.7**	**-0.2**
ULN				pmax	pmax		
	comp=Z,29nm,1.9s						
SONM	**Songino Array**	**63.87**	**329**	P	**P**	**10 59 52.1**	**-0.9**
SONM	**Songino Array**	**63.87**	**329**	P	**P**	**10 59 54.1**	**+1.2**
	comp=Z,7.0nm,0.8s,baz=144,slow=6.2,SNR=23						
SONM				LR	LR	11 27 24.8	
	comp=Z,445nm,21.1s,baz=148,slow=36						
	comp=Z,7.0nm,0.8s						
GOMU	**GeErMu**	**64.78**	**313**	P	**P**	**11 00 01.0**	**+1.5**
GOMU				pP	pwP	11 00 07.5	+2.7
GOMU				sP	sP	11 00 12.8	+10
GOMU				S	**S**	**11 08 41.8**	**+1.0**
GOMU				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GOMU				LR	LR		
	comp=Z,350nm,15.1s						
GOMU				LR	LR		
	comp=Z,470nm,19.4s						
GOMU				LR	LR		
	comp=Z,800nm,17.7s						
SEY	**Seymchan**	**66.67**	**1**	LR	LR	11 28 54.5	
	comp=Z,303nm,20.1s,baz=180,slow=36						
SEY	**Seymchan**	**66.67**	**1**	*ce*P	**P**	**11 00 11.3**	**+0.7**
SEY				pmax	pmax		
	comp=Z,15nm,1.0s						
ZAK	**Zakamensk**	**67.07**	**330**	*e*P	**P**	**11 00 13.7**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,16nm,1.2s						
YAK	**Yakutsk**	**67.48**	**350**	LR	LR	11 28 42.4	
	comp=Z,184nm,21.9s,baz=150,slow=35						
YAK	**Yakutsk**	**67.48**	**350**	*e*P	**P**	**11 00 16.0**	**+0.2**
YAK				*e**PP	**pwP**	**11 00 25.4**	**+4.4**
YAK				*e*		11 00 42.3	
YAK				*e*		11 02 44.2	
YAK				*e*S	**S**	**11 09 10.2**	**-1.6**
YAK				*e*		11 10 11.2	
YAK				*e*SS	**SS**	**11 13 29.0**	**-3.4**
YAK				pmax	pmax		
	comp=Z,20nm,1.1s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,103nm,5.1s						
YAK				pmax	pmax		
	comp=N,34nm,4.7s						
YAK				pmax	pmax		
	comp=E,67nm,4.8s						
YAK				smax	smax		
	comp=N,58nm,3.7s						
YAK				smax	smax		
	comp=E,18nm,3.0s						
YAK				MLR	MLR		
	comp=Z,381nm,20.0s						
YAK				MLR	MLR		
	comp=E,170nm,23.0s						
YAK				MLR	MLR		
	comp=N,182nm,23.0s						
CASY	**Casey**	**67.97**	**196**	P	**P**	**11 00 17.8**	**-1.0**
UNV	**Unalaska Valle**	**68.18**	**26**	P	**P**	**11 00 20.7**	**+0.4**
	baz=228						
SPIA	**Saint Paul Isl**	**68.97**	**22**	P	**P**	**11 00 25.9**	**+0.7**
	baz=224						
MOY	**Mondy**	**69.00**	**330**	*e*P	**P**	**11 00 27.0**	**+1.3**
MOY				pmax	pmax		
	comp=Z,36nm,1.4s						
PALK	**Pallekele**	**69.62**	**279**	LR	LR	11 31 22.3	
	comp=Z,171nm,21.7s,baz=102,slow=36						
TAOE	**Nuku Hiva Isla**	**69.93**	**98**	*e*LR	LR	11 21 51.8	
	comp=Z,850nm,24.4s						
SDPT	**Sand Point**	**71.85**	**27**	P	**P**	**11 00 42.6**	**-0.2**
	baz=234						
CHNA	**Chernabura Isl**	**71.96**	**28**	P	**P**	**11 00 47.9**	**+4.4**
CHNA	**Chernabura Isl**	**71.96**	**28**	P	**P**	**11 00 43.5**	**0.0**
	baz=234						
BILL	**Bilibino**	**72.71**	**6**	P	**P**	**11 00 47.0**	**-0.8**
BILL				IAmb	IAmb	11 01 15.5	
	comp=Z,18nm,1.1s						
BILL	**Bilibino**	**72.71**	**6**	*ce*P	**P**	**11 00 49.1**	**+1.3**
BILL				pmax	pmax		
	comp=Z,13nm,1.0s						
S14K	**Fog Glacier**	**72.82**	**27**	P	**P**	**11 00 49.0**	**+0.2**
	baz=234						
WMQ	**Urumqi**	**72.91**	**318**	*e*P	**P**	**11 00 50.6**	**+1.0**
WMQ				LR	LR		
	comp=Z,220nm,20.1s						
HYB	**Hyderabad**	**73.16**	**289**	*e*P	**P**	**11 00 50.1**	**-1.4**
GAMB	**Gambell**	**73.41**	**17**	P	**P**	**11 00 52.6**	**+0.7**
	baz=221						
M13K	**Dall Lake**	**73.81**	**22**	P	**P**	**11 00 54.5**	**+0.2**
	baz=230						
VNDA	**Vanda**	**73.87**	**177**	P	**P**	**11 00 54.5**	**0.0**
VNDA	**Vanda**	**73.87**	**177**	P	**P**	**11 00 54.4**	**-0.2**
	comp=Z,7.1nm,0.8s,baz=307,slow=5.9,SNR=39						
VNDA				LR	LR	11 29 31.8	
	comp=Z,456nm,20.4s,baz=356,slow=33						
	comp=Z,7.1nm,0.8s						
VNDA	**Vanda**	**73.87**	**177**	P	**P**	**11 00 54.5**	**0.0**
VNDA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
O14K	**Tigyukauivet M**	**73.89**	**24**	P	**P**	**11 00 55.4**	**+0.6**
	baz=232						
N14K	**Kuskokwak Cree**	**74.14**	**23**	P	**P**	**11 00 56.6**	**+0.3**
	baz=231						
K13K	**Kusilvak Mount**	**74.34**	**21**	P	**P**	**11 00 57.7**	**+0.3**
	baz=228						
CHIR	**Chirikof Islan**	**74.39**	**29**	P	**P**	**11 00 58.2**	**+0.3**
	baz=238						
O15K	**Ungalikthiuk R**	**74.43**	**24**	P	**P**	**11 00 56.7**	**-1.3**
O15K	**Ungalikthiuk R**	**74.43**	**24**	P	**P**	**11 00 58.6**	**+0.5**
	baz=233						
R16K	**Pilot Point**	**74.45**	**26**	P	**P**	**11 00 58.8**	**+0.7**
	baz=236						
SBA	**Scott Base**	**74.47**	**176**	P	**P**	**11 00 58.2**	**+0.2**
SBA				IAmb	IAmb	11 01 26.1	
	comp=Z,17nm,1.2s						
SBA	**Scott Base**	**74.47**	**176**	P	**P**	**11 00 58.3**	**+0.2**
SBA				pmax	pmax		
	comp=Z,17nm,1.2s						
M14K	**Bethel**	**74.55**	**22**	IAmb	IAmb	11 01 06.1	
	comp=Z,28nm,1.1s						
M14K	**Bethel**	**74.55**	**22**	P	**P**	**11 00 59.7**	**+1.0**
	baz=231						
L14K	**Kuka Creek**	**74.66**	**22**	IAmb	IAmb	11 01 06.1	
	comp=Z,18nm,1.1s						
L14K	**Kuka Creek**	**74.66**	**22**	P	**P**	**11 01 00.3**	**+1.0**
	baz=230						
N15K	**Kwethluk River**	**74.92**	**23**	P	**P**	**11 01 02.1**	**+1.2**
	baz=233						
M15K	**Kasigluk River**	**75.01**	**23**	P	**P**	**11 01 02.2**	**+0.8**
	baz=232						
P16K	**Nushagak River**	**75.11**	**25**	P	**P**	**11 01 03.0**	**+1.0**
	baz=235						
J14K	**Nanvaranak Lak**	**75.27**	**20**	P	**P**	**11 01 04.0**	**+1.2**
	baz=229						
L15K	**Ungalak Mounta**	**75.32**	**22**	P	**P**	**11 01 03.7**	**+0.6**
	baz=231						
O16K	**Kokwok River B**	**75.39**	**25**	P	**P**	**11 01 04.7**	**+1.1**
	baz=235						
SII	**Sitkinak Islan**	**75.46**	**28**	P	**P**	**11 01 04.7**	**+0.6**
	baz=239						
Q17K	**Contact Creek**	**75.59**	**26**	P	**P**	**11 01 05.7**	**+0.8**
	baz=237						
N16K	**Nishlik Lake**	**75.63**	**24**	P	**P**	**11 01 05.8**	**+0.8**
	baz=234						
K15K	**Wolf Creek Mou**	**75.69**	**21**	IAmb	IAmb	11 01 09.8	
	comp=Z,16nm,1.0s						
K15K	**Wolf Creek Mou**	**75.69**	**21**	P	**P**	**11 01 06.3**	**+1.0**
	baz=231,SNR=7.9						
TNA	**Tin City**	**75.83**	**17**	P	**P**	**11 01 06.8**	**+0.9**
	baz=224						
P17K	**Kvichak River**	**75.86**	**25**	P	**P**	**11 01 07.2**	**+0.9**
	baz=236						
R18K	**Karluk**	**75.86**	**27**	P	**P**	**11 01 07.2**	**+0.9**
	baz=239						
M16K	**Timber Creek**	**75.88**	**23**	P	**P**	**11 01 06.1**	**-0.3**
	baz=234,SNR=6.4						
ANM	**Nome**	**75.89**	**18**	P	**P**	**11 01 06.6**	**+0.3**
	baz=227						
O17K	**Koliganek Bris**	**75.91**	**25**	P	**P**	**11 01 07.2**	**+0.7**
	baz=236,SNR=6.6						
L16K	**Owhat River**	**76.09**	**22**	P	**P**	**11 01 08.3**	**+0.7**
	baz=233						
ZSN	**Zaisan**	**76.12**	**321**	*e*P	**P**	**11 01 08.4**	**+0.3**
ZSN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ZSN	**Zaisan**	**76.12**	**321**	*e*P	**P**	**11 01 08.4**	**+0.3**
	comp=Z,5.0nm,0.8s						
Q18K	**Katmai Hardscr**	**76.18**	**26**	P	**P**	**11 01 08.8**	**+0.5**
	baz=238						
OHAK	**Old Harbor**	**76.23**	**28**	P	**P**	**11 01 08.9**	**+0.5**
	baz=240						
F14K	**Arctic Creek**	**76.23**	**17**	P	**P**	**11 01 08.9**	**+0.6**
	baz=226						
N17K	**Nushagak Hills**	**76.30**	**24**	IAmb	IAmb	11 01 26.5	
	comp=Z,13nm,1.1s						
N17K	**Nushagak Hills**	**76.30**	**24**	P	**P**	**11 01 09.7**	**+0.9**
	baz=235						
P18K	**Big Mountain,**	**76.49**	**26**	P	**P**	**11 01 10.3**	**+0.4**
	baz=238						
TIXI	**Tiksi**	**76.60**	**353**	LR	LR	11 31 41.4	
	comp=Z,231nm,21.9s,baz=165,slow=33						
G15K	**Niukluk**	**76.61**	**18**	P	**P**	**11 01 10.8**	**+0.4**
	baz=228						
J16K	**Anvik River**	**76.65**	**21**	P	**P**	**11 01 10.5**	**-0.2**
	baz=232						
M17K	**Holitna River**	**76.70**	**23**	IAmb	IAmb	11 01 16.1	
	comp=Z,16nm,1.0s						
M17K	**Holitna River**	**76.70**	**23**	P	**P**	**11 01 10.3**	**-0.7**
	baz=235,SNR=9.4						
O18K	**Koktuh Hills**	**76.75**	**25**	P	**P**	**11 01 11.5**	**+0.1**
	baz=237						
L17K	**Donlin**	**76.79**	**22**	P	**P**	**11 01 13.0**	**+1.4**
	baz=234,SNR=5.9						
KDAK	**Kodiak Island**	**76.84**	**28**	LR	LR	11 28 53.1	
	comp=Z,508nm,21.9s,baz=244,slow=31						
KDAK	**Kodiak Island**	**76.84**	**28**	P	**P**	**11 01 12.5**	**+0.6**
	baz=240						
F15K	**North Star Dit**	**76.90**	**18**	P	**P**	**11 01 12.8**	**+0.7**
	baz=227						
N18K	**Kilae Creek**	**76.92**	**24**	P	**P**	**11 01 13.1**	**+0.8**
	baz=237						
Q19K	**Cape Douglas,**	**76.94**	**26**	P	**P**	**11 01 12.9**	**+0.4**
	baz=239						
I17K	**Unalakleet**	**76.99**	**20**	IAmb	IAmb	11 01 20.5	
	comp=Z,20nm,1.2s						
I17K	**Unalakleet**	**76.99**	**20**	P	**P**	**11 01 13.9**	**+1.3**
	baz=231						
K17K	**Iditarod**	**77.14**	**22**	IAmb	IAmb	11 01 18.4	
	comp=Z,18nm,1.1s						
K17K	**Iditarod**	**77.14**	**22**	P	**P**	**11 01 14.1**	**+0.6**
	baz=234,SNR=8.6						
J17K	**VABM Dome**	**77.26**	**21**	IAmb	IAmb	11 01 18.5	
	comp=Z,16nm,1.1s						
J17K	**VABM Dome**	**77.26**	**21**	P	**P**	**11 01 14.9**	**+0.8**
	baz=233,SNR=11						
Q20K	**Shuyak Island**	**77.34**	**27**	P	**P**	**11 01 14.9**	**+0.3**
	baz=240						
M18K	**Stony River**	**77.39**	**24**	P	**P**	**11 01 15.3**	**+0.4**
	baz=236						
G16K	**Koyuk River**	**77.40**	**19**	P	**P**	**11 01 15.7**	**+0.8**
	baz=230						
L18K	**Granite Mounta**	**77.46**	**23**	IAmb	IAmb	11 01 22.6	
	comp=Z,23nm,1.2s						
L18K	**Granite Mounta**	**77.46**	**23**	P	**P**	**11 01 15.5**	**+0.2**
	baz=236,SNR=14						
P19K	**Oil Pt**	**77.49**	**26**	P	**P**	**11 01 15.9**	**+0.3**
	baz=239						
MK31	**Makanchi Array**	**77.54**	**320**	*ce*P	**P**	**11 01 17.0**	**+0.9**
MKAR	**Makanchi Array**	**77.54**	**320**	P	**P**	**11 01 16.2**	**0.0**
	comp=Z,5.9nm,1.1s,baz=98,slow=8.0,SNR=16						
	comp=Z,5.9nm,1.1s						
MKAR	**Makanchi Array**	**77.54**	**320**	*ce*P	**P**	**11 01 16.7**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,13nm,1.2s						
N19K	**Bonanza Creek**	**77.57**	**25**	P	**P**	**11 01 16.1**	**+0.1**
N19K				IAmb	IAmb	11 01 22.6	
	comp=Z,15nm,1.2s						
N19K	**Bonanza Creek**	**77.57**	**25**	P	**P**	**11 01 16.4**	**+0.4**
	baz=238						
MAKZ	**Makanchi**	**77.75**	**319**	IAmb	IAmb	11 01 23.1	
	comp=Z,24nm,1.4s						
H17K	**Granite Mounta**	**77.91**	**20**	P	**P**	**11 01 17.6**	**-0.2**
H17K				IAmb	IAmb	11 01 24.5	
	comp=Z,22nm,1.2s						
H17K	**Granite Mounta**	**77.91**	**20**	P	**P**	**11 01 18.4**	**+0.6**
	baz=232,SNR=12						
O20K	**Slope Mountain**	**77.97**	**26**	P	**P**	**11 01 18.3**	**0.0**
	baz=240						
G17K	**Kiwalik Mounta**	**78.02**	**19**	P	**P**	**11 01 18.9**	**+0.5**
	baz=231						
L19K	**White Mountain**	**78.16**	**23**	IAmb	IAmb	11 01 29.7	
	comp=Z,16nm,0.9s						
L19K	**White Mountain**	**78.16**	**23**	P	**P**	**11 01 19.8**	**+0.6**
	baz=237,SNR=16						
J18K	**Innoko River**	**78.16**	**22**	P	**P**	**11 01 19.7**	**+0.5**
	baz=235,SNR=12						
M19K	**Big River Lodg**	**78.19**	**24**	P	**P**	**11 01 20.4**	**+1.0**
	baz=238						
HOM	**Homer**	**78.19**	**26**	P	**P**	**11 01 20.0**	**+0.6**
	baz=241						
SHLS	**Shalkode**	**78.32**	**315**	*e*P	**P**	**11 01 18.9**	**-1.8**
SHLS	**Shalkode**	**78.32**	**315**	*e*P	**P**	**11 01 18.9**	**-1.8**
F17K	**Baldwin Pennin**	**78.43**	**18**	P	**P**	**11 01 20.8**	**+0.3**
	baz=230						
C16K	**Lisburne Hills**	**78.47**	**16**	P	**P**	**11 01 21.7**	**+1.0**
	baz=226						
H18K	**Honhosa River**	**78.56**	**20**	P	**P**	**11 01 22.4**	**+1.0**
	baz=234						
UZB	**Uzynbulak**	**78.63**	**315**	*e*P	**P**	**11 01 22.5**	**+0.1**
UZB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
UZB	**Uzynbulak**	**78.63**	**315**	*e*P	**P**	**11 01 22.6**	**+0.1**
	comp=Z,6.2nm,0.9s						
ZAA0	**Zalesovo Array**	**78.63**	**327**		**P**	**11 01 20.3**	**-1.7**
ZALV	**Zalesovo Beam**	**78.63**	**327**		**P**	**11 01 20.1**	**-1.9**
ZALV	**Zalesovo Beam**	**78.63**	**327**	P	**P**	**11 01 21.6**	**-0.3**
	comp=Z,6.0nm,0.8s,baz=115,slow=6.7,SNR=16						
ZALV				LR	LR	11 35 11.7	
	comp=Z,335nm,21.4s,baz=97,slow=35						
	comp=Z,6.0nm,0.8s						
BRSE	**Bradley Lake S**	**78.63**	**26**	P	**P**	**11 01 22.4**	**+0.5**
	baz=242						
E17K	**Hotham Inlet**	**78.67**	**17**	P	**P**	**11 01 22.8**	**+0.9**
	baz=230						
M20K	**Styx River**	**78.69**	**24**	P	**P**	**11 01 23.1**	**+0.9**
	baz=239						
L20K	**Farewell, AK**	**78.70**	**23**	P	**P**	**11 01 22.9**	**+0.7**
	baz=238,SNR=11						
D17K	**Noatak River**	**78.70**	**17**	P	**P**	**11 01 22.8**	**+0.7**
	baz=228						
N20K	**Mount Spurr**	**78.72**	**25**	P	**P**	**11 01 22.1**	**-0.3**
	baz=240						
SPCR	**Spurr Chakacha**	**78.72**	**25**	P	**P**	**11 01 22.3**	**-0.1**
	baz=240						
GCSA	**Galena City Sc**	**78.84**	**21**	P	**P**	**11 01 23.0**	**+0.1**
	baz=235						
J19K	**Poorman**	**78.86**	**22**		**P**	**11 01 21.9**	**-1.2**
J19K				IAmb	IAmb	11 01 29.7	
	comp=Z,21nm,1.2s						
J19K	**Poorman**	**78.86**	**22**	P	**P**	**11 01 23.4**	**+0.4**
	baz=236,SNR=13						
G18K	**Tagagawik**	**78.92**	**19**	P	**P**	**11 01 23.4**	**0.0**
	baz=233,SNR=12						
CAPN	**Captain Cook N**	**78.95**	**25**	P	**P**	**11 01 23.6**	**0.0**
	baz=241						
KPKS	**Kokpek**	**78.95**	**315**	*e*P	**P**	**11 01 24.1**	**0.0**
KPKS	**Kokpek**	**78.95**	**315**	*e*P	**P**	**11 01 24.2**	**0.0**
RDOG	**Red Dog Mine**	**78.99**	**16**	P	**P**	**11 01 24.0**	**+0.3**
	baz=229						
F18K	**Selawik**	**79.03**	**18**	P	**P**	**11 01 24.0**	**+0.2**
	baz=232						
SATY	**Saty**	**79.04**	**315**	*e*P	**P**	**11 01 24.8**	**+0.2**
SATY	**Saty**	**79.04**	**315**	*e*P	**P**	**11 01 24.8**	**+0.2**
K20K	**Telida**	**79.09**	**22**	IAmb	IAmb	11 01 31.2	
	comp=Z,22nm,1.2s						
K20K	**Telida**	**79.09**	**22**	P	**P**	**11 01 24.9**	**+0.6**
	baz=238,SNR=10.0						
C17K	**DeLong Mountai**	**79.20**	**16**	P	**P**	**11 01 25.5**	**+0.7**
	baz=228						
E18K	**Tukpahlearik C**	**79.25**	**17**	P	**P**	**11 01 25.4**	**+0.3**
	baz=231						
SEW	**Seward**	**79.38**	**26**	P	**P**	**11 01 26.0**	**+0.1**
	baz=243						
SKT	**Skwentna**	**79.39**	**24**	P	**P**	**11 01 26.4**	**+0.4**
	baz=240						
O22K	**Cooper Landing**	**79.43**	**26**	P	**P**	**11 01 27.0**	**+0.8**
	baz=242						
H19K	**Roundabout Mou**	**79.44**	**20**	IAmb	IAmb	11 01 33.4	
	comp=Z,26nm,1.2s						
H19K	**Roundabout Mou**	**79.44**	**20**	P	**P**	**11 01 26.7**	**+0.5**
	baz=235,SNR=25						
SUA	**Susitna One**	**79.46**	**25**	P	**P**	**11 01 27.6**	**+1.0**
	baz=241						
J20K	**Nowinta River**	**79.50**	**22**	IAmb	IAmb	11 01 33.4	
	comp=Z,19nm,1.2s						
J20K	**Nowinta River**	**79.50**	**22**	P	**P**	**11 01 27.2**	**+0.6**
	baz=238,SNR=17						
TDK	**Taldyqorghan**	**79.57**	**317**	*e*P	**P**	**11 01 27.5**	**+0.1**
TDK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
TDK	**Taldyqorghan**	**79.57**	**317**	*e*P	**P**	**11 01 27.5**	**+0.1**
	comp=Z,7.5nm,0.6s						
G19K	**Purcell Mounta**	**79.58**	**19**	IAmb	IAmb	11 01 33.5	
	comp=Z,28nm,1.2s						
G19K	**Purcell Mounta**	**79.58**	**19**	P	**P**	**11 01 27.5**	**+0.6**
	baz=234,SNR=20						
PPLA	**Purkeypile**	**79.58**	**23**	P	**P**	**11 01 27.2**	**0.0**
	baz=240						
RC01	**Rabbit Creek A**	**79.71**	**26**	P	**P**	**11 01 27.5**	**-0.2**
	baz=242						
I20K	**Naaghedeneel**	**79.72**	**21**	IAmb	IAmb	11 01 35.1	
	comp=Z,24nm,1.1s						
I20K	**Naaghedeneel**	**79.72**	**21**	P	**P**	**11 01 28.6**	**+0.9**
	baz=237						
F19K	**Shaleruckik Mo**	**79.76**	**19**	P	**P**	**11 01 28.5**	**+0.7**
	baz=234,SNR=8.5						
C18K	**Utukok River**	**79.86**	**16**	P	**P**	**11 01 28.8**	**+0.3**
	baz=230						
M22K	**Willow**	**79.86**	**25**	P	**P**	**11 01 29.3**	**+0.8**
	baz=242						
CAST	**Castle Rocks**	**79.89**	**23**	P	**P**	**11 01 29.0**	**+0.3**
	baz=240,SNR=14						
KSH	**Kashi**	**79.91**	**311**	P	**P**	**11 01 31.9**	**+2.4**
KSH				pP	pwP	11 01 35.8	+1.0
KSH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KSH				LR	LR		
	comp=Z,440nm,22.7s						
KSH				LR	LR		
	comp=Z,280nm,19.6s						
KSH				LR	LR		
	comp=Z,190nm,18.9s						
H20K	**Anotleneega Mo**	**79.96**	**20**	P	**P**	**11 01 29.4**	**+0.3**
	baz=237						
MDOK	**Medeo**	**80.02**	**315**	*e*P	**P**	**11 01 30.4**	**+0.4**
MDOK	**Medeo**	**80.02**	**315**	*e*P	**P**	**11 01 30.4**	**+0.4**
CHUM	**Lake Minchumin**	**80.04**	**22**	P	**P**	**11 01 30.0**	**+0.6**
	baz=239,SNR=19						
B18K	**Kokolik River**	**80.16**	**16**	P	**P**	**11 01 30.7**	**+0.7**
	baz=230						
PMR	**Palmer**	**80.20**	**25**	P	**P**	**11 01 34.6**	**+4.2**
PMR	**Palmer**	**80.20**	**25**	P	**P**	**11 01 30.7**	**+0.3**
	baz=243,SNR=5.7						
PWL	**Port Wells**	**80.21**	**26**	IAmb	IAmb	11 01 40.2	
	comp=Z,17nm,0.9s						
PWL	**Port Wells**	**80.21**	**26**	P	**P**	**11 01 30.8**	**+0.3**
	baz=244						
P23K	**Montague Islan**	**80.25**	**27**	P	**P**	**11 01 31.0**	**+0.3**
	baz=244						
E19K	**Redstone River**	**80.30**	**18**	P	**P**	**11 01 31.4**	**+0.6**
	baz=234,SNR=15						
KTH	**Kantishna Hill**	**80.41**	**23**	IAmb	IAmb	11 01 37.4	
	comp=Z,27nm,1.2s						
KNK	**Knik Glacier**	**80.41**	**26**	P	**P**	**11 01 32.0**	**+0.5**
	baz=243						
Q23K	**Middleton Isla**	**80.49**	**28**	P	**P**	**11 01 32.7**	**+0.8**
	baz=246						
F20K	**Avaraart Lake**	**80.55**	**19**	P	**P**	**11 01 32.5**	**+0.4**
	baz=236						
C19K	**Lookout Ridge**	**80.60**	**16**	IAmb	IAmb	11 01 39.2	
	comp=Z,30nm,1.4s						
C19K	**Lookout Ridge**	**80.60**	**16**	P	**P**	**11 01 33.5**	**+1.0**
	baz=232,SNR=8.0						
TRF	**Thorofare Moun**	**80.61**	**23**	P	**P**	**11 01 33.0**	**+0.2**
	baz=241,SNR=7.1						
IMAR	**Indian Mountai**	**80.62**	**20**	P	**P**	**11 01 32.4**	**-0.1**
SML	**Sawmill**	**80.64**	**25**	IAmb	IAmb	11 02 11.1	
	comp=Z,24nm,1.1s						
SML	**Sawmill**	**80.64**	**25**	P	**P**	**11 01 33.3**	**+0.4**
	baz=243						
D19K	**Kuna River**	**80.65**	**17**	P	**P**	**11 01 33.3**	**+0.6**
	baz=233						
BPAW	**Bear Paw Mtn.**	**80.65**	**23**	P	**P**	**11 01 32.6**	**-0.2**
	baz=241,SNR=6.9						
GLI	**Glacier Island**	**80.77**	**26**	P	**P**	**11 01 33.8**	**+0.3**
	baz=245						
H21K	**Melozitna Rive**	**80.78**	**21**	P	**P**	**11 01 34.4**	**+1.0**
	baz=239						
NIL	**Nilore**	**80.82**	**305**	P	**P**	**11 01 32.9**	**-1.5**
NIL	**Nilore**	**80.82**	**305**	P	**P**	**11 01 32.9**	**-1.5**
NIL				pmax	pmax		
	comp=Z,29nm,0.8s						
I21K	**Tanana**	**80.83**	**21**	P	**P**	**11 01 34.7**	**+1.0**
	baz=240						
M23K	**Glacier View**	**80.89**	**25**	P	**P**	**11 01 34.3**	**+0.1**
	baz=244						
A19K	**Wainwright**	**80.90**	**15**	P	**P**	**11 01 34.8**	**+0.9**
	baz=230						
G21K	**Allakaket**	**80.99**	**20**	P	**P**	**11 01 34.6**	**+0.1**
	baz=238						
WAT1	**Susitna Watana**	**81.01**	**24**	P	**P**	**11 01 35.1**	**+0.3**
	baz=243						
SCM	**Sheep Creek Mo**	**81.08**	**25**	IAmb	IAmb	11 01 41.3	
	comp=Z,31nm,1.2s						
SCM	**Sheep Creek Mo**	**81.08**	**25**	P	**P**	**11 01 35.5**	**+0.3**
	baz=244						
KURK	**Kurchatov**	**81.08**	**323**	P	**P**	**11 01 33.3**	**-2.0**
KURK	**Kurchatov**	**81.08**	**323**	*ce*P	**P**	**11 01 35.4**	**+0.1**
KURK				pmax	pmax		
	comp=Z,23nm,1.7s						
E20K	**Nigu River**	**81.09**	**18**	P	**P**	**11 01 35.9**	**+0.7**
	baz=235						
KURBB	**Kurchatov Arra**	**81.11**	**322**	P	**P**	**11 01 35.2**	**-0.2**
	comp=Z,2.0nm,0.9s,baz=109,slow=4.5,SNR=15						
KURBB				LR	LR	11 37 20.3	
	comp=Z,390nm,21.9s,baz=158,slow=36						
	comp=Z,2.0nm,0.9s						
RND	**Reindeer**	**81.16**	**24**	IAmb	IAmb	11 01 40.6	
	comp=Z,20nm,1.0s						
MLY	**Manley**	**81.21**	**22**	P	**P**	**11 01 36.1**	**+0.3**
	baz=241,SNR=18						
D20K	**Etivluk River**	**81.23**	**17**	P	**P**	**11 01 36.0**	**+0.2**
	baz=235,SNR=5.4						
EYAK	**Cordova Ski Ar**	**81.23**	**27**	P	**P**	**11 01 35.8**	**-0.1**
	baz=246						
WAT6	**Susitna Watana**	**81.24**	**25**	P	**P**	**11 01 36.0**	**-0.2**
	baz=244						
MCK	**McKinley**	**81.28**	**23**	P	**P**	**11 01 36.7**	**+0.6**
	baz=243,SNR=11						
F21K	**Alatna River**	**81.37**	**19**	P	**P**	**11 01 37.0**	**+0.4**
	baz=238						
H22K	**Ishtalitna Cre**	**81.40**	**21**	P	**P**	**11 01 37.2**	**+0.4**
	baz=240						
KLU	**Klutina**	**81.54**	**26**	IAmb	IAmb	11 01 44.0	
	comp=Z,22nm,1.2s						
KLU	**Klutina**	**81.54**	**26**	P	**P**	**11 01 38.0**	**+0.4**
	baz=246						
KAIM	**Kayak Island**	**81.59**	**28**	P	**P**	**11 01 38.4**	**+0.6**
	baz=247						
DHY	**Denali Highway**	**81.60**	**24**	IAmb	IAmb	11 01 43.9	

	comp=Z,14nm,1.0s						
DHY	Denali Highway	81.60	24	P	P	11 01 37.9	-0.2
	baz=244,SNR=5.5						
NEA2	Nenana	81.62	22	P	P	11 01 38.2	+0.3
	baz=242						
M24K	Tolsona, Glenn	81.69	25	P	P	11 01 39.0	+0.6
	baz=245						
AAK	Ala-Archa	81.72	314	P	P	11 01 38.2	-1.0
AAK	Ala-Archa	81.72	314	ceP	P	11 01 40.2	+1.1
AAK				pmax	pmax		
	comp=Z,10.0nm,1.7s						
I23K	Minto, Yukon-K	81.77	22	P	P	11 01 39.5	+0.8
	baz=242						
SGDS	Sogindy	81.81	315	eP	P	11 01 39.7	+0.2
HMT	Hamilton	81.82	27	P	P	11 01 38.5	-0.6
HMT				IAmb	IAmb	11 01 45.4	
	comp=Z,21nm,1.2s						
B20K	Meade River	81.83	16	P	P	11 01 39.7	+0.9
	baz=234						
E21K	Killik River	81.88	18	P	P	11 01 39.3	+0.1
	baz=237						
G22K	Bettles	81.88	20	P	P	11 01 40.0	+0.8
	baz=240						
BMRM	Bremner River	81.91	27	IAmb	IAmb	11 02 11.1	
	comp=Z,26nm,1.2s						
BMRM	Bremner River	81.91	27	P	P	11 01 40.3	+0.7
	baz=247						
WRH	Wood River Hil	81.94	23	IAmb	IAmb	11 02 13.6	
	comp=Z,21nm,1.2s						
F22K	John River	81.95	19	P	P	11 01 40.1	+0.4
	baz=239						
C21K	Knifeblade Rid	82.03	17	P	P	11 01 40.6	+0.7
	baz=236						
H23K	Yukon River	82.03	21	P	P	11 01 39.8	-0.3
H23K	Yukon River	82.03	21	P	P	11 01 40.6	+0.5
	baz=242						
N25K	Chitina, Valde	82.17	26	IAmb	IAmb	11 01 47.3	
	comp=Z,31nm,1.7s						
N25K	Chitina, Valde	82.17	26	P	P	11 01 41.8	+0.8
	baz=247						
COLA	College	82.22	22	P	P	11 01 39.9	-1.1
COLA				IAmb	IAmb	11 01 45.7	
	comp=Z,30nm,1.4s						
COLA	College	82.22	22	P	P	11 01 42.7	+1.7
COLA	College	82.22	22	P	P	11 01 39.9	-1.1
COLA				pmax	pmax		
	comp=Z,30nm,1.4s						
COLA	College	82.22	22	P	P	11 01 42.0	+1.0
	baz=243						
HARP	HAARP	82.25	25	P	P	11 01 42.5	+1.3
	baz=246						
G23K	Bananza Creek	82.28	20	P	P	11 01 42.5	+1.0
	baz=241						
B21K	Ikpikpuk River	82.33	17	P	P	11 01 42.6	+1.1
	baz=236						
PAX	Paxson	82.35	25	P	P	11 01 42.7	+0.8
	baz=246						
HDA	Harding Lake	82.36	23	P	P	11 01 42.8	+0.9
	baz=244						
E22K	Anaktuvuk Pass	82.40	19	P	P	11 01 42.6	+0.6
	baz=239						
COLD	Coldfoot	82.47	20	IAmb	IAmb	11 01 49.6	
	comp=Z,15nm,1.3s						
COLD	Coldfoot	82.47	20	P	P	11 01 42.8	+0.4
	baz=241						
POKR	Poker Plat Res	82.48	22	P	P	11 01 43.5	+1.1
	baz=244						
CRQM	Cirque	82.50	27	IAmb	IAmb	11 01 59.9	
	comp=Z,16nm,1.0s						
D22K	Ayikyak River	82.51	18	P	P	11 01 43.3	+0.8
	baz=238						
CRQE	Cirque	82.51	27	P	P	11 01 43.6	+0.7
	baz=248						
ILAR	Eielson Array	82.54	23	P	P	11 01 40.5	-2.2
ILAR	Eielson Array	82.54	23	P	P	11 01 42.0	-0.7
	comp=Z,3.8nm,0.8s,baz=258,slow=4.7,SNR=38						
ILAR				LR	LR	11 32 13.5	
	comp=Z,326nm,21.6s,baz=248,slow=31						
	comp=Z,3.8nm,0.8s						
K24K	Donnelly Dome	82.57	24	IAmb	IAmb	11 02 17.2	
	comp=Z,9.8nm,0.9s						
K24K	Donnelly Dome	82.57	24	P	P	11 01 43.6	+0.7
	baz=246						
BTLS	Baital	82.57	316	eP	P	11 01 43.5	+0.1
BTLS				pmax	pmax		
	comp=Z,9.0nm,1.5s						
BTLS	Baital	82.57	316	eP	P	11 01 43.5	+0.1
	comp=Z,9.1nm,1.5s						
H24K	Noodor Dome	82.64	22	P	P	11 01 44.3	+1.0
	baz=243						
A21K	Barrow	82.75	15	P	P	11 01 44.5	+0.9
	baz=234						
MCARA	McCarthy VSAT	82.78	27	P	P	11 01 45.0	+0.9
	baz=248						
MESA	MESA	82.83	28	P	P	11 01 45.6	+1.0
	baz=249						
RIDG	Independent Ri	82.92	24	IAmb	IAmb	11 01 50.5	
	comp=Z,21nm,1.2s						
RIDG	Independent Ri	82.92	24	P	P	11 01 44.6	-0.2
	baz=246						
A22K	Sinclair Lake	83.01	16	P	P	11 01 44.1	-0.9
	baz=236						
J25K	Salcha River,	83.06	23	P	P	11 01 45.5	-0.1
	baz=246,SNR=24						
MENT	Mentasta	83.07	25	P	P	11 01 49.4	+3.8
B22K	Teshekpuk Lake	83.07	17	P	P	11 01 45.7	+0.4
	baz=238						
E23K	Chandalar	83.07	19	P	P	11 01 45.6	+0.1
	baz=241						
M26K	Nabesna, AK	83.17	26	P	P	11 01 46.9	+0.8
	baz=248						
D23K	Nanushuk River	83.18	18	P	P	11 01 46.3	+0.3
	baz=240						
G24K	Hadweenzic Riv	83.18	21	P	P	11 01 46.5	+0.5
	baz=244						
DOT	Dot Lake	83.20	24	IAmb	IAmb	11 01 52.0	
	comp=Z,21nm,1.1s						
L26K	Log Cabin Wild	83.26	25	P	P	11 01 46.7	+0.2
	baz=248,SNR=6.3						
SCRK	Sand Creek	83.36	24	IAmb	IAmb	11 01 52.9	
	comp=Z,11nm,1.2s						
SCRK	Sand Creek	83.36	24	P	P	11 01 47.5	+0.3
	baz=247,SNR=7.3						
TOLK	Toolik Lake Re	83.37	19	P	P	11 01 47.1	+0.1
	baz=241						
PRP	Porcupine Dome	83.38	22	P	P	11 01 47.5	+0.2
	baz=246						
CTG	Chitna Glacier	83.39	27	P	P	11 01 48.1	+0.7
	baz=250						
CTGM	Chitina Glacie	83.39	27	IAmb	IAmb	11 01 57.5	
	comp=Z,14nm,0.9s						
F24K	Squaw Lake	83.40	20	P	P	11 01 48.0	+0.8
	baz=243						
E24K	Your Creek	83.46	19	P	P	11 01 48.4	+0.9
	baz=242						
H25L	Birch Creek	83.59	22	P	P	11 01 48.6	+0.5
	baz=245						
PINM	Pinnacle	83.60	28	P	P	11 01 48.7	+0.3
	baz=251						
C23K	Itkillik River	83.63	18	P	P	11 01 48.6	+0.3
	baz=240						
M27K	Edge Creek, AK	83.64	26	P	P	11 01 49.3	+0.6
	baz=249,SNR=22						
G25K	Bearman Lake	83.70	21	P	P	11 01 48.7	+0.1
	baz=245						
J26L	Joseph Creek	83.74	24	P	P	11 01 49.2	+0.1
	baz=247						
D24K	Happy Valley	83.85	18	P	P	11 01 49.7	+0.3
	baz=242						
O28M	Mount Upton	83.86	28	P	P	11 01 49.9	-0.1
	baz=251						
PNL	Peninsula	83.87	29	P	P	11 01 49.9	+0.1
	baz=252						
BTK	Batken	83.91	311	IAmb	IAmb	11 02 08.3	
	comp=Z,22nm,1.2s						
L27K	Beaver Creek,	83.92	25	IAmb	IAmb	11 01 56.4	
	comp=Z,13nm,1.2s						
L27K	Beaver Creek,	83.92	25	P	P	11 01 50.8	+0.8
	baz=249						
BCAR	Beaver Creek A	83.94	25	P	P	11 01 49.2	-0.8
DZA	Taraz	84.05	314	eP	P	11 01 51.4	+0.4
DZA	Taraz	84.05	314	eP	P	11 01 51.5	+0.4
YUK3	Moose Creek	84.07	27	P	P	11 01 51.8	+0.8
	baz=250,SNR=10						
BVCY	Beaver Creek	84.11	26	P	P	11 01 51.4	+0.5
	baz=250						
C24K	Franklin Bluff	84.16	18	P	P	11 01 51.5	+0.6
	baz=242						
K27K	Chicken	84.16	24	P	P	11 01 52.0	+0.9
	baz=249						
I26K	Coal Creek Min	84.21	23	P	P	11 01 51.6	+0.3
	baz=248						
F25K	Christian Rive	84.21	20	P	P	11 01 51.4	+0.1
	baz=245						
YUK8	Steele Glacier	84.22	27	P	P	11 01 52.3	+0.5
	baz=251						
O29M	Mount Kennedy	84.46	28	P	P	11 01 53.7	+0.8
	baz=252						
BRZS	Berezniki	84.57	321	eP	P	11 01 54.0	+0.5
BRZS	Berezniki	84.57	321	eP	P	11 01 54.0	+0.5
G26K	Porcupine Rive	84.61	21	IAmb	IAmb	11 02 26.2	
	comp=Z,10.0nm,0.9s						
G26K	Porcupine Rive	84.61	21	P	P	11 01 53.4	+0.1
	baz=247						
P29M	Windy Craggy	84.67	29	P	P	11 01 53.6	-0.2
	baz=253						
KK31	Karatay Array	84.68	314	P	P	11 01 52.9	-1.3
KK31	Karatay Array	84.68	314	P	P	11 01 52.9	-1.3
KK31				pmax	pmax		
	comp=Z,35nm,1.2s						
KKAR	Karatay Array	84.68	314	P	P	11 01 53.1	-1.1
KKAR	Karatay Array	84.68	314	P	P	11 01 53.1	-1.1
D25K	Kavik River	84.71	19	P	P	11 01 54.0	+0.2
	baz=244						
YUK4	Talbot Arm	84.75	27	P	P	11 01 55.1	+0.7
	baz=252						
YUK6	Outpost Mounta	84.76	28	P	P	11 01 54.4	-0.1
	baz=252						
F26K	Sheenjek River	84.78	21	P	P	11 01 54.4	+0.2
	baz=247						
I27K	Kandik River	84.91	23	P	P	11 01 55.5	+0.6
	baz=249						
S31K	Pelican	84.95	31	P	P	11 01 56.4	+1.2
	baz=255						
SIMJ	Simiganj	85.06	309	P	P	11 01 54.8	-1.6
HYT	Haines Junctio	85.12	28	IAmb	IAmb	11 02 03.5	
	comp=Z,20nm,1.1s						
HYT	Haines Junctio	85.12	28	P	P	11 01 57.3	+1.1
	baz=253,SNR=20						
BRLS	Borolday	85.15	314	eP	P	11 01 57.0	+0.4
BRLS				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BRLS	Borolday	85.15	314	eP	P	11 01 57.0	+0.4
	comp=Z,7.7nm,1.3s						
M29M	Somme Creek	85.17	26	IAmb	IAmb	11 02 06.7	
	comp=Z,8.6nm,0.9s						
M29M	Somme Creek	85.17	26	P	P	11 01 57.2	+0.8
	baz=252						
H27K	Steamboat Moun	85.17	22	IAmb	IAmb	11 02 28.8	
	comp=Z,13nm,1.1s						
H27K	Steamboat Moun	85.17	22	P	P	11 01 56.8	+0.6
	baz=249						
MAW	Mawson	85.18	203	P	P	11 01 55.4	-0.8
	comp=Z,13nm,1.0s,baz=50,slow=6.5,SNR=5.9						
MAW				LR	LR	11 37 41.7	
	comp=Z,666nm,21.1s,baz=90,slow=34						
	comp=Z,13nm,1.0s						
P30M	Million Dollar	85.18	29	P	P	11 01 57.7	+1.3
	baz=254						
SIT	Sitka	85.19	32	P	P	11 01 57.7	+1.4
	baz=256						
CHM	Chimkent	85.20	313	eP	P	11 01 57.3	+0.4
CHM	Chimkent	85.20	313	eP	P	11 01 57.3	+0.4
DAWY	Dawson	85.28	25	IAmb	IAmb	11 02 04.0	
	comp=Z,22nm,1.3s						
DAWY	Dawson	85.28	25	P	P	11 01 57.8	+1.0
	baz=251,SNR=16						
PLBC	Pleasant Camp	85.29	30	P	P	11 01 58.2	+1.4
	baz=254						
G27K	Doyon Strip	85.33	22	P	P	11 01 58.4	+1.4
	baz=249						
C26K	Camden Bay	85.43	18	P	P	11 01 59.2	+1.9
	baz=246						
N30M	Aishikik Lake	85.50	27	IAmb	IAmb	11 02 05.3	
	comp=Z,14nm,1.4s						
N30M	Aishikik Lake	85.50	27	P	P	11 01 59.2	+1.2
	baz=254						
I28M	Miner Creek	85.52	23	IAmb	IAmb	11 02 29.6	
	comp=Z,29nm,1.8s						
I28M	Miner Creek	85.52	23	P	P	11 01 58.9	+0.9
	baz=251						
L29M	L29M	85.52	26	IAmb	IAmb	11 02 08.0	
	comp=Z,12nm,0.9s						
L29M	L29M	85.52	26	P	P	11 01 59.1	+1.1
	baz=252,SNR=13						
S32K	Killisnoo	85.68	32	P	P	11 02 00.4	+1.6
	baz=256						
C27K	Jago River	85.69	19	P	P	11 01 59.9	+1.2
	baz=247						
O30N	Mendenhall	85.78	28	IAmb	IAmb	11 02 06.0	
	comp=Z,15nm,1.3s						
O30N	Mendenhall	85.78	28	P	P	11 02 00.5	+1.2
	baz=254						
SKAG	Skagway	85.80	30	P	P	11 02 00.9	+1.6
	baz=255						
E27K	Coleen River	85.85	20	P	P	11 02 01.0	+1.4
	baz=249						
K29M	Barlow Dome	86.00	25	IAmb	IAmb	11 02 10.4	
	comp=Z,14nm,0.8s						
K29M	Barlow Dome	86.00	25	P	P	11 02 01.5	+1.0
	baz=253,SNR=18						
CRAG	Craig	86.01	34	P	P	11 02 01.2	+0.7
	baz=257						
QSPA	South Pole Qui	86.07	180	P	P	11 02 00.2	-0.6
	comp=Z,4.9nm,0.8s,baz=345,slow=1.6,SNR=15						
QSPA				LR	LR	11 40 25.9	
	comp=Z,382nm,18.1s,baz=6.0,slow=36						
	comp=Z,4.9nm,0.8s						
N31M	Braeburn, Yuko	86.11	28	P	P	11 02 01.9	+0.9
	baz=255,SNR=7.6						
I29M	Ogilvie Camp,	86.14	24	IAmb	IAmb	11 02 07.0	
	comp=Z,11nm,1.0s						
I29M	Ogilvie Camp,	86.14	24	P	P	11 02 02.4	+1.4
	baz=252						
U33K	Whale Pass	86.15	33	P	P	11 02 01.8	+0.6
	baz=257						
F28M	Old Crow	86.27	21	P	P	11 02 02.8	+1.2
	baz=251						
WHY	Whitehorse	86.32	29	P	P	11 02 02.6	+0.5
	baz=256						
H29M	Whitestone	86.38	23	P	P	11 02 02.4	+0.3
	baz=252						
D27M	Malcolm River	86.45	20	P	P	11 02 03.3	+0.8
	baz=250						
BVAR	Borovoye Array	86.59	324	P	P	11 02 02.9	-0.6
	comp=Z,9.6nm,0.9s,baz=93,slow=5.0,SNR=29						
BVAR				LR	LR	11 40 22.0	
	comp=Z,228nm,21.0s,baz=88,slow=35						
	comp=Z,9.6nm,0.9s						
MAYO	Mayo, Yukon	86.63	26	P	P	11 02 04.3	+0.9
	baz=254						
P32M	Atlin	86.63	30	P	P	11 02 04.7	+1.1
	baz=257						
WRAK	Wrangell Islan	86.64	33	P	P	11 02 04.7	+1.1
	baz=258						
BRVK	Borovoye	86.66	324	ceP	P	11 02 04.9	+1.1
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
J30M	Hart River	86.71	25	P	P	11 02 05.2	+1.2
	baz=254						
E28M	Babbage River	86.71	20	P	P	11 02 05.0	+1.2
	baz=251						
G29M	Pine Creek	86.72	22	P	P	11 02 04.6	+0.7
	baz=252						
V35K	Ketchikan	86.82	34	P	P	11 02 05.2	+0.7
	baz=259						
I30M	Mount Dempster	86.87	24	IAmb	IAmb	11 02 36.1	
	comp=Z,12nm,1.2s						
I30M	Mount Dempster	86.87	24	P	P	11 02 05.4	+0.6
	baz=254						
M31M	Drury Creek, Y	86.93	27	IAmb	IAmb	11 02 44.2	
	comp=Z,11nm,1.2s						
M31M	Drury Creek, Y	86.93	27	P	P	11 02 05.3	+0.3
	baz=256						
EPYK	Eagle Plains	87.06	23	P	P	11 02 06.0	+0.4
	baz=254						
P33M	Teslin, Yukon	87.21	29	IAmb	IAmb	11 02 20.7	
	comp=Z,14nm,1.4s						
P33M	Teslin, Yukon	87.21	29	P	P	11 02 07.6	+1.2
	baz=257						
Q32M	Nakina River	87.21	31	P	P	11 02 07.8	+1.1
	baz=258						
E29M	Blow River	87.22	21	P	P	11 02 06.8	+0.6
	baz=252						
D28M	Stokes Point	87.22	20	P	P	11 02 07.6	+1.5
	baz=252						
N32M	Quiet Lake	87.29	28	P	P	11 02 08.3	+1.5
	baz=257						
FARO	Faro, Yukon	87.41	27	IAmb	IAmb	11 02 27.0	
	comp=Z,15nm,1.2s						
FARO	Faro, Yukon	87.41	27	P	P	11 02 08.5	+1.1
	baz=257,SNR=14						
G30M	tAoh Zraii Nji	87.42	22	IAmb	IAmb	11 02 12.9	
	comp=Z,17nm,1.3s						
G30M	tAoh Zraii Nji	87.42	22	P	P	11 02 08.0	+0.7
	baz=254						
S34M	Telegraph Cree	87.59	32	IAmb	IAmb	11 02 15.2	
	comp=Z,12nm,1.1s						
S34M	Telegraph Cree	87.59	32	P	P	11 02 09.5	+1.3
	baz=259						
F30M	Barrier River	87.76	22	P	P	11 02 10.0	+1.2
	baz=254						
U35K	Hyder	87.81	34	P	P	11 02 10.1	+0.8
	baz=260						
H31M	Peel River	87.84	24	IAmb	IAmb	11 02 35.2	
	comp=Z,9.8nm,1.0s						
H31M	Peel River	87.84	24	P	P	11 02 09.9	+0.6
	baz=256						
T35M	Bob Quinn	87.88	33	IAmb	IAmb	11 02 32.2	
	comp=Z,12nm,1.1s						
T35M	Bob Quinn	87.88	33	P	P	11 02 10.7	+1.0
	baz=260						
R33M	Jennings River	87.96	30	IAmb	IAmb	11 02 17.0	
	comp=Z,17nm,1.2s						
R33M	Jennings River	87.96	30	P	P	11 02 10.4	+0.3
	baz=259,SNR=11						
G31M	Satah River	88.15	23	P	P	11 02 11.1	+0.5
	baz=256						
DLBC	Dease Lake	88.26	31	LR	LR	11 37 44.0	
	comp=Z,291nm,18.9s,baz=292,slow=33						
DLBC	Dease Lake	88.26	31	P	P	11 02 12.8	+1.3
	baz=260						
BBB	Bella Bella	88.33	38	LR	LR	11 38 04.1	
	comp=Z,312nm,18.2s,baz=259,slow=33						
MMPY	Sheldon Lake,	88.44	27	IAmb	IAmb	11 02 18.8	
	comp=Z,10nm,1.2s						
MMPY	Sheldon Lake,	88.44	27	P	P	11 02 12.7	+0.4
	baz=259						
F31M	Tsiigehtchic	88.47	22	P	P	11 02 12.3	+0.1
	baz=256						
INK	Inuvik	88.76	21	IAmb	IAmb	11 02 47.6	
	comp=Z,11nm,1.1s						
INK	Inuvik	88.76	21	LR	LR	11 37 38.0	
	comp=Z,285nm,21.7s,baz=241,slow=33						
INK	Inuvik	88.76	21	P	P	11 02 14.1	+0.6
	baz=256						
WTLY	Watson Lake, Y	89.17	30	IAmb	IAmb	11 02 22.4	
	comp=Z,19nm,1.2s						
WTLY	Watson Lake, Y	89.17	30	P	P	11 02 16.5	+0.8
	baz=261						
TOAD	Toad River Com	90.80	31	P	P	11 02 23.6	+0.2
	baz=264						
BEAVL	Fort Liard	91.02	30	P	P	11 02 24.9	+0.6
	baz=264						
WRGLY	Wrigley	92.06	27	P	P	11 02 29.5	+0.4
	baz=266						
ABKAR	Akbulak array	92.68	319	P	P	11 02 30.5	-1.7
SYO	Syowa Base	93.45	200	⇑eX	P	11 02 33.0	-2.4
ARTI	Arti	93.87	326	LR	LR	11 45 04.4	
	comp=Z,401nm,20.6s,baz=91,slow=36						
ARTI	Arti	93.87	326	d iP	P	11 02 37.3	-0.3
ARTI						11 06 22.2	
ARTI				S	SKSac	11 13 11.7	-0.7
ARTI				SS	SS	11 20 03.1	-3.2
ARTI				pmax	pmax		
	comp=Z,8.0nm,1.5s						
ARTI				MLR	MLR		
	comp=Z,423nm,20.0s						
AKTO	Aktyubinsk	93.97	320	LR	LR	11 46 13.8	
	comp=Z,254nm,19.4s,baz=64,slow=36						
NVAR	Mina Array Bea	94.05	52	P	P	11 02 39.7	+0.6
	comp=Z,0.8nm,0.9s,baz=270,slow=8.1,SNR=5.4						
	comp=Z,0.8nm,0.9s						
BMO	Blue Mountains	94.92	45	IAmb	IAmb	11 02 59.9	
	comp=Z,15nm,1.8s						
NEW	Newport	95.07	42	IAmb	IAmb	11 02 59.5	
	comp=Z,9.7nm,1.2s						
NEW	Newport	95.07	42	LR	LR	11 38 12.7	
	comp=Z,266nm,21.5s,baz=272,slow=31						
YKAW3	Yellowknife Wh	96.11	28	IAmb	IAmb	11 03 02.2	
	comp=Z,5.0nm,0.9s						
YKA	Yellowknife Ar	96.11	28	P	P	11 02 46.5	-1.1
YKA	Yellowknife Ar	96.11	28	P	P	11 02 47.5	-0.1
	comp=Z,2.1nm,0.9s,baz=280,slow=4.9,SNR=19						
YKA				LR	LR	11 43 54.4	
	comp=Z,368nm,20.2s,baz=284,slow=34						
	comp=Z,2.1nm,0.9s						
YKA	Yellowknife Ar	96.11	28	ceP	P	11 02 48.2	+0.5
YKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
YKAW1	Yellowknife Wh	96.17	28	IAmb	IAmb	11 03 02.5	
	comp=Z,6.5nm,1.1s						
SPR3	Spring Creek 3	97.16	51	IAmb	IAmb	11 02 59.8	
	comp=Z,4.2nm,1.1s						
KIRV	Kirov	98.60	329	LR	LR	11 49 34.2	
	comp=Z,318nm,21.4s,baz=78,slow=37						
MNK	Minsk	111.13	328	i P	Pdif	11 03 54.1	-0.7
	comp=E,3.0nm,0.5s						
MNK				i P	Pdif	11 03 54.1	-0.7
	comp=N,10.0nm,1.1s						
MNK				i P	Pdif	11 03 54.1	-0.7
	comp=Z,3.0nm,0.6s,baz=65						
MNK				i PP	PP	11 08 32.1	-0.4
MNK				i PPP	PPP	11 10 52.0	
MNK				i SKS	SKSdf	11 15 05.9	-0.1
MNK				i S	Sdif	11 16 12.0	-0.9
MNK				i SS	SS	11 24 06.3	+1.9
MNK				i SSS	SSS	11 28 14.1	
MNK				i LRM	MLR	11 54 55.2	
	comp=E,1µm,16.7s						
MNK				i LRM	MLR	11 55 49.4	
	comp=N,1µm,20.1s						
MNK				i LRM	MLR	11 56 02.5	
	comp=Z,334nm,20.1s						
MNK	Minsk	111.13	328	i P	Pdif	11 03 54.1	-0.7
MNK				i		11 08 32.0	
MNK				i PPP	PPP	11 10 52.0	
MNK				i		11 15 05.9	
MNK				i SS	SS	11 24 06.3	+1.9
MNK				i SSS	SSS	11 28 14.0	
MNK				pmax	pmax		
	comp=N,10.0nm,1.1s						
MNK				pmax	pmax		
	comp=E,3.0nm,0.5s						
MNK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MNK				MLR	MLR		
	comp=E,1µm,17.0s						
MNK				MLR	MLR		
	comp=N,1µm,20.0s						
MNK				MLR	MLR		
	comp=Z,334nm,20.0s						
CLL	Collm	120.48	330	ePKPdf	PKiKP	11 08 13.0	+1.1
CLL				AMS	AMS	12 04 00.0	
	comp=Z,300nm,19.0s						
GERES	GERESS Array B	121.58	327	PKP	PKPdf	11 08 13.8	-0.4
	comp=Z,0.7nm,0.6s,baz=48,slow=1.5,SNR=3.8						
TORD	Torodi Ar. Bea	146.97	288	PKPbc	PKPbc	11 09 03.4	-0.6
	comp=Z,15nm,1.0s,baz=69,slow=3.3,SNR=14						
DBIC	Dimbokro	154.40	277	PKPab	PKPab	11 09 36.0	0.0
	comp=Z,10.0nm,1.0s,baz=116,slow=1.7,SNR=4.5						

DJA 08 10:50:40.7±0.2,1°S±2°×12°2E±°,h10^{km},M3.8/11,mb4.2/2, MLv3.6/11,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
APSI	Ampana	0.42	194	P	Pg	10 50 48.3	-0.7
MRSI	Marisa	0.99	11	P	Pg	10 50 59.6	-0.2
MRSI				S	Sg	10 51 11.7	-1.0
LUWI	Luwuk	1.16	118	P	Pg	10 51 02.9	0.0
LUWI				S	Sn	10 51 18.6	-0.2
PCI	Palu	1.96	258	P	Pn	10 51 13.1	-0.9
MPSI	Mapaga	2.03	294	P	Pn	10 51 13.8	-1.2
TTSI	Tana Toraja	3.18	217	P	Pn	10 51 30.2	-0.6
SPSI	Sidrap Palu	3.97	210	P	Pn	10 51 43.1	+1.4
BNSI	Bone	4.21	203	P	Pn	10 51 46.6	+1.6
SANI	Sanana	4.51	110	P	Pn	10 51 48.6	-0.5
BBSI	Bau Bau	5.02	171	P	Pn	10 51 56.2	0.0
	47nm,0.9s						

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01				*i* S	Sn	12 01 29.5	-2.1
PB01	IPOC Station P	3.74	322	*e*P	Pn	12 00 45.4	-0.3
PB01				*e*S	Sn	12 01 31.0	-0.6
PB01				IAML		12 01 33.0	
	comp=Z,690nm,0.2s						
AC01	Pan de Azucar	3.90	236		Pn	12 00 47.2	-0.3
AC01	Pan de Azucar	3.90	236	*e*P	Pn	12 00 47.1	-0.3
AC01				*i* S	Sn	12 01 32.8	-2.0
AC01	Pan de Azucar	3.90	236	*e*P	Pn	12 00 46.8	-0.7
AC01				*e*S	Sn	12 01 32.9	-2.0
AC01				IAML		12 01 34.2	
	comp=Z,522nm,0.3s						
PB08	IPOC Station P	4.34	332		Pn	12 00 54.1	+0.7
AC06	Mina Casimiro	4.50	222		Pn	12 00 54.6	-0.4
AC06	Mina Casimiro	4.50	222	*e*P	Pn	12 00 53.7	-1.4
AC06				*i* S	Sn	12 01 46.7	-1.9
TA01	Diego Aracena	4.52	319		Pn	12 00 54.6	-0.7
TA01	Diego Aracena	4.52	319	*e*P	Pn	12 00 54.4	-0.9
TA01				*i* S	Sn	12 01 46.2	-2.7
TA01	Diego Aracena	4.52	319	*e*P	Pn	12 00 55.0	-0.3
TA01				*e*S	Sn	12 01 47.5	-1.4
TA01				IAML		12 01 51.9	
	comp=Z,296nm,0.5s						
GO03	Copiapo	4.61	219		Pn	12 00 56.1	-0.3
GO03	Copiapo	4.61	219	*e*P	Pn	12 00 55.7	-0.8
GO03				*i* S	Sn	12 01 48.9	-2.1
GO03	Copiapo	4.61	219	*e*P	Pn	12 00 55.4	-1.0
GO03				*e*S	Sn	12 01 49.5	-1.6
TA02	Huaiquique	4.72	321	Pn	Pn	12 00 58.0	+0.1
TA02	Huaiquique	4.72	321	*e*P	Pn	12 00 58.2	+0.4
TA02				*i* S	Sn	12 01 51.1	-2.4
GO01	Chusmiza	4.78	334		Pn	12 00 59.5	+0.4
GO01	Chusmiza	4.78	334	*e*P	Pn	12 00 59.8	+0.8
GO01				*e*S	Sn	12 01 55.7	0.0
VCA	Vinchina	4.83	193	*e*P	Pn	12 01 03.2	+3.9
VCA				*e*S	Sn	12 01 59.0	+2.7
PB11	IPOC Station P	4.89	329		Pn	12 00 59.6	-0.6
AC04	Llanos de Chal	5.55	220		Pn	12 01 07.5	-0.9
AC05	El Transito	5.63	211		Pn	12 01 09.4	-0.2
LCO	Las Campanas	5.98	213		Pn	12 01 13.4	-0.9
PB16	IPOC Station P	6.11	337		Pn	12 01 16.3	0.0
CFA	Coronel Fontan	7.64	188	P	Pn	12 01 35.6	-0.1
	comp=Z,0.9nm,0.3s,baz=232,slow=21,SNR=15						
CFA				S	Sn	12 02 56.4	-5.7
	comp=Z,5.5nm,0.3s,baz=250,slow=20,SNR=14						
LPAZ	La Paz	7.75	352		Pn	12 01 38.0	+0.2
LPAZ	La Paz	7.75	352	P	Pn	12 01 38.5	+0.7
	comp=Z,2.9nm,0.4s,baz=148,slow=2.4,SNR=16						
LPAZ				S	Sn	12 03 03.2	-2.4
	comp=Z,6.9nm,0.6s,baz=111,slow=24,SNR=6.3						
LPAZ	La Paz	7.75	352	*e*P	Pn	12 01 38.7	+0.9
CO06	Fray Jorge	7.81	211	Pn	Pn	12 01 37.2	-0.6
MURT	Porto Murtinho	8.97	77	*e*P	Pn	12 01 52.4	-0.7
BBSD	Serra de San D	9.05	43	*e*P	Pn	12 01 52.1	-2.0
CPUP	Villa Florida	9.06	107	P	Pn	12 01 51.6	-2.6
	comp=Z,1.5nm,0.8s,baz=152,slow=12,SNR=7.5						
VA06	Catapilco	9.32	203	Pn	Pn	12 01 55.9	-1.6
SIV	San Ignacio	9.73	36	P	Pn	12 02 00.7	-2.3
	comp=Z,5.4nm,0.5s,baz=213,slow=12,SNR=26						
AQDB	Aquidauana	11.04	74	*e*P	Pn	12 02 19.7	-0.1
PTLB	Pontes e Lacer	11.28	42	*e*P	Pn	12 02 21.2	-1.8
TRCB	Terra Rica	13.25	88	Pn	Pn	12 02 46.4	-1.4
TRCB	Terra Rica	13.25	88	*e*P	Pn	12 02 47.5	-0.4
SALV	Santo Antonio	13.34	55	*e*P	Pn	12 02 47.1	-1.9
PTGB	Pitanga	13.63	96	*e*P	P	12 02 55.2	+0.1
CPSB	Cacapava Do Su	13.64	121	*e*P	P	12 02 53.5	-1.6
PLTB	Pedras Altas	14.13	126		Pn	12 02 57.4	-1.4
LDASE	Londrina, Braz	14.56	91	*e*P	Pn	12 03 03.0	-1.2
TRQA	Tornquist	14.64	164	Pn	Pn	12 03 03.1	-1.9
PCMB	Pacaembu	14.71	84	*e*P	P	12 03 06.8	-0.2
NNA	Nana	15.17	320		Pn	12 03 10.8	-0.9
NNA				IAmb	IAmb	12 03 20.3	
	comp=Z,35nm,1.4s						
FRTB	Fartura	15.99	91	*e*P	P	12 03 20.4	-0.8
ITRB	Iturama	16.03	78	*e*P	Pn	12 03 22.4	+0.3
ARAG	Araguaiana, MT	16.49	63	*e*P	Pn	12 03 27.4	-0.2
PLCA	Paso Flores	16.94	189	P	P	12 03 32.1	+0.6
	comp=Z,1.2nm,0.6s,baz=6.7,slow=13,SNR=6.0						
VAO	Valinhos	18.41	91	P	P	12 03 45.6	-2.0
VAO	Valinhos	18.41	91	*e*P	P	12 03 46.7	-1.0
IPMB	Ipameri, GO	18.53	75	*e*P	P	12 03 48.5	-0.6
SNDB	Serra Nova Dou	19.12	54	*e*P	P	12 03 54.1	-1.2
BDFB	Brasilia	19.69	68		P	12 03 59.7	-1.9
BDFB	Brasilia	19.69	68	P	P	12 04 01.4	-0.2
	comp=Z,23nm,0.7s,baz=244,slow=11,SNR=29						
TBTG	Tabatinga, AM	19.91	351	P	P	12 04 02.3	-1.5
TBTG	Tabatinga, AM	19.91	351	*e*P	P	12 04 05.0	+1.2
TEFE	Tefe	20.51	7	*e*P	P	12 04 11.3	+1.1
JANB	Januaria	23.14	72	*e*P	P	12 04 34.8	-1.4
SMTB	Santa Maria do	23.90	54	*e*P	P	12 04 42.5	-0.6
COHC	Cochancay	24.48	329		P	12 04 47.9	-0.3
OTAV	Otavalo	26.54	334	P	P	12 05 05.9	-1.4
FLOC	Florencia	26.79	341	P	P	12 05 08.6	-0.5
FLOC				IAmb	IAmb	12 05 11.4	
	comp=Z,8.9nm,0.9s						
ROSC	El Rosal	29.55	345	LR	LR	12 18 17.6	
	comp=Z,136nm,19.7s,baz=74,slow=38						
MDP	Montagnes des	32.14	28	P	P	12 05 55.9	-0.4
	comp=Z,7.8nm,0.8s,baz=158,slow=5.4,SNR=1.7						
	comp=Z,7.8nm,0.8s						
VNA3	Neumayer Olymp	57.14	161	⇑P	P	12 09 14.6	+1.8
	comp=Z,3.4nm,0.7s						
VNA2	Neumayer--Watz	57.71	160	⇑P	P	12 09 18.5	+1.8
	comp=Z,3.2nm,0.7s,baz=278,slow=7.5						
SNAA	Sanae	59.34	161	⇑P	P	12 09 29.6	+1.6
	comp=Z,45nm,0.8s						
SNAA	Sanae	59.34	161	P	P	12 09 26.3	-1.8
SNAA	Sanae	59.34	161	P	P	12 09 28.8	+0.7
	comp=Z,1.9nm,0.9s,baz=276,slow=8.1,SNR=11						
	comp=Z,1.9nm,0.9s						
TROLL	Troll, Antarti	61.06	161	⇑P	P	12 09 41.7	+1.9
	comp=Z,91nm,0.5s						
WVT	Waverly	62.97	341	P	P	12 09 52.4	-0.4
WVT				IAmb	IAmb	12 09 53.6	
	comp=Z,6.6nm,0.7s						
SAND	Sanderson	63.38	326	IAmb	IAmb	12 09 58.4	
	comp=Z,4.6nm,1.0s						
T47A	Sharon Grove	63.56	342	IAmb	IAmb	12 09 57.5	
	comp=Z,7.8nm,1.1s						
TXAR	Lajitas Array	63.69	324	P	P	12 09 59.3	+1.6
	comp=Z,0.6nm,0.7s,baz=156,slow=6.3,SNR=5.8						
	comp=Z,0.6nm,0.7s						
PBMO	Poplar Bluff	64.37	339	IAmb	IAmb	12 10 03.4	
	comp=Z,7.1nm,0.8s						
CCM	Cathedral Cave	65.80	339		P	12 10 10.7	-0.4
CCM				IAmb	IAmb	12 10 12.5	
	comp=Z,6.7nm,0.7s						
QSPA	South Pole Qui	66.19	180	P	P	12 10 15.7	+2.2
QSPA				IAmb	IAmb	12 10 16.2	
	comp=Z,3.6nm,0.7s						
QSPA	South Pole Qui	66.19	180	P	P	12 10 15.5	+2.0
	comp=Z,2.7nm,0.6s,baz=19,slow=0.3,SNR=35						
	comp=Z,2.7nm,0.6s						
MNTX	Cornudas Mount	66.45	325		P	12 10 15.7	+0.3
P38A	Dawn	67.98	338	IAmb	IAmb	12 10 26.3	
	comp=Z,6.9nm,0.7s						
ECSD	EROS Data Cent	72.69	338		P	12 10 52.6	-0.6
ECSD				IAmb	IAmb	12 10 55.2	
	comp=Z,7.0nm,1.2s						
VNDA	Vanda	74.69	190	P	P	12 11 07.5	+3.0
	comp=Z,1.1nm,1.0s,baz=143,slow=5.1,SNR=4.0						
	comp=Z,1.1nm,1.0s						
NVAR	Mina Array Bea	78.54	321	P	P	12 11 28.6	+1.7
	comp=Z,0.6nm,0.7s,baz=105,slow=4.6,SNR=4.5						
	comp=Z,0.6nm,0.7s						
YNE	Yellowstone No	79.09	330	IAmb	IAmb	12 11 33.0	
	comp=Z,5.0nm,0.8s						
GCMT	Greycliff	79.55	331	P	P	12 11 31.9	-0.1
SFJD	Kangerlussuaq	91.56	6	LR	LR	12 56 15.2	
	comp=Z,65nm,20.4s,baz=148,slow=37						
YKA	Yellowknife Ar	94.13	340	P	P	12 12 43.5	+0.8
	comp=Z,0.9nm,0.8s,baz=131,slow=3.9,SNR=12						
	comp=Z,0.9nm,0.8s						
ASAR	Alice Springs	128.45	205	PKP	PKPdf	12 18 30.9	-0.1
	comp=Z,0.9nm,0.7s,baz=136,slow=2.0,SNR=13						
WRA	Warramunga Arr	131.62	207	PKP	PKPdf	12 18 37.4	+0.2
	comp=Z,0.5nm,0.5s,baz=158,slow=1.6,SNR=8.1						
ZALV	Zalesovo Beam	143.40	28	PKP	PKPdf	12 18 56.5	-1.2
	comp=Z,1.6nm,0.6s,baz=309,slow=7.1,SNR=8.8						
KSH	Kashi	145.20	55	PKP	PKPab	12 19 02.6	+0.8
MKAR	Makanchi Array	146.53	40	PKPbc	PKPbc	12 19 05.1	0.0
	comp=Z,2.7nm,0.7s,baz=304,slow=3.3,SNR=18						

*IDC **08** 12:19:40.4±1.1, 9°.64S×66°.36E, h0^{km}, mb3.7/6, mbtmp3.7/6, Error ellipse: s-maj=36.2km s-min=28.2km az=140.0*

ISC 08 12:19:41.8±1.0**, 9°.6S**±0°.2×**66°.4E**±0°.2**, h10**^{km}**, n13,** σ**0**^{s}**.58**/7**, mb3.7**/6**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	6.37	72	T	T	12 27 44.2	
	baz=265,slow=74						
H08S3	Diego Garcia H	6.38	72	T	T	12 27 48.9	
	baz=265,slow=74						
H08S2	Diego Garcia H	6.38	72	T	T	12 27 41.0	
	baz=265,slow=74						
CMAR	Chiang Mai Arr	42.58	49	P	P	12 27 37.9	-0.5
	0.6nm,0.7s,baz=232,slow=7.7,SNR=4.4						
	0.6nm,0.7s						
BOSA	Boshof	42.90	238	P	P	12 27 41.0	-0.1
	2.3nm,0.8s,baz=84,slow=10,SNR=5.3						
	2.3nm,0.8s						
H01W3	Cape Leeuwin H	50.25	128	T	T	13 22 22.6	
	baz=289,slow=75,SNR=11						
H01W2	Cape Leeuwin H	50.25	128	T	T	13 22 26.6	
	baz=289,slow=75,SNR=11						
H01W1	Cape Leeuwin H	50.27	128	T	T	13 22 28.0	
	baz=289,slow=75,SNR=8.8						
KURBB	Kurchatov Arra	60.94	9	P	P	12 29 55.3	+0.4
	0.3nm,0.6s,baz=213,slow=6.6,SNR=3.1						
	0.3nm,0.6s						
ASAR	Alice Springs	65.69	112	P	P	12 30 27.9	+0.7
	0.3nm,0.7s,baz=271,slow=6.7,SNR=4.8						
	0.3nm,0.7s						
WRA	Warramunga Arr	66.16	108	P	P	12 30 29.9	-0.3
	0.8nm,1.0s,baz=272,slow=6.5,SNR=3.2						
	0.8nm,1.0s						
SONM	Songino Array	67.31	28	P	P	12 30 37.3	+0.2
	1.1nm,0.7s,baz=223,slow=7.1,SNR=5.4						
	1.1nm,0.7s						
NVAR	Mina Array Bea	151.03	8	PKPbc	PKiKP	12 39 35.9	-0.5
	0.8nm,0.7s,baz=3.2,slow=2.8,SNR=5.4						

*IDC **08** 12:31:34.2±10.0, 6°.39S×129°.79E, h106^{km}±103^{km}, mb3.6/2, mbtmp3.9/5, ML3.7/3, MS3.2/2, Error ellipse: s-maj=98.7km s-min=33.9km az=52.0*

*NEIC **08** 12:31:36.1±2.1, 6°.37S±0°.08×130°.0E±0°.1, h132^{km}±12^{km}, mb4.2/8, Error ellipse: s-maj=15.0km s-min=11.3km az=85.0*

ISC 08 12:31:36.0±0.8**, 6°.37S**±0°.07×**130°.07E**±0°.09**, h146**^{km}**, n32,** σ**2**^{s}**.01**/31**, mb3.9**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.01	143	Pn	Pn	12 32 10.4	-0.6
FAKI	Fak Fak	4.06	32	Pn	Pn	12 32 37.4	+0.5
FAKI	Fak Fak	4.06	32	P	Pn	12 32 37.7	+0.7
DRS	Darwin Rock St	6.08	172	P	Pn	12 33 05.8	+2.1
MTN	Manton Dam	6.52	171		Pn	12 33 10.7	+1.1
MTN	Manton Dam	6.52	171	P	Pn	12 33 11.6	+2.0
SOEI	Soe	6.66	239	Pn	Pn	12 33 10.6	-1.0
SOEI	Soe	6.66	239	P	Pn	12 33 15.3	+3.7
KDU	Kakadu	6.71	159	P	Pn	12 33 13.2	+1.1
LUWI	Luwuk	9.00	306	Pn	Pn	12 33 40.7	-2.1
KNRA	Kununurra	9.34	188	Pn	Pn	12 33 47.7	+0.4
FITZ	Fitzroy Crossi	12.43	200	Pn	Pn	12 34 28.7	+0.7
FITZ	Fitzroy Crossi	12.43	200	P	Pn	12 34 27.8	-0.2
	0.3nm,0.3s,baz=25,slow=10,SNR=19						
FITZ				S	Sn	12 36 34.9	-11
	2.7nm,0.4s,baz=125,slow=23,SNR=8.9						
	1.1nm,0.4s						
WB0	Warramunga Arr	13.96	163		Pn	12 34 46.9	-0.8
DAV	Davao City (W)	14.08	341	LR	LR	12 40 16.1	
	comp=Z,37nm,19.1s,baz=186,slow=37						
WRA	Warramunga Arr	14.11	163	Pn	Pn	12 34 48.0	-1.6
WRA	Warramunga Arr	14.11	163	P	Pn	12 34 48.5	-1.1
	0.4nm,0.3s,baz=339,slow=13,SNR=33						
WRA				S	Sn	12 37 09.6	-16
	1.4nm,0.5s,baz=343,slow=22,SNR=10						
	0.7nm,0.4s						
WR8	Warramunga Arr	14.17	163	Pn	Pn	12 34 48.8	-1.6
COEN	Coen	14.93	121		P	12 35 02.1	+0.2
COEN				IAmb	IAmb	12 35 05.9	
	comp=Z,15nm,1.0s						
AS31	Alice Springs	17.59	168	P	Pn	12 35 32.6	+0.4
ASAR	Alice Springs	17.59	168	P	Pn	12 35 32.7	+0.5
ASAR	Alice Springs	17.59	168	P	Pn	12 35 33.3	+1.1
	comp=Z,0.4nm,0.3s,baz=347,slow=9.7,SNR=26						
ASAR				S	S	12 38 39.1	-7.5
	comp=Z,0.9nm,0.6s,baz=354,slow=28,SNR=4.4						
	comp=Z,1.5nm,0.5s						
PSA00	Pilbara Seismi	18.06	212	P	P	12 35 36.1	-0.1
PSA00				IAmb	IAmb	12 35 50.4	
	comp=Z,14nm,1.1s						
TGY	Tagaytay City	22.27	336	LR	LR	12 46 44.2	
	comp=Z,120nm,18.4s,baz=14,slow=41						
MORW	Morawa	26.18	209		P	12 36 55.9	-1.1
STKA	Stephens Creek	27.57	158	P	P	12 37 11.6	+2.2
STKA	Stephens Creek	27.57	158	P	P	12 37 11.8	+2.4
	comp=Z,1.0nm,0.6s,baz=324,slow=14,SNR=1.6						
	comp=Z,1.0nm,0.6s						
EIDS	Eidsvold	27.58	136	P	P	12 37 10.4	+0.8
MK31	Makanchi Array	67.74	327	P	P	12 42 17.7	-0.1
MK31				IAmb	IAmb	12 42 24.8	
	comp=Z,3.1nm,1.4s						
MKAR	Makanchi Array	67.74	327	P	P	12 42 18.7	+0.8
MKAR	Makanchi Array	67.74	327	P	P	12 42 19.5	+1.7
	comp=Z,0.9nm,0.6s,baz=124,slow=8.1,SNR=7.2						
	comp=Z,0.9nm,0.6s						
MAKZ	Makanchi	67.92	327	P	P	12 42 19.5	+0.6
MAKZ				IAmb	IAmb	12 42 20.4	
	comp=Z,5.8nm,1.2s						

NOU 08 13:09:41.0, 11°.02S×**163°.25E, h0**^{km}**, mB5.7**/10**, Solomon Islands, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HURO	Huro Makira	1.43	292	P	Pn	13 10 06.2	-2.1
LUES	Luesalemba Tem	2.64	83	P	Pn	13 10 23.2	-1.7
NGOA	Tingoa Renbel	3.17	260	P	Pn	13 10 30.2	-2.0
ALEG	Aligegeo Malai	3.38	312	P	Pn	13 10 35.5	+0.5
ALEG	Aligegeo Malai	3.38	312	S	Sn	13 11 16.6	+0.7
SAVO	Savo Central	3.86	298	P	Pn	13 10 43.2	+1.5
TATA	Tatamba Isabel	4.29	307	P	Pn	13 10 48.0	+0.4
VLAKA	Lakatoro	6.48	142	P	Pn	13 11 18.1	+0.4

*SJA **08** 13:19:02.7±0.6, 19°.54S×69°.43W, h120^{km}±3^{km}, ML3.7, MW3.6*

*GUC **08** 13:19:05.3±0.7, 19°.56S×69°.42W, h112^{km}±3^{km}, ML3.5*

ISC 08 13:19:04.5±1.4**, 19°.58S**±0°.03×**69°.53W**±0°.07**, h115**^{km}±7^{km}**, n28,** σ**1**^{s}**.23**/50**, 2C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB11	IPOC Station P	0.22	212	⇑*i*P	Pn	13 19 20.7	-0.1
PB11				*e*S	Sn	13 19 33.4	+0.4
PB11	IPOC Station P	0.22	212	*e*P	Pn	13 19 20.4	-0.4
PB11				*e*S	Sn	13 19 33.5	+0.6
PB11				IAML		13 19 34.1	
	comp=Z,4μm,0.2s						
GO01	Chusmiza	0.33	106	⇓*i*P	Pn	13 19 20.7	-0.9
GO01				*e*S	Sn	13 19 34.0	-0.4
GO01	Chusmiza	0.33	106	*e*P	Pn	13 19 20.7	-0.9
GO01				*e*S	Sn	13 19 34.0	-0.4
PX03	IPOC Station P	0.83	186	*e*P	Pn	13 19 24.0	-0.6
PX03				*i* S	Sn	13 19 40.0	+0.2
PX02	IPOC Station P	0.88	314	⇑*i*P	Pn	13 19 23.9	-1.1
TA02	Huaiquique	0.89	219	*e*P	Pn	13 19 25.6	+0.5
TA02				*i* S	Sn	13 19 41.4	+0.8
TA02	Huaiquique	0.89	219	*e*P	Pn	13 19 25.5	+0.5
TA02				*e*S	Sn	13 19 42.8	+2.3
TA02				IAML		13 19 45.4	
	comp=Z,2μm,0.1s						
TA01	Diego Aracena	1.16	212	*i* P	Pn	13 19 28.0	+0.3
TA01				*e*S	Sn	13 19 45.9	+0.5
TA01				IAML		13 19 46.6	
	comp=N,2μm,0.3s						
TA01	Diego Aracena	1.16	212	*e*P	Pn	13 19 27.9	+0.1
TA01				*e*S	Sn	13 19 46.4	+1.0
TA01				IAML		13 19 47.0	
	comp=Z,480nm,0.2s						
PB16	IPOC Station P	1.23	1	*e*P	Pn	13 19 28.7	-0.5
PB16				*i* S	Sn	13 19 47.2	-0.6
PB16				IAML		13 19 49.8	
	comp=N,929nm,0.3s						
PB16	IPOC Station P	1.23	1	*e*P	Pn	13 19 28.1	-1.2
PB16				*e*S	Sn	13 19 47.8	0.0
PB16				IAML		13 19 50.4	
	comp=Z,736nm,0.5s						
AP01	Chacalluta	1.42	327	*e*P	Pn	13 19 30.4	-0.4
AP01				*i* S	Sn	13 19 50.4	-0.2
AP01	Chacalluta	1.42	327	*e*P	Pn	13 19 30.3	-0.4
AP01				*e*S	Sn	13 19 50.7	+0.1
AP01				IAML		13 19 52.1	
	comp=Z,3μm,0.2s						
PB01	IPOC Station P	1.46	178	*e*P	Pn	13 19 31.7	+0.4
PB01				*e*S	Sn	13 19 51.9	+0.3
PB01	IPOC Station P	1.46	178	*e*P	Pn	13 19 31.4	+0.1
PB01				*e*S	Sn	13 19 52.2	+0.6
PB01				IAML		13 19 52.5	
	comp=Z,1μm,0.2s						
PB18	Visviri	1.98	1	*e*P	Pn	13 19 38.6	+0.6
PB18				*i* S	Sn	13 20 06.7	+3.2
PB09	IPOC Station P	2.23	173	*e*P	Pn	13 19 41.5	+0.7
PB09	IPOC Station P	2.23	173	*e*P	Pn	13 19 41.3	+0.5
PB09				*e*S	Sn	13 20 10.1	+1.6
PB09				IAML		13 20 10.6	
	comp=Z,215nm,0.7s						
PB03	IPOC Station P	2.47	185	⇓*e*P	Pn	13 19 44.0	+0.1
PB03				*e*S	Sn	13 20 12.8	-1.3
PB03				IAML		13 20 13.7	
	comp=E,262nm,0.3s						
PB03	IPOC Station P	2.47	185	*e*P	Pn	13 19 43.8	-0.1
PB03				*e*S	Sn	13 20 14.3	+0.2
PB03				IAML		13 20 18.6	
	comp=Z,179nm,0.2s						
PB06	IPOC Station P	3.12	181	*e*P	Pn	13 19 52.2	-0.1
PB06	IPOC Station P	3.12	181	*e*P	Pn	13 19 52.5	+0.1
PB06				*e*S	Sn	13 20 33.6	+4.3
PB06				IAML		13 20 53.9	
	comp=Z,131nm,0.7s						
PB05	IPOC Station P	3.32	191	*e*P	Pn	13 19 54.6	-0.5
PB05	IPOC Station P	3.32	191	*e*P	Pn	13 19 54.6	-0.5
PB05				*e*S	Sn	13 20 20.0	-14
PB05				IAML		13 21 01.0	
	comp=Z,54nm,1.4s						
LPAZ	La Paz	3.53	22	*e*P	Pn	13 19 58.5	+0.2
PB10	IPOC Station P	4.03	193	*e*P	Pn	13 20 03.4	-1.0
PB10				*e*S	Sn	13 20 50.9	0.0
PB10				IAML		13 20 52.2	
	comp=Z,57nm,3.2s						
PB14	IPOC Station P	5.09	189	*e*P	Pn	13 20 17.3	-1.7
PB14				*e*S	Sn	13 21 12.8	-4.0
PB14				IAML		13 21 14.3	
	comp=Z,42nm,0.2s						

WEL 08 13:22:32.2±0.9**, 37°S**±9°×**17°8E**±°**, h175**^{km}**, M3.3**/11**, ML3.6**/6**, MLv3.3**/11**, Error ellipse: s-maj=14.4km s-min=6.1km az=39.8, confirmed, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.02	149	P	Pn	13 22 59.5	0.0
MXZ				S	Sn	13 23 21.0	+0.4
HAZ	Te Kaha	1.07	174	P	Pn	13 22 59.8	-0.1
HAZ				S	Sn	13 23 21.3	-0.1
PKGZ	Pakihiroa	1.22	164	P	Pn	13 23 01.6	+0.4
MYRZ	Mayor Island	1.27	242	P	Pn	13 23 02.3	+0.7
RUGZ	Raukumara Rang	1.27	179	P	Pn	13 23 01.0	-0.7
WHRZ	Whale Island	1.28	205	P	Pn	13 23 02.4	+0.7
WMGZ	Waiomatatini S	1.28	152	P	Pn	13 23 01.9	+0.2
WMGZ				S	Sn	13 23 25.8	+1.2
OPRZ	Ohinepanea	1.44	217	P	Pn	13 23 03.4	+0.2
PUZ	Puketiti	1.46	161	P	Pn	13 23 03.5	+0.1
PUZ				S	Sn	13 23 27.5	-0.1
MARZ	Manawahe	1.51	211	P	Pn	13 23 04.2	+0.4
TWGZ	Tauwhareparae	1.51	170	P	Pn	13 23 04.5	+0.7
KUZ	Kuaotunu	1.55	267	P	Pn	13 23 04.4	+0.2
EDRZ	Edgecumbe	1.59	207	P	Pn	13 23 05.4	+0.7
URZ	Urewera	1.62	195	P	Pn	13 23 04.7	-0.2
MWZ	Matawai	1.64	183	P	Pn	13 23 05.1	-0.1
TKGZ	Te Karaka	1.75	175	P	Pn	13 23 06.3	+0.1
GRZ	Great Barrier	1.82	283	P	Pn	13 23 07.0	+0.1
CNGZ	Carnagh Statio	1.84	166	P	Pn	13 23 07.5	+0.4
RTZ	Ruatahuna	1.99	195	P	Pn	13 23 08.1	-0.8
HRRZ	Handcock Road	2.01	212	P	Pn	13 23 09.8	+0.7
RIGZ	Rimuhau	2.01	177	P	Pn	13 23 08.8	-0.3
WIAZ	Waiheke Island	2.02	266	P	Pn	13 23 09.5	+0.4
MKAZ	Moumakai	2.04	258	P	Pn	13 23 10.0	+0.7
GRRZ	Galatos Road	2.06	216	P	Pn	13 23 10.3	+0.7
PRRZ	Plateau Road	2.06	209	P	Pn	13 23 09.6	+0.1
SNGZ	Shannon Statio	2.10	187	P	Pn	13 23 09.5	-0.5
ALRZ	Allen Road	2.14	209	P	Pn	13 23 10.4	0.0
ETAZ	East Tamaki Re	2.20	262	P	Pn	13 23 11.9	+0.8
PRGZ	Paritu Road	2.24	175	P	Pn	13 23 11.3	-0.3
MTHZ	Maungataniwha	2.25	196	P	Pn	13 23 11.0	-0.7
MTHZ				S	Sn	13 23 42.0	-0.5
RAHZ	Arahi	2.27	191	P	Pn	13 23 11.6	-0.3
KUTZ	Kaahu Road	2.31	218	P	Pn	13 23 13.0	+0.7
KNZ	Kokohu	2.33	180	P	Pn	13 23 11.8	-0.8
TLZ	Tolley Road	2.34	225	P	Pn	13 23 13.9	+1.1
MRHZ	Matea Rd	2.35	204	P	Pn	13 23 12.1	-0.8
WHHZ	Waihua	2.40	188	P	Pn	13 23 13.0	-0.5
MHGZ	Mahia Peninsul	2.47	175	P	Pn	13 23 13.7	-0.5
NMHZ	Naumai	2.49	195	P	Pn	13 23 14.4	-0.1
ARHZ	Aropaoanui	2.62	191	P	Pn	13 23 15.4	-0.6
BKZ	Black Stump Fm	2.63	200	P	Pn	13 23 14.8	-1.4
WCZ	Waipu Caves	2.77	285	P	Pn	13 23 15.8	-2.0
MCHZ	McNeill Hill	2.85	195	P	Pn	13 23 18.0	-0.7
NTVZ	North Tongarir	2.87	212	P	Pn	13 23 18.7	-0.3
TMVZ	Te Maari	2.87	212	P	Pn	13 23 18.7	-0.4
HIZ	Hauiti	2.87	230	P	Pn	13 23 19.9	+1.0
KWHZ	Kaweka Forest	2.90	199	P	Pn	13 23 18.2	-1.2
OTVZ	Oturere	2.92	212	P	Pn	13 23 19.1	-0.7
SNVZ	South Ngauruho	2.95	212	P	Pn	13 23 19.5	-0.6
WNVZ	Wahianoa	3.09	211	P	Pn	13 23 20.5	-1.3
MOVZ	Moawhango	3.10	208	P	Pn	13 23 20.2	-1.6
KRHZ	Kereru	3.12	198	P	Pn	13 23 20.1	-1.9
KAHZ	Kahuranaki	3.16	191	P	Pn	13 23 21.2	-1.3
PXZ	Pawanui	3.39	190	P	Pn	13 23 23.1	-2.3
PNHZ	Pukenui	3.41	199	P	Pn	13 23 23.5	-2.2
WPHZ	Waipukurau	3.50	195	P	Pn	13 23 24.5	-2.2
TSZ	Takapari Road	3.61	201	P	Pn	13 23 25.7	-2.5
PRHZ	Porangahau	3.66	192	P	Pn	13 23 27.3	-1.5
DVHZ	Dannevirke	3.79	197	P	Pn	13 23 27.5	-2.9
ANWZ	Angora Road	3.87	193	P	Pn	13 23 28.8	-2.7
POWZ	Post Office Ro	3.98	201	P	Pn	13 23 30.0	-2.8
PRWZ	Pori Road	4.08	198	P	Pn	13 23 31.3	-2.8
BFZ	Birch Farm	4.13	195	P	Pn	13 23 31.6	-3.1
MRZ	Mangatainoka R	4.28	202	P	Pn	13 23 33.3	-3.4
TIWZ	Tintock	4.30	198	P	Pn	13 23 33.8	-3.2
HOWZ	Holdsworth Sta	4.52	201	P	Pn	13 23 35.9	-3.9
OGWZ	Otaki Gorge	4.55	204	P	Pn	13 23 36.6	-3.5
TMWZ	Te Maipa	4.62	197	P	Pn	13 23 37.5	-3.5
KIW	Kapiti Island	4.68	206	P	Pn	13 23 38.2	-3.7
CAW	Cannon Point	4.85	204	P	Pn	13 23 39.9	-4.1
TCW	Tory Channel	5.22	209	P	Pn	13 23 44.6	-4.3
TUWZ	Tuamarina	5.54	210	P	Pn	13 23 48.5	-4.5
KHZ	Kahutara	6.54	208	P	Pn	13 24 01.0	-5.1

*DJA **08** 13:23:10.8±1.5, 12°N±20°×12°7E±°, h21^{km}±34^{km}, M5.4/11, mb5.0/11, mB5.5/7, MLv6.1/2, Mw(mB)4.9/7, MwMwp4.7/1, Mwp5.0/1*

*BJI **08** 13:23:34.2, 9°.48N×126°.61E, h27^{km}, mB4.8/19, mb4.6/48, Ms4.4/47, Ms7 4.2/47*

*NEIC **08** 13:23:39.5±1.9, 9°.65N±0°.08×126°.5E±0°.1, h43^{km}±8^{km}, mb4.8/69, Error ellipse: s-maj=16.4km s-min=11.0km az=87.0*

*GCMT **08** 13:23:39.5±0.4, 9°.53N±0°.03×126°.91E±0°.03, h30^{km}±1^{km}, MW4.9/75, Moment Tensor Solution. s20,c23; s75,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.25±.24; $M_{\theta\theta}$0.33±.13; $M_{\phi\phi}$-2.58±.15; $M_{r\theta}$0.08±.19; $M_{\theta\phi}$-0.29±.07; $M_{\phi r}$1.81±.17; Best double couple: $M_0$3.03100×10^{16} NP1:ϕ_s188.00000°, δ27.00000°, λ94.00000°. NP2: ϕ_s4.00000°, δ63.00000°, λ88.00000°. Principal axes: T 2.8530, Plg72.0000°, Azm269.0000°; N 0.3510, Plg2.0000°, Azm5.0000°; P -3.2090, Plg18.0000°, Azm95.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **08** 13:23:43.5±1.9, 9°.58N×126°.44E, h84^{km}±18^{km}, mb3.9/24, mbtmp4.2/25, MS4.0/36 Error ellipse: s-maj=20.5km s-min=10.6km az=79.0*

ISC 08 13:23:39.1±0.5**, 9°.64N**±0°.04×**126°.53E**±0°.07**, h43**^{km}±4^{km}**, h42**^{km}**:pP-P, n164,** σ**2**^{s}**.13**/138**, mb4.8**/78**, MS4.1**/47**, 3C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	2.72	200		Pn	13 24 21.2	+0.8
DAV	Davao City (W)	2.72	200	P	Pn	13 24 24.9	+4.5
	258nm,0.5s,baz=96,slow=14,SNR=12						
DAV				S	Sn	13 24 56.3	+4.2
	434nm,0.5s,baz=310,slow=16,SNR=4.7						
DAV				LR	LR	13 25 33.5	
	comp=Z,5μm,21.4s,baz=37,slow=42						
DAV	Davao City (W)	2.72	200	P	Pn	13 24 23.0	+2.6
SGSI	Sangihe	6.00	190	P	Pn	13 25 10.5	+5.1
TGY	Tagaytay City	7.05	310	LR	LR	13 28 25.2	
	comp=Z,1μm,19.5s,baz=204,slow=40						
TNTI	Ternate	8.85	175		Pn	13 25 44.0	-0.5
TNTI	Ternate	8.85	175	P	Pn	13 25 49.3	+4.8
	873nm65nm,0.8s						
MYLDM	Lahad Datu	9.12	241		Pn	13 25 49.6	+1.5
KMSI	Cibinong	9.36	196	P	Pn	13 25 55.9	+4.4
	2μm139nm,0.9s						
MRSI	Marisa	10.19	207	P	Pn	13 26 05.7	+2.8
	36nm,0.9s						
LUWI	Luwuk	11.25	200	P	Pn	13 26 22.7	+5.2
SWI	Sorong	11.45	155	P	Pn	13 26 22.1	+2.0
	26nm,0.9s						
FAKI	Fak Fak	13.72	155		Pn	13 26 50.7	-0.5
YULB	Yu-li	14.56	341	Pn	Pn	13 27 01.8	-0.7
TPUB	Ta-pu	14.71	338	P	Pn	13 27 04.9	+0.4
KAPI	Kappang	16.05	205	LR	LR	13 34 05.0	
	comp=Z,250nm,21.9s,baz=30,slow=39						
QZH	Quanzhou	16.99	335	*e*P	Pn	13 27 34.4	+0.7
QZH				S	S	13 30 46.2	-3.9
QZH				pmax	pmax		
	comp=Z,290nm,9.7s						
QZH				LR	LR		
	comp=N,590nm,18.6s						
QZH				LR	LR		
	comp=E,530nm,20.6s						
QZH				LR	LR		
	comp=Z,800nm,18.2s						
JOW	Kunigami	17.18	5	LR	LR	13 33 35.1	
	comp=Z,612nm,19.3s,baz=244,slow=34						
GUMO	Guam	18.38	76	LR	LR	13 35 25.3	
	comp=Z,538nm,18.9s,baz=240,slow=38						
JAY	Jayapura	18.58	130	LR	LR	13 34 18.8	
	comp=Z,831nm,19.1s,baz=312,slow=34						
MMRI	Maumere	18.65	193		P	13 27 50.8	-2.8
MMRI				IAmb	IAmb	13 28 05.6	
	comp=Z,62nm,0.9s						
QIZ	Qiongzhong	18.65	302	P	P	13 27 46.7	-6.9
QIZ				pP	Pn	13 27 54.0	-0.2
QIZ				S	Sn	13 31 16.6	-5.5
QIZ				sS	S	13 31 30.4	+6.4
QIZ				pmax	pmax		
	comp=Z,19nm,1.3s						
QIZ				pmax	pmax		
	comp=Z,190nm,6.6s						
QIZ				LR	LR		
	comp=E,330nm,13.1s						
QIZ				LR	LR		
	comp=Z,500nm,17.2s						
SOEI	Soe	19.40	187	P	P	13 27 58.8	-3.1
SOEI				IAmb	IAmb	13 28 17.7	
	comp=Z,52nm,0.9s						
MTN	Manton Dam	22.80	168	P	P	13 28 38.0	-0.4
MTN				IAmb	IAmb	13 28 51.4	
	comp=Z,38nm,1.1s						
JCJ	Chichijima	22.80	38	P	P	13 28 35.6	-2.8
JCJ	Chichijima	22.80	38	LR	LR	13 37 56.3	
	comp=Z,346nm,19.2s,baz=314,slow=37						
NJ2	Nanjing	23.41	343	*e*P	P	13 28 46.8	+2.5
NJ2				pmax	pmax		
	comp=Z,14nm,0.7s						
NJ2				LR	LR		
	comp=Z,250nm,16.1s						
NJ2				LR	LR		
	comp=Z,510nm,18.0s						
NJ2				LR	LR		
	comp=Z,480nm,18.0s						
WHN	Wuhan	23.70	333	P	P	13 28 48.5	+1.4
WHN				pmax	pmax		
	comp=Z,84nm,1.1s						
WHN				LR	LR		
	comp=Z,650nm,9.4s						
WHN				LR	LR		
	comp=Z,1μm,15.7s						
WHN				LR	LR		
	comp=Z,1μm,13.4s						
GYA	Guiyang	25.17	314	⇑P	P	13 29 06.4	+5.6
GYA				pmax	pmax		
	comp=Z,16nm,0.8s						
KNRA	Kununurra	25.25	175	P	P	13 29 01.5	+0.1
KNRA				IAmb	IAmb	13 29 20.9	
	comp=Z,21nm,0.8s						
KULM	Kulim	26.02	262		P	13 29 05.7	-2.7
KULM				IAmb	IAmb	13 29 24.0	
	comp=Z,40nm,1.2s						
FITZ	Fitzroy Crossi	27.58	182	P	P	13 29 22.1	-0.2
KSRS	Korea Array	27.72	2	P	P	13 29 23.9	+0.5
	comp=Z,2.3nm,0.9s,baz=180,slow=9.5,SNR=9.7						
	comp=Z,2.3nm,0.9s						
TIA	Tai'an	27.80	344	P	P	13 29 24.8	+0.6
TIA				pmax	pmax		
	comp=Z,11nm,1.1s						
PMG	Port Moresby	27.92	132	LR	LR	13 42 10.1	
	comp=Z,163nm,18.8s,baz=286,slow=40						
CMAR	Chiang Mai Arr	28.13	291	P	P	13 29 26.7	-0.8
	comp=Z,2.6nm,1.0s,baz=98,slow=7.4,SNR=12						
CMAR				LR	LR	13 42 18.0	
	comp=Z,236nm,18.2s,baz=110,slow=40						
	comp=Z,2.6nm,1.0s						
CHTO	Chiang Mai	28.22	292		P	13 29 25.5	-2.7
RPSI	Rantau Prapat	28.29	258	P	P	13 29 26.8	-2.1
COEN	Coen	28.68	145	P	P	13 29 30.5	-1.8
MJAR	Matsushiro Arr	28.80	20	P	P	13 29 34.0	+0.8
	comp=Z,1.0nm,0.8s,baz=197,slow=9.6,SNR=2.9						
MJAR				LR	LR	13 41 00.4	
	comp=Z,478nm,19.0s,baz=214,slow=36						
	comp=Z,1.0nm,0.8s						
PZH	PanZhiHua	28.83	309	P	P	13 29 35.5	+1.8
XAN	Xi'an	29.17	329	⇑P	P	13 29 35.5	-1.1
XAN				S	S	13 34 28.0	+1.9
XAN				pmax	pmax		
	comp=Z,16nm,0.9s						
XAN				pmax	pmax		
	comp=Z,120nm,4.5s						
XAN				LR	LR		
	comp=Z,480nm,13.7s						
XAN				LR	LR		
	comp=Z,310nm,19.9s						
XAN				LR	LR		
	comp=Z,630nm,17.9s						
DL2	Dalian	29.47	352	P	P	13 29 40.9	+1.9
DL2				S	S	13 34 35.6	+5.1
DL2				pmax	pmax		
	comp=Z,49nm,1.5s						
DL2				pmax	pmax		
	comp=Z,230nm,6.1s						
DL2				LR	LR		
	comp=Z,470nm,18.6s						
DL2				LR	LR		
	comp=Z,360nm,19.4s						
DL2				LR	LR		
	comp=Z,500nm,19.5s						
HNS	HongShan	29.63	341	⇑P	P	13 29 41.3	+0.9
HNS				S	S	13 34 39.3	+6.3
HNS				pmax	pmax		
	comp=Z,30nm,1.3s						
HNS				LR	LR		
	comp=Z,260nm,18.4s						
HNS				LR	LR		
	comp=Z,250nm,17.8s						
HNS				LR	LR		
	comp=Z,410nm,17.7s						
CD2	Chengdu	29.95	318	P	P	13 29 42.1	-1.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		

	comp=Z,550nm,16.0s						
CD2				LR	LR		
	comp=Z,580nm,16.6s						
GSI	**Gunungsitoli**	**29.97**	**256**	P	**P**	**13 29 44.0**	**+0.2**
WB0	**Warramunga Arr**	**30.23**	**165**	P	**P**	**13 29 45.0**	**-1.0**
WRA	**Warramunga Arr**	**30.39**	**165**	P	**P**	**13 29 45.9**	**-1.4**
	comp=Z,0.3nm,0.4s,baz=343,slow=8.7,SNR=8.7						
	comp=Z,0.3nm,0.4s						
WR8	**Warramunga Arr**	**30.44**	**165**	P	**P**	**13 29 47.5**	**-0.3**
WR8				IAmb	IAmb	13 30 51.0	
	comp=Z,31nm,1.6s						
TNCH	**TengChong**	**30.71**	**303**	P	**P**	**13 29 51.2**	**+0.7**
TNCH				pmax	pmax		
	comp=Z,18nm,0.6s						
MBWA	**Marble Bar**	**31.33**	**192**	P	**P**	**13 29 55.3**	**-0.3**
BJI	**Beijing**	**31.65**	**345**	P	**P**	**13 29 58.5**	**+0.3**
BJI				pmax	pmax		
	comp=Z,3.0nm,1.4s						
BJI				pmax	pmax		
	comp=Z,47nm,5.0s						
BJI				LR	LR		
	comp=Z,110nm,20.8s						
BJI				LR	LR		
	comp=Z,86nm,14.3s						
BJI				LR	LR		
	comp=Z,110nm,16.4s						
PSA00	**Pilbara Seismi**	**31.71**	**192**	P	**P**	**13 29 58.4**	**-0.6**
LZH	**Lanzhou**	**33.44**	**325**	*e*P	**P**	**13 30 15.1**	**+0.9**
LZH				sP	pP	13 30 24.1	-1.0
LZH				pmax	pmax		
	comp=Z,22nm,1.0s						
LZH				LR	LR		
	comp=Z,490nm,13.3s						
LZH				LR	LR		
	comp=Z,390nm,14.9s						
LZH				LR	LR		
	comp=Z,430nm,15.9s						
HHC	**Hu-ho-hao-te**	**33.79**	**339**	*e*P	**P**	**13 30 18.2**	**+1.0**
HHC				sP	pP	13 30 30.1	+2.8
HHC				S	**S**	**13 35 38.2**	**0.0**
HHC				pmax	pmax		
	comp=Z,29nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,5.8s						
HHC				LR	LR		
	comp=Z,270nm,12.6s						
HHC				LR	LR		
	comp=Z,180nm,13.1s						
HHC				LR	LR		
	comp=Z,310nm,13.3s						
AS31	**Alice Springs**	**33.88**	**168**	P	**P**	**13 30 18.1**	**+0.1**
ASAR	**Alice Springs**	**33.88**	**168**	P	**P**	**13 30 18.1**	**+0.1**
ASAR	**Alice Springs**	**33.88**	**168**	P	**P**	**13 30 16.8**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=354,slow=7.1,SNR=34						
ASAR				PcP	**PcP**	**13 32 56.1**	**0.0**
	comp=Z,0.4nm,0.5s,baz=342,slow=3.2,SNR=1.5						
ASAR				LR	LR	13 45 36.6	
	comp=Z,179nm,20.4s,baz=274,slow=39						
	comp=Z,0.4nm,0.3s						
CN2	**Changchun**	**34.04**	**359**	*e*P	**P**	**13 30 19.9**	**+0.7**
CN2				S	**S**	**13 35 43.6**	**+1.8**
CN2				SS	**SnSn**	**13 37 50.9**	**-0.8**
CN2				LR	LR		
	comp=Z,120nm,16.0s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
CN2				LR	LR		
	comp=Z,210nm,18.0s						
BTO	**Baotou**	**34.14**	**337**	*e*P	**P**	**13 30 21.7**	**+1.5**
BTO				S	**S**	**13 35 50.1**	**+6.5**
BTO				pmax	pmax		
	comp=Z,13nm,0.6s						
BTO				pmax	pmax		
	comp=Z,180nm,5.5s						
BTO				LR	LR		
	comp=Z,340nm,7.6s						
BTO				LR	LR		
	comp=Z,470nm,15.9s						
BTO				LR	LR		
	comp=Z,310nm,15.9s						
USRK	**Ussuriysk Ar.**	**34.75**	**7**	P	**P**	**13 30 26.7**	**+1.4**
	comp=Z,2.1nm,0.6s,baz=187,slow=5.8,SNR=6.4						
	comp=Z,2.1nm,0.6s						
MDJ	**Mudanjiang**	**34.95**	**4**	P	**P**	**13 30 27.1**	**+0.1**
MDJ				S	**S**	**13 35 56.6**	**+0.9**
MDJ				pmax	pmax		
	comp=Z,13nm,1.3s						
MDJ				LR	LR		
	comp=Z,210nm,12.4s						
MDJ				LR	LR		
	comp=Z,200nm,15.1s						
MDJ				LR	LR		
	comp=Z,250nm,18.6s						
XLT	**XiLinHaoTe**	**35.32**	**347**	*e*P	**P**	**13 30 30.3**	**0.0**
XLT				S	**S**	**13 36 04.3**	**+2.7**
XLT				pmax	pmax		
	comp=Z,12nm,1.2s						
XLT				LR	LR		
	comp=Z,28nm,17.9s						
XLT				LR	LR		
	comp=Z,250nm,12.1s						
XLT				LR	LR		
	comp=Z,360nm,17.9s						
CTAO	**Charters Tower**	**35.35**	**147**	P	**P**	**13 30 28.7**	**-2.0**
ERM	**Erimo**	**35.41**	**22**	P	**P**	**13 30 34.3**	**+3.4**
BRDH	**Bariadhala**	**35.83**	**295**	LR	LR	13 46 27.1	
	comp=Z,178nm,20.4s,baz=142,slow=38						
BNX	**BinXian**	**35.98**	**1**	⇓P	**P**	**13 30 36.2**	**+0.4**
BNX				PP	**PnPn**	**13 31 55.9**	**-1.6**
BNX				S	**S**	**13 36 16.1**	**+4.7**
BNX				sS	**sS**	**13 36 23.1**	**-5.1**
BNX				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BNX				pmax	pmax		
	comp=Z,82nm,6.5s						
BNX				LR	LR		
	comp=Z,350nm,19.5s						
BNX				LR	LR		
	comp=Z,140nm,16.8s						
BNX				LR	LR		
	comp=Z,480nm,20.6s						
ASAJ	**Asahikawa**	**37.07**	**19**	LR	LR	13 45 42.7	
	comp=Z,329nm,19.1s,baz=220,slow=36						
GTA	**Gaotai**	**38.04**	**326**	*e*P	**P**	**13 30 54.4**	**+0.8**
GTA				sP	pP	13 31 05.9	+1.2
GTA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
GTA				LR	LR		
	comp=Z,240nm,16.0s						
GTA				LR	LR		
	comp=Z,260nm,17.4s						
GTA				LR	LR		
	comp=Z,390nm,16.4s						
HNR	**Honiara**	**38.28**	**119**	LR	LR	13 45 16.8	
	comp=Z,135nm,21.8s,baz=298,slow=34						
KLR	**Kul'dur**	**39.70**	**5**	P	**P**	**13 31 07.6**	**+0.5**
	comp=Z,2.9nm,0.6s,baz=182,slow=4.0,SNR=12						
KLR				LR	LR	13 48 23.2	
	comp=Z,182nm,19.1s,baz=206,slow=37						
	comp=Z,2.9nm,0.6s						
MORW	**Morawa**	**39.79**	**194**	P	**P**	**13 31 08.3**	**+0.1**
H11N1	**WAKE ISLAND Hy**	**40.21**	**71**	T	T	14 14 29.8	
	baz=255,slow=74						
H11N2	**WAKE ISLAND Hy**	**40.22**	**71**	T	T	14 14 28.2	
	baz=255,slow=74						
H11N3	**WAKE ISLAND Hy**	**40.23**	**71**	T	T	14 14 30.9	
	baz=255,slow=74						
HEH	**HeiHe**	**40.49**	**1**	*e*P	**P**	**13 31 14.0**	**+0.3**
HEH				sP	**pP**	**13 31 25.6**	**+1.9**
HEH				S	**S**	**13 37 20.0**	**+0.4**
HEH				pmax	pmax		
	comp=Z,7.0nm,1.3s						
HEH				LR	LR		
	comp=Z,230nm,17.3s						
HEH				LR	LR		
	comp=Z,280nm,18.6s						
HEH				LR	LR		
	comp=Z,320nm,18.7s						
ULN	**Ulaanbaatar**	**41.50**	**340**	P	**P**	**13 31 21.1**	**-1.1**
ULN				IAmb	IAmb	13 31 24.7	
	comp=Z,30nm,1.4s						
ULN	**Ulaanbaatar**	**41.50**	**340**	P	**P**	**13 31 23.5**	**+1.2**
SONM	**Songino Array**	**41.70**	**340**	P	**P**	**13 31 23.2**	**-0.6**
SONM				IAmb	IAmb	13 31 26.1	
	comp=Z,33nm,1.6s						
SONM	**Songino Array**	**41.70**	**340**	P	**P**	**13 31 24.7**	**+0.9**
	comp=Z,4.0nm,0.7s,baz=161,slow=9.0,SNR=26						
SONM				LR	LR	13 51 52.0	
	comp=Z,218nm,18.0s,baz=145,slow=40						
	comp=Z,4.0nm,0.7s						
BBOO	**Buckleboo**	**43.18**	**168**	P	**P**	**13 31 35.5**	**-0.4**
NWAO	**Narrogin (SRO)**	**43.25**	**191**	P	**P**	**13 31 35.8**	**-0.6**
STKA	**Stephens Creek**	**43.73**	**161**	P	**P**	**13 31 39.9**	**-0.4**
	comp=Z,1.3nm,0.3s,baz=340,slow=8.8,SNR=9.2						
	comp=Z,1.3nm,0.3s						
PALK	**Pallekele**	**45.37**	**271**	LR	LR	13 52 20.9	
	comp=Z,78nm,18.5s,baz=118,slow=38						
WMQ	**Urumqi**	**47.88**	**322**	*e*P	**P**	**13 32 14.5**	**+1.5**
WMQ				LR	LR		
	comp=Z,410nm,14.1s						
WMQ				LR	LR		
	comp=Z,340nm,11.3s						
WMQ				LR	LR		
	comp=Z,200nm,16.5s						
PEA0B	**Petropavlovsk-**	**50.10**	**24**	P	**P**	**13 32 30.6**	**+0.8**
PEA0B				IAmb	IAmb	13 33 20.4	
	comp=Z,22nm,1.4s						
PETK	**Petropavlovsk-**	**50.10**	**24**	P	**P**	**13 32 30.6**	**+0.8**
PETK	**Petropavlovsk-**	**50.10**	**24**	P	**P**	**13 32 31.3**	**+1.4**
	comp=Z,0.8nm,0.5s,baz=225,slow=5.5,SNR=5.3						
PETK				LR	LR	13 53 55.1	
	comp=Z,250nm,19.4s,baz=215,slow=36						
	comp=Z,0.8nm,0.5s						
DZM	**Mont Dzumac**	**50.25**	**129**	*e*LR	LR	13 46 50.3	
	comp=Z,159nm,24.6s						
MKAR	**Makanchi Array**	**52.68**	**323**	P	**P**	**13 32 48.9**	**-0.5**
MKAR	**Makanchi Array**	**52.68**	**323**	P	**P**	**13 32 49.3**	**0.0**
	comp=Z,2.8nm,0.6s,baz=122,slow=8.2,SNR=23						
MKAR				PcP	**PcP**	**13 33 59.1**	**+0.4**
	comp=Z,1.0nm,0.5s,baz=111,slow=6.3,SNR=1.3						
MKAR				LR	LR	13 54 53.3	
	comp=Z,131nm,18.6s,baz=116,slow=36						
	comp=Z,2.8nm,0.6s						
MAKZ	**Makanchi**	**52.88**	**323**	P	**P**	**13 32 49.2**	**-1.6**
MAKZ				IAmb	IAmb	13 33 03.0	
	comp=Z,8.6nm,1.1s						
MAKZ	**Makanchi**	**52.88**	**323**	P	**P**	**13 32 50.9**	**+0.2**
MAKZ				pP	**pP**	**13 33 02.5**	**+1.1**
MAKZ				sP	**sP**	**13 33 09.2**	**+3.4**
MA2	**Magadan**	**53.07**	**15**	LR	LR	13 55 47.1	
	comp=Z,92nm,20.1s,baz=208,slow=36						
KSH	**Kashi**	**53.84**	**312**	P	**P**	**13 33 00.1**	**+2.0**
KSH				sP	pP	13 33 11.4	+2.0
KSH				pmax	pmax		
	comp=Z,5.0nm,1.1s						
NIL	**Nilore**	**54.30**	**305**	P	**P**	**13 33 01.7**	**+0.3**
NIL				sP	**sP**	**13 33 19.4**	**+1.9**
ZALV	**Zalesovo Beam**	**55.30**	**331**	P	**P**	**13 33 07.1**	**-1.1**
	comp=Z,1.4nm,0.4s,baz=112,slow=4.0,SNR=7.5						
ZALV				LR	LR	13 58 51.3	
	comp=Z,153nm,18.5s,baz=124,slow=38						
	comp=Z,1.4nm,0.4s						
AAK	**Ala-Archa**	**55.95**	**315**	LR	LR	14 00 02.8	
	comp=Z,224nm,18.1s,baz=73,slow=39						
SEY	**Seymchan**	**56.36**	**14**	LR	LR	13 59 38.0	
	comp=Z,94nm,18.4s,baz=210,slow=38						
KURBB	**Kurchatov Arra**	**56.73**	**326**	P	**P**	**13 33 17.9**	**-0.6**
	comp=Z,2.0nm,0.5s,baz=124,slow=6.9,SNR=18						
	comp=Z,2.0nm,0.5s						
SHEM	**Shemya Is, Ala**	**57.54**	**32**	LR	LR	14 00 17.7	
	comp=Z,37nm,18.2s,baz=292,slow=38						
KKAR	**Karatay Array**	**58.88**	**315**	P	**P**	**13 33 33.1**	**-0.6**
TIXI	**Tiksi**	**61.97**	**1**	LR	LR	14 01 07.9	
	comp=Z,198nm,20.2s,baz=195,slow=36						
BVAR	**Borovoye Array**	**62.33**	**325**	P	**P**	**13 33 57.2**	**+0.1**
	comp=Z,2.2nm,0.7s,baz=114,slow=6.6,SNR=7.9						
BVAR				LR	LR	14 00 30.6	
	comp=Z,132nm,20.4s,baz=113,slow=35						
	comp=Z,2.2nm,0.7s						
BRVK	**Borovoye**	**62.40**	**326**	P	**P**	**13 33 56.2**	**-1.4**
BRVK				IAmb	IAmb	13 34 10.6	
	comp=Z,7.1nm,0.8s						
HRA	**Herat**	**63.43**	**304**	IAmb	IAmb	13 35 57.0	
	comp=Z,7.5nm,0.8s						
AB31	**Akbulak array**	**67.52**	**319**	P	**P**	**13 34 30.6**	**-0.3**
AB31				IAmb	IAmb	13 34 43.1	
	comp=Z,7.0nm,0.8s						
ABKAR	**Akbulak array**	**67.52**	**319**	P	**P**	**13 34 30.5**	**-0.4**
ABKAR	**Akbulak array**	**67.52**	**319**	IAmb	IAmb	13 34 43.1	
	comp=Z,7.0nm,0.8s						
AKTO	**Aktyubinsk**	**68.97**	**320**	LR	LR	14 07 26.9	
	comp=Z,182nm,18.3s,baz=151,slow=38						
K17K	**Iditarod**	**74.69**	**28**	IAmb	IAmb	13 35 19.3	
	comp=Z,25nm,1.5s						
N17K	**Nushagak Hills**	**74.91**	**30**	IAmb	IAmb	13 35 30.6	
	comp=Z,14nm,1.3s						
KIRV	**Kirov**	**75.11**	**328**	LR	LR	14 11 57.1	
	comp=Z,142nm,18.9s,baz=104,slow=38						
C19K	**Lookout Ridge**	**75.31**	**21**	IAmb	IAmb	13 35 33.3	
	comp=Z,9.2nm,0.9s						
H19K	**Roundabout Mou**	**75.90**	**25**	IAmb	IAmb	13 35 36.9	
	comp=Z,6.9nm,0.8s						
D20K	**Etivluk River**	**76.30**	**21**	IAmb	IAmb	13 35 38.4	
	comp=Z,10nm,0.9s						
B20K	**Meade River**	**76.32**	**20**	IAmb	IAmb	13 35 28.2	
	comp=Z,22nm,1.6s						
J20K	**Nowinta River**	**76.72**	**26**	IAmb	IAmb	13 35 44.6	
	comp=Z,13nm,1.6s						
KDAK	**Kodiak Island**	**77.04**	**33**	LR	LR	14 05 31.3	
	comp=Z,99nm,20.7s,baz=239,slow=32						
IMAR	**Indian Mountai**	**77.06**	**24**	P	**P**	**13 35 28.8**	**+1.2**
B21K	**Ikpikpuk River**	**77.14**	**21**	IAmb	IAmb	13 35 43.5	
	comp=Z,7.0nm,0.8s						
GNI	**Garni**	**77.60**	**309**	LR	LR	14 16 36.4	
	comp=Z,56nm,18.3s,baz=92,slow=41						
D22K	**Ayikyak River**	**77.74**	**21**	P	**P**	**13 35 33.0**	**+1.7**
D22K				IAmb	IAmb	13 35 49.6	
	comp=Z,19nm,1.5s						
RAYN	**Ar Rayn**	**78.04**	**292**	P	**P**	**13 35 32.2**	**-1.7**
RAYN				IAmb	IAmb	13 35 46.1	
	comp=Z,8.5nm,0.8s						
BPAW	**Bear Paw Mtn.**	**78.10**	**26**	IAmb	IAmb	13 35 51.1	
	comp=Z,8.8nm,1.0s						
MLY	**Manley**	**78.25**	**25**	IAmb	IAmb	13 35 38.7	
	comp=Z,17nm,1.6s						
KBZ	**Khabaz**	**78.82**	**313**	P	**P**	**13 35 37.5**	**-0.2**
	comp=Z,2.4nm,0.9s,baz=82,slow=4.2,SNR=6.1						
KBZ				LR	LR	14 15 01.4	
	comp=Z,78nm,18.4s,baz=87,slow=39						
	comp=Z,2.4nm,0.9s						
CCB	**Clear Creek Bu**	**79.50**	**26**	P	**P**	**13 35 41.5**	**+0.5**
ILAR	**Eielson Array**	**79.89**	**26**	P	**P**	**13 35 43.4**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=246,slow=5.4,SNR=7.7						
ILAR				LR	LR	14 12 03.8	
	comp=Z,67nm,19.8s,baz=270,slow=36						
	comp=Z,0.6nm,0.8s						
BMAR	**Burnt Mountain**	**80.74**	**23**	P	**P**	**13 35 46.2**	**-1.5**
RIDG	**Independent Ri**	**80.82**	**27**	P	**P**	**13 35 48.7**	**+0.4**
RIDG				IAmb	IAmb	13 35 52.0	
	comp=Z,13nm,1.2s						
G26K	**Porcupine Rive**	**81.08**	**23**	IAmb	IAmb	13 35 55.4	
	comp=Z,26nm,1.8s						
SCRK	**Sand Creek**	**81.18**	**27**	P	**P**	**13 35 49.4**	**-0.9**
I28M	**Miner Creek**	**82.77**	**25**	IAmb	IAmb	13 36 17.0	
	comp=Z,26nm,1.7s						
G30M	**tAoh Zraii Nji**	**84.03**	**23**	IAmb	IAmb	13 36 07.5	
	comp=Z,9.6nm,1.2s						
K29M	**Barlow Dome**	**84.04**	**26**	IAmb	IAmb	13 36 10.3	
	comp=Z,15nm,1.6s						
I30M	**Mount Dempster**	**84.28**	**25**	IAmb	IAmb	13 36 21.3	
	comp=Z,8.1nm,1.0s						
SPB2	**Spitsbergen Ar**	**84.68**	**349**	P	**P**	**13 36 08.6**	**+0.6**
SPITS	**Spitsbergen Ar**	**84.68**	**349**	P	**P**	**13 36 08.3**	**+0.3**
	comp=Z,7.9nm,0.9s,baz=94,slow=7.9,SNR=20						
	comp=Z,7.9nm,0.9s						
ARCES	**ARCESS Array B**	**84.87**	**340**	P	**P**	**13 36 09.6**	**+0.5**
	comp=Z,570nm,0.5s,baz=78,slow=5.8,SNR=46						
H31M	**Peel River**	**85.00**	**24**	IAmb	IAmb	13 36 24.9	
	comp=Z,11nm,1.1s						
MMAI	**Mount Meron Ar**	**85.76**	**303**	LR	LR	14 18 26.5	
	comp=Z,61nm,19.0s,baz=55,slow=38						
BRTR	**Keskin Array B**	**86.13**	**309**	P	**P**	**13 36 15.7**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=95,slow=7.4,SNR=5.0						
	comp=Z,0.6nm,0.7s						
FIA1	**FINESS Array S**	**86.56**	**332**	P	**P**	**13 36 17.8**	**+0.2**
FINES	**FINESS Array B**	**86.56**	**332**		**P**	**13 36 17.3**	**-0.3**
FINES	**FINESS Array B**	**86.56**	**332**	P	**P**	**13 36 17.6**	**0.0**
	comp=Z,3.3nm,0.4s,baz=85,slow=5.0,SNR=46						
	comp=Z,3.3nm,0.4s						
N32M	**Quiet Lake**	**86.60**	**29**	P	**P**	**13 36 18.0**	**+0.1**
N32M				IAmb	IAmb	13 36 33.8	
	comp=Z,9.0nm,1.1s						
EIL	**Elat**	**86.66**	**299**	LR	LR	14 20 10.5	
	comp=Z,50nm,19.7s,baz=63,slow=39						
MMPY	**Sheldon Lake,**	**87.07**	**27**	IAmb	IAmb	13 36 23.0	
	comp=Z,5.6nm,1.3s						
PPT2	**Papeete2**	**87.13**	**108**	*e*LR	LR	14 03 48.4	
	comp=Z,118nm,29.0s						
PPT2				*e*LR	LR	14 03 56.0	
	comp=Z,105nm,21.8s						
AKASG	**Malin Array Be**	**87.21**	**321**	P	**P**	**13 36 20.4**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=70,slow=3.9,SNR=7.9						
	comp=Z,0.5nm,0.4s						
TBI	**Tubuai**	**88.33**	**114**	*e*LR	LR	14 04 27.8	
	comp=Z,447nm,24.8s						
VNDA	**Vanda**	**89.28**	**173**	P	**P**	**13 36 30.4**	**+0.3**
	comp=Z,1.4nm,0.9s,baz=301,slow=5.9,SNR=5.0						
	comp=Z,1.4nm,0.9s						
DAG	**Danmarks Havn**	**91.41**	**352**	*i* P	**P**	**13 36 38.3**	**-1.9**
DAG				IAmb	IAmb	13 36 40.9	
	comp=Z,12nm,1.2s						
KOLS	**Kolonicke sedl**	**92.01**	**320**	*e*P	**P**	**13 36 44.2**	**+0.6**
HFS	**Hagfors**	**92.72**	**332**	P	**P**	**13 36 45.4**	**-1.3**
	comp=Z,3.0nm,0.6s,baz=84,slow=4.6,SNR=16						
	comp=Z,3.0nm,0.6s						
NB2	**NORSAR Subarra**	**93.43**	**334**	P	**P**	**13 36 49.1**	**-0.8**
	comp=Z,0.7nm,0.6s,baz=66,slow=4.6						
NOA	**NORSAR Array B**	**93.43**	**334**	P	**P**	**13 36 48.9**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=67,slow=4.6,SNR=5.9						
NOA				LR	LR	14 23 21.7	
	comp=Z,101nm,18.3s,baz=40,slow=38						
	comp=Z,1.2nm,0.7s						
DBG	**Daneborg**	**93.69**	**351**	*i* P	**P**	**13 36 48.6**	**-2.2**
DBG				IAmb	IAmb	13 36 52.4	
	comp=Z,11nm,1.3s						
YKA	**Yellowknife Ar**	**94.22**	**24**	P	**P**	**13 36 53.9**	**+0.5**
	comp=Z,1.1nm,0.9s,baz=306,slow=5.3,SNR=9.9						
	comp=Z,1.1nm,0.9s						
VRAC	**Vranov**	**95.41**	**322**	LR	LR	14 24 44.0	
	comp=Z,39nm,18.5s,baz=88,slow=38						
CLL	**Collm**	**96.75**	**325**	*e*P	**P**	**13 37 05.0**	**-0.2**
PLCA	**Paso Flores**	**145.53**	**157**	PKPbc	**PKPdf**	**13 43 12.3**	**-0.8**
	comp=Z,2.9nm,0.9s,baz=200,slow=6.4,SNR=3.2						
LPAZ	**La Paz**	**164.26**	**116**	PKP	**PKPdf**	**13 43 39.9**	**+0.2**
	comp=Z,3.1nm,1.1s,baz=66,slow=1.5,SNR=6.8						

AZER ***08*** *13:31:12.5, 38°.26N×44°.87E, h6^{km}, ml3.1*
NSSP ***08*** *13:31:12.8, 38°.17N×44°.85E, h10^{km}, Ms3.4*
TEH ***08*** *13:31:15.3, 38°.29N×44°.81E, h6^{km}±69^{km}*
ISK ***08*** *13:31:15.8, 38°.33N×44°.65E, h5^{km}, ML2.9/11*
AFAD ***08*** *13:31:15.5, 38°.24N×44°.71E, h9^{km}±5^{km}, ML3.0*
ISC 08 13:31:14.7±1.2, **38°.22N**±0°.02×**44°.81E**±0°.02, **h1**^{km}±10^{km},
n57, σ**1**^{s}**17**/93, **2C-2D, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ISHB	**Shabestar**	**0.64**	**84**	Pg	**Pg**	**13 31 26.9**	**0.0**
ISHB				Sg	**Sb**	**13 31 37.0**	**-1.4**
YOVA	**Hakkari_Yksek**	**0.75**	**214**	P	**Pb**	**13 31 30.3**	**-0.5**
YOVA				S	**Sb**	**13 31 40.0**	**-1.7**
YOVA				*i* IAML		13 31 45.0	
	comp=N,576nm,0.5s						
YOVA				*i* IAML		13 31 46.0	
	comp=E,560nm,0.5s						
ITBZ	**Tabriz**	**1.05**	**89**	Pg	**Pg**	**13 31 34.8**	**-0.1**
IAZR	**Azarshahr**	**1.07**	**120**	Pg	**Pn**	**13 31 36.7**	**-0.5**
NAX	**Nakhchivan**	**1.09**	**29**	P	**Pg**	**13 31 35.4**	**-0.3**
NAX				S	**Sg**	**13 31 50.2**	**+0.3**
HAKT	**HAKKARI**	**1.10**	**233**	P	**Pg**	**13 31 35.8**	**+0.1**
HAKT				*i* IAML		13 31 58.0	
	comp=E,416nm,0.5s						
HAKT	**HAKKARI**	**1.10**	**233**	P	**Pn**	**13 31 37.3**	**-0.2**
HAKT				S	**Sn**	**13 31 54.8**	**+1.4**
MAKU	**Maku**	**1.14**	**355**	Pg	**Pg**	**13 31 35.5**	**-1.1**
CLDR	**Caldiran**	**1.16**	**323**	Pg	**Pg**	**13 31 35.4**	**-1.6**
CLDR				Sg	**Sg**	**13 31 51.0**	**-1.1**
CLDR	**Caldiran**	**1.16**	**323**	P	**Pg**	**13 31 35.3**	**-1.7**
CLDR				*i* IAML		13 31 53.0	
	comp=N,658nm,0.2s						
CLDR				*i* IAML		13 31 53.0	
	comp=E,628nm,0.3s						
ORD	**Ordubad**	**1.17**	**52**	P	**Pg**	**13 31 37.0**	**-0.1**
ORD				S	**Sb**	**13 31 53.5**	**0.0**
VANB	**Van**	**1.18**	**289**	Pg	**Pg**	**13 31 35.7**	**-1.7**
VANB				Sg	**Sg**	**13 31 50.8**	**-1.9**
SBZ	**Shahbuz**	**1.31**	**26**	P	**Pg**	**13 31 39.1**	**-0.8**
SBZ				S	**Sn**	**13 31 58.4**	**-0.2**
GEVA	**Gevas**	**1.39**	**274**	P	**Pn**	**13 31 39.9**	**-1.6**
GEVA				S	**Sg**	**13 31 58.5**	**-0.7**
GEVA				*i* IAML		13 32 05.0	
	comp=N,255nm,0.6s						
GEVA				*i* IAML		13 32 09.0	
	comp=E,205nm,0.6s						
AKDM	**Akdamar-Van**	**1.45**	**275**	Pn	**Pn**	**13 31 42.0**	**-0.3**
AKDM				Sn	**Sg**	**13 32 01.3**	**0.0**
HYR	**Heyderabad**	**1.50**	**1**	Pn	**Pn**	**13 31 42.9**	**0.0**
HYR				Sn	**Sg**	**13 32 05.7**	**+2.8**
VAYK	**Vayk**	**1.55**	**18**	*i* P	**Pn**	**13 31 42.9**	**-0.7**
VAYK				*i* S	**Sn**	**13 32 04.2**	**-0.2**
DYDN	**Diyadin**	**1.59**	**327**	P	**Pn**	**13 31 44.5**	**+0.2**
DYDN				S	**Sn**	**13 32 05.3**	**-0.3**
DYDN				*i* IAML		13 32 10.0	
	comp=E,234nm,0.9s						
DYDN				*i* IAML		13 32 18.0	
	comp=N,266nm,1.1s						
MAHB	**Mahabad**	**1.61**	**154**	Pg	**Pg**	**13 31 46.5**	**+0.8**
EGVZ	**Egvard**	**1.69**	**53**	*e*P	**Pn**	**13 31 45.5**	**0.0**
EGVZ				*e*S	**Sg**	**13 32 08.7**	**-0.2**
ADCV	**BITLIS_Adilcev**	**1.74**	**290**	P	**Pb**	**13 31 47.8**	**+0.1**
ADCV				S	**Sb**	**13 32 10.3**	**+0.2**
GRS	**Goris**	**1.75**	**42**	⇑*i*P	**Pb**	**13 31 47.0**	**-0.7**
GRS				⇑*i*S	**Sg**	**13 32 11.0**	**+0.2**
IGDI	**IGDIR**	**1.75**	**341**	P	**Pn**	**13 31 46.2**	**-0.1**
IGDI				S	**Sn**	**13 32 08.8**	**-0.5**
IGDI	**IGDIR**	**1.75**	**341**	Pn	**Pn**	**13 31 47.0**	**+0.7**
IGDI				Sn	**Sg**	**13 32 12.1**	**+1.3**
IHRS	**Heris**	**1.76**	**86**	Pg	**Pg**	**13 31 48.5**	**+0.1**
NRKZ	**NAREK**	**1.78**	**356**	*e*P	**Pb**	**13 31 48.0**	**-0.3**
NRKZ				*e*S	**Sg**	**13 32 13.6**	**+1.6**
PERV	**Siirt/Pervari-**	**1.81**	**262**	P	**Pg**	**13 31 49.9**	**+0.4**
PERV				*i* IAML		13 32 20.0	
	comp=N,165nm,0.5s						
PERV				*i* IAML		13 32 26.0	
	comp=E,243nm,0.7s						
TASB	**TASBURUN-IGDIR**	**1.82**	**346**	Pn	**Pn**	**13 31 47.7**	**+0.4**
TASB				Sn	**Sn**	**13 32 10.4**	**-0.7**
GNI	**Garni**	**1.93**	**358**	Pn	**Pb**	**13 31 50.4**	**-0.5**
GNI	**Garni**	**1.93**	**358**	⇓*i*P	**Pb**	**13 31 51.4**	**+0.6**
GNI				⇓*i*S	**Sg**	**13 32 19.5**	**+2.7**
AGRB	**Hanur-Agry**	**1.96**	**314**	Pn	**Pn**	**13 31 49.2**	**-0.2**
DORK	**Agr/Tutak/Do**	**1.97**	**307**	P	**Pn**	**13 31 50.2**	**+0.7**
METS	**Metsamor**	**2.01**	**344**	*e*P	**Pg**	**13 31 53.2**	**-0.1**
METS				*e*S	**Sg**	**13 32 22.3**	**+2.9**
KOTA	**Agri, Merkez-K**	**2.02**	**322**	P	**Pb**	**13 31 52.3**	**0.0**
VNNZ	**Vanand**	**2.03**	**338**	*e*P	**Pg**	**13 31 53.6**	**-0.2**
VNNZ				*e*S	**Sg**	**13 32 23.5**	**+3.4**
AYRK	**Ayrk**	**2.04**	**21**	*e*P	**Pb**	**13 31 51.7**	**-1.1**
AYRK				*e*S	**Sb**	**13 32 18.4**	**-0.3**
KAPZ	**Kaputan**	**2.10**	**358**	*e*P	**Pb**	**13 31 54.3**	**+0.4**
KAPZ				*e*S	**Sg**	**13 32 24.2**	**+1.9**
BLIS	**Bitlis-Merkez**	**2.13**	**276**	P	**Pb**	**13 31 55.0**	**+0.7**
BLIS				*i* IAML		13 32 47.0	
	comp=N,148nm,0.2s						
BLIS				*i* IAML		13 32 47.0	
	comp=E,96nm,0.1s						
ARUZ	**Aruch**	**2.14**	**345**	*e*P	**Pg**	**13 31 55.3**	**-0.4**
ARUZ				*e*S	**Sg**	**13 32 26.1**	**+2.7**
IHSH	**Hashtrud**	**2.14**	**114**	Pn	**Pb**	**13 31 54.5**	**-0.2**
AMBZ	**Amberd**	**2.21**	**349**	*e*P	**Pg**	**13 31 56.6**	**-0.5**
AMBZ				*e*S	**Sg**	**13 32 27.6**	**+1.9**
GURO	**Guroymak-BITLI**	**2.21**	**280**	Pn	**Pn**	**13 31 52.9**	**+0.1**
SRTM	**Siirt_Merkez**	**2.29**	**265**	P	**Pb**	**13 31 57.9**	**+0.9**
SRTM				*i* IAML		13 32 38.0	
	comp=E,115nm,0.9s						
SRTM				*i* IAML		13 32 40.0	
	comp=N,123nm,0.8s						
QRD	**Qoradiz**	**2.32**	**57**	Pn	**Pn**	**13 31 53.7**	**-0.4**
QRD				Sn	**Sb**	**13 32 25.5**	**-1.0**
EATA	**Eleskirt**	**2.44**	**313**	P	**Pb**	**13 31 60.0**	**+0.3**
GDB	**GEDABAY**	**2.60**	**16**	Pn	**Pn**	**13 31 58.0**	**-0.2**
GDB				Sn	**Sb**	**13 32 32.7**	**-2.2**
KMOZ	**Kamo**	**2.69**	**346**	*e*P	**Pb**	**13 32 04.3**	**+0.5**
KMOZ				*e*S	**Sg**	**13 32 42.3**	**+1.3**
LSVT	**Lusahovit**	**2.71**	**6**	*e*P	**Pb**	**13 32 03.9**	**-0.3**
LSVT				*e*S	**Sg**	**13 32 40.7**	**-1.1**
YRD	**Yardimli**	**2.77**	**74**	Pn	**Pn**	**13 32 00.4**	**-0.2**

YRD				Sn	Sn	13 32 36.5	+1.6
LRK	Lerik	2.80	80	Pn	Pn	13 32 00.9	0.0
LRK				Sn	Sb	13 32 37.3	-3.3
SVAN	Silvan-Diyarba	2.85	270	Pn	Pn	13 32 02.5	+1.1
QZX	Qazax, Azerbai	2.87	8	Pn	Pn	13 32 01.2	-0.5
QZX				Sn	Sn	13 32 39.2	+2.3
SRTK	Saratovka	2.87	353	eP	Pb	13 32 07.5	+0.7
SRTK				eS	Sg	13 32 48.1	+1.2
KOPR	Koprukoy-ERZUR	2.91	308	Pn	Pn	13 32 02.3	0.0
SENK	Senkaya-Erzuru	3.02	322	Pn	Pn	13 32 04.2	+0.3
ASTR	Astara	3.14	83	Pn	Pn	13 32 05.0	-0.4
ASTR				Sn	Sn	13 32 45.5	+1.9
BNGB	Bingl	3.33	285	Pn	Pn	13 32 08.7	+0.6

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*NEIC **08** 13:40:59.6±0.8, 35°.25N±0°.01×97°.75W±0°.02, h4^{km}±2^{km}, Error ellipse: s-maj=2.2km s-min=1.5km az=105.0*

NEIC 08 13:40:59.6±1.1,**35°.259N**±0°.009×**97°.77W**±0°.01,**h5**^{km}±1^{km}, **mb_Lg2.1**/4,**ML2.3**/13,**ML2.2**/36,**Error ellipse: s-maj=2.4km s-min=1.5km az=229.0,Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNO	Franklin	0.30	90		Pg	13 41 05.7	+0.3
OK029	Liberty Lake	0.59	25		Pb	13 41 12.0	-0.5
OK029					Sg	13 41 19.9	+1.2
OK029				IAML		13 41 20.1	
	109nm,0.4s						
OK029				IAML		13 41 23.1	
	64nm,0.4s						
X34A	Smith Ranch, M	0.66	185		Pg	13 41 12.4	+0.2
X34A					Sb	13 41 22.5	-0.6
X34A				IAML		13 41 25.8	
	comp=N,72nm,0.4s						
WMOK	Wichita Mounta	0.98	238		Pg	13 41 18.6	+0.3
WMOK					Sg	13 41 30.6	-0.5
OK052	Battle Ridge R	1.07	47		Pg	13 41 19.5	-0.7
OK052					Sg	13 41 34.5	+0.3
DEOK	Depew	1.19	60		Pg	13 41 21.1	-1.3
DEOK				IAML		13 41 41.0	
	comp=N,64nm,0.5s						
DEOK				IAML		13 41 42.9	
	comp=E,80nm,0.2s						
CROK	Carrier	1.25	352		Pg	13 41 23.0	-0.7
CROK					Sg	13 41 40.0	+0.1
QUOK	Quay	1.25	43		Pg	13 41 22.9	-0.7
QUOK					Sn	13 41 41.0	-0.1
OK038	West end E0370	1.45	327		Pn	13 41 26.5	0.0
GC02	Grant County #	1.59	357		Pn	13 41 27.2	-1.3
TUL3	Leonard	1.74	67		Pn	13 41 30.7	+0.3
TUL3					Sb	13 41 54.5	+0.4
KAN09	Caldwell North	1.88	4		Pn	13 41 33.0	+0.6
FW03	Perrin-Whitt E	2.23	186	IAmb_Lg		13 42 12.6	
	comp=Z,11nm,0.7s						
BRDY	Brady	4.09	195	IAmb_Lg		13 43 13.2	
	comp=Z,3.5nm,0.7s						

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*IDC **08** 13:44:07.4±2.6, 39°.18S×72°.18W, h78^{km}±21^{km}, mb3.9/7, mbtmp4.3/9, MS3.1/1, Error ellipse: s-maj=39.2km s-min=14.4km az=91.0*

*NEIC **08** 13:44:08.0±2.2, 39°.34S±0°.05×72°.45W±0°.10, h88^{km}±8^{km}, mb4.7/10, ML4.4(GUC), Error ellipse: s-maj=11.0km s-min=7.7km az=96.0*

*SJA **08** 13:44:07.0±0.7, 39°.32S×72°.43W, h34^{km}±2^{km}, ML4.1, MW4.0*

*GUC **08** 13:44:09.0±0.6, 39°.37S×72°.39W, h84^{km}±3^{km}, ML4.5*

ISC 08 13:44:07.0±0.7,**39°.31S**±0°.04×**72°.42W**±0°.05,**h76**^{km}±6^{km}, **n71,σ2^{s}.15**/80,**mb4.5**/11,**4C,Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LR03	Panguipulli	0.32	170		Pn	13 44 21.2	+2.1
LR03	Panguipulli	0.32	170	eP	Pn	13 44 21.2	+2.1
LR03				eS	Sn	13 44 30.7	+2.8
LR03				IAML		13 44 31.3	
	comp=E,55µm,0.2s						
LR03	Panguipulli	0.32	170	eP	Pn	13 44 17.1	-2.0
LR03				eS	Sn	13 44 21.4	-6.5
LR03				IAML		13 44 33.4	
	comp=Z,38µm,0.3s						
LC01	Cunco	0.59	45	eP	Pn	13 44 23.9	+2.6
LC01				IAML		13 44 36.4	
	comp=E,37µm,0.1s						
GO06	Curarrehue	0.78	111	eP	Pn	13 44 25.1	+1.7
LR02	Universidad Au	0.81	232	eP	Pn	13 44 25.3	+1.7
LR02				IAML		13 44 42.1	
	comp=E,50µm,0.4s						
LR04	Corral	0.96	234		Pn	13 44 26.6	+1.2
LR04	Corral	0.96	234	eP	Pn	13 44 26.4	+1.0
LR04				IAML		13 44 44.4	
	comp=E,19µm,0.2s						
LR04	Corral	0.96	234	eP	Pn	13 44 25.8	+0.4
LR04				IAML		13 44 45.1	
	comp=Z,12µm,0.2s						
LR05	Currie	0.97	161		Pn	13 44 27.2	+1.7
LR05	Currie	0.97	161	eP	Pn	13 44 27.1	+1.6
LR05				eS	Sn	13 44 40.6	+1.4
LR05				IAML		13 44 42.6	
	comp=E,13µm,0.4s						
LR05	Currie	0.97	161	eS	Sn	13 44 21.4	-18
LR05				eP	Pn	13 44 26.4	+0.9
LR05				eS		13 44 27.1	
LR05				IAML		13 44 27.6	
	comp=Z,4µm,0.2s						
BI04	Isla Mocha	1.46	308	eP	Pn	13 44 34.8	+3.2
BI04				eS	Sn	13 44 53.4	+3.2
CANA	Caviahue	1.78	37	eP	Pn	13 44 39.3	+3.2
CANA				eS	Sn	13 45 05.7	+7.7
LL03	Petrohue	1.82	180		Pn	13 44 37.4	+1.0
LL03	Petrohue	1.82	180	eP	Pn	13 44 37.7	+1.2
LL03				IAML		13 45 08.2	
	comp=E,2µm,0.1s						
LL03	Petrohue	1.82	180	eP	Pn	13 44 37.9	+1.4
LL03				eS	Sn	13 45 00.9	+2.1
LL03				IAML		13 45 07.9	
	comp=Z,1µm,0.7s						
PLCA	Paso Flores	2.02	135	P	Pn	13 44 40.1	+1.1
	comp=Z,41nm,0.3s,baz=307,slow=9.1,SNR=318						
PLCA				S	Sn	13 45 01.1	-2.4
	comp=Z,186nm,0.6s,baz=325,slow=16,SNR=9.2						
PLCA				LR	LR	13 45 22.8	
	comp=Z,343nm,19.9s,baz=315,slow=38						
PLCA	Paso Flores	2.02	135	eP	Pn	13 44 40.2	+1.1
PLCA				eS	Sn	13 45 06.2	+2.6
LL05	Los Muermos	2.24	201		Pn	13 44 42.4	+0.3
BI05	Punta Hualpn	2.63	346		Pn	13 44 49.4	+2.0
BI05	Punta Hualpn	2.63	346	eP	Pn	13 44 49.6	+2.2
BI05				IAML		13 45 21.5	
	comp=N,5µm,0.2s						
BI05	Punta Hualpn	2.63	346	eP	Pn	13 44 49.0	+1.6
BI05				IAML		13 45 33.3	
	comp=Z,380nm,0.2s						
BI02	San Fabin de	2.80	19		Pn	13 44 52.7	+3.0
BI02	San Fabin de	2.80	19	eP	Pn	13 44 52.5	+2.9
BI02	San Fabin de	2.80	19	eP	Pn	13 44 52.2	+2.5
LL06	Loncomilla	3.04	197	eP	Pn	13 44 52.6	-0.3
LL06				IAML		13 45 27.3	
	comp=E,1µm,0.2s						
LL01	San Ignacio de	3.06	180		Pn	13 44 54.4	+1.3
LL01	San Ignacio de	3.06	180	eP	Pn	13 44 54.4	+1.3
LL01	San Ignacio de	3.06	180	eP	Pn	13 44 55.2	+2.1
LL01				eS	Sn	13 45 32.5	+3.9
LL07	Hotel Espejo d	3.61	193	IAML		13 45 40.7	
	comp=E,1µm,0.2s						
ML02	Panimavida	3.63	13		Pn	13 45 03.5	+2.5
ML02	Panimavida	3.63	13	eP	Pn	13 45 04.2	+3.3
ML02				eS	Sn	13 45 42.4	-0.2
ML02				IAML		13 46 04.8	
	comp=Z,319nm,0.5s						
LL02	Futaleuf	3.90	174		Pn	13 45 05.9	+1.4
GO07	Milladeo Hill,	3.91	194		Pn	13 45 04.2	-0.5
GO07	Milladeo Hill,	3.91	194	eP	Pn	13 44 51.6	-13
BO02	Sierra Bellavi	4.70	17		Pn	13 45 17.6	+2.0
BO01	Tunca	5.03	13		Pn	13 45 20.8	+0.9
BO04	La Punta	5.51	16		Pn	13 45 27.6	+1.1
MT01	Popeta	5.52	10		Pn	13 45 27.3	+0.6
MT09	Talagante	5.64	12		Pn	13 45 28.9	+0.4
VA05	Santo Domingo	5.68	7		Pn	13 45 28.3	-0.6
VA04	Juan Fernndez	7.66	316		Pn	13 45 59.0	+3.1
TRQA	Tornquist	8.26	85		Pn	13 46 05.3	+1.2
CFA	Coronel Fontan	8.41	25	P	Pn	13 46 03.2	-3.0
	comp=Z,1.9nm,0.2s,baz=230,slow=11,SNR=16						
CFA				S	Sn	13 47 36.2	-3.4
	comp=Z,3.9nm,0.4s,baz=308,slow=16,SNR=7.3						
CO06	Fray Jorge	8.64	4	Pn	Pn	13 46 07.8	-1.5
GO04	Tololo Observa	9.22	9	Pn	Pn	13 46 16.1	-1.3
AC05	El Transito	10.60	10	Pn	Pn	13 46 34.6	-1.6
USHA	Ushuaia	15.76	171	P	Pn	13 47 45.1	+1.0
	comp=Z,12nm,0.6s,baz=356,slow=9.2,SNR=19						
EFI	East Falkland	15.90	146	Pn	Pn	13 47 46.4	+0.4
EFI				IAmb	IAmb	13 47 47.5	
	comp=Z,50nm,1.1s						
PLTB	Pedras Altas	17.05	70	Pn	Pn	13 47 59.5	-1.0
PB11	IPOC Station P	19.63	8	P	P	13 48 30.1	+0.5
LPAZ	La Paz	23.25	10	P	P	13 49 05.5	-3.1
	comp=Z,1.3nm,0.7s,baz=193,slow=7.0,SNR=5.6						
LPAZ				LR	LR	13 59 11.6	
	comp=Z,47nm,19.6s,baz=218,slow=39						
	comp=Z,1.3nm,0.7s						
ESPZ	Base Esperanza	25.82	164	P	P	13 49 30.5	-0.3
ESPZ				IAmb	IAmb	13 49 34.5	
	comp=Z,22nm,1.1s						
PMSA	Palmer Station	25.97	172	P	P	13 49 31.5	-0.6
BELA	Belgrano 2	41.72	169	P	P	13 51 48.5	+0.5
BELA				IAmb	IAmb	13 51 49.6	
	comp=Z,6.0nm,0.8s						
VNA3	Neumayer Olymp	44.60	156	⇑P	P	13 52 10.9	-0.4
	comp=Z,4.6nm,0.8s						
VNA2	Neumayer--Watz	45.28	155	⇑P	P	13 52 16.6	0.0
	comp=Z,6.9nm,0.6s,baz=285,slow=5.6						
SNAA	Sanae	46.82	156	⇑P	P	13 52 28.9	+0.1
	comp=Z,167nm,0.8s						
SNAA	Sanae	46.82	156	P	P	13 52 28.6	-0.2
SNAA				IAmb	IAmb	13 52 29.9	
	comp=Z,12nm,1.0s						
SNAA	Sanae	46.82	156	P	P	13 52 28.5	-0.3
	comp=Z,7.2nm,0.8s,baz=283,slow=7.5,SNR=21						
	comp=Z,7.2nm,0.8s						
BAUV	El Baul	48.18	6	P	P	13 52 38.1	-1.7
BAUV				IAmb	IAmb	13 53 01.8	
	comp=Z,21nm,1.4s						
TROLL	Troll, Antarti	48.52	156	⇑P	P	13 52 42.2	+0.2
	comp=Z,564nm,0.6s						
QSPA	South Pole Qui	50.93	180	P	P	13 53 01.5	+1.1
QSPA				IAmb	IAmb	13 53 02.1	
	comp=Z,6.2nm,0.8s						
QSPA	South Pole Qui	50.93	180	P	P	13 53 01.6	+1.3
	comp=Z,5.5nm,0.6s,baz=164,slow=0.8,SNR=44						
	comp=Z,5.5nm,0.6s						
TXAR	Lajitas Array	74.24	332	P	P	13 55 37.0	+1.2
	comp=Z,0.2nm,0.5s,baz=119,slow=6.7,SNR=1.6						
	comp=Z,0.2nm,0.5s						
DBIC	Dimbokro	77.21	70	P	P	13 55 52.8	-0.2
	comp=Z,2.2nm,0.4s,baz=228,slow=6.9,SNR=5.2						
	comp=Z,2.2nm,0.4s						
BOSA	Boshof	77.90	117	P	P	13 55 56.5	-0.5
	comp=Z,3.6nm,0.7s,baz=229,slow=4.8,SNR=9.2						
	comp=Z,3.6nm,0.7s						
TORD	Torodi Ar. Bea	86.31	70	P	P	13 56 40.1	-0.7
	comp=Z,1.4nm,0.7s,baz=220,slow=5.1,SNR=2.7						
	comp=Z,1.4nm,0.7s						
WMQ	Urumqi	164.46	67	ePKP	PKPdf	14 04 00.6	-0.9
WMQ				LR	LR		
	comp=Z,120nm,23.9s						
PZH	PanZhiHua	166.32	157	PKP	PKPdf	14 04 01.2	-2.5

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*TIR **08** 13:45:59.5, 40°.53N×20°.85E, h12^{km}, Ml2.5/5*

*THE **08** 13:46:00.3, 40°.5N±0°.7×2°1E±°, h1^{km}±1^{km}, M2.4/9, MLh2.4/9*

*ATH **08** 13:46:00.0, 40°.62N×20°.83E, h5^{km}±1^{km}, ML2.5/8, Manual Solution by F.Xalaris First location: 2019/06/08 13:47:10, This location: 2019/06/08 14:34:15 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*SKO **08** 13:46:01.9, 40°.59N×20°.77E, h19^{km}, ML2.3*

*BEO **08** 13:46:01.7±0.4, 40°.50N×21°.00E, h2^{km}±2^{km}, ML2.2/8*

ISC 08 13:46:00.4±0.9,**40°.53N**±0°.02×**20°.81E**±0°.02,**h5**^{km}±7^{km}, **n52,σ1^{s}.00**/82,**3C-3D,Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	Korca	0.10	351	⇑iPg	Pg	13 46 02.7	0.0
KBN				Sg	Sg	13 46 04.1	0.0
KBN				AML	AML	13 46 05.6	
	38nm,0.2s						
KBN	Korca	0.10	351	P	Pg	13 46 02.6	0.0
KBN				S	Sg	13 46 04.6	+0.4
NEST	Nestorio	0.21	121	⇑iPg	Pg	13 46 04.5	-0.2
NEST				Sg	Sg	13 46 07.4	-0.1
NEST				AML	AML	13 46 09.9	
	3.2nm,0.2s						
NEST	Nestorio	0.21	121	P	Pg	13 46 05.0	+0.3
NEST				S	Sg	13 46 08.6	+1.1
NEST	Nestorio	0.21	121	P	Pg	13 46 05.2	+0.6
NEST				S	Sg	13 46 09.3	+1.8
PENT	Pentalofos	0.41	142	P	Pg	13 46 08.5	0.0
PENT	Pentalofos	0.41	142	P	Pg	13 46 08.7	+0.2
PENT				S	Sb	13 46 15.9	-1.0
OHR	Ohrid	0.59	359	P	Pg	13 46 12.1	+0.4
OHR				S	Sb	13 46 20.9	-0.9
OHR	Ohrid	0.59	359	⇓iPg	Pg	13 46 12.3	+0.6
OHR				i Sg	Sb	13 46 21.4	-0.5
OHR				eLg	Lg	13 46 22.4	
	comp=E,175nm,0.6s						
OHR				eLg	Lg	13 46 22.6	
	comp=N,86nm,0.4s						
OHR	Ohrid	0.59	359	ePg	Pg	13 46 12.0	+0.3
OHR				eSg	Sb	13 46 21.0	-0.9
KPRO	Kipourio	0.71	143	P	Pg	13 46 14.1	0.0
KPRO				S	Sb	13 46 24.5	-0.9
KZN	Kozani	0.77	106	P	Pb	13 46 15.5	-0.8
KZN				S	Sb	13 46 27.3	+0.3
KZN	Kozani	0.77	106	P	Pb	13 46 15.5	-0.8
KZN				S	Sb	13 46 26.3	-0.7
JAN	Janina	0.87	178	P	Pn	13 46 18.8	-0.5
JAN				S	Sn	13 46 31.6	-0.7
SRN	Sarande	0.89	224	⇓iPn	Pg	13 46 17.5	-0.1
SRN				Sn	Sn	13 46 32.1	-0.8
SRN				AML	AML	13 46 32.6	
	comp=N,0.5nm,0.4s						
SRN	Sarande	0.89	224	P	Pg	13 46 17.3	-0.3
IGT	Igoumenitsa	1.06	200	⇑iPn	Pg	13 46 20.4	-0.3
IGT				Sn	Sb	13 46 36.2	+0.9
IGT				AML	AML	13 46 42.0	
	comp=N,0.4nm,0.4s						
IGT	Igoumenitsa	1.06	200	P	Pg	13 46 20.0	-0.6
IGT	Igoumenitsa	1.06	200	i Pg	Pg	13 46 20.7	0.0
IGT				i Sg	Sn	13 46 38.4	+1.5
IGT	Igoumenitsa	1.06	200	ePg	Pg	13 46 20.4	-0.3
IGT				eSg	Sn	13 46 37.4	+0.5
IGT	Igoumenitsa	1.06	200	P	Pg	13 46 20.6	-0.1
IGT				S	Sn	13 46 37.5	+0.5
TIR	Tirane	1.09	319	ePg	Pn	13 46 23.9	+1.6
TIR				eSg	Sn	13 46 41.4	+3.6
KEK	Kerkira	1.12	224	P	Pn	13 46 23.0	+0.2
KEK	Kerkira	1.12	224	P	Pn	13 46 23.1	+0.4
KEK				S	Sn	13 46 39.7	+1.1
PHP	Peshkopia	1.19	347	⇓ePn	Pg	13 46 22.5	-0.8
PHP				Sn	Sb	13 46 39.7	+0.5
PHP				AML	AML	13 46 48.6	
	comp=N,0.4nm,0.7s						
THL	Klokotos Trika	1.33	136	P	Pn	13 46 25.2	-0.4
THL	Klokotos Trika	1.33	136	P	Pn	13 46 25.3	-0.4
LIT	Litokhoron	1.35	108	P	Pb	13 46 25.8	-0.4
LIT	Litokhoron	1.35	108	i Pg	Pg	13 46 26.1	-0.2
LIT				i Sg	Sn	13 46 47.1	+2.8
LIT	Litokhoron	1.35	108	P	Pg	13 46 26.1	-0.2
TYRN	Tyrnavos	1.36	126	P	Pb	13 46 25.9	-0.4
TYRN	Tyrnavos	1.36	126	P	Pg	13 46 26.2	-0.3
VAY	Valandovo	1.55	59	i Pn	Pb	13 46 29.2	-0.4
VAY				i Sg	Sg	13 46 53.0	+2.7
VAY				eLg	Lg	13 46 53.8	
	comp=E,24nm,0.6s						
VAY				eLg	Lg	13 46 54.7	
	comp=N,61nm,0.8s						
VAY	Valandovo	1.55	59	ePg	Pn	13 46 28.4	-0.3
VAY				eSg	Sn	13 46 48.5	-0.7
THE	Thessaloniki	1.65	86	Pn	Pn	13 46 29.8	-0.2
THE				Sn	Sb	13 46 52.1	-0.1
KNT	Kendrikon	1.71	67	i Pn	Pb	13 46 31.6	-0.7
KNT	Kendrikon	1.71	67	P	Pb	13 46 31.4	-0.9
LKD2	Lefkada island	1.74	184	P	Pg	13 46 33.7	-0.1
HORT	Hortiatis	1.75	87	P	Pn	13 46 30.7	-0.7
HORT	Hortiatis	1.75	87	P	Pn	13 46 30.8	-0.7
AGG	Agios Georgios	1.90	142	P	Pn	13 46 34.2	+0.6
PLG	Polygyros	2.02	93	P	Pn	13 46 35.5	+0.4
DRME	Dracevica, Mon	2.06	324	ePn	Pb	13 46 38.1	-0.2
DRME				eSn	Sg	13 47 06.1	-0.6
SRS	Serrai	2.19	73	ePn	Pn	13 46 37.3	-0.2
SRS				eSn	Sn	13 47 03.7	-1.3
BOSS	Bosilegrad	2.33	32	ePn	Pn	13 46 39.4	-0.1
BARS	Barje	2.41	18	i Pn	Pn	13 46 40.9	+0.3
BARS	Barje	2.41	18	ePn	Pn	13 46 40.8	+0.3
BARS				eSn	Sn	13 47 11.4	+1.0
SELS	Selova	2.70	5	ePn	Pn	13 46 46.3	+1.8
SELS				eSn	Sb	13 47 20.7	-2.0
SJES	Sjenica	2.80	347	ePn	Pb	13 46 49.4	-1.6
ZAPS	Zavoj	3.07	26	ePn	Pn	13 46 49.6	+0.1
ZAPS				eSn	Sn	13 47 27.4	+0.8
IVAS	Ivanjica	3.09	351	ePn	Pb	13 46 52.8	-3.1
ZAGS	Zajecar	3.45	17	ePn	Pn	13 46 55.6	+0.8

GCG 08 14:01:21.8±1.5,**13°.88N**×**91°.41W,h47**^{km}±69^{km},**MD3.8, ML3.4,Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG8	El Palmar, Qui	0.57	5	i P	Pn	14 01 38.8	+4.7
STG8				i S	Sn	14 01 50.5	+7.8
STG8				IAML		14 01 52.2	
	comp=N,2µm,0.2s						
FG8	Yepocapa, Chim	0.90	65	eP	Pn	14 01 36.4	-1.9
SOKI	Kika Raxquin	0.94	0	eP	Pn	14 01 40.2	+1.1
SOKI				i S	Sn	14 01 53.4	+1.8
SOKI				IAML		14 01 54.0	
	comp=N,388nm,0.4s						
FG16	Alotenango, Sa	0.95	65	eP	Pn	14 01 37.6	-1.5
FG16				IAML		14 01 52.4	
	comp=E,3µm,0.2s						
NUBE	Las Nubes	1.58	89	i P	Pn	14 01 48.0	+0.5
NUBE				eS	Sn	14 02 06.7	-0.2
MTO3	Montecristo	2.05	75	i P	Pn	14 01 54.9	+0.8

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*NEIC **08** 14:09:33.2±2.5, 5°.19N±0°.08×126°.8E±0°.1, h48^{km}±11^{km}, mb4.2/13, Error ellipse: s-maj=18.4km s-min=9.9km az=69.0*

*DJA **08** 14:09:37.8±0.3, 5°N±2°×12°6E±°, h45^{km}±18^{km}, M4.4/12, mB5.8/2, mb4.4/10, MLv4.4/12, Mw(mB)5.3/2*

*IDC **08** 14:09:37.0±2.1, 5°.23N×126°.20E, h67^{km}±16^{km}, mb3.9/12, mbtmp4.2/12, MS3.1/3, Error ellipse: s-maj=50.8km s-min=14.0km az=71.0*

ISC 08 14:09:37.1±0.6,**5°.22N**±0°.05×**126°.41E**±0°.09,**h71**^{km}**,n50, σ1^{s}.94**/48,**mb4.2**/18,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.75	210	P	Pn	14 10 04.3	-1.2
SGSI				S	Sn	14 10 25.0	-2.0
DAV	Davao City (W)	2.02	336	Pn	Pn	14 10 06.9	-2.1
DAV	Davao City (W)	2.02	336	P	Pn	14 10 08.1	-0.9
	312nm,0.5s,baz=312,slow=2.1,SNR=4.5						
DAV				S	Sn	14 10 31.3	-2.0
	353nm,0.4s,baz=270,slow=17,SNR=6.2						
DAV				LR	LR	14 11 07.0	
	comp=Z,477nm,19.5s,baz=168,slow=47						
TNTI	Ternate	4.52	168	Pn	Pn	14 10 37.5	-5.5
TNTI	Ternate	4.52	168	P	Pn	14 10 42.1	-1.0
MRSI	Marisa	6.48	224	P	Pn	14 11 10.8	+0.8
MRSI				S	Sn	14 12 21.9	-0.7
TOLI2	Tolitoli	6.94	234		Pn	14 11 14.9	-1.3
LUWI	Luwuk	7.20	210	P	Pn	14 11 20.5	+0.8
	72nm,1.2s						
LUWI				S	Sn	14 12 38.9	-1.2
	72nm,1.2s						
SANI	Sanana	7.23	183	P	Pn	14 11 19.4	-0.8
	0.2nm42nm,1.0s						
APSI	Ampana	7.72	218	P	Pn	14 11 26.0	-0.9
	48nm,1.2s						
MYLDM	Lahad Datu	7.88	270		Pn	14 11 31.1	+2.1
MPSI	Mapaga	8.11	233	P	Pn	14 11 31.6	-0.6
	7.4nm,0.7s						
AAI	Ambon	9.02	169	P	Pn	14 11 44.1	-0.6
	31nm,0.9s						
FAKI	Fak Fak	9.97	144	P	Pn	14 11 58.0	+0.4
	14nm,1.6s						
KKM	Kota Kinabalu	10.18	275	Pn	Pn	14 12 01.1	+0.6
KAPI	Kappang	12.14	213	LR	LR	14 18 16.1	
	comp=Z,82nm,18.2s,baz=56,slow=43						
JAY	Jayapura	16.22	118	LR	LR	14 19 18.5	
	comp=Z,74nm,20.7s,baz=357,slow=36						
MTN	Manton Dam	18.55	165	P	P	14 13 44.8	-3.4
MTN				IAmb	IAmb	14 14 01.7	
	comp=Z,35nm,1.4s						
YULB	Yu-li	18.73	345	P	P	14 13 47.8	-2.4
YHNB	Yeheng	19.94	346	P	P	14 13 59.9	-3.6
YHNB				IAmb	IAmb	14 14 08.1	
	comp=Z,18nm,1.1s						
KNRA	Kununurra	20.89	174	P	P	14 14 15.0	+1.3
KNRA				IAmb	IAmb	14 14 24.9	
	comp=Z,20nm,1.2s						
FITZ	Fitzroy Crossi	23.18	182	P	P	14 14 37.1	-0.8
KULM	Kulim	25.65	271	P	P	14 15 01.9	+1.4
WB0	Warramunga Arr	26.04	163	P	P	14 14 58.7	-5.2
WB0				IAmb	IAmb	14 15 29.3	
	comp=Z,7.3nm,0.9s						
WRA	Warramunga Arr	26.19	163	P	P	14 14 59.3	-6.0
WRA	Warramunga Arr	26.19	163	P	P	14 15 06.2	+0.9
	comp=Z,1.7nm,0.8s,baz=343,slow=10,SNR=13						
	comp=Z,1.7nm,0.8s						
WR8	Warramunga Arr	26.25	163	P	P	14 15 02.5	-3.3
WR8				IAmb	IAmb	14 15 26.8	
	comp=Z,12nm,1.2s						
ASAR	Alice Springs	29.62	166	P	P	14 15 36.8	+0.9
	comp=Z,0.4nm,0.6s,baz=346,slow=6.4,SNR=6.4						
	comp=Z,0.4nm,0.6s						
CMAR	Chiang Mai Arr	29.86	298	LR	LR	14 28 09.2	
	comp=Z,23nm,18.2s,baz=110,slow=38						
KSRS	Korea Array	32.12	2	P	P	14 15 58.4	+0.7
	comp=Z,1.2nm,0.6s,baz=187,slow=9.3,SNR=9.5						
	comp=Z,1.2nm,0.6s						
STKA	Stephens Creek	39.62	160	P	P	14 17 05.6	+3.6
	comp=Z,1.7nm,0.7s,baz=326,slow=8.3,SNR=3.7						
GTA	Gaotai	41.67	329	eP	P	14 17 20.1	+1.2
GTA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
H11N1	WAKE ISLAND Hy	41.94	66	T	T	15 01 46.8	
	baz=255,slow=75,SNR=8.1						
H11N2	WAKE ISLAND Hy	41.95	66	T	T	15 01 46.6	
	baz=255,slow=75,SNR=8.2						
H11N3	WAKE ISLAND Hy	41.95	66	T	T	15 01 53.5	
	baz=255,slow=75,SNR=7.5						
EVN	Everest	43.86	306	P	P	14 17 37.8	+0.4
HEH	HeiHe	44.89	1	eP	P	14 17 46.6	+2.1
SONM	Songino Array	45.80	341	P	P	14 17 52.5	+0.7
	comp=Z,1.2nm,0.5s,baz=156,slow=7.4,SNR=7.1						
	comp=Z,1.2nm,0.5s						
MKAR	Makanchi Array	56.16	325	P	P	14 19 09.3	-0.3
	comp=Z,2.5nm,0.5s,baz=125,slow=8.3,SNR=12						
MKAR				PcP	PcP	14 20 07.1	+0.4
	comp=Z,1.2nm,0.8s,baz=118,slow=3.8,SNR=3.7						
	comp=Z,2.5nm,0.5s						
ZALV	Zalesovo Beam	59.13	333	P	P	14 19 29.7	-0.5
	comp=Z,1.0nm,0.4s,baz=141,slow=5.7,SNR=5.1						
	comp=Z,1.0nm,0.4s						
KURBB	Kurchatov Arra	60.32	327	P	P	14 19 36.1	-2.3
	comp=Z,2.5nm,0.7s,baz=122,slow=7.1,SNR=8.4						
	comp=Z,2.5nm,0.7s						
KURK	Kurchatov	60.32	327	P	P	14 19 38.5	0.0
KKAR	Karatay Array	61.94	317	P	P	14 19 50.0	+0.4
BVAR	Borovoye Array	65.91	327	P	P	14 20 15.2	-0.3
	comp=Z,2.3nm,0.8s,baz=120,slow=8.7,SNR=12						
	comp=Z,2.3nm,0.8s						
AB31	Akbulak array	70.80	321	P	P	14 20 44.6	-1.5
AB31				IAmb	IAmb	14 20 59.3	
	comp=Z,1.7nm,0.9s						
ABKAR	Akbulak array	70.80	321		P	14 20 44.6	-1.5
ABKAR				IAmb	IAmb	14 20 59.3	
	comp=Z,1.8nm,0.9s						
ILAR	Eielson Array	83.91	25	P	P	14 21 58.9	-0.1
	comp=Z,0.2nm,0.5s,baz=255,slow=5.8,SNR=5.9						
	comp=Z,0.2nm,0.5s						
ARCES	ARCESS Array B	88.95	340	P	P	14 22 24.1	+0.5
	comp=Z,4.3nm,0.4s,baz=60,slow=5.3,SNR=1.4						
	comp=Z,4.3nm,0.4s						
SPITS	Spitsbergen Ar	88.97	349	P	P	14 22 23.5	-0.1

	comp=Z,2.4nm,0.6s,baz=89,slow=8.4,SNR=8.0						
	comp=Z,2.4nm,0.6s						
FINES	FINESS Array B	90.38	332	P	P	14 22 30.6	+0.2
	comp=Z,1.1nm,0.6s,baz=40,slow=6.0,SNR=11						
	comp=Z,1.1nm,0.6s						

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*NEIC **08** 14:11:13.1±2.4, 17°.8S±0°.1×178°.6W±0°.1, h534^{km}±6^{km}, mb4.7/371, Error ellipse: s-maj=15.7km s-min=13.3km az=140.0*

*BJI **08** 14:11:13.1, 17°.16S×178°.64W, h526^{km}, mB4.6/14, mb4.7/49*

*NOU **08** 14:11:14.4, 17°.85S×178°.50W, h554^{km}, mb5.0/86, Fiji Islands Region*

*IDC **08** 14:11:15.2±0.6, 17°.74S×178°.63W, h561^{km}±6^{km}, mb4.2/25, mbtmp5.0/27, Error ellipse: s-maj=10.9km s-min=9.1km az=144.0*

*GCMT **08** 14:11:16.1±0.6, 18°.2S±0°.1×178°.58W±0°.06, h558^{km}±4^{km}, MW5.2/43, Moment Tensor Solution. s43,c53; Duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.68±.06; $M_{\theta\theta}$-0.26±.11; $M_{\phi\phi}$-0.41±.09; $M_{r\theta}$0.39±.10; $M_{\theta\phi}$0.53±.08; $M_{\phi r}$0.12±.10; Best double couple: $M_0$0.88700×10^{17} NP1:ϕ_s345.00000°,δ46.00000°,λ130.00000°. NP2: ϕ_s114.00000°,δ57.00000°,λ56.00000°. Principal axes: T 0.8880, Plg62.0000°, Azm329.0000°; N -0.0010, Plg28.0000°, Azm134.0000°; P -0.8860, Plg6.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 08 14:11:14.1±0.3**, 17°.79S**±0°.05×**178°.63W**±0°.05**, h550**^{km}**, n885, σ0^{s}98**/735**, mb4.7**/231**, 59C-32D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKBA	Tubou, Lakemba	0.48	202	P	P	14 12 20.5	+1.1
LKBA	Tubou, Lakemba	0.48	202	S	S	14 13 13.9	+1.3
TAVE	Taveuni	1.62	311	P	P	14 12 23.7	+1.3
TAVE	Taveuni	1.62	311	S	S	14 13 20.1	+2.4
DGTI	Dogotuki	2.15	313	P	P	14 12 25.4	+0.8
DGTI	Dogotuki	2.15	313	S	S	14 13 23.9	+2.1
MSVF	Nonsavu	3.17	270		P	14 12 32.1	+1.8
MSVF	Nonsavu	3.17	270	P	P	14 12 32.2	+1.9
	1µm,0.8s,baz=117,slow=5.0,SNR=545						
MSVF				S	S	14 13 35.9	+3.6
	245nm,1.2s,baz=108,slow=20,SNR=12						
MSVF	Nonsavu	3.17	270	P	P	14 12 32.4	+2.1
MSVF	Nonsavu	3.17	270	S	S	14 13 37.4	+5.1
FUTU	Fugatoga	3.49	8		P	14 12 32.1	-0.4
FUTU	Fugatoga	3.49	8	P	P	14 12 33.2	+0.7
YSA	Yasawairara	3.78	286	P	P	14 12 35.4	+1.0
AFI	Afiamalu	7.64	61		P	14 13 05.5	-3.0
AFI	Afiamalu	7.64	61	P	P	14 13 06.0	-2.5
NIUE	Niue	8.36	100		P	14 13 14.3	-1.1
NIUE	Niue	8.36	100	P	P	14 13 16.2	+0.8
NIUE	Niue	8.36	100	P	P	14 13 15.1	-0.3
NIUE				S	S	14 14 59.6	+4.7
FUNA	Funafuti	9.45	347	P	P	14 13 25.2	-1.3
GLKZ	Green Lake	11.44	177	P	P	14 13 45.6	-1.2
VLAKA	Lakatoro	13.45	275	P	P	14 14 08.6	+0.9
PINNC	Pines Island,	13.92	248		P	14 14 12.3	-0.3
PINNC	Pines Island,	13.92	248	P	P	14 14 13.6	+1.1
YATNC	Mamie plateau,	14.26	250	P	P	14 14 15.6	-0.5
OUENC	Ouen Island, N	14.40	249	P	P	14 14 18.7	+1.2
DZM	Mont Dzumac	14.67	251		P	14 14 18.5	-1.8
DZM	Mont Dzumac	14.67	251	P	P	14 14 19.3	-1.0
	52nm,0.7s,baz=114,slow=24,SNR=19						
DZM	Mont Dzumac	14.67	251	P	P	14 14 20.1	-0.2
KOUNC	Koumac, New Ca	16.37	258	P	P	14 14 37.7	+0.5
OUZ	Omahuta	18.69	200	P	P	14 15 00.4	+2.3
GRZ	Great Barrier	19.12	195	P	P	14 15 03.5	+1.4
WCZ	Waipu Caves	19.12	198	P	P	14 15 04.8	+2.7
KUZ	Kuaotunu	19.53	194	P	P	14 15 06.3	+0.5
KUZ	Kuaotunu	19.53	194	P	P	14 15 06.9	+1.1
ABAZ	Army Bay	19.61	196	P	P	14 15 09.1	+2.6
WIAZ	Waiheke Island	19.72	195	P	P	14 15 09.0	+1.5
MBAZ	Motutapu North	19.75	196	P	P	14 15 10.0	+2.2
MXZ	Matakaoa Point	19.89	187	P	P	14 15 09.1	+0.1
EPAZ	Eden Park BICE	19.89	196	P	P	14 15 10.8	+1.7
ETAZ	East Tamaki Re	19.92	195	P	P	14 15 11.2	+1.8
MKAZ	Moumakai	20.01	195	P	P	14 15 11.5	+1.4
AWAZ	Awhitu Peninsu	20.10	196	P	P	14 15 12.7	+1.8
WMGZ	Waiomatatini S	20.13	187	P	P	14 15 11.2	0.0
HAZ	Te Kaha	20.14	188	P	P	14 15 11.2	-0.1
PKGZ	Pakihiroa	20.21	188	P	P	14 15 11.6	-0.4
PUZ	Puketiti	20.39	187	P	P	14 15 13.1	-0.5
URZ	Urewera	20.73	190	P	P	14 15 14.1	-2.6
	24nm,0.6s,baz=352,slow=3.0,SNR=22						
URZ				S	S	14 18 27.9	-5.0
	9.4nm,0.9s,baz=328,slow=19,SNR=1.8						
URZ	Urewera	20.73	190	P	P	14 15 15.5	-1.2
URZ	Urewera	20.73	190	P	P	14 15 14.1	-2.6
MWZ	Matawai	20.75	189	P	P	14 15 15.1	-1.8
CNGZ	Carnagh Statio	20.81	187	P	P	14 15 17.6	+0.3
TLZ	Tolley Road	21.09	193	P	P	14 15 21.3	+1.3
BKZ	Black Stump Fm	21.72	190	P	P	14 15 23.3	-2.4
VRZ	Vera Road	22.03	194	P	P	14 15 29.8	+1.5
NEZ	North Egmont	22.32	195	P	P	14 15 34.8	+3.8
TSZ	Takapari Road	22.68	191	P	P	14 15 33.5	-0.7
BFZ	Birch Farm	23.24	190	P	P	14 15 38.4	-0.7
MRZ	Mangatainoka R	23.34	191	P	P	14 15 38.0	-1.9
QRZ	Quartz Range	24.19	197	P	P	14 15 48.0	+0.5
QRZ	Quartz Range	24.19	197	P	P	14 15 47.6	+0.1
NNZ	Nelson	24.34	195	P	P	14 15 48.1	-0.7
THZ	Tophouse	24.97	195	P	P	14 15 53.6	-1.0
DSZ	Denniston Nort	25.25	197	P	P	14 15 56.7	-0.2
KHZ	Kahutara	25.44	194	P	P	14 15 57.1	-1.4
KHZ	Kahutara	25.44	194	P	P	14 15 56.7	-1.9
GVZ	Greta Valley S	26.08	194	P	P	14 16 02.2	-2.0
LTZ	Lake Taylor	26.09	195	P	P	14 16 02.4	-2.0
INZ	Inchbonnie	26.25	197	P	P	14 16 04.9	-0.9
OXZ	Oxford	26.66	195	P	P	14 16 07.2	-2.1
OXZ	Oxford	26.66	195	P	P	14 16 07.8	-1.5
WVZ	Waitaha Valley	26.77	197	P	P	14 16 09.2	-1.1
RPZ	Rata Peaks	27.28	196	P	P	14 16 15.0	+0.2
RPZ	Rata Peaks	27.28	196	P	P	14 16 12.8	-2.0
FOZ	Fox Glacier	27.46	198	P	P	14 16 15.2	-1.2
PPT	Papeete	27.67	94	P	P	14 16 17.8	-0.7
	36nm,0.9s,baz=108,slow=13,SNR=4.4						
	36nm,0.9s						
TMZ	Timaru	27.91	196	P	P	14 16 18.8	-1.5
LBZ	Lake Benmore	28.14	197	P	P	14 16 20.3	-2.0
JCZ	Jackson Bay	28.27	199	P	P	14 16 22.8	-0.7
ODZ	Otahua Downs	28.62	196	P	P	14 16 24.8	-1.6
WKZ	Wanaka	28.88	198	P	P	14 16 27.5	-1.3
MSZ	Milford Sound	29.08	200	P	P	14 16 30.8	+0.4
EIDS	Eidsvold	29.11	250		P	14 16 29.5	-1.5
EIDS	Eidsvold	29.11	250	P	P	14 16 30.9	-0.1
EAZ	Earnscleugh	29.16	198	P	P	14 16 30.2	-0.9
MLZ	Mavora Lakes	29.64	199	P	P	14 16 34.9	-0.4
MLZ	Mavora Lakes	29.64	199	P	P	14 16 35.6	+0.3
TUZ	Tuapeka	29.73	197	P	P	14 16 35.7	-0.3
ARMA	Armidale	29.82	240		P	14 16 36.9	-0.3
ARMA	Armidale	29.82	240	P	P	14 16 38.1	+0.9
DCZ	Deep Cove	30.04	200	P	P	14 16 38.4	-0.3
WHZ	Wether Hill Ro	30.17	199		P	14 16 39.4	-0.4
WHZ	Wether Hill Ro	30.17	199	P	P	14 16 39.8	0.0
APZ	The Paps	31.00	198	P	P	14 16 46.8	-0.2
RABL	Rabaul	31.62	292		P	14 16 51.2	-1.6
SYDH	Sydney Hard Ro	31.68	234	P	P	14 16 53.6	+0.6
CTAO	Charters Tower	33.26	260		P	14 17 05.9	-0.7
CTAO	Charters Tower	33.26	260	P	P	14 17 06.3	-0.3
CNB	Canberra Magne	33.34	232	P	P	14 17 07.8	+0.7
CAN	Canberra	33.61	232		P	14 17 08.8	-0.6
CAN	Canberra	33.61	232	P	P	14 17 10.0	+0.6
PMG	Port Moresby	34.23	280	P	P	14 17 14.8	+0.1
PMG	Port Moresby	34.23	280	P	P	14 17 16.1	+1.3
CMSA	Cobar Meteorol	35.03	240	P	P	14 17 21.3	+0.1
MTSU	Mount Surprise	35.21	264	P	P	14 17 22.7	-0.2
QLP	Quilpie	35.38	249	P	P	14 17 24.3	+0.1
JOHN	Johnston Islan	35.45	15	P	P	14 17 24.8	0.0
MANU	Manus Island	36.86	291	P	P	14 17 37.2	+0.7
COEN	Coen	36.89	270	P	P	14 17 36.6	-0.2
COEN	Coen	36.89	270	P	P	14 17 37.2	+0.4
TOO	Toolangi	37.08	231	P	P	14 17 38.3	+0.2
CORO	Coronation Par	37.59	224	P	P	14 17 42.9	+0.8
MLBS	Spotswood, Mel	37.62	230	P	P	14 17 43.4	+1.0
GEXS	Deakin Univers	38.20	230	P	P	14 17 47.8	+0.7
BRAT	Ballarat	38.23	231	P	P	14 17 48.2	+0.8
STKA	Stephens Creek	38.51	241	P	P	14 17 49.9	+0.2
STKA	Stephens Creek	38.51	241	P	P	14 17 50.3	+0.5
	35nm,0.6s,baz=86,slow=10,SNR=76						
	35nm,0.6s						
STKA	Stephens Creek	38.51	241	P	P	14 17 50.4	+0.6
QIS	Mount Isa	39.47	259	P	P	14 17 59.0	+1.3
ARPS	Mount Arapiles	39.55	233	P	P	14 17 58.6	+0.5
HTT	Hallett	41.03	239	P	P	14 18 10.5	+0.5
WHYH	Whyalla	42.06	240	P	P	14 18 18.4	+0.3
JAY	Jayapura	42.67	286	P	P	14 18 23.8	+0.6
	51nm,0.7s,baz=175,slow=6.4,SNR=11						
	51nm,0.7s						
GENI	Genyem	43.13	286	P	P	14 18 28.6	+1.9
GENI	Genyem	43.13	286	P	P	14 18 25.3	-1.4
BBOO	Buckleboo	43.28	241	P	P	14 18 27.5	-0.2
BBOO	Buckleboo	43.28	241	P	P	14 18 27.8	+0.1
KNHH	Kane Nui o Ham	43.53	33	P	P	14 18 29.8	0.0
HMH	Humu‘ula Sheep	43.56	33	P	P	14 18 29.7	-0.5
HPAH	Hawaii Prepara	43.81	32	P	P	14 18 32.3	+0.4
WR8	Warramunga Arr	44.30	259	P	P	14 18 34.2	-1.5
WR8				IAmb	IAmb	14 18 35.5	
	comp=Z,27nm,1.1s						
WB0	Warramunga Arr	44.41	260	P	P	14 18 35.1	-1.5
WRAB	Tennant Creek	44.44	259	P	P	14 18 35.1	-1.7
WRAB				IAmb	IAmb	14 18 36.5	
	comp=Z,25nm,0.8s						
WRA	Warramunga Arr	44.45	259	P	P	14 18 35.1	-1.8
WRA	Warramunga Arr	44.45	259	P	P	14 18 35.6	-1.3
	comp=Z,18nm,0.6s,baz=94,slow=6.9,SNR=166						
WRA				PcP	PcP	14 20 07.9	-0.7
	comp=Z,5.7nm,0.8s,baz=87,slow=3.5,SNR=8.0						
WRA				ScP	ScP	14 23 08.0	-0.5
	comp=Z,1.9nm,1.1s,baz=77,slow=3.5,SNR=3.7						
WRA				S	S	14 24 26.2	-6.1
	comp=Z,2.9nm,0.9s,baz=91,slow=14,SNR=7.7						
	comp=Z,18nm,0.6s						
AS01	Alice Springs	44.58	254	P	P	14 18 37.7	-0.2
AS31	Alice Springs	44.62	254	P	P	14 18 37.5	-0.7
ASAR	Alice Springs	44.62	254	P	P	14 18 37.7	-0.5
ASAR	Alice Springs	44.62	254	P	P	14 18 37.9	-0.4
	comp=Z,187nm,0.6s,baz=88,slow=8.2,SNR=1920						
ASAR				ScP	ScP	14 23 09.1	-0.2
	comp=Z,1.7nm,0.9s,baz=97,slow=4.2,SNR=4.6						
ASAR				S	S	14 24 31.1	-3.7
	comp=Z,9.1nm,1.1s,baz=85,slow=16,SNR=21						
KDU	Kakadu	47.35	269	P	P	14 18 58.7	-0.3
GUMO	Guam	47.64	308	P	P	14 19 01.1	0.0
	comp=Z,150nm,0.8s,baz=184,slow=12,SNR=6.9						
	comp=Z,150nm,0.8s						
MTN	Manton Dam	48.59	268	P	P	14 19 06.8	-1.4
MTN	Manton Dam	48.59	268	P	P	14 19 07.9	-0.4
RKPI	Ransiki, Papua	49.07	284	P	P	14 19 11.0	-0.8
	comp=Z,55nm,0.9s						
FORT	Forrest	49.87	245	P	P	14 19 16.5	-0.9
FORT	Forrest	49.87	245	P	P	14 19 17.6	+0.1
KNRA	Kununurra	50.29	264	P	P	14 19 19.6	-1.2
SWI	Sorong	52.01	283	P	P	14 19 33.5	+0.3
SOEI	Soe	55.86	270	P	P	14 20 02.7	+2.2
SOEI	Soe	55.86	270	P	P	14 20 02.8	+2.2
TNTI	Ternate	56.23	283	P	P	14 20 02.5	-0.4
TNTI				IAmb	IAmb	14 20 04.2	
	comp=Z,45nm,0.8s						
TNTI	Ternate	56.23	283	P	P	14 20 03.6	+0.7
TNTI	Ternate	56.23	283	P	P	14 20 02.3	-0.6
	comp=Z,62nm,0.9s						
PSA00	Pilbara Seismi	57.74	255	P	P	14 20 11.9	-1.3
PSA00	Pilbara Seismi	57.74	255	IAmb	IAmb	14 20 13.2	
	comp=Z,43nm,0.8s						
PSA00	Pilbara Seismi	57.74	255	P	P	14 20 12.5	-0.7
MBWA	Marble Bar	57.90	256	P	P	14 20 13.7	-0.6
MMRI	Maumere	58.09	271	IAmb	IAmb	14 20 15.6	
	comp=Z,35nm,0.7s						
EDFI	Ende, Flores	58.58	271	P	P	14 20 18.4	-0.7
	comp=Z,45nm,1.0s						
KLBR	Kellerberrin	58.70	243	P	P	14 20 19.0	-0.5
SBA	Scott Base	60.53	184	P	P	14 20 32.5	+1.7
VNDA	Vanda	60.55	185	P	P	14 20 32.0	+1.0
	comp=Z,0.7nm,0.4s,baz=360,slow=6.1,SNR=10						
APSI	Ampana	60.98	279	P	P	14 20 35.8	+0.9
	comp=Z,70nm,1.1s						
MRSI	Marisa	61.18	281	P	P	14 20 36.3	+0.1
	comp=Z,495nmcomp=Z,33nm,0.8s						
KAPI	Kappang	61.48	274	P	P	14 20 38.0	-0.2
	comp=Z,9.2nm,0.7s,baz=160,slow=6.9,SNR=5.9						
	comp=Z,9.2nm,0.7s						
SPSI	Sidrap Palu	61.78	275	P	P	14 20 40.4	+0.3
	comp=Z,29nm,0.8s						
PLAI	Plampang	62.29	269	P	P	14 20 44.0	+0.6
PLAI	Plampang	62.29	269	P	P	14 20 43.3	-0.1
	comp=Z,1000nmcomp=Z,101nm,0.9s						
TOLI2	Tolitoli	62.49	281	P	P	14 20 43.8	-0.9
TOLI2				IAmb	IAmb	14 20 45.5	
	comp=Z,20nm,1.0s						
PCI	Palu	62.69	278	P	P	14 20 46.3	+0.3
	comp=Z,108nm,1.0s						
TWSI	Taliwang, Sumb	63.16	269	P	P	14 20 49.1	0.0
JAGI	Jajag, Banyuwa	65.83	269	P	P	14 21 04.3	-1.7
JAGI	Jajag, Banyuwa	65.83	269	P	P	14 21 04.9	-1.1
MYLDM	Lahad Datu	66.08	284	P	P	14 21 08.6	+1.1
MYLDM	Lahad Datu	66.08	284	P	P	14 21 09.9	+2.4
CASY	Casey	66.16	205	P	P	14 21 07.0	0.0
CASY				IAmb	IAmb	14 21 08.6	
	comp=Z,9.5nm,0.7s						
MJAR	Matsushiro Arr	67.69	323	P	P	14 21 16.3	-0.6
	comp=Z,16nm,0.8s,baz=158,slow=5.7,SNR=36						
	comp=Z,16nm,0.8s						
MAJO	Matsushiro	67.69	323	P	P	14 21 16.2	-0.7
MAJO				IAmb	IAmb	14 21 17.6	
	comp=Z,24nm,0.8s						
MAJO	Matsushiro	67.69	323	P	P	14 21 16.7	-0.2
MJB9	Matsu-Tunnel	67.69	323	IAmb	IAmb	14 21 17.6	
	comp=Z,24nm,0.9s						
JMN	Monobe	68.36	319	P	P	14 21 22.7	+1.6
KKM	Kota Kinabalu	68.51	284	IAmb	IAmb	14 21 23.2	
	comp=Z,18nm,0.6s						
ADK	Adak	69.39	1	P	P	14 21 25.7	-1.1
ATKA	Atka Island	69.80	3	P	P	14 21 27.7	-1.5
ATKA	Atka Island	69.80	3	P	P	14 21 28.5	-0.7
SHEM	Shemya Is, Ala	70.50	355	P	P	14 21 32.5	-0.9
	comp=Z,33nm,0.5s,baz=47,slow=3.7,SNR=7.9						
	comp=Z,33nm,0.5s						
SMY	Shemya	70.50	355	P	P	14 21 32.2	-1.2
NIKH	Nikolski High	70.97	6	P	P	14 21 35.1	-1.0
	baz=190						
JKA	Kamikawa-asahi	71.07	332	IAmb	IAmb	14 21 38.9	
	comp=Z,32nm,1.1s						
NACB	Ninganchiao	71.67	304	P	P	14 21 41.5	+0.6
TPUB	Ta-pu	72.02	303	P	P	14 21 42.9	-0.1
UNV	Unalaska Valle	72.10	8	P	P	14 21 43.4	+0.7
UNV	Unalaska Valle	72.10	8	P	P	14 21 41.1	-1.5
	baz=192						
QSPA	South Pole Qui	72.27	180	P	P	14 21 44.5	+0.6
QSPA				IAmb	IAmb	14 21 46.5	
	comp=Z,28nm,1.4s						
QSPA	South Pole Qui	72.27	180	P	P	14 21 44.4	+0.6
	comp=Z,8.7nm,0.8s,baz=229,slow=0.9,SNR=62						
QSPA				pP	pP	14 23 40.4	+2.8
	comp=Z,5.1nm,0.9s,baz=23,slow=2.6,SNR=5.5						
	comp=Z,8.7nm,0.8s						
BBJI	Bungbulang	72.30	268	P	P	14 21 44.7	-0.2
KSM	Kuching	72.46	277	P	P	14 21 46.3	+0.6
KSM	Kuching	72.46	277	P	P	14 21 46.9	+1.2
LEM	Lembang	72.51	268	P	P	14 21 46.5	+0.2
	comp=Z,95nm,0.7s,baz=81,slow=3.9,SNR=22						
	comp=Z,95nm,0.7s						
PET	Petropavlovsk	73.21	346	P	P	14 21 47.8	-1.2
PET				IAmb	IAmb	14 21 49.0	
	comp=Z,31nm,1.2s						
YSS	Yuzhno-Sakhali	73.21	333	P	P	14 21 49.2	-0.1
YSS				IAmb	IAmb	14 21 51.2	
	comp=Z,33nm,1.1s						
YSS	Yuzhno-Sakhali	73.21	333	P	P	14 21 50.6	+1.3
PETK	Petropavlovsk-	73.51	345	P	P	14 21 49.7	-1.2
PETK	Petropavlovsk-	73.51	345	P	P	14 21 50.4	-0.5
	comp=Z,30nm,0.9s,baz=137,slow=7.6,SNR=42						
	comp=Z,30nm,0.9s						
CHNA	Chernabura Isl	74.13	11	P	P	14 21 52.9	-1.4
	baz=199						
SDPT	Sand Point	74.46	11	P	P	14 21 54.8	-1.3
SDPT				IAmb	IAmb	14 21 56.0	
	comp=Z,30nm,0.9s						
SDPT	Sand Point	74.46	11	P	P	14 21 56.2	+0.1
SDPT	Sand Point	74.46	11	P	P	14 21 54.9	-1.2
	baz=198						
KSRS	Korea Array	74.47	318	P	P	14 21 57.1	+0.5
	comp=Z,3.6nm,0.9s,baz=130,slow=6.3,SNR=16						
	comp=Z,3.6nm,0.9s						
KSAR	Wonju Array Be	74.49	318	P	P	14 21 56.7	0.0
P08K	Saint George I	74.49	5	P	P	14 21 54.9	-1.3
	baz=189						
S12K	Black Hills	74.53	10	P	P	14 21 55.2	-1.3
	baz=196						
SPIA	Saint Paul Isl	75.00	5	P	P	14 21 57.9	-1.2
	baz=188						
S14K	Fog Glacier	75.52	11	P	P	14 22 01.4	-0.7
	baz=199						
CHIR	Chirikof Islan	75.86	13	P	P	14 22 03.4	-0.5
	baz=203						
USRK	Ussuriysk Ar.	76.40	326	P	P	14 22 07.2	+0.1
USRK	Ussuriysk Ar.	76.40	326	P	P	14 22 07.8	+0.7
	comp=Z,6.4nm,0.9s,baz=116,slow=4.4,SNR=17						
	comp=Z,6.4nm,0.9s						
SII	Sitkinak Islan	76.86	14	P	P	14 22 09.7	+0.3
SII	Sitkinak Islan	76.86	14	P	P	14 22 09.1	-0.4
	baz=204						
R16K	Pilot Point	77.09	11	P	P	14 22 10.0	-0.6
	baz=201						
VTX	Valle De La Tr	77.61	51	IAmb	IAmb	14 22 17.3	
	comp=Z,32nm,1.4s						
OHAK	Old Harbor	77.67	14	P	P	14 22 13.2	-0.6
OHAK				IAmb	IAmb	14 22 14.7	
	comp=Z,32nm,1.0s						
OHAK	Old Harbor	77.67	14	P	P	14 22 14.0	+0.3
OHAK	Old Harbor	77.67	14	P	P	14 22 13.5	-0.2
	baz=205						
NJ2	Nanjing	77.70	310	*e*P	P	14 22 15.2	+0.6
NJ2				pmax	pmax		
	comp=Z,19nm,1.0s						
R18K	Karluk	77.72	13	P	P	14 22 13.7	-0.4
	baz=204						
ISA	Isabella, Lake	77.88	46	IAmb	IAmb	14 22 17.6	
	comp=Z,25nm,1.1s						
MDJ	Mudanjiang	77.97	325	P	P	14 22 16.6	+0.9
MDJ				pmax	pmax		
	comp=Z,55nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,250nm,3.9s						
ORV	Oroville	78.04	42	P	P	14 22 16.3	+0.1
O14K	Tigyukauivet M	78.07	9	P	P	14 22 14.9	-0.9
	baz=197						
Q17K	Contact Creek	78.07	12	P	P	14 22 15.2	-0.9
	baz=202						
O15K	Ungalikthiuk R	78.22	10	P	P	14 22 15.7	-1.0
	baz=198						
Q16K	King Salmon	78.31	12	P	P	14 22 16.9	-0.3
	baz=201						
KDAK	Kodiak Island	78.33	14	P	P	14 22 17.4	+0.1
	baz=205						
P16K	Nushagak River	78.39	11	P	P	14 22 17.0	-0.6
	baz=200,SNR=8.4						
M11K	Mekoryuk	78.54	6	P	P	14 22 17.1	-1.3
	baz=192						
Q18K	Katmai Hardscr	78.60	12	P	P	14 22 18.3	-0.6
	baz=203						
N14K	Kuskokwak Cree	78.65	9	P	P	14 22 18.9	0.0
N14K	Kuskokwak Cree	78.65	9	P	P	14 22 18.9	0.0
	baz=196,SNR=6.5						
WAKR	Walker	78.78	43	IAmb	IAmb	14 22 22.7	
	comp=Z,24nm,1.1s						
HATC	Hat Creek Radi	78.79	41	IAmb	IAmb	14 22 22.5	
	comp=Z,48nm,1.1s						
P17K	Kvichak River	78.83	11	P	P	14 22 19.3	-0.6
	baz=202,SNR=9.8						
M13K	Dall Lake	78.90	8	P	P	14 22 20.4	+0.2
	baz=195						
O16K	Kokwok River B	78.91	10	P	P	14 22 19.2	-1.1
	baz=200,SNR=7.6						
PNTR	Pine Nut	78.99	43	IAmb	IAmb	14 22 23.7	
	comp=Z,27nm,0.9s						
L04D	Klamath Falls	79.09	39	P	P	14 22 22.5	+0.5
L04D				IAmb	IAmb	14 22 23.7	
	comp=Z,31nm,1.1s						
N15K	Kwethluk River	79.12	9	IAmb	IAmb	14 22 22.9	
	comp=Z,33nm,1.2s						
N15K	Kwethluk River	79.12	9	P	P	14 22 21.5	0.0
	baz=198,SNR=6.1						
Q20K	Shuyak Island	79.13	14	P	P	14 22 21.4	-0.1
	baz=205						
DSP	Deep Springs	79.14	45	IAmb	IAmb	14 22 24.4	
	comp=Z,20nm,1.1s						
Q19K	Cape Douglas,	79.14	13	P	P	14 22 21.0	-0.7
	baz=204						
P18K	Big Mountain,	79.25	12	P	P	14 22 21.6	-0.7
	baz=203,SNR=9.8						
O17K	Koliganek Bris	79.25	11	P	P	14 22 21.5	-0.7
	baz=201,SNR=7.0						
LHV	Little Huntoon	79.25	44	IAmb	IAmb	14 22 25.1	
	comp=Z,27nm,1.0s						
M14K	Bethel	79.41	8	P	P	14 22 23.1	+0.1
M14K				IAmb	IAmb	14 22 24.4	
	comp=Z,32nm,1.3s						
M14K	Bethel	79.41	8	P	P	14 22 23.0	+0.1
	baz=196						
NVAR	Mina Array Bea	79.48	44	P	P	14 22 24.4	+0.1
NVAR	Mina Array Bea	79.48	44	P	P	14 22 24.8	+0.6
	comp=Z,8.8nm,0.8s,baz=227,slow=9.3,SNR=35						
NVAR				pP	pwP	14 24 23.2	+0.1
	comp=Z,2.5nm,1.1s,baz=236,slow=5.3,SNR=3.8						
	comp=Z,8.8nm,0.8s						
M15K	Kasigluk River	79.54	9	P	P	14 22 23.7	0.0
	baz=197,SNR=7.4						
N16K	Nishlik Lake	79.62	10	P	P	14 22 24.5	+0.3
	baz=199,SNR=8.4						
O18K	Koktuh Hills	79.68	12	P	P	14 22 24.1	-0.3
	baz=203,SNR=18						
CN2	Changchun	79.80	322	⇑P	P	14 22 25.6	+0.1
CN2				PcP	PcP	14 22 31.9	+0.9
CN2				pmax	pmax		
	comp=Z,40nm,1.2s						
CN2				pmax	pmax		
	comp=Z,140nm,5.0s						
J04A	Umpqua Nationa	79.81	38	IAmb	IAmb	14 22 27.7	
	comp=Z,42nm,1.0s						
BNX	BinXian	79.88	325	⇑P	P	14 22 25.8	0.0
BNX				pmax	pmax		
	comp=Z,41nm,1.0s						
L14K	Kuka Creek	79.89	8	P	P	14 22 25.5	0.0
	baz=196						
P19K	Oil Pt	79.89	13	P	P	14 22 24.9	-0.7
	baz=205						
N17K	Nushagak Hills	79.94	11	P	P	14 22 25.4	-0.4
	baz=201,SNR=6.0						
M16K	Timber Creek	80.11	10	P	P	14 22 27.4	+0.7
	baz=199,SNR=20						
O19K	Port Alsworth	80.17	12	P	P	14 22 26.1	-0.8
	baz=204,SNR=13						
CNPM	China Poot	80.22	14	IAmb	IAmb	14 22 28.2	
	comp=Z,27nm,1.0s						
K13K	Kusilvak Mount	80.22	7	IAmb	IAmb	14 22 28.9	
	comp=Z,26nm,1.2s						
K13K	Kusilvak Mount	80.22	7	P	P	14 22 27.7	+0.5
	baz=194,SNR=6.2						
HOM	Homer	80.24	14	P	P	14 22 26.9	-0.4
	baz=206						
N18K	Kilae Creek	80.32	11	P	P	14 22 27.2	-0.6
	baz=202						
WHN	Wuhan	80.36	306	P	P	14 22 30.1	+1.4
WHN				pmax	pmax		
	comp=Z,44nm,0.7s						
L15K	Ungalak Mounta	80.37	8	P	P	14 22 27.8	-0.1
	baz=197,SNR=10						
O20K	Slope Mountain	80.41	13	P	P	14 22 27.7	-0.7
	baz=205						
CNSH	ChangSha	80.42	304	P	P	14 22 30.4	+1.3
CNSH				pmax	pmax		
	comp=Z,17nm,1.2s						
V12A	Nelson	80.44	48	P	P	14 22 29.3	+0.1
BRLK	Bradley Lake	80.51	14	IAmb	IAmb	14 22 29.5	
	comp=Z,34nm,1.0s						
BRSE	Bradley Lake S	80.52	14	P	P	14 22 28.7	-0.2
	baz=207						
L16K	Owhat River	80.69	9	IAmb	IAmb	14 22 31.4	
	comp=Z,43nm,1.1s						
L16K	Owhat River	80.69	9	P	P	14 22 30.2	+0.6
	baz=198,SNR=28						
RED	Redoubt Volcan	80.69	13	IAmb	IAmb	14 22 29.8	
	comp=Z,19nm,0.8s						
N19K	Bonanza Creek	80.70	12	IAmb	IAmb	14 22 30.1	
	comp=Z,28nm,1.1s						
N19K	Bonanza Creek	80.70	12	P	P	14 22 29.1	-0.8
	baz=203,SNR=9.5						
M17K	Holitna River	80.72	10	P	P	14 22 30.9	+1.0
	baz=200,SNR=32						
PINE	Pine Mountain	80.83	38	IAmb	IAmb	14 22 33.3	
	comp=Z,35nm,1.1s						

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I05D  Terrebonne, OR   80.91  38 IAmb  IAmb  14 22 33.2
      comp=Z,32nm,1.3s
K15K  Wolf Creek Mou   80.95   8 P     P     14 22 31.9 +0.9
      baz=196,SNR=42
TIA   Tai'an           81.01 312 P     P     14 22 32.2 +0.2
TIA                              pmax  pmax
      comp=Z,11nm,1.0s
MA2   Magadan          81.02 345 P     P     14 22 30.9 -0.6
      comp=Z,27nm,1.6s
M18K  Stony River      81.08  11 P     P     14 22 31.8 +0.1
      baz=202,SNR=11
DIB   Dawson Inlet,    81.11  26 P     P     14 22 32.0  0.0
DIB                              IAmb  IAmb  14 22 33.3
      comp=Z,20nm,1.1s
SEW   Seward           81.14  14 IAmb  IAmb  14 22 32.4
      comp=Z,19nm,1.0s
SEW   Seward           81.14  14 P     P     14 22 31.4 -0.6
      baz=208
J14K  Nanvaranak Lak   81.14   7 P     P     14 22 32.0  0.0
      baz=195
PRN   Pahroc Range     81.14  46 IAmb  IAmb  14 22 35.2
      comp=Z,25nm,1.1s
L17K  Donlin           81.27  10 P     P     14 22 33.8 +1.1
      baz=200,SNR=29
HOOD  Mount Hood Mea   81.31  37 IAmb  IAmb  14 22 35.0
      comp=Z,24nm,1.1s
Q23K  Middleton Isla   81.33  16 P     P     14 22 32.1 -0.9
      baz=211
O22K  Cooper Landing   81.42  14 P     P     14 22 32.7 -0.7
      baz=208
WVOR  Wild Horse Val   81.45  40 IAmb  IAmb  14 22 36.2
      comp=Z,26nm,1.0s
GAMB  Gambell          81.48   3 IAmb  IAmb  14 22 35.1
      comp=Z,21nm,1.1s
N20K  Mount Spurr      81.52  13 P     P     14 22 32.7 -1.3
      baz=205,SNR=7.1
SPCR  Spurr Chakacha   81.52  13 P     P     14 22 32.7 -1.3
      baz=205
P23K  Montague Islan   81.55  15 P     P     14 22 33.2 -0.9
P23K                             IAmb  IAmb  14 22 34.7
      comp=Z,24nm,1.1s
P23K  Montague Islan   81.55  15 P     P     14 22 33.4 -0.7
      baz=210
L18K  Granite Mounta   81.61  10 IAmb  IAmb  14 22 36.2
      comp=Z,25nm,0.9s
L18K  Granite Mounta   81.61  10 P     P     14 22 35.1 +0.7
      baz=201,SNR=23
M19K  Big River Lodg   81.73  11 P     P     14 22 34.3 -0.7
      baz=203
TUC   Tucson           81.79  52 P     P     14 22 37.6 +1.4
TUC                              IAmb  IAmb  14 22 39.1
      comp=Z,17nm,1.1s
K17K  Iditarod         81.82   9 IAmb  IAmb  14 22 37.2
      comp=Z,44nm,1.4s
K17K  Iditarod         81.82   9 P     P     14 22 35.6 +0.1
      baz=200,SNR=9.0
I07A  Izee             81.84  39 IAmb  IAmb  14 22 38.2
      comp=Z,23nm,1.0s
STLK  Strandline Lak   81.86  13 IAmb  IAmb  14 22 35.4
      comp=Z,26nm,1.0s
L19K  White Mountain   81.90  11 IAmb  IAmb  14 22 37.2
      comp=Z,37nm,1.2s
L19K  White Mountain   81.90  11 P     P     14 22 35.9  0.0
      baz=203,SNR=20
M20K  Styx River       81.95  12 P     P     14 22 35.0 -1.3
      baz=204
RC01  Rabbit Creek A   81.95  14 IAmb  IAmb  14 22 36.8
      comp=Z,30nm,1.1s
RC01  Rabbit Creek A   81.95  14 P     P     14 22 34.8 -1.3
      baz=208,SNR=8.6
J16K  Anvik River      82.03   8 IAmb  IAmb  14 22 38.2
      comp=Z,34nm,1.1s
J16K  Anvik River      82.03   8 P     P     14 22 37.0 +0.4
      baz=197,SNR=15
J08A  Circle Bar Ran   82.06  40 P     P     14 22 37.4 +0.1
J08A                             IAmb  IAmb  14 22 39.2
      comp=Z,31nm,1.1s
SUA   Susitna One      82.06  13 P     P     14 22 36.1 -0.8
      baz=207,SNR=10.0
PWL   Port Wells       82.07  14 IAmb  IAmb  14 22 37.2
      comp=Z,31nm,1.0s
PWL   Port Wells       82.07  14 P     P     14 22 36.1 -0.7
      baz=209,SNR=9.0
X16A  Lo Mia Camp, P   82.27  50 IAmb  IAmb  14 22 41.2
      comp=Z,18nm,1.0s
KAIM  Kayak Island     82.27  17 IAmb  IAmb  14 22 39.0
      comp=Z,32nm,1.0s
KAIM  Kayak Island     82.27  17 P     P     14 22 37.9 +0.1
      baz=213
BELA  Belgrano 2       82.31 173 P     P     14 22 37.6 -0.3
BBB   Bella Bella      82.31  29 P     P     14 22 37.6 -0.5
      comp=Z,13nm,1.0s,baz=226,slow=8.4,SNR=5.5
      comp=Z,13nm,1.0s
J17K  VABM Dome        82.35   9 IAmb  IAmb  14 22 39.7
      comp=Z,20nm,1.1s
J17K  VABM Dome        82.35   9 P     P     14 22 38.4 +0.3
      baz=199,SNR=10
L20K  Farewell, AK     82.35  11 P     P     14 22 37.8 -0.5
      baz=204,SNR=19
SKT   Skwentna         82.36  13 P     P     14 22 36.7 -1.6
      baz=206,SNR=7.3
GLI   Glacier Island   82.39  15 P     P     14 22 37.5 -0.9
      baz=210,SNR=11
FID   Port Fidalgo     82.43  15 IAmb  IAmb  14 22 38.9
      comp=Z,22nm,1.1s
SPR3  Spring Creek 3   82.43  45 P     P     14 22 39.3 -0.2
EYAK  Cordova Ski Ar   82.44  16 P     P     14 22 37.9 -0.8
      baz=212
M22K  Willow           82.46  13 P     P     14 22 38.0 -0.7
      baz=207,SNR=12
CRAG  Craig            82.49  24 P     P     14 22 39.3 +0.3
      baz=223
KNB   Kanab            82.50  47 P     P     14 22 41.0 +1.3
319A  Douglas          82.52  54 IAmb  IAmb  14 22 42.9
      comp=Z,25nm,1.1s
PSUT  Pine Spring      82.53  46 P     P     14 22 40.3 +0.4
KNK   Knik Glacier     82.53  14 IAmb  IAmb  14 22 39.7
      comp=Z,19nm,0.9s
KNK   Knik Glacier     82.53  14 P     P     14 22 38.6 -0.6
      baz=209,SNR=7.3
PMR   Palmer           82.53  14 IAmb  IAmb  14 22 39.6
      comp=Z,14nm,0.8s
PMR   Palmer           82.53  14 P     P     14 22 38.9 -0.2
PMR   Palmer           82.53  14 P     P     14 22 38.6 -0.5
      baz=208,SNR=8.9
RAGM  Ragged Mountai   82.59  16 IAmb  IAmb  14 22 40.4
      comp=Z,38nm,1.2s
I17K  Unalakleet       82.59   8 P     P     14 22 39.6 +0.3
      baz=197
U15A  North Rim        82.59  48 IAmb  IAmb  14 22 42.9
      comp=Z,34nm,1.1s
HMT   Hamilton         82.66  16 IAmb  IAmb  14 22 40.6
      comp=Z,21nm,1.1s
HEH   HeiHe            82.70 328 eP    P     14 22 40.2  0.0
HEH                              pmax  pmax
      comp=Z,21nm,1.4s
ANM   Nome             82.72   6 P     P     14 22 40.2 +0.2
      baz=193
J18K  Innoko River     82.78  10 IAmb  IAmb  14 22 41.5
      comp=Z,27nm,1.0s
J18K  Innoko River     82.78  10 P     P     14 22 40.4 +0.1
      baz=201,SNR=26
WUAZ  Wupatki          82.82  49 IAmb  IAmb  14 22 43.8
      comp=Z,19nm,1.1s
G08A  Pilot Rock       82.84  38 IAmb  IAmb  14 22 43.0
      comp=Z,19nm,1.1s
SIT   Sitka            82.84  22 P     P     14 22 39.5 -1.2
      baz=221
BERG  Berg Lake        82.86  17 P     P     14 22 40.5 -0.3
BERG                             IAmb  IAmb  14 22 41.9
      comp=Z,33nm,1.3s
SML   Sawmill          82.91  14 IAmb  IAmb  14 22 42.5
      comp=Z,24nm,1.4s
SML   Sawmill          82.91  14 P     P     14 22 40.3 -0.7
      baz=209
DIV   Divide           82.94  15 IAmb  IAmb  14 22 41.8
      comp=Z,32nm,1.0s
U33K  Whale Pass       82.97  24 IAmb  IAmb  14 22 43.2
      comp=Z,44nm,1.3s
U33K  Whale Pass       82.97  24 P     P     14 22 42.0 +0.7
      baz=223
V35K  Ketchikan        82.99  25 P     P     14 22 40.6 -0.8
      baz=225
CUT   Chulitna         83.01  13 P     P     14 22 40.7 -0.7
      baz=207,SNR=8.1
M23K  Glacier View     83.03  14 P     P     14 22 41.1 -0.6
      baz=210
E07A  Sunnyside        83.05  36 IAmb  IAmb  14 22 43.9
      comp=Z,18nm,0.9s
PPLA  Purkeypile       83.06  12 P     P     14 22 41.0 -0.9
      baz=205,SNR=5.4
BMRM  Bremner River    83.10  16 P     P     14 22 41.3 -0.7
BMRM  Bremner River    83.10  16 P     P     14 22 41.5 -0.5
      baz=212,SNR=8.8
K20K  Telida           83.13  11 P     P     14 22 41.9 -0.2
      baz=204,SNR=25
HAWA  Hanford          83.13  37 IAmb  IAmb  14 22 44.3
      comp=Z,20nm,1.0s
WAX   Waxell Ridge     83.14  17 IAmb  IAmb  14 22 43.5
      comp=Z,32nm,0.9s
SCM   Sheep Creek Mo   83.16  14 P     P     14 22 41.9 -0.4
      baz=210,SNR=18
MESA  MESA             83.17  17 P     P     14 22 41.8 -0.8
      baz=215,SNR=17
DUN6  Lazy B Ranch     83.18  53 IAmb  IAmb  14 22 46.1
      comp=Z,31nm,1.1s
KLU   Klutina          83.21  15 IAmb  IAmb  14 22 43.3
      comp=Z,30nm,1.4s
KLU   Klutina          83.21  15 P     P     14 22 42.2 -0.4
      baz=211,SNR=7.4
S31K  Pelican          83.21  21 IAmb  IAmb  14 22 44.1
      comp=Z,28nm,1.1s
S31K  Pelican          83.21  21 P     P     14 22 42.8 +0.3
      baz=220,SNR=6.5
G15K  Niukluk          83.28   6 P     P     14 22 42.7 -0.1
      baz=194,SNR=13
HNS   HongShan         83.28 313 ⇓P    P     14 22 44.9 +1.5
HNS                              pmax  pmax
      comp=Z,21nm,1.3s
CRQE  Cirque           83.32  17 P     P     14 22 43.0 -0.2
      baz=214,SNR=13
TGL   Tana Glacier     83.40  17 IAmb  IAmb  14 22 44.5
      comp=Z,34nm,1.0s
S32K  Killisnoo        83.42  22 P     P     14 22 43.7 +0.1
      baz=222
J19K  Poorman          83.45  10 P     P     14 22 43.9 +0.2
      baz=202,SNR=11
WRAK  Wrangell Islan   83.48  24 P     P     14 22 44.4 +0.4
WRAK                             IAmb  IAmb  14 22 45.0
      comp=Z,22nm,1.1s
WRAK  Wrangell Islan   83.48  24 P     P     14 22 44.2 +0.2
      baz=224,SNR=5.1
TNA   Tin City         83.49   4 IAmb  IAmb  14 22 45.1
      comp=Z,36nm,1.2s
TNA   Tin City         83.49   4 P     P     14 22 43.8  0.0
      baz=190,SNR=6.3
PNL   Peninsula        83.51  19 P     P     14 22 44.3 +0.2
PNL   Peninsula        83.51  19 P     P     14 22 44.0 -0.1
      baz=217,SNR=8.1
F14K  Arctic Creek     83.53   5 P     P     14 22 44.1 +0.1
      baz=192,SNR=7.6
BJT   Baijiatuau       83.55 315 IAmb  IAmb  14 22 46.5
      comp=Z,25nm,1.1s
BJT   Baijiatuau       83.55 315 P     P     14 22 45.5 +0.8
BJI   Beijing          83.55 315 P     P     14 22 44.8 +0.1
BJI                              pmax  pmax
      comp=Z,10.0nm,1.2s
BJI                              pmax  pmax
      comp=Z,72nm,4.0s
CAST  Castle Rocks     83.55  12 P     P     14 22 42.5 -1.7
      baz=205,SNR=35
LYN   LuoYang          83.59 309 eP    P     14 22 45.7 +0.7
LYN                              pmax  pmax
      comp=Z,51nm,1.2s
PINM  Pinnacle         83.60  18 P     P     14 22 44.1 -0.5
      baz=217
RPSI  Rantau Prapat    83.63 275 P     P     14 22 45.2 -0.5
RPSI                             IAmb  IAmb  14 22 46.4
      comp=Z,27nm,0.9s
N25K  Chitina, Valde   83.64  16 P     P     14 22 44.4 -0.3
      baz=212,SNR=18
PSI   Prapat           83.66 275 P     P     14 22 46.3 +0.3
BCPM  Bancas Point     83.67  19 IAmb  IAmb  14 22 45.9
      comp=Z,26nm,1.4s
M24K  Tolsona, Glenn   83.68  15 P     P     14 22 44.9 +0.1
      baz=211,SNR=15
GRNC  Granite Creek    83.68  17 IAmb  IAmb  14 22 46.1
      comp=Z,25nm,1.0s
H17K  Granite Mounta   83.70   8 P     P     14 22 44.6 -0.3
      baz=198,SNR=5.4
MFID  Camas Ranch      83.72  41 IAmb  IAmb  14 22 47.5
      comp=Z,19nm,1.1s
WAT6  Susitna Watana   83.72  14 P     P     14 22 44.5 -0.8
      baz=210,SNR=27
WAT1  Susitna Watana   83.76  13 P     P     14 22 44.6 -0.7
      baz=209
G16K  Koyuk River      83.84   7 IAmb  IAmb  14 22 46.9
      comp=Z,15nm,1.2s
G16K  Koyuk River      83.84   7 P     P     14 22 45.7 +0.1
      baz=196
D08A  Wollman Farm,    83.86  36 IAmb  IAmb  14 22 47.8
      comp=Z,14nm,0.9s
J20K  Nowinta River    83.87  11 P     P     14 22 45.4 -0.3
      baz=203,SNR=21
MCARA McCarthy VSAT    83.87  16 P     P     14 22 45.2 -0.6
MCARA                            IAmb  IAmb  14 22 46.8
      comp=Z,28nm,1.1s
MCARA McCarthy VSAT    83.87  16 P     P     14 22 45.5 -0.3
      baz=214,SNR=6.4
KTH   Kantishna Hill   83.90  12 IAmb  IAmb  14 22 45.5
      comp=Z,20nm,0.9s
MAW   Mawson           83.90 200 P     P     14 22 45.9 -0.1
      comp=Z,4.9nm,0.7s,baz=136,slow=5.8,SNR=4.9
      comp=Z,4.9nm,0.7s
F15K  North Star Dit   83.91   6 IAmb  IAmb  14 22 46.8
      comp=Z,17nm,1.3s
F15K  North Star Dit   83.91   6 P     P     14 22 45.6 -0.3
      baz=193
CHUM  Lake Minchumin   83.93  11 P     P     14 22 44.8 -1.2
      baz=205,SNR=17
TRF   Thorofare Moun   83.94  12 P     P     14 22 45.2 -1.0
      baz=207,SNR=31
GCSA  Galena City Sc   83.95   9 P     P     14 22 46.1 +0.1
      baz=201,SNR=8.4
LOGN  Logan Glacier    83.97  18 IAmb  IAmb  14 22 47.4
      comp=Z,22nm,1.0s
CTG   Chitna Glacier   83.99  17 P     P     14 22 46.2 -0.3
      baz=216,SNR=10
CTGM  Chitina Glacie   83.99  17 IAmb  IAmb  14 22 47.5
      comp=Z,25nm,1.0s
P29M  Windy Craggy     84.00  20 IAmb  IAmb  14 22 48.1
      comp=Z,30nm,1.1s
P29M  Windy Craggy     84.00  20 P     P     14 22 46.9 +0.3
      baz=219,SNR=11
ENH   Enshi            84.03 304 P     P     14 22 48.2 +0.8
R32K  Eaglecrest       84.05  22 P     P     14 22 47.1 +0.3
      baz=222
JIS   Juneau Island    84.10  22 P     P     14 22 47.0 +0.1
H18K  Honhosa River    84.12   8 P     P     14 22 46.4 -0.5
      baz=199
G17K  Kiwalik Mounta   84.15   7 P     P     14 22 46.7 -0.4
      baz=197,SNR=6.7
O28M  Mount Upton      84.16  18 IAmb  IAmb  14 22 48.5
      comp=Z,16nm,0.8s
O28M  Mount Upton      84.16  18 P     P     14 22 47.2 -0.4
      baz=217,SNR=14
HARP  HAARP            84.17  15 P     P     14 22 46.8 -0.4
      baz=212,SNR=7.2
DHY   Denali Highway   84.23  14 IAmb  IAmb  14 22 48.3
      comp=Z,25nm,1.3s
DHY   Denali Highway   84.23  14 P     P     14 22 46.8 -0.9
      baz=210,SNR=13
O29M  Mount Kennedy    84.27  19 IAmb  IAmb  14 22 49.4
      comp=Z,22nm,1.4s
O29M  Mount Kennedy    84.27  19 P     P     14 22 47.9  0.0
      baz=218,SNR=7.2
PLBC  Pleasant Camp    84.31  20 P     P     14 22 48.2 +0.2
      baz=220,SNR=12
B08A  Colville Reser   84.36  35 IAmb  IAmb  14 22 49.5
      comp=Z,16nm,1.1s
BPAW  Bear Paw Mtn.    84.38  12 P     P     14 22 45.9 -2.4
BPAW  Bear Paw Mtn.    84.38  12 P     P     14 22 48.0 -0.3
      baz=206
I20K  Naaghedeneel     84.38  10 P     P     14 22 48.2  0.0
      baz=203
MCK   McKinley         84.47  13 IAmb  IAmb  14 22 49.0
      comp=Z,27nm,1.0s
MCK   McKinley         84.47  13 P     P     14 22 47.8 -0.9
      baz=208,SNR=7.5
GSI   Gunungsitoli     84.49 273 P     P     14 22 50.7 +0.8
PAX   Paxson           84.59  15 IAmb  IAmb  14 22 49.6
      comp=Z,14nm,1.1s
PAX   Paxson           84.59  15 P     P     14 22 48.5 -0.9
      baz=212,SNR=11
P30M  Million Dollar   84.63  20 P     P     14 22 50.0 +0.4
      baz=220
C09A  Chrisman Ranch   84.64  36 IAmb  IAmb  14 22 51.3
      comp=Z,13nm,1.0s
SKAG  Skagway          84.66  21 P     P     14 22 50.2 +0.6
      baz=221
HLID  Hailey           84.68  41 IAmb  IAmb  14 22 52.6
      comp=Z,14nm,1.1s
YUK8  Steele Glacier   84.70  18 P     P     14 22 50.0 -0.2
      baz=217,SNR=21
T35M  Bob Quinn        84.70  24 P     P     14 22 50.7 +0.7
      baz=226,SNR=5.2
M26K  Nabesna, AK      84.72  16 P     P     14 22 49.9 -0.2
      baz=214
H19K  Roundabout Mou   84.75   9 IAmb  IAmb  14 22 51.1
      comp=Z,23nm,1.5s
H19K  Roundabout Mou   84.75   9 P     P     14 22 50.0  0.0
      baz=201,SNR=7.8
G18K  Tagagawik        84.78   8 P     P     14 22 49.6 -0.6
      baz=199
GYA   Guiyang          84.79 300 P     P     14 22 51.9 +0.6
GYA                              pmax  pmax
      comp=Z,18nm,0.8s
YUK6  Outpost Mounta   84.84  18 P     P     14 22 50.6 -0.3
      baz=218
SRIT  Nakonsritamara   84.85 281 P     P     14 22 53.4 +1.7
YUK3  Moose Creek      84.89  17 P     P     14 22 50.9 -0.2
      baz=216,SNR=32
H20K  Anotleneega Mo   84.96  10 P     P     14 22 51.0  0.0
      baz=203,SNR=7.2
M27K  Edge Creek, AK   84.98  16 P     P     14 22 51.6 +0.2
      baz=215,SNR=35
F17K  Baldwin Pennin   84.98   7 P     P     14 22 50.6 -0.5
      baz=197
MENT  Mentasta         84.99  15 IAmb  IAmb  14 22 52.3
      comp=Z,15nm,1.0s
MENT  Mentasta         84.99  15 P     P     14 22 51.3  0.0
HYT   Haines Junctio   85.01  19 P     P     14 22 51.1 -0.4
HYT                              IAmb  IAmb  14 22 52.9
      comp=Z,14nm,1.1s
HYT   Haines Junctio   85.01  19 P     P     14 22 51.8 +0.3
      baz=219,SNR=9.4
S34M  Telegraph Cree   85.02  23 P     P     14 22 52.1 +0.6
      baz=225,SNR=17
YUK4  Talbot Arm       85.07  18 P     P     14 22 52.4 +0.4
      baz=218,SNR=7.5
L26K  Log Cabin Wild   85.15  15 IAmb  IAmb  14 22 53.0
      comp=Z,12nm,1.0s
L26K  Log Cabin Wild   85.15  15 P     P     14 22 52.0 -0.1
      baz=214,SNR=11
I21K  Tanana           85.17  11 IAmb  IAmb  14 22 52.7
      comp=Z,28nm,1.2s
NEA2  Nenana           85.20  12 P     P     14 22 50.8 -1.5
      baz=208
K24K  Donnelly Dome    85.23  14 P     P     14 22 52.2 -0.2
      baz=211,SNR=22
G19K  Purcell Mounta   85.23   9 P     P     14 22 52.1 -0.2
      baz=201,SNR=5.3
SLVN  Son La           85.24 294 IAmb  IAmb  14 22 55.8
      comp=Z,12nm,1.1s
SLVN  Son La           85.24 294 P     P     14 22 53.8 +0.3
MLY   Manley           85.27  11 IAmb  IAmb  14 22 52.5
      comp=Z,17nm,1.2s
MLY   Manley           85.27  11 P     P     14 22 51.2 -1.4
      baz=207,SNR=12
BVCY  Beaver Creek     85.30  17 P     P     14 22 52.6 -0.2
      baz=216
P32M  Atlin            85.31  21 IAmb  IAmb  14 22 54.5
      comp=Z,18nm,1.2s
P32M  Atlin            85.31  21 P     P     14 22 53.4 +0.5
      baz=222,SNR=7.6
Q32M  Nakina River     85.35  22 IAmb  IAmb  14 22 55.0
      comp=Z,25nm,1.4s
Q32M  Nakina River     85.35  22 P     P     14 22 53.7 +0.3
      baz=224,SNR=11
RIDG  Independent Ri   85.39  14 IAmb  IAmb  14 22 53.9
      comp=Z,25nm,1.1s
RIDG  Independent Ri   85.39  14 P     P     14 22 52.7 -0.5
      baz=212,SNR=16
O30N  Mendenhall       85.41  19 IAmb  IAmb  14 22 54.8
      comp=Z,22nm,1.1s
O30N  Mendenhall       85.41  19 P     P     14 22 53.6 +0.2
      baz=220,SNR=14
TCUT  Toone Canyon     85.42  44 IAmb  IAmb  14 22 55.5
      comp=Z,11nm,0.9s
H21K  Melozitna Rive   85.46  10 IAmb  IAmb  14 22 54.7
      comp=Z,19nm,1.4s
H21K  Melozitna Rive   85.46  10 P     P     14 22 53.0 -0.4
      baz=205,SNR=8.8
HDA   Harding Lake     85.49  13 IAmb  IAmb  14 22 55.2
      comp=Z,18nm,1.1s
HDA   Harding Lake     85.49  13 P     P     14 22 52.7 -0.9
      baz=210,SNR=14
DOT   Dot Lake         85.50  15 IAmb  IAmb  14 22 54.4
      comp=Z,22nm,1.1s
CCB   Clear Creek Bu   85.51  13 IAmb  IAmb  14 22 53.7
      comp=Z,28nm,1.2s
XLT   XiLinHaoTe       85.52 319 eP    P     14 22 54.3 -0.1
XLT                              pmax  pmax
      comp=Z,20nm,1.1s
E17K  Hotham Inlet     85.53   7 P     P     14 22 53.3 -0.4
      baz=196
L27K  Beaver Creek,    85.57  16 IAmb  IAmb  14 22 55.2
      comp=Z,15nm,1.4s
L27K  Beaver Creek,    85.57  16 P     P     14 22 53.9 -0.3
      baz=215,SNR=9.1
BCAR  Beaver Creek A   85.59  16 P     P     14 22 53.5 -0.7
IMAR  Indian Mountai   85.60  10 P     P     14 22 52.7 -1.4
PV05  Paradox Valley   85.61  48 IAmb  IAmb  14 22 57.3
      comp=Z,14nm,1.4s
VHRN  Van Horn         85.63  56 IAmb  IAmb  14 22 57.9
      comp=Z,21nm,1.4s
N30M  Aishikik Lake    85.63  19 P     P     14 22 54.3 -0.2
      baz=219
I23K  Minto, Yukon-K   85.64  12 IAmb  IAmb  14 22 55.2
      comp=Z,14nm,1.3s
I23K  Minto, Yukon-K   85.64  12 P     P     14 22 53.1 -1.1
      baz=208,SNR=7.0
COLA  College          85.70  13 P     P     14 22 53.0 -1.6
COLA  College          85.70  13 P     P     14 22 54.3 -0.3
COLA  College          85.70  13 P     P     14 22 53.4 -1.2
      baz=209
WHY   Whitehorse       85.71  20 P     P     14 22 55.1 +0.2
      baz=221,SNR=9.1
PV10  Paradox Valley   85.79  48 IAmb  IAmb  14 22 59.0
      comp=Z,12nm,1.0s
F19K  Shaleruckik Mo   85.79   8 P     P     14 22 54.4 -0.5
      baz=200,SNR=5.4
SCRK  Sand Creek       85.80  15 IAmb  IAmb  14 22 57.2
      comp=Z,13nm,1.1s
SCRK  Sand Creek       85.80  15 P     P     14 22 54.9 -0.3
      baz=213,SNR=10
DLBC  Dease Lake       85.80  23 IAmb  IAmb  14 22 57.1
      comp=Z,17nm,1.2s
DLBC  Dease Lake       85.80  23 P     P     14 22 55.2 -0.1
      comp=Z,7.3nm,1.0s,baz=214,slow=5.4,SNR=12
      comp=Z,7.3nm,1.0s
DLBC  Dease Lake       85.80  23 P     P     14 22 55.9 +0.6
      baz=226,SNR=8.9
IL31                   85.82  13 IAmb  IAmb  14 22 55.3
      comp=Z,29nm,1.3s
ILAR  Eielson Array    85.82  13 P     P     14 22 53.7 -1.5
ILAR  Eielson Array    85.82  13 P     P     14 22 54.0 -1.2
      comp=Z,3.4nm,0.4s,baz=223,slow=5.3,SNR=68
      comp=Z,3.4nm,0.4s
PV18  Skein Mesa, Pa   85.82  48 IAmb  IAmb  14 22 59.4
      comp=Z,16nm,1.2s
PV20  West Nyswonger   85.82  48 IAmb  IAmb  14 22 59.4
      comp=Z,14nm,1.0s
PV23  Carpenter Ridg   85.84  48 P     P     14 22 56.2  0.0
H22K  Ishtalitna Cre   85.92  11 P     P     14 22 55.2 -0.4
      baz=206,SNR=11
PV02  Paradox Valley   85.93  48 IAmb  IAmb  14 22 58.4
      comp=Z,19nm,1.4s
M29M  Somme Creek      86.00  18 P     P     14 22 56.3  0.0
      baz=218,SNR=11
E18K  Tukpahlearik C   86.00   7 P     P     14 22 55.6 -0.3
      baz=197,SNR=7.6
POKR  Poker Plat Res   86.00  13 P     P     14 22 54.7 -1.4
      baz=210
D17K  Noatak River     86.00   6 P     P     14 22 55.7 -0.2
      baz=195,SNR=6.1
J25K  Salcha River,    86.02  14 IAmb  IAmb  14 22 56.8
      comp=Z,21nm,1.2s
J25K  Salcha River,    86.02  14 P     P     14 22 55.3 -0.9
      baz=212,SNR=18
XAN   Xi'an            86.02 307 ⇑P    P     14 22 57.7 +0.8
XAN                              pmax  pmax
      comp=Z,71nm,1.2s
XAN                              pmax  pmax
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      comp=Z,110nm,5.4s
N31M  Braeburn, Yuko    86.05  19 P      P       14 22 56.7 +0.3
      baz=221,SNR=11
P33M  Teslin, Yukon     86.07  21 P      P       14 22 56.7 +0.1
      baz=223,SNR=7.4
TX31  Lajitas Ar. Si    86.11  58 IAmb   IAmb    14 23 00.6
      comp=Z,25nm,1.2s
TXAR  Lajitas Array     86.11  58 P      P       14 22 58.7 +1.2
TXAR  Lajitas Array     86.11  58 P      P       14 22 59.2 +1.7
      comp=Z,8.6nm,0.9s,baz=221,slow=5.4,SNR=57
TXAR                              pP     pwP     14 24 58.9 -1.0
      comp=Z,0.7nm,1.1s,baz=193,slow=3.9,SNR=1.9
      comp=Z,8.6nm,0.9s
G21K  Allakaket         86.13  10 P      P       14 22 56.1 -0.5
      baz=204
R33M  Jennings River    86.13  22 IAmb   IAmb    14 22 58.8
      comp=Z,22nm,1.2s
R33M  Jennings River    86.13  22 P      P       14 22 57.6 +0.6
      baz=225,SNR=18
ANMO  Albuquerque       86.19  52 P      P       14 22 57.8 -0.1
H23K  Yukon River       86.20  12 P      P       14 22 55.7 -1.3
      baz=208
F20K  Avaraart Lake     86.28   9 P      P       14 22 57.1 -0.2
      baz=202
BILL  Bilibino          86.29 354 P      P       14 22 56.9 -0.5
BILL                              IAmb   IAmb    14 22 58.3
      comp=Z,25nm,1.1s
K27K  Chicken           86.31  15 IAmb   IAmb    14 22 59.0
      comp=Z,21nm,1.4s
K27K  Chicken           86.31  15 P      P       14 22 57.7 +0.1
      baz=215
J26L  Joseph Creek      86.34  14 IAmb   IAmb    14 22 58.4
      comp=Z,10.0nm,0.8s
J26L  Joseph Creek      86.34  14 P      P       14 22 58.0 +0.2
      baz=213,SNR=18
C16K  Lisburne Hills    86.36   5 P      P       14 22 57.3 -0.4
      baz=193
RDOG  Red Dog Mine      86.36   6 P      P       14 22 57.2 -0.5
      baz=195
AHID  Auburn Hatcher    86.40  43 IAmb   IAmb    14 23 00.7
      comp=Z,16nm,1.2s
E19K  Redstone River    86.45   8 IAmb   IAmb    14 22 58.8
      comp=Z,11nm,1.1s
E19K  Redstone River    86.45   8 P      P       14 22 57.6 -0.5
      baz=200
ALPN  Alpine            86.53  57 IAmb   IAmb    14 23 02.1
      comp=Z,16nm,1.3s
L29M  L29M              86.62  17 P      P       14 22 59.4 +0.4
      baz=218,SNR=22
N32M  Quiet Lake        86.67  20 P      P       14 22 59.2 -0.1
      baz=223
DLMT  Dillon            86.70  40 IAmb   IAmb    14 23 01.9
      comp=Z,20nm,1.1s
C17K  DeLong Mountai    86.75   6 P      P       14 22 59.2 -0.3
      baz=195
PRP   Porcupine Dome    86.75  13 IAmb   IAmb    14 23 00.1
      comp=Z,15nm,1.4s
PRP   Porcupine Dome    86.75  13 P      P       14 22 58.8 -1.0
      baz=212,SNR=8.0
F21K  Alatna River      86.78  10 P      P       14 22 59.2 -0.5
      baz=204
G22K  Bettles           86.83  10 P      P       14 22 59.6 -0.3
      baz=206
TPAW  Teton Pass        86.84  42 IAmb   IAmb    14 23 02.9
      comp=Z,11nm,1.0s
FXWY  Fox Creek         86.86  42 P      P       14 23 00.5 -0.4
G23K  Bananza Creek     86.90  11 P      P       14 23 00.0 -0.3
      baz=207
M31M  Drury Creek, Y    87.03  19 IAmb   IAmb    14 23 01.7
      comp=Z,17nm,1.4s
M31M  Drury Creek, Y    87.03  19 P      P       14 23 00.6 -0.4
      baz=222,SNR=9.9
DAWY  Dawson            87.03  16 IAmb   IAmb    14 23 02.1
      comp=Z,13nm,1.1s
DAWY  Dawson            87.03  16 P      P       14 23 01.0  0.0
      baz=217,SNR=11
HHC   Hu-ho-hao-te      87.04 315 eP     P       14 23 02.9 +1.2
HHC                               pmax   pmax
      comp=Z,22nm,1.0s
HHC                               pmax   pmax
      comp=Z,79nm,4.7s
I26K  Coal Creek Min    87.11  14 IAmb   IAmb    14 23 03.2
      comp=Z,13nm,1.1s
I26K  Coal Creek Min    87.11  14 P      P       14 23 01.1 -0.2
      baz=214,SNR=8.1
C18K  Utukok River      87.11   6 P      P       14 23 00.5 -0.8
      baz=197
LOHW  Long Hollow       87.12  42 IAmb   IAmb    14 23 04.0
      comp=Z,16nm,1.4s
F22K  John River        87.25  10 P      P       14 23 01.5 -0.4
      baz=205
D19K  Kuna River        87.32   7 P      P       14 23 01.6 -0.7
      baz=200
COLD  Coldfoot          87.33  11 IAmb   IAmb    14 23 03.4
      comp=Z,15nm,1.0s
COLD  Coldfoot          87.33  11 P      P       14 23 02.3 +0.1
      baz=207,SNR=9.5
E20K  Nigu River        87.34   8 P      P       14 23 02.1 -0.3
      baz=201
K29M  Barlow Dome       87.36  17 IAmb   IAmb    14 23 04.1
      comp=Z,17nm,1.2s
K29M  Barlow Dome       87.36  17 P      P       14 23 02.8 +0.2
      baz=219,SNR=12
YFT   Old Faithful      87.36  42 IAmb   IAmb    14 23 06.5
      comp=Z,16nm,1.1s
G24K  Hadweenzic Riv    87.38  12 P      P       14 23 01.9 -0.6
      baz=210
FARO  Faro, Yukon       87.38  19 P      P       14 23 02.5 -0.2
      baz=223
BW06  Boulder Array     87.41  44 IAmb   IAmb    14 23 04.9
      comp=Z,17nm,1.4s
PD31  Pinedale Array    87.41  44 IAmb   IAmb    14 23 04.9
      comp=Z,16nm,1.4s
PDAR  Pinedale Array    87.41  44 P      P       14 23 03.0 -0.5
PDAR  Pinedale Array    87.41  44 P      P       14 23 03.5 -0.1
      comp=Z,3.3nm,0.6s,baz=204,slow=3.3,SNR=22
      comp=Z,3.3nm,0.6s
BOZ   Bozeman (W)       87.41  40 IAmb   IAmb    14 23 05.3
      comp=Z,15nm,1.2s
WTLY  Watson Lake, Y    87.42  23 IAmb   IAmb    14 23 04.5
      comp=Z,14nm,1.2s
WTLY  Watson Lake, Y    87.42  23 P      P       14 23 02.8 -0.1
      baz=227,SNR=5.8
H17A  Grant Village     87.50  42 IAmb   IAmb    14 23 07.0
      comp=Z,13nm,0.9s
SAND  Sanderson         87.59  58 P      P       14 23 04.5 +0.1
SAND                              IAmb   IAmb    14 23 06.4
      comp=Z,10nm,1.1s
KMI   Kunming           87.59 297 P      P       14 23 05.9 +1.2
KMI                               pmax   pmax
      comp=Z,18nm,1.2s
MAYO  Mayo, Yukon       87.63  18 P      P       14 23 04.0 +0.3
      baz=220
J29N  Klondike Camp     87.65  16 P      P       14 23 04.1 +0.1
      baz=218
G25K  Bearman Lake      87.71  12 P      P       14 23 04.1 +0.1
      baz=211
D20K  Etivluk River     87.71   8 IAmb   IAmb    14 23 04.9
      comp=Z,9.3nm,1.0s
D20K  Etivluk River     87.71   8 P      P       14 23 03.8 -0.3
      baz=201
I27K  Kandik River      87.72  14 P      P       14 23 03.8 -0.4
      baz=215
C19K  Lookout Ridge     87.72   7 P      P       14 23 03.8 -0.3
      baz=198
B18K  Kokolik River     87.74   6 P      P       14 23 04.1 -0.1
      baz=196
E21K  Killik River      87.83   9 IAmb   IAmb    14 23 05.1
      comp=Z,9.4nm,1.1s
E21K  Killik River      87.83   9 P      P       14 23 04.1 -0.5
      baz=204
E22K  Anaktuvuk Pass    87.88  10 IAmb   IAmb    14 23 05.7
      comp=Z,13nm,1.0s
E22K  Anaktuvuk Pass    87.88  10 P      P       14 23 04.6 -0.3
      baz=206,SNR=13
TOAD  Toad River Com    87.94  25 P      P       14 23 05.6 +0.3
      baz=230,SNR=17
LIRD  Liard River Hi    87.96  24 P      P       14 23 05.6 +0.2
      baz=229
I28M  Miner Creek       88.00  15 P      P       14 23 05.1 -0.5
      baz=217,SNR=6.1
F24K  Squaw Lake        88.01  11 IAmb   IAmb    14 23 06.0
      comp=Z,7.2nm,0.8s
F24K  Squaw Lake        88.01  11 P      P       14 23 05.4 -0.2
      baz=209,SNR=8.0
YNE   Yellowstone No    88.14  41 IAmb   IAmb    14 23 09.2
      comp=Z,15nm,1.1s
E23K  Chandalar         88.18  11 IAmb   IAmb    14 23 07.2
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      comp=Z,15nm,1.1s
E23K  Chandalar         88.18  11 P      P       14 23 06.1 -0.2
      baz=208,SNR=6.2
H27K  Steamboat Moun    88.25  14 IAmb   IAmb    14 23 07.8
      comp=Z,8.2nm,1.0s
H27K  Steamboat Moun    88.25  14 P      P       14 23 06.7  0.0
      baz=215,SNR=7.6
J30M  Hart River        88.26  17 P      P       14 23 06.4 -0.4
      baz=220,SNR=6.8
MMPY  Sheldon Lake,     88.33  20 P      P       14 23 07.6 +0.5
      baz=225,SNR=33
I29M  Ogilvie Camp,     88.34  16 P      P       14 23 06.5 -0.5
      baz=218
G26K  Porcupine Rive    88.35  13 P      P       14 23 07.3 +0.3
      baz=213,SNR=14
C21K  Knifeblade Rid    88.37   8 P      P       14 23 07.2 +0.1
      baz=203,SNR=7.7
E24K  Your Creek        88.39  11 P      P       14 23 07.1 -0.2
      baz=209
D22K  Ayikyak River     88.42   9 P      P       14 23 07.2 -0.1
      baz=205,SNR=8.4
F25K  Christian Rive    88.51  12 IAmb   IAmb    14 23 09.2
      comp=Z,9.9nm,1.1s
F25K  Christian Rive    88.51  12 P      P       14 23 08.2 +0.3
      baz=211,SNR=5.4
TGTN  Hyland Airport    88.58  22 P      P       14 23 08.4 +0.1
      baz=227
BMAR  Burnt Mountain    88.59  12 P      P       14 23 08.0 -0.2
A19K  Wainwright        88.62   6 P      P       14 23 07.9 -0.3
      baz=197
CMAR  Chiang Mai Arr    88.65 290 P      P       14 23 10.3 +0.8
      comp=Z,8.8nm,0.9s,baz=107,slow=2.9,SNR=41
      comp=Z,8.8nm,0.9s
RLMT  Red Lodge         88.66  42 IAmb   IAmb    14 23 11.4
      comp=Z,10nm,1.1s
G27K  Doyon Strip       88.70  14 P      P       14 23 08.6 -0.1
      baz=215
TOLK  Toolik Lake Re    88.70  10 IAmb   IAmb    14 23 10.5
      comp=Z,14nm,1.3s
TOLK  Toolik Lake Re    88.70  10 P      P       14 23 08.5 -0.3
      baz=208
OZNA  Ozona             88.74  57 IAmb   IAmb    14 23 11.6
      comp=Z,17nm,1.2s
I30M  Mount Dempster    88.75  16 IAmb   IAmb    14 23 09.9
      comp=Z,11nm,1.1s
I30M  Mount Dempster    88.75  16 P      P       14 23 08.8 -0.3
      baz=220,SNR=11
CHTO  Chiang Mai        88.76 290 P      P       14 23 11.1 +1.0
CHTO                              IAmb   IAmb    14 23 12.0
      comp=Z,11nm,0.8s
CHTO  Chiang Mai        88.76 290 P      P       14 23 11.3 +1.2
D23K  Nanushuk River    88.81  10 P      P       14 23 09.4 +0.2
      baz=207,SNR=7.8
B21K  Ikpikpuk River    88.83   8 P      P       14 23 08.9 -0.2
      baz=203,SNR=5.9
BEAVL Fort Liard        88.86  24 P      P       14 23 09.5 -0.1
      baz=230
B20K  Meade River       88.86   7 IAmb   IAmb    14 23 09.6
      comp=Z,9.5nm,1.2s
B20K  Meade River       88.86   7 P      P       14 23 09.1 -0.2
      baz=200
F26K  Sheenjek River    88.90  12 IAmb   IAmb    14 23 11.1
      comp=Z,12nm,1.2s
F26K  Sheenjek River    88.90  12 P      P       14 23 09.8 +0.1
      baz=213
PZH   PanZhiHua         88.91 298 P      P       14 23 11.0 +0.2
PZH                               pmax   pmax
      comp=Z,10.0nm,1.1s
H29M  Whitestone        89.01  15 P      P       14 23 09.9 -0.2
      baz=218,SNR=10
KOTAN Kotaneelee Air    89.22  24 P      P       14 23 11.1 -0.1
      baz=231
D24K  Happy Valley      89.29  10 P      P       14 23 11.3 -0.1
      baz=208
K22A  Casper            89.37  45 IAmb   IAmb    14 23 14.0
      comp=Z,20nm,1.4s
HBVL  Hebbronville      89.39  61 IAmb   IAmb    14 23 16.2
      comp=Z,15nm,1.2s
EPYK  Eagle Plains      89.54  16 P      P       14 23 12.3 -0.3
      baz=220,SNR=10
C23K  Itkillik River    89.61   9 P      P       14 23 12.9 +0.1
      baz=207
G29M  Pine Creek        89.64  15 IAmb   IAmb    14 23 14.4
      comp=Z,15nm,1.1s
G29M  Pine Creek        89.64  15 P      P       14 23 12.5 -0.6
      baz=218,SNR=6.4
SN05  Snyder 5          89.65  55 IAmb   IAmb    14 23 15.1
      comp=Z,9.5nm,1.0s
B22K  Teshekpuk Lake    89.65   8 P      P       14 23 12.6 -0.4
      baz=204
EGMT  Eagleton          89.69  39 IAmb   IAmb    14 23 15.3
      comp=Z,10nm,1.2s
HNDO  Hondo             89.74  59 P      P       14 23 15.0 +0.6
H31M  Peel River        89.74  17 IAmb   IAmb    14 23 14.0
      comp=Z,12nm,1.1s
H31M  Peel River        89.74  17 P      P       14 23 12.7 -0.8
      baz=222,SNR=8.2
F28M  Old Crow          89.76  14 P      P       14 23 13.5 -0.1
      baz=217
C24K  Franklin Bluff    89.81  10 P      P       14 23 13.9 +0.2
      baz=208
E27K  Coleen River      89.85  13 P      P       14 23 14.1 +0.1
      baz=215
D25K  Kavik River       89.86  11 P      P       14 23 13.8 -0.2
      baz=211
A22K  Sinclair Lake     90.06   8 P      P       14 23 14.6 -0.2
      baz=202
G30M  tAoh Zraii Nji    90.14  15 P      P       14 23 14.9 -0.5
      baz=220,SNR=21
A21K  Barrow            90.16   7 P      P       14 23 14.8 -0.5
      baz=201
TROLL Troll, Antarti    90.43 180 ⇑P     P       14 23 16.9  0.0
      comp=Z,399nm,0.7s
BRDY  Brady             90.58  57 IAmb   IAmb    14 23 19.7
      comp=Z,7.5nm,1.1s
G31M  Satah River       90.60  16 P      P       14 23 17.0 -0.4
      baz=222,SNR=16
C27K  Jago River        90.62  12 P      P       14 23 17.4 -0.1
      baz=213
E28M  Babbage River     90.64  13 P      P       14 23 17.4 -0.2
      baz=217
C26K  Camden Bay        90.64  11 P      P       14 23 17.8 +0.2
      baz=212
LZH   Lanzhou           90.65 308 eP     P       14 23 19.7 +1.0
LZH                               pmax   pmax
      comp=Z,33nm,1.2s
SNAA  Sanae             90.72 179 ⇑P     P       14 23 17.9 -0.3
      comp=Z,39nm,0.5s
SNAA  Sanae             90.72 179 P      P       14 23 17.5 -0.7
      comp=Z,2.7nm,0.8s,baz=209,slow=7.8,SNR=17
      comp=Z,2.7nm,0.8s
F30M  Barrier River     90.73  15 P      P       14 23 17.7 -0.3
      baz=220,SNR=5.7
E29M  Blow River        90.83  14 IAmb   IAmb    14 23 19.6
      comp=Z,13nm,1.4s
E29M  Blow River        90.83  14 P      P       14 23 19.0 +0.5
      baz=218
D27M  Malcolm River     90.85  13 P      P       14 23 18.9 +0.2
      baz=216
VNA3  Neumayer Olymp    90.87 176 ⇑P     P       14 23 18.8  0.0
      comp=Z,14nm,0.7s
F31M  Tsiigehtchic      91.13  16 P      P       14 23 19.6 -0.3
      baz=222,SNR=23
VNA2  Neumayer--Watz    91.31 177 ⇑P     P       14 23 20.9  0.0
      comp=Z,7.7nm,1.0s,baz=185,slow=3.0
VNA1  Neumayer--Stat    91.54 177 ⇑P     P       14 23 22.8 +0.9
      comp=Z,12nm,0.8s
RSSD  Black Hills       91.62  44 P      P       14 23 23.2 +0.2
RSSD                              IAmb   IAmb    14 23 24.2
      comp=Z,7.5nm,1.1s
INK   Inuvik            91.82  15 P      P       14 23 21.7 -1.4
      comp=Z,8.1nm,0.9s,baz=220,slow=7.8,SNR=12
      comp=Z,8.1nm,0.9s
INK   Inuvik            91.82  15 P      P       14 23 22.2 -0.8
      baz=222,SNR=10
ULN   Ulaanbaatar       92.93 320 P      P       14 23 29.0 +0.2
SONM  Songino Array     93.32 319 P      P       14 23 29.6 -1.0
SONM                              IAmb   IAmb    14 23 31.5
      comp=Z,7.8nm,1.3s
SONM  Songino Array     93.32 319 P      P       14 23 29.5 -1.1
      comp=Z,1.4nm,0.8s,baz=115,slow=4.3,SNR=12
      comp=Z,1.4nm,0.8s
YKA   Yellowknife Ar    94.31  25 P      P       14 23 34.3 -0.2
YKA   Yellowknife Ar    94.31  25 P      P       14 23 34.1 -0.5
      comp=Z,3.4nm,1.0s,baz=251,slow=4.6,SNR=24
      comp=Z,3.4nm,1.0s
YKAW3 Yellowknife Wh    94.34  25 IAmb   IAmb    14 23 34.8
      comp=Z,5.3nm,1.1s
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YKAW1 Yellowknife Wh     94.35  25 IAmb   IAmb    14 23 36.1
      comp=Z,8.8nm,1.2s
GTA   Gaotai             94.80 310 eP     P       14 23 37.9 +0.4
GTA                                pmax   pmax
      comp=Z,6.0nm,1.0s
C36M  Paulatuk           95.04  17 P      P       14 23 37.1 -0.6
      baz=231
A36M  Sachs Harbour      96.42  15 P      P       14 23 43.2 -0.6
      baz=230
ZALV  Zalesovo Beam     108.01 322 PKiKP  PKiKP   14 28 38.0 -1.2
      comp=Z,1.4nm,0.6s,baz=264,slow=3.0,SNR=6.7
MKAR  Makanchi Array    108.90 314 PKiKP  PKiKP   14 28 40.1 -1.2
      comp=Z,1.2nm,0.5s,baz=101,slow=1.5,SNR=14
KURBB Kurchatov Arra    111.65 318 PKiKP  PKiKP   14 28 45.0 -1.3
      comp=Z,1.8nm,0.7s,baz=98,slow=2.0,SNR=13
KURBB                              PP     PP      14 29 38.4 -0.7
      comp=Z,1.3nm,0.9s,baz=94,slow=6.6,SNR=4.6
KSH   Kashi             112.84 306 PKP    PKiKP   14 28 52.2 +3.1
BVAR  Borovoye Array    116.62 321 PKP    PKPdf   14 28 54.8 -1.0
      comp=Z,3.4nm,0.4s,baz=124,slow=2.1,SNR=30
BVAR                               PP     PP      14 30 14.1 +0.4
      comp=Z,2.3nm,1.0s,baz=77,slow=6.4,SNR=4.6
SPITS Spitsbergen Ar    119.14 356 PKP    PKPdf   14 28 59.1 -0.9
      comp=Z,1.5nm,0.5s,baz=66,slow=6.5,SNR=11
ARCES ARCESS Array B    126.16 350 PKP    PKPdf   14 29 12.9 -0.7
      comp=Z,1.3nm,0.4s,baz=34,slow=2.7,SNR=3.3
FINES FINESS Array B    133.01 344 PKhKP  PKPpre  14 29 19.8
      comp=Z,0.6nm,0.5s,baz=51,slow=3.7,SNR=7.1
FINES                              PKP    PKPdf   14 29 26.2 -0.6
      comp=Z,1.7nm,0.5s,baz=44,slow=4.2,SNR=6.2
NB2   NORSAR Subarra136.23 353 PKP    PKPpre  14 29 22.4
      comp=Z,1.7nm,0.7s,baz=11,slow=4.0
NOA   NORSAR Array B136.23 353 PKP    PKPdf   14 29 32.9  0.0
      comp=Z,0.5nm,0.5s,baz=15,slow=3.8,SNR=3.3
HFS   Hagfors           136.78 351 PKhKP  PKPpre  14 29 26.0
      comp=Z,1.1nm,0.4s,baz=90,slow=3.0,SNR=11
AKASG Malin Array Be    140.36 332 PKhKP  PKPpre  14 29 33.4
      comp=Z,1.4nm,0.3s,baz=42,slow=4.1,SNR=16
AKASG                              PKP    PKPdf   14 29 39.9 -0.7
      comp=Z,1.1nm,0.4s,baz=40,slow=2.8,SNR=8.9
EKA   Eskdalemuir Ar    142.36   4 PKhKP  PKPpre  14 29 39.4
      comp=Z,0.5nm,0.3s,baz=336,slow=2.4,SNR=10
MILM  Milestii Mici     143.20 328⇑iPKP   PKPab   14 29 43.0 -0.7
      comp=Z,75nm,1.3s
MILM  Milestii Mici     143.20 328 ⇓P     PKPab   14 29 43.5 -0.3
BZK   Bozkurt           143.20 318 ⇑P     PKPdf   14 29 45.3 -0.7
BNN   Bunyan            143.42 312        PKPbc   14 29 45.6 +0.3
LODK  Lodwar            143.76 251        PKPdf   14 29 47.8 -0.2
KWP   Kalwaria Pacla    143.88 336 ePKP   PKPbc   14 29 46.1 -0.1
VASR  Vaslui            143.90 329 ⇑P     PKPbc   14 29 46.2 -0.2
CIDE  Kastamonu/Cide    143.91 318 ⇑P     PKPdf   14 29 47.4 +0.2
VLDR  Vladesti          144.30 327 ⇑P     PKPab   14 29 48.2 +0.2
TLCR                    144.35 326 ⇑P     PKPab   14 29 49.5 +1.3
BURAR Bucovina Array    144.41 332 ⇓P     PKPab   14 29 49.0 +0.5
OJC   Ojcow             144.43 340 ePKP   PKPbc   14 29 47.7 -0.2
SCTR  Scanteiesti       144.46 327 ⇑P     PKPab   14 29 48.5 -0.1
GHRR                    144.49 328 ⇓P     PKPab   14 29 49.6 +0.9
BR131 Keskin Array S    144.55 315        PKPdf   14 29 48.2 -0.5
BRTR  Keskin Array B    144.55 315        PKPdf   14 29 48.0 -0.7
BRTR  Keskin Array B    144.55 315 PKP    PKPdf   14 29 48.5 -0.1
      comp=Z,16nm,0.9s,baz=126,slow=3.2,SNR=80
TESR  Tescani           144.55 329 ⇑P     PKPdf   14 29 48.3 +0.1
JURR  Jurilovca         144.60 325 ⇓P     PKPab   14 29 48.9 -0.2
STHS  Stebnicka Huta    144.60 337 ePKP   PKPbc   14 29 48.5  0.0
KOLS  Kolonicke sedl    144.61 336 ePKP   PKPab   14 29 49.2 +0.1
KIRS  Kirsehir-Merke    144.64 314 ⇑P     PKPbc   14 29 49.1 +0.1
IZVR  Izvoarele         144.66 327 ⇑P     PKPab   14 29 50.5 +1.2
SCHLR Schela            144.68 327 ⇓P     PKPab   14 29 49.5  0.0
TUDR                    144.68 327 ⇓P     PKiKP   14 29 51.4 -1.0
CFR   Carcaliu          144.72 327 ⇑P     PKPbc   14 29 49.0 +0.1
TPGR  Topolog           144.78 326 ⇑P     PKPbc   14 29 49.5 +0.3
ONER  Baraj Valea Uz    144.80 329 ⇑P     PKPbc   14 29 49.5 +0.4
KSP   Ksiaz             144.94 343 ePKP   PKPbc   14 29 49.9 +0.5
NIE   Niedzica          144.94 338 ePKP   PKPab   14 29 50.1 -0.3
VRI   Vrincioaia        144.97 329 ⇓P     PKPbc   14 29 49.5 -0.2
PLOR  Plostina          145.02 329 ⇓P     PKPbc   14 29 49.9  0.0
ANTO  Ankara            145.05 316        PKPbc   14 29 50.3 +0.1
ANTO  Ankara            145.05 316 ⇑P     PKPbc   14 29 50.2 +0.1
TIRR  Tirgusor          145.05 325 ⇓P     PKPbc   14 29 50.0 +0.1
BMR   Baia Mare         145.11 334 ⇑P     PKPab   14 29 50.8 -0.3
HARR  Harsova           145.15 326 ⇑P     PKPbc   14 29 50.6 +0.3
TURR  Turia             145.18 329 ⇓P     PKPab   14 29 51.3 -0.2
ARCR  ARCALIA           145.19 332 ⇑P     PKPab   14 29 51.0 -0.4
BISRR Bisoca            145.20 328 ⇑P     PKPab   14 29 52.1 +0.5
OSTC  Ostas             145.22 343 ePKP   PKPab   14 29 50.9 -0.5
MFTR  Murfatlar         145.23 325 ⇑P     PKPab   14 29 51.6  0.0
CHVC  Chvalec           145.23 344 ePKP   PKPbc   14 29 50.8 +0.5
OZUR                    145.26 330 ⇑P     PKPab   14 29 52.0 +0.3
CLL   Collm             145.30 347 i PKPdf PKPdf  14 29 49.6 +0.3
CLL                                i PKPbc PKPbc  14 29 50.4 -0.1
      comp=Z,64nm,1.2s
UPC   Upice             145.31 344 ePKP   PKPbc   14 29 50.7 +0.1
STEB  Steborice         145.32 341 ePKP   PKPbc   14 29 50.7 +0.1
DPC   Dobruska-Polom    145.37 343 ePKP   PKPbc   14 29 51.1 +0.3
TSMN  Mangalia Port-    145.37 324 ⇓P     PKPbc   14 29 51.3 +0.4
LANS  Liptovska Anna    145.45 339 ePKP   PKPab   14 29 52.0 -0.4
KRLC  Kraliky           145.49 342 ePKP   PKPbc   14 29 51.3 +0.2
NEHR  Nehoiu            145.49 328 ⇑P     PKPab   14 29 52.1 -0.5
BRG   Berggiesshubel    145.50 346 ePKP   PKPdf   14 29 49.6 -0.1
BRG                                 Amp           14 29 51.3
      comp=Z,4.9nm,1.2s
BRG   Berggiesshubel    145.50 346  P     PKPbc   14 29 51.4 +0.3
BRG                                 Amp           14 29 52.4
      comp=Z,24nm,0.9s
MORC  Moravsky Berou    145.53 341 ePKP   PKPbc   14 29 51.3  0.0
MORC                               e              14 31 53.0
DOPR  Dopca             145.55 330 ⇑P     PKPab   14 29 52.2 -0.6
ISR   Istrita           145.58 328 ⇑P     PKPab   14 29 52.5 -0.5
MLR   Muntele Rosu      145.62 329        PKPbc   14 29 51.9 +0.1
MLR   Muntele Rosu      145.62 329 ⇓P     PKPbc   14 29 52.0 +0.2
PSN   Preselentsi       145.73 325 eP     PKPbc   14 29 51.6 -0.4
SAHE  Sakarya_HENDEK145.79 318 ⇓P     PKPbc   14 29 52.0 -0.3
MAUC  Maruska           145.80 341 ePKP   PKPbc   14 29 51.6 -0.4
CJR   Cluj-Napoca       145.81 332 ⇓P     PKPbc   14 29 52.9 +0.7
MMAI  Mount Meron Ar    145.90 303  PKPbc PKPbc   14 29 53.3 +0.4
      comp=Z,11nm,0.5s,baz=74,slow=4.4,SNR=24
MARR  Marisel-Cluj      146.05 333 ⇓P     PKPbc   14 29 53.4 +0.5
VOIR                    146.10 330 ⇓P     PKPdf   14 29 51.9 +0.9
DRGR                    146.14 333 ⇑P     PKPbc   14 29 53.3 +0.2
PRU   Pruhonice         146.17 345 ePKP   PKPbc   14 29 53.1 +0.1
GOPC  GO Pecny, Ondr    146.18 344 ePKP   PKPbc   14 29 52.9 -0.2
VRAC  Vranov            146.23 342 ePKP   PKPbc   14 29 53.6 +0.4
VRAC  Vranov            146.23 342 ⇓P     PKPbc   14 29 53.2  0.0
VYHS  Vyhne             146.23 339 ePKP   PKPbc   14 29 53.5 +0.3
JAVC  Velka Javorina    146.30 340 ePKP   PKPbc   14 29 54.2 +0.7
PSZ   Piszkesteto       146.34 337 ⇑P     PKPbc   14 29 54.6 +0.9
ARR   Arges             146.35 330 ⇑P     PKiKP   14 29 55.3 -0.6
SILT  Sile              146.38 320 ⇑P     PKPbc   14 29 53.4 -0.4
NKC   Novy Kostel       146.43 347 ePKP   PKPbc   14 29 53.8 +0.1
PRD   Provadia          146.45 324 eP     PKPbc   14 29 54.4 +0.5
NEF   NEVSHA            146.45 325 eP     PKPbc   14 29 54.7 +0.7
SGRR  Singureni         146.50 327 ⇑P     PKPbc   14 29 53.9 -0.2
KRUC  Moravsky          146.51 342 ePKP   PKPbc   14 29 53.9 -0.1
KLYT  Kilyos            146.69 320 ⇑P     PKPbc   14 29 55.2 +0.5
ZVC   Zvikov            146.77 345 ePKP   PKPbc   14 29 54.7 +0.1
HUMR  Humele            146.79 328 ⇑P     PKPbc   14 29 54.8  0.0
MODS  Modra-Piesok      146.85 340 ePKP   PKPbc   14 29 55.2 +0.3
UCC   Uccle             146.98 357 dPKP   PKPbc   14 29 54.2 -0.9
SRO   Srobarova         146.99 339 ePKP   PKPbc   14 29 56.0 +0.7
MEM   Membach           147.04 355 dPKP   PKPbc   14 29 55.3 -0.1
BTNL  Ternell           147.06 354 dPKP   PKPbc   14 29 54.8 -0.6
BSTI  Sart Tilman       147.11 355 dPKP   PKPbc   14 29 55.2 -0.3
GZR   Gura Zlata        147.19 332 ⇑P     PKPbc   14 29 55.6 -0.4
GRF   Grafenberg Arr    147.19 348 ePKP   PKPbc   14 29 55.1 -0.7
      baz=18,slow=2.0
SURR  Surduc            147.20 333 ⇑P     PKPbc   14 29 55.4 -0.5
KHC   Kasperske Hory    147.21 345 ePKP   PKPbc   14 29 56.1 +0.2
BCLA  Clavier           147.29 355 dPKP   PKPbc   14 29 55.5 -0.4
CKRC  Cesky Krumlov     147.31 344 ePKP   PKPbc   14 29 56.2 +0.1
BGES  Gesves            147.34 356 dPKP   PKPbc   14 29 55.5 -0.6
GERES GERESS Array B    147.44 345  PKPbc PKPbc   14 29 56.5  0.0
      comp=Z,8.7nm,0.6s,baz=11,slow=3.3,SNR=52
BMRD  Maredsous         147.45 356 dPKP   PKPbc   14 29 56.8 +0.5
BZS   Buzias            147.53 333 ⇓P     PKPbc   14 29 56.9 +0.1
DOU   Dourbes           147.66 356 dPKP   PKPbc   14 29 57.1 +0.1
CONA  Conrad Observa    147.68 342 i PKiKP PKPbc  14 29 57.6 +0.4
      comp=Z,44nm,1.2s,SNR=19
HERR  Herculane         147.75 331 ⇓P     PKPbc   14 29 57.4  0.0
RONA  Rosalia, Austr    147.75 341 i PKiKP PKPbc  14 29 57.6 +0.3
      comp=Z,34nm,1.0s,SNR=11
BAND  Balkesir-Ban      147.79 320 ⇑P     PKPbc   14 29 58.1 +0.5
WLF   Walferdange       147.97 354 dPKP   PKPbc   14 29 58.4 +0.7
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MDVR	Moldovita	148.14	332	⇑P	PKPbc	14 29 58.2	-0.2
VALD	Valchedram	148.16	329	eP	PKiKP	14 29 59.3	-0.4
MOA	Molln	148.21	343	i PKP	PKPbc	14 29 58.3	-0.2
	comp=Z,22nm,1.2s,SNR=11						
MORH	Mrgy, Hungar	148.24	337	⇓P	PKPdf	14 29 54.1	-0.3
MPEP	Malo Peshtene	148.25	328	eP	PKPbc	14 29 58.8	+0.1
ARSA	Arzberg	148.39	341	i PKiKP	PKPbc	14 29 58.8	-0.1
	comp=Z,13nm,1.1s,SNR=5.9						
BIOA	Bad Ischl, Aus	148.52	344	i PKiKP	PKPbc	14 29 58.8	-0.5
	comp=Z,24nm,1.2s,SNR=7.5						
FRGS	Fruska Gora	148.66	335	⇑iP	PKPbc	14 29 59.5	-0.1
BFO	Black Forest	149.01	351		PKPbc	14 30 00.2	-0.2
LESA	Schwarzleotal	149.01	345	i PKiKP	PKPbc	14 30 00.1	-0.4
	comp=Z,13nm,0.4s,SNR=11						
BOVS	Bovan	149.03	331	⇑P	PKPbc	14 30 00.3	-0.2
VTS	Vitosha	149.04	328	eP	PKPbc	14 30 01.3	+0.5
PLNA	Plana	149.05	327	eP	PKPbc	14 30 00.9	+0.1
SOKA	Soboth	149.05	342	i PKP	PKPbc	14 30 00.0	-0.6
	comp=Z,29nm,1.3s,SNR=9.0						
KBA	Koelnbreinsper	149.17	344	i PKP	PKPbc	14 30 00.1	-0.9
	comp=Z,14nm,0.5s,SNR=11						
EZN	Ezine	149.20	321	⇓P	PKPbc	14 30 01.1	0.0
TEKS	Tekeris	149.27	334	⇑iP	PKPbc	14 30 00.7	-0.5
OBKA	Obir	149.35	342	⇑iP	PKPbc	14 29 59.0	-2.4
OBKA	Obir	149.35	342	i PKP	PKPbc	14 30 00.5	-0.8
	comp=Z,18nm,1.5s,SNR=6.3						
WATA	Walderalm	149.36	346	i PKP	PKPbc	14 30 01.0	-0.4
	comp=Z,14nm,0.5s,SNR=8.4						
RETA	Reutte	149.39	347	i PKiKP	PKPbc	14 30 01.2	-0.2
	comp=Z,9.0nm,0.5s,SNR=9.0						
WTTA	Wattenberg	149.41	346	i PKiKP	PKPbc	14 30 01.5	-0.2
	comp=Z,55nm,1.2s,SNR=11						
MOTA	Moosalm	149.45	347	i PKP	PKPbc	14 30 01.3	-0.4
	comp=Z,34nm,1.1s,SNR=8.0						
MYKA	Terra Mystica	149.50	343	i PKP	PKPbc	14 30 00.8	-0.9
	comp=Z,9.8nm,0.4s,SNR=11						
MMB	Musomishta	149.53	326	eP	PKPbc	14 30 01.7	-0.2
SQTA	Sankt Quirin	149.55	347	i PKiKP	PKPbc	14 30 01.6	-0.3
	comp=Z,44nm,1.2s,SNR=8.3						
GCIS	Gornji Cirnik	149.59	340	i PKPbc	PKPbc	14 30 01.8	-0.1
ABTA	Abfaltersbach	149.69	345	i PKP	PKPbc	14 30 01.4	-0.8
	comp=Z,39nm,0.9s,SNR=10						
DAVA	Damuels	149.76	348	i PKiKP	PKPbc	14 30 02.3	-0.1
	comp=Z,30nm,1.0s,SNR=9.4						
LJU	Ljubljana	149.78	342	i PKPbc	PKPbc	14 30 02.1	-0.2
FETA	Feichten	149.84	347	i PKiKP	PKPbc	14 30 02.5	-0.1
	comp=Z,36nm,1.2s,SNR=7.1						
BBLS	Lazi&#263i	149.88	334	⇑iP	PKPbc	14 30 02.6	-0.1
HAPS	Han Pijesak,BI	149.89	334	⇑iP	PKPbc	14 30 02.9	+0.1
A051A	Mrakovica	149.90	338	⇑iP	PKPbc	14 30 02.5	-0.2
GBAS	Gorenja Brezov	149.90	342	i PKPbc	PKPbc	14 30 02.1	-0.5
GBAS				i PKPab	PKPab	14 30 09.4	-1.1
BLY	Banja Luka	150.03	337	⇑iP	PKPbc	14 30 02.8	-0.1
BOJS	Bojanci	150.04	340	⇑iP	PKPbc	14 30 02.9	0.0
CEY	Cerknica	150.08	342	⇑iP	PKPbc	14 30 02.5	-0.5
RUDO	Rudo	150.09	333	eP	PKPbc	14 30 02.2	-0.9
SJES	Sjenica	150.11	332	⇑iP	PKPbc	14 30 03.3	0.0
FUORN	Ofenpass-Fuorn	150.32	348		PKPbc	14 30 03.9	+0.1
A050A	Klekovaca	150.49	338	⇑iP	PKPbc	14 30 03.4	-0.7
BRY	Bratogost	151.03	333	⇑iP	PKPbc	14 30 04.4	-1.1
PDG	Podgorica	151.09	332	⇑iP	PKPbc	14 30 04.9	-0.5
PDG	Podgorica	151.09	332	⇓P	PKPbc	14 30 05.4	0.0
DRME	Dracevica, Mon	151.32	332	⇑iP	PKPbc	14 30 05.5	-0.5
STON	Ston	151.40	334	⇑iP	PKPbc	14 30 04.9	-1.2
HCY	Herceg Novi	151.42	333	⇑iP	PKPbc	14 30 05.2	-1.0
POLO	Lamas de Olo	155.21	17	ePKPab	PKPab	14 30 33.2	-0.1
PVRL	Vila Real	155.32	17	ePKPab	PKPab	14 30 33.8	+0.1
MVO	Moncorvo	155.61	15	ePKPab	PKPab	14 30 34.1	-0.9
PVIS	Viseu	155.79	17	ePKPab	PKPab	14 30 35.8	0.0
MTE	Manteigas	156.19	17	ePKPab	PKPab	14 30 31.7	-5.8
PCAS	Casmilo, Conde	156.22	19	ePKPab	PKPab	14 30 37.3	-0.3
PSARD	Sardoal	156.74	19	ePKPab	PKPab	14 30 39.1	-0.7
PMRV	Marv??o	157.13	18	ePKPab	PKPab	14 30 41.6	0.0
PARRA	Arraiolos	157.16	21	ePKPab	PKPab	14 30 43.4	+1.7
MOE	Montemor	157.66	20	ePKPab	PKPab	14 30 39.2	-4.6
ESDC	Sonseca Array	157.70	11		PKPab	14 30 43.6	-0.5
ESDC	Sonseca Array	157.70	11	PKPab	PKPab	14 30 42.8	-1.3
	comp=Z,2.9nm,0.9s,baz=343,slow=4.5,SNR=11						
ESDC				PP	PP	14 34 25.0	+0.1
	comp=Z,1.6nm,1.2s,baz=350,slow=7.5,SNR=4.2						
PFVI	Vila Bisbo	158.74	23	ePKPab	PKPab	14 30 51.0	+2.4
KEST	Kesra	160.78	340	PKPab	PKPab	14 30 56.9	-0.7
	comp=Z,3.9nm,0.8s,baz=50,slow=5.3,SNR=4.3						

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*NNC **08** 14:14:23.5±1.7, 40°.52N×79°.09E, h0^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=12.9km s-min=8.6km az=164.0*
*KRNET **08** 14:14:23.5±0.1, 40°.82N×78°.71E, mb3.4*
*SOME **08** 14:14:23.3, 40°.83N×78°.67E, h10^{km}*
ISC 08 14:14:21.5±2.2**, 40°.4N**±0°.1×**78°.96E**±0°.07**, h10^{km}, n47, σ3^{s}02**/70**, 26C-12D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	2.10	349	⇑eP	Pn	14 14 55.2	-1.7
PRZ				⇑eS	Sn	14 15 18.0	-5.1
KDJ	Kajisay	2.17	322	⇑iP	Pn	14 14 55.7	-2.1
KDJ				⇑iS	Sn	14 15 19.3	-5.5
NRN	Naryn	2.46	295	⇓iP	Pn	14 15 02.5	+0.6
NRN				⇓iS	Sn	14 15 31.0	-1.1
SATY	Saty	2.66	351	Pg	Pn	14 15 06.3	+1.7
	45nm,0.4s						
SATY				Lg	Lg	14 15 37.6	
	206nm,0.6s						
UZB	Uzynbulak	2.72	1	Pg	Pn	14 15 08.3	+2.9
	13nm,0.2s						
UZB				Lg	Lg	14 15 40.3	
	126nm,0.6s						
ULHL	Ulahol	2.73	313	⇑iP	Pn	14 15 05.1	-0.6
ULHL				⇑iS	Sn	14 15 35.6	-3.3
SHLS	Shalkode	2.75	8	Lg	Lg	14 15 45.2	
	184nm,0.4s						
SHLS	Shalkode	2.75	8	eP	Pb	14 15 11.2	+0.3
	95nm,0.5s						
SHLS				eS	Sb	14 15 45.2	+0.4
	184nm,0.4s						
ZHN	Zhinishke	2.77	352	Lg	Lg	14 15 41.6	
	225nm,0.3s						
ZHN	Zhinishke	2.77	352	eP	Pn	14 15 08.7	+2.7
	28nm,0.2s						
ZHN				eS	Sn	14 15 41.1	+1.5
	225nm,0.3s						
PDGK	Podgornoye	2.93	8	⇑Pn	Pn	14 15 09.6	+1.4
	6.6nm,0.3s						
PDGK				⇑Sn	Sb	14 15 46.5	-3.3
	147nm,0.7s						
BOOM	Boomskoye usch	3.06	313	⇓iP	Pn	14 15 09.6	-0.6
BOOM				⇓iS	Sn	14 15 43.3	-3.7
MDOK	Medeo	3.08	333	Pn	Pn	14 15 12.7	+2.3
	19nm,0.5s						
MDOK				Pg	Pb	14 15 12.8	-3.8
	36nm,0.2s						
MDOK				Lg	Lg	14 15 48.3	
	53nm,0.6s						
MDOK				Sn	Sn	14 15 50.6	+3.2
	46nm,0.5s						
KOTS	Kotyrbulak	3.12	334	Pg	Pn	14 15 14.5	+3.5
	32nm,0.3s						
KOTS				Lg	Lg	14 15 51.3	
	130nm,0.5s						
KOTS	Kotyrbulak	3.12	334	eP	Pn	14 15 14.3	+3.3
	32nm,0.3s						
KOTS				eS	Sn	14 15 50.8	+2.3
	130nm,0.5s						
IZV	Izvestkoviy	3.14	327	Lg	Lg	14 15 51.6	
	59nm,0.5s						
IZV	Izvestkoviy	3.14	327	eP	Pn	14 15 14.4	+3.2
	12nm,0.3s						
IZV				eS	Sn	14 15 51.0	+2.1
	59nm,0.5s						
KNDC	Almaty	3.16	333	⇑Pn	Pn	14 15 13.9	+2.5
	56nm,0.7s						
KNDC				⇓Sn	Sn	14 15 52.8	+3.6
	57nm,0.4s						
KTMS	Ketmen	3.19	19	Pg	Pb	14 15 18.1	-0.3
	22nm,0.4s						
KTMS				Lg	Lg	14 15 57.2	
	42nm,0.4s						
KTMS	Ketmen	3.19	19	eP	Pb	14 15 17.4	-1.0
	22nm,0.4s						
KTMS				eS	Sb	14 15 56.1	-1.3
	42nm,0.4s						
MTBS	Maitube	3.30	326	Pg	Pn	14 15 16.9	+3.7
	8.3nm,0.2s						
MTBS				Lg	Lg	14 15 55.1	
	37nm,0.4s						
MTBS	Maitube	3.30	326	eP	Pn	14 15 16.9	+3.7
	8.3nm,0.2s						
MTBS				eS	Sn	14 15 55.1	+2.5
	37nm,0.4s						
KST	Kastek	3.44	320	Pg	Pn	14 15 19.5	+4.2
	11nm,0.3s						
KST				Lg	Lg	14 15 59.6	
	48nm,0.7s						
KST	Kastek	3.44	320	eP	Pn	14 15 19.5	+4.2
	11nm,0.3s						
KST				eS	Sn	14 15 59.6	+3.4
	48nm,0.7s						
TKM2	Tokmak 2	3.54	316	⇓Pn	Pn	14 15 19.7	+3.0
	14nm,0.5s						
TKM2				⇓Sn	Sn	14 16 03.1	+4.3
	41nm,0.4s						
TKM2	Tokmak 2	3.54	316	⇓iP	Pn	14 15 16.2	-0.6
TKM2				⇓iS	Sn	14 15 54.7	-4.1
DGS	Degeres	3.68	321	Pg	Pn	14 15 23.4	+4.8
	14nm,0.5s						
DGS				Lg	Lg	14 16 06.8	
	36nm,0.5s						
BLB	Baldybastay	3.69	355	Pg	Pb	14 15 25.1	-1.7
	32nm,0.3s						
BLB				Lg	Lg	14 16 09.5	
	38nm,0.5s						
KTBS	Karatobe	3.69	333	Pg	Pb	14 15 24.7	-2.2
	12nm,0.4s						
KTBS				Lg	Lg	14 16 08.5	
	2.6nm,0.3s						
KBK	Karagaybulak	3.74	308	⇑iP	Pn	14 15 19.2	-0.3
KBK				⇑iS	Sn	14 16 00.1	-3.6
ARLS	Aral	3.78	294	⇑eP	Pn	14 15 20.9	+0.9
ARLS				⇑eS	Sn	14 16 02.5	-2.1
UCH	Uchtor	3.80	300	⇑iP	Pn	14 15 20.6	+0.1
UCH				⇑iS	Sn	14 16 02.5	-3.0
ARXS	Arharly	3.88	348	Lg	Lg	14 16 14.2	
	54nm,0.5s						
KNOS	Konyrlen	3.93	2	Pg	Pb	14 15 30.4	-0.6
	5.4nm,0.3s						
KNOS				Lg	Lg	14 16 18.4	
	44nm,0.3s						
SALK	Salom-Alik	3.93	278	⇑eP	Pn	14 15 24.1	+2.0
SALK				⇑iS	Sn	14 16 08.2	-0.2
DJR	Jarkent	3.95	9	eP	Pb	14 15 29.4	-1.9
	2.4nm,0.2s						
DJR				eS	Sb	14 16 17.1	-2.1
	24nm,0.5s						
KUU	Kurty	3.97	332	Lg	Lg	14 16 14.8	
	19nm,0.6s						
KUU	Kurty	3.97	332	eP	Pn	14 15 28.4	+5.9
	5.3nm,0.2s						
KUU				eS	Sn	14 16 14.8	+5.6
	19nm,0.6s						
AAK	Ala-Archa	4.01	305	⇓Pn	Pn	14 15 27.2	+4.0
	1.4nm,0.5s						
AAK				⇑Sn	Sn	14 16 17.0	+6.6
	7.1nm,0.7s						
AAK	Ala-Archa	4.01	305	⇑iP	Pn	14 15 23.1	-0.1
AAK				⇑iS	Sn	14 16 06.7	-3.6
CHMS	Chumysh	4.06	311	⇑Pn	Pn	14 15 27.7	+3.9
	6.6nm,0.6s						
CHMS				⇑Sn	Sn	14 16 17.8	+6.4
	11nm,0.5s						
CHMS	Chumysh	4.06	311	⇑iP	Pn	14 15 23.5	-0.3
CHMS				⇑iS	Sn	14 16 07.3	-4.1
AML	Almayashu	4.32	295	⇓iP	Pn	14 15 28.2	+0.6
AML				⇓iS	Sn	14 16 15.4	-2.7
SGDS	Sogindy	4.42	315	Pg	Pb	14 15 36.6	-2.7
	3.1nm,0.6s						
SGDS				Lg	Lg	14 16 28.8	
	14nm,0.5s						
MRKS	Merke	4.88	300	eP	Pb	14 15 46.4	-0.8
	4.2nm,0.3s						
MRKS				eS	Sb	14 16 45.9	-0.1
	6.9nm,0.3s						
MK31	Makanchi Array	6.81	20	⇑Pn	Pn	14 16 01.9	+0.5
	7.6nm,1.9s,baz=200,slow=13,SNR=8.0						
KK31	Karatay Array	6.86	296	Pn	Pb	14 16 24.9	+4.1
	1.5nm,0.6s,baz=113,slow=16,SNR=5.2						
KK31				⇑Lg	Lg	14 17 46.1	
	3.1nm,0.7s						

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*BJI **08** 14:19:03.5, 25°.12S×176°.92W, h126^{km}, mB5.2/17, mb5.3/56*
*NEIC **08** 14:19:03.7±2.5, 25°.21S±0°.07×177°.17W±0°.09, h109^{km}±4^{km}, mb5.4/191, Mww5.5/32, Error ellipse: s-maj=14.6km s-min=4.8km az=128.0*
*NEIC **08** 14:19:05.1, 25°.05S×176°.64W, h110^{km}, Moment Tensor Solution. Duration: 2^{s}8 Moment tensor: Scale 10^{17}Nm; M_{rr}0.69; $M_{\theta\theta}$-1.84; $M_{\phi\phi}$1.15; $M_{r\theta}$-0.71; $M_{\theta\phi}$-0.68; $M_{\phi r}$0.70; Fault plane solution: $M_0$2.01000×10^{17} NP1:ϕ_s37.55000°, δ55.93000°, λ18.93000°. NP2:ϕ_s296.67000°, δ74.41000°, λ144.44000°. Principal axes: T 1.9077, Plg36.0000°, Azm252.0000°; N 0.1944, Plg52.0000°, Azm96.0000°; P -2.1021, Plg12.0000°, Azm351.0000°;*
*NOU **08** 14:19:05.7, 25°.23S×176°.58W, h155^{km}, mb5.3/94, South of Fiji Islands*
*NEIC **08** 14:19:05.1, 25°.25S×177°.19W, h110^{km}*
*IDC **08** 14:19:06.9±0.4, 25°.27S×177°.29W, h138^{km}±3^{km}, mb4.6/20, mbtmp5.1/24, MS4.1/38, Error ellipse: s-maj=11.4km s-min=8.1km az=91.0*
*GCMT **08** 14:19:07.7±0.1, 25°.21S±0°.01×176°.91W±0°.01, h137^{km}, MW5.5/161, Moment Tensor Solution. s134,c237; s161,c319; Duration: 1^{s}4 Moment tensor: Scale 10^{17}Nm; M_{rr}0.81±.02; $M_{\theta\theta}$-2.11±.03; $M_{\phi\phi}$1.30±.03; $M_{r\theta}$-0.99±.02; $M_{\theta\phi}$-0.93±.03; $M_{\phi r}$0.92±.02; Best double couple: $M_0$2.46400×10^{17} NP1:ϕ_s36.00000°, δ54.00000°, λ19.00000°. NP2:ϕ_s295.00000°, δ75.00000°, λ142.00000°. Principal axes: T 2.4050, Plg37.0000°, Azm249.0000°; N 0.1140, Plg50.0000°, Azm96.0000°; P -2.5240, Plg14.0000°, Azm350.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 08 14:19:06.7±0.3**, 25°.30S**±0°.04×**177°.12W**±0°.04**, h141^{km}±2^{km}, h141^{km}:pP-P, n909, σ1^{s}66**/872**, mb5.3**/181**, 38C-26D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	3.99	190	P	Pn	14 20 05.2	-1.3
RIZ				S	Sn	14 20 53.4	+0.3
RAO	Raoul Island	4.00	190		Pn	14 20 04.2	-2.4
RAO				Sn	Sn	14 20 53.4	+0.3
RAO	Raoul Island	4.00	190	P	Pn	14 20 05.3	-1.3
	962nm,0.3s,baz=53,slow=15,SNR=15						
RAO				S	Sn	14 20 52.7	-0.5
	4µm,0.3s,baz=16,slow=23,SNR=10						
RAO	Raoul Island	4.00	190	P	Pn	14 20 08.6	+2.0
GLKZ	Green Lake	4.01	190	P	Pn	14 20 05.3	-1.4
GLKZ				S	Sn	14 20 53.2	-0.2
LKBA	Tubou, Lakemba	7.21	347	P	Pn	14 20 48.5	-1.0
MSVF	Nonsavu	8.77	328		Pn	14 21 11.6	+1.0
MSVF	Nonsavu	8.77	328	P	Pn	14 21 11.0	+0.5
	1µm,1.1s,baz=153,slow=11,SNR=146						
MSVF	Nonsavu	8.77	328	P	Pn	14 21 11.4	+0.9
TAVE	Taveuni	8.94	343	P	Pn	14 21 12.9	+0.2
NIUE	Niue	9.10	48		Pn	14 21 08.9	-6.0
NIUE	Niue	9.10	48	P	Pn	14 21 08.9	-5.9
NIUE				S	Sn	14 22 40.4	-15
NIUE	Niue	9.10	48	P	Pn	14 21 09.3	-5.5
DGTI	Dogotuki	9.43	341	P	Pn	14 21 19.2	0.0
YSA	Yasawairara	9.89	329	P	Pn	14 21 27.9	+2.5
FUTU	Fugatoga	10.98	355		Pn	14 21 35.4	-4.5
FUTU	Fugatoga	10.98	355	P	Pn	14 21 38.6	-1.3
AFI	Afiamalu	12.40	25		Pn	14 21 49.5	-9.1
AFI	Afiamalu	12.40	25	P	Pn	14 21 52.0	-6.6
OUZ	Omahuta	12.72	217	P	P	14 22 05.5	-2.6
WCZ	Waipu Caves	12.89	213	P	P	14 22 07.7	-2.2
KUZ	Kuaotunu	12.94	207	P	Pn	14 22 06.8	+1.4
WMGZ	Waiomatatini S	13.04	196	P	Pn	14 21 58.0	-8.6
WMGZ				S	Sn	14 24 17.2	-13
HAZ	Te Kaha	13.15	198	P	Pn	14 21 58.2	-10
HAZ				S	Sn	14 24 21.8	-11
PKGZ	Pakihiroa	13.17	197	P	Pn	14 21 58.2	-10
PKGZ				S	Sn	14 24 20.1	-14
WIAZ	Waiheke Island	13.23	208	P	P	14 22 14.1	+0.4
PUZ	Puketiti	13.32	196	P	Pn	14 22 00.8	-9.4
PUZ				S	Sn	14 24 21.8	-16
RUGZ	Raukumara Rang	13.37	198	P	Pn	14 21 58.2	-13
RUGZ				S	Sn	14 24 25.5	-13
ETAZ	East Tamaki Re	13.45	208	P	P	14 22 17.7	+1.5
HBAZ	Herne Bay Bore	13.45	209	P	P	14 22 19.4	+3.3
MKAZ	Moumakai	13.48	207	P	P	14 22 15.4	-1.1
TWGZ	Tauwhareparae	13.49	197	P	Pn	14 22 04.9	-7.5
TWGZ				S	Sn	14 24 26.6	-15
WTAZ	Waiatarua	13.59	210	P	P	14 22 19.6	+1.9
CNGZ	Carnagh Statio	13.72	196	P	Pn	14 22 04.5	-11
CNGZ				S	Sn	14 24 34.6	-12
MWZ	Matawai	13.76	198	P	Pn	14 22 05.9	-10
MWZ				S	Sn	14 24 33.6	-14
TKGZ	Te Karaka	13.77	197	P	Pn	14 22 10.5	-5.4
TKGZ				S	Sn	14 24 33.2	-15
NFK	Norfolk Island	13.81	251	P	P	14 22 19.4	-0.8
	comp=Z,430nm,1.4s						
URZ	Urewera	13.81	199	P	Pn	14 22 17.1	+0.7
	comp=Z,134nm,0.5s,baz=113,slow=3.1,SNR=28						
URZ				S	Sn	14 24 36.3	-13
	comp=Z,98nm,0.4s,baz=238,slow=22,SNR=12						
URZ				LR	LR	14 25 53.5	
	comp=Z,545nm,20.7s,baz=91,slow=30						
URZ	Urewera	13.81	199	P	Pn	14 22 06.9	-10
URZ				S	Sn	14 24 34.1	-15
INH	Isangel	13.82	292	P	P	14 22 21.2	+0.8
KMRZ	Kaimai	13.82	204	P	P	14 22 20.4	0.0
KARZ	Kaharoa	13.87	202	P	P	14 22 20.5	-0.3
OMRZ	Omania	13.91	202	P	P	14 22 20.0	-1.3
RIGZ	Rimuhau	14.04	197	P	Pn	14 22 12.7	-6.8
RRRZ	Republican Roa	14.07	201	P	Pn	14 22 21.6	+1.8
HSRZ	Hossack Road	14.13	202	P	P	14 22 24.3	+0.5
MARNC	Mare, Loyalty	14.15	283	P	P	14 22 25.5	+1.4
RTZ	Ruatahuna	14.18	199		Pn	14 22 19.0	-2.1
GRRZ	Galatos Road	14.21	202	P	P	14 22 24.1	-0.6
PRRZ	Plateau Road	14.26	201	P	Pn	14 22 22.8	+0.7
ALRZ	Allen Road	14.33	201	P	Pn	14 22 23.4	+0.4
PINNC	Pines Island,	14.36	278	P	P	14 22 28.3	+1.9
TLZ	Tolley Road	14.40	204	P	Pn	14 22 25.2	+1.3
RAHZ	Arahi	14.43	198	P	Pn	14 22 19.3	-5.0
MTHZ	Maungataniwha	14.44	199	P	Pn	14 22 24.6	+0.2
WATZ	Wairara	14.67	203	P	P	14 22 29.2	-0.5
RATZ	Rangitukua	14.79	202	P	Pn	14 22 28.5	-0.4
HIZ	Hauiti	14.82	205	P	P	14 22 31.1	-0.2
HIZ	Hauiti	14.82	205	P	P	14 22 31.5	+0.1
BKZ	Black Stump Fm	14.83	200		Pn	14 22 24.4	-5.0
BKZ	Black Stump Fm	14.83	200	P	Pn	14 22 24.1	-5.2
RITZ	Rihia Road	14.87	202	P	Pn	14 22 24.4	-5.3
KATZ	Kakaramea	14.92	202	P	Pn	14 22 30.7	+0.2
OUENC	Ouen Island, N	14.95	278	P	P	14 22 35.6	+2.6
YATNC	Mamie plateau,	15.00	279	P	P	14 22 33.9	+0.4
MCHZ	McNeill Hill	15.03	199	P	Pn	14 22 31.1	-0.7
NTVZ	North Tongarir	15.04	202	P	Pn	14 22 31.4	-0.5
TMVZ	Te Maari	15.04	202	P	Pn	14 22 32.4	+0.3
KRVZ	Karewarewa	15.04	202	P	Pn	14 22 31.6	-0.4
WTVZ	West Tongariro	15.08	202	P	Pn	14 22 31.8	-0.7
NNVZ	North Ngauruho	15.09	202	P	Pn	14 22 32.0	-0.6
KWHZ	Kaweka Forest	15.09	200	P	Pn	14 22 30.9	-1.7
TWVZ	Taurewa	15.09	203	P	Pn	14 22 32.4	-0.2
OTVZ	Oturere	15.10	202	P	Pn	14 22 28.7	-4.1
SNVZ	South Ngauruho	15.13	202	P	Pn	14 22 30.9	-2.2
NGZ	Ngauruhoe	15.13	202	P	Pn	14 22 33.7	+0.5
COVZ	Chateau Observ	15.17	202	P	Pn	14 22 32.8	-0.8
FWVZ	Far West T-bar	15.22	202	P	Pn	14 22 31.9	-2.4
MAVZ	Matarangi	15.23	202	P	Pn	14 22 30.3	-4.2
WHVZ	Whangaehu Hut	15.23	202	P	Pn	14 22 32.0	-2.5
TRVZ	Turoa	15.26	202	P	Pn	14 22 32.1	-2.7
WNVZ	Wahianoa	15.27	202	P	Pn	14 22 30.5	-4.4
MOVZ	Moawhango	15.29	201	P	Pn	14 22 32.1	-2.9
KAHZ	Kahuranaki	15.30	198	P	Pn	14 22 31.9	-3.3
KRHZ	Kereru	15.31	199	P	Pn	14 22 29.4	-5.9
PKVZ	Pokaka	15.32	203	P	Pn	14 22 34.9	-0.6
ONTNC	Ouen Toro	15.32	278		Pn	14 22 35.0	-0.6
ONTNC	Ouen Toro	15.32	278	P	P	14 22 40.6	+3.5
MTVZ	Mangateitei	15.36	202	P	Pn	14 22 35.0	-0.9
VRZ	Vera Road	15.39	204	P	Pn	14 22 35.5	-0.6
DZM	Mont Dzumac	15.39	279	eP	P	14 22 38.5	+0.5
	comp=Z,1µm,1.4s						
DZM				eS	Sn	14 25 21.1	-6.5
	comp=Z,10µm,28.9s						
DZM				eLR	LR	14 26 04.9	
	comp=Z,1µm,27.8s						
DZM	Mont Dzumac	15.39	279	P	P	14 22 38.5	+0.5
	comp=Z,138nm,1.0s,baz=105,slow=15,SNR=26						
DZM				LR	LR	14 26 44.5	
	comp=Z,671nm,20.5s,baz=73,slow=30						
DZM	Mont Dzumac	15.39	279	P	P	14 22 42.4	+4.4
PXZ	Pawanui	15.53	197	P	Pn	14 22 36.0	-1.9
PNHZ	Pukenui	15.61	199	P	Pn	14 22 30.7	-8.3
WPHZ	Waipukurau	15.68	199	P	Pn	14 22 37.3	-2.4
PKE	Pukeiti	15.75	206	P	P	14 22 41.8	+0.1
NEZ	North Egmont	15.77	206	P	P	14 22 42.5	+0.5
PRHZ	Porangahau	15.81	198	P	Pn	14 22 32.9	-8.5
LREZ	Lake Rotokare	15.81	205	P	Pn	14 22 40.4	-1.1
TSZ	Takapari Road	15.81	200	P	Pn	14 22 35.1	-6.4
KHEZ	Kahui Hut	15.82	206	P	P	14 22 43.3	+0.8
WAZ	Wanganui	15.86	203	P	Pn	14 22 41.0	-1.1
DVHZ	Dannevirke	15.97	199	P	Pn	14 22 39.1	-4.4
ANWZ	Angora Road	16.03	198	P	Pn	14 22 40.3	-3.9
POWZ	Post Office Ro	16.18	200	P	Pn	14 22 42.9	-3.0
PRWZ	Pori Road	16.27	199	P	Pn	14 22 44.7	-2.3
BFZ	Birch Farm	16.30	198	P	Pn	14 22 42.7	-4.8
RAR	Rarotonga	16.45	79	P	Pn	14 22 50.3	+0.9
	comp=Z,61nm,0.5s,baz=246,slow=7.9,SNR=8.0						
RAR				S	Sn	14 25 37.4	-15
	comp=Z,88nm,0.7s,baz=114,slow=18,SNR=3.7						
RAR	Rarotonga	16.45	79	P	Pn	14 22 41.0	-8.4
RAR	Rarotonga	16.45	79	S	Sn	14 25 39.8	-13
MRZ	Mangatainoka R	16.48	200	P	Pn	14 22 41.7	-7.9
MRZ	Mangatainoka R	16.48	200	P	Pn	14 22 41.8	-7.8
TIWZ	Tintock	16.50	199	P	Pn	14 22 44.7	-5.1
HOWZ	Holdsworth Sta	16.72	200	P	P	14 22 48.0	-4.4
OGWZ	Otaki Gorge	16.75	201	P	P	14 22 47.6	-5.1
TMWZ	Te Maipa	16.80	199	P	P	14 22 46.8	-6.5
KIW	Kapiti Island	16.88	201	P	P	14 22 47.8	-6.3
MTW	Mount Morrison	16.96	199	P	P	14 22 51.6	-3.4
CAW	Cannon Point	17.05	201	P	P	14 22 50.5	-5.5
FUNA	Funafuti	17.05	347	P	P	14 22 54.8	-1.4
VLAKA	Lakatoro	17.10	299	P	Pn	14 22 59.5	+2.2
VLAKA	Lakatoro	17.10	299	S	S	14 26 13.6	+5.7
TRWZ	Traveller	17.13	199	P	P	14 22 54.6	-2.2
DUWZ	D’Urville Isla	17.16	204	P	P	14 22 51.4	-5.9
PAWZ	Paruwai Farm	17.19	199	P	P	14 22 53.3	-4.3
MSWZ	Moikau Station	17.27	200	P	P	14 22 55.2	-3.3
WEL	Wellington	17.30	201	P	P	14 22 53.9	-4.9
TCW	Tory Channel	17.40	202		P	14 22 54.3	-5.6
TCW	Tory Channel	17.40	202	P	P	14 22 55.1	-4.7
PLWZ	Palliser	17.41	199	P	P	14 22 57.0	-3.1
TUWZ	Tuamarina	17.71	203	P	P	14 22 55.4	-7.9
TUWZ	Tuamarina	17.71	203	P	P	14 22 56.5	-6.8
QRZ	Quartz Range	17.72	207	P	Pn	14 23 04.8	+0.3
QRZ	Quartz Range	17.72	207	P	P	14 22 59.4	-4.0
NNZ	Nelson	17.73	204	P	P	14 22 58.1	-5.4
TKNZ	Takaka Hill	17.73	205	P	P	14 22 59.2	-4.3
KOUNC	Koumac, New Ca	17.76	282	P	Pn	14 23 07.8	+2.6
CMWZ	Cape Campbell	17.90	202	P	P	14 23 03.1	-2.3
BSWZ	Blackbirch Sta	17.99	202	P	P	14 23 02.5	-3.8
MRNZ	Matariki Terra	18.12	205	P	P	14 23 03.1	-4.6
CTZ	Chatham Island	18.39	179	P	P	14 23 11.2	+0.5
KHZ	Kahutara	18.73	202		P	14 23 09.0	-5.3
KHZ	Kahutara	18.73	202	P	P	14 23 12.8	-1.5
KHZ	Kahutara	18.73	202	P	P	14 23 09.1	-5.2
GVZ	Greta Valley S	19.39	202	P	P	14 23 17.5	-4.0
GVZ	Greta Valley S	19.39	202	P	P	14 23 17.2	-4.3
OXZ	Oxford	20.05	204	P	P	14 23 24.1	-4.6
MQZ	McQueen’s Vall	20.17	202	P	P	14 23 27.6	-2.3
RPZ	Rata Peaks	20.75	205	P	P	14 23 31.7	-4.5
	comp=Z,16nm,0.6s,baz=16,slow=6.2,SNR=9.0						
RPZ				S	S	14 27 06.7	-13
	comp=Z,28nm,0.5s,baz=333,slow=1.8,SNR=10						
RPZ	Rata Peaks	20.75	205	P	P	14 23 37.5	+1.3
FOZ	Fox Glacier	21.09	207	P	P	14 23 39.4	-0.4
LHI	Lord Howe Isla	21.82	248	P	P	14 23 49.5	+1.8
	comp=Z,708nm,1.2s						
JCZ	Jackson Bay	21.96	208	P	P	14 23 49.8	+0.7
ODZ	Otahua Downs	22.04	204	P	P	14 23 51.7	+1.9
MLZ	Mavora Lakes	23.29	207		P	14 23 58.4	-3.4
WHZ	Wether Hill Ro	23.79	206		P	14 24 05.3	-1.0
SYZ	Scrubby Hill	23.86	204	P	P	14 24 07.3	+0.4
TBI	Tubuai	25.27	91	eP	P	14 24 18.0	-1.9
	comp=Z,257nm,1.3s						

TBI				*e*S	S	14 28 34.6	-0.7
	comp=Z,12µm,31.5s						
TBI				*e*LR	LR	14 30 25.2	
	comp=Z,4µm,36.5s						
PAE	Paea	26.70	79	*e*P	P	14 24 27.4	-5.4
	comp=Z,49nm,1.3s						
PAE				*e*LR	LR	14 31 17.7	
	comp=Z,237nm,22.7s						
PPT2	Papeete2	26.73	79	*e*P	P	14 24 32.0	-1.2
	comp=Z,98nm,1.4s						
PPT2				*e*S	S	14 28 52.7	-5.9
	comp=Z,976nm,25.2s						
PPT2				*e*LR	LR	14 31 12.8	
	comp=Z,1µm,30.5s						
PPT2				*e*LR	LR	14 31 18.5	
	comp=Z,2µm,24.8s						
PPT	Papeete	26.73	79	LR	LR	14 32 34.7	
	comp=Z,739nm,20.4s,baz=251,slow=30						
HNR	Honiara	26.91	302	LR	LR	14 32 43.1	
	comp=Z,519nm,20.4s,baz=138,slow=30						
TVO	Taravao	26.95	79	*e*P	P	14 24 31.3	-3.8
	comp=Z,36nm,1.0s						
ARMA	Armidale	28.04	252		P	14 24 44.9	0.0
ARMA	Armidale	28.04	252	P	P	14 24 45.8	+1.0
	comp=Z,32nm,1.6s						
ARMA	Armidale	28.04	252	P	P	14 24 47.2	+2.4
NTLH	Newcastle Hard	28.20	247	P	P	14 24 49.0	+2.9
EIDS	Eidsvold	28.70	263	IAmb	IAmb	14 24 53.2	
	comp=Z,122nm,1.2s						
EIDS	Eidsvold	28.70	263	P	P	14 24 51.6	+0.9
	comp=Z,89nm,1.3s						
EIDS	Eidsvold	28.70	263	P	P	14 24 52.2	+1.5
MGCD	Mangrove Creek	28.73	247	P	P	14 24 51.5	+0.7
	comp=Z,100nm,1.3s						
MGCD	Mangrove Creek	28.73	247	P	P	14 24 53.9	+3.1
RIV	Riverview	28.78	245	P	P	14 24 53.0	+1.8
	comp=Z,92nm,1.2s						
WOLH	Wollongong Har	29.10	244	P	P	14 24 55.8	+1.7
SYDH	Sydney Hard Ro	29.11	246	P	P	14 24 56.3	+2.1
PMOR	Pomariorio Ree	29.23	75	*e*LR	LR	14 32 29.9	
	comp=Z,2µm,22.2s						
CNB	Canberra Magne	30.48	243	P	P	14 25 07.3	+1.0
	comp=Z,36nm,0.8s						
CNB	Canberra Magne	30.48	243	P	P	14 25 08.9	+2.6
RMQ	Roma	30.67	260	P	P	14 25 08.5	+0.5
	comp=Z,52nm,1.9s						
CAN	Canberra	30.77	243		P	14 25 09.3	+0.4
CAN	Canberra	30.77	243	P	P	14 25 09.3	+0.4
	comp=Z,47nm,1.2s						
CAN	Canberra	30.77	243	P	P	14 25 12.2	+3.3
MILA	Mila	30.98	240	P	P	14 25 11.3	+0.5
	comp=Z,41nm,1.1s						
YNG	Young	31.11	245	P	P	14 25 12.3	+0.4
	comp=Z,106nm,1.4s						
CMSA	Cobar Meteorol	33.18	251	P	P	14 25 29.5	-0.4
	comp=Z,63nm,1.5s						
CMSA	Cobar Meteorol	33.18	251	P	P	14 25 30.4	+0.5
CORO	Coronation Par	33.63	232	P	P	14 25 35.1	+1.5
MOO	Moorlands	33.90	231	P	P	14 25 35.9	-0.1
	comp=Z,58nm,1.5s						
TOO	Toolangi	33.95	240		P	14 25 36.7	+0.2
TOO	Toolangi	33.95	240	P	P	14 25 36.7	+0.2
	comp=Z,28nm,1.5s						
TAU	Tasmania Unive	33.97	230	P	P	14 25 35.9	-0.6
CTAO	Charters Tower	34.11	271		P	14 25 38.3	+0.2
CTAO	Charters Tower	34.11	271	P	P	14 25 39.7	+1.6
CTAO	Charters Tower	34.11	271	P	P	14 25 38.3	+0.2
CTAO				sP	pwP	14 26 10.7	0.0
MLBS	Spotswood, Mel	34.46	239	P	P	14 25 42.6	+1.7
QLP	Quilpie	34.69	259	P	P	14 25 42.9	-0.1
	comp=Z,146nm,1.6s						
QLP	Quilpie	34.69	259	P	P	14 25 44.4	+1.4
GEXS	Deakin Univers	34.99	239	P	P	14 25 47.2	+1.7
BRAT	Ballarat	35.17	240	P	P	14 25 48.5	+1.6
MTSU	Mount Surprise	36.43	273	P	P	14 25 58.1	+0.1
	comp=Z,77nm,0.9s						
MTSU	Mount Surprise	36.43	273	P	P	14 26 00.4	+2.4
STKA	Stephens Creek	36.67	250		P	14 25 59.6	-0.3
STKA				PcP	PcP	14 28 21.8	+2.1
STKA	Stephens Creek	36.67	250	P	P	14 25 59.5	-0.3
	comp=Z,219nm,1.8s						
STKA	Stephens Creek	36.67	250	P	P	14 25 59.5	-0.4
	comp=Z,9.1nm,0.3s,baz=92,slow=9.5,SNR=53						
STKA				PcP	PcP	14 28 20.2	+0.5
	comp=Z,17nm,0.8s,baz=77,slow=4.5,SNR=5.9						
STKA				LR	LR	14 40 37.3	
	comp=Z,553nm,19.1s,baz=84,slow=35						
	comp=Z,9.1nm,0.3s						
STKA	Stephens Creek	36.67	250	P	P	14 26 00.5	+0.6
ARPS	Mount Arapiles	36.72	242	P	P	14 26 00.1	-0.1
	comp=Z,84nm,1.2s						
ARPS	Mount Arapiles	36.72	242	P	P	14 26 01.7	+1.5
PMG	Port Moresby	37.42	289	P	P	14 26 05.2	-1.2
PMG	Port Moresby	37.42	289	P	P	14 26 05.6	-0.8
	comp=Z,99nm,0.8s,baz=93,slow=4.6,SNR=19						
PMG				LR	LR	14 37 59.1	
	comp=Z,520nm,19.4s,baz=148,slow=30						
	comp=Z,99nm,0.8s						
PMG	Port Moresby	37.42	289	P	P	14 26 07.3	+0.9
TAOE	Nuku Hiva Isla	38.77	72	*e*SS	SS	14 35 03.8	+2.0
	comp=Z,556nm,26.6s						
TAOE				*e*LR	LR	14 36 55.1	
	comp=Z,791nm,24.8s						
HTT	Hallett	38.92	247	P	P	14 26 17.9	-0.9
	comp=Z,21nm,0.8s						
HTT	Hallett	38.92	247	P	P	14 26 19.2	+0.4
COEN	Coen	38.92	279		P	14 26 19.5	+0.5
COEN				IAmb	IAmb	14 26 22.1	
	comp=Z,101nm,1.2s						
COEN	Coen	38.92	279	P	P	14 26 18.7	-0.2
	comp=Z,87nm,1.3s						
COEN	Coen	38.92	279	P	P	14 26 20.1	+1.1
PTPS	Port Pirie	39.70	248	P	P	14 26 26.7	+1.5
QIS	Mount Isa	40.01	268	P	P	14 26 27.2	-0.7
	comp=Z,33nm,1.4s						
QIS	Mount Isa	40.01	268	P	P	14 26 27.9	0.0
WHYH	Whyalla	40.06	248	P	P	14 26 28.4	+0.3
BBOO	Buckleboo	41.34	248		P	14 26 37.2	-1.4
BBOO				IAmb	IAmb	14 26 38.5	
	comp=Z,123nm,1.4s						
BBOO				PcP	PcP	14 28 35.4	+0.9
BBOO	Buckleboo	41.34	248	P	P	14 26 37.2	-1.4
	comp=Z,68nm,1.6s						
BBOO	Buckleboo	41.34	248	P	P	14 26 38.4	-0.3
AS17	Alice Springs	44.33	261	P	P	14 27 02.1	-0.8
	comp=Z,43nm,1.4s						
AS31	Alice Springs	44.40	261		P	14 27 02.7	-0.8
ASAR	Alice Springs	44.40	261	P	P	14 27 01.7	-1.8
ASAR	Alice Springs	44.40	261	P	P	14 27 02.9	-0.6
	comp=Z,7.0nm,0.4s,baz=96,slow=7.3,SNR=89						
ASAR				PcP	PcP	14 28 45.2	+0.3
	comp=Z,7.6nm,0.8s,baz=114,slow=3.2,SNR=6.2						
ASAR				ScP	ScP	14 32 24.1	+0.2
	comp=Z,1.0nm,0.7s,baz=100,slow=3.9,SNR=2.0						
ASAR				S	S	14 33 23.6	-4.1
	comp=Z,1.0nm,0.6s,baz=96,slow=17,SNR=4.1						
ASAR				LR	LR	14 44 22.8	
	comp=Z,390nm,18.0s,baz=96,slow=34						
	comp=Z,7.0nm,0.4s						
WR8	Warramunga Arr	44.78	267		P	14 27 04.8	-1.7
WB1	Warramunga Ar.	44.92	267	P	P	14 27 05.7	-1.9
WRAB	Tennant Creek	44.92	267	P	P	14 27 05.5	-2.2
WRAB				IAmb	IAmb	14 27 07.7	
	comp=Z,75nm,1.3s						
WB0	Warramunga Arr	44.93	267	IAmb	IAmb	14 28 48.6	
	comp=Z,87nm,1.3s						
WRA	Warramunga Arr	44.93	267	P	P	14 27 05.5	-2.2
WRA	Warramunga Arr	44.93	267	P	P	14 27 06.1	-1.6
	comp=Z,42nm,1.1s,baz=100,slow=6.7,SNR=89						
WRA				pP	pP	14 27 37.5	-1.4
	comp=Z,18nm,0.8s,baz=104,slow=7.6,SNR=4.4						
WRA				PcP	PcP	14 28 47.3	+0.5
	comp=Z,35nm,1.1s,baz=101,slow=3.8,SNR=12						
WRA				ScP	ScP	14 32 25.1	-0.9
	comp=Z,2.8nm,0.9s,baz=107,slow=3.8,SNR=6.7						
WRA				S	S	14 33 29.2	-6.2
	comp=Z,7.9nm,1.2s,baz=101,slow=15,SNR=5.8						
WRA				LR	LR	14 44 22.7	
	comp=Z,289nm,18.3s,baz=99,slow=34						
	comp=Z,42nm,1.1s						
JAY	Jayapura	46.47	292	P	P	14 27 18.6	-1.3
	comp=Z,32nm,0.9s,baz=165,slow=2.7,SNR=11						
JAY				LR	LR	14 42 54.1	
	comp=Z,263nm,21.4s,baz=82,slow=31						
	comp=Z,32nm,0.9s						
FORT	Forrest	48.30	250	P	P	14 27 31.5	-2.2
	comp=Z,119nm,0.6s						
FORT	Forrest	48.30	250	P	P	14 27 33.3	-0.5
KDU	Kakadu	49.02	275	P	P	14 27 39.5	0.0
DRV	Dumont d'Urvil	49.14	201	P	P	14 27 39.4	-0.3
DRV				pP	pP	14 28 01.2	-10
DRV				sP	pwP	14 28 14.0	+0.3
KIP	Kipapa	50.02	23	P	P	14 27 42.7	-4.1
KIP	Kipapa	50.02	23	P	P	14 27 42.4	-4.4
KNRA	Kununurra	51.30	270	P	P	14 27 55.5	-1.1
	comp=Z,106nm,1.2s						
SBA	Scott Base	53.16	184	P	P	14 28 13.2	+3.8
SBA				sP	pwP	14 28 46.9	+2.9
VNDA	Vanda	53.22	186	P	P	14 28 08.4	-1.5
VNDA				IAmb	IAmb	14 28 14.3	
	comp=Z,61nm,1.4s						
VNDA	Vanda	53.22	186	P	P	14 28 11.3	+1.4
	comp=Z,36nm,1.2s,baz=6.8,slow=7.3,SNR=48						
	comp=Z,36nm,1.2s						
VNDA	Vanda	53.22	186	P	P	14 28 12.5	+2.6
VNDA				pP	pP	14 28 35.1	-7.0
VNDA				sP	pwP	14 28 47.7	+3.3
FITZ	Fitzroy Crossi	53.34	266	P	P	14 28 11.3	-0.4
	comp=Z,13nm,1.5s						
FITZ	Fitzroy Crossi	53.34	266	LR	LR	14 48 20.4	
	comp=Z,317nm,20.3s,baz=112,slow=33						
FITZ	Fitzroy Crossi	53.34	266	P	P	14 28 11.9	+0.3
FAKI	Fak Fak	53.49	286	P	P	14 28 10.6	-2.2
FAKI	Fak Fak	53.49	286	P	P	14 28 13.8	+1.0
GUMO	Guam	53.54	312	LR	LR	14 48 10.4	
	comp=Z,169nm,21.5s,baz=135,slow=33						
KLBR	Kellerberrin	56.87	248	P	P	14 28 35.0	-1.9
	comp=Z,92nm,1.0s						
KLBR	Kellerberrin	56.87	248	P	P	14 28 37.4	+0.5
RKGY	Rocky Gully	56.96	244	P	P	14 28 36.7	-0.8
	comp=Z,23nm,1.1s						
NWAO	Narrogin (SRO)	57.05	246	P	P	14 28 37.3	-0.8
NWAO	Narrogin (SRO)	57.05	246	LR	LR	14 53 09.7	
	comp=Z,216nm,18.6s,baz=82,slow=36						
MEEK	Meekatharra	57.22	254	P	P	14 28 37.9	-1.6
PSAD2	Pilbara Seismi	57.37	260	P	P	14 28 40.1	-0.5
	comp=Z,46nm,2.0s						
SOEI	Soe	57.57	274	P	P	14 28 43.2	+1.1
MBWA	Marble Bar	57.71	260	P	P	14 28 41.3	-1.6
	comp=Z,27nm,1.4s						
BLDU	Ballidu	57.95	249	P	P	14 28 42.6	-1.9
	comp=Z,70nm,1.5s						
CCD	Concordia, Ant	58.05	195	⇑P	P	14 28 46.3	+1.4
CCD				sP	pwP	14 29 20.1	+0.1
MUN	Mundaring	58.08	247	P	P	14 28 43.9	-1.5
	comp=Z,57nm,2.5s						
MORW	Morawa	58.86	250	P	P	14 28 49.5	-1.3
MORW				IAmb	IAmb	14 28 50.5	
	comp=Z,42nm,1.1s						
MORW	Morawa	58.86	250	P	P	14 28 49.5	-1.3
	comp=Z,51nm,2.8s						
TNTI	Ternate	59.55	287	P	P	14 28 56.2	+0.5
CASY	Casey	60.01	206	P	P	14 28 58.1	+0.1
CASY	Casey	60.01	206	P	P	14 28 58.2	+0.2
CASY				pP	pP	14 29 25.8	-5.1
CASY				PcP	sP	14 29 49.0	+2.8
EDFI	Ende, Flores	60.30	274	P	P	14 28 59.7	-1.3
	comp=Z,852nmcomp=Z,54nm,1.3s						
GIRL	Giralia	62.15	257	P	P	14 29 12.8	-0.3
KMSI	Cibinong	62.40	285	P	P	14 29 16.2	+1.3
	comp=Z,2µmcomp=Z,96nm,1.1s						
LUWI	Luwuk	62.70	283	P	P	14 29 18.2	+1.3
LUWI	Luwuk	62.70	283	P	P	14 29 16.4	-0.5
	comp=Z,1µmcomp=Z,109nm,1.5s						
BNSI	Bone	63.55	278	P	P	14 29 23.4	+0.8
	comp=Z,70nm,1.5s						
KAPI	Kappang	63.61	277	P	P	14 29 24.2	+1.3
APSI	Ampana	63.75	282	P	P	14 29 24.2	+0.4
	comp=Z,65nm,1.7s						
PLAI	Plampang	63.80	272	P	P	14 29 25.1	+0.9
PLAI	Plampang	63.80	272	P	P	14 29 22.7	-1.5
	comp=Z,1µmcomp=Z,123nm,1.3s						
MRSI	Marisa	64.14	284	P	P	14 29 25.4	-1.0
	comp=Z,26nm,1.2s						
TTSI	Tana Toraja	64.41	279	P	P	14 29 29.3	+1.1
	comp=Z,31nm,1.7s						
TWSI	Taliwang, Sumb	64.65	272	P	P	14 29 29.3	-0.4
	comp=Z,71nm,1.5s						
QSPA	South Pole Qui	64.79	180	P	P	14 29 31.6	+1.6
QSPA				IAmb	IAmb	14 29 33.4	
	comp=Z,66nm,0.8s						
QSPA	South Pole Qui	64.79	180	P	P	14 29 31.8	+1.8
	comp=Z,45nm,0.7s,baz=30,slow=0.9,SNR=175						
QSPA				pP	pP	14 30 04.8	+1.3
	comp=Z,44nm,1.2s,baz=52,slow=3.3,SNR=2.9						
	comp=Z,45nm,0.7s						
QSPA	South Pole Qui	64.79	180	P	P	14 29 31.8	+1.8
QSPA				sP	pP	14 30 04.1	+0.6
TOLI2	Tolitoli	65.46	284	P	P	14 29 32.7	-2.3
TOLI2				IAmb	IAmb	14 29 36.3	
	comp=Z,67nm,1.1s						
TOLI2	Tolitoli	65.46	284	P	P	14 29 35.6	+0.6
MPSI	Mapaga	65.88	283	P	P	14 29 35.9	-1.7
	comp=Z,36nm,1.4s						
SMKI	Samarinda	67.90	280	P	P	14 29 50.9	+0.4
KMMI	Kalianget	67.97	273	P	P	14 29 51.3	+0.4
	comp=Z,77nm,1.5s						
GRJI	Gresik	69.37	272	P	P	14 29 59.8	+0.2
MYLDM	Lahad Datu	69.41	286	P	P	14 30 00.5	+0.7
PCJI	Pacitan	70.03	270	P	P	14 30 03.9	+0.3
	comp=Z,101nm,1.5s						
WOJI	Wonogiri, Jawa	70.40	270	P	P	14 30 07.0	+1.1
	comp=Z,101nm,1.3s						
KKM	Kota Kinabalu	71.81	286	P	P	14 30 14.1	-0.4
KKM				IAmb	IAmb	14 30 16.2	
	comp=Z,80nm,1.3s						
KKM	Kota Kinabalu	71.81	286	P	P	14 30 15.0	+0.5
STKI	Sintang	73.25	278	P	P	14 30 24.7	+1.8
LEM	Lembang	73.81	270	LR	LR	15 03 14.3	
	comp=Z,87nm,18.2s,baz=127,slow=36						
MJAR	Matsushiro Arr	74.55	324	P	P	14 30 29.1	-0.8
	comp=Z,3.8nm,1.0s,baz=153,slow=5.6,SNR=13						
MJAR				pP	pwP	14 31 04.6	+0.3
	comp=Z,3.3nm,0.9s,baz=166,slow=5.9,SNR=2.8						
MJAR				sP	sP	14 31 20.5	+1.2
	comp=Z,1.7nm,0.8s,baz=38,slow=6.3,SNR=3.2						
MJAR				LR	LR	14 57 54.0	
	comp=Z,85nm,22.0s,baz=125,slow=31						
	comp=Z,3.8nm,1.0s						
KSM	Kuching	74.92	279	P	P	14 30 32.4	-0.2
JNU	Nakatsue	76.32	317	LR	LR	14 57 35.4	
	comp=Z,70nm,21.8s,baz=140,slow=30						
JNU	Nakatsue	76.32	317	P	P	14 30 39.5	-0.7
PMSA	Palmer Station	76.58	156	LR	LR	15 00 19.4	
	comp=Z,111nm,20.0s,baz=226,slow=32						
ADK	Adak	76.85	0	P	P	14 30 42.5	-0.1
NACB	Ninganchiao	77.05	305	P	P	14 30 43.8	-0.6
NACB				IAmb	IAmb	14 30 46.5	
	comp=Z,89nm,1.2s						
NACB	Ninganchiao	77.05	305	P	P	14 30 44.3	-0.1
ATKA	Atka Island	77.21	2	P	P	14 30 43.7	-0.9
ATKA				IAmb	IAmb	14 30 48.0	
	comp=Z,103nm,1.2s						
ATKA	Atka Island	77.21	2	P	P	14 30 42.0	-2.6
TPUB	Ta-pu	77.27	303	P	P	14 30 45.5	-0.2
SSLB	Suanglung	77.31	304	P	P	14 30 45.7	-0.2
MAW	Mawson	77.34	200	P	P	14 30 46.4	+1.1
	comp=Z,31nm,0.7s,baz=132,slow=7.9,SNR=25						
MAW				pP	pP	14 31 22.0	+2.0
	comp=Z,30nm,1.0s,baz=124,slow=4.8,SNR=2.9						
MAW				LR	LR	15 03 33.1	
	comp=Z,125nm,18.4s,baz=106,slow=34						
	comp=Z,31nm,0.7s						
YHNB	Yeheng	77.50	305	P	P	14 30 46.6	-0.4
MDSI	Maura Dua	77.89	271	P	P	14 30 49.8	+0.5
	comp=Z,30nm,1.3s						
NIKH	Nikolski High	78.28	5	P	P	14 30 49.9	-0.6
NIKH	Nikolski High	78.28	5	P	P	14 30 50.6	+0.1
	baz=188						
ASAJ	Asahikawa	78.32	332	LR	LR	15 01 31.4	
	comp=Z,235nm,20.6s,baz=175,slow=32						
UNV	Unalaska Valle	79.35	6	P	P	14 30 55.1	-1.2
UNV	Unalaska Valle	79.35	6	P	P	14 30 56.5	+0.2
	baz=190						
KSI	Kapahiang	79.67	271	P	P	14 31 01.0	+1.8
	comp=Z,60nm,0.9s						
AKUT	Akutan	79.72	7	P	P	14 30 57.5	-0.8
QZH	Quanzhou	79.73	304	*e*P	P	14 30 58.8	-0.3
QZH				S	S	14 40 48.6	-1.7
TJN	Taejon	80.64	318	P	P	14 31 02.8	-0.9
KSRS	Korea Array	81.01	319	P	P	14 31 05.8	+0.2
	comp=Z,2.7nm,0.7s,baz=141,slow=5.7,SNR=12						
KSRS				pP	pwP	14 31 41.0	+0.5
	comp=Z,1.3nm,0.8s,baz=132,slow=6.1,SNR=1.6						
KSRS				LR	LR	15 03 29.5	
	comp=Z,29µm,21.5s,baz=170,slow=33						
	comp=Z,2.7nm,0.7s						
PEA0B	Petropavlovsk-	81.10	345	P	P	14 31 06.3	+0.6
PEA0B				IAmb	IAmb	14 31 07.7	
	comp=Z,42nm,0.8s						
PETK	Petropavlovsk-	81.10	345	P	P	14 31 05.8	0.0
PETK	Petropavlovsk-	81.10	345	P	P	14 31 06.0	+0.2
	comp=Z,31nm,0.7s,baz=136,slow=3.9,SNR=103						
PETK				pP	pwP	14 31 41.4	+0.7
	comp=Z,11nm,0.8s,baz=133,slow=6.3,SNR=3.5						
PETK				LR	LR	15 01 16.1	
	comp=Z,106nm,21.6s,baz=150,slow=31						
	comp=Z,31nm,0.7s						
LPIG	La Paz	81.20	58	LR	LR	14 58 03.0	
	comp=Z,236nm,21.8s,baz=200,slow=29						
CHNA	Chernabura Isl	81.22	10	P	P	14 31 05.9	-0.4
	baz=196						
DLV	Lat	81.32	288	P	P	14 31 07.7	-0.3
SDPT	Sand Point	81.58	10	P	P	14 31 08.2	0.0
SDPT				IAmb	IAmb	14 31 16.1	
	comp=Z,76nm,1.3s						
SDPT	Sand Point	81.58	10	P	P	14 31 07.7	-0.5
	baz=195						
S12K	Black Hills	81.70	9	P	P	14 31 08.0	-0.8
	baz=194						
P08K	Saint George I	81.83	4	P	P	14 31 08.6	-0.9
	baz=187						
PFO	Pinyon Flats O	82.19	47	LR	LR	15 02 34.3	
	comp=Z,139nm,18.3s,baz=236,slow=32						
SYO	Syowa Base	82.24	193	⇑*i*P	P	14 31 11.4	-0.3
SYO	Syowa Base	82.24	193	⇓*e*PcP	PcP	14 31 16.5	-0.1
SYO	Syowa Base	82.24	193	⇓*e*pP	pP	14 31 38.8	-8.0
SPIA	Saint Paul Isl	82.36	4	P	P	14 31 12.0	-0.2
	baz=186						
O02D	Mt. Diablo Mer	82.46	39	IAmb	IAmb	14 31 51.4	
	comp=Z,90nm,1.2s						
S14K	Fog Glacier	82.62	10	P	P	14 31 13.1	-0.7
	baz=196						
TROLL	Troll, Antarti	82.95	180	⇑P	P	14 31 16.5	+1.0
	comp=Z,2µm,0.6s						
GLA	Glamis	82.95	49	IAmb	IAmb	14 31 53.2	
	comp=Z,91nm,1.2s						
GSC	Goldstone, Bar	82.99	46	IAmb	IAmb	14 31 52.8	
	comp=Z,67nm,1.1s						
SNAA	Sanae	83.21	178	⇑P	P	14 31 17.4	+0.6
	comp=Z,705nm,1.0s						
SNAA	Sanae	83.21	178	P	P	14 31 17.3	+0.6
SNAA				IAmb	IAmb	14 31 19.0	
	comp=Z,57nm,1.0s						
SNAA	Sanae	83.21	178	P	P	14 31 17.4	+0.6
	comp=Z,28nm,0.8s,baz=211,slow=5.2,SNR=80						
SNAA				pP	pP	14 31 51.5	-0.4
	comp=Z,27nm,1.0s,baz=150,slow=2.8,SNR=4.5						
	comp=Z,28nm,0.8s						
VNA3	Neumayer Olymp	83.32	176	⇑P	P	14 31 17.7	+0.4
	comp=Z,77nm,0.8s						
USRK	Ussuriysk Ar.	83.38	326	P	P	14 31 18.4	+0.6
	comp=Z,6.9nm,0.8s,baz=140,slow=4.2,SNR=16						
USRK				LR	LR	15 04 18.4	
	comp=Z,99nm,20.8s,baz=144,slow=33						
	comp=Z,6.9nm,0.8s						
113A	Mohawk Valley,	83.51	49	IAmb	IAmb	14 31 55.7	
	comp=Z,49nm,1.2s						
DSP	Deep Springs	83.52	44	IAmb	IAmb	14 31 55.6	
	comp=Z,68nm,1.3s						
YBH	Yreka Blue Hor	83.55	38	IAmb	IAmb	14 31 55.9	
	comp=Z,72nm,1.4s						
NJ2	Nanjing	83.56	310	*e*P	P	14 31 21.0	+2.0
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
QIZ	Qiongzhong	83.56	294	P	P	14 31 19.5	+0.1
QIZ				S	S	14 41 34.2	+4.3
QIZ				pmax	pmax		
	comp=Z,140nm,8.4s						
QIZ				LR	LR		
	comp=Z,80nm,19.2s						
QIZ				LR	LR		
	comp=Z,140nm,17.9s						
BLYC	Blythe	83.57	48	IAmb	IAmb	14 31 56.1	
	comp=Z,62nm,1.1s						
GWY	Greenwater Val	83.61	45	IAmb	IAmb	14 31 55.9	
	comp=Z,46nm,1.1s						
BEKR	Beckworth	83.66	40	P	P	14 31 21.7	+2.1
BEKR				IAmb	IAmb	14 31 56.1	
	comp=Z,69nm,1.4s						
VNA2	Neumayer--Watz	83.76	177	⇑P	P	14 31 20.3	+0.8
	comp=Z,64nm,0.6s,baz=172,slow=4.2						
SII	Sitkinak Islan	83.83	13	P	P	14 31 19.5	-0.3
	baz=201						
NVAR	Mina Array Bea	83.97	43	P	P	14 31 22.7	+1.4
NVAR	Mina Array Bea	83.97	43	P	P	14 31 22.9	+1.5
	comp=Z,2.9nm,0.5s,baz=225,slow=8.0,SNR=19						
NVAR				pP	pP	14 31 57.0	+0.5
	comp=Z,30nm,1.1s,baz=222,slow=7.3,SNR=14						
NVAR				LR	LR	15 01 46.9	
	comp=Z,88nm,20.8s,baz=193,slow=30						
	comp=Z,2.9nm,0.5s						
VNA1	Neumayer--Stat	83.99	176	⇑P	P	14 31 21.6	+1.0
	comp=Z,81nm,0.9s						
PAHR	Pah Rah Range	84.13	41	IAmb	IAmb	14 31 58.5	
	comp=Z,67nm,1.2s						
R16K	Pilot Point	84.17	10	P	P	14 31 21.2	-0.3
	baz=198						
MNSI	Mandailing Nat	84.28	274	P	P	14 31 25.3	+2.2
	comp=Z,14nm,1.0s						
OHAK	Old Harbor	84.62	13	P	P	14 31 23.7	-0.1
	baz=201						
LR05	Currie	84.68	132	IAmb	IAmb	14 31 28.9	
	comp=Z,102nm,1.4s						
R18K	Karluk	84.72	12	P	P	14 31 24.6	+0.4
	baz=200						
LR03	Panguipulli	84.73	131	IAmb	IAmb	14 31 28.9	
	comp=Z,62nm,1.1s						
W13A	Hualapai Mount	84.78	47	IAmb	IAmb	14 32 02.5	
	comp=Z,55nm,1.1s						
MDJ	Mudanjiang	84.90	325	P	P	14 31 27.0	+1.5
MDJ				pP	pP	14 31 57.8	-2.8
MDJ				SKS	SKSac	14 41 33.4	-3.1
MDJ				sS	sS	14 42 42.6	0.0
MDJ				pmax	pmax		
	comp=Z,20nm,1.0s						
Q17K	Contact Creek	85.12	11	P	P	14 31 26.1	-0.3
	baz=199						
KULM	Kulim	85.24	278	IAmb	IAmb	14 31 30.9	
	comp=Z,63nm,1.5s						
O14K	Tigyukauivet M	85.26	8	P	P	14 31 27.3	+0.4
	baz=194						
KDAK	Kodiak Island	85.29	13	LR	LR	15 05 39.9	
	comp=Z,53nm,18.4s,baz=195,slow=33						
KDAK	Kodiak Island	85.29	13	P	P	14 31 27.2	+0.1
	baz=202						
TUC	Tucson	85.32	51	IAmb	IAmb	14 32 05.6	
	comp=Z,53nm,1.1s						
O15K	Ungalikthiuk R	85.38	9	P	P	14 31 27.6	+0.1
	baz=196						
Q16K	King Salmon	85.38	11	P	P	14 31 27.7	+0.2
	baz=198						
J05D	Fort Rock, OR	85.39	37	IAmb	IAmb	14 32 05.7	
	comp=Z,76nm,1.1s						
PLCA	Paso Flores	85.40	133	P	P	14 31 30.9	+2.4
PLCA	Paso Flores	85.40	133	P	P	14 31 30.3	+1.8
	comp=Z,14nm,0.9s,baz=223,slow=5.5,SNR=18						
PLCA				pP	pP	14 32 05.0	+1.2
	comp=Z,8.0nm,1.0s,baz=210,slow=6.9,SNR=3.3						
PLCA				LR	LR	15 02 00.4	
	comp=Z,137nm,18.4s,baz=232,slow=30						
	comp=Z,14nm,0.9s						
P16K	Nushagak River	85.50	10	IAmb	IAmb	14 31 36.9	
	comp=Z,57nm,0.9s						
P16K	Nushagak River	85.50	10	P	P	14 31 28.0	-0.1
	baz=197						
Q18K	Katmai Hardscr	85.64	11	P	P	14 31 29.0	0.0
	baz=200,SNR=9.1						
PSI	Prapat	85.72	275	LR	LR	15 11 56.1	
	comp=Z,138nm,19.1s,baz=130,slow=37						
PSI	Prapat	85.72	275	P	P	14 31 30.1	-0.4
CNSH	ChangSha	85.74	304	P	P	14 31 28.7	-1.4
CNSH				pmax	pmax		
	comp=Z,10.0nm,1.5s						
M11K	Mekoryuk	85.84	5	P	P	14 31 29.9	+0.2
	baz=190						
N14K	Kuskokwak Cree	85.86	8	P	P	14 31 30.7	+0.8
	baz=194,SNR=8.2						
319A	Douglas	85.88	53	IAmb	IAmb	14 32 08.2	

	comp=Z,52nm,1.1s						
P17K	**Kvichak River**	**85.91**	**10**	P	**P**	**14 31 31.0**	**+0.9**
	baz=199,SNR=8.0						
WHN	**Wuhan**	**85.93**	**306**	P	**P**	**14 31 32.0**	**+1.0**
WHN				pmax	pmax		
	comp=Z,210nm,1.5s						
O16K	**Kokwok River B**	**86.03**	**10**	IAmb	IAmb	14 32 05.7	
	comp=Z,67nm,1.8s						
O16K	**Kokwok River B**	**86.03**	**10**	P	**P**	**14 31 30.9**	**+0.1**
	baz=197,SNR=5.9						
X16A	**Lo Mia Camp, P**	**86.04**	**49**	IAmb	IAmb	14 32 09.2	
	comp=Z,66nm,1.1s						
Q20K	**Shuyak Island**	**86.09**	**13**	P	**P**	**14 31 30.3**	**-0.8**
	baz=202						
M13K	**Dall Lake**	**86.14**	**7**	P	**P**	**14 31 31.6**	**+0.3**
	baz=192						
Q19K	**Cape Douglas,**	**86.15**	**12**	P	**P**	**14 31 31.3**	**-0.1**
	baz=201						
N15K	**Kwethluk River**	**86.30**	**8**	IAmb	IAmb	14 31 35.1	
	comp=Z,40nm,0.8s						
N15K	**Kwethluk River**	**86.30**	**8**	P	**P**	**14 31 32.3**	**+0.2**
	baz=195,SNR=16						
P18K	**Big Mountain,**	**86.30**	**11**	P	**P**	**14 31 31.8**	**-0.3**
	baz=200						
GSI	**Gunungsitoli**	**86.30**	**273**	P	**P**	**14 31 33.4**	**+0.2**
GSI	**Gunungsitoli**	**86.30**	**273**	P	**P**	**14 31 35.2**	**+2.0**
	comp=Z,48nm,1.6s						
O17K	**Koliganek Bris**	**86.35**	**10**	P	**P**	**14 31 32.4**	**+0.1**
	baz=198						
CN2	**Changchun**	**86.58**	**322**	*e*P	**P**	**14 31 34.5**	**+0.7**
CN2				SKS	**SKSac**	**14 41 45.8**	**-1.3**
CN2				pmax	pmax		
	comp=Z,30nm,1.0s						
CN2				LR	LR		
	comp=Z,170nm,20.0s						
CN2				LR	LR		
	comp=Z,160nm,20.0s						
CN2				LR	LR		
	comp=Z,130nm,21.0s						
M14K	**Bethel**	**86.63**	**7**	P	**P**	**14 31 33.9**	**+0.3**
	baz=194						
M15K	**Kasigluk River**	**86.73**	**8**	P	**P**	**14 31 34.8**	**+0.6**
	baz=195,SNR=8.7						
O18K	**Koktuh Hills**	**86.74**	**11**	IAmb	IAmb	14 31 36.6	
	comp=Z,43nm,0.8s						
O18K	**Koktuh Hills**	**86.74**	**11**	P	**P**	**14 31 34.4**	**+0.2**
	baz=200						
N16K	**Nishlik Lake**	**86.77**	**9**	P	**P**	**14 31 34.9**	**+0.5**
	baz=196,SNR=14						
BNX	**BinXian**	**86.80**	**325**	⇑P	**P**	**14 31 35.0**	**+0.2**
BNX				S	**S**	**14 42 04.0**	**+3.4**
BNX				pmax	pmax		
	comp=Z,35nm,1.0s						
BNX				LR	LR		
	comp=Z,160nm,20.6s						
P19K	**Oil Pt**	**86.90**	**12**	P	**P**	**14 31 35.3**	**+0.2**
	baz=201						
KLR	**Kul'dur**	**87.06**	**329**	LR	LR	15 07 05.2	
	comp=Z,176nm,20.5s,baz=152,slow=33						
N17K	**Nushagak Hills**	**87.06**	**10**	P	**P**	**14 31 35.7**	**0.0**
	baz=198						
TIA	**Tai'an**	**87.10**	**312**	P	**P**	**14 31 37.0**	**+0.4**
TIA				pmax	pmax		
	comp=Z,51nm,0.9s						
L14K	**Kuka Creek**	**87.13**	**7**	P	**P**	**14 31 36.2**	**+0.2**
	baz=193						
X18A	**Snowflake**	**87.13**	**50**	IAmb	IAmb	14 32 14.3	
	comp=Z,44nm,0.9s						
HOM	**Homer**	**87.21**	**13**	P	**P**	**14 31 36.6**	**+0.2**
	baz=203						
O19K	**Port Alsworth**	**87.21**	**11**	IAmb	IAmb	14 31 38.7	
	comp=Z,38nm,0.8s						
O19K	**Port Alsworth**	**87.21**	**11**	P	**P**	**14 31 36.5**	**0.0**
	baz=200						
ILSW	**Iliamna Southw**	**87.23**	**12**	IAmb	IAmb	14 32 11.9	
	comp=Z,58nm,1.1s						
M16K	**Timber Creek**	**87.28**	**9**	P	**P**	**14 31 37.9**	**+1.2**
	baz=196,SNR=6.9						
N18K	**Kilae Creek**	**87.41**	**10**	P	**P**	**14 31 37.3**	**-0.2**
	baz=199						
O20K	**Slope Mountain**	**87.42**	**12**	P	**P**	**14 31 37.5**	**0.0**
	baz=202						
BRSE	**Bradley Lake S**	**87.47**	**13**	P	**P**	**14 31 37.9**	**+0.1**
	baz=204						
K13K	**Kusilvak Mount**	**87.51**	**6**	P	**P**	**14 31 38.6**	**+0.7**
	baz=191						
L15K	**Ungalak Mounta**	**87.59**	**7**	P	**P**	**14 31 38.7**	**+0.4**
	baz=194,SNR=6.0						
N19K	**Bonanza Creek**	**87.77**	**11**	IAmb	IAmb	14 32 14.5	
	comp=Z,81nm,1.8s						
N19K	**Bonanza Creek**	**87.77**	**11**	P	**P**	**14 31 38.9**	**-0.4**
	baz=200						
M17K	**Holitna River**	**87.86**	**9**	IAmb	IAmb	14 32 18.7	
	comp=Z,63nm,1.4s						
M17K	**Holitna River**	**87.86**	**9**	P	**P**	**14 31 40.5**	**+1.0**
	baz=198,SNR=5.9						
L16K	**Owhat River**	**87.87**	**8**	IAmb	IAmb	14 32 17.4	
	comp=Z,74nm,1.8s						
L16K	**Owhat River**	**87.87**	**8**	P	**P**	**14 31 41.4**	**+1.9**
	baz=196,SNR=7.7						
SEW	**Seward**	**88.07**	**13**	P	**P**	**14 31 40.9**	**+0.3**
	baz=205						
Q23K	**Middleton Isla**	**88.16**	**15**	P	**P**	**14 31 41.6**	**+0.7**
	baz=208						
K15K	**Wolf Creek Mou**	**88.18**	**7**	IAmb	IAmb	14 32 19.1	
	comp=Z,43nm,1.1s						
K15K	**Wolf Creek Mou**	**88.18**	**7**	P	**P**	**14 31 42.1**	**+1.0**
	baz=194,SNR=8.1						
M18K	**Stony River**	**88.19**	**10**	P	**P**	**14 31 41.9**	**+0.8**
	baz=199						
BBB	**Bella Bella**	**88.25**	**28**	LR	LR	15 03 51.7	
	comp=Z,75nm,21.4s,baz=230,slow=30						
CAPN	**Captain Cook N**	**88.33**	**12**	P	**P**	**14 31 42.8**	**+1.1**
	baz=203						
J14K	**Nanvaranak Lak**	**88.41**	**6**	P	**P**	**14 31 43.2**	**+1.1**
	baz=192						
P23K	**Montague Islan**	**88.42**	**14**	P	**P**	**14 31 42.7**	**+0.5**
	baz=207						
L17K	**Donlin**	**88.44**	**9**	P	**P**	**14 31 43.4**	**+1.2**
	baz=197,SNR=7.5						
N20K	**Mount Spurr**	**88.53**	**12**	P	**P**	**14 31 43.2**	**+0.4**
	baz=202						
SPCR	**Spurr Chakacha**	**88.53**	**12**	P	**P**	**14 31 43.4**	**+0.6**
	baz=202						
MA2	**Magadan**	**88.61**	**344**	P	**P**	**14 31 43.8**	**+0.7**
MA2	**Magadan**	**88.61**	**344**	P	**P**	**14 31 40.8**	**-2.3**
L18K	**Granite Mounta**	**88.75**	**9**	IAmb	IAmb	14 32 21.7	
	comp=Z,57nm,1.8s						
L18K	**Granite Mounta**	**88.75**	**9**	P	**P**	**14 31 45.0**	**+1.3**
	baz=198,SNR=9.9						
CRAG	**Craig**	**88.78**	**23**	P	**P**	**14 31 44.3**	**+0.4**
	baz=219						
M19K	**Big River Lodg**	**88.81**	**11**	P	**P**	**14 31 44.6**	**+0.6**
	baz=200						
GAMB	**Gambell**	**88.88**	**2**	P	**P**	**14 31 45.1**	**+0.8**
	baz=185						
MNTX	**Cornudas Mount**	**88.88**	**54**	IAmb	IAmb	14 32 22.2	
	comp=Z,99nm,1.9s						
RC01	**Rabbit Creek A**	**88.91**	**13**	P	**P**	**14 31 45.2**	**+0.7**
	baz=204						
TXAR	**Lajitas Array**	**88.97**	**57**	P	**P**	**14 31 47.7**	**+2.0**
	comp=Z,1.6nm,0.9s,baz=214,slow=6.7,SNR=11						
TXAR				pP	**pP**	**14 32 20.7**	**-0.6**
	comp=Z,9.9nm,1.1s,baz=221,slow=5.0,SNR=9.6						
TXAR				PKKPbc	**PKKPbc**	**14 49 25.5**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=358,slow=3.9,SNR=3.7						
TXAR				LR	LR	15 02 49.1	
	comp=Z,100nm,21.8s,baz=238,slow=29						
	comp=Z,1.6nm,0.9s						
PWL	**Port Wells**	**88.99**	**14**	P	**P**	**14 31 45.4**	**+0.5**
	baz=206						
K17K	**Iditarod**	**88.99**	**9**	IAmb	IAmb	14 32 22.6	
	comp=Z,77nm,1.8s						
K17K	**Iditarod**	**88.99**	**9**	P	**P**	**14 31 45.1**	**+0.3**
	baz=197						
L19K	**White Mountain**	**88.99**	**10**	P	**P**	**14 31 45.4**	**+0.5**
	baz=200,SNR=13						
M20K	**Styx River**	**89.00**	**11**	P	**P**	**14 31 44.5**	**-0.6**
	baz=202						
SUA	**Susitna One**	**89.05**	**12**	IAmb	IAmb	14 31 47.1	
	comp=Z,21nm,0.8s						
KAIM	**Kayak Island**	**89.06**	**16**	P	**P**	**14 31 45.4**	**+0.1**
	baz=209						
V35K	**Ketchikan**	**89.22**	**24**	P	**P**	**14 31 45.8**	**-0.2**
	baz=220						
J16K	**Anvik River**	**89.25**	**7**	P	**P**	**14 31 46.5**	**+0.4**
	baz=195,SNR=9.7						
SIT	**Sitka**	**89.27**	**21**	P	**P**	**14 31 46.4**	**+0.1**
	baz=217						
GLI	**Glacier Island**	**89.28**	**14**	P	**P**	**14 31 46.6**	**+0.3**
	baz=207						
U33K	**Whale Pass**	**89.28**	**23**	P	**P**	**14 31 46.9**	**+0.6**
	baz=219						
EYAK	**Cordova Ski Ar**	**89.29**	**15**	P	**P**	**14 31 45.8**	**-0.5**
	baz=208						
HNS	**HongShan**	**89.37**	**312**	⇑P	**P**	**14 31 48.3**	**+1.1**
HNS				SKS	**SKSac**	**14 42 01.1**	**-3.0**
HNS				S	**ScS**	**14 42 28.0**	**-1.6**
HNS				pmax	pmax		
	comp=Z,40nm,1.5s						
SKT	**Skwentna**	**89.38**	**12**	P	**P**	**14 31 46.4**	**-0.3**
	baz=203						
ENH	**Enshi**	**89.39**	**304**	P	**P**	**14 31 47.0**	**-0.6**
LYN	**LuoYang**	**89.40**	**309**	⇓*i*P	**P**	**14 31 49.0**	**+1.6**
LYN				S	**S**	**14 42 27.4**	**+1.7**
LYN				pmax	pmax		
	comp=Z,87nm,0.9s						
L20K	**Farewell, AK**	**89.43**	**11**	P	**P**	**14 31 46.9**	**-0.1**
	baz=201						
M22K	**Willow**	**89.44**	**12**	IAmb	IAmb	14 33 04.6	
	comp=Z,59nm,1.2s						
M22K	**Willow**	**89.44**	**12**	P	**P**	**14 31 46.8**	**-0.2**
	baz=204						
PLID	**Pearl Lake**	**89.45**	**38**	IAmb	IAmb	14 32 24.9	
	comp=Z,64nm,1.4s						
KNK	**Knik Glacier**	**89.47**	**13**	IAmb	IAmb	14 32 23.4	
	comp=Z,93nm,1.8s						
KNK	**Knik Glacier**	**89.47**	**13**	P	**P**	**14 31 47.4**	**+0.3**
	baz=206						
PMR	**Palmer**	**89.49**	**13**	P	**P**	**14 31 44.1**	**-3.1**
PMR	**Palmer**	**89.49**	**13**	P	**P**	**14 31 47.2**	**+0.1**
	baz=205						
ALPN	**Alpine**	**89.51**	**56**	IAmb	IAmb	14 32 26.1	
	comp=Z,48nm,1.5s						
J17K	**VABM Dome**	**89.55**	**8**	IAmb	IAmb	14 32 25.2	
	comp=Z,53nm,1.6s						
J17K	**VABM Dome**	**89.55**	**8**	P	**P**	**14 31 48.0**	**+0.6**
	baz=196,SNR=7.5						
SLVN	**Son La**	**89.56**	**294**	P	**P**	**14 31 48.2**	**-0.4**
GHO	**Glory Hole Cre**	**89.69**	**13**	IAmb	IAmb	14 32 24.2	
	comp=Z,23nm,0.7s						
S31K	**Pelican**	**89.71**	**20**	P	**P**	**14 31 48.3**	**+0.1**
	baz=216						
B08A	**Colville Reser**	**89.71**	**34**	IAmb	IAmb	14 32 25.4	
	comp=Z,31nm,1.1s						
GYA	**Guiyang**	**89.72**	**299**	⇓P	**P**	**14 31 49.9**	**+0.6**
GYA				pmax	pmax		
	comp=Z,13nm,1.9s						
ANMO	**Albuquerque**	**89.78**	**51**	LR	LR	15 04 42.2	
	comp=Z,220nm,20.5s,baz=338,slow=30						
WRAK	**Wrangell Islan**	**89.79**	**23**	P	**P**	**14 31 48.2**	**-0.4**
	baz=220						
HEH	**HeiHe**	**89.80**	**328**	*e*P	**P**	**14 31 49.1**	**+0.2**
HEH				SKS	**SKSac**	**14 42 05.1**	**-0.9**
HEH				S	**ScS**	**14 42 32.4**	**-0.2**
HEH				pmax	pmax		
	comp=Z,35nm,0.9s						
I17K	**Unalakleet**	**89.83**	**7**	P	**P**	**14 31 48.9**	**+0.3**
	baz=195						
SML	**Sawmill**	**89.85**	**13**	P	**P**	**14 31 49.7**	**+0.7**
	baz=206						
S32K	**Killisnoo**	**89.85**	**21**	P	**P**	**14 31 48.5**	**-0.4**
	baz=218						
BJT	**Baijiatuau**	**89.85**	**315**	IAmb	IAmb	14 31 51.5	
	comp=Z,72nm,1.6s						
BJI	**Beijing**	**89.86**	**315**	P	**P**	**14 31 50.1**	**+0.7**
BJI				pmax	pmax		
	comp=Z,14nm,1.3s						
BJI				pmax	pmax		
	comp=Z,72nm,4.2s						
T33K	**Petersburg**	**89.89**	**23**	P	**P**	**14 31 49.7**	**+0.6**
	baz=219						
MESA	**MESA**	**89.91**	**17**	P	**P**	**14 31 49.9**	**+0.5**
	baz=211						
J18K	**Innoko River**	**89.93**	**9**	IAmb	IAmb	14 32 27.5	
	comp=Z,56nm,1.6s						
J18K	**Innoko River**	**89.93**	**9**	P	**P**	**14 31 49.9**	**+0.7**
	baz=198,SNR=15						
BMRM	**Bremner River**	**89.93**	**15**	P	**P**	**14 31 49.9**	**+0.6**
	baz=209,SNR=8.2						
M23K	**Glacier View**	**89.96**	**13**	P	**P**	**14 31 49.5**	**+0.1**
	baz=206						
CUT	**Chulitna**	**90.01**	**12**	IAmb	IAmb	14 32 26.2	
	comp=Z,34nm,0.8s						
CUT	**Chulitna**	**90.01**	**12**	P	**P**	**14 31 49.6**	**0.0**
	baz=204						
ANM	**Nome**	**90.04**	**5**	P	**P**	**14 31 50.2**	**+0.5**
	baz=190						
SCM	**Sheep Creek Mo**	**90.08**	**14**	IAmb	IAmb	14 32 25.6	
	comp=Z,25nm,1.0s						
SCM	**Sheep Creek Mo**	**90.08**	**14**	P	**P**	**14 31 50.2**	**+0.2**
	baz=207						
KLU	**Klutina**	**90.09**	**14**	P	**P**	**14 31 50.3**	**+0.2**
	baz=208						
CRQE	**Cirque**	**90.11**	**16**	P	**P**	**14 31 50.6**	**+0.3**
	baz=210						
PPLA	**Purkeypile**	**90.11**	**11**	P	**P**	**14 31 50.2**	**0.0**
	baz=202						
PNL	**Peninsula**	**90.17**	**18**	P	**P**	**14 31 47.1**	**-3.3**
PNL	**Peninsula**	**90.17**	**18**	P	**P**	**14 31 50.3**	**-0.1**
	baz=214						
TGL	**Tana Glacier**	**90.18**	**16**	IAmb	IAmb	14 32 28.1	
	comp=Z,67nm,1.4s						
K20K	**Telida**	**90.22**	**10**	IAmb	IAmb	14 32 27.8	
	comp=Z,83nm,1.9s						
K20K	**Telida**	**90.22**	**10**	P	**P**	**14 31 50.8**	**+0.1**
	baz=201,SNR=9.0						
PINM	**Pinnacle**	**90.29**	**17**	P	**P**	**14 31 51.0**	**-0.1**
	baz=213						
GRNC	**Granite Creek**	**90.43**	**17**	IAmb	IAmb	14 32 29.4	
	comp=Z,52nm,1.3s						
N25K	**Chitina, Valde**	**90.49**	**15**	P	**P**	**14 31 52.5**	**+0.5**
	baz=209						
R32K	**Eaglecrest**	**90.51**	**21**	P	**P**	**14 31 52.4**	**+0.4**
	baz=218						
G15K	**Niukluk**	**90.57**	**6**	P	**P**	**14 31 52.6**	**+0.5**
	baz=192						
M24K	**Tolsona, Glenn**	**90.58**	**14**	P	**P**	**14 31 52.7**	**+0.3**
	baz=208						
J19K	**Poorman**	**90.59**	**9**	IAmb	IAmb	14 32 30.0	
	comp=Z,78nm,1.9s						
J19K	**Poorman**	**90.59**	**9**	P	**P**	**14 31 53.0**	**+0.7**
	baz=199,SNR=7.0						
P29M	**Windy Craggy**	**90.61**	**19**	P	**P**	**14 31 53.0**	**+0.5**
	baz=215						
CAST	**Castle Rocks**	**90.61**	**11**	P	**P**	**14 31 52.6**	**+0.2**
	baz=202,SNR=11						
WAT6	**Susitna Watana**	**90.67**	**13**	P	**P**	**14 31 52.3**	**-0.6**
	baz=206						
MCARA	**McCarthy VSAT**	**90.67**	**16**	IAmb	IAmb	14 32 28.6	
	comp=Z,30nm,1.1s						
MCARA	**McCarthy VSAT**	**90.67**	**16**	P	**P**	**14 31 52.8**	**0.0**
	baz=210						
WAT1	**Susitna Watana**	**90.73**	**13**	P	**P**	**14 31 52.8**	**-0.2**
	baz=206						
CTG	**Chitna Glacier**	**90.74**	**17**	P	**P**	**14 31 53.2**	**0.0**
	baz=212						
CTGM	**Chitina Glacie**	**90.74**	**17**	IAmb	IAmb	14 32 30.7	
	comp=Z,24nm,1.1s						
TNA	**Tin City**	**90.85**	**4**	P	**P**	**14 31 53.4**	**0.0**
	baz=188						
F14K	**Arctic Creek**	**90.87**	**4**	P	**P**	**14 31 53.6**	**+0.1**
	baz=190						
O28M	**Mount Upton**	**90.87**	**17**	P	**P**	**14 31 53.8**	**-0.2**
	baz=213						
PLBC	**Pleasant Camp**	**90.88**	**19**	P	**P**	**14 31 53.7**	**0.0**
	baz=216						
O29M	**Mount Kennedy**	**90.92**	**18**	P	**P**	**14 31 53.9**	**-0.2**
	baz=214						
H17K	**Granite Mounta**	**90.93**	**7**	IAmb	IAmb	14 32 30.9	
	comp=Z,31nm,1.6s						
H17K	**Granite Mounta**	**90.93**	**7**	P	**P**	**14 31 54.1**	**+0.3**
	baz=195,SNR=6.3						
TRF	**Thorofare Moun**	**90.96**	**12**	IAmb	IAmb	14 32 31.7	
	comp=Z,22nm,1.0s						
TRF	**Thorofare Moun**	**90.96**	**12**	P	**P**	**14 31 54.8**	**+0.6**
	baz=204,SNR=7.3						
T35M	**Bob Quinn**	**90.97**	**24**	P	**P**	**14 31 54.4**	**+0.1**
	baz=221						
J20K	**Nowinta River**	**90.98**	**10**	IAmb	IAmb	14 32 31.4	
	comp=Z,70nm,1.9s						
J20K	**Nowinta River**	**90.98**	**10**	P	**P**	**14 31 55.2**	**+1.1**
	baz=201,SNR=7.7						
CHUM	**Lake Minchumin**	**91.00**	**11**	P	**P**	**14 31 54.3**	**+0.1**
	baz=202						
HARP	**HAARP**	**91.06**	**14**	P	**P**	**14 31 55.1**	**+0.5**
	baz=208						
TIY	**Taiyuan**	**91.07**	**312**	P	**P**	**14 31 56.5**	**+1.3**
TIY				SKS	**SKSac**	**14 42 13.4**	**-0.7**
TIY				S	**ScS**	**14 42 44.3**	**+0.4**
TIY				pmax	pmax		
	comp=Z,100nm,1.0s						
G16K	**Koyuk River**	**91.12**	**6**	P	**P**	**14 31 55.4**	**+0.8**
	baz=193						
GCSA	**Galena City Sc**	**91.13**	**9**	P	**P**	**14 31 55.3**	**+0.6**
	baz=198						
DHY	**Denali Highway**	**91.19**	**13**	IAmb	IAmb	14 32 31.4	
	comp=Z,63nm,1.9s						
DHY	**Denali Highway**	**91.19**	**13**	P	**P**	**14 31 55.9**	**+0.7**
	baz=207						
RND	**Reindeer**	**91.19**	**12**	IAmb	IAmb	14 32 33.4	
	comp=Z,24nm,1.0s						
SKAG	**Skagway**	**91.19**	**20**	P	**P**	**14 31 55.4**	**+0.2**
	baz=217						
SEY	**Seymchan**	**91.22**	**347**	LR	LR	15 10 09.5	
	comp=Z,113nm,19.4s,baz=144,slow=34						
F15K	**North Star Dit**	**91.22**	**5**	P	**P**	**14 31 55.6**	**+0.4**
	baz=191						
P30M	**Million Dollar**	**91.24**	**19**	P	**P**	**14 31 56.0**	**+0.6**
	baz=216						
H18K	**Honhosa River**	**91.33**	**8**	P	**P**	**14 31 55.9**	**+0.2**
	baz=197						
S34M	**Telegraph Cree**	**91.36**	**23**	P	**P**	**14 31 56.4**	**+0.4**
	baz=220						
G17K	**Kiwalik Mounta**	**91.40**	**7**	P	**P**	**14 31 56.5**	**+0.5**
	baz=195,SNR=6.5						
YUK8	**Steele Glacier**	**91.42**	**17**	P	**P**	**14 31 56.3**	**-0.3**
	baz=213						
BPAW	**Bear Paw Mtn.**	**91.43**	**11**	P	**P**	**14 31 56.7**	**+0.4**
	baz=203						
MCK	**McKinley**	**91.47**	**12**	IAmb	IAmb	14 32 34.4	
	comp=Z,38nm,1.5s						
MCK	**McKinley**	**91.47**	**12**	P	**P**	**14 31 57.0**	**+0.6**
	baz=205						
FXWY	**Fox Creek**	**91.49**	**42**	IAmb	IAmb	14 32 34.9	
	comp=Z,39nm,1.2s						
PAX	**Paxson**	**91.50**	**14**	IAmb	IAmb	14 32 32.4	
	comp=Z,49nm,1.9s						
PAX	**Paxson**	**91.50**	**14**	P	**P**	**14 31 56.9**	**+0.3**
	baz=208						
YUK6	**Outpost Mounta**	**91.51**	**18**	P	**P**	**14 31 57.2**	**+0.3**
	baz=214						
I20K	**Naaghedeneel**	**91.52**	**9**	IAmb	IAmb	14 32 35.6	
	comp=Z,50nm,1.7s						
I20K	**Naaghedeneel**	**91.52**	**9**	P	**P**	**14 31 57.3**	**+0.8**
	baz=200						
M26K	**Nabesna, AK**	**91.56**	**15**	P	**P**	**14 31 57.4**	**+0.5**
	baz=210						
YUK3	**Moose Creek**	**91.65**	**16**	P	**P**	**14 31 57.9**	**+0.3**
	baz=213						
HYT	**Haines Junctio**	**91.66**	**18**	P	**P**	**14 31 58.1**	**+0.7**
	baz=215						
XAN	**Xi'an**	**91.67**	**307**	⇑P	**P**	**14 31 59.0**	**+0.9**
XAN				S	**S**	**14 42 47.6**	**+1.0**
XAN				pmax	pmax		
	comp=Z,54nm,1.0s						
XAN				pmax	pmax		
	comp=Z,220nm,6.1s						
YUK4	**Talbot Arm**	**91.77**	**17**	P	**P**	**14 31 59.0**	**+0.9**
	baz=214						
Q32M	**Nakina River**	**91.78**	**21**	P	**P**	**14 31 58.5**	**+0.3**
	baz=220						
M27K	**Edge Creek, AK**	**91.79**	**16**	IAmb	IAmb	14 32 39.4	
	comp=Z,37nm,1.2s						
M27K	**Edge Creek, AK**	**91.79**	**16**	P	**P**	**14 31 58.7**	**+0.6**
	baz=211,SNR=11						
P32M	**Atlin**	**91.80**	**20**	P	**P**	**14 31 58.3**	**+0.3**
	baz=218						
MENT	**Mentasta**	**91.86**	**15**	IAmb	IAmb	14 32 34.9	
	comp=Z,59nm,2.0s						
MENT	**Mentasta**	**91.86**	**15**	P	**P**	**14 31 55.1**	**-3.1**
PDAR	**Pinedale Array**	**91.90**	**43**	P	**P**	**14 31 58.4**	**-0.8**
PDAR	**Pinedale Array**	**91.90**	**43**	P	**P**	**14 32 00.2**	**+1.0**
	comp=Z,2.6nm,0.5s,baz=220,slow=4.0,SNR=14						
PDAR				pP	**pP**	**14 32 34.1**	**-0.7**
	comp=Z,22nm,1.0s,baz=222,slow=2.0,SNR=16						
	comp=Z,2.6nm,0.5s						
H19K	**Roundabout Mou**	**91.93**	**8**	IAmb	IAmb	14 32 37.6	
	comp=Z,59nm,1.7s						
H19K	**Roundabout Mou**	**91.93**	**8**	P	**P**	**14 31 59.4**	**+1.0**
	baz=198						
G18K	**Tagagawik**	**92.00**	**7**	P	**P**	**14 31 59.6**	**+0.8**
G18K	**Tagagawik**	**92.00**	**7**	P	**P**	**14 31 59.6**	**+0.8**
	baz=197,SNR=5.3						
L26K	**Log Cabin Wild**	**92.02**	**15**	P	**P**	**14 31 59.6**	**+0.7**
	baz=210						
O30N	**Mendenhall**	**92.02**	**19**	P	**P**	**14 31 60.0**	**+0.9**
	baz=216						
XLT	**XiLinHaoTe**	**92.06**	**318**	*e*P	**P**	**14 32 00.1**	**+0.4**
XLT				SKS	**SKSac**	**14 42 17.6**	**-1.9**
XLT				S	**S**	**14 42 49.8**	**+0.1**
XLT				sS	sS	14 43 50.9	-0.5
XLT				pmax	pmax		
	comp=Z,17nm,0.8s						
BVCY	**Beaver Creek**	**92.09**	**16**	P	**P**	**14 32 00.1**	**+0.8**
	baz=212						
H20K	**Anotleneega Mo**	**92.11**	**9**	P	**P**	**14 31 60.0**	**+0.6**
	baz=200						
DLBC	**Dease Lake**	**92.14**	**23**	LR	LR	15 07 23.8	
	comp=Z,53nm,19.8s,baz=252,slow=31						
DLBC	**Dease Lake**	**92.14**	**23**	P	**P**	**14 31 60.0**	**+0.2**
	baz=221						
K24K	**Donnelly Dome**	**92.17**	**13**	IAmb	IAmb	14 32 11.8	
	comp=Z,13nm,0.8s						
K24K	**Donnelly Dome**	**92.17**	**13**	P	**P**	**14 32 00.4**	**+0.8**
	baz=208						
NEA2	**Nenana**	**92.23**	**12**	P	**P**	**14 32 00.6**	**+0.8**
	baz=205						
KMI	**Kunming**	**92.23**	**297**	⇑P	**P**	**14 32 02.2**	**+1.1**
KMI				S	**S**	**14 42 52.8**	**+0.4**
KMI				pmax	pmax		
	comp=Z,34nm,1.4s						
F17K	**Baldwin Pennin**	**92.25**	**6**	P	**P**	**14 32 00.5**	**+0.6**
	baz=194						
I21K	**Tanana**	**92.26**	**10**	P	**P**	**14 32 00.6**	**+0.7**
	baz=202						
WHY	**Whitehorse**	**92.29**	**19**	P	**P**	**14 32 01.3**	**+0.9**
	baz=217						
N30M	**Aishikik Lake**	**92.29**	**18**	P	**P**	**14 32 00.8**	**+0.5**
	baz=216						
RIDG	**Independent Ri**	**92.31**	**14**	IAmb	IAmb	14 32 37.6	
	comp=Z,50nm,1.8s						
RIDG	**Independent Ri**	**92.31**	**14**	P	**P**	**14 32 01.3**	**+1.0**
	baz=209						
MLY	**Manley**	**92.33**	**11**	P	**P**	**14 32 01.2**	**+0.8**
	baz=204						
L27K	**Beaver Creek,**	**92.40**	**15**	P	**P**	**14 32 01.8**	**+1.0**
	baz=211						
G19K	**Purcell Mounta**	**92.43**	**8**	IAmb	IAmb	14 32 38.9	
	comp=Z,32nm,1.4s						
G19K	**Purcell Mounta**	**92.43**	**8**	P	**P**	**14 32 02.0**	**+1.2**
	baz=198,SNR=6.4						
CMAR	**Chiang Mai Arr**	**92.46**	**289**	P	**P**	**14 32 03.3**	**+1.3**
CMAR	**Chiang Mai Arr**	**92.46**	**289**	P	**P**	**14 32 03.6**	**+1.5**
	comp=Z,21nm,1.0s,baz=129,slow=2.7,SNR=68						
CMAR				LR	LR	15 15 39.0	
	comp=Z,30nm,18.6s,baz=140,slow=37						
	comp=Z,21nm,1.0s						
HDA	**Harding Lake**	**92.47**	**13**	P	**P**	**14 32 02.2**	**+1.2**
	baz=207,SNR=6.0						
CCB	**Clear Creek Bu**	**92.51**	**12**	IAmb	IAmb	14 32 12.3	
	comp=Z,25nm,1.6s						
R33M	**Jennings River**	**92.55**	**22**	P	**P**	**14 32 02.8**	**+1.2**
	baz=221						
F18K	**Selawik**	**92.57**	**7**	P	**P**	**14 32 03.1**	**+1.7**
	baz=196						
P33M	**Teslin, Yukon**	**92.57**	**20**	P	**P**	**14 32 02.7**	**+1.0**
	baz=219						
H21K	**Melozitna Rive**	**92.58**	**10**	IAmb	IAmb	14 32 39.9	
	comp=Z,52nm,2.0s						
H21K	**Melozitna Rive**	**92.58**	**10**	P	**P**	**14 32 03.4**	**+1.9**
	baz=202						
CHTO	**Chiang Mai**	**92.62**	**289**	P	**P**	**14 32 02.3**	**-0.5**
I23K	**Minto, Yukon-K**	**92.68**	**11**	P	**P**	**14 32 02.6**	**+0.7**
	baz=205						
N31M	**Braeburn, Yuko**	**92.69**	**19**	P	**P**	**14 32 02.8**	**+0.7**
	baz=217						
SCRK	**Sand Creek**	**92.70**	**14**	P	**P**	**14 32 03.4**	**+1.2**
SCRK				IAmb	IAmb	14 32 38.7	
	comp=Z,46nm,2.0s						
SCRK	**Sand Creek**	**92.70**	**14**	P	**P**	**14 32 03.0**	**+0.8**
	baz=210						
COLA	**College**	**92.71**	**12**	P	**P**	**14 31 58.7**	**-3.3**
COLA	**College**	**92.71**	**12**	P	**P**	**14 32 03.0**	**+1.0**

	baz=206						
M29M	Somme Creek	92.73	17	P	P	14 32 03.2	+0.9
	baz=214						
IMAR	Indian Mountai	92.74	9	P	P	14 32 03.4	+1.2
ILAR	Eielson Array	92.80	12	P	P	14 32 02.6	+0.1
	comp=Z,1.5nm,0.7s,baz=221,slow=5.3,SNR=18						
ILAR				pP	pP	14 32 37.0	-1.0
	comp=Z,4.9nm,1.1s,baz=228,slow=5.3,SNR=3.5						
ILAR				sP	sP	14 32 54.6	+2.1
	comp=Z,1.3nm,0.7s,baz=229,slow=5.5,SNR=1.8						
ILAR				PP	PP	14 35 49.0	+2.0
	comp=Z,0.9nm,0.8s,baz=218,slow=6.9,SNR=5.9						
ILAR				LR	LR	15 07 12.7	
	comp=Z,27nm,20.6s,baz=221,slow=31						
	comp=Z,1.5nm,0.7s						
E17K	Hotham Inlet	92.82	6	P	P	14 32 03.3	+0.8
	baz=194						
J25K	Salcha River,	92.97	13	P	P	14 32 04.1	+0.7
	baz=208,SNR=5.3						
POKR	Poker Plat Res	93.01	12	P	P	14 32 04.0	+0.6
	baz=207						
F19K	Shaleruckik Mo	93.01	8	IAmb	IAmb	14 32 41.3	
	comp=Z,44nm,1.7s						
F19K	Shaleruckik Mo	93.01	8	P	P	14 32 04.7	+1.3
	baz=197,SNR=6.3						
H22K	Ishtalitna Cre	93.02	10	P	P	14 32 04.6	+1.1
	baz=203						
K27K	Chicken	93.17	15	P	P	14 32 05.5	+1.2
	baz=211						
N32M	Quiet Lake	93.22	20	P	P	14 32 05.4	+0.9
	baz=219						
J26L	Joseph Creek	93.25	14	P	P	14 32 05.8	+1.1
	baz=210,SNR=13						
H23K	Yukon River	93.27	11	P	P	14 32 05.6	+0.9
	baz=205						
HHC	Hu-ho-hao-te	93.27	314	eP	P	14 32 06.4	+1.0
HHC				SKS	SKSac	14 42 28.4	+2.0
HHC				S	S	14 43 00.9	+0.3
HHC				sS	sS	14 43 59.2	-3.0
HHC				pmax	pmax		
	comp=Z,24nm,0.6s						
HHC				pmax	pmax		
	comp=Z,72nm,4.4s						
E18K	Tukpahlearik C	93.27	6	P	P	14 32 05.6	+1.0
	baz=195						
G21K	Allakaket	93.27	9	IAmb	IAmb	14 32 42.9	
	comp=Z,32nm,1.6s						
G21K	Allakaket	93.27	9	P	P	14 32 05.3	+0.6
	baz=201						
D17K	Noatak River	93.31	5	P	P	14 32 06.1	+1.3
	baz=193						
L29M	L29M	93.36	17	IAmb	IAmb	14 32 45.1	
	comp=Z,34nm,1.4s						
L29M	L29M	93.36	17	P	P	14 32 06.1	+0.9
	baz=215						
F20K	Avaraart Lake	93.47	8	P	P	14 32 06.6	+1.1
	baz=199						
H24K	Noodor Dome	93.57	12	P	P	14 32 07.6	+1.5
	baz=206						
PZH	PanZhiHua	93.65	297	P	P	14 32 07.6	+0.1
PZH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
M31M	Drury Creek, Y	93.66	19	P	P	14 32 07.9	+1.3
	baz=218						
E19K	Redstone River	93.67	8	P	P	14 32 07.2	+0.7
	baz=198						
RDOG	Red Dog Mine	93.67	5	P	P	14 32 07.3	+0.8
	baz=193						
C16K	Lisburne Hills	93.70	4	P	P	14 32 07.5	+0.9
	baz=191						
PRP	Porcupine Dome	93.73	13	P	P	14 32 08.2	+1.2
	baz=208						
WTLY	Watson Lake, Y	93.81	22	P	P	14 32 08.3	+1.0
	baz=223						
DAWY	Dawson	93.84	16	P	P	14 32 08.3	+0.9
	baz=214						
F21K	Alatna River	93.94	9	P	P	14 32 08.9	+1.2
	baz=201						
G22K	Bettles	93.95	10	P	P	14 32 09.3	+1.6
	baz=203						
FARO	Faro, Yukon	93.98	19	P	P	14 32 09.3	+1.2
	baz=219						
G23K	Bananza Creek	93.99	10	P	P	14 32 09.1	+1.0
	baz=204						
NNA	Nana	94.03	105	LR	LR	15 05 10.5	
	comp=Z,89nm,20.9s,baz=242,slow=29						
I26K	Coal Creek Min	94.04	14	IAmb	IAmb	14 32 44.8	
	comp=Z,34nm,1.9s						
I26K	Coal Creek Min	94.04	14	P	P	14 32 09.6	+1.4
	baz=210						
CD2	Chengdu	94.04	302	P	P	14 32 10.6	+1.5
CD2				pmax	pmax		
	comp=Z,30nm,1.7s						
C17K	DeLong Mountai	94.06	5	P	P	14 32 09.7	+1.4
	baz=192						
K29M	Barlow Dome	94.12	16	IAmb	IAmb	14 32 46.6	
	comp=Z,48nm,1.9s						
K29M	Barlow Dome	94.12	16	P	P	14 32 09.9	+1.1
	baz=215						
BTO	Baotou	94.16	313	eP	P	14 32 11.2	+1.7
BTO				pmax	pmax		
	comp=Z,24nm,0.7s						
BTO				pmax	pmax		
	comp=Z,160nm,8.1s						
BTO				LR	LR		
	comp=Z,120nm,5.6s						
BTO				LR	LR		
	comp=Z,110nm,6.5s						
BTO				LR	LR		
	comp=Z,150nm,7.2s						
TOAD	Toad River Com	94.17	24	P	P	14 32 09.8	+0.8
	baz=226						
LIRD	Liard River Hi	94.25	23	P	P	14 32 10.6	+1.3
	baz=225						
H25L	Birch Creek	94.34	12	P	P	14 32 11.2	+1.7
	baz=208						
MAYO	Mayo, Yukon	94.35	17	P	P	14 32 11.5	+1.8
	baz=217						
F22K	John River	94.39	9	P	P	14 32 11.1	+1.3
	baz=202						
C18K	Utukok River	94.40	6	IAmb	IAmb	14 32 46.9	
	comp=Z,28nm,1.6s						
C18K	Utukok River	94.40	6	P	P	14 32 11.5	+1.7
	baz=194						
G24K	Hadweenzic Riv	94.42	11	P	P	14 32 11.5	+1.6
	baz=207						
COLD	Coldfoot	94.44	10	P	P	14 32 11.5	+1.5
	baz=204						
E20K	Nigu River	94.56	8	P	P	14 32 11.9	+1.3
	baz=199						
D19K	Kuna River	94.56	7	IAmb	IAmb	14 32 46.8	
	comp=Z,37nm,1.8s						
D19K	Kuna River	94.56	7	P	P	14 32 11.9	+1.3
	baz=197						
I27K	Kandik River	94.62	14	P	P	14 32 12.1	+1.2
	baz=212						
G25K	Bearman Lake	94.73	12	P	P	14 32 12.5	+1.2
	baz=208						
ATAH	Atahualpa	94.81	100	LR	LR	15 07 09.5	
	comp=Z,90nm,19.8s,baz=257,slow=30						
I28M	Miner Creek	94.87	15	P	P	14 32 13.0	+0.8
	baz=213						
MMPY	Sheldon Lake,	94.90	19	P	P	14 32 13.5	+1.2
	baz=221						
D20K	Etivluk River	94.94	7	P	P	14 32 13.9	+1.7
	baz=198						
C19K	Lookout Ridge	95.00	6	IAmb	IAmb	14 32 50.1	
	comp=Z,40nm,1.6s						
C19K	Lookout Ridge	95.00	6	P	P	14 32 14.1	+1.5
	baz=196						
E21K	Killik River	95.01	8	P	P	14 32 13.9	+1.2
	baz=201						
E22K	Anaktuvuk Pass	95.03	9	P	P	14 32 13.5	+0.8
	baz=203						
J30M	Hart River	95.03	16	P	P	14 32 14.1	+1.2
	baz=216						
TGTN	Hyland Airport	95.03	21	P	P	14 32 14.3	+1.4
	baz=223						
B18K	Kokolik River	95.05	5	P	P	14 32 13.7	+1.0
	baz=194						
F24K	Squaw Lake	95.08	11	P	P	14 32 13.9	+0.9
	baz=206						
BEAVL	Fort Liard	95.16	23	P	P	14 32 14.4	+0.9
	baz=226						
H27K	Steamboat Moun	95.18	14	P	P	14 32 14.3	+0.8
	baz=212						
I29M	Ogilvie Camp,	95.18	15	P	P	14 32 14.8	+1.4
	baz=215						
E23K	Chandalar	95.29	10	P	P	14 32 14.7	+0.7
	baz=205						
G26K	Porcupine Rive	95.33	13	P	P	14 32 14.9	+0.8
	baz=210						
E24K	Your Creek	95.49	10	P	P	14 32 15.8	+1.0
	baz=206						
KOTAN	Kotaneelee Air	95.50	24	P	P	14 32 15.5	+0.5
	baz=226						
I30M	Mount Dempster	95.54	16	P	P	14 32 15.6	+0.4
	baz=216						
F25K	Christian Rive	95.55	12	P	P	14 32 15.6	+0.5
	baz=208						
C21K	Knifeblade Rid	95.58	8	P	P	14 32 16.4	+1.2
	baz=200						
D22K	Ayikyak River	95.60	9	P	P	14 32 15.8	+0.5
	baz=202						
TNCH	TengChong	95.63	295	⇑P	P	14 32 16.9	+0.2
TNCH				SKS	SKSac	14 42 42.4	+2.4
TNCH				S	S	14 43 20.9	-1.2
TNCH				pmax	pmax		
	comp=Z,19nm,1.4s						
G27K	Doyon Strip	95.64	13	P	P	14 32 16.6	+1.0
	baz=212						
TOLK	Toolik Lake Re	95.83	10	P	P	14 32 17.3	+1.0
	baz=205						
H29M	Whitestone	95.87	15	P	P	14 32 17.4	+0.8
	baz=215						
F26K	Sheenjek River	95.91	12	P	P	14 32 17.6	+0.9
	baz=210						
A19K	Wainwright	95.93	5	P	P	14 32 17.7	+1.0
	baz=194						
D23K	Nanushuk River	95.96	9	P	P	14 32 17.7	+0.8
	baz=204						
B21K	Ikpikpuk River	96.04	8	P	P	14 32 18.0	+0.8
	baz=200						
B20K	Meade River	96.12	7	P	P	14 32 19.2	+1.7
	baz=198						
LZH	Lanzhou	96.30	307	eP	P	14 32 20.1	+0.6
LZH				SKS	SKSac	14 42 41.7	-1.3
LZH				S	S	14 43 24.7	-2.7
LZH				pmax	pmax		
	comp=Z,21nm,1.9s						
LZH				LR	LR		
	comp=Z,180nm,16.8s						
LZH				LR	LR		
	comp=Z,130nm,14.9s						
LZH				LR	LR		
	comp=Z,170nm,17.8s						
EPYK	Eagle Plains	96.38	15	P	P	14 32 18.6	-0.3
	baz=216						
D24K	Happy Valley	96.41	10	P	P	14 32 19.6	+0.7
	baz=206						
H31M	Peel River	96.52	16	P	P	14 32 20.3	+0.8
	baz=218						
G29M	Pine Creek	96.52	14	P	P	14 32 20.6	+1.1
	baz=215						
F28M	Old Crow	96.70	14	P	P	14 32 21.2	+0.9
	baz=213						
C23K	Itkillik River	96.77	9	P	P	14 32 21.9	+1.4
	baz=204						
E27K	Coleen River	96.83	13	P	P	14 32 22.3	+1.4
	baz=212						
YAK	Yakutsk	96.85	338	P	P	14 32 20.9	-0.1
B22K	Teshekpuk Lake	96.86	8	P	P	14 32 22.4	+1.5
	baz=201						
C24K	Franklin Bluff	96.94	10	P	P	14 32 22.8	+1.5
	baz=206						
D25K	Kavik River	96.95	11	P	P	14 32 22.9	+1.5
	baz=208						
G30M	tAoh Zraii Nji	96.99	15	P	P	14 32 22.5	+0.8
	baz=217						
A22K	Sinclair Lake	97.30	7	P	Pdif	14 32 24.5	+1.6
	baz=200						
G31M	Satah River	97.42	16	P	Pdif	14 32 24.8	+1.3
	baz=218						
A21K	Barrow	97.43	7	P	Pdif	14 32 25.0	+1.5
	baz=198						
E28M	Babbage River	97.60	13	P	P	14 32 25.0	+0.6
	baz=214						
F30M	Barrier River	97.60	15	P	Pdif	14 32 25.9	+1.5
	baz=217						
C27K	Jago River	97.67	11	P	Pdif	14 32 25.9	+1.2
	baz=210						
C26K	Camden Bay	97.72	11	P	P	14 32 25.4	+0.6
	baz=209						
E29M	Blow River	97.76	14	P	Pdif	14 32 26.2	+1.1
	baz=215						
WRGLY	Wrigley	97.82	22	P	Pdif	14 32 26.2	+0.8
	baz=227						
D27M	Malcolm River	97.85	12	P	Pdif	14 32 26.4	+0.9
	baz=212						
F31M	Tsiigehtchic	97.95	16	IAmb	IAmb	14 33 51.8	
	comp=Z,32nm,1.9s						
D28M	Stokes Point	98.36	13	P	Pdif	14 32 28.8	+1.1
	baz=214						
INK	Inuvik	98.68	15	LR	LR	15 09 51.3	
	comp=Z,43nm,21.7s,baz=236,slow=31						
INK	Inuvik	98.68	15	P	Pdif	14 32 30.2	+1.1
	baz=219						
SONM	Songino Array	99.88	318	P	Pdif	14 32 34.2	-0.9
	comp=Z,0.6nm,0.5s,baz=131,slow=4.2,SNR=5.5						
SONM				PKKPbc	PKKPbc	14 48 55.4	-0.5
	comp=Z,0.7nm,0.8s,baz=242,slow=3.1,SNR=3.8						
SONM				LR	LR	15 15 51.7	
	comp=Z,44nm,18.3s,baz=122,slow=34						
	comp=Z,0.6nm,0.5s						
YKA	Yellowknife Ar	100.52	25	PKKPbc	PKKPbc	14 48 53.4	-1.1
	comp=Z,0.5nm,0.8s,baz=32,slow=3.0,SNR=4.5						
GTA	Gaotai	100.61	309	P	Pdif	14 32 39.5	+0.9
GTA				SKS	SKSac	14 43 06.0	+1.6
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GTA				LR	LR		
	comp=Z,76nm,13.8s						
GTA				LR	LR		
	comp=Z,120nm,15.3s						
GTA				LR	LR		
	comp=Z,100nm,14.2s						
A36M	Sachs Harbour	103.30	15	P	Pdif	14 32 50.1	+0.5
	baz=227						
HYB	Hyderabad	109.89	280	ePdif	Pdif	14 33 20.6	+0.3
HYB				ePKiKP	PKiKP	14 37 22.4	+0.5
HYB				epPKiKP	PP	14 37 51.6	-5.1
WMQ	Urumqi	110.64	310	ePKP	PKiKP	14 37 22.1	-0.5
ZSN	Zaisan	113.44	313	ePKiKP	PKiKP	14 37 27.0	-0.7
ZALV	Zalesovo Beam	114.70	320	PKP	PKPdf	14 37 28.1	-1.7
	comp=Z,1.2nm,0.6s,baz=101,slow=3.0,SNR=6.7						
MKAR	Makanchi Array	115.03	312	PKP	PKPdf	14 37 29.9	-0.9
	comp=Z,3.0nm,0.9s,baz=141,slow=0.8,SNR=12						
MKAR				pPKP	PP	14 38 07.8	-25
	comp=Z,0.9nm,0.7s,baz=178,slow=1.6,SNR=2.0						
MKAR				PKKPbc	PKKPbc	14 48 08.3	+0.3
	comp=Z,1.3nm,0.9s,baz=276,slow=3.5,SNR=5.5						
SHLS	Shalkode	116.32	307	ePKP	PKPdf	14 37 32.0	-1.5
UZB	Uzynbulak	116.64	307	ePKP	PKPdf	14 37 33.1	-1.0
KPKS	Kokpek	116.94	308	ePKP	PKPdf	14 37 33.9	-0.8
KPKS				ePP	PP	14 38 44.5	-1.7
ZHN	Zhinishke	117.06	307	ePKP	PKPdf	14 37 34.1	-0.9
SATY	Saty	117.06	307	ePKP	PKPdf	14 37 34.1	-0.9
MDOK	Medeo	118.06	307	ePKP	PKPdf	14 37 36.0	-0.9
KURBB	Kurchatov Arra	118.07	316	PKP	PKPdf	14 37 35.9	-0.6
	comp=Z,4.6nm,1.0s,baz=100,slow=2.0,SNR=18						
KURBB				pPKP	pPKPdf	14 38 12.8	-0.9
	comp=Z,0.8nm,0.6s,baz=108,slow=1.8,SNR=1.6						
AAA	Alma-Ata	118.16	307	ePKP	PKPdf	14 37 36.2	-0.8
KUU	Kurty	118.68	308	ePKP	PKPdf	14 37 37.2	-0.7
SGDS	Sogindy	119.85	307	ePKP	PKPdf	14 37 39.5	-0.8
BTLS	Baital	120.46	309	ePKP	PKPdf	14 37 40.5	-0.8
BRZS	Berezniki	121.76	315	ePKP	PKPdf	14 37 42.7	-0.9
NEEM	North Greenlan	122.10	12	i P	PKPdf	14 37 43.6	-0.3
DZA	Taraz	122.18	306	ePKP	PKPdf	14 37 43.8	-1.0
BOSA	Boshof	122.23	203	PKP	PKPdf	14 37 46.1	+0.6
	comp=Z,2.6nm,0.5s,baz=183,slow=1.9,SNR=14						
BVAR	Borovoye Array	123.22	318	PKP	PKPdf	14 37 46.2	-0.1
	comp=Z,9.9nm,0.9s,baz=93,slow=3.0,SNR=29						
BRLS	Borolday	123.29	306	ePKP	PKPdf	14 37 46.1	-0.7
CHM	Chimkent	123.39	305	ePKP	PKPdf	14 37 46.1	-0.9
SPITS	Spitsbergen Ar	126.69	357	PKP	PKPdf	14 37 51.7	-0.6
	comp=Z,7.3nm,1.0s,baz=35,slow=3.5,SNR=4.7						
DAG	Danmarks Havn	127.41	6	i P	PKPdf	14 37 51.7	-2.0
DBG	Daneborg	129.47	8	i P	PKPdf	14 37 56.9	-0.7
ARCES	ARCESS Array B	133.77	349	PKP	PKPdf	14 38 05.3	-0.6
	comp=Z,1.8nm,0.6s,baz=42,slow=2.2,SNR=2.1						
FINES	FINESS Array B	140.58	343	PKhKP	PKPpre	14 38 11.2	
	comp=Z,2.1nm,0.7s,baz=116,slow=8.7,SNR=9.5						
FINES				SKiKP	SKPbc	14 41 43.9	+1.9
	comp=Z,5.2nm,0.9s,baz=8.5,slow=2.8,SNR=5.4						
KBZ	Khabaz	142.69	310	PKhKP	PKPpre	14 38 18.2	
	comp=Z,0.8nm,0.6s,baz=41,slow=3.9,SNR=3.9						
NC303	NORSAR Array S	143.63	353		PKPbc	14 38 22.1	+0.1
NB2	NORSAR Subarra	143.82	353	PKP	PKPab	14 38 22.0	+0.1
	comp=Z,7.2nm,1.1s,baz=10,slow=3.2						
NOA	NORSAR Array B	143.82	353	PKhKP	PKPpre	14 38 22.1	
	comp=Z,5.9nm,0.8s,baz=15,slow=4.9,SNR=17						
NOA				pPKP	pPKPdf	14 38 58.5	-3.2
	comp=Z,3.8nm,0.8s,baz=12,slow=2.3,SNR=3.5						
NAO01	NORSAR Array S	144.05	353		PKPbc	14 38 23.7	+0.5
HFS	Hagfors	144.39	351	PKP	PKPab	14 38 23.9	-0.1
	comp=Z,22nm,0.8s,baz=30,slow=2.2,SNR=46						
HFS				pPKP	pPKPdf	14 39 00.1	-2.5
	comp=Z,22nm,0.8s,baz=318,slow=2.0,SNR=4.6						
KONO	Kongsberg	145.35	354		PKPbc	14 38 27.9	+0.6
MNK	Minsk	145.46	334	i PKiKP	PKPbc	14 38 28.3	+0.5
	comp=E,51nm,0.9s						
MNK				i PKiKP	PKPbc	14 38 28.3	+0.5
	comp=N,17nm,0.8s						
MNK				i PKiKP	PKPbc	14 38 28.3	+0.5
	comp=Z,161nm,0.9s,baz=43						
MNK				i pPKiKP	pPKPdf	14 39 05.5	+0.8
MNK				i PP	PP	14 41 45.9	-2.8
MNK				i PPP	PPP	14 44 59.2	
MNK				i SKS	SKSdf	14 45 25.9	+2.6
MNK				i SKKS	SKKSdf	14 54 36.0	+2.9
MNK				i SS	SS	15 00 28.0	-1.0
MNK				i SSS	SSS	15 06 05.2	
MNK				i LR	LR	15 39 25.4	
NACGM	Naroch	145.58	336	ePKP	PKPbc	14 38 28.6	+0.4
	comp=E,28nm,0.8s						
STRU	Stroemstad	145.79	352	i P	PKPbc	14 38 29.4	+0.7
TJOU	Tjoern	146.71	352	i P	PKPbc	14 38 32.4	+1.0
HOMB	Homborsund	146.82	355	i P	PKPbc	14 38 31.8	+0.1
ONAU	Onsala	147.28	351	i P	PKPbc	14 38 33.5	+0.6
ONAU				eP	PKiKP	14 38 35.9	+0.8
FABU	Falkenberg	147.54	350	i P	PKPbc	14 38 34.4	+0.6
AKASG	Malin Array Be	147.55	328		PKPbc	14 38 34.0	0.0
AKASG	Malin Array Be	147.55	328	PKPbc	PKPbc	14 38 33.6	-0.4
	comp=E,14nm,0.6s,baz=43,slow=4.2,SNR=50						
AKASG				pPKPbc	pPKPbc	14 39 10.3	-0.5
	comp=E,9.1nm,0.7s,baz=43,slow=4.0,SNR=3.2						
AKBB	Malin Array Si	147.55	328		PKPbc	14 38 33.6	-0.3
KIEV	Kiev	147.56	328		PKPbc	14 38 33.6	-0.3
KIEV	Kiev	147.56	328	⇓P	PKPbc	14 38 33.9	-0.1
SUW	Suwalki	147.58	338	ePKPbc	PKPbc	14 38 33.7	-0.2
BLEU	Blekinge	147.63	347	i P	PKPab	14 38 37.4	+0.8
DEL	Delary	147.86	349	i P	PKPbc	14 38 35.4	+0.8
BJUU	Bjuv	148.38	349	i P	PKPbc	14 38 36.9	+0.9
BSD	Bornholm Skovb	148.93	347	i P	PKPbc	14 38 38.3	+0.9
BZK	Bozkurt	149.44	311	⇓P	PKiKP	14 38 40.3	+0.2
EKA	Eskdalemuir Ar	149.68	7	PKPbc	PKPbc	14 38 39.5	+0.2
	comp=E,6.1nm,0.7s,baz=353,slow=2.7,SNR=7.6						
EKA				pPKPbc	pPKPbc	14 39 15.4	-0.8
	comp=E,8.6nm,1.0s,baz=335,slow=3.2,SNR=2.6						
BEIL	Beino	149.81	296	eP	PKPbc	14 38 40.8	+0.4
HWQ	Hawqa	150.05	295	eP	PKPbc	14 38 41.2	+0.2
MILM	Milestii Mici	150.17	323	⇑iPKP	PKPbc	14 38 40.0	-0.7
	comp=E,140nm,1.7s						
MILM	Milestii Mici	150.17	323	⇓P	PKPbc	14 38 40.5	-0.1
CIDE	Kastamonu/Cide	150.19	311	⇑P	PKPbc	14 38 41.3	+0.4
BEL	Belsk	150.20	337	ePKPbc	PKPbc	14 38 41.3	+0.6
RCY	Rachaya	150.24	294	eP	PKPbc	14 38 42.2	+0.6
SHBL	Chebaa	150.34	293	eP	PKiKP	14 38 42.6	+0.1
BHL	Bhannes	150.34	295	eP	PKPbc	14 38 42.3	+0.6
QRWL	Qaraoun	150.37	294	eP	PKiKP	14 38 42.5	0.0
DQRL	Deir Qamar	150.44	294	eP	PKPbc	14 38 42.6	+0.7
KIRS	Kirsehir-Merke	150.50	305	⇓P	PKPbc	14 38 42.4	+0.5
BRTR	Keskin Array B	150.51	307	PKP	PKPdf	14 38 36.1	-0.3
	comp=E,6.8nm,1.3s,baz=127,slow=3.3,SNR=14						
BRTR				PKPbc	PKPbc	14 38 41.9	-0.1
	comp=E,16nm,1.0s,baz=128,slow=2.0,SNR=36						
BRTR				PKPab	PKPab	14 38 49.0	-0.2
	comp=E,27nm,0.8s,baz=78,slow=3.0,SNR=26						
MMAI	Mount Meron Ar	150.66	293	PKPbc	PKiKP	14 38 43.5	+0.4
	comp=E,3.9nm,0.3s,baz=60,slow=5.7,SNR=34						
MMAI				PKPab	PKPab	14 38 48.8	-1.1
	comp=E,9.6nm,0.3s,baz=76,slow=6.1,SNR=19						
VASR	Vaslui	150.89	323	⇓P	PKPbc	14 38 41.7	-0.8
ANTO	Ankara	151.07	307	⇓P	PKiKP	14 38 43.9	+0.2
TLCR		151.19	320	⇓P	PKiKP	14 38 45.6	+2.0
VLDR	Vladesti	151.22	322	⇑P	PKiKP	14 38 44.5	+0.8
KWP	Kalwaria Pacla	151.24	333	ePKPbc	PKPbc	14 38 43.6	+0.4
SCTR	Scanteiesti	151.37	322	⇓P	PKiKP	14 38 44.7	+0.7
JURR	Jurilovca	151.39	319	⇓P	PKPbc	14 38 44.1	+0.5
BURAR	Bucovina Array	151.58	327	⇑P	PKPbc	14 38 44.8	+0.6
CFR	Carcaliu	151.58	321	⇑P	PKPbc	14 38 44.5	+0.5
SCHLR	Schela	151.58	321	⇓P	PKiKP	14 38 45.5	+1.0
TESR	Tescani	151.58	324	⇑P	PKPbc	14 38 43.9	-0.1
TPGR	Topolog	151.60	320	⇓P	PKPbc	14 38 43.8	-0.4
ONER	Baraj Valea Uz	151.83	324	⇑P	PKiKP	14 38 45.5	+0.5
TIRR	Tirgusor	151.83	319	⇓P	PKiKP	14 38 45.6	+0.7
OJC	Ojcow	151.89	337	ePKPbc	PKPbc	14 38 44.9	+0.3
VRI	Vrincioaia	151.95	323	⇓P	PKPbc	14 38 45.5	+0.5
KOLS	Kolonicke sedl	151.96	332	ePKP	PKiKP	14 38 46.3	+1.1
HARR	Harsova	151.98	320	⇑P	PKiKP	14 38 46.2	+0.9
MFTR	Murfatlar	151.98	319	⇑P	PKPbc	14 38 45.5	+0.5
STHS	Stebnicka Huta	152.00	334	ePKP	PKiKP	14 38 45.8	+0.6
PLOR	Plostina	152.00	323	⇑P	PKiKP	14 38 45.8	+0.4
SAHE	Sakarya_HENDEK	152.05	311	⇓P	PKPbc	14 38 45.6	+0.3
TURR	Turia	152.21	324	⇓P	PKiKP	14 38 46.6	+0.8
OZUR		152.31	324	⇓P	PKPbc	14 38 44.5	-1.2
NIE	Niedzica	152.36	335	ePKPbc	PKiKP	14 38 46.9	+0.9
PSN	Preselentsi	152.46	318	eP	PKPab	14 38 58.6	+1.7
KSP	Ksiaz	152.49	341	ePKPbc	PKiKP	14 38 46.6	+0.5
ISR	Istrita	152.52	322	⇓P	PKiKP	14 38 47.2	+0.7
DOPR	Dopca	152.60	325	⇑P	PKiKP	14 38 47.3	+0.7
MLR	Muntele Rosu	152.61	323	PKP	PKPdf	14 38 39.0	-0.5
	comp=E,0.7nm,0.3s,baz=245,slow=5.4,SNR=4.3						
MLR				PKPbc	PKiKP	14 38 47.1	+0.4
	comp=E,15nm,1.1s,baz=19,slow=4.3,SNR=11						
MLR	Muntele Rosu	152.61	323	⇓P	PKPbc	14 38 47.0	+0.4
SILT	Sile	152.74	312	⇑P	PKPbc	14 38 47.2	+0.4
OSTC	Ostas	152.77	341	⇑ePKP	PKiKP	14 38 47.6	+0.8
STEB	Steborice	152.83	339	⇑ePKP	PKPbc	14 38 47.2	+0.5
UPC	Upice	152.87	341	⇑ePKP	PKiKP	14 38 48.1	+1.1
LANS	Liptovska Anna	152.90	336	ePKP	PKPab	14 38 59.6	+1.0
CLL	Collm	152.90	346	ePKPdf	PKPdf	14 38 40.0	+0.5
CLL				i PKPbc	PKPbc	14 38 47.1	+0.3
	comp=Z,23nm,1.1s						
CLL				ePKPab	PKPab	14 38 59.0	+0.6
CLL				epPKPbc	pPKPdf	14 39 15.0	-1.8
CLL				epPKPab	sPKPdf	14 39 28.0	-3.1
CLL				ex	x	14 39 33.0	
CLL				i x	x	14 42 41.3	
CLL				eSKSP		14 52 42.0	
CLL				eSPP	SPP	14 55 24.0	
CLL				ex	x	14 57 42.0	
CLL				eSS	SS	15 01 42.0	-9.4
DPC	Dobruska-Polom	152.92	341	⇑ePKP	PKiKP	14 38 48.5	+1.4
MESR	Meseseni	152.99	329	⇓P	PKPbc	14 38 47.3	+0.2
CJR	Cluj-Napoca	153.00	328	⇓P	PKiKP	14 38 48.6	+1.2
MORC	Moravsky Berou	153.04	339	ePKP	PKPdf	14 38 37.6	-2.2
MORC				e		14 38 47.8	
MORC	Moravsky Berou	153.04	339	⇑P	PKiKP	14 38 47.9	+0.5
BRG	Berggiesshubel	153.09	344	ePKP	PKPdf	14 38 39.7	-0.1
BRG				Amp		14 38 41.2	
	comp=Z,7.8nm,1.3s						
BRG	Berggiesshubel	153.09	344	P	PKPbc	14 38 47.8	+0.6
BRG				Amp		14 38 49.0	
	comp=Z,15nm,1.1s						
BRG	Berggiesshubel	153.09	344	P	PKiKP	14 38 53.4	+6.0
BRG				Amp		14 38 56.0	
	comp=Z,10.0nm,0.8s						
BRG				pPKP	pPKPbc	14 39 23.8	-0.5
BRG				Amp		14 39 24.6	
	comp=Z,16nm,1.1s						
KLYT	Kilyos	153.10	313	⇓P	PKPab	14 38 59.8	+0.2
VOIR		153.13	324	⇓P	PKiKP	14 38 49.2	+1.5
PRD	Provadia	153.16	318	eP	PKPab	14 39 01.9	+2.1
NEF	NEVSHA	153.18	318	eP	PKPab	14 39 01.7	+1.7
MARR	Marisel-Cluj	153.26	328	⇑P	PKiKP	14 38 48.9	+0.8
MAUC	Maruska	153.30	338	⇑ePKP	PKiKP	14 38 49.2	+1.3
ARR	Arges	153.40	324	⇑P	PKiKP	14 38 50.0	+1.7
VYHS	Vyhne	153.68	336	ePKP	PKPbc	14 38 48.9	+0.3
VYHS				e		14 39 03.2	
PSZ	Piszkesteto	153.73	334	⇑P	PKPbc	14 38 49.2	+0.4
PRU	Pruhonice	153.75	343	⇑ePKP	PKPab	14 38 56.9	-5.2
VRAC	Vranov	153.76	339	PKPab	PKPab	14 39 02.3	+0.1
	comp=Z,4.1nm,0.6s,baz=35,slow=4.8,SNR=8.0						
VRAC				pPKPab	pPKPab	14 39 37.8	-0.3
	comp=Z,2.9nm,0.5s,baz=25,slow=4.6,SNR=2.3						

VRAC	Vranov	153.76	339	*e*PKP	PKPab	14 39 02.9	+0.7
JAVC	Velka Javorina	153.79	338	*e*PKP	PKPdf	14 38 42.7	+1.8
JAVC				*e*		14 39 07.8	
SZH	Strazhitsa	153.96	319	*e*P	PKPab	14 39 04.9	+1.6
KRUC	Moravsky	154.03	339	*e*PKP	PKPdf	14 38 41.6	+0.4
KRUC				*e*		14 39 04.0	
MODS	Modra-Piesok	154.34	337	*e*PKP	PKiKP	14 38 51.3	+1.2
MODS				*e*		14 39 05.9	
ZVC	Zvikov	154.34	343⇑	*e*PKP	PKPab	14 39 01.4	-3.2
SURR	Surduc	154.40	328	⇑P	PKPab	14 39 05.3	+0.3
BZS	Buzias	154.74	328	⇑P	PKPdf	14 38 43.0	+0.7
KHC	Kasperske Hory	154.79	343	*e*PKPAB	PKPab	14 39 06.9	+0.3
KHC				*e*x	x	14 39 42.5	
GRF	Grafenberg Arr	154.80	347	*e*PKP	PKPab	14 39 07.1	+0.5
	baz=17,slow=3.9						
GERES	GERESS Array B	155.02	343	PKP	PKPdf	14 38 42.4	-0.3
	comp=Z,0.3nm,0.3s,baz=48,slow=1.5,SNR=3.7						
GERES				PKPab	PKPab	14 39 07.8	+0.2
	comp=Z,2.3nm,0.8s,baz=292,slow=14,SNR=4.1						
GERES				pPKPab	pPKPab	14 39 43.7	+0.2
	comp=Z,1.7nm,0.8s,baz=318,slow=1.8,SNR=2.4						
MPEP	Malo Peshtene	155.19	322	*e*P	PKPab	14 39 09.8	+1.3
CONA	Conrad Observa	155.20	339	*i* pPKP	PKPab	14 39 10.2	+1.8
	comp=Z,12nm,1.1s						
CONA				*i* pPKP	pPKPab	14 39 45.8	+1.5
	comp=Z,39nm,2.0s						
RONA	Rosalia, Austr	155.25	338	*i* pPKP	PKPab	14 39 10.5	+1.9
	comp=Z,19nm,1.1s						
RONA				*e*pPKP	pPKPab	14 39 45.9	+1.4
	comp=Z,14nm,1.0s						
PGB	Panagyurishte	155.47	320	*e*P	PKPab	14 39 11.7	+1.9
MORH	Mrgy, Hungar	155.61	333	⇑P	PKPdf	14 38 42.8	-0.6
RZN	Rozhen	155.62	318	*e*P	PKPab	14 39 12.3	+1.7
MOA	Molln	155.76	341	*i* PKP	PKPab	14 39 11.5	+0.7
	comp=Z,5.7nm,1.0s						
MOA				*i* pPKP	pPKPab	14 39 46.7	0.0
	comp=Z,33nm,1.8s						
ARSA	Arzberg	155.90	339	*i* PKP	PKPab	14 39 12.1	+0.7
	comp=Z,7.7nm,1.2s						
ARSA				*i* pPKP	pPKPab	14 39 48.4	+1.1
	comp=Z,7.4nm,1.1s						
PLNA	Plana	155.93	320	*e*P	PKPab	14 39 14.0	+2.1
VTS	Vitosha	155.95	321	*e*P	PKPab	14 39 14.0	+2.0
BIOA	Bad Ischl, Aus	156.09	342	*i* pPKP	PKPab	14 39 13.0	+0.9
	comp=Z,9.9nm,0.7s						
BIOA				*i* pPKP	pPKPab	14 39 49.4	+1.3
	comp=Z,42nm,1.5s						
MMB	Musomishta	156.31	318	*e*P	PKPab	14 39 14.8	+1.4
KKB	Krupnik	156.50	320	*e*P	PKPab	14 39 15.6	+1.4
SOKA	Soboth	156.57	339	*i* PKP	PKPab	14 39 13.8	-0.5
	comp=Z,12nm,1.3s						
SOKA				*i* pPKP	pPKPab	14 39 51.0	+0.7
	comp=Z,17nm,1.3s						
LESA	Schwarzleotal	156.59	343	*i* pPKP	PKPab	14 39 15.8	+1.4
	comp=Z,11nm,1.0s						
LESA				*i* pPKP	pPKPab	14 39 51.6	+1.3
	comp=Z,41nm,1.4s						
KBA	Koelnbreinsper	156.73	342	*i* pPKP	PKPab	14 39 16.4	+1.3
	comp=Z,3.7nm,0.6s						
KBA				*i* pPKP	pPKPab	14 39 52.0	+0.9
	comp=Z,20nm,1.5s						
OBKA	Obir	156.87	339	*i* pPKP	PKPab	14 39 16.3	+0.6
	comp=Z,4.7nm,0.8s						
WATA	Walderalm	156.95	345	*i* pPKP	PKPab	14 39 17.2	+1.2
	comp=Z,4.7nm,0.7s						
WATA				*i* pPKP	pPKPab	14 39 52.8	+1.0
	comp=Z,34nm,1.3s						
RETA	Reutte	156.99	346	*i* pPKP	PKPab	14 39 17.2	+1.0
	comp=Z,3.3nm,0.7s						
RETA				*i* pPKP	pPKPab	14 39 52.9	+1.0
	comp=Z,26nm,1.4s						
WTTA	Wattenberg	157.00	345	*i* pPKP	PKPab	14 39 17.0	+0.7
	comp=Z,19nm,1.2s						
WTTA				*e*pPKP	pPKPab	14 39 53.3	+1.1
	comp=Z,43nm,1.7s						
MYKA	Terra Mystica	157.05	341	*i* PKP	PKPab	14 39 16.8	+0.4
	comp=Z,6.2nm,0.8s						
MYKA				*i* pPKP	pPKPab	14 39 52.3	0.0
	comp=Z,8.5nm,1.0s						
MOTA	Moosalm	157.05	346	*e*PKP	PKPab	14 39 16.9	+0.4
	comp=Z,8.6nm,1.1s						
MOTA				*i* pPKP	pPKPab	14 39 53.3	+1.0
	comp=Z,43nm,1.8s						
SQTA	Sankt Quirin	157.15	345	*i* PKP	PKPab	14 39 17.2	+0.4
	comp=Z,5.1nm,1.0s						
SQTA				*i* pPKP	pPKPab	14 39 53.8	+1.1
	comp=Z,16nm,1.2s						
VAY	Valandovo	157.15	319	*i* P	PKPab	14 39 17.5	+0.5
ABTA	Abfaltersbach	157.26	343	*e*PKP	PKPab	14 39 16.8	-0.5
	comp=Z,5.3nm,0.6s						
ABTA				*e*pPKP	pPKPab	14 39 53.5	+0.3
	comp=Z,16nm,1.4s						
DAVA	Damuels	157.37	348	*e*PKP	PKPab	14 39 17.1	-0.8
	comp=Z,7.7nm,1.0s						
DAVA				*i* pPKP	pPKPab	14 39 54.5	+0.8
	comp=Z,22nm,1.8s						
FETA	Feichten	157.44	346	*i* PKP	PKPab	14 39 18.3	+0.1
	comp=Z,7.3nm,1.1s						
FETA				*i* pPKP	pPKPab	14 39 55.0	+1.0
	comp=Z,12nm,1.1s						
DAVOX	Davos/Dischmat	157.85	347	PKPab	PKPab	14 39 20.2	+0.2
	comp=Z,7.5nm,0.6s,baz=345,slow=2.9,SNR=11						
IDI	Anoyia	158.59	303	PKPab	PKPab	14 39 23.5	0.0
	comp=Z,8.1nm,0.8s,baz=265,slow=5.1,SNR=3.0						
DBIC	Dimbokro	160.05	157	PKPab	PKPab	14 39 30.6	+0.5
	comp=Z,3.7nm,0.5s,baz=200,slow=4.7,SNR=5.3						
ESDC	Sonseca Array	164.56	20	PKP	PKPdf	14 38 53.5	-0.2
	comp=Z,1.7nm,1.2s,baz=338,slow=2.4,SNR=4.7						
ESDC				PKPab	PKPab	14 39 49.4	0.0
	comp=Z,1.6nm,1.0s,baz=348,slow=4.2,SNR=4.6						
TORD	Torodi Ar. Bea	167.86	175		PKPdf	14 38 56.6	-0.3
KEST	Kesra	168.21	333	PKPab	PKPab	14 40 06.0	+0.4
	comp=Z,6.9nm,1.0s,baz=332,slow=3.9,SNR=6.0						

CATAC 08 14:44:55.7±0.6**, 11°N**±6°×**8°7W**±°**, h66**km±17km**, M2.9**/13**, MLv2.9**/13**, Error ellipse: s-maj=17.0km s-min=5.4km az=41.8, confirmed, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SABN	Sabanita	0.97	25	P	Pn	14 45 13.4	-0.2
NANN	Nandasmo	0.97	27	P	Pn	14 45 14.4	+0.7
NANN	Nandasmo	0.97	27	S	Sn	14 45 27.7	+0.8
MASN	Masaya	1.00	25	P	Pn	14 45 14.1	+0.1
MASN				S	Sn	14 45 28.3	+0.7
MAS3	Al N del Volca	1.02	23	P	Pn	14 45 13.6	-0.7
MORN	Al O del Volca	1.03	63	P	Pn	14 45 14.6	+0.3
CARN	Rivas	1.04	84	P	Pn	14 45 13.8	-0.7
CARN				S	Sn	14 45 29.1	+0.6
UNAN	Cigeo UNAN	1.08	16	P	Pn	14 45 14.2	-0.8
UNAN				S	Sn	14 45 29.5	+0.2
COPN	Copaltepe	1.10	359	P	Pn	14 45 15.1	-0.2
APQ3	Volcan Apoyequ	1.21	10	P	Pn	14 45 17.2	+0.5
APQ3				S	Sn	14 45 33.1	+0.7
MOMN	Momotombo	1.33	2	P	Pn	14 45 18.4	+0.1
MOM2	El Cardon	1.36	4	P	Pn	14 45 18.8	+0.1
MOM2				S	Sn	14 45 36.0	+0.1
MACN	El Madrono	1.39	356	P	Pn	14 45 19.6	+0.5
MACN				S	Sn	14 45 37.3	+0.7
CNGN	Cerro Negro	1.42	355	P	Pn	14 45 19.0	-0.5
CNGN	Cerro Negro	1.42	355	S	Sn	14 45 37.8	+0.2
BOAB	BOACO BROADBAN	1.63	33	P	Pn	14 45 22.8	+0.5
CSGN	Cosiguina Volc	2.12	333	P	Pn	14 45 29.3	+0.3

IDC 08 14:48:54.6±4.0**, 20°.46N**×**122°.47E, h0**km**, mb3.3**/4**, mbtmp3.3**/4**, MS3.9**/1**, Error ellipse: s-maj=327.8km s-min=24.5km az=62.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	41.80	163	P	P	14 56 45.5	-0.7
	0.4nm,0.7s,baz=343,slow=8.4,SNR=2.8 0.4nm,0.7s						
MKAR	Makanchi Array	41.87	318	P	P	14 56 47.0	+0.4
	0.2nm,0.5s,baz=97,slow=9.4,SNR=2.6 0.2nm,0.5s						
PALK	Pallekele	42.48	258	LR	LR	15 14 56.0	
	comp=Z,157nm,19.8s,baz=119,slow=37						
ASAR	Alice Springs	45.25	165	P	P	14 57 14.2	+0.3
	0.1nm,0.4s,baz=350,slow=7.2,SNR=6.9 0.1nm,0.4s						
KURBB	Kurchatov Arra	45.74	322	P	P	14 57 17.0	-0.6
	0.2nm,0.6s,baz=114,slow=9.2,SNR=2.2 0.2nm,0.6s						

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*IDC **08** 14:49:10.3±2.4, 3°.10S×128°.43E, h0km, mb3.4/2, mbtmp3.5/3, ML3.5/1, Error ellipse: s-maj=178.2km s-min=29.0km az=68.0*

*DJA **08** 14:49:12.7±0.2, 3°S±2°×12°9E±°, h10km, M3.2/9, MLv3.2/9*

ISC 08 14:49:11.9±1.0**, 2°.74S**±0°.06×**129°.00E**±0°.05**, h10**km**, n9, σ1ˢ70**/14**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.60	186	P	Pg	14 49 23.0	-0.6
MSAI				S	Sg	14 49 32.9	+1.3
AAI	Ambon	1.23	220	P	Pg	14 49 36.7	+1.1
NLAI	Namlea	1.96	255	P	Pn	14 49 45.4	+0.2
NLAI				S	Sn	14 50 11.0	+1.2
BNDI	Bandanaira	1.99	153	P	Pn	14 49 46.3	+0.7
BNDI				S	Sn	14 50 12.4	+1.9
SWI	Sorong	2.93	50	P	Pn	14 49 59.1	+0.5
SWI				S	Sn	14 50 35.4	+1.4
FAKI	Fak Fak	3.25	93	P	Pn	14 50 02.5	-0.6
FAKI				S	Sn	14 50 44.8	+2.9
WRA	Warramunga Arr	17.87	163	P	Pn	14 53 18.5	-2.4
	0.2nm,0.3s,baz=343,slow=12,SNR=11 0.7nm,0.5s						
ASAR	Alice Springs	21.34	168	P	P	14 53 56.9	-2.5
	1.2nm,0.6s,baz=349,slow=11,SNR=34 1.2nm,0.6s						
MKAR	Makanchi Array	64.15	326	P	P	14 59 46.5	-0.2
	0.3nm,0.6s,baz=114,slow=5.1,SNR=2.4 0.3nm,0.6s						

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*NEIC **08** 14:50:59.9±2.5, 56°.06N±0°.05×149°.6W±0°.1, h20km±8km, mb4.2/2, ML4.0/62, ML3.8(AEIC), Error ellipse: s-maj=10.7km s-min=1.7km az=129.0*

*IDC **08** 14:50:59.7±2.5, 56°.11N×149°.30W, h0km, mb3.6/1, mbtmp3.8/6, ML3.7/5, MS3.8/4, Error ellipse: s-maj=33.5km s-min=23.0km az=44.0*

*AEIC **08** 14:51:04.6±1.9, 56°.13N±0°.08×149°.6W±0°.1, h11km±7km, Error ellipse: s-maj=13.2km s-min=7.5km az=149.0*

ISC 08 14:50:58.9±0.9**, 56°.17N**±0°.07×**149°.57W**±0°.05**, h10**km**, n162, σ1ˢ60**/157**, MS3.9**/4**, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHAK	Old Harbor	2.31	299		Pn	14 51 37.6	+0.8
OHAK				Sn	Sn	14 52 03.5	-1.8
OHAK	Old Harbor	2.31	299	P	Pn	14 51 37.5	+0.6
KDAK	Kodiak Island	2.31	316		Pn	14 51 38.0	+1.1
KDAK				Sn	Sn	14 52 04.3	-1.2
KDAK	Kodiak Island	2.31	316	Pn	Pn	14 51 38.1	+1.1
	8.2nm,0.3s,baz=337,slow=5.4,SNR=710						
KDAK				Sn	Sn	14 52 04.2	-1.2
	24nm,0.3s,baz=301,slow=22,SNR=63 21nm,0.3s						
SII	Sitkinak Islan	2.60	281		Pn	14 51 41.5	+0.6
SII				IAML		14 52 11.5	
	comp=E,759nm,0.6s						
SII				IAML		14 52 11.8	
	comp=N,578nm,0.7s						
SII	Sitkinak Islan	2.60	281		Sn	14 52 10.3	-2.2
SII	Sitkinak Islan	2.60	281	P	Pn	14 51 41.0	+0.1
SYI	Shuyak Island	2.88	329	Pn	Pn	14 51 46.4	+1.5
SYI				IAML		14 52 22.0	
	comp=E,259nm,0.6s						
SYI	Shuyak Island	2.88	329		Sn	14 52 19.1	-0.4
R18K	Karluk	3.02	300		Pn	14 51 48.0	+1.2
R18K					Sn	14 52 21.1	-1.9
R18K	Karluk	3.02	300	IAML		14 52 22.3	
	comp=N,352nm,0.5s						
R18K				IAML		14 52 27.1	
	comp=E,269nm,0.5s						
CHIR	Chirikof Islan	3.42	267	Pn	Pn	14 51 52.4	+0.3
CHIR				IAML		14 52 29.9	
	comp=N,304nm,0.5s						
CHIR				IAML		14 52 29.9	
	comp=E,244nm,0.7s						
CHIR	Chirikof Islan	3.42	267		Sn	14 52 29.3	-3.4
CNPM	China Poot	3.48	346		Pn	14 51 53.9	+0.9
CNPM				IAML		14 52 35.4	
	comp=E,221nm,0.3s						
CNPM				IAML		14 52 35.9	
	comp=N,172nm,0.3s						
CNPM	China Poot	3.48	346		Sn	14 52 33.5	-0.9
Q19K	Cape Douglas,	3.53	323		Pn	14 51 55.8	+2.1
Q19K				IAML		14 52 44.1	
	comp=N,368nm,0.8s						
KAHG	Katmai Hook Gl	3.56	313		Pn	14 51 56.6	+2.4
BRSE	Bradley Lake S	3.63	351		Sn	14 52 36.1	-2.0
HOM	Homer	3.67	343		Pn	14 51 55.4	-0.2
HOM					Pn	14 51 55.8	+0.2
HOM					Sn	14 52 39.4	+0.6
HOM	Homer	3.67	343	IAML		14 52 41.0	
	comp=E,342nm,0.4s						
BRLK	Bradley Lake	3.67	350		Pn	14 51 56.4	+0.7
BRLK				IAML		14 52 41.5	
	comp=E,170nm,0.3s						
BRLK				IAML		14 52 41.7	
	comp=N,188nm,0.2s						
Q23K	Middleton Isla	3.69	26		Pn	14 51 56.4	+0.4
ACHA	Angle Creek He	3.74	306		Pn	14 51 58.4	+1.7
KJL	Kejulik	3.78	302		Pn	14 51 58.9	+1.7
ANCK	Angle Creek	3.81	305		Pn	14 51 59.5	+1.8
SEW	Seward	3.95	1		Pn	14 51 59.6	+0.2
P23K	Montague Islan	4.01	16		Pn	14 52 01.2	+1.0
P23K				IAML		14 52 46.6	
	comp=E,214nm,0.3s						
P23K				IAML		14 52 46.8	
	comp=N,288nm,0.4s						
PLK1	Peulik 1	4.18	296		Pn	14 52 04.5	+1.8
ILS	Iliamna Low So	4.23	335		Pn	14 52 04.3	+0.9
O20K	Slope Mountain	4.24	339		Pn	14 52 04.8	+1.2
PLBL	Peulik Blue Cr	4.26	294		Pn	14 52 05.9	+2.2
ILSW	Iliamna Southw	4.27	335		Pn	14 52 05.0	+1.1
ILSW	Iliamna Southw	4.27	335	IAML		14 52 55.5	
	comp=N,158nm,0.6s						
ILSW				IAML		14 52 58.1	
	comp=E,156nm,0.5s						
O22K	Cooper Landing	4.33	359		Pn	14 52 05.1	+0.5
SLKM	Skilak Lake	4.36	356		Pn	14 52 05.9	+0.7
P18K	Big Mountain,	4.43	319	Pn	Pn	14 52 06.9	+0.9
HIN	Hinchinbrook I	4.54	20		Pn	14 52 08.8	+1.2
HIN				IAML		14 52 60.0	
	comp=N,161nm,0.4s						
HIN				IAML		14 53 00.2	
	comp=E,168nm,0.8s						
RED	Redoubt Volcan	4.58	340	Pn	Pn	14 52 08.6	+0.4
RED				IAML		14 53 02.4	
	comp=E,108nm,0.6s						
RED				IAML		14 53 06.9	
	comp=N,88nm,0.6s						
KAIM	Kayak Island	4.66	34		Pn	14 52 10.6	+1.4
KAIM				IAML		14 53 07.0	
	comp=N,131nm,0.5s						
KAIM				IAML		14 53 09.2	
	comp=E,135nm,0.6s						
PWL	Port Wells	4.75	7		Pn	14 52 11.2	+0.7
PWL				IAML		14 53 08.5	
	comp=N,119nm,0.7s						
O18K	Koktuh Hills	4.76	323		Pn	14 52 11.4	+0.9
EYAK	Cordova Ski Ar	4.83	23		Pn	14 52 12.8	+1.3
EYAK				IAML		14 53 06.9	
	comp=E,90nm,0.6s						
EYAK				IAML		14 53 07.2	
	comp=N,102nm,0.8s						
EYAK	Cordova Ski Ar	4.83	23	P	Pn	14 52 13.0	+1.5
ANPB	Aniakchak Plen	4.87	281		Pn	14 52 13.5	+1.3
ANPB					Pn	14 52 14.1	+2.0
FID	Port Fidalgo	4.87	18		Pn	14 52 12.8	+0.7
FID				IAML		14 53 06.8	
	comp=E,116nm,0.5s						
FID				IAML		14 53 07.4	
	comp=N,107nm,0.2s						
GLI	Glacier Island	4.90	14		Pn	14 52 13.6	+1.1
GLI				IAML		14 53 08.9	
	comp=N,79nm,0.5s						
GLI				IAML		14 53 10.6	
	comp=E,83nm,0.3s						
RC01	Rabbit Creek A	4.94	359		Pn	14 52 13.9	+0.9
RC01				IAML		14 53 12.5	
	comp=N,88nm,0.5s						
RAGM	Ragged Mountai	4.95	29		Pn	14 52 14.7	+1.4
SUCK	Suckling Hills	4.97	36	IAML		14 53 11.6	
	comp=E,70nm,0.4s						
HMT	Hamilton	5.03	32		Pn	14 52 16.0	+1.6
GOAT	Goat Mountain	5.10	28		Pn	14 52 16.9	+1.5
BGLC	Bering Glacier	5.17	37		Pn	14 52 18.0	+1.8
KNK	Knik Glacier	5.29	6		Pn	14 52 19.1	+1.2
N19K	Bonanza Creek	5.32	333		Pn	14 52 18.9	+0.5
SUA	Susitna One	5.34	354		Pn	14 52 19.0	+0.3
DIV	Divide	5.35	20		Pn	14 52 20.3	+1.4
VNHG	Veniaminof 1	5.36	275		Pn	14 52 20.5	+1.6
P16K	Nushagak River	5.36	306		Pn	14 52 20.4	+1.6
O17K	Koliganek Bris	5.39	315		Pn	14 52 20.8	+1.5
CYK	Cape Yakataga	5.43	41		Pn	14 52 21.3	+1.6
PMR	Palmer	5.44	2		Pn	14 52 21.9	+2.0
STLK	Strandline Lak	5.47	349		Pn	14 52 21.3	+0.9
N18K	Kilae Creek	5.61	326		Pn	14 52 23.2	+0.9
BARK	Barkley Ridge	5.65	38		Pn	14 52 24.6	+1.7
SML	Sawmill	5.69	6		Pn	14 52 24.7	+1.3
CRQM	Cirque	5.70	34		Pn	14 52 25.2	+1.5
CHNA	Chernabura Isl	5.85	261	P	Pn	14 52 25.7	+0.1
CNBA	Chernabura Isl	5.85	261		Pn	14 52 25.8	+0.2
GRNC	Granite Creek	6.14	39		Pn	14 52 31.2	+1.5
SDPT	Sand Point	6.21	267		Pn	14 52 31.3	+0.8
SDPT	Sand Point	6.21	267	P	Pn	14 52 31.4	+0.9
MCARA	McCarthy VSAT	6.24	30		Pn	14 52 32.3	+1.4
M18K	Stony River	6.24	331		Pn	14 52 31.4	+0.5
YKU2	Yakutat	6.26	54	P	Pn	14 52 33.7	+2.6
PNL	Peninsula	6.45	53		Pn	14 52 35.2	+1.4
PNL	Peninsula	6.45	53	P	Pn	14 52 36.0	+2.1
LOGN	Logan Glacier	6.47	40		Pn	14 52 35.8	+1.5
N16K	Nishlik Lake	6.49	315		Pn	14 52 36.1	+1.8
BCPM	Bancas Point	6.49	50		Pn	14 52 36.2	+1.8
L19K	White Mountain	6.61	338		Pn	14 52 36.6	+0.6
WAT7	Susitna Watana	6.69	3		Pn	14 52 38.7	+1.4
L20K	Farewell, AK	6.70	343		Pn	14 52 37.9	+0.7
WAT1	Susitna Watana	6.70	4		Pn	14 52 39.1	+1.9
N15K	Kwethluk River	6.86	310		Pn	14 52 41.6	+2.2
M16K	Timber Creek	6.91	319		Pn	14 52 41.5	+1.4
PS1A	Pavlof South-1	6.91	269		Pn	14 52 40.9	+0.9
HAG	Hague Volcano	7.02	268		Pn	14 52 42.2	+0.6
S12K	Black Hills	7.03	271		Pn	14 52 42.5	+0.7
M26K	Nabesna, AK	7.09	26		Pn	14 52 44.9	+2.2
RND	Reindeer	7.27	3		Pn	14 52 46.4	+1.3
TRF	Thorofare Moun	7.31	357		Pn	14 52 46.9	+1.1
M27K	Edge Creek, AK	7.35	29		Pn	14 52 48.1	+1.9
CAST	Castle Rocks	7.38	351		Pn	14 52 48.2	+1.6
M15K	Kasigluk River	7.39	312		Pn	14 52 48.6	+2.0
MENT	Mentasta	7.41	21	P	Pn	14 52 50.1	+3.1
KTH	Kantishna Hill	7.44	355		Pn	14 52 48.7	+1.3
L16K	Owhat River	7.55	321		Pn	14 52 50.4	+1.5
MCK	McKinley	7.59	2		Pn	14 52 51.3	+1.8
BVCY	Beaver Creek	7.68	32		Pn	14 52 53.1	+2.4
P30M	Million Dollar	7.75	54		Pn	14 52 53.9	+2.1
PLBC	Pleasant Camp	7.78	60		Pn	14 52 53.5	+1.4
R31K	City Hall, Gus	7.82	68		Pn	14 52 53.3	+0.7
CHUM	Lake Minchumin	7.86	351		Pn	14 52 54.5	+1.4
K24K	Donnelly Dome	7.89	12		Pn	14 52 55.8	+2.3
K17K	Iditarod	7.92	330		Pn	14 52 55.2	+1.2
RIDG	Independent Ri	7.95	15		Pn	14 52 56.5	+2.1
BCAR	Beaver Creek A	7.96	26		Pn	14 52 56.5	+2.0
ISNN	Isanotski Nort	8.18	266		Pn	14 52 58.5	+1.0
SKAG	Skagway	8.29	61	P	Pn	14 53 00.7	+1.8
SCRK	Sand Creek	8.31	17		Pn	14 53 01.1	+1.7
BESE	Bessie Mountai	8.31	67		Pn	14 53 00.1	+0.8
S32K	Killisnoo	8.33	75		Pn	14 52 58.7	-0.8
SSLS	Shishaldin Sou	8.33	266		Pn	14 53 00.8	+1.1
WRH	Wood River Hil	8.36	4		Pn	14 53 01.6	+1.6
HDA	Harding Lake	8.37	8		Pn	14 53 01.5	+1.5
NEA2	Nenana	8.46	1		Pn	14 53 02.8	+1.6
JIS	Juneau Island	8.51	69	P	Pn	14 53 03.1	+1.1
CCB	Clear Creek Bu	8.55	5		Pn	14 53 04.2	+1.7
IL31		8.73	8		Pn	14 53 06.5	+1.5
ILAR	Eielson Array	8.73	8	Pn	Pn	14 53 05.6	+0.6
	comp=E,0.7nm,0.3s,baz=187,slow=13,SNR=51						
ILAR				Sn	Sn	14 54 39.6	-3.8
	comp=E,0.6nm,0.3s,baz=205,slow=16,SNR=4.3 comp=E,1.6nm,0.4s						
WESE	West Dahl East	8.73	265		Pn	14 53 06.2	+1.0
COLA	College	8.77	5		Pn	14 53 08.5	+2.9
COLA	College	8.77	5	P	Pn	14 53 08.5	+2.9
WHY	Whitehorse	8.92	54		Pn	14 53 10.0	+2.2
I23K	Minto, Yukon-K	9.01	1		Pn	14 53 10.4	+1.6
P32M	Atlin	9.11	61		Pn	14 53 11.6	+1.3
I21K	Tanana	9.12	354		Pn	14 53 11.7	+1.4
U33K	Whale Pass	9.19	84		Pn	14 53 09.1	-2.1
CRAG	Craig	9.29	87		Pn	14 53 10.6	-2.0
CRAG	Craig	9.29	87	P	Pn	14 53 12.0	-0.7
H21K	Melozitna Rive	9.65	352		Pn	14 53 19.4	+1.8
Q32M	Nakina River	9.70	66		Pn	14 53 20.2	+1.7
H24K	Noodor Dome	9.73	4		Pn	14 53 21.8	+3.0
UNV	Unalaska Valle	10.00	264		Pn	14 53 22.1	-0.3
R33M	Jennings River	10.44	64		Pn	14 53 30.2	+1.7
G21K	Allakaket	10.55	351		Pn	14 53 32.5	+2.5
G24K	Hadweenzic Riv	10.61	5		Pn	14 53 33.9	+3.1
FYU	Fort Yukon	10.63	9	Pn	Pn	14 53 32.7	+1.6
J30M	Hart River	10.65	32		Pn	14 53 34.5	+3.0
DLBC	Dease Lake	10.81	70		Pn	14 53 35.0	+1.5
DLBC	Dease Lake	10.81	70	Pn	Pn	14 53 34.5	+1.0
	comp=E,0.6nm,0.3s,baz=271,slow=5.8,SNR=27						
DLBC				Sn	Sn	14 55 30.5	-3.9
	comp=E,0.2nm,0.3s,baz=131,slow=20,SNR=1.4 comp=E,2.2nm,0.5s						
MMPY	Sheldon Lake,	11.32	48		Pn	14 53 43.3	+2.8
G31M	Satah River	12.97	28		Pn	14 54 05.1	+2.2
C23K	Itkillik River	13.73	358	Pn	Pn	14 54 14.1	+0.8
INK	Inuvik	14.21	25	Pn	Pn	14 54 19.7	-0.2
INK	Inuvik	14.21	25	Pn	Pn	14 54 21.4	+1.5
	comp=E,0.4nm,0.3s,baz=213,slow=11,SNR=11 comp=E,9.3nm,1.0s						
B20K	Meade River	14.29	349	Pn	Pn	14 54 19.9	-1.0
B22K	Teshekpuk Lake	14.32	355	Pn	Pn	14 54 21.9	+0.4
C36M	Paulatuk	17.42	31	Pn	Pn	14 55 01.1	-0.5
C36M				IAmb	IAmb	14 55 14.1	
	comp=Z,30nm,1.5s						
YKA	Yellowknife Ar	18.74	56	P	Pn	14 55 17.9	+0.1
	comp=Z,0.1nm,0.3s,baz=267,slow=11,SNR=6.0 comp=Z,1.1nm,0.9s						
A36M	Sachs Harbour	18.85	23	Pn	Pn	14 55 20.9	+1.8
A36M				IAmb	IAmb	14 55 22.0	
	comp=Z,11nm,0.8s						
NVAR	Mina Array Bea	27.30	117	P	P	14 56 44.8	+1.1
	comp=Z,0.5nm,0.5s,baz=330,slow=12,SNR=2.7 comp=Z,0.5nm,0.5s						
SADO	Sadowa	44.33	74	LR	LR	15 17 12.4	
	comp=Z,49nm,21.2s,baz=298,slow=36						
H11N2	WAKE ISLAND Hy	48.69	240	T	T	15 52 41.1	
	baz=30,slow=74						
H11N3	WAKE ISLAND Hy	48.69	240	T	T	15 52 41.5	
	baz=30						
H11N1	WAKE ISLAND Hy	48.70	240	T	T	15 52 48.9	
	baz=30,slow=74						
H11S1	WAKE ISLAND Hy	49.83	239	T	T	15 54 05.6	
	baz=29						
H11S2	WAKE ISLAND Hy	49.84	239	T	T	15 54 08.6	
	baz=29						
H11S3	WAKE ISLAND Hy	49.85	239	T	T	15 54 14.2	
	baz=29						
ARTI	Arti	65.53	343	LR	LR	15 33 45.5	
	comp=Z,111nm,20.9s,baz=64,slow=39						
GNI	Garni	83.28	349	LR	LR	15 45 33.2	
	comp=Z,42nm,19.6s,baz=22,slow=39						
MMAI	Mount Meron Ar	91.07	356	LR	LR	15 50 36.2	
	comp=Z,84nm,18.7s,baz=88,slow=39						

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*DJA **08** 14:59:52.0±0.5, 10°S±3°×11°9E±°, h10km±3km, M4.2/18, mb4.4/7, MLv4.2/18*

*IDC **08** 14:59:57.8±6.0, 9°.92S×119°.13E, h91km±53km, mb3.5/5, mbtmp3.8/8, ML3.7/3, MS2.9/2, Error ellipse: s-maj=76.7km s-min=17.5km az=63.0*

ISC 08 14:59:50.7±0.7**, 10°.33S**±0°.05×**118°.83E**±0°.04**, h35**km**, n28, σ3ˢ08**/45**, mb4.0**/6**, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.88	39	P	Pn	15 00 05.4	-1.3
WBSI				S	Sn	15 00 15.4	-2.9
BASI	Baing, Sumba	1.73	87	P	Pn	15 00 23.7	+5.4
BASI				S	Sn	15 00 44.9	+5.8
PLAI	Plampang	1.82	325	P	Pn	15 00 18.5	-1.1
PLAI				S	Sn	15 00 40.6	-0.8
TWSI	Taliwang, Sumb	2.49	309	P	Pn	15 00 29.5	+0.7
TWSI				S	Sn	15 00 59.0	+1.1
EDFI	Ende, Flores	3.23	61	P	Pn	15 00 41.8	+2.7

EDFI				S	Sn	15 01 19.2	+2.8
MMRI	Maumere	3.76	64	P	Pn	15 00 49.5	+3.2
DNP	Denpasar	3.93	294	P	Pn	15 00 49.8	+1.2
DNP				S	Sn	15 01 36.8	+3.3
SRBI	Singaraja	4.21	302	P	Pn	15 00 54.5	+2.0
SRBI				S	Sn	15 01 43.5	+3.1
BSSI	Bau Bau, Buton	4.47	22	P	Pn	15 00 56.8	+0.7
BSSI				S	Sn	15 01 46.2	-0.8
BATI	Baumata	4.76	89	P	Pn	15 01 03.2	+3.1
BATI				S	Sn	15 01 59.9	+5.8
JAGI	Jajag, Banyuwa	4.97	291	P	Pn	15 01 06.0	+3.0
KAPI	Kappang	5.36	10	P	Pn	15 01 09.2	+0.9
	6.3nm,0.3s,baz=166,slow=9.6,SNR=18						
KAPI				S	Sn	15 02 05.5	-3.4
	14nm,0.5s,baz=356,slow=21,SNR=8.5						
KAPI				LR	LR	15 03 20.8	
	comp=Z,113nm,20.1s,baz=136,slow=41						
	15nm,0.3s						
SOEI	Soe	5.39	84	P	Pn	15 01 12.9	+4.1
	0.2nm45nm,0.8s						
SOEI				S	Sn	15 02 14.8	+5.1
	0.2nm45nm,0.8s						
GMJI	Gumukmas	5.69	291	P	Pn	15 01 15.0	+2.1
	0.1nm24nm,0.8s						
GMJI				S	Sn	15 02 19.4	+2.3
	0.1nm24nm,0.8s						
KMMI	Kalianget	5.81	304	P	Pn	15 01 15.9	+1.5
	0.2nm38nm,1.7s						
KMMI				S	Sn	15 02 22.9	+3.1
	0.2nm38nm,1.7s						
BNSI	Bone	6.03	12	P	Pn	15 01 18.3	+0.9
	0.1nm47nm,1.0s						
BNSI				S	Sn	15 02 25.2	0.0
	0.1nm47nm,1.0s						
BBSI	Bau Bau	6.07	38	P	Pn	15 01 19.4	+1.3
	0.2nm47nm,1.1s						
BBSI				S	Sn	15 02 27.4	+1.0
	0.2nm47nm,1.1s						
SPSI	Sidrap Palu	6.39	8	P	Pn	15 01 25.0	+2.5
GRJI	Gresik	7.14	298	P	Pn	15 01 36.5	+3.8
FITZ	Fitzroy Crossi	10.16	140	P	Pn	15 02 11.6	-2.6
	1.8nm,0.3s,baz=342,slow=11,SNR=17						
FITZ				S	Sn	15 04 04.1	-2.9
	3.7nm,0.6s,baz=165,slow=21,SNR=7.6						
FITZ				LR	LR	15 07 35.2	
	comp=Z,87nm,20.2s,baz=120,slow=44						
WRA	Warramunga Arr	17.75	124	P	Pn	15 03 56.9	+1.7
	0.2nm,0.3s,baz=299,slow=13,SNR=5.3						
WRA				S	Sn	15 07 03.9	-8.3
	0.4nm,0.7s,baz=236,slow=28,SNR=4.8						
	0.3nm,0.5s						
ASAR	Alice Springs	19.56	135	P	Pn	15 04 20.4	+3.2
	0.2nm,0.3s,baz=305,slow=9.8,SNR=17						
ASAR				S	S	15 07 48.2	-6.7
	0.2nm,0.7s,baz=307,slow=22,SNR=1.4						
	1.4nm,0.8s						
NWAO	Narrogin (SRO)	22.54	184	P	P	15 05 01.2	+13
	13nm,0.8s,baz=6.9,slow=13,SNR=6.4						
NWAO				S	S	15 08 53.8	+1.0
	7.2nm,0.8s,baz=108,slow=20,SNR=1.2						
CMAR	Chiang Mai Arr	34.69	325	P	P	15 06 37.6	+0.2
	0.5nm,0.4s,baz=154,slow=7.7,SNR=5.3						
	0.5nm,0.4s						
SONM	Songino Array	58.95	350	P	P	15 09 45.8	-0.9
	0.7nm,0.5s,baz=166,slow=6.7,SNR=4.5						
	0.7nm,0.5s						
MKAR	Makanchi Array	65.56	333	P	P	15 10 30.5	-0.4
	0.7nm,0.4s,baz=156,slow=6.8,SNR=12						
	0.7nm,0.4s						
KURBB	Kurchatov Arra	70.08	334	P	P	15 10 58.1	-1.0
	0.4nm,0.7s,baz=155,slow=5.4,SNR=4.9						
	0.4nm,0.7s						
ZALV	Zalesovo Beam	70.22	339	P	P	15 10 58.8	-1.2
	0.5nm,0.3s,baz=160,slow=4.6,SNR=2.7						
	0.5nm,0.3s						

*IDC **08** 15:01:40.1±1.0, 21°.13S×174°.35W, h0^{km}, mb4.1/7, mbtmp4.1/8, ML4.0/1, Error ellipse: s-maj=39.9km s-min=23.7km az=135.0*

ISC 08 15:01:45.4±0.8**, 21°.2S**±0°.2×**174°.3W**±0°.2**, h35**^{km}**, n11,** σ**1**^{s}.**09**/11**, mb4.0**/7**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	8.05	294	Pn	Pn	15 03 40.5	+0.5
	0.7nm,0.3s,baz=125,slow=14,SNR=6.3						
URZ	Urewera	18.54	202	P	Pn	15 05 59.1	-0.3
	0.5nm,0.3s,baz=249,slow=2.0,SNR=5.3						
	15nm,1.0s						
ASAR	Alice Springs	47.77	257	P	P	15 10 18.6	-1.0
	2.9nm,0.8s,baz=102,slow=8.2,SNR=17						
	2.9nm,0.8s						
WRA	Warramunga Arr	47.97	262	P	P	15 10 20.0	-1.1
	1.7nm,0.6s,baz=95,slow=8.1,SNR=19						
	1.7nm,0.6s						
QSPA	South Pole Qui	68.85	180	P	P	15 12 47.3	+1.1
	1.2nm,0.9s,baz=50,slow=8.1,SNR=2.5						
	1.2nm,0.9s						
NVAR	Mina Array Bea	79.19	41	P	P	15 13 46.9	-0.2
	1.3nm,0.7s,baz=226,slow=8.6,SNR=5.5						
	1.3nm,0.7s						
ILAR	Eielson Array	88.29	11	P	P	15 14 33.0	+0.2
	0.9nm,1.0s,baz=215,slow=6.5,SNR=5.6						
	0.9nm,1.0s						
CMAR	Chiang Mai Arr	93.67	288	P	P	15 15 00.3	+1.5
	0.9nm,0.8s,baz=103,slow=3.2,SNR=4.9						
	0.9nm,0.8s						
YKA	Yellowknife Ar	95.73	24	P	P	15 15 07.2	-0.1
	0.3nm,0.7s,baz=335,slow=29,SNR=2.5						
	0.3nm,0.7s						
AKASG	Malin Array Be	145.28	334	PKPbc	PKPdf	15 21 18.7	-0.6
	1.9nm,0.6s,baz=44,slow=4.0,SNR=14						
BRTR	Keskin Array B	149.89	314	PKPbc	PKPbc	15 21 30.6	-1.8
	0.7nm,0.8s,baz=145,slow=4.5,SNR=4.3						

*NEIC **08** 15:06:00.4±1.3, 35°.244N±0°.007×97°.74W±0°.01, h3^{km}±3^{km}, Error ellipse: s-maj=1.5km s-min=0.9km az=114.0*

NEIC 08 15:06:00.3±1.4**, 35°.244N**±0°.007×**97°.73W**±0°.01**, h4**^{km}±3^{km}**, mb_Lg2.2**/33**, ML2.1**/10**, ML2.2**/34**, Error ellipse: s-maj=1.5km s-min=0.9km az=114.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNO	Franklin	0.27	87		Pg	15 06 06.3	+0.7
X34A	Smith Ranch, M	0.65	187		Pg	15 06 13.1	+0.4
X34A					Sb	15 06 23.1	-0.6
X34A				IAML		15 06 23.5	
	comp=N,198nm,0.3s						
X34A				IAML		15 06 24.2	
	comp=E,118nm,0.3s						
WMOK	Wichita Mounta	1.00	240		Pg	15 06 18.1	-1.3
WMOK					Sg	15 06 31.4	-1.0
OK052	Battle Ridge R	1.06	45		Pg	15 06 20.5	-0.3
OK052					Sg	15 06 35.0	+0.4
DEOK	Depew	1.17	59		Pg	15 06 22.0	-0.8
DEOK					Sb	15 06 38.5	-0.3
DEOK				IAML		15 06 43.7	
	comp=E,50nm,0.4s						
QUOK	Quay	1.25	42		Pg	15 06 23.7	-0.5
QUOK					Sn	15 06 41.6	-0.3
CROK	Carrier	1.27	351		Pg	15 06 23.6	-1.1
CROK					Sg	15 06 41.3	+0.1
CROK				IAML		15 06 59.9	
	comp=N,63nm,0.3s						
LOOK	Love County	1.33	160		Pn	15 06 25.0	-0.7
LOOK					Sn	15 06 44.2	+0.2
OK038	West end E0370	1.48	327		Pn	15 06 26.6	-1.2
WTFS	Witchita Falls	1.59	202		Pn	15 06 27.8	-1.6
GC02	Grant County #	1.61	356		Pn	15 06 27.8	-1.7
Z35A	Perchaven, San	1.95	168		Pn	15 06 33.9	-0.4
Z35A				IAmb_Lg		15 07 03.4	
	comp=Z,13nm,1.2s						
SMWD	Samnorwood	2.06	267		Pn	15 06 35.7	-0.1
FW06	Azle	2.27	176		Pn	15 06 38.7	0.0
RLO	Rose Lookout	2.39	67		Pn	15 06 40.3	-0.1
PLPT	Palo Pinto	2.47	191	IAmb_Lg		15 07 24.9	
	comp=Z,10nm,0.7s						
U38A	Gravette	2.97	65	IAmb_Lg		15 07 38.2	
	comp=Z,6.4nm,1.1s						
ABTX	Abilene, Hawle	3.06	212	IAmb_Lg		15 07 44.8	
	comp=Z,7.5nm,0.8s						
DKNS	Dickens	3.07	240	IAmb_Lg		15 07 45.3	
	comp=Z,8.6nm,0.8s						
AMTX	Amarillo	3.26	265	IAmb_Lg		15 07 49.5	
	comp=Z,12nm,1.1s						
SN07	Snyder 07	3.39	232	IAmb_Lg		15 07 56.5	
	comp=Z,5.9nm,0.9s						
SN05	Snyder 5	3.52	229	IAmb_Lg		15 07 57.7	
	comp=Z,7.5nm,0.8s						
BRDY	Brady	4.09	195	IAmb_Lg		15 08 14.3	
	comp=Z,5.6nm,0.7s						
X40A	Basin Creek Fa	4.10	99	IAmb_Lg		15 08 19.7	
	comp=Z,5.7nm,0.7s						
OZNA	Ozona	5.17	214	IAmb_Lg		15 08 51.5	
	comp=Z,5.4nm,0.8s						
T25A	Trinidad	5.72	291	IAmb_Lg		15 09 08.5	
	comp=Z,3.9nm,0.7s						
MNHN	Monahans	5.73	229	IAmb_Lg		15 09 18.4	
	comp=Z,4.0nm,0.8s						
CCM	Cathedral Cave	5.92	60	IAmb_Lg		15 09 15.8	
	comp=Z,4.3nm,0.8s						
SAND	Sanderson	6.44	216	IAmb_Lg		15 09 28.9	
	comp=Z,2.9nm,0.8s						
Q24A	Divide	6.99	304	IAmb_Lg		15 09 54.1	
	comp=Z,3.5nm,0.7s						

*BJI **08** 15:24:07.3, 44°.13S×168°.38E, h9^{km}, mB5.4/4, mb5.3/15, Ms4.8/5, Ms7 4.5/5*

*NOU **08** 15:24:08.8, 44°.18S×168°.11E, h12^{km}, mb5.4/21, South Island, New Zealand*

*WEL **08** 15:24:08.7, 44°.34S×168°.15E, h11^{km}, ML5.5, Mw4.7, Moment Tensor Solution. s14 Moment tensor: Scale 10^{16}Nm; M_{rr}1.06; $M_{\theta\theta}$0.21; $M_{\phi\phi}$-1.27; $M_{r\theta}$0.49; $M_{\theta\phi}$-0.30; $M_{\phi r}$-0.38; Fault plane solution: $M_0$1.36000×10^{16} NP1: ϕ_s167.00000°, δ57.00000°, λ59.00000°. NP2: ϕ_s35.00000°, δ44.00000°, λ129.00000°. Principal axes: T 1.3646, Plg63.0000°, Azm23.0000°; N -0.0030, Plg26.0000°, Azm185.0000°; P -1.3616, Plg7.0000°, Azm279.0000°; Stations used: JCZ WKZ EAZ LBZ WHZ ODZ TUZ RPZ WVZ SYZ OPZ APZ INZ OXZ REVERSE FAULTING*

*WEL **08** 15:24:08.7±0.6, 44°S±4°×16°8E±°, h5^{km}, M5.5/72, mB5.6/43, ML5.4/10, MLv5.5/72 Error ellipse: s-maj=6.5km s-min=2.6km az=136.3, confirmed*

*IDC **08** 15:24:12.9±2.3, 44°.19S×168°.31E, h44^{km}±22^{km}, mb4.4/10, mbtmp4.7/12, ML4.6/2, MS3.9/21, Error ellipse: s-maj=21.6km s-min=14.4km az=59.0*

*NEIC **08** 15:24:12.0±2.7, 44°.35S±0°.05×168°.12E±0°.06, h35^{km}±1^{km}, mb4.9/29, Error ellipse: s-maj=9.1km s-min=6.7km az=321.0*

ISC 08 15:24:08.6±1.1**, 44°.29S**±0°.03×**168°.15E**±0°.03**, h10**^{km}±6^{km}**, n332,** σ**1**^{s}.**46**/318**, mb4.9**/35**, MS3.9**/22**, 5C-1D, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSZ	Milford Sound	0.42	203	P	Pg	15 24 16.4	-0.4
MSZ				S	Sg	15 24 21.3	-1.0
NSBS	Neils Beach	0.47	52	P	Pb	15 24 18.7	-0.2
JCZ	Jackson Bay	0.50	65	P	Pb	15 24 19.1	-0.5
JCZ	Jackson Bay	0.50	65	P	Pb	15 24 19.1	-0.5
JCZ				S	Sb	15 24 26.2	-0.8
HDWS	Haast DOC Work	0.76	58	P	Pn	15 24 24.1	-1.2
MECS	Makarora Emerg	0.78	86	P	Pg	15 24 24.0	+0.4
MECS				S	Sg	15 24 34.3	+0.6
WKZ	Wanaka	0.82	131		Pg	15 24 24.5	+0.1
WKZ	Wanaka	0.82	131	P	Pg	15 24 24.4	+0.1
WKZ				S	Sg	15 24 34.6	-0.5
QTPS	Queenstown Pol	0.83	154	P	Pg	15 24 23.9	-0.7
MLZ	Mavora Lakes	1.08	181		Pb	15 24 28.1	-1.3
MLZ	Mavora Lakes	1.08	181	P	Pb	15 24 28.1	-1.3
MLZ				S	Sb	15 24 41.9	-1.7
EAZ	Earnscleugh	1.25	139	P	Pn	15 24 31.8	-0.5
DCZ	Deep Cove	1.38	211		Pn	15 24 32.4	-1.5
DCZ	Deep Cove	1.38	211	P	Pn	15 24 32.5	-1.3
DCZ				S	Sn	15 24 50.5	-1.6
MOSS	Mossburn Schoo	1.38	177	P	Pn	15 24 33.5	-0.5
TWAS	Twizel Area Sc	1.40	89	P	Pg	15 24 35.7	+0.4
TWAS				S	Sg	15 24 53.4	-0.2
FOZ	Fox Glacier	1.42	59		Pn	15 24 34.0	-0.4
FOZ	Fox Glacier	1.42	59	P	Pn	15 24 34.0	-0.4
FOZ				S	Sg	15 24 54.3	+0.1
LBZ	Lake Benmore	1.46	95		Pn	15 24 35.4	+0.3
LBZ	Lake Benmore	1.46	95	P	Pn	15 24 35.4	+0.3
LBZ				S	Sb	15 24 54.6	+0.1
WHZ	Wether Hill Ro	1.61	185		Pn	15 24 36.5	-0.6
WHZ	Wether Hill Ro	1.61	185	P	Pn	15 24 36.5	-0.6
RLNS	Resolution Isl	1.75	216	P	Pn	15 24 39.1	0.0
GCSZ	Gaunt Creek Bo	1.85	59	P	Pn	15 24 39.6	-0.8
RRKS	Rarakau	1.92	194	P	Pn	15 24 41.2	-0.2
ODZ	Otahua Downs	1.93	114		Pn	15 24 42.1	+0.5
ODZ	Otahua Downs	1.93	114	P	Pn	15 24 42.9	+1.4
ODZ	Otahua Downs	1.93	114	S	Sn	15 25 07.7	+1.8
ODZ	Otahua Downs	1.93	114	P	Pn	15 24 41.9	+0.4
TUZ	Tuapeka	1.97	148	P	Pn	15 24 42.3	+0.3
ORPS	Orepuki	2.02	188	P	Pn	15 24 43.9	+1.2
TMZ	Timaru	2.05	94	P	Pn	15 24 43.6	+0.4
PYZ	Puysegur Point	2.15	208		Pn	15 24 45.1	+0.6
PYZ	Puysegur Point	2.15	208	P	Pn	15 24 45.2	+0.7
PYZ	Puysegur Point	2.15	208	S	Sn	15 25 13.5	+2.3
PYZ	Puysegur Point	2.15	208	P	Pn	15 24 45.2	+0.7
OAMS	Oamaru North O	2.17	113	P	Pn	15 24 45.2	+0.5
RPZ	Rata Peaks	2.17	76		Pn	15 24 45.5	+0.7
RPZ	Rata Peaks	2.17	76	P	Pn	15 24 45.3	+0.5
	437nm,0.3s,baz=171,slow=3.4,SNR=786						
RPZ				S	Sb	15 25 14.1	-0.8
	4µm,0.5s,baz=8.5,slow=23,SNR=5.2						
	842nm,0.3s						
RPZ	Rata Peaks	2.17	76	P	Pn	15 24 46.0	+1.2
RPZ	Rata Peaks	2.17	76	P	Pn	15 24 45.4	+0.6
ARCZ	Arundel	2.21	82	P	Pn	15 24 45.4	+0.1
WVZ	Waitaha Valley	2.23	58	P	Pn	15 24 44.7	-0.9
SYZ	Scrubby Hill	2.36	163	P	Pn	15 24 48.2	+0.9
SYZ	Scrubby Hill	2.36	163	S	Sn	15 25 20.6	+4.3
SYZ	Scrubby Hill	2.36	163	P	Pn	15 24 47.8	+0.5
HHSZ	Highcliff Hill	2.36	134	P	Pn	15 24 48.1	+0.7
APZ	The Paps	2.55	183	P	Pn	15 24 50.2	+0.2
MHCZ	Mount Hutt	2.58	74	P	Pn	15 24 50.3	-0.2
WACZ	Wakanui South	2.68	84	P	Pn	15 24 51.7	0.0
INZ	Inchbonnie	2.86	58		Pn	15 24 53.9	-0.3
INZ	Inchbonnie	2.86	58	P	Pn	15 24 53.5	-0.8
RACZ	Rakaia	2.93	80	P	Pn	15 24 55.1	-0.1
OXZ	Oxford	2.97	73		Pn	15 24 55.0	-0.8
OXZ	Oxford	2.97	73	P	Pn	15 24 55.0	-0.8
MQZ	McQueen's Vall	3.30	81		Pn	15 24 59.9	-0.4
MQZ	McQueen's Vall	3.30	81	P	Pn	15 24 59.7	-0.6
LTZ	Lake Taylor	3.35	65		Pn	15 25 00.7	-0.3
LTZ	Lake Taylor	3.35	65	P	Pn	15 25 00.5	-0.6
AMCZ	Amberley	3.44	73		Pn	15 25 02.0	-0.3
AMCZ	Amberley	3.44	73	P	Pn	15 25 02.0	-0.3
AKCZ	Akaroa Harbour	3.45	85	P	Pn	15 25 02.5	+0.1
OKCZ	Okains Bay	3.58	83	P	Pn	15 25 04.3	+0.1
DSZ	Denniston Nort	3.69	48		Pn	15 25 05.3	-0.4
DSZ	Denniston Nort	3.69	48	P	Pn	15 25 04.8	-0.9
GVZ	Greta Valley S	3.78	71		Pn	15 25 06.4	-0.5
GVZ	Greta Valley S	3.78	71	P	Pn	15 25 06.2	-0.7
THZ	Tophouse	4.30	56		Pn	15 25 13.9	-0.2
THZ	Tophouse	4.30	56	P	Pn	15 25 13.5	-0.6
KHZ	Kahutara	4.35	66		Pn	15 25 14.0	-0.6
KHZ	Kahutara	4.35	66	P	Pn	15 25 14.1	-0.6
KHZ	Kahutara	4.35	66	P	Pn	15 25 14.1	-0.6
MRNZ	Matariki Terra	4.45	51		Pn	15 25 15.7	-0.5
MRNZ	Matariki Terra	4.45	51	P	Pn	15 25 15.6	-0.5
QRZ	Quartz Range	4.73	45		Pn	15 25 19.8	-0.3
QRZ	Quartz Range	4.73	45	P	Pn	15 25 19.6	-0.4
QRZ	Quartz Range	4.73	45	S	Sn	15 26 14.1	-0.9
QRZ	Quartz Range	4.73	45	P	Pn	15 25 19.4	-0.7
TKNZ	Takaka Hill	4.81	49		Pn	15 25 21.0	-0.1
TKNZ	Takaka Hill	4.81	49	P	Pn	15 25 20.5	-0.6
BSWZ	Blackbirch Sta	4.92	61		Pn	15 25 25.3	+2.7
BSWZ	Blackbirch Sta	4.92	61	P	Pn	15 25 23.1	+0.5
NNZ	Nelson	4.92	53		Pn	15 25 22.4	-0.2
NNZ	Nelson	4.92	53	P	Pn	15 25 22.8	+0.2
CMWZ	Cape Campbell	5.12	62	P	Pn	15 25 27.5	+2.3
TUWZ	Tuamarina	5.12	58	P	Pn	15 25 24.3	-1.1
TCW	Tory Channel	5.46	58		Pn	15 25 31.2	+1.2
TCW	Tory Channel	5.46	58	P	Pn	15 25 29.9	-0.1
DUWZ	D'Urville Isla	5.50	53	P	Pn	15 25 30.2	-0.4
SNZO	South Karori	5.66	61		Pn	15 25 33.1	+0.3
SNZO	South Karori	5.66	61	P	Pn	15 25 32.5	-0.3
BHW	Baring Head	5.71	62	P	Pn	15 25 38.9	+5.4
WEL	Wellington	5.72	61	P	Pn	15 25 33.8	+0.3
PLWZ	Palliser	5.88	65	P	Pn	15 25 35.4	-0.4
MSWZ	Moikau Station	5.95	64	P	Pn	15 25 36.1	-0.7
CAW	Cannon Point	6.00	60	P	Pn	15 25 36.2	-1.3
KIW	Kapiti Island	6.05	58	P	Pn	15 25 37.3	-0.8
PAWZ	Paruwai Farm	6.08	64	P	Pn	15 25 38.0	-0.6
OGWZ	Otaki Gorge	6.24	59	P	Pn	15 25 39.5	-1.2
MTW	Mount Morrison	6.25	63	P	Pn	15 25 38.5	-2.3
HOWZ	Holdsworth Sta	6.40	61	P	Pn	15 25 40.9	-2.1
NMEZ	Namu Road	6.48	43	P	Pn	15 25 43.9	0.0
TMWZ	Te Maipa	6.53	64	P	Pn	15 25 42.7	-2.0
MRZ	Mangatainoka R	6.58	59		Pn	15 25 43.9	-1.4
MRZ	Mangatainoka R	6.58	59	P	Pn	15 25 43.3	-2.0
NBEZ	Newall Road No	6.59	42	P	Pn	15 25 45.1	-0.4
KHEZ	Kahui Hut	6.64	43	P	Pn	15 25 45.9	-0.3
KHEZ	Kahui Hut	6.64	43	S	Sn	15 27 01.2	-0.8
KHEZ	Kahui Hut	6.64	43	P	Pn	15 25 46.2	-0.1
PREZ	Palmer Road	6.67	44	P	Pn	15 25 46.9	+0.3
NEZ	North Egmont	6.70	44	P	Pn	15 25 46.7	-0.3
PKE	Pukeiti	6.70	43	P	Pn	15 25 46.8	-0.3
LREZ	Lake Rotokare	6.71	46	P	Pn	15 25 47.9	+0.8
DREZ	Durham Road	6.81	44	P	Pn	15 25 48.6	+0.1
WAZ	Wanganui	6.81	51	P	Pn	15 25 49.2	+0.7
POWZ	Post Office Ro	6.85	58	P	Pn	15 25 52.5	+3.4
PRWZ	Pori Road	6.88	60	P	Pn	15 25 47.0	-2.5
BFZ	Birch Farm	6.98	62	P	Pn	15 25 50.7	-0.2
BFZ	Birch Farm	6.98	62	P	Pn	15 25 48.9	-2.0
VRZ	Vera Road	7.14	46	P	Pn	15 25 53.2	+0.1
DVHZ	Dannevirke	7.15	59	P	Pn	15 25 50.4	-2.9
TSZ	Takapari Road	7.17	57	P	Pn	15 25 51.8	-1.8
PKVZ	Pokaka	7.33	50	P	Pn	15 25 55.8	0.0
MTVZ	Mangateitei	7.34	51	P	Pn	15 25 59.1	+3.3
PNHZ	Pukenui	7.41	57	P	Pn	15 25 56.1	-0.7
TRVZ	Turoa	7.44	50	P	Pn	15 25 57.9	+0.5
WNVZ	Wahianoa	7.45	51	P	Pn	15 25 57.0	-0.4
WPHZ	Waipukurau	7.46	58	P	Pn	15 26 01.5	+4.0
MAVZ	Matarangi	7.47	50	P	Pn	15 25 58.3	+0.5
FWVZ	Far West T-bar	7.47	50	P	Pn	15 25 57.9	0.0
WHVZ	Whangaehu Hut	7.47	51	P	Pn	15 25 60.0	+2.1
MOVZ	Moawhango	7.48	52	P	Pn	15 25 56.8	-1.0
COVZ	Chateau Observ	7.50	50	P	Pn	15 25 59.1	+1.0
TUVZ	Tukino	7.52	51	P	Pn	15 25 58.1	-0.3
NGZ	Ngauruhoe	7.55	50	P	Pn	15 25 59.8	+0.9
SNVZ	South Ngauruho	7.57	50	P	Pn	15 26 01.5	+2.3
WTVZ	West Tongariro	7.59	50	P	Pn	15 25 59.9	+0.5
NNVZ	North Ngauruho	7.59	50	P	Pn	15 26 00.2	+0.7
OTVZ	Oturere	7.60	50	P	Pn	15 26 01.1	+1.6
KRVZ	Karewarewa	7.63	50	P	Pn	15 26 01.0	+1.0
NTVZ	North Tongarir	7.65	50	P	Pn	15 26 01.9	+1.8
TMVZ	Te Maari	7.65	50	P	Pn	15 26 04.2	+4.0
HIZ	Hauiti	7.66	43	P	Pn	15 25 59.4	-0.7
HIZ	Hauiti	7.66	43	P	Pn	15 25 59.5	-0.7
KRHZ	Kereru	7.68	56	P	Pn	15 26 00.5	0.0
KATZ	Kakaramea	7.75	49	P	Pn	15 26 03.1	+1.6
RITZ	Rihia Road	7.84	50	P	Pn	15 26 04.0	+1.3
KWHZ	Kaweka Forest	7.85	55	P	Pn	15 26 05.9	+3.0
RATZ	Rangitukua	7.87	49	P	Pn	15 26 04.0	+0.9
KAHZ	Kahuranaki	7.89	58	P	Pn	15 26 04.4	+1.0
WATZ	Wairara	7.96	48	P	Pn	15 26 06.7	+2.3
MCHZ	McNeill Hill	8.00	56	P	Pn	15 26 11.6	+6.7
BKZ	Black Stump Fm	8.06	53	P	Pn	15 26 04.6	-1.2
BKZ	Black Stump Fm	8.06	53	P	Pn	15 26 04.9	-0.9
WHTZ	Whakaora	8.11	49	P	Pn	15 26 10.0	+3.5
TLZ	Tolley Road	8.14	46	P	Pn	15 26 06.2	-0.7
KUTZ	Kaahu Road	8.17	47	P	Pn	15 26 08.3	+1.1
NMHZ	Naumai	8.29	54	P	Pn	15 26 09.3	+0.3
ALRZ	Allen Road	8.40	50	P	Pn	15 26 12.6	+2.2
GRRZ	Galatos Road	8.43	48	P	Pn	15 26 11.4	+0.7
PRRZ	Plateau Road	8.47	50	P	Pn	15 26 12.4	+1.1
MTHZ	Maungataniwha	8.48	53	P	Pn	15 26 12.9	+1.5
HRRZ	Handcock Road	8.49	49	P	Pn	15 26 13.7	+2.1
HSRZ	Hossack Road	8.53	48	P	Pn	15 26 14.7	+2.6
RAHZ	Arahi	8.57	54	P	Pn	15 26 15.3	+2.5
TOZ	Tahuroa Road	8.59	43	P	Pn	15 26 12.1	-0.7
UTU	Utuhina	8.60	48	P	Pn	15 26 16.7	+3.6
KMRZ	Kaimai	8.71	45	P	Pn	15 26 16.0	+1.2
RTZ	Ruatahuna	8.72	52	P	Pn	15 26 18.4	+3.6
AWAZ	Awhitu Peninsu	8.74	37	P	Pn	15 26 14.3	-0.6
OMRZ	Omania	8.74	48	P	Pn	15 26 16.6	+1.5
SNGZ	Shannon Statio	8.81	55	P	Pn	15 26 18.5	+2.4
WTAZ	Waiatarua	8.82	36	P	Pn	15 26 16.0	-0.1
MKAZ	Moumakai	8.93	39	P	Pn	15 26 17.9	+0.3
EPAZ	Eden Park BICE	8.94	36	P	Pn	15 26 17.6	-0.1
ETAZ	East Tamaki Re	8.95	37	P	Pn	15 26 17.6	-0.3
HBAZ	Herne Bay Bore	8.95	36	P	Pn	15 26 18.4	+0.5
TGRZ	Tauranga	8.97	46	P	Pn	15 26 18.5	+0.4
OPRZ	Ohinepanea	9.03	47	P	Pn	15 26 20.0	+0.9
URZ	Urewera	9.04	51	P	Pn	15 26 16.9	-2.2
	3.9nm,0.3s,baz=326,slow=6.2,SNR=11						
URZ				S	Sn	15 27 53.1	-7.8
	74nm,0.7s,baz=338,slow=11,SNR=6.6						
	17nm,0.4s						
URZ	Urewera	9.04	51	P	Pn	15 26 18.3	-0.8
URZ	Urewera	9.04	51	P	Pn	15 26 17.9	-1.2
PRGZ	Paritu Road	9.04	57	P	Pn	15 26 18.1	-1.1
MBAZ	Motutapu North	9.09	37	P	Pn	15 26 19.4	-0.4
RIGZ	Rimuhau	9.11	56	P	Pn	15 26 21.3	+1.1
WIAZ	Waiheke Island	9.18	38	P	Pn	15 26 21.2	+0.2
ABAZ	Army Bay	9.21	36	P	Pn	15 26 21.2	-0.2
MWZ	Matawai	9.22	53	P	Pn	15 26 21.0	-0.7
KUZ	Kuaotunu	9.48	40	P	Pn	15 26 24.5	-0.6
KUZ	Kuaotunu	9.48	40	P	Pn	15 26 24.7	-0.5
RUGZ	Raukumara Rang	9.56	52	P	Pn	15 26 25.6	-0.8
WCZ	Waipu Caves	9.59	32	P	Pn	15 26 26.1	-0.5
HAZ	Te Kaha	9.77	51	P	Pn	15 26 27.8	-1.3
GRZ	Great Barrier	9.77	37	P	Pn	15 26 29.3	+0.2
PUZ	Puketiti	9.82	54	P	Pn	15 26 30.4	+0.6
PKGZ	Pakihiroa	9.86	53	P	Pn	15 26 32.2	+1.8
OUZ	Omahuta	9.97	27	P	Pn	15 26 31.4	-0.5
OUZ	Omahuta	9.97	27	P	Pn	15 26 31.9	0.0
WMGZ	Waiomatatini S	10.09	54	P	Pn	15 26 32.4	-1.1
MXZ	Matakaoa Point	10.20	52	P	Pn	15 26 34.5	-0.5
MXZ	Matakaoa Point	10.20	52	P	Pn	15 26 35.5	+0.5
TAU	Tasmania Unive	15.16	268	Pn	Pn	15 27 40.3	-2.3
TAU				IAmb	IAmb	15 27 54.3	
	comp=Z,26nm,0.6s						
CAN	Canberra	17.20	295	Pn	Pn	15 28 07.7	-1.2
TOO	Toolangi	18.36	284	P	P	15 28 23.6	+0.3
RAO	Raoul Island	18.66	41	LR	LR	15 36 08.4	
	comp=Z,634nm,18.4s,baz=218,slow=39						
ARMA	Armidale	19.03	311	P	Pn	15 28 30.6	-1.0
DZM	Mont Dzumac	22.20	356	*e*P	P	15 29 06.5	+1.3
	comp=Z,221nm,1.4s						
DZM				*e*S	S	15 33 04.5	-5.2
	comp=Z,135nm,24.2s						
DZM				*e*LR	LR	15 34 25.8	
	comp=Z,262nm,25.9s						
DZM	Mont Dzumac	22.20	356	LR	LR	15 36 52.8	
	comp=Z,310nm,19.0s,baz=180,slow=34						
EIDS	Eidsvold	23.42	318	P	P	15 29 19.0	+1.2
EIDS				IAmb	IAmb	15 29 21.0	
	comp=Z,28nm,0.8s						
STKA	Stephens Creek	24.18	292	P	P	15 29 24.4	-0.7
STKA	Stephens Creek	24.18	292	P	P	15 29 25.6	+0.4
	comp=Z,13nm,0.9s,baz=123,slow=9.3,SNR=16						
STKA				LR	LR	15 37 04.1	
	comp=Z,194nm,18.5s,baz=108,slow=32						
	comp=Z,13nm,0.9s						
MSVF	Nonsavu	27.75	21	LR	LR	15 39 10.6	
	comp=Z,297nm,20.8s,baz=186,slow=32						
CTAO	Charters Tower	30.24	316	P	P	15 30 17.5	-2.0
CTAO				IAmb	IAmb	15 30 22.3	
	comp=Z,25nm,1.1s						
VNDA	Vanda	33.44	182	P	P	15 30 48.2	+1.1
	comp=Z,3.6nm,1.1s,baz=17,slow=11,SNR=8.9						
VNDA				LR	LR	15 42 16.2	
	comp=Z,469nm,19.6s,baz=9.5,slow=32						
	comp=Z,3.6nm,1.1s						
SBA	Scott Base	33.68	181	P	P	15 30 52.0	+2.8
SBA	Scott Base	33.68	181	P	P	15 30 52.8	+3.6
ASAR	Alice Springs	34.71	295	P	P	15 30 57.9	-0.9
ASAR	Alice Springs	34.71	295	P	P	15 30 59.0	+0.2
	comp=Z,7.8nm,1.1s,baz=134,slow=8.8,SNR=29						
ASAR				PcP	PcP	15 33 31.4	-1.1
	comp=Z,2.5nm,0.8s,baz=134,slow=3.6,SNR=6.2						
ASAR				LR	LR	15 44 13.3	
	comp=Z,108nm,18.2s,baz=94,slow=34						
	comp=Z,7.8nm,1.1s						
RAR	Rarotonga	35.10	60	LR	LR	15 42 56.9	
	comp=Z,194nm,19.6s,baz=240,slow=32						
HNR	Honiara	35.45	346	LR	LR	15 45 33.5	
	comp=Z,132nm,19.4s,baz=40,slow=36						
CCD	Concordia, Ant	36.50	198	P	P	15 31 14.7	+0.7
WR8	Warramunga Arr	37.02	300	P	P	15 31 17.7	-0.8

WRA	**Warramunga Arr**	**37.13**	**300**	P	**P**	**15 31 17.2**	**-2.3**
WRA	**Warramunga Arr**	**37.13**	**300**	P	**P**	**15 31 19.5**	**0.0**
	comp=Z,5.1nm,0.6s,baz=135,slow=8.0,SNR=45						
WRA				PcP	**PcP**	**15 33 38.3**	**-1.4**
	comp=Z,1.7nm,0.8s,baz=135,slow=2.8,SNR=5.8						
WRA				LR	LR	15 45 30.1	
	comp=Z,167nm,19.6s,baz=113,slow=34						
	comp=Z,5.1nm,0.6s						
WRAB	**Tennant Creek**	**37.13**	**300**	P	**P**	**15 31 18.6**	**-0.8**
WRAB				IAmb	IAmb	15 31 24.8	
	comp=Z,8.2nm,0.7s						
WB0	**Warramunga Arr**	**37.22**	**300**	P	**P**	**15 31 19.6**	**-0.7**
WB0				IAmb	IAmb	15 31 29.9	
	comp=Z,25nm,1.4s						
CASY	**Casey**	**37.63**	**214**		**P**	**15 31 22.5**	**-0.7**
CASY				IAmb	IAmb	15 31 29.3	
	comp=Z,30nm,1.2s						
TBI	**Tubuai**	**40.38**	**73**	*e*S	**S**	**15 37 50.3**	**-4.5**
	comp=Z,620nm,40.5s						
TBI				*e*LR	LR	15 42 45.2	
	comp=Z,801nm,26.8s						
TBI				*e*LR	LR	15 42 45.3	
	comp=Z,848nm,30.0s						
H01W1	**Cape Leeuwin H**	**41.99**	**264**	T	T	16 15 57.2	
	baz=120,slow=76,SNR=59						
H01W2	**Cape Leeuwin H**	**42.00**	**264**	T	T	16 15 57.8	
	baz=120,slow=76,SNR=52						
H01W3	**Cape Leeuwin H**	**42.01**	**264**	T	T	16 15 58.5	
	baz=120,slow=76,SNR=50						
MORW	**Morawa**	**43.74**	**272**	P	**P**	**15 32 14.3**	**+0.1**
KNRA	**Kununurra**	**43.82**	**298**	P	**P**	**15 32 15.0**	**+0.2**
KNRA				IAmb	IAmb	15 32 19.5	
	comp=Z,15nm,0.8s						
FITZ	**Fitzroy Crossi**	**44.08**	**292**	P	**P**	**15 32 16.9**	**0.0**
FITZ	**Fitzroy Crossi**	**44.08**	**292**	LR	LR	15 50 11.9	
	comp=Z,128nm,18.2s,baz=127,slow=35						
PPT2	**Papeete2**	**44.28**	**67**	*e*S	**S**	**15 38 51.6**	**-1.0**
	comp=Z,81nm,34.2s						
PPT2				*e*LR	LR	15 44 31.2	
	comp=Z,208nm,32.0s						
PPT2				*e*LR	LR	15 44 31.2	
	comp=Z,299nm,28.0s						
PPT	**Papeete**	**44.30**	**67**	LR	LR	15 48 45.2	
	comp=Z,218nm,18.0s,baz=214,slow=33						
MTN	**Manton Dam**	**44.52**	**303**	P	**P**	**15 32 20.2**	**-0.2**
MTN				IAmb	IAmb	15 32 21.9	
	comp=Z,34nm,1.4s						
QSPA	**South Pole Qui**	**45.84**	**180**	P	**P**	**15 32 31.8**	**+1.2**
QSPA	**South Pole Qui**	**45.84**	**180**	P	**P**	**15 32 31.8**	**+1.2**
	comp=Z,31nm,1.0s,baz=19,slow=1.8,SNR=66						
QSPA				LR	LR	15 49 25.0	
	comp=Z,373nm,19.2s,baz=35,slow=33						
	comp=Z,31nm,1.0s						
QSPA	**South Pole Qui**	**45.84**	**180**	P	**P**	**15 32 31.9**	**+1.4**
MBWA	**Marble Bar**	**46.01**	**284**	P	**P**	**15 32 32.3**	**+0.1**
MBWA				IAmb	IAmb	15 32 41.5	
	comp=Z,23nm,1.1s						
EDFI	**Ende, Flores**	**53.54**	**297**	P	**P**	**15 33 32.8**	**+3.0**
	comp=Z,12nm,1.0s						
SWI	**Sorong**	**54.22**	**312**	P	**P**	**15 33 37.8**	**+3.3**
	comp=Z,11nm,1.4s						
MAW	**Mawson**	**55.24**	**207**	LR	LR	15 55 33.6	
	comp=Z,194nm,19.1s,baz=108,slow=34						
TAOE	**Nuku Hiva Isla**	**56.89**	**68**	*e*LR	LR	15 50 30.1	
	comp=Z,201nm,23.8s						
BELA	**Belgrano 2**	**57.31**	**174**	P	**P**	**15 33 56.3**	**+0.3**
BELA				IAmb	IAmb	15 34 01.2	
	comp=Z,13nm,1.0s						
KAPI	**Kappang**	**57.63**	**298**	LR	LR	15 59 04.6	
	comp=Z,61nm,18.3s,baz=116,slow=36						
SYO	**Syowa Base**	**60.80**	**199**	⇓*e*P	**P**	**15 34 17.4**	**-2.9**
MPSI	**Mapaga**	**61.70**	**302**	P	**P**	**15 34 30.5**	**+3.5**
	comp=Z,12nm,1.0s						
TROLL	**Troll, Antarti**	**63.56**	**185**	⇑P	**P**	**15 34 38.5**	**-0.5**
	comp=Z,586nm,0.6s						
SNAA	**Sanae**	**64.17**	**183**	⇑P	**P**	**15 34 42.3**	**-0.6**
	comp=Z,177nm,0.9s						
SNAA	**Sanae**	**64.17**	**183**	P	**P**	**15 34 42.2**	**-0.6**
SNAA				IAmb	IAmb	15 34 47.9	
	comp=Z,16nm,1.1s						
SNAA	**Sanae**	**64.17**	**183**	P	**P**	**15 34 42.0**	**-0.9**
	comp=Z,6.4nm,0.8s,baz=205,slow=8.7,SNR=26						
SNAA				LR	LR	16 01 27.6	
	comp=Z,357nm,18.4s,baz=208,slow=35						
	comp=Z,6.4nm,0.8s						
LEM	**Lembang**	**64.34**	**286**	LR	LR	16 03 31.3	
	comp=Z,42nm,18.7s,baz=185,slow=37						
VNA3	**Neumayer Olymp**	**64.77**	**181**	⇑P	**P**	**15 34 46.1**	**-0.6**
	comp=Z,6.3nm,0.8s						
VNA2	**Neumayer--Watz**	**65.06**	**182**	⇑P	**P**	**15 34 47.9**	**-0.6**
	comp=Z,14nm,0.6s,baz=158,slow=5.7						
VNA1	**Neumayer--Stat**	**65.35**	**181**	⇑P	**P**	**15 34 51.7**	**+1.3**
	comp=Z,15nm,0.8s						
MDSI	**Maura Dua**	**68.39**	**286**	P	**P**	**15 35 14.1**	**+3.5**
	comp=Z,24nm,1.2s						
GO09	**Cerro Castillo**	**71.39**	**145**	P	**P**	**15 35 27.7**	**-0.9**
PPI	**Padang Panjang**	**73.89**	**286**	P	**P**	**15 35 46.9**	**+2.9**
	comp=Z,20nm,0.9s						
JCJ	**Chichijima**	**74.91**	**336**	P	**P**	**15 35 50.0**	**+0.6**
MNSI	**Mandailing Nat**	**75.36**	**286**	P	**P**	**15 35 56.0**	**+3.5**
	comp=Z,8.2nm,0.7s						
PSI	**Prapat**	**77.25**	**287**	LR	LR	16 11 36.0	
	comp=Z,64nm,18.4s,baz=136,slow=37						
YULB	**Yu-li**	**79.83**	**317**	P	**P**	**15 36 16.8**	**-0.4**
YULB				IAmb	IAmb	15 36 24.1	
	comp=Z,15nm,1.1s						
MLSI	**Meulaboh, Aceh**	**80.04**	**286**	P	**P**	**15 36 22.4**	**+3.8**
PLCA	**Paso Flores**	**80.28**	**139**	P	**P**	**15 36 19.2**	**-0.5**
PLCA				IAmb	IAmb	15 36 21.4	
	comp=Z,12nm,1.0s						
PLCA	**Paso Flores**	**80.28**	**139**	P	**P**	**15 36 19.4**	**-0.3**
	comp=Z,5.8nm,0.7s,baz=231,slow=5.4,SNR=15						
	comp=Z,5.8nm,0.7s						
SSLB	**Suanglung**	**80.33**	**317**	P	**P**	**15 36 19.2**	**-0.7**
SSLB				IAmb	IAmb	15 36 23.9	
	comp=Z,18nm,0.9s						
QIZ	**Qiongzhong**	**82.45**	**306**	P	**P**	**15 36 33.1**	**+1.9**
QIZ				S	**S**	**15 46 51.6**	**+3.9**
QIZ				pmax	pmax		
	comp=Z,140nm,6.2s						
QIZ				LR	LR		
	comp=Z,150nm,11.3s						
QIZ				LR	LR		
	comp=Z,160nm,14.4s						
MJAR	**Matsushiro Arr**	**84.91**	**336**	P	**P**	**15 36 42.0**	**-1.4**
	comp=Z,3.2nm,0.9s,baz=174,slow=7.1,SNR=7.9						
	comp=Z,3.2nm,0.9s						
NJ2	**Nanjing**	**88.27**	**320**	*e*P	**P**	**15 37 01.3**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
CMAR	**Chiang Mai Arr**	**88.68**	**297**	P	**P**	**15 37 03.1**	**+0.9**
	comp=Z,14nm,0.8s,baz=155,slow=3.3,SNR=70						
CMAR				LR	LR	16 19 48.5	
	comp=Z,42nm,18.5s,baz=125,slow=38						
	comp=Z,14nm,0.8s						
H08S2	**Diego Garcia H**	**88.75**	**261**	T	T	17 14 41.9	
	baz=135,slow=76,SNR=1845						
H08S1	**Diego Carcia H**	**88.77**	**261**	T	T	17 14 45.1	
	baz=135,slow=76,SNR=1359						
H08S3	**Diego Garcia H**	**88.77**	**261**	T	T	17 14 46.6	
	baz=135,slow=76,SNR=2617						
CHTO	**Chiang Mai**	**88.94**	**298**	P	**P**	**15 37 02.1**	**-1.4**
KSRS	**Korea Array**	**89.14**	**329**	P	**P**	**15 37 04.3**	**+0.5**
	comp=Z,3.9nm,1.0s,baz=148,slow=5.8,SNR=15						
	comp=Z,3.9nm,1.0s						
KSAR	**Wonju Array Be**	**89.14**	**329**	P	**P**	**15 37 04.6**	**+0.7**
AC05	**El Transito**	**89.77**	**132**	P	**P**	**15 37 06.9**	**-0.7**
AC05				IAmb	IAmb	15 37 09.0	
	comp=Z,10nm,0.9s						
ASAJ	**Asahikawa**	**90.92**	**342**	LR	LR	16 14 06.0	
	comp=Z,41nm,20.7s,baz=196,slow=33						
TIA	**Tai'an**	**92.52**	**321**	P	**P**	**15 37 21.1**	**+1.4**
TIA				pmax	pmax		
	comp=Z,12nm,0.7s						
PALK	**Pallekele**	**93.20**	**277**	LR	LR	16 12 41.0	
	comp=Z,25nm,20.0s,baz=174,slow=31						
CN2	**Changchun**	**95.61**	**330**	*e*P	**P**	**15 37 34.7**	**+1.0**
CN2				pP	sP	15 37 38.9	+0.7
BRDH	**Bariadhala**	**96.43**	**295**	LR	LR	16 23 29.7	
	comp=Z,48nm,21.6s,baz=117,slow=37						
HHC	**Hu-ho-hao-te**	**98.82**	**320**	*e*P	Pdif	15 37 50.6	+2.2
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,53nm,4.3s						
WMQ	**Urumqi**	**113.20**	**309**	*e*PKP	**PKiKP**	**15 42 45.9**	**0.0**
WMQ				LR	LR		
	comp=Z,190nm,20.1s						
WMQ				LR	LR		
	comp=Z,67nm,14.5s						
ILAR	**Eielson Array**	**114.26**	**19**	PKP	PKPdf	15 42 46.3	-0.8
	comp=Z,0.3nm,0.8s,baz=221,slow=5.7,SNR=5.1						
MKAR	**Makanchi Array**	**118.03**	**309**	PKP	**PKPdf**	**15 42 53.9**	**-1.1**
	comp=Z,1.4nm,1.0s,baz=48,slow=1.8,SNR=4.8						
KURBB	**Kurchatov Arra**	**122.23**	**311**	PKP	**PKPdf**	**15 43 01.3**	**-1.6**
	comp=Z,0.7nm,0.5s,baz=114,slow=1.7,SNR=11						
ULM	**Lac du Bonnet**	**125.56**	**52**	PKP	**PKPdf**	**15 43 08.8**	**-0.5**
	comp=Z,1.9nm,0.6s,baz=335,slow=3.8,SNR=3.7						
DBIC	**Dimbokro**	**142.03**	**191**	PKP	**PKPdf**	**15 43 37.9**	**-3.4**
	comp=Z,3.7nm,0.8s,baz=180,slow=8.1,SNR=3.4						
SCHQ	**Schefferville**	**143.70**	**53**	PKP	PKPab	15 43 38.9	-0.9
	comp=Z,1.3nm,0.4s,baz=241,slow=6.0,SNR=4.0						
SPITS	**Spitsbergen Ar**	**144.23**	**350**	PKP	PKPbc	15 43 40.8	-0.7
	comp=Z,23nm,0.9s,baz=86,slow=6.0,SNR=19						
BRTR	**Keskin Array B**	**146.23**	**278**	PKPbc	**PKPdf**	**15 43 48.1**	**+0.1**
	comp=Z,17nm,0.8s,baz=142,slow=4.6,SNR=86						
TORD	**Torodi Ar. Bea**	**146.87**	**205**		**PKPdf**	**15 43 50.2**	**+0.6**
TORD	**Torodi Ar. Bea**	**146.87**	**205**	PKPbc	**PKPdf**	**15 43 50.0**	**+0.4**
	comp=Z,14nm,0.9s,baz=114,slow=1.4,SNR=26						
DAG	**Danmarks Havn**	**147.28**	**3**	*i* P	**PKPdf**	**15 43 48.0**	**-0.4**
ARCES	**ARCESS Array B**	**148.45**	**336**	PKPbc	**PKPbc**	**15 43 52.8**	**-1.3**
	comp=Z,12nm,0.8s,baz=63,slow=1.9,SNR=9.6						
AKASG	**Malin Array Be**	**151.80**	**298**	PKPbc	**PKPbc**	**15 44 01.1**	**-1.6**
	comp=Z,2.7nm,0.6s,baz=74,slow=2.6,SNR=14						
FINES	**FINESS Array B**	**151.94**	**321**	PKPbc	**PKPbc**	**15 44 02.0**	**-0.7**
FINES	**FINESS Array B**	**151.94**	**321**	PKPbc	**PKPbc**	**15 44 01.6**	**-1.1**
	comp=Z,7.2nm,0.7s,baz=70,slow=3.3,SNR=30						
KOLS	**Kolonicke sedl**	**156.23**	**293**	*e*PKP	**PKPab**	**15 44 32.4**	**+1.6**
STHS	**Stebnicka Huta**	**156.91**	**295**	*e*PKP	**PKPab**	**15 44 33.8**	**+0.1**
HFS	**Hagfors**	**157.93**	**325**	PKPab	**PKPab**	**15 44 36.4**	**-1.3**
	comp=Z,3.0nm,0.7s,baz=108,slow=4.8,SNR=6.8						
NB2	**NORSAR Subarra**	**158.35**	**329**	P	**PKPab**	**15 44 38.0**	**-1.6**
	comp=Z,3.2nm,0.8s,baz=53,slow=4.6						
NOA	**NORSAR Array B**	**158.35**	**329**	PKPab	**PKPab**	**15 44 38.4**	**-1.2**
	comp=Z,2.4nm,0.9s,baz=53,slow=4.7,SNR=4.4						
VYHS	**Vyhne**	**158.50**	**292**	*e*PKP	**PKPab**	**15 44 41.8**	**+1.2**
SRO	**Srobarova**	**158.84**	**290**	*e*PKP	**PKPab**	**15 44 42.9**	**+0.9**
MORC	**Moravsky Berou**	**159.31**	**296**	*e*PKP	**PKPab**	**15 44 44.5**	**+0.4**
MODS	**Modra-Piesok**	**159.54**	**292**	*e*PKP	**PKPab**	**15 44 48.4**	**+3.3**
VRAC	**Vranov**	**159.95**	**295**	*e*PKP	**PKPab**	**15 44 46.1**	**-0.8**
KRUC	**Moravsky**	**160.10**	**294**	*e*PKP	**PKPab**	**15 44 46.2**	**-1.3**
SOKA	**Soboth**	**161.03**	**287**	*i* PKP	**PKPab**	**15 44 52.2**	**+0.4**
	comp=Z,5.0nm,0.8s						
BRG	**Berggiesshubel**	**161.45**	**300**	*e*PKP	**PKPab**	**15 44 53.6**	**+0.3**
BRG				Amp		15 44 54.4	
	comp=Z,7.4nm,1.0s						
BRG	**Berggiesshubel**	**161.45**	**300**	P	**PKPab**	**15 44 57.5**	**+4.1**
BRG				Amp		15 44 58.0	
	comp=Z,3.3nm,0.9s						
BRG	**Berggiesshubel**	**161.45**	**300**	P	PKPab	15 45 02.9	+10
BRG				Amp		15 45 04.4	
	comp=Z,4.0nm,0.9s						
MOA	**Molln**	**161.56**	**290**	*e*PKP	**PKPab**	**15 44 53.7**	**-0.3**
	comp=Z,3.3nm,1.0s						
GERES	**GERESS Array B**	**161.89**	**294**	PKPab	**PKPab**	**15 44 54.1**	**-1.4**
	comp=Z,1.4nm,0.7s,baz=193,slow=1.7,SNR=7.0						
CLL	**Collm**	**161.94**	**302**	*i* PKPab	**PKPab**	**15 44 55.6**	**+0.1**
BIOA	**Bad Ischl, Aus**	**161.99**	**290**	*i* PKP	**PKPab**	**15 44 55.4**	**-0.5**
	comp=Z,5.5nm,1.0s						
KBA	**Koelnbreinsper**	**162.20**	**288**	*i* PKP	**PKPab**	**15 44 56.2**	**-0.8**
	comp=Z,3.7nm,1.2s						
LESA	**Schwarzleotal**	**162.65**	**289**	*i* PKP	**PKPab**	**15 44 58.1**	**-0.8**
	comp=Z,6.6nm,1.3s						
ABTA	**Abfaltersbach**	**162.77**	**287**	*i* PKP	**PKPab**	**15 44 58.7**	**-0.7**
	comp=Z,4.8nm,1.0s						
WTTA	**Wattenberg**	**163.36**	**289**	*i* PKP	**PKPab**	**15 45 01.5**	**-0.6**
	comp=Z,5.2nm,0.8s						
WATA	**Walderalm**	**163.40**	**289**	*i* PKP	**PKPab**	**15 45 01.6**	**-0.7**
	comp=Z,3.7nm,0.7s						
SQTA	**Sankt Quirin**	**163.65**	**288**	*i* PKP	**PKPab**	**15 45 02.8**	**-0.5**
	comp=Z,5.6nm,1.0s						
MOTA	**Moosalm**	**163.72**	**289**	*i* PKP	**PKPab**	**15 45 03.2**	**-0.5**
	comp=Z,6.5nm,0.8s						
RETA	**Reutte**	**163.95**	**289**	*i* PKP	**PKPab**	**15 45 04.3**	**-0.2**
	comp=Z,5.8nm,1.0s						
FETA	**Feichten**	**163.99**	**288**	*i* PKP	**PKPab**	**15 45 04.7**	**-0.2**
	comp=Z,7.8nm,1.1s						
DAVA	**Damuels**	**164.56**	**289**	*i* PKP	**PKPab**	**15 45 06.7**	**-0.7**
	comp=Z,12nm,1.2s						
ESDC	**Sonseca Array**	**172.54**	**235**	PKPab	**PKPab**	**15 45 42.3**	**-0.4**
	comp=Z,0.9nm,1.0s,baz=117,slow=3.5,SNR=4.7						

WEL 08 15:33:37.2±0.7,**44°S**±4°×**16°8E**±°,**h5**^{km},**M3.9**/18, **ML4.0**/18,**MLv3.9**/18,**Error ellipse: s-maj=8.0km s-min=3.4km az=128.7,confirmed,South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSZ	**Milford Sound**	**0.37**	**204**	P	Pg	15 33 45.1	+0.7
MSZ				S	Sg	15 33 49.9	+0.6
NSBS	**Neils Beach**	**0.51**	**48**	P	Pg	15 33 47.5	+0.6
NSBS				S	Sg	15 33 54.1	+0.5
JCZ	**Jackson Bay**	**0.54**	**61**	P	Pg	15 33 47.8	+0.3
QTPS	**Queenstown Pol**	**0.79**	**152**	P	Pg	15 33 52.6	+0.1
HDWS	**Haast DOC Work**	**0.80**	**56**	P	Pg	15 33 52.7	+0.3
MECS	**Makarora Emerg**	**0.80**	**83**	P	Pg	15 33 52.7	+0.3
WKZ	**Wanaka**	**0.80**	**128**	P	Pg	15 33 53.1	+0.5
WKZ				S	Sg	15 34 03.1	+0.2
MLZ	**Mavora Lakes**	**1.03**	**181**	P	Pg	15 33 56.9	-0.1
EAZ	**Earnscleugh**	**1.23**	**137**	P	Pg	15 34 00.7	0.0
DCZ	**Deep Cove**	**1.33**	**211**	P	Pn	15 34 01.4	-1.0
DCZ				S	Sg	15 34 19.1	-0.8
FOZ	**Fox Glacier**	**1.46**	**57**	P	Pn	15 34 02.7	-1.5
LBZ	**Lake Benmore**	**1.47**	**93**	P	Pb	15 34 04.9	-0.1
WHZ	**Wether Hill Ro**	**1.56**	**185**	P	Pn	15 34 06.1	+0.4
GCSZ	**Gaunt Creek Bo**	**1.89**	**58**	P	Pn	15 34 08.3	-1.7
ODZ	**Otahua Downs**	**1.93**	**112**	P	Pn	15 34 11.3	+0.7
TUZ	**Tuapeka**	**1.94**	**147**	P	Pb	15 34 12.3	-0.7
TMZ	**Timaru**	**2.06**	**92**	P	Pn	15 34 12.7	+0.2
RPZ	**Rata Peaks**	**2.19**	**75**	P	Pn	15 34 14.4	+0.1
ARCZ	**Arundel**	**2.22**	**81**	P	Pn	15 34 14.6	-0.1
WVZ	**Waitaha Valley**	**2.27**	**57**	P	Pn	15 34 13.4	-1.9
SYZ	**Scrubby Hill**	**2.31**	**163**	P	Pb	15 34 17.9	-1.5
HHSZ	**Highcliff Hill**	**2.33**	**132**	P	Pn	15 34 18.0	+1.7
APZ	**The Paps**	**2.50**	**182**	P	Pn	15 34 20.4	+1.9
MHCZ	**Mount Hutt**	**2.61**	**73**	P	Pn	15 34 18.9	-1.1
WACZ	**Wakanui South**	**2.70**	**83**	P	Pn	15 34 20.9	-0.3
INZ	**Inchbonnie**	**2.90**	**57**	P	Pn	15 34 22.2	-1.7
OXZ	**Oxford**	**3.00**	**72**	P	Pn	15 34 23.7	-1.7
MQZ	**McQueen's Vall**	**3.32**	**81**	P	Pn	15 34 28.7	-1.1
LTZ	**Lake Taylor**	**3.38**	**64**	P	Pn	15 34 29.2	-1.6
DSZ	**Denniston Nort**	**3.73**	**47**	P	Pn	15 34 33.9	-1.6
GVZ	**Greta Valley S**	**3.81**	**71**	P	Pn	15 34 35.1	-1.5
THZ	**Tophouse**	**4.34**	**55**	P	Pn	15 34 42.7	-1.1
MRNZ	**Matariki Terra**	**4.49**	**51**	P	Pn	15 34 45.3	-0.6
QRZ	**Quartz Range**	**4.78**	**44**	P	Pn	15 34 48.2	-1.6
TKNZ	**Takaka Hill**	**4.85**	**49**	P	Pn	15 34 49.7	-1.2
BSWZ	**Blackbirch Sta**	**4.96**	**60**	P	Pn	15 34 53.6	+1.3
NNZ	**Nelson**	**4.96**	**53**	P	Pn	15 34 51.8	-0.5
TUWZ	**Tuamarina**	**5.16**	**58**	P	Pn	15 34 55.3	+0.2
TCW	**Tory Channel**	**5.49**	**57**	P	Pn	15 34 59.5	-0.1
DUWZ	**D'Urville Isla**	**5.54**	**52**	P	Pn	15 34 59.7	-0.6
OGWZ	**Otaki Gorge**	**6.27**	**58**	P	Pn	15 35 12.4	+2.0
HOWZ	**Holdsworth Sta**	**6.44**	**60**	P	Pn	15 35 17.1	+4.4
MRZ	**Mangatainoka R**	**6.61**	**59**	P	Pn	15 35 12.5	-2.5
KHEZ	**Kahui Hut**	**6.68**	**43**	P	Pn	15 35 14.8	-1.2
NEZ	**North Egmont**	**6.74**	**43**	P	Pn	15 35 15.8	-1.1
PKE	**Pukeiti**	**6.75**	**42**	P	Pn	15 35 15.6	-1.3
WAZ	**Wanganui**	**6.85**	**50**	P	Pn	15 35 18.2	-0.2
VRZ	**Vera Road**	**7.18**	**46**	P	Pn	15 35 22.2	-0.7
TRVZ	**Turoa**	**7.48**	**50**	P	Pn	15 35 28.5	+1.3
WNVZ	**Wahianoa**	**7.49**	**51**	P	Pn	15 35 28.6	+1.4
NNVZ	**North Ngauruho**	**7.63**	**50**	P	Pn	15 35 30.2	+0.9
TLZ	**Tolley Road**	**8.18**	**45**	P	Pn	15 35 36.2	-0.4
WCZ	**Waipu Caves**	**9.64**	**32**	P	Pn	15 35 55.2	-1.3

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*MOS **08** 15:37:28.8±1.0,44°.20N×147°.43E,h91^{km},mb4.7/23,Error ellipse: s-maj=7.0km s-min=5.1km az=101.6*

MOS Felt (III) at Malokuril'skoye.

*NEIC **08** 15:37:29.4±2.2,44°.17N±0°.09×147°.5E±0°.1,h87^{km}±8^{km}, mb4.6/71,Error ellipse: s-maj=14.5km s-min=10.7km az=140.0*

*NIED **08** 15:37:30.0,44°.03N×147°.49E,h81^{km},MW4.2,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.28; M$_{\theta\theta}$0.55; M$_{\phi\phi}$0.74; M$_{r\theta}$-1.12; M$_{\theta\phi}$-1.95; M$_{\phi r}$-0.84; Fault plane solution: M$_0$2.65000×10^{15} NP1: φ$_s$352.00000°,δ58.00000°,λ-33.00000°. NP2: φ$_s$101.00000°,δ62.00000°,λ-143.00000°.*

*IDC **08** 15:37:29.9±1.9,44°.33N×147°.35E,h86^{km}±16^{km},mb4.0/25, mbtmp4.3/32,MS2.9/4 Error ellipse: s-maj=14.1km s-min=11.5km az=136.0*

*JMA **08** 15:37:30.0±0.3,44°N±1°×14°7E±°,h81^{km},MD4.3/36, MV4.5/36,E OFF HOKKAIDO*

*SKHL **08** 15:37:30.7±0.2,44°.20N×147°.40E,h93^{km}±2^{km},mb5.6/6, msha6.8/4*

ISC 08 15:37:29.2±0.5,**44°.20N**±0°.04×**147°.42E**±0°.04,**h85**^{km}±4^{km}, **n343**,σ**1**^{s}**.24**/351,**mb4.5**/108,**58C-19D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHO	**Shikotan**	**0.54**	**232**	*d i*PN	**Pn**	**15 37 45.2**	**+1.5**
SHO				*i* S	**Sn**	**15 37 55.5**	**+1.0**
SHO				pmax	pmax		
	comp=N,822nm,0.2s						
SHO				pmax	pmax		
	comp=E,748nm,0.2s						
SHO				pmax	pmax		
	comp=Z,2µm,0.2s						
SHO				smax	smax		
	comp=N,38µm,0.3s						
SHO				smax	smax		
	comp=E,62µm,0.3s						
SHO	**Shikotan**	**0.54**	**232**	*i* P	**Pn**	**15 37 45.0**	**+1.3**
SHO				AMB	AMB	15 37 45.5	
	comp=E,2µm,0.2s						
SHO				*i* S	**Sn**	**15 37 55.7**	**+1.2**
SHO				A	A	15 37 56.1	
	comp=E,31µm,0.3s						
SHO				A	A	15 37 56.1	
	comp=E,74µm,0.3s						
KUR	**Kuril'sk**	**1.08**	**17**	*c i*PN	**Pn**	**15 37 50.6**	**+1.1**
KUR				*i* S	**Sn**	**15 38 06.1**	**+1.4**
KUR				pmax	pmax		
	comp=Z,4µm,0.3s						
KUR				pmax	pmax		
	comp=N,343nm,0.2s						
KUR				pmax	pmax		
	comp=E,830nm,0.4s						
KUR				smax	smax		
	comp=N,8µm,0.2s						
KUR				smax	smax		
	comp=E,4µm,0.1s						
KUR	**Kuril'sk**	**1.08**	**17**	*i* P	**Pn**	**15 37 51.3**	**+1.8**
KUR				AMB	AMB	15 37 51.9	
	comp=E,3µm,0.4s						
KUR				*i* S	**Sn**	**15 38 06.7**	**+2.0**
KUR				A	A	15 38 07.6	
	comp=E,12µm,0.4s						
KUR				A	A	15 38 07.6	
	comp=E,6µm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.13**	**262**	*c i*PN	**Pn**	**15 37 51.1**	**+1.0**
YUK				*i* S	**Sn**	**15 38 06.2**	**+0.5**
YUK				pmax	pmax		
	comp=N,303nm,0.2s						
YUK				pmax	pmax		
	comp=Z,4µm,0.2s						
YUK				pmax	pmax		
	comp=E,418nm,0.1s						
YUK				smax	smax		
	comp=E,13µm,0.4s						
YUK				smax	smax		
	comp=N,6µm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.13**	**262**	*i* P	**Pn**	**15 37 51.1**	**+1.0**
YUK				AMB	AMB	15 37 51.9	
	comp=N,3µm,0.4s						
YUK				*i* S	**Sn**	**15 38 06.4**	**+0.7**
YUK				A	A	15 38 08.6	
	comp=N,16µm,0.5s						
YUK				A	A	15 38 08.6	
	comp=N,20µm,0.5s						
GLVR	**Golovnino**	**1.45**	**252**	⇑*i*PN	**Pn**	**15 37 55.2**	**+1.3**
GLVR				*e*S	**Sn**	**15 38 13.6**	**+0.9**
GLVR				pmax	pmax		
	comp=Z,1µm,0.2s						
GLVR				pmax	pmax		
	comp=N,109nm,0.1s						
GLVR				pmax	pmax		
	comp=E,78nm,0.1s						
GLVR				smax	smax		
	comp=N,4µm,0.2s						
GLVR				smax	smax		
	comp=E,8µm,0.3s						
GLVR	**Golovnino**	**1.45**	**252**	*i* P	**Pn**	**15 37 55.2**	**+1.3**
GLVR				AMB	AMB	15 37 55.5	
	comp=E,1µm,0.2s						
GLVR				*e*S	**Sn**	**15 38 13.6**	**+0.9**
GLVR				A	A	15 38 15.1	
	comp=E,4µm,0.3s						
GLVR				A	A	15 38 15.1	
	comp=E,8µm,0.3s						
NEM2	**Nemuro 2**	**1.47**	**236**	*i* P	**Pn**	**15 37 54.8**	**+0.5**
NEM2				S	**Sn**	**15 38 12.7**	**-0.5**
NMR	**Nemuro--Hokkai**	**1.48**	**236**	⇑*i*PN	**Pn**	**15 37 54.8**	**+0.4**
NMR				*e*S	**Sn**	**15 38 12.1**	**-1.3**
NMR	**Nemuro--Hokkai**	**1.48**	**236**	*i* P	**Pn**	**15 37 54.8**	**+0.4**
NMR				*e*S	**Sn**	**15 38 12.6**	**-0.8**
RUSJ	**Misakicho**	**1.56**	**267**	⇑*i*PN	**Pn**	**15 37 57.0**	**+1.5**
RUSJ				*e*S	**Sn**	**15 38 18.5**	**+3.1**
JRA	**Rausu**	**1.67**	**262**	*i* P	**Pn**	**15 37 58.6**	**+1.7**
JRA				S	**Sn**	**15 38 20.3**	**+2.4**
JRA	**Rausu**	**1.67**	**262**	A	A	15 37 58.6	
	comp=N,7.0nm,2.7s,comp=E,5.0nm,1.0s						
JNSB	**Nemuroshibetsu**	**1.79**	**257**	*i* P	**Pn**	**15 38 00.2**	**+1.8**
JNSB				S	**Sn**	**15 38 22.7**	**+2.0**
JNSB	**Nemuroshibetsu**	**1.79**	**257**	A	A	15 38 00.2	
	comp=N,13nm,1.5s,comp=E,6.0nm,2.6s						
JKHN	**Kushirohamanak**	**1.98**	**236**	*i* P	**Pn**	**15 38 01.6**	**+0.7**
JKHN				S	**Sn**	**15 38 24.5**	**-0.6**
JNK	**Nakash**	**2.04**	**253**	*i* P	**Pn**	**15 38 03.1**	**+1.3**
JNK				S	**Sn**	**15 38 28.3**	**+1.7**
AKK	**Akkeshi**	**2.21**	**239**	*e*P	**Pn**	**15 38 04.4**	**+0.4**
JAK	**Akkeshi**	**2.31**	**240**	*i* P	**Pn**	**15 38 05.9**	**+0.6**
JTKR	**Abashiri--Toko**	**2.54**	**266**	*i* P	**Pn**	**15 38 10.2**	**+1.9**
JAR	**Ashorobuto**	**2.79**	**252**	*i* P	**Pn**	**15 38 13.8**	**+2.0**
JAR				S	**Sn**	**15 38 46.5**	**+2.0**
JOB	**Onbets**	**2.91**	**245**	*i* P	**Pn**	**15 38 14.6**	**+1.3**
JOB				S	**Sn**	**15 38 48.2**	**+0.9**
JMP	**Maruseppu**	**2.93**	**268**	*i* P	**Pn**	**15 38 15.8**	**+2.2**
JCH	**Churui**	**3.35**	**243**	*i* P	**Pn**	**15 38 20.0**	**+0.7**
JCH				S	**Sn**	**15 38 57.1**	**-1.0**
JKK2	**Kamakawa 2**	**3.38**	**266**	P	**Pn**	**15 38 22.1**	**+2.3**
JKA	**Kamikawa-asahi**	**3.47**	**270**		**Pn**	**15 38 23.4**	**+2.5**
ASAJ	**Asahikawa**	**3.47**	**270**	P	**Pn**	**15 38 22.8**	**+1.9**
	comp=E,37nm,0.3s,baz=71,slow=24,SNR=199						
ASAJ	**Asahikawa**	**3.47**	**270**	PN	**Pn**	**15 38 23.4**	**+2.5**
ASAJ	**Asahikawa**	**3.47**	**270**	*i* P	**Pn**	**15 38 23.5**	**+2.5**
JSE	**Soyaes**	**3.53**	**284**	P	**Pn**	**15 38 24.1**	**+2.3**
ERM	**Erimo**	**3.81**	**236**		**Pn**	**15 38 27.5**	**+2.0**
ERM	**Erimo**	**3.81**	**236**	*ce*PN	**Pn**	**15 38 27.3**	**+1.8**
ERM				pmax	pmax		
	comp=Z,524nm,0.5s						
JNBK	**Urakawa-nobuka**	**3.91**	**242**	*i* P	**Pn**	**15 38 27.3**	**+0.4**
JWK2	**Keihoku**	**4.08**	**288**	P	**Pn**	**15 38 33.0**	**+3.7**
YSS	**Yuzhno-Sakhali**	**4.28**	**312**		**Pn**	**15 38 34.0**	**+2.2**
YSS	**Yuzhno-Sakhali**	**4.28**	**312**	κ*e*PN	**Pn**	**15 38 34.1**	**+2.2**
YSS				*e*S	**Sn**	**15 39 21.5**	**+1.0**
YSS				pmax	pmax		
	comp=Z,30nm,0.6s						
YSS				smax	smax		
	comp=N,40nm,1.1s						
YSS				smax	smax		
	comp=E,50nm,1.3s						
YSS	**Yuzhno-Sakhali**	**4.28**	**312**	*e*P	**Pn**	**15 38 34.1**	**+2.2**
YSS				*e*S	**Sn**	**15 39 21.5**	**+1.0**
JTM	**Tenmabayashi**	**5.80**	**236**		**Pn**	**15 38 52.4**	**-0.3**
UGL	**Uglegorsk**	**6.11**	**325**	*e*PN	**Pn**	**15 38 53.9**	**-2.9**
UGL				pmax	pmax		
	comp=Z,100nm,0.8s						
UGL	**Uglegorsk**	**6.11**	**325**	*e*P	**Pn**	**15 38 59.8**	**+3.0**
UGL				AMB	AMB	15 39 01.1	
	comp=Z,70nm,0.7s						
TYV	**Tymovskoe**	**7.40**	**336**	*e*PN	**Pn**	**15 39 16.8**	**+2.4**
TYV				*e*S	**Sn**	**15 40 36.6**	**-0.1**
TYV				pmax	pmax		
	comp=Z,100nm,2.6s						
TYV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TYV				smax	smax		
	comp=N,7.0nm,1.1s						
TYV				smax	smax		
	comp=E,9.0nm,1.1s						

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TYV                                smax    smax
       comp=N,100nm,4.5s
TYV                                smax    smax
       comp=E,100nm,4.5s
TYV    Tymovskoe          7.40 336 eP      Pn       15 39 16.8 +2.4
TYV                                eS      Sn       15 40 36.6 -0.1
TEY    Ternei             7.76 280 ePN     Pn       15 39 22.7 +3.4
JMM    Marumori           8.06 221         Pn       15 39 21.9 -1.6
SKR    Severo-Kuril's     8.76  39 ePN     Pn       15 39 34.6 +1.7
SKR                                eS      Sn       15 41 10.2 +0.4
SKR                                pmax    pmax
       comp=Z,69nm,0.5s
SKR                                pmax    pmax
       comp=Z,200nm,4.8s
SKR    Severo-Kuril's     8.76  39 eP      Pn       15 39 34.2 +1.3
SKR                                AMB     AMB      15 39 36.1
       comp=Z,70nm,0.5s
SKR                                eS      Sn       15 41 07.6 -2.2
GRNR   Gornyy             9.92 315 ePN     Pn       15 39 49.7 +1.0
NKL    Nikolayevsk       10.00 336 eP      Pn       15 39 52.3 +2.6
NKL                                AMB     AMB      15 39 54.8
       comp=Z,20nm,0.4s
MJB9   Matsu-Tunnel      10.38 226         Pn       15 39 54.4 -0.7
MAJO   Matsushiro        10.38 226         Pn       15 39 54.4 -0.7
MAJO   Matsushiro        10.38 226 i PN    Pn       15 39 54.4 -0.7
MAJO                               pmax    pmax
       comp=Z,38nm,0.8s
MJAR   Matsushiro Arr    10.38 226 P       Pn       15 39 54.7 -0.4
       comp=Z,25nm,0.8s,baz=30,slow=14,SNR=97
MJAR                               LR      LR       15 44 36.0
       comp=Z,36nm,18.1s,baz=68,slow=41
USRK   Ussuriysk Ar.     11.08 275 P       Pn       15 40 04.1 -0.4
       comp=Z,2.2nm,0.6s,baz=79,slow=14,SNR=2.8
PEA0B  Petropavlovsk-    11.20  34         Pn       15 40 07.0 +0.9
PEA0B  Petropavlovsk-    11.20  34cePN     Pn       15 40 06.5 +0.4
PETK   Petropavlovsk-    11.20  34         Pn       15 40 06.3 +0.2
PETK   Petropavlovsk-    11.20  34 P       Pn       15 40 06.5 +0.4
       comp=Z,6.4nm,0.7s,baz=174,slow=9.6,SNR=31
PET    Petropavlovsk     11.53  36 Pn      Pn       15 40 09.3 -1.2
PET    Petropavlovsk     11.53  36 ePN     Pn       15 40 09.9 -0.7
PET                                pmax    pmax
       comp=Z,10.0nm,0.8s
PET    Petropavlovsk     11.53  36 eP      Pn       15 40 11.0 +0.4
JGF    Kuroka            11.54 225         Pn       15 40 09.9 -1.0
KLR    Kul'dur           11.87 301 P       Pn       15 40 15.9 +0.7
       comp=Z,0.6nm,0.3s,baz=102,slow=12,SNR=4.3
KLR    Kul'dur           11.87 301cePN     Pn       15 40 12.8 -2.4
KLR                                pmax    pmax
       comp=Z,6.0nm,1.7s
KLR    Kul'dur           11.87 301 eP      Pn       15 40 12.8 -2.4
INU    Inuyama           11.91 226 Pn      Pn       15 40 16.0 +0.1
MDJ    Mudanjiang        12.76 278 P       Pn       15 40 28.5 +1.3
MDJ                                pmax    pmax
       comp=Z,5.0nm,0.8s
BNX    BinXian           14.25 283 ⇑P      Pn       15 40 47.1 +0.3
BNX                                pmax    pmax
       comp=Z,7.0nm,0.7s
HEH    HeiHe             14.86 301 eP      P        15 40 57.1 -1.1
MA2    Magadan           15.53   6 P       Pn       15 41 03.5 +0.4
       comp=Z,2.4nm,0.2s,baz=198,slow=12,SNR=7.3
MA2                                LR      LR       15 47 01.7
       comp=Z,33nm,18.4s,baz=164,slow=37
CN2    Changchun         15.81 276 eP      P        15 41 07.9 -0.9
CN2                                eS      Sn       15 44 00.5 -0.7
KSRS   Korea Array       16.20 252 P       P        15 41 13.6 +0.4
       comp=Z,1.3nm,0.7s,baz=67,slow=13,SNR=7.9
KSRS                               LR      LR       15 47 25.4
       comp=Z,11µm,18.3s,baz=80,slow=37
ZEA    Zeya              16.27 313 i P     Pn       15 41 12.7 +0.4
ZEA    Zeya              16.27 313 eP      Pn       15 41 12.7 +0.4
SEY    Seymchan          18.99   7 P       P        15 41 42.6 -1.0
       comp=Z,0.9nm,0.3s,baz=182,slow=11,SNR=6.6
SEY                                LR      LR       15 49 42.6
       comp=Z,49nm,18.4s,baz=168,slow=39
SEY    Seymchan          18.99   7 i P     P        15 41 44.4 +0.8
SEY                                pmax    pmax
       comp=Z,2.0nm,0.9s
YAK    Yakutsk           20.66 336         P        15 41 59.3 -2.5
YAK    Yakutsk           20.66 336 P       P        15 42 00.1 -1.6
       comp=Z,11nm,0.5s,baz=160,slow=0.6,SNR=7.2
YAK                                LR      LR       15 50 25.4
       comp=Z,47nm,19.4s,baz=190,slow=38
       comp=Z,11nm,0.5s
YAK    Yakutsk           20.66 336 eP      P        15 41 59.9 -1.8
YAK                                eS      S        15 45 46.7 -0.8
YAK                                e*SS    sS       15 46 13.4 -2.0
YAK                                e                15 53 18.6
YAK                                pmax    pmax
       comp=Z,8.0nm,0.8s
YAK                                smax    smax
       comp=E,17nm,2.0s
YAK                                smax    smax
       comp=N,16nm,1.7s
XLT    XiLinHaoTe        22.46 280 eP      P        15 42 20.0 -1.3
XLT                                pmax    pmax
       comp=Z,10.0nm,0.5s
BJI    Beijing           23.46 271 P       P        15 42 31.0  0.0
BJI                                pmax    pmax
       comp=Z,8.0nm,0.8s
BJI                                pmax    pmax
       comp=Z,46nm,4.0s
TIA    Tai'an            24.37 261 P       P        15 42 40.0 +0.8
TIA                                pmax    pmax
       comp=Z,13nm,0.7s
NJ2    Nanjing           25.40 251 eP      P        15 42 48.4 -0.2
NJ2                                pmax    pmax
       comp=Z,7.0nm,0.6s
BILL   Bilibino          25.87  16 i P     P        15 42 54.8 +2.3
BILL   Bilibino          25.87  16 eP      P        15 42 54.8 +2.3
HHC    Hu-ho-hao-te      26.50 275 eP      P        15 42 58.3 -0.3
HHC                                pmax    pmax
       comp=Z,14nm,0.5s
HHC                                pmax    pmax
       comp=Z,45nm,5.8s
ULN    Ulaanbaatar       28.03 292 i P     P        15 43 12.6 +0.3
ULN                                pmax    pmax
       comp=Z,3.0nm,1.0s
ULN    Ulaanbaatar       28.03 292 eP      P        15 43 12.6 +0.3
SONM   Songino Array     28.48 292 P       P        15 43 14.8 -1.4
SONM   Songino Array     28.48 292 P       P        15 43 15.7 -0.6
       comp=Z,2.5nm,0.6s,baz=80,slow=7.9,SNR=11
       comp=Z,2.5nm,0.6s
H11N2  WAKE ISLAND Hy    29.32 140 T       T        16 14 25.9
       baz=332,slow=76,SNR=1169
H11N1  WAKE ISLAND Hy    29.33 140 T       T        16 14 25.6
       baz=332,slow=76,SNR=1007
H11N3  WAKE ISLAND Hy    29.34 140 T       T        16 14 27.6
       baz=332,slow=76,SNR=1183
H11S1  WAKE ISLAND Hy    30.30 142 T       T        16 15 36.4
       baz=333,slow=76,SNR=1485
H11S3  WAKE ISLAND Hy    30.30 142 T       T        16 15 31.0
       baz=333,slow=76,SNR=1354
H11S2  WAKE ISLAND Hy    30.32 142 T       T        16 15 41.6
       baz=333,slow=76,SNR=1181
XAN    Xi'an             31.29 264 ⇑P      P        15 43 41.7 +0.6
XAN                                pmax    pmax
       comp=Z,7.0nm,0.5s
LZH    Lanzhou           33.95 271 eP      P        15 44 05.3 +0.8
LZH                                sP      sP       15 44 37.1 +3.1
LZH                                pmax    pmax
       comp=Z,30nm,0.7s
G16K   Koyuk River       34.56  35 P       P        15 44 07.8 -1.3
G16K                               IAmb    IAmb     15 44 17.0
       comp=Z,6.8nm,1.2s
GTA    Gaotai            35.41 279 eP      P        15 44 18.1 +1.1
GTA                                pmax    pmax
       comp=Z,7.0nm,0.8s
M16K   Timber Creek      35.46  43 P       P        15 44 16.0 -1.0
M16K                               IAmb    IAmb     15 44 53.2
       comp=Z,9.0nm,1.4s
C18K   Utukok River      35.82  29 P       P        15 44 19.9 -0.1
C18K                               IAmb    IAmb     15 44 59.8
       comp=Z,6.8nm,1.4s
G18K   Tagagawik         36.16  34 P       P        15 44 24.2 +1.3
E19K   Redstone River    36.99  32 P       P        15 44 31.5 +1.5
E19K                               IAmb    IAmb     15 44 31.8
       comp=Z,2.8nm,0.6s
H19K   Roundabout Mou    37.01  35         P        15 44 30.3 +0.3
B20K   Meade River       37.56  28 P       P        15 44 34.7 +0.1
B20K                               IAmb    IAmb     15 44 56.3
       comp=Z,3.9nm,0.7s
J20K   Nowinta River     37.87  37         P        15 44 39.5 +2.2
IMAR   Indian Mountai    38.16  35 P       P        15 44 41.1 +1.2
B21K   Ikpikpuk River    38.34  29 P       P        15 44 40.6 -0.6
B21K                               IAmb    IAmb     15 45 03.5
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       comp=Z,4.8nm,0.8s
CAST   Castle Rocks      38.76  39         P        15 44 45.6 +0.7
KDAK   Kodiak Island     38.80  48 P       P        15 44 45.9 +0.7
KDAK   Kodiak Island     38.80  48 P       P        15 44 45.9 +0.7
KDAK                               pmax    pmax
       comp=Z,34nm,1.5s
STLK   Strandline Lak    38.91  42 P       P        15 44 45.8 -0.4
STLK                               IAmb    IAmb     15 44 49.5
       comp=Z,4.9nm,0.5s
PZH    PanZhiHua         40.65 260 P       P        15 45 01.4 +0.3
ZALV   Zalesovo Beam     40.88 307 P       P        15 45 00.8 -1.8
       comp=Z,1.0nm,0.5s,baz=76,slow=6.3,SNR=3.9
ZALV                               PcP     PcP      15 47 02.4 +0.9
       comp=Z,3.5nm,0.4s,baz=75,slow=1.7,SNR=13
       comp=Z,1.0nm,0.5s
ILAR   Eielson Array     41.01  37 P       P        15 45 04.2 +0.7
       comp=Z,0.7nm,0.5s,baz=271,slow=8.2,SNR=7.4
       comp=Z,0.7nm,0.5s
C27K   Jago River        42.14  29 P       P        15 45 13.5 +0.9
C27K                               IAmb    IAmb     15 45 35.3
       comp=Z,12nm,1.2s
SCRK   Sand Creek        42.33  38 P       P        15 45 14.3 -0.1
I28M   Miner Creek       43.88  35         P        15 45 28.1 +1.3
MK31   Makanchi Array    44.55 297ceP      P        15 45 32.5 +0.2
MKAR   Makanchi Array    44.55 297         P        15 45 32.4 +0.1
MKAR   Makanchi Array    44.55 297 P       P        15 45 32.1 -0.3
       comp=Z,3.6nm,0.7s,baz=79,slow=8.7,SNR=24
MKAR                               PcP     PcP      15 47 14.4 +0.4
       comp=Z,1.5nm,0.7s,baz=64,slow=3.8,SNR=6.9
       comp=Z,3.6nm,0.7s
MKAR   Makanchi Array    44.55 297 i P     P        15 45 32.5 +0.1
MKAR                               pmax    pmax
       comp=Z,4.0nm,0.7s
MKAR   Makanchi Array    44.55 297 eP      P        15 45 32.5 +0.1
MAKZ   Makanchi          44.74 297 P       P        15 45 33.3 -0.6
MAKZ                               IAmb    IAmb     15 45 35.6
       comp=Z,6.0nm,0.7s
MAKZ   Makanchi          44.74 297 P       P        15 45 33.3 -0.6
MAKZ                               pmax    pmax
       comp=Z,6.0nm,0.7s
F30M   Barrier River     45.20  32         P        15 45 39.3 +2.1
F30M                               IAmb    IAmb     15 45 40.5
       comp=Z,6.9nm,0.7s
I30M   Mount Dempster    45.39  35         P        15 45 40.7 +1.9
KURK   Kurchatov         45.44 304         P        15 45 38.4 -0.9
KURK                               IAmb    IAmb     15 45 41.9
       comp=Z,3.0nm,0.5s
KURK   Kurchatov         45.44 304ceP      P        15 45 39.1 -0.2
KURK                               pmax    pmax
       comp=Z,2.0nm,0.5s
KURK   Kurchatov         45.44 304 eP      P        15 45 39.1 -0.2
KURBB  Kurchatov Arra    45.52 304 P       P        15 45 39.0 -1.0
       comp=Z,2.2nm,0.4s,baz=77,slow=8.9,SNR=29
KURBB                              PcP     PcP      15 47 17.9 +0.7
       comp=Z,2.2nm,0.6s,baz=73,slow=3.4,SNR=13
       comp=Z,2.2nm,0.4s
HYT    Haines Junctio    45.86  41         P        15 45 45.1 +2.4
CHTO   Chiang Mai        47.59 254         P        15 45 57.0 +0.5
CHTO                               IAmb    IAmb     15 45 58.6
       comp=Z,6.1nm,0.8s
CHTO   Chiang Mai        47.59 254 P       P        15 45 57.0 +0.5
CHTO                               pmax    pmax
       comp=Z,6.0nm,0.8s
CMAR   Chiang Mai Arr    47.84 253 P       P        15 45 59.0 +0.6
       comp=Z,2.0nm,0.7s,baz=39,slow=7.3,SNR=14
       comp=Z,2.0nm,0.7s
CMAR   Chiang Mai Arr    47.84 253ceP      P        15 46 00.1 +1.7
CMAR                               pmax    pmax
       comp=Z,2.0nm,0.7s
A36M   Sachs Harbour     47.88  25 P       P        15 45 57.6 -0.4
BVAR   Borovoye Array    49.37 309 P       P        15 46 09.4 -0.3
       comp=Z,0.8nm,0.3s,baz=82,slow=7.9,SNR=7.6
BVAR                               PcP     PcP      15 47 31.4 +0.5
       comp=Z,1.8nm,0.5s,baz=58,slow=4.1,SNR=7.2
       comp=Z,0.8nm,0.3s
BRVK   Borovoye          49.41 309ceP      P        15 46 12.1 +2.1
BRVK                               pmax    pmax
       comp=Z,2.0nm,0.8s
BRVK   Borovoye          49.41 309 eP      P        15 46 12.1 +2.1
BOOM   Boomskoye usch    50.46 295         P        15 46 18.8 +0.4
BOOM                               IAmb    IAmb     15 46 20.4
       comp=Z,10nm,1.0s
BOOM   Boomskoye usch    50.46 295 P       P        15 46 18.8 +0.4
BOOM                               pmax    pmax
       comp=Z,10.0nm,1.0s
EVN    Everest           50.48 273         P        15 46 19.6 +0.4
EVN                                IAmb    IAmb     15 46 21.3
       comp=Z,9.5nm,1.1s
AAK    Ala-Archa         51.34 295deP      P        15 46 25.7 +0.8
AAK                                pmax    pmax
       comp=Z,5.0nm,1.3s
AAK    Ala-Archa         51.34 295 eP      P        15 46 25.6 +0.7
KSH    Kashi             51.88 291 P       P        15 46 33.7 +4.8
KSH                                pmax    pmax
       comp=Z,7.0nm,0.7s
KK31   Karatay Array     53.67 298 IAmb    IAmb     15 46 43.1
       comp=Z,7.3nm,0.8s
KKAR   Karatay Array     53.67 298         P        15 46 41.6 -0.4
KKAR   Karatay Array     53.67 298 IAmb    IAmb     15 46 43.1
       comp=Z,7.6nm,0.8s
KKAR   Karatay Array     53.67 298 P       P        15 46 41.6 -0.4
ARTI   Arti              54.26 317         P        15 46 43.4 -2.6
ARTI   Arti              54.26 317c iP     P        15 46 45.5 -0.5
ARTI                                                15 47 46.1
ARTI                               S       S        15 54 18.0 +1.3
ARTI                               SS      SS       15 57 58.1 -0.9
ARTI                               pmax    pmax
       comp=Z,4.0nm,0.7s
SPITS  Spitsbergen Ar    54.38 349 P       P        15 46 44.9 -1.7
       comp=Z,4.7nm,1.0s,baz=55,slow=12,SNR=6.5
       comp=Z,4.7nm,1.0s
RES    Resolute Bay      54.48  17 IAmb    IAmb     15 46 48.5
       comp=Z,3.2nm,0.7s
YKA    Yellowknife Ar    55.32  34 P       P        15 46 53.4 -0.1
       comp=Z,0.8nm,0.6s,baz=303,slow=7.6,SNR=5.9
       comp=Z,0.8nm,0.6s
YKA    Yellowknife Ar    55.32  34ceP      P        15 46 54.9 +1.3
AB31   Akbulak array     56.93 309 IAmb    IAmb     15 47 07.2
       comp=Z,13nm,1.4s
ABKAR  Akbulak array     56.93 309         P        15 47 05.2 -0.1
ABKAR                              IAmb    IAmb     15 47 07.2
       comp=Z,13nm,1.4s
ABKAR  Akbulak array     56.93 309         P        15 47 05.1 -0.1
SIMJ   Simiganj          56.95 294         P        15 47 06.1 +0.4
ARCES  ARCESS Array B    58.89 340 P       P        15 47 17.6 -1.0
       comp=Z,20nm,0.8s,baz=53,slow=6.2,SNR=1.7
       comp=Z,20nm,0.8s
KBL    Kabul             59.22 290         P        15 47 21.2 -0.5
KBL    Kabul             59.22 290 P       P        15 47 21.2 -0.5
KBL                                pmax    pmax
       comp=Z,11nm,0.6s
BLKN   Baker Lake        60.98  26         P        15 47 33.4 +0.5
ILON   Igloolik, Nuna    61.10  18 P       P        15 47 32.7 -1.0
ILON                               IAmb    IAmb     15 48 04.2
       comp=Z,4.6nm,1.1s
HRA    Herat             63.85 293 IAmb    IAmb     15 47 54.3
       comp=Z,5.5nm,0.6s
FINES  FINESS Array B    64.56 333 P       P        15 47 55.4 -1.4
       comp=Z,7.0nm,0.6s,baz=44,slow=7.6,SNR=41
       comp=Z,7.0nm,0.6s
FINES  FINESS Array B    64.56 333ceP      P        15 47 56.4 -0.4
FINES                              pmax    pmax
       comp=Z,7.0nm,0.6s
WRA    Warramunga Arr    64.94 194 P       P        15 48 00.6 +0.9
       comp=Z,1.2nm,0.8s,baz=8.3,slow=6.7,SNR=9.0
       comp=Z,1.2nm,0.8s
OBN    Obninsk           65.06 324⇑eP      P        15 47 59.5 -0.6
OBN                                e                15 48 33.3
OBN                                e                15 50 28.6
OBN                                eS      S        15 56 24.8  -11
OBN                                pmax    pmax
       comp=Z,4.0nm,0.8s
OBN                                MLR     MLR
       comp=Z,26nm,21.0s
OBN    Obninsk           65.06 324 eP      P        15 47 59.5 -0.6
LPSR   Galich'ya Gora    65.70 321 eP      P        15 48 02.3 -2.0
LPSR                               pmax    pmax
       comp=Z,10.0nm,0.8s
MCMT   McKenzie Canyo    66.32  50 P       P        15 48 07.7 -1.1
VSR    Storozhevoye      66.52 319 eP      P        15 48 07.0 -2.6
VSR                                pmax    pmax
       comp=Z,9.0nm,0.8s
NVAR   Mina Array Bea    67.18  58 P       P        15 48 15.1 +0.8
       comp=Z,1.3nm,0.8s,baz=288,slow=6.3,SNR=4.9
       comp=Z,1.3nm,0.8s
ASAR   Alice Springs     68.66 193 P       P        15 48 24.6 +1.2
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       comp=Z,0.5nm,0.7s,baz=9.5,slow=5.0,SNR=6.4
       comp=Z,0.5nm,0.7s
SEKA   Sheki             68.92 307 P       P        15 48 25.7 +0.8
NC405  NORSAR Array S    69.06 339 IAmb    IAmb     15 48 25.7
       comp=Z,6.0nm,0.5s
NB201  NORSAR Array S    69.22 339 IAmb    IAmb     15 48 35.4
       comp=Z,19nm,1.4s
NB2    NORSAR Subarra    69.25 339 P       P        15 48 26.0 -0.6
       comp=Z,2.4nm,0.5s,baz=32,slow=6.5
NB2    NORSAR Subarra    69.25 339 P       P        15 48 26.4 -0.2
NOA    NORSAR Array B    69.25 339 P       P        15 48 26.0 -0.6
       comp=Z,1.4nm,0.5s,baz=32,slow=6.6,SNR=24
       comp=Z,1.4nm,0.5s
MNGR   Mingechevir, A    69.27 307 P       P        15 48 28.2 +1.2
HFS    Hagfors           69.35 337 P       P        15 48 26.3 -0.8
       comp=Z,5.1nm,0.4s,baz=56,slow=5.8,SNR=67
       comp=Z,5.1nm,0.4s
NORES  NORESS Array B    69.42 339 P       P        15 48 26.8 -0.8
PDAR   Pinedale Array    69.47  50 P       P        15 48 28.0 -0.6
       comp=Z,0.5nm,0.4s,baz=232,slow=4.9,SNR=4.7
       comp=Z,0.5nm,0.4s
KIV    Kislovodsk        69.61 312 eP      P        15 48 29.9 +0.7
KIV                                pmax    pmax
       comp=Z,47nm,1.1s
KIV    Kislovodsk        69.61 312 eP      P        15 48 29.9 +0.7
KIV    Kislovodsk        69.61 312 P       P        15 48 30.5 +1.3
       comp=Z,384nmcomp=Z,50nm,0.8s
LKRN   Lenkeran, Azer    69.62 304 P       P        15 48 30.4 +1.2
KBZ    Khabaz            69.64 312 P       P        15 48 29.7 +0.5
       comp=Z,23nm,0.8s,baz=70,slow=4.0,SNR=47
KBZ    Khabaz            69.64 312ceP      P        15 48 30.7 +1.5
KBZ                                pmax    pmax
       comp=Z,21nm,0.7s
KBZ    Khabaz            69.64 312 eP      P        15 48 30.6 +1.4
SHA1   Shidzhatmaz       69.77 312 i P     P        15 48 31.2 +0.9
GANJ   Ganja             69.79 307 P       P        15 48 31.5 +1.2
NAX    Nakhchivan        71.24 307 P       P        15 48 40.5 +1.3
AKASG  Malin Array Be    71.33 324 P       P        15 48 38.9 -0.5
AKASG                              IAmb    IAmb     15 48 40.4
       comp=Z,5.9nm,1.1s
AKASG  Malin Array Be    71.33 324 P       P        15 48 39.3 -0.1
       comp=Z,5.1nm,0.5s,baz=40,slow=6.0,SNR=49
       comp=Z,5.1nm,0.5s
AKBB   Malin Array Si    71.33 324ceP      P        15 48 39.5 +0.1
KIEV   Kiev              71.34 324         P        15 48 38.6 -0.8
KIEV   Kiev              71.34 324 ⇑P      P        15 48 39.6 +0.2
KIEV   Kiev              71.34 324 ⇑P      P        15 48 39.6 +0.2
KOPT   Kop Dagi          73.49 310 IAmb    IAmb     15 48 56.8
       comp=Z,7.3nm,0.7s
UOSS   Minazif           73.88 289         P        15 48 54.1 -0.9
UOSS                               IAmb    IAmb     15 48 56.1
       comp=Z,5.8nm,0.7s
LVV    L'vov             74.16 326 P       P        15 48 57.3 +1.1
MILM   Milestii Mici     74.35 321 ⇑P      P        15 48 57.3  0.0
MILM   Milestii Mici     74.35 321 ⇑P      P        15 48 57.3  0.0
KSV    Kosov             74.91 324 P       P        15 48 59.6 -0.9
DIKM   Dikmen            75.13 314 ⇑P      P        15 49 03.5 +1.6
ARPR   Arapgir-MALATY    75.32 311 IAmb    IAmb     15 49 06.1
       comp=Z,13nm,0.8s
BUR08  Bucovina Ar. S    75.37 324 IAmb    IAmb     15 49 04.8
       comp=Z,11nm,0.8s
BURAR  Bucovina Array    75.39 324         P        15 49 04.1 +0.6
BURAR  Bucovina Array    75.39 324 ⇑P      P        15 49 04.2 +0.8
BURAR  Bucovina Array    75.39 324 ⇑P      P        15 49 04.2 +0.8
BZK    Bozkurt           75.54 315         P        15 49 05.0 +0.7
BZK    Bozkurt           75.54 315 ⇓P      P        15 49 05.5 +1.2
KOLS   Kolonicke sedl    75.56 326 eP      P        15 49 05.3 +0.9
KOLS                               pmax    pmax
       comp=Z,9.0nm,0.7s
KOLS   Kolonicke sedl    75.56 326 eP      P        15 49 05.2 +0.9
STHS   Stebnicka Huta    75.59 327 eP      P        15 49 05.2 +0.8
STHS                               pmax    pmax
       comp=Z,10.0nm,0.9s
STHS   Stebnicka Huta    75.59 327 eP      P        15 49 05.2 +0.8
TESR   Tescani           75.62 322 ⇓P      P        15 49 05.3 +0.6
ONER   Baraj Valea Uz    75.87 322 ⇓P      P        15 49 07.1 +1.0
TRSU   Trosnyk           75.95 325 P       P        15 49 07.9 +1.4
VRI    Vrincioaia        76.08 322 ⇑P      P        15 49 09.8 +2.5
VRI    Vrincioaia        76.08 322 ⇑P      P        15 49 09.8 +2.5
TPGR   Topolog           76.09 320 ⇓P      P        15 49 08.3 +0.9
PLOR   Plostina          76.13 322 ⇑P      P        15 49 08.7 +1.1
PLOR   Plostina          76.13 322 ⇑P      P        15 49 08.7 +1.1
TURR   Turia             76.25 322 ⇑P      P        15 49 10.3 +2.0
OZUR                     76.32 322 ⇑P      P        15 49 10.5 +1.8
HARR   Harsova           76.44 320 ⇑P      P        15 49 10.4 +1.1
HARR   Harsova           76.44 320 ⇑P      P        15 49 10.4 +1.1
STEB   Steborice         76.48 329 eP      P        15 49 10.6 +1.1
LANS   Liptovska Anna    76.49 328 eP      P        15 49 11.3 +1.7
LANS                               pmax    pmax
       comp=Z,7.0nm,0.9s
LANS   Liptovska Anna    76.49 328 eP      P        15 49 11.3 +1.7
OSTC   Ostas             76.53 330 eP      P        15 49 10.7 +0.9
OSTC   Ostas             76.53 330 eP      P        15 49 10.7 +0.9
DOPR   Dopca             76.59 323 ⇑P      P        15 49 11.9 +1.7
DPC    Dobruska-Polom    76.67 330 eP      P        15 49 11.9 +1.3
DPC    Dobruska-Polom    76.67 330 eP      P        15 49 11.9 +1.3
MORC   Moravsky Berou    76.70 329 IAmb    IAmb     15 49 12.5
       comp=Z,8.1nm,0.8s
MORC   Moravsky Berou    76.70 329 eP      P        15 49 11.0 +0.3
MORC   Moravsky Berou    76.70 329 ⇑P      P        15 49 11.1 +0.3
MORC   Moravsky Berou    76.70 329 ⇑P      P        15 49 11.1 +0.3
MLR    Muntele Rosu      76.72 322         P        15 49 11.2 +0.1
MLR                                IAmb    IAmb     15 49 13.5
       comp=Z,6.7nm,0.8s
MLR    Muntele Rosu      76.72 322 ⇑P      P        15 49 12.1 +1.0
MLR    Muntele Rosu      76.72 322 ⇑P      P        15 49 12.1 +1.0
KRLC   Kraliky           76.73 330 eP      P        15 49 11.8 +0.9
KRLC   Kraliky           76.73 330 eP      P        15 49 11.8 +0.9
MAUC   Maruska           76.93 329 eP      P        15 49 13.3 +1.2
CLL    Collm             77.00 333 i P     P        15 49 12.5 +0.1
CLL                                e*SP    sP       15 49 44.0 +0.2
CLL                                pmax    pmax
       comp=Z,16nm,0.7s
CLL    Collm             77.00 333 i P     P        15 49 12.5 +0.1
       comp=Z,16nm,0.7s
CLL                                esP     sP       15 49 44.0 +0.2
BRG    Berggiesshubel    77.06 332 eP      P        15 49 12.9 +0.2
BRG                                Amp              15 49 13.9
       comp=Z,3.7nm,0.6s
SCHQ   Schefferville     77.13  20 P       P        15 49 13.4 +0.3
       comp=Z,2.2nm,0.6s,baz=315,slow=7.1,SNR=3.6
       comp=Z,2.2nm,0.6s
VOIR                     77.16 322 ⇑P      P        15 49 14.8 +1.3
VOIR                     77.16 322 ⇑P      P        15 49 14.8 +1.3
VYHS   Vyhne             77.27 328 eP      P        15 49 15.0 +1.1
VYHS                               pmax    pmax
       comp=Z,6.0nm,0.7s
VYHS   Vyhne             77.27 328 eP      P        15 49 15.0 +1.1
PSZ    Piszkesteto       77.33 327 IAmb    IAmb     15 49 16.3
       comp=Z,8.4nm,0.9s
PSZ    Piszkesteto       77.33 327 ⇑P      P        15 49 15.6 +1.3
PSZ    Piszkesteto       77.33 327 ⇑P      P        15 49 15.6 +1.3
BR131  Keskin Array S    77.37 314 IAmb    IAmb     15 49 16.6
       comp=Z,4.5nm,0.7s
BRTR   Keskin Array B    77.37 314         P        15 49 15.6 +0.7
BRTR   Keskin Array B    77.37 314 P       P        15 49 16.0 +1.1
       comp=Z,3.2nm,0.7s,baz=77,slow=3.6,SNR=19
       comp=Z,3.2nm,0.7s
ARR    Arges             77.39 323 ⇓P      P        15 49 17.2 +2.4
JAVC   Velka Javorina    77.41 329 eP      P        15 49 16.3 +1.5
VRAC   Vranov            77.44 330 eP      P        15 49 15.5 +0.6
VRAC   Vranov            77.44 330 ⇑P      P        15 49 16.2 +1.3
VRAC   Vranov            77.44 330 ⇑P      P        15 49 16.2 +1.3
HSKC   Hora Svate Kat    77.45 332 eP      P        15 49 15.4 +0.4
GOPC   GO Pecny, Ondr    77.58 331 eP      P        15 49 16.6 +1.0
GOPC   GO Pecny, Ondr    77.58 331 eP      P        15 49 16.6 +1.0
PRU    Pruhonice         77.60 331 eP      P        15 49 16.5 +0.8
PRU    Pruhonice         77.60 331 eP      P        15 49 16.5 +0.8
KIRS   Kirsehir-Merke    77.66 313 ⇑P      P        15 49 17.7 +1.2
ANTO   Ankara            77.70 314 ⇑P      P        15 49 18.3 +1.7
ANTO   Ankara            77.70 314 ⇑P      P        15 49 18.3 +1.7
KRUC   Moravsky          77.71 329 eP      P        15 49 16.8 +0.4
EKA    Eskdalemuir Ar    77.75 343 P       P        15 49 16.4 -0.1
       comp=Z,4.3nm,0.6s,baz=24,slow=4.9,SNR=17
       comp=Z,4.3nm,0.6s
TREC   Trest             77.85 330 eP      P        15 49 18.1 +0.9
TREC   Trest             77.85 330 eP      P        15 49 18.1 +0.9
MODS   Modra-Piesok      77.96 329 eP      P        15 49 18.9 +1.1
MODS                               pmax    pmax
       comp=Z,22nm,1.2s
MODS   Modra-Piesok      77.96 329 eP      P        15 49 18.9 +1.1
SURR   Surduc            78.16 324 ⇑P      P        15 49 20.1 +1.2
GZR    Gura Zlata        78.17 324 ⇑P      P        15 49 19.1  0.0
GZR    Gura Zlata        78.17 324 ⇑P      P        15 49 19.1  0.0
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ZVC	Zvikov	78.18	331	*e*P	P	15 49 19.8	+0.8
BZS	Buzias	78.48	324	⇓P	P	15 49 21.8	+1.1
BZS	Buzias	78.48	324	⇓P	P	15 49 21.8	+1.1
KHC	Kasperske Hory	78.66	331	*e*P	P	15 49 22.7	+1.0
KHC	Kasperske Hory	78.66	331	*e*P	P	15 49 22.7	+1.0
CKRC	Cesky Krumlov	78.67	331	*e*P	P	15 49 22.5	+0.8
CKRC	Cesky Krumlov	78.67	331	*e*P	P	15 49 22.5	+0.8
CONA	Conrad Observa	78.85	329	*i* P	P	15 49 24.1	+1.2
	comp=Z,4.9nm,0.7s						
GEC2	GERESS Array S	78.86	331	P	P	15 49 22.6	-0.2
GEC2	GERESS Array S	78.86	331	P	P	15 49 22.6	-0.2
GEC2				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GERES	GERESS Array B	78.86	331	P	P	15 49 23.2	+0.4
	comp=Z,2.1nm,0.5s,baz=60,slow=7.9,SNR=12						
	comp=Z,2.1nm,0.5s						
RONA	Rosalia, Austr	78.88	329	*i* P	P	15 49 24.3	+1.3
	comp=Z,12nm,1.2s						
GRF	Grafenberg Arr	78.98	333	*e*P	P	15 49 24.0	+0.6
	comp=Z,9.6nm,0.8s,baz=30,slow=4.8						
MORH	Mrgy, Hungar	79.21	327	⇑P	P	15 49 25.0	+0.3
MOA	Molln	79.50	330	*i* P	P	15 49 27.0	+0.7
	comp=Z,4.2nm,0.8s						
ARSA	Arzberg	79.55	329	*i* P	P	15 49 27.3	+0.8
	comp=Z,3.1nm,1.2s						
RAO	Raoul Island	79.68	150	LR	LR	16 18 33.5	
	comp=Z,163nm,19.1s,baz=137,slow=31						
BTNL	Ternell	79.77	336	*d*P	P	15 49 28.5	+0.8
MEM	Membach	79.79	336	*d*P	P	15 49 28.2	+0.5
	comp=Z,11nm,1.0s						
BIOA	Bad Ischl, Aus	79.86	330	*i* P	P	15 49 29.1	+0.9
	comp=Z,10nm,1.2s						
BSTI	Sart Tilman	79.94	336	*d*P	P	15 49 29.2	+0.7
BCLA	Clavier	80.16	337	*d*P	P	15 49 29.3	-0.5
SOKA	Soboth	80.21	329	*i* P	P	15 49 30.9	+0.7
	comp=Z,3.5nm,0.5s						
BGES	Gesves	80.25	337	*d*P	P	15 49 29.9	-0.4
	comp=Z,8.8nm,0.8s						
BGES				*d*pP	pP	15 49 50.9	-1.7
BMRD	Maredsous	80.42	337	*d*P	P	15 49 31.7	+0.6
	comp=Z,10.0nm,0.8s						
LESA	Schwarzleotal	80.43	331	*i* P	P	15 49 32.2	+0.8
	comp=Z,7.1nm,0.9s						
KBA	Koelnbreinsper	80.49	330	*i* P	P	15 49 32.7	+0.9
	comp=Z,6.1nm,0.8s,SNR=5.3						
OBKA	Obir	80.53	329	*i* P	P	15 49 32.4	+0.5
	comp=Z,3.3nm,0.6s						
DOU	Dourbes	80.65	337	*d*P	P	15 49 32.9	+0.5
	comp=Z,6.1nm,1.1s						
MYKA	Terra Mystica	80.76	330	*i* P	P	15 49 33.5	+0.3
	comp=Z,3.7nm,0.8s						
WATA	Walderalm	80.89	331	*i* P	P	15 49 34.6	+0.7
	comp=Z,5.7nm,0.5s,SNR=6.2						
WTTA	Wattenberg	80.93	331	*i* P	P	15 49 35.0	+0.9
	comp=Z,5.6nm,0.4s,SNR=5.5						
PRED	Cave del Predi	80.95	330		P	15 49 33.4	-0.7
PRED				IAmb	IAmb	15 49 34.7	
	comp=Z,6.7nm,1.1s						
RETA	Reutte	81.04	332	*i* P	P	15 49 35.1	+0.5
	comp=Z,6.9nm,1.0s						
MOTA	Moosalm	81.04	332	*i* P	P	15 49 35.4	+0.7
	comp=Z,8.1nm,0.9s,SNR=4.6						
ABTA	Abfaltersbach	81.07	330	*i* P	P	15 49 35.5	+0.7
	comp=Z,2.1nm,0.5s						
SQTA	Sankt Quirin	81.11	331	*i* P	P	15 49 35.9	+0.8
	comp=Z,6.5nm,0.9s						
MMAI	Mount Meron Ar	81.36	308	P	P	15 49 37.9	+1.3
	comp=Z,4.5nm,0.7s,baz=37,slow=4.5,SNR=7.7						
	comp=Z,4.5nm,0.7s						
FETA	Feichten	81.45	332	*i* P	P	15 49 38.0	+1.1
	comp=Z,7.9nm,1.7s						
DAVA	Damuels	81.51	332	*i* P	P	15 49 38.1	+0.9
	comp=Z,9.9nm,1.1s						
FUORN	Ofenpass-Fuorn	81.96	332	IAmb	IAmb	15 49 41.5	
	comp=Z,6.2nm,0.9s						
RAYN	Ar Rayn	81.98	295	⇑P	P	15 49 41.0	+1.0
PDG	Podgorica	82.07	324	IAmb	IAmb	15 49 41.6	
	comp=Z,8.0nm,0.7s						
TXAR	Lajitas Array	82.24	56	P	P	15 49 42.4	+1.1
	comp=Z,2.7nm,0.6s,baz=302,slow=4.0,SNR=39						
	comp=Z,2.7nm,0.6s						
TUE	Stuetta	82.40	332	IAmb	IAmb	15 49 43.4	
	comp=Z,5.2nm,0.9s						
NRCA	Norcia	84.20	328	IAmb	IAmb	15 49 52.8	
	comp=Z,11nm,1.3s						
H03N2	Juan Fernandez	142.77	89	T	T	18 35 53.5	
	baz=304,slow=77,SNR=13						
H03N3	Juan Fernandez	142.78	89	T	T	18 35 54.3	
	baz=304,slow=77,SNR=21						
H03N1	Juan Fernandez	142.78	89	T	T	18 35 56.9	
	baz=304,slow=77,SNR=15						
TROLL	Troll, Antarti	147.48	199	⇑P	PKiKP	15 57 03.7	-0.5
	comp=Z,196nm,0.7s						
BDFB	Brasilia	148.66	30	PKPbc	PKPbc	15 57 06.6	-0.3
	comp=Z,4.4nm,0.8s,baz=200,slow=13,SNR=4.8						
SNAA	Sanae	148.94	198	⇑P	PKiKP	15 57 06.8	-0.4
	comp=Z,21nm,0.5s						
SNAA	Sanae	148.94	198	PKPbc	PKPbc	15 57 06.3	+0.4
	comp=Z,1.1nm,0.8s,baz=295,slow=2.0,SNR=6.4						
VNA2	Neumayer--Watz	150.47	196	⇑P	PKiKP	15 57 10.9	+0.7
	comp=Z,7.5nm,0.6s,baz=148,slow=3.2						
VNA3	Neumayer Olymp	150.66	195	⇑P	PKiKP	15 57 11.0	+0.4
	comp=Z,3.7nm,0.7s						
PLCA	Paso Flores	151.95	96	PKPbc	PKPbc	15 57 13.7	-0.3
	comp=Z,2.6nm,0.9s,baz=288,slow=3.4,SNR=4.5						

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*MDD **08** 15:37:53.8±2.5, 36°.14N×8°.00W, h54^{km}±46^{km}, Mb3.0/3, Error ellipse: s-maj=18.1km s-min=11.8km az=170.0*

*INMG **08** 15:37:54.9±0.9, 36°.11N×7°.95W, h34^{km}, ML1.5, Error ellipse: s-maj=5.5km s-min=4.8km az=86.0, #DIST_RANGE: LOCAL #IPMA_REGION: Golfo de Cadiz*

*SFS **08** 15:37:55.6, 36°.26N×7°.82W, h18^{km}, ML1.6/6, ML1.9/4, MLv1.5/6*

*IGIL **08** 15:37:55.7, 36°.11N×7°.95W, h31^{km}, ML1.3*

ISC 08 15:37:53.2±3.2**, 36°.2N**±0°.2×**7°.96W**±0°.07**, h71**^{km}±24^{km}**, n21, σ1**^{s}**04**/33**, 3C, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBDV	Barranco-do-Ve	1.08	1	*e*P	Pn	15 38 13.3	+0.5
PBDV				*e*S	Sn	15 38 27.0	-0.4
PBDV				*i* AML	AML	15 38 27.4	
PBDV				*i* AML	AML	15 38 31.3	
PFVI	Vila Bisbo	1.20	324	*e*S	Sn	15 38 29.3	-0.7
PFVI				*i* AML	AML	15 38 29.9	
PFVI				*i* AML	AML	15 38 34.4	
PVAQ	Vaqueiros	1.26	9	Pn	Pn	15 38 15.6	+0.6
PVAQ	Vaqueiros	1.26	9	*e*P	Pn	15 38 15.6	+0.6
PVAQ				*e*S	Sn	15 38 31.1	-0.3
PVAQ				*i* AML	AML	15 38 31.5	
MORF	Marmelete	1.27	334	*e*S	Sn	15 38 30.8	-0.9
MORF				IAML		15 38 31.5	
	comp=N,5.3nm,0.2s						
MORF	Marmelete	1.27	334	*e*P	Pn	15 38 16.0	+0.7
MORF				*e*S	Sn	15 38 31.6	-0.1
MORF				*i* AML	AML	15 38 32.4	
MORF				*i* AML	AML	15 38 33.0	
MORF				*i* AML	AML	15 38 33.2	
EGRO	El Granado	1.42	15	Pn	Pn	15 38 18.0	+0.8
EGRO				Sn	Sn	15 38 34.3	-0.9
EGRO	El Granado	1.42	15	Pn	Pn	15 38 16.7	-0.5
EGRO				⇑*i*IVmb_VC		15 38 18.6	
	comp=N,120nm,SNR=1.4						
EGRO				Sn	Sn	15 38 34.1	-1.1
PCVE	Castro Verde	1.47	357	Sn	Sn	15 38 36.2	-0.2
PCVE				Pn	Pn	15 38 18.8	+1.0
PCVE	Castro Verde	1.47	357	*e*P	Pn	15 38 18.8	+1.0
PCVE				*e*S	Sn	15 38 36.3	0.0
PCVE				*i* AML	AML	15 38 37.3	
PCVE				*i* AML	AML	15 38 37.3	
PCVE				*i* AML	AML	15 38 37.9	
MESJ	Messejana	1.69	353	*e*P	Pn	15 38 21.5	+0.8
MESJ				*e*S	Sn	15 38 40.8	-0.7
MESJ				IAML		15 38 42.5	
	comp=N,1.7nm,0.2s						
ESPR	Espera	1.83	67	Sn	Sn	15 38 43.9	-1.1
EMIN	Mina Concepcio	1.91	32	Pn	Pn	15 38 24.0	+0.4
EMIN	Mina Concepcio	1.91	32	⇑*i*IVmb_VC		15 38 27.4	
	comp=N,76nm,SNR=1.2						
EMIN				Sn	Sn	15 38 45.9	-0.8
PBAR	Barrancos	2.14	20	*e*P	Pn	15 38 27.6	+0.9
PBAR				*e*S	Sn	15 38 52.7	+0.3
PBAR				*i* AML	AML	15 39 09.9	
EVO	Evora	2.37	359	Sn	Sn	15 38 57.9	0.0
MOE	Montemor	2.38	353	*e*P	Pn	15 38 31.2	+1.2
MOE				*e*S	Sn	15 38 58.2	+0.1
MOE				*i* AML	AML	15 38 58.9	
MOE				*i* AML	AML	15 38 59.3	
MOE				*i* AML	AML	15 39 03.8	
EBAD	Badajoz	2.70	16	⇑*i*IVmb_VC		15 38 38.2	
	comp=N,84nm,SNR=1.5						
EBAD				Sg	Sn	15 39 04.5	-1.4
PARRA	Arraiolos	2.79	342	*e*P	Pn	15 38 34.7	-0.8
PARRA				*e*S	Sn	15 39 04.5	-3.5
PARRA				*i* AML	AML	15 39 05.4	
PARRA				*i* AML	AML	15 39 05.7	
PARRA				*i* AML	AML	15 39 09.6	
PMTG	Montargil	2.91	356	*e*P	Pn	15 38 38.7	+1.5
PMTG				*e*S	Sn	15 39 11.2	+0.2
PMTG				*i* AML	AML	15 39 12.4	
PMTG				*i* AML	AML	15 39 12.8	
PMTG				*i* AML	AML	15 39 12.8	
PSARD	Sardoal	3.44	357	*e*P	Pn	15 38 45.3	+0.9

WEL 08 15:44:37.2±0.7**, 44°S**±4°×**16°8E**±°**, h5**^{km}**, M3.7**/12**, ML3.9**/17**, MLv3.7**/12**, Error ellipse: s-maj=8.6km s-min=4.0km az=123.5, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSZ	Milford Sound	0.35	207	P	Pg	15 44 44.6	+0.6
MSZ				S	Sg	15 44 49.2	+0.7
NSBS	Neils Beach	0.52	45	P	Pg	15 44 46.9	-0.3
JCZ	Jackson Bay	0.54	58	P	Pg	15 44 47.3	-0.3
QTPS	Queenstown Pol	0.76	151	P	Pg	15 44 52.1	+0.3
QTPS				S	Sg	15 45 01.8	+0.1
WKZ	Wanaka	0.77	127	P	Pb	15 44 52.6	-0.5
MECS	Makarora Emerg	0.79	81	P	Pg	15 44 52.3	0.0
HDWS	Haast DOC Work	0.80	53	P	Pg	15 44 52.2	-0.5
MLZ	Mavora Lakes	1.00	181	P	Pg	15 44 56.4	0.0
EAZ	Earnscleugh	1.20	137	P	Pb	15 45 00.3	-0.1
DCZ	Deep Cove	1.31	212	P	Pn	15 45 01.0	-1.1
LBZ	Lake Benmore	1.46	92	P	Pn	15 45 04.4	+0.2
FOZ	Fox Glacier	1.46	56	P	Pb	15 45 04.6	-0.3
WHZ	Wether Hill Ro	1.53	185	P	Pn	15 45 05.2	-0.1
GCSZ	Gaunt Creek Bo	1.89	57	P	Pn	15 45 07.7	-2.5
TUZ	Tuapeka	1.90	147	P	Pb	15 45 11.6	-0.8
ODZ	Otahua Downs	1.90	112	P	Pn	15 45 10.9	+0.5
TMZ	Timaru	2.05	91	P	Pn	15 45 12.2	-0.2
RPZ	Rata Peaks	2.19	74	P	Pn	15 45 13.7	-0.6
ARCZ	Arundel	2.22	80	P	Pn	15 45 14.0	-0.7
WVZ	Waitaha Valley	2.28	56	P	Pn	15 45 12.7	-2.7
SYZ	Scrubby Hill	2.28	163	P	Pn	15 45 17.1	+1.6
HHSZ	Highcliff Hill	2.30	132	P	Pb	15 45 17.7	-1.6
APZ	The Paps	2.47	183	P	Pb	15 45 20.2	-1.9
MHCZ	Mount Hutt	2.60	73	P	Pn	15 45 18.4	-1.6
WACZ	Wakanui South	2.69	82	P	Pn	15 45 20.2	-0.8
INZ	Inchbonnie	2.90	57	P	Pn	15 45 21.5	-2.6
OXZ	Oxford	3.00	71	P	Pn	15 45 23.1	-2.3
MQZ	McQueen’s Vall	3.31	80	P	Pn	15 45 28.2	-1.5
LTZ	Lake Taylor	3.39	64	P	Pn	15 45 28.5	-2.2
DSZ	Denniston Nort	3.75	47	P	Pn	15 45 33.3	-2.4
GVZ	Greta Valley S	3.81	70	P	Pn	15 45 34.4	-2.2
THZ	Tophouse	4.35	55	P	Pn	15 45 42.1	-1.9
MRNZ	Matariki Terra	4.50	50	P	Pn	15 45 44.5	-1.5
QRZ	Quartz Range	4.79	44	P	Pn	15 45 47.5	-2.5
TKNZ	Takaka Hill	4.86	48	P	Pn	15 45 49.3	-1.7
NNZ	Nelson	4.97	53	P	Pn	15 45 50.9	-1.6
TUWZ	Tuamarina	5.17	57	P	Pn	15 45 55.6	+0.4
TCW	Tory Channel	5.50	57	P	Pn	15 45 59.8	0.0
DUWZ	D’Urville Isla	5.55	52	P	Pn	15 45 59.1	-1.4
HOWZ	Holdsworth Sta	6.44	60	P	Pn	15 46 16.9	+4.2
MRZ	Mangatainoka R	6.62	59	P	Pn	15 46 19.0	+3.9
NEZ	North Egmont	6.75	43	P	Pn	15 46 15.2	-1.8
VRZ	Vera Road	7.20	46	P	Pn	15 46 21.7	-1.3

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*IDC **08** 16:00:59.6±0.6, 9°.62N×126°.41E, h0^{km}, mb4.1/21, mbtmp4.1/22, ML4.0/1, MS3.5/15, Error ellipse: s-maj=27.2km s-min=12.6km az=75.0*

*NEIC **08** 16:01:05.8±2.0, 9°.90N±0°.07×126°.5E±0°.1, h35^{km}±2^{km}, mb4.5/18, Error ellipse: s-maj=21.3km s-min=6.1km az=62.0*

*DJA **08** 16:01:13.1±1.2, 9°N±22°×12°7E±°, h13^{km}±28^{km}, M4.8/7, mb4.7/7, mB5.2/2, MLv4.8/6, Mw(mB)4.6/2*

ISC 08 16:01:05.2±0.5**, 9°.79N**±0°.05×**126°.5E**±0°.1**, h35**^{km}**, n82, σ1**^{s}**48**/74**, mb4.3**/38**, MS3.6**/14**, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	2.86	199		Pn	16 01 50.0	+1.7
DAV	Davao City (W)	2.86	199	Pn	Pn	16 01 44.7	-3.6
	29nm,0.3s,baz=0.8,slow=3.3,SNR=6.7						
DAV				Sn	Sn	16 02 22.8	+1.3
	47nm,0.3s,baz=273,slow=23,SNR=5.7						
DAV				LR	LR	16 03 00.4	
	comp=Z,1µm,21.2s,baz=34,slow=45						
	78nm,0.5s						
DAV	Davao City (W)	2.86	199	P	Pn	16 01 51.0	+2.7
SGSI	Sangihe	6.14	189	P	Pn	16 02 35.7	+2.2
SGSI				S	Sn	16 03 40.5	-2.1
TGY	Tagaytay City	6.92	309	LR	LR	16 05 50.6	
	comp=Z,267nm,18.9s,baz=173,slow=42						
TNTI	Ternate	9.01	174	P	Pn	16 03 12.9	+0.1
KAPI	Kappang	16.18	205	LR	LR	16 11 19.8	
	comp=Z,82nm,19.4s,baz=59,slow=39						
KSM	Kuching	18.10	244		Pn	16 05 14.9	+0.9
GUMO	Guam	18.38	76	LR	LR	16 12 51.6	
	comp=Z,132nm,18.2s,baz=214,slow=38						
NJ2	Nanjing	23.25	343	*e*P	P	16 06 07.9	-1.6
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
JNU	Nakatsue	23.56	9	LR	LR	16 16 30.3	
	comp=Z,55nm,19.1s,baz=170,slow=39						
KNRA	Kununurra	25.41	175		P	16 06 30.7	+1.1
KNRA				IAmb	IAmb	16 06 48.9	
	comp=Z,15nm,0.8s						
KSAR	Wonju Array Be	27.55	2	P	P	16 06 45.6	-3.2
KSRS	Korea Array	27.57	2	P	P	16 06 50.3	+1.4
	comp=Z,1.0nm,0.8s,baz=169,slow=8.7,SNR=5.1						
	comp=Z,1.0nm,0.8s						
FITZ	Fitzroy Crossi	27.73	182	P	P	16 06 53.6	+3.1
CMAR	Chiang Mai Arr	28.04	291	P	P	16 06 49.3	-4.1
CMAR	Chiang Mai Arr	28.04	291	P	P	16 06 53.5	0.0
	comp=Z,1.8nm,0.8s,baz=100,slow=6.9,SNR=13						
	comp=Z,1.8nm,0.8s						
MJAR	Matsushiro Arr	28.67	20	LR	LR	16 18 26.4	
	comp=Z,113nm,19.2s,baz=182,slow=36						
PZH	PanZhiHua	28.71	309	P	P	16 06 59.1	-0.3
PZH				pmax	pmax		
	comp=Z,10.0nm,1.8s						
XAN	Xi'an	29.03	329	⇑P	P	16 07 02.0	0.0
XAN				pmax	pmax		
	comp=Z,11nm,0.8s						
XAN				pmax	pmax		
	comp=Z,150nm,5.1s						
HNS	HongShan	29.47	341	⇓P	P	16 07 08.0	+2.1
HNS				pmax	pmax		
	comp=Z,15nm,0.8s						
WRA	Warramunga Arr	30.54	165	P	P	16 07 13.1	-2.4
	comp=Z,0.4nm,0.6s,baz=345,slow=9.7,SNR=5.1						
	comp=Z,0.4nm,0.6s						
HHC	Hu-ho-hao-te	33.64	339	*e*P	P	16 07 42.3	-0.3
HHC				pmax	pmax		
	comp=Z,27nm,0.5s						
HHC				pmax	pmax		
	comp=Z,47nm,3.6s						
CN2	Changchun	33.89	359	*e*P	P	16 07 48.2	+3.6
CN2				*e*S	S	16 13 08.0	+1.2
CN2				LR	LR		
	comp=N,90nm,14.0s						
CN2				LR	LR		
	comp=E,60nm,14.0s						
CN2				LR	LR		
	comp=Z,80nm,16.0s						
ASAR	Alice Springs	34.03	168	P	P	16 07 43.8	-2.4
	comp=Z,0.3nm,0.4s,baz=354,slow=7.0,SNR=14						
ASAR				PcP	PcP	16 10 23.4	-0.2
	comp=Z,0.5nm,0.8s,baz=356,slow=2.5,SNR=4.4						
	comp=Z,0.3nm,0.4s						
USRK	Ussuriysk Ar.	34.61	7	P	P	16 07 52.1	+1.3
	comp=Z,1.5nm,0.8s,baz=183,slow=9.5,SNR=4.8						
	comp=Z,1.5nm,0.8s						
XLT	XiLinHaoTe	35.16	347	*e*P	P	16 07 57.4	+1.6
XLT				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA	Gaotai	37.90	326	*e*P	P	16 08 20.6	+1.4
GTA				sP	sP	16 08 32.1	+0.1
GTA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GTA				LR	LR		
	comp=N,130nm,13.4s						
GTA				LR	LR		
	comp=E,64nm,14.9s						
GTA				LR	LR		
	comp=Z,110nm,14.9s						
MORW	Morawa	39.93	194	P	P	16 08 35.9	-0.3
H11N1	WAKE ISLAND Hy	40.19	71	T	T	16 51 58.3	
	baz=265,slow=74,SNR=7.2						
H11N2	WAKE ISLAND Hy	40.20	71	T	T	16 51 58.8	
	baz=265,slow=74,SNR=6.2						
H11N3	WAKE ISLAND Hy	40.21	71	T	T	16 52 00.4	
	baz=265,slow=74,SNR=7.8						
HEH	HeiHe	40.34	1	*e*P	P	16 08 40.8	+1.5
FORT	Forrest	40.37	178	P	P	16 08 40.8	+1.1
SONM	Songino Array	41.54	340		P	16 08 47.7	-1.7
SONM				IAmb	IAmb	16 08 53.2	
	comp=Z,7.0nm,1.4s						
SONM	Songino Array	41.54	340	P	P	16 08 51.5	+2.1
	comp=Z,1.7nm,0.7s,baz=161,slow=9.3,SNR=9.1						
	comp=Z,1.7nm,0.7s						
BBOO	Buckleboo	43.34	168	P	P	16 09 03.7	-0.3
BBOO				IAmb	IAmb	16 09 35.3	
	comp=Z,36nm,1.5s						
NWAO	Narrogin (SRO)	43.39	191	P	P	16 09 03.8	-0.6
STKA	Stephens Creek	43.88	161	P	P	16 09 06.2	-2.2
STKA	Stephens Creek	43.88	161	P	P	16 09 07.3	-1.1
	comp=Z,1.7nm,0.6s,baz=354,slow=7.3,SNR=6.2						
	comp=Z,1.7nm,0.6s						
PALK	Pallekele	45.34	271	LR	LR	16 29 16.8	
	comp=Z,43nm,18.4s,baz=189,slow=38						
WMQ	Urumqi	47.73	322	*e*P	P	16 09 39.9	+1.1
WMQ				LR	LR		
	comp=N,180nm,17.7s						
WMQ				LR	LR		
	comp=Z,74nm,20.3s						
PETK	Petropavlovsk-	49.98	24	P	P	16 09 57.6	+1.8
	comp=Z,2.7nm,0.8s,baz=212,slow=7.2,SNR=7.4						
PETK				LR	LR	16 31 11.3	
	comp=Z,63nm,19.2s,baz=167,slow=36						
	comp=Z,2.7nm,0.8s						
TOO	Toolangi	50.37	160	P	P	16 10 00.0	+1.1
TOO				IAmb	IAmb	16 10 02.5	
	comp=Z,5.5nm,1.3s						
MKAR	Makanchi Array	52.54	323		P	16 10 15.1	0.0
MKAR	Makanchi Array	52.54	323	P	P	16 10 15.7	+0.6
	comp=Z,1.5nm,0.6s,baz=122,slow=8.0,SNR=12						
MKAR				PcP	PcP	16 11 24.8	-0.4
	comp=Z,0.9nm,0.6s,baz=110,slow=5.2,SNR=4.8						
	comp=Z,1.5nm,0.6s						
KSH	Kashi	53.72	312	P	P	16 10 26.6	+2.5
KSH				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ZALV	Zalesovo Beam	55.15	331	P	P	16 10 33.7	-0.3
	comp=Z,1.7nm,0.7s,baz=104,slow=6.3,SNR=5.8						
	comp=Z,1.7nm,0.7s						
KURK	Kurchatov	56.59	326		P	16 10 44.6	+0.2
KURK				IAmb	IAmb	16 10 57.3	
	comp=Z,4.5nm,0.8s						
KURBB	Kurchatov Arra	56.59	325	P	P	16 10 45.0	+0.6
	comp=Z,1.4nm,0.6s,baz=127,slow=6.9,SNR=18						
KURBB				LR	LR	16 38 21.7	
	comp=Z,38nm,18.1s,baz=172,slow=40						
	comp=Z,1.4nm,0.6s						
KBL	Kabul	57.79	305		P	16 10 50.2	-3.2
KBL				IAmb	IAmb	16 10 56.9	
	comp=Z,6.8nm,0.6s						
KK31	Karatay Array	58.74	315		P	16 10 59.1	-0.7
KK31				IAmb	IAmb	16 11 12.6	
	comp=Z,3.9nm,1.1s						
KKAR	Karatay Array	58.74	315		P	16 10 59.1	-0.7
KKAR	Karatay Array	58.74	315	P	P	16 10 59.1	-0.7
KKAR				IAmb	IAmb	16 11 12.6	
	comp=Z,4.1nm,1.1s						
BVAR	Borovoye Array	62.18	325	P	P	16 11 24.0	+1.0
	comp=Z,1.0nm,0.6s,baz=134,slow=6.9,SNR=8.5						
	comp=Z,1.0nm,0.6s						
AB31	Akbulak array	67.38	319	P	P	16 11 55.9	-1.0
ABKAR	Akbulak array	67.38	319		P	16 11 55.8	-1.2
KIRV	Kirov	74.97	328	LR	LR	16 49 13.0	
	comp=Z,49nm,19.0s,baz=81,slow=38						
KDAK	Kodiak Island	76.93	33	LR	LR	16 43 30.6	
	comp=Z,30nm,21.0s,baz=204,slow=33						
RAYN	Ar Rayn	77.96	292	P	P	16 12 59.8	-0.6
RAYN				IAmb	IAmb	16 13 12.7	
	comp=Z,2.6nm,0.7s						
BPAW	Bear Paw Mtn.	77.98	26	P	P	16 12 59.4	-0.3
BPAW				IAmb	IAmb	16 13 04.2	
	comp=Z,7.7nm,1.3s						
ILAR	Eielson Array	79.77	26	P	P	16 13 09.5	+0.1
	comp=Z,0.4nm,0.9s,baz=225,slow=6.7,SNR=4.1						
	comp=Z,0.4nm,0.9s						
SPITS	Spitsbergen Ar	84.52	349	P	P	16 13 34.8	+0.6
	comp=Z,1.9nm,0.6s,baz=63,slow=3.8,SNR=1.8						
	comp=Z,1.9nm,0.6s						
ARCES	ARCESS Array B	84.72	340	P	P	16 13 35.4	+0.1
	comp=Z,4.4nm,0.4s,baz=54,slow=6.2,SNR=3.9						
	comp=Z,4.4nm,0.4s						
BRTR	Keskin Array B	86.01	309	P	P	16 13 41.1	-1.4
	comp=Z,0.5nm,0.7s,baz=106,slow=4.5,SNR=4.3						
	comp=Z,0.5nm,0.7s						
FINES	FINESS Array B	86.42	332	P	P	16 13 43.5	-0.3
	comp=Z,3.5nm,0.7s,baz=76,slow=5.4,SNR=20						
FINES				LR	LR	16 54 27.8	
	comp=Z,40nm,18.1s,baz=359,slow=37						
	comp=Z,3.5nm,0.7s						
CSS	Mathiatis	87.04	305	P	P	16 13 47.4	-0.1
AK09	Malin Array Si	87.05	321	P	P	16 13 46.8	-0.4
AKASG	Malin Array Be	87.07	321	P	P	16 13 46.4	-0.9
	comp=Z,0.6nm,0.5s,baz=65,slow=5.3,SNR=5.8						
AKASG				LR	LR	16 53 49.8	
	comp=Z,24nm,19.9s,baz=54,slow=36						
	comp=Z,0.6nm,0.5s						
AK04	Malin Array Si	87.11	321	P	P	16 13 46.8	-0.6
AK06	Malin Array Si	87.11	321	P	P	16 13 47.2	-0.3
AK07	Malin Array Si	87.12	321	P	P	16 13 47.2	-0.3
AK22	Malin Array Si	87.16	321	P	P	16 13 47.2	-0.5
AK21	Malin Array Si	87.17	321	P	P	16 13 46.5	-1.2
PPT	Papeete	87.20	108	LR	LR	16 48 16.1	
	comp=Z,40nm,19.0s,baz=241,slow=32						
LUBAR	Lubar, Ukraine	88.16	320	P	P	16 13 51.8	-0.7
VNDA	Vanda	89.43	173	P	P	16 13 57.5	-0.3
	comp=Z,0.4nm,0.6s,baz=320,slow=6.8,SNR=5.3						
	comp=Z,0.4nm,0.6s						
HFS	Hagfors	92.57	332	P	P	16 14 12.8	-0.1
	comp=Z,2.0nm,0.6s,baz=64,slow=10,SNR=9.0						
	comp=Z,2.0nm,0.6s						
NB2	NORSAR Subarra	93.28	334	P	P	16 14 15.6	-0.6
	comp=Z,1.9nm,0.8s,baz=67,slow=4.6						
NOA	NORSAR Array B	93.28	334	P	P	16 14 15.3	-0.9
	comp=Z,1.0nm,0.8s,baz=65,slow=4.5,SNR=5.8						
NOA				LR	LR	17 00 47.9	
	comp=Z,22nm,18.5s,baz=25,slow=38						
	comp=Z,1.0nm,0.8s						
TXAR	Lajitas Array	117.96	49	PKP	PKPdf	16 19 49.0	0.0
	comp=Z,0.1nm,0.5s,baz=357,slow=3.6,SNR=1.4						
PLCA	Paso Flores	145.68	157	PKPbc	PKPdf	16 20 41.2	+0.9
	comp=Z,2.4nm,0.8s,baz=207,slow=6.1,SNR=4.5						

DJA 08 16:09:44.4±0.4**, 1°N**±2°×**12°7E**±°**, h159**^{km}±5^{km}**, M3.6**/12**, mb3.5**/2**, MLv3.6**/12**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.28	177	P	Pn	16 10 06.8	+0.8
SGSI	Sangihe	3.19	325	P	Pn	16 10 35.0	+0.5
SGSI				S	Sn	16 11 13.8	+0.3
SANI	Sanana	3.37	204	P	Pn	16 10 35.7	-1.1
KMSI	Cibinong	3.40	262	S	Sn	16 11 18.2	0.0
NLAI	Namlea	4.27	183	P	Pn	16 10 47.9	-0.5
LUWI	Luwuk	5.03	246	P	Pn	16 10 58.5	+0.1
	19nm,1.0s						

TRN 08 16:15:43.5, 15°.41N×61°.28W, h172^{km}**, MD3.5, Dominica., Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DSLB	Salisbury	0.14	281	*e*P	Pn	16 16 07.3	+0.9
MAGL	Barre de l’ile	0.53	0	*e*P	Pn	16 16 08.9	+1.4
MAGL				*e*S	Sn	16 16 26.7	+0.6

BIM	Bigot	0.91	167	*e*P	Pn	16 16 11.2	+1.4
BIM				*e*S	Sn	16 16 31.1	+1.0
SLBI	Saint Lucia, B	1.41	168	*e*S	Sn	16 16 36.5	-1.0
ANBD	Bethesda, Anti	1.69	344	*e*P	Pn	16 16 17.9	+1.2
ANBD				*e*S	Sn	16 16 41.9	-0.6
ANWB	Willy Bob	2.29	348	*e*P	Pn	16 16 24.3	+1.0
ANWB				*e*S	Sn	16 16 53.2	-1.2

WEL 08 16:18:33.0±0.7**,44°S**±4°×**16°8E**±°**,h5**^{km}**,M3.7**/19**, ML3.9**/16**,MLv3.7**/19**,Error ellipse: s-maj=6.8km s-min=3.3km az=122.6,confirmed,South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSZ	Milford Sound	0.38	208	P	Pg	16 18 40.7	+0.4
MSZ				S	Sg	16 18 45.8	+0.6
NSBS	Neils Beach	0.49	45	P	Pg	16 18 42.9	+0.5
NSBS				S	Sg	16 18 49.6	+0.7
JCZ	Jackson Bay	0.52	59	P	Pg	16 18 43.2	+0.3
JCZ				S	Sg	16 18 50.1	+0.5
MECS	Makarora Emerg	0.77	82	P	Pg	16 18 48.2	+0.5
QTPS	Queenstown Pol	0.77	153	P	Pg	16 18 48.2	+0.4
QTPS				S	Sg	16 18 57.8	-0.1
WKZ	Wanaka	0.77	129	P	Pb	16 18 48.7	-0.3
WKZ				S	Sg	16 18 58.8	+0.9
HDWS	Haast DOC Work	0.78	54	P	Pg	16 18 48.2	+0.3
MLZ	Mavora Lakes	1.02	182	P	Pg	16 18 52.6	0.0
EAZ	Earnscleugh	1.20	138	P	Pb	16 18 56.2	-0.1
DCZ	Deep Cove	1.34	213	P	Pn	16 18 57.3	-1.0
FOZ	Fox Glacier	1.44	56	P	Pn	16 18 58.2	-1.4
LBZ	Lake Benmore	1.44	92	P	Pb	16 19 00.4	+0.1
WHZ	Wether Hill Ro	1.56	186	P	Pn	16 19 01.3	-0.1
GCSZ	Gaunt Creek Bo	1.86	57	P	Pn	16 19 03.9	-1.7
ODZ	Otahua Downs	1.90	113	P	Pn	16 19 06.8	+0.8
TUZ	Tuapeka	1.91	148	P	Pb	16 19 08.0	-0.3
TMZ	Timaru	2.03	92	P	Pn	16 19 07.9	0.0
RPZ	Rata Peaks	2.17	74	P	Pn	16 19 10.0	+0.2
ARCZ	Arundel	2.20	81	P	Pn	16 19 10.4	+0.2
WVZ	Waitaha Valley	2.25	57	P	Pn	16 19 09.0	-1.8
SYZ	Scrubby Hill	2.30	163	P	Pn	16 19 12.9	+1.4
APZ	The Paps	2.49	183	P	Pb	16 19 16.3	-1.9
MHCZ	Mount Hutt	2.58	73	P	Pn	16 19 14.6	-0.9
WACZ	Wakanui South	2.67	83	P	Pn	16 19 16.3	-0.3
INZ	Inchbonnie	2.88	57	P	Pn	16 19 17.8	-1.6
OXZ	Oxford	2.97	71	P	Pn	16 19 19.3	-1.5
MQZ	McQueen's Vall	3.29	80	P	Pn	16 19 24.7	-0.5
LTZ	Lake Taylor	3.36	64	P	Pn	16 19 24.9	-1.3
DSZ	Denniston Nort	3.72	47	P	Pn	16 19 29.5	-1.6
GVZ	Greta Valley S	3.79	70	P	Pn	16 19 30.7	-1.3
THZ	Tophouse	4.32	55	P	Pn	16 19 38.4	-1.0
MRNZ	Matariki Terra	4.47	50	P	Pn	16 19 40.5	-0.9
QRZ	Quartz Range	4.76	44	P	Pn	16 19 43.8	-1.6
TKNZ	Takaka Hill	4.83	48	P	Pn	16 19 45.2	-1.2
NNZ	Nelson	4.94	53	P	Pn	16 19 47.4	-0.5
TUWZ	Tuamarina	5.14	57	P	Pn	16 19 51.0	+0.4
TCW	Tory Channel	5.47	57	P	Pn	16 19 55.3	+0.1
DUWZ	D'Urville Isla	5.52	52	P	Pn	16 19 55.3	-0.6
OGWZ	Otaki Gorge	6.25	58	P	Pn	16 20 05.9	0.0
HOWZ	Holdsworth Sta	6.42	60	P	Pn	16 20 12.0	+3.9
MRZ	Mangatainoka R	6.59	59	P	Pn	16 20 14.1	+3.5
NEZ	North Egmont	6.72	43	P	Pn	16 20 11.4	-1.1
PKE	Pukeiti	6.73	42	P	Pn	16 20 11.2	-1.3
WAZ	Wanganui	6.83	50	P	Pn	16 20 14.8	+1.0

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*IDC **08** 16:24:56.9±1.8,6°.11S×129°.48E,h0^{km},mb3.7/2, mbtmp3.9/5,ML4.2/3,Error ellipse: s-maj=83.7km s-min=25.4km az=76.0*

ISC 08 16:25:16.5±1.3**,6°.98S**±0°.10×**129°.7E**±0°.1**,h200**^{km}**,n11, σ3^{s}04**/13**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.89	122	P	Pn	16 25 51.6	-2.3
FAKI	Fak Fak	4.77	33	P	Pn	16 26 16.9	-11
DRS	Darwin Rock St	5.55	168	P	Pn	16 26 39.0	+1.0
MTN	Manton Dam	6.00	166	P	Pn	16 26 44.7	+0.9
SOEI	Soe	6.03	242	P	Pn	16 26 45.3	+1.0
KDU	Kakadu	6.31	154	P	Pn	16 26 48.1	+0.4
FITZ	Fitzroy Crossi	11.74	199	Pn	Pn	16 27 58.0	-0.1
	1.3nm,0.3s,baz=17,slow=8.9,SNR=35						
FITZ				Sn	Sn	16 30 04.6	-4.4
	1.7nm,0.3s,baz=244,slow=18,SNR=6.2						
	3.0nm,0.3s						
WRA	Warramunga Arr	13.66	161	Pn	Pn	16 28 22.8	+0.5
	1.1nm,0.3s,baz=339,slow=13,SNR=32						
WRA				Sn	S	16 30 52.1	-2.5
	1.2nm,0.3s,baz=331,slow=22,SNR=8.5						
	1.4nm,0.3s						
ASAR	Alice Springs	17.09	167	P	Pn	16 29 07.8	+3.9
	0.6nm,0.3s,baz=344,slow=9.3,SNR=65						
ASAR				S	S	16 32 16.6	+6.4
	0.5nm,0.4s,baz=358,slow=28,SNR=4.4						
	1.8nm,0.7s						
MKAR	Makanchi Array	68.03	327	P	P	16 35 53.0	-1.3
	0.3nm,0.4s,baz=109,slow=7.7,SNR=5.6						
	0.3nm,0.4s						
KURBB	Kurchatov Arra	72.33	329	P	P	16 36 19.3	-0.9
	0.7nm,0.8s,baz=139,slow=4.7,SNR=6.2						
	0.7nm,0.8s						

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*IDC **08** 16:29:04.2±2.0,6°.54S×130°.41E,h0^{km},mb3.9/3, mbtmp3.8/5,ML3.9/1,Error ellipse: s-maj=222.6km s-min=23.1km az=67.0*

ISC 08 16:29:16.7±1.4**,7°.3S**±0°.1×**129°.7E**±0°.2**,h100**^{km}**,n6, σ2^{s}49**/8**,mb3.8**/3**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	11.49	200	Sn	Sn	16 34 04.5	+0.4
	0.5nm,0.3s,baz=104,slow=12,SNR=3.1						
WRA	Warramunga Arr	13.39	161	Pn	Pn	16 32 23.1	+0.3
	0.6nm,0.4s,baz=340,slow=14,SNR=1.5						
WRA				Sn	Sn	16 34 47.8	-2.4
	1.1nm,0.3s,baz=336,slow=22,SNR=7.8						
ASAR	Alice Springs	16.81	167	P	P	16 33 09.8	+3.1
	0.4nm,0.3s,baz=341,slow=9.8,SNR=7.6						
ASAR				S	Sn	16 36 09.7	-3.2
	0.9nm,0.6s,baz=346,slow=26,SNR=5.4						
	1.1nm,0.5s						
STKA	Stephens Creek	26.89	157	P	P	16 34 49.8	+1.5
	1.7nm,0.5s,baz=333,slow=9.1,SNR=5.6						
	1.7nm,0.5s						
MKAR	Makanchi Array	68.29	327	P	P	16 40 06.1	-1.0
	0.9nm,0.7s,baz=114,slow=9.2,SNR=6.0						
	0.9nm,0.7s						
KURBB	Kurchatov Arra	72.58	329	P	P	16 40 31.6	-1.4
	0.3nm,0.5s,baz=127,slow=5.3,SNR=5.3						
	0.3nm,0.5s						

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*IDC **08** 16:31:28.6±1.0,10°.03N×126°.34E,h0^{km},mb3.9/13, mbtmp3.9/14,ML4.3/1,MS3.4/5,Error ellipse: s-maj=33.1km s-min=20.9km az=89.0*

*NEIC **08** 16:31:32.4±2.3,9°.77N±0°.07×126°.4E±0°.2,h35^{km}±1^{km}, mb4.5/11,Error ellipse: s-maj=30.2km s-min=11.6km az=96.0*

ISC 08 16:31:32.2±0.5**,9°.79N**±0°.07×**126°.4E**±0°.2**,h35**^{km}**,n37, σ1^{s}59**/32**,mb4.0**/18**,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	2.83	197		Pn	16 32 14.9	-0.1
DAV	Davao City (W)	2.83	197	Pn	Pn	16 32 17.8	+2.8
	35nm,0.3s,baz=55,slow=13,SNR=5.8						
DAV				Sn	Sn	16 32 58.6	+11
	51nm,0.3s,baz=299,slow=23,SNR=7.9						
DAV				LR	LR	16 33 27.0	
	comp=Z,609nm,21.4s,baz=34,slow=39						
	86nm,0.4s						
TGY	Tagaytay City	6.87	309	LR	LR	16 36 25.7	
	comp=Z,189nm,19.2s,baz=249,slow=45						
LUWI	Luwuk	11.36	199	Pn	Pn	16 34 13.4	+1.3
FAKI	Fak Fak	13.90	155	P	P	16 34 53.8	-0.8
YULB	Yu-li	14.38	341	Pn	Pn	16 34 46.8	-6.6
TPUB	Ta-pu	14.53	338		Pn	16 34 49.0	-6.4
SAUI	Saumlaki	18.32	164	P	P	16 35 41.8	-1.7
GUMO	Guam	18.45	76	LR	LR	16 43 09.4	
	comp=Z,88nm,18.5s,baz=204,slow=38						
SOEI	Soe	19.54	186	P	Pn	16 35 58.5	0.0
SOEI				IAmb	IAmb	16 36 13.9	
	comp=Z,25nm,0.8s						
MTN	Manton Dam	22.97	168	P	P	16 36 34.0	+0.2
MTN				IAmb	IAmb	16 36 52.4	
	comp=Z,13nm,1.1s						
KNRA	Kununurra	25.41	175	P	P	16 36 56.4	-0.2
KNRA				IAmb	IAmb	16 37 15.4	
	comp=Z,12nm,0.9s						
KSRS	Korea Array	27.57	3	P	P	16 37 16.3	+0.4
	comp=Z,0.9nm,1.0s,baz=171,slow=8.6,SNR=2.5						
	comp=Z,0.9nm,1.0s						
FITZ	Fitzroy Crossi	27.73	182	P	P	16 37 17.1	-0.4
CMAR	Chiang Mai Arr	27.97	291	P	P	16 37 20.8	+0.9
	comp=Z,1.2nm,0.7s,baz=108,slow=7.3,SNR=7.1						
	comp=Z,1.2nm,0.7s						
MBWA	Marble Bar	31.45	192	P	P	16 37 47.1	-3.5
MBWA				IAmb	IAmb	16 38 01.2	
	comp=Z,5.1nm,0.7s						
ASAR	Alice Springs	34.05	168	P	P	16 38 17.7	+4.4
	comp=Z,0.4nm,0.5s,baz=341,slow=8.2,SNR=2.4						
	comp=Z,0.4nm,0.5s						
USRK	Ussuriysk Ar.	34.62	7	P	P	16 38 16.0	-1.9
	comp=Z,0.6nm,0.8s,baz=214,slow=13,SNR=4.1						
	comp=Z,0.6nm,0.8s						
ASAJ	Asahikawa	36.96	19	LR	LR	16 53 36.6	
	comp=Z,44nm,19.2s,baz=180,slow=36						
MORW	Morawa	39.91	194	P	P	16 39 02.1	-0.9
SONM	Songino Array	41.51	340	P	P	16 39 17.5	+1.3
	comp=Z,1.0nm,0.6s,baz=158,slow=8.6,SNR=5.7						
	comp=Z,1.0nm,0.6s						
BBOO	Buckleboo	43.35	168	P	P	16 39 28.8	-2.3
BBOO				IAmb	IAmb	16 39 42.3	
	comp=Z,10nm,0.9s						
STKA	Stephens Creek	43.91	161	P	P	16 39 32.8	-2.8
STKA				IAmb	IAmb	16 39 33.0	
	comp=Z,6.7nm,0.9s						
PETK	Petropavlovsk-	50.01	24	P	P	16 40 22.9	-0.1
PETK	Petropavlovsk-	50.01	24	P	P	16 40 23.8	+0.7
	comp=Z,1.1nm,0.8s,baz=215,slow=5.5,SNR=4.4						
	comp=Z,1.1nm,0.8s						
YAK	Yakutsk	52.20	2	P	P	16 40 40.0	+0.7
MKAR	Makanchi Array	52.49	323	P	P	16 40 42.3	+0.4
MKAR	Makanchi Array	52.49	323	P	P	16 40 41.9	+0.1
	comp=Z,1.1nm,0.6s,baz=121,slow=7.4,SNR=6.2						
	comp=Z,1.1nm,0.6s						
ZALV	Zalesovo Beam	55.11	331	P	P	16 41 00.7	-0.1
	comp=Z,1.0nm,0.6s,baz=107,slow=5.0,SNR=4.4						
	comp=Z,1.0nm,0.6s						
KURK	Kurchatov	56.54	326	P	P	16 41 11.3	+0.2
KURBB	Kurchatov Arra	56.55	326	P	P	16 41 11.5	+0.3
	comp=Z,1.0nm,0.6s,baz=124,slow=6.9,SNR=14						
	comp=Z,1.0nm,0.6s						
KKAR	Karatay Array	58.69	315	P	P	16 41 25.6	-0.8
ABKAR	Akbulak array	67.33	319	P	P	16 42 22.9	-0.8
FINES	FINESS Array B	86.38	332	P	P	16 44 10.5	-0.2
	comp=Z,2.0nm,0.6s,baz=70,slow=4.7,SNR=17						
	comp=Z,2.0nm,0.6s						
AKASG	Malin Array Be	87.03	321	P	P	16 44 13.1	-1.0
	comp=Z,0.9nm,0.7s,baz=66,slow=5.4,SNR=4.1						
	comp=Z,0.9nm,0.7s						
HFS	Hagfors	92.54	332	P	P	16 44 39.2	-0.6
	comp=Z,1.7nm,0.6s,baz=94,slow=6.1,SNR=8.2						
HFS				LR	LR	17 30 34.0	
	comp=Z,25nm,18.3s,baz=263,slow=38						
	comp=Z,1.7nm,0.6s						
YKA	Yellowknife Ar	94.13	24	P	P	16 44 49.1	+2.0
	comp=Z,0.2nm,0.5s,baz=311,slow=6.1,SNR=3.7						
	comp=Z,0.2nm,0.5s						

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*NEIC **08** 16:58:35.7±2.0,37°.42N±0°.07×71°.9E±0°.1,h130^{km}±12^{km}, mb4.4/5,Error ellipse: s-maj=12.1km s-min=10.1km az=72.0*

*NNC **08** 16:58:37.1±4.6,37°.91N×71°.57E,h0^{km},mb4.7,mpv4.4, Error ellipse: s-maj=37.0km s-min=30.6km az=162.0*

*IDC **08** 16:58:37.5±6.3,37°.57N×71°.93E,h128^{km}±46^{km},mb3.5/6, mbtmp3.9/10,Error ellipse: s-maj=69.1km s-min=38.2km az=147.0*

ISC 08 16:58:34.1±0.7**,37°.31N**±0°.05×**71°.99E**±0°.07**,h130**^{km}**,n57, σ1^{s}70**/65**,mb4.1**/8**,5C-1D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	2.17	356		Pn	16 59 10.6	+0.1
SIMJ	Simiganj	2.72	301		Pn	16 59 15.1	-2.1
BTK	Batken	2.90	342		Pn	16 59 19.7	+0.3
KBL	Kabul	3.66	222		Pn	16 59 30.6	+1.1
NIL	Nilore	3.79	164		Pn	16 59 34.3	+3.2
ARSB	Arslanbob	4.08	11		Pn	16 59 34.8	-0.2
AML	Almayashu	4.99	15	P	Pn	16 59 47.8	+0.4
	SNR=94						
NRN	Naryn	5.16	36		Pn	16 59 49.8	+0.3
JMU	Jammu	5.16	152	*e*P	Pn	16 59 50.1	+0.7
JMU				*e*S	Sn	17 00 45.2	-2.7
JMU				IAML		17 00 51.1	
	comp=E,376nm,0.4s						
UCH	Uchtor	5.28	21	P	Sn	17 00 49.2	-2.2
	SNR=15						
MRKS	Merke	5.51	9	Pg	Pn	16 59 54.6	+0.5
	comp=E,30nm,0.4s						
MRKS				Lg	Lg	17 00 53.7	
	comp=E,68nm,0.4s						
EKS2	Erkin-Say	5.52	14	P	Pn	16 59 55.0	+0.8
	SNR=35						
DZA	Taraz	5.60	355	Pg	Pn	16 59 55.4	+0.3
	comp=E,126nm,0.3s						
DZA				Lg	Lg	17 00 55.1	
	comp=E,140nm,0.3s						
AAK	Ala-Archa	5.66	19	P	Pn	16 59 57.2	+1.1
	SNR=32						
AAK	Ala-Archa	5.66	19	P	Pn	16 59 57.2	+1.1
	comp=E,37nm,0.4s,baz=188,slow=6.2,SNR=78						
AAK				S	Sn	17 00 58.3	-1.8
	comp=E,8.2nm,0.5s,baz=201,slow=15,SNR=3.6						
AAK	Ala-Archa	5.66	19	⇑Pn	Pn	16 59 57.0	+0.9
	comp=E,3.5nm,0.4s						
AAK				⇓Sn	Sn	17 00 58.7	-1.4
	comp=E,2.4nm,0.5s						
THN	Thein Dam	5.75	147	*e*P	Pn	16 59 59.1	+2.0
THN				*e*S	Sn	17 01 00.4	-1.6
THN				IAML		17 01 06.0	
	comp=E,403nm,0.4s						
KBK	Karagaybulak	5.80	22	P	Pn	16 59 59.4	+1.4
	SNR=8.5						
FRU1	Bishkek	5.86	19		Pn	16 59 59.5	+0.8
KK31	Karatay Array	5.90	349		Pn	16 59 58.5	-0.6
KK31	Karatay Array	5.90	349	Pn	Pn	16 59 58.5	-0.6
	comp=E,35nm,0.5s,baz=176,slow=12,SNR=335						
KK31				⇑Sn	Sn	17 01 00.0	-5.6
	comp=E,15nm,0.3s,baz=176,slow=22						
KKAR	Karatay Array	5.90	349		Pn	16 59 58.5	-0.7
KKAR	Karatay Array	5.90	349		Pn	16 59 58.4	-0.7
ULHL	Ulahol	5.92	32	P	Pn	17 00 00.8	+1.2
	SNR=6.2						
BOOM	Boomskoye usch	6.00	29	Pn	Pn	17 00 01.8	+1.2
CHMS	Chumysh	6.06	20	P	Pn	17 00 02.3	+0.9
	SNR=43						
CHMS	Chumysh	6.06	20	⇑P	Pn	17 00 01.8	+0.4
	comp=E,44nm,0.8s						
CHMS				⇑S	Sn	17 01 07.5	-2.1
	comp=E,11nm,0.6s						
DHRM	DHARAMSHALA	6.17	144	*e*P	Pn	17 00 04.4	+1.4
DHRM				*e*S	Sn	17 01 09.6	-2.9
DHRM				IAML		17 01 12.5	
	comp=E,422nm,0.3s						
DHRM				IAML		17 01 13.9	
	comp=N,413nm,0.4s						
TKM2	Tokmak 2	6.25	25	P	Pn	17 00 05.2	+1.1
	SNR=30						
TKM2	Tokmak 2	6.25	25	⇑P	Pn	17 00 05.0	+1.0
	comp=N,12nm,0.6s						
USP	Ospenovka	6.25	17	P	Pn	17 00 04.2	+0.2
	SNR=16						
TARG	Taragay, Kyrgy	6.30	44	Pn	Pn	17 00 06.7	+1.8
KST	Kastek	6.48	27	Pg	Pn	17 00 08.4	+1.2
	comp=N,5.5nm,0.4s						
KST				Lg	Lg	17 01 18.0	
	comp=N,7.9nm,0.8s						
SMLA	Simla	7.50	144	*e*P	Pn	17 00 22.0	+1.2
SMLA				*e*S	Sn	17 01 40.1	-4.3
SMLA				IAML		17 01 43.7	
	comp=E,433nm,0.3s						
KLP	Kalpa	7.74	136	*e*P	Pn	17 00 24.5	+0.2
KLP				*e*S	Sn	17 01 44.7	-5.9
KLP				IAML		17 01 53.5	
	comp=E,468nm,0.2s						
MAKZ	Makanchi	12.04	35	Pn	Pn	17 01 21.4	+0.1
MKAR	Makanchi Array	12.17	36	P	Pn	17 01 23.7	+0.7
	comp=E,1.9nm,0.9s,baz=223,slow=14,SNR=6.5						
KURBB	Kurchatov Arra	14.11	17	P	Pn	17 01 45.2	-2.7
	comp=E,1.0nm,0.9s,baz=205,slow=11,SNR=4.8						
AB31	Akbulak array	14.80	328		Pn	17 01 54.2	-2.4
AB31	Akbulak array	14.80	328	P	Pn	17 01 56.6	0.0
	comp=E,0.7nm,0.3s,baz=142,slow=12,SNR=44						
ABKAR	Akbulak array	14.80	328	Pn	Pn	17 01 53.8	-2.8
EVN	Everest	15.57	123		Pn	17 02 07.2	+0.1
EVN				IAmb	IAmb	17 02 20.4	
	comp=Z,17nm,0.9s						
BVAR	Borovoye Array	15.76	356	P	Pn	17 02 07.5	-1.1
	comp=Z,0.9nm,0.4s						
ZAA0	Zalesovo Array	18.85	24	P	P	17 02 41.8	-2.0
ZALV	Zalesovo Beam	18.85	24	P	P	17 02 45.1	+1.3
ZALV	Zalesovo Beam	18.85	24	P	P	17 02 44.8	+1.0
	comp=Z,2.1nm,0.5s,baz=230,slow=11,SNR=11						
ARTI	Arti	21.16	339	P	P	17 03 09.6	+0.9
ARTI				IAmb	IAmb	17 03 10.1	
	comp=Z,6.8nm,0.4s						
BRTR	Keskin Array B	29.96	287	P	P	17 04 32.3	+2.1
	comp=Z,0.3nm,0.6s,baz=111,slow=8.0,SNR=1.6						
	comp=Z,0.3nm,0.6s						
AKASG	Malin Array Be	33.07	308	P	P	17 04 58.9	+1.8
	comp=Z,0.1nm,0.3s,baz=114,slow=8.3,SNR=3.0						
	comp=Z,0.1nm,0.3s						
AKAS	Kas	33.77	281	P	P	17 05 03.8	+0.3
FIA1	FINESS Array S	37.27	325	P	P	17 05 34.4	+1.5
FIA1				IAmb	IAmb	17 05 36.0	
	comp=Z,5.8nm,0.9s						
FINES	FINESS Array B	37.27	325	P	P	17 05 34.2	+1.4
FINES	FINESS Array B	37.27	325	P	P	17 05 34.6	+1.7
	comp=Z,1.1nm,0.3s,baz=118,slow=8.9,SNR=24						
	comp=Z,1.1nm,0.3s						
KEV	Kevo	40.35	338	P	P	17 05 59.5	+1.1
ARCES	ARCESS Array B	40.71	337	P	P	17 06 03.1	+1.6
	comp=Z,3.8nm,0.4s,baz=117,slow=7.8,SNR=1.3						
	comp=Z,3.8nm,0.4s						
HFS	Hagfors	42.93	321	P	P	17 06 21.2	+1.7
	comp=Z,1.8nm,0.4s,baz=97,slow=11,SNR=15						
	comp=Z,1.8nm,0.4s						
NOA	NORSAR Array B	44.22	322	P	P	17 06 31.3	+1.4
	comp=Z,0.4nm,0.5s,baz=94,slow=7.7,SNR=3.4						
	comp=Z,0.4nm,0.5s						

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*IDC **08** 16:59:28.3±4.2,1°.58N×127°.54E,h123^{km}±40^{km},mb3.6/10, mbtmp4.0/12,Error ellipse: s-maj=35.3km s-min=12.8km az=74.0*

*NEIC **08** 16:59:28.9±1.9,1°.51N±0°.10×127°.4E±0°.1,h129^{km}±8^{km}, mb4.1/11,Error ellipse: s-maj=17.7km s-min=12.3km az=53.0*

*DJA **08** 16:59:28.3±0.4,2°N±4°×12°7E±°,h117^{km}±8^{km},M4.2/13, mB4.9/4,mb4.4/6,MLv4.1/13,Mw(mB)4.2/4*

ISC 08 16:59:28.3±0.6**,1°.57N**±0°.07×**127°.40E**±0°.09**,h128**^{km}**,n43, σ1^{s}32**/43**,mb4.0**/16**,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.79	182		Pn	16 59 49.5	+0.3
TNTI	Ternate	0.79	182	P	Pn	16 59 49.5	+0.3
SGSI	Sangihe	2.81	318	P	Pn	17 00 10.7	-1.8
KMSI	Cibinong	3.56	254	P	Pn	17 00 22.5	+0.4
SANI	Sanana	3.86	201	P	Pn	17 00 25.8	-0.4
SWI	Sorong	4.55	122	P	Pn	17 00 36.3	+0.9
NLAI	Namlea	4.78	184	P	Pn	17 00 39.5	+1.0
LUWI	Luwuk	5.30	241		Pn	17 00 44.7	-0.7
LUWI	Luwuk	5.30	241	P	Pn	17 00 45.1	-0.3
	1µm55nm,1.1s						
APSI	Ampana	6.25	247	P	Pn	17 00 58.2	0.0
	0.4nm908nm33nm,0.5s						
FAKI	Fak Fak	6.59	133	Pn	Pn	17 01 05.4	+2.7
FAKI	Fak Fak	6.59	133	P	Pn	17 01 05.4	+2.7
	0.1nm26nm,0.8s						
TOLI2	Tolitoli	6.63	266		Pn	17 01 03.0	-0.3
TTSI	Tana Toraja	8.85	239	P	Pn	17 01 33.4	+0.1
	569nm39nm,0.7s						
BAKI	Biak	9.13	107	P	Pn	17 01 36.9	-0.1
BNSI	Bone	9.39	231	P	Pn	17 01 41.1	+0.5
SPSI	Sidrap Palu	9.40	234	P	Pn	17 01 41.9	+1.3
KAPI	Kappang	10.05	229	P	Pn	17 01 52.1	+2.7
	5.6nm,0.4s,baz=22,slow=7.7,SNR=5.7						
SOEI	Soe	11.67	195	Pn	Pn	17 02 07.9	-3.2
MTN	Manton Dam	14.79	166	Pn	Pn	17 02 50.0	-1.2
KNRA	Kununurra	17.19	176	P	P	17 03 18.4	-1.9
KNRA				IAmb	IAmb	17 03 36.9	
	comp=Z,6.3nm,0.9s						
FITZ	Fitzroy Crossi	19.62	185	P	P	17 03 46.3	-0.6
FITZ	Fitzroy Crossi	19.62	185	P	P	17 03 46.3	-0.6
	comp=Z,1.8nm,0.6s,baz=22,slow=9.1,SNR=6.6						
COEN	Coen	21.96	135	P	P	17 04 10.5	-1.6
WB0	Warramunga Arr	22.29	162	P	P	17 04 15.0	-0.2
WB0				IAmb	IAmb	17 04 15.7	
	comp=Z,7.4nm,0.9s						
WRAB	Tennant Creek	22.43	163	P	P	17 04 15.6	-1.1
WRAB				IAmb	IAmb	17 04 17.0	
	comp=Z,5.9nm,0.5s						
WRA	Warramunga Arr	22.43	163	P	P	17 04 15.3	-1.5
WRA	Warramunga Arr	22.43	163	P	P	17 04 16.4	-0.4
	comp=Z,3.7nm,0.4s,baz=340,slow=10,SNR=98						
	comp=Z,3.7nm,0.4s						
WR8	Warramunga Arr	22.50	162	P	P	17 04 16.9	-0.5
WR8				IAmb	IAmb	17 04 17.7	
	comp=Z,5.9nm,0.4s						
TPUB	Ta-pu	22.58	344	P	P	17 04 15.6	-2.6
TPUB				IAmb	IAmb	17 04 32.5	
	comp=Z,13nm,1.1s						
UBPT	Khong Chiam	25.57	303	P	P	17 04 45.6	0.0
UBPT				IAmb	IAmb	17 04 49.9	
	comp=Z,3.8nm,1.0s						
AS31	Alice Springs	25.87	166	P	P	17 04 46.4	-1.9
AS31				IAmb	IAmb	17 04 56.0	
	comp=Z,1.6nm,1.1s						
ASAR	Alice Springs	25.87	166	P	P	17 04 47.7	-0.6
ASAR	Alice Springs	25.87	166	P	P	17 04 48.3	+0.1
	comp=Z,1.0nm,0.5s,baz=345,slow=7.7,SNR=40						
	comp=Z,1.0nm,0.5s						
KSRS	Korea Array	35.72	1	P	P	17 06 15.2	+0.6
	comp=Z,0.6nm,0.5s,baz=176,slow=9.5,SNR=7.2						
	comp=Z,0.6nm,0.5s						
STKA	Stephens Creek	35.88	159	P	P	17 06 16.6	+0.5
STKA	Stephens Creek	35.88	159	P	P	17 06 16.8	+0.7
	comp=Z,5.4nm,0.4s,baz=341,slow=8.1,SNR=17						
	comp=Z,5.4nm,0.4s						
MJAR	Matsushiro Arr	36.21	15	P	P	17 06 18.6	-0.2
	comp=Z,0.8nm,0.7s,baz=175,slow=9.4,SNR=2.6						
	comp=Z,0.8nm,0.7s						
MKAR	Makanchi Array	59.70	326	P	P	17 09 20.2	+0.8
	comp=Z,0.6nm,0.5s,baz=118,slow=7.9,SNR=12						
	comp=Z,0.6nm,0.5s						
KURBB	Kurchatov Arra	63.91	328	P	P	17 09 47.8	+0.3
	comp=Z,0.5nm,0.5s,baz=127,slow=6.1,SNR=7.6						
	comp=Z,0.5nm,0.5s						
VNDA	Vanda	81.21	173	P	P	17 11 29.5	+0.1
	comp=Z,0.4nm,0.5s,baz=342,slow=5.5,SNR=5.2						
	comp=Z,0.4nm,0.5s						
KBZ	Khabaz	84.94	314	P	P	17 11 51.2	+2.0
	comp=Z,1.5nm,0.5s,baz=18,slow=7.1,SNR=4.2						
	comp=Z,1.5nm,0.5s						
QSPA	South Pole Qui	91.49	180	P	P	17 12 21.3	+1.2
	comp=Z,1.3nm,1.1s,baz=177,slow=0.8,SNR=7.1						
	comp=Z,1.3nm,1.1s						

IDC 08 17:13:18.0±9.2**,30°.51N**×**143°.75E,h0**^{km}**,mb3.3**/2**, mbtmp3.3**/3**,ML2.5**/1**,Error ellipse: s-maj=339.9km s-min=35.8km az=70.0,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	Matsushiro Arr	7.59	324	Pn	Pn	17 15 09.4	-0.5
	0.1nm,0.3s,baz=146,slow=12,SNR=11						
	0.8nm,0.4s						
WRA	Warramunga Arr	50.97	191	P	P	17 22 20.7	-0.7
	0.4nm,0.7s,baz=14,slow=8.1,SNR=4.8						
	0.4nm,0.7s						
ASAR	Alice Springs	54.69	191	P	P	17 22 49.6	+0.7
	0.2nm,0.8s,baz=12,slow=6.4,SNR=1.5						
	0.2nm,0.8s						

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*IDC **08** 17:19:45.9±1.3,1°.00S×129°.83E,h0^{km},mb3.8/3, mbtmp3.8/5,ML3.4/2,MS3.1/3,Error ellipse: s-maj=67.5km s-min=21.2km az=84.0*

*DJA **08** 17:19:47.0±0.7, 1°S±2°×12°9E±°, h11^{km}±5^{km}, M3.7/11, MLv3.7/11*

ISC 08 17:19:50.3±1.2**, 0°.98S**±0°.05×**128°.85E**±0°.05**, h51**^{km}±20^{km}**, n16, **σ**1^s.47**/18**, mb3.9**/3**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.28**	**320**	P	**Pn**	**17 20 24.9**	**-0.6**
TNTI				S	**Sn**	**17 20 53.1**	**+0.7**
MSAI	**Masohi**	**2.35**	**178**	P	**Pn**	**17 20 24.7**	**-1.8**
MSAI				S	**Sn**	**17 20 55.2**	**+1.0**
SWI	**Sorong**	**2.42**	**87**	P	**Pn**	**17 20 26.5**	**-0.8**
SWI				S	**Sn**	**17 20 57.8**	**+2.1**
AAI	**Ambon**	**2.77**	**194**	P	**Pn**	**17 20 31.6**	**-0.6**
NLAI	**Namlea**	**2.85**	**218**	P	**Pn**	**17 20 31.7**	**-1.5**
NLAI				S	**Sn**	**17 21 08.0**	**+1.7**
SANI	**Sanana**	**3.05**	**250**	P	**Pn**	**17 20 34.9**	**-1.1**
SANI				S	**Sn**	**17 21 12.4**	**+1.1**
BNDI	**Bandanaira**	**3.68**	**163**	P	**Pn**	**17 20 44.2**	**-0.4**
BNDI				S	**Sn**	**17 21 28.6**	**+1.8**
FAKI	**Fak Fak**	**3.91**	**120**	P	**Pn**	**17 20 45.8**	**-2.0**
TGY	**Tagaytay City**	**16.91**	**333**	LR	LR	17 31 24.7	
	comp=Z,36nm,18.4s,baz=190,slow=40						
FITZ	**Fitzroy Crossi**	**17.30**	**190**	P	**P**	**17 23 50.2**	**+1.0**
	0.1nm,0.3s,baz=24,slow=10.0,SNR=0.9						
	1.1nm,0.8s						
WRA	**Warramunga Arr**	**19.60**	**164**	P	**P**	**17 24 12.7**	**-1.8**
	0.2nm,0.3s,baz=346,slow=12,SNR=10.0						
	4.3nm,0.9s						
ASAR	**Alice Springs**	**23.08**	**168**	P	**P**	**17 24 51.9**	**+0.1**
	4.9nm,0.9s,baz=345,slow=12,SNR=21						
	4.9nm,0.9s						
NWAO	**Narrogin (SRO)**	**33.61**	**198**	LR	LR	17 42 33.5	
	comp=Z,64nm,18.6s,baz=266,slow=40						
JNU	**Nakatsue**	**33.97**	**3**	LR	LR	17 40 00.1	
	comp=Z,28nm,18.9s,baz=134,slow=36						
MJAR	**Matsushiro Arr**	**38.33**	**12**	P	**P**	**17 27 06.2**	**0.0**
	1.9nm,0.9s,baz=182,slow=10.0,SNR=4.7						
	1.9nm,0.9s						
KURBB	**Kurchatov Arra**	**66.82**	**328**	P	P	17 30 43.6	+7.0
	0.4nm,0.6s,baz=125,slow=6.1,SNR=4.9						
	0.4nm,0.6s						

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*WEL **08** 17:21:55.0±0.7, 44°S±4°×16°8E±°, h5^{km}, M3.3/11, ML3.4/13, MLv3.3/11, Error ellipse: s-maj=8.1km s-min=3.4km az=126.9, confirmed*

*NOU **08** 17:21:56.2, 44°.20S×168°.19E, h9^{km}, MLv3.7/8, South Island, New Zealand*

ISC 08 17:21:54.7±1.1**, 44°.32S**±0°.04×**168°.11E**±0°.05**, h10**^{km}**, n42, **σ**0^s.75**/46**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSZ	**Milford Sound**	**0.38**	**200**	P	**Pg**	**17 22 02.9**	**+0.7**
MSZ				S	**Sg**	**17 22 07.9**	**+0.7**
NSBS	**Neils Beach**	**0.51**	**51**	P	**Pg**	**17 22 05.1**	**+0.4**
NSBS				S	**Sg**	**17 22 12.0**	**+0.7**
JCZ	**Jackson Bay**	**0.54**	**63**	P	**Pg**	**17 22 05.3**	**0.0**
JCZ	**Jackson Bay**	**0.54**	**63**	P	**Pg**	**17 22 05.3**	**0.0**
JCZ				S	**Sg**	**17 22 12.3**	**-0.2**
HDWS	**Haast DOC Work**	**0.80**	**57**	P	**Pg**	**17 22 10.3**	**+0.1**
MECS	**Makarora Emerg**	**0.81**	**84**	P	**Pg**	**17 22 10.4**	**+0.1**
QTPS	**Queenstown Pol**	**0.81**	**151**	P	**Pg**	**17 22 10.3**	**-0.1**
WKZ	**Wanaka**	**0.82**	**128**	P	**Pb**	**17 22 10.8**	**-0.3**
WKZ				S	**Sg**	**17 22 21.0**	**-0.3**
MLZ	**Mavora Lakes**	**1.05**	**180**	P	**Pg**	**17 22 14.7**	**-0.1**
EAZ	**Earnscleugh**	**1.25**	**137**	P	**Pg**	**17 22 18.5**	**-0.2**
DCZ	**Deep Cove**	**1.33**	**210**	P	**Pn**	**17 22 19.4**	**+0.1**
FOZ	**Fox Glacier**	**1.46**	**58**	P	**Pn**	**17 22 20.3**	**-0.8**
LBZ	**Lake Benmore**	**1.49**	**93**	P	**Pb**	**17 22 22.6**	**+0.2**
WHZ	**Wether Hill Ro**	**1.58**	**184**	P	**Pb**	**17 22 23.8**	**-0.1**
GCSZ	**Gaunt Creek Bo**	**1.89**	**59**	P	**Pn**	**17 22 26.1**	**-1.0**
ODZ	**Otahua Downs**	**1.95**	**113**	P	**Pb**	**17 22 29.0**	**-1.3**
ODZ	**Otahua Downs**	**1.95**	**113**	S	**Sb**	**17 22 54.0**	**-0.6**
ODZ	**Otahua Downs**	**1.95**	**113**	P	**Pb**	**17 22 29.0**	**-1.3**
TUZ	**Tuapeka**	**1.96**	**147**	P	**Pb**	**17 22 30.8**	**+0.4**
TMZ	**Timaru**	**2.08**	**93**	P	**Pn**	**17 22 30.7**	**+1.0**
RPZ	**Rata Peaks**	**2.21**	**75**	P	**Pn**	**17 22 32.5**	**+1.1**
RPZ	**Rata Peaks**	**2.21**	**75**	S	**Sn**	**17 22 59.5**	**+0.7**
RPZ	**Rata Peaks**	**2.21**	**75**	P	**Pn**	**17 22 32.3**	**+0.9**
ARCZ	**Arundel**	**2.24**	**81**	P	**Pn**	**17 22 32.5**	**+0.6**
WVZ	**Waitaha Valley**	**2.27**	**58**	P	**Pn**	**17 22 31.1**	**-1.2**
SYZ	**Scrubby Hill**	**2.33**	**162**	P	**Pb**	**17 22 36.4**	**-0.4**
SYZ	**Scrubby Hill**	**2.33**	**162**	P	**Pb**	**17 22 36.0**	**-0.8**
APZ	**The Paps**	**2.51**	**182**	P	**Pb**	**17 22 38.8**	**-1.2**
MHCZ	**Mount Hutt**	**2.62**	**74**	P	**Pn**	**17 22 37.3**	**+0.2**
WACZ	**Wakanui South**	**2.71**	**83**	P	**Pn**	**17 22 38.6**	**+0.3**
INZ	**Inchbonnie**	**2.90**	**58**	P	**Pn**	**17 22 39.9**	**-1.1**
OXZ	**Oxford**	**3.01**	**72**	P	**Pb**	**17 22 49.1**	**+0.7**
LTZ	**Lake Taylor**	**3.39**	**64**	P	**Pn**	**17 22 47.0**	**-0.8**
DSZ	**Denniston Nort**	**3.74**	**48**	P	**Pn**	**17 22 51.9**	**-0.6**
THZ	**Tophouse**	**4.34**	**56**	P	**Pn**	**17 23 00.6**	**-0.2**
MRNZ	**Matariki Terra**	**4.49**	**51**	P	**Pn**	**17 23 02.8**	**0.0**
QRZ	**Quartz Range**	**4.78**	**45**	P	**Pn**	**17 23 05.8**	**-0.9**
QRZ	**Quartz Range**	**4.78**	**45**	P	**Pn**	**17 23 06.0**	**-0.8**
TKNZ	**Takaka Hill**	**4.85**	**49**	P	**Pn**	**17 23 07.7**	**-0.1**
TUWZ	**Tuamarina**	**5.17**	**58**	P	**Pn**	**17 23 14.0**	**+1.9**
TCW	**Tory Channel**	**5.50**	**58**	P	**Pn**	**17 23 18.0**	**+1.3**
DUWZ	**D'Urville Isla**	**5.55**	**53**	P	**Pn**	**17 23 17.3**	**-0.1**

KEA 08 17:36:29.9, 41°.43N×120°.08E, h3^{km}**, ML3.5**/1**, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUJ	**Sinuiju**	**3.61**	**110**	Pg	Pg	17 37 40.0	+0.9
SUJ				Sg	Sg	17 38 31.5	+5.7
SUJ				AML	AML		
	comp=N,184nm,0.4s						
SUJ				AML	AML		
	comp=E,144nm,0.6s						
SUJ				AML	AML		
	comp=Z,111nm,0.7s						
PYS	**Pyongsong**	**4.92**	**114**	Sg	Sg	17 39 14.2	+6.2
PYAG	**Pyongyang**	**4.96**	**117**	Sg	Sg	17 39 15.3	+6.2
HJU	**Haeju**	**5.51**	**126**	Sg	Sg	17 39 33.0	+6.0

IDC 08 17:37:35.5±4.0**, 65°.05S**×**178°.80E, h0**^{km}**, mb3.9**/3**, mbtmp3.9**/4**, ML3.6**/1**, MS3.8**/20**, Error ellipse: s-maj=140.5km s-min=26.6km az=69.0, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**13.55**	**196**	Pn	Pn	17 40 48.2	-0.5
	0.3nm,0.3s,baz=54,slow=18,SNR=19						
VNDA				LR	LR	17 44 50.5	
	comp=Z,273nm,20.3s,baz=4.0,slow=32						
	2.3nm,0.6s						
RPZ	**Rata Peaks**	**21.81**	**345**	LR	LR	17 48 56.4	
	comp=Z,279nm,21.2s,baz=175,slow=31						
QSPA	**South Pole Qui**	**25.04**	**180**	P	P	17 43 00.5	-0.6
	2.7nm,1.0s,baz=51,slow=3.2,SNR=5.4						
QSPA				LR	LR	17 51 38.9	
	comp=Z,271nm,18.6s,baz=38,slow=34						
	2.7nm,1.0s						
URZ	**Urewera**	**26.84**	**357**	LR	LR	17 52 34.7	
	comp=Z,386nm,18.0s,baz=250,slow=34						
RAO	**Raoul Island**	**35.87**	**5**	LR	LR	17 56 07.1	
	comp=Z,84nm,20.1s,baz=173,slow=31						
MAW	**Mawson**	**40.06**	**212**	LR	LR	18 01 38.6	
	comp=Z,324nm,21.9s,baz=140,slow=36						
STKA	**Stephens Creek**	**40.24**	**307**	LR	LR	18 00 00.7	
	comp=Z,75nm,21.2s,baz=24,slow=33						
PMSA	**Palmer Station**	**42.67**	**146**	LR	LR	17 59 59.1	
	comp=Z,56nm,18.0s,baz=211,slow=32						
SNAA	**Sanae**	**43.54**	**179**	LR	LR	18 03 22.0	
	comp=Z,161nm,18.3s,baz=170,slow=36						
DZM	**Mont Dzumac**	**43.72**	**343**	LR	LR	18 02 06.6	
	comp=Z,166nm,18.2s,baz=196,slow=34						
H01W1	**Cape Leeuwin H**	**48.32**	**276**	T	T	18 38 48.5	
	baz=149,slow=76,SNR=9.3						
H01W2	**Cape Leeuwin H**	**48.32**	**276**	T	T	18 38 48.1	
	baz=149,slow=76,SNR=11						
H01W3	**Cape Leeuwin H**	**48.33**	**276**	T	T	18 38 49.0	
	baz=149,slow=76,SNR=11						
NWAO	**Narrogin (SRO)**	**48.72**	**280**	LR	LR	18 02 01.1	
	comp=Z,81nm,20.6s,baz=84,slow=30						
ASAR	**Alice Springs**	**50.43**	**303**	P	P	17 46 34.8	+0.2
	1.2nm,0.8s,baz=155,slow=7.5,SNR=28						
ASAR				LR	LR	18 03 51.2	
	comp=Z,59nm,22.0s,baz=98,slow=31						
	1.2nm,0.8s						
WRA	**Warramunga Arr**	**53.71**	**305**	P	P	17 46 58.2	-0.8
	1.6nm,0.8s,baz=155,slow=6.6,SNR=11						
WRA				LR	LR	18 06 56.7	
	comp=Z,93nm,20.8s,baz=30,slow=33						
	1.6nm,0.8s						
HNR	**Honiara**	**57.08**	**338**	LR	LR	18 07 06.9	
	comp=Z,64nm,22.0s,baz=188,slow=31						
BOSA	**Boshof**	**84.41**	**203**	LR	LR	18 27 36.7	
	comp=Z,32nm,18.0s,baz=176,slow=36						
LPAZ	**La Paz**	**84.68**	**117**	LR	LR	18 22 05.3	
	comp=Z,22nm,18.5s,baz=242,slow=32						
LBTB	**Lobatse**	**87.87**	**204**	LR	LR	18 27 10.4	
	comp=Z,50nm,19.4s,baz=158,slow=34						
ATAH	**Atahualpa**	**88.94**	**105**	LR	LR	18 21 19.2	
	comp=Z,58nm,18.8s,baz=205,slow=30						
TSUM	**Tsumeb**	**94.79**	**198**	LR	LR	18 32 17.9	
	comp=Z,115nm,18.3s,baz=165,slow=35						
LSZ	**Lusaka**	**96.87**	**208**	LR	LR	18 31 32.3	
	comp=Z,90nm,19.7s,baz=141,slow=33						
H02S1	**DAWSON INLET T**	**123.71**	**33**	T	T	20 12 03.9	
	SNR=25						
BRTR	**Keskin Array B**	**147.67**	**235**	PKPbc	PKPbc	17 57 21.9	+0.7
	0.7nm,0.8s,baz=182,slow=4.4,SNR=4.0						

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*DJA **08** 18:00:02.3±0.5, 2°N±8°×12°8E±°, h10^{km}, M3.7/5, MLv3.7/5*

IDC 08 18:00:22.2±2.2**, 2°.49N**×**126°.02E, h0**^{km}**, mb3.3**/3**, mbtmp3.3**/3**, Error ellipse: s-maj=191.9km s-min=27.9km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.29**	**338**	P	Pn	18 00 50.3	+2.8
WRA	**Warramunga Arr**	**23.74**	**160**	P	P	18 05 35.6	-0.8
	0.3nm,0.4s,baz=339,slow=11,SNR=9.5						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**27.11**	**164**	P	P	18 06 08.0	+0.9
	0.6nm,0.9s,baz=346,slow=11,SNR=6.8						
	0.6nm,0.9s						
MKAR	**Makanchi Array**	**58.17**	**326**	P	P	18 10 17.8	-0.3
	0.3nm,0.7s,baz=129,slow=5.8,SNR=1.6						
	0.3nm,0.7s						

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*BJI **08** 18:10:37.7, 45°.21N×150°.67E, h48^{km}, mB4.9/29, mb4.8/69, Ms4.3/54, Ms7 4.2/55*

*JMA **08** 18:10:41.3±0.8, 45°N±4°×15°0E±°, h30^{km}, MD5.1/19, MV5.2/19, KURILE ISLANDS REGION*

*NIED **08** 18:10:41.3, 45°.29N×150°.24E, h30^{km}, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.82; M$_{\theta\theta}$0.49; M$_{\phi\phi}$-1.31; M$_{r\theta}$0.05; M$_{\theta\phi}$-0.87; M$_{\phi r}$1.85; Fault plane solution: M$_0$2.29000×10^{16} NP1: φ$_s$238.00000°, δ26.00000°, λ146.00000°. NP2: φ$_s$359.00000°, δ76.00000°, λ68.00000°.*

*MOS **08** 18:10:41.8±0.9, 45°.25N×150°.09E, h56^{km}, mb5.0/69, MS4.4/13 Error ellipse: s-maj=5.2km s-min=4.2km az=92.3*

*SKHL **08** 18:10:42.3±0.1, 45°.20N×150°.30E, h65^{km}±4^{km}, mb5.4/10, mbv5.0/1, ms4.5/6, msh5.2/1*

*IDC **08** 18:10:43.9±2.0, 45°.38N×149°.94E, h56^{km}±17^{km}, mb4.2/30, mbtmp4.4/39, ML4.1/9, MS4.0/81, Error ellipse: s-maj=12.6km s-min=9.4km az=144.0*

*NEIC **08** 18:10:44.7±1.3, 45°.36N±0°.09×150°.0E±0°.1, h61^{km}±6^{km}, mb4.9/446, Error ellipse: s-maj=14.4km s-min=9.9km az=142.0*

*GCMT **08** 18:10:44.7±0.2, 45°.32N±0°.02×150°.30E±0°.02, h53^{km}±1^{km}, MW5.0/104, Moment Tensor Solution. s63,c89; s104,c160; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.72±.15; M$_{\theta\theta}$-1.11±.11; M$_{\phi\phi}$-2.60±.10; M$_{r\theta}$-0.43±.08; M$_{\theta\phi}$-1.87±.07; M$_{\phi r}$1.18±.07; Best double couple: M$_0$3.99700×10^{16} NP1:φ$_s$228.00000°, δ41.00000°, λ112.00000°. NP2:φ$_s$20.00000°, δ52.00000°, λ72.00000°. Principal axes: T 4.0530, Plg75.0000°, Azm234.0000°; N -0.1020, Plg14.0000°, Azm31.0000°; P -3.9410, Plg6.0000°, Azm123.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 18:10:43.3±0.4**, 45°.23N**±0°.04×**150°.16E**±0°.03**, h55**^{km}±2^{km}**, h55**^{km}**:pP-P, n1067, **σ**1^s.19**/997**, mb4.8**/319**, MS4.2**/108**, 48C-35D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.62**	**271**	*d i*PN	**Pn**	**18 11 08.3**	**-1.1**
KUR				*e*S	**Sn**	**18 11 28.3**	**-0.9**
KUR				pmax	pmax		
	comp=Z,5µm,0.3s						
KUR				pmax	pmax		
	comp=N,2µm,0.1s						
KUR				pmax	pmax		
	comp=E,1µm,0.1s						
KUR				smax	smax		
	comp=N,9µm,0.4s						
KUR				smax	smax		
	comp=E,5µm,0.3s						
KUR	**Kuril'sk**	**1.62**	**271**	*i* P	**Pn**	**18 11 08.3**	**-1.1**
KUR				AMB	AMB	18 11 09.5	
	comp=E,5µm,0.3s						
KUR				*e*S	**Sn**	**18 11 27.9**	**-1.3**
KUR				A	A	18 11 29.9	
	comp=E,9µm,0.3s						
KUR				A	A	18 11 29.9	
	comp=E,5µm,0.3s						
SHO	**Shikotan**	**2.74**	**241**	*e*PN	**Pn**	**18 11 23.6**	**-1.2**
SHO				*e*S	**Sn**	**18 11 54.3**	**-2.4**
SHO				pmax	pmax		
	comp=Z,549nm,0.3s						
SHO				pmax	pmax		
	comp=N,170nm,0.2s						
SHO				pmax	pmax		
	comp=E,140nm,0.2s						
SHO				smax	smax		
	comp=E,2µm,0.6s						
SHO				smax	smax		
	comp=N,2µm,0.2s						
SHO	**Shikotan**	**2.74**	**241**	*e*P	**Pn**	**18 11 23.6**	**-1.2**
SHO				AMB	AMB	18 11 29.0	
	comp=N,550nm,0.3s						
SHO				*e*S	**Sn**	**18 11 54.5**	**-2.2**
SHO				A	A	18 12 04.4	
	comp=N,2µm,0.4s						
SHO				A	A	18 12 04.4	
	comp=N,2µm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.29**	**250**	*e*PN	**Pn**	**18 11 32.7**	**+0.4**
YUK				*e*S	**Sn**	**18 12 11.1**	**+0.9**
YUK				pmax	pmax		
	comp=Z,1µm,0.3s						
YUK				pmax	pmax		
	comp=E,282nm,0.2s						
YUK				smax	smax		
	comp=N,6µm,0.8s						
YUK				smax	smax		
	comp=E,4µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**3.29**	**250**	*e*P	**Pn**	**18 11 32.4**	**+0.1**
YUK				AMB	AMB	18 11 44.8	
	comp=E,1µm,0.3s						
YUK				*e*S	**Sn**	**18 12 10.0**	**-0.2**
YUK				A	A	18 12 21.3	
	comp=E,6µm,0.6s						
YUK				A	A	18 12 21.3	
	comp=E,4µm,0.6s						
GLVR	**Golovnino**	**3.64**	**247**	*e*PN	**Pn**	**18 11 38.3**	**+1.2**
GLVR				*e*S	**Sn**	**18 12 18.9**	**+0.1**
GLVR				pmax	pmax		
	comp=E,226nm,0.3s						
GLVR				pmax	pmax		
	comp=Z,762nm,0.3s						
GLVR				pmax	pmax		
	comp=N,266nm,0.1s						
GLVR				smax	smax		
	comp=N,5µm,0.4s						
GLVR				smax	smax		
	comp=E,2µm,0.3s						
GLVR	**Golovnino**	**3.64**	**247**	*e*P	**Pn**	**18 11 38.3**	**+1.2**
GLVR				AMB	AMB	18 11 47.2	
	comp=E,760nm,0.3s						
GLVR				*e*S	**Sn**	**18 12 18.9**	**+0.1**
GLVR				A	A	18 12 30.5	
	comp=E,5µm,0.4s						
GLVR				A	A	18 12 30.5	
	comp=E,2µm,0.4s						
NEM2	**Nemuro 2**	**3.68**	**241**	*e*P	**Pn**	**18 11 36.1**	**-1.5**
NEM2				*e*S	**Sn**	**18 12 16.0**	**-3.7**
RUSJ	**Misakicho**	**3.68**	**254**	*e*PN	**Pn**	**18 11 39.0**	**+1.4**
RUSJ				*e*S	**Sn**	**18 12 24.2**	**+4.5**
NMR	**Nemuro--Hokkai**	**3.69**	**241**	*e*PN	**Pn**	**18 11 35.9**	**-1.8**
NMR				*e*S	**Sn**	**18 12 16.9**	**-3.0**
NMR	**Nemuro--Hokkai**	**3.69**	**241**	*e*P	**Pn**	**18 11 37.1**	**-0.6**
NMR				*e*S	**Sn**	**18 12 18.2**	**-1.7**
JRA	**Rausu**	**3.83**	**252**	*e*P	**Pn**	**18 11 40.4**	**+0.8**
JRA				*e*S	**Sn**	**18 12 25.6**	**+2.3**
JRA	**Rausu**	**3.83**	**252**	A	A	18 11 40.4	
	comp=N,8.0nm,3.2s,comp=E,6.0nm,4.8s						
JNK	**Nakash**	**4.23**	**249**	*e*P	**Pn**	**18 11 45.9**	**+0.7**
JNK				*e*S	**Sn**	**18 12 32.7**	**-0.6**
AKK	**Akkeshi**	**4.42**	**242**	*e*P	**Pn**	**18 11 47.7**	**-0.1**
JAK	**Akkeshi**	**4.53**	**242**	*e*P	**Pn**	**18 11 48.4**	**-0.8**
JAK				*e*S	**Sn**	**18 12 37.9**	**-2.5**
JTKR	**Abashiri--Toko**	**4.64**	**256**	*e*P	**Pn**	**18 11 51.8**	**+1.0**
JAR	**Ashorobuto**	**4.98**	**249**	P	**Pn**	**18 11 57.0**	**+1.5**
JAR				*e*S	**Sn**	**18 12 52.9**	**+1.1**
JOB	**Onbets**	**5.12**	**245**	*e*P	**Pn**	**18 11 58.0**	**+0.7**
JOB				*e*S	**Sn**	**18 12 53.8**	**-1.2**
YSS	**Yuzhno-Sakhali**	**5.43**	**291**		**Pn**	**18 12 02.2**	**+0.6**
YSS	**Yuzhno-Sakhali**	**5.43**	**291**	κ*e*PN	**Pn**	**18 12 02.5**	**+0.9**
YSS				*e*S	**Sn**	**18 13 03.4**	**+0.7**
YSS				pmax	pmax		
	comp=Z,50nm,0.5s						
YSS				smax	smax		
	comp=N,50nm,0.6s						
YSS				smax	smax		
	comp=E,50nm,0.8s						
YSS				MLR	MLR		
	comp=Z,3µm,15.0s						
YSS	**Yuzhno-Sakhali**	**5.43**	**291**	*e*P	**Pn**	**18 12 02.5**	**+0.9**
YSS				*e*S	**Sn**	**18 13 03.4**	**+0.7**
YSS				AMS	AMS	18 13 53.2	
	comp=Z,3µm,16.0s						
YSS				AMS	AMS	18 13 53.2	
	comp=Z,2µm,16.0s						
JKK2	**Kamakawa 2**	**5.47**	**258**	*e*P	**Pn**	**18 12 04.1**	**+2.0**
JKA	**Kamikawa-asahi**	**5.51**	**261**		**Pn**	**18 12 03.3**	**+0.7**
ASAJ	**Asahikawa**	**5.51**	**261**	P	**Pn**	**18 12 02.8**	**+0.1**
	comp=Z,5.8nm,0.3s,baz=75,slow=20,SNR=63						
ASAJ				LR	LR	18 14 19.6	
	comp=Z,3µm,20.7s,baz=86,slow=40						
	comp=Z,69nm,0.9s						
ASAJ	**Asahikawa**	**5.51**	**261**	PN	**Pn**	**18 12 03.3**	**+0.6**
JCH	**Churui**	**5.56**	**244**	*e*P	**Pn**	**18 12 03.3**	**-0.1**
JCH				*e*S	**Sn**	**18 13 04.8**	**-1.2**
JWK2	**Keihoku**	**5.83**	**274**	*e*P	**Pn**	**18 12 10.1**	**+3.0**
JAB	**Ashibetsu**	**5.95**	**256**	*e*P	**Pn**	**18 12 11.9**	**+3.3**
JAB				*e*S	**Sn**	**18 13 21.2**	**+5.8**
ERM	**Erimo**	**6.01**	**240**		**Pn**	**18 12 10.5**	**+0.9**
ERM	**Erimo**	**6.01**	**240**	*c e*PN	**Pn**	**18 12 10.8**	**+1.2**
ERM				pmax	pmax		
	comp=Z,908nm,1.7s						
JNBK	**Urakawa-nobuka**	**6.12**	**244**	*e*P	Pn	18 12 06.4	-4.7
JNBK	**Urakawa-nobuka**	**6.12**	**244**	A	A	18 12 06.4	
	comp=N,10.0nm,2.8s,comp=E,7.0nm,1.9s						
JRBN	**Rebuntou**	**6.42**	**275**	*e*P	**Pn**	**18 12 17.6**	**+2.5**
UGL	**Uglegorsk**	**6.72**	**308**	⇓*e*PN	Pn	18 12 14.8	-4.5
UGL				*e*S	**Sn**	**18 13 38.2**	**+3.8**
UGL				pmax	pmax		
	comp=Z,161nm,1.4s						
UGL				smax	smax		
	comp=E,156nm,1.1s						
UGL				smax	smax		
	comp=N,67nm,0.8s						
UGL				smax	smax		
	comp=N,900nm,4.9s						
UGL				smax	smax		
	comp=E,1µm,3.0s						
UGL				MLR	MLR		
	comp=E,1µm,12.0s						
UGL				MLR	MLR		
	comp=N,800nm,11.0s						
UGL				MLR	MLR		
	comp=Z,2µm,12.0s						
UGL	**Uglegorsk**	**6.72**	**308**	*e*P	**Pn**	**18 12 20.2**	**+0.9**
UGL				AMB	AMB	18 12 23.9	
	comp=Z,50nm,0.4s						
UGL				*e*S	**Sn**	**18 13 33.4**	**-1.0**
UGL				A	A	18 13 37.5	
	comp=Z,60nm,0.4s						
UGL				A	A	18 13 37.5	
	comp=Z,90nm,0.4s						
UGL				A	A	18 13 44.7	
	comp=Z,900nm,4.0s						
UGL				A	A	18 13 44.7	
	comp=Z,1µm,4.0s						
UGL				AMS	AMS	18 15 13.4	
	comp=Z,800nm,12.0s						
UGL				AMS	AMS	18 15 13.4	
	comp=Z,1µm,12.0s						
SKR	**Severo-Kuril's**	**6.76**	**34**	*e*PN	**Pn**	**18 12 20.7**	**+0.9**
SKR				pmax	pmax		
	comp=Z,94nm,0.4s						
SKR				pmax	pmax		
	comp=Z,400nm,3.7s						
SKR				MLR	MLR		
	comp=Z,2µm,16.0s						
SKR	**Severo-Kuril's**	**6.76**	**34**	*e*P	**Pn**	**18 12 20.1**	**+0.3**
SKR				AMB	AMB	18 12 22.2	
	comp=Z,90nm,0.4s						
SKR				*e*S	**Sn**	**18 13 32.5**	**-2.8**
SKR				AMS	AMS	18 14 55.4	
	comp=Z,900nm,16.0s						
SKR				AMS	AMS	18 14 55.4	
	comp=Z,1µm,16.0s						
TYV	**Tymovskoe**	**7.55**	**321**	*e*PN	**Pn**	**18 12 31.5**	**+0.9**
TYV				pmax	pmax		
	comp=Z,200nm,4.7s						
TYV				pmax	pmax		
	comp=Z,49nm,1.1s						
TYV	**Tymovskoe**	**7.55**	**321**	*e*P	**Pn**	**18 12 31.5**	**+0.9**
TYV				AMB	AMB	18 12 32.4	
	comp=Z,200nm,4.7s						
TYV				AMB	AMB	18 12 36.2	
	comp=Z,40nm,0.6s						
TYV				*e*S	**Sn**	**18 13 52.3**	**-2.3**
TYV				A	A	18 13 55.9	
	comp=Z,30nm,0.5s						
TYV				A	A	18 13 55.9	
	comp=Z,20nm,0.5s						
TYV				AMS	AMS	18 15 06.6	
	comp=Z,2µm,18.0s						
TYV				AMS	AMS	18 15 06.6	
	comp=Z,1µm,18.0s						
PAU	**Pauzhetka**	**7.65**	**33**	*e*P	**Pn**	**18 12 32.3**	**+0.4**
PAU				AMB	AMB	18 13 21.6	
	comp=Z,170nm,0.5s						
PAU				*e*S	**Sn**	**18 13 55.6**	**-1.5**
PAU				A	A	18 14 28.9	
	comp=Z,620nm,0.8s						
PAU				A	A	18 14 28.9	
	comp=Z,360nm,0.8s						
JANG	**Nango**	**8.00**	**236**	*e*P	**Pn**	**18 12 34.3**	**-2.5**
JANG				*e*S	Sn	18 13 57.9	-7.9
JTM	**Tenmabayashi**	**8.01**	**239**		**Pn**	**18 12 35.3**	**-1.6**
JTH	**Tanohata**	**8.09**	**232**	*e*P	**Pn**	**18 12 35.3**	**-2.8**
PEA0B	**Petropavlovsk-**	**9.29**	**29**		**Pn**	**18 12 55.1**	**+0.7**
PEA0B	**Petropavlovsk-**	**9.29**	**29**	*c e*PN	**Pn**	**18 12 55.6**	**+1.1**
PETK	**Petropavlovsk-**	**9.29**	**29**		**Pn**	**18 12 55.6**	**+1.1**
PETK	**Petropavlovsk-**	**9.29**	**29**	P	**Pn**	**18 12 55.1**	**+0.6**
	comp=Z,3.2nm,0.3s,baz=198,slow=11,SNR=34						
PETK				LR	LR	18 16 27.8	
	comp=Z,1µm,18.6s,baz=220,slow=37						
	comp=Z,6.9nm,0.5s						
PETK	**Petropavlovsk-**	**9.29**	**29**	PN	**Pn**	**18 12 55.6**	**+1.1**
OKH	**Okha**	**9.56**	**333**	*e*P	**Pn**	**18 12 56.7**	**-1.3**
OKH				AMS	AMS	18 18 11.0	
	comp=Z,800nm,15.0s						
OKH				AMS	AMS	18 18 11.0	
	comp=Z,400nm,15.0s						
PET	**Petropavlovsk**	**9.57**	**32**	Pn	**Pn**	**18 12 58.2**	**0.0**
PET	**Petropavlovsk**	**9.57**	**32**	*e*PN	**Pn**	**18 12 58.5**	**+0.3**
PET				MLR	MLR		
	comp=Z,400nm,13.0s						
PET				MLR	MLR		
	comp=Z,500nm,8.0s						
PET	**Petropavlovsk**	**9.57**	**32**	*e*P	**Pn**	**18 12 57.4**	**-0.8**
PET				AMB	AMB	18 13 34.5	
	comp=Z,20nm,1.0s						
PET				*e*S	**Sn**	**18 14 41.3**	**-2.9**
PET				A	A	18 15 25.8	

	comp=Z,60nm,0.5s						
PET				A	A	18 15 25.8	
	comp=Z,50nm,0.5s						
TEY	**Ternei**	**9.59**	**274**	⇑*e*PN	**Pn**	**18 13 02.8**	**+4.3**
TEY				pmax	pmax		
	comp=E,100nm,1.4s						
TEY				pmax	pmax		
	comp=Z,100nm,1.4s						
TEY				pmax	pmax		
	comp=E,50nm,1.3s						
TEY				pmax	pmax		
	comp=Z,60nm,1.3s						
NKL	**Nikolayevsk**	**10.05**	**325**	*e*PN	**Pn**	**18 13 03.4**	**-1.4**
NKL				pmax	pmax		
	comp=N,55nm,1.2s						
NKL				pmax	pmax		
	comp=E,420nm,1.3s						
NKL				pmax	pmax		
	comp=Z,507nm,1.3s						
NKL				MLR	MLR		
	comp=E,11μm,23.0s						
NKL				MLR	MLR		
	comp=N,3μm,20.0s						
NKL				MLR	MLR		
	comp=Z,10μm,22.0s						
NKL	**Nikolayevsk**	**10.05**	**325**	*e*P	**Pn**	**18 13 03.4**	**-1.4**
NKL				AMB	AMB	18 13 04.4	
	comp=Z,500nm,0.6s						
NKL				*e*S	**Sn**	**18 14 54.2**	**-1.8**
NKL				A	A	18 15 01.9	
	comp=Z,150nm,0.7s						
NKL				A	A	18 15 01.9	
	comp=Z,150nm,0.7s						
NKL				AMS	AMS	18 16 48.8	
	comp=Z,3μm,22.0s						
NKL				AMS	AMS	18 16 48.8	
	comp=Z,11μm,22.0s						
JMM	**Marumori**	**10.17**	**227**	Pn	**Pn**	**18 13 03.8**	**-2.6**
GRNR	**Gornyy**	**10.74**	**306**	⇑*i*PN	**Pn**	**18 13 16.5**	**+2.3**
GRNR				pmax	pmax		
	comp=E,10.0nm,1.2s						
GRNR				pmax	pmax		
	comp=N,6.0nm,1.1s						
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GRNR				MLR	MLR		
	comp=Z,680nm,16.0s						
MJB9	**Matsu-Tunnel**	**12.52**	**230**		**Pn**	**18 13 37.3**	**-1.3**
MAJO	**Matsushiro**	**12.53**	**230**		**Pn**	**18 13 36.1**	**-2.5**
MAJO	**Matsushiro**	**12.53**	**230**	*i* PN	**Pn**	**18 13 37.0**	**-1.7**
MJAR	**Matsushiro Arr**	**12.53**	**230**	P	**Pn**	**18 13 36.9**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=26,slow=15,SNR=22						
	comp=Z,4.2nm,1.0s						
USA0B	**Ussuriysk Arra**	**12.97**	**272**	Pn	**Pn**	**18 13 45.1**	**+0.4**
USA0B	**Ussuriysk Arra**	**12.97**	**272**	*i* PN	**Pn**	**18 13 45.2**	**+0.6**
USRK	**Ussuriysk Ar.**	**12.97**	**272**		**Pn**	**18 13 43.6**	**-1.0**
USRK	**Ussuriysk Ar.**	**12.97**	**272**	P	**Pn**	**18 13 42.0**	**-2.7**
	comp=Z,0.5nm,0.3s,baz=80,slow=16,SNR=19						
USRK				LR	LR	18 18 49.3	
	comp=Z,876nm,19.1s,baz=81,slow=38						
	comp=Z,5.8nm,0.8s						
USRK	**Ussuriysk Ar.**	**12.97**	**272**	PN	**Pn**	**18 13 43.6**	**-1.0**
KLR	**Kul'dur**	**13.13**	**294**	P	**Pn**	**18 13 45.1**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=104,slow=13,SNR=42						
KLR				LR	LR	18 19 08.1	
	comp=Z,1μm,19.1s,baz=110,slow=39						
	comp=Z,3.1nm,1.1s						
KLR	**Kul'dur**	**13.13**	**294**	*ce*PN	**Pn**	**18 13 49.0**	**+2.2**
KLR				pmax	pmax		
	comp=Z,60nm,1.3s						
KLR	**Kul'dur**	**13.13**	**294**	*e*P	**Pn**	**18 13 46.0**	**-0.8**
VLA	**Vladivostok**	**13.29**	**267**	*i* PN	**Pn**	**18 13 49.2**	**+0.2**
JGF	**Kuroka**	**13.68**	**230**	Pn	**Pn**	**18 13 52.4**	**-2.1**
MSHR	**Mys Shultsa**	**13.96**	**266**	*i* P	**Pn**	**18 13 57.7**	**-0.3**
MSHR				pmax	pmax		
	comp=Z,24nm,1.0s						
INU	**Inuyama**	**14.06**	**230**	Pn	**Pn**	**18 13 57.1**	**-2.4**
PSTR	**Posyet**	**14.18**	**266**	*i* P	**Pn**	**18 14 00.0**	**-1.1**
PSTR	**Posyet**	**14.18**	**266**	*e*P	**Pn**	**18 14 00.0**	**-1.1**
MA2	**Magadan**	**14.37**	**1**	Pn	**Pn**	**18 14 00.4**	**-3.1**
MA2	**Magadan**	**14.37**	**1**	P	**Pn**	**18 14 03.1**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=240,slow=8.1,SNR=4.3						
MA2				LR	LR	18 19 39.2	
	comp=Z,632nm,18.8s,baz=176,slow=38						
	comp=Z,10.0nm,0.8s						
MA2	**Magadan**	**14.37**	**1**	*i* P	**Pn**	**18 14 03.1**	**-0.3**
MA2				pmax	pmax		
	comp=Z,21nm,1.0s						
JHJ2	**Mitsune**	**14.51**	**217**	Pn	Pn	18 14 01.0	-4.4
MDJ	**Mudanjiang**	**14.59**	**275**	P	**Pn**	**18 14 06.9**	**+0.5**
MDJ				PP	**PnPn**	**18 14 14.5**	**-0.2**
MDJ				S	**Sn**	**18 16 50.1**	**+3.5**
MDJ				pmax	pmax		
	comp=Z,13nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,400nm,5.7s						
MDJ				LR	LR		
	comp=Z,2μm,17.5s						
MDJ				LR	LR		
	comp=Z,2μm,21.3s						
MDJ				LR	LR		
	comp=Z,1μm,21.3s						
BNX	**BinXian**	**15.96**	**280**	⇑P	**Pn**	**18 14 25.5**	**+1.4**
BNX				S	**Sn**	**18 17 20.6**	**+0.7**
BNX				pmax	pmax		
	comp=Z,13nm,1.2s						
BNX				pmax	pmax		
	comp=Z,190nm,3.8s						
BNX				LR	LR		
	comp=Z,600nm,20.1s						
BNX				LR	LR		
	comp=Z,540nm,22.2s						
BNX				LR	LR		
	comp=Z,840nm,17.9s						
HEH	**HeiHe**	**16.08**	**296**	*e*P	**Pn**	**18 14 27.2**	**+1.7**
HEH				PP	**pP**	**18 14 41.3**	**+1.3**
HEH				sP	**sP**	**18 14 42.6**	**-4.4**
HEH				S	**Sn**	**18 17 26.4**	**+3.7**
HEH				pmax	pmax		
	comp=Z,20nm,0.9s						
HEH				pmax	pmax		
	comp=Z,190nm,3.6s						
HEH				LR	LR		
	comp=Z,350nm,20.6s						
HEH				LR	LR		
	comp=Z,780nm,21.0s						
HEH				LR	LR		
	comp=Z,1μm,20.4s						
JMN	**Monobe**	**16.99**	**233**	P	**Pn**	**18 14 37.7**	**+0.6**
ZEA	**Zeya**	**17.08**	**308**	*e*P	**Pn**	**18 14 38.2**	**+0.1**
ZEA				*e*		18 17 51.7	
ZEA				pmax	pmax		
	comp=E,20nm,1.3s						
ZEA				pmax	pmax		
	comp=N,20nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.1s						
ZEA	**Zeya**	**17.08**	**308**	*e*P	**Pn**	**18 14 35.5**	**-2.6**
SHEM	**Shemya Is, Ala**	**17.36**	**56**	LR	LR	18 20 53.0	
	comp=Z,63nm,22.0s,baz=286,slow=35						
SMY	**Shemya**	**17.36**	**56**	P	**Pn**	**18 14 42.1**	**+0.7**
SMY				IAmb	IAmb	18 14 47.8	
	comp=Z,147nm,1.3s						
SMY	**Shemya**	**17.36**	**56**	P	**Pn**	**18 14 42.1**	**+0.7**
SMY				pmax	pmax		
	comp=Z,147nm,1.3s						
CN2	**Changchun**	**17.67**	**274**	*e*P	**Pn**	**18 14 46.0**	**+0.7**
CN2				*e*S	**Sn**	**18 17 57.7**	**-3.5**
CN2				*e*SS	**SnSn**	**18 18 21.6**	**+6.5**
CN2				LR	LR		
	comp=Z,660nm,17.0s						
CN2				LR	LR		
	comp=Z,700nm,17.0s						
CN2				LR	LR		
	comp=Z,890nm,17.0s						
SEY	**Seymchan**	**17.78**	**3**	P	**Pn**	**18 14 46.0**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=172,slow=9.2,SNR=13						
SEY				LR	LR	18 21 57.4	
	comp=Z,814nm,18.4s,baz=182,slow=38						
	comp=Z,7.9nm,0.9s						
SEY	**Seymchan**	**17.78**	**3**	*ce*P	**P**	**18 14 47.6**	**+0.9**
SEY				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KSRS	**Korea Array**	**18.38**	**253**	P	**P**	**18 14 53.8**	**+0.3**
	comp=Z,0.7nm,0.3s,baz=58,slow=10,SNR=63						
KSRS				PcP	**PcP**	**18 19 23.6**	**+1.2**
	comp=Z,2.1nm,1.0s,baz=74,slow=0.4,SNR=7.2						
	comp=Z,5.1nm,0.6s						
KS19	**Wonju Array Si**	**18.39**	**253**	P	**P**	**18 14 52.9**	**-0.7**
KSAR	**Wonju Array Be**	**18.41**	**253**	P	**P**	**18 14 53.4**	**-0.4**
KSAR	**Wonju Array Be**	**18.41**	**253**	P	**P**	**18 14 53.4**	**-0.4**
JNU	**Nakatsue**	**19.17**	**238**	P	**P**	**18 15 01.8**	**-0.5**
JNU	**Nakatsue**	**19.17**	**238**	P	**P**	**18 15 03.0**	**+0.8**
	comp=Z,1.1nm,0.3s,baz=289,slow=1.4,SNR=12						
JNU				LR	LR	18 23 36.1	
	comp=Z,133nm,18.9s,baz=40,slow=40						
	comp=Z,11nm,0.9s						
JCJ	**Chichijima**	**19.19**	**202**	P	**P**	**18 15 02.1**	**-0.3**
JCJ	**Chichijima**	**19.19**	**202**	LR	LR	18 24 14.0	
	comp=Z,159nm,18.5s,baz=96,slow=42						
INCN	**Inchon**	**19.24**	**255**		**P**	**18 15 03.0**	**+0.1**
INCN	**Inchon**	**19.24**	**255**	P	**P**	**18 15 03.0**	**+0.1**
INCN				pmax	pmax		
	comp=Z,26nm,1.0s						
TJN	**Taejon**	**19.34**	**251**	P	**P**	**18 15 03.5**	**-0.5**
TJN				IAmb	IAmb	18 15 07.5	
	comp=Z,74nm,1.0s						
TJN	**Taejon**	**19.34**	**251**	*i* P	**P**	**18 15 04.4**	**+0.4**
YAK	**Yakutsk**	**20.59**	**332**		**P**	**18 15 16.3**	**-1.0**
YAK	**Yakutsk**	**20.59**	**332**	P	**P**	**18 15 17.2**	**-0.2**
	comp=Z,289nm,1.1s,baz=101,slow=1.6,SNR=16						
YAK				LR	LR	18 23 37.7	
	comp=Z,841nm,19.2s,baz=130,slow=38						
YAK	**Yakutsk**	**20.59**	**332**	*e*P	**P**	**18 15 16.6**	**-0.7**
YAK				*e*		18 15 35.6	
YAK				*e*S	**S**	**18 19 03.5**	**-0.7**
YAK				*e*		18 19 26.5	
YAK				*e*SS	**SnSn**	**18 19 29.7**	**+3.1**
YAK				*e*		18 26 38.4	
YAK				pmax	pmax		
	comp=Z,224nm,0.9s						
YAK				pmax	pmax		
	comp=E,75nm,1.2s						
YAK				pmax	pmax		
	comp=N,87nm,1.1s						
YAK				pmax	pmax		
	comp=Z,202nm,1.5s						
YAK				pmax	pmax		
	comp=E,114nm,1.5s						
YAK				pmax	pmax		
	comp=N,167nm,1.6s						
YAK				smax	smax		
	comp=N,125nm,2.0s						
YAK				smax	smax		
	comp=E,48nm,2.3s						
YAK				MLR	MLR		
	comp=Z,895nm,22.0s						
YAK				MLR	MLR		
	comp=E,381nm,21.0s						
YAK				MLR	MLR		
	comp=N,416nm,20.0s						
YAK	**Yakutsk**	**20.59**	**332**	*e*P	**P**	**18 15 16.6**	**-0.7**
DL2	**Dalian**	**22.03**	**263**	P	**P**	**18 15 33.1**	**+0.1**
DL2				S	**S**	**18 19 33.2**	**+0.4**
DL2				pmax	pmax		
	comp=N,44nm,1.0s						
DL2				pmax	pmax		
	comp=N,190nm,5.5s						
DL2				LR	LR		
	comp=N,430nm,24.1s						
DL2				LR	LR		
	comp=N,440nm,22.4s						
DL2				LR	LR		
	comp=N,590nm,23.4s						
KIWB	**Kanaga Island**	**22.50**	**61**	P	**P**	**18 15 37.5**	**-0.4**
XLT	**XiLinHaoTe**	**24.21**	**279**	*e*P	**P**	**18 15 54.1**	**-0.6**
XLT				pmax	pmax		
	comp=N,7.0nm,0.6s						
ATKA	**Atka Island**	**24.34**	**60**	P	**P**	**18 15 55.1**	**-0.5**
BILL	**Bilibino**	**24.36**	**15**	P	**P**	**18 15 55.0**	**-0.7**
BILL	**Bilibino**	**24.36**	**15**	*ce*P	**P**	**18 15 56.7**	**+1.1**
BILL				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BILL				MLR	MLR		
	comp=Z,667nm,18.0s						
BILL	**Bilibino**	**24.36**	**15**	*e*P	**P**	**18 15 56.7**	**+1.1**
JOW	**Kunigami**	**25.37**	**231**	P	**P**	**18 16 05.2**	**0.0**
JOW				IAmb	IAmb	18 16 10.1	
	comp=Z,57nm,1.2s						
JOW	**Kunigami**	**25.37**	**231**	LR	LR	18 26 21.4	
	comp=Z,153nm,20.5s,baz=70,slow=37						
BJI	**Beijing**	**25.41**	**270**	P	**P**	**18 16 05.0**	**-0.5**
BJI				S	**S**	**18 20 24.8**	**-3.4**
BJI				pmax	pmax		
	comp=Z,4.0nm,1.7s						
BJI				pmax	pmax		
	comp=Z,97nm,4.0s						
BJI				LR	LR		
	comp=Z,92nm,16.3s						
BJI				LR	LR		
	comp=Z,160nm,21.0s						
BJI				LR	LR		
	comp=Z,260nm,21.5s						
BJT	**Baijiatuau**	**25.43**	**270**	P	**P**	**18 16 05.2**	**-0.4**
BJT				pmax	pmax		
	comp=Z,11nm,0.9s						
TIA	**Tai'an**	**26.46**	**262**	P	**P**	**18 16 15.4**	**+0.4**
TIA				pmax	pmax		
	comp=Z,25nm,0.7s						
SPIA	**Saint Paul Isl**	**27.12**	**50**	P	**P**	**18 16 19.8**	**-0.9**
	baz=261						
NJ2	**Nanjing**	**27.58**	**252**	*e*P	**P**	**18 16 25.3**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				LR	LR		
	comp=Z,290nm,18.5s						
NJ2				LR	LR		
	comp=Z,420nm,19.4s						
NJ2				LR	LR		
	comp=Z,550nm,20.4s						
HNS	**HongShan**	**27.58**	**266**	⇑P	**P**	**18 16 25.0**	**-0.1**
HNS				S	**S**	**18 21 03.6**	**+1.1**
HNS				pmax	pmax		
	comp=Z,15nm,0.7s						
HNS				LR	LR		
	comp=Z,220nm,17.1s						
HNS				LR	LR		
	comp=Z,210nm,15.7s						
HNS				LR	LR		
	comp=Z,400nm,21.4s						
NIKH	**Nikolski High**	**27.61**	**59**	P	**P**	**18 16 24.5**	**-0.7**
	baz=271						
GAMB	**Gambell**	**28.25**	**35**	P	**P**	**18 16 30.2**	**-0.6**
	baz=247						
HHC	**Hu-ho-hao-te**	**28.36**	**275**	*e*P	**P**	**18 16 32.0**	**-0.1**
HHC				S	**S**	**18 21 14.4**	**-0.5**
HHC				pmax	pmax		
	comp=Z,18nm,0.7s						
HHC				pmax	pmax		
	comp=Z,100nm,4.1s						
HHC				LR	LR		
	comp=Z,150nm,13.5s						
HHC				LR	LR		
	comp=Z,510nm,14.3s						
HHC				LR	LR		
	comp=Z,840nm,14.1s						
TIXI	**Tiksi**	**28.39**	**346**	LR	LR	18 28 17.4	
	comp=Z,300nm,18.6s,baz=159,slow=37						
H11N2	**WAKE ISLAND Hy**	**28.97**	**146**	T	T	18 47 22.3	
	baz=336,slow=76						
H11N1	**WAKE ISLAND Hy**	**28.98**	**146**	T	T	18 47 22.1	
	baz=336,slow=76						
H11N3	**WAKE ISLAND Hy**	**28.98**	**146**	T	T	18 47 19.2	
	baz=336,slow=76						
UNV	**Unalaska Valle**	**29.01**	**57**	P	**P**	**18 16 36.9**	**-0.7**
	baz=271						
TIY	**Taiyuan**	**29.04**	**268**	P	**P**	**18 16 39.0**	**+0.8**
TIY				S	**S**	**18 21 30.9**	**+5.2**
TIY				pmax	pmax		
	comp=Z,120nm,5.6s						
TIY				LR	LR		
	comp=Z,170nm,20.6s						
TIY				LR	LR		
	comp=Z,250nm,22.7s						
TIY				LR	LR		
	comp=Z,330nm,19.2s						
ULN	**Ulaanbaatar**	**29.48**	**291**	*i* P	**P**	**18 16 42.1**	**0.0**
ULN				pmax	pmax		
	comp=Z,2.0nm,1.2s						
ULN	**Ulaanbaatar**	**29.48**	**291**	*e*P	**P**	**18 16 42.1**	**0.0**
BTO	**Baotou**	**29.54**	**275**	*e*P	**P**	**18 16 43.0**	**+0.4**
BTO				sP	**sP**	**18 17 03.8**	**+1.0**
BTO				PP	**PnPn**	**18 17 39.5**	**+0.5**
BTO				S	**S**	**18 21 34.4**	**+1.0**
BTO				pmax	pmax		
	comp=Z,15nm,0.5s						
BTO				pmax	pmax		
	comp=Z,200nm,5.2s						
BTO				LR	LR		
	comp=Z,1μm,16.8s						
BTO				LR	LR		
	comp=Z,810nm,17.4s						
BTO				LR	LR		
	comp=Z,1μm,14.3s						
M11K	**Mekoryuk**	**29.76**	**44**	P	**P**	**18 16 43.6**	**-0.5**
	baz=260						
SONM	**Songino Array**	**29.92**	**291**	P	**P**	**18 16 45.0**	**-1.0**
SONM				PcP	**PcP**	**18 19 47.6**	**+0.3**
SONM	**Songino Array**	**29.92**	**291**	P	**P**	**18 16 44.7**	**-1.2**
	comp=Z,0.8nm,0.6s,baz=92,slow=7.6,SNR=6.5						
SONM				PcP	**PcP**	**18 19 46.9**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=96,slow=3.3,SNR=5.4						
SONM				LR	LR	18 29 51.5	
	comp=Z,487nm,18.4s,baz=99,slow=39						
	comp=Z,0.8nm,0.6s						
H11S1	**WAKE ISLAND Hy**	**30.00**	**147**	T	T	18 48 38.9	
	baz=336,slow=76						
H11S3	**WAKE ISLAND Hy**	**30.01**	**147**	T	T	18 48 39.4	
	baz=336,slow=76,SNR=5546						
H11S2	**WAKE ISLAND Hy**	**30.02**	**147**	T	T	18 48 32.3	
	baz=336,slow=76,SNR=5772						
TNA	**Tin City**	**30.43**	**33**	P	**P**	**18 16 49.9**	**-0.1**
TNA	**Tin City**	**30.43**	**33**	P	**P**	**18 16 49.6**	**-0.4**
	baz=249						
K13K	**Kusilvak Mount**	**30.79**	**41**	P	**P**	**18 16 52.9**	**-0.4**
	baz=258						
F14K	**Arctic Creek**	**31.03**	**34**	P	**P**	**18 16 55.1**	**-0.2**
	baz=251						
ANM	**Nome**	**31.13**	**36**	P	**P**	**18 16 56.2**	**0.0**
	baz=253						
M13K	**Dall Lake**	**31.16**	**44**	P	**P**	**18 16 56.2**	**-0.2**
	baz=262						
J14K	**Nanvaranak Lak**	**31.46**	**40**	P	**P**	**18 16 59.9**	**+0.7**
J14K	**Nanvaranak Lak**	**31.46**	**40**	P	**P**	**18 16 59.1**	**-0.1**
	baz=258						
WHN	**Wuhan**	**31.55**	**255**	P	**P**	**18 17 00.5**	**+0.2**
WHN				pmax	pmax		
	comp=Z,54nm,0.5s						
S12K	**Black Hills**	**31.56**	**53**	P	**P**	**18 17 01.6**	**+1.5**
S12K				IAmb	IAmb	18 17 03.8	
	comp=Z,32nm,1.1s						
S12K				PcP	**PcP**	**18 19 51.6**	**+0.3**
S12K	**Black Hills**	**31.56**	**53**	P	**P**	**18 16 59.6**	**-0.5**
	baz=271						
L14K	**Kuka Creek**	**31.61**	**42**	P	**P**	**18 17 00.5**	**0.0**
	baz=261						
F15K	**North Star Dit**	**31.76**	**34**	P	**P**	**18 17 03.1**	**+1.3**
F15K				PcP	**PcP**	**18 19 53.1**	**+1.3**
F15K	**North Star Dit**	**31.76**	**34**	P	**P**	**18 17 00.8**	**-0.9**
	baz=252						
G15K	**Niukluk**	**31.80**	**35**	P	**P**	**18 17 01.9**	**-0.2**
	baz=254						
GUMO	**Guam**	**31.86**	**190**	LR	LR	18 29 48.9	
	comp=Z,157nm,20.1s,baz=14,slow=36						
M14K	**Bethel**	**31.88**	**44**	P	**P**	**18 17 03.7**	**+0.9**
M14K				PcP	**PcP**	**18 19 53.0**	**+1.0**
M14K	**Bethel**	**31.88**	**44**	P	**P**	**18 17 02.8**	**-0.1**
	baz=263						
SSLB	**Suanglung**	**31.92**	**238**	P	**P**	**18 17 04.3**	**+0.7**
SSLB				IAmb	IAmb	18 17 22.1	
	comp=Z,21nm,1.2s						
N14K	**Kuskokwak Cree**	**31.93**	**45**	P	**P**	**18 17 02.4**	**-0.9**
	baz=265						
YULB	**Yu-li**	**32.02**	**237**	P	**P**	**18 17 06.0**	**+1.6**
O14K	**Tigyukauivet M**	**32.08**	**46**	P	**P**	**18 17 05.1**	**+0.5**
O14K	**Tigyukauivet M**	**32.08**	**46**	P	**P**	**18 17 04.3**	**-0.4**
	baz=266						
L15K	**Ungalak Mounta**	**32.23**	**42**	P	**P**	**18 17 05.7**	**-0.2**
	baz=262						
K15K	**Wolf Creek Mou**	**32.30**	**41**	P	**P**	**18 17 06.9**	**+0.3**
K15K	**Wolf Creek Mou**	**32.30**	**41**	P	**P**	**18 17 06.2**	**-0.3**
	baz=261						
C16K	**Lisburne Hills**	**32.39**	**29**	P	**P**	**18 17 06.8**	**-0.5**
C16K				IAmb	IAmb	18 17 08.1	
	comp=Z,12nm,0.8s						
C16K				PcP	**PcP**	**18 19 52.8**	**-0.6**
C16K	**Lisburne Hills**	**32.39**	**29**	P	**P**	**18 17 06.9**	**-0.3**
	baz=248						
SDPT	**Sand Point**	**32.47**	**54**	P	**P**	**18 17 08.3**	**+0.2**
	baz=273						
M15K	**Kasigluk River**	**32.50**	**44**	P	**P**	**18 17 08.2**	**0.0**
	baz=264						
G16K	**Koyuk River**	**32.59**	**35**	P	**P**	**18 17 08.8**	**-0.2**
G16K	**Koyuk River**	**32.59**	**35**	P	**P**	**18 17 08.8**	**-0.2**
	baz=255						
N15K	**Kwethluk River**	**32.74**	**45**	P	**P**	**18 17 11.3**	**+0.8**
N15K				IAmb	IAmb	18 18 24.7	
	comp=Z,17nm,1.3s						
N15K	**Kwethluk River**	**32.74**	**45**	P	**P**	**18 17 10.2**	**-0.3**
	baz=266						
O15K	**Ungalikthiuk R**	**32.82**	**47**	P	**P**	**18 17 11.7**	**+0.6**
O15K	**Ungalikthiuk R**	**32.82**	**47**	P	**P**	**18 17 10.9**	**-0.1**
	baz=268						
J16K	**Anvik River**	**32.89**	**39**	P	**P**	**18 17 12.5**	**+0.8**
J16K	**Anvik River**	**32.89**	**39**	P	**P**	**18 17 11.5**	**-0.2**
	baz=260						
S14K	**Fog Glacier**	**32.95**	**52**	P	**P**	**18 17 11.3**	**-1.1**
	baz=272						
I17K	**Unalakleet**	**32.95**	**38**	P	**P**	**18 17 12.0**	**-0.2**
	baz=259						
D17K	**Noatak River**	**32.98**	**31**	P	**P**	**18 17 11.5**	**-0.9**
	baz=251,SNR=9.0						
CHNA	**Chernabura Isl**	**33.01**	**55**	P	**P**	**18 17 12.4**	**-0.4**
	baz=274						
RDOG	**Red Dog Mine**	**33.16**	**30**	P	**P**	**18 17 13.4**	**-0.6**
	baz=251						
L16K	**Owhat River**	**33.19**	**42**	P	**P**	**18 17 15.1**	**+0.9**
L16K	**Owhat River**	**33.19**	**42**	P	**P**	**18 17 13.4**	**-0.9**
	baz=264						
C17K	**DeLong Mountai**	**33.21**	**29**	P	**P**	**18 17 14.0**	**-0.4**
	baz=250,SNR=6.8						
E17K	**Hotham Inlet**	**33.26**	**32**	P	**P**	**18 17 14.4**	**-0.4**
	baz=253,SNR=6.0						
F17K	**Baldwin Pennin**	**33.30**	**33**	P	**P**	**18 17 16.1**	**+0.9**
F17K				IAmb	IAmb	18 17 16.9	
	comp=Z,15nm,0.7s						
F17K	**Baldwin Pennin**	**33.30**	**33**	P	**P**	**18 17 14.6**	**-0.6**
	baz=255						
G17K	**Kiwalik Mounta**	**33.31**	**35**	P	**P**	**18 17 14.5**	**-0.8**
	baz=257,SNR=5.3						
XAN	**Xi'an**	**33.33**	**265**	⇓P	**P**	**18 17 14.6**	**-1.3**
XAN				pP	pP	18 17 29.8	0.0
XAN				sS	sS	18 22 53.9	-2.1
XAN				pmax	pmax		
	comp=Z,24nm,0.8s						
XAN				pmax	pmax		
	comp=Z,150nm,3.6s						
XAN				LR	LR		
	comp=Z,290nm,18.6s						
XAN				LR	LR		
	comp=Z,270nm,15.1s						
XAN				LR	LR		
	comp=Z,440nm,15.8s						
M16K	**Timber Creek**	**33.37**	**43**	P	**P**	**18 17 16.7**	**+0.8**
M16K				PcP	**PcP**	**18 19 57.8**	**+1.5**
M16K	**Timber Creek**	**33.37**	**43**	P	**P**	**18 17 15.5**	**-0.4**
	baz=266						
N16K	**Nishlik Lake**	**33.42**	**44**	P	**P**	**18 17 15.5**	**-0.9**
	baz=266						
H17K	**Granite Mounta**	**33.49**	**36**	P	**P**	**18 17 17.0**	**+0.1**
H17K				PcP	**PcP**	**18 19 57.9**	**+1.4**
H17K	**Granite Mounta**	**33.49**	**36**	P	**P**	**18 17 15.8**	**-1.1**
	baz=259						
J17K	**VABM Dome**	**33.58**	**39**	P	**P**	**18 17 18.6**	**+0.8**
J17K				IAmb	IAmb	18 17 19.8	
	comp=Z,17nm,1.2s						
J17K					**PcP**	**18 19 58.4**	**+1.6**
J17K	**VABM Dome**	**33.58**	**39**	P	**P**	**18 17 17.0**	**-0.7**
	baz=262						
O16K	**Kokwok River B**	**33.72**	**46**	P	**P**	**18 17 19.9**	**+1.0**
O16K				PcP	**PcP**	**18 19 57.9**	**+0.6**
O16K	**Kokwok River B**	**33.72**	**46**	P	**P**	**18 17 17.9**	**-1.0**
	baz=268						
P16K	**Nushagak River**	**33.76**	**47**	P	**P**	**18 17 20.4**	**+1.1**
P16K	**Nushagak River**	**33.76**	**47**	P	**P**	**18 17 17.9**	**-1.3**
	baz=269						
L17K	**Donlin**	**33.79**	**41**	P	**P**	**18 17 18.4**	**-1.1**
	baz=264						

E18K	Tukpahlearik C	33.81	32	P	P	18 17 18.9	-0.8
	baz=254						
K17K	Iditarod	33.85	40	P	P	18 17 21.0	+1.0
K17K	Iditarod	33.85	40	P	P	18 17 18.8	-1.2
	baz=264						
C18K	Utukok River	33.96	29	P	P	18 17 21.1	+0.1
C18K				IAmb	IAmb	18 17 22.1	
	comp=Z,21nm,1.1s						
C18K				PcP	PcP	18 19 58.7	+0.8
C18K	Utukok River	33.96	29	P	P	18 17 20.0	-1.0
	baz=252,SNR=13						
F18K	Selawik	33.96	33	P	P	18 17 20.4	-0.5
	baz=256						
B18K	Kokolik River	33.99	28	P	P	18 17 20.4	-0.8
	baz=250,SNR=8.5						
R16K	Pilot Point	33.99	50	P	P	18 17 19.8	-1.5
	baz=272						
CNSH	ChangSha	33.99	253	P	P	18 17 21.7	+0.1
CNSH				pmax	pmax		
	comp=Z,18nm,1.1s						
M17K	Holitna River	34.13	43	P	P	18 17 23.5	+1.0
M17K				IAmb	IAmb	18 17 24.8	
	comp=Z,11nm,0.9s						
M17K	Holitna River	34.13	43	P	P	18 17 21.1	-1.4
	baz=266,SNR=7.1						
H18K	Honhosa River	34.18	36	P	P	18 17 22.2	-0.6
	baz=260						
G18K	Tagagawik	34.20	35	P	P	18 17 23.4	+0.4
G18K				IAmb	IAmb	18 17 24.7	
	comp=Z,15nm,0.9s						
G18K	Tagagawik	34.20	35	P	P	18 17 22.1	-0.9
	baz=258,SNR=13						
N17K	Nushagak Hills	34.21	44	P	P	18 17 23.8	+0.6
N17K	Nushagak Hills	34.21	44	P	P	18 17 22.4	-0.8
	baz=268						
O17K	Koliganek Bris	34.23	46	P	P	18 17 22.6	-0.7
	baz=269						
A19K	Wainwright	34.52	27	P	P	18 17 25.2	-0.4
	baz=250						
L18K	Granite Mounta	34.55	41	P	P	18 17 26.3	+0.3
L18K	Granite Mounta	34.55	41	P	P	18 17 25.2	-0.9
	baz=266,SNR=6.5						
P17K	Kvichak River	34.56	47	P	P	18 17 25.6	-0.6
	baz=270						
J18K	Innoko River	34.65	39	P	P	18 17 27.1	+0.1
J18K	Innoko River	34.65	39	P	P	18 17 25.5	-1.4
	baz=264,SNR=6.4						
C19K	Lookout Ridge	34.65	29	P	P	18 17 27.6	+0.6
C19K	Lookout Ridge	34.65	29	P	P	18 17 26.3	-0.7
	baz=253,SNR=21						
GCSA	Galena City Sc	34.74	37	P	P	18 17 26.3	-1.3
	baz=262						
F19K	Shaleruckik Mo	34.74	33	P	P	18 17 27.4	-0.3
F19K					PcP	18 20 00.5	+0.5
F19K	Shaleruckik Mo	34.74	33	P	P	18 17 27.0	-0.7
	baz=258,SNR=10.0						
N18K	Kilae Creek	34.85	44	P	P	18 17 28.5	-0.3
N18K				IAmb	IAmb	18 17 31.3	
	comp=Z,16nm,1.2s						
N18K	Kilae Creek	34.85	44	P	P	18 17 27.7	-1.0
	baz=269						
Q17K	Contact Creek	34.87	48	P	P	18 17 27.9	-1.1
	baz=272						
G19K	Purcell Mounta	34.88	34	P	P	18 17 28.6	-0.2
G19K				PcP	PcP	18 20 01.5	+1.0
G19K	Purcell Mounta	34.88	34	P	P	18 17 28.5	-0.4
	baz=260,SNR=8.6						
M18K	Stony River	34.91	43	P	P	18 17 29.0	-0.2
	baz=268						
D19K	Kuna River	35.00	30	P	P	18 17 29.2	-0.7
	baz=255						
H19K	Roundabout Mou	35.03	36	P	P	18 17 30.7	+0.5
H19K	Roundabout Mou	35.03	36	P	P	18 17 30.0	-0.2
	baz=261,SNR=31						
ENH	Enshi	35.06	259	P	P	18 17 30.0	-0.9
ENH				PcP	PcP	18 20 01.9	+0.2
E19K	Redstone River	35.08	32	P	P	18 17 30.1	-0.5
	baz=258						
ACHA	Angle Creek He	35.17	48	P	P	18 17 31.8	+0.3
ACHA				IAmb	IAmb	18 18 24.4	
	comp=Z,33nm,1.8s						
P18K	Big Mountain,	35.18	46	P	P	18 17 30.8	-0.8
	baz=271						
CHIR	Chirikof Islan	35.18	53	P	P	18 17 31.7	+0.1
CHIR	Chirikof Islan	35.18	53	P	P	18 17 30.9	-0.7
	baz=276						
O18K	Koktuh Hills	35.18	46	P	P	18 17 30.8	-0.8
	baz=271						
J19K	Poorman	35.19	38	P	P	18 17 31.9	+0.4
J19K				IAmb	IAmb	18 17 33.0	
	comp=Z,11nm,1.0s						
J19K	Poorman	35.19	38	P	P	18 17 31.4	-0.2
	baz=264,SNR=8.4						
Q18K	Katmai Hardscr	35.31	48	P	P	18 17 31.8	-1.0
	baz=272						
L19K	White Mountain	35.40	42	P	P	18 17 33.8	+0.3
L19K				PcP	PcP	18 20 02.9	+0.7
L19K	White Mountain	35.40	42	P	P	18 17 32.8	-0.6
	baz=268						
N19K	Bonanza Creek	35.54	44	P	P	18 17 35.2	+0.4
N19K				PcP	PcP	18 20 03.0	+0.4
N19K	Bonanza Creek	35.54	44	P	P	18 17 34.1	-0.7
	baz=270						
F20K	Avaraart Lake	35.57	33	P	P	18 17 35.0	+0.2
F20K				PcP	PcP	18 20 03.3	+0.8
F20K	Avaraart Lake	35.57	33	P	P	18 17 33.9	-0.9
	baz=260,SNR=8.1						
D20K	Etivluk River	35.59	30	P	P	18 17 34.6	-0.4
	baz=257						
M19K	Big River Lodg	35.61	42	P	P	18 17 35.8	+0.5
M19K				PcP	PcP	18 20 04.0	+1.3
M19K	Big River Lodg	35.61	42	P	P	18 17 35.2	-0.1
	baz=268						
E20K	Nigu River	35.64	31	P	P	18 17 35.3	-0.2
	baz=258						
R18K	Karluk	35.67	50	P	P	18 17 35.5	-0.3
	baz=274						
H20K	Anotleneega Mo	35.67	36	P	P	18 17 35.8	+0.1
	baz=263,SNR=12						
B20K	Meade River	35.73	28	P	P	18 17 35.6	-0.5
	baz=254,SNR=14						
I20K	Naaghedeneel	35.76	37	IAmb	IAmb	18 17 42.7	
	comp=Z,19nm,1.4s						
I20K	Naaghedeneel	35.76	37	P	P	18 17 36.4	-0.1
	baz=264						
K20K	Telida	35.82	40	P	P	18 17 37.2	+0.2
	baz=267						
J20K	Nowinta River	35.85	38	PcP	PcP	18 20 04.4	+1.0
J20K	Nowinta River	35.85	38	P	P	18 17 36.8	-0.4
	baz=265,SNR=11						
L20K	Farewell, AK	35.87	41	P	P	18 17 37.3	-0.2
	baz=268,SNR=7.0						
LZH	Lanzhou	35.88	272	*e*P	P	18 17 38.5	+0.5
LZH				S	S	18 23 11.5	-0.6
LZH				sS	sS	18 23 38.4	+2.9
LZH				pmax	pmax		
	comp=Z,34nm,1.4s						
LZH				pmax	pmax		
	comp=Z,190nm,4.3s						
LZH				LR	LR		
	comp=Z,250nm,17.1s						
LZH				LR	LR		
	comp=Z,290nm,15.2s						
LZH				LR	LR		
	comp=Z,440nm,16.8s						
SII	Sitkinak Islan	35.91	51	P	P	18 17 37.8	0.0
SII	Sitkinak Islan	35.91	51	P	P	18 17 37.8	0.0
	baz=276						
Q19K	Cape Douglas,	36.01	47	P	P	18 17 38.3	-0.4
	baz=273						
P19K	Oil Pt	36.19	46	P	P	18 17 40.7	+0.5
	baz=272						
IMAR	Indian Mountai	36.20	35	P	P	18 17 40.2	0.0
IMAR					PcP	18 20 05.3	+0.9
M20K	Styx River	36.20	42	P	P	18 17 41.2	+0.8
	baz=270						
OHAK	Old Harbor	36.33	50	IAmb	IAmb	18 17 42.2	
	comp=Z,11nm,0.8s						
OHAK				PcP	PcP	18 20 05.4	+0.5
OHAK	Old Harbor	36.33	50	P	P	18 17 41.2	-0.2
	baz=276						
C21K	Knifeblade Rid	36.33	30	P	P	18 17 41.8	+0.5
	baz=258,SNR=22						
G21K	Allakaket	36.36	34	IAmb	IAmb	18 17 43.5	
	comp=Z,18nm,0.8s						
G21K	Allakaket	36.36	34	P	P	18 17 41.2	-0.4
	baz=263						
F21K	Alatna River	36.47	33	PcP	PcP	18 20 06.0	+0.8
F21K	Alatna River	36.47	33	P	P	18 17 42.9	+0.4
	baz=262,SNR=12						
E21K	Killik River	36.48	31	P	P	18 17 42.5	-0.2
	baz=260,SNR=17						
B21K	Ikpikpuk River	36.49	29	P	P	18 17 43.3	+0.7
B21K	Ikpikpuk River	36.49	29	P	P	18 17 42.8	+0.2
	baz=258,SNR=41						
H21K	Melozitna Rive	36.55	36	IAmb	IAmb	18 17 45.0	
	comp=Z,14nm,1.0s						
H21K				PcP	PcP	18 20 06.6	+1.1
H21K	Melozitna Rive	36.55	36	P	P	18 17 44.1	+0.8
	baz=265,SNR=18						
N20K	Mount Spurr	36.65	43	P	P	18 17 44.9	+0.7
	baz=271						
SPCR	Spurr Chakacha	36.65	43	P	P	18 17 44.7	+0.5
	baz=271						
KDAK	Kodiak Island	36.65	49	P	P	18 17 43.8	-0.3
KDAK				PcP	PcP	18 20 06.2	+0.4
KDAK	Kodiak Island	36.65	49	P	P	18 17 43.8	-0.3
KDAK						18 20 06.2	
KDAK				pmax	pmax		
	comp=Z,20nm,0.9s						
KDAK	Kodiak Island	36.65	49	P	P	18 17 44.1	0.0
	baz=276						
KDAK	Kodiak Island	36.65	49	P	P	18 17 44.1	0.0
KDAK				PcP	PcP	18 20 07.1	+1.3
PPLA	Purkeypile	36.66	40	P	P	18 17 44.9	+0.5
	baz=269,SNR=9.6						
Q20K	Shuyak Island	36.68	48	P	P	18 17 44.3	-0.1
	baz=275						
A22K	Sinclair Lake	36.70	27	P	P	18 17 44.6	+0.2
	baz=255						
CAST	Castle Rocks	36.72	40	P	P	18 17 46.0	+1.3
CAST				IAmb	IAmb	18 17 47.1	
	comp=Z,9.5nm,0.8s						
CAST	Castle Rocks	36.72	40	P	P	18 17 45.0	+0.3
	baz=268,SNR=18						
SPU	Mount Spurr	36.73	43	IAmb	IAmb	18 17 47.2	
	comp=Z,18nm,1.2s						
STLK	Strandline Lak	36.83	43	P	P	18 17 46.8	+1.1
STLK				IAmb	IAmb	18 17 48.0	
	comp=Z,10.0nm,0.8s						
I21K	Tanana	36.85	37	IAmb	IAmb	18 17 47.9	
	comp=Z,11nm,0.9s						
I21K	Tanana	36.85	37	P	P	18 17 46.4	+0.6
	baz=266,SNR=7.3						
SKT	Skwentna	36.96	42	P	P	18 17 47.6	+0.9
	baz=271,SNR=5.8						
F22K	John River	37.01	33	P	P	18 17 47.4	+0.3
	baz=263,SNR=10						
D22K	Ayikyak River	37.02	30	P	P	18 17 47.7	+0.5
D22K	Ayikyak River	37.02	30	P	P	18 17 47.5	+0.3
	baz=260,SNR=13						
B22K	Teshekpuk Lake	37.05	28	IAmb	IAmb	18 17 48.2	
	comp=Z,16nm,0.8s						
B22K	Teshekpuk Lake	37.05	28	P	P	18 17 47.7	+0.4
	baz=258,SNR=6.7						
H22K	Ishtalitna Cre	37.16	35	P	P	18 17 49.0	+0.7
	baz=266,SNR=17						
GTA	Gaotai	37.18	279	*e*P	P	18 17 49.1	+0.1
GTA				pP	pP	18 18 03.0	0.0
GTA				PcP	PcP	18 20 09.1	+1.1
GTA				S	S	18 23 32.5	+0.7
GTA				PcS	PcS	18 23 57.8	+1.4
GTA				pmax	pmax		
	comp=Z,12nm,0.7s						
GTA				LR	LR		
	comp=Z,350nm,15.6s						
GTA				LR	LR		
	comp=Z,190nm,17.4s						
GTA				LR	LR		
	comp=Z,340nm,16.7s						
G22K	Bettles	37.20	34	P	P	18 17 49.1	+0.5
	baz=264						
E22K	Anaktuvuk Pass	37.23	32	P	P	18 17 49.9	+0.9
	baz=262,SNR=57						
BPAW	Bear Paw Mtn.	37.23	38	IAmb	IAmb	18 17 51.1	
	comp=Z,29nm,1.7s						
BPAW	Bear Paw Mtn.	37.23	38	P	P	18 17 50.1	+1.1
	baz=268,SNR=11						
KTH	Kantishna Hill	37.24	39	P	P	18 17 50.0	+0.8
SUA	Susitna One	37.35	43	P	P	18 17 50.3	+0.1
	baz=272						
MLY	Manley	37.37	37	P	P	18 17 49.7	-0.5
MLY					PcP	18 20 08.9	+0.9
MLY	Manley	37.37	37	P	P	18 17 51.3	+1.1
	baz=268,SNR=16						
BRSE	Bradley Lake S	37.45	46	P	P	18 17 52.1	+1.3
	baz=274						
TRF	Thorofare Moun	37.53	39	IAmb	IAmb	18 18 11.8	
	comp=Z,20nm,1.5s						
TRF	Thorofare Moun	37.53	39	P	P	18 17 52.3	+0.6
	baz=270						
CUT	Chulitna	37.55	41	P	P	18 17 52.5	+0.9
	baz=271						
M22K	Willow	37.63	42	P	P	18 17 53.2	+0.8
	baz=272						
COLD	Coldfoot	37.74	33	PcP	PcP	18 20 10.3	+1.3
COLD	Coldfoot	37.74	33	P	P	18 17 54.0	+0.7
	baz=265,SNR=16						
D23K	Nanushuk River	37.75	30	IAmb	IAmb	18 17 55.4	
	comp=Z,19nm,0.8s						
D23K	Nanushuk River	37.75	30	P	P	18 17 54.2	+0.8
	baz=262,SNR=11						
G23K	Bananza Creek	37.76	34	P	P	18 17 53.4	-0.1
G23K				IAmb	IAmb	18 17 55.2	
	comp=Z,13nm,0.8s						
G23K	Bananza Creek	37.76	34	P	P	18 17 54.2	+0.7
	baz=266,SNR=15						
RC01	Rabbit Creek A	37.85	43	P	P	18 17 54.7	+0.4
	baz=274						
C23K	Itkillik River	37.90	29	P	P	18 17 54.9	+0.3
C23K	Itkillik River	37.90	29	P	P	18 17 55.3	+0.7
	baz=261,SNR=13						
H23K	Yukon River	37.91	36	IAmb	IAmb	18 17 57.1	
	comp=Z,16nm,0.9s						
H23K	Yukon River	37.91	36	P	P	18 17 55.9	+1.1
	baz=268,SNR=15						
I23K	Minto, Yukon-K	37.96	37	PcP	PcP	18 20 10.5	+0.8
I23K	Minto, Yukon-K	37.96	37	P	P	18 17 56.2	+1.1
	baz=269,SNR=9.8						
E23K	Chandalar	38.04	32	P	P	18 17 56.4	+0.5
	baz=265,SNR=21						
SEW	Seward	38.06	45	P	P	18 17 56.3	+0.3
	baz=275						
NEA2	Nenana	38.07	38	P	P	18 17 56.7	+0.6
NEA2				IAmb	IAmb	18 17 57.9	
	comp=Z,9.1nm,0.8s						
NEA2	Nenana	38.07	38	P	P	18 17 56.5	+0.4
	baz=270						
TOLK	Toolik Lake Re	38.11	31	P	P	18 17 56.9	+0.5
TOLK	Toolik Lake Re	38.11	31	P	P	18 17 56.4	-0.1
	baz=264,SNR=17						
PMR	Palmer	38.12	43	P	P	18 17 57.1	+0.6
	baz=273						
MCK	McKinley	38.13	39	IAmb	IAmb	18 17 59.3	
	comp=Z,11nm,0.9s						
MCK	McKinley	38.13	39	P	P	18 17 56.6	0.0
	baz=271,SNR=7.2						
RND	Reindeer	38.17	40	IAmb	IAmb	18 17 58.3	
	comp=Z,29nm,1.4s						
GHO	Glory Hole Cre	38.20	42	IAmb	IAmb	18 17 58.9	
	comp=Z,12nm,0.9s						
WAT1	Susitna Watana	38.33	40	P	P	18 17 57.4	-0.9
	baz=272						
D24K	Happy Valley	38.44	30	P	P	18 17 59.3	+0.2
D24K	Happy Valley	38.44	30	P	P	18 17 59.1	0.0
	baz=264,SNR=13						
KNK	Knik Glacier	38.45	43	P	P	18 17 59.9	+0.6
	baz=274,SNR=7.8						
E24K	Your Creek	38.46	32		ScP	18 23 54.0	-0.5
E24K	Your Creek	38.46	32	P	P	18 18 00.5	+1.1
	baz=266,SNR=41						
SML	Sawmill	38.48	42	P	P	18 18 00.2	+0.6
SML				PcP	PcP	18 20 11.4	-0.1
SML	Sawmill	38.48	42	P	P	18 18 00.2	+0.6
SML				pmax	pmax		
	comp=Z,42nm,0.8s						
SML	Sawmill	38.48	42	P	P	18 18 00.4	+0.7
	baz=274,SNR=22						
WRH	Wood River Hil	38.50	38	P	P	18 18 00.2	+0.5
WRH				IAmb	IAmb	18 18 14.5	
	comp=Z,46nm,2.0s						
WRH					PcP	18 20 11.1	-0.3
C24K	Franklin Bluff	38.54	29	P	P	18 18 00.6	+0.6
	baz=263,SNR=12						
PWL	Port Wells	38.55	44	P	P	18 17 59.8	-0.4
	baz=275						
H24K	Noodor Dome	38.59	36	P	P	18 18 01.6	+1.1
H24K				IAmb	IAmb	18 18 02.9	
	comp=Z,12nm,1.1s						
H24K					PcP	18 20 11.7	-0.1
H24K	Noodor Dome	38.59	36	P	P	18 18 01.8	+1.3
	baz=269,SNR=9.7						
COLA	College	38.60	37	P	P	18 18 00.6	+0.2
COLA	College	38.60	37	*c i*P	P	18 18 01.4	+1.0
COLA				pmax	pmax		
	comp=Z,21nm,1.0s						
COLA	College	38.60	37	P	P	18 18 01.1	+0.6
	baz=270						
COLA	College	38.60	37	P	P	18 18 01.8	+1.3
F24K	Squaw Lake	38.65	33	P	P	18 18 01.6	+0.6
F24K				IAmb	IAmb	18 18 02.6	
	comp=Z,12nm,0.7s						
F24K					PcP	18 20 12.5	+0.6
F24K	Squaw Lake	38.65	33	P	P	18 18 01.3	+0.3
	baz=267,SNR=23						
CD2	Chengdu	38.69	265	P	P	18 18 01.5	-0.3
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
CD2				LR	LR		
	comp=Z,1µm,24.5s						
CD2				LR	LR		
	comp=Z,290nm,15.3s						
WAT6	Susitna Watana	38.71	41	P	P	18 18 01.8	+0.1
	baz=273,SNR=7.1						
M23K	Glacier View	38.77	42	P	P	18 18 02.5	+0.5
	baz=274						
POKR	Poker Plat Res	38.77	37	P	P	18 18 03.0	+1.1
	baz=270,SNR=8.3						
G24K	Hadweenzic Riv	38.78	34	P	P	18 18 02.7	+0.7
	baz=268,SNR=32						
DHY	Denali Highway	38.85	40	IAmb	IAmb	18 18 04.2	
	comp=Z,40nm,1.6s						
DHY	Denali Highway	38.85	40	P	P	18 18 02.9	+0.1
	baz=273,SNR=12						
SCM	Sheep Creek Mo	38.95	42	P	P	18 18 03.7	+0.1
SCM				IAmb	IAmb	18 18 05.3	
	comp=Z,28nm,1.2s						
SCM	Sheep Creek Mo	38.95	42	P	P	18 18 03.7	+0.1
SCM				pmax	pmax		
	comp=Z,28nm,1.2s						
SCM	Sheep Creek Mo	38.95	42	P	P	18 18 03.7	+0.1
	baz=275,SNR=9.7						
HDA	Harding Lake	38.99	38	IAmb	IAmb	18 18 04.9	
	comp=Z,9.0nm,0.6s						
HDA	Harding Lake	38.99	38	P	P	18 18 03.7	-0.1
	baz=272,SNR=10						
IL31		39.01	37	P	P	18 18 03.8	-0.1
IL31				IAmb	IAmb	18 18 06.0	
	comp=Z,14nm,1.2s						
ILAR	Eielson Array	39.01	37	P	P	18 18 03.6	-0.3
ILAR				PcP	PcP	18 20 12.3	-0.7
ILAR	Eielson Array	39.01	37	P	P	18 18 04.1	+0.1
	comp=Z,6.3nm,0.8s,baz=268,slow=7.2,SNR=52						
ILAR				LR	LR	18 34 29.6	
	comp=Z,95nm,21.1s,baz=258,slow=37						
	comp=Z,6.3nm,0.8s						
ILAR	Eielson Array	39.01	37	P	P	18 18 03.6	-0.3
ILAR						18 20 12.3	
P23K	Montague Islan	39.10	45	IAmb	IAmb	18 18 06.4	
	comp=Z,18nm,0.9s						
P23K	Montague Islan	39.10	45	P	P	18 18 04.9	+0.2
	baz=277						
GLI	Glacier Island	39.15	44	IAmb	IAmb	18 18 06.3	
	comp=Z,11nm,0.8s						
GLI				PcP	PcP	18 20 14.2	+0.6
GLI	Glacier Island	39.15	44	P	P	18 18 05.6	+0.4
	baz=276						
D25K	Kavik River	39.32	30	P	P	18 18 07.2	+0.6
	baz=266,SNR=20						
G25K	Bearman Lake	39.32	34	P	P	18 18 07.2	+0.7
	baz=270,SNR=9.3						
GYA	Guiyang	39.37	257	⇓P	P	18 18 07.5	0.0
GYA				pmax	pmax		
	comp=Z,17nm,1.4s						
H25L	Birch Creek	39.44	35	P	P	18 18 08.3	+0.8
	baz=270,SNR=9.3						
M24K	Tolsona, Glenn	39.48	42	P	P	18 18 08.1	+0.2
M24K				IAmb	IAmb	18 18 10.3	
	comp=Z,18nm,0.8s						
M24K	Tolsona, Glenn	39.48	42	P	P	18 18 08.3	+0.4
	baz=275,SNR=6.1						
F25K	Christian Rive	39.51	33	IAmb	IAmb	18 18 10.5	
	comp=Z,10nm,0.7s						
F25K	Christian Rive	39.51	33	P	P	18 18 08.9	+0.7
	baz=269,SNR=13						
K24K	Donnelly Dome	39.53	39	IAmb	IAmb	18 18 29.1	
	comp=Z,22nm,1.1s						
K24K	Donnelly Dome	39.53	39	P	P	18 18 08.8	+0.5
	baz=274,SNR=5.9						
PRP	Porcupine Dome	39.57	36	IAmb	IAmb	18 18 10.7	
	comp=Z,13nm,1.0s						
PRP	Porcupine Dome	39.57	36	P	P	18 18 09.4	+0.6
	baz=272,SNR=16						
KLU	Klutina	39.65	42	P	P	18 18 09.7	+0.3
KLU				IAmb	IAmb	18 18 11.4	
	comp=Z,20nm,1.0s						
KLU	Klutina	39.65	42	P	P	18 18 09.5	+0.1
	baz=276,SNR=10						
J25K	Salcha River,	39.67	38	P	P	18 18 09.1	-0.4
	baz=273,SNR=5.9						
TGY	Tagaytay City	39.68	228	P	P	18 18 10.4	+0.4
	comp=Z,183nm,0.3s,baz=318,slow=4.1,SNR=3.9						
PAX	Paxson	39.73	40	P	P	18 18 10.7	+0.6
	baz=275,SNR=8.6						
DIV	Divide	39.77	43	IAmb	IAmb	18 18 12.3	
	comp=Z,18nm,1.0s						
EYAK	Cordova Ski Ar	39.85	44	P	P	18 18 11.6	+0.7
	baz=278						
C26K	Camden Bay	39.87	29	P	P	18 18 11.9	+0.9
	baz=267						
BMAR	Burnt Mountain	39.92	33	P	P	18 18 12.0	+0.5
HARP	HAARP	39.92	41	P	P	18 18 12.9	+1.3
	baz=276						
RIDG	Independent Ri	39.95	39	IAmb	IAmb	18 18 12.9	
	comp=Z,13nm,1.0s						
RIDG	Independent Ri	39.95	39	P	P	18 18 11.7	-0.2
	baz=274,SNR=12						
F26K	Sheenjek River	40.09	33	IAmb	IAmb	18 18 15.5	
	comp=Z,16nm,0.8s						
F26K	Sheenjek River	40.09	33	P	P	18 18 14.3	+1.4
	baz=270,SNR=15						
G26K	Porcupine Rive	40.24	34	P	P	18 18 15.1	+1.0
G26K	Porcupine Rive	40.24	34	P	P	18 18 15.5	+1.4
	baz=272,SNR=15						
N25K	Chitina, Valde	40.27	42	IAmb	IAmb	18 18 16.9	
	comp=Z,27nm,1.6s						
N25K	Chitina, Valde	40.27	42	P	P	18 18 15.5	+0.9
	baz=277						
C27K	Jago River	40.27	30	P	P	18 18 15.3	+0.9
C27K	Jago River	40.27	30	P	P	18 18 15.0	+0.6
	baz=268,SNR=7.6						
SCRK	Sand Creek	40.31	38	IAmb	IAmb	18 18 16.2	
	comp=Z,25nm,1.6s						
SCRK	Sand Creek	40.31	38	P	P	18 18 15.0	+0.1
	baz=275,SNR=12						
BMRM	Bremner River	40.35	43	P	P	18 18 16.0	+0.8
BMRM				IAmb	IAmb	18 18 17.3	
	comp=Z,21nm,0.9s						
BMRM				PcP	PcP	18 20 17.7	+0.2
BMRM	Bremner River	40.35	43	P	P	18 18 16.0	+0.8
	baz=278,SNR=11						
RAGM	Ragged Mountai	40.40	44	IAmb	IAmb	18 18 40.5	
	comp=Z,32nm,1.2s						
J26L	Joseph Creek	40.45	38	P	P	18 18 15.6	-0.4
J26L	Joseph Creek	40.45	38	P	P	18 18 16.1	+0.1
	baz=275,SNR=9.0						
MENT	Mentasta	40.53	40	IAmb	IAmb	18 18 47.7	
	comp=Z,34nm,1.7s						
I26K	Coal Creek Min	40.57	36	P	P	18 18 18.0	+1.1
	baz=274						
KAIM	Kayak Island	40.59	45	IAmb	IAmb	18 18 34.5	
	comp=Z,28nm,1.0s						
KAIM	Kayak Island	40.59	45	P	P	18 18 18.2	+1.1
	baz=279						
HMT	Hamilton	40.61	44	IAmb	IAmb	18 18 19.7	
	comp=Z,23nm,1.1s						
L26K	Log Cabin Wild	40.69	40	P	P	18 18 18.1	+0.2
L26K	Log Cabin Wild	40.69	40	P	P	18 18 19.9	+2.0
	baz=276,SNR=13						
BERG	Berg Lake	40.87	44	P	P	18 18 19.4	-0.1

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BERG                               IAmb   IAmb   18 18 35.4
       comp=Z,30nm,1.3s
M26K   Nabesna, AK      40.92  41  IAmb   IAmb   18 18 22.7
       comp=Z,30nm,1.0s
M26K   Nabesna, AK      40.92  41  P      P      18 18 21.6 +1.7
       baz=278,SNR=33
E27K   Coleen River     41.04  32  P      P      18 18 22.2 +1.4
       baz=272,SNR=5.8
MCARA  McCarthy VSAT    41.05  42  IAmb   IAmb   18 18 26.0
       comp=Z,13nm,0.8s
MCARA  McCarthy VSAT    41.05  42  P      P      18 18 22.1 +1.2
       baz=279
G27K   Doyon Strip      41.08  34  P      P      18 18 22.7 +1.5
       baz=274,SNR=8.3
CRQM   Cirque           41.09  43  P      P      18 18 22.3 +0.8
CRQE   Cirque           41.11  43  P      P      18 18 23.2 +1.7
       baz=279,SNR=16
K27K   Chicken          41.14  38  IAmb   IAmb   18 18 23.8
       comp=Z,39nm,1.3s
K27K   Chicken          41.14  38  P      P      18 18 22.5 +0.9
       baz=276
H27K   Steamboat Moun   41.17  35  IAmb   IAmb   18 18 24.7
       comp=Z,16nm,0.9s
H27K   Steamboat Moun   41.17  35  P      P      18 18 23.5 +1.6
       baz=274,SNR=18
I27K   Kandik River     41.19  36  P      P      18 18 22.9 +0.9
       baz=275
TGL    Tana Glacier     41.24  43  IAmb   IAmb   18 18 25.1
       comp=Z,44nm,1.5s
D27M   Malcolm River    41.24  30  P      P      18 18 23.4 +0.9
       baz=271
WAX    Waxell Ridge     41.28  44  IAmb   IAmb   18 18 25.5
       comp=Z,29nm,0.9s
L27K   Beaver Creek,    41.37  40  IAmb   IAmb   18 18 25.8
       comp=Z,13nm,0.8s
L27K   Beaver Creek,    41.37  40  P      P      18 18 25.1 +1.6
       baz=278,SNR=34
BCAR   Beaver Creek A   41.39  40  P      P      18 18 24.6 +0.9
M27K   Edge Creek, AK   41.44  41  IAmb   IAmb   18 18 27.0
       comp=Z,19nm,0.9s
M27K   Edge Creek, AK   41.44  41  P      P      18 18 25.6 +1.3
       baz=278,SNR=20
F28M   Old Crow         41.72  33  IAmb   IAmb   18 18 28.9
       comp=Z,14nm,0.8s
F28M   Old Crow         41.72  33  P      P      18 18 27.9 +1.5
       baz=274,SNR=14
GRNC   Granite Creek    41.77  43  P      P      18 18 27.9 +0.8
GRNC                               PcP    PcP    18 20 22.6 +0.3
MESA   MESA             41.77  44  P      P      18 18 28.4 +1.3
       baz=281
E28M   Babbage River    41.79  31  IAmb   IAmb   18 18 29.2
       comp=Z,22nm,1.3s
E28M   Babbage River    41.79  31  P      P      18 18 28.1 +1.3
       baz=273,SNR=5.9
ZALV   Zalesovo Beam    41.84 306  P      P      18 18 25.8 -1.6
       comp=Z,0.9nm,0.5s,baz=90,slow=6.6,SNR=4.3
ZALV                               PcP    PcP    18 20 22.4 +0.1
       comp=Z,4.3nm,0.6s,baz=73,slow=3.1,SNR=14
ZALV                               LR     LR     18 36 59.7
       comp=Z,478nm,18.7s,baz=84,slow=38
       comp=Z,0.9nm,0.5s
I28M   Miner Creek      41.90  36  IAmb   IAmb   18 18 29.9
       comp=Z,15nm,0.7s
I28M   Miner Creek      41.90  36  P      P      18 18 28.9 +0.9
       baz=277,SNR=22
BVCY   Beaver Creek     41.91  41  P      P      18 18 29.5 +1.6
       baz=279,SNR=8.6
CTG    Chitna Glacier   41.92  43  P      P      18 18 29.8 +1.5
       baz=280,SNR=12
CTGM   Chitina Glacie   41.93  43  P      P      18 18 29.6 +1.4
LOGN   Logan Glacier    42.11  43  P      P      18 18 30.8 +1.0
LOGN                               IAmb   IAmb   18 18 32.1
       comp=Z,20nm,1.0s
YUK3   Moose Creek      42.20  41  P      P      18 18 31.5 +1.0
       baz=280,SNR=11
DAWY   Dawson           42.31  38  P      P      18 18 31.5 +0.3
DAWY   Dawson           42.31  38  P      P      18 18 31.6 +0.3
       baz=279
QIZ    Qiongzhong       42.35 245  P      P      18 18 31.2 -0.8
QIZ                                S      S      18 24 48.5 -0.8
QIZ                                LR     LR
       comp=Z,140nm,13.7s
QIZ                                LR     LR
       comp=Z,220nm,21.3s
E29M   Blow River       42.40  31  P      P      18 18 32.8 +0.9
E29M                               IAmb   IAmb   18 18 34.5
       comp=Z,22nm,0.9s
E29M                               PcP    PcP    18 20 25.0 +1.0
E29M   Blow River       42.40  31  P      P      18 18 33.5 +1.7
       baz=275,SNR=14
H29M   Whitestone       42.45  35  IAmb   IAmb   18 18 47.4
       comp=Z,15nm,0.9s
H29M   Whitestone       42.45  35  P      P      18 18 33.8 +1.6
       baz=277,SNR=13
G29M   Pine Creek       42.51  34  P      P      18 18 34.6 +1.8
       baz=277,SNR=15
O28M   Mount Upton      42.51  43  IAmb   IAmb   18 18 35.4
       comp=Z,15nm,1.0s
O28M                               PcP    PcP    18 20 25.4 +0.6
O28M   Mount Upton      42.51  43  P      P      18 18 34.1 +0.9
       baz=282,SNR=6.5
I29M   Ogilvie Camp,    42.59  36  P      P      18 18 34.1 +0.7
I29M                               IAmb   IAmb   18 18 35.4
       comp=Z,18nm,0.8s
I29M   Ogilvie Camp,    42.59  36  P      P      18 18 34.5 +1.1
       baz=278,SNR=27
YUK8   Steele Glacier   42.62  42  P      P      18 18 35.1 +1.1
       baz=281
PINM   Pinnacle         42.62  44  P      P      18 18 34.9 +1.1
       baz=282
PZH    PanZhiHua        42.75 261  P      P      18 18 35.1 -0.2
PZH                                pmax   pmax
       comp=Z,10.0nm,0.5s
KMI    Kunming          42.93 259 ⇑P      P      18 18 36.9  0.0
KMI                                pP     pP     18 18 51.9 +0.7
KMI                                pmax   pmax
       comp=Z,23nm,1.4s
KMI                                LR     LR
       comp=Z,210nm,17.4s
KMI                                LR     LR
       comp=Z,140nm,15.5s
KMI                                LR     LR
       comp=Z,200nm,14.6s
M29M   Somme Creek      43.00  40  P      P      18 18 37.1 +0.3
M29M   Somme Creek      43.00  40  P      P      18 18 38.3 +1.4
       baz=281,SNR=7.4
L29M   L29M             43.02  39  P      P      18 18 37.8 +0.8
L29M                               IAmb   IAmb   18 18 39.9
       comp=Z,11nm,0.7s
L29M   L29M             43.02  39  P      P      18 18 38.9 +1.9
       baz=281,SNR=16
EPYK   Eagle Plains     43.09  34  IAmb   IAmb   18 18 39.8
       comp=Z,33nm,1.1s
EPYK   Eagle Plains     43.09  34  P      P      18 18 38.9 +1.4
       baz=278,SNR=18
YUK4   Talbot Arm       43.13  42  P      P      18 18 39.4 +1.3
       baz=282
PNL    Peninsula        43.13  44  P      P      18 18 39.1 +1.2
       baz=283
K29M   Barlow Dome      43.16  38  P      P      18 18 39.5 +1.3
       baz=280,SNR=14
G30M   tAoh Zraii Nji   43.20  33  IAmb   IAmb   18 18 44.0
       comp=Z,17nm,0.8s
G30M   tAoh Zraii Nji   43.20  33  P      P      18 18 39.5 +1.2
       baz=278,SNR=19
F30M   Barrier River    43.28  32  P      P      18 18 40.2 +1.3
F30M   Barrier River    43.28  32  P      P      18 18 40.7 +1.7
       baz=278,SNR=27
YUK6   Outpost Mounta   43.35  42  P      P      18 18 40.9 +1.0
       baz=283
O29M   Mount Kennedy    43.39  43  P      P      18 18 41.3 +1.1
       baz=283
I30M   Mount Dempster   43.41  36  P      P      18 18 41.3 +1.1
       baz=280,SNR=51
J30M   Hart River       43.54  37  IAmb   IAmb   18 18 43.4
       comp=Z,28nm,1.4s
J30M   Hart River       43.54  37  P      P      18 18 42.5 +1.2
       baz=281,SNR=18
WMQ    Urumqi           43.56 291 eP      P      18 18 43.7 +2.1
WMQ                                LR     LR
       comp=Z,240nm,19.7s
WMQ                                LR     LR
       comp=Z,240nm,23.9s
WMQ                                LR     LR
       comp=Z,310nm,23.9s
DAV    Davao City (W)   43.59 217  LR     LR     18 38 03.1
       comp=Z,77nm,18.7s,baz=27,slow=38
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HYT    Haines Junctio   43.79  42  P      P      18 18 45.0 +1.7
       baz=284,SNR=24
N30M   Aishikik Lake    43.84  41  P      P      18 18 44.7 +1.1
       baz=283
P29M   Windy Craggy     43.96  44  P      P      18 18 46.4 +1.8
       baz=285,SNR=18
G31M   Satah River      43.97  33  P      P      18 18 44.3 -0.1
G31M                               IAmb   IAmb   18 18 59.9
       comp=Z,25nm,1.2s
G31M   Satah River      43.97  33  P      P      18 18 45.3 +0.9
       baz=280,SNR=11
INK    Inuvik           44.02  31  IAmb   IAmb   18 19 00.4
       comp=Z,36nm,1.4s
INK    Inuvik           44.02  31  LR     LR     18 41 28.2
       comp=Z,100nm,18.3s,baz=246,slow=42
INK    Inuvik           44.02  31  P      P      18 18 46.0 +1.1
INK                                pmax   pmax
       comp=Z,20nm,1.1s
INK    Inuvik           44.02  31  P      P      18 18 45.7 +0.8
       baz=279,SNR=12
F31M   Tsiigehtchic     44.08  33  P      P      18 18 46.4 +1.0
       baz=280,SNR=15
H31M   Peel River       44.14  35  P      P      18 18 46.8 +0.9
H31M   Peel River       44.14  35  P      P      18 18 47.1 +1.2
       baz=281,SNR=15
P30M   Million Dollar   44.22  43  P      P      18 18 48.0 +1.3
       baz=285
N31M   Braeburn, Yuko   44.44  41  P      P      18 18 49.6 +1.2
N31M                               IAmb   IAmb   18 18 51.7
       comp=Z,20nm,0.9s
N31M   Braeburn, Yuko   44.44  41  P      P      18 18 49.9 +1.5
       baz=284,SNR=7.1
O30N   Mendenhall       44.47  42  IAmb   IAmb   18 18 51.7
       comp=Z,29nm,1.5s
O30N   Mendenhall       44.47  42  P      P      18 18 50.2 +1.6
       baz=285,SNR=5.9
PLBC   Pleasant Camp    44.68  44  P      P      18 18 52.0 +1.8
       baz=286,SNR=6.7
M31M   Drury Creek, Y   44.91  40  IAmb   IAmb   18 18 54.8
       comp=Z,13nm,0.8s
M31M   Drury Creek, Y   44.91  40  P      P      18 18 53.6 +1.5
       baz=284,SNR=14
WHY    Whitehorse       45.08  42  IAmb   IAmb   18 18 56.5
       comp=Z,23nm,1.0s
WHY    Whitehorse       45.08  42  P      P      18 18 55.5 +1.9
       baz=286,SNR=7.1
S31K   Pelican          45.17  46  P      P      18 18 55.6 +1.5
       baz=287
FARO   Faro, Yukon      45.37  40  P      P      18 18 56.8 +1.1
FARO                               IAmb   IAmb   18 18 58.2
       comp=Z,13nm,1.0s
FARO   Faro, Yukon      45.37  40  P      P      18 18 57.2 +1.5
       baz=285,SNR=10
N32M   Quiet Lake       45.79  41  P      P      18 19 00.4 +1.3
       baz=286
MK31   Makanchi Array   45.81 297 i P     P      18 18 59.5 +0.1
MKAR   Makanchi Array   45.81 297  P      P      18 18 59.1 -0.4
MKAR                               PcP    PcP    18 20 36.2 +0.2
MKAR   Makanchi Array   45.81 297  P      P      18 18 58.4 -1.0
       comp=Z,1.1nm,0.5s,baz=78,slow=8.8,SNR=17
MKAR                               PcP    PcP    18 20 35.4 -0.7
       comp=Z,2.0nm,0.6s,baz=80,slow=1.5,SNR=8.6
MKAR                               LR     LR     18 39 23.9
       comp=Z,871nm,18.7s,baz=60,slow=38
       comp=Z,1.1nm,0.5s
MKAR   Makanchi Array   45.81 297 i P     P      18 18 59.4  0.0
MKAR                               pmax   pmax
       comp=Z,1.0nm,0.5s
MKAR   Makanchi Array   45.81 297 eP      P      18 18 59.4  0.0
SIT    Sitka            45.91  47  P      P      18 19 01.2 +1.2
       baz=289
TNCH   TengChong        45.93 262⇑iP      P      18 19 01.3 +0.5
TNCH                               pP     pP     18 19 15.6 +0.4
TNCH                               sP     sP     18 19 23.4 +1.9
TNCH                               S      S      18 25 39.9 -1.7
TNCH                               pmax   pmax
       comp=Z,27nm,1.4s
TNCH                               pmax   pmax
       comp=Z,240nm,4.1s
TNCH                               LR     LR
       comp=Z,110nm,6.3s
TNCH                               LR     LR
       comp=Z,140nm,5.2s
TNCH                               LR     LR
       comp=Z,140nm,19.0s
P32M   Atlin            45.94  43  P      P      18 19 01.8 +1.5
       baz=288
R32K   Eaglecrest       45.94  45  IAmb   IAmb   18 19 03.4
       comp=Z,9.7nm,0.8s
R32K   Eaglecrest       45.94  45  P      P      18 19 01.7 +1.5
       baz=288,SNR=5.6
A36M   Sachs Harbour    46.12  25  P      P      18 19 01.4  0.0
A36M                               IAmb   IAmb   18 19 03.0
       comp=Z,14nm,0.8s
A36M   Sachs Harbour    46.12  25  P      P      18 19 02.2 +0.8
       baz=283,SNR=6.3
S32K   Killisnoo        46.17  46  P      P      18 19 03.8 +1.8
       baz=289
P33M   Teslin, Yukon    46.19  42  IAmb   IAmb   18 19 05.2
       comp=Z,21nm,1.1s
P33M   Teslin, Yukon    46.19  42  P      P      18 19 03.6 +1.4
       baz=288,SNR=9.8
MMPY   Sheldon Lake,    46.20  39  IAmb   IAmb   18 19 18.6
       comp=Z,15nm,1.1s
MMPY   Sheldon Lake,    46.20  39  P      P      18 19 04.1 +1.8
       baz=286,SNR=15
KURK   Kurchatov        46.49 304  P      P      18 19 03.4 -1.2
KURK   Kurchatov        46.49 304  P      P      18 19 03.7 -1.0
KURK   Kurchatov        46.49 304ceP      P      18 19 03.7 -1.0
KURK                               pmax   pmax
       comp=Z,10.0nm,1.3s
KURK   Kurchatov        46.49 304 eP      P      18 19 03.7 -1.0
KURK   Kurchatov        46.49 304  P      P      18 19 03.5 -1.2
KURK                               pP     pP     18 19 19.7 +0.7
KURBB  Kurchatov Arra   46.58 304  P      P      18 19 03.4 -2.0
       comp=Z,2.3nm,0.4s,baz=67,slow=8.1,SNR=11
KURBB                              PcP    PcP    18 20 38.4 -0.2
       comp=Z,0.9nm,0.3s,baz=74,slow=3.3,SNR=7.7
KURBB                              LR     LR     18 39 22.4
       comp=Z,150nm,20.4s,baz=167,slow=37
       comp=Z,2.3nm,0.4s
Q32M   Nakina River     46.84  44  P      P      18 19 09.3 +1.8
       baz=289
C36M   Paulatuk         47.15  29  P      P      18 19 09.5  0.0
C36M   Paulatuk         47.15  29  P      P      18 19 09.8 +0.2
       baz=286,SNR=6.8
R33M   Jennings River   47.33  43  IAmb   IAmb   18 19 28.1
       comp=Z,21nm,1.2s
R33M   Jennings River   47.33  43  P      P      18 19 13.6 +2.3
       baz=290,SNR=13
U33K   Whale Pass       47.38  48  P      P      18 19 13.7 +2.2
       baz=291
CRAG   Craig            47.61  49  P      P      18 19 15.6 +2.3
       baz=292
WRAK   Wrangell Islan   47.67  47  IAmb   IAmb   18 19 17.1
       comp=Z,9.8nm,0.9s
WRAK   Wrangell Islan   47.67  47  P      P      18 19 16.1 +2.3
       baz=291
S34M   Telegraph Cree   47.76  45  P      P      18 19 15.6 +1.1
S34M   Telegraph Cree   47.76  45  P      P      18 19 16.5 +2.1
       baz=291,SNR=5.2
TGTN   Hyland Airport   47.88  40  P      P      18 19 16.7 +1.3
       baz=290
WTLY   Watson Lake, Y   48.12  42  P      P      18 19 19.5 +2.3
       baz=290
DLBC   Dease Lake       48.12  44  P      P      18 19 18.6 +1.2
DLBC                               IAmb   IAmb   18 19 34.4
       comp=Z,19nm,1.2s
DLBC   Dease Lake       48.12  44  LR     LR     18 39 00.7
       comp=Z,68nm,21.9s,baz=294,slow=35
DLBC   Dease Lake       48.12  44  P      P      18 19 19.8 +2.4
       baz=291,SNR=8.9
JAY    Jayapura         48.28 193  LR     LR     18 36 52.2
       comp=Z,56nm,21.6s,baz=16,slow=32
LSA    Lhasa            48.29 272  P      P      18 19 19.1 -0.4
LSA                                pmax   pmax
       comp=Z,7.0nm,0.5s
DIB    Dawson Inlet,    48.83  51  P      P      18 19 24.1 +1.3
WRGLY  Wrigley          49.38  37  P      P      18 19 28.5 +1.8
       baz=292
CHTO   Chiang Mai       49.75 255  P      P      18 19 30.1 -0.1
CHTO                               IAmb   IAmb   18 19 31.4
       comp=Z,6.8nm,0.8s
CHTO   Chiang Mai       49.75 255  P      P      18 19 30.7 +0.4
CHTO                               P      P      18 19 30.7 +0.4
CHTO   Chiang Mai       49.75 255  P      P      18 19 30.1 -0.1
CHTO                               pmax   pmax
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       comp=Z,7.0nm,0.8s
CHTO   Chiang Mai       49.75 255  P      P      18 19 30.6 +0.4
CHTO                               sP     sP     18 19 52.1 +1.3
BEAVL  Fort Liard       49.83  41  P      P      18 19 31.9 +1.6
       baz=293
CM31   Chiang Mai Arr   50.00 255  P      P      18 19 32.0 -0.2
CM31                               IAmb   IAmb   18 19 33.5
       comp=Z,21nm,1.6s
CM31   Chiang Mai Arr   50.00 255  P      P      18 19 31.9 -0.2
CM31                               P      P      18 19 31.9 -0.2
CMAR   Chiang Mai Arr   50.00 255  P      P      18 19 31.9 -0.2
CMAR                               PcP    PcP    18 20 51.0 -0.4
CMAR   Chiang Mai Arr   50.00 255  P      P      18 19 32.0 -0.1
       comp=Z,1.5nm,0.6s,baz=37,slow=7.3,SNR=11
CMAR                               PcP    PcP    18 20 52.4 +1.0
       comp=Z,1.1nm,0.8s,baz=32,slow=2.6,SNR=4.5
CMAR                               LR     LR     18 42 13.7
       comp=Z,212nm,19.9s,baz=60,slow=38
       comp=Z,1.5nm,0.6s
CMAR   Chiang Mai Arr   50.00 255 i P     P      18 19 32.9 +0.8
CMAR                               pmax   pmax
       comp=Z,2.0nm,0.6s
BVAR   Borovoye Array   50.23 309  P      P      18 19 32.3 -1.1
       comp=Z,1.9nm,0.6s,baz=77,slow=8.3,SNR=10
BVAR                               PcP    PcP    18 20 51.4 -0.4
       comp=Z,2.6nm,0.4s,baz=64,slow=3.4,SNR=7.9
BVAR                               LR     LR     18 42 20.7
       comp=Z,266nm,18.4s,baz=62,slow=38
       comp=Z,1.9nm,0.6s
BRVK   Borovoye         50.27 309ceP      P      18 19 31.2 -2.5
BRVK                               pmax   pmax
       comp=Z,4.0nm,1.3s
TOAD   Toad River Com   50.28  42  P      P      18 19 35.5 +1.7
       baz=294,SNR=15
KOTAN  Kotaneelee Air   50.31  40  P      P      18 19 35.6 +1.6
       baz=294
WUS    Wushi            50.33 292  IAmb   IAmb   18 20 20.1
       comp=Z,18nm,1.4s
WUS    Wushi            50.33 292  P      P      18 19 34.9 +0.4
EUNU   Eureka           51.01  11  P      P      18 19 37.9 -1.1
EUNU                               PcP    PcP    18 20 54.1 -0.1
BBB    Bella Bella      51.67  51  LR     LR     18 39 34.2
       comp=Z,42nm,21.1s,baz=269,slow=34
BOOM   Boomskoye usch   51.80 295  P      P      18 19 45.0 -0.6
BOOM                               IAmb   IAmb   18 20 59.3
       comp=Z,9.2nm,1.1s
BOOM   Boomskoye usch   51.80 295  P      P      18 19 45.0 -0.6
BOOM                               pmax   pmax
       comp=Z,9.0nm,1.1s
BRDH   Bariadhala       52.26 265  LR     LR     18 42 46.2
       comp=Z,135nm,18.1s,baz=76,slow=37
EVN    Everest          52.38 274  P      P      18 19 50.2 -0.4
AAK    Ala-Archa        52.65 296  P      P      18 19 51.5 -0.3
AAK    Ala-Archa        52.65 296  LR     LR     18 43 35.8
       comp=Z,283nm,19.3s,baz=54,slow=38
AAK    Ala-Archa        52.65 296ceP      P      18 19 51.1 -0.8
AAK                                pmax   pmax
       comp=Z,5.0nm,1.3s
AAK    Ala-Archa        52.65 296 eP      P      18 19 51.1 -0.8
RES    Resolute Bay     52.91  18  P      P      18 19 52.4 -0.7
RES                                IAmb   IAmb   18 19 53.4
       comp=Z,8.8nm,0.9s
RES                                PcP    PcP    18 21 01.4 +0.1
RES    Resolute Bay     52.91  18  LR     LR     18 45 51.8
       comp=Z,142nm,19.3s,baz=256,slow=40
RES    Resolute Bay     52.91  18  P      P      18 19 52.4 -0.7
RES                                pmax   pmax
       comp=Z,9.0nm,0.9s
KSH    Kashi            53.32 292  P      P      18 20 01.0 +4.2
KSH                                sP     sP     18 20 20.8 +3.1
KSH                                pmax   pmax
       comp=Z,6.0nm,1.5s
KSH                                LR     LR
       comp=Z,430nm,19.2s
KSH                                LR     LR
       comp=Z,350nm,19.6s
KSH                                LR     LR
       comp=Z,450nm,21.6s
YKAW3  Yellowknife Wh   53.33  35  IAmb   IAmb   18 19 58.1
       comp=Z,14nm,0.9s
YKA    Yellowknife Ar   53.36  35  P      P      18 19 56.6  0.0
YKA    Yellowknife Ar   53.36  35  P      P      18 19 57.1 +0.6
       comp=Z,8.0nm,0.8s,baz=302,slow=7.4,SNR=40
YKA                                LR     LR     18 45 00.5
       comp=Z,106nm,21.0s,baz=300,slow=38
       comp=Z,8.0nm,0.8s
YKAW1  Yellowknife Wh   53.41  35  IAmb   IAmb   18 19 58.7
       comp=Z,8.5nm,0.8s
SPITS  Spitsbergen Ar   53.73 349  P      P      18 19 58.4 -0.7
       comp=Z,2.7nm,0.8s,baz=51,slow=6.6,SNR=7.6
SPITS                              LR     LR     18 43 35.1
       comp=Z,154nm,19.2s,baz=22,slow=37
       comp=Z,2.7nm,0.8s
ARSB   Arslanbob        54.30 295  IAmb   IAmb   18 20 58.7
       comp=Z,12nm,1.2s
PMG    Port Moresby     54.45 184  LR     LR     18 39 50.0
       comp=Z,65nm,21.7s,baz=341,slow=32
ARTI   Arti             54.84 317  P      P      18 20 05.9 -1.5
ARTI                               IAmb   IAmb   18 20 07.5
       comp=Z,10nm,1.0s
ARTI                               PcP    PcP    18 21 08.5 -0.5
ARTI   Arti             54.84 317  LR     LR     18 45 22.2
       comp=Z,388nm,21.5s,baz=56,slow=38
ARTI   Arti             54.84 317 eP      P      18 20 05.7 -1.7
ARTI                               pmax   pmax
       comp=Z,11nm,1.2s
KK31   Karatay Array    54.91 298  IAmb   IAmb   18 20 09.2
       comp=Z,12nm,1.4s
KKAR   Karatay Array    54.91 298  IAmb   IAmb   18 20 09.2
       comp=Z,12nm,1.4s
HNR    Honiara          55.12 168  LR     LR     18 40 40.0
       comp=Z,222nm,21.8s,baz=350,slow=32
LLLB   Lillooet         55.85  50  IAmb   IAmb   18 20 17.0
       comp=Z,9.3nm,1.0s
KSM    Kuching          55.92 231  P      P      18 20 16.5 +0.8
KSM                                IAmb   IAmb   18 20 18.3
       comp=Z,23nm,1.3s
BTK    Batken           56.36 295  IAmb   IAmb   18 20 19.6
       comp=Z,5.1nm,0.5s
BTK    Batken           56.36 295  P      P      18 20 18.7  0.0
BTK                                pmax   pmax
       comp=Z,7.0nm,1.1s
NLWA   Neilton Lookou   56.43  54  IAmb   IAmb   18 20 21.7
       comp=Z,16nm,1.0s
NEEM   North Greenlan   56.88   5 i P     P      18 20 19.0 -3.1
NEEM                               IAmb   IAmb   18 20 21.3
       comp=Z,12nm,0.7s
KAPI   Kappang          56.93 217  LR     LR     18 46 56.5
       comp=Z,21nm,18.4s,baz=30,slow=38
LVZ    Lovozero         57.33 336 i P     P      18 20 25.4 +0.3
LVZ                                pmax   pmax
       comp=Z,15nm,1.5s
KIRV   Kirov            57.74 323  LR     LR     18 47 26.6
       comp=Z,445nm,19.5s,baz=48,slow=38
ABKAR  Akbulak array    57.80 309  P      P      18 20 27.4 -1.2
ABKAR  Akbulak array    57.80 309  IAmb   IAmb   18 20 29.3
       comp=Z,12nm,0.5s
DAG    Danmarks Havn    58.06 357  P      P      18 20 30.8 +0.8
DAG                                pmax   pmax
       comp=Z,4.0nm,2.0s
AKTO   Aktyubinsk       58.19 311  LR     LR     18 47 36.5
       comp=Z,645nm,19.8s,baz=51,slow=38
SIMJ   Simiganj         58.31 295  P      P      18 20 31.7 -0.8
SIMJ   Simiganj         58.31 295  P      P      18 20 32.6  0.0
DZET   Dzherino         58.34 295  P      P      18 20 32.7  0.0
DZET                               pmax   pmax
       comp=Z,7.0nm,1.2s
NIL    Nilore           58.41 287  P      P      18 20 32.8 -0.4
NIL    Nilore           58.41 287  P      P      18 20 32.8 -0.4
NIL                                pmax   pmax
       comp=Z,15nm,0.9s
NIL    Nilore           58.41 287  P      P      18 20 33.8 +0.6
B08A   Colville Reser   58.46  51  IAmb   IAmb   18 20 35.2
       comp=Z,14nm,1.2s
ARCES  ARCESS Array B   58.59 340  P      P      18 20 33.1 -0.8
       comp=Z,4.7nm,0.4s,baz=28,slow=10,SNR=2.0
ARCES                              LR     LR     18 51 38.5
       comp=Z,118nm,18.3s,baz=46,slow=42
       comp=Z,4.7nm,0.4s
H04A   Detroit Lake     58.90  56  P      P      18 20 37.6 +1.2
KULLO  Kullorsuaq       59.07   8 i P     P      18 20 33.9 -3.2
KULLO                              IAmb   IAmb   18 20 36.2
       comp=Z,16nm,0.9s
ILON   Igloolik, Nuna   59.50  19  IAmb   IAmb   18 20 39.6
       comp=Z,6.2nm,0.7s
NEW    Newport          59.73  51  P      P      18 20 42.0  0.0
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NEW                                IAmb    IAmb     18 20 44.0
        comp=Z,8.2nm,0.9s
NEW    Newport           59.73  51  P       P        18 20 42.8 +0.7
        comp=Z,6.1nm,0.9s,baz=289,slow=5.2,SNR=9.4
NEW                                LR      LR       18 46 23.6
        comp=Z,22nm,20.7s,baz=305,slow=36
        comp=Z,6.1nm,0.9s
NEW    Newport           59.73  51  P       P        18 20 42.1  0.0
NEW                                pmax    pmax
        comp=Z,8.0nm,1.0s
YBH    Yreka Blue Hor    60.28  59  IAmb    IAmb     18 20 49.2
        comp=Z,15nm,1.4s
KLMR   Klimovskoe        60.32 328 eP       P        18 20 43.8 -2.1
KLMR                              e*PP      pP       18 21 00.1 -0.6
KLMR                                S       S        18 28 55.4 -0.4
KLMR                                pmax    pmax
        comp=Z,12nm,1.2s
KLMR                                MLR     MLR
        comp=Z,426nm,18.0s
KBL    Kabul             60.70 291  P       P        18 20 48.0 -1.1
KBL                                 IAmb    IAmb     18 20 50.9
        comp=Z,11nm,0.8s
KBL    Kabul             60.70 291  P       P        18 20 48.6 -0.5
        SNR=6.4
KBL                                 P       P        18 20 48.6 -0.5
        SNR=6.4
KBL    Kabul             60.70 291  P       P        18 20 48.0 -1.1
KBL                                 pmax    pmax
        comp=Z,11nm,0.9s
PSI    Prapat            61.56 242  LR      LR       18 47 09.6
        comp=Z,63nm,21.9s,baz=36,slow=36
BMO    Blue Mountains    61.63  54  IAmb    IAmb     18 21 11.9
        comp=Z,16nm,1.7s
BKNI   Bangkinang        62.20 239  P       P        18 20 58.9 -0.3
BELG   Belogornoye       62.28 317  LR      LR       18 49 51.4
        comp=Z,283nm,21.0s,baz=57,slow=38
MSO    Missoula          62.32  50  IAmb    IAmb     18 21 01.8
        comp=Z,14nm,1.0s
SUMG   Summit            62.34   3  P       P        18 20 59.7 -0.1
SUMG                                pmax    pmax
        comp=Z,18nm,1.5s
SUMG   Summit            62.34   3 i P      P        18 20 58.0 -1.8
SUMG                                IAmb    IAmb     18 21 00.2
        comp=Z,15nm,1.0s
OVMT   Ovando            62.69  50  P       P        18 21 02.5 +0.3
BEKR   Beckworth         62.82  60  IAmb    IAmb     18 21 05.4
        comp=Z,12nm,1.0s
JMIC   Jan Mayen         63.08 352  LR      LR       18 47 41.5
        comp=Z,70nm,19.7s,baz=356,slow=35
FFC    Flin Flon         63.21  38  P       P        18 21 05.4  0.0
FFC    Flin Flon         63.21  38  P       P        18 21 05.4  0.0
FFC                                 pmax    pmax
        comp=Z,22nm,1.0s
FFC    Flin Flon         63.21  38  P       P        18 21 06.0 +0.6
FFC                                 sP      sP       18 21 30.2 +3.7
PAHR   Pah Rah Range     63.52  60  IAmb    IAmb     18 21 10.2
        comp=Z,15nm,1.3s
FCC    Fort Churchill    63.65  32  IAmb    IAmb     18 21 09.2
        comp=Z,15nm,1.0s
PNTR   Pine Nut          63.77  60  P       P        18 21 10.2 +0.6
PNTR                                IAmb    IAmb     18 21 25.8
        comp=Z,22nm,1.2s
EGMT   Eagleton          63.81  47  IAmb    IAmb     18 21 11.5
        comp=Z,18nm,1.0s
DLMT   Dillon            63.96  51  IAmb    IAmb     18 21 47.9
        comp=Z,13nm,1.2s
MCMT   McKenzie Canyo    64.15  52  P       P        18 21 12.0 -0.1
LEM    Lembang           64.32 228  LR      LR       18 50 19.1
        comp=Z,40nm,21.1s,baz=294,slow=37
BOZ    Bozeman (W)       64.34  50  IAmb    IAmb     18 21 14.9
        comp=Z,8.5nm,0.8s
SCO    Scoresbysund      64.45 357 i P      P        18 21 11.6 -1.7
SCO                                 IAmb    IAmb     18 21 13.1
        comp=Z,4.6nm,0.8s
FINES  FINESS Array B    64.51 334  P       P        18 21 11.8 -2.0
        comp=Z,3.4nm,0.6s,baz=29,slow=7.4,SNR=22
FINES                               LR      LR       18 51 50.3
        comp=Z,356nm,20.3s,baz=39,slow=38
        comp=Z,3.4nm,0.6s
FINES  FINESS Array B    64.51 334 i P      P        18 21 12.1 -1.7
FINES                               pmax    pmax
        comp=Z,3.0nm,0.6s
NVAR   Mina Array Bea    64.97  60  P       P        18 21 18.3 +0.8
        comp=Z,6.1nm,0.7s,baz=292,slow=6.8,SNR=30
NVAR                                LR      LR       18 49 16.2
        comp=Z,23nm,18.8s,baz=234,slow=36
        comp=Z,6.1nm,0.7s
NV11   Mina Array Sit    65.06  60  IAmb    IAmb     18 21 34.8
        comp=Z,20nm,1.4s
HRA    Herat             65.22 294  IAmb    IAmb     18 21 19.9
        comp=Z,7.9nm,0.6s
ELK    Elko              65.35  56  P       P        18 21 20.3 +0.4
ELK    Elko              65.35  56  P       P        18 21 21.3 +1.3
        comp=Z,1.0nm,0.6s,baz=322,slow=8.5,SNR=6.0
ELK                                 LR      LR       18 45 16.2
        comp=Z,39nm,21.1s,baz=310,slow=32
        comp=Z,1.0nm,0.6s
ELK    Elko              65.35  56  P       P        18 21 20.3 +0.4
ELK                                 pmax    pmax
        comp=Z,2.0nm,0.8s
OBN    Obninsk           65.37 325ceP       P        18 21 19.1 -0.4
OBN                               e                  18 21 50.3
OBN                               e                  18 23 44.9
OBN                               eS        S        18 30 04.7 +5.6
OBN                                 pmax    pmax
        comp=Z,7.0nm,1.0s
OBN                                 MLR     MLR
        comp=Z,188nm,18.0s
OBN    Obninsk           65.37 325 eP       P        18 21 19.1 -0.4
ICESG  Greenland Ices    65.76   4 i P      P        18 21 19.9 -2.4
ICESG                               IAmb    IAmb     18 21 22.5
        comp=Z,25nm,1.1s
VRH    Novokhopyorsk     65.83 319  P       P        18 21 20.2 -2.3
VRH                                 pmax    pmax
        comp=Z,10.0nm,1.2s
DSP    Deep Springs      65.84  61  IAmb    IAmb     18 21 25.7
        comp=Z,16nm,1.1s
TPAW   Teton Pass        66.06  52  P       P        18 21 25.3 +0.8
TPAW                                IAmb    IAmb     18 21 27.5
        comp=Z,14nm,0.9s
LPSR   Galich'ya Gora    66.13 322  P       P        18 21 22.4 -2.0
LPSR                                pmax    pmax
        comp=Z,13nm,1.0s
LOHW   Long Hollow       66.17  52  IAmb    IAmb     18 21 28.0
        comp=Z,17nm,1.4s
WRA    Warramunga Arr    66.44 196  P       P        18 21 26.7  0.0
WRA    Warramunga Arr    66.44 196  P       P        18 21 27.0 +0.3
        comp=Z,2.9nm,0.7s,baz=15,slow=6.6,SNR=16
WRA                                 LR      LR       18 50 08.7
        comp=Z,46nm,20.1s,baz=92,slow=36
        comp=Z,2.9nm,0.7s
VSU    Vasula            66.58 331 i P      P        18 21 29.8 +2.6
VSU                                 pmax    pmax
        comp=Z,3.0nm,0.8s
VORR   Voronezh          66.65 321  P       P        18 21 25.0 -2.8
VORR                                pmax    pmax
        comp=Z,9.0nm,0.9s
HWUT   Hardware Ranch    66.93  54  P       P        18 21 30.3 +0.3
HWUT                                IAmb    IAmb     18 21 32.4
        comp=Z,14nm,1.4s
SFJD   Kangerlussuaq     66.98   9  LR      LR       18 53 59.2
        comp=Z,122nm,18.2s,baz=358,slow=39
VSR    Storozhevoye      66.99 320 eP       P        18 21 26.5 -3.4
VSR                                 pmax    pmax
        comp=Z,6.0nm,1.0s
VORD   Divnogorie        67.11 320 eP       P        18 21 27.7 -2.9
VORD                                pmax    pmax
        comp=Z,9.0nm,0.9s
DUG    Dugway, Tooele    67.13  56  IAmb    IAmb     18 21 33.6
        comp=Z,13nm,1.2s
DUG    Dugway, Tooele    67.13  56  P       P        18 21 32.6 +1.4
DUG                                 pmax    pmax
        comp=Z,11nm,1.4s
FRB    Frobisher Bay     67.14  18  LR      LR       18 54 35.9
        comp=Z,51nm,18.3s,baz=334,slow=39
FRB    Frobisher Bay     67.14  18  P       P        18 21 29.6 -1.0
FRB                                 pmax    pmax
        comp=Z,12nm,1.1s
TPNV   Topopah Spring    67.17  60  IAmb    IAmb     18 21 33.8
        comp=Z,10nm,1.0s
BW06   Boulder Array     67.30  52  IAmb    IAmb     18 21 34.2
        comp=Z,17nm,1.4s
PD31   Pinedale Array    67.30  52  IAmb    IAmb     18 21 34.2
        comp=Z,13nm,1.2s
PDAR   Pinedale Array    67.30  52  P       P        18 21 31.7 -0.7
PDAR   Pinedale Array    67.30  52  P       P        18 21 33.0 +0.7
        comp=Z,4.2nm,0.7s,baz=318,slow=2.0,SNR=23
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PDAR                                LR      LR       18 54 02.4
        comp=Z,14nm,18.7s,baz=314,slow=39
        comp=Z,4.2nm,0.7s
MSVF   Nonsavu           67.61 151  LR      LR       18 45 04.3
        comp=Z,236nm,19.6s,baz=329,slow=30
SHPR   Sheep Range       68.12  60  P       P        18 21 38.1 +0.6
MAK    Makhachkala       68.48 310d iP      P        18 21 36.9 -2.5
MAK                               e*PP      pP       18 21 53.2 -1.4
MAK                               e*SP      sP       18 22 00.7  0.0
MAK                               e                  18 24 11.0
MAK                               eS        S        18 30 34.4 -2.5
MAK                               e*SS      sS       18 31 01.1 -1.6
MAK                               eSS       SS       18 35 00.1 -0.6
MAK                                 pmax    pmax
        comp=Z,46nm,0.9s
MAK                                 MLR     MLR
        comp=Z,194nm,16.0s
DZM    Mont Dzumac       68.61 164 eLR      LR       18 42 34.8
        comp=Z,223nm,23.4s
DZM    Mont Dzumac       68.61 164  LR      LR       18 53 37.1
        comp=Z,98nm,18.3s,baz=2.0,slow=37
V12A   Nelson            68.82  60  P       P        18 21 42.0 +0.1
LCMT   Little Creek M    68.95  58  IAmb    IAmb     18 21 59.6
        comp=Z,12nm,1.1s
NB2    NORSAR Subarra    68.97 340  P       P        18 21 40.8 -1.5
        comp=Z,0.8nm,0.5s,baz=28,slow=6.5
NOA    NORSAR Array B    68.97 340  P       P        18 21 40.5 -1.8
        comp=Z,1.3nm,0.5s,baz=28,slow=6.6,SNR=6.9
NOA                                 LR      LR       18 56 32.8
        comp=Z,128nm,18.8s,baz=40,slow=40
        comp=Z,1.3nm,0.5s
ULM    Lac du Bonnet     69.00  39  IAmb    IAmb     18 21 43.6
        comp=Z,15nm,1.2s
ULM    Lac du Bonnet     69.00  39  P       P        18 21 42.8 +0.2
        comp=Z,2.9nm,0.4s,baz=306,slow=6.8,SNR=10
        comp=Z,2.9nm,0.4s
HFS    Hagfors           69.13 338  P       P        18 21 41.6 -1.6
        comp=Z,2.5nm,0.6s,baz=35,slow=5.4,SNR=15
HFS                                 LR      LR       18 54 58.1
        comp=Z,157nm,21.1s,baz=28,slow=38
        comp=Z,2.5nm,0.6s
NORES  NORESS Array B    69.16 340  P       P        18 21 45.2 +1.8
SRU    San Rafael Swe    69.17  55  IAmb    IAmb     18 21 46.0
        comp=Z,10.0nm,0.9s
PFO    Pinyon Flats O    69.20  63  LR      LR       18 47 26.0
        comp=Z,36nm,19.7s,baz=304,slow=32
KNB    Kanab             69.20  58  IAmb    IAmb     18 22 01.4
        comp=Z,18nm,1.2s
MNK    Minsk             69.22 328 i P      P        18 21 44.0 +0.1
        comp=E,13nm,0.8s
MNK                                i P      P        18 21 44.0 +0.1
        comp=N,8.0nm,0.8s
MNK                                i P      P        18 21 44.0 +0.1
        comp=Z,8.0nm,0.8s,baz=40
MNK                                i pP     pP       18 21 59.5 +0.4
MNK                                i sP     sP       18 22 05.2  0.0
MNK                                i PP     PP       18 24 16.5 -0.2
MNK                                i PPP    PPP      18 25 58.9
MNK                                i S      S        18 30 44.8 -0.7
MNK                                i SS     SS       18 35 15.3 +3.6
MNK                                i SSS    SSS      18 38 32.8
MNK                                i LQ     LQ       18 47 49.8
MNK                                i LR     LR       18 51 17.6
MNK                                i LRM    MLR      18 54 46.7
        comp=E,192nm,18.5s
MNK                                i LRM    MLR      18 54 49.8
        comp=N,167nm,16.7s
MNK                                i LRM    MLR      18 54 52.7
        comp=Z,325nm,17.7s
MNK    Minsk             69.22 328 i P      P        18 21 44.0 +0.1
MNK                                i *PP    pP       18 21 59.4 +0.4
MNK                                i *SP    sP       18 22 05.1  0.0
MNK                                i                 18 24 16.5
MNK                                i PPP    PPP      18 25 58.9
MNK                                i S      S        18 30 44.7 -0.7
MNK                                i SS     SS       18 35 15.2 +3.6
MNK                                 pmax    pmax
        comp=N,8.0nm,0.8s
MNK                                 pmax    pmax
        comp=E,13nm,0.8s
MNK                                 pmax    pmax
        comp=Z,8.0nm,0.8s
MNK                                 MLR     MLR
        comp=E,192nm,18.0s
MNK                                 MLR     MLR
        comp=N,167nm,17.0s
MNK                                 MLR     MLR
        comp=Z,325nm,18.0s
RSSD   Black Hills       69.37  48  P       P        18 21 45.4 +0.1
RSSD                                IAmb    IAmb     18 21 46.7
        comp=Z,12nm,1.0s
RSSD   Black Hills       69.37  48  P       P        18 21 45.4 +0.1
RSSD                                pmax    pmax
        comp=Z,12nm,1.0s
RSSD   Black Hills       69.37  48  P       P        18 21 45.9 +0.6
GOF    Gofitskoye        69.40 314ceP       P        18 21 45.6 +0.4
HMU    Henry Mountain    69.83  56  IAmb    IAmb     18 21 49.7
        comp=Z,8.4nm,0.7s
SEKA   Sheki             69.83 308  P       P        18 21 48.9 +1.0
ASAR   Alice Springs     70.15 196  P       P        18 21 50.5 +0.7
ASAR   Alice Springs     70.15 196  P       P        18 21 50.6 +0.8
        comp=Z,1.9nm,0.7s,baz=10,slow=6.2,SNR=33
ASAR                                LR      LR       18 53 15.3
        comp=Z,45nm,19.2s,baz=88,slow=36
        comp=Z,1.9nm,0.7s
BORG   Borgarnes         70.16 356  LR      LR       18 51 31.7
        comp=Z,50nm,20.1s,baz=345,slow=35
MNGR   Mingechevir, A    70.19 308  P       P        18 21 51.4 +1.4
ERBR   Yeremizino-Bor    70.23 315 eP       P        18 21 47.1 -3.1
ERBR                              eS        S        18 30 53.4 -4.2
ERBR                                pmax    pmax
        comp=Z,13nm,0.8s
ERBR                                MLR     MLR
        comp=Z,259nm,17.0s
BLYC   Blythe            70.32  62  P       P        18 21 51.5 +0.5
KVAR   Kislovodsk Arr    70.35 313  LR      LR       18 56 37.3
        comp=Z,378nm,19.6s,slow=39
KIV    Kislovodsk        70.35 313  P       P        18 21 50.3 -0.8
KIV    Kislovodsk        70.35 313  P       P        18 21 51.6 +0.4
KIV                                 P       P        18 21 51.6 +0.4
KIV    Kislovodsk        70.35 313 ⇑P       P        18 21 50.8 -0.4
KIV    Kislovodsk        70.35 313 eP       P        18 21 51.1  0.0
KIV                                 pmax    pmax
        comp=Z,21nm,1.0s
KIV                                 MLR     MLR
        comp=Z,339nm,17.0s
KIV    Kislovodsk        70.35 313 eP       P        18 21 51.1  0.0
KBZ    Khabaz            70.40 313  P       P        18 21 51.4 +0.1
        comp=Z,13nm,0.8s,baz=58,slow=4.3,SNR=29
KBZ                                 LR      LR       18 56 25.6
        comp=Z,623nm,21.0s,baz=44,slow=39
        comp=Z,13nm,0.8s
KBZ    Khabaz            70.40 313ceP       P        18 21 51.1 -0.2
KBZ                                 pmax    pmax
        comp=Z,15nm,0.9s
KBZ    Khabaz            70.40 313 eP       P        18 21 51.1 -0.2
AGMN   Agassiz Nation    70.43  40  IAmb    IAmb     18 21 52.4
        comp=Z,25nm,1.3s
PALK   Pallekele         70.43 260  LR      LR       18 54 24.9
        comp=Z,78nm,21.4s,baz=54,slow=37
PV23   Carpenter Ridg    70.49  55  P       P        18 21 52.5 +0.2
PV23                                IAmb    IAmb     18 21 54.4
        comp=Z,28nm,1.3s
SHA1   Shidzhatmaz       70.52 313 i P      P        18 21 52.7 +0.4
PV22   Blue Mesa, Par    70.56  55  IAmb    IAmb     18 21 54.6
        comp=Z,14nm,1.2s
PV04   Paradox Valley    70.59  55  P       P        18 21 53.4 +0.6
PV04                                IAmb    IAmb     18 22 09.3
        comp=Z,12nm,1.0s
LKRN   Lenkeran, Azer    70.63 306  P       P        18 21 54.2 +1.4
PV16   Nyswonger Mesa    70.64  55  IAmb    IAmb     18 22 09.5
        comp=Z,12nm,0.9s
PV11   David Mesa, Pa    70.67  55  IAmb    IAmb     18 22 09.7
        comp=Z,17nm,1.0s
PV05   Paradox Valley    70.69  55  IAmb    IAmb     18 21 55.6
        comp=Z,20nm,1.2s
GANJ   Ganja             70.70 308  P       P        18 21 54.6 +1.4
PV07   Paradox Valley    70.71  55  P       P        18 21 53.3 -0.3
PV07                                IAmb    IAmb     18 21 55.4
        comp=Z,14nm,1.3s
PV03   Paradox Valley    70.72  55  IAmb    IAmb     18 22 09.9
        comp=Z,14nm,1.1s
PV02   Paradox Valley    70.81  55  IAmb    IAmb     18 22 10.6
        comp=Z,17nm,1.1s
LABN   Labinsk           70.87 315 eP       P        18 21 51.4 -2.8
LABN                              e*PP      pP       18 22 06.1 -3.3
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LABN                              eS        S        18 30 58.9 -6.2
LABN                                pmax    pmax
        comp=Z,19nm,0.7s
LABN                                MLR     MLR
        comp=Z,241nm,16.0s
PV01   Paradox Valley    70.96  55  P       P        18 21 54.7 -0.4
WUAZ   Wupatki           71.07  59  P       P        18 21 56.1 +0.4
Y14A   Wickenburg        71.14  61  IAmb    IAmb     18 22 12.6
        comp=Z,18nm,1.4s
113A   Mohawk Valley,    71.45  62  P       P        18 21 57.8  0.0
ISCO   Idaho Springs     71.50  52  P       P        18 21 59.6 +1.2
ISCO                                pmax    pmax
        comp=Z,6.0nm,1.8s
AKASG  Malin Array Be    71.63 325  P       P        18 21 57.0 -1.6
        comp=Z,2.3nm,0.4s,baz=39,slow=6.1,SNR=19
AKASG                               LR      LR       18 57 01.8
        comp=Z,205nm,18.0s,baz=32,slow=39
        comp=Z,2.3nm,0.4s
AKASG  Malin Array Be    71.63 325 i P      P        18 21 57.5 -1.1
AKASG                               pmax    pmax
        comp=Z,2.0nm,0.4s
AKBB   Malin Array Si    71.63 325  IAmb    IAmb     18 21 59.2
        comp=Z,17nm,1.6s
AKBB   Malin Array Si    71.63 325ceP       P        18 21 58.9 +0.3
AKBB                                pmax    pmax
        comp=Z,10.0nm,1.4s
KIEV   Kiev              71.64 325  P       P        18 21 57.2 -1.5
KIEV   Kiev              71.64 325 ⇓P       P        18 21 53.5 -5.2
KIEV   Kiev              71.64 325  P       P        18 21 57.2 -1.5
KIEV                                pmax    pmax
        comp=Z,14nm,1.5s
GNI    Garni             71.91 309  P       P        18 22 00.3 -0.4
GNI                                 IAmb    IAmb     18 22 42.6
        comp=Z,9.3nm,0.8s
GNI    Garni             71.91 309  LR      LR       18 56 27.6
        comp=Z,134nm,21.5s,baz=49,slow=38
GNI    Garni             71.91 309 i P      P        18 22 01.9 +1.2
GNI                                 pmax    pmax
        comp=Z,13nm,1.2s
NAX    Nakhchivan        72.17 308  P       P        18 22 03.5 +1.3
ANN    Anapa             72.39 316 eP       P        18 22 02.5 -0.7
ANN                                 pmax    pmax
        comp=Z,11nm,0.7s
ECSD   EROS Data Cent    73.41  44  IAmb    IAmb     18 22 10.5
        comp=Z,15nm,1.1s
TUC    Tucson            73.61  61  P       P        18 22 11.9 +1.1
TUC                                 XP      PcP      18 22 25.1 -1.4
TUC                                 pmax    pmax
        comp=Z,6.0nm,1.4s
GEVA   Gevas             74.13 309  P       P        18 22 13.3 -0.5
GEVA                                IAmb    IAmb     18 22 15.7
        comp=Z,20nm,1.5s
LVV    L'vov             74.38 327  P       P        18 22 14.2 -0.7
ANMO   Albuquerque       74.39  56  P       P        18 22 15.6 +0.1
ANMO   Albuquerque       74.39  56  P       P        18 22 16.5 +1.1
        comp=Z,2.3nm,0.8s,baz=56,slow=7.7,SNR=6.1
ANMO                                LR      LR       18 50 57.7
        comp=Z,53nm,22.0s,baz=46,slow=32
        comp=Z,2.3nm,0.8s
ANMO   Albuquerque       74.39  56  P       P        18 22 15.6 +0.1
ANMO                                pmax    pmax
        comp=Z,13nm,1.7s
GURO   Guroymak-BITLI    74.53 309  IAmb    IAmb     18 22 19.6
        comp=Z,17nm,1.2s
SHME   Shamm             74.66 291  P       P        18 22 17.1 +0.2
SHME                                P       P        18 22 17.1 +0.2
MILM   Milestii Mici     74.74 323 ⇑P       P        18 22 16.4 -0.6
MILM   Milestii Mici     74.74 323 ⇑P       P        18 22 16.4 -0.6
BNM    Barren Site       74.84  57  P       P        18 22 16.7 -1.5
BIDO   Bidbid            75.06 288  P       P        18 22 20.7 +1.4
BIDO                                P       P        18 22 20.7 +1.4
COWI   Conover           75.10  38  IAmb    IAmb     18 22 20.0
        comp=Z,40nm,1.9s
MASF   Masafi            75.11 291  P       P        18 22 20.0 +0.5
MASF                                P       P        18 22 20.0 +0.5
JLN    Jalan Bani Buh    75.12 286  P       P        18 22 21.1 +1.4
JLN                                 P       P        18 22 21.1 +1.4
319A   Douglas           75.17  60  IAmb    IAmb     18 22 22.2
        comp=Z,14nm,0.8s
KSV    Kosov             75.18 326  P       P        18 22 17.6 -2.0
UOSS   Minazif           75.37 291  P       P        18 22 20.3 -0.7
UOSS                                IAmb    IAmb     18 22 21.7
        comp=Z,12nm,0.8s
UOSS   Minazif           75.37 291  P       P        18 22 21.4 +0.4
UOSS                                P       P        18 22 21.4 +0.4
SMDO   Samad             75.43 288  P       P        18 22 22.7 +1.2
SMDO                                P       P        18 22 22.7 +1.2
RTBA   Rita Blanca       75.47  53  IAmb    IAmb     18 22 23.0
        comp=Z,19nm,1.5s
SCHQ   Schefferville     75.48  21  P       P        18 22 21.4 +0.2
        comp=Z,8.4nm,0.9s,baz=335,slow=6.2,SNR=6.9
        comp=Z,8.4nm,0.9s
HATD   Hatta, Dubai      75.50 291  P       P        18 22 22.4 +0.6
        SNR=7.8
HOQ    Hoqain            75.56 289  P       P        18 22 23.0 +0.8
HOQ                                 P       P        18 22 23.0 +0.8
OJC    Ojcow             75.62 330  P       P        18 22 21.2 -0.8
OJC                                 pmax    pmax
        comp=Z,12nm,1.4s
ASHO   Ashiyiah          75.65 291  P       P        18 22 23.5 +0.9
        SNR=5.1
ASHO                                P       P        18 22 23.5 +0.9
        SNR=5.1
BUR08  Bucovina Ar. S    75.67 325  IAmb    IAmb     18 22 23.1
        comp=Z,9.9nm,0.7s
BURAR  Bucovina Array    75.69 325  P       P        18 22 21.8 -0.8
BURAR                               IAmb    IAmb     18 22 23.5
        comp=Z,13nm,0.7s
BURAR  Bucovina Array    75.69 325 ⇑P       P        18 22 22.4 -0.2
BURAR  Bucovina Array    75.69 325 ⇑P       P        18 22 22.4 -0.2
SOHO   SOHO              75.71 290  P       P        18 22 23.3 +0.4
SOHO                                P       P        18 22 23.3 +0.4
KOLS   Kolonicke sedl    75.77 328 eP       P        18 22 22.8 -0.1
KOLS                                pmax    pmax
        comp=Z,7.0nm,0.9s
KOLS   Kolonicke sedl    75.77 328 eP       P        18 22 22.8 -0.1
DIKM   Dikmen            75.79 315 ⇑P       P        18 22 24.1 +1.0
JMDO   Jabal Madar       75.86 287  P       P        18 22 24.2 +0.3
JMDO                                P       P        18 22 24.2 +0.3
TESR   Tescani           75.97 324 ⇑P       P        18 22 23.9 -0.3
TLCR                     76.09 322 ⇓P       P        18 22 24.7 -0.1
TLCR                     76.09 322 ⇓P       P        18 22 24.7 -0.1
TRSU   Trosnyk           76.19 327  P       P        18 22 25.6 +0.3
BSY    Bisya             76.21 288  P       P        18 22 26.5 +0.6
        SNR=9.3
BSY                                 P       P        18 22 26.5 +0.6
        SNR=9.3
ARQ    Araqi             76.26 289  P       P        18 22 27.6 +1.4
ARQ                                 P       P        18 22 27.6 +1.4
CFR    Carcaliu          76.39 322 ⇑P       P        18 22 26.3 -0.2
CFR    Carcaliu          76.39 322 ⇑P       P        18 22 26.3 -0.2
VRI    Vrincioaia        76.46 323 ⇑P       P        18 22 25.6 -1.3
VRI    Vrincioaia        76.46 323 ⇑P       P        18 22 25.6 -1.3
PLOR   Plostina          76.50 323 ⇓P       P        18 22 27.3 +0.1
PLOR   Plostina          76.50 323  P       P        18 22 27.3 +0.1
TPGR   Topolog           76.52 322 ⇑P       P        18 22 27.4 +0.1
STEB   Steborice         76.57 331 eP       P        18 22 27.3 -0.1
OSTC   Ostas             76.57 332  AMS     AMS      18 59 20.0
        comp=Z,200nm,21.3s
CHVC   Chvalec           76.60 332 eP       P        18 22 27.4 -0.2
CHVC   Chvalec           76.60 332 eP       P        18 22 27.4 -0.2
TURR   Turia             76.61 324 ⇓P       P        18 22 28.3 +0.6
LANS   Liptovska Anna    76.63 329 eP       P        18 22 28.4 +0.6
LANS                                pmax    pmax
        comp=Z,5.0nm,0.8s
LANS   Liptovska Anna    76.63 329 eP       P        18 22 28.4 +0.6
OZUR                     76.67 324 ⇓P       P        18 22 28.4 +0.3
DPC    Dobruska-Polom    76.71 332  AMS     AMS      18 59 10.0
        comp=Z,200nm,22.8s
DPC    Dobruska-Polom    76.71 332  P       P        18 22 28.5 +0.2
DPC                                 pmax    pmax
        comp=Z,6.0nm,1.7s
MORC   Moravsky Berou    76.78 331  P       P        18 22 28.1 -0.6
MORC   Moravsky Berou    76.78 331 eP       P        18 22 28.3 -0.4
MORC   Moravsky Berou    76.78 331 ⇑P       P        18 22 28.9 +0.2
MORC   Moravsky Berou    76.78 331 ⇑P       P        18 22 28.9 +0.2
KRLC   Kraliky           76.79 331 eP       P        18 22 28.6 -0.2
KRLC   Kraliky           76.79 331 eP       P        18 22 28.6 -0.2
HARR   Harsova           76.87 322 ⇓P       P        18 22 28.7 -0.5
HARR   Harsova           76.87 322 ⇓P       P        18 22 28.7 -0.5
MHTO   MHTO              76.90 287  P       P        18 22 30.4 +0.7
I42A   Draeger Farm,     76.92  40  IAmb    IAmb     18 22 30.2
        comp=Z,12nm,0.8s
DOPR   Dopca             76.94 324 ⇑P       P        18 22 30.0 +0.4
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CLL	Collm	76.96	334	IAmb	IAmb	18 22 29.6	
	comp=Z,11nm,1.1s						
CLL	Collm	76.96	334	iP	P	18 22 28.6	-1.0
CLL				e*PP	PcP	18 22 43.0	+2.6
CLL				eS	S	18 32 16.0	+2.8
CLL				pmax	pmax		
	comp=Z,8.0nm,0.7s						
CLL	Collm	76.96	334	iP	P	18 22 28.6	-1.0
	comp=Z,8.0nm,0.7s						
CLL				ex	x	18 22 43.0	
CLL				epP	pP	18 22 48.0	+3.0
CLL				eS	S	18 32 16.0	+2.8
CLL				eSKSac	SKKSac	18 32 38.0	+0.4
CLL				eSS	SS	18 37 24.0	+15
CLL				eSSS	SSS	18 40 24.0	
CLL				eSSSS		18 42 24.0	
CLL				AMS	AMS	18 59 00.0	
	comp=Z,100nm,21.7s						
MESR	Meseseni	76.97	326	⇓P	P	18 22 30.2	+0.5
ILGA	Ilgaz	77.00	316	P	P	18 22 30.7	+0.4
BRG	Berggiesshubel	77.04	333	eP	P	18 22 29.2	-0.9
BRG				Amp		18 22 29.8	
	comp=Z,2.3nm,0.9s						
MLR	Muntele Rosu	77.09	323	IAmb	IAmb	18 22 32.2	
	comp=Z,14nm,1.3s						
MLR	Muntele Rosu	77.09	323	LR	LR	18 59 50.8	
	comp=Z,276nm,19.2s,baz=52,slow=38						
MLR	Muntele Rosu	77.09	323	⇓P	P	18 22 31.4	+0.8
MLR	Muntele Rosu	77.09	323	⇓P	P	18 22 31.4	+0.8
ISR	Istrita	77.13	323	⇓P	P	18 22 31.1	+0.4
ISR	Istrita	77.13	323	⇓P	P	18 22 31.1	+0.4
PVCC	Panska Ves	77.14	333	AMS	AMS	18 59 40.0	
	comp=Z,200nm,15.0s						
STKA	Stephens Creek	77.14	187	LR	LR	18 58 42.5	
	comp=Z,57nm,19.4s,baz=25,slow=37						
AMTX	Amarillo	77.18	53	IAmb	IAmb	18 22 32.6	
	comp=Z,15nm,1.0s						
MARR	Marisel-Cluj	77.29	326	⇑P	P	18 22 30.1	-1.6
EKA	Eskdalemuir Ar	77.29	345	P	P	18 22 30.2	-1.2
	comp=Z,3.2nm,0.7s,baz=18,slow=4.8,SNR=9.8						
	comp=Z,3.2nm,0.7s						
VYHS	Vyhne	77.41	329	eP	P	18 22 32.2	0.0
VYHS				pmax	pmax		
	comp=Z,17nm,1.6s						
VYHS	Vyhne	77.41	329	eP	P	18 22 32.2	0.0
HSKC	Hora Svate Kat	77.43	333	AMS	AMS	18 58 40.0	
	comp=Z,300nm,22.9s						
PSZ	Piszkesteto	77.50	328	IAmb	IAmb	18 22 34.0	
	comp=Z,20nm,1.5s						
PSZ	Piszkesteto	77.50	328	⇓P	P	18 22 31.3	-1.5
PSZ	Piszkesteto	77.50	328	⇓P	P	18 22 31.3	-1.5
VOIR		77.50	324	⇓P	P	18 22 33.3	+0.4
VOIR		77.50	324	⇓P	P	18 22 33.3	+0.4
VRAC	Vranov	77.51	331	LR	LR	18 59 55.7	
	comp=Z,227nm,21.8s,baz=32,slow=38						
VRAC	Vranov	77.51	331	eP	P	18 22 32.5	-0.2
VRAC	Vranov	77.51	331	⇑P	P	18 22 32.8	+0.1
VRAC	Vranov	77.51	331	⇑P	P	18 22 32.8	+0.1
JAVC	Velka Javorina	77.52	330	eP	P	18 22 33.6	+0.8
JRN	Qarnain Island	77.58	293	P	P	18 22 33.2	-0.3
JRN				P	P	18 22 33.2	-0.3
PRA	Prague	77.58	333	AMS	AMS	19 00 40.0	
	comp=Z,200nm,24.2s						
GOPC	GO Pecny, Ondr	77.60	332	AMS	AMS	19 00 20.0	
	comp=Z,200nm,12.5s						
PRU	Pruhonice	77.61	332	eP	P	18 22 33.2	-0.1
PRU				AMS	AMS	19 00 40.0	
	comp=Z,200nm,19.8s						
PRU	Pruhonice	77.61	332	eP	P	18 22 33.2	-0.1
PRU				MLR	MLR		
	comp=Z,200nm,19.8s						
ARR	Arges	77.73	324	⇓P	P	18 22 34.6	+0.5
KRUC	Moravsky	77.79	331	eP	P	18 22 33.9	-0.4
KRUC	Moravsky	77.79	331	P	P	18 22 34.3	0.0
KRUC				pmax	pmax		
	comp=Z,14nm,1.1s						
SMWD	Samnorwood	77.83	52	IAmb	IAmb	18 22 36.7	
	comp=Z,24nm,1.4s						
KBD	Kabd	77.89	299	P	P	18 22 35.7	+0.5
SMOL	Smolenice	77.89	330	eP	P	18 22 35.7	+0.8
SMOL				pmax	pmax		
	comp=Z,8.0nm,1.2s						
TREC	Trest	77.90	332	AMS	AMS	19 00 50.0	
	comp=Z,200nm,16.2s						
TREC	Trest	77.90	332	P	P	18 22 34.9	0.0
TREC				pmax	pmax		
	comp=Z,9.0nm,1.8s						
P38A	Dawn	78.02	45	IAmb	IAmb	18 22 36.2	
	comp=Z,11nm,0.9s						
BR131	Keskin Array S	78.05	315	IAmb	IAmb	18 22 37.2	
	comp=Z,27nm,1.7s						
BR131	Keskin Array S	78.05	315	P	P	18 22 36.3	+0.3
	SNR=6.7						
BRTR	Keskin Array B	78.05	315	P	P	18 22 35.5	-0.6
BRTR	Keskin Array B	78.05	315	P	P	18 22 36.0	0.0
	comp=Z,2.3nm,0.8s,baz=96,slow=3.2,SNR=17						
	comp=Z,2.3nm,0.8s						
MODS	Modra-Piesok	78.07	330	eP	P	18 22 36.0	+0.1
MODS				pmax	pmax		
	comp=Z,37nm,1.5s						
MODS	Modra-Piesok	78.07	330	eP	P	18 22 36.0	+0.1
SHMA	Al-Shehemyia	78.16	295	P	P	18 22 36.7	0.0
SRO	Srobarova	78.17	329	eP	P	18 22 36.8	+0.4
SRO				pmax	pmax		
	comp=Z,33nm,1.8s						
SRO	Srobarova	78.17	329	eP	P	18 22 36.8	+0.4
ZVC	Zvikov	78.20	332	eP	P	18 22 36.2	-0.4
ZVC				AMS	AMS	19 00 50.0	
	comp=Z,200nm,18.3s						
GHWR	Ruwais	78.24	292	P	P	18 22 37.3	+0.2
GHWR				P	P	18 22 37.3	+0.2
SAKB	Bahrain	78.35	295	P	P	18 22 37.9	+0.1
ANTO	Ankara	78.36	316	P	P	18 22 37.5	-0.2
ANTO				IAmb	IAmb	18 22 38.6	
	comp=Z,10nm,0.7s						
ANTO	Ankara	78.36	316	P	P	18 22 37.8	+0.1
ANTO	Ankara	78.36	316	⇓P	P	18 22 38.5	+0.8
ANTO	Ankara	78.36	316	P	P	18 22 37.5	-0.2
ANTO				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KIRS	Kirsehir-Merke	78.36	315	⇓P	P	18 22 38.2	+0.5
SURR	Surduc	78.44	326	⇑P	P	18 22 37.8	-0.1
GZR	Gura Zlata	78.47	325	⇑P	P	18 22 37.8	-0.4
GZR	Gura Zlata	78.47	325	⇑P	P	18 22 37.8	-0.4
MZR	Muzera	78.51	291	P	P	18 22 38.9	+0.2
	SNR=7.8						
MZR				P	P	18 22 38.9	+0.2
	SNR=7.8						
T35A	Sooner Cattle	78.52	49	IAmb	IAmb	18 22 39.7	
	comp=Z,18nm,1.0s						
POST	Post	78.61	54	P	P	18 22 39.0	-0.1
KHC	Kasperske Hory	78.67	333	eP	P	18 22 39.0	-0.2
KHC				AMS	AMS	18 59 00.0	
	comp=Z,400nm,23.3s						
KHC	Kasperske Hory	78.67	333	eP	P	18 22 39.0	-0.2
KHC				MLR	MLR		
	comp=Z,400nm,23.3s						
CKRC	Cesky Krumlov	78.70	332	eP	P	18 22 38.9	-0.5
CKRC				AMS	AMS	19 00 30.0	
	comp=Z,200nm,19.2s						
CKRC	Cesky Krumlov	78.70	332	eP	P	18 22 38.9	-0.5
CKRC				MLR	MLR		
	comp=Z,200nm,19.2s						
BZS	Buzias	78.75	326	⇑P	P	18 22 39.3	-0.3
BZS	Buzias	78.75	326	⇑P	P	18 22 39.3	-0.3
P40A	Paris	78.83	44	IAmb	IAmb	18 22 41.4	
	comp=Z,23nm,1.1s						
GERES	GERESS Array B	78.88	332	P	P	18 22 39.8	-0.6
	comp=Z,3.3nm,0.7s,baz=51,slow=7.2,SNR=20						
GERES				LR	LR	19 01 57.6	
	comp=Z,224nm,18.6s,baz=14,slow=39						
	comp=Z,3.3nm,0.7s						
WET	Wettzell	78.89	333	P	P	18 22 40.5	+0.1
WET				pmax	pmax		
	comp=Z,11nm,1.4s						
WMOK	Wichita Mounta	78.91	52	P	P	18 22 41.2	+0.4
WMOK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GRA1	Grafenberg Arr	78.92	334	IAmb	IAmb	18 22 41.4	
	comp=Z,12nm,0.9s						
GRF	Grafenberg Arr	78.92	334	eP	P	18 22 40.0	-0.6
	comp=Z,13nm,1.2s,baz=28,slow=4.8						
GRFO	Grafenberg	78.93	334	P	P	18 22 40.4	-0.2
GRFO				IAmb	IAmb	18 22 41.4	
	comp=Z,11nm,0.9s						
GRFO	Grafenberg	78.93	334	P	P	18 22 40.4	-0.2
GRFO				pmax	pmax		
	comp=Z,11nm,0.9s						
CONA	Conrad Observa	78.94	331	iP	P	18 22 41.1	+0.3
	comp=Z,4.6nm,0.6s,SNR=6.1						
RONA	Rosalia, Austr	78.99	330	iP	P	18 22 41.5	+0.5
	comp=Z,7.2nm,0.8s,SNR=5.6						
SMRA	Abu-Samra	79.03	294	P	P	18 22 41.4	-0.1
	SNR=5.7						
HERR	Herculane	79.04	325	⇓P	P	18 22 39.7	-1.6
APMT	Aspermont	79.20	53	IAmb	IAmb	18 22 43.7	
	comp=Z,7.9nm,0.7s						
MORH	Mrgy, Hungar	79.40	328	⇑P	P	18 22 42.1	-1.0
MDVR	Moldovita	79.40	325	⇓P	P	18 22 42.6	-0.7
MOA	Molln	79.56	332	iP	P	18 22 43.8	-0.2
	comp=Z,3.4nm,0.8s						
BTNL	Ternell	79.59	338	dP	P	18 22 41.8	-2.4
MEM	Membach	79.60	338	dP	P	18 22 43.9	-0.3
LPIG	La Paz	79.61	66	LR	LR	18 49 31.3	
	comp=Z,40nm,21.2s,baz=9.5,slow=29						
BUKO	Buck Lake	79.64	33	IAmb	IAmb	18 22 45.0	
	comp=Z,21nm,1.4s						
ARSA	Arzberg	79.64	330	iP	P	18 22 44.5	0.0
	comp=Z,4.5nm,1.0s						
BIOA	Bad Ischl, Aus	79.90	332	iP	P	18 22 46.2	+0.2
	comp=Z,17nm,1.6s,SNR=5.1						
U38A	Gravette	80.00	48	IAmb	IAmb	18 22 47.6	
	comp=Z,13nm,1.2s						
TX31	Lajitas Ar. Si	80.03	58	IAmb	IAmb	18 22 48.9	
	comp=Z,16nm,1.1s						
TXAR	Lajitas Array	80.04	58	P	P	18 22 47.6	+0.5
TXAR	Lajitas Array	80.04	58	P	P	18 22 47.8	+0.8
	comp=Z,7.9nm,0.7s,baz=299,slow=4.2,SNR=94						
	comp=Z,7.9nm,0.7s						
TXAR	Lajitas Array	80.04	58	P	P	18 22 47.6	+0.5
RAR	Rarotonga	80.29	133	LR	LR	18 52 29.8	
	comp=Z,108nm,19.9s,baz=309,slow=31						
SADO	Sadowa	80.30	33	LR	LR	18 59 14.9	
	comp=Z,77nm,21.4s,baz=326,slow=36						
SOKA	Soboth	80.31	330	iP	P	18 22 47.9	-0.3
	comp=Z,7.5nm,0.8s,SNR=9.1						
PERS	Pernice	80.31	330	iP	P	18 22 47.8	-0.4
BOVS	Bovan	80.36	325	⇓P	P	18 22 47.6	-0.8
CCM	Cathedral Cave	80.36	45	P	P	18 22 48.1	-0.4
CCM				IAmb	IAmb	18 22 49.5	
	comp=Z,15nm,1.0s						
CCM	Cathedral Cave	80.36	45	P	P	18 22 48.1	-0.4
CCM				pmax	pmax		
	comp=Z,15nm,1.0s						
WLF	Walferdange	80.42	337	dP	P	18 22 46.6	-2.1
LESA	Schwarzleotal	80.45	332	iP	P	18 22 49.1	+0.1
	comp=Z,8.4nm,0.8s,SNR=6.5						
KBA	Koelnbreinsper	80.53	332	P	P	18 22 49.9	+0.4
KBA				pmax	pmax		
	comp=Z,21nm,1.1s						
KBA	Koelnbreinsper	80.53	332	iP	P	18 22 49.8	+0.3
	comp=Z,11nm,0.8s,SNR=8.5						
MGMO	Mountain Grove	80.55	46	P	P	18 22 48.9	-0.7
MGMO				IAmb	IAmb	18 23 05.3	
	comp=Z,15nm,1.4s						
OBKA	Obir	80.62	331	iP	P	18 22 49.4	-0.5
	comp=Z,3.2nm,0.6s						
ALN	Alexandroupoli	80.73	321	IAmb	IAmb	18 22 52.1	
	comp=Z,19nm,1.3s						
TRQ	Mont Tremblant	80.75	30	IAmb	IAmb	18 22 51.0	
	comp=Z,20nm,1.2s						
MYKA	Terra Mystica	80.83	331	iP	P	18 22 50.0	-1.0
	comp=Z,2.7nm,0.5s						
WATA	Walderalm	80.89	333	iP	P	18 22 51.4	0.0
	comp=Z,7.2nm,0.5s,SNR=6.6						
WTTA	Wattenberg	80.93	333	P	P	18 22 51.7	0.0
WTTA				pmax	pmax		
	comp=Z,25nm,1.0s						
WTTA	Wattenberg	80.93	333	iP	P	18 22 51.7	0.0
	comp=Z,11nm,0.5s,SNR=7.5						
LMQ	La Malbaie	81.00	26	IAmb	IAmb	18 22 52.6	
	comp=Z,24nm,1.4s						
BFO	Black Forest	81.01	335	P	P	18 22 51.2	-0.7
BFO				IAmb	IAmb	18 22 55.9	
	comp=Z,26nm,1.7s						
BFO	Black Forest	81.01	335	P	P	18 22 51.2	-0.7
BFO				pmax	pmax		
	comp=Z,26nm,1.7s						
RETA	Reutte	81.02	333	iP	P	18 22 52.0	0.0
	comp=Z,3.9nm,0.6s						
MOTA	Moosalm	81.03	333	iP	P	18 22 52.0	-0.2
	comp=Z,12nm,0.9s,SNR=8.4						
ABTA	Abfaltersbach	81.10	332	iP	P	18 22 52.2	-0.2
	comp=Z,3.0nm,0.7s						
SQTA	Sankt Quirin	81.11	333	iP	P	18 22 52.4	-0.1
	comp=Z,8.6nm,0.8s						
DOK	Doka	81.13	287	P	P	18 22 53.4	+0.5
BOJS	Bojanci	81.24	330	iP	P	18 22 52.2	-0.8
CEY	Cerknica	81.33	330	iP	P	18 22 52.2	-1.4
BRDY	Brady	81.35	54	P	P	18 22 54.3	+0.4
FETA	Feichten	81.44	333	iP	P	18 22 54.2	-0.2
	comp=Z,5.0nm,1.1s						
ECH	Echery	81.45	336	P	P	18 22 53.3	-0.9
DAVA	Damuels	81.47	334	iP	P	18 22 54.3	-0.2
	comp=Z,7.0nm,0.8s						
JCT	Junction City	81.48	55	IAmb	IAmb	18 23 11.6	
	comp=Z,21nm,1.3s						
CIMO	Cimolais	81.51	332	P	P	18 22 52.8	-1.7
FCAR	Ozark Folk Cen	81.60	47	IAmb	IAmb	18 22 55.3	
	comp=Z,7.6nm,0.7s						
CGM3	Cape Girardeau	81.74	44	P	P	18 22 55.1	-0.7
DRIO	Del Rio	81.78	56	P	P	18 22 55.9	-0.3
MIAR	Mount Ida	81.88	48	IAmb	IAmb	18 22 58.0	
	comp=Z,15nm,1.1s						
MIAR	Mount Ida	81.88	48	P	P	18 22 57.1	+0.5
MIAR				pmax	pmax		
	comp=Z,15nm,1.0s						
DAVOX	Davos/Dischmat	81.92	334	LR	LR	19 02 40.2	
	comp=Z,241nm,20.4s,baz=54,slow=38						
FUORN	Ofenpass-Fuorn	81.94	333	P	P	18 22 56.3	-0.8
FUORN				IAmb	IAmb	18 22 57.6	
	comp=Z,14nm,1.2s						
WHAR	Wooly Hollow	81.97	47	IAmb	IAmb	18 23 13.5	
	comp=Z,26nm,1.3s						
ASF	Jabal al Asfar	82.05	308	LR	LR	19 04 31.9	
	comp=Z,104nm,19.9s,baz=48,slow=39						
MMAI	Mount Meron Ar	82.23	310	P	P	18 22 59.4	+0.7
	comp=Z,2.9nm,0.5s,baz=50,slow=5.5,SNR=9.9						
MMAI				LR	LR	19 03 26.8	
	comp=Z,234nm,21.1s,baz=18,slow=39						
	comp=Z,2.9nm,0.5s						
TAOE	Nuku Hiva Isla	82.29	111	eLR	LR	18 48 50.8	
	comp=Z,368nm,28.3s						
WCI	Wyandotte Cave	82.61	41	P	P	18 23 00.4	0.0
WCI				IAmb	IAmb	18 23 01.7	
	comp=Z,16nm,0.9s						
WCI	Wyandotte Cave	82.61	41	P	P	18 23 00.4	0.0
WCI				pmax	pmax		
	comp=Z,16nm,1.0s						
N53A	Lisbon	82.93	36	IAmb	IAmb	18 23 03.2	
	comp=Z,21nm,1.1s						
PPT	Papeete	82.99	123	LR	LR	18 57 51.8	
	comp=Z,133nm,19.0s,baz=334,slow=34						
G62A	West of Eustis	83.00	28	IAmb	IAmb	18 23 03.1	
	comp=Z,9.8nm,1.0s						
PPT2	Papeete2	83.01	123	eLR	LR	18 49 03.4	
	comp=Z,254nm,23.0s						
PPT2				eLR	LR	18 49 13.2	
	comp=Z,231nm,23.2s						
SENIN	Lac Senin/Sane	83.08	335	IAmb	IAmb	18 23 08.6	
	comp=Z,25nm,1.8s						
T47A	Sharon Grove	83.22	43	IAmb	IAmb	18 23 05.1	
	comp=Z,13nm,0.8s						
RAYN	Ar Rayn	83.30	297	P	P	18 23 04.0	-0.3
RAYN				IAmb	IAmb	18 23 05.8	
	comp=Z,15nm,1.3s						
RAYN	Ar Rayn	83.30	297	P	P	18 23 04.8	+0.6
RAYN	Ar Rayn	83.30	297	P	P	18 23 04.0	-0.3
RAYN				pmax	pmax		
	comp=Z,15nm,1.3s						
Q51A	Peebles	83.31	39	IAmb	IAmb	18 23 05.2	
	comp=Z,16nm,0.9s						
NWAO	Narrogin (SRO)	83.34	207	LR	LR	19 05 10.2	
	comp=Z,43nm,18.1s,baz=82,slow=39						
WVT	Waverly	83.56	44	P	P	18 23 04.9	-0.4
WVT				IAmb	IAmb	18 23 06.7	
	comp=Z,9.3nm,1.0s						
WVT	Waverly	83.56	44	P	P	18 23 04.9	-0.4
WVT				pmax	pmax		
	comp=Z,9.0nm,1.0s						
M57A	Sunshine Farm,	83.99	34	IAmb	IAmb	18 23 08.5	
	comp=Z,14nm,0.9s						
FDMO	Fiordimonte	84.15	330	P	P	18 23 07.5	-0.8
FDMO				IAmb	IAmb	18 23 09.4	
	comp=Z,9.9nm,0.8s						
MURB	Monte Urbino	84.15	330	IAmb	IAmb	18 23 10.8	
	comp=Z,22nm,1.3s						
U49A	Red Boiling Sp	84.24	42	IAmb	IAmb	18 23 10.1	
	comp=Z,13nm,0.8s						
CLTN	Cedars of Leba	84.31	43	IAmb	IAmb	18 23 10.7	
	comp=Z,8.7nm,0.9s						
S51A	Beattyville	84.34	40	IAmb	IAmb	18 23 10.3	
	comp=Z,8.2nm,0.7s						
V48A	Smith Brothers	84.36	43	IAmb	IAmb	18 23 10.6	
	comp=Z,11nm,1.0s						
CAMP	Campotosto	84.48	329	P	P	18 23 09.4	-0.7
CAMP				IAmb	IAmb	18 23 10.8	
	comp=Z,12nm,0.9s						
HBVL	Hebbronville	84.68	57	P	P	18 23 11.8	+0.6
CESX	Cesi	84.71	330	IAmb	IAmb	18 23 11.4	
	comp=Z,16nm,1.3s						
ORIF	Oris-en-Rattie	84.81	335	P	P	18 23 11.9	+0.2
ORIF				pmax	pmax		
	comp=Z,13nm,0.8s						
MATE	Matera	84.87	326	⇓P	P	18 23 11.2	-0.6
EIL	Elat	85.03	308	LR	LR	19 06 33.8	
	comp=Z,103nm,19.9s,baz=60,slow=40						
TZTN	Tazewell	85.25	41	IAmb	IAmb	18 23 14.9	
	comp=Z,9.5nm,0.8s						
W50A	Signal Mountai	85.52	43	IAmb	IAmb	18 23 16.4	
	comp=Z,8.6nm,0.9s						
ITM	Ithomi	85.61	321	P	P	18 23 14.3	-1.4
CPCT	Cooper Cave	85.69	42	IAmb	IAmb	18 23 17.4	
	comp=Z,13nm,0.9s						
IDI	Anoyia	85.80	318	LR	LR	19 04 17.6	
	comp=Z,102nm,20.6s,baz=302,slow=38						
TKL	Tuckaleechee C	85.88	41	P	P	18 23 17.3	+0.2
	comp=Z,9.8nm,0.8s,baz=100,slow=1.6,SNR=13						
TKL				LR	LR	19 04 22.3	
	comp=Z,47nm,19.6s,baz=4.0,slow=38						
	comp=Z,9.8nm,0.8s						
TIP	Timpagrande	86.11	326	⇓P	P	18 23 18.0	-0.3
BG3	Lake Jocassee	86.81	41	P	P	18 23 21.9	+0.2
Y52A	Lilburn	87.21	43	IAmb	IAmb	18 23 25.1	
	comp=Z,7.6nm,0.7s						
TBI	Tubuai	87.59	127	eLR	LR	18 51 15.4	
	comp=Z,850nm,24.5s						
250A	Grady	87.66	45	P	P	18 23 24.5	-1.3
VAE	Valguarnera	88.50	326	LR	LR	19 07 13.1	
	comp=Z,176nm,18.1s,baz=118,slow=38						
KEST	Kesra	91.96	329	LR	LR	19 09 43.8	
	comp=Z,153nm,18.9s,baz=7.2,slow=39						
ESDC	Sonseca Array	92.33	340	LR	LR	19 09 45.2	
	comp=Z,108nm,20.0s,baz=20,slow=38						
RKT	Rikitea	96.11	117	eLR	LR	18 55 16.9	
	comp=Z,9μm,37.0s						
MDT	Midelt	99.01	339	LR	LR	19 15 46.1	
	comp=Z,93nm,19.1s,baz=48,slow=40						
TORD	Torodi Ar. Bea	115.26	326	PKP	PKiKP	18 29 18.0	-0.9
	comp=Z,0.4nm,0.6s,baz=21,slow=3.0,SNR=2.8						
VNDA	Vanda	122.69	177	PKP	PKPdf	18 29 30.8	-0.4
	comp=Z,2.0nm,1.1s,baz=309,slow=3.7,SNR=5.0						
QSPA	South Pole Qui	134.97	180	PKP	PKiKP	18 29 56.4	+0.1
	comp=Z,4.4nm,1.0s,baz=123,slow=0.9,SNR=14						
LPAZ	La Paz	136.87	61	PKP	PKPdf	18 30 01.8	+1.1
	comp=Z,1.4nm,0.8s,baz=24,slow=8.8,SNR=5.4						
H03N2	Juan Fernandez	140.81	90	T	T	21 06 53.1	
	baz=306,slow=77,SNR=35						
H03N3	Juan Fernandez	140.82	90	T	T	21 07 13.3	
	baz=306,slow=77,SNR=44						
H03N1	Juan Fernandez	140.82	90	T	T	21 06 54.4	
	baz=306,slow=77,SNR=40						
BBSD	Serra de San D	142.01	53	eP	PKiKP	18 30 12.0	-0.2
SDBA	SAO DESIDERIO	144.85	26	eP	PKPab	18 30 13.5	0.0
BDFB	Brasilia	146.76	33	PKPbc	PKPbc	18 30 19.9	+0.5
	comp=Z,8.6nm,0.6s,baz=299,slow=3.8,SNR=15						
MURT	Porto Murtinho	147.27	53	eP	PKPdf	18 30 19.2	+1.0
AQDB	Aquidauana	147.38	49	eP	PKPbc	18 30 20.6	-0.3
NVL	N'lazarevskaya	147.41	204	ePKP2	PKPbc	18 30 19.6	+0.1
NVL				pmax	pmax		
	comp=Z,25nm,1.2s						
JANB	Januaria	147.53	27	eP	PKPdf	18 30 19.5	+0.7
RPRD	Ribas do Rio P	148.43	46	eP	PKPdf	18 30 21.3	+1.1
IPMB	Ipameri, GO	148.80	35	eP	PKPdf	18 30 21.7	+0.8
TROLL	Troll, Antarti	149.10	199	⇑PKPbc	PKPbc	18 30 25.0	+0.9
	comp=Z,698nm,0.9s						
ITRB	Iturama	149.39	40	eP	PKPdf	18 30 24.2	+2.4
PMNB	Patos De Minas	150.00	33	eP	PKPdf	18 30 25.2	+2.3
PLCA	Paso Flores	150.11	96	PKPbc	PKPbc	18 30 28.3	+0.8
	comp=Z,17nm,1.1s,baz=247,slow=3.9,SNR=14						
PLCA	Paso Flores	150.11	96	eP	PKPdf	18 30 25.2	+2.9
SNAA	Sanae	150.51	197	⇑PKPbc	PKPbc	18 30 27.7	+0.3
	comp=Z,201nm,1.1s						
SNAA	Sanae	150.51	197	PKPbc	PKPbc	18 30 27.8	+0.3
	comp=Z,10nm,1.0s,baz=151,slow=2.0,SNR=18						
CPUP	Villa Florida	151.01	59	PKPbc	PKPbc	18 30 30.2	+0.4
	comp=Z,1.8nm,0.8s,baz=262,slow=1.8,SNR=10						
SJMB	Sao Joao De Ma	151.91	23	eP	PKPdf	18 30 27.9	+2.2
VNA2	Neumayer--Watz	152.00	196	⇑PKPbc	PKiKP	18 30 31.5	+0.3
	comp=Z,13nm,0.7s,baz=146,slow=1.8						
VNA3	Neumayer Olymp	152.15	194	⇑PKPbc	PKPbc	18 30 31.5	+0.3
	comp=Z,6.0nm,0.8s						
LDASE	Londrina, Braz	152.17	46	eP	PKPdf	18 30 28.5	+2.5
VNA1	Neumayer--Stat	152.40	195	⇑PKPbc	PKiKP	18 30 32.3	+0.4
	comp=Z,12nm,1.2s						

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*IDC **08** 18:17:28.3±1.9, 2°.19N×126°.90E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=174.2km s-min=23.0km az=67.0*

*DJA **08** 18:17:33.3±1.1, 2°N±3°×12°6E±°, h16km±10km, M3.3/7, MLv3.3/7*

ISC 08 18:17:31.3±1.1, **1°.90N**±0°.08×**126°.32E**±0°.09, **h10km, n8, σ1s.20**/9, **mb3.6**/4, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.54	137	P	Pn	18 17 59.5	+0.7
TNTI				S	Sn	18 18 19.7	+0.9
SGSI	Sangihe	1.94	336	P	Pn	18 18 05.7	+1.3
KMSI	Cibinong	2.68	241	P	Pn	18 18 15.6	+1.1
LUWI	Luwuk	4.59	231	P	Pn	18 18 41.4	+0.5
WRA	Warramunga Arr	23.09	160	P	P	18 22 36.9	-0.6
	0.9nm,0.5s,baz=341,slow=11,SNR=11						
	0.9nm,0.5s						
ASAR	Alice Springs	26.46	164	P	P	18 23 08.7	-0.1
	0.7nm,1.0s,baz=347,slow=13,SNR=1.9						
	0.7nm,1.0s						
MKAR	Makanchi Array	58.82	326	P	P	18 27 29.9	-0.3
	0.3nm,0.5s,baz=125,slow=8.1,SNR=5.2						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	63.06	328	P	P	18 27 56.8	-2.0
	0.6nm,0.2s,baz=116,slow=4.3,SNR=1.6						
	0.6nm,0.2s						

IDC 08 18:33:11.7±39.0, **17°.28S**×**179°.42E, h525km**±177km, **mb3.0**/3, **mbtmp4.0**/3, **Error ellipse: s-maj=874.1km s-min=126.5km az=79.0, Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	1.39	251	P	P	18 34 16.7	0.0
	28nm,1.0s,baz=148,slow=14,SNR=7.9						
STKA	Stephens Creek	37.14	240	P	P	18 39 37.3	-0.4
	1.1nm,0.6s,baz=86,slow=8.6,SNR=2.9						
	1.1nm,0.6s						
WRA	Warramunga Arr	42.72	259	P	P	18 40 22.1	-0.6
	0.5nm,0.6s,baz=93,slow=7.4,SNR=8.6						
	0.5nm,0.6s						
ASAR	Alice Springs	42.98	254	P	P	18 40 24.9	+0.3
	3.9nm,0.6s,baz=88,slow=8.3,SNR=69						
	3.9nm,0.6s						

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*IDC **08** 18:33:34.9±1.9, 20°.79S×173°.98W, h0km, mb3.8/5, mbtmp3.8/6, ML5.0/1, MS3.5/5, Error ellipse: s-maj=70.8km s-min=28.5km az=157.0*

ISC 08 18:33:38.9±1.6, **20°.8S**±0°.4×**174°.0W**±0°.2, **h26km, n13, σ1s.48**/8, **mb3.8**/5, **MS3.6**/5, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.12	291	Pn	Pn	18 35 36.1	+0.8
	0.6nm,0.3s,baz=124,slow=16,SNR=4.5						
	23nm,1.2s						
PMG	Port Moresby	39.09	281	LR	LR	18 54 00.4	
	comp=Z,115nm,19.6s,baz=218,slow=31						

ASAR	Alice Springs	48.12	256	P	P	18 42 18.6	+1.7
	1.0nm,0.9s,baz=101,slow=7.9,SNR=5.1						
	1.0nm,0.9s						
WRA	Warramunga Arr	48.29	261	P	P	18 42 16.6	-1.7
	0.6nm,0.7s,baz=100,slow=8.1,SNR=4.7						
	0.6nm,0.7s						
MJAR	Matsushiro Arr	72.73	321	P	P	18 45 04.4	-0.5
	1.0nm,0.7s,baz=150,slow=5.6,SNR=4.7						
	1.0nm,0.7s						
ASAJ	Asahikawa	75.84	329	LR	LR	19 14 03.9	
	comp=Z,32nm,19.6s,baz=96,slow=32						
NVAR	Mina Array Bea	78.70	41	P	P	18 45 40.8	+1.5
	0.7nm,0.7s,baz=216,slow=8.3,SNR=4.1						
	0.7nm,0.7s						
KDAK	Kodiak Island	80.29	11	LR	LR	19 17 06.5	
	comp=Z,33nm,18.1s,baz=215,slow=32						
KLR	Kul'dur	84.74	328	LR	LR	19 20 04.0	
	comp=Z,22nm,19.9s,baz=184,slow=33						
ILAR	Eielson Array	87.81	11	P	P	18 46 24.9	-0.4
	0.4nm,0.7s,baz=206,slow=5.0,SNR=5.3						
	0.4nm,0.7s						
LPAZ	La Paz	98.45	111	LR	LR	19 24 21.4	
	comp=Z,9.4nm,19.3s,baz=352,slow=31						
AKASG	Malin Array Be	145.01	334	PKPbc	PKPab	18 53 12.0	-1.1
	1.3nm,0.5s,baz=42,slow=4.1,SNR=10						
BRTR	Keskin Array B	149.77	315	PKPbc	PKPbc	18 53 26.1	-0.9
	0.3nm,0.7s,baz=90,slow=2.9,SNR=2.7						

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*GCG **08** 18:36:59.5±3.0, 15°.90N×95°.22W, h57km±147km, MD4.3, ML3.5*

*MEX **08** 18:36:59.7±0.9, 15°.48N×95°.07W, h16km±15km, MD4.3*

ISC 08 18:36:58.0±1.2, 15°.51N±0°.05×95°.11W±0°.02, h44km±46km, n39, σ2s.25/65, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.00	285	eP	Pn	18 37 16.0	+0.4
HUIG				eS	Sn	18 37 28.1	-0.5
HUIG	Huatulco	1.00	285	i P	Pn	18 37 15.8	+0.2
HUIG				i S	Sn	18 37 28.0	-0.5
HUIG				IAML		18 37 28.5	
	comp=N,347nm,0.5s						
CMIG	Matias Romero	1.59	8	i P	Pn	18 37 22.9	-0.9
CMIG				eS	Sn	18 37 40.6	-2.4
PCIG		1.83	84	eP	Pn	18 37 26.2	-0.8
PCIG				eS	Sn	18 37 47.2	-1.8
PEIG	Puerto Escondi	2.02	284	eP	Pn	18 37 30.4	+0.6
PEIG				eS	Sn	18 37 52.2	-1.6
VHO	Vista Hermosa	2.20	315	eP	Pn	18 37 33.6	+1.2
VHO				eS	Sn	18 37 59.1	+0.6
TGIG		2.29	56	eP	Pn	18 37 34.2	+0.8
TGIG				eS	Sn	18 38 00.2	-0.2
TGIG		2.29	56	i P	Pn	18 37 34.0	+0.6
TGIG				i S	Sn	18 38 00.0	-0.3
TGIG				IAML		18 38 01.2	
	comp=E,603nm,0.5s						
NEUV	Arroyo Zacate	2.29	343	eP	Pn	18 37 34.0	+0.6
NEUV				eS	Sn	18 37 59.9	-0.5
TUIG	Tuzandepetl	2.59	15	eP	Pn	18 37 37.2	-0.3
TUIG				eS	Sn	18 38 10.8	+2.9
YOIG	Yosondua	2.70	300	eP	Pn	18 37 42.3	+3.1
YOIG				eS	Sn	18 38 11.4	+0.6
PATR	El Naranjo	2.80	98	eP	Pn	18 37 40.6	0.0
PATR				eS	Sn	18 38 11.5	-1.8
PAVE	Pavencul	2.84	96	eP	Pn	18 37 41.9	+0.7
PAVE				eS	Sn	18 38 12.6	-1.8
CCIG	Comitan	2.96	75	eP	Pn	18 37 43.0	+0.3
CCIG				eS	Sn	18 38 19.3	+2.2
CCIG	Comitan	2.96	75	eP	Pn	18 37 44.4	+1.7
CCIG				i S	Sn	18 38 20.9	+3.7
CCIG				IAML		18 38 36.0	
	comp=N,188nm,0.4s						
PMUV	Sontecomapan	3.02	360	eP	Pn	18 37 43.0	-0.5
PMUV				eS	Sn	18 38 17.8	-0.6
PNIG	Pinotepa	3.04	287	eP	Pn	18 37 45.2	+1.5
PNIG				eS	Sn	18 38 16.5	-2.3
TXIG	Tlaxiaco	3.09	305	eP	Pn	18 37 47.6	+3.1
TXIG				eS	Sn	18 38 19.5	-0.9
TOIG	Toxpalan	3.18	324	eP	Pn	18 37 46.6	+0.9
TOIG				eS	Sn	18 38 24.2	+1.6
RTAL	Retalhuleu	3.44	106	eP	Pn	18 37 47.6	-1.6
RTAL				eS	Sn	18 38 27.8	-1.0
HLIG	Huajuapan de L	3.46	312	eP	Pn	18 37 52.3	+2.6
HLIG				eS	Sn	18 38 30.6	+1.0
HUEH	Huehuetenango	3.48	93	eS	Sn	18 38 34.0	+4.0
TPIG	Tehuac#an	3.61	324	eP	Pn	18 37 46.3	-5.4
TPIG				eS	Sn	18 38 33.7	+0.5
FTIG	Fresnillo de T	3.75	310	eP	Pn	18 37 56.4	+2.8
FTIG				eS	Sn	18 38 36.8	+0.2
TLIG	Tlapa	3.90	302	eP	Pn	18 38 06.9	+11
TLIG				eS	Sn	18 38 39.9	-0.2
CRIG	Cruz Grande	4.06	288	eP	Pn	18 37 58.6	+1.0
CRIG				eS	Sn	18 38 40.5	-3.3
JAUV	Jalcomulco	4.16	337	eP	Pn	18 37 59.6	+0.4
JAUV				eS	Sn	18 38 43.4	-3.2
DAIG	Los Arroyos	4.62	290	eS	Sn	18 38 53.5	-4.2
PPPT	Popocatepetl	4.81	316	eP	Pn	18 38 12.7	+4.2
PBXN	Popocatepetl	4.86	316	eP	Pn	18 38 15.4	+6.2
PBPN	Popocatepetl	4.86	317	eP	Pn	18 38 14.9	+5.7
PBPN				eP		18 38 18.3	
PPM	Popocatepetl	4.88	317	eS	Sn	18 39 05.1	+0.2
MEIG	Mezcala	4.95	300	eP	Pn	18 38 13.2	+3.2
MEIG				eS	Sn	18 39 04.3	-1.6
YAIG	Yautepec	5.04	312	eP	Pn	18 38 15.5	+4.1
YAIG				eS	Sn	18 39 06.6	-1.9
SCIG	Sabancuy	5.09	47	eP	Pn	18 38 09.9	-1.9
SCIG				eS	Sn	18 39 05.4	-3.8
PLIG	Platanillo	5.09	305	eP	Pn	18 38 15.9	+4.0
PLIG				eS	Sn	18 39 05.3	-4.3
CAIG	El Cayaco	5.19	288	eS	Sn	18 39 07.2	-4.6
CXUV	Coxquihui	5.21	333	eP	Pn	18 38 15.3	+1.8
CXUV				eS	Sn	18 39 11.8	-0.5
ARIG	Puente Sto Nin	5.72	300	eP	Pn	18 38 24.6	+4.0
ARIG				eS	Sn	18 39 18.8	-6.2

MEX 08 18:37:51.7±0.5, 16°.86N×100°.48W, h5km±6km, MD3.3, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.27	47	eP	Pg	18 37 56.9	-0.1
CAIG				eS	Sg	18 38 00.7	0.0
DAIG	Los Arroyos	0.81	79	eP	Pg	18 38 05.8	-1.4
DAIG				eS	Sg	18 38 16.1	-1.5
MEIG	Mezcala	1.34	38	eP	Pn	18 38 14.1	-3.0
MEIG				eS	Sg	18 38 30.8	-3.9
ARIG	Puente Sto Nin	1.42	5	eP	Pn	18 38 13.1	-5.1
ARIG				eS	Sb	18 38 32.3	-4.7

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*NEIC **08** 18:41:29.6±1.4, 16°.1S±0°.2×177°.2W±0°.1, h434km±11km, mb4.4/17, Error ellipse: s-maj=28.4km s-min=18.2km az=184.0*

*IDC **08** 18:41:31.6±2.4, 15°.66S×177°.66W, h440km±25km, mb3.2/7, mbtmp4.0/8, Error ellipse: s-maj=36.7km s-min=20.2km az=152.0*

ISC 08 18:41:30.7±0.7, 16°.1S±0°.2×177°.3W±0°.1, h450km, n31, σ1s.23/31, mb4.2/16, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.70	249	P	P	18 42 51.3	-0.9
MSVF				S	S	18 43 56.3	-2.4
MSVF	Nonsavu	4.70	249	P	P	18 42 51.8	-0.4
	44nm,0.7s,baz=99,slow=14,SNR=28						
AFI	Afiamalu	5.81	69	P	P	18 42 59.7	-3.4
TKNZ	Takaka Hill	26.21	197	P	P	18 46 26.5	-1.2
BSWZ	Blackbirch Sta	26.61	195	P	P	18 46 30.4	-0.9
FOZ	Fox Glacier	29.43	199	P	P	18 46 56.4	+0.4
EIDS	Eidsvold	30.87	247	P	P	18 47 08.4	-0.4
EIDS				IAmb	IAmb	18 47 16.5	
	comp=Z,19nm,1.4s						
MLZ	Mavora Lakes	31.62	200	P	P	18 47 15.8	+0.8
ARMA	Armidale	31.74	238	P	P	18 47 16.9	+0.6
ARMA				IAmb	IAmb	18 47 34.3	
	comp=Z,14nm,1.4s						
CTAO	Charters Tower	34.78	258	P	P	18 47 42.9	+0.7
CTAO				IAmb	IAmb	18 47 53.7	
	comp=Z,36nm,1.5s						
CAN	Canberra	35.61	231	P	P	18 47 49.0	0.0
CAN				IAmb	IAmb	18 48 00.2	
	comp=Z,17nm,1.2s						
COEN	Coen	38.16	268	P	P	18 48 10.6	+0.3
STKA	Stephens Creek	40.40	240	P	P	18 48 28.6	+0.3
BBOO	Buckleboo	45.18	240	P	P	18 49 06.4	+0.4
BBOO				IAmb	IAmb	18 49 43.2	
	comp=Z,38nm,1.4s						
WR8	Warramunga Arr	45.83	258	P	P	18 49 10.3	-0.9
WB0	Warramunga Arr	45.95	258	P	P	18 49 11.2	-0.9
WB0				IAmb	IAmb	18 49 22.2	
	comp=Z,14nm,1.4s						
WRA	Warramunga Arr	45.99	258	P	P	18 49 11.6	-0.8
	comp=Z,0.9nm,0.5s,baz=97,slow=6.4,SNR=31						
	comp=Z,0.9nm,0.5s						
AS31	Alice Springs	46.28	253	P	P	18 49 15.0	+0.4
ASAR	Alice Springs	46.28	253	P	P	18 49 14.4	-0.2
ASAR	Alice Springs	46.28	253	P	P	18 49 15.1	+0.4
	comp=Z,7.5nm,0.5s,baz=86,slow=8.0,SNR=132						
	comp=Z,7.5nm,0.5s						
MTN	Manton Dam	49.90	267	P	P	18 49 41.6	-0.3
MTN				IAmb	IAmb	18 50 24.4	
	comp=Z,34nm,1.3s						
KNRA	Kununurra	51.71	263	P	P	18 49 56.0	+0.8
KNRA				IAmb	IAmb	18 50 21.0	
	comp=Z,14nm,1.3s						
FITZ	Fitzroy Crossi	54.35	259	P	P	18 50 15.2	+1.1
FITZ	Fitzroy Crossi	54.35	259	P	P	18 50 15.9	+1.8
	comp=Z,6.5nm,1.2s,baz=100,slow=11,SNR=2.2						
	comp=Z,6.5nm,1.2s						
PSA00	Pilbara Seismi	59.36	254	P	P	18 50 47.7	-1.0
PSA00				IAmb	IAmb	18 50 55.9	
	comp=Z,25nm,1.4s						
QSPA	South Pole Qui	73.93	180	P	P	18 52 19.5	+0.8
QSPA	South Pole Qui	73.93	180	P	P	18 52 23.0	+4.4
	comp=Z,0.8nm,0.7s,baz=22,slow=3.0,SNR=5.6						
	comp=Z,0.8nm,0.7s						
NVAR	Mina Array Bea	77.43	44	P	P	18 52 38.9	+0.1
	comp=Z,0.4nm,0.6s,baz=248,slow=6.8,SNR=2.1						
	comp=Z,0.4nm,0.6s						
ILAR	Eielson Array	83.92	13	P	P	18 53 11.8	+0.1
	comp=Z,0.3nm,0.7s,baz=252,slow=4.9,SNR=3.9						
	comp=Z,0.3nm,0.7s						
TXAR	Lajitas Array	84.18	57	P	P	18 53 17.1	+3.1
	comp=Z,0.5nm,0.8s,baz=224,slow=5.2,SNR=4.7						
	comp=Z,0.5nm,0.8s						
BRTR	Keskin Array B	144.21	317	PKP	PKPdf	19 00 15.2	+0.4
	comp=Z,0.7nm,0.8s,baz=146,slow=2.8,SNR=3.9						

IDC 08 19:00:19.2±15.0, 20°.72S×177°.70W, h477km±100km, mb2.7/3, mbtmp3.8/5, Error ellipse: s-maj=302.9km s-min=27.9km az=141.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.99	306	P	P	19 01 44.8	-0.3
	7.3nm,0.5s,baz=252,slow=20,SNR=14						
DZM	Mont Dzumac	14.83	262	P	P	19 03 28.8	+0.6
	10nm,0.8s,baz=95,slow=19,SNR=3.6						
ASAR	Alice Springs	44.74	257	P	P	19 07 49.5	+0.1
	0.5nm,0.5s,baz=89,slow=8.4,SNR=13						
	0.5nm,0.5s						
WRA	Warramunga Arr	44.85	262	P	P	19 07 49.8	-0.4
	0.2nm,0.4s,baz=97,slow=7.6,SNR=7.9						
	0.2nm,0.4s						
ILAR	Eielson Array	88.47	13	P	P	19 12 19.7	+0.2
	0.2nm,0.3s,baz=215,slow=5.3,SNR=5.9						
	0.2nm,0.3s						
FINES	FINESS Array B	136.06	344	PKP	PKPdf	19 18 44.1	-0.8
	1.1nm,0.8s,baz=4.4,slow=5.5,SNR=2.3						
AKASG	Malin Array Be	143.34	331	PKP	PKPbc	19 18 57.5	+0.8
	1.8nm,0.5s,baz=44,slow=4.2,SNR=21						
BRTR	Keskin Array B	147.19	312	PKPbc	PKPbc	19 19 08.1	-0.6
	0.2nm,0.6s,baz=126,slow=15,SNR=2.9						

IDC 08 19:18:54.9±1.4, 25°.06S×177°.27W, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=43.9km s-min=38.1km az=117.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	44.31	261	P	P	19 27 07.2	+0.2
	0.6nm,0.6s,baz=97,slow=7.5,SNR=14						
	0.6nm,0.6s						
WRA	Warramunga Arr	44.82	266	P	P	19 27 10.4	-0.6
	0.7nm,0.9s,baz=103,slow=7.8,SNR=5.0						
	0.7nm,0.9s						
QSPA	South Pole Qui	65.03	180	P	P	19 29 37.1	+0.3
	0.4nm,0.6s,baz=27,slow=11,SNR=1.2						
	0.4nm,0.6s						
PETK	Petropavlovsk-	80.83	345	P	P	19 31 11.7	+1.4
	1.2nm,0.6s,baz=116,slow=6.8,SNR=5.4						
	1.2nm,0.6s						
HFS	Hagfors	144.13	351	PKP	PKPbc	19 38 30.0	-0.2
	2.5nm,0.6s,baz=8.5,slow=3.0,SNR=11						
AKASG	Malin Array Be	147.28	328	PKPbc	PKPdf	19 38 38.4	+0.6
	0.3nm,0.4s,baz=46,slow=3.4,SNR=4.6						
BRTR	Keskin Array B	150.26	307	PKPbc	PKPbc	19 38 47.5	-0.9
	0.3nm,0.7s,baz=91,slow=5.9,SNR=2.0						

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*NEIC **08** 19:21:49.3±1.7, 43°.76N±0°.06×105°.23W±0°.06, h0km±1km, ML3.2/24, Error ellipse: s-maj=10.4km s-min=7.9km az=356.0*

*IDC **08** 19:21:51.9±1.5, 43°.99N×105°.58W, h0km, mbtmp3.2/2, ML3.0/2, Error ellipse: s-maj=35.1km s-min=9.9km az=148.0*

ISC 08 19:21:50.5±1.2, 43°.74N±0°.06×105°.18W±0°.07, h0km, n20, σ0s.90/18, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.91	65	Pg	Pb	19 22 09.5	+0.1
K22A	Casper	1.46	223		Pn	19 22 15.9	-2.4
LAO	LASA Array	3.04	346		Pn	19 22 39.9	-0.1
LAO				IAML		19 23 42.1	
	102nm,1.1s						
LAO				IAML		19 23 57.1	
	124nm,1.0s						
RLMT	Red Lodge	3.24	297		Pn	19 22 43.0	+0.2
RLMT				IAML		19 23 50.5	
	38nm,0.8s						
RLMT				IAML		19 23 54.0	
	42nm,0.8s						
PD31	Pinedale Array	3.34	255	Pn	Pn	19 22 44.1	-0.1
PDAR	Pinedale Array	3.34	255		Pn	19 22 45.2	+1.0
PDAR	Pinedale Array	3.34	255	Pn	Pn	19 22 45.4	+1.2
	1.9nm,0.3s,baz=65,slow=16,SNR=19						
PDAR				Lg	Lg	19 23 31.1	
	9.9nm,0.3s,baz=66,slow=34,SNR=14						
	2.4nm,0.4s						
OGNE	Ogallala	3.64	139		Pn	19 22 47.6	-0.5
YMP	Mirror Lake Pl	3.71	287		Pn	19 22 49.9	+0.5
LOHW	Long Hollow	3.94	270		Pn	19 22 51.7	-0.7
LOHW				IAML		19 24 14.0	
	22nm,0.9s						
ISCO	Idaho Springs	3.95	185	Pn	Pn	19 22 54.0	+1.4
ISCO				IAML		19 24 42.5	
	37nm,4.3s						
ISCO				IAML		19 25 01.6	
	34nm,3.9s						
O20A	White River Ci	4.26	213	Pn	Pn	19 22 56.8	0.0
O20A				IAML		19 24 16.5	
	40nm,1.1s						
AHID	Auburn Hatcher	4.43	259		Pn	19 22 59.1	0.0
AHID				IAML		19 24 19.1	
	32nm,1.1s						
AHID				IAML		19 24 33.6	
	23nm,1.4s						
YHL	Hebgen Lake	4.45	287		Pn	19 23 00.1	+0.5
YHL				IAML		19 24 33.5	
	comp=N,25nm,0.9s						
YHL				IAML		19 24 41.6	
	comp=E,23nm,1.0s						
EGMT	Eagleton	5.34	325		Pn	19 23 10.9	-0.7
LRM	Limekiln Ridge	5.58	294		Pn	19 23 15.1	+0.1
P18A	Preston Nutter	5.59	224	Pn	Pn	19 23 15.2	0.0
ULM	Lac du Bonnet	9.10	41	Pn	Pn	19 24 02.6	-0.4
	comp=E,0.3nm,0.3s,baz=227,slow=9.2,SNR=3.4						
ULM				Lg	Lg	19 26 34.1	
	comp=E,0.2nm,0.3s,baz=110,slow=7.0,SNR=2.1						
	comp=E,0.7nm,0.3s						
I56US	NEWPORT INFRAS	9.46	303	I	I	20 14 00.0	
	baz=116,slow=312,SNR=5.1						
TXAR	Lajitas Array	14.43	175	Pg	P	19 26 21.9	+59
	baz=354,slow=14						
TXAR				Lg	Lg	19 29 26.9	
	baz=6.3,slow=29						

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*DJA **08** 19:24:14.5±0.4, 12°S±4°×11°8E±°, h10km, M4.3/15, mb4.4/9, MLv4.3/15*

*IDC **08** 19:24:21.8±3.6, 11°.30S×118°.47E, h0km, mb3.3/2, mbtmp3.3/4, ML3.4/2, Error ellipse: s-maj=258.8km s-min=27.0km az=47.0*

ISC 08 19:24:18.0±1.0, 11°.51S±0°.09×117°.62E±0°.06, h35km, n26, σ1s.08/25, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	2.54	43	P	Pn	19 24 56.3	-0.5
PLAI	Plampang	2.67	3	P	Pn	19 24 57.9	-0.5
PLAI	Plampang	2.67	3	P	Pn	19 24 57.9	-0.5
BASI	Baing, Sumba	3.17	67	P	Pn	19 25 03.9	-1.5
BASI				S	Sn	19 25 42.6	+0.5
DNP	Denpasar	3.68	320	P	Pn	19 25 12.5	+0.1
SRBI	Singaraja	4.14	325	P	Pn	19 25 18.8	0.0
JAGI	Jajag, Banyuwa	4.56	311	P	Pn	19 25 22.6	-1.9
JAGI	Jajag, Banyuwa	4.56	311	P	Pn	19 25 22.5	-1.9
EDFI	Ende, Flores	4.85	56	P	Pn	19 25 28.6	0.0
GMJI	Gumukmas	5.22	308	P	Pn	19 25 32.0	-1.6
	0.1nm21nm,0.6s						
KMMI	Kalianget	5.71	321	P	Pn	19 25 41.5	+1.2
	0.2nm35nm,1.9s						
BSSI	Bau Bau, Buton	6.04	28	P	Pn	19 25 44.9	+0.1
	0.2nm41nm,1.3s						
BATI	Baumata	6.07	78	P	Pn	19 25 44.3	-1.1
	0.2nm19nm,0.8s						
GRJI	Gresik	6.82	312	P	Pn	19 25 54.4	-1.2
PCJI	Pacitan	7.15	297	P	Pn	19 25 59.7	-0.4
	0.2nm29nm,0.4s						
UGM	Wanagama	7.85	296	P	Pn	19 26 09.8	0.0
UGM	Wanagama	7.85	296	P	Pn	19 26 09.0	-0.8
	38nm,1.3s						
MBWA	Marble Bar	9.81	168	P	Pn	19 26 35.9	-0.7
PSA00	Pilbara Seismi	10.24	168	P	Pn	19 26 42.1	-0.3
GIRL	Giralia	11.54	196	P	Pn	19 27 00.6	+0.3
MEEK	Meekatharra	15.08	177	P	Pn	19 27 48.4	-0.2
WRA	Warramunga Arr	18.14	120	P	Pn	19 28 26.4	-0.8
	0.1nm,0.3s,baz=290,slow=13,SNR=8.7						
	0.4nm,0.8s						
BLDU	Ballidu	19.04	182	P	Pn	19 28 38.9	+0.9
ASAR	Alice Springs	19.65	130	P	Pn	19 28 47.8	+2.3
	0.2nm,0.3s,baz=310,slow=12,SNR=14						
	0.5nm,0.5s						
MKAR	Makanchi Array	66.08	334	P	P	19 35 10.6	+9.2
	0.2nm,0.5s,baz=140,slow=5.6,SNR=1.4						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	70.62	335	P	P	19 35 40.9	+11
	0.2nm,0.7s,baz=143,slow=5.9,SNR=4.7						
	0.2nm,0.7s						

IDC 08 19:47:57.3±2.0, 5°.56N×126°.45E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=168.5km s-min=23.9km az=66.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.73	330	LR	LR	19 48 38.6	
	comp=Z,30nm,21.0s,baz=166,slow=24						
WRA	Warramunga Arr	26.50	163	P	P	19 53 35.9	-0.8
	0.9nm,0.9s,baz=343,slow=10,SNR=7.8						
	0.9nm,0.9s						
ASAR	Alice Springs	29.94	166	P	P	19 54 08.6	+1.2
	0.1nm,0.3s,baz=348,slow=8.7,SNR=1.8						
	0.1nm,0.3s						
MKAR	Makanchi Array	55.91	325	P	P	19 57 37.3	+0.2
	0.4nm,0.5s,baz=119,slow=7.8,SNR=4.2						
	0.4nm,0.5s						
KURBB	Kurchatov Arra	60.06	327	P	P	19 58 05.8	-0.3
	0.2nm,0.5s,baz=131,slow=6.2,SNR=1.8						
	0.2nm,0.5s						

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*IDC **08** 19:48:26.2±0.8, 19°.89N×121°.41E, h0km, mb3.8/12, mbtmp3.8/13, ML3.6/1, MS3.2/9, Error ellipse: s-maj=33.7km s-min=16.8km az=72.0*

*NEIC **08** 19:48:32.3±1.1, 19°.92N±0°.08×121°.14E±0°.10, h35km±2km, mb4.5/22, Error ellipse: s-maj=15.5km s-min=13.1km az=91.0*

*JMA **08** 19:48:36.0±0.9, 20°N±4°×12°2E±°, h20km, MV3.9/9, PHILIPPINE ISL REGION*

ISC 08 19:48:32.0±0.5, 19°.92N±0°.06×121°.25E±0°.08, h40km, n67, σ1s.52/55, mb4.2/23, MS3.2/7, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWG	Pinlang	2.89	357		Pn	19 49 14.5	-1.0
TPUB	Ta-pu	3.41	350		Pn	19 49 22.1	-0.6
SSLB	Suanglung	3.85	356		Pn	19 49 29.3	+0.4
NACB	Ninganchiao	4.24	4	Pn	Pn	19 49 34.3	+0.2
YHNB	Yeheng	4.72	1	Pn	Pn	19 49 41.1	+0.3
HATJ	Hateruma jima	4.75	29	eS	Sn	19 50 32.1	-2.7
YOJ	Yonaguni jima	4.80	20	Pn	Pn	19 49 42.5	+0.7
IRIF	Iriomote-Funau	4.95	27	eP	Pn	19 49 45.4	+1.6
IRIF				eS	Sn	19 50 38.0	-2.0
JKRS	Kuro-shima	5.00	30	eP	Pn	19 49 45.8	+1.4
JKRS				eS	Sn	19 50 38.2	-2.8
JIJ	Ishigaki jima	5.17	31	eS	Sn	19 50 41.0	-4.1
JISG	Ishigakijimahi	5.44	31	eP	Pn	19 49 51.2	+0.7
JISG				eS	Sn	19 50 48.3	-3.6
JTJ	Tarama	5.68	34	eS	Sn	19 50 55.0	-2.8
TGY	Tagaytay City	5.80	183	LR	LR	19 52 24.2	
	comp=Z,113nm,21.3s,baz=206,slow=41						
HKPS	Hong Kong Po S	7.04	291	Pn	Pn	19 50 10.9	-1.7
QIZ	Qiongzhong	10.80	267	Pn	Pn	19 51 02.6	-1.6
DAV	Davao City (W)	13.45	161	LR	LR	19 57 35.5	
	comp=Z,75nm,18.9s,baz=12,slow=41						
KSRS	Korea Array	18.41	17	P	Pn	19 52 43.4	-0.7
	0.2nm,0.3s,baz=193,slow=11,SNR=9.0						
	0.6nm,0.4s						
INU	Inuyama	20.72	39	P	Pn	19 53 11.5	-0.1
INU				IAmb	IAmb	19 53 25.5	
	comp=Z,24nm,1.4s						
JGF	Kuroka	21.09	39	P	P	19 53 15.0	+1.9
JGF				IAmb	IAmb	19 53 43.2	
	comp=Z,31nm,1.4s						
CMAR	Chiang Mai Arr	21.12	270	LR	LR	20 01 15.7	
	comp=Z,27nm,19.2s,baz=130,slow=36						
MJAR	Matsushiro Arr	22.24	38	P	P	19 53 24.2	-1.2
	comp=Z,1.1nm,0.9s,baz=199,slow=5.5,SNR=4.1						
	comp=Z,1.1nm,0.9s						
KAPI	Kappang	24.83	184	LR	LR	20 03 38.8	
	comp=Z,52nm,19.9s,baz=39,slow=37						
FAKI	Fak Fak	25.14	153	P	P	19 53 53.5	0.0
BRDH	Bariadhala	27.70	281	LR	LR	20 08 06.3	
	comp=Z,144nm,18.1s,baz=77,slow=42						
JAY	Jayapura	29.36	137	LR	LR	20 04 16.6	
	comp=Z,36nm,19.0s,baz=14,slow=32						
JKA	Kamikawa-asahi	29.98	32	P	P	19 54 37.3	+0.6
JKA				IAmb	IAmb	19 55 05.5	
	comp=Z,18nm,1.4s						
SONM	Songino Array	30.34	340	P	P	19 54 40.5	+0.6
	comp=Z,0.3nm,0.5s,baz=139,slow=7.3,SNR=2.7						
	comp=Z,0.3nm,0.5s						
KNRA	Kununurra	36.14	168	P	P	19 55 28.6	-2.0
PSA00	Pilbara Seismi	41.27	182	P	P	19 56 12.5	-1.0
WB0	Warramunga Arr	41.49	161	P	P	19 56 13.9	-1.5
MKAR	Makanchi Array	41.52	319	P	P	19 56 14.1	-1.3
MKAR	Makanchi Array	41.52	319	P	P	19 56 14.9	-0.5
	comp=Z,0.3nm,0.5s,baz=110,slow=7.8,SNR=6.8						
	comp=Z,0.3nm,0.5s						
WRA	Warramunga Arr	41.64	161	P	P	19 56 14.3	-2.4
WRA	Warramunga Arr	41.64	161	P	P	19 56 15.3	-1.3
	comp=Z,3.3nm,0.7s,baz=342,slow=9.1,SNR=28						
	comp=Z,3.3nm,0.7s						
H11S3	WAKE ISLAND Hy	42.83	84	T	T	20 42 01.6	
	baz=280,slow=74,SNR=20						
H11N1	WAKE ISLAND Hy	42.83	82	T	T	20 42 02.2	
	baz=278,slow=75,SNR=32						
H11N2	WAKE ISLAND Hy	42.83	82	T	T	20 42 02.4	
	baz=278,slow=75,SNR=30						
H11S1	WAKE ISLAND Hy	42.84	84	T	T	20 42 02.1	
	baz=280,slow=74,SNR=14						
H11N3	WAKE ISLAND Hy	42.85	82	T	T	20 42 03.5	
	baz=278,slow=75,SNR=30						
H11S2	WAKE ISLAND Hy	42.85	84	T	T	20 42 06.8	
	baz=280,slow=74,SNR=11						
ZALV	Zalesovo Beam	43.89	330	P	P	19 56 36.5	+2.0
	comp=Z,0.3nm,0.3s,baz=106,slow=11,SNR=2.1						

	comp=Z,0.3nm,0.3s						
AS31	**Alice Springs**	**45.05**	**164**	P	**P**	**19 56 43.5**	**-0.5**
ASAR	**Alice Springs**	**45.05**	**164**	P	**P**	**19 56 43.5**	**-0.6**
ASAR	**Alice Springs**	**45.05**	**164**	P	**P**	**19 56 43.9**	**-0.2**
	comp=Z,1.2nm,0.3s,baz=340,slow=6.8,SNR=32						
	comp=Z,1.2nm,0.3s						
AAK	**Ala-Archa**	**45.23**	**311**	LR	LR	20 18 08.2	
	comp=Z,29nm,21.5s,baz=146,slow=39						
KURBB	**Kurchatov Arra**	**45.46**	**323**	P	**P**	**19 56 48.3**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=152,slow=6.2,SNR=6.3						
	comp=Z,0.6nm,0.7s						
MORW	**Morawa**	**48.97**	**186**	P	**P**	**19 57 14.1**	**-0.4**
BBOO	**Buckleboo**	**54.31**	**165**	P	**P**	**19 57 54.5**	**0.0**
ABKAR	**Akbulak array**	**56.51**	**316**	P	**P**	**19 58 10.7**	**+0.6**
ABKAR	**Akbulak array**	**56.51**	**316**	P	**P**	**19 58 10.2**	**+0.1**
ABKAR				IAmb	IAmb	19 58 35.4	
	comp=Z,1.4nm,1.2s						
ARTI	**Arti**	**58.66**	**325**	LR	LR	20 24 16.7	
	comp=Z,20nm,18.2s,baz=64,slow=37						
TOO	**Toolangi**	**61.58**	**158**	P	**P**	**19 58 45.8**	**+0.5**
TOO				IAmb	IAmb	19 58 55.6	
	comp=Z,1.9nm,1.0s						
C18K	**Utukok River**	**67.08**	**23**	P	**P**	**19 59 22.3**	**+1.3**
C18K				IAmb	IAmb	19 59 28.6	
	comp=Z,4.3nm,1.3s						
C19K	**Lookout Ridge**	**67.69**	**22**	P	**P**	**19 59 26.6**	**+1.8**
C19K				IAmb	IAmb	19 59 54.2	
	comp=Z,6.9nm,1.4s						
J17K	**VABM Dome**	**67.76**	**29**	P	**P**	**19 59 26.8**	**+1.5**
J17K				IAmb	IAmb	19 59 29.2	
	comp=Z,4.3nm,1.3s						
K17K	**Iditarod**	**68.12**	**29**	P	**P**	**19 59 28.3**	**+0.7**
K17K				IAmb	IAmb	19 59 33.2	
	comp=Z,8.5nm,1.5s						
D19K	**Kuna River**	**68.20**	**23**	P	**P**	**19 59 29.6**	**+1.6**
D19K				IAmb	IAmb	19 59 34.0	
	comp=Z,5.4nm,1.3s						
O16K	**Kokwok River B**	**68.32**	**33**	P	**P**	**19 59 29.8**	**+0.9**
O16K				IAmb	IAmb	19 59 42.6	
	comp=Z,3.9nm,1.0s						
IMAR	**Indian Mountai**	**69.96**	**26**	P	**P**	**19 59 40.0**	**+1.1**
D23K	**Nanushuk River**	**70.89**	**22**	P	**P**	**19 59 46.1**	**+1.5**
D23K				IAmb	IAmb	20 00 12.5	
	comp=Z,9.9nm,1.5s						
CAST	**Castle Rocks**	**70.90**	**28**	P	**P**	**19 59 45.8**	**+1.0**
D25K	**Kavik River**	**72.37**	**22**	P	**P**	**19 59 55.1**	**+1.5**
D25K				IAmb	IAmb	20 00 18.9	
	comp=Z,3.6nm,1.1s						
ILAR	**Eielson Array**	**72.96**	**27**	P	**P**	**19 59 56.1**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=272,slow=4.4,SNR=4.1						
	comp=Z,0.3nm,0.7s						
SPITS	**Spitsbergen Ar**	**73.64**	**348**	P	**P**	**20 00 01.8**	**+0.9**
	comp=Z,3.6nm,0.8s,baz=118,slow=6.7,SNR=4.7						
	comp=Z,3.6nm,0.8s						
FINES	**FINESS Array B**	**75.15**	**330**	P	**P**	**20 00 11.0**	**+1.1**
	comp=Z,1.2nm,0.8s,baz=132,slow=2.8,SNR=4.1						
	comp=Z,1.2nm,0.8s						
NOA	**NORSAR Array B**	**82.01**	**333**	P	**P**	**20 00 48.3**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=62,slow=1.8,SNR=3.5						
NOA				LR	LR	20 40 40.9	
	comp=Z,14nm,18.6s,baz=70,slow=38						
	comp=Z,0.8nm,0.8s						
YKA	**Yellowknife Ar**	**86.86**	**23**	P	**P**	**20 01 12.8**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=307,slow=4.9,SNR=3.4						
	comp=Z,0.5nm,0.6s						

IDC 08 20:00:51.3±2.5**,15°.96S**×**174°.26W,h0**^{km}**,mb3.9**/3**,mbtmp3.9**/3**,MS3.7**/20**,Error ellipse: s-maj=67.9km s-min=51.2km az=24.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**7.57**	**255**	LR	LR	20 05 18.4	
	comp=Z,576nm,20.5s,baz=19,slow=35						
RAR	**Rarotonga**	**14.69**	**113**	LR	LR	20 08 46.1	
	comp=Z,150nm,18.3s,baz=292,slow=32						
DZM	**Mont Dzumac**	**19.22**	**249**	LR	LR	20 11 23.0	
	comp=Z,395nm,18.6s,baz=356,slow=33						
URZ	**Urewera**	**23.48**	**197**	LR	LR	20 13 45.1	
	comp=Z,296nm,18.8s,baz=84,slow=33						
PPT	**Papeete**	**23.68**	**97**	LR	LR	20 14 12.2	
	comp=Z,41nm,18.1s,baz=322,slow=34						
HNR	**Honiara**	**25.97**	**281**	LR	LR	20 14 48.4	
	comp=Z,186nm,21.8s,baz=148,slow=32						
STKA	**Stephens Creek**	**43.04**	**240**	LR	LR	20 25 04.8	
	comp=Z,98nm,19.7s,baz=61,slow=34						
WRA	**Warramunga Arr**	**48.91**	**257**	P	P	20 09 41.2	+1.7
	1.1nm,0.7s,baz=91,slow=7.6,SNR=10						
	1.1nm,0.7s						
ASAR	**Alice Springs**	**49.15**	**252**	P	P	20 09 39.5	-1.8
	1.7nm,0.7s,baz=86,slow=8.0,SNR=12						
	1.7nm,0.7s						
MJAR	**Matsushiro Arr**	**68.84**	**320**	LR	LR	20 35 28.9	
	comp=Z,48nm,21.1s,baz=132,slow=30						
JNU	**Nakatsue**	**71.58**	**314**	LR	LR	20 36 20.3	
	comp=Z,58nm,20.8s,baz=142,slow=30						
PFO	**Pinyon Flats O**	**73.91**	**47**	LR	LR	20 36 24.7	
	comp=Z,93nm,20.1s,baz=198,slow=29						
LPIG	**La Paz**	**74.03**	**59**	LR	LR	20 35 32.9	
	comp=Z,49nm,20.0s,baz=212,slow=28						
QSPA	**South Pole Qui**	**74.08**	**180**	P	P	20 12 29.2	0.0
	1.1nm,0.9s,baz=47,slow=19,SNR=1.7						
	1.1nm,0.9s						
KDAK	**Kodiak Island**	**75.64**	**12**	LR	LR	20 39 30.5	
	comp=Z,37nm,20.3s,baz=196,slow=31						
USRK	**Ussuriysk Ar.**	**77.34**	**324**	LR	LR	20 39 18.4	
	comp=Z,48nm,21.1s,baz=168,slow=30						
BBB	**Bella Bella**	**78.76**	**27**	LR	LR	20 39 34.7	
	comp=Z,40nm,20.1s,baz=222,slow=30						
TXAR	**Lajitas Array**	**81.61**	**56**	LR	LR	20 42 57.1	
	comp=Z,27nm,19.6s,baz=234,slow=31						
ANMO	**Albuquerque**	**81.79**	**50**	LR	LR	20 43 06.8	
	comp=Z,66nm,18.7s,baz=313,slow=31						
PDAR	**Pinedale Array**	**83.23**	**42**	LR	LR	20 46 12.1	
	comp=Z,24nm,18.1s,baz=204,slow=33						
YKA	**Yellowknife Ar**	**90.94**	**24**	LR	LR	20 49 11.7	
	comp=Z,25nm,18.5s,baz=305,slow=32						
SONM	**Songino Array**	**94.71**	**318**	LR	LR	20 50 21.3	
	comp=Z,27nm,21.1s,baz=110,slow=31						
ULM	**Lac du Bonnet**	**94.89**	**39**	LR	LR	20 51 35.8	
	comp=Z,50nm,18.1s,baz=242,slow=32						
BRTR	**Keskin Array B**	**146.06**	**320**	PKPbc	PKPdf	20 20 33.0	0.0
	0.4nm,0.6s,baz=64,slow=2.9,SNR=4.0						

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*IDC **08** 20:11:29.1±2.0,1°.48N×126°.96E,h0^{km},mb3.5/4,mbtmp3.5/4,MS3.4/2,Error ellipse: s-maj=197.3km s-min=22.3km az=67.0*

*DJA **08** 20:11:35.6±0.7,1°N±2°×12°7E±°,h27^{km}±7^{km},M3.5/11,mb3.4/1,MLv3.5/11*

ISC 08 20:11:34.9±1.3**,1°.5N**±0°.1×**126°.90E**±0°.08**,h35**^{km}**,n9,**σ**1**^{s}.**10**/10**,mb3.4**/4**,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.83**	**145**	P	**Pn**	**20 11 50.9**	**+0.8**
TNTI				S	**Sn**	**20 12 02.0**	**+0.8**
KMSI	**Cibinong**	**3.04**	**253**	P	**Pn**	**20 12 21.0**	**+0.4**
KMSI				S	**Sn**	**20 12 56.7**	**+0.9**
SANI	**Sanana**	**3.60**	**195**	P	**Pn**	**20 12 28.1**	**-0.2**
NLAI	**Namlea**	**4.67**	**178**	P	**Pn**	**20 12 43.8**	**+0.8**
WRA	**Warramunga Arr**	**22.49**	**161**	P	**P**	**20 16 29.4**	**-2.2**
	0.6nm,0.6s,baz=340,slow=9.4,SNR=10						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**25.89**	**165**	P	**P**	**20 17 02.8**	**-0.9**
	0.2nm,0.3s,baz=344,slow=12,SNR=7.1						
ASAR				LR	LR	20 27 23.2	
	comp=Z,111nm,20.1s,baz=90,slow=37						
	0.2nm,0.3s						
ASAJ	**Asahikawa**	**44.71**	**16**	LR	LR	20 38 16.2	
	comp=Z,33nm,19.7s,baz=174,slow=36						
MKAR	**Makanchi Array**	**59.51**	**326**	P	**P**	**20 21 34.6**	**-0.1**
	0.3nm,0.6s,baz=116,slow=7.7,SNR=2.6						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**63.73**	**328**	P	**P**	**20 22 03.4**	**+0.4**
	0.5nm,0.3s,baz=125,slow=5.9,SNR=5.2						
	0.5nm,0.3s						

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*NEIC **08** 20:14:33.3±1.4,18°.4N±0°.4×68°.87W±0°.06,h166^{km}±5^{km},ML2.6/12,Md3.0/3(RSPR),Error ellipse: s-maj=57.1km s-min=6.7km az=185.0*

*RSPR **08** 20:14:35.0,18°.30N×68°.88W,h154^{km}±2^{km},MD3.0/3*

ISC 08 20:14:31.6±2.7**,18°.5N**±0°.2×**68°.89W**±0°.05**,h183**^{km}±20^{km}**,n22,**σ**1**^{s}.**40**/30**,3C,Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DR12	**Loma Pena Alta**	**0.56**	**302**	Pn	**Pn**	**20 14 57.0**	**-0.1**
DR12				Sn	**Sn**	**20 15 15.0**	**-1.8**
SMDR	**Samana, DR**	**0.85**	**340**	⇑*e*P	**Pn**	**20 14 59.7**	**+1.1**
SMDR	**Samana, DR**	**0.85**	**340**	*e*S	**Sn**	**20 15 20.3**	**+0.7**
BANI	**BANI**	**1.40**	**266**	Pn	**Pn**	**20 15 03.4**	**+0.3**
BANI				Sn	**Sn**	**20 15 26.2**	**-1.2**
AGPR	**Aguadilla, PR**	**1.68**	**90**		**Sn**	**20 15 31.5**	**-0.5**
AGPR	**Aguadilla, PR**	**1.68**	**90**	*e*S	**Sn**	**20 15 31.5**	**-0.5**
LSP	**Las Mesas**	**1.74**	**100**		**Pn**	**20 15 08.5**	**+2.2**
LSP					**Sn**	**20 15 33.4**	**+0.4**
LSP	**Las Mesas**	**1.74**	**100**	⇑*e*P	**Pn**	**20 15 08.5**	**+2.2**
LSP	**Las Mesas**	**1.74**	**100**	*e*S	**Sn**	**20 15 33.4**	**+0.4**
CRPR	**Cabo Rojo, PR**	**1.75**	**106**		**Pn**	**20 15 06.3**	**-0.1**
CRPR					**Sn**	**20 15 31.8**	**-1.5**
CRPR				IAML		20 16 29.2	
	comp=N,21nm,1.4s						
CRPR				IAML		20 16 32.4	
	comp=E,20nm,1.4s						
CRPR	**Cabo Rojo, PR**	**1.75**	**106**	⇑*e*P	**Pn**	**20 15 09.5**	**+3.2**
CRPR	**Cabo Rojo, PR**	**1.75**	**106**	*e*S	**Sn**	**20 15 32.3**	**-0.9**
MLPR	**Magueyes Islan**	**1.82**	**106**	*e*S	**Sn**	**20 15 35.6**	**+1.1**
AOPR	**Arecibo Observ**	**2.03**	**94**	Pn	**Pn**	**20 15 09.2**	**0.0**
AOPR					**Sn**	**20 15 36.9**	**-1.5**
AOPR				IAML		20 15 37.8	
	comp=N,37nm,0.3s						
AOPR				IAML		20 15 38.5	
	comp=E,75nm,0.3s						
AOPR	**Arecibo Observ**	**2.03**	**94**	*e*S	**Sn**	**20 15 37.1**	**-1.4**
UUPR	**Utuado, UPR, P**	**2.07**	**96**	Pn	**Pn**	**20 15 08.5**	**-1.2**
UUPR					**Sn**	**20 15 38.6**	**-0.7**
UUPR	**Utuado, UPR, P**	**2.07**	**96**	*e*S	**Sn**	**20 15 39.0**	**-0.2**
CELP	**Cerrillos**	**2.23**	**100**	Pn	**Pn**	**20 15 11.5**	**0.0**
CELP					**Sn**	**20 15 41.7**	**-0.7**
CELP				IAML		20 15 46.7	
	comp=N,12nm,1.0s						
CELP	**Cerrillos**	**2.23**	**100**	*e*S	**Sn**	**20 15 42.1**	**-0.2**
EMPR	**Esperanza - Ma**	**2.23**	**90**	Pn	**Pn**	**20 15 12.4**	**+0.9**
EMPR				Sn	**Sn**	**20 15 40.7**	**-1.8**
EMPR				IAML		20 16 45.7	
	comp=N,78nm,1.0s						
SDDR	**Presa de Saban**	**2.33**	**283**	Pn	**Pn**	**20 15 13.6**	**+1.0**
HUMP	**Col San Antoni**	**2.90**	**96**	Sn	**Sn**	**20 15 53.6**	**-2.8**

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*NIED **08** 20:16:39.0,35°.93N×134°.87E,h17^{km},MW3.3,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.34; $M_{\theta\theta}$0.17; $M_{\phi\phi}$0.17; $M_{r\theta}$-0.20; $M_{\theta\phi}$-1.06; $M_{\phi r}$0.15; Fault plane solution: $M_0$1.08000×10^{14} NP1:ϕ_s0.00000°,δ81.00000°,λ4.00000°. NP2:ϕ_s270.00000°,δ86.00000°,λ171.00000°.*

JMA 08 20:16:39.0±0.0**,35°.9N**±0°.2×**134°.87E**±0°.09**,h17**^{km}**,MD3.4**/40**,MV3.6**/40**,4D,NW OFF KINKI DISTRICT, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKY	**Yasaka**	**0.36**	**148**	⇓P	Pg	20 16 46.1	-0.2
JKY				⇓S	Sg	20 16 51.4	0.0
JKY	**Yasaka**	**0.36**	**148**	A	A	20 16 46.1	
	comp=N,4.0nm,0.7s,comp=E,3.0nm,0.6s						
JKSM	**Kasumi**	**0.38**	**206**	P	Pg	20 16 46.7	-0.1
JKSM				S	Sg	20 16 52.0	-0.1
JWT	**Wachi**	**0.78**	**146**	⇓P	Pb	20 16 53.4	-0.7
JWT				⇓S	Sb	20 17 03.7	-0.6
JKS	**Kasai**	**0.94**	**181**	P	Pb	20 16 56.5	-0.4
JKS				S	Sb	20 17 08.9	-0.2
JMIK	**Miki**	**1.13**	**172**	A	A	20 16 59.6	
	comp=N,2.0nm,0.2s,comp=E,4.0nm,0.2s						
JAD	**Aida**	**1.14**	**210**	P	Pb	20 17 00.3	0.0
JAD				S	Sn	20 17 15.2	-0.3

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*NEIC **08** 20:20:01.2±1.4,38°.38N±0°.02×118°.19W±0°.02,h14^{km}±6^{km},Error ellipse: s-maj=3.5km s-min=0.8km az=210.0*

REN 08 20:20:01.5±1.7**,38°.35N**±0°.02×**118°.19W**±0°.02**,h11**^{km}±7^{km}**,ML2.6**/11**,ML2.4**/54(NEIC)**,Error ellipse: s-maj=3.4km s-min=2.0km az=192.0,California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NV11	**Mina Array Sit**	**0.08**	**17**		Pg	20 20 04.2	+0.1
NV11				Sg	Sg	20 20 05.9	-0.2
NV11				IAML		20 20 06.2	
	comp=N,1μm,0.5s						
NV08	**Mina Array Sit**	**0.12**	**297**		Pg	20 20 04.7	+0.1
NVAR	**Mina Array Bea**	**0.12**	**310**	Pg	Pg	20 20 04.3	-0.4
NV09	**Mina Array Sit**	**0.14**	**305**		Pg	20 20 05.2	+0.2
LHV	**Little Huntoon**	**0.27**	**248**		Pg	20 20 07.4	+0.4
LHV				Sg	Sg	20 20 11.4	+0.7
RYN	**Ryan**	**0.38**	**316**		Pg	20 20 09.3	+0.2
RYN				Sg	Sg	20 20 14.6	+0.4
TVH1	**TV Hill, Hawth**	**0.47**	**283**		Pg	20 20 11.0	+0.3
TVH1					Sg	20 20 17.7	+0.7
ANTCA	**Antelope Range**	**0.53**	**215**		Pg	20 20 12.0	+0.2
MGNR	**McGee Canyon**	**0.67**	**217**		Pg	20 20 14.6	+0.1
BENR	**Benton**	**0.70**	**206**		Pg	20 20 15.2	0.0
MLNR	**Milner Canyon**	**0.77**	**189**		Pg	20 20 16.4	+0.1
TPH	**Tonopah**	**0.81**	**110**		Pg	20 20 17.0	0.0
TPH				Sg	Sg	20 20 28.1	+0.4
MLAC	**Mammoth, Mammo**	**0.89**	**216**		Pg	20 20 18.8	+0.2
MCBM	**Casa Benchmark**	**0.90**	**219**		Pb	20 20 19.5	+0.2
MZP	**Montezuma Peak**	**0.91**	**135**		Pg	20 20 18.9	-0.1
MZP				IAML		20 20 35.4	
	comp=E,90nm,0.5s						
MZP	**Montezuma Peak**	**0.91**	**135**		Sb	20 20 31.5	-0.1
Q09A	**Carvers**	**0.92**	**58**		Pg	20 20 18.9	-0.4
Q09A	**Carvers**	**0.92**	**58**		Sb	20 20 32.2	+0.3
MDYM	**Dry Creek**	**0.95**	**224**		Pb	20 20 20.2	+0.1
WAKR	**Walker**	**0.99**	**279**		Pg	20 20 20.1	-0.5
WAKR	**Walker**	**0.99**	**279**		Sg	20 20 33.4	-0.2
DSP	**Deep Springs**	**0.99**	**170**		Pb	20 20 20.8	+0.1
DSP				IAML		20 20 34.5	
	comp=E,64nm,0.5s						
DSP	**Deep Springs**	**0.99**	**170**		Sb	20 20 34.3	+0.5
MDPB	**Devils Postpil**	**1.01**	**225**		Pg	20 20 20.6	-0.2
BHPR	**Bishop**	**1.08**	**193**		Pb	20 20 22.3	0.0
LCH	**Last Change Ra**	**1.20**	**159**		Pn	20 20 24.3	+0.1
LCH					Sn	20 20 40.3	-0.3
GMN	**Gold Mountain**	**1.28**	**145**		Pn	20 20 25.4	-0.1
GMN				IAML		20 20 45.6	
	comp=E,74nm,0.4s						
GMN	**Gold Mountain**	**1.28**	**145**		Sn	20 20 43.3	+0.5
PNTR	**Pine Nut**	**1.33**	**304**		Pn	20 20 25.9	-0.3
PNTR				IAML		20 20 46.2	
	comp=E,54nm,0.7s						
PNTR				IAML		20 20 50.6	
	comp=N,60nm,0.8s						
PNTR	**Pine Nut**	**1.33**	**304**		Sg	20 20 44.8	+0.5
PAHR	**Pah Rah Range**	**1.64**	**326**		Pn	20 20 30.3	-0.1
PAHR				IAML		20 20 54.7	
	comp=N,41nm,0.3s						
PAHR				IAML		20 20 54.8	
	comp=E,48nm,0.7s						
PAHR	**Pah Rah Range**	**1.64**	**326**		Sg	20 20 53.8	-0.5
SGV	**South Grapevin**	**1.65**	**146**		Pb	20 20 32.2	+0.3
MPK	**Martis Peak**	**1.72**	**304**		Pb	20 20 32.7	-0.5
CMB	**Columbia Colle**	**1.76**	**260**		Pb	20 20 34.1	+0.3
CMB	**Columbia Colle**	**1.76**	**260**	Pn	Pn	20 20 32.0	0.0
CMB	**Columbia Colle**	**1.76**	**260**	IAML		20 20 57.4	
	comp=N,34nm,0.2s						
CMB				IAML		20 20 57.6	
	comp=E,38nm,0.1s						
PEAR	**Peavine Mounta**	**1.87**	**313**		Pb	20 20 35.4	-0.3
PEAR					Sg	20 21 01.3	-0.2
DONR	**Donner Summit**	**1.94**	**302**		Pb	20 20 36.8	-0.2
R11B	**Troy Canyon, C**	**2.04**	**89**		Pn	20 20 35.9	0.0
R11B				IAML		20 21 08.1	
	comp=E,28nm,0.2s						
R11B				IAML		20 21 08.3	
	comp=N,20nm,0.3s						
S11A	**Rachel**	**2.05**	**109**		Pn	20 20 35.8	-0.2
TPNV	**Topopah Spring**	**2.08**	**132**		Pn	20 20 36.6	+0.2
TPNV				IAML		20 21 12.6	
	comp=N,25nm,0.6s						
TPNV				IAML		20 21 14.6	
	comp=N,21nm,0.7s						
CPY	**CP-1**	**2.21**	**129**		Pb	20 20 41.9	+0.5
CPY					Sg	20 21 12.0	-0.4
SDH	**Striped Hills**	**2.25**	**139**		Pn	20 20 40.4	+1.7
NSP	**Numbskull Pass**	**2.26**	**135**		Pn	20 20 40.4	+1.6
AFDM	**Forest Hills D**	**2.26**	**286**		Pn	20 20 38.9	+0.1
AFDM				IAML		20 21 13.7	
	comp=E,13nm,0.5s						
BEKR	**Beckworth**	**2.27**	**312**		Pn	20 20 39.0	0.0
AMDNV	**Amargosa**	**2.43**	**141**		Pb	20 20 46.1	+1.0
MCY	**Mercury**	**2.44**	**133**		Pb	20 20 46.0	+0.5
GWY	**Greenwater Val**	**2.48**	**150**		Pn	20 20 42.4	+0.5
GWY	**Greenwater Val**	**2.48**	**150**		Pg	20 20 48.0	-1.0
GWY					Sg	20 21 20.5	-0.6
GWY	**Greenwater Val**	**2.48**	**150**	IAML		20 21 24.4	
	comp=E,20nm,0.7s						
GWY				IAML		20 21 31.6	
	comp=N,15nm,1.2s						
PRN	**Pahroc Range**	**2.65**	**110**		Pn	20 20 44.5	+0.2
PRN				IAML		20 21 34.8	
	comp=N,18nm,0.7s						
PRN				IAML		20 21 39.8	
	comp=E,20nm,0.9s						
SHPR	**Sheep Range**	**3.03**	**126**		Pn	20 20 49.5	-0.1
ELK	**Elko**	**3.30**	**43**		Pn	20 20 53.4	+0.1
ELK				IAML		20 21 46.7	
	comp=E,5.1nm,0.4s						

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*IDC **08** 20:24:49.5±1.4,64°.98S×179°.53E,h0^{km},mb4.3/4,mbtmp4.4/5,ML4.0/1,MS4.2/31,Error ellipse: s-maj=58.9km s-min=21.6km az=67.0*

*NEIC **08** 20:24:53.6±1.3,65°.3S±0°.1×177°.9E±0°.4,h10^{km}±2^{km},mb4.6/5,Error ellipse: s-maj=37.1km s-min=6.6km az=54.0*

*GCMT **08** 20:24:54.6±0.2,65°.13S±0°.01×179°.16E±0°.03,h21^{km}±1^{km},MW5.1/116,Moment Tensor Solution. s56,c69; s116,c178; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.23±.17; $M_{\theta\theta}$5.83±.16; $M_{\phi\phi}$-4.60±.13; $M_{r\theta}$-1.28±.24; $M_{\theta\phi}$-0.98±.10; $M_{\phi r}$-0.60±.25; Best double couple: $M_0$5.48100×10^{16} NP1:ϕ_s320.00000°,δ75.00000°,λ-2.00000°. NP2:ϕ_s51.00000°,δ88.00000°,λ-165.00000°. Principal axes: T 6.1240, Plg9.0000°, Azm185.0000°; N -1.2860, Plg75.0000°, Azm56.0000°; P -4.8380, Plg12.0000°, Azm277.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 20:24:50.9±0.8**,65°.1S**±0°.1×**179°.1E**±0°.3**,h10**^{km}**,n74,**σ**1**^{s}.**06**/29**,mb4.4**/9**,MS4.2**/31**,4C,Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBA	**Scott Base**	**13.39**	**191**		**Pn**	**20 27 58.8**	**-1.8**
VNDA	**Vanda**	**13.58**	**196**		**Pn**	**20 28 02.1**	**-1.1**
VNDA	**Vanda**	**13.58**	**196**	Pn	**Pn**	**20 28 02.6**	**-0.6**
	0.8nm,0.3s,baz=51,slow=17,SNR=78						
	9.5nm,0.8s						
RPZ	**Rata Peaks**	**21.86**	**344**	LR	LR	20 36 51.5	
	comp=Z,1μm,18.4s,baz=164,slow=33						
QSPA	**South Pole Qui**	**25.03**	**180**	P	**P**	**20 30 16.1**	**+1.2**
QSPA	**South Pole Qui**	**25.03**	**180**	P	**P**	**20 30 16.1**	**+1.2**
	23nm,1.0s,baz=34,slow=6.1,SNR=25						
QSPA				LR	LR	20 38 44.4	
	comp=Z,1μm,20.2s,baz=40,slow=33						
	23nm,1.0s						
URZ	**Urewera**	**26.86**	**356**	LR	LR	20 39 10.6	
	comp=Z,1μm,21.3s,baz=225,slow=32						
BELA	**Belgrano 2**	**35.84**	**168**	P	**P**	**20 31 51.9**	**+1.9**
BELA				IAmb	IAmb	20 31 57.3	
	comp=Z,9.3nm,1.3s						
RAO	**Raoul Island**	**35.87**	**4**	LR	LR	20 46 14.6	
	comp=Z,338nm,18.2s,baz=160,slow=36						
MAW	**Mawson**	**40.13**	**212**	LR	LR	20 48 53.4	
	comp=Z,1μm,19.0s,baz=133,slow=36						
STKA	**Stephens Creek**	**40.35**	**307**	LR	LR	20 46 57.5	
	comp=Z,144nm,20.6s,baz=194,slow=33						
PMSA	**Palmer Station**	**42.59**	**146**	LR	LR	20 47 23.9	
	comp=Z,241nm,18.1s,baz=238,slow=32						
SNAA	**Sanae**	**43.53**	**179**	⇑P	**P**	**20 32 54.4**	**+0.4**
	comp=Z,90nm,1.0s						
SNAA	**Sanae**	**43.53**	**179**	P	**P**	**20 32 54.5**	**+0.4**
SNAA				IAmb	IAmb	20 33 02.7	
	comp=Z,11nm,1.3s						
SNAA	**Sanae**	**43.53**	**179**	P	**P**	**20 32 54.9**	**+0.9**
	comp=Z,5.1nm,1.1s,baz=163,slow=7.8,SNR=8.7						
SNAA				LR	LR	20 50 46.4	
	comp=Z,644nm,18.1s,baz=200,slow=36						
	comp=Z,5.1nm,1.1s						
DZM	**Mont Dzumac**	**43.77**	**343**	*e*S	S	20 39 07.8	-19
	comp=Z,108nm,21.9s						
DZM				*e*SS	SS	20 42 28.5	-14
	comp=Z,167nm,23.8s						
DZM				*e*LR	LR	20 44 48.9	
	comp=Z,1μm,23.6s						
VNA3	**Neumayer Olymp**	**43.83**	**176**	⇑P	**P**	**20 32 56.0**	**-0.5**
	comp=Z,2.7nm,1.0s						
VNA2	**Neumayer--Watz**	**44.21**	**177**	⇑P	**P**	**20 32 59.5**	**+0.1**
	comp=Z,2.2nm,1.0s,baz=193,slow=5.9						
VNA1	**Neumayer--Stat**	**44.47**	**176**	⇑P	**P**	**20 33 00.1**	**-1.3**
	comp=Z,8.2nm,1.0s						
RAR	**Rarotonga**	**45.98**	**28**	LR	LR	20 47 28.7	
	comp=Z,371nm,19.6s,baz=203,slow=30						
TBI	**Tubuai**	**46.41**	**41**	*e*SS	SS	20 43 16.2	-14
	comp=Z,3μm,27.2s						
TBI				*e*LR	LR	20 45 58.7	
	comp=Z,784nm,26.5s						
TBI				*e*LR	LR	20 46 00.5	
	comp=Z,3μm,29.0s						
MSVF	**Nonsavu**	**47.29**	**359**	LR	LR	20 48 16.9	
	comp=Z,490nm,21.8s,baz=194,slow=30						
H01W1	**Cape Leeuwin H**	**48.45**	**276**	T	T	21 26 04.3	
	baz=149,slow=76,SNR=62						
H01W2	**Cape Leeuwin H**	**48.46**	**276**	T	T	21 26 06.0	
	baz=149,slow=76,SNR=53						
H01W3	**Cape Leeuwin H**	**48.47**	**276**	T	T	21 26 07.3	
	baz=149,slow=76,SNR=44						
NWAO	**Narrogin (SRO)**	**48.85**	**280**	LR	LR	20 50 02.5	
	comp=Z,399nm,18.0s,baz=96,slow=31						
ASAR	**Alice Springs**	**50.55**	**303**	P	**P**	**20 33 50.2**	**+0.9**
	comp=Z,1.8nm,0.8s,baz=156,slow=7.5,SNR=21						
	comp=Z,1.8nm,0.8s						
AS31	**Alice Springs**	**50.55**	**303**	P	**P**	**20 33 50.0**	**+0.7**
PPT2	**Papeete2**	**51.86**	**39**	*e*S	S	20 41 04.3	-17
	comp=Z,106nm,25.0s						
PPT2				*e*LR	LR	20 48 29.1	
	comp=Z,393nm,27.0s						
PPT2				*e*LR	LR	20 48 29.5	
	comp=Z,644nm,27.8s						
PPT	**Papeete**	**51.88**	**39**	LR	LR	20 49 41.2	
	comp=Z,162nm,19.6s,baz=184,slow=29						
WRA	**Warramunga Arr**	**53.83**	**305**	P	**P**	**20 34 14.4**	**+0.7**
	comp=Z,2.5nm,0.8s,baz=156,slow=6.5,SNR=12						
WRA				LR	LR	20 54 10.5	
	comp=Z,304nm,20.6s,baz=146,slow=33						
	comp=Z,2.5nm,0.8s						
WB0	**Warramunga Arr**	**53.97**	**305**	P	**P**	**20 34 14.8**	**+0.1**
WB0				IAmb	IAmb	20 34 34.8	
	comp=Z,17nm,1.5s						
FITZ	**Fitzroy Crossi**	**58.69**	**297**	LR	LR	20 56 52.6	
	comp=Z,214nm,20.6s,baz=158,slow=33						
PMG	**Port Moresby**	**59.86**	**323**	LR	LR	20 55 52.5	
	comp=Z,186nm,21.2s,baz=146,slow=31						
PLCA	**Paso Flores**	**61.53**	**126**	LR	LR	20 55 01.1	
	comp=Z,66nm,20.5s,baz=207,slow=30						
TAOE	**Nuku Hiva Isla**	**62.87**	**46**	*e*LR	LR	20 53 36.5	
	comp=Z,216nm,26.7s						
H03S2	**Juan Fernandez**	**64.61**	**116**	T	T	21 46 05.0	
	baz=205,slow=74,SNR=39						
H03S1	**Juan Fernandez**	**64.61**	**116**	T	T	21 46 06.3	
	baz=205,slow=74,SNR=32						
H03S3	**Juan Fernandez**	**64.62**	**116**	T	T	21 46 06.5	
	baz=205,slow=74,SNR=31						
H03N3	**Juan Fernandez**	**64.94**	**115**	T	T	21 46 31.0	
	baz=207,slow=80,SNR=41						
H03N2	**Juan Fernandez**	**64.96**	**115**	T	T	21 46 28.2	
	baz=207,slow=80,SNR=74						
H03N1	**Juan Fernandez**	**64.96**	**115**	T	T	21 46 29.1	
	baz=207,slow=80,SNR=32						
JAY	**Jayapura**	**68.20**	**318**	LR	LR	21 03 27.8	
	comp=Z,142nm,18.5s,baz=292,slow=34						
KAPI	**Kappang**	**72.91**	**296**	LR	LR	21 05 45.1	
	comp=Z,102nm,19.6s,baz=164,slow=34						
CPUP	**Villa Florida**	**79.09**	**130**	LR	LR	21 06 38.2	
	comp=Z,16nm,20.1s,baz=62,slow=32						
DAV	**Davao City (W)**	**81.99**	**306**	LR	LR	21 14 31.2	
	comp=Z,40nm,18.5s,baz=134,slow=36						
BOSA	**Boshof**	**84.45**	**203**	LR	LR	21 12 13.0	
	comp=Z,120nm,19.7s,baz=169,slow=34						

LPAZ	La Paz	84.55	117	LR	LR	21 06 07.3	
	comp=Z,58nm,21.2s,baz=223,slow=29						
NNA	Nana	85.05	108	LR	LR	21 06 21.5	
	comp=Z,63nm,21.6s,baz=201,slow=29						
SIV	San Ignacio	87.41	123	LR	LR	21 12 05.6	
	comp=Z,54nm,18.2s,baz=276,slow=32						
LBTB	Lobatse	87.91	204	LR	LR	21 15 19.8	
	comp=Z,182nm,18.2s,baz=168,slow=34						
PSI	Prapat	88.39	280	LR	LR	21 11 09.8	
	comp=Z,57nm,19.4s,baz=103,slow=31						
ATAH	Atahualpa	88.81	104	LR	LR	21 08 44.2	
	comp=Z,187nm,19.2s,baz=217,slow=30						
H08S2	Diego Garcia H	90.03	252	T	T	22 18 11.8	
	baz=155,slow=76,SNR=32						
H08S1	Diego Carcia H	90.04	252	T	T	22 18 20.0	
	baz=155,slow=76,SNR=26						
H08S3	Diego Garcia H	90.05	252	T	T	22 18 17.4	
	baz=155,slow=76,SNR=65						
MATP	Matopo	91.86	207	LR	LR	21 15 42.8	
	comp=Z,131nm,21.1s,baz=226,slow=33						
BDFB	Brasilia	92.02	135	LR	LR	21 14 18.0	
	comp=Z,36nm,22.0s,baz=176,slow=32						
TSUM	Tsumeb	94.82	197	LR	LR	21 19 04.4	
	comp=Z,341nm,18.7s,baz=170,slow=34						
LSZ	Lusaka	96.93	208	LR	LR	21 19 53.6	
	comp=Z,184nm,18.3s,baz=171,slow=34						
H02S1	DAWSON INLET T	123.65	33	T	T	22 59 40.3	
	SNR=122						
ILAR	Eielson Array	131.88	19	PKP	PKPdf	20 44 02.3	-0.2
	comp=Z,1.2nm,0.9s,baz=242,slow=3.2,SNR=7.7						
YKA	Yellowknife Ar	136.29	38	PKP	PKPdf	20 44 09.5	-1.3
	comp=Z,0.6nm,0.7s,baz=350,slow=3.6,SNR=3.9						
AB31	Akbulak array	145.05	273		PKPdf	20 44 28.0	+0.9
KARS	Kars	145.06	247	PKPdf	PKPdf	20 44 28.9	+1.3
BNN	Bunyan	146.22	237	PKPbc	PKiKP	20 44 32.1	-1.7
KBZ	Khabaz	147.76	250	PKPbc	PKiKP	20 44 35.2	-1.4
	comp=Z,2.2nm,0.7s,baz=180,slow=3.0,SNR=4.2						
BR131	Keskin Array S	147.78	235		PKPbc	20 44 34.5	-0.6
BRTR	Keskin Array B	147.78	235	PKPbc	PKPbc	20 44 35.3	+0.2
BRTR	Keskin Array B	147.78	235	PKPbc	PKiKP	20 44 35.6	-1.4
	comp=Z,0.9nm,0.8s,baz=157,slow=4.8,SNR=5.9						
RES	Resolute Bay	149.90	32	PKPdf	PKPbc	20 44 38.4	-0.8
RDO	Rodhopi	151.70	225	PKPbc	PKiKP	20 44 44.8	-0.1
TIP	Timpagrande	152.12	210	PKPbc	PKiKP	20 44 45.4	-0.5
ESDC	Sonseca Array	154.51	174	PKPbc	PKiKP	20 44 50.8	0.0
	comp=Z,0.9nm,0.9s,baz=201,slow=1.8,SNR=5.7						

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*MOS **08** 20:33:32.4, 42°.52N×46°.14E, h10^{km}, MPVA4.0*
*NORS **08** 20:33:34.0, 42°.53N×46°.16E, h6^{km}, MPVA3.9*
*DRS **08** 20:33:35.0, 42°.51N×46°.17E, h9^{km}*
ISC 08 20:33:33.9±1.0, **42°.52N**±0°.02×**46°.14E**±0°.01, **h6**^{km}±7^{km}, **n85**, σ1^{s}**17**/154, **3C-1D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTLR	Botlikh	0.16	24	*i* Pg	Pg	20 33 37.0	-0.2
BTLR				*e*Sg	Sg	20 33 39.4	0.0
BTLR	Botlikh	0.16	24	*i* PG	Pg	20 33 37.0	-0.2
XNZR	Khunzakh	0.42	87	*e*Pg	Pg	20 33 42.5	+0.3
XNZR				*i* Sg	Sb	20 33 49.3	-1.3
HNZR	Khunzah	0.43	84	*e*PG	Pg	20 33 42.5	+0.2
HNZR				*i* S	Sb	20 33 49.3	-1.6
DVE	Vedeno	0.44	359	*e*Pg	Pg	20 33 42.0	-0.5
DVE				*e*Sg	Sg	20 33 48.9	+0.7
DVE	Vedeno	0.44	359	*e*PG	Pg	20 33 42.3	-0.2
DVE				pmax	pmax		
	comp=Z,214nm,0.3s						
UNCR	Uncukul	0.53	68	*e*Pg	Pg	20 33 44.1	0.0
UNCR				*e*Sg	Sb	20 33 52.8	-0.7
UNCR	Uncukul	0.53	68	⇓*e*PG	Pg	20 33 44.1	0.0
UNCR				*e*S	Sb	20 33 52.8	-0.7
GNBR	Gunib	0.63	102	*e*Pg	Pg	20 33 46.4	+0.4
GNBR				*e*Sg	Sb	20 33 55.2	-1.2
GNBR	Gunib	0.63	102	*e*PG	Pg	20 33 46.2	+0.2
GNBR				*e*S	Sg	20 33 54.5	+0.3
GNBR				pmax	pmax		
	comp=Z,72nm,0.8s						
ARKR	Arakani	0.64	82	*e*Pg	Pg	20 33 46.4	+0.1
ARKR				*e*Sg	Sb	20 33 55.7	-1.1
ARKR	Arakani	0.64	82	*e*PG	Pg	20 33 46.4	+0.1
ARKR				*e*S	Sb	20 33 55.7	-1.1
KRNR	Karanay	0.65	61	*e*Pg	Pg	20 33 46.3	-0.1
KRNR				*e*Sg	Sb	20 33 55.5	-1.6
KRNR	Karanay	0.65	61	*e*PG	Pg	20 33 46.3	-0.1
KRNR				*e*S	Sb	20 33 55.5	-1.6
DLMR	Dylym	0.66	33	*e*Pg	Pg	20 33 46.6	0.0
DLMR				*e*Sg	Sb	20 33 56.4	-1.0
DLMR	Dylym	0.66	33	*e*PG	Pg	20 33 46.7	0.0
DLMR				*e*S	Sb	20 33 56.4	-1.0
DBC	Dubki	0.72	45	*e*Pg	Pg	20 33 47.7	0.0
DBC				*e*Sg	Sb	20 33 58.2	-0.8
DBC	Dubki	0.72	45	*e*PG	Pb	20 33 48.1	-0.8
DBC				*e*S	Sb	20 33 58.4	-0.6
GROC	Groznyy	0.73	340	*e*Pg	Pb	20 33 48.5	-0.5
GROC				*e*Sg	Sb	20 33 58.7	-0.6
GROC	Groznyy	0.73	340	*e*PG	Pg	20 33 48.4	+0.5
GROC				*e*S	Sb	20 33 58.8	-0.5
GROC				pmax	pmax		
	comp=Z,183nm,0.3s						
SHTL	Shatili	0.74	281	PG	Pg	20 33 47.0	-1.1
BUJR	Buynaksk	0.78	66	*e*Pg	Pb	20 33 49.5	-0.4
BUJR				*e*Sg	Sb	20 34 00.7	-0.1
BUJR	Buynaksk	0.78	66	*e*PG	Pb	20 33 49.5	-0.4
BUJR				*e*S	Sb	20 34 00.7	-0.1
KMKR	Kumukh	0.81	118	*e*Pg	Pb	20 33 49.9	-0.7
KMKR				*e*Sg	Sb	20 34 01.3	-0.5
KMKR	Kumukh	0.81	118	⇑*i*PG	Pg	20 33 49.8	+0.3
KMKR				*e*S	Sb	20 34 00.7	-1.2
KMKR				pmax	pmax		
	comp=Z,126nm,0.2s						
KMGR	Komgaron	1.08	300	*e*Pg	Pn	20 33 55.4	-0.3
KMGR				*e*Sg	Sn	20 34 11.5	+0.6
KMGR	Komgaron	1.08	300	*e*PG	Pn	20 33 55.4	-0.3
KMGR				*e*S	Sn	20 34 11.5	+0.6
MAK	Makhachkala	1.10	66	*e*Pg	Pn	20 33 56.1	+0.3
MAK				*e*Sg	Sn	20 34 11.0	-0.4
MAK	Makhachkala	1.10	66	*e*PG	Pn	20 33 55.4	-0.5
MAK				*e*S	Sn	20 34 11.2	-0.2
MAK				pmax	pmax		
	comp=Z,68nm,0.2s						
MAK				smax	smax		
	comp=E,331nm,0.5s						
MAK				smax	smax		
	comp=E,331nm,0.5s						
URKR	Urkarakh	1.17	107	*e*Pg	Pn	20 33 56.5	-0.3
URKR				*e*Sg	Sn	20 34 12.6	-0.5
URKR	Urkarakh	1.17	107	*e*PG	Pb	20 33 56.2	-0.3
URKR				*e*S	Sn	20 34 12.3	-0.9
URKR				pmax	pmax		
	comp=Z,60nm,0.4s						
VLKR	Vladikavkaz	1.20	297	*e*Pg	Pg	20 33 57.2	+0.3
VLKR				*e*Sg	Sn	20 34 14.3	+0.5
VLKR	Vladikavkaz	1.20	297	*e*PG	Pg	20 33 57.2	+0.3
VLKR				*e*S	Sn	20 34 14.3	+0.5
DGRG	David-gareji	1.21	208	PG	Pg	20 33 58.0	+0.9
GUDG	Gudauri	1.23	268	*e*Pg	Pn	20 33 55.8	-2.0
GUDG				*e*Sg	Sb	20 34 11.6	-2.2
GUDG	Gudauri	1.23	268	*e*PG	Pn	20 33 55.8	-2.0
TBLG	Delisi	1.30	233	*e*PG	Pn	20 33 58.1	-0.6
LACR	Lac	1.39	283	*e*Pg	Pn	20 33 59.5	-0.5
LACR				*e*Sg	Sb	20 34 16.0	-2.4
LACR	Lac	1.39	283	*e*PG	Pn	20 33 59.8	-0.2
BTKR	Batakoyurt	1.45	307	*e*Pg	Pb	20 34 01.6	+0.3
BTKR				*e*Sg	Sg	20 34 22.4	+1.9
BTKR	Batakoyurt	1.45	307	*e*PG	Pb	20 34 01.6	+0.3
BTKR				*e*S	Sg	20 34 22.4	+1.9
ARNR	Ardon	1.51	297	*e*Pg	Pb	20 34 02.8	+0.4
ARNR				*e*Sg	Sg	20 34 23.6	+1.0
ARNR	Ardon	1.51	297	*e*PG	Pb	20 34 02.8	+0.4
ARNR				*e*S	Sg	20 34 23.6	+1.0
TRKR	Terskaya	1.58	320	*e*Pg	Pb	20 34 03.4	-0.2
TRKR				*e*Sg	Sg	20 34 26.1	+1.3
TRKR	Terskaya	1.58	320	*e*PG	Pb	20 34 03.6	0.0
TRKR				*e*S	Sg	20 34 26.4	+1.6
KORR	Kora	1.62	291	*e*Pg	Pb	20 34 04.4	+0.1
KORR				*e*Sg	Sg	20 34 26.3	+0.2
KORR	Kora	1.62	291	*e*PN	Pb	20 34 04.4	+0.1
KORR				*e*S	Sg	20 34 26.3	+0.2
KSMR	Kasumkent	1.74	121	*e*Pg	Pb	20 34 06.4	+0.1
KSMR				*e*Sg	Sg	20 34 31.0	+1.1
KSMR	Kasumkent	1.74	121	*e*PN	Pb	20 34 06.4	+0.1
KSMR				*e*S	Sg	20 34 31.0	+1.1
STDR	Stavd-Durt	1.74	300	*e*Pg	Pb	20 34 06.8	+0.5
STDR				*e*Sg	Sg	20 34 30.4	+0.4
STDR	Stavd-Durt	1.74	300	*e*PN	Pb	20 34 06.8	+0.5
STDR				*e*S	Sg	20 34 30.4	+0.4
TRLG	Trialeti	1.80	238	PN	Pn	20 34 06.3	+0.6
LSNR	Lesken	1.86	295	*e*Pg	Pb	20 34 08.3	0.0
LSNR				*e*Sg	Sg	20 34 33.6	-0.1
LSNR	Lesken	1.86	295	*e*PN	Pb	20 34 08.3	0.0
LSNR				*e*S	Sg	20 34 33.6	-0.1
DIGR	Digorskoe uzhe	1.92	282	*e*Pg	Pn	20 34 08.0	+0.7
DIGR				*e*Sg	Sn	20 34 32.7	+0.8
DIGR	Digorskoe uzhe	1.92	282	*e*PN	Pb	20 34 08.8	-0.7
NCK	Nalchik	2.10	299	*e*PN	Pb	20 34 12.2	-0.3
NCK				*e*S	Sb	20 34 37.7	-1.2
AKH	Akhalkalaki	2.26	242	*e*Pn	Pn	20 34 13.4	+1.4
AKH				*e*Sn	Sb	20 34 41.9	-1.6
AKH	Akhalkalaki	2.26	242	*e*PN	Pn	20 34 13.4	+1.4
AKH				*e*S	Sb	20 34 41.9	-1.6
TKB	Tkibuli	2.33	267	PN	Pb	20 34 15.9	-0.5
KBTC	Kuba-Taba	2.38	304	*i* Pn	Pn	20 34 15.2	+1.6
KBTC				*e*Sn	Sn	20 34 44.0	+0.9
KBTC	Kuba-Taba	2.38	304	*i* PN	Pn	20 34 15.1	+1.6
KBTC				*e*S	Sn	20 34 44.0	+0.9
GNI	Garni	2.59	204	*e*Pn	Pn	20 34 18.1	+1.6
GNI				*e*Sn	Sb	20 34 52.5	-0.5
GNI	Garni	2.59	204	*i* PN	Pb	20 34 19.1	-1.7
GNI				*i* S	Sb	20 34 53.6	+0.7
GNI				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NEUR	Neytrino	2.63	288	*e*Pn	Pn	20 34 10.5	-6.6
NEUR				*e*Sn	Sn	20 34 43.4	-6.0
NEUR	Neytrino	2.63	288	*e*PN	Pn	20 34 10.5	-6.6
KBZ	Khabaz	2.66	298	*e*Pn	Pn	20 34 18.3	+1.0
KBZ				*e*Sn	Sn	20 34 50.6	+0.8
KBZ	Khabaz	2.66	298	*e*PN	Pn	20 34 18.3	+1.0
KBZ				*e*S	Sn	20 34 50.6	+0.8
PYA1	Pyatigorsk	2.70	306	*e*Pn	Pn	20 34 15.3	-2.7
PYA1				*e*Sn	Sn	20 34 49.4	-1.6
PYA1	Pyatigorsk	2.70	306	*e*PN	Pn	20 34 15.3	-2.7
PYA1				*e*S	Sn	20 34 49.4	-1.6
SHA1	Shidzhatmaz	2.82	297	*e*Pn	Pn	20 34 19.4	-0.4
SHA1				*e*Sn	Sb	20 34 57.9	-1.9
SHA1	Shidzhatmaz	2.82	297	*e*PN	Pn	20 34 21.2	+1.4
SHA1				*e*S	Sb	20 34 58.2	-1.6
BEYR	Belyy Ugol+	2.85	303	*e*Pn	Pn	20 34 19.2	-0.7
BEYR				*e*Sn	Sn	20 34 52.0	-2.5
BEYR	Belyy Ugol+	2.85	303	*e*PN	Pn	20 34 19.2	-0.7
KIV0	Kislovodsk Arr	2.90	301	*e*Pn	Pn	20 34 20.1	-0.5
KIV0				*e*Sn	Sn	20 34 53.6	-2.3
KIV	Kislovodsk	2.90	301	*e*Pn	Pn	20 34 20.7	0.0
KIV				*e*Sn	Sn	20 34 54.5	-1.5
KIV	Kislovodsk	2.90	301	*e*PN	Pn	20 34 20.7	0.0
KIV				*e*S	Sn	20 34 54.5	-1.5
ALER	Alexandrovskoy	3.24	315	*e*Pn	Pn	20 34 26.6	+1.3
ALER				*i* Sn	Sn	20 35 04.9	+0.6
ALER	Alexandrovskoy	3.24	315	*e*PN	Pn	20 34 26.6	+1.3
ALER				*i* S	Sn	20 35 04.9	+0.6
GOF	Gofitskoye	3.38	320	*ce*PN	Pg	20 34 37.9	-0.9
GOF				*e*S	Sg	20 35 22.7	+0.1
GRYR	Gornoye	4.01	295	*e*Pn	Pb	20 34 43.6	-1.4
GRYR				*e*Sn	Sb	20 35 36.0	+2.3
GRYR	Gornoye	4.01	295	*e*PN	Pb	20 34 43.6	-1.4
GRYR				*e*S	Sb	20 35 36.0	+2.3
OBN	Obninsk	14.07	337	⇑*e*P	Pn	20 36 54.3	+0.7
OBN				*e*S	Sn	20 39 33.0	+3.0
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,27nm,4.0s						
KLMR	Klimovskoe	18.80	350	*e*P	P	20 37 52.4	-1.4
KLMR				pmax	pmax		
	comp=Z,19nm,1.6s						
BORG	Borgarnes	43.13	325	*i* P	P	20 41 34.9	+0.2

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*IDC **08** 20:33:34.8±2.5, 39°.03N×142°.37E, h66^{km}±22^{km}, mb3.6/10, mbtmp3.9/14, MS3.4/3, Error ellipse: s-maj=23.4km s-min=16.1km az=103.0*
*NEIC **08** 20:33:34.2±2.1, 39°.00N±0°.05×142°.2E±0°.1, h52^{km}±9^{km}, mb4.2/17, Error ellipse: s-maj=13.8km s-min=6.6km az=108.0*
*JMA **08** 20:33:34.1±0.1, 39°.0N±0°.3×142°.1E±0°.7, h49^{km}, MD3.9/39, MV4.2/39, E OFF IWATE PREF*
JMA Felt II J1 at E OFF IWATE PREF .
ISC 08 20:33:33.8±0.8, **39°.02N**±0°.04×**142°.19E**±0°.07, **h49**^{km}±6^{km}, **n90**, σ1^{s}**34**/84, **mb4.1**/21, **MS3.4**/3, **3D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.41	279	*i* P	Pn	20 33 43.9	-0.1
OFUJ				S	Sn	20 33 50.6	-0.6
OFUJ	Ofunato	0.41	279	A	A	20 33 43.9	
	comp=N,8.0nm,0.6s,comp=E,12nm,0.6s						
JKMT	Kesennumamotoy	0.60	250	*i* P	Pn	20 33 45.8	-0.3
JKMT				*e*S	Sn	20 33 54.1	-1.0
JKMT	Kesennumamotoy	0.60	250	A	A	20 33 45.8	
	comp=N,6.0nm,1.1s,comp=E,6.0nm,1.6s						
MIYJ	Miyakonagasawa	0.63	333	*i* P	Pn	20 33 46.4	-0.2
MIYJ				*e*S	Sn	20 33 55.0	-0.8
JMK	Ichinoseki	0.76	265	*i* P	Pn	20 33 48.1	-0.2
JMK				S	Sn	20 33 57.3	-1.5
JMK	Ichinoseki	0.76	265	A	A	20 33 48.1	
	comp=N,12nm,0.4s,comp=E,18nm,0.4s						
JOM	Ohasama	0.83	303	⇓*i*P	Pn	20 33 49.1	-0.1
JIO	Ouri	0.87	230	*i* P	Pn	20 33 49.3	-0.4
JIO				*e*S	Sn	20 34 00.1	-1.2
JTH	Tanohata	0.95	345	*i* P	Pn	20 33 50.7	-0.2
JOFO	Osakifurukawao	1.08	248	A	A	20 33 52.6	
	comp=N,26nm,0.3s,comp=E,32nm,0.5s						
JKZ	Kuzumaki	1.17	326	A	A	20 33 54.0	
	comp=N,10.0nm,0.6s,comp=E,7.0nm,0.2s						
JKEN	Kujiedanarisaw	1.24	343	A	A	20 33 55.1	
	comp=N,8.0nm,0.8s,comp=E,7.0nm,0.4s						
JRG	Rokugo	1.27	288	⇓*i*P	Pn	20 33 55.1	0.0
JOU	Okura	1.36	242	*i* P	Pn	20 33 56.2	-0.3
JOU	Okura	1.36	242	A	A	20 33 56.2	
	comp=N,3.0nm,3.0s,comp=E,4.0nm,3.6s						
JYK	Kaneyama	1.43	266	⇓*i*P	Pn	20 33 57.4	0.0
JANG	Nango	1.45	339	*i* P	Pn	20 33 57.7	+0.1
JMM	Marumori	1.59	224		Pn	20 33 59.0	-0.5
JMM				Sn	Sn	20 34 18.3	-0.6
JMM	Marumori	1.59	224	P	Pn	20 33 59.1	-0.5
JMM	Marumori	1.59	224	*i* P	Pn	20 33 59.0	-0.5
JYS	Shirataka	1.85	245	A	A	20 34 03.6	
	comp=N,4.0nm,3.5s,comp=E,3.0nm,2.1s						
JTM	Tenmabayashi	1.96	334		Pn	20 34 05.2	+0.6
JTM				Sn	Sn	20 34 27.8	-0.3
JTM	Tenmabayashi	1.96	334	P	Pn	20 34 05.4	+0.8
ERM	Erimo	3.08	14		Pn	20 34 20.2	+0.3
ERM	Erimo	3.08	14	P	Pn	20 34 20.5	+0.6
JEM	Erimo	3.08	14	P	Pn	20 34 20.6	+0.7
MJAR	Matsushiro Arr	4.01	233	P	Pn	20 34 34.5	+1.8
	comp=E,10nm,0.6s,baz=38,slow=12,SNR=55						
MAJO	Matsushiro	4.01	233		Pn	20 34 34.4	+1.7
MAJO	Matsushiro	4.01	233	P	Pn	20 34 34.9	+2.2
MJB9	Matsu-Tunnel	4.01	233		Pn	20 34 34.8	+2.0
ASAJ	Asahikawa	5.10	3	P	Pn	20 34 48.1	+0.4
	comp=E,9.3nm,0.4s,baz=204,slow=17,SNR=32						
ASAJ				S	Sn	20 35 45.0	-0.2
	comp=E,9.1nm,0.5s,baz=295,slow=33,SNR=1.9						
JKA	Kamikawa-asahi	5.10	3		Pn	20 34 48.1	+0.5
JGF	Kuroka	5.15	230		Pn	20 34 50.1	+1.8
JGF	Kuroka	5.15	230	P	Pn	20 34 50.8	+2.4
INU	Inuyama	5.52	230		Pn	20 34 54.9	+1.4
INU	Inuyama	5.52	230	P	Pn	20 34 55.6	+2.2
JHJ2	Mitsune	6.20	199	Pn	Pn	20 35 02.5	-0.3
JHJ2	Mitsune	6.20	199	P	Pn	20 35 03.2	+0.4
YSS	Yuzhno-Sakhali	7.94	3	Pn	Pn	20 35 27.0	+0.5
USA0B	Ussuriysk Arra	9.23	307		Pn	20 35 46.3	+2.1
USRK	Ussuriysk Ar.	9.23	307		Pn	20 35 45.5	+1.3
USRK	Ussuriysk Ar.	9.23	307	P	Pn	20 35 46.9	+2.7
	comp=E,4.5nm,0.6s,baz=118,slow=14,SNR=13						
KSRS	Korea Array	11.33	267	P	Pn	20 36 16.8	+3.8
	comp=E,1.0nm,0.6s,baz=80,slow=14,SNR=7.0						
KS19	Wonju Array Si	11.37	267	Pn	Pn	20 36 15.7	+2.3
JCJ	Chichijima	11.89	180	Pn	Pn	20 36 20.5	-0.2
KLR	Kul'dur	12.65	327	P	P	20 36 36.5	-4.5
	comp=E,0.7nm,0.4s,baz=147,slow=8.7,SNR=4.6						
TIA	Tai'an	20.04	270	P	P	20 38 03.7	+1.0
TIA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MA2	Magadan	21.29	12	P	P	20 38 16.5	+0.6
MA2	Magadan	21.29	12	P	P	20 38 16.6	+0.7
	comp=Z,5.4nm,0.7s,baz=223,slow=9.0,SNR=3.7						
	comp=Z,5.4nm,0.7s						
HHC	Hu-ho-hao-te	23.50	284	*e*P	P	20 38 39.0	-0.4
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,34nm,3.5s						
YAK	Yakutsk	24.28	346	P	P	20 38 44.4	-1.8
ENH	Enshi	28.17	262	P	P	20 39 20.6	-1.0
ENH				IAmb	IAmb	20 39 26.6	
	comp=Z,9.6nm,0.8s						
H11N2	WAKE ISLAND Hy	28.71	125	T	T	21 09 50.7	
	baz=318,slow=75,SNR=624						
H11N1	WAKE ISLAND Hy	28.72	125	T	T	21 09 51.6	
	baz=318,slow=75,SNR=488						
H11N3	WAKE ISLAND Hy	28.73	125	T	T	21 09 52.2	
	baz=318,slow=75,SNR=532						
H11S1	WAKE ISLAND Hy	29.49	127	T	T	21 10 48.6	
	baz=318,slow=75,SNR=49						
H11S3	WAKE ISLAND Hy	29.49	127	T	T	21 10 49.1	
	baz=318,slow=75,SNR=59						
H11S2	WAKE ISLAND Hy	29.51	127	T	T	21 10 50.3	
	baz=318,slow=75,SNR=38						
PZH	PanZhiHua	35.95	262	P	P	20 40 32.9	+3.0
ZAA0	Zalesovo Array	41.06	311	P	P	20 41 13.2	+0.9
ZAA0				IAmb	IAmb	20 41 16.1	
	comp=Z,2.3nm,0.6s						
ZALV	Zalesovo Beam	41.06	311	P	P	20 41 13.2	+0.9
ZALV	Zalesovo Beam	41.06	311	P	P	20 41 12.6	+0.3
	comp=Z,2.0nm,0.5s,baz=84,slow=8.5,SNR=8.2						
	comp=Z,2.0nm,0.5s						
O16K	Kokwok River B	42.30	41	P	P	20 41 23.3	+1.0
O16K				IAmb	IAmb	20 41 24.8	
	comp=Z,7.6nm,1.2s						
CMAR	Chiang Mai Arr	42.62	254	P	P	20 41 26.5	+1.1
	comp=Z,0.3nm,0.5s,baz=58,slow=8.0,SNR=1.5						
	comp=Z,0.3nm,0.5s						
MKAR	Makanchi Array	43.61	300	P	P	20 41 32.7	-0.5
	comp=Z,0.9nm,0.5s,baz=87,slow=12,SNR=14						
	comp=Z,0.9nm,0.5s						
MAKZ	Makanchi	43.82	301	P	P	20 41 34.2	-0.7
B20K	Meade River	43.94	26	P	P	20 41 36.7	+1.3
B20K				IAmb	IAmb	20 41 47.1	
	comp=Z,14nm,1.4s						
KURK	Kurchatov	45.22	307	P	P	20 41 44.9	-1.0
KURK				IAmb	IAmb	20 41 46.0	
	comp=Z,2.5nm,0.8s						
KDAK	Kodiak Island	45.22	43	P	P	20 41 45.8	0.0
KURBB	Kurchatov Arra	45.29	307	P	P	20 41 46.1	-0.4
	comp=Z,2.2nm,0.5s,baz=80,slow=8.3,SNR=29						
	comp=Z,2.2nm,0.5s						
D22K	Ayikyak River	45.32	28	P	P	20 41 47.3	+0.8
D22K				IAmb	IAmb	20 41 55.0	
	comp=Z,5.0nm,1.1s						
ILAR	Eielson Array	47.49	33	P	P	20 42 04.1	+0.5
ILAR	Eielson Array	47.49	33	P	P	20 42 01.6	-2.0
	comp=Z,0.7nm,0.6s,baz=265,slow=6.6,SNR=11						
	comp=Z,0.7nm,0.6s						
BVAR	Borovoye Array	49.71	311	P	P	20 42 20.6	-0.2
	comp=Z,0.9nm,0.5s,baz=72,slow=7.5,SNR=7.7						
BVAR				LR	LR	21 03 02.1	
	comp=Z,40nm,18.7s,baz=126,slow=36						
	comp=Z,0.9nm,0.5s						
KSH	Kashi	50.18	293	P	P	20 42 28.8	+4.1
KSH				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARSB	Arslanbob	51.63	296	P	P	20 42 35.9	+0.3
ARSB				IAmb	IAmb	20 42 40.3	
	comp=Z,2.1nm,0.8s						
KK31	Karatay Array	52.68	299	P	P	20 42 43.2	0.0
KKAR	Karatay Array	52.68	299	P	P	20 42 42.9	-0.4
ARTI	Arti	55.40	318	P	P	20 43 02.5	-0.3
ARTI	Arti	55.40	318	LR	LR	21 10 12.8	
	comp=Z,30nm,19.2s,baz=63,slow=40						
AB31	Akbulak array	57.14	309		P	20 43 14.3	-1.0
AB31				IAmb	IAmb	20 43 15.4	
	comp=Z,1.4nm,0.7s						
ABKAR	Akbulak array	57.14	309		P	20 43 14.3	-1.0
ABKAR				IAmb	IAmb	20 43 15.4	
	comp=Z,1.4nm,0.7s						
WB0	Warramunga Arr	58.93	189	P	P	20 43 27.3	-0.7
WR8	Warramunga Arr	59.11	188	P	P	20 43 28.6	-0.6
WRA	Warramunga Arr	59.11	189	P	P	20 43 28.2	-1.1
	comp=Z,0.4nm,0.3s,baz=7.8,slow=7.7,SNR=11						
	comp=Z,0.4nm,0.3s						
BELG	Belogornoye	62.77	317	LR	LR	21 13 24.5	
	comp=Z,26nm,18.3s,baz=160,slow=38						
ASAR	Alice Springs	62.84	189	P	P	20 43 54.9	+0.4
	comp=Z,0.3nm,0.6s,baz=13,slow=6.3,SNR=2.1						
	comp=Z,0.3nm,0.6s						
FINES	FINESS Array B	67.35	332	P	P	20 44 23.2	-0.1
	comp=Z,2.3nm,1.1s,baz=49,slow=5.8,SNR=3.6						
	comp=Z,2.3nm,1.1s						
CLL	Collm	79.68	330	*i* P	P	20 45 36.0	0.0
CLL				*e*sP	sP	20 45 56.0	+0.6
CLL				*e*PP	PP	20 48 37.0	+0.4

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*IDC **08** 20:34:48.4±0.7, 5°.23N×126°.04E, h0^{km}, mb4.0/13, mbtmp4.0/13, MS3.5/6, Error ellipse: s-maj=42.2km s-min=14.3km az=73.0*
*NEIC **08** 20:34:54.1±1.4, 5°.30N±0°.06×126°.42E±0°.09, h35^{km}±2^{km}, mb4.4/21, Error ellipse: s-maj=15.7km s-min=9.5km az=250.0*
*DJA **08** 20:34:59.4±0.6, 5°N±3°×12°6E±°, h11^{km}±5^{km}, M4.4/13, mB4.9/2, mb4.5/10, MLv4.4/13, Mw(mB)4.2/2*
ISC 08 20:34:53.7±0.5, **5°.27N**±0°.05×**126°.43E**±0°.08, **h35**^{km}, **n68**, σ1^{s}**24**/62, **mb4.2**/24, **MS4.3**/3, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.81	210	P	Pn	20 35 23.8	+1.4
DAV	Davao City (W)	1.98	335		Pn	20 35 23.3	-1.5
DAV	Davao City (W)	1.98	335	Pn	Pn	20 35 22.0	-2.8
	41nm,0.3s,baz=313,slow=4.6,SNR=3.9						
TNTI	Ternate	4.56	168		Pn	20 36 01.8	+1.5
TNTI	Ternate	4.56	168	P	Pn	20 36 03.7	+3.3
KMSI	Cibinong	5.26	208	P	Pn	20 36 10.6	+0.6
MRSI	Marisa	6.53	223	P	Pn	20 36 30.2	+2.8
	0.2nm622nm62nm,0.7s						
MRSI				S	Sn	20 37 40.4	-0.4
	0.2nm622nm62nm,0.7s						
TOLI2	Tolitoli	6.99	234		Pn	20 36 33.4	-0.2
LUWI	Luwuk	7.25	210		Pn	20 36 37.8	+0.5
LUWI	Luwuk	7.25	210	P	Pn	20 36 38.5	+1.2
	0.3nm1µm60nm,0.8s						
LUWI				S	Sn	20 37 56.0	-2.5
	0.3nm1µm60nm,0.8s						
SANI	Sanana	7.28	183	P	Pn	20 36 38.6	+0.9
	0.2nm40nm,0.9s						
SANI				S	Sn	20 37 56.7	-2.5
	0.2nm40nm,0.9s						
APSI	Ampana	7.77	218	P	Pn	20 36 46.2	+1.7
	0.2nm36nm,0.8s						
MYLDM	Lahad Datu	7.89	270		Pn	20 36 47.2	+1.1
MPSI	Mapaga	8.15	233	P	Pn	20 36 51.3	+1.6
	0.1nm8.3nm,0.8s						
NLAI	Namlea	8.48	175	P	Pn	20 36 55.6	+1.5
FAKI	Fak Fak	10.00	144	Pn	Pn	20 37 15.5	+0.4
KAPI	Kappang	12.20	213	LR	LR	20 42 51.6	
	comp=Z,100nm,18.6s,baz=58,slow=40						
JAY	Jayapura	16.23	118	LR	LR	20 43 47.3	
	comp=Z,89nm,21.8s,baz=356,slow=33						
KSM	Kuching	16.52	257	P	P	20 38 46.4	+1.1
JAGI	Jajag, Banyuwa	18.33	222	P	Pn	20 39 06.1	+0.7
JAGI				IAmb	IAmb	20 39 14.7	
	comp=Z,27nm,1.1s						
MTN	Manton Dam	18.59	165	P	P	20 39 06.7	-1.4
MTN				IAmb	IAmb	20 39 27.3	
	comp=Z,47nm,1.4s						
GUMO	Guam	19.97	64	LR	LR	20 45 54.4	
	comp=Z,50nm,21.2s,baz=202,slow=33						
KNRA	Kununurra	20.94	174	P	P	20 39 33.2	-0.5
KNRA				IAmb	IAmb	20 39 44.4	
	comp=Z,33nm,1.4s						
FITZ	Fitzroy Crossi	23.23	182	P	P	20 39 56.7	-1.3
WB0	Warramunga Arr	26.08	163	P	P	20 40 23.9	-0.5
WB0				IAmb	IAmb	20 40 42.8	
	comp=Z,8.3nm,0.8s						
WRA	Warramunga Arr	26.23	163	P	P	20 40 25.8	+0.1
	comp=Z,1.6nm,0.6s,baz=339,slow=10,SNR=14						

	comp=Z,1.6nm,0.6s						
AS31	Alice Springs	29.67	166	P	P	20 40 56.5	+0.1
ASAR	Alice Springs	29.67	166	P	P	20 40 56.0	-0.4
ASAR	Alice Springs	29.67	166	P	P	20 40 56.2	-0.2
	comp=Z,0.8nm,0.8s,baz=336,slow=7.0,SNR=11						
	comp=Z,0.8nm,0.8s						
KSRS	Korea Array	32.06	2	P	P	20 41 18.1	+0.8
	comp=Z,1.1nm,0.7s,baz=188,slow=10,SNR=7.9						
	comp=Z,1.1nm,0.7s						
MJAR	Matsushiro Arr	32.95	18	LR	LR	20 52 56.0	
	comp=Z,22nm,20.9s,baz=178,slow=33						
LZH	Lanzhou	37.03	329	*e*P	P	20 41 51.7	-8.9
LZH				pP	pP	20 42 01.3	-8.3
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
STKA	Stephens Creek	39.67	160	P	P	20 42 22.3	-0.2
STKA	Stephens Creek	39.67	160	P	P	20 42 24.4	+1.9
	comp=Z,2.7nm,0.9s,baz=329,slow=8.1,SNR=3.7						
	comp=Z,2.7nm,0.9s						
GTA	Gaotai	41.63	329	*e*P	P	20 42 39.7	+0.8
GTA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
H11N1	WAKE ISLAND Hy	41.90	66	T	T	21 27 08.5	
	baz=255,slow=75,SNR=12						
H11N2	WAKE ISLAND Hy	41.91	66	T	T	21 27 09.7	
	baz=255,slow=75,SNR=13						
H11N3	WAKE ISLAND Hy	41.92	66	T	T	21 27 11.1	
	baz=255,slow=75,SNR=15						
ARMA	Armidale	42.91	147	P	P	20 42 48.7	-0.6
EVN	Everest	43.85	305	P	P	20 42 58.2	+0.6
EVN				IAmb	IAmb	20 42 58.8	
	comp=Z,4.4nm,0.7s						
KLR	Kul'dur	44.04	5	P	P	20 42 59.2	+1.2
	comp=Z,0.8nm,0.5s,baz=295,slow=1.9,SNR=3.7						
	comp=Z,0.8nm,0.5s						
SONM	Songino Array	45.75	341	P	P	20 43 12.8	+0.9
SONM	Songino Array	45.75	341	P	P	20 43 11.2	-0.6
	comp=Z,0.8nm,0.6s,baz=158,slow=9.6,SNR=7.0						
	comp=Z,0.8nm,0.6s						
PEA0B	Petropavlovsk-	54.13	23	P	P	20 44 16.2	+1.0
PETK	Petropavlovsk-	54.13	23	P	P	20 44 16.2	+1.0
	comp=Z,1.1nm,0.7s,baz=212,slow=6.3,SNR=4.1						
	comp=Z,1.1nm,0.7s						
MKAR	Makanchi Array	56.13	325	P	P	20 44 29.4	-0.5
	comp=Z,1.8nm,0.6s,baz=120,slow=8.0,SNR=19						
MKAR				PcP	PcP	20 45 27.1	-0.4
	comp=Z,1.1nm,0.8s,baz=108,slow=4.0,SNR=3.8						
	comp=Z,1.8nm,0.6s						
MAKZ	Makanchi	56.32	325	P	P	20 44 30.5	-0.7
MAKZ				IAmb	IAmb	20 44 32.9	
	comp=Z,2.4nm,0.9s						
YAK	Yakutsk	56.69	2	P	P	20 44 33.7	+0.2
ZALV	Zalesovo Beam	59.09	333	P	P	20 44 50.6	+0.1
ZALV	Zalesovo Beam	59.09	333	P	P	20 44 48.7	-1.8
	comp=Z,0.6nm,0.4s,baz=106,slow=11,SNR=3.9						
	comp=Z,0.6nm,0.4s						
KURBB	Kurchatov Arra	60.29	327	P	P	20 44 56.6	-2.2
	comp=Z,1.9nm,0.6s,baz=124,slow=6.9,SNR=20						
	comp=Z,1.9nm,0.6s						
KURK	Kurchatov	60.29	327	P	P	20 44 58.0	-0.8
KK31	Karatay Array	61.91	317	P	P	20 45 09.2	-0.8
KK31				IAmb	IAmb	20 45 10.6	
	comp=Z,1.7nm,0.8s						
KKAR	Karatay Array	61.91	317	P	P	20 45 09.6	-0.4
BVAR	Borovoye Array	65.88	327	P	P	20 45 35.1	-0.8
	comp=Z,1.9nm,0.8s,baz=127,slow=9.8,SNR=7.6						
	comp=Z,1.9nm,0.8s						
BRVK	Borovoye	65.95	327	P	P	20 45 35.5	-0.8
BRVK				IAmb	IAmb	20 45 36.3	
	comp=Z,4.7nm,1.0s						
ABKAR	Akbulak array	70.78	320	P	P	20 46 05.8	-0.9
ABKAR	Akbulak array	70.78	320	P	P	20 46 05.7	-0.9
ABKAR				IAmb	IAmb	20 46 06.2	
	comp=Z,1.4nm,0.7s						
IMAR	Indian Mountai	81.07	24	P	P	20 47 04.9	-0.1
B21K	Ikpikpuk River	81.25	20	P	P	20 47 05.0	-0.8
B21K				IAmb	IAmb	20 47 31.5	
	comp=Z,6.2nm,1.3s						
CAST	Castle Rocks	81.50	27	P	P	20 47 07.0	-0.4
CAST				IAmb	IAmb	20 47 28.3	
	comp=Z,2.6nm,1.2s						
MLY	Manley	82.22	25	P	P	20 47 11.0	-0.2
MLY				IAmb	IAmb	20 47 14.1	
	comp=Z,3.1nm,1.2s						
ILAR	Eielson Array	83.85	25	P	P	20 47 19.4	-0.1
	comp=Z,0.2nm,0.5s,baz=255,slow=4.6,SNR=4.1						
	comp=Z,0.2nm,0.5s						
BMAR	Burnt Mountain	84.79	23	P	P	20 47 25.0	+0.7
ARCES	ARCESS Array B	88.91	340	P	P	20 47 43.5	-0.8
	comp=Z,2µm,1.0s,baz=40,slow=9.6,SNR=85						
FINES	FINESS Array B	90.34	332	P	P	20 47 50.0	-1.1
	comp=Z,1.1nm,0.7s,baz=49,slow=5.8,SNR=6.5						
	comp=Z,1.1nm,0.7s						
BBB	Bella Bella	95.25	37	LR	LR	21 26 29.2	
	comp=Z,119nm,20.2s,baz=215,slow=32						
YKA	Yellowknife Ar	98.23	24	LR	LR	21 35 01.5	
	comp=Z,103nm,20.1s,baz=218,slow=37						

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*IDC **08** 20:38:57.4±2.2, 18°.78N×145°.68E, h223^{km}±22^{km}, mb3.2/7, mbtmp3.7/9, Error ellipse: s-maj=32.4km s-min=14.8km az=92.0*

*NEIC **08** 20:38:57.3±0.7, 18°.72N±0°.09×145°.8E±0°.2, h213^{km}±9^{km}, mb4.0/16, Error ellipse: s-maj=26.5km s-min=13.2km az=91.0*

ISC 08 20:38:55.6±0.7**, 18°.82N**±0°.08×**145°.7E**±0°.2**, h200**^{km}**, n30, σ1^{s}.20**/30**, mb3.7**/14**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.26	189	Pn	Pn	20 40 14.3	+0.9
GUMO	Guam	5.26	189	P	Pn	20 40 16.2	+2.8
	28nm,0.6s,baz=18,slow=19,SNR=1.6						
GUMO				S	Sn	20 41 15.8	+0.9
	22nm,0.4s,baz=169,slow=20,SNR=1.5						
MJAR	Matsushiro Arr	18.84	341	P	P	20 43 02.8	+2.3
	0.8nm,0.7s,baz=163,slow=9.7,SNR=1.6						
MAJO	Matsushiro	18.85	341	P	P	20 43 02.4	+1.8
MAJO				IAmb	IAmb	20 43 08.9	
	comp=Z,13nm,1.4s						
MTN	Manton Dam	34.59	206	P	P	20 45 25.0	-0.7
KNRA	Kununurra	38.12	207	P	P	20 45 54.9	-0.7
WB0	Warramunga Arr	39.92	197	P	P	20 46 09.1	-1.4
WB0				IAmb	IAmb	20 46 24.4	
	comp=Z,10nm,1.4s						
WRA	Warramunga Arr	40.10	197	P	P	20 46 10.1	-1.9
WRA	Warramunga Arr	40.10	197	P	P	20 46 11.5	-0.5
	comp=Z,1.1nm,0.5s,baz=7.0,slow=8.6,SNR=18						
	comp=Z,1.1nm,0.5s						
FITZ	Fitzroy Crossi	41.65	209	P	P	20 46 24.1	-0.5
AS31	Alice Springs	43.77	196	P	P	20 46 40.8	-0.9
ASAR	Alice Springs	43.77	196	P	P	20 46 40.0	-1.6
ASAR	Alice Springs	43.77	196	P	P	20 46 41.0	-0.7
	comp=Z,0.5nm,0.7s,baz=11,slow=7.5,SNR=9.5						
	comp=Z,0.5nm,0.7s						
S12K	Black Hills	53.65	34	P	P	20 47 56.4	0.0
O15K	Ungalikthiuk R	56.06	30	P	P	20 48 14.3	+0.7
J16K	Anvik River	57.35	26	P	P	20 48 23.0	+0.4
J16K				IAmb	IAmb	20 48 37.8	
	comp=Z,3.5nm,1.1s						
C19K	Lookout Ridge	60.29	20	P	P	20 48 43.6	+0.8
C19K				IAmb	IAmb	20 48 45.5	
	comp=Z,4.6nm,1.2s						
SKT	Skwentna	60.83	29	P	P	20 48 46.5	-0.1
SKT				IAmb	IAmb	20 48 47.5	
	comp=Z,3.4nm,1.2s						
CAST	Castle Rocks	60.98	27	P	P	20 48 48.0	+0.4
CAST				IAmb	IAmb	20 48 48.9	
	comp=Z,1.4nm,0.6s						
D20K	Etivluk River	61.09	21	P	P	20 48 48.8	+0.6
D20K				IAmb	IAmb	20 49 02.1	
	comp=Z,5.8nm,1.4s						
KURK	Kurchatov	61.18	318	P	P	20 48 47.8	-1.2
KURBB	Kurchatov Arra	61.23	318	P	P	20 48 48.5	-0.9
	comp=Z,0.3nm,0.5s,baz=94,slow=7.4,SNR=6.4						
	comp=Z,0.3nm,0.5s						
MLY	Manley	62.01	25	P	P	20 48 54.6	+0.2
MLY				IAmb	IAmb	20 48 55.7	
	comp=Z,0.8nm,0.6s						
ILAR	Eielson Array	63.53	26	P	P	20 49 03.4	-1.0
	comp=Z,0.5nm,0.7s,baz=264,slow=4.6,SNR=6.3						
	comp=Z,0.5nm,0.7s						
TKNZ	Takaka Hill	64.71	157	P	P	20 49 11.1	-1.2
BMAR	Burnt Mountain	65.00	24	P	P	20 49 14.7	+0.7
BVAR	Borovoye Array	66.38	320	P	P	20 49 22.6	-0.4
	comp=Z,0.7nm,0.6s,baz=108,slow=9.5,SNR=5.4						
	comp=Z,0.7nm,0.6s						
ABKAR	Akbulak array	73.25	317	P	P	20 50 03.2	-1.7
NVAR	Mina Array Bea	83.06	52	P	P	20 50 59.5	+0.2
	comp=Z,1.3nm,0.7s,baz=268,slow=5.7,SNR=6.4						
	comp=Z,1.3nm,0.7s						
FINES	FINESS Array B	86.78	335	P	P	20 51 14.4	-2.6
	comp=Z,0.2nm,0.5s,baz=90,slow=4.2,SNR=1.1						
	comp=Z,0.2nm,0.5s						

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*NEIC **08** 21:01:06.8±1.0, 35°.22N±0°.01×97°.77W±0°.02, h5^{km}±1^{km}, ML2.0/5, ML1.8/36, Error ellipse: s-maj=2.2km s-min=1.8km az=63.0*

NEIC 08 21:01:07.2±1.0**, 35°.24N**±0°.01×**97°.76W**±0°.02**, h6**^{km}±2^{km}**, Error ellipse: s-maj=2.1km s-min=1.8km az=124.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNO	Franklin	0.29	87		Pg	21 01 12.9	-0.1
FNO					Sg	21 01 16.1	-0.8
BCOK	Bluff Creek, N	0.43	16		Pg	21 01 15.8	+0.2
BCOK					Sg	21 01 22.0	+0.7
OK029	Liberty Lake	0.61	24	Pg	Pg	21 01 18.5	-0.4
OK029					Sg	21 01 27.3	+0.5
OK029				IAML		21 01 27.6	
	46nm,0.4s						
X34A	Smith Ranch, M	0.64	185		Pg	21 01 20.0	+0.5
X34A				IAML		21 01 30.6	
	comp=N,29nm,0.4s						
WMOK	Wichita Mounta	0.98	239		Pg	21 01 25.2	-0.8
WMOK					Sg	21 01 38.0	-0.6
OK052	Battle Ridge R	1.08	46		Pg	21 01 27.1	-0.9
OK052					Sg	21 01 41.8	-0.3
DEOK	Depew	1.19	59	Pg	Pg	21 01 29.4	-0.7
CROK	Carrier	1.27	352		Pn	21 01 30.4	-1.2
CROK				IAML		21 02 00.0	
	comp=E,30nm,0.3s						
WTFS	Witchita Falls	1.58	202		Pn	21 01 35.6	-0.2
GC02	Grant County #	1.61	357		Pn	21 01 35.5	-0.7
T35A	Sooner Cattle	1.95	31	Pn	Pn	21 01 40.9	-0.1

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*IDC **08** 21:09:11.8±0.8, 16°.96S×74°.68W, h0^{km}, mb4.0/7, mbtmp4.0/11, ML3.7/4, Error ellipse: s-maj=26.7km s-min=19.1km az=72.0*

*NEIC **08** 21:09:15.1±2.4, 17°.26S±0°.10×74°.5W±0°.1, h10^{km}±2^{km}, mb4.4/6, Error ellipse: s-maj=24.0km s-min=16.3km az=277.0*

ISC 08 21:09:16.5±0.7**, 17°.09S**±0°.07×**74°.7W**±0°.1**, h35**^{km}**, n36, σ2^{s}.13**/33**, mb4.1**/7**, Off coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB18	Visviri	4.99	96		Pn	21 10 30.0	+0.5
PB16	IPOC Station P	5.08	105		Pn	21 10 30.0	-0.8
PB11	IPOC Station P	5.46	120		Pn	21 10 32.6	-3.0
TA01	Diego Aracena	5.49	130	Pn	Pn	21 10 32.7	-3.1
NNA	Nana	5.49	337	Pn	Pn	21 10 32.4	-3.5
	2.2nm,0.3s,baz=153,slow=9.0,SNR=2.2						
NNA				Sn	Sn	21 11 32.3	-5.5
	6.6nm,0.3s,baz=265,slow=9.9,SNR=3.7						
	5.2nm,0.4s						
GO01	Chusmiza	5.81	117		Pn	21 10 38.8	-1.9
PB08	IPOC Station P	6.06	121		Pn	21 10 41.6	-2.4
PB01	IPOC Station P	6.29	129		Pn	21 10 44.7	-2.3
LPAZ	La Paz	6.33	84		Pn	21 10 46.8	-1.2
LPAZ	La Paz	6.33	84	Pn	Pn	21 10 47.3	-0.6
	0.8nm,0.3s,baz=305,slow=7.7,SNR=17						
	2.0nm,0.3s						
PB03	IPOC Station P	6.78	138		Pn	21 10 52.1	-1.6
PB09	IPOC Station P	6.95	133	Pn	Pn	21 10 54.6	-1.4
PB05	IPOC Station P	7.11	144		Pn	21 10 55.9	-2.4
PB10	IPOC Station P	7.47	149	Pn	Pn	21 11 00.9	-2.2
PB14	IPOC Station P	8.50	153	Pn	Pn	21 11 15.1	-2.3
AC05	El Transito	12.37	162		Pn	21 12 07.5	-2.8
SIV	San Ignacio	13.10	87	Pn	Pn	21 12 17.5	-2.7
	0.1nm,0.3s,baz=256,slow=5.7,SNR=8.2						
	1.5nm,0.5s						
CFA	Coronel Fontan	15.59	159	Pn	P	21 12 55.6	-2.0
	0.3nm,0.3s,baz=335,slow=11,SNR=17						
	5.1nm,0.7s						
H03N1	Juan Fernandez	16.72	192	T	T	21 30 44.5	
	baz=16,slow=74,SNR=8.3						
H03N2	Juan Fernandez	16.72	192	T	T	21 30 42.3	
	baz=16,slow=74,SNR=7.2						
H03N3	Juan Fernandez	16.74	192	T	T	21 30 44.5	
	baz=16,slow=74,SNR=7.7						
RUSC	La Rusia	22.89	4	P	P	21 14 21.7	+3.8
PLCA	Paso Flores	23.83	172	P	P	21 14 27.7	+1.3
PLCA				IAmb	IAmb	21 14 40.0	
	comp=Z,11nm,1.4s						
PLCA	Paso Flores	23.83	172	P	P	21 14 28.2	+1.7
	comp=Z,2.8nm,0.7s,baz=347,slow=11,SNR=6.1						
	comp=Z,2.8nm,0.7s						
BDFB	Brasilia	25.62	91	P	P	21 14 44.0	+0.9
	comp=Z,1.5nm,0.4s,baz=297,slow=5.2,SNR=3.1						
	comp=Z,1.5nm,0.4s						
TXAR	Lajitas Array	53.98	328	P	P	21 18 37.0	-0.3
	comp=Z,0.3nm,0.7s,baz=163,slow=8.3,SNR=4.1						
	comp=Z,0.3nm,0.7s						
BELA	Belgrano 2	63.88	171	P	P	21 19 47.2	+1.9
SNAA	Sanae	68.20	161	P	P	21 20 12.9	-0.2
SNAA				IAmb	IAmb	21 20 31.6	
	comp=Z,6.6nm,1.5s						
SNAA	Sanae	68.20	161	P	P	21 20 14.4	+1.2
	comp=Z,1.3nm,0.7s,baz=263,slow=8.7,SNR=10						
	comp=Z,1.3nm,0.7s						
SCHQ	Schefferville	71.95	5	P	P	21 20 36.4	+0.2
	comp=Z,1.6nm,0.6s,baz=192,slow=14,SNR=3.6						
	comp=Z,1.6nm,0.6s						
QSPA	South Pole Qui	73.07	180	P	P	21 20 44.3	+1.3
QSPA				IAmb	IAmb	21 20 45.5	
	comp=Z,4.8nm,1.3s						
QSPA	South Pole Qui	73.07	180	P	P	21 20 44.2	+1.2
	comp=Z,1.1nm,0.8s,baz=334,slow=0.9,SNR=15						
	comp=Z,1.1nm,0.8s						
TORD	Torodi Ar. Bea	81.17	73	P	P	21 21 28.5	-0.7
TORD				IAmb	IAmb	21 21 32.1	
	comp=Z,2.5nm,0.9s						
TORD	Torodi Ar. Bea	81.17	73	P	P	21 21 29.2	-0.1
	comp=Z,1.2nm,0.4s,baz=224,slow=4.0,SNR=2.0						
	comp=Z,1.2nm,0.4s						
WRA	Warramunga Arr	133.45	219	PKP	PKPdf	21 28 30.8	+0.7
	comp=Z,0.5nm,0.9s,baz=135,slow=1.8,SNR=5.3						
KSRS	Korea Array	151.58	320	PKPbc	PKiKP	21 29 08.7	+0.9
	comp=Z,0.9nm,0.7s,baz=45,slow=3.7,SNR=5.7						

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*TIR **08** 21:18:59.8, 40°.50N×20°.77E, h8^{km}±1^{km}, Ml2.5/6*

*ATH **08** 21:18:59.7, 40°.54N×20°.79E, h9^{km}±1^{km}, ML2.1/6, Manual Solution by N.Liadopoulou First location: 2019/06/08 21:20:04, This location: 2019/06/10 09:12:37 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

*SKO **08** 21:19:01.9, 40°.61N×20°.84E, h30^{km}, ML2.1*

ISC 08 21:19:00.4±0.9**, 40°.52N**±0°.02×**20°.81E**±0°.03**, h7**^{km}±8^{km}**, n24, σ0^{s}.81**/39**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.10	349	Pg	Pg	21 19 02.5	-0.3
KBN				Sg	Sg	21 19 04.5	0.0
KBN				AML	AML	21 19 05.4	
	7.7nm,0.1s						
NEST	Nestorio	0.21	120	Pg	Pg	21 19 04.8	+0.2
NEST				Sg	Sg	21 19 08.4	+1.0
NEST				AML	AML	21 19 08.9	
	3.8nm,0.2s						
NEST				AML	AML	21 19 09.1	
	2.4nm,0.3s						
NEST	Nestorio	0.21	120	P	Pg	21 19 04.8	+0.2
NEST				S	Sg	21 19 08.1	+0.7
PENT	Pentalofos	0.41	142	P	Pg	21 19 08.3	0.0
PENT				S	Sb	21 19 15.2	-1.2
OHR	Ohrid	0.59	359	*i* Pg	Pb	21 19 12.3	-0.7
OHR				*i* Sg	Sb	21 19 22.2	+0.5
OHR				*e*Lg	Lg	21 19 22.4	
	comp=E,196nm,0.6s						
OHR				*e*Lg	Lg	21 19 22.4	
	comp=N,72nm,0.6s						
KPRO	Kipourio	0.70	143	P	Pg	21 19 13.1	-0.8
KPRO				S	Sg	21 19 23.6	+0.5
KZN	Kozani	0.76	106	P	Pg	21 19 14.9	-0.1
KZN				S	Sg	21 19 25.4	+0.4
JAN	Janina	0.86	178	P	Pg	21 19 16.7	-0.3
SRN	Sarande	0.89	224	Pg	Pg	21 19 16.9	-0.6
SRN				Sg	Sb	21 19 29.8	-0.4
SRN				AML	AML	21 19 31.8	
	comp=N,0.4nm,0.6s						
IGT	Igoumenitsa	1.05	201	Pg	Pg	21 19 20.0	-0.6
IGT				Sg	Sn	21 19 36.9	+0.4
IGT	Igoumenitsa	1.05	201	*i* Pg	Pn	21 19 23.6	+2.0
IGT				*i* Sg	Sn	21 19 37.7	+1.2
IGT	Igoumenitsa	1.05	201	P	Pg	21 19 19.9	-0.6
IGT				S	Sg	21 19 34.5	+0.2
KEK	Kerkira	1.12	224	P	Pb	21 19 21.6	-0.5
PRGA	Parga	1.27	195	P	Pn	21 19 23.9	-0.6
THL	Klokotos Trika	1.33	136	P	Pn	21 19 25.0	-0.3
TYRN	Tyrnavos	1.36	126	P	Pn	21 19 25.1	-0.5
VAY	Valandovo	1.55	58	*i* Pg	Pb	21 19 29.1	-0.4
VAY				*i* Sg	Sg	21 19 50.9	+0.7
VAY				*e*Lg	Lg	21 19 52.3	
	comp=N,21nm,0.8s						
VAY				*e*Lg	Lg	21 19 54.3	
	comp=E,11nm,0.4s						
PUK	Puka	1.67	336	Pn	Pg	21 19 31.8	-0.6
PUK				Sn	Sg	21 19 55.3	+1.2
PUK				AML	AML	21 19 58.8	
	comp=E,0.2nm,0.9s						
KNT	Kendrikon	1.71	67	*i* Pn	Pn	21 19 30.6	+0.1
LKD2	Lefkada island	1.73	184	Pn	Pg	21 19 33.1	-0.5
LKD2				Sn	Sg	21 19 58.1	+2.0
LKD2				AML	AML	21 20 06.6	
	comp=E,0.2nm,0.6s						
BCI	Bajram Curri	1.93	343	Pn	Pg	21 19 37.5	+0.2
BCI				Sn	Sg	21 20 03.6	+1.3
BCI				AML	AML	21 20 04.9	
	comp=E,0.2nm,0.7s						
DRME	Dracevica, Mon	2.07	324	Pn	Pb	21 19 36.9	-1.3
SRS	Serrai	2.19	73	*i* Pn	Pn	21 19 36.9	-0.3
BARS	Barje	2.41	18	*i* Pn	Pn	21 19 40.4	+0.1

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*BJI **08** 21:36:53.4, 5°.27S×154°.70E, h150^{km}, mB4.8/16, mb4.9/64*

*IDC **08** 21:36:53.4±0.6, 5°.72S×154°.57E, h143^{km}±5^{km}, mb4.3/22, mbtmp4.7/26, MS3.6/8, Error ellipse: s-maj=14.5km s-min=9.4km az=91.0*

*NEIC **08** 21:36:55.0±1.3, 5°.65S±0°.08×154°.49E±0°.08, h150^{km}±6^{km}, mb5.0/82, Error ellipse: s-maj=13.3km s-min=10.3km az=222.0*

*MOS **08** 21:36:54.1±0.7, 5°.61S×154°.46E, h162^{km}, mb5.0/24, Error ellipse: s-maj=9.8km s-min=7.0km az=105.7*

*GCMT **08** 21:36:54.0±0.3, 5°.72S±0°.02×154°.42E±0°.02, h152^{km}±3^{km}, MW5.0/97, Moment Tensor Solution. s20,c22; s97,c135; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.87±.10; $M_{\theta\theta}$1.95±.12; $M_{\phi\phi}$-0.07±.12; $M_{r\theta}$-1.44±.10; $M_{\theta\phi}$-2.20±.14; $M_{\phi r}$-0.88±.09; Best double couple: $M_0$3.36100×10^{16} NP1:ϕ_s336.00000°,δ50.00000°,λ-34.00000°. NP2: ϕ_s90.00000°,δ65.00000°,λ-135.00000°. Principal axes: T 3.4710, Plg9.0000°, Azm210.0000°; N -0.2180, Plg40.0000°, Azm113.0000°; P -3.2510, Plg49.0000°, Azm310.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **08** 21:36:55.4±0.8, 6°S±5°×15°5E±°, h168^{km}±8^{km}, M4.8/25, mb5.1/25, mB5.5/14, MLv4.2/1, Mw(mB)5.0/14*

ISC 08 21:36:54.3±0.4**, 5°.65S**±0°.04×**154°.53E**±0°.05**, h151**^{km}±3^{km}**, h152**^{km}**:pP-P, n512, σ0^{s}.98**/530**, mb4.9**/103**, 5C-6D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	2.76	302		Pn	21 37 38.3	-0.5
RABL				Sn	Sn	21 38 13.1	-0.1
HNR	Honiara	6.56	125	Pn	Pn	21 38 29.6	+1.1
HNR	Honiara	6.56	125	P	Pn	21 38 27.7	-0.8
	100nm,0.8s,baz=17,slow=1.8,SNR=3.6						
HNR				S	Sn	21 39 41.8	-0.5
	295nm,0.9s,baz=118,slow=3.2,SNR=4.2						
HNR				LR	LR	21 40 41.2	
	comp=Z,246nm,20.3s,baz=326,slow=35						
HNR	Honiara	6.56	125	P	Pn	21 38 29.6	+1.1
MANU	Manus Island	7.99	296		Pn	21 38 47.1	-0.6
PMG	Port Moresby	8.20	242		Pn	21 38 51.5	+1.0
PMG	Port Moresby	8.20	242	P	Pn	21 38 49.5	-0.9
	69nm,1.1s,baz=16,slow=4.7,SNR=41						
PMG				S	Sn	21 40 24.6	+2.7
	99nm,0.6s,baz=332,slow=20,SNR=7.5						
PMG				LR	LR	21 42 44.8	
	comp=Z,95nm,18.2s,baz=36,slow=43						
PMG	Port Moresby	8.20	242	P	Pn	21 38 50.1	-0.4
PMG	Port Moresby	8.20	242	S	Sn	21 40 25.8	+4.0
PMG	Port Moresby	8.20	242	P	Pn	21 38 49.3	-1.2
PMG	Port Moresby	8.20	242	S	Sn	21 40 25.9	+4.1
PMG	Port Moresby	8.20	242	*i* P	Pn	21 38 51.6	+1.1
PATS	Pohnpei	12.97	17	Pn	Pn	21 39 52.4	-0.8
COEN	Coen	13.89	233		P	21 40 07.2	-1.1
COEN	Coen	13.89	233	P	P	21 40 06.6	-1.7
JAY	Jayapura	14.13	282	P	Pn	21 40 07.0	-1.0
	13nm,0.6s,baz=179,slow=21,SNR=23						
JAY	Jayapura	14.13	282	P	Pn	21 40 08.0	0.0
JAY	Jayapura	14.13	282	P	Pn	21 40 07.0	-1.0
TV1H	Townsville Har	15.48	208	P	P	21 40 27.0	+1.1
SMPI	Sarmi	16.19	282	P	P	21 40 33.9	+0.1
	2µm235nm,1.3s						
CTAO	Charters Tower	16.45	209		Pn	21 40 37.9	+1.3
CTAO	Charters Tower	16.45	209	P	Pn	21 40 38.7	+2.1
CTAO	Charters Tower	16.45	209	P	Pn	21 40 37.9	+1.3
BAKI	Biak	18.91	283	P	Pn	21 41 04.9	-1.0
	136nm,1.0s						
EIDS	Eidsvold	19.88	189		P	21 41 14.9	+0.9
EIDS	Eidsvold	19.88	189	P	P	21 41 15.3	+1.3
EIDS	Eidsvold	19.88	189	S	Sn	21 44 56.1	-6.1
DZM	Mont Dzumac	19.98	146	P	P	21 41 15.6	+0.4
DZM	Mont Dzumac	19.98	146	P	P	21 41 14.4	-0.8
	6.9nm,0.4s,baz=354,slow=24,SNR=9.2						
RKPI	Ransiki, Papua	20.72	281	P	P	21 41 22.9	-0.1
	102nm,1.1s						
QIS	Mount Isa	20.72	223	P	P	21 41 23.8	+0.7
FAKI	Fak Fak	22.38	276		P	21 41 39.9	-0.5
FAKI				IAmb	IAmb	21 41 42.2	
	comp=Z,37nm,0.8s						
FAKI	Fak Fak	22.38	276	P	P	21 41 39.1	-1.3
KDU	Kakadu	22.85	251	P	P	21 41 45.4	+0.6
QLP	Quilpie	23.02	204	P	P	21 41 47.5	+1.3
SWI	Sorong	23.70	281	P	P	21 41 52.3	-0.3
	comp=Z,747nmcomp=Z,47nm,1.0s						
WB0	Warramunga Arr	24.09	233	P	P	21 41 56.1	0.0
WR8	Warramunga Arr	24.11	232		P	21 41 56.4	+0.1
WR8				IAmb	IAmb	21 42 32.0	
	comp=Z,56nm,1.4s						
MTN	Manton Dam	24.15	251	P	P	21 41 56.5	-0.2
MTN				IAmb	IAmb	21 42 14.5	
	comp=Z,39nm,1.2s						
MTN	Manton Dam	24.15	251	P	P	21 41 57.3	+0.6
WRAB	Tennant Creek	24.22	232	*i* P	P	21 41 57.2	0.0
WRAB				pmax	pmax		
	comp=Z,27nm,1.5s						
WRA	Warramunga Arr	24.23	232	P	P	21 41 56.5	-0.9
WRA	Warramunga Arr	24.23	232	P	P	21 41 57.6	+0.2
	comp=Z,9.1nm,0.6s,baz=57,slow=10.0,SNR=154						
WRA				S	S	21 46 04.4	-0.6
	comp=Z,4.1nm,1.1s,baz=50,slow=13,SNR=7.0						
	comp=Z,9.1nm,0.6s						
WRA	Warramunga Arr	24.23	232	*e*P	P	21 41 57.5	+0.2
WRA				pmax	pmax		
	comp=Z,11nm,0.6s						
DRS	Darwin Rock St	24.27	252	P	P	21 41 58.0	+0.3
ARMA	Armidale	24.79	186		P	21 42 03.0	+0.6
ARMA	Armidale	24.79	186	P	P	21 42 03.4	+1.0
AAI	Ambon	26.32	273	P	P	21 42 15.7	-0.6
	comp=Z,117nm,0.9s						
AS01	Alice Springs	26.70	226	P	P	21 42 19.7	0.0
AS31	Alice Springs	26.74	226	P	P	21 42 19.5	-0.5
ASAR	Alice Springs	26.74	226	P	P	21 42 19.6	-0.4
	comp=Z,3.3nm,0.4s,baz=57,slow=9.4,SNR=126						
ASAR				pP	pP	21 42 50.0	+0.3
	comp=Z,8.0nm,0.8s,baz=55,slow=9.9,SNR=6.8						
ASAR				S	S	21 46 42.5	-2.2
	comp=Z,3.3nm,0.8s,baz=56,slow=13,SNR=7.3						
	comp=Z,3.3nm,0.4s						
ASAR	Alice Springs	26.74	226	*e*P	P	21 42 19.6	-0.4

ASAR				pmax	pmax		
	comp=Z,4.0nm,0.4s						
H11S3	WAKE ISLAND Hy	26.82	26	T	T	22 10 41.4	
	baz=207,slow=76,SNR=143						
H11S2	WAKE ISLAND Hy	26.83	26	T	T	22 10 27.9	
	baz=207,slow=76,SNR=127						
H11S1	WAKE ISLAND Hy	26.84	26	T	T	22 10 28.9	
	baz=207,slow=76,SNR=85						
CMSA	Cobar Meteorol	27.05	197	P	P	21 42 22.4	-0.2
KNRA	Kununurra	27.17	246	P	P	21 42 23.8	-0.1
NLAI	Namlea	27.45	274	P	P	21 42 26.4	0.0
	comp=Z,1µmcomp=Z,105nm,1.0s						
STKA	Stephens Creek	28.76	203	P	P	21 42 37.1	-0.8
STKA	Stephens Creek	28.76	203	P	P	21 42 37.5	-0.3
	comp=Z,5.3nm,0.8s,baz=7.0,slow=8.6,SNR=8.9						
	comp=Z,5.3nm,0.8s						
STKA	Stephens Creek	28.76	203	P	P	21 42 37.4	-0.5
SGSI	Sangihe	30.41	287	P	P	21 42 52.8	+0.2
FITZ	Fitzroy Crossi	30.79	244	P	P	21 42 55.0	-1.0
FITZ	Fitzroy Crossi	30.79	244	LR	LR	21 56 51.6	
	comp=Z,102nm,18.0s,baz=46,slow=39						
FITZ	Fitzroy Crossi	30.79	244	P	P	21 42 55.3	-0.7
KMSI	Cibinong	31.12	280	P	P	21 42 58.3	-0.6
HTT	Hallett	31.22	206	P	P	21 42 59.6	0.0
LUWI	Luwuk	32.02	277	P	P	21 43 06.0	-0.8
LUWI	Luwuk	32.02	277	P	P	21 43 07.2	+0.4
BBOO	Buckleboo	32.04	210	P	P	21 43 05.9	-0.8
BBOO	Buckleboo	32.04	210	P	P	21 43 06.4	-0.3
EDFI	Ende, Flores	32.71	263	P	P	21 43 12.4	-0.6
	comp=Z,23nm,0.9s						
ARPS	Mount Arapiles	33.08	199	P	P	21 43 16.1	+0.4
MRSI	Marisa	33.10	280	P	P	21 43 16.7	+0.5
APSI	Ampana	33.15	277	P	P	21 43 16.4	-0.2
	comp=Z,2µmcomp=Z,138nm,1.4s						
TOLI2	Tolitoli	34.36	280	P	P	21 43 25.8	-1.3
TOLI2				IAmb	IAmb	21 43 27.4	
	comp=Z,34nm,0.9s						
TOLI2	Tolitoli	34.36	280	P	P	21 43 25.7	-1.4
PCI	Palu	34.94	276	P	P	21 43 31.9	-0.2
MPSI	Mapaga	35.08	279	P	P	21 43 33.0	-0.3
	comp=Z,972nmcomp=Z,127nm,0.9s						
MBWA	Marble Bar	37.07	242	P	P	21 43 49.3	-0.8
MBWA				IAmb	IAmb	21 44 53.7	
	comp=Z,42nm,1.4s						
MOO	Moorlands	37.21	189	P	P	21 43 52.4	+1.4
MYLDM	Lahad Datu	37.55	286	P	P	21 43 54.0	-0.3
SMKI	Samarinda	37.61	277	P	P	21 43 54.5	-0.3
TAU	Tasmania Unive	37.65	189	P	P	21 43 54.6	-0.1
TAU	Tasmania Unive	37.65	189	P	P	21 43 54.6	-0.1
TAU				pmax	pmax		
	comp=Z,138nm,1.9s						
RTZ	Ruatahuna	38.62	151	P	P	21 44 02.3	-0.7
BKZ	Black Stump Fm	38.83	152	P	P	21 44 04.2	-0.5
KKM	Kota Kinabalu	39.97	286	P	P	21 44 14.0	-0.5
KKM				IAmb	IAmb	21 44 15.7	
	comp=Z,37nm,1.0s						
JAGI	Jajag, Banyuwa	40.15	264	P	P	21 44 13.8	-2.2
JAGI				IAmb	IAmb	21 45 07.6	
	comp=Z,35nm,1.3s						
JOW	Kunigami	41.09	323	P	P	21 44 24.8	+1.3
	comp=Z,44nm,1.0s,baz=215,slow=8.6,SNR=3.8						
	comp=Z,44nm,1.0s						
YULB	Yu-li	43.43	313	P	P	21 44 42.8	+0.3
YULB				IAmb	IAmb	21 44 44.8	
	comp=Z,19nm,0.8s						
NACB	Ninganchiao	43.69	314	P	P	21 44 45.0	+0.5
NACB				IAmb	IAmb	21 44 46.4	
	comp=Z,60nm,1.3s						
UGM	Wanagama	43.74	264	P	P	21 44 45.4	+0.3
NWAO	Narrogin (SRO)	44.05	227	LR	LR	22 04 00.4	
	comp=Z,221nm,18.2s,baz=136,slow=37						
JNU	Nakatsue	44.62	331	P	P	21 44 51.1	-0.7
JNU				IAmb	IAmb	21 44 52.8	
	comp=Z,44nm,1.0s						
JNU	Nakatsue	44.62	331	P	P	21 44 52.0	+0.2
	comp=Z,29nm,0.9s,baz=108,slow=5.0,SNR=16						
	comp=Z,29nm,0.9s						
MJAR	Matsushiro Arr	44.67	341	P	P	21 44 50.9	-1.2
	comp=Z,2.9nm,0.8s,baz=167,slow=6.8,SNR=5.0						
MJAR				PcP	PcP	21 46 31.4	-0.6
	comp=Z,3.1nm,0.9s,baz=130,slow=4.3,SNR=4.9						
	comp=Z,2.9nm,0.8s						
MAJO	Matsushiro	44.67	341	P	P	21 44 51.1	-1.0
MAJO	Matsushiro	44.67	341	*i* P	P	21 44 51.8	-0.3
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MJB9	Matsu-Tunnel	44.67	341	P	P	21 44 51.2	-0.9
KSM	Kuching	44.72	278	P	P	21 44 52.0	-0.9
KSM				IAmb	IAmb	21 44 54.3	
	comp=Z,51nm,0.9s						
RAR	Rarotonga	46.87	114	LR	LR	22 01 00.4	
	comp=Z,110nm,21.8s,baz=237,slow=31						
TJN	Taejon	48.94	331	P	P	21 45 24.8	-0.5
TJN	Taejon	48.94	331	*i* P	P	21 45 25.5	+0.2
KSRS	Korea Array	49.54	332	P	P	21 45 30.2	+0.4
	comp=Z,17nm,1.0s,baz=152,slow=8.8,SNR=41						
KSRS				PcP	PcP	21 46 49.7	+0.4
	comp=Z,1.5nm,0.8s,baz=164,slow=4.1,SNR=4.4						
	comp=Z,17nm,1.0s						
KSAR	Wonju Array Be	49.55	332	P	P	21 45 29.9	+0.1
KSAR	Wonju Array Be	49.55	332	P	P	21 45 29.9	+0.1
KS19	Wonju Array Si	49.60	332	P	P	21 45 29.9	-0.4
KS19				IAmb	IAmb	21 45 31.2	
	comp=Z,18nm,1.1s						
INCN	Inchon	50.17	331	P	P	21 45 34.5	-0.1
INCN	Inchon	50.17	331	P	P	21 45 34.5	-0.1
INCN				pmax	pmax		
	comp=Z,60nm,1.0s						
NJ2	Nanjing	50.59	320	⇑P	P	21 45 39.3	+1.5
NJ2				pmax	pmax		
	comp=Z,12nm,0.7s						
CNSH	ChangSha	52.33	312	P	P	21 45 52.0	+1.2
CNSH				pmax	pmax		
	comp=Z,23nm,0.8s						
WHN	Wuhan	52.66	316	P	P	21 45 54.1	+0.9
WHN				pmax	pmax		
	comp=Z,48nm,0.9s						
PSTR	Posyet	52.69	338	*i* P	P	21 45 53.5	+0.3
VLA	Vladivostok	52.70	339	*i* P	P	21 45 53.6	+0.3
VLA				pmax	pmax		
	comp=Z,15nm,1.1s						
YSS	Yuzhno-Sakhali	53.41	350	P	P	21 45 58.8	+0.5
YSS				IAmb	IAmb	21 46 00.2	
	comp=Z,41nm,1.6s						
YSS	Yuzhno-Sakhali	53.41	350	*i* P	P	21 45 58.8	+0.5
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
USA0B	Ussuriysk Arra	53.62	340		P	21 46 00.0	+0.1
USA0B				IAmb	IAmb	21 46 01.7	
	comp=Z,28nm,1.3s						
USA0B	Ussuriysk Arra	53.62	340	*i* P	P	21 46 00.3	+0.4
USRK	Ussuriysk Ar.	53.62	340		P	21 45 59.7	-0.2
USRK	Ussuriysk Ar.	53.62	340	P	P	21 46 00.7	+0.8
	comp=Z,9.7nm,1.0s,baz=149,slow=8.5,SNR=16						
	comp=Z,9.7nm,1.0s						
USRK	Ussuriysk Ar.	53.62	340	*e*P	P	21 46 00.6	+0.7
USRK				pmax	pmax		
	comp=Z,13nm,1.1s						
BKNI	Bangkinang	53.73	275	P	P	21 46 00.3	-1.1
DL2	Dalian	53.79	328	P	P	21 45 59.8	-1.5
DL2				pP	pP	21 46 39.0	+3.7
DL2				PP	PP	21 48 02.5	-1.5
DL2				S	S	21 53 19.4	-4.8
DL2				pmax	pmax		
	comp=Z,39nm,1.3s						
DL2				pmax	pmax		
	comp=Z,230nm,4.5s						
TIA	Tai'an	54.42	323	P	P	21 46 06.0	0.0
TIA				pmax	pmax		
	comp=Z,14nm,1.0s						
MDJ	Mudanjiang	54.83	338	P	P	21 46 09.0	+0.3
MDJ				pmax	pmax		
	comp=Z,24nm,1.0s						
KULM	Kulim	54.88	280	P	P	21 46 09.0	-0.7
KULM				IAmb	IAmb	21 48 06.8	
	comp=Z,64nm,1.9s						
CN2	Changchun	55.78	335	*e*P	P	21 46 15.0	-0.6
CN2				*e*S	S	21 53 48.6	-2.1
CN2				pmax	pmax		
	comp=Z,20nm,1.2s						
ENH	Enshi	55.99	312	P	P	21 46 17.2	-0.2
ENH				IAmb	IAmb	21 46 18.8	
	comp=Z,17nm,0.6s						
GYA	Guiyang	56.27	307	P	P	21 46 20.9	+1.3
GYA				pmax	pmax		
	comp=Z,14nm,1.1s						
SLVN	Son La	56.41	300		P	21 46 21.1	+0.6
SLVN				IAmb	IAmb	21 46 22.9	
	comp=Z,29nm,1.3s						
BNX	BinXian	56.60	338	⇓P	P	21 46 21.1	-0.2
BNX				pmax	pmax		
	comp=Z,34nm,1.1s						
HNS	HongShan	56.66	322	⇑P	P	21 46 22.7	+0.8
HNS				pmax	pmax		
	comp=Z,29nm,1.4s						
BJI	Beijing	57.55	326	P	P	21 46 28.1	0.0
BJI				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BJI				pmax	pmax		
	comp=Z,41nm,4.4s						
KLR	Kul'dur	58.15	343	P	P	21 46 33.3	+1.2
	comp=Z,22nm,1.1s,baz=145,slow=6.5,SNR=30						
	comp=Z,22nm,1.1s						
KLR	Kul'dur	58.15	343	*d i*P	P	21 46 32.7	+0.6
KLR				pmax	pmax		
	comp=Z,30nm,1.2s						
XAN	Xi'an	58.42	316	⇑P	P	21 46 34.2	-0.2
XAN				pmax	pmax		
	comp=Z,35nm,0.5s						
XAN				pmax	pmax		
	comp=Z,130nm,4.2s						
PEA0B	Petropavlovsk-	58.60	2	P	P	21 46 36.1	+0.9
PEA0B	Petropavlovsk-	58.60	2	*i* P	P	21 46 35.8	+0.6
PETK	Petropavlovsk-	58.60	2	P	P	21 46 35.9	+0.7
PETK	Petropavlovsk-	58.60	2	P	P	21 46 36.2	+1.1
	comp=Z,8.8nm,0.9s,baz=146,slow=6.3,SNR=16						
PETK				pP	pP	21 47 09.3	-1.1
	comp=Z,13nm,1.1s,baz=149,slow=6.9,SNR=3.6						
PETK				LR	LR	22 08 32.8	
	comp=Z,23nm,21.9s,baz=163,slow=32						
	comp=Z,8.8nm,0.9s						
PETK	Petropavlovsk-	58.60	2	P	P	21 46 35.9	+0.7
KMI	Kunming	58.88	304	⇓P	P	21 46 39.3	+1.3
KMI				pmax	pmax		
	comp=Z,26nm,0.8s						
CM31	Chiang Mai Arr	59.79	295	P	P	21 46 44.8	+0.8
CMAR	Chiang Mai Arr	59.79	295	P	P	21 46 44.8	+0.7
CMAR	Chiang Mai Arr	59.79	295	P	P	21 46 45.2	+1.2
	comp=Z,22nm,0.8s,baz=113,slow=5.0,SNR=95						
CMAR				pP	pP	21 47 18.2	-0.8
	comp=Z,3.3nm,0.8s,baz=108,slow=5.0,SNR=2.7						
	comp=Z,22nm,0.8s						
CMAR	Chiang Mai Arr	59.79	295	*e*P	P	21 46 45.2	+1.2
CMAR				pmax	pmax		
	comp=Z,24nm,0.9s						
CHTO	Chiang Mai	59.90	295	P	P	21 46 45.2	+0.5
CHTO				IAmb	IAmb	21 46 46.8	
	comp=Z,31nm,1.1s						
CHTO	Chiang Mai	59.90	295	P	P	21 46 45.3	+0.5
CHTO				pmax	pmax		
	comp=Z,31nm,1.2s						
CHTO	Chiang Mai	59.90	295	P	P	21 46 45.7	+0.9
PZH	PanZhiHua	60.27	305	P	P	21 46 50.0	+2.7
XLT	XiLinHaoTe	60.27	329	*e*P	P	21 46 47.8	+0.8
XLT				pmax	pmax		
	comp=Z,42nm,0.7s						
HEH	HeiHe	60.42	340	*e*P	P	21 46 47.6	-0.1
HEH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CD2	Chengdu	60.59	310	P	P	21 46 50.2	+0.9
CD2				pmax	pmax		
	comp=Z,40nm,0.5s						
HHC	Hu-ho-hao-te	60.74	324	*e*P	P	21 46 52.2	+2.0
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,56nm,4.4s						
DRV	Dumont d'Urvil	61.74	187	P	P	21 46 56.4	+0.1
ADK	Adak	62.37	20	P	P	21 47 01.8	+1.1
ADK	Adak	62.37	20	P	P	21 47 01.8	+1.1
ADK				pmax	pmax		
	comp=Z,60nm,1.2s						
TNCH	TengChong	62.38	302	⇓P	P	21 47 02.0	+0.4
TNCH				pmax	pmax		
	comp=Z,19nm,0.9s						
TNCH				pmax	pmax		
	comp=Z,65nm,4.2s						
HIA	Hailar	62.52	335	P	P	21 47 02.1	+0.3
HIA	Hailar	62.52	335	*i* P	P	21 47 02.3	+0.5
HIA				pmax	pmax		
	comp=Z,28nm,1.1s						
LZH	Lanzhou	63.04	315	*e*P	P	21 47 07.4	+1.7
LZH				pP	pP	21 47 44.7	+4.0
LZH				pmax	pmax		
	comp=Z,25nm,1.1s						
LZH				LR	LR		
	comp=Z,220nm,14.3s						
LZH				LR	LR		
	comp=Z,190nm,14.9s						
LZH				LR	LR		
	comp=Z,190nm,15.6s						
ZEA	Zeya	63.46	342	*e*P	P	21 47 08.7	+0.8
ZEA				*e*		21 47 46.6	
ZEA				pmax	pmax		
	comp=N,10.0nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.2s						
NIKH	Nikolski High	66.10	23	P	P	21 47 25.8	+0.8
	baz=220						
GTA	Gaotai	67.45	317	*e*P	P	21 47 35.5	+1.5
GTA				pP	pP	21 48 08.3	-1.1
GTA				pmax	pmax		
	comp=Z,18nm,0.9s						
ULN	Ulaanbaatar	67.63	328	P	P	21 47 35.5	+0.5
ULN				IAmb	IAmb	21 47 38.1	
	comp=Z,18nm,1.1s						
ULN	Ulaanbaatar	67.63	328	*i* P	P	21 47 35.3	+0.3
ULN				pmax	pmax		
	comp=Z,16nm,1.1s						
ULN	Ulaanbaatar	67.63	328	P	P	21 47 36.4	+1.4
UNV	Unalaska Valle	67.69	24	P	P	21 47 36.0	+1.0
	baz=223						
CASY	Casey	67.72	198	P	P	21 47 34.8	-0.2
SONM	Songino Array	67.96	327	P	P	21 47 37.4	+0.3
SONM				IAmb	IAmb	21 47 40.1	
	comp=Z,19nm,1.1s						
SONM	Songino Array	67.96	327	P	P	21 47 38.2	+1.1
	comp=Z,4.1nm,0.4s,baz=142,slow=5.1,SNR=26						
	comp=Z,4.1nm,0.4s						
SEY	Seymchan	68.41	359	*i* P	P	21 47 39.4	0.0
SEY				pmax	pmax		
	comp=Z,4.0nm,1.1s						
P08K	Saint George I	68.64	20	P	P	21 47 41.9	+1.0
	baz=219						
SPIA	Saint Paul Isl	68.86	20	P	P	21 47 43.5	+1.2
	baz=218						
LSA	Lhasa	70.13	304	P	P	21 47 51.2	-0.1
LSA	Lhasa	70.13	304	P	P	21 47 51.0	-0.3
LSA	Lhasa	70.13	304	P	P	21 47 51.2	-0.1
LSA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
YAK	Yakutsk	70.15	348	P	P	21 47 50.1	0.0
YAK				IAmb	IAmb	21 47 52.5	
	comp=Z,38nm,1.1s						
YAK	Yakutsk	70.15	348	*e*P	P	21 47 50.3	+0.2
YAK				*e*		21 48 10.0	
YAK				*e**PP	pP	21 48 27.3	+1.2
YAK				*e*		21 50 27.8	
YAK				*e*S	S	21 56 49.5	+0.6
YAK				*e*		21 57 39.0	
YAK				*e*SS	SS	22 01 24.3	+2.2
YAK				pmax	pmax		
	comp=Z,36nm,1.3s						
YAK				pmax	pmax		
	comp=N,13nm,1.4s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,30nm,2.5s						
YAK				pmax	pmax		
	comp=N,12nm,2.8s						
YAK				pmax	pmax		
	comp=E,23nm,3.1s						
YAK				smax	smax		
	comp=E,77nm,5.2s						
YAK				smax	smax		
	comp=N,72nm,5.2s						
S12K	Black Hills	70.82	24	P	P	21 47 54.8	+0.6
S12K	Black Hills	70.82	24	P	P	21 47 54.9	+0.6
	baz=226,SNR=7.5						
ZAK	Zakamensk	71.11	328	*e*P	P	21 47 55.5	-0.8
ZAK				pmax	pmax		
	comp=Z,14nm,1.4s						
SDPT	Sand Point	71.24	25	P	P	21 47 57.3	+0.5
	baz=228						
CHNA	Chernabura Isl	71.27	26	P	P	21 47 57.5	+0.5
	baz=229						
CCD	Concordia, Ant	71.66	188	P	P	21 47 59.8	+0.2
CCD				PcP	PcP	21 48 17.6	-0.3
CCD				sP	sP	21 48 53.3	+2.5
IRK	Irkutsk	71.69	330	*e*P	P	21 47 57.8	-1.8
IRK				*e*		21 50 40.4	
IRK				pmax	pmax		
	comp=Z,30nm,1.5s						
VNDA	Vanda	71.93	178	P	P	21 48 01.2	+0.5
VNDA	Vanda	71.93	178	P	P	21 48 00.7	0.0
	comp=Z,1.9nm,0.9s,baz=337,slow=6.9,SNR=8.9						
	comp=Z,1.9nm,0.9s						
VNDA	Vanda	71.93	178	P	P	21 48 01.2	+0.5
VNDA				pmax	pmax		
	comp=Z,19nm,2.0s						
VNDA	Vanda	71.93	178	P	P	21 48 01.0	+0.4
VNDA				pP	pP	21 48 36.3	-0.2
S14K	Fog Glacier	72.25	25	P	P	21 48 03.8	+0.9
	baz=229						
SBA	Scott Base	72.44	177	P	P	21 48 04.9	+1.2
SBA	Scott Base	72.44	177	P	P	21 48 04.9	+1.2
SBA				pmax	pmax		
	comp=Z,22nm,1.8s						
M11K	Mekoryuk	72.68	19	P	P	21 48 06.3	+1.1
	baz=221						
MOY	Mondy	73.03	328	*e*P	P	21 48 08.2	+0.5
MOY				pmax	pmax		
	comp=Z,20nm,2.1s						
EVN	Everest	73.24	301	P	P	21 48 09.4	-0.7
O14K	Tigyukauivet M	73.58	22	P	P	21 48 12.1	+1.4
O14K				IAmb	IAmb	21 48 13.2	
	comp=Z,47nm,1.1s						
O14K	Tigyukauivet M	73.58	22	P	P	21 48 11.5	+0.9
	baz=226						
M13K	Dall Lake	73.66	20	P	P	21 48 12.3	+1.3
	baz=224						
GAMB	Gambell	73.75	15	P	P	21 48 12.8	+1.3
	baz=215						
N14K	Kuskokwak Cree	73.90	21	P	P	21 48 13.6	+1.2
	baz=226						
R16K	Pilot Point	73.91	25	P	P	21 48 13.4	+0.9
	baz=230						
BILL	Bilibino	73.99	5	P	P	21 48 13.2	+0.3
BILL				IAmb	IAmb	21 48 15.0	
	comp=Z,40nm,1.6s						
BILL	Bilibino	73.99	5	*i* P	P	21 48 13.9	+1.1
BILL				pmax	pmax		
	comp=Z,15nm,1.3s						
O15K	Ungalikthiuk R	74.08	23	P	P	21 48 14.7	+1.2
O15K				IAmb	IAmb	21 48 16.5	
	comp=Z,42nm,1.3s						
O15K	Ungalikthiuk R	74.08	23	P	P	21 48 14.6	+1.1
	baz=228,SNR=5.6						
K13K	Kusilvak Mount	74.33	19	P	P	21 48 16.3	+1.3
	baz=222,SNR=7.5						
M14K	Bethel	74.38	21		P	21 48 16.0	+0.8
M14K				IAmb	IAmb	21 48 18.5	
	comp=Z,54nm,1.2s						
M14K	Bethel	74.38	21	P	P	21 48 16.8	+1.6
	baz=225,SNR=8.3						
L14K	Kuka Creek	74.55	20		P	21 48 17.3	+1.2
L14K				IAmb	IAmb	21 48 19.6	
	comp=Z,39nm,1.1s						
L14K	Kuka Creek	74.55	20	P	P	21 48 17.9	+1.7
	baz=224,SNR=12						
N15K	Kwethluk River	74.65	22	P	P	21 48 18.3	+1.4
	baz=227						
P16K	Nushagak River	74.69	23	P	P	21 48 17.6	+0.6
	baz=230						
SII	Sitkinak Islan	74.74	27	P	P	21 48 18.6	+1.1
SII	Sitkinak Islan	74.74	27	P	P	21 48 18.2	+0.8
	baz=234						
PALK	Pallekele	74.77	279	P	P	21 48 18.9	+0.4
PALK				IAmb	IAmb	21 48 19.9	
	comp=Z,25nm,0.9s						
PALK	Pallekele	74.77	279	P	P	21 48 18.9	+0.4
PALK				pmax	pmax		
	comp=Z,25nm,0.9s						
M15K	Kasigluk River	74.79	21	P	P	21 48 18.5	+0.9
	baz=227,SNR=10						
O16K	Kokwok River B	75.02	23	P	P	21 48 19.4	+0.5
	baz=229						
Q17K	Contact Creek	75.05	25	P	P	21 48 19.6	+0.4
	baz=232						
L15K	Ungalak Mounta	75.20	20	P	P	21 48 20.9	+1.0
	baz=226						
R18K	Karluk	75.23	26	P	P	21 48 21.0	+0.9
	baz=233						
J14K	Nanvaranak Lak	75.28	19	P	P	21 48 22.1	+1.8
	baz=223,SNR=11						
N16K	Nishlik Lake	75.34	22	P	P	21 48 22.3	+1.5
	baz=228						
P17K	Kvichak River	75.41	24	P	P	21 48 21.8	+0.7
	baz=231						
O17K	Koliganek Bris	75.52	23	P	P	21 48 22.4	+0.6
	baz=230						
OHAK	Old Harbor	75.53	26	P	P	21 48 22.8	+0.9
	baz=234						
K15K	Wolf Creek Mou	75.61	20		P	21 48 23.7	+1.4
K15K				IAmb	IAmb	21 48 25.8	
	comp=Z,36nm,1.1s						
K15K	Wolf Creek Mou	75.61	20	P	P	21 48 23.6	+1.3
	baz=226,SNR=13						
M16K	Timber Creek	75.64	21	P	P	21 48 24.1	+1.7
	baz=228,SNR=14						
Q18K	Katmai Hardscr	75.65	25	P	P	21 48 23.0	+0.3
	baz=232						
L16K	Owhat River	75.92	21	P	P	21 48 25.1	+1.1
	baz=228,SNR=8.6						
N17K	Nushagak Hills	75.97	22		P	21 48 25.7	+1.4
N17K				IAmb	IAmb	21 48 28.1	
	comp=Z,24nm,1.2s						
N17K	Nushagak Hills	75.97	22	P	P	21 48 26.0	+1.7
	baz=230,SNR=7.8						
P18K	Big Mountain,	76.02	24	P	P	21 48 25.2	+0.5
	baz=232						
ANM	Nome	76.08	17	P	P	21 48 25.7	+0.8
	baz=221						
TNA	Tin City	76.15	15	P	P	21 48 25.4	+0.2
	baz=219						
KDAK	Kodiak Island	76.17	26	P	P	21 48 26.4	+0.9
	baz=235						
O18K	Koktuh Hills	76.31	24	P	P	21 48 26.9	+0.6
	baz=232						
Q19K	Cape Douglas,	76.39	25	P	P	21 48 27.0	+0.3
Q19K	Cape Douglas,	76.39	25	P	P	21 48 27.4	+0.6
	baz=234						
M17K	Holitna River	76.44	22	P	P	21 48 28.9	+1.9
	baz=230,SNR=7.5						
F14K	Arctic Creek	76.51	16	P	P	21 48 28.5	+1.2
	baz=220						
N18K	Kilae Creek	76.56	23	P	P	21 48 29.1	+1.4
	baz=231,SNR=13						
J16K	Anvik River	76.61	19	P	P	21 48 29.6	+1.7
	baz=226,SNR=11						
L17K	Donlin	76.61	21	P	P	21 48 29.0	+1.1
	baz=229,SNR=6.8						
Q20K	Shuyak Island	76.73	25	P	P	21 48 29.8	+1.1
	baz=235						
G15K	Niukluk	76.79	17	P	P	21 48 30.1	+1.2
	baz=223						
O19K	Port Alsworth	76.87	24	P	P	21 48 30.3	+0.9
	baz=233						
P19K	Oil Pt	76.99	24	P	P	21 48 30.8	+0.7
	baz=234						
K17K	Iditarod	77.00	20	P	P	21 48 31.4	+1.3
	baz=228,SNR=8.1						
I17K	Unalakleet	77.00	19	P	P	21 48 31.7	+1.6
	baz=226						
M18K	Stony River	77.10	22	P	P	21 48 32.1	+1.5
	baz=231,SNR=8.7						
F15K	North Star Dit	77.14	16	P	P	21 48 32.2	+1.3
	baz=222						
N19K	Bonanza Creek	77.19	23	P	P	21 48 32.0	+0.7
	baz=232						
J17K	VABM Dome	77.19	20		P	21 48 32.6	+1.4
J17K				IAmb	IAmb	21 48 34.9	
	comp=Z,20nm,1.1s						
J17K	VABM Dome	77.19	20	P	P	21 48 32.6	+1.4
	baz=228,SNR=8.6						
L18K	Granite Mounta	77.24	21	P	P	21 48 33.0	+1.6
	baz=230,SNR=14						

O20K	Slope Mountain	77.49	24	P	P	21 48 33.4	+0.4
	baz=234						
WMQ	Urumqi	77.53	317	*e*P	P	21 48 35.4	+1.8
WMQ				LR	LR		
	comp=Z,72nm,24.1s						
G16K	Koyuk River	77.56	17	P	P	21 48 34.4	+1.3
	baz=224						
HOM	Homer	77.65	25	P	P	21 48 34.6	+0.9
	baz=235						
L19K	White Mountain	77.89	22	P	P	21 48 36.3	+1.2
	baz=232,SNR=15						
M19K	Big River Lodg	77.89	22	P	P	21 48 36.2	+1.1
	baz=232						
H17K	Granite Mounta	77.98	18	P	P	21 48 36.7	+1.2
	baz=227,SNR=10.0						
BRLK	Bradley Lake	78.03	25	P	P	21 48 36.3	+0.4
BRLK				IAmb	IAmb	21 48 38.4	
	comp=Z,23nm,1.1s						
J18K	Innoko River	78.04	20	P	P	21 48 36.7	+0.8
	baz=230,SNR=14						
BRSE	Bradley Lake S	78.07	25	P	P	21 48 36.9	+0.8
	baz=236						
G17K	Kiwalik Mounta	78.14	17	P	P	21 48 37.7	+1.3
	baz=226						
N20K	Mount Spurr	78.31	23	P	P	21 48 37.7	+0.2
	baz=234						
SPCR	Spurr Chakacha	78.31	23	P	P	21 48 38.4	+0.9
	baz=234						
M20K	Styx River	78.35	23	P	P	21 48 38.6	+0.9
	baz=234						
HYB	Hyderabad	78.39	289	*e*P	P	21 48 38.6	-0.2
HYB				*e*PP	PP	21 51 37.4	-0.9
L20K	Farewell, AK	78.43	22	P	P	21 48 39.3	+1.3
	baz=233,SNR=7.7						
H18K	Honhosa River	78.61	18	P	P	21 48 39.8	+0.8
	baz=228						
F17K	Baldwin Pennin	78.63	17	P	P	21 48 40.1	+1.0
	baz=225						
SLKM	Skilak Lake	78.72	24	P	P	21 48 40.1	+0.4
J19K	Poorman	78.75	20	P	P	21 48 41.1	+1.3
	baz=231,SNR=9.1						
GCSA	Galena City Sc	78.81	19	P	P	21 48 41.0	+1.0
	baz=230						
SEW	Seward	78.82	25	P	P	21 48 40.9	+0.7
	baz=237						
K20K	Telida	78.90	21	P	P	21 48 41.8	+1.2
	baz=232						
C16K	Lisburne Hills	78.90	14	P	P	21 48 41.7	+1.3
	baz=221						
O22K	Cooper Landing	78.91	25	P	P	21 48 41.7	+1.1
	baz=237						
E17K	Hotham Inlet	78.93	16	P	P	21 48 41.5	+0.8
	baz=224						
G18K	Tagagawik	79.02	18	P	P	21 48 42.1	+0.9
	baz=228,SNR=9.1						
SKT	Skwentna	79.02	23	P	P	21 48 41.9	+0.5
	baz=235						
SUA	Susitna One	79.04	24	P	P	21 48 41.7	+0.2
	baz=236						
D17K	Noatak River	79.04	15	P	P	21 48 42.3	+1.1
	baz=223						
F18K	Selawik	79.20	17	P	P	21 48 43.1	+1.0
	baz=227						
RC01	Rabbit Creek A	79.24	24	P	P	21 48 43.0	+0.6
	baz=237						
PPLA	Purkeypile	79.31	22	P	P	21 48 43.7	+0.7
	baz=234						
RDOG	Red Dog Mine	79.35	15	P	P	21 48 44.0	+1.0
	baz=223						
J20K	Nowinta River	79.37	20	P	P	21 48 44.2	+1.1
	baz=232,SNR=10						
M22K	Willow	79.45	23	P	P	21 48 44.5	+1.0
	baz=236						
H19K	Roundabout Mou	79.46	19	P	P	21 48 44.6	+1.1
	baz=230,SNR=14						
E18K	Tukpahlearik C	79.51	16	P	P	21 48 44.9	+1.1
	baz=226						
C17K	DeLong Mountai	79.59	15	P	P	21 48 45.3	+1.0
	baz=223						
P23K	Montague Islan	79.63	26	P	P	21 48 45.6	+1.0
	baz=239						
I20K	Naaghedeneel	79.64	20	P	P	21 48 45.6	+1.1
	baz=232						
CAST	Castle Rocks	79.65	22		P	21 48 44.6	-0.1
CAST				IAmb	IAmb	21 48 46.0	
	comp=Z,34nm,1.6s						
CAST	Castle Rocks	79.65	22	P	P	21 48 44.8	+0.1
	baz=234,SNR=7.4						
G19K	Purcell Mounta	79.66	18	P	P	21 48 45.8	+1.1
	baz=229,SNR=8.0						
PWL	Port Wells	79.69	25	P	P	21 48 45.6	+0.7
	baz=238,SNR=7.1						
CUT	Chulitna	79.75	23	P	P	21 48 45.9	+0.8
	baz=236						
PMR	Palmer	79.75	24	P	P	21 48 46.0	+0.8
PMR	Palmer	79.75	24	P	P	21 48 46.0	+0.8
PMR				pmax	pmax		
	comp=Z,18nm,1.1s						
PMR	Palmer	79.75	24	P	P	21 48 45.9	+0.8
	baz=237						
Q23K	Middleton Isla	79.81	26	P	P	21 48 46.0	+0.5
	baz=240						
CHUM	Lake Minchumin	79.84	21	P	P	21 48 46.7	+1.0
	baz=234						
F19K	Shaleruckik Mo	79.91	17	P	P	21 48 46.7	+0.8
	baz=228,SNR=6.1						
KNK	Knik Glacier	79.93	24	P	P	21 48 46.8	+0.5
	baz=238						
H20K	Anotleneega Mo	79.94	19	P	P	21 48 46.6	+0.4
	baz=231,SNR=8.4						
SML	Sawmill	80.19	24	P	P	21 48 48.4	+0.8
SML				IAmb	IAmb	21 48 50.4	
	comp=Z,51nm,1.2s						
SML	Sawmill	80.19	24	P	P	21 48 48.1	+0.4
	baz=238,SNR=7.9						
C18K	Utukok River	80.22	15	P	P	21 48 48.4	+0.7
	baz=225						
GLI	Glacier Island	80.22	25	P	P	21 48 48.3	+0.6
	baz=239						
TRF	Thorofare Moun	80.33	22	P	P	21 48 48.3	-0.2
	baz=236						
M23K	Glacier View	80.43	24	P	P	21 48 48.9	0.0
	baz=239						
BPAW	Bear Paw Mtn.	80.44	21	P	P	21 48 48.8	-0.2
	baz=235						
E19K	Redstone River	80.48	17		P	21 48 49.8	+0.7
E19K				IAmb	IAmb	21 48 51.8	
	comp=Z,56nm,1.9s						
E19K	Redstone River	80.48	17	P	P	21 48 49.2	+0.1
	baz=229,SNR=7.7						
B18K	Kokolik River	80.58	14	P	P	21 48 50.0	+0.5
	baz=224						
SCM	Sheep Creek Mo	80.61	24	P	P	21 48 50.6	+0.7
SCM				IAmb	IAmb	21 48 52.1	
	comp=Z,41nm,1.3s						
SCM	Sheep Creek Mo	80.61	24	P	P	21 48 50.6	+0.7
SCM				pmax	pmax		
	comp=Z,41nm,1.3s						
SCM	Sheep Creek Mo	80.61	24	P	P	21 48 50.7	+0.7
	baz=239,SNR=5.3						
IMAR	Indian Mountai	80.61	19	P	P	21 48 50.7	+0.9
EYAK	Cordova Ski Ar	80.62	26	P	P	21 48 50.4	+0.5
	baz=241						
WAT1	Susitna Watana	80.65	23	P	P	21 48 50.0	0.0
	baz=238						
F20K	Avaraart Lake	80.67	18	P	P	21 48 50.9	+1.0
	baz=230,SNR=5.9						
I21K	Tanana	80.72	20	P	P	21 48 51.3	+0.9
	baz=234,SNR=5.6						
H21K	Melozitna Rive	80.73	20	P	P	21 48 51.1	+0.7
	baz=233						
WAT6	Susitna Watana	80.84	23	P	P	21 48 51.7	+0.5
	baz=238						
KAIM	Kayak Island	80.91	27	P	P	21 48 52.0	+0.6
	baz=242						
D19K	Kuna River	80.93	16	P	P	21 48 52.1	+0.7
	baz=228						
C19K	Lookout Ridge	80.95	15	P	P	21 48 52.3	+0.7
	baz=226						
MCK	McKinley	80.99	22	P	P	21 48 51.8	-0.1
	baz=237,SNR=8.1						
KLU	Klutina	81.02	25	P	P	21 48 52.5	+0.4
	baz=240,SNR=7.6						
G21K	Allakaket	81.02	19	P	P	21 48 52.5	+0.6
	baz=232,SNR=6.9						
MLY	Manley	81.06	21	P	P	21 48 52.6	+0.3
	baz=235,SNR=5.7						
HMT	Hamilton	81.17	26	P	P	21 48 53.5	+0.6
HMT				IAmb	IAmb	21 48 55.2	
	comp=Z,24nm,1.2s						
M24K	Tolsona, Glenn	81.22	24	P	P	21 48 53.1	0.0
	baz=240						
DHY	Denali Highway	81.24	23	P	P	21 48 53.9	+0.5
	baz=239,SNR=7.3						
E20K	Nigu River	81.31	17	P	P	21 48 54.4	+0.9
	baz=230,SNR=7.4						
BMRM	Bremner River	81.32	26	P	P	21 48 54.5	+0.8
	baz=242						
H22K	Ishtalitna Cre	81.34	20	P	P	21 48 54.2	+0.5
	baz=235						
A19K	Wainwright	81.36	14	P	P	21 48 53.8	+0.2
	baz=225						
NEA2	Nenana	81.41	21	P	P	21 48 53.6	-0.4
	baz=237						
F21K	Alatna River	81.46	18	P	P	21 48 54.5	+0.2
	baz=232						
D20K	Etivluk River	81.49	16	P	P	21 48 54.9	+0.5
	baz=229						
BGLC	Bering Glacier	81.50	27	P	P	21 48 55.1	+0.6
	baz=243						
I23K	Minto, Yukon-K	81.61	21	P	P	21 48 55.5	+0.4
	baz=237						
N25K	Chitina, Valde	81.63	25	P	P	21 48 55.8	+0.5
	baz=242,SNR=5.2						
HARP	HAARP	81.78	24	P	P	21 48 56.4	+0.4
	baz=241						
CRQE	Cirque	81.87	26	P	P	21 48 56.9	+0.2
	baz=243						
G22K	Bettles	81.90	19	P	P	21 48 57.3	+0.8
	baz=234						
H23K	Yukon River	81.93	20	P	P	21 48 57.0	+0.2
	baz=236						
PAX	Paxson	81.93	24	P	P	21 48 57.5	+0.5
	baz=240						
TGL	Tana Glacier	81.99	26	P	P	21 48 57.5	+0.2
TGL				IAmb	IAmb	21 48 59.4	
	comp=Z,24nm,1.4s						
F22K	John River	82.03	18	P	P	21 48 57.8	+0.6
	baz=234						
E21K	Killik River	82.06	17	P	P	21 48 57.9	+0.5
	baz=232						
HDA	Harding Lake	82.09	22	P	P	21 48 58.4	+0.8
	baz=239						
MK31	Makanchi Array	82.09	319	*i* P	P	21 48 57.4	-0.6
MKAR	Makanchi Array	82.09	319	P	P	21 48 57.9	-0.1
MKAR	Makanchi Array	82.09	319	P	P	21 48 58.2	+0.2
	comp=Z,3.7nm,0.6s,baz=91,slow=8.9,SNR=10.0						
	comp=Z,3.7nm,0.6s						
MKAR	Makanchi Array	82.09	319	P	P	21 48 57.9	-0.1
MESA	MESA	82.12	27	P	P	21 48 58.6	+0.5
	baz=244						
MCARA	McCarthy VSAT	82.19	26	P	P	21 48 59.1	+0.9
	baz=243						
B20K	Meade River	82.20	15	P	P	21 48 59.1	+1.1
	baz=229						
K24K	Donnelly Dome	82.23	23	P	P	21 48 59.2	+0.9
	baz=240,SNR=7.2						
G23K	Bananza Creek	82.26	19	P	P	21 48 58.9	+0.4
	baz=236						
C21K	Knifeblade Rid	82.28	16	P	P	21 48 59.2	+0.7
	baz=231						
POKR	Poker Plat Res	82.28	21	P	P	21 48 59.0	+0.4
	baz=238						
ILAR	Eielson Array	82.30	22	P	P	21 48 57.6	-1.0
ILAR	Eielson Array	82.30	22	P	P	21 48 58.1	-0.5
	comp=Z,3.2nm,0.8s,baz=250,slow=4.1,SNR=10						
ILAR				pP	pP	21 49 33.8	-2.6
	comp=Z,2.0nm,0.8s,baz=246,slow=5.4,SNR=3.3						
	comp=Z,3.2nm,0.8s						
ILAR	Eielson Array	82.30	22	P	P	21 48 57.7	-1.0
MAKZ	Makanchi	82.30	319	P	P	21 48 58.9	-0.2
MAKZ	Makanchi	82.30	319	P	P	21 48 58.9	-0.2
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
COLD	Coldfoot	82.50	19	P	P	21 49 00.1	+0.5
	baz=236						
H24K	Noodor Dome	82.51	21	P	P	21 48 59.1	-0.6
	baz=238						
E22K	Anaktuvuk Pass	82.52	18	P	P	21 48 59.8	0.0
	baz=234						
RIDG	Independent Ri	82.56	23	P	P	21 49 00.2	+0.1
	baz=241,SNR=6.7						
B21K	Ikpikpuk River	82.62	16	P	P	21 49 00.3	+0.1
	baz=231						
M26K	Nabesna, AK	82.67	25	P	P	21 49 01.0	+0.3
	baz=243						
D22K	Ayikyak River	82.71	17	P	P	21 49 01.6	+0.9
	baz=233,SNR=5.8						
CTG	Chitna Glacier	82.74	26	P	P	21 49 01.8	+0.6
	baz=244,SNR=7.3						
J25K	Salcha River,	82.79	22	P	P	21 49 01.9	+0.6
	baz=240,SNR=13						
L26K	Log Cabin Wild	82.81	24	P	P	21 49 02.0	+0.6
	baz=242						
ZAA0	Zalesovo Array	82.81	326		P	21 49 00.5	-1.0
ZALV	Zalesovo Beam	82.81	326		P	21 49 00.5	-1.0
ZALV	Zalesovo Beam	82.81	326	P	P	21 49 00.8	-0.7
	comp=Z,4.0nm,0.7s,baz=116,slow=6.8,SNR=9.9						
	comp=Z,4.0nm,0.7s						
ZALV	Zalesovo Beam	82.81	326	*e*P	P	21 49 00.8	-0.7
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PINM	Pinnacle	82.86	27	P	P	21 49 02.2	+0.5
	baz=246						
SCRK	Sand Creek	83.01	23	P	P	21 49 02.7	+0.2
	baz=242						
PNL	Peninsula	83.08	28	P	P	21 49 02.7	-0.1
	baz=246						
G24K	Hadweenzic Riv	83.11	20	P	P	21 49 02.9	+0.1
	baz=238						
M27K	Edge Creek, AK	83.11	25	P	P	21 49 03.8	+0.7
	baz=244,SNR=11						
E23K	Chandalar	83.15	18	P	P	21 49 03.2	+0.1
	baz=236						
O28M	Mount Upton	83.17	27	P	P	21 49 03.4	-0.2
	baz=246						
PRP	Porcupine Dome	83.18	21	P	P	21 49 03.5	+0.1
	baz=240						
D23K	Nanushuk River	83.34	17	P	P	21 49 04.6	+0.7
	baz=235,SNR=9.0						
B22K	Teshekpuk Lake	83.39	16	P	P	21 49 04.0	-0.2
	baz=232						
A22K	Sinclair Lake	83.40	15	P	P	21 49 04.0	-0.2
	baz=231						
F24K	Squaw Lake	83.40	19	P	P	21 49 04.1	-0.2
	baz=238						
J26L	Joseph Creek	83.42	23	P	P	21 49 04.3	-0.3
	baz=242						
L27K	Beaver Creek,	83.45	24	P	P	21 49 04.5	-0.1
	baz=244						
H25L	Birch Creek	83.45	21	P	P	21 49 04.8	+0.2
	baz=240						
YUK3	Moose Creek	83.47	26	P	P	21 49 04.8	-0.2
	baz=245						
TOLK	Toolik Lake Re	83.49	18	P	P	21 49 04.9	+0.1
	baz=236						
E24K	Your Creek	83.51	18	P	P	21 49 04.6	-0.4
	baz=237						
BVCY	Beaver Creek	83.57	25	P	P	21 49 05.7	+0.4
	baz=245						
YUK8	Steele Glacier	83.57	26	P	P	21 49 05.3	-0.3
	baz=246,SNR=5.4						
G25K	Bearman Lake	83.61	20	P	P	21 49 05.5	+0.1
	baz=240						
O29M	Mount Kennedy	83.71	27	P	P	21 49 06.4	+0.2
	baz=247						
K27K	Chicken	83.78	23	P	P	21 49 06.5	+0.2
	baz=244						
P29M	Windy Craggy	83.84	28	P	P	21 49 06.4	-0.3
	baz=248						
C23K	Itkillik River	83.86	17	P	P	21 49 06.9	+0.3
	baz=235						
I26K	Coal Creek Min	83.95	22	P	P	21 49 06.8	-0.3
	baz=242						
S31K	Pelican	83.96	30	P	P	21 49 06.4	-0.9
	baz=249						
D24K	Happy Valley	84.00	17	P	P	21 49 06.9	-0.4
	baz=237						
YUK6	Outpost Mounta	84.05	27	P	P	21 49 07.1	-1.0
	baz=247						
YUK4	Talbot Arm	84.08	26	P	P	21 49 07.8	-0.3
	baz=247						
SIT	Sitka	84.10	31	P	P	21 49 08.0	0.0
	baz=250						
F25K	Christian Rive	84.18	19	P	P	21 49 07.9	-0.4
	baz=240						
QSPA	South Pole Qui	84.31	180	P	P	21 49 09.2	0.0
QSPA	South Pole Qui	84.31	180	P	P	21 49 08.7	-0.4
	comp=Z,4.7nm,0.8s,baz=191,slow=1.1,SNR=57						
QSPA				pP	pP	21 49 44.0	-2.5
	comp=Z,7.1nm,0.8s,baz=335,slow=1.1,SNR=6.1						
	comp=Z,4.7nm,0.8s						
C24K	Franklin Bluff	84.35	17	P	P	21 49 08.8	-0.2
	baz=237						
P30M	Million Dollar	84.39	28	P	P	21 49 09.3	-0.3
	baz=248						
HYT	Haines Junctio	84.40	27	P	P	21 49 09.4	-0.2
	baz=248,SNR=5.8						
PLBC	Pleasant Camp	84.42	29	P	P	21 49 08.9	-0.7
	baz=249						
G26K	Porcupine Rive	84.50	20	P	P	21 49 09.5	-0.3
	baz=242						
M29M	Somme Creek	84.60	25	P	P	21 49 09.4	-1.2
	baz=247						
S32K	Killisnoo	84.62	31	P	P	21 49 09.5	-1.1
	baz=251						
I27K	Kandik River	84.66	22	P	P	21 49 09.6	-1.2
	baz=244						
F26K	Sheenjek River	84.73	20	P	P	21 49 10.5	-0.6
	baz=241						
CRAG	Craig	84.75	33	P	P	21 49 10.2	-1.2
	baz=252						
KSH	Kashi	84.79	310	P	P	21 49 13.6	+1.5
KSH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
N30M	Aishikik Lake	84.82	27	P	P	21 49 10.5	-1.2
	baz=248						
D25K	Kavik River	84.83	18	P	P	21 49 10.2	-1.3
	baz=239						
DAWY	Dawson	84.86	24	P	P	21 49 11.0	-0.8
	baz=246						
R32K	Eaglecrest	84.92	30	P	P	21 49 10.9	-1.3
	baz=251						
U33K	Whale Pass	84.95	32	P	P	21 49 10.7	-1.6
	baz=252						
H27K	Steamboat Moun	84.97	21	P	P	21 49 10.7	-1.6
	baz=244						
L29M	L29M	85.00	25	P	P	21 49 10.7	-1.8
	baz=247						
O30N	Mendenhall	85.02	27	P	P	21 49 10.7	-2.0
	baz=249						
G27K	Doyon Strip	85.18	21	P	P	21 49 12.1	-1.2
	baz=244						
I28M	Miner Creek	85.22	22	P	P	21 49 12.7	-0.9
	baz=245						
N31M	Braeburn, Yuko	85.42	27	P	P	21 49 13.5	-1.1
	baz=250						
MAW	Mawson	85.45	203	P	P	21 49 13.3	-1.3
	comp=Z,7.3nm,0.9s,baz=110,slow=6.6,SNR=5.6						
	comp=Z,7.3nm,0.9s						
WRAK	Wrangell Islan	85.46	32	P	P	21 49 13.4	-1.4
	baz=253						
J29N	Klondike Camp	85.49	24	P	P	21 49 13.6	-1.3
	baz=247						
KURK	Kurchatov	85.49	322	*i* P	P	21 49 14.6	-0.5
KURK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KURBB	Kurchatov Arra	85.53	322	P	P	21 49 14.3	-1.0
	comp=Z,0.8nm,0.4s,baz=122,slow=3.2,SNR=4.8						
KURBB				PP	PP	21 52 35.2	-0.8
	comp=Z,0.2nm,0.3s,baz=105,slow=7.4,SNR=4.5						
	comp=Z,0.8nm,0.4s						
K29M	Barlow Dome	85.53	24	P	P	21 49 14.2	-1.0
	baz=248						
V35K	Ketchikan	85.54	33	P	P	21 49 14.1	-1.1
	baz=254						
WHY	Whitehorse	85.54	28	P	P	21 49 14.0	-1.4
	baz=250						
C26K	Camden Bay	85.58	18	P	P	21 49 14.1	-1.0
	baz=240						
P32M	Atlin	85.74	29	P	P	21 49 16.5	+0.2
	baz=251						
C27K	Jago River	85.80	18	P	P	21 49 16.8	+0.6
	baz=242						
I29M	Ogilvie Camp,	85.81	23	P	P	21 49 16.8	+0.4
	baz=247						
E27K	Coleen River	85.81	20	P	P	21 49 16.5	+0.1
	baz=244						
H29M	Whitestone	86.12	22	P	P	21 49 18.1	+0.2
	baz=247						
F28M	Old Crow	86.15	20	P	P	21 49 17.9	-0.2
	baz=245						
Q32M	Nakina River	86.25	30	P	P	21 49 18.2	-0.7
	baz=253						
M31M	Drury Creek, Y	86.28	26	P	P	21 49 18.5	-0.4
	baz=251						
J30M	Hart River	86.29	24	P	P	21 49 19.0	+0.1
	baz=249						
P33M	Teslin, Yukon	86.37	29	P	P	21 49 19.4	0.0
	baz=252						
D27M	Malcolm River	86.49	19	P	P	21 49 20.2	+0.4
	baz=244						
AAK	Ala-Archa	86.50	313	*i* P	P	21 49 20.0	-0.5
I30M	Mount Dempster	86.51	23	P	P	21 49 19.8	-0.2
	baz=249						
S34M	Telegraph Cree	86.52	31	P	P	21 49 20.4	+0.3
	baz=254						
G29M	Pine Creek	86.53	21	P	P	21 49 19.8	-0.2
	baz=247						
N32M	Quiet Lake	86.53	28	P	P	21 49 20.6	+0.5
	baz=252						
E28M	Babbage River	86.68	20	P	P	21 49 20.9	+0.3
	baz=246						
T35M	Bob Quinn	86.73	32	P	P	21 49 21.1	0.0
	baz=255						
FARO	Faro, Yukon	86.75	27	P	P	21 49 21.0	-0.2
	baz=252						
EPYK	Eagle Plains	86.80	22	P	P	21 49 21.0	-0.3
	baz=248						
R33M	Jennings River	87.02	30	P	P	21 49 22.0	-0.6
	baz=254						
E29M	Blow River	87.15	20	P	P	21 49 22.9	+0.1
	baz=247						
G30M	tAoh Zraii Nji	87.21	22	P	P	21 49 23.0	-0.2
	baz=249						
DLBC	Dease Lake	87.23	31		P	21 49 24.4	+0.8
DLBC	Dease Lake	87.23	31	P	P	21 49 22.8	-0.7
	baz=255,SNR=5.1						
D28M	Stokes Point	87.24	19	P	P	21 49 23.1	-0.2
	baz=246						
NRIK	Noril'sk	87.32	341	P	P	21 49 22.9	-0.8
NRIK	Noril'sk	87.32	341	P	P	21 49 22.9	-0.8
NRIK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
H31M	Peel River	87.51	23	P	P	21 49 23.8	-0.9
	baz=250						
F30M	Barrier River	87.59	21	P	P	21 49 24.6	-0.4
	baz=249						
MMPY	Sheldon Lake,	87.80	26	P	P	21 49 26.2	0.0
	baz=253						
G31M	Satah River	87.91	22	P	P	21 49 26.5	+0.1
	baz=251						
F31M	Tsiigehtchic	88.27	22	P	P	21 49 28.0	-0.1
	baz=251						
INK	Inuvik	88.63	21	P	P	21 49 29.6	-0.2
	baz=251						
TOAD	Toad River Com	89.76	31	P	P	21 49 35.7	+0.2
	baz=259						
BEAVL	Fort Liard	90.10	30	P	P	21 49 37.4	+0.4
	baz=259						
KOTAN	Kotaneelee Air	90.59	30	P	P	21 49 40.5	+1.3
	baz=260						
BVAR	Borovoye Array	90.95	323	P	P	21 49 39.8	-1.2
	comp=Z,5.9nm,0.9s,baz=103,slow=5.1,SNR=6.7						
	comp=Z,5.9nm,0.9s						
BRVK	Borovoye	91.02	323	*i* P	P	21 49 41.3	0.0
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NVAR	Mina Array Bea	91.26	52	P	P	21 49 43.5	+0.3
NVAR	Mina Array Bea	91.26	52	P	P	21 49 43.1	0.0
	comp=Z,2.6nm,1.0s,baz=246,slow=4.5,SNR=10						
NVAR				pP	pP	21 50 20.4	-0.8
	comp=Z,2.8nm,0.9s,baz=240,slow=4.6,SNR=5.3						
	comp=Z,2.6nm,1.0s						
C36M	Paulatuk	92.22	21	P	P	21 49 47.2	+0.7
	baz=260						
PFO	Pinyon Flats O	92.27	57		P	21 49 48.8	+1.0
PFO				IAmb	IAmb	21 49 51.4	
	comp=Z,10nm,1.2s						
PFO	Pinyon Flats O	92.27	57	*i* P	P	21 49 47.9	+0.1
PFO				pmax	pmax		
	comp=Z,11nm,1.0s						
A36M	Sachs Harbour	92.32	18	P	P	21 49 47.6	+0.7
	baz=259						

NEW	Newport	93.08	42	LR	LR	22 28 21.7	
	comp=Z,80nm,19.2s,baz=268,slow=33						
SYO	Syowa Base	93.44	199	⇑eP	P	21 49 52.7	+0.5
SYO	Syowa Base	93.44	199	⇓ePcP	PcP	21 49 54.7	+2.0
PRN	Pahroc Range	93.73	53	P	P	21 49 54.8	+0.4
YKA	Yellowknife Ar	95.37	28	P	P	21 50 00.9	-0.2
	comp=Z,1.3nm,1.0s,baz=279,slow=5.0,SNR=7.4						
YKA				pP	pP	21 50 38.1	-1.5
	comp=Z,1.1nm,0.9s,baz=294,slow=5.2,SNR=3.5						
	comp=Z,1.3nm,1.0s						
YKA	Yellowknife Ar	95.37	28	eP	P	21 50 02.4	+1.2
PDAR	Pinedale Array	98.15	48	LR	LR	22 28 44.1	
	comp=Z,28nm,21.1s,baz=288,slow=32						
TROLL	Troll, Antarti	100.38	189	⇑Pdiff	Pdif	21 50 23.3	-0.4
	comp=Z,97nm,1.4s						
OBN	Obninsk	110.37	327	d iPKIKP	PKiKP	21 55 08.0	-0.4
OBN				e		21 55 47.5	
OBN				ePPP	PPP	21 58 06.7	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AKASG	Malin Array Be	116.18	325	PP	PP	21 56 26.4	-0.3
	comp=Z,0.1nm,0.3s,baz=52,slow=7.3,SNR=5.3						

BJI ***08*** *21:39:04.1, 31.°97N×141.°81E, h16^{km}, mB4.7/12, mb4.5/42, Ms4.1/21, Ms7 4.0/21*

IDC ***08*** *21:39:05.0±0.6, 31.°98N×141.°69E, h0^{km}, mb4.4/17, mbtmp4.3/22, ML3.3/4, MS3.5/8, Error ellipse: s-maj=21.4km s-min=13.5km az=71.0*

MOS ***08*** *21:39:04.8±0.8, 31.°96N×141.°66E, h9^{km}, mb4.8/33, Error ellipse: s-maj=12.1km s-min=6.1km az=124.4*

JMA ***08*** *21:39:07.0±0.7, 32°N±2°×14°2E±°, h23^{km}, MV4.2/31, E OFF HACHIJOJIMA ISLAND*

NIED ***08*** *21:39:07.0, 32.°12N×141.°87E, h23^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$2.41; M$_{\theta\theta}$-0.09; M$_{\phi\phi}$-2.32; M$_{r\theta}$-1.73; M$_{\theta\phi}$0.59; M$_{\phi r}$3.55; Fault plane solution: M$_{0}$4.64000×10^{15} NP1: φ$_{s}$176.00000°, δ17.00000°, λ109.00000°. NP2: φ$_{s}$336.00000°, δ74.00000°, λ84.00000°.*

NEIC ***08*** *21:39:07.1±1.2, 32.°00N±0.°02×141.°73E±0.°08, h10^{km}±1^{km}, mb4.8/64 Error ellipse: s-maj=11.7km s-min=2.8km az=92.0*

ISC 08 21:39:06.2±0.4**, 32.°01N**±0.°04×**141.°71E**±0.°05**, h10^{km}, n216, σ1^{s}41**/219**, mb4.8**/74**, MS3.8**/12**, 11C-3D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.71	286	P	Pg	21 39 37.7	-1.3
JHCJ	Hachijojimakas	1.93	304	eP	Pb	21 39 39.6	-1.9
JHJ2	Mitsune	1.94	305		Pb	21 39 40.4	-1.2
JHJ2				Sn	Sb	21 40 05.1	-0.8
JHJ2	Mitsune	1.94	305	P	Pb	21 39 40.4	-1.2
JHJ2	Mitsune	1.94	305	eP	Pb	21 39 39.9	-1.8
BSO1	Boso 1	2.70	347	eP	Pn	21 39 50.0	+0.7
JOD2	Odawara 2	3.91	327	eP	Pn	21 40 07.9	+1.5
JHMK	Hamakita	4.33	311	eP	Pn	21 40 13.9	+1.9
JYN	Shimob	4.36	324	P	Pn	21 40 15.2	+2.5
HMMJ	Hamamatsu 2	4.38	311	eP	Pn	21 40 14.8	+2.0
JYT	Yasato	4.39	344	eP	Pn	21 40 14.3	+1.4
JRY	Ryogami san	4.62	330	eP	Pn	21 40 17.2	+1.0
CBIJ	Chichi jima	4.92	175	eP	Pn	21 40 20.6	+0.3
CBIJ				eS	Sn	21 41 13.2	-4.0
JCJ	Chichijima	4.92	175		Pn	21 40 20.3	+0.1
JCJ	Chichijima	4.92	175	Pn	Pn	21 40 18.2	-2.0
	60nm,0.3s,baz=78,slow=22,SNR=18						
JCJ				Sn	Sn	21 41 11.7	-5.5
	39nm,0.3s,baz=276,slow=23,SNR=5.2						
JCJ	Chichijima	4.92	175	P	Pn	21 40 20.7	+0.5
JCJ	Chichijima	4.92	175	S	Sn	21 41 13.9	-3.3
JGF	Kuroka	5.09	316		Pn	21 40 25.4	+2.7
JGF	Kuroka	5.09	316	P	Pn	21 40 26.1	+3.5
INU	Inuyama	5.13	312		Pn	21 40 25.1	+1.9
INU	Inuyama	5.13	312	P	Pn	21 40 28.0	+4.8
MJAR	Matsushiro Arr	5.37	328	Pn	Pn	21 40 26.9	+0.5
	0.9nm,0.3s,baz=150,slow=12,SNR=64						
MJAR				LR	LR	21 42 48.5	
	comp=Z,201nm,20.8s,baz=128,slow=41						
	12nm,0.5s						
MAJO	Matsushiro	5.37	328		Pn	21 40 28.2	+1.8
MAJO	Matsushiro	5.37	328	P	Pn	21 40 28.2	+1.8
MAJO	Matsushiro	5.37	328	i P	Pn	21 40 28.4	+2.0
MAT	Matsushiro	5.37	328	P	Pn	21 40 28.4	+2.0
MAT				eS	Sn	21 41 29.0	+0.7
MJB9	Matsu-Tunnel	5.37	328		Pn	21 40 29.2	+2.7
JHH2	Haha-jima-NKT2	5.38	176	eP	Pn	21 40 26.6	0.0
JHH2				eS	Sn	21 41 29.0	+0.5
JFK	Kawauchi	5.38	353	eP	Pn	21 40 25.5	-1.1
JFK				eS	Sn	21 41 23.2	-5.5
JMM	Marumori	5.89	353		Pn	21 40 32.6	-0.9
JMM	Marumori	5.89	353	P	Pn	21 40 32.6	-0.9
JSD	Sado	6.64	336	P	Pn	21 40 44.5	+0.6
JMN	Monobe	6.81	287	Pn	Pn	21 40 45.9	-0.3
JMN	Monobe	6.81	287	P	Pn	21 40 48.9	+2.7
JTM	Tenmabayashi	8.77	357	P	Pn	21 41 13.0	-0.1
JNU	Nakatsue	9.21	280	Pn	Pn	21 41 19.5	+0.3
JNU	Nakatsue	9.21	280	Pn	Pn	21 41 20.5	+1.4
	0.2nm,0.3s,baz=19,slow=16,SNR=2.5						
JNU				LR	LR	21 44 49.9	
	comp=Z,194nm,21.3s,baz=118,slow=38						
	4.2nm,0.8s						
ERM	Erimo	10.05	6	Pn	Pn	21 41 28.0	-2.6
ERM	Erimo	10.05	6	P	Pn	21 41 28.8	-1.8
ERM	Erimo	10.05	6	i P	Pn	21 41 29.0	-1.6
JEM	Erimo	10.05	6	P	Pn	21 41 29.8	-0.8
ASAJ	Asahikawa	12.10	3	Pn	Pn	21 41 55.4	-3.3
	1.3nm,0.3s,baz=219,slow=15,SNR=11						
KSRS	Korea Array	12.57	299	Pn	Pn	21 42 07.5	+2.4
	0.2nm,0.3s,baz=109,slow=13,SNR=10.0						
	1.5nm,0.6s						
JOW	Kunigami	12.79	250	LR	LR	21 47 00.0	
	comp=Z,162nm,18.4s,baz=146,slow=37						
YSS	Yuzhno-Sakhali	14.94	3	eP	Pn	21 42 32.7	-4.8
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YSS				MLR	MLR		
	comp=N,200nm,14.0s						
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
YSS				MLR	MLR		
	comp=E,300nm,15.0s						
CN2	Changchun	17.38	317	eP	P	21 43 10.2	+0.1
CN2				eS	Sn	21 46 22.2	+0.1
CN2				LR	LR		
	comp=E,120nm,16.0s						
CN2				LR	LR		
	comp=E,210nm,16.0s						
BNX	BinXian	17.62	325	⇓P	Pn	21 43 10.8	-1.0
BNX				pmax	pmax		
	comp=E,3.0nm,0.6s						
YOJ	Yonaguni jima	18.10	250		P	21 43 19.0	+0.8
YOJ	Yonaguni jima	18.10	250	P	P	21 43 19.9	+1.7
YOJ	Yonaguni jima	18.10	250	P	P	21 43 19.0	+0.8
YOJ				pmax	pmax		
	comp=Z,190nm,1.3s						
KLR	Kul'dur	18.76	339	P	P	21 43 23.9	-1.4
	comp=Z,0.3nm,0.3s,baz=135,slow=10,SNR=16						
	comp=Z,3.8nm,0.6s						
KLR	Kul'dur	18.76	339	ceP	Pn	21 43 25.9	+0.2
KLR				pmax	pmax		
	comp=Z,9.0nm,1.7s						
GRNR	Gornyy	19.14	350	eP	P	21 43 28.2	-1.3
YHNB	Yeheng	19.32	253	P	Pn	21 43 33.4	+0.7
NACB	Ninganchiao	19.37	251	P	Pn	21 43 33.0	-0.3
NJ2	Nanjing	19.38	276	eP	Pn	21 43 32.7	-0.6
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
YULB	Yu-li	19.98	250		Pn	21 43 38.3	-2.4
YULB	Yu-li	19.98	250	P	Pn	21 43 39.2	-1.4
SSLB	Suanglung	20.07	251	P	Pn	21 43 42.3	+0.7
HEH	HeiHe	21.10	334	eP	P	21 43 50.7	-0.1
XLT	XiLinHaoTe	23.33	308	eP	P	21 44 15.4	+0.7
XLT				pmax	pmax		
	comp=Z,11nm,0.8s						
XLT				LR	LR		
	comp=Z,170nm,14.1s						
XLT				LR	LR		
	comp=Z,170nm,14.4s						
ZEA	Zeya	24.07	339	eP	P	21 44 22.7	+1.1
ZEA				pmax	pmax		
	comp=N,20nm,0.8s						
ZEA				pmax	pmax		
	comp=E,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,40nm,0.8s						
HHC	Hu-ho-hao-te	25.71	299	eP	P	21 44 37.0	+0.3
HHC				pmax	pmax		
	comp=Z,13nm,0.5s						
HHC				pmax	pmax		
	comp=Z,84nm,4.4s						
HHC				LR	LR		
	comp=Z,120nm,11.6s						
HHC				LR	LR		
	comp=Z,160nm,11.4s						
HHC				LR	LR		
	comp=Z,170nm,12.7s						
XAN	Xi'an	27.50	283	⇓P	P	21 44 51.8	-1.1
XAN				pmax	pmax		
	comp=Z,16nm,0.7s						
XAN				pmax	pmax		
	comp=Z,140nm,3.7s						
ULN	Ulaanbaatar	30.62	311		P	21 45 21.2	+0.6
ULN	Ulaanbaatar	30.62	311	i P	P	21 45 21.2	+0.6
ULN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
YAK	Yakutsk	31.02	349	P	P	21 45 24.1	+0.3
YAK				IAmb	IAmb	21 45 24.9	
	comp=Z,9.5nm,0.9s						
YAK	Yakutsk	31.02	349	ceP	P	21 45 24.6	+0.8
YAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SONM	Songino Array	31.03	311	P	P	21 45 25.1	+0.9
SONM	Songino Array	31.03	311	P	P	21 45 25.2	+0.9
	comp=Z,2.4nm,0.6s,baz=122,slow=7.6,SNR=15						
	comp=Z,2.4nm,0.6s						
QIZ	Qiongzhong	31.40	253	P	P	21 45 26.8	-0.8
QIZ				S	S	21 50 37.7	+2.4
QIZ				pmax	pmax		
	comp=Z,140nm,4.3s						
QIZ				LR	LR		
	comp=Z,150nm,16.1s						
QIZ				LR	LR		
	comp=Z,130nm,20.5s						
SEY	Seymchan	31.68	9	ceP	P	21 45 30.6	+1.1
SEY				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GTA	Gaotai	34.56	294	eP	P	21 45 54.8	-0.4
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				LR	LR		
	comp=Z,140nm,13.8s						
GTA				LR	LR		
	comp=Z,110nm,15.6s						
GTA				LR	LR		
	comp=Z,190nm,15.3s						
PZH	PanZhiHua	35.16	271	P	P	21 46 02.7	+2.2
FAKI	Fak Fak	35.88	196	P	P	21 46 06.5	-0.1
GOMU	GeErMu	38.76	289	P	P	21 46 31.4	+0.1
GOMU				pP	pwP	21 46 36.0	-3.8
GOMU				sP	sP	21 46 41.1	+7.7
GOMU				pmax	pmax		
	comp=Z,23nm,0.8s						
BILL	Bilibino	38.79	14	i P	P	21 46 31.7	+1.0
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CMAR	Chiang Mai Arr	40.71	261	LR	LR	22 04 39.5	
	comp=Z,19nm,19.0s,baz=75,slow=38						
WMQ	Urumqi	43.51	302	eP	P	21 47 12.3	+2.4
ZAA0	Zalesovo Array	45.59	316		P	21 47 26.6	+0.3
ZAA0				IAmb	IAmb	21 49 02.7	
	comp=Z,5.6nm,0.8s						
ZALV	Zalesovo Beam	45.59	316		P	21 47 26.4	+0.1
ZALV	Zalesovo Beam	45.59	316	P	P	21 47 25.4	-0.9
	comp=Z,2.8nm,0.6s,baz=91,slow=6.7,SNR=13						
	comp=Z,2.8nm,0.6s						
ZALV	Zalesovo Beam	45.59	316	P	P	21 47 26.4	+0.1
COEN	Coen	45.73	178	P	P	21 47 28.2	+0.5
MTN	Manton Dam	45.74	194	P	P	21 47 27.3	-0.5
MK31	Makanchi Array	47.13	306	ceP	P	21 47 39.1	+0.5
MKAR	Makanchi Array	47.13	306		P	21 47 39.3	+0.7
MKAR	Makanchi Array	47.13	306	P	P	21 47 38.5	-0.1
	comp=Z,8.4nm,0.7s,baz=90,slow=9.5,SNR=76						
	comp=Z,8.4nm,0.7s						
MKAR	Makanchi Array	47.13	306	i P	P	21 47 39.5	+0.9
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
EVN	Everest	47.30	280		P	21 47 40.6	-0.3
EVN				IAmb	IAmb	21 48 11.2	
	comp=Z,9.9nm,0.9s						
MAKZ	Makanchi	47.35	306		P	21 47 40.9	+0.6
MAKZ				IAmb	IAmb	21 47 42.0	
	comp=Z,8.7nm,0.8s						
MAKZ	Makanchi	47.35	306	P	P	21 47 40.9	+0.6
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KNRA	Kununurra	49.02	197	P	P	21 47 53.3	0.0
KURK	Kurchatov	49.33	312		P	21 47 56.0	+0.5
KURK	Kurchatov	49.33	312	ceP	P	21 47 55.4	-0.1
KURK				pmax	pmax		
	comp=Z,20nm,0.7s						
KURBB	Kurchatov Arra	49.39	312	P	P	21 47 55.9	0.0
	comp=Z,11nm,0.6s,baz=88,slow=7.3,SNR=132						
	comp=Z,11nm,0.6s						
C19K	Lookout Ridge	49.40	24	P	P	21 47 57.7	+1.9
E19K	Redstone River	49.81	26		P	21 47 59.5	+0.5
WUS	Wushi	50.04	299		P	21 48 01.5	+0.3
K20K	Telida	50.40	32	P	P	21 48 04.3	+0.9
IMAR	Indian Mountai	50.89	28	P	P	21 48 07.5	+0.4
TARG	Taragay, Kyrgy	50.98	300	P	P	21 48 09.1	+0.4
TARG	Taragay, Kyrgy	50.98	300	P	P	21 48 09.1	+0.4
TARG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
D22K	Ayikyak River	51.77	25	P	P	21 48 15.8	+2.1
SUA	Susitna One	51.79	34	P	P	21 48 14.4	+0.4
WB0	Warramunga Arr	51.96	189		P	21 48 15.3	-0.2
WB0				IAmb	IAmb	21 48 15.8	
	comp=Z,9.7nm,0.7s						
E22K	Anaktuvuk Pass	51.97	26	P	P	21 48 16.2	+1.1
MLY	Manley	52.02	30		P	21 48 16.6	+1.0
MLY				IAmb	IAmb	21 48 54.0	
	comp=Z,39nm,2.0s						
WRA	Warramunga Arr	52.14	189	P	P	21 48 15.8	-1.1
WRA	Warramunga Arr	52.14	189	P	P	21 48 16.5	-0.4
	comp=Z,8.0nm,0.6s,baz=3.8,slow=7.6,SNR=58						
	comp=Z,8.0nm,0.6s						
FITZ	Fitzroy Crossi	52.15	199	P	P	21 48 16.6	-0.4
FITZ	Fitzroy Crossi	52.15	199	P	P	21 48 17.2	+0.2
	comp=Z,2.2nm,0.6s,baz=24,slow=10,SNR=5.8						
	comp=Z,2.2nm,0.6s						
BOOM	Boomskoye usch	52.20	301	P	P	21 48 18.0	+0.5
BOOM				IAmb	IAmb	21 48 19.2	
	comp=Z,20nm,1.7s						
BOOM	Boomskoye usch	52.20	301	P	P	21 48 18.0	+0.5
BOOM				pmax	pmax		
	comp=Z,20nm,1.7s						
G23K	Bananza Creek	52.47	28	P	P	21 48 20.0	+1.0
G23K				IAmb	IAmb	21 49 00.8	
	comp=Z,27nm,1.9s						
KSH	Kashi	52.81	298	P	P	21 48 25.5	+3.5
KSH				pP	pwP	21 48 30.5	-1.3
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AAK	Ala-Archa	53.22	302		P	21 48 24.9	0.0
AAK	Ala-Archa	53.22	302	LR	LR	22 13 32.4	
	comp=Z,78nm,18.5s,baz=54,slow=39						
AAK	Ala-Archa	53.22	302	ceP	P	21 48 25.4	+0.4
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
IL31		53.65	30	P	P	21 48 27.6	+0.1
IL31				IAmb	IAmb	21 48 59.2	
	comp=Z,23nm,1.8s						
ILAR	Eielson Array	53.65	30	P	P	21 48 28.0	+0.4
	comp=Z,1.9nm,0.7s,baz=266,slow=5.7,SNR=12						
	comp=Z,1.9nm,0.7s						
BVAR	Borovoye Array	54.21	315	P	P	21 48 32.7	+0.8
	comp=Z,3.8nm,0.6s,baz=85,slow=7.9,SNR=20						
	comp=Z,3.8nm,0.6s						
BRVK	Borovoye	54.27	315		P	21 48 33.0	+0.7
BRVK	Borovoye	54.27	315	ceP	P	21 48 32.9	+0.6
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARSB	Arslanbob	54.61	301	P	P	21 48 35.7	+0.6
ARSB				IAmb	IAmb	21 48 37.1	
	comp=Z,4.6nm,0.8s						
ARSB	Arslanbob	54.61	301	P	P	21 48 35.7	+0.6
ARSB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SCRK	Sand Creek	54.91	31		P	21 48 37.5	+0.6
SCRK				IAmb	IAmb	21 49 04.3	
	comp=Z,23nm,1.8s						
ARK	Arkit	55.24	301	P	P	21 48 40.9	+1.2
ARK				pmax	pmax		
	comp=Z,11nm,0.8s						
AS31	Alice Springs	55.87	189		P	21 48 44.1	-0.1
AS31				IAmb	IAmb	21 48 46.3	
	comp=Z,3.0nm,0.5s						
ASAR	Alice Springs	55.87	189	P	P	21 48 43.9	-0.2
ASAR	Alice Springs	55.87	189	P	P	21 48 44.4	+0.2
	comp=Z,2.3nm,0.5s,baz=1.9,slow=6.4,SNR=40						
ASAR				LR	LR	22 10 08.7	
	comp=Z,61nm,21.9s,baz=91,slow=33						
	comp=Z,2.3nm,0.5s						
H27K	Steamboat Moun	55.87	28	P	P	21 48 45.0	+1.3
TRKS	Terek-Say	55.90	301	P	P	21 48 45.5	+1.0
TRKS				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KK31	Karatay Array	55.96	303		P	21 48 45.6	+0.9
KK31				IAmb	IAmb	21 48 46.3	
	comp=Z,8.6nm,0.7s						
KK31	Karatay Array	55.96	303	P	P	21 48 45.6	+0.9
KK31				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KKAR	Karatay Array	55.96	303		P	21 48 45.6	+0.8
KKAR	Karatay Array	55.96	303	P	P	21 48 45.6	+0.8
BTK	Batken	56.52	300		P	21 48 49.5	+0.6
BTK				IAmb	IAmb	21 48 58.6	
	comp=Z,4.1nm,0.8s						
BTK	Batken	56.52	300	P	P	21 48 49.5	+0.6
BTK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NIL	Nilore	56.55	292		P	21 48 50.0	+0.9
NIL				IAmb	IAmb	21 48 51.7	
	comp=Z,9.0nm,0.8s						
NIL	Nilore	56.55	292	P	P	21 48 50.0	+0.9
NIL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MBWA	Marble Bar	56.91	205	P	P	21 48 51.2	-0.3
EPYK	Eagle Plains	57.79	28	P	P	21 48 58.6	+1.3
HYT	Haines Junctio	58.23	35		P	21 49 01.6	+0.9
SIMJ	Simiganj	58.27	298		P	21 49 01.6	+0.3
SIMJ				IAmb	IAmb	21 49 02.7	
	comp=Z,13nm,0.8s						
DZET	Dzherino	58.36	299	P	P	21 49 02.7	+0.8
DZET				pmax	pmax		
	comp=Z,21nm,0.6s						
INK	Inuvik	58.77	26	P	P	21 49 05.0	+0.9
INK				IAmb	IAmb	21 49 31.4	
	comp=Z,6.5nm,1.2s						
INK	Inuvik	58.77	26	P	P	21 49 05.0	+0.9
INK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SVE	Sverdlovsk	59.12	321	eP	P	21 49 07.7	+1.0
SVE				pmax	pmax		
	comp=Z,9.0nm,1.0s						
WHY	Whitehorse	59.53	35	P	P	21 49 09.9	+0.3
FARO	Faro, Yukon	59.92	33	P	P	21 49 13.2	+1.0
FARO				IAmb	IAmb	21 49 23.1	
	comp=Z,16nm,1.5s						
ARTI	Arti	60.44	321		P	21 49 16.2	+0.4
ARTI				IAmb	IAmb	21 49 21.1	
	comp=Z,6.5nm,0.6s						
ARTI	Arti	60.44	321	c iP	P	21 49 15.9	+0.1
ARTI						21 50 00.5	
ARTI						21 51 25.5	
ARTI				S	S	21 57 32.5	+1.7
ARTI				SS	SS	22 01 28.6	+0.6
ARTI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ABKAR	Akbulak array	61.43	312		P	21 49 23.1	+0.5
ABKAR	Akbulak array	61.43	312		P	21 49 23.1	+0.5
ABKAR				IAmb	IAmb	21 49 23.9	
	comp=Z,9.0nm,1.1s						
KIRV	Kirov	64.43	325	ceP	P	21 49 43.5	+1.1
HRA	Herat	64.85	296	P	P	21 49 46.6	+0.7
HRA				IAmb	IAmb	21 49 47.8	
	comp=Z,5.1nm,0.7s						
KLMR	Klimovskoe	68.15	329	eP	P	21 50 04.3	-1.9
KLMR				pmax	pmax		
	comp=Z,15nm,2.0s						
MAK	Makhachkala	71.79	310	eP	P	21 50 23.2	-5.7
MAK				eS	S	21 59 41.8	-7.5
MAK				eSS	SS	22 04 21.7	-2.9
MAK				pmax	pmax		
	comp=Z,52nm,1.1s						
MAK				MLR	MLR		
	comp=Z,126nm,17.0s						
OBN	Obninsk	72.28	324	deP	P	21 50 32.4	+0.8
OBN				e		21 53 11.1	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,60nm,16.0s						
FIA1	FINESS Array S	73.38	333	P	P	21 50 38.0	-0.1
FINES	FINESS Array B	73.38	333	P	P	21 50 38.1	+0.1
FINES	FINESS Array B	73.38	333	P	P	21 50 38.5	+0.5
	comp=Z,3.3nm,0.8s,baz=45,slow=6.0,SNR=11						
	comp=Z,3.3nm,0.8s						
UOSS	Minazif	73.64	289	P	P	21 50 40.3	+0.1
UOSS				IAmb	IAmb	21 50 46.8	
	comp=Z,10.0nm,1.1s						
BLKN	Baker Lake	73.91	23	P	P	21 50 41.3	+0.1
BLKN				IAmb	IAmb	21 50 45.4	
	comp=Z,16nm,1.8s						
KBZ	Khabaz	74.39	312	P	P	21 50 45.2	+0.9
	comp=Z,2.7nm,0.8s,baz=67,slow=2.2,SNR=7.0						
	comp=Z,2.7nm,0.8s						
KBZ	Khabaz	74.39	312	ceP	P	21 50 45.7	+1.4
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KIV	Kislovodsk	74.41	312	eP	P	21 50 45.7	+1.1
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,37nm,18.0s						
GNI	Garni	74.94	308	i P	P	21 50 49.6	+1.8
GNI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SUMG	Summit	75.69	0	P	P	21 50 53.2	+1.4
SUMG	Summit	75.69	0	P	P	21 50 53.2	+1.4
SUMG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GURO	Guroymak-BITLI	77.56	308	P	P	21 51 03.7	+1.0
LRM	Limekiln Ridge	77.59	44	P	P	21 51 03.5	+0.6
PABE	Paberze	77.94	329	P	P	21 51 04.5	+0.2
PABE				IAmb	IAmb	21 51 25.5	
	comp=Z,16nm,1.2s						
AKASG	Malin Array Be	78.43	323	P	P	21 51 07.3	+0.2
	comp=Z,1.9nm,0.6s,baz=50,slow=5.7,SNR=9.7						
	comp=Z,1.9nm,0.6s						
AKBB	Malin Array Si	78.43	323	ceP	P	21 51 06.9	-0.2
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HFS	Hagfors	78.76	336	P	P	21 51 09.2	+0.4
	comp=Z,2.2nm,0.6s,baz=92,slow=7.6,SNR=8.0						
	comp=Z,2.2nm,0.6s						
NB2	NORSAR Subarra	78.91	338	P	P	21 51 09.4	-0.2
	comp=Z,0.9nm,0.6s,baz=41,slow=5.6						
NOA	NORSAR Array B	78.91	338	P	P	21 51 09.9	+0.3
	comp=Z,2.8nm,0.9s,baz=41,slow=5.4,SNR=9.1						
	comp=Z,2.8nm,0.9s						
HVU	Hansel Valley	79.62	47	P	P	21 51 15.5	+1.5
HVU	Hansel Valley	79.62	47	P	P	21 51 15.5	+1.5
HVU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TPNV	Topopah Spring	79.99	53	P	P	21 51 16.8	+0.7
TPNV	Topopah Spring	79.99	53	P	P	21 51 16.8	+0.7
TPNV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PDAR	Pinedale Array	81.03	45	P	P	21 51 22.9	+1.2
	comp=Z,0.5nm,0.5s,baz=245,slow=6.4,SNR=4.5						
	comp=Z,0.5nm,0.5s						
ILGA	Ilgaz	81.56	313		P	21 51 25.4	+0.9
ILGA				IAmb	IAmb	21 51 27.0	
	comp=Z,12nm,0.8s						
PFO	Pinyon Flats O	81.64	56	LR	LR	22 22 20.7	
	comp=Z,40nm,19.3s,baz=224,slow=32						
BR131	Keskin Array S	82.38	312		P	21 51 28.8	0.0
BR131	Keskin Array S	82.38	312	P	P	21 51 28.8	0.0
BR131				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BRTR	Keskin Array B	82.38	312		P	21 51 29.0	+0.3
BRTR	Keskin Array B	82.38	312	P	P	21 51 29.6	+0.9
	comp=Z,1.2nm,0.8s,baz=103,slow=4.3,SNR=10						

	comp=Z,1.2nm,0.8s						
BUR08	Bucovina Ar. S	82.40	322		P	21 51 29.1	+0.5
BUR08				IAmb	IAmb	21 52 36.2	
	comp=Z,17nm,2.0s						
BURAR	Bucovina Array	82.41	322	P	P	21 51 29.2	+0.5
RAYN	Ar Rayn	82.81	293		P	21 51 31.9	+0.7
RAYN				IAmb	IAmb	21 51 32.8	
	comp=Z,5.1nm,0.8s						
RAYN	Ar Rayn	82.81	293	P	P	21 51 31.9	+0.7
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KOLS	Kolonicke sedl	83.03	325	*e*P	P	21 51 33.4	+1.6
KOLS	Kolonicke sedl	83.03	325	*e*P	P	21 51 33.4	+1.6
OJC	Ojcow	83.35	327	P	P	21 51 34.6	+1.2
OJC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
NIE	Niedzica	83.66	326	P	P	21 51 36.8	+1.7
PV05	Paradox Valley	84.05	49	P	P	21 51 38.2	+0.7
PV05				IAmb	IAmb	21 54 46.5	
	comp=Z,5.5nm,0.7s						
MORC	Moravsky Berou	84.70	327	*e*P	P	21 51 40.8	+0.4
VYHS	Vyhne	85.00	326	*e*P	P	21 51 42.4	+0.5
VYHS	Vyhne	85.00	326	*e*P	P	21 51 42.4	+0.5
VRAC	Vranov	85.47	328	*e*P	P	21 51 44.4	+0.2
CLL	Collm	85.57	331		P	21 51 44.4	-0.2
CLL				IAmb	IAmb	21 51 45.8	
	comp=Z,5.6nm,1.0s						
CLL	Collm	85.57	331	*i* P	P	21 51 44.6	0.0
CLL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CLL	Collm	85.57	331	*i* P	P	21 51 44.6	0.0
	comp=Z,6.0nm,1.0s						
KRUC	Moravsky	85.73	327	*e*P	P	21 51 46.2	+0.7
MODS	Modra-Piesok	85.82	327	*e*P	P	21 51 46.6	+0.6
MODS	Modra-Piesok	85.82	327	*e*P	P	21 51 46.6	+0.6
ANMO	Albuquerque	87.64	50	LR	LR	22 29 44.4	
	comp=Z,70nm,18.2s,baz=44,slow=35						
FUORN	Ofenpass-Fuorn	90.31	329	P	P	21 52 08.1	+0.3
FUORN				IAmb	IAmb	21 52 46.5	
	comp=Z,9.3nm,1.4s						
TX31	Lajitas Ar. Si	92.98	53		P	21 52 21.3	+1.0
TX31				IAmb	IAmb	21 52 24.1	
	comp=Z,3.6nm,0.8s						
TXAR	Lajitas Array	92.98	53		P	21 52 21.2	+0.9
TXAR	Lajitas Array	92.98	53	P	P	21 52 21.7	+1.4
	comp=Z,3.3nm,0.9s,baz=294,slow=2.8,SNR=20						
	comp=Z,3.3nm,0.9s						
QSPA	South Pole Qui	121.77	180	PKP	PKiKP	21 57 59.3	-0.6
	comp=Z,1.0nm,0.8s,baz=304,slow=2.6,SNR=6.7						
LPAZ	La Paz	148.73	67	PKPbc	PKiKP	21 58 55.4	-1.3
	comp=Z,1.4nm,0.6s,baz=19,slow=4.3,SNR=5.9						

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*IDC **08** 21:47:23.0±1.4, 6°.14S×130°.32E, h0^{km}, mb4.1/3, mbtmp4.1/6, ML4.0/3, Error ellipse: s-maj=76.0km s-min=20.9km az=71.0*

*NEIC **08** 21:47:41.3±2.7, 6°.56S±0°.08×129°.79E±0°.05, h159^{km}±10^{km}, mb4.2/10, Error ellipse: s-maj=11.7km s-min=6.5km az=176.0*

ISC 08 21:47:39.9±0.7**, 6°.64S**±0°.07×**129°.82E**±0°.07**, h146**^{km}**, n39, σ1^{s}62**/41**, mb4.1**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.98	133	Pn	Pn	21 48 18.4	+3.8
SAUI					Sn	21 48 41.8	+0.5
SAUI	Saumlaki	1.98	133	P	Pn	21 48 17.8	+3.2
FAKI	Fak Fak	4.41	33	Pn	Pn	21 48 45.6	+0.1
FAKI	Fak Fak	4.41	33	P	Pn	21 48 45.6	+0.1
DRS	Darwin Rock St	5.86	170	P	Pn	21 49 06.0	+1.3
SANI	Sanana	5.95	320	P	Pn	21 49 08.6	+2.7
MTN	Manton Dam	6.30	168		Pn	21 49 11.6	+0.9
MTN	Manton Dam	6.30	168	P	Pn	21 49 11.5	+0.9
SOEI	Soe	6.31	240	Pn	Pn	21 49 13.8	+2.9
SOEI	Soe	6.31	240	P	Pn	21 49 14.0	+3.1
KDU	Kakadu	6.56	157	P	Pn	21 49 14.4	+0.4
KNRA	Kununurra	9.05	187		Pn	21 49 47.0	-0.3
FITZ	Fitzroy Crossi	12.10	199	Pn	Pn	21 50 27.7	0.0
FITZ	Fitzroy Crossi	12.10	199	Pn	Pn	21 50 25.7	-2.0
	0.6nm,0.3s,baz=22,slow=9.1,SNR=19						
FITZ				Sn	Sn	21 52 32.7	-8.8
	1.6nm,0.3s,baz=205,slow=15,SNR=7.7						
	4.8nm,1.0s						
PLAI	Plampang	12.13	259	P	Pn	21 50 29.7	+1.6
WRA	Warramunga Arr	13.94	162	Pn	Pn	21 50 47.9	-3.3
	0.5nm,0.3s,baz=346,slow=13,SNR=12						
WRA				Sn	Sn	21 53 15.0	-11
	1.7nm,0.3s,baz=335,slow=21,SNR=9.2						
	0.9nm,0.4s						
COEN	Coen	15.01	120		P	21 51 07.4	+0.8
COEN				IAmb	IAmb	21 51 19.5	
	comp=Z,19nm,1.1s						
COEN	Coen	15.01	120	P	P	21 51 06.9	+0.3
JAGI	Jajag, Banyuwa	15.64	262	Pn	Pn	21 51 11.6	-1.0
JAGI				IAmb	IAmb	21 51 31.7	
	comp=Z,15nm,1.1s						
JAGI	Jajag, Banyuwa	15.64	262	P	P	21 51 13.4	-0.2
QIS	Mount Isa	16.78	147	P	Pn	21 51 26.8	+0.4
AS31	Alice Springs	17.38	167	P	P	21 51 33.6	+0.8
ASAR	Alice Springs	17.38	167	P	P	21 51 33.8	+1.0
ASAR	Alice Springs	17.38	167	P	Pn	21 51 34.0	+0.3
	comp=Z,0.9nm,0.3s,baz=344,slow=9.1,SNR=32						
ASAR				S	S	21 54 42.5	-4.0
	comp=Z,1.3nm,0.6s,baz=359,slow=27,SNR=7.5						
	comp=Z,4.0nm,0.6s						
AS01	Alice Springs	17.39	167	P	Pn	21 51 34.1	+0.3
	comp=Z,9.7nm,0.8s						
PSA00	Pilbara Seismi	17.71	212	P	P	21 51 35.4	-1.0
PSA00				IAmb	IAmb	21 51 48.7	
	comp=Z,9.7nm,1.1s						
UGM	Wanagama	19.19	265	P	Pn	21 51 54.8	-0.3
CTAO	Charters Tower	20.81	132	P	P	21 52 10.8	+0.8
CTAO				IAmb	IAmb	21 52 14.3	
	comp=Z,18nm,1.1s						
BBOO	Buckleboo	26.68	168	P	P	21 53 06.8	+1.4
BBOO	Buckleboo	26.68	168	P	P	21 53 06.6	+1.2
	comp=Z,21nm,1.9s						
STKA	Stephens Creek	27.41	158	P	P	21 53 11.7	-0.2
STKA	Stephens Creek	27.41	158	P	P	21 53 11.9	0.0
	comp=Z,1.5nm,0.3s,baz=349,slow=8.2,SNR=9.6						
	comp=Z,1.5nm,0.3s						
STKA	Stephens Creek	27.41	158	P	P	21 53 12.1	+0.2
CAN	Canberra	33.56	151	P	P	21 54 07.0	+1.0
CAN				IAmb	IAmb	21 54 07.8	
	comp=Z,5.6nm,0.7s						
MKAR	Makanchi Array	67.83	327	P	P	21 58 21.7	-0.6
MKAR	Makanchi Array	67.83	327	P	P	21 58 22.4	+0.1
	comp=Z,1.5nm,0.5s,baz=117,slow=8.2,SNR=24						
	comp=Z,1.5nm,0.5s						
MAKZ	Makanchi	68.01	327	P	P	21 58 22.7	-0.7
MAKZ				IAmb	IAmb	21 58 24.1	
	comp=Z,1.5nm,0.6s						
KURBB	Kurchatov Arra	72.11	329	P	P	21 58 48.1	-0.1
	comp=Z,0.2nm,0.3s,baz=122,slow=4.9,SNR=1.9						
	comp=Z,0.2nm,0.3s						
QSPA	South Pole Qui	83.34	180	P	P	21 59 49.0	-1.4

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*IDC **08** 21:59:40.8±0.9, 39°.05N×138°.99E, h181^{km}±11^{km}, mb3.5/8, mbtmp3.9/12, Error ellipse: s-maj=24.7km s-min=11.1km az=104.0*

*JMA **08** 21:59:41.8±0.2, 38°.9N±0°.6×139°.1E±0°.8, h198^{km}±1^{km}, MV3.3/39, W OFF YAMAGATA PREF*

ISC 08 21:59:41.4±0.7**, 38°.94N**±0°.05×**139°.07E**±0°.06**, h196**^{km}±7^{km}**, n31, σ1^{s}05**/44**, mb3.6**/8**, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTB	Tobi-shima	0.46	56	P	Pn	22 00 08.6	+0.8
JAW	Awa shima	0.51	164	P	Pn	22 00 08.3	+0.2
JAW				S	Sn	22 00 28.8	+0.1
JYA	Atsumi	0.61	125	P	Pn	22 00 08.8	+0.3
JYA				*e*S	Sn	22 00 29.5	0.0
JYYZ	Yamagatayuza	0.68	84	P	Pn	22 00 09.9	+1.1
JYK	Kaneyama	1.01	91	*i* P	Pn	22 00 11.1	+0.3
JYK				S	Sn	22 00 33.6	+0.1
JYS	Shirataka	1.06	132	*i* P	Pn	22 00 11.4	+0.2
JSD	Sado	1.10	215	*i* P	Pn	22 00 11.7	+0.2
JSD				S	Sn	22 00 33.9	-0.9
JNS	Sasagawa	1.14	170	P	Pn	22 00 11.5	-0.3
JNS				*e*S	Sn	22 00 34.4	-0.9
JMK	Ichinoseki	1.68	89	*i* P	Pn	22 00 16.2	-0.1
JMK				*e*S	Sn	22 00 42.7	-0.8
JOTO	OTAMA OYAMA	1.70	144	P	Pn	22 00 16.2	-0.5
JOM	Ohasama	1.81	72	*i* P	Pn	22 00 17.9	+0.3
JOM				*e*S	Sn	22 00 45.7	-0.1
JSZ	Suzu	2.01	223	P	Pn	22 00 19.9	+0.2
JSZ				S	Sn	22 00 49.3	-0.1
JHG	Hegura jima	2.01	238	P	Pn	22 00 20.2	+0.5
JANG	Nango	2.37	52	P	Pn	22 00 23.9	+0.4
JANG				*e*S	Sn	22 00 55.8	-0.7
MAT	Matsushiro	2.49	196	*e*P	Pn	22 00 24.6	-0.4
MAT				*e*S	Sn	22 00 57.9	-1.1
MJAR	Matsushiro Arr	2.49	196	P	Pn	22 00 24.9	-0.1
	5.7nm,0.3s,baz=11,slow=12,SNR=42						
MJAR				S	Sn	22 00 58.9	-0.1
	2.5nm,0.8s,baz=106,slow=31,SNR=5.4						
JAG	Ashikaga	2.53	173	P	Pn	22 00 24.3	-1.1
JOMM	Oshimamatsumae	2.68	15	P	Pn	22 00 28.4	+1.5
JOT	Ohata	2.87	31	*i* P	Pn	22 00 30.2	+1.1
JRY	Ryogami san	2.92	183	P	Pn	22 00 29.1	-0.9
JRY				*e*S	Sn	22 01 05.4	-2.5
ASAJ	Asahikawa	5.81	26	P	Pn	22 01 05.4	-0.6
	5.9nm,0.3s,baz=209,slow=14,SNR=52						
ASAJ				S	Sn	22 02 09.7	-3.2
	4.2nm,0.6s,baz=47,slow=26,SNR=1.7						
USRK	Ussuriysk Ar.	7.46	317	P	Pn	22 01 24.2	-3.3
	2.2nm,0.7s,baz=147,slow=11,SNR=5.2						
KLR	Kul'dur	11.54	335	P	Pn	22 02 20.3	0.0
	0.5nm,0.4s,baz=92,slow=4.9,SNR=3.8						
SONM	Songino Array	25.20	301	P	P	22 04 49.0	+0.1
	0.6nm,0.4s,baz=100,slow=8.8,SNR=6.2						
	0.6nm,0.4s						
MKAR	Makanchi Array	41.55	300	P	P	22 07 09.2	-0.2
	0.7nm,0.8s,baz=83,slow=12,SNR=5.2						
	0.7nm,0.8s						
KURBB	Kurchatov Arra	43.38	306	P	P	22 07 23.8	-0.3
	1.8nm,0.5s,baz=82,slow=8.4,SNR=20						
	1.8nm,0.5s						
BVAR	Borovoye Array	47.92	311	P	P	22 08 00.4	+0.8
	0.6nm,0.5s,baz=80,slow=11,SNR=5.1						
	0.6nm,0.5s						
SPITS	Spitsbergen Ar	58.29	348	P	P	22 09 15.2	+0.3
	6.7nm,0.9s,baz=76,slow=7.8,SNR=8.2						
	6.7nm,0.9s						
WRA	Warramunga Arr	58.74	185	P	P	22 09 20.4	+1.7
	0.6nm,1.1s,baz=1.9,slow=7.0,SNR=1.8						
	0.6nm,1.1s						
ARCES	ARCESS Array B	61.55	338	P	P	22 09 36.7	-0.4
	3.6nm,0.3s,baz=56,slow=6.7,SNR=0.7						
	3.6nm,0.3s						
FINES	FINESS Array B	66.26	331	P	P	22 10 07.9	0.0
	0.9nm,0.6s,baz=36,slow=7.1,SNR=7.1						
	0.9nm,0.6s						

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*HEL **08** 22:13:07.3±0.3, 67°.18N×20°.75E, h0^{km}, ML1.2, Suspected explosion*

UPP 08 22:13:06.4±0.0**, 67°.17N×20°.65E, h0**^{km}**, ML1.7, Unknown, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	Dundret	0.06	213	P	Pg	22 13 07.9	+0.3
DUNU				S	Sg	22 13 08.8	+0.5
MASU	Masugnsbyn	0.59	61	P	Pg	22 13 17.8	0.0
MASU				S	Sg	22 13 26.0	+0.6
RATU	Laukkuluspa	0.77	328	P	Pg	22 13 20.8	-0.4
RATU				S	Sg	22 13 31.4	+0.2
KUA	Kurravaara	0.79	351	P	Pg	22 13 21.4	-0.2
SALU	Saltoluokta	0.86	285	P	Pg	22 13 22.5	-0.3
ERTU	Ertsjaerv	0.87	135	P	Pg	22 13 22.4	-0.6
ERTU	Ertsjaerv	0.87	135	PG	Pg	22 13 22.3	-0.7
ERTU				SB	Sg	22 13 34.6	+0.4
PAJU	Pajala	0.97	98	P	Pg	22 13 24.6	-0.4
PAJU	Pajala	0.97	98	PB	Pg	22 13 24.8	-0.2
	baz=278						
PAJU				SG	Sg	22 13 35.8	-1.8
LANU	Lannavaara	1.02	30	PB	Pb	22 13 26.7	-0.2
HARU	Harads	1.02	173	P	Pg	22 13 25.3	-0.7
KLF	Kolari	1.29	86	PG	Pg	22 13 29.8	-1.3
KLF				MSG		22 13 45.1	
	comp=Z,1.1nm,0.2s						
HEF	Hetta	1.69	41	PG	Pn	22 13 37.2	+0.1
HEF				MSG		22 13 56.8	
	comp=Z,1.5nm,0.2s						
HEF				SN	Sg	22 14 00.3	-0.2
KALU	Kalix	1.71	139	P	Pn	22 13 37.1	-0.2
SJUU	Sjulsmark	1.72	167	P	Pn	22 13 37.4	-0.1
TOF	Tornio	1.83	125	PG	Pb	22 13 40.0	-0.7
TOF				MSG		22 14 01.2	
	comp=Z,1.3nm,0.2s						
TOF				SG	Sn	22 14 01.3	-1.5
KIF	Kilpisjarvi	1.84	2	PG	Pb	22 13 40.8	-0.1
	baz=179						
KIF				MSG		22 14 03.0	
	comp=Z,2.5nm,0.2s						
KIF				SG	Sg	22 14 06.1	+0.7
KTK1	Kautokeino	2.09	26	PB	Pn	22 13 43.5	+0.9
RNF	Rovaniemi	2.19	103	SN	Sn	22 14 09.7	-2.0
TRO	Tromso	2.55	346	SG	Sb	22 14 26.5	+1.6
RANF	Ranua	2.71	113	SG	Sb	22 14 29.4	0.0
ARA0	ARCESS Array S	2.98	35	SB	Sb	22 14 36.9	-0.2

UPP 08 22:13:27.8±0.0**, 67°.17N×20°.64E, h0**^{km}**, ML1.6, Unknown, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	Dundret	0.06	208	P	Pg	22 13 29.2	+0.3
DUNU				S	Sg	22 13 30.2	+0.5
MASU	Masugnsbyn	0.60	61	P	Pg	22 13 39.2	0.0
MASU				S	Sg	22 13 47.6	+0.6
RATU	Laukkuluspa	0.77	329	P	Pg	22 13 42.1	-0.4
RATU				S	Sg	22 13 52.4	0.0
KUA	Kurravaara	0.79	352	P	Pg	22 13 42.7	-0.3
ERTU	Ertsjaerv	0.87	135	P	Pg	22 13 43.8	-0.7
ERTU				S	Sg	22 13 56.0	+0.2
PAJU	Pajala	0.98	98	P	Pg	22 13 46.0	-0.5
HARU	Harads	1.02	172	P	Pg	22 13 46.8	-0.6
KOVU	Salmi	1.07	350	P	Pg	22 13 47.8	-0.5
KALU	Kalix	1.71	139	P	Pn	22 13 58.9	+0.2
KALU	Kalix	1.71	139	SN	Pn	22 13 58.9	+0.1
SJUU	Sjulsmark	1.72	166	P	Pn	22 13 58.8	0.0

GCG 08 22:16:08.0±0.3**, 14°.18N×91°.56W, h59**^{km}±19^{km}**, MD3.7, ML3.2, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG8	El Palmar, Qui	0.34	37	*i* P	Pn	22 16 21.5	+2.8
SOKI	Kika Raxquin	0.66	14	*e*P	Pn	22 16 23.2	+1.1
SOKI				*i* S	Sn	22 16 34.8	+2.5
ESSG	Sabana Grande	0.74	74	*i* P	Pn	22 16 22.9	+0.1
ESSG				*i* S	Sn	22 16 34.5	+0.9
ESSG				IAML		22 16 34.7	
	comp=E,447nm,0.2s						
FG8	Yepocapa, Chim	0.98	85	*i* P	Pn	22 16 22.3	-3.5
FG16	Alotenango, Sa	1.03	85	*i* P	Pn	22 16 23.4	-3.2
FG16				*i* S	Sn	22 16 35.5	-4.7
FG16				IAML		22 16 39.9	
	comp=N,2μm,0.2s						

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*IDC **08** 22:33:13.6±1.1, 43°.45N×142°.28E, h174^{km}±6^{km}, mb3.2/10, mbtmp3.6/10, Error ellipse: s-maj=27.1km s-min=24.9km az=13.0*

*SKHL **08** 22:33:13.8±0.6, 43°.60N×142°.10E, h124^{km}±2^{km}, mb4.2/3, msha4.5/3*

*JMA **08** 22:33:14.7±0.2, 43°.4N±0°.7×142°.2E±0°.9, h169^{km}±1^{km}, MV2.8/37, KAMIKAWA-SORACHI REGION*

ISC 08 22:33:13.7±0.7**, 43°.42N**±0°.05×**142°.21E**±0°.04**, h177**^{km}±5^{km}**, n34, σ0^{s}92**/51**, mb3.5**/10**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAB	Ashibetsu	0.09	5	P	Pn	22 33 37.2	+0.2
JAB				S	Sn	22 33 54.5	-0.8
JFR	Furan	0.38	133	P	Pn	22 33 37.8	0.0
JFR				S	Sn	22 33 55.4	-0.8
JHR	Hokuryu	0.48	313	P	Pn	22 33 38.5	+0.5
JHR				S	Sn	22 33 56.9	+0.1
JKK2	Kamakawa 2	0.60	40	*i* P	Pn	22 33 38.9	+0.3
JKK2				S	Sn	22 33 57.1	-0.8
JISS	Ishikarishitsu	0.60	256	*e*P	Pn	22 33 39.2	+0.6
JISS				S	Sn	22 33 57.5	-0.2
ASAJ	Asahikawa	0.75	22	P	Pn	22 33 39.5	+0.1
	101nm,0.3s,baz=211,slow=8.5,SNR=384						
ASAJ				S	Sn	22 33 58.4	-1.0
	24nm,0.6s,baz=8.2,slow=26,SNR=3.8						
JEW	Eniwo	0.81	224	P	Pn	22 33 40.1	+0.3
JEW				S	Sn	22 33 59.3	-0.5
JSS	Shosan	1.01	345	P	Pn	22 33 41.6	+0.4
JAR	Ashorobuto	1.14	96	*i* P	Pn	22 33 43.0	+0.8
JAR				S	Sn	22 34 04.6	+0.4
JCH	Churui	1.17	133	P	Pn	22 33 41.9	-0.5
JCH				S	Sn	22 34 02.6	-1.9
JNBK	Urakawa-nobuka	1.21	161	P	Pn	22 33 43.8	+1.0
JTKR	Abashiri--Toko	1.35	65	P	Pn	22 33 44.9	+1.0
JTKR				*e*S	Sn	22 34 07.8	+0.5
JSE	Soyaes	1.56	10	P	Pn	22 33 46.1	+0.2
JAK	Akkeshi	1.86	102	*e*S	Sn	22 34 15.2	-1.2
JWK2	Keihoku	1.91	353	P	Pn	22 33 50.0	+0.5
AKK	Akkeshi	1.96	101	*e*P	Pn	22 33 50.1	0.0
AKK				*e*S	Sn	22 34 16.9	-1.4
JRBN	Rebuntou	2.17	338	P	Pn	22 33 52.2	-0.1
JOT	Ohata	2.21	203	*i* P	Pn	22 33 52.7	-0.2
JOT				*e*S	Sn	22 34 21.9	-1.4
JOSM	Okushiri--Mats	2.42	237	*e*P	Pn	22 33 55.1	-0.1
NMR	Nemuro--Hokkai	2.56	90	*e*P	Pn	22 33 56.7	-0.2
NMR				*e*S	Sn	22 34 28.5	-2.0
YUK	Yuzh-Kuril'sk	2.71	76	*e*P	Pn	22 33 58.9	+0.2
YUK				AMB	AMB	22 34 01.0	
	80nm,0.3s						
YUK				*e*S	Sn	22 34 33.3	-0.4
YUK				A	A	22 34 35.3	
	50nm,0.4s						
YUK				A	A	22 34 35.3	
	80nm,0.4s						
SHO	Shikotan	3.38	81	*e*P	Pn	22 34 07.6	+0.8
SHO				AMB	AMB	22 34 11.8	
	20nm,0.8s						
SHO				*e*S	Sn	22 34 46.4	-1.9
SHO				A	A	22 34 48.2	
	20nm,0.3s						
SHO				A	A	22 34 48.2	
	20nm,0.3s						
YSS	Yuzhno-Sakhali	3.56	6	*e*P	Pn	22 34 07.9	-1.1
YSS				AMB	AMB	22 34 12.2	
	20nm,0.8s						
YSS				*e*S	Sn	22 34 49.3	-3.0
YSS				A	A	22 34 51.9	
	20nm,0.7s						
YSS				A	A	22 34 51.9	
	10.0nm,0.7s						
KUR	Kuril'sk	4.44	64	*e*P	Pn	22 34 21.1	+0.8
KUR				*e*S	Sn	22 35 13.3	+0.8
SONM	Songino Array	25.29	293	P	P	22 38 24.9	+1.2
	0.6nm,0.8s,baz=126,slow=7.5,SNR=3.8						
	0.6nm,0.8s						
ZALV	Zalesovo Beam	38.32	307	P	P	22 40 16.9	0.0
	0.7nm,0.5s,baz=64,slow=6.8,SNR=3.6						
	0.7nm,0.5s						
MKAR	Makanchi Array	41.54	296	P	P	22 40 44.5	+1.0
	0.1nm,0.4s,baz=89,slow=12,SNR=1.5						
	0.1nm,0.4s						
KURBB	Kurchatov Arra	42.80	303	P	P	22 40 53.8	+0.2
	1.0nm,0.6s,baz=72,slow=8.8,SNR=6.4						
	1.0nm,0.6s						
ILAR	Eielson Array	43.86	36	P	P	22 41 02.1	+0.2
	0.3nm,0.7s,baz=274,slow=7.9,SNR=4.9						
	0.3nm,0.7s						
BVAR	Borovoye Array	46.91	308	P	P	22 41 26.3	+0.3
	0.8nm,0.5s,baz=77,slow=8.7,SNR=6.0						
	0.8nm,0.5s						
WRA	Warramunga Arr	63.46	188	P	P	22 43 24.6	-0.1
	0.3nm,0.5s,baz=10,slow=6.8,SNR=2.1						
	0.3nm,0.5s						
FINES	FINESS Array B	63.49	331	P	P	22 43 23.9	-0.4
	0.8nm,0.7s,baz=53,slow=9.8,SNR=7.5						
	0.8nm,0.7s						
HFS	Hagfors	68.54	335	P	P	22 43 56.8	+0.2
	2.9nm,1.1s,baz=57,slow=9.0,SNR=6.3						
	2.9nm,1.1s						
AKASG	Malin Array Be	69.66	321	P	P	22 44 03.4	-0.2
	0.2nm,0.4s,baz=65,slow=0.8,SNR=1.4						
	0.2nm,0.4s						

KRSC 08 22:40:15.8±1.1**, 55°.03N×165°.48E, h30**^{km}±11^{km}**, Ml3.7, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	0.34	58	*i* P	Pb	22 40 24.1	+0.5
BKI				*e*S	Sb	22 40 28.6	-0.4
KBTR	Krutoberegovo	1.92	309	*e*P	Pn	22 40 47.7	+1.4
KBTR				*e*S	Sn	22 41 10.2	+0.8
MKZ	Mys Kozlova	2.22	259	*e*P	Pb	22 40 54.1	-1.0
MKZ				*e*S	Sb	22 41 20.1	-2.1
SMKR	Semkarok	2.75	306	*e*S	Sb	22 41 34.6	-2.8
TUMD	Tumrok D	2.92	276	*e*P	Pb	22 41 04.8	-2.4
TUMD				*e*S	Sn	22 41 38.1	+3.8
KII	Karymskiy	3.65	257	*e*P	Pn	22 41 13.7	+3.5
SPN	Mys Shipunski	3.75	241	*e*P	Pn	22 41 14.2	+2.6
SPN				*e*S	Sn	22 41 56.1	+1.4
NLC	Nalytchevo	4.06	245	*e*P	Pn	22 41 20.8	+4.9
SDLR	Sedlovina	4.25	248	*e*P	Pn	22 41 23.2	+4.6
SMAR	Somma	4.30	248	*e*P	Pn	22 41 23.9	+4.5
KRER	Koryakskii	4.32	249	*e*P	Pn	22 41 24.8	+5.3
UGLR	Uglovaya	4.32	248	*e*P	Pn	22 41 24.2	+4.8
AVH	Avacha	4.34	249	*e*P	Pn	22 41 24.9	+5.2
KRX	Arik	4.34	250	*e*P	Pn	22 41 24.7	+4.8
KOK	Koryaka	4.38	249	*e*P	Pn	22 41 25.1	+4.8
DALK	Dalny	4.44	246	*e*P	Pn	22 41 26.5	+5.4
PET	Petropavlovsk	4.50	246	*e*P	Pn	22 41 26.2	+4.4
GNL	Ganaly	4.61	256	*e*P	Pn	22 41 28.4	+5.0
KRMR	Karymshinskiy	4.87	246	*e*S	Sn	22 42 25.2	+3.0
MTVR	Mutnovka	5.02	242	*e*P	Pn	22 41 33.6	+4.4
GRL	Gorelyy	5.04	244	*e*P	Pn	22 41 34.5	+5.1
ASAK	Asacha	5.22	243	*e*P	Pn	22 41 36.8	+4.9
KDTR	Khodutka, Kamc	5.47	237	*e*P	Pn	22 41 40.4	+5.2

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*IDC **08** 23:05:48.1±1.3, 55°.10S×27°.89W, h0^{km}, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=105.7km s-min=30.7km az=97.0*

ISC 08 23:05:49.5±1.4**, 55°.1S**±0°.2×**28°.0W**±0°.4**, h10**^{km}**, n8, σ0^{s}30**/8**, 4C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA3	Neumayer Olymp	18.02	161	⇑P	P	23 10 00.0	-0.2
	comp=Z,2.5nm,0.6s						
VNA2	Neumayer--Watz	18.23	158	⇑P	P	23 10 02.4	0.0
	comp=Z,0.7nm,0.4s,baz=316,slow=12						
SNAA	Sanae	19.78	157	⇑P	P	23 10 19.4	-0.1
	comp=Z,22nm,0.5s						
TROLL	Troll, Antarti	21.28	154	⇑P	P	23 10 35.9	0.0
	comp=Z,61nm,0.5s						
QSPA	South Pole Qui	35.14	180	P	P	23 12 42.7	-0.3
	comp=Z,0.8nm,0.6s,baz=195,slow=2.6,SNR=2.6						
	comp=Z,0.8nm,0.6s						
VNDA	Vanda	47.49	183	P	P	23 14 24.4	+0.5
	comp=Z,0.8nm,0.7s,baz=194,slow=6.3,SNR=6.5						
	comp=Z,0.8nm,0.7s						
TORD	Torodi Ar. Bea	72.46	30	P	P	23 17 16.1	+0.1
	comp=Z,2.4nm,0.4s,baz=197,slow=5.7,SNR=1.5						
	comp=Z,2.4nm,0.4s						
ILAR	Eielson Array	149.16	313	PKPbc	PKPbc	23 25 36.3	-0.3
	comp=Z,0.7nm,0.8s,baz=107,slow=1.9,SNR=7.7						

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*IDC **08** 23:12:24.1±1.5, 34°.45N×26°.60E, h0^{km}, mb3.8/5, mbtmp3.5/8, ML3.4/3, MS2.5/1, Error ellipse: s-maj=32.1km s-min=20.7km az=151.0*

*ATH **08** 23:12:27.5±0.6, 34°.31N×26°.74E, h10^{km}, ML2.9/6, Manual Solution by N.Liadopoulou First location: 2019/06/08 23:14:16, This location: 2020/07/02 11:38:23 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 4 km; Longitude uncertainty: 3 km*

*HLW **08** 23:12:28.1, 34°.24N×26°.77E, h18^{km}±12^{km}, Md4.0, Ml3.3*

*ISK **08** 23:12:28.7, 34°.37N×26°.67E, h89^{km}, ML3.0/20*

*GII **08** 23:12:33.2±0.0, 34°.13N±0°.02×27°.373E±0°.007, h8^{km}, Mws3.3, confirmed*

*THE **08** 23:12:34.2, 35°N±16°×2°6E±1°3, h35^{km}, M3.0/7, MLh3.0/7*

*AFAD **08** 23:12:38.3, 35°.03N×27°.22E, h9^{km}±2^{km}, ML2.4*
ISC 08 23:12:28.2±0.9, **34°.26N**±0°.04×**26°.81E**±0°.04, **h62**^{km}±15^{km},
n145, σ**2^{s}.07**/158, **mb3.2**/4, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	Zakros	0.98	330	Pg	Pn	23 12 46.5	+0.4
ZKR	Zakros	0.98	330	P	Pn	23 12 45.8	-0.3
ZKR				S	Sn	23 12 58.3	-1.0
KARP	Karpathos	1.31	13	Pn	Pn	23 12 52.4	+1.9
KARP				Sn	Sn	23 13 09.4	+2.2
KARP	Karpathos	1.31	13	P	Pn	23 12 52.5	+2.0
KARP	Karpathos	1.31	13	P	Pn	23 12 51.8	+1.3
KARP				S	Sn	23 13 07.7	+0.5
IACM	Heraklion	1.77	307	P	Pn	23 12 57.2	+0.6
TMBK	Timbaki Herakl	1.87	296	P	Pn	23 12 58.3	+0.4
IDI	Anoyia	1.88	303	Pn	Pn	23 12 58.8	+0.7
IDI	Anoyia	1.88	303	P	Pn	23 12 58.6	+0.5
PRNS	Prines Rethymn	2.19	301	P	Pn	23 13 04.1	+1.8
PRNS	Prines Rethymn	2.19	301	P	Pn	23 13 03.8	+1.5
ARG	Arkhangelos	2.23	29	Pn	Pn	23 13 04.9	+2.1
ARG	Arkhangelos	2.23	29	P	Pn	23 13 05.6	+2.8
ARG	Arkhangelos	2.23	29	P	Pn	23 13 04.5	+1.7
GVD	Gavdhos	2.32	285	Pn	Pn	23 13 04.6	+0.6
GVD				Sn	Sn	23 13 30.7	-0.7
GVD	Gavdhos	2.32	285	P	Pn	23 13 04.8	+0.8
GVD	Gavdhos	2.32	285	P	Pn	23 13 04.7	+0.8
THR3	Thira Island,	2.43	332	P	Pn	23 13 05.3	-0.3
THR5	Thira Island,	2.46	331	P	Pn	23 13 05.5	-0.4
YAZI	Mula-Dat§a-	2.47	12	P	Pn	23 13 06.8	+0.7
YAZI				S	Sn	23 13 28.6	-6.5
SAP3	Santorini-Thir	2.48	332	P	Pn	23 13 06.0	-0.2
DAT	Datca	2.54	14	Pn	Pn	23 13 08.2	+1.0
DAT	Datca	2.54	14	P	Pn	23 13 08.1	+1.0
DAT				S	Sn	23 13 25.2	-12
CHNB	Souda	2.56	299	P	Pn	23 13 08.3	+1.0
CHAN	Chania	2.60	300	P	Pn	23 13 08.5	+0.7
IMMV	Iera Moni Meta	2.62	298	Pn	Pn	23 13 08.9	+0.9
IMMV	Iera Moni Meta	2.62	298	P	Pn	23 13 09.2	+1.2
KNDR	Palaiochora Ch	2.75	292	Pn	Pn	23 13 10.9	+1.1
KNDR	Palaiochora Ch	2.75	292	P	Pn	23 13 10.5	+0.7
KNDR	Palaiochora Ch	2.75	292	P	Pn	23 13 11.3	+1.5
TURN	Turunc	2.77	25	Pn	Pn	23 13 11.8	+1.7
TURN	Turunc	2.77	25	P	Pn	23 13 11.9	+1.8
TURN				S	Sn	23 13 37.1	-5.2
BODT	Bodrum	2.82	8	Pn	Pn	23 13 12.0	+1.1
BODT	Bodrum	2.82	8	P	Pn	23 13 11.8	+0.8
BDRM	Kayabasi	2.84	10	P	Pn	23 13 11.8	+0.6
MATC	Matruh	2.93	173	P	Pn	23 13 12.7	+0.4
DALY	Dalyan (Mula)	2.96	30	Pn	Pn	23 13 14.7	+2.0
APE	Apeiranthos	2.99	340	Pn	Pn	23 13 13.5	+0.3
APE	Apeiranthos	2.99	340	P	Pn	23 13 12.9	-0.3
FETY	Fethiye	3.01	37	Pn	Pn	23 13 15.7	+2.2
AKAS	Kas	3.02	49	Pn	Pn	23 13 15.9	+2.3
AKAS	Kas	3.02	49	P	Pn	23 13 16.0	+2.3
AKAS				S	Sn	23 13 44.0	-4.7
AKAS				*i* IAML		23 13 55.0	
	comp=N,48nm,0.4s						
AKAS				*i* IAML		23 14 03.0	
	comp=E,34nm,0.3s						
SLUM	Salum	3.07	206	P	Pn	23 13 15.4	+1.1
SLUM				S	Sn	23 13 48.6	-1.2
SABU	Mula-Dalaman	3.10	34	P	Pn	23 13 16.3	+1.6
MLSB	Milas	3.13	14	Pn	Pn	23 13 16.3	+1.2
MULA	Mugla, Merkez-	3.23	22	P	Pn	23 13 19.9	+3.4
MULA				*i* IAML		23 14 08.0	
	comp=E,21nm,0.6s						
ANKY	Antikythira Is	3.29	300	P	Pn	23 13 18.0	+0.7
ANKY	Antikythira Is	3.29	300	P	Pn	23 13 18.0	+0.7
CAME	Cameli-Denizli	3.36	36	Pn	Pn	23 13 20.2	+1.8
KNIK	Mula-Seydike	3.42	40	P	Pn	23 13 21.2	+2.0
KNIK				*i* IAML		23 14 04.0	
	comp=E,13nm,0.4s						
AYDN	Tasoluk	3.50	14	P	Pn	23 13 21.1	+0.9
AYDN				S	Sn	23 13 47.7	-13
DNZT	Denizli-Tavas-	3.51	30	P	Pn	23 13 22.4	+2.0
DNZT				S	Sn	23 13 54.2	-6.5
CAEL	Denizli, Camel	3.51	35	P	Pn	23 13 23.2	+2.8
CAEL				S	Sn	23 13 53.8	-7.0
CAEL				*i* IAML		23 14 20.0	
	comp=N,25nm,0.9s						
CAEL				*i* IAML		23 14 53.0	
	comp=E,30nm,1.3s						
DB3	El Dabaa	3.53	155	P	Pn	23 13 22.0	+1.4
ELL	Elmali	3.54	45	Pn	Pn	23 13 22.5	+1.7
ELL	Elmali	3.54	45	P	Pn	23 13 23.1	+2.2
TAVA	DENIZLI_Tavas	3.62	28	P	Pn	23 13 22.8	+0.8
TAVA				S	Sn	23 13 55.8	-7.7
KTHA	Kythira Island	3.66	304	P	Pn	23 13 21.7	-0.6
ESEN	Aydn-Nazilli	3.74	19	P	Pn	23 13 24.8	+1.3
ESEN				S	Sn	23 13 53.6	-13
APMY	Acipayam-Deniz	3.79	32	Pn	Pn	23 13 25.8	+1.6
DNIZ	Denizli-Tavas-	3.81	28	P	Pn	23 13 25.4	+0.9
DNIZ				S	Sn	23 14 01.9	-6.3
DNIZ				*i* IAML		23 14 15.0	
	comp=N,34nm,0.3s						
KORT	Korkueli	3.97	46	Pn	Pn	23 13 29.3	+2.6
IZMR	zmir-demi	3.98	13	P	Pn	23 13 27.7	+1.1
VLI	Veliai	4.00	309	P	Pn	23 13 26.0	-0.9
INCE	Denizli-Bozkur	4.11	32	P	Pn	23 13 29.5	+0.9
INCE				S	Sn	23 14 03.7	-12
INCE				*i* IAML		23 15 20.0	
	comp=N,8.0nm,1.7s						
KIRA	zmir-Kiraz	4.13	18	P	Pn	23 13 30.3	+1.5
DION	Dionisos Attik	4.46	329	P	Pn	23 13 34.0	+0.7
VILL	Villia	4.81	325	P	Pn	23 13 38.5	+0.4
LTK	Loutraki	4.87	321	P	Pn	23 13 39.1	+0.1
PYL	PYLOS	4.89	304	P	Pn	23 13 37.8	-1.4
ITM	Ithomi	4.92	308	Pn	Pn	23 13 39.2	-0.5
ITM	Ithomi	4.92	308	P	Pn	23 13 39.1	-0.5
SWA2		5.13	193	P	Pn	23 13 44.0	+1.5
SWA2				S	Sn	23 14 39.2	-1.2
GUR	Goura	5.15	317	P	Pn	23 13 42.0	-0.8
KLV	Kalavryta, Ach	5.33	316	P	Pn	23 13 44.9	-0.4
CSS	Mathiatis	5.42	81	P	Pn	23 13 48.8	+2.3
CSS	Mathiatis	5.42	81	S	Sn	23 14 46.0	-1.6
HMYD	Mayadein	5.60	142	P	Pn	23 13 50.9	+2.1
HNAT	Natroun	5.64	144	P	Pn	23 13 51.2	+1.8
RYAN	Fayoum	5.95	149	P	Pn	23 13 55.4	+1.7
KOT	Kottamia	6.07	134	P	Pn	23 13 56.4	+1.1
HHAG	Hagoal	6.21	132	P	Pn	23 13 59.2	+1.9
FSK	Fiskardo	6.55	312	P	Pn	23 14 02.1	+0.2
EVGI	Lefkada island	6.59	313	P	Pn	23 14 02.6	+0.1
LKD2	Lefkada island	6.70	314	P	Pn	23 14 03.0	-1.0
NBNS	Bani Suef	6.80	145	P	Pn	23 14 07.8	+2.4
OFRI	\`Ofer	7.03	101	P	Pn	23 14 10.1	+1.6
OFRI	\`Ofer	7.03	101	S	Sn	23 15 24.8	-2.2
HNTI	Hanita	7.07	97	P	Pn	23 14 11.1	+2.0
HNTI	Hanita	7.07	97	S	Sn	23 15 26.0	-2.0
ZNM	Zenema	7.10	132	P	Pn	23 14 12.2	+2.8
SLTI	Sal'it	7.18	104	P	Pn	23 14 12.2	+1.6
SLTI	Sal'it	7.18	104	S	Sn	23 15 29.4	-1.4
HFRF	Wahat Farafira	7.21	169	P	Pn	23 14 12.1	+1.2
HFRF				S	Sn	23 15 29.2	-2.1
KZIT	Kziot	7.22	116	P	Pn	23 14 12.8	+1.7
KZIT	Kziot	7.22	116	S	Sn	23 15 29.8	-2.0
MMA0B	Mount Meron ar	7.28	97	P	Pn	23 14 13.2	+1.4
MMA0B	Mount Meron ar	7.28	97	S	Sn	23 15 31.4	-1.6
MMAI	Mount Meron Ar	7.28	97	Pn	Pn	23 14 13.4	+1.6
	0.7nm,0.3s,baz=284,slow=9.8,SNR=14						
MMAI				Sn	Sn	23 15 34.2	+1.2
	3.2nm,0.3s,baz=283,slow=22,SNR=7.1						
	0.3nm,0.3s						
AMAZ	Amatzia	7.34	110	P	Pn	23 14 14.5	+1.7
AMAZ	Amatzia	7.34	110	S	Sn	23 15 32.5	-2.1
MMLI	Mount Malkishu	7.43	102	P	Pn	23 14 15.4	+1.4
MMLI	Mount Malkishu	7.43	102	S	Sn	23 15 34.8	-2.1
TAMRE	El Minia	7.45	151	P	Pn	23 14 15.8	+1.7
GEM	Giv'at Ha'Em	7.45	96	P	Pn	23 14 15.6	+1.4
GEM	Giv'at Ha'Em	7.45	96	S	Sn	23 15 35.8	-1.4
NATI	Neve Ativ	7.50	95	P	Pn	23 14 16.4	+1.6
NATI	Neve Ativ	7.50	95	S	Sn	23 15 37.1	-1.4
YTIR	Yattir	7.57	110	P	Pn	23 14 17.2	+1.3
YTIR	Yattir	7.57	110	S	Sn	23 15 38.8	-1.5
HMDT	Nahal Hemdat	7.57	103	P	Pn	23 14 17.6	+1.7
HMDT	Nahal Hemdat	7.57	103	S	Sn	23 15 38.7	-1.5
UJAP	Al Uja	7.62	105	P	Pn	23 14 18.5	+2.0
UJAP	Al Uja	7.62	105	S	Sn	23 15 39.6	-1.8
DSI	Dead Sea	7.69	108	P	Pn	23 14 18.9	+1.4
DSI	Dead Sea	7.69	108	S	Sn	23 15 41.9	-1.3
BRTR	Keskin Array B	7.72	43	Pn	Pn	23 14 20.4	+2.4
	0.1nm,0.3s,baz=223,slow=9.8,SNR=3.1						
BRTR				Sn	Sn	23 15 46.2	+2.2
	0.1nm,0.3s,baz=192,slow=26,SNR=3.6						
	0.2nm,0.3s						
MDBI	Mazsada	7.78	110	P	Pn	23 14 20.4	+1.7
MDBI	Mazsada	7.78	110	S	Sn	23 15 42.9	-2.3
MSBI	Mazada	7.78	110	P	Pn	23 14 20.4	+1.8
MSBI	Mazada	7.78	110	S	Sn	23 15 43.1	-2.1
KRMI	Paran Flat	7.88	119	P	Pn	23 14 22.3	+2.1
KRMI	Paran Flat	7.88	119	S	Sn	23 15 45.8	-2.0
GHAJ	Ghor Haditha	7.94	109	P	Pn	23 14 23.0	+2.1
GHAJ	Ghor Haditha	7.94	109	S	Sn	23 15 47.7	-1.6
PRNI	Paran	7.96	117	P	Pn	23 14 22.9	+1.7
PRNI	Paran	7.96	117	S	Sn	23 15 47.9	-1.8
ASUT		7.97	148	P	Pn	23 14 23.9	+2.6
ZFRI	Zfri	7.98	115	P	Pn	23 14 22.8	+1.3
ZFRI	Zfri	7.98	115	S	Sn	23 15 48.1	-2.2
HRFI	Mount Harif	8.15	119	P	Pn	23 14 25.8	+2.0
HRFI	Mount Harif	8.15	119	S	Sn	23 15 52.7	-1.7
MBRI	Mt Berech	8.20	121	P	Pn	23 14 26.5	+2.0
MBRI	Mt Berech	8.20	121	S	Sn	23 15 53.5	-2.1
EIL	Elat	8.29	121	P	Pn	23 14 27.7	+2.0
EIL	Elat	8.29	121	S	Sn	23 15 56.5	-1.5
ASF	Jabal al Asfar	8.71	101	LR	LR	23 18 35.5	
	comp=Z,30nm,18.4s,baz=302,slow=42						
HDK1	Dakhla	8.97	165	P	Pn	23 14 37.0	+1.9
GTR	Jabal at Tayr	9.31	159	P	Pn	23 14 41.9	+2.2
AKASG	Malin Array Be	16.52	5	Pn	P	23 16 15.8	-1.5
	0.9nm,0.3s,baz=188,slow=9.9,SNR=9.6						
	0.2nm,0.3s						
ESDC	Sonseca Array	25.10	291	P	P	23 17 48.8	+1.7
	0.2nm,0.6s,baz=82,slow=9.1,SNR=6.6						
	0.2nm,0.6s						
FINES	FINESS Array B	27.20	359	P	P	23 18 05.6	-0.1
	0.5nm,0.6s,baz=188,slow=9.1,SNR=4.7						
	0.5nm,0.6s						
TORD	Torodi Ar. Bea	31.00	233	P	P	23 18 43.3	+3.5
	2.1nm,0.5s,baz=42,slow=8.5,SNR=1.2						
	2.1nm,0.5s						
ARCES	ARCESS Array B	35.33	359	P	P	23 19 18.6	+1.6
	2.4nm,0.3s,baz=174,slow=8.6,SNR=1.2						
	2.4nm,0.3s						
MKAR	Makanchi Array	43.14	56	P	P	23 20 27.2	+4.7
	0.2nm,0.4s,baz=272,slow=7.4,SNR=4.3						
	0.2nm,0.4s						

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*SNET **09** 00:02:14.7±0.7, 13°.90N×89°.70W, h10^{km}±3^{km}, ML2.4*
CATAC 09 00:02:15.7±0.3, **14°N**±2°×**9°0W**±°, **h3**^{km}±1^{km}, **M2.6**/21,
MLv2.6/21, **Error ellipse: s-maj=3.8km s-min=3.0km**
az=177.9, confirmed, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LOAL	Lomas de Alarc	0.06	314	*e*P	Pg	00 02 18.4	+1.4
LOAL	Lomas de Alarc	0.06	314	P	Pg	00 02 17.2	+0.1
NUBE	Las Nubes	0.07	220	*e*P	Pg	00 02 17.4	+0.2
NUBE				*e*S	Sg	00 02 18.8	+0.6
NUBE				IAML		00 02 19.5	
	comp=Z,958nm,0.2s						
NUBE	Las Nubes	0.07	220	P	Pg	00 02 17.2	0.0
SLOZ	Alcaldia de Sa	0.09	326	P	Pg	00 02 18.0	+0.5
CEVE	Cerro Verde	0.17	139	*i* P	Pg	00 02 18.4	-0.7
CEVE				*e*S	Sg	00 02 21.4	+0.1
CEVE				IAML		00 02 21.8	
	comp=Z,2μm,0.3s						
CEVE	Cerro Verde	0.17	139	P	Pg	00 02 18.7	-0.4
UNIC	Universidad Ca	0.18	82	S	Sg	00 02 22.3	+0.5
UNIC	Universidad Ca	0.18	82	P	Pg	00 02 19.0	-0.3
FAME	Alcaldia de Sa	0.29	248	P	Pg	00 02 21.4	0.0
FAME	Alcaldia de Sa	0.29	248	S	Sg	00 02 26.0	+0.7
CEDA	San Andres	0.36	115	P	Pg	00 02 23.1	+0.4
JAYA	Jayaque - finc	0.41	137	*e*P	Pg	00 02 22.1	-1.5
JAYA				*e*S	Sg	00 02 27.6	-1.4
JAYA				IAML		00 02 28.8	
	comp=Z,459nm,0.2s						
JAYA	Jayaque - finc	0.41	137	P	Pg	00 02 23.8	+0.2
PMON	Piamonte	0.47	120	*e*P	Pg	00 02 24.2	-0.7
PMON	Piamonte	0.47	120	P	Pg	00 02 25.0	+0.1
PMON	Piamonte	0.47	120	S	Sg	00 02 31.8	+0.7
ITCA	Escuela Especi	0.52	122	P	Pg	00 02 26.2	+0.4
UEES	Universidad Ev	0.54	116	P	Pg	00 02 26.5	+0.5
MTO3	Montecristo	0.57	39	*e*P	Pg	00 02 26.7	-0.1
MTO3	Montecristo	0.57	39	S	Sg	00 02 35.0	+0.8
MTO3	Montecristo	0.57	39	P	Pg	00 02 26.8	+0.1
UTEC	Universidad Te	0.58	116	P	Pg	00 02 27.3	+0.5
IGN	Direccin Gen	0.60	114	P	Pg	00 02 27.8	+0.6
LALI	Alcalda de L	0.61	139	P	Pg	00 02 28.0	+0.5
LOMA	Loma Larga	0.63	119	P	Pg	00 02 28.1	+0.2
PANCS	Alcalda de	0.64	122	P	Pg	00 02 28.3	+0.3
ESQI	Esquipulas	0.71	32	P	Pg	00 02 29.7	+0.3
LLGN	La Laguna	0.79	75	*e*S	Sg	00 02 41.0	-0.3
LLGN	La Laguna	0.79	75	P	Pg	00 02 30.8	-0.2
PAVA	Las Pavas	0.81	107	P	Pg	00 02 31.1	-0.2
COEG	Centro de Oper	0.89	112	P	Pg	00 02 32.8	-0.1
UESV	Universidad de	0.97	109	P	Pg	00 02 34.7	+0.3
SCLA	Alcaldia de Sa	1.01	104	P	Pg	00 02 35.3	+0.2
TECO	Alcaldia de Te	1.02	114	P	Pg	00 02 35.5	+0.2
PACA	Pacayal	1.45	109	P	Pn	00 02 42.1	-1.0
RANC	El Ranchito	1.50	110	P	Pn	00 02 42.9	-0.8

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*SKO **09** 00:06:20.2, 40°.93N×20°.64E, h15^{km}, ML2.2*
*TIR **09** 00:06:21.5, 41°.17N×20°.71E, h2^{km}±1^{km}, Ml2.0/5*
*PDG **09** 00:06:21.9±0.5, 41°.17N×20°.78E, h5^{km}±2^{km}, ML2.6/10,*
Error ellipse: s-maj=4.4km s-min=1.5km az=90.0
*ATH **09** 00:06:23.1, 41°.19N×20°.85E, h2^{km}±1^{km}, ML2.1/4, Manual*
Solution by F.Gkika First location: 2019/06/09 00:07:37,
This location: 2021/06/08 15:28:45 ML Amplitudes are
expressed in micrometers, All distances are expressed in
degrees Latitude uncertainty: 1 km; Longitude uncertainty:
1 km
*BEO **09** 00:06:23.9±0.3, 41°.19N×20°.74E, h0^{km}±4^{km}, ML2.0/8*
ISC 09 00:06:23.3±0.8, **41°.17N**±0°.02×**20°.75E**±0°.02, **h7**^{km}±5^{km},
n56, σ**0^{s}.83**/90, **4C-7D**, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHR	Ohrid	0.07	145	⇑ *i*Pg	Pg	00 06 25.0	-0.2
OHR				*i* Sg	Sg	00 06 26.7	+0.3
OHR				*e*Lg	Lg	00 06 26.7	
	comp=N,2μm,0.3s						
OHR				*e*Lg	Lg	00 06 26.9	
	comp=E,3μm,0.5s						
OHR	Ohrid	0.07	145	*e*Pg	Pg	00 06 24.9	-0.2
OHR				*e*Sg	Sg	00 06 26.8	+0.4
LMS2	Laimos Florina	0.45	138	P	Pg	00 06 31.4	-0.5
LMS2				S	Sg	00 06 37.6	-0.2
KBN	Korca	0.54	177	Pg	Pg	00 06 32.7	-1.1
KBN				Sg	Sg	00 06 40.7	-0.1
KBN				AML	AML	00 06 47.3	
	comp=E,0.4nm,0.6s						
PHP	Peshkopia	0.57	336	Pg	Pg	00 06 33.0	-1.2
TIR	Tirane	0.69	286	Pg	Pg	00 06 35.6	-0.9
TIR				Sg	Sg	00 06 45.2	-0.3
TIR				AML	AML	00 06 46.6	
	comp=E,0.3nm,0.2s						
TIR				AML	AML	00 06 49.4	
	comp=E,0.2nm,0.2s						
TIR	Tirane	0.69	286	*e*Pg	Pg	00 06 35.3	-1.2
TIR				*e*Sg	Sg	00 06 45.7	+0.2
NEST	Nestorio	0.79	163	Pg	Pg	00 06 37.3	-1.0
NEST				Sg	Sb	00 06 49.7	-0.5
NEST				AML	AML	00 06 53.2	
	comp=E,0.3nm,0.4s						
NEST	Nestorio	0.79	163	P	Pg	00 06 37.3	-1.0
NEST				S	Sb	00 06 49.4	-0.8
PENT	Pentalofos	1.01	163	P	Pb	00 06 42.8	-0.4
PENT				S	Sb	00 06 56.5	-0.3
PUK	Puka	1.09	324	Pg	Pg	00 06 42.5	-1.6
PUK				Sg	Sg	00 06 58.6	+0.4
PUK				AML	AML	00 07 04.2	
	comp=E,0.2nm,0.4s						
KZN	Kozani	1.16	138	P	Pb	00 06 45.6	-0.1
KZN				S	Sg	00 07 00.1	-0.4
KPRO	Kipourio	1.30	159	P	Pn	00 06 47.8	-0.1
KPRO				S	Sn	00 07 05.0	-0.4
BCI	Bajram Curri	1.30	337	Pg	Pg	00 06 48.7	+0.5
BCI				Sg	Sn	00 07 06.8	+1.2
BCI				AML	AML	00 07 13.9	
	comp=E,0.2nm,0.5s						
ULC	Ulcinj	1.38	306	Pn	Pn	00 06 47.5	-1.5
ULC	Ulcinj	1.38	306	*i* Pg	Pn	00 06 47.7	-1.3
ULC	Ulcinj	1.38	306	⇓ *i*Pg	Pn	00 06 47.4	-1.6
ULC				*i* Sg	Sn	00 07 08.9	+1.4
VAY	Valandovo	1.38	83	*i* Pg	Pn	00 06 48.2	-0.8
VAY				*i* Sg	Sn	00 07 08.8	+1.3
VAY				*e*Lg	Lg	00 07 10.3	
	comp=E,7.8nm,0.4s						
VAY				*e*Lg	Lg	00 07 11.1	
	comp=N,13nm,0.7s						
VAY	Valandovo	1.38	83	*e*Pg	Pn	00 06 48.5	-0.5
VAY				*e*Sg	Sn	00 07 08.4	+0.9
JAN	Janina	1.51	177	P	Pg	00 06 51.9	-0.3
DRME	Dracevica, Mon	1.55	312	Pg	Pn	00 06 51.3	0.0
DRME	Dracevica, Mon	1.55	312	*e*Pg	Pn	00 06 51.5	+0.2
DRME	Dracevica, Mon	1.55	312	⇑ *i*Pg	Pn	00 06 50.8	-0.5
DRME				*i* Sg	Sg	00 07 15.4	+2.2
DRME	Dracevica, Mon	1.55	312	P	Pn	00 06 51.2	-0.1
KEK	Kerkira	1.62	207	P	Pg	00 06 53.8	-0.5
KEK				S	Sg	00 07 16.5	+1.1
KNT	Kendrikon	1.62	89	*i* Pn	Pn	00 06 52.4	+0.1
KNT	Kendrikon	1.62	89	P	Pn	00 06 52.0	-0.3
IGT	Igoumenitsa	1.66	191	Pn	Pg	00 06 55.2	+0.1
IGT	Igoumenitsa	1.66	191	*e*Pg	Pg	00 06 54.5	-0.6
IGT				*e*Sg	Sg	00 07 17.8	+1.1
IGT	Igoumenitsa	1.66	191	P	Pg	00 06 54.5	-0.6
IGT				S	Sg	00 07 16.9	+0.3
PDG	Podgorica	1.69	319	*e*Pg	Pn	00 06 53.1	0.0
PDG				*e*Sg	Sg	00 07 17.2	-0.2
PDG	Podgorica	1.69	319	⇓ *i*Pn	Pn	00 06 52.4	-0.7
PDG				*i* Sn	Sg	00 07 18.4	+1.0
BUM	Brajici-Budva	1.79	310	Pn	Pn	00 06 55.6	+0.9
BUM	Brajici-Budva	1.79	310	⇓ *i*Pn	Pn	00 06 55.3	+0.6
BUM				*i* Sn	Sg	00 07 22.0	+1.1
BEY	Berane	1.82	340	*e*Pg	Pn	00 06 55.6	+0.5
IVA	Berane	1.82	340	⇑ *i*Pn	Pn	00 06 54.3	-0.8
IVA				*i* Sn	Sg	00 07 22.3	+0.6
TYRN	Tyrnavos	1.84	142	P	Pn	00 06 55.8	+0.5
TYRN				S	Sn	00 07 19.0	+0.1
TETR	Tetrakomo, Epi	1.86	167	P	Pn	00 06 56.2	+0.5
THL	Klokotos Trika	1.87	148	P	Pn	00 06 56.1	+0.4
THL				S	Sb	00 07 20.3	-1.0
HORT	Hortiatis	1.87	107	P	Pn	00 06 55.7	-0.1
KKB	Krupnik	1.91	69	*i* Pn	Pn	00 06 56.5	+0.3
KOME	Kolasin	1.92	332	⇓ *i*Pn	Pn	00 06 55.7	-0.7
KOME				*i* Sn	Sg	00 07 24.4	-0.5
CEME	Cevo	1.94	316	⇑ *i*Pn	Pn	00 06 57.7	+1.0
CEME				*i* Sn	Sg	00 07 27.5	+1.8
SELS	Selova	2.07	8	*e*Pg	Pb	00 07 00.2	-1.0
SELS				*e*Sg	Sb	00 07 28.2	+1.1
HCY	Herceg Novi	2.12	308	Pn	Pb	00 07 01.2	-0.7
HCY	Herceg Novi	2.12	308	⇓ *i*Pn	Pn	00 06 59.1	0.0
HCY				*i* Sn	Sb	00 07 29.8	+1.4
SJES	Sjenica	2.17	345	*e*Pg	Pb	00 07 02.8	-0.2
SJES				*e*Sg	Sg	00 07 32.9	-0.1
VTS	Vitosha	2.36	51	*e*Pg	Pn	00 07 04.1	+1.6
VTS				*e*Sg	Sg	00 07 39.1	+0.1
LKD2	Lefkada island	2.38	182	P	Pn	00 07 03.6	+1.0
EVR	Evrytania	2.39	160	P	Pn	00 07 04.2	+1.3
BRY	Bratogost	2.39	317	⇓ *i*Pn	Pn	00 07 02.8	-0.2
BRY				*i* Sn	Sb	00 07 36.1	-0.4
MAKR	Makrakomi, Fth	2.40	153	P	Pn	00 07 03.7	+0.7
UPM	Unac-Piva	2.45	327	⇓ *i*Pn	Pn	00 07 03.8	-0.1
UPM				*i* Sn	Sb	00 07 37.5	-0.8
AGG	Agios Georgios	2.46	150	P	Pn	00 07 04.2	+0.3
ANX	Ano Chora	2.72	160	P	Pn	00 07 08.9	+1.4
THAS	Thassos island	3.06	99	P	Pn	00 07 11.6	-0.5

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*TIR **09** 00:10:15.1, 41°.18N×20°.73E, h1^{km}±1^{km}, Ml2.3/6*
*SKO **09** 00:10:15.1, 41°.10N×20°.68E, h15^{km}, ML2.4*
*PDG **09** 00:10:15.2±0.8, 41°.11N×20°.74E, h1^{km}±11^{km}, ML2.5/10,*
Error ellipse: s-maj=4.3km s-min=4.1km az=90.0
*ATH **09** 00:10:17.5, 41°.12N×20°.88E, h3^{km}±1^{km}, ML2.3/15,*
Manual Solution by A.Andreou First location: 2019/06/09
00:11:27, This location: 2020/10/13 19:03:32 ML
Amplitudes are expressed in micrometers, All distances
are expressed in degrees Latitude uncertainty: 1 km;
Longitude uncertainty: 1 km
*BEO **09** 00:10:17.4±0.3, 41°.19N×20°.74E, h0^{km}±3^{km}, ML2.2/8*
ISC 09 00:10:17.2±0.8, **41°.17N**±0°.02×**20°.78E**±0°.02, **h7**^{km}±5^{km},
n91, σ**1^{s}.15**/136, **7C-4D**, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHR	Ohrid	0.06	163	⇑ *i*Pg	Pg	00 10 18.5	-0.4
OHR				*i* Sg	Sg	00 10 20.2	+0.1
OHR				*e*Lg	Lg	00 10 20.2	
	comp=N,5μm,0.3s						
OHR				*e*Lg	Lg	00 10 20.4	
	comp=E,4μm,0.5s						
OHR	Ohrid	0.06	163	*e*Pg	Pg	00 10 18.5	-0.4
OHR				*e*Sg	Sg	00 10 20.2	+0.1
KBN	Korca	0.54	179	Pg	Pg	00 10 26.1	-1.6
KBN				Sg	Sg	00 10 34.8	0.0
KBN				AML	AML	00 10 38.9	
	comp=E,0.8nm,0.4s						
PHP	Peshkopia	0.58	334	Pg	Pg	00 10 26.5	-1.9
TIR	Tirane	0.71	285	Pg	Pg	00 10 29.1	-1.9
TIR				Sg	Sg	00 10 39.7	-0.5
TIR				AML	AML	00 10 40.1	
	comp=E,0.7nm,0.2s						
TIR	Tirane	0.71	285	*e*Pg	Pg	00 10 28.9	-2.0
TIR				*e*Sg	Sg	00 10 40.1	-0.1
NEST	Nestorio	0.78	165	Pg	Pg	00 10 30.7	-1.5
NEST				Sg	Sg	00 10 43.9	+1.6
NEST				AML	AML	00 10 45.5	
	comp=E,0.6nm,0.4s						
NEST	Nestorio	0.78	165	P	Pg	00 10 31.2	-1.0
NEST				S	Sg	00 10 41.2	-1.1
SKO	Skopje	0.95	31	*i* Pg	Pg	00 10 34.8	-0.6
SKO				*i* Sg	Sg	00 10 49.1	+1.3
PENT	Pentalofos	1.01	164	P	Pg	00 10 36.4	-0.2
PUK	Puka	1.10	323	Pg	Pg	00 10 36.4	-1.9
PUK				Sg	Sg	00 10 52.6	0.0
PUK				AML	AML	00 10 54.4	
	comp=E,0.1nm,2.5s						
KZN	Kozani	1.14	138	P	Pb	00 10 37.7	-1.7
KZN				S	Sg	00 10 52.4	-1.6
KPRO	Kipourio	1.29	160	P	Pn	00 10 41.1	-0.6
BCI	Bajram Curri	1.31	336	Pg	Pn	00 10 40.5	-1.6
BCI				Sg	Sb	00 10 59.8	+0.5
BCI				AML	AML	00 11 06.4	
	comp=E,0.4nm,0.5s						
VAY	Valandovo	1.36	83	*i* Pg	Pn	00 10 41.7	-1.0
VAY				*i* Sg	Sg	00 11 02.8	+1.8
VAY				*e*Lg	Lg	00 11 03.9	
	comp=N,17nm,0.4s						
VAY				*e*Lg	Lg	00 11 04.7	
	comp=E,19nm,0.4s						
VAY	Valandovo	1.36	83	*e*Pg	Pn	00 10 40.9	-1.8
VAY				*e*Sg	Sg	00 11 02.6	+1.6
ULC	Ulcinj	1.40	305	Pn	Pn	00 10 41.0	-2.2
ULC	Ulcinj	1.40	305	*i* Pg	Pn	00 10 41.0	-2.2
ULC	Ulcinj	1.40	305	⇓ *i*Pg	Pn	00 10 40.0	-3.2
ULC				*i* Sg	Sb	00 11 02.5	+0.7
SRN	Sarande	1.41	205	Pn	Pn	00 10 43.6	+0.2
SRN				Sn	Sg	00 11 04.6	+2.0
SRN				AML	AML	00 11 07.1	
	comp=E,0.1nm,0.5s						
JAN	Janina	1.51	178	P	Pn	00 10 44.7	-0.1
JAN				S	Sn	00 11 04.0	-0.6
DRME	Dracevica, Mon	1.57	311	Pg	Pn	00 10 45.3	-0.2
DRME	Dracevica, Mon	1.57	311	*e*Pn	Pn	00 10 44.1	-1.5
DRME	Dracevica, Mon	1.57	311	*e*Pg	Pn	00 10 44.4	-1.2
DRME				*e*Sg	Sn	00 11 06.4	+0.2
DRME	Dracevica, Mon	1.57	311	⇑ *i*Pn	Pn	00 10 43.6	-2.0
DRME				*i* Sn	Sb	00 11 07.9	+1.2
KNT	Kendrikon	1.60	89	*i* Pn	Pn	00 10 45.7	-0.3
KNT	Kendrikon	1.60	89	P	Pn	00 10 45.5	-0.5
KNT				S	Sn	00 11 06.0	-1.0
KEK	Kerkira	1.63	208	P	Pn	00 10 47.1	+0.7
KEK				S	Sn	00 11 08.6	+1.0
IGT	Igoumenitsa	1.67	192	Pn	Pn	00 10 47.7	+0.8
IGT				Sn	Sg	00 11 12.1	+1.3
IGT	Igoumenitsa	1.67	192	*e*Pg	Pn	00 10 47.9	+1.0
IGT				*e*Sg	Sg	00 11 11.5	+0.7
IGT	Igoumenitsa	1.67	192	P	Pn	00 10 47.8	+0.8
PDG	Podgorica	1.70	319	*e*Pn	Pn	00 10 45.2	-2.1
PDG	Podgorica	1.70	319	*e*Pg	Pn	00 10 46.4	-0.9
PDG				*e*Sg	Sn	00 11 08.9	-0.5

PDG	Podgorica	1.70	319	⇑iPn	Pn	00 10 44.6	-2.7
PDG				iSn	Sg	00 11 12.9	+1.0
THE	Thessaloniki	1.74	107	iPn	Pn	00 10 47.4	-0.5
THE	Thessaloniki	1.74	107	P	Pn	00 10 47.4	-0.5
THE				S	Sn	00 11 09.7	-0.6
BUM	Brajici-Budva	1.81	309	Pn	Pn	00 10 49.5	+0.6
BUM	Brajici-Budva	1.81	309	⇑iPn	Pn	00 10 48.5	-0.4
BUM				iSn	Sg	00 11 16.2	+0.8
BARS	Barje	1.82	25	iPn	Pn	00 10 49.0	-0.1
BARS	Barje	1.82	25	ePg	Pn	00 10 48.9	-0.1
BARS				eSg	Sb	00 11 15.1	+1.1
BEY	Berane	1.83	339	Pn	Pn	00 10 50.8	+1.6
BEY	Berane	1.83	339	ePg	Pn	00 10 50.5	+1.3
IVA	Berane	1.83	339	⇑iPn	Pn	00 10 49.6	+0.4
IVA				iSn	Sg	00 11 16.9	+0.9
TYRN	Tyrnavos	1.83	142	P	Pn	00 10 49.1	0.0
TYRN				S	Sn	00 11 11.2	-1.3
BOSS	Bosilegrad	1.84	43	ePg	Pn	00 10 49.3	0.0
BOSS				eSg	Sb	00 11 15.7	+1.2
HORT	Hortiatis	1.85	107	P	Pn	00 10 48.9	-0.6
THL	Klokotos Trika	1.86	149	P	Pn	00 10 49.3	-0.2
THL				S	Sn	00 11 12.1	-1.1
TETR	Tetrakomo, Epi	1.86	168	P	Pn	00 10 49.7	+0.1
KKB	Krupnik	1.89	68	iPn	Pn	00 10 49.8	-0.2
KOME	Kolasin	1.93	331	⇑iPn	Pn	00 10 49.4	-1.2
KOME				iSn	Sg	00 11 19.4	+0.2
CEME	Cevo	1.96	315	⇑iPn	Pn	00 10 51.2	+0.2
CEME				iSn	Sg	00 11 20.3	+0.1
SELS	Selova	2.07	7	ePg	Pb	00 10 55.2	0.0
SELS				eSg	Sb	00 11 22.6	+1.5
SRS	Serrai	2.13	90	iPn	Pn	00 10 53.3	0.0
SRS	Serrai	2.13	90	P	Pn	00 10 53.2	-0.1
HCY	Herceg Novi	2.13	308	ePn	Pn	00 10 54.7	+1.4
HCY	Herceg Novi	2.13	308	⇓iPn	Pn	00 10 53.7	+0.4
HCY				iSn	Sb	00 11 24.3	+1.4
PLG	Polygyros	2.17	110	P	Pn	00 10 53.6	-0.3
SJES	Sjenica	2.18	344	ePn	Pn	00 10 54.0	0.0
SJES	Sjenica	2.18	344	ePg	Pn	00 10 54.5	+0.5
SJES				eSg	Sb	00 11 26.2	+1.9
TSLK	Tsoukalades, L	2.34	182	P	Pn	00 10 56.9	+0.7
VTS	Vitosha	2.34	51	ePn	Pn	00 10 56.9	+0.6
VTS				eSg	Sb	00 11 31.6	+2.6
LKD2	Lefkada island	2.38	182	Pn	Pn	00 10 58.0	+1.3
LKD2	Lefkada island	2.38	182	P	Pn	00 10 57.2	+0.5
EVR	Evrytania	2.38	160	P	Pn	00 10 56.6	-0.2
TREB	Trebinje	2.38	311	ePn	Pn	00 10 57.9	+1.1
MAKR	Makrakomi, Fth	2.39	154	P	Pn	00 10 56.9	0.0
MAKR				S	Sn	00 11 25.7	-0.7
BRY	Bratogost	2.41	317	ePn	Pn	00 10 58.4	+1.2
BRY	Bratogost	2.41	317	⇓iPn	Pn	00 10 57.9	+0.7
BRY				iSn	Sb	00 11 31.4	+0.5
AGG	Agios Georgios	2.45	150	P	Pn	00 10 57.4	-0.3
AGG				S	Sn	00 11 27.6	-0.3
NYDR	Nydri-Lefkada	2.45	181	P	Pn	00 10 58.2	+0.5
NYDR				S	Sn	00 11 28.2	+0.4
UPM	Unac-Piva	2.47	326	Pn	Pb	00 11 02.3	+0.2
UPM	Unac-Piva	2.47	326	ePn	Pb	00 11 02.2	+0.2
UPM	Unac-Piva	2.47	326	⇓iPn	Pb	00 11 01.8	-0.2
UPM				iSn	Sb	00 11 35.4	+2.7
ZAPS	Zavoj	2.52	33	ePg	Pb	00 11 02.6	-0.2
ZAPS				eSg	Sg	00 11 37.6	-0.5
EVGI	Lefkada island	2.54	182	P	Pn	00 10 59.0	+0.1
OUR	Ouranopolis	2.57	108	P	Pn	00 10 59.4	+0.1
PVO	Paravola	2.61	167	P	Pn	00 10 60.0	+0.1
NEO	Neokhori	2.64	134	P	Pn	00 10 59.9	-0.4
NEO				S	Sn	00 11 31.4	-1.1
RUDO	Rudo	2.66	337	ePn	Pn	00 11 02.9	+2.3
ANX	Ano Chora	2.71	161	P	Pn	00 11 01.6	+0.2
ANX				S	Sn	00 11 34.1	-0.5
STON	Ston	2.86	308	ePn	Pn	00 11 03.4	+0.2
STON	Ston	2.86	308	ePn	Pn	00 11 03.8	+0.6
STON				eSg	Sb	00 11 46.9	+3.2
EFP	Efpalio	2.87	162	P	Pn	00 11 03.9	+0.4
BBLS	Lazi&#263i	2.88	340	ePn	Pn	00 10 57.9	-5.8
AXS	Araxos	3.00	171	P	Pn	00 11 05.3	+0.1
LKR	Lokris	3.04	145	P	Pn	00 11 05.5	-0.2
THAS	Thassos island	3.04	99	P	Pn	00 11 04.7	-1.0
HAPS	Han Pijesak,Bl	3.21	336	ePn	Pn	00 11 10.9	+2.6
TEKS	Tekeris	3.50	345	ePn	Pn	00 11 11.4	-0.8
A050A	Klekovaca	4.55	318	ePn	Pn	00 11 27.2	+0.6
A051A	Mrakovica	4.78	325	ePn	Pn	00 11 29.1	-0.6

*IDC **09** 00:12:59.2±1.0, 1°.03S×129°.22E, h0^{km}, mb3.8/6, mbtmp3.9/8, ML3.7/2, MS3.1/1, Error ellipse: s-maj=47.5km s-min=15.4km az=87.0*

*DJA **09** 00:13:04.9±0.9, 1°S±2°×12°9E±°, h31^{km}±11^{km}, M3.9/11, MLv3.9/11*

ISC 09 00:13:04.8±0.7, 1°.01S±0°.05×128°.89E±0°.04, h35^{km}, n16, σ1^{s}.59/23, mb3.9/6, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	2.32	179	P	Pn	00 13 42.3	+1.9
MSAI				S	Sn	00 14 08.4	+0.7
TNTI	Ternate	2.34	319	P	Pn	00 13 40.8	+0.1
TNTI				S	Sn	00 14 09.4	+1.2
SWI	Sorong	2.38	86	P	Pn	00 13 42.1	+0.9
SWI				S	Sn	00 14 11.3	+2.1
AAI	Ambon	2.74	195	P	Pn	00 13 47.6	+1.3
NLAI	Namlea	2.84	219	P	Pn	00 13 48.3	+0.6
NLAI				S	Sn	00 14 21.9	+1.2
SANI	Sanana	3.08	250	P	Pn	00 13 51.0	+0.1
SANI				S	Sn	00 14 27.9	+1.4
FAKI	Fak Fak	3.85	119	P	Pn	00 14 01.4	-0.2
FAKI				S	Sn	00 14 46.9	+1.2
FITZ	Fitzroy Crossi	17.27	190	P	Pn	00 17 00.7	-2.7
	0.1nm,0.3s,baz=2.8,slow=12,SNR=1.9						
FITZ				S	Sn	00 20 16.1	+1.5
	2.5nm,0.9s,baz=16,slow=3.8,SNR=2.0 1.5nm,0.6s						
WRA	Warramunga Arr	19.55	165	P	P	00 17 27.1	-2.6
	0.4nm,0.3s,baz=347,slow=12,SNR=16						
WRA				S	S	00 20 53.6	-15
	0.6nm,0.8s,baz=345,slow=22,SNR=2.1 9.6nm,0.9s						
ASAR	Alice Springs	23.04	168	P	P	00 18 06.8	-0.3
	8.5nm,0.9s,baz=348,slow=10,SNR=30						
ASAR				S	S	00 22 12.8	-2.8
	2.2nm,1.0s,baz=349,slow=16,SNR=7.5 8.5nm,0.9s						
JNU	Nakatsue	34.01	3	LR	LR	00 35 07.5	
	comp=Z,25nm,18.1s,baz=172,slow=39						
MJAR	Matsushiro Arr	38.36	12	P	P	00 20 20.4	-2.1
	3.2nm,0.8s,baz=188,slow=9.3,SNR=9.2 3.2nm,0.8s						
KLR	Kul'dur	50.11	2	P	P	00 21 57.7	+1.4
	0.7nm,0.6s,baz=180,slow=3.0,SNR=3.6 0.7nm,0.6s						
MKAR	Makanchi Array	62.66	326	P	P	00 23 27.2	+1.3
	0.2nm,0.5s,baz=116,slow=8.3,SNR=2.1 0.2nm,0.5s						
KURBB	Kurchatov Arra	66.87	328	P	P	00 23 54.4	+1.1
	0.9nm,0.9s,baz=127,slow=5.9,SNR=7.8 0.9nm,0.9s						
BVAR	Borovoye Array	72.45	327	P	P	00 24 28.1	+0.5
	0.7nm,0.8s,baz=93,slow=5.9,SNR=2.3 0.7nm,0.8s						

*NEIC **09** 00:26:14.4±1.3, 38°.63N±0°.08×141°.9E±0°.1, h59^{km}±13^{km}, mb4.2/4, Error ellipse: s-maj=18.3km s-min=8.1km az=120.0*

*IDC **09** 00:26:16.4±2.6, 38°.81N×141°.93E, h73^{km}±18^{km}, mb3.6/7, mbtmp3.9/10, Error ellipse: s-maj=32.9km s-min=12.4km az=113.0*

*NIED **09** 00:26:16.3, 38°.74N×141°.56E, h59^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.91; $M_{\theta\theta}$-2.16; $M_{\phi\phi}$1.25; $M_{r\theta}$0.13; $M_{\theta\phi}$2.07; $M_{\phi r}$1.15; Fault plane solution: $M_0$3.01000×10^{14} NP1:ϕ_s74.00000°, δ65.00000°, λ18.00000°. NP2:ϕ_s336.00000°, δ74.00000°, λ154.00000°.*

*JMA **09** 00:26:16.3±0.1, 38°.7N±0°.2×141°.6E±0°.4, h59^{km}, MD3.5/40, MV3.7/40, NORTHERN MIYAGI PREF*

JMA Felt II J1 at NORTHERN MIYAGI PREF .

ISC 09 00:26:15.7±0.9, 38°.74N±0°.04×141°.69E±0°.07, h59^{km}±6^{km}, n48, σ1^{s}.42/53, mb4.0/9, 12D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKMT	Kesennumamotoy	0.18	294	iP	Pn	00 26 25.2	+0.3
JKMT				S	Sn	00 26 31.4	-0.1
OFUJ	Ofunato	0.34	357	⇓iP	Pn	00 26 26.6	+0.6
OFUJ				⇓S	Sn	00 26 33.9	+0.3
JIO	Ouri	0.39	224	⇓iP	Pn	00 26 26.5	+0.1
JIO				⇓S	Sn	00 26 33.4	-0.7
JMK	Ichinoseki	0.43	301	iP	Pn	00 26 26.6	-0.2
JMK				S	Sn	00 26 33.9	-1.0
JMK	Ichinoseki	0.43	301	A	A	00 26 26.6	
	comp=N,4.0nm,0.2s,comp=E,5.0nm,0.3s						
JOM	Ohasama	0.80	337	⇓iP	Pn	00 26 31.1	0.0
JOM				⇓S	Sn	00 26 42.0	-0.4
JOM	Ohasama	0.80	337	A	A	00 26 31.1	
	comp=N,4.0nm,2.0s,comp=E,7.0nm,0.2s						
JOU	Okura	0.89	246	⇓iP	Pn	00 26 31.6	-0.6
JOU				⇓S	Sn	00 26 43.1	-1.3
JOU	Okura	0.89	246	A	A	00 26 31.6	
	comp=N,4.0nm,0.2s,comp=E,8.0nm,0.2s						
JRG	Rokugo	1.05	309	iP	Pn	00 26 34.1	-0.3
JRG				S	Sn	00 26 47.8	-0.5
JYK	Kaneyama	1.06	280	iP	Pn	00 26 33.7	-0.7
JYK				S	Sn	00 26 46.9	-1.4
JMM	Marumori	1.12	219		Pn	00 26 34.5	-0.7
JMM				Sn	Sn	00 26 47.7	-2.1
JMM	Marumori	1.12	219	⇓iP	Pn	00 26 34.5	-0.7
JMM				⇓S	Sn	00 26 47.9	-1.9
JYS	Shirataka	1.38	249	P	Pn	00 26 38.3	-0.3
JYS				S	Sn	00 26 55.0	-0.8
JFK	Kawauchi	1.51	205	⇓iP	Pn	00 26 40.4	-0.2
JFK				⇓S	Sn	00 26 58.1	-1.1
JYA	Atsumi	1.55	265	iP	Pn	00 26 40.5	-0.6
JOTO	OTAMA OYAMA	1.59	223	iP	Pn	00 26 41.5	0.0
JTM	Tenmabayashi	2.10	347		Pn	00 26 49.1	+0.6
ERM	Erimo	3.46	18	Pn	Pn	00 27 07.6	+0.5
MAJO	Matsushiro	3.53	233		Pn	00 27 09.1	+1.1
MJAR	Matsushiro Arr	3.53	233	P	Pn	00 27 09.7	+1.7
	comp=E,7.4nm,0.4s,baz=39,slow=12,SNR=57						
MJAR				S	Sn	00 27 55.1	+6.6
	comp=E,2.1nm,0.4s,baz=25,slow=40,SNR=1.4						
MJB9	Matsu-Tunnel	3.53	233		Pn	00 27 10.0	+2.0
JGF	Kuroka	4.67	229		Pn	00 27 25.8	+2.1
INU	Inuyama	5.04	229	Pn	Pn	00 27 30.7	+2.0
ASAJ	Asahikawa	5.42	7	P	Pn	00 27 34.2	+0.4
	comp=E,3.0nm,0.3s,baz=205,slow=11,SNR=11						
ASAJ				S	Sn	00 28 33.5	-1.4
	comp=E,3.3nm,0.5s,baz=252,slow=15,SNR=1.4						
JKA	Kamikawa-asahi	5.42	7	Pn	Pn	00 27 33.6	-0.2
JHJ2	Mitsune	5.81	196	Pn	Pn	00 27 38.6	-0.8
KSRS	Korea Array	10.93	268	P	Pn	00 28 52.8	+3.6
	comp=E,1.4nm,0.5s,baz=81,slow=14,SNR=5.2						
H11N2	WAKE ISLAND Hy	28.87	124	T	T	01 02 27.2	
	baz=317,slow=75,SNR=234						
H11N1	WAKE ISLAND Hy	28.88	124	T	T	01 02 27.7	
	baz=317,slow=75,SNR=524						
H11N3	WAKE ISLAND Hy	28.89	124	T	T	01 02 28.9	
	baz=317,slow=75,SNR=298						
H11S1	WAKE ISLAND Hy	29.64	126	T	T	01 03 24.6	
	baz=318,slow=75,SNR=64						
H11S3	WAKE ISLAND Hy	29.64	126	T	T	01 03 24.1	
	baz=318,slow=75,SNR=73						
H11S2	WAKE ISLAND Hy	29.65	126	T	T	01 03 24.0	
	baz=318,slow=75,SNR=61						
ZALV	Zalesovo Beam	40.95	311	P	P	00 33 51.5	-0.7
ZALV	Zalesovo Beam	40.95	311	P	P	00 33 52.0	-0.2
	comp=E,1.8nm,0.6s,baz=79,slow=7.9,SNR=7.5 comp=E,1.8nm,0.6s						
MKAR	Makanchi Array	43.42	301	P	P	00 34 11.8	-0.7
MKAR	Makanchi Array	43.42	301	P	P	00 34 12.3	-0.2
	comp=E,2.0nm,0.7s,baz=86,slow=9.8,SNR=19 comp=E,2.0nm,0.7s						
MAKZ	Makanchi	43.63	301	P	P	00 34 14.0	-0.2
MAKZ				IAmb	IAmb	00 34 14.8	
	comp=Z,2.3nm,0.8s						
KURK	Kurchatov	45.07	307	P	P	00 34 25.1	-0.5
KURK				IAmb	IAmb	00 34 25.8	
	comp=Z,5.7nm,0.8s						
KURBB	Kurchatov Arra	45.15	307	P	P	00 34 25.9	-0.3
	comp=Z,4.7nm,0.7s,baz=82,slow=8.3,SNR=48 comp=Z,4.7nm,0.7s						
BVAR	Borovoye Array	49.60	311	P	P	00 35 00.6	-0.2
	comp=Z,0.5nm,0.6s,baz=90,slow=10,SNR=3.7 comp=Z,0.5nm,0.6s						
ARTI	Arti	55.35	318	P	P	00 35 42.8	-0.5
AB31	Akbulak array	57.02	309	P	P	00 35 54.8	-0.4
ABKAR	Akbulak array	57.02	309	P	P	00 35 54.5	-0.7
WRA	Warramunga Arr	58.77	188	P	P	00 36 07.4	-0.4
	comp=Z,0.2nm,0.4s,baz=6.5,slow=6.9,SNR=4.8 comp=Z,0.2nm,0.4s						
FINES	FINESS Array B	67.41	332	P	P	00 37 03.6	-1.0
	comp=Z,1.1nm,0.8s,baz=22,slow=7.0,SNR=2.0 comp=Z,1.1nm,0.8s						
HFS	Hagfors	72.63	336	P	P	00 37 37.0	+0.5
	comp=Z,0.8nm,0.5s,baz=37,slow=7.4,SNR=1.7 comp=Z,0.8nm,0.5s						

NOU 09 00:30:56.5, 21°.71S×169°.57E, h15^{km}, mb4.2/13, Southeast of Loyalty Islands, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.45	279	P	Pn	00 31 21.5	-0.7
MARNC	Mare, Loyalty	1.45	279	S	Sb	00 31 41.7	+0.2
PINNC	Pines Island,	2.16	245	P	Pn	00 31 32.6	+0.6
PINNC	Pines Island,	2.16	245	S	Sn	00 32 00.1	+1.5
INH	Isangel	2.17	353	P	Pn	00 31 32.9	+0.8
YATNC	Mamie plateau,	2.51	262	P	Pn	00 31 36.4	-0.4
OUENC	Ouen Island, N	2.63	254	P	Pn	00 31 38.0	-0.4
DZM	Mont Dzumac	2.92	262	P	Pn	00 31 42.9	+0.3
DZM	Mont Dzumac	2.92	262	S	Sn	00 32 18.0	+0.5
ONTNC	Ouen Toro	2.95	258	P	Pn	00 31 42.1	-0.8
ONTNC	Ouen Toro	2.95	258	S	Sn	00 32 17.9	-0.2
KOUNC	Koumac, New Ca	5.07	282	P	Pn	00 32 12.5	+0.6

*IDC **09** 00:46:39.3±2.7, 1°.84N×128°.05E, h0^{km}, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=253.9km s-min=22.7km az=68.0*

*DJA **09** 00:46:51.1±0.4, 2°N±3°×12°8E±°, h24^{km}±4^{km}, M3.5/7, MLv3.5/7*

ISC 09 00:46:51.6±1.2, 1°.65N±0°.10×128°.23E±0°.10, h100^{km}, n7, σ1^{s}.56/8, mb3.4/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.22	225	P	Pn	00 47 13.8	-0.7
TNTI				S	Sn	00 47 33.7	+1.9
SGSI	Sangihe	3.37	307	P	Pn	00 47 43.8	+1.5
SWI	Sorong	3.93	129	P	Pn	00 47 50.7	+0.9
WRA	Warramunga Arr	22.28	165	P	P	00 51 41.4	+0.7
	1.0nm,0.7s,baz=343,slow=9.4,SNR=6.7 1.0nm,0.7s						
ASAR	Alice Springs	25.76	168	P	P	00 52 12.6	-0.6
	0.2nm,0.4s,baz=348,slow=9.0,SNR=1.3 0.2nm,0.4s						
MKAR	Makanchi Array	60.11	325	P	P	00 56 47.2	-1.3
	0.4nm,0.3s,baz=118,slow=8.0,SNR=8.6 0.4nm,0.3s						
KURBB	Kurchatov Arra	64.29	327	P	P	00 57 14.6	-1.6
	0.4nm,0.5s,baz=126,slow=6.0,SNR=5.5 0.4nm,0.5s						

*NNC **09** 01:03:21.9±3.5, 36°.98N×70°.85E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=28.5km s-min=20.8km az=163.0*

*IDC **09** 01:03:22.9±5.4, 36°.50N×71°.38E, h116^{km}±41^{km}, mb3.5/8, mbtmp3.8/14, MS2.8/2, Error ellipse: s-maj=54.1km s-min=27.5km az=148.0*

ISC 09 01:03:27.5±1.4, 36°.9N±0°.1×71°.19E±0°.10, h150^{km}, n21, σ2^{s}.05/24, mb3.5/6, 8C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.19	355	⇓P	Pn	01 04 56.0	-0.7
	11nm,0.5s,baz=184,slow=14,SNR=97						
KK31				⇑S	Sn	01 06 07.0	+0.5
	11nm,0.6s,baz=192,slow=25,SNR=3.7						
AAK	Ala-Archa	6.25	23	P	Pn	01 04 57.0	-0.6
	5.4nm,0.4s,baz=148,slow=5.0,SNR=9.1						
AAK				S	Sn	01 06 11.1	+3.0
	3.8nm,0.4s,baz=141,slow=22,SNR=7.3						
AAK	Ala-Archa	6.25	23	⇓P	Pn	01 04 57.0	-0.6
	0.4nm,0.5s						
AAK				⇑S	Sn	01 06 10.3	+2.2
	1.3nm,0.6s						
CHMS	Chumysh	6.65	23	⇑P	Pn	01 05 01.2	-1.6
	1.8nm,0.3s						
CHMS				⇑S	Sn	01 06 20.7	+3.2
	3.9nm,0.5s						
TKM2	Tokmak 2	6.88	28	⇓P	Pn	01 05 05.2	-0.8
	3.0nm,0.6s						
TKM2				⇑S	Sn	01 06 24.4	+1.2
	2.8nm,0.8s						
MKAR	Makanchi Array	12.86	36	P	P	01 06 26.5	-3.3
	0.2nm,0.5s,baz=222,slow=12,SNR=5.6						
MKAR				LR	LR	01 10 46.3	
	comp=Z,20nm,19.0s,baz=99,slow=34						
KURBB	Kurchatov Arra	14.67	19	P	P	01 06 51.0	+1.2
	0.5nm,0.4s,baz=205,slow=10,SNR=12						
AB31	Akbulak array	14.79	330	⇑P	P	01 06 48.0	-3.1
	0.5nm,0.3s,baz=137,slow=14,SNR=37						
AB31				S	Sn	01 09 31.8	-1.4
	1.8nm,0.6s,baz=153,slow=23,SNR=6.7						
BVAR	Borovoye Array	16.11	358	P	P	01 07 08.7	+2.9
	0.8nm,0.4s,baz=165,slow=11,SNR=6.0						
AKTO	Aktyubinsk	16.49	329	P	P	01 07 11.2	+1.2
	1.1nm,0.3s,baz=124,slow=8.8,SNR=4.7						
AKTO	Aktyubinsk	16.49	329	⇑P	P	01 07 10.4	+0.4
	1.9nm,0.8s						
AKTO				⇑S	Sn	01 10 11.6	-2.4
	1.8nm,0.9s						
ZALV	Zalesovo Beam	19.46	25	P	Pn	01 07 42.9	-2.3
	2.9nm,0.3s,baz=214,slow=11,SNR=20						
GNI	Garni	20.91	287	P	Pn	01 08 00.1	-2.6
	1.9nm,0.4s,baz=90,slow=14,SNR=5.6 1.9nm,0.4s						
KBZ	Khabaz	22.55	296	P	P	01 08 15.3	+0.5
	1.0nm,0.6s,baz=221,slow=15,SNR=2.2 1.0nm,0.6s						
AKASG	Malin Array Be	32.80	308	P	P	01 09 48.6	+2.3
	0.2nm,0.4s,baz=83,slow=7.0,SNR=3.1 0.2nm,0.4s						
FINES	FINESS Array B	37.22	326	P	P	01 10 27.1	+3.1
	1.4nm,0.8s,baz=111,slow=8.0,SNR=6.2 1.4nm,0.8s						
ARCES	ARCESS Array B	40.81	337	P	P	01 10 57.0	+3.2
	3.7nm,0.4s,baz=107,slow=7.9,SNR=1.2 3.7nm,0.4s						
HFS	Hagfors	42.83	322	P	P	01 11 11.6	+1.4
	0.6nm,0.4s,baz=92,slow=11,SNR=6.6 0.6nm,0.4s						
YAK	Yakutsk	43.53	36	LR	LR	01 31 38.5	
	comp=Z,18nm,19.2s,baz=150,slow=39						
NOA	NORSAR Array B	44.13	323	P	P	01 11 23.1	+2.4
	0.4nm,0.5s,baz=96,slow=7.9,SNR=1.9 0.4nm,0.5s						
TORD	Torodi Ar. Bea	65.88	269	P	P	01 13 57.0	-0.3
	1.0nm,0.3s,baz=57,slow=6.9,SNR=1.5 1.0nm,0.3s						

*IDC **09** 01:13:11.8±1.0, 14°.57N×45°.04W, h0^{km}, mb3.8/6, mbtmp3.8/6, MS3.0/7, Error ellipse: s-maj=31.6km s-min=26.3km az=122.0*

ISC 09 01:13:13.7±0.9, 14°.6N±0°.2×45°.0W±0°.2, h12^{km}, n18, σ0^{s}.66/6, mb3.8/5, MS3.1/6, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDP	Montagnes des	12.02	219	LR	LR	01 19 40.7	
	comp=Z,76nm,20.5s,baz=66,slow=32						
H05S1	Guadeloupe/Mar	15.31	271	T	T	01 32 31.7	
	SNR=7.5						
SJG	San Juan	20.57	283	LR	LR	01 25 24.2	
	comp=Z,25nm,19.6s,baz=150,slow=36						
SDV	Santo Domingo	25.68	260	LR	LR	01 29 21.2	
	comp=Z,7.3nm,20.4s,baz=101,slow=38						
BDFB	Brasilia	30.15	186	P	P	01 19 24.2	+0.2
	4.0nm,0.8s,baz=3.6,slow=10,SNR=6.8 4.0nm,0.8s						
ROSC	El Rosal	30.41	254	LR	LR	01 31 24.8	
	comp=Z,54nm,18.4s,baz=39,slow=36						
H10N3	ASCENSION HYDR	37.58	124	T	T	02 00 07.3	
	baz=306,slow=75,SNR=8.3						
H10N2	ASCENSION HYDR	37.58	124	T	T	02 00 11.8	
	baz=306,slow=75,SNR=9.7						
H10N1	ASCENSION HYDR	37.59	124	T	T	02 00 09.3	
	baz=306,slow=75,SNR=13						
H10S3	ASCENSION HYDR	38.11	126	T	T	02 00 49.3	
	baz=304,slow=74,SNR=12						
H10S2	ASCENSION HYDR	38.13	126	T	T	02 00 48.2	
	baz=276,slow=74,SNR=13						
LPAZ	La Paz	38.21	218	P	P	01 20 34.2	-0.1
	2.0nm,1.1s,baz=11,slow=4.9,SNR=4.1						
LPAZ				LR	LR	01 36 14.3	
	comp=Z,40nm,18.7s,baz=255,slow=36 2.0nm,1.1s						
TKL	Tuckaleechee C	40.54	308	LR	LR	01 36 16.2	
	comp=Z,22nm,19.4s,baz=182,slow=34						
ESDC	Sonseca Array	43.76	47	LR	LR	01 35 58.3	
	comp=Z,22nm,19.1s,baz=196,slow=31						
TORD	Torodi Ar. Bea	45.33	86	P	P	01 21 31.4	-0.6
	1.0nm,0.3s,baz=282,slow=9.2,SNR=1.4 1.0nm,0.3s						
TXAR	Lajitas Array	55.82	296	P	P	01 22 51.4	0.0
	0.4nm,0.9s,baz=102,slow=7.0,SNR=4.1 0.4nm,0.9s						
BRTR	Keskin Array B	72.20	53	P	P	01 24 39.9	+0.8
	0.3nm,0.8s,baz=260,slow=8.5,SNR=3.7 0.3nm,0.8s						
ILAR	Eielson Array	81.93	335	P	P	01 25 32.8	-0.3
	0.8nm,0.9s,baz=63,slow=4.4,SNR=8.1 0.8nm,0.9s						

*IDC **09** 01:33:33.1±1.2, 53°.70S×140°.57E, h0^{km}, mb3.8/5, mbtmp3.8/5, MS3.5/3, Error ellipse: s-maj=96.7km s-min=19.2km az=85.0*

ISC 09 01:33:34.4±1.0, 53°.7S±0°.1×140°.5E±0°.5, h10^{km}, n28, σ0^{s}.73/23, mb3.9/5, MS3.5/3, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	21.85	3	P	P	01 38 27.9	+0.8
	6.1nm,0.8s,baz=180,slow=13,SNR=9.6						
STKA				LR	LR	01 45 16.7	
	comp=Z,70nm,19.4s,baz=191,slow=32 6.1nm,0.8s						
VNDA	Vanda	25.12	169	P	P	01 38 59.9	+1.0
	0.9nm,1.0s,baz=316,slow=9.0,SNR=4.3 0.9nm,1.0s						
H01W1	Cape Leeuwin H	26.38	305	T	T	02 06 44.4	
	baz=143,slow=76,SNR=4.3						
H01W2	Cape Leeuwin H	26.38	305	T	T	02 06 49.3	
	baz=143,slow=76,SNR=4.7						
H01W3	Cape Leeuwin H	26.39	305	T	T	02 06 49.8	
	baz=143,slow=76,SNR=2.6						
ASAR	Alice Springs	30.42	348	P	P	01 39 47.2	+0.3
	1.0nm,0.7s,baz=166,slow=9.8,SNR=13 1.0nm,0.7s						
WRA	Warramunga Arr	34.05	350	P	P	01 40 17.8	-0.9
	1.1nm,0.7s,baz=173,slow=7.7,SNR=13 1.1nm,0.7s						
QSPA	South Pole Qui	36.38	180	P	P	01 40 38.1	-0.5
	1.8nm,1.0s,baz=0.0,slow=20,SNR=2.7						
QSPA				LR	LR	01 54 05.3	
	comp=Z,82nm,19.9s,baz=307,slow=34 1.8nm,1.0s						
RAR	Rarotonga	55.36	78	LR	LR	02 05 15.9	
	comp=Z,54nm,18.4s,baz=254,slow=34						
RONA	Rosalia, Austr	144.93	283	ePKP	PKPbc	01 53 10.0	-0.1
	1.8nm,0.6s						
SOKA	Soboth	145.13	281	ePKP	PKiKP	01 53 14.0	-1.1
	2.8nm,0.8s						
ARSA	Arzberg	145.14	282	ePKP	PKPdf	01 53 11.6	+0.5
	5.8nm,1.0s						
CONA	Conrad Observa	145.30	283	ePKP	PKPab	01 53 12.2	+0.7
	1.1nm,0.7s						
FINES	FINESS Array B	145.41	310	PKPbc	PKPab	01 53 12.0	+0.7
	2.0nm,0.8s,baz=139,slow=3.0,SNR=5.1						
MYKA	Terra Mystica	145.91	280	ePKP	PKPab	01 53 14.7	+0.9
	0.9nm,0.4s						
KBA	Koelnbreinsper	146.32	281	ePKP	PKPab	01 53 15.7	+0.2
	2.5nm,1.1s						
BIOA	Bad Ischl, Aus	146.47	282	ePKP	PKPab	01 53 16.6	+0.8
	5.1nm,1.2s						
ABTA	Abfaltersbach	146.64	280	ePKP	PKiKP	01 53 17.7	-0.6
	4.9nm,1.0s						
LESA	Schwarzleotal	146.89	281	ePKP	PKPbc	01 53 16.0	-0.2

	1.5nm,0.5s						
GERES	GERESS Array B	147.00	284	PKPbc	PKPbc	01 53 16.2	-0.2
	1.2nm,0.8s,baz=178,slow=2.9,SNR=6.5						
WTTA	Wattenberg	147.42	280	*e*PKP	PKPbc	01 53 17.7	-0.1
	4.1nm,0.9s						
SQTA	Sankt Quirin	147.65	279	*e*PKP	PKPbc	01 53 18.5	+0.2
	1.3nm,0.5s						
MOTA	Moosalm	147.77	280	*i* PKP	PKPbc	01 53 17.8	-0.8
	2.6nm,1.1s						
FETA	Feichten	147.82	279	*e*PKP	PKPdf	01 53 16.3	+0.4
	3.9nm,1.2s						
RETA	Reutte	148.04	280	*i* PKP	PKPbc	01 53 18.9	-0.4
	1.7nm,0.5s						
DAVA	Damuels	148.46	279	*i* PKP	PKPdf	01 53 16.2	-0.7
	3.9nm,1.1s						
SPITS	Spitsbergen Ar	148.84	341	PKPbc	PKPbc	01 53 19.0	-1.4
	6.6nm,1.0s,baz=52,slow=2.4,SNR=1.9						
ESDC	Sonseca Array	152.18	254	PKPbc	PKiKP	01 53 30.2	+0.4
	1.2nm,0.9s,baz=95,slow=1.1,SNR=9.8						

CATAC 09 01:56:31.0±0.5**, 13°N**±4°×**8°8W**±°**, h116**km±4km**, M2.9**/12**, MLv2.9**/12**, Error ellipse: s-maj=9.0km s-min=5.0km az=24.5, confirmed, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSGN	Cosiguina Volc	0.20	62	P	Pn	01 56 48.2	+1.0
CSGN				S	Sn	01 57 00.8	+1.4
POTN	Potosi Cosigui	0.25	62	P	Pn	01 56 48.2	+1.0
POTN				S	Sn	01 57 01.8	+2.4
CNCH	Conchagua	0.40	347	P	Pn	01 56 48.9	+0.8
CNCH	Conchagua	0.40	347	S	Sn	01 57 03.4	+2.5
LCND	La Caada	0.45	341	P	Pn	01 56 48.9	+0.7
LCND	La Caada	0.45	341	S	Sn	01 57 03.8	+2.7
CRIN	San Cristobal	0.69	105	P	Pn	01 56 51.0	+1.1
CRIN	San Cristobal	0.69	105	S	Sn	01 57 06.6	+2.4
PACA	Pacayal	0.82	316	P	Pn	01 56 51.8	+0.8
PACA	Pacayal	0.82	316	S	Sn	01 57 06.3	+0.1
CHOHN	Orocuina	0.82	43	P	Pn	01 56 51.3	+0.3
QUEN	Al S del Volca	0.91	108	P	Pn	01 56 52.2	+0.4
HERN	Volcan Telica	0.93	107	P	Pn	01 56 52.2	+0.3
HERN	Volcan Telica	0.93	107	S	Sn	01 57 10.7	+2.9
CNGN	Cerro Negro	1.08	110	P	Pn	01 56 53.3	-0.2
CNGN	Cerro Negro	1.08	110	S	Sn	01 57 11.7	+1.2
TGUH	Tegucigalpa,Un	1.25	21	P	Pn	01 56 55.9	+0.5
TGUH				S	Sn	01 57 15.0	+0.9
LIMN	Finca el Limon	1.35	82	P	Pn	01 56 56.7	+0.2
RCVN	Varillal2	1.66	65	P	Pn	01 56 59.8	-0.3
RCVN	Varillal2	1.66	65	S	Sn	01 57 22.4	0.0
RCPN	Sur Rio San Ju	1.72	68	P	Pn	01 57 00.5	-0.5
NUBE	Las Nubes	2.23	297	P	Pn	01 57 08.1	+0.8
NUBE	Las Nubes	2.23	297	S	Sn	01 57 35.6	+0.5

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*CATAC **09** 02:06:55.9±0.6, 13°N±3°×9°0W±°, h24km±3km, M3.6/23, MLv3.6/23, Error ellipse: s-maj=6.6km s-min=3.3km az=23.6, confirmed*

*GCG **09** 02:06:57.3±1.1, 13°.12N×89°.53W, h48km±13km, MD3.7, ML3.1*

*SNET **09** 02:06:58.0±1.4, 13°.14N×89°.48W, h44km, ML3.5*

ISC 09 02:06:56.6±1.7**, 13°.03N**±0°.07×**89°.51W**±0°.04**, h32**km±10km**, n73, σ0ˢ50**/84**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.49	22	*e*P	Pb	02 07 07.4	+0.4
LALI				*e*S	Sb	02 07 14.5	+0.3
LALI	Alcalda de L	0.49	22	*i* P	Pb	02 07 07.5	+0.4
LALI				*i* S	Sn	02 07 14.9	0.0
LALI				IAML		02 07 16.3	
	comp=N,1µm,0.4s						
JAYA	Jayaque - finc	0.62	6	*e*P	Pb	02 07 09.1	-0.2
JAYA				*e*S	Sb	02 07 17.9	0.0
JAYA	Jayaque - finc	0.62	6	*i* P	Pb	02 07 09.1	-0.2
JAYA				*i* S	Sb	02 07 18.0	0.0
JAYA	Jayaque - finc	0.62	6	P	Pb	02 07 09.0	-0.2
PANCS	Alcalda de	0.66	29	P	Pb	02 07 09.5	-0.4
PANCS	Alcalda de	0.66	29	S	Sb	02 07 18.8	-0.1
ITCA	Escuela Especi	0.68	20	S	Sb	02 07 19.7	+0.3
ITCA	Escuela Especi	0.68	20	P	Pb	02 07 09.8	-0.4
LOMA	Loma Larga	0.69	28	*e*P	Pb	02 07 10.1	-0.4
LOMA	Loma Larga	0.69	28	P	Pb	02 07 10.0	-0.4
LOMA	Loma Larga	0.69	28	S	Sn	02 07 20.7	+0.5
PMON	Piamonte	0.70	16	P	Pb	02 07 10.1	-0.5
PMON	Piamonte	0.70	16	S	Sn	02 07 20.8	+0.5
UEES	Universidad Ev	0.73	21	S	Sn	02 07 21.3	+0.3
UEES	Universidad Ev	0.73	21	P	Pb	02 07 10.6	-0.5
UTEC	Universidad Te	0.73	24	S	Sn	02 07 21.2	+0.3
UTEC	Universidad Te	0.73	24	P	Pb	02 07 10.7	-0.4
LFRS	El Faro	0.73	37	*e*P	Pb	02 07 10.8	-0.3
BOQS	Boqueron	0.73	18	*e*P	Pb	02 07 10.9	-0.3
IGN	Direccin Gen	0.76	26	*e*P	Pb	02 07 11.0	-0.5
IGN	Direccin Gen	0.76	26	P	Pb	02 07 11.1	-0.3
UDBS	Universidad Do	0.76	27	P	Pb	02 07 11.1	-0.5
UDBS	Universidad Do	0.76	27	S	Sn	02 07 22.2	+0.5
CEDA	San Andres	0.78	8	*e*P	Pn	02 07 11.2	-0.3
CEDA	San Andres	0.78	8	P	Pn	02 07 11.2	-0.3
CEVE	Cerro Verde	0.80	352	*e*P	Pn	02 07 11.8	-0.2
CEVE				*e*S	Sb	02 07 23.4	+0.5
CEVE	Cerro Verde	0.80	352	P	Pn	02 07 11.8	-0.2
LFU	La Fuente	0.81	28	*e*S	Sn	02 07 24.1	+1.1
LBRS	Las Brisas	0.84	33	*e*P	Pn	02 07 12.5	+0.2
COEG	Centro de Oper	0.85	46	*e*P	Pn	02 07 11.8	-0.6
COEG				*e*S	Sn	02 07 24.3	+0.4
COEG	Centro de Oper	0.85	46	P	Pn	02 07 12.0	-0.4
COEG	Centro de Oper	0.85	46	S	Sb	02 07 23.4	-0.8
TECO	Alcaldia de Te	0.87	55	P	Pn	02 07 12.0	-0.8
TECO	Alcaldia de Te	0.87	55	S	Sb	02 07 24.0	-0.7
PAVA	Las Pavas	0.88	39	*e*P	Pn	02 07 12.8	-0.1
PAVA				*e*S	Sn	02 07 25.1	+0.4
PAVA	Las Pavas	0.88	39	P	Pn	02 07 12.7	-0.1
NUBE	Las Nubes	0.91	343	*e*P	Pn	02 07 12.9	-0.4
NUBE				*e*S	Sn	02 07 25.1	-0.3
NUBE	Las Nubes	0.91	343	*i* P	Pn	02 07 12.9	-0.4
NUBE				*i* S	Sn	02 07 25.1	-0.3
NUBE	Las Nubes	0.91	343	P	Pn	02 07 12.9	-0.4
NUBE	Las Nubes	0.91	343	S	Sn	02 07 24.8	-0.6
UESV	Universidad de	0.93	49	P	Pn	02 07 13.0	-0.5
UESV	Universidad de	0.93	49	S	Sn	02 07 25.3	-0.4
FAME	Alcaldia de Sa	0.94	329	P	Pn	02 07 13.2	-0.5
FAME	Alcaldia de Sa	0.94	329	S	Sn	02 07 24.5	-1.6
UNIC	Universidad Ca	0.95	358	P	Pn	02 07 13.7	-0.1
UNIC	Universidad Ca	0.95	358	S	Sn	02 07 27.2	+1.0
ALJI	Alcalda de J	0.96	72	P	Pn	02 07 13.7	-0.2
ALJI	Alcalda de J	0.96	72	S	Sn	02 07 26.3	-0.2
LOAL	Lomas de Alarc	1.00	345	*e*P	Pn	02 07 14.8	+0.4
LOAL				*e*S	Sn	02 07 28.7	+1.2
LOAL	Lomas de Alarc	1.00	345	P	Pn	02 07 14.7	+0.2
SCLA	Alcaldia de Sa	1.01	49	P	Pn	02 07 14.6	0.0
SLOZ	Alcaldia de Sa	1.02	345	P	Pn	02 07 14.9	0.0
SLOZ	Alcaldia de Sa	1.02	345	S	Sn	02 07 29.3	+1.2
PACA	Pacayal	1.24	69	*e*P	Pn	02 07 18.5	+0.7
PACA	Pacayal	1.24	69	S	Sn	02 07 33.9	+0.4
PACA	Pacayal	1.24	69	P	Pn	02 07 17.8	-0.1
LLGN	La Laguna	1.25	26	*e*P	Pn	02 07 18.9	+0.8
LLGN	La Laguna	1.25	26	P	Pn	02 07 18.1	0.0
LLGN	La Laguna	1.25	26	S	Sb	02 07 35.5	-0.2
BLLM	Bellamira	1.31	72	*e*P	Pn	02 07 18.8	+0.1
MTO3	Montecristo	1.37	6	*e*P	Pn	02 07 19.7	0.0
MTO3	Montecristo	1.37	6	*i* P	Pn	02 07 19.7	0.0
MTO3	Montecristo	1.37	6	P	Pn	02 07 19.7	0.0
ESQI	Esquipulas	1.53	6	*e*P	Pn	02 07 22.2	+0.4
ESQI	Esquipulas	1.53	6	P	Pn	02 07 22.0	+0.1
LCND	La Caada	1.60	80	*e*P	Pn	02 07 22.3	-0.5
LCND				*e*P		02 07 23.3	
LCND	La Caada	1.60	80	P	Pn	02 07 22.9	+0.2
CNCH	Conchagua	1.65	81	P	Pn	02 07 23.7	+0.1
CNCH	Conchagua	1.65	81	S	Sn	02 07 44.3	+0.5
MARCA	Marcala la Paz	1.82	52	*e*P	Pn	02 07 25.6	-0.3
CSGN	Cosiguina Volc	1.90	91	P	Pn	02 07 26.8	-0.2
CSGN				S	Sn	02 07 51.3	+1.4
STG8	El Palmar, Qui	2.28	309	*i* P	Pb	02 07 37.5	+0.3

ATH 09 02:26:03.9, 39°.30N×22°.71E, h24km±1km**, ML1.6**/6**, Manual Solution by A.Fokaefs First location: 2019/06/09 02:27:07, This location: 2019/06/10 10:25:56 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEO	Neokhori	0.40	88	P	Pb	02 26 12.4	0.0
NEO				S	Sb	02 26 18.2	+0.1
AGG	Agios Georgios	0.40	228	P	Pb	02 26 12.2	-0.3
AGG				S	Sb	02 26 18.5	+0.2
AXAR	Agios Charalam	0.53	185	P	Pb	02 26 14.9	+0.3
AXAR				S	Sb	02 26 22.2	+0.3
MAKR	Makrakomi, Fth	0.53	238	P	Pb	02 26 14.8	+0.1
MAKR				S	Sb	02 26 22.7	+0.8
TYRN	Tyrnavos	0.56	318	P	Pb	02 26 15.2	+0.1
TYRN				S	Sb	02 26 23.5	+0.8
THL	Klokotos Trika	0.60	297	P	Pb	02 26 15.8	-0.1
THL				S	Sb	02 26 24.7	+0.7
EVR	Evrytania	0.80	242	P	Pn	02 26 19.9	+0.1
ANX	Ano Chora	0.93	222	P	Pb	02 26 21.5	0.0
EFP	Efpalio	1.07	216	P	Pn	02 26 23.4	0.0
KYMI	Kymi, Euboea I	1.27	121	P	Pn	02 26 26.4	+0.3

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*SOF **09** 02:26:49.7, 41°.79N±0°.01×23°.76E±0°.01, h10km±2km, MD3.2/9*

*ISK **09** 02:26:49.3, 41°.78N×23°.71E, h9km, ML3.2/18*

*ATH **09** 02:26:50.4, 41°.77N×23°.74E, h10km±1km, ML3.1/14, Manual Solution by A.Fokaefs First location: 2019/06/09 02:27:55, This location: 2019/06/10 10:41:55 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

*BEO **09** 02:26:51.3±0.3, 41°.82N×23°.70E, h8km±2km, ML3.1/11*

*SKO **09** 02:26:51.2, 41°.81N×23°.69E, h4km, ML3.0*

*THE **09** 02:26:51.0, 42°N±2°×2°4E±°, h11km±2km, M2.9/13, MLh2.9/13*

*AFAD **09** 02:26:56.6, 41°.44N×24°.35E, h11km±4km, ML2.9*

ISC 09 02:26:50.4±0.8**, 41°.77N**±0°.01×**23°.75E**±0°.01**, h16**km±6km**, n171, σ1ˢ38**/239**, 18C-21D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMB	Musomishta	0.22	179	⇑*i*Pg	Pg	02 26 55.6	-0.1
MMB				Sg	Sg	02 26 59.0	-0.1
MMB	Musomishta	0.22	179	P	Pg	02 26 55.5	-0.1
MMB				S	Sg	02 26 58.5	-0.6
MMB	Musomishta	0.22	179	⇑*i*Pg	Pg	02 26 55.6	-0.1
MMB				*i* Sg	Sb	02 26 59.8	-0.2
KKB	Krupnik	0.47	279	⇓*i*Pg	Pg	02 26 59.6	-0.2
KKB				Sg	Sg	02 27 05.9	-0.2
KKB	Krupnik	0.47	279	⇓*i*Pg	Pg	02 26 59.6	-0.2
KKB				*i* Sg	Sg	02 27 06.0	-0.2
SRS	Serrai	0.66	190	P	Pg	02 27 03.5	0.0
SRS				S	Sb	02 27 13.1	+0.6
SRS	Serrai	0.66	190	⇑*i*Pg	Pg	02 27 03.6	+0.1
SRS				*i* Sg	Sb	02 27 13.1	+0.6
SRS	Serrai	0.66	190	*e*Pg	Pg	02 27 03.5	+0.1
SRS				*e*Sg	Sb	02 27 13.2	+0.6
SRS	Serrai	0.66	190	P	Pg	02 27 03.5	+0.1
SRS				S	Sb	02 27 12.7	+0.1
PLNA	Plana	0.74	341	⇑*i*Pg	Pg	02 27 04.4	-0.6
PLNA				Sg	Sg	02 27 14.4	-0.5
RZN	Rozhen	0.75	96	⇓*i*Pg	Pg	02 27 04.4	-0.7
RZN				Sg	Sb	02 27 15.2	0.0
PGB	Panagyurishte	0.81	23	⇑*i*Pg	Pb	02 27 05.7	-0.4
PGB				Sg	Sb	02 27 16.1	-0.7
PLD	Plovdiv	0.84	63	Pg	Pb	02 27 05.9	-0.6
PLD				Sg	Sb	02 27 16.6	-1.0
PLD	Plovdiv	0.84	63	⇓*i*Pg	Pb	02 27 05.5	-1.1
PLD				Sg	Sb	02 27 16.6	-1.0
PLD	Plovdiv	0.84	63	P	Pb	02 27 06.0	-0.6
PLD				S	Sb	02 27 16.7	-0.8
PLD	Plovdiv	0.84	63	⇓*i*Pg	Pb	02 27 06.0	-0.6
PLD				*i* Sg	Sb	02 27 16.8	-0.8
PLD	Plovdiv	0.84	63	*e*Pg	Pb	02 27 06.0	-0.6
PLD				*e*Sg	Sn	02 27 19.0	-0.5
KNT	Kendrikon	0.88	227	Pg	Pb	02 27 06.7	-0.6
KNT				Sg	Sb	02 27 18.4	-0.5
KNT	Kendrikon	0.88	227	P	Pb	02 27 07.1	-0.3
KNT				S	Sb	02 27 18.5	-0.3
KNT	Kendrikon	0.88	227	⇑*i*Pg	Pb	02 27 07.0	-0.3
KNT				*i* Sg	Sb	02 27 18.5	-0.3
KNT	Kendrikon	0.88	227	P	Pb	02 27 07.0	-0.3
KNT				S	Sb	02 27 18.3	-0.5
VTS	Vitosha	0.93	336	*i* Pg	Pb	02 27 07.4	-0.8
VTS				Sg	Sb	02 27 19.2	-1.1
VTS	Vitosha	0.93	336	*e*Pg	Pb	02 27 07.2	-1.0
VTS				*e*Sg	Sb	02 27 18.8	-1.5
SOF	Sofia	0.95	343	Pg	Pb	02 27 08.6	+0.1
SOF				Sg	Sb	02 27 19.8	-1.0
KVLA	Kavala	0.96	150	P	Pg	02 27 09.1	-0.1
KVLA				S	Sb	02 27 21.1	-0.1
KAVA	Kavala	0.97	143	P	Pb	02 27 08.6	-0.2
KAVA				S	Sn	02 27 22.2	-0.4
KAVA	Kavala	0.97	143	P	Pb	02 27 08.5	-0.2
KAVA				S	Sg	02 27 21.9	0.0
VAY	Valandovo	0.99	243	P	Pb	02 27 09.6	+0.4
VAY	Valandovo	0.99	243	*i* Pg	Pb	02 27 09.6	+0.4
VAY				*i* Sg	Sb	02 27 22.2	+0.3
VAY				*e*Lg	Lg	02 27 24.2	
	comp=N,604nm,0.8s						
VAY				*e*Lg	Lg	02 27 25.1	
	comp=E,144nm,0.3s						
VAY	Valandovo	0.99	243	*e*Pg	Pb	02 27 09.4	+0.2
VAY				*e*Sg	Sn	02 27 23.6	+0.4
BOSS	Bosilegrad	1.19	308	*e*Pg	Pn	02 27 12.6	+0.2
BOSS				*e*Sg	Sb	02 27 28.4	+0.7
KDZ	Kurdzhali	1.20	96	Pn	Pb	02 27 12.9	0.0
KDZ				Sn	Sg	02 27 30.3	+0.9
KDZ	Kurdzhali	1.20	96	⇓*i*P	Pb	02 27 13.2	+0.4
KDZ				Sg	Sg	02 27 30.0	+0.6
KDZ	Kurdzhali	1.20	96	P	Pb	02 27 12.8	0.0
HORT	Hortiatis	1.27	203	Pn	Pn	02 27 13.9	+0.3
HORT				Sn	Sg	02 27 31.2	-0.3
HORT	Hortiatis	1.27	203	P	Pb	02 27 14.1	+0.1
HORT	Hortiatis	1.27	203	P	Pb	02 27 14.2	+0.3
HORT				S	Sn	02 27 30.9	+0.7
THE	Thessaloniki	1.28	208	P	Pb	02 27 14.3	+0.2
THE				S	Sg	02 27 31.3	-0.5
THE	Thessaloniki	1.28	208	⇑*i*Pg	Pb	02 27 14.4	+0.3
THE				*i* Sg	Sg	02 27 32.2	+0.3
THE	Thessaloniki	1.28	208	P	Pb	02 27 14.4	+0.2
THE				S	Sn	02 27 30.8	+0.4
GRG	Griva	1.30	232	Pn	Pn	02 27 14.0	+0.1
GRG				Sn	Sn	02 27 31.9	+1.0
THAS	Thassos island	1.38	147	P	Pn	02 27 15.3	+0.3
THAS				S	Sn	02 27 32.5	-0.3
THAS	Thassos island	1.38	147	P	Pn	02 27 15.2	+0.3
THAS				S	Sb	02 27 33.4	+0.3
DIM	Dimitrovgrad	1.40	78	⇓*i*P	Pb	02 27 16.5	+0.4
PLG	Polygyros	1.41	189	P	Pb	02 27 16.8	+0.4
PLG	Polygyros	1.41	189	P	Pb	02 27 16.6	+0.2
OUR	Ouranopolis	1.45	173	Pn	Pb	02 27 16.5	-0.4
OUR	Ouranopolis	1.45	173	P	Pb	02 27 16.6	-0.4
OUR	Ouranopolis	1.45	173	P	Pn	02 27 16.4	+0.5
OUR				S	Sg	02 27 36.4	-0.7
RDO	Rodhopi	1.48	114	Pn	Pb	02 27 17.2	-0.4
RDO	Rodhopi	1.48	114	P	Pn	02 27 17.0	+0.6
RDO	Rodhopi	1.48	114	P	Pb	02 27 17.3	-0.4
MPEP	Malo Peshtene	1.58	360	P	Pb	02 27 19.3	0.0
MPEP				Sg	Sg	02 27 42.2	+0.7
ZAPS	Zavoj	1.71	332	*e*Pg	Pb	02 27 21.0	-0.5
ZAPS				*e*Sg	Sb	02 27 44.7	+1.9
PVL	Pavlikeni	1.71	38	P	Pb	02 27 22.0	+0.5
PVL				Sg	Sg	02 27 45.3	-0.4
BARS	Barje	1.77	307	*i* Pn	Pn	02 27 21.4	+1.0
BARS	Barje	1.77	307	*e*Pg	Pn	02 27 21.3	+0.9
BARS				*e*Sg	Sg	02 27 46.8	-0.7
VALD	Valchedram	1.93	353	P	Pn	02 27 23.4	+0.8
VALD				Sg	Sg	02 27 53.6	+1.0
ALN	Alexandroupoli	1.94	116	Pn	Pb	02 27 24.2	-1.2
ALN	Alexandroupoli	1.94	116	P	Pn	02 27 23.7	+1.1
BLKB	Belogradchik	2.01	337	*e*Pg	Pb	02 27 27.7	+1.1
BLKB				*e*Sg	Sb	02 27 52.9	+1.5
KZN	Kozani	2.09	226	P	Pn	02 27 25.6	+0.7
CAVK	Edirne/Enez-Ca	2.12	120	P	Pb	02 27 29.8	+1.3
CAVK				S	Sb	02 27 56.0	+1.5
CAVK				*i* IAML		02 28 01.0	
	comp=E,157nm,0.5s						
CAVK				*i* IAML		02 28 05.0	
	comp=E,211nm,0.6s						
CAVK	Edirne/Enez-Ca	2.12	120	⇓P	Pg	02 27 30.0	-1.2
LIA	Limnos Island	2.17	149	P	Pn	02 27 26.2	+0.4
LIA	Limnos Island	2.17	149	P	Pn	02 27 26.0	+0.3
ZIMR		2.23	32	⇑P	Pb	02 27 29.7	-0.6
EDRB	Edirne	2.24	87	Pn	Pn	02 27 27.8	+0.9
EDRB	Edirne	2.24	87	P	Pn	02 27 27.4	+0.5
GADA	Gvkgeada	2.27	133	Pn	Pn	02 27 28.3	+1.1
GOAD	anakkale-G¶	2.30	134	P	Pg	02 27 34.4	-0.1
GOAD				S	Sn	02 27 55.5	0.0
OHR	Ohrid	2.31	254	*i* Pn	Pg	02 27 33.6	-1.2
OHR				*i* Sg	Sg	02 28 04.8	+0.1
OHR				*e*Lg	Lg	02 28 05.0	
	comp=N,25nm,0.8s						
OHR				*e*Lg	Lg	02 28 07.2	
	comp=E,27nm,0.5s						
OHR	Ohrid	2.31	254	*e*Pg	Pg	02 27 33.5	-1.2
ZAGS	Zajecar	2.32	332	*e*Pn	Pn	02 27 28.5	+0.5
ZAGS				*e*Sg	Sb	02 28 02.5	+2.1
TYRN	Tyrnavos	2.36	210	P	Pn	02 27 29.3	+0.9
TYRN	Tyrnavos	2.36	210	P	Pn	02 27 29.3	+0.9
ERIK	Erikli-Kesan	2.36	117	Pn	Pn	02 27 29.7	+1.3
BOVS	Bovan	2.39	322	⇓P	Pn	02 27 30.2	+1.3
KESN	Edirne-Kesan	2.41	112	P	Pg	02 27 35.1	-1.5
KESN				S	Sb	02 28 03.1	+0.1
SELS	Selova	2.42	308	*e*Pn	Pn	02 27 30.2	+0.8
SELS				*e*Sg	Sb	02 28 05.8	+2.6
NEST	Nestorio	2.45	237	P	Pb	02 27 32.2	-1.9
GELI	Tayfur-Gelibol	2.48	123	Pn	Pn	02 27 31.6	+1.5
NEO	Neokhori	2.49	189	P	Pn	02 27 30.9	+0.6
NEO	Neokhori	2.49	189	P	Pn	02 27 31.0	+0.6
KIRK	Kırklareli	2.51	89	P	Pb	02 27 35.5	+0.5
KIRK				S	Sb	02 28 05.4	-0.2
PUNG	Punghina	2.58	347	⇑P	Pn	02 27 33.3	+1.9
COPA	Copaceanca	2.60	24	⇑P	Pb	02 27 34.4	-2.2
AOS	Alonnisos	2.60	178	P	Pn	02 27 31.9	+0.1
BOZC	Bozcaada	2.60	137	Pn	Pn	02 27 32.9	+1.1
BOZC	Bozcaada	2.60	137	P	Pn	02 27 33.6	+1.8
CNKL	anakkale-Mer	2.63	130	P	Pb	02 27 37.6	+0.5
CNKL				S	Sn	02 28 03.1	-0.6
BORS2	Bor- Borsko je	2.64	332	*e*Pn	Pn	02 27 33.9	+1.5
BORS2				*e*Sn	Sn	02 28 05.1	+1.0
COMU	Canakkale	2.66	128	Pn	Pn	02 27 34.2	+1.6
LPK	Lapseki	2.67	121	Pn	Pn	02 27 34.3	+1.5
ARMN	Kirklareli, Me	2.75	87	P	Pn	02 27 34.7	+0.8
ARMN				S	Sn	02 28 08.7	+1.9
EZN	Ezine	2.76	134	Pn	Pn	02 27 35.3	+1.4
GOCS	Kraljevo Serbi	2.77	311	*e*Pn	Pn	02 27 34.9	+0.7
GOCS				*e*Sn	Sn	02 28 09.8	+2.4
SART	Tekirdag	2.81	112	P	Pb	02 27 41.1	+0.9
SART				S	Sb	02 28 12.0	-2.4
PHSR	Pinarhisar	2.83	92	⇓P	Pb	02 27 40.0	-0.6
HUMR	Humele	2.90	18	⇑P	Pn	02 27 38.4	+2.5
KOCA	Canakkale, Ayv	2.91	140	P	Pb	02 27 39.4	-2.5
BAYC	CANAKKALE_Bayr	2.94	133	P	Pn	02 27 38.5	+2.1
BAYC				S	Sn	02 28 09.5	-1.9
AGG	Agios Georgios	2.95	202	P	Pn	02 27 37.3	+0.6
MAKR	Makrakomi, Fth	3.02	205	P	Pn	02 27 39.4	+1.8
SIGR	SIGRI	3.02	147	P	Pn	02 27 38.3	+0.7
KUBS	Kucevo	3.04	331	*e*Pn	Pn	02 27 37.3	-0.6
BEY	Berane	3.06	292	*e*Pn	Pn	02 27 38.4	+0.2
GRUS	Gruza	3.07	315	*e*Pn	Pn	02 27 38.9	+0.6
GRUS				*e*Sg	Sb	02 28 26.0	+4.1
VIZE	Kirklareli, Vi	3.07	92	P	Pb	02 27 42.4	-2.3
VIZE				S	Sb	02 28 22.1	+0.2
KYMI	Kymi, Euboea I	3.15	175	P	Pn	02 27 39.5	+0.2
SJES	Sjenica	3.16	299	*e*Pn	Pn	02 27 40.6	+1.0
SJES	Sjenica	3.16	299	*e*Pn	Pn	02 27 40.6	+1.0
SJES				*e*Sg	Sg	02 28 30.1	-1.9
IVAS	Ivanjica	3.21	305	*e*Pn	Pn	02 27 40.5	+0.4
IVAS				*e*Sn	Sn	02 28 19.8	+1.8
KOME	Kolasin	3.32	290	*e*Pn	Pn	02 27 43.5	+1.8
AYVA	Ayvalik	3.33	137	P	Pn	02 27 44.2	+2.4
AYVA				S	Sn	02 28 19.4	-1.6
AYVA				*i* IAML		02 28 40.0	
	comp=E,41nm,0.9s						
AYVA				*i* IAML		02 28 44.0	
	comp=E,43nm,0.6s						
MDVR	Moldovita	3.35	334	⇓P	Pn	02 27 42.5	+0.3
MDVR	Moldovita	3.35	334	*e*Pn	Pn	02 27 42.5	+0.3
ULC	Ulcinj	3.37	275	*i* Pn	Pn	02 27 45.6	+3.3
BUHA	Balikesir, Bur	3.40	131	P	Pn	02 27 36.6	-6.2
PDG	Podgorica	3.41	283	*e*Pn	Pn	02 27 45.4	+2.6
PDG	Podgorica	3.41	283	⇑P	Pn	02 27 43.7	+0.9
PDG	Podgorica	3.41	283	*e*Pn	Pn	02 27 44.6	+1.8
DRME	Dracevica, Mon	3.42	278	*e*Pn	Pn	02 27 46.0	+2.9
DRME	Dracevica, Mon	3.42	278	*e*Pn	Pn	02 27 45.6	+2.5
SULR		3.44	31	⇑P	Pn	02 27 47.0	+3.8
TRUS	Trudelj	3.46	316	*e*Pn	Pn	02 27 43.9	+0.2
TRUS				*e*Sg	Sg	02 28 39.0	-2.7
ANX	Ano Chora	3.47	204	P	Pn	02 27 45.4	+1.6
PLE	Pljevlja	3.58	297	*e*Pn	Pn	02 27 46.6	+1.3
LOT	Lotru	3.68	0	Pn	Pn	02 27 47.1	+0.4
GZR	Gura Zlata	3.69	349	⇓P	Pn	02 27 47.5	+0.7
GZR	Gura Zlata	3.69	349	*e*Pn	Pn	02 27 47.0	+0.2
RUDO	Rudo	3.71	301	*e*Pn	Pb	02 27 54.5	-1.1
RUDO	Rudo	3.71	301	*e*Pn	Pn	02 27 47.2	+0.1
BLKS	Balkesir-Sus	3.72	119	P	Pn	02 27 48.7	+1.4
BKES	Balkesir-Mer	3.77	121	P	Pn	02 27 49.8	+1.9
BKES				S	Sn	02 28 29.9	-2.1
BKES				*i* IAML		02 28 55.0	
	comp=E,27nm,0.4s						
BKES				*i* IAML		02 29 01.0	
	comp=E,31nm,0.7s						
VOIR		3.79	14	⇓P	Pn	02 27 50.2	+2.0
VRSS	Vrsac	3.79	333	*e*Pn	Pn	02 27 47.9	-0.2
VRSS				*e*Sg	Sg	02 28 49.4	-2.6
BBLS	Lazi&#263i	3.82	305	*e*Pn	Pb	02 27 53.8	-3.6
UPM	Unac-Piva	3.85	293	*e*Pn	Pg	02 28 02.1	-2.2
STEP	BALIKESIR_Sava	3.86	127	P	Pn	02 27 49.5	+0.4
STEP				*i* IAML		02 29 06.0	
	comp=E,36nm,0.7s						
STEP				*i* IAML		02 29 07.0	
	comp=E,31nm,0.9s						
ISR	Istrita	3.92	30	⇓P	Pn	02 27 52.6	+2.7
KLV	Kalavryta, Ach	3.92	199	P	Pn	02 27 50.7	+0.7
BRY	Bratogost	4.02	288	*e*Pn	Pn	02 27 54.9	+3.5
MLR	Muntele Rosu	4.05	22	Pn	Pn	02 27 53.4	+1.6
MLR	Muntele Rosu	4.05	22	⇑P	Pn	02 27 54.0	+2.3
NEHR	Nehoiu	4.10	26	⇓P	Pn	02 27 55.1	+2.7
TREB	Trebinje	4.12	285	*e*Pn	Pn	02 27 53.8	+1.2
TREB	Trebinje	4.12	285	*e*Pn	Pn	02 27 55.1	+2.5
BZS	Buzias	4.14	339	⇑P	Pn	02 27 53.0	0.0
BZS	Buzias	4.14	339	*e*Pn	Pn	02 27 52.7	-0.3
TEKS	Tekeris	4.15	313	*e*Pn	Pn	02 27 52.9	-0.2
TEKS	Tekeris	4.15	313	*e*Pn	Pn	02 27 53.1	0.0
TEKS				*e*Sg	Sg	02 28 59.5	-4.1
SURR	Surduc	4.15	344	⇓P	Pn	02 27 54.4	+1.3
DEV	Deva	4.16	352	⇓P	Pn	02 27 54.5	+1.4
DURS	Dursunbey	4.20	120	P	Pn	02 27 55.0	+1.1
HAPS	Han Pijesak,Bl	4.21	305	*e*Pn	Pn	02 27 55.0	+0.9
HAPS	Han Pijesak,Bl	4.21	305	*e*Pn	Pn	02 27 54.9	+0.9
TIRR	Tirgusor	4.35	50	⇑P	Pn	02 27 59.3	+3.6
FRGS	Fruska Gora	4.43	321	*e*Pn	Pn	02 28 01.0	+4.0
TURR	Turia	4.59	20	⇓P	Pn	02 28 01.7	+2.6
PLOR	Plostina	4.59	26	⇓P	Pn	02 28 01.9	+2.8
TPGR	Topolog	4.60	46	⇑P	Pn	02 28 02.9	+3.6
STON	Ston	4.62	286	*e*Pn	Pn	02 28 01.7	+2.3
STON	Ston	4.62	286	*e*Pn	Pn	02 28 01.8	+2.3
VRI	Vrincioaia	4.63	27	⇓P	Pn	02 28 02.0	+2.3
CFR	Carcaliu	4.67	42	⇑P	Pn	02 28 02.9	+2.7
MARR	Marisel-Cluj	4.92	355	⇓P	Pn	02 28 05.1	+1.3
DRGR		5.07	352	*e*Pn	Pn	02 28 06.4	+0.6
BLY	Banja Luka	5.64	304	*e*Pn	Pn	02 28 15.4	+1.9
A050A	Klekovaca	5.93	300	*e*Pn	Pn	02 28 19.5	+1.9
A051A	Mrakovica	5.94	305	*e*Pn	Pn	02 28 18.8	+1.1

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*NOU **09** 02:27:24.1, 41°.14S×175°.36E, h25km, MLv3.7/13, North Island, New Zealand*

*WEL **09** 02:27:24.5±0.3, 41°S±2°×17°5E±°, h21km±3km, M3.6/18, ML3.9/18, MLv3.6/18, Error ellipse: s-maj=2.9km s-min=2.5km az=155.1, confirmed*

ISC 09 02:27:24.8±0.9**, 41°.00S**±0°.03×**175°.27E**±0°.02**, h31**km±6km**, n101, σ1ˢ09**/119**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAW	Cannon Point	0.19	236	P	Pn	02 27 31.5	-0.1

CAW				S	Sb	02 27 35.8	+0.5
OGWZ	**Otaki Gorge**	**0.20**	**338**	P	**Pb**	**02 27 30.5**	**-0.7**
OGWZ				S	Sb	02 27 34.5	-1.0
HOWZ	**Holdsworth Sta**	**0.21**	**60**	P	**Pn**	**02 27 31.4**	**-0.5**
HOWZ				S	Sb	02 27 36.5	+0.8
PAPS	**Paraparaumu Pr**	**0.22**	**294**	P	**Pb**	**02 27 31.0**	**-0.4**
PAPS				S	Sb	02 27 35.6	-0.2
MTW	**Mount Morrison**	**0.23**	**132**	P	**Pn**	**02 27 32.8**	**+0.5**
MTW				S	Sb	02 27 38.7	+2.6
KIW	**Kapiti Island**	**0.31**	**297**	P	**Pb**	**02 27 31.9**	**-0.6**
KIW				S	Sb	02 27 37.1	-0.7
PAWZ	**Paruwai Farm**	**0.40**	**163**	P	**Pn**	**02 27 35.2**	**+0.7**
PAWZ				S	Sn	02 27 42.9	+1.9
MSWZ	**Moikau Station**	**0.41**	**182**	P	**Pn**	**02 27 35.4**	**+0.6**
MSWZ				S	Sn	02 27 43.2	+1.8
MRZ	**Mangatainoka R**	**0.41**	**34**	P	**Pb**	**02 27 33.4**	**-0.6**
MRZ				S	Sb	02 27 39.9	-0.3
WEL	**Wellington**	**0.47**	**233**	P	**Pn**	**02 27 35.4**	**-0.1**
WEL				S	Sn	02 27 44.1	+1.4
TMWZ	**Te Maipa**	**0.48**	**103**	P	**Pn**	**02 27 36.1**	**+0.5**
TMWZ				S	Sn	02 27 45.0	+2.0
TRWZ	**Traveller**	**0.50**	**142**	P	**Pn**	**02 27 36.6**	**+0.6**
TRWZ				S	Sn	02 27 46.1	+2.5
TIWZ	**Tintock**	**0.52**	**64**	P	**Pn**	**02 27 35.9**	**-0.2**
TIWZ				S	Sn	02 27 44.0	+0.1
SNZO	**South Karori**	**0.53**	**234**	P	**Pn**	**02 27 36.1**	**-0.1**
SNZO	**South Karori**	**0.53**	**234**	S	**Sn**	**02 27 43.8**	**-0.3**
PLWZ	**Palliser**	**0.57**	**181**	P	**Pn**	**02 27 37.4**	**+0.5**
PLWZ				S	Sn	02 27 47.3	+2.1
PRWZ	**Pori Road**	**0.69**	**50**	P	**Pn**	**02 27 38.6**	**0.0**
PRWZ				S	Sn	02 27 48.9	+0.6
CPWZ	**Castlepoint**	**0.71**	**83**	P	**Pn**	**02 27 39.4**	**+0.7**
POWZ	**Post Office Ro**	**0.72**	**32**	P	**Pb**	**02 27 38.3**	**-0.6**
TCW	**Tory Channel**	**0.78**	**254**	P	**Pb**	**02 27 39.7**	**-0.3**
OHWZ	**Ohakea**	**0.80**	**2**	P	**Pb**	**02 27 39.6**	**-0.6**
BFZ	**Birch Farm**	**0.81**	**67**	P	**Pn**	**02 27 39.9**	**-0.2**
BFZ	**Birch Farm**	**0.81**	**67**	P	**Pn**	**02 27 39.8**	**-0.2**
BFZ				S	Sn	02 27 51.4	+0.4
DVHZ	**Dannevirke**	**0.98**	**44**	P	**Pb**	**02 27 42.0**	**-1.3**
DVHZ				S	Sb	02 27 54.8	-1.1
DUWZ	**D’Urville Isla**	**1.04**	**281**	P	**Pn**	**02 27 43.5**	**+0.2**
DUWZ				S	Sb	02 27 57.0	-0.7
TSZ	**Takapari Road**	**1.08**	**29**	P	**Pn**	**02 27 43.5**	**-0.4**
TUWZ	**Tuamarina**	**1.09**	**247**	P	**Pn**	**02 27 44.2**	**+0.3**
CMWZ	**Cape Campbell**	**1.09**	**227**	P	**Pb**	**02 27 45.0**	**-0.2**
WAZ	**Wanganui**	**1.27**	**350**	P	**Pn**	**02 27 47.2**	**+0.8**
BSWZ	**Blackbirch Sta**	**1.27**	**235**	P	**Pn**	**02 27 46.7**	**+0.2**
PRHZ	**Porangahau**	**1.27**	**55**	P	**Pn**	**02 27 45.9**	**-0.6**
WPHZ	**Waipukurau**	**1.29**	**44**	P	**Pn**	**02 27 47.4**	**+0.6**
PNHZ	**Pukenui**	**1.30**	**33**	P	**Pn**	**02 27 46.4**	**-0.5**
NNZ	**Nelson**	**1.45**	**261**	P	**Pn**	**02 27 49.2**	**+0.3**
PXZ	**Pawanui**	**1.55**	**52**	P	**Pn**	**02 27 49.6**	**-0.7**
KRHZ	**Kereru**	**1.60**	**32**	P	**Pn**	**02 27 50.2**	**-0.8**
MTVZ	**Mangateitei**	**1.62**	**5**	P	**Pn**	**02 27 52.1**	**+0.7**
MOVZ	**Moawhango**	**1.64**	**13**	P	**Pn**	**02 27 51.4**	**-0.2**
LREZ	**Lake Rotokare**	**1.68**	**336**	P	**Pn**	**02 27 53.4**	**+1.4**
WNVZ	**Wahianoa**	**1.69**	**9**	P	**Pn**	**02 27 52.7**	**+0.2**
PKVZ	**Pokaka**	**1.71**	**2**	P	**Pn**	**02 27 53.5**	**+0.9**
TRVZ	**Turoa**	**1.71**	**7**	P	**Pn**	**02 27 53.2**	**+0.4**
KAHZ	**Kahuranaki**	**1.72**	**46**	P	**Pn**	**02 27 52.2**	**-0.5**
WHVZ	**Whangaehu Hut**	**1.74**	**8**	P	**Pn**	**02 27 53.4**	**+0.3**
MAVZ	**Matarangi**	**1.75**	**7**	P	**Pn**	**02 27 53.9**	**+0.5**
TKNZ	**Takaka Hill**	**1.75**	**268**	P	**Pn**	**02 27 53.6**	**+0.6**
TUVZ	**Tukino**	**1.76**	**10**	P	**Pn**	**02 27 53.8**	**+0.5**
FWVZ	**Far West T-bar**	**1.76**	**7**	P	**Pn**	**02 27 53.9**	**+0.5**
COVZ	**Chateau Observ**	**1.81**	**7**	P	**Pn**	**02 27 54.6**	**+0.5**
SNVZ	**South Ngauruho**	**1.84**	**9**	P	**Pn**	**02 27 54.8**	**+0.4**
NGZ	**Ngauruhoe**	**1.84**	**8**	P	**Pn**	**02 27 55.0**	**+0.5**
OTVZ	**Oturere**	**1.86**	**9**	P	**Pn**	**02 27 55.1**	**+0.4**
PREZ	**Palmer Road**	**1.86**	**332**	P	**Pn**	**02 27 56.4**	**+1.8**
NNVZ	**North Ngauruho**	**1.89**	**8**	P	**Pn**	**02 27 55.6**	**+0.5**
ETVZ	**East Tongariro**	**1.90**	**10**	P	**Pn**	**02 27 55.6**	**+0.4**
MCHZ	**McNeill Hill**	**1.90**	**35**	P	**Pn**	**02 27 54.7**	**-0.5**
WTVZ	**West Tongariro**	**1.90**	**7**	P	**Pn**	**02 27 56.0**	**+0.7**
NMEZ	**Namu Road**	**1.91**	**326**	P	**Pn**	**02 27 57.0**	**+1.7**
TMVZ	**Te Maari**	**1.91**	**10**	P	**Pn**	**02 27 55.6**	**+0.2**
KHZ	**Kahutara**	**1.92**	**222**	P	**Pn**	**02 27 55.0**	**-0.4**
KHZ	**Kahutara**	**1.92**	**222**	S	**Sn**	**02 28 17.8**	**-0.6**
KHZ	**Kahutara**	**1.92**	**222**	P	**Pn**	**02 27 54.9**	**-0.4**
VRZ	**Vera Road**	**1.92**	**348**	P	**Pn**	**02 27 56.6**	**+1.3**
KRVZ	**Karewarewa**	**1.93**	**9**	P	**Pn**	**02 27 57.3**	**+1.7**
NTVZ	**North Tongarir**	**1.93**	**9**	P	**Pn**	**02 27 55.8**	**+0.2**
TWVZ	**Taurewa**	**1.93**	**4**	P	**Pn**	**02 27 56.0**	**+0.3**
THZ	**Tophouse**	**1.94**	**246**	P	**Pn**	**02 27 55.3**	**-0.4**
MRNZ	**Matariki Terra**	**1.94**	**257**	P	**Pn**	**02 27 56.0**	**+0.3**
NEZ	**North Egmont**	**1.95**	**332**	P	**Pn**	**02 27 57.7**	**+1.8**
KHEZ	**Kahui Hut**	**1.96**	**330**	P	**Pn**	**02 27 57.7**	**+1.7**
KHEZ	**Kahui Hut**	**1.96**	**330**	P	**Pn**	**02 27 57.5**	**+1.5**
DREZ	**Durham Road**	**1.99**	**335**	P	**Pn**	**02 27 58.4**	**+2.0**
NBEZ	**Newall Road No**	**2.04**	**328**	P	**Pn**	**02 27 58.9**	**+1.9**
PKE	**Pukeiti**	**2.06**	**331**	P	**Pn**	**02 27 59.4**	**+2.1**
BKZ	**Black Stump Fm**	**2.06**	**27**	P	**Pn**	**02 27 58.1**	**+0.7**
BKZ	**Black Stump Fm**	**2.06**	**27**	P	**Pn**	**02 27 56.2**	**-1.2**
QRZ	**Quartz Range**	**2.09**	**274**	P	**Pn**	**02 27 58.4**	**+0.7**
QRZ	**Quartz Range**	**2.09**	**274**	P	**Pn**	**02 27 58.2**	**+0.5**
MTHZ	**Maungataniwha**	**2.46**	**30**	P	**Pn**	**02 28 04.2**	**+1.3**
HIZ	**Hauiti**	**2.51**	**353**	P	**Pn**	**02 28 06.0**	**+2.5**
HIZ	**Hauiti**	**2.51**	**353**	P	**Pn**	**02 28 06.4**	**+2.9**
GVZ	**Greta Valley S**	**2.58**	**220**	P	**Pn**	**02 28 03.6**	**-0.8**
DSZ	**Denniston Nort**	**2.71**	**253**	P	**Pn**	**02 28 06.0**	**-0.4**
LTZ	**Lake Taylor**	**2.86**	**231**	P	**Pn**	**02 28 07.4**	**-1.0**
URZ	**Urewera**	**3.09**	**28**	P	**Pn**	**02 28 12.4**	**+1.0**
MWZ	**Matawai**	**3.18**	**34**	P	**Pn**	**02 28 10.8**	**-2.0**
TOZ	**Tahuroa Road**	**3.27**	**3**	P	**Pn**	**02 28 15.5**	**+1.5**
MQZ	**McQueen’s Vall**	**3.33**	**215**	P	**Pn**	**02 28 12.9**	**-1.8**
INZ	**Inchbonnie**	**3.34**	**238**	P	**Pn**	**02 28 13.9**	**-0.9**
RUGZ	**Raukumara Rang**	**3.56**	**32**	P	**Pn**	**02 28 16.4**	**-1.6**
RACZ	**Rakaia**	**3.58**	**219**	P	**Pn**	**02 28 16.5**	**-1.7**
WACZ	**Wakanui South**	**3.88**	**220**	P	**Pn**	**02 28 20.8**	**-1.5**
MKAZ	**Moumakai**	**3.89**	**359**	P	**Pn**	**02 28 22.6**	**0.0**
RPZ	**Rata Peaks**	**4.14**	**228**	P	**Pn**	**02 28 24.9**	**-1.0**
ARCZ	**Arundel**	**4.22**	**224**	P	**Pn**	**02 28 26.4**	**-0.7**
TMZ	**Timaru**	**4.61**	**222**	P	**Pn**	**02 28 31.6**	**-0.9**
FOZ	**Fox Glacier**	**4.77**	**236**	P	**Pn**	**02 28 33.1**	**-1.4**
LBZ	**Lake Benmore**	**5.05**	**226**	P	**Pn**	**02 28 37.1**	**-1.3**
ODZ	**Otahua Downs**	**5.27**	**218**	P	**Pn**	**02 28 39.9**	**-1.5**
ODZ	**Otahua Downs**	**5.27**	**218**	P	**Pn**	**02 28 40.0**	**-1.5**
JCZ	**Jackson Bay**	**5.69**	**235**	P	**Pn**	**02 28 45.7**	**-1.6**

IDC 09 02:36:41.9±2.1**, 20°.50S**×**178°.88W, h644**^{km}±27^{km}**, mb2.7**/3**, mbtmp3.8**/4**, Error ellipse: s-maj=52.9km s-min=31.6km az=24.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.00**	**313**	P	P	02 38 10.7	-0.1
	30nm,0.7s,baz=142,slow=15,SNR=12						
ASAR	**Alice Springs**	**43.72**	**257**	P	P	02 43 53.2	+0.3
	0.5nm,0.5s,baz=94,slow=7.9,SNR=9.2						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**43.78**	**262**	P	P	02 43 53.4	-0.1
	0.4nm,0.3s,baz=97,slow=7.6,SNR=11						
	0.4nm,0.3s						
QSPA	**South Pole Qui**	**69.56**	**180**	P	P	02 46 48.2	+0.1
	0.7nm,0.5s,baz=340,slow=3.2,SNR=7.5						
	0.7nm,0.5s						
AKASG	**Malin Array Be**	**142.62**	**330**	PKP	PKPdf	02 55 02.8	-0.4
	1.1nm,0.4s,baz=40,slow=4.2,SNR=6.3						

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*IDC **09** 02:36:49.1±0.8, 32°.96N×71°.28E, h0^{km}, mb3.9/15, mbtmp3.9/18, ML3.9/3, Error ellipse: s-maj=20.9km s-min=15.3km az=37.0*

*NEIC **09** 02:36:53.6±2.5, 32°.77N±0°.09×71°.23E±0°.04, h35^{km}±2^{km}, mb4.2/24, Error ellipse: s-maj=15.4km s-min=5.7km az=187.0*

*NDI **09** 02:37:12.0±0.8, 32°.78N×71°.20E, h30^{km}, ML4.1, MW4.2, mb4.2(NEIC)*

ISC 09 02:36:50.3±0.5**, 32°.88N**±0°.06×**71°.13E**±0°.04**, h10**^{km}**, n70, σ1**^{s}**57**/74**, mb4.1**/26**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIL	**Nilore**	**1.94**	**66**		**Pb**	**02 37 25.9**	**+0.1**
NIL				Sn	**Sg**	**02 37 52.2**	**-0.5**
KBL	**Kabul**	**2.40**	**314**		**Pb**	**02 37 33.3**	**-0.5**
JMU	**Jammu**	**3.18**	**92**	*e*P	Pg	02 37 58.6	+7.2
JMU				IAML		02 38 20.9	
	comp=E,1μm,0.7s						
JMU				IAML		02 38 21.2	
	comp=N,627nm,0.3s						
JMU				*e*S	**Sg**	**02 38 32.8**	**+0.2**
THN	**Thein Dam**	**3.90**	**95**	*e*P	**Pg**	**02 38 09.4**	**+4.4**
THN				*e*S	**Sg**	**02 38 52.5**	**-3.1**
THN				IAML		02 39 00.1	
	comp=E,564nm,0.3s						
THN				IAML		02 39 03.4	
	comp=N,488nm,0.5s						
DHRM	**DHARAMSHALA**	**4.41**	**97**	*e*P	**Pg**	**02 38 16.7**	**+1.8**
DHRM				*e*S	**Sb**	**02 39 02.8**	**+1.3**
DHRM				IAML		02 39 18.0	
	comp=N,893nm,0.5s						
DHRM				IAML		02 39 23.0	
	comp=E,2μm,0.7s						
SIMJ	**Simiganj**	**6.02**	**344**		**Pn**	**02 38 21.2**	**+1.7**
KUDL	**Kundal**	**6.61**	**134**	*e*P	**Pb**	**02 38 45.7**	**+0.3**
KUDL				*e*S	Sn	02 39 53.2	+10
AJM	**Ajmer**	**7.07**	**153**	*e*P	**Pb**	**02 38 51.9**	**-1.5**
AJM				*e*S	Sn	02 40 05.5	+11
BTK	**Batken**	**7.17**	**358**		**Pn**	**02 38 39.3**	**+4.0**
KSH	**Kashi**	**7.69**	**29**	Pn	**Pn**	**02 38 40.5**	**-2.1**
KSH				Sn	Sn	02 39 58.5	-11
KSH				smax	smax		
	comp=N,48nm,0.5s						
KSH				smax	smax		
	comp=N,79nm,0.5s						
ARSB	**Arslanbob**	**8.56**	**9**		**Pn**	**02 38 55.7**	**+1.3**
NRN	**Naryn**	**9.38**	**23**		**Pn**	**02 39 08.3**	**+2.5**
AAK	**Ala-Archa**	**10.10**	**14**	Pn	**Pn**	**02 39 16.9**	**+1.3**
	comp=N,3.5nm,0.3s,baz=205,slow=6.9,SNR=20						
AAK				Sn	**Sn**	**02 41 06.0**	**-3.0**
	comp=N,0.4nm,0.3s,baz=188,slow=17,SNR=1.6						
	comp=N,6.7nm,0.4s						
KK31	**Karatay Array**	**10.22**	**357**		**Pn**	**02 39 17.7**	**+0.6**
KKAR	**Karatay Array**	**10.22**	**357**		**Pn**	**02 39 17.6**	**+0.5**
KKAR	**Karatay Array**	**10.22**	**357**		**Pn**	**02 39 17.6**	**+0.5**
BOOM	**Boomskoye usch**	**10.32**	**20**		**Pn**	**02 39 20.3**	**+1.7**
EVN	**Everest**	**14.40**	**106**		**Pn**	**02 40 11.7**	**-3.2**
MAKZ	**Makanchi**	**16.19**	**28**		**Pn**	**02 40 36.2**	**-1.7**
MK31	**Makanchi Array**	**16.30**	**28**		**P**	**02 40 41.4**	**-1.0**
MKAR	**Makanchi Array**	**16.30**	**28**		**P**	**02 40 41.0**	**-1.3**
MKAR	**Makanchi Array**	**16.30**	**28**	Pn	**Pn**	**02 40 38.7**	**-0.7**
	comp=N,0.3nm,0.3s,baz=207,slow=12,SNR=11						
	comp=N,1.2nm,0.6s						
HYB	**Hyderabad**	**16.79**	**155**	*e*P	**Pn**	**02 40 46.4**	**+0.7**
WMQ	**Urumqi**	**16.95**	**45**	*e*P	**P**	**02 40 49.6**	**+0.1**
AB31	**Akbulak array**	**18.37**	**336**		**Pn**	**02 41 02.8**	**-2.3**
ABKAR	**Akbulak array**	**18.37**	**336**	P	**Pn**	**02 41 02.8**	**-2.3**
KURBB	**Kurchatov Arra**	**18.55**	**15**	P	**P**	**02 41 04.7**	**-2.4**
	comp=N,0.1nm,0.3s,baz=206,slow=9.9,SNR=9.5						
	comp=N,0.8nm,0.5s						
KURK	**Kurchatov**	**18.66**	**15**	P	**P**	**02 41 05.9**	**-2.4**
AKTO	**Aktyubinsk**	**20.04**	**335**	P	**P**	**02 41 23.1**	**-0.3**
	comp=N,2.3nm,0.5s,baz=107,slow=5.4,SNR=9.8						
	comp=N,2.3nm,0.5s						
BVAR	**Borovoye Array**	**20.14**	**359**	P	**P**	**02 41 24.2**	**-0.2**
	comp=N,2.8nm,0.5s,baz=159,slow=9.4,SNR=21						
	comp=N,2.8nm,0.5s						
BRVK	**Borovoye**	**20.18**	**359**	P	**P**	**02 41 24.4**	**-0.4**
BRVK				IAmb	IAmb	02 41 26.7	
	comp=Z,4.8nm,1.1s						
ZAA0	**Zalesovo Array**	**23.21**	**21**	P	**P**	**02 41 55.2**	**-2.1**
ZAA0				IAmb	IAmb	02 42 02.2	
	comp=Z,4.5nm,0.8s						
ZALV	**Zalesovo Beam**	**23.21**	**21**	P	**P**	**02 41 55.8**	**-1.4**
	comp=Z,2.4nm,0.4s,baz=228,slow=10.0,SNR=11						
	comp=Z,2.4nm,0.4s						
GTA	**Gaotai**	**24.00**	**66**	*e*P	**P**	**02 42 09.9**	**+4.5**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PZH	**PanZhiHua**	**27.29**	**95**	P	**P**	**02 42 35.7**	**+0.5**
CMAR	**Chiang Mai Arr**	**28.78**	**113**	P	**P**	**02 42 49.1**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=304,slow=5.4,SNR=4.0						
	comp=Z,0.8nm,0.3s						
BR131	**Keskin Array S**	**30.81**	**294**	P	**P**	**02 43 07.0**	**+0.6**
BR131				IAmb	IAmb	02 43 08.1	
	comp=Z,2.3nm,0.8s						
BRTR	**Keskin Array B**	**30.81**	**294**	P	**P**	**02 43 07.8**	**+1.3**
BRTR	**Keskin Array B**	**30.81**	**294**	P	**P**	**02 43 07.5**	**+1.0**
	comp=Z,1.5nm,0.7s,baz=108,slow=9.4,SNR=17						
	comp=Z,1.5nm,0.7s						
HHC	**Hu-ho-hao-te**	**33.08**	**64**	*e*P	**P**	**02 43 27.2**	**+0.8**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,4.4s						
MLR	**Muntele Rosu**	**36.75**	**303**	P	**P**	**02 44 00.4**	**+2.4**
MLR				IAmb	IAmb	02 44 01.2	
	comp=Z,2.9nm,0.7s						
BURAR	**Bucovina Array**	**37.44**	**307**	P	**P**	**02 44 05.0**	**+1.2**
BUR08	**Bucovina Ar. S**	**37.45**	**307**	P	**P**	**02 44 05.2**	**+1.3**
BUR08				IAmb	IAmb	02 44 27.6	
	comp=Z,3.3nm,1.3s						
RPSI	**Rantau Prapat**	**39.76**	**133**	P	**P**	**02 44 21.0**	**-2.4**
RPSI				IAmb	IAmb	02 44 22.2	
	comp=Z,9.9nm,1.3s						
FINES	**FINESS Array B**	**40.58**	**328**	P	**P**	**02 44 30.6**	**+0.9**
FINES	**FINESS Array B**	**40.58**	**328**	P	**P**	**02 44 29.7**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=130,slow=9.6,SNR=8.4						
	comp=Z,0.6nm,0.4s						
CUC	**Castrocucco**	**44.45**	**296**	P	**P**	**02 45 02.7**	**+1.1**
CUC				IAmb	IAmb	02 45 03.5	
	comp=Z,2.9nm,0.7s						
ARCES	**ARCESS Array B**	**44.54**	**339**	P	**P**	**02 45 02.5**	**+0.6**
	comp=Z,3.8nm,0.4s,baz=120,slow=8.3,SNR=7.2						
GERES	**GERESS Array B**	**45.18**	**308**	P	**P**	**02 45 08.8**	**+1.5**
	comp=Z,0.2nm,0.6s,baz=99,slow=8.1,SNR=1.7						
	comp=Z,0.2nm,0.6s						
PRED	**Cave del Predi**	**45.38**	**305**	P	**P**	**02 45 09.4**	**+0.5**
PRED				IAmb	IAmb	02 45 13.7	
	comp=Z,3.4nm,1.2s						
SABO	**M.te Sabotino**	**45.39**	**304**	P	**P**	**02 45 08.9**	**-0.1**
HFS	**Hagfors**	**46.01**	**324**	P	**P**	**02 45 14.4**	**+0.7**
	comp=Z,1.4nm,0.6s,baz=95,slow=8.8,SNR=7.1						
	comp=Z,1.4nm,0.6s						
FDMO	**Fiordimonte**	**46.05**	**300**	P	**P**	**02 45 14.2**	**0.0**
NRCA	**Norcia**	**46.06**	**300**	P	**P**	**02 45 14.0**	**-0.4**
NRCA				IAmb	IAmb	02 45 21.9	
	comp=Z,4.6nm,1.4s						
CIMO	**Cimolais**	**46.16**	**305**	P	**P**	**02 45 15.2**	**+0.1**
CIMO				IAmb	IAmb	02 45 24.6	
	comp=Z,5.6nm,1.5s						
NOA	**NORSAR Array B**	**47.37**	**325**	P	**P**	**02 45 24.5**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=96,slow=7.4,SNR=2.3						
	comp=Z,0.4nm,0.5s						
USRK	**Ussuriysk Ar.**	**47.93**	**58**	P	**P**	**02 45 27.9**	**-1.0**
	comp=Z,3.3nm,0.4s,baz=264,slow=18,SNR=50						
	comp=Z,3.3nm,0.4s						
SENIN	**Lac Senin/Sane**	**49.70**	**305**	P	**P**	**02 45 42.7**	**0.0**
KEST	**Kesra**	**50.37**	**291**	P	**P**	**02 45 48.4**	**+0.7**
KEST	**Kesra**	**50.37**	**291**	P	**P**	**02 45 48.5**	**+0.7**
	comp=Z,1.5nm,0.5s,baz=87,slow=5.9,SNR=9.8						
	comp=Z,1.5nm,0.5s						
SPITS	**Spitsbergen Ar**	**51.04**	**347**	P	**P**	**02 45 52.7**	**+0.6**
	comp=Z,1.7nm,0.6s,baz=127,slow=9.4,SNR=5.0						
	comp=Z,1.7nm,0.6s						
EKA	**Eskdalemuir Ar**	**54.99**	**318**	P	**P**	**02 46 21.5**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=82,slow=7.0,SNR=5.6						
	comp=Z,0.4nm,0.4s						
C19K	**Lookout Ridge**	**71.75**	**17**	P	**P**	**02 48 12.4**	**0.0**
D19K	**Kuna River**	**72.56**	**17**	P	**P**	**02 48 17.0**	**-0.3**
D19K				IAmb	IAmb	02 48 17.8	
	comp=Z,5.1nm,1.2s						
C23K	**Itkillik River**	**73.20**	**14**	P	**P**	**02 48 21.1**	**+0.1**
F21K	**Alatna River**	**74.67**	**16**	P	**P**	**02 48 29.0**	**-0.6**
F21K				IAmb	IAmb	02 49 08.2	
	comp=Z,2.6nm,1.2s						
BMAR	**Burnt Mountain**	**76.43**	**13**	P	**P**	**02 48 40.2**	**+0.4**
C36M	**Paulatuk**	**77.46**	**5**	P	**P**	**02 48 44.6**	**-0.9**
WRA	**Warramunga Arr**	**80.00**	**121**	P	**P**	**02 48 59.9**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=321,slow=5.1,SNR=8.0						
	comp=Z,0.9nm,0.6s						
ASAR	**Alice Springs**	**82.11**	**125**	P	**P**	**02 49 11.1**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=316,slow=5.5,SNR=5.4						
	comp=Z,0.4nm,0.7s						

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*IDC **09** 02:45:09.1±2.5, 44°.35S×168°.13E, h0^{km}, mb3.9/3, mbtmp3.9/4, ML4.0/1, Error ellipse: s-maj=107.3km s-min=22.4km az=178.0*

*WEL **09** 02:45:10.5±0.6, 44°S±3°×16°8E±°, h5^{km}, M4.3/40, ML4.1/7, MLv4.3/40, Error ellipse: s-maj=6.2km s-min=2.7km az=129.8, confirmed*

*WEL **09** 02:45:10.5, 44°.38S×168°.20E, h13^{km}, ML4.3, Mw3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14} Nm; M_{rr}3.75; $M_{\theta\theta}$-0.11; $M_{\phi\phi}$-3.63; $M_{r\theta}$0.01; $M_{\theta\phi}$-2.25; $M_{\phi r}$-2.73; Fault plane solution: $M_0$5.08000×10^{14} NP1: ϕ_s190.00000°, δ62.00000°, λ72.00000°. NP2: ϕ_s45.00000°, δ33.00000°, λ120.00000°. Principal axes: T -5.4020, Plg68.0000°, Azm64.0000°; N 0.6390, Plg16.0000°, Azm198.0000°; P 4.7630, Plg15.0000°, Azm293.0000°; Stations used: JCZ EAZ LBZ REVERSE FAULTING*

*NOU **09** 02:45:10.3, 44°.23S×168°.13E, h7^{km}, MLv4.4/11, South Island, New Zealand*

ISC 09 02:45:09.9±1.2**, 44°.38S**±0°.03×**168°.19E**±0°.03**, h11**^{km}±9^{km}**, n79, σ1**^{s}**00**/85**, mb3.5**/3**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.35**	**213**	P	**Pb**	**02 45 18.0**	**-0.1**
MSZ				S	**Sb**	**02 45 23.0**	**-0.7**
GLNY	**Glenorchy**	**0.51**	**162**	P	**Pg**	**02 45 19.9**	**+0.1**
GLNY				S	**Sb**	**02 45 27.2**	**-1.1**
NSBS	**Neils Beach**	**0.51**	**42**	P	**Pg**	**02 45 20.2**	**+0.3**
JCZ	**Jackson Bay**	**0.53**	**54**	P	**Pg**	**02 45 20.4**	**+0.2**
JCZ	**Jackson Bay**	**0.53**	**54**	P	**Pg**	**02 45 20.5**	**+0.2**
JCZ				S	**Sg**	**02 45 27.6**	**+0.4**
WKZ	**Wanaka**	**0.74**	**127**	P	**Pn**	**02 45 25.9**	**-0.6**
WNPS	**Wanaka Nationa**	**0.75**	**115**	P	**Pb**	**02 45 24.7**	**-0.3**
MECS	**Makarora Emerg**	**0.76**	**79**	P	**Pg**	**02 45 25.6**	**+0.9**
MECS				S	**Sb**	**02 45 35.3**	**-0.4**
HDWS	**Haast DOC Work**	**0.79**	**51**	P	**Pb**	**02 45 25.5**	**-0.2**
HDWS				S	**Sb**	**02 45 35.6**	**-0.8**
MLZ	**Mavora Lakes**	**0.99**	**183**	P	**Pg**	**02 45 29.7**	**+0.8**
EAZ	**Earnscleugh**	**1.16**	**137**	P	**Pg**	**02 45 33.2**	**+0.9**
EAZ				S	**Sg**	**02 45 48.1**	**+0.7**
DCZ	**Deep Cove**	**1.31**	**214**	P	**Pb**	**02 45 34.5**	**-0.1**
DCZ				S	**Sg**	**02 45 52.3**	**+0.2**
LBZ	**Lake Benmore**	**1.43**	**91**	P	**Pb**	**02 45 37.1**	**+0.5**
LBZ				S	**Sg**	**02 45 56.3**	**+0.3**
FOZ	**Fox Glacier**	**1.45**	**55**	P	**Pg**	**02 45 38.1**	**+0.4**
FOZ				S	**Sg**	**02 45 56.4**	**-0.1**
WHZ	**Wether Hill Ro**	**1.52**	**186**	P	**Pb**	**02 45 38.1**	**-0.1**
ODZ	**Otahua Downs**	**1.87**	**112**	P	**Pb**	**02 45 44.2**	**+0.1**
ODZ	**Otahua Downs**	**1.87**	**112**	P	**Pb**	**02 45 43.9**	**-0.2**
ODZ				S	**Sg**	**02 46 09.1**	**-1.0**
TUZ	**Tuapeka**	**1.87**	**148**	P	**Pb**	**02 45 44.0**	**-0.2**
TUZ				S	**Sg**	**02 46 09.8**	**-0.3**
GCSZ	**Gaunt Creek Bo**	**1.88**	**56**	P	**Pn**	**02 45 41.2**	**-0.8**
TMZ	**Timaru**	**2.02**	**91**	P	**Pb**	**02 45 45.6**	**-1.1**
PYZ	**Puysegur Point**	**2.08**	**210**	P	**Pb**	**02 45 47.7**	**0.0**
PYZ	**Puysegur Point**	**2.08**	**210**	P	**Pb**	**02 45 47.1**	**-0.6**
RPZ	**Rata Peaks**	**2.17**	**73**	Pn	**Pn**	**02 45 47.3**	**+1.2**
	39nm,0.3s,baz=228,slow=7.4,SNR=111						
RPZ				Sn	**Sb**	**02 46 14.8**	**-1.3**
	83nm,0.3s,baz=272,slow=14,SNR=9.1						
	70nm,0.3s						
RPZ	**Rata Peaks**	**2.17**	**73**	P	**Pb**	**02 45 47.6**	**-1.6**
RPZ	**Rata Peaks**	**2.17**	**73**	P	**Pn**	**02 45 47.1**	**+1.0**
ARCZ	**Arundel**	**2.19**	**80**	P	**Pn**	**02 45 47.5**	**+1.1**
SYZ	**Scrubby Hill**	**2.26**	**163**	P	**Pb**	**02 45 49.2**	**-1.5**
SYZ	**Scrubby Hill**	**2.26**	**163**	S	**Sg**	**02 46 20.7**	**-1.7**
SYZ	**Scrubby Hill**	**2.26**	**163**	P	**Pb**	**02 45 49.6**	**-1.1**
WVZ	**Waitaha Valley**	**2.26**	**56**	P	**Pn**	**02 45 46.3**	**-1.0**
HHSZ	**Highcliff Hill**	**2.27**	**132**	P	**Pb**	**02 45 49.9**	**-1.0**
APZ	**The Paps**	**2.46**	**183**	P	**Pb**	**02 45 52.2**	**-1.9**
MHCZ	**Mount Hutt**	**2.58**	**72**	P	**Pn**	**02 45 51.9**	**+0.1**
WACZ	**Wakanui South**	**2.66**	**82**	P	**Pn**	**02 45 53.6**	**+0.8**
INZ	**Inchbonnie**	**2.89**	**56**	P	**Pn**	**02 45 55.1**	**-0.8**
RACZ	**Rakaia**	**2.92**	**78**	P	**Pn**	**02 45 56.9**	**+0.5**
OXZ	**Oxford**	**2.98**	**71**	P	**Pn**	**02 45 56.6**	**-0.6**
MQZ	**McQueen’s Vall**	**3.29**	**80**	P	**Pn**	**02 46 01.4**	**+0.1**
LTZ	**Lake Taylor**	**3.37**	**63**	P	**Pn**	**02 46 02.2**	**-0.4**
AMCZ	**Amberley**	**3.45**	**71**	P	**Pn**	**02 46 03.5**	**-0.1**
OKCZ	**Okains Bay**	**3.57**	**81**	P	**Pn**	**02 46 06.1**	**+0.8**
DSZ	**Denniston Nort**	**3.74**	**46**	P	**Pn**	**02 46 06.5**	**-1.1**
GVZ	**Greta Valley S**	**3.79**	**70**	P	**Pn**	**02 46 07.9**	**-0.4**
THZ	**Tophouse**	**4.33**	**54**	P	**Pn**	**02 46 15.6**	**-0.2**
KHZ	**Kahutara**	**4.37**	**65**	P	**Pn**	**02 46 18.4**	**+2.3**
MRNZ	**Matariki Terra**	**4.49**	**50**	P	**Pn**	**02 46 17.3**	**-0.6**
QRZ	**Quartz Range**	**4.78**	**44**	P	**Pn**	**02 46 21.0**	**-0.9**
QRZ	**Quartz Range**	**4.78**	**44**	P	**Pn**	**02 46 21.1**	**-0.9**
TKNZ	**Takaka Hill**	**4.85**	**48**	P	**Pn**	**02 46 22.6**	**-0.3**
BSWZ	**Blackbirch Sta**	**4.95**	**59**	P	**Pn**	**02 46 26.2**	**+2.0**
NNZ	**Nelson**	**4.96**	**52**	P	**Pn**	**02 46 24.4**	**+0.1**
TUWZ	**Tuamarina**	**5.15**	**57**	P	**Pn**	**02 46 28.8**	**+1.8**
TCW	**Tory Channel**	**5.49**	**57**	P	**Pn**	**02 46 32.7**	**+1.1**
DUWZ	**D’Urville Isla**	**5.54**	**52**	P	**Pn**	**02 46 32.6**	**+0.3**
CAW	**Cannon Point**	**6.03**	**60**	P	**Pn**	**02 46 37.9**	**-1.2**
KIW	**Kapiti Island**	**6.08**	**57**	P	**Pn**	**02 46 40.3**	**+0.5**
MTW	**Mount Morrison**	**6.27**	**62**	P	**Pn**	**02 46 42.2**	**-0.2**
HOWZ	**Holdsworth Sta**	**6.43**	**60**	P	**Pn**	**02 46 48.7**	**+4.2**
MRZ	**Mangatainoka R**	**6.60**	**58**	P	**Pn**	**02 46 47.6**	**+0.6**
NBEZ	**Newall Road No**	**6.64**	**42**	P	**Pn**	**02 46 46.7**	**-0.7**
KHEZ	**Kahui Hut**	**6.69**	**43**	P	**Pn**	**02 46 47.5**	**-0.7**
KHEZ	**Kahui Hut**	**6.69**	**43**	P	**Pn**	**02 46 47.7**	**-0.5**
PREZ	**Palmer Road**	**6.72**	**44**	P	**Pn**	**02 46 48.5**	**-0.1**
NEZ	**North Egmont**	**6.75**	**43**	P	**Pn**	**02 46 48.5**	**-0.5**
PKE	**Pukeiti**	**6.75**	**42**	P	**Pn**	**02 46 48.4**	**-0.6**
LREZ	**Lake Rotokare**	**6.75**	**45**	P	**Pn**	**02 46 51.3**	**+2.2**
WAZ	**Wanganui**	**6.85**	**50**	P	**Pn**	**02 46 51.1**	**+0.7**
VRZ	**Vera Road**	**7.19**	**45**	P	**Pn**	**02 46 55.2**	**+0.2**
HIZ	**Hauiti**	**7.71**	**43**	P	**Pn**	**02 47 01.9**	**-0.2**
ASAR	**Alice Springs**	**34.77**	**295**	P	**P**	**02 52 01.6**	**+1.1**
	0.7nm,0.9s,baz=138,slow=8.6,SNR=4.3						
	0.7nm,0.9s						
WRA	**Warramunga Arr**	**37.20**	**300**	P	**P**	**02 52 20.7**	**-0.6**
	0.6nm,0.9s,baz=135,slow=8.0,SNR=7.3						
	0.6nm,0.9s						
H01W1	**Cape Leeuwin H**	**42.01**	**264**	T	T	03 36 58.0	
	baz=120,slow=75,SNR=4.6						
H01W2	**Cape Leeuwin H**	**42.02**	**264**	T	T	03 36 58.7	
	baz=120,slow=75,SNR=5.0						
H01W3	**Cape Leeuwin H**	**42.02**	**264**	T	T	03 37 00.9	
	baz=120,slow=75,SNR=3.7						
CMAR	**Chiang Mai Arr**	**88.75**	**297**	P	**P**	**02 58 05.0**	**+1.2**
	0.8nm,0.2s,baz=125,slow=4.5,SNR=4.2						
	0.8nm,0.2s						
H08S2	**Diego Garcia H**	**88.76**	**261**	T	T	04 35 46.6	
	baz=134,slow=76,SNR=183						
H08S1	**Diego Carcia H**	**88.78**	**261**	T	T	04 35 47.6	
	baz=134,slow=76,SNR=173						
H08S3	**Diego Garcia H**	**88.78**	**261**	T	T	04 35 50.8	
	baz=134,slow=76,SNR=176						
BRTR	**Keskin Array B**	**146.27**	**278**	PKPbc	**PKPbc**	**03 04 49.9**	**-0.5**
	1.3nm,0.9s,baz=117,slow=4.9,SNR=8.7						

IDC 09 02:47:35.8±9.3**, 22°.93S**×**176°.37W, h0**^{km}**, mb3.6**/2**, mbtmp3.6**/2**, MS3.6**/2**, Error ellipse: s-maj=407.8km s-min=60.5km az=147.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**6.45**	**192**	LR	LR	02 51 16.4	
	comp=Z,517nm,18.8s,baz=166,slow=34						
ASAR	**Alice Springs**	**45.49**	**259**	P	P	02 55 57.5	+0.2
	0.7nm,0.6s,baz=96,slow=7.0,SNR=12						
	0.7nm,0.6s						
WRA	**Warramunga Arr**	**45.81**	**264**	P	P	02 55 59.2	-0.6
	0.4nm,0.6s,baz=104,slow=7.9,SNR=5.0						
	0.4nm,0.6s						
JAY	**Jayapura**	**46.27**	**290**	LR	LR	03 13 47.5	
	comp=Z,67nm,18.1s,baz=0.5,slow=34						
AKASG	**Malin Array Be**	**145.86**	**331**	PKPbc	PKPdf	03 07 16.1	-0.3
	0.5nm,0.6s,baz=39,slow=4.2,SNR=4.9						

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*IDC **09** 03:07:23.2±1.4, 12°.91N×144°.78E, h49^{km}±12^{km}, mb3.5/8, mbtmp3.7/8, MS3.0/5, Error ellipse: s-maj=41.0km s-min=18.4km az=94.0*

ISC 09 03:07:23.5±1.1**, 12°.9N**±0°.1×**145°.0E**±0°.3**, h57**^{km}**, n17, σ0**^{s}**71**/11**, mb3.7**/8**, MS3.0**/4**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.70**	**351**	P	**Pn**	**03 07 37.0**	**-0.6**
	414nm,0.3s,baz=152,slow=3.2,SNR=49						
GUMO				S	**Sn**	**03 07 48.1**	**+0.3**
	2μm,0.3s,baz=344,slow=22,SNR=16						
DAV	**Davao City (W)**	**19.95**	**255**	LR	LR	03 18 03.6	
	comp=Z,34nm,21.6s,baz=178,slow=32						
H11N1	**WAKE ISLAND Hy**	**22.09**	**69**	T	T	03 35 15.7	
	baz=256,slow=74,SNR=14						
H11N2	**WAKE ISLAND Hy**	**22.10**	**69**	T	T	03 35 18.8	
	baz=256,slow=74,SNR=12						
H11N3	**WAKE ISLAND Hy**	**22.11**	**69**	T	T	03 35 17.1	

	baz=256,slow=74,SNR=13						
JNU	**Nakatsue**	**23.90**	**330**	LR	LR	03 20 40.3	
	comp=Z,9.8nm,18.8s,baz=144,slow=34						
MJAR	**Matsushiro Arr**	**24.32**	**347**	P	**P**	**03 12 36.5**	**+0.7**
	2.5nm,1.0s,baz=175,slow=8.9,SNR=5.0						
MJAR				LR	LR	03 21 53.0	
	comp=Z,30nm,18.6s,baz=157,slow=36						
	2.5nm,1.0s						
WRA	**Warramunga Arr**	**34.27**	**198**	P	**P**	**03 14 04.6**	**+0.2**
	0.5nm,0.7s,baz=18,slow=8.7,SNR=5.9						
	0.5nm,0.7s						
KLR	**Kul'dur**	**37.84**	**346**	LR	LR	03 29 30.0	
	comp=Z,35nm,18.4s,baz=90,slow=35						
ASAR	**Alice Springs**	**37.91**	**197**	P	**P**	**03 14 35.0**	**-0.5**
	0.2nm,0.6s,baz=22,slow=11,SNR=1.8						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**62.06**	**316**	P	**P**	**03 17 38.7**	**+0.4**
	0.2nm,0.3s,baz=108,slow=8.2,SNR=2.1						
	0.2nm,0.3s						
PALK	**Pallekele**	**63.40**	**272**	LR	LR	03 47 54.8	
	comp=Z,29nm,18.2s,baz=116,slow=38						
KURBB	**Kurchatov Arra**	**65.22**	**320**	P	**P**	**03 17 57.9**	**-1.1**
	0.3nm,0.3s,baz=104,slow=6.7,SNR=2.6						
	0.3nm,0.3s						
ILAR	**Eielson Array**	**69.15**	**25**	P	**P**	**03 18 23.7**	**+0.1**
	0.5nm,0.6s,baz=247,slow=5.9,SNR=10.0						
	0.5nm,0.6s						
BVAR	**Borovoye Array**	**70.53**	**322**	P	**P**	**03 18 32.7**	**+0.3**
	0.4nm,0.4s,baz=72,slow=9.3,SNR=2.4						
	0.4nm,0.4s						
FINES	**FINESS Array B**	**91.83**	**335**	P	**P**	**03 20 24.3**	**-0.9**
	1.7nm,0.9s,baz=62,slow=3.3,SNR=4.6						
	1.7nm,0.9s						
LPAZ	**La Paz**	**147.81**	**100**	PKPbc	**PKiKP**	**03 27 06.4**	**+0.7**
	0.9nm,0.8s,baz=243,slow=4.5,SNR=3.9						

IDC 09 03:11:04.1±2.6**, 6°.32S**×**142°.97E, h0^{km}, mb3.8**/2**, mbtmp3.7**/5**, ML3.4**/3**, Error ellipse: s-maj=65.0km s-min=14.2km az=100.0, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**4.41**	**329**	Pn	Pn	03 12 14.0	+1.6
	1.4nm,0.3s,baz=137,slow=17,SNR=5.4						
JAY				Sn	Sn	03 13 07.9	+3.4
	1.0nm,0.3s,baz=130,slow=14,SNR=1.9						
	16nm,1.0s						
WRA	**Warramunga Arr**	**15.93**	**211**	Pn	Pn	03 14 49.1	-0.6
	0.1nm,0.3s,baz=32,slow=11,SNR=2.0						
WRA				Sn	Sn	03 17 37.1	-10
	0.1nm,0.3s,baz=35,slow=24,SNR=1.4						
WRA				Lg	Lg	03 19 24.7	
	baz=344,slow=38						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**19.32**	**206**	P	Pn	03 15 32.6	+0.5
	0.2nm,0.3s,baz=34,slow=9.8,SNR=19						
ASAR				S	S	03 19 10.3	-0.6
	1.6nm,0.8s,baz=33,slow=9.4,SNR=8.0						
	2.1nm,0.7s						
MKAR	**Makanchi Array**	**75.23**	**322**	P	P	03 22 48.8	-0.1
	0.4nm,0.6s,baz=114,slow=6.6,SNR=3.6						
	0.4nm,0.6s						
BVAR	**Borovoye Array**	**84.69**	**325**	P	P	03 23 38.9	-1.0
	0.6nm,0.6s,baz=86,slow=7.8,SNR=4.3						
	0.6nm,0.6s						

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*IDC **09** 03:26:47.0±6.8, 21°.43S×174°.47W, h97^{km}±51^{km}, mb3.4/6, mbtmp3.9/7, MS3.1/1, Error ellipse: s-maj=70.5km s-min=25.2km az=149.0*

ISC 09 03:26:47.0±1.4**, 21°.5S**±0°.3×**174°.5W**±0°.1**, h100^{km}, n10, σ0^{s}.59**/9**, mb3.6**/6**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**7.98**	**296**	P	**Pn**	**03 28 40.8**	**+0.4**
	28nm,1.0s,baz=120,slow=12,SNR=8.4						
PPT	**Papeete**	**23.75**	**85**	LR	LR	03 40 28.5	
	comp=Z,45nm,18.5s,baz=268,slow=35						
ASAR	**Alice Springs**	**47.54**	**257**	P	**P**	**03 35 12.4**	**-0.3**
	2.0nm,0.8s,baz=100,slow=7.6,SNR=20						
	2.0nm,0.8s						
WRA	**Warramunga Arr**	**47.76**	**262**	P	**P**	**03 35 14.2**	**-0.2**
	0.8nm,0.6s,baz=97,slow=8.1,SNR=8.3						
	0.8nm,0.6s						
MJAR	**Matsushiro Arr**	**72.98**	**322**	P	**P**	**03 38 05.4**	**-0.4**
	1.6nm,0.8s,baz=157,slow=5.6,SNR=4.8						
	1.6nm,0.8s						
NVAR	**Mina Array Bea**	**79.48**	**42**	P	**P**	**03 38 43.0**	**+0.2**
	0.5nm,0.6s,baz=221,slow=8.2,SNR=4.5						
	0.5nm,0.6s						
TXAR	**Lajitas Array**	**84.81**	**56**	P	**P**	**03 39 11.3**	**+0.5**
	0.3nm,0.8s,baz=252,slow=5.4,SNR=3.0						
	0.3nm,0.8s						
ILAR	**Eielson Array**	**88.55**	**11**	P	**P**	**03 39 27.0**	**-0.9**
	0.2nm,0.7s,baz=202,slow=4.7,SNR=5.0						
	0.2nm,0.7s						
AKASG	**Malin Array Be**	**145.40**	**333**	PKPbc	**PKPab**	**03 46 13.6**	**+0.2**
	1.3nm,0.5s,baz=42,slow=3.9,SNR=14						
BRTR	**Keskin Array B**	**149.92**	**314**	PKPbc	**PKiKP**	**03 46 27.6**	**+0.6**
	0.6nm,0.8s,baz=91,slow=3.8,SNR=4.9						

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*NOU **09** 03:28:50.8, 41°.96S×172°.33E, h4^{km}, mb4.1/11, South Island, New Zealand*

*WEL **09** 03:28:50.9±0.3, 42°S±2°×17°2E±°, h5^{km}, M3.5/25, ML3.6/12, MLv3.5/25, Error ellipse: s-maj=3.3km s-min=2.8km az=153.0, confirmed*

ISC 09 03:28:51.2±1.0**, 41°.94S**±0°.02×**172°.40E**±0°.02**, h9^{km}**±10^{km}**, n56, σ0^{s}.74**/63**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
INGS	**Inangahua Fire**	**0.35**	**284**	P	**Pg**	**03 28 57.9**	**-0.1**
INGS				S	**Sg**	**03 29 03.1**	**+0.5**
THZ	**Tophouse**	**0.42**	**64**	P	**Pg**	**03 28 58.7**	**-0.7**
THZ				S	**Sg**	**03 29 05.1**	**+0.3**
SJFS	**Springs Juncti**	**0.42**	**203**	P	**Pg**	**03 28 59.4**	**-0.1**
DSZ	**Denniston Nort**	**0.49**	**294**	P	**Pg**	**03 29 00.4**	**-0.3**
DSZ				S	**Sg**	**03 29 06.9**	**-0.2**
MATW	**Matariki Wadsw**	**0.56**	**24**	P	**Pg**	**03 29 01.8**	**-0.3**
MRNZ	**Matariki Terra**	**0.61**	**26**	P	**Pg**	**03 29 02.6**	**-0.3**
MRNZ				S	**Sg**	**03 29 11.6**	**+0.8**
MOLW	**Molesworth Sta**	**0.65**	**103**	P	**Pg**	**03 29 04.0**	**+0.2**
MOLW				S	**Sg**	**03 29 12.9**	**+0.6**
KASC	**Karamea School**	**0.73**	**343**	P	**Pg**	**03 29 05.3**	**+0.2**
BTWS	**Nelson Brightw**	**0.78**	**45**	P	**Pg**	**03 29 04.6**	**-1.5**
LTZ	**Lake Taylor**	**0.84**	**187**	P	**Pg**	**03 29 07.2**	**-0.2**
KHZ	**Kahutara**	**0.97**	**120**	P	**Pg**	**03 29 10.0**	**+0.2**
KHZ	**Kahutara**	**0.97**	**120**	S	**Sb**	**03 29 24.1**	**+1.1**
KHZ	**Kahutara**	**0.97**	**120**	P	**Pb**	**03 29 10.2**	**0.0**
TKNZ	**Takaka Hill**	**1.00**	**25**	P	**Pg**	**03 29 09.2**	**-1.2**
NNZ	**Nelson**	**1.03**	**46**	P	**Pg**	**03 29 09.5**	**-1.5**
INZ	**Inchbonnie**	**1.06**	**222**	P	**Pg**	**03 29 10.9**	**-0.6**
INZ				S	**Sb**	**03 29 25.6**	**+0.1**
QRZ	**Quartz Range**	**1.12**	**5**	P	**Pg**	**03 29 12.1**	**-0.6**
QRZ	**Quartz Range**	**1.12**	**5**	S	**Sn**	**03 29 28.1**	**-0.5**
QRZ	**Quartz Range**	**1.12**	**5**	P	**Pg**	**03 29 11.7**	**-1.0**
QRZ				S	**Sb**	**03 29 27.7**	**+0.2**
BSWZ	**Blackbirch Sta**	**1.12**	**79**	P	**Pg**	**03 29 12.2**	**-0.6**
GVZ	**Greta Valley S**	**1.12**	**156**	P	**Pn**	**03 29 13.2**	**0.0**
AMCZ	**Amberley**	**1.25**	**172**	P	**Pb**	**03 29 15.0**	**+0.1**
TUWZ	**Tuamarina**	**1.26**	**67**	P	**Pn**	**03 29 13.8**	**-1.2**
CMWZ	**Cape Campbell**	**1.37**	**82**	P	**Pg**	**03 29 18.1**	**+0.7**
OXZ	**Oxford**	**1.41**	**191**	P	**Pn**	**03 29 17.0**	**-0.1**
TCW	**Tory Channel**	**1.58**	**63**	P	**Pn**	**03 29 19.0**	**-0.4**
DUWZ	**D'Urville Isla**	**1.61**	**46**	P	**Pn**	**03 29 19.5**	**-0.4**
WVZ	**Waitaha Valley**	**1.67**	**227**	P	**Pn**	**03 29 20.6**	**-0.1**
MHCZ	**Mount Hutt**	**1.70**	**201**	P	**Pn**	**03 29 21.1**	**-0.1**
MQZ	**McQueen's Vall**	**1.77**	**174**	P	**Pn**	**03 29 21.1**	**-0.9**
RACZ	**Rakaia**	**1.79**	**186**	P	**Pn**	**03 29 21.7**	**-0.6**
SNZO	**South Karori**	**1.84**	**71**	P	**Pb**	**03 29 24.2**	**-0.7**
SNZO	**South Karori**	**1.84**	**71**	P	**Sb**	**03 29 49.0**	**+0.9**
OKCZ	**Okains Bay**	**1.84**	**165**	P	**Pn**	**03 29 22.5**	**-0.5**
WEL	**Wellington**	**1.89**	**70**	P	**Pb**	**03 29 24.9**	**-1.0**
AKCZ	**Akaroa Harbour**	**1.96**	**169**	P	**Pn**	**03 29 24.1**	**-0.5**
RPZ	**Rata Peaks**	**2.03**	**209**	P	**Pn**	**03 29 25.7**	**+0.2**
WACZ	**Wakanui South**	**2.04**	**192**	P	**Pn**	**03 29 25.3**	**-0.4**
GCSZ	**Gaunt Creek Bo**	**2.06**	**227**	P	**Pn**	**03 29 25.9**	**0.0**
CAW	**Cannon Point**	**2.17**	**68**	P	**Pn**	**03 29 27.8**	**+0.4**
KIW	**Kapiti Island**	**2.17**	**61**	P	**Pn**	**03 29 29.0**	**+1.4**
ARCZ	**Arundel**	**2.20**	**204**	P	**Pn**	**03 29 27.8**	**-0.1**
MSWZ	**Moikau Station**	**2.20**	**77**	P	**Pn**	**03 29 27.6**	**-0.3**
OGWZ	**Otaki Gorge**	**2.37**	**63**	P	**Pn**	**03 29 31.0**	**+0.8**
MTW	**Mount Morrison**	**2.46**	**72**	P	**Pn**	**03 29 30.9**	**-0.5**
FOZ	**Fox Glacier**	**2.48**	**229**	P	**Pn**	**03 29 31.7**	**-0.1**
TMZ	**Timaru**	**2.64**	**202**	P	**Pn**	**03 29 33.6**	**-0.4**
MRZ	**Mangatainoka R**	**2.71**	**63**	P	**Pn**	**03 29 35.3**	**+0.4**
KHEZ	**Kahui Hut**	**2.92**	**25**	P	**Pn**	**03 29 39.2**	**+1.3**
KHEZ	**Kahui Hut**	**2.92**	**25**	P	**Pn**	**03 29 39.1**	**+1.3**
PREZ	**Palmer Road**	**2.92**	**28**	P	**Pn**	**03 29 39.7**	**+1.8**
PRWZ	**Pori Road**	**3.03**	**64**	P	**Pn**	**03 29 38.9**	**-0.4**
HIZ	**Hauiti**	**3.91**	**30**	P	**Pn**	**03 29 53.0**	**+1.6**
BKZ	**Black Stump Fm**	**4.17**	**50**	P	**Pn**	**03 29 56.0**	**+0.9**
URZ	**Urewera**	**5.15**	**46**	P	**Pn**	**03 30 08.3**	**-0.2**
	27nm,1.8s						
KUZ	**Kuaotunu**	**5.79**	**27**	P	**Pn**	**03 30 18.1**	**+0.8**
	26nm,1.3s						

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*IDC **09** 03:32:25.5±7.6, 6°.88S×128°.73E, h162^{km}±87^{km}, mb3.5/5, mbtmp4.0/8, Error ellipse: s-maj=48.0km s-min=44.9km az=83.0*

*NEIC **09** 03:32:28.8±2.4, 6°.83S±0°.10×128°.8E±0°.1, h196^{km}±6^{km}, mb4.0/6, Error ellipse: s-maj=16.3km s-min=13.0km az=128.0*

ISC 09 03:32:27.5±0.6**, 7°.09S**±0°.06×**128°.6E**±0°.1**, h200^{km}, n27, σ2^{s}.39**/27**, mb3.8**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.82**	**109**		**Pn**	**03 33 14.8**	**-0.4**
SOEI	**Soe**	**5.04**	**238**		Pn	03 33 47.2	+4.5
FAKI	**Fak Fak**	**5.51**	**41**		**Pn**	**03 33 44.0**	**-4.5**
MTN	**Manton Dam**	**6.24**	**157**		**Pn**	**03 33 59.6**	**+1.6**
KNRA	**Kununurra**	**8.54**	**179**		**Pn**	**03 34 30.0**	**+2.1**
FITZ	**Fitzroy Crossi**	**11.32**	**194**		**P**	**03 35 06.0**	**-3.6**
FITZ	**Fitzroy Crossi**	**11.32**	**194**	P	**P**	**03 35 05.8**	**-3.8**
	7.5nm,0.5s,baz=20,slow=9.6,SNR=40						
FITZ				S	**Sn**	**03 37 07.5**	**-2.6**
	7.1nm,0.3s,baz=279,slow=22,SNR=7.6						
WB0	**Warramunga Arr**	**13.80**	**157**		**P**	**03 35 39.0**	**+1.7**
WRA	**Warramunga Arr**	**13.94**	**157**	P	**P**	**03 35 36.2**	**-2.6**
	0.4nm,0.3s,baz=346,slow=12,SNR=30						
WRA				S	**S**	**03 38 06.5**	**-5.6**
	4.2nm,0.6s,baz=333,slow=22,SNR=11						
WR8	**Warramunga Arr**	**14.02**	**156**		**P**	**03 35 42.1**	**+2.5**
COEN	**Coen**	**15.87**	**117**		**Pn**	**03 36 00.7**	**+0.3**
COEN				IAmb	IAmb	03 36 03.1	
	comp=Z,16nm,0.8s						
AS31	**Alice Springs**	**17.25**	**163**	P	**Pn**	**03 36 19.4**	**+2.4**
AS31				IAmb	IAmb	03 36 21.1	
	comp=Z,2.2nm,0.5s						
ASAR	**Alice Springs**	**17.26**	**163**	P	**Pn**	**03 36 19.8**	**+2.9**
ASAR	**Alice Springs**	**17.26**	**163**	P	**Pn**	**03 36 19.1**	**+2.1**
	comp=Z,4.2nm,0.5s,baz=338,slow=9.9,SNR=57						
ASAR				S	**S**	**03 39 26.1**	**+1.4**
	comp=Z,0.8nm,0.4s,baz=351,slow=22,SNR=5.9						
YULB	**Yu-li**	**31.12**	**347**	P	**P**	**03 38 27.6**	**+0.1**
KSRS	**Korea Array**	**44.31**	**359**	P	**P**	**03 40 18.0**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=179,slow=9.1,SNR=5.3						
	comp=Z,0.9nm,0.6s						
PETK	**Petropavlovsk-**	**64.85**	**19**	P	**P**	**03 42 44.3**	**-0.7**
PETK	**Petropavlovsk-**	**64.85**	**19**	P	**P**	**03 42 45.3**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=233,slow=8.5,SNR=3.5						
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**67.54**	**327**	P	**P**	**03 43 03.4**	**+1.1**
MKAR	**Makanchi Array**	**67.54**	**327**	P	P	03 43 04.1	+1.7
	comp=Z,1.1nm,0.6s,baz=121,slow=5.6,SNR=8.8						
	comp=Z,1.1nm,0.6s						
MAKZ	**Makanchi**	**67.72**	**327**	P	P	03 43 04.8	+1.4
MAKZ				IAmb	IAmb	03 43 33.5	
	comp=Z,4.4nm,1.4s						
ZALV	**Zalesovo Beam**	**71.05**	**334**	P	**P**	**03 43 23.9**	**+0.3**
ZALV	**Zalesovo Beam**	**71.05**	**334**	P	**P**	**03 43 24.4**	**+0.8**
	comp=Z,0.7nm,0.4s,baz=134,slow=4.2,SNR=2.1						
	comp=Z,0.7nm,0.4s						
KURBB	**Kurchatov Arra**	**71.86**	**329**	P	**P**	**03 43 29.5**	**+0.9**
	comp=Z,0.7nm,0.4s,baz=126,slow=5.3,SNR=5.5						
	comp=Z,0.7nm,0.4s						
ABKAR	**Akbulak array**	**81.72**	**322**	P	**P**	**03 44 23.5**	**-0.2**
ABKAR	**Akbulak array**	**81.72**	**322**	P	**P**	**03 44 24.6**	**+1.0**
ABKAR				IAmb	IAmb	03 44 31.4	
	comp=Z,3.3nm,1.5s						
QSPA	**South Pole Qui**	**82.89**	**180**	P	**P**	**03 44 31.5**	**+1.8**

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*IDC **09** 03:33:27.1±1.5, 13°.10N×92°.42E, h0^{km}, mb3.7/7, mbtmp3.7/8, ML3.6/1, MS4.4/1, Error ellipse: s-maj=43.2km s-min=27.9km az=51.0*

ISC 09 03:33:31.7±1.2**, 13°.1N**±0°.2×**92°.5E**±0°.2**, h31^{km}, n12, σ0^{s}.77**/9**, mb3.7**/7**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**8.23**	**49**	Pn	**Pn**	**03 35 29.4**	**+0.4**
	0.2nm,0.3s,baz=230,slow=13,SNR=5.7						
	1.6nm,0.3s						
H08S3	**Diego Garcia H**	**28.57**	**225**	T	T	04 09 20.5	
	baz=44,slow=76,SNR=5.0						
H08S2	**Diego Garcia H**	**28.58**	**225**	T	T	04 09 19.6	
	baz=44,slow=76,SNR=4.3						
H08S1	**Diego Carcia H**	**28.59**	**225**	T	T	04 09 21.6	
	baz=44,slow=76,SNR=4.3						
MKAR	**Makanchi Array**	**34.68**	**348**	P	**P**	**03 40 18.2**	**-0.3**
	0.8nm,0.8s,baz=153,slow=9.7,SNR=4.5						
	0.8nm,0.8s						
KURBB	**Kurchatov Arra**	**39.13**	**346**	P	**P**	**03 40 55.3**	**-0.9**
	0.5nm,0.3s,baz=159,slow=7.5,SNR=4.2						
	0.5nm,0.3s						
ZALV	**Zalesovo Beam**	**41.22**	**353**	P	**P**	**03 41 12.2**	**-1.3**
	1.0nm,0.6s,baz=205,slow=6.6,SNR=3.7						
	1.0nm,0.6s						
BVAR	**Borovoye Array**	**43.56**	**341**	P	**P**	**03 41 32.3**	**-0.4**
	0.3nm,0.4s,baz=104,slow=6.1,SNR=2.2						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**54.56**	**132**	P	**P**	**03 42 57.1**	**-0.2**
	0.7nm,0.5s,baz=303,slow=7.1,SNR=2.4						
	0.7nm,0.5s						
BRTR	**Keskin Array B**	**57.84**	**309**	P	**P**	**03 43 21.3**	**+0.6**
	0.5nm,0.8s,baz=122,slow=6.4,SNR=4.2						
BRTR				LR	LR	04 10 14.2	
	comp=Z,320nm,20.4s,baz=330,slow=38						
	0.5nm,0.8s						
GERES	**GERESS Array B**	**72.88**	**317**	P	**P**	**03 44 57.9**	**0.0**
	0.6nm,0.8s,baz=94,slow=6.8,SNR=3.9						
	0.6nm,0.8s						
TXAR	**Lajitas Array**	**135.06**	**20**	PKP	**PKiKP**	**03 52 50.5**	**+0.3**
	0.1nm,0.5s,baz=77,slow=1.4,SNR=3.2						

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*IDC **09** 03:36:11.2±5.5, 6°.29S×143°.40E, h31^{km}±41^{km}, mb4.0/13, mbtmp4.2/16, ML1.9/1, MS2.9/2, Error ellipse: s-maj=23.8km s-min=14.1km az=77.0*

ISC 09 03:36:11.5±0.6**, 6°.36S**±0°.08×**143°.3E**±0°.1**, h35^{km}, n18, σ1^{s}.05**/20**, mb4.1**/12**, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**4.63**	**325**	Pn	**Pn**	**03 37 18.4**	**-0.7**
	12nm,0.4s,baz=208,slow=8.3,SNR=12						
JAY				Sn	**Sn**	**03 38 13.1**	**+1.3**
	3.3nm,0.3s,baz=318,slow=16,SNR=1.9						
JAY				LR	LR	03 38 58.7	
	comp=Z,54nm,20.8s,baz=8.5,slow=36						
PMG	**Port Moresby**	**4.85**	**129**	Pn	**Pn**	**03 37 22.6**	**+0.6**
	3.9nm,0.3s,baz=15,slow=8.1,SNR=7.1						
PMG				Sn	**Sn**	**03 38 16.5**	**-0.4**
	6.9nm,0.3s,baz=250,slow=23,SNR=6.6						
	9.5nm,0.3s						
WRA	**Warramunga Arr**	**16.08**	**212**	Pn	**Pn**	**03 39 51.9**	**-3.2**
	0.7nm,0.3s,baz=33,slow=13,SNR=8.2						
WRA				Sn	Sn	03 42 40.5	-12
	0.3nm,0.3s,baz=26,slow=23,SNR=2.5						
WRA				Lg	Lg	03 44 37.4	
	0.3nm,0.3s,baz=29,slow=28,SNR=4.6						
ASAR	**Alice Springs**	**19.45**	**207**	P	**Pn**	**03 40 38.0**	**+1.4**
	26nm,0.8s,baz=32,slow=10,SNR=73						
ASAR				S	S	03 44 04.0	-9.4
	1.0nm,0.7s,baz=12,slow=28,SNR=1.4						
ASAR				Lg	Lg	03 46 18.2	
	baz=20,slow=31,SNR=4.5						
FITZ	**Fitzroy Crossi**	**20.83**	**234**	P	**P**	**03 40 50.8**	**+0.5**
	10nm,0.6s,baz=67,slow=9.5,SNR=9.2						
FITZ				S	S	03 44 30.9	-10
	4.5nm,0.9s,baz=126,slow=16,SNR=2.1						
FITZ				Lg	Lg	03 47 01.4	
	0.2nm,0.3s,baz=106,slow=13,SNR=4.2						
	10nm,0.6s						
KAPI	**Kappang**	**23.50**	**272**	P	**P**	**03 41 18.5**	**0.0**
	5.9nm,0.6s,baz=95,slow=12,SNR=4.1						
	5.9nm,0.6s						
STKA	**Stephens Creek**	**25.44**	**183**	P	**P**	**03 41 35.9**	**-0.2**
	2.7nm,0.8s,baz=330,slow=9.1,SNR=3.2						
STKA				LR	LR	03 51 21.1	
	comp=Z,90nm,20.8s,baz=122,slow=36						
	2.7nm,0.8s						
KSRS	**Korea Array**	**45.90**	**343**	P	**P**	**03 44 30.6**	**-0.1**
	1.4nm,0.7s,baz=161,slow=10.0,SNR=8.8						
	1.4nm,0.7s						
USRK	**Ussuriysk Ar.**	**51.36**	**350**	P	**P**	**03 45 12.7**	**+0.1**
	1.4nm,0.7s,baz=135,slow=7.5,SNR=4.6						
	1.4nm,0.7s						
PETK	**Petropavlovsk-**	**60.48**	**10**	P	**P**	**03 46 17.2**	**-0.6**
	3.5nm,0.8s,baz=177,slow=8.2,SNR=8.7						
	3.5nm,0.8s						
VNDA	**Vanda**	**71.79**	**176**	P	**P**	**03 47 30.9**	**+0.9**
	0.8nm,0.7s,baz=351,slow=6.3,SNR=4.6						
	0.8nm,0.7s						
MKAR	**Makanchi Array**	**75.48**	**322**	P	**P**	**03 47 52.7**	**+0.5**
	2.6nm,0.8s,baz=109,slow=7.1,SNR=21						
	2.6nm,0.8s						
ZALV	**Zalesovo Beam**	**77.41**	**329**	P	**P**	**03 48 02.3**	**-0.6**
	0.7nm,0.4s,baz=108,slow=4.8,SNR=3.9						
	0.7nm,0.4s						
KURBB	**Kurchatov Arra**	**79.36**	**324**	P	**P**	**03 48 13.7**	**0.0**
	1.8nm,0.9s,baz=117,slow=4.8,SNR=9.4						
	1.8nm,0.9s						
QSPA	**South Pole Qui**	**83.61**	**180**	P	**P**	**03 48 36.5**	**+0.4**
	3.6nm,0.9s,baz=298,slow=0.9,SNR=24						
	3.6nm,0.9s						
BVAR	**Borovoye Array**	**84.93**	**325**	P	**P**	**03 48 43.4**	**+0.5**
	5.3nm,0.9s,baz=119,slow=5.6,SNR=16						
	5.3nm,0.9s						
ILAR	**Eielson Array**	**87.26**	**24**	P	**P**	**03 48 53.2**	**-0.9**
	1.0nm,0.9s,baz=258,slow=4.4,SNR=8.0						
	1.0nm,0.9s						
DBIC	**Dimbokro**	**148.40**	**272**	PKPbc	**PKPbc**	**03 55 56.3**	**+0.9**
	6.7nm,1.0s,baz=117,slow=5.8,SNR=3.9						

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*BER **09** 03:45:15.9±6.5, 69°.16N×17°.31W, h10^{km}, Mw4.7, mb4.7(USGS)*

*MOS **09** 03:45:16.1±1.2, 69°.02N×17°.23W, h10^{km}, mb4.8/52, MS4.1/17, Error ellipse: s-maj=10.0km s-min=4.7km az=106.6*

*IDC **09** 03:45:16.9±0.4, 68°.92N×17°.11W, h0^{km}, mb4.3/27, mbtmp4.3/34, ML3.7/6, MS4.1/69, Error ellipse: s-maj=13.9km s-min=9.3km az=18.0*

*DNK **09** 03:45:17.5±3.6, 69°.13N×16°.69W, h20^{km}±35^{km}, ML2.9*

*NEIC **09** 03:45:17.0±2.8, 68°.99N±0°.07×17°.4W±0°.2, h10^{km}±2^{km}, mb4.7/256, Error ellipse: s-maj=14.4km s-min=10.9km az=52.0*

*INMG **09** 03:45:18.0±4.5, 69°.09N×17°.18W, h10^{km}, M4.7, mb4.9, Ms4.1, #DIST_RANGE: DISTANT*

*GCMT **09** 03:45:18.0±0.2, 68°.92N±0°.01×17°.08W±0°.03, h12^{km}, MW5.0/131, Moment Tensor Solution. s50,c59; s131,c197; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.11±.08; $M_{\theta\theta}$1.99±.08; $M_{\phi\phi}$-0.88±.07; $M_{r\theta}$-1.39±.20; $M_{\theta\phi}$2.77±.06; $M_{\phi r}$0.11±.22; Best double couple: $M_0$3.45000×10^{16} NP1:ϕ_s195.00000°, δ62.00000°, λ-170.00000°. NP2:ϕ_s100.00000°, δ81.00000°, λ-28.00000°. Principal axes: T 3.9320, Plg13.0000°, Azm150.0000°; N -0.9660, Plg60.0000°, Azm264.0000°; P -2.9680, Plg26.0000°, Azm54.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*REY **09** 03:45:19.5, 68°.59N×16°.65W, h10^{km}*

ISC 09 03:45:17.8±0.3**, 68°.99N**±0°.03×**17°.09W**±0°.03**, h11^{km}, n893, σ2^{s}.12**/793**, mb4.7**/233**, MS4.2**/92**, 17C-19D, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
SCO	**Scoresbysund**	**2.26**	**314**		**Pn**	**03 45 50.9**	**-4.1**
SCO	**Scoresbysund**	**2.26**	**314**	P	**Pn**	**03 45 50.9**	**-4.1**
SCO	**Scoresbysund**	**2.26**	**314**	*i* P	**Pn**	**03 45 53.0**	**-2.1**
SCO	**Scoresbysund**	**2.26**	**314**	*i* P	**Pn**	**03 45 53.0**	**-2.1**
SCO				IAML		03 46 57.4	
	comp=Z,555nm,1.7s						
IGRI	**Grimsey**	**2.48**	**188**	P	**Pn**	**03 45 53.8**	**-4.2**
IGRI				S	Sn	03 46 19.3	-9.0
ILEI	**Leirhofn**	**2.60**	**175**	P	**Pn**	**03 45 55.5**	**-4.2**
ILEI				S	**Sn**	**03 46 23.0**	**-8.2**
IBRE	**Brettingsstaoi**	**2.90**	**187**	P	**Pn**	**03 45 59.6**	**-4.2**
IBRE				S	Sn	03 46 29.9	-8.6
IHED	**Heoinshofoi**	**2.92**	**182**	P	**Pn**	**03 45 59.8**	**-4.3**
IHED				S	Sn	03 46 30.3	-8.9
IGIL	**Gilhagi**	**2.94**	**174**	P	**Pn**	**03 46 00.2**	**-4.2**
IGIL				S	**Sn**	**03 46 32.3**	**-7.2**
ISIG	**Siglufjorour**	**2.95**	**195**	P	**Pn**	**03 46 00.9**	**-3.6**
IDIM	**Dimmadalss**	**3.04**	**179**	S	Sn	03 46 33.6	-8.5
IDIM				P	**Pn**	**03 46 01.6**	**-4.2**
IGRA	**Granastaoir**	**3.09**	**184**	P	**Pn**	**03 46 02.4**	**-4.0**
IGRA				S	Sn	03 46 34.6	-8.6
IHRN	**Hraun**	**3.12**	**203**	P	**Pn**	**03 46 04.1**	**-2.7**
ISKI	**Skildingahlsh**	**3.13**	**179**	P	**Pn**	**03 46 03.0**	**-4.1**
IGHA	**Grjothals**	**3.16**	**177**	P	**Pn**	**03 46 03.5**	**-4.0**
IGHA				S	**Sn**	**03 46 38.7**	**-6.5**
IKVO	**Krokottuvotn**	**3.29**	**178**	P	**Pn**	**03 46 05.2**	**-4.0**
IKVO				S	**Sn**	**03 46 41.8**	**-6.5**
IREN	**Reynihlio**	**3.36**	**179**	P	**Pn**	**03 46 06.2**	**-3.9**
IREN				S	**Sn**	**03 46 43.0**	**-6.9**
IGRS	**Grimsstaoir**	**3.39**	**173**	P	**Pn**	**03 46 06.6**	**-3.9**
IGRS				S	**Sn**	**03 46 44.5**	**-6.1**
IMEL	**Melhnausar**	**3.44**	**177**	P	**Pn**	**03 46 07.3**	**-4.0**
IMEL				S	**Sn**	**03 46 46.0**	**-5.9**
JMIC	**Jan Mayen**	**3.57**	**52**	Pn	**Pn**	**03 46 09.8**	**-3.3**
	comp=Z,11nm,0.3s,baz=137,slow=2.6,SNR=6.6						
JMIC	**Jan Mayen**	**3.57**	**52**	*e*P	**Pn**	**03 46 10.5**	**-2.5**
JMIC	**Jan Mayen**	**3.57**	**52**	*i* P	**Pn**	**03 46 08.9**	**-4.1**
JNW	**Jan Mayen West**	**3.61**	**51**	*e*P	**Pn**	**03 46 10.5**	**-3.1**
JNE	**Jan Mayen East**	**3.63**	**52**	*e*P	**Pn**	**03 46 11.0**	**-2.8**
ISVA	**Svartarkot**	**3.67**	**181**	P	**Pn**	**03 46 10.9**	**-3.5**
ISVA				S	**Sn**	**03 46 50.5**	**-7.0**
IASK	**Askja**	**3.96**	**177**	P	**Pn**	**03 46 14.8**	**-3.6**
IADA	**Aoalbol**	**4.03**	**171**	P	**Pn**	**03 46 15.3**	**-4.1**
IMKO	**Mokollar**	**4.04**	**175**	P	**Pn**	**03 46 16.0**	**-3.6**
THOR	**Thorvaldshraun**	**4.08**	**177**	P	**Pn**	**03 46 16.8**	**-3.2**
IDYN	**Dyngjuhals**	**4.22**	**182**	P	**Pn**	**03 46 18.9**	**-3.2**
IKRE	**Kreppuhraun**	**4.23**	**176**	P	**Pn**	**03 46 18.5**	**-3.7**
IVSH	**V-Sauoahnukur**	**4.23**	**172**	P	**Pn**	**03 46 17.8**	**-4.4**
ISTE	**Stelbrattur**	**4.27**	**195**	P	**Pn**	**03 46 20.7**	**-2.0**
IKIS	**Kista**	**4.34**	**183**	P	**Pn**	**03 46 20.8**	**-2.9**
IVON	**Vonarskard**	**4.34**	**184**	P	**Pn**	**03 46 20.7**	**-3.1**
ISKR	**Skrokkalda**	**4.48**	**187**	P	**Pn**	**03 46 23.8**	**-1.8**
IBJK	**Bruarjokull**	**4.54**	**178**	P	**Pn**	**03 46 23.3**	**-3.2**
IASB	**sbjarnarstai**	**4.57**	**203**	P	**Pn**	**03 46 25.4**	**-1.4**
BORG	**Borgarnes**	**4.57**	**203**		**Pn**	**03 46 25.4**	**-1.4**
BORG	**Borgarnes**	**4.57**	**203**	Pn	**Pn**	**03 46 24.8**	**-2.0**
	comp=Z,11nm,0.3s,baz=359,slow=6.1,SNR=64						
BORG				Sn	**Sn**	**03 47 22.0**	**+2.1**
	baz=168,slow=12						
BORG				LR	LR	03 47 46.8	
	comp=Z,910nm,18.7s,baz=17,slow=33						
	comp=Z,119nm,0.7s						
BORG	**Borgarnes**	**4.57**	**203**	P	**Pn**	**03 46 26.3**	**-0.5**
BORG	**Borgarnes**	**4.57**	**203**	*i* P	**Pn**	**03 46 25.8**	**-1.0**
BORG				*i* S	**Sn**	**03 47 19.6**	**-0.2**
BORG	**Borgarnes**	**4.57**	**203**	*i* P	**Pn**	**03 46 25.8**	**-1.0**
BORG				*i* S	**Sn**	**03 47 19.6**	**-0.2**
IGRF	**Grimsfjall**	**4.60**	**181**	P	**Pn**	**03 46 24.8**	**-2.6**
IVOT	**Vottur**	**4.74**	**180**	P	**Pn**	**03 46 27.4**	**-1.7**
IKSK	**Karasker**	**4.86**	**177**	P	**Pn**	**03 46 27.5**	**-3.2**
IGYG	**Gygjarholskot**	**4.89**	**196**	P	**Pn**	**03 46 30.1**	**-1.0**
IKVI	**Kvisker**	**5.04**	**177**	P	**Pn**	**03 46 30.1**	**-3.1**
IFAL	**Falljokull**	**5.05**	**179**	P	**Pn**	**03 46 31.1**	**-2.3**
IKAL	**Kalfafell**	**5.07**	**183**	P	**Pn**	**03 46 33.3**	**-0.3**
SLET	**Slettubjorg**	**5.08**	**178**	P	**Pn**	**03 46 31.6**	**-2.2**
IHEI	**Heioarbar**	**5.08**	**201**	P	**Pn**	**03 46 34.1**	**+0.3**
IFAG	**Fagurholsmyri**	**5.14**	**178**	P	**Pn**	**03 46 31.8**	**-2.7**
SOEG	**Soedalen**	**5.29**	**268**	*i* P	**Pn**	**03 46 35.2**	**-1.4**
SOEG	**Soedalen**	**5.29**	**268**	*i* P	**Pn**	**03 46 35.2**	**-1.4**
SOEG				IAML		03 48 42.8	
	comp=Z,60nm,1.4s						
DBG	**Daneborg**	**5.44**	**351**	*i* P	**Pn**	**03 46 35.2**	**-3.4**
DBG				*e*S	**Sn**	**03 47 33.3**	**-7.8**
DBG	**Daneborg**	**5.44**	**351**	*i* P	**Pn**	**03 46 35.2**	**-3.4**
DBG				*i* S	Sn	03 47 30.4	-11
DBG				IAML		03 47 59.2	
	comp=Z,4.7nm,0.4s						
DAG	**Danmarks Havn**	**7.84**	**357**	P	**Pn**	**03 47 08.8**	**-2.8**

DAG				pmax	pmax		
	comp=Z,32nm,0.9s						
DAG	**Danmarks Havn**	7.84	357	*i* P	Pn	03 47 08.0	-3.5
DAG				*i*		03 47 14.8	
DAG				*e*S	Sn	03 48 32.9	-7.2
DAG	**Danmarks Havn**	7.84	357	*i* P	Pn	03 47 08.0	-3.5
DAG				*i* P	Pn	03 47 08.0	-3.5
DAG				IAML		03 49 20.6	
	comp=Z,14nm,2.0s						
SUMG	**Summit**	7.88	307		Pn	03 47 10.7	-1.8
SUMG	**Summit**	7.88	307	P	Pn	03 47 11.9	-0.6
SUMG				pmax	pmax		
	comp=Z,62nm,0.7s						
SUMG	**Summit**	7.88	307	*i* P	Pn	03 47 11.1	-1.4
SUMG	**Summit**	7.88	307	*i* P	Pn	03 47 11.1	-1.4
SUMG				IAML		03 49 37.3	
	comp=Z,58nm,2.2s						
ICESG	**Greenland Ices**	8.07	281	*i* P	Pn	03 47 13.1	-2.0
ICESG	**Greenland Ices**	8.07	281	*i* P	Pn	03 47 13.1	-2.0
ICESG				IAML		03 50 11.0	
	comp=Z,39nm,2.6s						
ANGG	**Ammassalik, Gr**	8.61	257		Pn	03 47 19.2	-2.9
ANGG	**Ammassalik, Gr**	8.61	257	*i* P	Pn	03 47 21.8	-0.4
ANGG	**Ammassalik, Gr**	8.61	257	*i* P	Pn	03 47 21.8	-0.4
FOO	**Floro**	11.79	118	*e*P	Pn	03 48 05.3	-0.3
AKN	**Aaknes**	12.00	113	*e*P	Pn	03 48 09.1	+0.5
UMMG	**Uummannaq**	12.09	294	*i* P	Pn	03 48 06.1	-3.6
UMMG	**Uummannaq**	12.09	294	*i* P	Pn	03 48 06.1	-3.6
SUE	**Sulen**	12.11	120	*e*P	Pn	03 48 09.0	-1.0
NSS	**Namsos**	12.23	97	*e*P	Pn	03 48 11.1	-0.5
HSPB	**Hornsund (broa**	12.25	35	*e*P	Pn	03 48 14.0	+2.2
HSPB	**Hornsund (broa**	12.25	35	*e*P	Pn	03 48 13.6	+1.8
BRBA	**Barentsburg A**	12.47	30	*e*P	Pn	03 48 17.0	+2.2
HYA	**Hoyanger**	12.48	118	*e*P	Pn	03 48 15.0	0.0
BRBB	**Barentsburg B**	12.48	30	*e*P	Pn	03 48 17.2	+2.1
KBS	**Kingsbay**	12.56	26		Pn	03 48 16.4	+0.3
KBS	**Kingsbay**	12.56	26	P	Pn	03 48 17.0	+0.9
KBS				pmax	pmax		
	comp=Z,46nm,0.7s						
KBS	**Kingsbay**	12.56	26	*e*P	Pn	03 48 16.9	+0.8
SFJD	**Kangerlussuaq**	12.63	277	LR	LR	03 52 23.7	
	comp=Z,367nm,18.1s,baz=70,slow=34						
NOR	**Nord**	12.69	0	P	Pn	03 48 14.7	-3.1
NOR				pmax	pmax		
	comp=Z,45nm,0.9s						
NOR	**Nord**	12.69	0	*e*P	Pn	03 48 14.5	-3.2
ASK	**Askoy**	12.69	121	*e*P	Pn	03 48 17.2	-0.8
NEEM	**North Greenlan**	12.70	326	*i* P	Pn	03 48 13.5	-4.8
NEEM	**North Greenlan**	12.70	326	*i* P	Pn	03 48 13.5	-4.8
BER	**Bergen**	12.81	121	*e*P	Pn	03 48 18.8	-0.8
SPA0	**Spitsbergen Ar**	12.92	31	*e*P	Pn	03 48 23.5	+2.5
SPITS	**Spitsbergen Ar**	12.92	31	Pn	Pn	03 48 23.1	+2.1
	comp=Z,21nm,0.5s,baz=228,slow=13,SNR=119						
SPB2	**Spitsbergen Ar**	12.92	31		Pn	03 48 23.2	+2.2
KULLO	**Kullorsuaq**	13.47	312	*i* P	Pn	03 48 22.0	-6.6
KULLO	**Kullorsuaq**	13.47	312	*i* P	Pn	03 48 22.0	-6.6
SKAR	**Skarslia**	13.53	116	*e*P	Pn	03 48 29.8	+0.3
ODD1	**Odda**	13.59	120	*e*P	Pn	03 48 29.9	-0.3
KMY	**Karmoy**	13.73	125	*e*P	Pn	03 48 32.2	+0.1
BLS5	**Blasjo**	13.92	122	*e*P	Pn	03 48 33.9	-0.9
NBO00	**NORSAR Array S**	14.09	111		Pn	03 48 36.4	-0.6
HOPEN	**Hopen**	14.20	40	*e*P	Pn	03 48 41.5	+3.0
NOA	**NORSAR Array B**	14.23	110	Pn	Pn	03 48 38.3	-0.7
	comp=Z,0.1nm,0.3s,baz=32,slow=19,SNR=6.7						
NOA				LR	LR	03 53 48.8	
	comp=Z,525nm,19.0s,baz=300,slow=36						
	comp=Z,0.3nm,0.3s						
NC602	**NORSAR Array S**	14.56	111	*e*P	Pn	03 48 44.7	+1.2
IDGL	**Inch Island, C**	14.64	158	P	P	03 48 51.5	+0.6
KONO	**Kongsberg**	14.73	116	*i* P	Pn	03 48 47.5	+1.7
ARA0	**ARCESS Array S**	14.88	68	*e*P	Pn	03 48 48.0	+0.3
ARCES	**ARCESS Array B**	14.88	68	Pn	Pn	03 48 47.9	+0.1
	comp=Z,0.1nm,0.3s,baz=291,slow=10,SNR=6.6						
ARCES				LR	LR	03 53 20.0	
	comp=Z,696nm,19.2s,baz=282,slow=32						
	comp=Z,5.3nm,0.4s						
OSL	**Oslo**	14.88	114	*e*P	Pn	03 48 48.5	+0.7
SNART	**Snartemo**	15.03	123	*e*P	Pn	03 48 49.4	-0.5
SNART	**Snartemo**	15.03	123	*i* P	Pn	03 48 47.1	-2.8
IVI	**Ivigtut**	15.06	254	P	Pn	03 48 51.0	+0.8
EKA	**Eskdalemuir Ar**	15.10	148	Pn	Pn	03 48 49.2	-1.6
	baz=334,slow=13						
	comp=Z,4.5nm,0.8s						
KEV	**Kevo**	15.31	67		Pn	03 48 54.7	+1.3
KEV				IAmb	IAmb	03 48 59.9	
	comp=Z,52nm,1.2s						
KEV	**Kevo**	15.31	67	P	Pn	03 48 54.7	+1.3
KEV				pmax	pmax		
	comp=Z,52nm,1.2s						
HOMB	**Homborsund**	15.48	121	*i* P	Pn	03 48 51.7	-4.0
HFS	**Hagfors**	15.73	109	Pn	Pn	03 48 58.6	-0.4
	comp=Z,0.2nm,0.3s,baz=317,slow=10,SNR=8.2						
HFS				LR	LR	03 54 53.9	
	comp=Z,849nm,18.1s,baz=316,slow=37						
	comp=Z,3.9nm,0.8s						
ILTH	**Belurgan, Co L**	15.82	156	P	P	03 49 04.5	+0.5
SGF	**Sodankyl**	16.01	75	P	P	03 49 05.9	-0.1
SGF				pmax	pmax		
	comp=Z,140nm,1.0s						
IGLA	**Glengowla, Co**	16.03	163	P	P	03 49 07.0	+0.6
TULEG	**Thule**	16.45	319	Pn	Pn	03 49 03.5	-4.6
TULEG				IAmb	IAmb	03 49 09.5	
	comp=Z,51nm,0.9s						
DSB	**Dublin**	16.57	157	P	P	03 49 12.6	+0.2
OUL	**Oulu**	16.94	83	P	P	03 49 16.1	-0.2
OUL				pmax	pmax		
	comp=Z,72nm,1.1s						
VAF	**Ylistaro**	16.95	91	P	P	03 49 17.3	+0.8
VAF				pmax	pmax		
	comp=Z,72nm,1.2s						
VAF	**Ylistaro**	16.95	91	*e*P	P	03 49 17.0	+0.5
IWEX	**Carrickbyrne,**	17.37	158	P	P	03 49 20.6	-0.6
MSF	**Maaselka**	17.62	78	P	Pn	03 49 22.2	-0.7
MSF				pmax	pmax		
	comp=Z,149nm,1.1s						
RAF	**Rauma**	17.93	97	*e*P	P	03 49 28.5	+1.2
KEF	**Keuruu**	18.30	91	*e*P	P	03 49 31.5	+0.2
APA	**Apatity**	18.32	70	⇓*i*P	Pn	03 49 28.1	-3.3
APA				*i*		03 52 48.2	
APA				pmax	pmax		
	comp=Z,38nm,1.0s						
APA				MLR	MLR		
	comp=Z,1µm,14.0s						
LVZ	**Lovozero**	18.59	69	P	P	03 49 32.6	-1.9
LVZ	**Lovozero**	18.59	69	*i* P	P	03 49 33.9	-0.6
LVZ				pmax	pmax		
	comp=Z,57nm,1.0s						
DEL	**Delary**	18.64	117	*i* P	P	03 49 35.0	-0.2
DEL	**Delary**	18.64	117	*i* P	P	03 49 35.0	-0.2
FINES	**FINESS Array B**	19.20	92		Pn	03 49 41.7	-0.5
FINES	**FINESS Array B**	19.20	92	P	P	03 49 41.4	+0.1
	comp=Z,1.3nm,0.3s,baz=305,slow=6.6,SNR=75						
FINES				LR	LR	03 56 23.9	
	comp=Z,669nm,18.0s,baz=316,slow=35						
	comp=Z,14nm,0.7s						
FINES	**FINESS Array B**	19.20	92	P	Pn	03 49 41.7	-0.5
FIA1	**FINESS Array S**	19.20	92		Pn	03 49 42.6	+0.4
MEF	**Metsahovi**	19.43	96	*e*P	Pn	03 49 44.4	-0.5
POIN	**Pond Inlet**	19.52	309		P	03 49 43.4	-1.3
BSEG	**Bad Segeberg**	19.70	126	P	Pn	03 49 50.6	+2.5
BSEG				pmax	pmax		
	comp=Z,29nm,1.7s						
EUNU	**Eureka**	19.84	331		P	03 49 46.2	-2.0
MTSE	**Matsula**	20.30	100	*e*P	P	03 49 53.4	+0.2
FRB	**Frobisher Bay**	20.72	281	P	P	03 49 58.3	+0.6
	comp=Z,14nm,0.8s,baz=46,slow=10,SNR=19						
FRB				LR	LR	03 57 22.8	
	comp=Z,613nm,18.2s,baz=55,slow=35						
	comp=Z,14nm,0.8s						
FRB	**Frobisher Bay**	20.72	281	P	P	03 49 58.5	+0.8
FRB				pmax	pmax		
	comp=Z,23nm,1.3s						
UCC	**Uccle**	20.96	140	*d*P	P	03 49 59.2	-1.2
	comp=Z,10nm,1.4s						
BUG	**Bochum--Univer**	21.08	134	P	P	03 50 02.1	+0.4
BUG				pmax	pmax		
	comp=Z,74nm,1.3s						
BEBN	**Eben Emael**	21.27	137	*d*P	P	03 50 03.6	-0.2
BSTI	**Sart Tilman**	21.44	138	*d*P	P	03 50 05.7	+0.1
	comp=Z,5.3nm,1.2s						
BGES	**Gesves**	21.51	139	*d*P	P	03 50 05.6	-0.8
	comp=Z,10nm,1.0s						
BMRD	**Maredsous**	21.52	139	*d*P	P	03 50 06.0	-0.4
	comp=Z,13nm,1.0s						
MEM	**Membach**	21.53	137	P	P	03 50 06.6	0.0
MEM				pmax	pmax		
	comp=Z,57nm,0.9s						
MEM	**Membach**	21.53	137	*d*P	P	03 50 06.5	0.0
	comp=Z,37nm,1.1s						
VSU	**Vasula**	21.53	97	*ce*P	P	03 50 04.9	-1.6
VSU				pmax	pmax		
	comp=Z,30nm,0.8s						
VSU	**Vasula**	21.53	97	*e*P	P	03 50 05.2	-1.2
BCLA	**Clavier**	21.53	138	*d*P	P	03 50 05.9	-0.7
	comp=Z,12nm,1.1s						
BTNL	**Ternell**	21.58	137	*d*P	P	03 50 07.2	+0.1
	comp=Z,26nm,1.4s						
DOU	**Dourbes**	21.67	140	*d*P	P	03 50 07.1	-0.9
	comp=Z,10nm,1.6s						
PBUR	**Paburge**	21.70	107	*e*P	P	03 50 09.2	+0.8
ROSF	**Rostrenen**	21.81	155	P	P	03 50 08.4	-1.2
ROSF				pmax	pmax		
	comp=Z,49nm,1.5s						
PUL	**Pulkovo**	21.88	91	*ce*P	P	03 50 10.9	+0.7
PUL				pmax	pmax		
	comp=Z,125nm,0.8s						
ILON	**Igloolik, Nuna**	22.07	301		P	03 50 11.9	-0.3
GKP	**Gorka Klasztor**	22.39	117	*e*P	P	03 50 18.1	+2.4
GKP	**Gorka Klasztor**	22.39	117	P	P	03 50 18.7	+2.9
GKP				pmax	pmax		
	comp=Z,48nm,0.9s						
GKP	**Gorka Klasztor**	22.39	117	*e*P	P	03 50 17.0	+1.2
VSVD	**Vaisvydziai**	22.43	105	*e*P	P	03 50 16.9	+0.8
WLF	**Walferdange**	22.44	138		P	03 50 16.3	0.0
WLF	**Walferdange**	22.44	138	P	P	03 50 16.3	0.0
WLF				pmax	pmax		
	comp=Z,46nm,1.2s						
WLF	**Walferdange**	22.44	138	*d*P	P	03 50 16.8	+0.5
	comp=Z,18nm,1.1s						
CLL	**Collm**	22.79	126	IAmb	IAmb	03 50 26.8	
	comp=Z,20nm,1.0s						
CLL	**Collm**	22.79	126	*i* P	P	03 50 19.6	-0.4
CLL				*i*		03 50 22.0	
CLL				*e*S	S	03 54 32.0	+3.4
CLL				pmax	pmax		
	comp=Z,22nm,1.3s						
CLL	**Collm**	22.79	126	P	P	03 50 19.3	-0.7
	comp=Z,380nmcomp=Z,20nm,1.0s						
CLL	**Collm**	22.79	126	*i* P	P	03 50 19.6	-0.4
	comp=Z,22nm,1.3s						
CLL				*i* x	x	03 50 22.0	
	comp=Z,38nm,1.5s						
CLL				*e*Plp		03 50 23.0	
	comp=Z,100nm,20.5s						
CLL				*i* sP	pwP	03 50 25.6	+0.6
CLL				*e*PP	PnPn	03 50 52.0	+8.1
CLL				*e*x	x	03 51 18.0	
CLL				*e*x	x	03 51 36.0	
CLL				*e*x	x	03 52 32.0	
CLL				*e*S	S	03 54 32.0	+3.4
	comp=N,300nm,27.0s						
CLL				*e*S	S	03 54 32.0	+3.4
	comp=E,400nm,25.4s						
CLL				*e*SSS	SSS	03 55 18.0	
CLL				AMS	AMS	04 00 00.0	
	comp=N,300nm,19.1s						
CLL				AMS	AMS	04 00 00.0	
	comp=E,500nm,18.3s						
PABE	**Paberze**	22.82	105		P	03 50 20.8	+0.5
PABE	**Paberze**	22.82	105	*e*P	P	03 50 20.9	+0.6
MOX	**Moxa**	22.98	128	P	P	03 50 22.5	+0.4
MOX				pmax	pmax		
	comp=Z,16nm,1.0s						
CLF	**Chambon-Foret**	23.11	145		P	03 50 22.3	-1.0
RES	**Resolute Bay**	23.16	319	P	P	03 50 23.7	0.0
RES	**Resolute Bay**	23.16	319	LR	LR	03 59 20.4	
	comp=Z,1µm,20.1s,baz=66,slow=36						
RES	**Resolute Bay**	23.16	319	P	P	03 50 23.7	0.0
RES				pmax	pmax		
	comp=Z,18nm,1.1s						
BRG	**Berggiesshubel**	23.45	125	P	P	03 50 27.3	+0.5
BRG				pmax	pmax		
	comp=Z,16nm,1.3s						
BRG	**Berggiesshubel**	23.45	125	*e*P	P	03 50 27.1	+0.4
BRG				Amp		03 50 31.0	
	comp=Z,30nm,1.4s						
BRG	**Berggiesshubel**	23.45	125	S	S	03 54 44.0	+4.2
HSKC	**Hora Svate Kat**	23.54	126	*e*P	P	03 50 27.9	+0.2
HSKC				AMS	AMS	04 02 20.0	
	comp=Z,700nm,15.2s						
GRA1	**Grafenberg Arr**	23.73	130	IAmb	IAmb	03 50 46.6	
	comp=Z,29nm,1.1s						
GRF	**Grafenberg Arr**	23.73	130	P	P	03 50 30.6	+1.0
GRF				pmax	pmax		
	comp=Z,26nm,1.3s						
GRF	**Grafenberg Arr**	23.73	130	*e*P	P	03 50 29.2	-0.4
	comp=Z,111nm,2.1s,baz=335,slow=9.5						
GRFO	**Grafenberg**	23.73	130	P	P	03 50 30.1	+0.6
GRFO				IAmb	IAmb	03 50 46.5	
	comp=Z,31nm,1.1s						
GRFO	**Grafenberg**	23.73	130	P	P	03 50 30.1	+0.6
GRFO				pmax	pmax		
	comp=Z,31nm,1.1s						
SUW	**Suwalki**	23.75	109	*e*P	P	03 50 29.3	-0.3
SUW	**Suwalki**	23.75	109	P	P	03 50 28.0	-1.6
SUW	**Suwalki**	23.75	109	P	P	03 50 29.6	0.0
SUW				pmax	pmax		
	comp=Z,41nm,1.1s						
RICC	**Richard**	23.79	125	AMS	AMS	04 02 20.0	
	comp=Z,700nm,15.2s						
IDID	**Didziasalis**	23.94	103	*e*P	P	03 50 30.5	-0.9
PVCC	**Panska Ves**	23.94	124	*e*S	S	03 54 54.4	+6.8
PVCC				AMS	AMS	04 03 50.0	
	comp=Z,500nm,11.6s						
PVCC	**Panska Ves**	23.94	124	P	P	03 50 30.9	-0.7
LSH	**Leshukonskoye**	23.97	69	*e*P	P	03 50 30.9	-0.8
STU	**Stuttgart**	24.03	134	IAmb	IAmb	03 50 52.7	
	comp=Z,27nm,1.2s						
STU	**Stuttgart**	24.03	134	P	P	03 50 33.3	+0.9
STU				pmax	pmax		
	comp=Z,20nm,1.7s						
ECH	**Echery**	24.03	138	IAmb	IAmb	03 50 37.9	
	comp=Z,20nm,1.2s						
ECH	**Echery**	24.03	138	P	P	03 50 32.7	+0.3
ECH				pmax	pmax		
	comp=Z,17nm,1.7s						
KSP	**Ksiaz**	24.19	122	*e*P	P	03 50 34.1	+0.2
KSP	**Ksiaz**	24.19	122	P	P	03 50 34.6	+0.8
KSP	**Ksiaz**	24.19	122	P	P	03 50 34.1	+0.2
	comp=Z,27nm,1.6s						
BFO	**Black Forest**	24.21	136	P	P	03 50 34.2	0.0
BFO	**Black Forest**	24.21	136	P	P	03 50 34.2	0.0
BFO				pmax	pmax		
	comp=Z,13nm,1.1s						
NACGM	**Naroch**	24.28	103	*e*P	P	03 50 34.8	+0.2
PRA	**Prague**	24.31	125	AMS	AMS	04 03 00.0	
	comp=Z,600nm,15.0s						
CHVC	**Chvalec**	24.34	122	*e*P	P	03 50 35.7	+0.4
CHVC				AMS	AMS	04 04 30.0	
	comp=Z,400nm,13.6s						
CHVC	**Chvalec**	24.34	122	*e*P	P	03 50 35.7	+0.4
CHVC				MLR	MLR		
	comp=Z,400nm,13.6s						
UPC	**Upice**	24.40	122	*e*P	P	03 50 36.3	+0.5
UPC				AMS	AMS	04 03 10.0	
	comp=Z,400nm,12.8s						
UPC	**Upice**	24.40	122	*e*P	P	03 50 36.3	+0.5
UPC				MLR	MLR		
	comp=Z,400nm,12.8s						
PRU	**Pruhonice**	24.41	125	*e*P	P	03 50 36.1	+0.2
PRU				*e*S	S	03 55 00.0	+4.8
PRU				AMS	AMS	04 02 50.0	
	comp=Z,700nm,15.6s						
PRU	**Pruhonice**	24.41	125	*e*P	P	03 50 36.1	+0.2
PRU				*e*S	S	03 55 00.0	+4.8
PRU				MLR	MLR		
	comp=Z,700nm,15.6s						
OSTC	**Ostas**	24.41	122	*e*P	P	03 50 36.4	+0.4
OSTC				*e*S	S	03 55 04.6	+9.3
OSTC				AMS	AMS	04 04 30.0	
	comp=Z,400nm,13.6s						
OSTC	**Ostas**	24.41	122	*e*P	P	03 50 36.4	+0.4
OSTC				MLR	MLR		
	comp=Z,400nm,13.6s						
KLMR	**Klimovskoe**	24.43	81	*e*P	P	03 50 34.2	-1.8
KLMR	**Klimovskoe**	24.43	81	*e*P	P	03 50 29.2	-6.8
KLMR				S	S	03 54 47.2	-8.1
KLMR				pmax	pmax		
	comp=Z,91nm,1.5s						
KLMR				MLR	MLR		
	comp=Z,537nm,14.0s						
KUQ	**Kuujjuuaa**	24.48	269		P	03 50 38.0	+1.6
KUQ				IAmb	IAmb	03 50 43.3	
	comp=Z,24nm,1.1s						
GOPC	**GO Pecny, Ondr**	24.55	125	*e*P	P	03 50 37.9	+0.7
GOPC				*e*S	S	03 55 07.0	+10
GOPC				AMS	AMS	04 02 50.0	
	comp=Z,500nm,15.0s						
GOPC	**GO Pecny, Ondr**	24.55	125	*e*P	P	03 50 37.9	+0.7
GOPC				MLR	MLR		
	comp=Z,500nm,15.0s						
DPC	**Dobruska-Polom**	24.63	122	*e*P	P	03 50 39.1	+1.2
DPC				*e*S	S	03 55 08.8	+10
DPC				AMS	AMS	04 04 30.0	
	comp=Z,400nm,13.4s						
DPC	**Dobruska-Polom**	24.63	122	*e*P	P	03 50 39.1	+1.2
DPC				MLR	MLR		
	comp=Z,400nm,13.4s						
DPC	**Dobruska-Polom**	24.63	122	P	P	03 50 38.6	+0.7
	comp=Z,12nm,1.6s						
SLE	**Schleitheim**	24.78	136	P	P	03 50 41.1	+1.8
SLE				pmax	pmax		
	comp=Z,15nm,0.8s						
ZVC	**Zvikov**	24.80	126	*e*P	P	03 50 40.0	+0.6
KHC	**Kasperske Hory**	24.90	127	*e*P	P	03 50 41.3	+0.9
KHC				*e*S	S	03 55 07.3	+4.2
KHC				AMS	AMS	04 03 00.0	
	comp=Z,900nm,13.1s						
KHC	**Kasperske Hory**	24.90	127	*ce*P	P	03 50 41.1	+0.7
KHC				pmax	pmax		
	comp=Z,22nm,1.2s						
KHC	**Kasperske Hory**	24.90	127	P	P	03 50 40.5	+0.1
	comp=Z,15nm,1.3s						
MNK	**Minsk**	24.98	103	*i* P	P	03 50 41.1	+0.1
	comp=E,17nm,0.9s						
MNK				*i* P	P	03 50 41.1	+0.1
	comp=N,5.0nm,0.8s						
MNK				*i* P	P	03 50 41.1	+0.1
	comp=Z,14nm,0.8s,baz=324						
MNK				*i* PP	PnPn	03 51 14.1	+0.3
MNK				*i* PPP	PPP	03 51 22.2	
MNK				*i* S	S	03 55 08.2	+3.9
MNK				*i* SS	SnSn	03 55 44.1	-8.2
MNK				*i* LQ	LQ	03 57 20.6	
MNK				*i* LR	LR	03 58 58.4	
MNK				*i* LRM	MLR	03 59 54.4	
	comp=N,370nm,15.7s						
MNK				*i* LRM	MLR	03 59 55.7	
	comp=Z,112nm,12.9s						
MNK	**Minsk**	24.98	103	*i* P	P	03 50 41.1	+0.1
MNK				*i* PPP	PPP	03 51 22.1	
MNK				*i* S	S	03 55 08.2	+3.9
MNK				pmax	pmax		
	comp=Z,14nm,0.8s						
MNK				pmax	pmax		
	comp=N,5.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,17nm,0.9s						
MNK				MLR	MLR		
	comp=E,284nm,16.0s						
MNK				MLR	MLR		
	comp=N,370nm,16.0s						
MNK				MLR	MLR		
	comp=Z,112nm,13.0s						
KRLC	**Kraliky**	25.01	122	*e*P	P	03 50 41.6	+0.2
KRLC				AMS	AMS	04 04 40.0	
	comp=Z,500nm,12.1s						
KRLC	**Kraliky**	25.01	122	*e*P	P	03 50 41.6	+0.2
KRLC				MLR	MLR		
	comp=Z,500nm,12.1s						
GERES	**GERESS Array B**	25.19	127	P	P	03 50 43.9	+0.8
	comp=Z,7.8nm,0.8s,baz=322,slow=8.5,SNR=26						
GERES				LR	LR	03 59 43.8	
	comp=Z,274nm,21.6s,baz=322,slow=34						
	comp=Z,7.8nm,0.8s						
TREC	**Trest**	25.31	124	*e*P	P	03 50 44.1	0.0
TREC	**Trest**	25.31	124	*e*P	P	03 50 44.1	0.0
CKRC	**Cesky Krumlov**	25.39	127	*e*P	P	03 50 45.3	+0.5
CKRC				*e*S	S	03 55 15.4	+4.5
CKRC				AMS	AMS	04 03 20.0	
	comp=Z,700nm,13.8s						
CKRC	**Cesky Krumlov**	25.39	127	*e*P	P	03 50 45.3	+0.5
CKRC				*e*S	S	03 55 15.4	+4.5
CKRC				MLR	MLR		
	comp=Z,700nm,13.8s						
STEB	**Steborice**	25.44	121	*e*P	P	03 50 45.2	0.0
MORC	**Moravsky Berou**	25.51	121	*e*P	P	03 50 46.0	+0.1
MORC	**Moravsky Berou**	25.51	121	⇑P	P	03 50 47.0	+1.1
MORC	**Moravsky Berou**	25.51	121	P	P	03 50 46.9	+1.1
DAVA	**Damuels**	25.58	134	*e*P	P	03 50 47.6	+1.0
	comp=Z,27nm,1.4s,SNR=8.7						
RETA	**Reutte**	25.62	133	*e*P	P	03 50 47.9	+1.0
	comp=Z,18nm,1.3s						
VRAC	**Vranov**	25.63	123	P	P	03 50 47.5	+0.6
	comp=Z,6.0nm,0.8s,baz=331,slow=10,SNR=10						
VRAC				LR	LR	04 00 17.9	
	comp=Z,424nm,21.5s,baz=326,slow=35						
	comp=Z,6.0nm,0.8s						
VRAC	**Vranov**	25.63	123	*e*P	P	03 50 47.2	+0.2
VRAC	**Vranov**	25.63	123	⇓P	P	03 50 47.9	+0.9
VRAC	**Vranov**	25.63	123	P	P	03 50 47.8	+0.9
OKC	**Ostrava-Krasne**	25.64	120	*e*S	S	03 55 19.1	+4.3
OKC				AMS	AMS	04 04 40.0	
	comp=Z,500nm,12.5s						
KRUC	**Moravsky**	25.79	123	*e*P	P	03 50 48.4	0.0
SENIN	**Lac Senin/Sane**	25.80	139	IAmb	IAmb	03 51 23.5	
	comp=Z,13nm,1.1s						
OJC	**Ojcow**	25.83	118	*e*P	P	03 50 49.5	+0.7
OJC	**Ojcow**	25.83	118	P	P	03 50 49.2	+0.5
OJC	**Ojcow**	25.83	118	P	P	03 50 49.2	+0.5
OJC	**Ojcow**	25.83	118	P	P	03 50 49.6	+0.9
	comp=Z,7.1nm,1.2s						
MOTA	**Moosalm**	25.84	133	*e*P	P	03 50 49.8	+0.7
	comp=Z,22nm,1.6s,SNR=7.5						
MAUC	**Maruska**	25.96	121	*e*P	P	03 50 51.4	+1.4
WATA	**Walderalm**	25.98	132	*i* P	P	03 50 51.3	+1.0
	comp=Z,15nm,1.0s,SNR=9.5						
SQTA	**Sankt Quirin**	25.99	132	*e*pP	P	03 50 53.4	+3.1
	comp=Z,19nm,0.9s,SNR=13						
FETA	**Feichten**	26.04	133	*e*P	P	03 50 53.4	+2.5
	comp=Z,11nm,1.4s						
DAVOX	**Davos/Dischmat**	26.05	135	P	P	03 50 51.8	+0.8
	comp=Z,6.2nm,0.8s,baz=314,slow=10,SNR=16						
DAVOX				LR	LR	04 00 41.4	
	comp=Z,545nm,21.7s,baz=327,slow=36						
	comp=Z,6.2nm,0.8s						
WTTA	**Wattenberg**	26.06	132	P	P	03 50 54.1	+3.0
WTTA	**Wattenberg**	26.06	132	*e*P	P	03 50 51.7	+0.7
	comp=Z,32nm,1.3s,SNR=9.8						
LESA	**Schwarzleotal**	26.20	130	*e*P	P	03 50 52.4	+0.3
	comp=Z,6.7nm,0.9s						
TUE	**Stuetta**	26.20	136	P	P	03 50 52.5	+0.2
	comp=Z,106nm,1.4s						
SSB	**Saint Sauveur**	26.20	144	P	P	03 50 51.8	-0.4
BIOA	**Bad Ischl, Aus**	26.22	129	*e*P	P	03 50 53.6	+1.3
	comp=Z,9.7nm,1.1s,SNR=7.6						
MOA	**Molln**	26.25	128	*e*pP	P	03 50 54.8	+2.1
	comp=Z,19nm,1.5s						
FUORN	**Ofenpass-Fuorn**	26.29	134	IAmb	IAmb	03 51 39.5	
	comp=Z,18nm,1.3s						
JAVC	**Velka Javorina**	26.36	122	*e*P	P	03 50 54.3	+0.7
SCHQ	**Schefferville**	26.41	263	P	P	03 50 54.6	+0.6
	comp=Z,2.5nm,0.7s,baz=51,slow=8.4,SNR=4.2						
SCHQ				LR	LR	04 00 34.9	
	comp=Z,372nm,18.6s,baz=44,slow=35						
	comp=Z,2.5nm,0.7s						
SMOL	**Smolenice**	26.59	123	*e*P	P	03 50 58.3	+2.7
CONA	**Conrad Observa**	26.65	125	*e*P	P	03 50 57.0	+0.8
	comp=Z,15nm,1.0s,SNR=5.5						
LANS	**Liptovska Anna**	26.66	119	*e*P	P	03 50 57.8	+1.5
LANS				pmax	pmax		
	comp=Z,3.0nm,1.1s						
LANS	**Liptovska Anna**	26.66	119	*e*P	P	03 50 57.8	+1.5
MODS	**Modra-Piesok**	26.67	123	*e*P	P	03 50 57.9	+1.5
MODS				pmax	pmax		
	comp=Z,29nm,1.5s						
MODS	**Modra-Piesok**	26.67	123	*e*P	P	03 50 57.9	+1.5
NIE	**Niedzica**	26.69	118	*e*P	P	03 50 58.3	+1.8
NIE	**Niedzica**	26.69	118	P	P	03 50 59.4	+2.9
NIE	**Niedzica**	26.69	118	P	P	03 50 57.6	+1.1
	comp=Z,5.5nm,1.1s						
KBA	**Koelnbreinsper**	26.70	130	*e*pP	P	03 50 58.1	+1.3
	comp=Z,14nm,2.1s						
ABTA	**Abfaltersbach**	26.77	131	*e*pP	P	03 50 58.7	+1.3
	comp=Z,13nm,1.2s						

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RNPP9 Sopachiv          26.83 109   P       P       03 50 58.1 +0.4
RNPP8 Varash            26.88 109   P       P       03 50 59.1 +0.9
BNI   Bardonecchia      26.89 141   P       P       03 51 03.1 +4.6
BNI                                 pmax    pmax
      comp=Z,50nm,1.4s
RNPP5 Staryi Chortor    26.98 109   P       P       03 50 58.9 -0.2
RONA  Rosalia, Austr    26.98 125  eP       P       03 50 59.8 +0.6
      comp=Z,17nm,1.1s,SNR=5.3
STHS  Stebnicka Huta    26.99 117  eP       P       03 51 00.9 +1.7
STHS  Stebnicka Huta    26.99 117  eP       P       03 51 00.9 +1.7
VYHS  Vyhne             27.04 121  eP       P       03 51 01.5 +1.8
VYHS                                pmax    pmax
      comp=Z,22nm,1.4s
VYHS  Vyhne             27.04 121  eP       P       03 51 01.5 +1.8
CIMO  Cimolais          27.16 132   IAmb    IAmb    03 51 14.6
      comp=Z,14nm,1.1s
ARSA  Arzberg           27.16 126  epP      P       03 51 03.7 +2.9
      comp=Z,4.8nm,1.3s
MYKA  Terra Mystica     27.19 130  epP      P       03 51 03.7 +2.6
      comp=Z,0.1nm,0.2s
STAL  STALIGIAL         27.27 131   IAmb    IAmb    03 51 12.7
      comp=Z,24nm,1.3s
KWP   Kalwaria Pacla    27.28 115   P       P       03 51 01.7 -0.1
      comp=Z,16nm,1.5s
PRED  Cave del Predi    27.34 130   IAmb    IAmb    03 51 15.7
      comp=Z,16nm,1.3s
PGAV  Gavieira, Arco    27.48 166  eS       S       03 55 51.0 +6.8
PGAV                               i AMs_20         04 02 04.4
      comp=Z,477nm,18.0s
SRO   Srobarova         27.48 122  eP       P       03 51 06.5 +2.9
SRO                                 pmax    pmax
      comp=Z,4.0nm,0.8s
SRO   Srobarova         27.48 122  eP       P       03 51 06.5 +2.9
MOS   Moscow            27.50  91  eP       P       03 51 02.2 -1.5
MOS                                e                03 51 49.2
MOS                                ePPP     PPP     03 51 58.3
MOS                                eS       S       03 55 43.6 -0.4
MOS                                eSSS     SSS     03 57 21.4
MOS                                 pmax    pmax
      comp=Z,22nm,0.7s
MOS                                 MLR     MLR
      comp=Z,300nm,15.0s
SOKA  Soboth            27.54 128  eP       P       03 51 08.8 +4.5
      comp=Z,12nm,1.6s
OBKA  Obir              27.55 128  epP      P       03 51 07.7 +3.2
      comp=Z,2.5nm,0.8s
OBN   Obninsk           27.60  93   P       P       03 51 04.2 -0.4
      comp=Z,13nm,0.5s,baz=105,slow=22,SNR=4.2
      comp=Z,13nm,0.5s
OBN   Obninsk           27.60  93⇑eP       P       03 51 04.8 +0.2
OBN                                e                03 51 50.0
OBN                                eS       S       03 55 50.7 +5.1
OBN                                 pmax    pmax
      comp=Z,20nm,1.2s
OBN                                 MLR     MLR
      comp=Z,240nm,17.0s
OBN   Obninsk           27.60  93   P       P       03 51 04.3 -0.4
      comp=Z,16nm,0.7s
KOLS  Kolonicke sedl    27.75 116  eP       P       03 51 07.7 +1.7
KOLS  Kolonicke sedl    27.75 116  eP       P       03 51 07.7 +1.7
PBRG  Braganca          27.79 163  eP       P       03 51 10.4 +3.9
MPLH  Magyarpolny       27.83 124   P       P       03 51 06.1 -0.6
      comp=Z,28nm,1.5s
TEOL  Teolo             27.83 133   IAmb    IAmb    03 51 12.1
      comp=Z,9.0nm,0.7s
MI28  Mi28,Pidlybu      27.84 107   P       P       03 51 06.9 +0.1
PSZ   Piszkesteto       27.88 120   IAmb    IAmb    03 51 13.3
      comp=Z,17nm,1.2s
PSZ   Piszkesteto       27.88 120 ⇑P       P       03 51 08.9 +1.6
PSZ   Piszkesteto       27.88 120   P       P       03 51 08.9 +1.6
PSZ   Piszkesteto       27.88 120  eP       P       03 51 09.4 +2.2
POLO  Lamas de Olo      28.11 165  eP       P       03 51 10.5 +1.1
HOLU  Holmets           28.14 116   P       P       03 51 10.6 +1.2
PTO   Porto             28.27 166  eP       P       03 51 12.2 +1.4
MUKU  Mukachevo         28.30 116   P       P       03 51 11.9 +1.0
MVO   Moncorvo          28.39 164  eP       P       03 51 12.9 +1.0
MVO                                eS       S       03 56 01.4 +3.0
MVO                                i AMs_20         04 01 06.5
      comp=Z,326nm,20.0s
AK21  Malin Array Si    28.45 106   P       P       03 51 11.1 -1.1
AK20  Malin Array Si    28.46 106   P       P       03 51 11.6 -0.7
AK22  Malin Array Si    28.47 106   P       P       03 51 11.6 -0.8
AK22                                pP      pP      03 51 15.5 +0.3
BERU  Beregovo          28.48 116   P       P       03 51 13.8 +1.3
AK19  Malin Array Si    28.48 106   P       P       03 51 11.3 -1.2
AK19                                pP      pP      03 51 15.2 -0.1
AK18  Malin Array Si    28.50 106   P       P       03 51 11.9 -0.8
AK18                                pP      pP      03 51 15.7 +0.2
BRIU  Brid              28.51 116   P       P       03 51 13.0 +0.2
AK17  Malin Array Si    28.53 106   P       P       03 51 12.4 -0.5
AK04  Malin Array Si    28.53 106   P       P       03 51 11.8 -1.2
AK15  Malin Array Si    28.54 106   P       P       03 51 12.1 -0.9
AK03  Malin Array Si    28.55 106   P       P       03 51 12.1 -1.0
AK16  Malin Array Si    28.56 106   P       P       03 51 12.1 -1.1
AK11  Malin Array Si    28.57 106   P       P       03 51 12.3 -1.0
AKASG Malin Array Be    28.57 106   P       P       03 51 12.7 -0.6
      comp=Z,5.9nm,0.8s,baz=330,slow=9.4,SNR=13
AKASG                               PcP     PcP     03 54 25.9 +1.9
      comp=Z,0.2nm,0.4s,baz=320,slow=2.1,SNR=6.1
AKASG                               LR      LR      04 02 03.4
      comp=Z,277nm,18.9s,baz=326,slow=35
      comp=Z,5.9nm,0.8s
AKASG Malin Array Be    28.57 106 i P       P       03 51 12.6 -0.7
AKASG                               pmax    pmax
      comp=Z,6.0nm,0.8s
AKBB  Malin Array Si    28.57 106   IAmb    IAmb    03 51 17.6
      comp=Z,9.2nm,0.9s
AKBB  Malin Array Si    28.57 106ceP       P       03 51 14.0 +0.7
AKBB                                pmax    pmax
      comp=Z,12nm,1.0s
AKBB  Malin Array Si    28.57 106   P       P       03 51 12.6 -0.7
KIEV  Kiev              28.57 106   P       P       03 51 12.6 -0.7
KIEV  Kiev              28.57 106 ⇓P       P       03 51 14.3 +0.9
KIEV  Kiev              28.57 106   P       P       03 51 14.2 +0.9
KIEV  Kiev              28.57 106   P       P       03 51 12.0 -1.3
      comp=Z,36nm,1.6s
AK13  Malin Array Si    28.59 106   P       P       03 51 12.1 -1.4
AK14  Malin Array Si    28.59 106   P       P       03 51 12.7 -0.8
AK12  Malin Array Si    28.60 106   P       P       03 51 12.4 -1.1
AK02  Malin Array Si    28.60 106   P       P       03 51 12.8 -0.8
AK05  Malin Array Si    28.63 106   P       P       03 51 13.1 -0.8
AK08  Malin Array Si    28.64 106   P       P       03 51 13.0 -0.9
AK06  Malin Array Si    28.66 106   P       P       03 51 13.3 -0.8
AK09  Malin Array Si    28.66 106   P       P       03 51 12.8 -1.3
AK10  Malin Array Si    28.67 106   P       P       03 51 13.6 -0.6
AK07  Malin Array Si    28.69 106   P       P       03 51 13.9 -0.5
LUBAR Lubar, Ukraine    28.73 108   P       P       03 51 14.3 -0.4
MORH  Mrgy, Hungar      29.02 123 ⇑P       P       03 51 17.4 +0.1
MORH  Mrgy, Hungar      29.02 123   P       P       03 51 17.1 -0.2
      comp=Z,3.7nm,1.5s
MTE   Manteigas         29.10 165  eP       P       03 51 20.0 +1.8
MTE                                eS       S       03 56 18.9 +9.3
MTE                                i AMs_20         04 01 40.1
      comp=Z,483nm,20.0s
KSV   Kosov             29.20 113   P       P       03 51 18.6 -0.3
OSSC  Osservatorio P    29.43 135   P       P       03 51 20.5 -0.6
OSSC                                IAmb    IAmb    03 51 39.6
      comp=Z,12nm,1.2s
KMPD  K-Podol'skiy      29.45 111   P       P       03 51 20.0 -1.1
KIRV  Kirov             29.56  77   LR      LR      04 02 04.5
      comp=Z,444nm,20.3s,baz=320,slow=34
KIRV  Kirov             29.56  77 i P       P       03 51 22.1 +0.1
BLKN  Baker Lake        29.57 300           P       03 51 22.7 +0.7
BLKN                                IAmb    IAmb    03 51 23.7
      comp=Z,10nm,0.8s
DRGR                    29.77 118   P       P       03 51 27.0 +2.9
DRGR                                pmax    pmax
      comp=Z,9.0nm,1.4s
PSARD Sardoal           29.84 166  eP       P       03 51 25.6 +1.0
PMRV  Marv??o           30.08 165  eP       P       03 51 27.8 +1.0
PMRV                               i Amb            03 51 36.9
      comp=Z,28nm,1.6s
PMRV                               eS       ScP     03 58 04.9 -4.9
PMRV                               i AMs_20         04 02 06.5
      comp=Z,550nm,22.0s
ESDC  Sonseca Array     30.21 160   P       P       03 51 28.4 +0.3
ESDC  Sonseca Array     30.21 160   P       P       03 51 28.0 -0.1
      comp=Z,2.3nm,1.0s,baz=351,slow=8.6,SNR=16
ESDC                                PcP     PcP     03 54 29.7 +1.2
      comp=Z,1.6nm,1.1s,baz=338,slow=2.1,SNR=5.4
ESDC                                LR      LR      04 03 32.5
      comp=Z,658nm,18.1s,baz=342,slow=36
      comp=Z,2.3nm,1.0s
PMTG  Montargil         30.36 166  eP       P       03 51 30.4 +1.1
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LPSR  Galich'ya Gora    30.45  94  eP       P       03 51 26.9 -3.0
LPSR                                pmax    pmax
      comp=Z,10.0nm,1.0s
BZS   Buzias            30.47 120 ⇑P       P       03 51 31.4 +1.2
BZS   Buzias            30.47 120   P       P       03 51 31.3 +1.2
SURR  Surduc            30.50 119 ⇓P       P       03 51 31.1 +0.6
PARRA Arraiolos         30.55 168  eP       P       03 51 31.9 +1.0
PARRA                              i Amb            03 51 40.7
      comp=Z,23nm,1.5s
NRCA  Norcia            30.56 133   IAmb    IAmb    03 51 46.7
      comp=Z,14nm,1.2s
PESTR Estremoz          30.62 165  eP       P       03 51 31.8 +0.2
CAMP  Campotosto        30.91 133   IAmb    IAmb    03 51 45.4
      comp=Z,13nm,1.0s
AQU   L'Aquila          31.08 133   P       P       03 51 35.1 -0.6
      comp=Z,11nm,0.9s
TESR  Tescani           31.30 113   P       P       03 51 36.2 -1.3
      comp=Z,12nm,1.8s
A36M  Sachs Harbour     31.63 326   IAmb    IAmb    03 51 47.6
      comp=Z,8.4nm,0.9s
A36M  Sachs Harbour     31.63 326   P       P       03 51 40.3 +0.2
      baz=41
ARR   Arges             31.65 117 ⇑P       P       03 51 42.3 +1.7
VSR   Storozhevoye      31.67  95  eP       P       03 51 38.4 -2.3
VSR                                 pmax    pmax
      comp=Z,10.0nm,1.2s
VOIR                    31.72 116   P       P       03 51 42.6 +1.3
      comp=Z,6.5nm,1.2s
PCVE  Castro Verde      31.80 166  eP       P       03 51 42.5 +0.6
VRI   Vrincioaia        31.89 114   P       P       03 51 45.3 +2.6
VORD  Divnogorie        31.92  95  eP       P       03 51 39.8 -3.1
VORD                                pmax    pmax
      comp=Z,8.0nm,1.1s
MLR   Muntele Rosu      31.96 115   P       P       03 51 45.1 +1.6
      comp=Z,1.6nm,0.7s,baz=1.6,slow=11,SNR=3.3
MLR                                 LR      LR      04 05 52.8
      comp=Z,486nm,18.4s,baz=328,slow=39
      comp=Z,1.6nm,0.7s
MLR   Muntele Rosu      31.96 115   P       P       03 51 44.6 +1.1
      comp=Z,6.4nm,1.6s
PVAQ  Vaqueiros         32.06 166 i AMs_20          04 03 16.1
      comp=Z,508nm,22.0s
VRH   Novokhopyorsk     32.60  92  eP       P       03 51 47.3 -1.5
VRH                                 pmax    pmax
      comp=Z,10.0nm,0.9s
PDG   Podgorica         32.64 126 ⇓P       P       03 51 49.2 -0.1
C36M  Paulatuk          33.42 322   P       P       03 51 55.7 -0.1
      baz=39
BELG  Belogornoye       33.75  86   LR      LR      04 04 42.7
      comp=Z,366nm,19.5s,baz=320,slow=34
ARTI  Arti              34.37  73           P       03 52 04.6 +0.4
ARTI  Arti              34.37  73   P       P       03 52 04.8 +0.6
      comp=Z,12nm,0.7s,baz=304,slow=5.0,SNR=24
      comp=Z,12nm,0.7s
ARTI  Arti              34.37  73d iP       P       03 52 04.7 +0.6
ARTI                                                03 53 15.1
ARTI                                                03 54 36.6
ARTI                                S       S       03 57 34.7 +3.4
ARTI                                SS      SnSn    03 59 44.4 +3.8
ARTI                                pmax    pmax
      comp=Z,15nm,0.8s
ARTI                                MLR     MLR
      comp=Z,650nm,16.0s
G65A  Princeton         34.72 253           P       03 52 11.5 +4.1
G65A                                IAmb    IAmb    03 52 13.8
      comp=Z,14nm,1.0s
SVE   Sverdlovsk        34.79  70  eP       P       03 52 08.4 +0.6
SVE                                 pmax    pmax
      comp=Z,16nm,1.3s
TIP   Timpagrande       34.95 131   P       P       03 52 09.8 +0.3
      comp=Z,6.2nm,1.2s
VAE   Valguarnera       35.93 135   LR      LR      04 07 11.0
      comp=Z,276nm,20.1s,baz=334,slow=37
PMOZ  Porto Moniz, M    36.21 180 i AMs_20          04 04 13.6
      comp=Z,275nm,20.0s
INK   Inuvik            36.28 326   IAmb    IAmb    03 52 22.4
      comp=Z,17nm,1.5s
INK   Inuvik            36.28 326   LR      LR      04 08 18.5
      comp=Z,404nm,18.3s,baz=41,slow=38
INK   Inuvik            36.28 326   P       P       03 52 19.7 -0.8
      baz=33,SNR=5.7
TRQ   Mont Tremblant    36.30 261           P       03 52 22.4 +1.4
KEST  Kesra             36.39 142   P       P       03 52 22.2 +0.3
      comp=Z,5.1nm,1.2s,baz=314,slow=9.2,SNR=4.6
KEST                                LR      LR      04 07 24.5
      comp=Z,360nm,18.6s,baz=348,slow=36
      comp=Z,5.1nm,1.2s
YKAW3 Yellowknife Wh    36.42 309   IAmb    IAmb    03 52 28.2
      comp=Z,20nm,1.1s
D28M  Stokes Point      36.42 329   P       P       03 52 21.2 -0.4
      baz=31
YKAW1 Yellowknife Wh    36.44 309   IAmb    IAmb    03 52 28.5
      comp=Z,17nm,1.2s
YKA   Yellowknife Ar    36.47 309   P       P       03 52 23.3 +1.2
YKA   Yellowknife Ar    36.47 309   P       P       03 52 22.9 +0.7
      comp=Z,5.4nm,0.8s,baz=36,slow=8.0,SNR=28
YKA                                 PcP     PcP     03 54 46.1 +0.5
      comp=Z,2.1nm,1.0s,baz=29,slow=2.9,SNR=5.3
YKA                                 LR      LR      04 06 57.2
      comp=Z,475nm,19.9s,baz=40,slow=36
      comp=Z,5.4nm,0.8s
YKA   Yellowknife Ar    36.47 309 i P       P       03 52 22.8 +0.6
YKA                                 pmax    pmax
      comp=Z,5.0nm,0.8s
ERBR  Yeremizino-Bor    36.78  99  eP       P       03 52 25.9 +0.9
ERBR                                pmax    pmax
      comp=Z,24nm,1.2s
D27M  Malcolm River     36.89 330   P       P       03 52 25.5 -0.3
      baz=30
MDT   Midelt            36.91 162   LR      LR      04 06 36.0
      comp=Z,256nm,21.8s,baz=10,slow=35
C26K  Camden Bay        36.98 333   P       P       03 52 26.4  0.0
      baz=28
C27K  Jago River        37.03 332   P       P       03 52 26.8 -0.1
      baz=29
F31M  Tsiigehtchic      37.05 325   IAmb    IAmb    03 52 29.0
      comp=Z,11nm,1.0s
F31M  Tsiigehtchic      37.05 325   P       P       03 52 26.9 -0.2
      baz=32,SNR=7.7
E29M  Blow River        37.07 328   IAmb    IAmb    03 52 29.7
      comp=Z,16nm,1.2s
E29M  Blow River        37.07 328   P       P       03 52 25.9 -1.3
      baz=31,SNR=6.8
E28M  Babbage River     37.19 329           P       03 52 29.4 +1.2
E28M                                IAmb    IAmb    03 52 30.8
      comp=Z,17nm,0.9s
E28M  Babbage River     37.19 329   P       P       03 52 26.2 -2.1
      baz=30,SNR=9.1
F30M  Barrier River     37.33 326   IAmb    IAmb    03 52 30.9
      comp=Z,12nm,0.8s
F30M  Barrier River     37.33 326   P       P       03 52 27.7 -1.8
      baz=32,SNR=7.8
A21K  Barrow            37.39 340   P       P       03 52 28.9 -1.0
      baz=23
A22K  Sinclair Lake     37.47 339   P       P       03 52 30.8 +0.2
      baz=24
G31M  Satah River       37.61 325   IAmb    IAmb    03 52 33.4
      comp=Z,16nm,0.9s
G31M  Satah River       37.61 325   P       P       03 52 30.0 -1.7
      baz=32,SNR=12
SAHE  Sakarya_HENDEK    37.72 113 ⇓P       P       03 52 35.1 +2.0
D25K  Kavik River       37.74 333   IAmb    IAmb    03 52 35.3
      comp=Z,13nm,0.8s
D25K  Kavik River       37.74 333   P       P       03 52 32.0 -1.0
      baz=27,SNR=7.2
C24K  Franklin Bluff    37.75 335   P       P       03 52 31.7 -1.3
      baz=26
LABN  Labinsk           37.79 100  eP       P       03 52 34.8 +1.2
LABN                                pmax    pmax
      comp=Z,18nm,0.7s
LABN                                MLR     MLR
      comp=E,232nm,11.0s
LABN                                MLR     MLR
      comp=Z,366nm,14.0s
LABN                                MLR     MLR
      comp=N,853nm,13.0s
B22K  Teshekpuk Lake    37.87 338   P       P       03 52 32.4 -1.6
      baz=24
E27K  Coleen River      37.93 330   P       P       03 52 32.8 -1.8
      baz=29,SNR=9.5
C23K  Itkillik River    37.94 336           P       03 52 37.2 +2.6
C23K  Itkillik River    37.94 336   P       P       03 52 32.7 -1.8
      baz=25,SNR=8.3
G30M  tAoh Zraii Nji    37.95 326   IAmb    IAmb    03 52 37.3
      comp=Z,8.8nm,0.8s
G30M  tAoh Zraii Nji    37.95 326   P       P       03 52 32.2 -2.6
      baz=31,SNR=11
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F28M  Old Crow          38.12 329   P       P       03 52 32.7 -3.4
      baz=30,SNR=6.5
WRGLY Wrigley           38.23 315   IAmb    IAmb    03 52 44.0
      comp=Z,18nm,1.3s
WRGLY Wrigley           38.23 315   P       P       03 52 34.9 -2.2
      baz=34
GOF   Gofitskoye        38.26  97ceP       P       03 52 38.4 +0.9
ITM   Ithomi            38.27 126   IAmb    IAmb    03 52 42.6
      comp=Z,15nm,0.9s
D24K  Happy Valley      38.28 334   IAmb    IAmb    03 52 40.5
      comp=Z,17nm,0.9s
D24K  Happy Valley      38.28 334   P       P       03 52 35.6 -1.9
      baz=26,SNR=8.1
SOC   Sochi             38.35 101  eP       P       03 52 36.1 -2.2
SOC                                e                03 54 05.9
SOC                                eS       S       03 58 32.2 -0.2
SOC                                eSS      SnSn    04 01 13.9 -3.4
SOC                                eSSS     SSS     04 01 48.3
SOC                                 MLR     MLR
      comp=Z,398nm,18.0s
G29M  Pine Creek        38.37 327   IAmb    IAmb    03 52 43.4
      comp=Z,12nm,0.8s
G29M  Pine Creek        38.37 327   P       P       03 52 36.7 -1.6
      baz=30,SNR=12
H31M  Peel River        38.58 324   P       P       03 52 37.7 -2.4
      baz=31,SNR=8.3
EPYK  Eagle Plains      38.58 326   IAmb    IAmb    03 52 45.2
      comp=Z,9.4nm,0.8s
EPYK  Eagle Plains      38.58 326   P       P       03 52 37.9 -2.2
      baz=30,SNR=9.2
B20K  Meade River       38.68 339   P       P       03 52 38.4 -2.3
      baz=22
B21K  Ikpikpuk River    38.70 338   IAmb    IAmb    03 52 44.5
      comp=Z,18nm,1.2s
B21K  Ikpikpuk River    38.70 338   P       P       03 52 38.4 -2.5
      baz=23,SNR=5.5
D23K  Nanushuk River    38.74 335   IAmb    IAmb    03 52 44.7
      comp=Z,20nm,1.0s
D23K  Nanushuk River    38.74 335   P       P       03 52 38.7 -2.6
      baz=25,SNR=11
F26K  Sheenjek River    38.82 331   P       P       03 52 39.9 -2.2
      baz=27,SNR=8.9
TOLK  Toolik Lake Re    38.87 334   IAmb    IAmb    03 52 45.0
      comp=Z,14nm,1.0s
TOLK  Toolik Lake Re    38.87 334   P       P       03 52 40.9 -1.6
      baz=25,SNR=10
FFC   Flin Flon         38.89 293           P       03 52 44.0 +1.3
FFC                                 IAmb    IAmb    03 52 49.6
      comp=Z,27nm,1.4s
FFC   Flin Flon         38.89 293   P       P       03 52 44.0 +1.3
FFC                                 pmax    pmax
      comp=Z,27nm,1.4s
A19K  Wainwright        38.97 341   P       P       03 52 40.9 -2.3
      baz=20
H29M  Whitestone        39.05 327   P       P       03 52 42.7 -1.3
      baz=29,SNR=7.7
AKTO  Aktyubinsk        39.08  79   LR      LR      04 07 20.5
      comp=Z,203nm,21.9s,baz=215,slow=34
KIV   Kislovodsk        39.08  98   P       P       03 52 45.8 +1.2
KIV                                 IAmb    IAmb    03 52 46.6
      comp=Z,13nm,0.6s
KIV   Kislovodsk        39.08  98 ⇑P       P       03 52 45.9 +1.3
KIV   Kislovodsk        39.08  98  eP       P       03 52 45.3 +0.7
KIV                                 pmax    pmax
      comp=Z,13nm,1.1s
KIV                                 MLR     MLR
      comp=Z,167nm,16.0s
KIV   Kislovodsk        39.08  98   P       P       03 52 45.4 +0.8
      comp=Z,11nm,1.1s
D22K  Ayikyak River     39.11 336   P       P       03 52 40.9 -3.6
      baz=24
BMAR  Burnt Mountain    39.13 331           P       03 52 46.5 +1.8
C21K  Knifeblade Rid    39.16 338   P       P       03 52 43.9 -0.9
      baz=23,SNR=8.1
G27K  Doyon Strip       39.16 329   P       P       03 52 43.6 -1.3
      baz=28,SNR=9.9
F25K  Christian Rive    39.17 332   IAmb    IAmb    03 52 47.9
      comp=Z,17nm,0.8s
F25K  Christian Rive    39.17 332   P       P       03 52 44.5 -0.5
      baz=27,SNR=22
SADO  Sadowa            39.19 265   LR      LR      04 08 04.7
      comp=Z,249nm,19.3s,baz=34,slow=35
E24K  Your Creek        39.21 334   IAmb    IAmb    03 52 47.9
      comp=Z,11nm,0.8s
E24K  Your Creek        39.21 334   P       P       03 52 44.6 -0.7
      baz=26,SNR=13
KBZ   Khabaz            39.36  98   P       P       03 52 48.0 +1.2
      comp=Z,6.2nm,0.9s,baz=313,slow=9.0,SNR=13
KBZ                                 PP      PP      03 54 17.6 +0.9
      comp=Z,3.8nm,1.0s,baz=338,slow=11,SNR=2.8
KBZ                                 LR      LR      04 09 10.7
      comp=Z,333nm,18.2s,baz=328,slow=36
      comp=Z,6.2nm,0.9s
KBZ   Khabaz            39.36  98ceP       P       03 52 46.7  0.0
KBZ                                 pmax    pmax
      comp=Z,8.0nm,1.0s
E23K  Chandalar         39.40 334   IAmb    IAmb    03 52 49.8
      comp=Z,14nm,0.8s
E23K  Chandalar         39.40 334   P       P       03 52 45.5 -1.5
      baz=25,SNR=14
G26K  Porcupine Rive    39.42 330   IAmb    IAmb    03 52 49.9
      comp=Z,12nm,0.8s
G26K  Porcupine Rive    39.42 330   P       P       03 52 46.4 -0.6
      baz=27,SNR=13
I30M  Mount Dempster    39.51 325   P       P       03 52 47.1 -0.9
      baz=30,SNR=13
F24K  Squaw Lake        39.62 333   P       P       03 52 47.3 -1.4
      baz=26,SNR=8.4
H27K  Steamboat Moun    39.65 328   IAmb    IAmb    03 52 51.5
      comp=Z,16nm,0.8s
H27K  Steamboat Moun    39.65 328   P       P       03 52 48.1 -0.9
      baz=28,SNR=26
BR105 Keskin Array S    39.66 111   P       P       03 52 50.4 +0.9
      comp=Z,41nmcomp=Z,3.5nm,1.1s
BRTR  Keskin Array B    39.67 111   P       P       03 52 51.6 +2.1
BRTR  Keskin Array B    39.67 111   P       P       03 52 50.4 +0.8
      comp=Z,0.6nm,0.6s,baz=327,slow=3.8,SNR=9.1
      comp=Z,0.6nm,0.6s
BRTR  Keskin Array B    39.67 111   P       P       03 52 51.6 +2.1
E22K  Anaktuvuk Pass    39.67 335   P       P       03 52 48.3 -0.9
      baz=24,SNR=12
BR104 Keskin Array S    39.68 111   P       P       03 52 50.7 +1.0
      comp=Z,32nmcomp=Z,2.8nm,1.1s
E21K  Killik River      39.70 337   IAmb    IAmb    03 52 52.1
      comp=Z,16nm,1.1s
E21K  Killik River      39.70 337   P       P       03 52 49.0 -0.5
      baz=23
I29M  Ogilvie Camp,     39.79 326   IAmb    IAmb    03 52 51.7
      comp=Z,12nm,0.9s
I29M  Ogilvie Camp,     39.79 326   P       P       03 52 49.6 -0.6
      baz=29,SNR=9.6
D20K  Etivluk River     39.82 338   IAmb    IAmb    03 52 53.5
      comp=Z,22nm,1.0s
D20K  Etivluk River     39.82 338   P       P       03 52 48.1 -2.3
      baz=22,SNR=17
C19K  Lookout Ridge     39.83 340   P       P       03 52 51.7 +1.3
C19K  Lookout Ridge     39.83 340   P       P       03 52 49.1 -1.3
      baz=20
B18K  Kokolik River     39.85 341   P       P       03 52 50.2 -0.3
      baz=19
G25K  Bearman Lake      40.00 331   P       P       03 52 48.8 -3.0
      baz=26,SNR=7.1
I28M  Miner Creek       40.03 327           P       03 52 52.6 +0.3
I28M  Miner Creek       40.03 327   P       P       03 52 50.5 -1.7
      baz=28,SNR=13
J30M  Hart River        40.07 324   P       P       03 52 51.0 -1.6
      baz=29,SNR=12
E20K  Nigu River        40.18 338   P       P       03 52 52.0 -1.4
      baz=22,SNR=8.6
D19K  Kuna River        40.22 339   IAmb    IAmb    03 53 05.5
      comp=Z,22nm,1.1s
D19K  Kuna River        40.22 339   P       P       03 52 52.0 -1.7
      baz=21,SNR=8.3
I27K  Kandik River      40.22 328   P       P       03 52 52.7 -1.1
      baz=28,SNR=13
EPLO  Experimental L    40.25 282           P       03 52 54.6 +0.4
EPLO                                IAmb    IAmb    03 52 60.0
      comp=Z,15nm,1.2s
COLD  Coldfoot          40.26 334   P       P       03 52 53.0 -1.0
      baz=24,SNR=5.6
G24K  Hadweenzic Riv    40.29 332   P       P       03 52 52.9 -1.4
      baz=25,SNR=23
F22K  John River        40.30 335   P       P       03 52 53.6 -0.8
      baz=23
H25L  Birch Creek       40.40 331   P       P       03 52 54.9 -0.3
      baz=26,SNR=17
C18K  Utukok River      40.46 341   P       P       03 52 55.2 -0.5
      baz=19,SNR=8.4
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ULM	**Lac du Bonnet**	**40.52**	**284**	P	**P**	**03 52 56.8**	**+0.4**
	comp=Z,5.4nm,0.8s,baz=56,slow=7.1,SNR=6.4						
ULM				LR	LR	04 09 53.2	
	comp=Z,142nm,21.0s,baz=38,slow=36						
	comp=Z,5.4nm,0.8s						
MMPY	**Sheldon Lake,**	**40.65**	**320**		**P**	**03 52 59.8**	**+2.5**
MMPY				IAmb	IAmb	03 53 01.0	
	comp=Z,12nm,0.9s						
MMPY	**Sheldon Lake,**	**40.65**	**320**	P	**P**	**03 52 57.8**	**+0.4**
	baz=30,SNR=16						
G23K	**Bananza Creek**	**40.70**	**333**	P	**P**	**03 52 57.0**	**-0.7**
	baz=24,SNR=8.8						
G22K	**Bettles**	**40.74**	**334**	P	**P**	**03 52 57.4**	**-0.6**
	baz=23						
AB31	**Akbulak array**	**40.75**	**78**		**P**	**03 52 58.5**	**+0.3**
AB31				IAmb	IAmb	03 53 04.6	
	comp=Z,14nm,1.1s						
ABKAR	**Akbulak array**	**40.75**	**78**		**P**	**03 52 58.9**	**+0.7**
ABKAR	**Akbulak array**	**40.75**	**78**	IAmb	IAmb	03 53 04.6	
	comp=Z,14nm,1.1s						
F21K	**Alatna River**	**40.76**	**336**	P	**P**	**03 52 56.3**	**-2.0**
	baz=22,SNR=12						
I26K	**Coal Creek Min**	**40.78**	**329**	IAmb	IAmb	03 53 01.4	
	comp=Z,19nm,0.9s						
I26K	**Coal Creek Min**	**40.78**	**329**	P	**P**	**03 52 56.9**	**-1.4**
	baz=27,SNR=16						
MAYO	**Mayo, Yukon**	**40.84**	**323**	P	**P**	**03 52 58.4**	**-0.4**
	baz=29						
C17K	**DeLong Mountai**	**40.85**	**342**	P	**P**	**03 52 58.0**	**-0.9**
	baz=18,SNR=8.4						
K29M	**Barlow Dome**	**40.96**	**324**	IAmb	IAmb	03 53 02.9	
	comp=Z,15nm,1.0s						
K29M	**Barlow Dome**	**40.96**	**324**	P	**P**	**03 52 58.0**	**-2.0**
	baz=28,SNR=24						
PRP	**Porcupine Dome**	**41.02**	**330**		**P**	**03 53 02.7**	**+2.2**
PRP				IAmb	IAmb	03 53 03.9	
	comp=Z,16nm,0.8s						
PRP	**Porcupine Dome**	**41.02**	**330**	P	**P**	**03 52 58.0**	**-2.5**
	baz=26,SNR=23						
E19K	**Redstone River**	**41.08**	**338**	P	**P**	**03 52 58.8**	**-1.9**
	baz=21,SNR=8.3						
BRVK	**Borovoye**	**41.10**	**67**		**P**	**03 53 02.4**	**+1.3**
BRVK	**Borovoye**	**41.10**	**67***ce*	P	**P**	**03 53 01.8**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,11nm,1.0s						
H24K	**Noodor Dome**	**41.15**	**332**	P	**P**	**03 52 59.7**	**-1.7**
	baz=25,SNR=15						
DAWY	**Dawson**	**41.15**	**326**	P	**P**	**03 53 01.4**	**-0.1**
DAWY	**Dawson**	**41.15**	**326**	P	**P**	**03 52 58.8**	**-2.6**
	baz=28,SNR=9.7						
BVAR	**Borovoye Array**	**41.16**	**66**	P	**P**	**03 53 02.8**	**+1.2**
	comp=Z,5.6nm,0.7s,baz=325,slow=9.0,SNR=24						
BVAR				PP	**PP**	**03 54 37.1**	**+0.8**
	comp=Z,3.3nm,0.9s,baz=331,slow=12,SNR=4.8						
BVAR				LR	LR	04 09 39.4	
	comp=Z,153nm,19.6s,baz=325,slow=36						
	comp=Z,5.6nm,0.7s						
BEAVL	**Fort Liard**	**41.22**	**314**	P	**P**	**03 53 00.6**	**-1.4**
	baz=31						
RDOG	**Red Dog Mine**	**41.22**	**341**	P	**P**	**03 53 01.2**	**-0.8**
	baz=18						
F20K	**Avaraart Lake**	**41.25**	**337**	P	**P**	**03 53 01.9**	**-0.2**
	baz=21,SNR=34						
C16K	**Lisburne Hills**	**41.28**	**343**	P	**P**	**03 53 01.3**	**-1.1**
	baz=17						
G21K	**Allakaket**	**41.42**	**335**	IAmb	IAmb	03 53 06.4	
	comp=Z,14nm,0.9s						
G21K	**Allakaket**	**41.42**	**335**	P	**P**	**03 53 02.4**	**-1.2**
	baz=22,SNR=27						
H23K	**Yukon River**	**41.44**	**333**	P	**P**	**03 53 01.9**	**-1.8**
	baz=24,SNR=5.6						
FARO	**Faro, Yukon**	**41.47**	**321**	P	**P**	**03 53 02.3**	**-1.7**
	baz=29,SNR=8.9						
AKAS	**Kas**	**41.51**	**117**	P	**P**	**03 53 06.0**	**+1.2**
E18K	**Tukpahlearik C**	**41.55**	**340**	IAmb	IAmb	03 53 12.2	
	comp=Z,20nm,1.4s						
E18K	**Tukpahlearik C**	**41.55**	**340**	P	**P**	**03 53 02.9**	**-1.7**
	baz=19						
J26L	**Joseph Creek**	**41.58**	**328**	IAmb	IAmb	03 53 07.8	
	comp=Z,15nm,0.8s						
J26L	**Joseph Creek**	**41.58**	**328**	P	**P**	**03 53 03.1**	**-1.9**
	baz=26,SNR=28						
D17K	**Noatak River**	**41.58**	**341**	P	**P**	**03 53 03.4**	**-1.5**
	baz=18,SNR=5.4						
H22K	**Ishtalitna Cre**	**41.67**	**334**	P	**P**	**03 53 03.9**	**-1.8**
	baz=23,SNR=16						
MAK	**Makhachkala**	**41.68**	**94**	*e*P	**P**	**03 53 01.9**	**-4.0**
MAK				*e*		03 54 41.0	
MAK				*e*S	**S**	**03 59 16.7**	**-5.4**
MAK				*e*SS	**SS**	**04 02 24.7**	**-2.3**
MAK				pmax	pmax		
	comp=Z,49nm,1.2s						
MAK				MLR	MLR		
	comp=Z,205nm,15.0s						
K27K	**Chicken**	**41.72**	**327**	IAmb	IAmb	03 53 08.8	
	comp=Z,14nm,0.8s						
K27K	**Chicken**	**41.72**	**327**	P	**P**	**03 53 03.9**	**-2.2**
	baz=26						
POKR	**Poker Plat Res**	**41.73**	**331**	P	**P**	**03 53 04.9**	**-1.3**
	baz=24						
M31M	**Drury Creek, Y**	**41.73**	**321**	P	**P**	**03 53 04.1**	**-2.1**
	baz=29,SNR=8.7						
F19K	**Shaleruckik Mo**	**41.74**	**338**	P	**P**	**03 53 03.5**	**-2.6**
	baz=20,SNR=6.5						
L29M	**L29M**	**41.74**	**324**	IAmb	IAmb	03 53 08.9	
	comp=Z,11nm,0.9s						
L29M	**L29M**	**41.74**	**324**	P	**P**	**03 53 04.4**	**-1.9**
	baz=28,SNR=12						
KOPT	**Kop Dagi**	**41.77**	**103**		**P**	**03 53 09.8**	**+2.8**
KOPT				IAmb	IAmb	03 53 25.3	
	comp=Z,11nm,1.0s						
J25K	**Salcha River,**	**41.82**	**329**	IAmb	IAmb	03 53 09.9	
	comp=Z,15nm,0.8s						
J25K	**Salcha River,**	**41.82**	**329**	P	**P**	**03 53 04.7**	**-2.3**
	baz=25,SNR=24						
IL31		**41.95**	**330**	IAmb	IAmb	03 53 10.9	
	comp=Z,19nm,1.4s						
ILAR	**Eielson Array**	**41.95**	**330**	P	**P**	**03 53 09.5**	**+1.6**
	comp=Z,4.9nm,0.9s,baz=20,slow=7.0,SNR=39						
ILAR				LR	LR	04 12 32.0	
	comp=Z,264nm,20.9s,baz=35,slow=39						
	comp=Z,4.9nm,0.9s						
IMAR	**Indian Mountai**	**41.96**	**335**	P	**P**	**03 53 09.6**	**+1.6**
COLA	**College**	**42.02**	**331**	P	**P**	**03 53 09.9**	**+1.4**
COLA	**College**	**42.02**	**331** *c*	*i*P	**P**	**03 53 10.0**	**+1.5**
COLA				pmax	pmax		
	comp=Z,16nm,0.9s						
COLA	**College**	**42.02**	**331**	P	**P**	**03 53 07.1**	**-1.4**
	baz=24						
E17K	**Hotham Inlet**	**42.02**	**340**	P	**P**	**03 53 06.4**	**-2.1**
	baz=18						
I23K	**Minto, Yukon-K**	**42.03**	**332**	IAmb	IAmb	03 53 12.0	
	comp=Z,11nm,1.0s						
I23K	**Minto, Yukon-K**	**42.03**	**332**	P	**P**	**03 53 06.2**	**-2.3**
	baz=24,SNR=9.6						
H21K	**Melozitna Rive**	**42.12**	**334**	P	**P**	**03 53 07.9**	**-1.4**
	baz=22,SNR=28						
SCRK	**Sand Creek**	**42.14**	**328**	P	**P**	**03 53 06.9**	**-2.7**
	baz=26,SNR=12						
LIRD	**Liard River Hi**	**42.15**	**314**	P	**P**	**03 53 07.7**	**-1.9**
	baz=31						
AGMN	**Agassiz Nation**	**42.17**	**283**	P	**P**	**03 53 10.5**	**+0.7**
AGMN				IAmb	IAmb	03 53 16.9	
	comp=Z,18nm,1.2s						
F18K	**Selawik**	**42.21**	**339**	P	**P**	**03 53 08.3**	**-1.7**
	baz=19						
HDA	**Harding Lake**	**42.29**	**330**	IAmb	IAmb	03 53 13.4	
	comp=Z,16nm,0.9s						
HDA	**Harding Lake**	**42.29**	**330**	P	**P**	**03 53 08.5**	**-2.2**
	baz=24,SNR=12						
G19K	**Purcell Mounta**	**42.29**	**337**	P	**P**	**03 53 09.0**	**-1.7**
	baz=20,SNR=12						
MLY	**Manley**	**42.37**	**333**	P	**P**	**03 53 10.1**	**-1.3**
	baz=23,SNR=13						
TOAD	**Toad River Com**	**42.41**	**313**	P	**P**	**03 53 08.5**	**-3.3**
	baz=31,SNR=11						
M29M	**Somme Creek**	**42.41**	**324**	IAmb	IAmb	03 53 15.2	
	comp=Z,16nm,0.9s						
M29M	**Somme Creek**	**42.41**	**324**	P	**P**	**03 53 09.2**	**-2.6**
	baz=27,SNR=26						
I21K	**Tanana**	**42.43**	**334**	P	**P**	**03 53 09.9**	**-1.9**
	baz=22,SNR=6.6						
DOT	**Dot Lake**	**42.45**	**328**	IAmb	IAmb	03 53 15.1	
	comp=Z,16nm,0.9s						
NEA2	**Nenana**	**42.49**	**332**	IAmb	IAmb	03 53 15.1	
	comp=Z,17nm,0.9s						
NEA2	**Nenana**	**42.49**	**332**	P	**P**	**03 53 10.3**	**-2.0**
	baz=24,SNR=20						
RIDG	**Independent Ri**	**42.52**	**329**	IAmb	IAmb	03 53 15.8	
	comp=Z,21nm,1.0s						
RIDG	**Independent Ri**	**42.52**	**329**	P	**P**	**03 53 11.4**	**-1.2**
	baz=25,SNR=15						
BCAR	**Beaver Creek A**	**42.53**	**326**	P	**P**	**03 53 15.1**	**+2.4**
L27K	**Beaver Creek,**	**42.55**	**326**	P	**P**	**03 53 10.2**	**-2.6**
	baz=26,SNR=33						
F17K	**Baldwin Pennin**	**42.56**	**340**	P	**P**	**03 53 11.2**	**-1.7**
	baz=18						
H20K	**Anotleneega Mo**	**42.59**	**336**	P	**P**	**03 53 10.8**	**-2.3**
	baz=21,SNR=18						
K24K	**Donnelly Dome**	**42.63**	**329**	P	**P**	**03 53 11.1**	**-2.4**
	baz=25						
N31M	**Braeburn, Yuko**	**42.67**	**322**	IAmb	IAmb	03 53 16.2	
	comp=Z,15nm,0.9s						
N31M	**Braeburn, Yuko**	**42.67**	**322**	P	**P**	**03 53 11.4**	**-2.5**
	baz=28,SNR=9.8						
G40A	**Rib Lake**	**42.74**	**275**	P	**P**	**03 53 15.2**	**+0.6**
G18K	**Tagagawik**	**42.74**	**338**	IAmb	IAmb	03 53 21.4	
	comp=Z,18nm,1.1s						
G18K	**Tagagawik**	**42.74**	**338**	P	**P**	**03 53 11.0**	**-3.4**
	baz=19,SNR=10						
H19K	**Roundabout Mou**	**42.78**	**336**	P	**P**	**03 53 12.2**	**-2.5**
	baz=20,SNR=8.1						
L26K	**Log Cabin Wild**	**42.88**	**327**	IAmb	IAmb	03 53 18.6	
	comp=Z,8.5nm,0.8s						
L26K	**Log Cabin Wild**	**42.88**	**327**	P	**P**	**03 53 11.6**	**-3.9**
	baz=25,SNR=14						
BVCY	**Beaver Creek**	**42.93**	**325**	P	**P**	**03 53 13.3**	**-2.7**
	baz=26,SNR=10						
N30M	**Aishikik Lake**	**42.99**	**322**	P	**P**	**03 53 13.8**	**-2.7**
	baz=27						
MENT	**Mentasta**	**43.03**	**327**	IAmb	IAmb	03 53 19.9	
	comp=Z,12nm,1.0s						
SEKA	**Sheki**	**43.10**	**96**	P	**P**	**03 53 16.6**	**-1.0**
P33M	**Teslin, Yukon**	**43.12**	**319**	P	**P**	**03 53 14.8**	**-2.8**
	baz=28,SNR=9.6						
GNI	**Garni**	**43.16**	**99**	LR	LR	04 12 41.6	
	comp=Z,96nm,18.4s,baz=339,slow=38						
I20K	**Naaghedeneel**	**43.18**	**335**	IAmb	IAmb	03 53 21.6	
	comp=Z,19nm,1.0s						
I20K	**Naaghedeneel**	**43.18**	**335**	P	**P**	**03 53 14.8**	**-3.0**
	baz=21,SNR=5.8						
M27K	**Edge Creek, AK**	**43.19**	**326**	P	**P**	**03 53 15.2**	**-3.0**
	baz=26,SNR=8.1						
WHY	**Whitehorse**	**43.20**	**320**	IAmb	IAmb	03 53 21.0	
	comp=Z,15nm,0.8s						
WHY	**Whitehorse**	**43.20**	**320**	P	**P**	**03 53 18.6**	**+0.4**
	baz=28,SNR=11						
BILL	**Bilibino**	**43.22**	**358***ce*	P	**P**	**03 53 18.6**	**+0.4**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MCK	**McKinley**	**43.26**	**331**	IAmb	IAmb	03 53 21.3	
	comp=Z,17nm,1.0s						
MCK	**McKinley**	**43.26**	**331**	P	**P**	**03 53 18.4**	**-0.2**
	baz=23,SNR=7.2						
BPAW	**Bear Paw Mtn.**	**43.27**	**333**	IAmb	IAmb	03 53 21.4	
	comp=Z,20nm,1.1s						
BPAW	**Bear Paw Mtn.**	**43.27**	**333**	P	**P**	**03 53 19.1**	**+0.4**
	baz=22,SNR=16						
GANJ	**Ganja**	**43.28**	**97**	P	**P**	**03 53 17.7**	**-1.3**
PAX	**Paxson**	**43.34**	**329**	IAmb	IAmb	03 53 22.1	
	comp=Z,12nm,1.1s						
PAX	**Paxson**	**43.34**	**329**	P	**P**	**03 53 19.0**	**-0.3**
	baz=24,SNR=12						
M26K	**Nabesna, AK**	**43.38**	**327**	IAmb	IAmb	03 53 23.1	
	comp=Z,16nm,0.9s						
M26K	**Nabesna, AK**	**43.38**	**327**	P	**P**	**03 53 20.6**	**+1.0**
	baz=25,SNR=26						
O30N	**Mendenhall**	**43.38**	**321**	P	**P**	**03 53 19.0**	**-0.7**
	baz=27,SNR=6.1						
G17K	**Kiwalik Mounta**	**43.38**	**339**	P	**P**	**03 53 19.1**	**-0.4**
	baz=18						
R33M	**Jennings River**	**43.39**	**317**	P	**P**	**03 53 19.8**	**-0.1**
	baz=29,SNR=8.7						
H18K	**Honhosa River**	**43.41**	**337**	IAmb	IAmb	03 53 30.3	
	comp=Z,14nm,1.2s						
H18K	**Honhosa River**	**43.41**	**337**	P	**P**	**03 53 19.3**	**-0.5**
	baz=19						
YUK3	**Moose Creek**	**43.43**	**325**	P	**P**	**03 53 19.7**	**-0.5**
	baz=26,SNR=9.2						
YUK4	**Talbot Arm**	**43.43**	**323**	P	**P**	**03 53 20.0**	**-0.2**
	baz=27,SNR=5.1						
MNGR	**Mingechevir, A**	**43.44**	**96**	P	**P**	**03 53 19.2**	**-1.1**
GCSA	**Galena City Sc**	**43.58**	**336**	P	**P**	**03 53 21.2**	**+0.1**
	baz=20						
DHY	**Denali Highway**	**43.59**	**330**	IAmb	IAmb	03 53 27.8	
	comp=Z,16nm,1.4s						
DHY	**Denali Highway**	**43.59**	**330**	P	**P**	**03 53 21.6**	**+0.2**
	baz=24						
HYT	**Haines Junctio**	**43.65**	**322**	IAmb	IAmb	03 53 24.5	
	comp=Z,9.5nm,0.8s						
HYT	**Haines Junctio**	**43.65**	**322**	P	**P**	**03 53 22.0**	**+0.2**
	baz=27,SNR=10						
F15K	**North Star Dit**	**43.68**	**341**	P	**P**	**03 53 22.8**	**+0.9**
	baz=16						
CHUM	**Lake Minchumin**	**43.69**	**333**	P	**P**	**03 53 22.5**	**+0.4**
	baz=22						
G16K	**Koyuk River**	**43.70**	**340**	IAmb	IAmb	03 53 30.2	
	comp=Z,24nm,1.4s						
G16K	**Koyuk River**	**43.70**	**340**	P	**P**	**03 53 23.0**	**+0.9**
	baz=17						
J20K	**Nowinta River**	**43.71**	**334**	IAmb	IAmb	03 53 30.2	
	comp=Z,22nm,1.4s						
J20K	**Nowinta River**	**43.71**	**334**	P	**P**	**03 53 22.2**	**+0.1**
	baz=21,SNR=12						
SPMN	**Marine on St.**	**43.71**	**278**		**P**	**03 53 23.7**	**+1.3**
SPMN				IAmb	IAmb	03 53 29.5	
	comp=Z,9.9nm,1.0s						
YUK8	**Steele Glacier**	**43.72**	**324**	P	**P**	**03 53 22.3**	**-0.4**
	baz=26						
YUK6	**Outpost Mounta**	**43.73**	**323**	P	**P**	**03 53 22.7**	**0.0**
	baz=27,SNR=7.5						
TRF	**Thorofare Moun**	**43.76**	**332**	P	**P**	**03 53 22.6**	**-0.2**
	baz=22						
HARP	**HAARP**	**43.80**	**328**	P	**P**	**03 53 22.7**	**-0.2**
	baz=24,SNR=7.8						
H17K	**Granite Mounta**	**43.83**	**338**	IAmb	IAmb	03 53 26.2	
	comp=Z,17nm,1.2s						
H17K	**Granite Mounta**	**43.83**	**338**	P	**P**	**03 53 23.0**	**-0.1**
	baz=18,SNR=7.7						
P32M	**Atlin**	**43.88**	**319**	P	**P**	**03 53 22.6**	**-1.1**
	baz=28						
DLBC	**Dease Lake**	**44.00**	**316**	LR	LR	04 12 35.2	
	comp=Z,813nm,18.4s,baz=64,slow=37						
DLBC	**Dease Lake**	**44.00**	**316**	P	**P**	**03 53 23.6**	**-1.1**
	baz=29						
WAT1	**Susitna Watana**	**44.03**	**330**	P	**P**	**03 53 23.3**	**-1.5**
	baz=23						
CAST	**Castle Rocks**	**44.09**	**333**	IAmb	IAmb	03 53 35.5	
	comp=Z,16nm,1.3s						
CAST	**Castle Rocks**	**44.09**	**333**	P	**P**	**03 53 23.8**	**-1.5**
	baz=22,SNR=5.4						
Q32M	**Nakina River**	**44.09**	**318**	P	**P**	**03 53 23.6**	**-2.0**
	baz=28,SNR=6.0						
F14K	**Arctic Creek**	**44.09**	**342**	P	**P**	**03 53 25.0**	**-0.2**
	baz=16						
J19K	**Poorman**	**44.11**	**335**	IAmb	IAmb	03 53 33.4	
	comp=Z,20nm,1.2s						
J19K	**Poorman**	**44.11**	**335**	P	**P**	**03 53 24.7**	**-0.7**
	baz=20,SNR=13						
WAT6	**Susitna Watana**	**44.11**	**330**	P	**P**	**03 53 25.6**	**0.0**
	baz=23,SNR=11						
P30M	**Million Dollar**	**44.16**	**321**	P	**P**	**03 53 25.6**	**-0.3**
	baz=27						
TNA	**Tin City**	**44.18**	**343**	P	**P**	**03 53 25.9**	**0.0**
	baz=15						
M24K	**Tolsona, Glenn**	**44.26**	**328**	P	**P**	**03 53 24.8**	**-1.9**
	baz=24						
O28M	**Mount Upton**	**44.28**	**324**	P	**P**	**03 53 25.4**	**-1.7**
	baz=26						
NAX	**Nakhchivan**	**44.29**	**99**	P	**P**	**03 53 26.1**	**-1.1**
G15K	**Niukluk**	**44.30**	**341**	P	**P**	**03 53 25.5**	**-1.3**
	baz=16						
MCARA	**McCarthy VSAT**	**44.31**	**326**	IAmb	IAmb	03 53 33.8	
	comp=Z,10nm,0.9s						
MCARA	**McCarthy VSAT**	**44.31**	**326**	P	**P**	**03 53 23.7**	**-3.4**
	baz=25						
CTG	**Chitna Glacier**	**44.34**	**325**	P	**P**	**03 53 24.1**	**-3.4**
	baz=25						
O29M	**Mount Kennedy**	**44.35**	**323**	IAmb	IAmb	03 53 34.3	
	comp=Z,14nm,1.2s						
O29M	**Mount Kennedy**	**44.35**	**323**	P	**P**	**03 53 25.9**	**-1.7**
	baz=26						
SKAG	**Skagway**	**44.38**	**320**	P	**P**	**03 53 27.5**	**0.0**
	baz=27						
N25K	**Chitina, Valde**	**44.42**	**327**	P	**P**	**03 53 28.0**	**+0.1**
	baz=24,SNR=11						
F33A	**5 Mile Ranch,**	**44.42**	**281**	IAmb	IAmb	03 53 35.4	
	comp=Z,7.6nm,0.9s						
K20K	**Telida**	**44.47**	**334**	IAmb	IAmb	03 53 31.7	
	comp=Z,9.2nm,0.9s						
K20K	**Telida**	**44.47**	**334**	P	**P**	**03 53 27.9**	**-0.4**
	baz=21,SNR=10.0						
PPLA	**Purkeypile**	**44.59**	**333**	IAmb	IAmb	03 53 39.5	
	comp=Z,10nm,0.9s						
PPLA	**Purkeypile**	**44.59**	**333**	P	**P**	**03 53 29.5**	**0.0**
	baz=21						
PLBC	**Pleasant Camp**	**44.62**	**321**	P	**P**	**03 53 29.5**	**0.0**
	baz=27,SNR=6.0						
GRNC	**Granite Creek**	**44.64**	**325**	IAmb	IAmb	03 53 32.3	
	comp=Z,9.3nm,0.9s						
CUT	**Chulitna**	**44.73**	**331**	P	**P**	**03 53 31.3**	**+1.0**
	baz=22						
SCM	**Sheep Creek Mo**	**44.73**	**329**	P	**P**	**03 53 31.6**	**+1.2**
	baz=23,SNR=13						
S34M	**Telegraph Cree**	**44.74**	**316**	P	**P**	**03 53 31.4**	**+0.9**
	baz=28						
J18K	**Innoko River**	**44.77**	**336**	IAmb	IAmb	03 53 37.8	
	comp=Z,11nm,1.2s						
J18K	**Innoko River**	**44.77**	**336**	P	**P**	**03 53 31.3**	**+0.6**
	baz=20,SNR=8.6						
P29M	**Windy Craggy**	**44.77**	**322**	IAmb	IAmb	03 53 38.1	
	comp=Z,9.2nm,1.0s						
P29M	**Windy Craggy**	**44.77**	**322**	P	**P**	**03 53 31.8**	**+1.0**
	baz=26						
KLU	**Klutina**	**44.78**	**328**	IAmb	IAmb	03 53 40.5	
	comp=Z,9.8nm,1.0s						
KLU	**Klutina**	**44.78**	**328**	P	**P**	**03 53 30.9**	**+0.1**
	baz=24						
M23K	**Glacier View**	**44.84**	**329**	P	**P**	**03 53 31.6**	**+0.3**
	baz=23						
ANM	**Nome**	**44.87**	**341**	P	**P**	**03 53 31.5**	**+0.1**
	baz=16						
CRQE	**Cirque**	**44.90**	**326**	P	**P**	**03 53 32.2**	**+0.4**
	baz=24,SNR=7.0						
PINM	**Pinnacle**	**44.90**	**324**	P	**P**	**03 53 31.9**	**0.0**
	baz=25						
ZALV	**Zalesovo Beam**	**44.90**	**55**	P	**P**	**03 53 32.8**	**+1.0**
	comp=Z,2.2nm,0.7s,baz=327,slow=7.8,SNR=7.6						
ZALV				PP	**PP**	**03 55 18.5**	**+2.2**
	comp=Z,0.4nm,0.3s,baz=354,slow=7.8,SNR=2.5						
	comp=Z,2.2nm,0.7s						
I17K	**Unalakleet**	**44.93**	**338**	P	**P**	**03 53 32.6**	**+0.7**
	baz=18						
SML	**Sawmill**	**44.94**	**330**	IAmb	IAmb	03 53 40.7	
	comp=Z,14nm,1.0s						
SML	**Sawmill**	**44.94**	**330**	P	**P**	**03 53 31.6**	**-0.4**
	baz=23						
BMRM	**Bremner River**	**45.00**	**327**	P	**P**	**03 53 33.6**	**+1.0**
	baz=24,SNR=6.8						
DIV	**Divide**	**45.08**	**328**	IAmb	IAmb	03 53 43.4	
	comp=Z,14nm,1.2s						
PNL	**Peninsula**	**45.10**	**323**	P	**P**	**03 53 33.3**	**-0.1**
	baz=26						
J17K	**VABM Dome**	**45.18**	**337**	P	**P**	**03 53 33.8**	**-0.1**
	baz=18						
MESA	**MESA**	**45.19**	**325**	P	**P**	**03 53 34.7**	**+0.5**
	baz=25						
R32K	**Eaglecrest**	**45.24**	**319**	P	**P**	**03 53 35.0**	**+0.5**
	baz=27,SNR=6.1						
L20K	**Farewell, AK**	**45.26**	**333**	P	**P**	**03 53 34.8**	**+0.2**
	baz=20						
PMR	**Palmer**	**45.28**	**330**	IAmb	IAmb	03 53 38.2	
	comp=Z,12nm,1.4s						
PMR	**Palmer**	**45.28**	**330**	P	**P**	**03 53 35.5**	**+0.8**
	baz=22						
M22K	**Willow**	**45.31**	**331**	P	**P**	**03 53 35.0**	**+0.1**
	baz=22						
KNK	**Knik Glacier**	**45.33**	**329**	P	**P**	**03 53 35.7**	**+0.5**
	baz=22						
SKT	**Skwentna**	**45.34**	**332**	P	**P**	**03 53 35.1**	**-0.2**
	baz=21						
T35M	**Bob Quinn**	**45.34**	**315**	P	**P**	**03 53 34.5**	**-0.9**
	baz=28						
J16K	**Anvik River**	**45.50**	**338**	P	**P**	**03 53 36.2**	**-0.3**
	baz=18,SNR=7.3						
BGLC	**Bering Glacier**	**45.51**	**326**	P	**P**	**03 53 36.2**	**-0.4**
	baz=24						
GLI	**Glacier Island**	**45.57**	**328**	P	**P**	**03 53 36.8**	**-0.2**
	baz=23						
EYAK	**Cordova Ski Ar**	**45.61**	**327**	IAmb	IAmb	03 53 40.6	
	comp=Z,9.9nm,1.0s						
EYAK	**Cordova Ski Ar**	**45.61**	**327**	P	**P**	**03 53 36.4**	**-0.9**
	baz=23						
SUA	**Susitna One**	**45.69**	**331**	P	**P**	**03 53 37.6**	**-0.5**
	baz=22						
L19K	**White Mountain**	**45.70**	**334**	P	**P**	**03 53 37.4**	**-0.8**
	baz=20						
M20K	**Styx River**	**45.70**	**333**	P	**P**	**03 53 37.5**	**-0.7**
	baz=21,SNR=9.5						
K17K	**Iditarod**	**45.72**	**336**	P	**P**	**03 53 37.0**	**-1.2**
	baz=18						
KURK	**Kurchatov**	**45.80**	**62**		**P**	**03 53 38.9**	**-0.1**
KURK				IAmb	IAmb	03 53 45.6	
	comp=Z,12nm,1.1s						
KURK	**Kurchatov**	**45.80**	**62***ce*	P	**P**	**03 53 39.5**	**+0.5**
KURK				pmax	pmax		
	comp=Z,18nm,1.7s						
PWL	**Port Wells**	**45.82**	**329**	P	**P**	**03 53 37.9**	**-1.1**
	baz=22						
KURBB	**Kurchatov Arra**	**45.85**	**62**	P	**P**	**03 53 40.2**	**+0.8**
	comp=Z,4.3nm,0.9s,baz=329,slow=6.7,SNR=4.3						
KURBB				PP	**PP**	**03 55 25.5**	**-0.9**
	comp=Z,3.0nm,0.2s,baz=323,slow=10.0,SNR=9.4						
	comp=Z,4.3nm,0.9s						
RC01	**Rabbit Creek A**	**45.86**	**330**	P	**P**	**03 53 37.3**	**-2.0**
	baz=22						
LKRN	**Lenkeran, Azer**	**45.87**	**96**	P	**P**	**03 53 38.8**	**-0.9**
M19K	**Big River Lodg**	**45.89**	**333**	P	**P**	**03 53 38.7**	**-0.8**
	baz=20						
KAIM	**Kayak Island**	**45.92**	**326**	P	**P**	**03 53 39.4**	**-0.4**
	baz=24						
S31K	**Pelican**	**45.93**	**320**	P	**P**	**03 53 39.1**	**-0.8**
	baz=26						
L18K	**Granite Mounta**	**45.95**	**335**	IAmb	IAmb	03 53 47.0	
	comp=Z,7.7nm,1.2s						
L18K	**Granite Mounta**	**45.95**	**335**	P	**P**	**03 53 40.1**	**0.0**
	baz=19						
S32K	**Killisnoo**	**45.98**	**318**	P	**P**	**03 53 41.1**	**+0.8**
	baz=26						
SPCR	**Spurr Chakacha**	**46.19**	**332**	P	**P**	**03 53 42.3**	**+0.3**
	baz=21						
N20K	**Mount Spurr**	**46.19**	**332**	P	**P**	**03 53 42.3**	**+0.3**
	baz=21						
L17K	**Donlin**	**46.27**	**336**	P	**P**	**03 53 43.2**	**+0.6**
	baz=18						
GAMB	**Gambell**	**46.30**	**345**	P	**P**	**03 53 43.3**	**+0.6**
	baz=12						
MMAI	**Mount Meron Ar**	**46.35**	**113**	P	**P**	**03 53 44.0**	**+0.4**
	comp=Z,4.4nm,1.1s,baz=335,slow=9.7,SNR=1.5						
	comp=Z,4.4nm,1.1s						
ECSD	**EROS Data Cent**	**46.36**	**280**		**P**	**03 53 44.4**	**+0.9**
ECSD				IAmb	IAmb	03 53 50.7	
	comp=Z,12nm,1.4s						
WRAK	**Wrangell Islan**	**46.38**	**316**	P	**P**	**03 53 43.6**	**+0.1**
	baz=27						
J14K	**Nanvaranak Lak**	**46.40**	**339**	P	**P**	**03 53 43.1**	**-0.4**
	baz=16						
CAPN	**Captain Cook N**	**46.41**	**331**	P	**P**	**03 53 43.7**	**0.0**
	baz=21						
O22K	**Cooper Landing**	**46.42**	**330**	P	**P**	**03 53 44.6**	**+0.9**
	baz=22						
P23K	**Montague Islan**	**46.44**	**328**	P	**P**	**03 53 43.3**	**-0.6**
	baz=22						
M18K	**Stony River**	**46.51**	**334**	P	**P**	**03 53 44.6**	**+0.2**
	baz=19,SNR=6.6						
SIT	**Sitka**	**46.53**	**318**	P	**P**	**03 53 44.2**	**-0.4**
	baz=26						
K15K	**Wolf Creek Mou**	**46.57**	**338**	P	**P**	**03 53 45.0**	**+0.1**
	baz=17						
SEW	**Seward**	**46.73**	**329**	P	**P**	**03 53 45.6**	**-0.5**
	baz=22						
M17K	**Holitna River**	**46.84**	**335**	P	**P**	**03 53 47.1**	**0.0**
	baz=18,SNR=5.8						
U33K	**Whale Pass**	**46.84**	**316**	P	**P**	**03 53 45.7**	**-1.3**
	baz=26						
L16K	**Owhat River**	**46.85**	**337**	P	**P**	**03 53 46.6**	**-0.5**
	baz=18						
N19K	**Bonanza Creek**	**46.93**	**333**	P	**P**	**03 53 47.4**	**-0.5**
	baz=20						
L15K	**Ungalak Mounta**	**47.16**	**338**	P	**P**	**03 53 49.2**	**-0.3**
	baz=17						
V35K	**Ketchikan**	**47.17**	**315**	P	**P**	**03 53 48.5**	**-1.1**
	baz=27						
N18K	**Kilae Creek**	**47.29**	**334**	P	**P**	**03 53 48.1**	**-2.4**

	baz=19						
BRSE	Bradley Lake S	47.30	330	P	P	03 53 49.5	-1.1
	baz=21						
O20K	Slope Mountain	47.31	331	P	P	03 53 49.1	-1.7
	baz=20						
K13K	Kusilvak Mount	47.33	340	P	P	03 53 48.9	-1.9
	baz=15						
CRAG	Craig	47.42	316	P	P	03 53 50.5	-1.1
	baz=26						
M16K	Timber Creek	47.43	336	P	P	03 53 50.8	-0.9
	baz=18						
ASF	Jabal al Asfar	47.62	112	LR	LR	04 15 43.6	
	comp=Z,152nm,18.8s,baz=61,slow=38						
N17K	Nushagak Hills	47.63	335	P	P	03 53 52.0	-1.3
	baz=18,SNR=6.2						
L14K	Kuka Creek	47.65	338	P	P	03 53 52.8	-0.4
	baz=16						
P19K	Oil Pt	47.82	332	P	P	03 53 53.4	-1.3
	baz=20						
N16K	Nishlik Lake	47.93	336	P	P	03 53 55.3	-0.2
	baz=18						
O18K	Koktuh Hills	47.96	333	P	P	03 53 55.4	-0.4
	baz=19						
M15K	Kasigluk River	47.99	337	P	P	03 53 55.5	-0.5
	baz=17						
M14K	Bethel	48.12	338	P	P	03 53 57.2	+0.3
	baz=16,SNR=5.4						
TAM	Tamanrasset	48.20	152	P	P	03 53 58.5	+0.3
TAM	Tamanrasset	48.20	152	P	P	03 53 58.5	+0.3
TAM				pmax	pmax		
	comp=Z,15nm,0.2s						
O17K	Koliganek Bris	48.34	334	P	P	03 53 59.3	+0.6
	baz=18						
P18K	Big Mountain,	48.40	333	P	P	03 53 58.4	-0.8
	baz=19						
N15K	Kwethluk River	48.41	336	P	P	03 53 59.5	+0.2
	baz=17						
Q19K	Cape Douglas,	48.58	332	P	P	03 54 01.1	+0.5
	baz=19						
M13K	Dall Lake	48.63	338	P	P	03 53 59.9	-1.0
	baz=16						
Q20K	Shuyak Island	48.66	331	P	P	03 54 00.0	-1.1
	baz=20						
O16K	Kokwok River B	48.67	335	P	P	03 54 01.2	0.0
	baz=18						
P17K	Kvichak River	48.79	334	P	P	03 54 02.0	-0.1
	baz=18						
N14K	Kuskokwak Cree	48.88	337	P	P	03 54 02.7	-0.1
	baz=16						
TKL	Tuckaleechee C	48.88	263	LR	LR	04 14 06.3	
	comp=Z,555nm,18.5s,baz=32,slow=35						
M11K	Mekoryuk	49.02	340	P	P	03 54 03.1	-0.8
	baz=14						
BBB	Bella Bella	49.06	310	LR	LR	04 14 51.8	
	comp=Z,305nm,19.8s,baz=32,slow=36						
Q18K	Katmai Hardscr	49.07	332	P	P	03 54 02.9	-1.6
	baz=19						
EIL	Elat	49.28	115	LR	LR	04 16 35.0	
	comp=Z,76nm,19.9s,baz=280,slow=38						
NEW	Newport	49.31	300	LR	LR	04 15 18.1	
	comp=Z,215nm,19.0s,baz=30,slow=36						
O15K	Ungalikthiuk R	49.33	336	P	P	03 54 04.3	-2.0
	baz=17						
O14K	Tigyukauivet M	49.46	337	P	P	03 54 05.3	-2.0
	baz=16						
KDAK	Kodiak Island	49.47	330	LR	LR	04 18 56.0	
	comp=Z,381nm,19.1s,baz=28,slow=41						
KDAK	Kodiak Island	49.47	330	P	P	03 54 05.7	-1.6
	baz=20						
MSO	Missoula	49.57	296	IAmb	IAmb	03 54 10.1	
	comp=Z,10nm,1.1s						
Q17K	Contact Creek	49.58	333	P	P	03 54 06.4	-2.0
	baz=18						
KKAR	Karatay Array	49.75	73	P	P	03 54 10.9	+1.1
KKAR	Karatay Array	49.75	73	P	P	03 54 10.9	+1.1
YNE	Yellowstone No	49.88	292	IAmb	IAmb	03 54 18.1	
	comp=Z,12nm,1.2s						
BOZ	Bozeman (W)	49.90	294	IAmb	IAmb	03 54 17.2	
	comp=Z,10.0nm,1.2s						
R18K	Karluk	50.01	332	P	P	03 54 11.1	-0.3
	baz=19						
OHAK	Old Harbor	50.13	331	P	P	03 54 16.0	+3.6
OHAK	Old Harbor	50.13	331	P	P	03 54 10.2	-2.2
	baz=19						
MAKZ	Makanchi	50.30	62	P	P	03 54 13.9	0.0
MAKZ	Makanchi	50.30	62	P	P	03 54 13.9	0.0
MAKZ				pmax	pmax		
	comp=Z,18nm,1.5s						
MK31	Makanchi Array	50.41	62	*de*P	P	03 54 15.3	+0.6
MKAR	Makanchi Array	50.41	62	P	P	03 54 15.7	+1.0
MKAR	Makanchi Array	50.41	62	P	P	03 54 14.9	+0.1
	comp=Z,2.7nm,0.9s,baz=340,slow=5.3,SNR=14						
MKAR				PP	PP	03 56 11.8	+1.9
	comp=Z,1.2nm,0.8s,baz=331,slow=7.0,SNR=4.2						
MKAR				LR	LR	04 19 02.4	
	comp=Z,202nm,18.1s,baz=316,slow=40						
	comp=Z,2.7nm,0.9s						
MKAR	Makanchi Array	50.41	62	P	P	03 54 15.7	+1.0
YHL	Hebgen Lake	50.41	293	IAmb	IAmb	03 54 22.5	
	comp=Z,15nm,1.3s						
DLMT	Dillon	50.42	294	IAmb	IAmb	03 54 21.8	
	comp=Z,13nm,1.4s						
R16K	Pilot Point	50.52	334	P	P	03 54 13.6	-1.7
	baz=17						
SII	Sitkinak Islan	50.92	331	P	P	03 54 16.3	-2.1
	baz=18						
BW06	Boulder Array	51.71	290	IAmb	IAmb	03 54 31.0	
	comp=Z,14nm,1.4s						
PDAR	Pinedale Array	51.71	290	P	P	03 54 24.8	0.0
PDAR	Pinedale Array	51.71	290	P	P	03 54 25.1	+0.3
	comp=Z,1.6nm,0.9s,baz=46,slow=4.3,SNR=8.4						
PDAR				PP	PP	03 56 20.0	-2.0
	comp=Z,0.4nm,0.5s,baz=25,slow=9.6,SNR=2.1						
PDAR				LR	LR	04 16 23.2	
	comp=Z,265nm,19.1s,baz=14,slow=36						
	comp=Z,1.6nm,0.9s						
U38A	Gravette	52.01	273	P	P	03 54 27.2	+0.4
U38A				IAmb	IAmb	03 54 33.4	
	comp=Z,10nm,1.2s						
S14K	Fog Glacier	52.07	334	P	P	03 54 25.0	-2.1
	baz=16						
SPIA	Saint Paul Isl	52.63	342	P	P	03 54 29.3	-1.7
	baz=12						
SDPT	Sand Point	53.11	335	P	P	03 54 32.5	-2.1
	baz=16						
SIMJ	Simiganj	53.17	77	P	P	03 54 36.2	+0.7
SIMJ				IAmb	IAmb	03 54 45.3	
	comp=Z,14nm,1.4s						
MIAR	Mount Ida	53.41	272	P	P	03 54 39.4	+2.2
MIAR				IAmb	IAmb	03 54 50.8	
	comp=Z,9.6nm,1.4s						
MIAR	Mount Ida	53.41	272	P	P	03 54 39.4	+2.2
MIAR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
CHNA	Chernabura Isl	53.47	334	P	P	03 54 34.5	-2.8
	baz=16						
O20A	White River Ci	53.61	288	IAmb	IAmb	03 54 46.9	
	comp=Z,7.7nm,1.0s						
I07A	Izee	53.79	299	IAmb	IAmb	03 55 06.8	
	comp=Z,10nm,1.4s						
BBTS	Babate	54.29	179	LR	LR	04 14 03.3	
	comp=Z,127nm,20.9s,baz=233,slow=32						
WMQ	Urumqi	54.77	59	*e*P	P	03 54 49.4	+2.4
WMQ				LR	LR		
	comp=Z,350nm,14.7s						
WMQ				LR	LR		
	comp=Z,310nm,15.5s						
KSH	Kashi	54.82	71	P	P	03 54 51.7	+4.2
KSH				sP	sP	03 54 55.7	+4.1
KSH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ELK	Elko	55.42	294	P	P	03 54 53.2	+1.2
ELK	Elko	55.42	294	P	P	03 54 53.2	+1.2
ELK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
UNV	Unalaska Valle	55.44	339	P	P	03 54 48.7	-2.9
	baz=13						
PV01	Paradox Valley	55.51	287	IAmb	IAmb	03 55 00.8	
	comp=Z,7.7nm,1.0s						
PV13	Radium Mtn., P	55.58	287	IAmb	IAmb	03 55 01.3	
	comp=Z,5.5nm,0.9s						
SONM	Songino Array	56.28	42	P	P	03 54 59.2	+1.3
	comp=Z,0.3nm,0.4s,baz=332,slow=8.4,SNR=4.5						
SONM				LR	LR	04 22 45.3	
	comp=Z,86nm,18.3s,baz=294,slow=40						
	comp=Z,0.3nm,0.4s						
MVU	Marysvale	56.42	290	IAmb	IAmb	03 55 08.4	
	comp=Z,6.9nm,1.0s						
NIKH	Nikolski High	56.59	340	P	P	03 54 57.2	-2.6
	baz=12						
TORD	Torodi Ar. Bea	57.08	158	P	P	03 55 03.3	-0.5
	comp=Z,1.1nm,0.6s,baz=346,slow=8.5,SNR=8.2						
TORD				LR	LR	04 18 40.4	
	comp=Z,110nm,20.0s,baz=28,slow=35						
	comp=Z,1.1nm,0.6s						
ANMO	Albuquerque	57.65	283	LR	LR	04 17 55.6	
	comp=Z,372nm,18.3s,baz=128,slow=34						
R11B	Troy Canyon, C	57.70	293	IAmb	IAmb	03 55 14.7	
	comp=Z,14nm,1.4s						
KNB	Kanab	57.97	290	IAmb	IAmb	03 55 25.9	
	comp=Z,12nm,1.5s						
PETK	Petropavlovsk-	58.16	4	LR	LR	04 19 38.3	
	comp=Z,119nm,20.5s,baz=352,slow=35						
HEH	HeiHe	58.22	26	*e*P	P	03 55 18.6	+7.2
RAYN	Ar Rayn	58.50	107	P	P	03 55 14.7	+0.9
RAYN				IAmb	IAmb	03 55 23.2	
	comp=Z,11nm,1.4s						
RAYN	Ar Rayn	58.50	107	P	P	03 55 14.7	+0.9
RAYN				pmax	pmax		
	comp=Z,11nm,1.4s						
NVAR	Mina Array Bea	58.52	295	P	P	03 55 14.7	+0.8
	comp=Z,0.4nm,0.5s,baz=22,slow=9.6,SNR=4.2						
NVAR				LR	LR	04 21 12.9	
	comp=Z,457nm,18.2s,baz=9.0,slow=37						
	comp=Z,0.4nm,0.5s						
SJG	San Juan	59.14	237	LR	LR	04 16 22.9	
	comp=Z,119nm,21.9s,baz=70,slow=32						
SHPR	Sheep Range	59.22	292	P	P	03 55 20.6	+1.8
GWY	Greenwater Val	60.02	293	P	P	03 55 25.9	+1.6
GWY				IAmb	IAmb	03 55 37.8	
	comp=Z,7.6nm,1.1s						
MNTX	Cornudas Mount	60.21	281	P	P	03 55 28.4	+2.9
TXAR	Lajitas Array	61.74	278	P	P	03 55 38.0	+2.0
	comp=Z,0.7nm,0.9s,baz=38,slow=4.7,SNR=7.5						
TXAR				LR	LR	04 20 35.7	
	comp=Z,172nm,20.8s,baz=21,slow=34						
	comp=Z,0.7nm,0.9s						
TXAR	Lajitas Array	61.74	278	P	P	03 55 38.0	+2.0
XLT	XiLinHaoTe	62.22	37	*e*P	P	03 55 41.0	+2.0
XLT				pP	sP	03 55 45.6	+2.2
XLT				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PFO	Pinyon Flats O	62.30	292	LR	LR	04 21 24.6	
	comp=Z,309nm,20.0s,baz=16,slow=35						
GTA	Gaotai	62.40	51	*e*P	P	03 55 45.0	+4.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
GTA				LR	LR		
	comp=Z,190nm,14.5s						
GTA				LR	LR		
	comp=Z,230nm,15.6s						
GTA				LR	LR		
	comp=Z,310nm,15.6s						
BNX	BinXian	62.60	27	⇓P	P	03 55 44.8	+3.4
BNX				pmax	pmax		
	comp=Z,5.0nm,0.9s						
DBIC	Dimbokro	62.76	166	LR	LR	04 23 36.6	
	comp=Z,194nm,18.9s,baz=358,slow=37						
HHC	Hu-ho-hao-te	64.10	41	*e*P	P	03 55 49.6	-2.0
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC				pmax	pmax		
	comp=Z,78nm,4.3s						
HHC				LR	LR		
	comp=Z,110nm,20.2s						
HHC				LR	LR		
	comp=Z,240nm,16.8s						
PCRV	Puerto La Cruz	66.21	233	LR	LR	04 22 16.2	
	comp=Z,48nm,19.4s,slow=34						
ASAJ	Asahikawa	66.21	16	LR	LR	04 26 47.6	
	comp=Z,35nm,18.3s,baz=342,slow=38						
LZH	Lanzhou	66.62	49	*e*P	P	03 56 08.8	+0.8
LZH				sP	sP	03 56 15.4	+3.0
LZH				pmax	pmax		
	comp=Z,14nm,0.7s						
LZH				LR	LR		
	comp=Z,280nm,13.7s						
LZH				LR	LR		
	comp=Z,250nm,14.3s						
LZH				LR	LR		
	comp=Z,360nm,15.9s						
MDP	Montagnes des	68.00	219	LR	LR	04 19 40.4	
	comp=Z,58nm,20.3s,baz=26,slow=30						
LPIG	La Paz	68.88	282	LR	LR	04 25 12.9	
	comp=Z,189nm,19.8s,baz=18,slow=35						
EVN	Everest	69.01	67	P	P	03 56 26.3	+2.5
SDV	Santo Domingo	69.21	238	LR	LR	04 22 23.8	
	comp=Z,126nm,21.9s,baz=68,slow=32						
XAN	Xi'an	69.91	46	P	P	03 56 23.9	-4.6
XAN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ROSC	El Rosal	74.17	241	LR	LR	04 25 43.2	
	comp=Z,90nm,21.4s,baz=80,slow=33						
NJ2	Nanjing	74.19	38	*e*P	P	03 56 53.2	-0.9
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
JNU	Nakatsue	75.48	27	LR	LR	04 32 28.5	
	comp=Z,223nm,18.1s,baz=333,slow=38						
BRDH	Bariadhala	75.49	65	LR	LR	04 31 51.7	
	comp=Z,146nm,18.1s,baz=304,slow=37						
CHTO	Chiang Mai	81.43	59	P	P	03 57 34.4	-0.2
CHTO	Chiang Mai	81.43	59	P	P	03 57 34.4	-0.2
CHTO				pmax	pmax		
	comp=Z,16nm,1.4s						
CMAR	Chiang Mai Arr	81.77	60	P	P	03 57 37.2	+0.9
	comp=Z,1.8nm,0.3s,baz=334,slow=4.4,SNR=9.0						
CMAR				LR	LR	04 38 17.0	
	comp=Z,33nm,19.9s,baz=5.0,slow=39						
	comp=Z,1.8nm,0.3s						
QIZ	Qiongzhong	84.42	49	P	P	03 57 48.0	-2.1
QIZ				S	S	04 08 19.8	+3.8
QIZ				LR	LR		
	comp=Z,170nm,15.1s						
QIZ				LR	LR		
	comp=Z,130nm,15.1s						
PALK	Pallekele	86.06	80	LR	LR	04 38 32.3	
	comp=Z,83nm,18.5s,baz=340,slow=37						
ATAH	Atahualpa	86.74	241	LR	LR	04 36 00.5	
	comp=Z,26nm,18.8s,baz=7.6,slow=35						
BDFB	Brasilia	87.24	210	LR	LR	04 32 39.6	
	comp=Z,103nm,18.7s,baz=341,slow=33						
PTLB	Pontes e Lacer	89.35	220	P	P	03 58 15.4	+1.5
PTLB				IAmb	IAmb	03 58 20.4	
	comp=Z,5.4nm,1.2s						
LSZ	Lusaka	89.96	137	LR	LR	04 42 00.9	
	comp=Z,171nm,18.7s,baz=338,slow=38						
SIV	San Ignacio	90.33	222	LR	LR	04 33 16.9	
	comp=Z,54nm,20.3s,baz=107,slow=32						
NNA	Nana	90.84	238	LR	LR	04 37 42.1	
	comp=Z,26nm,20.6s,baz=349,slow=35						
TSUM	Tsumeb	91.41	147	LR	LR	04 40 07.6	
	comp=Z,256nm,19.6s,baz=338,slow=36						
LPAZ	La Paz	92.42	228	LR	LR	04 38 43.1	
	comp=Z,22nm,18.5s,baz=16,slow=35						
PSI	Prapat	96.47	65	LR	LR	04 46 43.2	
	comp=Z,94nm,18.2s,baz=319,slow=38						
LBTB	Lobatse	98.72	142	LR	LR	04 46 27.3	
	comp=Z,149nm,18.6s,baz=347,slow=37						
CPUP	Villa Florida	99.46	216	LR	LR	04 39 02.4	
	comp=Z,22nm,19.2s,baz=272,slow=32						
DAV	Davao City (W)	99.82	38	LR	LR	04 49 08.5	
	comp=Z,65nm,18.4s,baz=354,slow=38						
TAOE	Nuku Hiva Isla	109.70	298	*e*LR	LR	04 36 10.1	
	comp=Z,194nm,32.5s						
PPT2	Papeete2	120.83	305	*e*LR	LR	04 41 07.2	
	comp=Z,157nm,28.5s						
PPT2				*e*LR	LR	04 41 14.4	
	comp=Z,132nm,29.8s						
TBI	Tubuai	126.22	303	*e*LR	LR	04 43 39.9	
	comp=Z,490nm,28.0s						
WRA	Warramunga Arr	127.90	35	PKP	PKPdf	04 04 22.3	-0.8
	comp=Z,1.0nm,1.0s,baz=352,slow=2.5,SNR=3.1						
ASAR	Alice Springs	131.42	36	PKP	PKiKP	04 04 30.1	-0.5
	comp=Z,0.5nm,0.8s,baz=2.3,slow=2.2,SNR=2.0						
DZM	Mont Dzumac	133.03	356	*e*LR	LR	04 46 49.2	
	comp=Z,157nm,27.3s						
MAW	Mawson	146.87	136	PKPbc	PKPab	04 04 58.8	-0.7
	comp=Z,7.3nm,0.7s,baz=328,slow=6.6,SNR=5.2						

HEL ***09*** *04:13:25.0±0.2, 67°.59N×33°.87E, h0^{km}, ML1.3, Explosion*

KOLA 09 04:13:24.8, 67°.66N×33°.74E, h0^{km}, ML1.5, Error ellipse: s-maj=2.2km s-min=1.1km az=140.0, Khibiny, mines Kirovsk, Yukspor, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA	Apatity	0.15	236	P	Pg	04 13 27.6	-0.2
APA0	Apatity Array	0.29	260	P	Pg	04 13 29.9	-0.5
APA0				S	Sg	04 13 33.8	-0.3
LVZ	Lovozero	0.42	55	P	Pg	04 13 32.2	-0.7
LVZ				S	Sg	04 13 38.0	-0.4
LVZ	Lovozero	0.42	55	PG	Pg	04 13 32.7	-0.2
	baz=225						
LVZ				SG	Sg	04 13 38.5	+0.2
KVDA	Kovda	1.03	200	P	Pg	04 13 43.3	-1.1
KVDA				S	Sg	04 13 56.9	-0.9
VRF	Varrio	1.58	275	PG	Pn	04 13 54.4	+0.3
VRF				SG	Sn	04 14 12.9	-2.2
VRF				MSG		04 14 14.0	
	comp=Z,2.8nm,0.2s						
TERR	Teriberka	1.63	17	P	Pn	04 13 53.8	-1.0
TERR				S	Sn	04 14 15.7	-0.8
OLKF	Oulanka, Finla	2.17	234	PG	Pb	04 14 04.0	-0.9
OLKF				MSG		04 14 29.3	
	comp=Z,1.0nm,0.2s						
OLKF				SG	Sb	04 14 31.9	-0.4
RAJF	Raja-Jooseppi	2.20	294	SN	Sn	04 14 29.5	-0.9
KU6	Riekki	2.23	225	PG	Pb	04 14 04.7	-1.3
	baz=42						
KU6				MSG		04 14 30.8	
	comp=Z,0.7nm,0.2s						
KU6				SG	Sb	04 14 33.3	-0.9
MSF	Maaselka	2.56	229	SG	Sb	04 14 43.6	+0.1
ARA0	ARCESS Array S	3.56	306	*e*P	Pn	04 14 21.3	+0.1
ARCES	ARCESS Array B	3.56	306	P	Pn	04 14 20.9	-0.4
ARCES				S	Sn	04 15 01.8	-2.1
ERTU	Ertsjaerv	4.64	262	PG	Pb	04 14 48.3	+1.3

HEL 09 04:13:58.5±0.5, 67°.90N×20°.05E, h0^{km}, ML1.3, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LANU	Lannavaara	0.75	78	PB	Pg	04 14 13.2	+0.4
LANU				SB	Sg	04 14 21.9	-0.7
SALU	Saltoluokta	0.79	229	*e*P	Pg	04 14 13.1	-0.5
KIF	Kilpisjarvi	1.14	14	PN	Pn	04 14 22.7	+1.0
KIF				MSG		04 14 34.3	
	comp=Z,2.2nm,0.2s						
KIF				SN	Sb	04 14 36.7	+0.2
HEF	Hetta	1.45	68	PN	Pn	04 14 24.8	-1.1
HEF	Hetta	1.45	68	PG	Pn	04 14 24.8	-1.1
HEF				MSG		04 14 42.0	
	comp=Z,1.3nm,0.2s						
HEF				SG	Sg	04 14 43.8	-1.0
PAJU	Pajala	1.48	125	PB	Pn	04 14 23.8	-2.5
	baz=305						
PAJU				SG	Sg	04 14 42.6	-3.1
ERTU	Ertsjaerv	1.59	147	PG	Pn	04 14 26.5	-1.4
ERTU				SG	Sn	04 14 46.6	-2.5
KTK1	Kautokeino	1.62	45	PG	Pn	04 14 26.5	-1.8
	baz=225						
KTK1				SN	Sn	04 14 49.5	-0.4
KLF	Kolari	1.65	112	PB	Pn	04 14 27.2	-1.4
	baz=298						
KLF				MSG		04 14 47.8	
	comp=Z,1.3nm,0.2s						
KLF				SG	Sn	04 14 48.8	-1.7
KALU	Kalix	2.43	146	PB	Pn	04 14 39.6	+0.3
KALU	Kalix	2.43	146	PN	Pn	04 14 39.6	+0.3
	baz=327						
KALU				SN	Sn	04 15 10.6	+0.8
TOF	Tornio	2.48	135	PN	Pn	04 14 40.8	+0.7
	baz=315						
TOF				MSG		04 15 11.8	
	comp=Z,1.1nm,0.2s						
TOF				SN	Sn	04 15 13.0	+1.9
ARA0	ARCESS Array S	2.58	48	SG	Sb	04 15 16.9	-0.9
RNF	Rovaniemi	2.66	116	PN	Pn	04 14 43.2	+0.7
RNF				SB	Sb	04 15 17.9	-2.1
KEV	Kevo	3.14	50	PG	Pb	04 14 54.8	-0.2
KEV				MSG		04 15 30.7	
	comp=Z,1.2nm,0.2s						
RAJF	Raja-Jooseppi	3.14	76	SG	Sb	04 15 33.6	-0.2
RANF	Ranua	3.26	122	SG	Sb	04 15 37.6	+0.4
VRF	Varrio	3.63	88	SN	Sn	04 15 39.5	+0.1
OUL	Oulu	3.67	138	PG	Pb	04 15 05.6	+1.5
OLKF	Oulanka, Finla	3.98	109	PN	Pn	04 15 01.3	+0.6
OLKF				SB	Sb	04 15 57.3	-0.8
UMAU	Umeaa	4.04	176	SG	Sg	04 16 04.6	-3.6

IDC ***09*** *04:26:23.8±1.3, 39°.12N×140°.29E, h124^{km}±12^{km}, mb3.3/7, mbtmp3.7/9, Error ellipse: s-maj=28.2km s-min=10.5km az=116.0*

JMA ***09*** *04:26:24.4±0.1, 38°.9N±0°.4×140°.5E±0°.6, h141^{km}, MV3.4/40, SOUTHERN AKITA PREF*

ISC 09 04:26:24.5±0.8**, 38°.93N**±0°.04×**140°.50E**±0°.06**, h140**^{km}±5^{km}**, n36,** σ**1^{s}.01**/52**, mb3.4**/7**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYK	Kaneyama	0.11	264	P	Pn	04 26 43.6	+0.2
JYK				*e*S	Sn	04 26 57.7	0.0
JOFO	Osakifurukawao	0.46	135	P	Pn	04 26 44.7	+0.2
JOFO				*e*S	Sn	04 27 00.1	+0.5
JRG	Rokugo	0.48	12	P	Pn	04 26 45.1	+0.5
JRG				*e*S	Sn	04 27 00.6	+0.7
JMK	Ichinoseki	0.56	87	P	Pn	04 26 45.0	-0.1
JMK				*e*S	Sn	04 27 00.6	0.0
JOU	Okura	0.58	167	P	Pn	04 26 45.1	-0.2
JOU				*e*S	Sn	04 27 00.7	-0.1
JYA	Atsumi	0.70	242	P	Pn	04 26 46.0	0.0
JYS	Shirataka	0.79	206	P	Pn	04 26 46.3	-0.4
JYS				*e*S	Sn	04 27 03.1	-0.2
JIO	Ouri	0.81	125	*i* P	Pn	04 26 46.1	-0.6
JIO				*e*S	Sn	04 27 02.1	-1.6
JOM	Ohasama	0.82	48	P	Pn	04 26 47.3	+0.5
JOM				*e*S	Sn	04 27 04.3	+0.5
JMM	Marumori	1.09	168	P	Pn	04 26 48.3	-0.8
JMM	Marumori	1.09	168	*i* P	Pn	04 26 48.4	-0.8
JMM				*e*S	Sn	04 27 06.2	-1.6
JAW	Awa shima	1.09	245	P	Pn	04 26 49.2	0.0
JAW				*e*S	Sn	04 27 08.3	+0.5
JOTO	OTAMA OYAMA	1.37	186	P	Pn	04 26 51.4	-0.6
JOTO				*e*S	Sn	04 27 12.1	-0.9
JNS	Sasagawa	1.45	220	P	Pn	04 26 52.3	-0.5
JNS				*e*S	Sn	04 27 13.1	-1.2
JANG	Nango	1.64	28	*i* P	Pn	04 26 55.4	+0.6
JANG				*e*S	Sn	04 27 18.4	+0.3
JTM	Tenmabayashi	1.91	13	P	Pn	04 26 58.7	+0.8
JSD	Sado	1.97	244	P	Pn	04 26 58.1	-0.6
JSD	Sado	1.97	244	*e*P	Pn	04 26 58.1	-0.6
JSD				*e*S	Sn	04 27 23.7	-1.1
MAJO	Matsushiro	3.00	218	P	Pn	04 27 11.8	+0.3
MJAR	Matsushiro Arr	3.00	218	P	Pn	04 27 11.3	-0.2
	12nm,0.4s,baz=28,slow=13,SNR=40						
MJAR				S	Sn	04 27 47.5	-0.2
	4.4nm,0.8s,baz=11,slow=20,SNR=6.2						
ERM	Erimo	3.69	32	P	Pn	04 27 19.5	-0.8
ERM	Erimo	3.69	32	S	Sn	04 28 02.7	-1.0
JEM	Erimo	3.69	32	P	Pn	04 27 19.9	-0.5
JEM	Erimo	3.69	32	S	Sn	04 28 02.8	-0.9
JGF	Kuroka	4.16	218	P	Pn	04 27 26.7	0.0
JGF	Kuroka	4.16	218	S	Sn	04 28 15.6	+0.6
INU	Inuyama	4.53	219	P	Pn	04 27 32.0	+0.5
ASAJ	Asahikawa	5.42	16	P	Pn	04 27 41.2	-2.0
	3.6nm,0.3s,baz=211,slow=15,SNR=17						
ASAJ				S	Sn	04 28 41.0	-3.7
	6.3nm,0.4s,baz=47,slow=33,SNR=6.1						
JHJ2	Mitsune	5.83	186	P	Pn	04 27 49.2	+0.3
MKAR	Makanchi Array	42.52	300	P	P	04 34 04.8	-1.2
	0.5nm,0.7s,baz=90,slow=9.2,SNR=3.8						
	0.5nm,0.7s						
KURBB	Kurchatov Arra	44.28	306	P	P	04 34 19.1	-0.9
	0.6nm,0.4s,baz=81,slow=7.9,SNR=5.6						
	0.6nm,0.4s						
ILAR	Eielson Array	48.29	33	P	P	04 34 51.2	+0.1
	0.5nm,0.6s,baz=273,slow=5.7,SNR=10.0						
	0.5nm,0.6s						
WRA	Warramunga Arr	58.84	187	P	P	04 36 11.6	+3.2
	0.3nm,0.6s,baz=2.2,slow=7.1,SNR=1.8						
	0.3nm,0.6s						
FINES	FINESS Array B	66.81	332	P	P	04 36 59.7	-0.9
	1.8nm,1.0s,baz=28,slow=6.3,SNR=2.1						

	1.8nm,1.0s						
HFS	**Hagfors**	**72.07**	**335**	P	**P**	**04 37 32.6**	**-0.3**
	0.5nm,0.4s,baz=32,slow=6.0,SNR=5.4						
	0.5nm,0.4s						
TXAR	**Lajitas Array**	**89.53**	**52**	P	**P**	**04 39 06.3**	**+0.1**
	0.1nm,0.6s,baz=347,slow=6.0,SNR=1.9						
	0.1nm,0.6s						

HEL 09 04:28:23.7±0.4**,67°.85N**×**19°.95E,h0^{km},ML1.1, Explosion,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LANU	**Lannavaara**	**0.80**	**75**	PB	Pb	04 28 39.7	-0.7
LANU				SG	Sg	04 28 48.4	-0.8
KIF	**Kilpisjarvi**	**1.20**	**15**	*e*P	Pn	04 28 47.6	-0.1
KIF	**Kilpisjarvi**	**1.20**	**15**	PN	Pn	04 28 47.7	-0.1
	baz=196						
KIF				MSG		04 29 01.3	
	comp=Z,1.9nm,0.2s						
KIF				SB	Sb	04 29 03.1	-0.3
PAJU	**Pajala**	**1.47**	**123**	PG	Pn	04 28 50.1	-1.4
PAJU				SG	Sg	04 29 08.5	-2.5
HEF	**Hetta**	**1.50**	**66**	PG	Pn	04 28 50.8	-1.0
HEF				MSG		04 29 08.8	
	comp=Z,1.2nm,0.2s						
HEF				SG	Sg	04 29 09.3	-2.5
ERTU	**Ertsjaerv**	**1.56**	**145**	PN	Pn	04 28 53.1	+0.4
ERTU				SN	Sn	04 29 13.1	-0.5
KLF	**Kolari**	**1.66**	**110**	PG	Pn	04 28 53.9	-0.1
	baz=291						
KLF				MSG		04 29 13.2	
	comp=Z,0.8nm,0.2s						
KLF				SN	Sn	04 29 15.3	-0.7
JETT	**Jettan, Norway**	**1.72**	**5**	*e*P	Pn	04 28 46.2	-8.8
KALU	**Kalix**	**2.41**	**144**	SG	Sb	04 29 37.7	-0.3
TOF	**Tornio**	**2.47**	**134**	PG	Pn	04 29 06.8	+1.6
TOF				SN	Sn	04 29 33.6	-2.3
TOF				MSG		04 29 36.8	
	comp=Z,0.7nm,0.2s						
ARA0	**ARCESS Array S**	**2.64**	**48**	SB	Sn	04 29 41.8	+1.6
RNF	**Rovaniemi**	**2.67**	**115**	PB	Pn	04 29 09.7	+1.9
RNF				SB	Sn	04 29 42.9	+2.1
OLKF	**Oulanka, Finla**	**4.00**	**108**	SN	Sn	04 30 14.3	+0.7
MSF	**Maaselka**	**4.08**	**114**	SN	Sn	04 30 15.2	-0.4

IDC 09 04:30:33.7±8.4**,5°.61S**×**149°.86E,h124^{km}**±54^{km}**,mb3.0**/2**, mbtmp3.5**/3**,Error ellipse: s-maj=150.9km s-min=68.2km az=112.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.63**	**215**	P	Pn	04 31 41.6	-0.1
	17nm,0.8s,baz=41,slow=11,SNR=2.3						
PMG				S	Sn	04 32 29.9	-4.7
	20nm,0.9s,baz=276,slow=23,SNR=2.3						
WRA	**Warramunga Arr**	**20.76**	**225**	P	P	04 35 05.2	+0.3
	0.5nm,0.6s,baz=52,slow=10,SNR=4.8						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**23.63**	**219**	P	P	04 35 33.7	-0.1
	1.2nm,0.7s,baz=49,slow=9.0,SNR=8.9						
	1.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**147.73**	**286**	PKPbc	PKPbc	04 50 04.2	-0.8
	0.4nm,0.9s,baz=52,slow=4.5,SNR=3.7						

HVO ***09*** *04:31:20.6±0.6, 19°.419N±0°.007×155°.617W±0°.008, h-1^{km}±5^{km}, ML2.4/34, ML2.5/34(NEIC), Error ellipse: s-maj=1.2km s-min=0.9km az=221.0*

NEIC 09 04:31:21.1±0.3**,19°.416N**±0°.007×**155°.609W**±0°.007**, h5^{km}**±1^{km}**,Error ellipse: s-maj=2.5km s-min=1.2km az=304.0,Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MWH	**Mokuaweoweo**	**0.07**	**9**		Pg	04 31 22.7	-0.5
MWH	**Mokuaweoweo**	**0.07**	**9**		Sg	04 31 24.4	-0.2
MWH	**Mokuaweoweo**	**0.07**	**9**	IAML		04 31 23.5	
	comp=N,774nm,0.3s						
MWH				IAML		04 31 24.0	
	comp=E,932nm,0.4s						
ALEP	**Alea Permanent**	**0.13**	**345**		Pg	04 31 23.8	-0.1
ALEP					Sg	04 31 26.2	+0.4
AIN	**Ainahou**	**0.15**	**107**		Pg	04 31 24.5	+0.4
AIN					Sg	04 31 27.5	+1.2
AIN	**Ainahou**	**0.15**	**107**	IAML		04 31 28.2	
	comp=N,2µm,0.4s						
AIN				IAML		04 31 29.2	
	comp=E,3µm,0.3s						
KHU	**Kahuku**	**0.17**	**182**		Pg	04 31 24.5	-0.1
KHU					Sg	04 31 27.3	+0.5
KHU	**Kahuku**	**0.17**	**182**	IAML		04 31 28.0	
	comp=E,684nm,0.6s						
KHU				IAML		04 31 28.4	
	comp=N,636nm,0.4s						
HMH	**Humu‘ula Sheep**	**0.22**	**33**		Pg	04 31 25.6	0.0
HMH					Sg	04 31 29.0	+0.5
HMH	**Humu‘ula Sheep**	**0.22**	**33**	IAML		04 31 29.6	
	comp=E,439nm,0.6s						
HMH				IAML		04 31 29.7	
	comp=N,627nm,0.4s						
MLH	**Mauna Loa**	**0.22**	**70**		Pg	04 31 25.8	+0.3
MLH					Sg	04 31 29.8	+1.3
MLH	**Mauna Loa**	**0.22**	**70**	IAML		04 31 30.3	
	comp=N,1µm,0.6s						
MLH				IAML		04 31 30.3	
	comp=E,558nm,0.3s						
HTC	**Hot Caves**	**0.27**	**132**		Pg	04 31 26.4	0.0
WRMHI	**West Rim**	**0.29**	**92**		Pg	04 31 26.8	0.0
WRMHI					Sg	04 31 32.0	+1.3
SDHHI	**Sand Hill**	**0.30**	**95**		Pg	04 31 26.9	-0.1
SDHHI					Sg	04 31 31.5	+0.6
UWE	**Uwekahuna**	**0.30**	**89**		Pg	04 31 27.0	0.0
UWE					Sg	04 31 32.0	+1.1
UWE	**Uwekahuna**	**0.30**	**89**	IAML		04 31 35.4	
	comp=E,919nm,0.5s						
UWE				IAML		04 31 37.2	
	comp=N,1µm,0.5s						
CPH	**Captain Cook**	**0.30**	**284**		Pg	04 31 27.4	+0.5
OBL	**Observatory Le**	**0.31**	**90**		Pg	04 31 27.0	-0.1
OBL					Sg	04 31 32.4	+1.2
HLP	**Hilina Pali**	**0.31**	**113**		Pg	04 31 27.1	0.0
HLP					Sg	04 31 32.4	+1.2
HLP	**Hilina Pali**	**0.31**	**113**	IAML		04 31 34.6	
	comp=N,864nm,0.7s						
HLP				IAML		04 31 34.7	
	comp=E,1µm,0.6s						
UWB	**Uwekahuna Bluf**	**0.31**	**88**		Pg	04 31 27.1	-0.1
UWB					Sg	04 31 31.8	+0.4
RSD	**Rainshed**	**0.32**	**81**		Sg	04 31 32.8	+1.3
RIM	**Rim**	**0.32**	**94**		Pg	04 31 27.2	-0.1
RIM					Sg	04 31 32.1	+0.6
SBLHI	**Steaming Bluff**	**0.32**	**88**		Pg	04 31 27.2	-0.2
SBLHI					Sg	04 31 32.6	+0.9
KKO	**Keanakako'i**	**0.32**	**93**		Pg	04 31 27.3	-0.1
KKO					Sg	04 31 31.8	+0.1
HATHI	**Halema‘uma‘u T**	**0.33**	**89**		Pg	04 31 27.3	-0.2
HATHI					Sg	04 31 32.2	+0.4
HATHI	**Halema‘uma‘u T**	**0.33**	**89**	IAML		04 31 37.5	
	comp=E,694nm,0.5s						
HATHI				IAML		04 31 38.2	
	comp=N,594nm,0.7s						
BYL	**Byron's Ledge**	**0.33**	**91**		Pg	04 31 27.5	-0.1
BYL					Sg	04 31 32.3	+0.4
BYL	**Byron's Ledge**	**0.33**	**91**	IAML		04 31 34.0	
	comp=N,506nm,0.6s						
BYL				IAML		04 31 39.0	
	comp=E,883nm,0.5s						
HUH	**Hualalai**	**0.34**	**321**		Pg	04 31 28.7	+0.8
HUH	**Hualalai**	**0.34**	**321**	IAML		04 31 35.9	
	comp=N,750nm,0.3s						
HUH				IAML		04 31 38.6	
	comp=E,741nm,0.3s						
POHA	**Pohakuloa**	**0.35**	**12**		Pg	04 31 27.8	-0.1
POHA					Sg	04 31 32.5	0.0
POHA	**Pohakuloa**	**0.35**	**12**	IAML		04 31 36.9	
	comp=E,217nm,0.6s						
POHA				IAML		04 31 39.3	
	comp=E,417nm,0.8s						
PUH	**Pauahi**	**0.37**	**96**		Pg	04 31 27.9	-0.4
PUH					Sg	04 31 33.2	-0.1
PUH	**Pauahi**	**0.37**	**96**	IAML		04 31 38.6	
	comp=N,378nm,0.6s						
PUH				IAML		04 31 41.5	
	comp=E,393nm,0.4s						
KNHH	**Kane Nui o Ham**	**0.42**	**95**		Pg	04 31 28.6	-0.6
KKH	**Kailua Kona**	**0.46**	**302**		Pg	04 31 29.9	0.0
KKH					Sg	04 31 36.8	+0.9
STCH	**Steam Cracks**	**0.46**	**94**		Pg	04 31 29.3	-0.6
STCH					Sg	04 31 35.5	-0.4
NPOC	**North of Pu‘u**	**0.47**	**93**		Pg	04 31 29.5	-0.7
NPOC					Sg	04 31 35.7	-0.7
JCUZ	**Jacuzzi**	**0.48**	**94**		Pg	04 31 29.7	-0.7
JCUZ					Sg	04 31 36.6	0.0
JOKA	**Jonika Flow**	**0.57**	**88**		Pg	04 31 31.3	-0.8
JOKA					Sg	04 31 39.6	+0.1
HPAH	**Hawaii Prepara**	**0.62**	**352**		Pg	04 31 32.2	-0.8
HPAH					Sg	04 31 40.3	-0.8
KHLH	**Kahului Airpor**	**1.66**	**333**		Pn	04 31 46.2	-4.7

IDC ***09*** *04:40:10.8±1.1, 10°.14S×108°.39E, h0^{km}, mb3.8/8, mbtmp3.9/11, ML4.0/3, Error ellipse: s-maj=39.4km s-min=17.0km az=55.0*

NEIC ***09*** *04:40:11.8±2.4, 10°.27S±0°.08×108°.35E±0°.06, h10^{km}±1^{km}, mb4.4/6, Error ellipse: s-maj=13.4km s-min=10.6km az=188.0*

DJA ***09*** *04:40:14.4±0.4, 10°S±3°×10°8E±°, h10^{km}, M4.6/18, mB5.3/1, mb4.9/5, MLv4.4/18, Mw(mB)4.7/1*

ISC 09 04:40:13.5±0.6**,10°.12S**±0°.06×**108°.37E**±0°.05**,h25^{km},n54,** σ1^{s}.**65**/58**,mb3.9**/9**,South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMJI	**Cimerak**	**2.32**	**2**	P	**Pn**	**04 40 49.5**	**-0.6**
CMJI				S	**Sn**	**04 41 13.4**	**-4.5**
XMI	**Christmas Isla**	**2.66**	**263**	P	**Pn**	**04 40 54.7**	**-0.2**
XMIS	**Christmas Isla**	**2.70**	**262**		**Pn**	**04 40 54.9**	**-0.5**
XMIS	**Christmas Isla**	**2.70**	**262**	P	**Pn**	**04 40 54.9**	**-0.5**
BBJI	**Bungbulang**	**2.73**	**345**	P	**Pn**	**04 40 55.8**	**-0.1**
YOGI	**Yogyakarta**	**2.97**	**40**	P	**Pn**	**04 40 58.9**	**-0.2**
CNJI	**Cibinong**	**3.05**	**336**	P	**Pn**	**04 41 00.3**	**+0.1**
CNJI				S	**Sn**	**04 41 33.6**	**-2.3**
UGM	**Wanagama**	**3.05**	**44**		**Pn**	**04 41 00.5**	**+0.2**
UGM	**Wanagama**	**3.05**	**44**	P	**Pn**	**04 41 00.7**	**+0.4**
UGM	**Wanagama**	**3.05**	**44**	P	**Pn**	**04 41 00.6**	**+0.3**
UGM				S	**Sn**	**04 41 34.1**	**-1.9**
LEM	**Lembang**	**3.35**	**347**	Pn	**Pn**	**04 41 06.5**	**+2.0**
	13nm,0.3s,baz=193,slow=20,SNR=9.6						
LEM				Sn	**Sn**	**04 41 47.1**	**+3.5**
	20nm,0.3s,baz=189,slow=22,SNR=4.8						
	48nm,0.5s						
LEM	**Lembang**	**3.35**	**347**	P	**Pb**	**04 41 08.7**	**-3.7**
PCJI	**Pacitan**	**3.37**	**56**	P	**Pn**	**04 41 04.0**	**-0.5**
WOJI	**Wonogiri, Jawa**	**3.39**	**48**	P	**Pn**	**04 41 05.4**	**+0.5**
WOJI				S	**Sn**	**04 41 41.1**	**-3.2**
SKJI	**Sukabumi**	**3.57**	**330**	P	**Pn**	**04 41 08.1**	**+0.7**
SKJI				S	**Sn**	**04 41 46.7**	**-2.2**
SMRI	**Semarang**	**3.67**	**34**		**Pn**	**04 41 10.7**	**+2.0**
SMRI	**Semarang**	**3.67**	**34**	P	**Pn**	**04 41 11.1**	**+2.3**
SMRI	**Semarang**	**3.67**	**34**	P	**Pn**	**04 41 09.0**	**+0.2**
SMRI				S	**Sn**	**04 41 49.9**	**-1.4**
NGJI	**Ngawi**	**4.10**	**48**	P	**Pn**	**04 41 15.8**	**+1.2**
CGJI	**Cibinong**	**4.37**	**323**	P	**Pn**	**04 41 19.7**	**+1.3**
TBJI	**Tambak Boyo**	**4.75**	**47**	P	**Pn**	**04 41 23.9**	**+0.3**
GRJI	**Gresik**	**5.16**	**52**	P	**Pn**	**04 41 30.4**	**+1.2**
GMJI	**Gumukmas**	**5.33**	**70**	P	**Pn**	**04 41 32.5**	**+0.9**
JAGI	**Jajag, Banyuwa**	**5.94**	**74**		**Pn**	**04 41 40.6**	**+0.7**
JAGI	**Jajag, Banyuwa**	**5.94**	**74**	P	**Pn**	**04 41 41.0**	**+1.1**
JAGI	**Jajag, Banyuwa**	**5.94**	**74**	P	**Pn**	**04 41 40.8**	**+0.9**
	0.6nm3µm132nm,0.6s						
SRBI	**Singaraja**	**7.05**	**74**	P	**Pn**	**04 41 55.6**	**+0.4**
	0.3nm59nm,0.8s						
MNAI	**Manna**	**7.84**	**316**	Pn	**Pn**	**04 42 05.3**	**-0.8**
MNAI	**Manna**	**7.84**	**316**	P	**Pn**	**04 42 06.0**	**-0.2**
KAPI	**Kappang**	**12.37**	**67**	Pn	**Pn**	**04 43 09.5**	**+1.4**
KAPI	**Kappang**	**12.37**	**67**	Pn	**Pn**	**04 43 09.7**	**+1.6**
	0.6nm,0.3s,baz=233,slow=20,SNR=3.6						
	4.1nm,0.5s						
GIRL	**Giralia**	**13.66**	**156**	Pn	**Pn**	**04 43 22.1**	**-3.7**
MBWA	**Marble Bar**	**15.49**	**136**	Pn	**Pn**	**04 43 47.9**	**-2.6**
MBWA				IAmb	IAmb	04 44 05.1	
	comp=Z,26nm,1.4s						
PSA00	**Pilbara Seismi**	**15.85**	**137**	Pn	**Pn**	**04 43 52.0**	**-3.1**
PSA00				IAmb	IAmb	04 44 15.8	
	comp=Z,61nm,1.5s						
FITZ	**Fitzroy Crossi**	**18.52**	**117**		**Pn**	**04 44 28.1**	**-0.4**
FITZ	**Fitzroy Crossi**	**18.52**	**117**	P	**Pn**	**04 44 29.0**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=307,slow=11,SNR=26						
	comp=Z,1.4nm,0.3s						
KNRA	**Kununurra**	**20.62**	**108**	P	**P**	**04 44 51.2**	**0.0**
KNRA				IAmb	IAmb	04 44 55.8	
	comp=Z,21nm,1.5s						
WRA	**Warramunga Arr**	**26.88**	**114**	P	**P**	**04 45 52.7**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=286,slow=11,SNR=5.9						
	comp=Z,0.9nm,0.8s						
ASAR	**Alice Springs**	**27.84**	**122**	P	**P**	**04 46 02.2**	**+1.0**
	comp=Z,0.4nm,0.4s,baz=297,slow=9.9,SNR=5.6						
	comp=Z,0.4nm,0.4s						
H08S2	**Diego Garcia H**	**35.52**	**271**	T	T	05 25 36.1	
	baz=98,slow=75						
H08S3	**Diego Garcia H**	**35.53**	**271**	T	T	05 25 24.0	
	baz=98						
H08S1	**Diego Carcia H**	**35.54**	**271**	T	T	05 25 33.0	
	baz=98,slow=75						
SONM	**Songino Array**	**57.72**	**358**	P	**P**	**04 50 03.4**	**+1.2**
	comp=Z,0.8nm,0.5s,baz=177,slow=5.2,SNR=4.0						
	comp=Z,0.8nm,0.5s						
MKAR	**Makanchi Array**	**61.26**	**340**	P	**P**	**04 50 26.6**	**0.0**
MKAR	**Makanchi Array**	**61.26**	**340**	P	**P**	**04 50 27.7**	**+1.1**
	comp=Z,0.6nm,0.6s,baz=145,slow=7.7,SNR=6.6						
	comp=Z,0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**65.83**	**340**	P	**P**	**04 50 57.8**	**+1.2**
	comp=Z,0.4nm,0.4s,baz=146,slow=6.4,SNR=2.9						
	comp=Z,0.4nm,0.4s						
BVAR	**Borovoye Array**	**70.75**	**337**	P	**P**	**04 51 29.1**	**+1.6**
	comp=Z,0.8nm,0.5s,baz=134,slow=8.5,SNR=5.2						
	comp=Z,0.8nm,0.5s						
AB31	**Akbulak array**	**72.77**	**329**	P	**P**	**04 51 41.3**	**+1.7**
AB31				IAmb	IAmb	04 51 54.5	
	comp=Z,2.8nm,0.8s						
ABKAR	**Akbulak array**	**72.77**	**329**	P	**P**	**04 51 41.3**	**+1.6**
PEA0B	**Petropavlovsk-**	**75.66**	**28**	P	**P**	**04 51 57.4**	**+0.9**
PETK	**Petropavlovsk-**	**75.66**	**28**	P	**P**	**04 51 57.3**	**+0.8**
PETK	**Petropavlovsk-**	**75.66**	**28**	P	**P**	**04 51 57.1**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=228,slow=7.4,SNR=2.5						
	comp=Z,1.1nm,0.7s						
QSPA	**South Pole Qui**	**79.89**	**180**	P	**P**	**04 52 21.9**	**+1.9**
	comp=Z,1.0nm,0.9s,baz=293,slow=7.7,SNR=2.1						
	comp=Z,1.0nm,0.9s						
TXAR	**Lajitas Array**	**144.48**	**53**	PKP	**PKPdf**	**04 59 49.4**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=274,slow=1.5,SNR=9.7						

IDC ***09*** *04:48:37.6±0.8, 15°.24S×174°.31W, h0^{km}, mb3.9/8, mbtmp3.9/8, MS4.0/41, Error ellipse: s-maj=34.6km s-min=21.2km az=128.0*

GCMT ***09*** *04:48:43.0±0.3, 15°.13S±0°.02×174°.10W±0°.02, h16^{km}±1^{km}, MW4.9/96, Moment Tensor Solution. s21,c24; s96,c132; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.23±.11; $M_{\theta\theta}$0.03±.13; $M_{\phi\phi}$0.20±.10; $M_{r\theta}$-0.30±.34; $M_{\theta\phi}$2.88±.12; $M_{\phi r}$1.34±.34; Best double couple: $M_0$3.19800×10^{16} NP1:ϕ_s88.00000°,δ65.00000°,λ-6.00000°. NP2: ϕ_s180.00000°,δ84.00000°,λ-155.00000°. Principal axes: T 3.1740, Plg13.0000°, Azm312.0000°; N 0.0490, Plg64.0000°, Azm192.0000°; P -3.2230, Plg22.0000°, Azm47.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 09 04:48:33.8±1.0**,15°.6S**±0°.2×**173°.2W**±0°.1**,h10^{km},n53,** σ**3^{s}.48**/9**,mb3.9**/8**,MS4.0**/39**,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**8.70**	**254**	LR	LR	04 53 08.6	
	comp=Z,2µm,18.1s,baz=55,slow=35						
RAR	**Rarotonga**	**13.89**	**116**	LR	LR	04 56 35.3	
	comp=Z,324nm,19.1s,baz=302,slow=32						
DZM	**Mont Dzumac**	**20.35**	**248**	*e*S	**S**	**04 56 55.9**	**-3.1**
	1µm,25.6s						
DZM				*e*LR	LR	04 58 06.9	
	1µm,25.9s						
DZM	**Mont Dzumac**	**20.35**	**248**	LR	LR	04 59 23.2	
	comp=Z,510nm,19.3s,baz=60,slow=33						
PPT	**Papeete**	**22.69**	**98**	LR	LR	05 01 33.3	
	comp=Z,81nm,18.9s,baz=290,slow=32						
PPT2	**Papeete2**	**22.69**	**98**	*e*S	**S**	**04 57 42.0**	**-2.4**
	2µm,26.2s						
PPT2				*e*LR	LR	04 58 02.9	
	124nm,29.0s						
PPT2				*e*LR	LR	04 58 18.0	
	180nm,28.0s						
TBI	**Tubuai**	**23.62**	**113**	*e*S	**S**	**04 57 56.8**	**-3.1**
	5µm,26.8s						
TBI				*e*LR	LR	04 59 47.4	
	2µm,28.0s						
URZ	**Urewera**	**24.18**	**199**	P	**P**	**04 53 56.2**	**+5.8**
	16nm,1.0s,baz=280,slow=2.4,SNR=3.9						
URZ				LR	LR	05 01 57.2	
	comp=Z,843nm,19.9s,baz=92,slow=33						
	16nm,1.0s						
HNR	**Honiara**	**26.94**	**280**	LR	LR	05 02 37.7	
	comp=Z,505nm,21.3s,baz=130,slow=33						
TAOE	**Nuku Hiva Isla**	**32.91**	**82**	*e*LR	LR	05 04 06.3	
	228nm,22.4s						
H11S2	**WAKE ISLAND Hy**	**39.23**	**329**	T	T	05 36 40.8	
	baz=149,slow=76,SNR=116						
H11S3	**WAKE ISLAND Hy**	**39.24**	**329**	T	T	05 36 46.2	
	baz=149,slow=76,SNR=57						
H11S1	**WAKE ISLAND Hy**	**39.24**	**329**	T	T	05 36 42.1	
	baz=149,slow=76,SNR=81						
H11N3	**WAKE ISLAND Hy**	**40.17**	**330**	T	T	05 37 58.8	
	baz=150,slow=76,SNR=41						
H11N1	**WAKE ISLAND Hy**	**40.18**	**330**	T	T	05 37 59.9	
	baz=150,slow=76,SNR=68						
H11N2	**WAKE ISLAND Hy**	**40.19**	**330**	T	T	05 37 59.5	
	baz=150,slow=76,SNR=45						
STKA	**Stephens Creek**	**44.16**	**240**	LR	LR	05 14 33.8	
	comp=Z,174nm,18.2s,baz=41,slow=36						
JAY	**Jayapura**	**47.25**	**281**	LR	LR	05 14 38.4	
	comp=Z,135nm,19.3s,baz=8.0,slow=34						
WRA	**Warramunga Arr**	**50.03**	**257**	P	**P**	**04 57 26.4**	**-2.7**
	0.8nm,0.8s,baz=91,slow=7.9,SNR=13						
WRA				LR	LR	05 16 52.4	
	comp=Z,163nm,19.4s,baz=20,slow=35						
	0.8nm,0.8s						
ASAR	**Alice Springs**	**50.28**	**252**	P	**P**	**04 57 28.9**	**-1.9**
	2.3nm,0.7s,baz=87,slow=8.4,SNR=11						
ASAR				LR	LR	05 16 29.2	
	comp=Z,183nm,21.3s,baz=90,slow=34						
	2.3nm,0.7s						
DAV	**Davao City (W)**	**64.70**	**286**	LR	LR	05 25 33.9	
	comp=Z,109nm,18.1s,baz=160,slow=35						
NWAO	**Narrogin (SRO)**	**64.74**	**241**	LR	LR	05 26 34.3	
	comp=Z,252nm,18.1s,baz=79,slow=36						
KAPI	**Kappang**	**66.61**	**271**	LR	LR	05 27 51.7	
	comp=Z,26nm,18.2s,baz=100,slow=36						
SHEM	**Shemya Is, Ala**	**68.90**	**352**	LR	LR	05 24 12.0	
	comp=Z,67nm,20.7s,baz=129,slow=31						
ASAJ	**Asahikawa**	**71.81**	**328**	LR	LR	05 25 13.1	
	comp=Z,83nm,21.2s,baz=178,slow=31						
JNU	**Nakatsue**	**72.08**	**313**	LR	LR	05 25 28.6	
	comp=Z,80nm,20.9s,baz=140,slow=31						
PETK	**Petropavlovsk-**	**72.86**	**342**	P	**P**	**05 00 04.1**	**+1.4**
	1.1nm,0.7s,baz=160,slow=5.4,SNR=3.3						
PETK				LR	LR	05 24 50.0	
	comp=Z,34nm,21.2s,baz=148,slow=30						
	1.1nm,0.7s						
PFO	**Pinyon Flats O**	**72.86**	**47**	LR	LR	05 27 54.9	
	comp=Z,187nm,18.0s,baz=230,slow=32						
LPIG	**La Paz**	**72.93**	**58**	LR	LR	05 24 19.3	
	comp=Z,129nm,20.2s,baz=196,slow=29						
NVAR	**Mina Array Bea**	**74.30**	**42**	P	P	05 00 20.9	+9.1
	0.9nm,0.8s,baz=247,slow=7.8,SNR=5.5						
NVAR				LR	LR	05 26 07.6	
	comp=Z,115nm,19.6s,baz=214,slow=30						
	0.9nm,0.8s						
QSPA	**South Pole Qui**	**74.48**	**180**	P	P	05 00 19.3	+7.0
	2.0nm,1.0s,baz=16,slow=1.2,SNR=7.1						
QSPA				LR	LR	05 28 07.4	
	comp=Z,122nm,21.4s,baz=43,slow=32						
	2.0nm,1.0s						
KDAK	**Kodiak Island**	**75.04**	**11**	LR	LR	05 27 07.4	
	comp=Z,64nm,20.1s,baz=201,slow=31						
USRK	**Ussuriysk Ar.**	**77.66**	**323**	LR	LR	05 27 20.1	
	comp=Z,123nm,21.9s,baz=119,slow=30						
BBB	**Bella Bella**	**77.93**	**26**	LR	LR	05 27 23.7	
	comp=Z,94nm,20.2s,baz=234,slow=30						
MA2	**Magadan**	**80.39**	**342**	LR	LR	05 32 30.2	
	comp=Z,48nm,19.6s,baz=126,slow=33						
TXAR	**Lajitas Array**	**80.51**	**56**	P	P	05 00 55.6	+8.9
	0.5nm,1.0s,baz=258,slow=4.8,SNR=4.4						
TXAR				LR	LR	05 29 11.2	
	comp=Z,72nm,20.3s,baz=252,slow=30						
	0.5nm,1.0s						
NEW	**Newport**	**80.71**	**34**	LR	LR	05 30 53.4	
	comp=Z,93nm,19.1s,baz=213,slow=31						
ANMO	**Albuquerque**	**80.73**	**50**	LR	LR	05 29 28.0	
	comp=Z,225nm,20.9s,baz=324,slow=30						
KLR	**Kul'dur**	**80.78**	**327**	LR	LR	05 31 26.9	
	comp=Z,45nm,21.5s,baz=202,slow=32						
DLBC	**Dease Lake**	**81.77**	**21**	LR	LR	05 28 57.6	
	comp=Z,125nm,21.7s,baz=268,slow=30						
PDAR	**Pinedale Array**	**82.23**	**42**	LR	LR	05 33 15.6	
	comp=Z,62nm,18.2s,baz=224,slow=32						
ILAR	**Eielson Array**	**82.56**	**11**	P	P	05 01 01.5	+4.9
	0.3nm,0.8s,baz=181,slow=4.5,SNR=4.5						
ILAR				LR	LR	05 31 07.2	
	comp=Z,36nm,20.0s,baz=209,slow=31						
	0.3nm,0.8s						
PMSA	**Palmer Station**	**83.93**	**156**	LR	LR	05 36 14.0	
	comp=Z,68nm,18.1s,baz=230,slow=34						
INK	**Inuvik**	**88.37**	**14**	LR	LR	05 36 44.4	
	comp=Z,34nm,18.3s,baz=234,slow=33						
PLCA	**Paso Flores**	**89.23**	**132**	LR	LR	05 33 19.3	
	comp=Z,98nm,20.8s,baz=258,slow=30						
YKA	**Yellowknife Ar**	**90.16**	**23**	LR	LR	05 33 49.2	
	comp=Z,74nm,21.2s,baz=276,slow=30						
SNAA	**Sanae**	**92.73**	**177**	LR	LR	05 43 00.8	
	comp=Z,27nm,18.0s,baz=66,slow=35						
CMAR	**Chiang Mai Arr**	**92.89**	**288**	LR	LR	05 37 44.9	
	comp=Z,49nm,21.5s,baz=90,slow=32						
ULM	**Lac du Bonnet**	**93.92**	**39**	LR	LR	05 37 55.6	
	comp=Z,133nm,20.6s,baz=263,slow=31						
SONM	**Songino Array**	**95.12**	**318**	LR	LR	05 39 18.1	
	comp=Z,34nm,20.8s,baz=112,slow=32						
TKL	**Tuckaleechee C**	**98.42**	**55**	LR	LR	05 40 24.2	
	comp=Z,87nm,20.9s,baz=246,slow=31						
GERES	**GERESS Array B**	**146.34**	**352**	PKPbc	**PKiKP**	**05 08 18.3**	**+0.2**
	0.2nm,0.4s,baz=33,slow=2.3,SNR=2.1						
BRTR	**Keskin Array B**	**146.43**	**321**	PKPbc	**PKPab**	**05 08 17.7**	**+1.2**
	0.3nm,0.5s,baz=202,slow=2.3,SNR=3.9						

DJA 09 04:51:45.5±0.6**,10°S**±5°×**10°9E**±°**,h10^{km},M4.0**/12**, mB5.0**/2**,mb4.4**/3**,MLv3.9**/12**,Mw(mB)4.3**/2**,South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMJI	**Cimerak**	**2.38**	**354**	P	Pn	04 52 24.4	-0.3
CMJI				S	Sn	04 52 54.6	+0.6
YOGI	**Yogyakarta**	**2.81**	**34**	P	Pn	04 52 30.8	+0.2
UGM	**Wanagama**	**2.87**	**39**	P	Pn	04 52 32.3	+0.9
UGM				S	Sn	04 53 06.6	+0.6
PCJI	**Pacitan**	**3.13**	**51**	P	Pn	04 52 34.3	-0.6
WOJI	**Wonogiri, Jawa**	**3.19**	**44**	P	Pn	04 52 36.6	+0.9
WOJI				S	Sn	04 53 14.0	+0.2
CNJI	**Cibinong**	**3.24**	**331**	P	Pn	04 52 36.0	-0.5
LEM	**Lembang**	**3.49**	**342**	P	Pn	04 52 40.7	+0.6
CGJI	**Cibinong**	**4.63**	**320**	P	Pn	04 52 55.2	-0.3
GMJI	**Gumukmas**	**5.04**	**68**	P	Pn	04 53 00.7	-0.5
	0.2nm1µm21nm,1.1s						
JAGI	**Jajag, Banyuwa**	**5.63**	**73**	P	Pn	04 53 09.0	-0.3
	2µm56nm,0.6s						
SRBI	**Singaraja**	**6.75**	**73**	P	Pn	04 53 24.3	-0.4

ROM 09 05:12:58.6±0.1**,43°.265N**±0°.004×**11°.298E**±0°.009**, h6^{km},ML2.0**/47**,1C-2D,Error ellipse: s-maj=0.6km s-min=0.5km az=285.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSNT	**Castellina Chi**	**0.21**	**359**	P	Pg	05 13 03.3	+0.6
CSNT				S	Sg	05 13 06.4	+0.9
CSNT	**Castellina Chi**	**0.21**	**359**	⇓P	Pg	05 13 03.3	+0.6
CSNT				S	Sg	05 13 06.5	+1.0
CSNT				AML	AML		
	comp=E,1180µm,0.7s						
CSNT				AML	AML		
	comp=N,1135µm,0.6s						
CSNT				AML	AML		

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=E,1180µm,1.3s						
CSNT				AML	AML		
	comp=N,1135µm,1.4s						
OSSC	**Osservatorio P**	**0.26**	**352**	P	Pg	05 13 04.3	+0.6
OSSC				S	Sg	05 13 08.8	+1.6
OSSC	**Osservatorio P**	**0.26**	**352**	P	Pg	05 13 04.3	+0.5
OSSC				S	Sg	05 13 08.7	+1.5
OSSC				AML	AML		
	comp=E,674µm,0.6s						
OSSC				AML	AML		
	comp=N,934µm,0.8s						
OSSC				AML	AML		
	comp=E,920µm,0.7s						
OSSC				AML	AML		
	comp=N,664µm,0.6s						
OSSC				AML	AML		
	comp=N,664µm,1.4s						
OSSC				AML	AML		
	comp=E,674µm,1.4s						
OSSC				AML	AML		
	comp=N,934µm,0.7s						
RIBO	**Ribolla Roccas**	**0.37**	**210**	P	Pb	05 13 07.1	-0.4
RIBO				S	Sb	05 13 12.3	-1.1
CAFI	**Castiglion Fio**	**0.49**	**82**	⇑P	Pg	05 13 08.9	+0.8
CAFI				S	Sg	05 13 15.6	+1.1
CAFI				AML	AML		
	comp=N,230µm,1.1s						
CAFI				AML	AML		
	comp=N,238µm,1.0s						
CAFI				AML	AML		
	comp=E,179µm,1.3s						
CAFI				AML	AML		
	comp=N,231µm,1.1s						
CAFI				AML	AML		
	comp=E,199µm,1.3s						
SF01	**Poggio Pratacc**	**0.49**	**157**	P	Pb	05 13 08.9	-0.8
SF01				AML	AML		
	comp=E,2500µm,0.4s						
SF01				AML	AML		
	comp=N,3320µm,0.4s						
SF04	**Casetta**	**0.51**	**148**	P	Pg	05 13 09.1	+0.8
FIR	**Firenze**	**0.51**	**357**	AML	AML		
	comp=N,923µm,0.6s						
FIR				AML	AML		
	comp=E,877µm,0.5s						
FIR				AML	AML		
	comp=N,843µm,0.6s						
FIR				AML	AML		
	comp=E,840µm,0.5s						
FIR				AML	AML		
	comp=E,877µm,1.5s						
FIR				AML	AML		
	comp=E,840µm,1.5s						
CASP	**Castiglione de**	**0.57**	**214**	P	Pb	05 13 10.7	-0.4
CASP				S	Sb	05 13 18.6	-0.8
CASP				AML	AML		
	comp=N,286µm,0.3s						
CASP				AML	AML		
	comp=E,220µm,1.2s						
CASP				AML	AML		
	comp=E,220µm,0.8s						
CRMI	**Carmignano**	**0.58**	**336**	P	Pb	05 13 10.6	-0.5
CRMI				AML	AML		
	comp=N,57µm,0.7s						
CRMI				AML	AML		
	comp=E,45µm,0.8s						
CRE	**Caprese Michel**	**0.59**	**53**	P	Pb	05 13 11.0	-0.5
CRE				AML	AML		
	comp=N,266µm,0.3s						
CRE				AML	AML		
	comp=E,214µm,1.0s						
CRE				AML	AML		
	comp=E,214µm,1.0s						
RUFI	**Rufina**	**0.59**	**15**	P	Pb	05 13 10.9	-0.6
RUFI				S	Sb	05 13 19.5	-0.7
RUFI	**Rufina**	**0.59**	**15**	P	Pb	05 13 10.9	-0.6
RUFI				S	Sb	05 13 19.3	-0.9
RUFI				AML	AML		
	comp=E,244µm,1.2s						
RUFI				AML	AML		
	comp=N,195µm,0.4s						
RUFI				AML	AML		
	comp=E,244µm,0.8s						
SACS	**San Casciano d**	**0.61**	**133**	P	Pb	05 13 11.2	-0.6
SSP9	**Sansepolcro**	**0.68**	**63**	P	Pb	05 13 12.8	-0.2
SSP9				AML	AML		
	comp=E,112µm,1.1s						
SSP9				AML	AML		
	comp=E,112µm,1.1s						
SSP9				AML	AML		
	comp=N,180µm,1.4s						
SSP9				AML	AML		
	comp=N,180µm,0.6s						
SSP9				AML	AML		
	comp=E,112µm,0.9s						
MGAB	**Montegabbione**	**0.69**	**120**	P	Pb	05 13 12.8	-0.4
MGAB				AML	AML		
	comp=N,77µm,1.6s						
MGAB				AML	AML		
	comp=E,68µm,0.3s						
MGAB				AML	AML		
	comp=N,68µm,0.2s						
MGAB				AML	AML		
	comp=E,73µm,0.6s						
MGAB				AML	AML		
	comp=N,77µm,0.4s						
MPPT	**Montemurlo**	**0.71**	**348**	P	Pb	05 13 13.1	-0.3
MPPT				AML	AML		
	comp=E,210µm,0.5s						
MPPT				AML	AML		
	comp=N,96µm,1.3s						
MPPT				AML	AML		
	comp=E,210µm,1.5s						
MPPT				AML	AML		
	comp=N,96µm,0.7s						
PII	**Pisa**	**0.72**	**309**	P	Pg	05 13 13.1	+0.5
PII	**Pisa**	**0.72**	**309**	⇓P	Pg	05 13 13.0	+0.5
PII				AML	AML		
	comp=E,159µm,0.4s						
PII				AML	AML		
	comp=N,158µm,0.9s						
PII				AML	AML		
	comp=N,158µm,1.1s						
MOCL	**Monte Cuccoli**	**0.74**	**353**	AML	AML		
	comp=N,200µm,0.7s						
MOCL				AML	AML		
	comp=E,192µm,0.3s						
SFI	**Santa Sofia**	**0.75**	**32**	P	Pb	05 13 14.2	0.0
SFI				S	Sb	05 13 24.4	-0.4
SFI				AML	AML		
	comp=N,80µm,0.9s						
SFI				AML	AML		
	comp=N,80µm,1.1s						
SFI				AML	AML		
	comp=E,174µm,0.6s						
PARC	**Parchiule**	**0.79**	**60**	P	Pb	05 13 14.2	-0.5
PARC				AML	AML		
	comp=N,136µm,0.4s						
PARC				AML	AML		
	comp=E,91µm,0.7s						
ATVO	**AVT- Monte Val**	**0.82**	**81**	P	Pb	05 13 14.9	-0.4
ATVO				AML	AML		
	comp=E,103µm,0.4s						
ATVO				AML	AML		
	comp=N,82µm,0.8s						
MAON	**Monte Argentar**	**0.84**	**188**	P	Pb	05 13 15.6	-0.1
MAON				S	Sb	05 13 28.4	+1.1
MAON	**Monte Argentar**	**0.84**	**188**	AML	AML		
	comp=N,234µm,0.5s						
MAON				AML	AML		
	comp=E,133µm,0.5s						
LMD	**Lutirano**	**0.86**	**20**	P	Pb	05 13 16.3	+0.2
LMD				S	Sn	05 13 29.1	-1.2
LMD	**Lutirano**	**0.86**	**20**	AML	AML		
	comp=N,80µm,0.4s						
LMD				AML	AML		
	comp=E,92µm,0.3s						
POPM	**Popiglio**	**0.87**	**333**	P	Pb	05 13 15.9	-0.3
POPM	**Popiglio**	**0.87**	**333**	P	Pb	05 13 15.8	-0.4
POPM				AML	AML		
	comp=N,112µm,0.7s						
POPM				AML	AML		
	comp=N,112µm,1.3s						
POPM				AML	AML		
	comp=E,93µm,1.1s						
MAIM	**Mastiano**	**0.87**	**318**	P	Pg	05 13 15.6	+0.3
MAIM				S	Sg	05 13 26.9	+0.1
MURB	**Monte Urbino**	**0.90**	**90**	P	Pb	05 13 16.4	-0.2
MURB				AML	AML		
	comp=E,256µm,0.3s						
MURB				AML	AML		
	comp=N,174µm,0.3s						
BDI	**Bagni Di Lucca**	**0.95**	**328**	P	Pb	05 13 17.2	-0.3
CARD	**Cardoso**	**0.96**	**322**	P	Pg	05 13 17.3	+0.2
CARD				S	Sb	05 13 31.0	+0.3
EQUI	**Equi**	**1.23**	**318**	P	Pn	05 13 22.4	0.0

ROM 09 05:13:44.8±0.2**, 43.°270N**±0.°006×**11.°31E**±0.°02**, h5**^{km}±1^{km}**, ML1.8**/16**, 1C, Error ellipse: s-maj=1.3km s-min=0.5km az=285.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FROS	**Frosini**	**0.13**	**242**	P	Pg	05 13 48.1	+0.7
FROS				S	Sg	05 13 50.3	+1.2
FROS				AML	AML		
	comp=N,2665µm,0.4s						
FROS				AML	AML		
	comp=E,2220µm,0.4s						
CSNT	**Castellina Chi**	**0.20**	**356**	P	Pg	05 13 49.5	+0.7
CSNT				S	Sg	05 13 52.7	+1.2
CSNT	**Castellina Chi**	**0.20**	**356**	⇑P	Pg	05 13 49.5	+0.7
CSNT				S	Sg	05 13 52.7	+1.2
CSNT				AML	AML		
	comp=N,255µm,0.5s						
CSNT				AML	AML		
	comp=E,360µm,0.4s						
OSSC	**Osservatorio P**	**0.26**	**349**	P	Pg	05 13 50.5	+0.6
OSSC				S	Sg	05 13 54.8	+1.5
OSSC	**Osservatorio P**	**0.26**	**349**	P	Pg	05 13 50.4	+0.6
OSSC				S	Sg	05 13 54.8	+1.5
OSSC				AML	AML		
	comp=N,282µm,1.6s						
OSSC				AML	AML		
	comp=N,188µm,0.3s						
OSSC				AML	AML		
	comp=E,211µm,1.2s						
OSSC				AML	AML		
	comp=N,282µm,1.6s						
OSSC				AML	AML		
	comp=E,264µm,0.2s						
OSSC				AML	AML		
	comp=N,282µm,0.4s						
OSSC				AML	AML		
	comp=E,211µm,0.8s						
OSSC				AML	AML		
	comp=N,188µm,1.7s						
TRIF	**Trifonti**	**0.34**	**243**	P	Pb	05 13 52.5	-0.8
TRIF				S	Sg	05 13 56.6	+0.9
TRIF				AML	AML		
	comp=E,468µm,1.2s						
TRIF				AML	AML		
	comp=N,331µm,0.1s						
TRIF				AML	AML		
	comp=E,468µm,1.2s						
TRIF				AML	AML		
	comp=N,331µm,0.1s						
RIBO	**Ribolla Roccas**	**0.38**	**211**	P	Pb	05 13 53.3	-0.5
RIBO				S	Sb	05 13 58.5	-1.5
CAFI	**Castiglion Fio**	**0.48**	**83**	P	Pb	05 13 54.9	-0.8
CAFI				S	Sb	05 14 01.9	-1.2
SF01	**Poggio Pratacc**	**0.49**	**158**	P	Pb	05 13 55.3	-0.7
SF01				S	Sb	05 14 03.7	+0.2
SF01				AML	AML		
	comp=E,450µm,0.4s						
SF01				AML	AML		
	comp=N,585µm,0.4s						
SF01				AML	AML		
	comp=N,586µm,0.4s						
SF04	**Casetta**	**0.50**	**149**	P	Pg	05 13 55.2	+0.8
CASP	**Castiglione de**	**0.58**	**215**	P	Pb	05 13 57.0	-0.4
CASP				AML	AML		
	comp=E,64µm,0.2s						
CASP				AML	AML		
	comp=N,66µm,1.5s						
CASP				AML	AML		
	comp=N,66µm,0.5s						
CRE	**Caprese Michel**	**0.58**	**53**	P	Pb	05 13 57.7	+0.2
RUFI	**Rufina**	**0.59**	**14**	P	Pb	05 13 56.9	-0.6
RUFI				S	Sb	05 14 05.4	-0.8
RUFI	**Rufina**	**0.59**	**14**	P	Pb	05 13 57.1	-0.5
RUFI				S	Sb	05 14 05.3	-0.8
PII	**Pisa**	**0.73**	**309**	P	Pg	05 13 59.1	+0.3
PII				S	Sg	05 14 08.7	+0.4
PII	**Pisa**	**0.73**	**309**	P	Pg	05 13 59.1	+0.3
PII				AML	AML		
	comp=E,49µm,0.3s						
PII				AML	AML		
	comp=E,49µm,1.7s						
PII				AML	AML		
	comp=N,56µm,1.3s						
MOCL	**Monte Cuccoli**	**0.74**	**353**	P	Pb	05 14 00.6	+0.4
MAON	**Monte Argentar**	**0.85**	**189**	P	Pb	05 14 02.0	0.0
MAON				S	Sb	05 14 14.6	+0.9
POPM	**Popiglio**	**0.87**	**333**	P	Pb	05 14 02.0	-0.4
MAIM	**Mastiano**	**0.88**	**317**	P	Pg	05 14 01.9	+0.3
MAIM				S	Sg	05 14 12.9	-0.1
BDI	**Bagni Di Lucca**	**0.95**	**327**	P	Pb	05 14 03.4	-0.4

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*DJA **09** 05:33:46.1±1.2, 3°N±2°×12°6E±°, h25^{km}±12^{km}, M4.2/10, mB5.3/1, mb4.8/1, MLv3.8/10, Mw(mB)4.7/1*

*IDC **09** 05:33:58.4±10.0, 2.°43N×125.°97E, h164^{km}±109^{km}, mb3.5/7, mbtmp3.9/7, MS3.0/2, Error ellipse: s-maj=61.1km s-min=21.0km az=77.0*

ISC 09 05:33:45.9±0.9**, 2.°68N**±0.°07×**126.°3E**±0.°1**, h35**^{km}**, n14, σ1.**^{s}**68**/13**, mb3.9**/6**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.27**	**322**	P	**Pn**	**05 34 08.1**	**+0.9**
SGSI				S	**Sn**	**05 34 24.0**	**+1.0**
TNTI	**Ternate**	**2.17**	**151**	P	**Pn**	**05 34 21.3**	**+1.8**
KMSI	**Cibinong**	**3.13**	**228**	P	**Pn**	**05 34 34.6**	**+1.9**
DAV	**Davao City (W)**	**4.43**	**351**	LR	LR	05 36 27.4	
	comp=Z,55nm,19.4s,baz=168,slow=32						
SANI	**Sanana**	**4.70**	**184**	P	**Pn**	**05 34 54.7**	**+0.3**
LUWI	**Luwuk**	**5.11**	**224**	P	**Pn**	**05 35 00.9**	**+0.8**
FITZ	**Fitzroy Crossi**	**20.65**	**182**	P	**P**	**05 38 22.2**	**-0.5**
	1.4nm,0.5s,baz=354,slow=8.1,SNR=2.0						
	1.4nm,0.5s						
WRA	**Warramunga Arr**	**23.82**	**161**	P	**P**	**05 38 54.8**	**-1.1**
	2.3nm,0.6s,baz=342,slow=10,SNR=22						
	2.3nm,0.6s						
PMG	**Port Moresby**	**23.99**	**120**	LR	LR	05 51 35.3	
	comp=Z,103nm,20.2s,baz=214,slow=44						
ASAR	**Alice Springs**	**27.21**	**165**	P	**P**	**05 39 26.6**	**0.0**
	0.6nm,0.3s,baz=341,slow=7.1,SNR=9.9						
	0.6nm,0.3s						
KSRS	**Korea Array**	**34.64**	**2**	P	**P**	**05 40 34.6**	**+2.7**
	0.9nm,0.5s,baz=184,slow=9.7,SNR=4.7						
	0.9nm,0.5s						
MKAR	**Makanchi Array**	**58.18**	**326**	P	**P**	**05 43 35.1**	**-1.4**
	0.3nm,0.4s,baz=116,slow=8.6,SNR=6.9						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**62.40**	**328**	P	**P**	**05 44 03.4**	**-1.8**
	0.7nm,0.3s,baz=123,slow=5.9,SNR=5.0						
	0.7nm,0.3s						
FINES	**FINESS Array B**	**92.56**	**332**	P	**P**	**05 46 51.3**	**-2.2**
	1.6nm,0.9s,baz=90,slow=6.9,SNR=4.9						
	1.6nm,0.9s						

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*ISK **09** 05:45:18.6, 38.°57N×30.°59E, h6^{km}, ML3.2/25*

*AFAD **09** 05:45:18.7, 38.°58N×30.°58E, h7^{km}±2^{km}, MW3.5*

ISC 09 05:45:18.3±0.8**, 38.°58N**±0.°02×**30.°63E**±0.°02**, h11**^{km}±6^{km}**, n69, σ0.**^{s}**77**/98**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHUT	**Suhut-Afyon**	**0.07**	**244**	Pg	**Pg**	**05 45 20.8**	**+0.1**
SHUT				Sg	**Sg**	**05 45 22.2**	**-0.2**
KURO	**Afyon-Bolvadin**	**0.28**	**58**	P	**Pb**	**05 45 25.4**	**-0.1**
AFYN	**Afyon-Dinar-K**	**0.33**	**198**	P	**Pb**	**05 45 25.6**	**-0.6**
AFYN				S	**Sb**	**05 45 30.9**	**-0.6**
AFYO	**Afyonkarahisar**	**0.33**	**308**	P	**Pg**	**05 45 25.6**	**+0.7**
AFYO				S	**Sg**	**05 45 29.8**	**+0.5**
BYAT	**Afyon-Bayat**	**0.46**	**37**	P	**Pb**	**05 45 28.5**	**0.0**
BYAT				S	**Sg**	**05 45 33.6**	**+0.2**
KZIL	**AFYON_Kizioren**	**0.50**	**230**	P	**Pg**	**05 45 28.3**	**+0.3**
YVAC	**Isparta, Yalva**	**0.57**	**123**	P	**Pb**	**05 45 30.6**	**+0.2**
YVAC				S	**Sg**	**05 45 36.4**	**-0.6**
BNAZ	**Uak-Banaz**	**0.59**	**280**	P	**Pg**	**05 45 29.6**	**-0.2**
BAGO	**Egridir - ISPA**	**0.60**	**168**	P	**Pb**	**05 45 30.8**	**-0.1**
BAGO				S	**Sb**	**05 45 38.6**	**-0.9**
UCKU	**Afyonkarahisar**	**0.63**	**85**	P	**Pb**	**05 45 31.2**	**-0.1**
UCKU				S	**Sg**	**05 45 39.0**	**+0.3**
AUKIR	**Kırka- Seyitga**	**0.70**	**354**	P	**Pg**	**05 45 32.0**	**+0.2**
AUKIR				S	**Sg**	**05 45 41.1**	**+0.2**
ISP	**Isparta**	**0.76**	**186**	Pg	**Pg**	**05 45 32.8**	**-0.2**
ISP				Sg	**Sb**	**05 45 44.2**	**+0.1**
BASM	**Basmaki-Afyon**	**0.80**	**215**	Pg	**Pg**	**05 45 34.0**	**+0.2**
CIFT	**Cifteler, Eski**	**0.85**	**23**	Pg	**Pg**	**05 45 34.8**	**+0.2**
CIFT				Sg	**Sb**	**05 45 46.5**	**0.0**
KHL	**Karahalli**	**0.91**	**254**	Pg	**Pg**	**05 45 35.4**	**-0.3**
CTIK	**Konya-Celtik**	**0.91**	**60**	P	**Pb**	**05 45 36.6**	**+0.5**
CTIK				S	**Sb**	**05 45 48.6**	**+0.4**
PASA	**Karahalli, USA**	**0.93**	**256**	P	**Pg**	**05 45 35.6**	**-0.5**
PASA				S	**Sg**	**05 45 48.3**	**+0.1**
KUTH	**Kutahya**	**0.94**	**330**	P	**Pg**	**05 45 36.3**	**-0.1**
KUTH				S	**Sg**	**05 45 47.4**	**-1.3**
DOGA	**KONYA_Doganhis**	**0.95**	**120**	P	**Pn**	**05 45 37.1**	**-0.6**
SGAZ	**Eskisehir, Sey**	**0.96**	**10**	P	**Pg**	**05 45 37.0**	**+0.3**
SGAZ				S	**Sg**	**05 45 49.5**	**+0.2**
BRDR	**BURDUR-Merkez**	**0.99**	**207**	P	**Pg**	**05 45 36.8**	**-0.6**
BRDR				S	**Sb**	**05 45 51.2**	**+0.6**
KIZT	**Kizilcal**	**1.02**	**73**	Pg	**Pg**	**05 45 37.2**	**-0.8**
GDZ	**Gediz**	**1.03**	**300**	P	**Pg**	**05 45 38.1**	**0.0**
GDZ				S	**Sg**	**05 45 49.6**	**-1.9**
GEDZ	**Gediz**	**1.06**	**296**	Pg	**Pg**	**05 45 38.7**	**+0.1**
ANDZ	**Kutahya, Merke**	**1.08**	**329**	P	**Pg**	**05 45 38.6**	**-0.5**
ANDZ				S	**Sg**	**05 45 50.7**	**-2.6**
SVRH	**Sivrihisar-ESK**	**1.11**	**39**	Pn	**Pn**	**05 45 39.9**	**0.0**
AUSIV	**SIVRIHISAR**	**1.11**	**39**	P	**Pg**	**05 45 39.8**	**+0.1**
AUSIV				S	**Sb**	**05 45 54.4**	**+0.2**
BCK	**Bucak**	**1.12**	**182**	Pn	**Pn**	**05 45 40.1**	**+0.1**
KDHN	**Kadinhani**	**1.17**	**93**	P	**Pn**	**05 45 40.9**	**+0.2**
KDHN				S	**Sg**	**05 45 55.9**	**0.0**
SHAP	**Saphane-Kutahy**	**1.18**	**292**	Pn	**Pb**	**05 45 40.9**	**+0.1**
INCE	**Denizli-Bozkur**	**1.20**	**224**	P	**Pg**	**05 45 41.5**	**+0.1**
INCE				S	**Sn**	**05 45 58.7**	**+1.1**
BUCA	**Burdur, Bucak-**	**1.25**	**183**	P	**Pg**	**05 45 43.8**	**+1.4**
TVSB	**Tavsanli**	**1.25**	**314**	Pn	**Pb**	**05 45 42.4**	**+0.3**
USAK	**Uak-Merkez**	**1.27**	**276**	P	**Pn**	**05 45 42.1**	**+0.1**
EMET	**Ktahya-Emet**	**1.29**	**308**	P	**Pn**	**05 45 42.7**	**+0.3**
EMET				S	**Sb**	**05 45 58.1**	**-1.2**
BORA	**Eskisehir**	**1.30**	**354**	P	**Pb**	**05 45 43.3**	**+0.5**
SIMA	**Simav-Kutahya**	**1.38**	**292**	Pn	**Pb**	**05 45 44.6**	**+0.4**
SMAA	**Simav-Kutahya**	**1.39**	**292**	Pn	**Pb**	**05 45 44.6**	**+0.3**
DOMA	**Ktahya-Doman**	**1.40**	**329**	P	**Pb**	**05 45 44.9**	**+0.3**
DOMA				S	**Sn**	**05 46 02.4**	**-0.1**
AUBOZ	**BOZOYUK**	**1.40**	**341**	P	**Pg**	**05 45 45.3**	**0.0**
AUBOZ				S	**Sn**	**05 46 02.3**	**-0.2**
LADK	**Ladik-KONYA**	**1.42**	**105**	Pn	**Pg**	**05 45 45.8**	**+0.3**
SEDI	**Konya, Seydise**	**1.44**	**141**	P	**Pg**	**05 45 45.5**	**-0.4**
KONT	**Konya--Tatoy**	**1.50**	**114**	Pn	**Pg**	**05 45 47.2**	**0.0**
KONT	**Konya--Tatoy**	**1.50**	**114**	P	**Pg**	**05 45 47.4**	**+0.2**
SEYD	**Seydisehir-KON**	**1.52**	**141**	Pn	**Pg**	**05 45 47.1**	**-0.2**
APMY	**Acipayam-Deniz**	**1.53**	**224**	Pn	**Pb**	**05 45 46.4**	**-0.2**
KULA	**Kula-Manisa**	**1.54**	**268**	Pn	**Pn**	**05 45 46.6**	**+0.7**
DEMI	**Demirci**	**1.56**	**288**	P	**Pn**	**05 45 46.9**	**+0.8**
DNIZ	**Denizli-Tavas-**	**1.58**	**233**	P	**Pb**	**05 45 47.1**	**-0.4**
GOLH	**Golhisar**	**1.59**	**212**	P	**Pb**	**05 45 47.8**	**+0.1**
KORT	**Korkueli**	**1.59**	**188**	Pn	**Pg**	**05 45 48.4**	**-0.5**
KORT	**Korkueli**	**1.59**	**188**	P	**Pg**	**05 45 48.6**	**-0.3**
MANT	**Manisa**	**1.63**	**267**	P	**Pn**	**05 45 47.8**	**+0.7**
MANT				S	**Sn**	**05 46 05.0**	**-3.2**
CBEY	**Konya-Cihanbey**	**1.69**	**86**	P	**Pg**	**05 45 51.3**	**+0.6**
CBEY				S	**Sg**	**05 46 14.1**	**+1.5**
CAVI	**Cavuskoy**	**1.73**	**340**	Pn	**Pb**	**05 45 49.9**	**-0.2**
TAVA	**DENIZLI_Tavas**	**1.75**	**231**	P	**Pn**	**05 45 49.8**	**+1.0**
TAVA				S	**Sn**	**05 46 11.0**	**-0.2**
CAEL	**Denizli, Camel**	**1.79**	**216**	P	**Pg**	**05 45 54.3**	**+1.7**
ALIN	**Konya, Altinte**	**1.79**	**98**	P	**Pg**	**05 45 51.9**	**-0.7**
ALIN				S	**Sb**	**05 46 13.5**	**-0.1**
KIRA	**zmir-Kiraz**	**1.79**	**258**	P	**Pn**	**05 45 50.0**	**+0.7**
DNZT	**Denizli-Tavas-**	**1.82**	**225**	P	**Pb**	**05 45 50.8**	**-0.8**
DNZT				S	**Sn**	**05 46 13.7**	**+1.0**
GULT	**Gulveren**	**1.85**	**357**	Pn	**Pb**	**05 45 52.1**	**-0.1**
KNIK	**Mula-Seydike**	**1.93**	**206**	P	**Pb**	**05 45 53.1**	**-0.4**
NAZL	**Nazilli-Aydin**	**1.94**	**252**	Pn	**Pn**	**05 45 52.2**	**+1.0**
GORD	**Gordes-Manisa**	**1.94**	**280**	Pn	**Pn**	**05 45 52.8**	**+1.5**
CAME	**Cameli-Denizli**	**1.94**	**213**	Pn	**Pn**	**05 45 52.6**	**+1.2**
ESEN	**Aydn-Nazilli**	**1.96**	**247**	P	**Pn**	**05 45 52.0**	**+0.5**
ESEN				S	**Sn**	**05 46 17.3**	**+1.3**
ANTO	**Ankara**	**2.12**	**52**	Pn	**Pb**	**05 45 56.2**	**-0.5**
HDMB	**Hadim**	**2.19**	**137**	Pn	**Pb**	**05 45 56.8**	**-1.2**
AYDB	**Zeytinkoy-Aydi**	**2.25**	**254**	Pn	**Pn**	**05 45 56.9**	**+1.4**

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*SNET **09** 05:52:13.5±2.3, 12.°65N×88.°97W, h16^{km}, ML4.4*

*CATAC **09** 05:52:16.1±0.4, 13°N±2°×8°9W±°, h22^{km}±2^{km}, M4.4/29, MLv4.4/29, Error ellipse: s-maj=4.9km s-min=2.3km az=24.4, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.96; $M_{\theta\theta}$-5.65; $M_{\phi\phi}$4.69; $M_{r\theta}$4.84; $M_{\theta\phi}$-0.09; $M_{\phi r}$5.52; Fault plane solution: $M_0$9.02053×10^{14} NP1: ϕ_s310.78371°, δ35.36400°, λ173.52472°. NP2: ϕ_s46.07177°, δ86.25762°, λ54.80889°. Principal axes: T 9.2117, Plg38.5204°, Azm284.6822°; N -0.3954, Plg35.1050°, Azm48.7071°; P -8.8164, Plg32.0383°, Azm164.8047°; Moment Tensor Solution. Moment tensor: Scale 10^{15} Nm; M_{rr}-0.39; $M_{\theta\theta}$-0.85; $M_{\phi\phi}$1.23; $M_{r\theta}$0.33; $M_{\theta\phi}$-0.33; $M_{\phi r}$1.19; Fault plane solution: $M_0$1.68616×10^{15} NP1:ϕ_s305.97450°, δ37.23418°, λ-166.16039°. NP2:ϕ_s204.87729°, δ81.67797°, λ-53.57568°. Principal axes: T 1.8747, Plg27.4279°, Azm266.6465°; N -0.4820, Plg35.9804°, Azm18.7810°; P -1.3927, Plg41.7069°, Azm149.0981°; Moment Tensor Solution. Moment tensor: Scale 10^{14} Nm; M_{rr}1.39; $M_{\theta\theta}$-0.83; $M_{\phi\phi}$-0.55; $M_{r\theta}$3.35; $M_{\theta\phi}$0.88; $M_{\phi r}$-2.04; Fault plane solution: $M_0$4.19638×10^{14} NP1:ϕ_s121.84718°, δ79.78010°, λ86.39682°. NP2:ϕ_s321.38745°, δ10.83011°, λ109.21795°. Principal axes: T 4.1167, Plg55.0820°, Azm27.3945°; N 0.1551, Plg3.5459°, Azm122.4873°; P -4.2718, Plg34.6842°, Azm214.9451°; Moment Tensor Solution. Moment tensor: Scale 10^{14} Nm; M_{rr}1.13; $M_{\theta\theta}$-0.92; $M_{\phi\phi}$-0.21; $M_{r\theta}$3.40; $M_{\theta\phi}$0.90; $M_{\phi r}$-2.01; Fault plane solution: $M_0$4.18508×10^{14} NP1:ϕ_s120.55035°, δ80.71831°, λ88.29394°. NP2:ϕ_s311.01329°, δ9.43583°, λ100.32445°. Principal axes: T 3.9706, Plg54.2513°, Azm28.4853°; N 0.4002, Plg1.6837°, Azm120.8256°; P -4.3708, Plg35.6965°, Azm212.0357°; confirmed*

*NEIC **09** 05:52:18.3±1.5, 12.°97N±0.°09×88.°76W±0.°07, h69^{km}±5^{km}, mb4.1/24 Error ellipse: s-maj=14.4km s-min=7.5km az=213.0*

*IDC **09** 05:52:21.6±3.9, 13.°03N×88.°46W, h98^{km}±65^{km}, mb3.3/6, mbtmp3.6/7, ML3.2/1, MS3.0/2, Error ellipse: s-maj=90.2km s-min=30.6km az=27.0*

ISC 09 05:52:15.8±1.1**, 12.°83N**±0.°06×**88.°93W**±0.°03**, h53**^{km}±9^{km}**, n135, σ1.**^{s}**34**/143**, mb4.0**/12**, 1C-24D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALJI	**Alcalda de J**	**0.60**	**35**	S	**Sn**	**05 52 38.7**	**+0.9**
ALJI	**Alcalda de J**	**0.60**	**35**	⇓P	**Pn**	**05 52 29.2**	**+0.6**
TECO	**Alcaldia de Te**	**0.72**	**12**	S	**Sn**	**05 52 40.5**	**+0.2**
TECO	**Alcaldia de Te**	**0.72**	**12**	⇓P	**Pn**	**05 52 30.5**	**+0.4**
LALI	**Alcalda de L**	**0.76**	**330**	S	**Sn**	**05 52 41.0**	**-0.1**
LALI	**Alcalda de L**	**0.76**	**330**	⇓P	**Pn**	**05 52 31.0**	**+0.5**
COEG	**Centro de Oper**	**0.79**	**3**	*e*P	**Pn**	**05 52 31.3**	**+0.4**
COEG	**Centro de Oper**	**0.79**	**3**	S	**Sn**	**05 52 42.1**	**+0.2**
COEG	**Centro de Oper**	**0.79**	**3**	⇓P	**Pn**	**05 52 31.3**	**+0.4**
LFRS	**El Faro**	**0.80**	**351**	*e*P	**Pn**	**05 52 31.5**	**+0.4**
UESV	**Universidad de**	**0.81**	**10**	S	**Sn**	**05 52 43.1**	**+0.6**
UESV	**Universidad de**	**0.81**	**10**	⇓P	**Pn**	**05 52 32.0**	**+0.7**
PANCS	**Alcalda de**	**0.81**	**343**	*e*P	**Pn**	**05 52 31.5**	**+0.2**
PANCS				*e*S	**Sn**	**05 52 42.4**	**-0.2**
PANCS	**Alcalda de**	**0.81**	**343**	⇓P	**Pn**	**05 52 31.5**	**+0.2**
PACA	**Pacayal**	**0.87**	**43**	*e*P	**Pn**	**05 52 33.2**	**+1.2**
PACA	**Pacayal**	**0.87**	**43**	P	**Pn**	**05 52 32.8**	**+0.8**
PACA	**Pacayal**	**0.87**	**43**	S	**Sn**	**05 52 44.8**	**+0.9**
PQSS	**Presa 15 de Se**	**0.87**	**24**	S	**Sn**	**05 52 45.0**	**+1.3**
PQSS	**Presa 15 de Se**	**0.87**	**24**	⇑P	**Pn**	**05 52 33.0**	**+1.1**
PAVA	**Las Pavas**	**0.88**	**359**	*e*P	**Pn**	**05 52 32.9**	**+0.7**

PAVA				eS	Sn	05 52 45.4	+1.3
PAVA	Las Pavas	0.88	359	S	Sn	05 52 44.4	+0.2
PAVA	Las Pavas	0.88	359	⇓P	Pn	05 52 32.9	+0.7
SCLA	Alcaldia de Sa	0.89	13	S	Sn	05 52 45.5	+1.2
SCLA	Alcaldia de Sa	0.89	13	⇓P	Pn	05 52 33.3	+1.1
ITCA	Escuela Especi	0.91	338	eP	Pn	05 52 33.2	+0.6
ITCA	Escuela Especi	0.91	338	S	Sn	05 52 45.4	+0.6
ITCA	Escuela Especi	0.91	338	⇓P	Pn	05 52 33.2	+0.6
UTEC	Universidad Te	0.91	343	S	Sn	05 52 44.9	+0.2
UTEC	Universidad Te	0.91	343	P	Pn	05 52 33.0	+0.5
UDBS	Universidad Do	0.91	346	P	Pn	05 52 33.1	+0.6
UDBS	Universidad Do	0.91	346	S	Sn	05 52 45.5	+0.7
BLLM	Bellamira	0.91	48	eP	Pn	05 52 33.2	+0.7
IGN	Direccin Gen	0.91	345	eP	Pn	05 52 33.2	+0.7
IGN	Direccin Gen	0.91	345	S	Sn	05 52 45.5	+0.7
IGN	Direccin Gen	0.91	345	P	Pn	05 52 33.1	+0.5
LBRS	Las Brisas	0.91	353	eP	Pn	05 52 33.6	+1.0
SEMO	Seminario San	0.92	342	P	Pn	05 52 33.2	+0.6
SEMO	Seminario San	0.92	342	S	Sn	05 52 45.1	+0.2
LFU	La Fuente	0.93	349	eP	Pn	05 52 33.6	+0.8
UEES	Universidad Ev	0.93	341	S	Sn	05 52 45.7	+0.3
UEES	Universidad Ev	0.93	341	⇓P	Pn	05 52 33.6	+0.7
PMON	Piamonte	0.95	337	S	Sn	05 52 46.6	+0.7
PMON	Piamonte	0.95	337	⇓P	Pn	05 52 33.9	+0.8
BOQS	Boqueron	0.96	339	⇓iP	Pn	05 52 34.3	+0.9
JAYA	Jayaque - finc	0.96	328	eP	Pn	05 52 34.0	+0.6
JAYA				eS	Sn	05 52 46.6	+0.4
JAYA	Jayaque - finc	0.96	328	⇓P	Pn	05 52 34.0	+0.6
CNRM	Centro Naciona	0.98	49	eP	Pn	05 52 34.4	+1.0
CNRM				eS	Sn	05 52 48.0	+1.7
CNRM	Centro Naciona	0.98	49	S	Sn	05 52 47.9	+1.6
CNRM	Centro Naciona	0.98	49	⇓P	Pn	05 52 34.4	+1.0
CEDA	San Andres	1.07	335	eP	Pn	05 52 35.3	+0.7
CEDA				eS	Sn	05 52 49.7	+1.2
CEDA	San Andres	1.07	335	P	Pn	05 52 35.5	+0.8
LCND	La Caada	1.12	65	eP	Pn	05 52 36.2	+0.9
LCND				eS	Sn	05 52 51.1	+1.4
LCND	La Caada	1.12	65	S	Sn	05 52 52.1	+2.4
LCND	La Caada	1.12	65	⇓P	Pn	05 52 36.2	+0.9
CNCH	Conchagua	1.16	67	eP	Pn	05 52 36.4	+0.6
CNCH				eP		05 52 37.6	
CNCH	Conchagua	1.16	67	S	Sn	05 52 53.2	+2.5
CNCH	Conchagua	1.16	67	⇓P	Pn	05 52 36.5	+0.6
CAHU	Cacacuatique	1.17	37	iP	Pn	05 52 37.5	+1.4
CEVE	Cerro Verde	1.20	326	eP	Pn	05 52 37.6	+1.0
CEVE	Cerro Verde	1.20	326	S	Sn	05 52 53.0	+0.9
CEVE	Cerro Verde	1.20	326	P	Pn	05 52 37.8	+1.2
UNIC	Universidad Ca	1.29	332	S	Sn	05 52 55.5	+1.5
UNIC	Universidad Ca	1.29	332	P	Pn	05 52 39.0	+1.3
LLGN	La Laguna	1.32	359	eP	Pn	05 52 39.7	+1.5
LLGN	La Laguna	1.32	359	S	Sn	05 52 56.5	+1.7
LLGN	La Laguna	1.32	359	P	Pn	05 52 39.5	+1.3
CSGN	Cosiguina Volc	1.34	84	P	Pn	05 52 39.5	+1.1
CSGN				S	Sn	05 52 58.2	+3.0
NUBE	Las Nubes	1.35	322	eP	Pn	05 52 39.5	+0.9
NUBE	Las Nubes	1.35	322	S	Sn	05 52 56.4	+0.9
NUBE	Las Nubes	1.35	322	⇓P	Pn	05 52 39.4	+0.9
POTN	Potosi Cosigui	1.40	83	P	Pn	05 52 40.1	+1.1
POTN				S	Sn	05 52 59.0	+2.6
LOAL	Lomas de Alarc	1.43	325	eP	Pn	05 52 41.0	+1.5
LOAL	Lomas de Alarc	1.43	325	S	Sn	05 52 59.8	+2.6
LOAL	Lomas de Alarc	1.43	325	P	Pn	05 52 40.9	+1.4
SLOZ	Alcaldia de Sa	1.45	325	S	Sn	05 52 59.6	+1.8
SLOZ	Alcaldia de Sa	1.45	325	⇓P	Pn	05 52 41.3	+1.5
FAME	Alcaldia de Sa	1.46	314	S	Sn	05 52 59.4	+1.4
FAME	Alcaldia de Sa	1.46	314	⇓P	Pn	05 52 40.5	+0.6
MTO3	Montecristo	1.61	345		Pn	05 52 43.6	+1.4
MTO3	Montecristo	1.61	345	eP	Pn	05 52 43.6	+1.4
MTO3	Montecristo	1.61	345	P	Pn	05 52 43.6	+1.4
MTO3	Montecristo	1.61	345	S	Sn	05 53 03.3	+1.2
ESQI	Esquipulas	1.77	347		Pn	05 52 46.1	+1.9
ESQI	Esquipulas	1.77	347	iP	Pn	05 52 46.0	+1.9
TGUH	Tegucigalpa,Un	2.02	53		Pn	05 52 49.1	+1.4
TGUH	Tegucigalpa,Un	2.02	53	⇓P	Pn	05 52 49.3	+1.7
TGUH				S	Sn	05 53 14.2	+2.3
HERN	Volcan Telica	2.06	96	Pn	Pn	05 52 48.6	+0.5
HERN	Volcan Telica	2.06	96	⇓P	Pn	05 52 48.8	+0.7
CNGN	Cerro Negro	2.20	98		Pn	05 52 50.8	+0.8
CNGN	Cerro Negro	2.20	98	⇓P	Pn	05 52 50.9	+0.8
YUSH	Yuscaran	2.32	61	S	Sn	05 53 21.7	+2.6
YUSH	Yuscaran	2.32	61	⇓P	Pn	05 52 53.2	+1.5
LIMN	Finca el Limon	2.51	84	⇓P	Pn	05 52 55.2	+0.9
MGAN	Managua	2.71	104		Pn	05 52 58.5	+1.6
RTAL	Retalhuleu	3.17	302		Pn	05 53 06.7	+3.4
BOAB	BOACO BROADBAN	3.21	96		Pn	05 53 04.0	+0.3
HUEH	Huehuetenango	3.52	315	Pn	Pn	05 53 10.6	+2.4
ACON	Acoyapa	3.77	103		Pn	05 53 12.3	+0.9
PETF	Flores	4.16	348		Pn	05 53 17.8	+0.9
ESPN	Las Esperanzas	4.56	97	Pn	Pn	05 53 21.5	-0.9
CCIG	Comitan	4.63	318		Pn	05 53 25.0	+1.5
JTS	Las Juntas de	4.64	123		Pn	05 53 25.7	+2.2
JTS	Las Juntas de	4.64	123	P	Pn	05 53 26.2	+2.7
	1.2nm,0.3s,baz=292,slow=24,SNR=7.4						
JTS				S	Sn	05 54 16.4	+0.3
	7.1nm,0.3s,baz=284,slow=21,SNR=1.0						
	3.2nm,0.4s						
LCR2	La Lucha 2	5.72	122	Pn	Pn	05 53 39.8	+1.3
TEIG	Tepich	7.38	5	Pn	Pn	05 54 03.9	+2.9
SOR	Soroa	11.40	29	Pn	Pn	05 54 54.3	-1.7
060A	Indiantown	16.26	28	Pn	Pn	05 55 58.8	-1.9
SDDR	Presa de Saban	18.03	68	P	P	05 56 21.6	-1.1
SDDR				IAmb	IAmb	05 56 54.3	
	comp=Z,18nm,1.4s						
HKT	Hockley	18.20	340	P	P	05 56 24.5	+0.2
833A	Chaparral WMA,	18.25	329	P	P	05 56 24.8	-0.2
SDV	Santo Domingo	18.39	100	P	P	05 56 24.6	-2.3
HNDO	Hondo	19.20	332	P	P	05 56 35.5	+0.1
DRIO	Del Rio	19.76	328	P	P	05 56 42.0	+0.4
237A	Washetta, Mont	20.10	343	P	P	05 56 44.6	-0.6
237A				IAmb	IAmb	05 57 11.5	
	comp=Z,7.8nm,0.8s						
BRDY	Brady	20.58	335		P	05 56 50.5	0.0
BRDY				IAmb	IAmb	05 57 05.0	
	comp=Z,5.1nm,0.8s						
BAUV	El Baul	20.87	99	P	P	05 56 52.6	-1.1
BAUV				IAmb	IAmb	05 56 56.7	
	comp=Z,17nm,1.2s						
GOGA	Godfrey	21.09	13	P	P	05 56 53.6	-2.3
GOGA				IAmb	IAmb	05 57 00.9	
	comp=Z,5.0nm,0.7s						
TXAR	Lajitas Array	21.38	322	P	P	05 57 02.2	+3.0
	comp=Z,1.0nm,0.5s,baz=137,slow=10,SNR=6.3						
	comp=Z,1.0nm,0.5s						
SJG	San Juan	22.56	74	LR	LR	06 07 19.0	
	comp=Z,30nm,18.0s,baz=100,slow=41						
V53A	Saluda	23.40	13	P	P	05 57 18.6	-1.6
V53A				IAmb	IAmb	05 57 43.3	
	comp=Z,11nm,1.3s						
T47A	Sharon Grove	24.11	4	P	P	05 57 25.2	-1.5
T47A				IAmb	IAmb	05 57 28.0	
	comp=Z,3.1nm,0.7s						
SMWD	Samnorwood	24.43	337		P	05 57 28.8	-0.9
SMWD				IAmb	IAmb	05 57 34.1	
	comp=Z,6.5nm,0.7s						
CCM	Cathedral Cave	25.21	356		P	05 57 36.6	0.0
RTBA	Rita Blanca	26.59	335	P	P	05 57 48.9	-0.4
RTBA				IAmb	IAmb	05 57 53.9	
	comp=Z,3.1nm,0.6s						
ANMO	Albuquerque	27.14	327	LR	LR	06 12 33.6	
	comp=Z,37nm,18.1s,baz=276,slow=44						
RSSD	Black Hills	33.77	340		P	05 58 53.2	+0.4
PDAR	Pinedale Array	34.77	333	P	P	05 59 03.1	+1.6
	comp=Z,0.4nm,0.6s,baz=144,slow=7.2,SNR=2.4						
	comp=Z,0.4nm,0.6s						
NVAR	Mina Array Bea	36.47	320	P	P	05 59 19.5	+3.3
	comp=Z,0.4nm,0.7s,baz=120,slow=5.5,SNR=3.9						
	comp=Z,0.4nm,0.7s						
SCHQ	Schefferville	45.35	18	P	P	06 00 27.5	-1.2
	comp=Z,1.1nm,0.5s,baz=230,slow=7.9,SNR=1.6						
	comp=Z,1.1nm,0.5s						
YKAW1	Yellowknife Wh	52.84	345		P	06 01 26.4	+0.7
YKAW1				IAmb	IAmb	06 01 26.8	
	comp=Z,2.4nm,0.8s						
YKA	Yellowknife Ar	52.88	345	P	P	06 01 26.1	0.0
	comp=Z,0.6nm,0.4s,baz=150,slow=6.6,SNR=34						
	comp=Z,0.6nm,0.4s						
ILAR	Eielson Array	65.09	336	P	P	06 02 51.1	+0.4
	comp=Z,0.1nm,0.4s,baz=115,slow=7.3,SNR=5.0						
	comp=Z,0.1nm,0.4s						
PZH	PanZhiHua	139.55	345	PKP	PKPdf	06 11 37.5	-1.0
MYLDM	Lahad Datu	147.40	302	PKPdf	PKPdf	06 11 49.8	-2.5
TOLI2	Tolitoli	147.43	293	PKPdf	PKPdf	06 11 50.4	-2.0

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*IDC **09** 06:13:23.1±1.9, 18˚.20S×178˚.24W, h544km±20km, mb3.0/7, mbtmp3.9/8, Error ellipse: s-maj=24.7km s-min=22.5km az=135.0*

ISC 09 06:13:25.4±1.0**, 18˚.1S**±0˚.2×**178˚.5W**±0˚.2**, h579**km**, n8,** σ**2ˢ.14**/8**, mb3.4**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.34	276	P	P	06 14 42.0	-3.0
	50nm,0.7s,baz=118,slow=8.1,SNR=29						
URZ	Urewera	20.46	190	P	P	06 17 21.5	-2.5
	1.6nm,0.3s,baz=350,slow=6.1,SNR=5.8						
	1.6nm,0.3s						
STKA	Stephens Creek	38.50	241	P	P	06 20 00.6	+1.4
	1.8nm,0.6s,baz=106,slow=7.4,SNR=1.8						
	1.8nm,0.6s						
WRA	Warramunga Arr	44.55	260	P	P	06 20 47.8	+0.8
	0.9nm,0.6s,baz=98,slow=7.1,SNR=13						
	0.9nm,0.6s						
ASAR	Alice Springs	44.69	254	P	P	06 20 49.5	+1.5
	4.0nm,0.5s,baz=90,slow=8.2,SNR=85						
	4.0nm,0.5s						
QSPA	South Pole Qui	71.96	180	P	P	06 23 52.2	+1.4
	0.6nm,0.5s,baz=60,slow=14,SNR=7.4						
	0.6nm,0.5s						
ILAR	Eielson Array	86.08	13	P	P	06 25 06.0	+0.9
	0.2nm,0.5s,baz=221,slow=4.0,SNR=5.7						
	0.2nm,0.5s						
TXAR	Lajitas Array	86.14	58	P	P	06 25 05.9	-0.4
	0.3nm,0.8s,baz=259,slow=3.2,SNR=3.9						
	0.3nm,0.8s						

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*CATAC **09** 06:32:03.9±0.4, 15˚N±2˚×8˚8W±˚, h1km, M3.7/15, MLv3.7/15, Error ellipse: s-maj=4.4km s-min=3.0km az=28.0, confirmed*

*GCG **09** 06:32:05.1±2.2, 14˚.88N×87˚.65W, h6km±52km, MD4.2, ML3.6*

*SNET **09** 06:32:05.4±1.0, 14˚.94N×87˚.64W, h11km±9km, ML3.4*

ISC 09 06:32:03.7±1.4**, 14˚.96N**±0˚.04×**87˚.62W**±0˚.04**, h2**km±11km**,** **n58,** σ**0ˢ.62**/68**, Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARCA	Marcala la Paz	0.89	207	iP	Pg	06 32 20.5	-0.2
MARCA				iS	Sg	06 32 32.1	-0.2
TGUH	Tegucigalpa,Un	0.96	159	P	Pg	06 32 22.1	0.0
TGUH				S	Sg	06 32 34.8	+0.4
IZABA	Izabal, Puerto	1.21	310	eP	Pg	06 32 26.7	-0.1
IZABA				eS	Sg	06 32 43.0	+0.6
IZABA	Izabal, Puerto	1.21	310	P	Pg	06 32 26.6	-0.1
YUSH	Yuscaran	1.25	143	P	Pg	06 32 27.3	-0.4
YUSH	Yuscaran	1.25	143	S	Sg	06 32 44.4	+0.5
CAHU	Cacacuatique	1.31	206	eP	Pn	06 32 28.2	-1.0
LLGN	La Laguna	1.50	239	P	Pn	06 32 30.4	-1.3
LLGN	La Laguna	1.50	239	S	Sn	06 32 50.9	-1.2
CHOHN	Orocuina	1.54	163	S	Sn	06 32 52.5	-0.4
CHOHN	Orocuina	1.54	163	P	Pn	06 32 31.2	-1.0
CNRM	Centro Naciona	1.57	200	S	Sn	06 32 53.1	-0.3
CNRM	Centro Naciona	1.57	200	P	Pn	06 32 32.1	-0.5
PQSS	Presa 15 de Se	1.61	215	S	Sn	06 32 54.2	-0.2
PQSS	Presa 15 de Se	1.61	215	P	Pn	06 32 32.1	-1.0
BLLM	Bellamira	1.62	202	eP	Pn	06 32 33.1	-0.2
PACA	Pacayal	1.63	205	eP	Pn	06 32 33.4	-0.1
PACA	Pacayal	1.63	205	S	Sb	06 32 55.7	+0.1
PACA	Pacayal	1.63	205	P	Pn	06 32 33.4	-0.1
SCLA	Alcaldia de Sa	1.65	221	S	Sb	06 32 56.0	0.0
SCLA	Alcaldia de Sa	1.65	221	P	Pn	06 32 33.4	-0.3
LCND	La Caada	1.66	189	eP	Pn	06 32 33.6	-0.2
LCND				IAML		06 32 58.6	
	comp=Z,475nm,0.5s						
LCND	La Caada	1.66	189	P	Pn	06 32 33.5	-0.2
LCY	Lacayo	1.66	203	eP	Pn	06 32 33.7	-0.2
CNCH	Conchagua	1.68	187	eP	Pn	06 32 34.3	0.0
CNCH				eS	Sn	06 32 57.0	+0.5
CNCH	Conchagua	1.68	187	S	Sn	06 32 57.0	+0.5
CNCH	Conchagua	1.68	187	P	Pn	06 32 34.1	-0.2
ESQI	Esquipulas	1.71	257	eP	Pn	06 32 35.0	+0.4
ESQI				eS	Sn	06 32 57.1	0.0
ESQI	Esquipulas	1.71	257	P	Pn	06 32 33.7	-0.9
ESQI	Esquipulas	1.71	257	Sg	Sb	06 32 58.5	+0.5
UESV	Universidad de	1.73	221	S	Sb	06 32 58.2	-0.3
UESV	Universidad de	1.73	221	P	Pn	06 32 33.6	-1.2
MTO3	Montecristo	1.77	252	eP	Pn	06 32 35.5	-0.1
MTO3	Montecristo	1.77	252	eP	Pn	06 32 35.3	-0.3
MTO3	Montecristo	1.77	252	S	Sn	06 32 59.2	+0.4
MTO3	Montecristo	1.77	252	P	Pn	06 32 34.1	-1.5
MTO3	Montecristo	1.77	252	Sg	Sb	06 32 59.7	-0.1
PAVA	Las Pavas	1.78	226	eP	Pn	06 32 35.5	0.0
PAVA				eS	Sb	06 32 59.8	-0.1
PAVA	Las Pavas	1.78	226	P	Pn	06 32 35.3	-0.2
COEG	Centro de Oper	1.80	223	eP	Pn	06 32 35.9	0.0
COEG				eS	Sb	06 33 00.1	-0.5
COEG	Centro de Oper	1.80	223	P	Pn	06 32 36.0	0.0
TECO	Alcaldia de Te	1.80	219	P	Pn	06 32 35.6	-0.2
TECO	Alcaldia de Te	1.80	219	Sg	Sb	06 33 01.1	+0.6
TECO	Alcaldia de Te	1.80	219	S	Sn	06 32 59.1	-0.3
ALJI	Alcalda de J	1.86	210	S	Sn	06 33 01.5	+0.7
ALJI	Alcalda de J	1.86	210	P	Pn	06 32 36.9	+0.3
LFRS	El Faro	1.93	227	eP	Pn	06 32 37.5	-0.1
UDBS	Universidad Do	1.93	230	S	Sb	06 33 04.3	0.0
UDBS	Universidad Do	1.93	230	P	Pn	06 32 38.0	+0.3
RCVN	Varillal2	1.94	134	P	Pn	06 32 37.2	-0.7
RCVN	Varillal2	1.94	134	S	Sn	06 33 04.0	+1.0
POTN	Potosi Cosigui	1.95	177	P	Pn	06 32 38.5	+0.7
POTN				S	Sb	06 33 04.4	-0.3
LOMA	Loma Larga	1.99	229	eP	Pn	06 32 39.2	+0.7
PIC2	El Picacho	1.99	233	eP	Pn	06 32 39.2	+0.6
BOQS	Boqueron	2.01	233	eS	Sn	06 33 05.5	+0.7
JAYA	Jayaque - finc	2.19	234	eP	Pn	06 32 42.3	+1.0
JAYA				iS	Sb	06 33 13.1	+1.1
CEVE	Cerro Verde	2.24	240	eP	Pn	06 32 43.2	+1.1
CEVE				eS	Sn	06 33 10.8	+0.3
CEVE				IAML		06 33 20.0	
	comp=Z,253nm,0.4s						
NUBE	Las Nubes	2.34	244	eP	Pn	06 32 41.8	-1.5

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*CATAC **09** 06:41:28.1±0.4, 13˚N±2˚×8˚9W±˚, h26km±2km, M3.5/29, MLv3.5/29, Error ellipse: s-maj=5.1km s-min=2.6km az=32.9, confirmed*

*SNET **09** 06:41:28.8±1.5, 12˚.98N×89˚.42W, h45km, ML3.6*

*GCG **09** 06:41:29.3±0.7, 13˚.02N×89˚.47W, h34km±3km, MD3.8*

ISC 09 06:41:28.1±1.3**, 12˚.98N**±0˚.05×**89˚.39W**±0˚.04**, h22**km±8km**,** **n92,** σ**0ˢ.52**/108**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.51	7	eP	Pn	06 41 40.0	0.0
LALI				eS	Sn	06 41 47.8	-0.3
LALI	Alcalda de L	0.51	7	iP	Pn	06 41 39.4	-0.7
LALI				iS	Sn	06 41 47.6	-0.5
LALI	Alcalda de L	0.51	7	P	Pn	06 41 40.1	0.0
LALI	Alcalda de L	0.51	7	S	Sn	06 41 48.2	+0.1
PANCS	Alcalda de	0.66	18	S	Sn	06 41 51.6	-0.3
JAYA	Jayaque - finc	0.67	355	eP	Pn	06 41 42.1	-0.4
JAYA				eS	Sn	06 41 51.8	-0.6
JAYA	Jayaque - finc	0.67	355	iP	Pn	06 41 42.0	-0.5
JAYA				iS	Sn	06 41 51.8	-0.6
JAYA	Jayaque - finc	0.67	355	P	Pn	06 41 42.1	-0.4
LOMA	Loma Larga	0.69	18	eP	Pn	06 41 42.5	-0.1
LOMA	Loma Larga	0.69	18	P	Pn	06 41 42.6	-0.1
LOMA	Loma Larga	0.69	18	S	Sn	06 41 53.2	+0.4
ITCA	Escuela Especi	0.70	9	eS	Sn	06 41 52.3	-0.7
ITCA	Escuela Especi	0.70	9	P	Pn	06 41 42.5	-0.2
ITCA	Escuela Especi	0.70	9	S	Sn	06 41 53.1	+0.1
LFRS	El Faro	0.71	26	eP	Pn	06 41 42.9	-0.1
PMON	Piamonte	0.73	6	P	Pn	06 41 42.9	-0.3
PMON	Piamonte	0.73	6	S	Sn	06 41 53.9	+0.1
SEMO	Seminario San	0.74	12	P	Pn	06 41 43.1	-0.2
SEMO	Seminario San	0.74	12	S	Sn	06 41 53.9	+0.1
UTEC	Universidad Te	0.74	14	P	Pn	06 41 43.1	-0.2
UTEC	Universidad Te	0.74	14	S	Sn	06 41 54.2	+0.3
UEES	Universidad Ev	0.75	11	P	Pn	06 41 43.3	-0.1
UEES	Universidad Ev	0.75	11	S	Sn	06 41 54.3	+0.2
BOQS	Boqueron	0.76	8	eP	Pn	06 41 43.6	-0.1
IGN	Direccin Gen	0.76	16	P	Pn	06 41 43.6	0.0
IGN	Direccin Gen	0.76	16	S	Sn	06 41 54.5	+0.1
UDBS	Universidad Do	0.77	17	S	Sn	06 41 54.8	+0.3
COEG	Centro de Oper	0.81	38	eP	Pn	06 41 44.2	-0.1
COEG				eS	Sn	06 41 55.6	0.0
COEG	Centro de Oper	0.81	38	P	Pn	06 41 44.1	-0.1
LFU	La Fuente	0.81	19	eP	Pn	06 41 44.6	+0.4
TECO	Alcaldia de Te	0.81	47	P	Pn	06 41 43.9	-0.3
TECO	Alcaldia de Te	0.81	47	S	Sn	06 41 55.2	-0.4
CEDA	San Andres	0.82	359	eP	Pn	06 41 44.1	-0.3
CEDA				eS	Sn	06 41 55.3	-0.5
CEDA	San Andres	0.82	359	P	Pn	06 41 44.0	-0.3
LBRS	Las Brisas	0.82	24	eP	Pn	06 41 44.9	+0.4
PAVA	Las Pavas	0.85	31	eP	Pn	06 41 45.0	+0.2
PAVA	Las Pavas	0.85	31	P	Pn	06 41 44.8	0.0
PAVA	Las Pavas	0.85	31	S	Sn	06 41 57.1	+0.3
ALJI	Alcalda de J	0.87	66	eP	Pn	06 41 45.1	+0.1
ALJI				eS	Sn	06 41 57.2	+0.2
ALJI	Alcalda de J	0.87	66	P	Pn	06 41 45.0	0.0
CEVE	Cerro Verde	0.87	345	eP	Pn	06 41 45.0	-0.3
CEVE				eS	Sn	06 41 58.0	+0.5
CEVE	Cerro Verde	0.87	345	P	Pn	06 41 45.0	-0.3
CEVE	Cerro Verde	0.87	345	S	Sn	06 41 57.7	+0.2
UESV	Universidad de	0.88	42	P	Pn	06 41 45.0	-0.2
UESV	Universidad de	0.88	42	S	Sn	06 41 57.1	-0.1
SCLA	Alcaldia de Sa	0.96	42	P	Pn	06 41 46.5	+0.1
SCLA	Alcaldia de Sa	0.96	42	S	Sn	06 42 00.2	+0.9
NUBE	Las Nubes	0.99	337	eP	Pb	06 41 46.2	-0.5
NUBE				eS	Sb	06 41 59.4	0.0
NUBE	Las Nubes	0.99	337	iP	Pb	06 41 46.2	-0.5
NUBE				iS	Sb	06 41 59.3	-0.1
NUBE	Las Nubes	0.99	337	P	Pb	06 41 46.1	-0.5
UNIC	Universidad Ca	1.01	351	P	Pb	06 41 46.7	-0.2
UNIC	Universidad Ca	1.01	351	S	Sn	06 42 00.6	0.0
PQSS	Presa 15 de Se	1.03	51	P	Pn	06 41 47.3	+0.1
PQSS	Presa 15 de Se	1.03	51	S	Sn	06 42 01.1	+0.1
FAME	Alcaldia de Sa	1.05	325	P	Pb	06 41 46.7	-0.9
FAME	Alcaldia de Sa	1.05	325	S	Sb	06 41 60.0	-1.1
LOAL	Lomas de Alarc	1.08	339	P	Pb	06 41 47.9	-0.3
LOAL	Lomas de Alarc	1.08	339	S	Sn	06 42 02.5	+0.1
SLOZ	Alcaldia de Sa	1.11	340	P	Pn	06 41 48.2	-0.2
SLOZ	Alcaldia de Sa	1.11	340	S	Sn	06 42 03.5	+0.5
PACA	Pacayal	1.14	65	eP	Pb	06 41 49.7	+0.5
PACA	Pacayal	1.14	65	P	Pb	06 41 49.4	+0.2
PACA	Pacayal	1.14	65	S	Sn	06 42 04.4	+0.4
LCY	Lacayo	1.15	67	eP	Pb	06 41 49.5	+0.1
BLLM	Bellamira	1.21	68	eP	Pb	06 41 50.3	0.0
LLGN	La Laguna	1.25	20	P	Pn	06 41 50.4	0.0
LLGN	La Laguna	1.25	20	S	Sn	06 42 07.4	+0.8
CAHU	Cacacuatique	1.39	55	eP	Pb	06 41 53.2	-0.2
MTO3	Montecristo	1.41	1	iP	Pn	06 41 52.7	0.0
MTO3	Montecristo	1.41	1	P	Pn	06 41 52.7	0.0
MTO3	Montecristo	1.41	1	S	Sn	06 42 10.3	-0.4
LCND	La Caada	1.49	77	eP	Pn	06 41 54.2	+0.5
LCND				eS	Sb	06 42 13.5	-0.2
LCND	La Caada	1.49	77	P	Pn	06 41 54.1	+0.5
LCND	La Caada	1.49	77	S	Sb	06 42 14.2	+0.5
CNCH	Conchagua	1.54	79	eP	Pn	06 41 53.0	-1.4
CNCH				eP	Pn	06 41 54.8	+0.4
CNCH	Conchagua	1.54	79	P	Pn	06 41 54.8	+0.4
CNCH	Conchagua	1.54	79	S	Sn	06 42 13.9	+0.1
ESQI	Esquipulas	1.57	2	eP	Pn	06 41 55.2	+0.4
ESQI				eS	Sb	06 42 16.8	+0.7
ESQI	Esquipulas	1.57	2	P	Pn	06 41 55.2	+0.4
MARCA	Marcala la Paz	1.76	48	iP	Pn	06 41 58.2	+0.8
MARCA				iS	Sb	06 42 20.6	-0.9
CSGN	Cosiguina Volc	1.78	90	P	Pn	06 41 57.8	+0.2
CSGN				S	Sn	06 42 20.2	+0.5
POTN	Potosi Cosigui	1.83	89	S	Sb	06 42 22.8	-0.7
TGUH	Tegucigalpa,Un	2.32	62	P	Pn	06 42 05.6	+0.5
STG8	El Palmar, Qui	2.40	308	iP	Pb	06 42 11.1	+0.3
STG8				iS	Sb	06 42 43.3	+3.1
QUEN	Al S del Volca	2.50	99	P	Pn	06 42 07.5	-0.1
CNGN	Cerro Negro	2.67	100	P	Pn	06 42 09.5	-0.3
CNGN	Cerro Negro	2.67	100	S	Sn	06 42 41.0	-0.5
LIMN	Finca el Limon	2.94	88	P	Pn	06 42 13.9	+0.2
RCPN	Sur Rio San Ju	3.25	80	P	Pn	06 42 18.3	+0.4
MATN	Matagalpa	3.38	90	P	Pn	06 42 18.6	-1.0
MATN	Matagalpa	3.38	90	S	Sn	06 42 58.8	-0.2
BOAB	BOACO BROADBAN	3.67	98	P	Pn	06 42 23.1	-0.5

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*DJA **09** 06:47:53.3±0.5, 5˚N±3˚×12˚6E±˚, h10km, M4.3/8, mb4.5/4, MLv4.3/8*

*IDC **09** 06:47:57.8±7.6, 5˚.18N×126˚.11E, h82km±71km, mb3.6/10, mbtmp3.9/10, MS3.2/4, Error ellipse: s-maj=52.7km s-min=14.5km az=72.0*

*NEIC **09** 06:47:59.1±1.7, 5˚.0N±0˚.1×126˚.1E±0˚.1, h106km±10km, mb4.2/14, Error ellipse: s-maj=19.4km s-min=14.3km az=67.0*

ISC 09 06:47:58.6±0.6**, 5˚.05N**±0˚.07×**126˚.08E**±0˚.10**, h100**km**, n43,** σ**1ˢ.24**/37**, mb4.1**/19**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.46	202	P	Pn	06 48 22.4	-2.0
SGSI				S	Sn	06 48 45.1	+1.2
DAV	Davao City (W)	2.07	346	LR	LR	06 48 57.7	
	comp=Z,65nm,20.3s,baz=175,slow=31						
TNTI	Ternate	4.44	163	Pn	Pn	06 49 03.9	+0.1
TNTI	Ternate	4.44	163	P	Pn	06 49 00.4	-3.3
MRSI	Marisa	6.14	222	P	Pn	06 49 28.6	+1.8
	0.2nm30nm,0.5s						
TOLI2	Tolitoli	6.58	234	Pn	Pn	06 49 32.6	-0.1
SANI	Sanana	7.05	181	P	Pn	06 49 38.0	-1.2
MTN	Manton Dam	18.47	164	P	P	06 52 04.9	-1.9
MTN				IAmb	IAmb	06 52 08.6	
	comp=Z,13nm,1.1s						
UGM	Wanagama	20.16	230	P	P	06 52 23.2	-2.0
KNRA	Kununurra	20.76	173	P	P	06 52 30.5	-1.1
KNRA				IAmb	IAmb	06 53 00.7	
	comp=Z,9.6nm,0.8s						
FITZ	Fitzroy Crossi	23.00	181	P	P	06 52 54.1	-1.0
KULM	Kulim	25.32	272	P	P	06 53 16.2	-0.1
KULM				IAmb	IAmb	06 53 44.2	
	comp=Z,28nm,1.4s						
WB0	Warramunga Arr	25.98	162	P	P	06 53 22.0	-0.2
WB0				IAmb	IAmb	06 53 47.9	
	comp=Z,8.4nm,1.0s						
WRA	Warramunga Arr	26.13	162	P	P	06 53 25.4	+1.9
	comp=Z,1.7nm,0.9s,baz=344,slow=10,SNR=13						
WRA				PcP	PcP	06 56 49.1	+0.5
	comp=Z,0.3nm,0.8s,baz=348,slow=2.5,SNR=1.7						
	comp=Z,1.7nm,0.9s						
WR8	Warramunga Arr	26.19	162	P	P	06 53 22.4	-1.6
WR8				IAmb	IAmb	06 53 34.7	
	comp=Z,5.3nm,1.1s						
ASAR	Alice Springs	29.54	165	P	P	06 53 52.8	-1.1
ASAR	Alice Springs	29.54	165	P	P	06 53 54.9	+0.9
	comp=Z,0.4nm,0.7s,baz=334,slow=6.8,SNR=7.0						
ASAR				PcP	PcP	06 56 59.1	+2.2
	comp=Z,0.4nm,0.6s,baz=335,slow=2.5,SNR=4.5						
	comp=Z,0.4nm,0.7s						
CMAR	Chiang Mai Arr	29.66	299	LR	LR	07 06 25.0	
	comp=Z,19nm,18.2s,baz=215,slow=37						
KSRS	Korea Array	32.30	3	P	P	06 54 18.1	+0.2
	comp=Z,0.4nm,0.4s,baz=188,slow=9.1,SNR=2.0						
	comp=Z,0.4nm,0.4s						
LZH	Lanzhou	37.05	329	eP	P	06 55 09.5	+10
LZH				sP	sP	06 55 33.8	+1.6
LZH				pmax	pmax		
	comp=Z,35nm,0.7s						
STKA	Stephens Creek	39.58	159	P	P	06 55 23.3	+3.1
	comp=Z,0.9nm,0.3s,baz=337,slow=13,SNR=4.5						
	comp=Z,0.9nm,0.3s						
XLT	XiLinHaoTe	39.69	349	eP	P	06 55 28.5	+7.5
XLT				sP	pP	06 55 36.1	-7.0
XLT				pmax	pmax		
	comp=Z,9.0nm,0.8s						
H11N1	WAKE ISLAND Hy	42.30	66	T	T	07 40 10.9	
	baz=254,slow=75,SNR=8.8						
H11N2	WAKE ISLAND Hy	42.31	66	T	T	07 40 09.6	
	baz=254,slow=75,SNR=8.9						
H11N3	WAKE ISLAND Hy	42.32	66	T	T	07 40 10.0	
	baz=254,slow=75,SNR=8.8						
SONM	Songino Array	45.85	342	P	P	06 56 10.6	-0.3
	comp=Z,0.5nm,0.5s,baz=161,slow=9.1,SNR=2.2						
	comp=Z,0.5nm,0.5s						
PEA0B	Petropavlovsk-	54.47	23	P	P	06 57 14.4	-1.2
PETK	Petropavlovsk-	54.47	23	P	P	06 57 14.8	-0.8
PETK	Petropavlovsk-	54.47	23	P	P	06 57 15.4	-0.2
	comp=Z,1.4nm,0.9s,baz=224,slow=7.1,SNR=2.5						
	comp=Z,1.4nm,0.9s						
MK31	Makanchi Array	56.11	325	P	P	06 57 27.3	-0.4
MK31				IAmb	IAmb	06 57 35.7	
	comp=Z,2.5nm,1.0s						

MKAR	Makanchi Array	56.11	325	P	P	06 57 26.2	-1.4
MKAR	Makanchi Array	56.11	325	P	P	06 57 28.3	+0.7
	comp=Z,1.0nm,0.5s,baz=121,slow=7.7,SNR=11						
MKAR				PcP	PcP	06 58 25.7	+1.2
	comp=Z,0.9nm,0.8s,baz=113,slow=5.0,SNR=3.8						
	comp=Z,1.0nm,0.5s						
AAK	Ala-Archa	58.95	318	LR	LR	07 25 11.0	
	comp=Z,32nm,20.4s,baz=133,slow=38						
ZAA0	Zalesovo Array	59.13	333	P	P	06 57 47.9	-0.7
ZAA0				IAmb	IAmb	06 57 53.1	
	comp=Z,1.3nm,0.8s						
ZALV	Zalesovo Beam	59.13	333	P	P	06 57 49.1	+0.5
	comp=Z,0.7nm,0.3s,baz=161,slow=5.8,SNR=2.6						
ZALV				LR	LR	07 23 16.9	
	comp=Z,18nm,21.2s,baz=46,slow=36						
	comp=Z,0.7nm,0.3s						
KBL	Kabul	60.21	307	P	P	06 57 55.5	-1.2
KURBB	Kurchatov Arra	60.29	327	P	P	06 57 57.1	+0.5
	comp=Z,1.0nm,0.6s,baz=125,slow=6.0,SNR=14						
	comp=Z,1.0nm,0.6s						
KURK	Kurchatov	60.29	327	P	P	06 57 57.1	+0.5
KURK				IAmb	IAmb	06 57 57.6	
	comp=Z,1.8nm,0.7s						
TIXI	Tiksi	66.54	1	LR	LR	07 27 16.7	
	comp=Z,26nm,21.3s,baz=194,slow=36						
AB31	Akbulak array	70.72	321	P	P	06 59 04.3	+0.4
ABKAR	Akbulak array	70.72	321	P	P	06 59 04.3	+0.4
ARCES	ARCESS Array B	89.00	340	P	P	07 00 41.9	0.0
	comp=Z,3.0nm,0.9s,baz=70,slow=4.6,SNR=2.3						
FINES	FINESS Array B	90.37	332	P	P	07 00 48.9	+0.4
	comp=Z,1.3nm,0.8s,baz=64,slow=4.4,SNR=4.9						
	comp=Z,1.3nm,0.8s						

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*TIR **09** 07:14:10.8, 40°.44N×20°.72E, h8^{km}±1^{km}, Md2.8/4, Ml2.1/4*
*ATH **09** 07:14:11.0, 40°.48N×20°.71E, h18^{km}±5^{km}, ML1.8/3, Manual Solution by S.Koutrakis First location: 2019/06/09 07:15:32, This location: 2019/06/09 12:29:14 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 5 km*
ISC 09 07:14:11.1±1.0, **40°.47N**±0°.05×**20°.73E**±0°.03, **h15**^{km}±8^{km}, **n10, σ0^{s}.61**/18, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	Korca	0.16	15	Pg	Pg	07 14 15.4	+0.1
KBN				Sg	Sg	07 14 17.6	-0.5
KBN				AML	AML	07 14 18.8	
	2.1nm,0.2s						
NEST	Nestorio	0.25	102	Pg	Pg	07 14 16.3	-0.3
NEST				Sg	Sg	07 14 20.4	+0.1
NEST				AML	AML	07 14 23.6	
	1.2nm,0.2s						
NEST				AMd		07 15 12.4	
NEST	Nestorio	0.25	102	P	Pb	07 14 17.3	0.0
NEST				S	Sb	07 14 21.4	0.0
PENT	Pentalofos	0.41	131	P	Pb	07 14 20.1	0.0
PENT				S	Sb	07 14 26.4	+0.2
KPRO	Kipourio	0.70	136	P	Pb	07 14 25.1	+0.1
KPRO				S	Sb	07 14 36.0	+1.4
KZN	Kozani	0.81	101	P	Pb	07 14 27.3	+0.4
KZN				S	Sn	07 14 39.4	-0.3
SRN	Sarande	0.81	224	Pg	Pb	07 14 26.8	0.0
SRN				Sg	Sn	07 14 38.8	-0.9
SRN				AMd		07 15 19.4	
IGT	Igoumenitsa	0.98	198	Pg	Pg	07 14 29.7	-0.4
IGT				Sg	Sn	07 14 43.2	-0.7
IGT				AML	AML	07 14 44.5	
IGT				AMd		07 15 24.3	
PUK	Puka	1.70	338	Pn	Pg	07 14 43.5	-0.2
PUK				AMd		07 15 47.1	
SCTE	Santa Cesarea	1.78	258	Sn	Sg	07 15 09.4	+1.1
SCTE				AML	AML	07 15 18.4	
	0.2nm,1.0s						

GCG 09 07:19:51.3±1.7, **13°.99N**×**91°.77W, h0**^{km}±18^{km}, **MD3.8, ML2.9, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG8	El Palmar, Qui	0.61	42	*e*P	Pn	07 20 06.8	-0.7
STG8				*e*S	Sn	07 20 19.4	+1.3
FG8	Yepocapa, Chim	1.20	77	*i* P	Pg	07 20 09.9	-4.5
FG8				*i* S	Sg	07 20 25.0	-5.0
FG16	Alotenango, Sa	1.25	77	*i* P	Pg	07 20 11.1	-4.3
CCIG	Comitan	2.30	351	*i* P	Pn	07 20 31.8	+1.1

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*IDC **09** 07:20:01.4±11.0, 20°.54S×177°.97W, h492^{km}±124^{km}, mb3.1/5, mbtmp4.0/5, Error ellipse: s-maj=60.6km s-min=34.2km az=77.0*
ISC 09 07:20:05.2±1.5, **20°.6S**±0°.2×**178°.1W**±0°.3, **h534**^{km}, **n7, σ0^{s}.30**/7, **mb3.5**/5, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	37.69	244	P	P	07 26 35.3	+0.2
	2.7nm,0.9s,baz=40,slow=7.9,SNR=2.1						
	2.7nm,0.9s						
ASAR	Alice Springs	44.43	257	P	P	07 27 28.9	+0.1
	2.2nm,0.5s,baz=93,slow=7.9,SNR=38						
ASAR				PcP	PcP	07 29 01.3	+0.3
	0.5nm,0.7s,baz=97,slow=4.1,SNR=2.6						
	2.2nm,0.5s						
WRA	Warramunga Arr	44.51	262	P	P	07 27 29.1	-0.5
	1.0nm,0.6s,baz=97,slow=6.9,SNR=18						
	1.0nm,0.6s						
QSPA	South Pole Qui	69.49	180	P	P	07 30 19.7	-0.1
	0.7nm,0.7s,baz=44,slow=4.0,SNR=1.4						
	0.7nm,0.7s						
PETK	Petropavlovsk-	76.33	345	P	P	07 30 59.0	0.0
	1.1nm,0.7s,baz=116,slow=8.9,SNR=3.8						
	1.1nm,0.7s						
AKASG	Malin Array Be	143.05	331	PKhKP	PKPpre	07 38 34.5	
	0.6nm,0.4s,baz=38,slow=4.7,SNR=6.2						
BRTR	Keskin Array B	146.84	312	PKPbc	PKPbc	07 38 48.0	+0.1
	0.3nm,0.6s,baz=95,slow=3.6,SNR=2.5						

IDC 09 07:26:42.1±16.0, **0°.95S**×**130°.08E, h0**^{km}, **mb3.9**/2, **mbtmp3.7**/3, **ML3.5**/1, **Error ellipse: s-maj=309.2km s-min=185.4km az=112.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	19.33	168	P	P	07 31 07.9	-1.3
	0.1nm,0.3s,baz=348,slow=11,SNR=7.5						
	0.6nm,0.7s						
ASAR	Alice Springs	22.89	171	P	P	07 31 48.1	+0.6
	2.1nm,0.6s,baz=351,slow=11,SNR=34						
	2.1nm,0.6s						
STKA	Stephens Creek	32.63	162	P	P	07 33 16.0	+0.2
	1.8nm,0.7s,baz=322,slow=12,SNR=2.9						
	1.8nm,0.7s						

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*WEL **09** 07:31:37.1±0.3, 39°S±3°×17°5E±°, h19^{km}±3^{km}, M3.4/74, ML3.8/32, MLv3.4/74, Error ellipse: s-maj=4.2km s-min=1.8km az=174.9, confirmed*
*NOU **09** 07:31:38.0, 39°.13S×174°.60E, h43^{km}, MLv3.8/17, North Island, New Zealand*
ISC 09 07:31:37.6±0.9, **39°.20S**±0°.02×**174°.76E**±0°.02, **h33**^{km}±5^{km}, **n145, σ0^{s}.93**/166, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRZ	Vera Road	0.08	357	P	Pb	07 31 43.0	-0.2
VRZ				S	Sb	07 31 47.5	+0.5
MHEZ	Mangahewa	0.36	290	P	Pb	07 31 46.2	+0.1
LREZ	Lake Rotokare	0.38	227	P	Pb	07 31 46.0	-0.3
LREZ				S	Sn	07 31 53.2	+0.2
DREZ	Durham Road	0.44	271	P	Pb	07 31 47.1	-0.1
DREZ				S	Sb	07 31 54.3	+0.5
INHS	Inglewood High	0.45	276	P	Pb	07 31 47.5	+0.1
PKVZ	Pokaka	0.46	101	P	Pb	07 31 47.2	-0.4
PKVZ				S	Sn	07 31 54.7	-0.4
PREZ	Palmer Road	0.49	253	P	Pb	07 31 47.9	-0.1
PREZ				S	Sn	07 31 56.7	+0.9
TUHS	Taumarunui Hig	0.51	48	P	Pb	07 31 47.1	-1.1
TUHS				S	Sb	07 31 55.2	-0.4
NEZ	North Egmont	0.52	262	P	Pb	07 31 48.3	-0.3
NEZ				S	Sn	07 31 57.5	+0.8
TWVZ	Taurewa	0.54	76	P	Pb	07 31 48.3	-0.6
MTVZ	Mangateitei	0.58	109	P	Pb	07 31 48.9	-0.6
MTVZ				S	Sn	07 31 57.8	-0.2
WAZ	Wanganui	0.58	163	P	Pb	07 31 49.1	-0.3
KHEZ	Kahui Hut	0.59	261	P	Pb	07 31 49.8	+0.2
KHEZ	Kahui Hut	0.59	261	S	Sn	07 31 59.4	+1.2
KHEZ	Kahui Hut	0.59	261	P	Pb	07 31 49.7	+0.2
KHEZ				S	Sb	07 31 58.2	+0.3
PKE	Pukeiti	0.60	270	P	Pb	07 31 49.8	0.0
PKE				S	Sb	07 31 58.7	+0.5
COVZ	Chateau Observ	0.60	90	P	Pb	07 31 49.4	-0.5
COVZ				S	Sb	07 31 58.3	-0.1
FWVZ	Far West T-bar	0.62	95	P	Pb	07 31 49.6	-0.6
FWVZ				S	Sn	07 31 58.9	-0.3
TRVZ	Turoa	0.62	99	P	Pb	07 31 49.7	-0.5
TRVZ				S	Sb	07 31 58.5	-0.3
MAVZ	Matarangi	0.62	96	P	Pb	07 31 49.8	-0.5
MAVZ				S	Sb	07 31 59.0	-0.1
WHVZ	Whangaehu Hut	0.65	97	P	Pb	07 31 50.0	-0.7
WHVZ				S	Sb	07 31 59.3	-0.3
WTVZ	West Tongariro	0.65	83	P	Pb	07 31 50.1	-0.5
WTVZ				S	Sb	07 31 59.1	-0.4
NGZ	Ngauruhoe	0.65	88	P	Pb	07 31 50.2	-0.5
NGZ				S	Sb	07 31 59.5	-0.1
WNVZ	Wahianoa	0.66	101	P	Pb	07 31 50.4	-0.5
WNVZ				S	Sb	07 31 59.8	-0.1
NNVZ	North Ngauruho	0.67	84	P	Pb	07 31 50.5	-0.5
NNVZ				S	Sb	07 31 60.0	-0.1
SNVZ	South Ngauruho	0.68	89	P	Pb	07 31 50.8	-0.4
SNVZ				S	Sb	07 32 00.5	0.0
HIZ	Hauiti	0.69	6	P	Pb	07 31 50.7	-0.5
HIZ	Hauiti	0.69	6	S	Sn	07 32 02.6	+2.0
HIZ	Hauiti	0.69	6	P	Pb	07 31 50.8	-0.5
KRVZ	Karewarewa	0.69	81	P	Pb	07 31 50.8	-0.5
KRVZ				S	Sb	07 32 00.2	-0.5
TUVZ	Tukino	0.69	96	P	Pb	07 31 51.2	-0.2
NBEZ	Newall Road No	0.70	264	P	Pb	07 31 50.8	-0.5
OTVZ	Oturere	0.70	87	P	Pb	07 31 51.2	-0.3
NTVZ	North Tongarir	0.72	82	P	Pb	07 31 51.3	-0.5
NMEZ	Namu Road	0.72	253	P	Pb	07 31 51.2	-0.5
TMVZ	Te Maari	0.74	84	P	Pb	07 31 51.7	-0.4
ETVZ	East Tongariro	0.74	85	P	Pb	07 31 51.8	-0.3
KATZ	Kakaramea	0.76	73	P	Pb	07 31 52.1	-0.3
MOVZ	Moawhango	0.80	105	P	Pb	07 31 52.3	-0.7
RATZ	Rangitukua	0.85	67	P	Pb	07 31 53.5	-0.5
RITZ	Rihia Road	0.88	76	P	Pn	07 31 54.3	+0.6
WATZ	Wairara	0.90	57	P	Pb	07 31 54.1	-0.7
TLZ	Tolley Road	1.06	35	P	Pn	07 31 55.9	-0.3
WHTZ	Whakaora	1.07	61	P	Pb	07 31 57.8	+0.1
OHWZ	Ohakea	1.09	157	P	Pn	07 31 57.1	+0.6
KUTZ	Kaahu Road	1.09	50	P	Pn	07 31 56.9	+0.3
TSZ	Takapari Road	1.26	133	P	Pn	07 31 59.3	+0.4
WPRZ	Whakapapatarin	1.29	59	P	Pn	07 31 59.4	+0.1
PNHZ	Pukenui	1.32	123	P	Pn	07 32 00.2	+0.4
KRHZ	Kereru	1.32	110	P	Pb	07 32 02.0	+0.2
MRHZ	Matea Rd	1.34	75	P	Pn	07 32 00.3	+0.3
BKZ	Black Stump Fm	1.34	89	P	Pb	07 32 02.7	+0.5
BKZ	Black Stump Fm	1.34	89	S	Sb	07 32 20.3	+1.2
BKZ	Black Stump Fm	1.34	89	P	Pb	07 32 01.7	-0.5
GRRZ	Galatos Road	1.35	51	P	Pn	07 32 00.2	0.0
POWZ	Post Office Ro	1.42	147	P	Pn	07 32 02.2	+1.2
HRRZ	Handcock Road	1.44	56	P	Pn	07 32 01.7	+0.4
PRRZ	Plateau Road	1.45	62	P	Pb	07 32 04.7	+0.6
HSRZ	Hossack Road	1.46	53	P	Pb	07 32 04.0	-0.2
UTU	Utuhina	1.52	48	P	Pn	07 32 02.6	+0.2
MCHZ	McNeill Hill	1.52	100	P	Pb	07 32 05.8	+0.7
DVHZ	Dannevirke	1.54	136	P	Pb	07 32 05.1	-0.4
WPHZ	Waipukurau	1.56	124	P	Pb	07 32 05.2	-0.6
NGRZ	Ngongotaha	1.56	46	P	Pn	07 32 03.3	+0.2
MRZ	Mangatainoka R	1.59	157	P	Pn	07 32 04.4	+1.1
NMHZ	Naumai	1.59	87	P	Pb	07 32 05.8	-0.6
RRRZ	Republican Roa	1.62	58	P	Pb	07 32 07.8	+1.0
KMRZ	Kaimai	1.64	35	P	Pn	07 32 05.7	+1.6
PRWZ	Pori Road	1.64	146	P	Pb	07 32 06.3	-0.9
OGWZ	Otaki Gorge	1.64	169	P	Pn	07 32 05.2	+1.0
KARZ	Kaharoa	1.65	45	P	Pb	07 32 07.4	0.0
MTHZ	Maungataniwha	1.66	79	P	Pb	07 32 06.1	-1.4
KIW	Kapiti Island	1.66	176	P	Pn	07 32 05.1	+0.7
OMRZ	Omania	1.67	50	P	Pb	07 32 09.2	+1.6
DUWZ	D’Urville Isla	1.72	202	P	Pn	07 32 05.9	+0.6
MUGZ	Murupara	1.73	66	P	Pn	07 32 06.6	+1.3
KAHZ	Kahuranaki	1.74	111	P	Pb	07 32 08.9	0.0
HOWZ	Holdsworth Sta	1.79	161	P	Pb	07 32 08.9	-0.9
PRHZ	Porangahau	1.79	127	P	Pb	07 32 09.0	-0.8
ANWZ	Angora Road	1.82	134	P	Pb	07 32 11.7	+1.4
PXZ	Pawanui	1.82	118	P	Pb	07 32 13.1	+2.9
RTZ	Ruatahuna	1.83	72	P	Pb	07 32 10.4	+0.1
RAHZ	Arahi	1.83	82	P	Pb	07 32 09.0	-1.4
BFZ	Birch Farm	1.87	143	P	Pn	07 32 08.5	+1.2
TGRZ	Tauranga	1.88	39	P	Pn	07 32 07.5	0.0
CAW	Cannon Point	1.92	173	P	Pn	07 32 09.1	+1.2
OPRZ	Ohinepanea	1.95	47	P	Pn	07 32 08.5	+0.1
MTW	Mount Morrison	2.04	164	P	Pn	07 32 11.8	+2.2
TCW	Tory Channel	2.04	190	P	Pn	07 32 10.0	+0.4
URZ	Urewera	2.06	64	P	Pn	07 32 12.2	+2.3
URZ	Urewera	2.06	64	P	Pn	07 32 12.3	+2.4
WEL	Wellington	2.08	180	P	Pn	07 32 11.6	+1.5
TMWZ	Te Maipa	2.09	156	P	Pn	07 32 11.8	+1.5
KBAZ	Karaka Road Bo	2.11	3	P	Pn	07 32 11.3	+0.8
SNZO	South Karori	2.11	181	P	Pn	07 32 11.6	+1.1
MKAZ	Moumakai	2.12	9	P	Pn	07 32 10.9	+0.2
AWAZ	Awhitu Peninsu	2.14	357	P	Pn	07 32 11.1	+0.2
BHW	Baring Head	2.21	178	P	Pn	07 32 14.1	+2.2
PAWZ	Paruwai Farm	2.24	167	P	Pb	07 32 15.3	-2.0
MSWZ	Moikau Station	2.24	171	P	Pn	07 32 14.8	+2.4
ETAZ	East Tamaki Re	2.25	3	P	Pn	07 32 12.9	+0.5
WTAZ	Waiatarua	2.27	356	P	Pn	07 32 13.3	+0.5
NNZ	Nelson	2.27	207	P	Pn	07 32 13.4	+0.6
TKNZ	Takaka Hill	2.29	216	P	Pn	07 32 13.2	+0.1
TRWZ	Traveller	2.31	162	P	Pb	07 32 18.1	-0.4
TUWZ	Tuamarina	2.31	195	P	Pn	07 32 14.2	+0.9
MWZ	Matawai	2.33	69	P	Pb	07 32 16.9	-2.0
HBAZ	Herne Bay Bore	2.35	359	P	Pn	07 32 14.4	+0.6
QRZ	Quartz Range	2.36	226	P	Pn	07 32 13.2	-0.8
QRZ	Quartz Range	2.36	226	P	Pn	07 32 13.4	-0.6
PLWZ	Palliser	2.40	171	P	Pb	07 32 17.8	-2.3
WIAZ	Waiheke Island	2.42	7	P	Pn	07 32 15.3	+0.4
MBAZ	Motutapu North	2.43	3	P	Pn	07 32 15.2	+0.2
KUZ	Kuaotunu	2.57	17	P	Pn	07 32 16.4	-0.4
KUZ	Kuaotunu	2.57	17	S	Sn	07 32 46.7	-0.2
KUZ	Kuaotunu	2.57	17	P	Pn	07 32 16.4	-0.4
CMWZ	Cape Campbell	2.58	189	P	Pn	07 32 20.4	+3.3
RUGZ	Raukumara Rang	2.60	63	P	Pn	07 32 20.6	+3.2
ABAZ	Army Bay	2.60	1	P	Pn	07 32 17.7	+0.5
BSWZ	Blackbirch Sta	2.60	195	P	Pn	07 32 18.9	+1.6
MRNZ	Matariki Terra	2.68	214	P	Pn	07 32 18.7	+0.3
PKGZ	Pakihiroa	2.92	64	P	Pn	07 32 20.5	-1.2
THZ	Tophouse	2.92	208	P	Pn	07 32 22.7	+0.9
GRZ	Great Barrier	3.00	11	P	Pn	07 32 22.7	-0.1
WCZ	Waipu Caves	3.27	354	P	Pn	07 32 26.4	-0.1
KHZ	Kahutara	3.34	196	P	Pn	07 32 28.2	+0.7
KHZ	Kahutara	3.34	196	P	Pn	07 32 28.5	+1.0
DSZ	Denniston Nort	3.40	221	P	Pn	07 32 27.9	-0.4
LTZ	Lake Taylor	4.04	207	P	Pn	07 32 37.7	+0.5
OUZ	Omahuta	4.08	346	P	Pn	07 32 37.4	-0.3
OUZ	Omahuta	4.08	346	S	Sn	07 33 22.8	-1.5
OUZ	Omahuta	4.08	346	P	Pn	07 32 37.6	-0.1
INZ	Inchbonnie	4.32	214	P	Pn	07 32 41.0	0.0
OKCZ	Okains Bay	4.70	195	P	Pn	07 32 45.5	-0.6
MQZ	McQueen’s Vall	4.77	199	P	Pn	07 32 46.1	-1.1
WVZ	Waitaha Valley	4.92	217	P	Pn	07 32 49.0	-0.1
GCSZ	Gaunt Creek Bo	5.30	218	P	Pn	07 32 54.1	-0.3
RPZ	Rata Peaks	5.30	211	P	Pn	07 32 55.3	+0.9
ARCZ	Arundel	5.45	208	P	Pn	07 32 55.7	-0.8
FOZ	Fox Glacier	5.71	219	P	Pn	07 32 59.3	-0.7
TMZ	Timaru	5.89	207	P	Pn	07 33 01.5	-1.0
ODZ	Otahua Downs	6.59	206	P	Pn	07 33 11.9	-0.2
ODZ	Otahua Downs	6.59	206	P	Pn	07 33 11.5	-0.6
JCZ	Jackson Bay	6.61	221	P	Pn	07 33 11.8	-0.7
JCZ	Jackson Bay	6.61	221	P	Pn	07 33 11.8	-0.7

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*ISN **09** 07:39:05.2±0.3, 33°.72N×45°.75E, h7^{km}±1^{km}, ML3.0*
*TEH **09** 07:39:06.2, 33°.72N×45°.83E, h8^{km}±26^{km}*
ISC 09 07:39:07.0±0.9, **33°.70N**±0°.03×**45°.81E**±0°.04, **h19**^{km}, **n19, σ1^{s}.28**/23, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILBA	Ilam Banvizeh	0.34	103	Pg	Pg	07 39 13.0	-1.3
GLG1	Gilan-e-Gharb	0.42	12	Pg	Pg	07 39 13.9	-1.8
IBDR	Badra	0.60	170	*e*Pg	Pb	07 39 17.5	-1.3
IBDR				*e*Sg	Sb	07 39 26.3	-0.5
IBDR				AML	AML	07 39 31.2	
	comp=N,664nm,0.3s						
IBDR				AML	AML	07 39 31.5	
	comp=E,593nm,0.4s						
KGS1	Ghasr-e-Shirin	0.82	347	Pg	Pb	07 39 22.2	-0.5
IGHG	Ghaleghazi	0.89	45	Pg	Pb	07 39 23.6	-0.4
IDHR	Dehrash	1.10	26	Pg	Pb	07 39 26.9	-0.7
KCHF	Cheshme Sefid,	1.17	61	Pg	Pn	07 39 28.4	-0.1
BHD	Baghdad	1.27	250	*e*Pn	Pb	07 39 30.5	+0.2
BHD				*e*Sn	Sg	07 39 49.0	+0.8
BHD				AML	AML	07 39 51.0	
	comp=E,384nm,0.7s						
ILIN	Lien	1.54	38	Pg	Pb	07 39 35.6	+0.5
IKFM	Kafar-mosalman	1.71	95	Pg	Pb	07 39 37.7	-0.1
IBZA	Bozab	1.87	65	Pn	Pb	07 39 40.8	+0.1
SNQR	Sonqor, Kerman	1.90	52	Pn	Pb	07 39 41.2	0.0
IDOB	Doab	1.98	87	Pn	Pb	07 39 41.9	-0.5
RAFI	Al-Rafai	1.99	172	*e*Pn	Pb	07 39 41.5	-1.1
RAFI				*e*Sn	Sb	07 40 08.0	+1.0
RAFI				AML	AML	07 40 11.8	
	comp=N,196nm,0.2s						
RAFI				AML	AML	07 40 11.8	
	comp=E,257nm,0.4s						
IKRK	Kirkuk	2.08	325	*e*Pn	Pn	07 39 42.0	+1.1
IKRK				*e*Sn	Sb	07 40 08.5	-1.1
IKRK				AML	AML	07 40 13.5	
	comp=N,146nm,0.2s						
IKRK				AML	AML	07 40 23.6	
	comp=E,112nm,0.6s						
HSAM	Samen	2.38	77	Pn	Pb	07 39 47.5	-1.8
HAGD	Aghdareh	2.98	67	Pn	Pn	07 39 55.4	+2.0
HGHA	Hamedan- Ghaye	3.08	54	Pn	Pn	07 39 57.2	+2.4
IKLH	Kolahrood	4.83	93	Pn	Pn	07 40 21.5	+2.5

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*SOME **09** 07:55:43.4, 39°.70N×75°.40E, h10^{km}*
*KRNET **09** 07:55:49.1±0.1, 39°.61N×75°.57E, h35^{km}, mb3.8*
*NNC **09** 07:55:53.0±1.0, 40°.01N×75°.37E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=8.0km s-min=5.7km az=159.0*
ISC 09 07:55:49.6±1.7, **39°.61N**±0°.06×**75°.53E**±0°.04, **h29**^{km}±15^{km}, **n60, σ1^{s}.56**/97, **32C-34D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	1.61	285	⇑*i*P	Pn	07 56 16.7	+0.4
SFK				⇑*i*S	Sn	07 56 36.9	+0.7
SALK	Salom-Alik	1.82	315	⇓*i*P	Pn	07 56 19.6	+0.5
SALK				⇓*i*S	Sn	07 56 41.8	+0.5
NRN	Naryn	1.85	11	⇓*i*P	Pn	07 56 19.4	-0.3
NRN				⇓*i*S	Sn	07 56 41.5	-0.8
OHH	Osh	2.30	294	⇑*i*P	Pn	07 56 26.0	+0.5
OHH				⇑*i*S	Sn	07 56 53.1	+0.2
ARLS	Aral	2.43	338	⇓*i*P	Pn	07 56 27.7	+0.3
ARLS				⇓*i*S	Sn	07 56 55.8	-0.4
ARSB	Arslanbob	2.59	312	⇑*i*P	Pn	07 56 30.2	+0.6
ARSB				⇑*i*S	Sn	07 57 00.1	-0.1
ULHL	Ulahol	2.69	11	P	Pb	07 56 34.7	-2.4
	SNR=7.7						
ULHL	Ulahol	2.69	11	⇑*i*P	Pn	07 56 31.1	+0.1
ULHL				⇑*i*S	Sn	07 57 01.7	-1.0
UCH	Uchtor	2.73	344	P	Pn	07 56 34.2	+2.4
	SNR=16						
UCH	Uchtor	2.73	344	⇑*i*P	Pn	07 56 32.0	+0.2
UCH				⇑*i*S	Sn	07 57 03.5	-0.5
TARG	Taragay, Kyrgy	2.73	39	⇓*i*P	Pn	07 56 31.6	-0.2
TARG				⇓*i*S	Sn	07 57 02.7	-1.4
KDJ	Kajisay	2.81	26	⇓*i*P	Pn	07 56 32.7	0.0
KDJ				⇓*i*S	Sn	07 57 04.5	-1.2
AML	Almayashu	2.88	332	P	Pn	07 56 35.9	+2.0
	SNR=30						
AML	Almayashu	2.88	332	⇓*i*P	Pn	07 56 34.2	+0.4
AML				⇓*i*S	Sn	07 57 07.0	-0.6
DRK	Karamyk	2.89	269	⇓*i*P	Pn	07 56 34.3	+0.4
DRK				⇓*i*S	Sn	07 57 07.1	-0.7
BOOM	Boomskoye usch	2.89	6	⇑*i*P	Pn	07 56 34.0	+0.2
BOOM				⇑*i*S	Sn	07 57 06.8	-0.9
KBK	Karagaybulak	3.07	352	P	Pn	07 56 39.2	+2.9
	SNR=8.3						
KBK	Karagaybulak	3.07	352	⇓*i*P	Pn	07 56 36.6	+0.3
KBK				⇓*i*S	Sn	07 57 11.4	-0.8
AAK	Ala-Archa	3.12	346	P	Pn	07 56 39.6	+2.6
	SNR=58						
AAK	Ala-Archa	3.12	346	⇓Pn	Pn	07 56 39.3	+2.4
	5.9nm,0.4s						
AAK				⇓Lg	Lg	07 57 17.5	
	23nm,0.8s						
AAK	Ala-Archa	3.12	346	⇑*i*P	Pn	07 56 37.4	+0.4
AAK				⇑*i*S	Sn	07 57 12.7	-0.7
FRU1	Bishkek	3.27	348	⇓*i*P	Pn	07 56 39.6	+0.7
FRU1				⇓*i*S	Sn	07 57 16.6	-0.2
TKM2	Tokmak 2	3.31	1	P	Pn	07 56 41.9	+2.3
	SNR=21						
TKM2	Tokmak 2	3.31	1	⇑Pn	Pn	07 56 41.9	+2.3
	11nm,0.4s						
TKM2				⇓Lg	Lg	07 57 27.6	
	79nm,0.5s						
TKM2	Tokmak 2	3.31	1	⇓*i*P	Pn	07 56 39.9	+0.3
TKM2				⇓*i*S	Sn	07 57 16.9	-1.1
EKS2	Erkin-Say	3.32	337	P	Pn	07 56 42.6	+2.9
	SNR=6.2						
EKS2	Erkin-Say	3.32	337	⇑*i*P	Pn	07 56 40.1	+0.4
EKS2				⇑*i*S	Sn	07 57 17.6	-0.6
CHMS	Chumysh	3.43	350	P	Pn	07 56 43.8	+2.7
	SNR=9.9						
CHMS	Chumysh	3.43	350	⇓Pn	Pn	07 56 43.4	+2.3
	10nm,0.6s						
CHMS				⇑Lg	Lg	07 57 30.0	
	64nm,0.8s						
CHMS	Chumysh	3.43	350	⇑*i*P	Pn	07 56 41.5	+0.4
CHMS				⇑*i*S	Sn	07 57 19.9	-1.0
KST	Kastek	3.44	5	Pg	Pb	07 56 49.0	-0.9
	12nm,0.3s						
KST				Lg	Lg	07 57 31.9	
	156nm,1.0s						
KST	Kastek	3.44	5	*e*P	Pn	07 56 44.0	+2.6
	10nm,0.5s						
KST				*e*S	Sb	07 57 28.7	-2.7
	155nm,0.7s						
ARK	Arkit	3.48	310	⇑*i*P	Pn	07 56 42.6	+0.7
ARK				⇑*i*S	Sn	07 57 21.7	-0.5
IZV	Izvestkoviy	3.52	13	Pg	Pb	07 56 50.5	-0.7
	16nm,0.6s						
IZV				Lg	Lg	07 57 33.8	
	44nm,0.7s						
IZV	Izvestkoviy	3.52	13	*e*P	Pb	07 56 47.9	-3.3
	9.5nm,0.3s						
IZV				*e*S	Sb	07 57 33.8	+0.3
	44nm,0.4s						
MTBS	Maitube	3.58	11	Pg	Pb	07 56 51.5	-0.7
	10nm,0.3s						
MTBS				Lg	Lg	07 57 35.6	
	48nm,0.6s						
MTBS	Maitube	3.58	11	*e*P	Pb	07 56 48.3	-4.0
	11nm,0.2s						
MTBS				*e*S	Sb	07 57 35.6	+0.4
	48nm,0.6s						
MRKS	Merke	3.58	332	Pg	Pb	07 56 50.9	-1.4
	16nm,0.5s						
MRKS				Lg	Lg	07 57 34.8	
	33nm,0.7s						
MRKS	Merke	3.58	332	*e*P	Pn	07 56 47.0	+3.8
	16nm,0.2s						
MRKS				*e*S	Sb	07 57 33.9	-1.5
	33nm,0.4s						
PRZ	Przheval'sk	3.60	36	⇓*i*P	Pn	07 56 43.7	+0.2
PRZ				⇓*i*S	Sn	07 57 23.6	-1.5
DGS	Degeres	3.63	3	Pg	Pb	07 56 52.3	-0.8
	22nm,0.3s						
DGS				Lg	Lg	07 57 36.9	
	60nm,0.5s						
BTK	Batken	3.66	279	⇓*i*P	Pn	07 56 44.9	+0.7
BTK				⇓*i*S	Sn	07 57 25.8	-0.6
MNAS	Manas	3.67	322	⇓*i*P	Pn	07 56 45.1	+0.6
MNAS				⇓*i*S	Sn	07 57 26.1	-0.8
MDOK	Medeo	3.73	17	Pn	Pn	07 56 47.1	+1.8
	6.9nm,0.4s						
MDOK				Pg	Pb	07 56 53.9	-0.9
	12nm,0.4s						
MDOK				Lg	Lg	07 57 39.9	
	45nm,0.9s						

MDOK				Lg	Lg	07 57 40.1	
	63nm,0.9s						
USP	Ospenovka	3.73	348	P	Pn	07 56 47.3	+2.0
	SNR=17						
USP	Ospenovka	3.73	348	⇑iP	Pn	07 56 45.8	+0.5
USP				⇑iS	Sn	07 57 27.1	-1.2
KOTS	Kotyrbulak	3.81	18	Pg	Pb	07 56 56.4	+0.2
	14nm,0.5s						
KOTS				Lg	Lg	07 57 44.0	
	271nm,0.7s						
KOTS	Kotyrbulak	3.81	18	eP	Pb	07 56 52.4	-3.8
	14nm,0.3s						
KOTS				eS	Sb	07 57 44.0	+2.0
	271nm,0.7s						
TRKS	Terek-Say	3.85	301	⇑iP	Pn	07 56 47.0	0.0
TRKS				⇑iS	Sn	07 57 29.4	-2.0
SGDS	Sogindy	3.90	350	Pg	Pb	07 56 56.8	-0.8
	7.5nm,0.4s						
SGDS				Lg	Lg	07 57 44.8	
	84nm,0.8s						
GAR	Garm	4.09	263	⇑iP	Pn	07 56 50.8	+0.5
GAR				⇑iS	Sn	07 57 36.1	-1.1
KTBS	Karatobe	4.19	12	Pg	Pb	07 57 02.4	-0.2
	5.5nm,0.6s						
KTBS				Lg	Lg	07 57 54.5	
	50nm,0.8s						
KUU	Kurty	4.32	8	eP	Pb	07 57 03.1	-1.7
	1.4nm,0.1s						
KUU				eS	Sb	07 57 58.2	+1.7
	51nm,0.4s						
PDGK	Podgornoye	4.76	37	⇑Pg	Pb	07 57 15.0	+2.7
	4.8nm,0.5s						
PDGK				⇓Lg	Lg	07 58 15.6	
	28nm,0.8s						
ARXS	Arharly	4.91	20	Pg	Pb	07 57 15.2	+0.4
ARXS				Lg	Lg	07 58 16.5	
	13nm,0.4s						
BLB	Baldybastay	4.99	25	Pg	Pb	07 57 17.5	+1.2
	20nm,0.6s						
BLB				Lg	Lg	07 58 20.1	
	17nm,0.6s						
KK31	Karatay Array	5.14	314	⇑Pn	Pn	07 57 04.7	+0.1
	0.2nm,0.2s,baz=130,slow=11,SNR=7.3						
KK31				⇓Pg	Pb	07 57 19.2	+0.5
	1.6nm,0.4s,baz=135,slow=15,SNR=6.2						
KK31				⇑Sn	Sn	07 58 01.0	-1.9
	1.7nm,0.4s						
KK31				⇑Lg	Lg	07 58 27.4	
	15nm,0.9s						
KKAR	Karatay Array	5.14	314	⇓iP	Pn	07 57 05.2	+0.6
KKAR				⇓iS	Sn	07 58 00.9	-2.0
BTLS	Baital	5.54	349	Pg	Pb	07 57 26.0	+0.5
	3.3nm,0.8s						
BTLS				Lg	Lg	07 58 34.6	
	6.3nm,0.4s						
BTLS	Baital	5.54	349	eP	Pb	07 57 24.1	-1.4
	3.2nm,0.4s						
BTLS				eS	Sb	07 58 35.4	+4.0
	10nm,0.3s						

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*SKHL **09** 08:06:44.5±0.4, 42°.10N×136°.80E, h334^{km}±5^{km}, mb4.8/5, mbv4.9/4, msh4.4/4, msha4.4/4*

*IDC **09** 08:06:45.4±0.8, 42°.28N×136°.74E, h327^{km}±7^{km}, mb3.4/15, mbtmp4.1/22, Error ellipse: s-maj=11.3km s-min=9.3km az=51.0*

*NEIC **09** 08:06:45.0±1.0, 42°.17N±0°.07×136°.72E±0°.10, h333^{km}±7^{km}, mb4.1/29, Error ellipse: s-maj=11.0km s-min=10.6km az=161.0*

*JMA **09** 08:06:45.7±0.3, 42°N±1°×13°7E±°, h349^{km}±2^{km}, MV3.7/33, EASTERN SEA OF JAPAN*

*NIED **09** 08:06:45.7, 42°.17N×136°.87E, h349^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.03; M$_{\theta\theta}$0.92; M$_{\phi\phi}$-0.94; M$_{r\theta}$-0.40; M$_{\theta\phi}$-0.18; M$_{\phi r}$-0.40; Fault plane solution: M$_0$1.10000×10^{15} NP1: ϕ_s320.00000°, δ59.00000°, λ-1.00000°. NP2: ϕ_s50.00000°, δ89.00000°, λ-149.00000°.*

*MOS **09** 08:06:45.0±0.9, 42°.27N×136°.69E, h341^{km}, mb4.2/14 Error ellipse: s-maj=8.9km s-min=6.8km az=119.9*

ISC 09 08:06:44.9±0.5**, 42°.19N**±0°.04×**136°.79E**±0°.04**, h334**^{km}±6^{km}**, n165, **σ1^{s}**57**/191**, mb3.8**/35**, 9C-10D, Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOSM	Okushiri--Mats	2.00	92	P	Pn	08 07 36.2	+1.5
JOSM				eS	S	08 08 16.5	+1.9
JHST	Hiyamasetana	2.30	83	P	Pn	08 07 39.0	+2.0
JHST				eS	S	08 08 20.4	+1.7
JSH	Shimam	2.45	78	P	Pn	08 07 40.0	+1.8
JSH				eS	S	08 08 23.1	+2.2
JOMM	Oshimamatsumae	2.49	104	P	Pn	08 07 40.4	+1.8
JOMM				eS	S	08 08 24.0	+2.4
TEY	Ternei	2.85	357	eP	Pn	08 07 42.3	+0.7
TEY	Ternei	2.85	357	eP	Pn	08 07 42.4	+0.8
TEY				AMB	AMB	08 07 42.7	
	20nm,0.4s						
TEY				AMB	AMB	08 07 43.0	
	70nm,1.0s						
TEY				A	A	08 08 26.4	
	60nm,2.0s						
TEY				A	A	08 08 26.4	
	40nm,2.0s						
TEY				eS	S	08 08 27.3	+0.1
TEY				A	A	08 08 27.3	
	20nm,0.6s						
TEY				A	A	08 08 27.3	
	20nm,0.6s						
JOT	Ohata	3.28	103	P	Pn	08 07 47.2	+1.5
JTM	Tenmabayashi	3.50	112	Pn	Pn	08 07 49.5	+1.6
JTM	Tenmabayashi	3.50	112	P	Pn	08 07 49.2	+1.3
JEW	Eniwo	3.50	78	eP	Pn	08 07 49.9	+2.0
JEW				eS	S	08 08 40.8	+2.3
GRTR	Gornotajezhnoj	3.73	296	eP	Pn	08 07 50.2	+0.1
GRTR				AMB	AMB	08 07 50.8	
	20nm,0.4s						
GRTR				eS	S	08 08 39.5	-3.1
GRTR				A	A	08 08 41.7	
	20nm,0.7s						
GRTR				A	A	08 08 41.7	
	20nm,0.7s						
GRTR				A	A	08 08 42.4	
	130nm,2.0s						
GRTR				A	A	08 08 42.4	
	110nm,2.0s						
VLA	Vladivostok	3.74	286	c iP	Pn	08 07 50.4	+0.2
JANG	Nango	3.99	115	eP	Pn	08 07 54.3	+1.4
USA0B	Ussuriysk Arra	4.05	301		Pn	08 07 53.0	-0.4
USA0B	Ussuriysk Arra	4.05	301	deP	Pn	08 07 53.0	-0.4
USRK	Ussuriysk Ar.	4.05	301		Pn	08 07 53.1	-0.4
USRK	Ussuriysk Ar.	4.05	301	P	Pn	08 07 53.5	0.0
	4.9nm,0.4s,baz=106,slow=9.6,SNR=19						
USRK				S	S	08 08 46.5	-2.1
	6.7nm,0.8s,baz=117,slow=17,SNR=7.3						
MSHR	Mys Shultsa	4.19	277	d iP	Pn	08 07 54.7	-0.3
MSHR				pmax	pmax		
	comp=Z,58nm,0.4s						
JYK	Kaneyama	4.25	139	eP	Pn	08 07 57.2	+1.6
JYK				eS	S	08 08 53.1	+0.5
JSD	Sado	4.29	164	P	Pn	08 07 58.4	+2.2
JSS	Shosan	4.30	57	eP	Pn	08 07 58.4	+2.2
PSTR	Posyet	4.46	278	d iP	Pn	08 07 58.3	+0.5
PSTR	Posyet	4.46	278	eP	Pn	08 07 58.3	+0.5
PSTR				eS	S	08 08 53.8	-2.8
ASAJ	Asahikawa	4.66	64	P	Pn	08 08 01.5	+1.5
	comp=Z,37nm,0.3s,baz=246,slow=8.6,SNR=164						
ASAJ				S	S	08 08 59.8	-0.9
	comp=Z,22nm,0.8s,baz=134,slow=30,SNR=11						
JKA	Kamikawa-asahi	4.67	64		Pn	08 08 01.4	+1.3
JMK	Ichinoseki	4.67	132	i P	Pn	08 08 01.0	+0.8
JMK				eS	S	08 08 59.5	-1.4
ERM	Erimo	4.74	90		Pn	08 08 00.9	0.0
ERM	Erimo	4.74	90	d iP	Pn	08 08 01.9	+1.0
ERM				pmax	pmax		
	comp=Z,80nm,0.8s						
JEM	Erimo	4.74	90	P	Pn	08 08 01.9	+1.0
JEM	Erimo	4.74	90	S	S	08 09 00.1	-2.0
JWK2	Keihoku	4.84	48	eP	Pn	08 08 04.7	+2.8
JCH	Churui	4.88	83	P	Pn	08 08 03.0	+0.5
JCH				eS	S	08 09 02.7	-2.3
JMM	Marumori	5.29	143		Pn	08 08 07.3	+0.1
JMM	Marumori	5.29	143	P	Pn	08 08 07.8	+0.6
JMM	Marumori	5.29	143	S	S	08 09 13.3	-0.3
JTKR	Abashiri--Toko	5.51	69	eP	Pn	08 08 10.6	+1.1
JTKR				eS	S	08 09 16.4	-1.4
MJB9	Matsu-Tunnel	5.74	169	Pn	Pn	08 08 11.9	-0.5
MAJO	Matsushiro	5.74	169	P	Pn	08 08 15.4	+3.1
MAJO	Matsushiro	5.74	169	i P	Pn	08 08 15.5	+3.1
MJAR	Matsushiro Arr	5.74	169	P	Pn	08 08 14.4	+2.0
	comp=Z,3.4nm,0.5s,baz=351,slow=12,SNR=15						
MDJ	Mudanjiang	5.78	297	P	Pn	08 08 12.7	+0.1
MDJ				pmax	pmax		
	comp=Z,25nm,0.7s						
AKK	Akkeshi	6.00	79	eP	Pn	08 08 14.9	-0.2
JRY	Ryogami san	6.38	164	eP	Pn	08 08 21.0	+1.3
JRY				eS	S	08 09 36.7	+0.2
YSS	Yuzhno-Sakhali	6.39	40		Pn	08 08 20.1	+0.5
YSS	Yuzhno-Sakhali	6.39	40	P	Pn	08 08 21.4	+1.8
YSS	Yuzhno-Sakhali	6.39	40	κ iP	Pn	08 08 21.2	+1.6
YSS				eS	S	08 09 35.4	-0.9
YSS				pmax	pmax		
	comp=Z,100nm,3.4s						
YSS				pmax	pmax		
	comp=N,100nm,5.0s						
YSS				pmax	pmax		
	comp=Z,40nm,0.6s						
YSS				pmax	pmax		
	comp=E,20nm,0.7s						
YSS				smax	smax		
	comp=N,40nm,0.6s						
YSS				smax	smax		
	comp=E,40nm,0.9s						
YSS	Yuzhno-Sakhali	6.39	40	i P	Pn	08 08 20.4	+0.8
YSS				AMB	AMB	08 08 23.1	
	comp=E,120nm,3.0s						
YSS				eS	S	08 09 33.8	-2.5
YSS				A	A	08 09 37.9	
	comp=E,40nm,0.6s						
YSS				A	A	08 09 37.9	
	comp=E,40nm,0.6s						
JGF	Kuroka	6.59	176		Pn	08 08 21.8	-0.5
JGF	Kuroka	6.59	176	P	Pn	08 08 26.0	+3.7
NMR	Nemuro--Hokkai	6.68	77	eP	Pn	08 08 22.9	-0.2
NEM2	Nemuro 2	6.69	77	P	Pn	08 08 23.1	0.0
NEM2				eS	S	08 09 37.8	-5.0
INU	Inuyama	6.83	178		Pn	08 08 25.2	+0.2
INU	Inuyama	6.83	178	P	Pn	08 08 29.3	+4.3
YUK	Yuzh-Kuril'sk	6.89	71	⇓eP	Pn	08 08 26.6	+1.1
YUK	Yuzh-Kuril'sk	6.89	71	eP	Pn	08 08 26.7	+1.2
YUK				AMB	AMB	08 08 27.9	
	comp=E,120nm,0.5s						
JOD2	Odawara 2	7.14	165	eP	Pn	08 08 29.7	+0.9
SHO	Shikotan	7.54	74	eP	Pn	08 08 33.7	+0.4
SHO				eS	S	08 09 56.2	-5.2
SHO				pmax	pmax		
	comp=Z,81nm,0.3s						
SHO	Shikotan	7.54	74	eP	Pn	08 08 34.0	+0.7
SHO				AMB	AMB	08 08 34.8	
	comp=Z,80nm,0.3s						
SHO				AMB	AMB	08 08 37.7	
	comp=Z,410nm,2.0s						
SHO				eS	S	08 09 57.2	-4.2
SHO				A	A	08 10 01.6	
	comp=Z,590nm,3.0s						
SHO				A	A	08 10 01.6	
	comp=Z,900nm,3.0s						
BNX	BinXian	7.65	301	⇓P	Pn	08 08 33.6	-0.9
BNX				S	S	08 10 01.9	-1.8
BNX				pmax	pmax		
	comp=Z,13nm,0.8s						
JHS	Saijyo	7.73	203	eP	Pn	08 08 38.0	+2.2
JIE	Ise	7.78	181	eP	Pn	08 08 39.9	+3.5
KLR	Kul'dur	7.88	335	P	Pn	08 08 36.9	-0.3
	comp=Z,24nm,0.6s,baz=145,slow=11,SNR=72						
KLR	Kul'dur	7.88	335	c iP	Pn	08 08 36.7	-0.5
KLR				pmax	pmax		
	comp=Z,46nm,1.3s						
KLR	Kul'dur	7.88	335	eP	Pn	08 08 36.7	-0.5
BSO1	Boso 1	8.21	155	eP	Pn	08 08 40.2	-0.6
BSO1				eS	S	08 10 11.7	-3.6
KSRS	Korea Array	8.30	238	P	P	08 08 44.0	-2.0
	comp=Z,2.3nm,0.6s,baz=50,slow=12,SNR=4.5						
KSAR	Wonju Array Be	8.33	238	Pn	Pn	08 08 39.4	-3.4
KSAR	Wonju Array Be	8.33	238	P	Pn	08 08 39.4	-3.4
CN2	Changchun	8.47	285	P	Pn	08 08 44.3	-0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
JMN	Monobe	8.75	196	Pn	Pn	08 08 47.4	-0.6
JHJ2	Mitsune	9.37	164	Pn	Pn	08 08 54.8	-0.6
JHJ2	Mitsune	9.37	164	eP	Pn	08 08 55.4	0.0
TYV	Tymovskoe	9.57	23	eP	Pn	08 08 59.1	+1.6
TYV				eS	S	08 10 44.1	-1.9
TYV				pmax	pmax		
	comp=Z,22nm,0.7s						
TYV				smax	smax		
	comp=E,100nm,2.3s						
TYV				smax	smax		
	comp=N,4.0nm,1.4s						
TYV				smax	smax		
	comp=E,5.0nm,1.4s						
TYV	Tymovskoe	9.57	23	eP	Pn	08 08 59.1	+1.6
TYV				AMB	AMB	08 08 59.9	
	comp=E,220nm,0.7s						
TYV				AMB	AMB	08 09 02.1	
	comp=E,340nm,2.1s						
TYV				eS	S	08 10 44.1	-1.9
TYV				A	A	08 10 47.9	
	comp=E,200nm,2.2s						
TYV				A	A	08 10 47.9	
	comp=E,100nm,2.2s						
TYV				A	A	08 10 51.6	
	comp=E,50nm,1.7s						
TYV				A	A	08 10 51.6	
	comp=E,40nm,1.7s						
JNU	Nakatsue	10.19	209	Pn	Pn	08 09 03.8	-1.5
JNU	Nakatsue	10.19	209	P	P	08 09 07.3	+0.1
	comp=E,11nm,0.8s,baz=42,slow=0.5,SNR=9.0						
ZEA	Zeya	13.19	334	eP	Pn	08 09 41.2	+0.4
ZEA				pmax	pmax		
	comp=E,10.0nm,0.4s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA	Zeya	13.19	334	eP	Pn	08 09 43.3	+2.5
HIA	Hailar	13.84	307	P	P	08 09 46.8	-0.6
HIA	Hailar	13.84	307	P	P	08 09 46.8	-0.6
XLT	XiLinHaoTe	15.24	283	eP	P	08 10 03.0	+0.1
XLT				pmax	pmax		
	comp=Z,19nm,0.7s						
BJT	Baijiatuau	15.70	269	P	P	08 10 06.8	-1.0
BJT				IAmb	IAmb	08 10 09.0	
	comp=Z,8.5nm,0.8s						
BJT	Baijiatuau	15.70	269	P	P	08 10 06.8	-1.0
BJT				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TIA	Tai'an	16.36	255	P	P	08 10 16.0	+0.9
TIA				pmax	pmax		
	comp=Z,14nm,0.8s						
JOW	Kunigami	16.83	207	P	P	08 10 19.7	-0.5
HHC	Hu-ho-hao-te	18.93	274	eP	P	08 10 41.2	-1.4
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,45nm,3.9s						
MA2	Magadan	19.44	22	P	P	08 10 46.9	-0.8
MA2				IAmb	IAmb	08 10 49.1	
	comp=Z,9.5nm,0.8s						
MA2	Magadan	19.44	22	P	P	08 10 46.8	-0.9
	comp=Z,6.6nm,0.6s,baz=199,slow=8.0,SNR=4.3						
MA2	Magadan	19.44	22	P	P	08 10 46.9	-0.8
MA2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ULN	Ulaanbaatar	21.69	295	P	P	08 11 08.4	-1.1
ULN				IAmb	IAmb	08 11 10.2	
	comp=Z,4.9nm,0.6s						
ULN	Ulaanbaatar	21.69	295	c iP	P	08 11 09.3	-0.2
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ULN	Ulaanbaatar	21.69	295	eP	P	08 11 09.3	-0.2
SONM	Songino Array	22.13	295	P	P	08 11 12.2	-1.3
SONM	Songino Array	22.13	295	P	P	08 11 13.4	-0.1
	comp=Z,0.9nm,0.3s,baz=104,slow=10,SNR=5.2						
	comp=Z,0.9nm,0.3s						
SEY	Seymchan	22.72	19	⇑eP	P	08 11 20.2	+1.8
SEY				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SEY	Seymchan	22.72	19	eP	P	08 11 20.2	+1.8
LZH	Lanzhou	26.17	268	eP	P	08 11 55.7	+5.8
LZH				pP	pP	08 12 00.7	-49
LZH				pmax	pmax		
	comp=Z,18nm,0.9s						
PZH	PanZhiHua	32.63	253	P	P	08 12 46.1	-0.6
ADK	Adak	32.65	56	P	P	08 12 46.1	-0.2
ADK	Adak	32.65	56	P	P	08 12 46.1	-0.2
ADK				pmax	pmax		
	comp=Z,59nm,1.5s						
WMQ	Urumqi	35.52	290	eP	P	08 13 12.5	+1.4
ZAA0	Zalesovo Array	35.88	307	P	P	08 13 13.3	-0.5
ZALV	Zalesovo Beam	35.88	307	P	P	08 13 14.0	+0.2
	comp=Z,2.2nm,0.5s,baz=92,slow=7.6,SNR=6.8						
	comp=Z,2.2nm,0.5s						
ZALV	Zalesovo Beam	35.88	307	P	P	08 13 14.0	+0.2
MK31	Makanchi Array	38.50	296	c iP	P	08 13 35.7	-0.1
MKAR	Makanchi Array	38.50	296		P	08 13 35.2	-0.6
MKAR	Makanchi Array	38.50	296	P	P	08 13 35.6	-0.2
	comp=Z,2.5nm,0.6s,baz=85,slow=9.8,SNR=17						
	comp=Z,2.5nm,0.6s						
LSA	Lhasa	38.57	266	P	P	08 13 34.8	-2.3
LSA	Lhasa	38.57	266	P	P	08 13 34.8	-2.3
LSA				pmax	pmax		
	comp=Z,10.0nm,0.3s						
MAKZ	Makanchi	38.70	296		P	08 13 36.9	-0.6
MAKZ				IAmb	IAmb	08 13 38.2	
	comp=Z,4.1nm,0.7s						
MAKZ	Makanchi	38.70	296	P	P	08 13 36.9	-0.6
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KURK	Kurchatov	40.04	303		P	08 13 47.4	-0.9
KURK				IAmb	IAmb	08 13 49.4	
	comp=Z,9.6nm,0.8s						
KURK	Kurchatov	40.04	303	deP	P	08 13 48.1	-0.2
KURK				pmax	pmax		
	comp=Z,15nm,1.3s						
KURK	Kurchatov	40.04	303	eP	P	08 13 48.1	-0.2
KURBB	Kurchatov Arra	40.11	303	P	P	08 13 48.7	-0.2
	comp=Z,6.4nm,0.5s,baz=80,slow=8.7,SNR=42						
	comp=Z,6.4nm,0.5s						
H17K	Granite Mounta	41.62	35	P	P	08 14 00.7	-0.2
C19K	Lookout Ridge	42.01	29	P	P	08 14 04.9	+0.9
C19K				IAmb	IAmb	08 14 29.3	
	comp=Z,16nm,1.5s						
WUS	Wushi	42.29	289	P	P	08 14 06.3	-0.5
WUS				IAmb	IAmb	08 14 09.0	
	comp=Z,7.2nm,1.2s						
EVN	Everest	42.71	267		P	08 14 09.5	-1.4
EVN				IAmb	IAmb	08 14 13.9	
	comp=Z,10.0nm,0.7s						
BOOM	Boomskoye usch	44.11	292	P	P	08 14 21.2	-0.1
BOOM				IAmb	IAmb	08 14 24.1	
	comp=Z,14nm,1.0s						
BOOM	Boomskoye usch	44.11	292	P	P	08 14 21.2	-0.1
BOOM				pmax	pmax		
	comp=Z,15nm,1.0s						
G21K	Allakaket	44.25	33	P	P	08 14 22.3	+0.6
BVAR	Borovoye Array	44.53	308	P	P	08 14 24.6	+0.5
	comp=Z,3.7nm,0.6s,baz=59,slow=8.8,SNR=12						
	comp=Z,3.7nm,0.6s						
BRVK	Borovoye	44.58	308	⇑eP	P	08 14 25.3	+0.7
BRVK	Borovoye	44.58	308	eP	P	08 14 25.3	+0.7
AAK	Ala-Archa	45.05	293	⇑eP	P	08 14 29.0	+0.4
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AAK	Ala-Archa	45.05	293	eP	P	08 14 29.0	+0.4
F24K	Squaw Lake	46.37	31	P	P	08 14 37.9	-0.4
ILAR	Eielson Array	47.17	35	P	P	08 14 46.3	+1.9
	comp=Z,0.2nm,0.6s,baz=277,slow=7.7,SNR=2.6						
	comp=Z,0.2nm,0.6s						
KK31	Karatay Array	47.59	295		P	08 14 47.7	-0.2
KK31	Karatay Array	47.59	295	P	P	08 14 47.7	-0.2
KKAR	Karatay Array	47.59	295	P	P	08 14 47.7	-0.3
KKAR	Karatay Array	47.59	295	P	P	08 14 47.7	-0.3
GAR	Garm	49.42	290	P	P	08 15 01.6	-0.4
GAR				IAmb	IAmb	08 15 08.8	
	comp=Z,4.2nm,0.6s						
ARTI	Arti	50.28	315		P	08 15 08.1	+0.2
ARTI	Arti	50.28	315	d iP	P	08 15 08.8	+0.9
ARTI						08 17 07.8	
ARTI				S	S	08 21 54.8	+0.9
ARTI				SS	SS	08 25 29.7	-1.9
ARTI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BCPM	Bancas Point	51.68	40	P	P	08 15 19.1	+0.9
BCPM				IAmb	IAmb	08 15 46.8	
	comp=Z,7.8nm,0.9s						
ABKAR	Akbulak array	51.96	306		P	08 15 21.3	+0.9
ABKAR				IAmb	IAmb	08 15 21.9	
	comp=Z,6.7nm,0.6s						
KIRV	Kirov	54.00	320	ceP	P	08 15 36.1	+1.1
KNRA	Kununurra	58.05	189	P	P	08 16 03.7	-0.2
KNRA				IAmb	IAmb	08 16 23.6	
	comp=Z,15nm,1.3s						
WB0	Warramunga Arr	61.68	183	P	P	08 16 29.1	+0.7
WB0				IAmb	IAmb	08 17 01.0	
	comp=Z,13nm,1.5s						
WB2	Warramunga Arr	61.86	183	P	P	08 16 29.5	-0.1
WRA	Warramunga Arr	61.86	183	P	P	08 16 30.8	+1.2
	comp=Z,1.3nm,0.8s,baz=360,slow=7.0,SNR=27						
	comp=Z,1.3nm,0.8s						
WRA	Warramunga Arr	61.86	183	i P	P	08 16 31.8	+2.3
FINES	FINESS Array B	62.59	330	P	P	08 16 33.6	-0.3
FINES	FINESS Array B	62.59	330	P	P	08 16 34.6	+0.8
	comp=Z,2.9nm,0.6s,baz=48,slow=8.5,SNR=19						
	comp=Z,2.9nm,0.6s						
KIV	Kislovodsk	64.89	307	eP	P	08 16 49.2	0.0
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KBZ	Khabaz	64.90	307	P	P	08 16 49.8	+0.7
	comp=Z,1.2nm,0.5s,baz=18,slow=9.6,SNR=4.6						
	comp=Z,1.2nm,0.5s						
KBZ	Khabaz	64.90	307	⇑eP	P	08 16 50.6	+1.5
KBZ	Khabaz	64.90	307	eP	P	08 16 50.6	+1.5
ASAR	Alice Springs	65.58	183	P	P	08 16 53.4	-0.2
ASAR	Alice Springs	65.58	183	P	P	08 16 56.0	+2.4
	comp=Z,1.0nm,0.7s,baz=356,slow=5.2,SNR=13						
	comp=Z,1.0nm,0.7s						
ASAR	Alice Springs	65.58	183	P	P	08 16 56.0	+2.4
NC405	NORSAR Array S	67.82	335	P	P	08 17 07.8	+0.6
HFS	Hagfors	67.91	333	P	P	08 17 08.5	+0.7
	comp=Z,0.6nm,0.4s,baz=54,slow=7.9,SNR=5.5						
	comp=Z,0.6nm,0.4s						
NOA	NORSAR Array B	68.04	335	P	P	08 17 08.8	+0.2
	comp=Z,0.5nm,0.6s,baz=51,slow=5.8,SNR=2.3						
	comp=Z,0.5nm,0.6s						
AKASG	Malin Array Be	68.06	319	P	P	08 17 09.3	+0.5
	comp=Z,1.0nm,0.5s,baz=49,slow=6.4,SNR=6.1						
	comp=Z,1.0nm,0.5s						
BRTR	Keskin Array B	72.81	308	P	P	08 17 38.2	+0.4
BRTR	Keskin Array B	72.81	308	P	P	08 17 39.0	+1.2
	comp=Z,1.0nm,0.6s,baz=77,slow=3.6,SNR=7.6						
	comp=Z,1.0nm,0.6s						
BRTR	Keskin Array B	72.81	308	i P	P	08 17 39.0	+1.2
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FORT	Forrest	73.05	188	P	P	08 17 38.3	-0.6
STKA	Stephens Creek	73.83	176	P	P	08 17 44.0	+0.6
	comp=Z,0.8nm,0.5s,baz=354,slow=9.2,SNR=1.1						
	comp=Z,0.8nm,0.5s						
STKA	Stephens Creek	73.83	176	P	P	08 17 44.0	+0.6
DUG	Dugway, Tooele	76.60	48	P	P	08 17 58.4	-0.9
DUG				IAmb	IAmb	08 18 25.6	
	comp=Z,1.5nm,0.8s						
DUG	Dugway, Tooele	76.60	48	P	P	08 17 58.4	-0.9
DUG				pmax	pmax		
	comp=Z,2.0nm,0.9s						

IDC 09 08:28:17.9±1.5**, 28°.02N**×**141°.57E, h0**^{km}**, mb4.1**/2**, mbtmp3.8**/3**, ML2.0**/1**, Error ellipse: s-maj=73.7km s-min=22.2km az=70.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.07	149	Pn	Pn	08 28 39.8	-0.4
	24nm,0.3s,baz=330,slow=14,SNR=4.1						
JCJ				Sn	Sg	08 28 51.4	-0.9
	146nm,0.3s,baz=192,slow=23,SNR=22						
MJAR	Matsushiro Arr	8.96	342	Pn	Pn	08 30 29.2	+0.6
	baz=164,slow=11,SNR=1.8						
MJAR				Sn	Sn	08 32 06.8	-3.4
	0.1nm,0.3s,baz=127,slow=23,SNR=4.2						
	0.7nm,0.6s						
H11N2	WAKE ISLAND Hy	24.55	104	T	T	08 58 38.9	
	baz=296,slow=74,SNR=13						
H11N1	WAKE ISLAND Hy	24.55	104	T	T	08 58 37.3	

	baz=296,slow=74,SNR=6.0						
H11N3	WAKE ISLAND Hy	24.57	104	T	T	08 58 42.6	
	baz=296,slow=74,SNR=9.0						
H11S3	WAKE ISLAND Hy	24.91	107	T	T	08 59 07.0	
	baz=297,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	24.91	107	T	T	08 59 02.0	
	baz=297,slow=75,SNR=9.2						
H11S2	WAKE ISLAND Hy	24.92	107	T	T	08 59 06.4	
	baz=297,slow=75,SNR=8.8						
WRA	Warramunga Arr	48.19	189	P	P	08 37 00.5	+0.3
	1.1nm,0.7s,baz=7.7,slow=8.6,SNR=15						
	1.1nm,0.7s						
FINES	FINESS Array B	76.88	334	P	P	08 40 11.2	-0.4
	2.5nm,1.0s,baz=59,slow=4.9,SNR=5.2						
	2.5nm,1.0s						

SNET ***09*** *08:50:02.4±0.6, 13°.03N×89°.51W, h27^{km}±6^{km}, ML3.1*

CATAC ***09*** *08:50:02.4±0.5, 13°N±2°×9°0W±°, h25^{km}±2^{km}, M3.3/24, MLv3.3/24, Error ellipse: s-maj=5.6km s-min=3.4km az=30.6, confirmed*

GCG ***09*** *08:50:04.0±1.1, 13°.20N×89°.48W, h60^{km}±8^{km}, MD3.7*

ISC 09 08:50:03.2±1.6**, 13°.06N**±0°.07×**89°.46W**±0°.04**, h24**^{km}±13^{km}**,**
n70, σ1^{s}18/79**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.44	17	*i* P	Pn	08 50 13.9	-0.2
LALI				*i* S	Sn	08 50 22.3	+1.0
LALI	Alcalda de L	0.44	17	P	Pn	08 50 13.8	-0.3
LALI	Alcalda de L	0.44	17	S	Sn	08 50 21.4	+0.1
JAYA	Jayaque - finc	0.59	1	*i* P	Pn	08 50 15.4	-0.7
JAYA				*i* S	Sn	08 50 24.5	-0.6
JAYA	Jayaque - finc	0.59	1	P	Pn	08 50 15.5	-0.7
PANCS	Alcalda de	0.61	26	P	Pn	08 50 16.1	-0.3
PANCS	Alcalda de	0.61	26	S	Sn	08 50 25.3	-0.2
ITCA	Escuela Especi	0.63	16	*e*S	Sn	08 50 26.4	+0.3
ITCA	Escuela Especi	0.63	16	P	Pn	08 50 16.1	-0.7
ITCA	Escuela Especi	0.63	16	S	Sn	08 50 25.4	-0.7
LOMA	Loma Larga	0.64	26	P	Pn	08 50 16.5	-0.5
LOMA	Loma Larga	0.64	26	S	Sn	08 50 27.1	+0.6
PMON	Piamonte	0.66	12	P	Pn	08 50 16.6	-0.6
UTEC	Universidad Te	0.68	21	P	Pn	08 50 16.9	-0.5
UTEC	Universidad Te	0.68	21	S	Sn	08 50 27.8	+0.5
UEES	Universidad Ev	0.68	18	P	Pn	08 50 17.0	-0.5
UEES	Universidad Ev	0.68	18	S	Sn	08 50 27.6	+0.2
IGN	Direccin Gen	0.70	23	P	Pn	08 50 17.3	-0.4
IGN	Direccin Gen	0.70	23	S	Sn	08 50 27.9	0.0
UDBS	Universidad Do	0.71	24	P	Pn	08 50 17.4	-0.4
UDBS	Universidad Do	0.71	24	S	Sn	08 50 28.7	+0.6
CEDA	San Andres	0.74	5	P	Pn	08 50 17.6	-0.6
CEDA	San Andres	0.74	5	S	Sn	08 50 28.5	-0.2
CEVE	Cerro Verde	0.78	348	*e*P	Pb	08 50 18.1	-0.1
CEVE				*e*S	Sn	08 50 30.4	+0.4
CEVE				IAML		08 50 32.7	
	comp=Z,648nm,0.2s						
CEVE	Cerro Verde	0.78	348	P	Pn	08 50 18.2	-0.7
CEVE	Cerro Verde	0.78	348	S	Sn	08 50 29.9	0.0
COEG	Centro de Oper	0.79	45	*e*P	Pn	08 50 18.6	-0.3
COEG				*e*S	Sn	08 50 30.4	+0.4
COEG	Centro de Oper	0.79	45	P	Pb	08 50 18.3	0.0
COEG	Centro de Oper	0.79	45	S	Sn	08 50 29.9	0.0
TECO	Alcaldia de Te	0.81	54	P	Pb	08 50 18.6	-0.1
TECO	Alcaldia de Te	0.81	54	S	Sn	08 50 30.6	+0.1
PAVA	Las Pavas	0.82	38	P	Pn	08 50 19.4	+0.1
PAVA	Las Pavas	0.82	38	S	Sn	08 50 31.5	+0.7
UESV	Universidad de	0.87	49	P	Pb	08 50 19.6	0.0
UESV	Universidad de	0.87	49	S	Sn	08 50 32.2	+0.4
NUBE	Las Nubes	0.89	339	*i* P	Pb	08 50 19.2	-0.9
NUBE				*i* S	Sb	08 50 31.4	-0.3
NUBE	Las Nubes	0.89	339	P	Pb	08 50 19.0	-1.1
NUBE	Las Nubes	0.89	339	S	Sb	08 50 30.7	-0.9
ALJI	Alcalda de J	0.90	73	P	Pb	08 50 20.1	-0.1
ALJI	Alcalda de J	0.90	73	S	Sn	08 50 33.1	+0.4
UNIC	Universidad Ca	0.92	354	P	Pb	08 50 19.9	-0.6
UNIC	Universidad Ca	0.92	354	S	Sn	08 50 32.7	-0.5
FAME	Alcaldia de Sa	0.95	325	P	Pb	08 50 19.6	-1.4
FAME	Alcaldia de Sa	0.95	325	S	Sb	08 50 30.7	-2.4
SCLA	Alcaldia de Sa	0.95	48	P	Pb	08 50 21.2	+0.1
SCLA	Alcaldia de Sa	0.95	48	S	Sn	08 50 34.8	+0.8
SLOZ	Alcaldia de Sa	1.01	342	P	Pn	08 50 21.2	-0.7
SLOZ	Alcaldia de Sa	1.01	342	S	Sn	08 50 35.3	-0.1
PQSS	Presa 15 de Se	1.04	57	P	Pn	08 50 22.2	0.0
PQSS	Presa 15 de Se	1.04	57	S	Sn	08 50 36.3	+0.3
PACA	Pacayal	1.18	70	P	Pb	08 50 24.8	-0.2
PACA	Pacayal	1.18	70	S	Sb	08 50 40.6	+0.8
RANC	El Ranchito	1.20	72	P	Pn	08 50 20.3	-4.3
LLGN	La Laguna	1.20	24	P	Pn	08 50 24.3	-0.3
LLGN	La Laguna	1.20	24	S	Sb	08 50 40.8	+0.2
BLLM	Bellamira	1.25	72	*e*P	Pn	08 50 25.3	+0.1
MTO3	Montecristo	1.33	4	*i* P	Pn	08 50 26.1	-0.4
MTO3	Montecristo	1.33	4	P	Pn	08 50 26.0	-0.5
MTO3	Montecristo	1.33	4	S	Sn	08 50 43.4	-0.2
ESQI	Esquipulas	1.49	4	P	Pn	08 50 28.5	-0.1
ESQI	Esquipulas	1.49	4	S	Sn	08 50 47.9	+0.5
LCND	La Caada	1.55	81	P	Pn	08 50 29.3	0.0
FG16	Alotenango, Sa	1.58	320	*i* S	Sb	08 50 56.5	+5.0
FG16				*i* P	Sb	08 50 57.2	+5.7
CNCH	Conchagua	1.59	82	*e*P	Pn	08 50 29.8	-0.2
CNCH				*e*S	Sb	08 50 51.5	-0.4
CNCH	Conchagua	1.59	82	P	Pn	08 50 29.8	-0.2
CNCH	Conchagua	1.59	82	S	Sn	08 50 51.0	+1.0
MARCA	Marcala la Paz	1.76	52	*i* P	Pn	08 50 32.5	+0.2
MARCA				*i* S	Sn	08 50 52.5	-1.5
POTN	Potosi Cosigui	1.90	92	P	Pn	08 50 33.8	-0.4
POTN				S	Sn	08 50 58.1	+0.8
LIMN	Finca el Limon	3.01	90	P	Pn	08 50 49.4	-0.1
MATN	Matagalpa	3.44	92	P	Pn	08 50 54.0	-1.4

ASIES ***09*** *08:50:46.8, 24°.93N×122°.32E, h13^{km}, ML3.5, Mw3.5, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}-1.42; $M_{\theta\theta}$1.42; $M_{\phi\phi}$-0.00; $M_{r\theta}$-0.91; $M_{\theta\phi}$0.74; $M_{\phi r}$-0.52; Fault plane solution: $M_0$1.91360×10^{21} NP1: ϕ_s252.47000°, δ28.49000°, λ-81.40000°. NP2: ϕ_s62.71000°, δ61.85000°, λ-94.64000°. Principal axes: T Plg16.7370°, Azm156.1310°; N Plg4.0900°, Azm64.8990°; P Plg72.7420°, Azm321.5900°;*

JMA ***09*** *08:50:46.7±0.3, 25°N±2°×122°.3E±0°.4, h0^{km}, MV2.7/9, TAIWAN REGION*

TAP ***09*** *08:50:46.8, 24°.93N×122°.32E, h13^{km}, ML3.5, C*

ISC 09 08:50:46.6±1.0**, 24°.92N**±0°.02×**122°.33E**±0°.02**, h13**^{km}±8^{km}**,**
n103, σ0^{s}80/183**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao	0.33	286	*i* P	Pg	08 50 53.6	+0.4
TWB1				S	Sg	08 50 57.9	+0.2
EGS		0.37	259	*e*P	Pb	08 50 54.9	-0.1
EGS				*e*S	Sb	08 51 01.1	+0.3
SXI1	Grass Mountain	0.45	293	*i* P	Pb	08 50 56.4	-0.1
SXI1				*e*S	Sb	08 51 02.8	-0.3
TIPB	Shuangxi	0.46	277	P	Pb	08 50 56.4	-0.3
TIPB				*i* S	Sb	08 51 03.0	-0.4
EOS2	EOS2	0.50	190	*i* P	Pb	08 50 57.4	+0.1
EOS2				*e*S	Sb	08 51 04.8	+0.3
NWF	Wu-fen Shan	0.52	287	*i* P	Pb	08 50 57.8	+0.1
NWF				*e*S	Sb	08 51 05.0	-0.2
WFSB	Wu-fen Shan	0.52	287	*i* P	Pb	08 50 58.0	+0.4
WFSB				S	Sb	08 51 05.3	+0.2
TWC	Suao	0.54	235	P	Pg	08 50 57.1	0.0
TWC				*e*S	Sg	08 51 03.7	-0.5
ILA	Ilan	0.55	254	*e*P	Pb	08 50 58.5	+0.4
ILA				*e*S	Sb	08 51 07.1	+1.2
TNOU	National Taiwa	0.56	295	P	Pb	08 50 58.3	0.0
TNOU				*e*S	Sb	08 51 05.6	-0.5
ESAO	Su ao	0.56	233	P	Pb	08 50 58.1	-0.1
ESAO				S	Sb	08 51 06.1	-0.1
NDS	Dongshan	0.63	243	*e*P	Pg	08 50 58.0	-0.8
NDS				*e*S	Sg	08 51 06.5	-0.7
EOS3	EOS3	0.63	181	P	Pb	08 50 59.6	+0.2
EOS3				*e*S	Sb	08 51 09.6	+1.6
TWE	Neicheng	0.64	252	*i* P	Pg	08 50 59.1	+0.1
TWE				S	Sb	08 51 08.5	+0.2
TWA	Mucha	0.68	275	P	Pb	08 51 00.7	+0.3
TWA				*i* S	Sb	08 51 10.0	+0.3
EWUT	Wuta	0.69	227	*i* P	Pg	08 51 00.2	+0.2
EWUT				*e*S	Sg	08 51 08.9	-0.2
FUSB	Fushanzhiwuyua	0.69	257	*i* P	Pb	08 51 00.4	-0.2
FUSB				*e*S	Sb	08 51 10.3	+0.2
ENA	Nanau	0.72	228	*e*P	Pg	08 51 00.7	0.0
ENA				S	Sb	08 51 10.8	-0.1
YM08	YM08	0.72	292	*e*P	Pb	08 51 01.3	+0.1
YM08				*e*S	Sb	08 51 10.9	-0.1
JYNG	Yonagunijimaku	0.73	130	*e*P	Pg	08 51 00.6	-0.1
JYNG				S	Sg	08 51 10.7	+0.4
NHDH	Xindian Distri	0.73	274	*e*P	Pb	08 51 01.8	+0.6
NHDH				*i* S	Sb	08 51 11.9	+0.7
ENTT	Nioudou	0.75	249	P	Pb	08 51 01.6	0.0
ENTT				*e*S	Sb	08 51 12.5	+0.8
TWY	Chenhua	0.75	298	*e*P	Pb	08 51 01.8	+0.2
TWY				S	Sn	08 51 12.8	-1.5
ZUZH	Zhuzihu	0.75	289	*i* P	Pb	08 51 01.9	+0.3
ZUZH				*e*S	Sb	08 51 11.9	+0.1
TAP	Taipei	0.76	279	*e*P	Pn	08 51 02.6	-0.5
TAP				*i* S	Sb	08 51 12.7	+0.7
NWLT	Wulai	0.77	260	*e*P	Pb	08 51 02.0	+0.2
NWLT				*e*S	Sb	08 51 11.8	-0.3
YOJ	Yonaguni jima	0.77	126	P	Pg	08 51 01.1	-0.3
YOJ				*e*S	Sg	08 51 11.6	+0.1
YOJ	Yonaguni jima	0.77	126	*e*P	Pg	08 51 01.2	-0.3
YOJ				*e*S	Sg	08 51 11.8	+0.3
ANP	Anpu	0.78	290	*e*P	Pn	08 51 03.0	-0.5
ANP				*e*S	Sg	08 51 11.1	-1.1
EOS4	EOS4	0.79	181	*e*P	Pb	08 51 02.5	+0.4
EOS4				*e*S	Sb	08 51 13.2	+0.7
EAHA	Aohua	0.80	223	*i* P	Pb	08 51 02.4	+0.1
EAHA				*e*S	Sg	08 51 11.8	-0.6
LATG	Datong	0.82	243	*i* P	Pb	08 51 03.0	+0.1
LATG				*e*S	Sb	08 51 14.7	+0.8
NTST	Danshui	0.84	287	*e*P	Pn	08 51 03.7	-0.4
YHNB	Yeheng	0.90	254	P	Pb	08 51 04.2	0.0
YHNB				*e*S	Sn	08 51 17.3	-0.7
NSK	Sanguang	0.92	255	P	Pb	08 51 04.5	0.0
NSK				*i* S	Sb	08 51 17.1	+0.6
NNSB	Datong	0.99	241	*i* P	Pg	08 51 05.8	+0.1
NNSB				*i* S	Sg	08 51 18.8	+0.1
ETL	Fush Village	0.99	221	*e*P	Pb	08 51 04.8	-0.9
ETL				*e*S	Sb	08 51 18.5	-0.2
NNS	Nan Shan	0.99	242	*i* P	Pb	08 51 05.8	0.0
NNS				S	Sb	08 51 18.4	-0.4
NACB	Ninganchiao	1.00	222	*i* P	Pb	08 51 05.4	-0.4
NACB				*e*S	Sb	08 51 18.1	-0.7
NCU	National Centr	1.04	273	P	Pn	08 51 07.4	+0.5
NCU				S	Sn	08 51 21.6	+0.3
NCUH	Zhongli	1.04	273	*e*P	Pn	08 51 09.6	+2.6
NCUH				*e*S	Sn	08 51 21.6	+0.2
ETLH	Xiulin Townshi	1.05	228	*i* P	Pb	08 51 06.6	-0.1
ETLH				*i* S	Sn	08 51 21.3	-0.4
KSHI	Guanxi Townshi	1.06	263	*e*P	Pn	08 51 07.2	0.0
KSHI				*e*S	Sn	08 51 22.9	+1.1
TWD	Chiawan	1.07	219	*e*P	Pb	08 51 07.0	0.0
TWD				*e*S	Sb	08 51 20.5	-0.4
NFF	Wufeng Townshi	1.14	256	*e*P	Pb	08 51 08.1	-0.1
FUSS	Fushou	1.19	236	*e*P	Pg	08 51 09.6	-0.1
FUSS				S	Sn	08 51 26.0	+0.5
ETM	Tongmen	1.22	219	P	Pb	08 51 09.6	+0.1
ETM				*e*S	Sn	08 51 25.7	0.0
LXIB	Xiulin Townshi	1.22	223	*i* P	Pn	08 51 09.7	+0.1
LXIB				*e*S	Sb	08 51 25.5	0.0
LIOB	Emei	1.23	258	*e*P	Pn	08 51 09.3	-0.2
LIOB				S	Sg	08 51 26.3	+0.1
WHF	Hehuan Shan	1.24	232	*e*P	Pg	08 51 10.5	0.0
WHF				S	Sb	08 51 26.1	-0.1
TWT	Tachien	1.24	238	P	Pg	08 51 10.4	-0.1
TWT				S	Sg	08 51 27.8	+1.0
HSN	Hsinchu	1.24	265	*e*S	Sb	08 51 24.4	-1.4
NSTT	Nanjuang	1.24	257	P	Pn	08 51 09.7	0.0
NSTT				*e*S	Sg	08 51 28.4	+1.7
TDCB	Techi	1.26	238	*e*P	Pg	08 51 11.3	+0.5
TDCB				*e*S	Sg	08 51 27.4	+0.2
SHUL	Shoufeng	1.32	212	*e*P	Pg	08 51 12.6	+0.4
ESL	Shilin	1.37	217	P	Pn	08 51 11.8	+0.3
ESL				S	Sg	08 51 31.4	+0.6
IRIF	Iriomote-Funau	1.40	114	*e*P	Pg	08 51 13.5	0.0
WHP	Taichung City	1.41	244	P	Pg	08 51 13.9	+0.1
WHP				*e*S	Sg	08 51 32.8	+0.6
OWD	Renai	1.42	228	*e*P	Pb	08 51 13.1	0.0
OWD				*e*S	Sg	08 51 32.4	-0.2
WUSB	Renai	1.44	230	*e*P	Pb	08 51 13.8	+0.4
WUSB				*e*S	Sg	08 51 32.9	-0.2
NMLH	Miaoli	1.45	255	*e*P	Pg	08 51 15.9	+1.4
WARBT	Fenglin Townsh	1.47	216	*e*P	Pn	08 51 13.0	+0.1
WARBT				S	Sn	08 51 32.3	+0.3
EGFH	Guangfu	1.49	214	*e*P	Pg	08 51 15.6	+0.3
EGFH				*e*S	Sg	08 51 35.4	+0.7
WCS	Beigang Elemen	1.55	237	*e*P	Pg	08 51 16.3	-0.1
WCS				*e*S	Sg	08 51 37.5	+1.0
VWDT	VWDT	1.59	223	*e*P	Pb	08 51 15.7	-0.1
VWDT				*e*S	Sg	08 51 36.9	-0.8
HATJ	Hateruma jima	1.59	122	*e*P	Pg	08 51 17.1	-0.1
HGSD	Ruisui	1.64	210	*e*P	Pb	08 51 17.5	+0.8
SMLT	Sun Moon Lake	1.66	232	*e*P	Pg	08 51 18.7	+0.2
SMLT				*e*S	Sg	08 51 40.3	+0.2
JKRS	Kuro-shima	1.67	114	*e*P	Pg	08 51 19.6	+0.9
EHYH	Wanrong	1.68	213	*e*P	Pn	08 51 16.5	+0.8
EHY	Hungye	1.68	213	P	Pn	08 51 15.8	+0.1
EHY				S	Sb	08 51 38.4	-0.1
TYC	Yuchr	1.68	233	*e*P	Pg	08 51 18.7	-0.2
TYC				*e*S	Sb	08 51 39.5	+1.1
SSLB	Suanglung	1.69	228	*e*P	Pb	08 51 17.5	0.0
SSLB				*e*S	Sb	08 51 39.2	+0.6
YULB	Yu-li	1.79	212	*e*P	Pb	08 51 18.4	-0.8
YULB				*e*S	Sn	08 51 40.6	+0.8
WHYT	Xinyi Township	1.82	228	*e*P	Pb	08 51 20.0	+0.3
WHYT				*e*S	Sg	08 51 45.1	0.0
TWF1	Yuli	1.82	211	*e*P	Pn	08 51 16.8	-0.9
TWF1				*e*S	Sb	08 51 42.1	-0.5
WNT	Mingjian	1.82	236	*e*P	Pg	08 51 21.1	-0.6
WNT				*e*S	Sg	08 51 46.3	+1.0
FULB	Fuli	1.96	209	*e*S	Sb	08 51 47.3	+0.9
ALS	Alishan	1.98	225	*e*P	Pb	08 51 22.5	-0.1
ALS				*e*S	Sg	08 51 49.1	-1.1
EHD	Haiduan	2.04	211	*e*S	Sb	08 51 48.0	-0.9
ELDTW	Lidau	2.10	215	*e*P	Pn	08 51 22.4	+0.8
ELDTW				*e*S	Sn	08 51 46.4	-1.2
EDH	Donghe	2.15	206	*e*P	Pn	08 51 20.9	-1.3
EDH				*e*S	Sn	08 51 47.5	-1.3
WTK	Tuku	2.15	236	*e*S	Sb	08 51 52.5	+0.4
WCKO	Fanlu	2.16	227	*e*S	Sb	08 51 53.0	+0.7
CHN4	Tsaushan	2.23	226	*e*P	Pb	08 51 25.9	-0.8
CHN4				*e*S	Sb	08 51 56.3	+2.1
CHY	Chiayi	2.24	231	*e*S	Sb	08 51 54.6	-0.1
STYH	Taoyuan	2.25	220	*e*P	Pn	08 51 23.8	+0.3
STYH				*e*S	Sb	08 51 54.8	+0.1
WTP	Ta-pu	2.29	224	*e*P	Pb	08 51 26.6	-1.2
WTP				*e*S	Sb	08 51 56.4	+0.4
TWK	Hsinying	2.35	226	*e*P	Pn	08 51 26.8	+1.8
TWK				*e*S	Sb	08 51 57.5	-0.4
LDUT	Ludao	2.37	200	*e*S	Sn	08 51 52.1	-2.0
SNST	Tainan City	2.38	225	*e*S	Sb	08 51 58.1	-0.6
TWGBT	Beinan	2.38	209	*e*S	Sn	08 51 54.2	-0.3
TWG	Pinlang	2.38	209	S	Sn	08 51 54.2	-0.3
CHN1	Nanshi	2.39	224	P	Pb	08 51 28.0	-1.5
CHN1				*e*S	Sb	08 51 58.1	-0.7
SGST	Jiashian	2.43	222	*e*P	Pn	08 51 27.1	+1.1
SGST				*e*S	Sb	08 51 58.9	-1.1
ICHU	Yijhu	2.43	231	P	Pn	08 51 28.0	+1.9
ICHU				*e*S	Sb	08 52 00.6	+0.5
MATB	Ma-tsu	2.48	300	*e*P	Pn	08 51 26.1	-0.7
TSMG	Majia	2.69	215	*e*S	Sb	08 52 05.0	-2.6
TSCK	Chigu Township	2.71	230	*e*P	Pb	08 51 33.1	-1.8
TSCK				*e*S	Sb	08 52 06.0	-2.0
MASBT	Mashibuluo	2.77	214	*e*P	Pb	08 51 34.3	-1.8
MASBT				*e*S	Sb	08 52 07.5	-2.4
PHUB	P'eng-hu	2.88	242	*e*S	Sn	08 52 08.0	+1.2
SCZT	Fangliau	2.98	212	P	Pn	08 51 35.9	+2.2
SCZT				S	Sn	08 52 11.2	+2.0
KNMB	Chin-men Tao	3.62	264	*e*P	Pn	08 51 41.5	-0.8

IDC ***09*** *08:53:36.9±4.7, 13°.51N×88°.03W, h0^{km}, mb3.4/4, mbtmp3.5/4, MS2.9/1, Error ellipse: s-maj=133.8km s-min=81.4km az=46.0*

CATAC ***09*** *08:53:45.3±0.3, 13°N±2°×8°9W±°, h27^{km}±2^{km}, M4.3/43, MLv4.3/43, Error ellipse: s-maj=4.0km s-min=2.1km az=33.3, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-2.97; $M_{\theta\theta}$4.76; $M_{\phi\phi}$-1.79; $M_{r\theta}$0.68; $M_{\theta\phi}$0.02; $M_{\phi r}$0.68; Fault plane solution: $M_0$4.27621×10^{14} NP1: ϕ_s112.97248°, δ44.97239°, λ-55.51754°. NP2: ϕ_s248.81965°, δ54.36730°, λ-119.49287°. Principal axes: T 4.8227, Plg5.0652°, Azm359.2754°; N -1.4938, Plg23.5868°, Azm267.0575°; P -3.3289, Plg65.8101°, Azm100.6555°; Moment Tensor Solution. Moment tensor: Scale 10^{14} Nm; M_{rr}-2.49; $M_{\theta\theta}$4.89; $M_{\phi\phi}$-2.40; $M_{r\theta}$0.44; $M_{\theta\phi}$0.47; $M_{\phi r}$-0.68; Fault plane solution: $M_0$4.33747×10^{14} NP1: ϕ_s51.04810°, δ56.50708°, λ-145.24244°. NP2: ϕ_s300.09482°, δ61.61190°, λ-38.84856°. Principal axes: T 4.9409, Plg3.0965°, Azm356.6245°; N -1.7604, Plg43.2476°, Azm89.5413°; P -3.1805, Plg46.5849°, Azm263.3468°; Moment Tensor Solution. Moment tensor: Scale 10^{14} Nm; M_{rr}-4.41; $M_{\theta\theta}$2.85; $M_{\phi\phi}$1.56; $M_{r\theta}$0.27; $M_{\theta\phi}$-1.08; $M_{\phi r}$-0.13; Fault plane solution: $M_0$4.03352×10^{14} NP1: ϕ_s119.82032°, δ42.83526°, λ-89.67325°. NP2: ϕ_s299.37474°, δ47.16560°, λ-90.30294°. Principal axes: T 3.4717, Plg2.1652°, Azm29.5891°; N 0.9530, Plg0.2222°, Azm299.5807°; P -4.4247, Plg87.8234°, Azm203.7253°; Moment Tensor Solution. Moment tensor: Scale 10^{14} Nm; M_{rr}-4.40; $M_{\theta\theta}$2.88; $M_{\phi\phi}$1.52; $M_{r\theta}$0.68; $M_{\theta\phi}$-1.06; $M_{\phi r}$0.48; Fault plane solution: $M_0$4.10280×10^{14} NP1: ϕ_s125.86227°, δ42.78059°, λ-78.54141°. NP2: ϕ_s290.42356°, δ48.26737°, λ-100.41671°. Principal axes: T 3.4778, Plg2.7684°, Azm27.7775°; N 1.0471, Plg7.7545°, Azm297.4002°; P -4.5249, Plg81.7604°, Azm137.2849°; Moment Tensor Solution. Moment tensor: Scale 10^{14} Nm; M_{rr}-5.46; $M_{\theta\theta}$3.38; $M_{\phi\phi}$2.08; $M_{r\theta}$0.38; $M_{\theta\phi}$-1.31; $M_{\phi r}$0.05; Fault plane solution: $M_0$4.96595×10^{14} NP1: ϕ_s123.75162°, δ43.26729°, λ-87.04921°. NP2: ϕ_s299.70242°, δ46.80417°, λ-92.77411°. Principal axes: T 4.2011, Plg1.7695°, Azm31.6646°; N 1.2794, Plg2.0220°, Azm301.6021°; P -5.4805, Plg87.3125°, Azm162.8252°; Moment Tensor Solution. Moment tensor: Scale 10^{14} Nm; M_{rr}-5.52; $M_{\theta\theta}$3.39; $M_{\phi\phi}$2.13; $M_{r\theta}$0.33; $M_{\theta\phi}$-1.32; $M_{\phi r}$0.27; Fault plane solution: $M_0$5.01980×10^{14} NP1: ϕ_s125.65643°, δ44.29170°, λ-85.12460°. NP2: ϕ_s298.86081°, δ45.91019°, λ-94.73974°. Principal axes: T 4.2268, Plg0.8107°, Azm32.2107°; N 1.3216, Plg3.4024°, Azm302.1625°; P -5.5484, Plg86.5021°, Azm135.5953°; confirmed*

GCG ***09*** *08:53:46.4±1.7, 13°.06N×89°.53W, h40^{km}±29^{km}, MD4.1, ML3.6, MW3.5*

SNET ***09*** *08:53:47.4±2.2, 13°.11N×89°.44W, h39^{km}, ML4.1*

ISC 09 08:53:45.9±1.2**, 13°.03N**±0°.04×**89°.43W**±0°.03**, h31**^{km}±10^{km}**,**
n122, σ1^{s}06/133**, mb3.4**/3**, 19C-4D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.47	13	*e*P	Pn	08 53 56.9	+0.3
LALI				*e*S	Sn	08 54 05.1	+1.2
LALI	Alcalda de L	0.47	13	*i* P	Pn	08 53 56.9	+0.3
LALI				IAML		08 54 04.3	
	comp=Z,2μm,0.3s						
LALI				*i* S	Sn	08 54 04.6	+0.7
LALI	Alcalda de L	0.47	13	P	Pn	08 53 56.7	+0.1
JAYA	Jayaque - finc	0.63	359	*e*P	Pb	08 53 58.6	-0.1
JAYA				*e*S	Sn	08 54 07.9	0.0
JAYA	Jayaque - finc	0.63	359	*i* P	Pb	08 53 58.5	-0.1
JAYA				*i* S	Sn	08 54 07.4	-0.5
JAYA	Jayaque - finc	0.63	359	⇑P	Pb	08 53 58.5	-0.1
PANCS	Alcalda de	0.63	23	P	Pb	08 53 58.5	-0.2
PANCS	Alcalda de	0.63	23	S	Sn	08 54 08.3	+0.3
ITCA	Escuela Especi	0.66	13	S	Sn	08 54 08.8	+0.1
ITCA	Escuela Especi	0.66	13	⇑P	Pn	08 53 59.2	-0.1
LOMA	Loma Larga	0.67	23	*e*P	Pn	08 53 59.6	+0.2
LOMA	Loma Larga	0.67	23	S	Sn	08 54 10.1	+1.2
LOMA	Loma Larga	0.67	23	⇑P	Pn	08 53 59.5	+0.1
PMON	Piamonte	0.69	10	S	Sn	08 54 10.2	+0.7
PMON	Piamonte	0.69	10	⇑P	Pb	08 53 59.6	-0.1
LFRS	El Faro	0.70	31	*e*P	Pn	08 54 00.3	+0.5
SEMO	Seminario San	0.70	17	S	Sn	08 54 10.2	+0.5
SEMO	Seminario San	0.70	17	⇑P	Pn	08 53 59.8	-0.1
UTEC	Universidad Te	0.71	19	S	Sn	08 54 10.7	+0.9
UTEC	Universidad Te	0.71	19	⇑P	Pn	08 53 60.0	+0.1
UEES	Universidad Ev	0.71	15	S	Sn	08 54 10.6	+0.6
UEES	Universidad Ev	0.71	15	⇑P	Pn	08 53 60.0	0.0
BOQS	Boqueron	0.72	12	*e*P	Pn	08 54 00.3	0.0
IGN	Direccin Gen	0.73	21	*e*P	Pn	08 54 00.4	+0.2
IGN	Direccin Gen	0.73	21	P	Pn	08 54 00.2	0.0
IGN	Direccin Gen	0.73	21	S	Sn	08 54 10.8	+0.4
UDBS	Universidad Do	0.74	22	S	Sn	08 54 11.6	+1.1
UDBS	Universidad Do	0.74	22	⇑P	Pn	08 54 00.4	+0.1
CEDA	San Andres	0.77	3	S	Sn	08 54 11.4	0.0
CEDA	San Andres	0.77	3	⇑P	Pb	08 54 00.6	-0.4
COEG	Centro de Oper	0.80	42	*e*P	Pn	08 54 01.4	+0.2
COEG				*e*S	Sn	08 54 13.1	+1.0
COEG	Centro de Oper	0.80	42	S	Sn	08 54 12.6	+0.6
COEG	Centro de Oper	0.80	42	P	Pn	08 54 01.4	+0.2
LBRS	Las Brisas	0.81	28	*e*P	Pn	08 54 01.9	+0.7
TECO	Alcaldia de Te	0.81	51	S	Sn	08 54 13.2	+0.8
TECO	Alcaldia de Te	0.81	51	⇑P	Pn	08 54 01.9	+0.6
CEVE	Cerro Verde	0.82	347	*e*P	Pb	08 54 01.1	-0.8
CEVE	Cerro Verde	0.82	347	S	Sn	08 54 12.6	-0.2
CEVE	Cerro Verde	0.82	347	⇑P	Pb	08 54 01.2	-0.8
PAVA	Las Pavas	0.84	35	S	Sn	08 54 14.2	+1.2
PAVA	Las Pavas	0.84	35	P	Pn	08 54 02.2	+0.5
UESV	Universidad de	0.88	46	S	Sn	08 54 14.8	+0.9
UESV	Universidad de	0.88	46	P	Pb	08 54 02.3	-0.4
ALJI	Alcalda de J	0.89	70	S	Sn	08 54 15.7	+1.5
ALJI	Alcalda de J	0.89	70	⇓P	Pn	08 54 02.8	+0.4
NUBE	Las Nubes	0.94	339	*i* P	Pn	08 54 02.3	-0.8
NUBE				*i* S	Sb	08 54 14.5	-1.4
NUBE	Las Nubes	0.94	339	⇑P	Pn	08 54 02.3	-0.8
UNIC	Universidad Ca	0.96	353	S	Sn	08 54 15.7	-0.2
UNIC	Universidad Ca	0.96	353	⇑P	Pn	08 54 03.1	-0.2
SCLA	Alcaldia de Sa	0.96	45	S	Sn	08 54 16.6	+0.5
SCLA	Alcaldia de Sa	0.96	45	P	Pb	08 54 04.1	0.0
FAME	Alcaldia de Sa	0.99	325	S	Sn	08 54 15.0	-1.7
FAME	Alcaldia de Sa	0.99	325	⇑P	Pn	08 54 02.7	-1.1
LOAL	Lomas de Alarc	1.02	341	*e*P	Pn	08 54 04.7	+0.4
LOAL				*e*S	Sb	08 54 18.3	-0.1
LOAL	Lomas de Alarc	1.02	341	⇑P	Pn	08 54 03.9	-0.3
PQSS	Presa 15 de Se	1.04	55	S	Sb	08 54 18.7	0.0
PQSS	Presa 15 de Se	1.04	55	P	Pb	08 54 04.9	-0.5
SLOZ	Alcaldia de Sa	1.05	341	S	Sb	08 54 18.5	-0.6
SLOZ	Alcaldia de Sa	1.05	341	⇑P	Pn	08 54 04.2	-0.4
PACA	Pacayal	1.17	68	S	Sb	08 54 22.9	+0.4
PACA	Pacayal	1.17	68	P	Pb	08 54 07.6	-0.1
LCY	Lacayo	1.18	70	*e*P	Pn	08 54 07.4	+1.0
RANC	El Ranchito	1.19	70	P	Pn	08 54 03.1	-3.5
LLGN	La Laguna	1.23	23	*e*S	Sb	08 54 24.8	+0.6
LLGN	La Laguna	1.23	23	S	Sb	08 54 24.1	-0.1
LLGN	La Laguna	1.23	23	⇑P	Pn	08 54 07.3	+0.2
BLLM	Bellamira	1.24	70	*e*P	Pn	08 54 08.0	+0.8
CNRM	Centro Naciona	1.31	70	*e*S	Sb	08 54 27.1	+0.7
CNRM	Centro Naciona	1.31	70	S	Sb	08 54 26.8	+0.3
CNRM	Centro Naciona	1.31	70	P	Pn	08 54 09.0	+0.9
MTO3	Montecristo	1.37	3	*e*P	Pn	08 54 09.1	0.0
MTO3	Montecristo	1.37	3	*i* P	Pn	08 54 09.1	0.0
MTO3				IAML		08 54 28.7	
	comp=Z,523nm,0.6s						
MTO3	Montecristo	1.37	3	S	Sb	08 54 26.4	-1.9
MTO3	Montecristo	1.37	3	⇑P	Pn	08 54 09.1	0.0
CAHU	Cacacuatique	1.40	58	*e*S	Sb	08 54 29.3	0.0
ESQI	Esquipulas	1.53	3	*e*P	Pn	08 54 11.6	+0.3
ESQI	Esquipulas	1.53	3	S	Sb	08 54 31.2	-1.6
ESQI	Esquipulas	1.53	3	⇑P	Pn	08 54 11.6	+0.3
LCND	La Caada	1.53	79	*e*P	Pn	08 54 12.2	+1.0
LCND	La Caada	1.53	79	S	Sb	08 54 32.8	0.0
LCND	La Caada	1.53	79	⇓P	Pn	08 54 12.1	+1.0
CNCH	Conchagua	1.58	81	*e*P	Pn	08 54 10.4	-1.5
CNCH				*e*P		08 54 12.7	
CNCH				*e*S	Sb	08 54 34.0	-0.2
CNCH	Conchagua	1.58	81	S	Sb	08 54 33.6	-0.7
CNCH	Conchagua	1.58	81	⇓P	Pn	08 54 12.7	+0.7
FG16	Alotenango, Sa	1.62	320	*i* P	Pb	08 54 16.7	+1.3
FG16				*i* S	Sb	08 54 41.2	+5.6
FG16				IAML		08 54 49.9	
	comp=Z,1μm,0.3s						
FG8	Yepocapa, Chim	1.65	318	*i* P	Pb	08 54 17.2	+1.4
FG8				*i* S	Sb	08 54 39.9	+3.7
MARCA	Marcala la Paz	1.77	50	*i* P	Pn	08 54 14.8	+0.3
CSGN	Cosiguina Volc	1.83	91	P	Pn	08 54 15.6	+0.3
CSGN				S	Sb	08 54 40.2	-1.2

POTN	Potosi Cosigui	1.88	91	S	Sn	08 54 40.3	+1.7
ESSG	Sabana Grande	1.92	315	*i* P	Pn	08 54 15.8	-0.7
ESSG				*i* S	Sn	08 54 37.8	-1.8
ESSG				IAML		08 54 46.3	
	comp=Z,566nm,0.6s						
TGUH	Tegucigalpa,Un	2.34	64	P	Pn	08 54 22.6	+0.3
QUEN	Al S del Volca	2.56	99	P	Pn	08 54 25.7	+0.4
HERN	Volcan Telica	2.57	99	S	Sn	08 54 56.6	+0.7
HERN	Volcan Telica	2.57	99	⇓P	Pn	08 54 25.7	+0.1
HOYN	Al Sur del Vol	2.58	99	P	Pn	08 54 25.5	-0.1
HOYN				S	Sn	08 54 57.9	+1.9
RTAL	Retalhuleu	2.66	304	P	Pn	08 54 27.1	+0.5
RTAL	Retalhuleu	2.66	304	S	Sn	08 54 58.2	+0.4
CNGN	Cerro Negro	2.72	101	P	Pn	08 54 28.0	+0.4
CNGN	Cerro Negro	2.72	101	S	Sn	08 55 00.2	+0.7
MOMN	Momotombo	2.89	102	P	Pn	08 54 29.8	-0.1
LIMN	Finca el Limon	2.99	89	P	Pn	08 54 31.7	+0.4
RCVN	Varillal2	3.20	80	P	Pn	08 54 35.1	+0.8
TISN	Laguna Tiscapa	3.21	105	P	Pn	08 54 33.6	-0.7
UNAN	Cigeo UNAN	3.22	106	P	Pn	08 54 34.9	+0.5
UNAN				S	Sn	08 55 11.9	+0.1
RCPN	Sur Rio San Ju	3.29	81	P	Pn	08 54 36.5	+1.1
MAS3	Al N del Volca	3.33	107	P	Pn	08 54 37.3	+1.3
MAS3				S	Sn	08 55 13.6	-1.0
NANN	Nandasmo	3.41	108	P	Pn	08 54 39.1	+2.1
NANN	Nandasmo	3.41	108	S	Sn	08 55 16.9	+0.4
MATN	Matagalpa	3.42	91	P	Pn	08 54 36.3	-0.9
BOAB	BOACO BROADBAN	3.72	98	P	Pn	08 54 41.0	-0.3
BOAB	BOACO BROADBAN	3.72	98	S	Sn	08 55 25.3	+1.2
PETF	Flores	3.89	354	*i* P	Pn	08 54 44.8	+1.2
PETF				IAML		08 55 58.1	
	comp=Z,49nm,0.7s						
CCIG	Comitan	4.16	321	*i* P	Pn	08 54 47.8	+0.2
CCIG				IAML		08 56 00.6	
	comp=Z,34nm,0.7s						
INDI	Punta indio, G	4.97	129	P	Pn	08 55 00.1	+1.6
INDI	Punta indio, G	4.97	129	S	Sn	08 55 51.6	-3.4
SCIG	Sabancuy	6.14	344	IAML		08 57 12.0	
	comp=Z,34nm,1.0s						
TXAR	Lajitas Array	20.93	323	P	P	08 58 26.4	+0.1
	comp=Z,0.7nm,0.4s,baz=136,slow=9.6,SNR=35						
	comp=Z,0.7nm,0.4s						
TKL	Tuckaleechee C	23.11	12	LR	LR	09 06 34.6	
	comp=Z,34nm,21.0s,baz=199,slow=35						
PDAR	Pinedale Array	34.37	333	P	P	09 00 28.9	-1.5
	comp=Z,0.2nm,0.5s,baz=143,slow=9.6,SNR=2.3						
	comp=Z,0.2nm,0.5s						
YKA	Yellowknife Ar	52.56	346	P	P	09 02 51.6	-4.6
	comp=Z,0.7nm,0.8s,baz=144,slow=7.1,SNR=14						
	comp=Z,0.7nm,0.8s						
ILAR	Eielson Array	64.72	336	P	P	09 04 15.6	-5.3
	comp=Z,0.3nm,0.8s,baz=178,slow=4.6,SNR=4.7						
	comp=Z,0.3nm,0.8s						
WRA	Warramunga Arr	137.56	255	PKP	PKPdf	09 13 07.7	0.0
	comp=Z,0.4nm,0.8s,baz=88,slow=2.1,SNR=5.8						

IDC 09 09:06:10.8±2.6**, 3°.17S×129°.46E, h0^{km}, mb3.3**/2**,**
mbtmp3.5/3**, ML3.2**/1**, Error ellipse: s-maj=169.4km**
s-min=29.9km az=69.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.34	164	P	Pn	09 10 14.9	+0.6
	0.1nm,0.3s,baz=347,slow=12,SNR=7.0						
	1.0nm,0.7s						
ASAR	Alice Springs	20.82	168	P	P	09 10 53.9	-0.3
	0.7nm,0.7s,baz=350,slow=12,SNR=11						
	0.7nm,0.7s						
MKAR	Makanchi Array	64.76	326	P	P	09 16 51.2	0.0
	0.2nm,0.4s,baz=122,slow=5.4,SNR=2.3						
	0.2nm,0.4s						

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*DJA **09** 09:32:24.0±0.1, 8°S±2°×10°9E±°, h62^{km}±2^{km}, M5.3/107, mb5.5/107, mB5.8/61, MLv5.8/34, Mw(mB)5.3/61, MwMwp5.1/36, Mwp5.4/36*

*MOS **09** 09:32:24.3±1.1, 7°.93S×109°.07E, h73^{km}, mb5.6/67, MS4.5/13, Error ellipse: s-maj=7.8km s-min=4.1km az=120.1*

*IDC **09** 09:32:24.8±1.1, 8°.12S×108°.98E, h65^{km}±8^{km}, mb5.1/34, mbtmp5.3/36, MS4.4/66, Error ellipse: s-maj=12.7km s-min=8.8km az=76.0*

*NEIC **09** 09:32:25.8, 8°.29S×108°.86E, h70^{km}, Moment Tensor Solution. Duration: 2^{s}2 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.98; M$_{\theta\theta}$-1.08; M$_{\phi\phi}$0.10; M$_{r\theta}$0.49; M$_{\theta\phi}$0.85; M$_{\phi r}$-0.25; Fault plane solution: M$_0$1.45000×10^{17} NP1: ϕ_s299.08000°, δ33.15000°, λ92.00000°. NP2: ϕ_s116.68000°, δ56.88000°, λ88.69000°. Principal axes: T 1.0929, Plg78.0000°, Azm22.0000°; N 0.5470, Plg1.0000°, Azm117.0000°; P -1.6400, Plg12.0000°, Azm208.0000°;*

*NEIC **09** 09:32:25.1±1.8, 8°.20S±0°.09×108°.95E±0°.06, h70^{km}±5^{km}, mb5.5/122, Mww5.4/15 Error ellipse: s-maj=12.8km s-min=8.0km az=197.0*

*NEIC **09** 09:32:25.8, 8°.19S×108°.96E, h70^{km}*

*GCMT **09** 09:32:27.1±0.1, 8°.66S±0°.01×108°.87E±0°.01, h58^{km}, MW5.4/136, Moment Tensor Solution. s136,c237; s129,c245; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.19±.02; M$_{\theta\theta}$-1.20±.02; M$_{\phi\phi}$0.00±.02; M$_{r\theta}$0.78±.02; M$_{\theta\phi}$0.53±.01; M$_{\phi r}$-0.38±.01; Best double couple: M$_0$1.55700×10^{17} NP1: ϕ_s286.00000°, δ28.00000°, λ83.00000°. NP2: ϕ_s114.00000°, δ62.00000°, λ94.00000°. Principal axes: T 1.4560, Plg73.0000°, Azm33.0000°; N 0.1980, Plg3.0000°, Azm292.0000°; P -1.6580, Plg17.0000°, Azm201.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 09:32:25.6±0.2**, 8°.30S**±0°.03×**108°.92E**±0°.03**, h79^{km}**±1^{km}**,**
h79^{km}:pP-P, n1263, σ1^{s}.42/1318**, mb5.4**/220**, 97C-58D,**
Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMJI	Cimerak	0.69	318	P	Pn	09 32 38.4	-2.7
YOGI	Yogyakarta	1.45	71	P	Pn	09 32 48.4	-1.8
BBJI	Bungbulang	1.51	303	P	Pn	09 32 49.6	-1.4
BBJI	Bungbulang	1.51	303	S	Sn	09 33 07.2	-3.0
UGM	Wanagama	1.64	76		Pn	09 32 50.5	-2.1
UGM	Wanagama	1.64	76	P	Pn	09 32 51.6	-1.1
UGM	Wanagama	1.64	76	P	Pn	09 32 51.1	-1.6
LEM	Lembang	1.95	319	P	Pn	09 32 56.5	-0.5
	2µm,0.4s,baz=73,slow=20,SNR=65						
LEM				S	Sn	09 33 10.8	-10
	4µm,0.5s,baz=160,slow=22,SNR=6.8						
LEM				LR	LR	09 33 54.9	
	comp=Z,20µm,20.7s,baz=128,slow=48						
LEM	Lembang	1.95	319	P	Pn	09 32 57.2	+0.2
SMRI	Semarang	1.96	51		Pn	09 32 57.7	+0.9
SMRI	Semarang	1.96	51	P	Pn	09 32 58.7	+1.8
SMRI	Semarang	1.96	51	P	Pn	09 32 57.8	+0.9
CNJI	Cibinong	2.03	299	P	Pn	09 32 55.8	-2.0
WOJI	Wonogiri, Jawa	2.04	77	P	Pn	09 32 55.5	-2.4
PCJI	Pacitan	2.24	87	P	Pn	09 32 59.2	-1.4
SKJI	Sukabumi	2.67	299	P	Pn	09 33 05.1	-1.4
NGJI	Ngawi	2.69	70	P	Pn	09 33 08.1	+1.5
TNG	Tangerang	3.09	313	P	Pn	09 33 12.5	+0.4
TNG				P	Pn	09 33 12.5	+0.4
TBJI	Tambak Boyo	3.26	63	P	Pn	09 33 14.6	+0.2
CGJI	Cibinong	3.61	297	P	Pn	09 33 17.8	-1.4
GRJI	Gresik	3.79	69	P	Pn	09 33 21.7	+0.1
XMI	Christmas Isla	3.83	236	P	Pn	09 33 17.0	-5.3
BWJI	Bawean	4.44	57	P	Pn	09 33 31.1	+0.6
GMJI	Gumukmas	4.48	90	P	Pn	09 33 30.6	-0.4
BLSI	Bandar Lampung	4.67	308	P	Pn	09 33 34.3	+0.7
KMMI	Kalianget	5.16	76	P	Pn	09 33 39.8	-0.5
	6.4nm13µm11µm610nm,0.8s						
JAGI	Jajag, Banyuwa	5.18	92		Pn	09 33 39.4	-1.2
JAGI	Jajag, Banyuwa	5.18	92	P	Pn	09 33 40.7	+0.1
JAGI	Jajag, Banyuwa	5.18	92	S	Sn	09 34 38.9	-0.2
JAGI	Jajag, Banyuwa	5.18	92	P	Pn	09 33 39.4	-1.2
KASI	Kota Agung	5.18	302	P	Pn	09 33 41.0	+0.3
	3.6nm6µm712nm,1.0s						
ABJI	Asem Bagus	5.29	85	P	Pn	09 33 41.9	-0.2
TPI	Tanjungpandan	5.65	347	P	Pn	09 33 48.0	+1.0
	4.8nm5µm334nm,0.6s						
LWLI	Liwa	5.83	304	P	Pn	09 33 51.1	+1.6
MDSI	Maura Dua	6.04	309	P	Pn	09 33 53.0	+0.6
	2.2nm6µm5µm619nm,1.3s						
DNP	Denpasar	6.24	94	P	Pn	09 33 54.9	-0.1
SRBI	Singaraja	6.24	88	P	Pn	09 33 54.2	-0.8
PPBI	Pangkal Pinang	6.70	335	P	Pn	09 34 01.0	-0.3
PMBI	Palembang	6.75	322		Pn	09 34 03.4	+1.4
PMBI	Palembang	6.75	322	P	Pn	09 34 02.1	+0.1
PMBI	Palembang	6.75	322	P	Pn	09 34 03.6	+1.6
	4.5nm844nm,1.0s						
MNAI	Manna	7.10	303		Pn	09 34 06.2	-0.7
MNAI	Manna	7.10	303	P	Pn	09 34 07.7	+0.8
MNAI	Manna	7.10	303	P	Pn	09 34 07.0	+0.1
	4.1nm6µm902nm,0.9s						
KSI	Kapahiang	7.80	306	P	Pn	09 34 16.9	+0.4
TWSI	Taliwang, Sumb	7.89	94	P	Pn	09 34 15.9	-1.7
	2.9nm7µm7µm501nm,0.9s						
STKI	Sintang	8.69	17	P	Pn	09 34 30.7	+2.1
	10µm424nm,1.1s						
PLAI	Plampang	8.78	94	P	Pn	09 34 29.6	-0.1
PLAI	Plampang	8.78	94	S	Sn	09 36 08.5	+1.4
PLAI	Plampang	8.78	94	P	Pn	09 34 28.5	-1.2
KSM	Kuching	9.81	8		Pn	09 34 45.0	+1.2
KSM	Kuching	9.81	8	P	Pn	09 34 45.6	+1.8
TPRI	Tanjung Pinang	10.15	334	P	Pn	09 34 52.7	+4.2
	5µm215nm,1.1s						
WBSI	Waikabubak, Su	10.43	98	P	Pn	09 34 50.8	-1.6
	3µm294nm,0.9s						
BKB	Balikpapan	10.59	49	Pn	Pn	09 34 54.7	+0.3
BKB	Balikpapan	10.59	49	P	Pn	09 34 56.8	+2.4
BKB	Balikpapan	10.59	49	P	Pn	09 34 57.6	+3.2
	9µm3µm142nm,1.4s						
KAPI	Kappang	11.24	74		Pn	09 35 03.6	+0.2
KAPI	Kappang	11.24	74	P	Pn	09 35 02.4	-1.0
	20nm,0.7s,baz=254,slow=8.2,SNR=26						
KAPI				LR	LR	09 40 23.3	
	comp=Z,3µm,18.5s,baz=261,slow=43						
KAPI	Kappang	11.24	74	P	Pn	09 35 06.5	+3.1
KAPI	Kappang	11.24	74	S	Sn	09 37 10.0	+2.6
KAPI	Kappang	11.24	74	⇑*e*P	Pn	09 35 02.1	-1.3
KAPI				pmax	pmax		
	comp=Z,22nm,0.6s						
WSI	Waingapu	11.32	98	P	Pn	09 35 04.9	+0.4
	comp=Z,422nm,0.8s						
PPI	Padang Panjang	11.52	312	P	Pn	09 35 06.0	-1.2
	comp=Z,105nm,1.0s						
SPSI	Sidrap Palu	11.62	69	P	Pn	09 35 10.0	+1.5
	comp=Z,113nm,1.3s						
BKNI	Bangkinang	11.62	317		Pn	09 35 06.7	-1.9
BKNI	Bangkinang	11.62	317	P	Pn	09 35 07.7	-0.9
BKNI	Bangkinang	11.62	317	P	Pn	09 35 07.0	-1.6
	comp=Z,2µmcomp=Z,217nm,1.0s						
BASI	Baing, Sumba	11.66	100	P	Pn	09 35 06.6	-2.5
	comp=Z,5µmcomp=Z,412nm,0.7s						
BSSI	Bau Bau, Buton	11.68	80	P	Pn	09 35 10.4	+1.1
	comp=Z,4µmcomp=Z,4µmcomp=Z,317nm,1.3s						
BNSI	Bone	11.77	71	P	Pn	09 35 11.6	+1.0
	comp=Z,5µmcomp=Z,4µmcomp=Z,180nm,1.2s						
SISI	Saibi	11.99	305	P	Pn	09 35 09.3	-4.3
	comp=Z,3µmcomp=Z,250nm,0.8s						
TTSI	Tana Toraja	12.04	65	P	Pn	09 35 16.6	+2.4
	comp=Z,7µmcomp=Z,4µmcomp=Z,370nm,1.1s						
COCO	West Island	12.50	251	P	Pn	09 35 20.3	-0.2
EDFI	Ende, Flores	12.64	93	P	Pn	09 35 17.4	-5.1
	comp=Z,151nm,0.7s						
MNSI	Mandailing Nat	12.97	314	P	Pn	09 35 21.9	-5.0
	comp=Z,98nm,0.8s						
PCI	Palu	13.12	57	P	Pn	09 35 31.9	+3.0
	comp=Z,6µmcomp=Z,547nm,1.0s						
MMRI	Maumere	13.18	92		Pn	09 35 25.3	-4.4
MMRI	Maumere	13.18	92	P	Pn	09 35 26.6	-3.0
MMRI	Maumere	13.18	92	P	Pn	09 35 25.8	-3.8
	comp=Z,3µmcomp=Z,251nm,1.0s						
BBSI	Bau Bau	13.84	79	P	Pn	09 35 37.6	-0.7
	comp=Z,4µmcomp=Z,3µmcomp=Z,228nm,1.1s						
MPSI	Mapaga	13.91	52	P	P	09 35 42.7	-2.0
	comp=Z,6µmcomp=Z,2µmcomp=Z,258nm,0.9s						
BATI	Baumata	14.68	99	P	Pn	09 35 47.4	-1.8
	comp=Z,3µmcomp=Z,281nm,1.1s						
RPSI	Rantau Prapat	14.79	317		Pn	09 35 45.8	-4.8
GSI	Gunungsitoli	14.79	310	P	Pn	09 35 45.2	-5.5
GSI	Gunungsitoli	14.79	310	P	Pn	09 35 44.7	-6.0
	comp=Z,4µmcomp=Z,148nm,0.7s						
PSI	Prapat	14.87	317	P	Pn	09 35 45.7	-6.0
	comp=Z,14nm,0.7s,baz=114,slow=14,SNR=15						
PSI				LR	LR	09 42 46.6	
	comp=Z,1µm,18.8s,baz=132,slow=42						
PSI	Prapat	14.87	317	P	Pn	09 35 45.8	-5.9
TOLI2	Tolitoli	15.08	52		Pn	09 35 54.0	-0.3
TOLI2	Tolitoli	15.08	52	P	P	09 35 58.0	+0.2
GIRL	Giralia	15.15	161		Pn	09 35 47.3	-7.9
GIRL	Giralia	15.15	161	P	Pn	09 35 47.8	-7.4
GIRL	Giralia	15.15	161	P	Pn	09 35 54.8	-0.4
SOEI	Soe	15.23	97		Pn	09 35 52.5	-3.9
SOEI	Soe	15.23	97	P	Pn	09 35 53.4	-3.0
SOEI	Soe	15.23	97	P	Pn	09 35 53.0	-3.4
	comp=Z,5µmcomp=Z,600nm,1.0s						
LUWI	Luwuk	15.57	63	P	P	09 36 02.8	-0.4
LUWI	Luwuk	15.57	63	P	P	09 36 03.1	-0.1
	comp=Z,4µmcomp=Z,469nm,1.0s						
MRSI	Marisa	15.64	57	P	P	09 36 03.9	-0.1
	comp=Z,5µmcomp=Z,549nm,1.0s						
KULM	Kulim	15.82	328	P	Pn	09 36 02.1	-1.6
KULM	Kulim	15.82	328	P	Pn	09 36 02.1	-1.6
KKM	Kota Kinabalu	16.00	27	P	P	09 36 07.7	-0.4
KKM	Kota Kinabalu	16.00	27	P	P	09 36 08.0	-0.1
MYLDM	Lahad Datu	16.45	36	P	P	09 36 15.4	+2.4
MBWA	Marble Bar	16.50	142	P	Pn	09 36 06.5	-5.8
MBWA	Marble Bar	16.50	142	P	Pn	09 36 07.2	-5.0
MBWA	Marble Bar	16.50	142	P	Pn	09 36 07.4	-4.8
MBWA	Marble Bar	16.50	142	P	Pn	09 36 08.0	-4.2
PSAD1	Pilbara Seismi	16.79	142	P	Pn	09 36 11.4	-4.4
PSAC1	Pilbara Seismi	16.83	143	P	Pn	09 36 11.6	-4.7
PSAA2	Pilbara Seismi	16.88	143	P	Pn	09 36 12.2	-4.7
PSA00	Pilbara Seismi	16.89	143	P	Pn	09 36 11.3	-5.6
PSA00	Pilbara Seismi	16.89	143	P	Pn	09 36 09.4	-7.5
PSA00	Pilbara Seismi	16.89	143	P	Pn	09 36 12.6	-4.4
KMSI	Cibinong	17.41	60	P	P	09 36 25.1	+1.5
SANI	Sanana	18.09	71	P	Pn	09 36 32.1	+0.4
SANI	Sanana	18.09	71	P	Pn	09 36 32.3	+0.6
	comp=Z,5µmcomp=Z,3µmcomp=Z,242nm,1.2s						
NLAI	Namlea	18.77	76	P	Pn	09 36 40.9	+1.0
	comp=Z,4µmcomp=Z,5µmcomp=Z,532nm,0.9s						
FITZ	Fitzroy Crossi	18.95	123	P	P	09 36 41.0	+0.4
FITZ	Fitzroy Crossi	18.95	123	P	Pn	09 36 41.4	-0.6
	comp=Z,49nm,0.9s,baz=298,slow=6.6,SNR=53						
FITZ				S	S	09 39 54.7	-17
	comp=Z,41nm,0.8s,baz=251,slow=21,SNR=4.4						
FITZ				LR	LR	09 44 57.1	
	comp=Z,2µm,19.9s,baz=301,slow=40						
FITZ	Fitzroy Crossi	18.95	123	P	Pn	09 36 41.8	-0.2
SRIT	Nakonsritamara	19.18	331	P	P	09 36 42.8	-0.2
SRIT	Nakonsritamara	19.18	331	P	Pn	09 36 44.0	-0.7
AAI	Ambon	19.71	78	P	P	09 36 49.3	+0.5
DLV	Lat	20.12	359	P	Pn	09 36 54.8	-1.1
SGSI	Sangihe	20.40	55	P	P	09 36 57.3	+1.0
	comp=Z,4µmcomp=Z,6µmcomp=Z,285nm,0.8s						
MEEK	Meekatharra	20.43	154	P	P	09 36 56.6	+0.1
	comp=Z,142nm,1.1s						
MEEK	Meekatharra	20.43	154	P	P	09 36 57.2	+0.6
TNTI	Ternate	20.48	65	P	P	09 36 57.5	+0.3
TNTI	Ternate	20.48	65	P	P	09 36 58.0	+0.8
TNTI	Ternate	20.48	65	P	P	09 36 58.3	+1.1
	comp=Z,3µmcomp=Z,5µmcomp=Z,491nm,1.2s						
MSAI	Masohi	20.50	77	P	P	09 36 57.5	+0.1
	comp=Z,4µmcomp=Z,6µmcomp=Z,247nm,0.9s						
KNRA	Kununurra	20.74	113	P	P	09 36 59.3	-0.7
KNRA				IAmb	IAmb	09 37 01.7	
	comp=Z,198nm,0.8s						
KNRA	Kununurra	20.74	113	P	P	09 37 00.2	+0.3
	comp=Z,279nm,1.0s						
BNDI	Bandanaira	21.19	81	P	P	09 37 05.8	+1.0
BNDI	Bandanaira	21.19	81	P	P	09 37 04.4	-0.4
MORW	Morawa	21.72	163	P	P	09 37 10.0	-0.3
MORW				IAmb	IAmb	09 37 28.2	
	comp=Z,179nm,1.1s						
MORW	Morawa	21.72	163	P	P	09 37 09.1	-1.2
	comp=Z,157nm,1.4s						
MORW	Morawa	21.72	163	P	P	09 37 10.5	+0.2
DRS	Darwin Rock St	22.00	103	P	P	09 37 14.9	+1.4
MTN	Manton Dam	22.29	104	P	P	09 37 15.7	-0.9
MTN				IAmb	IAmb	09 37 20.0	
	comp=Z,182nm,1.2s						
MTN	Manton Dam	22.29	104	P	P	09 37 16.5	-0.2
	comp=Z,161nm,1.1s						
MTN	Manton Dam	22.29	104	P	P	09 37 17.3	+0.7
DAV	Davao City (W)	22.56	48	P	P	09 37 19.3	-0.2
DAV				IAmb	IAmb	09 37 25.3	
	comp=Z,356nm,1.1s						
DAV	Davao City (W)	22.56	48	LR	LR	09 46 22.2	
	comp=Z,2µm,21.8s,baz=235,slow=37						
BLDU	Ballidu	23.37	163	P	P	09 37 27.0	-0.3
	comp=Z,77nm,2.4s						
SWI	Sorong	23.45	73	P	P	09 37 26.8	-1.4
	comp=Z,2µmcomp=Z,2µmcomp=Z,120nm,0.8s						
KDU	Kakadu	23.56	103	P	P	09 37 28.9	-0.3
	comp=Z,270nm,1.3s						
KDU	Kakadu	23.56	103	P	P	09 37 29.1	-0.1
FAKI	Fak Fak	23.82	78	P	P	09 37 28.4	-3.1
FAKI				IAmb	IAmb	09 37 38.0	
	comp=Z,89nm,0.9s						
FAKI	Fak Fak	23.82	78	P	P	09 37 29.3	-2.2
FAKI	Fak Fak	23.82	78	P	P	09 37 28.8	-2.7
	comp=Z,2µmcomp=Z,110nm,1.3s						
MUN	Mundaring	24.52	165	P	P	09 37 36.7	-1.0
	comp=Z,62nm,1.1s						
KLBR	Kellerberrin	24.59	162	P	P	09 37 38.2	-0.2
	comp=Z,95nm,0.9s						
KLBR	Kellerberrin	24.59	162	P	P	09 37 39.9	+1.5
KMPI	Kaimana, Papua	25.07	81	P	P	09 37 42.8	-0.1
NWAO	Narrogin (SRO)	25.69	164	P	P	09 37 47.7	-0.6
NWAO	Narrogin (SRO)	25.69	164	LR	LR	09 47 08.9	
	comp=Z,2µm,21.6s,baz=322,slow=34						
NWAO	Narrogin (SRO)	25.69	164	P	P	09 37 50.3	+2.0
KMBL	Kambalda	25.94	154	P	P	09 37 48.9	-1.7
	comp=Z,68nm,0.8s						
KMBL	Kambalda	25.94	154	P	P	09 37 53.0	+2.4
RKPI	Ransiki, Papua	26.04	76	P	P	09 37 52.0	+0.3
WB0	Warramunga Arr	27.17	117	P	P	09 38 02.2	+0.3
WB0				IAmb	IAmb	09 38 03.6	
	comp=Z,76nm,0.9s						
WB9	Warramunga Arr	27.17	118	P	P	09 38 01.9	+0.1
QIZ	Qiongzhong	27.17	2	P	P	09 38 02.2	+0.5
QIZ				sP	sP	09 38 30.0	+0.6
QIZ				S	S	09 42 37.3	+2.5
QIZ				pmax	pmax		
	comp=Z,290nm,4.6s						
QIZ				LR	LR		
	comp=Z,1µm,20.6s						
QIZ				LR	LR		
	comp=Z,2µm,24.7s						
WRA	Warramunga Arr	27.19	118	P	P	09 38 02.5	+0.5
WRA	Warramunga Arr	27.19	118	P	P	09 38 02.9	+0.9
	comp=Z,64nm,0.9s,baz=291,slow=11,SNR=205						
WRA				ScP	ScP	09 44 54.6	+0.4
	comp=Z,7.7nm,1.1s,baz=298,slow=3.5,SNR=5.5						
	comp=Z,64nm,0.9s						
WRAB	Tennant Creek	27.19	118	*c i*P	P	09 38 02.7	+0.7
WRAB				pmax	pmax		
	comp=Z,96nm,0.9s						
SRPI	Serui, Papua	27.94	78	P	P	09 38 09.2	+0.5
	comp=Z,154nm,0.9s						
BAKI	Biak	27.98	77	P	P	09 38 10.0	+0.9
	comp=Z,118nm,1.0s						
CM31	Chiang Mai Arr	28.35	340	P	P	09 38 10.9	-1.4
CM31	Chiang Mai Arr	28.35	340	P	P	09 38 11.5	-0.8
CMAR	Chiang Mai Arr	28.35	340	P	P	09 38 10.8	-1.5
CMAR	Chiang Mai Arr	28.35	340	P	P	09 38 11.6	-0.7
	comp=Z,28nm,0.7s,baz=178,slow=8.6,SNR=133						
CMAR				PcP	PcP	09 41 24.6	+1.2
	comp=Z,5.2nm,0.6s,baz=197,slow=3.1,SNR=6.4						
CMAR				ScP	ScP	09 44 59.9	+2.2
	comp=Z,1.7nm,0.3s,baz=191,slow=3.3,SNR=8.1						
CMAR				LR	LR	09 50 15.0	
	comp=Z,2µm,20.5s,baz=165,slow=38						
	comp=Z,28nm,0.7s						
CMAR	Chiang Mai Arr	28.35	340	*ce*P	P	09 38 11.6	-0.7
CMAR				pmax	pmax		
	comp=Z,33nm,0.7s						
ASAR	Alice Springs	28.39	125	P	P	09 38 12.8	+0.1
ASAR	Alice Springs	28.39	125	P	P	09 38 13.2	+0.5
	comp=Z,33nm,1.0s,baz=301,slow=8.5,SNR=144						
ASAR				PcP	PcP	09 41 25.0	+1.4
	comp=Z,8.6nm,0.9s,baz=326,slow=2.6,SNR=6.0						
ASAR				ScP	ScP	09 44 59.9	+2.0
	comp=Z,10nm,1.1s,baz=302,slow=2.8,SNR=6.6						
ASAR				LR	LR	09 50 24.6	
	comp=Z,912nm,20.1s,baz=302,slow=38						
	comp=Z,33nm,1.0s						
AS31	Alice Springs	28.39	125	P	P	09 38 12.5	-0.2
AS31	Alice Springs	28.39	125	P	P	09 38 12.8	+0.1
	comp=Z,8.8nm,0.8s						
AS01	Alice Springs	28.43	125	P	P	09 38 13.2	+0.2
FORT	Forrest	28.64	144	P	P	09 38 17.3	+2.6
CHTO	Chiang Mai	28.68	340	P	P	09 38 14.4	-0.8
CHTO	Chiang Mai	28.68	340	P	P	09 38 14.4	-0.8
CHTO				S	S	09 42 59.5	+0.9
CHTO	Chiang Mai	28.68	340	P	P	09 38 14.4	-0.8
CHTO	Chiang Mai	28.68	340	P	P	09 38 14.4	-0.8
CHTO				pmax	pmax		
	comp=Z,38nm,0.8s						
SLVN	Son La	29.86	351	P	P	09 38 25.9	+0.3
SLVN	Son La	29.86	351	P	P	09 38 27.4	+1.7
SMPI	Sarmi	30.31	80	P	P	09 38 28.8	-1.0
	comp=Z,76nm,1.5s						
GENI	Genyem	31.61	81	P	P	09 38 40.6	-0.6
	comp=Z,49nm,0.8s						
QIS	Mount Isa	32.05	116	P	P	09 38 45.7	+0.6
	comp=Z,73nm,1.3s						
QIS	Mount Isa	32.05	116	P	P	09 38 46.0	+1.0
PALK	Pallekele	32.10	298	P	P	09 38 46.4	+0.8
PALK				IAmb	IAmb	09 38 48.9	
	comp=Z,99nm,1.2s						
PALK	Pallekele	32.10	298	LR	LR	09 50 01.1	
	comp=Z,656nm,21.7s,baz=118,slow=33						
PALK	Pallekele	32.10	298	P	P	09 38 47.5	+1.9
PALK	Pallekele	32.10	298	*d i*P	P	09 38 47.9	+2.3
PALK				pmax	pmax		
	comp=Z,119nm,1.2s						
JAY	Jayapura	32.15	81	LR	LR	09 54 31.8	
	comp=Z,378nm,21.8s,baz=263,slow=41						
JAY	Jayapura	32.15	81	P	P	09 38 45.0	-1.0
	comp=Z,41nm,1.2s						
GULI	GuiLin	33.42	2	P	P	09 38 58.1	+1.3
GULI				S	S	09 44 20.4	+7.9
GULI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YULB	Yu-li	33.74	21	P	P	09 39 00.6	+0.9
YULB				IAmb	IAmb	09 39 25.0	
	comp=Z,106nm,1.8s						
KMI	Kunming	33.76	350	P	P	09 39 02.0	+1.9
KMI				S	S	09 44 21.4	+3.1
KMI				pmax	pmax		
	comp=Z,30nm,1.0s						
KMI				pmax	pmax		
	comp=Z,180nm,8.0s						
KMI				LR	LR		
	comp=Z,1µm,22.4s						
KMI				LR	LR		
	comp=Z,2µm,18.6s						
KMI				LR	LR		
	comp=Z,2µm,20.3s						
SSLB	Suanglung	33.99	20	P	P	09 39 01.9	+0.1
SSLB				IAmb	IAmb	09 39 03.8	
	comp=Z,50nm,0.8s						
SSLB	Suanglung	33.99	20	P	P	09 39 02.4	+0.5
COEN	Coen	34.05	103	P	P	09 39 03.1	+0.6
COEN				IAmb	IAmb	09 39 04.3	
	comp=Z,66nm,0.8s						
COEN	Coen	34.05	103	P	P	09 39 02.8	+0.3
	comp=Z,97nm,1.1s						
COEN	Coen	34.05	103	P	P	09 39 03.2	+0.6
QZH	Quanzhou	34.36	16	*e*P	P	09 39 05.9	+0.9
QZH				*e*S	S	09 44 32.5	+5.4
QZH				LR	LR		
	comp=Z,810nm,21.3s						
QZH				LR	LR		
	comp=Z,830nm,23.4s						
QZH				LR	LR		
	comp=Z,1µm,22.3s						
GYA	Guiyang	34.62	356	⇑P	P	09 39 08.3	+0.9
GYA				pmax	pmax		
	comp=Z,36nm,0.7s						
TNCH	TengChong	34.64	343	P	P	09 39 07.6	-0.1
TNCH				PP	PP	09 40 31.1	+3.4
TNCH				S	S	09 44 35.1	+3.3
TNCH				pmax	pmax		
	comp=Z,32nm,0.8s						
TNCH				pmax	pmax		
	comp=Z,130nm,3.1s						
TNCH				LR	LR		
	comp=Z,1µm,22.8s						
TNCH				LR	LR		
	comp=Z,1µm,11.4s						

TNCH				LR	LR		
	comp=Z,2µm,23.4s						
BBOO	Buckleboo	35.02	138	P	P	09 39 11.0	+0.4
BBOO				IAmb	IAmb	09 39 12.4	
	comp=Z,47nm,0.8s						
BBOO	Buckleboo	35.02	138	P	P	09 39 10.4	-0.3
	comp=Z,66nm,0.9s						
BBOO	Buckleboo	35.02	138	P	P	09 39 11.4	+0.7
BRDH	Bariadhala	35.13	332	LR	LR	09 55 38.3	
	comp=Z,1µm,20.0s,baz=138,slow=40						
PZH	PanZhiHua	35.29	349	P	P	09 39 13.8	+0.6
PZH				S	S	09 44 46.1	+4.5
PZH				pmax	pmax		
	comp=Z,20nm,0.6s						
PZH				pmax	pmax		
	comp=Z,110nm,4.7s						
PZH				LR	LR		
	comp=Z,640nm,18.2s						
PZH				LR	LR		
	comp=Z,2µm,21.2s						
PZH				LR	LR		
	comp=Z,1µm,23.0s						
MTSU	Mount Surprise	35.76	109	P	P	09 39 18.8	+1.5
	comp=Z,60nm,1.1s						
MTSU	Mount Surprise	35.76	109	P	P	09 39 19.2	+2.0
H08S2	Diego Garcia H	36.07	268	T	T	10 17 22.2	
	baz=93,slow=76,SNR=229						
H08S3	Diego Garcia H	36.08	268	T	T	10 17 13.4	
	baz=93,slow=76,SNR=284						
H08S1	Diego Carcia H	36.09	268	T	T	10 17 29.2	
	baz=93,slow=76,SNR=144						
WHYH	Whyalla	36.16	137	P	P	09 39 22.4	+1.9
PTPS	Port Pirie	36.53	137	P	P	09 39 25.7	+2.1
HTT	Hallett	37.31	136	P	P	09 39 30.5	+0.2
	comp=Z,11nm,1.5s						
HTT	Hallett	37.31	136	P	P	09 39 31.7	+1.4
PMG	Port Moresby	37.79	95	P	P	09 39 35.2	+0.6
PMG				IAmb	IAmb	09 39 36.7	
	comp=Z,95nm,1.0s						
PMG	Port Moresby	37.79	95	LR	LR	09 57 26.3	
	comp=Z,325nm,20.5s,baz=289,slow=40						
PMG	Port Moresby	37.79	95	P	P	09 39 36.2	+1.7
PMG	Port Moresby	37.79	95	P	P	09 39 36.1	+1.6
PMG	Port Moresby	37.79	95	*c i*P	P	09 39 35.1	+0.6
PMG				pmax	pmax		
	comp=Z,77nm,1.0s						
CTAO	Charters Tower	37.95	112	P	P	09 39 37.0	+1.3
CTAO				IAmb	IAmb	09 39 39.0	
	comp=Z,86nm,1.2s						
CTAO	Charters Tower	37.95	112	P	P	09 39 37.4	+1.6
CTAO	Charters Tower	37.95	112	P	P	09 39 37.1	+1.3
CTAO				pmax	pmax		
	comp=Z,86nm,1.2s						
CTAO	Charters Tower	37.95	112	P	P	09 39 37.9	+2.0
CTAO				pP	pP	09 39 53.5	-0.6
CTAO				sP	sP	09 40 02.8	-0.2
QLP	Quilpie	38.10	123	P	P	09 39 38.2	+1.3
	comp=Z,194nm,1.2s						
QLP	Quilpie	38.10	123	P	P	09 39 38.4	+1.4
TV1H	Townsville Har	38.28	111	P	P	09 39 40.4	+1.8
ENH	Enshi	38.35	1	P	P	09 39 38.2	-0.8
ENH	Enshi	38.35	1	P	P	09 39 38.7	-0.3
STKA	Stephens Creek	38.36	132	P	P	09 39 40.0	+0.8
STKA	Stephens Creek	38.36	132	P	P	09 39 40.0	+0.8
	comp=Z,467nm,0.9s						
STKA	Stephens Creek	38.36	132	P	P	09 39 40.4	+1.2
	comp=Z,52nm,0.5s,baz=309,slow=9.1,SNR=132						
STKA				PcP	PcP	09 41 52.7	+1.3
	comp=Z,16nm,0.8s,baz=342,slow=3.7,SNR=2.3						
STKA				LR	LR	09 57 13.3	
	comp=Z,392nm,18.2s,baz=291,slow=39						
	comp=Z,52nm,0.5s						
STKA	Stephens Creek	38.36	132	P	P	09 39 40.0	+0.8
STKA	Stephens Creek	38.36	132	*ce*P	P	09 39 40.0	+0.8
WHN	Wuhan	38.97	7	P	P	09 39 48.0	+3.9
WHN				pP	pP	09 40 03.8	+0.7
WHN				sS	sS	09 46 13.5	+4.5
WHN				LR	LR		
	comp=Z,2µm,15.8s						
WHN				LR	LR		
	comp=Z,3µm,21.7s						
WHN				LR	LR		
	comp=Z,4µm,30.8s						
CD2	Chengdu	39.30	353	P	P	09 39 46.2	-0.7
CD2				S	S	09 45 43.5	+1.3
CD2				pmax	pmax		
	comp=Z,20nm,0.4s						
CD2				pmax	pmax		
	comp=Z,170nm,4.4s						
CD2				LR	LR		
	comp=Z,1µm,19.7s						
CD2				LR	LR		
	comp=Z,1µm,19.7s						
HYB	Hyderabad	39.41	311	*e*P	P	09 39 47.7	-0.4
HYB				*e*sP	sP	09 40 13.7	-2.5
HYB				*e*PP	PP	09 41 19.3	-0.7
HYB				*e*PcP	PcP	09 41 54.8	-0.1
JOW	Kunigami	39.65	28	LR	LR	09 57 28.6	
	comp=Z,466nm,20.4s,baz=316,slow=38						
JOW	Kunigami	39.65	28	P	P	09 39 50.5	+0.6
SSE	Sheshan	40.90	16	P	P	09 40 00.9	+0.8
SSE				pmax	pmax		
	comp=Z,15nm,0.9s						
SSE				LR	LR		
	comp=Z,200nm,27.8s						
SSE				LR	LR		
	comp=Z,240nm,27.7s						
ARPS	Mount Arapiles	41.19	138	P	P	09 40 03.5	+1.0
	comp=Z,70nm,1.0s						
ARPS	Mount Arapiles	41.19	138	P	P	09 40 04.0	+1.5
NJ2	Nanjing	41.23	13	⇑P	P	09 40 03.5	+0.7
NJ2				PcP	PcP	09 42 01.8	+1.4
NJ2				S	S	09 46 16.1	+5.2
NJ2				pmax	pmax		
	comp=Z,24nm,0.7s						
NJ2				LR	LR		
	comp=Z,490nm,21.8s						
NJ2				LR	LR		
	comp=Z,720nm,18.5s						
NJ2				LR	LR		
	comp=Z,840nm,16.7s						
CMSA	Cobar Meteorol	41.28	129	P	P	09 40 04.7	+1.4
	comp=Z,84nm,1.1s						
CMSA	Cobar Meteorol	41.28	129	P	P	09 40 05.1	+1.8
LSA	Lhasa	41.47	336	P	P	09 40 04.3	-1.1
LSA	Lhasa	41.47	336	P	P	09 40 04.3	-1.1
LSA				pmax	pmax		
	comp=Z,31nm,1.0s						
GUMO	Guam	41.80	59	LR	LR	09 56 14.5	
	comp=Z,230nm,21.3s,baz=229,slow=34						
EVN	Everest	41.91	330	P	P	09 40 07.0	-2.1
XAN	Xi'an	42.11	0	⇑P	P	09 40 09.4	-0.6
XAN				S	S	09 46 22.9	-1.0
XAN				sS	sS	09 46 57.0	+1.0
XAN				pmax	pmax		
	comp=Z,59nm,0.8s						
XAN				pmax	pmax		
	comp=Z,150nm,3.5s						
XAN				LR	LR		
	comp=Z,950nm,22.1s						
XAN				LR	LR		
	comp=Z,1µm,18.9s						
XAN				LR	LR		
	comp=Z,2µm,22.9s						
LYN	LuoYang	42.75	4	⇑P	P	09 40 15.2	+0.1
LYN				pP	pP	09 40 33.8	-0.5
LYN				sP	sP	09 40 43.4	0.0
LYN				PcP	PcP	09 42 07.0	+1.6
LYN				S	S	09 46 33.0	-0.2
LYN				pmax	pmax		
	comp=Z,39nm,0.9s						
LYN				pmax	pmax		
	comp=Z,270nm,9.5s						
LYN				LR	LR		
	comp=Z,2µm,18.2s						
LYN				LR	LR		
	comp=Z,880nm,16.5s						
LYN				LR	LR		
	comp=Z,2µm,18.2s						
EIDS	Eidsvold	43.55	118	P	P	09 40 21.6	-0.3
EIDS				IAmb	IAmb	09 40 48.6	
	comp=Z,91nm,1.7s						
EIDS	Eidsvold	43.55	118	P	P	09 40 21.3	-0.6
	comp=Z,28nm,1.7s						
EIDS	Eidsvold	43.55	118	P	P	09 40 23.9	+2.0
TOO	Toolangi	44.06	137	P	P	09 40 26.7	+0.9
TOO	Toolangi	44.06	137	P	P	09 40 24.0	-1.8
	comp=Z,11nm,1.3s						
TOO	Toolangi	44.06	137	P	P	09 40 26.7	+0.9
TOO				pmax	pmax		
	comp=Z,11nm,1.0s						
LZH	Lanzhou	44.41	354	*e*P	P	09 40 28.8	+0.2
LZH				PcP	PP	09 42 12.9	-0.9
LZH				S	S	09 46 53.7	-4.0
LZH				pmax	pmax		
	comp=Z,55nm,1.9s						
LZH				pmax	pmax		
	comp=Z,240nm,4.7s						
LZH				LR	LR		
	comp=Z,980nm,13.6s						
LZH				LR	LR		
	comp=Z,980nm,15.6s						
LZH				LR	LR		
	comp=Z,1µm,14.9s						
YNG	Young	44.53	131	P	P	09 40 30.6	+1.0
	comp=Z,52nm,1.0s						
TIA	Tai'an	44.94	9	P	P	09 40 31.4	-1.3
TIA				sP	sP	09 41 05.6	+4.5
TIA				PcP	PcP	09 42 14.6	+1.7
TIA				PP	PP	09 42 21.0	+1.7
TIA				S	S	09 46 57.4	-7.7
TIA				pmax	pmax		
	comp=Z,25nm,0.9s						
TIA				pmax	pmax		
	comp=Z,160nm,5.4s						
TIA				LR	LR		
	comp=Z,560nm,21.5s						
TIA				LR	LR		
	comp=Z,860nm,17.2s						
TIA				LR	LR		
	comp=Z,1µm,21.0s						
CAN	Canberra	45.43	132	P	P	09 40 37.8	+1.1
CAN				IAmb	IAmb	09 40 40.4	
	comp=Z,75nm,1.4s						
CAN	Canberra	45.43	132	P	P	09 40 34.6	-2.1
	comp=Z,36nm,1.1s						
CAN	Canberra	45.43	132	P	P	09 40 38.7	+1.9
CAN	Canberra	45.43	132	P	P	09 40 37.8	+1.1
CAN				pmax	pmax		
	comp=Z,75nm,1.4s						
CAN	Canberra	45.43	132	P	P	09 40 38.6	+1.8
CAN				sP	sP	09 41 03.4	-0.2
ARMA	Armidale	45.54	125	P	P	09 40 39.0	+1.3
ARMA	Armidale	45.54	125	P	P	09 40 40.3	+2.5
ARMA	Armidale	45.54	125	P	P	09 40 39.8	+2.0
CNB	Canberra Magne	45.70	132	P	P	09 40 39.0	+0.1
	comp=Z,25nm,2.0s						
CNB	Canberra Magne	45.70	132	P	P	09 40 40.6	+1.7
HNS	HongShan	45.78	6	⇑P	P	09 40 38.8	-0.5
HNS				PcP	PcP	09 42 17.7	+2.0
HNS				S	S	09 47 21.9	+4.8
HNS				pmax	pmax		
	comp=Z,24nm,1.0s						
HNS				pmax	pmax		
	comp=Z,250nm,7.0s						
HNS				LR	LR		
	comp=Z,430nm,19.2s						
HNS				LR	LR		
	comp=Z,590nm,19.0s						
HNS				LR	LR		
	comp=Z,530nm,16.7s						
TIY	Taiyuan	45.89	4	P	P	09 40 40.3	0.0
TIY				S	S	09 47 20.1	+1.2
TIY				pmax	pmax		
	comp=Z,43nm,0.7s						
TIY				LR	LR		
	comp=Z,810nm,19.2s						
TIY				LR	LR		
	comp=Z,290nm,14.4s						
TIY				LR	LR		
	comp=Z,770nm,17.9s						
JNU	Nakatsue	46.19	26	P	P	09 40 41.6	-1.0
JNU				IAmb	IAmb	09 40 44.8	
	comp=Z,41nm,0.9s						
JNU	Nakatsue	46.19	26	P	P	09 40 41.9	-0.8
	comp=Z,33nm,0.9s,baz=178,slow=2.6,SNR=9.7						
JNU				LR	LR	10 00 56.2	
	comp=Z,470nm,21.8s,baz=208,slow=37						
	comp=Z,33nm,0.9s						
JNU	Nakatsue	46.19	26	P	P	09 40 40.9	-1.8
GOMU	GeErMu	46.21	344	P	P	09 40 42.5	-0.6
GOMU				PcP	PcP	09 42 18.6	+0.8
GOMU				pmax	pmax		
	comp=Z,11nm,0.7s						
GOMU				LR	LR		
	comp=Z,1µm,17.5s						
GOMU				LR	LR		
	comp=Z,900nm,20.2s						
GOMU				LR	LR		
	comp=Z,2µm,20.8s						
GC1S	Gold Coast 1 S	46.40	121	P	P	09 40 46.9	+2.5
RIV	Riverview	46.42	129	P	P	09 40 46.3	+1.8
	comp=Z,76nm,1.1s						
RIV	Riverview	46.42	129	P	P	09 40 47.0	+2.5
NTLH	Newcastle Hard	46.48	128	P	P	09 40 47.7	+2.7
TJN	Taejon	47.70	20		P	09 40 53.2	-1.1
TJN	Taejon	47.70	20	P	P	09 40 53.7	-0.6
TJN	Taejon	47.70	20	*c i*P	P	09 40 53.3	-1.1
JCJ	Chichijima	47.72	41	P	P	09 40 51.4	-3.3
JCJ	Chichijima	47.72	41	LR	LR	10 00 58.2	
	comp=Z,307nm,21.7s,baz=80,slow=36						
JCJ	Chichijima	47.72	41	P	P	09 40 55.4	+0.7
JMN	Monobe	48.05	28	P	P	09 40 55.1	-2.0
JMN				IAmb	IAmb	09 40 57.7	
	comp=Z,44nm,0.9s						
JMN	Monobe	48.05	28	P	P	09 40 56.5	-0.6
GTA	Gaotai	48.21	351	*e*P	P	09 40 59.1	+0.7
GTA				pP	pP	09 41 20.6	+2.7
GTA				PcP	PcP	09 42 26.0	+1.5
GTA				ScP	ScP	09 46 15.7	+3.5
GTA				S	S	09 47 57.5	+5.5
GTA				ScS	ScS	09 50 43.7	-0.3
GTA				pmax	pmax		
	comp=Z,19nm,1.1s						
GTA				pmax	pmax		
	comp=Z,250nm,9.1s						
GTA				LR	LR		
	comp=Z,530nm,20.4s						
GTA				LR	LR		
	comp=Z,590nm,20.7s						
GTA				LR	LR		
	comp=Z,720nm,22.5s						
DL2	Dalian	48.43	13	P	P	09 40 58.9	-1.0
DL2				*e*S	S	09 47 56.6	+1.8
DL2				sS	sS	09 48 32.4	+4.9
DL2				pmax	pmax		
	comp=Z,59nm,0.9s						
DL2				pmax	pmax		
	comp=Z,280nm,10.1s						
DL2				LR	LR		
	comp=Z,370nm,25.0s						
DL2				LR	LR		
	comp=Z,460nm,25.5s						
DL2				LR	LR		
	comp=Z,810nm,29.8s						
INCN	Inchon	48.47	19	P	P	09 40 58.8	-1.5
INCN				IAmb	IAmb	09 41 00.4	
	comp=Z,34nm,0.8s						
INCN	Inchon	48.47	19	P	P	09 40 59.7	-0.5
INCN	Inchon	48.47	19	P	P	09 40 59.9	-0.3
INCN	Inchon	48.47	19	P	P	09 40 58.8	-1.5
INCN				pmax	pmax		
	comp=Z,34nm,0.9s						
BJT	Baijiatuau	48.54	7	P	P	09 41 00.8	+0.1
BJI	Beijing	48.56	7	P	P	09 40 59.8	-1.1
BJI				PcP	PcP	09 42 26.8	+1.3
BJI				S	S	09 47 54.2	-2.4
BJI				sS	sS	09 48 29.4	0.0
BJI				pmax	pmax		
	comp=Z,16nm,1.2s						
BJI				pmax	pmax		
	comp=Z,82nm,3.7s						
BJI				LR	LR		
	comp=Z,180nm,17.9s						
BJI				LR	LR		
	comp=Z,240nm,16.8s						
BJI				LR	LR		
	comp=Z,310nm,18.5s						
BTO	Baotou	48.67	1	*e*P	P	09 41 02.5	+0.6
BTO				pP	pP	09 41 21.2	-0.2
BTO				sP	sP	09 41 30.1	-0.3
BTO				S	S	09 47 58.8	+0.4
BTO				pmax	pmax		
	comp=Z,84nm,0.8s						
BTO				pmax	pmax		
	comp=Z,290nm,4.3s						
BTO				LR	LR		
	comp=Z,1µm,21.6s						
BTO				LR	LR		
	comp=Z,860nm,19.4s						
BTO				LR	LR		
	comp=Z,2µm,21.4s						
KSAR	Wonju Array Be	48.84	20	P	P	09 41 02.5	-0.6
KSAR				PcP	PcP	09 42 27.8	+1.2
KSAR	Wonju Array Be	48.84	20	P	P	09 41 02.5	-0.6
KSAR						09 42 27.8	
KSRS	Korea Array	48.87	20	P	P	09 41 03.1	-0.1
	comp=Z,15nm,0.9s,baz=199,slow=8.7,SNR=43						
KSRS				PcP	PcP	09 42 27.9	+1.2
	comp=Z,8.8nm,0.8s,baz=197,slow=3.3,SNR=10						
KSRS				LR	LR	10 04 42.3	
	comp=Z,113µm,18.5s,baz=210,slow=40						
	comp=Z,15nm,0.9s						
KS19	Wonju Array Si	48.89	20	P	P	09 41 02.9	-0.5
HHC	Hu-ho-hao-te	48.97	3	*e*P	P	09 41 04.4	+0.3
HHC				S	S	09 48 07.2	+4.7
HHC				sS	sS	09 48 35.8	+0.5
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,4.6s						
HHC				LR	LR		
	comp=Z,630nm,18.6s						
HHC				LR	LR		
	comp=Z,570nm,19.6s						
HHC				LR	LR		
	comp=Z,830nm,19.4s						
SAVO	Savo Central	50.28	95	P	P	09 41 15.9	+1.4
HNR	Honiara	50.40	95	LR	LR	10 07 15.7	
	comp=Z,195nm,18.4s,baz=260,slow=42						
INU	Inuyama	50.87	30	P	P	09 41 16.4	-2.1
INU				IAmb	IAmb	09 41 18.4	
	comp=Z,38nm,0.9s						
INU	Inuyama	50.87	30	P	P	09 41 17.2	-1.3
INU	Inuyama	50.87	30	P	P	09 41 17.1	-1.3
INU				pP	pP	09 41 36.6	-1.6
INU				PcP	PcP	09 42 32.3	-1.9
ALEG	Aligegeo Malai	51.17	95	P	P	09 41 20.6	-0.6
JGF	Kuroka	51.24	30	P	P	09 41 19.1	-2.3
JGF				IAmb	IAmb	09 41 20.6	
	comp=Z,73nm,1.5s						
JGF	Kuroka	51.24	30	P	P	09 41 19.7	-1.6
XLT	XiLinHaoTe	52.36	7	*e*P	P	09 41 28.8	-0.8
XLT				pmax	pmax		
	comp=Z,38nm,1.1s						
XLT				LR	LR		
	comp=Z,310nm,19.1s						
XLT				LR	LR		
	comp=Z,610nm,27.6s						
MAJO	Matsushiro	52.40	30	P	P	09 41 28.0	-2.0
MAJO				IAmb	IAmb	09 41 29.0	
	comp=Z,30nm,0.8s						
MAJO	Matsushiro	52.40	30	P	P	09 41 28.3	-1.7
MAJO	Matsushiro	52.40	30	*c i*P	P	09 41 28.0	-2.0
MAJO				pmax	pmax		
	comp=Z,25nm,0.9s						
MAJO	Matsushiro	52.40	30	P	P	09 41 28.3	-1.7
MAJO				PcP	PcP	09 42 40.7	+0.8
MJAR	Matsushiro Arr	52.40	30	P	P	09 41 28.3	-1.6
	comp=Z,35nm,0.8s,baz=206,slow=7.5,SNR=96						
MJAR				PcP	PcP	09 42 41.5	+1.6
	comp=Z,14nm,0.9s,baz=192,slow=3.5,SNR=5.9						
MJAR				ScP	ScP	09 46 32.4	+2.3
	comp=Z,6.0nm,1.0s,baz=204,slow=4.2,SNR=6.4						
	comp=Z,35nm,0.8s						
MJB9	Matsu-Tunnel	52.41	30	P	P	09 41 28.0	-2.0
MJB9				IAmb	IAmb	09 41 28.9	
	comp=Z,29nm,0.8s						
JSD	Sado	53.62	29	P	P	09 41 37.7	-1.1
NIL	Nilore	53.73	323	P	P	09 41 37.6	-2.2
NIL	Nilore	53.73	323	P	P	09 41 37.6	-2.2
NIL				pmax	pmax		
	comp=Z,84nm,0.8s						
NIL	Nilore	53.73	323	P	P	09 41 38.1	-1.7
NIL				sP	pP	09 42 02.6	+2.9
CN2	Changchun	53.98	15	P	P	09 41 39.6	-1.8
CN2				pmax	pmax		
	comp=Z,30nm,0.9s						
CN2				LR	LR		
	comp=Z,400nm,18.0s						
CN2				LR	LR		
	comp=Z,300nm,18.0s						
CN2				LR	LR		
	comp=Z,500nm,21.0s						
PSTR	Posyet	54.50	20	*d i*P	P	09 41 44.2	-0.9
MSHR	Mys Shultsa	54.56	20	*ce*P	P	09 41 44.8	-0.7
MSHR				pmax	pmax		
	comp=Z,33nm,1.0s						
JMM	Marumori	54.73	31	P	P	09 41 45.1	-1.8
JMM				IAmb	IAmb	09 41 46.9	
	comp=Z,64nm,0.8s						
JMM	Marumori	54.73	31	P	P	09 41 45.7	-1.2
KOUNC	Koumac, New Ca	54.75	109	P	P	09 41 50.0	+2.6
VLA	Vladivostok	55.28	20	*d i*P	P	09 41 49.5	-1.3
VLA				pmax	pmax		
	comp=Z,43nm,1.0s						
WMQ	Urumqi	55.33	341	*e*P	P	09 41 53.5	+2.3
WMQ				LR	LR		
	comp=Z,490nm,19.5s						
WMQ				LR	LR		
	comp=Z,490nm,20.9s						
WMQ				LR	LR		
	comp=Z,670nm,23.9s						
MDJ	Mudanjiang	55.88	18	P	P	09 41 53.3	-1.8
MDJ				S	S	09 49 30.4	-6.2
MDJ				pmax	pmax		
	comp=Z,33nm,0.9s						
MDJ				LR	LR		
	comp=Z,210nm,15.1s						
MDJ				LR	LR		
	comp=Z,350nm,23.4s						
MDJ				LR	LR		
	comp=Z,630nm,21.6s						
SONM	Songino Array	55.93	358	P	P	09 41 55.2	-0.4
SONM	Songino Array	55.93	358	P	P	09 41 55.6	0.0
	comp=Z,12nm,0.6s,baz=178,slow=8.4,SNR=46						
SONM				PcP	PcP	09 42 53.7	+0.5
	comp=Z,15nm,0.8s,baz=191,slow=3.2,SNR=7.5						
SONM				ScP	ScP	09 46 47.1	+1.7
	comp=Z,1.9nm,0.8s,baz=173,slow=4.8,SNR=3.5						
SONM				LR	LR	10 08 37.3	
	comp=Z,700nm,20.2s,baz=174,slow=39						
	comp=Z,12nm,0.6s						
ULN	Ulaanbaatar	55.94	358	P	P	09 41 55.0	-0.7
ULN	Ulaanbaatar	55.94	358	P	P	09 41 55.3	-0.3
ULN	Ulaanbaatar	55.94	358	*c i*P	P	09 41 54.9	-0.7
ULN				pmax	pmax		
	comp=Z,20nm,1.0s						
ULN	Ulaanbaatar	55.94	358	P	P	09 41 55.9	+0.2
USA0B	Ussuriysk Arra	56.27	20	P	P	09 41 56.1	-1.7
USA0B				IAmb	IAmb	09 41 58.0	
	comp=Z,39nm,0.9s						
USA0B	Ussuriysk Arra	56.27	20	*c i*P	P	09 41 56.3	-1.5
USRK	Ussuriysk Ar.	56.27	20	P	P	09 41 57.1	-0.7
	comp=Z,22nm,0.8s,baz=219,slow=5.4,SNR=44						
USRK				LR	LR	10 08 18.9	
	comp=Z,312nm,19.5s,baz=201,slow=38						
	comp=Z,22nm,0.8s						
BNX	BinXian	56.29	15	⇑P	P	09 41 56.8	-1.2
BNX				pP	pP	09 42 17.9	-0.1
BNX				sP	sP	09 42 25.9	-0.9
BNX				S	S	09 49 44.9	+2.9
BNX				sS	sS	09 50 19.6	+3.5
BNX				pmax	pmax		
	comp=Z,85nm,0.8s						
BNX				pmax	pmax		
	comp=Z,170nm,3.8s						
BNX				LR	LR		
	comp=Z,120nm,16.8s						
BNX				LR	LR		
	comp=Z,250nm,19.5s						
BNX				LR	LR		
	comp=Z,400nm,34.7s						
WUS	Wushi	56.32	333	P	P	09 41 58.2	-0.2
KSH	Kashi	56.53	330	P	P	09 41 58.9	-1.0

KSH				PcP	**PcP**	**09 42 56.8**	**+1.0**
KSH				pmax	pmax		
	comp=Z,39nm,0.8s						
KSH				LR	LR		
	comp=Z,700nm,23.0s						
KSH				LR	LR		
	comp=Z,460nm,24.4s						
KSH				LR	LR		
	comp=Z,410nm,19.6s						
DZM	**Mont Dzumac**	**56.88**	**111**	*e*P	P	09 41 51.7	-11
	comp=Z,89nm,1.5s						
DZM	**Mont Dzumac**	**56.88**	**111**	*e*PP	PP	09 44 00.6	-9.4
	comp=Z,101nm,23.2s						
DZM				*e*S	**S**	**09 49 46.1**	**-4.7**
	comp=Z,481nm,30.4s						
DZM				*e*SS	**SS**	**09 53 36.7**	**-3.6**
	comp=Z,169nm,25.4s						
DZM				*e*LQ	LQ	09 56 20.5	
	comp=Z,462nm,29.2s						
DZM				*e*LR	LR	09 58 46.3	
	comp=Z,891nm,26.4s						
KBL	**Kabul**	**56.91**	**321**	P	**P**	**09 42 00.7**	**-2.1**
KBL				IAmb	IAmb	09 42 04.0	
	comp=Z,31nm,0.8s						
KBL	**Kabul**	**56.91**	**321**	P	**P**	**09 42 01.1**	**-1.7**
	SNR=17						
KBL	**Kabul**	**56.91**	**321**	P	**P**	**09 42 00.7**	**-2.1**
KBL				pmax	pmax		
	comp=Z,31nm,0.9s						
JLN	**Jalan Bani Buh**	**57.18**	**303**	P	**P**	**09 42 05.4**	**+0.7**
	SNR=6.2						
YATNC	**Mamie plateau,**	**57.29**	**111**	P	**P**	**09 42 08.7**	**+3.2**
TARG	**Taragay, Kyrgy**	**57.38**	**333**	P	**P**	**09 42 05.6**	**-0.7**
TARG				IAmb	IAmb	09 42 15.5	
	comp=Z,25nm,0.8s						
TARG	**Taragay, Kyrgy**	**57.38**	**333**	P	**P**	**09 42 05.6**	**-0.7**
TARG				pmax	pmax		
	comp=Z,25nm,0.8s						
PRZ	**Przheval'sk**	**57.71**	**334**	P	**P**	**09 42 08.0**	**-0.3**
PRZ				IAmb	IAmb	09 42 10.8	
	comp=Z,42nm,0.9s						
PRZ	**Przheval'sk**	**57.71**	**334**	P	**P**	**09 42 08.0**	**-0.3**
PRZ				pmax	pmax		
	comp=Z,42nm,0.9s						
SHLS	**Shalkode**	**57.80**	**335**	*e*P	**P**	**09 42 06.4**	**-2.4**
SHLS				pmax	pmax		
	comp=Z,23nm,0.6s						
SHLS	**Shalkode**	**57.80**	**335**	*e*P	**P**	**09 42 06.4**	**-2.4**
	comp=Z,23nm,0.6s						
DQM	**DQM**	**57.82**	**300**	P	**P**	**09 42 10.1**	**+0.8**
	SNR=9.1						
DQM				S	**S**	**09 50 03.6**	**+0.6**
MHTO	**MHTO**	**57.89**	**301**	P	**P**	**09 42 10.0**	**+0.3**
	SNR=11						
CASY	**Casey**	**57.90**	**179**	P	**P**	**09 42 08.8**	**-0.2**
CASY	**Casey**	**57.90**	**179**	P	**P**	**09 42 09.5**	**+0.5**
UZB	**Uzynbulak**	**57.98**	**335**	*e*P	**P**	**09 42 08.8**	**-1.3**
UZB				*e*S	**S**	**09 50 03.4**	**-1.3**
UZB				pmax	pmax		
	comp=Z,16nm,0.8s						
UZB	**Uzynbulak**	**57.98**	**335**	*e*P	**P**	**09 42 08.9**	**-1.3**
	comp=Z,16nm,0.8s						
UZB				*e*S	**S**	**09 50 03.4**	**-1.3**
NRN	**Naryn**	**57.99**	**331**	P	**P**	**09 42 08.7**	**-1.7**
NRN				IAmb	IAmb	09 42 11.3	
	comp=Z,32nm,0.8s						
NRN	**Naryn**	**57.99**	**331**	P	**P**	**09 42 08.7**	**-1.7**
NRN				pmax	pmax		
	comp=Z,32nm,0.8s						
HIA	**Hailar**	**58.10**	**8**	P	**P**	**09 42 09.9**	**-0.8**
SATY	**Saty**	**58.17**	**334**	*e*P	**P**	**09 42 10.2**	**-1.3**
SATY				*e*S	**S**	**09 50 05.9**	**-1.2**
SATY				pmax	pmax		
	comp=Z,16nm,0.8s						
SATY	**Saty**	**58.17**	**334**	*e*P	**P**	**09 42 10.2**	**-1.3**
	comp=Z,16nm,0.8s						
SATY				*e*S	**S**	**09 50 05.9**	**-1.2**
ZHN	**Zhinishke**	**58.25**	**334**	*e*P	**P**	**09 42 10.1**	**-1.8**
ZHN	**Zhinishke**	**58.25**	**334**	*e*P	**P**	**09 42 10.2**	**-1.8**
WSAR	**Wadi Sarin**	**58.31**	**304**	P	**P**	**09 42 12.9**	**+0.2**
WSAR				S	**S**	**09 50 10.1**	**+0.8**
JMDO	**Jabal Madar**	**58.36**	**303**	P	**P**	**09 42 13.6**	**+0.6**
	SNR=6.4						
JMDO				S	**S**	**09 50 11.1**	**+1.1**
KPKS	**Kokpek**	**58.38**	**334**	*e*P	**P**	**09 42 11.4**	**-1.5**
KPKS	**Kokpek**	**58.38**	**334**	*e*P	**P**	**09 42 11.4**	**-1.5**
ZAK	**Zakamensk**	**58.64**	**356**	*e*P	**P**	**09 42 13.4**	**-1.1**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
TEY	**Ternei**	**58.65**	**23**⇓	*e*P	**P**	**09 42 12.9**	**-1.6**
TEY				pmax	pmax		
	comp=N,20nm,0.8s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.8s						
TEY				pmax	pmax		
	comp=Z,40nm,0.8s						
DRK	**Karamyk**	**58.67**	**327**	P	**P**	**09 42 14.4**	**-0.8**
DRK	**Karamyk**	**58.67**	**327**	P	**P**	**09 42 14.4**	**-0.8**
DRK				pmax	pmax		
	comp=Z,149nm,0.6s						
SMDO	**Samad**	**58.71**	**303**	P	**P**	**09 42 16.1**	**+0.5**
	SNR=11						
BIDO	**Bidbid**	**58.85**	**304**	P	**P**	**09 42 17.4**	**+1.1**
	SNR=12						
MDOK	**Medeo**	**58.85**	**333**	*e*P	**P**	**09 42 14.8**	**-1.4**
MDOK				*e*S	**S**	**09 50 14.7**	**-1.3**
MDOK	**Medeo**	**58.85**	**333**	*e*P	**P**	**09 42 14.8**	**-1.4**
MDOK				*e*S	**S**	**09 50 14.8**	**-1.3**
AAA	**Alma-Ata**	**58.95**	**333**	*e*P	**P**	**09 42 15.7**	**-1.1**
AAA				pmax	pmax		
	comp=Z,18nm,0.6s						
AAA	**Alma-Ata**	**58.95**	**333**	*e*P	**P**	**09 42 15.7**	**-1.1**
	comp=Z,18nm,0.6s						
ERM	**Erimo**	**59.07**	**29**	*ce*P	**P**	**09 42 16.5**	**-1.0**
ERM				pmax	pmax		
	comp=Z,34nm,0.9s						
GAR	**Garm**	**59.15**	**326**	P	**P**	**09 42 16.7**	**-1.7**
DMTO	**DMTO**	**59.24**	**296**	P	**P**	**09 42 19.1**	**0.0**
BSY	**Bisya**	**59.28**	**303**	P	**P**	**09 42 20.2**	**+0.9**
	SNR=8.9						
TKM2	**Tokmak 2**	**59.33**	**332**	P	**P**	**09 42 18.5**	**-1.1**
	SNR=91						
ARXS	**Arharly**	**59.35**	**334**	*e*P	**P**	**09 42 17.6**	**-2.0**
KBK	**Karagaybulak**	**59.43**	**331**	P	**P**	**09 42 19.6**	**-0.6**
	SNR=23						
ZSN	**Zaisan**	**59.47**	**341**	*e*P	**P**	**09 42 19.3**	**-0.9**
ZSN				pmax	pmax		
	comp=Z,19nm,0.8s						
ZSN	**Zaisan**	**59.47**	**341**	*e*P	**P**	**09 42 19.4**	**-0.9**
	comp=Z,19nm,0.8s						
HOQ	**Hoqain**	**59.55**	**303**	P	**P**	**09 42 22.2**	**+1.0**
	SNR=7.8						
BTK	**Batken**	**59.62**	**327**	P	**P**	**09 42 20.0**	**-1.5**
BTK	**Batken**	**59.62**	**327**	P	**P**	**09 42 20.0**	**-1.5**
BTK				pmax	pmax		
	comp=Z,54nm,0.8s						
AAK	**Ala-Archa**	**59.63**	**331**	P	**P**	**09 42 22.1**	**+0.6**
	SNR=11						
AAK	**Ala-Archa**	**59.63**	**331**	P	**P**	**09 42 20.2**	**-1.4**
AAK	**Ala-Archa**	**59.63**	**331**	LR	LR	10 12 16.9	
	comp=Z,266nm,18.1s,baz=145,slow=40						
AAK	**Ala-Archa**	**59.63**	**331**	P	**P**	**09 42 21.0**	**-0.6**
AAK	**Ala-Archa**	**59.63**	**331**	*ce*P	**P**	**09 42 21.1**	**-0.5**
AAK				pmax	pmax		
	comp=Z,23nm,1.3s						
AAK	**Ala-Archa**	**59.63**	**331**	*i* P	**P**	**09 42 20.7**	**-0.8**
	SNR=12						
AML	**Almayashu**	**59.63**	**330**	P	**P**	**09 42 22.2**	**+0.3**
	SNR=16						
SIMJ	**Simiganj**	**59.66**	**324**	P	**P**	**09 42 19.6**	**-2.2**
SIMJ	**Simiganj**	**59.66**	**324**	P	**P**	**09 42 19.8**	**-2.0**
SIMJ				PcP	**PcP**	**09 43 09.2**	**+1.0**
FRU1	**Bishkek**	**59.70**	**331**	P	**P**	**09 42 21.3**	**-0.6**
FRU1				IAmb	IAmb	09 42 22.9	
	comp=Z,44nm,0.7s						
FRU1	**Bishkek**	**59.70**	**331**	P	**P**	**09 42 21.3**	**-0.6**
FRU1				pmax	pmax		
	comp=Z,44nm,0.7s						
KUU	**Kurty**	**59.75**	**333**	*e*P	**P**	**09 42 21.2**	**-1.0**
KUU				pmax	pmax		
	comp=Z,45nm,0.9s						
KUU	**Kurty**	**59.75**	**333**	*e*P	**P**	**09 42 21.2**	**-1.0**
	comp=Z,45nm,0.9s						
TDK	**Taldyqorghan**	**59.75**	**335**	*e*P	**P**	**09 42 21.3**	**-0.8**
TDK				pmax	pmax		
	comp=Z,44nm,0.8s						
TDK	**Taldyqorghan**	**59.75**	**335**	*e*P	**P**	**09 42 21.4**	**-0.8**
	comp=Z,44nm,0.8s						
MK31	**Makanchi Array**	**59.76**	**339**	P	**P**	**09 42 21.0**	**-1.2**
MKAR	**Makanchi Array**	**59.76**	**339**	P	**P**	**09 42 20.4**	**-1.8**
MKAR	**Makanchi Array**	**59.76**	**339**	P	**P**	**09 42 21.1**	**-1.1**
	comp=Z,22nm,0.6s,baz=148,slow=7.1,SNR=124						
MKAR				PcP	**PcP**	**09 43 10.2**	**+2.0**
	comp=Z,7.4nm,0.6s,baz=133,slow=6.1,SNR=4.5						
MKAR				ScS	**ScS**	**09 52 05.0**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=101,slow=6.3,SNR=3.7						
MKAR				LR	LR	10 12 32.2	
	comp=Z,377nm,19.1s,baz=134,slow=40						
	comp=Z,22nm,0.6s						
RBK	**Rabkut**	**59.82**	**296**	P	**P**	**09 42 24.0**	**+0.8**
MAKZ	**Makanchi**	**59.88**	**339**	P	**P**	**09 42 21.0**	**-2.1**
MAKZ	**Makanchi**	**59.88**	**339**	P	**P**	**09 42 21.0**	**-2.1**
MAKZ				pmax	pmax		
	comp=Z,15nm,1.0s						
MAKZ	**Makanchi**	**59.88**	**339**	P	**P**	**09 42 21.7**	**-1.4**
MAKZ				PcP	**PcP**	**09 43 07.2**	**-1.5**
EKS2	**Erkin-Say**	**59.99**	**331**	P	**P**	**09 42 23.2**	**-0.8**
	SNR=37						
ARQ	**Araqi**	**60.09**	**303**	P	**P**	**09 42 25.5**	**+0.5**
	SNR=6.1						
USP	**Ospenovka**	**60.10**	**332**	P	**P**	**09 42 23.1**	**-1.7**
	SNR=22						
MOY	**Mondy**	**60.12**	**354**	*e*P	**P**	**09 42 24.0**	**-0.7**
MOY				pmax	pmax		
	comp=Z,24nm,1.4s						
SGDS	**Sogindy**	**60.19**	**332**	*e*P	**P**	**09 42 24.3**	**-0.9**
CIT	**Chita**	**60.21**	**3**	*e*P	**P**	**09 42 24.9**	**-0.3**
CIT				*e*		09 42 53.7	
CIT				*e*		09 43 10.1	
DOK	**Doka**	**60.29**	**297**	P	**P**	**09 42 26.5**	**+0.1**
DOK				S	**S**	**09 50 34.3**	**-0.7**
WHFO	**Wadi Hawf**	**60.36**	**296**	P	**P**	**09 42 26.7**	**-0.2**
ASAJ	**Asahikawa**	**60.42**	**27**	P	**P**	**09 42 26.1**	**-0.6**
	comp=Z,28nm,0.7s,baz=162,slow=7.7,SNR=43						
ASAJ				LR	LR	10 08 31.7	
	comp=Z,350nm,21.9s,baz=188,slow=36						
	comp=Z,28nm,0.7s						
JKA	**Kamikawa-asahi**	**60.42**	**27**	P	**P**	**09 42 25.2**	**-1.5**
JKA				IAmb	IAmb	09 42 27.1	
	comp=Z,31nm,0.7s						
SOHO	**SOHO**	**60.42**	**304**	P	**P**	**09 42 27.4**	**+0.3**
SOHO	**SOHO**	**60.42**	**304**	*i* P	**P**	**09 42 26.6**	**-0.6**
	SNR=16						
IRK	**Irkutsk**	**60.43**	**357**	*e*P	**P**	**09 42 25.9**	**-0.8**
IRK				pmax	pmax		
	comp=Z,64nm,2.1s						
HEH	**HeiHe**	**60.49**	**14**	*e*P	**P**	**09 42 25.8**	**-1.3**
HEH				pmax	pmax		
	comp=Z,160nm,0.8s						
HEH				LR	LR		
	comp=Z,480nm,19.4s						
HEH				LR	LR		
	comp=Z,690nm,17.8s						
HEH				LR	LR		
	comp=Z,690nm,18.2s						
KLR	**Kul'dur**	**60.68**	**17**	P	**P**	**09 42 27.5**	**-0.9**
	comp=Z,50nm,0.7s,baz=223,slow=5.3,SNR=166						
KLR				LR	LR	10 09 24.4	
	comp=Z,336nm,20.6s,baz=206,slow=37						
	comp=Z,50nm,0.7s						
KLR	**Kul'dur**	**60.68**	**17**	*c i*P	**P**	**09 42 26.9**	**-1.5**
KLR				pmax	pmax		
	comp=Z,43nm,0.9s						
KLR				MLR	MLR		
	comp=Z,365nm,21.0s						
UMZA	**Um Al Zommool**	**60.98**	**302**	P	**P**	**09 42 31.0**	**+0.1**
UMZA				S	**S**	**09 50 43.4**	**-0.2**
ALNE	**Al Ain**	**61.04**	**303**	P	**P**	**09 42 31.8**	**+0.4**
	SNR=16						
ALNE				S	**S**	**09 50 43.7**	**-0.8**
ALNE	**Al Ain**	**61.04**	**303**	*i* P	**P**	**09 42 31.2**	**-0.2**
	SNR=7.4						
UOSS	**Minazif**	**61.05**	**304**	P	**P**	**09 42 30.1**	**-1.3**
UOSS				IAmb	IAmb	09 42 35.7	
	comp=Z,41nm,1.0s						
UOSS	**Minazif**	**61.05**	**304**	P	**P**	**09 42 31.6**	**+0.2**
UOSS				S	**S**	**09 50 44.2**	**-0.3**
UOSS	**Minazif**	**61.05**	**304**	*i* P	**P**	**09 42 31.1**	**-0.3**
	SNR=11						
UOSS	**Minazif**	**61.05**	**304**	P	**P**	**09 42 31.5**	**+0.2**
ASHO	**Ashiyiah**	**61.05**	**304**	P	**P**	**09 42 32.0**	**+0.5**
	SNR=8.8						
ASHO				S	**S**	**09 50 45.1**	**+0.4**
ASHO	**Ashiyiah**	**61.05**	**304**	*i* P	**P**	**09 42 31.6**	**+0.1**
	SNR=23						
HATD	**Hatta, Dubai**	**61.05**	**304**	P	**P**	**09 42 32.2**	**+0.7**
	SNR=9.9						
HATD				S	**S**	**09 50 43.4**	**-1.3**
HATD	**Hatta, Dubai**	**61.05**	**304**	*i* P	**P**	**09 42 32.0**	**+0.5**
	SNR=22						
MDH	**Madha**	**61.12**	**305**	P	**P**	**09 42 31.3**	**-0.6**
MDH	**Madha**	**61.12**	**305**	*i* P	**P**	**09 42 31.2**	**-0.8**
	SNR=7.2						
HRA	**Herat**	**61.25**	**317**	P	**P**	**09 42 31.4**	**-1.5**
HRA				IAmb	IAmb	09 42 32.6	
	comp=Z,36nm,1.1s						
MSFE	**Esma-Masafi**	**61.26**	**305**	*i* P	**P**	**09 42 32.8**	**-0.1**
	SNR=13						
MASF	**Masafi**	**61.27**	**305**	P	**P**	**09 42 33.7**	**+0.8**
	SNR=7.0						
MASF				S	**S**	**09 50 48.6**	**+1.2**
DZA	**Taraz**	**61.37**	**329**	*e*P	**P**	**09 42 32.4**	**-0.9**
DZA	**Taraz**	**61.37**	**329**	*e*P	**P**	**09 42 32.5**	**-0.9**
BANOM	**Banah**	**61.40**	**305**	P	**P**	**09 42 34.4**	**+0.6**
FAQ	**Al Faqa, Dubai**	**61.46**	**304**	P	**P**	**09 42 34.8**	**+0.6**
	SNR=25						
FAQ	**Al Faqa, Dubai**	**61.46**	**304**	*i* P	**P**	**09 42 34.4**	**+0.2**
	SNR=12						
NAZ	**Nazwa, Dubai**	**61.51**	**304**	P	**P**	**09 42 34.9**	**+0.4**
	SNR=13						
NAZ	**Nazwa, Dubai**	**61.51**	**304**	*i* P	**P**	**09 42 34.6**	**0.0**
	SNR=12						
H04N2	**CROZET ISLANDS**	**61.54**	**222**	T	T	10 49 41.0	
	baz=70,slow=75,SNR=1001						
H04N1	**CROZET ISLANDS**	**61.55**	**222**	T	T	10 49 45.7	
	baz=70,slow=75,SNR=1024						
H04N3	**CROZET ISLANDS**	**61.55**	**222**	T	T	10 49 34.4	
	baz=70,slow=75,SNR=878						
SHME	**Shamm**	**61.58**	**305**	P	**P**	**09 42 35.6**	**+0.6**
	SNR=6.8						
SHME	**Shamm**	**61.58**	**305**	*i* P	**P**	**09 42 35.3**	**+0.3**
	SNR=9.1						
ASUD	**Al Ashush, Dub**	**61.63**	**304**	P	**P**	**09 42 36.2**	**+0.8**
	SNR=10						
ASUD				S	**S**	**09 50 52.5**	**+0.7**
ASUD	**Al Ashush, Dub**	**61.63**	**304**	*i* P	**P**	**09 42 35.6**	**+0.3**
	SNR=22						
BTLS	**Baital**	**61.67**	**333**	*e*P	**P**	**09 42 34.4**	**-0.8**
BTLS	**Baital**	**61.67**	**333**	*e*P	**P**	**09 42 34.5**	**-0.8**
H04S1	**CROZET ISLANDS**	**61.69**	**221**	T	T	10 49 49.6	
	baz=76,slow=76,SNR=12						
H04S3	**CROZET ISLANDS**	**61.70**	**221**	T	T	10 49 48.6	
	baz=76,slow=76,SNR=9.7						
H04S2	**CROZET ISLANDS**	**61.71**	**221**	T	T	10 49 50.7	
	baz=76,slow=76,SNR=7.2						
CHM	**Chimkent**	**61.86**	**328**	*e*P	**P**	**09 42 35.7**	**-0.9**
CHM				pmax	pmax		
	comp=Z,12nm,0.6s						
CHM	**Chimkent**	**61.86**	**328**	*e*P	**P**	**09 42 35.7**	**-0.9**
	comp=Z,12nm,0.6s						
AJN	**Ajban**	**61.88**	**303**	P	**P**	**09 42 37.0**	**-0.1**
	SNR=7.1						
AJN				S	**S**	**09 50 56.8**	**+1.7**
AJN	**Ajban**	**61.88**	**303**	*i* P	**P**	**09 42 36.6**	**-0.4**
	SNR=5.7						
KK31	**Karatay Array**	**61.94**	**329**	P	**P**	**09 42 35.4**	**-1.8**
KK31	**Karatay Array**	**61.94**	**329**	*i* P	**P**	**09 42 35.6**	**-1.5**
KKAR	**Karatay Array**	**61.94**	**329**	P	**P**	**09 42 35.8**	**-1.3**
KKAR	**Karatay Array**	**61.94**	**329**	P	**P**	**09 42 35.6**	**-1.5**
KKAR				IAmb	IAmb	09 42 40.8	
	comp=Z,9.3nm,0.8s						
KKAR	**Karatay Array**	**61.94**	**329**	P	**P**	**09 42 35.8**	**-1.3**
DRV	**Dumont d'Urvil**	**62.02**	**167**	P	**P**	**09 42 38.2**	**+1.0**
DRV				pP	**pP**	**09 42 55.8**	**-0.6**
BRLS	**Borolday**	**62.24**	**329**	*e*P	**P**	**09 42 37.6**	**-1.5**
BRLS	**Borolday**	**62.24**	**329**	*e*P	**P**	**09 42 37.6**	**-1.5**
MZR	**Muzera**	**62.51**	**301**	P	**P**	**09 42 41.9**	**+0.6**
	SNR=25						
MZR	**Muzera**	**62.51**	**301**	*i* P	**P**	**09 42 41.7**	**+0.4**
	SNR=9.0						
YSS	**Yuzhno-Sakhali**	**62.70**	**25**	P	**P**	**09 42 40.9**	**-1.1**
YSS	**Yuzhno-Sakhali**	**62.70**	**25**	P	**P**	**09 42 41.2**	**-0.8**
YSS	**Yuzhno-Sakhali**	**62.70**	**25**α	*i*P	**P**	**09 42 41.2**	**-0.8**
YSS				*e*S	**S**	**09 50 59.2**	**-5.3**
YSS				pmax	pmax		
	comp=Z,300nm,4.7s						
YSS				pmax	pmax		
	comp=Z,60nm,0.9s						
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
YSS				MLR	MLR		
	comp=N,200nm,15.0s						
YSS	**Yuzhno-Sakhali**	**62.70**	**25**	P	**P**	**09 42 41.7**	**-0.3**
JCZ	**Jackson Bay**	**62.77**	**135**	P	**P**	**09 42 45.3**	**+2.5**
GHWR	**Ruwais**	**63.40**	**302**	P	**P**	**09 42 47.7**	**+0.6**
GRNR	**Gornyy**	**63.47**	**19**⇑	*i*P	**P**	**09 42 46.7**	**-0.4**
GRNR				pmax	pmax		
	comp=Z,20nm,1.0s						
SEM	**Semipalatinsk**	**63.55**	**340**	*e*P	**P**	**09 42 46.5**	**-1.4**
SEM	**Semipalatinsk**	**63.55**	**340**	*e*P	**P**	**09 42 46.5**	**-1.4**
ZEA	**Zeya**	**63.72**	**12**	*e*P	**P**	**09 42 48.2**	**-0.5**
ZEA				pmax	pmax		
	comp=E,20nm,1.0s						
ZEA				pmax	pmax		
	comp=N,20nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,40nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,100nm,5.5s						
JRN	**Qarnain Island**	**63.81**	**303**	P	**P**	**09 42 48.8**	**-1.0**
	SNR=6.8						
RPZ	**Rata Peaks**	**64.27**	**135**	P	**P**	**09 42 52.6**	**0.0**
RPZ	**Rata Peaks**	**64.27**	**135**	LR	LR	10 09 24.6	
	comp=Z,896nm,21.8s,baz=279,slow=34						
KURBB	**Kurchatov Arra**	**64.33**	**339**	P	**P**	**09 42 51.7**	**-1.0**
	comp=Z,12nm,0.7s,baz=154,slow=5.6,SNR=54						
KURBB				LR	LR	10 14 15.7	
	comp=Z,626nm,21.0s,baz=169,slow=39						
	comp=Z,12nm,0.7s						
KURBB	**Kurchatov Arra**	**64.33**	**339**	P	**P**	**09 42 51.6**	**-1.1**
KURK	**Kurchatov**	**64.37**	**339**	P	**P**	**09 42 51.1**	**-1.9**
KURK				IAmb	IAmb	09 42 54.1	
	comp=Z,28nm,0.9s						
KURK	**Kurchatov**	**64.37**	**339**	P	**P**	**09 42 52.2**	**-0.7**
KURK				S	**S**	**09 51 25.3**	**+0.2**
KURK	**Kurchatov**	**64.37**	**339**	*c i*P	**P**	**09 42 51.9**	**-1.1**
KURK				pmax	pmax		
	comp=Z,25nm,0.9s						
KURK	**Kurchatov**	**64.37**	**339**	P	**P**	**09 42 52.2**	**-0.7**
SLWR	**Sila**	**64.44**	**302**	P	**P**	**09 42 54.2**	**+0.3**
SLWR				S	**S**	**09 51 28.9**	**+2.0**
TRNA	**Turayna**	**65.09**	**302**	P	**P**	**09 42 58.1**	**-0.1**
	SNR=15						
TRNA				S	**S**	**09 51 36.4**	**+1.4**
THZ	**Tophouse**	**65.17**	**132**	P	**P**	**09 42 57.9**	**-0.7**
THZ				IAmb	IAmb	09 43 21.2	
	comp=Z,116nm,1.4s						
ZALV	**Zalesovo Beam**	**65.27**	**345**	P	**P**	**09 42 57.4**	**-1.3**
	comp=Z,14nm,0.4s,baz=143,slow=3.7,SNR=76						
ZALV				LR	LR	10 14 39.8	
	comp=Z,264nm,19.7s,baz=146,slow=39						
	comp=Z,14nm,0.4s						
SMRA	**Abu-Samra**	**65.42**	**302**	P	**P**	**09 43 00.8**	**+0.5**
	SNR=22						
KRAR	**Krasnoyarsk**	**65.45**	**350**⇓	*e*P	**P**	**09 42 59.4**	**-0.4**
BRZS	**Berezniki**	**66.06**	**335**	*e*P	**P**	**09 43 02.9**	**-1.0**
BRZS	**Berezniki**	**66.06**	**335**	*e*P	**P**	**09 43 03.0**	**-1.0**
SAKB	**Bahrain**	**66.14**	**303**	P	**P**	**09 43 05.1**	**+0.2**
KUZ	**Kuaotunu**	**66.51**	**126**	P	**P**	**09 43 09.5**	**+2.3**
MAW	**Mawson**	**66.69**	**197**	P	**P**	**09 43 08.8**	**+1.1**
	comp=Z,8.2nm,1.3s						
MAW	**Mawson**	**66.69**	**197**	P	**P**	**09 43 08.8**	**+1.1**
	comp=Z,27nm,0.7s,baz=54,slow=7.7,SNR=22						
MAW				LR	LR	10 07 15.8	
	comp=Z,659nm,21.4s,baz=57,slow=31						
	comp=Z,27nm,0.7s						
MRZ	**Mangatainoka R**	**66.96**	**131**	P	**P**	**09 43 09.9**	**-0.1**
MRZ				IAmb	IAmb	09 43 14.0	
	comp=Z,65nm,1.2s						
CCD	**Concordia, Ant**	**67.27**	**176**	P	**P**	**09 43 13.7**	**+2.0**
CCD				pP	**pP**	**09 43 32.5**	**+1.4**
BKZ	**Black Stump Fm**	**67.44**	**129**	P	**P**	**09 43 13.7**	**+0.6**
BKZ				IAmb	IAmb	09 43 35.0	
	comp=Z,83nm,1.2s						
BKZ	**Black Stump Fm**	**67.44**	**129**	P	**P**	**09 43 14.4**	**+1.3**
BFZ	**Birch Farm**	**67.47**	**131**	P	**P**	**09 43 14.9**	**+1.7**
MSVF	**Nonsavu**	**67.70**	**106**	LR	LR	10 13 35.3	
	comp=Z,219nm,19.2s,baz=251,slow=36						
RTZ	**Ruatahuna**	**67.74**	**128**	P	**P**	**09 43 15.7**	**+0.7**
URZ	**Urewera**	**67.80**	**128**	LR	LR	10 12 37.6	
	comp=Z,726nm,21.3s,baz=12,slow=36						
BVA0	**Borovoye Array**	**69.31**	**336**	*i* P	**P**	**09 43 23.1**	**-1.2**
BVAR	**Borovoye Array**	**69.31**	**336**	P	**P**	**09 43 23.6**	**-0.7**
	comp=Z,32nm,0.8s,baz=141,slow=7.6,SNR=119						
BVAR				LR	LR	10 17 32.6	
	comp=Z,460nm,21.1s,baz=129,slow=39						
	comp=Z,32nm,0.8s						
BRVK	**Borovoye**	**69.37**	**336**	P	**P**	**09 43 23.6**	**-1.1**
BRVK	**Borovoye**	**69.37**	**336**	P	**P**	**09 43 24.0**	**-0.7**
BRVK				S	**S**	**09 52 25.3**	**0.0**
BRVK	**Borovoye**	**69.37**	**336**	*c i*P	**P**	**09 43 23.2**	**-1.5**
BRVK				pmax	pmax		
	comp=Z,24nm,0.9s						
BRVK	**Borovoye**	**69.37**	**336**	P	**P**	**09 43 24.0**	**-0.7**
DGTI	**Dogotuki**	**69.37**	**104**	P	**P**	**09 43 27.1**	**+1.6**
RAYN	**Ar Rayn**	**69.54**	**299**	P	**P**	**09 43 25.5**	**-0.9**
RAYN				IAmb	IAmb	09 43 27.3	
	comp=Z,33nm,0.9s						
RAYN	**Ar Rayn**	**69.54**	**299**	P	**P**	**09 43 26.4**	**0.0**
RAYN	**Ar Rayn**	**69.54**	**299**	P	**P**	**09 43 27.3**	**+0.9**
RAYN	**Ar Rayn**	**69.54**	**299**	*i* P	**P**	**09 43 26.3**	**0.0**
	SNR=33						
RAYN	**Ar Rayn**	**69.54**	**299**	P	**P**	**09 43 26.6**	**+0.1**
RAYN				PcP	**pP**	**09 43 47.3**	**+0.4**
KBD	**Kabd**	**69.69**	**305**	P	**P**	**09 43 27.4**	**+0.3**
KIBK	**Kibwezi**	**70.74**	**270**	P	**P**	**09 43 33.9**	**-0.1**
KIBK	**Kibwezi**	**70.74**	**270**	P	**P**	**09 43 35.1**	**+1.1**
RAO	**Raoul Island**	**71.32**	**118**	LR	LR	10 15 28.0	
	comp=Z,170nm,20.4s,baz=232,slow=36						
AB31	**Akbulak array**	**71.50**	**329**	P	**P**	**09 43 36.8**	**-0.9**
AB31	**Akbulak array**	**71.50**	**329**	*i* P	**P**	**09 43 37.3**	**-0.5**
ABKAR	**Akbulak array**	**71.50**	**329**	P	**P**	**09 43 37.5**	**-0.3**
ABKAR	**Akbulak array**	**71.50**	**329**	P	**P**	**09 43 37.4**	**-0.4**
ABKAR				IAmb	IAmb	09 43 38.7	
	comp=Z,121nm,0.7s						
KMBO	**Kilima Mbogo**	**71.70**	**272**	P	**P**	**09 43 40.9**	**+0.9**
KMBO	**Kilima Mbogo**	**71.70**	**272**	P	**P**	**09 43 41.6**	**+1.5**
KMBO	**Kilima Mbogo**	**71.70**	**272**	*ce*P	**P**	**09 43 41.4**	**+1.4**
KMBO	**Kilima Mbogo**	**71.70**	**272**	*i* P	**P**	**09 43 41.7**	**+1.7**
	SNR=9.3						
KMBO	**Kilima Mbogo**	**71.70**	**272**	P	**P**	**09 43 42.0**	**+2.0**
YAK	**Yakutsk**	**71.95**	**10**	P	**P**	**09 43 38.9**	**-1.3**
YAK	**Yakutsk**	**71.95**	**10**	P	**P**	**09 43 39.1**	**-1.0**
	comp=Z,164nm,0.7s,baz=201,slow=1.9,SNR=46						
YAK				LR	LR	10 19 25.1	
	comp=Z,121nm,18.0s,baz=212,slow=39						
	comp=Z,164nm,0.7s						
YAK	**Yakutsk**	**71.95**	**10**	*e*P	**P**	**09 43 38.2**	**-2.0**
YAK				*e**PP	**PcP**	**09 43 53.9**	**-4.5**
YAK				*e*S	**S**	**09 52 53.2**	**-1.7**
YAK				*e**SS	**sS**	**09 53 28.0**	**-2.5**
YAK				*e*		09 53 37.5	
YAK				*e*SS	**SS**	**09 57 27.0**	**-6.3**
YAK				pmax	pmax		
	comp=Z,158nm,0.9s						
YAK				pmax	pmax		
	comp=E,22nm,1.3s						
YAK				pmax	pmax		
	comp=N,47nm,1.2s						
YAK				pmax	pmax		
	comp=Z,4.0nm,0.3s						
YAK				smax	smax		
	comp=E,46nm,1.9s						
YAK				smax	smax		
	comp=N,14nm,1.0s						
AKTO	**Aktyubinsk**	**73.21**	**329**	LR	LR	10 20 31.9	
	comp=N,425nm,20.9s,baz=48,slow=40						
PEA0B	**Petropavlovsk-**	**73.81**	**28**	P	**P**	**09 43 50.9**	**-0.5**
PEA0B	**Petropavlovsk-**	**73.81**	**28**	*ce*P	**P**	**09 43 50.8**	**-0.6**
PETK	**Petropavlovsk-**	**73.81**	**28**	P	**P**	**09 43 50.6**	**-0.8**
PETK	**Petropavlovsk-**	**73.81**	**28**	P	**P**	**09 43 50.8**	**-0.6**
	comp=N,8.6nm,0.7s,baz=174,slow=1.3,SNR=30						
PETK				LR	LR	10 18 55.4	
	comp=N,97nm,18.9s,baz=228,slow=38						
	comp=N,8.6nm,0.7s						
PET	**Petropavlovsk**	**74.21**	**29**	P	**P**	**09 43 53.9**	**+0.2**

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PET   Petropavlovsk      74.21  29  eP     P      09 43 52.6 -1.1
PET                                 e*PP   pP     09 44 13.6 -0.9
PET                                 eS     S      09 53 20.5 -0.4
PET                                  pmax  pmax
      comp=Z,47nm,1.0s
PET                                  pmax  pmax
      comp=Z,100nm,12.2s
PET                                  MLR   MLR
      comp=Z,200nm,17.0s
PET   Petropavlovsk      74.21  29   P     P      09 43 51.8 -1.9
      comp=Z,49nm,1.4s
LODK  Lodwar             74.27 276   P     P      09 43 54.5 -0.4
LODK  Lodwar             74.27 276   P     P      09 43 57.2 +2.3
      SNR=6.4
VNDA  Vanda              74.35 170   P     P      09 43 55.0 +0.9
VNDA  Vanda              74.35 170   P     P      09 43 55.7 +1.5
      comp=Z,7.7nm,0.8s,baz=319,slow=6.3,SNR=42
VNDA                                 LR    LR     10 13 55.8
      comp=Z,254nm,21.2s,baz=310,slow=33
      comp=Z,7.7nm,0.8s
SYO   Syowa Base         74.95 200⇓eP     P      09 44 00.2 +2.5
SYO   Syowa Base         74.95 200⇑ipP    pP     09 44 17.5  0.0
MA2   Magadan            75.42  21   P     P      09 43 59.6 -0.9
MA2                                  IAmb  IAmb   09 44 01.7
      comp=Z,101nm,1.8s
MA2   Magadan            75.42  21   P     P      09 44 00.0 -0.5
      comp=Z,14nm,0.8s,baz=212,slow=5.7,SNR=6.7
MA2                                  LR    LR     10 18 12.5
      comp=Z,169nm,21.0s,baz=230,slow=36
      comp=Z,14nm,0.8s
MA2   Magadan            75.42  21   P     P      09 44 00.8 +0.3
MA2   Magadan            75.42  21c iP     P      09 44 00.3 -0.2
MA2                                  pmax  pmax
      comp=Z,20nm,1.0s
MA2   Magadan            75.42  21   P     P      09 43 59.6 -0.9
      comp=Z,35nm,1.4s
MAK   Makhachkala        75.51 318  eP     P      09 44 00.5 -0.9
MAK                                 e*PP   pP     09 44 21.4 -0.9
MAK                                 e*SP   sP     09 44 30.3 -0.6
MAK                                 e             09 46 49.0
MAK                                 ePPP   PPP    09 48 34.4
MAK                                 eS     S      09 53 33.8 -1.9
MAK                                 e*SS   sS     09 54 13.7 +2.2
MAK                                 eSS    SS     09 58 25.3 -3.0
MAK                                  pmax  pmax
      comp=Z,90nm,0.6s
SVE   Sverdlovsk         75.98 335deP     P      09 44 03.6 -0.2
SVE                                  pmax  pmax
      comp=Z,92nm,1.4s
GNI   Garni              76.21 315   P     P      09 44 05.1 -0.6
GNI                                  IAmb  IAmb   09 44 44.3
      comp=Z,31nm,0.9s
GNI   Garni              76.21 315   LR    LR     10 21 25.6
      comp=Z,176nm,21.0s,baz=104,slow=39
GNI   Garni              76.21 315   P     P      09 44 06.4 +0.7
GNI   Garni              76.21 315c iP     P      09 44 05.7  0.0
GNI                                  pmax  pmax
      comp=Z,33nm,1.2s
GNI   Garni              76.21 315   P     P      09 44 06.1 +0.4
GNI   Garni              76.21 315   P     P      09 44 05.3 -0.4
      comp=Z,637nmcomp=Z,36nm,1.3s
ARTI  Arti               76.66 334   P     P      09 44 06.8 -0.8
ARTI                                 IAmb  IAmb   09 44 08.9
      comp=Z,66nm,0.7s
ARTI  Arti               76.66 334   LR    LR     10 22 26.1
      comp=Z,374nm,21.1s,baz=130,slow=39
ARTI  Arti               76.66 334c iP     P      09 44 07.2 -0.5
ARTI                                 *PP   sP     09 44 33.9 -3.4
ARTI                                              09 46 57.7
ARTI                                 S     S      09 53 47.0 -0.9
ARTI                                 *SS   sS     09 54 23.8  0.0
ARTI                                 SS    SS     09 58 38.1 -7.2
ARTI                                 pmax  pmax
      comp=Z,65nm,0.8s
ARTI                                 MLR   MLR
      comp=Z,369nm,21.0s
GEVA  Gevas              76.71 312   P     P      09 44 08.4 -0.2
GEVA                                 IAmb  IAmb   09 44 11.1
      comp=Z,27nm,0.9s
TRLG  Trialeti           77.21 316   P     P      09 44 11.8 +0.5
GUDG  Gudauri            77.32 317   P     P      09 44 13.4 +1.4
GURO  Guroymak-BITLI     77.55 312   P     P      09 44 13.2  0.0
GURO                                 IAmb  IAmb   09 44 15.9
      comp=Z,41nm,0.8s
KARS  Kars               77.57 315   P     P      09 44 13.2 -0.1
KARS  Kars               77.57 315   P     P      09 44 13.2 -0.1
KARS                                 pmax  pmax
      comp=Z,349nm,0.8s
MARD  Mardin             78.04 311   P     P      09 44 16.1 +0.1
MARD                                 IAmb  IAmb   09 44 17.3
      comp=Z,44nm,0.9s
MATP  Matopo             78.21 251   LR    LR     10 13 07.2
      comp=Z,289nm,21.8s,baz=64,slow=31
MBAR  Mbarara            78.22 271   P     P      09 44 18.3 +0.7
MBAR                                 IAmb  IAmb   09 44 20.6
      comp=Z,32nm,0.9s
MBAR  Mbarara            78.22 271   P     P      09 44 19.7 +2.2
MBAR  Mbarara            78.22 271c iP     P      09 44 18.8 +1.3
MBAR                                 pmax  pmax
      comp=Z,38nm,1.1s
NCK   Nalchik            78.33 318d iP     P      09 44 18.1 +0.8
NCK                                  pmax  pmax
      comp=Z,76nm,0.8s
SEY   Seymchan           78.40  19   P     P      09 44 17.1 -0.1
      comp=Z,14nm,0.7s,baz=213,slow=5.3,SNR=31
      comp=Z,14nm,0.7s
SEY   Seymchan           78.40  19c iP     P      09 44 16.7 -0.5
SEY                                  pmax  pmax
      comp=Z,38nm,1.5s
SEY                                  MLR   MLR
      comp=Z,122nm,18.0s
KBZ   Khabaz             78.88 318   P     P      09 44 20.9 +0.6
      comp=Z,90nm,0.9s,baz=107,slow=4.0,SNR=115
KBZ                                  LR    LR     10 23 17.5
      comp=Z,88nm,21.3s,baz=101,slow=39
      comp=Z,90nm,0.9s
KBZ   Khabaz             78.88 318c iP     P      09 44 20.8 +0.5
KBZ                                  pmax  pmax
      comp=Z,117nm,1.0s
LSZ   Lusaka             78.97 256   P     P      09 44 21.5  0.0
LSZ   Lusaka             78.97 256   LR    LR     10 13 57.1
      comp=Z,581nm,21.7s,baz=129,slow=32
LSZ   Lusaka             78.97 256   P     P      09 44 21.5  0.0
LSZ                                  pmax  pmax
      comp=Z,21nm,0.8s
MREMI Moremi             79.02 249  i P    P      09 44 23.8 +2.0
SHA1  Shidzhatmaz        79.05 317c iP     P      09 44 21.8 +0.3
KIV   Kislovodsk         79.11 318   P     P      09 44 21.2 -0.5
KIV                                  IAmb  IAmb   09 44 24.4
      comp=Z,66nm,0.7s
KIV   Kislovodsk         79.11 318   P     P      09 44 22.9 +1.2
KIV   Kislovodsk         79.11 318  ⇑P     P      09 44 23.0 +1.4
KIV   Kislovodsk         79.11 318  eP     P      09 44 21.5 -0.2
KIV                                 eS     S      09 54 14.3 -0.7
KIV                                  pmax  pmax
      comp=Z,85nm,4.0s
KIV                                  pmax  pmax
      comp=Z,67nm,1.1s
KIV   Kislovodsk         79.11 318  i P    P      09 44 22.1 +0.4
      SNR=18
KIV   Kislovodsk         79.11 318   P     P      09 44 22.1 +0.4
      comp=Z,713nmcomp=Z,60nm,1.1s
KOPT  Kop Dagi           79.18 313   P     P      09 44 22.1 -0.3
KOPT                                 IAmb  IAmb   09 44 26.6
      comp=Z,35nm,0.7s
BROLN Tlhalogang         79.25 250  i P    P      09 44 24.4 +1.4
ASF   Jabal al Asfar     79.45 305   LR    LR     10 19 27.0
      comp=Z,236nm,21.0s,baz=132,slow=36
BELG  Belogornoye        79.75 327   LR    LR     10 24 13.3
      comp=Z,189nm,21.7s,baz=100,slow=39
BELG  Belogornoye        79.75 327c iP     P      09 44 24.4 -0.4
BELG                                 pmax  pmax
      comp=Z,35nm,1.0s
GHAJ  Ghor Haditha       80.30 304   P     P      09 44 28.0 -0.2
EIL   Elat               80.37 302   LR    LR     10 20 02.2
      comp=Z,144nm,18.9s,baz=67,slow=36
LPHEP Lephephe           80.42 248⇓iP     P      09 44 31.4 +2.2
ARPR  Arapgir-MALATY     80.45 312   P     P      09 44 28.8 -0.3
LBTB  Lobatse            80.52 246   P     P      09 44 29.6 -0.2
LBTB                                 IAmb  IAmb   09 44 54.2
      comp=Z,48nm,1.6s
LBTB  Lobatse            80.52 246   LR    LR     10 14 03.5
      comp=Z,475nm,20.7s,baz=92,slow=31
LBTB  Lobatse            80.52 246   P     P      09 44 29.6 -0.2
BOSA  Boshof             80.54 242   P     P      09 44 30.6 +0.8
BOSA  Boshof             80.54 242   P     P      09 44 31.5 +1.7
      comp=Z,12nm,0.9s,baz=97,slow=4.0,SNR=14
BOSA                                 LR    LR     10 13 41.8
      comp=Z,642nm,20.6s,baz=106,slow=31
      comp=Z,12nm,0.9s
LABN  Labinsk            80.68 318  eP     P      09 44 30.6 +0.6
LABN                                e*PP   pP     09 44 52.1 +1.2
LABN                                eS     S      09 54 31.2  0.0
LABN                                 pmax  pmax
      comp=Z,100nm,1.1s
GAZ   Gaziantep          80.69 310   P     P      09 44 30.3  0.0
GAZ                                  IAmb  IAmb   09 44 32.2
      comp=Z,45nm,0.8s
VSLR  Vesyoloye          80.72 317c iP     P      09 44 30.4 +0.1
VSLR                                 pmax  pmax
      comp=Z,116nm,1.0s
TIXI  Tiksi              80.87   6   P     P      09 44 29.4 -1.1
      comp=Z,74nm,0.8s,baz=190,slow=3.5,SNR=166
TIXI                                 LR    LR     10 23 41.8
      comp=Z,285nm,19.3s,baz=218,slow=38
      comp=Z,74nm,0.8s
MMAI  Mount Meron Ar     80.90 305   P     P      09 44 33.2 +1.7
      comp=Z,43nm,0.8s,baz=104,slow=7.0,SNR=47
MMAI                                 LR    LR     10 23 21.1
      comp=Z,164nm,18.3s,baz=101,slow=38
      comp=Z,43nm,0.8s
SOC   Sochi              80.98 317  eP     P      09 44 29.9 -1.7
SOC                                 e             09 47 34.7
SOC                                 ePPP   PPP    09 49 25.3
SOC                                 eS     S      09 54 31.7 -2.7
SOC                                 eSSS   SSS    10 03 11.4
SOC                                  pmax  pmax
      comp=Z,77nm,0.8s
ERBR  Yeremizino-Bor     81.23 319  eP     P      09 44 32.6 -0.3
ERBR                                e*PP   pP     09 44 53.6 -0.3
ERBR                                eS     S      09 54 35.6 -1.3
ERBR                                e             09 54 45.6
ERBR                                 pmax  pmax
      comp=Z,123nm,1.4s
KDWAN Kaudwane           81.51 248   P     P      09 44 35.4 +0.3
KDWAN                                IAmb  IAmb   09 44 38.4
      comp=Z,48nm,1.1s
QSPA  South Pole Qui     81.70 180   P     P      09 44 36.6 +1.4
      comp=Z,14nm,0.7s,baz=298,slow=1.3,SNR=144
QSPA                                 PKKPbc PKKPbc 10 03 06.5 -3.6
      comp=Z,2.3nm,0.8s,baz=251,slow=1.3,SNR=6.8
QSPA                                 LR    LR     10 15 47.1
      comp=Z,968nm,20.9s,baz=314,slow=32
      comp=Z,14nm,0.7s
KIRV  Kirov              81.90 333   LR    LR     10 27 08.2
      comp=Z,284nm,19.5s,baz=120,slow=40
KIRV  Kirov              81.90 333c iP     P      09 44 35.9 -0.2
SHEM  Shemya Is, Ala     82.02  34   LR    LR     10 20 39.5
      comp=Z,45nm,20.9s,baz=240,slow=35
TOKA  Tokat              82.19 313   P     P      09 44 38.4 +0.2
TOKA                                 IAmb  IAmb   09 44 41.8
      comp=Z,82nm,1.5s
BNN   Bunyan             82.22 311   P     P      09 44 37.5 -1.0
BNN                                  IAmb  IAmb   09 44 39.5
      comp=Z,68nm,1.0s
ANN   Anapa              82.93 317  eP     P      09 44 41.3 -0.5
ANN                                 e*PP   pP     09 45 02.2 -0.7
ANN                                 eS     S      09 54 53.0 -1.4
ANN                                 e             09 54 59.2
ANN                                  pmax  pmax
      comp=E,11nm,1.4s
ANN                                  pmax  pmax
      comp=Z,62nm,1.0s
ANN                                  pmax  pmax
      comp=N,18nm,0.9s
CSS   Mathiatis          83.08 307   P     P      09 44 42.6 -0.2
CSS   Mathiatis          83.08 307   P     P      09 44 43.0 +0.1
      comp=N,1µmcomp=N,124nm,1.1s
DIKM  Dikmen             83.47 314  ⇓P     P      09 44 45.9 +1.2
DIKM  Dikmen             83.47 314   P     P      09 44 45.2 +0.5
KIRS  Kirsehir-Merke     83.74 311  ⇓P     P      09 44 47.2 +1.0
KGCAE Kacgae             83.81 248  i P    P      09 44 49.1 +2.1
VORD  Divnogorie         83.87 323  eP     P      09 44 44.2 -2.3
VORD                                 pmax  pmax
      comp=Z,90nm,1.0s
VSR   Storozhevoye       84.03 324  eP     P      09 44 44.6 -2.7
VSR                                  pmax  pmax
      comp=Z,180nm,0.9s
BR104 Keskin Array S     84.10 311   P     P      09 44 47.9 -0.2
      comp=Z,509nmcomp=Z,67nm,1.0s
BR131 Keskin Array S     84.11 311   P     P      09 44 48.0 -0.1
BR131                                IAmb  IAmb   09 44 49.5
      comp=Z,69nm,0.8s
BR131 Keskin Array S     84.11 311   P     P      09 44 48.4 +0.2
      SNR=74
BR131 Keskin Array S     84.11 311c iP     P      09 44 48.1 -0.1
BRTR  Keskin Array B     84.11 311   P     P      09 44 48.0 -0.1
BRTR  Keskin Array B     84.11 311   P     P      09 44 48.2 +0.1
      comp=Z,67nm,1.0s,baz=130,slow=6.7,SNR=274
BRTR                                 LR    LR     10 25 45.1
      comp=Z,198nm,19.6s,baz=111,slow=38
      comp=Z,67nm,1.0s
BR105 Keskin Array S     84.12 311   P     P      09 44 48.3  0.0
      comp=Z,547nmcomp=Z,73nm,1.0s
BR106 Keskin Array S     84.13 311   P     P      09 44 48.3  0.0
      comp=Z,485nmcomp=Z,65nm,1.1s
VORR  Voronezh           84.17 324  eP     P      09 44 47.7 -0.3
VORR                                 pmax  pmax
      comp=Z,122nm,0.8s
ILGA  Ilgaz              84.41 313   P     P      09 44 49.7 -0.1
ILGA                                 IAmb  IAmb   09 44 51.7
      comp=Z,59nm,0.8s
BZK   Bozkurt            84.46 314   P     P      09 44 50.9 +1.2
BZK   Bozkurt            84.46 314  ⇓P     P      09 44 51.4 +1.7
BZK   Bozkurt            84.46 314   P     P      09 44 50.7 +1.0
      comp=Z,2µmcomp=Z,282nm,0.8s
ANTO  Ankara             84.77 311   P     P      09 44 51.4  0.0
ANTO                                 IAmb  IAmb   09 44 53.3
      comp=Z,69nm,1.0s
ANTO  Ankara             84.77 311   P     P      09 44 52.5 +1.0
ANTO  Ankara             84.77 311  ⇑P     P      09 44 52.5 +1.0
ANTO  Ankara             84.77 311   P     P      09 44 52.4 +1.0
ANTO  Ankara             84.77 311   P     P      09 44 51.9 +0.4
      comp=Z,450nmcomp=Z,36nm,1.1s
CIDE  Kastamonu/Cide     85.19 313  ⇑P     P      09 44 54.4 +1.0
SIM   Simferopol'        85.22 317  eP     P      09 44 54.2 +0.7
SIM                                 eS     S      09 55 16.7 -0.7
SIM                                  pmax  pmax
      comp=Z,108nm,0.7s
ISP   Isparta            85.98 309   P     P      09 44 56.3 -1.3
ISP                                  IAmb  IAmb   09 45 10.4
      comp=Z,33nm,1.0s
ISP   Isparta            85.98 309c iP     P      09 44 56.9 -0.7
ISP                                  pmax  pmax
      comp=Z,16nm,0.8s
BILL  Bilibino           86.11  19   P     P      09 44 56.5 -0.8
BILL                                 IAmb  IAmb   09 44 59.1
      comp=Z,21nm,0.8s
BILL  Bilibino           86.11  19c iP     P      09 44 56.7 -0.6
BILL                                 pmax  pmax
      comp=Z,18nm,0.9s
BILL                                 MLR   MLR
      comp=Z,175nm,20.0s
MDUB  Mudurnu            86.11 312   P     P      09 44 58.1 -0.1
AKAS  Kas                86.33 307   P     P      09 44 58.6 -0.7
SAHE  Sakarya_HENDEK     86.46 312  ⇓P     P      09 45 00.6 +0.9
MOS   Moscow             86.49 328  eP     P      09 44 57.1 -2.3
MOS                                 e             09 45 16.6
MOS                                 e             09 45 23.4
MOS                                 eS     SKSac  09 55 18.2 -0.6
MOS                                  pmax  pmax
      comp=Z,200nm,0.8s
MOS                                  pmax  pmax
      comp=Z,163nm,0.7s
BORA  Eskisehir          86.52 311   P     P      09 45 00.1  0.0
BORA                                 IAmb  IAmb   09 45 01.8
      comp=Z,44nm,0.9s
KIWB  Kanaga Island      86.71  37   P     P      09 45 00.1 -0.5
OBN   Obninsk            86.85 327   P     P      09 45 00.9 -0.3
OBN   Obninsk            86.85 327  ⇓P     P      09 45 02.0 +0.8
OBN   Obninsk            86.85 327c iP     P      09 45 01.5 +0.3
OBN                                 i S    SKSac  09 55 20.4 -0.5
OBN                                  pmax  pmax
      comp=Z,203nm,0.9s
OBN   Obninsk            86.85 327   P     P      09 45 01.4 +0.3
      comp=Z,3µmcomp=Z,314nm,1.5s
ADK   Adak               86.99  37   P     P      09 45 01.5 -0.5
ADK   Adak               86.99  37   P     P      09 45 02.3 +0.3
ADK   Adak               86.99  37   P     P      09 45 01.5 -0.5
ADK                                  pmax  pmax
      comp=Z,62nm,0.9s
TROLL Troll, Antarti     87.16 197  ⇓P     P      09 45 04.5 +1.8
      comp=Z,96nm,0.6s
TROLL                               ⇑pP    pP     09 45 24.2 +1.2
      comp=Z,382nm,0.9s
KLMR  Klimovskoe         87.40 333  eP     P      09 45 01.1 -2.6
KLMR                                 pmax  pmax
      comp=Z,395nm,1.2s
KLMR                                 MLR   MLR
      comp=Z,260nm,16.0s
SILT  Sile               87.42 312  ⇑P     P      09 45 05.0 +0.7
YLV   Yalova             87.48 311   P     P      09 45 05.1 +0.3
      comp=Z,1µmcomp=Z,138nm,1.3s
MANT  Manisa             87.64 309   P     P      09 45 06.2 +0.5
ISK   Istanbul-Kandi     87.83 312   P     P      09 45 06.8 +0.5
KLYT  Kilyos             87.88 312  ⇓P     P      09 45 07.5 +1.0
KLYT  Kilyos             87.88 312   P     P      09 45 06.6 +0.1
KARP  Karpathos          88.13 306   P     P      09 45 08.0 +0.1
KARP  Karpathos          88.13 306   P     P      09 45 09.2 +1.3
      comp=Z,5µmcomp=Z,680nm,0.9s
RAR   Rarotonga          88.25 111   LR    LR     10 25 16.4
      comp=Z,78nm,18.8s,baz=284,slow=36
BAND  Balkesir-Ban       88.39 311  ⇓P     P      09 45 10.2 +1.2
PURM  Purcari            88.50 317  ⇓P     P      09 45 10.3 +0.9
PURM  Purcari            88.50 317   P     P      09 45 10.2 +0.9
      comp=Z,2µmcomp=Z,199nm,1.0s
WIN   Windhoek           88.53 248   P     P      09 45 13.5 +3.2
WIN                                  pmax  pmax
      comp=Z,19nm,2.9s
ATKA  Atka Island        88.56  37   P     P      09 45 08.7 -0.7
ATKA  Atka Island        88.56  37   P     P      09 45 09.2 -0.2
EDC   Edincik            88.56 311   P     P      09 45 10.4 +0.6
TSUM  Tsumeb             88.56 251   LR    LR     10 18 54.1
      comp=Z,324nm,21.3s,baz=143,slow=32
JURR  Jurilovca          88.78 315  ⇓P     P      09 45 11.9 +1.2
EFOR  EFORIE             88.80 315  ⇑P     P      09 45 12.6 +1.8
SNAA  Sanae              88.86 197  ⇓P     P      09 45 12.9 +2.2
      comp=Z,242nm,0.6s
SNAA                                ⇑pP    pP     09 45 32.0 +1.0
      comp=Z,462nm,1.0s
SNAA  Sanae              88.86 197   P     P      09 45 12.2 +1.5
SNAA                                 IAmb  IAmb   09 45 33.8
      comp=Z,34nm,1.1s
SNAA  Sanae              88.86 197   P     P      09 45 12.8 +2.2
      comp=Z,7.7nm,0.6s,baz=161,slow=4.5,SNR=79
SNAA                                 PKKPbc PKKPdf 10 02 48.9 +2.3
      comp=Z,1.0nm,0.9s,baz=327,slow=1.9,SNR=6.0
SNAA                                 LR    LR     10 19 22.0
      comp=Z,792nm,21.8s,baz=93,slow=32
      comp=Z,7.7nm,0.6s
SNAA  Sanae              88.86 197deP     P      09 45 12.6 +1.9
SNAA                                 pmax  pmax
      comp=Z,11nm,0.7s
TLCR                     88.92 316  ⇑P     P      09 45 12.6 +1.3
TLCR                     88.92 316   P     P      09 45 12.6 +1.3
TIRR  Tirgusor           89.04 315   P     P      09 45 11.7 -0.2
TIRR  Tirgusor           89.04 315  ⇓P     P      09 45 13.0 +1.0
TIRR  Tirgusor           89.04 315   P     P      09 45 12.9 +1.0
TIRR  Tirgusor           89.04 315   P     P      09 45 12.5 +0.6
      comp=Z,879nmcomp=Z,78nm,1.1s
PSN   Preselentsi        89.06 314⇑iP     P      09 45 12.9 +0.9
PHSR  Pinarhisar         89.08 312  ⇓P     P      09 45 13.3 +1.2
TPGR  Topolog            89.12 315  ⇑P     P      09 45 13.1 +0.7
MILM  Milestii Mici      89.30 318⇑iP     P      09 45 12.0 -1.1
      comp=Z,250nm,2.6s
MILM                                epP    pP     09 45 35.0 +0.5
MILM                                i S    S      09 55 55.0 -1.4
      comp=Z,230nm,2.6s
MILM                                eL     L      10 26 04.0
MILM                                 LRM   MLR    10 29 21.0
      comp=Z,150nm,18.5s
MILM  Milestii Mici      89.30 318  ⇑P     P      09 45 13.6 +0.5
MILM  Milestii Mici      89.30 318c iP     P      09 45 12.0 -1.1
MILM                                e*PP   pP     09 45 35.0 +0.5
MILM                                i S    S      09 55 55.0 -1.4
MILM                                 pmax  pmax
      comp=Z,250nm,2.6s
MILM                                 smax  smax
      comp=E,230nm,2.6s
TLBR  Topalu             89.31 315  ⇑P     P      09 45 14.7 +1.5
CFR   Carcaliu           89.38 316  ⇓P     P      09 45 14.4 +0.9
CFR   Carcaliu           89.38 316   P     P      09 45 14.4 +0.9
ICOR  Ion Corvin         89.39 315  ⇓P     P      09 45 14.9 +1.4
HARR  Harsova            89.42 315  ⇓P     P      09 45 14.2 +0.5
HARR  Harsova            89.42 315   P     P      09 45 14.2 +0.5
PRD   Provadia           89.47 314⇑iP     P      09 45 14.5 +0.5
NEF   NEVSHA             89.59 314⇑iP     P      09 45 15.1 +0.5
EZN   Ezine              89.61 310  ⇓P     P      09 45 16.0 +1.2
EZN   Ezine              89.61 310   P     P      09 45 15.9 +1.2
EZN   Ezine              89.61 310   P     P      09 45 15.4 +0.7
      comp=E,44nm,1.1s
AK09  Malin Array Si     89.83 321   P     P      09 45 15.3 -0.2
AK10  Malin Array Si     89.85 321   P     P      09 45 15.5 -0.1
AK08  Malin Array Si     89.86 321   P     P      09 45 15.2 -0.4
AK05  Malin Array Si     89.89 321   P     P      09 45 15.2 -0.5
AKASG Malin Array Be     89.89 321   P     P      09 45 14.7 -1.1
AKASG Malin Array Be     89.89 321   P     P      09 45 15.3 -0.4
      comp=E,10nm,0.6s,baz=88,slow=4.6,SNR=64
AKASG                                PP    PP     09 48 47.3 -2.2
      comp=E,2.6nm,0.7s,baz=92,slow=6.3,SNR=7.6
AKASG                                LR    LR     10 30 37.1
      comp=E,127nm,19.8s,baz=86,slow=39
      comp=E,10nm,0.6s
AKBB  Malin Array Si     89.89 321   P     P      09 45 14.8 -0.9
AKBB                                 IAmb  IAmb   09 45 16.9
      comp=Z,25nm,0.8s
AKBB  Malin Array Si     89.89 321c iP     P      09 45 15.1 -0.6
AK01  Malin Array Si     89.89 321   P     P      09 45 15.5 -0.3
CAVK  Edirne/Enez-Ca     89.90 311  ⇓P     P      09 45 17.1 +1.1
AK03  Malin Array Si     89.90 321   P     P      09 45 15.4 -0.4
IDI   Anoyia             89.90 306   P     P      09 45 16.9 +0.6
IDI   Anoyia             89.90 306   LR    LR     10 26 13.2
      comp=Z,89nm,22.0s,baz=92,slow=36
KIEV  Kiev               89.90 321   P     P      09 45 14.8 -1.0
KIEV                                 IAmb  IAmb   09 45 16.9
      comp=Z,22nm,0.8s
KIEV  Kiev               89.90 321  ⇓P     P      09 45 15.8  0.0
KIEV  Kiev               89.90 321   P     P      09 45 15.7  0.0
KIEV  Kiev               89.90 321  i P    P      09 45 15.2 -0.5
      SNR=29
KIEV  Kiev               89.90 321   P     P      09 45 15.1 -0.7
      comp=Z,2µmcomp=Z,126nm,0.8s
AK12  Malin Array Si     89.92 321   P     P      09 45 15.4 -0.5
AK04  Malin Array Si     89.93 321   P     P      09 45 15.7 -0.2
AK14  Malin Array Si     89.95 321   P     P      09 45 15.7 -0.3
JMB   Yambol             89.97 313⇑iP     P      09 45 17.0 +0.7
AK17  Malin Array Si     89.99 321   P     P      09 45 16.0 -0.2
AK18  Malin Array Si     89.99 321   P     P      09 45 16.0 -0.2
AK22  Malin Array Si     90.00 321   P     P      09 45 16.0 -0.2
ALN   Alexandroupoli     90.03 311   P     P      09 45 17.1 +0.5
AK19  Malin Array Si     90.03 321   P     P      09 45 16.2 -0.2
AK20  Malin Array Si     90.03 321   P     P      09 45 15.9 -0.5
GHRR                     90.07 316  ⇑P     P      09 45 18.1 +1.4
VRI   Vrincioaia         90.49 316  ⇓P     P      09 45 19.9 +1.2
VRI   Vrincioaia         90.49 316   P     P      09 45 19.9 +1.2
VRI   Vrincioaia         90.49 316   P     P      09 45 19.6 +0.9
      comp=Z,742nmcomp=Z,55nm,0.9s
VNA2  Neumayer--Watz     90.50 197  ⇓P     P      09 45 20.6 +2.3
      comp=Z,19nm,0.6s,baz=112,slow=4.3
VNA2                                ⇑pP    pP     09 45 38.3 -0.4
      comp=Z,18nm,0.9s,baz=129,slow=2.8
MI30  MI30,Zelenitsa     90.54 321   P     P      09 45 18.1 -0.7
      comp=Z,55nm,0.7s
PLOR  Plostina           90.55 316  ⇑P     P      09 45 20.0 +1.0
PLOR  Plostina           90.55 316   P     P      09 45 20.0 +1.0
SULR                     90.59 315  ⇑P     P      09 45 20.7 +1.5
LUBAR Lubar, Ukraine     90.64 320   P     P      09 45 18.8 -0.5
TESR  Tescani            90.67 317  ⇑P     P      09 45 20.4 +0.9
TESR  Tescani            90.67 317   P     P      09 45 20.2 +0.7
      comp=Z,679nmcomp=Z,51nm,1.1s
KDZ   Kurdzhali          90.68 312⇑iP     P      09 45 19.8 +0.1
MI29  MI29, Kamyanyy     90.68 321   P     P      09 45 19.0 -0.5
      comp=Z,284nm,0.7s
SGRR  Singureni          90.70 314  ⇑P     P      09 45 21.1 +1.4
NEHR  Nehoiu             90.71 316  ⇑P     P      09 45 21.2 +1.4
ONER  Baraj Valea Uz     90.81 317  ⇓P     P      09 45 21.5 +1.3
VNA1  Neumayer--Stat     90.89 197  ⇓P     P      09 45 22.3 +2.3
      comp=Z,22nm,1.1s
VNA1                                ⇑pP    pP     09 45 41.7 +1.3
      comp=Z,22nm,1.0s
MI28  Mi28,Pidlybu       90.90 321   P     P      09 45 20.0 -0.5
MLR   Muntele Rosu       90.96 316   LR    LR     10 33 57.3
      comp=Z,111nm,19.4s,baz=74,slow=41
MLR   Muntele Rosu       90.96 316  ⇓P     P      09 45 21.9 +0.9
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MLR    Muntele Rosu       90.96 316   P        P        09 45 21.9 +0.9
VNA3   Neumayer Olymp     91.00 197  ⇓P        P        09 45 22.5 +1.8
       comp=Z,7.1nm,0.8s
VNA3                                 ⇑pP       pwP      09 45 43.1 -2.5
       comp=Z,17nm,0.9s
TURR   Turia              91.02 316  ⇓P        P        09 45 21.9 +0.8
PRAR   RASCA              91.12 318  ⇑P        P        09 45 22.4 +0.8
RZN    Rozhen             91.14 312 ⇑iP        P        09 45 22.5 +0.5
KMPD   K-Podol'skiy       91.20 319   P        P        09 45 20.3 -1.6
PUL    Pulkovo            91.42 330 deP        P        09 45 23.6 +1.0
PUL                                   pmax     pmax
       comp=Z,111nm,0.9s
DOPR   Dopca              91.43 316  ⇓P        P        09 45 23.8 +0.7
HUMR   Humele             91.46 315  ⇓P        P        09 45 24.1 +0.9
OUR    Ouranopolis        91.47 310   P        P        09 45 23.8 +0.5
MNK    Minsk              91.52 325  i P       P        09 45 23.0 -0.2
       comp=E,8.0nm,0.9s
MNK                                  i P       P        09 45 23.0 -0.2
       comp=N,23nm,0.9s
MNK                                  i P       P        09 45 23.0 -0.2
       comp=Z,23nm,0.8s,baz=102
MNK                                  i pP      pP       09 45 44.0 -0.6
MNK                                  i sP      sP       09 45 51.5 -1.5
MNK                                  i PP      PP       09 49 03.0 +0.7
MNK                                  i PPP     PPP      09 50 59.1
MNK                                  i S       SKSac    09 55 48.4 -0.2
MNK                                  i sS      ScS      09 56 23.1 +4.1
MNK                                  i LRM     MLR      10 26 20.2
       comp=E,547nm,18.8s
MNK                                  i LRM     MLR      10 26 23.3
       comp=N,388nm,17.4s
MNK    Minsk              91.52 325d iP        P        09 45 23.0 -0.2
VOIR                      91.57 316  ⇑P        P        09 45 23.8  0.0
VOIR                      91.57 316   P        P        09 45 23.8  0.0
VLAD   Vladila            91.78 314  ⇑P        P        09 45 26.4 +1.7
LVZ    Lovozero           91.79 339d iP        P        09 45 23.6 -0.7
LVZ                                   pmax     pmax
       comp=Z,71nm,1.1s
LVZ    Lovozero           91.79 339   P        P        09 45 23.5 -0.7
BURAR  Bucovina Array     91.84 318  ⇑P        P        09 45 26.5 +1.5
BURAR  Bucovina Array     91.84 318   P        P        09 45 26.5 +1.5
MMB    Musomishta         91.84 312 ⇑iP        P        09 45 25.3 +0.2
NIKH   Nikolski High      91.91  37   P        P        09 45 25.3 +0.3
       baz=259
SPIA   Saint Paul Isl     91.97  33   P        P        09 45 25.8 +0.5
       baz=258
KSV    Kosov              92.06 318   P        P        09 45 25.4 -0.5
RNPP5  Staryi Chortor     92.06 321   P        P        09 45 25.5 -0.3
RNPP9  Sopachiv           92.10 322   P        P        09 45 25.9 -0.1
APA    Apatity            92.14 338 ⇓iP        P        09 45 22.8 -3.0
APA                                  i                  09 49 08.0
APA                                   pmax     pmax
       comp=Z,19nm,1.2s
MPEP   Malo Peshtene      92.14 313 ⇑iP        P        09 45 26.7 +0.3
TNR    Turnu Rosu         92.14 316  ⇑P        P        09 45 27.7 +1.2
TNR    Turnu Rosu         92.14 316   P        P        09 45 27.6 +1.2
NACGM  Naroch             92.23 325  eP        P        09 45 26.1 -0.3
       comp=Z,19nm,0.8s,baz=102
P08K   Saint George I     92.23  33   P        P        09 45 26.8 +0.4
       baz=258
PLNA   Plana              92.23 312 ⇑iP        P        09 45 27.5 +0.5
ARCR   ARCALIA            92.33 317  ⇓P        P        09 45 28.7 +1.5
KKB    Krupnik            92.35 312 ⇑iP        P        09 45 27.5 +0.1
VTS    Vitosha            92.39 313 ⇑iP        P        09 45 27.8  0.0
VALD   Valchedram         92.42 314  i P       P        09 45 28.8 +1.2
LOT    Lotru              92.46 315  ⇓P        P        09 45 28.5 +0.6
GAMB   Gambell            92.72  26   P        P        09 45 29.2 +0.7
       baz=257
CJR    Cluj-Napoca        92.78 317  ⇑P        P        09 45 31.1 +1.8
CJR    Cluj-Napoca        92.78 317   P        P        09 45 31.1 +1.8
VSU    Vasula             92.94 329c iP        P        09 45 28.9 -0.8
VSU                                   pmax     pmax
       comp=Z,48nm,1.1s
LVV    L'vov              92.99 320   P        P        09 45 30.2  0.0
BMR    Baia Mare          93.00 318  ⇑P        P        09 45 31.3 +1.1
BMR    Baia Mare          93.00 318   P        P        09 45 31.3 +1.1
MARR   Marisel-Cluj       93.10 317  ⇑P        P        09 45 31.3 +0.4
DEV    Deva               93.13 316  ⇓P        P        09 45 32.3 +1.4
DEV    Deva               93.13 316   P        P        09 45 32.2 +1.4
GZR    Gura Zlata         93.14 315  ⇓P        P        09 45 31.9 +0.8
GZR    Gura Zlata         93.14 315   P        P        09 45 31.8 +0.8
HERR   Herculane          93.32 315  ⇓P        P        09 45 32.6 +0.8
DRGR                      93.39 317  ⇓P        P        09 45 32.7 +0.5
DRGR                      93.39 317   P        P        09 45 32.7 +0.5
TRSU   Trosnyk            93.42 318   P        P        09 45 31.2 -1.0
UNV    Unalaska Valle     93.45  36   P        P        09 45 31.7 -0.4
       baz=261
SURR   Surduc             93.65 316  ⇓P        P        09 45 33.7 +0.5
BOVS   Bovan              93.65 313  ⇓P        P        09 45 33.9 +0.6
MDVR   Moldovita          93.80 315  ⇑P        P        09 45 34.7 +0.6
FINES  FINESS Array B     93.81 331   P        P        09 45 34.2 +0.6
       comp=Z,29nm,0.8s,baz=96,slow=5.7,SNR=64
FINES                                 LR       LR       10 32 38.3
       comp=Z,297nm,21.1s,baz=88,slow=39
       comp=Z,29nm,0.8s
AKUT   Akutan             93.92  36   P        P        09 45 34.7 +0.4
BZS    Buzias             93.98 315  ⇓P        P        09 45 35.2 +0.3
BZS    Buzias             93.98 315   P        P        09 45 35.1 +0.3
KOLS   Kolonicke sedl     93.99 319  eP        P        09 45 35.8 +1.0
KOLS                                  pmax     pmax
       comp=Z,33nm,0.8s
KOLS   Kolonicke sedl     93.99 319  eP        P        09 45 35.8 +1.0
SUW    Suwalki            94.15 324  eP        P        09 45 35.1 -0.3
OUL    Oulu               94.53 335   P        P        09 45 36.9 +0.1
OUL                                   pmax     pmax
       comp=Z,112nm,1.0s
M11K   Mekoryuk           94.62  30   P        P        09 45 37.5 +0.1
       baz=261
TNA    Tin City           94.67  24   P        P        09 45 37.8 +0.3
       baz=260
SGF    Sodankyl           94.69 337   P        P        09 45 37.3 -0.3
SGF                                   pmax     pmax
       comp=Z,50nm,1.2s
STHS   Stebnicka Huta     94.72 319  eP        P        09 45 38.4 +0.2
STHS                                  pmax     pmax
       comp=Z,17nm,0.8s
STHS   Stebnicka Huta     94.72 319  eP        P        09 45 38.4 +0.2
SJES   Sjenica            94.85 313 ⇑iP        P        09 45 39.7 +0.7
FRGS   Fruska Gora        95.19 315  eP        P        09 45 40.5 +0.1
PDG    Podgorica          95.28 312  eP        P        09 45 41.0 +0.2
PDG    Podgorica          95.28 312  ⇓P        P        09 45 41.0 +0.2
DRME   Dracevica, Mon     95.31 312  eP        P        09 45 40.7 -0.3
F14K   Arctic Creek       95.31  25   P        P        09 45 40.8 +0.3
       baz=262
TEKS   Tekeris            95.32 314 ⇑iP        P        09 45 40.6 -0.4
RUDO   Rudo               95.33 313 ⇑iP        P        09 45 40.6 -0.5
BBLS   Lazi&#263i         95.33 313 ⇑iP        P        09 45 41.4 +0.2
NIE    Niedzica           95.34 319  eP        P        09 45 41.4 +0.4
NIE    Niedzica           95.34 319   P        P        09 45 41.7 +0.7
ARA0   ARCESS Array S     95.41 339  eP        P        09 45 40.5 -0.3
ARCES  ARCESS Array B     95.41 339   P        P        09 45 40.4 -0.4
       comp=Z,8.2nm,0.4s,baz=101,slow=4.5,SNR=9.5
ARCES                                 LR       LR       10 33 44.8
       comp=Z,455nm,20.9s,baz=94,slow=39
       comp=Z,8.2nm,0.4s
PSZ    Piszkesteto        95.44 317  ⇓P        P        09 45 42.0 +0.5
PSZ    Piszkesteto        95.44 317   P        P        09 45 42.0 +0.5
K13K   Kusilvak Mount     95.58  28   P        P        09 45 42.2 +0.5
       baz=263
ANM    Nome               95.59  26   P        P        09 45 42.3 +0.6
       baz=262
HAPS   Han Pijesak,BI     95.68 314 ⇑iP        P        09 45 43.3 +0.5
OJC    Ojcow              95.75 320  eP        P        09 45 42.9 +0.1
OJC    Ojcow              95.75 320   P        P        09 45 45.0 +2.2
HCY    Herceg Novi        95.85 312 ⇑iP        P        09 45 43.0 -0.4
LANS   Liptovska Anna     95.85 319  eP        P        09 45 43.6 +0.2
LANS   Liptovska Anna     95.85 319  eP        P        09 45 43.6 +0.2
BRY    Bratogost          95.86 312 ⇑iP        P        09 45 42.7 -1.0
M13K   Dall Lake          96.03  30   P        P        09 45 44.5 +0.7
       baz=264
F15K   North Star Dit     96.03  25   P        P        09 45 44.4 +0.7
       baz=263
C16K   Lisburne Hills     96.07  22   P        P        09 45 44.6 +0.8
       baz=263
MORH   Mrgy, Hungar       96.11 316  ⇑P        P        09 45 44.7 +0.2
J14K   Nanvaranak Lak     96.18  28   P        P        09 45 45.0 +0.6
       baz=264
VYHS   Vyhne              96.20 318  eP        P        09 45 45.0 +0.1
VYHS                                  pmax     pmax
       comp=Z,7.0nm,1.2s
VYHS   Vyhne              96.20 318  eP        P        09 45 45.0 +0.1
G15K   Niukluk            96.21  25   P        P        09 45 44.9 +0.4
       baz=264
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S12K   Black Hills        96.24  35   P        P        09 45 45.2 +0.3
       baz=264
L14K   Kuka Creek         96.45  29   P        P        09 45 46.5 +0.8
       baz=265,SNR=6.9
STON   Ston               96.47 312 ⇑iP        P        09 45 45.0 -1.2
SRO    Srobarova          96.49 317  eP        P        09 45 47.0 +0.8
SRO                                   pmax     pmax
       comp=Z,10.0nm,0.9s
SRO    Srobarova          96.49 317  eP        P        09 45 47.0 +0.8
M14K   Bethel             96.75  30   P        P        09 45 47.7 +0.6
       baz=265,SNR=7.7
OKC    Ostrava-Krasne     96.77 319  eP        P        09 45 47.6 +0.2
OKC    Ostrava-Krasne     96.77 319  eP        P        09 45 47.6 +0.2
N14K   Kuskokwak Cree     96.81  30   P        P        09 45 47.8 +0.4
       baz=265
TIP    Timpagrande        96.85 309  ⇓P        P        09 45 49.4 +1.3
D17K   Noatak River       96.86  23   P        P        09 45 48.3 +0.8
       baz=265,SNR=12
C17K   DeLong Mountai     96.89  22   P        P        09 45 48.4 +0.8
       baz=265
G16K   Koyuk River        96.95  25   P        P        09 45 48.8 +0.9
       baz=265,SNR=9.8
RDOG   Red Dog Mine       96.95  22   P        P        09 45 48.8 +0.9
       baz=265
O14K   Tigyukauivet M     96.97  31   P        P        09 45 48.8 +0.7
       baz=266
JAVC   Velka Javorina     97.00 318  eP        Pdif     09 45 49.6 +0.9
BLY    Banja Luka         97.00 314  eP        Pdif     09 45 49.0 +0.3
MATE   Matera             97.02 310  ⇓P        Pdif     09 45 49.6 +0.7
STEB   Steborice          97.02 319  eP        Pdif     09 45 48.8 +0.1
L15K   Ungalak Mounta     97.05  29   P        Pdif     09 45 49.1 +0.6
       baz=266
K15K   Wolf Creek Mou     97.08  28   P        Pdif     09 45 49.3 +0.6
       baz=266
SDPT   Sand Point         97.11  35   P        Pdif     09 45 48.8  0.0
       baz=266
MORC   Moravsky Berou     97.16 319  eP        Pdif     09 45 49.6 +0.3
MORC   Moravsky Berou     97.16 319  ⇓P        Pdif     09 45 50.0 +0.6
MORC   Moravsky Berou     97.16 319   P        Pdif     09 45 49.9 +0.6
A051A  Mrakovica          97.22 314 ⇑iP        P        09 45 48.9 -0.8
MODS   Modra-Piesok       97.23 318  eP        P        09 45 49.2 -0.4
MODS                                  pmax     pmax
       comp=Z,15nm,1.0s
MODS   Modra-Piesok       97.23 318  eP        P        09 45 49.2 -0.4
TBI    Tubuai             97.28 115  ePP       PP       09 49 45.9 -1.9
       comp=Z,281nm,31.5s
TBI                                  eS        S        09 57 02.7 -5.5
       comp=Z,1µm,32.2s
TBI                                  eSS       SS       10 03 41.4 -6.2
       comp=Z,2µm,33.0s
TBI                                  eLQ       LQ       10 13 02.3
       comp=Z,1µm,35.5s
TBI                                  eLR       LR       10 17 23.8
       comp=Z,1µm,25.0s
TBI                                  eLR       LR       10 17 29.9
       comp=Z,1µm,25.8s
E17K   Hotham Inlet       97.29  23   P        Pdif     09 45 50.4 +1.0
       baz=266
M15K   Kasigluk River     97.37  30   P        Pdif     09 45 50.5 +0.5
       baz=266,SNR=8.9
A050A  Klekovaca          97.45 314 ⇑iP        P        09 45 50.2 -0.6
B18K   Kokolik River      97.45  21   P        Pdif     09 45 50.8 +0.7
       baz=266
F17K   Baldwin Pennin     97.48  24   P        Pdif     09 45 51.1 +0.8
       baz=266
I17K   Unalakleet         97.56  27   P        Pdif     09 45 51.7 +1.0
       baz=267
J16K   Anvik River        97.57  27   P        Pdif     09 45 51.6 +0.9
       baz=267,SNR=13
CHNA   Chernabura Isl     97.58  36   P        Pdif     09 45 51.7 +0.7
       baz=266
C18K   Utukok River       97.63  22   P        Pdif     09 45 51.8 +0.7
       baz=267,SNR=6.2
N15K   Kwethluk River     97.63  30   P        Pdif     09 45 51.9 +0.7
       baz=267,SNR=8.2
G17K   Kiwalik Mounta     97.67  25   P        Pdif     09 45 52.0 +0.8
       baz=267,SNR=8.5
KRLC   Kraliky            97.67 319   AMS      AMS      10 36 40.0
       comp=Z,200nm,22.8s
S14K   Fog Glacier        97.69  34   P        Pdif     09 45 52.0 +0.4
       baz=267
O15K   Ungalikthiuk R     97.71  31   P        Pdif     09 45 52.1 +0.6
       baz=267
VRAC   Vranov             97.74 319   LR       LR       10 36 30.2
       comp=Z,160nm,21.3s,baz=78,slow=39
VRAC   Vranov             97.74 319  eP        P        09 45 50.4 -1.5
A19K   Wainwright         97.75  20   P        Pdif     09 45 52.0 +0.6
       baz=267
KOGS   Kog                97.78 316  i P       Pdif     09 45 52.2 +0.1
E18K   Tukpahlearik C     97.79  23   P        Pdif     09 45 52.7 +1.1
       baz=267,SNR=7.9
RONA   Rosalia, Austr     97.83 317  eP        P        09 45 51.5 -0.9
       comp=Z,2.6nm,0.9s
RONA                                 ePP       PP       09 49 51.6 -0.1
       comp=Z,6.0nm,1.6s
KRUC   Moravsky           97.86 318  eP        P        09 45 52.1 -0.3
H17K   Granite Mounta     97.95  25   P        Pdif     09 45 53.5 +1.0
       baz=268,SNR=10
DPC    Dobruska-Polom     97.98 320  eP        Pdif     09 45 53.6 +0.6
DPC                                   AMS      AMS      10 36 50.0
       comp=Z,200nm,23.9s
DPC    Dobruska-Polom     97.98 320  eP        Pdif     09 45 53.6 +0.6
DPC                                   MLR      MLR
       comp=Z,200nm,23.9s
L16K   Owhat River        98.01  29   P        Pdif     09 45 53.4 +0.7
       baz=267,SNR=10
KSP    Ksiaz              98.03 320   P        Pdif     09 45 54.2 +1.1
OSTC   Ostas              98.06 320   AMS      AMS      10 36 30.0
       comp=Z,200nm,20.4s
F18K   Selawik            98.13  24   P        Pdif     09 45 54.1 +1.0
       baz=268
CONA   Conrad Observa     98.14 317  i Pdiff   P        09 45 53.6 -0.2
       comp=Z,2.3nm,1.0s
CONA                                 ePP       PP       09 49 54.0  0.0
       comp=Z,7.6nm,1.6s
UPC    Upice              98.19 320   AMS      AMS      10 36 20.0
       comp=Z,200nm,21.1s
M16K   Timber Creek       98.23  29   P        Pdif     09 45 54.4 +0.7
       baz=268,SNR=6.7
C19K   Lookout Ridge      98.23  21   P        Pdif     09 45 54.7 +1.0
       baz=268,SNR=6.9
J17K   VABM Dome          98.26  27   P        Pdif     09 45 54.5 +0.7
       baz=268
N16K   Nishlik Lake       98.30  30   P        Pdif     09 45 55.0 +0.9
       baz=268
ARSA   Arzberg            98.33 317  ePdiff    P        09 45 54.2 -0.4
       comp=Z,3.1nm,0.8s
ARSA                                 ePP       PP       09 49 52.2 -3.3
       comp=Z,4.2nm,0.9s
PPT2   Papeete2           98.35 109  ePKIKP    P        09 45 49.8 -5.6
       comp=Z,51nm,28.2s
PPT2   Papeete2           98.35 109  ePP       PP       09 49 49.8 -6.5
       comp=Z,45nm,26.2s
PPT2                                 eS        S        09 57 07.7  -10
       comp=Z,282nm,28.5s
PPT2                                 eSS       SS       10 04 02.1 -1.0
       comp=Z,60nm,25.2s
PPT2                                 eLQ       LQ       10 13 51.0
       comp=Z,231nm,28.2s
PPT2                                 eLR       LR       10 17 50.6
       comp=Z,206nm,22.8s
PPT2                                 eLR       LR       10 17 50.6
       comp=Z,201nm,33.2s
PPT    Papeete            98.35 109   LR       LR       10 26 40.1
       comp=Z,139nm,20.2s,baz=268,slow=33
BOJS   Bojanci            98.42 315 ⇑iP        P        09 45 54.6 -0.4
TREC   Trest              98.46 319  eP        Pdif     09 45 55.7 +0.6
TREC                                  AMS      AMS      10 37 10.0
       comp=Z,200nm,23.3s
TREC   Trest              98.46 319  eP        Pdif     09 45 55.7 +0.6
TREC                                  MLR      MLR
       comp=Z,200nm,23.3s
G18K   Tagagawik          98.51  25   P        Pdif     09 45 55.5 +0.6
       baz=269
VAE    Valguarnera        98.56 307   LR       LR       10 38 46.6
       comp=Z,39nm,18.0s,baz=130,slow=40
L17K   Donlin             98.58  28   P        Pdif     09 45 56.3 +1.0
       baz=268,SNR=5.8
K17K   Iditarod           98.59  28   P        Pdif     09 45 56.5 +1.1
       baz=269,SNR=10
SPA0   Spitsbergen Ar     98.59 348  eP        P        09 45 54.8 -0.4
SPITS  Spitsbergen Ar     98.59 348   P        P        09 45 54.7 -0.4
       comp=Z,16nm,0.7s,baz=117,slow=14,SNR=22
SPITS                                 LR       LR       10 35 29.5
       comp=Z,208nm,21.5s,baz=48,slow=38
       comp=Z,16nm,0.7s
O16K   Kokwok River B     98.61  31   P        Pdif     09 45 55.9 +0.4
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       baz=268,SNR=6.4
H18K   Honhosa River      98.62  25   P        Pdif     09 45 56.0 +0.5
       baz=269,SNR=7.7
SOKA   Soboth             98.64 316  ePdiff    Pdif     09 45 56.3 +0.3
       comp=Z,3.2nm,0.8s
SOKA                                 ePP       PP       09 49 56.6 -1.2
       comp=Z,5.8nm,1.1s
P16K   Nushagak River     98.65  31   P        Pdif     09 45 56.1 +0.4
       baz=268
D19K   Kuna River         98.75  22   P        Pdif     09 45 57.0 +0.9
       baz=270,SNR=10
R16K   Pilot Point        98.83  33   P        Pdif     09 45 56.9 +0.4
       baz=268
F19K   Shaleruckik Mo     98.88  24   P        Pdif     09 45 57.0 +0.5
       baz=270,SNR=10
LJU    Ljubljana          98.96 315  i P       Pdif     09 45 57.6 +0.3
OBKA   Obir               98.96 316  ePdiff    Pdif     09 45 58.5 +1.0
       comp=Z,3.3nm,0.8s
OBKA                                 ePP       PP       09 49 58.9 -1.5
       comp=Z,5.2nm,1.1s
M17K   Holitna River      98.97  29   P        Pdif     09 45 57.3 +0.2
       baz=269,SNR=5.7
FAUS   Fauske             99.00 337  eP        Pdif     09 45 57.0 -0.1
STEI   Steigen            99.02 338  eP        Pdif     09 45 56.9 -0.2
N17K   Nushagak Hills     99.08  30   P        Pdif     09 45 57.8 +0.2
       baz=269
B20K   Meade River        99.09  20   P        Pdif     09 45 58.3 +0.9
       baz=271
E19K   Redstone River     99.09  23   P        Pdif     09 45 58.3 +0.9
       baz=270,SNR=10
PRU    Pruhonice          99.11 319  eP        Pdif     09 45 58.3 +0.4
PRU                                   AMS      AMS      10 37 20.0
       comp=Z,200nm,21.9s
PRU    Pruhonice          99.11 319  eP        Pdif     09 45 58.3 +0.4
PRU                                   MLR      MLR
       comp=Z,200nm,21.9s
O17K   Koliganek Bris     99.12  31   P        Pdif     09 45 58.4 +0.7
       baz=269
G19K   Purcell Mounta     99.15  24   P        Pdif     09 45 58.7 +1.0
       baz=270,SNR=11
PRA    Prague             99.18 319   AMS      AMS      10 35 00.0
       comp=Z,200nm,24.0s
MOA    Molln              99.21 317  ePdiff    Pdif     09 45 58.5  0.0
       comp=Z,3.3nm,1.0s
MOA                                  ePP       PP       09 50 00.7 -1.4
       comp=Z,0.1nm,0.3s
CKRC   Cesky Krumlov      99.22 318  eP        Pdif     09 45 58.6 +0.1
CKRC                                  AMS      AMS      10 34 50.0
       comp=Z,200nm,21.9s
CKRC   Cesky Krumlov      99.22 318  eP        Pdif     09 45 58.6 +0.1
CKRC                                  MLR      MLR
       comp=Z,200nm,21.9s
A21K   Barrow             99.24  19   P        Pdif     09 45 59.1 +1.1
       baz=272
GCSA   Galena City Sc     99.25  26   P        Pdif     09 45 58.9 +0.7
       baz=270
D20K   Etivluk River      99.30  22   P        Pdif     09 45 59.4 +0.9
       baz=271,SNR=12
J18K   Innoko River       99.32  27   P        Pdif     09 45 59.3 +0.7
       baz=270,SNR=12
L18K   Granite Mounta     99.34  28   P        Pdif     09 45 59.5 +0.8
       baz=270,SNR=8.1
MOR8   Moi Rana           99.35 336  eP        Pdif     09 45 58.2 -0.5
H19K   Roundabout Mou     99.42  25   P        Pdif     09 46 00.1 +1.2
       baz=271,SNR=15
P17K   Kvichak River      99.45  31   P        Pdif     09 45 59.5 +0.3
       baz=270
E20K   Nigu River         99.47  22   P        Pdif     09 45 59.9 +0.6
       baz=271,SNR=7.4
BRG    Berggiesshubel     99.52 320⇓ePif                09 46 00.1
BRG                                   Amp               09 46 00.9
       comp=Z,3.5nm,1.0s
MYKA   Terra Mystica      99.59 316  ePdiff    Pdif     09 46 01.1 +0.8
       comp=Z,1.4nm,0.5s
MYKA                                 ePP       PP       09 50 04.5 -0.7
       comp=Z,3.6nm,1.0s
GERES  GERESS Array B     99.62 318   P        Pdif     09 46 00.7 +0.3
       comp=Z,1.7nm,0.6s,baz=94,slow=7.1,SNR=8.4
GERES                                 LR       LR       10 36 18.4
       comp=Z,199nm,21.8s,baz=76,slow=38
       comp=Z,1.7nm,0.6s
BIOA   Bad Ischl, Aus     99.63 317  i Pdiff   Pdif     09 45 59.8 -0.6
       comp=Z,2.3nm,0.5s
BIOA                                 i PP      PP       09 50 04.2 -1.2
       comp=Z,0.6nm,0.3s
LOF    Lofoten            99.66 338  eP        Pdif     09 45 58.4 -1.5
F20K   Avaraart Lake      99.68  23   P        Pdif     09 46 01.0 +0.9
       baz=272
KHC    Kasperske Hory     99.71 318  eP        Pdif     09 46 00.2 -0.5
KHC                                   AMS      AMS      10 37 50.0
       comp=Z,300nm,23.6s
KHC    Kasperske Hory     99.71 318 deP        Pdif     09 46 01.0 +0.3
KHC                                   pmax     pmax
       comp=Z,4.0nm,0.8s
N18K   Kilae Creek        99.72  30   P        Pdif     09 46 01.1 +0.6
       baz=270
Q17K   Contact Creek      99.74  32   P        Pdif     09 46 00.8 +0.1
       baz=270
HFS    Hagfors            99.74 330   P        Pdif     09 46 00.8 +0.3
       comp=Z,6.1nm,0.7s,baz=106,slow=4.9,SNR=7.6
HFS                                   LR       LR       10 37 43.8
       comp=Z,134nm,19.3s,baz=78,slow=39
       comp=Z,6.1nm,0.7s
M18K   Stony River        99.75  29   P        Pdif     09 46 00.9 +0.4
       baz=271
A22K   Sinclair Lake      99.79  19   P        Pdif     09 46 01.1 +0.7
       baz=273
J19K   Poorman            99.80  26   P        Pdif     09 46 01.5 +0.8
       baz=271,SNR=7.3
VAGH   Vaagaholmen        99.81 336  eP        Pdif     09 46 01.0 +0.4
KBA    Koelnbreinsper     99.81 316  ePdiff    Pdif     09 46 01.9 +0.5
       comp=Z,3.6nm,1.1s
KBA                                  ePP       PP       09 50 05.0 -1.9
       comp=Z,3.6nm,0.9s
HSKC   Hora Svate Kat     99.84 320   AMS      AMS      10 36 50.0
       comp=Z,200nm,20.1s
KONS   Konsvik            99.87 336  eP        Pdif     09 46 01.2 +0.3
LEIR   Leirfjorden        99.89 336  eP        Pdif     09 46 01.5 +0.5
C21K   Knifeblade Rid     99.95  21   P        Pdif     09 46 02.1 +0.8
       baz=273
B21K   Ikpikpuk River     99.98  21   P        Pdif     09 46 02.1 +0.7
       baz=273
P18K   Big Mountain,     100.07  31   P        Pdif     09 46 02.2 +0.2
       baz=271
O18K   Koktuh Hills      100.07  31   P        Pdif     09 46 02.3 +0.2
       baz=271
H20K   Anotleneega Mo    100.08  25   P        Pdif     09 46 02.2 +0.2
       baz=272
CLL    Collm             100.12 321  i P       Pdif     09 46 02.0 -0.4
CLL    Collm             100.12 321  i Pdif    Pdif     09 46 02.0 -0.4
CLL                                  ePP       PP       09 50 06.0 -2.8
CLL                                  ex        x        09 51 30.0
CLL                                  eSKSac    SKSac    09 56 36.0 +1.9
CLL                                  ePPS      PPS      10 00 00.0
CLL                                  e(SS)              10 04 00.0
CLL                                  ex        x        10 05 24.0
CLL                                  eSSS      SSS      10 08 36.0
CLL                                  ex        x        10 09 42.0
CLL                                   AMS      AMS      10 38 00.0
       comp=Z,200nm,21.5s
CLL                                   AMS      AMS      13 05 00.0
       comp=N,300nm,20.9s
CLL                                   AMS      AMS      13 05 00.0
       comp=E,300nm,19.0s
CLL                                   AMS      AMS      13 05 00.0
       comp=Z,600nm,19.5s
CLL                                   AMS      AMS      16 48 00.0
       comp=Z,100nm,19.6s
Q18K   Katmai Hardscr    100.19  32   P        Pdif     09 46 02.8 +0.1
       baz=271
L19K   White Mountain    100.20  28   P        Pdif     09 46 03.3 +0.8
       baz=272,SNR=6.0
I20K   Naaghedeneel      100.27  26   P        Pdif     09 46 03.5 +0.7
       baz=272
LESA   Schwarzleotal     100.27 317  ePdiff    Pdif     09 46 02.9 -0.4
       comp=Z,3.2nm,1.1s
LESA                                 ePP       PP       09 50 08.1 -2.1
       comp=Z,7.9nm,1.3s
E21K   Killik River      100.28  22   P        Pdif     09 46 03.6 +0.7
       baz=274
B22K   Teshekpuk Lake    100.35  20   P        Pdif     09 46 03.8 +0.9
       baz=274
ABTA   Abfaltersbach     100.37 316  ePdiff    Pdif     09 46 03.9 +0.1
       comp=Z,3.7nm,1.1s
ABTA                                 ePP       PP       09 50 10.4 -0.7
       comp=Z,2.8nm,1.1s
N19K   Bonanza Creek     100.41  30   P        Pdif     09 46 04.0 +0.4
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	baz=272,SNR=7.5						
M19K	Big River Lodg baz=272	100.42	29	P	Pdif	09 46 04.2	+0.6
J20K	Nowinta River baz=273,SNR=6.7	100.44	26	P	Pdif	09 46 04.1	+0.6
NKC	Novy Kostel comp=Z,200nm,13.5s	100.46	320	AMS	AMS	10 37 20.0	
R18K	Karluk baz=271	100.51	33	P	Pdif	09 46 04.3	+0.3
O19K	Port Alsworth baz=272	100.51	30	P	Pdif	09 46 04.2	+0.3
K20K	Telida baz=272	100.51	27	P	Pdif	09 46 04.8	+0.9
F21K	Alatna River baz=274	100.55	23	P	Pdif	09 46 04.8	+0.8
G21K	Allakaket baz=274,SNR=7.7	100.58	24	P	Pdif	09 46 04.7	+0.5
L20K	Farewell, AK baz=272,SNR=6.4	100.64	28	P	Pdif	09 46 05.3	+0.8
SII	Sitkinak Islan baz=271	100.67	34	P	Pdif	09 46 05.0	+0.2
D22K	Ayikyak River baz=275	100.72	21	P	Pdif	09 46 05.3	+0.5
Q19K	Cape Douglas, baz=272	100.90	32	P	Pdif	09 46 05.8	0.0
H21K	Melozitna Rive baz=274,SNR=6.0	100.93	25	P	Pdif	09 46 06.3	+0.6
NB2	NORSAR Subarra comp=Z,23nm,1.4s,baz=81,slow=4.6	100.94	331	P	Pdif	09 46 05.7	-0.2
NB2	NORSAR Subarra	100.94	331	P	Pdif	09 46 06.7	+0.8
NB2	NORSAR Subarra baz=81,slow=4.6	100.94	331	P	Pdif	09 46 05.7	-0.2
NOA	NORSAR Array B comp=Z,5.7nm,0.9s,baz=88,slow=4.6,SNR=8.4	100.94	331	P	Pdif	09 46 05.9	0.0
NOA	comp=Z,0.8nm,0.8s,baz=93,slow=7.7,SNR=3.2			PP	PP	09 50 16.8	+1.9
WTTA	Wattenberg comp=Z,7.1nm,1.0s	100.98	317	*i* Pdiff	Pdif	09 46 06.1	-0.5
WTTA	comp=Z,7.6nm,1.2s			*e*PP	PP	09 50 12.6	-3.1
M20K	Styx River baz=273	101.02	29	P	Pdif	09 46 06.8	+0.5
WATA	Walderalm comp=Z,4.4nm,0.9s	101.02	317	*i* Pdiff	Pdif	09 46 06.0	-0.7
WATA	comp=Z,10.0nm,1.5s			*e*PP	PP	09 50 13.0	-3.0
F22K	John River baz=275	101.03	23	P	Pdif	09 46 06.7	+0.6
P19K	Oil Pt baz=272	101.08	31	P	Pdif	09 46 06.8	+0.3
E22K	Anaktuvuk Pass baz=276	101.11	22	P	Pdif	09 46 07.0	+0.4
OHAK	Old Harbor baz=272	101.15	33	P	Pdif	09 46 07.0	+0.2
CHUM	Lake Minchumin baz=274	101.27	26	P	Pdif	09 46 07.5	+0.3
SQTA	Sankt Quirin comp=Z,3.1nm,0.7s	101.27	316	*i* Pdiff	Pdif	09 46 07.5	-0.3
SQTA	comp=Z,5.1nm,1.0s			*e*PP	PP	09 50 15.0	-2.8
I21K	Tanana baz=275	101.31	25	P	Pdif	09 46 08.2	+0.8
MOTA	Moosalm comp=Z,7.7nm,1.1s	101.34	317	*i* Pdiff	Pdif	09 46 07.9	-0.3
MOTA	comp=Z,8.2nm,1.2s			*e*PP	PP	09 50 16.2	-2.2
G22K	Bettles baz=276	101.34	23	P	Pdif	09 46 08.2	+0.7
C23K	Itkillik River baz=277	101.35	20	P	Pdif	09 46 08.3	+0.8
O20K	Slope Mountain baz=273	101.36	30	P	Pdif	09 46 08.1	+0.2
PPLA	Purkeypile baz=274	101.39	27	P	Pdif	09 46 08.2	+0.2
CAST	Castle Rocks baz=274	101.40	27	P	Pdif	09 46 08.4	+0.5
D23K	Nanushuk River baz=277	101.44	21	P	Pdif	09 46 08.6	+0.7
H22K	Ishtalitna Cre baz=275	101.50	24	P	Pdif	09 46 09.1	+0.9
N20K	Mount Spurr baz=274	101.50	29	P	Pdif	09 46 08.1	-0.3
KDAK	Kodiak Island baz=273	101.50	33	P	Pdif	09 46 08.6	+0.2
Q20K	Shuyak Island baz=273	101.56	32	P	Pdif	09 46 08.8	+0.2
RETA	Reutte comp=Z,4.1nm,1.0s	101.57	317	*i* Pdiff	Pdif	09 46 08.4	-0.7
RETA	comp=Z,2.0nm,0.5s			*e*PP	PP	09 50 17.7	-2.4
FETA	Feichten comp=Z,3.6nm,1.3s	101.60	316	*i* Pdiff	Pdif	09 46 09.1	-0.2
FETA	comp=Z,9.5nm,1.2s			*e*PP	PP	09 50 17.8	-2.6
SKT	Skwentna baz=274	101.77	28	P	Pdif	09 46 09.6	+0.1
COLD	Coldfoot baz=277	101.82	23	P	Pdif	09 46 10.3	+0.6
BPAW	Bear Paw Mtn. baz=275	101.83	26	P	Pdif	09 46 10.3	+0.5
MLY	Manley baz=276	101.85	25	P	Pdif	09 46 10.5	+0.7
TOLK	Toolik Lake Re baz=278	101.88	22	P	Pdif	09 46 10.6	+0.6
HOM	Homer baz=274	101.89	31	P	Pdif	09 46 10.4	+0.4
E23K	Chandalar baz=278	101.94	22	P	Pdif	09 46 10.5	+0.2
G23K	Bananza Creek baz=277	101.95	24	P	Pdif	09 46 10.8	+0.5
C24K	Franklin Bluff baz=279	102.03	20	P	Pdif	09 46 11.0	+0.5
D24K	Happy Valley baz=278	102.07	21	P	Pdif	09 46 11.2	+0.5
DAVA	Damuels comp=Z,3.5nm,0.7s	102.17	317	*i* Pdiff	Pdif	09 46 12.1	+0.2
DAVA	comp=Z,10nm,1.0s			*e*PP	PP	09 50 21.5	-3.2
SUA	Susitna One baz=275	102.18	29	P	Pdif	09 46 11.6	+0.1
TRF	Thorofare Moun baz=276	102.20	27	P	Pdif	09 46 11.9	+0.3
H23K	Yukon River baz=277	102.25	24	P	Pdif	09 46 11.9	+0.3
CUT	Chulitna baz=276	102.32	28	P	Pdif	09 46 12.4	+0.5
BRSE	Bradley Lake S baz=275	102.33	31	P	Pdif	09 46 12.4	+0.3
E24K	Your Creek baz=279	102.36	22	P	Pdif	09 46 12.3	+0.2
I23K	Minto, Yukon-K baz=277	102.41	25	P	Pdif	09 46 12.6	+0.3
M22K	Willow baz=276	102.45	29	P	Pdif	09 46 12.7	+0.2
NEA2	Nenana baz=277	102.61	26	P	Pdif	09 46 13.3	+0.1
F24K	Squaw Lake baz=279	102.67	23	P	Pdif	09 46 13.7	+0.3
RC01	Rabbit Creek A baz=276	102.71	29	P	Pdif	09 46 13.9	+0.2
MCK	McKinley baz=277	102.77	26	P	Pdif	09 46 14.2	+0.2
O22K	Cooper Landing baz=276	102.77	30	P	Pdif	09 46 14.3	+0.3
D25K	Kavik River baz=281	102.90	21	P	Pdif	09 46 14.7	+0.2
H24K	Noodor Dome baz=279	102.93	24	P	Pdif	09 46 14.8	+0.1
PMR	Palmer baz=277	102.94	29	P	Pdif	09 46 15.0	+0.3
SEW	Seward baz=276	102.95	30	P	Pdif	09 46 15.0	+0.3
G24K	Hadweenzic Riv baz=279	102.95	23	P	Pdif	09 46 15.0	+0.2
WAT1	Susitna Watana baz=277	103.06	27	P	Pdif	09 46 15.6	+0.3
COLA	College baz=278	103.08	25	P	Pdif	09 46 15.7	+0.5
POKR	Poker Plat Res baz=279	103.22	25	P	Pdif	09 46 16.1	+0.1
KNK	Knik Glacier baz=277	103.28	29	P	Pdif	09 46 16.2	-0.1
C26K	Camden Bay baz=282	103.28	20	P	Pdif	09 46 16.3	+0.2
SML	Sawmill baz=277	103.29	28	P	Pdif	09 46 16.4	0.0
PWL	Port Wells baz=277	103.41	29	P	Pdif	09 46 16.5	-0.3
WAT6	Susitna Watana baz=278	103.47	28	P	Pdif	09 46 17.0	-0.2
G25K	Bearman Lake baz=280	103.48	23	P	Pdif	09 46 16.9	-0.1
F25K	Christian Rive baz=281	103.50	22	P	Pdif	09 46 16.8	-0.4
ILAR	Eielson Array comp=Z,0.4nm,0.8s,baz=298,slow=3.9,SNR=4.9	103.51	25	Pdiff	Pdif	09 46 16.4	-0.8
ILAR	comp=Z,0.7nm,0.8s,baz=284,slow=8.1,SNR=4.9			PKiKP	PKiKP	09 50 34.9	-0.6
HDA	Harding Lake baz=279	103.54	26	P	Pdif	09 46 17.4	0.0
DHY	Denali Highway baz=278	103.56	27	P	Pdif	09 46 17.1	-0.6
M23K	Glacier View baz=278	103.58	28	P	Pdif	09 46 17.2	-0.4
H25L	Birch Creek baz=281	103.69	24	P	Pdif	09 46 17.7	-0.3
C27K	Jago River baz=284	103.76	20	P	Pdif	09 46 18.2	0.0
SCM	Sheep Creek Mo baz=278	103.76	28	P	Pdif	09 46 18.1	-0.4
PRP	Porcupine Dome baz=281	103.94	24	P	Pdif	09 46 19.0	-0.3
P23K	Montague Islan baz=278	103.98	30	P	Pdif	09 46 18.8	-0.5
GLI	Glacier Island baz=278	104.01	29	P	Pdif	09 46 19.2	-0.4
F26K	Sheenjek River baz=283	104.04	22	P	Pdif	09 46 19.4	-0.1
K24K	Donnelly Dome baz=280	104.15	26	P	Pdif	09 46 19.7	-0.4
J25K	Salcha River, baz=281	104.18	25	P	Pdif	09 46 19.9	-0.3
M24K	Tolsona, Glenn baz=279	104.26	28	P	Pdif	09 46 20.2	-0.5
G26K	Porcupine Rive baz=283	104.34	23	P	Pdif	09 46 20.5	-0.3
PAX	Paxson baz=280	104.43	27	P	Pdif	09 46 21.2	-0.3
KLU	Klutina baz=279	104.48	29	P	Pdif	09 46 21.2	-0.5
RIDG	Independent Ri baz=281	104.57	26	P	Pdif	09 46 21.7	-0.3
Q23K	Middleton Isla baz=278	104.59	31	P	Pdif	09 46 21.7	-0.4
HARP	HAARP baz=280	104.68	28	P	Pdif	09 46 22.0	-0.4
EYAK	Cordova Ski Ar baz=279	104.71	30	P	Pdif	09 46 22.2	-0.4
D27M	Malcolm River baz=286	104.79	20	P	Pdif	09 46 22.3	-0.6
E27K	Coleen River baz=285	104.86	21	P	Pdif	09 46 22.9	-0.3
SCRK	Sand Creek baz=282	104.89	26	P	Pdif	09 46 23.0	-0.5
I26K	Coal Creek Min baz=283	104.96	24	P	Pdif	09 46 23.6	-0.1
J26L	Joseph Creek baz=282	104.97	25	P	Pdif	09 46 23.4	-0.4
N25K	Chitina, Valde baz=281	105.08	28	P	PKiKP	09 50 38.7	+0.1
G27K	Doyon Strip baz=285	105.19	23	P	PKiKP	09 50 38.6	+0.1
BMRM	Bremner River baz=280	105.20	29	P	PKiKP	09 50 38.7	-0.1
MENT	Mentasta	105.22	27	P	Pdif	09 46 26.2	+1.3
L26K	Log Cabin Wild baz=282	105.37	27	P	PKiKP	09 50 38.9	-0.1
H27K	Steamboat Moun baz=285	105.39	23	P	PKiKP	09 50 38.9	0.0
E28M	Babbage River baz=287	105.47	21	P	PKiKP	09 50 39.4	+0.4
KAIM	Kayak Island baz=280	105.47	30	P	PKiKP	09 50 39.3	+0.1
I27K	Kandik River baz=284	105.51	24	P	PKiKP	09 50 39.4	+0.2
D28M	Stokes Point baz=288	105.53	20	P	PKiKP	09 50 39.6	+0.6
F28M	Old Crow baz=287	105.64	22	P	PKiKP	09 50 39.8	+0.5
M26K	Nabesna, AK baz=282	105.66	27	P	PKiKP	09 50 40.1	+0.5
K27K	Chicken baz=284	105.70	26	P	PKiKP	09 50 40.0	+0.5
MCARA	McCarthy VSAT baz=282	105.87	28	P	PKiKP	09 50 40.3	+0.4
CRQE	Cirque baz=282	105.96	29	P	PKiKP	09 50 40.5	+0.2
BGLC	Bering Glacier baz=281	106.00	30	P	PKiKP	09 50 40.4	+0.3
L27K	Beaver Creek, baz=284	106.04	27	P	PKiKP	09 50 40.5	+0.3
E29M	Blow River baz=289	106.11	21	P	PKiKP	09 50 40.8	+0.6
M27K	Edge Creek, AK baz=283	106.18	27	P	PKiKP	09 50 40.6	0.0
I28M	Miner Creek baz=286	106.23	24	P	PKiKP	09 50 40.7	+0.1
G29M	Pine Creek baz=288	106.54	22	P	PKiKP	09 50 41.6	+0.6
H29M	Whitestone baz=288	106.62	23	P	PKiKP	09 50 41.8	+0.7
BVCY	Beaver Creek baz=284	106.63	27	P	PKiKP	09 50 41.7	+0.4
MESA	MESA baz=283	106.64	30	P	PKiKP	09 50 42.0	+0.4
CTG	Chitna Glacier baz=283	106.75	29	P	PKiKP	09 50 42.3	+0.6
DAWY	Dawson baz=286	106.84	25	P	PKiKP	09 50 42.4	+0.7
I29M	Ogilvie Camp, baz=288	106.91	24	P	PKiKP	09 50 42.5	+0.7
YUK3	Moose Creek baz=284	106.97	28	P	PKiKP	09 50 42.7	+0.5
F30M	Barrier River baz=291	107.13	21	P	PKiKP	09 50 42.8	+0.7
G30M	tAoh Zraii Nji baz=290	107.19	22	P	PKiKP	09 50 42.9	+0.6
EPYK	Eagle Plains baz=289	107.21	23	P	PKiKP	09 50 43.2	+0.9
O28M	Mount Upton baz=284	107.35	29	P	PKiKP	09 50 43.0	-0.1
YUK8	Steele Glacier baz=285	107.42	28	P	PKiKP	09 50 43.0	-0.1
PINM	Pinnacle baz=284	107.48	29	P	PKiKP	09 50 43.4	+0.3
L29M	L29M baz=287	107.65	26	P	PKiKP	09 50 44.1	+0.9
INK	Inuvik baz=293	107.66	20	P	PKiKP	09 50 44.0	+1.0
K29M	Barlow Dome baz=288	107.69	25	P	PKiKP	09 50 43.8	+0.4
M29M	Somme Creek baz=286	107.70	27	P	PKiKP	09 50 43.7	+0.3
I30M	Mount Dempster baz=289	107.72	24	P	PKiKP	09 50 43.6	+0.3
F31M	Tsiigehtchic baz=292	107.92	21	P	PKiKP	09 50 43.9	+0.4
YUK4	Talbot Arm baz=286	107.92	28	P	PKiKP	09 50 44.2	+0.2
G31M	Satah River baz=292	107.92	22	P	PKiKP	09 50 44.0	+0.5
J30M	Hart River baz=289	107.95	24	P	PKiKP	09 50 44.0	+0.1
PNL	Peninsula baz=285	108.01	30	P	PKiKP	09 50 44.1	+0.2
YUK6	Outpost Mounta baz=286	108.17	28	P	PKiKP	09 50 44.3	-0.2
O29M	Mount Kennedy baz=286	108.24	29	P	PKiKP	09 50 44.5	0.0
H31M	Peel River baz=291	108.31	23	P	PKiKP	09 50 44.7	+0.3
A36M	Sachs Harbour baz=302	108.45	15	P	PKiKP	09 50 45.1	+0.8
TORD	Torodi Ar. Bea comp=Z,1.6nm,0.7s,baz=45,slow=3.1,SNR=9.1	108.53	281	PKiKP	PKiKP	09 50 46.4	+0.2
HYT	Haines Junctio baz=287	108.60	28	P	PKiKP	09 50 45.2	+0.1
N30M	Aishikik Lake baz=287	108.61	28	P	PKiKP	09 50 45.4	+0.3
P29M	Windy Craggy baz=286	108.83	30	P	PKiKP	09 50 45.7	+0.2
P30M	Million Dollar baz=287	109.06	29	P	PKiKP	09 50 46.2	+0.3
TAOE	Nuku Hiva Isla comp=Z,173nm,27.5s	109.12	102	*e*LR	LR	10 22 55.4	
N31M	Braeburn, Yuko baz=289	109.19	27	P	PKiKP	09 50 46.3	+0.2
O30N	Mendenhall baz=288	109.28	28	P	PKiKP	09 50 46.8	+0.4
EKA	Eskdalemuir Ar comp=Z,1.4nm,0.8s,baz=93,slow=8.2,SNR=5.4	109.28	326	PKiKP	PKiKP	09 50 46.7	+0.3
PLBC	Pleasant Camp baz=287	109.55	29	P	PKiKP	09 50 47.5	+0.7
M31M	Drury Creek, Y baz=290	109.58	26	P	PKiKP	09 50 47.7	+0.9
FARO	Faro, Yukon baz=291	110.03	26	P	PKiKP	09 50 48.8	+1.1
SKAG	Skagway baz=288	110.05	29	P	PKiKP	09 50 48.4	+0.7
S31K	Pelican baz=287	110.06	31	P	PKiKP	09 50 48.3	+0.5
R31K	City Hall, Gus baz=288	110.18	30	P	PKiKP	09 50 48.7	+0.7
C36M	Paulatuk baz=303	110.21	18	P	PKiKP	09 50 48.6	+0.9
N32M	Quiet Lake baz=291	110.53	27	P	PKiKP	09 50 49.1	+0.5
MMPY	Sheldon Lake, baz=293	110.78	25	P	PKiKP	09 50 49.9	+0.8
P32M	Atlin baz=290	110.79	29	P	PKiKP	09 50 49.5	+0.3
SIT	Sitka baz=288	110.80	32	P	PKiKP	09 50 49.7	+0.5
R32K	Eaglecrest baz=289	110.83	30	P	PKiKP	09 50 49.6	+0.4
P33M	Teslin, Yukon baz=291	110.99	28	P	PKiKP	09 50 50.2	+0.5
S32K	Killisnoo baz=288	111.06	31	P	PKiKP	09 50 50.2	+0.6
Q32M	Nakina River baz=291	111.70	29	P	PKiKP	09 50 51.6	+0.5
T33K	Petersburg baz=290	112.11	32	P	PKiKP	09 50 52.4	+0.7
R33M	Jennings River baz=292	112.17	29	P	PKiKP	09 50 51.9	0.0
U33K	Whale Pass baz=289	112.25	32	P	PKiKP	09 50 52.8	+0.8
TGTN	Hyland Airport baz=296	112.51	26	P	PKiKP	09 50 53.2	+0.8
WRAK	Wrangell Islan baz=290	112.56	32	P	PKiKP	09 50 53.5	+1.0
S34M	Telegraph Cree baz=292	112.64	30	P	PKiKP	09 50 53.6	+0.9
ESDC	Sonseca Array comp=Z,0.8nm,1.0s,baz=12,slow=1.0,SNR=4.1	112.84	310	PKiKP	PKiKP	09 50 54.1	+0.4
ESDC	comp=Z,2.9nm,1.1s,baz=98,slow=6.9,SNR=6.1			PP	PP	09 51 44.2	+1.5
ESDC	comp=Z,0.9nm,0.8s,baz=253,slow=4.9,SNR=5.8			PKKPab	PKKPab	10 01 51.1	+1.7
WTLY	Watson Lake, Y baz=295	112.88	27	P	PKiKP	09 50 54.3	+1.1
DLBC	Dease Lake baz=293	112.99	29	P	PKiKP	09 50 53.9	+0.5
V35K	Ketchikan baz=290	113.32	33	P	PKiKP	09 50 54.8	+0.7
T35M	Bob Quinn baz=292	113.44	31	P	PKiKP	09 50 55.5	+1.2
WRGLY	Wrigley baz=301	113.67	23	P	PKiKP	09 50 55.4	+1.0
U35K	Hyder baz=292	113.95	32	P	PKiKP	09 50 56.1	+0.9
DBIC	Dimbokro comp=Z,8.6nm,1.0s,baz=183,slow=3.0,SNR=3.7	114.38	274	PKP	PKiKP	09 50 58.0	+0.7
DBIC	Dimbokro	114.38	274	PKIKP	PKiKP	09 50 58.0	+0.7
LIRD	Liard River Hi baz=297	114.42	27	P	PKiKP	09 50 57.1	+1.0
BEAVL	Fort Liard baz=298	114.52	26	P	PKPdf	09 50 57.3	+1.0
KOTAN	Kotaneelee Air baz=299	114.99	26	P	PKPdf	09 50 58.3	+1.1
TOAD	Toad River Com baz=298	115.08	28	P	PKPdf	09 50 58.4	+1.0
YKA	Yellowknife Ar comp=Z,4.5nm,0.7s,baz=329,slow=2.5,SNR=43	117.40	21	PKP	PKiKP	09 51 02.2	+0.5
YKA	comp=Z,1.3nm,1.0s,baz=308,slow=3.0,SNR=4.8			SKP		09 54 32.6	
NVAR	Mina Array Bea comp=Z,6.1nm,0.9s,baz=253,slow=2.6,SNR=26	128.07	47	PKP	PKiKP	09 51 25.4	+1.6
NVAR	comp=Z,2.3nm,0.9s,baz=256,slow=6.5,SNR=4.2			PP	PP	09 53 24.4	-2.6
PLCA	Paso Flores comp=Z,2.5nm,1.1s,baz=207,slow=6.8,SNR=2.3	131.21	181	PKP	PKiKP	09 51 31.0	+1.1
PLCA	comp=Z,2.0nm,0.8s,baz=191,slow=5.2,SNR=3.3			PP	PP	09 53 44.1	-1.8
PDAR	Pinedale Array comp=Z,2.1nm,0.6s,baz=90,slow=1.9,SNR=5.2	131.88	38	PKP	PKiKP	09 51 32.2	+0.8
PDAR	comp=Z,4.1nm,1.0s,baz=318,slow=2.0,SNR=10			SKPbc	SKPbc	09 54 48.5	-0.9
ULM	Lac du Bonnet comp=Z,6.4nm,0.9s,baz=349,slow=4.8,SNR=8.1	133.37	22	PKP	PKPdf	09 51 33.2	+0.6
ULM	comp=Z,6.4nm,0.9s,baz=345,slow=4.4,SNR=7.4			SKPbc	SKPbc	09 54 55.0	+1.0
SCHQ	Schefferville comp=Z,5.0nm,0.7s,baz=31,slow=3.4,SNR=9.7	133.47	357	PKP	PKiKP	09 51 33.5	-0.4
SCHQ	comp=Z,3.0nm,0.9s,baz=0.0,slow=5.1,SNR=2.1			SKPbc	SKPbc	09 54 55.2	+1.0
Y22D	IRIS PASSCAL I baz=300	138.24	47	P	PKPdf	09 51 42.5	+0.1
CFA	Coronel Fontan comp=Z,1.4nm,0.8s,baz=298,slow=5.9,SNR=3.7	140.23	184	PKhKP	PKPpre	09 51 43.2	
TXAR	Lajitas Array comp=Z,2.7nm,0.6s,baz=263,slow=2.2,SNR=42	142.94	51	PKhKP	PKPpre	09 51 48.3	
TXAR	comp=Z,6.5nm,1.1s,baz=259,slow=1.3,SNR=7.7			SKPbc	SKiKP	09 55 25.5	+2.0
CPUP	Villa Florida comp=Z,0.9nm,0.7s,baz=40,slow=2.6,SNR=4.9	143.07	201	PKhKP	PKPpre	09 51 48.9	
HDIL	Hopedale	144.01	24		PKPbc	09 51 50.5	+0.1
LBNH	Lisbon	144.19	1		PKPbc	09 51 50.7	-0.1
LBNH	Lisbon	144.19	1	PKIKP	PKPbc	09 51 50.7	-0.1
K50A	Casco	144.19	15		PKPbc	09 51 51.2	+0.4
AAM	Ann Arbor	144.37	16		PKPbc	09 51 52.0	+0.7
AAM	Ann Arbor	144.37	16	PKIKP	PKPbc	09 51 52.1	+0.7
M65A	Busby, Falmout baz=0.7	146.87	359	P	PKPbc	09 51 58.2	-0.9
BDFB	Brasilia comp=Z,14nm,0.9s,baz=78,slow=1.7,SNR=18	147.01	224	PKPbc	PKPab	09 52 02.3	+0.3
SIV	San Ignacio comp=Z,6.0nm,1.1s,baz=176,slow=1.9,SNR=12	153.91	202	PKP	PKPdf	09 52 10.6	+1.7
SIV	comp=Z,7.5nm,1.0s,baz=270,slow=2.8,SNR=4.7			PKPab	PKPab	09 52 31.2	+1.1
LPAZ	La Paz comp=Z,1.7nm,0.9s,baz=36,slow=16,SNR=4.9	155.40	187	PKP	PKPdf	09 52 10.7	-1.0
LPAZ	comp=Z,2.8nm,1.0s,baz=182,slow=10.0,SNR=5.4			PKPab	PKPab	09 52 37.6	+0.5
PIAT	Ana Tenorio	168.31	142	P	PKPdf	09 52 26.6	+1.9
OTAV	Otavalo	169.13	137	P	PKPdf	09 52 26.8	+1.5
GR1C	Gorgona, Isla	171.20	126	P	PKPdf	09 52 26.7	+0.8
BBAC	Balboa, Cauca	171.25	135	P	PKPdf	09 52 26.6	+0.4
FLOC	Florencia	171.92	145	P	PKPdf	09 52 27.2	+0.9
POPC	Popayan, Colom	172.02	135	P	PKPdf	09 52 26.4	-0.2
JAMC	Jamundi, Valle	172.49	132	P	PKPdf	09 52 26.8	0.0
YOTC	Yotoco, Valle	173.24	129	P	PKPdf	09 52 26.8	-0.2
MACC	Macarena, Meta	173.29	156	P	PKPdf	09 52 27.2	+0.3
PLMC	San Jos del P	173.83	123	P	PKPdf	09 52 27.4	+0.3
ORTC	Ortega, Tolima	173.99	136	P	PKPdf	09 52 26.6	-0.5
PRAC	Prado	174.08	140	P	PKPdf	09 52 27.1	-0.1
CBOC	Ciudad Bolivar	174.54	116	P	PKPdf	09 52 27.5	0.0
GUY2C	Guyana, Caldas	174.76	125	P	PKPdf	09 52 26.2	-1.7
NORC	Norcasia	175.36	126	P	PKPdf	09 52 27.2	-0.4
CHIC	Chingaza	175.50	144	P	PKPdf	09 52 27.0	-1.1
SJCC	San Jacinto, C	175.65	68	P	PKPdf	09 52 28.2	+0.6
ZARC	Zaragoza, Cauc	176.17	102	P	PKPdf	09 52 27.0	-0.7
PTBC	PUERTO BERRIO,	176.22	117	P	PKPdf	09 52 26.8	-0.9
RUSC	La Rusia	176.89	140	P	PKPdf	09 52 27.9	-0.6

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*BER **09** 09:39:04.7±1.4, 80°.10N×20°.97E, h23^{km}±6^{km}, ML1.8, Confirmed Earthquake*

KOLA 09 09:38:53.9, 80°.36N×22°.68E, h0^{km}, ML1.9, Error ellipse: s-maj=32.2km s-min=23.3km az=120.0, Spitsbergen, Arctic Ocean, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KBS	Kingsbay	2.42	239	P	Pn	09 39 35.6	+1.1
KBS				S	Sn	09 39 58.1	-6.6
KBS	Kingsbay	2.42	239	P	Pn	09 39 35.5	+1.0
KBS				S	Sn	09 40 05.2	+0.4
KBS	Kingsbay	2.42	239	*e*P	Pn	09 39 35.6	+1.0
KBS				*e*Pg	Pg	09 39 39.9	-0.2
KBS				*e*Sg	Sn	09 40 05.4	+0.6
KBS				IAML		09 40 06.5	

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      comp=Z,19nm,0.1s
SPA0  Spitsbergen Ar   2.49 211 eP     Pn     09 39 36.4 +0.8
SPA0                            ePg    Pb     09 39 40.4 +1.0
SPA0                            eSg    Sn     09 40 07.1 +0.4
SPA0                             IAML         09 40 12.2
      comp=Z,9.1nm,0.3s
SPITS Spitsbergen Ar   2.49 211  P     Pn     09 39 36.9 +1.2
SPITS                            S     Sn     09 40 00.3 -6.3
SPITS Spitsbergen Ar   2.49 211  P     Pn     09 39 36.4 +0.8
SPITS                            S     Sn     09 40 07.5 +0.8
BRBB  Barentsburg B    2.78 219  P     Pn     09 39 39.7 +0.2
BRBB                             S     Sn     09 40 06.3 -7.4
BRBB  Barentsburg B    2.78 219  P     Pn     09 39 40.3 +0.8
BRBB                             S     Sb     09 40 16.8 -2.0
BRBB  Barentsburg B    2.78 219 eP     Pn     09 39 40.5 +1.0
BRBB                            eS     Sn     09 40 07.3 -6.3
BRBB                            eSg    Sb     09 40 16.2 -2.6
BRBA  Barentsburg A    2.81 219 eP     Pn     09 39 42.2 +2.3
BRBA                            eS     Sn     09 40 08.0 -6.3
BRBA                            eSg    Sb     09 40 17.1 -2.5
HSPB  Hornsund (broa   3.66 206  P     Pb     09 39 59.4 +0.2
HSPB  Hornsund (broa   3.66 206  S     Sn     09 40 30.0 -5.3
HSPB  Hornsund (broa   3.66 206 ePg    Pg     09 40 01.6 -2.3
HSPB                            eSg    Sb     09 40 42.5 -1.6
HOPEN Hopen            3.90 172 e      Pn     09 39 57.5 +2.5
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JMA 09 09:40:18.1±0.0, 35°.4N±0°.1×133°.8E±0°.1, h10km, MV1.2/31, EASTERN TOTTORI PREF, Western Honshu

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Code  Station Name      Δ°  AZ°    Phase ID          Time      Res
                                  Op     ISC       h  m  s     ISC
JKR   Kurayoshi        0.05 182 i P    Pg     09 40 20.0 -0.1
JKR                             eS     Sg     09 40 21.4 -0.1
JAD   Aida             0.56 150  P     Pg     09 40 28.8 -0.2
JAD                             eS     Sg     09 40 36.4  0.0
JKSM  Kasumi           0.71  77 eP     Pg     09 40 31.4 -0.3
JKSM                            eS     Sg     09 40 40.5 -0.4
JHS   Saijyo           0.72 234 eP     Pg     09 40 31.7 -0.3
JHS                             eS     Sg     09 40 40.7 -0.7
JKS   Kasai            0.95 118 eP     Pg     09 40 35.8 -0.5
JKS                             eS     Sg     09 40 48.2 -0.5
JJS   Sakaide          1.05 175 eS     Sg     09 40 51.5 -0.5
JKY   Yasaka           1.06  79 eS     Sg     09 40 51.4 -1.0
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*BJI **09** 09:47:37.8, 12°.19S×116°.03E, h31km, mB5.3/5, mb4.9/46, Ms4.7/5, Ms7 4.4/1*

*IDC **09** 09:47:40.9±0.5, 11°.44S×115°.76E, h0km, mb4.6/20, mbtmp4.7/23, ML4.8/3, MS3.8/4, Error ellipse: s-maj=20.4km s-min=11.2km az=72.0*

*DJA **09** 09:47:41.8±0.7, 12°S±1°×11°6E±°, h14km±5km, M5.1/72, mb5.1/72, mB5.5/16, MLv5.3/24, Mw(mB)5.0/16*

*NEIC **09** 09:47:42.3±1.0, 11°.53S±0°.06×115°.67E±0°.06, h10km±1km, mb4.9/41, Error ellipse: s-maj=11.9km s-min=7.8km az=137.0*

ISC 09 09:47:42.3±0.3**, 11°.61S**±0°.04×**115°.75E**±0°.05**, h16km, n209, σ1s.70**/207**, mb4.9**/61**, MS4.1**/5**, 5C-1D, South of Bali**

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Code  Station Name      Δ°  AZ°    Phase ID          Time      Res
                                  Op     ISC       h  m  s     ISC
DNP   Denpasar         2.96 350  P     Pn     09 48 27.8 -0.9
TWSI  Taliwang, Sumb   3.06  21  P     Pn     09 48 30.2 +0.1
TWSI                             S     Sn     09 49 02.5 -3.9
PLAI  Plampang         3.41  36  P     Pn     09 48 35.4 +0.6
PLAI  Plampang         3.41  36  P     Pn     09 48 35.1 +0.3
JAGI  Jajag, Banyuwa   3.49 333        Pn     09 48 34.5 -1.5
JAGI  Jajag, Banyuwa   3.49 333  P     Pn     09 48 34.9 -1.1
JAGI  Jajag, Banyuwa   3.49 333  P     Pn     09 48 34.7 -1.3
SRBI  Singaraja        3.54 351  P     Pn     09 48 37.3 +0.6
GMJI  Gumukmas         4.02 325  P     Pn     09 48 41.7 -1.5
ABJI  Asem Bagus       4.07 338  P     Pn     09 48 44.6 +0.6
WBSI  Waikabubak, Su   4.08  62  P     Pn     09 48 44.0 -0.1
KMMI  Kalianget        4.86 339  P     Pn     09 48 55.7 +0.9
WSI   Waingapu         4.87  67  P     Pn     09 48 55.3 +0.4
BASI  Baing, Sumba     4.94  74  P     Pn     09 48 55.5 -0.4
      4.0nm8µm299nm,0.7s
PCJI  Pacitan          5.64 307  P     Pn     09 49 03.6 -1.9
      2.0nm140nm,1.1s
GRJI  Gresik           5.67 325  P     Pn     09 49 05.5 -0.5
      212nm,0.9s
NGJI  Ngawi            5.97 314  P     Pn     09 49 09.6 -0.5
      1.5nm120nm,0.9s
WOJI  Wonogiri, Jawa   6.05 308  P     Pn     09 49 09.9 -1.4
      2.5nm3µm150nm,0.7s
TBJI  Tambak Boyo      6.12 321  P     Pn     09 49 12.7 +0.5
      1.0nm228nm,1.0s
UGM   Wanagama         6.33 305        Pn     09 49 14.3 -0.7
UGM   Wanagama         6.33 305  P     Pn     09 49 14.9 -0.1
UGM   Wanagama         6.33 305  P     Pn     09 49 14.0 -1.0
YOGI  Yogyakarta       6.56 305  P     Pn     09 49 17.4 -0.9
      1.0nm2µm166nm,0.6s
SMRI  Semarang         6.92 310        Pn     09 49 22.1 -1.1
SMRI  Semarang         6.92 310  P     Pn     09 49 22.7 -0.6
SMRI  Semarang         6.92 310  P     Pn     09 49 22.5 -0.8
      3µm102nm,0.6s
MMRI  Maumere          7.04  66        Pn     09 49 25.4 +0.7
MMRI  Maumere          7.04  66  P     Pn     09 49 25.0 +0.2
MMRI  Maumere          7.04  66  P     Pn     09 49 26.1 +1.3
BSSI  Bau Bau, Buton   7.17  41  P     Pn     09 49 28.1 +1.5
KAPI  Kappang          7.65  31        Pn     09 49 34.7 +1.5
KAPI  Kappang          7.65  31  Pn    Pn     09 49 33.8 +0.6
      22nm,0.3s,baz=195,slow=12,SNR=44
KAPI                             Sn    Sn     09 50 53.5 -6.2
      14nm,0.3s,baz=40,slow=23,SNR=7.0
KAPI                             LR    LR     09 52 41.4
      comp=Z,506nm,20.8s,baz=80,slow=40
      71nm,0.3s
KAPI  Kappang          7.65  31  P     Pn     09 49 35.3 +2.1
BATI  Baumata          7.89  81  P     Pn     09 49 36.7 +0.1
BNSI  Bone             8.36  31  P     Pn     09 49 45.4 +2.5
      101nm,0.5s
SOEI  Soe              8.57  78        Pn     09 49 46.9 +1.0
SOEI  Soe              8.57  78  P     Pn     09 49 47.8 +1.9
SOEI  Soe              8.57  78  P     Pn     09 49 46.8 +0.8
      2µm198nm,0.6s
SPSI  Sidrap Palu      8.57  28  P     Pn     09 49 47.2 +1.4
      36nm,0.5s
BBJI  Bungbulang       8.99 297  P     Pn     09 49 50.8 -0.8
BBSI  Bau Bau          9.08  49  P     Pn     09 49 54.8 +2.0
      84nm,0.9s
LEM   Lembang          9.33 300  Pn    Pn     09 49 55.5 -0.8
      7.2nm,0.3s,baz=117,slow=6.9,SNR=6.6
LEM                              Sn    Sn     09 51 37.7 -3.4
      5.7nm,0.3s,baz=156,slow=22,SNR=4.8
LEM                              LR    LR     09 54 11.4
      comp=Z,767nm,18.1s,baz=308,slow=42
      21nm,0.6s
LEM   Lembang          9.33 300  P     Pn     09 49 56.0 -0.4
      83nm,0.8s
TTSI  Tana Toraja      9.41  26  P     Pn     09 49 59.7 +2.3
      2µm212nm,0.9s
CNJI  Cibinong         9.52 296  P     Pn     09 49 57.4 -1.4
      68nm,1.1s
SKJI  Sukabumi        10.16 296  P     Pn     09 50 06.1 -1.5
      246nm,1.1s
MBWA  Marble Bar      10.24 159        Pn     09 50 04.0 -4.7
MBWA  Marble Bar      10.24 159  P     Pn     09 50 04.3 -4.4
      comp=Z,138nm,0.5s
BKB   Balikpapan      10.34   6  P     Pn     09 50 13.3 +3.2
      comp=Z,78nm,1.4s
PSAD1 Pilbara Seismi  10.54 159  P     Pn     09 50 09.0 -3.9
      comp=Z,50nm,0.5s
PSAC1 Pilbara Seismi  10.61 159  P     Pn     09 50 09.2 -4.6
PSAB2 Pilbara Seismi  10.65 159  P     Pn     09 50 10.1 -4.2
      comp=Z,52nm,0.5s
PSA00 Pilbara Seismi  10.66 159        Pn     09 50 10.2 -4.2
PSA00 Pilbara Seismi  10.66 159  P     Pn     09 50 10.2 -4.3
      comp=Z,39nm,0.6s
GIRL  Giralia         11.07 187        Pn     09 50 16.5 -3.6
GIRL  Giralia         11.07 187  P     Pn     09 50 16.9 -3.2
      comp=Z,663nm,0.5s
GIRL  Giralia         11.07 187  P     Pn     09 50 16.9 -3.2
CGJI  Cibinong        11.10 296  P     Pn     09 50 19.3 -1.2
      comp=Z,83nm,1.0s
FITZ  Fitzroy Crossi  11.53 125        Pn     09 50 23.7 -2.7
FITZ  Fitzroy Crossi  11.53 125  P     Pn     09 50 24.2 -2.2
      comp=Z,6.2nm,0.6s
FITZ  Fitzroy Crossi  11.53 125  Pn    Pn     09 50 24.4 -2.0
      comp=Z,2.7nm,0.3s,baz=309,slow=9.9,SNR=53
FITZ                             Sn    Sn     09 52 23.3  -12
      comp=Z,13nm,0.3s,baz=249,slow=19,SNR=11
TPI   Tanjungpandan   11.90 317  P     Pn     09 50 31.0 -0.6
STKI  Sintang         12.35 340  P     Pn     09 50 38.2 +0.6
      comp=Z,84nm,0.9s
KASI  Kota Agung      12.66 298  P     Pn     09 50 39.9 -2.0
      comp=Z,31nm,0.8s
KNRA  Kununurra       13.28 109        Pn     09 50 48.7 -1.6
KNRA  Kununurra       13.28 109  P     Pn     09 50 48.7 -1.6
      comp=Z,24nm,0.5s
MDSI  Maura Dua       13.46 301  P     Pn     09 50 51.2 -1.6
KSM   Kuching         14.07 337        Pn     09 50 58.9 -2.4
MNAI  Manna           14.57 299  Pn    Pn     09 51 05.0 -3.0
MNAI  Manna           14.57 299  P     Pn     09 51 06.9 -1.1
DRS   Darwin Rock St  14.84  95  P     Pn     09 51 11.1 -0.6
MTN   Manton Dam      15.09  96        Pn     09 51 13.6 -1.4
MTN   Manton Dam      15.09  96  P     Pn     09 51 13.7 -1.2
      comp=Z,35nm,0.8s
MTN   Manton Dam      15.09  96  P     Pn     09 51 15.2 +0.2
MEEK  Meekatharra     15.20 170  P     Pn     09 51 12.6 -3.8
      comp=Z,231nm,0.7s
KSI   Kapahiang       15.24 300  P     Pn     09 51 14.2 -2.9
LBMI  Labuha          15.96  48  P     P      09 51 28.2 -1.7
KDU   Kakadu          16.39  95  P     Pn     09 51 31.3 -0.5
      comp=Z,22nm,0.7s
KDU   Kakadu          16.39  95  P     Pn     09 51 32.1 +0.3
TNTI  Ternate         16.86  44        Pn     09 51 37.6 -0.3
TNTI  Ternate         16.86  44  P     P      09 51 39.2 -0.7
      comp=Z,40nm,1.1s
MYLDM Lahad Datu      16.90   9  P     P      09 51 39.0 -1.3
MYLDM                            IAmb  IAmb   09 51 45.0
      comp=Z,98nm,1.1s
MORW  Morawa          17.38 179  P     Pn     09 51 40.7 -3.6
MORW  Morawa          17.38 179  P     Pn     09 51 40.4 -3.8
      comp=Z,75nm,0.8s
KKM   Kota Kinabalu   17.54   2  P     P      09 51 46.2 -1.3
KKM   Kota Kinabalu   17.54   2  P     P      09 51 47.1 -0.4
FAKI  Fak Fak         18.49  63  P     P      09 51 56.8 -1.1
FAKI                             IAmb  IAmb   09 51 58.6
      comp=Z,64nm,0.9s
FAKI  Fak Fak         18.49  63  P     P      09 51 57.2 -0.7
FAKI  Fak Fak         18.49  63  P     P      09 51 57.2 -0.7
      comp=Z,83nm,0.9s
SWI   Sorong          18.73  56  P     Pn     09 52 02.2 +1.2
      comp=Z,58nm,0.8s
PPI   Padang Panjang  18.84 305  P     P      09 51 58.2 -3.6
BLDU  Ballidu         18.94 177  P     P      09 51 60.0 -2.7
      comp=Z,120nm,0.7s
BLDU  Ballidu         18.94 177  P     P      09 52 01.1 -1.6
WRA   Warramunga Arr  19.70 117  P     P      09 52 11.4 +0.3
WRA   Warramunga Arr  19.70 117  P     Pn     09 52 12.8 +0.1
      comp=Z,2.9nm,0.3s,baz=288,slow=14,SNR=139
WRA                              S     S      09 55 36.6  -16
      comp=Z,12nm,0.8s,baz=292,slow=25,SNR=8.4
      comp=Z,25nm,0.7s
WR7   Warramunga Arr  19.82 117  P     P      09 52 12.7 +0.1
KLBR  Kellerberrin    19.98 175  P     P      09 52 14.1  0.0
      comp=Z,95nm,0.6s
KLBR  Kellerberrin    19.98 175  P     P      09 52 14.9 +0.8
MUN   Mundaring       20.28 179  P     P      09 52 16.1 -1.3
      comp=Z,104nm,1.0s
KMBL  Kambalda        20.47 165  P     P      09 52 19.6 +0.2
      comp=Z,57nm,1.2s
PBSI  Pulau Batu      20.80 302  P     P      09 52 23.1 -0.1
      comp=Z,85nm,1.0s
RKPI  Ransiki, Papua  20.85  63  P     Pn     09 52 25.1 -1.1
      comp=Z,91nm,0.9s
AS13  Alice Springs   21.01 127  P     P      09 52 27.2 +1.8
AS31  Alice Springs   21.02 127  P     P      09 52 26.9 +1.4
ASAR  Alice Springs   21.02 127  P     P      09 52 26.9 +1.3
ASAR  Alice Springs   21.02 127  P     P      09 52 27.6 +2.1
      comp=Z,20nm,0.6s,baz=299,slow=10,SNR=192
ASAR                             S     S      09 56 11.4 -7.9
      comp=Z,9.1nm,0.7s,baz=303,slow=22,SNR=14
      comp=Z,20nm,0.6s
NWAO  Narrogin (SRO)  21.27 177  P     P      09 52 30.6 +2.6
NWAO  Narrogin (SRO)  21.27 177  P     P      09 52 32.1 +4.1
      comp=Z,48nm,0.5s,baz=358,slow=11,SNR=42
NWAO                             S     S      09 56 08.8  -15
      comp=Z,29nm,0.5s,baz=342,slow=5.0,SNR=4.5
NWAO                             LR    LR     10 01 08.1
      comp=Z,197nm,19.4s,baz=264,slow=38
      comp=Z,48nm,0.5s
RPSI  Rantau Prapat   21.95 309  P     P      09 52 34.2 -1.4
RPSI  Rantau Prapat   21.95 309  P     P      09 52 35.0 -0.5
PSI   Prapat          22.02 310  P     P      09 52 35.0 -1.4
      comp=Z,6.8nm,0.4s,baz=154,slow=6.8,SNR=14
PSI                              LR    LR     10 01 52.7
      comp=Z,431nm,18.0s,baz=119,slow=39
      comp=Z,6.8nm,0.4s
PSI   Prapat          22.02 310  P     P      09 52 35.6 -0.8
GSI   Gunungsitoli    22.15 304  P     P      09 52 37.2 -0.5
      comp=Z,37nm,0.8s
FORT  Forrest         22.23 151  P     P      09 52 39.1 +0.7
      comp=Z,120nm,0.7s
KULM  Kulim           22.53 317  P     P      09 52 40.8 -1.0
KULM                             IAmb  IAmb   09 52 43.0
      comp=Z,95nm,1.5s
KULM  Kulim           22.53 317  P     P      09 52 41.1 -0.6
TSI   Tuntungan       22.75 310  P     P      09 52 45.2 +1.2
      comp=Z,174nm,0.9s
DLV    Lat            24.48 343  P     P      09 53 01.5 +0.3
QIS   Mount Isa       24.56 114  P     P      09 53 03.0 +1.3
      comp=Z,66nm,1.0s
QIS   Mount Isa       24.56 114  P     P      09 53 03.4 +1.7
MLSI  Meulaboh, Aceh  24.88 308  P     P      09 53 06.9 +2.3
      comp=Z,110nm,1.1s
SRIT  Nakonsritamara  25.70 321  P     P      09 53 12.3 +0.3
BSI   Banda Aceh      26.51 309  P     P      09 53 18.9 -0.5
      comp=Z,54nm,0.9s
COEN  Coen            26.84  98  P     P      09 53 23.3 +0.9
BBOO  Buckleboo       28.16 142  P     P      09 53 34.6 +0.5
MTSU  Mount Surprise  28.34 107  P     P      09 53 38.3 +2.5
QLP   Quilpie         30.66 123  P     P      09 53 56.1 -0.2
QIZ   Qiongzhong      30.99 349  P     P      09 53 59.3 +0.1
QIZ                              S     S      09 59 08.6 +5.1
QIZ                              pmax  pmax
      comp=Z,12nm,0.7s
QIZ                              LR    LR
      comp=Z,190nm,13.5s
STKA  Stephens Creek  31.21 134  P     P      09 54 02.6 +1.5
STKA  Stephens Creek  31.21 134  P     P      09 54 02.5 +1.4
      comp=Z,186nm,0.9s
STKA  Stephens Creek  31.21 134  P     P      09 54 03.2 +2.1
      comp=Z,15nm,0.7s,baz=307,slow=9.4,SNR=20
      comp=Z,15nm,0.7s
STKA  Stephens Creek  31.21 134  P     P      09 54 01.3 +0.2
CMSA  Cobar Meteorol  34.00 130  P     P      09 54 27.2 +1.6
      comp=Z,13nm,1.1s
CMSA  Cobar Meteorol  34.00 130  P     P      09 54 25.5 -0.1
CM31  Chiang Mai Arr  34.17 331  P     P      09 54 26.1 -1.0
CM31                             IAmb  IAmb   09 54 43.9
      comp=Z,21nm,1.0s
CMAR  Chiang Mai Arr  34.17 331  P     P      09 54 27.3 +0.3
CMAR  Chiang Mai Arr  34.17 331  P     P      09 54 28.2 +1.2
      comp=Z,16nm,0.8s,baz=160,slow=7.5,SNR=31
      comp=Z,16nm,0.8s
ARPS  Mount Arapiles  34.34 141  P     P      09 54 27.9 -0.5
CHTO  Chiang Mai      34.47 331  P     P      09 54 29.8 +0.1
CHTO                             IAmb  IAmb   09 54 33.7
      comp=Z,9.4nm,0.6s
YHNB  Yeheng          36.47   9  P     P      09 54 46.5 -0.4
TOO   Toolangi        37.12 139  P     P      09 54 50.7 -1.6
      comp=Z,6.5nm,1.3s
KMI   Kunming         38.65 341  P     P      09 55 06.9 +1.4
KMI                              pmax  pmax
      comp=Z,22nm,0.4s
TNCH  TengChong       40.10 335 eP     P      09 55 21.2 +3.6
TNCH                             pmax  pmax
      comp=Z,38nm,1.2s
PZH   PanZhiHua       40.25 340  P     P      09 55 19.5 +0.7
PZH                              pmax  pmax
      comp=Z,10.0nm,0.5s
NJ2   Nanjing         43.51   4 eP     P      09 55 46.2 +1.0
NJ2                              pmax  pmax
      comp=Z,11nm,0.6s
CD2   Chengdu         43.81 345  P     P      09 55 47.0 -0.7
CD2                              pmax  pmax
      comp=Z,30nm,0.6s
XAN   Xi'an           45.85 352 ⇑P     P      09 56 02.9 -1.0
XAN                              pmax  pmax
      comp=Z,12nm,0.9s
EVN   Everest         48.29 325  P     P      09 56 22.9 -0.9
LZH   Lanzhou         48.75 347 eP     P      09 56 24.9 -1.7
LZH                              pmax  pmax
      comp=Z,26nm,1.3s
KSAR  Wonju Array Be  50.10  13  P     P      09 56 36.8 +0.1
KSRS  Korea Array     50.12  13  P     P      09 56 36.6 -0.2
      comp=Z,5.2nm,0.9s,baz=192,slow=8.0,SNR=19
      comp=Z,5.2nm,0.9s
BTO   Baotou          52.22 354 eP     P      09 56 53.4 +0.7
BTO                              pP    sP     09 56 58.3 +1.1
BTO                              S     S      10 04 20.6 +3.7
BTO                              pmax  pmax
      comp=Z,21nm,0.7s
BTO                              pmax  pmax
      comp=Z,960nm,9.3s
BTO                              LR    LR
      comp=Z,220nm,10.9s
BTO                              LR    LR
      comp=Z,150nm,10.3s
BTO                              LR    LR
      comp=Z,270nm,16.7s
HHC   Hu-ho-hao-te    52.33 356 eP     P      09 56 45.0 -8.5
HHC                              pmax  pmax
      comp=Z,25nm,0.8s
HHC                              pmax  pmax
      comp=Z,88nm,4.5s
MJAR  Matsushiro Arr  52.36  23  P     P      09 56 52.1 -1.5
      comp=Z,4.0nm,0.7s,baz=196,slow=7.9,SNR=11
      comp=Z,4.0nm,0.7s
GTA   Gaotai          52.88 345 eP     P      09 56 59.0 +1.4
GTA                              pmax  pmax
      comp=Z,9.0nm,0.8s
XLT   XiLinHaoTe      55.24   0 eP     P      09 57 22.9 +8.2
XLT                              pP    pwP    09 57 27.9 +2.4
XLT                              pmax  pmax
      comp=Z,19nm,0.7s
MDJ   Mudanjiang      57.35  12  P     P      09 57 28.8 -0.9
MDJ                              pmax  pmax
      comp=Z,22nm,0.7s
USRK  Ussuriysk Ar.   57.47  14  P     P      09 57 29.9 -0.6
      comp=Z,7.0nm,0.7s,baz=177,slow=6.5,SNR=12
      comp=Z,7.0nm,0.7s
BNX   BinXian         58.04  10 ⇓P     P      09 57 33.4 -1.1
BNX                              pmax  pmax
      comp=Z,5.0nm,0.7s
ULN   Ulaanbaatar     59.71 353  P     P      09 57 46.3  0.0
ULN                              IAmb  IAmb   09 57 47.2
      comp=Z,9.7nm,0.8s
SONM  Songino Array   59.76 353  P     P      09 57 46.3 -0.3
SONM                             IAmb  IAmb   09 57 47.5
      comp=Z,9.2nm,0.9s
SONM  Songino Array   59.76 353  P     P      09 57 46.6  0.0
      comp=Z,9.0nm,0.8s,baz=173,slow=8.5,SNR=33
      comp=Z,9.0nm,0.8s
RTZ   Ruatahuna       60.42 128  P     P      09 57 52.7 +1.3
NIL   Nilore          60.51 320        P      09 57 50.7 -1.1
NIL                              IAmb  IAmb   09 57 54.9
      comp=Z,7.8nm,0.5s
JKA   Kamikawa-asahi  60.59  22  P     P      09 57 52.0 -0.2
WMQ   Urumqi          60.79 337 eP     P      09 57 55.9 +2.2
HEH   HeiHe           62.44   8 eP     P      09 58 04.1 -0.4
HEH                              pmax  pmax
      comp=Z,10.0nm,0.5s
KSH   Kashi           62.88 326  P     P      09 58 07.6 -0.3
KSH                              sP    pwP    09 58 19.3 +0.5
KSH                              pmax  pmax
      comp=Z,9.0nm,0.9s
KSH                              LR    LR
      comp=Z,610nm,22.7s
KSH                              LR    LR
      comp=Z,290nm,22.3s
TARG  Taragay, Kyrgy  63.52 329  P     P      09 58 12.3 -0.2
TARG                             IAmb  IAmb   09 58 31.1
      comp=Z,5.6nm,0.7s
KBL   Kabul           63.78 318  P     P      09 58 13.3 -0.8
KBL                              IAmb  IAmb   09 58 30.6
      comp=Z,11nm,0.7s
KDJ   Kajisay         64.14 329  P     P      09 58 16.2  0.0
KDJ                              IAmb  IAmb   09 58 23.1
      comp=Z,4.9nm,0.6s
MKAR  Makanchi Array  65.39 335  P     P      09 58 23.5 -0.7
MKAR  Makanchi Array  65.39 335  P     P      09 58 24.2 +0.1
      comp=Z,5.4nm,0.4s,baz=147,slow=7.5,SNR=46
      comp=Z,5.4nm,0.4s
MAKZ  Makanchi        65.53 335  P     P      09 58 24.7 -0.4
GAR   Garm            65.77 322  P     P      09 58 25.8 -1.1
AAK   Ala-Archa       65.88 328  P     P      09 58 27.6 +0.1
AAK                              IAmb  IAmb   09 58 45.3
      comp=Z,4.8nm,0.7s
SIMJ  Simiganj        66.34 321  P     P      09 58 29.7 -0.8
SIMJ                             IAmb  IAmb   09 58 43.2
      comp=Z,4.8nm,0.8s
KKAR  Karatay Array   68.33 326  P     P      09 58 41.8 -1.1
KURBB Kurchatov Arra  69.95 336  P     P      09 58 52.8 +0.1
      comp=Z,4.0nm,0.7s,baz=151,slow=5.3,SNR=24
      comp=Z,4.0nm,0.7s
VNDA  Vanda           69.95 170  P     P      09 58 53.7 +1.3
VNDA                             IAmb  IAmb   09 59 07.0
      comp=Z,7.4nm,0.9s
VNDA  Vanda           69.95 170  P     P      09 58 54.5 +2.1
      comp=Z,5.0nm,0.8s,baz=318,slow=5.7,SNR=20
      comp=Z,5.0nm,0.8s
KURK  Kurchatov       69.98 336  P     P      09 58 53.0  0.0
KURK                             IAmb  IAmb   09 58 55.1
      comp=Z,6.9nm,0.8s
ZALV  Zalesovo Beam   70.39 341  P     P      09 58 54.9 -0.5
      comp=Z,7.8nm,0.7s,baz=134,slow=4.3,SNR=20
      comp=Z,7.8nm,0.7s
PETK  Petropavlovsk-  73.75  25  P     P      09 59 16.8 +1.2
      comp=Z,1.0nm,0.6s,baz=226,slow=7.2,SNR=5.9
      comp=Z,1.0nm,0.6s
SYO   Syowa Base      74.28 201⇑eP     P      09 59 20.4 +1.9
BVAR  Borovoye Array  75.13 334  P     P      09 59 24.0 +0.4
      comp=Z,2.1nm,0.6s,baz=148,slow=8.7,SNR=8.7
      comp=Z,2.1nm,0.6s
BRVK  Borovoye        75.20 334  P     P      09 59 23.2 -0.8
RAYN  Ar Rayn         77.02 298  P     P      09 59 34.5 -0.6
AB31  Akbulak array   77.89 326  P     P      09 59 39.2 -0.1
AB31                             IAmb  IAmb   09 59 48.5
      comp=Z,6.6nm,0.8s
ABKAR Akbulak array   77.89 326  P     P      09 59 39.5 +0.2
ABKAR                            IAmb  IAmb   09 59 48.5
      comp=Z,6.6nm,0.8s
ABKAR Akbulak array   77.89 326  P     P      09 59 39.2 -0.1
QSPA  South Pole Qui  78.41 180  P     P      09 59 43.5 +1.3
      comp=Z,7.2nm,1.0s,baz=315,slow=4.0,SNR=13
      comp=Z,7.2nm,1.0s
SEY   Seymchan        79.52  16  P     P      09 59 48.5 +0.5
      comp=Z,2.4nm,0.7s,baz=166,slow=3.6,SNR=6.1
      comp=Z,2.4nm,0.7s
ARTI  Arti            82.66 332  P     P      10 00 04.4 -0.5
ARTI                             IAmb  IAmb   10 00 17.0
      comp=Z,7.2nm,0.9s
SNAA  Sanae           87.63 196 ⇑P     P      10 00 32.1 +2.3
      comp=Z,87nm,0.7s
SNAA  Sanae           87.63 196  P     P      10 00 31.0 +1.2
SNAA                             IAmb  IAmb   10 00 32.6
      comp=Z,5.2nm,0.9s
SNAA  Sanae           87.63 196  P     P      10 00 31.6 +1.9
      comp=Z,4.9nm,0.9s,baz=162,slow=3.9,SNR=14
      comp=Z,4.9nm,0.9s
MMAI  Mount Meron Ar  88.30 304  P     P      10 00 35.8 +2.1
      comp=Z,1.1nm,0.5s,baz=110,slow=6.4,SNR=2.0
      comp=Z,1.1nm,0.5s
BELA  Belgrano 2      89.12 186  P     P      10 00 37.5 +0.9
BELA                             IAmb  IAmb   10 01 01.7
      comp=Z,5.6nm,1.1s
VNA2  Neumayer--Watz  89.28 196 ⇑P     P      10 00 39.9 +2.5
      comp=Z,3.0nm,0.8s,baz=337,slow=0.6
VNA3  Neumayer Olymp  89.69 195 ⇑P     P      10 00 41.7 +2.3
      comp=Z,2.5nm,0.8s
BRTR  Keskin Array B  91.35 310  P     P      10 00 48.4 +0.6
      comp=Z,1.1nm,0.9s,baz=108,slow=6.6,SNR=5.7
      comp=Z,1.1nm,0.9s
PLTM  Poltava         93.11 320  P     P      10 00 54.6 -0.9
AK10  Malin Array Si  96.66 320  P     P      10 01 11.1 -0.6
RNPP5 Staryi Chortor  98.86 320  P     P      10 01 20.7 -0.9
TXAR  Lajitas Array  139.32  58  PKhKP PKPpre 10 07 01.1
      comp=Z,0.3nm,0.9s,baz=210,slow=1.4,SNR=2.3
TXAR                             PKP   PKiKP  10 07 11.9  0.0
      comp=Z,0.2nm,0.5s,baz=344,slow=1.3,SNR=4.0
BDFB  Brasilia       148.52 211  PKPbc PKiKP  10 07 30.7 -0.5
      comp=Z,2.1nm,0.6s,baz=108,slow=6.4,SNR=3.5
LPAZ  La Paz         152.02 172  PKPbc PKiKP  10 07 40.6 +1.7
      comp=Z,2.6nm,0.8s,baz=127,slow=0.2,SNR=9.0
SIV   San Ignacio    152.40 187  PKPbc PKiKP  10 07 40.3 +1.3
      comp=Z,1.3nm,0.8s,baz=138,slow=4.8,SNR=9.7
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DJA 09 09:48:22.6±0.9**, 2°N**±7°×**12°1E**±°**, h10km, M4.5**/7**, mB5.3**/2**, mb5.3**/2**, MLv4.0**/7**, Mw(mB)4.7**/2**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	1.44	159	P	Pn	09 48 47.7	-1.0
MRSI				S	Sn	09 49 07.1	-0.6
MPSI	Mapaga	2.13	226	P	Pn	09 48 57.8	-0.5
APSI	Ampana	2.73	175	P	Pn	09 49 06.7	+0.2
KMSI	Cibinong	2.84	116	P	Pn	09 49 07.8	-0.2
LUWI	Luwuk	3.15	155	P	Pn	09 49 13.2	+0.9
TTSI	Tana Toraja	5.10	198	P	Pn	09 49 40.0	+0.8
	0.6nm2µm212nm,0.9s						

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*ATH **09** 10:09:33.3, 37.°63N×20.°68E, h14^{km}±2^{km}, ML3.5/9, Manual Solution by A.Papageorgiou First location: 2019/06/09 10:10:31, This location: 2021/06/07 06:11:13 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*

*THE **09** 10:09:34.3, 38°N±2°×2°1E±°, h6^{km}±2^{km}, M3.4/16, MLh3.4/16*

*PDG **09** 10:09:34.8±0.3, 37.°66N×20.°70E, h5^{km}±1^{km}, ML3.7/6, Error ellipse: s-maj=0.7km s-min=1.2km az=0.0*

*IDC **09** 10:09:46.3±3.8, 37.°72N×20.°65E, h122^{km}±37^{km}, mb3.4/10, mbtmp3.5/14, MS3.9/1, Error ellipse: s-maj=23.7km s-min=17.6km az=173.0*

ISC 09 10:09:34.5±0.9**, 37.°69N**±0.°04×**20.°75E**±0.°03**, h11**^{km}±4^{km}**, n69, σ0.^{s}99**/101**, mb3.7**/9**, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LTHK	Lithakia	0.08	72	P	Pg	10 09 36.5	-0.4
LTHK				S	Sg	10 09 37.7	-1.1
LTHK	Lithakia	0.08	72	P	Pg	10 09 36.8	-0.2
LTHK				S	Sg	10 09 37.8	-0.9
KYPS	Kipseli, Zakin	0.15	25	P	Pg	10 09 38.2	+0.3
KYPS				S	Sg	10 09 41.5	+1.1
ORTH	Orthonies,Zaky	0.17	347	P	Pg	10 09 38.6	+0.3
ORTH				S	Sg	10 09 41.9	+0.9
CLEM	Kyllini,Ilia,G	0.37	56	P	Pb	10 09 42.5	-0.5
CLEM				S	Sb	10 09 48.7	-0.1
RTZL	Ratzakli, Kefa	0.39	3	P	Pb	10 09 42.6	-0.9
RTZL				S	Sb	10 09 48.7	-0.8
PSDA	Pessada-Kefalo	0.45	343	P	Pb	10 09 43.5	-0.9
PSDA				S	Sb	10 09 50.7	-0.4
PSDA	Pessada-Kefalo	0.45	343	P	Pb	10 09 43.6	-0.8
PSDA				S	Sb	10 09 50.4	-0.7
KTLO	Katakolo	0.46	95	P	Pb	10 09 43.3	-1.3
KTLO				S	Sb	10 09 51.0	-0.4
LCHA	Lechaina	0.48	58	P	Pb	10 09 43.8	-1.2
LCHA				S	Sb	10 09 52.1	+0.1
VLS	Valsamata	0.51	346	P	Pb	10 09 44.3	-1.1
VLS				S	Sb	10 09 51.9	-0.9
VLS	Valsamata	0.51	346	P	Pb	10 09 44.4	-1.1
VLS				S	Sb	10 09 52.2	-0.6
ANDM	Andravida	0.51	54	P	Pb	10 09 44.5	-1.0
ANDM				S	Sb	10 09 52.5	-0.4
ARG2	Argostoli	0.53	338	P	Pb	10 09 44.7	-1.1
ARG2				S	Sb	10 09 53.0	-0.6
SMHA	Samh	0.57	352	P	Pb	10 09 45.4	-1.0
SMHA				S	Sb	10 09 53.8	-0.8
DMLN	Damoulianata-K	0.62	332	P	Pb	10 09 46.6	-0.8
DMLN				S	Sn	10 09 57.3	-2.0
DMLN	Damoulianata-K	0.62	332	P	Pb	10 09 46.6	-0.8
DMLN				S	Sb	10 09 55.7	-0.6
YRMI	Loutra Irminis	0.63	49	P	Pb	10 09 47.1	-0.5
YRMI				S	Sb	10 09 56.5	+0.1
RLS	Riolos of Patr	0.68	57	P	Pb	10 09 48.1	-0.3
RLS				S	Sb	10 09 58.1	+0.3
RLS	Riolos of Patr	0.68	57	P	Pb	10 09 48.2	-0.2
RLS				S	Sb	10 09 58.3	+0.5
KRES	Krestena	0.70	97	P	Pb	10 09 48.5	-0.2
KRES				S	Sb	10 09 58.7	+0.3
AXS	Araxos	0.71	44	P	Pb	10 09 48.3	-0.7
AXS				S	Sb	10 09 59.6	+0.9
AXS	Araxos	0.71	44	P	Pb	10 09 48.4	-0.5
AXS				S	Sb	10 09 58.8	+0.1
ZARO	Zacharo	0.74	105	P	Pb	10 09 49.2	-0.3
ZARO				S	Sb	10 10 00.1	+0.5
AMT	Artemida-Makis	0.78	101	P	Pb	10 09 49.5	-0.6
AMT				S	Sb	10 10 01.7	+1.0
FSK	Fiskardo	0.79	349	P	Pb	10 09 49.3	-0.9
FSK				S	Sb	10 10 01.4	+0.6
FSK	Fiskardo	0.79	349	P	Pb	10 09 49.2	-0.9
FSK				S	Sb	10 10 01.0	+0.2
EVGI	Lefkada island	0.94	356	P	Pb	10 09 52.0	-0.8
PDO	Prodromos	0.97	21	P	Pb	10 09 52.8	-0.6
NYDR	Nydri-Lefkada	1.03	358	P	Pb	10 09 53.6	-0.7
ITM	Ithomi	1.07	118	P	Pn	10 09 54.8	-0.6
LKD2	Lefkada island	1.10	356	P	Pg	10 09 54.7	-1.1
PVO	Paravola	1.11	33	P	Pn	10 09 55.7	-0.3
TSLK	Tsoukalades, L	1.14	356	P	Pn	10 09 55.7	-0.7
KLV	Kalavryta, Ach	1.17	72	P	Pn	10 09 56.6	-0.2
EFP	Efpalio	1.18	51	P	Pb	10 09 56.4	-0.5
SERG	Sergoula	1.26	55	P	Pg	10 09 57.9	-0.9
AMPL	Ampelaki	1.29	16	P	Pn	10 09 57.9	-0.5
GUR	Goura	1.29	78	P	Pg	10 09 58.8	-0.5
ANX	Ano Chora	1.30	45	P	Pg	10 09 58.6	-0.8
KALE	Kalithea	1.31	57	P	Pg	10 09 58.8	-0.8
KALE	Kalithea	1.31	57	P	Pn	10 09 58.2	-0.5
ULC	Ulcinj	4.42	345	*e*Pn	Pn	10 10 42.9	+1.3
ULC				*i* Sn	Sn	10 11 33.9	+0.8
DRME	Dracevica, Mon	4.65	346	*e*Pn	Pn	10 10 46.2	+1.5
DRME				*i* Sn	Sn	10 11 39.4	+0.8
BUM	Brajici-Budva	4.82	343	*e*Pn	Pn	10 10 48.6	+1.5
BUM				*i* Sn	Sn	10 11 43.4	+0.5
PDG	Podgorica	4.87	347	*e*Pn	Pn	10 10 49.2	+1.5
PDG				*i* Sn	Sn	10 11 44.6	+0.5
CEME	Cevo	5.05	344	*e*Pn	Pn	10 10 51.4	+1.2
CEME				*i* Sn	Sn	10 11 48.3	-0.3
HCY	Herceg Novi	5.06	341	*e*Pn	Pn	10 10 51.7	+1.4
HCY				*i* Sn	Sn	10 11 48.6	-0.1
IVA	Berane	5.22	353	*e*Pn	Pn	10 10 54.0	+1.4
IVA				*i* Sn	Sn	10 11 53.0	+0.2
BRY	Bratogost	5.47	343	*e*Pn	Pn	10 10 57.4	+1.3
BRY				*i* Sn	Sn	10 11 57.7	-1.4
UPM	Unac-Piva	5.69	346	*e*Pn	Pn	10 11 00.4	+1.3
UPM				*i* Sn	Sn	10 12 04.2	-0.2
OBKA	Obir	9.94	334	*e*Pn	Pn	10 12 01.2	+3.9
	2.3nm,0.4s						
BRTR	Keskin Array B	10.28	75	P	Pn	10 12 11.6	+10
	0.3nm,0.5s,baz=265,slow=14,SNR=2.5						
MYKA	Terra Mystica	10.37	332	*e*Pn	Pn	10 12 07.2	+4.1
	1.0nm,0.3s						
MOA	Molln	11.21	337	*e*Pn	Pn	10 12 19.5	+4.8
	1.0nm,0.5s						
GERES	GERESS Array B	12.27	338	P	Pn	10 12 35.6	+6.5
	0.3nm,0.5s,baz=150,slow=14,SNR=1.7						
AKASG	Malin Array Be	14.35	22	P	P	10 13 05.3	+0.8
	0.2nm,0.4s,baz=211,slow=9.4,SNR=8.5						
ESDC	Sonseca Array	19.38	284	P	Pn	10 14 00.8	-0.6
	0.4nm,0.9s,baz=79,slow=11,SNR=1.8						
HFS	Hagfors	22.91	351	P	P	10 14 38.5	+0.4
	1.3nm,0.6s,baz=170,slow=8.8,SNR=7.8 1.3nm,0.6s						
EKA	Eskdalemuir Ar	23.93	325	P	P	10 14 49.0	+0.7
	2.1nm,0.8s,baz=128,slow=8.9,SNR=4.7 2.1nm,0.8s						
FINES	FINESS Array B	24.02	6	P	P	10 14 49.2	+0.2
	0.6nm,0.5s,baz=185,slow=9.8,SNR=4.3 0.6nm,0.5s						
NOA	NORSAR Array B	24.13	349	P	P	10 14 50.5	+0.3
	0.5nm,0.8s,baz=161,slow=10,SNR=3.2 0.5nm,0.8s						
TORD	Torodi Ar. Bea	29.76	220	P	P	10 15 41.2	+0.1
	0.4nm,0.3s,baz=26,slow=8.6,SNR=2.7 0.4nm,0.3s						
BVAR	Borovoye Array	37.30	49	P	P	10 16 46.9	+0.5
	1.2nm,0.6s,baz=270,slow=7.2,SNR=4.8 1.2nm,0.6s						
DBIC	Dimbokro	38.66	223	LR	LR	10 34 56.0	
	comp=Z,200nm,21.5s,baz=128,slow=39						
KURBB	Kurchatov Arra	42.38	53	P	P	10 17 27.4	-1.3
	0.8nm,0.7s,baz=281,slow=9.0,SNR=6.2 0.8nm,0.7s						
MKAR	Makanchi Array	45.41	58	P	P	10 17 52.8	-0.3
	0.4nm,0.6s,baz=282,slow=7.5,SNR=4.0 0.4nm,0.6s						
ZALV	Zalesovo Beam	45.89	48	P	P	10 17 56.1	-0.6
	1.8nm,0.5s,baz=276,slow=9.2,SNR=6.3 1.8nm,0.5s						
CMAR	Chiang Mai Arr	69.78	82	P	P	10 20 44.7	-0.4
	0.7nm,0.5s,baz=321,slow=5.5,SNR=5.0 0.7nm,0.5s						

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*NEIC **09** 10:32:36.4±1.2, 52.°62N±0.°06×161.°8W±0.°1, h10^{km}±2^{km}, mb3.6/12, ML3.3/16, ML3.2(AEIC), Error ellipse: s-maj=11.0km s-min=10.6km az=65.0*

*IDC **09** 10:32:37.2±1.4, 53.°04N×161.°88W, h0^{km}, mb3.5/5, mbtmp3.4/7, ML2.8/2, Error ellipse: s-maj=31.9km s-min=23.3km az=175.0*

*AEIC **09** 10:32:40.8±1.7, 52.°8N±0.°1×162.°0W±0.°1, h42^{km}±9^{km}, Error ellipse: s-maj=16.1km s-min=9.8km az=158.0*

ISC 09 10:32:39.5±0.9**, 52.°9N**±0.°1×**161.°86W**±0.°07**, h20**^{km}**, n83, σ1.^{s}40**/76**, mb3.4**/5**, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISLZ	Isanotski Laza	2.13	330		Pn	10 33 15.0	+0.9
SSLS	Shishaldin Sou	2.22	326		Pn	10 33 16.5	+1.3
ISNN	Isanotski Nort	2.25	330		Pn	10 33 17.3	+1.7
WESE	West Dahl East	2.26	315		Pn	10 33 17.2	+1.4
CNBA	Chernabura Isl	2.35	34	Pn	Pn	10 33 17.0	+0.1
WECS	Westdahl Cape	2.38	315		Pn	10 33 19.0	+1.6
WEBT	Westdahl Beart	2.41	316		Pn	10 33 18.5	+0.6
HAG	Hague Volcano	2.43	359		Pn	10 33 20.1	+2.1
PS1A	Pavlof South-1	2.53	2		Pn	10 33 21.6	+2.2
SDPT	Sand Point	2.59	18		Pn	10 33 21.9	+1.6
SDPT	Sand Point	2.59	18	IAML		10 33 59.8	
	comp=N,67nm,0.8s						
SDPT				IAML		10 34 01.2	
	comp=E,55nm,1.2s						
AKUT	Akutan	2.64	300		Pn	10 33 21.5	+0.5
AKUT	Akutan	2.64	300	IAML		10 33 54.0	
	comp=E,109nm,0.9s						
AKUT				IAML		10 33 55.7	
	comp=N,110nm,0.5s						
AHB	Akutan Harbor	2.66	299		Pn	10 33 21.7	+0.5
AKBBA	Akutan Broad B	2.71	298		Pn	10 33 22.3	+0.4
AKMO	Akutan Morgan	2.75	297		Pn	10 33 22.9	+0.4
AKGG	Akutan Green G	2.79	300		Pn	10 33 23.6	+0.7
LVA	Lava Point	2.79	299	Pn	Pn	10 33 21.8	-1.3
LVA				IAML		10 34 00.1	
	comp=E,130nm,1.0s						
S12K	Black Hills	2.81	358		Pn	10 33 25.9	+2.5
S12K	Black Hills	2.81	358	IAML		10 34 01.7	
	comp=N,111nm,0.7s						
S12K				IAML		10 34 08.3	
	comp=E,141nm,0.8s						
UNV	Unalaska Valle	2.94	291		Pn	10 33 24.8	-0.2
MREP	Makushin Rep't	3.06	289		Pn	10 33 26.9	0.0
MTBL	Makushin Table	3.07	292		Pn	10 33 27.9	+0.9
MAPS	Pakushin South	3.18	289		Pn	10 33 28.4	+0.1
VNKR	Veniaminof 5	3.46	24		Pn	10 33 34.2	+1.9
VNSS	Veniaminof 8	3.62	22		Pn	10 33 37.4	+2.8
VNFG	Fog Glacier, M	3.65	21		Pn	10 33 37.5	+2.6
VNHG	Veniaminof 1	3.68	24		Pn	10 33 37.6	+2.3
OKTU	Okmok Mt. Tuli	3.75	280		Pn	10 33 36.0	-0.2
OKNC	Okmok New Cone	3.81	281		Pn	10 33 36.7	-0.3
OKCE	Okmok Cone E	3.83	280		Pn	10 33 37.1	-0.2
NIKH	Nikolski High	4.23	274		Pn	10 33 41.6	-1.2
NIKH				IAML		10 36 25.0	
	comp=E,66nm,3.7s						
SII	Sitkinak Islan	5.77	47	Pn	Pn	10 34 03.8	-0.1
O14K	Tigyukauivet M	6.38	3	Pn	Pn	10 34 13.9	+1.6
O15K	Ungalikthiuk R	6.40	9	Pn	Pn	10 34 14.6	+2.1
ACHA	Angle Creek He	6.49	32	Pn	Pn	10 34 14.9	+1.1
P16K	Nushagak River	6.52	18	Pn	Pn	10 34 14.8	+0.6
O16K	Kokwok River B	7.03	16	Pn	Pn	10 34 21.9	+0.7
N14K	Kuskokwak Cree	7.05	1	Pn	Pn	10 34 23.1	+1.7
KDAK	Kodiak Island	7.21	44	Pn	Pn	10 34 23.8	+0.2
KDAK	Kodiak Island	7.21	44	Pn	Pn	10 34 23.2	-0.4
	comp=E,0.5nm,0.3s,baz=230,slow=12,SNR=25						
KDAK				Sn	Sn	10 35 40.5	-4.2
	baz=294,slow=20 comp=E,1.5nm,0.4s						
Q19K	Cape Douglas,	7.60	34	Pn	Pn	10 34 29.6	+0.5
SYI	Shuyak Island	7.83	39	Pn	Pn	10 34 32.3	+0.2
M14K	Bethel	7.88	360	Pn	Pn	10 34 33.8	+1.0
N17K	Nushagak Hills	8.07	17	Pn	Pn	10 34 36.8	+1.4
M17K	Holitna River	8.86	14	Pn	Pn	10 34 47.6	+1.3
N19K	Bonanza Creek	8.90	24	Pn	Pn	10 34 48.2	+1.3
ADK	Adak	9.12	270	Pn	Pn	10 34 48.7	-1.2
K13K	Kusilvak Mount	9.19	352	Pn	Pn	10 34 52.1	+1.4
K15K	Wolf Creek Mou	9.43	1	Pn	Pn	10 34 55.6	+1.6
L18K	Granite Mounta	9.75	14	Pn	Pn	10 34 59.4	+0.9
J16K	Anvik River	10.44	3	Pn	Pn	10 35 10.3	+2.4
HIN	Hinchinbrook I	11.29	42	Pn	Pn	10 35 19.1	-0.5
J19K	Poorman	11.59	14	Pn	Pn	10 35 25.9	+2.3
EYAK	Cordova Ski Ar	11.68	43	Pn	Pn	10 35 24.6	-0.3
KLU	Klutina	12.17	39		Pn	10 35 31.7	+0.1
GRNC	Granite Creek	13.48	46		Pn	10 35 49.6	0.0
ILAR	Eielson Array	14.15	27	Pn	Pn	10 35 56.3	-2.3
	baz=220,slow=14,SNR=1.9 comp=E,0.2nm,0.5s						
SCRK	Sand Creek	14.46	33		Pn	10 36 02.3	-0.6
I26K	Coal Creek Min	15.63	30	Pn	Pn	10 36 18.8	+0.6
I26K				IAmb	IAmb	10 36 43.1	
	comp=Z,7.1nm,1.5s						
M29M	Somme Creek	15.66	43	Pn	Pn	10 36 19.1	+0.2
M29M				IAmb	IAmb	10 36 35.8	
	comp=Z,3.0nm,0.7s						
C18K	Utukok River	15.81	1	Pn	Pn	10 36 22.2	+1.5
E22K	Anaktuvuk Pass	16.03	14	Pn	Pn	10 36 24.8	+1.2
DAWY	Dawson	16.11	37	Pn	Pn	10 36 25.1	+0.5
D22K	Ayikyak River	16.61	12	Pn	P	10 36 32.1	-1.1
D22K				IAmb	IAmb	10 36 58.4	
	comp=Z,6.4nm,1.3s						
TOLK	Toolik Lake Re	16.84	16	Pn	P	10 36 35.4	-0.4
TOLK				IAmb	IAmb	10 36 57.2	
	comp=Z,7.7nm,1.4s						
B21K	Ikpikpuk River	17.12	9	Pn	Pn	10 36 37.7	+0.5
G27K	Doyon Strip	17.12	28		P	10 36 38.9	0.0
J30M	Hart River	17.52	38	P	P	10 36 43.9	+0.5
J30M				IAmb	IAmb	10 37 03.0	
	comp=Z,6.0nm,1.4s						
FARO	Faro, Yukon	17.77	47	P	P	10 36 47.6	+1.4
FARO				IAmb	IAmb	10 36 52.3	
	comp=Z,6.6nm,1.5s						
G29M	Pine Creek	18.26	31	P	P	10 36 53.6	+2.1
PETK	Petropavlovsk-	24.11	287	P	P	10 37 52.0	-1.6
PETK	Petropavlovsk-	24.11	287	P	P	10 37 54.9	+1.2
	comp=Z,2.7nm,0.7s,baz=76,slow=11,SNR=9.3 comp=Z,2.7nm,0.7s						
YKA	Yellowknife Ar	26.42	50	P	P	10 38 12.9	-1.5
	comp=Z,0.3nm,0.8s,baz=271,slow=10,SNR=1.7 comp=Z,0.3nm,0.8s						
NVAR	Mina Array Bea	33.15	98	P	P	10 39 16.5	+2.0
	comp=Z,0.3nm,0.7s,baz=322,slow=8.8,SNR=1.6 comp=Z,0.3nm,0.7s						
H11N2	WAKE ISLAND Hy	40.98	228	T	T	11 25 03.8	
	baz=30,slow=76,SNR=15						
H11N3	WAKE ISLAND Hy	40.98	228	T	T	11 25 01.9	
	baz=30,slow=76,SNR=10						
H11N1	WAKE ISLAND Hy	41.00	228	T	T	11 25 03.7	
	baz=30,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	42.14	228	T	T	11 26 30.1	
	baz=30,slow=76,SNR=4.1						
H11S2	WAKE ISLAND Hy	42.15	228	T	T	11 26 31.9	
	baz=30,slow=76,SNR=4.2						
H11S3	WAKE ISLAND Hy	42.16	228	T	T	11 26 30.4	
	baz=30,slow=76,SNR=5.6						
TXAR	Lajitas Array	48.20	95	P	P	10 41 19.6	+1.0
	comp=Z,0.2nm,0.5s,baz=316,slow=6.5,SNR=5.8						
TXAR				PcP	PcP	10 42 46.3	+0.6
	comp=Z,0.1nm,0.5s,baz=312,slow=3.1,SNR=1.8 comp=Z,0.2nm,0.5s						
AKASG	Malin Array Be	76.35	353	P	P	10 44 25.5	-1.2
	comp=Z,0.3nm,0.5s,baz=17,slow=7.3,SNR=3.8 comp=Z,0.3nm,0.5s						

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*DJA **09** 10:41:28.2±0.5, 10°S±4°×10°9E±°, h10^{km}, M4.1/13, mB4.9/1, mb4.5/2, MLv3.9/13, Mw(mB)4.2/1*

*IDC **09** 10:41:36.1±2.0, 9.°17S×107.°20E, h0^{km}, mb3.7/7, mbtmp3.7/7, Error ellipse: s-maj=99.1km s-min=22.7km az=46.0*

ISC 09 10:41:27.7±1.4**, 10.°3S**±0.°1×**108.°62E**±0.°08**, h10**^{km}**, n17, σ0.^{s}75**/17**, mb3.9**/7**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMJI	Cimerak	2.54	356	P	Pn	10 42 08.8	-0.3
CMJI				S	Sn	10 42 39.5	-0.6
UGM	Wanagama	3.06	38	P	Pn	10 42 16.8	+0.6
UGM				S	Sn	10 42 52.1	-0.8
PCJI	Pacitan	3.30	50	P	Pn	10 42 18.5	-1.0
CNJI	Cibinong	3.35	334	P	Pn	10 42 20.7	+0.5
WOJI	Wonogiri, Jawa	3.37	43	P	Pn	10 42 20.6	+0.2
LEM	Lembang	3.63	344	P	Pn	10 42 23.5	-0.6
SMRI	Semarang	3.73	29	P	Pn	10 42 26.8	+1.4
NGJI	Ngawi	4.07	44	P	Pn	10 42 31.4	+1.3
GMJI	Gumukmas	5.18	67	P	Pn	10 42 45.6	+0.2
	0.1nm1µm17nm,0.7s						
JAGI	Jajag, Banyuwa	5.76	72	P	Pn	10 42 53.0	-0.4
WRA	Warramunga Arr	26.56	114	P	P	10 47 31.5	+25
	0.4nm,0.7s,baz=286,slow=9.7,SNR=2.1 0.4nm,0.7s						
ASAR	Alice Springs	27.51	122	P	P	10 47 41.2	+27
	0.2nm,0.6s,baz=291,slow=9.3,SNR=4.8 0.2nm,0.6s						
SONM	Songino Array	57.95	358	P	P	10 51 20.8	+0.4
	0.4nm,0.5s,baz=181,slow=9.1,SNR=2.3 0.4nm,0.5s						
MKAR	Makanchi Array	61.55	340	P	P	10 51 45.4	+0.3
	1.0nm,0.6s,baz=156,slow=8.2,SNR=9.0 1.0nm,0.6s						
KURBB	Kurchatov Arra	66.12	340	P	P	10 52 15.5	+0.4
	0.5nm,0.6s,baz=157,slow=5.5,SNR=4.9 0.5nm,0.6s						
BVAR	Borovoye Array	71.05	337	P	P	10 52 45.1	-0.7
	0.6nm,0.5s,baz=147,slow=3.4,SNR=2.8 0.6nm,0.5s						
BRTR	Keskin Array B	85.23	312	P	P	10 54 05.2	+0.2
	0.5nm,0.6s,baz=91,slow=6.1,SNR=2.9 0.5nm,0.6s						

IDC 09 11:15:07.8±8.2**, 23.°27S×176.°73W, h0**^{km}**, mb4.0**/5**, mbtmp4.0**/5**, Error ellipse: s-maj=194.3km s-min=37.0km az=41.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.74	248	P	P	11 22 25.8	+0.3
	1.5nm,0.6s,baz=84,slow=8.0,SNR=3.3 1.5nm,0.6s						
ASAR	Alice Springs	45.10	259	P	P	11 23 25.8	-0.3
	0.5nm,0.8s,baz=100,slow=7.5,SNR=11 0.5nm,0.8s						
WRA	Warramunga Arr	45.45	264	P	P	11 23 28.6	-0.3
	1.0nm,0.4s,baz=104,slow=7.9,SNR=33 1.0nm,0.4s						
FITZ	Fitzroy Crossi	53.88	264	P	P	11 24 33.1	0.0
	2.1nm,0.7s,baz=105,slow=9.8,SNR=5.6 2.1nm,0.7s						
VNDA	Vanda	55.28	186	P	P	11 24 42.4	-0.1
	1.1nm,0.3s,baz=34,slow=15,SNR=15 1.1nm,0.3s						

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*IDC **09** 11:21:00.3±1.9, 3.°26S×144.°43E, h0^{km}, mb3.6/4, mbtmp3.6/6, ML3.5/1, Error ellipse: s-maj=51.0km s-min=28.7km az=87.0*

ISC 09 11:21:04.4±1.5**, 3.°3S**±0.°2×**144.°4E**±0.°3**, h26**^{km}**, n6, σ0.^{s}18**/6**, mb3.8**/4**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.68	156	Pn	Pn	11 22 40.9	0.0
	9.6nm,0.7s,baz=330,slow=20,SNR=1.4						
WRA	Warramunga Arr	19.24	210	P	P	11 25 27.0	+0.1
	0.1nm,0.3s,baz=34,slow=11,SNR=11 0.5nm,0.5s						
ASAR	Alice Springs	22.65	206	P	P	11 26 03.6	-0.2
	0.4nm,0.5s,baz=26,slow=12,SNR=8.7 0.4nm,0.5s						
FITZ	Fitzroy Crossi	23.53	230	P	P	11 26 12.9	+0.2
	3.3nm,1.1s,baz=41,slow=9.3,SNR=1.4 3.3nm,1.1s						
SONM	Songino Array	60.78	332	P	P	11 31 14.3	0.0
	0.3nm,0.5s,baz=123,slow=5.3,SNR=2.1 0.3nm,0.5s						
QSPA	South Pole Qui	86.66	180	P	P	11 33 45.8	+0.1
	1.1nm,0.9s,baz=14,slow=4.2,SNR=1.5 1.1nm,0.9s						

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*IDC **09** 11:48:27.8±1.5, 44.°04N×125.°65E, h0^{km}, mb3.5/2, mbtmp3.3/5, ML2.8/3, Error ellipse: s-maj=19.2km s-min=18.0km az=118.0*

*KEA **09** 11:48:30.0, 43.°58N×125.°75E, h1^{km}, ML3.2/2*

ISC 09 11:48:27.5±1.0**, 43.°87N**±0.°06×**125.°76E**±0.°09**, h10**^{km}**, n8, σ1.^{s}62**/10**, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUJ	Sinuiju	3.88	195	Pg	Pg	11 49 39.9	-1.9
SUJ				Sg	Sg	11 50 31.9	-0.1
SUJ				AML	AML		
	comp=N,37nm,0.7s						
SUJ				AML	AML		
	comp=E,68nm,0.9s						
SUJ				AML	AML		
	comp=Z,41nm,0.8s						
USRK	Ussuriysk Ar.	4.50	84	Pn	Pn	11 49 37.2	+1.4
	comp=Z,0.4nm,0.3s,baz=272,slow=14,SNR=4.1						
USRK				Pg	Pg	11 49 51.5	-2.2
	comp=Z,1.3nm,0.3s,baz=271,slow=16,SNR=10.0						
USRK				Lg	Lg	11 50 52.1	
	comp=Z,1.9nm,0.3s,baz=271,slow=28,SNR=8.4 comp=Z,0.8nm,0.4s						
PYS	Pyongsong	4.61	179	Sg	Sg	11 50 56.6	+0.9
PYS				AML	AML		
	comp=N,87nm,0.7s						
PYS				AML	AML		
	comp=E,98nm,0.9s						
PYS				AML	AML		
	comp=Z,49nm,0.8s						
HJU	Haeju	5.82	180	Sg	Sg	11 51 35.9	+1.6
KSRS	Korea Array	6.62	165	Pn	Pn	11 50 10.2	+5.4
	comp=Z,0.1nm,0.3s,baz=350,slow=13,SNR=3.0						
KSRS				Pg	Pg	11 50 32.5	-1.6
	comp=Z,0.3nm,0.3s,baz=347,slow=17,SNR=5.1						
KSRS				Lg	Lg	11 52 03.0	
	comp=Z,0.8nm,0.3s,baz=346,slow=29,SNR=8.0 comp=Z,0.6nm,0.4s						
KLR	Kul'dur	6.77	35	Pn	Pn	11 50 07.0	+0.2
	comp=Z,0.3nm,0.3s,baz=221,slow=16,SNR=2.2						
KLR				Pg	Pb	11 50 31.0	+5.8
	comp=Z,0.5nm,0.3s,baz=221,slow=16,SNR=4.8						
KLR				Lg	Lg	11 52 00.4	
	comp=Z,0.5nm,0.3s,baz=145,slow=20,SNR=10 comp=Z,0.6nm,0.3s						
KURBB	Kurchatov Arra	32.31	299	P	P	11 54 56.4	-0.1
	comp=Z,0.8nm,0.8s,baz=89,slow=9.1,SNR=5.4 comp=Z,0.8nm,0.8s						
ILAR	Eielson Array	50.34	34	P	P	11 57 25.3	+1.2
	comp=Z,0.4nm,0.8s,baz=279,slow=7.5,SNR=6.8 comp=Z,0.4nm,0.8s						

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*BJI **09** 11:53:46.4, 3.°40S×139.°93E, h24^{km}, mB5.3/47, mb4.9/81, Ms4.8/74, Ms7 4.7/73*

*IDC **09** 11:53:49.4±0.4, 2.°82S×139.°52E, h0^{km}, mb4.9/23, mbtmp4.9/26, ML4.9/2, MS4.5/50, Error ellipse: s-maj=10.6km s-min=8.6km az=109.0*

*MOS **09** 11:53:52.2±0.8, 2.°82S×139.°42E, h29^{km}, mb5.2/43, Error ellipse: s-maj=9.1km s-min=5.1km az=111.6*

*DJA **09** 11:53:54.3±0.2, 3°S±2°×14°0E±°, h33^{km}±2^{km}, M5.2/88, mb5.4/88, mB5.7/48, MLv5.5/7, Mw(mB)5.2/48, MwMwp4.9/12, Mwp5.2/12*

*GCMT **09** 11:53:55.9±0.1, 2.°76S±0.°01×139.°52E±0.°01, h20^{km}, MW5.3/132, Moment Tensor Solution. s104,c176; s132,c230; Duration: 1.^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.76±.02; $M_{\theta\theta}$-0.72±.01; $M_{\phi\phi}$-0.04±.01; $M_{r\theta}$-0.57±.02; $M_{\theta\phi}$0.25±.01; $M_{\phi r}$0.12±.02; Best double couple: $M_0$0.97500×10^{17} NP1:ϕ_s112.00000°, δ27.00000°, λ97.00000°. NP2:ϕ_s285.00000°, δ63.00000°, λ86.00000°. Principal axes: T 0.9560, Plg72.0000°, Azm187.0000°; N 0.0370, Plg3.0000°, Azm286.0000°; P -0.9930, Plg18.0000°, Azm17.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **09** 11:53:55.9±1.0, 2.°80S±0.°08×139.°36E±0.°07, h35^{km}±1^{km}, mb5.3/96, Mww5.3/17 Error ellipse: s-maj=13.3km s-min=11.0km az=204.0*

NEIC ***09*** *11:53:55.8, 2.°80S×139.°37E, h30^{km}*

NEIC ***09*** *11:53:55.8, 2.°80S×139.°47E, h30^{km}, Moment Tensor Solution. Duration: 2.ˢ3 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.87; M$_{\theta\theta}$-0.81; M$_{\phi\phi}$-0.07; M$_{r\theta}$-0.58; M$_{\theta\phi}$0.19; M$_{\phi r}$0.26; Fault plane solution: M$_0$1.07000×10^{17} NP1:ϕ_s98.17000°, δ27.28000°, λ79.60000°. NP2:ϕ_s289.84000°, δ63.21000°, λ95.32000°. Principal axes: T 1.0853, Plg71.0000°, Azm212.0000°; N -0.0271, Plg5.0000°, Azm107.0000°; P -1.0581, Plg18.0000°, Azm16.0000°;*

ISC 09 11:53:53.7±0.4**, 2.°85S**±0.°03×**139.°53E**±0.°03**, h24**^{km}±2^{km}**, h25**^{km}**:pP-P, n818, σ1.ˢ46**/855**, mb5.2**/161**, MS4.6**/76**, 10C-18D, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.68**	**68**	P	**Pb**	**11 54 06.2**	**-0.8**
GENI	**Genyem**	**0.68**	**68**	S	**Sb**	**11 54 16.5**	**+0.5**
GENI	**Genyem**	**0.68**	**68**	P	**Pb**	**11 54 06.2**	**-0.8**
GENI				S	**Sn**	**11 54 17.1**	**-0.6**
SMPI	**Sarmi**	**1.18**	**316**	P	**Pn**	**11 54 12.8**	**-2.0**
JAY	**Jayapura**	**1.22**	**74**	Pg	**Pn**	**11 54 12.7**	**-2.5**
	491nm,0.3s,baz=254,slow=16,SNR=154						
JAY				Lg	Lg	11 54 28.4	
	4µm,0.3s,baz=106,slow=19,SNR=27						
JAY				LR	LR	11 54 59.3	
	comp=Z,17µm,19.5s,baz=68,slow=58						
JAY	**Jayapura**	**1.22**	**74**	P	**Pn**	**11 54 12.7**	**-2.5**
JAY				S	**Sn**	**11 54 26.9**	**-4.0**
SRPI	**Serui, Papua**	**3.43**	**286**	P	**Pn**	**11 54 46.2**	**+0.5**
RKPI	**Ransiki, Papua**	**5.51**	**284**	P	**Pn**	**11 55 15.9**	**+1.5**
	1.8nm6µm420nm,0.8s						
KMPI	**Kaimana, Papua**	**5.88**	**262**	P	**Pn**	**11 55 21.8**	**+2.5**
FAKI	**Fak Fak**	**7.28**	**269**		**Pn**	**11 55 40.2**	**+1.6**
FAKI	**Fak Fak**	**7.28**	**269**	P	**Pn**	**11 55 40.6**	**+2.0**
FAKI	**Fak Fak**	**7.28**	**269**	P	**Pn**	**11 55 39.7**	**+1.1**
	0.7nm6µm3µm270nm,0.8s						
MANU	**Manus Island**	**7.87**	**84**		**Pn**	**11 55 50.3**	**+3.6**
SWI	**Sorong**	**8.50**	**283**	P	**Pn**	**11 55 58.0**	**+2.6**
	4µm150nm,0.7s						
SAUI	**Saumlaki**	**9.65**	**238**	Pn	**Pn**	**11 56 09.8**	**-1.4**
BNDI	**Bandanaira**	**9.75**	**260**	P	**Pn**	**11 56 11.9**	**-0.7**
BNDI	**Bandanaira**	**9.75**	**260**	P	**Pn**	**11 56 17.0**	**+4.4**
	383nm,0.9s						
PMG	**Port Moresby**	**9.99**	**131**		**Pn**	**11 56 19.3**	**+3.4**
PMG	**Port Moresby**	**9.99**	**131**	Pn	**Pn**	**11 56 16.8**	**+0.9**
	34nm,0.9s,baz=310,slow=12,SNR=15						
PMG				LR	LR	12 01 15.5	
	comp=Z,4µm,21.4s,baz=318,slow=44						
PMG	**Port Moresby**	**9.99**	**131**	P	**Pn**	**11 56 18.1**	**+2.2**
PMG	**Port Moresby**	**9.99**	**131**	P	**Pn**	**11 56 18.2**	**+2.3**
PMG	**Port Moresby**	**9.99**	**131**	*de*P	**Pn**	**11 56 18.8**	**+2.9**
PMG				pmax	pmax		
	comp=Z,95nm,1.0s						
MSAI	**Masohi**	**10.60**	**267**	P	**Pn**	**11 56 25.0**	**+0.8**
	comp=Z,3µmcomp=Z,247nm,0.9s						
AAI	**Ambon**	**11.35**	**265**	P	**Pn**	**11 56 35.1**	**+0.6**
	comp=Z,3µmcomp=Z,2µmcomp=Z,205nm,1.1s						
COEN	**Coen**	**11.61**	**162**		**Pn**	**11 56 39.0**	**+1.0**
COEN	**Coen**	**11.61**	**162**	P	**Pn**	**11 56 38.6**	**+0.5**
	comp=Z,114nm,1.0s						
COEN	**Coen**	**11.61**	**162**	P	**Pn**	**11 56 39.1**	**+1.0**
COEN	**Coen**	**11.61**	**162**	S	**Sn**	**11 58 51.7**	**+4.7**
KDU	**Kakadu**	**12.02**	**215**	P	**Pn**	**11 56 42.6**	**-0.9**
	comp=Z,0.0nmcomp=Z,339nm,0.7s						
KDU	**Kakadu**	**12.02**	**215**	S	**Sn**	**11 58 57.3**	**+0.4**
KDU	**Kakadu**	**12.02**	**215**	P	**Pn**	**11 56 42.4**	**-1.2**
NLAI	**Namlea**	**12.42**	**268**	P	**Pn**	**11 56 50.8**	**+1.7**
RABL	**Rabaul**	**12.68**	**96**		**Pn**	**11 56 55.7**	**+3.1**
TNTI	**Ternate**	**12.68**	**286**	Pn	**Pn**	**11 56 50.9**	**-1.8**
TNTI	**Ternate**	**12.68**	**286**	P	**Pn**	**11 56 52.8**	**+0.1**
TNTI	**Ternate**	**12.68**	**286**	P	**Pn**	**11 56 55.1**	**+2.4**
DRS	**Darwin Rock St**	**12.80**	**221**	P	**Pn**	**11 56 53.4**	**-0.8**
MTN	**Manton Dam**	**12.95**	**219**		**Pn**	**11 56 55.2**	**-1.2**
MTN	**Manton Dam**	**12.95**	**219**	P	**Pn**	**11 56 55.0**	**-1.4**
	comp=Z,223nm,0.7s						
MTN	**Manton Dam**	**12.95**	**219**	S	**Sn**	**11 59 19.3**	**-0.6**
MTN	**Manton Dam**	**12.95**	**219**	P	**Pn**	**11 56 55.0**	**-1.4**
MTN	**Manton Dam**	**12.95**	**219**	S	**Sn**	**11 59 22.5**	**+2.7**
SANI	**Sanana**	**13.56**	**273**	P	**Pn**	**11 57 04.7**	**+0.1**
SANI	**Sanana**	**13.56**	**273**	S	**Sn**	**11 59 35.9**	**+1.3**
SANI	**Sanana**	**13.56**	**273**	P	**Pn**	**11 57 05.0**	**+0.4**
SGSI	**Sangihe**	**15.43**	**295**	P	**Pn**	**11 57 30.7**	**+0.7**
	comp=Z,194nm,0.8s						
MTSU	**Mount Surprise**	**15.90**	**163**	P	**Pn**	**11 57 36.1**	**0.0**
	comp=Z,84nm,0.9s						
MTSU	**Mount Surprise**	**15.90**	**163**	P	**P**	**11 57 38.3**	**-1.3**
KMSI	**Cibinong**	**15.91**	**282**	P	**Pn**	**11 57 37.1**	**+0.8**
	comp=Z,298nm,0.9s						
KNRA	**Kununurra**	**16.59**	**219**		**Pn**	**11 57 43.5**	**-1.3**
KNRA	**Kununurra**	**16.59**	**219**	P	**Pn**	**11 57 44.7**	**-0.1**
	comp=Z,274nm,0.9s						
SOEI	**Soe**	**16.65**	**245**		**Pn**	**11 57 44.4**	**-1.3**
SOEI				IAmb	IAmb	11 57 52.5	
	comp=Z,314nm,1.1s						
SOEI	**Soe**	**16.65**	**245**	P	**Pn**	**11 57 46.1**	**+0.4**
SOEI	**Soe**	**16.65**	**245**	P	**Pn**	**11 57 46.8**	**+1.1**
LUWI	**Luwuk**	**16.85**	**276**		**Pn**	**11 57 46.9**	**-1.2**
LUWI				IAmb	IAmb	11 57 52.3	
	comp=Z,290nm,1.1s						
LUWI	**Luwuk**	**16.85**	**276**	P	**Pn**	**11 57 48.0**	**-0.1**
LUWI	**Luwuk**	**16.85**	**276**	P	**Pn**	**11 57 47.3**	**-0.8**
	comp=Z,3µmcomp=Z,247nm,1.2s						
DAV	**Davao City (W)**	**17.06**	**305**	LR	LR	12 05 09.0	
	comp=Z,2µm,18.1s,baz=146,slow=40						
DAV	**Davao City (W)**	**17.06**	**305**	P	**P**	**11 57 56.1**	**+3.7**
BBSI	**Bau Bau**	**17.12**	**261**	P	**P**	**11 57 53.0**	**-0.1**
	comp=Z,6µmcomp=Z,455nm,1.3s						
GUMO	**Guam**	**17.17**	**18**	LR	LR	12 04 31.9	
	comp=Z,2µm,18.1s,baz=210,slow=38						
BATI	**Baumata**	**17.37**	**244**	P	**Pn**	**11 57 55.4**	**+0.7**
WB0	**Warramunga Arr**	**17.55**	**196**		**Pn**	**11 57 55.0**	**-1.8**
WB9	**Warramunga Arr**	**17.58**	**196**	P	**Pn**	**11 57 54.6**	**-2.6**
WB8	**Warramunga Arr**	**17.60**	**196**	P	**Pn**	**11 57 55.3**	**-2.2**
	comp=Z,140nm,1.0s						
QIS	**Mount Isa**	**17.60**	**180**	P	**Pn**	**11 57 56.2**	**-1.3**
	comp=Z,204nm,0.8s						
WB7	**Warramunga Arr**	**17.62**	**196**	P	**Pn**	**11 57 55.6**	**-2.2**
	comp=Z,117nm,0.9s						
WR8	**Warramunga Arr**	**17.70**	**196**	P	**Pn**	**11 57 56.6**	**-2.2**
WRAB	**Tennant Creek**	**17.72**	**196**	P	**Pn**	**11 57 57.2**	**-1.8**
WRAB	**Tennant Creek**	**17.72**	**196**	*de*P	**Pn**	**11 57 56.6**	**-2.4**
WRAB				pmax	pmax		
	comp=Z,41nm,0.9s						
WRA	**Warramunga Arr**	**17.73**	**196**	P	**Pn**	**11 57 56.2**	**-3.0**
WRA	**Warramunga Arr**	**17.73**	**196**	P	**Pn**	**11 57 56.7**	**-2.4**
	comp=Z,4.1nm,0.3s,baz=17,slow=12,SNR=65						
WRA				S	**Sn**	**12 01 06.7**	**-10**
	comp=Z,67nm,0.9s,baz=8.7,slow=22,SNR=9.7						
WRA				Lg	Lg	12 03 15.4	
	comp=Z,0.3nm,0.3s,baz=15,slow=29,SNR=2.4						
WRA				LR	LR	12 05 58.1	
	comp=Z,2µm,19.8s,baz=6.0,slow=41						
	comp=Z,64nm,0.8s						
TV1H	**Townsville Har**	**17.79**	**157**	P	**P**	**11 58 02.5**	**+2.0**
MRSI	**Marisa**	**17.89**	**280**	P	**Pn**	**11 58 00.8**	**-0.4**
	comp=Z,90nm,1.1s						
APSI	**Ampana**	**17.98**	**276**	P	**Pn**	**11 58 02.1**	**-0.1**
	comp=Z,3µmcomp=Z,246nm,1.5s						
MMRI	**Maumere**	**18.14**	**251**	P	**P**	**11 58 05.3**	**+0.9**
MMRI	**Maumere**	**18.14**	**251**	P	**P**	**11 58 05.2**	**+0.9**
	comp=Z,2µmcomp=Z,128nm,1.5s						
CTAO	**Charters Tower**	**18.35**	**160**		**Pn**	**11 58 07.2**	**+0.5**
CTAO	**Charters Tower**	**18.35**	**160**	P	**Pn**	**11 58 08.0**	**+1.3**
CTAO	**Charters Tower**	**18.35**	**160**	P	**Pn**	**11 58 07.2**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,53nm,1.1s						
EDFI	**Ende, Flores**	**18.69**	**251**	P	**P**	**11 58 10.2**	**-0.3**
	comp=Z,70nm,0.9s						
TOLI2	**Tolitoli**	**19.15**	**282**	P	**P**	**11 58 14.1**	**-1.5**
TOLI2	**Tolitoli**	**19.15**	**282**	P	**P**	**11 58 15.8**	**+0.3**
BSSI	**Bau Bau, Buton**	**19.26**	**260**	P	**Pn**	**11 58 17.4**	**-0.4**
	comp=Z,2µmcomp=Z,3µmcomp=Z,263nm,1.5s						
BNSI	**Bone**	**19.45**	**265**	P	**P**	**11 58 18.5**	**-0.3**
	comp=Z,2µmcomp=Z,121nm,1.2s						
TTSI	**Tana Toraja**	**19.69**	**269**	P	**Pn**	**11 58 23.0**	**+0.1**
	comp=Z,2µmcomp=Z,140nm,0.9s						
SPSI	**Sidrap Palu**	**19.76**	**266**	P	**Pn**	**11 58 23.9**	**+0.1**
	comp=Z,1µmcomp=Z,150nm,1.1s						
PCI	**Palu**	**19.78**	**275**	P	**Pn**	**11 58 24.3**	**+0.3**
KAPI	**Kappang**	**19.85**	**263**	P	**P**	**11 58 23.7**	**+0.6**
	comp=Z,2.6nm,0.3s,baz=86,slow=11,SNR=6.9						
KAPI				LR	LR	12 08 25.1	
	comp=Z,296nm,19.0s,baz=98,slow=44						
	comp=Z,5.7nm,0.3s						
KAPI	**Kappang**	**19.85**	**263**	P	**Pn**	**11 58 26.1**	**+1.3**
KAPI				S	**Sn**	**12 02 11.2**	**+3.7**
KAPI	**Kappang**	**19.85**	**263**	P	**Pn**	**11 58 25.7**	**+0.9**
KAPI	**Kappang**	**19.85**	**263**	⇓*e*P	**Pn**	**11 58 24.8**	**0.0**
KAPI				pmax	pmax		
	comp=Z,5.0nm,0.3s						
MPSI	**Mapaga**	**19.88**	**279**	P	**P**	**11 58 24.1**	**+0.6**
	comp=Z,69nm,0.9s						
BASI	**Baing, Sumba**	**20.20**	**248**	P	**P**	**11 58 27.4**	**+0.5**
	comp=Z,3µmcomp=Z,271nm,0.7s						
WSI	**Waingapu**	**20.28**	**250**	P	Pn	11 58 29.8	0.0
	comp=Z,194nm,1.0s						
FITZ	**Fitzroy Crossi**	**20.38**	**221**		**P**	**11 58 28.0**	**-0.8**
FITZ	**Fitzroy Crossi**	**20.38**	**221**	P	**P**	**11 58 28.1**	**-0.8**
	comp=Z,24nm,0.9s						
FITZ	**Fitzroy Crossi**	**20.38**	**221**	P	**P**	**11 58 27.9**	**-0.9**
	comp=Z,36nm,0.7s,baz=42,slow=12,SNR=70						
FITZ				S	**S**	**12 02 09.7**	**-6.5**
	comp=Z,61nm,1.0s,baz=143,slow=12,SNR=4.6						
FITZ				LR	LR	12 06 57.1	
	comp=Z,5µm,19.9s,baz=40,slow=39						
	comp=Z,36nm,0.7s						
FITZ	**Fitzroy Crossi**	**20.38**	**221**	P	**P**	**11 58 28.2**	**-0.6**
TATA	**Tatamba Isabel**	**20.90**	**106**	P	**P**	**11 58 35.8**	**+1.2**
WBSI	**Waikabubak, Su**	**21.12**	**250**	P	**P**	**11 58 34.2**	**-2.8**
	comp=Z,1µmcomp=Z,146nm,0.9s						
HNR	**Honiara**	**21.31**	**109**	P	**P**	**11 58 38.7**	**-0.3**
	comp=Z,136nm,0.8s,baz=258,slow=20,SNR=2.4						
	comp=Z,136nm,0.8s						
AS16	**Alice Springs**	**21.37**	**194**	P	**P**	**11 58 38.8**	**-0.7**
	comp=Z,183nm,0.8s						
AS01	**Alice Springs**	**21.39**	**194**	P	**P**	**11 58 39.4**	**-0.4**
AS31	**Alice Springs**	**21.40**	**194**		**P**	**11 58 39.0**	**-0.9**
AS31	**Alice Springs**	**21.40**	**194**	P	**P**	**11 58 39.0**	**-0.9**
	comp=Z,51nm,0.7s						
ASAR	**Alice Springs**	**21.40**	**194**	P	**P**	**11 58 39.5**	**-0.4**
ASAR	**Alice Springs**	**21.40**	**194**	P	**P**	**11 58 39.3**	**-0.6**
	comp=Z,56nm,0.7s,baz=21,slow=9.9,SNR=103						
ASAR				S	**S**	**12 02 39.2**	**+2.7**
	comp=Z,26nm,0.8s,baz=15,slow=26,SNR=6.1						
ASAR				LR	LR	12 07 18.8	
	comp=Z,3µm,20.1s,baz=24,slow=38						
	comp=Z,56nm,0.7s						
ASAR	**Alice Springs**	**21.40**	**194**	P	**P**	**11 58 39.5**	**-0.4**
ALEG	**Aligegeo Malai**	**21.85**	**106**	P	**P**	**11 58 44.8**	**+0.1**
PLAI	**Plampang**	**22.44**	**254**	P	**P**	**11 58 48.8**	**-2.3**
SMKI	**Samarinda**	**22.44**	**276**	P	**P**	**11 58 53.1**	**+1.9**
	comp=Z,255nm,1.5s						
MYLDM	**Lahad Datu**	**22.47**	**291**	P	**P**	**11 58 48.0**	**-3.5**
MYLDM				IAmb	IAmb	11 59 09.8	
	comp=Z,162nm,1.3s						
MYLDM	**Lahad Datu**	**22.47**	**291**	P	**P**	**11 58 53.9**	**+2.4**
BKB	**Balikpapan**	**22.68**	**274**	P	**P**	**11 58 56.2**	**+2.6**
BKB	**Balikpapan**	**22.68**	**274**	P	**P**	**11 58 55.0**	**+1.4**
	comp=Z,4µmcomp=Z,254nm,1.1s						
TWSI	**Taliwang, Sumb**	**23.27**	**254**	P	**P**	**11 58 57.9**	**-1.9**
	comp=Z,65nm,0.9s						
GD1S	**Gladstone Soft**	**23.71**	**153**	P	**P**	**11 59 06.6**	**+2.7**
QLP	**Quilpie**	**24.03**	**170**	P	**P**	**11 59 06.8**	**-0.1**
	comp=Z,193nm,0.8s						
QLP	**Quilpie**	**24.03**	**170**	P	**P**	**11 59 09.4**	**+2.5**
SRBI	**Singaraja**	**24.75**	**257**	P	**P**	**11 59 12.4**	**-1.3**
	comp=Z,2µmcomp=Z,121nm,1.4s						
DNP	**Denpasar**	**24.87**	**256**	P	**P**	**11 59 14.2**	**-0.6**
TGY	**Tagaytay City**	**24.97**	**313**	LR	LR	12 09 48.2	
	comp=Z,2µm,18.6s,baz=169,slow=38						
EIDS	**Eidsvold**	**25.00**	**155**		**P**	**11 59 17.2**	**+1.4**
EIDS	**Eidsvold**	**25.00**	**155**	P	**P**	**11 59 16.9**	**+1.1**
	comp=Z,200nm,1.4s						
EIDS	**Eidsvold**	**25.00**	**155**	P	**P**	**11 59 17.6**	**+1.8**
KMMI	**Kalianget**	**25.81**	**260**	P	**P**	**11 59 24.9**	**+1.7**
JAGI	**Jajag, Banyuwa**	**25.86**	**256**	P	**P**	**11 59 21.7**	**-2.0**
JAGI				IAmb	IAmb	11 59 36.4	
	comp=Z,68nm,0.9s						
JAGI	**Jajag, Banyuwa**	**25.86**	**256**	P	**P**	**11 59 24.7**	**+1.0**
JAGI	**Jajag, Banyuwa**	**25.86**	**256**	P	**P**	**11 59 24.7**	**+1.0**
	comp=Z,92nm,0.9s						
GMJI	**Gumukmas**	**26.51**	**257**	P	**P**	**11 59 31.5**	**+1.9**
	comp=Z,37nm,1.4s						
MBWA	**Marble Bar**	**26.51**	**225**	P	**P**	**11 59 28.4**	**-1.2**
MBWA				IAmb	IAmb	11 59 58.3	
	comp=Z,99nm,1.2s						
MBWA	**Marble Bar**	**26.51**	**225**	P	**P**	**11 59 29.2**	**-0.4**
	comp=Z,80nm,1.1s						
MBWA	**Marble Bar**	**26.51**	**225**	P	**P**	**11 59 29.4**	**-0.2**
MBWA	**Marble Bar**	**26.51**	**225**	P	**P**	**11 59 30.2**	**+0.6**
PSAD1	**Pilbara Seismi**	**26.64**	**224**	P	**P**	**11 59 30.6**	**-0.1**
	comp=Z,54nm,1.2s						
PSAB2	**Pilbara Seismi**	**26.68**	**224**	P	**P**	**11 59 30.7**	**-0.4**
	comp=Z,50nm,1.3s						
PSA00	**Pilbara Seismi**	**26.70**	**224**	P	**P**	**11 59 29.6**	**-1.7**
PSA00				IAmb	IAmb	11 59 49.8	
	comp=Z,57nm,1.0s						
PSA00	**Pilbara Seismi**	**26.70**	**224**	P	**P**	**11 59 31.4**	**+0.1**
PSA00				IAmb	IAmb	11 59 54.3	
	comp=Z,22nm,0.9s						
PSA00	**Pilbara Seismi**	**26.70**	**224**	P	**P**	**11 59 31.0**	**-0.3**
	comp=Z,67nm,1.0s						
PSA00	**Pilbara Seismi**	**26.70**	**224**	P	**P**	**11 59 31.7**	**+0.4**
GRJI	**Gresik**	**27.25**	**260**	P	**P**	**11 59 39.1**	**+2.8**
STKI	**Sintang**	**28.19**	**275**	P	**P**	**11 59 45.2**	**+0.4**
STKA	**Stephens Creek**	**28.94**	**176**	P	**P**	**11 59 52.4**	**+1.2**
STKA	**Stephens Creek**	**28.94**	**176**	P	**P**	**11 59 51.7**	**+0.4**
	comp=Z,178nm,1.5s						
STKA	**Stephens Creek**	**28.94**	**176**	P	**P**	**11 59 51.6**	**+0.4**
	comp=Z,19nm,0.7s,baz=355,slow=9.9,SNR=24						
STKA				LR	LR	12 12 57.4	
	comp=Z,3µm,18.9s,baz=354,slow=40						
	comp=Z,19nm,0.7s						
STKA	**Stephens Creek**	**28.94**	**176**	P	**P**	**11 59 51.8**	**+0.6**
STKA	**Stephens Creek**	**28.94**	**176**	*c i*P	**P**	**11 59 51.9**	**+0.7**
CMSA	**Cobar Meteorol**	**29.12**	**169**	P	**P**	**11 59 54.3**	**+1.5**
	comp=Z,125nm,1.1s						
CMSA	**Cobar Meteorol**	**29.12**	**169**	P	**P**	**11 59 54.9**	**+2.1**
SMRI	**Semarang**	**29.28**	**261**	P	**P**	**11 59 57.4**	**+3.0**
SMRI	**Semarang**	**29.28**	**261**	P	**P**	**11 59 55.0**	**+0.6**
	comp=Z,51nm,0.9s						
KSM	**Kuching**	**29.53**	**278**	P	**P**	**11 59 55.4**	**-1.3**
KSM	**Kuching**	**29.53**	**278**	P	**P**	**11 59 56.5**	**-0.1**
ARMA	**Armidale**	**29.72**	**159**		**P**	**11 59 59.6**	**+1.4**
ARMA				IAmb	IAmb	12 00 01.1	
	comp=Z,37nm,0.9s						
ARMA	**Armidale**	**29.72**	**159**	P	**P**	**11 59 59.2**	**+1.0**
	comp=Z,46nm,1.1s						
ARMA	**Armidale**	**29.72**	**159**	P	**P**	**11 59 59.8**	**+1.6**
FORT	**Forrest**	**29.83**	**200**	P	**P**	**12 00 00.3**	**+1.2**
	comp=Z,96nm,0.7s						
JCJ	**Chichijima**	**29.88**	**5**	LR	LR	12 10 35.7	
	comp=Z,1µm,18.1s,baz=136,slow=34						
BBOO	**Buckleboo**	**29.98**	**186**	P	**P**	**12 00 00.9**	**+0.4**
	comp=Z,34nm,1.1s						
WHYH	**Whyalla**	**30.09**	**183**	P	**P**	**12 00 02.3**	**+1.0**
HTT	**Hallett**	**30.43**	**181**	P	**P**	**12 00 05.2**	**+0.8**
	comp=Z,14nm,0.9s						
HTT	**Hallett**	**30.43**	**181**	P	**P**	**12 00 06.1**	**+1.7**
MEEK	**Meekatharra**	**31.01**	**218**	P	**P**	**12 00 09.8**	**+0.2**
JOW	**Kunigami**	**31.45**	**340**	LR	LR	12 11 16.4	
	comp=Z,1µm,19.8s,baz=190,slow=33						
GIRL	**Giralia**	**31.45**	**229**	P	**P**	**12 00 14.3**	**+0.8**
	comp=Z,261nm,1.8s						
TPI	**Tanjungpandan**	**31.84**	**269**	P	**P**	**12 00 16.7**	**-0.4**
	comp=Z,22nm,1.2s						
NTLH	**Newcastle Hard**	**32.00**	**160**	P	**P**	**12 00 20.4**	**+2.2**
NACB	**Ninganchiao**	**32.03**	**328**	P	**P**	**12 00 17.4**	**-1.1**
NACB				IAmb	IAmb	12 00 21.2	
	comp=Z,38nm,1.0s						
NACB	**Ninganchiao**	**32.03**	**328**	P	**P**	**12 00 18.4**	**-0.1**
SSLB	**Suanglung**	**32.06**	**327**	P	**P**	**12 00 19.2**	**+0.3**
YNG	**Young**	**32.36**	**166**	P	**P**	**12 00 23.2**	**+1.8**
	comp=Z,134nm,0.9s						
DZM	**Mont Dzumac**	**32.37**	**128**	P	**P**	**12 00 22.3**	**+0.5**
DZM				IAmb	IAmb	12 00 31.7	
	comp=Z,76nm,1.6s						
DZM	**Mont Dzumac**	**32.37**	**128**	*e*P	**P**	**12 00 17.9**	**-3.8**
	comp=Z,67nm,1.4s						
DZM				*e*S	**S**	**12 05 32.8**	**-2.0**
	comp=Z,670nm,29.9s						
DZM				*e*LR	LR	12 08 46.3	
	comp=Z,1µm,23.6s						
DZM	**Mont Dzumac**	**32.37**	**128**	LR	LR	12 13 35.7	
	comp=Z,708nm,20.6s,baz=333,slow=37						
SYDH	**Sydney Hard Ro**	**32.49**	**162**	P	**P**	**12 00 24.5**	**+2.0**
RIV	**Riverview**	**32.68**	**162**	P	**P**	**12 00 25.9**	**+1.8**
	comp=Z,102nm,1.8s						
RIV	**Riverview**	**32.68**	**162**	P	**P**	**12 00 26.6**	**+2.5**
RIV	**Riverview**	**32.68**	**162**	P	**P**	**12 00 25.5**	**+1.4**
RIV				pmax	pmax		
	comp=Z,102nm,1.8s						
KMBL	**Kambalda**	**32.89**	**209**	P	**P**	**12 00 24.7**	**-1.3**
	comp=Z,58nm,1.4s						
KMBL	**Kambalda**	**32.89**	**209**	P	**P**	**12 00 25.2**	**-0.9**
WOLH	**Wollongong Har**	**33.13**	**163**	P	**P**	**12 00 30.4**	**+2.3**
CAN	**Canberra**	**33.48**	**166**	P	**P**	**12 00 32.4**	**+1.2**
CAN	**Canberra**	**33.48**	**166**	P	**P**	**12 00 32.8**	**+1.6**
	comp=Z,112nm,1.1s						
CAN	**Canberra**	**33.48**	**166**	P	**P**	**12 00 33.2**	**+2.0**
CAN	**Canberra**	**33.48**	**166**	P	**P**	**12 00 32.4**	**+1.2**
CAN				pmax	pmax		
	comp=Z,107nm,1.0s						
CAN	**Canberra**	**33.48**	**166**	P	**P**	**12 00 33.6**	**+2.3**
CNB	**Canberra Magne**	**33.57**	**165**	P	**P**	**12 00 33.4**	**+1.4**
	comp=Z,178nm,1.1s						
CNB	**Canberra Magne**	**33.57**	**165**	P	**P**	**12 00 34.0**	**+2.0**
ARPS	**Mount Arapiles**	**33.83**	**177**	P	**P**	**12 00 34.3**	**+0.2**
	comp=Z,136nm,0.9s						
ARPS	**Mount Arapiles**	**33.83**	**177**	P	**P**	**12 00 36.1**	**+2.0**
LHI	**Lord Howe Isla**	**33.95**	**149**	P	**P**	**12 00 36.1**	**+0.8**
	comp=Z,99nm,1.3s						
QZH	**Quanzhou**	**34.30**	**325**	P	P	12 00 45.6	+7.3
QZH				S	**S**	**12 06 03.7**	**-0.6**
QZH				LR	LR		
	comp=N,810nm,24.0s						
QZH				LR	LR		
	comp=E,880nm,21.6s						
QZH				LR	LR		
	comp=Z,1µm,18.1s						
MORW	**Morawa**	**34.34**	**218**	P	**P**	**12 00 39.0**	**+0.3**
	comp=Z,54nm,1.0s						
MORW	**Morawa**	**34.34**	**218**	P	**P**	**12 00 39.9**	**+1.2**
TOO	**Toolangi**	**34.99**	**172**	P	**P**	**12 00 45.1**	**+0.9**
TOO				IAmb	IAmb	12 00 47.8	
	comp=Z,41nm,1.4s						
TOO	**Toolangi**	**34.99**	**172**	P	**P**	**12 00 45.4**	**+1.2**
	comp=Z,25nm,1.2s						
TOO	**Toolangi**	**34.99**	**172**	P	**P**	**12 00 45.1**	**+0.9**
TOO				pmax	pmax		
	comp=Z,41nm,1.4s						
BLDU	**Ballidu**	**35.05**	**216**	P	**P**	**12 00 45.0**	**+0.2**
	comp=Z,32nm,1.1s						
MLBS	**Spotswood, Mel**	**35.16**	**173**	P	**P**	**12 00 48.7**	**+3.1**
MILA	**Mila**	**35.18**	**167**	P	**P**	**12 00 47.6**	**+1.7**
	comp=Z,41nm,0.9s						
KLBR	**Kellerberrin**	**35.19**	**213**	P	**P**	**12 00 45.8**	**-0.2**
	comp=Z,57nm,0.8s						
MDSI	**Maura Dua**	**35.32**	**266**	P	**P**	**12 00 46.1**	**-1.2**
	comp=Z,93nm,1.2s						
GEXS	**Deakin Univers**	**35.45**	**174**	P	**P**	**12 00 51.5**	**+3.3**
MUN	**Mundaring**	**36.35**	**215**	P	**P**	**12 00 57.0**	**+1.1**
	comp=Z,49nm,1.3s						
QIZ	**Qiongzhong**	**36.41**	**308**	P	**P**	**12 01 00.1**	**+3.5**
QIZ				PP	**PP**	**12 02 24.9**	**+5.2**
QIZ				S	**S**	**12 06 38.7**	**+1.7**
QIZ				pmax	pmax		
	comp=Z,30nm,2.2s						
QIZ				LR	LR		
	comp=Z,680nm,16.5s						
QIZ				LR	LR		
	comp=Z,1µm,19.9s						
NWAO	**Narrogin (SRO)**	**36.50**	**212**	LR	LR	12 17 30.6	
	comp=Z,3µm,18.6s,baz=51,slow=39						
JNU	**Nakatsue**	**36.70**	**348**	P	**P**	**12 00 59.1**	**+0.1**
JNU				IAmb	IAmb	12 01 48.4	
	comp=Z,64nm,1.6s						
JNU	**Nakatsue**	**36.70**	**348**	LR	LR	12 16 02.6	
	comp=Z,961nm,18.1s,baz=174,slow=36						
JNU	**Nakatsue**	**36.70**	**348**	P	**P**	**12 00 59.0**	**+0.1**
SSE	**Sheshan**	**38.01**	**334**	P	**P**	**12 01 10.1**	**+0.1**
SSE				S	**S**	**12 07 05.4**	**+4.4**
SSE				pmax	pmax		
	comp=Z,18nm,1.0s						
SSE				LR	LR		
	comp=Z,320nm,18.4s						
SSE				LR	LR		
	comp=Z,310nm,18.2s						
BKNI	**Bangkinang**	**38.61**	**274**	P	**P**	**12 01 13.8**	**-1.6**
BKNI	**Bangkinang**	**38.61**	**274**	P	**P**	**12 01 15.2**	**-0.2**
BKNI	**Bangkinang**	**38.61**	**274**	P	**P**	**12 01 14.4**	**-1.0**
	comp=Z,72nm,0.9s						
GLAD	**Gladstone**	**38.73**	**170**	P	**P**	**12 01 18.0**	**+2.1**
CORO	**Coronation Par**	**39.04**	**171**	P	**P**	**12 01 20.8**	**+2.3**
PPI	**Padang Panjang**	**39.19**	**273**	P	**P**	**12 01 18.9**	**-1.3**
	comp=Z,1µmcomp=Z,85nm,1.1s						
MJAR	**Matsushiro Arr**	**39.20**	**358**	P	**P**	**12 01 18.6**	**-1.4**
	comp=Z,1.0nm,0.6s,baz=185,slow=7.6,SNR=4.1						
MJAR				PcP	**PcP**	**12 03 28.9**	**-0.1**
	comp=Z,2.9nm,0.8s,baz=168,slow=2.3,SNR=5.2						
MAJO	**Matsushiro**	**39.21**	**358**	⇑*e*P	**P**	**12 01 17.9**	**-2.1**
MAJO				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KULM	**Kulim**	**39.67**	**282**	P	**P**	**12 01 23.5**	**-0.8**
NJ2	**Nanjing**	**39.88**	**332**	⇓P	**P**	**12 01 26.4**	**+0.8**
NJ2				S	**S**	**12 07 32.7**	**+3.6**
NJ2				pmax	pmax		
	comp=Z,14nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,340nm,3.6s						
NJ2				LR	LR		
	comp=Z,720nm,18.0s						
NJ2				LR	LR		
	comp=Z,780nm,15.2s						
NJ2				LR	LR		
	comp=Z,1µm,19.0s						
MOO	**Moorlands**	**40.01**	**171**	P	**P**	**12 01 27.8**	**+1.2**
	comp=Z,79nm,1.5s						
MOO	**Moorlands**	**40.01**	**171**	P	**P**	**12 01 29.0**	**+2.3**
CNSH	**ChangSha**	**40.08**	**322**	P	**P**	**12 01 28.0**	**+0.6**
CNSH				S	**S**	**12 07 36.1**	**+3.8**
CNSH				pmax	pmax		
	comp=Z,25nm,1.3s						
CNSH				LR	LR		
	comp=Z,440nm,18.4s						
CNSH				LR	LR		
	comp=Z,470nm,21.8s						
CNSH				LR	LR		
	comp=Z,790nm,20.6s						
MNSI	**Mandailing Nat**	**40.10**	**275**	P	**P**	**12 01 27.3**	**-0.5**
	comp=Z,33nm,1.1s						
SISI	**Saibi**	**40.44**	**271**	P	**P**	**12 01 29.3**	**-1.4**
	comp=Z,91nm,0.8s						
TAU	**Tasmania Unive**	**40.49**	**171**	P	**P**	**12 01 31.4**	**+0.8**
TAU				IAmb	IAmb	12 01 33.5	
	comp=Z,52nm,0.8s						
TAU	**Tasmania Unive**	**40.49**	**171**	P	**P**	**12 01 32.6**	**+2.0**
TAU	**Tasmania Unive**	**40.49**	**171**	P	**P**	**12 01 31.4**	**+0.8**
TAU				pmax	pmax		
	comp=Z,52nm,0.9s						
TAU	**Tasmania Unive**	**40.49**	**171**	pP	**P**	**12 01 31.9**	**+1.3**
RPSI	**Rantau Prapat**	**40.97**	**277**		**P**	**12 01 33.3**	**-1.7**
RPSI				IAmb	IAmb	12 01 34.8	
	comp=Z,54nm,1.0s						
PSI	**Prapat**	**40.98**	**278**	LR	LR	12 21 44.5	
	comp=Z,307nm,19.0s,baz=134,slow=41						
PSI	**Prapat**	**40.98**	**278**	P	**P**	**12 01 33.5**	**-1.7**
PSI	**Prapat**	**40.98**	**278**	P	**P**	**12 01 33.3**	**-1.9**
PSI				pmax	pmax		
	comp=Z,55nm,1.0s						
WHN	**Wuhan**	**40.99**	**326**	P	P	12 01 40.2	+5.3
WHN				S	**S**	**12 07 51.0**	**+5.2**
WHN				LR	LR		
	comp=Z,2µm,17.7s						
SRIT	**Nakonsritamara**	**41.40**	**286**		**P**	**12 01 38.0**	**-0.6**
SRIT	**Nakonsritamara**	**41.40**	**286**	P	**P**	**12 01 37.8**	**-0.8**
KSRS	**Korea Array**	**41.52**	**346**	P	**P**	**12 01 38.6**	**-0.5**
	comp=Z,2.0nm,0.7s,baz=160,slow=8.6,SNR=12						
KSRS				PcP	**PcP**	**12 03 35.8**	**-0.6**
	comp=Z,1.1nm,0.7s,baz=160,slow=3.9,SNR=4.5						
	comp=Z,2.0nm,0.7s						
DGTI	**Dogotuki**	**41.73**	**111**	P	**P**	**12 01 43.0**	**+1.8**
GSI	**Gunungsitoli**	**42.15**	**275**		**P**	**12 01 42.6**	**-2.1**
GSI	**Gunungsitoli**	**42.15**	**275**	P	**P**	**12 01 43.4**	**-1.3**
GSI	**Gunungsitoli**	**42.15**	**275**	P	**P**	**12 01 42.5**	**-2.2**
	comp=Z,56nm,1.2s						
SLVN	**Son La**	**42.35**	**306**		**P**	**12 01 45.4**	**-0.9**
SLVN	**Son La**	**42.35**	**306**	P	**P**	**12 01 45.9**	**-0.4**
ENH	**Enshi**	**43.68**	**321**	P	**P**	**12 01 56.9**	**0.0**
TIA	**Tai'an**	**44.13**	**334**	P	**P**	**12 02 00.2**	**-0.2**
TIA				S	**S**	**12 08 31.3**	**-0.7**
TIA				SS	**SS**	**12 11 51.1**	**+0.9**
TIA				pmax	pmax		
	comp=Z,34nm,0.9s						
TIA				pmax	pmax		

	comp=Z,300nm,3.8s						
TIA				LR	LR		
	comp=Z,840nm,18.1s						
TIA				LR	LR		
	comp=Z,340nm,21.6s						
TIA				LR	LR		
	comp=Z,1µm,18.1s						
DL2	**Dalian**	**44.71**	**340**	P	P	12 02 10.5	+5.6
DL2				S	**S**	**12 08 47.2**	**+7.0**
DL2				pmax	pmax		
	comp=Z,37nm,1.1s						
DL2				pmax	pmax		
	comp=Z,440nm,5.9s						
DL2				LR	LR		
	comp=N,550nm,17.0s						
DL2				LR	LR		
	comp=E,440nm,16.3s						
DL2				LR	LR		
	comp=Z,620nm,15.7s						
LYN	**LuoYang**	**45.07**	**328**	⇓P	**P**	**12 02 08.2**	**+0.3**
LYN				pP	pP	12 02 13.9	-1.5
LYN				S	**S**	**12 08 40.0**	**-5.6**
LYN				sS	sS	12 09 01.1	+3.0
LYN				pmax	pmax		
	comp=Z,58nm,0.9s						
LYN				pmax	pmax		
	comp=Z,340nm,5.8s						
LYN				LR	LR		
	comp=Z,690nm,15.1s						
LYN				LR	LR		
	comp=Z,470nm,15.8s						
LYN				LR	LR		
	comp=Z,1µm,15.1s						
CM31	**Chiang Mai Arr**	**45.22**	**300**	P	**P**	**12 02 08.2**	**-1.1**
CM31	**Chiang Mai Arr**	**45.22**	**300**	P	**P**	**12 02 09.1**	**-0.2**
CMAR	**Chiang Mai Arr**	**45.22**	**300**		**P**	**12 02 08.0**	**-1.4**
CMAR	**Chiang Mai Arr**	**45.22**	**300**	P	**P**	**12 02 08.3**	**-1.0**
	comp=Z,8.0nm,0.9s,baz=114,slow=7.8,SNR=32						
CMAR				LR	LR	12 22 38.3	
	comp=Z,222nm,18.3s,baz=110,slow=38						
	comp=Z,8.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**45.22**	**300**	*i* P	**P**	**12 02 08.8**	**-0.5**
CMAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KMI	**Kunming**	**45.23**	**310**	P	**P**	**12 02 09.5**	**-0.1**
KMI				S	**S**	**12 08 48.4**	**-0.4**
KMI				pmax	pmax		
	comp=Z,21nm,1.5s						
KMI				pmax	pmax		
	comp=Z,160nm,6.1s						
KMI				LR	LR		
	comp=Z,320nm,18.7s						
KMI				LR	LR		
	comp=Z,470nm,18.4s						
KMI				LR	LR		
	comp=Z,560nm,20.7s						
CHTO	**Chiang Mai**	**45.36**	**300**	P	**P**	**12 02 09.4**	**-1.1**
CHTO	**Chiang Mai**	**45.36**	**300**	P	**P**	**12 02 09.5**	**-1.0**
CHTO	**Chiang Mai**	**45.36**	**300**	P	**P**	**12 02 09.4**	**-1.1**
CHTO				pmax	pmax		
	comp=Z,11nm,1.0s						
PSTR	**Posyet**	**45.97**	**351**	⇓*e*P	**P**	**12 02 17.4**	**+2.6**
HNS	**HongShan**	**46.21**	**332**	⇑P	**P**	**12 02 16.4**	**-0.4**
HNS				pP	**pP**	**12 02 24.9**	**+0.5**
HNS				S	**S**	**12 09 04.5**	**+2.6**
HNS				SS	**SS**	**12 12 26.2**	**-1.4**
HNS				pmax	pmax		
	comp=Z,49nm,1.1s						
HNS				LR	LR		
	comp=Z,620nm,21.0s						
HNS				LR	LR		
	comp=Z,810nm,20.0s						
HNS				LR	LR		
	comp=Z,1µm,21.0s						
XAN	**Xi'an**	**46.66**	**324**	⇑P	**P**	**12 02 19.9**	**-0.6**
XAN				PP	**PP**	**12 04 14.2**	**+3.6**
XAN				S	**S**	**12 09 06.5**	**-2.2**
XAN				pmax	pmax		
	comp=Z,26nm,1.1s						
XAN				pmax	pmax		
	comp=Z,380nm,3.5s						
XAN				LR	LR		
	comp=Z,490nm,19.9s						
XAN				LR	LR		
	comp=Z,400nm,20.6s						
XAN				LR	LR		
	comp=Z,890nm,22.0s						
PZH	**PanZhiHua**	**46.73**	**311**	P	**P**	**12 02 20.4**	**-0.9**
PZH				S	**S**	**12 09 10.0**	**-0.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,130nm,4.4s						
PZH				LR	LR		
	comp=Z,320nm,17.1s						
PZH				LR	LR		
	comp=Z,410nm,20.6s						
PZH				LR	LR		
	comp=Z,530nm,20.6s						
JKA	**Kamikawa-asahi**	**46.83**	**3**		**P**	**12 02 21.6**	**0.0**
JKA				IAmb	IAmb	12 02 50.1	
	comp=Z,25nm,1.0s						
ASAJ	**Asahikawa**	**46.83**	**3**	P	**P**	**12 02 21.6**	**0.0**
	comp=Z,9.7nm,0.8s,baz=205,slow=9.4,SNR=11						
ASAJ				LR	LR	12 22 54.1	
	comp=Z,373nm,19.1s,baz=202,slow=37						
	comp=Z,9.7nm,0.8s						
USA0B	**Ussuriysk Arra**	**47.32**	**353**	P	**P**	**12 02 23.0**	**-2.4**
USA0B	**Ussuriysk Arra**	**47.32**	**353**	*de*P	**P**	**12 02 26.0**	**+0.6**
USRK	**Ussuriysk Ar.**	**47.32**	**353**	P	**P**	**12 02 24.9**	**-0.5**
USRK	**Ussuriysk Ar.**	**47.32**	**353**	P	**P**	**12 02 25.3**	**-0.1**
	comp=Z,3.2nm,0.7s,baz=165,slow=6.9,SNR=8.7						
USRK				LR	LR	12 19 02.6	
	comp=Z,1µm,21.8s,baz=166,slow=32						
	comp=Z,3.2nm,0.7s						
TIY	**Taiyuan**	**47.54**	**331**	P	**P**	**12 02 27.3**	**0.0**
TIY				S	**S**	**12 09 24.2**	**+3.1**
TIY				pmax	pmax		
	comp=Z,210nm,8.2s						
TIY				LR	LR		
	comp=Z,670nm,19.9s						
TIY				LR	LR		
	comp=Z,520nm,22.0s						
TIY				LR	LR		
	comp=Z,830nm,20.6s						
BJT	**Baijiatuau**	**47.74**	**336**	P	**P**	**12 02 28.8**	**+0.1**
BJT	**Baijiatuau**	**47.74**	**336**	P	**P**	**12 02 29.1**	**+0.4**
BJI	**Beijing**	**47.75**	**336**	P	**P**	**12 02 28.3**	**-0.5**
BJI				S	**S**	**12 09 24.2**	**+0.3**
BJI				pmax	pmax		
	comp=Z,18nm,1.2s						
BJI				pmax	pmax		
	comp=Z,140nm,5.7s						
BJI				LR	LR		
	comp=Z,400nm,17.9s						
BJI				LR	LR		
	comp=Z,230nm,17.5s						
BJI				LR	LR		
	comp=Z,580nm,18.7s						
CD2	**Chengdu**	**47.84**	**317**	P	**P**	**12 02 29.4**	**-0.3**
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
CD2				pmax	pmax		
	comp=Z,190nm,3.5s						
CD2				LR	LR		
	comp=Z,420nm,17.8s						
CD2				LR	LR		
	comp=Z,660nm,18.4s						
MDJ	**Mudanjiang**	**48.08**	**350**	P	**P**	**12 02 31.2**	**-0.1**
MDJ				pmax	pmax		
	comp=Z,11nm,1.2s						
MDJ				LR	LR		
	comp=Z,660nm,17.9s						
MDJ				LR	LR		
	comp=Z,320nm,20.6s						
MDJ				LR	LR		
	comp=Z,970nm,20.6s						
CN2	**Changchun**	**48.13**	**346**	P	**P**	**12 02 31.6**	**-0.1**
CN2				S	**S**	**12 09 29.5**	**+0.3**
CN2				SS	**SS**	**12 12 54.4**	**-4.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,300nm,5.0s						
CN2				LR	LR		
	comp=Z,600nm,20.0s						
CN2				LR	LR		
	comp=Z,500nm,20.0s						
CN2				LR	LR		
	comp=Z,800nm,19.0s						
TNCH	**TengChong**	**48.48**	**307**	P	**P**	**12 02 31.9**	**-3.1**
TNCH				pP	pP	12 02 40.8	-1.8
TNCH				sP	sP	12 02 45.2	-0.4
TNCH				S	**S**	**12 09 31.8**	**-3.2**
TNCH				pmax	pmax		
	comp=Z,23nm,0.4s						
TNCH				pmax	pmax		
	comp=Z,140nm,3.6s						
TNCH				LR	LR		
	comp=Z,210nm,7.8s						
TNCH				LR	LR		
	comp=Z,300nm,14.4s						
TNCH				LR	LR		
	comp=Z,530nm,16.1s						
JCZ	**Jackson Bay**	**48.52**	**152**	P	**P**	**12 02 37.4**	**+2.5**
DCZ	**Deep Cove**	**48.87**	**154**	P	**P**	**12 02 38.8**	**+1.5**
URZ	**Urewera**	**49.19**	**141**	LR	LR	12 25 21.0	
	comp=Z,699nm,18.3s,baz=28,slow=38						
MLZ	**Mavora Lakes**	**49.21**	**154**	P	**P**	**12 02 41.3**	**+1.2**
TUWZ	**Tuamarina**	**49.30**	**146**	P	**P**	**12 02 40.8**	**0.0**
RTZ	**Ruatahuna**	**49.32**	**141**	P	**P**	**12 02 41.8**	**+0.8**
RPZ	**Rata Peaks**	**49.36**	**150**	P	**P**	**12 02 42.2**	**+1.0**
BNX	**BinXian**	**49.56**	**349**	⇑P	**P**	**12 02 42.3**	**-0.4**
BNX				pP	**pP**	**12 02 48.6**	**-1.7**
BNX				sP	**sP**	**12 02 50.1**	**-3.2**
BNX				PP	**PP**	**12 04 38.7**	**+1.5**
BNX				S	**S**	**12 09 50.4**	**+1.2**
BNX				pmax	pmax		
	comp=Z,20nm,1.0s						
BNX				pmax	pmax		
	comp=Z,290nm,4.6s						
BNX				LR	LR		
	comp=Z,370nm,15.7s						
BNX				LR	LR		
	comp=Z,200nm,14.6s						
BNX				LR	LR		
	comp=Z,500nm,18.4s						
YSS	**Yuzhno-Sakhali**	**49.67**	**3**	P	**P**	**12 02 42.7**	**-0.7**
YSS				IAmb	IAmb	12 02 44.5	
	comp=Z,17nm,0.7s						
YSS	**Yuzhno-Sakhali**	**49.67**	**3**	P	**P**	**12 02 43.1**	**-0.3**
YSS	**Yuzhno-Sakhali**	**49.67**	**3**	*e*P	**P**	**12 02 43.3**	**-0.1**
YSS				*e*		12 04 43.9	
YSS				*e*S	**S**	**12 09 49.3**	**-1.4**
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS				pmax	pmax		
	comp=Z,100nm,3.4s						
YSS				MLR	MLR		
	comp=Z,300nm,15.0s						
YSS				MLR	MLR		
	comp=N,200nm,16.0s						
HHC	**Hu-ho-hao-te**	**50.43**	**333**	*e*P	**P**	**12 02 50.2**	**+0.7**
HHC				S	**S**	**12 10 04.3**	**+2.5**
HHC				pmax	pmax		
	comp=N,32nm,0.8s						
HHC				pmax	pmax		
	comp=N,260nm,3.6s						
HHC				LR	LR		
	comp=N,580nm,16.6s						
HHC				LR	LR		
	comp=N,520nm,16.9s						
HHC				LR	LR		
	comp=N,990nm,17.3s						
BTO	**Baotou**	**50.97**	**331**	*e*P	**P**	**12 02 54.4**	**+0.8**
BTO				pP	**pP**	**12 03 01.5**	**+0.3**
BTO				sP	**sP**	**12 03 05.2**	**+1.0**
BTO				S	**S**	**12 10 10.6**	**+1.4**
BTO				pmax	pmax		
	comp=N,31nm,0.5s						
BTO				pmax	pmax		
	comp=N,250nm,6.3s						
BTO				LR	LR		
	comp=N,1µm,15.7s						
BTO				LR	LR		
	comp=N,1µm,16.9s						
BTO				LR	LR		
	comp=N,2µm,19.1s						
XLT	**XiLinHaoTe**	**51.08**	**338**	*e*P	P	12 02 59.2	+4.9
XLT				pmax	pmax		
	comp=N,14nm,0.7s						
LZH	**Lanzhou**	**51.09**	**323**	*e*P	**P**	**12 02 55.1**	**+0.5**
LZH				pP	pP	12 03 00.5	-1.8
LZH				S	**S**	**12 10 11.9**	**+0.7**
LZH				pmax	pmax		
	comp=N,29nm,1.8s						
LZH				LR	LR		
	comp=N,380nm,15.2s						
LZH				LR	LR		
	comp=N,550nm,16.8s						
LZH				LR	LR		
	comp=N,790nm,17.1s						
KLR	**Kul'dur**	**52.30**	**354**	LR	LR	12 21 48.5	
	comp=N,623nm,21.8s,baz=197,slow=32						
KLR	**Kul'dur**	**52.30**	**354**	*ce*P	**P**	**12 03 03.2**	**-0.1**
KLR				pmax	pmax		
	comp=Z,16nm,1.3s						
BRDH	**Bariadhala**	**53.16**	**301**	LR	LR	12 26 34.1	
	comp=Z,216nm,20.1s,baz=132,slow=37						
GRNR	**Gornyy**	**53.48**	**358**	*e*P	**P**	**12 03 12.2**	**+0.3**
GRNR				MLR	MLR		
	comp=N,250nm,16.0s						
TYV	**Tymovskoe**	**53.57**	**2**	*e*P	**P**	**12 03 12.9**	**+0.4**
TYV				pmax	pmax		
	comp=Z,100nm,3.1s						
TYV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HEH	**HeiHe**	**53.91**	**350**	*e*P	**P**	**12 03 13.8**	**-1.3**
HEH				pP	**pP**	**12 03 18.8**	**-4.0**
HEH				PcP	**PcP**	**12 04 20.3**	**0.0**
HEH				S	**S**	**12 10 45.8**	**-3.1**
HEH				pmax	pmax		
	comp=Z,23nm,1.4s						
HEH				pmax	pmax		
	comp=Z,280nm,6.5s						
HEH				LR	LR		
	comp=Z,320nm,18.6s						
HEH				LR	LR		
	comp=Z,460nm,17.8s						
HEH				LR	LR		
	comp=Z,650nm,19.6s						
GTA	**Gaotai**	**55.67**	**323**	*e*P	**P**	**12 03 28.8**	**+0.6**
GTA				sP	pP	12 03 36.2	+0.3
GTA				S	**S**	**12 11 16.6**	**+3.3**
GTA				pmax	pmax		
	comp=Z,12nm,1.0s						
GTA				LR	LR		
	comp=Z,200nm,16.4s						
GTA				LR	LR		
	comp=Z,230nm,16.7s						
GTA				LR	LR		
	comp=Z,460nm,18.5s						
ZEA	**Zeya**	**57.31**	**351**	*e*P	**P**	**12 03 38.6**	**-0.8**
ZEA				*e*S	**S**	**12 11 37.2**	**+3.0**
ZEA				pmax	pmax		
	comp=Z,100nm,5.6s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.2s						
ZEA				smax	smax		
	comp=N,200nm,13.4s						
PEA0B	**Petropavlovsk-**	**57.81**	**13**	⇓*e*P	**P**	**12 03 45.0**	**+2.0**
PETK	**Petropavlovsk-**	**57.81**	**13**	P	**P**	**12 03 43.5**	**+0.6**
PETK	**Petropavlovsk-**	**57.81**	**13**	P	**P**	**12 03 43.8**	**+0.8**
	comp=N,10nm,0.9s,baz=199,slow=8.5,SNR=13						
PETK				LR	LR	12 30 45.6	
	comp=N,307nm,18.4s,baz=200,slow=38						
	comp=N,10nm,0.9s						
ULN	**Ulaanbaatar**	**57.94**	**335**	P	**P**	**12 03 43.6**	**-0.6**
ULN				IAmb	IAmb	12 03 48.9	
	comp=Z,13nm,0.8s						
ULN	**Ulaanbaatar**	**57.94**	**335**	P	**P**	**12 03 44.8**	**+0.6**
ULN				S	**S**	**12 11 44.9**	**+1.9**
ULN	**Ulaanbaatar**	**57.94**	**335**	P	**P**	**12 03 43.6**	**-0.6**
ULN				pmax	pmax		
	comp=Z,13nm,0.8s						
ULN	**Ulaanbaatar**	**57.94**	**335**	P	**P**	**12 03 45.4**	**+1.2**
PET	**Petropavlovsk**	**57.95**	**14**	*e*P	**P**	**12 03 46.5**	**+2.6**
PET				*e*S	**S**	**12 11 47.4**	**+4.9**
PET				pmax	pmax		
	comp=Z,100nm,11.6s						
PET				MLR	MLR		
	comp=Z,300nm,17.0s						
SONM	**Songino Array**	**58.20**	**334**	P	**P**	**12 03 45.4**	**-0.5**
SONM	**Songino Array**	**58.20**	**334**	P	**P**	**12 03 45.8**	**-0.2**
	comp=Z,3.9nm,0.7s,baz=152,slow=8.3,SNR=22						
SONM				LR	LR	12 29 42.4	
	comp=Z,947nm,18.5s,baz=138,slow=37						
	comp=Z,3.9nm,0.7s						
CIT	**Chita**	**58.93**	**342**	*e*P	**P**	**12 03 51.2**	**+0.3**
CIT				*e*		12 03 58.0	
CIT				*e*		12 06 06.8	
CIT				pmax	pmax		
	comp=Z,109nm,1.3s						
EVN	**Everest**	**59.19**	**305**	P	**P**	**12 03 52.5**	**-1.4**
PALK	**Pallekele**	**59.56**	**280**	LR	LR	12 34 22.2	
	comp=Z,103nm,18.1s,baz=95,slow=41						
ZAK	**Zakamensk**	**61.46**	**334**	*e*P	**P**	**12 04 07.5**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,24nm,1.4s						
RAR	**Rarotonga**	**61.71**	**112**	LR	LR	12 29 45.9	
	comp=Z,97nm,19.2s,baz=296,slow=35						
IRK	**Irkutsk**	**62.45**	**336**	*e*P	**P**	**12 04 11.7**	**-3.1**
IRK				pmax	pmax		
	comp=Z,74nm,2.7s						
SHEM	**Shemya Is, Ala**	**62.55**	**23**	LR	LR	12 27 23.3	
	comp=Z,518nm,21.1s,baz=256,slow=32						
MA2	**Magadan**	**62.86**	**6**	P	**P**	**12 04 17.4**	**0.0**
MA2				IAmb	IAmb	12 04 18.7	
	comp=Z,20nm,1.0s						
MA2	**Magadan**	**62.86**	**6**	P	**P**	**12 04 17.6**	**+0.2**
	comp=Z,16nm,1.0s,baz=213,slow=10,SNR=6.3						
MA2				LR	LR	12 28 28.6	
	comp=Z,172nm,21.6s,baz=184,slow=33						
	comp=Z,16nm,1.0s						
MA2	**Magadan**	**62.86**	**6**	P	**P**	**12 04 17.8**	**+0.3**
MA2	**Magadan**	**62.86**	**6**	*de*P	**P**	**12 04 17.9**	**+0.5**
MA2				pmax	pmax		
	comp=Z,19nm,1.0s						
MA2	**Magadan**	**62.86**	**6**	P	**P**	**12 04 17.6**	**+0.2**
	comp=Z,466nmcomp=Z,24nm,1.1s						
MA2	**Magadan**	**62.86**	**6**	P	**P**	**12 04 17.7**	**+0.3**
MOY	**Mondy**	**63.39**	**334**	*e*P	**P**	**12 04 21.5**	**+0.3**
MOY				pmax	pmax		
	comp=Z,60nm,3.1s						
HYB	**Hyderabad**	**63.39**	**291**	*e*P	**P**	**12 04 20.4**	**-1.3**
HYB				*e*pP	**pP**	**12 04 31.3**	**+1.7**
HYB				*e*S	**S**	**12 12 50.3**	**-3.2**
DRV	**Dumont d’Urvil**	**63.70**	**180**	P	**P**	**12 04 23.0**	**+0.2**
DRV				pP	**sP**	**12 04 34.2**	**+0.6**
BOD	**Bodaibo**	**63.85**	**345**	*e*P	**P**	**12 04 24.0**	**0.0**
BOD				pmax	pmax		
	comp=Z,44nm,2.2s						
YAK	**Yakutsk**	**65.14**	**355**	P	**P**	**12 04 32.1**	**-0.2**
YAK	**Yakutsk**	**65.14**	**355**	P	**P**	**12 04 31.6**	**-0.7**
	comp=Z,88nm,0.8s,baz=115,slow=4.0,SNR=21						
YAK				LR	LR	12 29 58.9	
	comp=Z,401nm,20.1s,baz=161,slow=33						
	comp=Z,88nm,0.8s						
YAK	**Yakutsk**	**65.14**	**355**	*e*P	**P**	**12 04 30.9**	**-1.4**
YAK				*e**PP	**sP**	**12 04 44.6**	**+1.5**
YAK				*e*		12 06 56.1	
YAK				*e*S	**S**	**12 13 13.5**	**+0.1**
YAK				*e**SS	sS	12 13 51.4	+25
YAK				pmax	pmax		
	comp=Z,107nm,0.9s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,41nm,1.1s						
YAK				pmax	pmax		
	comp=Z,11nm,0.7s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,27nm,1.8s						
YAK				smax	smax		
	comp=N,25nm,2.6s						
YAK				smax	smax		
	comp=E,167nm,3.5s						
YAK	**Yakutsk**	**65.14**	**355**	P	**P**	**12 04 32.5**	**+0.2**
WMQ	**Urumqi**	**65.63**	**321**	*e*P	**P**	**12 04 36.3**	**+0.3**
WMQ				pP	pP	12 04 43.3	-0.5
WMQ				sS	sS	12 13 32.8	-0.5
WMQ				pmax	pmax		
	comp=E,35nm,1.1s						
WMQ				pmax	pmax		
	comp=E,160nm,4.3s						
WMQ				LR	LR		
	comp=E,310nm,20.1s						
WMQ				LR	LR		
	comp=E,410nm,19.3s						
WMQ				LR	LR		
	comp=E,170nm,22.9s						
KIWB	**Kanaga Island**	**65.67**	**28**	P	**P**	**12 04 36.2**	**+0.2**
SEY	**Seymchan**	**66.32**	**6**	P	**P**	**12 04 39.4**	**-0.5**
	comp=E,6.2nm,0.9s,baz=198,slow=4.3,SNR=16						
SEY				LR	LR	12 37 56.8	
	comp=E,197nm,18.0s,baz=170,slow=40						
	comp=E,6.2nm,0.9s						
SEY	**Seymchan**	**66.32**	**6**	*ce*P	**P**	**12 04 40.2**	**+0.3**
SEY				pmax	pmax		
	comp=Z,23nm,1.7s						
CASY	**Casey**	**66.51**	**192**	P	**P**	**12 04 41.0**	**-0.1**
CASY	**Casey**	**66.51**	**192**	P	**P**	**12 04 41.7**	**+0.6**
CASY				pP	**sP**	**12 04 54.9**	**+3.0**
ZSN	**Zaisan**	**69.16**	**324**	*e*P	**P**	**12 04 56.6**	**-1.6**
ZSN				pmax	pmax		
	comp=Z,20nm,1.5s						
ZSN	**Zaisan**	**69.16**	**324**	*e*P	**P**	**12 04 56.7**	**-1.6**
	comp=Z,20nm,1.5s						
NIKH	**Nikolski High**	**70.38**	**30**	P	**P**	**12 05 05.4**	**-0.1**
	baz=236						
MK31	**Makanchi Array**	**70.40**	**322**	*i* P	**P**	**12 05 05.2**	**-0.7**
MK31				pmax	pmax		
	comp=Z,24nm,0.9s						
MKAR	**Makanchi Array**	**70.40**	**322**	P	**P**	**12 05 04.7**	**-1.2**
MKAR	**Makanchi Array**	**70.40**	**322**	P	**P**	**12 05 05.3**	**-0.6**
	comp=Z,12nm,1.0s,baz=120,slow=7.5,SNR=39						
MKAR				LR	LR	12 38 30.6	
	comp=Z,278nm,18.1s,baz=94,slow=38						
	comp=Z,12nm,1.0s						
MKAR	**Makanchi Array**	**70.40**	**322**	*i* P	**P**	**12 05 05.8**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,12nm,1.0s						
MAKZ	**Makanchi**	**70.60**	**322**	P	**P**	**12 05 05.9**	**-1.2**
MAKZ				IAmb	IAmb	12 05 15.0	
	comp=Z,27nm,0.8s						
MAKZ	**Makanchi**	**70.60**	**322**	P	**P**	**12 05 05.9**	**-1.2**
MAKZ				pmax	pmax		
	comp=Z,27nm,0.8s						
MAKZ	**Makanchi**	**70.60**	**322**	P	**P**	**12 05 06.7**	**-0.4**
SHLS	**Shalkode**	**70.67**	**318**	*e*P	**P**	**12 05 04.5**	**-3.2**
SHLS	**Shalkode**	**70.67**	**318**	*e*P	**P**	**12 05 04.6**	**-3.2**
PPT	**Papeete**	**70.93**	**108**	LR	LR	12 32 39.1	
	comp=Z,202nm,21.7s,baz=272,slow=33						
PPT2	**Papeete2**	**70.93**	**108**	*e*P	P	12 05 04.0	-5.7
	comp=Z,42nm,24.0s						
PPT2				*e*S	**S**	**12 14 28.2**	**+3.7**
	comp=Z,157nm,24.8s						
PPT2				*e*SS	**SS**	**12 18 55.2**	**-2.5**
	comp=Z,159nm,23.8s						
PPT2				*e*LQ	LQ	12 23 45.8	
	comp=Z,707nm,29.0s						
PPT2				*e*LR	LR	12 26 47.7	
	comp=Z,803nm,25.0s						
PPT2				*e*LR	LR	12 26 48.8	
	comp=Z,598nm,25.0s						
UZB	**Uzynbulak**	**70.96**	**318**	*e*P	**P**	**12 05 08.0**	**-1.5**
UZB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
UZB	**Uzynbulak**	**70.96**	**318**	*e*P	**P**	**12 05 08.1**	**-1.5**
	comp=Z,6.7nm,0.8s						
TARG	**Taragay, Kyrgy**	**71.25**	**316**	P	**P**	**12 05 10.6**	**-1.0**
TARG	**Taragay, Kyrgy**	**71.25**	**316**	P	**P**	**12 05 10.6**	**-1.0**
TARG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KPKS	**Kokpek**	**71.31**	**318**	*e*P	**P**	**12 05 10.2**	**-1.3**
KPKS				pmax	pmax		
	comp=Z,9.0nm,1.5s						
KPKS	**Kokpek**	**71.31**	**318**	*e*P	**P**	**12 05 10.3**	**-1.3**
	comp=Z,8.9nm,1.5s						
SATY	**Saty**	**71.34**	**317**	*e*P	**P**	**12 05 10.6**	**-1.2**
SATY				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SATY	**Saty**	**71.34**	**317**	*e*P	**P**	**12 05 10.6**	**-1.2**
	comp=Z,8.9nm,0.8s						
TBI	**Tubuai**	**71.44**	**114**	*e*P	**P**	**12 05 09.5**	**-3.1**
	comp=Z,299nm,26.0s						

TBI				eS	S	12 14 34.9	+4.8
	comp=Z,488nm,24.8s						
TBI				eSS	SS	12 19 05.8	+0.6
	comp=Z,532nm,29.0s						
TBI				eLQ	LQ	12 24 01.8	
	comp=Z,2µm,37.8s						
TBI				eLR	LR	12 27 00.1	
	comp=Z,1µm,28.5s						
TBI				eLR	LR	12 27 01.2	
	comp=Z,1µm,27.5s						
KSH	Kashi	71.78	313	P	P	12 05 15.8	+1.3
KSH				pP	pP	12 05 22.7	+0.3
KSH				pmax	pmax		
	comp=Z,15nm,1.0s						
KSH				LR	LR		
	comp=Z,300nm,21.0s						
KSH				LR	LR		
	comp=Z,440nm,19.6s						
KSH				LR	LR		
	comp=Z,510nm,18.9s						
UNV	Unalaska Valle	72.03	30	P	P	12 05 15.4	-0.1
	baz=238						
NIL	Nilore	72.07	307	P	P	12 05 14.8	-1.4
NIL	Nilore	72.07	307	P	P	12 05 15.5	-0.8
NIL	Nilore	72.07	307	P	P	12 05 14.8	-1.4
NIL				pmax	pmax		
	comp=Z,51nm,1.0s						
NIL	Nilore	72.07	307	P	P	12 05 15.8	-0.4
NIL				PcP	PcP	12 05 34.6	-0.1
TDK	Taldyqorghan	72.10	319	eP	P	12 05 14.9	-1.2
TDK				pmax	pmax		
	comp=Z,12nm,1.3s						
TDK	Taldyqorghan	72.10	319	eP	P	12 05 15.0	-1.2
	comp=Z,12nm,1.3s						
ARXS	Arharly	72.17	318	eP	P	12 05 14.6	-2.1
MDOK	Medeo	72.30	317	eP	P	12 05 16.0	-1.6
MDOK	Medeo	72.30	317	eP	P	12 05 16.1	-1.6
AAA	Alma-Ata	72.41	317	eP	P	12 05 16.8	-1.3
AAA				pmax	pmax		
	comp=Z,11nm,0.6s						
AAA	Alma-Ata	72.41	317	eP	P	12 05 16.8	-1.3
	comp=Z,11nm,0.6s						
NRN	Naryn	72.41	315	P	P	12 05 17.7	-0.8
NRN	Naryn	72.41	315	P	P	12 05 17.7	-0.8
NRN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ZALV	Zalesovo Beam	72.47	330	P	P	12 05 16.3	-1.8
	comp=Z,2.2nm,0.6s,baz=115,slow=6.5,SNR=10						
ZALV				LR	LR	12 36 51.6	
	comp=Z,346nm,21.2s,baz=116,slow=36						
	comp=Z,2.2nm,0.6s						
KUU	Kurty	73.05	318	eP	P	12 05 20.6	-1.3
KUU				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KUU	Kurty	73.05	318	eP	P	12 05 20.6	-1.3
	comp=Z,6.9nm,1.1s						
BILL	Bilibino	73.15	10	P	P	12 05 21.6	-0.3
BILL	Bilibino	73.15	10	deP	P	12 05 22.2	+0.3
BILL				pmax	pmax		
	comp=Z,20nm,1.3s						
SEM	Semipalatinsk	73.23	325	eP	P	12 05 21.4	-1.6
SEM	Semipalatinsk	73.23	325	eP	P	12 05 21.5	-1.6
AAK	Ala-Archa	73.88	316	P	P	12 05 26.3	-0.7
AAK	Ala-Archa	73.88	316	LR	LR	12 41 13.0	
	comp=Z,219nm,18.5s,baz=106,slow=38						
AAK	Ala-Archa	73.88	316	P	P	12 05 25.9	-1.0
AAK	Ala-Archa	73.88	316	deP	P	12 05 27.1	+0.2
AAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
SGDS	Sogindy	74.06	317	eP	P	12 05 26.7	-1.1
KURK	Kurchatov	74.30	325	P	P	12 05 27.8	-1.2
KURK	Kurchatov	74.30	325	P	P	12 05 28.1	-1.0
KURK	Kurchatov	74.30	325	ceP	P	12 05 28.0	-1.0
KURK				pmax	pmax		
	comp=Z,22nm,1.7s						
KURBB	Kurchatov Arra	74.31	325	P	P	12 05 27.7	-1.3
	comp=Z,4.6nm,0.9s,baz=112,slow=5.7,SNR=30						
	comp=Z,4.6nm,0.9s						
ARSB	Arslanbob	74.52	314	P	P	12 05 30.0	-0.7
ARSB				IAmb	IAmb	12 06 20.8	
	comp=Z,33nm,1.4s						
ARSB	Arslanbob	74.52	314	P	P	12 05 30.0	-0.7
ARSB				pmax	pmax		
	comp=Z,33nm,1.4s						
TIXI	Tiksi	74.69	357	LR	LR	12 39 47.9	
	comp=Z,194nm,18.2s,baz=182,slow=37						
BTLS	Baital	74.99	318	eP	P	12 05 32.1	-1.0
BTLS	Baital	74.99	318	eP	P	12 05 32.1	-1.0
S12K	Black Hills	75.19	30	P	P	12 05 33.8	-0.3
	baz=242						
VNDA	Vanda	75.57	175	P	P	12 05 36.5	+0.6
VNDA				IAmb	IAmb	12 05 44.5	
	comp=Z,19nm,0.8s						
VNDA	Vanda	75.57	175	P	P	12 05 36.0	+0.1
	comp=Z,14nm,0.8s,baz=335,slow=6.6,SNR=51						
VNDA				LR	LR	12 37 13.8	
	comp=Z,984nm,20.9s,baz=358,slow=34						
	comp=Z,14nm,0.8s						
VNDA	Vanda	75.57	175	P	P	12 05 36.5	+0.6
VNDA				pmax	pmax		
	comp=Z,19nm,0.9s						
GAMB	Gambell	75.62	20	P	P	12 05 36.7	+0.3
	baz=231						
KBL	Kabul	75.67	307	P	P	12 05 36.0	-1.6
KBL	Kabul	75.67	307	P	P	12 05 36.5	-1.1
	SNR=6.1						
KBL	Kabul	75.67	307	P	P	12 05 36.0	-1.6
KBL				pmax	pmax		
	comp=Z,15nm,1.0s						
M11K	Mekoryuk	75.70	25	P	P	12 05 37.2	+0.3
	baz=237						
GAR	Garm	75.81	311	P	P	12 05 37.7	-0.5
GAR				IAmb	IAmb	12 05 38.6	
	comp=Z,47nm,1.1s						
SDPT	Sand Point	75.83	31	P	P	12 05 38.2	+0.5
SDPT	Sand Point	75.83	31	P	P	12 05 37.7	0.0
	baz=243						
CHNA	Chernabura Isl	76.05	31	P	P	12 05 38.0	-1.0
	baz=244						
DZA	Taraz	76.17	315	eP	P	12 05 38.9	-1.1
DZA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
DZA	Taraz	76.17	315	eP	P	12 05 38.9	-1.1
	comp=Z,5.8nm,0.5s						
SBA	Scott Base	76.33	174	P	P	12 05 43.4	+3.2
SBA				pmax	pmax		
	comp=Z,39nm,1.8s						
SIMJ	Simiganj	76.70	311	P	P	12 05 42.2	-1.1
SIMJ				IAmb	IAmb	12 05 43.7	
	comp=Z,24nm,1.0s						
S14K	Fog Glacier	76.71	30	P	P	12 05 42.3	-0.5
	baz=244						
KK31	Karatay Array	76.80	315	P	P	12 05 42.6	-1.0
KK31				IAmb	IAmb	12 05 51.5	
	comp=Z,33nm,1.6s						
KK31	Karatay Array	76.80	315	P	P	12 05 42.6	-1.0
KK31				pmax	pmax		
	comp=Z,33nm,1.6s						
KKAR	Karatay Array	76.80	315	P	P	12 05 42.3	-1.3
KKAR				IAmb	IAmb	12 05 51.5	
	comp=Z,35nm,1.6s						
KKAR	Karatay Array	76.80	315	P	P	12 05 42.4	-1.2
KKAR	Karatay Array	76.80	315	P	P	12 05 42.4	-1.2
M13K	Dall Lake	76.92	25	P	P	12 05 43.7	-0.1
	baz=240						
K13K	Kusilvak Mount	77.17	24	P	P	12 05 46.0	+0.8
K13K				IAmb	IAmb	12 05 47.5	
	comp=Z,38nm,1.1s						
K13K	Kusilvak Mount	77.17	24	P	P	12 05 45.9	+0.8
	baz=238,SNR=13						
CHM	Chimkent	77.23	314	eP	P	12 05 44.8	-1.2
CHM				pmax	pmax		
	comp=Z,12nm,0.8s						
CHM	Chimkent	77.23	314	eP	P	12 05 44.8	-1.2
	comp=Z,12nm,0.8s						
BRLS	Borolday	77.26	315	eP	P	12 05 45.2	-1.0
BRLS	Borolday	77.26	315	eP	P	12 05 45.2	-1.0
O14K	Tigyukauivet M	77.27	27	P	P	12 05 46.3	+0.5
	baz=242,SNR=5.2						
N14K	Kuskokwak Cree	77.40	26	P	P	12 05 46.7	+0.2
	baz=241						
BRZS	Berezniki	77.54	323	eP	P	12 05 46.5	-1.0
BRZS	Berezniki	77.54	323	eP	P	12 05 46.5	-1.0
L14K	Kuka Creek	77.67	25	P	P	12 05 48.3	+0.3
L14K	Kuka Creek	77.67	25	P	P	12 05 49.0	+1.0
	baz=240,SNR=19						
M14K	Bethel	77.69	25	P	P	12 05 48.6	+0.6
M14K				IAmb	IAmb	12 05 50.0	
	comp=Z,34nm,0.9s						
M14K	Bethel	77.69	25	P	P	12 05 48.9	+0.8
	baz=241,SNR=7.9						
O15K	Ungalikthiuk R	77.89	27	P	P	12 05 49.8	+0.6
O15K				IAmb	IAmb	12 05 51.0	
	comp=Z,26nm,1.1s						
O15K	Ungalikthiuk R	77.89	27	P	P	12 05 49.9	+0.6
	baz=243						
TNA	Tin City	78.00	20	P	P	12 05 50.1	+0.4
	baz=234						
J14K	Nanvaranak Lak	78.04	23	P	P	12 05 51.1	+1.1
	baz=239,SNR=7.7						
M15K	Kasigluk River	78.21	26	P	P	12 05 51.5	+0.5
	baz=242,SNR=8.6						
N15K	Kwethluk River	78.22	26	P	P	12 05 51.6	+0.5
N15K				IAmb	IAmb	12 05 53.0	
	comp=Z,21nm,0.9s						
N15K	Kwethluk River	78.22	26	P	P	12 05 51.7	+0.6
	baz=243,SNR=6.8						
ANM	Nome	78.33	21	P	P	12 05 52.1	+0.5
	baz=237						
L15K	Ungalak Mounta	78.34	25	P	P	12 05 51.8	+0.1
	baz=241						
F14K	Arctic Creek	78.50	20	P	P	12 05 53.2	+0.7
	baz=236						
K15K	Wolf Creek Mou	78.62	24	P	P	12 05 53.8	+0.5
K15K				IAmb	IAmb	12 05 55.5	
	comp=Z,46nm,1.1s						
K15K	Wolf Creek Mou	78.62	24	P	P	12 05 54.0	+0.7
	baz=241,SNR=22						
P16K	Nushagak River	78.67	28	P	P	12 05 53.8	+0.3
	baz=245						
O16K	Kokwok River B	78.87	27	P	P	12 05 54.9	+0.3
O16K				IAmb	IAmb	12 05 56.4	
	comp=Z,31nm,1.1s						
O16K	Kokwok River B	78.87	27	P	P	12 05 55.3	+0.6
	baz=244,SNR=8.3						
N16K	Nishlik Lake	78.95	26	P	P	12 05 56.1	+1.0
	baz=244,SNR=8.4						
G15K	Niukluk	79.04	21	P	P	12 05 55.9	+0.3
	baz=238						
M16K	Timber Creek	79.11	26	P	P	12 05 56.5	+0.5
M16K				IAmb	IAmb	12 05 58.0	
	comp=Z,40nm,1.0s						
M16K	Timber Creek	79.11	26	P	P	12 05 56.6	+0.6
	baz=244,SNR=17						
L16K	Owhat River	79.20	25	P	P	12 05 56.6	+0.1
L16K				IAmb	IAmb	12 05 58.2	
	comp=Z,32nm,1.1s						
L16K	Owhat River	79.20	25	P	P	12 05 57.1	+0.6
	baz=243,SNR=13						
F15K	North Star Dit	79.21	20	P	P	12 05 57.0	+0.6
	baz=237,SNR=8.9						
Q17K	Contact Creek	79.35	29	P	P	12 05 57.0	-0.6
	baz=247,SNR=8.4						
O17K	Koliganek Bris	79.40	27	P	P	12 05 58.4	+0.8
	baz=245,SNR=34						
P17K	Kvichak River	79.47	28	P	P	12 05 58.3	+0.3
	baz=246						
J16K	Anvik River	79.48	23	P	P	12 05 58.5	+0.5
J16K				IAmb	IAmb	12 06 00.3	
	comp=Z,34nm,1.1s						
J16K	Anvik River	79.48	23	P	P	12 05 58.8	+0.9
	baz=242,SNR=12						
SII	Sitkinak Islan	79.55	31	P	P	12 05 59.5	+1.0
SII	Sitkinak Islan	79.55	31	P	P	12 05 59.0	+0.5
	baz=248						
N17K	Nushagak Hills	79.68	27	P	P	12 05 59.9	+0.8
N17K				IAmb	IAmb	12 06 01.4	
	comp=Z,22nm,0.9s						
N17K	Nushagak Hills	79.68	27	P	P	12 05 59.8	+0.8
	baz=245,SNR=10						
I17K	Unalakleet	79.73	23	P	P	12 06 00.2	+1.0
	baz=241,SNR=8.3						
R18K	Karluk	79.79	30	P	P	12 06 00.1	+0.4
	baz=248						
G16K	Koyuk River	79.86	21	P	P	12 06 00.7	+0.8
G16K				IAmb	IAmb	12 06 01.8	
	comp=Z,30nm,1.1s						
G16K	Koyuk River	79.86	21	P	P	12 06 00.8	+0.8
	baz=240,SNR=8.0						
L17K	Donlin	79.89	25	P	P	12 06 01.3	+1.1
	baz=244,SNR=13						
BVA0	Borovoye Array	79.89	325	i P	P	12 05 59.3	-1.1
BVAR	Borovoye Array	79.89	325	P	P	12 05 59.5	-0.9
	comp=Z,4.3nm,0.5s,baz=111,slow=6.3,SNR=30						
	comp=Z,4.3nm,0.5s						
Q18K	Katmai Hardscr	79.93	29	P	P	12 06 00.0	-0.6
	baz=247,SNR=14						
M17K	Holitna River	79.94	26	P	P	12 06 01.5	+1.1
M17K	Holitna River	79.94	26	P	P	12 06 01.6	+1.1
	baz=245,SNR=14						
BRVK	Borovoye	79.97	325	P	P	12 05 60.0	-0.8
BRVK	Borovoye	79.97	325	c iP	P	12 06 00.0	-0.8
BRVK				pmax	pmax		
	comp=Z,26nm,1.7s						
TAOE	Nuku Hiva Isla	80.01	98	eLR	LR	12 31 06.1	
	comp=Z,415nm,21.8s						
P18K	Big Mountain,	80.11	28	P	P	12 06 00.7	-0.8
	baz=247						
J17K	VABM Dome	80.14	24	P	P	12 06 01.9	+0.4
J17K	VABM Dome	80.14	24	P	P	12 06 02.7	+1.2
	baz=243,SNR=20						
K17K	Iditarod	80.15	24	P	P	12 06 02.6	+1.1
K17K	Iditarod	80.15	24	P	P	12 06 02.7	+1.1
	baz=244,SNR=32						
OHAK	Old Harbor	80.25	31	P	P	12 06 02.8	+0.5
OHAK	Old Harbor	80.25	31	P	P	12 06 02.9	+0.7
OHAK	Old Harbor	80.25	31	P	P	12 06 02.4	+0.2
	baz=249,SNR=10						
O18K	Koktuh Hills	80.31	28	P	P	12 06 02.5	-0.1
	baz=247,SNR=5.1						
N18K	Kilae Creek	80.32	27	P	P	12 06 03.3	+0.7
	baz=246,SNR=9.8						
C16K	Lisburne Hills	80.39	18	P	P	12 06 03.0	+0.3
	baz=236						
G17K	Kiwalik Mounta	80.53	21	P	P	12 06 04.3	+0.8
	baz=241,SNR=11						
H17K	Granite Mounta	80.53	22	P	P	12 06 04.5	+0.9
	baz=242,SNR=16						
L18K	Granite Mounta	80.61	25	P	P	12 06 05.2	+1.1
	baz=245,SNR=17						
M18K	Stony River	80.68	26	P	P	12 06 05.6	+1.1
	baz=246,SNR=19						
Q19K	Cape Douglas,	80.69	29	P	P	12 06 05.6	+0.9
	baz=249						
F17K	Baldwin Pennin	80.78	20	P	P	12 06 05.4	+0.6
	baz=240						
D17K	Noatak River	80.80	19	P	P	12 06 05.8	+0.9
	baz=239,SNR=18						
KDAK	Kodiak Island	80.81	30	P	P	12 06 05.3	+0.1
KDAK	Kodiak Island	80.81	30	P	P	12 06 05.5	+0.3
	comp=Z,41nm,1.0s,baz=221,slow=2.1,SNR=17						
KDAK				LR	LR	12 38 37.3	
	comp=Z,521nm,20.0s,baz=238,slow=33						
	comp=Z,41nm,1.0s						
KDAK	Kodiak Island	80.81	30	P	P	12 06 05.3	+0.1
	baz=250						
O19K	Port Alsworth	80.85	28	P	P	12 06 05.4	0.0
	baz=248						
E17K	Hotham Inlet	80.90	20	P	P	12 06 06.3	+0.8
	baz=240,SNR=8.6						
N19K	Bonanza Creek	81.01	27	P	P	12 06 06.8	+0.4
	baz=248,SNR=22						
J18K	Innoko River	81.12	24	P	P	12 06 07.1	+0.3
	baz=245,SNR=17						
P19K	Oil Pt	81.16	28	P	P	12 06 06.7	-0.4
	baz=249,SNR=7.5						
C17K	DeLong Mountai	81.18	18	P	P	12 06 07.0	-0.1
	baz=238						
Q20K	Shuyak Island	81.19	29	P	P	12 06 07.0	-0.2
	baz=250,SNR=6.2						
H18K	Honhosa River	81.21	22	P	P	12 06 07.2	0.0
	baz=243,SNR=7.9						
L19K	White Mountain	81.38	26	P	P	12 06 08.3	0.0
L19K				IAmb	IAmb	12 06 10.1	
	comp=Z,35nm,1.0s						
L19K	White Mountain	81.38	26	P	P	12 06 08.8	+0.6
	baz=247,SNR=20						
F18K	Selawik	81.41	21	P	P	12 06 08.2	0.0
	baz=242						
G18K	Tagagawik	81.44	21	P	P	12 06 08.7	+0.2
	baz=243,SNR=12						
M19K	Big River Lodg	81.47	26	P	P	12 06 09.3	+0.6
	baz=248						
E18K	Tukpahlearik C	81.48	20	P	P	12 06 09.0	+0.4
E18K				IAmb	IAmb	12 06 10.4	
	comp=Z,30nm,0.9s						
E18K	Tukpahlearik C	81.48	20	P	P	12 06 09.4	+0.8
	baz=241,SNR=17						
O20K	Slope Mountain	81.60	28	P	P	12 06 09.8	+0.3
	baz=249						
GCSA	Galena City Sc	81.60	23	P	P	12 06 09.7	+0.4
	baz=245,SNR=22						
J19K	Poorman	81.78	24	P	P	12 06 11.1	+0.8
	baz=246,SNR=20						
C18K	Utukok River	81.89	19	P	P	12 06 11.1	+0.3
	baz=240,SNR=5.8						
HOM	Homer	81.91	29	P	P	12 06 10.8	-0.2
	baz=250						
L20K	Farewell, AK	81.91	26	P	P	12 06 11.8	+0.8
	baz=248,SNR=14						
JLN	Jalan Bani Buh	81.93	293	P	P	12 06 11.1	-0.8
M20K	Styx River	82.02	26	P	P	12 06 12.2	+0.5
	baz=249						
B18K	Kokolik River	82.07	18	P	P	12 06 12.4	+0.8
	baz=240						
H19K	Roundabout Mou	82.10	22	P	P	12 06 12.3	+0.4
	baz=245,SNR=22						
G19K	Purcell Mounta	82.13	22	P	P	12 06 13.0	+0.9
G19K				IAmb	IAmb	12 06 13.8	
	comp=Z,24nm,0.9s						
G19K	Purcell Mounta	82.13	22	P	P	12 06 12.7	+0.7
	baz=244,SNR=21						
N20K	Mount Spurr	82.18	27	P	P	12 06 12.9	+0.3
	baz=250						
F19K	Shaleruckik Mo	82.19	21	P	P	12 06 12.4	+0.1
	baz=244,SNR=12						
MAW	Mawson	82.31	202	P	P	12 06 13.1	+0.1
	comp=Z,4.2nm,0.6s,baz=99,slow=12,SNR=4.5						
MAW				LR	LR	12 40 20.9	
	comp=Z,677nm,19.5s,baz=64,slow=34						
	comp=Z,4.2nm,0.6s						
BRSE	Bradley Lake S	82.37	29	P	P	12 06 13.4	-0.1
	baz=251						
J20K	Nowinta River	82.45	24	P	P	12 06 14.7	+0.9
J20K				IAmb	IAmb	12 06 15.8	
	comp=Z,32nm,1.0s						
J20K	Nowinta River	82.45	24	P	P	12 06 14.7	+0.9
	baz=247,SNR=36						
I20K	Naaghedeneel	82.56	23	P	P	12 06 15.2	+0.9
	baz=247,SNR=9.3						
C19K	Lookout Ridge	82.63	18	P	P	12 06 15.6	+0.9
	baz=242,SNR=17						
E19K	Redstone River	82.65	20	P	P	12 06 15.4	+0.7
	baz=244,SNR=30						
H20K	Anotleneega Mo	82.68	23	P	P	12 06 15.6	+0.6
	baz=247,SNR=16						
A19K	Wainwright	82.71	17	P	P	12 06 15.3	+0.3
	baz=240						
SKT	Skwentna	82.76	26	P	P	12 06 14.2	-1.3
	baz=250,SNR=7.1						
PPLA	Purkeypile	82.79	25	P	P	12 06 15.3	-0.5
	baz=249,SNR=7.2						
D19K	Kuna River	82.82	19	P	P	12 06 15.9	+0.2
	baz=243,SNR=23						
SUA	Susitna One	82.94	27	P	P	12 06 15.4	-1.2
SUA				IAmb	IAmb	12 06 46.4	
	comp=Z,44nm,1.4s						
SUA	Susitna One	82.94	27	P	P	12 06 15.5	-1.0
	baz=251						
F20K	Avaraart Lake	83.01	21	P	P	12 06 17.2	+0.6
F20K				IAmb	IAmb	12 06 26.2	
	comp=Z,39nm,1.2s						
F20K	Avaraart Lake	83.01	21	P	P	12 06 17.3	+0.6
	baz=246						
CAST	Castle Rocks	83.02	25	P	P	12 06 16.5	-0.3
	baz=249,SNR=18						
CHUM	Lake Minchumin	83.09	24	P	P	12 06 17.5	+0.4
	baz=249,SNR=18						
O22K	Cooper Landing	83.09	28	P	P	12 06 16.3	-0.8
	baz=252						
SEW	Seward	83.10	28	P	P	12 06 16.6	-0.6
	baz=252,SNR=5.6						
MHTO	MHTO	83.15	291	P	P	12 06 16.9	-1.4
JMDO	Jabal Madar	83.16	293	P	P	12 06 17.7	-0.7
BIDO	Bidbid	83.26	294	P	P	12 06 18.5	-0.4
RC01	Rabbit Creek A	83.28	28	P	P	12 06 17.3	-0.8
	baz=252						
SMDO	Samad	83.28	293	P	P	12 06 18.0	-1.1
IMAR	Indian Mountai	83.31	22	P	P	12 06 18.4	+0.2
M22K	Willow	83.31	27	P	P	12 06 17.2	-1.1
	baz=251,SNR=8.4						
E20K	Nigu River	83.35	20	P	P	12 06 19.0	+0.5
	baz=245,SNR=28						
D20K	Etivluk River	83.41	19	P	P	12 06 19.1	+0.4
	baz=245,SNR=16						
CUT	Chulitna	83.46	26	P	P	12 06 17.9	-1.1
	baz=251						
H21K	Melozitna Rive	83.54	23	P	P	12 06 20.0	+0.6
	baz=248,SNR=15						
G21K	Allakaket	83.60	22	P	P	12 06 20.1	+0.4
	baz=248,SNR=11						
I21K	Tanana	83.69	23	P	P	12 06 20.6	+0.4
	baz=249						
PMR	Palmer	83.71	27	P	P	12 06 19.5	-0.8
PMR	Palmer	83.71	27	P	P	12 06 19.6	-0.8
	baz=252,SNR=17						
BPAW	Bear Paw Mtn.	83.72	24	P	P	12 06 20.0	-0.3
	baz=250						
TRF	Thorofare Moun	83.79	25	P	P	12 06 19.9	-1.0
	baz=251,SNR=6.8						
B20K	Meade River	83.80	18	P	P	12 06 21.0	+0.3
	baz=244						
PWL	Port Wells	83.86	28	P	P	12 06 20.9	-0.3
	baz=253,SNR=14						
F21K	Alatna River	83.88	21	P	P	12 06 21.3	+0.2
	baz=248,SNR=6.7						
KNK	Knik Glacier	83.97	27	P	P	12 06 21.4	-0.3
	baz=253,SNR=18						
HOQ	Hoqain	84.01	294	P	P	12 06 21.9	-0.9
BSY	Bisya	84.03	293	P	P	12 06 21.9	-0.9
P23K	Montague Islan	84.06	29	P	P	12 06 21.9	-0.2
	baz=254,SNR=7.9						
MLY	Manley	84.13	24	P	P	12 06 22.6	+0.1
	baz=250,SNR=30						
SML	Sawmill	84.14	27	P	P	12 06 22.5	-0.1
	baz=253,SNR=26						
H22K	Ishtalitna Cre	84.18	23	P	P	12 06 23.1	+0.5
	baz=250						
E21K	Killik River	84.18	20	P	P	12 06 22.9	+0.2
	baz=247						
C21K	Knifeblade Rid	84.19	19	P	P	12 06 23.2	+0.5
	baz=246,SNR=9.1						
WAT1	Susitna Watana	84.35	26	P	P	12 06 22.8	-0.8
	baz=253						
M23K	Glacier View	84.41	27	P	P	12 06 23.3	-0.6
	baz=254,SNR=7.9						
Q23K	Middleton Isla	84.42	30	P	P	12 06 23.7	-0.2
	baz=255						
B21K	Ikpikpuk River	84.44	19	P	P	12 06 24.6	+0.7
	baz=246,SNR=14						
GLI	Glacier Island	84.45	28	P	P	12 06 23.7	-0.4
	baz=254,SNR=15						
F22K	John River	84.45	21	P	P	12 06 24.5	+0.5
	baz=249						
MCK	McKinley	84.46	25	P	P	12 06 23.4	-0.8
	baz=252,SNR=12						
A21K	Barrow	84.54	17	P	P	12 06 24.7	+0.3
	baz=244						
SCM	Sheep Creek Mo	84.60	27	P	P	12 06 24.9	-0.1
	baz=254,SNR=15						
WAT6	Susitna Watana	84.63	26	P	P	12 06 24.7	-0.6
	baz=253,SNR=14						
NEA2	Nenana	84.67	24	P	P	12 06 24.0	-1.2
	baz=252,SNR=19						
ARQ	Araqi	84.71	294	P	P	12 06 25.4	-0.9
I23K	Minto, Yukon-K	84.72	24	P	P	12 06 25.5	+0.1
	baz=252,SNR=21						
SOHO	SOHO	84.77	294	P	P	12 06 25.7	-0.9
SOHO	SOHO	84.77	294	i P	P	12 06 25.0	-1.5
	SNR=6.0						
D22K	Ayikyak River	84.78	20	P	P	12 06 26.6	+0.9
	baz=248,SNR=11						
E22K	Anaktuvuk Pass	84.81	21	P	P	12 06 26.5	+0.7
	baz=249,SNR=17						
H23K	Yukon River	84.87	23	P	P	12 06 26.6	+0.4
	baz=252,SNR=23						
A22K	Sinclair Lake	84.89	17	P	P	12 06 26.2	+0.1
	baz=246						
DHY	Denali Highway	84.93	26	P	P	12 06 26.5	-0.2
	baz=254,SNR=34						
G23K	Bananza Creek	84.97	22	P	P	12 06 27.1	+0.4

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      baz=251,SNR=18
EYAK  Cordova Ski Ar   85.00  29     P        P        12 06 26.8  0.0
EYAK                                 IAmb     IAmb     12 06 35.5
      comp=Z,17nm,0.9s
EYAK  Cordova Ski Ar   85.00  29     P        P        12 06 27.0 +0.1
EYAK  Cordova Ski Ar   85.00  29     P        P        12 06 26.7 -0.2
      baz=255,SNR=7.3
COLD  Coldfoot         85.08  22     P        P        12 06 27.9 +0.7
      baz=251,SNR=19
MDH   Madha            85.09 296     P        P        12 06 26.6 -1.6
B22K  Teshekpuk Lake   85.10  18     P        P        12 06 27.5 +0.3
B22K  Teshekpuk Lake   85.10  18     P        P        12 06 27.6 +0.3
      baz=248,SNR=10
UOSS  Minazif          85.14 295     P        P        12 06 26.0 -2.5
UOSS                                 IAmb     IAmb     12 06 27.7
      comp=Z,20nm,0.9s
UOSS  Minazif          85.14 295     P        P        12 06 27.4 -1.1
UOSS  Minazif          85.14 295   i P        P        12 06 26.8 -1.7
      SNR=7.0
BANOM Banah            85.15 296     P        P        12 06 28.3 -0.2
BANOM Banah            85.15 296   i P        P        12 06 27.8 -0.7
      SNR=16
KLU   Klutina          85.16  28     P        P        12 06 27.9 +0.1
      baz=255,SNR=14
HATD  Hatta, Dubai     85.20 295     P        P        12 06 28.1 -0.6
      SNR=5.2
HATD  Hatta, Dubai     85.20 295   i P        P        12 06 27.5 -1.2
      SNR=8.0
M24K  Tolsona, Glenn   85.20  27     P        P        12 06 28.2 +0.2
      baz=255,SNR=11
MSFE  Esma-Masafi      85.22 296   i P        P        12 06 27.9 -1.0
      SNR=12
MASF  Masafi           85.23 296     P        P        12 06 28.4 -0.5
      SNR=7.4
COLA  College          85.25  24     P        P        12 06 27.2 -0.8
COLA  College          85.25  24   i P        P        12 06 26.6 -1.4
COLA                                 pmax     pmax
      comp=Z,17nm,0.9s
COLA  College          85.25  24     P        P        12 06 28.8 +0.8
      baz=253
ASHO  Ashiyiah         85.25 295     P        P        12 06 27.9 -1.1
      SNR=5.2
ASHO  Ashiyiah         85.25 295   i P        P        12 06 27.7 -1.4
      SNR=6.8
SHME  Shamm            85.31 296     P        P        12 06 28.6 -0.6
      SNR=5.8
SHME  Shamm            85.31 296   i P        P        12 06 28.3 -0.9
      SNR=11
AB31  Akbulak array    85.36 320     P        P        12 06 27.4 -1.6
AB31  Akbulak array    85.36 320   i P        P        12 06 27.0 -1.9
ABKAR Akbulak array    85.36 320     P        P        12 06 27.5 -1.4
RAGM  Ragged Mountai   85.47  29     P        P        12 06 29.6 +0.3
ALNE  Al Ain           85.48 294     P        P        12 06 29.4 -0.7
      SNR=11
ALNE  Al Ain           85.48 294   i P        P        12 06 29.0 -1.1
      SNR=12
KAIM  Kayak Island     85.49  29     P        P        12 06 29.7 +0.3
      baz=257,SNR=6.6
HDA   Harding Lake     85.49  25     P        P        12 06 28.0 -1.3
      baz=254,SNR=22
POKR  Poker Plat Res   85.49  24     P        P        12 06 28.1 -1.2
      baz=254
D23K  Nanushuk River   85.49  20     P        P        12 06 30.5 +1.3
      baz=250,SNR=39
H24K  Noodor Dome      85.52  23     P        P        12 06 29.8 +0.3
      baz=253,SNR=20
E23K  Chandalar        85.56  21     P        P        12 06 30.5 +0.8
      baz=251,SNR=26
ILAR  Eielson Array    85.62  24     P        P        12 06 28.5 -1.4
      comp=Z,16nm,0.8s,baz=260,slow=5.8,SNR=139
ILAR                                 PP       PP       12 09 45.7 -3.2
      comp=Z,1.1nm,1.1s,baz=247,slow=9.9,SNR=5.2
ILAR                                 LR       LR       12 44 55.7
      comp=Z,221nm,18.7s,baz=248,slow=36
      comp=Z,16nm,0.8s
NAZ   Nazwa, Dubai     85.64 295     P        P        12 06 29.7 -1.2
BMRM  Bremner River    85.64  28     P        P        12 06 30.3 +0.1
      baz=256,SNR=16
HMT   Hamilton         85.66  29     P        P        12 06 30.3  0.0
FAQ   Al Faqa, Dubai   85.68 295     P        P        12 06 30.2 -0.9
      SNR=5.1
FAQ   Al Faqa, Dubai   85.68 295     P        P        12 06 29.8 -1.3
HARP  HAARP            85.74  27     P        P        12 06 30.5 -0.1
      baz=256
PAX   Paxson           85.74  26     P        P        12 06 30.4 -0.2
      baz=255,SNR=7.2
TOLK  Toolik Lake Re   85.76  20     P        P        12 06 31.4 +0.7
      baz=251,SNR=22
N25K  Chitina, Valde   85.80  28     P        P        12 06 31.1 +0.1
      baz=256,SNR=8.2
C23K  Itkillik River   85.81  19              P        12 06 31.2 +0.5
C23K  Itkillik River   85.81  19     P        P        12 06 31.1 +0.4
      baz=250
K24K  Donnelly Dome    85.82  25     P        P        12 06 31.2 +0.2
K24K                                 IAmb     IAmb     12 06 40.9
      comp=Z,22nm,1.1s
K24K  Donnelly Dome    85.82  25     P        P        12 06 30.6 -0.4
      baz=255,SNR=9.2
ASUD  Al Ashush, Dub   85.91 295     P        P        12 06 30.7 -1.5
      SNR=5.3
ASUD  Al Ashush, Dub   85.91 295   i P        P        12 06 31.2 -1.0
      SNR=7.4
G24K  Hadweenzic Riv   85.93  22     P        P        12 06 32.0 +0.5
      baz=253,SNR=13
E24K  Your Creek       85.97  21     P        P        12 06 32.3 +0.6
      baz=252,SNR=9.9
F24K  Squaw Lake       86.02  22     P        P        12 06 32.9 +1.0
      baz=253,SNR=29
D24K  Happy Valley     86.19  20     P        P        12 06 33.7 +1.1
D24K  Happy Valley     86.19  20     P        P        12 06 33.4 +0.8
      baz=252,SNR=23
J25K  Salcha River,    86.20  25     P        P        12 06 31.8 -1.1
J25K                                 IAmb     IAmb     12 06 42.1
      comp=Z,25nm,1.2s
J25K  Salcha River,    86.20  25     P        P        12 06 32.0 -0.9
      baz=255,SNR=18
RIDG  Independent Ri   86.21  26     P        P        12 06 32.6 -0.3
      baz=256,SNR=12
AJN   Ajban            86.21 295     P        P        12 06 32.9 -0.8
CRQE  Cirque           86.32  29     P        P        12 06 33.6  0.0
      baz=258,SNR=16
PRP   Porcupine Dome   86.37  24     P        P        12 06 33.8  0.0
      baz=255
RBK   Rabkut           86.40 288     P        P        12 06 33.8 -1.0
C24K  Franklin Bluff   86.40  19     P        P        12 06 34.1 +0.5
      baz=252
H25L  Birch Creek      86.45  23     P        P        12 06 34.6 +0.7
      baz=255,SNR=10
G25K  Bearman Lake     86.47  23     P        P        12 06 35.1 +1.0
      baz=255,SNR=11
MCARA McCarthy VSAT    86.48  28     P        P        12 06 34.3  0.0
      baz=258
MENT  Mentasta         86.51  26     P        P        12 06 34.7 +0.3
DOK   Doka             86.55 289     P        P        12 06 33.8 -1.6
SCRK  Sand Creek       86.63  25     P        P        12 06 34.8 -0.3
      baz=257,SNR=11
L26K  Log Cabin Wild   86.70  26     P        P        12 06 35.4 +0.1
      baz=257,SNR=7.7
M26K  Nabesna, AK      86.72  27     P        P        12 06 35.8 +0.4
      baz=258,SNR=5.8
MESA  MESA             86.75  29     P        P        12 06 36.2 +0.3
      baz=259
AKTO  Aktyubinsk       86.77 321     LR       LR       12 45 09.9
      comp=Z,129nm,21.4s,baz=48,slow=36
WHFO  Wadi Hawf        86.84 288     P        P        12 06 35.7 -1.3
F25K  Christian Rive   86.86  22     P        P        12 06 37.3 +1.2
      baz=255,SNR=21
J26L  Joseph Creek     86.93  25     P        P        12 06 36.5  0.0
      baz=257,SNR=18
D25K  Kavik River      87.07  20     P        P        12 06 37.4 +0.3
      baz=254,SNR=7.7
QSPA  South Pole Qui   87.10 180     P        P        12 06 36.8 -0.6
      comp=Z,26nm,0.8s,baz=337,slow=3.0,SNR=112
QSPA                                 LR       LR       12 44 13.1
      comp=Z,575nm,21.7s,baz=12,slow=35
      comp=Z,26nm,0.8s
CTG   Chitna Glacier   87.20  29     P        P        12 06 38.5 +0.5
      baz=259,SNR=16
M27K  Edge Creek, AK   87.22  27     P        P        12 06 38.4 +0.4
      baz=259,SNR=21
BMAR  Burnt Mountain   87.22  22     P        P        12 06 38.5 +0.7
ABTO  Aybut            87.25 287     P        P        12 06 38.3 -0.7
I26K  Coal Creek Min   87.28  24     P        P        12 06 37.5 -0.5
      baz=257,SNR=7.2
L27K  Beaver Creek,    87.38  27     P        P        12 06 38.9 +0.2
      baz=259,SNR=28
BCAR  Beaver Creek A   87.40  27     P        P        12 06 38.9 +0.2
G26K  Porcupine Rive   87.41  23     P        P        12 06 39.7 +1.1
      baz=257,SNR=41
F26K  Sheenjek River   87.45  22     P        P        12 06 40.1 +1.3
      baz=256,SNR=38
ARTI  Arti             87.45 327     P        P        12 06 36.4 -2.7
ARTI                                 IAmb     IAmb     12 07 00.5
      comp=Z,36nm,1.6s
ARTI  Arti             87.45 327     LR       LR       12 46 57.6
      comp=Z,198nm,20.6s,baz=95,slow=36
ARTI  Arti             87.45 327c  i P        P        12 06 36.7 -2.4
ARTI                                                   12 10 01.9
ARTI                                 S        SKSac    12 17 04.3 -0.9
ARTI                                 SS       SS       12 23 01.7 -2.1
ARTI                                 pmax     pmax
      comp=Z,10.0nm,1.7s
K27K  Chicken          87.47  26     P        P        12 06 39.9 +0.9
      baz=258
MZR   Muzera           87.47 293     P        P        12 06 39.2 -0.7
      SNR=11
MZR   Muzera           87.47 293   i P        P        12 06 39.0 -0.9
      SNR=16
PINM  Pinnacle         87.57  30     P        P        12 06 39.7  0.0
      baz=260,SNR=5.8
BVCY  Beaver Creek     87.69  27     P        P        12 06 40.7 +0.5
      baz=260,SNR=6.0
O28M  Mount Upton      87.72  29     P        P        12 06 40.9 +0.2
      baz=260,SNR=14
C26K  Camden Bay       87.72  20     P        P        12 06 40.7 +0.6
      baz=256
YUK3  Moose Creek      87.77  28     P        P        12 06 41.0 +0.2
      baz=260,SNR=9.8
PNL   Peninsula        87.93  30     P        P        12 06 41.7 +0.4
PNL   Peninsula        87.93  30     P        P        12 06 41.3  0.0
      baz=261,SNR=6.1
I27K  Kandik River     87.97  24     P        P        12 06 42.1 +0.6
      baz=259,SNR=37
YUK8  Steele Glacier   88.01  28     P        P        12 06 42.5 +0.5
      baz=261,SNR=9.5
C27K  Jago River       88.06  20     P        P        12 06 42.2 +0.5
      baz=257
H27K  Steamboat Moun   88.13  23     P        P        12 06 43.1 +0.9
      baz=259,SNR=43
G27K  Doyon Strip      88.20  23     P        P        12 06 43.5 +1.0
      baz=259,SNR=13
O29M  Mount Kennedy    88.43  30     P        P        12 06 44.5 +0.6
      baz=262,SNR=10
E27K  Coleen River     88.49  22     P        P        12 06 44.4 +0.6
      baz=259
YUK4  Talbot Arm       88.55  29     P        P        12 06 45.3 +0.8
      baz=262,SNR=16
YUK6  Outpost Mounta   88.63  29     P        P        12 06 45.1 +0.2
      baz=262,SNR=6.0
I28M  Miner Creek      88.63  24     P        P        12 06 45.1 +0.4
      baz=260,SNR=21
DAWY  Dawson           88.64  26     P        P        12 06 45.1 +0.5
      baz=261,SNR=33
P29M  Windy Craggy     88.75  30     P        P        12 06 45.6 +0.3
      baz=262,SNR=9.6
M29M  Somme Creek      88.80  27     P        P        12 06 45.8 +0.3
      baz=262,SNR=30
D27M  Malcolm River    88.92  21     P        P        12 06 46.3 +0.4
      baz=259
HYT   Haines Junctio   89.03  29     P        P        12 06 47.0 +0.4
      baz=263,SNR=24
F28M  Old Crow         89.03  22     P        P        12 06 46.9 +0.6
      baz=260
L29M  L29M             89.05  27     P        P        12 06 47.3 +0.7
      baz=262,SNR=30
SLWR  Sila             89.18 294     P        P        12 06 47.2 -0.7
P30M  Million Dollar   89.21  30     P        P        12 06 47.9 +0.5
      baz=263
I29M  Ogilvie Camp,    89.29  25     P        P        12 06 47.9 +0.2
      baz=262
N30M  Aishikik Lake    89.31  28     P        P        12 06 48.2 +0.3
      baz=263,SNR=16
E28M  Babbage River    89.32  21     P        P        12 06 47.9 +0.2
      baz=261
S31K  Pelican          89.33  32     P        P        12 06 48.1 +0.2
      baz=264
H29M  Whitestone       89.39  24     P        P        12 06 48.3 +0.2
      baz=262
K29M  Barlow Dome      89.42  26     P        P        12 06 48.8 +0.4
      baz=263,SNR=20
PLBC  Pleasant Camp    89.43  31     P        P        12 06 48.5 +0.2
      baz=264,SNR=8.5
G29M  Pine Creek       89.63  23     P        P        12 06 49.3 +0.1
      baz=262
R31K  City Hall, Gus   89.64  32     P        P        12 06 49.7 +0.4
      baz=264
TRNA  Turayna          89.65 295     P        P        12 06 49.2 -1.0
O30N  Mendenhall       89.71  29     P        P        12 06 49.8 +0.1
      baz=264,SNR=9.6
D28M  Stokes Point     89.72  21     P        P        12 06 50.0 +0.5
      baz=261
SIT   Sitka            89.72  33     P        P        12 06 50.0 +0.3
      baz=264
E29M  Blow River       89.88  22     P        P        12 06 50.9 +0.6
      baz=262
N31M  Braeburn, Yuko   89.94  29     P        P        12 06 51.2 +0.4
      baz=264,SNR=11
SKAG  Skagway          89.95  31     P        P        12 06 51.3 +0.5
      baz=264
SMRA  Abu-Samra        90.00 295     P        P        12 06 50.6 -1.2
J30M  Hart River       90.03  25     P        P        12 06 51.6 +0.4
      baz=264,SNR=15
EPYK  Eagle Plains     90.07  24     P        P        12 06 51.3  0.0
      baz=263,SNR=5.7
I30M  Mount Dempster   90.08  25     P        P        12 06 51.5  0.0
      baz=264,SNR=11
MAYO  Mayo, Yukon      90.11  26     P        P        12 06 52.0 +0.5
      baz=264
S32K  Killisnoo        90.16  33     P        P        12 06 52.1 +0.3
      baz=265
R32K  Eaglecrest       90.26  32     P        P        12 06 52.7 +0.4
      baz=265
WHY   Whitehorse       90.29  29     P        P        12 06 52.8 +0.3
      baz=265,SNR=13
G30M  tAoh Zraii Nji   90.34  23     P        P        12 06 52.5 -0.1
      baz=264,SNR=5.1
F30M  Barrier River    90.58  22     P        P        12 06 53.9 +0.3
      baz=264
M31M  Drury Creek, Y   90.66  28     P        P        12 06 54.3 +0.2
      baz=265
P32M  Atlin            90.78  31     P        P        12 06 54.9 +0.1
      baz=266
CRAG  Craig            90.81  35     P        P        12 06 55.1 +0.2
      baz=266
U33K  Whale Pass       90.86  34     P        P        12 06 55.4 +0.4
      baz=266
SYO   Syowa Base       90.92 201⇓ eP        P        12 06 55.6 +0.5
SYO   Syowa Base       90.92 201⇓ ePcP      PcP      12 06 58.0 +1.8
H31M  Peel River       90.98  24     P        P        12 06 55.3 -0.3
      baz=265
T33K  Petersburg       91.00  33     P        P        12 06 55.9 +0.3
      baz=266
G31M  Satah River      91.10  23     P        P        12 06 56.5 +0.5
      baz=266,SNR=6.4
FARO  Faro, Yukon      91.15  28     P        P        12 06 56.3 -0.1
      baz=266,SNR=20
N32M  Quiet Lake       91.20  29     P        P        12 06 57.0 +0.3
      baz=266
P33M  Teslin, Yukon    91.28  30     P        P        12 06 57.3 +0.2
      baz=267
WRAK  Wrangell Islan   91.31  34     P        P        12 06 57.3 +0.1
      baz=267
F31M  Tsiigehtchic     91.35  23     P        P        12 06 57.6 +0.5
      baz=266
Q32M  Nakina River     91.48  31     P        P        12 06 58.1 -0.1
      baz=267
INK   Inuvik           91.49  22     LR       LR       12 47 17.3
      comp=Z,173nm,18.9s,baz=233,slow=35
INK   Inuvik           91.49  22     P        P        12 06 58.0 +0.2
      baz=266
V35K  Ketchikan        91.66  35     P        P        12 06 59.0 +0.2
      baz=268
S34M  Telegraph Cree   92.04  32     P        P        12 07 01.1 +0.6
      baz=268
MMPY  Sheldon Lake,    92.14  28     P        P        12 07 01.2 +0.2
      baz=268
R33M  Jennings River   92.17  31     P        P        12 07 01.5 +0.1
      baz=268
KIRV  Kirov            92.47 328     LR       LR       12 51 11.6
      comp=Z,516nm,19.3s,baz=86,slow=37
T35M  Bob Quinn        92.48  33     P        P        12 07 03.1 +0.4
      baz=269
DLBC  Dease Lake       92.64  32     LR       LR       12 45 15.5
      comp=Z,232nm,19.5s,baz=273,slow=33
DLBC  Dease Lake       92.64  32     P        P        12 07 03.5 +0.1
      baz=269
WTLY  Watson Lake, Y   93.28  30     P        P        12 07 06.8 +0.5
      baz=270
BELG  Belogornoye      93.40 322     LR       LR       12 50 56.3
      comp=Z,161nm,21.5s,baz=69,slow=37
TGTN  Hyland Airport   93.53  29     P        P        12 07 07.6 +0.1
      baz=271
BBB   Bella Bella      93.68  38     LR       LR       12 42 11.8
      comp=Z,276nm,20.2s,baz=254,slow=31
A36M  Sachs Harbour    94.31  18     P        P        12 07 11.3 +0.6
      baz=274
LIRD  Liard River Hi   94.66  31     P        P        12 07 13.4 +0.7
      baz=272
RAYN  Ar Rayn          94.82 293     P        P        12 07 12.6 -1.6
RAYN  Ar Rayn          94.82 293     P        P        12 07 12.6 -1.6
RAYN                                 pmax     pmax
      comp=Z,6.0nm,0.9s
RAYN  Ar Rayn          94.82 293   i P        P        12 07 12.7 -1.5
      SNR=6.8
C36M  Paulatuk         94.91  21     P        P        12 07 14.4 +0.9
      baz=275
TOAD  Toad River Com   95.14  31     P        P        12 07 15.2 +0.3
      baz=273
BEAVL Fort Liard       95.15  30     P        P        12 07 14.9  0.0
      baz=273
GNI   Garni            95.49 310     LR       LR       12 54 54.0
      comp=Z,70nm,20.7s,baz=84,slow=38
KBZ   Khabaz           96.76 314     LR       LR       12 57 51.0
      comp=Z,88nm,18.0s,baz=78,slow=40
KIV   Kislovodsk       96.90 314    eP        P        12 07 20.0 -3.3
KIV                                  pmax     pmax
      comp=Z,4.0nm,1.0s
VSLR  Vesyoloye        98.85 313 deP        Pdif     12 07 33.4 +1.4
VSLR                                 pmax     pmax
      comp=Z,18nm,1.1s
SPITS Spitsbergen Ar   99.26 350     LR       LR       12 51 47.3
      comp=Z,363nm,20.9s,baz=14,slow=35
OBN   Obninsk          99.74 325⇓ eP        Pdif     12 07 37.2 +1.6
OBN                                 e                  12 11 37.4
OBN                                 eSS       SS       12 25 57.9 -1.3
OBN                                  pmax     pmax
      comp=Z,6.0nm,0.8s
OBN                                  MLR      MLR
      comp=Z,296nm,20.0s
YKA   Yellowknife Ar   99.81  27     P        Pdif     12 07 35.4 -0.4
      comp=Z,0.4nm,0.7s,baz=285,slow=5.3,SNR=6.0
YKA                                  LR       LR       12 49 46.1
      comp=Z,343nm,20.4s,baz=287,slow=34
      comp=Z,0.4nm,0.7s
YKA   Yellowknife Ar   99.81  27   i P        Pdif     12 07 38.5 +2.7
YKA                                  pmax     pmax
      comp=Z,1.0nm,0.8s
TROLL Troll, Antarti  100.38 192   ⇓P         Pdif     12 07 38.7 +0.3
      comp=Z,237nm,0.9s
KHAM  Kharkiv         100.71 320     P        Pdif     12 07 38.7 -1.4
ARCES ARCESS Array B  100.91 341     P        Pdif     12 07 39.0 -1.5
      comp=Z,5.7nm,1.1s,baz=71,slow=3.8,SNR=4.0
NVAR  Mina Array Bea  101.29  52     P        Pdif     12 07 42.9 -0.3
      comp=Z,1.3nm,0.8s,baz=277,slow=6.4,SNR=7.7
SNAA  Sanae           101.74 191     P        Pdif     12 07 43.7 -0.6
      comp=Z,3.2nm,1.1s,baz=83,slow=9.7,SNR=5.7
SNAA                                 PP       PP       12 11 52.9 -1.6
      comp=Z,2.6nm,1.0s,baz=150,slow=12,SNR=3.6
PFO   Pinyon Flats O  103.23  56     Pdiff    Pdif     12 07 51.8 -0.1
      comp=Z,1.4nm,0.6s,baz=256,slow=7.7,SNR=2.1
MNK   Minsk           104.77 326   i P        Pdif     12 07 55.2 -2.8
      comp=E,18nm,0.8s
MNK                                i P        Pdif     12 07 55.2 -2.8
      comp=N,11nm,0.8s
MNK                                i P        Pdif     12 07 55.2 -2.8
      comp=Z,5.0nm,0.8s,baz=74
MNK                                i PP       PP       12 12 23.9 +6.2
MNK                                i PPP      PPP      12 15 21.1
MNK                                i SKS               12 17 59.9
MNK                                i S        Sdif     12 19 48.2 -1.6
MNK                                i SP       SP       12 21 33.6 +5.5
MNK                                i PS       PS       12 22 16.6  +45
MNK                                i SS       SS       12 26 47.1  -22
MNK                                i SSS      SSS      12 29 49.5
MNK                                i LQ       LQ       12 49 51.8
MNK                                i LR       LR       12 57 15.5
MNK   Minsk           104.77 326   i P        Pdif     12 07 55.2 -2.8
MNK                                i                   12 12 23.9
MNK                                i S        Sdif     12 19 48.2 -1.6
MNK                                i SP       SP       12 21 33.5 +5.5
MNK                                i PS       PS       12 22 16.6  +45
MNK                                  pmax     pmax
      comp=E,18nm,0.8s
MNK                                  pmax     pmax
      comp=Z,5.0nm,0.8s
MNK                                  pmax     pmax
      comp=N,11nm,0.8s
AK06  Malin Array Si  105.03 322     P        Pdif     12 07 57.4 -1.8
AK12  Malin Array Si  105.04 322     P        Pdif     12 07 57.5 -1.8
MI28  Mi28,Pidlybu    105.88 322     P        Pdif     12 08 00.8 -2.2
LUBAR Lubar, Ukraine  106.09 321     P        Pdif     12 08 02.5 -1.5
RNPP9 Sopachiv        106.82 323     P        Pdif     12 08 05.3 -1.9
MDVR  Moldovita       111.51 317   ⇓P         Pdif     12 08 28.2 -0.1
MDVR                               ⇓S         pPdif    12 08 34.1 -2.3
TXAR  Lajitas Array   114.66  59     PKP      PKPdf    12 12 32.5 -0.3
      comp=N,0.1nm,0.5s,baz=313,slow=4.3,SNR=1.7
TXAR                                 PP       PP       12 13 31.5 +1.1
      comp=N,0.8nm,1.0s,baz=284,slow=5.1,SNR=4.7
TXAR                                 PKKPab   PKKPab   12 23 15.5 -1.5
      comp=N,1.3nm,0.9s,baz=107,slow=4.2,SNR=14
KEST  Kesra           123.58 312     PKP      PKPdf    12 12 49.3 -0.5
      comp=N,1.7nm,0.7s,baz=146,slow=3.6,SNR=2.5
TORD  Torodi Ar. Bea  137.08 286     PKP      PKPdf    12 13 15.2 -0.6
      comp=N,2.0nm,0.3s,baz=63,slow=2.9,SNR=1.5
DBIC  Dimbokro        144.32 277              PKPab    12 13 25.8 -1.1
DBIC  Dimbokro        144.32 277     PKP      PKPab    12 13 26.1 -0.8
      comp=N,30nm,0.8s,baz=92,slow=3.7,SNR=25
DBIC  Dimbokro        144.32 277     PKIKP    PKPab    12 13 25.8 -1.1
PB16  IPOC Station P  144.49 127              PKPbc    12 13 28.4 +0.1
FLOC  Florencia       144.82  91              PKPab    12 13 28.2 -0.6
SDDR  Presa de Saban  145.85  60              PKPdf    12 13 28.9 -2.5
ROSC  El Rosal        146.17  86     PKPbc    PKPdf    12 13 32.5 -0.1
      comp=N,8.6nm,0.3s,baz=300,slow=17,SNR=6.0
LPAZ  La Paz          146.70 126     PKPbc    PKPbc    12 13 34.7 -0.6
      comp=N,5.1nm,0.6s,baz=231,slow=1.2,SNR=22
CPUP  Villa Florida   146.72 152     PKPbc    PKPbc    12 13 33.8 -0.5
      comp=N,0.7nm,0.6s,baz=231,slow=0.3,SNR=5.5
SDV   Santo Domingo   149.41  77     PKPbc    PKPbc    12 13 41.6 -0.5
      comp=N,15nm,1.0s,baz=294,slow=6.3,SNR=8.8
SDV   Santo Domingo   149.41  77    eP        PKPdf    12 13 35.6 -2.0
SJG   San Juan        150.61  57     PKPbc    PKPbc    12 13 42.3 -2.3
      comp=N,8.9nm,0.2s,baz=270,slow=10,SNR=6.1
SJG                                  PKPab    pPKPdf   12 13 48.8 +1.3
      comp=N,23nm,0.9s,baz=326,slow=3.6,SNR=6.8
```

MDD ***09*** *12:05:11.9±0.4, 44.°85N×8.°70W, h0km, mb_Lg3.9/31, Error ellipse: s-maj=3.5km s-min=2.7km az=130.0*

LDG ***09*** *12:05:13.2±0.2, 44.°98N×8.°63W, h10km, Ml4.0/40, Error ellipse: s-maj=4.6km s-min=2.3km az=110.0*

IGIL ***09*** *12:05:16.7, 44.°85N×8.°70W, h22km, ML3.4*

INMG ***09*** *12:05:17.0±1.4, 44.°84N×8.°73W, h31km, ML3.4, Error ellipse: s-maj=6.0km s-min=3.4km az=111.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Mar Cantabrico*

ISC 09 12:05:13.5±1.9**, 44.°65N**±0.°07×**8.°43W**±0.°07**, h10km, n129, σ2.s27**/181**, 1C-6D, North Atlantic Ocean**

```
Code  Station Name      Δ°   AZ°    Phase ID              Time      Res
                                   Op        ISC       h  m  s    ISC
EPON  Pontenova        1.61 145  ⇓Pn        Pb       12 05 44.9 +1.5
EPON                               Sn        Sg       12 06 06.5 +1.1
EPON                             i IVmb_Lg           12 06 07.1
EMAZ  Mazaricos        1.75 193  ⇑Pn        Pn       12 05 44.7 +0.8
EMAZ                               Sn        Sn       12 06 06.2 -0.1
EMAZ                             i IVmb_Lg           12 06 07.5
EAGO  Agolada(Pontev   1.86 172    Pn        Pn       12 05 47.1 +1.6
EAGO                               Sn        Sg       12 06 11.8 -1.6
EAGO                             i IVmb_Lg           12 06 14.3
EZAM  Zamans           2.51 184    Pn        Pn       12 05 55.8 +1.4
EZAM                               Sn        Sn       12 06 26.0 +1.0
EZAM                             i IVmb_Lg           12 06 27.4
PGAV  Gavieira, Arco   2.69 177⇓ eP        Pn       12 05 58.7 +1.8
PGAV                              eS        Sn       12 06 30.9 +1.3
PGAV                             i AML      AML      12 06 33.1
PGAV                             i AML      AML      12 06 33.6
PGAV                             i AML      AML      12 06 33.8
EARI  Arriondas        2.69 119  ⇓Pn        Pn       12 05 59.8 +2.9
EARI                               Sn        Sb       12 06 32.6 -2.2
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ELOB	**Lobios**	**2.80**	**174**	Pn	**Pn**	**12 06 00.3**	**+1.9**
ELOB				Sn	**Sn**	**12 06 33.3**	**+1.1**
ELOB				*i* IVmb_Lg		12 06 35.2	
PCAB	**Cabril**	**2.96**	**174**	*e*P	**Pn**	**12 06 02.9**	**+2.4**
PCAB				*e*S	**Sn**	**12 06 37.4**	**+1.4**
PCAB				*i* AML	AML	12 06 38.6	
PCAB				*i* AML	AML	12 06 39.1	
PCAB				*i* AML	AML	12 06 40.4	
ECAL	**Calabor**	**2.98**	**155**	Pn	**Pn**	**12 06 03.8**	**+2.9**
ECAL				Sn	**Sb**	**12 06 40.0**	**-3.2**
ECAL	**Calabor**	**2.98**	**155**	Pn	**Pn**	**12 06 03.8**	**+2.9**
ECAL				Sn	**Sb**	**12 06 39.8**	**-3.4**
ECAL				*i* IVmb_Lg		12 06 42.6	
PBRG	**Braganca**	**3.10**	**156**	*e*P	**Pn**	**12 06 06.0**	**+3.4**
PBRG				*e*S	**Sn**	**12 06 42.0**	**+2.3**
PBRG				*i* AML	AML	12 06 44.7	
PBRG				*i* AML	AML	12 06 44.8	
PBRG				*i* AML	AML	12 06 45.1	
POLO	**Lamas de Olo**	**3.31**	**172**	⇓*e*P	**Pn**	**12 06 07.7**	**+2.3**
POLO				*e*S	**Sn**	**12 06 46.2**	**+1.4**
POLO				*i* AML	AML	12 06 47.8	
POLO				*i* AML	AML	12 06 47.8	
POLO				*i* AML	AML	12 06 49.2	
ALT03	**Santillana del**	**3.36**	**111**	Pn	**Pn**	**12 06 08.5**	**+2.5**
ALT03				Sn	**Sn**	**12 06 47.5**	**+1.6**
ALT01	**Santillana del**	**3.36**	**111**	Pn	**Pn**	**12 06 08.5**	**+2.5**
ALT01				Sn	**Sn**	**12 06 48.3**	**+2.3**
ALT02	**Santillana del**	**3.36**	**111**	Pn	**Pn**	**12 06 08.5**	**+2.5**
ALT02				Sn	**Sn**	**12 06 47.8**	**+1.8**
PVRL	**Vila Real**	**3.42**	**171**	*e*P	**Pn**	**12 06 09.3**	**+2.4**
PVRL				*e*S	**Sn**	**12 06 48.7**	**+1.3**
PVRL				*i* AML	AML	12 06 50.8	
PVRL				*i* AML	AML	12 06 51.9	
PVRL				*i* AML	AML	12 06 52.2	
PTO	**Porto**	**3.51**	**182**	*e*P	**Pn**	**12 06 08.9**	**+0.8**
PTO				*e*S	**Sn**	**12 06 49.2**	**-0.6**
PTO				*i* AML	AML	12 06 49.9	
PTO				*i* AML	AML	12 06 50.2	
PTO				*i* AML	AML	12 06 50.7	
MVO	**Moncorvo**	**3.63**	**163**	*e*P	**Pn**	**12 06 12.7**	**+2.8**
MVO				*e*S	**Sn**	**12 06 55.0**	**+2.1**
MVO				*i* AML	AML	12 06 56.5	
MVO				*i* AML	AML	12 06 56.8	
MVO				*i* AML	AML	12 06 57.0	
ELAN	**Lanestosa**	**3.88**	**110**	⇓Pn	**Pn**	**12 06 15.3**	**+2.1**
ELAN				Sn	**Sn**	**12 06 59.2**	**+0.4**
ELAN				*i* IVmb_Lg		12 07 03.4	
PVIS	**Viseu**	**3.95**	**174**	*e*P	**Pn**	**12 06 16.6**	**+2.3**
PVIS				*e*S	**Sn**	**12 07 00.8**	**+0.1**
EJUZ	**Juzbado, Salam**	**4.02**	**151**	Pn	**Pn**	**12 06 18.3**	**+3.1**
EJUZ				Sn	**Sn**	**12 07 04.6**	**+2.2**
MTE	**Manteigas**	**4.30**	**171**	*e*P	**Pn**	**12 06 21.4**	**+2.4**
MTE				*e*S	**Sn**	**12 07 10.1**	**+0.8**
MTE				*i* AML	AML	12 07 12.5	
MTE				*i* AML	AML	12 07 13.4	
MTE				*i* AML	AML	12 07 13.9	
COI	**Coimbra**	**4.44**	**180**	*e*S	**Sn**	**12 07 12.3**	**-0.4**
PCAS	**Casmilo, Conde**	**4.60**	**181**	*e*P	**Pn**	**12 06 25.3**	**+2.2**
PCAS				*e*S	**Sn**	**12 07 15.9**	**-0.6**
PCAS				*i* AML	AML	12 07 18.3	
PCAS				*i* AML	AML	12 07 18.6	
PCAS				*i* AML	AML	12 07 19.8	
PCBR	**Castelo Branco**	**4.86**	**171**	*e*P	**Pn**	**12 06 29.0**	**+2.4**
PCBR				*e*S	**Sn**	**12 07 23.1**	**+0.2**
PCBR				*i* AML	AML	12 07 24.4	
PCBR				*i* AML	AML	12 07 26.6	
PCBR				*i* AML	AML	12 07 26.6	
QUIF	**Quistinic**	**4.90**	**46**	*e*Pn	Pn	12 06 23.2	-4.0
QUIF				*e*Sn	Sn	12 07 13.8	-10
	46nm,0.2s						
EPLA	**Plasencia**	**4.90**	**158**	Pn	**Pn**	**12 06 30.4**	**+3.0**
EPLA				Sn	**Sn**	**12 07 25.8**	**+1.6**
EPLA				*i* IVmb_Lg		12 07 28.2	
PSARD	**Sardoal**	**5.05**	**178**	*e*P	**Pn**	**12 06 31.5**	**+2.2**
PSARD				*e*S	**Sn**	**12 07 26.7**	**-1.1**
PSARD				*i* AML	AML	12 07 31.4	
PSARD				*i* AML	AML	12 07 31.8	
PSARD				*i* AML	AML	12 07 33.0	
GUD	**Guadarrama**	**5.10**	**140**	Pn	**Pn**	**12 06 33.0**	**+2.9**
GUD				Sn	**Sn**	**12 07 29.5**	**+0.5**
ROSF	**Rostrenen**	**5.12**	**42**	*e*Pn	Pn	12 06 25.9	-4.4
ROSF				*e*Sn	Sn	12 07 18.4	-11
	13nm,0.2s						
PSBE	**So Bento**	**5.14**	**183**	*e*P	**Pn**	**12 06 32.5**	**+1.9**
PSBE				*e*S	**Sn**	**12 07 28.7**	**-1.3**
PSBE				*i* AML	AML	12 07 32.4	
PSBE				*i* AML	AML	12 07 32.5	
PSBE				*i* AML	AML	12 07 32.9	
EALK	**Alkurruntz**	**5.20**	**104**	Pn	**Pn**	**12 06 32.9**	**+1.4**
EALK				Sn	**Sn**	**12 07 28.9**	**-2.6**
EALK				*i* IVmb_Lg		12 07 34.3	
PMRV	**Marv??o**	**5.28**	**171**	*e*P	**Pn**	**12 06 34.9**	**+2.5**
PMRV				*e*S	**Sn**	**12 07 33.2**	**-0.1**
PMRV				*i* AML	AML	12 07 36.2	
PMRV				*i* AML	AML	12 07 36.2	
PMRV				*i* AML	AML	12 07 36.9	
EARA	**Aranguren**	**5.31**	**108**	Pn	**Pn**	**12 06 36.1**	**+3.3**
EARA				Sn	**Sn**	**12 07 36.1**	**+2.1**
SGMF	**Saint Gilles**	**5.43**	**46**	*e*Pn	Pn	12 06 30.4	-4.0
SGMF				*e*Sn	Sn	12 07 26.1	-11
	22nm,0.2s						
SJPF	**Ste Jean**	**5.43**	**104**	*e*Pn	**Pn**	**12 06 35.9**	**+1.4**
SJPF				*e*Sn	**Sn**	**12 07 35.1**	**-2.0**
	22nm,0.2s						
EORO	**Oroz-Betelu**	**5.45**	**106**	Pn	**Pn**	**12 06 37.6**	**+2.8**
EORO				Sn	**Sn**	**12 07 37.9**	**+0.3**
EORO				*i* IVmb_Lg		12 07 43.7	
PMTG	**Montargil**	**5.58**	**178**	*e*P	**Pn**	**12 06 38.6**	**+2.0**
PMTG				*e*S	**Sn**	**12 07 38.6**	**-2.1**
PMTG				*i* AML	AML	12 07 40.3	
PMTG				*i* AML	AML	12 07 41.1	
PMTG				*i* AML	AML	12 07 43.2	
PMAFR	**Mafra**	**5.73**	**187**	Pn	**Pn**	**12 06 39.4**	**+0.9**
PMAFR				Sn	**Sn**	**12 07 40.6**	**-3.8**
PMAFR	**Mafra**	**5.73**	**187**	*e*P	**Pn**	**12 06 39.5**	**+0.9**
PMAFR				*e*S	**Sn**	**12 07 40.6**	**-3.8**
PMAFR				*i* AML	AML	12 07 45.0	
PMAFR				*i* AML	AML	12 07 45.5	
PMAFR				*i* AML	AML	12 07 45.6	
UCM	**Universidad Co**	**5.79**	**137**	Pn	**Pn**	**12 06 42.3**	**+2.8**
UCM				Sn	**Sn**	**12 07 47.1**	**+1.1**
PESTR	**Estremoz**	**5.81**	**174**	Sn	**Sn**	**12 07 44.8**	**-1.7**
PESTR				Pn	**Pn**	**12 06 42.0**	**+2.2**
PESTR	**Estremoz**	**5.81**	**174**	*e*S	**Sn**	**12 07 45.7**	**-0.8**
PESTR				*i* AML	AML	12 07 46.3	
PESTR				*i* AML	AML	12 07 48.4	
PESTR				*i* AML	AML	12 07 49.6	
PARRA	**Arraiolos**	**5.85**	**185**	*e*P	**Pn**	**12 06 42.2**	**+2.0**
PARRA				*e*S	**Sn**	**12 07 44.8**	**-2.6**
PARRA				*i* AML	AML	12 07 49.5	
PARRA				*i* AML	AML	12 07 50.2	
PARRA				*i* AML	AML	12 08 01.1	
PAB	**San Pablo**	**5.94**	**148**	Pn	**Pn**	**12 06 44.5**	**+3.0**
PAB				Sn	**Sn**	**12 07 50.6**	**+1.0**
CCA1	**Carnmenellis**	**5.95**	**20**	Pn	Pn	12 06 35.5	-6.1
CCA1				Sn	Sn	12 07 33.6	-16
LIS	**Lisbon**	**5.95**	**185**	*e*S	**Sn**	**12 07 47.5**	**-2.4**
ETSF	**Etsaut**	**5.96**	**104**	*e*Pn	**Pn**	**12 06 44.6**	**+2.7**
ETSF				*e*Sn	**Sn**	**12 07 49.3**	**-1.0**
	27nm,0.2s						
ESBB	**Sonseca Array**	**5.98**	**145**	Pn	**Pn**	**12 06 44.8**	**+2.7**
ESBB				Sn	**Sn**	**12 07 50.8**	**+0.1**
ESDC	**Sonseca Array**	**5.98**	**145**	Pn	**Pn**	**12 06 44.7**	**+2.6**
ESDC				Sn	**Sn**	**12 07 50.7**	**+0.1**
EBAD	**Badajoz**	**5.99**	**169**	Pn	**Pn**	**12 06 44.4**	**+2.3**
EBAD				Sn	**Sn**	**12 07 50.4**	**-0.3**
EBAD	**Badajoz**	**5.99**	**169**	Pn	**Pn**	**12 06 44.7**	**+2.5**
EBAD				Sn	**Sn**	**12 07 50.7**	**-0.1**
EBAD				*i* IVmb_Lg		12 07 54.6	
ETOR	**Torete**	**6.06**	**127**	Pn	**Pn**	**12 06 45.9**	**+2.7**
ETOR				Sn	**Sn**	**12 07 52.5**	**-0.1**
EVO	**Evora**	**6.12**	**177**	Pn	**Pn**	**12 06 46.2**	**+2.2**
EVO				Sn	**Sn**	**12 07 52.9**	**-1.2**
EVO	**Evora**	**6.12**	**177**	*e*P	**Pn**	**12 06 46.3**	**+2.3**
EVO				*e*S	**Sn**	**12 07 52.1**	**-1.9**
EVO				*i* AML	AML	12 07 55.3	
EVO				*i* AML	AML	12 07 56.4	
EVO				*i* AML	AML	12 07 57.5	
MOE	**Montemor**	**6.12**	**179**	*e*P	**Pn**	**12 06 45.8**	**+1.7**
MOE				*e*S	**Sn**	**12 07 51.8**	**-2.3**
MOE				*i* AML	AML	12 07 54.8	
MOE				*i* AML	AML	12 07 55.8	
MOE				*i* AML	AML	12 07 56.8	
MFF	**Saint Martin d**	**6.13**	**69**	*e*Pn	Pn	12 06 42.6	-1.5
MFF	**Saint Martin d**	**6.13**	**69**	*e*Pn	Pn	12 06 42.7	-1.4
MFF	**Saint Martin d**	**6.13**	**69**	*e*P	**Pn**	**12 06 45.7**	**+1.6**
MFF				*e*Sn	Sn	12 07 46.7	-7.5
	5.5nm,0.2s						
MFF				*e*Sn	Sn	12 07 46.8	-7.5
	18nm,0.2s						
JSA	**Saint Aubin**	**6.24**	**41**	Pn	Pn	12 06 41.2	-4.4
JSA				Sn	Sn	12 07 45.0	-12
GRR	**Gorron**	**6.42**	**52**	*e*Pn	Pn	12 06 44.8	-3.3
GRR				*e*Sn	Sn	12 07 50.9	-11
	39nm,0.3s						
ESAC	**San Caprasio**	**6.51**	**114**	Pn	**Pn**	**12 06 51.6**	**+2.2**
ESAC				Sn	**Sn**	**12 08 05.0**	**+1.2**
ESAC				*i* IVmb_Lg		12 08 10.0	
LFF	**La Frestale**	**6.53**	**84**	*e*Pn	**Pn**	**12 06 49.3**	**-0.3**
LFF				*e*Sn	**Sn**	**12 07 59.9**	**-4.2**
	59nm,0.3s						
DYA	**Yadsworthy**	**6.54**	**26**	Pn	Pn	12 06 43.9	-5.8
DYA				Sn	Sn	12 07 50.4	-14
PBAR	**Barrancos**	**6.55**	**170**	Pn	**Pn**	**12 06 52.7**	**+2.7**
PBAR				Sn	**Sn**	**12 08 02.7**	**-2.0**
PBAR	**Barrancos**	**6.55**	**170**	*e*P	**Pn**	**12 06 52.7**	**+2.7**
PBAR				*e*S	**Sn**	**12 08 03.2**	**-1.6**
PBAR				*i* AML	AML	12 08 08.5	
PBAR				*i* AML	AML	12 08 17.6	
PBAR				*i* AML	AML	12 08 17.9	
ECHI	**Chisagues Biel**	**6.56**	**105**	Sn	**Sn**	**12 08 05.8**	**+0.6**
PBEJ	**Beja**	**6.63**	**176**	*e*P	**Pn**	**12 06 53.5**	**+2.5**
PBEJ				*e*S	**Sn**	**12 08 04.2**	**-2.4**
PBEJ				*i* AML	AML	12 08 06.3	
PBEJ				*i* AML	AML	12 08 09.1	
PBEJ				*i* AML	AML	12 08 09.6	
PSIM	**Granatula de C**	**6.79**	**147**	Pn	**Pn**	**12 06 55.5**	**+2.2**
PSIM				Sn	**Sn**	**12 08 10.5**	**-0.2**
MESJ	**Messejana**	**6.81**	**179**	*e*P	**Pn**	**12 06 55.4**	**+2.0**
MESJ				*e*S	**Sn**	**12 08 07.3**	**-3.6**
MESJ				IAML		12 08 11.7	
	comp=N,20nm,0.5s						
MESJ	**Messejana**	**6.81**	**179**	*e*P	**Pn**	**12 06 55.5**	**+2.0**
MESJ				*e*S	**Sn**	**12 08 08.3**	**-2.7**
MESJ				*i* AML	AML	12 08 10.9	
MESJ				*i* AML	AML	12 08 11.9	
MESJ				*i* AML	AML	12 08 12.3	
E0901	**Celadas (Terue**	**6.81**	**125**	Pn	**Pn**	**12 06 55.7**	**+2.0**
E0901				Sn	**Sn**	**12 08 12.9**	**+1.6**
FLN	**La Foliniere**	**6.84**	**50**	*e*Pn	Pn	12 06 50.3	-3.5
	baz=241						
FLN				*e*Sn	Sn	12 08 00.5	-11
	comp=N,12nm,0.3s						
HTL	**Hartland**	**6.88**	**21**	Pn	Pn	12 06 48.3	-6.1
HTL				Sn	Sn	12 07 55.8	-17
LDF	**La Druitiere**	**6.95**	**52**	*e*Pn	Pn	12 06 51.9	-3.4
LDF				*e*Sn	Sn	12 08 03.3	-11
	comp=N,8.6nm,0.2s						
ECAB	**El Cabril**	**6.95**	**160**	Pn	**Pn**	**12 06 58.3**	**+2.9**
ECAB				Sn	**Sn**	**12 08 13.9**	**-0.6**
ECAB	**El Cabril**	**6.95**	**160**	Pn	**Pn**	**12 06 57.6**	**+2.2**
ECAB				Sn	**Sn**	**12 08 15.2**	**+0.7**
EMIN	**Mina Concepcio**	**7.00**	**168**	Pn	**Pn**	**12 06 58.9**	**+2.7**
EMIN	**Mina Concepcio**	**7.00**	**168**	Sn	**Sn**	**12 08 15.5**	**-0.3**
PCVE	**Castro Verde**	**7.02**	**177**	Pn	**Pn**	**12 06 58.5**	**+2.1**
PCVE				Sn	**Sn**	**12 08 12.7**	**-3.5**
PCVE	**Castro Verde**	**7.02**	**177**	⇓*e*P	**Pn**	**12 06 58.5**	**+2.1**
PCVE				*e*S	**Sn**	**12 08 13.5**	**-2.7**
PCVE				*i* AML	AML	12 08 15.8	
PCVE				*i* AML	AML	12 08 16.3	
PCVE				*i* AML	AML	12 08 18.3	
RJF	**Les Rejaudoux**	**7.08**	**81**	*e*Pn	**Pn**	**12 06 57.2**	**0.0**
RJF				*e*Sn	**Sn**	**12 08 12.3**	**-5.5**
	comp=N,39nm,0.2s						
EADA	**Adamuz**	**7.09**	**155**	Pn	**Pn**	**12 07 00.5**	**+3.0**
EADA				Sn	**Sn**	**12 08 17.2**	**-0.9**
EADA	**Adamuz**	**7.09**	**155**	Pn	**Pn**	**12 06 58.8**	**+1.3**
EADA				Sn	**Sn**	**12 08 17.7**	**-0.4**
PTEO	**Sao Teotonio**	**7.10**	**182**	*e*P	**Pn**	**12 06 59.4**	**+1.9**
PTEO				*e*S	**Sn**	**12 08 15.5**	**-2.7**
PTEO				*i* AML	AML	12 08 17.5	
PTEO				*i* AML	AML	12 08 22.0	
PTEO				*i* AML	AML	12 08 22.4	
EGRO	**El Granado**	**7.15**	**174**	Pn	**Pn**	**12 07 00.5**	**+2.4**
EGRO				Sn	**Sn**	**12 08 18.0**	**-1.3**
EGRO	**El Granado**	**7.15**	**174**	Pn	**Pn**	**12 07 01.4**	**+3.4**
EGRO				Sn	**Sn**	**12 08 17.7**	**-1.6**
PVAQ	**Vaqueiros**	**7.26**	**176**	Pn	**Pn**	**12 07 02.0**	**+2.4**
PVAQ	**Vaqueiros**	**7.26**	**176**	*e*P	**Pn**	**12 07 02.1**	**+2.4**
PVAQ				*i* AML	AML	12 08 23.4	
EMOS	**Mosqueruela**	**7.27**	**123**	Pn	**Pn**	**12 07 02.3**	**+2.3**
EMOS				Sn	**Sn**	**12 08 25.8**	**+3.1**
MORF	**Marmelete**	**7.34**	**181**	*e*P	**Pn**	**12 07 02.4**	**+1.6**
MORF				*e*S	**Sn**	**12 08 19.6**	**-4.6**
MORF				IAML		12 08 25.5	
	comp=N,39nm,0.3s						
MORF	**Marmelete**	**7.34**	**181**	*e*P	**Pn**	**12 07 02.6**	**+1.8**
MORF				*e*S	**Sn**	**12 08 20.7**	**-3.5**
MORF				*i* AML	AML	12 08 26.2	
MORF				*i* AML	AML	12 08 27.2	
MORF				*i* AML	AML	12 08 27.6	
VAL	**Valentia**	**7.39**	**351**	Sn	Sn	12 08 07.0	-18
VAL				Pn	Pn	12 06 54.2	-7.2
VAL	**Valentia**	**7.39**	**351**	Pn	Pn	12 06 54.1	-7.3
VAL				Sn	Sn	12 08 06.2	-19
PBDV	**Barranco-do-Ve**	**7.41**	**177**	*e*P	**Pn**	**12 07 04.4**	**+2.7**
PBDV				*e*S	**Sn**	**12 08 22.5**	**-3.3**
PBDV				*i* AML	AML	12 08 28.4	
PBDV				*i* AML	AML	12 08 29.4	
PBDV				*i* AML	AML	12 08 30.2	
ERTA	**Horta de San J**	**7.43**	**117**	Pn	**Pn**	**12 07 03.7**	**+1.8**
ERTA				Sn	**Sn**	**12 08 26.3**	**0.0**
CAF	**Calviac**	**7.47**	**84**	*e*Pn	**Pn**	**12 07 02.3**	**-0.3**
CAF				*e*Sn	Sn	12 08 20.7	-6.7
	comp=N,13nm,0.2s						
PFVI	**Vila Bisbo**	**7.52**	**182**	Pn	**Pn**	**12 07 04.7**	**+1.5**
PFVI				Sn	**Sn**	**12 08 24.8**	**-3.6**
PFVI	**Vila Bisbo**	**7.52**	**182**	*e*P	**Pn**	**12 07 05.0**	**+1.8**
PFVI				*e*S	**Sn**	**12 08 25.2**	**-3.2**
PFVI				*i* AML	AML	12 08 29.6	
PFVI				*i* AML	AML	12 08 29.6	
PFVI				*i* AML	AML	12 08 29.7	
EVIV	**Cofrentes, Val**	**7.66**	**132**	Pn	**Pn**	**12 07 06.2**	**+1.1**
EVIV				Sn	**Sn**	**12 08 31.4**	**-0.5**
TCF	**Toulx Ste Croi**	**7.66**	**74**	*e*Pn	**Pn**	**12 07 04.4**	**-0.7**
TCF				*e*Sn	Sn	12 08 24.2	-7.7
	comp=N,20nm,0.2s						
EPOB	**Poblet**	**7.71**	**112**	Pn	**Pn**	**12 07 08.0**	**+2.1**
EPOB				Sn	**Sn**	**12 08 28.3**	**-4.9**
MTLF	**Montolieu**	**7.79**	**96**	*e*Pn	**Pn**	**12 07 07.4**	**+0.5**
MTLF				*e*Sn	**Sn**	**12 08 31.2**	**-3.9**
	comp=N,29nm,0.3s						
EQES	**Quesada**	**7.94**	**148**	Pn	**Pn**	**12 07 12.7**	**+3.6**
EQES				Sn	**Sn**	**12 08 36.6**	**-2.5**
ESPR	**Espera**	**8.02**	**165**	Sn	**Sn**	**12 08 40.6**	**-0.1**
CLF	**Chambon-Foret**	**8.13**	**62**	Pn	Pn	12 07 08.3	-3.3
CLF				Sn	Sn	12 08 32.6	-11
BGF	**Bois d'Agland**	**8.13**	**72**	*e*Pn	**Pn**	**12 07 10.5**	**-1.1**
BGF				*e*Sn	Sn	12 08 33.3	-10
	comp=N,45nm,0.3s						
HYF	**Humbligny**	**8.14**	**67**	*e*Pn	Pn	12 07 09.2	-2.6
HYF				*e*Sn	Sn	12 08 32.6	-11
MCH1	**Michaelchurch**	**8.19**	**24**	Pn	Pn	12 07 07.1	-5.2
MCH1				Sn	Sn	12 08 30.6	-14
EGOR	**Sierra Gorda,**	**8.21**	**155**	Pn	**Pn**	**12 07 16.1**	**+3.2**
EGOR				Sn	**Sn**	**12 08 44.9**	**-0.9**
AVF	**Avril sur Loir**	**8.52**	**71**	*e*Pn	Pn	12 07 15.3	-1.6
AVF				*e*Sn	Sn	12 08 43.2	-10
	comp=N,6.3nm,0.3s						
EMIJ	**Mijas**	**8.54**	**160**	P	Pn	12 07 22.7	+5.4
SSF	**Saint Saulge**	**8.67**	**70**	*e*Pn	Pn	12 07 17.4	-1.6
SSF				*e*Sn	Sn	12 08 46.1	-11
	comp=N,9.8nm,0.3s						
LASF	**Ste Croix**	**8.82**	**89**	*e*Pn	**Pn**	**12 07 21.0**	**-0.1**
LASF				*e*Sn	**Sn**	**12 08 54.5**	**-6.1**
	comp=N,16nm,0.3s						
SMF	**Signal de Mont**	**8.83**	**73**	*e*Pn	**Pn**	**12 07 19.8**	**-1.3**
SMF				*e*Sn	Sn	12 08 50.8	-10
	comp=N,5.7nm,0.2s						
LOR	**Lormes**	**8.95**	**69**	*e*Pn	Pn	12 07 21.2	-1.6
	baz=262						
LOR				*e*Sn	Sn	12 08 51.0	-13
	comp=N,7.3nm,0.2s						
VIVF	**Saint-Julien-l**	**9.33**	**84**	*e*Pn	**Pn**	**12 07 27.7**	**-0.3**
VIVF				*e*Sn	Sn	12 09 05.6	-7.4
	comp=N,9.6nm,0.3s						
SFTF	**Sexfontaines**	**9.96**	**64**	*e*Pn	Pn	12 07 33.0	-3.6
SFTF				*e*Sn	Sn	12 09 13.7	-15
	comp=N,7.1nm,0.2s						
MEZF	**Maizieres J’vi**	**10.05**	**63**	*e*Pn	Pn	12 07 35.5	-2.3
MEZF				*e*Sn	Sn	12 09 17.9	-13
	comp=N,5.0nm,0.3s						
SMRF	**Simiane la Rot**	**10.06**	**89**	*e*Pn	**Pn**	**12 07 38.5**	**+0.4**
SMRF				*e*Sn	**Sn**	**12 09 24.9**	**-6.1**
	comp=N,0.8nm,0.2s						
SAVF	**Savonnieres en**	**10.13**	**62**	*e*Pn	Pn	12 07 33.2	-5.7
SAVF	**Savonnieres en**	**10.13**	**62**	*e*P	**Pn**	**12 07 40.3**	**+1.4**
SAVF				*e*Sn	Sn	12 09 21.3	-11
	comp=N,4.5nm,0.2s						
BAIF	**Baives**	**10.13**	**53**	*e*Pn	Pn	12 07 35.3	-3.7
BAIF				*e*Sn	Sn	12 09 17.9	-15
	comp=N,3.4nm,0.2s						
ORIF	**Oris-en-Rattie**	**10.18**	**83**	*e*Pn	**Pn**	**12 07 40.4**	**+0.6**
CABF	**La Chapelle**	**10.36**	**74**	*e*Sn	Sn	12 09 27.6	-11
	comp=N,3.1nm,0.4s						
PAGF	**Fort de Pagny**	**10.49**	**63**	*e*Sn	Sn	12 09 27.8	-14
	comp=N,4.4nm,0.3s						
GIVF	**Givet**	**10.51**	**54**	*e*Pn	Pn	12 07 41.1	-3.0
GIVF				*e*Sn	Sn	12 09 25.5	-16
	comp=N,8.5nm,0.3s						
HAU	**Haudompre**	**10.76**	**67**	*e*Sn	Sn	12 09 38.1	-10
	comp=N,4.9nm,0.3s						
HINF	**Hinteralfeld**	**11.05**	**68**	*e*Sn	Sn	12 09 41.1	-14
	comp=N,4.3nm,0.4s						

IDC 09 12:41:36.8±5.2, 4°.09S×129°.77E, h0^{km}, mb4.0/1, mbtmp3.7/4, ML3.4/3, MS3.9/1, Error ellipse: s-maj=108.2km s-min=83.5km az=98.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**14.50**	**196**	Pn	Pn	12 45 04.7	+1.2
	0.1nm,0.3s,baz=7.1,slow=8.1,SNR=1.7						
	2.0nm,1.0s						
WRA	**Warramunga Arr**	**16.38**	**165**	Pn	Pn	12 45 29.5	+1.3
	0.1nm,0.3s,baz=344,slow=11,SNR=5.1						
	1.1nm,0.8s						
ASAR	**Alice Springs**	**19.87**	**169**	P	P	12 46 08.6	-1.1
	0.2nm,0.3s,baz=342,slow=10,SNR=12						
	0.9nm,0.7s						
SONM	**Songino Array**	**55.63**	**341**	LR	LR	13 16 02.3	
	comp=Z,103nm,18.2s,baz=158,slow=37						
VNDA	**Vanda**	**75.35**	**173**	P	P	12 53 21.8	+0.2
	1.7nm,1.2s,baz=336,slow=4.2,SNR=4.1						
	1.7nm,1.2s						

KRSC 09 12:44:17.6±2.1, 49°.49N×157°.05E, h42^{km}±33^{km}, Ml3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril’s**	**1.34**	**334**	*e*P	Pn	12 44 39.2	-0.6
SKR				*e*S	Sn	12 44 54.9	-1.5
PAU	**Pauzhetka**	**1.99**	**356**	*e*P	Pn	12 44 51.2	+2.5
PAU				*e*S	Sn	12 45 15.0	+2.7
KDTR	**Khodutka, Kamc**	**2.42**	**15**	*e*P	Pn	12 44 58.0	+3.4
KDTR				*e*S	Sn	12 45 27.3	+4.4
MIPR	**Malaya Ipel'ka**	**2.80**	**356**	*e*P	Pn	12 45 01.9	+2.1
ASAK	**Asacha**	**2.95**	**10**	*e*P	Pn	12 45 05.8	+3.8
MTVR	**Mutnovka**	**3.08**	**13**	*e*P	Pn	12 45 07.8	+3.9
MTVR				*e*S	Sn	12 45 44.4	+4.8
RUS	**Russkaya**	**3.09**	**17**	*e*P	Pn	12 45 07.0	+3.2
GRL	**Gorelyy**	**3.14**	**11**	*e*P	Pn	12 45 08.8	+4.2
PET	**Petropavlovsk**	**3.68**	**15**	*e*P	Pn	12 45 16.2	+4.2
PET				*e*S	Sn	12 45 59.6	+5.5
DALK	**Dalny**	**3.71**	**16**	*e*P	Pn	12 45 16.3	+4.0
DALK				*e*S	Sn	12 45 59.9	+5.2
UGLR	**Uglovaya**	**3.89**	**16**	*e*P	Pn	12 45 19.0	+4.1
AVH	**Avacha**	**3.93**	**15**	*e*P	Pn	12 45 20.0	+4.6
SMAR	**Somma**	**3.94**	**16**	*e*P	Pn	12 45 20.3	+4.6
KOK	**Koryaka**	**3.94**	**14**	*e*P	Pn	12 45 20.6	+5.1
SDLR	**Sedlovina**	**3.97**	**16**	*e*P	Pn	12 45 19.8	+3.9
KRER	**Koryakskii**	**3.97**	**15**	*e*P	Pn	12 45 20.6	+4.6
KRX	**Arik**	**4.00**	**14**	*e*P	Pn	12 45 21.3	+4.8
SPN	**Mys Shipunski**	**4.07**	**26**	*e*P	Pn	12 45 21.6	+4.4
SPN				*e*S	Sn	12 46 08.3	+4.7
GNL	**Ganaly**	**4.25**	**7**	*e*P	Pn	12 45 24.9	+5.0
MKZ	**Mys Kozlova**	**5.84**	**28**	*e*P	Pn	12 45 44.9	+3.4
KBTR	**Krutoberegovo**	**7.58**	**25**	*e*P	Pn	12 46 09.0	+3.6

*FCIAR **09** 12:44:28.0, 82°.00N×3°.73W, h10^{km}, station ZFI2 has station magnitude of 3.80 station OMEGA has station magnitude of 3.80*
*DNK **09** 12:44:30.6±3.7, 81°.97N×5°.84W, h23^{km}±62^{km}, ML2.0*
*BER **09** 12:44:31.7±2.9, 81°.94N×5°.83W, h15^{km}±25^{km}, Mw3.2, ML2.0(DNK), Confirmed Earthquake*

ISC 09 12:44:25.8±1.2, 82°.05N±0°.09×5°.03W±0°.05, h10^{km}, n17, σ2^{s}.49/31, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NOR	**Nord**	**1.73**	**261**	*e*	**Pn**	**12 44 56.0**	**+0.3**
	baz=88,slow=18						
NOR				*i* P	**Pb**	**12 44 56.8**	**-0.6**
NOR				*i* S	**Sn**	**12 45 16.2**	**-1.5**
NOR				IAML		12 45 18.4	
	comp=Z,21nm,0.3s						
NOR	**Nord**	**1.73**	**261**	*e*	**Pn**	**12 44 56.0**	**+0.3**
	baz=88,slow=18						
NOR				*i* P	**Pb**	**12 44 56.8**	**-0.6**
NOR				*i* S	**Sn**	**12 45 16.2**	**-1.5**
NOR				IAML		12 45 18.4	
	comp=Z,21nm,0.3s						
KBS	**Kingsbay**	**4.19**	**129**	*e*P	**Pn**	**12 45 32.6**	**+2.9**
KBS				*e*S	**Sn**	**12 46 17.9**	**-0.7**
KBS				IAML		12 46 25.6	
	comp=Z,3.1nm,1.0s						
KBS	**Kingsbay**	**4.19**	**129**	*i* P	**Pn**	**12 45 32.4**	**+2.7**
BRBB	**Barentsburg B**	**5.14**	**130**	*e*P	**Pn**	**12 45 46.5**	**+3.9**
BRBB				*e*S	**Sn**	**12 46 41.2**	**-0.7**
BRBA	**Barentsburg A**	**5.17**	**130**	*e*P	**Pn**	**12 45 46.7**	**+3.6**
BRBA				*e*S	**Sn**	**12 46 43.1**	**+0.4**
BRBA				IAML		12 46 50.7	
	comp=Z,2.1nm,0.6s						
SPA0	**Spitsbergen Ar**	**5.31**	**126**	*e*P	**Pn**	**12 45 47.6**	**+2.6**
SPA0				*e*S	**Sn**	**12 46 43.7**	**-2.4**
SPA0	**Spitsbergen Ar**	**5.31**	**126**	*e*P	**Pn**	**12 45 49.1**	**+4.1**
SPA0				*e*S	**Sn**	**12 46 46.8**	**+0.7**
SPA0				IAML		12 46 53.8	
	comp=Z,1.5nm,0.6s						
DAG	**Danmarks Havn**	**5.84**	**212**	*i* P	**Pn**	**12 45 53.0**	**+0.7**
DAG				*e*S	**Sn**	**12 46 54.9**	**-4.2**
DAG				IAML		12 47 04.6	
	comp=Z,5.6nm,0.3s						
DAG	**Danmarks Havn**	**5.84**	**212**	*i* P	**Pn**	**12 45 53.0**	**+0.7**
DAG				*i* P	**Pn**	**12 45 53.0**	**+0.7**
DAG				*e*S	**Sn**	**12 46 54.9**	**-4.2**
DAG				IAML		12 47 04.6	
	comp=Z,5.6nm,0.3s						
HSPB	**Hornsund (broa**	**6.24**	**133**	*e*P	**Pn**	**12 46 01.4**	**+3.6**
HSPB				IAML		12 47 28.2	
	comp=Z,2.2nm,0.8s						
ZFI2	**Zemlya Franca-**	**7.72**	**72**	*e*P	**Pn**	**12 46 17.5**	**-0.4**
ZFI2				*e*S	Sn	12 47 38.8	-6.4
	comp=Z,28nm,1.6s						
OMEGA	**Omega**	**7.74**	**72**	*e*P	**Pn**	**12 46 17.5**	**-0.7**
OMEGA				*e*S	Sn	12 47 38.8	-7.0
	comp=Z,27nm,1.5s						
HOPEN	**Hopen**	**7.74**	**119**	*e*P	**Pn**	**12 46 19.9**	**+1.6**
HOPEN				*e*S	**Sn**	**12 47 42.1**	**-3.7**
HOPEN	**Hopen**	**7.74**	**119**	*e*P	**Pn**	**12 46 21.0**	**+2.7**
HOPEN				*e*S	**Sn**	**12 47 41.7**	**-4.1**
HOPEN				IAML		12 47 51.2	
	comp=Z,3.5nm,0.7s						
DBG	**Daneborg**	**8.33**	**209**	*i* P	**Pn**	**12 46 27.2**	**+0.9**
DBG				*i*		12 47 54.3	
DBG				IAML		12 48 02.3	
	comp=Z,3.2nm,0.3s						
DBG	**Daneborg**	**8.33**	**209**	*i* P	**Pn**	**12 46 27.2**	**+0.9**
DBG				*i*		12 47 54.3	
DBG				IAML		12 48 02.3	
	comp=Z,3.2nm,0.3s						

IDC 09 12:54:24.3±2.0**,3°.64S**×**126°.12E,h0^{km},mb3.3**/2**,mbtmp3.5**/4**,ML2.8**/2**,Error ellipse: s-maj=114.3km s-min=27.4km az=67.0,Buru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**14.38**	**182**	Pn	Pn	12 57 50.1	+0.8
	baz=6.7,slow=17,SNR=1.7 4.5nm,1.3s						
WRA	**Warramunga Arr**	**18.08**	**154**	P	Pn	12 58 35.7	-1.4
	baz=332,slow=11,SNR=4.8 0.7nm,0.8s						
ASAR	**Alice Springs**	**21.29**	**160**	P	P	12 59 12.1	-0.6
	0.6nm,0.8s,baz=337,slow=10,SNR=5.4 0.6nm,0.8s						
MKAR	**Makanchi Array**	**63.33**	**328**	P	P	13 04 55.9	+0.7
	0.3nm,0.5s,baz=127,slow=7.3,SNR=2.6 0.3nm,0.5s						

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*WEL **09** 12:59:29.7±0.7,44°S±4°×16°8E±°,h5^{km},M3.6/13, ML3.8/10,MLv3.6/13,Error ellipse: s-maj=7.3km s-min=3.1km az=130.5,confirmed*

*NOU **09** 12:59:31.8,44°.19S×168°.27E,h10^{km},MLv4.1/11,South Island, New Zealand*

ISC 09 12:59:28.7±1.4**,44°.27S**±0°.04×**168°.13E**±0°.04**,h2^{km}**±12^{km}**,n43,**σ**0^{s}.71**/50**,South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.43**	**199**	P	**Pg**	**12 59 37.3**	**+0.4**
MSZ				S	**Sg**	**12 59 42.3**	**-0.2**
NSBS	**Neils Beach**	**0.47**	**55**	P	**Pb**	**12 59 39.9**	**+0.2**
JCZ	**Jackson Bay**	**0.51**	**68**	P	**Pg**	**12 59 39.6**	**+1.0**
JCZ	**Jackson Bay**	**0.51**	**68**	S	**Sb**	**12 59 47.6**	**-0.9**
JCZ	**Jackson Bay**	**0.51**	**68**	P	**Pb**	**12 59 40.1**	**-0.5**
MECS	**Makarora Emerg**	**0.80**	**88**	P	**Pb**	**12 59 45.1**	**-0.2**
WKZ	**Wanaka**	**0.85**	**131**	P	**Pg**	**12 59 45.3**	**+0.3**
WKZ				S	**Sg**	**12 59 55.6**	**-0.3**
QTPS	**Queenstown Pol**	**0.85**	**153**	P	**Pg**	**12 59 44.8**	**-0.3**
MLZ	**Mavora Lakes**	**1.10**	**180**	P	**Pg**	**12 59 49.2**	**-0.6**
MLZ				S	**Sg**	**13 00 03.0**	**-1.0**
EAZ	**Earnscleugh**	**1.28**	**139**	P	**Pg**	**12 59 52.9**	**-0.3**
DCZ	**Deep Cove**	**1.38**	**210**	P	**Pn**	**12 59 53.9**	**-1.2**
DCZ				S	**Sg**	**13 00 11.6**	**-1.5**
FOZ	**Fox Glacier**	**1.43**	**59**	P	**Pn**	**12 59 55.1**	**-0.5**
FOZ				S	**Sn**	**13 00 16.1**	**+1.1**
LBZ	**Lake Benmore**	**1.48**	**95**	P	**Pn**	**12 59 56.4**	**0.0**
LBZ				S	**Sn**	**13 00 16.0**	**-0.4**
WHZ	**Wether Hill Ro**	**1.63**	**184**	P	**Pn**	**12 59 57.6**	**-0.9**
WHZ				S	**Sn**	**13 00 19.7**	**-0.3**
GCSZ	**Gaunt Creek Bo**	**1.86**	**60**	P	**Pn**	**13 00 00.8**	**-0.8**
ODZ	**Otahua Downs**	**1.96**	**114**	P	**Pn**	**13 00 03.6**	**+0.6**
ODZ	**Otahua Downs**	**1.96**	**114**	S	**Sb**	**13 00 29.5**	**-0.5**
ODZ	**Otahua Downs**	**1.96**	**114**	P	**Pn**	**13 00 03.2**	**+0.2**
TUZ	**Tuapeka**	**1.99**	**148**	P	**Pn**	**13 00 03.7**	**+0.2**
TMZ	**Timaru**	**2.07**	**94**	P	**Pn**	**13 00 05.0**	**+0.4**
PYZ	**Puysegur Point**	**2.15**	**208**	P	**Pb**	**13 00 09.9**	**+1.4**
PYZ	**Puysegur Point**	**2.15**	**208**	S	**Sg**	**13 00 39.6**	**+1.7**
PYZ	**Puysegur Point**	**2.15**	**208**	P	**Pn**	**13 00 06.4**	**+0.8**
RPZ	**Rata Peaks**	**2.19**	**76**	P	**Pn**	**13 00 06.8**	**+0.7**
RPZ	**Rata Peaks**	**2.19**	**76**	P	**Pn**	**13 00 06.9**	**+0.8**
ARCZ	**Arundel**	**2.22**	**83**	P	**Pn**	**13 00 06.9**	**+0.3**
WVZ	**Waitaha Valley**	**2.24**	**59**	P	**Pn**	**13 00 05.9**	**-0.9**
SYZ	**Scrubby Hill**	**2.38**	**163**	P	**Pn**	**13 00 08.9**	**+0.2**
SYZ	**Scrubby Hill**	**2.38**	**163**	P	**Pn**	**13 00 09.0**	**+0.2**
HHSZ	**Highcliff Hill**	**2.38**	**134**	P	**Pn**	**13 00 09.5**	**+0.6**
APZ	**The Paps**	**2.56**	**182**	P	**Pn**	**13 00 12.2**	**+0.9**
MHCZ	**Mount Hutt**	**2.59**	**75**	P	**Pn**	**13 00 11.8**	**+0.1**
WACZ	**Wakanui South**	**2.69**	**84**	P	**Pn**	**13 00 13.4**	**+0.3**
INZ	**Inchbonnie**	**2.87**	**59**	P	**Pn**	**13 00 14.7**	**-0.8**
OXZ	**Oxford**	**2.99**	**73**	P	**Pn**	**13 00 17.5**	**+0.4**
MQZ	**McQueen's Vall**	**3.32**	**82**	P	**Pn**	**13 00 21.7**	**+0.1**
LTZ	**Lake Taylor**	**3.36**	**65**	P	**Pn**	**13 00 22.2**	**-0.1**
AMCZ	**Amberley**	**3.46**	**73**	P	**Pn**	**13 00 24.4**	**+0.8**
OKCZ	**Okains Bay**	**3.60**	**83**	P	**Pn**	**13 00 25.9**	**+0.3**
DSZ	**Denniston Nort**	**3.69**	**48**	P	**Pn**	**13 00 26.5**	**-0.4**
QRZ	**Quartz Range**	**4.74**	**45**	P	**Pn**	**13 00 40.8**	**-0.3**
KHEZ	**Kahui Hut**	**6.64**	**44**	P	**Pn**	**13 01 07.4**	**0.0**
HIZ	**Hauiti**	**7.66**	**44**	P	**Pn**	**13 01 22.1**	**+0.8**

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*IDC **09** 13:04:34.5±2.3,6°.16S×129°.36E,h0^{km},mb3.6/1, mbtmp3.5/4,ML3.5/3,Error ellipse: s-maj=97.1km s-min=28.4km az=75.0*

ISC 09 13:04:46.0±1.6**,6°.67S**±0°.09×**129°.4E**±0°.2**,h200^{km},n10,**σ**3^{s}.44**/9**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.31**	**125**	P	**Pn**	**13 05 30.2**	**+2.4**
FAKI	**Fak Fak**	**4.70**	**38**	P	**Pn**	**13 05 54.8**	**-1.8**
DRS	**Darwin Rock St**	**5.92**	**165**	P	Pn	13 06 17.0	+4.8
MTN	**Manton Dam**	**6.37**	**164**	P	Pn	13 06 22.3	+4.2
KDU	**Kakadu**	**6.71**	**153**	S	**Sn**	**13 07 36.8**	**-2.3**
KDU	**Kakadu**	**6.71**	**153**	P	**Pn**	**13 06 25.0**	**+2.5**
FITZ	**Fitzroy Crossi**	**11.93**	**197**	Pn	**P**	**13 07 34.0**	**-0.9**
	0.3nm,0.3s,baz=17,slow=12,SNR=24						
FITZ				Sn	**S**	**13 09 43.3**	**0.0**
	0.2nm,0.3s,baz=41,slow=19,SNR=2.2 0.6nm,0.2s						
WRA	**Warramunga Arr**	**14.05**	**160**	Pn	**P**	**13 08 00.4**	**+2.0**
	0.2nm,0.3s,baz=337,slow=13,SNR=13						
WRA				Sn	**S**	**13 10 27.6**	**-5.4**
	0.4nm,0.3s,baz=340,slow=22,SNR=7.8 0.4nm,0.5s						
ASAR	**Alice Springs**	**17.45**	**166**	P	Pn	13 08 45.1	+7.4
	0.2nm,0.3s,baz=347,slow=10,SNR=16						
ASAR				S	**S**	**13 11 51.2**	**+4.1**
	0.3nm,0.5s,baz=352,slow=27,SNR=5.7 0.4nm,0.5s						
MKAR	**Makanchi Array**	**67.61**	**327**	P	P	13 15 30.5	+9.3
	0.2nm,0.4s,baz=130,slow=8.0,SNR=4.6 0.2nm,0.4s						

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*MCSM **09** 13:43:43.7±2.7,35°N±9°×2°7E±°,h11^{km}±19^{km},mb4.3, mB4.3,MLv3.8,Mw(mB)3.4*

*IDC **09** 13:43:46.4±0.8,35°.23N×26°.99E,h0^{km},mb3.9/17, mbtmp3.8/28,ML3.5/10,MS3.2/14,Error ellipse: s-maj=17.0km s-min=9.2km az=177.0*

*MOS **09** 13:43:47.7±1.2,35°.14N×27°.01E,h18^{km},mb4.2/7,Error ellipse: s-maj=7.7km s-min=4.6km az=78.0*

*ISK **09** 13:43:48.3,35°.24N×26°.91E,h7^{km},ML3.8/29*

*THE **09** 13:43:49.8,35°N±18°×2°7E±2°4,h1^{km}±27^{km},M3.8/15, MLh3.8/15*

*NEIC **09** 13:43:49.2±2.0,35°.19N±0°.05×26°.94E±0°.06,h10^{km}±1^{km}, mb4.0/7,Error ellipse: s-maj=9.3km s-min=6.5km az=132.0*

*ATH **09** 13:43:49.8,35°.28N×26°.93E,h4^{km}±1^{km},ML3.8/7,Manual Solution by S.Koutrakis First location: 2019/06/09 13:45:02, This location: 2019/06/09 14:25:42 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 2 km*

*HLW **09** 13:44:18.0,32°.96N×27°.33E,h31^{km}±21^{km},Md3.4,Ml3.1*

ISC 09 13:43:49.1±0.9**,35°.23N**±0°.03×**26°.92E**±0°.02**,h16^{km}**±6^{km}**,n207,**σ**1^{s}.75**/219**,mb3.9**/28**,MS3.1**/9**,9C-6D,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.37**	**32**	Pg	**Pg**	**13 43 56.1**	**-0.7**
KARP				Sg	**Sg**	**13 44 02.2**	**+0.2**
KARP	**Karpathos**	**0.37**	**32**		**Pg**	**13 43 56.1**	**-0.7**
KARP	**Karpathos**	**0.37**	**32**	P	**Pg**	**13 43 56.1**	**-0.7**
KARP				S	**Sg**	**13 44 02.2**	**+0.2**
KARP	**Karpathos**	**0.37**	**32**	P	**Pg**	**13 43 56.3**	**-0.5**
KARP				S	**Sg**	**13 44 00.8**	**-1.3**
ZKR	**Zakros**	**0.59**	**259**	Pg	**Pg**	**13 43 59.5**	**-1.3**
ZKR				Sg	**Sg**	**13 44 08.6**	**0.0**
ZKR	**Zakros**	**0.59**	**259**	P	**Pb**	**13 44 01.1**	**0.0**
ZKR				S	**Sb**	**13 44 09.5**	**+0.3**
ARG	**Arkhangelos**	**1.39**	**45**	Pn	**Pb**	**13 44 14.6**	**-0.1**
ARG				Sn	**Sg**	**13 44 33.9**	**-0.1**
ARG	**Arkhangelos**	**1.39**	**45**		**Pb**	**13 44 14.4**	**-0.3**
ARG	**Arkhangelos**	**1.39**	**45**	P	**Pb**	**13 44 14.9**	**+0.1**
ARG	**Arkhangelos**	**1.39**	**45**	P	**Pb**	**13 44 14.4**	**-0.3**
ARG	**Arkhangelos**	**1.39**	**45**	P	**Pg**	**13 44 15.3**	**-0.6**
ARG				S	**Sg**	**13 44 34.0**	**-0.1**
NISR	**Nisiros**	**1.39**	**7**	P	**Pb**	**13 44 14.8**	**+0.1**
IACM	**Heraklion**	**1.52**	**273**	P	**Pg**	**13 44 18.9**	**+0.6**
DAT	**Datca**	**1.59**	**19**	Pn	**Pn**	**13 44 17.4**	**+0.7**
DAT				Sn	**Sb**	**13 44 38.6**	**+0.5**
THR8	**Santorini-Mono**	**1.66**	**315**	P	**Pn**	**13 44 18.4**	**+0.8**
IDI	**Anoyia**	**1.66**	**273**	Pn	**Pn**	**13 44 18.1**	**+0.4**
IDI	**Anoyia**	**1.66**	**273**		**Pb**	**13 44 19.4**	**0.0**
IDI	**Anoyia**	**1.66**	**273**	P	**Pb**	**13 44 19.1**	**-0.4**
IDI				S	**Sg**	**13 44 42.5**	**-0.3**
IDI	**Anoyia**	**1.66**	**273**	Pg	**Pb**	**13 44 18.9**	**-0.6**
	36nm,0.3s,baz=88,slow=18,SNR=152						
IDI				Lg	Lg	13 44 41.8	
	102nm,0.3s,baz=322,slow=19,SNR=8.2						
IDI				LR	LR	13 44 56.9	
	comp=Z,256nm,19.0s,baz=93,slow=41						
IDI	**Anoyia**	**1.66**	**273**	P	**Pb**	**13 44 20.1**	**+0.6**
IDI				S	**Sb**	**13 44 41.9**	**+1.6**
THR6	**Thira Island,**	**1.67**	**313**	P	**Pb**	**13 44 19.5**	**-0.1**
THR9	**Santorini-Faro**	**1.70**	**312**	P	**Pb**	**13 44 20.0**	**0.0**
THR3	**Thira Island,**	**1.71**	**314**	P	**Pn**	**13 44 19.4**	**+1.2**
KLNA	**Kalymnos**	**1.72**	**1**	P	**Pn**	**13 44 19.6**	**+1.1**
THR5	**Thira Island,**	**1.74**	**313**	P	**Pn**	**13 44 19.7**	**+1.0**
CMBO	**Columbo, Santo**	**1.75**	**316**	P	**Pn**	**13 44 20.1**	**+1.3**
CMBO				S	**Sb**	**13 44 43.4**	**+0.8**
TMBK	**Timbaki Herakl**	**1.77**	**266**	P	**Pb**	**13 44 22.4**	**+1.2**
BODT	**Bodrum**	**1.85**	**10**	Pn	**Pn**	**13 44 20.9**	**+0.6**
BODT	**Bodrum**	**1.85**	**10**	P	**Pb**	**13 44 21.8**	**-0.9**
TURN	**Turunc**	**1.88**	**34**	Pn	**Pn**	**13 44 21.5**	**+0.9**
DALY	**Dalyan (Mula)**	**2.12**	**41**	Pn	**Pn**	**13 44 25.4**	**+1.5**
APE	**Apeiranthos**	**2.15**	**329**	Pn	**Pn**	**13 44 25.4**	**+0.9**
APE	**Apeiranthos**	**2.15**	**329**	P	**Pn**	**13 44 25.2**	**+0.7**
APE	**Apeiranthos**	**2.15**	**329**	*d i*P	**Pn**	**13 44 25.4**	**+0.9**
MLSB	**Milas**	**2.17**	**18**	Pn	**Pn**	**13 44 26.1**	**+1.4**
FETY	**Fethiye**	**2.25**	**51**	Pn	**Pn**	**13 44 27.1**	**+1.4**
GVD	**Gavdhos**	**2.36**	**261**	Pn	**Pn**	**13 44 28.8**	**+1.6**
GVD	**Gavdhos**	**2.36**	**261**	P	**Pb**	**13 44 29.8**	**-1.5**
GVD	**Gavdhos**	**2.36**	**261**	P	**Pb**	**13 44 30.1**	**-1.1**
CHAN	**Chania**	**2.37**	**278**	P	**Pn**	**13 44 29.4**	**+2.1**
AKAS	**Kas**	**2.40**	**65**	Pn	**Pn**	**13 44 29.0**	**+1.1**
AKAS	**Kas**	**2.40**	**65**		**Pn**	**13 44 28.6**	**+0.7**
IMMV	**Iera Moni Meta**	**2.42**	**276**	Pn	**Pn**	**13 44 29.9**	**+1.9**
IMMV	**Iera Moni Meta**	**2.42**	**276**	P	**Pn**	**13 44 29.8**	**+1.8**
IMMV	**Iera Moni Meta**	**2.42**	**276**	P	**Pb**	**13 44 30.7**	**-1.6**
GCAM	**G?zelcaml?**	**2.48**	**6**	Pn	**Pn**	**13 44 30.7**	**+1.8**
MHLO	**Agia Marina, M**	**2.51**	**306**	P	**Pn**	**13 44 30.4**	**+1.1**
CAME	**Cameli-Denizli**	**2.58**	**48**	Pn	**Pn**	**13 44 31.9**	**+1.5**
KNDR	**Palaiochora Ch**	**2.65**	**271**	Pn	**Pb**	**13 44 34.0**	**-2.2**
AYDB	**Zeytinkoy-Aydi**	**2.82**	**16**	Pn	**Pn**	**13 44 35.7**	**+2.0**
ELL	**Elmali**	**2.86**	**57**	Pn	**Pn**	**13 44 35.9**	**+1.7**
ELL	**Elmali**	**2.86**	**57**		**Pn**	**13 44 35.6**	**+1.4**
ELL	**Elmali**	**2.86**	**57**	P	**Pn**	**13 44 35.6**	**+1.4**
NAZL	**Nazilli-Aydin**	**2.94**	**22**	Pn	**Pn**	**13 44 36.3**	**+1.0**
APMY	**Acipayam-Deniz**	**2.95**	**40**	Pn	**Pn**	**13 44 37.2**	**+1.8**
ANKY	**Antikythira Is**	**3.02**	**283**	P	**Pn**	**13 44 37.5**	**+1.1**
BLCB	**Balcova**	**3.15**	**2**	Pn	**Pn**	**13 44 39.6**	**+1.5**
ODEM	**Odemis-Izmir**	**3.18**	**17**	Pn	**Pn**	**13 44 40.4**	**+1.8**
CHOS	**Chios island**	**3.23**	**348**	Pn	**Pn**	**13 44 40.7**	**+1.5**
CHOS	**Chios island**	**3.23**	**348**	P	**Pn**	**13 44 40.3**	**+1.0**
KORT	**Korkueli**	**3.29**	**57**	Pn	**Pn**	**13 44 41.8**	**+1.6**
KTHA	**Kythira Island**	**3.30**	**289**	P	**Pn**	**13 44 41.6**	**+1.3**
ANTB	**Antalya**	**3.45**	**60**	Pn	**Pn**	**13 44 44.5**	**+2.3**
MANT	**Manisa**	**3.51**	**21**		**Pn**	**13 44 44.4**	**+1.2**
VLI	**Veliai**	**3.56**	**296**	P	**Pn**	**13 44 45.1**	**+1.4**
KULA	**Kula-Manisa**	**3.56**	**23**	Pn	**Pn**	**13 44 45.9**	**+2.0**
BASM	**Basmaki-Afyon**	**3.68**	**42**	Pn	**Pn**	**13 44 47.2**	**+1.7**
BCK	**Bucak**	**3.70**	**52**	Pn	**Pn**	**13 44 47.7**	**+1.9**
BCK	**Bucak**	**3.70**	**52**	P	**Pn**	**13 44 47.6**	**+1.8**
ATH	**Athens Observa**	**3.76**	**318**	P	**Pn**	**13 44 51.0**	**+4.5**
ISP	**Isparta**	**3.89**	**47**	Pn	**Pn**	**13 44 50.6**	**+2.3**
ISP	**Isparta**	**3.89**	**47**		**Pn**	**13 44 49.8**	**+1.5**
ISP	**Isparta**	**3.89**	**47**	⇑*e*P	**Pn**	**13 44 49.6**	**+1.3**
SLUM	**Salum**	**3.99**	**201**	P	**Pn**	**13 44 53.6**	**+3.9**
SLUM				S	Sn	13 45 19.3	-17
PRK	**Paraskevi**	**4.04**	**353**	P	**Pn**	**13 44 54.0**	**+3.6**
KYMI	**Kymi, Euboea I**	**4.08**	**327**	P	**Pn**	**13 44 52.4**	**+1.5**
LTK	**Loutraki**	**4.23**	**312**	P	**Pn**	**13 44 56.3**	**+3.4**
VLX	**Vlachokerasia**	**4.25**	**302**	P	**Pn**	**13 44 56.0**	**+2.7**
DB3	**El Dabaa**	**4.40**	**161**	P	**Pn**	**13 44 51.6**	**-3.6**
DB3				S	**Pg**	**13 45 15.5**	**+2.1**
SHUT	**Suhut-Afyon**	**4.41**	**40**	Pn	**Pn**	**13 44 57.1**	**+1.5**
ITM	**Ithomi**	**4.48**	**297**		**Pn**	**13 44 58.7**	**+2.2**
ITM	**Ithomi**	**4.48**	**297**	P	**Pn**	**13 44 58.8**	**+2.4**
GUR	**Goura**	**4.57**	**308**	P	**Pn**	**13 45 00.7**	**+3.0**
EZN	**Ezine**	**4.61**	**354**	P	**Pn**	**13 45 02.4**	**+4.2**
	0.1nm25nm,0.9s						
KLV	**Kalavryta, Ach**	**4.75**	**308**	P	**Pn**	**13 45 02.8**	**+2.6**
EFP	**Efpalio**	**5.13**	**310**	P	**Pn**	**13 45 08.8**	**+3.4**
ANX	**Ano Chora**	**5.23**	**311**	P	**Pn**	**13 45 09.8**	**+3.1**
CSS	**Mathiatis**	**5.26**	**91**		**Pn**	**13 45 06.0**	**-1.1**
AGG	**Agios Georgios**	**5.27**	**317**	P	**Pn**	**13 45 11.2**	**+3.9**
AGG	**Agios Georgios**	**5.27**	**317**	P	**Pn**	**13 45 12.0**	**+4.7**
PDO	**Prodromos**	**5.70**	**308**	P	**Pn**	**13 45 16.3**	**+3.2**
ALN	**Alexandroupoli**	**5.70**	**353**		**Pn**	**13 45 14.7**	**+1.6**
ALN	**Alexandroupoli**	**5.70**	**353**	P	**Pn**	**13 45 14.1**	**+1.0**
ALN	**Alexandroupoli**	**5.70**	**353**	P	**Pn**	**13 45 14.7**	**+1.6**
AMPL	**Ampelaki**	**5.87**	**311**	P	**Pn**	**13 45 18.2**	**+2.8**
RDO	**Rodhopi**	**6.01**	**350**		**Pn**	**13 45 17.9**	**+0.6**
SWA2		**6.10**	**192**	P	**Pn**	**13 45 17.4**	**-1.2**
LKD2	**Lefkada island**	**6.14**	**307**	P	**Pn**	**13 45 21.4**	**+2.2**
ANTO	**Ankara**	**6.57**	**43**	P	**Pn**	**13 45 27.1**	**+1.9**
ANTO				pmax	pmax		
	comp=Z,16nm,0.8s						
ANTO	**Ankara**	**6.57**	**43**	P	**Pn**	**13 45 27.5**	**+2.3**
	comp=Z,0.0nmcomp=Z,8.0nm,0.8s						
RYAN	**Fayoum**	**6.76**	**154**	P	**Pn**	**13 45 25.5**	**-2.2**
BR104	**Keskin Array S**	**6.96**	**48**	P	**Pn**	**13 45 31.4**	**+0.8**
	comp=Z,0.0nmcomp=Z,42nmcomp=Z,4.5nm,1.0s						
BR106	**Keskin Array S**	**6.97**	**48**	P	**Pn**	**13 45 32.2**	**+1.5**
	comp=Z,0.0nmcomp=Z,49nmcomp=Z,3.9nm,0.9s						
BR131	**Keskin Array S**	**6.97**	**48**		**Pn**	**13 45 31.8**	**+1.0**
BR131	**Keskin Array S**	**6.97**	**48**	P	**Pn**	**13 45 31.8**	**+1.0**
BRTR	**Keskin Array B**	**6.97**	**48**		**Pn**	**13 45 31.4**	**+0.6**
BRTR	**Keskin Array B**	**6.97**	**48**	Pn	**Pn**	**13 45 30.0**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=229,slow=13,SNR=9.3						
BRTR				Sn	**Sn**	**13 46 51.7**	**+1.9**
	baz=225,slow=18						
BRTR				Lg	Lg	13 47 25.9	
	baz=223,slow=25						
BRTR				LR	LR	13 48 54.3	
	comp=Z,258nm,19.9s,baz=242,slow=44 comp=Z,1.4nm,0.9s						
BRTR	**Keskin Array B**	**6.97**	**48**	*ce*P	**Pn**	**13 45 32.0**	**+1.2**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MMAI	**Mount Meron Ar**	**7.37**	**105**	Pn	**Pn**	**13 45 34.3**	**-1.9**
	comp=Z,1.8nm,0.3s,baz=299,slow=13,SNR=5.1						
MMAI				Sn	**Sn**	**13 46 56.7**	**-2.8**
	comp=Z,3.6nm,0.3s,baz=281,slow=32,SNR=5.7 comp=Z,1.0nm,0.3s						
NBNS	**Bani Suef**	**7.56**	**149**	P	**Pn**	**13 45 37.6**	**-1.1**
BNN	**Bunyan**	**8.00**	**61**		**Pn**	**13 45 46.8**	**+2.0**
GHAJ	**Ghor Haditha**	**8.23**	**116**		**Pn**	**13 45 49.7**	**+1.8**
BZK	**Bozkurt**	**8.71**	**37**	P	**Pn**	**13 45 57.0**	**+2.6**
EIL	**Elat**	**8.76**	**127**	Pn	**Pn**	**13 45 54.5**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=312,slow=12,SNR=10.0						
EIL				Sn	**Sn**	**13 47 28.1**	**-5.5**
	comp=Z,1.3nm,0.3s,baz=321,slow=2.8,SNR=3.9 comp=Z,4.2nm,0.7s						
ASF	**Jabal al Asfar**	**8.85**	**107**	Pn	**Pn**	**13 45 56.1**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=310,slow=15,SNR=3.7						
ASF				Sn	**Sn**	**13 47 37.1**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=236,slow=13,SNR=1.1 comp=Z,1.4nm,0.5s						
TIP	**Timpagrande**	**9.01**	**299**		**Pn**	**13 45 58.7**	**0.0**
TIP	**Timpagrande**	**9.01**	**299**	P	**Pn**	**13 45 58.8**	**+0.1**
	comp=Z,8.4nm,0.7s						
TIRR	**Tirgusor**	**9.29**	**7**	P	**Pn**	**13 46 04.2**	**+1.9**
TIRR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CEL	**Celeste**	**9.35**	**292**		**Pn**	**13 46 03.7**	**+0.3**
CEL	**Celeste**	**9.35**	**292**	P	**Pn**	**13 46 02.4**	**-0.9**
	comp=Z,11nm,0.8s						
CUC	**Castrocucco**	**10.01**	**302**		**Pn**	**13 46 11.9**	**-0.4**
MLR	**Muntele Rosu**	**10.28**	**356**	Pn	**Pn**	**13 46 17.7**	**+1.6**
	comp=Z,1.7nm,0.4s,baz=150,slow=14,SNR=8.9						
MLR				LR	LR	13 50 42.6	
	comp=Z,156nm,19.9s,baz=200,slow=40						
MLR	**Muntele Rosu**	**10.28**	**356**	P	**Pn**	**13 46 20.6**	**+4.6**
	comp=Z,14nm,1.7s						
VOIR		**10.29**	**353**	P	**Pn**	**13 46 19.4**	**+3.2**
VOIR				pmax	pmax		
	comp=Z,4.0nm,1.3s						
VAE	**Valguarnera**	**10.34**	**286**	Sn	**Sn**	**13 48 08.5**	**-3.9**
	comp=Z,1.8nm,0.3s,baz=150,slow=9.3,SNR=2.1						
KIS	**Kishinev**	**11.84**	**6**	P	**Pn**	**13 46 41.7**	**+4.4**
INTR	**Introdacqua**	**12.22**	**308**		**Pn**	**13 46 43.9**	**+1.4**
KEST	**Kesra**	**14.33**	**277**	Pn	**Pn**	**13 47 12.8**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=118,slow=15,SNR=4.7						
KEST				LR	LR	13 53 42.6	
	comp=Z,60nm,22.0s,baz=183,slow=41 comp=Z,2.9nm,0.9s						
SHA1	**Shidzhatmaz**	**14.81**	**50**	⇑*e*P	**Pn**	**13 47 18.6**	**+0.5**
GNI	**Garni**	**14.93**	**66**	LR	LR	13 54 22.5	
	comp=Z,108nm,19.6s,baz=284,slow=43						
KIV	**Kislovodsk**	**14.94**	**50**	*e*P	**Pn**	**13 47 17.9**	**-1.8**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,31nm,13.0s						
KBZ	**Khabaz**	**14.96**	**51**	Pn	**Pn**	**13 47 22.3**	**+2.5**
	comp=Z,0.1nm,0.3s,baz=239,slow=13,SNR=6.4						
KBZ				LR	LR	13 54 56.2	
	comp=Z,40nm,18.0s,baz=222,slow=45 comp=Z,0.5nm,0.4s						
KBZ	**Khabaz**	**14.96**	**51**	⇑*e*P	**Pn**	**13 47 19.2**	**-0.6**
KBZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MODS	**Modra-Piesok**	**14.96**	**334**	*e*P	**P**	**13 47 29.4**	**+4.1**
MODS	**Modra-Piesok**	**14.96**	**334**	*e*P	**P**	**13 47 29.3**	**+4.0**
AK07	**Malin Array Si**	**15.40**	**5**	P	**P**	**13 47 30.2**	**0.0**
AK06	**Malin Array Si**	**15.44**	**5**	P	**P**	**13 47 30.1**	**-0.5**
AK13	**Malin Array Si**	**15.45**	**5**	P	**P**	**13 47 30.1**	**-0.7**
AK10	**Malin Array Si**	**15.46**	**6**	P	**P**	**13 47 30.7**	**-0.1**
AK09	**Malin Array Si**	**15.47**	**6**	P	**P**	**13 47 30.4**	**-0.6**
AK14	**Malin Array Si**	**15.47**	**5**	P	**P**	**13 47 30.6**	**-0.4**
AK08	**Malin Array Si**	**15.49**	**6**	P	**P**	**13 47 30.7**	**-0.5**
AK12	**Malin Array Si**	**15.49**	**5**	P	**P**	**13 47 30.8**	**-0.4**
AK16	**Malin Array Si**	**15.51**	**5**	P	**P**	**13 47 31.4**	**-0.1**
AK11	**Malin Array Si**	**15.53**	**5**	P	**P**	**13 47 31.0**	**-0.6**
AK15	**Malin Array Si**	**15.54**	**5**	P	**P**	**13 47 31.2**	**-0.5**
AK01	**Malin Array Si**	**15.54**	**5**	P	**P**	**13 47 31.4**	**-0.4**
KIEV	**Kiev**	**15.55**	**5**	Pn	**Pn**	**13 47 29.6**	**+2.1**
KIEV	**Kiev**	**15.55**	**5**	P	**Pn**	**13 47 29.6**	**+2.1**
KIEV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KIEV	**Kiev**	**15.55**	**5**	P	**P**	**13 47 32.0**	**+0.2**
	comp=Z,27nm,0.9s						
AKASG	**Malin Array Be**	**15.55**	**5**	Pn	**Pn**	**13 47 27.8**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=195,slow=11,SNR=8.9						
AKASG				Sn	**S**	**13 50 30.3**	**-4.7**
	comp=Z,0.1nm,0.3s,baz=193,slow=22,SNR=5.8						
AKASG				LR	LR	13 54 02.9	
	comp=Z,70nm,20.4s,baz=198,slow=40 comp=Z,0.6nm,0.7s						
AKBB	**Malin Array Si**	**15.55**	**5**	Pn	**Pn**	**13 47 29.6**	**+2.0**
AKBB				IAmb	IAmb	13 47 38.4	
	comp=Z,4.8nm,0.8s						
AKBB	**Malin Array Si**	**15.55**	**5**	P	**Pn**	**13 47 29.6**	**+2.0**
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AK19	**Malin Array Si**	**15.56**	**5**	P	**P**	**13 47 31.5**	**-0.5**
AK18	**Malin Array Si**	**15.56**	**5**	P	**P**	**13 47 31.7**	**-0.3**
VRAC	**Vranov**	**15.99**	**335**	Pn	**Pn**	**13 47 34.9**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=144,slow=8.7,SNR=1.4 comp=Z,0.9nm,0.5s						
GERES	**GERESS Array B**	**16.74**	**328**	Pn	**Pn**	**13 47 44.1**	**+1.1**
	baz=139,slow=13,SNR=7.1 comp=Z,1.0nm,0.8s						
KHC	**Kasperske Hory**	**17.01**	**329**	*e*P	**P**	**13 47 48.0**	**-0.2**
KHC	**Kasperske Hory**	**17.01**	**329**	*e*P	**P**	**13 47 48.0**	**-0.2**
DAVOX	**Davos/Dischmat**	**17.24**	**317**	P	**Pn**	**13 47 47.5**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=151,slow=19,SNR=1.8 comp=Z,0.4nm,0.3s						
SENIN	**Lac Senin/Sane**	**18.51**	**313**	P	**P**	**13 48 05.1**	**+0.3**
SENIN				IAmb	IAmb	13 48 42.0	
	comp=Z,5.0nm,0.8s						
RAYN	**Ar Rayn**	**19.92**	**121**	P	**Pn**	**13 48 21.8**	**-0.2**
RAYN				pmax	pmax		
	comp=Z,6.0nm,1.4s						
OBN	**Obninsk**	**20.98**	**16**	⇓*e*P	**P**	**13 48 31.5**	**+0.1**
OBN				*e*		13 48 50.7	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,44nm,19.0s						
OBN	**Obninsk**	**20.98**	**16**	P	Pn	13 48 33.6	-0.4
TAM	**Tamanrasset**	**22.39**	**242**	P	**P**	**13 48 48.5**	**+1.4**
TAM				pmax	pmax		
	comp=Z,4.0nm,2.0s						
BELG	**Belogornoye**	**22.62**	**34**	P	P	13 48 39.6	-9.5
	comp=Z,4.9nm,0.6s,baz=163,slow=14,SNR=3.5						
BELG				LR	LR	13 59 59.0	
	comp=Z,34nm,18.3s,baz=301,slow=43						
BELG	**Belogornoye**	**22.62**	**34**	⇓*e*P	**P**	**13 48 50.6**	**+1.6**
BELG				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ESBB	**Sonseca Array**	**24.85**	**289**	P	**P**	**13 49 10.6**	**-0.3**
ESBB				IAmb	IAmb	13 49 31.9	
	comp=Z,9.2nm,1.4s						
ESDC	**Sonseca Array**	**24.85**	**289**	P	**P**	**13 49 10.0**	**-1.0**
	comp=Z,1.1nm,0.6s,baz=89,slow=9.2,SNR=12 comp=Z,1.1nm,0.6s						
PAB	**San Pablo**	**25.15**	**289**	P	**P**	**13 49 13.4**	**-0.2**
PAB				IAmb	IAmb	13 49 51.8	
	comp=Z,3.9nm,1.1s						
PAB	**San Pablo**	**25.15**	**289**	P	**P**	**13 49 13.4**	**-0.2**
PAB				pmax	pmax		
	comp=Z,4.0nm,1.1s						
FINES	**FINESS Array B**	**26.24**	**359**	P	**P**	**13 49 20.0**	**-3.2**
	comp=Z,1.1nm,0.8s,baz=180,slow=9.7,SNR=1.2						
HFS	**Hagfors**	**26.36**	**345**	P	**P**	**13 49 23.4**	**-0.8**
	comp=Z,2.0nm,0.8s,baz=153,slow=9.7,SNR=1.9						
HFS				LR	LR	14 00 56.1	
	comp=Z,101nm,19.8s,baz=165,slow=39 comp=Z,2.0nm,0.8s						
AKTO	**Aktyubinsk**	**27.15**	**46**	LR	LR	14 05 15.3	
	comp=Z,32nm,19.0s,baz=58,slow=48						
KIRV	**Kirov**	**27.70**	**26**	LR	LR	14 02 38.0	
	comp=Z,45nm,18.7s,baz=279,slow=41						
NOA	**NORSAR Array B**	**27.72**	**344**	P	**P**	**13 49 34.7**	**-1.9**
	comp=Z,0.7nm,0.8s,baz=156,slow=7.8,SNR=1.7 comp=Z,0.7nm,0.8s						
NC204	**NORSAR Array S**	**28.03**	**343**	P	**P**	**13 49 40.9**	**+1.5**
EKA	**Eskdalemuir Ar**	**28.83**	**324**	P	**P**	**13 49 46.1**	**-0.3**
	comp=Z,1.0nm,0.9s,baz=127,slow=10,SNR=3.7 comp=Z,1.0nm,0.9s						
ARTI	**Arti**	**30.05**	**35**	*c i*P	**P**	**13 49 56.4**	**-0.8**
ARTI						13 50 51.6	
ARTI						13 52 53.5	
ARTI				S	**S**	**13 54 57.0**	**+2.3**
ARTI				SS	**SnSn**	**13 56 30.8**	**+3.8**
ARTI				pmax	pmax		
	comp=Z,3.0nm,1.2s						
TORD	**Torodi Ar. Bea**	**31.66**	**232**	P	**P**	**13 50 11.6**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=36,slow=9.1,SNR=4.0 comp=Z,1.9nm,0.6s						
ARCES	**ARCESS Array B**	**34.37**	**359**	P	**P**	**13 50 34.9**	**-0.1**
	comp=Z,1.6nm,0.9s,baz=177,slow=9.7,SNR=4.2 comp=Z,1.6nm,0.9s						
BRVK	**Borovoye**	**35.20**	**46**	⇑*e*P	**P**	**13 50 43.9**	**+1.5**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BVAR	**Borovoye Array**	**35.26**	**46**	P	**P**	**13 50 42.9**	**0.0**
	comp=Z,0.2nm,0.4s,baz=242,slow=4.3,SNR=3.8						
BVAR				LR	LR	14 07 30.6	
	comp=Z,26nm,20.8s,baz=220,slow=40 comp=Z,0.2nm,0.4s						
AAK	**Ala-Archa**	**37.33**	**64**	⇑*e*P	**P**	**13 50 59.4**	**-1.5**
KURBB	**Kurchatov Arra**	**39.95**	**51**	P	**P**	**13 51 23.3**	**+0.7**
	comp=Z,2.4nm,0.9s,baz=274,slow=8.9,SNR=14						
KURBB				LR	LR	14 10 43.8	
	comp=Z,40nm,18.1s,baz=176,slow=40 comp=Z,2.4nm,0.9s						
KURK	**Kurchatov**	**40.02**	**51**	*de*P	**P**	**13 51 23.9**	**+0.8**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
JMIC	**Jan Mayen**	**40.43**	**343**	LR	LR	14 08 40.8	
	comp=Z,33nm,19.9s,baz=284,slow=37						
MK31	**Makanchi Array**	**42.53**	**57**	*de*P	**P**	**13 51 44.0**	**+0.1**
MKAR	**Makanchi Array**	**42.53**	**57**	P	**P**	**13 51 44.5**	**+0.6**
MKAR	**Makanchi Array**	**42.53**	**57**	P	**P**	**13 51 44.0**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=274,slow=7.5,SNR=12 comp=Z,1.1nm,0.5s						
MKAR	**Makanchi Array**	**42.53**	**57**	*ce*P	**P**	**13 51 44.4**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SPITS	**Spitsbergen Ar**	**43.29**	**357**	P	**P**	**13 51 48.5**	**-1.1**
	comp=Z,1.1nm,0.8s,baz=164,slow=7.5,SNR=4.9 comp=Z,1.1nm,0.8s						

SCO	Scoresbysund	43.79	339	P	P	13 51 55.4	+1.7
SCO				IAmb	IAmb	13 52 04.2	
	comp=Z,8.0nm,1.4s						
SCO	Scoresbysund	43.79	339	P	P	13 51 55.4	+1.7
SCO				pmax	pmax		
	comp=Z,8.0nm,1.4s						
ZALV	Zalesovo Beam	43.91	46	P	P	13 51 53.1	-1.9
	comp=Z,0.8nm,0.4s,baz=268,slow=7.2,SNR=3.8						
	comp=Z,0.8nm,0.4s						
SONM	Songino Array	58.32	51	P	P	13 53 43.4	0.0
	comp=Z,0.7nm,0.5s,baz=292,slow=9.1,SNR=3.8						
	comp=Z,0.7nm,0.5s						
ULN	Ulaanbaatar	58.73	51	⇑eP	P	13 53 46.2	-0.1
ULN				pmax	pmax		
	comp=Z,1.0nm,1.0s						
PZH	PanZhiHua	63.45	75	P	P	13 54 19.3	+0.7
SCHQ	Schefferville	64.06	320	P	P	13 54 21.7	-0.4
	comp=Z,1.6nm,0.5s,baz=73,slow=11,SNR=3.8						
	comp=Z,1.6nm,0.5s						
HHC	Hu-ho-hao-te	64.39	57	eP	P	13 54 25.3	+0.7
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,75nm,4.4s						
YAK	Yakutsk	65.09	30	⇓eP	P	13 54 28.5	-0.1
YAK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CMAR	Chiang Mai Arr	65.13	84	P	P	13 54 28.2	-1.3
	comp=Z,0.4nm,0.6s,baz=292,slow=5.0,SNR=5.1						
	comp=Z,0.4nm,0.6s						
KSRS	Korea Array	77.09	53	P	P	13 55 41.6	-0.2
	comp=Z,1.1nm,0.9s,baz=309,slow=5.0,SNR=4.2						
	comp=Z,1.1nm,0.9s						
YKA	Yellowknife Ar	77.82	343	P	P	13 55 45.4	+0.1
	comp=Z,0.4nm,0.8s,baz=25,slow=5.6,SNR=1.5						
	comp=Z,0.4nm,0.8s						
MDP	Montagnes des	78.55	268	LR	LR	14 31 56.2	
	comp=Z,25nm,18.1s,baz=120,slow=37						
MJAR	Matsushiro Arr	84.20	49	P	P	13 56 18.6	-1.3
	comp=Z,0.8nm,0.8s,baz=324,slow=1.4,SNR=2.0						
	comp=Z,0.8nm,0.8s						
ASAR	Alice Springs	116.64	101	PKP	PKiKP	14 02 33.1	+0.2
	comp=Z,0.2nm,0.8s,baz=291,slow=1.6,SNR=1.3						

NOU 09 13:54:18.8, 14.°88S×166.°96E, h16^{km}, MLv4.6/14,
Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLAKA	Lakatoro	1.30	160	P	Pb	13 54 42.9	+0.1
LUES	Luesalemba Tem	4.32	346	P	Pn	13 55 24.3	+0.5
LUES	Luesalemba Tem	4.32	346	S	Sn	13 56 14.5	+0.7
YATNC	Mamie plateau,	7.14	181	P	Pn	13 56 01.8	-0.9
DZM	Mont Dzumac	7.17	184	P	Pn	13 56 03.2	+0.1
ONTNC	Ouen Toro	7.40	184	P	Pn	13 56 06.6	+0.3
OUENC	Ouen Island, N	7.50	181	P	Pn	13 56 07.4	-0.2
PINNC	Pines Island,	7.71	177	P	Pn	13 56 11.1	+0.7

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*IDC **09** 13:54:26.3±3.4, 68.°03N×136.°60W, h0^{km}, mb4.0/1,*
mbtmp3.4/3, ML3.1/2, Error ellipse: s-maj=68.2km
s-min=19.8km az=173.0
*ANF **09** 13:54:29.0±0.2, 67.°76N×136.°56W, h12^{km}±1^{km}, ML3.2/52,*
Error ellipse: s-maj=1.4km s-min=1.2km az=32.0
ISC 09 13:54:28.0±1.0**, 67.°82N**±0.°02×**136.°56W**±0.°02**, h14^{km}**±8^{km}**,**
n88, σ1.^{s}**55**/122**, Northern Yukon Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
F30M	Barrier River	0.36	125	P	Pg	13 54 35.5	+0.2
	baz=305,SNR=1000						
F30M				S	Sg	13 54 41.3	+1.0
	baz=305						
E29M	Blow River	0.76	319	P	Pb	13 54 42.8	-0.2
	baz=138,SNR=1000						
E29M				S	Sn	13 54 53.7	-1.8
	baz=138						
G30M	tAoh Zraii Nji	0.85	171	P	Pg	13 54 43.3	-1.2
	baz=352,SNR=498						
G30M				S	Sg	13 54 54.5	-1.1
	baz=352						
G29M	Pine Creek	1.07	213	P	Pg	13 54 48.1	-0.6
	baz=32,SNR=1000						
G29M				S	Sg	13 55 02.9	+0.3
	baz=32						
F31M	Tsiigehtchic	1.14	108	P	Pg	13 54 50.0	+0.1
	baz=290,SNR=1000						
F31M				S	Sb	13 55 05.9	+1.9
	baz=290						
INK	Inuvik	1.24	65	P	Pn	13 54 51.2	+0.5
	baz=247,SNR=345						
INK				S	Sn	13 55 09.4	+2.2
	baz=247						
G31M	Satah River	1.26	134	P	Pn	13 54 51.4	+0.3
	baz=316,SNR=968						
G31M				S	Sb	13 55 08.1	+0.6
	baz=316						
F28M	Old Crow	1.28	262	P	Pn	13 54 51.8	+0.4
	baz=80,SNR=594						
F28M				S	Sn	13 55 09.6	+1.3
	baz=80						
E28M	Babbage River	1.36	307	P	Pg	13 54 53.2	-1.0
	baz=124,SNR=246						
E28M				S	Sn	13 55 12.0	+1.6
	baz=124						
EPYK	Eagle Plains	1.46	183	P	Pn	13 54 54.4	+0.6
	baz=2.7,SNR=70						
EPYK				Sb	Sn	13 55 14.4	+1.8
	baz=2.7						
D28M	Stokes Point	1.72	333	P	Pg	13 54 59.8	-1.0
	baz=151,SNR=72						
D28M				Sb	Sg	13 55 24.4	+1.3
	baz=151						
H29M	Whitestone	1.76	205	P	Pn	13 54 58.6	+0.6
	baz=23,SNR=488						
H29M				Sb	Sn	13 55 22.9	+2.8
	baz=23						
E27K	Coleen River	1.93	283	P	Pn	13 55 01.4	+1.0
	baz=99,SNR=76						
E27K				S	Sb	13 55 26.1	-0.8
	baz=99						
D27M	Malcolm River	2.16	313	P	Pb	13 55 06.0	-0.9
	baz=130,SNR=26						
D27M				S	Sg	13 55 34.0	-3.4
	baz=130						
H31M	Peel River	2.20	156	P	Pn	13 55 04.7	+0.6
	baz=338,SNR=282						
H31M				S	Sn	13 55 31.7	+0.6
	baz=338						
G27K	Doyon Strip	2.22	245	P	Pn	13 55 05.5	+1.2
	baz=61,SNR=51						
G27K				S	Sn	13 55 32.6	+1.1
	baz=61						
H27K	Steamboat Moun	2.52	233	P	Pn	13 55 09.5	+1.1
	baz=49,SNR=48						
I29M	Ogilvie Camp,	2.57	197	Sb	Sb	13 55 46.1	+1.1
	baz=15						
I30M	Mount Dempster	2.61	178	P	Pn	13 55 10.1	+0.4
	baz=359,SNR=53						
I30M				S	Sn	13 55 42.1	+0.9
	baz=359						
I28M	Miner Creek	2.74	211	P	Pn	13 55 11.5	0.0
	baz=28,SNR=49						
I28M				S	Sn	13 55 45.4	+1.1
	baz=28						
F26K	Sheenjek River	2.89	271	P	Pn	13 55 14.8	+1.3
	baz=84,SNR=37						
F26K				S	Sn	13 55 49.3	+1.2
	baz=84						
G26K	Porcupine Rive	2.93	256	P	Pn	13 55 14.9	+1.0
	baz=70,SNR=27						
G26K				S	Sn	13 55 50.3	+1.5
	baz=70						
I27K	Kandik River	3.00	224	P	Pn	13 55 15.7	+0.7
	baz=40,SNR=50						
I27K				Sb	Sb	13 55 59.0	+1.4
	baz=40						
C27K	Jago River	3.18	308	P	Pn	13 55 20.1	+2.7
	baz=122,SNR=24						
J30M	Hart River	3.26	178	P	Pn	13 55 19.8	+1.1
	baz=359,SNR=94						
F25K	Christian Rive	3.47	270	P	Pn	13 55 22.6	+1.0
	baz=82,SNR=9.9						
I26K	Coal Creek Min	3.65	229	P	Pn	13 55 24.4	+0.5
	baz=44,SNR=19						
G25K	Bearman Lake	3.85	258	P	Pn	13 55 28.2	+1.5
	baz=70						
D25K	Kavik River	3.91	297	P	Pn	13 55 29.7	+2.3
	baz=108,SNR=18						
D25K				S	Sn	13 56 16.7	+3.6
	baz=108						
DAWY	Dawson	3.94	198	P	Pn	13 55 28.9	+0.9
	baz=16,SNR=55						
DAWY				S	Sn	13 56 14.2	+0.2
	baz=16						
H25L	Birch Creek	3.95	251	P	Pn	13 55 28.8	+0.8
	baz=63						
H25L				S	Sn	13 56 16.1	+2.1
	baz=63						
K29M	Barlow Dome	4.01	186	P	Pn	13 55 30.3	+1.3
	baz=5.3,SNR=60						
K29M				S	Sn	13 56 16.8	+1.0
	baz=5.3						
PRP	Porcupine Dome	4.25	241	P	Pn	13 55 33.3	+1.0
	baz=53						
PRP				S	Sn	13 56 22.3	+0.7
	baz=53						
MAYO	Mayo, Yukon	4.25	176	S	Sn	13 56 22.0	+0.5
	baz=357						
F24K	Squaw Lake	4.33	271	P	Pn	13 55 34.9	+1.6
	baz=81						
F24K				S	Sn	13 56 24.4	+0.8
	baz=81						
J26L	Joseph Creek	4.38	224	P	Pn	13 55 35.1	+1.1
	baz=38,SNR=24						
J26L				S	Sn	13 56 24.6	-0.1
	baz=38						
G24K	Hadweenzic Riv	4.38	260	P	Pn	13 55 35.1	+1.1
	baz=70						
G24K				S	Sn	13 56 25.6	+0.8
	baz=70						
K27K	Chicken	4.43	213	P	Pn	13 55 35.2	+0.6
	baz=28						
K27K				S	Sn	13 56 25.9	+0.1
	baz=28						
E24K	Your Creek	4.51	279	P	Pn	13 55 37.6	+1.9
	baz=88						
E24K				S	Sn	13 56 28.9	+1.1
	baz=88						
L29M	L29M	4.78	189	P	Pn	13 55 40.4	+1.0
	baz=7.3,SNR=18						
L29M				S	Sn	13 56 34.0	-0.5
	baz=7.3						
J25K	Salcha River,	4.80	232	P	Pn	13 55 40.5	+0.7
	baz=44						
C24K	Franklin Bluff	4.81	299	P	Pn	13 55 41.7	+1.9
	baz=108						
C36M	Paulatuk	4.83	66	P	Pn	13 55 40.8	+0.8
	baz=257,SNR=80						
H24K	Noodor Dome	4.89	251	P	Pn	13 55 41.9	+0.9
	baz=61						
SCRK	Sand Creek	4.91	222	P	Pn	13 55 41.9	+0.5
	baz=35						
TOLK	Toolik Lake Re	4.92	286	P	Pn	13 55 43.6	+2.2
	baz=94						
E23K	Chandalar	4.93	279	P	Pn	13 55 43.6	+2.1
	baz=87						
POKR	Poker Plat Res	5.13	243	P	Pn	13 55 45.8	+1.5
	baz=53						
ILAR	Eielson Array	5.17	239	Pn	Pn	13 55 45.7	+1.0
	0.5nm,0.3s,baz=45,slow=13,SNR=33						
ILAR				Sn	Sn	13 56 43.1	-0.9
	0.4nm,0.3s,baz=45,slow=25,SNR=4.7						
	1.5nm,0.5s						
L27K	Beaver Creek,	5.26	207	P	Pn	13 55 47.7	+1.6
	baz=22,SNR=18						
COLD	Coldfoot	5.27	270	P	Pn	13 55 48.2	+2.0
	baz=77						
RIDG	Independent Ri	5.33	224	P	Pn	13 55 47.8	+0.8
	baz=36						
G23K	Bananza Creek	5.34	264	P	Pn	13 55 49.0	+1.8
	baz=72						
D23K	Nanushuk River	5.34	289	P	Pn	13 55 49.6	+2.5
	baz=96						
COLA	College	5.42	242	P	Pn	13 55 50.2	+2.0
	baz=52						
M29M	Somme Creek	5.46	189	P	Pn	13 55 49.8	+0.9
	baz=7.7,SNR=18						
C23K	Itkillik River	5.48	298	P	Pn	13 55 51.0	+2.0
	baz=105						
H23K	Yukon River	5.50	255	P	Pn	13 55 50.9	+1.5
	baz=63						
K24K	Donnelly Dome	5.53	228	P	Pn	13 55 50.7	+0.9
	baz=39						
A36M	Sachs Harbour	5.71	38	P	Pn	13 55 54.8	+2.7
	baz=228,SNR=26						
E22K	Anaktuvuk Pass	5.75	280	P	Pn	13 55 55.3	+2.5
	baz=86						
I23K	Minto, Yukon-K	5.78	248	P	Pn	13 55 54.0	+0.9
	baz=57						
M27K	Edge Creek, AK	5.92	205	P	Pn	13 55 56.2	+1.0
	baz=20						
F22K	John River	5.96	274	P	Pn	13 55 57.8	+2.1
	baz=80						
D22K	Ayikyak River	6.06	288	P	Pn	13 55 58.9	+1.9
	baz=93						
PAX	Paxson	6.12	222	P	Pn	13 55 59.1	+1.2
	baz=34						
H22K	Ishtalitna Cre	6.15	259	P	Pn	13 55 59.8	+1.5
	baz=65						
YUK3	Moose Creek	6.29	197	P	Pn	13 56 00.8	+0.4
	baz=14						
MLY	Manley	6.34	250	P	Pn	13 56 02.1	+1.3
	baz=58						
N31M	Braeburn, Yuko	6.37	177	P	Pn	13 56 01.9	+0.7
	baz=357						
N30M	Aishikik Lake	6.39	182	P	Pn	13 56 02.4	+0.8
	baz=1.9,SNR=8.5						
F21K	Alatna River	6.52	273	P	Pn	13 56 05.2	+2.0
	baz=77						
E21K	Killik River	6.53	284	P	Pn	13 56 05.4	+1.9
	baz=88						
MCK	McKinley	6.53	237	P	Pn	13 56 04.9	+1.4
	baz=46						
HARP	HAARP	6.54	218	P	Pn	13 56 05.1	+1.6
	baz=30						
B22K	Teshekpuk Lake	6.54	300	P	Pn	13 56 05.4	+1.9
	baz=105						
DHY	Denali Highway	6.55	229	P	Pn	13 56 04.3	+0.4
	baz=39						
YUK4	Talbot Arm	6.56	189	P	Pn	13 56 03.9	-0.1
	baz=6.8						
YUK8	Steele Glacier	6.71	193	P	Pn	13 56 06.4	+0.3
	baz=11						
I21K	Tanana	6.71	254	P	Pn	13 56 07.1	+1.3
	baz=60						
H21K	Melozitna Rive	6.79	259	P	Pn	13 56 08.9	+1.9
	baz=64						
B21K	Ikpikpuk River	6.81	294	P	Pn	13 56 09.8	+2.6
	baz=97						
C21K	Knifeblade Rid	6.83	290	P	Pn	13 56 09.3	+1.8
	baz=93						
N32M	Quiet Lake	6.86	166	P	Pn	13 56 09.2	+1.2
	baz=349						
YUK6	Outpost Mounta	6.95	187	P	Pn	13 56 10.7	+1.3
	baz=5.7						
BPAW	Bear Paw Mtn.	6.97	244	P	Pn	13 56 11.5	+2.0
	baz=51						
YKA	Yellowknife Ar	10.62	110	Pn	Pn	13 56 58.2	-1.3
	0.2nm,0.3s,baz=298,slow=14,SNR=8.6						
YKA				Sn	Sn	13 58 51.3	-6.7
	0.3nm,0.3s,baz=307,slow=23,SNR=4.9						
	0.2nm,0.4s						
ULM	Lac du Bonnet	26.60	111	P	P	14 00 06.4	+1.1
	1.0nm,0.4s,baz=333,slow=6.8,SNR=1.6						
	1.0nm,0.4s						

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*BUL **09** 14:10:10.8±1.3, 26.°07S×29.°69E, h10^{km}, MD2.9*
PRE 09 14:10:01.1±0.9**, 26.°27S×29.°28E, h0^{km}, ML2.2,**
Suspected explosion, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRLN	Carolina, Mapu	0.72	68	eP	Pg	14 10 14.7	-0.2
CRLN				eS	Sg	14 10 25.4	+1.2
CRLN				IAML		14 10 36.1	
	comp=Z,40nm,0.6s						
HRAO	HartRAO	1.48	284	eP	Pn	14 10 29.4	+0.2
HRAO				eS	Sn	14 10 49.9	+0.6
HRAO				IAML		14 10 51.7	
	comp=Z,29nm,0.2s						
WDLM	Western Deep L	1.68	264	eP	Pn	14 10 32.4	+0.5
WDLM				eS	Sg	14 10 55.8	+0.8
WDLM				IAML		14 10 57.7	
	comp=Z,49nm,0.4s						
PRYS	Parys	1.84	249	eP	Pn	14 10 34.6	+0.4
PRYS				eS	Sn	14 10 58.6	+0.4
PRYS				IAML		14 11 02.6	
	comp=Z,19nm,0.4s						
PILG	Pilgrimsrest,	1.85	44	eP	Pb	14 10 35.5	-0.5
PILG				eS	Sb	14 10 59.5	-0.2
PILG				IAML		14 11 05.7	
	comp=Z,23nm,0.5s						
SNKL	Senekal, Frees	2.41	214	eP	Pn	14 10 42.6	+0.6
SNKL				eS	Sn	14 11 13.3	+1.0
SNKL				IAML		14 11 19.1	
	comp=Z,15nm,0.4s						
POGA	Pongola	2.42	117	eP	Pn	14 10 42.4	+0.4
POGA				eS	Sn	14 11 12.8	+0.5
POGA				IAML		14 11 16.7	
	comp=Z,30nm,0.4s						
LEPH	Lephalale, Lim	2.75	330	eP	Pn	14 10 47.6	+1.1
LEPH				eS	Sn	14 11 20.5	0.0
LEPH				IAML		14 11 33.9	
	comp=Z,19nm,0.5s						
MOPA	Mopani	3.34	36	eP	Pn	14 10 54.6	-0.1
MOPA				eS	Sn	14 11 35.0	-0.1
MOPA				IAML		14 11 51.2	
	comp=Z,21nm,0.7s						
MOPA	Mopani	3.34	36	i P	Pn	14 10 56.6	+2.0
MOPA				i S	Sn	14 11 33.9	-1.2
MOPA	Mopani	3.34	36	i P	Pn	14 10 56.6	+2.0
MOPA				i S	Sn	14 11 33.0	-2.1
LBTB	Lobatse	3.55	290	eP	Pn	14 10 59.1	+1.5
LBTB				eS	Sn	14 11 41.1	+0.7
LBTB				IAML		14 11 57.4	
	comp=Z,11nm,0.3s						
LBTB	Lobatse	3.55	290	i P	Pg	14 11 08.0	-1.2
LBTB				i S	Sb	14 11 50.7	+2.1
LBTB	Lobatse	3.55	290	i P	Pg	14 11 08.7	-0.5
LBTB				i S	Sg	14 11 52.8	-2.4
MUSN	Musina, Limpop	3.99	8	i P	Pb	14 11 08.4	-4.0
MUSN				i S	Sn	14 11 51.6	+0.4
MUSN	Musina, Limpop	3.99	8	i P	Pb	14 11 08.9	-3.5
MUSN				i S	Sn	14 11 51.1	-0.1
BOSA	Boshof	4.28	236	eP	Pn	14 11 08.4	+0.8
BOSA				eS	Sn	14 11 58.0	-0.3
BOSA				IAML		14 12 20.3	
	comp=Z,5.6nm,0.5s						
BOSA	Boshof	4.28	236	i P	Pb	14 11 19.4	+2.2
BOSA				i S	Sb	14 12 10.5	+1.1
BOSA	Boshof	4.28	236	i P	Pg	14 11 21.5	-1.6
BOSA				i S	Sb	14 12 13.0	+3.5
BLWY	Bulawayo	6.13	354	i P	Pn	14 11 38.6	+5.5
BLWY				i S	Sn	14 12 43.8	-0.2

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*SOME **09** 14:17:18.7, 40.°90N×83.°42E, h15^{km}*
*NNC **09** 14:17:23.7±1.9, 41.°26N×83.°48E, h0^{km}, mb3.8, mpv3.5,*
Error ellipse: s-maj=13.4km s-min=8.8km az=154.0
ISC 09 14:17:26.8±2.5**, 41.°4N**±0.°1×**83.°43E**±0.°09**, h10^{km}, n22,**
σ**2.^{s}00**/30**, 12C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	3.04	312	eP	Pb	14 18 20.6	-0.4
KTMS				eS	Sg	14 19 05.2	+0.8
SHLS	Shalkode	3.41	302	Pg	Pn	14 18 21.7	+1.6
	18nm,0.2s						
SHLS				Lg	Lg	14 19 08.4	
	216nm,0.4s						
SHLS	Shalkode	3.41	302	eP	Pn	14 18 21.7	+1.6
	18nm,0.2s						
SHLS				eS	Sb	14 19 07.3	-1.6
	216nm,0.4s						
PDGK	Podgornoye	3.48	304	⇓Pn	Pn	14 18 21.7	+0.6
	2.7nm,0.5s						
PDGK				⇓Pg	Pg	14 18 33.2	-0.2
	18nm,0.8s						
PDGK				⇑Sn	Sn	14 19 05.9	+3.5
	25nm,0.4s						
PDGK				⇑Lg	Lg	14 19 18.2	
	63nm,0.5s						
UZB	Uzynbulak	3.69	299	Pg	Pb	14 18 31.9	-0.3
	5.1nm,0.6s						
UZB				Lg	Lg	14 19 24.2	
	68nm,0.5s						
DJR	Jarkent	3.94	318	Pg	Pb	14 18 37.2	+0.8
	9.9nm,0.6s						
DJR				Lg	Lg	14 19 34.6	
	18nm,0.4s						
DJR	Jarkent	3.94	318	eP	Pb	14 18 37.4	+1.0
	9.9nm,0.6s						
DJR				eS	Sg	14 19 34.6	+1.3
	18nm,0.4s						
KPKS	Kokpek	4.06	302	Pg	Pb	14 18 38.5	+0.1
	3.7nm,0.6s						
KPKS				Lg	Lg	14 19 36.1	
	55nm,0.5s						
KNOS	Konyrlen	4.28	315	Pg	Pg	14 18 45.4	-3.3
	9.5nm,0.6s						
KNOS				Lg	Lg	14 19 48.3	
	17nm,0.4s						
BLB	Baldybastay	4.51	308	Pg	Pb	14 18 46.9	+0.7
	29nm,0.5s						
BLB				Lg	Lg	14 19 51.2	
	28nm,0.6s						
MDOK	Medeo	5.04	292	Pg	Pb	14 18 56.2	+1.1
	1.6nm,0.3s						
MDOK				Lg	Lg	14 20 05.9	
	12nm,0.6s						
IZV	Izvestkoviy	5.31	290	Pg	Pb	14 19 00.3	+0.6
	2.5nm,0.3s						
IZV				Lg	Lg	14 20 13.9	
	41nm,0.6s						
IZV	Izvestkoviy	5.31	290	eP	Pb	14 19 00.3	+0.6
	3.1nm,0.2s						
IZV				eS	Sg	14 20 13.9	-3.3
	41nm,0.6s						
MK31	Makanchi Array	5.42	352	Pn	Pn	14 18 47.1	-0.5
	0.4nm,0.3s,baz=139,slow=14,SNR=16						
MK31				⇑Pg	Pg	14 19 06.9	-3.7
	1.9nm,0.5s,baz=171,slow=15,SNR=12						
MK31				⇑Sn	Sn	14 19 53.5	+3.4
	5.0nm,0.6s,baz=176,slow=22,SNR=4.4						
MK31				⇑Lg	Lg	14 20 23.0	
	13nm,0.6s,baz=176,slow=22,SNR=4.4						
MAKZ	Makanchi	5.47	349	⇑Pn	Pn	14 18 48.6	+0.2
	3.3nm,1.2s						
MAKZ				⇓Pg	Pg	14 19 09.7	-1.9
	2.2nm,0.6s						
MAKZ				⇑Sn	Sn	14 19 54.8	+3.4
	5.5nm,0.6s						
MAKZ				⇓Lg	Lg	14 20 25.3	
	7.2nm,0.6s						
KTBS	Karatobe	5.48	297	Pg	Pb	14 19 04.1	+1.5
	2.7nm,0.6s						
KTBS				Lg	Lg	14 20 21.0	
	23nm,0.4s						
KST	Kastek	5.77	289	eP	Pb	14 19 09.3	+1.7
	3.6nm,0.3s						
KST				eS	Sg	14 20 28.7	-3.4
	25nm,0.6s						
TKM2	Tokmak 2	6.01	287	⇑Pn	Pn	14 18 56.6	+0.7
	3.9nm,0.7s						
TKM2				⇑Sn	Sn	14 20 06.2	+1.4
	7.4nm,0.5s						
TKM2				⇑Lg	Lg	14 20 36.0	
	40nm,1.0s						
AAK	Ala-Archa	6.76	283	⇓Lg	Lg	14 21 02.0	
	3.2nm,0.7s						
KK31	Karatay Array	9.72	284	⇑Lg	Lg	14 22 36.9	
	1.9nm,0.7s,baz=94,slow=28,SNR=4.0						
KURBB	Kurchatov Arra	9.80	341	⇓Lg	Lg	14 22 39.2	
	12nm,0.8s						
KURK	Kurchatov	9.86	342	⇑Lg	Lg	14 22 41.5	
	6.0nm,1.2s						

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*IDC **09** 14:27:13.6±0.7, 2.°76S×119.°71E, h0^{km}, mb4.0/13,*
mbtmp4.0/15, ML4.0/2, MS3.7/40, Error ellipse:
s-maj=35.3km s-min=12.7km az=64.0
*DJA **09** 14:27:14.9±0.2, 3°S±2°×12°0E±°, h10^{km}, M4.6/20,*
mb4.6/20, mB5.1/7, MLv4.7/20, Mw(mB)4.4/7
*GCMT **09** 14:27:16.0±0.3, 2.°84S±0.°02×119.°44E±0.°03, h15^{km}±1^{km},*
MW4.8/76, Moment Tensor Solution. s14,c16; s76,c103;
Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.48±.10;
M$_{\theta\theta}$-0.33±.07; M$_{\phi\phi}$0.80±.09; M$_{r\theta}$0.82±.33; M$_{\theta\phi}$1.40±.06;

M$_{\phi r}$0.11±.25; Best double couple: M$_0$1.75800×10^{16} NP1:ϕ_s351.00000°,δ58.00000°,λ-167.00000°. NP2: ϕ_s255.00000°,δ79.00000°,λ-32.00000°. Principal axes: T 1.8860, Plg14.0000°, Azm307.0000°; N -0.2560, Plg56.0000°, Azm58.0000°; P -1.6300, Plg30.0000°, Azm209.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

*NEIC **09** 14:27:18.0±1.6, 2.°96S±0.°04×119.°43E±0.°07, h30^{km}±7^{km}, mb4.5/11 Error ellipse: s-maj=10.2km s-min=5.7km az=77.0*

ISC 09 14:27:15.7±0.5**, 2.°93S**±0.°05×**119.°55E**±0.°06**, h10^{km}, n99, σ1.^{s}34**/65**, mb4.3**/22**, MS3.8**/39**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTSI	Tana Toraja	0.29	113	P	Pg	14 27 21.4	-0.1
SPSI	Sidrap Palu	1.05	168	P	Pg	14 27 34.3	-1.6
BNSI	Bone	1.56	159	P	Pn	14 27 43.8	+0.3
PCI	Palu	2.03	8	P	Pn	14 27 49.1	-0.9
KAPI	Kappang	2.08	174		Pn	14 27 50.4	-0.3
KAPI	Kappang	2.08	174	Pn	Pn	14 27 50.7	+0.1
	149nm,0.3s,baz=329,slow=11,SNR=138						
KAPI				Sn	Sn	14 28 18.0	+1.4
	142nm,0.3s,baz=311,slow=19,SNR=8.5						
	359nm,0.3s						
APSI	Ampana	2.90	46	P	Pn	14 28 02.2	+0.2
BKB	Balikpapan	3.13	302		Pn	14 28 04.4	-0.8
BKB	Balikpapan	3.13	302	P	Pn	14 28 04.5	-0.6
MPSI	Mapaga	3.27	6	P	Pn	14 28 06.1	-0.9
BSSI	Bau Bau, Buton	3.32	164	P	Pn	14 28 08.3	+0.5
SMKI	Samarinda	3.40	316	P	Pn	14 28 07.4	-1.5
LUWI	Luwuk	3.73	60		Pn	14 28 14.8	+1.5
LUWI	Luwuk	3.73	60	P	Pn	14 28 13.2	-0.1
BBSI	Bau Bau	3.94	130	P	Pn	14 28 16.8	+0.6
MRSI	Marisa	4.14	35	P	Pn	14 28 17.5	-1.6
TOLI2	Tolitoli	4.20	17		Pn	14 28 20.9	+1.1
KMSI	Cibinong	5.63	52	P	Pn	14 28 39.4	-0.2
PLAI	Plampang	6.12	197	P	Pn	14 28 45.3	-0.9
	0.4nm46nm,1.3s						
TWSI	Taliwang, Sumb	6.35	205	P	Pn	14 28 48.3	-1.1
	0.3nm30nm,0.8s						
SANI	Sanana	6.49	82	P	Pn	14 28 50.6	-0.7
WBSI	Waikabubak, Su	6.67	181	P	Pn	14 28 53.5	-0.3
SRBI	Singaraja	6.70	220	P	Pn	14 28 53.1	-1.1
	0.5nm2μm71nm,0.5s						
KMMI	Kalianget	6.90	233	P	Pn	14 28 56.1	-0.9
	60nm,1.7s						
JAGI	Jajag, Banyuwa	7.69	224		Pn	14 29 06.2	-1.7
JAGI	Jajag, Banyuwa	7.69	224	P	Pn	14 29 06.0	-1.8
	0.2nm51nm,0.7s						
GMJI	Gumukmas	8.07	229	P	Pn	14 29 11.6	-1.4
	28nm,0.9s						
MYLDM	Lahad Datu	8.13	353		Pn	14 29 14.3	+0.4
SOEI	Soe	8.24	146	Pn	Pn	14 29 16.6	+1.1
BATI	Baumata	8.30	151	LR	LR	14 32 47.4	
	comp=Z,794nm,21.2s,baz=256,slow=40						
STKI	Sintang	8.60	290	P	Pn	14 29 17.9	-2.5
NGJI	Ngawi	9.18	241	P	Pn	14 29 27.2	-1.1
DAV	Davao City (W)	11.62	31	LR	LR	14 35 09.0	
	comp=Z,697nm,19.3s,baz=222,slow=42						
MDSI	Maura Dua	15.42	264	P	Pn	14 30 54.5	+1.0
	24nm,1.1s						
KNRA	Kununurra	15.58	145	Pn	Pn	14 30 53.8	-1.7
FITZ	Fitzroy Crossi	16.21	159	Pn	Pn	14 31 05.7	+2.0
	0.1nm,0.3s,baz=338,slow=8.1,SNR=6.0						
FITZ				LR	LR	14 39 12.3	
	comp=Z,550nm,20.0s,baz=338,slow=44						
	1.4nm,0.8s						
PPI	Padang Panjang	19.30	277	P	P	14 31 40.4	-0.6
	23nm,0.9s						
MNSI	Mandailing Nat	20.30	280	P	P	14 31 51.9	-0.1
	27nm,0.7s						
SISI	Saibi	20.51	274	P	P	14 31 52.3	-1.9
	61nm,0.7s						
KULM	Kulim	20.57	293	P	P	14 31 53.2	-1.7
KULM				IAmb	IAmb	14 31 57.2	
	comp=Z,37nm,1.2s						
JAY	Jayapura	21.13	89	LR	LR	14 41 59.9	
	comp=Z,242nm,21.6s,baz=272,slow=42						
RPSI	Rantau Prapat	21.36	285	P	P	14 32 02.1	-1.4
RPSI				IAmb	IAmb	14 32 09.5	
	comp=Z,65nm,1.2s						
PSI	Prapat	21.39	285	P	P	14 32 02.6	-1.2
	comp=Z,14nm,0.9s,baz=104,slow=10,SNR=17						
PSI				LR	LR	14 40 32.2	
	comp=Z,361nm,18.6s,baz=117,slow=37						
	comp=Z,14nm,0.9s						
WB0	Warramunga Arr	22.14	140	P	P	14 32 10.1	-1.6
WB0				IAmb	IAmb	14 32 44.3	
	comp=Z,17nm,1.1s						
WRA	Warramunga Arr	22.23	141	P	P	14 32 11.7	-1.1
	comp=Z,4.6nm,1.0s,baz=312,slow=12,SNR=14						
WRA				LR	LR	14 42 02.9	
	comp=Z,305nm,18.1s,baz=349,slow=40						
	comp=Z,4.6nm,1.0s						
WRAB	Tennant Creek	22.23	141	P	P	14 32 11.7	-1.1
WRAB				IAmb	IAmb	14 32 26.1	
	comp=Z,12nm,0.9s						
WR8	Warramunga Arr	22.34	140	P	P	14 32 12.9	-1.0
WR8				IAmb	IAmb	14 32 22.6	
	comp=Z,15nm,1.1s						
QIZ	Qiongzhong	23.82	337	P	P	14 32 28.3	-0.8
QIZ				S	S	14 36 48.9	+3.9
QIZ				LR	LR		
	comp=E,170nm,11.7s						
QIZ				LR	LR		
	comp=Z,220nm,15.1s						
AS31	Alice Springs	24.85	147	P	P	14 32 38.0	-0.6
ASAR	Alice Springs	24.85	147	P	P	14 32 37.9	-0.7
ASAR	Alice Springs	24.85	147	P	P	14 32 39.0	+0.4
	comp=Z,1.8nm,0.8s,baz=318,slow=5.4,SNR=16						
ASAR				PcP	PcP	14 36 13.3	-1.5
	comp=Z,0.7nm,0.7s,baz=335,slow=2.0,SNR=5.1						
ASAR				LR	LR	14 44 42.4	
	comp=Z,203nm,18.2s,baz=274,slow=42						
	comp=Z,1.8nm,0.8s						
PMG	Port Moresby	28.18	104	P	P	14 33 07.6	-1.1
PMG				IAmb	IAmb	14 33 30.9	
	comp=Z,39nm,1.1s						
CMAR	Chiang Mai Arr	29.39	317	P	P	14 33 19.8	+0.4
	comp=Z,1.2nm,0.9s,baz=130,slow=5.8,SNR=5.1						
CMAR				LR	LR	14 47 23.9	
	comp=Z,201nm,19.2s,baz=125,slow=41						
	comp=Z,1.2nm,0.9s						
NWAO	Narrogin (SRO)	29.92	184	LR	LR	14 45 37.9	
	comp=Z,257nm,20.4s,baz=285,slow=37						
GUMO	Guam	30.01	56	LR	LR	14 45 49.3	
	comp=Z,32nm,18.1s,baz=229,slow=38						
JOW	Kunigami	30.77	15	P	P	14 33 30.4	-1.1
BBOO	Buckleboo	33.51	154	P	P	14 33 55.5	0.0
STKA	Stephens Creek	35.48	147	P	P	14 34 12.6	-0.1
	comp=Z,1.2nm,0.2s,baz=304,slow=9.4,SNR=1.6						
STKA				LR	LR	14 50 30.1	
	comp=Z,143nm,21.6s,baz=334,slow=39						
	comp=Z,1.2nm,0.2s						
BRDH	Bariadhala	37.28	314	LR	LR	14 52 49.1	
	comp=Z,223nm,18.7s,baz=126,slow=41						
JNU	Nakatsue	37.43	16	LR	LR	14 49 39.5	
	comp=Z,59nm,21.3s,baz=212,slow=36						
KSRS	Korea Array	40.93	10	P	P	14 34 54.5	-3.9
	comp=Z,0.3nm,0.7s,baz=201,slow=9.1,SNR=2.0						
	comp=Z,0.3nm,0.7s						
LZH	Lanzhou	41.50	341	eP	P	14 35 17.2	+14
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
MJAR	Matsushiro Arr	42.95	22	LR	LR	14 50 26.4	
	comp=Z,68nm,21.0s,baz=212,slow=33						
GTA	Gaotai	45.88	339	eP	P	14 35 40.3	+1.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				LR	LR		
	comp=N,130nm,16.4s						
GTA				LR	LR		
	comp=E,130nm,16.4s						
GTA				LR	LR		
	comp=Z,160nm,15.3s						
XLT	XiLinHaoTe	46.73	357	eP	P	14 35 49.6	+4.6
XLT				sP	sP	14 35 56.2	+6.0
XLT				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ASAJ	Asahikawa	51.20	21	LR	LR	14 55 37.0	
	comp=Z,40nm,21.2s,baz=208,slow=33						
SONM	Songino Array	51.85	349	P	P	14 36 23.7	-0.6
SONM				IAmb	IAmb	14 36 31.5	
	comp=Z,2.4nm,0.8s						
SONM	Songino Array	51.85	349	P	P	14 36 23.2	-1.1
	comp=Z,2.8nm,0.7s,baz=172,slow=8.6,SNR=9.8						
	comp=Z,2.8nm,0.7s						
KLR	Kul'dur	53.02	10	LR	LR	15 01 20.0	
	comp=Z,46nm,18.7s,baz=198,slow=39						
KSH	Kashi	58.17	321	P	P	14 37 12.3	+2.2
KSH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MKAR	Makanchi Array	59.39	331	P	P	14 37 17.3	-1.1
MKAR	Makanchi Array	59.39	331	P	P	14 37 17.7	-0.7
	comp=Z,2.7nm,0.6s,baz=128,slow=7.6,SNR=22						
MKAR				LR	LR	15 05 48.1	
	comp=Z,55nm,21.7s,baz=139,slow=39						
	comp=Z,2.7nm,0.6s						
AAK	Ala-Archa	60.90	323	LR	LR	15 08 08.9	
	comp=Z,68nm,20.4s,baz=178,slow=40						
URZ	Urewera	63.06	132	LR	LR	15 05 32.8	
	comp=Z,119nm,18.5s,baz=7.0,slow=36						
ZALV	Zalesovo Beam	63.63	338	P	P	14 37 45.2	-1.6
	comp=Z,1.1nm,0.6s,baz=142,slow=7.2,SNR=4.7						
ZALV				LR	LR	15 08 55.6	
	comp=Z,39nm,19.2s,baz=155,slow=39						
	comp=Z,1.1nm,0.6s						
KURBB	Kurchatov Arra	63.85	332	P	P	14 37 47.5	-0.8
	comp=Z,1.1nm,0.7s,baz=134,slow=6.0,SNR=8.4						
	comp=Z,1.1nm,0.7s						
PETK	Petropavlovsk-	64.34	24	LR	LR	15 05 41.2	
	comp=Z,16nm,20.4s,baz=197,slow=36						
YAK	Yakutsk	65.25	5	LR	LR	15 08 44.0	
	comp=Z,35nm,19.6s,baz=192,slow=38						
MA2	Magadan	66.99	17	LR	LR	15 08 35.5	
	comp=Z,25nm,20.3s,baz=227,slow=37						
BVAR	Borovoye Array	69.27	331	P	P	14 38 21.9	-1.1
	comp=Z,0.4nm,0.6s,baz=128,slow=9.6,SNR=4.5						
BVAR				LR	LR	15 12 17.6	
	comp=Z,59nm,21.4s,baz=119,slow=39						
	comp=Z,0.4nm,0.6s						
SHEM	Shemya Is, Ala	71.82	31	LR	LR	15 09 43.6	
	comp=Z,27nm,19.9s,baz=124,slow=36						
ABKAR	Akbulak array	72.98	324	P	P	14 38 44.0	-1.5
AKTO	Aktyubinsk	74.61	324	LR	LR	15 16 12.2	
	comp=Z,56nm,21.7s,baz=280,slow=39						
TIXI	Tiksi	74.69	3	LR	LR	15 13 14.7	
	comp=Z,51nm,21.4s,baz=208,slow=37						
ARTI	Arti	76.96	330	LR	LR	15 14 44.7	
	comp=Z,45nm,21.6s,baz=152,slow=37						
VNDA	Vanda	77.86	171	P	P	14 39 13.4	+0.4
	comp=Z,0.3nm,0.5s,baz=304,slow=2.3,SNR=3.5						
	comp=Z,0.3nm,0.5s						
GNI	Garni	80.33	311	LR	LR	15 21 37.1	
	comp=Z,25nm,20.4s,baz=104,slow=41						
BELG	Belogornoye	81.39	324	LR	LR	15 20 48.2	
	comp=Z,46nm,19.0s,baz=78,slow=40						
ASF	Jabal al Asfar	85.33	302	LR	LR	15 23 22.8	
	comp=Z,23nm,18.0s,baz=144,slow=40						
MMAI	Mount Meron Ar	86.67	303	LR	LR	15 24 12.1	
	comp=Z,36nm,18.7s,baz=105,slow=39						
EIL	Elat	86.75	300	LR	LR	15 24 51.6	
	comp=Z,42nm,18.7s,baz=92,slow=40						
QSPA	South Pole Qui	87.02	180	P	P	14 40 03.4	+2.1
	comp=Z,2.1nm,1.1s,baz=341,slow=7.4,SNR=2.6						
	comp=Z,2.1nm,1.1s						
KDAK	Kodiak Island	91.32	32	LR	LR	15 17 37.1	
	comp=Z,28nm,20.6s,baz=239,slow=33						
BOSA	Boshof	92.38	241	LR	LR	15 15 59.1	
	comp=Z,84nm,21.5s,baz=155,slow=32						
AKASG	Malin Array Be	92.46	320	LR	LR	15 28 19.0	
	comp=Z,29nm,18.8s,baz=58,slow=40						
FINES	FINESS Array B	94.22	331	LR	LR	15 28 02.9	
	comp=Z,22nm,18.0s,baz=82,slow=39						
MLR	Muntele Rosu	94.61	315	LR	LR	15 33 20.2	
	comp=Z,30nm,18.4s,baz=86,slow=42						
SPITS	Spitsbergen Ar	95.55	348	LR	LR	15 29 08.6	
	comp=Z,35nm,19.9s,baz=59,slow=39						
INK	Inuvik	98.93	21	LR	LR	15 29 17.1	
	comp=Z,15nm,19.5s,baz=268,slow=38						

*KRNET **09** 14:33:07.3±0.1, 42.°54N×80.°79E, h19^{km}, mb3.1*

*SOME **09** 14:33:07.0, 42.°58N×80.°90E, h20^{km}*

*NNC **09** 14:33:08.0±1.1, 42.°64N×80.°80E, h0^{km}, mb3.0, mpv3.2, Error ellipse: s-maj=7.2km s-min=6.3km az=179.0*

ISC 09 14:33:10.2±2.3**, 42.°71N**±0.°07×**80.°62E**±0.°07**, h0^{km}**±12^{km}**, n23, σ1.^{s}58**/39**, 7C-5D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	0.76	345	P	Pg	14 33 25.0	+0.2
KTMS				S	Sn	14 33 38.2	-2.5
KTMS	Ketmen	0.76	345	eP	Pg	14 33 25.0	+0.2
KTMS				eS	Sn	14 33 38.2	-2.5
SHLS	Shalkode	0.96	298	P	Pg	14 33 24.8	-3.8
	14nm,0.2s						
SHLS				S	Sg	14 33 37.5	-3.5
	77nm,0.4s						
SHLS	Shalkode	0.96	298	eP	Pg	14 33 24.7	-4.0
SHLS				eS	Sg	14 33 37.6	-3.5
SHLS	Shalkode	0.96	298	eP	Pg	14 33 24.6	-4.0
	14nm,0.2s						
SHLS				eS	Sg	14 33 37.6	-3.5
	77nm,0.4s						
PDGK	Podgornoye	1.03	307	⇑P	Pg	14 33 30.1	+0.1
	1.2nm,0.4s						
PDGK				⇑S	Sn	14 33 46.3	-1.0
	7.3nm,0.5s						
UZB	Uzynbulak	1.25	291	P	Pn	14 33 33.8	-1.4
	5.6nm,0.1s						
UZB				S	Sn	14 33 53.2	+0.4
	9.3nm,0.1s						
UZB	Uzynbulak	1.25	291	eP	Pn	14 33 33.8	-1.4
UZB				eS	Sn	14 33 53.2	+0.4
KPKS	Kokpek	1.61	299	P	Pn	14 33 40.2	+0.3
	9.4nm,0.3s						
KPKS				S	Sg	14 34 03.6	+1.7
	12nm,0.2s						
KPKS	Kokpek	1.61	299	eP	Pn	14 33 40.2	+0.3
KPKS				eS	Sg	14 34 04.3	+2.4
PRZ	Przheval'sk	1.66	263	⇓eP	Pn	14 33 40.0	-0.7
PRZ				⇓eS	Sb	14 34 04.0	+0.8
SATY	Saty	1.67	283	P	Pn	14 33 41.1	+0.3
	11nm,0.2s						
SATY				S	Sg	14 34 05.8	+2.1
	22nm,0.1s						
SATY	Saty	1.67	283	eP	Pn	14 33 41.1	+0.3
SATY				eS	Sg	14 34 05.8	+2.1
DJR	Jarkent	1.73	340	Pg	Pn	14 33 42.1	+0.5
	1.1nm,0.1s						
DJR				Lg	Lg	14 34 08.1	
	15nm,0.2s						
DJR	Jarkent	1.73	340	eP	Pn	14 33 42.3	+0.7
	1.1nm,0.1s						
DJR				eS	Sg	14 34 08.1	+2.3
	15nm,0.2s						
KNOS	Konyrlen	1.95	328	Pg	Pn	14 33 45.9	+1.2
	1.8nm,0.2s						
KNOS				Lg	Lg	14 34 15.0	
	12nm,0.2s						
KURS	Kuram	1.96	294	eP	Pn	14 33 45.8	+1.1
KURS				eS	Sg	14 34 14.1	+1.0
BLB	Baldybastay	2.09	312	Pg	Pn	14 33 47.9	+1.3
	12nm,0.1s						
BLB				Lg	Lg	14 34 17.9	
	10nm,0.2s						
KDJ	Kajisay	2.61	258	⇑eP	Pn	14 33 53.3	-0.6
KDJ				⇑eS	Sn	14 34 26.8	+0.4
KOTS	Kotyrbulak	2.63	283	eP	Pb	14 33 57.9	-0.4
	3.1nm,0.2s						
KOTS				eS	Sg	14 34 34.5	-0.2
	12nm,0.2s						
BOOM	Boomskoye usch	3.46	268	⇓eP	Pn	14 34 05.8	+0.2
BOOM				⇓eS	Sn	14 34 48.3	+0.9
NRN	Naryn	3.67	251	⇑eP	Pn	14 34 08.1	-0.4
NRN				⇑eS	Sn	14 34 52.7	0.0
MK31	Makanchi Array	4.25	16	⇑Pg	Pb	14 34 25.7	-0.2
	0.5nm,0.6s,baz=206,slow=14,SNR=2.9						
MK31				⇓Lg	Lg	14 35 21.0	
	0.5nm,0.5s						

*IDC **09** 14:36:26.9±2.2, 5.°58S×151.°47E, h0^{km}, mb3.5/4, mbtmp3.6/5, ML1.6/1, Error ellipse: s-maj=116.3km s-min=27.7km az=129.0*

ISC 09 14:36:34.2±2.2**, 5.°7S**±0.°7×**151.°4E**±0.°8**, h57^{km}, n6, σ0.^{s}94**/7**, mb3.3**/4**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	5.58	229	Pn	Pn	14 37 53.6	-1.1
	1.0nm,0.3s,baz=215,slow=16,SNR=1.6						
PMG				Sn	Sn	14 38 57.5	-0.1
	1.4nm,0.3s,baz=289,slow=19,SNR=2.5						
	14nm,0.8s						
WRA	Warramunga Arr	21.80	228	P	P	14 41 22.0	+0.3
	0.3nm,0.4s,baz=53,slow=9.9,SNR=9.3						
	0.3nm,0.4s						
ASAR	Alice Springs	24.54	222	P	P	14 41 49.8	+1.0
	0.6nm,0.9s,baz=52,slow=9.2,SNR=6.1						
	0.6nm,0.9s						
FITZ	Fitzroy Crossi	28.00	242	P	P	14 42 21.0	+1.0
	0.5nm,0.3s,baz=56,slow=11,SNR=7.0						
	0.5nm,0.3s						
ILAR	Eielson Array	83.54	22	P	P	14 48 55.5	-0.3
	0.5nm,0.9s,baz=246,slow=5.2,SNR=3.2						
	0.5nm,0.9s						
TORD	Torodi Ar. Bea	149.26	286	PKPbc	PKiKP	14 56 18.5	-0.3
	0.3nm,0.5s,baz=82,slow=4.2,SNR=3.4						

CATAC 09 14:43:41.6±0.3**, 12.°N**±2°×**8.°7W**±°**, h49^{km}, M3.5**/27**, MLv3.5**/27**, 1C-13D, Error ellipse: s-maj=6.0km s-min=3.0km az=33.7, confirmed, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAPS	Ciudad Sandino	0.51	35	S	Sn	14 44 03.6	+2.4
SAPS	Ciudad Sandino	0.51	35	⇑P	Pn	14 43 53.7	+0.7
BC86	Nagarote	0.53	15	P	Pn	14 43 54.4	+1.2
BC86	Nagarote	0.53	15	S	Sn	14 44 03.4	+1.8
ABCN	Banco Central	0.54	46	S	Sn	14 44 03.8	+2.1
ABCN	Banco Central	0.54	46	P	Pn	14 43 54.7	+1.4
UNAN	Cigeo UNAN	0.56	49	P	Pn	14 43 55.0	+1.4
UNAN				S	Sn	14 44 04.8	+2.6
USIM	UNAN	0.56	49	P	Pn	14 43 55.1	+1.5
USIM	UNAN	0.56	49	S	Sn	14 44 04.4	+2.2
ENAN	Enatrel Managu	0.57	50	S	Sn	14 44 04.8	+2.5
ENAN	Enatrel Managu	0.57	50	⇓P	Pn	14 43 55.4	+1.8
MAFN	Magfor	0.57	53	S	Sn	14 44 04.6	+2.1
MAFN	Magfor	0.57	53	P	Pn	14 43 55.5	+1.7
TISN	Laguna Tiscapa	0.58	47	⇓P	Pn	14 43 54.5	+0.6
APQ2	Apoyeque	0.58	40	⇓P	Pn	14 43 54.8	+1.0
APQ2				S	Sn	14 44 03.8	+1.2
MAS3	Al N del Volca	0.59	62	⇓P	Pn	14 43 54.7	+0.8
MAS3				S	Sn	14 44 05.2	+2.4
MASN	Masaya	0.59	66	P	Pn	14 43 55.4	+1.4
MASN				S	Sn	14 44 05.3	+2.4
MGAN	Managua	0.60	48	S	Sn	14 44 05.8	+2.8
MGAN	Managua	0.60	48	⇓P	Pn	14 43 55.7	+1.6
MGAN				P		14 43 55.8	
MGAN	Managua	0.60	48	S	Sn	14 44 04.9	+1.9
NANN	Nandasmo	0.60	71	P	Pn	14 43 55.6	+1.5
NANN	Nandasmo	0.60	71	S	Sn	14 44 05.7	+2.6
LEVN	Ruinas Leon Vi	0.66	8	S	Sn	14 44 05.4	+1.1
AERN	Aeropuerto Man	0.66	53	P	Pn	14 43 56.1	+1.3
AERN	Aeropuerto Man	0.66	53	S	Sn	14 44 06.3	+2.0
BC84	Volcan Momotom	0.66	14	S	Sn	14 44 06.0	+1.6
BC84	Volcan Momotom	0.66	14	P	Pn	14 43 56.2	+1.3
MOMN	Momotombo	0.68	14	⇓P	Pn	14 43 55.7	+0.6
MOMN				S	Sn	14 44 06.5	+1.6
CNGN	Cerro Negro	0.75	0	S	Sn	14 44 08.3	+1.8
CNGN	Cerro Negro	0.75	0	P	Pn	14 43 56.9	+0.8
SBEN	San Benito	0.84	49	S	Sn	14 44 10.1	+1.5
SBEN	San Benito	0.84	49	P	Pn	14 43 58.7	+1.4
QUEN	Al S del Volca	0.85	350	⇓P	Pn	14 43 58.1	+0.7
QUEN				S	Sn	14 44 10.3	+1.3
HOYN	Al Sur del Vol	0.86	352	⇓P	Pn	14 43 58.0	+0.4
HOYN				S	Sn	14 44 10.6	+1.5
BC87	San Francisco	0.86	28	P	Pn	14 43 58.5	+1.0
BC87	San Francisco	0.86	28	S	Sn	14 44 10.2	+1.1
HERN	Volcan Telica	0.87	352	S	Sn	14 44 09.9	+0.6
HERN	Volcan Telica	0.87	352	⇓P	Pn	14 43 58.0	+0.4
ARIN	Rivas	0.90	109	S	Sn	14 44 10.7	+0.7
ARIN	Rivas	0.90	109	P	Pn	14 43 59.2	+1.2
POLN	Al Sur del Vol	0.90	353	S	Sn	14 44 11.0	+0.8
CRIN	San Cristobal	1.01	340	S	Sn	14 44 12.5	-0.2
CRIN	San Cristobal	1.01	340	⇓P	Pn	14 43 59.7	+0.2
BOAB	BOACO BROADBAN	1.23	55	P	Pn	14 44 03.7	+1.2
BOAB	BOACO BROADBAN	1.23	55	S	Sn	14 44 19.4	+1.3
CARN	Rivas	1.28	115	⇓P	Pn	14 44 00.5	-2.7
CARN				S	Sn	14 44 20.6	+1.3
LIMN	Finca el Limon	1.35	14	P	Pn	14 44 05.4	+1.2
MATN	Matagalpa	1.40	33	P	Pn	14 44 05.5	+0.6
MATN	Matagalpa	1.40	33	S	Sn	14 44 23.2	+0.9
POTN	Potosi Cosigui	1.47	328	P	Pn	14 44 06.0	+0.3
POTN				S	Sn	14 44 24.4	+0.5
CSGN	Cosiguina Volc	1.48	326	⇓P	Pn	14 44 05.1	-0.8
CSGN				S	Sn	14 44 24.7	+0.5
ACON	Acoyapa	1.52	81	S	Sn	14 44 26.5	+1.6
ACON	Acoyapa	1.52	81	⇓P	Pn	14 44 06.1	-0.3

IDC 09 14:44:34.1±2.0**, 0.°38S**×**125.°32E, h0^{km}, mb3.2**/3**, mbtmp3.2**/3**, Error ellipse: s-maj=182.8km s-min=28.4km az=64.0, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.36	156	P	P	14 49 22.3	-0.8
	0.2nm,0.3s,baz=334,slow=11,SNR=6.6						
	0.2nm,0.3s						
ASAR	Alice Springs	24.60	161	P	P	14 49 56.8	+0.5
	0.4nm,0.6s,baz=342,slow=9.4,SNR=13						
	0.4nm,0.6s						
MKAR	Makanchi Array	60.16	327	P	P	14 54 43.6	-0.1
	0.3nm,0.6s,baz=126,slow=8.5,SNR=1.6						
	0.3nm,0.6s						

IDC 09 14:44:45.0±7.8**, 23.°33N**×**142.°07E, h75^{km}**±106^{km}**, mb3.2**/4**, mbtmp3.5**/5**, ML2.4**/1**, Error ellipse: s-maj=248.7km s-min=29.2km az=76.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	Matsushiro Arr	13.59	347	P	Pn	14 47 53.6	-0.8
	baz=171,slow=12,SNR=1.5						
	0.6nm,0.5s						
WRA	Warramunga Arr	43.66	191	P	P	14 52 42.2	-0.2
	0.2nm,0.9s,baz=8.4,slow=7.8,SNR=1.5						
	0.2nm,0.9s						
MKAR	Makanchi Array	52.84	312	P	P	14 53 53.4	+0.5
	0.2nm,0.6s,baz=81,slow=7.9,SNR=1.8						
	0.2nm,0.6s						
KURBB	Kurchatov Arra	55.64	316	P	P	14 54 12.9	-0.2
	0.8nm,0.7s,baz=94,slow=7.3,SNR=7.7						
	0.8nm,0.7s						
BVAR	Borovoye Array	60.77	319	P	P	14 54 48.7	-0.2
	1.1nm,0.5s,baz=97,slow=5.8,SNR=7.2						
	1.1nm,0.5s						

*IDC **09** 14:49:29.8±8.2, 17.°35S×168.°64E, h114^{km}±92^{km}, mb3.4/4, mbtmp3.7/5, ML3.2/1, Error ellipse: s-maj=99.6km s-min=37.4km az=152.0*

*NOU **09** 14:49:44.3, 18.°91S×168.°99E, h175^{km}, MLv3.6/8, Vanuatu Islands*

ISC 09 14:49:31.5±1.6**, 17.°8S**±0.°1×**169.°1E**±0.°2**, h150^{km}, n12, σ1.^{s}40**/11**, mb3.5**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INH	Isangel	1.80	174	P	Pn	14 50 10.4	+6.0
MARNC	Mare, Loyalty	3.84	194	P	Pn	14 50 27.6	-2.1
MARNC	Mare, Loyalty	3.84	194	S	Sn	14 51 04.8	-10
YATNC	Mamie plateau,	4.75	205	P	Pn	14 50 41.1	-0.6
DZM	Mont Dzumac	4.96	209	P	Pn	14 50 44.1	-0.4
	1.0nm,0.3s,baz=47,slow=19,SNR=15						
DZM				S	Sn	14 51 43.4	+2.1
	3.8nm,0.5s,baz=233,slow=22,SNR=1.7						
	5.9nm,0.7s						
DZM	Mont Dzumac	4.96	209	P	Pn	14 50 44.3	-0.2
PINNC	Pines Island,	5.07	197	P	Pn	14 50 45.6	-0.3
OUENC	Ouen Island, N	5.09	204	P	Pn	14 50 46.4	+0.2
WRA	Warramunga Arr	32.90	261	P	P	14 55 50.2	-1.5
	0.2nm,0.4s,baz=91,slow=7.6,SNR=10						
	0.2nm,0.4s						
ASAR	Alice Springs	33.35	254	P	P	14 55 54.1	-1.5
	1.6nm,0.4s,baz=81,slow=8.8,SNR=88						
	1.6nm,0.4s						

FITZ	Fitzroy Crossi	41.24	263	P	P	14 57 02.3	+0.2
	2.8nm,1.0s,baz=90,slow=8.1,SNR=2.7						
	2.8nm,1.0s						
ILAR	Eielson Array	88.86	17	P	P	15 02 09.6	+1.3
	0.1nm,0.4s,baz=229,slow=5.8,SNR=1.4						
	0.1nm,0.4s						

IDC 09 15:56:26.0±2.0, 2°.51N×128°.53E, h0^{km}, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=150.7km s-min=21.7km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.04	166	P	P	15 01 33.1	+0.1
	0.9nm,0.6s,baz=346,slow=11,SNR=13						
	0.9nm,0.6s						
ASAR	Alice Springs	26.54	169	P	P	15 02 05.4	-0.3
	0.3nm,0.8s,baz=352,slow=8.1,SNR=6.9						
	0.3nm,0.8s						
MKAR	Makanchi Array	59.57	325	P	P	15 06 32.0	+0.4
	0.2nm,0.4s,baz=115,slow=7.9,SNR=6.6						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	63.73	327	P	P	15 06 59.2	-0.3
	0.3nm,0.5s,baz=129,slow=6.3,SNR=4.7						
	0.3nm,0.5s						

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*IDC **09** 15:13:53.8±1.1, 6°.26S×142°.75E, h0^{km}, mb3.7/5, mbtmp3.8/9, ML3.7/3, MS2.8/1, Error ellipse: s-maj=25.1km s-min=18.2km az=89.0*

*NEIC **09** 15:13:56.1±1.3, 6°.34S±0°.08×142°.6E±0°.1, h10^{km}±1^{km}, mb4.0/11, Error ellipse: s-maj=20.1km s-min=12.6km az=263.0*

ISC 09 15:13:58.5±0.6, 6°.44S±0°.06×142°.57E±0°.07, h35^{km}, n22, σ1^{s}.95/26, mb3.6/5, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	4.32	334	Pn	Pn	15 15 01.1	-0.6
	3.1nm,0.3s,baz=150,slow=4.5,SNR=15						
JAY				Sn	Sn	15 15 51.9	+0.9
	1.0nm,0.3s,baz=152,slow=2.4,SNR=1.1						
JAY				LR	LR	15 16 39.0	
	comp=Z,115nm,20.0s,baz=180,slow=39						
	29nm,1.1s						
PMG	Port Moresby	5.42	123	Pn	Pn	15 15 17.0	+0.1
PMG	Port Moresby	5.42	123	Pn	Pn	15 15 16.2	-0.7
	10nm,0.5s,baz=355,slow=3.6,SNR=9.0						
PMG				Sn	Sn	15 16 17.8	-0.2
	1.7nm,0.3s,baz=99,slow=13,SNR=2.6						
MTN	Manton Dam	12.94	240	Pn	Pn	15 17 01.2	+1.1
WB0	Warramunga Arr	15.45	210	Pn	Pn	15 17 37.3	+3.3
WB0				IAmb	IAmb	15 18 00.2	
	comp=Z,6.0nm,1.1s						
WR8	Warramunga Arr	15.56	209	Pn	Pn	15 17 36.7	+1.3
WR8				IAmb	IAmb	15 18 01.6	
	comp=Z,11nm,1.3s						
WRA	Warramunga Arr	15.62	210	Pn	Pn	15 17 37.5	+1.3
WRA	Warramunga Arr	15.62	210	Pn	Pn	15 17 37.0	+0.8
	comp=Z,0.2nm,0.3s,baz=29,slow=13,SNR=14						
WRA				Sn	Sn	15 20 25.3	-3.0
	comp=Z,0.3nm,0.3s,baz=26,slow=23,SNR=5.2						
WRA				Lg	Lg	15 22 16.2	
	comp=Z,0.1nm,0.3s,baz=29,slow=26,SNR=1.7						
	comp=Z,0.4nm,0.5s						
KNRA	Kununurra	16.36	235	Pn	Pn	15 17 45.9	+0.3
KNRA				IAmb	IAmb	15 18 25.4	
	comp=Z,21nm,1.4s						
AS31	Alice Springs	19.05	205		Pn	15 18 22.1	+3.2
ASAR	Alice Springs	19.05	205	P	Pn	15 18 20.9	+2.1
	comp=Z,0.6nm,0.3s,baz=33,slow=9.9,SNR=66						
ASAR				S	Sn	15 21 48.8	-2.6
	comp=Z,0.3nm,0.7s,baz=135,slow=57,SNR=2.2						
ASAR				Lg	Lg	15 24 07.9	
	comp=Z,0.1nm,0.3s,baz=21,slow=32,SNR=4.1						
	comp=Z,6.8nm,0.7s						
FITZ	Fitzroy Crossi	20.17	233	P	P	15 18 31.9	+1.7
FITZ				IAmb	IAmb	15 18 38.3	
	comp=Z,4.0nm,1.5s						
FITZ	Fitzroy Crossi	20.17	233	P	Pn	15 18 33.6	+1.4
	comp=Z,2.4nm,0.6s,baz=49,slow=9.8,SNR=11						
FITZ				S	S	15 22 10.3	-4.6
	comp=Z,1.2nm,0.5s,baz=43,slow=14,SNR=1.9						
FITZ				Lg	Lg	15 24 42.1	
	comp=Z,0.1nm,0.3s,baz=103,slow=9.4,SNR=3.8						
	comp=Z,2.4nm,0.6s						
GIRL	Giralia	31.71	237	P	P	15 20 20.0	+0.8
JMZ	Minamidaito 2	33.91	341	P	P	15 20 35.7	-2.6
INU	Inuyama	41.89	353	P	P	15 21 45.7	+0.2
INU				IAmb	IAmb	15 22 21.2	
	comp=Z,28nm,1.4s						
PEA0B	Petropavlovsk-	60.69	10	P	P	15 24 05.6	-0.6
MKAR	Makanchi Array	75.07	322	P	P	15 25 38.6	+1.7
	comp=Z,0.5nm,0.9s,baz=108,slow=4.7,SNR=2.8						
	comp=Z,0.5nm,0.9s						
QSPA	South Pole Qui	83.53	180	P	P	15 26 23.9	+1.1
	comp=Z,0.3nm,0.6s,baz=102,slow=2.0,SNR=1.0						
	comp=Z,0.3nm,0.6s						
BVAR	Borovoye Array	84.55	325	P	P	15 26 28.3	+0.2
	comp=Z,0.5nm,0.5s,baz=110,slow=8.3,SNR=5.4						
	comp=Z,0.5nm,0.5s						
ILAR	Eielson Array	87.64	24	P	P	15 26 41.2	-1.8
	comp=Z,0.4nm,1.0s,baz=259,slow=5.3,SNR=2.7						
	comp=Z,0.4nm,1.0s						
C23K	Itkillik River	88.21	19	P	P	15 26 46.0	+0.4

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*IDC **09** 15:21:32.7±1.1, 15°.04S×177°.45W, h0^{km}, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=56.3km s-min=28.3km az=135.0*

ISC 09 15:21:34.2±0.9, 15°.0S±0°.3×177°.5W±0°.3, h10^{km}, n24, σ2^{s}.14/21, mb3.9/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	16.76	243	*e*LR	LR	15 29 32.4	
	389nm,24.1s						
PPT2	Papeete2	26.93	99	*e*LR	LR	15 33 53.0	
	135nm,25.8s						
TBI	Tubuai	27.73	112	*e*LR	LR	15 34 22.5	
	1µm,27.0s						
ASAR	Alice Springs	46.47	252	P	P	15 30 01.9	+0.1
	1.0nm,0.7s,baz=85,slow=8.1,SNR=13						
	1.0nm,0.7s						
QSPA	South Pole Qui	75.05	180	P	P	15 33 15.9	-0.1
	1.1nm,0.9s,baz=42,slow=2.1,SNR=2.2						
	1.1nm,0.9s						
NVAR	Mina Array Bea	76.73	44	P	P	15 33 26.1	-0.1
	1.0nm,0.8s,baz=240,slow=4.2,SNR=4.8						
	1.0nm,0.8s						
ILAR	Eielson Array	82.86	13	P	P	15 33 58.2	-0.3
	0.6nm,0.9s,baz=224,slow=6.2,SNR=6.1						
	0.6nm,0.9s						
PDAR	Pinedale Array	84.65	43	P	P	15 34 09.1	+0.6
	0.3nm,0.5s,baz=292,slow=6.4,SNR=1.6						
	0.3nm,0.5s						
GERES	GERESS Array B	145.00	347	PKPbc	PKPdf	15 41 11.9	-0.1
	0.2nm,0.3s,baz=0.0,slow=1.2,SNR=3.4						
MOA	Molln	145.81	346	*e*P	PKiKP	15 41 15.0	-2.4
	comp=Z,7.5nm,1.3s						
ARSA	Arzberg	146.05	344	*e*P	PKiKP	15 41 18.4	+0.5
	comp=Z,0.6nm,0.7s						
BIOA	Bad Ischl, Aus	146.10	346	*e*P	PKiKP	15 41 19.4	+1.4
	comp=Z,3.2nm,0.7s						
LESA	Schwarzleotal	146.56	347	*e*P	PKiKP	15 41 18.1	-0.9
	comp=Z,3.1nm,1.1s						
SOKA	Soboth	146.71	344	*e*P	PKiKP	15 41 17.4	-1.9
	comp=Z,4.8nm,1.2s						
KBA	Koelnbreinsper	146.75	346	*e*P	PKiKP	15 41 24.9	+5.3
	comp=Z,2.0nm,0.9s						
WATA	Walderalm	146.87	349	*i* P	PKiKP	15 41 19.2	-0.5
	comp=Z,4.5nm,1.0s						
RETA	Reutte	146.87	350	*i* P	PKiKP	15 41 18.2	-1.4
	comp=Z,3.8nm,0.9s						
WTTA	Wattenberg	146.93	349	*e*P	PKiKP	15 41 18.9	-1.0
	comp=Z,2.6nm,0.7s						
MOTA	Moosalm	146.95	349	*i* P	PKiKP	15 41 19.3	-0.6
	comp=Z,2.5nm,0.8s						
OBKA	Obir	146.99	345	*e*P	PKiKP	15 41 19.7	-0.2
	comp=Z,5.0nm,1.5s						
SQTA	Sankt Quirin	147.05	349	*i* P	PKiKP	15 41 19.2	-0.8
	comp=Z,5.0nm,1.1s						
MYKA	Terra Mystica	147.10	346	*e*P	PKiKP	15 41 18.4	-1.7
	comp=Z,4.8nm,1.2s						
DAVA	Damuels	147.21	351	*i* P	PKiKP	15 41 19.7	-0.8
	comp=Z,8.8nm,1.5s						
FETA	Feichten	147.33	350	*e*P	PKiKP	15 41 26.4	+5.7
	comp=Z,3.7nm,1.2s						

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*IDC **09** 15:26:08.4±1.3, 15°.16S×177°.40W, h0^{km}, mb3.9/9, mbtmp3.9/9, MS4.1/46, Error ellipse: s-maj=78.1km s-min=19.6km az=145.0*

*NEIC **09** 15:26:12.0±1.8, 14°.86S±0°.07×177°.58W±0°.07, h10^{km}±1^{km}, mb4.8/47, Error ellipse: s-maj=14.0km s-min=9.1km az=219.0*

*GCMT **09** 15:26:14.0±0.3, 15°.07S±0°.02×177°.09W±0°.01, h15^{km}±1^{km}, MW4.9/104, Moment Tensor Solution. s16,c22; s104,c150; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.11±.09; $M_{\theta\theta}$-0.15±.09; $M_{\phi\phi}$0.26±.07; $M_{r\theta}$-0.52±.29; $M_{\theta\phi}$2.64±.09; $M_{\phi r}$0.23±.25; Best double couple: $M_0$2.70900×10^{16} NP1:ϕ_s178.00000°,δ79.00000°, λ-174.00000°. NP2:ϕ_s87.00000°,δ84.00000°, λ-11.00000°. Principal axes: T 2.7160, Plg4.0000°, Azm133.0000°; N -0.0150, Plg78.0000°, Azm241.0000°; P -2.7020, Plg12.0000°, Azm42.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 15:26:11.7±0.5, 14°.89S±0°.08×177°.62W±0°.08, h10^{km}, n133, σ1^{s}.39/72, mb4.8/38, MS4.2/46, 1C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUTU	Fugatoga	0.76	320		Pb	15 26 26.5	-0.5
MSVF	Nonsavu	5.03	235	Pn	Pn	15 27 28.1	+0.7
AFI	Afiamalu	5.75	81	Pn	Pn	15 27 30.0	-7.3
RAO	Raoul Island	14.30	181	Pn	Pn	15 29 35.1	+0.8
DZM	Mont Dzumac	16.71	242	*e*LR	LR	15 34 08.2	
	2µm,24.2s						
RAR	Rarotonga	18.09	113	Pn	Pn	15 30 21.2	-2.1
RAR	Rarotonga	18.09	113	LR	LR	15 35 37.3	
	comp=Z,413nm,19.2s,baz=300,slow=32						
HNR	Honiara	22.58	281	LR	LR	15 38 44.7	
	comp=Z,1µm,20.6s,baz=125,slow=33						
URZ	Urewera	23.74	190	LR	LR	15 38 59.2	
	comp=Z,743nm,18.9s,baz=120,slow=33						
PPT	Papeete	27.05	100	LR	LR	15 39 32.9	
	comp=Z,155nm,20.6s,baz=268,slow=30						
PPT2	Papeete2	27.05	100	*e*S	S	15 36 33.6	+0.9
	1µm,27.0s						
PPT2				*e*LR	LR	15 38 30.2	
	486nm,25.5s						
PPT2				*e*LR	LR	15 38 38.6	
	198nm,20.2s						
PLWZ	Palliser	27.29	192	P	P	15 31 54.8	-1.7
TBI	Tubuai	27.86	112	*e*S	S	15 36 51.4	+6.1
	4µm,29.5s						
TBI				*e*LR	LR	15 38 58.4	
	5µm,26.8s						
TBI				*e*LR	LR	15 39 03.0	
	888nm,21.5s						
PMG	Port Moresby	34.83	275	LR	LR	15 46 12.4	
	comp=Z,367nm,18.4s,baz=82,slow=34						
TAOE	Nuku Hiva Isla	37.12	85	*e*LR	LR	15 43 16.8	
	360nm,25.7s						
STKA	Stephens Creek	40.80	238		P	15 33 53.9	+0.3
STKA	Stephens Creek	40.80	238	P	P	15 33 53.9	+0.3
	11nm,0.9s,baz=78,slow=12,SNR=7.1						
STKA				LR	LR	15 49 31.1	
	comp=Z,374nm,18.3s,baz=51,slow=34						
	11nm,0.9s						
RKT	Rikitea	41.03	108	*e*LR	LR	15 44 58.8	
	5µm,34.8s						
JAY	Jayapura	42.89	283	LR	LR	15 50 47.4	
	comp=Z,166nm,19.7s,baz=74,slow=34						
WRA	Warramunga Arr	45.99	257	P	P	15 34 34.4	-1.3
	0.9nm,1.0s,baz=90,slow=8.0,SNR=4.1						
WRA				PcP	PcP	15 36 08.7	-3.7
	0.3nm,0.3s,baz=84,slow=3.7,SNR=9.5						
	0.9nm,1.0s						
AS31	Alice Springs	46.40	251	P	P	15 34 38.1	-0.7
ASAR	Alice Springs	46.40	251	P	P	15 34 37.9	-1.0
ASAR	Alice Springs	46.40	251	P	P	15 34 37.8	-1.1
	1.5nm,0.6s,baz=85,slow=8.2,SNR=18						
ASAR				PcP	PcP	15 36 10.0	-3.8
	0.5nm,0.8s,baz=96,slow=3.5,SNR=1.9						
	1.5nm,0.6s						
GUMO	Guam	46.67	306	LR	LR	15 51 36.5	
	comp=Z,126nm,19.5s,baz=118,slow=32						
DAV	Davao City (W)	60.38	287	LR	LR	16 00 57.6	
	comp=Z,108nm,19.3s,baz=162,slow=34						
NWAO	Narrogin (SRO)	61.32	240	LR	LR	16 02 19.7	
	comp=Z,318nm,18.4s,baz=86,slow=35						
VNDA	Vanda	63.50	185	LR	LR	15 58 00.1	
	comp=Z,42nm,21.1s,baz=15,slow=30						
MJAR	Matsushiro Arr	65.98	322	LR	LR	16 00 22.7	
	comp=Z,100nm,21.9s,baz=142,slow=31						
JOW	Kunigami	66.93	308	LR	LR	16 00 33.7	
	comp=Z,120nm,21.5s,baz=292,slow=31						
TGY	Tagaytay City	67.26	292	LR	LR	16 02 39.8	
	comp=Z,214nm,20.9s,baz=166,slow=32						
SHEM	Shemya Is, Ala	67.72	355	LR	LR	16 01 06.7	
	comp=Z,58nm,20.5s,baz=276,slow=31						
JNU	Nakatsue	68.52	315	LR	LR	16 02 15.4	
	comp=Z,113nm,19.9s,baz=144,slow=32						
ASAJ	Asahikawa	69.02	330	LR	LR	16 03 45.2	
	comp=Z,206nm,19.7s,baz=166,slow=32						
PETK	Petropavlovsk-	70.98	345	LR	LR	16 06 00.7	
	comp=Z,150nm,19.1s,baz=161,slow=34						
USRK	Ussuriysk Ar.	74.58	325	LR	LR	16 05 15.2	
	comp=Z,132nm,21.5s,baz=147,slow=31						
KBO	Bosley Butte	75.09	38	P	P	15 37 54.3	+0.2
QSPA	South Pole Qui	75.15	180	LR	LR	16 06 23.3	
	comp=Z,73nm,20.7s,baz=17,slow=32						
KDAK	Kodiak Island	75.31	14	LR	LR	16 05 58.1	
	comp=Z,72nm,19.0s,baz=203,slow=32						
PFO	Pinyon Flats O	75.61	49	LR	LR	16 03 58.9	
	comp=Z,246nm,19.2s,baz=233,slow=30						
LPIG	La Paz	76.29	60	LR	LR	16 02 41.1	
	comp=Z,176nm,20.8s,baz=212,slow=29						
NJ2	Nanjing	76.64	309	*e*P	P	15 38 03.8	+0.8
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
NVAR	Mina Array Bea	76.74	44	P	P	15 38 03.1	-0.7
NVAR	Mina Array Bea	76.74	44	P	P	15 38 02.1	-1.6
	comp=Z,0.8nm,0.7s,baz=223,slow=9.3,SNR=5.6						
NVAR				LR	LR	16 03 32.1	
	comp=Z,128nm,21.3s,baz=196,slow=29						
	comp=Z,0.8nm,0.7s						
ILSW	Iliamna Southw	77.19	12	P	P	15 38 05.0	-0.7
TPH	Tonopah	77.29	45	P	P	15 38 05.8	-1.0
KLR	Kul'dur	77.92	329	LR	LR	16 07 45.5	
	comp=Z,199nm,20.3s,baz=146,slow=32						
PINE	Pine Mountain	77.97	38		P	15 38 10.2	-0.2
PINE				IAmb	IAmb	15 38 13.1	
	comp=Z,11nm,1.2s						
K15K	Wolf Creek Mou	77.97	8		P	15 38 10.5	+0.7
K15K				IAmb	IAmb	15 38 13.6	
	comp=Z,14nm,1.2s						
CN2	Changchun	78.12	322	P	P	15 38 13.3	+2.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SLKM	Skilak Lake	78.30	13	P	P	15 38 11.6	-0.1
SLKM				IAmb	IAmb	15 38 14.7	
	comp=Z,11nm,1.0s						
MA2	Magadan	78.51	344	LR	LR	16 09 37.2	
	comp=Z,128nm,19.4s,baz=172,slow=33						
L18K	Granite Mounta	78.61	10	P	P	15 38 14.1	+0.8
M20K	Styx River	78.93	12	P	P	15 38 16.3	+1.1
BBB	Bella Bella	79.32	28	LR	LR	16 07 14.1	
	comp=Z,119nm,18.5s,baz=236,slow=31						
J18K	Innoko River	79.78	9	P	P	15 38 20.6	+0.8
J18K				IAmb	IAmb	15 38 23.7	
	comp=Z,6.6nm,0.9s						
ELK	Elko	79.95	43	LR	LR	16 05 42.0	
	comp=Z,142nm,21.7s,baz=255,slow=30						
BMRM	Bremner River	80.06	16	P	P	15 38 21.0	-0.4
BMRM				IAmb	IAmb	15 38 23.8	
	comp=Z,11nm,1.1s						
CAST	Castle Rocks	80.54	11	P	P	15 38 24.2	+0.3
J20K	Nowinta River	80.86	10		P	15 38 26.4	+0.8
J20K				IAmb	IAmb	15 38 29.5	
	comp=Z,21nm,1.9s						
SEY	Seymchan	81.03	347	LR	LR	16 09 32.5	
	comp=Z,79nm,21.0s,baz=150,slow=32						
O28M	Mount Upton	81.12	18	P	P	15 38 27.0	-0.4
HLID	Hailey	81.87	41		P	15 38 31.1	-0.5
HDA	Harding Lake	82.47	13	P	P	15 38 33.4	-0.6
HDA				IAmb	IAmb	15 38 37.4	
	comp=Z,4.7nm,0.8s						
DOT	Dot Lake	82.47	14	P	P	15 38 33.6	-0.5
CCB	Clear Creek Bu	82.49	12		P	15 38 33.2	-0.9
NEW	Newport	82.64	36	LR	LR	16 07 45.0	
	comp=Z,97nm,20.1s,baz=208,slow=30						
DLBC	Dease Lake	82.78	23	LR	LR	16 11 09.7	
	comp=Z,226nm,18.1s,baz=268,slow=33						
ILAR	Eielson Array	82.79	13	P	P	15 38 34.3	-1.5
	comp=Z,2.1nm,1.1s,baz=233,slow=5.5,SNR=14						
	comp=Z,2.1nm,1.1s						
F19K	Shaleruckik Mo	82.80	8	IAmb	IAmb	15 38 38.7	
	comp=Z,6.0nm,1.1s						
J25K	Salcha River,	82.99	13	IAmb	IAmb	15 38 39.8	
	comp=Z,21nm,1.9s						
R33M	Jennings River	83.10	22	IAmb	IAmb	15 38 40.5	
	comp=Z,14nm,1.5s						
J26L	Joseph Creek	83.31	14	IAmb	IAmb	15 38 41.6	
	comp=Z,9.3nm,1.4s						
ANMO	Albuquerque	83.64	51	LR	LR	16 09 10.9	
	comp=Z,257nm,19.2s,baz=342,slow=31						
PRP	Porcupine Dome	83.73	13		P	15 38 40.1	-0.6
PRP				IAmb	IAmb	15 38 43.1	
	comp=Z,9.0nm,1.3s						
TXAR	Lajitas Array	83.75	58	P	P	15 38 40.4	-1.2
	comp=Z,0.1nm,0.3s,baz=252,slow=4.5,SNR=2.7						
TXAR				LR	LR	16 08 31.4	
	comp=Z,133nm,19.4s,baz=218,slow=30						
	comp=Z,0.1nm,0.3s						
DLMT	Dillon	83.88	40	IAmb	IAmb	15 39 01.0	
	comp=Z,10nm,1.4s						
DAWY	Dawson	84.00	16	IAmb	IAmb	15 38 44.7	
	comp=Z,11nm,1.4s						
TPAW	Teton Pass	84.06	42	IAmb	IAmb	15 38 44.5	
	comp=Z,18nm,1.9s						
FXWY	Fox Creek	84.07	42	IAmb	IAmb	15 38 46.9	
	comp=Z,9.1nm,1.9s						
I26K	Coal Creek Min	84.08	14	IAmb	IAmb	15 38 45.2	
	comp=Z,12nm,1.2s						
COLD	Coldfoot	84.33	10	IAmb	IAmb	15 38 47.0	
	comp=Z,5.5nm,1.1s						
YHL	Hebgen Lake	84.52	41		P	15 38 45.0	-0.4
BOZ	Bozeman (W)	84.59	40	IAmb	IAmb	15 38 47.0	
	comp=Z,5.3nm,1.3s						
PDAR	Pinedale Array	84.65	43	P	P	15 38 44.9	-1.1
	comp=Z,0.3nm,0.5s,baz=260,slow=4.1,SNR=2.2						
PDAR				LR	LR	16 08 54.3	
	comp=Z,77nm,21.1s,baz=238,slow=30						
	comp=Z,0.3nm,0.5s						
E22K	Anaktuvuk Pass	84.88	9	IAmb	IAmb	15 38 49.9	
	comp=Z,7.1nm,1.0s						
I28M	Miner Creek	84.97	15	IAmb	IAmb	15 38 49.4	
	comp=Z,7.6nm,1.2s						
F24K	Squaw Lake	85.00	11	IAmb	IAmb	15 38 50.2	
	comp=Z,6.1nm,1.2s						
XAN	Xi'an	85.05	307	P	P	15 38 52.2	+4.2
XAN				pmax	pmax		
	comp=Z,7.0nm,0.4s						
H27K	Steamboat Moun	85.23	14	IAmb	IAmb	15 38 51.0	
	comp=Z,6.5nm,1.2s						
I29M	Ogilvie Camp,	85.31	15	IAmb	IAmb	15 38 51.3	
	comp=Z,4.3nm,1.0s						
I30M	Mount Dempster	85.71	16	IAmb	IAmb	15 40 01.8	
	comp=Z,18nm,2.0s						
HHC	Hu-ho-hao-te	85.72	314	⇑ *i*P	P	15 38 50.6	-0.7
HHC				pmax	pmax		
	comp=Z,15nm,0.7s						
HHC				pmax	pmax		
	comp=Z,140nm,4.8s						
HHC				LR	LR		
	comp=N,93nm,20.6s						
HHC				LR	LR		
	comp=E,130nm,19.6s						
HHC				LR	LR		
	comp=Z,150nm,19.3s						
PMSA	Palmer Station	86.27	157	LR	LR	16 07 36.5	
	comp=Z,71nm,21.8s,baz=248,slow=29						
MAW	Mawson	86.94	200	LR	LR	16 15 01.0	
	comp=Z,102nm,18.9s,baz=73,slow=34						
YAK	Yakutsk	87.08	338	LR	LR	16 17 43.8	
	comp=Z,40nm,18.4s,baz=128,slow=35						
PZH	PanZhiHua	88.42	298	P	P	15 39 06.6	+1.9
CMAR	Chiang Mai Arr	88.59	289	LR	LR	16 14 48.3	
	comp=Z,61nm,21.1s,baz=105,slow=33						
INK	Inuvik	88.79	15	LR	LR	16 11 14.8	
	comp=Z,43nm,20.8s,baz=232,slow=30						
YKA	Yellowknife Ar	91.29	24	P	P	15 39 17.1	0.0
	comp=Z,0.5nm,0.9s,baz=253,slow=4.9,SNR=4.0						
YKA				LR	LR	16 14 04.4	
	comp=Z,196nm,19.6s,baz=227,slow=31						
	comp=Z,0.5nm,0.9s						
SONM	Songino Array	91.77	319	P	P	15 39 20.7	+0.7
	comp=Z,0.4nm,0.4s,baz=91,slow=6.5,SNR=1.6						
SONM				LR	LR	16 16 07.6	
	comp=Z,49nm,20.3s,baz=95,slow=33						
	comp=Z,0.4nm,0.4s						
SYO	Syowa Base	92.25	193	⇓ *e*PcP	PcP	15 39 22.6	+0.2
PLCA	Paso Flores	92.85	133	LR	LR	16 12 45.0	
	comp=Z,69nm,20.2s,baz=234,slow=30						
TIXI	Tiksi	93.45	345	LR	LR	16 20 52.2	
	comp=Z,97nm,19.0s,baz=168,slow=35						
SNAA	Sanae	93.58	178	LR	LR	16 18 57.0	
	comp=Z,35nm,18.7s,baz=130,slow=34						
ULM	Lac du Bonnet	96.12	40	LR	LR	16 15 57.8	
	comp=Z,190nm,21.7s,baz=250,slow=31						
BRDH	Bariadhala	96.28	292	LR	LR	16 20 39.5	
	comp=Z,68nm,21.3s,baz=140,slow=34						
VYHS	Vyhne	143.85	341	*e*PKP	PKPdf	15 45 46.5	-0.9
MODS	Modra-Piesok	144.42	343	*e*PKP	PKPdf	15 45 49.5	+1.1
KHC	Kasperske Hory	144.64	347	*e*PKP	PKPdf	15 45 50.2	+1.4
CKRC	Cesky Krumlov	144.77	346	*e*PKP	PKPdf	15 45 49.9	+0.9
GERES	GERESS Array B	144.88	347	PKPbc	PKPab	15 45 47.1	-1.3
	comp=Z,2.1nm,0.9s,baz=1.7,slow=3.1,SNR=9.5						
MMAI	Mount Meron Ar	145.04	307	PKPbc	PKPbc	15 45 49.0	-0.3
	comp=Z,3.9nm,0.8s,baz=78,slow=5.2,SNR=7.0						
WLF	Walferdange	145.18	356		PKPbc	15 45 49.0	-0.2
CONA	Conrad Observa	145.22	344	*i* PKP	PKPdf	15 45 49.9	0.0
	comp=Z,6.3nm,1.2s						
RONA	Rosalia, Austr	145.31	343	*e*PKP	PKPdf	15 45 50.5	+0.5
	comp=Z,14nm,1.3s						
MOA	Molln	145.69	346	*i* pPKP	PKPab	15 45 52.4	+1.2
	comp=Z,7.1nm,1.4s						
ARSA	Arzberg	145.93	344	*e*pPKP	pPKPdf	15 45 54.0	+0.1
	comp=Z,1.0nm,0.3s						
BIOA	Bad Ischl, Aus	145.99	346	*e*PKP	PKPab	15 45 52.1	-0.3
	comp=Z,1.7nm,0.4s						
BFO	Black Forest	146.29	353	PKPdf	PKPdf	15 45 51.7	+0.1
LESA	Schwarzleotal	146.45	347	*i* PKP	PKPbc	15 45 53.4	+0.1
	comp=Z,4.8nm,1.2s						
SOKA	Soboth	146.59	344	*i* PKP	PKPbc	15 45 53.9	+0.1
	comp=Z,3.8nm,1.2s						
KBA	Koelnbreinsper	146.63	346	*i* pPKP	pPKPdf	15 45 55.6	+0.3
	comp=Z,2.6nm,1.0s						
WATA	Walderalm	146.76	349	*e*PKP	PKPbc	15 45 54.6	+0.3
	comp=Z,4.8nm,1.0s						
RETA	Reutte	146.76	350	*e*PKP	PKPbc	15 45 53.6	-0.6
	comp=Z,6.0nm,1.1s						
WTTA	Wattenberg	146.81	348	*i* pPKP	PKPab	15 45 55.5	-0.2
	comp=Z,7.5nm,1.0s						
MOTA	Moosalm	146.84	349	*e*PKP	PKPbc	15 45 54.4	-0.2
	comp=Z,5.7nm,1.1s						
OBKA	Obir	146.87	345	*e*pPKP	PKPab	15 45 55.7	-0.2
	comp=Z,7.5nm,1.5s						
SQTA	Sankt Quirin	146.94	349	*e*pPKP	PKPab	15 45 55.8	-0.3
	comp=Z,8.7nm,1.2s						
MYKA	Terra Mystica	146.98	346	*i* PKP	PKPbc	15 45 54.4	-0.5
	comp=Z,7.1nm,1.4s						
DAVA	Damuels	147.10	351	*e*PKiKP	PKPab	15 45 56.8	-0.1
	comp=Z,9.8nm,1.2s						
ABTA	Abfaltersbach	147.13	347	*i* PKP	PKPbc	15 45 54.4	-0.9
	comp=Z,3.7nm,0.9s						
PRED	Cave del Predi	147.18	346	PKPdf	PKPdf	15 45 52.0	-1.2
FETA	Feichten	147.22	349	*e*pPKP	PKPbc	15 45 55.5	-0.1
	comp=Z,6.4nm,1.5s						

IDC 09 15:26:53.6±1.8, 31°.43S×178°.22W, h0^{km}, mb3.8/3, mbtmp3.8/3, MS3.7/4, Error ellipse: s-maj=54.8km s-min=35.9km az=45.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.87	268	P	P	15 34 53.5	-0.5
	1.3nm,1.0s,baz=110,slow=8.3,SNR=5.9						
	1.3nm,1.0s						
WRA	Warramunga Arr	43.95	273	P	P	15 35 02.9	+0.1
	0.8nm,0.4s,baz=114,slow=7.8,SNR=25						
	0.8nm,0.4s						
BATI	Baumata	57.60	278	LR	LR	16 03 29.7	
	comp=Z,109nm,18.5s,baz=146,slow=38						

QSPA	**South Pole Qui**	58.69	180	P	P	15 36 52.6	-0.1
	0.7nm,0.6s,baz=287,slow=0.8,SNR=7.9						
	0.7nm,0.6s						
NNA	**Nana**	93.32	106	LR	LR	16 14 26.6	
	comp=Z,43nm,19.3s,baz=225,slow=31						
LPAZ	**La Paz**	97.90	114	LR	LR	16 18 00.7	
	comp=Z,18nm,18.9s,baz=250,slow=31						
CPUP	**Villa Florida**	99.50	129	LR	LR	16 21 40.3	
	comp=Z,19nm,18.3s,baz=120,slow=33						
FINES	**FINESS Array B**	146.04	339	PKPbc	PKPdf	15 46 33.6	-0.3
	1.9nm,0.8s,baz=66,slow=5.0,SNR=8.5						
MMAI	**Mount Meron Ar**	151.57	282	PKPbc	PKiKP	15 46 50.3	-0.2
	0.7nm,0.5s,baz=79,slow=3.7,SNR=1.9						

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*NEIC **09** 15:53:48.7±1.2, 16.°73N±0.°04×99.°95W±0.°02, h16^{km}±5^{km}, mb4.0/2, Md4.3/158(MEX), Error ellipse: s-maj=6.8km s-min=2.0km az=203.0*

*MEX **09** 15:53:51.0±1.1, 16.°75N×99.°97W, h16^{km}±15^{km}, MD4.4*

ISC 09 15:53:47.9±1.0**, 16.°71N**±0.°03×**99.°95W**±0.°02**, h18**^{km}±3^{km}**, n123, σ2.^{s}19**/221**, 1C, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACP2	**Acapulco**	0.17	19		Pg	15 53 53.1	+0.6
ACP2					Sg	15 53 56.0	+0.3
ACP2	**Acapulco**	0.17	19	eP	Pg	15 53 53.1	+0.6
ACP2				iS	Sg	15 53 56.0	+0.3
VNTA	**La Mica**	0.24	31	eP	Pg	15 53 54.2	+0.7
VNTA				eS	Sg	15 53 57.7	+0.4
DAIG	**Los Arroyos**	0.42	42		Pb	15 53 57.4	+0.5
DAIG					Sb	15 54 03.2	+0.2
DAIG	**Los Arroyos**	0.42	42	⇑eP	Pb	15 53 57.4	+0.5
	baz=227,slow=16						
DAIG				eS	Sb	15 54 03.2	+0.2
CAIG	**El Cayaco**	0.46	318		Pb	15 53 57.5	0.0
CAIG					Sb	15 54 03.6	-0.3
CAIG	**El Cayaco**	0.46	318	eP	Pb	15 53 57.5	0.0
CAIG				eS	Sb	15 54 03.6	-0.3
ATYC	**Atoyac**	0.68	317	eP	Pb	15 54 01.2	-0.1
ATYC				eS	Sb	15 54 10.7	+0.3
CRIG	**Cruz Grande**	0.78	88		Pb	15 54 03.7	+0.7
CRIG					Sb	15 54 14.4	+1.1
CRIG	**Cruz Grande**	0.78	88	eP	Pb	15 54 03.7	+0.7
CRIG				eS	Sb	15 54 14.4	+1.1
MEIG	**Mezcala**	1.25	14		Pn	15 54 11.2	+0.7
MEIG					Sn	15 54 27.1	+0.1
MEIG	**Mezcala**	1.25	14	eP	Pn	15 54 11.3	+0.7
MEIG				eS	Sn	15 54 27.6	+0.6
PET2	**Petatlan**	1.50	303	eP	Pg	15 54 15.9	-1.0
PET2				eS	Sg	15 54 35.3	-1.2
TLIG	**Tlapa**	1.57	57		Pn	15 54 15.5	+0.5
TLIG	**Tlapa**	1.57	57	eP	Pb	15 54 16.2	-0.3
TLIG				eS	Sg	15 54 37.5	-1.1
ARIG	**Puente Sto Nin**	1.61	346		Pb	15 54 16.2	-1.0
ARIG					Sn	15 54 36.0	+0.2
ARIG	**Puente Sto Nin**	1.61	346	eP	Pb	15 54 16.7	-0.5
ARIG				eS	Sg	15 54 37.1	-2.8
ZIIG	**Zihuatanejo**	1.70	302		Pn	15 54 17.0	+0.3
ZIIG					Sn	15 54 38.3	+0.2
ZIIG	**Zihuatanejo**	1.70	302	eP	Pn	15 54 18.1	+1.3
ZIIG				eS	Sn	15 54 38.3	+0.2
HMTT	**Tlapaneco**	1.71	51		Pg	15 54 19.5	-1.4
HMTT					Sg	15 54 42.2	-1.0
HMTT	**Tlapaneco**	1.71	51	eP	Pg	15 54 19.5	-1.4
HMTT				eS	Sg	15 54 42.2	-1.0
PLIG	**Platanillo**	1.73	14		Pb	15 54 18.3	-0.9
PLIG					Sg	15 54 41.8	-1.9
PLIG	**Platanillo**	1.73	14	eP	Pb	15 54 18.6	-0.6
PLIG				eS	Sg	15 54 41.8	-1.9
PNIG	**Pinotepa**	1.77	100		Pn	15 54 17.9	+0.1
PNIG					Sn	15 54 38.3	-1.5
PNIG	**Pinotepa**	1.77	100	eP	Pn	15 54 17.9	+0.1
PNIG				eS	Sn	15 54 38.3	-1.5
FTIG	**Fresnillo de T**	2.10	55		Pn	15 54 22.8	+0.4
FTIG					Sn	15 54 48.3	+0.2
FTIG	**Fresnillo de T**	2.10	55	eP	Pn	15 54 22.8	+0.4
FTIG				eS	Sn	15 54 48.3	+0.2
TXIG	**Tlaxiaco**	2.15	75		Pn	15 54 24.2	+1.0
TXIG					Sg	15 54 56.2	-1.2
TXIG	**Tlaxiaco**	2.15	75	eP	Pn	15 54 24.2	+1.0
TXIG				eS	Sg	15 54 56.2	-1.2
UON	**La Union**	2.18	305	eS	Sg	15 54 55.4	-2.8
TEJU	**Tejupilco**	2.19	355	eP	Pb	15 54 26.6	-0.6
TEJU				eS	Sg	15 54 54.6	-3.9
MAVM	**Malinalco, Edo**	2.28	11		Pn	15 54 25.0	+0.1
MAVM					Sn	15 54 53.4	+0.9
MAVM	**Malinalco, Edo**	2.28	11	eP	Pn	15 54 25.0	+0.1
MAVM				eS	Sn	15 54 53.4	+0.9
YAIG	**Yautepec**	2.30	21		Pn	15 54 25.4	+0.4
YAIG					Sb	15 54 55.9	-1.3
YAIG	**Yautepec**	2.30	21	eP	Pn	15 54 25.9	+0.8
YAIG				eS	Sb	15 54 55.9	-1.3
YOIG	**Yosondua**	2.31	86		Pn	15 54 26.5	+1.2
YOIG					Sn	15 54 54.3	+1.0
YOIG	**Yosondua**	2.31	86	eP	Pn	15 54 26.5	+1.2
YOIG				eS	Sn	15 54 54.3	+1.0
HLIG	**Huajuapan de L**	2.33	61		Pn	15 54 26.2	+0.7
HLIG					Sn	15 54 54.7	+0.8
HLIG	**Huajuapan de L**	2.33	61	eP	Pn	15 54 26.2	+0.7
HLIG				eS	Sn	15 54 54.7	+0.8
PPPT	**Popocatepetl**	2.58	29	eP	Pn	15 54 30.1	+0.8
PPPT				eS	Sg	15 55 08.0	-3.1
PBXN	**Popocatepetl**	2.60	28	eP	Pn	15 54 31.5	+2.0
PBXN				eS	Sb	15 55 06.6	+0.6
TLVM	**San Miguel Top**	2.60	17	eP	Pn	15 54 29.3	-0.1
TLVM				eS	Sn	15 55 02.7	+2.0
AOVM	**Tlapan**	2.61	13		Pn	15 54 31.5	+1.8
AOVM					Sb	15 55 04.5	-1.9
AOVM	**Tlapan**	2.61	13	eP	Pn	15 54 31.5	+1.8
AOVM				eS	Sb	15 55 04.5	-1.9
INVM	**La Marquesa**	2.62	12	eP	Pn	15 54 31.0	+1.3
INVM				eS	Sb	15 55 05.0	-1.7
PBCV	**Popocatepetl**	2.62	30	eP	Pb	15 54 32.0	-2.6
PBCV				eS	Sb	15 55 04.7	-2.0
MPVM	**San Francisco**	2.63	20	eP	Pb	15 54 33.3	-1.5
MPVM				eS	Sb	15 55 04.8	-2.0
PBPN	**Popocatepetl**	2.64	28	eP	Pn	15 54 31.1	+1.1
PBPN				eP	Pb	15 54 31.8	-3.2
PBPN				eS	Sb	15 55 05.8	-1.5
XCVM	**Xochimilco**	2.65	17	eP	Pn	15 54 31.7	+1.7
XCVM				eS	Sn	15 55 04.1	+2.2
PPIG	**Popocatepetl**	2.66	28		Pn	15 54 31.3	+0.9
PPIG					Sb	15 55 07.7	-0.2
PPM	**Popocatepetl**	2.66	28	eP	Pn	15 54 31.3	+0.9
PPM				eS	Sb	15 55 07.7	-0.2
UNM	**Universidad Na**	2.71	16	Pn	Pn	15 54 31.2	+0.4
UNM	**Universidad Na**	2.71	16	eP	Pb	15 54 34.2	-1.7
UNM				eS	Sb	15 55 05.8	-3.1
COVM	**Coyoacan**	2.73	16	eP	Pb	15 54 34.3	-2.1
COVM				eS	Sn	15 55 06.1	+2.2
BJVM	**Benito Juarez**	2.75	15	eP	Pb	15 54 34.0	-2.8
BJVM				eS	Sb	15 55 09.4	-0.9
PEIG	**Puerto Escondi**	2.78	104		Pn	15 54 32.9	+1.3
PEIG					Sn	15 55 02.7	-1.9
PEIG	**Puerto Escondi**	2.78	104	eP	Pn	15 54 32.9	+1.3
PEIG				eS	Sn	15 55 02.7	-1.9
VRVM	**Mexico City**	2.81	16	eP	Pb	15 54 35.1	-2.6
VRVM				eS	Sn	15 55 08.1	+2.3
CTVM	**Cuauhtemoc**	2.82	15	eP	Pb	15 54 36.1	-1.8
CTVM				eS	Sn	15 55 04.6	-1.4
PBVM	**Pinon**	2.84	17		Pn	15 54 32.3	-0.1
PBVM					Sn	15 55 04.5	-1.6
PBVM	**Pinon**	2.84	17	eP	Pn	15 54 32.3	-0.1
PBVM				eS	Sn	15 55 04.5	-1.6
APVM	**Azcapotzalco**	2.85	14		Pb	15 54 38.1	-0.3
APVM					Sn	15 55 09.1	+2.2
APVM	**Azcapotzalco**	2.85	14	eP	Pb	15 54 38.1	-0.3
APVM				eS	Sn	15 55 09.1	+2.2
TXVM	**Universitario**	2.88	20	eP	Pn	15 54 35.5	+2.3
TXVM				eS	Sb	15 55 13.0	-1.0
AZVM	**Cuida Lopez Ma**	2.93	12		Pb	15 54 36.8	-3.0
AZVM					Sb	15 55 12.8	-2.6
AZVM	**Cuida Lopez Ma**	2.93	12	eP	Pb	15 54 36.8	-3.0
AZVM				eS	Sb	15 55 12.8	-2.6
TPIG	**Tehuac#an**	3.00	55		Pn	15 54 35.3	+0.7
TPIG					Sb	15 55 17.2	0.0
TPIG	**Tehuac#an**	3.00	55	eP	Pn	15 54 35.3	+0.7
TPIG				eS	Sb	15 55 17.2	0.0
ATVM	**ATLACOMULCO**	3.04	2		Pn	15 54 37.7	+2.3
ATVM					Sn	15 55 12.9	+1.5
ATVM	**ATLACOMULCO**	3.04	2	eP	Pn	15 54 37.7	+2.3
ATVM				eS	Sn	15 55 12.9	+1.5
TOIG	**Toxpalan**	3.08	63		Pn	15 54 36.2	+0.4
TOIG					Sn	15 55 15.3	+3.1
TOIG	**Toxpalan**	3.08	63	eP	Pn	15 54 36.2	+0.4
TOIG				eS	Sn	15 55 15.3	+3.1
OXIG	**Oaxaca**	3.10	83		Pn	15 54 36.9	+0.8
OXIG					Sn	15 55 14.1	+1.3
VHO	**Vista Hermosa**	3.10	83	eP	Pn	15 54 36.9	+0.8
VHO				eS	Sn	15 55 14.1	+1.3
OXBJ	**Oaxaca**	3.11	83		Pn	15 54 37.9	+1.7
OXBJ					Sn	15 55 13.1	+0.1
OXBJ	**Oaxaca**	3.11	83	eP	Pn	15 54 37.9	+1.7
OXBJ				eS	Sn	15 55 13.1	+0.1
OXLC	**Oaxaca**	3.12	83	eP	Pn	15 54 35.1	-1.4
OXLC				eS	Sn	15 55 13.5	+0.1
MOIG	**Morelia**	3.18	338	Pn	Pn	15 54 37.4	+0.2
MOIG	**Morelia**	3.18	338	eP	Pb	15 54 41.1	-3.0
MOIG				eS	Sb	15 55 21.2	-1.4
ZUVM	**ZUMPANGO**	3.21	15		Pn	15 54 38.4	+0.7
ZUVM					Sn	15 55 17.0	+1.4
ZUVM	**ZUMPANGO**	3.21	15	eP	Pn	15 54 38.4	+0.7
ZUVM				eS	Sn	15 55 17.0	+1.4
VTVM	**Tizayuca**	3.24	20		Pn	15 54 41.2	+3.0
VTVM					Sn	15 55 17.3	+0.8
VTVM	**Tizayuca**	3.24	20	eP	Pn	15 54 41.2	+3.0
VTVM				eS	Sn	15 55 17.3	+0.8
ACIG	**Acambay**	3.25	1		Pn	15 54 41.2	+2.9
ACIG					Sn	15 55 18.4	+1.7
ACIG	**Acambay**	3.25	1	eP	Pn	15 54 41.2	+2.9
ACIG				eS	Sn	15 55 18.4	+1.7
MMIG	**Aquila**	3.60	296		Pn	15 54 44.8	+1.9
MMIG					Sn	15 55 26.7	+1.7
MMIG	**Aquila**	3.60	296	eP	Pn	15 54 44.8	+1.9
MMIG				eS	Sn	15 55 26.7	+1.7
DHIG	**Demacu**	3.67	13		Pn	15 54 46.5	+2.4
DEIG	**Demacu**	3.68	13	eP	Pn	15 54 46.5	+2.4
HUIG	**Huatulco**	3.80	104		Pn	15 54 45.7	0.0
HUIG					Sn	15 55 26.5	-3.4
HUIG	**Huatulco**	3.80	104	eP	Pn	15 54 45.7	0.0
HUIG				eS	Sn	15 55 26.5	-3.4
JAUV	**Jalcomulco**	3.99	48	eP	Pn	15 54 49.0	+0.8
JAUV				eS	Sn	15 55 39.6	+5.0
NEUV	**Arroyo Zacate**	4.08	75	eP	Pn	15 54 50.0	+0.5
NEUV				eS	Sn	15 55 37.3	+0.4
CXUV	**Coxquihui**	4.11	33	eP	Pn	15 54 51.5	+1.7
CXUV				eS	Sb	15 55 43.5	-5.6
IGIG	**Irapuato, Guan**	4.23	342		Pn	15 54 53.8	+2.1
IGIG					Sn	15 55 43.2	+2.5
IGIG	**Irapuato, Guan**	4.23	342	eP	Pn	15 54 53.8	+2.1
IGIG				eS	Sn	15 55 43.2	+2.5
MNGA	**Volcan de Coli**	4.44	309	eP	Pn	15 54 59.4	+4.7
MNGA				eS	Sn	15 55 49.9	+3.9
CDAR	**Ciudad de Arme**	4.46	300	eP	Pn	15 55 00.0	+5.3
CDAR				eS	Sn	15 55 50.3	+4.1
INCO	**Volcan de Coli**	4.47	309	eP	Pn	15 54 59.2	+4.0
INCO				eS	Sn	15 55 52.9	+6.0
SOMAC	**Volcano de Col**	4.48	309	eP	Pn	15 54 57.3	+2.0
SOMAC				eS	Sn	15 55 50.5	+3.3
CEGR	**Campo Tres**	4.58	306	eP	Pn	15 54 58.8	+2.4
CEGR				eS	Sn	15 55 47.8	-1.5
CMIG	**Matias Romero**	4.86	85		Pn	15 55 01.2	+1.0
CMIG					Sn	15 56 03.6	+7.6
CMIG	**Matias Romero**	4.86	85	eP	Pn	15 55 01.2	+1.0
CMIG				eS	Sn	15 56 03.6	+7.6
PMUV	**Sontecomapan**	4.95	68	eP	Pb	15 55 11.7	-2.4
PMUV				eS	Sn	15 56 05.6	+7.2
CTUV	**Llano Grande**	4.97	17	eP	Pn	15 55 04.7	+3.0
CTUV				eS	Sn	15 56 04.7	+6.0
RPIG	**Rio Verde**	5.15	360		Pn	15 55 06.9	+2.6
RPIG	**Rio Verde**	5.15	360	eP	Pn	15 55 06.9	+2.6
CIHU	**Emiliano Zapat**	5.22	300	eP	Pn	15 55 04.6	-0.5
CIHU				eS	Sn	15 56 07.2	+2.3
TUIG	**Tuzandepetl**	5.44	75	eP	Pn	15 55 03.5	-4.6
CJM	**Chamela**	5.59	301	eP	Pn	15 55 15.7	+5.5
CJM				eS	Sn	15 56 16.6	+2.7
AAIG	**Aguscalientes**	5.71	337		Pn	15 55 10.8	-1.3
AAIG	**Aguscalientes**	5.71	337	eP	Pn	15 55 10.8	-1.3
ANIG	**Ahuacatlan**	6.12	316		Sn	15 56 28.4	+1.3
ANIG	**Ahuacatlan**	6.12	316	eS	Sn	15 56 28.4	+1.3
GTIG	**Gomez Farias**	6.37	6		Pn	15 55 26.7	+5.8
GTIG	**Gomez Farias**	6.37	6	eP	Pn	15 55 26.7	+5.8
ZAIG	**Zacatecas**	6.51	338	eP	Pn	15 55 26.9	+3.7
ZAIG				eS	Sn	15 56 42.3	+5.1
TGIG		6.54	88		Pn	15 55 29.3	+6.0
TGIG					Sn	15 56 45.0	+7.5
TGIG		6.54	88	eP	Pn	15 55 29.3	+6.0
TGIG				eS	Sn	15 56 45.0	+7.5
VHRN	**Van Horn**	14.75	343	Pn	Pn	15 57 15.6	-0.2
CSTR	**Hydro, Custer**	18.89	3	P	P	15 58 07.7	+0.2
CSTR				IAmb	IAmb	15 58 31.9	
	comp=Z,1.2nm,0.4s						
DR12	**Loma Pena Alta**	29.17	81	P	P	15 59 48.8	+0.3
SDMD	**Soldier's Deli**	30.29	37	P	P	15 59 59.0	+0.9
SDMD				IAmb	IAmb	16 00 27.7	
	comp=Z,9.1nm,1.0s						

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*IDC **09** 16:02:02.5±0.8, 23.°94N×122.°54E, h0^{km}, mb3.8/10, mbtmp3.8/11, ML3.3/1, Error ellipse: s-maj=29.1km s-min=16.6km az=74.0*

*NEIC **09** 16:02:07.4±0.8, 23.°94N±0.°06×122.°86E±0.°08, h33^{km}±2^{km}, mb4.1/11, Error ellipse: s-maj=11.5km s-min=5.8km az=124.0*

*ASIES **09** 16:02:09.3, 24.°07N×122.°66E, h33^{km}, ML4.1, Mw3.6, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}2.98; $M_{\theta\theta}$-2.23; $M_{\phi\phi}$-0.76; $M_{r\theta}$1.45; $M_{\theta\phi}$-1.32; $M_{\phi r}$0.89; Fault plane solution: $M_0$3.43953×10^{21} NP1: ϕ_s240.15000°, δ30.24000°, λ90.94000°. NP2: ϕ_s59.06000°, δ59.76000°, λ89.45000°. Principal axes: T Plg75.2290°, Azm327.5420°; N Plg0.4730°, Azm59.3380°; P Plg14.7630°, Azm149.4630°;*

*JMA **09** 16:02:09.2±0.1, 24.°1N±0.°8×122.°6E±0.°6, h32^{km}, MV3.6/13, NW OFF ISHIGAKIJIMA IS*

*TAP **09** 16:02:09.3, 24.°07N×122.°66E, h33^{km}, ML4.1, C*

ISC 09 16:02:05.8±0.9**, 24.°01N**±0.°02×**122.°67E**±0.°02**, h19**^{km}±3^{km}**, n220, σ1.^{s}43**/346**, mb3.9**/15**, 25C-12D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS4	**EOS4**	0.34	288	⇓iP	Pn	16 02 17.3	+1.8
EOS4				S	Sn	16 02 22.7	+1.0
EOS3	**EOS3**	0.42	310	⇓iP	Pn	16 02 18.6	+1.8
EOS3				S	Sn	16 02 24.9	+0.9
JYNG	**Yonagunijimaku**	0.50	30	P	Pn	16 02 19.3	+1.3
JYNG				S	Sn	16 02 26.6	+0.4
YOJ	**Yonaguni jima**	0.54	35		Pn	16 02 19.0	+0.4
YOJ				Sn	Sn	16 02 26.9	-0.4
YOJ	**Yonaguni jima**	0.54	35	P	Pn	16 02 19.7	+1.1
YOJ	**Yonaguni jima**	0.54	35	S	Sn	16 02 28.3	+1.1
YOJ	**Yonaguni jima**	0.54	35	P	Pn	16 02 19.9	+1.3
YOJ	**Yonaguni jima**	0.54	35	S	Sn	16 02 28.4	+1.2
YOJ	**Yonaguni jima**	0.54	35	P	Pn	16 02 20.0	+1.3
YOJ				S	Sn	16 02 27.8	+0.6
YOJ	**Yonaguni jima**	0.54	35	⇓iP	Pn	16 02 20.0	+1.3
YOJ				S	Sn	16 02 27.9	+0.6
EOS2	**EOS2**	0.57	315	⇓iP	Pn	16 02 21.0	+2.2
EOS2				eS	Sn	16 02 29.2	+1.5
EAHA	**Aohua**	0.91	290	eP	Pn	16 02 25.9	+2.3
EAHA				eS	Sn	16 02 38.8	+2.6
EWUT	**Wuta**	0.92	298	eP	Pn	16 02 25.9	+2.1
EWUT				eS	Sn	16 02 38.7	+2.2
ESAO	**Su ao**	0.94	307	⇓P	Pg	16 02 26.1	+2.0
ESAO				eS	Sn	16 02 39.6	+2.7
ENA	**Nanau**	0.94	296	⇑iP	Pg	16 02 26.2	+2.0
TWC	**Suao**	0.95	309	⇓P	Pg	16 02 26.2	+1.8
TWC				eS	Sn	16 02 38.7	+1.3
ETL	**Fush Village**	0.97	279	eP	Pg	16 02 26.4	+1.7
ETL				eS	Sn	16 02 39.7	+1.9
HWA	**Hwalien**	0.97	268	eP	Pg	16 02 26.7	+1.9
HWA				eS	Sn	16 02 39.5	+1.7
TWD	**Chiawan**	0.98	274	⇑iP	Pg	16 02 26.3	+1.4
TWD				eS	Sn	16 02 38.2	+0.1
TEYL	**Yanliau Villag**	0.99	262	eP	Pg	16 02 26.6	+1.5
TEYL				S	Sg	16 02 39.3	+1.1
NACB	**Ninganchiao**	0.99	279		Pg	16 02 26.6	+1.4
NACB	**Ninganchiao**	0.99	279	P	Pg	16 02 26.4	+1.2
NACB	**Ninganchiao**	0.99	279	⇑iP	Pg	16 02 26.7	+1.4
NACB				eS	Sg	16 02 39.9	+1.6
IRIF	**Iriomote-Funau**	1.02	71	P	Pg	16 02 28.0	+2.3
IRIF				S	Sg	16 02 42.5	+3.4
SHUL	**Shoufeng**	1.04	258	⇑P	Pg	16 02 27.3	+1.3
SHUL				eS	Sg	16 02 40.8	+1.1
HATJ	**Hateruma jima**	1.04	87	P	Pg	16 02 29.3	+3.3
EGS		1.07	321	eP	Pg	16 02 27.7	+1.1
NDS	**Dongshan**	1.07	306	P	Pg	16 02 27.5	+1.0
ETM	**Tongmen**	1.08	268	⇑iP	Pg	16 02 27.6	+0.8
ETM				eS	Sn	16 02 41.0	+0.5
TEGC	**Jichi Village**	1.08	254	eP	Pg	16 02 27.9	+1.2
TEGC				eS	Sn	16 02 41.0	+0.6
ETLH	**Xiulin Townshi**	1.10	280	⇑iP	Pg	16 02 28.4	+1.2
ETLH				eS	Sg	16 02 42.4	+0.7
ILA	**Ilan**	1.13	312	eP	Pg	16 02 29.7	+2.0
ILA				eS	Sg	16 02 43.6	+1.1
NTC	**Toucheng**	1.14	318	eP	Pg	16 02 29.2	+1.4
ESL	**Shilin**	1.15	260	⇑iP	Pb	16 02 28.3	+1.2
ESL				eS	Sb	16 02 42.1	+0.4
TWE	**Neicheng**	1.15	308	⇑iP	Pg	16 02 29.7	+1.5
TWE				eS	Sg	16 02 44.8	+1.4
LATG	**Datong**	1.17	297	⇑iP	Pg	16 02 29.7	+1.3
TWB1	**Santiao Chiao**	1.17	328	⇓iP	Pg	16 02 29.0	+0.5
TWB1				eS	Sg	16 02 44.7	+0.9
ENTT	**Nioudou**	1.18	302	⇑iP	Pg	16 02 30.1	+1.4
EGFH	**Guangfu**	1.19	253	eP	Pg	16 02 29.6	+0.8
EGFH				eS	Sn	16 02 43.9	+0.7
WARBT	**Fenglin Townsh**	1.21	256	⇑iP	Pb	16 02 29.2	+1.0
WARBT				S	Sb	16 02 44.0	+0.5
TIPB	**Shuangxi**	1.23	321	P	Pg	16 02 30.2	+0.6
FUSB	**Fushanzhiwuyua**	1.23	307	⇑iP	Pg	16 02 31.1	+1.4
FUSB				eS	Sg	16 02 47.5	+1.5
JKRS	**Kuro-shima**	1.24	79	P	Pg	16 02 31.9	+2.0
NNSB	**Datong**	1.25	290	⇑iP	Pg	16 02 30.7	+0.7
NNSB				S	Sg	16 02 46.5	+0.2
HGSD	**Ruisui**	1.25	246	⇓P	Pb	16 02 29.9	+1.0
HGSD				eS	Sn	16 02 44.8	0.0
NNS	**Nan Shan**	1.26	290	eP	Pg	16 02 30.8	+0.6
WHF	**Hehuan Shan**	1.29	276	eP	Pg	16 02 31.3	+0.4
SXI1	**Grass Mountain**	1.30	326	⇓P	Pg	16 02 31.1	+0.1
SXI1				eS	Sg	16 02 46.5	-1.4
NWLT	**Wulai**	1.31	306	eP	Pg	16 02 32.0	+0.9
NWLT				eS	Sg	16 02 49.1	+0.9
ECBN	**Changbin**	1.31	238	eP	Pb	16 02 31.2	+1.2
ECBN				eS	Sn	16 02 46.6	+0.3
EHYH	**Wanrong**	1.32	247	eP	Pb	16 02 31.5	+1.5
EHYH				eS	Sb	16 02 47.5	+0.9
FUSS	**Fushou**	1.32	280	⇑P	Pg	16 02 31.9	+0.4
FUSS				eS	Sg	16 02 48.9	+0.1
NWF	**Wu-fen Shan**	1.33	323	eP	Pg	16 02 31.9	+0.4
NWF				eS	Sb	16 02 47.4	+0.5
WFSB	**Wu-fen Shan**	1.33	323	⇓P	Pg	16 02 31.8	+0.3
WFSB				eS	Sb	16 02 47.2	+0.3
EHY	**Hungye**	1.33	248	⇑P	Pb	16 02 31.6	+1.3
EHY				eS	Sn	16 02 47.7	+1.0
YHNB	**Yeheng**	1.35	299		Pg	16 02 32.4	+0.5
YHNB	**Yeheng**	1.35	299	P	Pg	16 02 32.3	+0.3
YHNB	**Yeheng**	1.35	299	P	Pg	16 02 32.2	+0.3
YHNB	**Yeheng**	1.35	299	⇑iP	Pg	16 02 32.5	+0.5
NSK	**Sanguang**	1.37	299	eP	Pg	16 02 32.7	+0.5
OWD	**Renai**	1.37	268	eP	Pg	16 02 32.4	+0.1
OWD				eS	Sb	16 02 48.6	+0.5
TWA	**Mucha**	1.38	314	P	Pg	16 02 32.9	+0.4
TWA				eS	Sg	16 02 50.7	+0.2
TWT	**Tachien**	1.39	280	eP	Pg	16 02 33.3	+0.7
JIJ	**Ishigaki jima**	1.39	75	iP	Pg	16 02 33.1	+0.4
JIJ				eS	Sg	16 02 51.4	+0.6
TNOU	**National Taiwa**	1.40	324	⇑iP	Pg	16 02 32.4	-0.4
TNOU				eS	Sg	16 02 49.8	-1.3
TDCB	**Techi**	1.40	280	eP	Pg	16 02 33.2	+0.3
YULB	**Yu-li**	1.40	244		Pb	16 02 32.4	+1.0
YULB	**Yu-li**	1.40	244	P	Pb	16 02 32.4	+1.0
YULB	**Yu-li**	1.40	244	S	Sb	16 02 50.5	+1.5
YULB	**Yu-li**	1.40	244	P	Pb	16 02 32.9	+1.5
YULB	**Yu-li**	1.40	244	S	Sb	16 02 50.1	+1.1
YULB	**Yu-li**	1.40	244	⇓P	Pb	16 02 32.3	+0.9
YULB				S	Sn	16 02 49.3	+0.8
NHDH	**Xindian Distri**	1.41	312	eP	Pg	16 02 33.4	+0.4
NHDH				eS	Sg	16 02 51.9	+0.5
TWF1	**Yuli**	1.42	243	⇑iP	Pb	16 02 32.7	+0.9
TWF1				eS	Sb	16 02 50.5	+1.0
WUSB	**Renai**	1.42	269	⇑iP	Pg	16 02 33.3	0.0
WUSB				eS	Sb	16 02 50.5	+0.9
VWDT	**VWDT**	1.42	260	⇑P	Pg	16 02 33.4	+0.1
VWDT				S	Sb	16 02 50.4	+0.8
CHKH	**Chenggong**	1.43	235	eP	Pn	16 02 32.1	+1.4
CHKH				eS	Sn	16 02 48.6	-0.5
TATO	**Taipei**	1.44	312		Pg	16 02 33.5	-0.1
TAP	**Taipei**	1.47	314	eP	Pg	16 02 34.1	-0.1
TAP				eS	Sg	16 02 52.9	-0.5
FULB	**Fuli**	1.50	238	eP	Pn	16 02 33.3	+1.5
FULB				eS	Sn	16 02 52.0	+1.1
CHKT	**Chengkung**	1.50	233	eP	Pn	16 02 33.2	+1.3
CHKT				eS	Sn	16 02 50.5	-0.4
YM08	**YM08**	1.53	320	eP	Pg	16 02 34.6	-0.7
ZUZH	**Zhuzihu**	1.54	318	eP	Pb	16 02 34.5	+0.8
NFF	**Wufeng Townshi**	1.54	294	eP	Pg	16 02 35.4	-0.2
NFF				eS	Sg	16 02 55.0	-0.8
KSHI	**Guanxi Townshi**	1.56	299	eP	Pg	16 02 36.2	+0.3
SSLB	**Suanglung**	1.59	262		Pb	16 02 35.7	+1.0
SSLB	**Suanglung**	1.59	262	P	Pb	16 02 35.6	+1.0
SSLB	**Suanglung**	1.59	262	P	Pb	16 02 35.8	+1.2
SSLB	**Suanglung**	1.59	262	eP	Pb	16 02 35.6	+1.0
SSLB				eS	Sb	16 02 55.4	+1.1
TWY	**Chenhua**	1.59	322	eP	Pg	16 02 35.7	-0.8
TWY				eS	Sb	16 02 55.0	+0.6
EHD	**Haiduan**	1.59	238	eP	Pb	16 02 35.0	+0.2
EHD				eS	Sn	16 02 53.9	+0.7
NTST	**Danshui**	1.60	316	eP	Pg	16 02 36.0	-0.6
WHP	**Taichung City**	1.60	280	eP	Pg	16 02 36.3	-0.3
WHP				eS	Sg	16 02 57.1	-0.3
JISG	**Ishigakijimahi**	1.60	69	iP	Pb	16 02 36.0	+1.1
WCS	**Beigang Elemen**	1.61	272	eP	Pb	16 02 36.2	+1.2
WCS				eS	Sg	16 02 59.7	+1.9
ECS	**Chishang**	1.61	236	eP	Pb	16 02 35.6	+0.5
ECS				eS	Sb	16 02 55.7	+0.6
SMLT	**Sun Moon Lake**	1.62	266	P	Pb	16 02 36.5	+1.2
SMLT				eS	Sb	16 02 56.0	+0.5
EDH	**Donghe**	1.63	231	eP	Pn	16 02 34.9	+1.4
EDH				eS	Sn	16 02 52.6	-1.4
LIOB	**Emei**	1.64	293	eP	Pg	16 02 37.3	0.0
NSTT	**Nanjuang**	1.64	292	⇑P	Pg	16 02 37.2	-0.2
NSTT				eS	Sb	16 02 56.7	+0.8
NCU	**National Centr**	1.65	305	eP	Pg	16 02 37.0	-0.7
NCUH	**Zhongli**	1.65	305	eP	Pg	16 02 36.9	-0.8
TYC	**Yuchr**	1.66	267	⇑P	Pb	16 02 36.9	+1.0
WHYT	**Xinyi Township**	1.69	260	eP	Pb	16 02 37.7	+1.2
WHYT				eS	Sb	16 02 58.3	+0.9
SBCB	**Hsinchu**	1.72	297	eP	Pb	16 02 38.1	+1.2
ELDTW	**Lidau**	1.72	242	⇓P	Pn	16 02 36.8	+1.9
LDUT	**Ludao**	1.73	220	eP	Pn	16 02 36.4	+1.5
LDUT				eS	Sn	16 02 55.6	-0.9
HSN	**Hsinchu**	1.74	297	eP	Pb	16 02 37.8	+0.7
TWQ1	**Liyutan**	1.76	281	eP	Pg	16 02 39.2	-0.5
TWQ1				eS	Sb	16 03 00.7	+1.3
ALS	**Alishan**	1.78	254	⇑P	Pb	16 02 39.2	+1.1
ALS				eS	Sb	16 03 00.3	+0.1
WJS	**Zhushan**	1.79	264	eP	Pg	16 02 40.1	-0.1
WJS				eS	Sg	16 03 03.8	+0.3
NSY	**Sanyi**	1.79	283	⇑iP	Pg	16 02 39.9	-0.4
NSY				S	Sg	16 03 02.4	-1.1
NMLH	**Miaoli**	1.79	287	eP	Pb	16 02 39.6	+1.5
NMLH				eS	Sg	16 03 02.2	-1.4
LONT	**Longtian**	1.79	232	eP	Pn	16 02 37.9	+2.1
LONT				eS	Sn	16 02 59.0	+0.9
WNT	**Mingjian**	1.82	266	eP	Pg	16 02 40.5	-0.4
WNT				eS	Sb	16 03 02.9	+1.8
TCU	**Taichung**	1.83	275	eP	Pb	16 02 40.3	+1.6
TCU				eS	Sg	16 03 03.6	-1.2
TTN	**Taitung**	1.88	228	eP	Pb	16 02 40.0	+0.5
TTN				eS	Sb	16 03 03.1	+0.4
WDJ	**Dajia District**	1.88	281	eP	Pb	16 02 41.1	+1.5
TWGBT	**Beinan**	1.88	231	P	Pn	16 02 38.9	+1.9
TWGBT	**Beinan**	1.88	231	P	Pn	16 02 39.0	+1.9
TWGBT	**Beinan**	1.88	231	eP	Pn	16 02 38.9	+1.9
TWGBT				eS	Sn	16 03 01.1	+0.8
TWG	**Pinlang**	1.89	231		Pn	16 02 38.9	+1.8
TWG	**Pinlang**	1.89	231	eP	Pn	16 02 38.9	+1.8

TWG				*e*S	Sn	16 03 01.0	+0.6
STYH	**Taoyuan**	1.93	245	*e*P	Pn	16 02 39.1	+1.5
STYH				*e*S	Sn	16 03 02.0	+0.6
WCHH	**Zhanghua**	1.93	272	*e*P	Pb	16 02 41.6	+1.1
WCHH				*e*S	Sb	16 03 05.8	+1.6
WCH1	**Changhua City**	1.94	272	*e*P	Pb	16 02 40.7	+0.1
WCH1				*e*S	Sb	16 03 06.7	+2.2
JTJ	**Tarama**	1.96	71	P	Pb	16 02 41.8	+0.9
WGK	**Gukeng**	1.96	261	*e*P	Pb	16 02 42.4	+1.5
WGK				*e*S	Sb	16 03 07.2	+2.2
WDL	**Douliou City**	1.97	262	*e*S	Sb	16 03 07.7	+2.2
WCKO	**Fanlu**	1.98	254	*e*P	Pb	16 02 42.9	+1.6
WCKO				*e*S	Sb	16 03 06.8	+1.3
WDLH	**Douliu**	1.98	261	*e*P	Pb	16 02 42.6	+1.3
WDLH				*e*S	Sb	16 03 08.1	+2.5
TPUB	**Ta-pu**	2.00	250		Pb	16 02 41.7	+0.1
TPUB	**Ta-pu**	2.00	250	P	Pb	16 02 42.4	+0.7
TPUB	**Ta-pu**	2.00	250	S	Sb	16 03 08.3	+2.1
TPUB	**Ta-pu**	2.00	250	P	Pb	16 02 43.0	+1.3
TPUB	**Ta-pu**	2.00	250	*e*P	Pb	16 02 42.9	+1.3
TPUB				*e*S	Sb	16 03 07.0	+0.8
CHN4	**Tsaushan**	2.02	251	*e*P	Pb	16 02 43.6	+1.7
CHN4				*e*S	Sb	16 03 07.9	+1.3
WTP	**Ta-pu**	2.03	248	*e*P	Pb	16 02 43.1	+0.8
WTP				*e*S	Sb	16 03 08.4	+1.2
CHN2	**Minshiung**	2.07	257	*e*P	Pb	16 02 44.2	+1.5
CHN2				*e*S	Sb	16 03 10.0	+1.9
WTK	**Tuku**	2.11	262	*e*P	Pb	16 02 44.7	+1.2
WTK				*e*S	Sb	16 03 10.8	+1.4
ECL	**Taimali**	2.12	229	*e*P	Pn	16 02 41.9	+1.7
ECL				*e*S	Sn	16 03 05.9	-0.1
CHY	**Chiayi**	2.12	256	*e*P	Pb	16 02 44.4	+0.7
CHY				*e*S	Sb	16 03 10.4	+0.8
SGST	**Jiashian**	2.13	245	*e*P	Pb	16 02 44.3	+0.5
SGST				*e*S	Sb	16 03 10.0	+0.1
CHN1	**Nanshi**	2.13	248	*e*P	Pb	16 02 44.8	+0.9
CHN1				*e*S	Sb	16 03 10.7	+0.7
TWK	**Hsinying**	2.13	250	⇑P	Pb	16 02 44.9	+0.9
TWK				*e*S	Sb	16 03 10.5	+0.3
SNST	**Tainan City**	2.14	249	*e*P	Pb	16 02 44.9	+0.8
SNST				*e*S	Sb	16 03 11.1	+0.8
WTCT	**Ta-ch'eng**	2.19	267	*e*P	Pb	16 02 44.9	+0.1
WTCT				*e*S	Sb	16 03 12.1	+0.5
LAY	**Lan-yu**	2.22	208	*e*P	Pn	16 02 42.4	+0.7
LYUB	**Lan-yu**	2.24	207	*e*P	Pn	16 02 42.6	+0.7
LYUB				*e*S	Sn	16 03 07.4	-1.7
SSD	**Sandimen**	2.26	236	*e*P	Pb	16 02 45.2	-0.9
SSD				*e*S	Sn	16 03 12.0	+2.5
WSF	**Szhu**	2.27	261	*e*P	Pb	16 02 46.4	+0.1
WSF				*e*S	Sb	16 03 14.7	+0.6
ICHU	**Yijhu**	2.29	254	*e*P	Pb	16 02 46.7	+0.2
ICHU				*e*S	Sb	16 03 14.2	-0.2
WSL	**Shuilin Townsh**	2.29	258	*e*P	Pb	16 02 46.6	0.0
WSL				*e*S	Sb	16 03 14.1	-0.4
SCST	**Cishan**	2.29	241	*e*P	Pb	16 02 47.4	+0.8
SCST				*e*S	Sb	16 03 15.7	+1.1
CHN3	**Shinhua**	2.31	247	*e*P	Pb	16 02 48.6	+1.7
CHN3				*e*S	Sb	16 03 16.8	+1.6
TAW	**Tawu**	2.32	225	*e*P	Pn	16 02 45.1	+2.1
TAW				*e*S	Sn	16 03 11.8	+0.7
EAST	**Anshuo**	2.33	226	*e*P	Pn	16 02 45.2	+2.0
MASBT	**Mashibuluo**	2.33	234	*e*P	Pn	16 02 45.9	+2.7
MASBT				*e*S	Sb	16 03 15.9	+0.1
TAWH	**Dawu Township**	2.34	225	*e*P	Pn	16 02 45.8	+2.5
TAWH				*e*S	Sn	16 03 12.3	+0.8
CHN8	**Yiju**	2.35	254	*e*P	Pb	16 02 47.4	-0.2
CHN8				*e*S	Sb	16 03 15.7	-0.6
SSHA	**Shanhua**	2.35	249	*e*S	Sb	16 03 16.9	+0.6
SGLT	**Jiouru**	2.38	238	*e*P	Pb	16 02 49.6	+1.5
SGLT				*e*S	Sb	16 03 20.1	+3.0
TWM1	**Shoushan**	2.38	241	*e*P	Pb	16 02 49.7	+1.6
TWM1				*e*S	Sb	16 03 19.9	+2.8
SCLT	**Jiali**	2.42	250	*e*S	Sb	16 03 18.3	+0.1
JIRB	**Irabujima**	2.42	70	P	Pb	16 02 48.9	+0.1
SLIU	**Shizi**	2.48	224	*e*P	Pn	16 02 47.2	+1.9
SCZT	**Fangliau**	2.50	230	*e*P	Pb	16 02 48.9	-1.2
SCZT				*e*S	Sb	16 03 19.6	-0.9
JMJ	**Miyako jima 2**	2.52	71	P	Pb	16 02 51.1	+0.6
TSCK	**Chigu Township**	2.52	251	*e*P	Pb	16 02 49.7	-0.8
TSCK				*e*S	Sb	16 03 19.6	-1.6
WSSB	**Gushan**	2.60	239	*e*P	Pb	16 02 52.4	+0.5
SMST	**Manzhou Townsh**	2.60	221	*e*P	Pn	16 02 49.9	+2.9
SMST				*e*S	Sn	16 03 19.1	+1.0
TSEB	**Hengchuen, Pin**	2.66	218	*e*P	Pb	16 02 51.6	-1.3
TSEB				*e*S	Sn	16 03 22.8	+3.2
HEN	**Hengchun**	2.68	222	*e*P	Pn	16 02 51.3	+3.3
HEN				*e*S	Sn	16 03 22.2	+2.3
TWKBT	**Hengchun**	2.68	220	*e*P	Pn	16 02 50.7	+2.7
TWKBT				*e*S	Sn	16 03 21.5	+1.5
TWK1	**Hengchun**	2.68	220	*e*P	Pn	16 02 51.0	+3.0
TWK1				*e*S	Sn	16 03 21.8	+1.7
WDGT	**Dungji**	2.86	255	*e*P	Pn	16 02 53.8	+3.3
WDGT				*e*S	Sn	16 03 26.3	+1.9
PHUB	**P'eng-hu**	2.88	261	*e*P	Pn	16 02 54.0	+3.3
PHUB				*e*S	Sn	16 03 26.9	+2.0
PNG	**Penghu**	2.89	262	*e*P	Pn	16 02 54.2	+3.3
PNG				*e*S	Sn	16 03 27.0	+1.9
VCHM	**Qimei**	3.08	256	*e*P	Pn	16 02 56.8	+3.3
VCHM				*e*S	Sn	16 03 32.2	+2.4
MATB	**Ma-tsu**	3.26	311	*e*P	Pn	16 02 57.9	+1.9
MATB				*e*S	Sn	16 03 34.4	+0.1
PTMZ	**Houxiangcun**	3.39	288	*e*P	Pn	16 02 59.7	+2.0
PTMZ				*e*S	Sn	16 03 37.0	-0.5
XPSS	**Dashiqiu**	3.67	323	*e*P	Pn	16 03 03.5	+1.9
KNM	**Kinmen**	3.89	277	*e*P	Pn	16 03 08.7	+4.0
KNM				*e*S	Sn	16 03 51.1	+1.3
MHZQ	**Yeshan**	3.90	303	*e*P	Pn	16 03 06.7	+1.9
MHZQ				*e*S	Sn	16 03 48.6	-1.5
KNMB	**Chin-men Tao**	3.93	277	Pn	Pn	16 03 07.2	+2.0
KNMB	**Chin-men Tao**	3.93	277	*e*P	Pn	16 03 07.1	+1.8
KNMB				*e*S	Sn	16 03 50.4	-0.5
AXDP	**Jialang**	4.37	283	*e*P	Pn	16 03 13.2	+1.9
AXDP				*e*S	Sn	16 04 00.7	-1.0
ZPLA	**Ao Xicun**	4.50	270	*e*P	Pn	16 03 15.1	+2.0
ZPLA				*e*S	Sn	16 04 04.5	-0.4
DSXP	**Dongshan**	4.81	267	*e*P	Pn	16 03 19.9	+2.6
DSXP				*e*S	Sn	16 04 11.4	-1.1
SXFK	**Yanhouchang**	5.13	299	*e*P	Pn	16 03 24.9	+3.1
JOW	**Kunigami**	5.79	60	Pn	Pn	16 03 32.3	+1.5
	1.6nm,0.3s,baz=120,slow=17,SNR=6.5						
JOW				Sn	Sn	16 04 41.3	+4.5
	0.8nm,0.3s,baz=291,slow=28,SNR=1.5						
	17nm,0.8s						
KSAR	**Wonju Array Be**	14.11	17	P	P	16 05 31.7	-0.6
KSRS	**Korea Array**	14.13	17	Pn	P	16 05 28.9	-3.6
	0.9nm,0.3s,baz=198,slow=11,SNR=47						
KS19	**Wonju Array Si**	14.16	17	P	P	16 05 32.8	-0.1
BJT	**Baijiatuau**	16.87	343	Pn	Pn	16 06 01.4	+0.4
BJT				IAmb	IAmb	16 06 44.1	
	comp=Z,5.1nm,0.4s						
MAJO	**Matsushiro**	18.30	43		Pn	16 06 18.0	-0.8
MJB9	**Matsu-Tunnel**	18.30	43		Pn	16 06 17.4	-1.3
MJB9				IAmb	IAmb	16 06 54.5	
	comp=Z,13nm,1.4s						
USRK	**Ussuriysk Ar.**	21.54	18	P	P	16 06 53.7	-0.2
	comp=Z,1.2nm,0.7s,baz=183,slow=9.5,SNR=4.2						
	comp=Z,1.2nm,0.7s						
LUWI	**Luwuk**	24.91	180	P	P	16 07 26.1	-1.7
SONM	**Songino Array**	27.07	335	P	P	16 07 46.3	-1.1
	comp=Z,0.4nm,0.6s,baz=143,slow=8.3,SNR=3.1						
	comp=Z,0.4nm,0.6s						
LSA	**Lhasa**	28.63	288	P	P	16 08 01.2	-0.7
LSA				IAmb	IAmb	16 08 02.7	
	comp=Z,4.3nm,0.4s						
MKAR	**Makanchi Array**	39.41	315	P	P	16 09 34.8	+0.3
MKAR	**Makanchi Array**	39.41	315	P	P	16 09 34.1	-0.4
	comp=Z,0.4nm,0.5s,baz=101,slow=9.0,SNR=8.7						
	comp=Z,0.4nm,0.5s						
MAKZ	**Makanchi**	39.61	315	P	P	16 09 36.2	0.0
MAKZ				IAmb	IAmb	16 09 41.7	
	comp=Z,2.5nm,1.2s						
FITZ	**Fitzroy Crossi**	41.96	176	P	P	16 09 52.3	-3.4
FITZ	**Fitzroy Crossi**	41.96	176	P	P	16 09 52.6	-3.1
	comp=Z,1.1nm,0.7s,baz=0.5,slow=8.6,SNR=1.4						
	comp=Z,1.1nm,0.7s						
WB0	**Warramunga Arr**	44.99	164	P	P	16 10 17.9	-2.3
WB0				IAmb	IAmb	16 10 43.3	
	comp=Z,9.4nm,1.4s						
WRAB	**Tennant Creek**	45.14	164	P	P	16 10 19.3	-2.1
WRAB				IAmb	IAmb	16 10 55.1	
	comp=Z,10nm,1.3s						
WRA	**Warramunga Arr**	45.15	164	P	P	16 10 19.8	-1.7
	comp=Z,0.4nm,0.7s,baz=343,slow=9.9,SNR=6.0						
	comp=Z,0.4nm,0.7s						
AS31	**Alice Springs**	48.63	166	P	P	16 10 50.0	+1.3
AS31				IAmb	IAmb	16 11 34.2	
	comp=Z,1.1nm,1.0s						
ASAR	**Alice Springs**	48.63	166	P	P	16 10 50.1	+1.4
ASAR	**Alice Springs**	48.63	166	P	P	16 10 49.5	+0.7
	comp=Z,0.4nm,0.5s,baz=342,slow=6.9,SNR=21						
	comp=Z,0.4nm,0.5s						
BVAR	**Borovoye Array**	48.67	320	P	P	16 10 47.9	-0.8
	comp=Z,0.6nm,0.5s,baz=93,slow=10,SNR=3.0						
BVAR				PcP	PcP	16 12 13.6	-0.2
	comp=Z,0.7nm,0.5s,baz=96,slow=5.8,SNR=4.2						
	comp=Z,0.6nm,0.5s						
ABKAR	**Akbulak array**	54.53	314	P	P	16 11 33.5	+0.9
L14K	**Kuka Creek**	61.88	32	P	P	16 12 21.8	-2.0
BMAR	**Burnt Mountain**	69.12	24	P	P	16 13 09.9	-0.6
ARCES	**ARCESS Array B**	70.20	338	P	P	16 13 17.0	-0.2
	comp=Z,2.6nm,0.9s,baz=60,slow=5.3,SNR=1.7						
	comp=Z,2.6nm,0.9s						
FINES	**FINESS Array B**	72.28	330	P	P	16 13 30.0	+0.2
FINES	**FINESS Array B**	72.28	330	P	P	16 13 29.5	-0.2
	comp=Z,1.8nm,0.9s,baz=68,slow=5.9,SNR=1.5						
	comp=Z,1.8nm,0.9s						
HFS	**Hagfors**	78.37	331	P	P	16 14 05.4	+0.6
	comp=Z,4.5nm,1.1s,baz=44,slow=4.8,SNR=1.6						
	comp=Z,4.5nm,1.1s						

IDC 09 16:04:45.3±3.5**,15°.46S**×**177°.23W,h0**^{km}**,mb3.6**/4**,**
mbtmp3.6/4**,MS3.7**/30**,Error ellipse: s-maj=190.5km**
s-min=30.5km az=146.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	16.79	244	LR	LR	16 14 04.4	
	comp=Z,365nm,18.1s,baz=59,slow=33						
RAR	**Rarotonga**	17.53	112	LR	LR	16 13 55.3	
	comp=Z,330nm,20.8s,baz=290,slow=31						
HNR	**Honiara**	23.07	282	LR	LR	16 17 23.7	
	comp=Z,516nm,20.6s,baz=164,slow=33						
URZ	**Urewera**	23.25	191	LR	LR	16 17 37.2	
	comp=Z,218nm,19.0s,baz=110,slow=33						
PPT	**Papeete**	26.59	98	LR	LR	16 18 32.2	
	comp=Z,104nm,19.4s,baz=265,slow=31						
RPZ	**Rata Peaks**	29.88	197	LR	LR	16 21 15.5	
	comp=Z,224nm,19.3s,baz=42,slow=33						
PMG	**Port Moresby**	35.26	276	LR	LR	16 23 48.6	
	comp=Z,175nm,21.5s,baz=92,slow=32						
STKA	**Stephens Creek**	40.82	239	LR	LR	16 27 50.8	
	comp=Z,86nm,18.1s,baz=43,slow=34						
JAY	**Jayapura**	43.39	283	LR	LR	16 29 27.7	
	comp=Z,86nm,18.8s,baz=28,slow=34						
WRA	**Warramunga Arr**	46.23	257	P	P	16 13 12.4	-0.3
	0.9nm,1.2s,baz=89,slow=6.8,SNR=2.2						
	0.9nm,1.2s						
ASAR	**Alice Springs**	46.58	252	P	P	16 13 15.4	0.0
	0.4nm,0.6s,baz=86,slow=8.0,SNR=8.4						
ASAR				LR	LR	16 31 57.1	
	comp=Z,86nm,18.4s,baz=88,slow=35						
	0.4nm,0.6s						
DAV	**Davao City (W)**	60.91	287	LR	LR	16 39 36.7	
	comp=Z,27nm,19.1s,baz=144,slow=34						
MJAR	**Matsushiro Arr**	66.66	322	LR	LR	16 38 28.0	
	comp=Z,44nm,21.8s,baz=160,slow=30						
JOW	**Kunigami**	67.58	308	LR	LR	16 41 49.7	
	comp=Z,86nm,19.4s,baz=290,slow=33						
JNU	**Nakatsue**	69.19	315	LR	LR	16 40 47.4	
	comp=Z,37nm,20.6s,baz=148,slow=31						
ASAJ	**Asahikawa**	69.70	330	LR	LR	16 42 55.7	
	comp=Z,61nm,18.5s,baz=120,slow=33						
PETK	**Petropavlovsk-**	71.63	344	LR	LR	16 43 33.5	
	comp=Z,33nm,19.8s,baz=142,slow=32						
USRK	**Ussuriysk Ar.**	75.26	325	LR	LR	16 44 07.0	
	comp=Z,48nm,21.1s,baz=161,slow=31						
PFO	**Pinyon Flats O**	75.70	49	LR	LR	16 42 07.3	
	comp=Z,75nm,18.7s,baz=240,slow=30						
KDAK	**Kodiak Island**	75.77	13	LR	LR	16 43 16.9	
	comp=Z,39nm,19.6s,baz=201,slow=30						
LPIG	**La Paz**	76.24	60	LR	LR	16 41 29.9	
	comp=Z,58nm,19.8s,baz=211,slow=29						
NVAR	**Mina Array Bea**	76.89	44	LR	LR	16 44 13.6	
	comp=Z,41nm,18.0s,baz=196,slow=31						
KLR	**Kul'dur**	78.61	329	LR	LR	16 45 22.6	
	comp=Z,54nm,21.7s,baz=152,slow=31						
MA2	**Magadan**	79.16	344	LR	LR	16 48 55.7	
	comp=Z,26nm,19.0s,baz=176,slow=34						
BBB	**Bella Bella**	79.64	28	LR	LR	16 46 03.2	
	comp=Z,44nm,19.1s,baz=231,slow=31						
ELK	**Elko**	80.11	43	LR	LR	16 44 42.5	
	comp=Z,41nm,19.0s,baz=280,slow=30						
NEW	**Newport**	82.88	36	LR	LR	16 47 54.5	
	comp=Z,35nm,18.4s,baz=214,slow=31						
DLBC	**Dease Lake**	83.15	23	LR	LR	16 49 21.9	
	comp=Z,87nm,18.1s,baz=223,slow=32						
ILAR	**Eielson Array**	83.27	13	P	P	16 17 13.3	-0.1
	0.5nm,0.7s,baz=225,slow=5.3,SNR=6.8						
	0.5nm,0.7s						
ANMO	**Albuquerque**	83.70	51	LR	LR	16 47 59.2	
	comp=Z,68nm,19.1s,baz=330,slow=31						
PDAR	**Pinedale Array**	84.81	43	P	P	16 17 22.3	+0.2
	0.1nm,0.3s,baz=221,slow=6.0,SNR=1.8						
PDAR				LR	LR	16 54 13.6	
	comp=Z,22nm,18.1s,baz=272,slow=35						
	0.1nm,0.3s						
CMAR	**Chiang Mai Arr**	89.14	289	LR	LR	16 53 07.1	
	comp=Z,19nm,21.8s,baz=95,slow=33						

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*GCG **09** 16:33:05.7±3.1,15°.70N×94°.27W,h41^{km}±912^{km},MD4.3,*
ML3.5
*MEX **09** 16:33:07.2±0.6,15°.76N×94°.27W,h63^{km}±11^{km},MD4.2*
ISC 09 16:33:04.8±1.3**,15°.72N**±0°.04×**94°.26W**±0°.03**,h78**^{km}±18^{km}**,**
n40,σ**2^{s}.32**/73**,Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		1.00	91	*e*P	Pn	16 33 23.9	+0.2
PCIG				*e*S	Sn	16 33 37.4	-0.4
CMIG	**Matias Romero**	1.49	336	*e*P	Pn	16 33 31.0	+1.0
CMIG				*e*S	Sn	16 33 49.4	+0.4
TGIG		1.51	46	*e*P	Pn	16 33 30.5	+0.2
TGIG				*e*S	Sn	16 33 48.2	-1.4
TGIG		1.51	46	*e*P	Pn	16 33 30.3	-0.1
TGIG				IAML		16 33 56.7	
	comp=Z,154nm,0.4s						
HUIG	**Huatulco**	1.79	272	*i* P	Pn	16 33 34.5	+0.7
HUIG				*e*S	Sn	16 33 54.8	-1.1
HUIG	**Huatulco**	1.79	272	*i* P	Pn	16 33 34.5	+0.7
HUIG				*e*S	Sn	16 33 53.8	-2.1
HUIG				IAML		16 34 01.6	
	comp=E,131nm,0.3s						
PATR	**El Naranjo**	2.04	107	*e*P	Pn	16 33 38.2	+0.8
PATR				*e*S	Sn	16 34 02.4	+0.2
PAVE	**Pavencul**	2.07	104	*e*P	Pn	16 33 39.0	+1.2
PAVE				*e*S	Sn	16 34 04.0	+1.0
THIG		2.08	113	*e*P	Pn	16 33 38.8	+1.0
THIG				*e*S	Sn	16 34 03.0	+0.1
THIG		2.08	113	*e*S	Sn	16 34 03.5	+0.6
CCIG	**Comitan**	2.11	74	*i* P	Pn	16 33 40.1	+1.7
CCIG				*e*P	Pn	16 33 40.1	+1.7
CCIG				IAML		16 34 17.7	
	comp=N,519nm,0.4s						
CCIG				IAML		16 34 18.4	
	comp=Z,187nm,0.5s						
TUIG	**Tuzandepetl**	2.31	356	*e*P	Pn	16 33 41.4	+0.6
TUIG				*e*S	Sn	16 34 08.6	+0.3
NEUV	**Arroyo Zacate**	2.48	323	*e*P	Pn	16 33 44.0	+1.0
NEUV				*e*S	Sn	16 34 13.8	+1.4
OXLC	**Oaxaca**	2.71	300	*e*S	Sn	16 34 18.1	-0.1
VHO	**Vista Hermosa**	2.73	300	*e*P	Pn	16 33 47.5	+0.8
VHO				*e*S	Sn	16 34 18.8	-0.2
RTAL	**Retalhuleu**	2.74	115	*e*P	Pn	16 33 48.4	+1.7
RTAL				*e*S	Sn	16 34 19.9	+1.1
PEIG	**Puerto Escondi**	2.80	276	*e*P	Pn	16 33 48.3	+0.9
PEIG				*e*S	Sn	16 34 17.2	-3.0
PMUV	**Sontecomapan**	2.93	344	*e*P	Pn	16 33 52.4	+3.1
PMUV				*e*S	Sn	16 34 21.9	-1.7
STG8	**El Palmar, Qui**	3.08	114	*e*S	Sn	16 34 20.5	-6.7
STG8				IAML		16 34 26.5	
	comp=N,316nm,0.3s						
STG8				IAML		16 34 34.9	
	comp=E,244nm,0.3s						
YOIG	**Yosondua**	3.36	290	*e*P	Pn	16 33 57.4	+2.1
YOIG				*e*S	Sn	16 34 34.3	+0.2
TOIG	**Toxpalan**	3.58	312	*e*P	Pn	16 34 00.1	+1.9
TOIG				*e*S	Sn	16 34 38.5	-0.9
TXIG	**Tlaxiaco**	3.70	295	*e*P	Pn	16 34 01.5	+1.5
TXIG				*e*S	Sn	16 34 39.9	-2.7
PNIG	**Pinotepa**	3.78	281	*e*P	Pn	16 34 00.2	-0.6
PNIG				*e*S	Sn	16 34 43.4	-0.9
HLIG	**Huajuapan de L**	4.00	302	*e*P	Pn	16 34 01.8	-2.1
HLIG				*e*S	Sn	16 34 45.2	-4.4
TPIG	**Tehuac#an**	4.01	313	*e*P	Pn	16 34 05.8	+1.8
TPIG				*e*S	Sn	16 34 55.5	+5.6
FTIG	**Fresnillo de T**	4.30	301	*e*P	Pn	16 34 12.6	+4.6
FTIG				*e*S	Sn	16 34 54.0	-3.1
SCIG	**Sabancuy**	4.36	42	*e*P	Pn	16 34 07.9	-0.8
SCIG				*e*S	Sn	16 34 56.3	-2.0
JAUV	**Jalcomulco**	4.37	327	*e*P	Pn	16 34 09.5	+0.7
JAUV				*e*S	Sn	16 34 56.3	-2.2
PETF	**Flores**	4.38	74	*e*P	Pn	16 34 09.9	+1.0
PETF				*e*S	Sn	16 34 54.4	-4.3
PETF	**Flores**	4.38	74	IAML		16 34 58.4	
	comp=N,120nm,0.6s						
TLIG	**Tlapa**	4.52	295	*e*P	Pn	16 34 15.7	+4.7
TLIG				*e*S	Sn	16 34 58.8	-3.6
CRIG	**Cruz Grande**	4.79	283	*e*P	Pn	16 34 15.3	+0.8
CRIG				*e*S	Sn	16 35 05.1	-3.8
DAIG	**Los Arroyos**	5.34	285	*e*P	Pn	16 34 24.7	+2.6
DAIG				*e*S	Sn	16 35 21.6	-0.6
CXUV	**Coxquihui**	5.45	325	*e*P	Pn	16 34 24.5	+0.9
CXUV				*e*S	Sn	16 35 22.8	-2.1
YAIG	**Yautepec**	5.56	305	*e*P	Pn	16 34 28.7	+3.5
YAIG				*e*S	Sn	16 35 27.7	-0.1
MEIG	**Mezcala**	5.59	294	*e*P	Pn	16 34 28.5	+3.0
MEIG				*e*S	Sn	16 35 29.8	+1.3
PLIG	**Platanillo**	5.68	299	*e*P	Pn	16 34 29.9	+3.1
PLIG				*e*S	Sn	16 35 28.8	-1.9
UNM	**Universidad Na**	5.91	308	*e*P	Pn	16 34 27.2	-2.9
CAIG	**El Cayaco**	5.92	284	*e*P	Pn	16 34 32.4	+2.4
CAIG				*e*S	Sn	16 35 31.8	-4.6
ARIG	**Puente Sto Nin**	6.36	294	*e*P	Pn	16 34 35.6	-0.4
ARIG				*e*S	Sn	16 35 47.9	+0.6

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*IDC **09** 16:48:16.3±5.0,20°.13S×176°.57W,h0^{km},mb4.1/3,*
mbtmp4.1/3,Error ellipse: s-maj=167.7km s-min=97.5km
az=159.0
*NEIC **09** 16:49:32.9±1.0,21°.9S±0°.2×179°.4W±0°.2,h593^{km}±20^{km},*
mb4.2/17,Error ellipse: s-maj=36.2km s-min=16.1km
az=216.0
ISC 09 16:49:32.9±1.5**,21°.8S**±0°.1×**179°.5W**±0°.2**,h592**^{km}**,n25,**
σ**0^{s}.52**/27**,mb4.2**/12**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	4.71	330	P	P	16 51 04.3	+1.0
MSVF				S	S	16 52 15.5	-1.3
RAO	**Raoul Island**	7.51	170	P	P	16 51 27.1	-0.1
DZM	**Mont Dzumac**	13.09	266	P	P	16 52 22.9	+0.1
BKZ	**Black Stump Fm**	17.61	190	P	P	16 53 05.4	+0.2
TUWZ	**Tuamarina**	20.31	194	P	P	16 53 29.2	-0.4
EIDS	**Eidsvold**	27.20	257	P	P	16 54 31.1	+0.1
EIDS				IAmb	IAmb	16 55 14.8	
	comp=Z,7.2nm,1.2s						
CTAO	**Charters Tower**	32.03	267	P	P	16 55 12.9	+0.3
CTAO				IAmb	IAmb	16 55 29.9	
	comp=Z,18nm,1.4s						
TAU	**Tasmania Unive**	34.72	225	P	P	16 55 35.4	+0.7
STKA	**Stephens Creek**	35.99	246	P	P	16 55 45.0	-0.4
STKA	**Stephens Creek**	35.99	246	P	P	16 55 45.6	+0.1
	comp=Z,2.8nm,0.7s,baz=80,slow=11,SNR=4.3						
	comp=Z,2.8nm,0.7s						
BBOO	**Buckleboo**	40.74	245	P	P	16 56 23.9	+0.1
AS31	**Alice Springs**	42.90	258	P	P	16 56 40.4	-0.5
ASAR	**Alice Springs**	42.90	258	P	P	16 56 40.5	-0.4
ASAR	**Alice Springs**	42.90	258	P	P	16 56 41.1	+0.2
	comp=Z,2.5nm,0.8s,baz=97,slow=7.9,SNR=53						
ASAR				PcP	PcP	16 58 17.9	-0.1
	comp=Z,0.3nm,0.6s,baz=118,slow=3.6,SNR=4.1						
	comp=Z,2.5nm,0.8s						
WR8	**Warramunga Arr**	42.93	264	P	P	16 56 40.7	-0.5
WR8				IAmb	IAmb	16 57 16.8	
	comp=Z,11nm,1.4s						
WB0	**Warramunga Arr**	43.07	264	P	P	16 56 42.1	-0.2
WB0				IAmb	IAmb	16 57 03.3	
	comp=Z,12nm,1.4s						
WRAB	**Tennant Creek**	43.08	264	P	P	16 56 41.6	-0.7
WRAB				IAmb	IAmb	16 56 42.6	
	comp=Z,6.1nm,1.1s						
WRA	**Warramunga Arr**	43.09	264	P	P	16 56 41.7	-0.7
WRA	**Warramunga Arr**	43.09	264	P	P	16 56 41.7	-0.7
	comp=Z,0.7nm,0.3s,baz=96,slow=7.7,SNR=49						
	comp=Z,0.7nm,0.3s						
MTN	**Manton Dam**	47.84	272	P	P	16 57 18.1	-0.4
MTN				IAmb	IAmb	16 57 57.1	
	comp=Z,20nm,1.4s						
KNRA	**Kununurra**	49.23	268	P	P	16 57 28.8	0.0
KNRA				IAmb	IAmb	16 57 42.7	
	comp=Z,13nm,1.4s						
FITZ	**Fitzroy Crossi**	51.52	264	P	P	16 57 45.8	+0.4
PSA00	**Pilbara Seismi**	56.05	258	P	P	16 58 17.3	+0.1
MBWA	**Marble Bar**	56.24	259	P	P	16 58 18.2	-0.3
MBWA				IAmb	IAmb	16 58 20.3	
	comp=Z,16nm,1.3s						
CASY	**Casey**	62.17	205	P	P	16 58 56.7	-0.5
CASY				IAmb	IAmb	16 58 57.8	
	comp=Z,4.9nm,0.7s						

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*IDC **09** 16:56:52.9±3.3,34°.75N×24°.94E,h65^{km}±12^{km},mb3.3/4,*
mbtmp3.5/5,Error ellipse: s-maj=48.8km s-min=39.5km
az=39.0
*ATH **09** 16:56:55.8,35°.07N×25°.41E,h10^{km}±3^{km},ML2.9/7,*
Manual Solution by F.Xalaris First location: 2019/06/09
16:58:00, This location: 2020/10/10 10:03:01 ML
Amplitudes are expressed in micrometers, All distances
are expressed in degrees Latitude uncertainty: 1 km;
Longitude uncertainty: 1 km
*THE **09** 16:56:56.0,35°N±28°×2°5E±5°9,h43^{km}±16^{km},M2.7/7,*
MLh2.7/7
ISC 09 16:56:55.4±1.1**,35°.01N**±0°.08×**25°.31E**±0°.04**,h49**^{km}±9^{km}**,**
n28,σ**1^{s}.95**/34**,mb3.4**/4**,Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDI	**Anoyia**	0.45	309	P	Pn	16 57 05.9	-0.2
IDI				S	Sn	16 57 15.4	+1.7
IDI	**Anoyia**	0.45	309	P	Pn	16 57 06.7	+0.6
	66nm,0.3s,baz=162,slow=18,SNR=26						
IDI				S	Sn	16 57 17.3	+3.6
	230nm,0.4s,baz=74,slow=18,SNR=17						
IDI	**Anoyia**	0.45	309	P	Pn	16 57 05.9	-0.2
IDI				S	Sn	16 57 11.6	-2.1
TMBK	**Timbaki Herakl**	0.45	279	P	Pn	16 57 05.5	-0.6
TMBK				S	Sn	16 57 14.8	+1.2
TMBK	**Timbaki Herakl**	0.45	279	P	Pn	16 57 06.0	-0.1
TMBK				S	Sn	16 57 12.8	-0.8
ZKR	**Zakros**	0.75	81	P	Pn	16 57 10.7	+0.9
PRNS	**Prines Rethymn**	0.75	299	P	Pn	16 57 11.7	+1.9
PRNS	**Prines Rethymn**	0.75	299	P	Pn	16 57 12.1	+2.2
GVD	**Gavdhos**	1.02	261	P	Pn	16 57 12.6	-0.8
GVD	**Gavdhos**	1.02	261	P	Pn	16 57 16.5	+3.1
GVD				S	Sn	16 57 31.6	+4.9
CHAN	**Chania**	1.16	297	P	Pn	16 57 18.8	+3.6
IMMV	**Iera Moni Meta**	1.18	293	P	Pn	16 57 16.6	+1.1
THR5	**Thira Island,**	1.41	1	P	Pn	16 57 20.0	+1.3
KARP	**Karpathos**	1.61	70	P	Pn	16 57 23.2	+1.8
KARP	**Karpathos**	1.61	70	P	Pn	16 57 23.2	+1.8
ANKY	**Antikythira Is**	1.85	298	P	Pn	16 57 25.7	+1.0
ANKY	**Antikythira Is**	1.85	298	P	Pn	16 57 26.1	+1.4
APE	**Apeiranthos**	2.07	5	P	Pn	16 57 29.7	+2.0
KTHA	**Kythira Island**	2.22	305	P	Pn	16 57 29.6	-0.1
VLI	**Veliai**	2.58	312	P	Pn	16 57 34.5	-0.1
VLI	**Veliai**	2.58	312	P	Pn	16 57 35.2	+0.5
ARG	**Arkhangelos**	2.59	61	P	Pn	16 57 36.4	+1.5
KARY	**Karystos**	3.10	347	P	Pn	16 57 44.2	+2.3
AKASG	**Malin Array Be**	15.94	9	P	P	17 00 38.3	-0.8
	0.2nm,0.2s,baz=202,slow=11,SNR=4.9						
FINES	**FINESS Array B**	26.46	1	P	P	17 02 25.6	-1.9
	0.8nm,0.5s,baz=182,slow=9.9,SNR=5.2						
	0.8nm,0.5s						
ARCES	**ARCESS Array B**	34.58	0	P	P	17 03 36.9	-2.2
	1.3nm,0.8s,baz=196,slow=9.4,SNR=3.8						
	1.3nm,0.8s						

KURBB	Kurchatov Arra	41.12	51	P	P	17 04 33.9	-0.5
	0.2nm,0.4s,baz=275,slow=8.8,SNR=3.0						
	0.2nm,0.4s						
MKAR	Makanchi Array	43.76	56	P	P	17 04 55.2	-0.8
	0.1nm,0.3s,baz=269,slow=7.0,SNR=2.0						
	0.1nm,0.3s						

IDC ***09*** *17:25:12.9±0.8, 9°.54N×57°.96E, h0^{km}, mb4.3/30, mbtmp4.3/30, ML2.0/2, MS3.6/38, Error ellipse: s-maj=19.0km s-min=14.9km az=16.0*

BJI ***09*** *17:25:14.0, 9°.70N×58°.00E, h10^{km}, mB5.0/9, mb4.6/36, Ms4.3/5, Ms7 4.2/5*

NEIC ***09*** *17:25:15.7±2.2, 9°.6N±0°.1×58°.1E±0°.1, h10^{km}±2^{km}, mb4.6/26, Error ellipse: s-maj=23.1km s-min=19.8km az=128.0*

ISC 09 17:25:15.9±0.6**, 9°.60N**±0°.10×**57°.87E**±0°.07**, h17^{km}, n152, σ1^{s}.51**/124**, mb4.5**/72**, MS3.6**/38**, 13C-4D, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSAR	Wadi Sarin	13.59	3	Pn	Pn	17 28 28.0	0.0
	baz=210,slow=24,SNR=2.1						
MZR	Muzera	13.98	343	Pn	Pn	17 28 36.9	+3.6
ATD	Arta Tunnel	14.90	279	Pn	Pn	17 28 45.1	-0.9
	baz=101,slow=14,SNR=2.4						
ASHO	Ashiyiah	15.10	354	Pn	Pn	17 28 46.1	-2.6
HATD	Hatta, Dubai	15.23	354	Pn	Pn	17 28 48.2	-2.3
UOSS	Minazif	15.35	354		Pn	17 28 53.9	+2.0
UOSS	Minazif	15.35	354	Pn	Pn	17 28 47.9	-3.9
NAZ	Nazwa, Dubai	15.45	352	Pn	P	17 28 56.2	-1.4
RAYN	Ar Rayn	18.21	321		Pn	17 29 26.9	-1.2
RAYN	Ar Rayn	18.21	321	P	Pn	17 29 23.1	-5.0
PALK	Pallekele	22.70	94	LR	LR	17 36 51.7	
	comp=Z,135nm,20.4s,baz=286,slow=31						
KIBK	Kibwezi	23.04	240		P	17 30 22.5	+1.8
KIBK				IAmb	IAmb	17 30 25.3	
	comp=Z,21nm,1.1s						
KMBO	Kilima Mbogo	23.13	244	P	P	17 30 24.1	+2.3
KMBO	Kilima Mbogo	23.13	244	P	P	17 30 18.6	-3.3
LODK	Lodwar	23.18	256		P	17 30 26.1	+4.0
LODK				IAmb	IAmb	17 30 35.4	
	comp=Z,22nm,1.2s						
EIL	Elat	29.30	316	LR	LR	17 42 18.6	
	comp=Z,57nm,18.4s,baz=234,slow=35						
ASF	Jabal al Asfar	29.69	322	LR	LR	17 43 11.4	
	comp=Z,65nm,21.7s,baz=162,slow=36						
OPO	Ambohidratompo	29.91	201	LR	LR	17 40 35.1	
	comp=Z,160nm,20.6s,baz=166,slow=31						
MMAI	Mount Meron Ar	31.18	322	P	P	17 31 34.2	-0.2
	comp=Z,0.6nm,0.5s,baz=152,slow=6.5,SNR=1.7						
	comp=Z,0.6nm,0.5s						
GEVA	Gevas	31.54	337	P	P	17 31 37.2	-0.4
GEVA				IAmb	IAmb	17 31 52.0	
	comp=Z,6.7nm,1.0s						
MARD	Mardin	31.62	333		P	17 31 40.5	+2.2
BTK	Batken	32.45	19		P	17 31 47.3	+1.9
GNI	Garni	32.59	341	LR	LR	17 46 25.8	
	comp=Z,202nm,18.3s,baz=132,slow=39						
EVN	Everest	32.79	52	P	P	17 31 47.6	-1.7
EVN				IAmb	IAmb	17 31 57.1	
	comp=Z,4.6nm,0.8s						
KSH	Kashi	33.89	26	P	P	17 31 55.0	-3.1
KSH				pP	pP	17 32 01.0	-1.1
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRDH	Bariadhala	34.85	64	LR	LR	17 46 36.5	
	comp=Z,161nm,18.4s,baz=285,slow=37						
KK31	Karatay Array	35.16	16		P	17 32 10.4	+1.5
KK31				IAmb	IAmb	17 32 18.2	
	comp=Z,9.7nm,0.8s						
KKAR	Karatay Array	35.16	16	P	P	17 32 10.2	+1.3
KKAR				IAmb	IAmb	17 32 18.2	
	comp=Z,10nm,0.8s						
KKAR	Karatay Array	35.16	16		P	17 32 09.9	+1.0
AAK	Ala-Archa	35.99	21	P	P	17 32 16.6	+0.4
	comp=Z,1.1nm,0.4s,baz=188,slow=8.2,SNR=4.7						
AAK				LR	LR	17 47 42.8	
	comp=Z,143nm,20.6s,baz=212,slow=38						
	comp=Z,1.1nm,0.4s						
AAK	Ala-Archa	35.99	21	P	P	17 32 18.3	+2.1
KIRS	Kirsehir-Merke	36.38	328	⇑P	P	17 32 21.1	+1.6
KBZ	Khabaz	36.41	342	P	P	17 32 20.8	+1.2
	comp=Z,1.8nm,0.7s,baz=162,slow=7.6,SNR=5.9						
KBZ				LR	LR	17 49 54.1	
	comp=Z,93nm,19.0s,baz=156,slow=41						
	comp=Z,1.8nm,0.7s						
BR131	Keskin Array S	36.97	328	P	P	17 32 25.3	+0.7
BR131				IAmb	IAmb	17 32 34.0	
	comp=Z,8.0nm,1.0s						
BRTR	Keskin Array B	36.97	328		P	17 32 25.3	+0.7
BRTR	Keskin Array B	36.97	328	P	P	17 32 25.8	+1.2
	comp=Z,2.2nm,0.9s,baz=152,slow=9.1,SNR=12						
	comp=Z,2.2nm,0.9s						
ANTO	Ankara	37.52	328	P	P	17 32 28.8	-0.3
ANTO				IAmb	IAmb	17 32 39.1	
	comp=Z,13nm,0.9s						
LSZ	Lusaka	38.42	230	LR	LR	17 47 21.9	
	comp=Z,108nm,19.6s,baz=56,slow=35						
AB31	Akbulak array	39.57	2	IAmb	IAmb	17 32 55.1	
	comp=Z,21nm,0.9s						
ABKAR	Akbulak array	39.57	2		P	17 32 46.5	+0.4
ABKAR	Akbulak array	39.57	2	IAmb	IAmb	17 32 55.1	
	comp=Z,21nm,0.9s						
AKTO	Aktyubinsk	40.71	0	P	P	17 32 56.5	+0.8
	comp=Z,7.3nm,0.7s,baz=173,slow=7.8,SNR=27						
AKTO				LR	LR	17 51 38.4	
	comp=Z,56nm,19.0s,baz=232,slow=39						
	comp=Z,7.3nm,0.7s						
CM31	Chiang Mai Arr	40.73	73	P	P	17 32 54.1	-2.1
CM31				IAmb	IAmb	17 33 05.3	
	comp=Z,20nm,1.2s						
CMAR	Chiang Mai Arr	40.73	73		P	17 32 56.2	0.0
CMAR	Chiang Mai Arr	40.73	73	P	P	17 32 56.9	+0.6
	comp=Z,3.7nm,1.0s,baz=265,slow=8.1,SNR=17						
CMAR				LR	LR	17 47 59.8	
	comp=Z,24nm,20.3s,baz=260,slow=34						
	comp=Z,3.7nm,1.0s						
PSI	Prapat	41.33	97	LR	LR	17 46 52.9	
	comp=Z,80nm,18.3s,baz=232,slow=32						
MAKZ	Makanchi	42.38	25	P	P	17 33 09.2	-0.2
MKAR	Makanchi Array	42.50	25	P	P	17 33 10.1	-0.3
	comp=Z,1.0nm,0.7s,baz=203,slow=8.8,SNR=8.3						
MKAR				LR	LR	17 53 05.9	
	comp=Z,57nm,18.0s,baz=196,slow=39						
	comp=Z,1.0nm,0.7s						
GOMU	GeErMu	42.70	46	P	P	17 33 13.5	+0.9
GOMU				pP	pwP	17 33 19.8	-1.4
GOMU				sP	sP	17 33 26.4	+7.8
GOMU				pmax	pmax		
	comp=Z,8.0nm,1.3s						
WMQ	Urumqi	42.81	32	*e*P	P	17 33 17.2	+4.2
WMQ				pmax	pmax		
	comp=Z,28nm,0.7s						
TIRR	Tirgusor	43.07	329	P	P	17 33 14.3	-0.7
TIRR	Tirgusor	43.07	329	⇑P	P	17 33 15.9	+0.9
TPGR	Topolog	43.35	329	⇓P	P	17 33 17.8	+0.5
BELG	Belogornoye	43.48	351	P	P	17 33 18.2	+0.1
	comp=Z,22nm,0.8s,baz=142,slow=0.3,SNR=6.0						
BELG				LR	LR	17 54 50.6	
	comp=Z,32nm,19.1s,baz=125,slow=41						
	comp=Z,22nm,0.8s						
KURBB	Kurchatov Arra	44.32	19	P	P	17 33 25.1	+0.2
	comp=Z,1.9nm,0.8s,baz=216,slow=8.1,SNR=19						
KURBB				LR	LR	17 52 58.5	
	comp=Z,140nm,21.2s,baz=162,slow=38						
	comp=Z,1.9nm,0.8s						
KURK	Kurchatov	44.43	19	P	P	17 33 25.6	-0.2
BVAR	Borovoye Array	44.48	11	P	P	17 33 26.2	0.0
	comp=Z,2.5nm,0.7s,baz=188,slow=5.7,SNR=15						
BVAR				PcP	PcP	17 35 09.7	+0.2
	comp=Z,1.7nm,0.7s,baz=174,slow=2.6,SNR=5.2						
BVAR				LR	LR	17 53 53.6	
	comp=Z,77nm,18.2s,baz=193,slow=39						
	comp=Z,2.5nm,0.7s						
BRVK	Borovoye	44.49	11	P	P	17 33 26.1	-0.2
PZH	PanZhiHua	44.72	62	P	P	17 33 30.4	+1.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
VRI	Vrincioaia	44.91	329	⇓P	P	17 33 31.3	+1.5
PLOR	Plostina	44.94	329	⇑P	P	17 33 31.1	+1.1
MLR	Muntele Rosu	45.05	328		P	17 33 32.0	+0.9
MLR				IAmb	IAmb	17 33 41.0	
	comp=Z,6.5nm,0.8s						
MLR	Muntele Rosu	45.05	328	P	P	17 33 32.2	+1.1
	comp=Z,3.5nm,0.9s,baz=153,slow=6.8,SNR=7.7						
	comp=Z,3.5nm,0.9s						
MLR	Muntele Rosu	45.05	328	⇑P	P	17 33 32.3	+1.1
KMI	Kunming	45.29	64	P	P	17 33 33.9	+0.5
KMI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TESR	Tescani	45.39	330	⇑P	P	17 33 34.6	+1.0
TURR	Turia	45.40	329	⇓P	P	17 33 34.6	+0.9
VOIR		45.48	328	⇓P	P	17 33 35.4	+1.0
DOPR	Dopca	45.66	328	⇑P	P	17 33 36.5	+0.7
LOT	Lotru	46.17	327	⇑P	P	17 33 40.2	+0.2
LBTB	Lobatse	46.62	222	LR	LR	17 51 57.5	
	comp=Z,72nm,18.4s,baz=61,slow=34						
ARTI	Arti	46.68	0		P	17 33 43.4	-0.2
ARTI	Arti	46.68	0	P	P	17 33 43.2	-0.3
	comp=Z,6.2nm,0.9s,baz=173,slow=6.0,SNR=7.6						
ARTI				LR	LR	17 54 34.3	
	comp=Z,17nm,20.2s,baz=181,slow=38						
	comp=Z,6.2nm,0.9s						
SURR	Surduc	47.26	326	⇑P	P	17 33 48.9	+0.6
AKASG	Malin Array Be	47.30	335	P	P	17 33 48.1	-0.4
	comp=Z,0.6nm,0.6s,baz=141,slow=7.5,SNR=5.7						
AKASG				LR	LR	17 56 22.8	
	comp=Z,35nm,18.5s,baz=152,slow=40						
	comp=Z,0.6nm,0.6s						
KIEV	Kiev	47.30	335	⇑P	P	17 33 45.4	-3.0
MARR	Marisel-Cluj	47.31	328	⇑P	P	17 33 49.7	+0.9
BZS	Buzias	47.46	326	⇑P	P	17 33 50.5	+0.7
GTA	Gaotai	47.70	44	*e*P	P	17 33 52.1	+0.1
GTA				PP	PP	17 35 44.5	+0.7
GTA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TSUM	Tsumeb	48.95	234	LR	LR	17 54 49.9	
	comp=Z,77nm,19.1s,baz=54,slow=36						
KOLS	Kolonicke sedl	49.21	330	*e*P	P	17 34 03.0	-0.3
ZALV	Zalesovo Beam	49.21	21	P	P	17 34 02.9	-0.3
	comp=Z,4.6nm,0.7s,baz=237,slow=8.1,SNR=19						
ZALV				LR	LR	17 55 39.8	
	comp=Z,105nm,21.1s,baz=202,slow=37						
	comp=Z,4.6nm,0.7s						
LZH	Lanzhou	49.28	50	*e*P	P	17 34 04.1	-0.2
LZH				sP	pwP	17 34 11.6	-1.5
LZH				pmax	pmax		
	comp=Z,18nm,0.9s						
KIRV	Kirov	49.30	354	P	P	17 34 03.3	-0.5
	comp=Z,7.6nm,0.6s,baz=207,slow=1.2,SNR=5.2						
KIRV				LR	LR	17 58 51.6	
	comp=Z,50nm,18.8s,baz=170,slow=41						
	comp=Z,7.6nm,0.6s						
BOSA	Boshof	49.35	219	P	P	17 34 04.1	-0.7
	comp=Z,1.4nm,0.7s,baz=31,slow=5.9,SNR=1.1						
BOSA				LR	LR	17 52 16.0	
	comp=Z,131nm,21.1s,baz=24,slow=33						
	comp=Z,1.4nm,0.7s						
VYHS	Vyhne	50.71	327	*e*P	P	17 34 14.7	-0.1
FDMO	Fiordimonte	51.26	319		P	17 34 19.8	+0.8
FDMO				IAmb	IAmb	17 34 27.7	
	comp=Z,7.0nm,1.0s						
NACGM	Naroch	51.47	338	*e*P	P	17 34 20.8	+0.5
	comp=Z,9.0nm,0.9s,baz=139						
MODS	Modra-Piesok	51.48	326	*e*P	P	17 34 20.9	+0.3
RONA	Rosalia, Austr	51.65	325	*e*P	P	17 34 22.4	+0.5
	comp=Z,8.1nm,1.3s						
SOKA	Soboth	51.83	323	*e*P	P	17 34 24.2	+0.9
	comp=Z,3.1nm,1.0s						
ARSA	Arzberg	51.85	324	*e*P	P	17 34 25.9	+2.6
	comp=Z,2.7nm,0.7s						
CONA	Conrad Observa	52.02	325	*e*P	P	17 34 24.8	+0.1
	comp=Z,2.5nm,0.8s						
OBKA	Obir	52.03	323	*e*P	P	17 34 27.9	+3.1
	comp=Z,3.1nm,1.0s						
MORC	Moravsky Berou	52.16	328	⇑P	P	17 34 26.0	+0.4
XAN	Xi'an	52.62	54	P	P	17 34 28.7	-0.6
XAN				pP	sP	17 34 35.4	+0.1
XAN				pmax	pmax		
	comp=Z,15nm,0.7s						
XAN				pmax	pmax		
	comp=Z,130nm,4.9s						
MYKA	Terra Mystica	52.63	323	*e*P	P	17 34 30.1	+0.9
	comp=Z,6.4nm,1.0s						
MOA	Molln	52.89	324	*e*P	P	17 34 30.7	-0.3
	comp=Z,2.5nm,0.7s						
KBA	Koelnbreinsper	53.03	323	*e*P	P	17 34 33.4	+1.1
	comp=Z,2.1nm,0.8s						
BIOA	Bad Ischl, Aus	53.17	324	*i* P	P	17 34 33.4	+0.3
	comp=Z,7.0nm,1.0s						
ABTA	Abfaltersbach	53.36	322	*e*P	P	17 34 38.5	+3.9
	comp=Z,2.8nm,0.7s						
LESA	Schwarzleotal	53.59	323	*e*P	P	17 34 35.8	-0.6
	comp=Z,2.2nm,0.9s						
GERES	GERESS Array B	53.73	325	LR	LR	17 58 26.7	
	comp=Z,16nm,18.1s,baz=94,slow=37						
WTTA	Wattenberg	54.14	323	*e*P	P	17 34 40.3	-0.1
	comp=Z,10.0nm,1.1s						
WATA	Walderalm	54.21	323	*e*P	P	17 34 40.3	-0.6
	comp=Z,3.9nm,0.9s						
SQTA	Sankt Quirin	54.37	322	*e*P	P	17 34 41.4	-0.6
	comp=Z,3.1nm,0.8s						
MOTA	Moosalm	54.49	323	*e*P	P	17 34 42.6	-0.4
	comp=Z,7.3nm,0.9s						
FETA	Feichten	54.57	322	*e*P	P	17 34 44.5	+0.9
	comp=Z,6.5nm,1.6s						
BRG	Berggiesshubel	54.68	327	*e*P	P	17 34 43.9	-0.2
BRG				Amp		17 34 45.7	
	comp=Z,1.3nm,0.7s						
BRG	Berggiesshubel	54.68	327	P	P	17 34 50.6	+6.6
BRG				Amp		17 34 51.7	
	comp=Z,3.9nm,1.0s						
RETA	Reutte	54.77	323	*i* P	P	17 34 48.0	+3.2
	comp=Z,2.4nm,0.7s						
DAVOX	Davos/Dischmat	54.98	321	LR	LR	17 59 19.2	
	comp=Z,27nm,20.4s,baz=81,slow=37						
TORD	Torodi Ar. Bea	55.10	279	P	P	17 34 49.4	+1.7
	comp=Z,2.4nm,0.4s,baz=77,slow=7.6,SNR=1.5						
	comp=Z,2.4nm,0.4s						
DAVA	Damuels	55.21	322	*e*P	P	17 34 48.0	-0.1
	comp=Z,5.0nm,1.4s						
CLL	Collm	55.41	327	*e*P	P	17 34 51.0	+1.7
	comp=Z,4.0nm,1.3s						
CLL				*i* x	x	17 34 56.3	
H04N1	CROZET ISLANDS	55.77	185	T	T	18 35 13.8	
	baz=10						
SONM	Songino Array	55.77	38	P	P	17 34 51.7	-0.4
	comp=Z,0.7nm,0.6s,baz=230,slow=6.7,SNR=4.5						
	comp=Z,0.7nm,0.6s						
H04N2	CROZET ISLANDS	55.77	185	T	T	18 35 11.5	
	baz=10,slow=74						
H04N3	CROZET ISLANDS	55.79	185	T	T	18 35 12.7	
	baz=10,slow=74						
WHN	Wuhan	56.38	60	P	P	17 35 03.1	+6.4
WHN				pmax	pmax		
	comp=Z,52nm,0.6s						
HHC	Hu-ho-hao-te	56.57	47	*e*P	P	17 34 57.7	-0.3
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,78nm,3.5s						
FINES	FINESS Array B	56.77	342	P	P	17 34 58.4	-0.4
	comp=Z,2.0nm,0.7s,baz=126,slow=9.7,SNR=7.9						
FINES				LR	LR	18 01 27.2	
	comp=Z,53nm,20.4s,baz=217,slow=38						
	comp=Z,2.0nm,0.7s						
HNS	HongShan	58.01	52	⇑P	P	17 35 08.3	+0.3
HNS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HFS	Hagfors	60.17	336	P	P	17 35 21.0	-1.6
HFS	Hagfors	60.17	336	P	P	17 35 21.0	-1.6
	comp=Z,2.7nm,0.9s,baz=140,slow=7.0,SNR=2.3						
	comp=Z,2.7nm,0.9s						
NJ2	Nanjing	60.41	59	*e*P	P	17 35 26.0	+1.2
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
XLT	XiLinHaoTe	60.66	45	*e*P	P	17 35 28.3	+1.9
XLT				pP	pwP	17 35 37.6	+2.5
XLT				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NOA	NORSAR Array B	61.70	336	LR	LR	18 04 41.2	
	comp=Z,41nm,20.3s,baz=100,slow=38						
DBIC	Dimbokro	62.10	272	LR	LR	18 01 26.0	
	comp=Z,23nm,18.2s,baz=131,slow=35						
ESDC	Sonseca Array	62.32	310	P	P	17 35 38.2	+0.6
	comp=Z,1.8nm,0.7s,baz=83,slow=5.8,SNR=15						
	comp=Z,1.8nm,0.7s						
ARCES	ARCESS Array B	63.38	348	P	P	17 35 43.8	-0.4
	comp=Z,4.8nm,1.1s,baz=129,slow=5.0,SNR=4.4						
ARCES				LR	LR	18 06 34.2	
	comp=Z,44nm,20.1s,baz=141,slow=39						
	comp=Z,4.8nm,1.1s						
EKA	Eskdalemuir Ar	65.87	327	P	P	17 35 59.4	-1.2
	comp=Z,1.6nm,0.9s,baz=110,slow=7.7,SNR=3.5						
	comp=Z,1.6nm,0.9s						
KSAR	Wonju Array Be	68.37	54		P	17 36 15.6	-1.2
KSRS	Korea Array	68.40	54	P	P	17 36 15.4	-1.7
	comp=Z,2.6nm,0.8s,baz=268,slow=8.1,SNR=13						
	comp=Z,2.6nm,0.8s						
H01W3	Cape Leeuwin H	69.15	133	T	T	18 51 32.6	
	baz=299						
H01W2	Cape Leeuwin H	69.15	133	T	T	18 51 33.0	
	baz=299						
H01W1	Cape Leeuwin H	69.16	133	T	T	18 51 28.4	
	baz=299						
JNU	Nakatsue	70.61	58	P	P	17 36 30.5	-0.4
	comp=Z,13nm,0.9s,baz=180,slow=2.4,SNR=5.0						
	comp=Z,13nm,0.9s						
USRK	Ussuriysk Ar.	71.99	47	LR	LR	18 09 23.6	
	comp=Z,60nm,20.5s,baz=244,slow=37						
KLR	Kul'dur	72.27	41	P	P	17 36 38.7	-1.7
	comp=Z,1.2nm,0.6s,baz=296,slow=8.9,SNR=4.3						
KLR				LR	LR	18 10 16.9	
	comp=Z,86nm,20.0s,baz=208,slow=37						
	comp=Z,1.2nm,0.6s						
YAK	Yakutsk	73.07	28	P	P	17 36 44.1	-0.8
	comp=Z,6.4nm,0.5s,baz=281,slow=1.2,SNR=8.4						
YAK				LR	LR	18 10 24.0	
	comp=Z,48nm,20.1s,baz=221,slow=37						
	comp=Z,6.4nm,0.5s						
TIXI	Tiksi	75.00	18	LR	LR	18 11 31.3	
	comp=Z,88nm,21.6s,baz=232,slow=37						
MJAR	Matsushiro Arr	76.61	55	P	P	17 37 05.0	-1.0
	comp=Z,1.6nm,1.0s,baz=279,slow=8.0,SNR=1.5						
MJAR				LR	LR	18 12 00.2	
	comp=Z,40nm,20.4s,baz=226,slow=37						
	comp=Z,1.6nm,1.0s						
ASAJ	Asahikawa	79.62	47	LR	LR	18 14 15.0	
	comp=Z,74nm,19.3s,baz=242,slow=37						
ASAR	Alice Springs	81.25	116	P	P	17 37 30.9	-0.8
	comp=Z,2.3nm,0.8s,baz=292,slow=4.9,SNR=29						
	comp=Z,2.3nm,0.8s						
SEY	Seymchan	83.58	27	P	P	17 37 43.1	+0.1
	comp=Z,1.7nm,0.6s,baz=321,slow=9.5,SNR=4.1						
	comp=Z,1.7nm,0.6s						
PETK	Petropavlovsk-	88.24	36	LR	LR	18 18 58.3	
	comp=Z,54nm,20.3s,baz=270,slow=37						
SFJD	Kangerlussuaq	88.32	338	LR	LR	18 19 01.4	
	comp=Z,20nm,21.4s,baz=16,slow=36						
SHEM	Shemya Is, Ala	97.67	33	LR	LR	18 25 07.6	
	comp=Z,39nm,21.1s,baz=263,slow=37						
PDAR	Pinedale Array	126.64	348	PKP	PKPdf	17 44 19.2	+0.1
	comp=Z,0.9nm,0.7s,baz=15,slow=1.7,SNR=6.9						
NVAR	Mina Array Bea	132.09	356	PKP	PKPdf	17 44 30.0	+0.4
	comp=Z,1.2nm,0.9s,baz=18,slow=2.5,SNR=5.3						
TXAR	Lajitas Array	137.40	336	PKP	PKPdf	17 44 40.1	+0.5
	comp=Z,0.4nm,0.6s,baz=104,slow=0.2,SNR=5.9						

SKHL ***09*** *17:27:13.1±0.2, 43°.00N×142°.60E, h138^{km}±3^{km}, mb4.8/5, msha5.7/5*

MOS ***09*** *17:27:13.1±0.8, 43°.14N×142°.64E, h141^{km}, mb4.4/5, Error ellipse: s-maj=8.7km s-min=7.2km az=101.1*

NEIC ***09*** *17:27:13.9±1.4, 43°.15N±0°.06×142°.6E±0°.2, h129^{km}±8^{km}, mb4.3/24, Error ellipse: s-maj=16.1km s-min=8.3km az=87.0*

JMA ***09*** *17:27:14.2±0.2, 43°.1N±0°.6×142°.6E±0°.8, h126^{km}±1^{km}, MV3.6/36, TAISETSU MOUNTAINS REG*

NIED ***09*** *17:27:14.2, 43°.11N×142°.65E, h126^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.47; M$_{\theta\theta}$0.08; M$_{\phi\phi}$0.39; M$_{r\theta}$-0.00; M$_{\theta\phi}$-0.18; M$_{\phi r}$-0.91; Fault plane solution: M$_0$1.02000×10^{15} NP1: φ$_s$140.00000°, δ16.00000°, λ-125.00000°. NP2: φ$_s$357.00000°, δ77.00000°, λ-80.00000°.*

IDC ***09*** *17:27:14.0±0.7, 43°.19N×142°.63E, h131^{km}±4^{km}, mb3.8/29, mbtmp4.1/34, MS3.6/1 Error ellipse: s-maj=12.9km s-min=11.3km az=112.0*

ISC 09 17:27:13.7±0.5**, 43°.11N**±0°.04×**142°.62E**±0°.04**, h132^{km}**±4^{km}**, n130, σ0^{s}.91**/152**, mb4.2**/47**, 3C-2D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFR	Furan	0.06	341	*i* P	Pn	17 27 31.5	-0.1
JFR				*e*S	Sn	17 27 44.2	-1.0
JBT2	Biratori 2	0.38	209	*i* P	Pn	17 27 32.5	+0.1
JBT2				S	Sn	17 27 46.1	-0.4
JAB	Ashibetsu	0.49	324	*i* P	Pn	17 27 33.0	+0.1
JAB				S	Sn	17 27 47.2	-0.3
JIAM	Iburiatsuma	0.71	227	*i* P	Pn	17 27 35.5	+1.2
JIAM				S	Sn	17 27 51.7	+1.9
JCH	Churui	0.74	132	*i* P	Pn	17 27 34.1	-0.5
JCH				S	Sn	17 27 48.8	-1.5
JKK2	Kamakawa 2	0.77	7	*i* P	Pn	17 27 35.1	+0.3
JKK2				S	Sn	17 27 50.2	-0.7
JNBK	Urakawa-nobuka	0.84	173	*i* P	Pn	17 27 35.9	+0.5
JAR	Ashorobuto	0.86	77	*i* P	Pn	17 27 35.7	+0.2
JAR				S	Sn	17 27 52.2	+0.1
JEW	Eniwo	0.90	253	*i* P	Pn	17 27 36.0	+0.2
JEW				S	Sn	17 27 52.5	-0.1
JHR	Hokuryu	0.91	314	*i* P	Pn	17 27 36.1	+0.2
JHR				S	Sn	17 27 53.3	+0.5
JOB	Onbets	0.92	103	*i* P	Pn	17 27 36.2	+0.2
JOB				S	Sn	17 27 53.1	+0.2
ASAJ	Asahikawa	1.00	359	P	Pn	17 27 36.8	0.0
	205nm,0.5s,baz=202,slow=17,SNR=752						
ASAJ				S	Sn	17 27 53.8	-0.6
	398nm,0.7s,baz=66,slow=32,SNR=14						
ASAJ	Asahikawa	1.00	359	PN	Pn	17 27 36.9	+0.1
JKA	Kamikawa-asahi	1.00	359		Pn	17 27 36.9	0.0
ERM	Erimo	1.17	160		Pn	17 27 39.2	+0.8
ERM	Erimo	1.17	160	P	Pn	17 27 39.4	+1.0
ERM	Erimo	1.17	160	PN	Pn	17 27 39.2	+0.8
JEM	Erimo	1.17	160	P	Pn	17 27 39.5	+1.1
JTKR	Abashiri--Toko	1.27	47	*i* P	Pn	17 27 39.8	+0.4
JTKR				S	Sn	17 27 58.8	-0.3
JSS	Shosan	1.40	337	P	Pn	17 27 41.6	+0.7
JAK	Akkeshi	1.53	94	*i* P	Pn	17 27 41.7	-0.5
AKK	Akkeshi	1.63	93	*e*P	Pn	17 27 42.9	-0.5
JRA	Rausu	2.00	65	*i* P	Pn	17 27 48.3	+0.6
RUSJ	Misakicho	2.15	62	*e*PN	Pn	17 27 50.6	+1.0
GLVR	Golovnino	2.21	72	*e*PN	Pn	17 27 50.9	+0.7
GLVR				*e*S	Sn	17 28 20.8	+2.5
GLVR				pmax	pmax		
	comp=Z,132nm,0.1s						
GLVR				smax	smax		
	comp=N,765nm,0.3s						
GLVR				smax	smax		
	comp=E,520nm,0.3s						
GLVR	Golovnino	2.21	72	*e*P	Pn	17 27 50.9	+0.7
GLVR				AMB	AMB	17 27 52.7	
	comp=E,130nm,0.2s						
GLVR				*e*S	Sn	17 28 20.5	+2.2
GLVR				A	A	17 28 21.9	
	comp=E,380nm,0.3s						
GLVR				A	A	17 28 21.9	
	comp=E,520nm,0.3s						
NMR	Nemuro--Hokkai	2.29	82	⇓*i*PN	Pn	17 27 50.5	-0.8
NMR				*i* S	Sn	17 28 18.0	-2.1
NMR	Nemuro--Hokkai	2.29	82	*i* P	Pn	17 27 50.5	-0.8
NMR				*i* S	Sn	17 28 18.0	-2.1
YUK	Yuzh-Kuril'sk	2.53	68*c*	*i*PN	Pn	17 27 55.5	+1.2
YUK				*e*S	Sn	17 28 27.8	+2.2
YUK				pmax	pmax		
	comp=Z,271nm,0.3s						
YUK				pmax	pmax		
	comp=N,22nm,0.2s						
YUK				smax	smax		
	comp=N,305nm,0.3s						
YUK				smax	smax		
	comp=E,618nm,0.4s						
YUK	Yuzh-Kuril'sk	2.53	68	*i* P	Pn	17 27 55.1	+0.8
YUK				AMB	AMB	17 27 55.8	
	comp=E,270nm,0.3s						
YUK				*e*S	Sn	17 28 26.5	+0.9
YUK				A	A	17 28 34.3	
	comp=E,310nm,0.4s						
YUK				A	A	17 28 34.3	
	comp=E,620nm,0.4s						
JTM	Tenmabayashi	2.59	207		Pn	17 27 54.9	-0.2
JTM	Tenmabayashi	2.59	207	P	Pn	17 27 55.3	+0.1
SHO	Shikotan	3.16	75*c*	*i*PN	Pn	17 28 02.7	+0.3
SHO				*e*S	Sn	17 28 38.4	-1.6
SHO				pmax	pmax		
	comp=Z,27nm,0.1s						

SHO				smax	smax		
	comp=E,594nm,0.2s						
SHO				smax	smax		
	comp=N,251nm,0.3s						
SHO	**Shikotan**	**3.16**	**75**	*i* P	**Pn**	**17 28 02.7**	**+0.3**
SHO				AMB	AMB	17 28 04.4	
	comp=N,20nm,0.4s						
SHO				*e*S	**Sn**	**17 28 39.0**	**-1.0**
SHO				A	A	17 28 42.7	
	comp=N,250nm,0.3s						
SHO				A	A	17 28 42.7	
	comp=N,590nm,0.3s						
YSS	**Yuzhno-Sakhali**	**3.84**	**1**	*e*PN	**Pn**	**17 28 12.2**	**+0.8**
YSS				*e*S	**Sn**	**17 28 56.2**	**+0.1**
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				smax	smax		
	comp=N,40nm,1.1s						
YSS				smax	smax		
	comp=E,20nm,1.0s						
YSS				MLR	MLR		
	comp=Z,100nm,15.0s						
YSS	**Yuzhno-Sakhali**	**3.84**	**1**	*e*P	**Pn**	**17 28 12.2**	**+0.8**
YSS				AMB	AMB	17 28 13.7	
	comp=Z,20nm,0.8s						
YSS				*e*S	**Sn**	**17 28 56.4**	**+0.3**
YSS				A	A	17 28 57.9	
	comp=Z,400nm,0.6s						
YSS				A	A	17 28 57.9	
	comp=Z,200nm,0.6s						
KUR	**Kuril'sk**	**4.33**	**59**	*e*PN	**Pn**	**17 28 19.6**	**+1.8**
KUR				*e*S	**Sn**	**17 29 10.5**	**+2.9**
KUR	**Kuril'sk**	**4.33**	**59**	*e*P	**Pn**	**17 28 18.9**	**+1.1**
KUR				AMB	AMB	17 28 20.1	
	comp=Z,140nm,0.7s						
KUR				*e*S	**Sn**	**17 29 08.3**	**+0.7**
KUR				A	A	17 29 16.6	
	comp=Z,40nm,0.3s						
KUR				A	A	17 29 16.6	
	comp=Z,60nm,0.3s						
JMM	**Marumori**	**5.42**	**195**		**Pn**	**17 28 31.1**	**-1.3**
JMM	**Marumori**	**5.42**	**195**	P	**Pn**	**17 28 31.5**	**-1.0**
JSD	**Sado**	**6.06**	**215**	P	**Pn**	**17 28 42.9**	**+1.9**
MJB9	**Matsu-Tunnel**	**7.38**	**209**		**Pn**	**17 28 59.5**	**+0.6**
MAJO	**Matsushiro**	**7.38**	**209**	P	**Pn**	**17 28 57.6**	**-1.3**
MJAR	**Matsushiro Arr**	**7.38**	**209**	P	**Pn**	**17 28 59.3**	**+0.4**
	comp=Z,4.9nm,0.8s,baz=20,slow=14,SNR=18						
MJAR				S	**Sn**	**17 30 17.5**	**-3.7**
	comp=Z,0.9nm,0.4s,baz=316,slow=27,SNR=1.0						
USRK	**Ussuriysk Ar.**	**7.79**	**282**	P	**Pn**	**17 29 04.9**	**+0.7**
	comp=Z,4.1nm,0.7s,baz=75,slow=13,SNR=5.4						
JGF	**Kuroka**	**8.53**	**210**	P	**Pn**	**17 29 15.2**	**+0.8**
GRNR	**Gornyy**	**8.75**	**333**	⇑*i*PN	**Pn**	**17 29 18.1**	**+1.0**
GRNR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KLR	**Kul'dur**	**9.71**	**313**	P	**Pn**	**17 29 29.7**	**-0.2**
	comp=Z,5.6nm,0.9s,baz=124,slow=14,SNR=12						
BNX	**BinXian**	**11.19**	**289**	⇓P	**Pn**	**17 29 50.5**	**+0.7**
BNX				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CN2	**Changchun**	**12.50**	**279**	P	**Pn**	**17 30 06.3**	**-0.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSRS	**Korea Array**	**12.56**	**248**	P	**Pn**	**17 30 08.5**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=59,slow=12,SNR=1.8						
PETK	**Petropavlovsk-**	**14.17**	**40**	P	**Pn**	**17 30 26.6**	**-1.7**
	comp=Z,2.3nm,0.5s,baz=222,slow=8.8,SNR=17						
ZEA	**Zeya**	**14.70**	**322**	*e*P	**P**	**17 30 37.3**	**-0.3**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SEY	**Seymchan**	**20.66**	**13**	P	**P**	**17 31 41.8**	**-0.9**
	comp=Z,1.1nm,0.5s,baz=227,slow=7.8,SNR=7.0						
	comp=Z,1.1nm,0.5s						
TIA	**Tai'an**	**20.75**	**259**	P	**P**	**17 31 43.0**	**-1.0**
TIA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**23.13**	**275**	*e*P	**P**	**17 32 08.0**	**-0.3**
HHC				pmax	pmax		
	comp=Z,23nm,0.5s						
HHC				pmax	pmax		
	comp=Z,80nm,4.2s						
SONM	**Songino Array**	**25.68**	**293**		**P**	**17 32 31.0**	**-0.4**
SONM	**Songino Array**	**25.68**	**293**	P	**P**	**17 32 31.6**	**+0.2**
	comp=Z,3.8nm,0.8s,baz=78,slow=8.2,SNR=18						
SONM				PcP	**PcP**	**17 35 57.4**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=52,slow=1.0,SNR=3.8						
	comp=Z,3.8nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**30.98**	**131**	T	T	18 05 13.2	
	baz=324,slow=76,SNR=34						
H11N1	**WAKE ISLAND Hy**	**30.99**	**131**	T	T	18 05 08.0	
	baz=324,slow=76,SNR=30						
H11N3	**WAKE ISLAND Hy**	**31.00**	**131**	T	T	18 05 20.0	
	baz=324,slow=76,SNR=31						
H11S1	**WAKE ISLAND Hy**	**31.87**	**133**	T	T	18 06 16.1	
	baz=346,slow=72,SNR=31						
H11S3	**WAKE ISLAND Hy**	**31.87**	**133**	T	T	18 06 14.1	
	baz=346,slow=72,SNR=26						
H11S2	**WAKE ISLAND Hy**	**31.88**	**133**	T	T	18 06 22.4	
	baz=346,slow=72,SNR=25						
PZH	**PanZhiHua**	**37.02**	**257**	P	**P**	**17 34 12.0**	**+1.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
M14K	**Bethel**	**37.13**	**42**	P	**P**	**17 34 10.2**	**-0.9**
M14K				IAmb	IAmb	17 34 21.3	
	comp=Z,5.8nm,1.0s						
KMI	**Kunming**	**37.16**	**254**	P	**P**	**17 34 13.5**	**+1.4**
KMI				pmax	pmax		
	comp=Z,19nm,0.5s						
N15K	**Kwethluk River**	**38.04**	**43**	P	**P**	**17 34 19.2**	**+0.3**
N15K				IAmb	IAmb	17 34 56.3	
	comp=Z,7.7nm,1.2s						
ZAA0	**Zalesovo Array**	**38.74**	**307**	P	**P**	**17 34 24.5**	**-0.3**
ZALV	**Zalesovo Beam**	**38.74**	**307**	P	**P**	**17 34 25.1**	**+0.3**
	comp=Z,6.5nm,0.7s,baz=85,slow=4.9,SNR=13						
ZALV				PcP	**PcP**	**17 36 34.0**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=96,slow=6.1,SNR=4.0						
	comp=Z,6.5nm,0.7s						
M17K	**Holitna River**	**39.34**	**41**	P	**P**	**17 34 30.3**	**+0.7**
M17K				IAmb	IAmb	17 34 37.4	
	comp=Z,6.8nm,1.2s						
J20K	**Nowinta River**	**40.83**	**37**	P	**P**	**17 34 42.4**	**+0.5**
CAST	**Castle Rocks**	**41.77**	**38**	P	**P**	**17 34 50.5**	**+0.8**
E22K	**Anaktuvuk Pass**	**41.85**	**31**	P	**P**	**17 34 50.0**	**-0.3**
MKAR	**Makanchi Array**	**41.94**	**297**		**P**	**17 34 51.4**	**+0.2**
MKAR	**Makanchi Array**	**41.94**	**297**	P	**P**	**17 34 51.3**	**+0.1**
	comp=Z,4.5nm,0.5s,baz=81,slow=10,SNR=60						
MKAR				PcP	**PcP**	**17 36 43.8**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=74,slow=5.2,SNR=11						
	comp=Z,4.5nm,0.5s						
MAKZ	**Makanchi**	**42.14**	**297**		**P**	**17 34 53.1**	**+0.2**
MAKZ	**Makanchi**	**42.14**	**297**	P	**P**	**17 34 53.1**	**+0.2**
MAKZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
H23K	**Yukon River**	**42.75**	**34**	P	**P**	**17 34 58.1**	**+0.5**
C24K	**Franklin Bluff**	**43.02**	**28**	P	**P**	**17 34 58.7**	**-0.9**
C24K				IAmb	IAmb	17 35 15.3	
	comp=Z,9.0nm,1.3s						
KURK	**Kurchatov**	**43.13**	**303**		**P**	**17 35 00.5**	**-0.2**
KURK				IAmb	IAmb	17 35 01.7	
	comp=Z,6.2nm,0.8s						
KURK	**Kurchatov**	**43.13**	**303**	P	**P**	**17 35 01.4**	**+0.6**
KURK						17 36 48.4	
KURBB	**Kurchatov Arra**	**43.22**	**303**	P	**P**	**17 35 01.4**	**-0.1**
	comp=Z,7.4nm,0.7s,baz=76,slow=8.9,SNR=47						
KURBB				PcP	**PcP**	**17 36 48.4**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=81,slow=3.1,SNR=4.9						
	comp=Z,7.4nm,0.7s						
ILAR	**Eielson Array**	**43.94**	**36**	P	**P**	**17 35 06.9**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=274,slow=7.5,SNR=10						
	comp=Z,0.7nm,0.8s						
CHTO	**Chiang Mai**	**43.95**	**250**	P	**P**	**17 35 07.9**	**+0.2**
CHTO				IAmb	IAmb	17 35 10.0	
	comp=Z,4.4nm,0.7s						
CHTO	**Chiang Mai**	**43.95**	**250**	P	**P**	**17 35 07.9**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**44.19**	**250**	P	**P**	**17 35 10.8**	**+1.2**
	comp=Z,1.5nm,0.7s,baz=47,slow=6.9,SNR=8.2						
	comp=Z,1.5nm,0.7s						
SCRK	**Sand Creek**	**45.30**	**36**	P	**P**	**17 35 17.8**	**-0.2**
TARG	**Taragay, Kyrgy**	**46.78**	**292**	IAmb	IAmb	17 35 31.9	
	comp=Z,3.0nm,0.7s						
EVN	**Everest**	**47.02**	**270**	P	**P**	**17 35 33.2**	**+0.6**
BVAR	**Borovoye Array**	**47.34**	**309**	P	**P**	**17 35 34.4**	**+0.4**
	comp=Z,4.7nm,0.4s,baz=81,slow=9.0,SNR=38						
BVAR				PcP	**PcP**	**17 37 02.9**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=63,slow=4.2,SNR=5.0						
	comp=Z,4.7nm,0.4s						
BRVK	**Borovoye**	**47.39**	**309**		**P**	**17 35 34.2**	**-0.1**
BRVK				IAmb	IAmb	17 35 35.2	
	comp=Z,3.3nm,0.6s						
BRVK	**Borovoye**	**47.39**	**309**	P	**P**	**17 35 34.2**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AAK	**Ala-Archa**	**48.63**	**294**	P	**P**	**17 35 44.0**	**-0.2**
	comp=Z,0.9nm,0.3s,baz=112,slow=4.3,SNR=3.9						
	comp=Z,0.9nm,0.3s						
AAK	**Ala-Archa**	**48.63**	**294**	P	**P**	**17 35 44.0**	**-0.2**
KKAR	**Karatay Array**	**51.06**	**296**	P	**P**	**17 36 01.7**	**-0.7**
KKAR	**Karatay Array**	**51.06**	**296**	P	**P**	**17 36 01.7**	**-0.7**
ARTI	**Arti**	**52.64**	**316**		**P**	**17 36 12.8**	**-1.0**
ARTI	**Arti**	**52.64**	**316**	P	**P**	**17 36 13.6**	**-0.2**
	comp=Z,7.3nm,0.5s,baz=73,slow=4.4,SNR=15						
	comp=Z,7.3nm,0.5s						
KULM	**Kulim**	**52.80**	**237**	P	**P**	**17 36 16.0**	**+0.4**
AB31	**Akbulak array**	**54.86**	**307**	IAmb	IAmb	17 36 31.4	
	comp=Z,6.2nm,1.0s						
ABKAR	**Akbulak array**	**54.86**	**307**		**P**	**17 36 30.3**	**+0.2**
ABKAR	**Akbulak array**	**54.86**	**307**	IAmb	IAmb	17 36 31.4	
	comp=Z,6.3nm,1.0s						
AKTO	**Aktyubinsk**	**55.42**	**309**	P	**P**	**17 36 34.5**	**+0.3**
	comp=Z,2.6nm,0.7s,baz=47,slow=10,SNR=5.3						
	comp=Z,2.6nm,0.7s						
KIRV	**Kirov**	**56.04**	**321**	P	**P**	**17 36 38.4**	**0.0**
	comp=Z,8.8nm,0.6s,baz=84,slow=3.0,SNR=4.3						
	comp=Z,8.8nm,0.6s						
BBB	**Bella Bella**	**57.16**	**47**	LR	LR	18 02 25.5	
	comp=Z,45nm,18.1s,baz=219,slow=37						
YKA	**Yellowknife Ar**	**58.13**	**32**	pP	pP	17 37 24.0	-0.7
	comp=Z,1.0nm,1.0s,baz=304,slow=7.3,SNR=3.9						
ARCES	**ARCESS Array B**	**58.66**	**338**	P	**P**	**17 36 55.7**	**-1.0**
	comp=Z,2.5nm,0.9s,baz=32,slow=7.1,SNR=3.8						
	comp=Z,2.5nm,0.9s						
BELG	**Belogornoye**	**60.06**	**315**	P	**P**	**17 37 06.3**	**-0.1**
	comp=Z,19nm,0.9s,baz=64,slow=5.3,SNR=3.7						
	comp=Z,19nm,0.9s						
WRA	**Warramunga Arr**	**63.20**	**189**	P	**P**	**17 37 27.8**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=7.4,slow=6.8,SNR=19						
	comp=Z,0.9nm,0.8s						
FINES	**FINESS Array B**	**63.90**	**331**	P	**P**	**17 37 31.4**	**-0.5**
	comp=Z,5.7nm,0.6s,baz=49,slow=7.7,SNR=39						
	comp=Z,5.7nm,0.6s						
ASAR	**Alice Springs**	**66.93**	**189**	P	**P**	**17 37 53.4**	**+1.5**
	comp=Z,0.8nm,0.7s,baz=10,slow=7.6,SNR=11						
	comp=Z,0.8nm,0.7s						
KIV	**Kislovodsk**	**67.68**	**310**	*e*P	**P**	**17 37 57.0**	**+0.4**
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
KBZ	**Khabaz**	**67.70**	**309**	P	**P**	**17 37 57.3**	**+0.7**
	comp=Z,4.3nm,0.8s,baz=56,slow=4.5,SNR=11						
	comp=Z,4.3nm,0.8s						
HFS	**Hagfors**	**68.95**	**335**	P	**P**	**17 38 03.7**	**-0.3**
	comp=Z,3.1nm,0.4s,baz=54,slow=7.5,SNR=24						
	comp=Z,3.1nm,0.4s						
NB2	**NORSAR Subarra**	**68.95**	**337**	P	**P**	**17 38 04.0**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=34,slow=6.5						
NOA	**NORSAR Array B**	**68.95**	**337**	P	**P**	**17 38 03.5**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=35,slow=6.4,SNR=6.8						
	comp=Z,1.2nm,0.6s						
AKASG	**Malin Array Be**	**70.08**	**322**	P	**P**	**17 38 10.6**	**-0.6**
	comp=Z,1.6nm,0.5s,baz=45,slow=6.5,SNR=11						
	comp=Z,1.6nm,0.5s						
NVAR	**Mina Array Bea**	**70.69**	**55**	P	**P**	**17 38 15.8**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=290,slow=5.4,SNR=2.6						
NVAR				pP	**pP**	**17 38 48.3**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=290,slow=6.0,SNR=4.6						
	comp=Z,0.4nm,0.8s						
PDAR	**Pinedale Array**	**72.80**	**47**	P	**P**	**17 38 28.4**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=294,slow=6.3,SNR=4.5						
	comp=Z,0.6nm,0.7s						
BUR08	**Bucovina Ar. S**	**74.12**	**321**	P	**P**	**17 38 35.5**	**0.0**
BUR08				IAmb	IAmb	17 38 38.6	
	comp=Z,3.6nm,0.9s						
BRTR	**Keskin Array B**	**75.53**	**311**	P	**P**	**17 38 43.1**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=46,slow=4.2,SNR=4.5						
	comp=Z,0.5nm,0.6s						
CLL	**Collm**	**76.29**	**330**	*e*P	**P**	**17 38 48.0**	**+0.4**
CLL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CLL	**Collm**	**76.29**	**330**	*e*P	**P**	**17 38 48.0**	**+0.4**
	comp=Z,3.0nm,0.8s						
CLL				*e*(PcP)	**PcP**	**17 38 57.0**	**-2.0**
EKA	**Eskdalemuir Ar**	**77.71**	**341**	P	**P**	**17 38 55.2**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=22,slow=5.3,SNR=9.1						
	comp=Z,0.6nm,0.5s						
GERES	**GERESS Array B**	**78.03**	**328**	P	**P**	**17 38 57.4**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=32,slow=5.3,SNR=4.0						
	comp=Z,0.5nm,0.5s						
MMAI	**Mount Meron Ar**	**79.21**	**305**	P	**P**	**17 39 05.2**	**+0.9**
	comp=Z,1.0nm,0.5s,baz=26,slow=4.2,SNR=4.4						
	comp=Z,1.0nm,0.5s						
FUORN	**Ofenpass-Fuorn**	**81.18**	**329**	P	**P**	**17 39 15.7**	**+0.8**
FUORN				IAmb	IAmb	17 39 16.2	
	comp=Z,2.4nm,0.6s						
TXAR	**Lajitas Array**	**85.72**	**53**	P	**P**	**17 39 39.7**	**+1.6**
	comp=Z,0.1nm,0.4s,baz=345,slow=3.4,SNR=2.0						
TXAR				pP	**pP**	**17 40 11.9**	**0.0**
	comp=Z,0.7nm,0.8s,baz=289,slow=3.5,SNR=6.4						
	comp=Z,0.1nm,0.4s						
ESDC	**Sonseca Array**	**92.22**	**335**	P	**P**	**17 40 09.0**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=35,slow=5.9,SNR=3.2						
	comp=Z,0.5nm,0.8s						

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*KRNET **09** 18:06:32.1±0.1, 39°.06N×70°.14E, mb3.6*
*NNC **09** 18:06:34.6±3.1, 39°.09N×69°.89E, h0^{km}, mb3.6, mpv3.2,*
Error ellipse: s-maj=22.3km s-min=17.9km az=24.0
ISC 09 18:06:33.6±1.6**, 39°.06N**±0°.06×**70°.21E**±0°.08**, h10**^{km}**, n18,**
σ**2**^{s}.**15**/36**, 19C-20D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	**Garm**	**0.10**	**126**	⇑*i*P	**Pg**	**18 06 35.6**	**-0.8**
GAR				⇑*i*S	**Sg**	**18 06 38.0**	**-0.4**
BTK	**Batken**	**1.10**	**25**	⇑*i*P	**Pb**	**18 06 53.3**	**-1.5**
BTK				⇑*i*S	**Sg**	**18 07 08.7**	**-0.5**
DRK	**Karamyk**	**1.30**	**71**	⇑*i*P	**Pn**	**18 06 57.4**	**-0.8**
DRK				⇑*i*S	**Sg**	**18 07 16.0**	**+0.3**
OHH	**Osh**	**2.46**	**53**	⇑*i*P	**Pn**	**18 07 14.9**	**+1.0**
OHH				⇑*i*S	**Sn**	**18 07 46.3**	**+2.1**
TRKS	**Terek-Say**	**2.57**	**16**	⇓*i*P	**Pn**	**18 07 15.4**	**0.0**
TRKS				⇓*i*S	**Sn**	**18 07 46.9**	**+0.1**
SFK	**Sufi-Kurgan**	**2.72**	**69**	⇓*i*P	**Pn**	**18 07 18.8**	**+1.2**
SFK				⇓*i*S	**Sn**	**18 07 52.7**	**+2.0**
ARK	**Arkit**	**3.04**	**26**	⇓*e*P	**Pn**	**18 07 22.9**	**+1.0**
ARK				⇓*e*S	**Sn**	**18 07 59.7**	**+1.2**
ARSB	**Arslanbob**	**3.10**	**42**	⇓*i*P	**Pn**	**18 07 23.7**	**+0.9**
ARSB				⇓*i*S	**Sn**	**18 08 01.5**	**+1.5**
SALK	**Salom-Alik**	**3.32**	**56**	⇓*i*P	**Pn**	**18 07 26.9**	**+1.1**
SALK				⇓*i*S	**Sn**	**18 08 07.0**	**+1.6**
MNAS	**Manas**	**3.84**	**26**	⇓*i*P	**Pn**	**18 07 33.9**	**+1.0**
MNAS				⇓*i*S	**Sn**	**18 08 19.2**	**+1.0**
KK31	**Karatay Array**	**4.04**	**3**	⇑Pn	**Pn**	**18 07 37.8**	**+2.2**
	3.8nm,0.4s,baz=184,slow=13,SNR=24						
KK31				⇑Sn	**Sn**	**18 08 27.0**	**+4.0**
	6.5nm,0.4s						
KK31				⇓Lg	Lg	18 08 40.3	
	9.9nm,0.4s,baz=190,slow=30,SNR=6.4						
KKAR	**Karatay Array**	**4.04**	**3**	⇑*i*P	**Pn**	**18 07 36.3**	**+0.7**
KKAR				⇑*i*S	**Sn**	**18 08 23.2**	**+0.2**
AML	**Almayashu**	**4.06**	**40**	⇑*i*P	**Pn**	**18 07 37.3**	**+1.2**
AML				⇑*i*S	**Sn**	**18 08 24.8**	**+1.0**
ARLS	**Aral**	**4.20**	**47**	⇓*i*P	**Pn**	**18 07 39.2**	**+1.3**
ARLS				⇓*i*S	**Sn**	**18 08 28.1**	**+0.9**
EKS2	**Erkin-Say**	**4.50**	**36**	⇑*i*P	**Pn**	**18 07 43.1**	**+1.1**
EKS2				⇑*i*S	**Sn**	**18 08 35.0**	**+0.6**
AAK	**Ala-Archa**	**4.83**	**41**	⇓Pn	**Pn**	**18 07 50.6**	**+4.0**
	0.3nm,0.4s						
AAK				⇓Sn	**Sb**	**18 08 51.8**	**-4.8**
	3.9nm,0.8s						
AAK				⇑Lg	Lg	18 09 10.9	
	5.5nm,1.1s						
AAK	**Ala-Archa**	**4.83**	**41**	⇓*i*P	**Pn**	**18 07 47.8**	**+1.3**
AAK				⇓*i*S	**Sn**	**18 08 42.9**	**+0.3**
TKM2	**Tokmak 2**	**5.61**	**45**	⇑Pn	**Pn**	**18 08 00.8**	**+3.5**
	4.2nm,0.5s						
TKM2				⇑Sn	**Sn**	**18 09 08.6**	**+6.7**
	6.2nm,1.0s						
TKM2				⇓Lg	Lg	18 09 35.1	
	5.8nm,0.7s						

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*IDC **09** 18:30:40.5±1.6, 3°.99S×149°.81E, h0^{km}, mb3.9/8,*
mbtmp3.9/9, ML1.8/1, MS3.5/20, Error ellipse:
s-maj=60.9km s-min=18.6km az=111.0
ISC 09 18:30:46.1±1.5**, 4°.0S**±0°.2×**149°.8E**±0°.4**, h35**^{km}**, n34,**
σ**1**^{s}.**15**/12**, mb3.8**/8**, MS3.6**/17**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.00**	**206**	Pn	**Pn**	**18 32 12.0**	**-0.3**
	1.6nm,0.3s,baz=321,slow=5.1,SNR=7.1						
PMG				Sn	**Sn**	**18 33 21.1**	**+1.2**
	0.7nm,0.3s,baz=3.9,slow=8.6,SNR=2.4						
PMG				LR	LR	18 33 55.4	
	comp=Z,121nm,18.6s,baz=50,slow=32						
	19nm,1.1s						
JAY	**Jayapura**	**9.17**	**279**	LR	LR	18 35 51.1	
	comp=Z,382nm,18.1s,baz=62,slow=34						
GUMO	**Guam**	**18.11**	**344**	LR	LR	18 40 14.8	
	comp=Z,188nm,20.9s,baz=157,slow=32						
WRA	**Warramunga Arr**	**21.88**	**222**	P	**P**	**18 35 34.5**	**-1.7**
	10nm,0.9s,baz=46,slow=10,SNR=26						
WRA				PcP	**PcP**	**18 39 35.8**	**+0.8**
	0.5nm,0.9s,baz=42,slow=2.5,SNR=2.2						
	10nm,0.9s						
ASAR	**Alice Springs**	**24.87**	**217**	P	**P**	**18 36 04.7**	**-1.0**
	7.3nm,1.0s,baz=54,slow=8.3,SNR=29						
ASAR				LR	LR	18 46 47.3	
	comp=Z,208nm,21.7s,baz=79,slow=39						
	7.3nm,1.0s						
DAV	**Davao City (W)**	**26.52**	**294**	LR	LR	18 46 16.1	
	comp=Z,72nm,18.5s,baz=98,slow=35						
BATI	**Baumata**	**26.63**	**255**	LR	LR	18 47 54.5	
	comp=Z,192nm,18.1s,baz=112,slow=39						
FITZ	**Fitzroy Crossi**	**27.48**	**237**	P	**P**	**18 36 29.3**	**0.0**
	10nm,0.9s,baz=70,slow=9.2,SNR=13						
	10nm,0.9s						
H11S3	**WAKE ISLAND Hy**	**27.85**	**36**	T	T	19 05 57.0	
	baz=216,slow=76						
H11S2	**WAKE ISLAND Hy**	**27.86**	**36**	T	T	19 05 57.3	
	baz=216						
H11S1	**WAKE ISLAND Hy**	**27.87**	**36**	T	T	19 05 57.4	
	baz=216,slow=76						
STKA	**Stephens Creek**	**28.81**	**195**	LR	LR	18 48 21.2	
	comp=Z,149nm,18.5s,baz=25,slow=37						
H11N1	**WAKE ISLAND Hy**	**28.93**	**35**	T	T	19 07 23.7	
	baz=219,slow=76,SNR=5.2						
H11N3	**WAKE ISLAND Hy**	**28.94**	**35**	T	T	19 07 24.8	
	baz=219,slow=76,SNR=6.5						
H11N2	**WAKE ISLAND Hy**	**28.95**	**35**	T	T	19 07 24.7	
	baz=219,slow=76,SNR=11						
KAPI	**Kappang**	**29.95**	**267**	LR	LR	18 49 27.3	
	comp=Z,38nm,20.0s,baz=96,slow=38						
MSVF	**Nonsavu**	**30.89**	**118**	LR	LR	18 48 26.9	
	comp=Z,166nm,20.3s,baz=223,slow=35						
MJAR	**Matsushiro Arr**	**41.72**	**346**	LR	LR	18 55 46.0	
	comp=Z,46nm,19.8s,baz=158,slow=36						
LEM	**Lembang**	**42.05**	**264**	LR	LR	18 59 50.6	
	comp=Z,24nm,18.3s,baz=186,slow=42						
KLR	**Kul'dur**	**55.25**	**346**	LR	LR	19 02 41.3	
	comp=Z,35nm,19.4s,baz=214,slow=35						
PETK	**Petropavlovsk-**	**57.25**	**6**	LR	LR	19 00 43.4	
	comp=Z,69nm,21.8s,baz=201,slow=32						
SHEM	**Shemya Is, Ala**	**60.11**	**17**	LR	LR	19 01 42.9	
	comp=Z,59nm,21.8s,baz=124,slow=31						
MA2	**Magadan**	**63.35**	**1**	LR	LR	19 08 57.4	
	comp=Z,28nm,18.9s,baz=229,slow=36						
SONM	**Songino Array**	**64.04**	**329**	P	**P**	**18 41 15.9**	**-0.6**
	0.2nm,0.3s,baz=122,slow=11,SNR=4.0						
	0.2nm,0.3s						
YAK	**Yakutsk**	**67.59**	**350**	LR	LR	19 10 15.4	
	comp=Z,12nm,21.9s,baz=166,slow=35						
VNDA	**Vanda**	**73.79**	**177**	LR	LR	19 10 53.4	
	comp=Z,48nm,18.5s,baz=316,slow=33						
KDAK	**Kodiak Island**	**76.82**	**28**	LR	LR	19 09 51.8	
	comp=Z,37nm,22.0s,baz=236,slow=31						
MKAR	**Makanchi Array**	**77.72**	**319**	P	**P**	**18 42 41.5**	**+2.0**
	0.5nm,1.0s,baz=91,slow=4.9,SNR=4.4						
	0.5nm,1.0s						
KURBB	**Kurchatov Arra**	**81.29**	**322**	P	**P**	**18 42 59.3**	**+0.6**
	0.3nm,0.9s,baz=101,slow=4.8,SNR=2.9						
	0.3nm,0.9s						
ILAR	**Eielson Array**	**82.54**	**23**	P	**P**	**18 43 05.1**	**+0.1**
	0.4nm,0.7s,baz=260,slow=4.5,SNR=5.5						
	0.4nm,0.7s						
BVAR	**Borovoye Array**	**86.77**	**324**	P	**P**	**18 43 25.5**	**-1.1**
	0.7nm,0.8s,baz=103,slow=6.5,SNR=4.3						
	0.7nm,0.8s						
INK	**Inuvik**	**88.76**	**21**	LR	LR	19 16 31.7	
	comp=Z,26nm,21.7s,baz=256,slow=31						
ARTI	**Arti**	**94.04**	**326**	LR	LR	19 27 23.6	
	comp=Z,24nm,19.4s,baz=98,slow=36						
TORD	**Torodi Ar. Bea**	**147.18**	**288**	PKPbc	**PKPdf**	**18 50 24.3**	**-0.2**
	2.3nm,0.4s,baz=85,slow=3.0,SNR=2.0						

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*DJA **09** 18:44:14.6±0.7, 0°S±2°×12°4E±°, h26^{km}±6^{km}, M4.2/18,*
mB4.8/1, mb4.3/6, MLv4.0/18, Mw(mB)4.0/1
ISC 09 18:44:15.5±1.1**, 0°.41S**±0°.05×**124°.19E**±0°.04**, h88**^{km}**, n20,**
σ**1**^{s}.**56**/29**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.00**	**348**	P	**Pn**	**18 44 33.2**	**-1.9**
KMSI				S	**Sn**	**18 44 47.5**	**-2.2**
LUWI	**Luwuk**	**1.55**	**246**	P	**Pn**	**18 44 40.2**	**-1.6**
LUWI	**Luwuk**	**1.55**	**246**	P	**Pn**	**18 44 39.7**	**-2.1**
LUWI				S	**Sn**	**18 45 00.5**	**-1.1**
MRSI	**Marisa**	**2.41**	**291**	P	**Pn**	**18 44 50.8**	**-2.3**
SANI	**Sanana**	**2.43**	**132**	P	**Pn**	**18 44 52.0**	**-1.3**
SANI	**Sanana**	**2.43**	**132**	P	**Pn**	**18 44 51.8**	**-1.5**
SANI				S	**Sn**	**18 45 19.5**	**-2.8**
TNTI	**Ternate**	**3.39**	**70**	P	**Pn**	**18 45 07.6**	**+1.3**
TNTI	**Ternate**	**3.39**	**70**	S	**Sn**	**18 45 48.5**	**+3.0**
TOLI2	**Tolitoli**	**3.73**	**294**	P	**Pn**	**18 45 10.8**	**0.0**
KDI	**Kendari**	**3.85**	**204**	P	**Pn**	**18 45 12.6**	**0.0**
KDI				S	**Sn**	**18 45 56.6**	**-0.2**
NLAI	**Namlea**	**4.05**	**134**	P	**Pn**	**18 45 15.0**	**-0.2**
NLAI				S	**Sn**	**18 46 02.5**	**+1.0**
MPSI	**Mapaga**	**4.35**	**280**	P	**Pn**	**18 45 20.9**	**+1.6**
PCI	**Palu**	**4.38**	**264**	P	**Pn**	**18 45 19.4**	**-0.3**
PCI				S	**Sn**	**18 46 10.2**	**+0.7**
TTSI	**Tana Toraja**	**5.09**	**239**	P	**Pn**	**18 45 29.2**	**-0.2**
	0.2nm854nm41nm,0.5s						
SPSI	**Sidrap Palu**	**5.65**	**231**	P	**Pn**	**18 45 37.3**	**+0.3**
SPSI				S	**Sn**	**18 46 41.3**	**+0.7**
BNSI	**Bone**	**5.68**	**226**	P	**Pn**	**18 45 37.0**	**-0.5**
	0.1nm18nm,0.7s						
BNSI				S	**Sn**	**18 46 42.4**	**+1.0**
	0.1nm18nm,0.7s						
BSSI	**Bau Bau, Buton**	**6.78**	**213**	P	**Pn**	**18 45 52.3**	**-0.2**
	0.1nm21nm,0.6s						
BSSI				S	**Sn**	**18 47 10.0**	**+1.7**
	0.1nm21nm,0.6s						
SWI	**Sorong**	**7.09**	**94**	P	**Pn**	**18 45 56.7**	**+0.1**
MYLDM	**Lahad Datu**	**7.94**	**314**	P	**Pn**	**18 46 11.3**	**+3.0**
FAKI	**Fak Fak**	**8.44**	**107**	P	**Pn**	**18 46 14.0**	**-1.0**

IDC 09 18:44:24.6±4.6**, 5°.42S**×**151°.38E, h245**^{km}±34^{km}**, mb2.9**/4**,**
mbtmp3.6/5**, Error ellipse: s-maj=112.5km**
s-min=21.2km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.76**	**226**	P	Pn	18 45 48.6	-1.1
	14nm,0.5s,baz=17,slow=5.8,SNR=12						
PMG				S	S	18 46 59.6	+1.9
	11nm,0.5s,baz=331,slow=17,SNR=1.9						
WRA	**Warramunga Arr**	**21.98**	**227**	P	P	18 48 58.5	-0.6
	0.6nm,0.5s,baz=52,slow=9.8,SNR=13						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**24.75**	**221**	P	P	18 49 24.7	+0.5
	0.3nm,0.4s,baz=53,slow=9.1,SNR=17						
	0.3nm,0.4s						
PETK	**Petropavlovsk-**	**58.55**	**4**	P	P	18 53 55.9	+0.3
	0.5nm,0.5s,baz=188,slow=7.4,SNR=4.8						
	0.5nm,0.5s						
ILAR	**Eielson Array**	**83.26**	**22**	P	P	18 56 23.1	-0.4
	0.3nm,0.7s,baz=232,slow=5.6,SNR=2.3						
	0.3nm,0.7s						

IDC 09 19:38:03.5±2.2**, 8°.03S**×**129°.47E, h0**^{km}**, mb3.2**/1**,**
mbtmp3.0/3**, ML2.8**/2**, Error ellipse: s-maj=100.9km**
s-min=30.0km az=67.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC

WRA	Warramunga Arr	12.75	159	Pn	Pn	19 41 06.3	+0.1
	baz=338,slow=12,SNR=1.6						
WRA				Sn	Sn	19 43 32.5	+3.5
	0.1nm,0.3s,baz=336,slow=21,SNR=5.1						
	0.2nm,0.7s						
ASAR	Alice Springs	16.12	165	Pn	Pn	19 41 50.5	-1.2
	baz=343,slow=10,SNR=5.1						
	0.3nm,0.6s						
MKAR	Makanchi Array	68.80	327	P	P	19 49 09.7	+0.1
	0.1nm,0.6s,baz=126,slow=7.3,SNR=1.7						
	0.1nm,0.6s						

VAO ***09*** *19:43:16.4±0.8, 6°.79N×72°.97W, h129^{km}±10^{km}, mb4.8*

NEIC ***09*** *19:43:17.0±2.2, 6°.88N±0°.07×73°.04W±0°.09, h135^{km}±6^{km}, mb4.7/131, Error ellipse: s-maj=13.1km s-min=9.4km az=99.0*

IDC ***09*** *19:43:17.7±0.4, 6°.74N×72°.93W, h159^{km}±3^{km}, mb3.8/22, mbtmp4.3/28, Error ellipse: s-maj=9.4km s-min=6.4km az=130.0*

RSNC ***09*** *19:43:18.6±0.0, 7°N±1°×7°3W±°, h152^{km}±1^{km}, M4.9, mB5.2, mb5.2, ML4.5, Mw(mB)4.6*

ISC 09 19:43:17.4±0.4, **6°.84N**±0°.03×**73°.07W**±0°.03, **h154**^{km}±3^{km}, **h154**^{km}**:pP-P, n525,** σ**1**^{s}**.11**/528, **mb4.7**/91, **2C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.27	204	P	Pn	19 43 39.0	+0.3
BARC				S	Sn	19 43 54.4	-0.5
PAMC	Pamplona, Colo	0.62	37	P	Pn	19 43 41.8	+1.4
PAMC				S	Sn	19 43 59.0	+1.0
BRJC	Barrancabermej	0.68	281	P	Pn	19 43 40.6	+0.4
BRJC				S	Sn	19 43 57.5	-0.1
RUSC	La Rusia	0.94	181		Pn	19 43 42.1	-0.5
RUSC	La Rusia	0.94	181	P	Pn	19 43 42.9	+0.2
RUSC				S	Sn	19 44 01.6	-0.4
TAMC	Tame, Arauca	1.33	107	P	Pn	19 43 47.4	+1.8
TAMC				S	Sn	19 44 09.3	+2.1
PTBC	PUERTO BERRIO,	1.41	258	P	Pn	19 43 45.4	-1.0
PTBC				S	Sn	19 44 06.4	-2.1
SPBC	San Pablo de B	1.54	220	P	Pn	19 43 47.7	-0.2
SPBC				S	Sn	19 44 10.2	-1.0
ZARC	Zaragoza, Cauc	1.89	290	P	Pn	19 43 51.1	-0.4
ZARC				S	Sn	19 44 16.4	-1.3
NORC	Norcasia	2.19	235	P	Pn	19 43 54.5	-0.6
NORC				S	Sn	19 44 23.4	-0.7
CHIC	Chingaza	2.29	197	P	Pn	19 43 56.8	+0.1
CHIC				S	Sn	19 44 26.4	-0.5
ROSC	El Rosal	2.34	212	P	Pn	19 43 58.6	+1.3
	3µm,0.4s,baz=222,slow=1.8,SNR=656						
ROSC				S	Sn	19 44 28.9	+1.0
	7µm,0.4s,baz=172,slow=21,SNR=8.6						
ROSC	El Rosal	2.34	212	P	Pn	19 43 58.5	+1.3
ROSC				S	Sn	19 44 28.2	+0.3
CVER	Cruz Verde, Cu	2.51	203	P	Pn	19 44 00.3	+0.9
CVER				S	Sn	19 44 32.2	+0.5
UREC	San Jos de Ur	2.60	290	P	Pn	19 43 58.5	-1.5
UREC				S	Sn	19 44 31.0	-1.9
VILC	Villavicencio,	2.78	193	P	Pn	19 44 02.2	-0.2
VILC				S	Sn	19 44 36.3	-0.8
PTGC	Puerto Gaitan,	2.79	160	P	Pn	19 44 02.1	-0.2
PTGC				S	Sn	19 44 35.1	-1.9
GUY2C	Guyana, Caldas	2.79	235	P	Pn	19 44 02.9	+0.1
GUY2C				S	Sn	19 44 35.3	-2.5
NIZA	Niza - Manizal	2.97	234	P	Pn	19 44 06.1	+1.2
NIZA				S	Sn	19 44 40.7	-0.9
CBOC	Ciudad Bolivar	3.08	252	P	Pn	19 44 06.4	+0.3
CBOC				S	Sn	19 44 42.0	-1.8
DBBC	Dabeiba	3.12	273	P	Pn	19 44 06.3	-0.2
DBBC				S	Sn	19 44 42.3	-2.3
SDV	Santo Domingo	3.16	50	P	Pn	19 44 08.5	+1.4
	360nm,0.3s,baz=164,slow=2.8,SNR=150						
SDV				S	Sn	19 44 45.8	+0.2
	2µm,0.4s,baz=75,slow=22,SNR=51						
SDV	Santo Domingo	3.16	50	P	Pn	19 44 08.5	+1.4
SDV				S	Sn	19 44 45.6	0.0
ARGC	Ariguani, Magd	3.22	339	P	Pn	19 44 09.0	+1.3
ARGC				S	Sn	19 44 48.0	+1.3
ANIL	Santa Ana	3.29	225	P	Pn	19 44 09.2	+0.3
ANIL				S	Sn	19 44 48.1	-0.7
PRAC	Prado	3.59	210	P	Pn	19 44 11.8	-0.8
PRAC				S	Sn	19 44 54.2	-1.2
ORTC	Ortega, Tolima	3.63	217	P	Pn	19 44 12.7	-0.3
ORTC				S	Sn	19 44 55.7	-0.5
APAC	Apartado, Choc	3.64	287	P	Pn	19 44 12.8	-0.3
APAC				S	Sn	19 44 54.5	-1.8
SJCC	San Jacinto, C	3.68	326	P	Pn	19 44 12.6	-1.1
SJCC				S	Sn	19 44 54.2	-3.3
PLMC	San Jos del P	3.73	239	P	Pn	19 44 14.3	0.0
PLMC				S	Sn	19 44 55.7	-2.9
URMC	La Uribe, Meta	3.80	200	P	Pn	19 44 15.3	0.0
URMC				S	Sn	19 44 58.8	-1.5
LCBC	Los crdobas,	3.83	302	P	Pn	19 44 14.0	-1.6
LCBC				S	Sn	19 45 01.7	+0.9
CRJC	Cerrejon, Guaj	4.16	3	P	Pn	19 44 19.3	-0.6
CRJC				S	Sn	19 45 06.6	-2.0
GUVC	San Jose del G	4.29	174	P	Pn	19 44 20.8	-0.8
YOTC	Yotoco, Valle	4.32	229	P	Pn	19 44 21.1	-1.0
YOTC				S	Sn	19 45 11.8	-0.7
SMRC	Santa Marta, M	4.44	345		Pn	19 44 23.5	-0.1
SMRC	Santa Marta, M	4.44	345	P	Pn	19 44 23.9	+0.3
CAPC	Capurgana	4.60	293	P	Pn	19 44 22.8	-2.9
CAPC				S	Sn	19 45 14.8	-4.1
PTAC	Punta Ardita,	4.71	274	P	Pn	19 44 26.0	-1.1
MACC	Macarena, Meta	4.73	189	P	Pn	19 44 25.7	-1.7
URIC	Uribia, Colomb	4.95	12	P	Pn	19 44 29.3	-0.9
URIC				S	Sn	19 45 22.2	-4.9
JAMC	Jamundi, Valle	5.08	225	P	Pn	19 44 31.3	-1.0
	3µm282nm,0.8s						
MALC	Bahia Malaga	5.09	237	P	Pn	19 44 33.0	+0.9
GARC	Garzon, Huila	5.21	208	P	Pn	19 44 32.5	-1.5
	8µm341nm,0.7s						
BAUV	El Baul	5.40	67		Pn	19 44 35.4	-0.8
POPC	Popayan, Colom	5.58	220	P	Pn	19 44 38.2	-0.7
	3µm269nm,0.7s						
FLOC	Florencia	5.82	206	Pn	Pn	19 44 41.0	-0.9
FLOC	Florencia	5.82	206	P	Pn	19 44 40.9	-1.0
	4µm382nm,1.0s						
BBAC	Balboa, Cauca	6.34	221	P	Pn	19 44 48.8	-0.2
	3µm284nm,0.6s						
GR1C	Gorgona, Isla	6.35	233	P	Pn	19 44 48.3	-0.5
	302nm,0.8s						
CRUC	La Cruz	6.51	217	P	Pn	19 44 52.6	+1.3
CAZU	Cerro Azul, Pa	6.71	291	*e*P	Pn	19 44 50.9	-2.9
GCUF	Volcan Galeras	7.02	218	P	Pn	19 44 59.1	+0.9
	1µm135nm,0.6s						
ZANG	Zanguenga, Cho	7.05	288	*e*P	Pn	19 44 56.2	-2.0
BCIP	Isla Barro Col	7.09	289	Pn	Pn	19 44 56.6	-2.1
BCIP	Isla Barro Col	7.09	289	*e*P	Pn	19 44 56.5	-2.1
BCIP	Isla Barro Col	7.09	289	P	Pn	19 44 56.4	-2.3
AZU	Azuero	7.21	278	*e*P	Pn	19 44 58.6	-1.6
AZU	Azuero	7.21	278	P	Pn	19 44 58.6	-1.6
	1µm90nm,0.6s						
BONI	La Bonita	7.75	215	P	Pn	19 45 08.1	+0.3
	1µm144nm,0.8s						
GMAL	Guarumal, Vera	8.15	277	*e*P	Pn	19 45 13.1	+0.2
GMAL	Guarumal, Vera	8.15	277	P	Pn	19 45 13.0	+0.2
	157nm,0.9s						
OTAV	Otavalo	8.47	220	Pn	Pn	19 45 16.2	-1.4
OTAV	Otavalo	8.47	220	*e*P	Pn	19 45 15.4	-2.2
OTAV	Otavalo	8.47	220	P	Pn	19 45 16.1	-1.5
KKNTU	Kakintº	8.88	283	*e*P	Pn	19 45 21.6	-1.0
PCRV	Puerto La Cruz	8.98	68	P	Pn	19 45 23.7	-0.2
	8.6nm,0.4s,baz=273,slow=3.7,SNR=15						
PCRV				S	Sn	19 47 01.3	-2.4
	34nm,0.5s,baz=124,slow=13,SNR=3.6						
PCRV	Puerto La Cruz	8.98	68	*e*P	Pn	19 45 27.0	+3.1
PCRV	Puerto La Cruz	8.98	68	*e*S	Sn	19 47 02.6	-1.1
RBALA	Bur	9.22	283	*e*P	Pn	19 45 26.5	-0.6
PBNVO	Pueblo Nuevo,	9.26	283	*e*P	Pn	19 45 26.1	-1.5
BQTLY	Boquete Panama	9.50	282	*e*P	Pn	19 45 30.5	-0.4
MCANO	Manzana, Boque	9.57	281	*e*P	Pn	19 45 33.5	+1.7
CLLRA	Cordillera,	9.64	282	*e*P	Pn	19 45 33.0	+0.2
ALCO	Alturas Coton,	9.89	283	*e*P	Pn	19 45 36.5	+0.3
DRK0	Durika	10.36	284	*e*P	Pn	19 45 42.5	+0.2
PRVC	Isla de Provid	10.43	309	Pn	Pn	19 45 40.3	-2.8
VERH	Veragua Rainfo	10.47	288	*e*P	Pn	19 45 42.9	-0.8
CVTR	Volcan Turrial	11.03	287	*e*P	Pn	19 45 51.1	-0.3
PIEC	Cerro El Cedra	11.12	285	*e*P	Pn	19 45 53.2	+0.8
LCR2	La Lucha 2	11.20	286		Pn	19 45 54.3	+0.9
LCR2	La Lucha 2	11.20	286	*e*P	Pn	19 45 54.0	+0.6
HDC	Heredia	11.37	287	*e*P	Pn	19 45 56.8	+1.3
TBTG	Tabatinga, AM	11.40	164		Pn	19 45 53.9	-2.0
TBTG	Tabatinga, AM	11.40	164	*e*P	Pn	19 45 55.1	-0.7
PAR1A	Puntarenas Pro	11.40	285	*e*P	Pn	19 45 57.1	+1.3
HOJ	Hope	11.66	342	*i* P	Pn	19 46 03.0	+3.8
HOJ				*i* S	Sn	19 48 01.0	-7.3
STH	Stony Hill	11.75	342	⇑*e*P	Pn	19 46 03.3	+2.9
STH				⇑*e*S	Sn	19 47 55.2	-15
STH	Stony Hill	11.75	342	⇓*i*P	Pn	19 46 03.4	+3.1
MCJ	Malvern	11.90	338	*i* P	Pn	19 46 04.5	+2.1
TPP	Pointe-a-Pierr	12.00	72	*e*	P	19 46 14.1	+4.1
PSKH	Kent House, Po	12.03	71	*e*	P	19 46 12.0	+1.5
MTDJ	Mount Denham	12.12	339		Pn	19 46 07.4	+2.1
MTDJ	Mount Denham	12.12	339	*e*P	Pn	19 46 07.6	+2.3
MTDJ	Mount Denham	12.12	339	⇓*i*P	Pn	19 46 08.7	+3.3
TRN	Trinidad (W)	12.14	71	*e*	P	19 46 13.0	+1.4
SDDR	Presa de Saban	12.19	8		Pn	19 46 08.3	+2.1
SDDR	Presa de Saban	12.19	8	*e*P	Pn	19 46 09.6	+3.4
JTS	Las Juntas de	12.24	287	P	Pn	19 46 09.1	+2.3
	9.8nm,0.7s,baz=190,slow=11,SNR=17						
JTS	Las Juntas de	12.24	287	*e*P	Pn	19 46 08.1	+1.3
GRFF	Grenada Fort F	12.32	64	*e*	P	19 46 15.2	+1.5
TBH	Brigand Hill	12.41	72	*e*	P	19 46 18.3	+3.7
DR12	Loma Pena Alta	12.41	16	Pn	Pn	19 46 06.4	-2.6
GRGR	Grenville	12.43	64	*e*	P	19 46 14.6	-0.2
GRSS	Sisters	12.53	63	*e*	P	19 46 14.5	-1.5
GCMP	Grenada, Carri	12.77	63	*e*	P	19 46 21.1	+2.4
CELP	Cerrillos	12.84	29		Pn	19 46 12.2	-2.2
PDPR	Patillas Dam,	13.06	31		Pn	19 46 16.5	-0.8
SJG	San Juan	13.08	30		Pn	19 46 16.2	-1.3
SJG	San Juan	13.08	30	P	Pn	19 46 17.1	-0.4
	32nm,0.4s,baz=201,slow=12,SNR=29						
SJG				S	Sn	19 48 28.0	-14
	25nm,0.8s,baz=4.3,slow=18,SNR=4.2						
GTBY	Guantanamo Bay	13.16	352	P	P	19 46 22.1	-0.9
GTBY	Guantanamo Bay	13.16	352	*e*P	P	19 46 23.0	+0.1
HUMP	Col San Antoni	13.26	31	Pn	Pn	19 46 18.7	-1.1
BOAV	Boa Vista	13.26	109		Pn	19 46 18.1	-1.8
BOAV	Boa Vista	13.26	109	*e*P	Pn	19 46 18.3	-1.6
GCPR	Guaynabo City	13.28	30	Pn	Pn	19 46 18.8	-1.2
TEFE	Tefe	13.29	140	*e*P	Pn	19 46 18.8	-1.5
MASC	Masc	13.30	355	*e*P	Pn	19 46 21.2	+0.9
RCC	Rio Carpintero	13.32	349	*e*P	P	19 46 24.9	+0.2
MARVS	Santiago de Cu	13.37	348	*e*P	P	19 46 24.5	-0.8
QMBU	Quimbuelo	13.39	353	*e*P	Pn	19 46 16.6	-4.9
BOAB	BOACO BROADBAN	13.61	295		Pn	19 46 24.1	-0.2
PILO	Pilon	13.65	342	*e*P	P	19 46 27.9	-0.6
LMGC	Las Mercedes	13.69	344	*e*P	P	19 46 29.0	+0.2
NMDO	Nuevo Mundo	13.76	352	*e*P	P	19 46 30.0	+0.3
PINC	Pinares de May	13.82	349	*e*P	Pn	19 46 26.9	0.0
YAR	Yar	13.82	347	*e*P	Pn	19 46 29.4	+2.4
FDF	Fort de France	14.09	55		Pn	19 46 28.2	-2.2
HLGC	Holguin	14.26	349	*e*P	Pn	19 46 31.0	-1.5
CZSB	Cruzeiro do Su	14.48	179	*e*P	Pn	19 46 35.1	-0.2
FSCY	Frank Sound, G	14.69	328	*e*P	Pn	19 46 38.5	+0.6
ATAH	Atahualpa	14.86	201	P	Pn	19 46 40.0	-0.5
	2.0nm,0.4s,baz=358,slow=16,SNR=1.7						
GDSD	La Dsirade Is	15.05	50	P	P	19 46 44.2	+0.2
MACA	Manacapuru-AM	15.86	128	*e*P	Pn	19 46 51.8	-0.6
CAIB	Caibarien	16.74	339	*e*P	Pn	19 47 13.8	+11
MTO3	Montecristo	17.68	296	IAmb	IAmb	19 47 17.6	
	comp=Z,32nm,0.7s						
SOR	Soroa	18.52	330	P	P	19 47 21.1	-1.1
NNA	Nana	19.08	191	P	P	19 47 27.8	-0.5
	comp=Z,5.8nm,0.6s,baz=171,slow=6.3,SNR=2.0						
TEIG	Tepich	19.86	314	P	P	19 47 37.7	+1.0
TEIG				IAmb	IAmb	19 47 39.3	
	comp=Z,34nm,0.8s						
TEIG	Tepich	19.86	314	P	P	19 47 38.9	+2.2
	comp=Z,0.2nm,0.4s,baz=35,slow=22,SNR=1.9						
MDP	Montagnes des	20.39	94	P	P	19 47 41.2	-1.2
	comp=Z,7.3nm,0.9s,baz=263,slow=11,SNR=9.6						
	comp=Z,7.3nm,0.9s						
ITTB	Itaituba	20.58	122	*e*P	P	19 47 44.3	-0.1
CCIG	Comitan	20.88	298	P	P	19 47 49.2	+1.3
CCIG				IAmb	IAmb	19 47 54.6	
	comp=Z,21nm,0.9s						
NPGB	Novo Progresso	22.42	128	*e*P	P	19 48 03.5	-0.1
VILB	Vilhena	23.46	147	P	P	19 48 13.6	+0.4
VILB				IAmb	IAmb	19 48 15.2	
	comp=Z,37nm,0.7s						
VILB	Vilhena	23.46	147	*e*P	P	19 48 13.3	+0.1
LPAZ	La Paz	23.49	168	P	P	19 48 14.3	+0.2
LPAZ	La Paz	23.49	168	P	P	19 48 12.5	-1.6
	comp=Z,3.9nm,0.7s,baz=342,slow=10,SNR=19						
	comp=Z,3.9nm,0.7s						
PDRB	Porto dos Gac	24.50	138	*e*P	P	19 48 22.1	-0.6
T59A	Double "B" Far	30.27	353	P	P	19 49 14.4	+0.5
T59A				IAmb	IAmb	19 49 17.1	
	comp=Z,10nm,0.6s						
U54A	Nelsons Funny	30.61	346	P	P	19 49 18.6	+1.6
U54A				IAmb	IAmb	19 49 21.0	
	comp=Z,17nm,0.7s						
V48A	Smith Brothers	31.41	338	P	P	19 49 26.2	+2.2
V48A				IAmb	IAmb	19 49 27.0	
	comp=Z,13nm,0.6s						
HBVL	Hebbronville	31.56	313	P	P	19 49 25.9	+0.5
HBVL				IAmb	IAmb	19 49 28.0	
	comp=Z,6.8nm,0.6s						
WVT	Waverly	32.13	337	P	P	19 49 31.8	+1.5
WVT				IAmb	IAmb	19 49 32.5	
	comp=Z,24nm,1.2s						
T47A	Sharon Grove	32.62	339	IAmb	IAmb	19 49 37.1	
	comp=Z,11nm,0.6s						
R50A	Paris	32.92	344	IAmb	IAmb	19 49 40.4	
	comp=Z,9.9nm,0.7s						
SSFO	Shawnee State	33.01	345	IAmb	IAmb	19 49 40.9	
	comp=Z,12nm,0.6s						
Q52A	Bidwell	33.04	347	IAmb	IAmb	19 49 41.1	
	comp=Z,12nm,0.8s						
BDFB	Brasilia	33.39	132	P	P	19 49 40.1	-1.5
	comp=Z,2.3nm,0.6s,baz=263,slow=8.5,SNR=4.7						
	comp=Z,2.3nm,0.6s						
PBMO	Poplar Bluff	33.75	334	IAmb	IAmb	19 49 47.0	
	comp=Z,11nm,0.8s						
FCAR	Ozark Folk Cen	33.78	332	IAmb	IAmb	19 49 46.2	
	comp=Z,9.0nm,1.1s						
CGM3	Cape Girardeau	33.87	336	IAmb	IAmb	19 49 47.2	
	comp=Z,8.4nm,0.6s						
O52A	Adamsville	34.05	348	IAmb	IAmb	19 49 49.6	
	comp=Z,12nm,0.7s						
SIUC	Southern Illin	34.06	337	IAmb	IAmb	19 49 49.0	
	comp=Z,13nm,0.7s						
T42A	Van Buren	34.25	334	IAmb	IAmb	19 49 50.6	
	comp=Z,6.4nm,1.0s						
BRDY	Brady	34.34	318	P	P	19 49 50.0	+0.4
BLO	Bloomington	34.40	341	IAmb	IAmb	19 49 52.6	
	comp=Z,18nm,0.7s						
M57A	Sunshine Farm,	34.54	355	IAmb	IAmb	19 49 54.5	
	comp=Z,11nm,0.8s						
FVM	French Village	34.77	336	IAmb	IAmb	19 49 55.4	
	comp=Z,12nm,0.8s						
CCM	Cathedral Cave	35.17	335	P	P	19 49 57.0	+0.4
CCM				IAmb	IAmb	19 49 58.9	
	comp=Z,20nm,0.9s						
L56A	Greenwood	35.38	354	IAmb	IAmb	19 50 01.1	
	comp=Z,22nm,1.0s						
BCX	Boston College	35.39	2	IAmb	IAmb	19 50 01.2	
	comp=Z,22nm,0.9s						
WVNY	West Valley, N	35.76	353	IAmb	IAmb	19 50 05.3	
	comp=Z,14nm,0.6s						
J61A	Chester	36.36	1	IAmb	IAmb	19 50 09.9	
	comp=Z,15nm,0.8s						
ACCN	Adirondack Com	36.40	359	IAmb	IAmb	19 50 10.0	
	comp=Z,16nm,1.2s						
TXAR	Lajitas Array	36.49	312	P	P	19 50 08.8	+0.8
	comp=Z,2.5nm,0.6s,baz=127,slow=9.0,SNR=29						
TXAR				PcP	PcP	19 52 29.4	+0.8
	comp=Z,1.4nm,0.7s,baz=128,slow=5.7,SNR=8.3						
TXAR				ScP	ScP	19 56 01.1	+0.1
	comp=Z,0.1nm,0.6s,baz=97,slow=5.0,SNR=1.5						
	comp=Z,2.5nm,0.6s						
HNH	Hanover	36.72	1	IAmb	IAmb	19 50 12.7	
	comp=Z,10nm,0.9s						
P40A	Paris	36.75	335	IAmb	IAmb	19 50 11.4	
	comp=Z,9.4nm,0.7s						
LBNH	Lisbon	37.27	1	IAmb	IAmb	19 50 17.2	
	comp=Z,16nm,0.6s						
VT1	Waterbury	37.34	0	IAmb	IAmb	19 50 17.8	
	comp=Z,9.7nm,0.9s						
P38A	Dawn	37.47	334	IAmb	IAmb	19 50 17.4	
	comp=Z,13nm,1.1s						
H62A	Milan	37.62	2	IAmb	IAmb	19 50 20.3	
	comp=Z,19nm,1.4s						
WVL	Waterville	37.70	4	IAmb	IAmb	19 50 20.7	
	comp=Z,16nm,0.9s						
FRNY	Flat Rock	37.85	359	IAmb	IAmb	19 50 22.0	
	comp=Z,15nm,1.1s						
SADO	Sadowa	38.15	353	IAmb	IAmb	19 50 24.6	
	comp=Z,11nm,0.6s						
G62A	West of Eustis	38.30	3	P	P	19 50 24.2	+1.3
PKME	Peaks-Kenny Pk	38.42	4	IAmb	IAmb	19 50 26.5	
	comp=Z,17nm,0.9s						
BUKO	Buck Lake	38.84	353	IAmb	IAmb	19 50 30.7	
	comp=Z,7.9nm,0.5s						
F64A	Sherman	39.09	5	P	P	19 50 30.7	+1.2
F64A				IAmb	IAmb	19 50 31.9	
	comp=Z,20nm,0.8s						
TRQ	Mont Tremblant	39.26	358	IAmb	IAmb	19 50 33.7	
	comp=Z,13nm,1.0s						
I42A	Draeger Farm,	39.43	342	IAmb	IAmb	19 50 33.9	
	comp=Z,8.6nm,0.6s						
LMN	Caledonia Moun	39.52	9	P	P	19 50 33.1	0.0
H43A	Windswept, Lux	39.62	343	IAmb	IAmb	19 50 36.5	
	comp=Z,11nm,0.7s						
GBN	Guysborough	39.71	13	P	P	19 50 35.1	+0.5
GBN				IAmb	IAmb	19 51 18.3	
	comp=Z,33nm,1.3s						
E46A	Sault Ste Mari	40.55	348	P	P	19 50 43.2	+1.6
E46A				IAmb	IAmb	19 50 43.7	
	comp=Z,17nm,0.6s						
LMQ	La Malbaie	40.63	3	P	P	19 50 43.6	+1.4
LMQ				IAmb	IAmb	19 50 44.8	
	comp=Z,21nm,0.7s						
VLDQ	Val d'Or	41.30	356	IAmb	IAmb	19 50 51.6	
	comp=Z,11nm,0.6s						
ANMO	Albuquerque	41.53	317	P	P	19 50 50.2	+0.2
	comp=Z,0.8nm,0.6s,baz=268,slow=3.8,SNR=2.6						
ANMO				ScP	ScP	19 56 18.6	-1.8
	comp=Z,0.3nm,0.3s,baz=114,slow=3.6,SNR=1.8						
	comp=Z,0.8nm,0.6s						
ICQ	Pointe Anglais	42.82	6	P	P	19 51 01.0	+1.2
EYMN	Ely	43.87	342	P	P	19 51 09.0	+0.6
EYMN				IAmb	IAmb	19 51 09.6	
	comp=Z,20nm,0.6s						
WUAZ	Wupatki	45.24	315		P	19 51 21.4	+1.7
AGMN	Agassiz Nation	45.62	339	P	P	19 51 22.5	+0.3
AGMN				IAmb	IAmb	19 51 23.5	
	comp=Z,7.8nm,0.6s						
EPLO	Experimental L	46.09	341	P	P	19 51 26.3	+0.5
EPLO				IAmb	IAmb	19 51 27.1	
	comp=Z,12nm,0.6s						
ULM	Lac du Bonnet	47.28	340	IAmb	IAmb	19 51 36.5	
	comp=Z,13nm,0.6s						
ULM	Lac du Bonnet	47.28	340	P	P	19 51 35.1	0.0
	comp=Z,14nm,0.7s,baz=148,slow=7.1,SNR=20						
	comp=Z,14nm,0.7s						
PLCA	Paso Flores	47.40	177	P	P	19 51 35.0	-1.3
	comp=Z,1.0nm,0.5s,baz=298,slow=16,SNR=1.7						
	comp=Z,1.0nm,0.5s						
PDAR	Pinedale Array	48.09	324	P	P	19 51 42.2	+0.4
PDAR	Pinedale Array	48.09	324	P	P	19 51 42.6	+0.8
	comp=Z,1.0nm,0.6s,baz=134,slow=8.6,SNR=9.7						
PDAR				PcP	PcP	19 53 07.6	+0.4
	comp=Z,0.7nm,0.6s,baz=151,slow=4.5,SNR=2.4						
PDAR				ScP	ScP	19 56 47.5	+0.1
	comp=Z,0.3nm,0.5s,baz=113,slow=4.3,SNR=2.6						
	comp=Z,1.0nm,0.6s						
SCHQ	Schefferville	48.12	5	P	P	19 51 42.8	+1.3
	comp=Z,45nm,0.6s,baz=187,slow=6.8,SNR=88						
SCHQ				ScP	ScP	19 56 46.8	-0.1
	comp=Z,3.1nm,0.8s,baz=172,slow=4.2,SNR=4.9						
BGU	Big Grassy Mou	49.16	320	P	P	19 51 50.4	+0.4
KUQ	Kuujjuuaa	51.27	3		P	19 52 06.2	+1.0
NVAR	Mina Array Bea	51.50	315	P	P	19 52 08.6	+0.9
	comp=Z,0.8nm,0.7s,baz=135,slow=6.1,SNR=5.6						
NVAR				pP	pP	19 52 44.8	+1.9
	comp=Z,0.8nm,0.7s,baz=103,slow=3.1,SNR=3.1						
NVAR				PcP	PcP	19 53 19.7	0.0
	comp=Z,1.5nm,0.8s,baz=114,slow=3.0,SNR=5.3						
	comp=Z,0.8nm,0.7s						
MFID	Camas Ranch	52.24	321	IAmb	IAmb	19 52 15.7	
	comp=Z,3.8nm,0.7s						
FCC	Fort Churchill	54.26	347	IAmb	IAmb	19 52 28.2	
	comp=Z,17nm,1.1s						
IVI	Ivigtut	57.34	14	*i* P	P	19 52 49.2	+0.2
IVI				IAmb	IAmb	19 52 51.0	
	comp=Z,30nm,1.1s						
NRS	Narsarsuaq	58.00	15	*i* P	P	19 52 52.8	-0.9
NRS				IAmb	IAmb	19 52 56.6	
	comp=Z,19nm,0.8s						
NUUK	Nuuk	59.24	11	*i* P	P	19 53 02.1	-0.1
NUUK				IAmb	IAmb	19 53 04.5	
	comp=Z,65nm,1.5s						
YKA	Yellowknife Ar	63.26	340	P	P	19 53 29.6	+0.3
	comp=Z,7.6nm,0.6s,baz=133,slow=6.1,SNR=67						
YKA				pP	pP	19 54 08.4	+2.3
	comp=Z,0.7nm,0.4s,baz=185,slow=24,SNR=2.8						
	comp=Z,7.6nm,0.6s						
ISOG	Isortoq, Green	63.27	15	*i* P	P	19 53 28.4	-0.8
ISOG				IAmb	IAmb	19 53 30.2	
	comp=Z,20nm,0.9s						
ANGG	Ammassalik, Gr	63.67	16	*i* P	P	19 53 29.2	-2.7
ANGG				IAmb	IAmb	19 53 32.9	
	comp=Z,8.6nm,0.7s						
TOAD	Toad River Com	65.31	333	P	P	19 53 43.7	+1.0
	baz=120						
POIN	Pond Inlet	65.86	358	IAmb	IAmb	19 53 48.3	
	comp=Z,3.8nm,0.8s						
BEAVL	Fort Liard	65.92	334	P	P	19 53 48.2	+1.6
	baz=121						
ICESG	Greenland Ices	65.92	13	*i* P	P	19 53 47.0	+0.1
ICESG				IAmb	IAmb	19 53 48.0	
	comp=Z,42nm,1.0s						
U35K	Hyder	66.26	329	P	P	19 53 50.9	+2.1
	baz=115						
T35M	Bob Quinn	66.82	330	P	P	19 53 53.6	+1.2
	baz=115						
V35K	Ketchikan	66.84	328	P	P	19 53 53.7	+1.1
	baz=113						
WRGLY	Wrigley	66.91	338	P	P	19 53 53.8	+1.0
	baz=124						
DLBC	Dease Lake	67.33	331	P	P	19 53 56.3	+0.6
	baz=116						
S34M	Telegraph Cree	67.64	331	P	P	19 53 58.6	+1.0
	baz=114						
WRAK	Wrangell Islan	67.65	329	P	P	19 53 58.6	+1.0
	baz=113						
DBIC	Dimbokro	67.68	86	P	P	19 53 57.6	-1.0
	comp=Z,11nm,0.7s,baz=281,slow=5.5,SNR=17						
	comp=Z,11nm,0.7s						
CRAG	Craig	67.69	328	P	P	19 53 57.3	-0.6
	baz=112						
U33K	Whale Pass	67.93	328	P	P	19 53 59.5	+0.1
	baz=112						
TGTN	Hyland Airport	67.95	335	P	P	19 53 59.9	+0.5
	baz=118						
HOPE	Hope Point	68.18	158	P	P	19 54 02.0	+1.2
R33M	Jennings River	68.18	332	P	P	19 54 01.0	0.0
	baz=115						
Q32M	Nakina River	68.61	331	P	P	19 54 04.3	+0.4
	baz=114						
SUMG	Summit	68.96	11		P	19 54 06.2	+0.2
SUMG	Summit	68.96	11	*i* P	P	19 54 06.0	0.0
SUMG				IAmb	IAmb	19 54 07.2	
	comp=Z,52nm,0.7s						
S32K	Killisnoo	69.17	329	P	P	19 54 07.8	+0.8
	baz=111						
P33M	Teslin, Yukon	69.37	333	P	P	19 54 08.8	+0.5
	baz=114						
SIT	Sitka	69.41	329	P	P	19 54 08.8	+0.3
	baz=110						
R32K	Eaglecrest	69.44	330	P	P	19 54 09.4	+0.8
	baz=111						
P32M	Atlin	69.54	332	P	P	19 54 09.3	-0.1
	baz=112						
ESDC	Sonseca Array	69.60	50	P	P	19 54 08.1	-2.1
	comp=Z,0.3nm,0.5s,baz=264,slow=7.2,SNR=4.4						
	comp=Z,0.3nm,0.5s						
MMPY	Sheldon Lake,	69.70	335	P	P	19 54 11.1	+0.8
	baz=116						
S31K	Pelican	70.18	330	P	P	19 54 14.0	+0.8
	baz=110						
SKAG	Skagway	70.26	331	P	P	19 54 14.8	+1.1
	baz=111						
WHY	Whitehorse	70.49	333	P	P	19 54 15.8	+0.6
	baz=112						
C36M	Paulatuk	70.59	343	P	P	19 54 16.5	+1.0
	baz=125						
PLBC	Pleasant Camp	70.75	331	P	P	19 54 17.7	+1.0
	baz=110						
M31M	Drury Creek, Y	70.86	334	P	P	19 54 18.4	+1.1

	baz=113						
O30N	**Mendenhall**	**71.08**	**332**	P	**P**	**19 54 19.1**	**+0.4**
	baz=111,SNR=9.2						
N31M	**Braeburn, Yuko**	**71.20**	**333**	P	**P**	**19 54 20.2**	**+0.8**
	baz=111,SNR=6.3						
P30M	**Million Dollar**	**71.26**	**332**	P	**P**	**19 54 21.3**	**+1.5**
	baz=110						
P29M	**Windy Craggy**	**71.47**	**331**	P	**P**	**19 54 21.2**	**+0.1**
	baz=109						
NEEM	**North Greenlan**	**71.53**	**5**	*i* P	**P**	**19 54 21.7**	**+0.3**
NEEM				IAmb	IAmb	19 54 22.6	
	comp=Z,58nm,1.1s						
HYT	**Haines Junctio**	**71.75**	**332**	P	**P**	**19 54 23.3**	**+0.5**
	baz=109						
N30M	**Aishikik Lake**	**71.78**	**333**	P	**P**	**19 54 22.9**	**0.0**
	baz=110						
O29M	**Mount Kennedy**	**72.08**	**332**	P	**P**	**19 54 24.4**	**-0.5**
	baz=108						
YUK6	**Outpost Mounta**	**72.19**	**332**	P	**P**	**19 54 26.0**	**+0.4**
	baz=109						
H31M	**Peel River**	**72.27**	**338**	P	**P**	**19 54 26.1**	**+0.5**
	baz=114						
PNL	**Peninsula**	**72.28**	**331**	P	**P**	**19 54 26.7**	**+0.8**
	baz=107						
A36M	**Sachs Harbour**	**72.43**	**345**		**P**	**19 54 26.3**	**-0.1**
A36M	**Sachs Harbour**	**72.43**	**345**	P	**P**	**19 54 26.5**	**+0.1**
	baz=125,SNR=10						
YUK4	**Talbot Arm**	**72.45**	**333**	P	**P**	**19 54 26.5**	**-0.5**
	baz=109						
J30M	**Hart River**	**72.57**	**336**	P	**P**	**19 54 27.4**	**-0.2**
	baz=112						
G31M	**Satah River**	**72.70**	**339**	P	**P**	**19 54 28.2**	**+0.1**
	baz=114						
M29M	**Somme Creek**	**72.72**	**334**	P	**P**	**19 54 28.8**	**+0.3**
	baz=109						
F31M	**Tsiigehtchic**	**72.73**	**339**	P	**P**	**19 54 28.9**	**+0.6**
	baz=115						
K29M	**Barlow Dome**	**72.79**	**335**	P	**P**	**19 54 29.6**	**+0.7**
	baz=110,SNR=5.5						
L29M	**L29M**	**72.80**	**334**	P	**P**	**19 54 29.1**	**+0.2**
	baz=110						
PINM	**Pinnacle**	**72.82**	**331**	P	**P**	**19 54 30.1**	**+1.0**
	baz=107						
I30M	**Mount Dempster**	**72.83**	**337**	IAmb	IAmb	19 54 31.5	
	comp=Z,6.3nm,1.0s						
I30M	**Mount Dempster**	**72.83**	**337**	P	**P**	**19 54 30.0**	**+0.9**
	baz=112,SNR=6.0						
YUK8	**Steele Glacier**	**72.94**	**332**	P	**P**	**19 54 29.5**	**-0.5**
	baz=108						
O28M	**Mount Upton**	**72.99**	**332**	P	**P**	**19 54 29.7**	**-0.7**
	baz=107						
EKA	**Eskdalemuir Ar**	**73.02**	**34**	P	**P**	**19 54 29.4**	**-0.8**
	comp=Z,0.5nm,0.4s,baz=268,slow=2.6,SNR=11						
	comp=Z,0.5nm,0.4s						
INK	**Inuvik**	**73.03**	**340**	P	**P**	**19 54 29.7**	**-0.4**
	baz=115						
EPYK	**Eagle Plains**	**73.38**	**338**	P	**P**	**19 54 31.7**	**-0.5**
	baz=112						
YUK3	**Moose Creek**	**73.41**	**333**	P	**P**	**19 54 31.9**	**-0.8**
	baz=107,SNR=11						
G30M	**tAoh Zraii Nji**	**73.43**	**339**	P	**P**	**19 54 32.0**	**-0.5**
	baz=112						
F30M	**Barrier River**	**73.52**	**339**	IAmb	IAmb	19 54 34.9	
	comp=Z,16nm,1.1s						
F30M	**Barrier River**	**73.52**	**339**	P	**P**	**19 54 32.8**	**-0.2**
	baz=113,SNR=5.0						
CTG	**Chitna Glacier**	**73.58**	**332**	P	**P**	**19 54 33.2**	**-0.5**
	baz=106						
DAWY	**Dawson**	**73.64**	**335**	P	**P**	**19 54 33.5**	**-0.3**
	baz=109						
MESA	**MESA**	**73.66**	**331**	P	**P**	**19 54 33.8**	**-0.4**
	baz=105						
TORD	**Torodi Ar. Bea**	**73.69**	**78**	P	**P**	**19 54 33.4**	**-1.5**
	comp=Z,1.7nm,0.4s,baz=275,slow=7.3,SNR=1.8						
TORD				pP	**pP**	**19 55 12.7**	**-0.8**
	comp=Z,1.5nm,0.4s,baz=276,slow=4.8,SNR=1.4						
	comp=Z,1.7nm,0.4s						
H29M	**Whitestone**	**73.95**	**337**	IAmb	IAmb	19 54 37.3	
	comp=Z,5.2nm,0.8s						
H29M	**Whitestone**	**73.95**	**337**	P	**P**	**19 54 36.1**	**+0.6**
	baz=110,SNR=5.9						
G29M	**Pine Creek**	**74.07**	**338**	P	**P**	**19 54 36.6**	**+0.4**
	baz=111						
M27K	**Edge Creek, AK**	**74.21**	**333**	P	**P**	**19 54 37.8**	**+0.5**
	baz=106,SNR=9.0						
I28M	**Miner Creek**	**74.31**	**336**	P	**P**	**19 54 38.6**	**+0.9**
	baz=108						
CRQE	**Cirque**	**74.36**	**331**	P	**P**	**19 54 38.3**	**+0.2**
	baz=104						
BCAR	**Beaver Creek A**	**74.37**	**334**		**P**	**19 54 39.3**	**+1.3**
L27K	**Beaver Creek,**	**74.38**	**334**	P	**P**	**19 54 38.8**	**+0.7**
	baz=106,SNR=8.2						
MCARA	**McCarthy VSAT**	**74.48**	**332**	P	**P**	**19 54 39.3**	**+0.7**
	baz=104						
E29M	**Blow River**	**74.55**	**340**	P	**P**	**19 54 38.7**	**-0.2**
	baz=111,SNR=5.3						
M26K	**Nabesna, AK**	**74.73**	**333**	P	**P**	**19 54 39.8**	**-0.3**
	baz=105						
K27K	**Chicken**	**74.76**	**335**	P	**P**	**19 54 39.4**	**-0.9**
	baz=106						
KAIM	**Kayak Island**	**74.80**	**330**	P	**P**	**19 54 39.7**	**-0.9**
	baz=103						
F28M	**Old Crow**	**74.98**	**339**	P	**P**	**19 54 40.7**	**-0.7**
	baz=109						
I27K	**Kandik River**	**75.02**	**336**	P	**P**	**19 54 41.9**	**+0.1**
	baz=107,SNR=6.7						
L26K	**Log Cabin Wild**	**75.04**	**334**	P	**P**	**19 54 42.3**	**+0.4**
	baz=105,SNR=6.0						
BMRM	**Bremner River**	**75.12**	**331**	P	**P**	**19 54 42.5**	**0.0**
	baz=103,SNR=6.0						
H27K	**Steamboat Moun**	**75.17**	**337**	P	**P**	**19 54 42.6**	**0.0**
	baz=107						
D28M	**Stokes Point**	**75.17**	**340**	P	**P**	**19 54 41.8**	**-0.7**
	baz=111						
E28M	**Babbage River**	**75.19**	**340**	P	**P**	**19 54 42.9**	**+0.3**
	baz=110						
N25K	**Chitina, Valde**	**75.27**	**332**	P	**P**	**19 54 43.4**	**+0.1**
	baz=103						
G27K	**Doyon Strip**	**75.39**	**338**	P	**P**	**19 54 43.5**	**-0.3**
	baz=107						
J26L	**Joseph Creek**	**75.51**	**335**	P	**P**	**19 54 44.0**	**-0.7**
	baz=105						
I26K	**Coal Creek Min**	**75.55**	**336**	P	**P**	**19 54 44.5**	**-0.3**
	baz=105						
SCRK	**Sand Creek**	**75.56**	**335**	IAmb	IAmb	19 54 47.2	
	comp=Z,5.9nm,1.0s						
SCRK	**Sand Creek**	**75.56**	**335**	P	**P**	**19 54 44.0**	**-0.9**
	baz=104,SNR=11						
EYAK	**Cordova Ski Ar**	**75.58**	**331**	P	**P**	**19 54 44.1**	**-0.8**
	baz=102						
DAG	**Danmarks Havn**	**75.63**	**11**	*i* P	**P**	**19 54 44.8**	**-0.2**
DAG				IAmb	IAmb	19 54 45.3	
	comp=Z,12nm,0.8s						
Q23K	**Middleton Isla**	**75.66**	**330**	P	**P**	**19 54 44.2**	**-1.2**
	baz=101						
HARP	**HAARP**	**75.70**	**333**	P	**P**	**19 54 44.6**	**-1.1**
	baz=103						
E27K	**Coleen River**	**75.78**	**339**	P	**P**	**19 54 45.8**	**-0.3**
	baz=108						
KLU	**Klutina**	**75.86**	**332**	P	**P**	**19 54 46.2**	**-0.5**
	baz=102						
RIDG	**Independent Ri**	**75.87**	**334**	IAmb	IAmb	19 54 48.9	
	comp=Z,8.9nm,0.9s						
RIDG	**Independent Ri**	**75.87**	**334**	P	**P**	**19 54 45.9**	**-0.7**
	baz=103,SNR=9.5						
D27M	**Malcolm River**	**75.89**	**340**	P	**P**	**19 54 46.1**	**-0.6**
	baz=108						
PAX	**Paxson**	**75.97**	**333**	P	**P**	**19 54 46.7**	**-0.6**
	baz=103,SNR=5.8						
M24K	**Tolsona, Glenn**	**76.11**	**332**	P	**P**	**19 54 47.1**	**-1.0**
	baz=102						
G26K	**Porcupine Rive**	**76.24**	**338**	P	**P**	**19 54 47.8**	**-0.8**
	baz=105						
P23K	**Montague Islan**	**76.29**	**330**	P	**P**	**19 54 48.1**	**-0.9**
	baz=100						
K24K	**Donnelly Dome**	**76.29**	**334**	P	**P**	**19 54 48.0**	**-1.0**
	baz=103						
J25K	**Salcha River,**	**76.30**	**335**	P	**P**	**19 54 47.7**	**-1.3**
	baz=103						
GLI	**Glacier Island**	**76.30**	**331**	P	**P**	**19 54 48.2**	**-0.9**
	baz=101						
F26K	**Sheenjek River**	**76.57**	**338**	P	**P**	**19 54 49.5**	**-1.0**
	baz=105						
PRP	**Porcupine Dome**	**76.57**	**336**	IAmb	IAmb	19 54 52.2	
	comp=Z,5.9nm,0.8s						
PRP	**Porcupine Dome**	**76.57**	**336**	P	**P**	**19 54 50.3**	**-0.4**
	baz=103,SNR=8.5						
SCM	**Sheep Creek Mo**	**76.59**	**332**	P	**P**	**19 54 50.6**	**-0.1**
	baz=101,SNR=7.4						
M23K	**Glacier View**	**76.76**	**332**	P	**P**	**19 54 51.6**	**-0.1**
	baz=100,SNR=5.2						
DHY	**Denali Highway**	**76.84**	**333**	P	**P**	**19 54 51.4**	**-0.8**
	baz=101						
H25L	**Birch Creek**	**76.86**	**337**	P	**P**	**19 54 51.5**	**-0.5**
	baz=103						
PWL	**Port Wells**	**76.89**	**331**	P	**P**	**19 54 51.7**	**-0.7**
	baz=100						
WAT6	**Susitna Watana**	**76.91**	**333**	P	**P**	**19 54 51.3**	**-1.4**
	baz=100,SNR=6.6						
C27K	**Jago River**	**76.93**	**340**	P	**P**	**19 54 52.7**	**+0.3**
	baz=106						
ILAR	**Eielson Array**	**76.97**	**335**	P	**P**	**19 54 53.1**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=112,slow=4.1,SNR=16						
ILAR				pP	**pP**	**19 55 32.5**	**+1.7**
	comp=Z,0.8nm,0.7s,baz=100,slow=4.7,SNR=3.0						
	comp=Z,1.8nm,0.8s						
KNK	**Knik Glacier**	**77.04**	**331**	P	**P**	**19 54 53.1**	**-0.2**
	baz=100						
SML	**Sawmill**	**77.05**	**332**	P	**P**	**19 54 53.1**	**-0.2**
	baz=100						
G25K	**Bearman Lake**	**77.08**	**337**	P	**P**	**19 54 53.0**	**-0.3**
	baz=103						
F25K	**Christian Rive**	**77.10**	**338**	P	**P**	**19 54 53.7**	**+0.2**
	baz=104						
POKR	**Poker Plat Res**	**77.26**	**335**	P	**P**	**19 54 54.0**	**-0.4**
	baz=101						
SEW	**Seward**	**77.32**	**330**	P	**P**	**19 54 54.9**	**+0.2**
	baz=98						
WAT1	**Susitna Watana**	**77.33**	**333**	P	**P**	**19 54 54.8**	**0.0**
	baz=100						
PMR	**Palmer**	**77.39**	**332**	P	**P**	**19 54 55.5**	**+0.4**
	baz=99						
C26K	**Camden Bay**	**77.41**	**340**	P	**P**	**19 54 55.3**	**+0.2**
	baz=105						
RND	**Reindeer**	**77.56**	**333**	IAmb	IAmb	19 54 58.4	
	comp=Z,12nm,0.8s						
H24K	**Noodor Dome**	**77.59**	**336**	P	**P**	**19 54 56.7**	**+0.5**
	baz=101,SNR=5.5						
G24K	**Hadweenzic Riv**	**77.60**	**337**	P	**P**	**19 54 57.0**	**+0.7**
	baz=102						
RC01	**Rabbit Creek A**	**77.60**	**331**	P	**P**	**19 54 57.0**	**+0.7**
	baz=98						
MCK	**McKinley**	**77.65**	**334**	P	**P**	**19 54 56.5**	**-0.1**
	baz=100						
D25K	**Kavik River**	**77.76**	**340**	P	**P**	**19 54 57.3**	**+0.2**
	baz=103						
NEA2	**Nenana**	**77.86**	**335**	P	**P**	**19 54 57.6**	**0.0**
	baz=100,SNR=5.1						
BRSE	**Bradley Lake S**	**77.91**	**330**	P	**P**	**19 54 58.2**	**+0.1**
	baz=97						
F24K	**Squaw Lake**	**77.92**	**338**	P	**P**	**19 54 58.2**	**+0.2**
	baz=102						
CUT	**Chulitna**	**78.04**	**332**	P	**P**	**19 54 58.9**	**+0.2**
	baz=98						
I23K	**Minto, Yukon-K**	**78.07**	**335**	P	**P**	**19 54 59.0**	**+0.2**
	baz=100						
SUA	**Susitna One**	**78.14**	**331**	P	**P**	**19 54 59.2**	**-0.2**
	baz=98,SNR=7.3						
TRF	**Thorofare Moun**	**78.20**	**333**	P	**P**	**19 54 59.8**	**-0.1**
	baz=98						
CAPN	**Captain Cook N**	**78.25**	**331**	P	**P**	**19 54 59.6**	**-0.3**
	baz=97						
E24K	**Your Creek**	**78.25**	**338**	P	**P**	**19 54 59.4**	**-0.5**
	baz=101						
H23K	**Yukon River**	**78.26**	**336**	P	**P**	**19 54 59.5**	**-0.4**
	baz=100						
HOM	**Homer**	**78.36**	**329**	P	**P**	**19 55 00.4**	**-0.1**
	baz=96						
SKT	**Skwentna**	**78.57**	**332**	P	**P**	**19 55 01.2**	**-0.5**
	baz=97,SNR=8.0						
D24K	**Happy Valley**	**78.58**	**339**	P	**P**	**19 55 00.9**	**-0.7**
	baz=101						
NOR	**Nord**	**78.59**	**7**	*i* P	**P**	**19 55 00.3**	**-1.1**
NOR				IAmb	IAmb	19 55 02.4	
	comp=Z,9.0nm,1.2s						
G23K	**Bananza Creek**	**78.60**	**337**	P	**P**	**19 55 01.4**	**-0.4**
	baz=99,SNR=6.2						
BPAW	**Bear Paw Mtn.**	**78.60**	**334**	P	**P**	**19 55 01.8**	**0.0**
	baz=98,SNR=6.5						
MLY	**Manley**	**78.63**	**335**	P	**P**	**19 55 01.8**	**-0.2**
	baz=98,SNR=5.2						
Q20K	**Shuyak Island**	**78.63**	**328**	P	**P**	**19 55 01.8**	**-0.2**
	baz=96						
C24K	**Franklin Bluff**	**78.65**	**340**	P	**P**	**19 55 01.1**	**-0.8**
	baz=101						
KDAK	**Kodiak Island**	**78.65**	**328**	P	**P**	**19 55 02.0**	**-0.2**
	baz=95						
E23K	**Chandalar**	**78.67**	**338**	P	**P**	**19 55 01.6**	**-0.6**
	baz=100						
COLD	**Coldfoot**	**78.75**	**337**	P	**P**	**19 55 02.8**	**+0.2**
	baz=99						
TOLK	**Toolik Lake Re**	**78.75**	**339**	P	**P**	**19 55 02.3**	**-0.3**
	baz=100						
N20K	**Mount Spurr**	**78.81**	**331**	P	**P**	**19 55 03.2**	**+0.1**
	baz=96						
SPCR	**Spurr Chakacha**	**78.81**	**331**	P	**P**	**19 55 03.6**	**+0.5**
	baz=96						
O20K	**Slope Mountain**	**78.89**	**330**	P	**P**	**19 55 03.1**	**-0.5**
	baz=96						
OHAK	**Old Harbor**	**78.98**	**327**	P	**P**	**19 55 04.2**	**+0.2**
	baz=94						
PPLA	**Purkeypile**	**78.99**	**333**	P	**P**	**19 55 04.5**	**+0.4**
	baz=96,SNR=8.5						
CAST	**Castle Rocks**	**79.00**	**333**	IAmb	IAmb	19 55 05.2	
	comp=Z,5.8nm,0.8s						
CAST	**Castle Rocks**	**79.00**	**333**	P	**P**	**19 55 04.6**	**+0.6**
	baz=97,SNR=9.2						
H22K	**Ishtalitna Cre**	**79.02**	**336**	P	**P**	**19 55 04.2**	**+0.2**
	baz=98						
P19K	**Oil Pt**	**79.16**	**329**	P	**P**	**19 55 04.9**	**-0.1**
	baz=95						
I21K	**Tanana**	**79.17**	**335**	P	**P**	**19 55 05.7**	**+0.9**
	baz=97						
D23K	**Nanushuk River**	**79.21**	**339**	P	**P**	**19 55 04.9**	**-0.1**
	baz=99						
G22K	**Bettles**	**79.21**	**337**	P	**P**	**19 55 05.8**	**+0.7**
	baz=98						
Q19K	**Cape Douglas,**	**79.31**	**329**	P	**P**	**19 55 06.6**	**+0.8**
	baz=94						
M20K	**Styx River**	**79.32**	**332**	P	**P**	**19 55 06.3**	**+0.5**
	baz=96						
C23K	**Itkillik River**	**79.32**	**340**	P	**P**	**19 55 06.6**	**+1.0**
	baz=99						
SII	**Sitkinak Islan**	**79.43**	**326**	P	**P**	**19 55 06.8**	**+0.3**
	baz=94						
E22K	**Anaktuvuk Pass**	**79.50**	**338**	P	**P**	**19 55 07.0**	**+0.4**
	baz=98						
F22K	**John River**	**79.55**	**337**	P	**P**	**19 55 07.6**	**+0.7**
	baz=97						
H21K	**Melozitna Rive**	**79.57**	**335**	P	**P**	**19 55 07.7**	**+0.7**
	baz=96						
R18K	**Karluk**	**79.64**	**327**	P	**P**	**19 55 08.3**	**+0.9**
	baz=94						
L20K	**Farewell, AK**	**79.72**	**332**	P	**P**	**19 55 08.6**	**+0.6**
	baz=95,SNR=6.6						
N19K	**Bonanza Creek**	**79.87**	**331**	P	**P**	**19 55 09.3**	**+0.5**
	baz=94						
K20K	**Telida**	**79.88**	**333**	P	**P**	**19 55 09.0**	**+0.2**
	baz=95						
D22K	**Ayikyak River**	**79.91**	**339**	P	**P**	**19 55 09.5**	**+0.7**
	baz=97						
M19K	**Big River Lodg**	**79.91**	**332**	P	**P**	**19 55 09.3**	**+0.3**
	baz=94						
G21K	**Allakaket**	**79.95**	**336**	P	**P**	**19 55 09.4**	**+0.4**
	baz=96						
J20K	**Nowinta River**	**79.99**	**334**	IAmb	IAmb	19 55 10.6	
	comp=Z,10nm,1.0s						
J20K	**Nowinta River**	**79.99**	**334**	P	**P**	**19 55 10.1**	**+0.8**
	baz=95,SNR=9.7						
Q18K	**Katmai Hardscr**	**80.00**	**328**	P	**P**	**19 55 09.7**	**+0.1**
	baz=93						
F21K	**Alatna River**	**80.02**	**337**	P	**P**	**19 55 09.7**	**+0.2**
	baz=96,SNR=6.0						
L19K	**White Mountain**	**80.15**	**332**	P	**P**	**19 55 10.2**	**-0.1**
	baz=94						
O18K	**Koktuh Hills**	**80.17**	**330**	P	**P**	**19 55 10.5**	**+0.1**
	baz=93						
I20K	**Naaghedeneel**	**80.19**	**335**	P	**P**	**19 55 10.9**	**+0.6**
	baz=95						
CHIR	**Chirikof Islan**	**80.19**	**325**	P	**P**	**19 55 10.2**	**-0.3**
	baz=92						
E21K	**Killik River**	**80.33**	**338**	P	**P**	**19 55 11.5**	**+0.4**
	baz=96						
B22K	**Teshekpuk Lake**	**80.35**	**340**	P	**P**	**19 55 12.1**	**+1.0**
	baz=97						
H20K	**Anotleneega Mo**	**80.41**	**335**	P	**P**	**19 55 12.7**	**+1.2**
	baz=95						
Q17K	**Contact Creek**	**80.44**	**328**	P	**P**	**19 55 12.1**	**+0.1**
	baz=92						
N18K	**Kilae Creek**	**80.56**	**330**	P	**P**	**19 55 12.3**	**-0.1**
	baz=93						
M18K	**Stony River**	**80.57**	**331**	P	**P**	**19 55 12.0**	**-0.4**
	baz=93						
J19K	**Poorman**	**80.62**	**334**	P	**P**	**19 55 11.8**	**-0.9**
	baz=94						
B21K	**Ikpikpuk River**	**80.68**	**339**		**P**	**19 55 13.2**	**+0.4**
B21K				IAmb	IAmb	19 55 14.7	
	comp=Z,6.8nm,0.8s						
B21K	**Ikpikpuk River**	**80.68**	**339**	P	**P**	**19 55 12.8**	**0.0**
	baz=96,SNR=6.8						
C21K	**Knifeblade Rid**	**80.69**	**339**	P	**P**	**19 55 12.6**	**-0.4**
	baz=95						
P17K	**Kvichak River**	**80.77**	**329**	P	**P**	**19 55 13.6**	**+0.1**
	baz=92						
Q16K	**King Salmon**	**80.86**	**328**	P	**P**	**19 55 14.1**	**+0.1**
	baz=92						
F20K	**Avaraart Lake**	**80.87**	**337**	P	**P**	**19 55 14.0**	**+0.1**
	baz=94						
A22K	**Sinclair Lake**	**80.93**	**341**	P	**P**	**19 55 14.6**	**+0.5**
	baz=95						
L18K	**Granite Mounta**	**81.01**	**332**	P	**P**	**19 55 15.1**	**+0.3**
	baz=92						
H19K	**Roundabout Mou**	**81.07**	**335**	P	**P**	**19 55 15.9**	**+0.9**
	baz=93						
J18K	**Innoko River**	**81.08**	**333**	P	**P**	**19 55 15.6**	**+0.5**
	baz=93						
O17K	**Koliganek Bris**	**81.12**	**329**	P	**P**	**19 55 15.8**	**+0.4**
	baz=92						
E20K	**Nigu River**	**81.13**	**338**	P	**P**	**19 55 15.5**	**+0.1**
	baz=94						
N17K	**Nushagak Hills**	**81.19**	**330**	P	**P**	**19 55 16.6**	**+0.8**
	baz=92						
GCSA	**Galena City Sc**	**81.21**	**334**	P	**P**	**19 55 16.3**	**+0.6**
	baz=93						
NB2	**NORSAR Subarra**	**81.29**	**29**	P	**P**	**19 55 16.9**	**+0.6**
	comp=Z,4.9nm,0.8s,baz=269,slow=5.6						
NOA	**NORSAR Array B**	**81.29**	**29**	P	**P**	**19 55 16.6**	**+0.3**
	comp=Z,1.5nm,0.5s,baz=267,slow=5.3,SNR=9.1						
	comp=Z,1.5nm,0.5s						
D20K	**Etivluk River**	**81.32**	**338**	P	**P**	**19 55 16.9**	**+0.6**
	baz=94						
R16K	**Pilot Point**	**81.32**	**327**	P	**P**	**19 55 17.0**	**+0.6**
	baz=91						
M17K	**Holitna River**	**81.34**	**331**	P	**P**	**19 55 16.9**	**+0.4**
	baz=92						
G19K	**Purcell Mounta**	**81.36**	**336**	P	**P**	**19 55 16.7**	**+0.1**
	baz=93						
E19K	**Redstone River**	**81.48**	**337**	P	**P**	**19 55 17.5**	**+0.4**
	baz=93						
P16K	**Nushagak River**	**81.56**	**329**	P	**P**	**19 55 18.4**	**+0.7**
	baz=91						
B20K	**Meade River**	**81.59**	**340**	P	**P**	**19 55 18.1**	**+0.4**
	baz=93						
O16K	**Kokwok River B**	**81.62**	**329**	P	**P**	**19 55 17.4**	**-0.7**
	baz=91						
F19K	**Shaleruckik Mo**	**81.67**	**337**	P	**P**	**19 55 18.8**	**+0.7**
	baz=92						
L17K	**Donlin**	**81.76**	**332**	P	**P**	**19 55 19.0**	**+0.3**
	baz=91						
K17K	**Iditarod**	**81.78**	**332**	P	**P**	**19 55 18.5**	**-0.3**
	baz=91						
H18K	**Honhosa River**	**81.86**	**335**	P	**P**	**19 55 18.9**	**-0.3**
	baz=91						
D19K	**Kuna River**	**81.86**	**338**	P	**P**	**19 55 19.6**	**+0.4**
	baz=92						
N16K	**Nishlik Lake**	**81.97**	**330**	P	**P**	**19 55 19.5**	**-0.4**
	baz=90						
G18K	**Tagagawik**	**81.99**	**336**	P	**P**	**19 55 19.8**	**-0.1**
	baz=91						
M16K	**Timber Creek**	**82.07**	**331**	P	**P**	**19 55 20.6**	**+0.2**
	baz=90						
J17K	**VABM Dome**	**82.14**	**333**	P	**P**	**19 55 21.0**	**+0.3**
	baz=90						
CLL	**Collm**	**82.25**	**39**	*e*P	**P**	**19 55 21.0**	**-0.5**
CLL				*e*sP	**sP**	**19 56 12.0**	**-5.5**
L16K	**Owhat River**	**82.32**	**331**	P	**P**	**19 55 21.6**	**0.0**
	baz=90						
S14K	**Fog Glacier**	**82.40**	**326**	P	**P**	**19 55 22.5**	**+0.1**
	baz=89						
F18K	**Selawik**	**82.41**	**336**	P	**P**	**19 55 21.9**	**-0.1**
	baz=90						
C19K	**Lookout Ridge**	**82.41**	**339**	P	**P**	**19 55 22.3**	**+0.3**
	baz=91						
CHNA	**Chernabura Isl**	**82.45**	**324**	P	**P**	**19 55 22.9**	**+0.5**
	baz=89						
HFS	**Hagfors**	**82.50**	**30**	P	**P**	**19 55 22.4**	**-0.3**
	comp=Z,1.6nm,0.6s,baz=202,slow=1.6,SNR=8.3						
	comp=Z,1.6nm,0.6s						
O15K	**Ungalikthiuk R**	**82.51**	**329**	P	**P**	**19 55 22.9**	**+0.2**
	baz=89						
H17K	**Granite Mounta**	**82.51**	**335**	P	**P**	**19 55 22.9**	**+0.3**
	baz=90						
N15K	**Kwethluk River**	**82.63**	**330**	P	**P**	**19 55 23.7**	**+0.4**
	baz=89						
GERES	**GERESS Array B**	**82.78**	**42**	P	**P**	**19 55 22.6**	**-1.9**
	comp=Z,1.2nm,0.6s,baz=51,slow=0.9,SNR=12						
	comp=Z,1.2nm,0.6s						
E18K	**Tukpahlearik C**	**82.78**	**337**	P	**P**	**19 55 24.5**	**+0.5**
	baz=90						
G17K	**Kiwalik Mounta**	**82.82**	**335**	P	**P**	**19 55 24.8**	**+0.6**
	baz=89						
J16K	**Anvik River**	**82.83**	**333**	P	**P**	**19 55 24.8**	**+0.6**
	baz=89						
I17K	**Unalakleet**	**82.86**	**334**	P	**P**	**19 55 25.2**	**+0.9**
	baz=89						
M15K	**Kasigluk River**	**82.92**	**330**	P	**P**	**19 55 25.5**	**+0.8**
	baz=89						
A19K	**Wainwright**	**82.93**	**340**	P	**P**	**19 55 25.6**	**+1.0**
	baz=90						
SDPT	**Sand Point**	**82.95**	**325**	P	**P**	**19 55 25.5**	**+0.5**
	baz=88						
C18K	**Utukok River**	**82.99**	**338**	P	**P**	**19 55 25.2**	**+0.1**
	baz=89						
F17K	**Baldwin Pennin**	**83.05**	**336**	P	**P**	**19 55 25.9**	**+0.6**
	baz=89						
B18K	**Kokolik River**	**83.20**	**339**	P	**P**	**19 55 26.4**	**+0.4**
	baz=89						
SPITS	**Spitsbergen Ar**	**83.24**	**12**	P	**P**	**19 55 26.8**	**+0.7**
	comp=Z,4.6nm,0.7s,baz=182,slow=2.3,SNR=14						
SPITS				pP	**pP**	**19 56 06.2**	**+0.7**
	comp=Z,1.5nm,0.6s,baz=250,slow=2.9,SNR=1.4						
	comp=Z,4.6nm,0.7s						
O14K	**Tigyukauivet M**	**83.25**	**329**	P	**P**	**19 55 26.9**	**+0.5**
	baz=88						
E17K	**Hotham Inlet**	**83.26**	**337**	P	**P**	**19 55 27.0**	**+0.6**
	baz=88						
L15K	**Ungalak Mounta**	**83.28**	**331**	P	**P**	**19 55 27.1**	**+0.6**
	baz=88						
K15K	**Wolf Creek Mou**	**83.28**	**332**	P	**P**	**19 55 27.5**	**+0.9**
	baz=88						
N14K	**Kuskokwak Cree**	**83.44**	**330**	P	**P**	**19 55 28.3**	**+0.9**
	baz=88						
G16K	**Koyuk River**	**83.53**	**335**	P	**P**	**19 55 28.6**	**+0.9**
	baz=88						
M14K	**Bethel**	**83.54**	**330**	P	**P**	**19 55 29.3**	**+1.4**
	baz=88						
RDOG	**Red Dog Mine**	**83.64**	**338**	P	**P**	**19 55 29.2**	**+0.8**
	baz=88						
C17K	**DeLong Mountai**	**83.73**	**338**	P	**P**	**19 55 29.6**	**+0.8**
	baz=87						
D17K	**Noatak River**	**83.73**	**337**	P	**P**	**19 55 29.6**	**+0.9**
	baz=87						
S12K	**Black Hills**	**83.83**	**325**	P	**P**	**19 55 30.5**	**+0.9**
	baz=87						
L14K	**Kuka Creek**	**83.86**	**331**	P	**P**	**19 55 30.8**	**+1.3**
	baz=87						
J14K	**Nanvaranak Lak**	**84.19**	**332**	P	**P**	**19 55 32.1**	**+0.9**
	baz=86						
M13K	**Dall Lake**	**84.24**	**330**	P	**P**	**19 55 32.6**	**+1.1**
	baz=86						
G15K	**Niukluk**	**84.26**	**335**	P	**P**	**19 55 32.2**	**+0.7**
	baz=86						
F15K	**North Star Dit**	**84.47**	**335**	P	**P**	**19 55 33.1**	**+0.6**
	baz=86						
C16K	**Lisburne Hills**	**84.54**	**338**	P	**P**	**19 55 33.5**	**+0.6**
	baz=85						
K13K	**Kusilvak Mount**	**84.76**	**332**	P	**P**	**19 55 35.2**	**+1.1**
	baz=85						
ANM	**Nome**	**84.87**	**334**	P	**P**	**19 55 35.2**	**+0.7**
	baz=85						
F14K	**Arctic Creek**	**85.18**	**335**	P	**P**	**19 55 36.8**	**+0.7**
	baz=84						
M11K	**Mekoryuk**	**85.66**	**330**	P	**P**	**19 55 39.2**	**+0.7**
	baz=84						
TNA	**Tin City**	**85.83**	**335**	P	**P**	**19 55 40.1**	**+0.8**
	baz=83						

UNV	Unalaska Valle	86.56	324	P	P	19 55 43.3	+0.2
	baz=83						
ARCES	ARCESS Array B	86.64	20	P	P	19 55 43.4	+0.2
	comp=Z,3.6nm,0.7s,baz=280,slow=4.5,SNR=12						
	comp=Z,3.6nm,0.7s						
GAMB	Gambell	87.72	334	P	P	19 55 49.3	+0.8
	baz=79						
P08K	Saint George I	87.90	327	P	P	19 55 50.3	+0.8
	baz=81						
NIKH	Nikolski High	88.07	323	P	P	19 55 50.3	-0.1
	baz=81						
SPIA	Saint Paul Isl	88.19	327	P	P	19 55 51.6	+0.8
	baz=80						
FINES	FINESS Array B	88.40	28	P	P	19 55 52.1	+0.4
	comp=Z,2.7nm,0.9s,baz=323,slow=2.9,SNR=5.7						
	comp=Z,2.7nm,0.9s						
SNAA	Sanae	90.34	163	P	P	19 55 59.9	-0.7
	comp=Z,0.6nm,0.6s,baz=284,slow=7.5,SNR=2.3						
	comp=Z,0.6nm,0.6s						
BVAR	Borovoye Array	112.81	23	Pdiff	Pdif	19 57 42.3	+0.4
	comp=Z,0.8nm,0.6s,baz=208,slow=37,SNR=1.2						
ZALV	Zalesovo Beam	116.64	14	PKP	PKPdf	20 01 43.1	-0.1
	comp=Z,1.8nm,0.4s,baz=270,slow=1.5,SNR=8.7						
KURBB	Kurchatov Arra	117.72	20	PKP	PKPdf	20 01 45.6	+0.2
	comp=Z,1.3nm,0.6s,baz=316,slow=2.3,SNR=13						
MKAR	Makanchi Array	122.29	20	PKP	PKPdf	20 01 53.9	-0.4
	comp=Z,1.5nm,0.5s,baz=299,slow=2.6,SNR=35						
SONM	Songino Array	125.56	0	PKP	PKPdf	20 02 01.3	+0.5
	comp=Z,1.7nm,0.6s,baz=324,slow=1.3,SNR=9.6						
KSH	Kashi	125.71	29	PKP	PKiKP	20 02 02.3	+0.6
WMQ	Urumqi	126.65	17	*e*PKP	PKPdf	20 02 03.1	+0.2
MJAR	Matsushiro Arr	127.83	328	PKP	PKPdf	20 02 05.8	+0.5
	comp=Z,0.3nm,0.4s,baz=51,slow=3.6,SNR=1.4						
KSRS	Korea Array	131.77	338	PKP	PKPdf	20 02 12.0	-0.6
	comp=Z,0.5nm,0.5s,baz=54,slow=2.1,SNR=2.3						
HHC	Hu-ho-hao-te	132.35	355	*e*P	PKPdf	20 02 11.5	-2.4
GTA	Gaotai	133.51	8	*e*PKP	PKPdf	20 02 16.4	+0.3
STKA	Stephens Creek	139.20	228	PKP	PKPdf	20 02 26.5	-0.2
	comp=Z,2.4nm,0.8s,baz=153,slow=23,SNR=1.7						
NJ2	Nanjing	139.69	344	*e*P	PKPdf	20 02 28.1	+0.6
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
PZH	PanZhiHua	146.47	8	PKPbc	PKPdf	20 02 40.8	+1.0
AS31	Alice Springs	149.16	234		PKPbc	20 02 47.9	-0.7
ASAR	Alice Springs	149.16	234		PKPbc	20 02 47.6	-1.0
ASAR	Alice Springs	149.16	234	PKPbc	PKPbc	20 02 47.8	-0.8
	comp=Z,4.9nm,0.7s,baz=117,slow=3.5,SNR=40						
ASAR				pPKPbc	pPKPbc	20 03 29.4	-0.2
	comp=Z,3.0nm,0.8s,baz=116,slow=2.7,SNR=5.2						
WRA	Warramunga Arr	150.39	241	PKPbc	PKPbc	20 02 50.6	-0.9
	comp=Z,3.8nm,0.5s,baz=109,slow=2.4,SNR=50						
WRA				pPKPbc	pPKPbc	20 03 32.2	-0.4
	comp=Z,3.3nm,0.5s,baz=109,slow=2.3,SNR=4.7						
CMAR	Chiang Mai Arr	153.66	17	PKP	PKPdf	20 02 51.7	+0.7
	comp=Z,1.2nm,0.7s,baz=327,slow=1.2,SNR=8.1						
CMAR				PKPbc	PKPbc	20 02 59.4	+0.4
	comp=Z,4.4nm,0.6s,baz=322,slow=3.2,SNR=19						

*NAO **09** 19:43:23.0±1.6,76°.96N×7°.91E,ML2.7*
*BER **09** 19:43:25.1±2.7,77°.00N×7°.88E,h10^{km},Mw3.6,*
ML2.7(NAO),Confirmed Earthquake
*FCIAR **09** 19:43:30.0,77°.27N×8°.69E,h10^{km}*
*IDC **09** 19:43:31.7±5.4,76°.72N×10°.65E,h0^{km},mb3.7/2,*
mbtmp3.7/3,ML2.9/1,MS3.0/2,Error ellipse: s-maj=98.1km
s-min=25.3km az=77.0
ISC 09 19:43:24.3±1.8,**77°.08N**±0°.05×**8°.44E**±0°.05,**h5**^{km}±13^{km},
n31,σ**1**^{s}**.91**/48,**2C,Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRBA	Barentsburg A	1.59	49	Pn	Pg	19 43 54.4	-0.4
BRBA				Sn	Sn	19 44 13.0	-0.8
BRBA	Barentsburg A	1.59	49	*e*P	Pg	19 43 54.6	-0.1
BRBA				*e*S	Sn	19 44 12.7	-1.1
BRBA				IAML		19 44 21.9	
	comp=Z,21nm,0.4s						
HSPB	Hornsund (broa	1.60	89	Pn	Pb	19 43 54.2	-0.1
HSPB				Sn	Sn	19 44 12.6	-1.5
HSPB	Hornsund (broa	1.60	89	*e*P	Pn	19 43 52.5	-0.6
HSPB				*e*S	Sn	19 44 12.5	-1.6
HSPB	Hornsund (broa	1.60	89	*e*P	Pb	19 43 53.7	-0.6
HSPB				IAML		19 44 11.9	
	comp=Z,15nm,0.4s						
HSPB				*e*S	Sn	19 44 12.5	-1.6
BRBB	Barentsburg B	1.61	48	Pn	Pb	19 43 54.5	+0.1
BRBB				Sn	Sn	19 44 13.4	-0.9
BRBB	Barentsburg B	1.61	48	⇑*i*P	Pb	19 43 54.5	+0.1
BRBB				*e*S	Sn	19 44 13.4	-0.9
KBS	Kingsbay	1.99	20	Pn	Pn	19 43 59.4	+0.9
KBS				Sn	Sn	19 44 22.1	-1.6
KBS	Kingsbay	1.99	20	*e*P	Pn	19 43 59.5	+1.0
KBS				IAML		19 44 26.5	
	comp=Z,23nm,0.3s						
KBS	Kingsbay	1.99	20	*i* P	Pn	19 43 59.2	+0.7
KBS				*i* S	Sn	19 44 21.5	-2.2
SPA0	Spitsbergen Ar	2.03	53	Pn	Pb	19 44 01.5	-0.1
	baz=231,slow=14						
SPA0				Sn	Sb	19 44 25.9	-1.2
	baz=222,slow=22						
SPA0	Spitsbergen Ar	2.03	53	*e*P	Pb	19 44 01.1	-0.5
SPA0				*e*S	Sn	19 44 24.4	-0.4
SPA0	Spitsbergen Ar	2.03	53	⇑*i*P	Pb	19 44 01.6	-0.1
SPA0				*e*		19 44 06.6	
SPA0				*e*S	Sb	19 44 26.8	-0.3
SPA0				IAML		19 44 28.4	
	comp=Z,27nm,0.5s						
BJO1	Bjornoya	3.67	130	*e*P	Pn	19 44 20.3	-1.2
HOPEN	Hopen	3.84	90	Pn	Pn	19 44 24.6	+0.8
HOPEN				Sn	Sn	19 45 06.5	-2.7
HOPEN	Hopen	3.84	90	*e*P	Pn	19 44 23.4	-0.4
HOPEN				*e*S	Sn	19 45 07.1	-2.1
HOPEN	Hopen	3.84	90	*e*P	Pn	19 44 24.9	+1.0
HOPEN				*e*S	Sn	19 45 07.5	-1.7
HOPEN				IAML		19 45 21.7	
	comp=Z,16nm,0.4s						
DAG	Danmarks Havn	6.12	280	*e*P	Pn	19 44 53.2	-2.0
DAG	Danmarks Havn	6.12	280	*e*	Pn	19 44 49.1	-6.0
	baz=77,slow=12						
DAG				*i* P	Pn	19 44 52.0	-3.2
DAG				*i* P	Pn	19 44 52.8	-2.4
DAG				*i* S	Sn	19 45 55.5	-10
DAG				IAML		19 45 59.9	
	comp=Z,1.8nm,0.4s						
NOR	Nord	6.42	326	Pn	Pn	19 44 58.5	-0.7
NOR				Sn	Sn	19 46 10.8	-1.9
DBG	Daneborg	7.56	263	Pn	Pn	19 45 14.7	-0.2
DBG				Sn	Sn	19 46 31.3	-9.4
ZFI2	Zemlya Franca-	8.22	45	*e*P	Pn	19 45 26.1	+2.2
ZFI2				*e*S	Sn	19 46 52.1	-4.9
OMEGA	Omega	8.23	45	*e*P	Pn	19 45 26.1	+2.0
OMEGA				*e*S	Sn	19 46 52.1	-5.1
KIF	Kilpisjarvi	8.85	150	Pn	Pn	19 45 30.9	-1.7
KIF				Sn	Sn	19 47 02.8	-10
ARA0	ARCESS Array S	8.98	139	Pn	Pn	19 45 33.5	-0.8
	baz=323,slow=11						
ARA0				Sn	Sn	19 47 05.5	-10
	baz=328,slow=37						
ARCES	ARCESS Array B	8.98	139	Pn	Pn	19 45 32.8	-1.5
	comp=Z,0.1nm,0.3s,baz=332,slow=12,SNR=11						
ARCES				Sn	Sn	19 47 04.2	-11
	comp=Z,0.1nm,0.3s,baz=331,slow=26,SNR=1.9						
	comp=Z,5.2nm,1.0s						
LOF	Lofoten	9.12	168	Pn	Pn	19 45 34.5	-1.8
RES	Resolute Bay	22.25	317	LR	LR	19 57 28.5	
	comp=Z,34nm,18.5s,baz=225,slow=37						
ZALV	Zalesovo Beam	35.19	85	P	P	19 50 22.1	+3.5
	comp=Z,0.9nm,0.6s,baz=326,slow=7.0,SNR=3.0						
	comp=Z,0.9nm,0.6s						
YAK	Yakutsk	36.46	43	LR	LR	20 05 37.4	
	comp=Z,26nm,18.7s,baz=200,slow=36						
MKAR	Makanchi Array	41.33	92	P	P	19 51 14.2	+3.9
	comp=Z,0.5nm,0.7s,baz=345,slow=8.8,SNR=6.7						
	comp=Z,0.5nm,0.7s						

*JSO **09** 20:14:53.0±0.0,33°.82N×35°.12E,h12^{km},M2.5/13,*
Md3.2/13,Mjma2.9/13,ML2.7/11,MLv2.5/13,MLv2.5/13,
Ms(BB)2.9/4
*GII **09** 20:14:53.3±0.0,33°.816N±0°.003×35°.118E±0°.001,h12^{km},*
Mws2.2/6,confirmed
*GRAL **09** 20:14:53.6±0.3,33°.89N×35°.10E,h31^{km}±2^{km},MD3.0*
ISC 09 20:14:51.9±1.6,**33°.90N**±0°.06×**35°.18E**±0°.06,**h14**^{km},**n47**,
σ**0**^{s}**.53**/50,**Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DQRL	Deir Qamar	0.38	120	*e*P	Pn	20 15 02.5	-0.5
DQRL				*e*S	Sn	20 15 09.0	-1.2
BHL	Bhannes	0.40	89	*e*P	Pn	20 15 02.8	-0.6
QRWL	Qaraoun	0.55	129	*e*P	Pn	20 15 04.9	-0.5
QRWL				*e*S	Sn	20 15 13.2	-1.2
ZAHL	Zahle	0.59	94	*e*P	Pn	20 15 05.8	-0.2
RCY	Rachaya	0.68	126	*e*P	Pn	20 15 06.9	-0.3
RCY				*e*S	Sn	20 15 16.7	-1.1
SHBL	Chebaa	0.72	139	*e*P	Pb	20 15 07.3	+1.0
HWQ	Hawqa	0.74	59	*e*P	Pn	20 15 08.2	+0.1
NATI	Neve Ativ	0.79	143	P	Pb	20 15 07.6	+0.2
NATI	Neve Ativ	0.79	143	P	Pb	20 15 08.1	+0.8
NATI	Neve Ativ	0.79	143	S	Sb	20 15 18.7	+0.8
GEM	Giv'at Ha'Em	0.80	149	P	Pg	20 15 07.6	+0.2
GEM	Giv'at Ha'Em	0.80	149	P	Pb	20 15 08.2	+0.7
GEM	Giv'at Ha'Em	0.80	149	S	Sb	20 15 19.0	+0.8
HNTI	Hanita	0.81	180	P	Pg	20 15 07.2	-0.4
HNTI	Hanita	0.81	180	P	Pg	20 15 07.8	+0.2
HNTI	Hanita	0.81	180	S	Sg	20 15 18.2	-0.1
MMC7	Mount Meron ar	0.89	168	P	Pb	20 15 09.3	+0.1
MMA0B	Mount Meron ar	0.90	168	P	Pb	20 15 09.4	+0.1
MMA0B	Mount Meron ar	0.90	168	S	Sg	20 15 21.0	-0.1
BEIL	Beino	1.05	52	*e*P	Pn	20 15 12.3	0.0
KSHT	Keshet	1.06	150	P	Pg	20 15 12.5	+0.2
KSHT	Keshet	1.06	150	S	Sb	20 15 26.1	+0.4
BLGI	Bet Lehem HaGe	1.16	179	P	Pn	20 15 13.3	-0.4
BLGI	Bet Lehem HaGe	1.16	179	P	Pn	20 15 13.8	+0.1
BLGI	Bet Lehem HaGe	1.16	179	S	Sb	20 15 27.9	-0.7
OFRI	\`Ofer	1.28	187	P	Pn	20 15 15.0	-0.4
OFRI	\`Ofer	1.28	187	P	Pn	20 15 14.9	-0.6
OFRI	\`Ofer	1.28	187	S	Sb	20 15 30.8	-1.4
MMLI	Mount Malkishu	1.47	172	P	Pn	20 15 17.9	-0.1
MMLI	Mount Malkishu	1.47	172	P	Pn	20 15 17.7	-0.3
MMLI	Mount Malkishu	1.47	172	S	Sn	20 15 36.9	-0.1
SLTI	Sal'it	1.66	184	P	Pn	20 15 20.5	0.0
SLTI	Sal'it	1.66	184	P	Pn	20 15 20.6	+0.1
SLTI	Sal'it	1.66	184	S	Sn	20 15 41.5	-0.1
HMDT	Nahal Hemdat	1.67	170	P	Pn	20 15 20.8	+0.1
HMDT	Nahal Hemdat	1.67	170	P	Pn	20 15 20.6	0.0
HMDT	Nahal Hemdat	1.67	170	S	Sn	20 15 41.8	0.0
SALP	Salfit	1.82	180	P	Pn	20 15 22.9	0.0
DSI	Dead Sea	2.33	176	P	Pn	20 15 29.7	-0.1
DSI	Dead Sea	2.33	176	P	Pn	20 15 29.9	+0.1
YTIR	Yattir	2.53	181	P	Pn	20 15 32.6	0.0
YTIR	Yattir	2.53	181	S	Sn	20 16 03.6	+0.3
MSBI	Mazada	2.58	177	P	Pn	20 15 33.5	+0.3
MSBI	Mazada	2.58	177	P	Pn	20 15 33.6	+0.3
GHAJ	Ghor Haditha	2.61	173	P	Pn	20 15 33.9	+0.3
KZIT	Kziot	3.05	193	P	Pn	20 15 40.3	+0.6
PRNI	Paran	3.54	182	P	Pn	20 15 46.6	+0.2

*HLW **09** 20:21:06.4,27°.43N×34°.53E,h18^{km}±2^{km},Md2.5,Ml2.3*
*SGS **09** 20:21:08.3,27°.55N×34°.66E,h11^{km},Ml2.0*
ISC 09 20:21:05.3±1.1,**27°.47N**±0°.05×**34°.57E**±0°.03,**h12**^{km},**n31**,
σ**0**^{s}**.75**/33,**Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TR1	Tor 1	0.77	314	P	Pg	20 21 21.1	+0.9
KRABS	KRABS	0.87	44	S	Sb	20 21 33.1	-0.8
KRABS	KRABS	0.87	44	P	Pb	20 21 22.6	+0.2
MWLHS	Almuwaylih	0.88	72	P	Pb	20 21 22.8	+0.3
MWLHS	Almuwaylih	0.88	72	S	Sb	20 21 33.5	-0.7
HHRG	Al Ghardaqah	0.93	254	P	Pb	20 21 22.9	-0.5
AYUS	\`Aynunah	0.94	41	S	Sb	20 21 35.6	-0.5
AYUS	\`Aynunah	0.94	41	P	Pb	20 21 24.0	+0.4
BDAS	Al Bad\`	1.06	26	P	Pb	20 21 25.9	+0.2
BDAS	Al Bad\`	1.06	26	S	Sg	20 21 38.8	-0.8
TAYS	Tayyib Ism	1.10	14	P	Pb	20 21 26.3	-0.1
TAYS	Tayyib Ism	1.10	14	S	Sb	20 21 39.8	-0.9
HKAT	Jabal Katrina	1.16	334	P	Pb	20 21 27.9	+0.4
HKAT				S	Sb	20 21 42.6	-0.1
TR2	Tor 2	1.18	321	P	Pn	20 21 28.0	+0.3
TR2				S	Sb	20 21 42.8	-0.2
HDHB	Dhahab	1.24	2	P	Pn	20 21 28.6	0.0
WTBKS	WTBKS	1.33	63	S	Sb	20 21 46.5	-0.9
WTBKS	WTBKS	1.33	63	P	Pb	20 21 30.4	+0.1
DESA	DESA	1.41	88	S	Sb	20 21 48.2	-1.4
DESA	DESA	1.41	88	P	Pn	20 21 31.3	+0.4
NUB	Nuweibaa	1.55	2	P	Pn	20 21 32.6	-0.2
HAQS	Haql	1.60	11	S	Sn	20 21 53.2	-0.9
HAQS	Haql	1.60	11	P	Pn	20 21 33.8	+0.3
HRDS	Abu Rudays	1.67	318	P	Pn	20 21 35.3	+0.8
HBST	Basata	1.74	5	P	Pn	20 21 35.9	+0.5
JMOS	Jabal al Moall	1.75	16	P	Pn	20 21 36.4	+0.9
GRB	Gharib	1.77	297	P	Pn	20 21 35.6	-0.2
TBKS	Tabuk	1.89	66	P	Pb	20 21 39.0	-0.8
TBKS	Tabuk	1.89	66	S	Sb	20 22 03.0	-0.5
BIDS	Bi'r al Bayda'	2.21	105	P	Pn	20 21 42.4	+0.6
URD12	Shuwaq	2.22	82	P	Pn	20 21 43.8	+1.7
URD10	Hayder	2.34	72	P	Pn	20 21 45.2	+1.5

*TEH **09** 20:27:13.6,38°.37N×45°.42E,h6^{km}±62^{km}*
*AZER **09** 20:27:14.7,38°.52N×45°.45E,h4^{km},ml2.6*
ISC 09 20:27:15.5±1.1,**38°.47N**±0°.03×**45°.53E**±0°.03,**h6**^{km}±11^{km},
n23,σ**1**^{s}**.63**/38,**Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISHB	Shabestar	0.20	159	Pg	Pg	20 27 17.3	-2.2
ITBZ	Tabriz	0.54	116	Pg	Pg	20 27 24.4	-1.5
ORD	Ordubad	0.59	38	P	Pb	20 27 28.1	-0.2
ORD				S	Sb	20 27 38.5	+1.6
NAX	Nakhchivan	0.70	358	P	Pb	20 27 30.1	-0.2
NAX				S	Sn	20 27 41.6	-1.8
IAZR	Azarshahr	0.87	155	Pg	Pg	20 27 29.7	-2.5
SBZ	Shahbuz	0.93	1	P	Pn	20 27 34.2	-1.1
SBZ				S	Sn	20 27 48.5	-0.5
MAKU	Maku	1.10	324	Pg	Pg	20 27 35.0	-1.7
IHRS	Heris	1.20	97	Pg	Pg	20 27 38.3	-0.2
HYR	Heyderabad	1.35	337	P	Pg	20 27 40.6	-0.9
HYR				S	Sn	20 28 00.5	+1.0
HAKT	HAKKARI	1.70	238	Pn	Pg	20 27 49.4	+1.3
HAKT				Sn	Sg	20 28 13.8	+3.6
QRD	Qoradiz	1.71	54	Pn	Pb	20 27 47.9	+0.4
QRD				Sn	Sg	20 28 13.1	+2.5
IGDI	IGDIR	1.79	322	Pn	Pg	20 27 48.8	-1.1
IHSH	Hashtrud	1.80	130	Pn	Pn	20 27 46.8	-0.6
GRMI	Germi	1.89	79	Pn	Pb	20 27 50.0	-0.4
BLQ	Beylaqan	2.02	51	Pn	Pg	20 27 54.1	0.0
BLQ				Sn	Sg	20 28 22.5	+2.2
AGDM	Agdam	2.05	36	Pn	Pg	20 27 54.0	-0.8
AGDM				Sn	Sg	20 28 23.5	+2.2
YRD	Yardimli	2.17	77	Pn	Pb	20 27 55.4	+0.1
YRD				Sn	Sg	20 28 26.5	+1.2
BRDA	Brd	2.20	35	Pn	Pg	20 27 57.4	-0.3
BRDA				Sn	Sg	20 28 30.8	+4.5
LRK	Lerik	2.21	85	Pn	Pb	20 27 56.1	+0.1
LRK				Sn	Sg	20 28 28.5	+1.9
GDB	GEDABAY	2.26	4	Pn	Pb	20 27 56.4	-0.4
GDB				Sn	Sg	20 28 28.6	+0.5
GANJ	Ganja	2.26	16	Pn	Pg	20 27 57.7	-1.2
GANJ				Sn	Sg	20 28 28.7	+0.6
GLBA	Clilabad	2.37	70	Pn	Pb	20 27 59.2	+0.7
GLBA				Sn	Sg	20 28 31.0	-0.6
QZX	Qazax, Azerbai	2.59	357	Pg	Pb	20 28 01.1	-1.3
QZX				Sg	Sg	20 28 37.5	-1.2

*JMA **09** 20:45:55.3±0.2,22°N±1°×12°1E±°,h69^{km}±2^{km},MV3.6/13,*
TAIWAN REGION
*TAP **09** 20:45:55.7,21°.95N×121°.24E,h35^{km},ML3.4,C*
ISC 09 20:45:56.4±1.1,**22°.08N**±0°.03×**121°.23E**±0°.02,**h18**^{km}±4^{km},
n82,σ**1**^{s}**.00**/116,**1C-1D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAY	Lan-yu	0.30	99	*i* P	Pg	20 46 03.7	+0.7
LAY				S	Sb	20 46 09.4	+1.6
LYUB	Lan-yu	0.34	104	*i* P	Pg	20 46 03.5	-0.1
LYUB				S	Sg	20 46 09.1	+0.6
TSEB	Hengchuen, Pin	0.36	239	P	Pb	20 46 04.7	+0.5
TSEB				*i* S	Sn	20 46 11.2	-2.0
SMST	Manzhou Townsh	0.37	260	*i* P	Pb	20 46 04.9	+0.5
SMST				S	Sn	20 46 11.4	-2.2
TAWH	Dawu Township	0.41	309	P	Pn	20 46 06.3	-1.0
TAWH				*e*S	Sn	20 46 14.0	-0.4
TAW	Tawu	0.41	311	*i* P	Pn	20 46 06.2	-1.2
TAW				*i* S	Sn	20 46 14.1	-0.5
TWKBT	Hengchun	0.41	250	⇓*i*P	Pb	20 46 05.1	-0.1
TWKBT				*i* S	Sb	20 46 11.6	+0.5
TWK1	Hengchun	0.42	250	⇑*i*P	Pb	20 46 05.1	-0.2
TWK1				*i* S	Sb	20 46 11.6	+0.3
EAST	Anshuo	0.46	310	*i* P	Pn	20 46 07.1	-1.0
EAST				S	Sn	20 46 15.9	0.0
HEN	Hengchun	0.46	260	P	Pb	20 46 06.0	0.0
HEN				S	Sb	20 46 13.4	+0.9
ECL	Taimali	0.57	333	*i* P	Pg	20 46 08.4	+0.6
ECL				*i* S	Sn	20 46 17.4	-1.1
SCZT	Fangliau	0.63	297	*i* P	Pn	20 46 09.7	-0.8
TTN	Taitung	0.67	353	*e*P	Pn	20 46 11.8	+0.8
TTN				*e*S	Sn	20 46 22.3	+1.3
TWGBT	Beinan	0.74	349	P	Pb	20 46 10.6	-0.2
TWGBT	Beinan	0.74	349	P	Pg	20 46 10.9	-0.1
TWGBT				*e*S	Sn	20 46 22.7	-0.1
TWG	Pinlang	0.75	349	P	Pg	20 46 10.7	-0.3
TWG				S	Sn	20 46 21.8	-1.1
MASBT	Mashibuluo	0.76	314	*i* P	Pn	20 46 11.9	-0.4
TSMG	Majia	0.82	319	*e*P	Pn	20 46 12.8	-0.2
LONT	Longtian	0.82	354	*e*P	Pb	20 46 12.1	-0.1
LONT				*i* S	Sn	20 46 24.6	-0.2
TWP	Hsiaoliuchiu	0.84	288	*e*P	Pn	20 46 14.1	+0.7
SSD	Sandimen	0.86	320	*e*P	Pg	20 46 12.8	-0.4
EDH	Donghe	0.89	4	*e*P	Pb	20 46 13.2	0.0
EDH				S	Sn	20 46 27.1	+0.8
ECS	Chishang	1.01	359	*e*P	Pb	20 46 15.1	-0.2
ECS				*e*S	Sn	20 46 30.2	+0.9
CHKT	Chengkung	1.02	7	*e*P	Pb	20 46 14.9	-0.6
CHKT				*e*S	Sg	20 46 29.5	-0.1
SCST	Cishan	1.05	320	*e*P	Pg	20 46 17.7	+1.0
TWM1	Shoushan	1.05	315	*e*P	Pg	20 46 18.9	+2.2
EHD	Haiduan	1.06	359	P	Pb	20 46 15.0	-1.2
EHD				*i* S	Sb	20 46 29.6	-0.1
FULB	Fuli	1.11	3	*e*P	Pb	20 46 16.8	-0.3
FULB				S	Sg	20 46 32.8	+0.2
CHKH	Chenggong	1.11	8	*e*P	Pn	20 46 16.5	-0.5
CHKH				*i* S	Sg	20 46 32.4	-0.2
ELDTW	Lidau	1.12	350	*e*P	Pb	20 46 16.6	-0.7
ELDTW				S	Sn	20 46 31.4	-0.9
SGST	Jiashian	1.16	329	*e*P	Pg	20 46 18.5	-0.4
STYH	Taoyuan	1.16	339	*e*P	Pg	20 46 18.1	-0.7
ECBN	Changbin	1.24	9	*e*P	Pn	20 46 18.1	-0.7
ECBN				*e*S	Sg	20 46 36.5	-0.2
TWF1	Yuli	1.26	3	*e*P	Pn	20 46 18.2	-1.0
YULB	Yu-li	1.30	3	P	Pb	20 46 20.3	-0.1
YULB	Yu-li	1.30	3	S	Sg	20 46 44.2	+5.6
YULB	Yu-li	1.30	3	*e*P	Pn	20 46 18.8	-0.9
SNST	Tainan City	1.32	329	*e*P	Pg	20 46 21.3	-0.5
TPUB	Ta-pu	1.33	335	P	Pg	20 46 21.8	-0.3
TPUB	Ta-pu	1.33	335	S	Sg	20 46 41.7	+2.2
TPUB	Ta-pu	1.33	335	*e*P	Pg	20 46 21.6	-0.5
TWK	Hsinying	1.36	330	*e*P	Pg	20 46 21.7	-1.0
CHN4	Tsaushan	1.39	335	*e*P	Pg	20 46 22.8	-0.4
HGSD	Ruisui	1.41	7	*e*P	Pb	20 46 21.7	-0.5
HGSD				*e*S	Sg	20 46 40.8	-1.3
WCKO	Fanlu	1.47	337	*e*P	Pb	20 46 23.4	+0.3
ALS	Alishan	1.47	345	*e*P	Pb	20 46 23.4	0.0
TSCK	Chigu Township	1.50	315	*i* P	Pn	20 46 22.3	0.0
CHY	Chiayi	1.59	332	*e*P	Pb	20 46 25.4	+0.2
WARBT	Fenglin Townsh	1.63	5	*e*P	Pn	20 46 23.8	-0.4
TEGC	Jichi Village	1.64	10	*e*P	Pn	20 46 23.1	-1.2
WHYT	Xinyi Township	1.64	348	P	Pb	20 46 26.4	+0.3
VWDT	VWDT	1.66	357	*e*P	Pb	20 46 25.5	-1.0
WSL	Shuilin Townsh	1.70	327	P	Pb	20 46 25.8	-1.3
WSL				S	Sb	20 46 48.2	0.0
SSLB	Suanglung	1.71	352	P	Pb	20 46 27.0	-0.4
SSLB	Suanglung	1.71	352	*i* P	Pb	20 46 27.2	-0.2
SSLB				*e*S	Sb	20 46 49.2	+0.6
SHUL	Shoufeng	1.72	10	*e*P	Pb	20 46 27.1	-0.4
ESL	Shilin	1.73	6	*e*P	Pn	20 46 25.2	-0.4
OWD	Renai	1.86	358	*e*P	Pb	20 46 28.6	-1.4
WDGT	Dungji	1.86	309	*e*P	Pn	20 46 26.5	-0.8
WUSB	Renai	1.90	357	*e*P	Pn	20 46 29.0	+1.0
WCS	Beigang Elemen	1.98	352	*e*P	Pb	20 46 31.4	-0.5
VCHM	Qimei	2.00	304	P	Pn	20 46 28.4	-0.9
PHUB	P'eng-hu	2.09	313	*e*P	Pn	20 46 29.7	-0.8
PHUB				*i* S	Sn	20 46 55.6	-0.4
NACB	Ninganchiao	2.11	9	P	Pn	20 46 31.8	+1.1
ETLH	Xiulin Townshi	2.12	6	*e*P	Pn	20 46 31.1	0.0
PNG	Penghu	2.14	314	*e*P	Pn	20 46 30.7	-0.4
WHP	Taichung City	2.20	353	*e*P	Pn	20 46 32.8	+0.7
EOS4	EOS4	2.26	26	*e*P	Pn	20 46 33.3	+0.8
NNSB	Datong	2.34	3	*e*P	Pb	20 46 36.0	-2.1
YHNB	Yeheng	2.58	3	P	Pn	20 46 38.8	+1.5
JYNG	Yonagunijimaku	2.83	33	*e*P	Pn	20 46 39.6	-1.1
YOJ	Yonaguni jima	2.88	34	P	Pn	20 46 41.5	+0.1
YOJ	Yonaguni jima	2.88	34	*e*P	Pn	20 46 41.4	+0.1
YOJ	Yonaguni jima	2.88	34	*e*P	Pn	20 46 41.7	+0.4
YOJ				*i* S	Sn	20 47 17.3	+1.8
HATJ	Hateruma jima	3.08	50	*e*P	Pn	20 46 43.6	-0.4
HATJ				*e*S	Sn	20 47 18.4	-2.0
IRIF	Iriomote-Funau	3.21	45	*e*P	Pn	20 46 45.7	-0.2
IRIF				*e*S	Sn	20 47 22.8	-0.9
VWUC	VWUC	3.32	331	*e*P	Pn	20 46 47.5	0.0
VWUC				S	Sn	20 47 27.0	+0.5
JKRS	Kuro-shima	3.34	49	*e*P	Pn	20 46 47.3	-0.3
JKRS				*e*S	Sn	20 47 25.2	-1.6
JIJ	Ishigaki jima	3.51	49	*e*P	Pn	20 46 49.7	-0.3
KNMB	Chin-men Tao	3.53	313	P	Pn	20 46 50.1	-0.2
KNMB				*e*S	Sn	20 47 30.4	-1.1
JISG	Ishigakijimahi	3.77	48	*e*P	Pn	20 46 53.0	-0.6
JISG				*e*S	Sn	20 47 36.6	-0.9
JTJ	Tarama	4.08	51	*e*P	Pn	20 46 57.5	-0.4

*CATAC **09** 20:47:22.5±0.7,14°N±3°×9°2W±°,h12^{km}±3^{km},M3.5/11,*
MLv3.5/11,Error ellipse: s-maj=8.1km s-min=4.5km
az=41.5,confirmed
*GCG **09** 20:47:24.3±0.9,14°.21N×91°.79W,h23^{km}±5^{km},MD3.7,*
ML3.2
*MEX **09** 20:47:26.0±0.9,14°.18N×92°.03W,h46^{km}±17^{km},MD3.9*
ISC 09 20:47:16.5±1.5,**13°.91N**±0°.06×**91°.95W**±0°.04,**h15**^{km}±9^{km},
n35,σ**2**^{s}**.08**/50,**Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	Retalhuleu	0.66	22	*e*P	Pn	20 47 34.5	+3.2
RTAL				*e*S	Sn	20 47 42.5	+1.1
STG8	El Palmar, Qui	0.79	47	*e*P	Pn	20 47 36.6	+3.3
STG8				*e*S	Sn	20 47 45.7	+0.7
STG8				IAML		20 47 46.5	
	comp=Z,4μm,0.1s						
SMCA	Catarina	0.94	353	*e*P	Pn	20 47 37.7	+2.5
SMCA				*e*S	Sb	20 47 47.7	+0.7
SMCA				IAML		20 47 50.4	
	comp=N,4μm,0.2s						
THIG		1.03	343	*e*P	Pn	20 47 39.5	+3.0
THIG				*e*S	Sg	20 47 49.4	-0.6
THIG		1.03	343	*e*P	Pn	20 47 39.2	+2.8
THIG				IAML		20 47 54.7	
	comp=Z,489nm,0.2s						
SOKI	Kika Raxquin	1.04	30	*e*P	Pn	20 47 38.7	+1.7
SOKI				*i* S	Sg	20 47 50.0	-0.5
SOKI				IAML		20 47 54.9	
	comp=E,891nm,0.3s						
ESSG	Sabana Grande	1.18	67	*e*P	Pn	20 47 41.8	+3.2
ESSG				*i* S	Sn	20 47 55.3	+0.9
ESSG				IAML		20 47 58.6	
	comp=Z,312nm,0.2s						
PATR	El Naranjo	1.23	347	*e*P	Pg	20 47 41.1	+1.0
PATR				*e*S	Sb	20 47 53.4	-1.9
PAVE	Pavencul	1.29	350	*e*P	Pg	20 47 42.1	+0.7
PAVE				*e*S	Sb	20 47 55.0	-2.1
FG8	Yepocapa, Chim	1.39	76	*i* P	Pn	20 47 40.9	-0.6
FG8				*e*S	Sb	20 47 53.4	-6.5
FG16	Alotenango, Sa	1.44	75	*e*P	Pn	20 47 42.0	-0.2
FG16				*e*S	Sb	20 47 55.4	-6.0
HUEH	Huehuetenango	1.46	17	*e*P	Pg	20 47 45.0	+0.3
HUEH				*e*S	Sn	20 48 00.9	-0.6
HUEH	Huehuetenango	1.46	17	P	Pg	20 47 45.4	+0.8
HUEH	Huehuetenango	1.46	17	S	Sn	20 48 01.2	-0.4
FAME	Alcaldia de Sa	1.88	92	P	Pg	20 47 53.5	+1.0
FAME	Alcaldia de Sa	1.88	92	S	Sg	20 48 16.2	-0.9
SLOZ	Alcaldia de Sa	2.11	87	S	Sb	20 48 22.1	+1.6
SLOZ	Alcaldia de Sa	2.11	87	P	Pg	20 47 56.8	-0.1

NUBE	**Las Nubes**	**2.11**	**90**	*e*P	**Pg**	**20 47 56.4**	**-0.6**
NUBE	**Las Nubes**	**2.11**	**90**	P	**Pg**	**20 47 56.5**	**-0.4**
NUBE	**Las Nubes**	**2.11**	**90**	S	**Sb**	**20 48 21.6**	**+1.0**
PCIG		**2.16**	**326**	*i* P	**Pb**	**20 47 55.2**	**-0.1**
PCIG				*e*S	**Sn**	**20 48 16.2**	**-2.4**
CEVE	**Cerro Verde**	**2.26**	**92**	P	**Pg**	**20 47 58.8**	**-1.1**
CEVE	**Cerro Verde**	**2.26**	**92**	S	**Sg**	**20 48 27.1**	**-2.1**
CCIG	**Comitan**	**2.36**	**356**	*i* P	**Pb**	**20 47 58.1**	**-0.8**
CCIG				*e*S	**Sn**	**20 48 22.8**	**-0.9**
CCIG	**Comitan**	**2.36**	**356**	*e*P	**Pb**	**20 47 58.0**	**-0.8**
CCIG				*e*S	**Sn**	**20 48 26.2**	**+2.5**
CCIG				IAML		20 48 36.5	
	comp=N,88nm,0.4s						
CCIG	**Comitan**	**2.36**	**356**	P	**Pb**	**20 47 58.3**	**-0.5**
JAYA	**Jayaque - finc**	**2.44**	**96**	*e*S	**Sb**	**20 48 30.6**	**+0.3**
JAYA	**Jayaque - finc**	**2.44**	**96**	P	**Pb**	**20 48 01.5**	**+1.2**
JAYA	**Jayaque - finc**	**2.44**	**96**	S	**Sb**	**20 48 31.0**	**+0.8**
PMON	**Piamonte**	**2.57**	**94**	P	**Pb**	**20 48 03.1**	**+0.8**
PMON	**Piamonte**	**2.57**	**94**	S	**Sb**	**20 48 34.7**	**+0.9**
TGIG		**3.06**	**338**	*e*P	**Pn**	**20 48 05.3**	**+0.8**
TGIG				*e*S	**Sn**	**20 48 38.0**	**-3.0**
TGIG		**3.06**	**338**	IAML		20 48 54.4	
	comp=E,31nm,0.4s						
TGIG				IAML		20 48 56.2	
	comp=N,26nm,0.3s						
NEUV	**Arroyo Zacate**	**5.29**	**316**	*e*P	**Pn**	**20 48 36.7**	**+1.6**
NEUV				*e*S	**Sn**	**20 49 33.3**	**-2.5**

IDC 09 21:11:36.3±7.3**, 5°.23S**×**148°.45E, h120^{km}**±62^{km}**, mb2.6**/2**, mbtmp3.2**/3**, Error ellipse: s-maj=126.7km s-min=55.5km az=113.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.34**	**197**	P	Pn	21 12 40.6	+0.2
	7.6nm,0.7s,baz=35,slow=12,SNR=1.5						
PMG				S	Sn	21 13 30.7	+0.5
	19nm,0.4s,baz=144,slow=16,SNR=9.3						
WRA	**Warramunga Arr**	**20.05**	**222**	P	P	21 16 00.7	+0.4
	0.3nm,0.4s,baz=46,slow=11,SNR=5.9						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**23.07**	**216**	P	P	21 16 31.4	-0.2
	0.2nm,0.4s,baz=52,slow=8.3,SNR=5.4						
	0.2nm,0.4s						
TORD	**Torodi Ar. Bea**	**146.28**	**286**	PKPbc	PKPdf	21 31 03.1	+0.4
	1.5nm,0.3s,baz=66,slow=1.4,SNR=1.8						

IDC 09 21:16:19.2±16.0**, 16°.98S**×**179°.25E, h429^{km}**±59^{km}**, mb3.1**/3**, mbtmp3.9**/3**, Error ellipse: s-maj=363.7km s-min=77.0km az=65.0, Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**1.37**	**236**	P	P	21 17 14.7	0.0
	18nm,0.4s,baz=56,slow=14,SNR=35						
STKA	**Stephens Creek**	**37.15**	**239**	P	P	21 22 51.9	+0.1
	1.2nm,0.5s,baz=78,slow=9.2,SNR=4.5						
	1.2nm,0.5s						
WRA	**Warramunga Arr**	**42.61**	**259**	P	P	21 23 35.6	-0.6
	0.2nm,0.4s,baz=95,slow=7.7,SNR=11						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**42.90**	**253**	P	P	21 23 38.6	+0.1
	3.2nm,0.6s,baz=88,slow=8.2,SNR=48						
	3.2nm,0.6s						

TAP 09 21:36:07.1, 23°.64N×**121°.69E, h31^{km}, ML1.7, D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.15**	**297**	P	Pb	21 36 12.7	-0.3
TEGC				S	Sb	21 36 17.4	+0.3
SHUL	**Shoufeng**	**0.19**	**322**	P	Pb	21 36 13.1	-0.3
SHUL				*e*S	Sn	21 36 18.2	+0.2
EGFH	**Guangfu**	**0.24**	**277**	P	Pb	21 36 13.7	-0.2
EGFH				S	Sn	21 36 19.0	-0.3
TEYL	**Yanliau Villag**	**0.24**	**340**	*i* P	Pb	21 36 14.2	+0.2
TEYL				*e*S	Sn	21 36 20.0	+0.7
HGSD	**Ruisui**	**0.28**	**239**	*e*P	Pn	21 36 16.9	+1.8
HGSD				*e*S	Sn	21 36 23.2	+2.9
WARBT	**Fenglin Townsh**	**0.29**	**286**	*i* P	Pb	21 36 14.1	-0.5
WARBT				*i* S	Sb	21 36 19.3	-0.3
ESL	**Shilin**	**0.29**	**307**	P	Pb	21 36 13.8	-0.8
ESL				S	Sb	21 36 19.2	-0.5
HWA	**Hwalien**	**0.35**	**347**	*i* P	Pb	21 36 15.0	-0.3
HWA				S	Sb	21 36 20.9	0.0
EHYH	**Wanrong**	**0.35**	**246**	*i* P	Pb	21 36 15.0	-0.3
EHYH				S	Sb	21 36 20.8	-0.1
EHY	**Hungye**	**0.36**	**249**	*e*P	Pb	21 36 15.0	-0.5
EHY				*e*S	Sb	21 36 21.0	-0.3
ETM	**Tongmen**	**0.37**	**331**	*e*P	Pb	21 36 15.1	-0.7
ETM				S	Sb	21 36 21.5	-0.1
ECBN	**Changbin**	**0.39**	**214**	P	Pb	21 36 15.9	0.0
ECBN				S	Sb	21 36 22.0	+0.1
YULB	**Yu-li**	**0.43**	**236**	*i* P	Pb	21 36 15.9	-0.7
YULB				*i* S	Sb	21 36 22.9	-0.3
TWD	**Chiawan**	**0.45**	**349**	P	Pb	21 36 16.9	+0.1
TWD				S	Sb	21 36 23.4	-0.1
TWF1	**Yuli**	**0.46**	**232**	P	Pb	21 36 16.2	-0.7
TWF1				S	Sb	21 36 24.2	+0.4
VWDT	**VWDT**	**0.52**	**283**	P	Pb	21 36 17.9	+0.1
VWDT				S	Sn	21 36 25.8	-0.2
CHKH	**Chenggong**	**0.52**	**211**	P	Pn	21 36 18.1	-0.2
CHKH				S	Sb	21 36 25.2	-0.1
NACB	**Ninganchiao**	**0.54**	**351**	*e*P	Pb	21 36 17.5	-0.8
NACB				*e*S	Sb	21 36 25.0	-0.9
OWD	**Renai**	**0.57**	**304**	P	Pb	21 36 18.4	-0.4
OWD				*i* S	Sb	21 36 26.3	-0.4
FULB	**Fuli**	**0.57**	**220**	P	Pb	21 36 18.6	-0.1
FULB				*e*S	Sn	21 36 27.7	+0.4
ETLH	**Xiulin Townshi**	**0.60**	**342**	P	Pb	21 36 18.7	-0.5
WUSB	**Renai**	**0.63**	**304**	*e*P	Pb	21 36 19.6	-0.2
WUSB				*e*S	Sb	21 36 28.4	-0.2
WHF	**Hehuan Shan**	**0.64**	**323**	P	Pb	21 36 19.6	-0.5
WHF				S	Sb	21 36 28.7	-0.3
EHD	**Haiduan**	**0.66**	**222**	P	Pb	21 36 19.8	-0.4
EHD				*e*S	Sb	21 36 27.8	-1.3
SSLB	**Suanglung**	**0.69**	**283**	P	Pn	21 36 19.9	-0.9
SSLB				S	Sb	21 36 29.9	-0.2
FUSS	**Fushou**	**0.73**	**326**	P	Pn	21 36 21.1	-0.4
FUSS				S	Sb	21 36 31.4	0.0
WHYT	**Xinyi Township**	**0.77**	**274**	*e*P	Pb	21 36 22.0	-0.1
WHYT				S	Sn	21 36 32.5	+0.1
ALS	**Alishan**	**0.82**	**261**	P	Pn	21 36 22.6	-0.2
ALS				*e*S	Sn	21 36 34.5	+0.5
NNSB	**Datong**	**0.83**	**340**	P	Pn	21 36 22.6	-0.2
NNSB				S	Sn	21 36 33.8	-0.4
NNSH	**Datong**	**0.83**	**340**	P	Pn	21 36 22.1	-0.8
NNSH				S	Sn	21 36 33.5	-0.6
WJS	**Zhushan**	**0.90**	**282**	P	Pn	21 36 23.3	-0.3
WJS				S	Sn	21 36 35.6	+0.1
LATG	**Datong**	**0.91**	**351**	P	Pn	21 36 23.3	-0.4
LATG				S	Sn	21 36 35.6	-0.2
WHP	**Taichung City**	**0.93**	**313**	P	Pn	21 36 23.5	-0.6
WHP				S	Sn	21 36 36.4	-0.1
CHN4	**Tsaushan**	**1.05**	**254**	P	Pn	21 36 25.8	+0.2
WTP	**Ta-pu**	**1.06**	**249**	*e*P	Pb	21 36 26.5	-0.4
YHNB	**Yeheng**	**1.07**	**344**	P	Pn	21 36 25.9	-0.1
YHNB				S	Sn	21 36 39.6	-0.2
SGST	**Jiashian**	**1.16**	**242**	P	Pn	21 36 26.4	-0.7
CHN1	**Nanshi**	**1.16**	**247**	P	Pn	21 36 27.6	+0.4

RSNC 09 21:51:06.8±0.0**, 7°N**±1°×**7°3W**±°**, h113^{km}**±2^{km}**, M2.4, mb3.9, ML2.1, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.28**	**77**	P	Pn	21 51 22.5	-0.6
BARC				S	Sn	21 51 34.8	-0.6
VMM10	**El Carmen**	**0.35**	**312**	P	Pn	21 51 21.6	-1.6
VMM10				S	Sn	21 51 33.9	-1.6
BRJC	**Barrancabermej**	**0.52**	**327**	P	Pn	21 51 22.5	-1.7
BRJC				S	Sn	21 51 36.4	-0.8
VMM09	**Lebrija**	**0.62**	**16**	P	Pn	21 51 24.0	-1.0
VMM09				S	Sn	21 51 38.1	-0.5
RUSC	**La Rusia**	**0.74**	**149**	P	Pn	21 51 25.3	-1.0
RUSC				S	Sn	21 51 40.6	-0.4
VMM07	**Puerto Wilches**	**0.91**	**335**	P	Pn	21 51 26.2	-1.2
VMM07				S	Sn	21 51 43.5	+0.6
PTBC	**PUERTO BERRIO,**	**0.99**	**271**	P	Pn	21 51 25.3	-2.8
PTBC				S	Sn	21 51 40.1	-4.2
SPBC	**San Pablo de B**	**1.06**	**215**	P	Pn	21 51 27.5	-1.5
SPBC				S	Sn	21 51 43.5	-2.3
EZNC	**La Esperanza**	**1.10**	**7**	P	Pn	21 51 28.1	-1.2
EZNC				S	Sn	21 51 45.5	-0.9
PAMC	**Pamplona, Colo**	**1.10**	**43**	P	Pn	21 51 29.1	-0.7
PAMC				S	Sn	21 51 46.8	-0.4
ZARC	**Zaragoza, Cauc**	**1.69**	**305**	P	Pn	21 51 34.7	-1.3
ZARC				S	Sn	21 51 57.7	-0.6
NORC	**Norcasia**	**1.70**	**236**	P	Pn	21 51 34.1	-2.2
NORC				S	Sn	21 51 55.2	-3.5
ROSC	**El Rosal**	**1.88**	**207**	P	Pn	21 51 38.7	-0.2
ROSC				S	Sn	21 52 03.5	+0.2
CHIC	**Chingaza**	**1.91**	**188**	P	Pn	21 51 38.3	-0.9
CHIC				S	Sn	21 52 03.4	-0.4
AGCC	**Aguachica**	**1.97**	**356**	P	Pn	21 51 39.4	-0.3
CVER	**Cruz Verde, Cu**	**2.09**	**197**	P	Pn	21 51 41.5	0.0
CVER				S	Sn	21 52 08.6	+0.6
GUY2C	**Guyana, Caldas**	**2.30**	**236**	P	Pn	21 51 43.1	-1.1
GUY2C				S	Sn	21 52 11.2	-1.5
VILC	**Villavicencio,**	**2.41**	**186**	P	Pn	21 51 43.9	-1.5
VILC				S	Sn	21 52 14.0	-0.9
CBOC	**Ciudad Bolivar**	**2.62**	**256**	P	Pn	21 51 48.0	-0.1
PTGC	**Puerto Gaitan,**	**2.67**	**150**	P	Pn	21 51 46.9	-1.6
PTGC				S	Sn	21 52 18.1	-2.5
ANIL	**Santa Ana**	**2.80**	**224**	P	Pn	21 51 50.6	0.0
ANIL				S	Sn	21 52 23.2	-1.0
PRAC	**Prado**	**3.14**	**207**	P	Pn	21 51 53.1	-1.7
PRAC				S	Sn	21 52 30.8	-1.0
ORTC	**Ortega, Tolima**	**3.15**	**214**	P	Pn	21 51 54.3	-0.7
ORTC				S	Sn	21 52 31.6	-0.6
SJCC	**San Jacinto, C**	**3.75**	**333**	P	Pn	21 51 59.1	-3.9
SJCC				S	Sn	21 52 42.2	-4.3
CRJC	**Cerrejon, Guaj**	**4.50**	**7**	P	Pn	21 52 10.5	-2.5
CRJC				S	Sn	21 53 02.9	-1.5
URIC	**Uribia, Colomb**	**5.34**	**16**	P	Pn	21 52 22.3	-2.0

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*SJA **09** 22:00:49.9±0.8, 27°.30S×71°.45W, h16^{km}±3^{km}, ML3.9, MW3.9*

*IDC **09** 22:00:50.6±0.9, 27°.26S×71°.14W, h0^{km}, mb4.0/5, mbtmp3.9/8, ML3.5/3, MS3.0/4, Error ellipse: s-maj=36.8km s-min=19.9km az=96.0*

*NEIC **09** 22:00:51.6±1.5, 27°.30S±0°.03×71°.32W±0°.04, h10^{km}±1^{km}, mb4.2/4, ML4.1(GUC), Error ellipse: s-maj=7.4km s-min=4.7km az=126.0*

*GUC **09** 22:00:53.8±0.9, 27°.34S×71°.26W, h27^{km}±15^{km}, ML4.1*

ISC 09 22:00:50.4±0.9**, 27°.30S**±0°.02×**71°.20W**±0°.04**, h2^{km}**±6^{km}**, n101,** σ**1^{s}74**/139**, mb4.2**/8**, 4C-7D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC06	**Mina Casimiro**	**0.75**	**94**		**Pn**	**22 01 08.6**	**+0.6**
AC06				Sg	**Sn**	**22 01 18.8**	**-1.2**
AC06	**Mina Casimiro**	**0.75**	**94**	⇓*i*P	**Pn**	**22 01 08.6**	**+0.6**
AC06				*i* S	**Sn**	**22 01 18.8**	**-1.2**
AC06				IAML		22 01 19.3	
	comp=N,23µm,0.2s						
GO03	**Copiapo**	**0.90**	**109**		**Pn**	**22 01 10.8**	**+0.7**
GO03				Sg	**Sn**	**22 01 22.6**	**-1.1**
GO03	**Copiapo**	**0.90**	**109**	⇓*i*P	**Pn**	**22 01 10.8**	**+0.7**
GO03				*e*S	**Sn**	**22 01 22.9**	**-0.9**
GO03				IAML		22 01 25.0	
	comp=E,7µm,0.3s						
GO03	**Copiapo**	**0.90**	**109**	*e*P	**Pn**	**22 01 10.8**	**+0.7**
GO03				*e*S	**Sn**	**22 01 23.5**	**-0.3**
AC04	**Llanos de Chal**	**0.91**	**173**		**Pb**	**22 01 09.3**	**+0.5**
AC04				Sg	**Sg**	**22 01 20.5**	**+1.0**
AC04	**Llanos de Chal**	**0.91**	**173**	⇓*i*P	**Pb**	**22 01 09.4**	**+0.6**
AC04				*e*S	**Sg**	**22 01 20.6**	**+1.0**
AC04	**Llanos de Chal**	**0.91**	**173**	*e*P	**Pg**	**22 01 08.7**	**+0.9**
AC04				*e*P	**Pb**	**22 01 09.3**	**+0.5**
AC04				*e*S	**Sg**	**22 01 20.8**	**+1.3**
AC04				IAML		22 01 21.6	
	comp=Z,2µm,0.3s						
AC01	**Pan de Azucar**	**1.27**	**25**		**Pn**	**22 01 16.4**	**+1.3**
AC01					**Sn**	**22 01 33.1**	**+0.4**
AC01	**Pan de Azucar**	**1.27**	**25**	⇑*e*P	**Pn**	**22 01 16.4**	**+1.3**
AC01				*i* S	**Sn**	**22 01 33.7**	**+1.0**
AC01	**Pan de Azucar**	**1.27**	**25**	*e*P	**Pn**	**22 01 15.7**	**+0.6**
AC01				*e*S	**Sn**	**22 01 36.6**	**+3.9**
AC01				IAML		22 01 39.4	
	comp=Z,900nm,0.5s						
AC05	**El Transito**	**1.73**	**152**		**Pb**	**22 01 23.3**	**+0.3**
AC05	**El Transito**	**1.73**	**152**	⇑*i*P	**Pb**	**22 01 23.4**	**+0.5**
AC05				*i* S	**Sg**	**22 01 45.8**	**-0.3**
AC05				IAML		22 01 50.3	
	comp=E,2µm,0.6s						
AC05	**El Transito**	**1.73**	**152**	*e*P	**Pb**	**22 01 23.5**	**+0.5**
AC05				*e*S	**Sg**	**22 01 48.1**	**+2.0**
AC05				IAML		22 01 51.4	
	comp=Z,963nm,0.7s						
LCO	**Las Campanas**	**1.76**	**166**		**Pn**	**22 01 23.1**	**+1.0**
LCO	**Las Campanas**	**1.76**	**166**	⇑*i*P	**Pn**	**22 01 23.2**	**+1.0**
LCO				*i* S	**Sn**	**22 01 44.1**	**-1.1**
LCO	**Las Campanas**	**1.76**	**166**	*e*P	**Pn**	**22 01 23.3**	**+1.2**
LCO				*e*P	**Pb**	**22 01 23.5**	**0.0**
LCO				*e*S	**Sg**	**22 01 47.4**	**+0.5**
LCO				IAML		22 01 48.5	
	comp=Z,2µm,0.4s						
AC02	**Maricunga**	**1.90**	**76**		**Pg**	**22 01 27.0**	**+0.1**
AC02	**Maricunga**	**1.90**	**76**	⇑*i*P	**Pg**	**22 01 27.9**	**+1.0**
AC02				*i* S	**Sg**	**22 01 52.8**	**+1.3**
AC02				IAML		22 01 55.3	
	comp=N,4µm,0.3s						
AC02	**Maricunga**	**1.90**	**76**	*e*P	**Pg**	**22 01 27.7**	**+0.9**
AC02				*e*S	**Sg**	**22 01 53.7**	**+2.2**
AC02				IAML		22 01 55.1	
	comp=Z,3µm,0.3s						
GO02	**Mina Guanaco**	**2.57**	**34**		**Pn**	**22 01 35.3**	**+2.0**
GO02	**Mina Guanaco**	**2.57**	**34**	*e*P	**Pb**	**22 01 35.7**	**-1.8**
GO02				*i* S	**Sb**	**22 02 07.1**	**-2.5**
GO02	**Mina Guanaco**	**2.57**	**34**	*e*P	**Pn**	**22 01 35.1**	**+1.8**
GO02				*e*S	**Sb**	**22 02 09.8**	**+0.1**
CO05	**La Serena**	**2.61**	**181**		**Pn**	**22 01 33.8**	**+0.3**
PB14	**IPOC Station P**	**2.76**	**15**		**Pn**	**22 01 36.5**	**+0.6**
PB14	**IPOC Station P**	**2.76**	**15**	*e*P	**Pn**	**22 01 36.8**	**+0.8**
PB14	**IPOC Station P**	**2.76**	**15**	*e*P	**Pn**	**22 01 36.7**	**+0.8**
PB14				*e*S	**Sn**	**22 02 09.3**	**-0.7**
PB14				IAML		22 02 29.4	
	comp=Z,217nm,0.6s						
CO01	**Juntas del Tor**	**2.84**	**160**		**Pn**	**22 01 38.6**	**+1.7**
CO01	**Juntas del Tor**	**2.84**	**160**	*e*P	**Pn**	**22 01 39.3**	**+2.4**
CO01				*i* S	**Sn**	**22 02 13.0**	**+1.3**
CO01				IAML		22 02 25.4	
	comp=N,272nm,0.3s						
CO01	**Juntas del Tor**	**2.84**	**160**	*e*P	**Pn**	**22 01 38.8**	**+1.9**
CO01				*e*S	**Sn**	**22 02 09.3**	**-2.4**
CO01				*e*S	**Sb**	**22 02 13.8**	**-3.3**
CO01				IAML		22 02 24.8	
	comp=Z,337nm,0.6s						
GO04	**Tololo Observa**	**2.88**	**173**		**Pn**	**22 01 38.2**	**+0.7**
GO04	**Tololo Observa**	**2.88**	**173**	*e*P	**Pn**	**22 01 38.4**	**+0.9**
GO04				*i* S	**Sn**	**22 02 11.8**	**-1.1**
GO04	**Tololo Observa**	**2.88**	**173**	*e*P	Pn	22 01 27.2	-10
GO04				*e*S	**Sn**	**22 02 14.8**	**+2.0**
VCA	**Vinchina**	**3.01**	**119**	*e*P	**Pb**	**22 01 44.9**	**+0.2**
VCA				*i* S	**Sg**	**22 02 24.7**	**-2.3**
VCA				IAML		22 02 32.1	
	comp=N,610nm,0.3s						
VCA	**Vinchina**	**3.01**	**119**	*e*P	**Pb**	**22 01 45.0**	**+0.2**
VCA				*e*S	**Sg**	**22 02 24.0**	**-3.0**
VCA				IAML		22 02 32.2	
	comp=Z,348nm,1.0s						
AGUA	**GUANDACOL**	**3.23**	**133**	*e*P	**Pb**	**22 01 47.8**	**-0.7**
AGUA				*e*S	**Sb**	**22 02 30.3**	**+2.1**
AGUA				IAML		22 02 37.6	
	comp=Z,234nm,0.7s						
CO06	**Fray Jorge**	**3.38**	**186**		**Pn**	**22 01 43.4**	**-0.8**
CO06	**Fray Jorge**	**3.38**	**186**	*e*P	**Pn**	**22 01 43.4**	**-0.8**
CO06				IAML		22 02 46.7	
	comp=E,183nm,0.5s						
CO03	**El Pedregal**	**3.55**	**173**		**Pn**	**22 01 47.5**	**+0.8**
CO03	**El Pedregal**	**3.55**	**173**	*e*P	**Pn**	**22 01 47.7**	**+1.1**
CO03				*i* S	**Sn**	**22 02 28.9**	**-0.3**
CO03				IAML		22 02 48.2	
	comp=E,441nm,0.4s						
CO03	**El Pedregal**	**3.55**	**173**	*e*P	**Pn**	**22 01 47.9**	**+1.3**
CO03				*e*S	**Sn**	**22 02 32.3**	**+3.1**
CO03				IAML		22 02 47.1	
	comp=Z,215nm,0.5s						
ACCO	**Cerro Coronel**	**3.77**	**151**	*e*P	**Pn**	**22 01 53.8**	**+4.0**
ACCO				*e*S	**Sg**	**22 02 53.0**	**+1.4**
PB10	**IPOC Station P**	**3.82**	**9**	Pn	**Pn**	**22 01 50.2**	**0.0**
PB10	**IPOC Station P**	**3.82**	**9**	*e*P	**Pn**	**22 01 50.1**	**0.0**
PB10	**IPOC Station P**	**3.82**	**9**	*e*P	**Pn**	**22 01 51.0**	**+0.8**
PB10				*e*S	**Sn**	**22 02 36.1**	**+0.5**
CO02	**Combarbal**	**3.89**	**178**		**Pn**	**22 01 51.6**	**+0.3**
CO02	**Combarbal**	**3.89**	**178**	*e*P	**Pn**	**22 01 51.7**	**+0.5**
CO02	**Combarbal**	**3.89**	**178**	*e*P	**Pn**	**22 01 51.9**	**+0.6**
CO02				*e*S	**Sn**	**22 02 32.3**	**-5.3**
CO02				*e*S	**Sb**	**22 02 44.8**	**-2.5**
CO02				IAML		22 02 58.0	
	comp=Z,423nm,0.9s						
DOCA	**Reserva Natura**	**4.08**	**154**	*e*P	**Pn**	**22 01 56.9**	**+2.9**
DOCA				*e*S	**Sn**	**22 02 44.8**	**+2.3**
DOCA				*e*S	**Sb**	**22 02 45.3**	**-7.7**
DOCA				IAML		22 03 05.0	
	comp=Z,245nm,1.4s						
ACLC	**CERRO LA CRUZ**	**4.30**	**120**	*e*P	**Pn**	**22 02 01.4**	**+4.4**
ACLC				*e*S	**Sg**	**22 03 05.8**	**-2.7**
ACLC				IAML		22 03 14.0	
	comp=Z,65nm,1.2s						
PB05	**IPOC Station P**	**4.52**	**12**		**Pn**	**22 01 60.0**	**0.0**
PB05	**IPOC Station P**	**4.52**	**12**	*e*P	**Pn**	**22 02 00.0**	**0.0**
PB05				*e*S	**Sn**	**22 02 49.9**	**-3.3**
PB05				IAML		22 03 30.5	
	comp=Z,69nm,0.9s						
ZON	**Zonda**	**4.76**	**153**		**Pn**	**22 02 04.1**	**+0.8**
PB06	**IPOC Station P**	**4.81**	**18**		**Pn**	**22 02 04.6**	**+0.6**
PB06	**IPOC Station P**	**4.81**	**18**	*e*P	**Pn**	**22 02 05.0**	**+1.1**
PB06				*e*S	**Sn**	**22 02 59.0**	**-1.3**
PB06				IAML		22 03 40.1	
	comp=Z,141nm,0.5s						
CYA	**Choya**	**4.91**	**105**	*e*P	Pn	22 02 10.3	+5.1
CYA	**Choya**	**4.91**	**105**	*e*P	**Pn**	**22 02 05.8**	**+0.6**
CYA				*e*P	Pb	22 02 09.9	-7.2
CYA				*e*S	**Sb**	**22 03 10.4**	**-6.2**
CYA				IAML		22 03 13.8	
	comp=Z,36nm,0.9s						
CFA	**Coronel Fontan**	**5.00**	**150**	Pn	**Pn**	**22 02 09.2**	**+2.7**
	comp=Z,3.2nm,0.3s,baz=331,slow=10,SNR=56						
CFA				Sn	**Sn**	**22 03 06.8**	**+1.8**
	comp=Z,2.4nm,0.3s,baz=24,slow=9.4,SNR=3.9						
CFA				Lg	Lg	22 03 27.8	
	comp=Z,5.6nm,0.3s,baz=213,slow=11,SNR=7.9						
	comp=Z,6.5nm,0.3s						
CFA	**Coronel Fontan**	**5.00**	**150**	*e*P	**Pn**	**22 02 09.9**	**+3.4**
CFA				*e*S	**Sn**	**22 03 09.3**	**+4.4**
PB03	**IPOC Station P**	**5.39**	**14**		**Pn**	**22 02 12.2**	**+0.2**
VA03	**San Esteban**	**5.47**	**174**		**Pn**	**22 02 14.2**	**+1.2**
PB09	**IPOC Station P**	**5.76**	**18**		**Pn**	**22 02 18.3**	**+1.2**
PEL	**Peldehue**	**5.84**	**176**		**Pn**	**22 02 18.8**	**+0.8**
MT02	**Curacav**	**5.94**	**180**		**Pn**	**22 02 18.9**	**-0.4**
MT08	**Bocatoma Ro**	**6.21**	**171**		**Pn**	**22 02 24.0**	**+0.8**
VA05	**Santo Domingo**	**6.34**	**183**	Pn	**Pn**	**22 02 24.6**	**-0.3**
MT09	**Talagante**	**6.46**	**178**		**Pn**	**22 02 26.4**	**-0.2**
MT13	**San Alfonso**	**6.47**	**173**		**Pn**	**22 02 26.1**	**-0.6**
MT01	**Popeta**	**6.54**	**180**		**Pn**	**22 02 27.2**	**-0.4**
LMEL	**Las Melosas**	**6.58**	**173**		**Pn**	**22 02 29.3**	**+1.0**
BO01	**Tunca**	**7.07**	**179**		**Pn**	**22 02 34.5**	**-0.3**
PB08	**IPOC Station P**	**7.37**	**15**	Pn	**Pn**	**22 02 40.6**	**+1.3**
BO02	**Sierra Bellavi**	**7.47**	**177**		**Pn**	**22 02 40.0**	**-0.5**
PB11	**IPOC Station P**	**7.64**	**11**	Pn	**Pn**	**22 02 42.1**	**-0.7**
H03N1	**Juan Fernandez**	**9.04**	**226**	T	T	22 12 33.8	
	baz=53,slow=71,SNR=991						
H03N2	**Juan Fernandez**	**9.06**	**226**	T	T	22 12 34.4	
	baz=53,slow=71,SNR=726						
H03N3	**Juan Fernandez**	**9.06**	**226**	T	T	22 12 32.9	
	baz=53,slow=71,SNR=1774						
LPAZ	**La Paz**	**11.32**	**15**	Pn	**Pn**	**22 03 33.5**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=298,slow=4.9,SNR=1.8						
	comp=Z,0.7nm,0.5s						
TRQA	**Tornquist**	**13.23**	**146**	Pn	**Pn**	**22 03 59.9**	**+0.6**
PLCA	**Paso Flores**	**13.41**	**178**	LR	LR	22 09 45.3	
	comp=Z,93nm,19.3s,baz=328,slow=40						
SIV	**San Ignacio**	**14.66**	**42**	Pn	**Pn**	**22 04 19.3**	**+0.3**
	baz=226,slow=11,SNR=1.7						
SIV				LR	LR	22 10 54.4	
	comp=Z,38nm,19.4s,baz=210,slow=41						
	comp=Z,0.3nm,0.4s						
ITAB	**Concordia**	**16.95**	**94**		**P**	**22 04 50.4**	**-0.4**
VAO	**Valinhos**	**22.34**	**84**	P	**P**	**22 05 49.3**	**-0.4**
VAO				IAmb	IAmb	22 05 57.5	
	comp=Z,10nm,1.2s						
BDFB	**Brasilia**	**24.45**	**66**	P	**P**	**22 06 09.8**	**-1.0**
	comp=Z,1.4nm,0.5s,baz=264,slow=7.7,SNR=4.8						
BDFB				LR	LR	22 17 49.6	
	comp=Z,22nm,18.6s,baz=274,slow=42						
	comp=Z,1.4nm,0.5s						
SDV	**Santo Domingo**	**35.98**	**1**	LR	LR	22 24 34.3	
	comp=Z,31nm,18.4s,baz=56,slow=40						
VNA3	**Neumayer Olymp**	**55.32**	**160**	⇓P	**P**	**22 10 25.8**	**+0.7**
	comp=Z,2.4nm,0.6s						
VNA2	**Neumayer--Watz**	**55.94**	**159**	⇓P	**P**	**22 10 28.5**	**-1.1**
	comp=Z,2.8nm,0.6s,baz=290,slow=7.7						
SNAA	**Sanae**	**57.54**	**160**	⇓P	**P**	**22 10 41.2**	**+0.3**
	comp=Z,28nm,0.5s						
SNAA	**Sanae**	**57.54**	**160**	P	**P**	**22 10 41.2**	**+0.3**
SNAA				IAmb	IAmb	22 10 42.0	
	comp=Z,1.6nm,0.7s						
SNAA	**Sanae**	**57.54**	**160**	P	**P**	**22 10 41.3**	**+0.3**
	comp=Z,1.2nm,0.5s,baz=284,slow=7.9,SNR=25						
	comp=Z,1.2nm,0.5s						
TROLL	**Troll, Antarti**	**59.26**	**160**	⇓P	**P**	**22 10 53.3**	**+0.3**
	comp=Z,33nm,0.2s						
QSPA	**South Pole Qui**	**62.91**	**180**	P	**P**	**22 11 18.7**	**+0.8**
QSPA	**South Pole Qui**	**62.91**	**180**	P	**P**	**22 11 19.0**	**+1.1**
	comp=Z,0.6nm,0.5s,baz=292,slow=1.7,SNR=7.8						
	comp=Z,0.6nm,0.5s						
DBIC	**Dimbokro**	**72.42**	**73**	P	**P**	**22 12 19.4**	**+0.8**
	comp=Z,1.2nm,0.6s,baz=172,slow=7.1,SNR=0.8						
	comp=Z,1.2nm,0.6s						
BOSA	**Boshof**	**82.56**	**118**	P	**P**	**22 13 15.4**	**0.0**
	comp=Z,1.8nm,0.9s,baz=264,slow=7.3,SNR=4.1						
	comp=Z,1.8nm,0.9s						
ASAR	**Alice Springs**	**123.83**	**208**	PKP	**PKPdf**	**22 19 50.3**	**-0.4**
	comp=Z,0.3nm,0.8s,baz=174,slow=0.9,SNR=1.9						
WRA	**Warramunga Arr**	**126.92**	**210**	PKP	**PKPdf**	**22 19 56.7**	**+0.1**
	comp=Z,0.4nm,1.0s,baz=160,slow=1.6,SNR=6.8						
KURBB	**Kurchatov Arra**	**147.27**	**36**	PKPbc	**PKPdf**	**22 20 34.5**	**+1.7**
	comp=Z,1.4nm,0.6s,baz=299,slow=3.0,SNR=13						
ZALV	**Zalesovo Beam**	**148.06**	**27**	PKPbc	**PKPbc**	**22 20 38.1**	**+1.0**
	comp=Z,4.5nm,0.6s,baz=309,slow=4.9,SNR=15						
MKAR	**Makanchi Array**	**151.47**	**40**	PKPbc	**PKPbc**	**22 20 46.5**	**+0.7**
	comp=Z,1.6nm,0.7s,baz=332,slow=2.0,SNR=17						
MKAR				PKPab	**sPKPab**	**22 20 53.3**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=295,slow=1.6,SNR=4.3						
PZH	**PanZhiHua**	**173.65**	**96**	PKP	**PKPdf**	**22 21 01.3**	**-0.8**

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*DJA **09** 22:03:14.5±0.3, 3°S±2°×12°0E±°, h10^{km}, M3.7/11, MLv3.7/11*

*IDC **09** 22:03:14.5±1.7, 2°.92S×119°.71E, h0^{km}, mb3.2/3, mbtmp3.3/4, ML3.5/1, MS3.0/1, Error ellipse: s-maj=67.0km s-min=23.9km az=72.0*

ISC 09 22:03:13.9±2.0**, 2°.86S**±0°.04×**119°.47E**±0°.09**, h4^{km}**±13^{km}**, n13,** σ**1^{s}00**/18**, mb3.2**/3**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTSI	**Tana Toraja**	**0.39**	**117**	P	**Pg**	**22 03 21.8**	**+0.3**
TTSI				S	**Sg**	**22 03 27.4**	**+0.7**
SPSI	**Sidrap Palu**	**1.14**	**165**	P	**Pb**	**22 03 34.6**	**-1.5**
SPSI				S	**Sn**	**22 03 52.0**	**-0.6**
BNSI	**Bone**	**1.65**	**157**	P	**Pn**	**22 03 43.8**	**0.0**
BNSI				S	**Sb**	**22 04 05.6**	**-0.6**
PCI	**Palu**	**1.98**	**11**	P	**Pn**	**22 03 47.8**	**-0.4**
PCI				S	**Sn**	**22 04 12.9**	**-0.6**
KAPI	**Kappang**	**2.16**	**173**	Pn	**Pn**	**22 03 51.3**	**+0.6**
	16nm,0.3s,baz=347,slow=11,SNR=22						
KAPI				Sn	**Sn**	**22 04 17.4**	**-0.4**
	15nm,0.3s,baz=102,slow=22,SNR=7.3						
	55nm,0.4s						
MPSI	**Mapaga**	**3.21**	**8**	P	**Pn**	**22 04 05.9**	**+0.8**
SMKI	**Samarinda**	**3.30**	**317**	P	**Pn**	**22 04 05.8**	**-0.6**
BSSI	**Bau Bau, Buton**	**3.41**	**163**	P	**Pn**	**22 04 08.9**	**+0.9**
LUWI	**Luwuk**	**3.76**	**61**	P	**Pn**	**22 04 13.0**	**+0.2**
MRSI	**Marisa**	**4.14**	**37**	P	**Pn**	**22 04 17.1**	**-0.8**
WRA	**Warramunga Arr**	**22.34**	**141**	P	**P**	**22 08 12.9**	**-0.1**
	1.1nm,1.1s,baz=318,slow=10,SNR=3.2						
	1.1nm,1.1s						
ASAR	**Alice Springs**	**24.95**	**147**	P	**P**	**22 08 37.4**	**-1.2**
	0.6nm,1.0s,baz=328,slow=10,SNR=4.5						

	0.6nm,1.0s						
MKAR	Makanchi Array	59.29	331	P	P	22 13 19.2	+2.3
	0.2nm,0.5s,baz=130,slow=8.1,SNR=2.4						
	0.2nm,0.5s						

*DJA **09** 22:08:45.1±1.1,5°N±6°×12°6E±°,h12^{km}±7^{km},M4.1/6,mb4.3/2,MLv4.0/6*

*IDC **09** 22:09:03.1±2.4,4°.67N×125°.25E,h197^{km}±31^{km},mb3.2/7,mbtmp3.7/8,MS2.7/1,Error ellipse: s-maj=88.5km s-min=13.4km az=69.0*

ISC 09 22:08:41.3±1.0,**5°.4N**±0°.1×**126°.5E**±0°.1,**h10**^{km}**,n12,**σ**1^{s}.26**/12,**mb3.7**/7,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.92	210	P	Pn	22 09 14.5	+0.4
SGSI				S	Sn	22 09 37.1	-1.1
DAV	Davao City (W)	1.93	332	P	Pg	22 09 45.8	+27
	56nm,0.3s,baz=95,slow=21,SNR=3.7						
DAV				S	Sg	22 10 19.9	+37
	204nm,0.4s,baz=7.0,slow=8.0,SNR=4.7						
TNTI	Ternate	4.64	169	P	Pn	22 09 52.3	+0.8
MRSI	Marisa	6.64	223	P	Pn	22 10 20.7	+1.6
	0.1nm23nm,0.6s						
GUMO	Guam	19.87	64	LR	LR	22 21 57.8	
	comp=Z,18nm,19.1s,baz=112,slow=36						
FITZ	Fitzroy Crossi	23.32	182	P	P	22 13 47.7	-2.0
	1.3nm,0.5s,baz=350,slow=11,SNR=1.9						
	1.3nm,0.5s						
WRA	Warramunga Arr	26.30	163	P	P	22 14 17.6	+0.3
	1.4nm,0.8s,baz=340,slow=10,SNR=9.2						
	1.4nm,0.8s						
ASAR	Alice Springs	29.74	166	P	P	22 14 49.5	+1.4
	0.5nm,0.8s,baz=340,slow=7.7,SNR=4.7						
ASAR				PcP	PcP	22 17 50.6	-1.5
	0.3nm,0.8s,baz=340,slow=2.7,SNR=1.9						
	0.5nm,0.8s						
STKA	Stephens Creek	39.73	160	P	P	22 16 14.0	-0.2
	5.5nm,1.2s,baz=331,slow=10,SNR=4.5						
	5.5nm,1.2s						
MKAR	Makanchi Array	56.09	325	P	P	22 18 20.3	-0.6
	0.3nm,0.5s,baz=119,slow=8.0,SNR=5.8						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	60.25	327	P	P	22 18 49.4	-0.5
	0.4nm,0.6s,baz=129,slow=6.4,SNR=2.4						
	0.4nm,0.6s						
BVAR	Borovoye Array	65.84	327	P	P	22 19 27.5	+0.5
	0.4nm,0.6s,baz=157,slow=4.7,SNR=2.6						
	0.4nm,0.6s						

IDC 09 22:32:08.7±5.9,**5°.26S**×**147°.72E,h0**^{km}**,mb3.2**/2,**mbtmp3.3**/3,**ML2.9**/1,**Error ellipse: s-maj=180.2km s-min=37.5km az=102.0,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	19.56	221	P	Pn	22 36 39.0	-0.5
	baz=44,slow=11,SNR=6.2						
	1.2nm,0.9s						
ASAR	Alice Springs	22.63	215	P	P	22 37 10.9	-0.6
	0.4nm,0.7s,baz=51,slow=9.6,SNR=4.5						
	0.4nm,0.7s						
MKAR	Makanchi Array	77.39	320	P	P	22 44 05.8	+0.1
	0.4nm,0.9s,baz=95,slow=6.4,SNR=2.1						
	0.4nm,0.9s						

*SJA **09** 22:39:23.7±0.6,21°.31S×67°.45W,h214^{km}±4^{km},ML4.0,MW3.9*

*IDC **09** 22:39:25.0±1.6,21°.28S×67°.21W,h170^{km}±17^{km},mb3.6/5,mbtmp4.1/12,Error ellipse: s-maj=21.0km s-min=15.0km az=75.0*

*NEIC **09** 22:39:25.2±1.7,21°.35S±0°.06×67°.35W±0°.05,h185^{km}±9^{km},mb4.3/9,Error ellipse: s-maj=9.3km s-min=6.6km az=161.0*

*GUC **09** 22:39:26.1±0.7,21°.29S×67°.71W,h217^{km}±7^{km},ML4.2*

*SCB **09** 22:39:26.2±1.2,21°.31S×67°.40W,h176^{km}±13^{km},ML4.2/2,MW3.6,Error ellipse: s-maj=6.0km s-min=4.0km az=0.0*

*VAO **09** 22:39:27.2±0.6,21°.12S×67°.14W,h184^{km}±5^{km},mb3.9*

ISC 09 22:39:25.4±0.6,**21°.31S**±0°.04×**67°.44W**±0°.04,**h191**^{km}±6^{km},**n137,**σ**1^{s}.49**/169,**mb3.9**/6,**6C-6D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCB	Mochara	1.68	88	Pg	Pn	22 40 00.6	+0.1
MOCB				Sg	Sn	22 40 26.1	-1.6
MOCB				IAML		22 40 27.6	
	1μm,0.3s						
PB09	IPOC Station P	1.75	254	Pn	Pn	22 40 01.7	+0.9
PB09				Sn	Sn	22 40 28.1	-0.3
PB09	IPOC Station P	1.75	254	⇑*i*P	Pn	22 40 01.7	+0.9
PB09				*i* S	Sn	22 40 28.7	+0.4
PB09	IPOC Station P	1.75	254	Pg	Pn	22 40 01.6	+0.8
PB09	IPOC Station P	1.75	254	*e*P	Pn	22 40 01.5	+0.7
PB09				*e*S	Sn	22 40 29.5	+1.2
PB09				IAML		22 40 31.5	
	comp=Z,394nm,0.4s						
AF01	San Pedro de A	1.77	203		Pn	22 40 01.1	-0.1
AF01	San Pedro de A	1.77	203	Pg	Pn	22 40 01.6	+0.4
AF01	San Pedro de A	1.77	203	*e*P	Pn	22 40 03.4	+2.2
PB01	IPOC Station P	1.93	278		Pn	22 40 02.5	-0.1
PB01	IPOC Station P	1.93	278	*e*S	Sn	22 40 30.1	-1.3
PB01	IPOC Station P	1.93	278	Pg	Pn	22 40 03.4	+0.8
PB01				Sg	Sn	22 40 31.2	-0.3
PB01				IAML		22 40 32.9	
	comp=Z,1μm,0.2s						
PB01	IPOC Station P	1.93	278	*e*P	Pn	22 39 44.8	-18
PB01				*e*S	Sn	22 40 31.8	+0.3
PB01				IAML		22 40 32.1	
	comp=Z,852nm,0.2s						
PB08	IPOC Station P	1.98	306	Pn	Pn	22 40 04.2	+0.7
PB08	IPOC Station P	1.98	306	⇓*i*P	Pn	22 40 04.3	+0.7
PB08				*i* S	Sn	22 40 32.9	-0.2
PB08				IAML		22 40 34.4	
	comp=E,605nm,0.2s						
PB08	IPOC Station P	1.98	306	Pg	Pn	22 40 04.2	+0.7
PB08	IPOC Station P	1.98	306	*e*P	Pn	22 40 04.2	+0.7
PB08				*e*S	Sn	22 40 33.6	+0.6
PB08				IAML		22 40 35.2	
	comp=Z,310nm,0.3s						
YJA	Yavi	1.99	116	⇓*i*P	Pn	22 40 04.3	+0.8
YJA				*i* S	Sn	22 40 31.6	-1.6
YJA	Yavi	1.99	116	Pg	Pn	22 40 04.2	+0.6
YJA	Yavi	1.99	116	*e*P	Pn	22 40 04.5	+0.9
YJA				*e*S	Sn	22 40 34.0	+0.9
PB03	IPOC Station P	2.27	251	Pn	Pn	22 40 06.8	+0.5
PB03	IPOC Station P	2.27	251	⇑*i*P	Pn	22 40 06.4	+0.1
PB03				*i* S	Sn	22 40 36.9	-1.3
PB03				IAML		22 40 37.9	
	comp=N,921nm,0.4s						
PB03	IPOC Station P	2.27	251	*e*P	Pn	22 40 06.4	+0.1
PB03				*e*S	Sn	22 40 37.5	-0.7
PB03				IAML		22 40 40.7	
	comp=Z,805nm,0.2s						
GO01	Chusmiza	2.32	315		Pn	22 40 07.3	+0.1
GO01	Chusmiza	2.32	315	⇓*i*P	Pn	22 40 07.4	+0.2
GO01				*i* S	Sn	22 40 39.2	-0.5
GO01	Chusmiza	2.32	315	Pg	Pn	22 40 07.9	+0.7
GO01	Chusmiza	2.32	315	*e*P	Pn	22 40 07.7	+0.5
GO01				*e*S	Sn	22 40 42.3	+2.6
PB06	IPOC Station P	2.42	235		Pn	22 40 08.5	+0.6
PB06	IPOC Station P	2.42	235	⇑*i*P	Pn	22 40 08.3	+0.3
PB06				*i* S	Sn	22 40 40.8	-0.3
PB06				IAML		22 40 41.9	
	comp=E,451nm,0.2s						
PB06	IPOC Station P	2.42	235	*e*P	Pn	22 40 08.2	+0.3
PB06				*e*S	Sn	22 40 41.6	+0.5
PB06				IAML		22 40 43.3	
	comp=Z,273nm,0.3s						
AOVT	TarijaAcel	2.56	95	Pg	Pn	22 40 09.5	-0.1
PB11	IPOC Station P	2.59	306		Pn	22 40 09.9	0.0
PB11	IPOC Station P	2.59	306	⇓*i*P	Pn	22 40 09.7	-0.2
PB11				*i* S	Sn	22 40 42.5	-2.0
PB11	IPOC Station P	2.59	306	Pg	Pn	22 40 10.0	0.0
PB11	IPOC Station P	2.59	306	*e*P	Pn	22 40 09.7	-0.2
PB11				*e*S	Sn	22 40 43.4	-1.2
PB11				IAML		22 40 44.3	
	comp=Z,562nm,0.2s						
TA01	Diego Aracena	2.67	286		Pn	22 40 10.3	-0.4
TA01	Diego Aracena	2.67	286	*e*P	Pn	22 40 10.0	-0.6
TA01				*i* S	Sn	22 40 43.2	-2.7
TA01				IAML		22 40 45.5	
	comp=E,879nm,0.3s						
TA01	Diego Aracena	2.67	286	*e*P	Pn	22 40 10.2	-0.4
TA01				*e*S	Sn	22 40 43.5	-2.3
TA01				IAML		22 40 44.9	
	comp=Z,448nm,0.2s						
TA02	Huaiquique	2.72	292	Pn	Pn	22 40 10.5	-0.7
TA02	Huaiquique	2.72	292	*e*P	Pn	22 40 10.6	-0.7
TA02	Huaiquique	2.72	292	*e*P	Pn	22 40 11.0	-0.3
TA02				*e*S	Sn	22 40 45.2	-1.8
TA02				IAML		22 40 47.6	
	comp=Z,909nm,0.2s						
SOEO	Opoqueri	2.77	351	Pg	Pn	22 40 13.1	+0.7
PB05	IPOC Station P	2.98	239		Pn	22 40 14.9	+0.4
PB05	IPOC Station P	2.98	239	⇑*i*P	Pn	22 40 14.5	+0.1
PB05				*i* S	Sn	22 40 50.6	-2.3
PB05				IAML		22 40 53.5	
	comp=E,234nm,0.3s						
PB05	IPOC Station P	2.98	239	*e*P	Pn	22 40 14.6	+0.1
PB05				*e*S	Sn	22 40 51.8	-1.1
PB05				IAML		22 40 54.0	
	comp=Z,130nm,0.2s						
SALTA		3.07	161	⇓*i*P	Pn	22 40 17.8	+1.9
SOET	ToroToro	3.53	26	Pg	Pn	22 40 21.6	+0.2
PB16	IPOC Station P	3.54	326		Pn	22 40 22.4	+0.6
PB16	IPOC Station P	3.54	326	⇓*i*P	Pn	22 40 22.5	+0.8
PB16				*e*S	Sn	22 41 04.4	-1.4
PB16	IPOC Station P	3.54	326	Pg	Pn	22 40 22.6	+0.8
PB16	IPOC Station P	3.54	326	*e*P	Pn	22 40 21.9	+0.1
PB10	IPOC Station P	3.62	232		Pn	22 40 21.8	-0.3
PB10	IPOC Station P	3.62	232	⇑*i*P	Pn	22 40 21.8	-0.3
PB10	IPOC Station P	3.62	232	*e*P	Pn	22 40 21.9	-0.3
PB10				*e*S	Sn	22 41 05.0	-1.5
AZAP	Zapla	3.63	143	*e*P	Pn	22 40 22.8	+0.3
AZAP				*e*S	Sn	22 41 06.8	-0.5
AZAP				IAML		22 41 12.5	
	comp=Z,183nm,0.4s						
AOEA	Aiquile	3.75	34	Pg	Pn	22 40 23.7	-0.3
SLA	San Lorenzo	3.83	153	*e*P	Pn	22 40 26.4	+1.4
SLA				*e*S	Sn	22 41 15.8	+4.2
AP01	Chacalluta	4.00	316	Pn	Pn	22 40 26.6	-0.3
AP01	Chacalluta	4.00	316	*e*P	Pn	22 40 26.6	-0.3
AP01				*e*S	Sn	22 41 15.5	+0.4
AP01				IAML		22 41 19.7	
	comp=Z,236nm,0.2s						
PB18	Visviri	4.17	332		Pn	22 40 29.1	-0.5
PB14	IPOC Station P	4.28	219		Pn	22 40 30.1	-0.6
PB14	IPOC Station P	4.28	219	*e*P	Pn	22 40 30.4	-0.3
PB14				*e*S	Sn	22 41 20.1	-1.9
GO02	Mina Guanaco	4.31	207		Pn	22 40 31.2	+0.1
GO02	Mina Guanaco	4.31	207	⇑*i*P	Pn	22 40 31.4	+0.3
GO02	Mina Guanaco	4.31	207	*e*P	Pn	22 40 31.2	+0.1
BBOJ	La Paz, Jacaqu	4.37	351	Pg	Pn	22 40 33.5	+1.4
SOEJ	Jacaque	4.37	351	Pg	Pn	22 40 33.9	+1.8
BBOE	La Paz, Chanca	4.51	353	Pg	Pn	22 40 35.3	+1.4
BBOD	La Paz, Gloria	4.78	347	Pg	Pn	22 40 38.5	+1.2
FSA	Cafayete	4.96	165	*e*P	Pn	22 40 41.0	+1.8
LPAZ	La Paz	5.04	352		Pn	22 40 41.2	+0.5
LPAZ	La Paz	5.04	352	P	Pn	22 40 41.5	+0.7
	comp=Z,14nm,0.4s,baz=152,slow=6.1,SNR=126						
LPAZ				S	Sn	22 41 38.2	-1.8
	comp=Z,18nm,0.9s,baz=341,slow=19,SNR=5.7						
LPAZ	La Paz	5.04	352	Pg	Pn	22 40 41.3	+0.5
LPAZ	La Paz	5.04	352	*e*P	Pn	22 40 41.4	+0.7
LPAZ				*e*S	Sn	22 41 37.2	-2.8
LPAZ	La Paz	5.04	352	*e*P	Pn	22 40 41.5	+0.7
LPAZ				*e*S	Sn	22 41 37.0	-2.9
BBOB	La Paz, Bander	5.19	353	Pg	Pn	22 40 43.2	+0.7
AC01	Pan de Azucar	5.62	210		Pn	22 40 46.1	-1.4
AC02	Maricunga	5.71	195		Pn	22 40 49.2	0.0
AC06	Mina Casimiro	6.58	203		Pn	22 40 57.5	-2.6
GO03	Copiapo	6.75	202		Pn	22 41 00.1	-2.2
BBSD	Serra de San D	7.65	59	*e*P	Pn	22 41 11.0	-3.1
AC05	El Transito	7.92	198		Pn	22 41 15.6	-2.0
SIV	San Ignacio	8.03	50	P	Pn	22 41 16.0	-3.1
	comp=Z,42nm,0.5s,baz=226,slow=11,SNR=171						
SIV				S	Sn	22 42 40.1	-9.3
	comp=Z,7.5nm,0.6s,baz=301,slow=16,SNR=5.8						
LCO	Las Campanas	8.21	200		Pn	22 41 18.5	-3.1
CO01	Juntas del Tor	8.95	195	Pn	Pn	22 41 29.3	-2.0
MURT	Porto Murtinho	9.16	94	*e*P	Pn	22 41 30.9	-2.9
GO04	Tololo Observa	9.33	198	Pn	Pn	22 41 33.1	-3.0
PTLB	Pontes e Lacer	9.80	55		Pn	22 41 39.2	-3.1
PTLB	Pontes e Lacer	9.80	55	*e*P	Pn	22 41 39.4	-2.9
CO03	El Pedregal	9.93	196	Pn	Pn	22 41 41.0	-2.8
CFA	Coronel Fontan	10.28	184	P	Pn	22 41 47.8	-0.5
	comp=Z,0.7nm,0.3s,baz=342,slow=13,SNR=16						
CFA				S	Sn	22 43 34.9	-8.0
	comp=Z,2.0nm,0.4s,baz=126,slow=18,SNR=7.3						
CPUP	Villa Florida	10.52	120		Pn	22 41 50.7	-0.7
CPUP	Villa Florida	10.52	120	P	Pn	22 41 49.4	-2.0
	comp=Z,1.3nm,0.5s,baz=163,slow=11,SNR=14						
CPUP	Villa Florida	10.52	120	*e*P	Pn	22 41 52.2	+0.8
VILB	Vilhena	10.81	41		Pn	22 41 54.5	-0.9
VILB	Vilhena	10.81	41	*e*P	Pn	22 41 54.1	-1.3
SJPY	San Joaquin	11.05	112	*e*P	Pn	22 41 57.5	-1.0
VA03	San Esteban	11.74	193	Pn	Pn	22 42 09.2	+2.0
SALV	Santo Antonio	12.37	66	*e*P	Pn	22 42 14.0	-1.3
ITQB	Itaqui	12.83	133	*e*P	Pn	22 42 22.2	+1.2
NNA	Nana	12.92	314	P	Pn	22 42 24.4	+2.0
	comp=Z,9.0nm,0.6s,baz=133,slow=9.5,SNR=5.0						
PDRB	Porto dos Gac	14.08	48	*e*P	Pn	22 42 34.6	-2.2
LDASE	Londrina, Braz	15.24	101	*e*P	Pn	22 42 50.6	-0.4
CPSB	Cacapava Do Su	15.51	129	*e*P	Pn	22 42 53.4	-0.7
ARAG	Araguaiana, MT	15.83	72	*e*P	Pn	22 42 56.4	-1.8
PLTB	Pedras Altas	16.16	133	P	P	22 43 00.6	-1.1
PLTB				IAmb	IAmb	22 43 02.5	
	comp=Z,14nm,1.1s						
CNLB	Canela	16.97	121	*e*P	P	22 43 10.6	0.0
TRQA	Tornquist	17.34	165		P	22 43 14.4	-0.1
TRQA	Tornquist	17.34	165	*e*P	Pn	22 43 18.9	+2.9
ATAH	Atahualpa	17.63	321	P	Pn	22 43 21.2	+1.2
	comp=Z,2.1nm,0.6s,baz=90,slow=4.8,SNR=3.9						
MAJ01	Sao Joao Batis	17.84	113	*e*P	P	22 43 20.4	+0.2
NPGB	Novo Progresso	18.38	41	*e*P	P	22 43 24.4	-1.6
MACA	Manacapuru-AM	19.20	21	P	P	22 43 33.6	-1.4
MACA	Manacapuru-AM	19.20	21	*e*P	P	22 43 33.2	-1.8
BDFB	Brasilia	19.26	76	P	P	22 43 35.1	-0.7
BDFB				IAmb	IAmb	22 43 39.8	
	comp=Z,6.1nm,0.5s						
BDFB	Brasilia	19.26	76	P	P	22 43 35.0	-0.7
	comp=Z,5.4nm,0.5s,baz=242,slow=6.5,SNR=12						
ITTB	Itaituba	20.32	36	*e*P	P	22 43 45.4	-1.6
DIAM	Diamantina, MG	22.56	87	*e*P	P	22 44 09.9	0.0
PRPB	Parauapebas	22.75	51	*e*P	P	22 44 09.8	-1.6
SMTB	Santa Maria do	22.78	60	*e*P	P	22 44 11.1	-0.6
JANB	Januaria	22.82	78	*e*P	P	22 44 11.2	-0.9
MAL2	Monte Alegre,	23.12	36	P	P	22 44 14.7	-0.1
SDBA	SAO DESIDERIO	23.29	71	*e*P	P	22 44 15.3	-1.0
BOAV	Boa Vista	24.52	17	P	P	22 44 28.8	+1.4
BOAV	Boa Vista	24.52	17	*e*P	P	22 44 27.1	-0.3
TMAB	Tom-Au,PA,Br	26.63	48	*e*P	P	22 44 47.2	+0.7
NBPB	Pedra_Branca-C	31.21	64	*e*P	P	22 45 26.7	-0.4
RCBR	Riachuelo	34.20	68	*e*P	P	22 45 53.6	+0.6
JSC	Jenkinsville	56.83	346	P	P	22 48 50.0	+0.1
JSC				IAmb	IAmb	22 48 51.9	
	comp=Z,12nm,0.8s						
SNAA	Sanae	62.01	161	P	P	22 49 24.8	-0.2
SNAA				IAmb	IAmb	22 49 34.3	
	comp=Z,6.0nm,1.4s						
SNAA	Sanae	62.01	161	P	P	22 49 26.9	+1.9
	comp=Z,0.4nm,0.6s,baz=247,slow=9.3,SNR=1.6						
	comp=Z,0.4nm,0.6s						
DBIC	Dimbokro	67.37	73	P	P	22 50 01.5	+1.0
	comp=Z,1.3nm,0.4s,baz=317,slow=11,SNR=4.2						
	comp=Z,1.3nm,0.4s						
QSPA	South Pole Qui	68.88	180	P	P	22 50 11.5	+2.4
	comp=Z,0.8nm,0.9s,baz=220,slow=12,SNR=1.4						
	comp=Z,0.8nm,0.9s						
TORD	Torodi Ar. Bea	76.00	70	P	P	22 50 51.3	-0.6
TORD				IAmb	IAmb	22 50 52.4	
	comp=Z,2.8nm,0.7s						
TORD	Torodi Ar. Bea	76.00	70	P	P	22 50 51.4	-0.5
	comp=Z,3.4nm,0.3s,baz=263,slow=5.1,SNR=2.9						
	comp=Z,3.4nm,0.3s						
ESDC	Sonseca Array	84.75	44	P	P	22 51 39.6	+1.5
	comp=Z,0.5nm,0.8s,baz=224,slow=3.5,SNR=2.4						
	comp=Z,0.5nm,0.8s						
MKAR	Makanchi Array	144.67	37	PKP	PKPab	22 58 39.8	+1.3
	comp=Z,0.8nm,0.4s,baz=343,slow=2.9,SNR=12						
PZH	PanZhiHua	168.84	60	PKP	PKPdf	22 59 08.2	-1.9

*IDC **09** 23:03:35.7±3.5,64°.96S×178°.91E,h0^{km},mb3.5/4,mbtmp3.5/5,ML2.7/1,MS3.6/5,Error ellipse: s-maj=133.1km s-min=25.9km az=67.0*

ISC 09 23:03:37.1±2.4,**65°.0S**±0°.2×**178°.9E**±0°.5,**h10**^{km}**,n15,**σ**0^{s}.20**/7,**mb3.5**/4,**MS3.6**/4,**Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	Vanda	13.64	196	Pn	Pn	23 06 50.2	0.0
	baz=32,slow=13,SNR=10.0						
VNDA				LR	LR	23 10 52.5	
	comp=Z,142nm,18.5s,baz=14,slow=32						
	1.3nm,0.9s						
QSPA	South Pole Qui	25.12	180	P	P	23 09 01.6	-0.3
	0.7nm,0.8s,baz=49,slow=14,SNR=1.6						
QSPA				LR	LR	23 17 30.2	
	comp=Z,94nm,18.5s,baz=33,slow=33						
	0.7nm,0.8s						
URZ	Urewera	26.77	357	LR	LR	23 17 03.6	
	comp=Z,136nm,20.9s,baz=304,slow=30						
MAW	Mawson	40.14	212	LR	LR	23 27 18.7	
	comp=Z,92nm,19.6s,baz=110,slow=35						
SNAA	Sanae	43.62	179	P	P	23 11 41.1	+0.1
	2.2nm,1.1s,baz=131,slow=9.3,SNR=3.5						
SNAA				LR	LR	23 29 05.5	
	comp=Z,77nm,18.3s,baz=75,slow=35						
	2.2nm,1.1s						
H01W1	Cape Leeuwin H	48.34	276	T	T	00 04 35.4	
	baz=149,slow=76,SNR=14						
H01W2	Cape Leeuwin H	48.35	276	T	T	00 04 36.8	
	baz=149,slow=76,SNR=10						
H01W3	Cape Leeuwin H	48.36	276	T	T	00 04 38.0	
	baz=149,slow=76,SNR=14						
ASAR	Alice Springs	50.42	303	P	P	23 12 34.6	+0.1
	0.2nm,0.8s,baz=156,slow=7.2,SNR=5.4						
	0.2nm,0.8s						
WRA	Warramunga Arr	53.69	305	P	P	23 12 58.7	-0.2
	0.5nm,0.9s,baz=154,slow=7.5,SNR=2.7						
	0.5nm,0.9s						
H03S2	Juan Fernandez	64.74	116	T	T	00 25 05.2	
	baz=205,slow=74						
H03S1	Juan Fernandez	64.74	116	T	T	00 25 06.8	
	baz=205,slow=74						
H03S3	Juan Fernandez	64.75	116	T	T	00 25 08.2	
	baz=205,slow=74						
KBZ	Khabaz	147.69	250	PKPbc	PKPbc	23 23 20.9	+0.2
	1.5nm,0.7s,baz=200,slow=2.9,SNR=4.3						
BRTR	Keskin Array B	147.74	235	PKPbc	PKPbc	23 23 21.2	0.0
	0.2nm,0.7s,baz=169,slow=2.3,SNR=1.6						

*IDC **09** 23:04:02.7±6.6,19°.90N×146°.49E,h0^{km},mb3.5/7,mbtmp3.5/7,Error ellipse: s-maj=258.3km s-min=22.8km az=80.0*

ISC 09 23:04:05.4±9.0,**20°.0N**±0°.4×**14°7E**±°,**h35**^{km}**,n7,**σ**0^{s}.53**/7,**mb3.4**/7,**Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	41.66	198	P	P	23 11 50.6	-0.1
	0.3nm,0.5s,baz=19,slow=9.9,SNR=8.0						
	0.3nm,0.5s						
SONM	Songino Array	43.06	320	P	P	23 12 02.3	+0.3
	0.3nm,0.5s,baz=115,slow=8.5,SNR=1.4						
	0.3nm,0.5s						
ASAR	Alice Springs	45.31	197	P	P	23 12 20.1	0.0
	0.5nm,1.0s,baz=20,slow=6.8,SNR=1.8						
	0.5nm,1.0s						
ZALV	Zalesovo Beam	57.88	322	P	P	23 13 52.9	-0.7
	0.4nm,0.3s,baz=98,slow=7.2,SNR=1.8						
	0.4nm,0.3s						
MKAR	Makanchi Array	58.62	313	P	P	23 13 58.4	-0.6
	0.1nm,0.3s,baz=86,slow=7.4,SNR=2.5						
	0.1nm,0.3s						
KURBB	Kurchatov Arra	61.33	317	P	P	23 14 17.4	-0.1
	0.4nm,0.4s,baz=92,slow=7.6,SNR=9.6						
	0.4nm,0.4s						
BVAR	Borovoye Array	66.40	320	P	P	23 14 51.3	+0.4
	0.3nm,0.3s,baz=100,slow=7.6,SNR=4.7						
	0.3nm,0.3s						

STR 09 23:11:24.1±0.9,**45°N**±4°×°±°,**h5**^{km}**,MLv0.8**/7,**Error ellipse: s-maj=0.0km s-min=0.0km az=72.2,preliminary, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRN	Grenoble	0.09	302	Pg	Pg	23 11 26.2	0.0
GRN				Sg	Sg	23 11 27.6	0.0
ORIF	Oris-en-Rattie	0.28	176	Sg	Sg	23 11 33.3	+0.1
SSB	Saint Sauveur	0.93	276	Sg	Sg	23 11 53.3	-0.8

BER 09 23:18:38.8±2.4,**77°.47N**×**18°.52E,h15**^{km}**,ML0.8,Confirmed Earthquake,Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPA0	Spitsbergen Ar	0.85	328	*e*P	Pb	23 18 51.9	-3.3
SPA0				*e*S	Sg	23 19 05.4	-0.9
BRBB	Barentsburg B	1.11	306	*e*P	Pb	23 18 58.1	-1.6
BRBB				*e*S	Sb	23 19 12.1	-1.9
KBS	Kingsbay	1.99	320	*e*P	Pn	23 19 11.9	0.0
KBS				IAML		23 19 37.8	
	comp=Z,1.5nm,0.6s						

UPP 09 23:19:04.7±0.0,**67°.83N**×**20°.20E,h0**^{km}**,ML2.1,Unknown, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.14	22	P	Pg	23 19 07.5	+0.2
KUA				S	Sg	23 19 09.6	+0.5
RATU	Laukkuluspa	0.23	269	P	Pg	23 19 09.3	+0.2
RATU				S	Sg	23 19 12.6	+0.5
KOVU	Salmi	0.40	358	P	Pg	23 19 12.3	0.0
KOVU				S	Sg	23 19 17.8	+0.4
DUNU	Dundret	0.72	169	P	Pg	23 19 18.3	-0.3
DUNU				S	Sg	23 19 28.4	+0.5
MASU	Masugnsbyn	0.78	118	P	Pg	23 19 19.5	-0.2
MASU				S	Sg	23 19 30.2	+0.5
SALU	Saltoluokta	0.79	236	P	Pg	23 19 19.6	-0.3
SALU				S	Sg	23 19 30.2	+0.2
SALU	Saltoluokta	0.79	236	*e*P	Pg	23 19 19.8	0.0
KIF	Kilpisjarvi	1.20	10	*e*P	Pg	23 19 28.0	+0.2
PAJU	Pajala	1.38	124	P	Pg	23 19 30.1	-1.1
PAJU				S	Sg	23 19 48.6	-0.4
ERTU	Ertsjaerv	1.50	148	P	Pn	23 19 32.2	-0.6
HARU	Harads	1.70	169	P	Pn	23 19 35.6	+0.1

*IDC **09** 23:31:41.9±2.2,32°.67N×45°.50E,h0^{km},mb3.7/5,mbtmp3.6/6,ML2.5/1,MS2.7/4,Error ellipse: s-maj=65.5km s-min=25.6km az=158.0*

*TEH **09** 23:31:42.2,32°.43N×45°.79E,h8^{km}±62^{km}*

*ISN **09** 23:31:42.5±0.6,32°.45N×45°.77E,h8^{km}±8^{km},ML3.4*

ISC 09 23:31:43.2±1.0,**32°.43N**±0°.06×**45°.76E**±0°.05,**h10**^{km}**,n41,**σ**1^{s}.15**/40,**mb3.5**/4,**Iraq**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IBDR	Badra	0.69	12	*e*Pg	Pg	23 31 56.0	-0.7
IBDR				*e*Sg	Sg	23 32 05.0	-0.8
IBDR				AML	AML	23 32 20.1	
	comp=E,2μm,0.7s						
IBDR				AML	AML	23 32 26.5	
	comp=N,2μm,0.5s						
ILBA	Ilam Banvizeh	1.25	17	Pg	Pb	23 32 06.3	-0.7
BHD	Baghdad	1.43	306	*e*Pn	Pn	23 32 10.3	+1.0
BHD				*e*Sn	Sg	23 32 31.0	+1.6
BHD				AML	AML	23 32 38.6	
	comp=E,894nm,0.5s						
GLG1	Gilan-e-Gharb	1.69	4	Pg	Pn	23 32 13.4	+0.6
IGHG	Ghaleghazi	2.01	19	Pn	Pn	23 32 18.8	+1.3
IKFM	Kafar-mosalman	2.07	58	Pn	Pn	23 32 19.2	+1.3
KGS1	Ghasr-e-Shirin	2.08	356	Pn	Pn	23 32 19.3	+1.1
KCHF	Cheshme Sefid,	2.13	30	Pn	Pn	23 32 20.2	+1.1
IDHR	Dehrash	2.33	13	Pn	Pn	23 32 23.3	+1.5
IDOB	Doab	2.44	56	Pn	Pn	23 32 24.7	+1.3
ILIN	Lien	2.68	22	Pn	Pn	23 32 27.5	+0.8
IBZA	Bozab	2.69	40	Pn	Pn	23 32 28.4	+1.6
SNQR	Sonqor, Kerman	2.88	32	Pn	Pn	23 32 30.4	+1.0
HSAM	Samen	2.97	52	Pn	Pn	23 32 31.7	+1.0

IKRK	**Kirkuk**	**3.19**	**339**	*e*Pn	**Pn**	**23 32 34.5**	**+1.0**
IKRK				*e*Sn	**Sn**	**23 33 13.0**	**+1.4**
HAGD	**Aghdareh**	**3.69**	**49**	Pn	**Pn**	**23 32 41.5**	**+0.9**
HGHA	**Hamedan- Ghaye**	**3.99**	**39**	Pn	**Pn**	**23 32 45.9**	**+1.2**
JHBN	**Jahan bin**	**4.16**	**91**	Pn	**Pn**	**23 32 48.4**	**+1.3**
ZNGN	**Zangian**	**4.33**	**93**	Pn	**Pn**	**23 32 50.9**	**+1.6**
IPIR	**Pirpir**	**4.34**	**85**	Pn	**Pn**	**23 32 50.5**	**+0.9**
QABG	**Abgarm-Qazvin**	**4.56**	**43**	Pn	**Pn**	**23 32 53.7**	**+1.2**
QAMS	**Qamsar**	**4.91**	**73**	Pn	**Pn**	**23 32 58.5**	**+1.2**
IKLH	**Kolahrood**	**4.98**	**78**	Pn	**Pn**	**23 32 59.1**	**+0.9**
IQOM	**Qom**	**5.04**	**60**	Pn	**Pn**	**23 33 00.8**	**+1.7**
KLNJ	**Kolanjah**	**5.17**	**104**	Pn	**Pn**	**23 33 01.4**	**+0.5**
IZEF	**Zefreh**	**5.56**	**83**	Pn	**Pn**	**23 33 06.9**	**+0.6**
KRSH	**Karshahi**	**5.56**	**72**	Pn	**Pn**	**23 33 06.8**	**+0.6**
IVRN	**Varamin**	**5.59**	**61**	Pn	**Pn**	**23 33 07.6**	**+1.1**
IRAM	**Ramesheh**	**5.65**	**95**	Pn	**Pn**	**23 33 08.9**	**+1.4**
ISFB	**Sefidab**	**5.75**	**69**	Pn	**Pn**	**23 33 09.2**	**+0.5**
ISHB	**Shabestar**	**5.84**	**359**	Pn	**Pn**	**23 33 10.5**	**+0.4**
GNI	**Garni**	**7.75**	**354**	LR	LR	23 36 43.0	
	comp=E,27nm,18.1s,baz=214,slow=40						
EIL	**Elat**	**9.67**	**256**	LR	LR	23 38 34.4	
	comp=E,26nm,20.9s,baz=60,slow=43						
KBZ	**Khabaz**	**11.50**	**350**	LR	LR	23 40 05.2	
	comp=E,23nm,21.9s,baz=174,slow=45						
BRTR	**Keskin Array B**	**12.21**	**310**	Pn	**Pn**	**23 34 36.6**	**-0.6**
	baz=121,slow=14,SNR=3.6						
	comp=E,0.2nm,0.3s						
BVAR	**Borovoye Array**	**27.17**	**33**	P	**P**	**23 37 25.2**	**-1.5**
	comp=E,0.5nm,0.6s,baz=247,slow=7.5,SNR=5.2						
	comp=E,0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**30.19**	**43**	P	**P**	**23 37 53.7**	**+0.2**
	comp=E,0.3nm,0.3s,baz=250,slow=9.4,SNR=3.1						
	comp=E,0.3nm,0.3s						
MKAR	**Makanchi Array**	**31.28**	**52**	P	**P**	**23 38 04.8**	**+1.5**
	comp=E,0.3nm,0.8s,baz=251,slow=9.0,SNR=2.3						
	comp=E,0.3nm,0.8s						
ZALV	**Zalesovo Beam**	**35.05**	**40**	P	**P**	**23 38 35.8**	**-0.3**
	comp=E,1.0nm,0.5s,baz=254,slow=10,SNR=4.8						
	comp=E,1.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**44.56**	**255**	P	**P**	**23 39 54.3**	**-1.3**
	comp=E,1.4nm,0.4s,baz=60,slow=7.8,SNR=1.7						
	comp=E,1.4nm,0.4s						
PSI	**Prapat**	**57.84**	**109**	LR	LR	00 09 03.3	
	comp=E,26nm,18.1s,baz=182,slow=38						

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*GCG **09** 23:36:48.3±1.2, 13.°05N×89.°44W, h55^{km}±12^{km}, MD3.7*

*SNET **09** 23:36:49.4±0.8, 13.°17N×89.°37W, h56^{km}±8^{km}, ML2.6*

ISC 09 23:36:46.2±2.8**, 12.°9N**±0.°1×**89.°47W**±0.°08**, h28**^{km}±13^{km}**,**
n20, σ**0^{s}.52**/28**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.59**	**14**	*e*P	**Pn**	**23 36 59.1**	**+0.4**
LALI				*e*S	**Sb**	**23 37 06.7**	**+0.6**
LALI	**Alcalda de L**	**0.59**	**14**	*i* P	**Pn**	**23 36 59.2**	**+0.4**
LALI				*i* S	**Sb**	**23 37 07.2**	**+1.0**
JAYA	**Jayaque - finc**	**0.74**	**1**	*e*P	**Pn**	**23 37 01.1**	**+0.2**
JAYA				*e*S	**Sb**	**23 37 10.1**	**-0.4**
JAYA				IAML		23 37 11.9	
	comp=Z,237nm,0.2s						
JAYA	**Jayaque - finc**	**0.74**	**1**	*i* P	**Pn**	**23 37 01.2**	**+0.2**
JAYA				*i* S	**Sn**	**23 37 11.8**	**+0.4**
LOMA	**Loma Larga**	**0.78**	**21**	*e*P	**Pn**	**23 37 01.9**	**+0.4**
LOMA				IAML		23 37 13.9	
	comp=Z,702nm,0.1s						
LFRS	**El Faro**	**0.81**	**29**	*e*P	**Pn**	**23 37 01.8**	**-0.1**
LFRS				*e*S	**Sb**	**23 37 11.3**	**-1.1**
PMON	**Piamonte**	**0.81**	**10**	*e*P	**Pn**	**23 37 02.1**	**+0.2**
BOQS	**Boqueron**	**0.84**	**12**	*e*P	**Pn**	**23 37 02.6**	**+0.3**
BOQS				*e*S	**Sb**	**23 37 12.6**	**-0.8**
LFU	**La Fuente**	**0.90**	**22**	*e*P	**Pb**	**23 37 03.6**	**+0.2**
COEG	**Centro de Oper**	**0.91**	**39**	*e*P	**Pb**	**23 37 03.4**	**-0.1**
COEG				IAML		23 37 16.2	
	comp=Z,127nm,0.3s						
SBLS	**San Blas**	**0.94**	**351**	*e*P	**Pb**	**23 37 04.2**	**+0.2**
SNJE	**San Jose**	**0.96**	**352**	*e*P	**Pb**	**23 37 04.5**	**0.0**
NUBE	**Las Nubes**	**1.03**	**343**	*e*P	**Pn**	**23 37 04.4**	**-0.6**
NUBE	**Las Nubes**	**1.03**	**343**	*i* P	**Pb**	**23 37 05.5**	**-0.1**
NUBE				*i* S	**Sn**	**23 37 18.4**	**-0.1**
SCLA	**Alcaldia de Sa**	**1.06**	**42**	*e*P	**Pb**	**23 37 05.7**	**-0.3**
PACA	**Pacayal**	**1.24**	**63**	*e*P	**Pb**	**23 37 08.8**	**-0.4**
LCY	**Lacayo**	**1.25**	**66**	*e*P	**Pb**	**23 37 08.5**	**-0.7**
BLLM	**Bellamira**	**1.31**	**66**	*e*P	**Pn**	**23 37 09.3**	**+0.7**
MTO3	**Montecristo**	**1.48**	**4**	*i* P	**Pn**	**23 37 11.5**	**+0.3**
MTO3				*i* S	**Sn**	**23 37 29.5**	**-0.3**
LCND	**La Caada**	**1.58**	**75**	*e*P	**Pn**	**23 37 13.0**	**+0.6**

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*IDC **09** 23:57:04.2±2.1, 5.°11S×146.°05E, h124^{km}±20^{km}, mb3.6/7, mbtmp3.9/10, Error ellipse: s-maj=27.6km s-min=15.4km az=75.0*

*NEIC **09** 23:57:05.9±1.1, 5.°2S±0.°1×145.°9E±0.°1, h128^{km}±8^{km}, mb4.1/38, Error ellipse: s-maj=19.9km s-min=12.2km az=56.0*

ISC 09 23:57:02.4±0.7**, 5.°05S**±0.°08×**145.°8E**±0.°1**, h100**^{km}**, n52,**
σ**0^{s}.83**/52**, mb4.2**/23**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.53**	**163**	Pn	**Pn**	**23 58 10.2**	**+1.3**
PMG	**Port Moresby**	**4.53**	**163**	P	**Pn**	**23 58 09.6**	**+0.8**
	8.0nm,0.4s,baz=26,slow=3.0,SNR=1.8						
PMG				S	**Sn**	**23 58 59.9**	**-0.5**
	31nm,0.3s,baz=183,slow=20,SNR=14						
JAY	**Jayapura**	**5.67**	**296**	P	Pn	23 58 29.8	+5.4
	11nm,0.4s,baz=189,slow=5.0,SNR=14						
COEN	**Coen**	**9.22**	**196**	Pn	**Pn**	**23 59 13.9**	**+1.3**
WB0	**Warramunga Arr**	**18.37**	**216**	P	**Pn**	**00 01 10.7**	**0.0**
WB0				IAmb	IAmb	00 01 21.0	
	comp=Z,12nm,1.2s						
WR8	**Warramunga Arr**	**18.45**	**216**	P	**Pn**	**00 01 10.9**	**-0.8**
WRAB	**Tennant Creek**	**18.52**	**216**	P	**Pn**	**00 01 11.7**	**-0.8**
WRAB				IAmb	IAmb	00 01 35.2	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	**18.54**	**216**	P	**P**	**00 01 10.3**	**-1.0**
WRA	**Warramunga Arr**	**18.54**	**216**	P	**Pn**	**00 01 12.7**	**0.0**
	comp=Z,0.9nm,0.3s,baz=41,slow=10,SNR=30						
KNRA	**Kununurra**	**19.79**	**236**	P	**Pn**	**00 01 27.1**	**-0.3**
KNRA				IAmb	IAmb	00 01 39.7	
	comp=Z,12nm,1.2s						
ASAR	**Alice Springs**	**21.77**	**211**	P	**P**	**00 01 47.0**	**+0.7**
	comp=Z,1.6nm,0.5s,baz=41,slow=7.5,SNR=19						
	comp=Z,1.6nm,0.5s						
FITZ	**Fitzroy Crossi**	**23.59**	**235**	P	**P**	**00 02 04.7**	**+0.3**
STKA	**Stephens Creek**	**26.98**	**188**	P	**P**	**00 02 35.0**	**+0.2**
	comp=Z,2.6nm,0.7s,baz=338,slow=5.4,SNR=2.9						
	comp=Z,2.6nm,0.7s						
CMWZ	**Cape Campbell**	**44.47**	**149**	P	**P**	**00 05 03.1**	**-0.6**
RPZ	**Rata Peaks**	**44.48**	**154**	P	**P**	**00 05 04.8**	**+1.0**
LBZ	**Lake Benmore**	**44.64**	**155**	P	**P**	**00 05 04.3**	**-0.8**
RPSI	**Rantau Prapat**	**47.46**	**278**	P	**P**	**00 05 27.7**	**0.0**
COCO	**West Island**	**48.87**	**258**	P	**P**	**00 05 38.7**	**+0.2**
PETK	**Petropavlovsk-**	**58.81**	**8**	P	**P**	**00 06 51.1**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=227,slow=7.1,SNR=1.9						
	comp=Z,0.9nm,0.7s						
MKAR	**Makanchi Array**	**76.01**	**321**	P	**P**	**00 08 37.8**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=94,slow=4.9,SNR=3.8						
	comp=Z,0.4nm,0.7s						
O16K	**Kokwok River B**	**78.04**	**26**	P	**P**	**00 08 50.1**	**+0.3**
O16K				IAmb	IAmb	00 08 59.1	
	comp=Z,5.3nm,1.3s						
K15K	**Wolf Creek Mou**	**78.17**	**22**	P	**P**	**00 08 49.0**	**-1.5**
K15K				IAmb	IAmb	00 08 54.8	
	comp=Z,4.2nm,1.1s						
K17K	**Iditarod**	**79.64**	**23**	P	**P**	**00 08 59.3**	**+0.7**
J17K	**VABM Dome**	**79.72**	**22**	P	**P**	**00 09 00.4**	**+1.4**
KURK	**Kurchatov**	**79.74**	**323**	P	**P**	**00 08 59.0**	**-0.3**
L18K	**Granite Mounta**	**80.01**	**24**	P	**P**	**00 09 01.3**	**+0.7**
L18K				IAmb	IAmb	00 09 12.3	
	comp=Z,4.4nm,1.4s						
CNPM	**China Poot**	**81.05**	**27**	P	**P**	**00 09 06.7**	**+0.5**
G18K	**Tagagawik**	**81.27**	**20**	P	**P**	**00 09 07.7**	**+0.5**
G18K				IAmb	IAmb	00 09 08.2	
	comp=Z,2.7nm,1.0s						
BRLK	**Bradley Lake**	**81.31**	**27**	P	**P**	**00 09 07.9**	**+0.3**
J19K	**Poorman**	**81.35**	**22**	P	**P**	**00 09 08.3**	**+0.7**
J20K	**Nowinta River**	**82.00**	**23**	P	**P**	**00 09 11.8**	**+0.7**
J20K				IAmb	IAmb	00 09 33.9	
	comp=Z,3.7nm,1.4s						
F19K	**Shaleruckik Mo**	**82.09**	**19**	P	**P**	**00 09 11.7**	**+0.2**
RC01	**Rabbit Creek A**	**82.40**	**26**	P	**P**	**00 09 12.3**	**-0.9**
CAST	**Castle Rocks**	**82.44**	**24**	P	**P**	**00 09 13.4**	**0.0**
E19K	**Redstone River**	**82.61**	**19**	P	**P**	**00 09 15.0**	**+0.8**
E19K				IAmb	IAmb	00 09 15.6	
	comp=Z,2.1nm,0.7s						
C19K	**Lookout Ridge**	**82.80**	**17**	P	**P**	**00 09 16.0**	**+0.8**
C19K				IAmb	IAmb	00 09 21.5	
	comp=Z,5.6nm,1.3s						
PMR	**Palmer**	**82.88**	**26**	P	**P**	**00 09 16.9**	**+1.2**
PMR				IAmb	IAmb	00 09 17.3	
	comp=Z,2.3nm,0.8s						
F20K	**Avaraart Lake**	**82.89**	**20**	P	**P**	**00 09 16.4**	**+0.8**
F20K				IAmb	IAmb	00 09 50.1	
	comp=Z,3.3nm,1.4s						
D19K	**Kuna River**	**82.90**	**18**	P	**P**	**00 09 16.2**	**+0.4**
PWL	**Port Wells**	**82.93**	**27**	P	**P**	**00 09 15.5**	**-0.5**
PWL				IAmb	IAmb	00 09 49.6	
	comp=Z,4.5nm,1.0s						
GHO	**Glory Hole Cre**	**83.04**	**26**	P	**P**	**00 09 16.0**	**-0.6**
GHO				IAmb	IAmb	00 09 16.8	
	comp=Z,3.8nm,1.0s						
BPAW	**Bear Paw Mtn.**	**83.19**	**23**	P	**P**	**00 09 16.7**	**-0.6**
BPAW				IAmb	IAmb	00 09 33.6	
	comp=Z,2.5nm,0.8s						
CCB	**Clear Creek Bu**	**84.67**	**23**	P	**P**	**00 09 23.8**	**-0.9**
E22K	**Anaktuvuk Pass**	**84.73**	**19**	P	**P**	**00 09 24.8**	**-0.3**
E22K				IAmb	IAmb	00 09 54.9	
	comp=Z,5.0nm,1.5s						
D22K	**Ayikyak River**	**84.80**	**19**	P	**P**	**00 09 26.3**	**+0.9**
D22K				IAmb	IAmb	00 10 05.7	
	comp=Z,5.7nm,1.4s						
QSPA	**South Pole Qui**	**84.91**	**180**	P	**P**	**00 09 25.1**	**-1.1**
QSPA				IAmb	IAmb	00 09 26.6	
	comp=Z,2.9nm,1.1s						
QSPA	**South Pole Qui**	**84.91**	**180**	P	**P**	**00 09 24.8**	**-1.4**
	comp=Z,1.8nm,0.7s,baz=303,slow=1.5,SNR=20						
	comp=Z,1.8nm,0.7s						
ILAR	**Eielson Array**	**85.09**	**23**	P	**P**	**00 09 25.1**	**-1.8**
	comp=Z,1.6nm,0.6s,baz=253,slow=5.1,SNR=15						
	comp=Z,1.6nm,0.6s						
BVAR	**Borovoye Array**	**85.31**	**324**	P	**P**	**00 09 27.7**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=101,slow=6.0,SNR=2.6						
	comp=Z,0.2nm,0.4s						
D23K	**Nanushuk River**	**85.48**	**19**	P	**P**	**00 09 29.8**	**+1.0**
D23K				IAmb	IAmb	00 09 30.5	
	comp=Z,2.4nm,0.8s						
J25K	**Salcha River,**	**85.63**	**24**	P	**P**	**00 09 29.2**	**-0.5**
J25K				IAmb	IAmb	00 09 31.1	
	comp=Z,4.8nm,1.5s						
F24K	**Squaw Lake**	**85.80**	**21**	P	**P**	**00 09 31.0**	**+0.6**

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*SJA **10** 00:06:03.2±0.7, 24.°16S×66.°86W, h214^{km}±4^{km}, ML3.6, MW3.5*

*IDC **10** 00:06:04.2±2.8, 24.°02S×66.°72W, h200^{km}±28^{km}, mb3.7/2, mbtmp3.8/5, Error ellipse: s-maj=32.2km s-min=22.8km az=64.0*

ISC 10 00:06:03.7±0.8**, 24.°12S**±0.°04×**66.°88W**±0.°05**, h200**^{km}**, n29,**
σ**1^{s}.30**/44**, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.39**	**116**	*e*P	**Pn**	**00 06 37.7**	**+1.0**
SLA				*e*S	**Sn**	**00 07 03.6**	**+1.4**
AZAP	**Zapla**	**1.66**	**94**	*e*P	**Pn**	**00 06 39.6**	**+0.4**
AF01	**San Pedro de A**	**1.66**	**314**	*e*P	**Pn**	**00 06 43.7**	**+4.4**
AF01				*e*S	**Sn**	**00 07 07.9**	**+1.1**
AF01				IAML		00 07 29.6	
	comp=Z,142nm,0.7s						
FSA	**Cafayete**	**2.15**	**158**	*e*P	**Pn**	**00 06 44.6**	**+0.7**
FSA				*e*S	**Sn**	**00 07 15.1**	**-0.2**
ASTB	**Santa Barbara**	**2.23**	**86**	*e*P	Pn	00 06 26.0	-19
ALOL	**LOMAS DE OLMED**	**2.67**	**84**	*e*P	**Pn**	**00 06 49.9**	**+0.4**
GO02	**Mina Guanaco**	**2.67**	**247**	*e*P	**Pn**	**00 06 50.9**	**+1.0**
PB06	**IPOC Station P**	**2.84**	**299**	*e*P	**Pn**	**00 06 53.2**	**+1.5**
PB06				*e*S	**Sn**	**00 07 29.7**	**+0.6**
PB06				IAML		00 07 31.9	
	comp=Z,241nm,0.1s						
PB09	**IPOC Station P**	**3.17**	**316**	*e*P	**Pn**	**00 06 57.1**	**+1.5**
PB09				*e*S	**Sn**	**00 07 38.0**	**+1.8**
PB09				IAML		00 07 41.6	
	comp=Z,70nm,0.2s						
PB14	**IPOC Station P**	**3.25**	**260**	*e*P	**Pn**	**00 06 57.8**	**+1.1**
PB14				*e*S	**Sn**	**00 07 38.0**	**0.0**
PB14				IAML		00 07 40.5	
	comp=Z,113nm,0.2s						
PB05	**IPOC Station P**	**3.30**	**292**	*e*P	**Pn**	**00 06 58.2**	**+1.2**
PB05				*e*S	**Sn**	**00 07 38.0**	**-0.7**
PB05				IAML		00 07 45.0	
	comp=Z,73nm,0.7s						
PB03	**IPOC Station P**	**3.35**	**307**	*e*P	**Pn**	**00 06 58.1**	**+0.4**
PB03				*e*S	**Sn**	**00 07 39.9**	**-0.1**
PB03				IAML		00 07 43.2	
	comp=Z,208nm,0.2s						
AC02	**Maricunga**	**3.38**	**216**	*e*P	**Pn**	**00 06 60.0**	**+1.6**
AC02				*e*S	**Sn**	**00 07 40.4**	**-0.8**
PB10	**IPOC Station P**	**3.42**	**279**	*e*P	**Pn**	**00 06 59.7**	**+1.3**
PB10				*e*S	**Sn**	**00 07 41.6**	**+0.5**
PB10				IAML		00 07 43.5	
	comp=Z,60nm,0.4s						
PB01	**IPOC Station P**	**3.90**	**321**	*e*P	**Pn**	**00 07 04.8**	**+0.5**
PB01				*e*S	**Sn**	**00 07 52.1**	**+0.3**
PB01				IAML		00 07 55.0	
	comp=Z,49nm,0.2s						
AC01	**Pan de Azucar**	**3.93**	**238**	*e*P	**Pn**	**00 07 04.9**	**+0.3**
AC01				*e*S	**Sn**	**00 07 51.2**	**-1.2**
AC01				IAML		00 07 52.1	
	comp=Z,58nm,0.3s						
CYA	**Choya**	**4.41**	**168**	*e*P	**Pn**	**00 07 12.5**	**+1.8**
PB08	**IPOC Station P**	**4.49**	**332**	*e*P	**Pn**	**00 07 13.1**	**+1.1**
PB08				*e*S	**Sn**	**00 08 05.5**	**-0.1**
PB08				IAML		00 08 09.8	
	comp=Z,28nm,0.2s						
GO03	**Copiapo**	**4.59**	**220**	*e*P	**Pn**	**00 07 12.9**	**0.0**
GO03				*e*S	**Sn**	**00 08 06.6**	**-1.0**
TA01	**Diego Aracena**	**4.67**	**319**	*e*P	Pn	00 07 03.5	-11
TA01				IAML		00 08 09.8	
	comp=Z,20nm,1.1s						
GO01	**Chusmiza**	**4.92**	**334**	*e*S	**Sn**	**00 08 15.2**	**-0.6**
PB11	**IPOC Station P**	**5.04**	**329**	*e*P	**Pn**	**00 07 18.1**	**-0.8**
PB11				*e*S	**Sn**	**00 08 15.8**	**-2.4**
PB11				IAML		00 08 21.6	
	comp=Z,32nm,0.2s						
ACLC	**CERRO LA CRUZ**	**5.29**	**181**	*e*P	**Pn**	**00 07 22.0**	**+0.1**
ACLC				*e*S	**Sn**	**00 08 21.6**	**-2.1**
LPAZ	**La Paz**	**7.88**	**351**	P	**Pn**	**00 07 56.1**	**+0.1**
	comp=Z,1.6nm,0.3s,baz=165,slow=10,SNR=13						
LPAZ				S	**Sn**	**00 09 23.4**	**-2.0**
	comp=Z,1.3nm,0.6s,baz=166,slow=19,SNR=4.0						
CPUP	**Villa Florida**	**8.93**	**106**	P	**Pn**	**00 08 08.2**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=263,slow=17,SNR=1.6						
BDFB	**Brasilia**	**19.63**	**68**	P	**P**	**00 10 16.5**	**-0.9**
	comp=Z,1.8nm,0.5s,baz=235,slow=11,SNR=4.1						
QSPA	**South Pole Qui**	**66.08**	**180**	P	**P**	**00 16 30.1**	**+1.1**
	comp=Z,1.0nm,0.7s,baz=150,slow=0.9,SNR=5.7						
	comp=Z,1.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**76.51**	**69**	P	**P**	**00 17 30.6**	**-1.6**
	comp=Z,1.3nm,0.3s,baz=252,slow=4.6,SNR=1.1						
	comp=Z,1.3nm,0.3s						
MKAR	**Makanchi Array**	**146.55**	**40**	PKPbc	**PKPbc**	**00 25 22.0**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=310,slow=3.9,SNR=2.2						

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*NAO **10** 00:13:22.9±4.4, 73.°43N×7.°72E, ML2.5*

*BER **10** 00:13:26.3±1.8, 73.°44N×7.°55E, h10^{km}, Mw3.6, Confirmed Earthquake*

ISC 10 00:13:22.9±1.4**, 73.°33N**±0.°08×**7.°8E**±0.°1**, h10**^{km}**, n24,**
σ**2^{s}.18**/26**, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BJO1	**Bjornoya**	**3.32**	**64**	*e*P	**Pn**	**00 14 14.5**	**-0.3**
BJO1				IAML		00 14 15.1	
	comp=Z,10nm,0.6s						
HSPB	**Hornsund (broa**	**4.18**	**25**	Pn	**Pn**	**00 14 26.7**	**+0.1**
HSPB	**Hornsund (broa**	**4.18**	**25**	*e*P	**Pn**	**00 14 27.0**	**+0.4**
HSPB				IAML		00 14 31.6	
	comp=Z,2.5nm,0.4s						
BRBB	**Barentsburg B**	**5.04**	**15**	Pn	**Pn**	**00 14 38.2**	**0.0**
BRBB	**Barentsburg B**	**5.04**	**15**	*e*P	**Pn**	**00 14 38.3**	**0.0**
TRO	**Tromso**	**5.12**	**131**	Pn	**Pn**	**00 14 42.2**	**+2.7**
TRO				Sn	**Sn**	**00 15 36.2**	**-2.4**
TRO	**Tromso**	**5.12**	**131**	*e*P	**Pn**	**00 14 42.4**	**+2.8**
SPA0	**Spitsbergen Ar**	**5.30**	**19**	Pn	**Pn**	**00 14 42.3**	**+0.3**
	baz=196,slow=18						
SPA0	**Spitsbergen Ar**	**5.30**	**19**	*e*P	**Pn**	**00 14 42.4**	**+0.4**
HOPEN	**Hopen**	**5.48**	**47**	Pn	**Pn**	**00 14 45.1**	**+0.7**
HOPEN	**Hopen**	**5.48**	**47**	*e*P	**Pn**	**00 14 44.5**	**0.0**
HOPEN				IAML		00 14 47.9	
	comp=Z,2.0nm,0.2s						
JNW	**Jan Mayen West**	**5.49**	**253**	*e*P	**Pn**	**00 14 44.7**	**+0.1**
LOF	**Lofoten**	**5.56**	**157**	Pn	**Pn**	**00 14 47.7**	**+2.2**
LOF				Sn	**Sn**	**00 15 44.5**	**-4.8**
LOF	**Lofoten**	**5.56**	**157**	*e*P	**Pn**	**00 14 48.0**	**+2.5**
KBS	**Kingsbay**	**5.71**	**8**	Pn	**Pn**	**00 14 47.5**	**0.0**
KBS	**Kingsbay**	**5.71**	**8**	*e*P	**Pn**	**00 14 47.2**	**-0.3**
KBS				IAML		00 14 51.8	
	comp=Z,2.3nm,0.6s						
KIF	**Kilpisjarvi**	**6.03**	**130**	Pn	**Pn**	**00 14 55.0**	**+2.9**
KIF	**Kilpisjarvi**	**6.03**	**130**	*e*P	**Pn**	**00 14 54.9**	**+2.9**
ARA0	**ARCESS Array S**	**6.79**	**115**	Pn	**Pn**	**00 15 03.7**	**+1.3**
	baz=305,slow=11						
VAGH	**Vaagaholmen**	**6.89**	**162**	*e*P	**Pn**	**00 15 06.1**	**+2.4**
KEV	**Kevo**	**7.04**	**111**	*e*P	**Pn**	**00 15 08.7**	**+2.9**
KONS	**Konsvik**	**7.10**	**163**	*e*P	**Pn**	**00 15 09.4**	**+2.7**
STOK	**Stokkvaagen**	**7.26**	**163**	*e*P	**Pn**	**00 15 11.4**	**+2.7**
LEIR	**Leirfjorden**	**7.48**	**163**	*e*P	**Pn**	**00 15 14.3**	**+2.4**

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*NEIC **10** 00:41:08.8±1.4, 48.°4N±0.°1×153.°3E±0.°2, h131^{km}±7^{km}, mb4.2/13, Error ellipse: s-maj=19.3km s-min=11.5km az=134.0*

*MOS **10** 00:41:08.0±0.9, 48.°20N×152.°98E, h141^{km}, mb4.1/7, Error ellipse: s-maj=14.2km s-min=5.7km az=73.7*

*SKHL **10** 00:41:09.2±0.0, 48.°10N×153.°40E, h140^{km}±8^{km}, mb4.5/2, msha5.5/3*

*KRSC **10** 00:41:10.1±2.6, 48.°04N×154.°09E, h143^{km}±53^{km}, Ml4.2*

*IDC **10** 00:41:10.7±2.0, 48.°29N×153.°13E, h152^{km}±16^{km}, mb3.5/20, mbtmp3.9/24, Error ellipse: s-maj=23.3km s-min=11.9km az=139.0*

*JMA **10** 00:41:11.5±0.8, 47°N±8°×15°4E±°, h1^{km}, MV3.7/9, FAR FIELD*

ISC 10 00:41:08.7±0.6**, 48.°07N**±0.°08×**153.°39E**±0.°07**, h150**^{km}**,**
n134, σ**1^{s}.83**/146**, mb3.9**/44**, 6C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.17**	**33**	*i* PN	**Pn**	**00 41 57.1**	**-0.9**
SKR	**Severo-Kuril's**	**3.17**	**33**	*e*P	**Pn**	**00 41 57.6**	**-0.5**
SKR				*e*S	**Sn**	**00 42 34.9**	**-1.5**
SKR	**Severo-Kuril's**	**3.17**	**33**	*e*P	**Pn**	**00 41 58.1**	**+0.1**
SKR				AMB	AMB	00 42 01.6	
	40nm,0.4s						
SKR				*e*S	**Sn**	**00 42 34.8**	**-1.5**
SKR				A	A	00 42 37.7	
	70nm,0.3s						
SKR				A	A	00 42 37.7	
	110nm,0.3s						
PAU	**Pauzhetka**	**4.06**	**32**	*e*P	**Pn**	**00 42 09.2**	**-0.4**
PAU				AMB	AMB	00 42 15.7	
	20nm,0.4s						
PAU				*e*S	**Sn**	**00 42 54.2**	**-2.8**
PAU				A	A	00 42 56.4	
	150nm,0.3s						
PAU				A	A	00 42 56.4	
	210nm,0.3s						
MIPR	**Malaya Ipel'ka**	**4.74**	**26**	PN	**Pn**	**00 42 19.0**	**+0.6**
MIPR	**Malaya Ipel'ka**	**4.74**	**26**	*e*P	**Pn**	**00 42 19.1**	**+0.6**
KUR	**Kuril'sk**	**4.74**	**235**	*e*P	**Pn**	**00 42 19.2**	**+0.6**
KUR				*e*S	**Sn**	**00 43 13.6**	**+0.5**
ASAK	**Asacha**	**5.20**	**32**	PN	**Pn**	**00 42 24.8**	**+0.2**
ASAK				S	**Sn**	**00 43 23.3**	**-0.7**
ASAK	**Asacha**	**5.20**	**32**	*e*P	**Pn**	**00 42 24.8**	**+0.2**
ASAK				*e*S	**Sn**	**00 43 23.4**	**-0.7**
MTVR	**Mutnovka**	**5.38**	**33**	PN	**Pn**	**00 42 28.2**	**+1.1**
MTVR				S	**Sn**	**00 43 25.1**	**-3.3**
MTVR	**Mutnovka**	**5.38**	**33**	*e*P	**Pn**	**00 42 28.3**	**+1.1**
MTVR				*e*S	**Sn**	**00 43 25.2**	**-3.3**
GRL	**Gorelyy**	**5.40**	**32**	PN	**Pn**	**00 42 27.3**	**0.0**
GRL				S	**Sn**	**00 43 26.1**	**-2.7**
GRL	**Gorelyy**	**5.40**	**32**	*e*P	**Pn**	**00 42 27.3**	**0.0**
GRL				*e*S	**Sn**	**00 43 26.1**	**-2.7**
RUS	**Russkaya**	**5.47**	**35**	*e*S	**Sn**	**00 43 24.3**	**-5.9**
PEA0B	**Petropavlovsk-**	**5.74**	**27**	Pn	**Pn**	**00 42 29.1**	**-2.7**
PEA0B	**Petropavlovsk-**	**5.74**	**27**	*ce*PN	**Pn**	**00 42 32.8**	**+1.0**
PETK	**Petropavlovsk-**	**5.74**	**27**	Pn	**Pn**	**00 42 29.7**	**-2.1**
PETK	**Petropavlovsk-**	**5.74**	**27**	P	**Pn**	**00 42 32.8**	**+1.0**
	3.1nm,0.5s,baz=204,slow=12,SNR=9.8						
PETK				S	**Sn**	**00 43 36.0**	**-0.8**
	2.1nm,0.7s,baz=122,slow=20,SNR=1.2						
UGLR	**Uglovaya**	**6.20**	**32**	PN	**Pn**	**00 42 38.0**	**+0.1**
UGLR	**Uglovaya**	**6.20**	**32**	*e*P	**Pn**	**00 42 38.1**	**+0.1**
KOK	**Koryaka**	**6.20**	**31**	PN	**Pn**	**00 42 39.7**	**+1.7**
KOK	**Koryaka**	**6.20**	**31**	*e*P	**Pn**	**00 42 39.7**	**+1.7**
KOK	**Koryaka**	**6.20**	**31**	*e*P	**Pn**	**00 42 39.7**	**+1.7**
SHO	**Shikotan**	**6.21**	**230**	PN	**Pn**	**00 42 37.4**	**-0.6**
SHO				*e*S	**Sn**	**00 43 42.3**	**-5.7**
SHO				smax	smax		
	comp=E,38nm,0.4s						
SHO				smax	smax		
	comp=N,19nm,0.2s						
SHO	**Shikotan**	**6.21**	**230**	*e*P	**Pn**	**00 42 37.7**	**-0.3**
SHO				*e*S	**Sn**	**00 43 45.2**	**-2.8**
SHO				A	A	00 43 47.2	
	comp=N,30nm,0.4s						
SHO				A	A	00 43 47.2	
	comp=N,40nm,0.4s						
AVH	**Avacha**	**6.21**	**31**	PN	**Pn**	**00 42 41.3**	**+3.2**
AVH	**Avacha**	**6.21**	**31**	*e*P	**Pn**	**00 42 41.3**	**+3.2**
SMAR	**Somma**	**6.23**	**31**	PN	**Pn**	**00 42 40.2**	**+1.7**
SMAR	**Somma**	**6.23**	**31**	*e*P	**Pn**	**00 42 40.3**	**+1.7**
KRX	**Arik**	**6.26**	**30**	PN	**Pn**	**00 42 41.1**	**+2.3**
KRX	**Arik**	**6.26**	**30**	*e*P	**Pn**	**00 42 41.2**	**+2.3**
SDLR	**Sedlovina**	**6.28**	**32**	PN	**Pn**	**00 42 38.7**	**-0.3**
SDLR	**Sedlovina**	**6.28**	**32**	*e*P	**Pn**	**00 42 38.7**	**-0.3**
GNL	**Ganaly**	**6.33**	**25**	PN	**Pn**	**00 42 40.7**	**+1.1**
GNL	**Ganaly**	**6.33**	**25**	*e*P	**Pn**	**00 42 40.8**	**+1.1**
NEM2	**Nemuro 2**	**7.12**	**232**	*e*P	**Pn**	**00 42 48.4**	**-1.8**
NEM2				*e*S	**Sn**	**00 44 03.5**	**-6.4**
NMR	**Nemuro--Hokkai**	**7.13**	**232**	*e*P	**Pn**	**00 42 48.5**	**-1.8**
YSS	**Yuzhno-Sakhali**	**7.29**	**265⇑**	*e*PN	**Pn**	**00 42 55.3**	**+2.8**
JNK	**Nakash**	**7.53**	**237**	*e*P	**Pn**	**00 42 56.3**	**+0.5**
JTKR	**Abashiri--Toko**	**7.77**	**242**	*e*P	**Pn**	**00 43 01.0**	**+2.2**
AKK	**Akkeshi**	**7.84**	**233**	*e*S	**Sn**	**00 44 20.8**	**-6.4**
JAR	**Ashorobuto**	**8.25**	**238**	*e*P	**Pn**	**00 43 06.8**	**+1.5**
JAR				*e*S	**Sn**	**00 44 35.3**	**-1.9**
JOB	**Onbets**	**8.47**	**236**	*e*P	**Pn**	**00 43 07.8**	**-0.4**
JOB				*e*S	**Sn**	**00 44 37.7**	**-4.6**
JKA	**Kamikawa-asahi**	**8.48**	**246**	Pn	**Pn**	**00 43 09.9**	**+1.6**
JKA	**Kamikawa-asahi**	**8.48**	**246**	*e*P	**Pn**	**00 43 09.9**	**+1.6**
ASAJ	**Asahikawa**	**8.48**	**246**	P	**Pn**	**00 43 08.9**	**+0.5**
	comp=N,6.9nm,0.5s,baz=86,slow=16,SNR=5.9						
ASAJ	**Asahikawa**	**8.48**	**246**	PN	**Pn**	**00 43 09.9**	**+1.6**
JCH	**Churui**	**8.92**	**236**	*e*P	**Pn**	**00 43 13.8**	**-0.4**
ERM	**Erimo**	**9.44**	**234**	Pn	**Pn**	**00 43 22.5**	**+1.4**
ERM	**Erimo**	**9.44**	**234**	PN	**Pn**	**00 43 22.5**	**+1.4**
JNBK	**Urakawa-nobuka**	**9.48**	**236**	*e*P	**Pn**	**00 43 20.4**	**-1.3**
JNBK				*e*S	**Sn**	**00 45 01.3**	**-5.4**
SHEM	**Shemya Is, Ala**	**13.99**	**63**	Pn	**Pn**	**00 44 18.8**	**-1.4**
SMY	**Shemya**	**13.99**	**63**	Pn	**Pn**	**00 44 19.0**	**-1.2**
SMY	**Shemya**	**13.99**	**63**	P	**Pn**	**00 44 19.0**	**-1.2**
KLR	**Kul'dur**	**14.35**	**283**	P	**Pn**	**00 44 25.9**	**+1.2**
	comp=N,2.8nm,0.6s,baz=85,slow=10,SNR=8.6						
KLR	**Kul'dur**	**14.35**	**283⇓**	*e*P	**P**	**00 44 26.7**	**-0.8**
KLR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KLR	**Kul'dur**	**14.35**	**283**	*e*P	**P**	**00 44 26.7**	**-0.8**
SEY	**Seymchan**	**14.91**	**358⇑**	*e*P	**Pn**	**00 44 30.0**	**-1.6**
SEY	**Seymchan**	**14.91**	**358**	*e*P	**Pn**	**00 44 30.0**	**-1.6**
USRK	**Ussuriysk Ar.**	**15.32**	**263**	P	**Pn**	**00 44 37.3**	**+0.4**
	comp=Z,1.1nm,0.4s,baz=81,slow=12,SNR=4.6						
USRK	**Ussuriysk Ar.**	**15.32**	**263**	*e*P	**P**	**00 44 40.1**	**+1.8**
USRK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
INU	**Inuyama**	**17.59**	**230**	Pn	**Pn**	**00 45 08.7**	**+4.3**
INU				IAmb	IAmb	00 45 20.5	
	comp=Z,24nm,1.4s						
KSRS	**Korea Array**	**21.40**	**250**	P	**P**	**00 45 46.0**	**+1.6**
	comp=Z,3.4nm,0.7s,baz=47,slow=10,SNR=9.2						
	comp=Z,3.4nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**30.31**	**154**	T	T	01 19 30.1	
	baz=342,slow=76,SNR=10.0						
H11N1	**WAKE ISLAND Hy**	**30.33**	**154**	T	T	01 19 20.8	
	baz=342,slow=76,SNR=27						
H11N3	**WAKE ISLAND Hy**	**30.33**	**154**	T	T	01 19 31.3	
	baz=342,slow=76,SNR=3.7						
SONM	**Songino Array**	**31.10**	**287**	P	**P**	**00 47 12.9**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=70,slow=6.6,SNR=1.8						

	comp=Z,0.2nm,0.5s						
H11S1	**WAKE ISLAND Hy**	**31.42**	**155**	T	T	01 20 48.4	
	baz=343,slow=76,SNR=39						
H11S3	**WAKE ISLAND Hy**	**31.43**	**155**	T	T	01 20 52.9	
	baz=343,slow=76,SNR=35						
H11S2	**WAKE ISLAND Hy**	**31.43**	**155**	T	T	01 20 51.6	
	baz=343,slow=76,SNR=26						
SML	**Sawmill**	**34.89**	**45**	P	**P**	**00 47 43.4**	**-2.0**
SML				IAmb	IAmb	00 47 48.0	
	comp=Z,7.8nm,0.9s						
SML	**Sawmill**	**34.89**	**45**	P	**P**	**00 47 43.4**	**-2.0**
SML				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ILAR	**Eielson Array**	**35.41**	**40**	P	**P**	**00 47 52.2**	**+2.5**
	comp=Z,0.3nm,0.9s,baz=271,slow=8.8,SNR=2.8						
	comp=Z,0.3nm,0.9s						
BCPM	**Bancas Point**	**39.38**	**47**	P	**P**	**00 48 21.6**	**-1.6**
ZALV	**Zalesovo Beam**	**42.01**	**305**	P	**P**	**00 48 44.1**	**-0.6**
	comp=Z,2.1nm,0.5s,baz=70,slow=6.9,SNR=9.8						
	comp=Z,2.1nm,0.5s						
MK31	**Makanchi Array**	**46.51**	**296**	*ce*P	**P**	**00 49 21.2**	**+0.5**
MKAR	**Makanchi Array**	**46.51**	**296**	P	**P**	**00 49 20.6**	**-0.1**
MKAR	**Makanchi Array**	**46.51**	**296**	P	**P**	**00 49 20.3**	**-0.4**
	comp=Z,1.8nm,0.5s,baz=69,slow=7.9,SNR=22						
	comp=Z,1.8nm,0.5s						
MKAR	**Makanchi Array**	**46.51**	**296**	*e*P	**P**	**00 49 20.9**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MKAR	**Makanchi Array**	**46.51**	**296**	*e*P	**P**	**00 49 20.9**	**+0.2**
MAKZ	**Makanchi**	**46.70**	**297**	P	**P**	**00 49 21.8**	**-0.3**
MAKZ				IAmb	IAmb	00 49 22.6	
	comp=Z,1.7nm,0.7s						
MAKZ	**Makanchi**	**46.70**	**297**	P	**P**	**00 49 21.8**	**-0.3**
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURK	**Kurchatov**	**46.80**	**303**	P	**P**	**00 49 22.6**	**-0.2**
KURK				IAmb	IAmb	00 49 23.1	
	comp=Z,4.2nm,0.8s						
KURK	**Kurchatov**	**46.80**	**303**	P	**P**	**00 49 22.9**	**+0.1**
KURK						00 50 54.5	
KURK	**Kurchatov**	**46.80**	**303**	*e*P	**P**	**00 49 22.9**	**+0.1**
KURBB	**Kurchatov Arra**	**46.90**	**303**	P	**P**	**00 49 22.9**	**-0.7**
	comp=Z,2.7nm,0.8s,baz=64,slow=8.4,SNR=13						
KURBB				PcP	**PcP**	**00 50 54.5**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=64,slow=4.2,SNR=2.3						
	comp=Z,2.7nm,0.8s						
EUNU	**Eureka**	**47.80**	**12**	P	**P**	**00 49 30.8**	**+0.6**
BVAR	**Borovoye Array**	**50.17**	**309**	P	**P**	**00 49 48.4**	**-0.2**
	comp=Z,5.4nm,0.5s,baz=57,slow=8.0,SNR=47						
	comp=Z,5.4nm,0.5s						
BRVK	**Borovoye**	**50.21**	**309**	P	**P**	**00 49 48.9**	**0.0**
BRVK	**Borovoye**	**50.21**	**309**	*ce*P	**P**	**00 49 49.0**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRVK	**Borovoye**	**50.21**	**309**	*e*P	**P**	**00 49 49.0**	**+0.1**
SPITS	**Spitsbergen Ar**	**51.35**	**350**	P	**P**	**00 49 55.9**	**-1.2**
	comp=Z,1.3nm,0.7s,baz=26,slow=14,SNR=1.1						
	comp=Z,1.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**52.87**	**256**	P	**P**	**00 50 09.6**	**+0.5**
	comp=Z,1.1nm,0.6s,baz=42,slow=6.8,SNR=4.7						
	comp=Z,1.1nm,0.6s						
ARCES	**ARCESS Array B**	**56.67**	**341**	P	**P**	**00 50 35.6**	**-0.1**
	comp=Z,4.1nm,0.9s,baz=18,slow=7.5,SNR=2.1						
	comp=Z,4.1nm,0.9s						
AB31	**Akbulak array**	**57.73**	**309**	P	**P**	**00 50 43.7**	**+0.3**
AB31				IAmb	IAmb	00 50 44.2	
	comp=Z,1.6nm,0.6s						
ABKAR	**Akbulak array**	**57.73**	**309**	P	**P**	**00 50 43.7**	**+0.3**
ABKAR				IAmb	IAmb	00 50 44.2	
	comp=Z,1.6nm,0.6s						
FINES	**FINESS Array B**	**62.93**	**335**	P	**P**	**00 51 17.8**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=34,slow=7.3,SNR=18						
	comp=Z,0.5nm,0.3s						
FINES	**FINESS Array B**	**62.93**	**335**	*e*P	**P**	**00 51 18.1**	**-0.4**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
S11A	**Rachel**	**63.70**	**62**	P	**P**	**00 51 25.3**	**+1.2**
NB2	**NORSAR Subarra**	**67.04**	**341**	P	**P**	**00 51 45.6**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=29,slow=6.5						
NOA	**NORSAR Array B**	**67.04**	**341**	P	**P**	**00 51 45.3**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=30,slow=6.7,SNR=6.2						
	comp=Z,0.5nm,0.5s						
HFS	**Hagfors**	**67.29**	**339**	P	**P**	**00 51 46.9**	**+0.3**
	comp=Z,1.5nm,0.3s,baz=55,slow=5.6,SNR=19						
	comp=Z,1.5nm,0.3s						
WRA	**Warramunga Arr**	**69.82**	**199**	P	**P**	**00 52 04.9**	**+2.2**
	comp=Z,0.3nm,0.7s,baz=17,slow=6.1,SNR=1.6						
	comp=Z,0.3nm,0.7s						
AKASG	**Malin Array Be**	**70.56**	**326**	P	**P**	**00 52 06.2**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=35,slow=6.2,SNR=4.5						
	comp=Z,0.6nm,0.5s						
AKASG	**Malin Array Be**	**70.56**	**326**	*e*P	**P**	**00 52 06.7**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BUR08	**Bucovina Ar. S**	**74.57**	**327**	P	**P**	**00 52 31.4**	**+0.5**
BURAR	**Bucovina Array**	**74.59**	**327**	P	**P**	**00 52 31.6**	**+0.6**
BURAR	**Bucovina Array**	**74.59**	**327**	P	**P**	**00 52 31.6**	**+0.6**
BURAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
EKA	**Eskdalemuir Ar**	**75.10**	**346**	P	**P**	**00 52 34.1**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=17,slow=4.9,SNR=6.6						
	comp=Z,0.2nm,0.3s						
CLL	**Collm**	**75.34**	**336**	P	**P**	**00 52 35.2**	**+0.2**
CLL				IAmb	IAmb	00 52 36.1	
	comp=Z,4.2nm,0.6s						
CLL	**Collm**	**75.34**	**336**	*i* P	**P**	**00 52 35.5**	**+0.4**
CLL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CLL	**Collm**	**75.34**	**336**	*i* P	**P**	**00 52 35.5**	**+0.4**
	comp=Z,4.0nm,0.8s						
TXAR	**Lajitas Array**	**76.68**	**61**	P	**P**	**00 52 45.3**	**+2.1**
	comp=Z,0.2nm,0.5s,baz=303,slow=4.6,SNR=2.6						
	comp=Z,0.2nm,0.5s						
KHC	**Kasperske Hory**	**77.13**	**334**	*ce*P	**P**	**00 52 47.5**	**+2.2**
KHC				pmax	pmax		
	comp=Z,9.0nm,2.5s						
GERES	**GERESS Array B**	**77.35**	**334**	P	**P**	**00 52 47.1**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=38,slow=6.9,SNR=7.2						
	comp=Z,1.0nm,0.7s						
GERES	**GERESS Array B**	**77.35**	**334**	*e*P	**P**	**00 52 47.3**	**+0.7**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CONA	**Conrad Observa**	**77.52**	**332**	*e*P	**P**	**00 52 48.2**	**+0.7**
	comp=Z,1.1nm,0.6s						
BRTR	**Keskin Array B**	**77.56**	**317**	P	**P**	**00 52 48.2**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=65,slow=5.1,SNR=4.6						
	comp=Z,0.4nm,0.5s						
BRTR	**Keskin Array B**	**77.56**	**317**	*e*P	**P**	**00 52 49.0**	**+1.0**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
RONA	**Rosalia, Austr**	**77.58**	**332**	*i* P	**P**	**00 52 49.3**	**+1.4**
	comp=Z,2.5nm,1.0s						
ARSA	**Arzberg**	**78.22**	**332**	*e*P	**P**	**00 52 51.2**	**-0.2**
	comp=Z,2.7nm,1.0s						
BIOA	**Bad Ischl, Aus**	**78.41**	**334**	*e*P	**P**	**00 52 54.0**	**+1.7**
	comp=Z,3.6nm,1.1s						
SOKA	**Soboth**	**78.89**	**332**	*i* P	**P**	**00 52 55.4**	**+0.3**
	comp=Z,1.7nm,0.6s						
LESA	**Schwarzleotal**	**78.93**	**334**	*e*P	**P**	**00 52 56.6**	**+1.3**
	comp=Z,2.4nm,0.6s						
KBA	**Koelnbreinsper**	**79.05**	**333**	*i* P	**P**	**00 52 57.4**	**+1.3**
	comp=Z,5.3nm,0.9s						
WATA	**Walderalm**	**79.33**	**335**	*e*P	**P**	**00 52 58.6**	**+1.1**
	comp=Z,2.2nm,0.6s						
MYKA	**Terra Mystica**	**79.36**	**333**	*e*P	**P**	**00 52 55.9**	**-1.7**
	comp=Z,4.0nm,1.0s						
WTTA	**Wattenberg**	**79.38**	**335**	*i* P	**P**	**00 52 58.9**	**+1.0**
	comp=Z,6.0nm,1.3s						
RETA	**Reutte**	**79.42**	**335**	*i* P	**P**	**00 52 59.5**	**+1.6**
	comp=Z,1.7nm,0.8s						
MOTA	**Moosalm**	**79.46**	**335**	*e*P	**P**	**00 52 59.4**	**+1.1**
	comp=Z,1.0nm,0.5s						
SQTA	**Sankt Quirin**	**79.54**	**335**	*e*P	**P**	**00 53 00.1**	**+1.5**
	comp=Z,2.6nm,0.9s						
DAVA	**Damuels**	**79.85**	**336**	*e*P	**P**	**00 53 01.5**	**+1.1**
	comp=Z,3.2nm,0.9s						
FETA	**Feichten**	**79.86**	**335**	*e*P	**P**	**00 52 56.8**	**-3.6**
	comp=Z,1.4nm,0.6s						
MMAI	**Mount Meron Ar**	**82.08**	**311**	P	**P**	**00 53 13.8**	**+1.4**
	comp=Z,2.1nm,0.7s,baz=52,slow=9.7,SNR=6.5						
	comp=Z,2.1nm,0.7s						

SJA ***10*** *00:45:44.6±1.9, 29°.50S×72°.13W, h10^{km}, ML3.6, MW3.5*
GUC ***10*** *00:45:50.7±0.7, 29°.57S×71°.90W, h42^{km}±3^{km}, ML3.4*
ISC 10 00:45:45.4±1.1, 29°.50S±0°.03×72°.17W±0°.05, h10^{km}, n45, σ2^{s}.15/79, 2C-3D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.91**	**117**	⇓*i*P	**Pn**	**00 46 04.0**	**-0.2**
CO05				*e*S	**Sg**	**00 46 13.3**	**-1.4**
CO05				IAML		00 46 15.4	
	comp=E,2µm,0.6s						
CO06	**Fray Jorge**	**1.25**	**159**	⇑*i*P	**Pg**	**00 46 10.1**	**+0.5**
CO06				*e*S	**Sb**	**00 46 24.3**	**-1.2**
CO06				IAML		00 46 26.4	
	comp=E,3µm,0.2s						
GO04	**Tololo Observa**	**1.36**	**120**	*i* P	**Pb**	**00 46 11.3**	**+0.1**
GO04				*e*S	**Sn**	**00 46 26.4**	**-2.6**
GO04	**Tololo Observa**	**1.36**	**120**	*e*P	**Pb**	**00 46 11.3**	**+0.1**
GO04				*e*S	**Sn**	**00 46 27.0**	**-1.9**
GO04				*e*S	**Sb**	**00 46 27.1**	**-1.6**
LCO	**Las Campanas**	**1.37**	**69**	*e*P	**Pb**	**00 46 11.7**	**+0.4**
LCO				*e*S	**Sn**	**00 46 26.8**	**-2.4**
LCO	**Las Campanas**	**1.37**	**69**	*e*P	**Pb**	**00 46 11.8**	**+0.5**
LCO				*e*S	**Sn**	**00 46 27.7**	**-1.5**
LCO				IAML		00 46 28.6	
	comp=Z,3µm,0.2s						
AC04	**Llanos de Chal**	**1.61**	**37**	⇑*i*P	**Pb**	**00 46 15.4**	**+0.1**
AC04	**Llanos de Chal**	**1.61**	**37**	*e*P	**Pb**	**00 46 15.2**	**0.0**
AC04				*e*S	**Sn**	**00 46 34.2**	**-0.5**
AC04				IAML		00 46 34.8	
	comp=Z,293nm,0.1s						
AC05	**El Transito**	**1.78**	**69**	⇓*i*P	**Pb**	**00 46 18.0**	**-0.3**
AC05	**El Transito**	**1.78**	**69**	*e*P	**Pb**	**00 46 18.0**	**-0.3**
AC05				*e*S	**Sn**	**00 46 40.5**	**+1.3**
AC05				IAML		00 46 41.3	
	comp=Z,334nm,0.2s						
CO03	**El Pedregal**	**1.85**	**137**	⇓*i*P	**Pn**	**00 46 18.3**	**+1.0**
CO03				*e*S	**Sn**	**00 46 38.4**	**-2.3**
CO03	**El Pedregal**	**1.85**	**137**	*e*P	**Pn**	**00 46 18.3**	**+1.0**
CO03				*e*S	**Sn**	**00 46 39.1**	**-1.6**
CO03				IAML		00 46 40.2	
	comp=Z,491nm,0.2s						
CO01	**Juntas del Tor**	**1.86**	**105**	*i* P	**Pn**	**00 46 18.8**	**+1.2**
CO01				*e*S	**Sn**	**00 46 39.3**	**-2.0**
CO01				IAML		00 46 41.5	
	comp=N,691nm,0.2s						
CO02	**Combarbal**	**1.97**	**150**	*e*P	**Pb**	**00 46 20.8**	**-0.7**
CO02				*e*S	**Sn**	**00 46 41.4**	**-2.5**
CO02	**Combarbal**	**1.97**	**150**	*e*P	**Pn**	**00 46 15.2**	**-3.8**
CO02				*e*P	**Pb**	**00 46 20.7**	**-0.7**
CO02				*e*S	**Sn**	**00 46 43.7**	**-0.2**
CO02				IAML		00 46 44.0	
	comp=Z,946nm,0.8s						
GO03	**Copiapo**	**2.55**	**42**	*e*P	**Pn**	**00 46 28.6**	**+1.7**
GO03				IAML		00 47 10.1	
	comp=E,236nm,0.3s						
GO03	**Copiapo**	**2.55**	**42**	*e*P	**Pn**	**00 46 28.7**	**+1.8**
GO03				*e*S	**Sn**	**00 46 58.7**	**+0.7**
AC06	**Mina Casimiro**	**2.67**	**37**	*e*P	**Pb**	**00 46 30.7**	**-2.6**
AC06				IAML		00 47 13.3	
	comp=E,149nm,0.5s						
ACDV	**Cuesta del Vie**	**2.73**	**105**	*e*P	**Pn**	**00 46 31.8**	**+2.3**
ACDV				*e*S	**Sb**	**00 47 08.0**	**0.0**
ACDV				IAML		00 47 09.7	
	comp=Z,176nm,0.3s						
ACCO	**Cerro Coronel**	**2.90**	**113**	*e*P	**Pb**	**00 46 35.2**	**-2.2**
ACCO				*e*S	**Sn**	**00 47 10.7**	**+3.7**
ACCO				*e*S	**Sb**	**00 47 15.2**	**+2.2**
DOCA	**Reserva Natura**	**3.03**	**119**	*e*P	**Pn**	**00 46 36.8**	**+3.0**
DOCA				*e*S	**Sn**	**00 47 13.5**	**+3.1**
DOCA				IAML		00 47 19.1	
	comp=Z,89nm,0.2s						
VA06	**Catapilco**	**3.14**	**166**	*e*P	**Pn**	**00 46 36.8**	**+1.9**
VA06				*e*S	**Sn**	**00 47 11.0**	**-1.4**
AGUA	**GUANDACOL**	**3.20**	**91**	*e*P	**Pb**	**00 46 40.3**	**-2.2**
AGUA				*e*S	**Sn**	**00 47 13.7**	**-0.5**
AGUA				IAML		00 47 28.4	
	comp=Z,138nm,0.3s						
RTLS	**Leoncito**	**3.37**	**134**	*e*P	**Pb**	**00 46 42.5**	**-2.9**
RTLS				*e*S	**Sn**	**00 47 22.0**	**+3.4**
RTLS				*e*S	**Sb**	**00 47 23.8**	**-2.7**
RTLS				IAML		00 47 32.8	
	comp=Z,376nm,0.7s						
VA03	**San Esteban**	**3.53**	**157**	*e*P	**Pn**	**00 46 43.1**	**+2.6**
VA03	**San Esteban**	**3.53**	**157**	*e*P	**Pn**	**00 46 42.7**	**+2.2**
VA03				*e*S	**Sn**	**00 47 23.8**	**+1.5**
VA03				IAML		00 47 30.7	
	comp=Z,205nm,0.2s						
VCA	**Vinchina**	**3.55**	**79**	*e*P	**Pb**	**00 46 46.0**	**-2.4**
VCA	**Vinchina**	**3.55**	**79**	*e*P	**Pb**	**00 46 45.4**	**-3.0**
VCA				*e*S	**Sn**	**00 47 27.0**	**+4.2**
VCA				IAML		00 47 32.5	
	comp=Z,135nm,0.3s						
ROCH	**El Roble**	**3.60**	**164**	IAML		00 47 43.5	
	comp=N,185nm,0.3s						
AC01	**Pan de Azucar**	**3.62**	**23**	*e*P	**Pn**	**00 46 42.6**	**+1.1**
AC01				*e*S	**Sn**	**00 47 23.3**	**-1.0**
AC02	**Maricunga**	**3.77**	**46**	*e*P	**Pn**	**00 46 46.9**	**+2.7**
AC02	**Maricunga**	**3.77**	**46**	*e*P	Pn	00 46 35.2	-8.9
AC02				*e*P	Pb	00 46 47.0	-5.5
AC02				*e*S	**Sg**	**00 47 43.9**	**-2.8**
AC02				IAML		00 47 47.1	
	comp=Z,64nm,0.4s						
PEL	**Peldehue**	**3.84**	**161**	*e*P	**Pn**	**00 46 47.0**	**+2.3**
MT02	**Curacav**	**3.85**	**167**	*e*P	**Pn**	**00 46 46.0**	**+1.3**
MT02	**Curacav**	**3.85**	**167**	*e*P	**Pn**	**00 46 46.3**	**+1.6**
MT02				*e*S	**Sn**	**00 47 28.4**	**-1.6**
MT02				IAML		00 47 30.9	
	comp=Z,76nm,0.2s						
CFA	**Coronel Fontan**	**3.98**	**123**	*e*P	**Pn**	**00 46 49.7**	**+3.1**
CFA				*e*S	**Sn**	**00 47 35.4**	**+2.0**
MT05	**Renca**	**4.06**	**163**	*e*P	**Pn**	**00 46 49.5**	**+1.8**
MT05				IAML		00 47 58.4	
	comp=Z,78nm,1.1s						
FCH	**Farellones**	**4.14**	**158**	*e*P	**Pn**	**00 46 51.7**	**+2.7**
MT03	**Universidad Ad**	**4.22**	**161**	*e*P	**Pn**	**00 46 52.6**	**+2.7**
MT03				*e*S	**Sn**	**00 47 39.9**	**+0.5**
MT03				IAML		00 47 42.7	
	comp=Z,114nm,0.1s						
MT04	**Ro Olivares**	**4.26**	**157**	*e*P	**Pn**	**00 46 53.0**	**+2.5**
MT04				*e*S	**Sn**	**00 47 42.4**	**+1.9**
MT04				*e*S	**Sn**	**00 47 42.6**	**+2.2**
MT04				IAML		00 47 52.7	
	comp=Z,91nm,0.5s						
ARCO	**CERRO ARCO**	**4.33**	**141**	*e*P	Pb	00 46 56.7	-5.0
ARCO				*e*S	**Sn**	**00 47 44.2**	**+2.1**
ARCO				IAML		00 48 08.2	
	comp=Z,62nm,1.1s						
MT08	**Bocatoma Ro**	**4.34**	**156**	*e*P	**Pn**	**00 46 55.8**	**+4.1**
MT08				*e*S	**Sn**	**00 47 45.5**	**+3.1**
MT08				*e*S	**Sn**	**00 47 46.3**	**+3.9**
MT08				IAML		00 47 46.3	
	comp=Z,64nm,0.6s						
MT01	**Popeta**	**4.42**	**170**	*e*P	**Pn**	**00 46 54.4**	**+1.9**
MT01				*e*S	**Sn**	**00 47 44.3**	**+0.3**
MT01				IAML		00 47 56.6	
	comp=Z,64nm,0.5s						
MT13	**San Alfonso**	**4.52**	**160**	*e*P	**Pn**	**00 46 57.0**	**+2.9**
MT13				IAML		00 48 19.8	
	comp=Z,29nm,1.4s						
ACLC	**CERRO LA CRUZ**	**4.55**	**90**	*e*P	**Pn**	**00 46 57.2**	**+2.7**

NEIC ***10*** *00:51:58.5±2.7, 15°.2S±0°.1×173°.2W±0°.1, h10^{km}±1^{km}, mb4.6/47, Error ellipse: s-maj=21.7km s-min=16.1km az=141.0*
IDC ***10*** *00:52:11.2±4.7, 15°.20S×173°.47W, h116^{km}±41^{km}, mb3.7/11, mbtmp4.1/12, MS3.5/23, Error ellipse: s-maj=26.3km s-min=17.0km az=124.0*
ISC 10 00:52:01.3±0.6, 15°.2S±0°.1×173°.4W±0°.2, h30^{km}, n80, σ0^{s}.95/45, mb4.5/35, MS3.6/21, 1C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.04**	**50**	Pn	Pn	00 52 27.3	-6.4
MSVF	**Nonsavu**	**8.59**	**252**	P	Pn	00 54 13.6	+10
	11nm,0.8s,baz=88,slow=16,SNR=5.3						
MSVF				LR	LR	00 57 01.4	
	comp=Z,242nm,21.6s,baz=71,slow=34						
RAO	**Raoul Island**	**14.56**	**196**	LR	LR	01 00 22.3	
	comp=Z,208nm,21.9s,baz=64,slow=34						
DZM	**Mont Dzumac**	**20.28**	**247**	P	**P**	**00 56 35.6**	**+0.9**
DZM	**Mont Dzumac**	**20.28**	**247**	*e*LR	LR	01 01 13.4	
	207nm,26.8s						
DZM	**Mont Dzumac**	**20.28**	**247**	P	Pn	00 56 40.1	+3.2
	6.7nm,0.8s,baz=82,slow=18,SNR=2.7						
DZM				LR	LR	01 03 02.3	
	comp=Z,156nm,18.9s,baz=82,slow=32						
TBI	**Tubuai**	**23.95**	**113**	*e*LR	LR	01 02 34.3	
	391nm,27.5s						
URZ	**Urewera**	**24.42**	**198**	LR	LR	01 05 38.5	
	comp=Z,164nm,18.2s,baz=114,slow=33						
TOZ	**Tahuroa Road**	**24.47**	**202**	P	**P**	**00 57 19.2**	**+1.5**
TOZ				IAmb	IAmb	00 57 21.0	
	comp=Z,13nm,0.9s						
RTZ	**Ruatahuna**	**24.79**	**198**	P	**P**	**00 57 21.7**	**+1.1**
RTZ				IAmb	IAmb	00 57 37.4	
	comp=Z,18nm,1.1s						
BFZ	**Birch Farm**	**26.91**	**198**	P	**P**	**00 57 39.5**	**-0.3**
MRZ	**Mangatainoka R**	**27.09**	**199**	P	**P**	**00 57 40.4**	**-1.0**
QRZ	**Quartz Range**	**28.29**	**203**	P	**P**	**00 57 51.4**	**-0.7**
TKNZ	**Takaka Hill**	**28.31**	**202**	P	**P**	**00 57 52.3**	**0.0**
MRNZ	**Matariki Terra**	**28.70**	**202**	P	**P**	**00 57 55.8**	**0.0**
DSZ	**Denniston Nort**	**29.35**	**203**	P	**P**	**00 58 00.6**	**-1.0**
GVZ	**Greta Valley S**	**29.99**	**200**	P	**P**	**00 58 07.8**	**+0.6**
LTZ	**Lake Taylor**	**30.09**	**201**	P	**P**	**00 58 07.6**	**-0.5**
FOZ	**Fox Glacier**	**31.64**	**204**	P	**P**	**00 58 20.6**	**-1.1**
WHZ	**Wether Hill Ro**	**34.35**	**203**	P	**P**	**00 58 46.0**	**+0.7**
RKT	**Rikitea**	**37.02**	**108**	*e*LR	LR	01 08 54.7	
	comp=Z,3µm,33.2s						
STKA	**Stephens Creek**	**44.13**	**240**	P	**P**	**01 00 06.9**	**-0.4**
	comp=Z,2.8nm,0.6s,baz=94,slow=11,SNR=3.5						
	comp=Z,2.8nm,0.6s						
WRA	**Warramunga Arr**	**49.90**	**257**	P	**P**	**01 00 52.1**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=91,slow=6.9,SNR=40						
WRA				PcP	**PcP**	**01 02 12.8**	**0.0**
	comp=Z,0.4nm,0.7s,baz=97,slow=3.3,SNR=1.6						
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**50.18**	**252**	P	**P**	**01 00 54.0**	**-0.6**
	comp=Z,2.5nm,0.5s,baz=87,slow=8.1,SNR=20						
ASAR				LR	LR	01 21 01.6	
	comp=Z,76nm,18.9s,baz=93,slow=34						
	comp=Z,2.5nm,0.5s						
VNDA	**Vanda**	**63.53**	**186**	P	**P**	**01 02 28.7**	**+0.2**
	comp=Z,1.8nm,1.0s,baz=16,slow=6.7,SNR=5.6						
	comp=Z,1.8nm,1.0s						
DAV	**Davao City (W)**	**64.41**	**286**	LR	LR	01 29 20.6	
	comp=Z,17nm,18.8s,baz=70,slow=35						
SHEM	**Shemya Is, Ala**	**68.55**	**352**	LR	LR	01 27 15.6	
	comp=Z,49nm,19.7s,baz=335,slow=31						
MJAR	**Matsushiro Arr**	**68.83**	**320**	LR	LR	01 26 53.3	
	comp=Z,31nm,20.7s,baz=180,slow=30						
PETK	**Petropavlovsk-**	**72.49**	**342**	P	**P**	**01 03 25.5**	**+0.6**
	comp=Z,1.7nm,0.8s,baz=124,slow=8.0,SNR=4.2						
PETK				LR	LR	01 31 57.4	
	comp=Z,15nm,19.1s,baz=114,slow=33						
	comp=Z,1.7nm,0.8s						
PFO	**Pinyon Flats O**	**72.80**	**47**	LR	LR	01 29 10.9	
	comp=Z,53nm,19.7s,baz=225,slow=30						
NVAR	**Mina Array Bea**	**74.20**	**42**	P	**P**	**01 03 35.0**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=227,slow=10,SNR=5.7						
NVAR				LR	LR	01 31 30.3	
	comp=Z,48nm,18.6s,baz=210,slow=32						
	comp=Z,0.5nm,0.7s						
KDAK	**Kodiak Island**	**74.76**	**11**	LR	LR	01 29 09.3	
	comp=Z,61nm,20.4s,baz=204,slow=30						
QSPA	**South Pole Qui**	**74.80**	**180**	P	**P**	**01 03 39.6**	**+1.0**
QSPA				IAmb	IAmb	01 03 40.4	
	comp=Z,5.0nm,0.8s						
QSPA	**South Pole Qui**	**74.80**	**180**	P	**P**	**01 03 39.5**	**+0.9**
	comp=Z,4.6nm,0.8s,baz=58,slow=1.4,SNR=18						
	comp=Z,4.6nm,0.8s						
ILSW	**Iliamna Southw**	**76.73**	**10**	P	**P**	**01 03 48.9**	**-0.6**
K15K	**Wolf Creek Mou**	**77.84**	**6**		**P**	**01 03 56.4**	**+0.9**
K15K				IAmb	IAmb	01 03 57.5	
	comp=Z,8.5nm,1.1s						
MVU	**Marysvale**	**78.27**	**45**	P	**P**	**01 03 59.1**	**+0.3**
MVU				IAmb	IAmb	01 03 59.6	
	comp=Z,3.5nm,0.7s						
L18K	**Granite Mounta**	**78.32**	**8**		**P**	**01 03 58.9**	**+0.7**
GLI	**Glacier Island**	**78.73**	**13**	P	**P**	**01 03 57.4**	**-3.1**
GLI				IAmb	IAmb	01 04 00.4	
	comp=Z,8.0nm,0.8s						
J16K	**Anvik River**	**78.90**	**6**		**P**	**01 04 02.4**	**+1.0**
HLID	**Hailey**	**79.49**	**39**		**P**	**01 04 05.5**	**+0.1**
J18K	**Innoko River**	**79.52**	**8**	P	**P**	**01 04 05.4**	**+0.7**
K20K	**Telida**	**79.77**	**9**		**P**	**01 04 06.2**	**0.0**
N25K	**Chitina, Valde**	**79.92**	**14**		**P**	**01 04 06.8**	**-0.3**
N25K				IAmb	IAmb	01 04 07.5	
	comp=Z,4.3nm,0.8s						
MA2	**Magadan**	**80.02**	**342**	LR	LR	01 34 30.8	
	comp=Z,19nm,20.8s,baz=128,slow=32						
CAST	**Castle Rocks**	**80.14**	**10**		**P**	**01 04 06.3**	**-1.8**
PV23	**Carpenter Ridg**	**80.44**	**46**	P	**P**	**01 04 11.5**	**+0.8**
PV23				IAmb	IAmb	01 04 28.0	
	comp=Z,9.2nm,1.2s						
TRF	**Thorofare Moun**	**80.47**	**10**		**P**	**01 04 09.3**	**-0.8**
TRF				IAmb	IAmb	01 04 09.8	
	comp=Z,4.5nm,0.7s						
TXAR	**Lajitas Array**	**80.51**	**56**	P	**P**	**01 04 11.6**	**+0.6**
	comp=Z,0.9nm,1.0s,baz=234,slow=4.0,SNR=4.1						
TXAR				LR	LR	01 30 41.7	
	comp=Z,25nm,21.0s,baz=252,slow=29						
	comp=Z,0.9nm,1.0s						
J20K	**Nowinta River**	**80.54**	**8**		**P**	**01 04 10.5**	**+0.3**
J20K				IAmb	IAmb	01 04 10.7	
	comp=Z,5.1nm,0.9s						
NEW	**Newport**	**80.56**	**34**	LR	LR	01 31 33.4	
	comp=Z,32nm,19.9s,baz=203,slow=29						
PV01	**Paradox Valley**	**80.60**	**46**	P	**P**	**01 04 11.3**	**-0.2**
ANMO	**Albuquerque**	**80.68**	**50**	LR	LR	01 31 28.5	
	comp=Z,44nm,20.9s,baz=346,slow=29						
MCK	**McKinley**	**80.96**	**11**	IAmb	IAmb	01 04 12.8	
	comp=Z,6.8nm,0.9s						
M26K	**Nabesna, AK**	**80.99**	**14**	IAmb	IAmb	01 04 13.3	
	comp=Z,5.2nm,1.1s						
M27K	**Edge Creek, AK**	**81.21**	**14**	IAmb	IAmb	01 04 15.0	
	comp=Z,4.8nm,1.1s						
WRH	**Wood River Hil**	**81.79**	**11**	IAmb	IAmb	01 04 17.3	
	comp=Z,8.6nm,1.0s						
HDA	**Harding Lake**	**81.95**	**11**	IAmb	IAmb	01 04 17.9	
	comp=Z,5.1nm,0.9s						
CCB	**Clear Creek Bu**	**82.00**	**11**	IAmb	IAmb	01 04 18.1	
	comp=Z,6.8nm,0.9s						
PDAR	**Pinedale Array**	**82.13**	**42**	P	**P**	**01 04 19.0**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=208,slow=2.9,SNR=4.6						
PDAR				LR	LR	01 32 27.8	
	comp=Z,24nm,20.1s,baz=214,slow=29						
	comp=Z,0.3nm,0.4s						
YHL	**Hebgen Lake**	**82.14**	**39**	IAmb	IAmb	01 04 20.9	
	comp=Z,5.4nm,0.9s						
SCRK	**Sand Creek**	**82.15**	**13**	IAmb	IAmb	01 04 19.5	
	comp=Z,4.0nm,1.0s						
ILAR	**Eielson Array**	**82.29**	**11**	P	**P**	**01 04 18.1**	**-1.4**
ILAR	**Eielson Array**	**82.29**	**11**	P	**P**	**01 04 18.7**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=230,slow=5.9,SNR=14						
ILAR				LR	LR	01 32 15.0	
	comp=Z,33nm,20.4s,baz=147,slow=29						
	comp=Z,1.1nm,0.7s						
F19K	**Shaleruckik Mo**	**82.65**	**6**	IAmb	IAmb	01 04 21.8	
	comp=Z,3.2nm,0.8s						
J26L	**Joseph Creek**	**82.70**	**13**	IAmb	IAmb	01 04 22.9	
	comp=Z,4.0nm,0.9s						
L29M	**L29M**	**82.77**	**15**	IAmb	IAmb	01 04 23.1	
	comp=Z,5.9nm,0.8s						
PRP	**Porcupine Dome**	**83.21**	**11**	IAmb	IAmb	01 04 25.1	
	comp=Z,7.4nm,1.2s						
E19K	**Redstone River**	**83.31**	**6**	IAmb	IAmb	01 04 25.6	
	comp=Z,3.2nm,0.8s						
E22K	**Anaktuvuk Pass**	**84.60**	**8**	IAmb	IAmb	01 04 32.5	
	comp=Z,3.9nm,0.9s						
I30M	**Mount Dempster**	**84.95**	**15**	IAmb	IAmb	01 04 33.8	
	comp=Z,3.6nm,1.1s						
INK	**Inuvik**	**88.11**	**14**	LR	LR	01 36 49.6	
	comp=Z,28nm,21.6s,baz=248,slow=30						
YAK	**Yakutsk**	**88.98**	**337**	LR	LR	01 41 16.6	
	comp=Z,13nm,19.5s,baz=128,slow=33						
YKA	**Yellowknife Ar**	**89.94**	**23**	P	**P**	**01 04 56.6**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=253,slow=3.6,SNR=4.3						
YKA				LR	LR	01 39 09.5	
	comp=Z,34nm,18.6s,baz=338,slow=31						
	comp=Z,0.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**92.59**	**288**	LR	LR	01 40 55.3	
	comp=Z,5.3nm,20.7s,baz=140,slow=32						
SYO	**Syowa Base**	**92.76**	**191**	⇑*i*P	**P**	**01 05 09.0**	**-1.4**
ULM	**Lac du Bonnet**	**93.80**	**39**	LR	LR	01 41 45.4	
	comp=Z,43nm,19.0s,baz=8.5,slow=32						
HFS	**Hagfors**	**134.88**	**355**	PKhKP	PKPpre	01 11 07.5	
	comp=Z,0.4nm,0.3s,baz=72,slow=4.8,SNR=6.2						
BRTR	**Keskin Array B**	**146.05**	**321**	PKPbc	**PKPbc**	**01 11 38.8**	**0.0**
	comp=Z,1.9nm,0.8s,baz=78,slow=1.6,SNR=13						
MMAI	**Mount Meron Ar**	**148.48**	**309**	PKPbc	**PKPdf**	**01 11 43.7**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=62,slow=15,SNR=1.5						

*OSPL **10** 01:28:22.8±1.2, 18°.48N×70°.61W, h0^{km}±5^{km}, ML2.9*
*SDD **10** 01:28:22.4±2.3, 18°.46N×70°.61W, h12^{km}±39^{km}, MD3.3, ML3.3, MW3.3*
ISC 10 01:28:21.6±1.0, **18°.48N**±0°.03×**70°.58W**±0°.02, **h12**^{km}±9^{km}, **n29,** σ**1^{s}.30**/47, **30C-2D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BANI	BANI	0.23	111	⇑ePg	Pb	01 28 27.7	-0.1
BANI				IAML		01 28 35.1	
	comp=N,5µm,0.2s						
ABDR	Alto Bandera	0.34	353	⇓ePg	Pg	01 28 27.7	-0.9
ABDR				⇑eSg	Sg	01 28 32.8	-0.5
ABDR				IAML		01 28 33.2	
	comp=N,13µm,0.2s						
LOSC1	San Cristbal	0.46	99	i P	Pn	01 28 48.1	+14
LOSC1				eS		01 28 54.9	
SDD	Santo Domingo	0.64	91	⇑ePg	Pg	01 28 34.3	+0.3
SDD				⇑eSg	Sb	01 28 43.9	+0.4
SDD				IAML		01 28 53.4	
	comp=N,92nm,0.8s						
SDD	Santo Domingo	0.64	91	i P	Pg	01 28 34.6	+0.6
SDD				eS	Sg	01 28 43.2	+0.8
DR08	Loma La Naviza	0.72	48	⇑ePg	Pb	01 28 35.9	-0.3
DR08				⇑eSg	Sb	01 28 45.6	-0.4
DR08				IAML		01 28 47.4	
	comp=N,4µm,0.3s						
PODR	Polo	0.73	245	⇑ePg	Pg	01 28 35.7	-0.2
PODR				IAML		01 28 51.1	
	comp=N,380nm,0.2s						
SDDR	Presa de Saban	0.84	307	⇑ePg	Pb	01 28 36.9	-1.3
SDDR				⇑eSg	Sb	01 28 48.2	-1.2
SDDR				IAML		01 28 52.2	
	comp=N,890nm,0.4s						
SDDR	Presa de Saban	0.84	307	i P	Pb	01 28 36.9	-1.3
SDDR				eS	Sb	01 28 48.6	-0.8
SDDR				IAML		01 28 55.7	
	comp=Z,423nm,0.2s						
LODU1	El Espartillar	0.85	262	i P	Pb	01 28 37.9	-0.6
LODU1				IAML		01 28 54.0	
	comp=Z,395nm,0.3s						
SC01	Santiago de lo	0.96	352	⇑ePg	Pb	01 28 39.2	-1.0
SC01				⇑eSg	Sg	01 28 53.2	+0.6
SC01				IAML		01 28 53.8	
	comp=N,1µm,0.5s						
SC01	Santiago de lo	0.96	352	i P	Pb	01 28 39.3	-0.8
SC01				eS	Sb	01 28 52.6	-0.2
SC01				IAML		01 28 54.6	
	comp=Z,768nm,0.3s						
LOVI	El Cajuil, Ovi	1.00	228	i P	Pb	01 28 40.2	-0.8
LOVI				eS	Sg	01 28 54.1	0.0
LOVI				IAML		01 28 57.2	
	comp=Z,221nm,0.2s						
REDR	Restauracion	1.03	312	⇓ePg	Pg	01 28 44.9	+3.4
REDR				⇑eSg	Sn	01 29 01.9	+5.6
REDR				IAML		01 29 04.7	
	comp=N,874nm,0.1s						
NADR	Nagua	1.11	38	⇑ePg	Pn	01 28 41.6	-1.5
NADR				⇑eSg	Sb	01 28 57.3	0.0
NADR				IAML		01 28 57.9	
	comp=N,2µm,0.3s						
LOBH	Bahia de las A	1.18	239	i P	Pb	01 28 43.8	-0.1
LOBH				IAML		01 29 06.6	
	comp=Z,122nm,0.8s						
HATOM	Hato Mayor del	1.18	75	⇑ePg	Pn	01 28 42.8	-1.3
HATOM				⇑eSg	Sn	01 28 59.4	-0.7
HATOM				IAML		01 29 01.0	
	comp=N,154nm,0.3s						
MADR	Mao Valverde	1.19	336	⇑ePg	Pn	01 28 42.6	-1.5
MADR				⇑eSg	Sb	01 28 58.5	-1.0
MADR				IAML		01 29 01.6	
	comp=N,644nm,0.7s						
JIDR	Jimani	1.20	271	⇑ePg	Pn	01 28 43.3	-0.9
JIDR				IAML		01 29 03.6	
	comp=N,173nm,0.2s						
CADR	Cabrera	1.33	27	⇑ePg	Pn	01 28 45.8	-0.3
CADR				⇑eSg	Sg	01 29 05.2	+0.6
CADR				IAML		01 29 06.2	
	comp=N,824nm,0.5s						
LUDR	Luperon	1.45	346	⇑ePg	Pb	01 28 48.0	-0.7
LUDR				IAML		01 29 15.1	
	comp=N,2µm,0.3s						
LODA1	ITESIL, Dajabo	1.50	315	⇑ePg	Pb	01 28 49.3	-0.2
LODA1				⇑eSg	Sn	01 29 05.5	-2.5
LODA1				IAML		01 29 09.3	
	comp=N,2µm,1.2s						
LODA1	ITESIL, Dajabo	1.50	315	i P	Pb	01 28 48.6	-0.9
LODA1				eS	Sn	01 29 07.3	-0.6
LODA1				IAML		01 29 07.8	
	comp=Z,1µm,1.2s						
MIDR	Miches	1.54	71	⇑ePg	Pn	01 28 49.0	+0.2
MIDR				eSg	Sn	01 29 08.4	-0.4
MIDR				IAML		01 29 11.3	
	comp=N,93nm,0.5s						
SMDR	Samana, DR	1.55	58	⇑ePg	Pn	01 28 48.9	-0.1
SMDR				⇑eSg	Sb	01 29 10.6	+0.7
SMDR				IAML		01 29 14.0	
	comp=N,133nm,0.6s						
PAPH	Port-au-Prince	1.63	272	i P	Pn	01 28 50.1	0.0
MCDR	Montecristi	1.74	324	⇑ePg	Pn	01 28 52.0	+0.4
MCDR				⇑eSg	Sb	01 29 16.1	+0.8
MCDR				IAML		01 29 20.6	
	comp=N,442nm,0.5s						
HIDR	Higuey Centro	1.77	86	⇑eSg	Sb	01 29 16.2	-0.1
HIDR				IAML		01 29 22.5	
	comp=N,262nm,0.2s						
GRTK	Grand Turk	3.06	350	i P	Pn	01 29 10.7	+0.8
GRTK				IAML		01 29 46.5	
	comp=Z,23nm,1.8s						

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*IDC **10** 01:31:57.1±1.2, 6°.70S×130°.08E, h0^{km}, mb4.2/4, mbtmp4.4/8, ML4.6/4, Error ellipse: s-maj=43.6km s-min=19.7km az=74.0*
*DJA **10** 01:32:12.5±0.3, 7°S±2°×13°0E±°, h177^{km}±7^{km}, M4.5/15, mB5.0/7, mb4.3/13, MLv4.6/15, Mw(mB)4.3/7*
*NEIC **10** 01:32:13.1±0.9, 7°.15S±0°.08×129°.50E±0°.08, h132^{km}±7^{km}, mb4.1/16, Error ellipse: s-maj=12.0km s-min=11.1km az=149.0*
ISC 10 01:32:13.9±0.5, **7°.27S**±0°.05×**129°.52E**±0°.05, **h150**^{km}, **n69,** σ**1^{s}.69**/73, **mb4.0**/7, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.90	112	Pn	Pn	01 32 47.7	-0.2
SAUI	Saumlaki	1.90	112	P	Pn	01 32 48.3	+0.4
SAUI				S	Sn	01 33 14.5	+0.5
BNDI	Bandanaira	2.76	8	P	Pn	01 32 58.3	0.0
BNDI				S	Sn	01 33 32.6	0.0
AAI	Ambon	3.80	340	P	Pn	01 33 11.3	-0.3
MSAI	Masohi	3.94	351	P	Pn	01 33 12.7	-0.8
MSAI				S	Sn	01 34 00.6	+0.7
NLAI	Namlea	4.68	329	P	Pn	01 33 22.4	-0.7
FAKI	Fak Fak	5.11	32	Pn	Pn	01 33 26.2	-2.7
FAKI	Fak Fak	5.11	32	P	Pn	01 33 25.5	-3.3
	0.9nm3µm30nm,0.5s						
DRS	Darwin Rock St	5.30	165	P	Pn	01 33 31.8	+0.4
DRS	Darwin Rock St	5.30	165	S	Sn	01 34 30.2	-1.7
KMPI	Kaimana, Papua	5.50	49	P	Pn	01 33 32.1	-1.9
	2.1nm156nm,0.8s						
SOEI	Soe	5.75	244	Pn	Pn	01 33 37.6	+0.1
SOEI	Soe	5.75	244	P	Pn	01 33 37.9	+0.4
SOEI	Soe	5.75	244	P	Pn	01 33 37.7	+0.1
MTN	Manton Dam	5.76	164	Pn	Pn	01 33 37.0	-0.5
MTN	Manton Dam	5.76	164	P	Pn	01 33 37.4	-0.1
MTN	Manton Dam	5.76	164	S	Sn	01 34 39.8	-3.0
KDU	Kakadu	6.12	152	P	Pn	01 33 41.6	-0.6
SANI	Sanana	6.27	326	P	Pn	01 33 45.3	+1.0
	0.1nm22nm,0.8s						
BATI	Baumata	6.48	243	Pn	Pn	01 33 46.2	-1.0
	26nm,0.3s,baz=78,slow=2.2,SNR=10						
BATI				Sn	Sn	01 34 58.0	-2.1
	30nm,0.3s,baz=79,slow=21,SNR=9.3						
	94nm,0.4s						
BATI	Baumata	6.48	243	P	Pn	01 33 47.3	+0.1
	0.9nm2µm103nm,0.8s						
SWI	Sorong	6.60	15	P	Pn	01 33 48.0	-0.7
	0.2nm8.6nm,0.4s						
RKPI	Ransiki, Papua	7.37	39	P	Pn	01 33 55.2	-3.8
	39nm,0.6s						
EDFI	Ende, Flores	7.89	259	P	Pn	01 34 05.4	-0.7
	0.1nm2µm11nm,0.7s						
TNTI	Ternate	8.28	345	P	Pn	01 34 08.8	-2.3
	18nm,0.8s						
KNRA	Kununurra	8.39	185	Pn	Pn	01 34 10.8	-1.8
BASI	Baing, Sumba	9.31	251	P	Pn	01 34 24.1	-0.8
FITZ	Fitzroy Crossi	11.41	199	Pn	Pn	01 34 49.5	-3.1
FITZ	Fitzroy Crossi	11.41	199	Pn	Pn	01 34 49.7	-2.8
	1.7nm,0.3s,baz=20,slow=10.0,SNR=59						
FITZ				Sn	Sn	01 36 49.7	-8.9
	4.0nm,0.3s,baz=90,slow=10,SNR=8.8						
	5.6nm,0.4s						
FITZ	Fitzroy Crossi	11.41	199	P	Pn	01 34 50.0	-2.5
PLAI	Plampang	11.73	262	P	Pn	01 34 55.4	-1.4
WB0	Warramunga Arr	13.29	160	Pn	Pn	01 35 13.3	-3.6
WRAB	Tennant Creek	13.43	160	Pn	Pn	01 35 15.7	-3.1
WRA	Warramunga Arr	13.43	160	Pn	Pn	01 35 14.0	-4.7
WRA	Warramunga Arr	13.43	160	Pn	Pn	01 35 14.8	-4.0
	2.9nm,0.3s,baz=339,slow=13,SNR=70						
WRA				Sn	Sn	01 37 33.9	-14
	6.3nm,0.3s,baz=336,slow=22,SNR=9.8						
	10.0nm,0.9s						
WR8	Warramunga Arr	13.50	160	Pn	Pn	01 35 16.2	-3.4
COEN	Coen	14.97	117	Pn	Pn	01 35 38.2	+0.1
COEN				IAmb	IAmb	01 35 47.0	
	comp=Z,6.1nm,0.8s						
COEN	Coen	14.97	117	P	P	01 35 40.8	+0.9
JAGI	Jajag, Banyuwa	15.27	265	Pn	Pn	01 35 41.0	-0.9
JAGI				IAmb	IAmb	01 35 43.0	
	comp=Z,15nm,0.8s						
JAGI	Jajag, Banyuwa	15.27	265	P	Pn	01 35 42.3	+0.4
QIS	Mount Isa	16.43	145	P	P	01 35 56.3	+0.3
MBWA	Marble Bar	16.74	213		Pn	01 36 01.1	+1.4
MBWA				IAmb	IAmb	01 36 18.0	
	comp=Z,12nm,1.0s						
AS31	Alice Springs	16.84	166		P	01 36 00.4	-0.1
AS31				IAmb	IAmb	01 36 04.6	
	comp=Z,4.3nm,0.5s						
ASAR	Alice Springs	16.84	166		Pn	01 36 01.6	+0.6
ASAR	Alice Springs	16.84	166	P	P	01 36 00.1	-0.4
	comp=Z,2.1nm,0.3s,baz=343,slow=9.1,SNR=43						
ASAR				S	S	01 38 54.9	-13
	comp=Z,2.0nm,0.8s,baz=343,slow=20,SNR=4.7						
	comp=Z,6.6nm,0.7s						
AS01	Alice Springs	16.84	166	P	Pn	01 36 01.2	+0.1
PSA00	Pilbara Seismi	17.01	212		Pn	01 36 04.0	+0.9
PSA00				IAmb	IAmb	01 36 05.4	
	comp=Z,13nm,0.9s						
PSA00	Pilbara Seismi	17.01	212	P	Pn	01 36 03.2	+0.1
MTSU	Mount Surprise	18.01	128	P	Pn	01 36 16.9	+1.9
FORT	Forrest	23.43	183	P	P	01 37 11.1	+1.4
FORT	Forrest	23.43	183	P	P	01 37 11.0	+1.4
QLP	Quilpie	23.76	146	P	P	01 37 14.8	+2.0
BBOO	Buckleboo	26.13	167	P	P	01 37 35.3	+1.2
BBOO	Buckleboo	26.13	167	P	P	01 37 35.6	+1.5
STKA	Stephens Creek	26.95	157	P	P	01 37 42.3	+0.9
STKA	Stephens Creek	26.95	157	P	P	01 37 43.0	+1.5
	comp=Z,4.2nm,0.6s,baz=328,slow=10,SNR=8.6						
	comp=Z,4.2nm,0.6s						
EVN	Everest	54.11	312	P	P	01 41 24.0	-0.3
EVN				IAmb	IAmb	01 41 26.5	
	comp=Z,1.7nm,0.7s						
MKAR	Makanchi Array	68.19	327	P	P	01 42 58.0	-0.1
MKAR	Makanchi Array	68.19	327	P	P	01 42 58.6	+0.4
	comp=Z,1.1nm,0.4s,baz=122,slow=7.8,SNR=14						
	comp=Z,1.1nm,0.4s						
MAKZ	Makanchi	68.37	327	P	P	01 42 59.4	+0.1
BOOM	Boomskoye usch	69.45	321	P	P	01 43 06.0	-0.2
BOOM				IAmb	IAmb	01 43 25.6	
	comp=Z,7.2nm,1.1s						
ZALV	Zalesovo Beam	71.62	334	P	P	01 43 18.9	+0.1
	comp=Z,0.5nm,0.5s,baz=152,slow=6.4,SNR=1.7						
	comp=Z,0.5nm,0.5s						
KURBB	Kurchatov Arra	72.49	329	P	P	01 43 23.6	-0.5
	comp=Z,0.5nm,0.3s,baz=129,slow=4.6,SNR=4.3						
	comp=Z,0.5nm,0.3s						
KK31	Karatay Array	73.23	319	P	P	01 43 28.7	0.0
AB31	Akbulak array	82.43	322	P	P	01 44 18.6	-0.7
ABKAR	Akbulak array	82.43	322	P	P	01 44 18.8	-0.6
QSPA	South Pole Qui	82.71	180	P	P	01 44 23.0	+2.2
QSPA				IAmb	IAmb	01 44 25.5	
	comp=Z,1.7nm,1.1s						
BRLK	Bradley Lake	91.02	30	P	P	01 45 02.9	+1.9
TORD	Torodi Ar. Bea	128.40	281	PKPdf	PKPdf	01 51 03.8	-0.1

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*NEIC **10** 01:54:58.8±1.7, 18°.88N±0°.07×145°.75E±0°.07, h104^{km}±8^{km}, mb4.3/40, Error ellipse: s-maj=12.2km s-min=8.4km az=141.0*
*IDC **10** 01:54:59.4±2.2, 18°.84N×145°.81E, h129^{km}±21^{km}, mb3.5/13, mbtmp4.0/16, Error ellipse: s-maj=23.8km s-min=12.0km az=86.0*
ISC 10 01:54:58.3±0.5, **18°.88N**±0°.05×**145°.8E**±0°.1, **h109**^{km}, **n68,** σ**1^{s}.36**/67, **mb4.2**/31, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.33	189	Pn	Pn	01 56 18.2	+2.6
GUMO	Guam	5.33	189	P	Pn	01 56 17.8	+2.2
	128nm,0.3s,baz=139,slow=21,SNR=4.1						
GUMO				S	Sn	01 57 16.3	+0.5
	82nm,0.3s,baz=285,slow=12,SNR=2.0						
JCJ	Chichijima	8.81	339	Pn	Pn	01 57 01.0	-1.8
JCJ	Chichijima	8.81	339	P	Pn	01 57 05.9	+3.2
	60nm,0.7s,baz=264,slow=20,SNR=1.9						
JCJ				S	Sn	01 58 40.1	-0.2
	49nm,0.5s,baz=291,slow=21,SNR=1.4						
PATS	Pohnpei	17.11	133	P	Pn	01 58 50.1	-0.7
JGF	Kuroka	18.24	338	P	Pn	01 59 04.2	-0.1
MJAR	Matsushiro Arr	18.80	341	P	P	01 59 08.3	-1.0
	1.3nm,0.3s,baz=166,slow=9.8,SNR=6.6						
MAJO	Matsushiro	18.81	341	P	P	01 59 10.0	+0.6
MAJO				IAmb	IAmb	01 59 25.0	
	comp=Z,14nm,1.1s						
MJB9	Matsu-Tunnel	18.81	341	P	Pn	01 59 10.8	-0.3
MJB9				IAmb	IAmb	01 59 25.0	
	comp=Z,13nm,1.1s						
H11S3	WAKE ISLAND Hy	19.83	88	T	T	02 20 28.3	
	baz=275,slow=74						
H11S1	WAKE ISLAND Hy	19.84	88	T	T	02 20 26.3	
	baz=275,slow=74						
H11S2	WAKE ISLAND Hy	19.85	88	T	T	02 20 25.9	
	baz=275,slow=74						
MANU	Manus Island	20.86	175	P	P	01 59 30.3	-1.4
JTM	Tenmabayashi	22.20	351	P	P	01 59 47.6	+2.0
ERM	Erimo	23.16	355	P	P	01 59 58.3	+3.1
KSRS	Korea Array	24.20	324	P	P	02 00 04.0	-0.6
	comp=Z,1.0nm,0.5s,baz=149,slow=9.3,SNR=5.1						
	comp=Z,1.0nm,0.5s						
FAKI	Fak Fak	25.42	213	P	P	02 00 16.6	+0.6
PETK	Petropavlovsk-	35.40	12	P	P	02 01 41.9	-1.6
	comp=Z,0.8nm,0.6s,baz=192,slow=4.4,SNR=2.9						
	comp=Z,0.8nm,0.6s						
KNRA	Kununurra	38.20	207	P	P	02 02 06.8	-0.7
WB0	Warramunga Arr	39.99	197	P	P	02 02 21.4	-1.1
WB0				IAmb	IAmb	02 02 22.7	
	comp=Z,6.0nm,0.8s						
WR8	Warramunga Arr	40.15	197	P	P	02 02 22.5	-1.3
WR8				IAmb	IAmb	02 02 33.4	
	comp=Z,9.3nm,1.2s						
WRAB	Tennant Creek	40.16	197	P	P	02 02 22.2	-1.7
WRAB				IAmb	IAmb	02 02 24.2	
	comp=Z,5.0nm,0.8s						
WRA	Warramunga Arr	40.18	197	P	P	02 02 21.8	-2.2
WRA	Warramunga Arr	40.18	197	P	P	02 02 22.3	-1.7
	comp=Z,5.3nm,0.9s,baz=14,slow=8.0,SNR=58						
	comp=Z,5.3nm,0.9s						
FITZ	Fitzroy Crossi	41.73	209	P	P	02 02 36.1	-0.7
SONM	Songino Array	43.03	321	P	P	02 02 47.4	+0.1
	comp=Z,0.3nm,0.3s,baz=120,slow=10,SNR=2.0						
	comp=Z,0.3nm,0.3s						
AS31	Alice Springs	43.84	196	P	P	02 02 52.3	-1.5
ASAR	Alice Springs	43.84	196	P	P	02 02 52.3	-1.5
ASAR	Alice Springs	43.84	196	P	P	02 02 52.9	-1.0
	comp=Z,1.4nm,0.6s,baz=18,slow=7.1,SNR=13						
	comp=Z,1.4nm,0.6s						
CHGN	Chignik	55.70	34	P	P	02 04 26.3	+3.1
O15K	Ungalikthiuk R	55.98	30	P	P	02 04 25.5	+0.4
N15K	Kwethluk River	56.23	29	P	P	02 04 28.0	+1.0
M16K	Timber Creek	57.07	28	P	P	02 04 33.8	+0.9
M16K				IAmb	IAmb	02 04 55.0	
	comp=Z,3.3nm,1.1s						
N17K	Nushagak Hills	57.71	29	P	P	02 04 38.7	+1.4
MKAR	Makanchi Array	58.38	314	P	P	02 04 42.7	+0.4
	comp=Z,0.1nm,0.4s,baz=97,slow=8.4,SNR=2.6						
	comp=Z,0.1nm,0.4s						
H18K	Honhosa River	58.94	24	P	P	02 04 46.6	+0.7
H18K				IAmb	IAmb	02 04 57.4	
	comp=Z,3.3nm,1.2s						
K20K	Telida	60.04	27	P	P	02 04 54.8	+1.4
K20K				IAmb	IAmb	02 05 15.5	
	comp=Z,6.2nm,1.5s						
CAST	Castle Rocks	60.91	27	P	P	02 05 00.3	+0.9
CAST				IAmb	IAmb	02 05 02.5	
	comp=Z,3.4nm,1.1s						
D20K	Etivluk River	61.02	21	P	P	02 05 00.9	+0.9
D20K				IAmb	IAmb	02 05 06.3	
	comp=Z,5.3nm,1.2s						
KURBB	Kurchatov Arra	61.22	318	P	P	02 05 01.5	-0.1
	comp=Z,0.4nm,0.6s,baz=92,slow=7.5,SNR=8.0						
	comp=Z,0.4nm,0.6s						
BPAW	Bear Paw Mtn.	61.57	26	P	P	02 05 04.2	+0.5
BPAW				IAmb	IAmb	02 05 05.3	
	comp=Z,2.5nm,1.0s						
E22K	Anaktuvuk Pass	62.46	22	P	P	02 05 11.2	+1.4
D23K	Nanushuk River	63.12	21	P	P	02 05 15.6	+1.6
TOLK	Toolik Lake Re	63.40	22	P	P	02 05 17.1	+1.1
TOLK				IAmb	IAmb	02 05 26.2	
	comp=Z,6.7nm,1.4s						
ILAR	Eielson Array	63.46	26	P	P	02 05 14.6	-1.7
	comp=Z,0.6nm,0.6s,baz=254,slow=6.1,SNR=9.0						
	comp=Z,0.6nm,0.6s						
J25K	Salcha River,	64.06	27	P	P	02 05 18.8	-1.6
DOT	Dot Lake	64.46	28	P	P	02 05 23.2	+0.3
D25K	Kavik River	64.70	21	P	P	02 05 25.1	+0.7
D25K				IAmb	IAmb	02 05 36.1	
	comp=Z,5.8nm,1.4s						
BMAR	Burnt Mountain	64.93	24	P	P	02 05 27.3	+1.3
F26K	Sheenjek River	65.14	23	P	P	02 05 28.5	+1.2
F26K				IAmb	IAmb	02 05 31.9	
	comp=Z,5.3nm,1.4s						
L27K	Beaver Creek,	65.38	29	P	P	02 05 28.8	-0.1
L27K				IAmb	IAmb	02 06 03.3	
	comp=Z,4.6nm,1.4s						
BCAR	Beaver Creek A	65.40	29	P	P	02 05 29.6	+0.6
BVAR	Borovoye Array	66.37	320	P	P	02 05 35.2	-0.2
	comp=Z,0.9nm,0.4s,baz=84,slow=8.8,SNR=5.4						
	comp=Z,0.9nm,0.4s						
L29M	L29M	67.06	29	P	P	02 05 40.7	+1.0
L29M				IAmb	IAmb	02 05 41.7	
	comp=Z,2.9nm,0.9s						
I30M	Mount Dempster	67.94	26	P	P	02 05 45.7	+0.5
J05D	Fort Rock, OR	79.43	48	P	P	02 06 53.4	+0.5
J05D				IAmb	IAmb	02 06 54.3	
	comp=Z,4.8nm,0.9s						
PINE	Pine Mountain	79.49	47	P	P	02 06 54.4	+1.1
PINE				IAmb	IAmb	02 06 54.9	
	comp=Z,5.4nm,0.8s						
BEKR	Beckworth	81.02	51	P	P	02 07 01.6	0.0
BEKR				IAmb	IAmb	02 07 02.3	
	comp=Z,3.1nm,0.7s						
PNTR	Pine Nut	81.82	52	P	P	02 07 06.4	+0.6
PNTR				IAmb	IAmb	02 07 07.3	
	comp=Z,4.0nm,0.8s						
ARCES	ARCESS Array B	82.34	342	P	P	02 07 07.1	-0.5
	comp=Z,3.3nm,1.0s,baz=72,slow=5.0,SNR=1.2						
	comp=Z,3.3nm,1.0s						
NVAR	Mina Array Bea	82.98	52	P	P	02 07 12.1	+0.3
NVAR	Mina Array Bea	82.98	52	P	P	02 07 11.9	0.0
	comp=Z,2.2nm,0.7s,baz=291,slow=5.6,SNR=21						
	comp=Z,2.2nm,0.7s						
MZP	Montezuma Peak	83.91	52	P	P	02 07 16.6	-0.1
FINES	FINESS Array B	86.74	335	P	P	02 07 27.1	-2.8
	comp=Z,1.7nm,0.8s,baz=52,slow=3.1,SNR=6.7						
	comp=Z,1.7nm,0.8s						
PDAR	Pinedale Array	87.66	45	P	P	02 07 33.0	-2.0
	comp=Z,0.3nm,0.5s,baz=32,slow=7.6,SNR=2.1						
	comp=Z,0.3nm,0.5s						
PB11	IPOC Station P	146.61	97	PKPbc	PKPdf	02 14 26.9	+0.5
LPAZ	La Paz	147.62	91	PKPbc	PKPbc	02 14 30.9	-0.7
LPAZ	La Paz	147.62	91	PKPbc	PKPbc	02 14 30.3	-1.4
	comp=Z,0.7nm,0.7s,baz=297,slow=2.3,SNR=2.5						

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*SJA **10** 01:55:14.9±0.7, 22°.64S×68°.78W, h107^{km}±4^{km}, ML3.5, MW3.5*
*GUC **10** 01:55:16.4±0.8, 22°.58S×68°.83W, h108^{km}±4^{km}, ML3.4*
ISC 10 01:55:15.5±1.4, **22°.63S**±0°.03×**68°.84W**±0°.05, **h112**^{km}±9^{km}, **n25,** σ**0^{s}.91**/41, **4C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB06	IPOC Station P	0.68	263	⇑iP	Pn	01 55 34.0	0.0
PB06				eS	Sn	01 55 47.8	-0.2
PB06				IAML		01 55 49.7	
	comp=E,2µm,0.1s						
PB06	IPOC Station P	0.68	263	eP	Pn	01 55 34.2	+0.1
PB06				eS	Sn	01 55 48.7	+0.7
PB06				IAML		01 55 49.4	
	comp=Z,1µm,0.2s						
AF01	San Pedro de A	0.69	118	i P	Pn	01 55 34.3	-0.1
AF01				eS	Sn	01 55 48.1	-0.3
AF01				IAML		01 55 48.9	
	comp=E,5µm,0.5s						
AF01	San Pedro de A	0.69	118	eP	Pn	01 55 34.4	+0.1
AF01				eS	Sn	01 55 46.9	-1.6
AF01				IAML		01 55 59.7	
	comp=Z,3µm,0.3s						
PB09	IPOC Station P	0.91	336	⇑iP	Pn	01 55 36.6	+0.3
PB09				eS	Sn	01 55 51.5	-0.2
PB09				IAML		01 55 52.4	
	comp=N,775nm,0.3s						
PB09	IPOC Station P	0.91	336	eP	Pn	01 55 36.5	+0.3
PB09				eS	Sn	01 55 51.8	+0.1
PB09				IAML		01 55 52.9	
	comp=Z,1µm,1.0s						
PB03	IPOC Station P	1.02	304	⇑iP	Pn	01 55 37.5	+0.1
PB03				eS	Sn	01 55 53.2	-0.5
PB03				IAML		01 55 53.8	
	comp=N,1µm,0.4s						
PB03	IPOC Station P	1.02	304	eP	Pn	01 55 37.4	+0.1
PB03				eS	Sn	01 55 53.7	0.0
PB03				IAML		01 55 53.9	
	comp=Z,996nm,0.3s						
PB05	IPOC Station P	1.27	260	⇑iP	Pn	01 55 40.5	+0.5
PB05				eS	Sn	01 55 59.1	+0.6
PB05				IAML		01 56 00.3	
	comp=E,418nm,0.2s						
PB05	IPOC Station P	1.27	260	eP	Pn	01 55 40.5	+0.5
PB05				eS	Sn	01 55 59.7	+1.2
PB05				IAML		01 55 59.9	
	comp=Z,474nm,0.7s						
PB01	IPOC Station P	1.69	339	eP	Pn	01 55 45.3	+0.5
PB01				IAML		01 56 08.1	
	comp=E,724nm,0.3s						
PB01	IPOC Station P	1.69	339	eP	Pn	01 55 45.3	+0.5
PB01				eS	Sn	01 56 07.6	+0.5
PB01				IAML		01 56 08.0	
	comp=Z,267nm,0.2s						
PB10	IPOC Station P	1.81	241	eP	Pn	01 55 47.1	+1.0
PB10				IAML		01 56 19.0	
	comp=N,193nm,0.2s						
PB10	IPOC Station P	1.81	241	eP	Pn	01 55 46.8	+0.6
PB10				eS	Sn	01 56 08.9	-0.6
PB10				IAML		01 56 09.0	
	comp=Z,191nm,0.9s						
TA01	Diego Aracena	2.40	329	eP	Pn	01 55 53.2	-0.6
PB14	IPOC Station P	2.45	215	eP	Pn	01 55 55.2	+0.6
PB14				eS	Sn	01 56 23.2	-1.4
PB14				IAML		01 56 24.2	
	comp=Z,156nm,0.4s						
PB08	IPOC Station P	2.49	353	eP	Pn	01 55 56.0	+0.7
PB08	IPOC Station P	2.49	353	eP	Pn	01 55 56.0	+0.7
PB08				eP		01 55 56.2	
PB08				eS	Sn	01 56 23.6	-2.2
GO02	Mina Guanaco	2.61	195	eP	Pn	01 55 57.6	+0.8
GO02	Mina Guanaco	2.61	195	eP	Pn	01 55 57.3	+0.5
GO02				eS	Sn	01 56 26.2	-2.3
PB11	IPOC Station P	2.95	345	eP	Pn	01 56 00.7	-0.5
PB11				IAML		01 56 45.6	
	comp=E,156nm,0.2s						
GO01	Chusmiza	2.96	354	eP	Pn	01 56 02.0	+0.4
AZAP	Zapla	3.81	115	eP	Pn	01 56 14.6	+2.0
AC01	Pan de Azucar	3.85	204	eP	Pn	01 56 12.4	-0.5
AC01				eS	Sn	01 56 56.2	-1.2
AC01				IAML		01 57 10.0	
	comp=Z,38nm,0.5s						
AC02	Maricunga	4.20	184	eP	Pn	01 56 19.2	+1.2
AC02				IAML		01 57 40.1	
	comp=Z,95nm,0.8s						

CATAC ***10*** *02:04:07.7±0.6, 9°N±4°×8°4W±°, h11^{km}±2^{km}, M3.5/8, MLv3.5/8, Error ellipse: s-maj=10.7km s-min=3.5km az=45.7, confirmed*

UCR ***10*** *02:04:08.5±0.8, 9°.14N×83°.94W, h28^{km}±2^{km}, MW3.7*

ISC 10 02:04:07.8±1.3, **9°.11N**±0°.05×**83°.96W**±0°.04, **h18**^{km}±4^{km}, **n73**, σ**0^{s}.56**/82, **Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCHAL	Ojochal	0.31	92	P	Pb	02 04 15.4	+0.6
OCHAL	Ojochal	0.31	92	S	Sg	02 04 21.0	+1.9
EDPE	Pejibaye, P	0.39	82	eP	Pb	02 04 16.5	+0.3
EDPE				eS	Sb	02 04 22.9	+1.0
PIEC	Cerro El Cedra	0.51	0	eP	Pg	02 04 18.2	-0.1
RAZU	San Marcos de	0.55	353	eP	Pg	02 04 19.4	+0.4
RAZU				eS	Sg	02 04 27.5	+1.0
PITB	Pirrs, San	0.56	353	eP	Pg	02 04 19.2	+0.2
PAR1A	Puntarenas Pro	0.57	329	eP	Pg	02 04 19.5	+0.4
PAR1A				eS	Sg	02 04 28.2	+1.4
PICV	PH. Pirrs	0.57	336	eP	Pg	02 04 19.3	+0.1
ABE2	San Pablo	0.60	351	eP	Pg	02 04 19.9	0.0
FIMO	Fila Mora	0.61	101	eP	Pg	02 04 20.2	+0.2
BURE	Buenos Aires	0.62	84	eP	Pb	02 04 20.0	0.0
LCR2	La Lucha 2	0.63	356	eP	Pb	02 04 20.0	-0.4
LCR2	La Lucha 2	0.63	356	P	Pb	02 04 20.1	-0.4
LCR2	La Lucha 2	0.63	356	S	Sg	02 04 29.3	+0.4
ACOS	Acosta	0.71	343	eP	Pb	02 04 21.3	-0.5
ACOS				eS	Sb	02 04 31.2	-0.2
DRK0	Durika	0.72	78	eP	Pb	02 04 21.4	-0.6
DRK0				eS	Sg	02 04 31.6	-0.1
DRK0	Durika	0.72	78	P	Pb	02 04 21.3	-0.6
REPA	Paraso	0.72	7	eP	Pb	02 04 21.6	-0.4
EDP2	Potrero Grande	0.78	97	eP	Pb	02 04 22.8	0.0
AMPA	Desamparados	0.79	353	eP	Pb	02 04 22.4	-0.7
AMPA				eS	Sb	02 04 33.0	-0.5
PCAYA	Pacayas	0.82	10	eP	Pb	02 04 23.2	-0.4
ECI	Escuela Centro	0.83	354	eP	Pb	02 04 23.4	-0.4
ECI				eS	Sg	02 04 34.8	-0.4
SJS3	Mercedes San J	0.83	354	eP	Pb	02 04 23.5	-0.4
SJS3				eS	Sg	02 04 35.0	-0.2
BELE	Belen	0.89	345	eP	Pb	02 04 24.4	-0.5
VTCV	VTCV, Calle Va	0.90	15	eP	Pb	02 04 24.6	-0.5
HDC	Heredia	0.90	350	eP	Pb	02 04 24.6	-0.4
HDC				eS	Sb	02 04 36.6	-0.2
VTLA	Turrialba Volc	0.91	11	eP	Pb	02 04 24.9	-0.4
CVIMO	Finca Echandi	0.91	1	eP	Pb	02 04 24.8	-0.4
CVTQ	Turrialba Volc	0.91	12	eP	Pb	02 04 24.9	-0.4
CVTV	Tajo	0.92	13	eP	Pb	02 04 25.0	-0.4
ABRB	Las Abras (San	0.92	15	eP	Pb	02 04 25.1	-0.4
VTR0	Volcan Turrial	0.93	12	eP	Pb	02 04 25.2	-0.4
CVTR	Volcan Turrial	0.93	12	eP	Pb	02 04 25.1	-0.5
ATEO	Atenas	0.96	334	eP	Pb	02 04 25.6	-0.4
RESJ	San Isidro (Tu	0.97	19	eP	Pb	02 04 25.7	-0.4
TCS1	Tacares	0.99	340	eP	Pb	02 04 26.3	-0.2
TCS1	Tacares	0.99	340	P	Pb	02 04 26.3	-0.2
VBV1	V. Barva	1.01	352	eP	Pb	02 04 26.6	-0.4
IRES	Siquirres	1.08	24	eP	Pb	02 04 27.4	-0.6
VPS8	V Poas	1.10	345	eP	Pb	02 04 28.3	-0.2
VPS5	V. Poas	1.11	346	eP	Pb	02 04 28.4	-0.3
VERH	Veragua Rainfo	1.11	43	eP	Pn	02 04 28.0	-0.5
PILE	Guapiles	1.11	9	eP	Pn	02 04 28.3	-0.3
ALCO	Alturas Coton,	1.12	98	eP	Pn	02 04 27.6	-1.2
CEUA	Cerro Uatsi, L	1.13	63	eP	Pg	02 04 29.3	-0.4
CDITO	Canoas	1.20	116	S	Sn	02 04 45.9	+0.5
CDITO	Canoas	1.20	116	P	Pn	02 04 29.0	-0.7
CBL1	Cabuya	1.22	293	eP	Pn	02 04 28.7	-1.2
BRIBI	Bribri	1.23	66	eP	Pb	02 04 30.7	+0.1
VPL2	V. Platanar	1.26	341	eP	Pn	02 04 30.6	-0.2
CARI	Cariari	1.27	10	eP	Pn	02 04 30.5	-0.1
BRU2	Volcan	1.29	104	eP	Pn	02 04 30.4	-0.7
BRU2	Volcan	1.29	104	S	Sg	02 04 48.9	-0.8
BRU2	Volcan	1.29	104	P	Pn	02 04 30.4	-0.7
CLLRA	Cordillera,	1.38	105	eP	Pn	02 04 31.8	-0.5
SOCE	Pocosol	1.43	333	eP	Pn	02 04 33.1	+0.3
SOCE	Pocosol	1.43	333	S	Sb	02 04 52.3	+0.5
SOCE	Pocosol	1.43	333	P	Pn	02 04 33.0	+0.2
TRT2	Tortugero	1.46	9	eP	Pn	02 04 33.1	-0.2
TRT2	Tortugero	1.46	9	P	Pn	02 04 33.1	-0.2
TRT2	Tortugero	1.46	9	S	Sb	02 04 52.8	+0.2
JTS	Las Juntas de	1.53	320	eP	Pn	02 04 33.9	-0.3
VACR	Volcan Arenal	1.53	332	eP	Pn	02 04 34.9	+0.6
ARE1	Arenal 1	1.54	331	eP	Pb	02 04 35.2	-0.7
VARE2	V. Arenal	1.54	331	eP	Pb	02 04 35.1	-0.7
CEDE	Laguna Cedeo	1.56	332	eP	Pn	02 04 35.0	+0.4
COVE	Coope Vega, Sa	1.66	345	S	Sb	02 04 58.6	+0.1
COVE	Coope Vega, Sa	1.66	345	P	Pn	02 04 36.6	+0.5
PBNVO	Pueblo Nuevo,	1.76	97	eP	Pn	02 04 37.0	-0.4
RBALA	Bur	1.80	97	eP	Pn	02 04 37.3	-0.6
TENO	El Achiote	1.88	328	eP	Pn	02 04 40.1	+1.0
CUI	Cuipilapa	1.95	322	eP	Pn	02 04 40.2	+0.2
KKNTU	Kakintº	2.14	97	eP	Pn	02 04 42.4	-0.3

SVSA ***10*** *02:15:50.5±1.4, 38°.63N×29°.13W, h5^{km}±4^{km}, ML3.7(INMG), Error ellipse: s-maj=7.1km s-min=4.8km az=10.0, #DIST_RANGE: LOCAL #IPMA_REGION: W Faial #FELT: III (MM56) at Castelo Branco*

INMG ***10*** *02:15:50.5±1.4, 38°.63N×29°.13W, h5^{km}±4^{km}, ML3.7, Error ellipse: s-maj=7.1km s-min=4.8km az=10.0, #DIST_RANGE: LOCAL #IPMA_REGION: W Faial #FELT: III (MM56) at Castelo Branco*

ISC 10 02:15:49.7±2.5, **38°.60N**±0°.07×**29°.0W**±0°.1, **h32**^{km}±6^{km}, **n71**, σ**0^{s}.63**/129, **Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFCBR	Castelo Branco	0.24	108	eP	Pb	02 15 56.5	-0.1
PFCBR				eS	Sb	02 16 01.4	+0.1
PFCBR				i IAML		02 16 02.2	
PFCBR				i IAML		02 16 02.3	
PFCBR				i IAML		02 16 03.3	
PFCBR	Castelo Branco	0.24	108	eP	Pb	02 15 56.5	-0.1
PFCBR				eS	Sb	02 16 01.4	+0.1
PFCBR				i IAML		02 16 02.2	
PFCBR				i IAML		02 16 02.3	
PFCBR				i IAML		02 16 03.3	
PFCBR	Castelo Branco	0.24	108	eP	Pb	02 15 56.5	-0.1
PFCBR				eS	Sb	02 16 01.4	+0.1
PFCBR				i AML	AML	02 16 02.2	
PFCBR				i AML	AML	02 16 02.3	
PFCBR				i AML	AML	02 16 03.3	
CALA	Caldeira	0.24	93	eP	Pb	02 15 56.5	-0.2
CALA				eS	Sb	02 16 01.3	-0.2
CALA				i IAML		02 16 03.1	
CALA				i IAML		02 16 03.3	
CALA				i IAML		02 16 03.3	
CALA	Caldeira	0.24	93	eP	Pb	02 15 56.5	-0.2
CALA				eS	Sb	02 16 01.3	-0.2
CALA				i IAML		02 16 03.1	
CALA				i IAML		02 16 03.3	
CALA				i IAML		02 16 03.3	
CALA	Caldeira	0.24	93	eP	Pb	02 15 56.5	-0.2
CALA				eS	Sb	02 16 01.3	-0.2
CALA				i AML	AML	02 16 03.1	
CALA				i AML	AML	02 16 03.3	
CALA				i AML	AML	02 16 03.3	
PCED	Cedros	0.25	82	eP	Pb	02 15 56.6	-0.1
PCED				eS	Sb	02 16 01.4	0.0
PCED				i IAML		02 16 02.0	
PCED				i IAML		02 16 02.3	
PCED				i IAML		02 16 02.4	
PCED	Cedros	0.25	82	eP	Pb	02 15 56.6	-0.1
PCED				eS	Sb	02 16 01.4	0.0
PCED				i IAML		02 16 02.0	
PCED				i IAML		02 16 02.3	
PCED				i IAML		02 16 02.4	
PCED	Cedros	0.25	82	eP	Pb	02 15 56.6	-0.1
PCED				eS	Sb	02 16 01.4	0.0
PCED				i AML	AML	02 16 02.0	
PCED				i AML	AML	02 16 02.3	
PCED				i AML	AML	02 16 02.4	
HOR	Horta	0.31	103	eP	Pb	02 15 57.4	0.0
HOR				eS	Sb	02 16 02.9	+0.2
HOR				i IAML		02 16 05.2	
HOR				i IAML		02 16 05.5	
HOR				i IAML		02 16 05.6	
HOR	Horta	0.31	103	eP	Pb	02 15 57.4	0.0
HOR				eS	Sb	02 16 02.9	+0.2
HOR				i IAML		02 16 05.2	
HOR				i IAML		02 16 05.5	
HOR				i IAML		02 16 05.6	
HOR	Horta	0.31	103	eP	Pb	02 15 57.4	0.0
HOR				eS	Sb	02 16 02.9	+0.2
HOR				i AML	AML	02 16 05.2	
HOR				i AML	AML	02 16 05.5	
HOR				i AML	AML	02 16 05.6	
PRIB2	Ribeirinha	0.31	90	eP	Pb	02 15 57.4	-0.1
PRIB2				eS	Sb	02 16 02.8	0.0
PRIB2				i IAML		02 16 03.8	
PRIB2				i IAML		02 16 03.9	
PRIB2				i IAML		02 16 05.0	
PRIB2	Ribeirinha	0.31	90	eP	Pb	02 15 57.4	-0.1
PRIB2				eS	Sb	02 16 02.8	0.0
PRIB2				i IAML		02 16 03.8	
PRIB2				i IAML		02 16 03.9	
PRIB2				i IAML		02 16 05.0	
PRIB2	Ribeirinha	0.31	90	eP	Pb	02 15 57.4	-0.1
PRIB2				eS	Sb	02 16 02.8	0.0
PRIB2				i AML	AML	02 16 03.8	
PRIB2				i AML	AML	02 16 03.9	
PRIB2				i AML	AML	02 16 05.0	
PCAN	Candelaria	0.43	107	eP	Pn	02 15 59.5	-0.3
PCAN				eS	Sb	02 16 06.2	+0.4
PCAN				i IAML		02 16 07.2	
PCAN				i IAML		02 16 07.2	
PCAN				i IAML		02 16 07.4	
PCAN	Candelaria	0.43	107	eP	Pn	02 15 59.5	-0.3
PCAN				eS	Sb	02 16 06.2	+0.4
PCAN				i IAML		02 16 07.2	
PCAN				i IAML		02 16 07.2	
PCAN				i IAML		02 16 07.4	
PCAN	Candelaria	0.43	107	eP	Pn	02 15 59.5	-0.3
PCAN				eS	Sb	02 16 06.2	+0.4
PCAN				i AML	AML	02 16 07.2	
PCAN				i AML	AML	02 16 07.2	
PCAN				i AML	AML	02 16 07.4	
PICO	Pico	0.47	101	eP	Pn	02 16 00.1	-0.1
PICO				eS	Sn	02 16 07.6	+0.1
PICO				i IAML		02 16 09.5	
PICO				i IAML		02 16 09.6	
PICO				i IAML		02 16 09.8	
PICO	Pico	0.47	101	eP	Pn	02 16 00.1	-0.1
PICO				eS	Sn	02 16 07.6	+0.1
PICO				i IAML		02 16 09.5	
PICO				i IAML		02 16 09.6	
PICO				i IAML		02 16 09.8	
PICO	Pico	0.47	101	eP	Pn	02 16 00.1	-0.1
PICO				eS	Sn	02 16 07.6	+0.1
PICO				i AML	AML	02 16 09.5	
PICO				i AML	AML	02 16 09.6	
PICO				i AML	AML	02 16 09.8	
PPNO	Prainha do Nor	0.60	102	eP	Pn	02 16 02.0	0.0
PPNO				eS	Sn	02 16 11.1	+0.4
PPNO				i IAML		02 16 13.9	
PPNO				i IAML		02 16 16.3	
PPNO	Prainha do Nor	0.60	102	eP	Pn	02 16 02.0	0.0
PPNO				eS	Sn	02 16 11.1	+0.4
PPNO				i IAML		02 16 13.9	
PPNO				i IAML		02 16 16.3	
PPNO	Prainha do Nor	0.60	102	eP	Pn	02 16 02.0	0.0
PPNO				eS	Sn	02 16 11.1	+0.4
PPNO				i AML	AML	02 16 13.9	
PPNO				i AML	AML	02 16 16.3	
ROSA	Rosais	0.62	78	eP	Pb	02 16 01.9	-0.2
ROSA				eS	Sb	02 16 10.7	+0.1
ROSA				i IAML		02 16 11.7	
ROSA				i IAML		02 16 12.1	
ROSA				i IAML		02 16 12.2	
ROSA	Rosais	0.62	78	eP	Pb	02 16 01.9	-0.2
ROSA				eS	Sb	02 16 10.7	+0.1
ROSA				i IAML		02 16 11.7	
ROSA				i IAML		02 16 12.1	
ROSA				i IAML		02 16 12.2	
ROSA	Rosais	0.62	78	eP	Pb	02 16 01.9	-0.2
ROSA				eS	Sb	02 16 10.7	+0.1
ROSA				i AML	AML	02 16 11.7	
ROSA				i AML	AML	02 16 12.1	
ROSA				i AML	AML	02 16 12.2	
PID	Ribeirinha	0.72	102	eP	Pn	02 16 03.5	-0.1
PID				eS	Sn	02 16 13.7	+0.2
PID				i IAML		02 16 21.8	
PID				i IAML		02 16 22.9	
PID				i IAML		02 16 24.6	
PID	Ribeirinha	0.72	102	eP	Pn	02 16 03.5	-0.1
PID				eS	Sn	02 16 13.7	+0.2
PID				i IAML		02 16 21.8	
PID				i IAML		02 16 22.9	
PID				i IAML		02 16 24.6	
PID	Ribeirinha	0.72	102	eP	Pn	02 16 03.5	-0.1
PID				eS	Sn	02 16 13.7	+0.2
PID				i AML	AML	02 16 21.8	
PID				i AML	AML	02 16 22.9	
PID				i AML	AML	02 16 24.6	
PMAN	Manadas	0.72	87	eP	Pn	02 16 03.5	-0.2
PMAN				eS	Sn	02 16 13.7	0.0
PMAN				i IAML		02 16 17.7	
PMAN				i IAML		02 16 19.6	
PMAN				i IAML		02 16 20.7	
PMAN	Manadas	0.72	87	eP	Pn	02 16 03.5	-0.2
PMAN				eS	Sn	02 16 13.7	0.0
PMAN				i IAML		02 16 17.7	
PMAN				i IAML		02 16 19.6	
PMAN				i IAML		02 16 20.7	
PMAN	Manadas	0.72	87	eP	Pn	02 16 03.5	-0.2
PMAN				eS	Sn	02 16 13.7	0.0
PMAN				i AML	AML	02 16 17.7	
PMAN				i AML	AML	02 16 19.6	
PMAN				i AML	AML	02 16 20.7	
PGRA	Graciosa	0.92	61	eP	Pb	02 16 18.8	+12
PGRA				eS	Sb	02 16 29.6	+11
PGRA				i IAML		02 16 35.2	
PGRA				i IAML		02 16 36.4	
PGRA				i IAML		02 16 37.3	
PGRA	Graciosa	0.92	61	eP	Pb	02 16 18.8	+12
PGRA				eS	Sb	02 16 29.6	+11
PGRA				i IAML		02 16 35.2	
PGRA				i IAML		02 16 36.4	
PGRA				i IAML		02 16 37.3	
PGRA	Graciosa	0.92	61	eP	Pb	02 16 18.8	+12
PGRA				eS	Sb	02 16 29.6	+11
PGRA				i AML	AML	02 16 35.2	
PGRA				i AML	AML	02 16 36.4	
PGRA				i AML	AML	02 16 37.3	
PTOPO	Topo S. Jorge	0.99	92	eP	Pn	02 16 07.2	-0.1
PTOPO				eS	Sn	02 16 19.9	-0.2
PTOPO				i IAML		02 16 30.6	
PTOPO				i IAML		02 16 31.1	
PTOPO				i IAML		02 16 35.1	
PTOPO	Topo S. Jorge	0.99	92	eP	Pn	02 16 07.2	-0.1
PTOPO				eS	Sn	02 16 19.9	-0.2
PTOPO				i IAML		02 16 30.6	
PTOPO				i IAML		02 16 31.1	
PTOPO				i IAML		02 16 35.1	
PTOPO	Topo S. Jorge	0.99	92	eP	Pn	02 16 07.2	-0.1
PTOPO				eS	Sn	02 16 19.9	-0.2
PTOPO				i AML	AML	02 16 30.6	
PTOPO				i AML	AML	02 16 31.1	
PTOPO				i AML	AML	02 16 35.1	
PSBA	Serra de Santa	1.33	82	eP	Pn	02 16 11.5	-0.6
PSBA				eS	Sn	02 16 28.1	-0.7
PSBA				i IAML		02 16 29.6	
PSBA				i IAML		02 16 30.4	
PSBA				i IAML		02 16 30.7	
PSBA	Serra de Santa	1.33	82	eP	Pn	02 16 11.5	-0.6
PSBA				eS	Sn	02 16 28.1	-0.7
PSBA				i IAML		02 16 29.6	
PSBA				i IAML		02 16 30.4	
PSBA				i IAML		02 16 30.7	
PSBA	Serra de Santa	1.33	82	eP	Pn	02 16 11.5	-0.6
PSBA				eS	Sn	02 16 28.1	-0.7
PSBA				i AML	AML	02 16 29.6	
PSBA				i AML	AML	02 16 30.4	
PSBA				i AML	AML	02 16 30.7	
ADH	Angra Heroismo	1.39	87	eP	Pn	02 16 12.6	-0.3
ADH				eS	Sn	02 16 29.3	-0.8
ADH				i IAML		02 16 30.9	
ADH				i IAML		02 16 31.0	
ADH				i IAML		02 16 31.1	
ADH	Angra Heroismo	1.39	87	eP	Pn	02 16 12.6	-0.3
ADH				eS	Sn	02 16 29.3	-0.8
ADH				i IAML		02 16 30.9	
ADH				i IAML		02 16 31.0	
ADH				i IAML		02 16 31.1	
ADH	Angra Heroismo	1.39	87	eP	Pn	02 16 12.6	-0.3
ADH				eS	Sn	02 16 29.3	-0.8
ADH				i AML	AML	02 16 30.9	
ADH				i AML	AML	02 16 31.0	
ADH				i AML	AML	02 16 31.1	
PAGU	Agualva, Azore	1.44	83	eP	Pn	02 16 13.4	-0.1
PAGU				eS	Sn	02 16 31.0	-0.4
PAGU				i IAML		02 16 32.1	
PAGU				i IAML		02 16 32.3	
PAGU				i IAML		02 16 32.4	
PAGU	Agualva, Azore	1.44	83	eP	Pn	02 16 13.4	-0.1
PAGU				eS	Sn	02 16 31.0	-0.4
PAGU				i IAML		02 16 32.1	
PAGU				i IAML		02 16 32.3	
PAGU				i IAML		02 16 32.4	
PAGU	Agualva, Azore	1.44	83	eP	Pn	02 16 13.4	-0.1
PAGU				eS	Sn	02 16 31.0	-0.4
PAGU				i AML	AML	02 16 32.1	
PAGU				i AML	AML	02 16 32.3	
PAGU				i AML	AML	02 16 32.4	
PSCM	Serra do Cume	1.49	85	eP	Pn	02 16 14.0	-0.2
PSCM				eS	Sn	02 16 32.1	-0.5
PSCM				i IAML		02 16 33.3	
PSCM				i IAML		02 16 34.1	
PSCM				i IAML		02 16 34.2	
PSCM	Serra do Cume	1.49	85	eP	Pn	02 16 14.0	-0.2
PSCM				eS	Sn	02 16 32.1	-0.5
PSCM				i IAML		02 16 33.3	
PSCM				i IAML		02 16 34.1	
PSCM				i IAML		02 16 34.2	
PSCM	Serra do Cume	1.49	85	eP	Pn	02 16 14.0	-0.2
PSCM				eS	Sn	02 16 32.1	-0.5
PSCM				i AML	AML	02 16 33.3	
PSCM				i AML	AML	02 16 34.1	
PSCM				i AML	AML	02 16 34.2	
PSET	Sete Cidades	2.71	106	eP	Pn	02 16 31.4	+0.5
PSET				eS	Sn	02 17 01.6	-1.0
PSET				i IAML		02 17 03.8	
PSET				i IAML		02 17 04.3	
PSET				i IAML		02 17 04.8	
PSET	Sete Cidades	2.71	106	eP	Pn	02 16 31.4	+0.5
PSET				eS	Sn	02 17 01.6	-1.0
PSET				i IAML		02 17 03.8	
PSET				i IAML		02 17 04.3	
PSET				i IAML		02 17 04.8	
PSET	Sete Cidades	2.71	106	eP	Pn	02 16 31.4	+0.5
PSET				eS	Sn	02 17 01.6	-1.0
PSET				i AML	AML	02 17 03.8	
PSET				i AML	AML	02 17 04.3	
PSET				i AML	AML	02 17 04.8	
CMLA	Cha da Macela	2.87	106	eP	Pn	02 16 34.1	+0.9
CMLA				eS	Sn	02 17 06.2	-0.5
CMLA				i IAML		02 17 08.9	
CMLA				i IAML		02 17 09.1	
CMLA				i IAML		02 17 09.4	
CMLA	Cha da Macela	2.87	106	eP	Pn	02 16 34.1	+0.9
CMLA				eS	Sn	02 17 06.2	-0.5
CMLA				i IAML		02 17 08.9	
CMLA				i IAML		02 17 09.1	
CMLA				i IAML		02 17 09.4	
CMLA	Cha da Macela	2.87	106	eP	Pn	02 16 34.1	+0.9
CMLA				eS	Sn	02 17 06.2	-0.5
CMLA				i AML	AML	02 17 08.9	
CMLA				i AML	AML	02 17 09.1	
CMLA				i AML	AML	02 17 09.4	
PCALD	Caldeiras da R	2.89	105	eP	Pn	02 16 34.3	+0.9
PCALD				eS	Sn	02 17 06.5	-0.6
PCALD	Caldeiras da R	2.89	105	eP	Pn	02 16 34.3	+0.9
PCALD				eS	Sn	02 17 06.5	-0.6
PGRON	Lagoa das Cont	2.98	105	eP	Pn	02 16 35.8	+1.0
PGRON				eS	Sn	02 17 08.4	-1.1
PGRON				i IAML		02 17 13.0	
PGRON				i IAML		02 17 13.1	
PGRON				i IAML		02 17 13.3	
PGRON	Lagoa das Cont	2.98	105	eP	Pn	02 16 35.8	+1.0
PGRON				eS	Sn	02 17 08.4	-1.1
PGRON				i IAML		02 17 13.0	
PGRON				i IAML		02 17 13.1	
PGRON				i IAML		02 17 13.3	
PGRON	Lagoa das Cont	2.98	105	eP	Pn	02 16 35.8	+1.0
PGRON				eS	Sn	02 17 08.4	-1.1
PGRON				i AML	AML	02 17 13.0	
PGRON				i AML	AML	02 17 13.1	
PGRON				i AML	AML	02 17 13.3	
BART	Pico Bartolome	3.14	104	eP	Pn	02 16 37.6	+0.7
BART	Pico Bartolome	3.14	104	eP	Pn	02 16 37.6	+0.7
PSMN	Pico do Norte,	3.51	116	eP	Pn	02 16 41.9	-0.1
PSMN				eS	Sn	02 17 20.4	-2.0
PSMN				i IAML		02 17 21.0	
PSMN				i IAML		02 17 21.1	
PSMN				i IAML		02 17 22.0	
PSMN	Pico do Norte,	3.51	116	eP	Pn	02 16 41.9	-0.1
PSMN				eS	Sn	02 17 20.4	-2.0
PSMN				i IAML		02 17 21.0	
PSMN				i IAML		02 17 21.1	
PSMN				i IAML		02 17 22.0	
PSMN	Pico do Norte,	3.51	116	eP	Pn	02 16 41.9	-0.1
PSMN				eS	Sn	02 17 20.4	-2.0
PSMN				i AML	AML	02 17 21.0	
PSMN				i AML	AML	02 17 21.1	
PSMN				i AML	AML	02 17 22.0	
PMOZ	Porto Moniz, M	11.20	117	eP	Pn	02 18 32.5	+4.9
PMOZ				IAmb	IAmb	02 18 35.6	
	comp=Z,120nm,1.9s						
PMAR	Madeira	11.45	117	eP	Pn	02 18 32.7	+1.6
PMAR				IAmb	IAmb	02 18 38.9	
	comp=Z,83nm,1.7s						
FUL	Funchal	11.51	117	eP	Pn	02 18 32.6	+0.9
FUL				IAML		02 18 34.7	
PMPS	Porto Santo	11.68	114	eP	Pn	02 18 37.0	+3.0

SJA ***10*** *02:36:44.1±2.2, 21°.50S×69°.93W, h48^{km}±35^{km}, ML3.4, MW3.6*

GUC ***10*** *02:36:46.7±0.7, 21°.51S×69°.76W, h49^{km}±4^{km}, ML3.4*

ISC 10 02:36:45.6±1.3, **21°.49S**±0°.02×**69°.91W**±0°.06, **h27**^{km}±13^{km}, **n26**, σ**0^{s}.76**/35, **2C-4D**, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB03	IPOC Station P	0.58	165	⇓iP	Pb	02 36 58.3	+1.1
PB03				eS	Sn	02 37 07.1	+0.2
PB03				IAML		02 37 07.5	
	comp=E,6μm,0.2s						
PB03	IPOC Station P	0.58	165	i P	Pb	02 36 57.5	+0.3
PB03				IAML		02 37 09.2	
	comp=Z,3μm,0.2s						
PB01	IPOC Station P	0.59	42	⇑eP	Pb	02 36 57.6	+0.1
PB01				eS	Sb	02 37 06.0	+0.5
PB01				IAML		02 37 06.9	
	comp=N,2μm,0.2s						
PB01	IPOC Station P	0.59	42	i P	Pb	02 36 56.8	-0.7
PB01				IAML		02 37 07.0	
	comp=Z,1μm,0.2s						
PB09	IPOC Station P	0.69	116	⇓eP	Pb	02 36 59.0	-0.2
PB09				eS	Sb	02 37 08.4	-0.1
PB09				IAML		02 37 09.3	
	comp=N,3μm,0.4s						
PB09	IPOC Station P	0.69	116	i P	Pb	02 36 58.3	-0.9
PB09				IAML		02 37 08.9	
	comp=Z,1μm,0.5s						
TA01	Diego Aracena	0.95	344	i P	Pb	02 37 02.6	-0.9
TA01				IAML		02 37 22.1	
	comp=Z,286nm,0.3s						
TA02	Huaiquique	1.23	350	eP	Pn	02 37 07.6	+0.6
TA02				eS	Sn	02 37 24.1	+1.4
TA02				IAML		02 37 28.0	
	comp=E,2μm,0.1s						
TA02	Huaiquique	1.23	350	i P	Pn	02 37 07.0	+0.1
TA02				IAML		02 37 28.3	
	comp=Z,846nm,0.3s						
PB06	IPOC Station P	1.25	166	⇓eP	Pn	02 37 06.7	-0.7
PB06				⇑eS	Sn	02 37 22.9	-0.6
PB06				IAML		02 37 27.3	
	comp=E,933nm,0.3s						
PB06	IPOC Station P	1.25	166	i P	Pn	02 37 06.2	-1.2

PB06				IAML		02 37 26.8	
	comp=Z,771nm,0.2s						
PB05	**IPOC Station P**	**1.39**	**191**	⇓eP	**Pn**	**02 37 09.5**	**+0.3**
PB05				eS	**Sn**	**02 37 27.6**	**+0.9**
PB05				IAML		02 37 28.7	
	comp=E,812nm,0.3s						
PB05	**IPOC Station P**	**1.39**	**191**	i P	**Pn**	**02 37 08.9**	**-0.4**
PB05				IAML		02 37 31.1	
	comp=Z,698nm,0.3s						
PB08	**IPOC Station P**	**1.52**	**28**	eP	**Pn**	**02 37 11.1**	**-0.2**
PB08				eS	**Sn**	**02 37 29.9**	**-0.4**
PB08				IAML		02 37 33.1	
	comp=N,625nm,0.2s						
PB08	**IPOC Station P**	**1.52**	**28**	i P	**Pn**	**02 37 10.4**	**-0.9**
PB08				IAML		02 37 31.2	
	comp=Z,342nm,0.3s						
PB11	**IPOC Station P**	**1.73**	**8**	eP	**Pn**	**02 37 14.2**	**+0.1**
PB11				eS	**Sn**	**02 37 35.4**	**-0.1**
PB11				IAML		02 37 38.7	
	comp=N,535nm,0.4s						
PB11	**IPOC Station P**	**1.73**	**8**	i P	**Pn**	**02 37 13.6**	**-0.5**
PB11				IAML		02 37 40.0	
	comp=Z,296nm,0.3s						
GO01	**Chusmiza**	**1.93**	**20**	eP	**Pn**	**02 37 17.3**	**+0.2**
GO01				eS	**Sn**	**02 37 40.8**	**+0.1**
GO01				IAML		02 37 42.5	
	comp=N,925nm,0.1s						
GO01	**Chusmiza**	**1.93**	**20**	i P	**Pn**	**02 37 16.7**	**-0.4**
PB10	**IPOC Station P**	**2.10**	**196**	eP	**Pn**	**02 37 19.1**	**+0.1**
PB10				IAML		02 37 54.4	
	comp=E,201nm,0.2s						
PB10	**IPOC Station P**	**2.10**	**196**	i P	**Pn**	**02 37 18.6**	**-0.4**
PB10				IAML		02 37 54.1	
	comp=Z,152nm,0.4s						
AF01	**San Pedro de A**	**2.17**	**133**	i P	**Pn**	**02 37 22.1**	**+1.9**
AF01				IAML		02 38 12.2	
	comp=Z,502nm,0.5s						
PB14	**IPOC Station P**	**3.16**	**188**	i P	**Pn**	**02 37 32.3**	**-1.5**
PB14				IAML		02 38 29.3	
	comp=Z,84nm,0.7s						
PB16	**IPOC Station P**	**3.16**	**7**	i P	**Pn**	**02 37 35.1**	**+1.0**
PB16				IAML		02 38 31.3	
	comp=Z,46nm,0.8s						
GO02	**Mina Guanaco**	**3.67**	**175**	i P	**Pn**	**02 37 40.5**	**-0.4**
AC02	**Maricunga**	**5.37**	**173**	i P	**Pn**	**02 38 04.1**	**-0.3**
AC02				IAML		02 39 44.7	
	comp=Z,28nm,1.9s						

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*IDC **10** 02:38:01.3±1.0, 17°.68S×178°.89W, h564^{km}±9^{km}, mb3.2/10, mbtmp4.1/12, Error ellipse: s-maj=20.0km s-min=13.7km az=142.0*

ISC 10 02:37:59.9±0.7**, 17°.7S**±0°.1×**178°.8W**±0°.1**, h550^{km}, n36, σ1^{s}03**/40**, mb3.4**/9**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.01**	**268**	P	**P**	**02 39 17.3**	**+2.2**
	96nm,0.7s,baz=109,slow=3.6,SNR=72						
MSVF				S	**S**	**02 40 19.4**	**+3.1**
	15nm,1.1s,baz=89,slow=23,SNR=1.2						
DZM	**Mont Dzumac**	**14.56**	**250**	P	**P**	**02 41 04.0**	**-1.0**
	4.2nm,0.7s,baz=116,slow=23,SNR=6.1						
URZ	**Urewera**	**20.84**	**189**	P	**P**	**02 42 04.3**	**+0.9**
	4.2nm,0.6s,baz=336,slow=3.8,SNR=1.8						
	4.2nm,0.6s						
WRA	**Warramunga Arr**	**44.31**	**259**	P	**P**	**02 45 20.5**	**-1.1**
	0.5nm,0.3s,baz=94,slow=7.0,SNR=20						
WRA				PcP	**PcP**	**02 46 53.3**	**-0.5**
	0.6nm,0.7s,baz=97,slow=3.1,SNR=1.1						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**44.50**	**254**	P	**P**	**02 45 23.0**	**-0.1**
	6.9nm,0.6s,baz=88,slow=8.1,SNR=68						
ASAR				PcP	**PcP**	**02 46 54.1**	**-0.4**
	0.9nm,0.4s,baz=98,slow=4.7,SNR=4.8						
ASAR				S	**S**	**02 51 17.4**	**-1.4**
	0.9nm,0.9s,baz=95,slow=15,SNR=5.7						
	6.9nm,0.6s						
MJAR	**Matsushiro Arr**	**67.48**	**324**	P	**P**	**02 48 00.9**	**-0.6**
	2.0nm,0.5s,baz=168,slow=6.2,SNR=5.0						
	2.0nm,0.5s						
QSPA	**South Pole Qui**	**72.40**	**180**	P	**P**	**02 48 29.9**	**-0.5**
	0.7nm,0.6s,baz=346,slow=4.2,SNR=7.6						
	0.7nm,0.6s						
PETK	**Petropavlovsk-**	**73.34**	**345**	P	**P**	**02 48 36.0**	**+0.3**
	2.0nm,0.7s,baz=131,slow=7.7,SNR=5.4						
	2.0nm,0.7s						
NVAR	**Mina Array Bea**	**79.50**	**44**	P	**P**	**02 49 10.2**	**+0.1**
	0.4nm,0.5s,baz=258,slow=5.6,SNR=1.5						
	0.4nm,0.5s						
ILAR	**Eielson Array**	**85.72**	**13**	P	**P**	**02 49 39.5**	**-1.0**
	0.4nm,0.4s,baz=221,slow=5.0,SNR=9.2						
	0.4nm,0.4s						
TXAR	**Lajitas Array**	**86.17**	**58**	P	**P**	**02 49 44.6**	**+1.0**
	0.4nm,0.7s,baz=232,slow=6.0,SNR=7.9						
	0.4nm,0.7s						
PDAR	**Pinedale Array**	**87.42**	**44**	P	**P**	**02 49 49.1**	**-0.2**
	0.4nm,0.5s,baz=184,slow=2.4,SNR=2.4						
	0.4nm,0.5s						
EKA	**Eskdalemuir Ar**	**142.24**	**4**	PKP	**PKPdf**	**02 56 28.8**	**-0.9**
	0.3nm,0.6s,baz=0.0,slow=0.4,SNR=3.8						
BRTR	**Keskin Array B**	**144.34**	**315**	PKP	**PKPab**	**02 56 34.0**	**-0.3**
	1.7nm,0.7s,baz=103,slow=2.7,SNR=14						
MORC	**Moravsky Berou**	**145.35**	**341**	ePKP	**PKPbc**	**02 56 36.4**	**-0.1**
MMAI	**Mount Meron Ar**	**145.69**	**303**	PKPbc	**PKPab**	**02 56 38.7**	**-1.0**
	1.6nm,0.5s,baz=66,slow=6.5,SNR=7.6						
JAVC	**Velka Javorina**	**146.12**	**340**	ePKP	**PKPbc**	**02 56 39.5**	**+0.8**
KRUC	**Moravsky**	**146.33**	**342**	ePKP	**PKPbc**	**02 56 39.2**	**0.0**
GERES	**GERESS Array B**	**147.27**	**345**	PKPbc	**PKPbc**	**02 56 42.0**	**+0.2**
	1.6nm,0.6s,baz=27,slow=4.5,SNR=10						
CONA	**Conrad Observa**	**147.50**	**342**	i PKP	**PKiKP**	**02 56 43.2**	**-0.9**
	2.6nm,0.7s						
RONA	**Rosalia, Austr**	**147.57**	**341**	ePKP	**PKPbc**	**02 56 41.3**	**-1.3**
	1.5nm,0.6s						
MOA	**Molln**	**148.04**	**343**	i PKP	**PKPdf**	**02 56 41.3**	**+1.5**
	2.0nm,1.0s						
ARSA	**Arzberg**	**148.21**	**341**	i PKP	**PKiKP**	**02 56 45.0**	**-0.5**
	2.2nm,0.8s						
BIOA	**Bad Ischl, Aus**	**148.35**	**344**	ePKP	**PKPab**	**02 56 51.0**	**+1.1**
	1.6nm,0.5s						
LESA	**Schwarzleotal**	**148.84**	**345**	i PKP	**PKPbc**	**02 56 45.8**	**-0.1**
	1.1nm,0.4s						
SOKA	**Soboth**	**148.88**	**341**	i PKP	**PKPbc**	**02 56 45.3**	**-0.7**
	1.3nm,0.6s						
KBA	**Koelnbreinsper**	**148.99**	**344**	ePKP	**PKPbc**	**02 56 46.1**	**-0.3**
	1.5nm,0.5s						
WATA	**Walderalm**	**149.19**	**346**	ePKP	**PKPbc**	**02 56 46.5**	**-0.3**
	0.7nm,0.4s						
RETA	**Reutte**	**149.22**	**347**	ePKP	**PKPbc**	**02 56 46.5**	**-0.3**
	1.2nm,0.5s						
WTTA	**Wattenberg**	**149.24**	**346**	i PKP	**PKPbc**	**02 56 46.6**	**-0.4**
	4.0nm,0.6s						
MOTA	**Moosalm**	**149.29**	**347**	i PKP	**PKPbc**	**02 56 46.7**	**-0.3**
	3.8nm,1.1s						
MYKA	**Terra Mystica**	**149.32**	**343**	ePKP	**PKPbc**	**02 56 46.1**	**-0.9**
	2.0nm,0.5s						
SQTA	**Sankt Quirin**	**149.38**	**347**	i PKP	**PKPbc**	**02 56 47.1**	**-0.1**
	3.1nm,0.5s						
ABTA	**Abfaltersbach**	**149.52**	**345**	i PKP	**PKPbc**	**02 56 46.9**	**-0.6**
	3.0nm,0.6s						
DAVA	**Damuels**	**149.59**	**348**	ePKP	**PKPbc**	**02 56 45.7**	**-2.1**
	3.5nm,1.3s						
FETA	**Feichten**	**149.68**	**347**	i PKP	**PKiKP**	**02 56 48.7**	**0.0**
	5.4nm,1.6s						

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*NEIC **10** 02:41:10.6±0.9, 35°.408N±0°.010×118°.84W±0°.01, h15^{km}±4^{km}, Error ellipse: s-maj=1.6km s-min=1.4km az=97.0*

PAS 10 02:41:11.1±0.9**, 35°.406N**±0°.003×**118°.85W**±0°.01**, h13^{km}**±4^{km}**, Mwr3.5**/4**, ML3.3**/88(NEIC)**, Error ellipse: s-maj=1.6km s-min=0.2km az=103.0, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAGC	**SCE Magundon P**	**0.08**	**235**		Pg	02 41 14.2	+0.3
MAGC					Sg	02 41 16.7	+0.9
TEJ	**El Tejon**	**0.22**	**144**		Pg	02 41 15.6	-0.3
TEJ					Sg	02 41 18.8	-0.3
BAKC	**Calstate**	**0.22**	**254**		Pb	02 41 20.8	+3.8
ARVC	**Arvin**	**0.28**	**177**		Pg	02 41 17.0	+0.1
ARVC					Sg	02 41 21.2	+0.4
TJR	**Tejon Ranch**	**0.39**	**168**		Pg	02 41 18.4	-0.5
TJR					Sg	02 41 23.7	-0.3
ISA	**Isabella, Lake**	**0.40**	**50**		Pg	02 41 18.7	-0.4
ISA				Sg	Sg	02 41 23.6	-0.8
WASM	**Alta Sierra Ca**	**0.41**	**35**		Pg	02 41 18.9	-0.3
WASM					Sg	02 41 24.6	-0.2
VES	**Vestal, Richgr**	**0.48**	**336**		Pg	02 41 20.2	-0.3
VES					Sg	02 41 27.0	+0.2
WHFM	**Hanning Flat**	**0.50**	**54**		Pg	02 41 20.4	-0.5
WHFM					Sg	02 41 27.1	-0.5
THC	**Tehachapi Micr**	**0.52**	**163**		Pg	02 41 20.8	-0.5
THC					Sg	02 41 27.7	-0.5
WORM	**Onyx Ranch**	**0.57**	**59**		Pg	02 41 21.7	-0.6
WORM					Sg	02 41 29.2	-0.7
WBSM	**Bird Springs**	**0.59**	**77**		Pg	02 41 22.1	-0.6
WBSM					Sg	02 41 29.7	-0.9
BCW	**Bitter Crk WRg**	**0.66**	**225**	Pg	Pg	02 41 23.3	-0.6
BCW				Sg	Sg	02 41 32.2	-0.4
CCAC	**Calif City Air**	**0.72**	**110**	Pg	Pg	02 41 24.6	-0.6
CCAC				Sg	Sg	02 41 33.9	-0.8
TPO	**Tropico Hills**	**0.73**	**136**		Pg	02 41 24.5	-0.8
TPO					Sg	02 41 33.7	-1.1
CRGC	**Crocker Grade**	**0.74**	**257**		Pg	02 41 25.2	-0.3
CRGC					Sb	02 41 35.6	-0.3
SPG2	**Springville 2**	**0.80**	**5**		Pg	02 41 25.2	-1.3
SPG2					Pn	02 41 35.5	+7.5
OSI	**Osito Audit: C**	**0.80**	**173**		Pg	02 41 25.6	-0.9
OSI					Sg	02 41 36.2	-0.7
CARC	**Carrizo Plain**	**0.82**	**263**		Pg	02 41 26.5	-0.5
CARC					Pn	02 41 38.3	+10
DTP	**Desert Tortois**	**0.83**	**99**		Pg	02 41 26.2	-0.9
DTP					Sg	02 41 37.0	-1.0
ALPC	**Antelope**	**0.85**	**148**		Pg	02 41 26.7	-0.8
ALPC					Pn	02 41 37.2	+8.5
EDW2	**Edwards Air Fo**	**0.87**	**127**		Pg	02 41 26.9	-1.0
EDW2					Sg	02 41 38.5	-0.9
WNMM	**Nine Mile Cany**	**0.88**	**60**		Pg	02 41 27.2	-0.9
WNMM					Pn	02 41 38.4	+9.2
LEOC	**Leona Valley**	**0.89**	**150**		Pg	02 41 27.5	-0.9
LEOC					Sg	02 41 39.0	-1.0
SRTC	**Snort**	**0.94**	**72**		Pg	02 41 28.6	-0.6
SMMC	**Simmler**	**0.94**	**265**		Pb	02 41 28.2	-1.1
SMMC					Sg	02 41 41.1	-0.6
PKM	**Mcpherson Peak**	**0.95**	**237**		Pg	02 41 28.2	-1.2
PKM					Sg	02 41 40.4	-1.4
LRMC	**Laurel Mtn Rad**	**0.95**	**85**		Pg	02 41 28.3	-1.2
LRMC					Sg	02 41 40.8	-1.2
TOW	**Tower One**	**0.97**	**65**		Pb	02 41 29.2	-0.5
WRVM	**Rose V. Centra**	**0.98**	**52**		Pb	02 41 29.1	-0.9
PDE	**Pardee, Santa**	**0.99**	**167**		Pb	02 41 29.2	-0.8
PDE					Sg	02 41 43.1	+0.1
WVPM	**Volcano Peak E**	**1.00**	**57**		Pb	02 41 29.4	-0.9
VOG	**Valley Oaks Go**	**1.01**	**335**		Pb	02 41 29.2	-1.3
VOG					Sb	02 41 42.4	-1.2
JRC2	**Joshua Ridge**	**1.02**	**55**		Pb	02 41 29.9	-0.8
JRC2					Sb	02 41 43.6	-0.5
CJV	**Casa Juvan**	**1.05**	**146**		Pb	02 41 30.3	-0.8
MFS	**McCloud Flat S**	**1.07**	**48**		Pb	02 41 30.9	-0.7
WCSM	**Coso Springs S**	**1.07**	**54**		Pb	02 41 30.9	-0.7
OAT	**Oat Mountain**	**1.08**	**170**		Pb	02 41 31.4	-0.2
SBB	**Saddle Back Bu**	**1.10**	**130**		Pb	02 41 31.1	-0.9
SBB					Sb	02 41 45.9	-0.5
LRRC	**Littlerock Res**	**1.10**	**142**		Pb	02 41 31.4	-0.6
FIGC	**Figueroa Mtn.**	**1.16**	**235**		Pb	02 41 32.2	-0.7
BLCC	**Black Canyon**	**1.17**	**173**		Pb	02 41 32.6	-0.5
HYS	**Haystack Butte**	**1.18**	**117**		Pn	02 41 32.4	-1.0
SBC	**Santa Barbara**	**1.20**	**217**		Pn	02 41 33.3	-0.2
CWC	**Cottonwood Cre**	**1.20**	**31**		Pn	02 41 33.4	-0.4
JNH	**Juniper Hills**	**1.20**	**142**		Pn	02 41 33.0	-0.7
CCCA	**Chr Cany lake**	**1.21**	**84**		Pn	02 41 33.4	-0.4
PKEM	**Kettleman Hill**	**1.22**	**303**		Pn	02 41 33.3	-0.5
DECC	**Green Verdugo**	**1.22**	**160**		Pn	02 41 33.3	-0.6
TSCN	**Private Proper**	**1.23**	**277**		Pn	02 41 32.9	-1.2
HOLC	**Holcomb Ridge**	**1.25**	**139**		Pn	02 41 33.9	-0.5
CHFC	**Chilao Flat St**	**1.27**	**148**		Pn	02 41 34.0	-0.6
DJJ	**Donna J Jenkin**	**1.34**	**166**		Pn	02 41 34.4	-1.0
MWC	**Mount Wilson**	**1.35**	**151**		Pn	02 41 35.6	-0.1
PASC	**Pasadena Art C**	**1.35**	**156**	Pn	Pn	02 41 35.0	-0.6
PASC					Sb	02 41 53.1	-0.1
PASC				IAML		02 41 57.8	
	comp=E,820nm,0.5s						
PASC				IAML		02 41 59.4	
	comp=N,408nm,0.6s						
GR2C	**Griffith Obs.**	**1.36**	**161**		Pb	02 41 36.1	-0.3
NJQ	**Nojoqui County**	**1.40**	**232**		Pb	02 41 36.8	-0.2
CGO	**Cerro Gordo**	**1.42**	**36**		Pb	02 41 37.3	-0.3
GVRC	**Garvey Reservo**	**1.48**	**156**		Pb	02 41 38.2	-0.2
PKD	**Bear Valley Ra**	**1.48**	**292**		Pn	02 41 36.3	-1.1
PWMM	**Westland Maint**	**1.51**	**313**		Pn	02 41 37.6	-0.2
BFSC	**Mount Baldy Ra**	**1.52**	**140**		Pn	02 41 38.0	-0.1
SSK	**Sunset Peak**	**1.52**	**141**		Pn	02 41 38.2	0.0
RHC	**Rose Hills Cem**	**1.56**	**154**		Pb	02 41 40.3	+0.5
PSRC	**Puddingstone R**	**1.56**	**147**		Pn	02 41 38.9	+0.3
PSMM	**Smith Mountain**	**1.57**	**295**		Pn	02 41 38.1	-0.6
DPD	**Davis Peak**	**1.59**	**264**		Pn	02 41 38.4	-0.6
RRX	**Edison Barstow**	**1.60**	**109**		Pb	02 41 41.1	+0.5
SS2	**San Sevaine**	**1.63**	**137**		Pn	02 41 39.6	+0.2
PJUM	**Juniper Ridge**	**1.64**	**300**		Pn	02 41 39.4	-0.3
CSP	**Cedar Springs**	**1.65**	**132**		Pn	02 41 39.4	-0.4
RAMR	**Ramage Ranch**	**1.67**	**278**		Pn	02 41 38.7	-1.3
GSC	**Goldstone, Bar**	**1.67**	**93**	Pn	Pn	02 41 39.7	-0.4
GSC				IAML		02 42 07.3	
	comp=N,332nm,0.6s						
GSC				IAML		02 42 10.1	
	comp=E,396nm,0.4s						
RPV	**Rancho Palos V**	**1.70**	**168**		Pb	02 41 42.9	+0.7
TIN	**Tinemaha, Big**	**1.72**	**17**		Pb	02 41 42.3	-0.3
FRI	**Friant**	**1.73**	**336**		Pn	02 41 41.0	+0.1
PSAM	**San Ardo**	**1.77**	**291**		Pn	02 41 40.4	-1.0
PMPB	**Monarch Peak**	**1.78**	**298**	Pn	Pn	02 41 40.6	-1.0
PMPB				IAML		02 42 10.4	
	comp=E,487nm,0.8s						
PMPB				IAML		02 42 14.8	
	comp=N,440nm,0.9s						
GWY	**Greenwater Val**	**1.93**	**66**	Pn	Pn	02 41 43.2	-0.6
GWY				IAML		02 42 15.3	
	comp=E,316nm,0.5s						
GWY				IAML		02 42 25.5	
	comp=N,225nm,0.9s						
GRAC	**Grapevine Rang**	**1.99**	**37**	Pn	Pn	02 41 45.2	+0.8
GRAC				IAML		02 42 21.6	
	comp=N,382nm,0.4s						
PCCM	**Crazy Canyon**	**2.01**	**291**		Pn	02 41 43.2	-1.5
DSP	**Deep Springs**	**2.08**	**20**	Pn	Pn	02 41 46.9	+1.2
DSP				IAML		02 42 17.2	
	comp=N,173nm,0.5s						
DSP				IAML		02 42 21.6	
	comp=E,122nm,0.5s						
ELS	**Elsinore Mount**	**2.11**	**146**	Pn	Pn	02 41 45.2	-0.9
ELS				IAML		02 42 18.6	
	comp=E,117nm,0.7s						
ELS				IAML		02 42 19.5	
	comp=N,173nm,0.7s						
GMN	**Gold Mountain**	**2.28**	**34**	Pn	Pn	02 41 49.4	+0.7
SAO	**San Andreas Ge**	**2.51**	**303**	Pn	Pn	02 41 51.1	-0.4
MZP	**Montezuma Peak**	**2.58**	**27**	Pn	Pn	02 41 53.8	+1.0
TPNV	**Topopah Spring**	**2.60**	**53**	Pn	Pn	02 41 53.6	+0.6
TPNV				IAML		02 42 37.2	
	comp=N,74nm,0.8s						
TPNV				IAML		02 42 43.0	
	comp=N,81nm,0.7s						
PFO	**Pinyon Flats O**	**2.66**	**132**	Pn	Pn	02 41 53.5	-0.3
PFO				IAML		02 42 40.9	
	comp=N,82nm,0.8s						
LHV	**Little Huntoon**	**2.85**	**5**	Pn	Pn	02 41 58.5	+2.3
CMB	**Columbia Colle**	**2.90**	**335**	Pn	Pn	02 41 57.7	+0.7
CMB				IAML		02 42 44.7	
	comp=E,146nm,0.5s						
CMB				IAML		02 42 46.4	
	comp=N,133nm,0.5s						
TPH	**Tonopah**	**2.96**	**26**	Pn	Pn	02 41 59.3	+1.3
NVAR	**Mina Array Bea**	**3.05**	**8**	Pn	Pn	02 42 01.7	+2.5
SHPR	**Sheep Range**	**3.18**	**69**	Pn	Pn	02 42 01.8	+0.8
V12A	**Nelson**	**3.27**	**83**	Pn	Pn	02 42 01.9	-0.3
S11A	**Rachel**	**3.35**	**47**	Pn	Pn	02 42 04.2	+0.9
S11A				IAML		02 43 04.2	
	comp=N,97nm,1.5s						
S11A				IAML		02 43 11.3	
	comp=E,105nm,0.9s						
TKX	**Tecate**	**3.39**	**146**	Pn	Pn	02 42 03.9	+0.2
TKX				IAML		02 42 56.0	
	comp=N,79nm,0.3s						
TKX				IAML		02 42 58.0	
	comp=E,66nm,0.3s						
CBX	**Cerro Bola**	**3.58**	**149**	Pn	Pn	02 42 06.2	-0.2
PRN	**Pahroc Range**	**3.65**	**56**	Pn	Pn	02 42 08.2	+0.7
PRN				IAML		02 43 17.5	
	comp=N,46nm,0.9s						
PRN				IAML		02 43 18.1	
	comp=E,44nm,0.8s						
YUH	**Yuha Desert**	**3.67**	**138**	Pn	Pn	02 42 07.0	-0.5
AFDM	**Forest Hills D**	**3.92**	**335**	Pn	Pn	02 42 12.0	+1.0
AFDM				IAML		02 43 14.5	
	comp=N,61nm,0.4s						
BLYC	**Blythe**	**3.93**	**114**	Pn	Pn	02 42 10.2	-0.9
BLYC				IAML		02 43 24.4	
	comp=N,44nm,0.8s						
BLYC				IAML		02 43 24.6	
	comp=E,37nm,0.6s						
MPK	**Martis Peak**	**4.00**	**347**	Pn	Pn	02 42 13.5	+1.3
W13A	**Hualapai Mount**	**4.07**	**93**		Pn	02 42 14.4	+1.1
GLA	**Glamis**	**4.07**	**124**	Pn	Pn	02 42 11.6	-1.6
GLA				IAML		02 43 23.5	
	comp=N,50nm,0.7s						
ESJX	**Sierra Juarez**	**4.16**	**144**	Pn	Pn	02 42 14.4	-0.1
ESJX				IAML		02 43 23.1	
	comp=E,30nm,1.3s						
ESJX				IAML		02 43 23.1	
	comp=N,27nm,1.0s						
PAHR	**Pah Rah Range**	**4.31**	**354**	Pn	Pn	02 42 18.7	+2.2
PAHR				IAML		02 43 27.4	
	comp=E,51nm,1.6s						
PAHR				IAML		02 43 31.2	
	comp=N,42nm,1.1s						
BEKR	**Beckworth**	**4.61**	**345**	Pn	Pn	02 42 23.1	+2.4
BEKR				IAML		02 43 36.4	
	comp=N,44nm,0.8s						
GDXM	**Geysers**	**4.64**	**318**	Pn	Pn	02 42 21.0	+0.1
GDXM				IAML		02 43 41.4	
	comp=N,14nm,1.8s						
GDXM				IAML		02 43 43.0	
	comp=E,14nm,1.0s						
LCMT	**Little Creek M**	**4.80**	**69**	Pn	Pn	02 42 25.4	+2.1
113A	**Mohawk Valley,**	**4.97**	**121**	Pn	Pn	02 42 25.5	+0.1
113A				IAML		02 44 03.1	
	comp=E,11nm,1.4s						
Y14A	**Wickenburg**	**5.03**	**105**	Pn	Pn	02 42 25.9	-0.4
Y14A				IAML		02 44 00.2	
	comp=E,14nm,0.5s						
Y14A				IAML		02 44 14.9	
	comp=N,14nm,1.0s						
KNB	**Kanab**	**5.13**	**70**	Pn	Pn	02 42 30.8	+3.0
U15A	**North Rim**	**5.42**	**77**	Pn	Pn	02 42 33.6	+1.8
ELK	**Elko**	**6.04**	**27**	Pn	Pn	02 42 42.0	+1.7
WUAZ	**Wupatki**	**6.10**	**87**	Pn	Pn	02 42 44.3	+3.3

KRSC 10 02:59:33.9±1.4**, 54°.04N**×**168°.74E, h60^{km}**±25^{km}**, Ml3.7, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	**Bering**	**1.99**	**307**	eP	Pn	03 00 06.3	+1.2
BKI				eS	Sn	03 00 31.9	+3.1
MKZ	**Mys Kozlova**	**4.14**	**280**	eP	Pn	03 00 36.9	+2.5
MKZ				eS	Sn	03 01 25.4	+3.9
TUMD	**Tumrok D**	**4.99**	**287**	eS	Sn	03 01 46.5	+4.1
SDLR	**Sedlovina**	**5.91**	**267**	eP	Pn	03 01 02.2	+3.3
UGLR	**Uglovaya**	**5.96**	**266**	eP	Pn	03 01 03.0	+3.5
SMAR	**Somma**	**5.96**	**267**	eP	Pn	03 01 04.5	+4.8
AVH	**Avacha**	**6.00**	**267**	eP	Pn	03 01 04.0	+4.0
KRX	**Arik**	**6.03**	**268**	eP	Pn	03 01 04.0	+3.5
KOK	**Koryaka**	**6.05**	**267**	eP	Pn	03 01 04.6	+3.8
GNL	**Ganaly**	**6.40**	**271**	eP	Pn	03 01 10.0	+4.4
MTVR	**Mutnovka**	**6.52**	**260**	eP	Pn	03 01 11.5	+4.2
MTVR				eS	Sn	03 02 22.5	+2.2
ASAK	**Asacha**	**6.72**	**260**	eP	Pn	03 01 13.9	+3.9

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*ATH **10** 03:05:09.7, 40°.49N×20°.80E, h18^{km}±4^{km}, ML2.0/5, Manual Solution by I.Dede First location: 2019/06/10 03:06:24, This location: 2019/06/10 11:03:29 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*

*TIR **10** 03:05:10.8, 40°.48N×20°.80E, h13^{km}, Ml2.6/6*

ISC 10 03:05:10.4±1.0**, 40°.46N**±0°.03×**20°.77E**±0°.03**, h7^{km}**±9^{km}**, n15, σ0^{s}87**/28**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	**Korca**	**0.17**	**5**	Pg	**Pg**	**03 05 13.0**	**-0.9**
KBN				AML	AML	03 05 16.4	
	3.8nm,0.6s						
KBN				Sg	**Sg**	**03 05 16.7**	**+0.5**
NEST	**Nestorio**	**0.22**	**102**	P	**Pg**	**03 05 14.8**	**0.0**
NEST				S	**Sg**	**03 05 19.4**	**+1.6**
NEST				AML	AML	03 05 21.2	
	4.7nm,0.3s						
NEST	**Nestorio**	**0.22**	**102**	P	**Pg**	**03 05 15.0**	**+0.2**
NEST				S	**Sg**	**03 05 18.4**	**+0.6**
PENT	**Pentalofos**	**0.39**	**133**	P	**Pg**	**03 05 16.1**	**-1.9**
PENT				S	**Sg**	**03 05 23.6**	**+0.5**
KPRO	**Kipourio**	**0.68**	**138**	P	**Pg**	**03 05 22.2**	**-1.3**
KPRO				S	**Sg**	**03 05 32.8**	**+0.4**
KZN	**Kozani**	**0.78**	**101**	P	**Pg**	**03 05 24.8**	**-0.6**
KZN				S	**Sb**	**03 05 36.4**	**-0.8**
JAN	**Janina**	**0.80**	**175**	P	**Pg**	**03 05 25.6**	**-0.3**
JAN				S	**Sg**	**03 05 37.2**	**+0.9**
SRN	**Sarande**	**0.82**	**226**	Pg	**Pg**	**03 05 25.7**	**-0.6**
SRN				Sg	**Sb**	**03 05 39.5**	**+1.1**
SRN				AML	AML	03 05 41.2	
	0.1nm,0.6s						
VLO	**Vlora**	**0.97**	**271**	Pg	**Pb**	**03 05 29.6**	**+0.1**
VLO				Sg	**Sn**	**03 05 43.9**	**-0.5**
VLO				AML	AML	03 05 47.8	
	0.6nm,0.5s						
IGT	**Igoumenitsa**	**0.98**	**200**	Pn	**Pn**	**03 05 30.8**	**+0.1**
IGT				Sn	**Sn**	**03 05 45.6**	**+0.7**
IGT	**Igoumenitsa**	**0.98**	**200**	P	**Pg**	**03 05 28.4**	**-0.9**
KEK	**Kerkira**	**1.05**	**225**	P	**Pb**	**03 05 30.3**	**-0.7**
TIR	**Tirane**	**1.12**	**323**	Pg	**Pn**	**03 05 32.6**	**0.0**
TIR				Sg	**Sn**	**03 05 49.1**	**+0.9**
PUK	**Puka**	**1.71**	**338**	Pn	**Pg**	**03 05 42.5**	**-0.8**
PUK				Sn	**Sg**	**03 06 06.4**	**+0.9**
PUK				AML	AML	03 06 10.8	
	0.2nm,0.7s						
BCI	**Bajram Curri**	**1.98**	**345**	P	**Pg**	**03 05 47.6**	**-0.7**
BCI				Sn	**Sg**	**03 06 14.3**	**+0.4**
BCI				AML	AML	03 06 16.3	
	0.1nm,0.8s						

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*THE **10** 03:12:52.0, 40°.5N±0°.9×2°1E±°, h0^{km}±2^{km}, M2.6/8, MLh2.6/8*

*TIR **10** 03:12:52.6, 40°.52N×20°.86E, h0^{km}±1^{km}, Ml2.9/7*

*ATH **10** 03:12:52.9, 40°.47N×20°.86E, h7^{km}±2^{km}, ML2.5/7, Manual Solution by I.Dede First location: 2019/06/10 03:13:53, This location: 2020/10/17 05:21:59 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*PDG **10** 03:12:53.4±0.6, 40°.53N×20°.91E, h0^{km}±11^{km}, ML2.8/9, Error ellipse: s-maj=1.0km s-min=1.5km az=0.0*

*BEO **10** 03:12:53.6±0.3, 40°.48N×20°.92E, h9^{km}±3^{km}, ML2.4/9*

*SKO **10** 03:12:54.5, 40°.54N×20°.83E, h15^{km}, ML2.5*

ISC 10 03:12:52.7±1.1**, 40°.48N**±0°.02×**20°.83E**±0°.02**, h2^{km}**±9^{km}**, n64, σ0^{s}91**/100**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	**Korca**	**0.15**	**347**	P	**Pg**	**03 12 54.8**	**-0.8**
KBN				Sg	**Sg**	**03 12 56.7**	**-0.9**
KBN				AML	AML	03 12 57.8	
	22nm,0.2s						
KBN	**Korca**	**0.15**	**347**	P	**Pg**	**03 12 54.8**	**-0.8**
KBN				S	**Sg**	**03 12 56.6**	**-1.0**
NEST	**Nestorio**	**0.18**	**111**	P	**Pg**	**03 12 56.9**	**+0.8**
NEST				Sg	**Sg**	**03 13 00.2**	**+1.7**
NEST				AML	AML	03 13 04.2	
	6.7nm,0.3s						
NEST	**Nestorio**	**0.18**	**111**	P	**Pg**	**03 12 56.9**	**+0.8**
NEST				S	**Sg**	**03 13 00.8**	**+2.3**
NEST	**Nestorio**	**0.18**	**111**	P	**Pg**	**03 12 57.3**	**+1.1**
NEST				S	**Sg**	**03 12 58.8**	**+0.3**
PENT	**Pentalofos**	**0.37**	**140**	P	**Pg**	**03 12 60.0**	**+0.2**
PENT	**Pentalofos**	**0.37**	**140**	P	**Pg**	**03 12 60.0**	**+0.2**

PENT				S	Sg	03 13 05.5	+1.0
OHR	Ohrid	0.63	358	P	Pg	03 13 03.9	-0.9
OHR				S	Sg	03 13 13.4	+0.3
OHR	Ohrid	0.63	358	*i* Pg	Pg	03 13 04.1	-0.7
OHR				*i* Sg	Sb	03 13 15.1	-0.7
OHR				*e*Lg	Lg	03 13 15.4	
	comp=E,194nm,0.4s						
OHR				*e*Lg	Lg	03 13 16.8	
	comp=N,144nm,0.4s						
OHR	Ohrid	0.63	358	*e*Pg	Pg	03 13 04.6	-0.2
OHR				*e*Sg	Sb	03 13 15.2	-0.7
KPRO	Kipourio	0.66	142	P	Pg	03 13 05.0	-0.4
KPRO				S	Sb	03 13 16.4	-0.3
KPRO	Kipourio	0.66	142	P	Pg	03 13 04.8	-0.6
KPRO				S	Sb	03 13 15.6	-1.1
KZN	Kozani	0.74	103	P	Pg	03 13 06.9	0.0
KZN				S	Sb	03 13 19.4	+0.5
KZN	Kozani	0.74	103	P	Pg	03 13 07.1	+0.3
KZN				S	Sb	03 13 18.1	-0.8
JAN	Janina	0.82	179	P	Pg	03 13 07.7	-0.8
JAN				S	Sb	03 13 20.2	-1.0
SRN	Sarande	0.87	227	Pg	Pb	03 13 10.9	+0.3
SRN				Sg	Sn	03 13 25.4	+0.1
SRN				AML	AML	03 13 30.0	
	comp=N,0.6nm,0.7s						
SRN	Sarande	0.87	227	P	Pg	03 13 08.7	-0.8
SRN				S	Sg	03 13 20.9	+0.1
VLO	Vlora	1.02	270	Pg	Pb	03 13 13.1	0.0
VLO				S	Sn	03 13 28.7	-0.2
VLO				AML	AML	03 13 33.2	
	comp=N,1.8nm,0.3s						
IGT	Igoumenitsa	1.02	202	Pg	Pn	03 13 13.4	-0.6
IGT				Sg	Sn	03 13 30.7	+1.8
IGT	Igoumenitsa	1.02	202	*i* Pg	Pg	03 13 12.2	-0.1
IGT	Igoumenitsa	1.02	202	*e*Pg	Pg	03 13 12.0	-0.2
IGT				*e*Sg	Sb	03 13 27.4	+0.5
IGT	Igoumenitsa	1.02	202	P	Pb	03 13 12.6	-0.5
TIR	Tirane	1.14	320	Pg	Pn	03 13 15.5	-0.2
TIR				S	Sn	03 13 32.7	+0.9
TIR				AML	AML	03 13 38.0	
	comp=N,0.3nm,0.4s						
TIR	Tirane	1.14	320	*i* Pg	Pg	03 13 14.1	-0.3
TIR	Tirane	1.14	320	*e*Pg	Pg	03 13 13.9	-0.6
TIR				*e*Sg	Sn	03 13 31.9	+0.1
TETR	Tetrakomo, Epi	1.18	163	P	Pg	03 13 15.3	-0.1
THL	Klokotos Trika	1.29	135	P	Pg	03 13 15.6	-1.7
THL				S	Sg	03 13 33.6	-0.4
TYRN	Tyrnavos	1.32	125	P	Pn	03 13 17.4	-0.7
TYRN	Tyrnavos	1.32	125	P	Pn	03 13 17.4	-0.7
TYRN				S	Sg	03 13 34.2	-0.9
VAY	Valandovo	1.56	57	P	Pn	03 13 21.2	-0.3
VAY	Valandovo	1.56	57	*i* Pn	Pn	03 13 21.6	+0.1
VAY				*i* Sg	Sg	03 13 44.8	+1.9
VAY				*e*Lg	Lg	03 13 45.6	
	comp=N,75nm,0.8s						
VAY				*e*Lg	Lg	03 13 46.6	
	comp=E,56nm,0.6s						
VAY	Valandovo	1.56	57	*e*Pg	Pb	03 13 21.7	-0.6
VAY				*e*Sg	Sn	03 13 40.8	-1.5
TSLK	Tsoukalades, L	1.66	185	P	Pn	03 13 22.5	-0.3
KNT	Kendrikon	1.71	66	*i* Pn	Pn	03 13 23.2	-0.3
KNT	Kendrikon	1.71	66	P	Pn	03 13 23.0	-0.6
PUK	Puka	1.71	336	Pn	Pb	03 13 25.2	+0.2
PUK				Sn	Sg	03 13 50.3	+2.5
PUK				AML	AML	03 13 52.8	
	comp=E,0.4nm,0.8s						
HORT	Hortiatis	1.73	85	P	Pn	03 13 23.3	-0.6
ULC	Ulcinj	1.91	322	*e*Pn	Pn	03 13 26.6	+0.4
ULC				*i* Sn	Sb	03 13 53.2	+0.7
PVO	Paravola	1.94	164	P	Pn	03 13 26.6	0.0
BCI	Bajram Curri	1.97	343	Pn	Pb	03 13 29.4	+0.1
BCI				Sn	Sg	03 13 57.9	+1.9
BCI				AML	AML	03 14 02.2	
	comp=E,0.4nm,0.7s						
DRME	Dracevica, Mon	2.11	325	*e*Pn	Pn	03 13 29.7	+0.7
DRME	Dracevica, Mon	2.11	325	*e*Pn	Pn	03 13 29.3	+0.3
DRME				*i* Sn	Sb	03 13 58.0	-0.3
SRS	Serrai	2.19	72	*e*Pg	Pb	03 13 31.7	-1.3
PDG	Podgorica	2.28	329	*e*Pn	Pn	03 13 31.6	+0.2
PDG	Podgorica	2.28	329	*e*Pn	Pn	03 13 31.6	+0.2
PDG				*i* Sn	Sb	03 14 02.1	-1.1
BUM	Brajici-Budva	2.33	322	*e*Pn	Pn	03 13 32.4	+0.3
BUM				*i* Sn	Sb	03 14 03.5	-1.3
BOSS	Bosilegrad	2.37	31	*e*Pn	Pn	03 13 31.7	-0.8
BARS	Barje	2.45	17	*i* Pn	Pn	03 13 33.0	-0.7
BARS	Barje	2.45	17	*e*Pn	Pn	03 13 32.9	-0.8
BEY	Berane	2.49	344	*e*Pn	Pn	03 13 35.5	+1.1
IVA	Berane	2.49	344	*e*Pn	Pn	03 13 34.3	-0.1
IVA				*i* Sn	Sn	03 14 06.7	+1.3
CEME	Cevo	2.52	326	*e*Pn	Pn	03 13 34.4	-0.3
CEME				*i* Sn	Sn	03 14 07.7	+1.7
KOME	Kolasin	2.57	338	*e*Pn	Pn	03 13 36.8	+1.4
KOME	Kolasin	2.57	338	*e*Pn	Pn	03 13 35.5	+0.1
KOME				*i* Sn	Sn	03 14 08.5	+1.3
HCY	Herceg Novi	2.64	319	*e*Pn	Pn	03 13 36.8	+0.5
HCY				*i* Sn	Sn	03 14 10.8	+2.0
SELS	Selova	2.75	4	*e*Pn	Pn	03 13 39.2	+1.4
VTS	Vitosha	2.80	39	*e*Pn	Pn	03 13 38.3	-0.3
TREB	Trebinje	2.91	321	*e*Pn	Pn	03 13 38.4	-1.6
PLE	Pljevlja	3.05	340	*e*Pn	Pn	03 13 42.1	+0.1
PLE				*i* Sn	Sn	03 14 19.9	+0.8
GOCS	Kraljevo Serbi	3.08	1	*e*Pn	Pn	03 13 43.3	+0.8
ZAPS	Zavoj	3.10	25	*e*Pn	Pn	03 13 43.0	+0.3
IVAS	Ivanjica	3.14	351	*e*Pn	Pn	03 13 41.9	-1.3
ZAGS	Zajecar	3.49	17	*e*Pn	Pn	03 13 47.5	-0.5
HAPS	Han Pijesak,Bl	3.87	339	*e*Pn	Pn	03 13 53.4	+0.1

CATAC ***10*** *03:16:08.9±0.6, 13˚N±4˚×8˚9W±˚, h29^{km}±3^{km}, M3.0/16, MLv3.0/16, Error ellipse: s-maj=9.5km s-min=3.8km az=15.5, confirmed*

SNET ***10*** *03:16:09.9±0.7, 13°.33N×89°.46W, h57^{km}±6^{km}, ML3.2*

GCG ***10*** *03:16:10.2±0.4, 13°.37N×89°.49W, h58^{km}±3^{km}, MD3.5*

ISC 10 03:16:08.9±1.9**, 13°.3N**±0°.1×**89°.51W**±0°.06**, h66**^{km}**, n64, σ0^{s}.75**/69**, 6D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	0.40	8⇓	*e*P	Pn	03 16 20.1	-0.5
JAYA				*e*S	Sn	03 16 27.5	-1.6
JAYA				IAML		03 16 29.0	
	comp=Z,2µm,0.2s						
JAYA	Jayaque - finc	0.40	8	*i* P	Pn	03 16 20.1	-0.5
JAYA				*i* S	Sn	03 16 27.5	-1.6
JAYA	Jayaque - finc	0.40	8	P	Pn	03 16 19.9	-0.7
ITCA	Escuela Especi	0.47	29	S	Sn	03 16 29.6	-0.5
PANCS	Alcalda de	0.47	42	S	Sn	03 16 29.0	-1.1
PMON	Piamonte	0.49	23⇓	*e*P	Pn	03 16 21.0	-0.3
PMON	Piamonte	0.49	23	P	Pn	03 16 21.1	-0.3
PMON	Piamonte	0.49	23	S	Sn	03 16 30.0	-0.5
LOMA	Loma Larga	0.51	41	*e*P	Pn	03 16 21.2	-0.3
LOMA	Loma Larga	0.51	41	S	Sn	03 16 30.2	-0.6
LOMA	Loma Larga	0.51	41	P	Pn	03 16 21.3	-0.3
BOQS	Boqueron	0.52	25	*e*P	Pn	03 16 21.8	-0.1
BOQS				*e*S	Sn	03 16 30.7	-0.6
UEES	Universidad Ev	0.53	30	*e*P	Pn	03 16 21.4	-0.3
UEES				IAML		03 16 33.1	
	comp=Z,1µm,0.2s						
UEES	Universidad Ev	0.53	30	P	Pn	03 16 21.6	-0.1
UEES	Universidad Ev	0.53	30	S	Sn	03 16 31.0	-0.1
UTEC	Universidad Te	0.53	34	S	Sn	03 16 30.7	-0.5
UTEC	Universidad Te	0.53	34	P	Pn	03 16 21.5	-0.3
PIC2	El Picacho	0.54	27	*e*P	Pn	03 16 22.1	+0.1
CEDA	San Andres	0.55	12	*e*P	Pn	03 16 21.9	0.0
CEDA	San Andres	0.55	12	P	Pn	03 16 21.9	0.0
CEDA	San Andres	0.55	12	S	Sn	03 16 31.7	+0.3
IGN	Direccin Gen	0.56	36	S	Sn	03 16 31.4	-0.3
LFRS	El Faro	0.57	50	*e*P	Pn	03 16 21.8	-0.4
LFRS				*e*S	Sn	03 16 31.4	-0.5
CEVE	Cerro Verde	0.58	349	*e*P	Pn	03 16 22.6	+0.1
CEVE				IAML		03 16 34.1	
	comp=Z,2µm,0.3s						
CEVE	Cerro Verde	0.58	349	S	Sn	03 16 33.0	+0.7
CEVE	Cerro Verde	0.58	349	P	Pn	03 16 22.4	0.0
SBLS	San Blas	0.59	349	*e*P	Pn	03 16 22.6	+0.1
SNJE	San Jose	0.61	351⇓	*i*Pg	Pn	03 16 22.8	0.0
LFU	La Fuente	0.62	38	*e*P	Pn	03 16 22.9	+0.2
RTR	El Retiro	0.65	348⇓	*e*P	Pn	03 16 23.5	+0.4
NUBE	Las Nubes	0.69	338⇓	*e*P	Pn	03 16 23.6	0.0
NUBE	Las Nubes	0.69	338	*i* P	Pn	03 16 23.6	0.0
NUBE				*i* S	Sn	03 16 34.3	0.0
NUBE	Las Nubes	0.69	338	P	Pn	03 16 23.6	0.0
COEG	Centro de Oper	0.71	60	*e*P	Pn	03 16 23.2	-0.5
COEG				IAML		03 16 39.2	
	comp=Z,309nm,0.4s						
COEG	Centro de Oper	0.71	60	P	Pn	03 16 23.2	-0.5
COEG	Centro de Oper	0.71	60	S	Sn	03 16 33.8	-0.8
PAVA	Las Pavas	0.72	51	*e*P	Pn	03 16 24.0	+0.1
PAVA	Las Pavas	0.72	51	P	Pn	03 16 23.8	0.0
PAVA	Las Pavas	0.72	51	S	Sn	03 16 35.0	+0.2
UNIC	Universidad Ca	0.72	357	P	Pn	03 16 24.2	+0.4
UNIC	Universidad Ca	0.72	357	S	Sn	03 16 35.6	+0.8
FAME	Alcaldia de Sa	0.76	320	P	Pn	03 16 24.5	+0.2
FAME	Alcaldia de Sa	0.76	320	S	Sn	03 16 35.3	-0.3
TECO	Alcaldia de Te	0.76	69	*e*P	Pn	03 16 23.6	-0.6
TECO	Alcaldia de Te	0.76	69	P	Pn	03 16 23.7	-0.6
TECO	Alcaldia de Te	0.76	69	S	Sn	03 16 34.2	-1.3
UESV	Universidad de	0.80	62	S	Sn	03 16 36.0	-0.3
SLOZ	Alcaldia de Sa	0.81	341	*e*P	Pn	03 16 25.1	+0.2
SLOZ	Alcaldia de Sa	0.81	341	S	Sn	03 16 37.8	+1.1
SLOZ	Alcaldia de Sa	0.81	341	P	Pn	03 16 25.1	+0.2
SCLA	Alcaldia de Sa	0.88	60	*e*P	Pn	03 16 25.5	-0.2
SCLA	Alcaldia de Sa	0.88	60	P	Pn	03 16 25.7	0.0
SCLA	Alcaldia de Sa	0.88	60	S	Sn	03 16 38.9	+0.8
ALJI	Alcalda de J	0.92	86	S	Sn	03 16 37.7	-1.2
MTO3	Montecristo	1.14	7⇓	*e*P	Pn	03 16 29.4	+0.2
MTO3	Montecristo	1.14	7	*i* P	Pn	03 16 29.4	+0.2
MTO3	Montecristo	1.14	7	P	Pn	03 16 29.4	+0.2
PACA	Pacayal	1.17	80	*e*P	Pn	03 16 33.5	+4.0
PACA	Pacayal	1.17	80	S	Sn	03 16 45.2	+0.3
PACA	Pacayal	1.17	80	P	Pn	03 16 30.4	+0.9
ESQI	Esquipulas	1.30	7	P	Pn	03 16 31.7	+0.5
LCND	La Caada	1.58	88	P	Pn	03 16 34.9	+0.2
CNCH	Conchagua	1.63	89	P	Pn	03 16 35.3	-0.3
CNCH	Conchagua	1.63	89	S	Sn	03 16 56.6	+0.8

VAO ***10*** *03:16:50.2±2.8, 32°.37S×71°.71W, h10^{km}, mb4.4*

SJA ***10*** *03:16:57.9±0.7, 31°.96S×71°.43W, h18^{km}±3^{km}, ML4.2, MW4.1*

GUC ***10*** *03:17:01.4±0.9, 31°.98S×71°.26W, h55^{km}±3^{km}, ML4.4*

NEIC ***10*** *03:17:01.8, 31°.94S×71°.31W, h48^{km}*

NEIC ***10*** *03:17:01.9±1.5, 31°.96S±0°.03×71°.29W±0°.07, h50^{km}±2^{km}, mb4.6/22, Mwr4.3/58, ML4.4(GUC), Error ellipse: s-maj=8.2km s-min=4.4km az=92.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.33; $M_{\theta\theta}$-0.09; $M_{\phi\phi}$-2.23; $M_{r\theta}$0.36; $M_{\theta\phi}$0.92; $M_{\phi r}$-2.02; Fault plane solution: $M_0$3.20000×10^{15} NP1:ϕ_s331.82000°, δ25.68000°, λ76.63000°. NP2:ϕ_s166.59000°, δ65.06000°, λ96.34000°. Principal axes: T 3.0890, Plg69.0000°, Azm89.0000°; N 0.2107, Plg6.0000°, Azm344.0000°; P -3.2997, Plg20.0000°, Azm252.0000°;*

IDC ***10*** *03:17:02.1±0.5, 31°.96S×71°.18W, h58^{km}±4^{km}, mb4.1/9, mbtmp4.2/14, MS3.1/7 Error ellipse: s-maj=14.2km s-min=9.8km az=168.0*

ISC 10 03:17:01.4±0.5**, 31°.96S**±0°.02×**71°.24W**±0°.04**, h54**^{km}±4^{km}**, n183, σ1^{s}.67**/223**, mb4.6**/21**, MS3.4**/4**, 6C-14D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	Catapilco	0.60	185	Pn	Pn	03 17 14.7	+0.6
VA06				Sn	Sn	03 17 23.6	+0.4
VA06	Catapilco	0.60	185⇑	*e*P	Pn	03 17 14.3	+0.2
VA06				*e*S	Sn	03 17 22.6	-0.6
VA06				IAML		03 17 26.1	
	comp=N,41µm,0.5s						
CO02	Combarbal	0.78	15	Pn	Pn	03 17 16.5	0.0
CO02				Sn	Sn	03 17 27.4	-0.1
CO02	Combarbal	0.78	15⇓	*e*P	Pn	03 17 16.7	+0.2
CO02				*e*S	Sn	03 17 27.9	+0.4
CO02				IAML		03 17 30.4	
	comp=N,38µm,0.2s						
CO02	Combarbal	0.78	15	*e*P	Pn	03 17 14.2	-2.3
CO02				IAML		03 17 28.3	
	comp=Z,8µm,0.3s						
VA03	San Esteban	0.99	144	Pn	Pn	03 17 19.6	+0.4
VA03				Sn	Sn	03 17 32.7	+0.5
VA03	San Esteban	0.99	144⇓	*e*P	Pn	03 17 19.6	+0.4
VA03				*e*S	Sn	03 17 33.0	+0.7
VA03				IAML		03 17 33.9	
	comp=E,27µm,0.2s						
ROCH	El Roble	1.02	169⇓	*e*P	Pn	03 17 19.9	+0.2
ROCH				*e*S	Sn	03 17 33.7	+0.4
ROCH				IAML		03 17 37.1	
	comp=N,24µm,0.5s						
VA01	Torpederas	1.11	198	Pn	Pn	03 17 21.1	+0.4
VA01	Torpederas	1.11	198	*e*P	Pn	03 17 21.1	+0.4
VA01				*e*S	Sn	03 17 34.9	-0.2
VA01	Torpederas	1.11	198	*e*P	Pn	03 17 20.5	-0.2
VA01				*e*S	Sn	03 17 37.5	+2.4
VA01				IAML		03 17 38.4	
	comp=Z,3µm,0.4s						
CO03	El Pedregal	1.21	23	Pn	Pn	03 17 22.8	+0.6
CO03				Sn	Sn	03 17 38.4	+0.7
CO03	El Pedregal	1.21	23⇓	*e*P	Pn	03 17 22.8	+0.6
CO03				*e*S	Sn	03 17 39.0	+1.4
CO03				IAML		03 17 39.9	
	comp=N,6µm,0.3s						
CO03	El Pedregal	1.21	23	*e*P	Pn	03 17 22.8	+0.6
CO03				*e*S	Sn	03 17 39.2	+1.6
CO03				IAML		03 17 39.4	
	comp=Z,4µm,0.3s						
PEL	Peldehue	1.27	159	Pn	Pn	03 17 23.3	+0.4
PEL				Sn	Sn	03 17 39.8	+0.9
PEL	Peldehue	1.27	159	*i* P	Pn	03 17 22.8	0.0
PEL				*i* S	Sn	03 17 40.0	+1.1
PEL				IAML		03 17 42.5	
	comp=N,12µm,0.3s						
MT02	Curacav	1.30	176	Pn	Pn	03 17 23.8	+0.6
MT02				Sn	Sn	03 17 40.1	+0.5
MT02	Curacav	1.30	176	*e*P	Pn	03 17 23.5	+0.3
MT02				*e*S	Sn	03 17 39.8	+0.2
MT02	Curacav	1.30	176	*e*P	Pn	03 17 18.2	-5.0
MT02				*e*P		03 17 22.9	
MT02				*e*S	Sn	03 17 41.1	+1.6
MT02				IAML		03 17 44.4	
	comp=Z,4µm,0.3s						
CO06	Fray Jorge	1.33	345	Pn	Pn	03 17 24.3	+0.6
CO06	Fray Jorge	1.33	345	*e*P	Pn	03 17 24.2	+0.6
CO06				*e*S	Sn	03 17 42.0	+1.8
CO06				IAML		03 17 46.5	
	comp=E,6µm,0.3s						
MT10	Hacienda Santa	1.44	156⇓	*e*P	Pn	03 17 26.0	+0.8
MT10				*e*S	Sn	03 17 44.1	+1.0
MT10				IAML		03 17 47.2	
	comp=N,18µm,0.5s						
MT05	Renca	1.49	164	Pn	Pn	03 17 26.4	+0.6
MT05	Renca	1.49	164⇓	*e*P	Pn	03 17 26.6	+0.8
MT05				*e*S	Sn	03 17 44.6	+0.4
MT05				IAML		03 17 48.2	
	comp=E,14µm,0.3s						
MT05	Renca	1.49	164	*e*P	Pn	03 17 26.6	+0.8
MT05				*e*S	Sn	03 17 43.0	-1.2
MT05				IAML		03 17 51.6	
	comp=Z,4µm,0.8s						
MT14	Cerro Cal¡n	1.55	158	*e*P	Pn	03 17 27.4	+0.7
MT14				*e*S	Sn	03 17 46.4	+0.7
MT14				IAML		03 17 49.2	
	comp=N,10µm,0.4s						
FCH	Farellones	1.58	150⇓	*e*P	Pn	03 17 28.2	+0.9
FCH				*e*S	Sn	03 17 48.4	+1.6
FCH				IAML		03 17 50.6	
	comp=E,4µm,0.3s						
MT16	CCHEN	1.58	158	Pn	Pn	03 17 27.8	+0.7
MT16	CCHEN	1.58	158⇓	*e*P	Pn	03 17 27.9	+0.8
MT16				*e*S	Sn	03 17 47.2	+0.7
MT03	Universidad Ad	1.65	158		Pn	03 17 28.4	+0.4
RTLS	Leoncito	1.66	85	*e*P	Pn	03 17 31.2	+2.8
RTLS				IAML		03 18 17.7	
	comp=Z,2µm,0.9s						
MT04	Ro Olivares	1.71	148	*e*P	Pn	03 17 30.3	+1.3
MT04				*e*S	Sn	03 17 51.1	+1.1
MT04				IAML		03 17 58.7	
	comp=E,5µm,0.6s						
MT04	Ro Olivares	1.71	148	*e*P	Pn	03 17 29.7	+0.7
MT04				*e*S	Sn	03 17 54.5	+4.6
MT04				IAML		03 17 57.5	
	comp=Z,2µm,0.4s						
VA05	Santo Domingo	1.72	191	Pn	Pn	03 17 29.3	+0.3
VA05	Santo Domingo	1.72	191⇓	*e*P	Pn	03 17 29.3	+0.3
VA05				*e*S	Sn	03 17 49.9	+0.1
VA05				IAML		03 17 55.5	
	comp=N,7µm,0.3s						
MT15	Las Vizcachas	1.75	160⇓	*e*P	Pn	03 17 30.0	+0.7
MT15				*e*S	Sn	03 17 51.0	+0.5
MT15				IAML		03 17 57.5	
	comp=N,12µm,0.3s						
MT08	Bocatoma Ro	1.80	146	Pn	Pn	03 17 32.2	+1.9
MT08	Bocatoma Ro	1.80	146	IAML		03 18 02.5	
	comp=N,4µm,0.4s						
MT08	Bocatoma Ro	1.80	146	*e*P	Pn	03 17 31.7	+1.4
MT08				*e*S	Sn	03 17 58.0	+5.9
MT08				IAML		03 18 03.0	
	comp=Z,2µm,0.6s						
MT09	Talagante	1.82	173	Pn	Pn	03 17 31.4	+1.0
MT09	Talagante	1.82	173	*e*P	Pn	03 17 31.4	+1.0
MT09				*e*S	Sn	03 17 53.0	+0.5
MT09				IAML		03 17 55.9	
	comp=E,8µm,0.3s						
GO04	Tololo Observa	1.82	12	Pn	Pn	03 17 31.2	+0.7
GO04	Tololo Observa	1.82	12⇓	*e*P	Pn	03 17 31.3	+0.7
GO04				*e*S	Sn	03 17 54.1	+1.4
GO04				IAML		03 17 59.8	
	comp=E,12µm,0.4s						
GO04	Tololo Observa	1.82	12	*e*P	Pn	03 17 31.4	+0.8
GO04				*e*S	Sn	03 17 57.4	+4.7
MT01	Popeta	1.90	180	Pn	Pn	03 17 32.5	+1.1
MT01	Popeta	1.90	180	*e*P	Pn	03 17 31.9	+0.5
MT01				*e*S	Sn	03 17 55.1	+1.0
MT01				IAML		03 18 02.1	
	comp=E,4µm,0.4s						
MT01	Popeta	1.90	180	*e*P	Pn	03 17 31.6	+0.3
MT01				*e*S	Sn	03 17 57.2	+3.1
MT01				IAML		03 18 01.7	
	comp=Z,3µm,0.4s						
MT13	San Alfonso	1.95	156	Pn	Pn	03 17 33.6	+1.5
MT13	San Alfonso	1.95	156	IAML		03 18 00.3	
	comp=E,5µm,0.3s						
MT13	San Alfonso	1.95	156	*e*P	Pn	03 17 28.2	-4.0
MT13				*e*P		03 17 33.7	
MT13				*e*S	Sn	03 17 59.2	+3.6
MT13				IAML		03 18 00.9	
	comp=Z,3µm,0.7s						
CO05	La Serena	2.04	360	Pn	Pn	03 17 33.7	+0.4
CO05	La Serena	2.04	360	*e*P	Pn	03 17 33.9	+0.7
CO05				*e*S	Sn	03 17 59.6	+2.1
CO05				IAML		03 18 08.6	
	comp=E,3µm,0.4s						
LMEL	Las Melosas	2.07	155	Pn	Pn	03 17 35.4	+1.5
LMEL	Las Melosas	2.07	155⇑	*e*P	Pn	03 17 34.5	+0.6
LMEL				*e*S	Sn	03 17 59.8	+1.2
LMEL				IAML		03 18 07.7	
	comp=E,4µm,0.4s						
LMEL	Las Melosas	2.07	155	*e*P	Pn	03 17 35.5	+1.6
LMEL				*e*S	Sn	03 18 03.0	+4.4
BO04	La Punta	2.09	166⇓	*e*P	Pn	03 17 34.9	+0.9
BO04				*e*S	Sn	03 17 59.8	+0.9
BO04				IAML		03 18 02.5	
	comp=E,4µm,0.3s						
DOCA	Reserva Natura	2.10	62	*e*P	Pn	03 17 37.0	+2.5
DOCA				IAML		03 18 11.3	
	comp=Z,1µm,0.8s						
ARCO	CERRO ARCO	2.14	115	*e*P	Pn	03 17 39.0	+4.2
ARCO				IAML		03 18 13.6	
	comp=Z,1µm,0.7s						
CO01	Juntas del Tor	2.21	27	Pn	Pn	03 17 37.5	+1.7
CO01	Juntas del Tor	2.21	27⇓	*e*P	Pn	03 17 37.7	+1.9
CO01				*e*S	Sn	03 18 04.0	+1.9
CO01				IAML		03 18 07.7	
	comp=N,1µm,0.2s						
CO01	Juntas del Tor	2.21	27	*e*P	Pn	03 17 37.7	+1.9
CO01				*e*S	Sn	03 17 51.0	-11
CO01				*e*S		03 17 59.2	
CO01				IAML		03 18 07.6	
	comp=Z,1µm,0.8s						
ZON	Zonda	2.22	80	Pn	Pn	03 17 38.9	+3.1
ZON	Zonda	2.22	80	*e*P	Pn	03 17 38.5	+2.7
ZON				IAML		03 18 16.6	
	comp=Z,789nm,0.4s						
ACCO	Cerro Coronel	2.31	54	*e*P	Pn	03 17 40.2	+2.9
SJA	San Juan	2.32	80	*e*P	Pn	03 17 41.5	+4.3
SJA				IAML		03 18 30.3	
	comp=Z,535nm,0.4s						
AAGR	Agrelo	2.32	119	*e*P	Pn	03 17 41.1	+3.8
AAGR				*e*S	Sn	03 17 58.2	-6.5
AAGR				IAML		03 17 58.8	
	comp=Z,1µm,0.7s						
AROD	Rodeo	2.34	41	*e*P	Pn	03 17 28.5	-9.3
BO01	Tunca	2.43	177	Pn	Pn	03 17 39.4	+0.8
BO01	Tunca	2.43	177⇓	*e*P	Pn	03 17 39.4	+0.8
BO01				*e*S	Sn	03 18 07.7	+0.6
BO01				IAML		03 18 22.0	
	comp=E,1µm,0.2s						
BO01	Tunca	2.43	177	*e*P	Pn	03 17 39.5	+0.8
BO01				*e*S	Sn	03 18 11.9	+4.8
BO01				IAML		03 18 19.5	
	comp=Z,794nm,0.5s						
ACDV	Cuesta del Vie	2.55	46	*e*P	Pn	03 17 44.2	+3.8
ACDV				*e*S	Sn	03 18 01.2	-9.1
ACDV				IAML		03 18 01.6	
	comp=Z,727nm,0.4s						
CFA	Coronel Fontan	2.58	83	P	Pn	03 17 42.8	+2.0
	comp=Z,203nm,0.4s,baz=249,slow=8.9,SNR=569						
CFA				S	Sn	03 18 11.1	+0.2
	comp=Z,285nm,0.3s,baz=20,slow=21,SNR=10.0						
CFA	Coronel Fontan	2.58	83	*e*P	Pn	03 17 42.7	+2.0
BO02	Sierra Bellavi	2.85	172	Pn	Pn	03 17 45.7	+1.2
BO02	Sierra Bellavi	2.85	172	*e*P	Pn	03 17 45.3	+0.8
BO02				*e*S	Sn	03 18 18.2	+0.6
BO02				IAML		03 18 24.5	
	comp=Z,1µm,0.6s						
LCO	Las Campanas	2.98	9	Pn	Pn	03 17 47.3	+0.9
LCO	Las Campanas	2.98	9	*e*P	Pn	03 17 47.4	+1.0
LCO				*e*S	Sn	03 18 26.5	+5.4
LCO				IAML		03 18 38.3	
	comp=Z,2µm,0.4s						
AC05	El Transito	3.22	15	Pn	Pn	03 17 51.0	+1.3
AC05	El Transito	3.22	15	*e*P	Pn	03 17 51.2	+1.6
AC05				*e*S	Sn	03 18 28.2	+1.3
AC05				IAML		03 18 51.4	
	comp=Z,771nm,0.7s						
AGUA	GUANDACOL	3.42	44	*e*P	Pn	03 17 56.0	+3.8
AGUA				IAML		03 18 51.1	
	comp=Z,899nm,0.6s						
RFA	San Rafael	3.64	141	*e*P	Pn	03 17 56.3	+1.1
AC04	Llanos de Chal	3.75	2	Pn	Pn	03 17 57.2	+0.5
ML02	Panimavida	3.79	182	Pn	Pn	03 17 59.0	+1.7
GO03	Copiapo	4.44	12	Pn	Pn	03 18 06.9	+0.6
AC06	Mina Casimiro	4.65	10	Pn	Pn	03 18 09.1	0.0
BI02	San Fabin de	4.69	180	Pn	Pn	03 18 10.6	+0.9
BI05	Punta Hualpn	5.04	198	Pn	Pn	03 18 13.0	-1.4
AC02	Maricunga	5.43	20	Pn	Pn	03 18 21.2	+1.0
AC01	Pan de Azucar	5.82	6	Pn	Pn	03 18 24.2	-0.9
VA04	Juan Fernndez	6.61	253	Pn	Pn	03 18 35.0	-0.9
H03N1	Juan Fernandez	6.64	255	T	T	03 25 24.3	
	baz=82,slow=72,SNR=1071						
H03N3	Juan Fernandez	6.65	255	T	T	03 25 15.9	
	baz=82,slow=72,SNR=977						
H03N2	Juan Fernandez	6.65	255	T	T	03 25 20.3	
	baz=82,slow=72,SNR=1266						
H03S3	Juan Fernandez	6.72	252	T	T	03 25 12.5	
	baz=82,slow=75,SNR=25						
H03S1	Juan Fernandez	6.72	252	T	T	03 25 11.2	
	baz=82,slow=75,SNR=28						
H03S2	Juan Fernandez	6.73	252	T	T	03 25 11.2	
	baz=82,slow=75,SNR=34						
PB14	IPOC Station P	7.34	6	Pn	Pn	03 18 44.7	-1.6
LR03	Panguipulli	7.71	186	Pn	Pn	03 18 50.3	-0.6
LR04	Corral	8.10	192	Pn	Pn	03 18 53.1	-3.2
PLCA	Paso Flores	8.77	177	Pn	Pn	03 19 05.8	+0.3
PLCA	Paso Flores	8.77	177	P	Pn	03 19 06.3	+0.7
	comp=Z,0.9nm,0.4s,baz=341,slow=11,SNR=6.2						
PLCA				LR	LR	03 22 42.2	
	comp=Z,44nm,19.7s,baz=26,slow=39						
LL05	Los Muermos	9.59	190	Pn	Pn	03 19 16.4	-0.3
TRQA	Tornquist	9.72	131	Pn	Pn	03 19 18.9	+0.3
PB11	IPOC Station P	12.23	7	Pn	Pn	03 19 53.6	+0.6
ITQB	Itaqui	12.77	84	Pn	Pn	03 19 58.2	-2.0
ITQB	Itaqui	12.77	84	*e*P	Pn	03 19 57.8	-2.3
CPUP	Villa Florida	13.38	69	Pn	Pn	03 20 06.5	-2.1
CPUP	Villa Florida	13.38	69	P	Pn	03 20 08.0	-0.6
	comp=Z,0.3nm,0.4s,baz=103,slow=11,SNR=5.4						

CPUP				S	Sn	03 22 31.4	-4.3
	comp=Z,3.0nm,0.8s,baz=302,slow=1.0,SNR=4.1						
CPUP				LR	LR	03 25 36.1	
	comp=Z,27nm,20.3s,baz=97,slow=38						
PB16	IPOC Station P	13.66	7	Pn	Pn	03 20 14.1	+1.3
PLTB	Pedras Altas	14.99	94	Pn	Pn	03 20 26.2	-3.7
LPAZ	La Paz	15.86	11	Pn	Pn	03 20 41.9	+0.2
LPAZ	La Paz	15.86	11	P	Pn	03 20 41.8	0.0
	comp=Z,4.4nm,0.7s,baz=188,slow=7.2,SNR=31						
LPAZ				S	Sn	03 23 30.3	-6.6
	comp=Z,1.3nm,1.0s,baz=180,slow=15,SNR=1.4						
LPAZ	La Paz	15.86	11	eP	Pn	03 20 39.7	-2.0
MURT	Porto Murtinho	15.90	53	eP	Pn	03 20 41.1	-0.6
AQDB	Aquidauana	18.01	54	P	P	03 21 07.9	+0.1
AQDB	Aquidauana	18.01	54	eP	P	03 21 07.5	-0.3
SIV	San Ignacio	18.39	33	P	P	03 21 11.4	-0.7
	comp=Z,4.2nm,0.6s,baz=205,slow=7.6,SNR=27						
SIV				pP	pP	03 21 25.5	+1.1
	comp=Z,4.8nm,0.8s,baz=197,slow=6.6,SNR=7.1						
SIV				LR	LR	03 28 35.9	
	comp=Z,25nm,20.0s,baz=88,slow=38						
LDASE	Londrina, Braz	19.73	69	eP	P	03 21 26.2	-0.6
PTLB	Pontes e Lacer	19.80	37	P	P	03 21 27.0	-0.3
PTLB	Pontes e Lacer	19.80	37	eP	P	03 21 27.4	0.0
PCMB	Pacaembu	20.57	65	eP	P	03 21 35.1	-0.6
FRTB	Fartura	21.00	71	eP	P	03 21 39.1	-1.3
SALV	Santo Antonio	21.34	45	eP	P	03 21 43.2	-1.0
VILB	Vilhena	21.46	31	P	P	03 21 46.0	+0.5
VILB				IAmb	IAmb	03 22 06.8	
	comp=Z,19nm,0.7s						
VILB	Vilhena	21.46	31	eP	P	03 21 44.6	-0.8
ITRB	Iturama	22.36	62	eP	P	03 21 54.0	-1.0
ARAG	Araguaiana, MT	23.97	52	eP	P	03 22 09.6	-1.3
PDRB	Porto dos Gac	24.27	37	eP	P	03 22 12.6	-1.0
BDFB	Brasilia	26.66	58	P	P	03 22 34.8	-0.6
BDFB				IAmb	IAmb	03 22 36.7	
	comp=Z,9.1nm,0.7s						
BDFB	Brasilia	26.66	58	P	P	03 22 35.1	-0.3
	comp=Z,8.8nm,0.7s,baz=228,slow=8.5,SNR=19						
BDFB				pP	pP	03 22 49.8	+0.4
	comp=Z,7.5nm,0.8s,baz=191,slow=13,SNR=3.5						
BDFB				LR	LR	03 33 18.5	
	comp=Z,88nm,18.4s,baz=229,slow=37						
	comp=Z,8.8nm,0.7s						
MACA	Manacapuru-AM	30.32	21	P	P	03 23 07.4	-0.5
MACA				IAmb	IAmb	03 23 07.9	
	comp=Z,10nm,0.5s						
BOAV	Boa Vista	35.65	19	P	P	03 23 53.8	-0.6
BOAV				IAmb	IAmb	03 24 14.3	
	comp=Z,9.3nm,0.7s						
RUSC	La Rusia	37.68	357	P	P	03 24 12.7	+0.5
MDP	Montagnes des	40.89	29	LR	LR	03 42 43.0	
	comp=Z,55nm,18.7s,baz=200,slow=38						
BELA	Belgrano 2	48.77	170	P	P	03 25 41.8	+1.4
BELA				IAmb	IAmb	03 25 42.2	
	comp=Z,3.4nm,0.7s						
CELP	Cerrillos	49.95	6	P	P	03 25 49.8	-0.2
VNA3	Neumayer Olymp	50.99	159	⇑P	P	03 25 58.1	+0.8
	comp=Z,6.3nm,0.6s						
VNA2	Neumayer--Watz	51.63	158	⇑P	P	03 26 01.8	-0.2
	comp=Z,8.1nm,0.6s,baz=286,slow=6.9						
SNAA	Sanae	53.22	158	⇑P	P	03 26 14.6	+0.7
	comp=Z,202nm,0.7s						
SNAA	Sanae	53.22	158	P	P	03 26 14.4	+0.5
SNAA	Sanae	53.22	158	P	P	03 26 14.5	+0.7
	comp=Z,5.9nm,0.6s,baz=271,slow=7.9,SNR=44						
	comp=Z,5.9nm,0.6s						
TEIG	Tepich	54.40	340	P	P	03 26 23.2	+0.2
TROLL	Troll, Antarti	54.93	159	⇑P	P	03 26 27.1	+0.7
	comp=Z,217nm,0.5s						
QSPA	South Pole Qui	58.27	180	P	P	03 26 50.9	+0.7
	comp=Z,1.8nm,0.6s,baz=172,slow=1.2,SNR=24						
QSPA				pP	pP	03 27 05.5	+0.3
	comp=Z,4.5nm,0.9s,baz=163,slow=3.0,SNR=7.4						
	comp=Z,1.8nm,0.6s						
X48A	Hartselle	67.72	346	P	P	03 27 53.5	+0.5
X48A				IAmb	IAmb	03 27 54.0	
	comp=Z,6.5nm,1.0s						
SAND	Sanderson	68.20	331	P	P	03 27 57.0	+0.7
TKL	Tuckaleechee C	68.29	349	LR	LR	03 59 04.0	
	comp=Z,18nm,18.8s,baz=235,slow=37						
TXAR	Lajitas Array	68.30	330	P	P	03 27 57.5	+0.6
TXAR	Lajitas Array	68.30	330	P	P	03 27 57.9	+0.9
	comp=Z,0.5nm,0.7s,baz=158,slow=8.7,SNR=7.0						
TXAR				pP	pP	03 28 12.4	+0.3
	comp=Z,1.0nm,0.7s,baz=153,slow=8.2,SNR=9.8						
	comp=Z,0.5nm,0.7s						
WVT	Waverly	69.50	346	P	P	03 28 04.4	+0.3
WVT				IAmb	IAmb	03 28 19.2	
	comp=Z,7.4nm,0.9s						
LCAR	Lake Charles	70.20	343	P	P	03 28 08.2	-0.1
LCAR				IAmb	IAmb	03 28 30.0	
	comp=Z,4.7nm,0.7s						
CCM	Cathedral Cave	72.11	344	P	P	03 28 20.1	+0.2
CCM				IAmb	IAmb	03 28 35.5	
	comp=Z,7.2nm,0.9s						
P40A	Paris	73.71	343	P	P	03 28 29.9	+0.6
P40A				IAmb	IAmb	03 28 45.5	
	comp=Z,10nm,1.0s						
DBIC	Dimbokro	73.89	71	P	P	03 28 30.6	-0.3
DBIC	Dimbokro	73.89	71	P	P	03 28 30.9	-0.1
	comp=Z,4.8nm,0.6s,baz=250,slow=7.3,SNR=7.6						
DBIC				pP	pP	03 28 47.6	+1.2
	comp=Z,2.2nm,0.6s,baz=230,slow=8.9,SNR=1.5						
DBIC				LR	LR	04 00 50.6	
	comp=Z,26nm,18.1s,baz=170,slow=36						
	comp=Z,4.8nm,0.6s						
MAW	Mawson	74.94	163	P	P	03 28 36.1	-0.1
	comp=Z,1.9nm,0.7s,baz=228,slow=12,SNR=1.8						
	comp=Z,1.9nm,0.7s						
ECSD	EROS Data Cent	78.83	342	P	P	03 28 58.4	+0.1
ECSD				IAmb	IAmb	03 29 14.1	
	comp=Z,6.9nm,0.9s						
BOSA	Boshof	80.42	118	P	P	03 29 06.7	-0.9
	comp=Z,4.1nm,1.0s,baz=258,slow=9.3,SNR=2.6						
	comp=Z,4.1nm,1.0s						
LBTB	Lobatse	82.54	115	P	P	03 29 18.4	-0.5
LBTB				IAmb	IAmb	03 29 47.8	
	comp=Z,3.6nm,1.1s						
NVAR	Mina Array Bea	82.61	325	P	P	03 29 20.2	+1.3
	comp=Z,0.2nm,0.3s,baz=162,slow=6.9,SNR=3.7						
	comp=Z,0.2nm,0.3s						
TORD	Torodi Ar. Bea	82.88	70	P	P	03 29 20.1	-0.4
	comp=Z,2.4nm,0.5s,baz=254,slow=4.9,SNR=2.1						
	comp=Z,2.4nm,0.5s						
L18K	Granite Mounta	115.71	329	PKPdf	PKiKP	03 35 37.5	+0.7
IMAR	Indian Mountai	115.81	333	PKPdf	PKiKP	03 35 37.2	+0.3
C19K	Lookout Ridge	118.88	336	PKPdf	PKiKP	03 35 43.5	+0.6
BRTR	Keskin Array B	120.24	60	PKP	PKPdf	03 35 46.0	-0.5
	comp=Z,0.3nm,0.6s,baz=250,slow=2.9,SNR=2.8						
WR8	Warramunga Arr	122.79	209	PKPdf	PKPdf	03 35 51.4	-0.5
WRA	Warramunga Arr	122.87	209	PKP	PKPdf	03 35 51.5	-0.6
	comp=Z,0.7nm,0.6s,baz=165,slow=1.7,SNR=6.6						
H11S2	WAKE ISLAND Hy	126.46	270	T	T	05 55 08.6	
	baz=118,slow=75,SNR=106						
H11S1	WAKE ISLAND Hy	126.47	270	T	T	05 55 10.1	
	baz=118,slow=75,SNR=108						
H11S3	WAKE ISLAND Hy	126.47	270	T	T	05 55 10.0	
	baz=118,slow=75,SNR=92						
H11N3	WAKE ISLAND Hy	126.82	272	T	T	05 55 31.1	
	baz=116,slow=75,SNR=58						
H11N1	WAKE ISLAND Hy	126.83	272	T	T	05 55 32.6	
	baz=116,slow=75,SNR=17						
H11N2	WAKE ISLAND Hy	126.83	272	T	T	05 55 32.3	
	baz=116,slow=75,SNR=92						
ABKAR	Akbulak array	139.88	50	PKPdf	PKPdf	03 36 23.4	+0.4
BVAR	Borovoye Array	145.32	41	PKPbc	PKPab	03 36 32.4	-0.4
	comp=Z,3.7nm,0.5s,baz=321,slow=3.2,SNR=17						
BVAR				pPKPbc	pPKPdf	03 36 49.8	+0.7
	comp=Z,2.0nm,0.6s,baz=298,slow=3.2,SNR=4.3						
KKAR	Karatay Array	147.95	59	PKPbc	PKPbc	03 36 40.9	+0.4
ARSB	Arslanbob	149.99	62	PKPbc	PKiKP	03 36 46.8	0.0
KURBB	Kurchatov Arra	150.91	41	PKPbc	PKiKP	03 36 48.0	-0.1
	comp=Z,3.5nm,0.6s,baz=301,slow=3.0,SNR=38						
KURBB				pPKPbc	pPKPbc	03 37 04.3	+0.5
	comp=Z,2.4nm,0.6s,baz=304,slow=2.8,SNR=10						
KURK	Kurchatov	150.92	41	PKPbc	PKiKP	03 36 47.4	-0.7
ZALV	Zalesovo Beam	152.14	31	PKPbc	PKiKP	03 36 50.5	-0.1
	comp=Z,7.3nm,0.4s,baz=319,slow=3.4,SNR=23						
ZALV				pPKPbc	sPKPdf	03 37 06.9	+0.9
	comp=Z,5.9nm,0.6s,baz=316,slow=4.1,SNR=7.3						
KSH	Kashi	152.45	65	PKPbc	PKiKP	03 36 51.8	-0.1
MKAR	Makanchi Array	154.90	46	PKPbc	PKPbc	03 36 55.7	-0.9
	comp=Z,0.6nm,0.7s,baz=251,slow=3.7,SNR=4.3						
MKAR				PKPab	PKPab	03 37 12.1	0.0
	comp=Z,0.7nm,0.5s,baz=304,slow=2.6,SNR=7.5						
PZH	PanZhiHua	171.80	130	PKP	PKPdf	03 37 03.7	-0.8

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*SDD **10** 03:41:26.6±2.7, 19°.00N×70°.67W, h31km±11km, MD3.3, ML3.5, MW3.6*
*OSPL **10** 03:41:27.0±2.1, 19°.06N×70°.64W, h26km±10km, ML3.0*
ISC 10 03:41:25.6±0.9**, 19°.04N**±0°.03×**70°.60W**±0°.02**, h28**km±8km**,**
n31, σ**1.ˢ52**/53**, 34C-2D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABDR	Alto Bandera	0.23	186	⇑ePg	Pb	03 41 32.4	0.0
ABDR				⇑eSg	Sb	03 41 37.8	+0.9
ABDR				IAML		03 41 38.2	
	comp=N,6µm,0.2s						
SC01	Santiago de lo	0.40	343	ePg	Pn	03 41 34.9	-0.7
SC01				⇑eSg	Sn	03 41 42.0	-0.3
SC01				IAML		03 41 46.5	
	comp=N,3µm,0.4s						
SC01	Santiago de lo	0.40	343	i P	Pn	03 41 34.9	-0.7
SC01				eS	Sb	03 41 40.2	-0.3
DR08	Loma La Naviza	0.56	98	⇑ePg	Pn	03 41 37.3	-0.4
DR08				⇑eSg	Sn	03 41 45.6	-0.5
DR08				IAML		03 41 47.9	
	comp=N,33µm,0.1s						
SDDR	Presa de Saban	0.65	265	⇑ePg	Pb	03 41 37.6	-0.9
SDDR				⇑eSg	Sb	03 41 47.1	-0.2
SDDR				IAML		03 41 48.8	
	comp=N,1µm,0.6s						
SDDR	Presa de Saban	0.65	265	i P	Pb	03 41 37.6	-0.9
SDDR				eS	Sb	03 41 46.6	-0.7
SDDR				IAML		03 41 49.1	
	comp=Z,1µm,0.2s						
BANI	BANI	0.68	160	⇑ePg	Pn	03 41 39.4	-0.2
BANI				IAML		03 41 52.1	
	comp=N,3µm,0.3s						
MADR	Mao Valverde	0.70	318	⇑ePg	Pb	03 41 38.2	-1.2
MADR				⇑eSg	Sb	03 41 48.3	-0.5
MADR				IAML		03 41 52.2	
	comp=N,2µm,0.4s						
REDR	Restauracion	0.76	280	⇑ePg	Pn	03 41 43.8	+3.3
REDR				⇓eSg	Sn	03 41 57.3	+6.3
REDR				IAML		03 41 58.3	
	comp=N,3µm,0.1s						
NADR	Nagua	0.77	66	⇑ePg	Pn	03 41 41.0	+0.3
NADR				⇑eSg	Sn	03 41 53.3	+2.0
NADR				IAML		03 41 53.6	
	comp=N,2µm,0.4s						
LONA1	Toro Cenizo, N	0.78	64	i P	Pb	03 41 39.3	-1.3
LONA1				eS	Sn	03 41 51.6	+0.3
LONA1				IAML		03 41 55.3	
	comp=Z,1µm,1.2s						
SDD	Santo Domingo	0.87	131	⇑ePg	Pb	03 41 41.7	-0.5
SDD				⇑eSg	Sn	03 41 54.4	+0.6
SDD				IAML		03 41 58.2	
	comp=N,59nm,0.3s						
SDD	Santo Domingo	0.87	131	i P	Pb	03 41 41.7	-0.5
SDD				eS	Sn	03 41 53.6	-0.2
CADR	Cabrera	0.88	45	⇑ePg	Pn	03 41 42.2	0.0
CADR				⇑eSg	Sn	03 41 57.8	+3.7
CADR				IAML		03 42 01.8	
	comp=N,1µm,0.7s						
LUDR	Luperon	0.91	339	⇑ePg	Pn	03 41 42.6	0.0
LUDR				⇑eSg	Sn	03 41 57.1	+2.4
LUDR				IAML		03 41 57.9	
	comp=N,8µm,0.4s						
NEDR	Neiba UASD	0.95	235	⇑ePg	Pn	03 41 41.9	-1.2
NEDR				⇑eSg	Sn	03 41 56.6	+0.9
NEDR				IAML		03 41 58.2	
	comp=N,306nm,0.4s						
LODU1	El Espartillar	1.07	231	i P	Pn	03 41 44.9	+0.1
LODU1				IAML		03 42 03.8	
	comp=Z,373nm,0.4s						
PODR	Polo	1.08	217	⇑ePg	Pn	03 41 44.3	-0.8
PODR				IAML		03 42 08.3	
	comp=N,327nm,0.3s						
PODR	Polo	1.08	217	i P	Pn	03 41 44.6	-0.5
PODR				eS	Sb	03 41 58.6	-1.1
LODA1	ITESIL, Dajabo	1.16	296	⇑ePg	Pn	03 41 44.6	-1.3
LODA1				⇑eSg	Sn	03 41 59.2	-1.6
LODA1				IAML		03 42 04.5	
	comp=N,2µm,2.2s						
LODA1	ITESIL, Dajabo	1.16	296	i P	Pn	03 41 44.8	-1.1
LODA1				eS	Sn	03 41 58.5	-2.3
LODA1				IAML		03 42 00.6	
	comp=Z,878nm,1.0s						
HATOM	Hato Mayor del	1.18	102	⇑ePg	Pb	03 41 46.7	-0.8
HATOM				⇑eSg	Sb	03 42 02.0	-0.4
HATOM				IAML		03 42 03.9	
	comp=N,576nm,0.2s						
JIDR	Jimani	1.30	245	⇑ePg	Pn	03 41 48.3	+0.3
JIDR				IAML		03 42 06.8	
	comp=N,365nm,0.2s						
JIDR				e		03 43 04.0	
MCDR	Montecristi	1.31	311	⇓ePg	Pn	03 41 48.1	+0.1
MCDR				IAML		03 42 10.2	
	comp=N,952nm,0.1s						
SMDR	Samana, DR	1.36	79	⇑ePg	Pb	03 41 50.2	-0.3
SMDR				⇑eSg	Sb	03 42 10.3	+2.9
SMDR				IAML		03 42 16.0	
	comp=N,511nm,0.8s						
LOVI	El Cajuil, Ovi	1.43	211	i P	Pn	03 41 50.5	+0.7
LOVI				IAML		03 42 12.2	
	comp=Z,95nm,0.9s						
MIDR	Miches	1.47	92	⇑ePg	Pb	03 41 51.2	-1.1
MIDR				⇑eSg	Sb	03 42 09.9	-0.7
MIDR				IAML		03 42 16.4	
	comp=N,419nm,0.6s						
PAPH	Port-au-Prince	1.69	253	i P	Pn	03 41 54.4	+1.1
HIDR	Higuey Centro	1.84	104	⇑ePg	Pb	03 41 57.1	-1.5
HIDR				⇑eSg	Sb	03 42 20.9	-0.3
HIDR				IAML		03 42 28.7	
	comp=N,1µm,0.3s						
PCDR	Punta Cana, DR	2.17	104	⇑eSg	Sb	03 42 30.2	-0.5
PCDR				IAML		03 42 40.3	
	comp=N,266nm,0.4s						
GRTK	Grand Turk	2.51	349	i P	Pn	03 42 05.1	+0.5
GRTK				IAML		03 42 38.3	
	comp=Z,26nm,0.6s						

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*RSNC **10** 03:48:46.4±0.0, 12°N±3°×7°3W±°, h56km±7km, M2.9, ML2.8*
ISC 10 03:48:42.7±1.1**, 12°.68N**±0°.05×**72°.41W**±0°.07**, h35**km**, n18,**
σ**1.ˢ84**/31**, Near north coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URIC	Uribia, Colomb	1.05	157	P	Pn	03 48 59.1	-1.9
URIC				S	Sn	03 49 14.8	+0.4
CRJC	Cerrejon, Guaj	1.71	196	P	Pn	03 49 10.1	0.0
CRJC				S	Sn	03 49 30.1	-0.7
SMRC	Santa Marta, M	2.33	230	P	Pn	03 49 18.8	+0.3
SMRC				S	Sn	03 49 43.4	-2.5
ARGC	Ariguani, Magd	3.33	213	P	Pn	03 49 31.3	-1.0
ARGC				S	Sn	03 50 09.5	-1.2
SJCC	San Jacinto, C	3.88	225	P	Pn	03 49 41.6	+1.7
SJCC				S	Sn	03 50 22.0	-2.2
SDV	Santo Domingo	4.15	155	P	Pn	03 49 44.6	+0.8
SDV				S	Sn	03 50 29.5	-1.8
PAMC	Pamplona, Colo	5.31	183	P	Pn	03 49 58.7	-1.3
PAMC				S	Sn	03 50 59.4	-0.9
ZARC	Zaragoza, Cauc	5.69	205	P	Pn	03 50 09.9	+5.1
ZARC				S	Sn	03 51 09.1	+0.2
UREC	San Jos de Ur	5.78	212	P	Pn	03 50 08.7	+2.7
UREC				S	Sn	03 51 10.5	-0.7
BRJC	Barrancabermej	5.82	193	P	Pn	03 50 06.8	+0.3
BRJC				S	Sn	03 51 11.5	-0.6
TAMC	Tame, Arauca	6.23	174	P	Pn	03 50 12.8	+0.5
TAMC				S	Sn	03 51 20.4	-2.0
PTBC	PUERTO BERRIO,	6.42	198	P	Pn	03 50 16.6	+1.7
PTBC				S	Sn	03 51 27.7	+0.7
RUSC	La Rusia	6.77	186	P	Pn	03 50 21.3	+1.2
MASC	Masc	7.66	347	eP	Pn	03 50 33.8	+2.0
MASC				eS	Sn	03 51 53.8	-3.6
GTBY	Guantanamo Bay	7.66	341	eP	Pn	03 50 33.0	+1.2
GTBY				eS	Sn	03 51 53.0	-4.4
QMBU	Quimbuelo	7.83	343	eP	Pn	03 50 36.9	+2.8
RCC	Rio Carpintero	7.93	337	eP	Pn	03 50 37.8	+2.3
YAR	Yar	8.54	334	eP	Pn	03 50 44.2	+0.4
YAR				eS	Sn	03 52 12.1	-6.9

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*GCG **10** 03:50:20.6±1.0, 14°.77N×92°.45W, h67km±6km, MD4.0, ML3.7*
*MEX **10** 03:50:20.5±0.5, 14°.75N×92°.52W, h76km±6km, MD4.1*
ISC 10 03:50:15.0±1.4**, 14°.55N**±0°.06×**92°.51W**±0°.04**, h95**km±8km**,**
n26, σ**2.ˢ71**/43**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.42	33	eP	Pn	03 50 30.7	+1.0
THIG				eS	Sn	03 50 38.6	-2.1
THIG		0.42	33	i P	Pn	03 50 30.7	+1.0
SMCA	Catarina	0.52	54	i P	Pn	03 50 31.9	+1.5
SMCA				i S	Sn	03 50 41.4	-0.5
SMCA				IAML		03 50 42.5	
	comp=E,3µm,0.1s						
PATR	El Naranjo	0.62	25	eP	Pn	03 50 32.0	+0.5
PATR				eS	Sn	03 50 41.4	-2.5
PAVE	Pavencul	0.71	26	eP	Pn	03 50 33.1	+0.8
PAVE				eS	Sn	03 50 43.7	-1.7
RTAL	Retalhuleu	0.79	92	eP	Pn	03 50 36.0	+3.2
RTAL				eS	Sn	03 50 48.5	+2.4
STG8	El Palmar, Qui	1.12	95	i P	Pn	03 50 36.9	+0.2
STG8				eS	Sn	03 50 50.5	-2.5
STG8				IAML		03 50 53.2	
	comp=E,3µm,0.1s						
HUEH	Huehuetenango	1.23	52	eP	Pn	03 50 41.3	+3.3
HUEH				eS	Sn	03 50 56.8	+1.5
PCIG		1.34	329	eP	Pn	03 50 40.3	+1.3
PCIG				eS	Sn	03 50 55.6	-1.5
CCIG	Comitan	1.76	12	eP	Pn	03 50 46.3	+1.8
CCIG				eS	Sn	03 51 05.3	-1.5
CCIG	Comitan	1.76	12	eP	Pn	03 50 47.1	+2.6
FG8	Yepocapa, Chim	1.91	99	i P	Pn	03 50 46.0	-0.2
FG8				eS	Sn	03 51 05.8	-4.4
FG16	Alotenango, Sa	1.95	98	i P	Pn	03 50 47.3	+0.4
FG16				IAML		03 51 18.7	
	comp=N,2µm,0.3s						
TGIG		2.29	345	eP	Pn	03 50 52.0	+0.7
TGIG				eS	Sn	03 51 15.5	-3.6
NUBE	Las Nubes	2.72	103	i P	Pn	03 51 03.6	+6.6
PETF	Flores	3.46	47	eP	Pn	03 51 10.6	+3.8
PETF				eS	Sn	03 51 44.9	-2.0
HUIG	Huatulco	3.68	290	eP	Pn	03 51 06.3	-3.5
HUIG				eS	Sn	03 51 50.6	-1.7
NEUV	Arroyo Zacate	4.46	315	eP	Pn	03 51 22.0	+1.7
NEUV				eS	Sn	03 52 10.8	-0.4
SCIG	Sabancuy	4.57	16	eP	Pn	03 51 23.3	+1.5
SCIG				eS	Sn	03 52 11.7	-2.0
VHO	Vista Hermosa	4.78	302	eP	Pn	03 51 35.4	+11
YOIG	Yosondua	5.37	296	eP	Pn	03 51 40.7	+7.8
YOIG				eS	Sn	03 52 27.2	-6.4
TOIG	Toxpalan	5.62	309	eP	Pn	03 51 38.7	+2.5
TOIG				eS	Sn	03 52 37.8	-1.7
PNIG	Pinotepa	5.72	289	eP	Pn	03 51 41.4	+3.9
PNIG				eS	Sn	03 52 37.7	-4.1
TXIG	Tlaxiaco	5.73	299	eP	Pn	03 51 41.5	+3.7
TXIG				eS	Sn	03 52 38.5	-4.0
JAUV	Jalcomulco	6.31	320	eP	Pn	03 51 44.6	-1.0
JAUV				eS	Sn	03 52 51.9	-4.4
FTIG	Fresnillo de T	6.35	302	eP	Pn	03 51 50.7	+4.5
FTIG				eS	Sn	03 52 57.2	-0.2

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*IDC **10** 03:58:22.1±2.4, 18°.60S×178°.01W, h611km±26km, mb3.0/7, mbtmp3.9/8, Error ellipse: s-maj=49.2km s-min=20.1km az=144.0*
ISC 10 03:58:21.2±1.0**, 18°.7S**±0°.3×**178°.0W**±0°.2**, h600**km**, n9,**
σ**1.ˢ38**/9**, mb3.3**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.90	283	P	P	03 59 46.9	+0.8
	2.2nm,0.4s,baz=90,slow=20,SNR=2.1						
STKA	Stephens Creek	38.65	242	P	P	04 04 55.5	+0.5
	2.3nm,0.6s,baz=77,slow=14,SNR=4.4						
	2.3nm,0.6s						
WRA	Warramunga Arr	44.92	260	P	P	04 05 43.9	-0.4
	0.3nm,0.3s,baz=96,slow=7.5,SNR=9.8						
	0.3nm,0.3s						
ASAR	Alice Springs	45.00	255	P	P	04 05 45.2	+0.3
	1.7nm,0.5s,baz=86,slow=8.8,SNR=14						
	1.7nm,0.5s						
MAW	Mawson	83.31	200	P	P	04 09 44.5	-1.2
	4.8nm,0.8s,baz=41,slow=9.9,SNR=8.8						
	4.8nm,0.8s						
TXAR	Lajitas Array	86.03	57	P	P	04 10 01.5	+1.7
	0.3nm,0.7s,baz=242,slow=5.4,SNR=4.6						
	0.3nm,0.7s						
ILAR	Eielson Array	86.51	13	P	P	04 09 58.8	-2.2
	0.2nm,0.4s,baz=227,slow=4.5,SNR=6.0						
	0.2nm,0.4s						
PDAR	Pinedale Array	87.60	43	P	P	04 10 07.7	+0.7
	0.3nm,0.6s,baz=238,slow=4.4,SNR=2.3						
	0.3nm,0.6s						
GERES	GERESS Array B	148.43	345	PKPbc	PKPbc	04 17 00.7	-0.6
	0.4nm,0.6s,baz=4.1,slow=1.4,SNR=3.2						

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*JMA **10** 04:04:52.6±0.1, 24°.8N±0°.8×125°.0E±0°.4, h24km±1km, MV3.5/13, NEAR MIYAKOJIMA ISLAND*
JMA Felt I J1 at NEAR MIYAKOJIMA ISLAND .
ISC 10 04:04:52.8±0.9**, 24°.79N**±0°.09×**124°.97E**±0°.04**, h17**km±8km**,**
n20, σ**0.ˢ90**/32**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIRB	Irabujima	0.19	77	P	Pb	04 04 57.3	-0.5
JIRB				S	Sg	04 05 00.6	0.0
JTJ	Tarama	0.28	240	P	Pb	04 05 00.1	+0.6
JTJ				S	Sb	04 05 05.8	+1.9
JIKM	Ikemajima	0.29	61	P	Pg	04 04 58.7	-0.4
JIKM				S	Sg	04 05 03.0	-0.3
JMJ	Miyako jima 2	0.29	84	P	Pg	04 04 59.4	+0.2
JMJ2	Miyako jima3	0.33	98	P	Pg	04 04 59.5	-0.3
JMJ2				S	Sg	04 05 04.5	+0.1
JOGS	Gusukube	0.40	94	P	Pg	04 05 00.6	-0.4
JOGS				S	Sg	04 05 06.5	-0.1
JISG	Ishigakijimahi	0.63	252	i P	Pb	04 05 05.2	-0.2
JISG				S	Sg	04 05 14.3	+0.6
JIJ	Ishigaki jima	0.86	241	i P	Pb	04 05 08.9	-0.4
JIJ				S	Sb	04 05 21.0	+0.4
JKRS	Kuro-shima	1.03	238	i P	Pb	04 05 12.3	+0.1
JKRS				S	Sg	04 05 26.9	+0.5
IRIF	Iriomote-Funau	1.22	249	i P	Pn	04 05 14.3	-0.7
IRIF				S	Sb	04 05 31.1	+0.4
HATJ	Hateruma jima	1.29	236	eP	Pn	04 05 16.4	+0.4
HATJ				eS	Sn	04 05 33.0	+0.2
YOJ	Yonaguni jima	1.81	260	P	Pn	04 05 22.6	-0.6
YOJ	Yonaguni jima	1.81	260	eP	Pn	04 05 22.6	-0.6
YOJ				eS	Sn	04 05 43.7	-2.1
JYNG	Yonagunijimaku	1.87	260	P	Pn	04 05 23.5	-0.6
JYNG				eS	Sn	04 05 45.5	-1.8
NACB	Ninganchiao	3.14	259	P	Pn	04 05 42.4	+1.0
YHNB	Yeheng	3.27	269	P	Pn	04 05 44.7	+1.3
JOW	Kunigami	3.61	55	P	Pn	04 05 49.6	+1.7
YULB	Yu-li	3.63	248	P	Pn	04 05 47.6	-0.7
SSLB	Suanglung	3.80	256	P	Pn	04 05 51.7	+1.1
TWGBT	Beinan	4.07	242	P	Pn	04 05 53.6	-0.7

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*OSPL **10** 04:22:09.7±0.9, 18°.34N×70°.48W, h31km±64km, ML2.0*
*SDD **10** 04:22:12.2±2.2, 18°.25N×70°.84W, h27km±54km, MD3.0, ML1.6, MW2.1*
ISC 10 04:22:12.4±1.4**, 18°.28N**±0°.06×**70°.83W**±0°.04**, h23**km±16km**,**
n8, σ**2.ˢ74**/14**, 7C-1D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BANI	BANI	0.46	76	⇑ePg	Pb	04 22 22.2	+0.2
BANI				IAML		04 22 29.6	
	comp=N,37nm,1.6s						
ABDR	Alto Bandera	0.56	20	⇓ePg	Pb	04 22 23.0	-0.9
ABDR				⇑eSg	Sb	04 22 31.2	-0.5
ABDR				IAML		04 22 32.6	
	comp=N,31nm,0.2s						
LODU1	El Espartillar	0.62	277	i P	Pn	04 22 25.4	-0.3
LODU1				IAML		04 22 35.9	
	comp=Z,44nm,4.3s						
LOVI	El Cajuil, Ovi	0.70	227	i P	Pb	04 22 25.4	-0.6
LOVI				eS	Sn	04 22 37.1	+0.1
LOVI				IAML		04 22 39.0	
	comp=Z,44nm,0.8s						
SDDR	Presa de Saban	0.82	328	⇑ePg	Pb	04 22 25.0	-3.1

SDDR				⇑eSg	Sb	04 22 38.7	-0.1
SDDR				IAML		04 23 18.3	
	comp=N,16nm,2.1s						
SDDR	Presa de Saban	0.82	328	i P	Pb	04 22 25.3	-2.8
SDDR				eS	Sb	04 22 37.3	-1.5
SDDR				IAML		04 22 43.0	
	comp=Z,8.7nm,1.9s						
REDR	Restauracion	1.03	329	⇑ePg	Pb	04 22 34.5	+2.9
REDR				⇑eSg	Sb	04 22 51.5	+6.7
REDR				IAML		04 23 16.3	
	comp=N,9.2nm,1.8s						
HATOM	Hato Mayor del	1.46	70	⇑ePg	Pn	04 22 37.3	-0.1
HATOM				eSg	Sn	04 22 55.6	-0.3
HATOM				IAML		04 23 01.2	
	comp=N,19nm,3.0s						

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*ISK **10** 04:46:33.9, 36°.44N×23°.98E, h12km, ML3.1/17*

*ATH **10** 04:46:36.6, 36°.39N×23°.95E, h65km±4km, ML3.2/19, Manual Solution by A.Papageorgiou First location: 2019/06/10 04:47:37, This location: 2019/06/10 13:34:12 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

*THE **10** 04:46:36.8, 36°N±1°×2°4E±°, h68km±3km, M3.0/24, MLh3.0/24*

*HLW **10** 04:46:37.6, 36°.24N×24°.75E, h27km±17km, Md3.5, Ml3.6*

ISC 10 04:46:35.8±1.1**, 36°.38N**±0°.02×**23°.95E**±0°.02**, h71**km±8km**, n108, σ1ˢ20**/164**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MHLO	Agia Marina, M	0.48	49	P	Pn	04 46 49.4	+0.9
MHLO				S	Sn	04 46 59.0	+1.2
MHLO	Agia Marina, M	0.48	49	P	Pn	04 46 49.0	+0.6
MHLO				S	Sn	04 46 57.9	+0.1
KTHA	Kythira Island	0.72	261	P	Pn	04 46 52.2	+1.2
ANKY	Antikythira Is	0.73	226	P	Pn	04 46 51.9	+0.9
ANKY				S	Sn	04 47 02.9	+0.6
ANKY	Antikythira Is	0.73	226	P	Pn	04 46 51.8	+0.7
ANKY				S	Sn	04 47 02.3	0.0
MNVA	Monemvasia	0.80	293	P	Pn	04 46 53.2	+1.4
MNVA				S	Sn	04 47 03.8	+0.2
CHAN	Chania	0.86	175	P	Pn	04 46 53.4	+0.7
CHAN				S	Sn	04 47 05.6	+0.6
CHAN	Chania	0.86	175	P	Pn	04 46 53.3	+0.7
CHAN				S	Sn	04 47 05.5	+0.5
VLI	Veliai	0.88	293	P	Pn	04 46 53.4	+0.5
VLI				S	Sn	04 47 05.4	-0.1
VLI	Veliai	0.88	293	P	Pn	04 46 53.2	+0.4
VLI				S	Sn	04 47 05.0	-0.5
CHNB	Souda	0.89	174	P	Pn	04 46 53.9	+1.0
CHNB				S	Sn	04 47 06.0	+0.3
IMMV	Iera Moni Meta	0.92	178	Pg	Pn	04 46 53.3	0.0
IMMV				Sg	Sn	04 47 07.5	+1.3
IMMV	Iera Moni Meta	0.92	178	P	Pn	04 46 54.1	+0.8
YDRA	Hydra	1.04	338	P	Pn	04 46 55.5	+0.7
YDRA				S	Sn	04 47 08.3	-0.7
PRNS	Prines Rethymn	1.11	156	P	Pn	04 46 56.4	+0.8
PRNS				S	Sn	04 47 11.3	+0.9
PRNS	Prines Rethymn	1.11	156	P	Pn	04 46 56.1	+0.5
PRNS				S	Sn	04 47 10.4	0.0
SAP3	Santorini-Thir	1.13	87	P	Pn	04 46 56.8	+0.9
SAP3				S	Sn	04 47 11.8	+0.8
SAP3	Santorini-Thir	1.13	87	P	Pn	04 46 56.4	+0.5
SAP3				S	Sn	04 47 11.6	+0.6
THR5	Thira Island,	1.13	88	P	Pn	04 46 56.8	+0.8
THR9	Santorini-Faro	1.14	91	P	Pn	04 46 56.8	+0.8
KNDR	Palaiochora Ch	1.16	191	Pn	Pn	04 46 57.7	+1.4
KNDR				Sn	Sn	04 47 15.2	+3.6
KNDR	Palaiochora Ch	1.16	191	P	Pn	04 46 58.2	+1.9
KNDR				S	Sn	04 47 13.1	+1.5
THR6	Thira Island,	1.17	91	P	Pn	04 46 57.3	+0.9
THR3	Thira Island,	1.17	88	P	Pn	04 46 57.4	+0.9
CMBO	Columbo, Santo	1.18	85	P	Pn	04 46 57.6	+1.0
CMBO				S	Sn	04 47 13.7	+1.6
CMBO	Columbo, Santo	1.18	85	P	Pn	04 46 57.4	+0.9
CMBO				S	Sn	04 47 12.1	0.0
THR2	Thira island,	1.20	86	P	Pn	04 46 57.7	+0.9
THR8	Santorini-Mono	1.24	88	P	Pn	04 46 58.1	+0.8
MET6	Megalochori,Me	1.30	339	P	Pn	04 46 58.8	+0.7
MET6				S	Sn	04 47 14.9	0.0
MET4	Agioi Theodoro	1.32	341	P	Pn	04 46 59.2	+0.8
MET4				S	Sn	04 47 15.5	+0.2
IDI	Anoyia	1.33	145	Pn	Pn	04 46 58.8	+0.2
IDI	Anoyia	1.33	145	P	Pn	04 46 58.4	-0.2
IDI				S	Sn	04 47 14.8	-0.8
IACM	Heraklion	1.41	139	P	Pn	04 47 01.1	+1.6
IACM	Heraklion	1.41	139	P	Pn	04 46 60.0	+0.5
IACM				S	Sn	04 47 17.5	+0.2
APE	Apeiranthos	1.45	61	Pn	Pn	04 46 59.9	-0.2
APE				Sn	Sn	04 47 18.8	+0.4
APE	Apeiranthos	1.45	61	P	Pn	04 47 00.8	+0.7
APE	Apeiranthos	1.45	61	P	Pn	04 47 00.5	+0.4
APE				S	Sn	04 47 18.2	-0.2
TNSA	Tinos	1.52	40	P	Pn	04 47 01.4	+0.5
GVD	Gavdhos	1.54	176	Pn	Pn	04 47 02.9	+1.6
GVD				Sn	Sn	04 47 23.9	+3.4
GVD	Gavdhos	1.54	176	P	Pn	04 47 02.6	+1.3
GVD	Gavdhos	1.54	176	P	Pn	04 47 02.5	+1.2
GVD				S	Sn	04 47 20.8	+0.3
ATHU	Athens Univers	1.59	355	P	Pn	04 47 02.6	+0.6
ATHU	Athens Univers	1.59	355	P	Pn	04 47 02.5	+0.6
ATHU				S	Sn	04 47 21.3	-0.5
VLX	Vlachokerasia	1.60	309	P	Pn	04 47 03.1	+0.9
VLX				S	Sn	04 47 22.0	-0.1
VLX	Vlachokerasia	1.60	309	P	Pn	04 47 03.0	+0.9
VLX				S	Sn	04 47 22.5	+0.4
ATH	Athens Observa	1.60	353	P	Pn	04 47 01.8	-0.3
AMGA	Amorgos Island	1.63	73	P	Pn	04 47 03.0	+0.5
PTL	Penteli	1.67	358	P	Pn	04 47 03.8	+0.8
PTL	Penteli	1.67	358	P	Pn	04 47 03.5	+0.4
PTL				S	Sn	04 47 23.1	-0.6
KARY	Karystos	1.70	13	P	Pn	04 47 04.2	+0.8
KARY	Karystos	1.70	13	P	Pn	04 47 03.9	+0.5
KARY				S	Sn	04 47 24.4	+0.1
ITM	Ithomi	1.81	297	Pn	Pn	04 47 05.9	+1.0
ITM				Sn	Sn	04 47 29.1	+2.1
ITM	Ithomi	1.81	297	P	Pn	04 47 06.4	+1.4
ITM	Ithomi	1.81	297	P	Pn	04 47 06.3	+1.4
ITM				S	Sn	04 47 28.4	+1.4
LTK	Loutraki	1.82	335	P	Pn	04 47 05.8	+0.7
LTK				S	Sn	04 47 27.2	0.0
VILL	Villia	1.85	344	P	Pn	04 47 06.2	+0.7
VILL				S	Sn	04 47 28.4	+0.3
VIL2	Platees	1.91	344	P	Pn	04 47 06.1	-0.2
VIL2				S	Sn	04 47 28.0	-1.4
GUR	Goura	2.02	321	P	Pn	04 47 08.4	+0.7
GUR				S	Sn	04 47 32.3	+0.2
GUR	Goura	2.02	321	P	Pn	04 47 08.2	+0.5
AMT	Artemida-Makis	2.13	303	P	Pn	04 47 10.9	+1.6
KLV	Kalavryta, Ach	2.20	320	P	Pn	04 47 10.8	+0.7
KLV				S	Sn	04 47 36.5	+0.2
KLV	Kalavryta, Ach	2.20	320	P	Pn	04 47 10.6	+0.5
ZKR	Zakros	2.23	124	Pn	Pn	04 47 12.1	+1.5
ZKR	Zakros	2.23	124	P	Pn	04 47 12.1	+1.5
ZKR	Zakros	2.23	124	P	Pn	04 47 11.6	+1.0
KYMI	Kymi, Euboea I	2.26	3	P	Pn	04 47 11.7	+0.8
KYMI	Kymi, Euboea I	2.26	3	P	Pn	04 47 11.5	+0.6
LKR	Lokris	2.39	342	P	Pn	04 47 13.6	+0.9
KALE	Kalithea	2.47	325	P	Pn	04 47 14.3	+0.4
KALE				S	Sn	04 47 43.1	+0.1
SERG	Sergoula	2.53	324	P	Pn	04 47 15.0	+0.4
SERG				S	Sn	04 47 45.2	+0.9
AXAR	Agios Charalam	2.60	337	P	Pn	04 47 16.5	+1.0
AXAR				S	Sn	04 47 47.5	+1.5
CHOS	Chios island	2.62	39	Pn	Pn	04 47 16.4	+0.6
CHOS				Sn	Sn	04 47 47.3	+0.7
CHOS	Chios island	2.62	39	P	Pn	04 47 16.6	+0.8
CHOS				S	Sn	04 47 47.7	+1.1
KARP	Karpathos	2.74	107	Pn	Pn	04 47 18.2	+0.8
KARP	Karpathos	2.74	107	P	Pn	04 47 18.3	+0.8
ANX	Ano Chora	2.74	325	P	Pn	04 47 18.5	+1.0
ANX				S	Sn	04 47 49.7	+0.2
BODT	Bodrum	2.79	75	Pn	Pn	04 47 19.2	+1.1
BODT	Bodrum	2.79	75	P	Pn	04 47 19.5	+1.4
AOS	Alonnisos	2.79	359	P	Pn	04 47 18.4	+0.3
AOS				S	Sn	04 47 50.7	0.0
AGG	Agios Georgios	2.94	335	Pn	Pn	04 47 21.2	+1.1
AGG	Agios Georgios	2.94	335	P	Pn	04 47 21.0	+0.9
AGG				S	Sn	04 47 54.9	+0.6
DAT	Datca	2.94	82	Pn	Pn	04 47 21.5	+1.2
NEO	Neokhori	2.98	349	P	Pn	04 47 21.7	+1.0
NEO				S	Sn	04 47 56.4	+1.0
MAKR	Makrakomi, Fth	3.00	332	P	Pn	04 47 22.4	+1.4
MAKR				S	Sn	04 47 56.7	+0.9
PDO	Prodromos	3.12	316	P	Pn	04 47 23.0	+0.4
VLS	Valsamata	3.23	305	P	Pn	04 47 24.0	0.0
AMPL	Ampelaki	3.34	320	P	Pn	04 47 27.1	+1.5
ARG	Arkhangelos	3.38	91	Pn	Pn	04 47 27.9	+1.8
ARG				Sn	Sn	04 48 07.3	+2.2
ARG	Arkhangelos	3.38	91	P	Pn	04 47 27.7	+1.6
ARG				S	Sn	04 48 07.3	+2.2
DMLN	Damoulianata-K	3.40	304	P	Pn	04 47 27.1	+0.7
EVGI	Lefkada island	3.44	312	P	Pn	04 47 27.0	0.0
EVGI				S	Sn	04 48 07.8	+1.1
NYDR	Nydri-Lefkada	3.48	313	P	Pn	04 47 28.4	+1.0
NYDR				S	Sn	04 48 08.3	+0.9
TURN	Turunc	3.48	82	Pn	Pn	04 47 29.2	+1.7
PAIG	Paliouri	3.55	357	P	Pn	04 47 28.9	+0.5
LKD2	Lefkada island	3.55	314	P	Pn	04 47 28.7	+0.2
LKD2				S	Sn	04 48 10.5	+1.2
TSLK	Tsoukalades, L	3.58	314	P	Pn	04 47 29.5	+0.7
TSLK				S	Sn	04 48 11.7	+1.8
LIA	Limnos Island	3.65	15	P	Pn	04 47 30.2	+0.5
KPRO	Kipourio	4.11	331	P	Pn	04 47 36.7	+0.5
HORT	Hortiatis	4.27	351	P	Pn	04 47 39.5	+1.2
LFKM	Lefkimmi	4.34	316	P	Pn	04 47 39.7	+0.5
CAME	Cameli-Denizli	4.34	81	Pn	Pn	04 47 42.2	+2.8
AKAS	Kas	4.57	90	Pn	Pn	04 47 44.9	+2.4
KEK	Kerkira	4.67	317	Pn	Pn	04 47 45.2	+1.5
SLUM	Salum	4.99	167	P	Pn	04 47 47.2	-0.9
SLUM				S	Sn	04 48 38.2	-6.2
DB3	El Dabaa	6.56	143	P	Pn	04 48 05.4	-4.2
SWA2		7.23	169	P	Pn	04 48 17.5	-1.2
RYAN	Fayoum	9.02	142	P	Pn	04 48 40.3	-2.9
HKAT	Jabal Katrina	11.54	130	P	Pn	04 49 14.2	-3.7

IDC 10 04:57:03.2±1.5**, 53°.13N**×**85°.42E, h0**km**, mbtmp2.4**/2**, ML2.1**/2**, Error ellipse: s-maj=13.5km s-min=9.2km az=103.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.90	337	I	I	05 02 20.0	
	baz=158,slow=326,SNR=2.0						
ZALV	Zalesovo Beam	0.90	337	Pg	Pg	04 57 20.9	+0.5
	0.2nm,0.3s,baz=158,slow=18,SNR=2.8						
ZALV				Lg	Lg	04 57 32.3	
	1.3nm,0.3s,baz=152,slow=31,SNR=10						
KURBB	Kurchatov Arra	4.95	242	Pn	Pn	04 58 20.2	+1.6
	baz=60,slow=14,SNR=1.9						
KURBB				Lg	Lg	04 59 36.7	
	baz=57,slow=29,SNR=3.5						
	0.1nm,0.3s						
MKAR	Makanchi Array	6.65	199	Pn	Pn	04 58 43.4	+1.2
	0.1nm,0.3s,baz=23,slow=13,SNR=5.0						
MKAR				Lg	Lg	05 00 31.7	
	0.1nm,0.3s,baz=15,slow=29,SNR=2.2						
	0.2nm,0.3s						

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*SNET **10** 05:10:06.0±0.8, 13°.02N×89°.47W, h32km±9km, ML3.5*

*CATAC **10** 05:10:06.6±0.5, 13°N±3°×8°9W±°, h26km±3km, M3.4/22, MLv3.4/22, Error ellipse: s-maj=6.5km s-min=3.6km az=24.7, confirmed*

*GCG **10** 05:10:07.8±0.6, 13°.11N×89°.51W, h48km±10km, MD3.8, ML3.2*

ISC 10 05:10:07.0±1.6**, 13°.03N**±0°.06×**89°.46W**±0°.04**, h29**km±12km**, n92, σ0ˢ47**/99**, 9C-2D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.47	16	eP	Pn	05 10 17.9	+0.1
LALI				eS	Sn	05 10 24.6	-0.5
LALI	Alcalda de L	0.47	16	i P	Pn	05 10 17.7	0.0
LALI				i S	Sn	05 10 25.6	+0.5
LALI	Alcalda de L	0.47	16	P	Pn	05 10 18.1	+0.3
JAYA	Jayaque - finc	0.62	1	eP	Pn	05 10 19.5	-0.4
JAYA	Jayaque - finc	0.62	1	i P	Pn	05 10 19.6	-0.4
JAYA				i S	Sn	05 10 29.0	0.0
JAYA	Jayaque - finc	0.62	1	P	Pn	05 10 19.7	-0.2
JAYA	Jayaque - finc	0.62	1	S	Sn	05 10 29.1	+0.1
PANCS	Alcalda de	0.63	25	P	Pn	05 10 19.8	-0.3
PANCS	Alcalda de	0.63	25	S	Sn	05 10 29.2	0.0
ITCA	Escuela Especi	0.66	15	eP	Pn	05 10 20.2	-0.2
ITCA	Escuela Especi	0.66	15	P	Pn	05 10 20.3	-0.2
ITCA	Escuela Especi	0.66	15	S	Sn	05 10 30.3	+0.4
LOMA	Loma Larga	0.67	24	eP	Pb	05 10 20.3	+0.1
LOMA	Loma Larga	0.67	24	P	Pb	05 10 20.4	+0.1
LOMA	Loma Larga	0.67	24	S	Sn	05 10 30.7	+0.6
PMON	Piamonte	0.69	11	⇑eP	Pb	05 10 20.6	-0.1
PMON	Piamonte	0.69	11	P	Pb	05 10 20.5	-0.1
PMON	Piamonte	0.69	11	S	Sn	05 10 30.9	+0.2
LFRS	El Faro	0.70	33	⇓iP	Pb	05 10 20.9	+0.1
LFRS				eS	Sn	05 10 30.6	-0.3
SEMO	Seminario San	0.70	19	S	Sn	05 10 31.4	+0.4
UTEC	Universidad Te	0.71	20	P	Pb	05 10 21.1	+0.2
UTEC	Universidad Te	0.71	20	S	Sn	05 10 31.5	+0.5
UEES	Universidad Ev	0.71	17	⇑eP	Pb	05 10 20.8	-0.1
UEES	Universidad Ev	0.71	17	P	Pb	05 10 20.9	0.0
UEES	Universidad Ev	0.71	17	S	Sn	05 10 31.6	+0.4
BOQS	Boqueron	0.72	14	⇑eP	Pb	05 10 21.2	+0.1
BOQS				eS	Sn	05 10 31.2	-0.3
UESS	Universidad de	0.72	20	eP	Pb	05 10 21.2	0.0
IGN	Direccin Gen	0.73	22	P	Pb	05 10 21.5	+0.2
IGN	Direccin Gen	0.73	22	S	Sn	05 10 32.2	+0.6
PIC2	El Picacho	0.73	15	eP	Pb	05 10 21.6	+0.2
AEIL	Aeropuerto Ilo	0.74	27	eP	Pb	05 10 21.6	+0.2
UDBS	Universidad Do	0.74	23	P	Pb	05 10 21.8	+0.4
UDBS	Universidad Do	0.74	23	S	Sn	05 10 32.5	+0.7
CEDA	San Andres	0.77	4	eP	Pb	05 10 21.9	0.0
LFU	La Fuente	0.78	25	eP	Pb	05 10 22.4	+0.2
CEVE	Cerro Verde	0.81	348	eP	Pb	05 10 22.6	-0.1
CEVE	Cerro Verde	0.81	348	P	Pb	05 10 22.4	-0.3
CEVE	Cerro Verde	0.81	348	S	Sb	05 10 34.1	+0.8
LBRS	Las Brisas	0.81	30	eP	Pb	05 10 22.7	+0.1
COEG	Centro de Oper	0.81	44	⇑eP	Pn	05 10 22.0	-0.5
COEG	Centro de Oper	0.81	44	P	Pn	05 10 22.1	-0.4
COEG	Centro de Oper	0.81	44	S	Sb	05 10 33.7	+0.5
SBLS	San Blas	0.82	348	eP	Pb	05 10 22.6	-0.3
TECO	Alcaldia de Te	0.82	53	⇑eP	Pn	05 10 22.0	-0.7
TECO	Alcaldia de Te	0.82	53	P	Pn	05 10 22.1	-0.7
TECO	Alcaldia de Te	0.82	53	S	Sb	05 10 34.1	+0.4
PAVA	Las Pavas	0.84	37	⇑iP	Pb	05 10 23.0	-0.3
PAVA	Las Pavas	0.84	37	P	Pb	05 10 22.9	-0.3
PAVA	Las Pavas	0.84	37	S	Sb	05 10 35.0	+0.8
SNJE	San Jose	0.84	350	eP	Pb	05 10 22.7	-0.6
RTR	El Retiro	0.88	348	⇑eP	Pb	05 10 23.4	-0.4
UESV	Universidad de	0.88	47	eP	Pn	05 10 23.1	-0.5
UESV	Universidad de	0.88	47	P	Pn	05 10 23.0	-0.5
UESV	Universidad de	0.88	47	S	Sb	05 10 35.2	-0.1
ALJI	Alcalda de J	0.91	71	eP	Pn	05 10 23.4	-0.4
ALJI	Alcalda de J	0.91	71	P	Pn	05 10 23.6	-0.2
ALJI	Alcalda de J	0.91	71	S	Sb	05 10 35.9	-0.1
NUBE	Las Nubes	0.92	340	⇓eP	Pn	05 10 23.5	-0.7
NUBE	Las Nubes	0.92	340	i P	Pn	05 10 23.5	-0.7
NUBE				i S	Sb	05 10 36.0	-0.4
NUBE	Las Nubes	0.92	340	P	Pn	05 10 23.4	-0.7
NUBE	Las Nubes	0.92	340	S	Sn	05 10 35.6	-0.8
UNIC	Universidad Ca	0.95	355	eP	Pb	05 10 24.4	-0.5
UNIC	Universidad Ca	0.95	355	P	Pb	05 10 24.3	-0.5
UNIC	Universidad Ca	0.95	355	S	Sb	05 10 37.5	+0.4
SCLA	Alcaldia de Sa	0.97	47	eP	Pn	05 10 24.6	-0.1
SCLA	Alcaldia de Sa	0.97	47	P	Pn	05 10 24.6	-0.1
SCLA	Alcaldia de Sa	0.97	47	S	Sb	05 10 38.1	+0.3
FAME	Alcaldia de Sa	0.97	326	P	Pn	05 10 23.8	-0.9
FAME	Alcaldia de Sa	0.97	326	S	Sn	05 10 36.5	-1.0
TECA	Tecapa	1.03	64	eP	Pn	05 10 25.8	0.0
SLOZ	Alcaldia de Sa	1.04	342	eP	Pn	05 10 25.4	-0.2
SLOZ	Alcaldia de Sa	1.04	342	P	Pn	05 10 25.3	-0.4
SLOZ	Alcaldia de Sa	1.04	342	S	Sb	05 10 40.3	+0.7
PACA	Pacayal	1.18	68	eP	Pb	05 10 28.2	-0.8
PACA	Pacayal	1.18	68	P	Pb	05 10 28.2	-0.8
PACA	Pacayal	1.18	68	S	Sb	05 10 43.7	-0.2
LCY	Lacayo	1.20	71	eP	Pn	05 10 28.0	+0.2
LLGN	La Laguna	1.23	24	P	Pn	05 10 28.2	-0.1
BLLM	Bellamira	1.25	71	⇑eP	Pn	05 10 28.8	+0.2
MTO3	Montecristo	1.36	4	⇑eP	Pn	05 10 30.2	-0.1
MTO3	Montecristo	1.36	4	i P	Pn	05 10 30.2	-0.1
MTO3	Montecristo	1.36	4	P	Pn	05 10 30.1	-0.2
MTO3	Montecristo	1.36	4	S	Sb	05 10 47.8	-1.3
ESQI	Esquipulas	1.52	4	P	Pn	05 10 32.5	+0.1
LCND	La Caada	1.55	80	eP	Pn	05 10 32.7	+0.1
LCND	La Caada	1.55	80	P	Pn	05 10 32.7	+0.1
CNCH	Conchagua	1.60	81	eP	Pn	05 10 33.3	-0.1
CNCH	Conchagua	1.60	81	P	Pn	05 10 33.2	-0.2
CNCH	Conchagua	1.60	81	S	Sn	05 10 53.8	+0.7
FG16	Alotenango, Sa	1.60	320	i P	Pb	05 10 38.2	+2.1
POTN	Potosi Cosigui	1.90	91	P	Pn	05 10 37.4	-0.1
POTN				S	Sn	05 11 00.8	+0.4
STG8	El Palmar, Qui	2.32	308	i P	Pb	05 10 48.5	+0.2
STG8				IAML		05 11 22.5	
	comp=E,118nm,0.2s						

IDC 10 05:17:08.2±6.3**, 8°.11S**×**127°.93E, h213**km±67km**, mb3.1**/2**, mbtmp3.8**/5**, Error ellipse: s-maj=67.7km s-min=31.5km az=60.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	10.17	192	P	Pn	05 19 30.1	+0.6
	2.6nm,0.3s,baz=16,slow=12,SNR=34						
FITZ				S	S	05 21 23.6	-0.1
	3.1nm,0.3s,baz=241,slow=1.6,SNR=4.4						
WRA	Warramunga Arr	13.30	153	P	Pn	05 20 07.6	-1.5
	0.4nm,0.3s,baz=322,slow=14,SNR=21						
WRA				S	S	05 22 28.3	-8.2
	3.1nm,0.6s,baz=331,slow=23,SNR=13						
ASAR	Alice Springs	16.49	160	P	Pn	05 20 47.8	-0.2
	1.8nm,0.5s,baz=343,slow=11,SNR=24						
ASAR				S	S	05 23 49.2	+0.5
	0.6nm,0.4s,baz=317,slow=18,SNR=6.8						
MKAR	Makanchi Array	68.05	328	P	P	05 27 44.8	0.0
	0.2nm,0.4s,baz=118,slow=7.7,SNR=5.8						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	72.40	330	P	P	05 28 11.0	0.0
	0.5nm,0.5s,baz=133,slow=5.5,SNR=7.7						
	0.5nm,0.5s						

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*ASRS **10** 05:20:13.0±0.6, 54°.20N×87°.19E, h0km, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 10 05:20:15.7±3.6**, 54°.28N**×**87°.29E, h0**km**, mbtmp2.6**/2**, ML2.3**/2**, Error ellipse: s-maj=32.4km s-min=20.7km az=49.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.49	258	I	I	05 29 10.0	
	baz=77,slow=321,SNR=3.9						
ZALV	Zalesovo Beam	1.49	258	Pg	Pn	05 20 41.0	-2.7
	1.1nm,0.3s,baz=81,slow=16,SNR=10						
ZALV				Lg	Lg	05 21 03.8	
	1.6nm,0.3s,baz=78,slow=27,SNR=5.3						
KURBB	Kurchatov Arra	6.49	239	Pn	Pn	05 21 52.9	+0.6
	baz=55,slow=14,SNR=2.1						
	0.2nm,0.3s						
MKAR	Makanchi Array	8.14	205	Pn	Pn	05 22 17.0	+1.9
	0.1nm,0.3s,baz=28,slow=15,SNR=1.8						
	0.1nm,0.4s						

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*VAO **10** 05:27:13.0±0.6, 22°.34S×69°.06W, h58km±4km, mb5.1*

*SJA **10** 05:27:21.6±1.9, 22°.40S×68°.65W, h95km, ML4.7, MW4.7*

*NEIC **10** 05:27:22.9±1.8, 22°.34S±0°.04×68°.64W±0°.04, h106km±3km, mb4.7/165, Mwr4.7/31, Mww4.8/16, Mwr4.8(GUC), Error ellipse: s-maj=5.8km s-min=4.7km az=189.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.19; $M_{\theta\theta}$0.04; $M_{\phi\phi}$0.15; $M_{r\theta}$0.46; $M_{\theta\phi}$-0.20; $M_{\phi r}$-1.36; Fault plane solution: $M_0$1.46000×10^{16} NP1: ϕ_s112.32000°, δ6.76000°, λ-138.70000°. NP2: ϕ_s341.22000°, δ85.54000°, λ-84.91000°. Principal axes: T 1.4930, Plg40.0000°, Azm66.0000°; N -0.0741, Plg5.0000°, Azm161.0000°; P -1.4189, Plg49.0000°, Azm257.0000°;*

*IDC **10** 05:27:22.8±0.6, 22°.30S×68°.42W, h104km±4km, mb4.2/15, mbtmp4.5/20, MS3.5/17 Error ellipse: s-maj=15.4km s-min=11.1km az=74.0*

*NEIC **10** 05:27:23.1, 22°.34S×68°.65W, h110km*

*GUC **10** 05:27:23.4±0.8, 22°.33S×68°.67W, h103km±4km, ML4.6*

*NEIC **10** 05:27:23.1, 22°.34S×68°.76W, h110km, Moment Tensor Solution. Duration: 1ˢ3 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.71; $M_{\theta\theta}$-0.77; $M_{\phi\phi}$1.48; $M_{r\theta}$0.21; $M_{\theta\phi}$0.01; $M_{\phi r}$-1.86; Fault plane solution: $M_0$2.27000×10^{16} NP1: ϕ_s200.93000°, δ16.81000°, λ-61.46000°. NP2: ϕ_s351.33000°, δ75.28000°, λ-98.22000°. Principal axes: T 2.5464, Plg30.0000°, Azm88.0000°; N -0.7414, Plg8.0000°, Azm353.0000°; P -1.8050, Plg59.0000°, Azm250.0000°;*

*NEIC **10** 05:27:23, 22°.33S×68°.65W, h107km*

*GCMT **10** 05:27:25.1±0.4, 22°.45S±0°.03×68°.65W±0°.03, h128km±7km, MW4.8/77, Moment Tensor Solution. s10,c10; s77,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.71±.13; $M_{\theta\theta}$0.58±.16; $M_{\phi\phi}$0.13±.23; $M_{r\theta}$0.43±.07; $M_{\theta\phi}$-0.03±.14; $M_{\phi r}$-2.02±.11; Best double couple: $M_0$2.11700×10^{16} NP1: ϕ_s134.00000°, δ7.00000°, λ-121.00000°. NP2: ϕ_s346.00000°, δ84.00000°, λ-86.00000°. Principal axes: T 1.8430, Plg39.0000°, Azm73.0000°; N 0.5480, Plg4.0000°, Azm166.0000°; P -2.3910, Plg51.0000°, Azm260.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 05:27:21.9±0.4**, 22°.33S**±0°.02×**68°.60W**±0°.04**, h103**km±3km**, h103**km**:pP-P, n353, σ1ˢ41**/300**, mb4.7**/91**, 15C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AF01	San Pedro de A	0.73	148		Pn	05 27 41.5	+1.2
AF01					Sn	05 27 56.1	+2.1
AF01	San Pedro de A	0.73	148	⇓eP	Pn	05 27 41.5	+1.2
AF01				eS	Sn	05 27 56.1	+2.1
AF01	San Pedro de A	0.73	148	eP	Pn	05 27 37.9	-2.4
AF01				i P		05 27 41.6	
AF01				eP		05 27 41.6	
PB09	IPOC Station P	0.80	312		Pn	05 27 42.0	+1.2
PB09				Sn	Sn	05 27 56.2	+1.4
PB09	IPOC Station P	0.80	312	⇑eP	Pn	05 27 41.9	+1.2
PB09				eS	Sn	05 27 56.0	+1.2
PB09	IPOC Station P	0.80	312	eP	Pn	05 27 42.0	+1.2
PB09				eS	Sn	05 27 56.7	+1.9
PB09				IAML		05 28 00.3	
	comp=Z,13μm,1.0s						
PB06	IPOC Station P	0.97	247		Pn	05 27 42.9	+0.5
PB06					Sn	05 27 58.6	+0.7
PB06	IPOC Station P	0.97	247	⇑eP	Pn	05 27 42.9	+0.5
PB06				eS	Sn	05 27 58.1	+0.2
PB06				IAML		05 28 05.3	
	comp=N,18μm,0.3s						
PB06	IPOC Station P	0.97	247	eP	Pn	05 27 43.0	+0.5
PB06				eS	Sn	05 27 58.8	+0.9
PB06				IAML		05 28 03.8	
	comp=Z,12μm,0.6s						
PB03	IPOC Station P	1.10	284	Pn	Pn	05 27 44.3	+0.4
PB03					Sn	05 28 00.6	+0.2
PB03	IPOC Station P	1.10	284	⇑eP	Pn	05 27 44.4	+0.4
PB03				eS	Sn	05 28 00.7	+0.2
PB03				IAML		05 28 02.6	
	comp=E,20μm,0.5s						
PB03	IPOC Station P	1.10	284	eP	Pn	05 27 44.3	+0.4
PB03				eS	Sn	05 28 00.8	+0.4
PB03				IAML		05 28 02.5	
	comp=Z,12μm,0.4s						
PB01	IPOC Station P	1.52	327	Pn	Pn	05 27 49.7	+1.0
PB01	IPOC Station P	1.52	327	⇑eP	Pn	05 27 49.8	+1.0
PB01				eS	Sn	05 28 09.2	+0.1
PB01				IAML		05 28 11.9	
	comp=N,8μm,0.4s						
PB01	IPOC Station P	1.52	327	eP	Pn	05 27 49.5	+0.8
PB01				eS	Sn	05 28 11.4	+2.3
PB05	IPOC Station P	1.57	250	Pn	Pn	05 27 49.3	-0.1
PB05				Sn	Sn	05 28 10.8	+0.7
PB05	IPOC Station P	1.57	250	⇑eP	Pn	05 27 49.3	-0.1

PB05				*e*S	Sn	05 28 09.4	-0.7
PB05				IAML		05 28 17.1	
	comp=E,10µm,0.7s						
PB05	IPOC Station P	1.57	250	*e*P	Pn	05 27 49.3	-0.1
PB05				*e*S	Sn	05 28 09.0	-1.2
PB05				IAML		05 28 13.4	
	comp=Z,8µm,0.9s						
PX03	IPOC Station P	2.14	333	⇑*e*P	Pn	05 27 56.9	+0.3
PX03				*e*S	Sn	05 28 23.4	+0.3
PX03				IAML		05 28 29.0	
	comp=N,4µm,0.6s						
PB10	IPOC Station P	2.15	236	Pn	Pn	05 27 56.8	+0.2
PB10	IPOC Station P	2.15	236	⇑*e*P	Pn	05 27 55.9	-0.8
PB10				*e*S	Sn	05 28 20.9	-2.2
PB10				IAML		05 28 34.8	
	comp=N,5µm,0.4s						
PB10	IPOC Station P	2.15	236	*e*P	Pn	05 27 57.3	+0.7
PB10				*e*S	Sn	05 28 20.0	-3.2
PB10				IAML		05 28 33.0	
	comp=Z,4µm,0.4s						
PB08	IPOC Station P	2.24	347		Pn	05 27 59.9	+1.8
PB08	IPOC Station P	2.24	347	⇓*e*P	Pn	05 27 59.8	+1.7
PB08				*e*S	Sn	05 28 27.4	+1.7
PB08	IPOC Station P	2.24	347	*e*P	Pn	05 28 00.1	+2.0
PB08				*e*S	Sn	05 28 23.4	-2.3
TA01	Diego Aracena	2.29	320		Pn	05 27 58.3	-0.2
TA01				Sn	Sn	05 28 26.5	+0.2
TA01	Diego Aracena	2.29	320	⇑*e*P	Pn	05 27 58.2	-0.2
TA01				*e*S	Sn	05 28 24.6	-1.7
TA01				IAML		05 28 33.3	
	comp=N,3µm,0.4s						
TA01	Diego Aracena	2.29	320	*e*P	Pn	05 27 58.4	0.0
TA01				*e*S	Sn	05 28 24.3	-2.0
TA01				IAML		05 28 35.6	
	comp=Z,2µm,0.5s						
TA02	Huaiquique	2.50	325	Pn	Pn	05 28 01.0	-0.1
TA02	Huaiquique	2.50	325	⇑*e*P	Pn	05 28 01.1	-0.1
TA02	Huaiquique	2.50	325	*e*P	Pn	05 28 01.0	-0.1
TA02				*e*S	Sn	05 28 28.9	-2.3
TA02				IAML		05 28 37.6	
	comp=Z,1µm,0.3s						
GO01	Chusmiza	2.70	348		Pn	05 28 05.9	+1.6
GO01	Chusmiza	2.70	348	*e*P	Pn	05 28 05.3	+1.0
GO01				*e*S	Sn	05 28 28.9	-7.9
GO01				*e*S		05 28 30.9	
PB11	IPOC Station P	2.74	339		Pn	05 28 05.0	+0.5
PB11	IPOC Station P	2.74	339	⇓*e*P	Pn	05 28 04.6	+0.2
PB11				*e*S	Sn	05 28 34.6	-2.6
PB11				IAML		05 28 45.1	
	comp=E,2µm,0.4s						
PB11	IPOC Station P	2.74	339	*e*P	Pn	05 28 04.7	+0.2
PB11				*e*S	Sn	05 28 28.4	-8.7
PB11				*e*S		05 28 42.7	
PB11				IAML		05 28 45.5	
	comp=Z,2µm,0.8s						
PB14	IPOC Station P	2.82	216		Pn	05 28 05.6	-0.1
PB14	IPOC Station P	2.82	216	*e*P	Pn	05 28 05.2	-0.5
PB14				*e*S	Sn	05 28 37.7	-1.7
PB14				IAML		05 28 49.9	
	comp=N,4µm,0.5s						
PB14	IPOC Station P	2.82	216	*e*P	Pn	05 28 04.7	-1.0
PB14				*e*S	Sn	05 28 28.4	-11
PB14				IAML		05 28 34.4	
	comp=Z,7µm,0.7s						
PB14				*e*S		05 28 37.9	
YJA	Yavi	2.86	88	*e*P	Pn	05 28 09.8	+3.4
GO02	Mina Guanaco	2.96	198	Pn	Pn	05 28 07.7	+0.2
GO02	Mina Guanaco	2.96	198	*e*P	Pn	05 28 06.9	-0.6
GO02				*e*S	Sn	05 28 42.6	0.0
SLA	San Lorenzo	3.71	131	*e*P	Pn	05 28 20.8	+3.4
AZAP	Zapla	3.76	121	*e*P	Pn	05 28 20.4	+2.3
PB16	IPOC Station P	4.06	348	Pn	Pn	05 28 23.7	+1.1
PB16	IPOC Station P	4.06	348	*e*P	Pn	05 28 23.4	+0.8
PB16				*e*S	Sn	05 28 55.9	-14
PB16				IAML		05 29 55.9	
	comp=Z,382nm,1.0s						
AC01	Pan de Azucar	4.22	205		Pn	05 28 22.1	-2.0
AC01	Pan de Azucar	4.22	205	*e*P	Pn	05 28 22.1	-2.0
AC01				*e*S	Sn	05 29 09.1	-3.2
AC01				IAML		05 29 26.4	
	comp=Z,4µm,0.8s						
AP01	Chacalluta	4.26	337	Pn	Pn	05 28 24.9	+0.2
FSA	Cafayete	4.46	148	*e*P	Pn	05 28 30.1	+2.6
AC02	Maricunga	4.51	186		Pn	05 28 28.8	+0.2
AC02	Maricunga	4.51	186	*e*P	Pn	05 28 27.9	-0.6
AC02				*e*S	Sn	05 29 05.5	-15
AC02				IAML		05 29 55.0	
	comp=Z,1µm,0.5s						
PB18	Visviri	4.79	350	Pn	Pn	05 28 31.4	-1.0
AC06	Mina Casimiro	5.25	197	Pn	Pn	05 28 36.2	-2.0
GO03	Copiapo	5.45	195	Pn	Pn	05 28 38.8	-2.0
LPAZ	La Paz	6.03	4	Pn	Pn	05 28 52.2	+3.0
LPAZ	La Paz	6.03	4	P	Pn	05 28 51.1	+1.9
	comp=Z,26nm,0.5s,baz=192,slow=5.8,SNR=91						
LPAZ				S	Sn	05 29 45.6	-12
	comp=Z,47nm,0.9s,baz=192,slow=16,SNR=6.3						
LPAZ	La Paz	6.03	4	*e*P	Pn	05 28 40.2	-9.0
AC04	Llanos de Chal	6.26	200		Pn	05 28 47.7	-4.1
AC05	El Transito	6.65	193		Pn	05 28 54.5	-2.8
LCO	Las Campanas	6.92	195		Pn	05 28 57.2	-3.8
CO01	Juntas del Tor	7.74	190		Pn	05 29 09.6	-2.4
CO05	La Serena	7.92	197		Pn	05 29 09.8	-4.5
GO04	Tololo Observa	8.06	194		Pn	05 29 12.2	-4.2
CO03	El Pedregal	8.68	192		Pn	05 29 20.4	-4.3
CO06	Fray Jorge	8.74	197	Pn	Pn	05 29 19.4	-6.1
BBSD	Serra de San D	9.10	57	*e*P	Pn	05 29 26.4	-3.9
CO02	Combarbal	9.10	193		Pn	05 29 25.0	-5.4
CFA	Coronel Fontan	9.24	178	P	Pn	05 29 28.9	-3.4
	comp=Z,6.8nm,0.3s,baz=260,slow=16,SNR=49						
CFA				S	Sn	05 31 04.8	-10
	comp=Z,9.3nm,0.4s,baz=348,slow=11,SNR=1.1						
SIV	San Ignacio	9.50	50	P	Pn	05 29 33.8	-2.1
	comp=Z,94nm,0.5s,baz=248,slow=7.5,SNR=643						
SIV				S	Sn	05 31 10.8	-10
	comp=Z,28nm,0.9s,baz=304,slow=22,SNR=7.2						
MURT	Porto Murtinho	10.22	88	*e*P	Pn	05 29 43.0	-2.6
VA06	Catapilco	10.47	193	Pn	Pn	05 29 42.7	-6.2
VA03	San Esteban	10.54	189		Pn	05 29 45.4	-4.6
PEL	Peldehue	10.93	189	Pn	Pn	05 29 53.7	-1.6
CPUP	Villa Florida	11.02	113	Pn	Pn	05 29 55.0	-1.5
CPUP	Villa Florida	11.02	113	P	Pn	05 29 54.8	-1.7
	comp=Z,2.7nm,0.7s,baz=150,slow=12,SNR=17						
MT02	Curacav	11.12	191	Pn	Pn	05 29 54.5	-3.2
MT08	Bocatoma Ro	11.14	186	Pn	Pn	05 29 55.6	-2.7
MT05	Renca	11.18	189	Pn	Pn	05 29 55.6	-3.1
MT16	CCHEN	11.19	188	Pn	Pn	05 29 54.5	-4.3
MT03	Universidad Ad	11.25	188	Pn	Pn	05 29 54.9	-4.7
PTLB	Pontes e Lacer	11.27	54	Pn	Pn	05 29 57.5	-2.4
PTLB	Pontes e Lacer	11.27	54	*e*P	Pn	05 29 56.5	-3.3
MT13	San Alfonso	11.47	187		Pn	05 29 57.8	-4.7
LMEL	Las Melosas	11.56	187	Pn	Pn	05 30 00.8	-3.0
VA05	Santo Domingo	11.60	193	Pn	Pn	05 29 58.3	-5.8
MT09	Talagante	11.60	190	Pn	Pn	05 29 58.3	-5.9
MT01	Popeta	11.73	191	Pn	Pn	05 29 59.1	-6.8
BO04	La Punta	11.75	188	Pn	Pn	05 30 00.2	-6.0
SJPY	San Joaquin	11.76	106	*e*P	Pn	05 30 04.0	-2.3
AQDB	Aquidauana	12.16	84		Pn	05 30 09.3	-2.4
AQDB	Aquidauana	12.16	84	*e*P	Pn	05 30 08.5	-3.2
BO01	Tunca	12.22	190	Pn	Pn	05 30 05.0	-7.3
VILB	Vilhena	12.28	42	Pn	Pn	05 30 11.9	-1.5
VILB	Vilhena	12.28	42	*e*P	Pn	05 30 09.0	-4.4
BO02	Sierra Bellavi	12.56	188		Pn	05 30 12.6	-4.5
NNA	Nana	12.95	321	P	P	05 30 26.7	-2.1
	comp=Z,12nm,0.9s,baz=209,slow=13,SNR=4.7						
ITQB	Itaqui	13.01	127	*e*P	Pn	05 30 19.5	-3.4
ML02	Panimavida	13.61	190		Pn	05 30 30.2	-0.4
SALV	Santo Antonio	13.77	65	*e*P	Pn	05 30 30.5	-2.3
RPRD	Ribas do Rio P	14.00	85	*e*P	Pn	05 30 34.6	-1.1
H03N1	Juan Fernandez	14.33	217	P	P	05 30 45.1	+1.5
	baz=114,slow=15,SNR=13						
H03N1				T	T	05 43 20.5	
	baz=43,slow=72,SNR=65						
H03N2	Juan Fernandez	14.34	217	P	P	05 30 44.8	+1.0
	baz=114,slow=15,SNR=9.9						
H03N2				T	T	05 43 02.1	
	baz=43,slow=72,SNR=50						
H03N3	Juan Fernandez	14.35	217	P	P	05 30 44.0	+0.1
	baz=114,slow=15,SNR=16						
H03N3				T	T	05 43 01.0	
	baz=43,slow=72,SNR=64						
VA04	Juan Fernndez	14.44	216		Pn	05 30 40.2	-1.1
BI02	San Fabin de	14.47	189		Pn	05 30 40.8	-1.0
H03S3	Juan Fernandez	14.62	216	P	Pn	05 30 41.0	-2.3
	baz=22,slow=18,SNR=4.0						
H03S1	Juan Fernandez	14.63	216	P	Pn	05 30 41.3	-2.1
	baz=22,slow=18,SNR=4.0						
H03S2	Juan Fernandez	14.63	216	P	Pn	05 30 40.8	-2.7
	baz=22,slow=18,SNR=4.4						
TRCB	Terra Rica	14.76	95	*e*P	Pn	05 30 45.0	-0.6
BI05	Punta Hualpn	14.91	194	Pn	Pn	05 30 45.4	-1.9
CZSB	Cruzeiro do Su	15.04	344	Pn	Pn	05 30 48.6	-0.6
CZSB	Cruzeiro do Su	15.04	344	*e*P	Pn	05 30 40.3	-8.9
C2SB	Chapadao do Su	15.18	79	*e*P	Pn	05 30 50.4	-0.5
PTGB	Pitanga	15.35	102	*e*P	Pn	05 30 52.6	-0.5
PDRB	Porto dos Gac	15.56	49	*e*P	Pn	05 30 53.7	-2.0
ITAB	Concordia	15.73	111		Pn	05 30 57.3	-0.4
ITAB	Concordia	15.73	111	*e*P	Pn	05 30 55.5	-2.2
CPSB	Cacapava Do Su	15.78	124	*e*P	Pn	05 30 56.7	-1.6
PCMB	Pacaembu	16.10	91	*e*P	Pn	05 31 01.2	-1.2
LDASE	Londrina, Braz	16.15	97	*e*P	Pn	05 31 02.5	-0.5
PLTB	Pedras Altas	16.32	128		Pn	05 31 02.3	-2.7
PLTB	Pedras Altas	16.32	128	*e*P	Pn	05 31 00.8	-4.2
TRQA	Tornquist	16.68	162		Pn	05 31 08.5	-0.8
CLDB	Colider	16.73	49	*e*P	Pn	05 31 07.3	-2.8
ARAG	Araguaiana, MT	17.18	70	*e*P	P	05 31 14.7	-0.9
ITRB	Iturama	17.23	85	*e*P	P	05 31 15.7	-0.6
CNLB	Canela	17.42	117	*e*P	P	05 31 17.7	-0.5
LR03	Panguipulli	17.54	190	P	P	05 31 17.4	-2.1
FRTB	Fartura	17.58	97	*e*P	P	05 31 19.8	-0.2
ATAH	Atahualpa	17.81	327	P	Pn	05 31 26.0	+2.2
	comp=Z,2.7nm,0.7s,baz=18,slow=4.6,SNR=4.1						
LR05	Currie	18.08	188		P	05 31 23.6	-1.8
TBTG	Tabatinga, AM	18.08	356	P	P	05 31 25.6	+0.1
TBTG	Tabatinga, AM	18.08	356	*e*P	P	05 31 19.6	-5.9
PLCA	Paso Flores	18.42	185	P	P	05 31 28.9	-0.4
PLCA	Paso Flores	18.42	185	P	P	05 31 29.1	-0.2
	comp=Z,6.9nm,0.7s,baz=354,slow=10,SNR=22						
PLCA				PcP	PcP	05 35 56.0	+0.3
	comp=Z,1.3nm,0.6s,baz=117,slow=2.3,SNR=1.7						
PLCA				LR	LR	05 38 51.9	
	comp=Z,111nm,18.7s,baz=7.0,slow=37						
PLCA	Paso Flores	18.42	185	*e*P	P	05 31 23.3	-5.9
MAJ01	Sao Joao Batis	18.47	110	*e*P	P	05 31 28.5	-1.3
LL03	Petrohue	19.03	189	P	P	05 31 33.8	-1.9
TEFE	Tefe	19.10	12	*e*P	P	05 31 32.9	-3.8
LL05	Los Muermos	19.46	191	P	P	05 31 40.7	+0.3
SNDB	Serra Nova Dou	19.46	61	*e*P	P	05 31 38.9	-1.7
SPB	Sao Paulo	19.53	98	P	P	05 31 40.9	-0.5
SPB	Sao Paulo	19.53	98	*e*P	P	05 31 40.0	-1.4
IPMB	Ipameri, GO	19.62	81	*e*P	P	05 31 41.2	-1.2
PET01	Itanhaem-SP	19.68	100	*e*P	P	05 31 41.9	-1.1
NPGB	Novo Progresso	19.85	42	*e*P	P	05 31 42.3	-2.5
VAO	Valinhos	19.98	96	P	P	05 31 45.0	-1.3
VAO	Valinhos	19.98	96	*e*P	P	05 31 45.0	-1.3
LL01	San Ignacio de	20.25	188	P	P	05 31 48.4	-0.5
MACA	Manacapuru-AM	20.54	23		P	05 31 50.9	-1.4
MACA	Manacapuru-AM	20.54	23	*e*P	P	05 31 49.7	-2.6
BDFB	Brasilia	20.56	75	P	P	05 31 51.3	-1.3
BDFB	Brasilia	20.56	75	P	P	05 31 51.0	-1.7
	comp=Z,20nm,0.6s,baz=262,slow=11,SNR=44						
BDFB				LR	LR	05 41 06.0	
	comp=Z,146nm,18.1s,baz=244,slow=40						
	comp=Z,20nm,0.6s						
LL02	Futaleuf	20.98	187	P	P	05 31 56.9	+0.1
PMNB	Patos De Minas	21.10	84	*e*P	P	05 31 56.5	-1.9
GO07	Milladeo Hill,	21.15	190	P	P	05 31 58.2	-0.4
PARB	Paraibuna	21.20	97	*e*P	P	05 31 57.9	-1.5
SLP01	Ubatuba-SP	21.63	97	*e*P	P	05 32 02.1	-1.9
ITTB	Itaituba	21.77	37	*e*P	P	05 32 03.1	-2.4
COHC	Cochancay	22.29	331	P	P	05 32 11.2	+0.2
VAS01	Vassouras-RJ	23.27	95	*e*P	P	05 32 18.4	-2.2
COYC	Coyhaique	23.36	186	P	P	05 32 20.1	-1.1
SLOR	San Lorenzo -	23.53	335	P	P	05 32 22.0	-1.5
DIAM	Diamantina, MG	23.71	85	*e*P	P	05 32 24.0	-0.8
JANB	Januaria	24.09	77	*e*P	P	05 32 25.5	-2.7
SMTB	Santa Maria do	24.22	60	*e*P	P	05 32 27.6	-1.6
PRPB	Parauapebas	24.23	51	*e*P	P	05 32 27.2	-2.1
OTAV	Otavalo	24.40	336	P	P	05 32 29.7	-1.6
OTAV	Otavalo	24.40	336	*e*P	P	05 32 25.2	-6.1
MAL2	Monte Alegre,	24.58	37	P	P	05 32 31.2	-1.2
SDBA	SAO DESIDERIO	24.64	70	*e*P	P	05 32 30.7	-2.4
FLOC	Florencia	24.74	343	P	P	05 32 33.3	-0.7
AY03	Cochrane	25.07	186	P	P	05 32 35.8	-0.9
BOAV	Boa Vista	25.81	19	P	P	05 32 44.3	+0.7
BOAV	Boa Vista	25.81	19	*e*P	P	05 32 41.6	-2.0
ROSC	El Rosal	27.58	348	P	P	05 33 00.4	+0.5
	comp=Z,3.1nm,0.4s,baz=85,slow=15,SNR=1.9						
ROSC				LR	LR	05 45 47.0	
	comp=Z,87nm,18.8s,baz=187,slow=40						
	comp=Z,3.1nm,0.4s						
TMAB	Tom-Au,PA,Br	28.11	48	*e*P	P	05 33 02.4	-1.9
RUSC	La Rusia	28.39	351	P	P	05 33 07.7	+0.5
RUSC				IAmb	IAmb	05 34 05.2	
	comp=Z,23nm,1.1s						
GO09	Cerro Castillo	29.04	185	P	P	05 33 13.2	+1.1
MG05	Puerto Natales	29.45	185	P	P	05 33 16.8	+1.0
MG02	Cerro Sombrero	30.41	181	P	P	05 33 25.1	+0.9
BAUV	El Baul	31.08	1	P	P	05 33 30.6	+0.1
BAUV				IAmb	IAmb	05 33 31.1	
	comp=Z,14nm,0.9s						
SDV	Santo Domingo	31.09	356	LR	LR	05 48 48.1	
	comp=Z,68nm,19.2s,baz=186,slow=41						
MDP	Montagnes des	31.42	32	LR	LR	05 47 11.5	
	comp=Z,150nm,19.3s,baz=184,slow=38						
MG03	Isla Dawson	31.50	182	P	P	05 33 34.7	+0.9
PCRV	Puerto La Cruz	32.54	7	LR	LR	05 48 01.8	
	comp=Z,58nm,20.3s,slow=38						
NBPB	Pedra_Branca-C	32.63	64	*e*P	P	05 33 43.3	-0.8
NBCL	Cascavel-CE	34.43	63	*e*P	P	05 33 59.0	-0.8
RCBR	Riachuelo	35.58	67	P	P	05 34 09.5	-0.2
RCBR	Riachuelo	35.58	67	*e*P	P	05 34 08.3	-1.5
HOPE	Hope Point	40.02	151	P	P	05 34 47.0	+0.5
PDPR	Patillas Dam,	40.18	4	P	P	05 34 46.8	-1.4
PDPR				IAmb	IAmb	05 34 55.4	
	comp=Z,16nm,1.1s						
CELP	Cerrillos	40.20	3	P	P	05 34 48.3	-0.1
SDD	Santo Domingo	40.56	358	P	P	05 34 51.2	0.0
DR12	Loma Pena Alta	40.87	359	P	P	05 34 52.1	-1.9
ESPZ	Base Esperanza	41.79	172	P	P	05 35 01.1	+0.2
MTO3	Montecristo	41.79	329	P	P	05 35 01.3	-0.5
MTO3				IAmb	IAmb	05 35 04.5	
	comp=Z,12nm,0.8s						
ESQI	Esquipulas	41.92	329	P	P	05 35 02.3	-0.3
ESQI				IAmb	IAmb	05 35 05.8	
	comp=Z,17nm,0.9s						
PMSA	Palmer Station	42.54	177	LR	LR	05 52 15.3	
	comp=Z,69nm,18.5s,baz=308,slow=35						
PETF	Flores	44.21	330	P	P	05 35 22.8	+1.9
CCIG	Comitan	44.76	327	P	P	05 35 26.8	+1.2
CCIG				IAmb	IAmb	05 37 05.0	
	comp=Z,17nm,1.3s						
SMAI	San Martin Ant	45.81	179	P	P	05 35 34.2	+1.2
SMAI				IAmb	IAmb	05 35 35.2	
	comp=Z,9.2nm,0.9s						
TEIG	Tepich	46.46	334	P	P	05 35 38.5	-0.1
BELA	Belgrano 2	57.89	172	P	P	05 37 03.7	+1.1
BELA				IAmb	IAmb	05 37 04.7	
	comp=Z,8.2nm,1.1s						
HKT	Hockley	58.20	332	P	P	05 37 04.8	-0.5
HKT				IAmb	IAmb	05 37 07.7	
	comp=Z,10.0nm,1.1s						
X48A	Hartselle	59.13	342	P	P	05 37 11.8	+0.1
X48A				IAmb	IAmb	05 37 12.6	
	comp=Z,7.8nm,1.0s						
VNA3	Neumayer Olymp	59.20	161	⇑P	P	05 37 12.7	+0.9
	comp=Z,6.1nm,0.7s						
NATX	Nacogdoches	59.29	334	P	P	05 37 11.9	-0.9
VNA1	Neumayer--Stat	59.41	160	⇑P	P	05 37 13.0	-0.2
	comp=Z,7.3nm,1.2s						
HNDO	Hondo	59.42	329	P	P	05 37 15.1	+1.2
TKL	Tuckaleechee C	59.44	346	LR	LR	06 06 11.8	
	comp=Z,22nm,18.6s,baz=155,slow=39						
SWET	Sewanee	59.55	344	P	P	05 37 15.1	+0.5
SWET				IAmb	IAmb	05 37 41.8	
	comp=Z,8.5nm,1.0s						
VNA2	Neumayer--Watz	59.78	161	⇑P	P	05 37 16.6	+0.9
	comp=Z,5.4nm,0.6s,baz=276,slow=8.6						
T57A	Hurt	59.86	350	P	P	05 37 16.4	-0.2
DRIO	Del Rio	59.98	328	P	P	05 37 18.2	+0.6
DRIO				IAmb	IAmb	05 37 19.8	
	comp=Z,8.5nm,0.9s						
V48A	Smith Brothers	60.28	343	P	P	05 37 19.2	-0.3
WLAR	White Oak Lake	60.40	337		P	05 37 21.6	+1.1
JCT	Junction City	60.46	329		P	05 37 21.9	+0.9
BRDY	Brady	60.76	330		P	05 37 23.8	+0.9
BRDY				IAmb	IAmb	05 37 24.3	
	comp=Z,8.9nm,0.9s						
FW16	Waxahatchie	60.85	333	P	P	05 37 23.9	+0.4
WVT	Waverly	60.92	342	P	P	05 37 23.9	0.0
WVT				IAmb	IAmb	05 37 24.8	
	comp=Z,6.6nm,0.8s						
WVT	Waverly	60.92	342	P	P	05 37 23.9	0.0
WVT				pP	pP	05 37 50.3	-0.2
WVT				sP	sP	05 37 59.8	-2.6
FW13	Cleburne	60.96	332	P	P	05 37 25.3	+1.1
FW13				IAmb	IAmb	05 37 25.8	
	comp=Z,11nm,1.0s						
SAND	Sanderson	61.17	327		P	05 37 27.1	+1.3
SAND				IAmb	IAmb	05 37 27.9	
	comp=Z,8.0nm,0.9s						
MIAR	Mount Ida	61.34	337		P	05 37 27.6	+0.8
MIAR				IAmb	IAmb	05 37 28.2	
	comp=Z,9.8nm,1.1s						
SNAA	Sanae	61.41	161	⇑P	P	05 37 27.6	+0.7
	comp=Z,133nm,0.7s						
SNAA	Sanae	61.41	161		P	05 37 27.4	+0.5
SNAA				IAmb	IAmb	05 37 28.3	
	comp=Z,5.7nm,0.7s						
SNAA	Sanae	61.41	161	P	P	05 37 27.4	+0.5
	comp=Z,5.1nm,0.7s,baz=281,slow=7.3,SNR=27						
	comp=Z,5.1nm,0.7s						
OZNA	Ozona	61.46	328	IAmb	IAmb	05 37 56.2	
	comp=Z,13nm,1.3s						
TXAR	Lajitas Array	61.47	325	P	P	05 37 28.6	+0.7
	comp=Z,1.1nm,0.8s,baz=148,slow=8.5,SNR=14						
	comp=Z,1.1nm,0.8s						
TX31	Lajitas Ar. Si	61.47	325	P	P	05 37 27.9	0.0
TX31				IAmb	IAmb	05 37 44.7	
	comp=Z,10nm,1.7s						
T47A	Sharon Grove	61.53	343	P	P	05 37 28.7	+0.7
ABTX	Abilene, Hawle	62.18	331	IAmb	IAmb	05 37 34.6	
	comp=Z,12nm,1.1s						
ALPN	Alpine	62.28	326	IAmb	IAmb	05 37 35.2	
	comp=Z,17nm,1.7s						
MNHN	Monahans	62.61	327	P	P	05 37 35.9	+0.5
MNHN				IAmb	IAmb	05 37 37.4	
	comp=Z,9.3nm,0.9s						
BBTS	Babate	62.88	59	LR	LR	06 05 27.1	
	comp=Z,32nm,18.6s,baz=110,slow=36						
APMT	Aspermont	62.98	331	P	P	05 37 38.0	+0.2
APMT				IAmb	IAmb	05 37 39.4	
	comp=Z,11nm,0.8s						
TROLL	Troll, Antarti	63.12	161	⇑P	P	05 37 39.4	+1.0
	comp=Z,364nm,0.6s						
ODSA	Odessa	63.14	328	IAmb	IAmb	05 37 40.9	
	comp=Z,9.4nm,0.8s						
PECS	Pecos	63.20	326	IAmb	IAmb	05 37 41.5	
	comp=Z,7.6nm,1.2s						
VHRN	Van Horn	63.31	325	IAmb	IAmb	05 37 42.1	
	comp=Z,8.7nm,0.9s						
FVM	French Village	63.41	341	IAmb	IAmb	05 38 08.5	
	comp=Z,8.7nm,0.8s						
POST	Post	63.41	329	IAmb	IAmb	05 37 43.5	
	comp=Z,8.8nm,1.0s						
OK052	Battle Ridge R	63.85	335	P	P	05 37 44.2	+0.8
OK029	Liberty Lake	63.94	334	IAmb	IAmb	05 37 45.1	
	comp=Z,12nm,0.9s						
HSIG		65.35	320	P	P	05 37 53.2	-0.1
HSIG				IAmb	IAmb	05 37 56.3	
	comp=Z,9.4nm,1.2s						
319A	Douglas	66.12	322	IAmb	IAmb	05 38 01.3	
	comp=Z,9.2nm,1.0s						
G62A	West of Eustis	67.24	359	IAmb	IAmb	05 38 07.6	
	comp=Z,9.4nm,1.0s						
ANMO	Albuquerque	67.35	327	P	P	05 38 06.6	+0.4
ANMO				IAmb	IAmb	05 38 08.9	
	comp=Z,7.5nm,0.8s						
ANMO	Albuquerque	67.35	327	P	P	05 38 08.1	+1.8
TUC	Tucson	67.66	322		P	05 38 09.8	+1.7
TUC				IAmb	IAmb	05 38 11.1	
	comp=Z,13nm,1.6s						
F64A	Sherman	67.86	0	P	P	05 38 09.8	+0.8
QSPA	South Pole Qui	67.87	180		P	05 38 10.3	+1.2
QSPA	South Pole Qui	67.87	180	P	P	05 38 10.2	+1.2
	comp=Z,14nm,0.5s,baz=300,slow=0.4,SNR=206						
QSPA				pP	PcP	05 38 35.7	+0.9
	comp=Z,8.7nm,0.8s,baz=267,slow=5.2,SNR=5.2						
QSPA				LR	LR	06 09 25.6	
	comp=Z,39nm,18.2s,baz=245,slow=37						
	comp=Z,14nm,0.5s						
QSPA	South Pole Qui	67.87	180	P	P	05 38 10.3	+1.2
QSPA				pP	pP	05 38 39.1	+3.3
QSPA				sP	sP	05 38 49.0	+1.5
214A	Organ Pipe Nat	68.58	320	IAmb	IAmb	05 38 17.1	
	comp=Z,11nm,1.2s						
DBIC	Dimbokro	68.70	73		P	05 38 14.8	0.0
DBIC	Dimbokro	68.70	73	P	P	05 38 14.8	0.0
	comp=Z,37nm,0.8s,baz=243,slow=6.7,SNR=28						
DBIC				LR	LR	06 09 34.8	
	comp=Z,29nm,18.2s,baz=180,slow=37						
	comp=Z,37nm,0.8s						
DBIC	Dimbokro	68.70	73	P	P	05 38 15.0	+0.2
KSCO	Kaye Shedlock’	68.84	332	IAmb	IAmb	05 38 17.7	
	comp=Z,15nm,1.0s						
D62A	Allapoint, All	69.08	360	IAmb	IAmb	05 38 19.1	
	comp=Z,12nm,0.9s						
SDCO	Great Sand Dun	69.10	329	IAmb	IAmb	05 38 20.4	
	comp=Z,14nm,1.1s						
BATG	Bathurst New B	69.32	2	P	P	05 38 19.1	+1.1
BATG				IAmb	IAmb	05 38 52.0	
	comp=Z,25nm,1.6s						
MVCO	Mesa Verde	70.14	327	IAmb	IAmb	05 38 26.4	
	comp=Z,11nm,1.0s						
WUAZ	Wupatki	70.37	324	IAmb	IAmb	05 38 28.2	
	comp=Z,10.0nm,0.9s						
K30B	Basset	70.72	336	IAmb	IAmb	05 38 29.1	
	comp=Z,14nm,0.9s						
ISCO	Idaho Springs	70.81	331		P	05 38 28.8	+1.1
PV01	Paradox Valley	70.90	328	IAmb	IAmb	05 38 31.2	
	comp=Z,8.3nm,1.1s						
PV15	Paradox Valley	71.01	328	IAmb	IAmb	05 38 32.6	
	comp=Z,10nm,1.0s						
PV02	Paradox Valley	71.03	328	IAmb	IAmb	05 38 31.9	
	comp=Z,18nm,1.3s						
PV13	Radium Mtn., P	71.04	327	IAmb	IAmb	05 38 31.8	
	comp=Z,12nm,1.2s						
PV03	Paradox Valley	71.13	327	P	P	05 38 31.0	+1.5
PV10	Paradox Valley	71.32	327	IAmb	IAmb	05 38 32.9	
	comp=Z,9.2nm,1.0s						
PV23	Carpenter Ridg	71.36	328	IAmb	IAmb	05 38 33.7	
	comp=Z,8.2nm,1.0s						
ICQ	Pointe Anglais	71.53	1	P	P	05 38 32.7	+1.3
ICQ				IAmb	IAmb	05 38 33.6	
	comp=Z,14nm,0.9s						
HMU	Henry Mountain	71.85	326	IAmb	IAmb	05 38 37.2	
	comp=Z,8.1nm,1.0s						
PFO	Pinyon Flats O	71.92	319	P	P	05 38 34.7	+0.5
KNB	Kanab	72.26	324	IAmb	IAmb	05 38 39.9	
	comp=Z,14nm,1.0s						
O20A	White River Ci	72.30	329	IAmb	IAmb	05 38 39.2	
	comp=Z,11nm,0.9s						
SRU	San Rafael Swe	72.62	327	IAmb	IAmb	05 38 41.0	
	comp=Z,9.0nm,0.8s						
P18A	Preston Nutter	72.88	328	P	P	05 38 42.0	+1.9
P18A				IAmb	IAmb	05 38 43.0	
	comp=Z,8.1nm,0.8s						
RSSD	Black Hills	73.67	334	P	P	05 38 45.8	+1.3
BSUT	Blindstream Ca	73.83	328	IAmb	IAmb	05 38 48.6	
	comp=Z,6.4nm,0.8s						
SPR3	Spring Creek 3	74.52	325		P	05 38 50.5	+0.8
PDAR	Pinedale Array	74.97	330	P	P	05 38 52.6	+0.6
	comp=Z,0.8nm,0.7s,baz=134,slow=6.4,SNR=5.8						
PDAR				pP	pP	05 39 20.0	+0.4
	comp=Z,0.5nm,0.6s,baz=106,slow=5.3,SNR=3.0						
	comp=Z,0.8nm,0.7s						
EPLO	Experimental L	75.08	343	IAmb	IAmb	05 40 31.0	
	comp=Z,29nm,1.9s						
TPH	Tonopah	75.46	322	IAmb	IAmb	05 38 57.4	
	comp=Z,13nm,0.9s						
SYO	Syowa Base	75.63	159	⇑*e*P	P	05 38 56.2	+1.0
AHID	Auburn Hatcher	75.69	329	IAmb	IAmb	05 38 58.5	
	comp=Z,12nm,0.9s						
SNOW	Snow King Moun	76.06	330	IAmb	IAmb	05 39 00.9	
	comp=Z,6.4nm,0.8s						
VNDA	Vanda	76.09	190	P	P	05 38 59.9	+2.1
	comp=Z,3.0nm,0.9s,baz=111,slow=4.3,SNR=6.5						
	comp=Z,3.0nm,0.9s						
TPAW	Teton Pass	76.17	330	P	P	05 38 59.2	+0.2
ULM	Lac du Bonnet	76.19	342	P	P	05 38 58.3	-0.3
	comp=Z,1.5nm,0.5s,baz=151,slow=4.4,SNR=4.1						
	comp=Z,1.5nm,0.5s						
NVAR	Mina Array Bea	76.32	322	P	P	05 39 01.8	+1.9

	comp=Z,1.6nm,0.9s,baz=155,slow=7.0,SNR=11						
	comp=Z,1.6nm,0.9s						
FXWY	**Fox Creek**	**76.32**	**330**	P	**P**	**05 39 00.1**	**+0.3**
LAO	**LASA Array**	**76.65**	**334**	IAmb	IAmb	05 39 43.7	
	comp=Z,9.6nm,1.1s						
YNE	**Yellowstone No**	**76.92**	**331**	IAmb	IAmb	05 39 05.8	
	comp=Z,11nm,1.0s						
YHB	**Horse Butte**	**77.25**	**330**	IAmb	IAmb	05 39 08.6	
	comp=Z,5.9nm,0.8s						
YHL	**Hebgen Lake**	**77.33**	**330**	IAmb	IAmb	05 39 08.8	
	comp=Z,12nm,1.5s						
TORD	**Torodi Ar. Bea**	**77.36**	**70**	P	**P**	**05 39 05.7**	**-0.3**
TORD	**Torodi Ar. Bea**	**77.36**	**70**	P	**P**	**05 39 05.8**	**-0.1**
	comp=Z,17nm,0.7s,baz=269,slow=4.7,SNR=13						
TORD				pP	**pP**	**05 39 32.0**	**-1.5**
	comp=Z,5.5nm,0.7s,baz=265,slow=8.0,SNR=3.4						
	comp=Z,17nm,0.7s						
PAHR	**Pah Rah Range**	**77.81**	**322**	IAmb	IAmb	05 39 11.1	
	comp=Z,10nm,0.9s						
HLID	**Hailey**	**77.89**	**328**	IAmb	IAmb	05 39 11.7	
	comp=Z,8.0nm,0.8s						
BOZ	**Bozeman (W)**	**78.10**	**331**	IAmb	IAmb	05 39 11.5	
	comp=Z,17nm,1.9s						
DLMT	**Dillon**	**78.36**	**330**	IAmb	IAmb	05 39 13.9	
	comp=Z,8.9nm,1.2s						
TSUM	**Tsumeb**	**79.53**	**106**		**P**	**05 39 18.2**	**+0.1**
PLID	**Pearl Lake**	**79.78**	**328**	IAmb	IAmb	05 39 21.4	
	comp=Z,8.5nm,0.9s						
J08A	**Circle Bar Ran**	**79.82**	**325**	IAmb	IAmb	05 39 21.9	
	comp=Z,12nm,1.5s						
I07A	**Izee**	**80.86**	**325**		**P**	**05 39 25.9**	**+1.4**
J05D	**Fort Rock, OR**	**81.24**	**324**	IAmb	IAmb	05 39 28.8	
	comp=Z,8.1nm,1.0s						
PINE	**Pine Mountain**	**81.42**	**325**	IAmb	IAmb	05 39 30.5	
	comp=Z,12nm,0.9s						
GRTLG	**Ghanzi**	**81.98**	**110**		**P**	**05 39 31.1**	**0.0**
GRTLG				IAmb	IAmb	05 39 32.2	
	comp=Z,7.8nm,0.8s						
I05D	**Terrebonne, OR**	**82.00**	**325**	IAmb	IAmb	05 39 33.2	
	comp=Z,11nm,0.7s						
NEW	**Newport**	**82.60**	**330**	LR	LR	06 21 51.2	
	comp=Z,25nm,19.0s,baz=128,slow=40						
BOSA	**Boshof**	**82.81**	**118**	P	**P**	**05 39 35.0**	**-0.3**
	comp=Z,4.9nm,0.8s,baz=274,slow=5.3,SNR=8.2						
	comp=Z,4.9nm,0.8s						
MAW	**Mawson**	**83.46**	**163**	P	**P**	**05 39 38.6**	**+1.0**
	comp=Z,3.6nm,0.6s,baz=219,slow=7.3,SNR=11						
	comp=Z,3.6nm,0.6s						
TAM	**Tamanrasset**	**84.94**	**63**	P	**P**	**05 39 45.0**	**-1.2**
ESDC	**Sonseca Array**	**86.22**	**44**	P	**P**	**05 39 53.0**	**+1.1**
ESDC				IAmb	IAmb	05 39 54.1	
	comp=Z,9.8nm,1.4s						
ESDC	**Sonseca Array**	**86.22**	**44**	P	**P**	**05 39 52.6**	**+0.7**
	comp=Z,4.1nm,1.1s,baz=234,slow=5.4,SNR=13						
ESDC				LR	LR	06 17 12.0	
	comp=Z,16nm,18.7s,baz=186,slow=35						
	comp=Z,4.1nm,1.1s						
KSANE	**Kasane**	**86.74**	**108**		**P**	**05 39 54.6**	**-0.5**
YKAW1	**Yellowknife Wh**	**92.02**	**341**		**P**	**05 40 18.8**	**+0.2**
YKAW1				IAmb	IAmb	05 40 20.8	
	comp=Z,5.5nm,1.1s						
YKA	**Yellowknife Ar**	**92.06**	**340**	P	**P**	**05 40 19.7**	**+0.9**
YKA	**Yellowknife Ar**	**92.06**	**340**	P	**P**	**05 40 19.5**	**+0.6**
	comp=Z,2.1nm,0.8s,baz=134,slow=4.0,SNR=28						
YKA				pP	**pP**	**05 40 45.4**	**-1.7**
	comp=Z,0.9nm,0.7s,baz=135,slow=3.9,SNR=3.1						
	comp=Z,2.1nm,0.8s						
YKAW3	**Yellowknife Wh**	**92.11**	**341**		**P**	**05 40 19.7**	**+0.6**
YKAW3				IAmb	IAmb	05 40 20.7	
	comp=Z,4.5nm,0.9s						
KEST	**Kesra**	**93.57**	**53**	LR	LR	06 24 17.7	
	comp=Z,31nm,19.0s,baz=253,slow=37						
BORG	**Borgarnes**	**94.11**	**18**	LR	LR	06 18 45.9	
	comp=Z,10nm,18.2s,baz=208,slow=33						
VAE	**Valguarnera**	**98.00**	**53**	LR	LR	06 27 17.0	
	comp=Z,33nm,18.0s,baz=134,slow=37						
DAVOX	**Davos/Dischmat**	**98.47**	**43**	LR	LR	06 20 54.2	
	comp=Z,30nm,20.9s,baz=262,slow=33						
KBZ	**Khabaz**	**120.41**	**51**	PKP	**PKiKP**	**05 46 03.2**	**+2.0**
	comp=Z,1.0nm,0.7s,baz=211,slow=5.9,SNR=2.0						
H11S2	**WAKE ISLAND Hy**	**128.26**	**276**	T	T	08 06 25.6	
	baz=103,slow=74,SNR=53						
H11S1	**WAKE ISLAND Hy**	**128.27**	**276**	T	T	08 06 48.3	
	baz=103,slow=74,SNR=33						
H11S3	**WAKE ISLAND Hy**	**128.28**	**276**	T	T	08 06 38.9	
	baz=103,slow=74,SNR=36						
H11N3	**WAKE ISLAND Hy**	**128.36**	**278**	T	T	08 06 45.5	
	baz=104,slow=74,SNR=22						
H11N2	**WAKE ISLAND Hy**	**128.38**	**278**	T	T	08 06 53.9	
	baz=104,slow=74,SNR=18						
H11N1	**WAKE ISLAND Hy**	**128.38**	**278**	T	T	08 06 50.4	
	baz=104,slow=74,SNR=16						
ASAR	**Alice Springs**	**129.31**	**207**	PKP	**PKPdf**	**05 46 19.1**	**0.0**
	comp=Z,3.1nm,0.8s,baz=135,slow=2.1,SNR=23						
WRA	**Warramunga Arr**	**132.38**	**210**	PKP	**PKPdf**	**05 46 25.6**	**+0.7**
	comp=Z,2.4nm,0.7s,baz=156,slow=1.8,SNR=31						
WRA				pPKP	**pPKPdf**	**05 46 54.8**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=156,slow=1.7,SNR=3.8						
BVAR	**Borovoye Array**	**136.31**	**35**	PKP	**PKPdf**	**05 46 31.3**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=20,slow=4.6,SNR=2.5						
FITZ	**Fitzroy Crossi**	**137.47**	**200**	PKP	**PKPdf**	**05 46 35.1**	**+0.8**
	comp=Z,3.5nm,1.0s,baz=214,slow=7.7,SNR=5.8						
KURBB	**Kurchatov Arra**	**141.86**	**34**	PKP	**PKPdf**	**05 46 42.5**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=301,slow=2.9,SNR=5.4						
ZALV	**Zalesovo Beam**	**142.57**	**26**	PKhKP	PKPpre	05 46 38.9	
	comp=Z,1.2nm,0.5s,baz=108,slow=0.9,SNR=4.4						
KSH	**Kashi**	**145.39**	**52**	PKPbc	**PKPdf**	**05 46 49.1**	**+1.0**
MKAR	**Makanchi Array**	**146.13**	**37**	PKPbc	**PKPdf**	**05 46 49.8**	**+0.9**
	comp=Z,6.2nm,0.8s,baz=318,slow=2.6,SNR=29						
MKAR				pPKPbc	**pPKPdf**	**05 47 19.2**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=312,slow=2.6,SNR=2.1						
MKAR				SKPbc	**SKPbc**	**05 50 19.4**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=290,slow=4.2,SNR=1.4						
LEM	**Lembang**	**150.79**	**172**	PKPbc	**PKPbc**	**05 47 04.0**	**+0.6**
	comp=Z,35nm,0.6s,baz=45,slow=7.1,SNR=5.3						
USRK	**Ussuriysk Ar.**	**152.36**	**327**	PKPbc	**PKPbc**	**05 47 06.4**	**+0.6**
	comp=Z,1.1nm,0.4s,baz=298,slow=3.1,SNR=2.4						
MJAR	**Matsushiro Arr**	**152.81**	**307**	PKPbc	**PKPbc**	**05 47 07.3**	**+0.2**
	comp=Z,4.1nm,1.0s,baz=83,slow=2.6,SNR=4.8						
SONM	**Songino Array**	**154.24**	**8**	PKP	**PKPdf**	**05 47 02.4**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=135,slow=0.4,SNR=3.9						
GTA	**Gaotai**	**160.31**	**28**	*e*P	**PKPab**	**05 47 51.7**	**+1.0**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC	**Hu-ho-hao-te**	**161.53**	**360**	*e*P	**PKPdf**	**05 47 10.4**	**-0.5**
CMAR	**Chiang Mai Arr**	**167.70**	**106**	PKPab	**PKPab**	**05 48 23.2**	**-0.6**
	comp=Z,1.2nm,0.3s,baz=230,slow=4.4,SNR=4.2						
NJ2	**Nanjing**	**168.27**	**327**	*e*P	**PKPdf**	**05 47 17.9**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
PZH	**PanZhiHua**	**170.27**	**63**	PKP	**PKPdf**	**05 47 16.6**	**-1.7**

IDC 10 05:32:09.9±1.9**, 0°.96N**×**126°.84E, h0**^{km}**, mb3.2**/4**, mbtmp3.2**/4**, Error ellipse: s-maj=183.4km s-min=23.9km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.03**	**161**	P	P	05 37 04.8	-1.5
	0.4nm,0.7s,baz=339,slow=11,SNR=4.6						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**25.42**	**165**	P	P	05 37 40.5	+1.0
	0.2nm,0.4s,baz=347,slow=12,SNR=6.2						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**59.89**	**326**	P	P	05 42 17.8	0.0
	0.1nm,0.3s,baz=118,slow=7.7,SNR=2.0						
	0.1nm,0.3s						
KURBB	**Kurchatov Arra**	**64.13**	**328**	P	P	05 42 45.9	-0.2
	0.3nm,0.6s,baz=122,slow=7.3,SNR=2.3						
	0.3nm,0.6s						

AEIC ***10*** *05:34:34.1±1.6, 52°.6N±0°.1×169°.6W±0°.1, h65*^{km}*±8*^{km}*, Error ellipse: s-maj=18.2km s-min=8.5km az=150.0*

NEIC 10 05:34:32.7±0.8**, 52°.6N**±0°.1×**170°.07W**±0°.07**, h58**^{km}±25^{km}**, ML3.1**/14**, ML2.6**(AEIC)**, Error ellipse: s-maj=17.0km s-min=5.0km az=169.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**0.81**	**65**		Pn	05 34 48.3	+0.1
NIKH					Sn	05 34 59.5	-0.2
NIKH				IAML		05 35 00.2	
	comp=N,371nm,0.6s						
OKSP	**Okmok Steeple**	**1.25**	**59**		Pn	05 34 53.8	-0.2
OKSP					Sn	05 35 08.9	-0.9
OKWE	**Okmok W’ng Wal**	**1.39**	**52**		Pn	05 34 55.9	0.0
OKCE	**Okmok Cone E**	**1.40**	**54**		Pn	05 34 56.4	+0.3
OKCE					Sn	05 35 13.5	-0.1
OKNC	**Okmok New Cone**	**1.44**	**54**		Pn	05 34 56.6	+0.1
OKTU	**Okmok Mt. Tuli**	**1.44**	**58**		Pn	05 34 56.6	0.0
OKRE	**Okmok R’deer P**	**1.46**	**51**		Pn	05 34 56.9	+0.1
OKFG	**Magazine Ridge**	**1.52**	**58**		Pn	05 34 57.6	0.0
OKFG					Sn	05 35 16.1	-0.3
MAPS	**Pakushin South**	**2.22**	**57**		Pn	05 35 06.9	-0.3
MAPS					Sn	05 35 32.0	-1.4
MGOD	**Makushin Gods**	**2.25**	**57**		Pn	05 35 07.3	-0.3
MGOD					Sn	05 35 33.4	-0.8
MREP	**Makushin Rep’t**	**2.32**	**58**		Pn	05 35 08.6	0.0
ATKA	**Atka Island**	**2.56**	**262**		Pn	05 35 10.8	-0.9
AKRB	**Akutan Reef Bi**	**2.83**	**56**		Pn	05 35 16.2	+0.7
ZRO	**Akutan Zero**	**2.86**	**58**		Pn	05 35 16.3	+0.5
LVA	**Lava Point**	**2.86**	**56**		Pn	05 35 15.0	-0.9
LVA				IAML		05 36 01.6	
	comp=N,81nm,1.0s						
LVA				IAML		05 36 03.2	
	comp=E,68nm,1.1s						
AKBBA	**Akutan Broad B**	**2.88**	**58**		Pn	05 35 16.5	+0.3
AKGG	**Akutan Green G**	**2.91**	**56**		Pn	05 35 16.7	+0.2
AKUT	**Akutan**	**2.98**	**58**	Pn	Pn	05 35 15.4	-2.1
AKUT				IAML		05 36 14.7	
	comp=N,29nm,1.0s						
AKUT				IAML		05 36 20.8	
	comp=E,40nm,0.9s						
P08K	**Saint George I**	**3.99**	**4**	Pn	Pn	05 35 31.3	0.0
P08K				IAML		05 38 04.0	
	comp=N,27nm,1.1s						
ADK	**Adak**	**4.13**	**262**	Pn	Pn	05 35 33.6	+0.4
ADK				IAML		05 36 40.8	
	comp=N,28nm,0.8s						
SPIA	**Saint Paul Isl**	**4.56**	**359**	Pn	Pn	05 35 39.6	+0.5
SPIA				IAML		05 38 24.2	
	comp=E,19nm,1.1s						

DJA 10 05:37:20.1±0.7**, 1°N**±4°×**9°8E**±°**, h22**^{km}±8^{km}**, M3.9**/8**, mb4.1**/1**, MLv3.8**/8**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.10**	**310**	P	Pn	05 37 39.7	-0.5
GSI				S	Sn	05 37 54.7	-0.1
MNSI	**Mandailing Nat**	**1.18**	**80**	P	Pn	05 37 40.5	-0.8
MNSI				S	Sb	05 37 56.1	-0.5
PPI	**Padang Panjang**	**2.23**	**118**	P	Pn	05 37 56.4	+0.6
PPI				S	Sn	05 38 23.6	+0.9
BKNI	**Bangkinang**	**2.63**	**96**	P	Pn	05 38 01.8	+0.5
BKNI				S	Sn	05 38 33.1	+0.5
BSI	**Banda Aceh**	**5.79**	**327**	P	Pn	05 38 43.2	-1.5

IDC 10 05:59:53.8±3.0**, 53°.62N**×**87°.09E, h0**^{km}**, mbtmp2.5**/2**, ML1.9**/1**, Error ellipse: s-maj=29.5km s-min=17.8km az=69.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.39**	**285**	I	I	06 08 30.0	
	baz=102,slow=323,SNR=6.5						
ZALV	**Zalesovo Beam**	**1.39**	**285**	Pg	Pg	06 00 20.0	-0.3
	0.2nm,0.3s,baz=105,slow=13,SNR=4.0						
ZALV				Lg	Lg	06 00 38.1	
	0.5nm,0.3s,baz=102,slow=34,SNR=3.6						
KURBB	**Kurchatov Arra**	**6.07**	**244**	Pn	Pn	06 01 24.6	0.0
	baz=60,slow=13,SNR=3.8						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**7.50**	**206**	Pn	Pn	06 01 45.9	+1.5
	0.1nm,0.3s,baz=28,slow=14,SNR=1.4						

IDC ***10*** *06:05:34.6±1.0, 9°.50N×125°.58E, h0*^{km}*, mb3.7/9, mbtmp3.7/9, MS3.4/4, Error ellipse: s-maj=90.3km s-min=19.8km az=68.0*

ISC 10 06:05:38.3±0.9**, 9°.5N**±0°.2×**125°.6E**±0°.5**, h23**^{km}**, n20,** σ**0^{s}.71**/11**, mb3.7**/9**, MS3.1**/3**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOW	**Kunigami**	**17.43**	**8**	LR	LR	06 16 02.3	
	comp=Z,347nm,19.2s,baz=290,slow=36						
JNU	**Nakatsue**	**24.02**	**11**	LR	LR	06 21 45.5	
	comp=Z,64nm,18.6s,baz=190,slow=40						
WRA	**Warramunga Arr**	**30.49**	**164**	P	**P**	**06 11 50.0**	**+0.2**
	0.3nm,0.7s,baz=350,slow=9.1,SNR=1.4						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**33.94**	**166**	P	**P**	**06 12 19.3**	**-0.8**
	0.4nm,0.8s,baz=347,slow=7.8,SNR=6.5						
ASAR				PcP	**PcP**	**06 14 59.5**	**+1.3**
	0.1nm,0.4s,baz=347,slow=2.3,SNR=1.2						
	0.4nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**40.79**	**73**	T	T	06 56 11.6	
	baz=259						
H11S1	**WAKE ISLAND Hy**	**40.80**	**73**	T	T	06 56 11.1	
	baz=259						
H11S2	**WAKE ISLAND Hy**	**40.81**	**73**	T	T	06 56 19.8	
	baz=259						
H11N1	**WAKE ISLAND Hy**	**41.14**	**71**	T	T	06 56 47.7	
	baz=260,slow=74						
H11N2	**WAKE ISLAND Hy**	**41.15**	**71**	T	T	06 56 46.1	
	baz=260						
H11N3	**WAKE ISLAND Hy**	**41.16**	**71**	T	T	06 56 36.3	
	baz=260,slow=74						
SONM	**Songino Array**	**41.52**	**340**	P	**P**	**06 13 24.5**	**+0.6**
	0.6nm,0.5s,baz=140,slow=7.2,SNR=2.4						
	0.6nm,0.5s						
PETK	**Petropavlovsk-**	**50.62**	**24**	LR	LR	06 38 46.5	
	comp=Z,17nm,18.1s,baz=231,slow=39						
MKAR	**Makanchi Array**	**52.24**	**323**	P	**P**	**06 14 47.1**	**-0.5**
	0.7nm,0.8s,baz=116,slow=8.8,SNR=5.2						
	0.7nm,0.8s						
KURBB	**Kurchatov Arra**	**56.33**	**326**	P	**P**	**06 15 17.6**	**+0.3**
	0.2nm,0.3s,baz=125,slow=6.6,SNR=5.0						
	0.2nm,0.3s						
BVAR	**Borovoye Array**	**61.92**	**326**	P	**P**	**06 15 55.8**	**-0.2**
	0.6nm,0.5s,baz=108,slow=8.0,SNR=2.0						
	0.6nm,0.5s						
TIXI	**Tiksi**	**62.14**	**1**	LR	LR	06 42 25.2	
	comp=Z,37nm,20.6s,baz=202,slow=36						
FINES	**FINESS Array B**	**86.25**	**332**	P	**P**	**06 18 17.3**	**-0.5**
	2.6nm,0.9s,baz=76,slow=6.6,SNR=4.6						
	2.6nm,0.9s						
NOA	**NORSAR Array B**	**93.15**	**334**	P	**P**	**06 18 49.8**	**-0.7**
	0.3nm,0.7s,baz=69,slow=5.2,SNR=1.6						
	0.3nm,0.7s						
YKA	**Yellowknife Ar**	**94.74**	**24**	P	**P**	**06 18 57.3**	**-0.3**
	0.2nm,0.7s,baz=307,slow=5.0,SNR=2.8						
	0.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**119.92**	**291**	PKP	**PKiKP**	**06 24 28.4**	**+0.4**
	1.1nm,0.3s,baz=75,slow=1.9,SNR=2.3						

CATAC 10 06:20:19.6±0.5**, 11°N**±4°×**8°7W**±°**, h17**^{km}**, M3.2**/20**, MLv3.2**/20**, Error ellipse: s-maj=8.8km s-min=3.7km az=30.4, confirmed, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAPS	**Ciudad Sandino**	**1.24**	**55**	P	Pn	06 20 42.1	-0.1
LEVN	**Ruinas Leon Vi**	**1.24**	**41**	P	Pn	06 20 40.1	-2.1
CNGN	**Cerro Negro**	**1.27**	**35**	P	Pn	06 20 42.3	-0.4
QUEN	**Al S del Volca**	**1.27**	**27**	P	Pn	06 20 42.8	+0.2
HOYN	**Al Sur del Vol**	**1.28**	**28**	P	Pn	06 20 42.9	0.0
MOMN	**Momotombo**	**1.29**	**43**	P	Pn	06 20 42.7	-0.3
MOMN				S	Sb	06 20 59.9	0.0
UNAN	**Cigeo UNAN**	**1.32**	**60**	P	Pn	06 20 43.2	-0.1
UNAN				S	Sg	06 21 01.6	-0.7
TISN	**Laguna Tiscapa**	**1.33**	**59**	P	Pn	06 20 42.2	-1.4
MGAN	**Managua**	**1.35**	**59**	S	Sb	06 21 01.9	+0.2
MGAN	**Managua**	**1.35**	**59**	P	Pb	06 20 44.9	+0.4
NANN	**Nandasmo**	**1.38**	**69**	S	Sb	06 21 03.1	+0.8
NANN	**Nandasmo**	**1.38**	**69**	P	Pb	06 20 44.8	-0.2
AERN	**Aeropuerto Man**	**1.42**	**61**	P	Pg	06 20 47.1	0.0
CSGN	**Cosiguina Volc**	**1.52**	**356**	P	Pn	06 20 46.2	+0.1
CSGN				S	Sn	06 21 05.1	-0.3
POTN	**Potosi Cosigui**	**1.54**	**358**	P	Pn	06 20 46.3	0.0
POTN				S	Sn	06 21 05.5	-0.4
CNCH	**Conchagua**	**1.85**	**348**	P	Pn	06 20 50.6	-0.2
LCND	**La Caada**	**1.89**	**347**	P	Pn	06 20 51.1	-0.1
CARN	**Rivas**	**1.90**	**98**	P	Pn	06 20 51.3	0.0
CARN				S	Sn	06 21 14.0	-0.9
LIMN	**Finca el Limon**	**1.91**	**33**	P	Pn	06 20 51.1	-0.4
BOAB	**BOACO BROADBAN**	**2.00**	**60**	P	Pn	06 20 51.7	-0.9
MATN	**Matagalpa**	**2.08**	**45**	P	Pn	06 20 53.7	-0.2
PACA	**Pacayal**	**2.18**	**337**	P	Pn	06 20 55.5	+0.2
PACA	**Pacayal**	**2.18**	**337**	S	Sn	06 21 21.7	-0.2
ACON	**Acoyapa**	**2.28**	**77**	P	Pn	06 20 56.1	-0.4
RCVN	**Varillal2**	**2.44**	**30**	P	Pn	06 20 59.0	+0.1
RCPN	**Sur Rio San Ju**	**2.44**	**32**	P	Pn	06 20 59.7	+0.9
SCLA	**Alcaldia de Sa**	**2.56**	**331**	S	Sn	06 21 31.5	+0.2
SCLA	**Alcaldia de Sa**	**2.56**	**331**	P	Pn	06 21 01.0	+0.5

ISN ***10*** *06:30:00.4±0.4, 32°.72N×46°.24E, h14*^{km}*±12*^{km}*, ML2.9*

TEH ***10*** *06:30:00.4, 32°.72N×46°.25E, h10*^{km}

ISC 10 06:30:00.3±1.1**, 32°.64N**±0°.05×**46°.33E**±0°.08**, h10**^{km}**, n6,** σ**0^{s}.50**/10**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAFI	**Al-Rafai**	**0.93**	**191**	*e*Pg	**Pn**	**06 30 19.0**	**-0.4**
RAFI				*e*Sg	**Sn**	**06 30 33.0**	**+0.2**
RAFI				AML	AML	06 30 33.8	
	comp=E,294nm,0.4s						
RAFI				AML	AML	06 30 39.6	
	comp=N,326nm,0.4s						
GLG1	**Gilan-e-Gharb**	**1.51**	**347**	Pg	**Pn**	**06 30 27.4**	**-0.1**
GLG1				Sg	**Sb**	**06 30 48.0**	**+0.3**
IKFM	**Kafar-mosalman**	**1.55**	**55**	Pg	**Pg**	**06 30 30.1**	**+0.1**
IGHG	**Ghaleghazi**	**1.70**	**7**	Pg	**Pb**	**06 30 31.9**	**+0.1**
BHD	**Baghdad**	**1.76**	**292**	*e*Pn	**Pn**	**06 30 31.0**	**+0.3**
BHD				*e*Sn	**Sn**	**06 30 53.0**	**-0.1**
IKRK	**Kirkuk**	**3.21**	**330**	*e*Pn	**Pn**	**06 30 51.0**	**+0.2**
IKRK				*e*Sn	**Sn**	**06 31 28.0**	**-1.1**

GCG ***10*** *06:32:23.7±1.8, 14°.87N×93°.71W, h36*^{km}*±999*^{km}*, MD4.0, ML3.3*

MEX ***10*** *06:32:24.4±0.6, 14°.88N×93°.73W, h25*^{km}*±55*^{km}*, MD3.9*

ISC 10 06:32:18.5±1.6**, 14°.83N**±0°.06×**93°.78W**±0°.03**, h20**^{km}±6^{km}**, n21,** σ**2^{s}.20**/38**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**1.02**	**32**	*e*P	**Pn**	**06 32 39.4**	**+1.7**
PCIG				*i* S	**Sn**	**06 32 51.2**	**-0.3**
THIG		**1.46**	**87**	*e*P	**Pg**	**06 32 46.3**	**-0.5**
THIG				*e*S	**Sb**	**06 33 02.9**	**-0.4**
THIG		**1.46**	**87**	*e*P	**Pg**	**06 32 46.7**	**0.0**
PATR	**El Naranjo**	**1.52**	**79**	*e*P	**Pg**	**06 32 46.6**	**-1.2**
PATR				*e*S	**Sb**	**06 33 03.5**	**-1.5**
PAVE	**Pavencul**	**1.59**	**77**	*e*P	**Pg**	**06 32 48.0**	**-1.2**
PAVE				*e*S	**Sn**	**06 33 06.1**	**+0.2**
SMCA	**Catarina**	**1.65**	**89**	*i* P	**Pb**	**06 32 48.8**	**+0.6**
SMCA				*i* S	**Sn**	**06 33 07.9**	**+1.0**
SMCA				IAML		06 33 09.4	
	comp=E,301nm,0.2s						
TGIG		**2.04**	**18**	*e*P	**Pb**	**06 32 54.6**	**-0.3**
TGIG				*e*S	**Sn**	**06 33 17.4**	**+0.7**
TGIG		**2.04**	**18**	*i* P	**Pb**	**06 32 54.5**	**-0.4**
RTAL	**Retalhuleu**	**2.04**	**98**	*e*P	**Pn**	**06 32 53.0**	**+1.3**
RTAL				*e*S	**Sn**	**06 33 18.5**	**+1.9**
CCIG	**Comitan**	**2.14**	**47**	*e*P	**Pb**	**06 32 57.1**	**+0.4**
CCIG				*e*S	**Sn**	**06 33 20.9**	**+1.5**
CCIG	**Comitan**	**2.14**	**47**	*i* P	**Pg**	**06 32 57.3**	**-2.4**
CCIG				IAML		06 33 27.6	
	comp=N,112nm,0.4s						
HUEH	**Huehuetenango**	**2.25**	**77**	*e*P	**Pb**	**06 32 58.9**	**+0.3**
HUEH				*e*S	**Sn**	**06 33 24.6**	**+2.5**
HUEH	**Huehuetenango**	**2.25**	**77**	*i* P	**Pb**	**06 32 59.2**	**+0.6**
HUEH				IAML		06 33 34.3	
	comp=E,382nm,0.6s						
STG8	**El Palmar, Qui**	**2.38**	**99**	*i* P	**Pn**	**06 32 55.7**	**-0.9**
STG8				*i* S	**Sn**	**06 33 19.5**	**-5.9**
STG8				IAML		06 33 20.8	
	comp=E,362nm,0.1s						
HUIG	**Huatulco**	**2.44**	**293**	*e*P	**Pn**	**06 32 59.7**	**+2.5**
HUIG				*e*S	**Sn**	**06 33 24.2**	**-2.3**
PEIG	**Puerto Escondi**	**3.45**	**290**	*e*P	**Pn**	**06 33 14.8**	**+3.6**
PEIG				*e*S	**Sn**	**06 33 48.4**	**-3.2**
NEUV	**Arroyo Zacate**	**3.46**	**326**	*e*P	**Pn**	**06 33 14.2**	**+2.8**
NEUV				*e*S	**Sn**	**06 33 49.8**	**-2.1**
PETF	**Flores**	**4.29**	**61**	*e*P	**Pn**	**06 33 26.1**	**+3.3**
PETF				*i* S	**Sn**	**06 34 08.9**	**-3.5**
PNIG	**Pinotepa**	**4.47**	**291**	*e*P	**Pn**	**06 33 27.5**	**+2.2**
PNIG				*e*S	**Sn**	**06 34 14.9**	**-1.8**
TOIG	**Toxpalan**	**4.53**	**316**	*e*P	**Pn**	**06 33 29.3**	**+3.2**
TOIG				*e*S	**Sn**	**06 34 16.4**	**-1.9**
SCIG	**Sabancuy**	**4.80**	**31**	*e*P	**Pn**	**06 33 31.2**	**+1.5**
SCIG				*e*S	**Sn**	**06 34 22.6**	**-2.2**

IDC ***10*** *06:34:51.8±0.9, 11°.99N×143°.79E, h0*^{km}*, mb3.9/11, mbtmp3.9/11, MS3.1/5, Error ellipse: s-maj=28.2km s-min=18.6km az=113.0*

NEIC ***10*** *06:34:52.4±1.5, 12°.0N±0°.1×143°.9E±0°.2, h10*^{km}*±1*^{km}*, mb4.6/46, Error ellipse: s-maj=29.8km s-min=15.4km az=111.0*

ISC 10 06:34:54.4±0.7**, 11°.98N**±0°.09×**143°.8E**±0°.1**, h26**^{km}**, n72,** σ**1^{s}.14**/66**, mb4.4**/35**, MS2.9**/4**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.89**	**32**	Pn	**Pn**	**06 35 22.1**	**-2.9**
GUMO	**Guam**	**1.89**	**32**	Pn	**Pb**	**06 35 27.6**	**-0.6**
	181nm,0.3s,baz=161,slow=6.4,SNR=11						
GUMO				Sn	**Sn**	**06 35 50.1**	**+2.1**
	124nm,0.3s,baz=139,slow=17,SNR=9.8						
GUMO				LR	LR	06 36 22.7	
	comp=Z,204nm,20.0s,baz=83,slow=48						
JAY	**Jayapura**	**14.73**	**192**	LR	LR	06 43 36.8	
	comp=Z,91nm,18.8s,baz=348,slow=36						
JMZ	**Minamidaito 2**	**18.20**	**321**		**Pn**	**06 39 04.4**	**-0.9**
SAUI	**Saumlaki**	**23.43**	**213**	P	**P**	**06 40 00.1**	**-1.6**
H11N1	**WAKE ISLAND Hy**	**23.45**	**68**	T	T	07 04 29.3	
	baz=255,slow=75,SNR=4.6						
H11N2	**WAKE ISLAND Hy**	**23.46**	**68**	T	T	07 04 35.6	
	baz=255,slow=75,SNR=3.7						
H11N3	**WAKE ISLAND Hy**	**23.47**	**68**	T	T	07 04 31.2	
	baz=255,slow=75,SNR=5.2						
JMN	**Monobe**	**23.48**	**339**	P	**P**	**06 40 01.3**	**-0.9**
JMN				IAmb	IAmb	06 40 04.7	
	comp=Z,30nm,1.3s						
MJAR	**Matsushiro Arr**	**24.98**	**349**	LR	LR	06 48 59.9	
	comp=Z,35nm,18.1s,baz=166,slow=34						
MAJO	**Matsushiro**	**24.98**	**349**	P	**P**	**06 40 15.5**	**-0.5**
MAJO				IAmb	IAmb	06 40 39.5	
	comp=Z,19nm,1.4s						
MJB9	**Matsu-Tunnel**	**24.98**	**349**	P	**P**	**06 40 15.4**	**-0.6**
MJB9				IAmb	IAmb	06 40 39.5	
	comp=Z,19nm,1.4s						
ASAJ	**Asahikawa**	**32.04**	**358**	LR	LR	06 55 04.5	
	comp=Z,13nm,19.1s,baz=185,slow=38						
WB0	**Warramunga Arr**	**32.89**	**197**	P	**P**	**06 41 26.0**	**-0.6**
WRAB	**Tennant Creek**	**33.06**	**197**	P	**P**	**06 41 26.1**	**-2.0**
WRAB				IAmb	IAmb	06 41 26.7	
	comp=Z,9.5nm,1.2s						
WRA	**Warramunga Arr**	**33.07**	**197**	P	**P**	**06 41 29.3**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=18,slow=9.8,SNR=5.5						
	comp=Z,0.6nm,0.7s						
USA0B	**Ussuriysk Arra**	**33.69**	**345**	P	**P**	**06 41 31.7**	**-1.5**
USA0B				IAmb	IAmb	06 41 53.2	
	comp=Z,3.5nm,0.8s						
ASAR	**Alice Springs**	**36.74**	**195**	P	**P**	**06 42 01.0**	**+1.2**
	comp=Z,0.2nm,0.7s,baz=20,slow=11,SNR=3.2						
	comp=Z,0.2nm,0.7s						
BJT	**Baijiatuau**	**37.10**	**324**	P	**P**	**06 42 02.3**	**-0.4**
BJT				IAmb	IAmb	06 42 12.2	
	comp=Z,6.5nm,0.4s						
PETK	**Petropavlovsk-**	**42.50**	**12**	LR	LR	06 58 47.4	
	comp=Z,16nm,19.3s,baz=225,slow=34						
SONM	**Songino Array**	**47.48**	**326**	P	**P**	**06 43 28.4**	**+1.1**
	comp=Z,0.8nm,0.5s,baz=150,slow=12,SNR=3.1						
	comp=Z,0.8nm,0.5s						
MKAR	**Makanchi Array**	**61.96**	**317**	P	**P**	**06 45 11.2**	**-1.0**
MKAR	**Makanchi Array**	**61.96**	**317**	P	**P**	**06 45 13.7**	**+1.6**
	comp=Z,0.7nm,0.8s,baz=96,slow=7.4,SNR=5.4						
	comp=Z,0.7nm,0.8s						
ZALV	**Zalesovo Beam**	**62.35**	**325**	P	**P**	**06 45 15.9**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=126,slow=2.5,SNR=1.8						
	comp=Z,0.4nm,0.3s						
N15K	**Kwethluk River**	**63.15**	**28**	P	**P**	**06 45 19.4**	**-0.4**
N15K				IAmb	IAmb	06 45 41.0	
	comp=Z,7.4nm,1.2s						
P16K	**Nushagak River**	**63.68**	**29**	P	**P**	**06 45 23.1**	**-0.2**
M16K	**Timber Creek**	**64.01**	**27**	P	**P**	**06 45 24.8**	**-0.7**
M16K				IAmb	IAmb	06 45 31.8	

	comp=Z,4.3nm,1.2s						
N17K	**Nushagak Hills**	**64.62**	**28**	P	**P**	**06 45 29.6**	**+0.1**
N17K				IAmb	IAmb	06 45 56.2	
	comp=Z,6.3nm,1.5s						
M17K	**Holitna River**	**64.83**	**27**	P	**P**	**06 45 31.8**	**+0.9**
KURK	**Kurchatov**	**65.17**	**321**	P	**P**	**06 45 34.2**	**+0.9**
KURK				IAmb	IAmb	06 45 35.8	
	comp=Z,3.6nm,0.8s						
KURBB	**Kurchatov Arra**	**65.21**	**320**	P	**P**	**06 45 34.2**	**+0.7**
	comp=Z,3.0nm,0.8s,baz=103,slow=6.7,SNR=26						
	comp=Z,3.0nm,0.8s						
N19K	**Bonanza Creek**	**65.96**	**28**	P	**P**	**06 45 39.8**	**+1.4**
G18K	**Tagagawik**	**66.18**	**22**	P	**P**	**06 45 41.3**	**+1.8**
CNPM	**China Poot**	**67.12**	**30**	P	**P**	**06 45 46.0**	**+0.3**
J20K	**Nowinta River**	**67.26**	**25**	P	**P**	**06 45 46.6**	**+0.1**
SKT	**Skwentna**	**67.68**	**27**	P	**P**	**06 45 50.4**	**+1.3**
SKT				IAmb	IAmb	06 45 50.5	
	comp=Z,3.7nm,1.3s						
CAST	**Castle Rocks**	**67.87**	**26**	P	**P**	**06 45 51.0**	**+0.6**
CAST				IAmb	IAmb	06 45 55.6	
	comp=Z,3.1nm,1.3s						
IMAR	**Indian Mountai**	**68.06**	**23**	P	**P**	**06 45 51.3**	**-0.1**
D20K	**Etivluk River**	**68.09**	**20**	P	**P**	**06 45 51.6**	**0.0**
D20K				IAmb	IAmb	06 45 54.4	
	comp=Z,5.6nm,1.2s						
M22K	**Willow**	**68.26**	**28**	P	**P**	**06 45 52.9**	**+0.2**
B20K	**Meade River**	**68.47**	**18**	P	**P**	**06 45 54.6**	**+0.7**
PWL	**Port Wells**	**68.86**	**29**	P	**P**	**06 45 55.9**	**-0.7**
PWL				IAmb	IAmb	06 46 02.1	
	comp=Z,6.3nm,1.1s						
RND	**Reindeer**	**69.26**	**26**	P	**P**	**06 45 59.0**	**-0.1**
SCM	**Sheep Creek Mo**	**69.56**	**28**	P	**P**	**06 46 01.2**	**+0.2**
SCM				IAmb	IAmb	06 46 04.2	
	comp=Z,7.2nm,1.2s						
FID	**Port Fidalgo**	**69.72**	**29**	P	**P**	**06 46 01.5**	**-0.4**
FID				IAmb	IAmb	06 46 02.9	
	comp=Z,4.5nm,0.9s						
B22K	**Teshekpuk Lake**	**69.77**	**19**	P	**P**	**06 46 02.9**	**+1.0**
ILAR	**Eielson Array**	**70.44**	**25**	P	**P**	**06 46 06.2**	**0.0**
	comp=Z,0.5nm,0.6s,baz=254,slow=5.8,SNR=7.1						
	comp=Z,0.5nm,0.6s						
BVAR	**Borovoye Array**	**70.57**	**322**	P	**P**	**06 46 08.7**	**+1.5**
	comp=Z,2.4nm,0.5s,baz=102,slow=7.3,SNR=8.8						
	comp=Z,2.4nm,0.5s						
C24K	**Franklin Bluff**	**71.09**	**20**	P	**P**	**06 46 11.0**	**+1.0**
F25K	**Christian Rive**	**71.60**	**22**	P	**P**	**06 46 13.3**	**0.0**
D25K	**Kavik River**	**71.77**	**21**	P	**P**	**06 46 15.4**	**+1.1**
D25K				IAmb	IAmb	06 46 17.0	
	comp=Z,3.5nm,0.9s						
J26L	**Joseph Creek**	**71.78**	**26**	P	**P**	**06 46 15.2**	**+0.7**
BMAR	**Burnt Mountain**	**71.96**	**23**	P	**P**	**06 46 16.1**	**+0.6**
BCAR	**Beaver Creek A**	**72.32**	**27**	P	**P**	**06 46 17.3**	**-0.4**
C27K	**Jago River**	**72.75**	**20**	P	**P**	**06 46 20.5**	**+0.4**
C27K				IAmb	IAmb	06 46 23.6	
	comp=Z,3.4nm,0.9s						
K29M	**Barlow Dome**	**74.32**	**27**	P	**P**	**06 46 30.0**	**+0.5**
F30M	**Barrier River**	**75.33**	**23**	P	**P**	**06 46 36.1**	**+0.9**
F30M				IAmb	IAmb	06 46 58.1	
	comp=Z,5.5nm,1.0s						
G31M	**Satah River**	**75.88**	**24**	P	**P**	**06 46 39.4**	**+1.1**
G31M				IAmb	IAmb	06 46 40.9	
	comp=Z,5.7nm,1.0s						
AB31	**Akbulak array**	**77.06**	**318**	P	**P**	**06 46 46.1**	**+0.7**
ABKAR	**Akbulak array**	**77.06**	**318**	P	**P**	**06 46 46.1**	**+0.8**
EUNU	**Eureka**	**84.59**	**8**	P	**P**	**06 47 25.5**	**+0.4**
YKAW3	**Yellowknife Wh**	**84.72**	**27**	P	**P**	**06 47 26.3**	**+0.4**
YKAW3				IAmb	IAmb	06 47 29.1	
	comp=Z,2.7nm,1.1s						
YKA	**Yellowknife Ar**	**84.74**	**27**	P	**P**	**06 47 26.9**	**+0.8**
YKA	**Yellowknife Ar**	**84.74**	**27**	P	**P**	**06 47 27.6**	**+1.6**
	comp=Z,0.6nm,0.8s,baz=236,slow=5.9,SNR=14						
YKA				LR	LR	07 22 33.3	
	comp=Z,18nm,21.1s,baz=316,slow=34						
	comp=Z,0.6nm,0.8s						
YKAW1	**Yellowknife Wh**	**84.80**	**27**	P	**P**	**06 47 26.6**	**+0.3**
YKAW1				IAmb	IAmb	06 47 29.5	
	comp=Z,2.7nm,1.1s						
RES	**Resolute Bay**	**86.34**	**13**	P	**P**	**06 47 34.6**	**+0.8**
RES				IAmb	IAmb	06 47 41.9	
	comp=Z,2.3nm,0.9s						
NVAR	**Mina Array Bea**	**88.70**	**51**	P	**P**	**06 47 48.4**	**+2.2**
	comp=Z,0.9nm,0.7s,baz=258,slow=4.7,SNR=8.0						
	comp=Z,0.9nm,0.7s						
FINES	**FINESS Array B**	**92.19**	**335**	P	**P**	**06 48 01.9**	**+0.3**
FINES	**FINESS Array B**	**92.19**	**335**	P	**P**	**06 48 03.8**	**+2.2**
	comp=Z,0.6nm,0.4s,baz=92,slow=4.6,SNR=5.9						
	comp=Z,0.6nm,0.4s						
Q16A	**Castle Valley**	**93.92**	**49**	P	**P**	**06 48 08.0**	**-2.5**
Q16A				IAmb	IAmb	06 48 10.7	
	comp=Z,4.0nm,0.8s						
CRZF	**Crozet Islands**	**99.92**	**225**	Pdif	**Pdif**	**06 48 35.9**	**-1.1**
ABPO	**Ambohimpanom**	**99.99**	**253**	Pdif	**Pdif**	**06 48 35.9**	**-2.3**

NEIC ***10*** *06:37:36.9±1.0, 18°.82N±0°.03×155°.24W±0°.02, h10^{km}±2^{km}, Error ellipse: s-maj=6.1km s-min=3.1km az=331.0*

HVO 10 06:37:37.9±0.9**, 18°.81N**±0°.04×**155°.27W**±0°.02**, h11**^{km}±9^{km}**, ML2.5**/22**, ML2.6**/44(NEIC)**, Error ellipse: s-maj=5.7km s-min=0.9km az=152.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HPO	**Honuapo**	**0.39**	**316**		Pg	06 37 45.7	+0.1
HPO					Sg	06 37 51.1	+0.3
HTC	**Hot Caves**	**0.44**	**344**		Pg	06 37 46.2	-0.4
HLP	**Hilina Pali**	**0.48**	**356**		Pg	06 37 47.1	-0.3
HLP					Sg	06 37 54.5	+0.6
KHU	**Kahuku**	**0.54**	**323**		Pg	06 37 47.6	-1.0
KHU					Sg	06 37 54.8	-1.0
KHU				IAML		06 37 55.8	
	comp=E,357nm,0.2s						
KHU				IAML		06 38 04.0	
	comp=N,314nm,0.5s						
PUH	**Pauahi**	**0.56**	**5**		Pg	06 37 47.7	-1.2
PUH					Sg	06 37 56.3	-0.1
KNHH	**Kane Nui o Ham**	**0.57**	**9**		Pg	06 37 47.9	-1.2
SDHHI	**Sand Hill**	**0.58**	**358**		Pg	06 37 47.9	-1.3
SDHHI					Sg	06 37 56.3	-0.5
RIM	**Rim**	**0.58**	**359**		Pg	06 37 48.0	-1.3
KKO	**Keanakako'i**	**0.58**	**0**		Pg	06 37 48.1	-1.3
KKO					Sg	06 37 56.8	-0.3
AIN	**Ainahou**	**0.59**	**342**		Pg	06 37 48.4	-1.0
AIN					Sg	06 37 56.3	-0.9
STCH	**Steam Cracks**	**0.59**	**13**		Pg	06 37 48.0	-1.4
JCUZ	**Jacuzzi**	**0.59**	**15**		Pg	06 37 48.1	-1.3
WRMHI	**West Rim**	**0.59**	**357**		Pg	06 37 48.1	-1.4
BYL	**Byron's Ledge**	**0.60**	**1**	Pg	Pg	06 37 48.3	-1.3
BYL				IAML		06 38 05.0	
	comp=E,364nm,0.8s						
BYL				IAML		06 38 09.4	
	comp=N,250nm,1.2s						
NPOC	**North of Pu‘u**	**0.60**	**14**		Pg	06 37 48.2	-1.4
NPOC					Sg	06 37 56.5	-1.0
OBL	**Observatory Le**	**0.60**	**359**		Pg	06 37 48.3	-1.4
UWE	**Uwekahuna**	**0.61**	**358**		Pg	06 37 48.3	-1.4
UWE				IAML		06 38 03.2	
	comp=E,390nm,0.7s						
HATHI	**Halema‘uma‘u T**	**0.61**	**1**		Pg	06 37 48.4	-1.5
HATHI				IAML		06 38 08.7	
	comp=N,247nm,0.5s						
HATHI				IAML		06 38 10.6	
	comp=E,355nm,1.0s						
UWB	**Uwekahuna Bluf**	**0.61**	**359**		Pg	06 37 48.3	-1.5
SBLHI	**Steaming Bluff**	**0.61**	**0**		Pg	06 37 48.2	-1.7
SBLHI					Sg	06 37 56.5	-1.5
RSD	**Rainshed**	**0.65**	**359**		Sb	06 37 59.9	-0.5
RSD	**Rainshed**	**0.65**	**359**	Pg	Pg	06 37 49.4	-1.2
JOKA	**Jonika Flow**	**0.67**	**22**		Pg	06 37 49.2	-1.7
JOKA				IAML		06 38 07.8	
	comp=N,258nm,1.2s						
MLH	**Mauna Loa**	**0.69**	**351**		Pg	06 37 49.8	-1.5
MLH				IAML		06 38 05.7	
	comp=E,266nm,0.9s						
MLH				IAML		06 38 08.3	
	comp=N,277nm,0.7s						
MWH	**Mokuaweoweo**	**0.74**	**335**		Pg	06 37 50.6	-1.7
MWH				IAML		06 38 08.5	
	comp=N,204nm,1.4s						
MWH				IAML		06 38 17.7	
	comp=E,264nm,0.9s						
ALEP	**Alea Permanent**	**0.81**	**334**		Pg	06 37 51.2	-2.5
ALEP					Sg	06 38 01.3	-3.0
HMH	**Humu‘ula Sheep**	**0.81**	**346**		Pg	06 37 51.5	-2.2
HMH				IAML		06 38 09.8	
	comp=N,194nm,1.0s						
HMH				IAML		06 38 13.1	
	comp=E,162nm,0.5s						
POHA	**Pohakuloa**	**0.97**	**345**	Pg	Pg	06 37 55.5	-1.2
POHA				IAML		06 38 18.4	
	comp=E,132nm,0.5s						
HUH	**Hualalai**	**1.02**	**328**		Pg	06 37 54.5	-3.1
HPAH	**Hawaii Prepara**	**1.28**	**342**	Pn	Pn	06 37 59.3	-2.5
HPAH				IAML		06 38 12.6	
	comp=E,88nm,0.2s						
HPAH				IAML		06 38 37.2	
	comp=N,86nm,3.5s						

IDC ***10*** *06:48:55.1±0.7, 19°.34N×68°.05W, h0^{km}, mb3.8/10, mbtmp4.0/14, ML3.6/4, MS3.3/21, Error ellipse: s-maj=21.4km s-min=15.0km az=45.0*

NEIC ***10*** *06:48:57.0±2.6, 19°.36N±0°.06×68°.11W±0°.03, h10^{km}±1^{km}, mb4.2/23, ML4.3/42, ML4.3/22(RSPR), Error ellipse: s-maj=9.9km s-min=5.0km az=13.0*

OSPL ***10*** *06:48:57.6±2.4, 19°.53N×67°.95W, h5^{km}±17^{km}, ML4.5*

SDD ***10*** *06:48:58.8±2.9, 19°.33N×68°.07W, h31^{km}±41^{km}, MD4.2, ML4.5, MW4.5*

RSPR ***10*** *06:48:59.1, 19°.52N×68°.10W, h4^{km}±2^{km}, MD3.3/22*

RSNC ***10*** *06:49:07.5±0.7, 19°N±6°×6°9W±1°0, h83^{km}±12^{km}, M4.4, mB5.1, mb4.4, Mw(mB)4.4*

ISC 10 06:48:58.9±1.0**, 19°.28N**±0°.04×**68°.12W**±0°.02**, h31**^{km}±8^{km}**, n175, σ2**^{s}**10**/211**, mb4.1**/19**, MS3.4**/17**, 23C-11D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.80**	**198**	⇑*e*Pg	**Pb**	**06 49 13.0**	**-1.4**
PCDR				*e*Sg	**Sb**	**06 49 25.2**	**+0.3**
PCDR				IAML		06 49 29.2	
	comp=N,12µm,0.4s						
HIDR	**Higuey Centro**	**0.89**	**219**	⇑*e*Pg	**Pb**	**06 49 14.2**	**-1.7**
HIDR				*e*Sg	**Sb**	**06 49 27.0**	**-0.4**
HIDR				IAML		06 49 29.3	
	comp=E,18µm,0.2s						
HIDR				IAML		06 49 29.5	
	comp=N,23µm,0.3s						
HIDR				IAML		06 49 29.5	
	comp=N,23µm,0.3s						
MIDR	**Miches**	**0.93**	**251**	*e*Pg	**Pb**	**06 49 15.4**	**-1.0**
MIDR				⇑*e*Sg	**Sn**	**06 49 29.2**	**+1.3**
MIDR				⇓*e*Sg	**Sb**	**06 49 29.4**	**+1.0**
MIDR				IAML		06 49 30.7	
	comp=N,6µm,0.4s						
MIDR				IAML		06 49 31.4	
	comp=E,6µm,0.4s						
SMDR	**Samana, DR**	**1.01**	**271**	⇑*e*P	**Pb**	**06 49 16.8**	**-1.0**
SMDR	**Samana, DR**	**1.01**	**271**	⇑*e*Pg	**Pb**	**06 49 16.7**	**-1.1**
SMDR				⇓*e*Sg	**Sn**	**06 49 32.9**	**+2.9**
SMDR				IAML		06 49 40.2	
	comp=N,7µm,1.1s						
SMDR				IAML		06 49 40.3	
	comp=N,7µm,1.1s						
SMDR				IAML		06 49 42.5	
	comp=E,9µm,0.7s						
IDE	**Isla Desecheo**	**1.08**	**145**		**Pb**	**06 49 20.2**	**+1.1**
IDE	**Isla Desecheo**	**1.08**	**145**	⇑*e*P	**Pb**	**06 49 20.2**	**+1.1**
AGPR	**Aguadilla, PR**	**1.25**	**130**		**Pn**	**06 49 19.8**	**-0.5**
AGPR				Sn	**Sb**	**06 49 38.8**	**+0.9**
AGPR				IAML		06 49 40.4	
	comp=E,7µm,0.6s						
AGPR				IAML		06 49 40.4	
	comp=N,5µm,0.6s						
AGPR	**Aguadilla, PR**	**1.25**	**130**	⇓*e*P	**Pb**	**06 49 22.0**	**-0.1**
AGPR	**Aguadilla, PR**	**1.25**	**130**	*e*S	**Sb**	**06 49 39.8**	**+1.9**
AGPR	**Aguadilla, PR**	**1.25**	**130**	*e*Pg	**Pn**	**06 49 20.1**	**-0.2**
AGPR				*e*Sg	**Sb**	**06 49 38.8**	**+0.9**
AGPR				IAML		06 49 40.2	
	comp=E,6µm,0.5s						
AGPR				IAML		06 49 40.3	
	comp=N,4µm,0.5s						
AGPR				IAML		06 49 40.3	
	comp=N,4µm,0.5s						
AGPR	**Aguadilla, PR**	**1.25**	**130**	*i* P	**Pn**	**06 49 20.2**	**-0.2**
AGPR				*e*S	**Sb**	**06 49 37.9**	**+0.1**
AGPR				IAML		06 49 43.4	
	comp=Z,2µm,0.2s						
DR12	**Loma Pena Alta**	**1.29**	**248**		**Pn**	**06 49 20.9**	**+0.1**
DR12				Sn	**Sb**	**06 49 39.7**	**+0.8**
HATOM	**Hato Mayor del**	**1.29**	**248**	⇓*e*Pg	**Pn**	**06 49 20.9**	**+0.1**
HATOM				⇓*e*Sg	**Sb**	**06 49 40.5**	**+1.7**
HATOM				IAML		06 49 41.0	
	comp=N,9µm,0.7s						
HATOM				IAML		06 49 41.0	
	comp=N,9µm,0.7s						
HATOM				IAML		06 49 43.4	
	comp=E,5µm,0.4s						
HATOM				IAML		06 49 43.4	
	comp=E,5µm,0.5s						
SPM1	**San Pedro UASD**	**1.39**	**234**	*e*Pg	**Pb**	**06 49 23.7**	**-0.7**
SPM1				IAML		06 49 47.8	
	comp=N,5µm,1.0s						
PRSN	**Puerto Rico Se**	**1.41**	**139**		**Pn**	**06 49 21.9**	**-0.5**
PRSN					**Sb**	**06 49 43.0**	**+0.8**
PRSN				IAML		06 49 52.1	
	comp=E,7µm,0.3s						
PRSN				IAML		06 49 52.5	
	comp=N,6µm,0.3s						
PRSN	**Puerto Rico Se**	**1.41**	**139**	⇓*e*P	**Pb**	**06 49 24.7**	**+0.1**
PRSN	**Puerto Rico Se**	**1.41**	**139**	*e*S	**Sb**	**06 49 45.3**	**+3.1**
LSP	**Las Mesas**	**1.48**	**138**		**Pb**	**06 49 25.6**	**-0.2**
LSP	**Las Mesas**	**1.48**	**138**	⇑*e*P	**Pb**	**06 49 25.6**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.59**	**143**		**Pn**	**06 49 24.5**	**-0.4**
CRPR				Sn	**Sb**	**06 49 47.3**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.59**	**143**	⇓*e*P	**Pb**	**06 49 27.3**	**-0.4**
CRPR	**Cabo Rojo, PR**	**1.59**	**143**	*e*S	**Sb**	**06 49 50.2**	**+2.7**
CRPR	**Cabo Rojo, PR**	**1.59**	**143**	*e*Pg	**Pn**	**06 49 25.9**	**+1.0**
CRPR				IAML		06 49 55.6	
	comp=E,2µm,0.9s						
CRPR				IAML		06 49 55.9	
	comp=N,2µm,0.3s						
CRPR				IAML		06 49 56.0	
	comp=N,2µm,0.3s						
CRPR	**Cabo Rojo, PR**	**1.59**	**143**	*i* P	**Pn**	**06 49 26.0**	**+1.1**
CRPR				*e*S	**Sb**	**06 49 47.8**	**+0.3**
CRPR				IAML		06 49 53.7	
	comp=Z,5µm,0.5s						
AOPR	**Arecibo Observ**	**1.60**	**125**		**Pn**	**06 49 25.0**	**0.0**
AOPR					**Sn**	**06 49 46.5**	**+1.9**
AOPR				IAML		06 49 52.5	
	comp=N,4µm,0.4s						
AOPR	**Arecibo Observ**	**1.60**	**125**	⇑*e*P	**Pb**	**06 49 26.5**	**-1.3**
AOPR	**Arecibo Observ**	**1.60**	**125**	*e*S	**Sb**	**06 49 48.9**	**+1.3**
AOPR	**Arecibo Observ**	**1.60**	**125**	⇓*e*Pg	**Pn**	**06 49 25.1**	**0.0**
AOPR				IAML		06 49 56.0	
	comp=E,8µm,0.5s						
AOPR				IAML		06 50 04.3	
	comp=N,3µm,0.3s						
AOPR				IAML		06 50 04.3	
	comp=N,3µm,0.3s						
NADR	**Nagua**	**1.64**	**273**	⇑*e*Pg	**Pn**	**06 49 26.5**	**+0.9**
NADR				IAML		06 49 58.7	
	comp=E,15µm,0.6s						
NADR				IAML		06 50 01.2	
	comp=N,19µm,0.8s						
NADR				IAML		06 50 01.2	
	comp=N,19µm,0.8s						
LONA1	**Toro Cenizo, N**	**1.65**	**274**	*i* P	**Pn**	**06 49 25.4**	**-0.3**
LONA1				*e*S	**Sb**	**06 49 50.3**	**+1.2**
LONA1				IAML		06 50 04.6	
	comp=Z,8µm,0.7s						
MLPR	**Magueyes Islan**	**1.66**	**142**	⇓*e*P	**Pb**	**06 49 28.1**	**-0.8**
UUPR	**Utuado, UPR, P**	**1.68**	**127**	Pn	**Pn**	**06 49 26.6**	**+0.4**
UUPR	**Utuado, UPR, P**	**1.68**	**127**	⇑*e*P	**Pb**	**06 49 28.0**	**-1.2**
EMPR	**Esperanza - Ma**	**1.71**	**118**		**Pn**	**06 49 27.0**	**+0.5**
EMPR					**Sn**	**06 49 49.1**	**+1.7**
EMPR				IAML		06 49 53.5	
	comp=E,5µm,0.6s						
EMPR	**Esperanza - Ma**	**1.71**	**118**	⇓*e*P	**Pb**	**06 49 28.6**	**-1.1**
EMPR	**Esperanza - Ma**	**1.71**	**118**	*e*S	**Sb**	**06 49 50.7**	**-0.1**
GBPR	**Guanica, Bosqu**	**1.75**	**138**		**Pb**	**06 49 29.2**	**-1.3**
GBPR	**Guanica, Bosqu**	**1.75**	**138**	⇑*e*P	**Pb**	**06 49 29.2**	**-1.3**
CADR	**Cabrera**	**1.76**	**283**	*e*Pg	**Pb**	**06 49 29.3**	**-1.2**
CADR				IAML		06 49 57.1	
	comp=E,5µm,0.6s						
CADR				IAML		06 50 08.1	
	comp=N,4µm,0.5s						
CADR				IAML		06 50 17.7	
	comp=N,5µm,0.6s						
DR08	**Loma La Naviza**	**1.82**	**260**	*e*Pg	**Pb**	**06 49 30.4**	**-1.3**
DR08				IAML		06 49 58.9	
	comp=E,21µm,0.4s						
DR08				IAML		06 50 03.4	
	comp=N,43µm,0.2s						
DR08				IAML		06 50 03.4	
	comp=N,43µm,0.2s						
SDD	**Santo Domingo**	**1.88**	**244**		**Pb**	**06 49 31.0**	**-1.7**
SDD				Sn	**Sn**	**06 49 53.7**	**+2.1**
SDD				IAML		06 50 01.6	
	comp=N,2µm,0.5s						
SDD				IAML		06 50 01.6	
	comp=E,2µm,0.6s						
SDD	**Santo Domingo**	**1.88**	**244**	⇑*e*P	**Pb**	**06 49 31.5**	**-1.2**
SDD	**Santo Domingo**	**1.88**	**244**	⇑*e*Pg	**Pb**	**06 49 31.4**	**-1.2**
SDD				⇑*e*Sg	**Sb**	**06 49 56.5**	**+0.7**
SDD				IAML		06 50 01.4	
	comp=N,785nm,0.5s						
SDD				IAML		06 50 01.5	
	comp=N,785nm,0.5s						
SDD				IAML		06 50 01.5	
	comp=E,803nm,0.4s						
SDD	**Santo Domingo**	**1.88**	**244**	*i* P	**Pb**	**06 49 31.5**	**-1.2**
SDD				*e*S	**Sb**	**06 49 56.5**	**+0.7**
CELP	**Cerrillos**	**1.89**	**129**		**Pn**	**06 49 30.3**	**+1.2**
CELP				Sn	**Sb**	**06 49 55.0**	**-1.1**
CELP				IAML		06 49 59.5	
	comp=N,3µm,0.5s						
CELP				IAML		06 50 01.0	
	comp=E,2µm,0.7s						
CELP	**Cerrillos**	**1.89**	**129**	⇑*e*P	**Pb**	**06 49 31.4**	**-1.5**
CELP	**Cerrillos**	**1.89**	**129**	*e*S	**Sb**	**06 49 56.1**	**0.0**
CELP	**Cerrillos**	**1.89**	**129**	*e*Pg	**Pn**	**06 49 30.3**	**+1.2**
CELP				IAML		06 49 58.8	
	comp=N,3µm,0.5s						
CELP				IAML		06 49 58.9	
	comp=N,3µm,0.5s						
CELP				IAML		06 50 00.7	
	comp=E,2µm,0.7s						
OBIP	**Obispado Ponce**	**1.89**	**130**		**Pn**	**06 49 30.3**	**+1.2**
OBIP				Sn	**Sb**	**06 49 55.3**	**-0.8**
OBIP				IAML		06 49 59.6	
	comp=N,3µm,0.6s						
OBIP				IAML		06 50 00.5	
	comp=E,2µm,0.9s						
OBIP	**Obispado Ponce**	**1.89**	**130**	⇑*e*P	**Pb**	**06 49 32.0**	**-0.8**
OBIP	**Obispado Ponce**	**1.89**	**130**	*e*S	**Sb**	**06 49 56.5**	**+0.3**
ECPR	**Experimental S**	**1.92**	**120**	⇑*e*P	**Pb**	**06 49 31.9**	**-1.5**
ECPR	**Experimental S**	**1.92**	**120**	*e*S	**Sb**	**06 49 56.5**	**-0.5**
GCPR	**Guaynabo City**	**2.16**	**116**		**Pn**	**06 49 33.4**	**+0.6**
GCPR					**Sn**	**06 50 00.6**	**+2.1**
GCPR	**Guaynabo City**	**2.16**	**116**	⇑*e*P	**Pn**	**06 49 34.6**	**+1.8**
GCPR	**Guaynabo City**	**2.16**	**116**	*e*S	**Sb**	**06 50 01.7**	**-2.1**
SJG	**San Juan**	**2.20**	**122**		**Pn**	**06 49 34.2**	**+0.9**
SJG				IAML		06 50 09.0	
	comp=E,1µm,0.6s						
SJG	**San Juan**	**2.20**	**122**	Pn	**Pn**	**06 49 33.8**	**+0.5**
	comp=E,66nm,0.3s,baz=291,slow=13,SNR=58						
SJG				Sn	**Sn**	**06 50 01.1**	**+1.6**
	comp=E,126nm,0.3s,baz=314,slow=10,SNR=11						
SJG				LR	LR	06 50 12.2	
	comp=E,127nm,20.5s,baz=307,slow=35						
	comp=E,232nm,0.4s						
SJG	**San Juan**	**2.20**	**122**	⇑*e*P	**Pb**	**06 49 36.0**	**-2.2**
SJG	**San Juan**	**2.20**	**122**	*e*S	**Sb**	**06 50 03.5**	**-1.5**
SJG	**San Juan**	**2.20**	**122**	*e*Pg	**Pn**	**06 49 33.6**	**+0.2**
SJG	**San Juan**	**2.20**	**122**	*i* P	**Pn**	**06 49 33.9**	**+0.5**
SJG				IAML		06 50 10.1	
	comp=Z,730nm,0.7s						
BANI	**BANI**	**2.29**	**248**		**Pn**	**06 49 37.2**	**+2.4**
BANI	**BANI**	**2.29**	**248**	*e*Pg	**Pb**	**06 49 38.6**	**-1.1**
BANI				IAML		06 50 16.1	
	comp=E,3µm,0.5s						
BANI				IAML		06 50 17.2	
	comp=N,5µm,0.5s						
BANI				IAML		06 50 17.2	
	comp=N,5µm,0.5s						
IGPR	**InterUniversit**	**2.32**	**124**		**Pn**	**06 49 35.9**	**+1.0**
IGPR					**Sn**	**06 50 03.9**	**+1.5**
IGPR				IAML		06 50 10.9	
	comp=E,1µm,0.3s						
IGPR				IAML		06 50 15.1	
	comp=N,1µm,0.3s						
IGPR	**InterUniversit**	**2.32**	**124**	⇑*e*P	**Pn**	**06 49 36.7**	**+1.8**
IGPR	**InterUniversit**	**2.32**	**124**	*e*S	**Sb**	**06 50 06.2**	**-2.0**
PDPR	**Patillas Dam,**	**2.35**	**122**		**Pn**	**06 49 35.7**	**+0.2**
PDPR	**Patillas Dam,**	**2.35**	**122**	⇑*e*P	**Pn**	**06 49 37.4**	**+1.9**
PDPR	**Patillas Dam,**	**2.35**	**122**	*e*S	**Sb**	**06 50 06.8**	**-2.6**
ABDR	**Alto Bandera**	**2.41**	**259**	*e*Pg	**Pb**	**06 49 39.3**	**-2.6**
ABDR				IAML		06 50 19.3	
	comp=E,3µm,0.8s						
ABDR				IAML		06 50 20.9	
	comp=N,3µm,0.7s						
ABDR				IAML		06 50 20.9	
	comp=N,3µm,0.7s						
HUMP	**Col San Antoni**	**2.44**	**117**		**Pn**	**06 49 36.2**	**-0.3**
HUMP	**Col San Antoni**	**2.44**	**117**	⇓*e*P	**Pn**	**06 49 38.5**	**+1.9**
HUMP	**Col San Antoni**	**2.44**	**117**	*e*S	**Sn**	**06 50 07.4**	**+2.1**
SC01	**Santiago de lo**	**2.46**	**274**		**Pn**	**06 49 38.6**	**+1.6**
SC01	**Santiago de lo**	**2.46**	**274**	*e*Pg	**Pb**	**06 49 40.4**	**-2.2**
SC01				IAML		06 50 28.8	
	comp=N,5µm,0.8s						
SDDR	**Presa de Saban**	**3.01**	**265**		**Pn**	**06 49 44.0**	**-0.5**
SDDR	**Presa de Saban**	**3.01**	**265**	⇑*e*P	**Pn**	**06 49 47.5**	**+3.0**
SDDR	**Presa de Saban**	**3.01**	**265**	⇑*e*Pg	**Pn**	**06 49 46.8**	**+2.4**
SDDR				IAML		06 50 40.9	
	comp=E,3µm,0.7s						
SDDR				IAML		06 50 46.4	
	comp=N,2µm,0.8s						
SDDR				IAML		06 50 46.4	
	comp=N,2µm,0.8s						
SDDR	**Presa de Saban**	**3.01**	**265**	*i* P	**Pn**	**06 49 47.5**	**+3.0**
SDDR				IAML		06 50 39.9	
	comp=Z,1µm,0.9s						
REDR	**Restauracion**	**3.09**	**268**	IAML		06 50 49.5	
	comp=E,1µm,0.8s						
REDR				IAML		06 50 55.5	
	comp=N,1µm,0.8s						
PODR	**Polo**	**3.19**	**250**	*e*Pg	**Pn**	**06 49 51.1**	**+4.0**
PODR				IAML		06 50 47.2	
	comp=N,1µm,0.9s						
PODR				IAML		06 50 47.2	
	comp=N,1µm,0.9s						
LODU1	**El Espartillar**	**3.31**	**254**	*i* P	**Pn**	**06 49 52.6**	**+4.1**
LODU1				IAML		06 50 43.2	
	comp=Z,1µm,0.9s						
LOVI	**El Cajuil, Ovi**	**3.41**	**245**	*i* P	**Pn**	**06 49 52.9**	**+2.9**
LOVI				*e*S	**Sn**	**06 50 34.1**	**+4.7**
LOVI				IAML		06 50 47.0	
	comp=Z,641nm,0.9s						
GRTK	**Grand Turk**	**3.59**	**309**	Pn	**Pn**	**06 49 48.9**	**-3.5**
GRTK				IAML		06 50 57.5	
	comp=Z,534nm,0.8s						
GRTK	**Grand Turk**	**3.59**	**309**	*i* P	**Pn**	**06 49 51.6**	**-0.8**
GRTK				*e*S	**Sn**	**06 50 32.3**	**-1.5**
LOBH	**Bahia de las A**	**3.62**	**248**	*i* P	**Pn**	**06 49 56.7**	**+3.8**
LOBH				IAML		06 50 54.5	
	comp=Z,592nm,0.6s						
PAPH	**Port-au-Prince**	**4.03**	**260**		**Pn**	**06 50 00.3**	**+1.9**
SABA	**Saba**	**4.92**	**109**	Pn	**Pn**	**06 50 10.3**	**-0.4**
SABA				IAML		06 51 42.0	
	comp=N,253nm,0.7s						
SABA				IAML		06 51 51.4	
	comp=E,395nm,0.8s						
SMRT	**St. Maarten**	**4.94**	**104**	Pn	**Pn**	**06 50 09.6**	**-1.5**
SMRT				IAML		06 51 24.4	
	comp=E,213nm,0.7s						
SMRT				IAML		06 51 27.2	
	comp=N,173nm,0.5s						
SEUS	**St. Eustatius**	**5.20**	**109**	Pn	**Pn**	**06 50 12.4**	**-2.2**
SEUS				IAML		06 51 00.0	
	comp=N,251nm,1.1s						
SEUS				IAML		06 53 43.9	
	comp=E,240nm,1.9s						
NMDO	**Nuevo Mundo**	**6.58**	**282**	Pn	**Pn**	**06 50 31.2**	**-2.4**
GTBY	**Guantanamo Bay**	**6.62**	**277**	Pn	**Pn**	**06 50 32.7**	**-1.3**
GDHS	**Morne Mazeau,**	**6.76**	**115**	Pn	**Pn**	**06 50 34.2**	**-1.9**
TDBA	**Terre de Bas,**	**7.07**	**118**	Pn	**Pn**	**06 50 39.4**	**-0.8**
BIM	**Bigot**	**8.25**	**124**	Pn	**Pn**	**06 50 56.1**	**-0.4**
URIC	**Uribia, Colomb**	**8.41**	**207**	P	**Pn**	**06 50 58.7**	**0.0**
	comp=E,20nm,0.9s						
URIC				S	**Sn**	**06 52 30.4**	**-2.2**
	comp=E,20nm,0.9s						
MTDJ	**Mount Denham**	**8.98**	**265**	Pn	**Pn**	**06 51 05.9**	**-0.7**

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CRJC  Cerrejon, Guaj     9.41 210  P      Pn     06 51 13.2 +0.7
      comp=E,1μmcomp=E,16nm,0.7s
CRJC                               S      Sn     06 52 55.0 -2.4
      comp=E,1μmcomp=E,16nm,0.7s
PCRV  Puerto La Cruz     9.66 159  Pn     Pn     06 51 16.8 +0.9
      comp=E,1.3nm,0.3s,baz=318,slow=4.3,SNR=13
PCRV                               Sn     Sn     06 52 58.6 -4.8
      comp=E,0.5nm,0.3s,baz=76,slow=17,SNR=1.4
PCRV                               LR     LR     06 55 25.3
      comp=E,114nm,18.2s,slow=40
      comp=E,9.5nm,0.8s
SMRC  Santa Marta, M     9.99 217  S      Sn     06 53 03.9 -7.5
BAUV  El Baul           10.28 180         Pn     06 51 25.5 +1.2
SDV   Santo Domingo     10.62 194         Pn     06 51 31.7 +2.6
SDV   Santo Domingo     10.62 194  Pn     Pn     06 51 31.3 +2.1
      comp=E,3.0nm,0.3s,baz=8.3,slow=11,SNR=7.0
SDV                                Sn     Sn     06 53 22.5 -4.7
      comp=E,1.6nm,0.3s,baz=308,slow=20,SNR=3.1
SDV                                LR     LR     06 55 42.0
      comp=E,128nm,21.3s,baz=64,slow=38
      comp=E,14nm,0.5s
SDV   Santo Domingo     10.62 194  P      Pn     06 51 32.8 +3.6
      comp=E,25nm,0.6s
ARGC  Ariguani, Magd    11.08 213  P      Pn     06 51 35.9 +0.5
      comp=E,11nm,2.3s
ARGC                               S      Sn     06 53 35.0 -3.3
      comp=E,11nm,2.3s
PAMC  Pamplona, Colo    12.68 201  P      Pn     06 51 58.6 +1.0
PAMC                               S      Sn     06 54 14.1 -3.9
BBSR  BB Station        13.39  13  Pn     Pn     06 52 05.8 -1.1
BRJC  Barrancabermej    13.40 205  P      Pn     06 52 08.1 +1.1
      comp=E,31nm,0.8s
BRJC                               S      Sn     06 54 31.0 -4.0
      comp=E,31nm,0.8s
ZARC  Zaragoza, Cauc    13.42 210  P      Pn     06 52 09.5 +2.2
      comp=E,10nm,0.6s
ZARC                               S      Sn     06 54 30.3 -5.2
      comp=E,10nm,0.6s
UREC  San Jos de Ur     13.53 213  P      Pn     06 52 10.2 +1.3
      comp=E,1μmcomp=E,13nm,0.5s
UREC                               S      Sn     06 54 35.9 -2.3
      comp=E,1μmcomp=E,13nm,0.5s
BARC  Barichara         13.54 202  P      Pn     06 52 09.3 +0.1
BARC                               S      Sn     06 54 33.0 -5.7
APAC  Apartado, Choc    13.98 217  P      Pn     06 52 15.3 +0.4
      comp=E,16nm,1.5s
APAC                               S      Sn     06 54 43.8 -5.3
      comp=E,16nm,1.5s
PTBC  PUERTO BERRIO,    14.08 207  P      Pn     06 52 16.1 -0.3
      comp=E,135nmcomp=E,9.8nm,0.6s
PTBC                               S      Sn     06 54 45.9 -5.8
      comp=E,135nmcomp=E,9.8nm,0.6s
RUSC  La Rusia          14.16 201         Pn     06 52 17.3 -0.6
RUSC  La Rusia          14.16 201  P      Pn     06 52 18.3 +0.5
      comp=E,360nmcomp=E,21nm,1.1s
RUSC                               S      Sn     06 54 46.5 -7.7
      comp=E,360nmcomp=E,21nm,1.1s
SPBC  San Pablo de B    14.73 204  P      Pn     06 52 23.9 -1.4
      comp=E,10nm,0.8s
SPBC                               S      Sn     06 55 04.1 -3.6
      comp=E,10nm,0.8s
NORC  Norcasia          15.14 207  P      Pn     06 52 33.8 +3.1
NORC                               S      Sn     06 55 13.3 -4.1
CBOC  Ciudad Bolivar    15.39 211  P      Pn     06 52 36.4 +2.3
CBOC                               S      Sn     06 55 17.8 -6.0
CHIC  Chingaza          15.56 201  P      Pn     06 52 37.0 +0.5
      comp=E,12nm,0.9s
CHIC                               S      Sn     06 55 25.6 -2.6
      comp=E,12nm,0.9s
ROSC  El Rosal          15.57 204  Pn     Pn     06 52 37.1 +0.4
ROSC                               IAmb   IAmb   06 52 47.5
      comp=Z,20nm,0.8s
ROSC  El Rosal          15.57 204  Pn     Pn     06 52 37.5 +0.8
      comp=Z,1.2nm,0.3s,baz=36,slow=20,SNR=5.5
ROSC                               Sn     Sn     06 55 30.0 +1.5
      comp=Z,0.7nm,0.3s,baz=106,slow=22,SNR=4.6
ROSC                               LR     LR     06 59 17.7
      comp=Z,166nm,18.6s,baz=16,slow=40
      comp=Z,4.4nm,0.5s
GUY2C Guyana, Caldas    15.65 208  P      Pn     06 52 39.5 +1.7
      comp=Z,27nm,0.8s
GUY2C                              S      Sn     06 55 25.5 -5.1
      comp=Z,27nm,0.8s
PLMC  San Jos del P     16.36 210  P      Pn     06 52 45.7 -0.7
      comp=Z,19nm,0.8s
PLMC                               S      Sn     06 55 50.9 +3.8
      comp=Z,19nm,0.8s
ORTC  Ortega, Tolima    16.79 205  P      Pn     06 52 52.9 +1.0
      comp=Z,35nm,1.0s
ORTC                               S      Sn     06 55 52.1 -5.5
      comp=Z,35nm,1.0s
PRAC  Prado             16.82 204  P      Pn     06 52 50.8 -1.5
PRAC                               S      Sn     06 55 53.7 -4.7
ESPN  Las Esperanzas    17.08 248  Pn     Pn     06 52 55.2 -0.3
YOTC  Yotoco, Valle     17.19 209  P      P      06 53 00.0 +1.6
Y58A  Scranton          17.83 327         Pn     06 53 04.8 +0.1
ACON  Acoyapa           17.95 249         Pn     06 53 06.5 +0.2
ACON                               IAmb   IAmb   06 53 34.1
      comp=Z,24nm,1.4s
V61A  Roper             18.06 337         Pn     06 53 06.8 -0.6
BOAV  Boa Vista         18.36 155         P      06 53 10.9 -0.1
BOAV                               IAmb   IAmb   06 53 22.1
      comp=Z,19nm,1.4s
TGUH  Tegucigalpa,Un    19.06 257  P      P      06 53 18.2 -0.7
FLOC  Florencia         19.07 204  P      P      06 53 20.0 +1.0
FLOC                               IAmb   IAmb   06 53 27.5
      comp=Z,29nm,1.0s
T59A  Double "B" Far    19.47 337  P      P      06 53 23.4 +0.2
MDP   Montagnes des     20.65 131  LR     LR     07 03 37.7
      comp=Z,38nm,19.4s,baz=340,slow=43
MTO3  Montecristo       20.89 260  P      P      06 53 38.4 -0.6
TKL   Tuckaleechee C    21.38 323  P      P      06 53 46.9 +3.0
      comp=Z,2.1nm,0.9s,baz=345,slow=14,SNR=2.0
TKL                                S      S      06 57 34.5 -5.1
      comp=Z,5.5nm,0.7s,baz=188,slow=6.5,SNR=5.8
OTAV  Otavalo           21.47 209  P      P      06 53 44.6 -0.8
CPCT  Cooper Cave       21.66 321  P      P      06 53 46.1 -0.9
CPCT                               IAmb   IAmb   06 54 25.6
      comp=Z,9.5nm,1.2s
LRAL  Lakeview Retre    21.74 313  P      P      06 53 48.7 +1.0
LRAL                               IAmb   IAmb   06 53 51.1
      comp=Z,9.5nm,1.1s
Q56A  Snyder Ridge,     21.90 336  P      P      06 53 47.9 -1.5
Q56A                               IAmb   IAmb   06 54 24.9
      comp=Z,8.2nm,1.0s
ATAH  Atahualpa         28.13 202  LR     LR     07 07 53.5
      comp=Z,79nm,18.1s,baz=17,slow=40
SN07  Snyder 07         32.31 302  P      P      06 55 25.9 +0.6
R32A  Long Quarter,     32.66 312  P      P      06 55 29.1 +0.7
R32A                               IAmb   IAmb   06 55 52.5
      comp=Z,4.1nm,0.8s
TXAR  Lajitas Array     33.79 294  P      P      06 55 40.4 +2.0
      comp=Z,0.6nm,0.7s,baz=112,slow=9.7,SNR=5.2
TXAR                               LR     LR     07 14 26.6
      comp=Z,19nm,18.1s,baz=94,slow=45
      comp=Z,0.6nm,0.7s
TX31  Lajitas Ar. Si    33.79 294  P      P      06 55 39.6 +1.3
TX31                               IAmb   IAmb   06 56 12.8
      comp=Z,1.9nm,0.8s
LPAZ  La Paz            35.35 180  P      P      06 55 53.1 +0.7
      comp=Z,1.1nm,0.9s,baz=0.7,slow=11,SNR=3.9
LPAZ                               PcP    PcP    06 58 22.1 -0.3
      comp=Z,0.8nm,0.9s,baz=36,slow=8.7,SNR=1.8
      comp=Z,1.1nm,0.9s
SIV   San Ignacio       35.73 168  LR     LR     07 11 22.3
      comp=Z,39nm,18.1s,baz=323,slow=38
ANMO  Albuquerque       37.26 303  LR     LR     07 13 46.4
      comp=Z,35nm,18.9s,baz=220,slow=40
PV01  Paradox Valley    39.76 307  P      P      06 56 31.9 +2.7
PV02  Paradox Valley    39.91 307  P      P      06 56 32.4 +1.9
PV02                               IAmb   IAmb   06 56 34.2
      comp=Z,7.4nm,1.0s
PV13  Radium Mtn., P    39.96 307  P      P      06 56 31.1 +0.3
PV03  Paradox Valley    40.01 307  P      P      06 56 32.5 +1.3
PV03                               IAmb   IAmb   06 56 44.0
      comp=Z,6.9nm,1.4s
PDAR  Pinedale Array    41.96 313  P      P      06 56 48.1 +0.8
      comp=Z,0.2nm,0.5s,baz=74,slow=4.1,SNR=2.4
PDAR                               LR     LR     07 14 33.7
      comp=Z,17nm,18.7s,baz=123,slow=37
      comp=Z,0.2nm,0.5s
FRB   Frobisher Bay     44.43 360  LR     LR     07 14 13.0
      comp=Z,35nm,21.8s,baz=28,slow=34
PFO   Pinyon Flats O    45.18 298  LR     LR     07 19 17.2
      comp=Z,45nm,18.5s,baz=80,slow=40
ELK   Elko              45.43 309  LR     LR     07 17 19.0
      comp=Z,40nm,18.5s,baz=168,slow=38
NVAR  Mina Array Bea    47.29 305  P      P      06 57 31.8 +1.9
      comp=Z,0.8nm,0.9s,baz=83,slow=7.7,SNR=5.4
NVAR                               LR     LR     07 19 25.7
      comp=Z,38nm,19.1s,baz=232,slow=39
      comp=Z,0.8nm,0.9s
NEW   Newport           48.83 318  LR     LR     07 19 46.1
      comp=Z,58nm,18.4s,baz=108,slow=38
SFJD  Kangerlussuaq     49.01   9  LR     LR     07 16 37.0
      comp=Z,28nm,20.1s,baz=218,slow=34
YKA   Yellowknife Ar    53.65 335  P      P      06 58 17.4 +0.2
      comp=Z,0.7nm,0.9s,baz=110,slow=7.4,SNR=5.8
      comp=Z,0.7nm,0.9s
ESDC  Sonseca Array     58.23  55  P      P      06 58 51.5 +1.0
      comp=Z,1.0nm,0.7s,baz=273,slow=7.1,SNR=9.3
ESDC                               LR     LR     07 18 02.9
      comp=Z,34nm,21.9s,baz=258,slow=30
      comp=Z,1.0nm,0.7s
DBIC  Dimbokro          62.62  92  P      P      06 59 21.4 +0.6
      comp=Z,3.3nm,0.7s,baz=32,slow=7.0,SNR=4.4
      comp=Z,3.3nm,0.7s
SCRK  Sand Creek        66.65 332  P      P      06 59 48.6 +2.1
SCRK                               IAmb   IAmb   06 59 49.2
      comp=Z,4.7nm,1.3s
TORD  Torodi Ar. Bea    66.94  84  P      P      06 59 49.4 +0.4
      comp=Z,0.8nm,0.3s,baz=293,slow=6.9,SNR=2.4
      comp=Z,0.8nm,0.3s
PRP   Porcupine Dome    67.40 334  P      P      06 59 53.3 +2.0
PRP                                IAmb   IAmb   07 00 14.5
      comp=Z,3.1nm,1.1s
ILAR  Eielson Array     67.95 333  P      P      06 59 55.2 +0.7
      comp=Z,0.3nm,0.7s,baz=107,slow=6.5,SNR=3.8
ILAR                               LR     LR     07 31 20.2
      comp=Z,39nm,19.2s,baz=24,slow=38
      comp=Z,0.3nm,0.7s
HFS   Hagfors           69.42  32  LR     LR     07 26 55.8
      comp=Z,25nm,19.9s,baz=244,slow=33
VRAC  Vranov            72.24  43  LR     LR     07 27 59.4
      comp=Z,27nm,21.0s,baz=250,slow=32
ARCES ARCESS Array B    73.37  21  P      P      07 00 27.4  0.0
      comp=Z,3.2nm,0.8s,baz=345,slow=6.7,SNR=1.8
      comp=Z,3.2nm,0.8s
BRTR  Keskin Array B    86.53  49  LR     LR     07 36 42.7
      comp=Z,13nm,19.7s,baz=134,slow=33
PZH   PanZhiHua        133.44  13  PKP    PKiKP  07 08 16.2 +2.1
ASAR  Alice Springs    159.05 254  PKPab  PKPab  07 09 31.7 +0.4
      comp=Z,0.4nm,0.8s,baz=95,slow=3.7,SNR=4.2
```

IDC 10 06:52:11.6±2.7**,4°.80S×134°.75E,h0^{km},mb3.6**/1**,
mbtmp3.6**/4**,ML3.9**/3**,MS3.1**/2**,Error ellipse:
s-maj=94.8km s-min=30.2km az=83.0,Irian Jaya region**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time     Res
                                   Op     ISC       h  m  s    ISC
JAY   Jayapura           6.36  69  LR     LR     06 56 40.3
      comp=Z,67nm,19.6s,baz=268,slow=42
WRA   Warramunga Arr    15.05 181  Pn     Pn     06 55 45.1 -0.7
      0.4nm,0.3s,baz=1.8,slow=11,SNR=40
WRA                                Sn     Sn     06 58 22.2  -11
      baz=349,slow=24,SNR=1.0
      0.2nm,0.7s
FITZ  Fitzroy Crossi    15.94 213  Pn     Pn     06 55 55.2 -2.2
      0.3nm,0.3s,baz=35,slow=12,SNR=1.8
FITZ                               Sn     Sn     06 58 40.3  -15
      0.1nm,0.3s,baz=158,slow=14,SNR=2.6
      0.6nm,0.3s
ASAR  Alice Springs     18.77 182  P      Pn     06 56 33.5 +0.7
      0.6nm,0.3s,baz=5.7,slow=11,SNR=51
ASAR                               LR     LR     07 04 12.1
      comp=Z,134nm,21.3s,baz=199,slow=38
      2.3nm,0.6s
MKAR  Makanchi Array    69.10 324  P      P      07 03 19.6  0.0
      0.5nm,0.7s,baz=108,slow=7.3,SNR=5.1
      0.5nm,0.7s
```

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*ASRS **10** 06:59:21.0±1.0,54°.11N×86°.42E,h0^{km},M2.3,The
earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p +
CD-ROM, 2021.*

IDC 10 06:59:23.0±2.9**,54°.18N×86°.64E,h0^{km},mbtmp2.8**/2**,
ML2.6**/2**,Error ellipse: s-maj=23.7km s-min=14.8km
az=54.0,Southwestern Siberia**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time     Res
                                   Op     ISC       h  m  s    ISC
I46RU ZALESOVO INFRA     1.10 259  I      I      07 06 10.0
      baz=80,slow=319,SNR=5.3
ZALV  Zalesovo Beam      1.10 259  Pg     Pg     06 59 42.6 -1.4
      1.4nm,0.3s,baz=78,slow=17,SNR=10
ZALV                               Lg     Lg     06 59 59.0
      1.8nm,0.3s,baz=77,slow=28,SNR=9.2
KURBB Kurchatov Arra     6.11 238  Pn     Pn     07 00 55.4 +1.0
      0.1nm,0.3s,baz=54,slow=13,SNR=4.5
KURBB                              Lg     Lg     07 02 41.5
      baz=58,slow=33,SNR=4.3
      0.3nm,0.3s
MKAR  Makanchi Array     7.89 202  Pn     Pn     07 01 20.1 +1.1
      0.2nm,0.3s,baz=24,slow=13,SNR=6.2
      0.2nm,0.3s
```

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*NEIC **10** 06:59:37.9±1.8,5°.50S±0°.08×29°.4E±0°.1,h5^{km}±1^{km},
mb4.5/17,Error ellipse: s-maj=18.4km s-min=11.8km
az=294.0*

*IDC **10** 06:59:40.0±1.0,5°.20S×29°.05E,h0^{km},mb3.9/9,
mbtmp3.9/9,MS3.3/5,Error ellipse: s-maj=36.5km
s-min=21.1km az=89.0*

ISC 10 06:59:38.1±0.6**,5°.49S**±0°.07×**29°.43E**±0°.10**,h10^{km},n39,
σ1ˢ.30**/33**,mb4.2**/12**,MS3.5**/3**,Lake Tanganyika region**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time     Res
                                   Op     ISC       h  m  s    ISC
MBAR  Mbarara            5.03  15         Pn     07 00 53.6 -0.2
KMBO  Kilima Mbogo       8.93  61  Pn     Pn     07 01 47.5  0.0
KIBK  Kibwezi            9.15  70  Pn     Pn     07 01 50.6 +0.3
LSZ   Lusaka             9.80 187         Pn     07 01 58.2 -1.1
LSZ   Lusaka             9.80 187  LR     LR     07 05 07.2
      comp=Z,40nm,18.6s,baz=344,slow=32
LODK  Lodwar            10.66  34  Pn     Pn     07 02 08.4 -2.6
KSANE Kasane            12.92 198  Pn     Pn     07 02 40.6 -1.4
QNGWA Qangwa            16.10 209  Pn     Pn     07 03 25.1 +0.3
FURI  Furi              17.01  33  Pn     Pn     07 03 36.0 -0.7
MREMI Moremi            17.08 186         P      07 03 38.8 -0.3
TSUM  Tsumeb            17.86 219         Pn     07 03 46.6 -0.4
LPHEP Lephephe          18.10 191         P      07 03 50.3  0.0
KGCAE Kacgae            18.61 201  P      Pn     07 03 56.0 -0.2
KGCAE                              IAmb   IAmb   07 04 19.0
      comp=Z,24nm,1.3s
LBTB  Lobatse           19.75 190  P      P      07 04 08.2 -0.2
LBTB                               IAmb   IAmb   07 04 17.9
      comp=Z,16nm,1.4s
LBTB  Lobatse           19.75 190  LR     LR     07 12 49.7
      comp=Z,96nm,18.9s,baz=40,slow=40
BOSA  Boshof            23.33 189  P      P      07 04 52.1 +5.4
      comp=Z,3.7nm,0.7s,baz=357,slow=7.6,SNR=8.2
BOSA                               LR     LR     07 14 05.2
      comp=Z,68nm,18.1s,baz=24,slow=37
      comp=Z,3.7nm,0.7s
TORD  Torodi Ar. Bea    33.20 304  P      P      07 06 15.3 -0.1
TORD  Torodi Ar. Bea    33.20 304  P      P      07 06 15.3 -0.1
      comp=Z,1.5nm,0.5s,baz=115,slow=8.4,SNR=4.1
      comp=Z,1.5nm,0.5s
DBIC  Dimbokro          36.29 289  P      P      07 06 41.8 -0.3
DBIC                               IAmb   IAmb   07 06 53.5
      comp=Z,14nm,1.2s
DBIC  Dimbokro          36.29 289  P      P      07 06 42.2  0.0
      comp=Z,4.9nm,1.1s,baz=83,slow=8.1,SNR=1.6
      comp=Z,4.9nm,1.1s
ARG   Arkhangelos       41.51 358  P      P      07 07 25.5  0.0
BR131 Keskin Array S    45.16   5  P      P      07 07 56.3 +1.0
BR131                              IAmb   IAmb   07 07 56.8
      comp=Z,2.2nm,0.8s
BRTR  Keskin Array B    45.16   5  P      P      07 07 56.2 +1.0
      comp=Z,1.6nm,0.8s,baz=183,slow=8.5,SNR=8.5
      comp=Z,1.6nm,0.8s
GEVA  Gevas             45.39  15  P      P      07 07 58.0 +0.9
GEVA                               IAmb   IAmb   07 08 00.3
      comp=Z,12nm,0.9s
PALK  Pallekele         52.71  77  LR     LR     07 27 36.3
      comp=Z,42nm,20.8s,baz=210,slow=32
ESDC  Sonseca Array     54.48 329  P      P      07 09 06.6 +0.5
      comp=Z,0.6nm,0.9s,baz=165,slow=10,SNR=4.0
      comp=Z,0.6nm,0.9s
GERES GERESS Array B    55.84 348  P      P      07 09 15.1 -0.6
      comp=Z,0.2nm,0.4s,baz=179,slow=5.5,SNR=2.5
      comp=Z,0.2nm,0.4s
AAK   Ala-Archa         62.96  36  LR     LR     07 39 30.1
      comp=Z,37nm,19.3s,baz=244,slow=38
NRN   Naryn             63.14  38  P      P      07 10 07.5 +0.9
KDJ   Kajisay           64.26  38  P      P      07 10 13.1 -0.8
EVN   Everest           64.52  56  P      P      07 10 14.9 -1.5
EVN                                IAmb   IAmb   07 10 45.4
      comp=Z,11nm,1.5s
FINES FINESS Array B    66.79 358  P      P      07 10 29.6 +0.1
FINES FINESS Array B    66.79 358  P      P      07 10 30.2 +0.7
      comp=Z,2.8nm,1.0s,baz=138,slow=9.1,SNR=1.3
      comp=Z,2.8nm,1.0s
NB201 NORSAR Array S    67.84 351  P      P      07 10 37.6 +1.3
NB201                              IAmb   IAmb   07 11 04.6
      comp=Z,9.0nm,1.0s
SNAA  Sanae             69.11 190  P      P      07 10 43.7 -0.5
SNAA                               IAmb   IAmb   07 11 16.9
      comp=Z,3.0nm,1.2s
KURBB Kurchatov Arra    70.01  31  P      P      07 10 54.9 +4.9
      comp=Z,0.2nm,0.6s,baz=246,slow=6.2,SNR=2.1
      comp=Z,0.2nm,0.6s
QSPA  South Pole Qui    84.57 180  P      P      07 12 16.8 +5.2
      comp=Z,0.7nm,0.7s,baz=268,slow=1.8,SNR=8.7
      comp=Z,0.7nm,0.7s
KS19  Wonju Array Si   100.01  53  Pdif   Pdif   07 13 23.6 -0.4
KSAR  Wonju Array Be   100.03  53  Pdif   Pdif   07 13 23.0 -1.0
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*UPA **10** 07:03:02.9±0.7,8°.23N×82°.90W,h0^{km}±4^{km},MW4.2*

*UCR **10** 07:03:03.3±0.6,8°.17N×82°.88W,h10^{km}±2^{km},MW3.7*

*CATAC **10** 07:03:03.9±0.9,8°N±6°×8°3W±°,h2^{km}±3^{km},M4.1/13,
MLv4.1/13,Error ellipse: s-maj=12.4km s-min=7.3km
az=5.3,confirmed*

ISC 10 07:03:03.4±1.0**,8°.17N**±0°.04×**82°.88W**±0°.03**,h11^{km}**±7^{km}**,
n67,σ1ˢ.20**/84**,8D,Panama-Costa Rica border region**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time     Res
                                   Op     ISC       h  m  s    ISC
LMNES Limones            0.07 165  eP     Pg     07 03 06.6 +0.8
LPPC  Paso Canoas        0.36   6  eP     Pg     07 03 10.8 +0.1
LPPC                               eS     Sb     07 03 17.0 -0.7
CDITO Canoas             0.40   1   P     Pg     07 03 11.3 -0.1
CDITO Canoas             0.40   1   S     Sb     07 03 17.8 -0.9
NELY  Ciudad Neily       0.48 352  eP     Pg     07 03 12.5 -0.4
CSTBL De las Acacias     0.49  61⇓eP     Pg     07 03 13.3 +0.2
DVD   David              0.50  58  i P    Pg     07 03 13.3 +0.2
DVD                                i S    Sb     07 03 21.6 -0.1
DVD   David              0.50  58  eP     Pg     07 03 13.4 +0.2
DVD                                eS     Sb     07 03 21.5 -0.1
MCANO Manzana, Boque     0.50  37⇓eP     Pg     07 03 13.5 +0.3
FITO  Golfito            0.53 329  eP     Pg     07 03 12.8 -0.9
FITO                               eS     Sg     07 03 20.4 -0.3
LOMA3 Las Lomas, Chi     0.55  62  i P    Pg     07 03 14.1  0.0
EDAD  Golfito            0.56 329  eP     Pg     07 03 13.3 -1.0
CGUAY Guayabal, Coch     0.60  61⇓eP     Pg     07 03 15.0 -0.1
CLLRA Cordillera,        0.63  25⇓eP     Pg     07 03 15.6 -0.1
RSRNO Rio Sereno         0.64   2  eP     Pg     07 03 16.1 +0.1
BRU2  Volcan             0.65  17⇓eP     Pg     07 03 15.8 -0.2
BRU2  Volcan             0.65  17   S     Sg     07 03 25.1 +0.6
BRU2  Volcan             0.65  17   P     Pg     07 03 15.9 -0.2
BRU2  Volcan             0.65  17  i P    Pg     07 03 16.0 -0.1
BRU2                               eS     Sn     07 03 39.0  +10
BRU2  Volcan             0.65  17  eP     Pg     07 03 16.2 +0.2
BRU2                               eS     Sb     07 03 26.6 +0.6
VITO  San Vito           0.65 352  eP     Pg     07 03 16.0 -0.1
TBS2                     0.66  20  eP     Pb     07 03 17.0 -0.1
SCLRA Santa Clara, W     0.67   8  eP     Pg     07 03 16.4  0.0
BQTLY Boquete Panama     0.71  35⇓eP     Pg     07 03 16.9 -0.4
BQSF3 Alto Boquete,      0.72  38  i P    Pg     07 03 16.9 -0.5
BQSF3                              eS     Sn     07 03 33.0 +2.1
ALCO  Alturas Coton,     0.78   3  eP     Pg     07 03 17.8 -0.7
ISECA Islas Secas        0.86 103  eP     Pg     07 03 18.6 -1.5
EDP2  Potrero Grande     0.89 341  eP     Pg     07 03 19.9 -0.7
PBNVO Pueblo Nuevo,      0.99  44⇓eP     Pg     07 03 20.9 -1.6
RBALA Bur                1.01  46  eP     Pg     07 03 21.6 -1.3
RMDIO Remedios, Chir     1.04  87  eP     Pg     07 03 22.2 -1.3
DRK0  Durika             1.14 342  eP     Pb     07 03 23.6 -1.8
DRK0  Durika             1.14 342   P     Pb     07 03 23.8 -1.6
DRK0  Durika             1.14 342   S     Sg     07 03 40.0 -0.4
DRK0  Durika             1.14 342  eP     Pb     07 03 24.5 -0.9
DRK0                               eS     Sg     07 03 40.1 -0.4
PDCAN Manzana , Fuen     1.18  84  eP     Pb     07 03 23.9 -2.0
OCHAL Ojochal            1.19 321   P     Pb     07 03 25.5 -0.7
OCHAL Ojochal            1.19 321   S     Sn     07 03 43.1 +0.7
KKNTU Kakintº            1.25  58⇓eP     Pn     07 03 24.9 -2.0
BRIBI Bribri             1.44   2  eP     Pb     07 03 30.0 -0.3
GMAL  Guarumal, Vera     1.68 104  eP     Pn     07 03 33.1 +0.2
GMAL                               eS     Sb     07 03 55.7 +0.1
LLNJ  Naranjito          1.77 317  eP     Pn     07 03 34.1 +0.1
LCR2  La Lucha 2         1.92 325   P     Pn     07 03 37.1 +0.8
LCR2  La Lucha 2         1.92 325   S     Sb     07 04 01.9 -0.7
PAR1A Puntarenas Pro     1.96 316  eP     Pn     07 03 36.9 +0.2
PCAYA Pacayas            1.96 332  eP     Pn     07 03 36.9  0.0
RESJ  San Isidro (Tu     2.00 338  eP     Pn     07 03 38.1 +0.9
CACAO El Cacao, Vera     2.16 112  eP     Pn     07 03 40.6 +1.1
CACAO                              eS     Sb     07 04 09.5  0.0
HDC   Heredia            2.19 326   P     Pn     07 03 41.5 +1.5
HDC                                 S     Sb     07 04 11.0 +0.5
TCS1  Tacares            2.33 323   P     Pn     07 03 43.6 +1.7
CHIT3 Chitre             2.45  95  eP     Pn     07 03 44.2 +0.8
CHIT3                              eS     Sb     07 04 15.7 -2.1
TRT2  Tortugero          2.52 340   P     Pn     07 03 46.2 +1.8
AZU   Azuero             2.61  98  eP     Pn     07 03 47.2 +1.6
AZU                                eS     Sn     07 04 19.5 +2.2
SOCE  Pocosol            2.79 322   P     Pn     07 03 50.5 +2.3
JTS   Las Juntas de      2.94 316  eP     Pn     07 03 50.0 -0.2
JTS                                eS     Sn     07 04 24.9 -0.6
INDI  Punta indio, G     3.09 303   P     Pn     07 03 52.1 -0.1
INDI  Punta indio, G     3.09 303   S     Sn     07 04 29.8 +0.5
CMARA Lajas Hojancha     3.11 306   P     Pn     07 03 52.9 +0.3
CMARA Lajas Hojancha     3.11 306   S     Sn     07 04 30.5 +0.6
BCIP  Isla Barro Col     3.17  72  i P    Pn     07 03 54.3 +1.0
BCIP                               eS     Pg     07 04 04.2  0.0
BCIP  Isla Barro Col     3.17  72  eP     Pn     07 03 53.8 +0.5
BCIP                               eS     Sn     07 04 32.4 +1.3
UPA   Univ. de Panam     3.41  76  eP     Pb     07 04 03.2 -0.6
UPA                                eS     Sb     07 04 44.5 -0.9
UPA   Univ. de Panam     3.41  76  eP     Pn     07 03 57.9 +1.3
UPA                                eS     Sn     07 04 38.9 +1.9
CHPO  Chepo, Panama      3.85  75  eS     Sg     07 05 04.0 -3.3
BLUN  Bluefields         3.91 347   P     Pn     07 04 04.7 +1.2
CARN  Rivas              3.97 319   P     Pn     07 04 07.2 +2.8
TOTI  Torti              4.58  80  i P    Pb     07 04 18.5 -5.4
TOTI                               eS     Sb     07 05 23.7 +4.5
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*ASRS **10** 07:10:13.0±1.3,55°.82N×86°.02E,h0^{km},M2.3,The
earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p +
CD-ROM, 2021.*

IDC 10 07:10:19.9±3.6**,55°.63N×85°.83E,h0^{km},mbtmp2.6**/2**,
ML2.4**/2**,Error ellipse: s-maj=31.7km s-min=27.3km
az=54.0,Southwestern Siberia**

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Code  Station Name        Δ°   AZ°   Phase ID          Time     Res
                                   Op     ISC       h  m  s    ISC
I46RU ZALESOVO INFRA     1.78 200  I      I      07 22 20.0
      baz=19,slow=318,SNR=2.9
ZALV  Zalesovo Beam      1.78 200  Pn     Pn     07 10 50.2 -1.7
      1.2nm,0.3s,baz=20,slow=16,SNR=9.4
ZALV                               Lg     Lg     07 11 16.2
      1.5nm,0.3s,baz=16,slow=27,SNR=7.1
KURBB Kurchatov Arra     6.66 224  Pn     Pn     07 11 58.9  0.0
      baz=44,slow=14,SNR=4.3
      0.3nm,0.4s
MKAR  Makanchi Array     9.12 196  Pn     Pn     07 12 33.1 +0.5
      0.1nm,0.3s,baz=13,slow=12,SNR=1.8
      0.1nm,0.4s
```

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*CATAC **10** 07:20:35.5±0.7,13°N±4°×9°0W±°,h23^{km}±4^{km},M2.4/12,
MLv2.4/12,Error ellipse: s-maj=8.6km s-min=4.4km
az=20.7,confirmed*

*GCG **10** 07:20:36.1±0.4,13°.12N×89°.58W,h59^{km}±7^{km},MD3.6*

*SNET **10** 07:20:37.0±0.5,13°.16N×89°.45W,h53^{km}±8^{km},ML2.2*

ISC 10 07:20:36.0±2.4**,13°.0N**±0°.1×**89°.51W**±0°.06**,h43^{km},n43,
σ0ˢ.73**/47**,1C,El Salvador**

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Code  Station Name        Δ°   AZ°   Phase ID          Time     Res
                                   Op     ISC       h  m  s    ISC
JAYA  Jayaque - finc     0.62   5⇑eP     Pn     07 20 48.3 -0.4
JAYA                               eS     Sn     07 20 56.9 -0.8
JAYA                               IAML          07 20 58.6
      comp=Z,162nm,0.2s
```

JAYA	Jayaque - finc	0.62	5	iP	Pn	07 20 48.3	-0.4
JAYA				iS	Sn	07 20 58.1	+0.3
JAYA	Jayaque - finc	0.62	5	P	Pn	07 20 48.2	-0.4
JAYA	Jayaque - finc	0.62	5	S	Sn	07 20 57.6	-0.1
PANCS	Alcalda de	0.66	29	S	Sn	07 20 58.4	-0.1
LOMA	Loma Larga	0.69	28	eP	Pn	07 20 49.5	-0.1
LOMA				IAML		07 21 02.2	
	comp=Z,150nm,0.1s						
LOMA	Loma Larga	0.69	28	P	Pn	07 20 49.8	+0.3
LOMA	Loma Larga	0.69	28	S	Sn	07 21 00.2	+0.8
PMON	Piamonte	0.70	15	eP	Pn	07 20 49.5	-0.2
PMON	Piamonte	0.70	15	P	Pn	07 20 49.3	-0.4
PMON	Piamonte	0.70	15	S	Sn	07 21 00.2	+0.6
UEES	Universidad Ev	0.73	21	S	Sn	07 21 00.1	0.0
UEES	Universidad Ev	0.73	21	P	Pn	07 20 50.0	-0.1
LFRS	El Faro	0.73	36	eP	Pn	07 20 49.9	-0.2
LFRS				eS	Sn	07 20 60.0	-0.2
UDBS	Universidad Do	0.76	27	P	Pn	07 20 50.6	+0.1
UDBS	Universidad Do	0.76	27	S	Sn	07 21 00.9	0.0
SNJE	San Jose	0.84	353	eP	Pn	07 20 51.4	-0.2
COEG	Centro de Oper	0.85	46	eP	Pn	07 20 51.1	-0.5
COEG				IAML		07 21 04.9	
	comp=Z,50nm,0.2s						
COEG	Centro de Oper	0.85	46	P	Pn	07 20 50.9	-0.7
COEG	Centro de Oper	0.85	46	S	Sn	07 21 02.4	-0.6
TECO	Alcaldia de Te	0.87	54	eP	Pn	07 20 51.5	-0.3
TECO	Alcaldia de Te	0.87	54	P	Pn	07 20 51.4	-0.5
TECO	Alcaldia de Te	0.87	54	S	Sn	07 21 03.4	0.0
PAVA	Las Pavas	0.88	39	eP	Pn	07 20 52.0	-0.1
PAVA	Las Pavas	0.88	39	P	Pn	07 20 52.0	-0.1
PAVA	Las Pavas	0.88	39	S	Sn	07 21 04.3	+0.5
NUBE	Las Nubes	0.91	343	eP	Pn	07 20 52.0	-0.5
NUBE	Las Nubes	0.91	343	iP	Pn	07 20 52.2	-0.3
NUBE				iS	Sn	07 21 04.4	-0.1
NUBE	Las Nubes	0.91	343	P	Pn	07 20 52.2	-0.3
FAME	Alcaldia de Sa	0.95	329	P	Pn	07 20 52.4	-0.5
FAME	Alcaldia de Sa	0.95	329	S	Sn	07 21 05.2	-0.1
ALJI	Alcalda de J	0.96	72	S	Sn	07 21 05.9	+0.3
ALJI	Alcalda de J	0.96	72	P	Pn	07 20 53.6	+0.6
SLOZ	Alcaldia de Sa	1.03	345	eP	Pn	07 20 54.2	+0.2
SLOZ	Alcaldia de Sa	1.03	345	S	Sn	07 21 09.1	+1.9
SLOZ	Alcaldia de Sa	1.03	345	P	Pn	07 20 54.2	+0.2
PACA	Pacayal	1.23	69	P	Pn	07 20 58.5	+1.6
PACA	Pacayal	1.23	69	S	Sn	07 21 13.2	+0.7
RANC	El Ranchito	1.25	71	S	Sn	07 21 09.8	-3.1
MTO3	Montecristo	1.37	6	eP	Pn	07 20 58.6	-0.2
MTO3	Montecristo	1.37	6	iP	Pn	07 20 58.7	-0.2
MTO3	Montecristo	1.37	6	P	Pn	07 20 58.6	-0.2
MTO3	Montecristo	1.37	6	S	Sn	07 21 17.0	+1.1

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*NEIC **10** 07:28:17.5±1.3, 19°.16N±0°.05×68°.22W±0°.04, h35^{km}±2^{km}, ML2.4/22, Md2.9/10(RSPR), Error ellipse: s-maj=9.0km s-min=6.5km az=209.0*

*RSPR **10** 07:28:19.0, 19°.07N×68°.22W, h67^{km}±8^{km}, MD2.9/10*

ISC 10 07:28:18.2±1.6**, 19°.1N**±0°.1×**68°.23W**±0°.05**, h62**^{km}±22^{km}**, n40, σ1^{s}.07**/46**, 9C-4D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HIDR	Higuey Centro	0.68	224	⇑iP	Pn	07 28 31.8	-0.6
HIDR	Higuey Centro	0.68	224	eS	Sn	07 28 43.8	+1.1
SMDR	Samana, DR	0.93	283	⇓eP	Pn	07 28 34.8	-0.7
SMDR	Samana, DR	0.93	283	eS	Sn	07 28 50.5	+2.2
IDE	Isla Desecheo	0.99	134		Pn	07 28 34.7	-1.6
IDE					Sn	07 28 49.3	-0.4
IDE	Isla Desecheo	0.99	134	⇑eP	Pn	07 28 34.7	-1.6
IDE	Isla Desecheo	0.99	134	eS	Sn	07 28 49.3	-0.4
DR12	Loma Pena Alta	1.13	255	Pn	Pn	07 28 38.7	+0.6
AGPR	Aguadilla, PR	1.22	120		Pn	07 28 38.8	-0.5
AGPR					Sn	07 28 54.4	-0.5
AGPR				IAML		07 29 02.3	
	comp=N,92nm,2.2s						
AGPR				IAML		07 29 05.7	
	comp=E,85nm,2.2s						
AGPR	Aguadilla, PR	1.22	120	⇓eP	Pn	07 28 38.7	-0.5
AGPR	Aguadilla, PR	1.22	120	eS	Sn	07 28 54.6	-0.4
LSP	Las Mesas	1.41	130		Pn	07 28 41.9	+0.1
LSP					Sn	07 29 01.2	+1.8
LSP	Las Mesas	1.41	130	⇑eP	Pn	07 28 41.9	+0.1
LSP	Las Mesas	1.41	130	eS	Sn	07 29 01.2	+1.8
CRPR	Cabo Rojo, PR	1.50	135		Pn	07 28 42.3	-0.7
CRPR					Sn	07 29 01.5	-0.2
CRPR	Cabo Rojo, PR	1.50	135	⇑eP	Pn	07 28 43.2	+0.2
CRPR	Cabo Rojo, PR	1.50	135	eS	Sn	07 29 02.0	+0.3
AOPR	Arecibo Observ	1.57	117		Pn	07 28 43.4	-0.6
AOPR					Sn	07 29 04.3	+0.9
AOPR				IAML		07 29 09.8	
	comp=N,41nm,0.4s						
AOPR				IAML		07 29 12.7	
	comp=E,75nm,0.3s						
AOPR	Arecibo Observ	1.57	117	⇑eP	Pn	07 28 43.3	-0.7
AOPR	Arecibo Observ	1.57	117	eS	Sn	07 29 03.6	+0.2
MLPR	Magueyes Islan	1.57	134	⇓eP	Pn	07 28 44.4	+0.4
UUPR	Utuado, UPR, P	1.65	120		Pn	07 28 44.0	-1.0
UUPR	Utuado, UPR, P	1.65	120	⇓eP	Pn	07 28 45.5	+0.5
UUPR	Utuado, UPR, P	1.65	120	eS	Sn	07 29 05.8	+0.6
EMPR	Esperanza - Ma	1.71	110	Pn	Pn	07 28 45.0	-0.8
SDD	Santo Domingo	1.72	249	Pn	Pn	07 28 44.4	-1.5
SDD				IAML		07 29 16.3	
	comp=E,64nm,1.7s						
OBIP	Obispado Ponce	1.85	124		Pn	07 28 47.1	-0.6
OBIP				IAML		07 29 16.8	
	comp=N,21nm,1.1s						
OBIP	Obispado Ponce	1.85	124	⇑eP	Pn	07 28 49.4	+1.7
CELP	Cerrillos	1.85	122		Pn	07 28 46.7	-1.1
CELP					Sn	07 29 10.6	+0.4
CELP				IAML		07 29 16.8	
	comp=N,25nm,1.1s						
CELP	Cerrillos	1.85	122	⇑eP	Pn	07 28 49.1	+1.3
CELP	Cerrillos	1.85	122	eS	Sn	07 29 12.2	+1.9
ECPR	Experimental S	1.92	113	⇑eP	Pn	07 28 48.1	-0.6
ECPR	Experimental S	1.92	113	eS	Sn	07 29 11.8	0.0
BANI	BANI	2.13	252	Pn	Pn	07 28 50.8	-0.9
PDPR	Patillas Dam,	2.34	117	Pn	Pn	07 28 52.6	-1.8
PDPR				IAML		07 29 30.5	
	comp=N,15nm,1.6s						
PDPR	Patillas Dam,	2.34	117	⇑eP	Pn	07 28 55.9	+1.5
PDPR	Patillas Dam,	2.34	117	eS	Sn	07 29 22.7	+0.6
HUMP	Col San Antoni	2.44	112		Pn	07 28 54.9	-0.8
HUMP				IAML		07 29 25.8	
	comp=N,14nm,1.9s						
HUMP				IAML		07 30 28.8	
	comp=E,20nm,0.2s						
HUMP	Col San Antoni	2.44	112	⇑eP	Pn	07 28 56.3	+0.6
SDDR	Presa de Saban	2.90	269	Pn	Pn	07 29 00.5	-1.6
SDDR				IAML		07 29 27.0	
	comp=E,12nm,2.5s						
SDDR				IAML		07 29 36.8	
	comp=E,15nm,3.1s						

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*NEIC **10** 07:31:08.6±1.6, 19°.41N±0°.06×68°.14W±0°.05, h10^{km}±2^{km}, ML2.5/24, Md2.8/13(RSPR), Error ellipse: s-maj=12.4km s-min=3.9km az=37.0*

*RSPR **10** 07:31:11.9, 19°.37N×68°.17W, h86^{km}±7^{km}, MD2.8/13*

ISC 10 07:31:12.8±1.6**, 19°.3N**±0°.1×**68°.18W**±0°.05**, h52**^{km}±37^{km}**, n46, σ1^{s}.36**/57**, 12C-3D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HIDR	Higuey Centro	0.85	216	⇑eP	Pn	07 31 26.4	-2.3
SMDR	Samana, DR	0.95	271	⇓eP	Pn	07 31 29.4	-0.5
SMDR	Samana, DR	0.95	271	eS	Sn	07 31 45.3	+2.8
IDE	Isla Desecheo	1.12	143		Pn	07 31 30.8	-1.4
IDE					Sn	07 31 46.7	+0.1
IDE	Isla Desecheo	1.12	143	⇑eP	Pn	07 31 30.8	-1.4
IDE	Isla Desecheo	1.12	143	eS	Sn	07 31 46.7	+0.1
DR12	Loma Pena Alta	1.23	247	Pn	Pn	07 31 33.9	0.0
AGPR	Aguadilla, PR	1.30	128		Pn	07 31 33.3	-1.4
AGPR					Sn	07 31 52.0	+1.0
AGPR				IAML		07 31 55.9	
	comp=E,80nm,1.6s						
AGPR				IAML		07 31 57.8	
	comp=N,108nm,2.6s						
AGPR	Aguadilla, PR	1.30	128	⇑eP	Pn	07 31 33.5	-1.2
AGPR	Aguadilla, PR	1.30	128	eS	Sn	07 31 52.0	+1.0
PRSN	Puerto Rico Se	1.45	137	Pn	Pn	07 31 37.3	+0.6
PRSN					Sn	07 31 54.7	+0.2
PRSN				IAML		07 31 58.9	
	comp=N,72nm,0.3s						
PRSN	Puerto Rico Se	1.45	137	eS	Sn	07 31 56.7	+2.2
LSP	Las Mesas	1.52	136		Pn	07 31 37.3	-0.3
LSP					Sn	07 31 58.3	+2.1
LSP	Las Mesas	1.52	136	⇓eP	Pn	07 31 37.3	-0.3
LSP	Las Mesas	1.52	136	eS	Sn	07 31 58.3	+2.1
CRPR	Cabo Rojo, PR	1.63	141		Pn	07 31 38.9	-0.2
CRPR					Sn	07 31 59.6	+0.6
CRPR	Cabo Rojo, PR	1.63	141	⇑eP	Pn	07 31 39.4	+0.3
CRPR	Cabo Rojo, PR	1.63	141	eS	Sn	07 31 59.8	+0.9
AOPR	Arecibo Observ	1.64	124		Pn	07 31 37.3	-2.0
AOPR					Sn	07 32 00.1	+0.7
AOPR				IAML		07 32 04.8	
	comp=N,42nm,0.7s						
AOPR				IAML		07 32 11.6	
	comp=E,50nm,0.3s						
AOPR	Arecibo Observ	1.64	124	⇓eP	Pn	07 31 38.4	-1.0
AOPR	Arecibo Observ	1.64	124	eS	Sn	07 32 00.2	+0.8
MLPR	Magueyes Islan	1.69	140	⇑eP	Pn	07 31 40.4	+0.3
MLPR	Magueyes Islan	1.69	140	eS	Sn	07 32 02.8	+2.2
UUPR	Utuado, UPR, P	1.72	126		Pn	07 31 39.1	-1.4
UUPR					Sn	07 32 02.9	+1.6
UUPR	Utuado, UPR, P	1.72	126	⇑eP	Pn	07 31 39.5	-0.9
UUPR	Utuado, UPR, P	1.72	126	eS	Sn	07 32 02.8	+1.5
EMPR	Esperanza - Ma	1.76	117		Pn	07 31 38.2	-2.7
EMPR					Sn	07 32 00.3	-1.8
EMPR	Esperanza - Ma	1.76	117	⇑eP	Pn	07 31 39.6	-1.3
EMPR	Esperanza - Ma	1.76	117	eS	Sn	07 32 03.8	+1.7
SDD	Santo Domingo	1.83	244	Pn	Pn	07 31 39.7	-2.2
SDD				IAML		07 32 00.4	
	comp=E,58nm,2.1s						
CELP	Cerrillos	1.94	128		Pn	07 31 42.7	-0.6
CELP					Sn	07 32 07.6	+1.0
CELP				IAML		07 32 12.6	
	comp=N,30nm,0.6s						
CELP	Cerrillos	1.94	128	⇑eP	Pn	07 31 43.2	-0.2
CELP	Cerrillos	1.94	128	eS	Sn	07 32 07.0	+0.5
OBIP	Obispado Ponce	1.94	129		Pn	07 31 42.8	-0.6
OBIP					Sn	07 32 06.8	+0.3
OBIP				IAML		07 32 14.1	
	comp=N,26nm,2.1s						
OBIP	Obispado Ponce	1.94	129	⇑eP	Pn	07 31 43.8	+0.4
OBIP	Obispado Ponce	1.94	129	eS	Sn	07 32 07.0	+0.4
ECPR	Experimental S	1.97	119	⇑eP	Pn	07 31 44.2	+0.3
ECPR	Experimental S	1.97	119	eS	Sn	07 32 09.9	+2.5
BANI	BANI	2.24	247	Pn	Pn	07 31 46.4	-1.3
PDPR	Patillas Dam,	2.40	121	Pn	Pn	07 31 47.2	-2.5
PDPR				IAML		07 32 24.5	
	comp=N,16nm,2.2s						
PDPR	Patillas Dam,	2.40	121	⇑eP	Pn	07 31 50.1	+0.3
PDPR	Patillas Dam,	2.40	121	eS	Sn	07 32 18.0	0.0
HUMP	Col San Antoni	2.48	117		Pn	07 31 49.4	-1.5
HUMP					Sn	07 32 20.5	+0.5
HUMP				IAML		07 32 35.1	
	comp=N,13nm,2.0s						
HUMP	Col San Antoni	2.48	117	⇑eP	Pn	07 31 51.6	+0.7
HUMP	Col San Antoni	2.48	117	eS	Sn	07 32 21.2	+1.2
SDDR	Presa de Saban	2.95	265	Pn	Pn	07 31 56.2	-1.1
SDDR				IAML		07 32 53.8	
	comp=N,18nm,2.0s						
SDDR				IAML		07 32 55.9	
	comp=N,20nm,2.4s						

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*ASRS **10** 07:40:20.0±0.6, 53°.66N×86°.78E, h0^{km}, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 10 07:40:22.1±2.8**, 53°.73N**×**86°.84E, h0**^{km}**, mbtmp2.8**/2**, ML2.5**/2**, Error ellipse: s-maj=26.5km s-min=14.7km az=65.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.22	281	I	I	07 48 10.0	
	baz=100,slow=325,SNR=2.7						
ZALV	Zalesovo Beam	1.22	281	Pg	Pg	07 40 44.3	-1.1
	1.5nm,0.3s,baz=99,slow=13,SNR=22						
ZALV				Lg	Lg	07 41 02.0	
	1.1nm,0.3s,baz=102,slow=27,SNR=5.4						
KURBB	Kurchatov Arra	5.98	242	Pn	Pn	07 41 53.1	+1.3
	0.1nm,0.3s,baz=56,slow=13,SNR=2.8						
	0.3nm,0.3s						
MKAR	Makanchi Array	7.53	205	Pn	Pn	07 42 14.3	+1.2
	0.1nm,0.3s,baz=23,slow=13,SNR=8.7						
	0.2nm,0.3s						

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*NEIC **10** 07:49:34.7±1.2, 9°.0N±0°.1×57°.65E±0°.05, h10^{km}±1^{km}, mb4.5/20, Error ellipse: s-maj=19.0km s-min=6.9km az=162.0*

*IDC **10** 07:49:37.0±0.9, 9°.56N×57°.96E, h0^{km}, mb4.0/19, mbtmp4.0/19, MS3.3/26, Error ellipse: s-maj=25.2km s-min=17.2km az=32.0*

ISC 10 07:49:37.0±0.8**, 9°.4N**±0°.1×**57°.9E**±0°.1**, h10**^{km}**, n65, σ1^{s}.55**/48**, mb4.2**/28**, MS3.3**/26**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UOSS	Minazif	15.55	354		P	07 53 18.6	-2.3
KAAM	Kaadhehdhoo	17.47	120	Pn	Pn	07 53 36.6	-4.4
RAYN	Ar Rayn	18.36	321		Pn	07 53 50.5	-1.5
PALK	Pallekele	22.71	94	LR	LR	08 01 14.6	
	comp=Z,61nm,20.5s,baz=264,slow=31						
EIL	Elat	29.43	316	LR	LR	08 07 53.4	
	comp=Z,29nm,18.2s,baz=228,slow=37						
GNI	Garni	32.78	341	LR	LR	08 10 49.8	
	comp=Z,63nm,18.5s,baz=162,slow=39						
BRDH	Bariadhala	34.96	64	LR	LR	08 11 30.3	
	comp=Z,75nm,18.0s,baz=201,slow=38						
KK31	Karatay Array	35.36	16	P	P	07 56 34.2	+1.4
KK31				IAmb	IAmb	07 56 41.2	
	comp=Z,3.7nm,0.9s						
KKAR	Karatay Array	35.36	16	P	P	07 56 34.0	+1.2
AAK	Ala-Archa	36.19	21	LR	LR	08 12 26.8	
	comp=Z,51nm,19.3s,baz=210,slow=38						
KBZ	Khabaz	36.61	342	P	P	07 56 44.5	+1.1
	comp=Z,1.3nm,0.7s,baz=198,slow=11,SNR=3.9						
KBZ				LR	LR	08 13 00.9	
	comp=Z,52nm,20.8s,baz=169,slow=38						
	comp=Z,1.3nm,0.7s						
BR131	Keskin Array S	37.13	328	P	P	07 56 47.3	-0.8
BRTR	Keskin Array B	37.13	328	P	P	07 56 47.5	-0.7
BRTR	Keskin Array B	37.13	328	P	P	07 56 49.8	+1.6
	comp=Z,1.2nm,0.8s,baz=153,slow=8.3,SNR=6.8						
	comp=Z,1.2nm,0.8s						
ILGA	Ilgaz	38.09	330	P	P	07 56 55.9	-0.4
ILGA				IAmb	IAmb	07 57 10.1	
	comp=Z,8.4nm,1.0s						
LSZ	Lusaka	38.27	230	LR	LR	08 11 57.4	
	comp=Z,52nm,19.0s,baz=154,slow=35						
MANT	Manisa	39.12	323	P	P	07 57 01.9	-3.2
MANT				IAmb	IAmb	07 57 02.2	
	comp=Z,7.8nm,0.9s						
IDI	Anoyia	39.60	316	P	P	07 57 06.3	-2.6
AB31	Akbulak array	39.78	2		P	07 57 10.6	+0.5
AB31				IAmb	IAmb	07 57 18.7	
	comp=Z,14nm,1.1s						
ABKAR	Akbulak array	39.78	2		P	07 57 10.7	+0.6
CMAR	Chiang Mai Arr	40.81	73	P	P	07 57 21.1	+2.0
	comp=Z,1.3nm,0.3s,baz=260,slow=8.0,SNR=6.9						
CMAR				LR	LR	08 13 11.0	
	comp=Z,8.5nm,19.5s,baz=245,slow=35						
	comp=Z,1.3nm,0.3s						
AKTO	Aktyubinsk	40.92	0	P	P	07 57 20.2	+0.7
	comp=Z,4.9nm,0.8s,baz=184,slow=8.7,SNR=19						
AKTO				LR	LR	08 16 03.1	
	comp=Z,21nm,18.1s,baz=188,slow=39						
	comp=Z,4.9nm,0.8s						
MAKZ	Makanchi	42.58	25	P	P	07 57 33.6	+0.5
MKAR	Makanchi Array	42.69	25	P	P	07 57 34.1	-0.1
MKAR	Makanchi Array	42.69	25	P	P	07 57 34.3	+0.2
	comp=Z,0.8nm,0.7s,baz=213,slow=6.0,SNR=5.8						
MKAR				PcP	PcP	07 59 26.2	+0.2
	comp=Z,0.3nm,0.6s,baz=250,slow=2.9,SNR=2.8						
MKAR				LR	LR	08 16 50.0	
	comp=Z,21nm,19.6s,baz=208,slow=38						
	comp=Z,0.8nm,0.7s						
BELG	Belogornoye	43.68	351	LR	LR	08 17 54.9	
	comp=Z,27nm,18.8s,baz=259,slow=39						
KURBB	Kurchatov Arra	44.52	19	P	P	07 57 48.9	+0.1
	comp=Z,1.2nm,0.8s,baz=215,slow=8.3,SNR=11						
	comp=Z,1.2nm,0.8s						
BVAR	Borovoye Array	44.68	11	P	P	07 57 50.3	+0.2
	comp=Z,2.0nm,0.7s,baz=188,slow=6.0,SNR=8.4						
BVAR				PcP	PcP	07 59 33.3	+0.8
	comp=Z,1.2nm,0.7s,baz=172,slow=4.4,SNR=4.8						
BVAR				LR	LR	08 18 17.0	
	comp=Z,26nm,18.4s,baz=179,slow=39						
	comp=Z,2.0nm,0.7s						
MLR	Muntele Rosu	45.22	328	LR	LR	08 17 02.8	
	comp=Z,28nm,21.9s,baz=122,slow=36						
LBTB	Lobatse	46.45	222	LR	LR	08 17 22.4	
	comp=Z,54nm,18.5s,baz=71,slow=36						
ARTI	Arti	46.89	0	P	P	07 58 07.8	+0.4
ARTI	Arti	46.89	0	P	P	07 58 07.1	-0.3
	comp=Z,2.7nm,0.6s,baz=259,slow=4.3,SNR=3.9						
ARTI				LR	LR	08 16 34.4	
	comp=Z,24nm,21.0s,baz=175,slow=35						
	comp=Z,2.7nm,0.6s						
BURAR	Bucovina Array	47.03	330	P	P	07 58 08.2	-0.6
BUR08	Bucovina Ar. S	47.06	330	P	P	07 58 07.8	-1.3
BUR08				IAmb	IAmb	07 58 38.0	
	comp=Z,6.8nm,1.5s						
GRTLG	Ghanzi	47.20	229	P	P	07 58 04.3	-6.2
GRTLG				IAmb	IAmb	07 58 23.3	
	comp=Z,9.7nm,1.1s						
AKASG	Malin Array Be	47.48	336	P	P	07 58 12.4	+0.4
	comp=Z,0.2nm,0.4s,baz=155,slow=7.1,SNR=6.6						
AKASG				LR	LR	08 21 14.6	
	comp=Z,16nm,18.5s,baz=42,slow=40						
	comp=Z,0.2nm,0.4s						
AKBB	Malin Array Si	47.48	336	P	P	07 58 11.3	-0.8
AKBB				IAmb	IAmb	07 58 20.0	
	comp=Z,11nm,1.3s						
KIEV	Kiev	47.48	336	P	P	07 58 11.3	-0.8
KIEV				IAmb	IAmb	07 58 20.0	
	comp=Z,8.9nm,1.2s						
BOSA	Boshof	49.18	219	LR	LR	08 18 14.7	
	comp=Z,71nm,18.5s,baz=28,slow=35						
ZAA0	Zalesovo Array	49.41	21		P	07 58 26.6	-0.4
ZAA0				IAmb	IAmb	07 58 34.2	
	comp=Z,4.6nm,0.8s						
ZALV	Zalesovo Beam	49.41	21	P	P	07 58 26.2	-0.8
	comp=Z,3.0nm,0.7s,baz=206,slow=6.4,SNR=7.3						
ZALV				LR	LR	08 20 14.3	
	comp=Z,46nm,20.4s,baz=169,slow=37						
	comp=Z,3.0nm,0.7s						
KIRV	Kirov	49.51	354	LR	LR	08 22 27.9	
	comp=Z,35nm,19.6s,baz=158,slow=40						
VRAC	Vranov	52.55	327	LR	LR	08 24 08.0	
	comp=Z,14nm,18.1s,baz=47,slow=40						
TORD	Torodi Ar. Bea	55.11	279	P	P	07 59 13.2	+3.2
	comp=Z,1.1nm,0.3s,baz=98,slow=5.8,SNR=2.7						
	comp=Z,1.1nm,0.3s						
SONM	Songino Array	55.95	38	P	P	07 59 15.4	-0.2
	comp=Z,0.5nm,0.5s,baz=247,slow=7.5,SNR=5.7						
	comp=Z,0.5nm,0.5s						
FINES	FINESS Array B	56.96	342	P	P	07 59 22.7	+0.3
FINES	FINESS Array B	56.96	342	P	P	07 59 22.5	+0.1
	comp=Z,0.6nm,0.5s,baz=100,slow=7.9,SNR=3.4						
	comp=Z,0.6nm,0.5s						
ECH	Echery	57.41	322	P	P	07 59 23.6	-2.3
ECH				IAmb	IAmb	07 59 34.5	
	comp=Z,2.9nm,1.0s						
HFS	Hagfors	60.35	336	LR	LR	08 28 17.7	
	comp=Z,21nm,19.7s,baz=171,slow=38						
NOA	NORSAR Array B	61.88	336	P	P	07 59 55.9	-0.6
	comp=Z,1.0nm,0.9s,baz=118,slow=7.7,SNR=3.1						
	comp=Z,1.0nm,0.9s						
ESDC	Sonseca Array	62.44	310	P	P	08 00 02.1	+1.5
	comp=Z,1.5nm,0.8s,baz=85,slow=5.2,SNR=11						
	comp=Z,1.5nm,0.8s						
EKA	Eskdalemuir Ar	66.03	327	P	P	08 00 23.7	-0.2
	comp=Z,0.8nm,0.8s,baz=128,slow=8.7,SNR=2.0						
	comp=Z,0.8nm,0.8s						
KSAR	Wonju Array Be	68.51	54	P	P	08 00 40.6	+0.7
KSRS	Korea Array	68.54	54	P	P	08 00 39.8	-0.4
	comp=Z,2.4nm,0.9s,baz=270,slow=7.9,SNR=6.4						
	comp=Z,2.4nm,0.9s						
JNU	Nakatsue	70.74	58	P	P	08 00 53.4	-0.4
USRK	Ussuriysk Ar.	72.15	47	LR	LR	08 33 28.1	
	comp=Z,25nm,20.9s,baz=229,slow=37						
KLR	Kul'dur	72.44	41	LR	LR	08 33 36.4	
	comp=Z,36nm,19.3s,baz=241,slow=36						
TIXI	Tiksi	75.20	18	LR	LR	08 35 55.9	
	comp=Z,34nm,21.9s,baz=236,slow=37						
MJAR	Matsushiro Arr	76.75	55	LR	LR	08 36 11.0	
	comp=Z,27nm,18.8s,baz=210,slow=36						
ASAJ	Asahikawa	79.78	47	LR	LR	08 38 49.3	
	comp=Z,21nm,18.6s,baz=164,slow=37						
WRA	Warramunga Arr	80.68	112	P	P	08 01 52.2	+1.2
	comp=Z,1.5nm,0.9s,baz=295,slow=4.5,SNR=9.2						
	comp=Z,1.5nm,0.9s						
ASAR	Alice Springs	81.18	116	P	P	08 01 54.8	+1.2
	comp=Z,1.6nm,0.8s,baz=290,slow=4.9,SNR=12						
	comp=Z,1.6nm,0.8s						
HOPE	Hope Point	100.08	216		Pdif	08 03 18.2	-4.5
PDAR	Pinedale Array	126.84	348	PKP	PKiKP	08 08 42.8	+0.5
	comp=Z,0.8nm,0.7s,baz=48,slow=2.2,SNR=5.7						
NVAR	Mina Array Bea	132.30	356	PKP	PKiKP	08 08 54.9	+1.6
	comp=Z,0.4nm,0.9s,baz=329,slow=1.8,SNR=3.6						

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*NEIC **10** 07:54:15.0±0.5, 19°.35N±0°.07×68°.17W±0°.04, h10^{km}±2^{km}, ML2.4/20, Md3.2/10(RSPR), Error ellipse: s-maj=11.9km s-min=6.4km az=358.0*

*RSPR **10** 07:54:18.3, 19°.39N×68°.17W, h58^{km}±10^{km}, MD3.2/10*

ISC 10 07:54:17.9±1.8**, 19°.3N**±0°.1×**68°.18W**±0°.06**, h52**^{km}±46^{km}**, n36, σ0^{s}.71**/43**, 11C-1D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMDR	Samana, DR	0.95	267	⇑eP	Pn	07 54 35.1	+0.1
SMDR	Samana, DR	0.95	267	eS	Sn	07 54 48.1	+0.4
IDE	Isla Desecheo	1.16	145		Pn	07 54 37.2	-0.7
IDE	Isla Desecheo	1.16	145	⇓eP	Pn	07 54 37.2	-0.7
DR12	Loma Pena Alta	1.26	244	Pn	Pn	07 54 39.0	-0.3
AGPR	Aguadilla, PR	1.33	130		Pn	07 54 39.6	-0.6
AGPR					Sn	07 54 57.4	+0.5
AGPR				IAML		07 55 06.6	
	comp=N,77nm,2.8s						
AGPR				IAML		07 55 11.0	
	comp=E,80nm,2.4s						
AGPR	Aguadilla, PR	1.33	130	⇑eP	Pn	07 54 39.6	-0.6
AGPR	Aguadilla, PR	1.33	130	eS	Sn	07 54 57.2	+0.3
LSP	Las Mesas	1.55	138		Pn	07 54 43.4	+0.1
LSP					Sn	07 55 02.8	+0.5
LSP	Las Mesas	1.55	138	⇑eP	Pn	07 54 43.4	+0.1
LSP	Las Mesas	1.55	138	eS	Sn	07 55 02.8	+0.5
CRPR	Cabo Rojo, PR	1.67	142		Pn	07 54 43.8	-1.0
CRPR					Sn	07 55 05.0	-0.1
CRPR				IAML		07 55 42.5	
	comp=N,33nm,2.6s						
CRPR	Cabo Rojo, PR	1.67	142	⇑eP	Pn	07 54 45.0	+0.2
CRPR	Cabo Rojo, PR	1.67	142	eS	Sn	07 55 04.7	-0.3
AOPR	Arecibo Observ	1.67	126		Pn	07 54 43.5	-1.4
AOPR					Sn	07 55 05.6	+0.4
AOPR				IAML		07 55 12.8	
	comp=N,31nm,0.3s						
AOPR				IAML		07 55 19.5	
	comp=E,53nm,0.3s						
AOPR	Arecibo Observ	1.67	126	⇑eP	Pn	07 54 43.5	-1.4
AOPR	Arecibo Observ	1.67	126	eS	Sn	07 55 05.0	-0.3
MLPR	Magueyes Islan	1.74	141	⇑eP	Pn	07 54 46.5	+0.8
MLPR	Magueyes Islan	1.74	141	eS	Sn	07 55 07.6	+0.9
UUPR	Utuado, UPR, P	1.75	128		Pn	07 54 45.8	-0.2
UUPR					Sn	07 55 07.6	+0.4
UUPR	Utuado, UPR, P	1.75	128	⇑eP	Pn	07 54 46.0	0.0
UUPR	Utuado, UPR, P	1.75	128	eS	Sn	07 55 08.6	+1.4
SDD	Santo Domingo	1.86	242	Pn	Pn	07 54 46.6	-0.8
CELP	Cerrillos	1.97	129		Pn	07 54 49.3	+0.4
CELP					Sn	07 55 13.6	+1.1
CELP				IAML		07 55 18.5	
	comp=N,21nm,0.4s						
CELP				IAML		07 55 37.6	
	comp=E,21nm,2.8s						
CELP	Cerrillos	1.97	129	⇑eP	Pn	07 54 47.9	-1.1
CELP	Cerrillos	1.97	129	eS	Sn	07 55 12.9	+0.4
OBIP	Obispado Ponce	1.97	131	Pn	Pn	07 54 48.3	-0.6
ECPR	Experimental S	2.00	120	⇑eP	Pn	07 54 49.3	0.0
ECPR	Experimental S	2.00	120	eS	Sn	07 55 12.8	-0.4
PDPR	Patillas Dam,	2.43	122	Pn	Pn	07 54 53.8	-1.5
PDPR	Patillas Dam,	2.43	122	⇑eP	Pn	07 54 55.7	+0.4
PDPR	Patillas Dam,	2.43	122	eS	Sn	07 55 24.6	+0.8
HUMP	Col San Antoni	2.51	118		Pn	07 54 55.6	-0.6
HUMP				IAML		07 55 18.2	
	comp=N,13nm,1.9s						
HUMP					Sn	07 55 26.2	+0.5
HUMP				IAML		07 55 52.9	
	comp=E,14nm,2.5s						
HUMP	Col San Antoni	2.51	118	⇑eP	Pn	07 54 56.9	+0.6

HUMP	Col San Antoni	2.51	118	*e*S	Sn	07 55 26.0	+0.3
SDDR	Presa de Saban	2.96	264	Pn	Pn	07 55 02.2	-0.3
SDDR				IAML		07 55 56.0	
	comp=E,13nm,1.6s						

*ASRS **10** 07:59:39.0±0.9, 53°.93N×86°.62E, h0^{km}, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 10 07:59:44.0±2.6**, 53°.92N×86°.52E, h0^{km}, mbtmp2.8**/2**, ML2.6**/2**, Error ellipse: s-maj=21.6km s-min=12.7km az=62.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.01	273	I	I	08 06 40.0	
	baz=89,slow=321,SNR=5.8						
ZALV	Zalesovo Beam	1.01	272	Pg	Pg	08 00 02.5	-0.8
	0.8nm,0.3s,baz=92,slow=20,SNR=7.4						
ZALV				Lg	Lg	08 00 17.4	
	2.4nm,0.3s,baz=94,slow=27,SNR=12						
KURBB	Kurchatov Arra	5.91	239	Pn	Pn	08 01 14.1	+1.3
	0.1nm,0.3s,baz=55,slow=13,SNR=5.3						
	0.5nm,0.4s						
MKAR	Makanchi Array	7.63	202	Pn	Pn	08 01 37.1	+0.8
	0.2nm,0.3s,baz=24,slow=11,SNR=7.1						
MKAR				Lg	Lg	08 03 44.3	
	0.1nm,0.3s,baz=16,slow=32,SNR=3.1						
	0.2nm,0.4s						

*NEIC **10** 07:59:52.0±1.7, 19°.5N±0°.1×68°.07W±0°.02, h10^{km}±2^{km}, ML2.5/16, Md2.3/3(RSPR), Error ellipse: s-maj=19.7km s-min=3.0km az=8.0*

*RSPR **10** 07:59:57.9, 19°.38N×68°.14W, h37^{km}±13^{km}, MD2.3/3*

ISC 10 07:59:51.9±1.5**, 19°.5N**±0°.1×**68°.08W**±0°.04**, h21^{km}, n25,** σ**1^{s}.46**/29**, 2C, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMDR	Samana, DR	1.06	260	⇑*e*P	Pn	08 00 14.0	+2.4
SMDR	Samana, DR	1.06	260	*e*S	Sn	08 00 27.4	+1.6
HIDR	Higuey Centro	1.07	214	⇑*e*P	Pn	08 00 10.7	-1.0
HIDR	Higuey Centro	1.07	214	*e*S	Sn	08 00 24.2	-1.7
IDE	Isla Desecheo	1.23	152	*e*S	Sn	08 00 30.5	+0.6
AGPR	Aguadilla, PR	1.36	138	Pn	Pb	08 00 17.2	+0.5
AGPR				IAML		08 00 29.8	
	comp=E,72nm,2.2s						
AGPR				Sn	Sb	08 00 35.6	+1.9
AGPR				IAML		08 00 44.8	
	comp=N,80nm,2.6s						
AGPR	Aguadilla, PR	1.36	138	*e*S	Sb	08 00 34.8	+1.1
DR12	Loma Pena Alta	1.41	241	Pn	Pb	08 00 18.6	+1.1
DR12				Sn	Sb	08 00 36.3	+1.2
LSP	Las Mesas	1.60	144	*e*S	Sb	08 00 41.2	+0.5
AOPR	Arecibo Observ	1.69	132	Pn	Pb	08 00 23.3	+1.0
AOPR				Sn	Sb	08 00 43.2	+0.2
AOPR				IAML		08 00 49.6	
	comp=E,44nm,0.7s						
AOPR	Arecibo Observ	1.69	132	*e*S	Sb	08 00 43.3	+0.2
CRPR	Cabo Rojo, PR	1.73	148	*e*S	Sb	08 00 44.0	-0.3
EMPR	Esperanza - Ma	1.77	124	Pn	Pb	08 00 22.6	-1.1
EMPR				Sn	Sb	08 00 44.5	-1.0
EMPR				IAML		08 01 10.6	
	comp=E,67nm,3.1s						
UUPR	Utuado, UPR, P	1.77	133	*e*S	Sb	08 00 45.5	0.0
MLPR	Magueyes Islan	1.79	147	*e*S	Sb	08 00 45.7	-0.5
CELP	Cerrillos	1.99	134	*e*S	Sb	08 00 50.5	-1.4
ECPR	Experimental S	2.00	125	*e*S	Sb	08 00 51.5	-0.4
SDD	Santo Domingo	2.01	240	Pn	Pb	08 00 27.7	0.0
SDD				IAML		08 00 38.9	
	comp=E,51nm,2.5s						
GCPR	Guaynabo City	2.22	121	*e*S	Sb	08 00 58.6	+0.2
SJG	San Juan	2.28	126	Pn	Pn	08 00 29.2	+0.9
SJG				IAML		08 01 41.4	
	comp=E,18nm,0.3s						
BANI	BANI	2.41	244	Pn	Pb	08 00 32.3	-2.3
PDPR	Patillas Dam,	2.43	126	Pn	Pb	08 00 33.3	-1.7
PDPR	Patillas Dam,	2.43	126	*e*S	Sb	08 01 02.5	-2.0
SDDR	Presa de Saban	3.07	261	Pn	Pb	08 00 42.1	-3.8
SDDR				IAML		08 01 40.9	
	comp=E,14nm,3.2s						
SDDR				IAML		08 02 25.4	
	comp=E,10nm,2.5s						
PAPH	Port-au-Prince	4.10	257	Pn	Pn	08 00 54.5	+1.1

IDC 10 08:06:32.8±2.1**, 3°.82S×145°.95E, h0^{km}, mb3.4**/2**, mbtmp3.4**/3**, ML3.8**/1**, MS3.2**/1**, Error ellipse: s-maj=272.0km s-min=31.2km az=119.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	19.62	214	P	P	08 11 02.7	-0.3
	0.3nm,0.3s,baz=38,slow=10,SNR=19						
	0.9nm,0.8s						
ASAR	Alice Springs	22.91	209	P	P	08 11 38.4	-0.1
	0.9nm,0.6s,baz=39,slow=8.2,SNR=12						
	0.9nm,0.6s						
KAPI	Kappang	26.15	266	LR	LR	08 22 35.9	
	comp=Z,48nm,19.7s,baz=210,slow=37						
ILAR	Eielson Array	83.91	23	P	P	08 19 04.6	+0.3
	0.3nm,0.7s,baz=257,slow=3.6,SNR=2.9						
	0.3nm,0.7s						

*ASRS **10** 08:15:17.0±1.0, 53°.72N×88°.17E, h0^{km}, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 10 08:15:19.6±3.7**, 53°.65N×88°.05E, h0^{km}, mbtmp2.5**/2**, ML2.1**/2**, Error ellipse: s-maj=36.8km s-min=20.4km az=50.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.94	280	I	I	08 27 40.0	
	0.1nm,1.0s,baz=95,slow=325,SNR=6.6						
ZALV	Zalesovo Beam	1.94	280	Pn	Pn	08 15 54.4	+0.6
	0.5nm,0.3s,baz=98,slow=12,SNR=11						
ZALV				Lg	Lg	08 16 20.9	
	0.8nm,0.3s,baz=101,slow=23,SNR=6.7						
KURBB	Kurchatov Arra	6.60	246	Pn	Pn	08 16 58.4	+0.5
	baz=63,slow=15,SNR=3.6						
	0.5nm,0.7s						
MKAR	Makanchi Array	7.80	211	Pn	Pn	08 17 15.2	+0.9
	baz=27,slow=13,SNR=2.5						
	0.1nm,0.5s						

*TEH **10** 08:21:53.0, 33°.65N×45°.53E, h8^{km}±22^{km}*

*IDC **10** 08:21:55.8±2.1, 33°.77N×45°.45E, h0^{km}, mb3.7/6, mbtmp3.8/6, MS2.6/3, Error ellipse: s-maj=50.1km s-min=26.5km az=162.0*

*ISN **10** 08:21:56.7±0.6, 33°.68N×45°.68E, h12^{km}±2^{km}, ML3.5*

ISC 10 08:21:57.0±0.7**, 33°.70N**±0°.03×**45°.67E**±0°.04**, h13^{km}, n31,** σ**1^{s}.08**/32**, mb3.8**/4**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILBA	Ilam Banvizeh	0.46	99	Pg	Pg	08 22 05.0	-1.1
GLG1	Gilan-e-Gharb	0.46	26	Pg	Pg	08 22 04.7	-1.5
IBDR	Badra	0.62	159	*e*Pg	Pg	08 22 09.0	-0.2
IBDR				*e*Sg	Sg	08 22 17.0	-0.5
IGHG	Ghaleghazi	0.98	50	Pg	Pb	08 22 15.1	-0.9
BHD	Baghdad	1.16	249	*e*Pg	Pg	08 22 19.0	-0.3
BHD				*e*Sg	Sn	08 22 35.0	+0.4
BHD				AML	AML	08 22 46.1	
	comp=E,2μm,0.2s						
IDHR	Dehrash	1.16	31	Pg	Pb	08 22 18.0	-1.1
KCHF	Cheshme Sefid,	1.28	63	Pg	Pb	08 22 21.2	+0.2
ILIN	Lien	1.62	41	Pg	Pb	08 22 27.0	0.0
IKFM	Kafar-mosalman	1.83	95	Pn	Pb	08 22 29.3	-0.9
IBZA	Bozab	1.98	66	Pn	Pb	08 22 31.9	-1.1
SNQR	Sonqor, Kerman	1.99	54	Pn	Pb	08 22 32.3	-1.0
RAFI	Al-Rafai	2.00	169	*e*Pn	Pb	08 22 32.0	-1.3
RAFI				*e*Sn	Sb	08 22 58.0	-0.1
RAFI				AML	AML	08 23 04.5	
	comp=E,256nm,0.4s						
RAFI				AML	AML	08 23 14.5	
	comp=N,272nm,0.4s						
IKRK	Kirkuk	2.02	328	*e*Pn	Pb	08 22 33.0	-0.6
IKRK				*e*Sn	Sb	08 22 59.0	+0.3
IKRK				AML	AML	08 23 09.2	
	comp=N,750nm,0.8s						
IKRK				AML	AML	08 23 13.7	
	comp=E,866nm,1.0s						
IDOB	Doab	2.09	87	Pn	Pn	08 22 32.2	+0.2
HSAM	Samen	2.49	77	Pn	Pn	08 22 38.4	+0.9
MAHB	Mahabad	3.06	1	Pn	Pn	08 22 45.5	+0.3
HAGD	Aghdareh	3.09	68	Pn	Pn	08 22 46.8	+1.2
HGHA	Hamedan- Ghaye	3.18	55	Pn	Pn	08 22 48.3	+1.3
QABG	Abgarm-Qazvin	3.80	57	Pn	Pn	08 22 56.8	+1.3
IKLH	Kolahrood	4.95	93	Pn	Pn	08 23 11.8	+0.4
KRSH	Karshahi	5.39	85	Pn	Pn	08 23 18.5	+1.3
ISFB	Sefidab	5.50	81	Pn	Pn	08 23 19.9	+1.2
GNI	Garni	6.48	354	LR	LR	08 26 35.1	
	comp=E,23nm,20.6s,baz=252,slow=44						
ASF	Jabal al Asfar	7.53	261	LR	LR	08 26 32.1	
	comp=E,32nm,18.9s,baz=174,slow=38						
AKASG	Malin Array Be	20.83	330	P	P	08 26 37.0	-1.2
	comp=E,0.3nm,0.2s,baz=141,slow=10,SNR=6.1						
	comp=E,0.3nm,0.2s						
AAK	Ala-Archa	24.27	60	LR	LR	08 38 04.3	
	comp=E,36nm,18.7s,baz=150,slow=40						
BVAR	Borovoye Array	26.16	35	P	P	08 27 34.0	+3.1
	comp=E,0.6nm,0.5s,baz=248,slow=11,SNR=2.8						
	comp=E,0.6nm,0.5s						
MKAR	Makanchi Array	30.57	54	P	P	08 28 11.7	+1.3
	comp=E,0.6nm,0.5s,baz=250,slow=10,SNR=7.8						
	comp=E,0.6nm,0.5s						
HFS	Hagfors	33.69	331	P	P	08 28 36.6	-0.9
	comp=E,0.9nm,0.5s,baz=123,slow=10,SNR=3.7						
	comp=E,0.9nm,0.5s						
ZALV	Zalesovo Beam	34.15	42	P	P	08 28 41.8	+0.2
	comp=E,0.5nm,0.3s,baz=242,slow=9.3,SNR=1.7						
	comp=E,0.5nm,0.3s						
TORD	Torodi Ar. Bea	44.83	254	P	P	08 30 10.7	-0.3
	comp=E,0.6nm,0.3s,baz=57,slow=6.2,SNR=1.3						
	comp=E,0.6nm,0.3s						

*ASRS **10** 08:25:50.0±1.0, 53°.77N×88°.24E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 10 08:25:50.7±3.6**, 53°.84N×88°.21E, h0^{km}, mbtmp2.8**/3**, ML2.4**/3**, Error ellipse: s-maj=35.8km s-min=20.5km az=47.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	2.01	275	I	I	08 38 10.0	
	0.1nm,0.8s,baz=92,slow=328,SNR=26						
ZALV	Zalesovo Beam	2.01	275	Pn	Pn	08 26 26.6	+0.7
	1.3nm,0.3s,baz=91,slow=19,SNR=4.2						
ZALV				Lg	Lg	08 26 54.5	
	3.8nm,0.3s,baz=89,slow=25,SNR=10						
	2.2nm,0.3s						
KURBB	Kurchatov Arra	6.76	245	Pn	Pn	08 27 31.4	+0.3
	0.1nm,0.3s,baz=62,slow=14,SNR=5.1						
	0.6nm,0.4s						
MKAR	Makanchi Array	8.00	211	Pn	Pn	08 27 49.2	+1.0
	0.1nm,0.3s,baz=29,slow=12,SNR=4.7						
	0.2nm,0.4s						

IDC 10 08:26:27.9±1.2**, 25°.13N×97°.12E, h0^{km}, mb3.6**/4**, mbtmp3.6**/5**, MS2.6**/1**, Error ellipse: s-maj=59.3km s-min=17.4km az=69.0, Myanmar-China border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	6.85	165	Pn	Pn	08 28 08.2	-1.6
	1.5nm,0.3s,baz=342,slow=13,SNR=6.6						
CMAR				Pg	Pb	08 28 32.3	+4.3
	0.4nm,0.3s,baz=338,slow=17,SNR=16						
CMAR				Lg	Lg	08 30 02.5	
	1.9nm,0.3s,baz=349,slow=28,SNR=5.8						
CMAR				LR	LR	08 30 59.4	
	comp=Z,46nm,19.6s,baz=295,slow=40						
MKAR	Makanchi Array	24.64	335	P	P	08 31 48.3	-2.0
	1.3nm,0.7s,baz=142,slow=10,SNR=11						
	1.3nm,0.7s						
ZALV	Zalesovo Beam	30.21	346	P	P	08 32 41.6	+1.6
	0.8nm,0.4s,baz=151,slow=6.6,SNR=1.4						
	0.8nm,0.4s						
WRA	Warramunga Arr	57.60	138	P	P	08 36 20.0	+0.1
	0.4nm,0.8s,baz=318,slow=6.9,SNR=1.5						
	0.4nm,0.8s						
ASAR	Alice Springs	60.20	141	P	P	08 36 39.2	+1.3
	0.3nm,0.7s,baz=321,slow=6.8,SNR=5.6						
	0.3nm,0.7s						

IDC 10 08:52:09.3±57.0**, 16°.22S×177°.08W, h0^{km}, mb3.8**/3**, mbtmp3.8**/3**, Error ellipse: s-maj=1061.0km s-min=179.5km az=77.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	40.56	240	P	P	08 59 50.5	-0.2
	2.0nm,1.0s,baz=104,slow=8.3,SNR=1.2						
	2.0nm,1.0s						
WRA	Warramunga Arr	46.21	258	P	P	09 00 36.7	+0.2
	0.2nm,0.5s,baz=91,slow=7.5,SNR=6.6						
	0.2nm,0.5s						
ASAR	Alice Springs	46.49	253	P	P	09 00 38.3	-0.4
	2.3nm,0.6s,baz=89,slow=7.8,SNR=50						
	2.3nm,0.6s						

IDC 10 08:52:17.2±48.0**, 15°.88S×175°.74W, h0^{km}, mb3.9**/3**, mbtmp3.9**/3**, Error ellipse: s-maj=907.3km s-min=164.6km az=78.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	41.85	240	P	P	09 00 09.4	+0.3
	2.9nm,1.0s,baz=72,slow=8.0,SNR=6.5						
	2.9nm,1.0s						
WRA	Warramunga Arr	47.54	257	P	P	09 00 54.2	-0.6
	0.2nm,0.3s,baz=94,slow=7.7,SNR=11						
	0.2nm,0.3s						
ASAR	Alice Springs	47.82	252	P	P	09 00 56.9	-0.1
	2.2nm,0.6s,baz=89,slow=8.0,SNR=21						
	2.2nm,0.6s						

*NEIC **10** 08:59:30.3±1.5, 19°.68N±0°.08×68°.03W±0°.04, h10^{km}±2^{km}, ML3.0/32, Md3.0/12(RSPR), Error ellipse: s-maj=14.6km s-min=6.5km az=12.0*

*OSPL **10** 08:59:33.3±1.9, 19°.50N×68°.04W, h0^{km}±15^{km}, ML2.8*

*SDD **10** 08:59:33.4±2.4, 19°.42N×68°.09W, h23^{km}±112^{km}, MD3.5, ML2.9, MW3.3*

*RSPR **10** 08:59:35.3, 19°.50N×68°.10W, h65^{km}±8^{km}, MD3.0/12*

ISC 10 08:59:31.9±2.1**, 19°.41N**±0°.06×**68°.10W**±0°.03**, h8^{km}**±14^{km}**, n64,** σ**0^{s}.93**/85**, 35C-2D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCDR	Punta Cana, DR	0.93	197	⇑*e*Sg	Sg	09 00 01.1	-0.8
PCDR				IAML		09 00 11.3	
	comp=N,218nm,0.8s						
MIDR	Miches	0.99	245	⇓*e*Pg	Pb	08 59 51.1	-0.3
MIDR				⇑*e*Sg	Sg	09 00 05.2	+1.2
MIDR				IAML		09 00 06.7	
	comp=N,152nm,0.3s						
HIDR	Higuey Centro	1.00	216	⇑*e*Pg	Pb	08 59 49.9	-1.7
HIDR				⇑*e*Sg	Sb	09 00 03.6	-1.4
HIDR				IAML		09 00 04.0	
	comp=N,364nm,0.3s						
SMDR	Samana, DR	1.04	264	⇓*e*P	Pb	08 59 52.6	+0.4
SMDR	Samana, DR	1.04	264	*e*S	Sn	09 00 07.8	+0.3
SMDR	Samana, DR	1.04	264	⇑*e*Pg	Pb	08 59 52.4	+0.2
SMDR				IAML		09 00 09.1	
	comp=N,196nm,0.3s						
IDE	Isla Desecheo	1.18	150	⇑*e*P	Pn	08 59 52.4	-2.3
AGPR	Aguadilla, PR	1.32	135		Pn	08 59 57.0	+0.3
AGPR					Sn	09 00 15.0	+0.4
AGPR				IAML		09 00 18.9	
	comp=N,217nm,0.2s						
AGPR	Aguadilla, PR	1.32	135	⇑*e*P	Pn	08 59 57.1	+0.3
AGPR	Aguadilla, PR	1.32	135	⇑*e*Pg	Pn	08 59 55.3	-1.5
AGPR				⇑*e*Sg	Sb	09 00 14.5	+0.3
AGPR				IAML		09 00 18.9	
	comp=N,214nm,0.2s						
AGPR	Aguadilla, PR	1.32	135	*i* P	Pn	08 59 56.6	-0.2
AGPR				*e*S	Sn	09 00 15.0	+0.4
AGPR				IAML		09 00 19.0	
	comp=Z,124nm,0.2s						
DR12	Loma Pena Alta	1.36	243		Pn	08 59 57.3	0.0
HATOM	Hato Mayor del	1.36	243	⇑*e*Pg	Pn	08 59 56.9	-0.5
HATOM				⇑*e*Sg	Sg	09 00 16.4	+0.6
HATOM				IAML		09 00 16.4	
	comp=N,148nm,0.5s						
PRSN	Puerto Rico Se	1.49	143		Pn	08 59 59.5	+0.5
LSP	Las Mesas	1.56	142		Pn	09 00 00.5	+0.5
LSP					Sn	09 00 20.4	-0.1
LSP	Las Mesas	1.56	142	⇑*e*P	Pn	09 00 00.5	+0.5
LSP	Las Mesas	1.56	142	*e*S	Sn	09 00 20.4	-0.1
AOPR	Arecibo Observ	1.66	130		Pn	09 00 01.7	+0.4
AOPR					Sb	09 00 24.0	+0.2
AOPR				IAML		09 00 28.4	
	comp=N,188nm,0.3s						
AOPR	Arecibo Observ	1.66	130	⇑*e*P	Pn	09 00 01.5	+0.2
AOPR	Arecibo Observ	1.66	130	*e*S	Sb	09 00 23.9	+0.1
AOPR	Arecibo Observ	1.66	130	⇑*e*Pg	Pn	09 00 01.5	+0.2
AOPR				⇑*e*Sg	Sb	09 00 23.9	+0.1
AOPR				IAML		09 00 28.3	
	comp=N,178nm,0.2s						
NADR	Nagua	1.66	268	⇑*e*Pg	Pb	09 00 02.6	-0.2
NADR				IAML		09 00 28.3	
	comp=N,460nm,0.7s						
CRPR	Cabo Rojo, PR	1.68	146		Pn	09 00 02.8	+1.2
CRPR					Sb	09 00 25.4	+0.9
CRPR	Cabo Rojo, PR	1.68	146	⇑*e*P	Pn	09 00 02.5	+0.8
CRPR	Cabo Rojo, PR	1.68	146	*e*S	Sb	09 00 24.9	+0.4
CRPR	Cabo Rojo, PR	1.68	146	⇑*e*Pg	Pn	09 00 02.5	+0.8
CRPR				⇑*e*Sg	Sb	09 00 24.9	+0.4
CRPR				IAML		09 00 31.9	
	comp=N,51nm,0.8s						
CRPR	Cabo Rojo, PR	1.68	146	*i* P	Pn	09 00 02.5	+0.8
CRPR				IAML		09 00 29.2	
	comp=Z,133nm,0.5s						
UUPR	Utuado, UPR, P	1.74	131		Pn	09 00 03.3	+0.8
UUPR					Sb	09 00 26.2	0.0
UUPR	Utuado, UPR, P	1.74	131	⇑*e*P	Pn	09 00 03.4	+0.9
UUPR	Utuado, UPR, P	1.74	131	*e*S	Sn	09 00 24.0	-0.9
MLPR	Magueyes Islan	1.75	145	⇑*e*P	Pn	09 00 03.6	+1.1
MLPR	Magueyes Islan	1.75	145	*e*S	Sn	09 00 25.9	+0.8
MLPR	Magueyes Islan	1.75	145	⇑*e*Pg	Pn	09 00 03.4	+0.9
MLPR				⇑*e*Sg	Sb	09 00 27.2	+0.8
MLPR				IAML		09 00 32.5	
	comp=N,20nm,0.5s						
EMPR	Esperanza - Ma	1.75	122		Pn	09 00 02.5	-0.1
EMPR					Sn	09 00 25.4	+0.2
EMPR	Esperanza - Ma	1.75	122	⇑*e*P	Pn	09 00 03.2	+0.6
EMPR	Esperanza - Ma	1.75	122	*e*S	Sb	09 00 26.9	+0.5
DR08	Loma La Naviza	1.87	257	⇑*e*Pg	Pn	09 00 05.7	+1.3
DR08				⇑*e*Sg	Sb	09 00 31.1	+1.0
DR08				IAML		09 00 39.4	
	comp=N,2μm,0.2s						
CELP	Cerrillos	1.96	132		Pn	09 00 06.4	+0.9
CELP					Sb	09 00 31.9	-0.6
CELP				IAML		09 00 34.5	
	comp=N,129nm,0.5s						
CELP				IAML		09 00 36.9	
	comp=E,78nm,0.4s						
CELP	Cerrillos	1.96	132	⇑*e*P	Pn	09 00 06.4	+0.9
CELP	Cerrillos	1.96	132	*e*S	Sn	09 00 30.4	+0.2
CELP	Cerrillos	1.96	132	⇑*e*Pg	Pn	09 00 06.4	+0.9
CELP				⇑*e*Sg	Sb	09 00 32.6	+0.1
CELP				IAML		09 00 34.6	
	comp=N,128nm,0.2s						
OBIP	Obispado Ponce	1.96	134		Pn	09 00 06.4	+0.9
OBIP				IAML		09 00 34.4	
	comp=E,70nm,0.4s						
OBIP				IAML		09 00 35.6	
	comp=N,109nm,0.6s						
SDD	Santo Domingo	1.96	241		Pb	09 00 07.3	-0.7
SDD				IAML		09 00 22.3	
	comp=N,66nm,2.4s						
SDD					Sn	09 00 31.0	+0.7
SDD				IAML		09 00 47.8	
	comp=E,70nm,1.8s						
SDD	Santo Domingo	1.96	241	⇑*e*P	Pb	09 00 07.3	-0.7
SDD	Santo Domingo	1.96	241	*e*S	Sn	09 00 30.8	+0.5
SDD	Santo Domingo	1.96	241	*i* P	Pb	09 00 07.1	-0.8
SDD				*e*S	Sb	09 00 31.8	-0.9
ECPR	Experimental S	1.97	123	⇑*e*P	Pn	09 00 06.4	+0.7
ECPR	Experimental S	1.97	123	*e*S	Sn	09 00 31.7	+1.2
GCPR	Guaynabo City	2.20	120	Pn	Pn	09 00 07.9	-0.9
SJG	San Juan	2.25	125	Pn	Pn	09 00 09.7	+0.2
SJG				IAML		09 00 44.3	
	comp=E,58nm,0.5s						
SJG				IAML		09 00 45.1	
	comp=E,73nm,0.3s						
SJG	San Juan	2.25	125	*i* P	Pn	09 00 09.8	+0.2
SJG				*e*S	Sn	09 00 38.3	+0.8
SJG				IAML		09 00 42.8	
	comp=Z,35nm,0.3s						
BANI	BANI	2.37	245	Pn	Pn	09 00 11.5	+0.2
IGPR	InterUniversit	2.37	127	Pn	Pn	09 00 10.2	-1.0
IGPR				IAML		09 00 46.2	
	comp=N,79nm,0.3s						
IGPR				IAML		09 00 46.8	
	comp=E,74nm,0.3s						
PDPR	Patillas Dam,	2.41	125	Pn	Pn	09 00 11.5	-0.1
PDPR	Patillas Dam,	2.41	125	⇑*e*P	Pn	09 00 12.9	+1.2
PDPR	Patillas Dam,	2.41	125	*e*S	Sn	09 00 39.3	-2.0
ABDR	Alto Bandera	2.46	256	⇑*e*Sg	Sb	09 00 45.8	-1.6
ABDR				IAML		09 01 00.5	
	comp=N,40nm,0.2s						
HUMP	Col San Antoni	2.48	120	Pn	Pn	09 00 11.3	-1.3
HUMP	Col San Antoni	2.48	120	⇑*e*P	Pn	09 00 13.7	+1.1
HUMP	Col San Antoni	2.48	120	*e*S	Sn	09 00 43.5	+0.5
SC01	Santiago de lo	2.48	271	Pn	Pn	09 00 11.7	-1.0
SC01				IAML		09 01 06.8	
	comp=N,77nm,1.2s						
SC01				IAML		09 01 10.6	
	comp=E,58nm,0.7s						
SDDR	Presa de Saban	3.04	262		Pn	09 00 23.0	+2.5
SDDR				IAML		09 01 16.8	
	comp=E,40nm,0.8s						
SDDR				IAML		09 01 22.3	
	comp=E,33nm,0.8s						
SDDR	Presa de Saban	3.04	262	*i* P	Pn	09 00 23.1	+2.6
SDDR				IAML		09 01 15.5	
	comp=Z,25nm,1.1s						
GRTK	Grand Turk	3.53	307	*i* P	Pn	09 00 26.3	-0.8
GRTK				⇑*e*S	Sn	09 01 07.7	-1.4
GRTK				IAML		09 01 15.3	
	comp=Z,22nm,1.4s						

*KRSC **10** 09:00:29.6±1.7, 54°.23N×168°.89E, h42^{km}±46^{km}, Ml5.1*

*BJI **10** 09:00:30.7, 54°.59N×169°.18E, h27^{km}, mB5.0/14, mb4.7/42, Ms4.8/32, Ms7 4.5/33*

*IDC **10** 09:00:30.0±0.5, 54°.46N×168°.90E, h0^{km}, mb4.4/34, mbtmp4.4/38, ML3.6/3, MS4.1/36, Error ellipse: s-maj=14.3km s-min=9.7km az=170.0*

*NEIC **10** 09:00:32.0±1.9, 54°.29N±0°.10×169°.0E±0°.1, h10^{km}±1^{km}, mb4.8/375, Error ellipse: s-maj=16.2km s-min=9.9km az=186.0*

*MOS **10** 09:00:33.5±0.9, 54°.32N×168°.77E, h40^{km}, mb4.8/30, MS3.9/9, Error ellipse: s-maj=6.1km s-min=4.9km az=25.2*

*GCMT **10** 09:00:36.0±0.2, 54°.46N±0°.01×168°.85E±0°.02, h20^{km}±1^{km}, MW5.0/112, Moment Tensor Solution. s39,c50; s112,c161; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.50±.13; $M_{\theta\theta}$-2.95±.10; $M_{\phi\phi}$3.45±.11; $M_{r\theta}$-0.42±.20; $M_{\theta\phi}$-0.29±.09; $M_{\phi r}$-0.80±.19; Best double couple: $M_0$3.32900×10^{16} NP1:ϕ_s132.00000°,δ75.00000°, λ180.00000°. NP2:ϕ_s222.00000°,δ90.00000°,λ15.00000°. Principal axes: T 3.6110, Plg11.0000°, Azm88.0000°; N -0.5670, Plg75.0000°, Azm223.0000°; P -3.0480, Plg11.0000°, Azm356.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 09:00:33.3±0.3**, 54°.23N**±0°.05×**168°.99E**±0°.03**, h25^{km}, n771,** σ**1^{s}.18**/587**, mb4.8**/243**, MS4.2**/50**, 12C-2D, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	2.00	300	PN	Pn	09 01 02.0	-3.5
BKI				S	Sn	09 01 26.1	-3.6
BKI	Bering	2.00	300	*e*P	Pn	09 01 02.0	-3.5
BKI				*e*S	Sn	09 01 26.2	-3.6
SMY	Shemya	3.40	114		Pn	09 01 24.3	-0.5
SMY	Shemya	3.40	114	P	Pn	09 01 23.8	-1.0
SMY	Shemya	3.40	114	PN	Pn	09 01 24.1	-0.7

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SHEM  Shemya Is, Ala     3.41 114   Pn     Pn     09 01 24.2 -0.6
SHEM  Shemya Is, Ala     3.41 114   Pn     Pn     09 01 24.5 -0.2
      1µm,0.6s,baz=2.5,slow=3.4,SNR=186
SHEM                                Sn     Sn     09 02 03.9 -0.4
      95nm,0.3s,baz=327,slow=19,SNR=3.6
KBTR  Krutoberegovo      4.05 302   PN     Pn     09 01 31.1 -2.5
KBTR  Krutoberegovo      4.05 302  eP      Pn     09 01 31.1 -2.5
KBG   Krutoberegovo      4.13 302   PN     Pn     09 01 32.6 -2.0
KBG                                 S      Sn     09 02 22.9 +0.8
KBG   Krutoberegovo      4.13 302  eP      Pn     09 01 32.7 -2.0
KBG                                eS      Sn     09 02 23.0 +0.8
MKZ   Mys Kozlova        4.25 277   PN     Pn     09 01 35.2 -1.2
MKZ                                 S      Sn     09 02 21.5 -3.7
MKZ   Mys Kozlova        4.25 277  eP      Pn     09 01 35.3 -1.2
MKZ                                eS      Sn     09 02 21.6 -3.7
SMKR  Semkarok           4.89 302   PN     Pn     09 01 43.8 -1.4
SMKR  Semkarok           4.89 302  eP      Pn     09 01 43.9 -1.4
BZGR  Bezymyannyi-Gr     5.06 293   PN     Pn     09 01 48.6 +1.0
BZGR  Bezymyannyi-Gr     5.06 293  eP      Pn     09 01 48.6 +1.0
TUMD  Tumrok D           5.07 285   PN     Pn     09 01 46.8 -0.9
TUMD  Tumrok D           5.07 285  eP      Pn     09 01 46.9 -0.9
TUMD                               eS      Sn     09 02 41.0 -4.4
CIRR  Tsirk              5.09 295  eS      Sn     09 02 47.1 +1.1
KRSR  Krestovskiy        5.22 296   PN     Pn     09 01 48.0 -1.7
KRSR  Krestovskiy        5.22 296  eP      Pn     09 01 48.1 -1.7
KIRR  Kirishev           5.26 293   PN     Pn     09 01 49.6 -0.7
KIRR                                S      Sn     09 02 48.6 -1.6
KIRR  Kirishev           5.26 293  eP      Pn     09 01 49.6 -0.7
KIRR                               eS      Sn     09 02 48.6 -1.6
KMNR  Kamenistaya        5.26 290   PN     Pn     09 01 50.7 +0.3
KMNR                                S      Sn     09 02 51.1 +0.8
KMNR  Kamenistaya        5.26 290  eP      Pn     09 01 50.7 +0.3
KMNR                               eS      Sn     09 02 51.1 +0.8
KPT   Kopyto             5.33 293   PN     Pn     09 01 51.7 +0.5
KPT                                 S      Sn     09 02 53.4 +1.6
KPT   Kopyto             5.33 293  eP      Pn     09 01 51.7 +0.5
KPT                                eS      Sn     09 02 53.4 +1.6
SPN   Mys Shipunski      5.45 262   PN     Pn     09 01 51.5 -1.4
SPN   Mys Shipunski      5.45 262  eP      Pn     09 01 51.5 -1.4
SPN                                eS      Sn     09 02 50.6 -4.1
KOZ   Kozyrevsk          5.54 293   PN     Pn     09 01 55.0 +0.9
KOZ                                 S      Sn     09 02 54.7 -2.2
KOZ   Kozyrevsk          5.54 293  eP      Pn     09 01 55.1 +0.9
KOZ                                eS      Sn     09 02 54.7 -2.2
KII   Karymskiy          5.61 272   PN     Pn     09 01 54.4 -0.8
KII   Karymskiy          5.61 272  eP      Pn     09 01 54.4 -0.8
SRDR  Sredinnyy          5.70 295   PN     Pn     09 01 57.4 +1.1
SRDR  Sredinnyy          5.70 295  eP      Pn     09 01 57.5 +1.1
NLC   Nalytchevo         5.83 263   PN     Pn     09 01 56.6 -1.4
NLC   Nalytchevo         5.83 263  eP      Pn     09 01 56.7 -1.4
OSSR  Ossora             5.99 329   PN     Pn     09 01 58.3 -2.0
OSSR  Ossora             5.99 329  eP      Pn     09 01 58.3 -2.0
SDLR  Sedlovina          6.07 265   PN     Pn     09 02 00.5 -1.0
SDLR  Sedlovina          6.07 265  eP      Pn     09 02 00.5 -1.0
UGLR  Uglovaya           6.12 264   PN     Pn     09 02 01.6 -0.6
UGLR  Uglovaya           6.12 264  eP      Pn     09 02 01.6 -0.6
SMAR  Somma              6.12 265   PN     Pn     09 02 01.3 -1.0
SMAR  Somma              6.12 265  eP      Pn     09 02 01.3 -1.0
KRER  Koryakskii         6.14 265   PN     Pn     09 02 02.1 -0.5
KRER  Koryakskii         6.14 265  eP      Pn     09 02 02.1 -0.5
ESO   Esso               6.15 290   PN     Pn     09 02 03.1 +0.7
ESO   Esso               6.15 290  eP      Pn     09 02 03.2 +0.7
AVH   Avacha             6.16 265   PN     Pn     09 02 02.0 -0.7
AVH   Avacha             6.16 265  eP      Pn     09 02 02.0 -0.7
KRX   Arik               6.19 266   PN     Pn     09 02 02.3 -0.9
KRX   Arik               6.19 266  eP      Pn     09 02 02.3 -0.9
KOK   Koryaka            6.21 265   PN     Pn     09 02 02.7 -0.7
KOK   Koryaka            6.21 265  eP      Pn     09 02 02.7 -0.7
PET   Petropavlovsk      6.27 263          Pn     09 02 03.3 -0.7
PET   Petropavlovsk      6.27 263   P      Pn     09 02 03.9 -0.2
PET   Petropavlovsk      6.27 263   S      Sn     09 03 15.9 +1.1
PET   Petropavlovsk      6.27 263  ePN     Pn     09 02 03.5 -0.6
PET                                 pmax   pmax
      comp=Z,67nm,0.5s
PET                                 MLR    MLR
      comp=Z,2µm,15.0s
PET                                 MLR    MLR
      comp=Z,1µm,14.0s
RUS   Russkaya           6.53 258   PN     Pn     09 02 07.5 -0.1
RUS   Russkaya           6.53 258  eP      Pn     09 02 07.5 -0.1
GNL   Ganaly             6.54 270   PN     Pn     09 02 07.9 -0.1
GNL   Ganaly             6.54 270  eP      Pn     09 02 07.9 -0.1
KRMR  Karymshinskiy      6.62 262   PN     Pn     09 02 08.6 -0.3
KRMR  Karymshinskiy      6.62 262  eP      Pn     09 02 08.7 -0.3
KRMR                               eS      Sn     09 03 20.6 -3.0
MTVR  Mutnovka           6.70 259   PN     Pn     09 02 09.6 -0.6
MTVR  Mutnovka           6.70 259  eP      Pn     09 02 09.7 -0.6
MTVR                               eS      Sn     09 03 21.2 -4.5
GRL   Gorelyy            6.74 260   PN     Pn     09 02 10.6 -0.1
GRL   Gorelyy            6.74 260  eP      Pn     09 02 10.7 -0.1
PEA0B Petropavlovsk-     6.80 265          Pn     09 02 11.9 +0.4
PEA0B Petropavlovsk-     6.80 265ceePN     Pn     09 02 10.1 -1.4
PETK  Petropavlovsk-     6.80 265          Pn     09 02 10.9 -0.5
PETK  Petropavlovsk-     6.80 265   Pn     Pn     09 02 11.2 -0.2
      comp=Z,8.0nm,0.3s,baz=77,slow=19,SNR=124
PETK                                Sn     Sn     09 03 27.8 -0.2
      comp=Z,5.5nm,0.3s,baz=350,slow=30,SNR=4.4
PETK                                LR     LR     09 04 52.0
      comp=Z,2µm,20.2s,baz=84,slow=39
      comp=Z,14nm,0.5s
PETK  Petropavlovsk-     6.80 265   PN     Pn     09 02 10.9 -0.5
ASAK  Asacha             6.90 259   PN     Pn     09 02 12.6 -0.2
ASAK  Asacha             6.90 259  eP      Pn     09 02 12.7 -0.2
ASAK                               eS      Sn     09 03 26.9 -3.6
APC   Apacha             7.17 264   PN     Pn     09 02 16.5 +0.1
APC   Apacha             7.17 264  eP      Pn     09 02 16.5 +0.1
MIPR  Malaya Ipel'ka     7.59 260   PN     Pn     09 02 22.7 +0.4
MIPR  Malaya Ipel'ka     7.59 260  eP      Pn     09 02 22.7 +0.4
KMSK  Kamenskaya         8.39 351   PN     Pn     09 02 32.0 -1.1
KMSK  Kamenskaya         8.39 351  eP      Pn     09 02 32.1 -1.1
SKR   Severo-Kuril’s     8.62 251  ePN     Pn     09 02 34.1 -2.3
SKR                                 pmax   pmax
      comp=Z,54nm,0.5s
SKR                                 pmax   pmax
      comp=Z,400nm,4.3s
SKR                                 MLR    MLR
      comp=Z,1µm,14.0s
KIWB  Kanaga Island      8.69 100          Pn     09 02 37.5 +0.2
ADK   Adak               8.95  99          Pn     09 02 40.3 -0.5
ADK   Adak               8.95  99   P      Pn     09 02 39.7 -1.1
ADK   Adak               8.95  99   S      Sn     09 04 17.2 -3.4
ADK   Adak               8.95  99   PN     Pn     09 02 40.3 -0.5
GSTR  Great Sitkin T     9.24  97          Pn     09 02 45.6 +0.8
ATKA  Atka Island       10.29  95          Pn     09 02 59.2  0.0
ATKA  Atka Island       10.29  95   P      Pn     09 02 58.9 -0.3
MA2   Magadan           11.29 306   LR     LR     09 07 24.8
      comp=Z,676nm,18.5s,baz=106,slow=37
MA2   Magadan           11.29 306 i PN     Pn     09 03 13.7 +0.8
SPIA  Saint Paul Isl    12.07  67          Pn     09 03 24.1 +0.7
SPIA  Saint Paul Isl    12.07  67   P      Pn     09 03 23.4  0.0
      baz=265
SEY   Seymchan          12.25 322   Pn     Pn     09 03 23.3 -2.7
      comp=Z,0.2nm,0.3s,baz=119,slow=15,SNR=7.6
SEY                                 LR     LR     09 07 51.7
      comp=Z,984nm,19.7s,baz=122,slow=37
      comp=Z,4.0nm,0.9s
SEY   Seymchan          12.25 322ceePN     Pn     09 03 27.7 +1.7
SEY                                 pmax   pmax
      comp=Z,9.0nm,1.7s
P08K  Saint George I    12.41  70          Pn     09 03 27.9 -0.3
P08K  Saint George I    12.41  70   P      Pn     09 03 27.8 -0.3
      baz=268,SNR=10.0
NIKH  Nikolski High     13.21  86          Pn     09 03 40.3 +1.2
NIKH  Nikolski High     13.21  86   P      Pn     09 03 39.8 +0.7
NIKH  Nikolski High     13.21  86   P      Pn     09 03 39.1  0.0
      baz=285
GAMB  Gambell           13.74  38          Pn     09 03 45.6 -0.6
GAMB  Gambell           13.74  38   P      Pn     09 03 45.8 -0.4
      baz=235
BILL  Bilibino          13.91 356          Pn     09 03 48.6  0.0
BILL  Bilibino          13.91 356ceP       Pn     09 03 49.4 +0.8
BILL                                pmax   pmax
      comp=Z,45nm,1.7s
LVA   Lava Point        14.60  80          Pn     09 03 59.0 +0.9
M11K  Mekoryuk          14.70  55          Pn     09 04 01.4 +2.1
M11K  Mekoryuk          14.70  55   P      Pn     09 03 59.0 -0.3
      baz=256
AKUT  Akutan            14.76  80   Pn     Pn     09 04 01.2 +1.0
AKUT  Akutan            14.76  80   P      Pn     09 04 01.4 +1.3
K13K  Kusilvak Mount    15.83  50   P      Pn     09 04 13.8 -0.5
      baz=253
M13K  Dall Lake         16.09  56   IAmb   IAmb   09 04 24.2
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      comp=Z,108nm,1.1s
M13K  Dall Lake         16.09  56   P      Pn     09 04 17.1 -0.3
      baz=260,SNR=8.8
TNA   Tin City          16.09  36   P      P      09 04 20.1 -0.5
TNA   Tin City          16.09  36   P      Pn     09 04 17.1 -0.4
      baz=236
TYV   Tymovskoe         16.33 269  eP      Pn     09 04 20.6 -0.1
TYV                                 pmax   pmax
      comp=Z,11nm,1.3s
TYV                                 pmax   pmax
      comp=Z,100nm,2.3s
ANM   Nome              16.52  41   P      Pn     09 04 22.8 -0.2
      baz=243
J14K  Nanvaranak Lak    16.57  48   P      Pn     09 04 23.6  0.0
      baz=252
L14K  Kuka Creek        16.59  53   P      Pn     09 04 24.3 +0.4
      baz=258,SNR=17
F14K  Arctic Creek      16.61  38   P      Pn     09 04 24.1  0.0
      baz=239
S12K  Black Hills       16.64  73   P      Pn     09 04 24.8 +0.2
      baz=277
NKL   Nikolayevsk       16.76 278  eP      P      09 04 27.2 -0.9
NKL                                eS      Sn     09 07 35.4 +4.2
NKL                                 pmax   pmax
      comp=E,33nm,0.8s
NKL                                 pmax   pmax
      comp=N,40nm,1.0s
NKL                                 pmax   pmax
      comp=Z,100nm,0.9s
NKL                                 smax   smax
      comp=E,144nm,2.6s
NKL                                 smax   smax
      comp=N,194nm,5.1s
M14K  Bethel            16.82  56   IAmb   IAmb   09 04 30.9
      comp=Z,168nm,1.4s
M14K  Bethel            16.82  56   P      Pn     09 04 26.9 +0.1
      baz=260,SNR=25
N14K  Kuskokwak Cree    16.84  58   IAmb   IAmb   09 04 30.6
      comp=Z,108nm,0.9s
N14K  Kuskokwak Cree    16.84  58   P      Pn     09 04 27.5 +0.5
      baz=263,SNR=20
O14K  Tigyukauivet M    16.98  61   P      Pn     09 04 29.1 +0.2
      baz=266
L15K  Ungalak Mounta    17.22  53   P      P      09 04 32.5 -0.7
      baz=258
G15K  Niukluk           17.23  41   P      Pn     09 04 32.2 +0.3
      baz=244
F15K  North Star Dit    17.33  38   P      P      09 04 33.9 -0.4
      baz=241,SNR=6.4
K15K  Wolf Creek Mou    17.34  50   P      P      09 04 34.5 -0.1
      baz=256,SNR=19
M15K  Kasigluk River    17.43  56   P      P      09 04 35.1 -0.4
      baz=262,SNR=17
SDPT  Sand Point        17.58  74   P      P      09 04 37.2  0.0
SDPT  Sand Point        17.58  74   P      P      09 04 36.9 -0.3
      baz=279
N15K  Kwethluk River    17.66  58   P      P      09 04 38.1  0.0
      baz=264,SNR=13
O15K  Ungalikthiuk R    17.72  61   P      P      09 04 39.0 +0.3
O15K  Ungalikthiuk R    17.72  61   P      P      09 04 39.0 +0.3
      baz=268,SNR=8.1
S14K  Fog Glacier       17.97  71   P      P      09 04 41.6  0.0
      baz=277
J16K  Anvik River       18.02  48   P      P      09 04 42.2 +0.2
      baz=254
G16K  Koyuk River       18.04  40   P      P      09 04 41.9 -0.3
      baz=246
YSS   Yuzhno-Sakhali    18.10 257  eP      P      09 04 45.4 +2.4
YSS                                eS      Sn     09 08 03.9  0.0
YSS                                 pmax   pmax
      comp=Z,20nm,1.4s
YSS                                 pmax   pmax
      comp=Z,300nm,5.2s
YSS                                 MLR    MLR
      comp=Z,600nm,14.0s
I17K  Unalakleet        18.16  46   P      P      09 04 43.5  0.0
      baz=252
CHNA  Chernabura Isl    18.17  75   P      P      09 04 44.0 +0.3
      baz=281
L16K  Owhat River       18.17  53   P      P      09 04 43.6  0.0
      baz=260,SNR=14
M16K  Timber Creek      18.31  55   IAmb   IAmb   09 04 50.2
      comp=Z,90nm,1.6s
M16K  Timber Creek      18.31  55   P      Pn     09 04 45.5 +0.2
      baz=263,SNR=12
N16K  Nishlik Lake      18.34  57   P      Pn     09 04 45.9 +0.2
      baz=265,SNR=14
C16K  Lisburne Hills    18.50  31   P      Pn     09 04 47.3 -0.1
      baz=233,SNR=6.0
O16K  Kokwok River B    18.62  60   P      Pn     09 04 48.8 -0.2
      baz=268,SNR=10.0
P16K  Nushagak River    18.66  62   P      P      09 04 48.7 -0.3
      baz=270
J17K  VABM Dome         18.71  48   IAmb   IAmb   09 05 01.6
      comp=Z,66nm,1.1s
J17K  VABM Dome         18.71  48   P      Pn     09 04 50.1  0.0
      baz=256,SNR=14
G17K  Kiwalik Mounta    18.73  41   P      Pn     09 04 50.4 +0.1
      baz=248,SNR=11
L17K  Donlin            18.79  52   P      Pn     09 04 51.0 -0.1
      baz=260,SNR=17
H17K  Granite Mounta    18.82  43   P      Pn     09 04 51.0 -0.4
      baz=250,SNR=15
D17K  Noatak River      18.88  34   P      Pn     09 04 52.3 +0.2
      baz=238,SNR=18
F17K  Baldwin Pennin    18.90  38   IAmb   IAmb   09 05 01.9
      comp=Z,34nm,0.7s
F17K  Baldwin Pennin    18.90  38   P      Pn     09 04 52.3  0.0
      baz=244
K17K  Iditarod          18.90  50   IAmb   IAmb   09 05 04.2
      comp=Z,75nm,0.9s
K17K  Iditarod          18.90  50   P      Pn     09 04 52.6 +0.1
      baz=258,SNR=14
R16K  Pilot Point       18.93  66   P      P      09 04 52.1 +0.1
      baz=274
E17K  Hotham Inlet      18.99  36   P      Pn     09 04 52.9 -0.5
      baz=242
M17K  Holitna River     19.09  54   IAmb   IAmb   09 05 07.1
      comp=Z,91nm,1.0s
M17K  Holitna River     19.09  54   P      Pn     09 04 55.2 +0.5
      baz=263,SNR=20
RDOG  Red Dog Mine      19.12  33   P      Pn     09 04 55.1  0.0
      baz=238
N17K  Nushagak Hills    19.13  57   P      Pn     09 04 55.4 +0.2
      baz=266,SNR=17
O17K  Koliganek Bris    19.13  59   P      Pn     09 04 56.0 +0.8
      baz=268,SNR=12
C17K  DeLong Mountai    19.27  31   P      Pn     09 04 57.5 +0.6
      baz=236,SNR=12
Q16K  King Salmon       19.36  63   P      Pn     09 04 58.3 +0.4
      baz=272,SNR=9.5
P17K  Kvichak River     19.46  61   P      Pn     09 04 59.6 +0.5
      baz=271,SNR=9.7
H18K  Honhosa River     19.51  43   IAmb   IAmb   09 05 11.4
      comp=Z,60nm,0.9s
H18K  Honhosa River     19.51  43   P      Pn     09 05 00.3 +0.6
      baz=252,SNR=15
F18K  Selawik           19.55  38   P      Pn     09 05 00.7 +0.6
      baz=246
L18K  Granite Mounta    19.55  52   P      Pn     09 05 00.7 +0.5
      baz=262,SNR=15
E18K  Tukpahlearik C    19.57  36   P      Pn     09 05 00.8 +0.4
      baz=243,SNR=7.8
G18K  Tagagawik         19.65  41   P      Pn     09 05 01.6 +0.2
      baz=249,SNR=41
J18K  Innoko River      19.76  48   P      Pn     09 05 02.6 -0.1
      baz=258,SNR=26
N18K  Kilae Creek       19.78  57   P      Pn     09 05 02.7 -0.2
      baz=267,SNR=17
Q17K  Contact Creek     19.78  64   P      Pn     09 05 02.8 -0.3
      baz=274,SNR=16
M18K  Stony River       19.87  54   P      Pn     09 05 03.7 -0.3
      baz=265,SNR=14
JKA   Kamikawa-asahi    19.89 250   P      Pn     09 05 05.6 +1.3
JKA                                 IAmb   IAmb   09 05 17.3
      comp=Z,110nm,1.8s
ASAJ  Asahikawa         19.89 250   P      Pn     09 05 03.7 -0.6
      comp=Z,0.3nm,0.3s,baz=352,slow=3.4,SNR=6.4
ASAJ                                LR     LR     09 14 00.9
      comp=Z,341nm,18.1s,baz=53,slow=41
      comp=Z,9.3nm,0.9s
C18K  Utukok River      19.98  32   P      Pn     09 05 04.4 -0.9
C18K                                IAmb   IAmb   09 05 13.3
      comp=Z,39nm,0.8s
C18K  Utukok River      19.98  32   P      Pn     09 05 04.8 -0.5
      baz=239,SNR=25
GCSA  Galena City Sc    20.00  45   P      Pn     09 05 05.2 -0.3
      baz=255,SNR=7.7
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GRNR  Gornyy            20.02 273⇓iP       Pn     09 05 05.3 -0.6
GRNR                                pmax   pmax
      comp=Z,7.0nm,1.0s
GRNR                                MLR    MLR
      comp=N,380nm,15.0s
GRNR                                MLR    MLR
      comp=Z,350nm,14.0s
P18K  Big Mountain,     20.08  61   IAmb   IAmb   09 05 07.3
      comp=Z,62nm,1.0s
P18K  Big Mountain,     20.08  61   P      Pn     09 05 06.2 -0.4
      baz=271,SNR=28
O18K  Koktuh Hills      20.09  59   IAmb   IAmb   09 05 17.7
      comp=Z,40nm,1.0s
O18K  Koktuh Hills      20.09  59   P      Pn     09 05 06.3 -0.3
      baz=270,SNR=16
B18K  Kokolik River     20.18  30   P      Pn     09 05 06.7 -0.9
      baz=236,SNR=33
CHIR  Chirikof Islan    20.22  71   P      Pn     09 05 07.2 -0.9
      baz=280
Q18K  Katmai Hardscr    20.22  63   P      P      09 05 07.1 +0.9
      baz=273,SNR=27
F19K  Shaleruckik Mo    20.32  39   P      P      09 05 07.9 +0.8
F19K                                IAmb   IAmb   09 05 20.7
      comp=Z,42nm,0.9s
F19K  Shaleruckik Mo    20.32  39   P      Pn     09 05 08.3 -0.9
      baz=248,SNR=23
G19K  Purcell Mounta    20.34  41   IAmb   IAmb   09 05 17.4
      comp=Z,44nm,0.8s
G19K  Purcell Mounta    20.34  41   P      Pn     09 05 08.5 -1.0
      baz=251,SNR=37
J19K  Poorman           20.35  47   IAmb   IAmb   09 05 22.4
      comp=Z,51nm,0.9s
J19K  Poorman           20.35  47   P      Pn     09 05 08.6 -1.0
      baz=258,SNR=16
H19K  Roundabout Mou    20.39  43   P      Pn     09 05 08.9 -1.1
      baz=253,SNR=29
L19K  White Mountain    20.40  53   P      Pn     09 05 09.7 -0.6
      baz=264,SNR=50
N19K  Bonanza Creek     20.47  57   IAmb   IAmb   09 05 24.8
      comp=Z,45nm,0.8s
N19K  Bonanza Creek     20.47  57   P      Pn     09 05 10.6 -0.6
      baz=268,SNR=36
O19K  Port Alsworth     20.54  58   IAmb   IAmb   09 05 20.9
      comp=Z,58nm,0.9s
O19K  Port Alsworth     20.54  58   P      Pn     09 05 10.8 -1.0
      baz=270,SNR=8.9
M19K  Big River Lodg    20.59  53   P      Pn     09 05 11.5 -1.0
      baz=265
R18K  Karluk            20.60  66   P      P      09 05 09.3 -0.9
      baz=277
C19K  Lookout Ridge     20.71  32   P      Pn     09 05 12.8 -1.1
      baz=240,SNR=45
E19K  Redstone River    20.76  37   IAmb   IAmb   09 05 22.5
      comp=Z,121nm,1.6s
E19K  Redstone River    20.76  37   P      Pn     09 05 13.6 -0.8
      baz=247,SNR=21
A19K  Wainwright        20.87  29   P      P      09 05 14.0 +1.0
      baz=235
L20K  Farewell, AK      20.88  52   P      P      09 05 14.3 +1.0
      baz=264,SNR=26
SII   Sitkinak Islan    20.88  69   P      P      09 05 12.8 -0.5
SII   Sitkinak Islan    20.88  69   P      P      09 05 13.7 +0.4
      baz=279
D19K  Kuna River        20.89  34   P      Pn     09 05 14.7 -1.2
      baz=244,SNR=54
K20K  Telida            20.91  49   P      P      09 05 14.3 +0.7
      baz=262
Q19K  Cape Douglas,     20.91  62   P      P      09 05 14.4 +0.8
      baz=274,SNR=26
I20K  Naaghedeneel      21.01  45   IAmb   IAmb   09 05 33.7
      comp=Z,71nm,1.0s
I20K  Naaghedeneel      21.01  45   P      P      09 05 15.5 +1.0
      baz=257,SNR=8.7
H20K  Anotleneega Mo    21.01  43   P      P      09 05 15.8 +1.2
      baz=255,SNR=27
J20K  Nowinta River     21.02  47   IAmb   IAmb   09 05 28.5
      comp=Z,38nm,0.9s
J20K  Nowinta River     21.02  47   P      P      09 05 15.7 +1.0
      baz=259,SNR=47
P19K  Oil Pt            21.09  60   P      P      09 05 16.6 +1.0
      baz=272,SNR=20
F20K  Avaraart Lake     21.16  39   P      P      09 05 16.9 +0.8
      baz=250
M20K  Styx River        21.18  54   P      P      09 05 17.3 +0.7
      baz=266
OHAK  Old Harbor        21.27  67   P      P      09 05 16.5 -0.9
OHAK  Old Harbor        21.27  67   P      P      09 05 16.8 -0.7
      baz=278,SNR=15
O20K  Slope Mountain    21.39  59   P      P      09 05 19.6 +0.8
      baz=271,SNR=8.2
E20K  Nigu River        21.44  36   P      P      09 05 20.1 +0.9
      baz=247,SNR=39
D20K  Etivluk River     21.49  34   IAmb   IAmb   09 05 29.7
      comp=Z,46nm,1.0s
D20K  Etivluk River     21.49  34   P      P      09 05 20.4 +0.7
      baz=245,SNR=30
KDAK  Kodiak Island     21.57  65   P      P      09 05 20.3 -0.4
KDAK  Kodiak Island     21.57  65   P      P      09 05 20.0 -0.7
      comp=Z,8.5nm,0.6s,baz=245,slow=5.4,SNR=19
      comp=Z,8.5nm,0.6s
KDAK  Kodiak Island     21.57  65 i P      P      09 05 18.6 -2.1
KDAK                                pmax   pmax
      comp=Z,11nm,0.8s
KDAK  Kodiak Island     21.57  65   P      P      09 05 21.0 +0.3
      baz=277
Q20K  Shuyak Island     21.59  63   P      P      09 05 21.7 +0.9
      baz=275,SNR=21
IMAR  Indian Mountai    21.59  42   P      P      09 05 21.7 +0.9
N20K  Mount Spurr       21.59  56   P      P      09 05 21.3 +0.3
      baz=269
SPCR  Spurr Chakacha    21.59  56   P      P      09 05 21.5 +0.5
      baz=269
PPLA  Purkeypile        21.70  51   IAmb   IAmb   09 05 36.7
      comp=Z,57nm,0.9s
PPLA  Purkeypile        21.70  51   P      P      09 05 23.1 +0.8
      baz=265,SNR=22
CHUM  Lake Minchumin    21.77  48   P      P      09 05 23.0 +0.3
      baz=262,SNR=6.3
STLK  Strandline Lak    21.78  55   IAmb   IAmb   09 05 32.5
      comp=Z,24nm,0.5s
CAST  Castle Rocks      21.81  50   IAmb   IAmb   09 05 34.3
      comp=Z,78nm,1.6s
CAST  Castle Rocks      21.81  50   P      P      09 05 23.4 +0.2
      baz=263,SNR=11
G21K  Allakaket         21.83  41   IAmb   IAmb   09 05 39.8
      comp=Z,45nm,1.0s
G21K  Allakaket         21.83  41   P      P      09 05 23.7 +0.4
      baz=254,SNR=11
YAK   Yakutsk           21.86 307   P      P      09 05 23.4 -0.4
      comp=Z,12nm,0.4s,baz=91,slow=20,SNR=8.6
YAK                                 LR     LR     09 13 54.4
      comp=Z,393nm,18.5s,baz=94,slow=37
      comp=Z,12nm,0.4s
YAK   Yakutsk           21.86 307  eP      P      09 05 21.0 -2.8
YAK                                e              09 05 40.9
YAK                                ePPP    PPP    09 05 49.7
YAK                                eS      S      09 09 21.8 -2.0
YAK                                eSSS    SSS    09 10 00.7
YAK                                 pmax   pmax
      comp=Z,50nm,1.5s
YAK                                 pmax   pmax
      comp=N,8.0nm,1.4s
YAK                                 pmax   pmax
      comp=E,37nm,1.4s
YAK                                 pmax   pmax
      comp=Z,72nm,2.0s
YAK                                 pmax   pmax
      comp=N,34nm,2.3s
YAK                                 pmax   pmax
      comp=E,53nm,2.3s
YAK                                 smax   smax
      comp=E,249nm,6.5s
YAK                                 smax   smax
      comp=N,259nm,5.0s
YAK                                 MLR    MLR
      comp=Z,443nm,20.0s
YAK                                 MLR    MLR
      comp=N,479nm,18.0s
YAK                                 MLR    MLR
      comp=E,200nm,16.0s
H21K  Melozitna Rive    21.89  43   IAmb   IAmb   09 05 40.2
      comp=Z,44nm,0.9s
H21K  Melozitna Rive    21.89  43   P      P      09 05 24.4 +0.4
      baz=257,SNR=22
HOM   Homer             21.90  60   P      P      09 05 24.5 +0.4
      baz=273,SNR=7.6
B20K  Meade River       21.90  31   P      P      09 05 24.1  0.0
      baz=241
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SKT	Skwentna	21.94	53	IAmb	IAmb	09 05 38.8	
	comp=Z,41nm,0.9s						
SKT	Skwentna	21.94	53	P	**P**	**09 05 25.6**	**+0.9**
	baz=268,SNR=17						
F21K	Alatna River	22.04	39	P	**P**	**09 05 26.1**	**+0.4**
	baz=252,SNR=8.9						
CAPN	Captain Cook N	22.10	57	P	**P**	**09 05 27.1**	**+0.7**
	baz=271						
CNPM	China Poot	22.11	60	IAmb	IAmb	09 05 39.2	
	comp=Z,41nm,0.7s						
I21K	Tanana	22.12	45	P	**P**	**09 05 26.8**	**+0.3**
	baz=259						
E21K	Killik River	22.27	36	P	**P**	**09 05 28.7**	**+0.5**
	baz=249						
C21K	Knifeblade Rid	22.27	34	P	**P**	**09 05 28.5**	**+0.4**
	baz=246,SNR=19						
BRLK	Bradley Lake	22.27	59	IAmb	IAmb	09 05 42.1	
	comp=Z,32nm,0.8s						
SUA	Susitna One	22.30	55	IAmb	IAmb	09 05 38.8	
	comp=Z,30nm,0.9s						
SUA	Susitna One	22.30	55	P	**P**	**09 05 28.5**	**-0.2**
	baz=270,SNR=28						
KTH	Kantishna Hill	22.34	49	IAmb	IAmb	09 05 44.3	
	comp=Z,33nm,0.9s						
BRSE	Bradley Lake S	22.35	59	P	**P**	**09 05 29.6**	**+0.5**
	baz=274						
BPAW	Bear Paw Mtn.	22.37	48	P	**P**	**09 05 29.8**	**+0.5**
	baz=263,SNR=13						
H22K	Ishtalitna Cre	22.51	43	P	**P**	**09 05 30.7**	**-0.1**
	baz=258,SNR=22						
B21K	Ikpikpuk River	22.52	33	P	**P**	**09 05 30.8**	**+0.1**
	baz=246						
CUT	Chulitna	22.55	52	P	**P**	**09 05 31.2**	**+0.1**
	baz=268						
SLKM	Skilak Lake	22.57	57	IAmb	IAmb	09 05 51.1	
	comp=Z,53nm,1.6s						
M22K	Willow	22.60	54	P	**P**	**09 05 31.9**	**+0.2**
	baz=269						
F22K	John River	22.61	39	P	**P**	**09 05 32.0**	**+0.3**
	baz=253						
TRF	Thorofare Moun	22.61	50	P	**P**	**09 05 32.1**	**+0.1**
	baz=265,SNR=29						
MLY	Manley	22.61	46	IAmb	IAmb	09 05 54.7	
	comp=Z,62nm,1.4s						
MLY	Manley	22.61	46	P	**P**	**09 05 32.0**	**+0.1**
	baz=261,SNR=32						
G22K	Bettles	22.70	41	P	**P**	**09 05 32.7**	**0.0**
	baz=256,SNR=7.6						
A21K	Barrow	22.71	28	P	**P**	**09 05 32.3**	**-0.5**
	baz=239						
RC01	Rabbit Creek A	22.79	56	P	**P**	**09 05 33.7**	**0.0**
	baz=271						
O22K	Cooper Landing	22.82	57	P	**P**	**09 05 33.9**	**0.0**
	baz=273						
D22K	Ayikyak River	22.87	35	P	**P**	**09 05 35.2**	**+0.8**
D22K				IAmb	IAmb	09 05 45.2	
	comp=Z,36nm,0.9s						
D22K	Ayikyak River	22.87	35	P	**P**	**09 05 34.1**	**-0.4**
	baz=250,SNR=9.4						
E22K	Anaktuvuk Pass	22.93	37	IAmb	IAmb	09 05 45.6	
	comp=Z,26nm,0.9s						
E22K	Anaktuvuk Pass	22.93	37	P	**P**	**09 05 34.9**	**-0.2**
	baz=252,SNR=24						
SEW	Seward	22.97	58	IAmb	IAmb	09 05 52.1	
	comp=Z,22nm,0.7s						
SEW	Seward	22.97	58	P	**P**	**09 05 35.4**	**-0.2**
	baz=274						
A22K	Sinclair Lake	23.02	30	P	**P**	**09 05 35.3**	**-0.7**
	baz=242						
PMR	Palmer	23.08	55	P	**P**	**09 05 36.2**	**-0.3**
PMR	Palmer	23.08	55	P	**P**	**09 05 37.7**	**+1.1**
PMR	Palmer	23.08	55	P	**P**	**09 05 36.3**	**-0.3**
PMR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PMR	Palmer	23.08	55	P	**P**	**09 05 36.6**	**0.0**
	baz=271						
B22K	Teshekpuk Lake	23.19	32	P	**P**	**09 05 37.5**	**-0.2**
	baz=246,SNR=15						
I23K	Minto, Yukon-K	23.21	45	P	**P**	**09 05 38.2**	**+0.3**
	baz=262,SNR=20						
G23K	Bananza Creek	23.22	41	P	**P**	**09 05 37.8**	**-0.3**
	baz=258,SNR=23						
MCK	McKinley	23.24	49	IAmb	IAmb	09 05 49.4	
	comp=Z,30nm,0.8s						
MCK	McKinley	23.24	49	P	**P**	**09 05 37.9**	**-0.4**
	baz=266						
H23K	Yukon River	23.24	44	P	**P**	**09 05 38.1**	**-0.2**
	baz=260,SNR=9.6						
RND	Reindeer	23.25	50	IAmb	IAmb	09 05 47.8	
	comp=Z,31nm,0.8s						
NEA2	Nenana	23.26	47	P	**P**	**09 05 38.5**	**0.0**
	baz=264,SNR=13						
COLD	Coldfoot	23.27	40	IAmb	IAmb	09 05 58.1	
	comp=Z,36nm,0.9s						
COLD	Coldfoot	23.27	40	P	**P**	**09 05 38.7**	**+0.2**
	baz=256,SNR=17						
WAT1	Susitna Watana	23.36	51	P	**P**	**09 05 38.7**	**-0.9**
	baz=268						
KNK	Knik Glacier	23.40	55	IAmb	IAmb	09 05 51.8	
	comp=Z,34nm,0.8s						
KNK	Knik Glacier	23.40	55	P	**P**	**09 05 38.9**	**-1.0**
	baz=272,SNR=6.8						
KLR	Kul'dur	23.41	273	LR	LR	09 14 51.2	
	comp=Z,404nm,20.6s,baz=58,slow=37						
KLR	Kul'dur	23.41	273	*ce*P	**P**	**09 05 40.6**	**+0.6**
KLR				pmax	pmax		
	comp=Z,7.0nm,1.3s						
SML	Sawmill	23.45	54	P	**P**	**09 05 39.5**	**-1.0**
	baz=271,SNR=12						
PWL	Port Wells	23.48	56	P	**P**	**09 05 39.8**	**-0.9**
	baz=273,SNR=11						
D23K	Nanushuk River	23.58	36	IAmb	IAmb	09 05 53.0	
	comp=Z,40nm,1.1s						
D23K	Nanushuk River	23.58	36	P	**P**	**09 05 41.5**	**-0.1**
	baz=252,SNR=14						
WRH	Wood River Hil	23.67	47	IAmb	IAmb	09 06 00.8	
	comp=Z,41nm,0.9s						
E23K	Chandalar	23.70	38	IAmb	IAmb	09 05 54.5	
	comp=Z,22nm,0.8s						
E23K	Chandalar	23.70	38	P	**P**	**09 05 42.6**	**-0.2**
	baz=255,SNR=10						
WAT6	Susitna Watana	23.73	52	P	**P**	**09 05 42.3**	**-1.0**
	baz=270,SNR=5.2						
M23K	Glacier View	23.74	54	P	**P**	**09 05 42.6**	**-0.6**
	baz=271,SNR=19						
CCB	Clear Creek Bu	23.81	47	IAmb	IAmb	09 05 53.2	
	comp=Z,29nm,0.8s						
COLA	College	23.81	46	P	**P**	**09 05 44.7**	**+0.9**
COLA	College	23.81	46	P	**P**	**09 05 44.2**	**+0.4**
COLA	College	23.81	46	*e*P	**P**	**09 05 43.8**	**0.0**
COLA				pmax	pmax		
	comp=Z,23nm,0.9s						
COLA	College	23.81	46	P	**P**	**09 05 43.5**	**-0.3**
	baz=264						
TOLK	Toolik Lake Re	23.87	37	P	**P**	**09 05 44.3**	**-0.1**
	baz=254,SNR=32						
C23K	Itkillik River	23.89	34	P	**P**	**09 05 44.8**	**+0.3**
	baz=250,SNR=11						
DHY	Denali Highway	23.91	51	IAmb	IAmb	09 05 53.5	
	comp=Z,22nm,1.0s						
DHY	Denali Highway	23.91	51	P	**P**	**09 05 44.3**	**-0.7**
	baz=269,SNR=12						
H24K	Noodor Dome	23.92	44	IAmb	IAmb	09 06 03.6	
	comp=Z,19nm,0.8s						
H24K	Noodor Dome	23.92	44	P	**P**	**09 05 45.3**	**+0.4**
	baz=262						
SCM	Sheep Creek Mo	23.93	54	P	**P**	**09 05 45.2**	**+0.1**
	baz=272,SNR=13						
P23K	Montague Islan	24.01	58	IAmb	IAmb	09 05 56.3	
	comp=Z,28nm,0.8s						
P23K	Montague Islan	24.01	58	P	**P**	**09 05 45.3**	**-0.4**
	baz=276						
POKR	Poker Plat Res	24.02	46	P	**P**	**09 05 45.9**	**+0.2**
	baz=264,SNR=5.8						
GLI	Glacier Island	24.09	56	IAmb	IAmb	09 05 58.0	
	comp=Z,66nm,1.4s						
GLI	Glacier Island	24.09	56	P	**P**	**09 05 46.1**	**-0.4**
	baz=274						
E24K	Your Creek	24.11	38	P	**P**	**09 05 46.7**	**+0.1**
	baz=256						
HDA	Harding Lake	24.16	48	IAmb	IAmb	09 05 59.5	
	comp=Z,20nm,0.8s						
HDA	Harding Lake	24.16	48	P	**P**	**09 05 47.4**	**+0.3**
	baz=266,SNR=11						
F24K	Squaw Lake	24.21	40	P	**P**	**09 05 47.6**	**+0.1**
	baz=258						
ILAR	Eielson Array	24.21	47	P	**P**	**09 05 46.9**	**-0.7**
	comp=Z,5.4nm,0.7s,baz=252,slow=6.9,SNR=38						
ILAR				LR	LR	09 14 52.2	
	comp=Z,389nm,21.4s,baz=258,slow=36						
	comp=Z,5.4nm,0.7s						
G24K	Hadweenzic Riv	24.21	42	IAmb	IAmb	09 06 01.7	
	comp=Z,30nm,0.8s						
G24K	Hadweenzic Riv	24.21	42	P	**P**	**09 05 47.4**	**-0.2**
	baz=260,SNR=19						
D24K	Happy Valley	24.27	36	P	**P**	**09 05 47.9**	**-0.1**
	baz=254,SNR=18						
ZEA	Zeya	24.29	286	*e*P	**P**	**09 05 48.9**	**+0.5**
ZEA				*e*S	**S**	**09 10 03.2**	**-2.4**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ZEA				smax	smax		
	comp=E,400nm,12.3s						
ZEA				MLR	MLR		
	comp=Z,400nm,15.0s						
FID	Port Fidalgo	24.40	56	IAmb	IAmb	09 06 00.3	
	comp=Z,26nm,0.9s						
HIN	Hinchinbrook I	24.42	57	IAmb	IAmb	09 06 08.5	
	comp=Z,24nm,0.9s						
M24K	Tolsona, Glenn	24.47	53	P	**P**	**09 05 49.7**	**-0.3**
	baz=272,SNR=28						
C24K	Franklin Bluff	24.48	34	P	**P**	**09 05 49.6**	**-0.3**
	baz=253						
TIXI	Tiksi	24.49	331	LR	LR	09 15 22.4	
	comp=Z,298nm,20.6s,baz=118,slow=37						
Q23K	Middleton Isla	24.60	60	P	**P**	**09 05 50.5**	**-0.6**
	baz=278						
KLU	Klutina	24.61	55	IAmb	IAmb	09 06 02.9	
	comp=Z,30nm,0.8s						
KLU	Klutina	24.61	55	P	**P**	**09 05 50.8**	**-0.5**
	baz=274,SNR=15						
K24K	Donnelly Dome	24.64	49	P	**P**	**09 05 51.0**	**-0.6**
	baz=269,SNR=16						
DIV	Divide	24.71	56	IAmb	IAmb	09 06 10.3	
	comp=Z,38nm,1.2s						
G25K	Bearman Lake	24.76	42	P	**P**	**09 05 52.5**	**-0.1**
	baz=262,SNR=14						
EYAK	Cordova Ski Ar	24.77	57	P	**P**	**09 05 53.4**	**+0.7**
EYAK	Cordova Ski Ar	24.77	57	P	**P**	**09 05 52.2**	**-0.4**
	baz=276						
PAX	Paxson	24.78	51	IAmb	IAmb	09 06 01.7	
	comp=Z,22nm,0.9s						
PAX	Paxson	24.78	51	P	**P**	**09 05 52.4**	**-0.4**
	baz=271,SNR=28						
H25L	Birch Creek	24.81	43	P	**P**	**09 05 52.9**	**-0.1**
	baz=263,SNR=17						
PRP	Porcupine Dome	24.85	45	P	**P**	**09 05 53.1**	**-0.5**
	baz=265,SNR=85						
J25K	Salcha River,	24.85	47	IAmb	IAmb	09 06 04.7	
	comp=Z,15nm,0.8s						
J25K	Salcha River,	24.85	47	P	**P**	**09 05 53.4**	**-0.1**
	baz=267,SNR=14						
HARP	HAARP	24.93	52	P	**P**	**09 05 54.4**	**+0.3**
	baz=272						
RIDG	Independent Ri	25.06	49	IAmb	IAmb	09 06 04.2	
	comp=Z,25nm,0.9s						
RIDG	Independent Ri	25.06	49	P	**P**	**09 05 55.0**	**-0.2**
	baz=270,SNR=6.5						
F25K	Christian Rive	25.07	40	IAmb	IAmb	09 06 06.2	
	comp=Z,26nm,0.8s						
F25K	Christian Rive	25.07	40	P	**P**	**09 05 55.0**	**-0.4**
	baz=260,SNR=20						
D25K	Kavik River	25.16	36	P	**P**	**09 05 56.0**	**-0.2**
	baz=256						
E25K	Arctic Village	25.19	39	IAmb	IAmb	09 06 06.9	
	comp=Z,21nm,0.7s						
E25K	Arctic Village	25.19	39	P	**P**	**09 05 56.3**	**-0.2**
	baz=260,SNR=23						
N25K	Chitina, Valde	25.24	54	IAmb	IAmb	09 06 09.2	
	comp=Z,25nm,0.8s						
N25K	Chitina, Valde	25.24	54	P	**P**	**09 05 56.7**	**-0.3**
	baz=274						
BMRM	Bremner River	25.29	56	P	**P**	**09 05 56.7**	**-0.7**
	baz=276,SNR=6.2						
SCRK	Sand Creek	25.44	49	IAmb	IAmb	09 06 06.6	
	comp=Z,19nm,0.8s						
SCRK	Sand Creek	25.44	49	P	**P**	**09 05 58.0**	**-0.8**
	baz=270,SNR=35						
BMAR	Burnt Mountain	25.45	41		**P**	**09 05 59.7**	**+0.9**
HEH	HeiHe	25.49	278	*e*P	**P**	**09 05 58.3**	**-1.0**
HEH				pmax	pmax		
	comp=Z,15nm,1.5s						
HEH				LR	LR		
	comp=Z,2µm,16.5s						
HEH				LR	LR		
	comp=Z,850nm,15.6s						
HEH				LR	LR		
	comp=Z,710nm,14.7s						
KAIM	Kayak Island	25.51	58	P	**P**	**09 05 59.3**	**0.0**
	baz=278						
HMT	Hamilton	25.53	57	IAmb	IAmb	09 06 15.1	
	comp=Z,26nm,0.9s						
MENT	Mentasta	25.58	51	IAmb	IAmb	09 06 28.7	
	comp=Z,20nm,0.7s						
J26L	Joseph Creek	25.63	47	IAmb	IAmb	09 06 09.6	
	comp=Z,17nm,0.9s						
J26L	Joseph Creek	25.63	47	P	**P**	**09 06 00.2**	**-0.3**
	baz=269						
F26K	Sheenjek River	25.65	40	IAmb	IAmb	09 06 11.9	
	comp=Z,17nm,0.9s						
F26K	Sheenjek River	25.65	40	P	**P**	**09 06 00.7**	**+0.1**
	baz=262,SNR=9.5						
G26K	Porcupine Rive	25.70	42	P	**P**	**09 06 01.6**	**+0.6**
	baz=264,SNR=17						
L26K	Log Cabin Wild	25.74	51	IAmb	IAmb	09 06 18.0	
	comp=Z,14nm,0.8s						
L26K	Log Cabin Wild	25.74	51	P	**P**	**09 06 01.7**	**+0.2**
	baz=272						
BERG	Berg Lake	25.80	57	IAmb	IAmb	09 06 25.3	
	comp=Z,20nm,0.8s						
C26K	Camden Bay	25.80	35	P	**P**	**09 06 02.3**	**+0.5**
	baz=256						
I26K	Coal Creek Min	25.83	46	P	**P**	**09 06 02.8**	**+0.6**
	baz=268						
USA0B	Ussuriysk Arra	25.89	262	*i* P	**P**	**09 06 00.4**	**-2.5**
USRK	Ussuriysk Ar.	25.89	262	P	**P**	**09 06 03.8**	**+0.9**
	comp=Z,0.8nm,0.5s,baz=39,slow=12,SNR=4.4						
USRK				LR	LR	09 16 46.0	
	comp=Z,490nm,19.1s,baz=62,slow=38						
	comp=Z,0.8nm,0.5s						
M26K	Nabesna, AK	25.94	52	IAmb	IAmb	09 06 30.5	
	comp=Z,14nm,0.8s						
M26K	Nabesna, AK	25.94	52	P	**P**	**09 06 03.8**	**+0.5**
	baz=274						
MCARA	McCarthy VSAT	26.01	55	P	**P**	**09 06 04.6**	**+0.7**
	baz=276						
BGLC	Bering Glacier	26.04	58	P	**P**	**09 06 04.9**	**+0.8**
	baz=278						
CRQE	Cirque	26.05	56	P	**P**	**09 06 05.0**	**+0.6**
	baz=277						
C27K	Jago River	26.14	36	P	**P**	**09 06 05.5**	**+0.5**
C27K				IAmb	IAmb	09 06 16.9	
	comp=Z,32nm,0.9s						
C27K	Jago River	26.14	36	P	**P**	**09 06 05.6**	**+0.5**
	baz=258,SNR=6.1						
TGL	Tana Glacier	26.18	56	IAmb	IAmb	09 06 27.3	
	comp=Z,19nm,0.8s						
WAX	Waxell Ridge	26.21	57	IAmb	IAmb	09 06 34.5	
	comp=Z,23nm,0.9s						
K27K	Chicken	26.28	49	IAmb	IAmb	09 06 18.0	
	comp=Z,21nm,0.9s						
K27K	Chicken	26.28	49	P	**P**	**09 06 06.5**	**+0.2**
	baz=271,SNR=21						
L27K	Beaver Creek,	26.43	51	IAmb	IAmb	09 06 17.3	
	comp=Z,28nm,0.8s						
L27K	Beaver Creek,	26.43	51	P	**P**	**09 06 07.9**	**+0.2**
	baz=274,SNR=27						
BCAR	Beaver Creek A	26.45	51	P	**P**	**09 06 08.8**	**+0.9**
M27K	Edge Creek, AK	26.46	52	P	**P**	**09 06 08.3**	**+0.1**
	baz=275,SNR=24						
I27K	Kandik River	26.48	45	P	**P**	**09 06 08.1**	**-0.1**
	baz=269						
G27K	Doyon Strip	26.52	42	IAmb	IAmb	09 06 21.4	
	comp=Z,16nm,0.8s						
G27K	Doyon Strip	26.52	42	P	**P**	**09 06 08.3**	**-0.2**
	baz=266,SNR=15						
H27K	Steamboat Moun	26.54	44	IAmb	IAmb	09 06 20.6	
	comp=Z,16nm,0.8s						
H27K	Steamboat Moun	26.54	44	P	**P**	**09 06 08.3**	**-0.4**
	baz=268						
E27K	Coleen River	26.67	39	P	**P**	**09 06 10.5**	**+0.7**
E27K	Coleen River	26.67	39	P	**P**	**09 06 09.4**	**-0.4**
	baz=264						
MESA	MESA	26.69	57	P	**P**	**09 06 09.5**	**-0.8**
	baz=279						
CTG	Chitna Glacier	26.87	55	P	**P**	**09 06 11.7**	**-0.1**
	baz=278						
CTGM	Chitina Glacie	26.88	55	IAmb	IAmb	09 06 49.4	
	comp=Z,32nm,1.3s						
BVCY	Beaver Creek	26.93	52	P	**P**	**09 06 12.3**	**+0.1**
	baz=276						
D27M	Malcolm River	27.04	37	P	**P**	**09 06 12.6**	**-0.5**
	baz=262						
LOGN	Logan Glacier	27.06	56	IAmb	IAmb	09 06 25.9	
	comp=Z,14nm,0.8s						
I28M	Miner Creek	27.18	45	P	**P**	**09 06 14.5**	**0.0**
	baz=270						
YUK3	Moose Creek	27.19	53	P	**P**	**09 06 14.6**	**-0.1**
	baz=277						
F28M	Old Crow	27.27	41	IAmb	IAmb	09 06 30.1	
	comp=Z,18nm,1.1s						
F28M	Old Crow	27.27	41	P	**P**	**09 06 15.2**	**0.0**
	baz=266						
O28M	Mount Upton	27.46	56	IAmb	IAmb	09 06 32.7	
	comp=Z,26nm,1.1s						
O28M	Mount Upton	27.46	56	P	**P**	**09 06 17.1**	**-0.2**
	baz=279						
DAWY	Dawson	27.46	48	P	**P**	**09 06 17.2**	**+0.2**
	baz=274,SNR=14						
E28M	Babbage River	27.47	38	P	**P**	**09 06 17.4**	**+0.4**
	baz=265						
PCA	Pinnacle	27.54	57	IAmb	IAmb	09 06 35.1	
	comp=Z,24nm,1.0s						
PINM	Pinnacle	27.55	57	P	**P**	**09 06 18.0**	**+0.2**
	baz=281						
YUK8	Steele Glacier	27.58	54	P	**P**	**09 06 18.4**	**0.0**
	baz=279						
MAJO	Matsushiro	27.61	243	P	**P**	**09 06 20.0**	**+1.5**
MAJO				IAmb	IAmb	09 06 24.8	
	comp=Z,22nm,1.1s						
MAJO	Matsushiro	27.61	243	*i* P	**P**	**09 06 16.5**	**-2.0**
MAJO				pmax	pmax		
	comp=Z,24nm,1.1s						
MJAR	Matsushiro Arr	27.61	243	P	**P**	**09 06 19.0**	**+0.5**
	comp=Z,3.0nm,0.9s,baz=8.1,slow=9.4,SNR=6.9						
	comp=Z,3.0nm,0.9s						
MJB9	Matsu-Tunnel	27.61	243	P	**P**	**09 06 19.2**	**+0.7**
MJB9				IAmb	IAmb	09 06 24.8	
	comp=Z,22nm,1.1s						
H29M	Whitestone	27.82	44	IAmb	IAmb	09 06 43.8	
	comp=Z,35nm,1.3s						
H29M	Whitestone	27.82	44	P	**P**	**09 06 20.5**	**+0.4**
	baz=270						
D28M	Stokes Point	27.83	37	P	**P**	**09 06 20.6**	**+0.4**
	baz=264						
BCPM	Bancas Point	27.88	57	IAmb	IAmb	09 06 33.4	
	comp=Z,22nm,1.0s						
G29M	Pine Creek	27.96	42	P	**P**	**09 06 21.4**	**0.0**
	baz=269,SNR=9.7						
M29M	Somme Creek	28.03	52	P	**P**	**09 06 21.9**	**-0.3**
	baz=278						
PNL	Peninsula	28.05	58	P	**P**	**09 06 22.5**	**+0.2**
PNL	Peninsula	28.05	58	P	**P**	**09 06 22.0**	**-0.3**
	baz=282						
E29M	Blow River	28.06	39	P	**P**	**09 06 22.0**	**-0.2**
	baz=267						
L29M	L29M	28.11	50	IAmb	IAmb	09 06 32.6	
	comp=Z,13nm,0.9s						
L29M	L29M	28.11	50	P	**P**	**09 06 22.2**	**-0.6**
	baz=276						
YUK4	Talbot Arm	28.11	54	P	**P**	**09 06 22.9**	**-0.1**
	baz=279						
K29M	Barlow Dome	28.30	49	P	**P**	**09 06 24.2**	**-0.3**
	baz=276,SNR=33						
YUK6	Outpost Mounta	28.31	55	P	**P**	**09 06 23.8**	**-1.0**
	baz=280						
O29M	Mount Kennedy	28.33	56	IAmb	IAmb	09 06 40.2	
	comp=Z,14nm,0.8s						
O29M	Mount Kennedy	28.33	56	P	**P**	**09 06 24.3**	**-0.5**
	baz=281						
EPYK	Eagle Plains	28.48	43	P	**P**	**09 06 25.4**	**-0.6**
	baz=272,SNR=13						
G30M	tAoh Zraii Nji	28.67	42		P	09 06 34.9	+7.2
G30M	tAoh Zraii Nji	28.67	42	P	**P**	**09 06 27.1**	**-0.6**
	baz=271						
I30M	Mount Dempster	28.68	46	P	**P**	**09 06 27.5**	**-0.5**
	baz=274						
HYT	Haines Junctio	28.75	55	IAmb	IAmb	09 06 43.1	
	comp=Z,18nm,0.8s						
HYT	Haines Junctio	28.75	55	P	**P**	**09 06 28.1**	**-0.4**
	baz=281,SNR=11						
J30M	Hart River	28.75	47	P	**P**	**09 06 28.1**	**-0.5**
	baz=275						
N30M	Aishikik Lake	28.83	54	P	**P**	**09 06 29.0**	**-0.2**
	baz=280						
F30M	Barrier River	28.83	41		P	09 06 36.5	+7.4
F30M	Barrier River	28.83	41	P	**P**	**09 06 28.3**	**-0.8**
	baz=270						
P29M	Windy Craggy	28.88	57	IAmb	IAmb	09 07 01.4	
	comp=Z,21nm,1.2s						
P29M	Windy Craggy	28.88	57	P	**P**	**09 06 29.3**	**-0.4**
	baz=283						
MAYO	Mayo, Yukon	29.05	49	P	**P**	**09 06 31.2**	**+0.1**
	baz=277						
P30M	Million Dollar	29.16	56	P	**P**	**09 06 32.0**	**-0.1**
	baz=283						
O30N	Mendenhall	29.44	55	P	**P**	**09 06 34.2**	**-0.3**
	baz=282						
G31M	Satah River	29.44	42	IAmb	IAmb	09 06 43.3	
	comp=Z,18nm,0.8s						
G31M	Satah River	29.44	42	P	**P**	**09 06 34.1**	**-0.3**
	baz=273,SNR=5.9						
N31M	Braeburn, Yuko	29.44	53	P	**P**	**09 06 34.3**	**-0.3**
	baz=281						
H31M	Peel River	29.48	44	IAmb	IAmb	09 06 43.2	
	comp=Z,8.3nm,0.7s						
H31M	Peel River	29.48	44	P	**P**	**09 06 34.3**	**-0.6**
	baz=275						
PLBC	Pleasant Camp	29.60	57	P	**P**	**09 06 35.7**	**-0.3**
	baz=284						
F31M	Tsiigehtchic	29.62	41	P	**P**	**09 06 35.5**	**-0.6**
	baz=272						
INK	Inuvik	29.68	39	IAmb	IAmb	09 06 51.7	
	comp=Z,34nm,1.7s						
INK	Inuvik	29.68	39	LR	LR	09 20 18.5	
	comp=Z,268nm,19.2s,baz=244,slow=40						
INK	Inuvik	29.68	39	P	**P**	**09 06 36.6**	**0.0**
	baz=271						
CN2	Changchun	29.95	268	P	**P**	**09 06 39.0**	**-0.2**
CN2				S	**S**	**09 11 33.5**	**-1.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				LR	LR		
	comp=Z,700nm,16.0s						
CN2				LR	LR		
	comp=Z,400nm,16.0s						
CN2				LR	LR		
	comp=Z,600nm,17.0s						
M31M	Drury Creek, Y	29.95	52	IAmb	IAmb	09 06 49.0	
	comp=Z,19nm,0.8s						
M31M	Drury Creek, Y	29.95	52	P	**P**	**09 06 39.4**	**+0.3**
	baz=281,SNR=11						
WHY	Whitehorse	30.04	55	P	**P**	**09 06 40.0**	**0.0**
	baz=283						
S31K	Pelican	30.07	60	P	**P**	**09 06 39.9**	**-0.2**
	baz=287						
SKAG	Skagway	30.11	57	P	**P**	**09 06 40.0**	**-0.5**
	baz=285						
R31K	City Hall, Gus	30.19	59	P	**P**	**09 06 40.6**	**-0.6**
	baz=286						
FARO	Faro, Yukon	30.42	51	P	**P**	**09 06 42.5**	**-0.7**
	baz=282						
N32M	Quiet Lake	30.78	53	P	**P**	**09 06 46.0**	**-0.5**
	baz=284						
SIT	Sitka	30.82	62	P	**P**	**09 06 46.4**	**-0.3**
	baz=289						
R32K	Eaglecrest	30.85	59	IAmb	IAmb	09 06 57.5	
	comp=Z,14nm,0.9s						
R32K	Eaglecrest	30.85	59	P	**P**	**09 06 46.4**	**-0.6**
	baz=288						
P32M	Atlin	30.87	57	P	**P**	**09 06 46.6**	**-0.7**
	baz=286						
JIS	Juneau Island	30.92	59	P	**P**	**09 06 49.2**	**+1.6**
S32K	Killisnoo	31.07	61	P	**P**	**09 06 48.3**	**-0.6**
	baz=289						
P33M	Teslin, Yukon	31.14	55	IAmb	IAmb	09 06 59.8	
	comp=Z,17nm,0.8s						
P33M	Teslin, Yukon	31.14	55	P	**P**	**09 06 48.9**	**-0.8**
	baz=285,SNR=10						
MMPY	Sheldon Lake,	31.29	50	IAmb	IAmb	09 07 00.6	
	comp=Z,13nm,0.9s						
MMPY	Sheldon Lake,	31.29	50	P	**P**	**09 06 50.0**	**-0.9**
	baz=283						
Q32M	Nakina River	31.77	57	IAmb	IAmb	09 07 06.6	

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      comp=Z,10.0nm,0.8s
Q32M  Nakina River      31.77  57    P      P      09 06 54.5 -0.9
      baz=288
R33M  Jennings River    32.27  56    IAmb   IAmb   09 07 10.3
      comp=Z,9.4nm,0.7s
R33M  Jennings River    32.27  56    P      P      09 06 58.6 -1.1
      baz=288,SNR=6.5
U33K  Whale Pass        32.28  63    P      P      09 06 58.7 -0.9
      baz=292
A36M  Sachs Harbour     32.40  32    IAmb   IAmb   09 07 12.2
      comp=Z,15nm,0.8s
A36M  Sachs Harbour     32.40  32    P      P      09 07 00.1 -0.4
      baz=272
CRAG  Craig             32.52  64    P      P      09 07 01.6 -0.2
      baz=292
WRAK  Wrangell Islan    32.58  62    P      P      09 07 02.1 -0.1
      baz=292
KSRS  Korea Array       32.60 256    P      P      09 07 03.6 +1.1
      comp=Z,1.5nm,0.7s,baz=35,slow=9.6,SNR=5.5
      comp=Z,1.5nm,0.7s
KSAR  Wonju Array Be    32.63 256    P      P      09 07 02.7 -0.1
KSAR  Wonju Array Be    32.63 256    P      P      09 07 02.7 -0.1
S34M  Telegraph Cree    32.67  59    IAmb   IAmb   09 07 13.7
      comp=Z,11nm,0.7s
S34M  Telegraph Cree    32.67  59    P      P      09 07 03.1 +0.1
      baz=290
TGTN  Hyland Airport    32.93  52    P      P      09 07 05.2 -0.1
      baz=286
C36M  Paulatuk          33.02  37    P      P      09 07 05.7 -0.3
      baz=278
DLBC  Dease Lake        33.04  58    IAmb   IAmb   09 07 17.2
      comp=Z,11nm,0.8s
DLBC  Dease Lake        33.04  58    LR     LR     09 21 55.5
      comp=Z,417nm,19.2s,baz=294,slow=39
DLBC  Dease Lake        33.04  58    P      P      09 07 05.6 -0.7
      baz=290,SNR=7.1
V35K  Ketchikan         33.37  63    P      P      09 07 09.4 +0.2
      baz=293
T35M  Bob Quinn         33.45  60    IAmb   IAmb   09 07 21.0
      comp=Z,9.6nm,0.8s
T35M  Bob Quinn         33.45  60    P      P      09 07 10.3 +0.5
      baz=292
U35K  Hyder             33.97  62    P      P      09 07 15.0 +0.7
      baz=293
JNU   Nakatsue          34.12 247    LR     LR     09 20 08.9
      comp=Z,143nm,20.5s,baz=46,slow=34
H11N2 WAKE ISLAND Hy    34.48 183    T      T      09 43 44.6
      baz=2.3,slow=76
H11N3 WAKE ISLAND Hy    34.49 183    T      T      09 43 45.5
      baz=2.3,slow=76,SNR=9486
H11N1 WAKE ISLAND Hy    34.49 183    T      T      09 43 45.9
      baz=2.3,slow=76
WRGLY Wrigley           34.59  48    P      P      09 07 20.0 +0.4
      baz=287
LIRD  Liard River Hi    34.62  55    P      P      09 07 20.4 +0.4
      baz=291
BEAVL Fort Liard        34.84  53    P      P      09 07 22.2 +0.4
      baz=290
TOAD  Toad River Com    35.24  55    P      P      09 07 24.9 -0.4
      baz=292,SNR=9.3
DL2   Dalian            35.25 264    P      P      09 07 21.2 -4.4
DL2                                  S      S      09 12 48.4 -9.2
DL2                                  pmax   pmax
      comp=Z,17nm,0.5s
DL2                                  pmax   pmax
      comp=Z,120nm,5.4s
DL2                                  LR     LR
      comp=N,590nm,17.4s
DL2                                  LR     LR
      comp=E,320nm,19.2s
DL2                                  LR     LR
      comp=Z,700nm,21.6s
KOTAN Kotaneelee Air    35.33  53    P      P      09 07 25.8 -0.3
      baz=291
H11S1 WAKE ISLAND Hy    35.70 184    T      T      09 45 13.4
      baz=2.3,slow=76,SNR=5043
H11S3 WAKE ISLAND Hy    35.71 184    T      T      09 45 25.1
      baz=2.3,slow=76,SNR=2048
H11S2 WAKE ISLAND Hy    35.72 184    T      T      09 45 18.1
      baz=2.3,slow=76,SNR=5541
BBB   Bella Bella       36.62  67    LR     LR     09 20 46.9
      comp=Z,387nm,21.3s,baz=288,slow=33
ULN   Ulaanbaatar       38.33 287  i P      P      09 07 51.5 -0.4
ULN                                  pmax   pmax
      comp=Z,11nm,1.1s
YKAW3 Yellowknife Wh    38.61  46    IAmb   IAmb   09 08 03.2
      comp=Z,7.9nm,0.8s
YKA   Yellowknife Ar    38.64  46    P      P      09 07 54.3 +0.1
YKA   Yellowknife Ar    38.64  46    P      P      09 07 54.4 +0.2
      comp=Z,1.8nm,0.7s,baz=297,slow=8.9,SNR=20
      comp=Z,1.8nm,0.7s
YKA   Yellowknife Ar    38.64  46    P      P      09 07 54.3 +0.1
YKAW1 Yellowknife Wh    38.70  46    IAmb   IAmb   09 08 03.6
      comp=Z,6.8nm,0.9s
SONM  Songino Array     38.71 287    P      P      09 07 54.8 -0.3
SONM  Songino Array     38.71 287    P      P      09 07 54.7 -0.4
      comp=Z,1.9nm,0.8s,baz=64,slow=10,SNR=9.2
SONM                                 PcP    PcP    09 10 07.6 +1.2
      comp=Z,1.9nm,0.8s,baz=82,slow=2.7,SNR=3.6
SONM                                 LR     LR     09 25 09.4
      comp=Z,299nm,20.4s,baz=88,slow=38
      comp=Z,1.9nm,0.8s
MOY   Mondy             39.61 295   eP      P      09 08 02.6  0.0
MOY                                  pmax   pmax
      comp=Z,18nm,1.8s
HHC   Hu-ho-hao-te      39.89 275   eP      P      09 08 05.9 +0.9
HHC                                  S      S      09 14 08.5 +0.2
HHC                                  sS     sS     09 14 22.7 +2.2
HHC                                  pmax   pmax
      comp=Z,9.0nm,0.7s
HHC                                  pmax   pmax
      comp=Z,93nm,5.4s
HHC                                  LR     LR
      comp=Z,960nm,14.5s
HHC                                  LR     LR
      comp=Z,780nm,14.5s
HHC                                  LR     LR
      comp=Z,590nm,14.5s
RES   Resolute Bay      40.20  24    P      P      09 08 07.3 +0.4
RES   Resolute Bay      40.20  24    P      P      09 08 07.4 +0.4
RES                                  pmax   pmax
      comp=Z,6.0nm,0.9s
HNS   HongShan          40.31 268   ⇑P      P      09 08 09.6 +1.3
HNS                                  pmax   pmax
      comp=Z,12nm,1.1s
HNS                                  LR     LR
      comp=Z,400nm,15.0s
HNS                                  LR     LR
      comp=Z,290nm,14.7s
HNS                                  LR     LR
      comp=Z,520nm,15.7s
JOW   Kunigami          40.44 244    LR     LR     09 24 22.3
      comp=Z,75nm,20.9s,baz=52,slow=35
BTO   Baotou            40.95 276   eP      P      09 08 14.9 +1.2
BTO                                  pP     pP     09 08 20.8 -0.2
BTO                                  sP     pwP    09 08 23.0 +2.0
BTO                                  PP     PP     09 09 46.5 -1.7
BTO                                  S      S      09 14 27.7 +3.7
BTO                                  SS     SS     09 17 23.8 -2.0
BTO                                  pmax   pmax
      comp=Z,22nm,0.9s
BTO                                  pmax   pmax
      comp=Z,230nm,3.6s
BTO                                  LR     LR
      comp=Z,2µm,17.7s
BTO                                  LR     LR
      comp=Z,750nm,17.0s
NLWA  Neilton Lookou    41.50  71    IAmb   IAmb   09 08 21.0
      comp=Z,21nm,1.1s
NJ2   Nanjing           41.66 259   eP      P      09 08 21.6 +2.1
NJ2                                  pmax   pmax
      comp=Z,12nm,0.5s
NJ2                                  LR     LR
      comp=Z,340nm,14.2s
NJ2                                  LR     LR
      comp=Z,320nm,14.2s
NJ2                                  LR     LR
      comp=Z,410nm,13.3s
D05A  Enumclaw          42.66  70    IAmb   IAmb   09 08 39.7
      comp=Z,16nm,0.9s
LYN   LuoYang           43.59 267    P      P      09 08 36.7 +1.6
LYN                                  pmax   pmax
      comp=Z,23nm,0.5s
LYN                                  LR     LR
      comp=Z,970nm,17.9s
LYN                                  LR     LR
      comp=Z,650nm,17.2s
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LYN                                  LR     LR
      comp=Z,670nm,18.9s
HOOD  Mount Hood Mea    43.97  72    IAmb   IAmb   09 08 49.7
      comp=Z,26nm,1.2s
H04A  Detroit Lake      44.06  73    IAmb   IAmb   09 08 41.0
      comp=Z,18nm,1.1s
NEW   Newport           44.67  66    IAmb   IAmb   09 08 57.4
      comp=Z,21nm,1.6s
NEW   Newport           44.67  66    P      P      09 08 44.3 +0.5
NEW                                  pmax   pmax
      comp=Z,9.0nm,1.4s
GUMO  Guam              44.76 214    LR     LR     09 24 08.1
      comp=Z,71nm,21.2s,baz=36,slow=32
BLKN  Baker Lake        45.07  38    P      P      09 08 46.2 -0.4
PINE  Pine Mountain     45.32  73    IAmb   IAmb   09 09 13.6
      comp=Z,18nm,1.3s
J05D  Fort Rock, OR     45.47  74           P      09 08 51.9 +1.6
J05D                                 IAmb   IAmb   09 09 15.0
      comp=Z,21nm,1.1s
YBH   Yreka Blue Hor    45.63  77    P      P      09 08 53.0 +1.5
YBH   Yreka Blue Hor    45.63  77    P      P      09 08 53.0 +1.5
YBH                                  pmax   pmax
      comp=Z,41nm,2.0s
XAN   Xi'an             46.03 269   ⇑P      P      09 08 55.2 +0.6
XAN                                  pmax   pmax
      comp=Z,8.0nm,0.6s
ZALV  Zalesovo Beam     46.51 306    P      P      09 08 56.6 -1.5
      comp=Z,0.8nm,0.3s,baz=25,slow=8.2,SNR=4.2
ZALV                                 PcP    PcP    09 10 32.8 +0.7
      comp=Z,1.7nm,0.7s,baz=57,slow=5.3,SNR=3.9
ZALV                                 LR     LR     09 30 28.4
      comp=Z,308nm,18.4s,baz=32,slow=39
      comp=Z,0.8nm,0.3s
SPITS Spitsbergen Ar    46.79 353    LR     LR     09 29 11.2
      comp=Z,160nm,19.6s,baz=348,slow=37
MSO   Missoula          47.26  66    IAmb   IAmb   09 09 18.2
      comp=Z,9.0nm,1.1s
WVOR  Wild Horse Val    47.48  73    IAmb   IAmb   09 09 28.9
      comp=Z,12nm,1.4s
WVOR  Wild Horse Val    47.48  73    P      P      09 09 07.2 +1.2
WVOR                                 pmax   pmax
      comp=Z,5.0nm,2.0s
LZH   Lanzhou           47.58 275   eP      P      09 09 07.5 +0.6
LZH                                  pP     pwP    09 09 15.3 +1.0
LZH                                  pmax   pmax
      comp=Z,25nm,1.8s
LZH                                  LR     LR
      comp=Z,820nm,15.9s
LZH                                  LR     LR
      comp=Z,500nm,15.5s
GTA   Gaotai            47.66 282   eP      P      09 09 07.5 +0.1
GTA                                  pmax   pmax
      comp=Z,10.0nm,1.2s
GTA                                  LR     LR
      comp=Z,690nm,15.6s
GTA                                  LR     LR
      comp=Z,800nm,14.9s
GTA                                  LR     LR
      comp=Z,770nm,16.0s
MFID  Camas Ranch       48.41  70    IAmb   IAmb   09 09 24.2
      comp=Z,6.8nm,0.9s
AFDM  Forest Hills D    48.47  78           P      09 09 14.3 +0.7
EGMT  Eagleton          48.71  62    IAmb   IAmb   09 09 26.4
      comp=Z,9.1nm,0.7s
FCC   Fort Churchill    49.16  43    IAmb   IAmb   09 09 27.7
      comp=Z,10nm,0.8s
DAG   Danmarks Havn     49.17   2    P      P      09 09 17.3 -1.2
DAG                                  pmax   pmax
      comp=Z,5.0nm,0.7s
BOZ   Bozeman (W)       49.28  66    IAmb   IAmb   09 09 31.0
      comp=Z,7.0nm,0.9s
WAKR  Walker            49.65  78    IAmb   IAmb   09 09 24.9
      comp=Z,7.7nm,0.8s
YHL   Hebgen Lake       50.00  66    IAmb   IAmb   09 09 37.5
      comp=Z,14nm,1.0s
YHB   Horse Butte       50.06  66    IAmb   IAmb   09 09 37.8
      comp=Z,14nm,0.9s
NVAR  Mina Array Bea    50.35  77    P      P      09 09 29.0 +0.9
NVAR  Mina Array Bea    50.35  77    P      P      09 09 29.4 +1.3
      comp=Z,4.1nm,0.8s,baz=296,slow=7.6,SNR=30
      comp=Z,4.1nm,0.8s
LHV   Little Huntoon    50.35  77    IAmb   IAmb   09 09 53.5
      comp=Z,11nm,1.1s
YFT   Old Faithful      50.45  66    IAmb   IAmb   09 09 42.3
      comp=Z,9.9nm,0.8s
H17A  Grant Village     50.63  66    IAmb   IAmb   09 09 43.6
      comp=Z,10nm,0.9s
RLMT  Red Lodge         50.85  65    IAmb   IAmb   09 09 51.1
      comp=Z,11nm,0.8s
LAO   LASA Array        51.40  61    IAmb   IAmb   09 09 50.0
      comp=Z,19nm,1.1s
WMQ   Urumqi            51.47 294   eP      P      09 09 39.0 +2.6
WMQ                                  LR     LR
      comp=Z,1µm,18.7s
WMQ                                  LR     LR
      comp=Z,440nm,24.5s
KURK  Kurchatov         51.50 306           P      09 09 35.5 -1.0
KURK                                 IAmb   IAmb   09 09 36.4
      comp=Z,15nm,1.1s
KURK  Kurchatov         51.50 306  ceP      P      09 09 35.4 -1.0
KURK                                 pmax   pmax
      comp=Z,28nm,1.7s
KURBB Kurchatov Arra    51.61 306    P      P      09 09 35.5 -1.6
      comp=Z,7.3nm,1.0s,baz=52,slow=7.7,SNR=37
KURBB                                LR     LR     09 33 13.7
      comp=Z,205nm,18.1s,baz=162,slow=38
      comp=Z,7.3nm,1.0s
SUMG  Summit            52.05  10           P      09 09 40.3 -0.4
SUMG                                 IAmb   IAmb   09 09 59.9
      comp=Z,13nm,1.0s
SUMG  Summit            52.05  10    P      P      09 09 40.3 -0.4
SUMG                                 pmax   pmax
      comp=Z,13nm,1.0s
SPR3  Spring Creek 3    52.21  74    IAmb   IAmb   09 10 06.8
      comp=Z,16nm,1.3s
DUG   Dugway, Tooele    52.24  72    P      P      09 09 43.4 +1.2
DUG                                  pmax   pmax
      comp=Z,6.0nm,2.4s
BW06  Boulder Array     52.27  67    IAmb   IAmb   09 09 54.4
      comp=Z,9.3nm,0.9s
PD31  Pinedale Array    52.27  67    IAmb   IAmb   09 09 54.4
      comp=Z,8.6nm,0.9s
PDAR  Pinedale Array    52.27  67           P      09 09 43.2 +0.7
PDAR  Pinedale Array    52.27  67    P      P      09 09 42.2 -0.4
      comp=Z,4.3nm,0.9s,baz=316,slow=4.1,SNR=24
      comp=Z,4.3nm,0.9s
MK31  Makanchi Array    52.31 300  ceP      P      09 09 41.5 -1.0
MKAR  Makanchi Array    52.31 300    P      P      09 09 40.7 -1.8
      comp=Z,1.9nm,0.7s,baz=59,slow=7.2,SNR=15
MKAR                                 LR     LR     09 33 26.7
      comp=Z,223nm,19.1s,baz=26,slow=38
      comp=Z,1.9nm,0.7s
MAKZ  Makanchi          52.46 300           P      09 09 42.2 -1.4
MAKZ  Makanchi          52.46 300    P      P      09 09 42.2 -1.4
MAKZ                                 pmax   pmax
      comp=Z,7.0nm,1.1s
TPNV  Topopah Spring    52.55  77    IAmb   IAmb   09 09 47.0
      comp=Z,9.8nm,0.9s
PSUT  Pine Spring       52.80  74    IAmb   IAmb   09 10 10.3
      comp=Z,18nm,1.6s
GWY   Greenwater Val    52.84  78    IAmb   IAmb   09 09 59.4
      comp=Z,17nm,1.3s
GYA   Guiyang           52.90 264   ⇓P      P      09 09 48.8 +1.5
GYA                                  pmax   pmax
      comp=Z,20nm,1.0s
PRN   Pahroc Range      52.91  76    IAmb   IAmb   09 10 19.1
      comp=Z,10nm,1.0s
GSC   Goldstone, Bar    53.39  79    IAmb   IAmb   09 09 53.0
      comp=Z,20nm,1.4s
BVAR  Borovoye Array    53.69 312    P      P      09 09 51.6 -1.0
      comp=Z,9.4nm,0.7s,baz=48,slow=8.2,SNR=33
BVAR                                 LR     LR     09 34 36.5
      comp=Z,339nm,19.4s,baz=50,slow=38
      comp=Z,9.4nm,0.7s
ARCES ARCESS Array B    53.71 345    LR     LR     09 35 25.4
      comp=Z,132nm,19.4s,baz=28,slow=39
BRVK  Borovoye          53.72 312           P      09 09 51.9 -0.8
BRVK  Borovoye          53.72 312  ceP      P      09 09 51.8 -0.9
BRVK                                 pmax   pmax
      comp=Z,37nm,1.7s
MVU   Marysvale         53.74  73    IAmb   IAmb   09 10 33.2
      comp=Z,22nm,1.9s
K22A  Casper            53.98  65    IAmb   IAmb   09 10 06.7
      comp=Z,6.5nm,0.8s
P18A  Preston Nutter    54.05  70    IAmb   IAmb   09 10 07.8
      comp=Z,8.4nm,1.0s
ULM   Lac du Bonnet     54.06  52           P      09 09 56.1 +0.8
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ULM                                  IAmb   IAmb   09 10 06.8
      comp=Z,7.2nm,0.8s
ULM   Lac du Bonnet     54.06  52    P      P      09 09 55.5 +0.2
      comp=Z,2.1nm,0.5s,baz=301,slow=7.8,SNR=6.6
      comp=Z,2.1nm,0.5s
V12A  Nelson            54.21  77    IAmb   IAmb   09 10 36.4
      comp=Z,10nm,1.3s
LCMT  Little Creek M    54.21  75    IAmb   IAmb   09 09 59.0
      comp=Z,7.2nm,0.9s
RSSD  Black Hills       54.27  62           P      09 09 58.0 +0.8
RSSD                                 IAmb   IAmb   09 10 08.8
      comp=Z,13nm,0.9s
RSSD  Black Hills       54.27  62    P      P      09 09 58.0 +0.8
RSSD                                 pmax   pmax
      comp=Z,13nm,0.9s
KNB   Kanab             54.45  74    IAmb   IAmb   09 10 00.9
      comp=Z,10nm,0.9s
O20A  White River Ci    54.80  69    IAmb   IAmb   09 10 24.6
      comp=Z,20nm,1.4s
AGMN  Agassiz Nation    55.43  54    IAmb   IAmb   09 10 16.7
      comp=Z,12nm,0.8s
EPLO  Experimental L    55.46  51    IAmb   IAmb   09 10 24.1
      comp=Z,12nm,0.9s
PV21  Cone Mtn., Par    55.51  70    IAmb   IAmb   09 10 23.5
      comp=Z,6.9nm,0.7s
CBX   Cerro Bola        55.61  81    P      P      09 10 08.2 +1.2
CBX                                  IAmb   IAmb   09 10 08.8
      comp=Z,11nm,0.8s
PV22  Blue Mesa, Par    55.63  70    IAmb   IAmb   09 10 21.1
      comp=Z,11nm,0.7s
PV04  Paradox Valley    55.66  70    IAmb   IAmb   09 10 09.6
      comp=Z,16nm,1.0s
PV16  Nyswonger Mesa    55.72  71    IAmb   IAmb   09 10 44.1
      comp=Z,11nm,0.7s
PZH   PanZhiHua         55.75 269    P      P      09 10 10.3 +2.3
PZH                                  pmax   pmax
      comp=Z,10.0nm,0.7s
PZH                                  pmax   pmax
      comp=Z,100nm,4.8s
PV07  Paradox Valley    55.78  70    IAmb   IAmb   09 10 22.3
      comp=Z,8.5nm,0.7s
PV03  Paradox Valley    55.80  71    IAmb   IAmb   09 10 10.3
      comp=Z,11nm,0.9s
PV01  Paradox Valley    56.03  70    IAmb   IAmb   09 10 21.7
      comp=Z,7.0nm,0.9s
ARTI  Arti              56.09 321    P      P      09 10 08.6 -1.3
      comp=Z,5.3nm,0.7s,baz=30,slow=7.5,SNR=5.1
ARTI                                 LR     LR     09 36 04.9
      comp=Z,273nm,19.0s,baz=48,slow=38
      comp=Z,5.3nm,0.7s
ARTI  Arti              56.09 321  c iP     P      09 10 09.9  0.0
ARTI                                               09 11 05.3
ARTI                                               09 12 13.8
ARTI                                 S      S      09 18 01.8 +5.1
ARTI                                 pmax   pmax
      comp=Z,12nm,1.0s
ESJX  Sierra Juarez     56.25  81    P      P      09 10 12.5 +0.9
ESJX                                 IAmb   IAmb   09 10 14.0
      comp=Z,12nm,1.1s
WUAZ  Wupatki           56.34  75    IAmb   IAmb   09 10 15.0
      comp=Z,22nm,1.4s
ISCO  Idaho Springs     56.47  67    IAmb   IAmb   09 10 26.2
      comp=Z,9.8nm,0.8s
ISCO  Idaho Springs     56.47  67    P      P      09 10 15.0 +1.8
ISCO                                 pmax   pmax
      comp=Z,15nm,1.0s
MVCO  Mesa Verde        56.73  71    IAmb   IAmb   09 10 34.3
      comp=Z,6.0nm,0.7s
QIZ   Qiongzhong        56.82 256    P      P      09 10 16.5 +0.9
QIZ                                  S      S      09 18 09.8 +2.5
QIZ                                  LR     LR
      comp=Z,290nm,14.9s
QIZ                                  LR     LR
      comp=Z,210nm,14.1s
X16A  Lo Mia Camp, P    57.09  76    IAmb   IAmb   09 10 20.5
      comp=Z,6.9nm,0.9s
S22A  4UR Ranch, Cre    57.27  70    IAmb   IAmb   09 10 32.0
      comp=Z,8.0nm,0.8s
KIRV  Kirov             57.46 327    LR     LR     09 36 21.2
      comp=Z,193nm,21.0s,baz=45,slow=38
KIRV  Kirov             57.46 327  i P      P      09 10 17.1 -2.4
OGNE  Ogallala          57.56  64           P      09 10 30.0 +9.3
ECSD  EROS Data Cent    58.33  58    IAmb   IAmb   09 10 36.9
      comp=Z,12nm,0.9s
TUC   Tucson            59.00  77           P      09 10 31.3 +0.5
TUC   Tucson            59.00  77    P      P      09 10 31.3 +0.5
TUC                                  pmax   pmax
      comp=Z,5.0nm,1.0s
T25A  Trinidad          59.04  68    IAmb   IAmb   09 10 40.7
      comp=Z,17nm,1.3s
AAK   Ala-Archa         59.18 301    LR     LR     09 38 40.9
      comp=Z,224nm,18.1s,baz=40,slow=39
AAK   Ala-Archa         59.18 301  ceP      P      09 10 32.2 +0.2
AAK                                  pmax   pmax
      comp=Z,11nm,1.7s
ANMO  Albuquerque       59.51  72           P      09 10 35.5 +1.0
ANMO  Albuquerque       59.51  72    IAmb   IAmb   09 10 46.4
      comp=Z,6.5nm,1.1s
ANMO  Albuquerque       59.51  72  i P      P      09 10 34.1 -0.4
ANMO                                 pmax   pmax
      comp=Z,3.0nm,0.9s
Y22D  IRIS PASSCAL I    59.89  73    P      P      09 10 36.7 -0.4
      baz=318
RTBA  Rita Blanca       60.46  68    IAmb   IAmb   09 10 52.2
      comp=Z,11nm,0.9s
319A  Douglas           60.55  76    IAmb   IAmb   09 10 43.6
      comp=Z,5.9nm,0.9s
KSH   Kashi             60.72 298    P      P      09 10 45.7 +3.1
KSH                                  pP     pwP    09 10 57.4 +4.5
KSH                                  sP     sP     09 11 02.0  +10
KSH                                  pmax   pmax
      comp=Z,11nm,1.3s
KSH                                  LR     LR
      comp=Z,670nm,17.9s
KSH                                  LR     LR
      comp=Z,330nm,16.5s
AKTO  Aktyubinsk        60.79 317    P      P      09 10 41.6 -1.1
      comp=Z,4.8nm,0.6s,baz=26,slow=6.7,SNR=7.4
AKTO                                 LR     LR     09 39 30.9
      comp=Z,322nm,18.7s,baz=321,slow=39
      comp=Z,4.8nm,0.6s
KKAR  Karatay Array     60.80 304           P      09 10 42.0 -1.0
KKAR  Karatay Array     60.80 304    P      P      09 10 42.0 -1.0
N35A  Tabor             60.93  60    P      P      09 10 44.5 +0.7
SCHQ  Schefferville     62.00  33    P      P      09 10 50.0 -0.9
      comp=Z,3.5nm,0.9s,baz=319,slow=4.7,SNR=5.7
      comp=Z,3.5nm,0.9s
MNTX  Cornudas Mount    62.52  73    IAmb   IAmb   09 10 57.1
      comp=Z,7.6nm,0.8s
BELG  Belogornoye       63.10 324    P      P      09 10 56.7 -1.4
      comp=Z,14nm,0.9s,baz=236,slow=7.4,SNR=6.4
BELG                                 LR     LR     09 41 58.7
      comp=Z,269nm,18.1s,baz=48,slow=40
      comp=Z,14nm,0.9s
CHTO  Chiang Mai        63.30 265           P      09 11 00.7 +0.7
CHTO                                 IAmb   IAmb   09 11 09.9
      comp=Z,7.4nm,0.8s
CHTO  Chiang Mai        63.30 265    P      P      09 11 00.7 +0.7
CHTO                                 pmax   pmax
      comp=Z,7.0nm,0.8s
EVN   Everest           63.37 281           P      09 11 00.5 -0.6
EVN                                  IAmb   IAmb   09 11 08.9
      comp=Z,7.7nm,0.7s
VHRN  Van Horn          63.43  74    IAmb   IAmb   09 11 24.7
      comp=Z,5.3nm,1.0s
CMAR  Chiang Mai Arr    63.58 265    P      P      09 11 02.2 +0.3
      comp=Z,1.5nm,0.3s,baz=17,slow=6.9,SNR=15
CMAR                                 LR     LR     09 40 44.6
      comp=Z,146nm,18.3s,baz=45,slow=38
      comp=Z,1.5nm,0.3s
NOA   NORSAR Array B    63.73 348    P      P      09 11 01.4 -0.9
      comp=Z,3.8nm,0.6s,baz=17,slow=6.8,SNR=5.4
      comp=Z,3.8nm,0.6s
HNR   Honiara           63.88 190    LR     LR     09 34 05.8
      comp=Z,88nm,20.1s,baz=19,slow=32
MNHN  Monahans          64.26  72    IAmb   IAmb   09 11 17.6
      comp=Z,9.9nm,1.1s
HHAR  Hobbs             65.26  62           P      09 11 19.9 +7.3
HHAR                                 IAmb   IAmb   09 11 20.5
      comp=Z,5.1nm,0.9s
CCM   Cathedral Cave    65.27  59           P      09 11 13.3 +0.6
CCM                                  IAmb   IAmb   09 11 20.3
      comp=Z,6.1nm,0.9s
CCM   Cathedral Cave    65.27  59    P      P      09 11 13.3 +0.6
CCM                                  pmax   pmax
      comp=Z,6.0nm,0.9s
TX31  Lajitas Ar. Si    65.27  74    IAmb   IAmb   09 11 24.5
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	comp=Z,12nm,1.1s						
TXAR	Lajitas Array	65.27	74		P	09 11 14.0	+1.1
TXAR	Lajitas Array	65.27	74	P	P	09 11 13.9	+1.0
	comp=Z,4.4nm,0.7s,baz=300,slow=4.1,SNR=29						
	comp=Z,4.4nm,0.7s						
SAND	Sanderson	65.67	72	IAmb	IAmb	09 11 28.4	
	comp=Z,6.0nm,0.9s						
PMG	Port Moresby	66.03	204	LR	LR	09 35 14.1	
	comp=Z,115nm,20.1s,baz=334,slow=32						
BRDY	Brady	66.38	69	IAmb	IAmb	09 11 31.0	
	comp=Z,7.3nm,1.0s						
NIL	Nilore	66.58	295		P	09 11 20.3	-0.9
NIL	Nilore	66.58	295	P	P	09 11 20.3	-0.9
NIL				pmax	pmax		
	comp=Z,11nm,0.9s						
NACGM	Naroch	66.86	337	*e*P	P	09 11 25.3	+2.7
	comp=N,18nm,0.8s						
DRIO	Del Rio	66.91	72	IAmb	IAmb	09 11 34.8	
	comp=Z,12nm,1.0s						
MNK	Minsk	66.98	337	*i* LRM	MLR	09 43 44.2	
	comp=Z,136nm,16.7s						
MNK	Minsk	66.98	337	*i* P	P	09 11 18.6	-4.8
MNK				*i*		09 13 45.5	
MNK				*i* PPP	PPP	09 15 23.2	
MNK				*i* S	S	09 20 15.6	+0.9
MNK				*i* SS	SS	09 24 35.0	+2.7
MNK				pmax	pmax		
	comp=Z,16nm,0.7s						
MNK				pmax	pmax		
	comp=E,13nm,0.6s						
MNK				pmax	pmax		
	comp=N,53nm,0.8s						
MNK				MLR	MLR		
	comp=N,149nm,16.0s						
MNK				MLR	MLR		
	comp=E,110nm,19.0s						
MNK				MLR	MLR		
	comp=Z,136nm,17.0s						
MNK	Minsk	66.98	337	*i* P	P	09 11 18.6	-4.8
	comp=E,13nm,0.6s						
MNK	Minsk	66.98	337	*i* P	P	09 11 18.6	-4.8
	comp=N,53nm,0.8s						
MNK	Minsk	66.98	337	*i* P	P	09 11 18.6	-4.8
	comp=Z,16nm,0.7s,baz=23						
MNK	Minsk	66.98	337	*i* PP	PP	09 13 45.6	-4.8
MNK	Minsk	66.98	337	*i* PPP	PPP	09 15 23.2	
MNK	Minsk	66.98	337	*i* S	S	09 20 15.6	+0.9
MNK	Minsk	66.98	337	*i* SS	SS	09 24 35.1	+2.8
MNK	Minsk	66.98	337	*i* SSS	SSS	09 27 42.8	
MNK	Minsk	66.98	337	*i* LR	LR	09 41 08.6	
MNK	Minsk	66.98	337	*i* LRM	MLR	09 43 29.6	
	comp=N,149nm,16.0s						
MNK	Minsk	66.98	337	*i* LRM	MLR	09 43 35.5	
	comp=E,110nm,19.3s						
WLAR	White Oak Lake	67.69	63		P	09 11 37.0	+8.8
T47A	Sharon Grove	68.16	57	P	P	09 11 32.1	+1.0
T47A				IAmb	IAmb	09 11 57.1	
	comp=Z,13nm,1.2s						
G62A	West of Eustis	68.77	41		P	09 11 40.9	+6.1
ACCN	Adirondack Com	69.06	44		P	09 11 43.3	+6.7
ACCN				IAmb	IAmb	09 11 43.7	
	comp=Z,7.8nm,0.8s						
HKT	Hockley	69.14	68	*i* P	P	09 11 32.9	-4.3
HKT				pmax	pmax		
	comp=Z,7.0nm,1.1s						
T50A	Nancy	69.24	55		P	09 11 43.9	+6.0
CLTN	Cedars of Leba	69.25	57	IAmb	IAmb	09 11 49.5	
	comp=Z,12nm,1.1s						
M57A	Sunshine Farm,	69.29	47		P	09 11 44.1	+6.0
AKASG	Malin Array Be	70.14	334	P	P	09 11 42.0	-1.1
	comp=Z,2.8nm,0.8s,baz=27,slow=6.2,SNR=13						
	comp=Z,2.8nm,0.8s						
AKASG	Malin Array Be	70.14	334	*i* P	P	09 11 42.9	-0.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKBB	Malin Array Si	70.14	334	*ce*P	P	09 11 41.5	-1.6
AKBB				pmax	pmax		
	comp=Z,11nm,1.1s						
EKA	Eskdalemuir Ar	70.61	355	P	P	09 11 44.7	-1.2
	comp=Z,2.5nm,0.8s,baz=352,slow=5.0,SNR=8.3						
	comp=Z,2.5nm,0.8s						
TKL	Tuckaleechee C	70.84	55	P	P	09 11 47.4	-0.4
	comp=Z,3.8nm,1.0s,baz=210,slow=21,SNR=2.7						
	comp=Z,3.8nm,1.0s						
KIV	Kislovodsk	72.01	322	*e*P	P	09 11 53.4	-1.3
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,79nm,18.0s						
KBZ	Khabaz	72.13	322	P	P	09 11 54.7	-0.6
	comp=Z,1.9nm,0.5s,baz=71,slow=4.3,SNR=4.4						
KBZ				LR	LR	09 47 45.7	
	comp=Z,143nm,18.3s,baz=33,slow=39						
	comp=Z,1.9nm,0.5s						
CLL	Collm	72.93	345	*i* P	P	09 11 59.5	-0.4
	comp=Z,20nm,1.9s						
CLL				*e*S	S	09 21 24.0	-0.6
CLL				*e*PS	PnS	09 22 00.0	+2.9
CLL				*e*SS	SS	09 26 03.0	-0.8
CLL				*e*SSS	SSS	09 29 18.0	
STHS	Stebnicka Huta	73.21	339	*e*P	P	09 12 06.4	+4.7
SOC	Sochi	73.38	324	*e*P	P	09 11 59.7	-3.0
SOC				*e*		09 14 42.6	
SOC				*e*PPP	PPP	09 16 28.7	
SOC				*e*S	S	09 21 29.5	-0.4
SOC				MLR	MLR		
	comp=Z,206nm,17.0s						
MORC	Moravsky Berou	73.62	341	*e*P	P	09 12 04.5	+0.4
LANS	Liptovska Anna	73.84	340	*e*P	P	09 12 07.8	+2.4
LANS	Liptovska Anna	73.84	340	*e*P	P	09 12 07.8	+2.4
BURAR	Bucovina Array	74.00	335		P	09 12 06.6	+0.1
MTN	Manton Dam	74.14	218		P	09 12 15.8	+8.4
MTN				IAmb	IAmb	09 12 19.0	
	comp=Z,12nm,0.9s						
VRAC	Vranov	74.25	342	P	P	09 12 07.7	-0.1
	comp=Z,2.3nm,0.5s,baz=16,slow=6.0,SNR=4.4						
	comp=Z,2.3nm,0.5s						
VRAC	Vranov	74.25	342	*e*P	P	09 12 08.6	+0.9
JAVC	Velka Javorina	74.47	341	*e*P	P	09 12 10.5	+1.4
KRUC	Moravsky	74.52	342	*e*P	P	09 12 10.0	+0.7
GNI	Garni	74.53	319	LR	LR	09 49 30.3	
	comp=Z,222nm,18.6s,baz=30,slow=40						
GERES	GERESS Array B	75.20	343	P	P	09 12 13.1	-0.3
	comp=Z,1.1nm,0.7s,baz=56,slow=24,SNR=4.6						
	comp=Z,1.1nm,0.7s						
CONA	Conrad Observa	75.71	342	*e*P	P	09 12 17.3	+1.0
	comp=Z,5.8nm,1.3s						
RONA	Rosalia, Austr	75.84	341	*e*P	P	09 12 18.2	+1.2
	comp=Z,2.1nm,0.8s						
TAOE	Nuku Hiva Isla	75.97	128	*e*LR	LR	09 35 37.8	
	comp=Z,211nm,28.2s						
DZM	Mont Dzumac	76.02	182	*e*LR	LR	09 35 45.5	
	comp=Z,208nm,24.4s						
MOA	Molln	76.07	343	*e*P	P	09 12 18.9	+0.6
	comp=Z,7.0nm,1.5s						
PSI	Prapat	76.16	255	LR	LR	09 49 02.4	
	comp=Z,124nm,18.1s,baz=53,slow=38						
BIOA	Bad Ischl, Aus	76.33	343	*e*P	P	09 12 20.0	+0.3
	comp=Z,2.7nm,0.5s						
ARSA	Arzberg	76.42	342	*e*P	P	09 12 21.0	+0.7
	comp=Z,2.5nm,0.8s						
LESA	Schwarzleotal	76.75	344	*e*P	P	09 12 21.7	-0.6
	comp=Z,0.2nm,0.3s						
KBA	Koelnbreinsper	76.97	343	*e*P	P	09 12 24.4	+0.8
	comp=Z,12nm,1.0s						
WATA	Walderalm	77.01	344	*e*P	P	09 12 23.1	-0.7
	comp=Z,4.7nm,1.3s						
SOKA	Soboth	77.06	342	*i* P	P	09 12 24.8	+0.8
	comp=Z,11nm,1.3s						
WTTA	Wattenberg	77.07	344	*e*P	P	09 12 24.9	+0.7
	comp=Z,6.5nm,1.0s						
MOTA	Moosalm	77.08	345	*e*P	P	09 12 22.6	-1.5
	comp=Z,5.8nm,1.1s						
SQTA	Sankt Quirin	77.18	345	*e*P	P	09 12 25.5	+0.8
	comp=Z,3.8nm,0.6s						
OBKA	Obir	77.31	342	*e*P	P	09 12 26.3	+0.8
	comp=Z,3.4nm,0.9s						
DAVA	Damuels	77.32	346	*e*P	P	09 12 25.5	0.0
	comp=Z,2.6nm,0.9s						
MYKA	Terra Mystica	77.36	343	*e*P	P	09 12 27.2	+1.6
	comp=Z,5.8nm,1.0s						
ABTA	Abfaltersbach	77.43	344	*e*P	P	09 12 26.3	+0.2
	comp=Z,3.5nm,0.9s						
FETA	Feichten	77.45	345	*e*P	P	09 12 27.0	+0.7
	comp=Z,4.5nm,1.1s						
PRED	Cave del Predi	77.55	343	IAmb	IAmb	09 12 44.9	
	comp=Z,6.5nm,1.0s						
ILGA	Ilgaz	77.63	327		P	09 12 28.1	+0.6
BRTR	Keskin Array B	78.86	326		P	09 12 33.9	-0.3
BRTR	Keskin Array B	78.86	326	P	P	09 12 33.0	-1.1
	comp=Z,1.1nm,0.7s,baz=50,slow=1.9,SNR=8.4						
	comp=Z,1.1nm,0.7s						
BRTR	Keskin Array B	78.86	326	*i* P	P	09 12 34.2	0.0
BRTR				pmax	pmax		
	comp=Z,4.0nm,1.2s						
WRA	Warramunga Arr	79.64	213	P	P	09 12 39.3	+1.0
	comp=Z,3.2nm,0.9s,baz=27,slow=5.9,SNR=8.6						
WRA				LR	LR	09 45 04.6	
	comp=Z,56nm,21.9s,baz=9.5,slow=34						
	comp=Z,3.2nm,0.9s						
PPT2	Papeete2	79.82	140	*e*LR	LR	09 37 23.6	
	comp=Z,245nm,25.8s						
PPT2				*e*LR	LR	09 37 31.8	
	comp=Z,258nm,22.0s						
FDMO	Fiordimonte	80.94	342	IAmb	IAmb	09 13 05.5	
	comp=Z,9.7nm,0.9s						
PALK	Pallekele	83.15	273	LR	LR	09 54 13.1	
	comp=Z,45nm,20.4s,baz=16,slow=39						
ASAR	Alice Springs	83.26	212		P	09 12 58.9	+1.5
ASAR	Alice Springs	83.26	212	P	P	09 12 59.3	+1.9
	comp=Z,2.0nm,0.7s,baz=16,slow=5.3,SNR=19						
	comp=Z,2.0nm,0.7s						
ASAR	Alice Springs	83.26	212	P	P	09 12 58.9	+1.5
MMAI	Mount Meron Ar	84.32	322	P	P	09 13 04.0	+0.9
	comp=Z,1.0nm,0.2s,baz=18,slow=6.6,SNR=4.6						
	comp=Z,1.0nm,0.2s						
ASF	Jabal al Asfar	84.53	321	LR	LR	09 56 22.6	
	comp=Z,99nm,18.7s,baz=199,slow=40						
TBI	Tubuai	85.14	142	*e*LR	LR	09 39 58.0	
	comp=Z,1µm,26.8s						
TBI				*e*LR	LR	09 39 58.8	
	comp=Z,632nm,21.8s						
ESDC	Sonseca Array	86.27	355		P	09 13 12.1	-0.6
ESDC	Sonseca Array	86.27	355	P	P	09 13 11.3	-1.4
	comp=Z,4.6nm,1.3s,baz=1.4,slow=4.3,SNR=7.6						
	comp=Z,4.6nm,1.3s						
STKA	Stephens Creek	88.97	203	P	P	09 13 26.4	+1.2
	comp=Z,2.7nm,0.8s,baz=15,slow=3.8,SNR=5.0						
	comp=Z,2.7nm,0.8s						
BOSA	Boshof	143.31	299	PKP	PKPdf	09 20 06.1	+1.0
	comp=Z,3.5nm,0.8s,baz=27,slow=2.7,SNR=5.4						
QSPA	South Pole Qui	143.98	180	PKP	PKPbc	09 20 02.8	-0.2
	comp=Z,6.7nm,0.7s,baz=68,slow=0.1,SNR=26						
MAW	Mawson	144.11	219	PKP	PKPdf	09 20 04.7	-0.4
	comp=Z,3.4nm,0.8s,baz=44,slow=6.8,SNR=3.7						
SNAA	Sanae	162.14	188	PKPab	PKPab	09 21 20.2	+2.4
	comp=Z,2.1nm,0.8s,baz=292,slow=3.4,SNR=5.5						

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*SNET **10** 09:03:16.8±0.7, 13.°39N×89.°52W, h67^{km}±3^{km}, ML3.1*

*GCG **10** 09:03:16.6±0.8, 13.°39N×89.°53W, h69^{km}±5^{km}, MD3.6, MW2.7*

*CATAC **10** 09:03:16.6±0.4, 13°N±4°×9°0W±°, h49^{km}±4^{km}, M3.2/22, MLv3.2/22, Error ellipse: s-maj=9.5km s-min=4.2km az=20.4, confirmed*

ISC 10 09:03:16.8±2.0**, 13.°35N**±0.°08×**89.°54W**±0.°06**, h68**^{km}±9^{km}**, n83, σ0^{s}46**/89**, 2C-11D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.26	57	⇓*e*P	Pn	09 03 27.1	-0.3
LALI				*e*S	Sn	09 03 34.5	-0.7
LALI	Alcalda de L	0.26	57	*i* P	Pn	09 03 27.2	-0.3
LALI				*i* S	Sn	09 03 34.8	-0.5
LALI	Alcalda de L	0.26	57	P	Pn	09 03 27.1	-0.3
JAYA	Jayaque - finc	0.32	17	⇓*i*P	Pn	09 03 27.8	-0.3
JAYA				*e*S	Sn	09 03 36.3	-0.1
JAYA				IAML		09 03 37.3	
	comp=Z,3µm,0.2s						
JAYA	Jayaque - finc	0.32	17	*i* P	Pn	09 03 27.8	-0.3
JAYA				*i* S	Sn	09 03 36.3	-0.1
JAYA	Jayaque - finc	0.32	17	P	Pn	09 03 27.8	-0.3
ITCA	Escuela Especi	0.41	39	P	Pn	09 03 28.6	-0.2
ITCA	Escuela Especi	0.41	39	S	Sn	09 03 37.8	+0.2
PMON	Piamonte	0.42	32	⇓*i*P	Pn	09 03 28.7	-0.1
PMON	Piamonte	0.42	32	P	Pn	09 03 28.8	-0.1
PANCS	Alcalda de	0.44	54	*e*P	Pn	09 03 28.7	-0.3
PANCS	Alcalda de	0.44	54	P	Pn	09 03 28.6	-0.3
BOQS	Boqueron	0.46	34	*e*P	Pn	09 03 29.3	0.0
SEMO	Seminario San	0.47	41	P	Pn	09 03 29.0	-0.2
UEES	Universidad Ev	0.47	39	*e*P	Pn	09 03 28.9	-0.3
UEES	Universidad Ev	0.47	39	P	Pn	09 03 29.0	-0.3
UEES	Universidad Ev	0.47	39	S	Sn	09 03 39.2	+0.8
CEDA	San Andres	0.47	18	*e*P	Pn	09 03 28.8	-0.5
CEDA	San Andres	0.47	18	S	Sn	09 03 39.4	+1.0
CEVE	Cerro Verde	0.48	351	*e*P	Pn	09 03 29.5	-0.1
CEVE	Cerro Verde	0.48	351	P	Pn	09 03 29.5	-0.1
CEVE	Cerro Verde	0.48	351	S	Sn	09 03 40.0	+1.1
PIC2	El Picacho	0.48	35	*e*P	Pn	09 03 29.6	0.0
UTEC	Universidad Te	0.48	44	P	Pn	09 03 29.2	-0.2
UTEC	Universidad Te	0.48	44	S	Sn	09 03 39.1	+0.6
SBLS	San Blas	0.49	351	⇓*i*P	Pn	09 03 29.5	-0.1
IGN	Direccin Gen	0.51	45	P	Pn	09 03 29.3	-0.4
IGN	Direccin Gen	0.51	45	S	Sn	09 03 40.0	+0.9
SNJE	San Jose	0.52	353	⇓*i*P	Pn	09 03 29.7	-0.2
UDBS	Universidad Do	0.53	46	P	Pn	09 03 29.7	-0.1
UDBS	Universidad Do	0.53	46	S	Sn	09 03 40.0	+0.7
LFRS	El Faro	0.54	60	⇑*e*P	Pn	09 03 29.9	-0.1
LFRS				*e*S	Sn	09 03 40.2	+0.5
RTR	El Retiro	0.55	350	⇓*e*P	Pn	09 03 30.3	+0.1
LFU	La Fuente	0.58	46	*e*P	Pn	09 03 30.2	-0.1
NUBE	Las Nubes	0.60	337	⇓*e*P	Pn	09 03 30.2	-0.4
NUBE	Las Nubes	0.60	337	*i* P	Pn	09 03 30.2	-0.4
NUBE				*e*S	Sn	09 03 41.0	+0.3
NUBE	Las Nubes	0.60	337	P	Pn	09 03 30.2	-0.4
UNIC	Universidad Ca	0.63	360	P	Pn	09 03 30.5	-0.4
UNIC	Universidad Ca	0.63	360	S	Sn	09 03 41.3	+0.1
FAME	Alcaldia de Sa	0.67	317	P	Pn	09 03 31.1	-0.1
FAME	Alcaldia de Sa	0.67	317	S	Sn	09 03 42.0	+0.1
LOAL	Lomas de Alarc	0.69	340	*e*P	Pn	09 03 31.3	-0.2
LOAL	Lomas de Alarc	0.69	340	P	Pn	09 03 31.3	-0.2
PAVA	Las Pavas	0.69	58	⇓*e*P	Pn	09 03 31.4	-0.2
PAVA	Las Pavas	0.69	58	P	Pn	09 03 31.3	-0.2
PAVA	Las Pavas	0.69	58	S	Sn	09 03 43.2	+0.7
COEG	Centro de Oper	0.70	67	*e*P	Pn	09 03 31.2	-0.4
COEG				IAML		09 03 45.0	
	comp=Z,338nm,0.1s						
COEG	Centro de Oper	0.70	67	P	Pn	09 03 31.3	-0.4
COEG	Centro de Oper	0.70	67	S	Sn	09 03 42.7	+0.1
SLOZ	Alcaldia de Sa	0.71	341	⇓*i*P	Pn	09 03 31.4	-0.3
SLOZ	Alcaldia de Sa	0.71	341	P	Pn	09 03 31.5	-0.3
SLOZ	Alcaldia de Sa	0.71	341	S	Sn	09 03 43.3	+0.5
SNVI	San Vicente	0.73	69	⇑*e*P	Pn	09 03 32.4	+0.3
TECO	Alcaldia de Te	0.77	76	*e*P	Pn	09 03 32.0	-0.4
TECO	Alcaldia de Te	0.77	76	P	Pn	09 03 31.9	-0.4
TECO	Alcaldia de Te	0.77	76	S	Sn	09 03 44.0	+0.2
UESV	Universidad de	0.79	69	P	Pn	09 03 32.3	-0.3
UESV	Universidad de	0.79	69	S	Sn	09 03 44.8	+0.4
SCLA	Alcaldia de Sa	0.87	66	⇓*e*P	Pn	09 03 33.3	-0.3
SCLA	Alcaldia de Sa	0.87	66	P	Pn	09 03 33.2	-0.3
SCLA	Alcaldia de Sa	0.87	66	S	Sn	09 03 46.7	+0.6
PQSS	Presa 15 de Se	0.99	74	S	Sn	09 03 48.9	+0.2
LLGN	La Laguna	1.00	36	P	Pn	09 03 34.7	-0.5
TECA	Tecapa	1.02	82	*e*P	Pn	09 03 35.5	-0.1
MTO3	Montecristo	1.06	10	⇓*i*P	Pn	09 03 35.8	-0.4
MTO3	Montecristo	1.06	10	*i* P	Pn	09 03 35.7	-0.4
MTO3	Montecristo	1.06	10	P	Pn	09 03 35.8	-0.4
MTO3	Montecristo	1.06	10	S	Sn	09 03 50.1	-0.5
PACA	Pacayal	1.19	84	*e*P	Pn	09 03 37.8	0.0
PACA	Pacayal	1.19	84	P	Pn	09 03 38.2	+0.4
LCY	Lacayo	1.22	86	*e*P	Pn	09 03 38.3	+0.2
ESQI	Esquipulas	1.22	9	*e*P	Pn	09 03 38.0	-0.1
ESQI	Esquipulas	1.22	9	P	Pn	09 03 38.1	-0.1
RANC	El Ranchito	1.23	86	S	Sn	09 03 52.0	-2.2
BLLM	Bellamira	1.27	86	*e*P	Pn	09 03 39.0	+0.3
LCND	La Caada	1.61	91	*e*P	Pn	09 03 42.8	-0.3
LCND				IAML		09 04 07.1	
	comp=Z,137nm,0.2s						
LCND	La Caada	1.61	91	P	Pn	09 03 43.0	-0.1
CNCH	Conchagua	1.67	92	*e*P	Pn	09 03 44.5	+0.5
CNCH	Conchagua	1.67	92	P	Pn	09 03 44.5	+0.5
MARCA	Marcala la Paz	1.67	61	*i* P	Pn	09 03 43.8	-0.3
MARCA	Marcala la Paz	1.67	61	P	Pn	09 03 43.7	-0.4
INTHN	La Esperanza I	1.70	55	P	Pn	09 03 44.3	-0.2
CSGN	Cosiguina Volc	1.97	101	P	Pn	09 03 48.6	+0.6

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*IDC **10** 09:05:20.9±0.7, 67.°68N×34.°12E, h0^{km}, mb3.7/8, mbtmp3.9/15, ML3.6/7, Error ellipse: s-maj=9.1km s-min=7.6km az=62.0*

*HEL **10** 09:05:20.7±0.2, 67.°74N×33.°74E, h0^{km}, ML3.0, Suspected explosion*

*KOLA **10** 09:05:20.9, 67.°63N×33.°89E, h0^{km}, ML2.9, Error ellipse: s-maj=3.7km s-min=1.8km az=150.0, Khibiny, mines Rasvumchorr, Central*

*NAO **10** 09:05:21.3±3.7, 67.°58N×33.°74E, h12^{km}±11^{km}, ML4.0*

*UPP **10** 09:05:21.4±3.2, 67.°63N×33.°69E, h0^{km}, ML3.2*

*FCIAR **10** 09:05:21.0, 67.°66N×33.°86E, h10^{km}*

*BER **10** 09:05:22.7±2.3, 67.°59N×33.°80E, h0^{km}, ML3.4, ML4.0(NAO), Suspected explosion*

*DNK **10** 09:05:29.0±0.8, 67.°60N×31.°97E, h0^{km}, ML3.2(UPP), Suspected explosion*

ISC 10 09:05:18.9±0.5**, 67.°59N**±0.°03×**33.°87E**±0.°03**, h0**^{km}**, n107, σ2^{s}01**/165**, mb3.7**/7**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA	Apatity	0.18	262	P	Pg	09 05 24.3	+2.0
APA0	Apatity Array	0.34	272	Pg	Pg	09 05 27.2	+1.9
	baz=100,slow=18						
APA0				Lg	Lg	09 05 32.2	
APA0	Apatity Array	0.34	272	P	Pg	09 05 26.9	+1.6
APA0				S	Sg	09 05 31.9	+2.2
APA0	Apatity Array	0.34	272	Pg	Pg	09 05 27.2	+1.9
	baz=100,slow=18						
APA0				Sg	Sb	09 05 32.2	-1.4
LVZ	Lovozero	0.42	44	P	Pg	09 05 28.1	+1.2
LVZ				S	Sg	09 05 33.4	+0.9
LVZ	Lovozero	0.42	44	PG	Pg	09 05 27.4	+0.4
LVZ				SG	Sg	09 05 33.3	+0.8
KVDA	Kovda	0.99	204	P	Pg	09 05 39.2	+1.4
VRF	Varrio	1.64	277	PG	Pn	09 05 49.8	+0.9
	baz=87						
VRF				MSG		09 06 07.9	
	comp=Z,234nm,0.2s						
VRF				SN	Sn	09 06 11.1	+0.5
OLKF	Oulanka, Finla	2.18	236	PB	Pb	09 05 59.4	+0.4
OLKF				MSG		09 06 26.5	
	comp=Z,106nm,0.2s						
OLKF				SG	Sg	09 06 28.5	-0.1
KU6	Riekki	2.23	227	PB	Pb	09 05 59.5	-0.4
KU6				MSG		09 06 28.6	
	comp=Z,67nm,0.2s						
KU6				SG	Sb	09 06 30.0	+2.0
RAJF	Raja-Jooseppi	2.27	295	PG	Pn	09 05 58.8	+1.3
RAJF				SG	Sn	09 06 28.1	+1.9
MSF	Maaselka	2.56	231	PB	Pb	09 06 04.6	-0.9
MSF				SG	Sb	09 06 39.0	+1.5
KU1	Kurvinen	2.67	222	PN	Pn	09 06 06.3	+3.2
KU1				SB	Sb	09 06 41.2	+0.5
KU2	Taivalkoski	2.94	233	PN	Pn	09 06 10.2	+3.5
VADS	Vadso	3.02	329	Pn	Pn	09 06 08.7	+0.9
VADS				Sn	Sn	09 06 45.0	+0.4
VADS	Vadso	3.02	329	P	Pn	09 06 08.9	+1.1
VADS				S	Sn	09 06 45.1	+0.4
VADS	Vadso	3.02	329	*e*P	Pn	09 06 09.0	+1.2
VADS				*e*S	Sn	09 06 45.4	+0.8
VADS				IAML		09 06 51.2	
	comp=Z,277nm,0.3s						
RANF	Ranua	3.22	244	PN	Pn	09 06 12.8	+2.2
	baz=56						
RANF				SG	Sb	09 06 59.3	+2.8
KEV	Kevo	3.32	314	Pn	Pn	09 06 14.0	+2.1
KEV				Sn	Sn	09 06 52.8	+0.9
KEV	Kevo	3.32	314	*e*P	Pn	09 06 14.0	+2.1
KEV				*e*S	Sn	09 06 52.6	+0.6
KEV	Kevo	3.32	314	PN	Pn	09 06 13.0	+1.1
	baz=127						
ARA0	ARCESS Array S	3.64	306	Pn	Pn	09 06 18.0	+1.7
	baz=122,slow=16						
ARA0				Sn	Sn	09 06 59.1	-0.7
	baz=123,slow=28						
ARA0				Lg	Lg	09 07 10.4	
	baz=127,slow=28						
ARA0	ARCESS Array S	3.64	306	*e*P	Pn	09 06 18.1	+1.7
ARA0				*e*S	Sn	09 06 59.2	-0.7
ARA0				IAML		09 07 15.8	
	comp=Z,222nm,0.4s						
ARA0	ARCESS Array S	3.64	306	PN	Pn	09 06 17.1	+0.8
	baz=119						
ARA0				SN	Sn	09 06 60.0	+0.1
ARCES	ARCESS Array B	3.64	306	Pn	Pn	09 06 17.8	+1.5
	comp=Z,23nm,0.3s,baz=121,slow=15,SNR=1596						
ARCES				Pg	Pb	09 06 25.9	+2.0
	comp=Z,4.9nm,0.3s,baz=120,slow=15,SNR=5.0						
ARCES				Sn	Sn	09 06 59.9	0.0
	comp=Z,19nm,0.3s,baz=121,slow=26,SNR=12						
ARCES				Lg	Lg	09 07 09.6	
	comp=Z,46nm,0.3s,baz=113,slow=36,SNR=6.4						
	comp=Z,104nm,0.4s						
ARCES	ARCESS Array B	3.64	306	P	Pn	09 06 17.5	+1.2
ARCES				S	Sn	09 06 59.2	-0.7
RMF	Romuvaara	3.76	207	PN	Pn	09 06 20.5	+2.5
KLF	Kolari	3.84	269	PN	Pn	09 06 20.0	+0.9
	baz=79						
KLF				SG	Sg	09 07 19.2	-2.9
HEF	Hetta	3.93	287	Pn	Pn	09 06 21.7	+1.4
HEF				Sn	Sn	09 07 07.6	+0.5
HEF	Hetta	3.93	287	*e*P	Pn	09 06 21.7	+1.4
HEF	Hetta	3.93	287	PN	Pn	09 06 21.6	+1.2
HEF				SN	Sn	09 07 08.0	+1.0
TOF	Tornio	4.07	252	PN	Pn	09 06 23.4	+1.2
TOF				SN	Sn	09 07 12.0	+1.6
OUL	Oulu	4.08	236	Pn	Pn	09 06 24.7	+2.3
OUL				Sn	Sn	09 07 10.7	-0.1
OUL	Oulu	4.08	236	Pn	Pn	09 06 24.7	+2.3
OUL				Sn	Sn	09 07 10.7	-0.1
OUL	Oulu	4.08	236	PN	Pn	09 06 25.8	+3.4
	baz=42						
OUL				SB	Sb	09 07 22.6	+1.3
PAJU	Pajala	4.21	267	P	Pn	09 06 25.0	+0.7
PAJU				S	Sn	09 07 14.6	+0.6
PAJU	Pajala	4.21	267	P	Pn	09 06 25.0	+0.7
PAJU				S	Sn	09 07 14.6	+0.6
PAJU	Pajala	4.21	267	PN	Pn	09 06 24.9	+0.7
PAJU				SN	Sn	09 07 15.6	+1.7
OBF4	Vikkela, Lumij	4.52	236	PN	Pn	09 06 30.8	+2.4
	baz=48						
KALU	Kalix	4.52	252	P	Pn	09 06 29.8	+1.4
KALU	Kalix	4.52	252	P	Pn	09 06 29.8	+1.4
KALU	Kalix	4.52	252	PN	Pn	09 06 29.9	+1.4
KALU				SN	Sn	09 07 23.0	+1.4
LANU	Lannavaara	4.53	281	PN	Pn	09 06 30.3	+1.8
LANU				SN	Sn	09 07 22.0	+0.3
MASU	Masugnsbyn	4.56	274	P	Pn	09 06 29.8	+0.8
MASU	Masugnsbyn	4.56	274	P	Pn	09 06 29.8	+0.8
ERTU	Ertsjaerv	4.69	263	PN	Pn	09 06 31.8	+1.0
	baz=69						
ERTU				SN	Sn	09 07 26.4	+0.7
HAMF	Hammerfest	4.76	315	Pn	Pn	09 06 32.8	+1.1
HAMF				Sn	Sn	09 07 25.8	-1.6
HAMF	Hammerfest	4.76	315	*e*P	Pn	09 06 32.9	+1.2
KIF	Kilpisjarvi	5.05	292	Pn	Pn	09 06 37.1	+1.4
KIF				Sn	Sn	09 07 32.5	-2.2
KIF	Kilpisjarvi	5.05	292	*e*P	Pn	09 06 37.3	+1.6
KUA	Kurravaara	5.15	280	P	Pn	09 06 37.8	+0.6
KUA	Kurravaara	5.15	280	P	Pn	09 06 37.8	+0.6
DUNU	Dundret	5.16	271	P	Pn	09 06 38.3	+1.0
DUNU	Dundret	5.16	271	P	Pn	09 06 38.3	+1.0
KOVU	Salmi	5.21	283	P	Pn	09 06 38.9	+0.9
KOVU	Salmi	5.21	283	P	Pn	09 06 38.9	+0.9
HARU	Harads	5.28	260	P	Pn	09 06 38.8	-0.1
HARU	Harads	5.28	260	P	Pn	09 06 38.8	-0.1
JETT	Jettan, Norway	5.31	298	Pn	Pn	09 06 40.9	+1.6
JETT				Sn	Sn	09 07 38.8	-2.4
JETT	Jettan, Norway	5.31	298	Pn	Pn	09 06 40.9	+1.6
JETT				Sn	Sn	09 07 38.8	-2.4
SJUU	Sjulsmark	5.33	253	P	Pn	09 06 40.8	+1.3
SJUU	Sjulsmark	5.33	253	P	Pn	09 06 40.8	+1.3
RATU	Laukkuluspa	5.44	279	P	Pn	09 06 41.5	+0.4
RATU	Laukkuluspa	5.44	279	P	Pn	09 06 41.5	+0.4
LSH	Leshukonskoye	5.51	114	*e*P	Pn	09 06 43.2	+1.2
LSH				*e*S	Sn	09 07 44.5	-1.5
TRO	Tromso	5.83	297	Pn	Pn	09 06 48.3	+1.9
TRO				Sn	Sn	09 07 51.3	-2.6
TRO	Tromso	5.83	297	*e*P	Pn	09 06 48.2	+1.9
TRO				Sn	Sn	09 07 51.3	-2.6
SALU	Saltoluokta	5.91	275	*e*P	Pn	09 06 47.9	+0.4
FIA0	FINESS Array S	7.03	212	Pn	Pn	09 07 04.2	+1.4

	baz=30,slow=12						
FIA0				Sn	Sn	09 08 23.1	-0.2
	baz=35,slow=22						
FIA0	FINESS Array S	7.03	212	Pn	Pn	09 07 04.2	+1.4
	baz=30,slow=12						
FIA0				Sn	Sn	09 08 23.1	-0.2
	baz=35,slow=22						
FINES	FINESS Array B	7.03	212	Pn	Pn	09 07 05.0	+2.2
	comp=Z,0.6nm,0.3s,baz=28,slow=14,SNR=7.3						
FINES				Sn	Sn	09 08 22.7	-0.6
	comp=Z,2.8nm,0.3s,baz=34,slow=22,SNR=6.6						
FINES				Lg	Lg	09 08 55.9	
	comp=Z,9.0nm,0.3s,baz=31,slow=27,SNR=18						
	comp=Z,2.5nm,0.4s						
STEI	Steigen	7.07	281	Pn	Pn	09 07 03.2	-0.2
STEI				Sn	Sn	09 08 21.9	-2.5
STEI	Steigen	7.07	281	eP	Pn	09 07 03.7	+0.3
STEI				Sn	Sn	09 08 21.9	-2.5
FAUS	Fauske	7.13	277	Pn	Pn	09 07 04.7	+0.5
FAUS				Sn	Sn	09 08 23.1	-2.8
FAUS	Fauske	7.13	277	S	Sn	09 08 23.0	-2.9
FAUS	Fauske	7.13	277	Pn	Pn	09 07 04.7	+0.5
FAUS				Sn	Sn	09 08 23.1	-2.8
KLMR	Klimovskoe	7.20	157	eP	Pn	09 07 03.7	-1.5
KLMR				eS	Sn	09 08 24.0	-3.5
LOF	Lofoten	7.69	283	Pn	Pn	09 07 11.5	-0.4
LOF				Sn	Sn	09 08 34.0	-5.5
LOF	Lofoten	7.69	283	eP	Pn	09 07 11.4	-0.4
LOF				Sn	Sn	09 08 34.0	-5.5
MOR8	Moi Rana	7.77	268	Pn	Pn	09 07 10.4	-2.6
MOR8				Sn	Sn	09 08 35.1	-6.5
MOR8	Moi Rana	7.77	268	eP	Pn	09 07 10.6	-2.5
MOR8				Sn	Sn	09 08 35.1	-6.5
VAGH	Vaagaholmen	8.05	273	eP	Pn	09 07 16.4	-0.5
KONS	Konsvik	8.18	272	Pn	Pn	09 07 18.6	+0.1
KONS				Sn	Sn	09 08 49.7	-1.7
KONS	Konsvik	8.18	272	eP	Pn	09 07 18.8	+0.2
BJO1	Bjornoya	8.42	332	eP	Pn	09 07 18.4	-3.5
BJO1				eS	Sn	09 08 46.3	-11
HOPEN	Hopen	9.35	347	eP	Pn	09 07 33.1	-1.5
HOPEN				eS	Sn	09 09 12.0	-8.3
HSPB	Hornsund (broa	10.89	338	eP	Pn	09 07 53.1	-2.5
HSPB				eS	Sn	09 09 47.6	-10
KIRV	Kirov	11.41	135	Pn	Pn	09 08 01.9	-1.0
	comp=Z,2.1nm,0.3s,baz=97,slow=12,SNR=4.0						
	comp=Z,9.3nm,0.6s						
HFS	Hagfors	11.57	239	Pn	Pn	09 08 04.6	-0.4
	baz=42,slow=12						
HFS	Hagfors	11.57	239	Pn	Pn	09 08 05.2	+0.3
	comp=Z,0.5nm,0.3s,baz=42,slow=14,SNR=13						
HFS				Sn	Sn	09 10 11.2	-3.5
	comp=Z,2.1nm,0.3s,baz=56,slow=22,SNR=8.9						
HFS				Lg	Lg	09 11 17.5	
	comp=Z,3.3nm,0.3s,baz=56,slow=27,SNR=7.3						
	comp=Z,6.2nm,0.6s						
SPA0	Spitsbergen Ar	11.72	342	Pn	Pn	09 08 05.1	-2.0
	baz=142,slow=16						
SPA0	Spitsbergen Ar	11.72	342	eP	Pn	09 08 04.5	-2.6
SPA0				eS	Sn	09 10 07.1	-11
SPITS	Spitsbergen Ar	11.72	342	Pn	Pn	09 08 05.1	-2.0
	baz=140,slow=16						
SPITS				Sn	Sn	09 10 12.3	-6.0
	baz=147,slow=29						
	comp=Z,3.3nm,0.4s						
NB2	NORSAR Subarra	11.76	247	Pn	Pn	09 08 07.2	-0.5
	baz=45,slow=12						
NOA	NORSAR Array B	11.76	247	Pn	Pn	09 08 07.5	-0.2
	comp=Z,0.1nm,0.3s,baz=41,slow=10,SNR=12						
NOA				Sn	Sn	09 10 14.8	-4.7
	comp=Z,0.1nm,0.3s,baz=44,slow=21,SNR=5.0						
	comp=Z,0.7nm,0.6s						
NRA0	NORESS Array S	11.86	245	Pn	Pn	09 08 08.4	-0.6
	baz=51,slow=12						
ARTI	Arti	15.93	123	Pn	Pn	09 09 01.0	-3.1
	comp=Z,1.3nm,0.3s,baz=342,slow=6.0,SNR=4.3						
ARTI				Lg	Lg	09 13 41.4	
	comp=Z,0.5nm,0.3s,baz=229,slow=1.5,SNR=5.0						
BELG	Belogornoye	16.66	149	Pn	Pn	09 09 09.9	-3.4
	comp=Z,0.3nm,0.3s,baz=3.6,slow=1.7,SNR=3.6						
AKASG	Malin Array Be	17.10	190	Pn	Pn	09 09 13.4	-5.5
	comp=Z,1.1nm,0.3s,baz=8.9,slow=12,SNR=14						
AKASG				Lg	Lg	09 14 23.6	
	comp=Z,0.5nm,0.3s,baz=355,slow=29,SNR=4.3						
	comp=Z,2.6nm,0.6s						
AKTO	Aktyubinsk	20.97	133	P	P	09 10 03.5	+0.4
	comp=Z,5.5nm,0.7s,baz=326,slow=9.8,SNR=12						
	comp=Z,5.5nm,0.7s						
BVAR	Borovoye Array	22.75	112	P	P	09 10 22.4	+0.2
	comp=Z,4.6nm,0.5s,baz=320,slow=9.6,SNR=6.1						
	comp=Z,4.6nm,0.5s						
KBZ	Khabaz	24.40	164	P	P	09 10 40.7	+2.2
	comp=Z,0.9nm,0.4s,baz=328,slow=5.9,SNR=4.0						
	comp=Z,0.9nm,0.4s						
KURBB	Kurchatov Arra	27.66	105	P	P	09 11 09.9	+2.0
	comp=Z,1.0nm,0.7s,baz=348,slow=6.4,SNR=1.2						
	comp=Z,1.0nm,0.7s						
BRTR	Keskin Array B	27.92	180	P	P	09 11 13.4	+2.9
	comp=Z,0.5nm,0.6s,baz=353,slow=7.4,SNR=2.3						
	comp=Z,0.5nm,0.6s						
MKAR	Makanchi Array	32.23	106	P	P	09 11 51.0	+2.5
	comp=Z,0.5nm,0.5s,baz=326,slow=7.7,SNR=5.9						
	comp=Z,0.5nm,0.5s						
ILAR	Eielson Array	47.92	0	P	P	09 13 59.4	+1.3
	comp=Z,0.2nm,0.8s,baz=354,slow=8.8,SNR=4.1						
	comp=Z,0.2nm,0.8s						
YKA	Yellowknife Ar	48.22	341	P	P	09 14 02.1	+1.6
	comp=Z,0.3nm,0.7s,baz=13,slow=8.4,SNR=3.6						
	comp=Z,0.3nm,0.7s						

BEO ***10*** *09:06:55.4±0.5, 43°.40N×17°.29E, h1^{km}±2^{km}, ML2.4/13*

RHSSO ***10*** *09:06:55.5±0.3, 43°.34N×17°.29E, h4^{km}±2^{km}, ML2.7/13*

PDG ***10*** *09:06:56.4±0.6, 43°.35N×17°.41E, h2^{km}±2^{km}, ML2.8/10, Error ellipse: s-maj=1.1km s-min=2.0km az=0.0*

ISC 10 09:06:54.9±1.0**, 43°.37N**±0°.02×**17°.30E**±0°.02**, h4**^{km}±9^{km}**, n74, σ1^{s}.23**/121**, 12C-3D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RICI	Ricice	0.18	316	i Pg	Pg	09 06 58.0	-0.5
RICI				Sg	Sg	09 07 00.3	-0.6
MAKA	Makarska	0.22	250	i Pg	Pg	09 06 59.1	-0.1
MAKA				Sg	Sg	09 07 02.8	+0.6
STON	Ston	0.57	149	⇓iPg	Pg	09 07 05.4	-0.5
STON				eSg	Sg	09 07 14.1	+0.8
STON	Ston	0.57	149	ePg	Pb	09 07 07.3	-0.2
STON				Sg	Sb	09 07 15.3	-0.6
STON	Ston	0.57	149	ePg	Pg	09 07 05.6	-0.3
STON				eSg	Sb	09 07 15.1	-0.8
HVAR	Hvar	0.65	254	ePg	Pg	09 07 07.8	+0.3
HVAR				Sg	Sg	09 07 16.4	+0.5
KIJV	Kijevo	0.91	315	ePg	Pg	09 07 12.1	-0.3
KIJV				Sg	Sb	09 07 25.1	-0.8
DBRK	Dubrovnik	0.93	138	ePg	Pg	09 07 13.0	+0.3
DBRK				Sg	Sn	09 07 27.2	-1.3
TREB	Trebinje	1.00	130	ePg	Pg	09 07 13.2	-1.0
TREB				eSg	Sg	09 07 27.5	+0.3
TREB	Trebinje	1.00	130	ePg	Pg	09 07 12.7	-1.5
TREB				eSg	Sb	09 07 28.0	-0.4
BRY	Bratogost	1.02	117	⇑iPg	Pg	09 07 13.5	-0.9
BRY				eSg	Sg	09 07 27.4	-0.2
BRY	Bratogost	1.02	117	⇑iPg	Pg	09 07 13.4	-0.9
BRY				i Sg	Sb	09 07 28.4	-0.5
UPM	Unac-Piva	1.18	97	ePg	Pb	09 07 16.8	-1.2
UPM	Unac-Piva	1.18	97	⇑iPg	Pb	09 07 16.8	-1.2
UPM				i Sg	Sn	09 07 34.0	-0.9
ZIRJ	Zirje	1.24	284	i Pg	Pn	09 07 17.0	-2.0
ZIRJ				Sg	Sg	09 07 34.8	0.0
A050A	Klekovaca	1.25	334	⇓iPg	Pn	09 07 18.0	-1.2
A050A				eSg	Sn	09 07 35.4	-1.1
MORI	Morici	1.26	294	ePg	Pn	09 07 18.1	-1.2
MORI				Sg	Sn	09 07 36.6	-0.1
HCY	Herceg Novi	1.27	136	ePg	Pn	09 07 17.6	-1.8
HCY	Herceg Novi	1.27	136	⇑iPg	Pn	09 07 18.8	-0.6
HCY				i Sg	Sn	09 07 37.6	+0.8
BLY	Banja Luka	1.39	356	⇑iPg	Pg	09 07 21.3	-0.2
BLY				eSg	Sg	09 07 40.4	+0.9
BLY	Banja Luka	1.39	356	ePg	Pb	09 07 21.0	-0.4
BLY				eSg	Sb	09 07 37.8	-1.6
HAPS	Han Pijesak,Bl	1.40	58	⇑iPg	Pb	09 07 21.4	-0.2
HAPS				eSg	Sg	09 07 40.8	+1.1
HAPS	Han Pijesak,Bl	1.40	58	ePg	Pg	09 07 21.8	+0.1
HAPS				eSg	Sg	09 07 39.8	+0.1
CEME	Cevo	1.44	124	⇑iPg	Pn	09 07 21.3	-0.5
CEME				i Sg	Sg	09 07 43.6	+2.4
PLE	Pljevlja	1.52	91	⇓iPg	Pn	09 07 22.4	-0.6
PLE				i Sg	Sg	09 07 45.2	+1.4
RUDO	Rudo	1.52	80	⇑iPn	Pb	09 07 23.1	-0.6
RUDO				eSn	Sg	09 07 44.3	+0.4
RUDO	Rudo	1.52	80	ePg	Pn	09 07 22.4	-0.5
RUDO				eSg	Sg	09 07 44.3	+0.4
BUM	Brajici-Budva	1.58	132	ePg	Pb	09 07 23.9	-0.8
BUM				eSg	Sg	09 07 48.7	+3.0
BBLS	Lazi&#263i	1.61	71	⇑iPn	Pb	09 07 24.8	-0.4
BBLS				eSn	Sg	09 07 46.6	+0.1
BBLS	Lazi&#263i	1.61	71	ePg	Pb	09 07 25.2	0.0
BBLS				eSg	Sb	09 07 45.0	-0.8
A051A	Mrakovica	1.67	350	⇑iPn	Pb	09 07 25.4	-0.9
A051A				eSn	Sg	09 07 48.0	-0.6
KOME	Kolasin	1.70	107	⇑iPn	Pb	09 07 26.6	-0.2
KOME				i Sn	Sg	09 07 52.0	+2.5
PDG	Podgorica	1.71	122	ePn	Pb	09 07 25.9	-1.0
PDG				eSn	Sb	09 07 48.2	-0.5
PDG	Podgorica	1.71	122	⇑iPn	Pb	09 07 26.8	-0.1
PDG	Podgorica	1.71	122	ePn	Pg	09 07 27.8	+0.1
PDG				i Sn	Sg	09 07 52.7	+2.8
DUGI	Dugi Otok	1.75	292	i Pn	Pb	09 07 26.9	-0.6
DUGI				Sn	Sg	09 07 51.5	+0.5
DRME	Dracevica, Mon	1.82	130	ePn	Pb	09 07 28.0	-0.7
DRME				eSn	Sb	09 07 50.8	-1.0
DRME	Dracevica, Mon	1.82	130	ePn	Pb	09 07 28.3	-0.4
DRME				i Sn	Sg	09 07 55.4	+2.1
SJES	Sjenica	1.95	92	ePn	Pn	09 07 28.9	0.0
SJES				eSn	Sb	09 07 54.9	-0.9
SJES	Sjenica	1.95	92	ePn	Pn	09 07 29.2	+0.3
SJES				eSn	Sn	09 07 54.0	+0.1
IVA	Berane	1.96	104	ePn	Pb	09 07 30.8	-0.4
IVA				eSn	Sg	09 07 59.5	+1.7
TEKS	Tekeris	2.00	53	ePn	Pb	09 07 30.9	-0.9
TEKS				eSn	Sb	09 07 55.8	-1.2
TEKS	Tekeris	2.00	53	ePn	Pb	09 07 30.2	-1.6
TEKS				eSn	Sb	09 07 56.0	-1.0
IVAS	Ivanjica	2.08	83	ePn	Pb	09 07 32.3	-1.0
IVAS				eSn	Sb	09 07 58.4	-1.2
TRUS	Trudelj	2.41	68	ePn	Pn	09 07 35.1	+0.1
GRUS	Gruza	2.53	77	ePn	Pn	09 07 36.9	+0.1
GRUS				eSn	Sb	09 08 09.6	-2.8
FRGS	Fruska Gora	2.54	44	ePn	Pn	09 07 38.3	+1.4
FRGS				eSn	Sn	09 08 09.0	+0.7
FRGS	Fruska Gora	2.54	44	ePn	Pn	09 07 37.2	+0.3
FRGS				eSn	Sn	09 08 08.8	+0.5
BOJS	Bojanci	2.59	326	i Pn	Pn	09 07 39.3	+1.7
BOJS				i Sn	Sb	09 08 15.0	+0.8
GOCS	Kraljevo Serbi	2.61	84	ePn	Pb	09 07 39.8	-2.4
GOCS				eSn	Sn	09 08 10.2	+0.2
SELS	Selova	2.79	92	ePn	Pn	09 07 42.1	+1.8
CRES	Cresnjevec Ost	2.79	332	eSn	Sn	09 08 15.9	+1.4
MORH	Mrgy, Hungar	3.00	18	ePn	Pn	09 07 44.5	+1.3
MORH				eSn	Sn	09 08 21.1	+1.4
SKDS	Skadanscina	3.21	314	ePn	Pn	09 07 46.5	+0.4
SKDS				eSn	Sn	09 08 25.0	+0.2
SOKA	Soboth	3.68	335	i Pn	Pn	09 07 53.9	+1.3
	3.6nm,0.2s,SNR=11						
OBKA	Obir	3.70	329	ePn	Pn	09 07 53.8	+0.9
OBKA				eSn	Sn	09 08 37.2	+0.2
OBKA	Obir	3.70	329	i Pn	Pn	09 07 56.0	+3.0
	1.7nm,0.3s						
ZAPS	Zavoj	3.89	90	ePn	Pn	09 07 57.8	+2.3
ARSA	Arzberg	4.08	343	i Pn	Pn	09 07 59.0	+0.9
	3.8nm,0.2s,SNR=13						
MYKA	Terra Mystica	4.17	323	ePn	Pn	09 07 59.3	-0.1
	0.9nm,0.3s						
RONA	Rosalia, Austr	4.39	351	i Pn	Pn	09 08 02.9	+0.5
	1.8nm,0.7s						
KBA	Koelnbreinsper	4.65	324	i Pn	Pn	09 08 08.8	+2.8
	0.9nm,0.3s						
CONA	Conrad Observa	4.67	348	i Pn	Pn	09 08 07.5	+1.2
	0.7nm,0.3s						
ABTA	Abfaltersbach	4.79	317	i Pn	Pn	09 08 08.7	+0.8
	1.2nm,0.3s						
MOA	Molln	4.96	336	i Pn	Pn	09 08 12.3	+2.1
	4.8nm,0.4s,SNR=15						
MODS	Modra-Piesok	5.01	360	eSN	Sn	09 09 08.5	-0.6
BIOA	Bad Ischl, Aus	5.04	331	i Pn	Pn	09 08 13.9	+2.7
	3.0nm,0.3s						
LESA	Schwarzleotal	5.21	323	i Pn	Pn	09 08 15.1	+1.5
	4.0nm,0.5s,SNR=6.3						
VYHS	Vyhne	5.24	11	ePN	Pn	09 08 18.4	+4.4
WTTA	Wattenberg	5.58	316	i Pn	Pn	09 08 20.4	+1.5
	1.2nm,0.3s						
WATA	Walderalm	5.66	317	i Pn	Pn	09 08 21.6	+1.8
	1.2nm,0.2s						
SQTA	Sankt Quirin	5.77	314	ePn	Pn	09 08 24.8	+3.4
	0.2nm,0.1s						
MOTA	Moosalm	5.91	314	ePn	Pn	09 08 24.5	+1.2
	0.9nm,0.3s						
FETA	Feichten	5.91	310	ePn	Pb	09 08 31.0	-7.6
	0.8nm,0.4s						

ASRS ***10*** *09:10:31.0±1.1, 53°.61N×88°.00E, h0^{km}, M3.0, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC ***10*** *09:10:33.1±2.9, 53°.50N×87°.93E, h0^{km}, mbtmp3.1/2, ML2.7/2, Error ellipse: s-maj=23.7km s-min=16.2km az=71.0*

ISC 10 09:10:28.0±2.3**, 52°.32N**±0°.05×**86°.8E**±0°.1**, h0**^{km}**, n6, σ1^{s}.41**/8**, 3C, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	2.00	325	I	I	09 22 20.0	
	0.2nm,0.7s,baz=98,slow=325,SNR=34						
ZAA0	Zalesovo Array	2.00	325	⇑Pn	Pb	09 11 05.5	+0.2
	1.0nm,0.5s,baz=98,slow=17						
ZAA0				⇑Sn	Sg	09 11 32.7	+0.3
	7.1nm,0.7s,baz=103,slow=25						
ZALV	Zalesovo Beam	2.00	325	Pn	Pg	09 11 06.2	-0.2
	3.5nm,0.3s,baz=99,slow=15,SNR=25						
ZALV				Lg	Lg	09 11 32.8	
	1.6nm,0.3s,baz=102,slow=25,SNR=3.7						
KURBB	Kurchatov Arra	5.42	255	Pn	Pg	09 12 10.8	-1.0
	0.2nm,0.3s,baz=63,slow=14,SNR=6.6						
KURBB				Sn	Sg	09 13 23.1	+1.2
	0.1nm,0.3s,baz=66,slow=25,SNR=5.1						
KURBB				Lg	Lg	09 13 58.6	
	0.1nm,0.3s,baz=59,slow=32,SNR=5.7						
	1.4nm,0.4s						
KURBB	Kurchatov Arra	5.42	255	⇑Pn	Pg	09 12 10.1	-1.6
	2.4nm,0.6s						
MKAR	Makanchi Array	6.25	209	Pn	Pg	09 12 26.7	-1.0
	0.1nm,0.3s,baz=28,slow=13,SNR=1.5						
MKAR				Sn	Sg	09 13 50.5	+1.9
	baz=30,slow=27,SNR=3.7						
MKAR				Lg	Lg	09 14 35.0	
	0.2nm,0.3s,baz=29,slow=34,SNR=5.0						
	0.4nm,0.5s						

IDC ***10*** *09:12:17.0±0.7, 13°.19N×88°.24W, h67^{km}±4^{km}, mb4.1/22, mbtmp4.4/25, MS4.1/36, Error ellipse: s-maj=19.9km s-min=9.6km az=54.0*

CATAC ***10*** *09:12:17.5±0.2, 13°N±2°×8°9W±°, h40^{km}±3^{km}, M5.4/60, mb5.5/6, mB5.5/3, MLv5.4/60, Mw(mB)5.0/3, Error ellipse: s-maj=4.3km s-min=1.2km az=32.5, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.33; M$_{\theta\theta}$0.37; M$_{\phi\phi}$0.97; M$_{r\theta}$5.05; M$_{\theta\phi}$0.09; M$_{\phi r}$-3.97; Fault plane solution: M$_0$6.53819×10^{16} NP1:φ$_s$159.95650°, δ4.78999°, λ-58.96247°. NP2:φ$_s$308.83035°, δ85.89707°, λ-92.47395°. Principal axes: T 6.0903, Plg40.8473°, Azm41.1428°; N 0.8186, Plg2.4676°, Azm309.0075°; P -6.9089, Plg49.0454°, Azm216.1613°; Moment Tensor Solution. Moment tensor: Scale 10^{16} Nm; M$_{rr}$-1.40; M$_{\theta\theta}$0.57; M$_{\phi\phi}$0.83; M$_{r\theta}$5.39; M$_{\theta\phi}$0.19; M$_{\phi r}$-4.34; Fault plane solution: M$_0$7.02932×10^{16} NP1:φ$_s$139.47814°, δ3.94875°, λ-79.59897°. NP2:φ$_s$309.05290°, δ86.11624°, λ-90.71399°. Principal axes: T 6.5277, Plg41.1121°, Azm39.7230°; N 0.9138, Plg0.7123°, Azm309.1013°; P -7.4415, Plg48.8790°, Azm218.2852°; Moment Tensor Solution. Moment tensor: Scale 10^{16} Nm; M$_{rr}$-0.78; M$_{\theta\theta}$-0.73; M$_{\phi\phi}$1.50; M$_{r\theta}$4.66; M$_{\theta\phi}$0.01; M$_{\phi r}$-3.62; Fault plane solution: M$_0$6.04236×10^{16} NP1:φ$_s$207.29725°, δ10.85514°, λ-12.88712°. NP2:φ$_s$309.96128°, δ87.59272°, λ-100.58798°. Principal axes: T 5.7070, Plg41.6634°, Azm49.9770°; N 0.6225, Plg10.5785°, Azm310.4111°; P -6.3295, Plg46.3986°, Azm209.1019°; Moment Tensor Solution. Moment tensor: Scale 10^{16} Nm; M$_{rr}$-1.36; M$_{\theta\theta}$0.36; M$_{\phi\phi}$0.99; M$_{r\theta}$5.08; M$_{\theta\phi}$0.13; M$_{\phi r}$-3.96; Fault plane solution: M$_0$6.55486×10^{16} NP1:φ$_s$160.04041°, δ4.77365°, λ-58.66718°. NP2:φ$_s$308.61909°, δ85.92381°, λ-92.48653°. Principal axes: T 6.0753, Plg40.8735°, Azm40.9442°; N 0.8718, Plg2.4802°, Azm308.7960°; P -6.9471, Plg49.0181°, Azm215.9380°; Moment Tensor Solution. Moment tensor: Scale 10^{16} Nm; M$_{rr}$-1.52; M$_{\theta\theta}$0.42; M$_{\phi\phi}$1.10; M$_{r\theta}$5.10; M$_{\theta\phi}$-0.16; M$_{\phi r}$-3.88; Fault plane solution: M$_0$6.54707×10^{16} NP1:φ$_s$160.72210°, δ6.17456°, λ-57.51766°. NP2:φ$_s$308.08856°, δ84.79432°, λ-93.32514°. Principal axes: T 6.1753, Plg39.7060°, Azm41.1445°; N 0.6890, Plg3.3114°, Azm308.3906°; P -6.8643, Plg50.0997°, Azm214.4226°; Moment Tensor Solution. Moment tensor: Scale 10^{16} Nm; M$_{rr}$-0.54; M$_{\theta\theta}$-0.25; M$_{\phi\phi}$0.80; M$_{r\theta}$5.34; M$_{\theta\phi}$0.03; M$_{\phi r}$-3.72; Fault plane solution: M$_0$6.55058×10^{16} NP1:φ$_s$197.96004°, δ4.47184°, λ-17.50830°. NP2:φ$_s$305.41828°, δ88.65592°, λ-94.26546°. Principal axes: T 6.2986, Plg43.5011°, Azm39.5762°; N 0.4777, Plg4.2643°, Azm305.5185°; P -6.7764, Plg46.1818°, Azm211.0619°; Moment Tensor Solution. Moment tensor: Scale 10^{16} Nm; M$_{rr}$-2.56; M$_{\theta\theta}$2.67; M$_{\phi\phi}$-0.11; M$_{r\theta}$-3.48; M$_{\theta\phi}$-1.96; M$_{\phi r}$3.63; Fault plane solution: M$_0$5.99340×10^{16} NP1:φ$_s$134.91115°, δ75.14380°, λ-76.74710°. NP2:φ$_s$272.34073°, δ19.80853°, λ-130.83495°. Principal axes: T 6.3281, Plg28.9450°, Azm214.2358°; N -0.7378, Plg12.8022°, Azm311.4555°; P -5.5904, Plg57.8400°, Azm62.6419°; Moment Tensor Solution. Moment tensor: Scale 10^{16} Nm; M$_{rr}$-2.17; M$_{\theta\theta}$1.31; M$_{\phi\phi}$0.86; M$_{r\theta}$-3.88; M$_{\theta\phi}$-2.24; M$_{\phi r}$2.13; Fault plane solution: M$_0$5.31313×10^{16} NP1:φ$_s$118.77818°, δ74.74999°, λ-100.75383°. NP2:φ$_s$334.60982°, δ18.58648°, λ-55.61217°. Principal axes: T 5.7335, Plg28.9624°, Azm217.4513°; N -0.9762, Plg10.3709°, Azm121.6381°; P -4.7573, Plg58.8945°, Azm13.9814°; confirmed*

GCG ***10*** *09:12:18.3±1.9, 12°.97N×88°.76W, h37^{km}±216^{km}, MD5.0, ML5.6, MW4.5*

NEIC ***10*** *09:12:18.9±2.9, 13°.05N±0°.06×88°.57W±0°.07, h72^{km}±6^{km}, mb4.9/415, Mww5.1/42, Error ellipse: s-maj=12.4km s-min=5.8km az=48.0*

SNET ***10*** *09:12:18.0±0.8, 13°.02N×88°.68W, h55^{km}±6^{km}, ML5.7*

GCMT ***10*** *09:12:19.0±0.2, 12°.94N±0°.01×88°.71W±0°.01, h64^{km}±2^{km}, MW5.1/128, Moment Tensor Solution. s81,c114; s128,c191; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.42±.17; M$_{\theta\theta}$-2.42±.13; M$_{\phi\phi}$0.00±.14; M$_{r\theta}$4.24±.10; M$_{\theta\phi}$1.20±.12; M$_{\phi r}$-3.71±.10; Best double couple: M$_0$6.24600×10^{16} NP1:φ$_s$272.00000°, δ15.00000°, λ54.00000°. NP2:φ$_s$130.00000°, δ78.00000°, λ99.00000°. Principal axes: T 6.1440, Plg56.0000°, Azm51.0000°; N 0.2050, Plg9.0000°, Azm308.0000°; P -6.3470, Plg32.0000°, Azm212.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***10*** *09:12:19, 13°.07N×88°.55W, h70^{km}*

NEIC ***10*** *09:12:19, 13°.07N×88°.66W, h70^{km}, Moment Tensor Solution. Duration: 1^{s}.8 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.77; M$_{\theta\theta}$-1.21; M$_{\phi\phi}$0.45; M$_{r\theta}$3.50; M$_{\theta\phi}$2.07; M$_{\phi r}$-2.65; Fault plane solution: M$_0$4.97000×10^{16} NP1: φ$_s$286.86000°, δ11.19000°, λ68.36000°. NP2: φ$_s$128.88000°, δ79.61000°, λ94.17000°. Principal axes: T 3.7990, Plg55.0000°, Azm44.0000°; N 1.8277, Plg4.0000°, Azm308.0000°; P -5.6267, Plg34.0000°, Azm215.0000°;*

ISC 10 09:12:16.9±0.3**, 12°.99N**±0°.03×**88°.66W**±0°.03**, h69**^{km}±2^{km}**, h70**^{km}**:pP-P, n972, σ1^{s}.24**/811**, mb4.9**/202**, 6C-40D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALJI	Alcalda de J	0.35	14	⇓iP	Pn	09 12 28.3	-0.1
ALJI				eS	Sn	09 12 36.9	+0.1
ALJI	Alcalda de J	0.35	14	S	Sn	09 12 37.1	+0.3
ALJI	Alcalda de J	0.35	14	P	Pn	09 12 28.3	-0.1
TECA	Tecapa	0.53	17	⇓iP	Pn	09 12 30.3	+0.1
TECA				⇓iP		09 12 30.3	
LCY	Lacayo	0.56	39	⇓iP	Pn	09 12 30.6	+0.2
TECO	Alcaldia de Te	0.56	348	⇓iP	Pn	09 12 30.2	-0.1
TECO	Alcaldia de Te	0.56	348	S	Sn	09 12 40.1	-0.1
TECO	Alcaldia de Te	0.56	348	P	Pn	09 12 30.2	-0.1
PACA	Pacayal	0.58	34	⇑eP	Pn	09 12 31.0	+0.4
PACA				eS	Sn	09 12 42.4	+1.7
PACA	Pacayal	0.58	34	P	Pn	09 12 31.2	+0.6
BLLM	Bellamira	0.61	42	⇑iP	Pn	09 12 31.1	+0.3
PQSS	Presa 15 de Se	0.64	8	⇑eP	Pn	09 12 31.5	+0.4
PQSS	Presa 15 de Se	0.64	8	P	Pn	09 12 31.5	+0.4
PQSS	Presa 15 de Se	0.64	8	S	Sn	09 12 42.9	+1.3
SNVI	San Vicente	0.65	344	⇓iP	Pn	09 12 31.5	+0.1
UESV	Universidad de	0.66	349	⇓eP	Pn	09 12 31.6	+0.2
UESV	Universidad de	0.66	349	P	Pn	09 12 31.4	+0.1
UESV	Universidad de	0.66	349	S	Sn	09 12 42.4	+0.4
COEG	Centro de Oper	0.67	341	⇓iP	Pn	09 12 31.5	0.0
COEG				eS	Sn	09 12 42.1	-0.1
COEG	Centro de Oper	0.67	341	P	Pn	09 12 31.6	+0.1
CNRM	Centro Naciona	0.68	44	⇓iP	Pn	09 12 31.9	+0.3
CNRM	Centro Naciona	0.68	44	P	Pn	09 12 31.9	+0.3
CNRM	Centro Naciona	0.68	44	S	Sn	09 12 44.0	+1.7
SCLA	Alcaldia de Sa	0.71	354	⇓iP	Pn	09 12 32.7	+0.7
SCLA	Alcaldia de Sa	0.71	354	P	Pn	09 12 32.7	+0.7
SCLA	Alcaldia de Sa	0.71	354	S	Sn	09 12 44.3	+1.2
LFRS	El Faro	0.74	328	⇑iP	Pn	09 12 32.4	-0.1
PAVA	Las Pavas	0.77	339	⇓iP	Pn	09 12 33.0	+0.3
PAVA	Las Pavas	0.77	339	P	Pn	09 12 33.2	+0.5
PAVA	Las Pavas	0.77	339	S	Sn	09 12 45.5	+1.0
PANCS	Alcalda de	0.80	321	⇓eP	Pn	09 12 32.6	-0.4
PANCS	Alcalda de	0.80	321	P	Pn	09 12 32.6	-0.4
PANCS	Alcalda de	0.80	321	S	Sn	09 12 44.2	-0.8
LCND	La Caada	0.81	67	⇓eP	Pn	09 12 33.5	+0.3
LCND	La Caada	0.81	67	P	Pn	09 12 33.4	+0.3
LCND	La Caada	0.81	67	S	Sn	09 12 46.5	+1.4
LALI	Alcalda de L	0.82	308	⇓iP	Pn	09 12 32.6	-0.5
LALI	Alcalda de L	0.82	308	i P	Pn	09 12 32.7	-0.5
	comp=Z,15μm,0.6s						
LALI				eS	Sn	09 12 43.2	-1.9
LALI				IAML		09 12 45.2	
	comp=N,25μm,0.6s						
LALI	Alcalda de L	0.82	308	P	Pn	09 12 32.6	-0.5
LOMA	Loma Larga	0.82	323	⇓iP	Pn	09 12 33.3	-0.1
LOMA	Loma Larga	0.82	323	S	Sn	09 12 45.2	-0.4
LOMA	Loma Larga	0.82	323	P	Pn	09 12 33.5	+0.1
AEIL	Aeropuerto Ilo	0.84	328	⇓iP	Pn	09 12 33.7	+0.3
LBRS	Las Brisas	0.84	333	⇓eP	Pn	09 12 33.8	+0.4
CNCH	Conchagua	0.85	70	⇓iP	Pn	09 12 33.9	+0.2
CNCH	Conchagua	0.85	70	P	Pn	09 12 33.8	+0.2
CNCH	Conchagua	0.85	70	S	Sn	09 12 46.8	+0.7
UDBS	Universidad Do	0.87	326	⇓eP	Pn	09 12 34.0	+0.1
UDBS	Universidad Do	0.87	326	P	Pn	09 12 34.0	+0.1
UDBS	Universidad Do	0.87	326	S	Sn	09 12 46.6	+0.2
IGN	Direccin Gen	0.88	325	⇓eP	Pn	09 12 34.1	+0.2
IGN	Direccin Gen	0.88	325	P	Pn	09 12 34.3	+0.3
IGN	Direccin Gen	0.88	325	S	Sn	09 12 47.0	+0.4
LFU	La Fuente	0.88	330	⇓iP	Pn	09 12 34.3	+0.3
UTEC	Universidad Te	0.89	323	S	Sn	09 12 46.9	+0.1
UTEC	Universidad Te	0.89	323	P	Pn	09 12 34.1	0.0
CAHU	Cacacuatique	0.89	29	⇑iP	Pn	09 12 35.0	+0.7
UESS	Universidad de	0.90	324	⇓eP	Pn	09 12 34.5	+0.3
SEMO	Seminario San	0.90	322	P	Pn	09 12 34.3	0.0
SEMO	Seminario San	0.90	322	S	Sn	09 12 46.8	-0.3
ITCA	Escuela Especi	0.91	319	⇓eP	Pn	09 12 34.4	0.0
ITCA	Escuela Especi	0.91	319	P	Pn	09 12 34.4	0.0
ITCA	Escuela Especi	0.91	319	S	Sn	09 12 47.3	-0.1
UEES	Universidad Ev	0.92	322	⇓iP	Pn	09 12 34.6	+0.1
UEES	Universidad Ev	0.92	322	P	Pn	09 12 34.6	+0.1
UEES	Universidad Ev	0.92	322	S	Sn	09 12 47.1	-0.4
PIC2	El Picacho	0.95	322	⇓iP	Pn	09 12 35.5	+0.5
BOQS	Boqueron	0.96	321	⇓iP	Pn	09 12 35.4	+0.3
PMON	Piamonte	0.96	318	⇓iP	Pn	09 12 35.1	+0.1
PMON	Piamonte	0.96	318	S	Sn	09 12 48.4	-0.1
PMON	Piamonte	0.96	318	P	Pn	09 12 35.2	+0.1
JAYA	Jayaque - finc	1.02	311	⇓eP	Pn	09 12 35.4	-0.4
JAYA	Jayaque - finc	1.02	311	i P	Pn	09 12 35.4	-0.4

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JAYA  Jayaque - finc     1.02 311   S     Sn     09 12 49.0  -0.7
QUEZ  Alcaldia de Qu     1.03 325⇓eP     Pn     09 12 36.5 +0.6
CSGN  Cosiguina Volc     1.07  90   P     Pn     09 12 36.2  -0.1
CSGN                                S     Sn     09 12 51.2 +0.4
CEDA  San Andres         1.08 319⇓iP     Pn     09 12 36.7 +0.2
CEDA  San Andres         1.08 319   P     Pn     09 12 36.9 +0.4
CEDA  San Andres         1.08 319   S     Sn     09 12 51.4 +0.4
POTN  Potosi Cosigui     1.12  89   P     Pn     09 12 37.0 +0.1
POTN                                S     Sn     09 12 51.8   0.0
LLGN  La Laguna          1.20 347⇓iP     Pn     09 12 38.7 +0.7
LLGN  La Laguna          1.20 347   P     Pn     09 12 38.8 +0.7
LLGN  La Laguna          1.20 347   S     Sn     09 12 55.3 +1.5
CEVE  Cerro Verde        1.26 312⇓eP     Pn     09 12 39.3 +0.4
CEVE  Cerro Verde        1.26 312   P     Pn     09 12 39.7 +0.8
CEVE  Cerro Verde        1.26 312   S     Sn     09 12 56.1 +0.7
SBLS  San Blas           1.27 312⇓eP     Pn     09 12 39.4 +0.4
SNJE  San Jose           1.27 314⇓eP     Pn     09 12 39.4 +0.4
MARCA Marcala la Paz     1.31  27  i P    Pn     09 12 40.7 +1.1
MARCA                              i S    Sn     09 12 58.9 +2.4
UNIC  Universidad Ca     1.31 319   P     Pn     09 12 39.8 +0.3
UNIC  Universidad Ca     1.31 319   S     Sn     09 12 57.6 +1.2
RTR   El Retiro          1.32 313⇓iP     Pn     09 12 40.4 +0.7
NUBE  Las Nubes          1.42 310⇓eP     Pn     09 12 41.3 +0.4
NUBE  Las Nubes          1.42 310  i P    Pn     09 12 41.3 +0.4
NUBE                               i S    Sn     09 12 59.5 +0.5
NUBE  Las Nubes          1.42 310   P     Pn     09 12 41.6 +0.6
LOAL  Lomas de Alarc     1.48 313⇓eP     Pn     09 12 42.5 +0.7
LOAL  Lomas de Alarc     1.48 313   P     Pn     09 12 42.5 +0.7
LOAL  Lomas de Alarc     1.48 313   S     Sn     09 13 01.6 +1.2
SLOZ  Alcaldia de Sa     1.51 313⇓eP     Pn     09 12 42.6 +0.6
SLOZ  Alcaldia de Sa     1.51 313   P     Pn     09 12 42.7 +0.7
SLOZ  Alcaldia de Sa     1.51 313   S     Sn     09 13 02.3 +1.4
MTO3  Montecristo        1.56 334         Pn     09 12 43.6 +0.8
MTO3  Montecristo        1.56 334⇓iP     Pn     09 12 43.7 +0.8
MTO3  Montecristo        1.56 334  i P    Pn     09 12 43.7 +0.8
      comp=Z,5μm,0.5s
MTO3  Montecristo        1.56 334   P     Pn     09 12 43.7 +0.8
MTO3  Montecristo        1.56 334   S     Sn     09 13 03.0 +0.5
FAME  Alcaldia de Sa     1.57 303   P     Pn     09 12 43.1 +0.2
FAME  Alcaldia de Sa     1.57 303   S     Sn     09 13 02.1  -0.3
ESQI  Esquipulas         1.70 337         Pn     09 12 46.0 +1.4
ESQI  Esquipulas         1.70 337⇓iP     Pn     09 12 45.9 +1.4
ESQI  Esquipulas         1.70 337   P     Pn     09 12 46.0 +1.4
ESQI  Esquipulas         1.70 337   S     Sn     09 13 07.0 +1.4
TGUH  Tegucigalpa,Un     1.72  52         Pn     09 12 46.0 +1.1
TGUH  Tegucigalpa,Un     1.72  52   P     Pn     09 12 45.9 +1.0
TGUH                                S     Sn     09 13 07.9 +1.9
TGUH  Tegucigalpa,Un     1.72  52   P     Pn     09 12 45.9 +1.0
QUEN  Al S del Volca     1.80 102   P     Pn     09 12 46.3 +0.4
HERN  Volcan Telica      1.82 102         Pn     09 12 46.3 +0.1
HERN  Volcan Telica      1.82 102   P     Pn     09 12 46.3 +0.1
HERN  Volcan Telica      1.82 102   S     Sn     09 13 08.9 +0.5
HOYN  Al Sur del Vol     1.82 102   P     Pn     09 12 46.3   0.0
HOYN                                S     Sn     09 13 09.2 +0.6
ESSJ  San Jos, E         1.88 288  eP     Pn     09 12 53.6 +6.7
CNGN  Cerro Negro        1.97 104         Pn     09 12 48.2 +0.1
CNGN  Cerro Negro        1.97 104   P     Pn     09 12 48.3 +0.1
CNGN  Cerro Negro        1.97 104   S     Sn     09 13 12.4 +0.3
CNGN  Cerro Negro        1.97 104   P     Pn     09 12 48.0  -0.2
YUSH  Yuscaran           2.01  61   P     Pn     09 12 49.8 +1.0
AESN  El Sauce Leon      2.07  92   P     Pn     09 12 49.5 +0.1
LEVN  Ruinas Leon Vi     2.08 106   S     Sn     09 13 13.8  -0.6
MOMN  Momotombo          2.14 105   P     Pn     09 12 50.5   0.0
MOMN                                S     Sn     09 13 16.6 +0.3
BC86  Nagarote           2.17 109   S     Sn     09 13 16.4  -0.3
BC86  Nagarote           2.17 109   P     Pn     09 12 51.3 +0.5
FG16  Alotenango, Sa     2.21 306  eP     Pn     09 12 55.5 +4.0
FG16                                IAML         09 13 38.7
      comp=E,82μm,0.3s
LIMN  Finca el Limon     2.23  88   P     Pn     09 12 52.3 +0.5
FG8   Yepocapa, Chim     2.24 305  eP     Pn     09 12 56.7 +4.7
AMTN  Mateare            2.30 109   P     Pn     09 12 53.2 +0.7
AMTN  Mateare            2.30 109   S     Sn     09 13 19.4  -0.4
SAPS  Ciudad Sandino     2.34 110   P     Pn     09 12 53.0  -0.2
BC87  San Francisco      2.36 101   P     Pn     09 12 53.3   0.0
APQ2  Apoyeque           2.41 109   P     Pn     09 12 54.2 +0.1
APQ2                                S     Sn     09 13 23.5 +1.0
GCG4  OSOP               2.42 311  eP     Pn     09 12 55.5 +1.1
      comp=Z,7μm,0.7s
GCG4                                IAML         09 13 52.4
      comp=N,18μm,1.0s
ABCN  Banco Central      2.45 110   P     Pn     09 12 55.7 +1.1
ABCN  Banco Central      2.45 110   S     Sn     09 13 22.7  -0.8
RCVN  Varillal2          2.47  76   P     Pn     09 12 55.6 +0.5
TISN  Laguna Tiscapa     2.48 110   P     Pn     09 12 53.9  -1.2
USIM  UNAN               2.48 110         Pn     09 12 55.7 +0.6
UNAN  Cigeo UNAN         2.49 110   P     Pn     09 12 55.0  -0.2
UNAN                                S     Sn     09 13 23.6  -0.9
MGAN  Managua            2.50 109         Pn     09 12 55.4 +0.2
MGAN  Managua            2.50 109   P     Pn     09 12 55.6 +0.3
MGAN  Managua            2.50 109   P     Pn     09 12 55.1  -0.2
MGAN  Managua            2.50 109   S     Sn     09 13 23.6  -1.1
MGAN                                S            09 13 25.2
MGAN  Managua            2.50 109   P     Pn     09 12 54.9  -0.4
ESSG  Sabana Grande      2.53 304  eP     Pn     09 12 56.4 +0.6
      comp=Z,12μm,0.4s
ESSG                               eS     Sn     09 13 25.0  -0.6
ESSG                                IAML         09 13 34.7
      comp=N,31μm,0.4s
RCPN  Sur Rio San Ju     2.55  78   P     Pn     09 12 57.1 +1.0
MAS3  Al N del Volca     2.60 111   P     Pn     09 12 56.3  -0.5
MAS3                                S     Sn     09 13 26.8  -0.6
SBEN  San Benito         2.63 105   P     Pn     09 12 57.7 +0.6
MASN  Masaya             2.64 112   P     Pn     09 12 57.1  -0.1
MASN                                S     Sn     09 13 27.8  -0.5
SABN  Sabanita           2.64 113   P     Pn     09 12 56.8  -0.5
MATN  Matagalpa          2.66  91   P     Pn     09 12 56.8  -0.8
MATN  Matagalpa          2.66  91   S     Sn     09 13 29.6 +0.7
NANN  Nandasmo           2.69 113   S     Sn     09 13 30.1 +0.7
NANN  Nandasmo           2.69 113   P     Pn     09 12 58.5 +0.6
IZABA Izabal, Puerto     2.73   1   P     Pn     09 13 00.6 +2.2
BOAB  BOACO BROADBAN2.97 100         Pn     09 13 02.0 +0.3
BOAB  BOACO BROADBAN2.97 100   P     Pn     09 13 01.5  -0.2
BOAB  BOACO BROADBAN2.97 100   S     Sn     09 13 36.7 +0.6
STG8  El Palmar, Qui     3.00 299  i P    Pn     09 13 08.0 +5.7
      comp=Z,4μm,0.8s
STG8                               i S    Sn     09 13 46.9  +10
STG8                                IAML         09 14 00.8
      comp=E,19μm,0.5s
SOKI  Kika Raxquin       3.23 305  eP     Pn     09 13 08.3 +2.7
SOKI                                IAML         09 13 54.2
      comp=E,16μm,0.5s
RTAL  Retalhuleu         3.32 298         Pn     09 13 08.2 +1.6
LCRUZ La Cruz            3.52 122  eP     Pn     09 13 09.1  -0.1
ACON  Acoyapa            3.55 106         Pn     09 13 09.4  -0.3
ACON  Acoyapa            3.55 106  eP     Pn     09 13 09.1  -0.6
ACON  Acoyapa            3.55 106   P     Pn     09 13 11.6 +1.9
ACON  Acoyapa            3.55 106   P     Pn     09 13 08.9  -0.7
CARN  Rivas              3.55 120  eP     Pn     09 13 10.5 +0.9
CARN  Rivas              3.55 120   P     Pn     09 13 10.6 +0.9
CARN                                S     Sn     09 13 49.5  -0.9
HUEH  Huehuetenango      3.60 310         Pn     09 13 12.9 +2.4
HUEH  Huehuetenango      3.60 310  eP     Pn     09 13 12.4 +1.8
HUEH                                IAML         09 14 23.2
      comp=N,15μm,0.8s
HUEH  Huehuetenango      3.60 310   P     Pn     09 13 12.5 +1.8
SMCA  Catarina           3.80 300  eP     Pn     09 13 14.1 +1.0
      comp=Z,3μm,0.6s
SMCA                               i S    Sn     09 13 55.5  -1.1
SMCA                                IAML         09 14 10.0
      comp=N,6μm,0.5s
ELI1  Hacienda Flor      3.83 127  eP     Pn     09 13 15.7 +2.2
PG27  Guanacaste Pro     3.85 123  eP     Pn     09 13 15.4 +1.6
LAPC  Finca la Perla     3.85 125  eP     Pn     09 13 15.3 +1.5
ALIBA Liberia Airpor     3.87 128  eP     Pn     09 13 15.6 +1.7
BUAI  Buenos Aires       3.87 122  eP     Pn     09 13 14.8 +0.8
PEJA  Penjamo Buenos     3.88 122  eP     Pn     09 13 14.8 +0.7
VORI  VORI               3.89 123  eP     Pn     09 13 16.2 +1.7
VRLE  La Escondida,      3.89 124  eP     Pn     09 13 15.5 +1.1
ERIA  Liberia            3.92 126  eP     Pn     09 13 16.9 +2.2
THIG                     3.99 299  eP     Pn     09 13 16.9 +1.3
THIG                               i S    Sn     09 14 02.8 +1.6
THIG                                IAML         09 14 17.1
      comp=N,28μm,0.6s
SACU  Santa Cruz         4.05 132  eP     Pn     09 13 17.1 +0.7
MESS  Mesas              4.06 123  eP     Pn     09 13 16.9 +0.3
PETF  Flores             4.08 343         Pn     09 13 19.9 +3.1
PETF  Flores             4.08 343  i P    Pn     09 13 19.8 +2.9
PETF                                IAML         09 14 38.4
      comp=E,3μm,0.9s
HORNC Hornillas          4.09 123  eP     Pn     09 13 17.6 +0.6
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COLC  Colonia            4.09 124  eP     Pn     09 13 18.6 +1.5
BAGA  Bagaces            4.13 126  eP     Pn     09 13 19.3 +1.8
UPAL  Upala              4.13 120  eP     Pn     09 13 18.9 +1.4
CUI   Cuipilapa          4.13 124  eP     Pn     09 13 18.8 +1.2
PLVR  Palo Verde         4.17 129  eP     Pn     09 13 19.1 +0.9
NICO  Nicoya             4.23 132  eP     Pn     09 13 20.1 +1.1
TENO  El Achiote         4.26 122  eP     Pn     09 13 19.7 +0.4
TIMP  Tierras Morena     4.29 123  eP     Pn     09 13 20.4 +0.6
INVE  Universidad In     4.31 125  eP     Pn     09 13 23.0 +2.9
LCHIL Los Chiles         4.32 116  eP     Pn     09 13 20.7 +0.6
CNAS  Canas              4.32 126  eP     Pn     09 13 21.9 +1.7
ESPN  Las Esperanzas     4.33 100         Pn     09 13 20.9 +0.6
ESPN  Las Esperanzas     4.33 100  eP     Pn     09 13 20.4 +0.2
ESPN  Las Esperanzas     4.33 100   P     Pn     09 13 20.6 +0.4
CMARA Lajas Hojancha     4.33 133  eP     Pn     09 13 21.1 +0.8
QUEB  Quebradon, Cot     4.37 122  eP     Pn     09 13 21.1 +0.3
TILA  Tilaran            4.39 124  eP     Pn     09 13 22.0 +0.8
JTS   Las Juntas de      4.51 126         Pn     09 13 24.2 +1.4
JTS   Las Juntas de      4.51 126   P     Pn     09 13 21.9  -0.9
      comp=E,28nm,0.3s,baz=116,slow=23,SNR=58
JTS   Las Juntas de      4.51 126  eP     Pn     09 13 24.6 +1.8
JUNT  Juntas             4.51 126  eP     Pn     09 13 24.6 +1.8
TABAC Tabacon            4.54 123  eP     Pn     09 13 25.0 +1.8
MTEVE Monteverde         4.59 125  eP     Pn     09 13 25.3 +1.2
CEDE  Laguna Cedeo       4.60 122  eP     Pn     09 13 26.0 +1.9
ARE1  Arenal 1           4.60 123  eP     Pn     09 13 25.8 +1.7
VARE2 V. Arenal          4.60 123  eP     Pn     09 13 25.6 +1.5
CASO  Castillo           4.60 123  eP     Pn     09 13 25.5 +1.4
VACR  Volcan Arenal      4.63 122  eP     Pn     09 13 26.1 +1.7
TUNA  La Fortuna         4.66 122  eP     Pn     09 13 27.2 +2.4
CCIG  Comitan            4.70 315         Pn     09 13 28.7 +3.2
CCIG  Comitan            4.70 315  i P    Pn     09 13 28.3 +2.8
CCIG  Comitan            4.70 315   P     Pn     09 13 28.1 +2.6
SOCE  Pocosol            4.73 123         Pn     09 13 27.8 +2.0
SOCE  Pocosol            4.73 123  eP     Pn     09 13 27.6 +1.8
SOCE  Pocosol            4.73 123   P     Pn     09 13 27.6 +1.8
COVE  Coope Vega, Sa     4.74 118   P     Pn     09 13 27.1 +1.3
PAQE  Paquera            4.82 130  eP     Pn     09 13 28.8 +1.8
CBL1  Cabuya             4.86 134  eP     Pn     09 13 28.2 +0.6
BLUN  Bluefields         4.87 101  eP     Pn     09 13 27.6   0.0
BLUN  Bluefields         4.87 101   P     Pn     09 13 28.8 +1.1
BLUN                                S     Sn     09 14 21.3  -1.4
BLUN  Bluefields         4.87 101   P     Pn     09 13 27.8 +0.2
QUEU  Ciudad Quesada     4.91 122  eP     Pn     09 13 28.4 +0.1
ARZA  Esparza            4.91 127  eP     Pn     09 13 29.8 +1.5
VPL2  V. Platanar        4.96 122  eP     Pn     09 13 31.8 +2.7
ITAL  Pital              4.98 120  eP     Pn     09 13 30.4 +1.2
SRA1  San Ramn           5.01 125  eP     Pn     09 13 31.5 +1.8
RAMO  San Ramon          5.02 125  eP     Pn     09 13 30.3 +0.5
ZARE  Zarcero            5.02 123  eP     Pn     09 13 32.4 +2.4
ARTO  Ro Cuarto          5.08 121  eP     Pn     09 13 32.4 +1.7
SARCI Sarchi             5.11 124  eP     Pn     09 13 34.4 +3.3
ATEO  Atenas             5.15 125  eP     Pn     09 13 34.8 +3.2
VPS8  V Poas             5.15 122  eP     Pn     09 13 34.2 +2.4
VPS5  V. Poas            5.15 122  eP     Pn     09 13 34.6 +2.8
GREC  Grecia             5.15 124  eP     Pn     09 13 33.2 +1.6
TCS1  Tacares            5.18 124  eP     Pn     09 13 33.5 +1.5
TCS1  Tacares            5.18 124   P     Pn     09 13 34.0 +2.1
BITO  Garabito Jaco      5.18 130  eP     Pn     09 13 32.5 +0.6
SARA  Sarapiqu           5.19 119  eP     Pn     09 13 32.2 +0.1
POAS  San Pedro de P     5.20 123  eP     Pn     09 13 34.1 +1.7
BILN  Bilwi Airport      5.25  78   P     Pn     09 13 33.3 +0.6
BILN                                S     Sn     09 14 35.5 +3.6
UELA  Alajuela           5.26 124  eP     Pn     09 13 33.0  -0.1
PURI  Puriscal           5.28 126  eP     Pn     09 13 35.5 +2.0
VBV1  V. Barva           5.30 122  eP     Pn     09 13 35.9 +2.1
BELE  Belen              5.30 124  eP     Pn     09 13 35.1 +1.4
SANTA Santa Ana          5.33 124  eP     Pn     09 13 35.6 +1.5
HDC   Heredia            5.35 123         Pn     09 13 36.0 +1.7
HDC   Heredia            5.35 123  eP     Pn     09 13 35.7 +1.3
HDC   Heredia            5.35 123   P     Pn     09 13 35.6 +1.3
HDC                                 S     Sn     09 14 35.5 +0.8
DOMI  Santo Domingo      5.38 123  eP     Pn     09 13 39.5 +4.7
TRT2  Tortugero          5.39 116  eP     Pn     09 13 35.1 +0.3
TRT2  Tortugero          5.39 116   P     Pn     09 13 34.9 +0.2
TRT2  Tortugero          5.39 116   S     Sn     09 14 39.9 +4.3
MEXI  Barrio Mexico      5.41 124  eP     Pn     09 13 37.2 +2.0
TIBA  Tibas              5.41 123  eP     Pn     09 13 40.6 +5.5
CENT  San Jose           5.42 124  eP     Pn     09 13 37.6 +2.3
LUJA  Lujan              5.43 124  eP     Pn     09 13 36.9 +1.4
ACOS  Acosta             5.43 125  eP     Pn     09 13 37.2 +1.8
LUPE  Guadalupe          5.43 123  eP     Pn     09 13 36.9 +1.4
ECI   Escuela Centro     5.44 123  eP     Pn     09 13 37.0 +1.4
SJS3  Mercedes San J     5.44 123  eP     Pn     09 13 37.9 +2.4
AMPA  Desamparados       5.45 124  eP     Pn     09 13 37.6 +1.8
CORON Coronado           5.46 123  eP     Pn     09 13 37.5 +1.6
CVIMO Finca Echandi      5.48 122  eP     Pn     09 13 38.2 +2.0
PAR1A Puntarenas Pro     5.48 128  eP     Pn     09 13 38.3 +2.3
TRIO  Tres Rios          5.50 123  eP     Pn     09 13 38.3 +1.8
PICV  PH. Pirrs          5.50 127  eP     Pn     09 13 38.6 +2.2
PILE  Guapiles           5.51 119  eP     Pn     09 13 38.2 +1.8
ABE2  San Pablo          5.57 125  eP     Pn     09 13 40.5 +3.1
LCR2  La Lucha 2         5.59 125         Pn     09 13 39.2 +1.6
LCR2  La Lucha 2         5.59 125  eP     Pn     09 13 39.2 +1.6
LCR2  La Lucha 2         5.59 125   P     Pn     09 13 39.8 +2.1
LCR2  La Lucha 2         5.59 125   S     Sn     09 14 40.8 +0.1
PITB  Pirrs, San         5.62 126  eP     Pn     09 13 41.6 +3.5
RAZU  San Marcos de      5.62 126  eP     Pn     09 13 41.3 +3.2
VTLA  Turrialba Volc     5.63 121  eP     Pn     09 13 39.7 +1.3
CVTR  Volcan Turrial     5.63 121  eP     Pn     09 13 39.7 +1.2
VTR0  Volcan Turrial     5.63 121  eP     Pn     09 13 40.0 +1.5
CVTQ  Turrialba Volc     5.63 121  eP     Pn     09 13 40.5 +2.0
PCAYA Pacayas            5.65 122  eP     Pn     09 13 40.6 +2.1
REPA  Paraso             5.65 123  eP     Pn     09 13 41.2 +2.8
QUEP  Quepos             5.65 128  eP     Pn     09 13 40.6 +2.3
CVTV  Tajo               5.65 121  eP     Pn     09 13 40.6 +2.0
ABRB  Las Abras (San     5.68 121  eP     Pn     09 13 40.6 +1.7
VTCV  VTCV, Calle Va     5.68 121  eP     Pn     09 13 40.2 +1.2
PIEC  Cerro El Cedra     5.69 125  eP     Pn     09 13 41.6 +2.4
RESJ  San Isidro (Tu     5.73 120  eP     Pn     09 13 40.5 +1.1
TGIG                     5.73 312  eP     Pn     09 13 40.7 +1.2
TURIB Turrialba          5.75 122  eP     Pn     09 13 41.6 +1.7
IRES  Siquirres          5.81 119  eP     Pn     09 13 42.2 +1.6
VERH  Veragua Rainfo     6.16 119  eP     Pn     09 13 46.3 +0.9
SAJE  San Jernim         6.21 125  eP     Pn     09 13 48.3 +2.1
EDPE  Pejibaye, P        6.28 127  eP     Pn     09 13 49.4 +2.5
BURE  Buenos Aires       6.45 125  eP     Pn     09 13 51.6 +2.2
DRK0  Durika             6.47 124  eP     Pn     09 13 52.0 +2.3
CEUA  Cerro Uatsi, L     6.53 120  eP     Pn     09 13 51.7 +1.2
FIMO  Fila Mora          6.55 127  eP     Pn     09 13 53.2 +2.4
BRIBI Bribri             6.63 120  eP     Pn     09 13 55.4 +3.6
EDP2  Potrero Grande     6.67 126  eP     Pn     09 13 55.3 +3.0
SAIC  Isla e San And     6.79  93   P     Pn     09 13 57.4 +3.5
      comp=E,2μmcomp=E,131nm,0.7s
EDAD  Golfito            6.90 128  eP     Pn     09 13 57.1 +1.5
FITO  Golfito            6.93 128  eP     Pn     09 13 57.2 +1.3
VITO  San Vito           6.95 126  eP     Pn     09 13 58.5 +2.2
ALCO  Alturas Coton,     6.98 124  eP     Pn     09 13 57.8 +1.0
NELY  Ciudad Neily       7.07 127  eP     Pn     09 13 59.5 +1.7
SCLRA Santa Clara, W     7.09 125  eP     Pn     09 14 00.6 +2.4
PRVC  Isla de Provid     7.11  86   P     Pn     09 13 59.4 +1.0
      comp=E,3μmcomp=E,427nm,1.5s
BRU2  Volcan             7.19 125  eP     Pn     09 14 01.9 +2.3
TEIG  Tepich             7.21   3         Pn     09 14 02.3 +2.7
TEIG  Tepich             7.21   3   P     Pn     09 14 02.6 +3.0
      comp=E,8μmcomp=E,7μmcomp=E,2μm,0.8s
TBS2                     7.22 125  eP     Pn     09 14 00.6 +0.7
CLLRA Cordillera,        7.28 125  eP     Pn     09 14 03.0 +2.1
BQTLY Boquete Panama     7.39 124  eP     Pn     09 14 04.4 +2.0
MCANO Manzana, Boque     7.42 126  eP     Pn     09 14 04.9 +2.4
LMNES Limones            7.49 130  eP     Pn     09 14 05.7 +2.2
PBNVO Pueblo Nuevo,      7.54 122  eP     Pn     09 14 06.0 +1.8
RBALA Bur                7.58 122  eP     Pn     09 14 06.0 +1.2
CSTBL De las Acacias     7.62 126  eP     Pn     09 14 06.9 +1.7
CGUAY Guayabal, Coch     7.66 125  eP     Pn     09 14 07.2 +1.4
HUIG  Huatulco           7.73 292  eP     Pn     09 14 06.8   0.0
KKNTU Kakintº            7.89 121  eP     Pn     09 14 09.8 +0.8
ISECA Islas Secas        8.20 127  eP     Pn     09 14 14.3 +1.2
BCIP  Isla Barro Col     9.45 113   P     Pn     09 14 32.0 +1.7
      comp=E,45nm,0.8s
AZU   Azuero             9.73 121   P     Pn     09 14 38.1 +4.0
      comp=E,31nm,1.2s
MTDJ  Mount Denham      11.91  63         Pn     09 15 04.9 +0.9
MTDJ  Mount Denham      11.91  63  eP     Pn     09 15 06.4 +2.4
MTDJ                               eS     Sn     09 17 48.5  +33
MTDJ  Mount Denham      11.91  63   P     Pn     09 15 07.2 +3.2
      comp=E,113nm,0.7s
APAC  Apartado, Choc    12.91 112   P     Pn     09 15 20.4 +2.9
      comp=E,25nm,0.8s
LMGC  Las Mercedes      13.20  56  eP     Pn     09 15 19.7  -1.7
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SJCC  San Jacinto, C    13.56 102   P     P      09 15 33.5 +0.5
CHIV  Chivirico         13.64  58  eP     Pn     09 15 19.2  -8.0
JRQG  Juriquilla Cam    13.64 306   Pn    Pn     09 15 30.1 +2.6
YAR   Yar               13.88  56  eP     Pn     09 15 27.6  -2.8
UREC  San Jos de Ur     13.92 111   P     P      09 15 36.8  -0.1
RCC   Rio Carpintero    14.24  59  eP     Pn     09 15 29.0  -6.3
CBOC  Ciudad Bolivar    14.34 118   P     Pn     09 15 38.1 +1.4
      comp=E,345nmcomp=E,16nm,1.1s
HLGC  Holguin           14.38  55  eP     Pn     09 15 35.6  -1.4
PINC  Pinares de May    14.40  57  eP     Pn     09 15 35.6  -1.6
PLMC  San Jos del P     14.62 122   P     Pn     09 15 40.9 +0.7
      comp=E,14nm,0.7s
ZARC  Zaragoza, Cauc    14.63 111   P     P      09 15 43.3  -1.6
      comp=E,381nmcomp=E,36nm,0.6s
GTBY  Guantanamo Bay    14.71  60   P     P      09 15 45.7   0.0
GTBY  Guantanamo Bay    14.71  60  eP     Pn     09 15 39.6  -1.6
GTBY  Guantanamo Bay    14.71  60   P     P      09 15 45.9 +0.3
QMBU  Quimbuelo         15.08  60  eP     Pn     09 15 40.9  -5.1
NMDO  Nuevo Mundo       15.10  58  eP     Pn     09 15 47.6 +1.3
YOTC  Yotoco, Valle     15.10 125   P     Pn     09 15 48.3 +1.8
      comp=E,329nmcomp=E,16nm,0.9s
MASC  Masc              15.56  61  eP     Pn     09 15 52.9 +0.7
BBAC  Balboa, Cauca     15.69 133   P     P      09 15 58.7 +1.8
      comp=E,33nm,0.5s
POPC  Popayan, Colom    15.76 130   P     P      09 15 59.0 +1.4
      comp=E,707nmcomp=E,65nm,1.0s
OTAV  Otavalo           16.21 141   P     P      09 16 03.0 +0.1
ROSC  El Rosal          16.30 118   P     Pn     09 16 00.5  -1.6
      comp=E,4.8nm,0.4s,baz=123,slow=23,SNR=4.1
ZAIG  Zacatecas         16.42 308   P     P      09 16 06.2 +1.3
RUSC  La Rusia          16.89 113         P      09 16 11.9 +1.5
FLOC  Florencia         17.15 130   P     P      09 16 15.4 +2.6
SDDR  Presa de Saban    17.72  68  eP     Pn     09 16 20.8 +1.6
735A  Kenedy            17.94 333   P     Pn     09 16 24.3 +2.6
COHC  Cochancay         17.97 148   P     Pn     09 16 24.5 +2.4
      comp=E,574nmcomp=E,18nm,0.9s
HKT   Hockley           18.14 340   P     Pn     09 16 24.9 +0.9
SDV   Santo Domingo     18.16 101         P      09 16 24.0  -0.1
SDV   Santo Domingo     18.16 101   P     P      09 16 21.9  -2.2
      comp=E,20nm,0.4s,baz=319,slow=10,SNR=9.0
SDV                                 LR    LR     09 24 04.0
      comp=E,359nm,21.5s,baz=282,slow=40
SDV   Santo Domingo     18.16 101   P     P      09 16 24.3 +0.2
      comp=E,759nmcomp=E,49nm,1.0s
441A  DeRidder          18.17 347   P     Pn     09 16 25.0 +0.6
MACC  Macarena, Meta    18.19 125   P     Pn     09 16 25.9 +1.0
      comp=E,498nmcomp=E,16nm,0.7s
346A  Big Creek Wild    18.33 358         Pn     09 16 27.8 +1.4
352A  Blakely           18.72  10   P     Pn     09 16 30.5  -0.6
HNVL  Huntsville, TX    18.77 342   P     Pn     09 16 32.8 +1.1
250A  Grady             19.03   6   P     Pn     09 16 34.2  -0.5
NATX  Nacogdoches       19.48 345         Pn     09 16 40.5 +0.3
435B  Jarrell           19.53 336   IAmb  IAmb   09 16 52.3
      comp=Z,52nm,0.8s
146A  Union             19.56 359   IAmb  IAmb   09 16 44.2
      comp=Z,104nm,1.0s
DRIO  Del Rio           19.77 328   IAmb  IAmb   09 16 49.2
      comp=Z,41nm,0.7s
143A  Socs Landing,     19.79 353   IAmb  IAmb   09 16 49.0
      comp=Z,143nm,1.4s
LRAL  Lakeview Retre    20.01   4   P     Pn     09 16 45.3  -1.0
LRAL                                IAmb  IAmb   09 16 49.0
      comp=Z,41nm,0.9s
Z47A  Carrollton        20.13   1   P     Pn     09 16 47.1  -0.6
154A  Montrose          20.19  14   P     Pn     09 16 47.4  -0.9
JCT   Junction City     20.23 331   P     P      09 16 47.1 +0.7
JCT                                 IAmb  IAmb   09 17 07.3
      comp=Z,56nm,1.1s
BRDY  Brady             20.55 334   P     P      09 16 50.5 +0.5
BRDY                                IAmb  IAmb   09 17 06.5
      comp=Z,76nm,0.9s
BAUV  El Baul           20.63  99   P     P      09 16 49.2  -1.7
BAUV                                IAmb  IAmb   09 16 53.7
      comp=Z,54nm,0.6s
GOGA  Godfrey           20.88  12   IAmb  IAmb   09 16 58.3
      comp=Z,87nm,1.3s
Z38A  Mt. Pleasant      20.99 345   IAmb  IAmb   09 17 14.6
      comp=Z,108nm,1.0s
SAND  Sanderson         20.99 326   IAmb  IAmb   09 17 15.9
      comp=Z,48nm,1.1s
OZNA  Ozona             21.23 329   IAmb  IAmb   09 17 18.5
      comp=Z,84nm,0.9s
FW07  Weatherford       21.33 338   IAmb  IAmb   09 17 19.5
      comp=Z,73nm,1.3s
X48A  Hartselle         21.42   4   IAmb  IAmb   09 17 20.3
      comp=Z,73nm,1.1s
TXAR  Lajitas Array     21.42 322   P     P      09 17 01.6 +2.2
TXAR  Lajitas Array     21.42 322   P     P      09 17 00.8 +1.5
      comp=Z,17nm,0.6s,baz=146,slow=9.6,SNR=92
TXAR                                pP    pP     09 17 15.9 +2.0
      comp=Z,36nm,0.8s,baz=146,slow=9.9,SNR=19
TXAR                                PcP   PcP    09 21 00.3  -0.3
      comp=Z,1.0nm,0.8s,baz=107,slow=3.3,SNR=4.0
TXAR                                ScP   ScP    09 24 31.8 +0.1
      comp=Z,0.5nm,0.6s,baz=152,slow=4.8,SNR=4.3
TXAR                                LR    LR     09 27 17.6
      comp=Z,115nm,18.1s,baz=132,slow=42
      comp=Z,17nm,0.6s
TX31  Lajitas Ar. Si    21.42 322   IAmb  IAmb   09 17 17.7
      comp=Z,44nm,0.8s
FPAL  Fort Paine        21.64   7   IAmb  IAmb   09 17 20.2
      comp=Z,41nm,1.1s
PLAL  Pickwick Lake     21.91   1   IAmb  IAmb   09 17 24.3
      comp=Z,109nm,1.8s
HODGE Hodges            21.93  14   IAmb  IAmb   09 17 26.2
      comp=Z,92nm,1.2s
ABTX  Abilene, Hawle    21.98 335   IAmb  IAmb   09 17 21.5
      comp=Z,80nm,1.2s
SGCY  Sterling City     22.05 331   IAmb  IAmb   09 17 23.2
      comp=Z,36nm,0.8s
SJG   San Juan          22.27  74   LR    LR     09 26 55.0
      comp=Z,596nm,18.2s,baz=260,slow=40
SWET  Sewanee           22.27   6   IAmb  IAmb   09 17 30.3
      comp=Z,161nm,1.9s
W50A  Signal Mountai    22.32   7   IAmb  IAmb   09 17 31.1
      comp=Z,93nm,1.6s
TPB05 Hovey Rd          22.40 325   P     P      09 17 07.7  -2.1
W52A  Murphy            22.42  10   IAmb  IAmb   09 17 33.2
      comp=Z,54nm,0.8s
TPB16 Coyonosa          22.51 326   P     P      09 17 11.6 +0.6
BG3   Lake Jocassee     22.51  12   IAmb  IAmb   09 17 32.5
      comp=Z,100nm,1.3s
WTFS  Witchita Falls    22.53 338   IAmb  IAmb   09 17 36.5
      comp=Z,32nm,0.7s
PAULI Pauline           22.61  15   IAmb  IAmb   09 17 32.4
      comp=Z,62nm,1.1s
TPB01 Permian Basin     22.67 324   P     P      09 17 15.1 +2.4
CPCT  Cooper Cave       22.68   9   IAmb  IAmb   09 17 32.2
      comp=Z,83nm,1.2s
V48A  Smith Brothers    22.71   4   IAmb  IAmb   09 17 38.5
      comp=Z,41nm,1.0s
SN05  Snyder 5          22.74 333   IAmb  IAmb   09 17 29.5
      comp=Z,60nm,1.0s
SLBS  Sierra La Lagu    22.80 301   P     P      09 17 17.0 +2.8
BIRD  Birdtown, Kers    22.81  18   IAmb  IAmb   09 17 34.2
      comp=Z,38nm,0.9s
TPB06 Permian Basin     22.89 327   P     P      09 17 14.1  -0.9
TPB10 Southeast of T    22.91 325   P     P      09 17 15.8 +0.6
ODSA  Odessa            22.92 328   IAmb  IAmb   09 17 17.5
      comp=Z,32nm,0.7s
SN07  Snyder 07         22.92 333   IAmb  IAmb   09 17 31.1
      comp=Z,38nm,0.9s
TKL   Tuckaleechee C    23.00  10   IAmb  IAmb   09 17 34.9
      comp=Z,70nm,1.0s
TKL   Tuckaleechee C    23.00  10   P     P      09 17 15.3  -0.7
      comp=Z,26nm,0.8s,baz=179,slow=11,SNR=26
TKL                                 LR    LR     09 26 52.2
      comp=Z,144nm,18.6s,baz=190,slow=38
      comp=Z,26nm,0.8s
FCAR  Ozark Folk Cen    23.02 353   IAmb  IAmb   09 17 34.5
      comp=Z,68nm,0.9s
WVT   Waverly           23.06   2   P     P      09 17 15.9  -0.6
V53A  Saluda            23.19  12   IAmb  IAmb   09 17 45.5
      comp=Z,81nm,1.1s
LPIG  La Paz            23.28 301   LR    LR     09 26 49.9
      comp=Z,105nm,21.4s,baz=117,slow=37
W57A  Gilead            23.42  18   IAmb  IAmb   09 17 43.4
      comp=Z,66nm,1.4s
DKNS  Dickens           23.42 334   IAmb  IAmb   09 17 23.0
      comp=Z,47nm,0.7s
HHAR  Hobbs             23.68 349   IAmb  IAmb   09 17 40.4
      comp=Z,144nm,1.7s
PCRV  Puerto La Cruz    23.69  94   LR    LR     09 27 14.3
      comp=Z,362nm,21.6s,slow=38
V55A  Taylorsville      23.73  15   IAmb  IAmb   09 17 43.1
      comp=Z,64nm,1.1s
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PBMO  Poplar Bluff      23.74 356  IAmb   IAmb   09 17 42.0
      comp=Z,74nm,0.9s
DEOK  Depew             23.83 344  IAmb   IAmb   09 17 41.5
      comp=Z,70nm,1.1s
TZTN  Tazewell          23.90  10  IAmb   IAmb   09 17 51.3
      comp=Z,38nm,1.1s
U38A  Gravette          23.91 349  IAmb   IAmb   09 17 43.1
      comp=Z,55nm,1.0s
T47A  Sharon Grove      23.94   3  IAmb   IAmb   09 17 27.7
      comp=Z,48nm,1.0s
T42A  Van Buren         24.04 355  IAmb   IAmb   09 17 50.8
      comp=Z,92nm,1.4s
U54A  Nelsons Funny     24.23  14  IAmb   IAmb   09 17 46.7
      comp=Z,73nm,0.9s
SMWD  Samnorwood        24.39 336  IAmb   IAmb   09 17 45.8
      comp=Z,59nm,0.8s
U56A  King              24.42  16  IAmb   IAmb   09 17 48.9
      comp=Z,63nm,1.0s
MSTX  Muleshoe          24.52 331  IAmb   IAmb   09 17 48.4
      comp=Z,72nm,1.1s
USIN  University of     24.89   2  IAmb   IAmb   09 17 53.3
      comp=Z,83nm,1.1s
S51A  Beattyville       24.96  10  IAmb   IAmb   09 17 54.1
      comp=Z,47nm,1.1s
CCM   Cathedral Cave    25.07 355  P      P      09 17 35.1 +0.3
OK038 West end E0370    25.09 341  IAmb   IAmb   09 17 55.3
      comp=Z,27nm,0.7s
WCI   Wyandotte Cave    25.23   4  P      P      09 17 36.7 +0.4
WCI                                IAmb   IAmb   09 18 14.8
      comp=Z,30nm,0.8s
TBTG  Tabatinga, AM     25.26 131  eP     P      09 17 34.5 -2.3
KAN14 Manchester OK     25.29 342  IAmb   IAmb   09 17 54.6
      comp=Z,67nm,1.3s
KAN09 Caldwell North    25.35 343  IAmb   IAmb   09 17 55.4
      comp=Z,54nm,0.8s
T57A  Hurt              25.35  18  IAmb   IAmb   09 17 57.2
      comp=Z,67nm,0.9s
KAN05 Bluff City Nor    25.40 343  IAmb   IAmb   09 17 55.9
      comp=Z,59nm,0.9s
KAN01 Argonia South     25.41 343  IAmb   IAmb   09 17 55.9
      comp=Z,52nm,0.8s
KAN08 Anthony NE Sta    25.54 343  IAmb   IAmb   09 17 57.2
      comp=Z,75nm,1.1s
KAN12 Harper NE Stat    25.61 343  IAmb   IAmb   09 17 58.5
      comp=Z,51nm,0.7s
OLIL  Olney             25.65   1  IAmb   IAmb   09 17 59.4
      comp=Z,57nm,1.4s
Q44A  Meyer Farm, Va    25.81 359  IAmb   IAmb   09 18 04.7
      comp=Z,43nm,1.0s
T59A  Double "B" Far    25.87  21  IAmb   IAmb   09 18 01.9
      comp=Z,61nm,1.1s
CZSB  Cruzeiro do Su    25.98 142  eP     P      09 17 42.0 -1.3
CZSB  Cruzeiro do Su    25.98 142  P      P      09 17 46.5 +3.2
SRIG  Santa Rosalia     26.27 306  IAmb   IAmb   09 18 23.5
      comp=Z,26nm,0.8s
Q51A  Peebles           26.36   9  IAmb   IAmb   09 18 13.1
      comp=Z,36nm,1.0s
Q52A  Bidwell           26.48  11  IAmb   IAmb   09 18 15.2
      comp=Z,57nm,1.4s
Y22D  IRIS PASSCAL I    26.76 325  P      P      09 17 51.0 +0.6
      baz=137
Q54A  Coxs Mills        26.80  14  IAmb   IAmb   09 18 09.1
      comp=Z,38nm,1.0s
P51A  Williamsport      26.85  10  IAmb   IAmb   09 18 33.0
      comp=Z,30nm,0.9s
R32A  Long Quarter,     26.86 342  IAmb   IAmb   09 18 09.6
      comp=Z,29nm,1.0s
ANMO  Albuquerque       27.16 327  P      P      09 17 56.6 +2.5
ANMO  Albuquerque       27.16 327  IAmb   IAmb   09 17 58.0
      comp=Z,10.0nm,1.3s
ANMO  Albuquerque       27.16 327  IAmb   IAmb   09 17 58.1
      comp=Z,11nm,1.2s
ANMO  Albuquerque       27.16 327  P      P      09 17 55.6 +1.6
      comp=Z,5.5nm,0.9s,baz=241,slow=12,SNR=13
      comp=Z,5.5nm,0.9s
NNA   Nana              27.44 154  LR     LR     09 28 32.1
      comp=Z,114nm,18.6s,baz=320,slow=36
O52A  Adamsville        27.68  11  IAmb   IAmb   09 18 17.5
      comp=Z,29nm,0.9s
T25A  Trinidad          27.88 332  IAmb   IAmb   09 18 23.7
      comp=Z,28nm,0.9s
O53A  New Philadelph    27.94  12  IAmb   IAmb   09 18 52.0
      comp=Z,52nm,1.5s
TUC   Tucson            27.95 317  P      P      09 18 03.8 +2.8
P57A  Homestead Farm    28.02  18  IAmb   IAmb   09 18 20.7
      comp=Z,39nm,0.8s
O54A  Avella            28.05  14  IAmb   IAmb   09 18 24.9
      comp=Z,27nm,1.1s
N53A  Lisbon            28.55  12  IAmb   IAmb   09 18 25.3
      comp=Z,19nm,0.9s
KSCO  Kaye Shedlock'    28.72 337  IAmb   IAmb   09 18 10.3
      comp=Z,68nm,1.4s
L40A  Anamosa           29.05 356  IAmb   IAmb   09 18 29.1
      comp=Z,44nm,1.0s
SSPA  Standing Stone    29.12  17  P      P      09 18 11.9 +0.7
SSPA                               IAmb   IAmb   09 18 43.1
      comp=Z,66nm,2.0s
JFWS  Jewell Farm       29.85 358  IAmb   IAmb   09 18 36.2
      comp=Z,33nm,1.1s
MVCO  Mesa Verde        29.95 327  IAmb   IAmb   09 18 37.9
      comp=Z,30nm,1.6s
I42A  Draeger Farm,     30.80 360  IAmb   IAmb   09 18 44.0
      comp=Z,16nm,0.9s
PV02  Paradox Valley    30.82 328  IAmb   IAmb   09 18 30.5
      comp=Z,36nm,1.3s
PV13  Radium Mtn., P    30.83 328  IAmb   IAmb   09 18 29.8
      comp=Z,23nm,1.3s
PV05  Paradox Valley    30.91 328  IAmb   IAmb   09 18 30.9
      comp=Z,30nm,1.3s
PV03  Paradox Valley    30.91 328  IAmb   IAmb   09 18 30.4
      comp=Z,32nm,1.4s
PV07  Paradox Valley    30.95 329  IAmb   IAmb   09 18 30.9
      comp=Z,44nm,1.7s
PV11  David Mesa, Pa    30.96 328  IAmb   IAmb   09 18 31.4
      comp=Z,32nm,1.2s
PV17  East Wray Mesa    30.99 328  IAmb   IAmb   09 18 31.6
      comp=Z,15nm,0.8s
PV16  Nyswonger Mesa    30.99 328  IAmb   IAmb   09 18 31.8
      comp=Z,31nm,1.2s
PV20  West Nyswonger    31.04 328  IAmb   IAmb   09 18 32.0
      comp=Z,35nm,1.2s
PV04  Paradox Valley    31.05 328  IAmb   IAmb   09 18 32.3
      comp=Z,15nm,0.8s
PV10  Paradox Valley    31.11 328  IAmb   IAmb   09 18 32.1
      comp=Z,37nm,1.2s
PV23  Carpenter Ridg    31.15 328  IAmb   IAmb   09 19 01.7
      comp=Z,21nm,0.8s
ECSD  EROS Data Cent    31.39 349  IAmb   IAmb   09 19 34.5
      comp=Z,19nm,1.1s
HMU   Henry Mountain    31.69 326  IAmb   IAmb   09 18 38.6
      comp=Z,16nm,1.1s
YUH   Yuha Desert       31.70 313  IAmb   IAmb   09 18 54.1
      comp=Z,40nm,1.9s
O20A  White River Ci    32.07 331  IAmb   IAmb   09 18 42.5
      comp=Z,24nm,0.9s
MACA  Manacapuru-AM     32.08 118  P      P      09 18 36.0 -1.5
MACA                               IAmb   IAmb   09 18 38.0
      comp=Z,13nm,0.6s
MACA  Manacapuru-AM     32.08 118  eP     P      09 18 35.8 -1.8
G40A  Rib Lake          32.20 358  IAmb   IAmb   09 18 56.5
      comp=Z,38nm,1.2s
M65A  Busby, Falmout    32.52  26  P      P      09 18 41.2 +0.1
      baz=214
PFO   Pinyon Flats O    32.59 314  P      P      09 18 43.6 +1.6
      comp=Z,2.1nm,0.8s,baz=113,slow=4.7,SNR=5.8
PFO                                PcP    PcP    09 21 27.6 +0.5
      comp=Z,1.4nm,0.7s,baz=109,slow=3.0,SNR=4.0
PFO                                ScP    ScP    09 25 05.8 +0.7
      comp=Z,1.6nm,0.8s,baz=97,slow=0.2,SNR=3.5
PFO                                LR     LR     09 32 47.5
      comp=Z,274nm,21.1s,baz=130,slow=38
      comp=Z,2.1nm,0.8s
SADO  Sadowa            32.70  13  IAmb   IAmb   09 19 01.2
      comp=Z,22nm,1.0s
SADO  Sadowa            32.70  13  P      P      09 18 41.2 -1.4
      comp=Z,6.3nm,0.5s,baz=215,slow=9.5,SNR=15
SADO                               LR     LR     09 32 07.0
      comp=Z,235nm,21.3s,baz=166,slow=37
      comp=Z,6.3nm,0.5s
MVU   Marysvale         32.91 325  IAmb   IAmb   09 19 04.8
      comp=Z,25nm,1.9s
F33A  5 Mile Ranch,     33.38 350  IAmb   IAmb   09 19 05.5
      comp=Z,21nm,1.0s
BSUT  Blindstream Ca    33.61 329  IAmb   IAmb   09 18 54.2
      comp=Z,16nm,1.4s
MPU   Maple Canyon      33.67 327  IAmb   IAmb   09 18 55.3
      comp=Z,18nm,1.2s
RSSD  Black Hills       33.72 340  P      P      09 18 53.3 +1.5
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RSSD                               IAmb   IAmb   09 18 54.6
      comp=Z,11nm,0.9s
RSSD  Black Hills       33.72 340  P      P      09 18 53.1 +1.3
RSSD                               sP     pP     09 19 09.2 +0.6
GSC   Goldstone, Bar    33.75 316         PcP    09 21 32.0 +1.8
PDAR  Pinedale Array    34.75 333  P      P      09 19 01.4 +0.6
PDAR  Pinedale Array    34.75 333  P      P      09 19 01.5 +0.7
      comp=Z,1.4nm,0.5s,baz=126,slow=11,SNR=20
PDAR                               ScP    ScP    09 25 12.3 -0.2
      comp=Z,0.9nm,0.9s,baz=205,slow=2.8,SNR=5.0
      comp=Z,1.4nm,0.5s
R11B  Troy Canyon, C    34.79 321  P      P      09 19 03.4 +2.3
HWUT  Hardware Ranch    34.81 329  IAmb   IAmb   09 19 31.6
      comp=Z,23nm,1.4s
BGU   Big Grassy Mou    35.07 327  IAmb   IAmb   09 19 22.9
      comp=Z,19nm,1.4s
AHID  Auburn Hatcher    35.46 331  IAmb   IAmb   09 19 10.0
      comp=Z,13nm,0.7s
LPAZ  La Paz            35.47 145  P      P      09 19 09.1 +1.5
LPAZ  La Paz            35.47 145  P      P      09 19 08.9 +1.2
      comp=Z,2.1nm,0.5s,baz=330,slow=7.3,SNR=17
      comp=Z,2.1nm,0.5s
LPAZ  La Paz            35.47 145  eP     P      09 19 06.0 -1.6
LPAZ                               epP    pP     09 19 24.9 +0.6
LPAZ  La Paz            35.47 145  P      P      09 19 08.8 +1.2
LPAZ                               sP     sP     09 19 32.1 -0.3
HVU   Hansel Valley     35.55 328  IAmb   IAmb   09 19 27.0
      comp=Z,28nm,1.6s
ELK   Elko              36.15 325  P      P      09 19 14.5 +1.7
      comp=Z,0.9nm,0.4s,baz=111,slow=4.8,SNR=6.8
ELK                                ScP    ScP    09 25 18.8 +1.0
      comp=Z,1.3nm,0.7s,baz=92,slow=3.8,SNR=6.1
      comp=Z,0.9nm,0.4s
PB16  IPOC Station P    36.41 148  P      P      09 19 17.4 +1.9
H17A  Grant Village     36.49 333  IAmb   IAmb   09 19 37.4
      comp=Z,32nm,1.6s
RLMT  Red Lodge         36.52 335  IAmb   IAmb   09 19 17.4
      comp=Z,14nm,0.7s
NVAR  Mina Array Bea    36.53 319  P      P      09 19 17.8 +1.7
NVAR  Mina Array Bea    36.53 319  P      P      09 19 17.5 +1.4
      comp=Z,1.9nm,0.5s,baz=128,slow=7.7,SNR=19
NVAR                               PcP    PcP    09 21 39.1 +0.7
      comp=Z,2.0nm,0.7s,baz=137,slow=2.4,SNR=9.0
NVAR                               ScP    ScP    09 25 20.5 +1.3
      comp=Z,1.5nm,0.6s,baz=130,slow=4.5,SNR=8.9
NVAR                               LR     LR     09 36 26.2
      comp=Z,426nm,19.6s,baz=178,slow=40
      comp=Z,1.9nm,0.5s
LHV   Little Huntoon    36.55 319  IAmb   IAmb   09 19 54.9
      comp=Z,11nm,0.9s
YMP   Mirror Lake Pl    36.58 334  IAmb   IAmb   09 19 56.2
      comp=Z,29nm,1.1s
YFT   Old Faithful      36.65 333  IAmb   IAmb   09 19 48.1
      comp=Z,20nm,1.1s
YNE   Yellowstone No    36.74 334  IAmb   IAmb   09 19 37.5
      comp=Z,22nm,1.1s
YHB   Horse Butte       37.04 333  IAmb   IAmb   09 20 03.1
      comp=Z,15nm,1.1s
ULM   Lac du Bonnet     37.62 352  P      P      09 19 23.9 -1.0
      comp=Z,12nm,0.5s,baz=166,slow=9.3,SNR=27
ULM                                pP     pP     09 19 40.5 -1.4
      comp=Z,44nm,0.9s,baz=174,slow=8.8,SNR=16
      comp=Z,12nm,0.5s
GO01  Chusmiza          37.69 149  P      P      09 19 28.5 +2.1
PNTR  Pine Nut          37.73 319  IAmb   IAmb   09 20 19.9
      comp=Z,11nm,0.8s
D62A  Allapoint, All    37.76  22  IAmb   IAmb   09 19 47.1
      comp=Z,19nm,0.9s
BOZ   Bozeman (W)       37.90 334  IAmb   IAmb   09 19 47.1
      comp=Z,25nm,1.2s
NPGB  Novo Progresso    38.61 119  eP     P      09 19 31.6 -2.0
NPGB                               epP    pP     09 19 50.7  0.0
PLID  Pearl Lake        39.56 329  IAmb   IAmb   09 20 00.1
      comp=Z,18nm,1.3s
SIV   San Ignacio       39.66 136  LR     LR     09 35 28.1
      comp=Z,334nm,21.1s,baz=303,slow=35
J08A  Circle Bar Ran    39.68 325  IAmb   IAmb   09 20 02.0
      comp=Z,8.8nm,0.8s
PDRB  Porto dos Gac     40.01 126  eP     P      09 19 44.2 -1.2
PDRB                               epP    pP     09 20 01.5 -0.9
PTLB  Pontes e Lacer    40.64 133  P      P      09 19 50.4 -0.1
PTLB  Pontes e Lacer    40.64 133  eP     P      09 19 48.4 -2.0
PTLB                               epP    pP     09 20 08.1 +0.6
BBSD  Serra de San D    40.82 137  eP     P      09 19 50.9 -1.1
BBSD                               epP    pP     09 20 10.2 +1.1
GO02  Mina Guanaco      42.23 154  P      P      09 20 05.0 +1.3
GO02                               IAmb   IAmb   09 20 26.7
      comp=Z,28nm,1.2s
NEW   Newport           42.38 332  P      P      09 20 04.7 +0.3
FFC   Flin Flon         42.94 349  P      P      09 20 08.9 +0.2
FFC                                IAmb   IAmb   09 20 26.9
      comp=Z,13nm,0.8s
FFC   Flin Flon         42.94 349  P      P      09 20 08.9 +0.2
FFC                                pP     pP     09 20 26.5 +0.5
SALV  Santo Antonio     43.44 130  eP     P      09 20 12.7 -0.6
SALV                               epP    pP     09 20 29.9 -0.5
B08A  Colville Reser    43.49 330  P      P      09 20 13.8 +0.4
AC02  Maricunga         43.90 154  P      P      09 20 19.8 +2.4
AC02                               IAmb   IAmb   09 20 40.9
      comp=Z,32nm,1.3s
SNDB  Serra Nova Dou    44.60 122  eP     P      09 20 20.8 -1.8
SNDB                               epP    pP     09 20 39.6 -0.4
SCHQ  Schefferville     45.12  18  P      P      09 20 24.4 -1.8
      comp=Z,6.8nm,0.7s,baz=235,slow=4.3,SNR=14
SCHQ                               LR     LR     09 40 19.9
      comp=Z,329nm,18.8s,baz=215,slow=38
      comp=Z,6.8nm,0.7s
MURT  Porto Murtinho    45.98 138  eP     P      09 20 31.8 -1.7
MURT                               epP    pP     09 20 52.0 +1.2
ARAG  Araguaiana, MT    46.27 127  eP     P      09 20 33.4 -2.4
ARAG                               epP    pP     09 20 53.6 +0.3
AQDB  Aquidauana        46.43 135  eP     P      09 20 36.6 -0.4
AQDB                               epP    pP     09 20 54.6 +0.1
H03N2 Juan Fernandez    47.09 169  T      T      10 11 01.3
      baz=347,slow=76,SNR=38
H03N1 Juan Fernandez    47.09 169  T      T      10 11 03.4
      baz=347,slow=76,SNR=44
H03N3 Juan Fernandez    47.11 169  T      T      10 11 04.8
      baz=347,slow=76,SNR=44
KUQ   Kuujjuuaa         47.57  14  P      P      09 20 44.6 -0.7
RPRD  Ribas do Rio P    47.83 134  eP     P      09 20 46.2 -1.7
RPRD                               epP    pP     09 21 06.1 +0.7
BDFB  Brasilia          49.25 124  P      P      09 20 57.7 -1.4
      comp=Z,3.0nm,0.5s,baz=291,slow=10,SNR=4.9
      comp=Z,3.0nm,0.5s
CPUP  Villa Florida     49.55 142  P      P      09 21 00.2 -0.8
      comp=Z,0.6nm,0.5s,baz=193,slow=9.1,SNR=7.1
      comp=Z,0.6nm,0.5s
BO01  Tunca             49.99 161  P      P      09 21 05.5 +1.3
BBB   Bella Bella       50.26 329  LR     LR     09 46 55.5
      comp=Z,201nm,19.4s,baz=148,slow=41
PCMB  Pacaembu          50.29 133  eP     P      09 21 05.8 -1.0
PCMB                               epP    pP     09 21 24.7 +0.4
BI02  San Fabin de      52.03 162  P      P      09 21 22.1 +2.6
BI02                               IAmb   IAmb   09 21 42.5
      comp=Z,24nm,1.2s
ITQB  Itaqui            52.47 144  eP     P      09 21 21.7 -1.1
ITQB                               epP    pP     09 21 41.5 +1.0
FRB   Frobisher Bay     52.62  11  LR     LR     09 45 17.9
      comp=Z,344nm,18.1s,baz=205,slow=38
YKAW1 Yellowknife Wh    52.75 345  IAmb   IAmb   09 21 43.1
      comp=Z,47nm,1.1s
YKA   Yellowknife Ar    52.79 345  P      P      09 21 24.0 -0.8
      comp=Z,11nm,0.9s,baz=61,slow=1.7,SNR=236
YKA                                pP     pP     09 21 42.5  0.0
      comp=Z,28nm,1.0s,baz=144,slow=7.2,SNR=15
YKA                                ScP    ScP    09 26 24.9 +0.2
      comp=Z,0.3nm,0.6s,baz=144,slow=4.1,SNR=5.6
YKA                                S      S      09 28 47.0 -0.8
      comp=Z,0.6nm,0.9s,baz=154,slow=13,SNR=4.1
YKA                                LR     LR     09 46 43.3
      comp=Z,159nm,19.5s,baz=163,slow=39
      comp=Z,11nm,0.9s
YKAW3 Yellowknife Wh    52.85 345  IAmb   IAmb   09 21 43.9
      comp=Z,47nm,1.1s
TOAD  Toad River Com    53.30 337  P      P      09 21 28.6  0.0
      baz=134,SNR=11
KOTAN Kotaneelee Air    53.77 339  P      P      09 21 32.0  0.0
      baz=136
LIRD  Liard River Hi    54.01 337  P      P      09 21 33.2 -0.5
      baz=133
T35M  Bob Quinn         54.13 333  P      P      09 21 34.6 -0.1
      baz=127
BEAVL Fort Liard        54.16 339  P      P      09 21 34.7 -0.2
      baz=134,SNR=16
CRAG  Craig             54.57 331  P      P      09 21 37.7 -0.2
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      baz=123
WRAK  Wrangell Islan    54.74 332  P      P      09 21 39.4 +0.4
      baz=124
DLBC  Dease Lake        54.92 335  LR     LR     09 49 40.7
      comp=Z,211nm,18.8s,baz=120,slow=41
DLBC  Dease Lake        54.92 335  P      P      09 21 40.7 +0.2
      baz=128,SNR=11
U33K  Whale Pass        54.92 331  P      P      09 21 41.0 +0.6
      baz=123
S34M  Telegraph Cree    55.07 334  P      P      09 21 42.0 +0.6
      baz=126
WTLY  Watson Lake, Y    55.50 337  IAmb   IAmb   09 22 07.8
      comp=Z,23nm,1.3s
WTLY  Watson Lake, Y    55.50 337  P      P      09 21 44.4 -0.1
      baz=130,SNR=10
TAOE  Nuku Hiva Isla    55.55 250  eLR    LR     09 37 40.7
      comp=Z,850nm,27.7s
WRGLY Wrigley           55.84 342  P      P      09 21 47.0 +0.1
      baz=138
R33M  Jennings River    55.90 335  IAmb   IAmb   09 22 07.5
      comp=Z,11nm,1.0s
R33M  Jennings River    55.90 335  P      P      09 21 47.2 -0.4
      baz=128
PLCA  Paso Flores       56.02 163  P      P      09 21 49.1 +0.5
      comp=Z,4.3nm,0.7s,baz=331,slow=8.5,SNR=5.6
      comp=Z,4.3nm,0.7s
PLCA  Paso Flores       56.02 163  eP     P      09 21 48.5  0.0
PLCA                               epP    pP     09 22 07.8 +1.3
PLCA  Paso Flores       56.02 163  P      P      09 21 49.9 +1.4
PLCA                               sP     pP     09 22 10.5 +4.0
Q32M  Nakina River      56.17 335  IAmb   IAmb   09 22 10.5
      comp=Z,14nm,1.0s
Q32M  Nakina River      56.17 335  P      P      09 21 49.4 -0.3
      baz=126
TGTN  Hyland Airport    56.23 338  P      P      09 21 49.7 -0.2
      baz=132
S32K  Killisnoo         56.34 332  P      P      09 21 51.4 +0.9
      baz=123
SIT   Sitka             56.46 332  P      P      09 21 51.3 -0.1
      baz=122
ILON  Igloolik, Nuna    56.51   3  P      P      09 21 51.0 -0.6
R32K  Eaglecrest        56.75 333  P      P      09 21 54.0 +0.5
      baz=123
P33M  Teslin, Yukon     57.14 336  P      P      09 21 56.5 +0.2
      baz=126
P32M  Atlin             57.14 335  P      P      09 21 56.4 +0.1
      baz=125
S31K  Pelican           57.35 332  P      P      09 21 57.4 -0.3
      baz=121
R31K  City Hall, Gus    57.37 333  P      P      09 21 58.1 +0.4
      baz=122
SKAG  Skagway           57.75 334  P      P      09 22 00.6 +0.1
      baz=123
N32M  Quiet Lake        57.80 336  IAmb   IAmb   09 22 20.4
      comp=Z,15nm,0.9s
N32M  Quiet Lake        57.80 336  P      P      09 22 00.8 -0.1
      baz=126,SNR=7.1
MMPY  Sheldon Lake,     58.01 338  IAmb   IAmb   09 22 03.5
      comp=Z,8.6nm,0.7s
MMPY  Sheldon Lake,     58.01 338  P      P      09 22 02.2 -0.2
      baz=129,SNR=12
PLBC  Pleasant Camp     58.20 334  P      P      09 22 04.4 +0.8
      baz=122
WHY   Whitehorse        58.23 335  P      P      09 22 04.1 +0.1
      baz=124
FARO  Faro, Yukon       58.54 337  IAmb   IAmb   09 23 06.0
      comp=Z,18nm,1.8s
FARO  Faro, Yukon       58.54 337  P      P      09 22 05.9 -0.2
      baz=126
O30N  Mendenhall        58.79 335  IAmb   IAmb   09 22 27.4
      comp=Z,11nm,0.9s
O30N  Mendenhall        58.79 335  P      P      09 22 07.6 -0.2
      baz=123,SNR=6.0
P30M  Million Dollar    58.81 334  P      P      09 22 08.3 +0.3
      baz=122
P29M  Windy Craggy      58.89 333  IAmb   IAmb   09 22 28.5
      comp=Z,16nm,1.0s
P29M  Windy Craggy      58.89 333  P      P      09 22 08.4 -0.1
      baz=121
M31M  Drury Creek, Y    58.92 337  P      P      09 22 08.6 -0.1
      baz=125
N31M  Braeburn, Yuko    59.06 336  IAmb   IAmb   09 22 28.6
      comp=Z,13nm,0.9s
N31M  Braeburn, Yuko    59.06 336  P      P      09 22 09.7 +0.1
      baz=124
HYT   Haines Junctio    59.41 335  P      P      09 22 12.4 +0.2
      baz=121
N30M  Aishikik Lake     59.57 335  IAmb   IAmb   09 22 32.6
      comp=Z,7.5nm,0.9s
N30M  Aishikik Lake     59.57 335  P      P      09 22 13.2  0.0
      baz=122,SNR=5.0
O29M  Mount Kennedy     59.59 334  P      P      09 22 13.3 -0.1
      baz=120
PNL   Peninsula         59.64 333  P      P      09 22 13.8 +0.1
      baz=119
YUK6  Outpost Mounta    59.83 334  P      P      09 22 14.9 -0.2
      baz=121
POIN  Pond Inlet        60.02   4  P      P      09 22 15.7 -0.3
YUK4  Talbot Arm        60.15 335  P      P      09 22 17.2 -0.2
      baz=121
PINM  Pinnacle          60.22 333  P      P      09 22 18.1 +0.4
      baz=118
MAYO  Mayo, Yukon       60.29 338  P      P      09 22 18.3 +0.3
      baz=124,SNR=5.3
O28M  Mount Upton       60.52 334  P      P      09 22 19.1 -0.9
      baz=119
YUK8  Steele Glacier    60.59 334  P      P      09 22 20.1 -0.3
      baz=119,SNR=7.1
C36M  Paulatuk          60.62 346  P      P      09 22 20.0 -0.1
      baz=140
M29M  Somme Creek       60.64 336  IAmb   IAmb   09 22 40.3
      comp=Z,11nm,0.9s
M29M  Somme Creek       60.64 336  P      P      09 22 20.4 -0.2
      baz=121,SNR=15
L29M  L29M              60.86 337  IAmb   IAmb   09 22 26.4
      comp=Z,9.8nm,1.1s
L29M  L29M              60.86 337  P      P      09 22 21.7 -0.2
      baz=122,SNR=6.5
J30M  Hart River        61.00 339  P      P      09 22 23.0  0.0
      baz=124
MESA  MESA              61.01 333  P      P      09 22 23.2  0.0
      baz=117
K29M  Barlow Dome       61.03 338  P      P      09 22 23.1 -0.1
K29M  Barlow Dome       61.03 338  P      P      09 22 23.1 -0.1
      baz=123
H31M  Peel River        61.05 340  P      P      09 22 23.4 +0.3
      baz=127
CTGM  Chitina Glacie    61.10 334  IAmb   IAmb   09 22 26.6
      comp=Z,5.6nm,0.8s
CTG   Chitna Glacier    61.10 334  P      P      09 22 23.3 -0.5
      baz=118
YUK3  Moose Creek       61.12 335  P      P      09 22 23.6 -0.4
      baz=119
I30M  Mount Dempster    61.39 339  IAmb   IAmb   09 22 26.0
      comp=Z,6.3nm,0.8s
I30M  Mount Dempster    61.39 339  P      P      09 22 25.5 -0.1
      baz=125,SNR=8.8
BGLC  Bering Glacier    61.59 332  P      P      09 22 26.9 +0.1
      baz=115
BVCY  Beaver Creek      61.59 335  P      P      09 22 27.0 +0.1
      baz=119
TGL   Tana Glacier      61.66 333  IAmb   IAmb   09 22 32.4
      comp=Z,15nm,1.1s
G31M  Satah River       61.71 341  P      P      09 22 27.4 -0.1
      baz=128,SNR=12
CRQE  Cirque            61.77 333  P      P      09 22 28.0 -0.3
      baz=116
RES   Resolute Bay      61.78 358  LR     LR     09 49 29.3
      comp=Z,216nm,21.8s,baz=160,slow=36
DAWY  Dawson            61.85 337  P      P      09 22 28.0 -0.6
      baz=121
F31M  Tsiigehtchic      61.87 342  P      P      09 22 28.3 -0.2
      baz=128
M27K  Edge Creek, AK    61.98 335  P      P      09 22 29.2 -0.5
      baz=118
KAIM  Kayak Island      62.02 332  P      P      09 22 29.6 -0.2
      baz=114
MCARA McCarthy VSAT     62.02 334  IAmb   IAmb   09 22 51.3
      comp=Z,17nm,1.0s
MCARA McCarthy VSAT     62.02 334  P      P      09 22 29.6 -0.2
      baz=116
I29M  Ogilvie Camp,     62.14 339  IAmb   IAmb   09 22 32.1
      comp=Z,7.9nm,1.1s
I29M  Ogilvie Camp,     62.14 339  P      P      09 22 30.1 -0.4
      baz=123,SNR=6.7
EPYK  Eagle Plains      62.16 340  IAmb   IAmb   09 22 33.1
      comp=Z,9.6nm,0.9s
EPYK  Eagle Plains      62.16 340  P      P      09 22 30.3 -0.4
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     baz=125,SNR=7.4
BCAR Beaver Creek A  62.28 336 P     P     09 22 31.6 +0.1
L27K Beaver Creek,   62.30 336 IAmb  IAmb  09 22 50.7
     comp=Z,7.2nm,0.9s
L27K Beaver Creek,   62.30 336 P     P     09 22 31.2 -0.4
     baz=118,SNR=10
INK  Inuvik          62.34 343 LR    LR    09 51 44.0
     comp=Z,263nm,21.9s,baz=114,slow=38
INK  Inuvik          62.34 343 P     P     09 22 31.5 -0.3
     baz=129,SNR=11
G30M tAoh Zraii Nji  62.36 341 IAmb  IAmb  09 22 38.5
     comp=Z,27nm,1.8s
G30M tAoh Zraii Nji  62.36 341 P     P     09 22 31.6 -0.3
     baz=126
M26K Nabesna, AK     62.47 335 P     P     09 22 32.4 -0.4
     baz=117
BMRM Bremner River   62.54 333 IAmb  IAmb  09 22 55.7
     comp=Z,12nm,1.2s
BMRM Bremner River   62.54 333 P     P     09 22 32.9 -0.4
     baz=114
F30M Barrier River   62.59 342 P     P     09 22 33.6 +0.1
F30M Barrier River   62.59 342 P     P     09 22 33.7 +0.2
     baz=126,SNR=26
H29M Whitestone      62.63 340 IAmb  IAmb  09 22 36.7
     comp=Z,8.3nm,0.9s
H29M Whitestone      62.63 340 P     P     09 22 33.8 +0.1
     baz=123,SNR=8.1
Q23K Middleton Isla  62.73 331 P     P     09 22 34.2 -0.2
     baz=112
I28M Miner Creek     62.77 338 P     P     09 22 35.0 +0.3
     baz=121,SNR=7.9
N25K Chitina, Valde  62.80 334 IAmb  IAmb  09 22 39.6
     comp=Z,9.0nm,0.8s
N25K Chitina, Valde  62.80 334 P     P     09 22 35.3 +0.2
     baz=115,SNR=9.7
K27K Chicken         62.85 337 P     P     09 22 35.5 +0.3
     baz=118,SNR=6.3
EYAK Cordova Ski Ar  62.88 332 P     P     09 22 35.0 -0.4
     baz=113
A36M Sachs Harbour   62.89 348 P     P     09 22 34.9 -0.4
     baz=139
L26K Log Cabin Wild  62.89 335 P     P     09 22 35.0 -0.6
     baz=117
G29M Pine Creek      62.90 340 IAmb  IAmb  09 22 38.3
     comp=Z,14nm,0.8s
G29M Pine Creek      62.90 340 P     P     09 22 35.7 +0.1
     baz=124,SNR=12
KLU  Klutina         63.33 333 IAmb  IAmb  09 22 43.3
     comp=Z,8.7nm,0.9s
KLU  Klutina         63.33 333 P     P     09 22 38.4 -0.2
     baz=113
HARP HAARP           63.37 334 P     P     09 22 38.6 -0.2
     baz=114
P23K Montague Islan  63.44 331 P     P     09 22 38.9 -0.2
     baz=111
I27K Kandik River    63.45 338 P     P     09 22 39.1 -0.2
     baz=120,SNR=9.1
SCRK Sand Creek      63.58 336 P     P     09 22 39.6 -0.6
     baz=116
GLI  Glacier Island  63.62 332 P     P     09 22 40.0 -0.4
     baz=112
J26L Joseph Creek    63.65 337 P     P     09 22 40.3 -0.3
     baz=117,SNR=14
M24K Tolsona, Glenn  63.69 334 P     P     09 22 40.6 -0.3
     baz=113
E29M Blow River      63.69 342 P     P     09 22 40.3 -0.4
     baz=124,SNR=6.8
H27K Steamboat Moun  63.73 339 IAmb  IAmb  09 22 42.3
     comp=Z,12nm,0.8s
H27K Steamboat Moun  63.73 339 P     P     09 22 40.8 -0.3
     baz=120,SNR=16
PAX  Paxson          63.74 335 P     P     09 22 40.7 -0.6
     baz=114
RIDG Independent Ri  63.81 336 IAmb  IAmb  09 22 44.5
     comp=Z,9.9nm,0.9s
RIDG Independent Ri  63.81 336 P     P     09 22 41.3 -0.4
     baz=115,SNR=10.0
I26K Coal Creek Min  63.87 338 P     P     09 22 42.0 +0.1
     baz=118,SNR=14
F28M Old Crow        63.89 341 P     P     09 22 42.3 +0.3
     baz=122,SNR=32
G27K Doyon Strip     64.06 339 P     P     09 22 43.1 -0.2
     baz=120,SNR=9.6
SCM  Sheep Creek Mo  64.08 333 IAmb  IAmb  09 22 45.5
     comp=Z,12nm,1.2s
SCM  Sheep Creek Mo  64.08 333 P     P     09 22 43.4 -0.1
     baz=112
PWL  Port Wells      64.18 332 P     P     09 22 44.2 +0.2
     baz=111
K24K Donnelly Dome   64.22 336 IAmb  IAmb  09 22 46.9
     comp=Z,15nm,0.8s
K24K Donnelly Dome   64.22 336 P     P     09 22 43.8 -0.5
     baz=114,SNR=13
M23K Glacier View    64.24 333 P     P     09 22 44.1 -0.4
     baz=112
E28M Babbage River   64.32 342 IAmb  IAmb  09 22 46.8
     comp=Z,16nm,1.1s
E28M Babbage River   64.32 342 P     P     09 22 44.2 -0.7
     baz=123,SNR=11
J25K Salcha River,   64.40 336 P     P     09 22 45.0 -0.5
     baz=115,SNR=14
KNK  Knik Glacier    64.43 333 P     P     09 22 45.2 -0.5
     baz=111
SEW  Seward          64.44 331 P     P     09 22 45.4 -0.3
     baz=109
D28M Stokes Point    64.48 342 P     P     09 22 45.6 -0.2
     baz=124
SML  Sawmill         64.52 333 P     P     09 22 45.8 -0.6
     baz=111
WAT6 Susitna Watana  64.55 334 P     P     09 22 45.8 -0.8
     baz=112,SNR=7.5
DHY  Denali Highway  64.58 334 P     P     09 22 46.1 -0.8
     baz=113
O22K Cooper Landing  64.69 331 P     P     09 22 46.5 -0.8
     baz=109
E27K Coleen River    64.74 341 IAmb  IAmb  09 22 50.9
     comp=Z,8.8nm,0.8s
E27K Coleen River    64.74 341 P     P     09 22 47.1 -0.6
     baz=121,SNR=12
GHO  Glory Hole Cre  64.77 333 IAmb  IAmb  09 22 50.8
     comp=Z,15nm,0.8s
PMR  Palmer          64.80 333 IAmb  IAmb  09 23 07.4
     comp=Z,17nm,1.6s
PMR  Palmer          64.80 333 P     P     09 22 47.5 -0.6
     baz=110
PRP  Porcupine Dome  64.85 337 IAmb  IAmb  09 23 07.8
     comp=Z,16nm,1.4s
PRP  Porcupine Dome  64.85 337 P     P     09 22 47.5 -1.0
     baz=116,SNR=11
G26K Porcupine Rive  64.87 339 P     P     09 22 47.5 -0.9
     baz=118,SNR=6.4
RC01 Rabbit Creek A  64.90 332 IAmb  IAmb  09 22 53.2
     comp=Z,9.7nm,0.7s
RC01 Rabbit Creek A  64.90 332 P     P     09 22 47.9 -0.8
     baz=110
BRSE Bradley Lake S  64.93 330 P     P     09 22 48.8 -0.2
     baz=108
HDA  Harding Lake    64.94 336 IAmb  IAmb  09 22 49.3
     comp=Z,18nm,1.2s
HDA  Harding Lake    64.94 336 P     P     09 22 48.5 -0.4
     baz=114,SNR=8.9
WAT1 Susitna Watana  64.99 334 P     P     09 22 49.8 +0.5
     baz=111
ILAR Eielson Array   65.06 336 P     P     09 22 49.0 -0.7
     comp=Z,4.6nm,0.8s,baz=110,slow=5.0,SNR=47
ILAR                           pP    pP    09 23 07.0 -1.0
     comp=Z,8.9nm,1.0s,baz=120,slow=5.1,SNR=9.8
ILAR                           LR    LR    09 54 09.0
     comp=Z,149nm,21.6s,baz=83,slow=39
     comp=Z,4.6nm,0.8s
D27M Malcolm River   65.10 342 P     P     09 22 50.6 +0.6
     baz=122
H25L Birch Creek     65.28 338 P     P     09 22 51.4 +0.3
     baz=116,SNR=15
KDAK Kodiak Island   65.29 328 LR    LR    09 53 13.0
     comp=Z,115nm,21.6s,baz=107,slow=38
KDAK Kodiak Island   65.29 328 P     P     09 22 50.5 -0.8
     baz=105
M22K Willow          65.30 333 P     P     09 22 51.2  0.0
     baz=109
RND  Reindeer        65.33 335 IAmb  IAmb  09 22 52.6
     comp=Z,18nm,0.8s
F26K Sheenjek River  65.34 340 P     P     09 22 51.3 -0.3
     baz=118,SNR=12
HOM  Homer           65.34 330 P     P     09 22 51.4 -0.3
     baz=107
BMAR Burnt Mountain  65.37 339 P     P     09 22 52.1 +0.3
POKR Poker Plat Res  65.41 337 P     P     09 22 51.9 -0.2
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     baz=114
Q20K Shuyak Island   65.42 329 P     P     09 22 52.0 -0.1
     baz=106
CAPN Captain Cook N  65.45 331 P     P     09 22 52.5 +0.2
     baz=108
COLA College         65.48 336 P     P     09 22 52.3  0.0
COLA College         65.48 336 P     P     09 22 52.1 -0.3
     baz=113
COLA College         65.48 336 P     P     09 22 51.7 -0.7
COLA                           pP    pP    09 23 09.6 -1.2
COLA                           PcP   PcP   09 23 23.4 -0.3
MCK  McKinley        65.48 335 IAmb  IAmb  09 22 55.7
     comp=Z,11nm,1.0s
MCK  McKinley        65.48 335 P     P     09 22 50.9 -1.5
     baz=111,SNR=8.2
SUA  Susitna One     65.48 332 P     P     09 22 52.0 -0.7
     baz=109,SNR=10
OHAK Old Harbor      65.51 327 P     P     09 22 52.0 -0.8
     baz=104
G25K Bearman Lake    65.60 338 P     P     09 22 52.6 -0.5
     baz=116,SNR=11
F25K Christian Rive  65.81 339 IAmb  IAmb  09 23 15.6
     comp=Z,17nm,1.2s
F25K Christian Rive  65.81 339 P     P     09 22 53.9 -0.7
     baz=116,SNR=15
SII  Sitkinak Islan  65.83 326 P     P     09 22 54.7 -0.2
     baz=103
NEA2 Nenana          65.85 336 P     P     09 22 54.5 -0.4
     baz=112,SNR=7.7
H24K Noodor Dome     65.87 337 P     P     09 22 54.2 -0.8
     baz=113,SNR=9.1
O20K Slope Mountain  65.94 330 P     P     09 22 54.2 -1.4
     baz=106
TRF  Thorofare Moun  65.94 334 IAmb  IAmb  09 22 58.7
     comp=Z,10nm,0.6s
TRF  Thorofare Moun  65.94 334 P     P     09 22 55.2 -0.5
     baz=110,SNR=16
SKT  Skwentna        66.00 333 P     P     09 22 55.0 -0.9
     baz=108,SNR=10.0
E25K Arctic Village  66.02 340 IAmb  IAmb  09 22 58.5
     comp=Z,18nm,1.2s
E25K Arctic Village  66.02 340 P     P     09 22 55.6 -0.3
     baz=117,SNR=15
G24K Hadweenzic Riv  66.07 338 IAmb  IAmb  09 23 16.3
     comp=Z,16nm,1.2s
G24K Hadweenzic Riv  66.07 338 P     P     09 22 55.7 -0.5
     baz=114,SNR=13
N20K Mount Spurr     66.07 332 P     P     09 22 56.1 -0.3
     baz=107
SPCR Spurr Chakacha  66.07 332 P     P     09 22 55.9 -0.5
     baz=107
RED  Redoubt Volcan  66.11 331 IAmb  IAmb  09 23 16.8
     comp=Z,10nm,1.0s
P19K Oil Pt          66.12 330 P     P     09 22 55.8 -0.8
     baz=106
C27K Jago River      66.13 342 IAmb  IAmb  09 23 16.7
     comp=Z,11nm,1.0s
C27K Jago River      66.13 342 P     P     09 22 56.6 +0.1
     baz=119,SNR=6.9
Q19K Cape Douglas,   66.13 329 IAmb  IAmb  09 24 04.8
     comp=Z,19nm,1.1s
Q19K Cape Douglas,   66.13 329 P     P     09 22 56.6 -0.2
     baz=105
I23K Minto, Yukon-K  66.17 336 IAmb  IAmb  09 23 17.3
     comp=Z,12nm,1.0s
I23K Minto, Yukon-K  66.17 336 P     P     09 22 56.9  0.0
     baz=112,SNR=17
R18K Karluk          66.20 328 P     P     09 22 57.0 -0.2
     baz=104
KTH  Kantishna Hill  66.25 334 IAmb  IAmb  09 22 59.0
     comp=Z,11nm,1.1s
SUMG Summit          66.37  15 P     P     09 22 58.0 -0.5
CHIR Chirikof Islan  66.45 325 P     P     09 22 58.0 -0.8
     baz=102
BPAW Bear Paw Mtn.   66.46 335 P     P     09 22 58.2 -0.6
     baz=110,SNR=15
H23K Yukon River     66.50 337 P     P     09 22 58.1 -0.9
     baz=112,SNR=5.3
F24K Squaw Lake      66.55 339 P     P     09 22 59.4  0.0
     baz=114,SNR=7.2
PPLA Purkeypile      66.58 333 IAmb  IAmb  09 23 00.9
     comp=Z,17nm,1.3s
PPLA Purkeypile      66.58 333 P     P     09 22 58.5 -1.2
     baz=108
C26K Camden Bay      66.64 342 P     P     09 22 59.1 -0.7
     baz=118
MLY  Manley          66.68 336 P     P     09 22 59.9 -0.2
MLY                            IAmb  IAmb  09 23 18.9
     comp=Z,14nm,1.0s
MLY  Manley          66.68 336 P     P     09 22 59.8 -0.4
     baz=110,SNR=22
M20K Styx River      66.69 332 P     P     09 22 59.6 -0.8
     baz=107
CAST Castle Rocks    66.70 334 P     P     09 22 59.2 -1.1
     baz=108,SNR=11
Q18K Katmai Hardscr  66.75 329 P     P     09 22 59.9 -1.0
     baz=104
O19K Port Alsworth   66.79 330 P     P     09 23 00.9 +0.1
     baz=105
D25K Kavik River     66.82 341 P     P     09 23 01.0  0.0
     baz=116
CHUM Lake Minchumin  66.94 334 P     P     09 23 01.9 +0.1
     baz=108
E24K Your Creek      66.99 339 P     P     09 23 02.1  0.0
     baz=114
G23K Bananza Creek   67.01 338 IAmb  IAmb  09 23 22.2
     comp=Z,11nm,1.1s
G23K Bananza Creek   67.01 338 P     P     09 23 02.5 +0.3
     baz=112,SNR=9.9
N19K Bonanza Creek   67.03 331 P     P     09 23 01.9 -0.7
     baz=105
P18K Big Mountain,   67.03 329 P     P     09 23 02.3 -0.3
     baz=104
EUNU Eureka          67.09   0 P     P     09 23 02.5 -0.1
EUNU                           IAmb  IAmb  09 23 25.2
     comp=Z,9.4nm,0.8s
Q17K Contact Creek   67.11 328 P     P     09 23 02.7 -0.4
     baz=103
O18K Koktuh Hills    67.14 330 P     P     09 23 02.8 -0.4
     baz=104
L20K Farewell, AK    67.20 333 P     P     09 23 02.7 -0.8
     baz=106,SNR=16
I21K Tanana          67.22 336 P     P     09 23 02.7 -0.8
     baz=109
H22K Ishtalitna Cre  67.23 337 P     P     09 23 03.3 -0.3
     baz=110
COLD Coldfoot        67.26 338 IAmb  IAmb  09 23 24.4
     comp=Z,15nm,1.0s
COLD Coldfoot        67.26 338 P     P     09 23 03.9 +0.1
     baz=112,SNR=18
M19K Big River Lodg  67.27 332 P     P     09 23 03.6 -0.4
     baz=106
PPT  Papeete         67.36 245 LR    LR    09 43 49.9
     comp=Z,385nm,20.5s,baz=356,slow=28
PPT2 Papeete2        67.37 245 eP    P     09 23 11.1 +5.7
     comp=Z,58nm,26.8s
PPT2                           eS    S     09 31 53.2 -2.9
     comp=Z,87nm,25.8s
PPT2 Papeete2        67.37 245 eLR   LR    09 43 20.7
     comp=Z,608nm,27.5s
PPT2                           eLR   LR    09 43 22.5
     comp=Z,634nm,29.2s
PPT2                           eLR   LR    09 43 28.8
     comp=Z,769nm,26.0s
E23K Chandalar       67.37 339 IAmb  IAmb  09 23 08.6
     comp=Z,13nm,0.8s
E23K Chandalar       67.37 339 P     P     09 23 04.1 -0.5
     baz=112,SNR=18
K20K Telida          67.53 334 P     P     09 23 04.9 -0.7
     baz=106
D24K Happy Valley    67.54 340 IAmb  IAmb  09 23 26.1
     comp=Z,14nm,1.1s
D24K Happy Valley    67.54 340 P     P     09 23 05.0 -0.5
     baz=114
L19K White Mountain  67.56 332 P     P     09 23 05.1 -0.7
     baz=105
TOLK Toolik Lake Re  67.58 340 IAmb  IAmb  09 23 08.8
     comp=Z,7.8nm,0.6s
TOLK Toolik Lake Re  67.58 340 P     P     09 23 05.7 -0.1
     baz=113,SNR=7.0
Q16K King Salmon     67.59 328 P     P     09 23 05.9 -0.1
     baz=102
P17K Kvichak River   67.59 329 P     P     09 23 05.8 -0.2
     baz=102
G22K Bettles         67.63 338 P     P     09 23 06.2 +0.1
     baz=110,SNR=7.1
N18K Kilae Creek     67.66 331 P     P     09 23 05.4 -1.1
     baz=104
```

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H21K Melozitna Rive  67.70 336 P     P     09 23 06.1 -0.5
     baz=108
C24K Franklin Bluff  67.73 341 P     P     09 23 06.4 -0.2
     baz=114
J20K Nowinta River   67.80 335 P     P     09 23 06.0 -1.2
     baz=107
M18K Stony River     67.83 331 P     P     09 23 06.5 -0.9
     baz=104,SNR=6.2
R16K Pilot Point     67.85 327 P     P     09 23 07.5 -0.1
     baz=101
O17K Koliganek Bris  68.05 330 P     P     09 23 08.8 -0.1
     baz=102,SNR=8.0
D23K Nanushuk River  68.08 340 P     P     09 23 08.9 -0.1
     baz=112,SNR=5.5
F22K John River      68.08 338 P     P     09 23 09.2 +0.2
     baz=110
I20K Naaghedeneel    68.11 335 IAmb  IAmb  09 23 28.9
     comp=Z,29nm,1.1s
I20K Naaghedeneel    68.11 335 P     P     09 23 08.9 -0.3
     baz=106,SNR=7.4
E22K Anaktuvuk Pass  68.17 339 IAmb  IAmb  09 23 28.9
     comp=Z,13nm,0.9s
E22K Anaktuvuk Pass  68.17 339 P     P     09 23 09.3 -0.2
     baz=110,SNR=9.7
G21K Allakaket       68.25 337 IAmb  IAmb  09 23 29.8
     comp=Z,22nm,1.5s
G21K Allakaket       68.25 337 P     P     09 23 09.3 -0.7
     baz=108,SNR=7.6
N17K Nushagak Hills  68.25 330 P     P     09 23 09.9 -0.2
     baz=102
P16K Nushagak River  68.34 329 P     P     09 23 10.1 -0.6
     baz=101
J19K Poorman         68.37 334 P     P     09 23 10.5 -0.3
     baz=105,SNR=6.5
C23K Itkillik River  68.39 341 P     P     09 23 11.0 +0.2
     baz=112,SNR=9.6
L18K Granite Mounta  68.40 332 P     P     09 23 09.9 -1.1
     baz=104
F21K Alatna River    68.46 338 IAmb  IAmb  09 23 31.7
     comp=Z,27nm,1.1s
F21K Alatna River    68.46 338 P     P     09 23 11.4  0.0
     baz=108,SNR=16
H20K Anotleneega Mo  68.48 336 P     P     09 23 10.3 -1.1
     baz=106
O16K Kokwok River B  68.51 329 P     P     09 23 10.8 -0.9
     baz=101
CHNA Chernabura Isl  68.51 324 P     P     09 23 10.7 -1.1
     baz=98
M17K Holitna River   68.56 331 IAmb  IAmb  09 24 42.3
     comp=Z,22nm,1.6s
M17K Holitna River   68.56 331 P     P     09 23 11.8 -0.3
     baz=102
S14K Fog Glacier     68.70 326 P     P     09 23 11.9 -1.2
     baz=99
J18K Innoko River    68.71 333 P     P     09 23 12.8 -0.1
     baz=104
D22K Ayikyak River   68.72 340 P     P     09 23 12.6 -0.3
     baz=110,SNR=6.8
N16K Nishlik Lake    69.01 330 P     P     09 23 14.3 -0.5
     baz=101
E21K Killik River    69.03 339 P     P     09 23 14.4 -0.5
     baz=108
SDPT Sand Point      69.08 324 P     P     09 23 15.3 -0.1
     baz=97
GCSA Galena City Sc  69.09 335 P     P     09 23 14.6 -0.6
     baz=104
H19K Roundabout Mou  69.12 336 IAmb  IAmb  09 23 34.1
     comp=Z,10nm,1.0s
H19K Roundabout Mou  69.12 336 P     P     09 23 14.9 -0.5
     baz=105,SNR=9.6
L17K Donlin          69.12 332 P     P     09 23 15.0 -0.5
     baz=102
M16K Timber Creek    69.20 331 P     P     09 23 15.8 -0.3
     baz=101
K17K Iditarod        69.24 332 P     P     09 23 16.2  0.0
     baz=102
F20K Avaraart Lake   69.25 337 P     P     09 23 15.8 -0.4
     baz=106
O15K Ungalikthiuk R  69.30 329 P     P     09 23 17.0 +0.3
     baz=99
B22K Teshekpuk Lake  69.47 341 IAmb  IAmb  09 23 19.3
     comp=Z,16nm,1.0s
B22K Teshekpuk Lake  69.47 341 P     P     09 23 17.6 +0.1
     baz=110,SNR=8.1
G19K Purcell Mounta  69.53 336 P     P     09 23 18.2 +0.2
     baz=104
C21K Knifeblade Rid  69.53 340 P     P     09 23 18.2 +0.2
     baz=108
TBI  Tubuai          69.57 239 eP    P     09 23 20.8 +1.9
     comp=Z,294nm,25.2s
TBI                            eS    S     09 32 22.2 +0.2
     comp=Z,624nm,29.5s
TBI  Tubuai          69.57 239 eLR   LR    09 44 31.7
     comp=Z,3µm,27.8s
L16K Owhat River     69.58 331 P     P     09 23 18.6 +0.3
     baz=101
N15K Kwethluk River  69.60 330 P     P     09 23 18.6  0.0
     baz=100
B21K Ikpikpuk River  69.62 340 P     P     09 23 18.1 -0.3
     baz=108
J17K VABM Dome       69.73 333 P     P     09 23 19.6 +0.3
     baz=102
E20K Nigu River      69.76 338 P     P     09 23 19.4 +0.1
     baz=106,SNR=15
H18K Honhosa River   69.80 335 P     P     09 23 19.4 -0.3
     baz=103
E19K Redstone River  69.92 338 P     P     09 23 20.1 -0.2
     baz=105
F19K Shaleruckik Mo  69.97 337 P     P     09 23 20.1 -0.6
     baz=104,SNR=6.6
M15K Kasigluk River  69.98 330 P     P     09 23 20.6 -0.1
     baz=99
S12K Black Hills     70.02 325 P     P     09 23 20.7 -0.5
     baz=96
D20K Etivluk River   70.03 339 IAmb  IAmb  09 23 41.1
     comp=Z,26nm,1.1s
D20K Etivluk River   70.03 339 P     P     09 23 21.1 +0.1
     baz=106,SNR=15
O14K Tigyukauivet M  70.05 329 P     P     09 23 21.1 -0.2
     baz=98
G18K Tagagawik       70.09 336 P     P     09 23 21.1 -0.4
     baz=103,SNR=5.5
A22K Sinclair Lake   70.17 341 P     P     09 23 22.1 +0.3
     baz=108
N14K Kuskokwak Cree  70.35 329 P     P     09 23 22.9 -0.1
     baz=98
J16K Anvik River     70.38 333 P     P     09 23 23.2  0.0
     baz=100
H17K Granite Mounta  70.40 335 P     P     09 23 23.2 -0.1
     baz=101
D19K Kuna River      70.51 339 IAmb  IAmb  09 23 43.9
     comp=Z,17nm,1.2s
D19K Kuna River      70.51 339 P     P     09 23 24.0 +0.1
     baz=104
L15K Ungalak Mounta  70.52 331 P     P     09 23 23.6 -0.5
     baz=99
I17K Unalakleet      70.53 333 P     P     09 23 23.8 -0.3
     baz=100
B20K Meade River     70.58 340 P     P     09 23 24.6 +0.3
     baz=106
M14K Bethel          70.61 330 IAmb  IAmb  09 23 27.7
     comp=Z,13nm,0.8s
M14K Bethel          70.61 330 P     P     09 23 25.0 +0.4
     baz=98
K15K Wolf Creek Mou  70.64 332 IAmb  IAmb  09 23 27.2
     comp=Z,8.6nm,0.8s
K15K Wolf Creek Mou  70.64 332 P     P     09 23 25.2 +0.4
     baz=99
F18K Selawik         70.64 336 P     P     09 23 25.0 +0.3
     baz=102
A21K Barrow          70.78 342 P     P     09 23 25.9 +0.4
     baz=107
G17K Kiwalik Mounta  70.82 335 P     P     09 23 25.8  0.0
     baz=101
L14K Kuka Creek      71.04 331 P     P     09 23 26.9 -0.3
     baz=98
C19K Lookout Ridge   71.17 339 IAmb  IAmb  09 23 48.6
     comp=Z,19nm,1.2s
C19K Lookout Ridge   71.17 339 P     P     09 23 28.2 +0.2
     baz=103
E18K Tukpahlearik C  71.18 337 P     P     09 23 27.6 -0.4
     baz=102
F17K Baldwin Pennin  71.24 336 P     P     09 23 28.3  0.0
     baz=101
M13K Dall Lake       71.24 330 P     P     09 23 28.9 +0.4
     baz=97
G16K Koyuk River     71.50 335 P     P     09 23 30.4 +0.4
     baz=99
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E17K	Hotham Inlet	71.58	337	P	P	09 23 30.9	+0.6
	baz=100						
J14K	Nanvaranak Lak	71.63	332	P	P	09 23 30.4	-0.4
	baz=97						
C18K	Utukok River	71.64	338	P	P	09 23 30.3	-0.6
	baz=102						
A19K	Wainwright	71.92	340	P	P	09 23 32.2	-0.2
	baz=102						
B18K	Kokolik River	72.00	339	P	P	09 23 32.0	-0.9
	baz=101						
K13K	Kusilvak Mount	72.04	331	P	P	09 23 32.2	-1.1
	baz=96						
G15K	Niukluk	72.14	334	P	P	09 23 33.2	-0.6
	baz=98						
RDOG	Red Dog Mine	72.16	338	P	P	09 23 33.4	-0.5
	baz=100						
D17K	Noatak River	72.17	337	P	P	09 23 33.5	-0.4
	baz=99						
C17K	DeLong Mountai	72.33	338	P	P	09 23 34.3	-0.6
	baz=100						
F15K	North Star Dit	72.49	335	P	P	09 23 35.5	-0.4
	baz=97						
M11K	Mekoryuk	72.65	329	P	P	09 23 36.2	-0.6
	baz=94						
ANM	Nome	72.66	334	P	P	09 23 36.3	-0.5
	baz=96						
C16K	Lisburne Hills	73.09	338	P	P	09 23 39.0	-0.4
	baz=97						
F14K	Arctic Creek	73.16	335	P	P	09 23 39.9	0.0
	baz=96						
TNA	Tin City	73.82	335	P	P	09 23 42.8	-1.0
	baz=94						
NIKH	Nikolski High	73.85	322	P	P	09 23 43.7	-0.4
	baz=90						
P08K	Saint George I	74.25	325	P	P	09 23 45.5	-0.8
	baz=90						
SPIA	Saint Paul Isl	74.64	326	P	P	09 23 47.7	-0.9
	baz=90						
GAMB	Gambell	75.38	333	P	P	09 23 52.0	-0.7
	baz=90						
EKA	Eskdalemuir Ar	76.88	36	P	P	09 23 58.0	-3.5
	comp=Z,0.7nm,0.5s,baz=269,slow=5.9,SNR=7.1						
EKA				pP	pP	09 24 16.8	-3.4
	comp=Z,7.0nm,1.0s,baz=270,slow=5.0,SNR=8.8						
	comp=Z,0.7nm,0.5s						
RAR	Rarotonga	77.64	245	LR	LR	09 49 30.4	
	comp=Z,189nm,20.4s,baz=84,slow=29						
ESDC	Sonseca Array	77.79	52	P	P	09 24 04.3	-2.7
	comp=Z,0.8nm,0.5s,baz=282,slow=5.0,SNR=7.4						
ESDC				pP	pP	09 24 22.8	-3.0
	comp=Z,2.8nm,0.8s,baz=289,slow=5.7,SNR=10						
	comp=Z,0.8nm,0.5s						
SPITS	Spitsbergen Ar	80.42	12	P	P	09 24 19.2	-1.3
	comp=Z,0.9nm,0.5s,baz=249,slow=0.7,SNR=7.0						
SPITS				LR	LR	10 01 07.1	
	comp=Z,169nm,19.8s,baz=241,slow=37						
	comp=Z,0.9nm,0.5s						
SMAI	San Martin Ant	82.38	172	P	P	09 24 34.0	+3.2
SMAI				IAmb	IAmb	09 24 54.3	
	comp=Z,22nm,1.2s						
NB2	NORSAR Subarra	83.47	29	P	pP	09 24 54.7	-1.2
	comp=Z,4.6nm,1.2s,baz=292,slow=6.5						
NOA	NORSAR Array B	83.47	29	P	P	09 24 36.0	-0.9
NOA	NORSAR Array B	83.47	29	P	P	09 24 36.0	-0.9
	comp=Z,0.4nm,0.6s,baz=282,slow=6.3,SNR=1.6						
NOA				pP	pP	09 24 53.9	-2.0
	comp=Z,3.2nm,1.0s,baz=286,slow=5.0,SNR=6.3						
NOA				LR	LR	09 57 51.6	
	comp=Z,118nm,21.8s,baz=280,slow=33						
	comp=Z,0.4nm,0.6s						
SHEM	Shemya Is, Ala	84.12	323	LR	LR	10 04 33.0	
	comp=Z,21nm,18.2s,baz=100,slow=37						
HFS	Hagfors	84.90	29	LR	LR	09 58 31.0	
	comp=Z,104nm,21.2s,baz=276,slow=33						
ARCES	ARCESS Array B	86.06	19	P	P	09 24 48.3	-1.4
	comp=Z,5.6nm,0.9s,baz=285,slow=4.6,SNR=5.0						
ARCES				LR	LR	10 03 21.4	
	comp=Z,70nm,18.5s,baz=304,slow=36						
	comp=Z,5.6nm,0.9s						
GERES	GERESS Array B	88.29	40	LR	LR	09 59 41.8	
	comp=Z,167nm,21.8s,baz=258,slow=32						
VRAC	Vranov	89.94	39	LR	LR	10 03 54.7	
	comp=Z,146nm,18.4s,baz=272,slow=35						
FINES	FINESS Array B	90.01	26	LR	LR	10 04 47.0	
	comp=Z,77nm,20.6s,baz=272,slow=35						
SEY	Seymchan	90.99	336	P	P	09 25 13.3	+0.1
	comp=Z,2.4nm,0.8s,baz=50,slow=3.9,SNR=4.7						
SEY				LR	LR	10 10 18.8	
	comp=Z,122nm,21.7s,baz=30,slow=38						
	comp=Z,2.4nm,0.8s						
TIXI	Tiksi	91.89	349	LR	LR	10 09 09.2	
	comp=Z,158nm,21.9s,baz=31,slow=37						
VAE	Valguarnera	92.30	51	LR	LR	10 01 09.2	
	comp=Z,349nm,20.9s,baz=308,slow=32						
MA2	Magadan	93.45	334	LR	LR	10 11 53.1	
	comp=Z,88nm,21.4s,baz=38,slow=38						
AKASG	Malin Array Be	96.75	34	LR	LR	10 06 29.2	
	comp=Z,75nm,21.0s,baz=272,slow=34						
YAK	Yakutsk	99.41	343	LR	LR	10 21 49.2	
	comp=Z,33nm,18.4s,baz=17,slow=42						
DZM	Mont Dzumac	108.42	251	*e*LR	LR	10 02 27.7	
	comp=Z,146nm,24.8s						
SYO	Syowa Base	115.20	162	⇑*e*pPdiff	pPdif	09 27 23.2	+2.5
BOSA	Boshof	116.99	116	PKP	PKiKP	09 30 54.5	-0.1
	comp=Z,2.1nm,0.4s,baz=289,slow=1.7,SNR=7.9						
KSRS	Korea Array	119.19	327	PKP	PKiKP	09 30 58.4	-0.1
	comp=Z,1.4nm,0.7s,baz=22,slow=1.9,SNR=5.4						
MKAR	Makanchi Array	119.94	7	PKP	PKPdf	09 30 57.4	-2.3
	comp=Z,0.3nm,0.4s,baz=298,slow=2.8,SNR=5.1						
HHC	Hu-ho-hao-te	123.26	342	*e*P	PKPdf	09 31 03.1	-3.3
WMQ	Urumqi	123.37	3	*e*PKP	PKiKP	09 31 08.4	+1.7
WMQ				LR	LR		
	comp=Z,310nm,23.9s						
GTA	Gaotai	127.28	352	*e*PKP	PKPdf	09 31 14.1	0.0
GTA				LR	LR		
	comp=N,140nm,18.9s						
GTA				LR	LR		
	comp=E,91nm,18.2s						
GTA				LR	LR		
	comp=Z,180nm,18.5s						
NJ2	Nanjing	128.04	330	*e*P	PKiKP	09 31 17.3	+1.1
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
STKA	Stephens Creek	130.36	239	PKP	PKiKP	09 31 20.4	-0.4
	comp=Z,1.3nm,0.8s,baz=108,slow=6.4,SNR=4.5						
WRA	Warramunga Arr	138.28	255	PKhKP	PKPpre	09 31 28.0	
	comp=Z,0.3nm,0.5s,baz=91,slow=3.2,SNR=8.0						
WRA				PKP	PKiKP	09 31 36.2	-1.0
	comp=Z,1.6nm,0.5s,baz=89,slow=2.4,SNR=20						
ASAR	Alice Springs	138.37	249	PKhKP	PKPpre	09 31 27.1	
	comp=Z,0.5nm,0.6s,baz=107,slow=3.5,SNR=7.3						
ASAR				PKP	PKPdf	09 31 35.9	+0.6
	comp=Z,1.0nm,0.5s,baz=104,slow=2.1,SNR=12						
PZH	PanZhiHua	139.47	346	PKP	PKPdf	09 31 37.6	+0.3
CMAR	Chiang Mai Arr	147.87	346	PKPbc	PKPdf	09 31 53.1	+1.1
	comp=Z,2.1nm,0.3s,baz=338,slow=3.6,SNR=12						

MEX 10 09:14:22.0±0.6,16°.70N×100°.85W,h16km±13km,MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATYC	Atoyac	0.65	38	*i* P	Pg	09 14 32.7	-2.1
ATYC				*i* S	Sg	09 14 40.6	-2.9
CAIG	El Cayaco	0.66	58	*e*P	Pg	09 14 32.2	-2.7
CAIG				*i* S	Sg	09 14 40.6	-3.1
PET2	Petatlan	0.93	335	*e*P	Pb	09 14 36.9	-2.8
PET2				*e*S	Sb	09 14 47.2	-4.5
ACP2	Acapulco	0.94	79	*e*P	Pb	09 14 35.2	-4.7
ACP2				*e*S	Sb	09 14 46.9	-5.2
ZIIG	Zihuatanejo	1.08	327	*e*P	Pb	09 14 38.5	-3.8
ZIIG				*e*S	Sb	09 14 51.0	-5.2
DAIG	Los Arroyos	1.19	74	*e*P	Pn	09 14 40.0	-4.0
DAIG				*e*S	Sb	09 14 54.1	-5.3
CRIG	Cruz Grande	1.65	88	*e*P	Pn	09 14 45.1	-5.1
CRIG				*e*S	Sn	09 15 04.4	-6.7
ARIG	Puente Sto Nin	1.65	17	*e*P	Pn	09 14 47.6	-2.8
ARIG				*e*S	Sn	09 15 07.9	-3.3
MEIG	Mezcala	1.70	44	*e*P	Pn	09 14 48.1	-2.9
MEIG				*i* S	Sn	09 15 04.2	-8.3
PLIG	Platanillo	2.12	37	*e*P	Pn	09 14 54.4	-2.5
PLIG				*i* S	Sn	09 15 16.6	-6.4
TEJU	Tejupilco	2.29	17	*e*P	Pn	09 14 58.0	-1.3
TEJU				*i* S	Sn	09 15 27.5	+0.2
TLIG	Tlapa	2.35	68		Pn	09 14 48.2	-12
TLIG	Tlapa	2.35	68	*e*P	Pn	09 14 48.2	-12
TLIG				*e*S	Sn	09 15 25.1	-3.5
YAIG	Yautepec	2.74	38	*e*P	Pn	09 15 02.4	-3.2
AOVM	Tlapan	2.94	29	*e*P	Pn	09 15 05.1	-3.4
AOVM				*i* S	Sn	09 15 41.1	-2.7
TLVM	San Miguel Top	2.98	33	*e*P	Pn	09 15 06.1	-2.8
MOIG	Morelia	2.98	354	*e*P	Pn	09 15 08.9	0.0
MOIG				*e*S	Sn	09 15 41.6	-2.9
XCVM	Xochimilco	3.03	33	*e*P	Pn	09 15 08.1	-1.5
MPVM	San Francisco	3.04	35	*e*P	Pn	09 15 04.8	-4.9

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*IDC **10** 09:20:31.8±0.7,38°.31S×16°.33W,h0km,mb4.4/11, mbtmp4.4/11,MS3.9/11,Error ellipse: s-maj=26.3km s-min=17.7km az=98.0*

*NEIC **10** 09:20:33.6±1.7,38°.4S±0°.1×16°.09W±0°.06,h10km±1km, mb4.9/29,Error ellipse: s-maj=21.8km s-min=8.0km az=173.0*

*GCMT **10** 09:20:36.6±0.3,38°.21S±0°.02×16°.26W±0°.02,h27km±1km, MW5.0/104,Moment Tensor Solution. s13,c13; s104,c136; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.86±.29; $M_{\theta\theta}$2.95±.23; $M_{\phi\phi}$-1.09±.17; $M_{r\theta}$1.59±.30; $M_{\theta\phi}$-3.36±.14; $M_{\phi r}$-1.17±.28; Best double couple: $M_0$4.22400×10^{16} NP1:ϕ_s73.00000°,δ66.00000°, λ-178.00000°. NP2:ϕ_s342.00000°,δ88.00000°, λ-24.00000°. Principal axes: T 5.3810, Plg15.0000°, Azm30.0000°; N -2.3140, Plg66.0000°, Azm158.0000°; P -3.0670, Plg18.0000°, Azm295.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 09:20:33.3±0.6,38°.34S±0°.10×16°.2W±0°.1,h10km,n77, σ0s.90/56,mb4.8/24,MS4.0/11,5C-1D,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	29.28	3	T	T	09 57 07.8	
	baz=182,slow=74,SNR=336						
H10S3	ASCENSION HYDR	29.29	3	T	T	09 57 14.1	
	baz=38,slow=74,SNR=408						
H10N1	ASCENSION HYDR	30.39	3	T	T	09 58 32.4	
	baz=190,slow=78,SNR=27						
H10N3	ASCENSION HYDR	30.40	3	T	T	09 58 32.7	
	baz=190,slow=78,SNR=340						
H10N2	ASCENSION HYDR	30.41	3	T	T	09 58 33.3	
	baz=190,slow=78,SNR=78						
VNA1	Neumayer--Stat	32.65	175	⇑P	P	09 27 05.5	+0.5
	comp=Z,6.5nm,0.8s						
VNA2	Neumayer--Watz	32.98	175	⇑P	P	09 27 08.3	+0.3
	comp=Z,5.8nm,0.7s,baz=351,slow=7.7						
VNA3	Neumayer Olymp	33.15	176	⇑P	P	09 27 09.5	+0.1
	comp=Z,10.0nm,0.9s						
JANB	Januaria	33.93	305	*e*P	P	09 27 16.0	-0.8
SNAA	Sanae	34.10	172	⇑P	P	09 27 17.6	-0.2
	comp=Z,88nm,0.8s						
SNAA	Sanae	34.10	172		P	09 27 17.4	-0.4
SNAA	Sanae	34.10	172	P	P	09 27 16.8	-1.0
	comp=Z,4.3nm,0.9s,baz=288,slow=12,SNR=18						
SNAA				LR	LR	09 37 45.2	
	comp=Z,431nm,18.9s,baz=338,slow=30						
	comp=Z,4.3nm,0.9s						
TSUM	Tsumeb	34.97	67	LR	LR	09 39 12.3	
	comp=Z,287nm,21.2s,baz=145,slow=32						
TROLL	Troll, Antarti	35.06	170	⇑P	P	09 27 26.2	0.0
	comp=Z,816nm,0.8s						
BOSA	Boshof	35.68	87	LR	LR	09 39 09.7	
	comp=Z,97nm,18.2s,baz=198,slow=31						
TRQA	Tornquist	35.68	256	P	P	09 27 32.6	+0.9
TRQA				IAmb	IAmb	09 27 37.3	
	comp=Z,11nm,0.9s						
BDFB	Brasilia	35.95	300	P	P	09 27 34.1	-0.3
BDFB	Brasilia	35.95	300	P	P	09 27 32.7	-1.6
	comp=Z,4.6nm,0.7s,baz=145,slow=6.6,SNR=6.4						
	comp=Z,4.6nm,0.7s						
SDBA	SAO DESIDERIO	36.30	308	*e*P	P	09 27 37.5	+0.2
CPUP	Villa Florida	36.46	277	LR	LR	09 40 21.0	
	comp=Z,60nm,21.9s,baz=192,slow=33						
LBTB	Lobatse	37.67	82	LR	LR	09 41 12.3	
	comp=Z,156nm,18.1s,baz=236,slow=33						
PMSA	Palmer Station	38.34	211	LR	LR	09 40 34.7	
	comp=Z,160nm,19.6s,baz=16,slow=31						
ARAG	Araguaiana, MT	38.55	296	*e*P	P	09 27 56.4	+0.2
BELA	Belgrano 2	40.41	186		P	09 28 11.0	-0.1
SMTB	Santa Maria do	40.70	308	*e*P	P	09 28 14.8	+0.6
SNDB	Serra Nova Dou	40.79	301	*e*P	P	09 28 13.9	-1.1
SALV	Santo Antonio	41.21	292	*e*P	P	09 28 18.8	+0.4
PLCA	Paso Flores	41.41	249	P	P	09 28 20.6	+0.6
	comp=Z,1.2nm,0.7s,baz=137,slow=8.0,SNR=3.0						
	comp=Z,1.2nm,0.7s						
SYO	Syowa Base	42.66	154	⇓*e*sP	sP	09 28 32.0	-0.8
BO02	Sierra Bellavi	43.43	257	P	P	09 28 36.6	+0.1
MT16	CCHEN	43.74	259	P	P	09 28 38.7	-0.2
BO01	Tunca	43.81	258		P	09 28 39.5	+0.1
BO01				IAmb	IAmb	09 28 46.0	
	comp=Z,36nm,1.7s						
MT09	Talagante	43.97	259	P	P	09 28 41.0	+0.1
MT09				IAmb	IAmb	09 28 45.9	
	comp=Z,15nm,0.8s						
VA03	San Esteban	44.02	260	P	P	09 28 42.4	+1.1
VA03				IAmb	IAmb	09 29 42.5	
	comp=Z,35nm,1.6s						
PTLB	Pontes e Lacer	44.04	289		P	09 28 42.7	+1.4
PTLB	Pontes e Lacer	44.04	289	*e*P	P	09 28 42.4	+1.0
BBSD	Serra de San D	44.06	286	*e*P	P	09 28 42.5	+0.9
MT01	Popeta	44.14	258	P	P	09 28 41.7	-0.4
MT01				IAmb	IAmb	09 28 47.3	
	comp=Z,18nm,0.9s						
PRPB	Parauapebas	44.17	308	*e*P	P	09 28 41.3	-1.2
CO01	Juntas del Tor	44.81	264	P	P	09 28 49.1	+1.3
CO01				IAmb	IAmb	09 28 50.7	
	comp=Z,5.8nm,0.6s						
PDRB	Porto dos Gac	44.82	295	*e*P	P	09 28 47.6	-0.1
LSZ	Lusaka	45.26	72	LR	LR	09 45 07.2	
	comp=Z,197nm,20.1s,baz=173,slow=32						
LCO	Las Campanas	45.72	265	P	P	09 28 55.0	0.0
LCO				IAmb	IAmb	09 29 10.1	
	comp=Z,22nm,1.5s						
VILB	Vilhena	46.43	291		P	09 29 00.5	+0.1
VILB				IAmb	IAmb	09 29 04.3	
	comp=Z,18nm,1.2s						
VILB	Vilhena	46.43	291	*e*P	P	09 29 00.7	+0.3
GO02	Mina Guanaco	46.65	270	P	P	09 29 03.5	+1.1
NPGB	Novo Progresso	47.10	301	*e*P	P	09 29 04.4	-1.3
PB08	IPOC Station P	48.94	276	P	P	09 29 20.9	+0.5
PB08				IAmb	IAmb	09 29 28.2	
	comp=Z,19nm,1.2s						
GO01	Chusmiza	49.24	277	P	P	09 29 21.6	-1.1
H04S2	CROZET ISLANDS	49.42	123	T	T	10 23 05.2	
	baz=256,slow=76,SNR=13						
H04S3	CROZET ISLANDS	49.43	123	T	T	10 23 06.6	
	baz=256,slow=76,SNR=14						
H04S1	CROZET ISLANDS	49.44	123	T	T	10 23 06.0	
	baz=256,slow=76,SNR=9.9						
LPAZ	La Paz	50.35	281		P	09 29 29.9	-1.5
LPAZ				IAmb	IAmb	09 29 34.3	
	comp=Z,28nm,2.0s						
LPAZ	La Paz	50.35	281	P	P	09 29 30.3	-1.1
	comp=Z,2.5nm,1.1s,baz=190,slow=4.3,SNR=6.1						
	comp=Z,2.5nm,1.1s						
LPAZ	La Paz	50.35	281	*e*P	P	09 29 29.7	-1.7
MAW	Mawson	51.13	151	LR	LR	09 47 57.6	
	comp=Z,90nm,19.3s,baz=274,slow=32						
QSPA	South Pole Qui	51.92	180	P	P	09 29 42.6	+0.6
QSPA				IAmb	IAmb	09 29 43.6	
	comp=Z,18nm,0.9s						
QSPA	South Pole Qui	51.92	180	P	P	09 29 42.8	+0.8
	comp=Z,16nm,0.9s,baz=199,slow=2.6,SNR=38						
QSPA				LR	LR	09 48 21.3	
	comp=Z,140nm,21.7s,baz=192,slow=32						
	comp=Z,16nm,0.9s						
TORD	Torodi Ar. Bea	53.89	22		P	09 29 56.2	-0.7
TORD				IAmb	IAmb	09 30 56.3	
	comp=Z,14nm,0.8s						
TORD	Torodi Ar. Bea	53.89	22	P	P	09 29 55.5	-1.3
	comp=Z,3.1nm,0.6s,baz=194,slow=5.6,SNR=4.3						
	comp=Z,3.1nm,0.6s						
VNDA	Vanda	64.41	180	P	P	09 31 06.3	-2.8
VNDA				IAmb	IAmb	09 31 18.3	
	comp=Z,15nm,1.4s						
VNDA	Vanda	64.41	180	P	P	09 31 09.4	+0.3
	comp=Z,1.6nm,1.0s,baz=204,slow=6.9,SNR=3.6						
	comp=Z,1.6nm,1.0s						
COHC	Cochancay	67.50	285	P	P	09 31 31.2	+1.4
RUSC	La Rusia	68.61	297	P	P	09 31 37.9	+0.5
RUSC				IAmb	IAmb	09 31 45.1	
	comp=Z,17nm,1.3s						
KEST	Kesra	77.41	21		P	09 32 29.6	+1.2
KEST	Kesra	77.41	21	P	P	09 32 29.1	+0.6
	comp=Z,8.9nm,0.8s,baz=217,slow=2.1,SNR=11						
	comp=Z,8.9nm,0.8s						
ESDC	Sonseca Array	78.44	10	P	P	09 32 34.3	+0.2
	comp=Z,2.6nm,1.1s,baz=186,slow=5.3,SNR=9.1						
	comp=Z,2.6nm,1.1s						
MMAI	Mount Meron Ar	85.69	41	LR	LR	10 09 03.8	
	comp=Z,108nm,20.0s,baz=270,slow=34						
BRTR	Keskin Array B	90.13	36		P	09 33 33.7	+0.1
BRTR	Keskin Array B	90.13	36	P	P	09 33 34.5	+1.0
	comp=Z,2.0nm,0.8s,baz=181,slow=7.4,SNR=12						
BRTR				LR	LR	10 13 42.5	
	comp=Z,57nm,19.2s,baz=282,slow=35						
	comp=Z,2.0nm,0.8s						
MLR	Muntele Rosu	91.66	28		P	09 33 40.9	+0.4
MLR	Muntele Rosu	91.66	28	P	P	09 33 40.7	+0.2
	comp=Z,5.4nm,0.8s,baz=210,slow=7.7,SNR=6.1						
	comp=Z,5.4nm,0.8s						
H01W2	Cape Leeuwin H	93.83	141	T	T	11 19 07.9	
	baz=218,slow=75,SNR=59						
H01W3	Cape Leeuwin H	93.84	141	T	T	11 19 10.9	
	baz=218,slow=75,SNR=42						
H01W1	Cape Leeuwin H	93.84	141	T	T	11 19 08.5	
	baz=218,slow=75,SNR=39						
YKA	Yellowknife Ar	126.89	325	PKP	PKPdf	09 39 36.1	-0.2
	comp=Z,0.6nm,0.9s,baz=101,slow=2.1,SNR=5.7						
ILAR	Eielson Array	141.05	329	PKhKP	PKPpre	09 39 58.9	
	comp=Z,0.5nm,0.8s,baz=96,slow=0.6,SNR=5.8						

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*ASRS **10** 09:25:11.0±0.7,54°.21N×87°.11E,h0km,M2.6,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 10 09:25:10.6±3.2,54°.32N×87°.35E,h0km,mbtmp2.8/2, ML2.6/2,2C-1D,Error ellipse: s-maj=27.8km s-min=19.7km az=44.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.54	257	I	I	09 34 00.0	
	baz=77,slow=326,SNR=11						
ZAA0	Zalesovo Array	1.54	257	⇑Pg	Pn	09 25 37.3	-1.9
	0.3nm,0.6s,baz=82,slow=18						
ZAA0				⇑Lg	Lg	09 26 01.9	
	1.4nm,0.7s						
ZALV	Zalesovo Beam	1.54	257	Pg	Pn	09 25 37.6	-1.6
	1.3nm,0.3s,baz=76,slow=17,SNR=9.4						
ZALV				Lg	Lg	09 25 59.0	
	1.8nm,0.3s,baz=78,slow=21,SNR=6.4						
KURBB	Kurchatov Arra	6.54	239	Pn	Pn	09 26 48.4	+0.5
	0.1nm,0.3s,baz=56,slow=14,SNR=5.6						
KURBB				Lg	Lg	09 28 40.1	
	0.1nm,0.3s,baz=50,slow=23,SNR=4.7						
	0.6nm,0.5s						
KURBB	Kurchatov Arra	6.54	239	⇓Pn	Pn	09 26 44.5	-3.4
	4.0nm,1.1s						
MKAR	Makanchi Array	8.19	205	Pn	Pn	09 27 11.9	+1.3
	0.1nm,0.3s,baz=28,slow=15,SNR=4.9						
MKAR				Lg	Lg	09 29 32.8	
	0.1nm,0.3s,baz=28,slow=31,SNR=2.6						
	0.2nm,0.3s						

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*ASRS **10** 09:34:56.0±0.9,54°.14N×87°.18E,h0km,M2.6,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 10 09:34:58.0±3.4,54°.21N×87°.45E,h0km,mbtmp3.0/2, ML2.6/2,Error ellipse: s-maj=27.8km s-min=19.3km az=49.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.57	261	I	I	09 44 07.6	
	baz=80,slow=322,SNR=12						
ZALV	Zalesovo Beam	1.57	261	Pg	Pn	09 35 25.0	-2.1
	2.6nm,0.3s,baz=80,slow=14,SNR=17						
ZALV				Lg	Lg	09 35 47.9	
	2.1nm,0.3s,baz=81,slow=25,SNR=8.0						
KURBB	Kurchatov Arra	6.53	240	Pn	Pn	09 36 36.5	+1.3
	0.1nm,0.3s,baz=54,slow=13,SNR=2.3						
KURBB				Lg	Lg	09 38 26.0	
	0.1nm,0.3s,baz=57,slow=32,SNR=6.4						
	0.8nm,0.2s						
MKAR	Makanchi Array	8.12	206	Pn	Pn	09 36 58.1	+1.0
	0.1nm,0.3s,baz=27,slow=15,SNR=2.0						
MKAR				Lg	Lg	09 39 16.7	
	0.1nm,0.3s,baz=26,slow=30,SNR=4.0						
	0.1nm,0.3s						

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*NEIC **10** 09:35:27.8±0.9,20°.6S±0°.1×178°.6W±0°.2,h616km±8km, mb4.1/19,Error ellipse: s-maj=26.3km s-min=12.3km az=130.0*

*IDC **10** 09:35:27.0±1.9,20°.60S×178°.66W,h606km±20km,mb3.3/9, mbtmp4.2/11,Error ellipse: s-maj=23.1km s-min=16.8km az=117.0*

ISC 10 09:35:26.6±0.7,20°.6S±0°.2×178°.7W±0°.1,h600km,n42, σ1s.20/44,mb4.1/20,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.23	312	P	P	09 36 55.4	+1.5
MSVF	Nonsavu	4.23	312	P	P	09 36 54.9	+1.0
	67nm,0.7s,baz=143,slow=9.5,SNR=32						
AFI	Afiamalu	9.34	46	P	P	09 37 39.6	+0.5
PINNC	Pines Island,	13.09	259	P	P	09 38 17.8	+1.5
DZM	Mont Dzumac	13.97	261	P	P	09 38 25.0	-0.3
	7.3nm,0.8s,baz=83,slow=16,SNR=2.8						
CTAO	Charters Tower	32.88	265	P	P	09 41 12.8	-0.2
CTAO				IAmb	IAmb	09 41 52.3	
	comp=Z,18nm,1.4s						
STKA	Stephens Creek	37.20	244	P	P	09 41 49.0	+0.4
STKA	Stephens Creek	37.20	244	P	P	09 41 48.5	-0.1
	comp=Z,1.8nm,0.5s,baz=79,slow=7.1,SNR=8.6						
	comp=Z,1.8nm,0.5s						
BBOO	Buckleboo	41.96	244	P	P	09 42 26.5	-0.1
WR8	Warramunga Arr	43.84	262	P	P	09 42 40.8	-0.5
WR8				IAmb	IAmb	09 42 42.3	
	comp=Z,9.7nm,1.3s						
AS31	Alice Springs	43.91	257	P	P	09 42 41.9	0.0
ASAR	Alice Springs	43.91	257	P	P	09 42 41.7	-0.2
ASAR	Alice Springs	43.91	257	P	P	09 42 41.9	0.0
	comp=Z,8.7nm,0.9s,baz=98,slow=7.6,SNR=101						
ASAR				PcP	PcP	09 44 14.1	-0.3
	comp=Z,0.8nm,0.7s,baz=121,slow=3.6,SNR=5.7						
	comp=Z,8.7nm,0.9s						
WB0	Warramunga Arr	43.97	263	P	P	09 42 42.2	-0.1
WB0				IAmb	IAmb	09 42 43.1	
	comp=Z,18nm,1.4s						
WRAB	Tennant Creek	43.98	262	P	P	09 42 42.2	-0.2
WRAB				IAmb	IAmb	09 42 42.4	
	comp=Z,5.2nm,0.8s						
WRA	Warramunga Arr	43.99	262	P	P	09 42 42.1	-0.5
WRA	Warramunga Arr	43.99	262	P	P	09 42 41.8	-0.7
	comp=Z,2.5nm,0.5s,baz=97,slow=7.2,SNR=85						
	comp=Z,2.5nm,0.5s						
KNRA	Kununurra	50.05	266	P	P	09 43 27.4	-0.5
KNRA				IAmb	IAmb	09 43 28.5	
	comp=Z,6.8nm,0.8s						
FITZ	Fitzroy Crossi	52.41	263	P	P	09 43 45.2	+0.3
QSPA	South Pole Qui	69.47	180	P	P	09 45 36.1	+0.4
QSPA	South Pole Qui	69.47	180	P	P	09 45 35.6	-0.1
	comp=Z,0.7nm,0.4s,baz=204,slow=3.0,SNR=25						
	comp=Z,0.7nm,0.4s						
MJAR	Matsushiro Arr	69.93	324	P	P	09 45 38.6	-0.2
	comp=Z,2.1nm,0.7s,baz=150,slow=6.3,SNR=4.4						
	comp=Z,2.1nm,0.7s						
ADK	Adak	72.19	1	P	P	09 45 50.8	-0.8
PETK	Petropavlovsk-	76.22	346	P	P	09 46 13.8	-0.4
	comp=Z,2.0nm,0.6s,baz=135,slow=5.9,SNR=6.4						
	comp=Z,2.0nm,0.6s						
O18K	Koktuh Hills	82.42	12	P	P	09 46 46.4	-0.2
O18K				IAmb	IAmb	09 46 47.4	
	comp=Z,5.2nm,0.8s						
ILSW	Iliamna Southw	82.95	13	P	P	09 46 49.4	-0.1
ILSW				IAmb	IAmb	09 46 49.8	
	comp=Z,4.2nm,0.7s						
TRF	Thorofare Moun	86.67	12	P	P	09 47 06.7	-0.7
TRF				IAmb	IAmb	09 47 07.6	
	comp=Z,2.9nm,0.8s						
RND	Reindeer	86.93	13	P	P	09 47 08.5	0.0
RND				IAmb	IAmb	09 47 09.2	
	comp=Z,3.2nm,0.8s						

TXAR	Lajitas Array	87.62	58	P	P	09 47 14.1	+1.5
	comp=Z,0.4nm,0.8s,baz=210,slow=7.2,SNR=4.0						
	comp=Z,0.4nm,0.8s						
CCB	Clear Creek Bu	88.25	13	P	P	09 47 13.9	-0.6
CCB				IAmb	IAmb	09 47 14.7	
	comp=Z,2.2nm,0.7s						
ILAR	Eielson Array	88.55	13	P	P	09 47 14.8	-1.1
	comp=Z,0.6nm,0.7s,baz=224,slow=5.9,SNR=8.1						
	comp=Z,0.6nm,0.7s						
J26L	Joseph Creek	89.05	14	P	P	09 47 19.0	+0.5
J26L				IAmb	IAmb	09 47 20.3	
	comp=Z,2.0nm,0.8s						
CMAR	Chiang Mai Arr	89.58	290	P	P	09 47 23.4	+1.5
	comp=Z,0.6nm,0.3s,baz=144,slow=2.4,SNR=6.1						
	comp=Z,0.6nm,0.3s						
DKNS	Dickens	91.54	55	P	P	09 47 32.5	+1.9
AKASG	Malin Array Be	142.81	331	PKP	PKPdf	09 53 49.3	-3.2
	comp=Z,3.3nm,0.5s,baz=43,slow=4.1,SNR=27						
AKBB	Malin Array Si	142.81	331		PKPdf	09 53 48.5	-4.0
KIEV	Kiev	142.82	331		PKPdf	09 53 48.8	-3.7
EKA	Eskdalemuir Ar	145.15	5	PKPbc	PKPdf	09 53 56.4	-0.1
	comp=Z,0.6nm,0.6s,baz=306,slow=2.0,SNR=4.2						
BRTR	Keskin Array B	146.46	312	PKPbc	PKPbc	09 54 01.6	-0.3
	comp=Z,1.1nm,0.7s,baz=126,slow=3.1,SNR=6.3						
MMAI	Mount Meron Ar	147.34	299	PKPbc	PKPbc	09 54 04.5	+0.2
	comp=Z,0.4nm,0.3s,baz=230,slow=2.1,SNR=3.7						
CLL	Collm	148.02	346	*i* PKPbc	PKPbc	09 54 05.3	-0.1
	comp=Z,4.0nm,0.9s						
CLL				*i* PKPab	PKPab	09 54 10.4	0.0
	comp=Z,3.0nm,0.7s						
GERES	GERESS Array B	150.13	344	PKPbc	PKPbc	09 54 10.2	-0.5
	comp=Z,0.7nm,0.8s,baz=268,slow=2.9,SNR=4.4						

*IDC **10** 09:38:02.3±0.5, 13°.45N×44°.81W, h0^{km}, mb4.2/24, mbtmp4.2/25, ML4.1/1, MS4.2/58, Error ellipse: s-maj=15.5km s-min=12.5km az=127.0*

*NEIC **10** 09:38:05.5±1.9, 13°.4N±0°.1×44°.8W±0°.1, h10^{km}±1^{km}, mb4.9/236, Error ellipse: s-maj=18.6km s-min=15.8km az=138.0*

*GCMT **10** 09:38:06.5±0.2, 13°.50N±0°.02×44°.83W±0°.01, h12^{km}, MW5.0/119, Moment Tensor Solution. s44,c51; s119,c202; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.64±.10; M$_{\theta\theta}$0.01±.09; M$_{\phi\phi}$4.63±.08; M$_{r\theta}$-0.80±.40; M$_{\theta\phi}$0.42±.09; M$_{\phi r}$-0.38±.27; Best double couple: M$_0$4.73600×10^{16} NP1:ϕ_s176.00000°, δ43.00000°, λ-103.00000°. NP2:ϕ_s14.00000°, δ48.00000°, λ-78.00000°. Principal axes: T 4.6900, Plg3.0000°, Azm96.0000°; N 0.0950, Plg9.0000°, Azm186.0000°; P -4.7830, Plg81.0000°, Azm349.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*INMG **10** 09:38:06.0±1.1, 13°.37N×44°.78W, h10^{km}, M4.6, Ms4.2, #DIST_RANGE: DISTANT*

ISC 10 09:38:05.5±0.3**, 13°.50N**±0°.06×**44°.80W**±0°.06**, h15**^{km}**, n558, σ0^{s}.75**/446**, mb4.8**/119**, MS4.3**/58**, 3C-4D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDP	Montagnes des	11.37	224	Pn	Pn	09 40 45.0	-2.6
	1.3nm,0.3s,baz=34,slow=15,SNR=21						
MDP				Sn	Sn	09 42 41.6	-13
	0.6nm,0.3s,baz=80,slow=15,SNR=1.2						
MDP				LR	LR	09 44 25.7	
	comp=Z,1µm,20.3s,baz=35,slow=34						
	5.3nm,0.4s						
H05S1	Guadeloupe/Mar	15.59	275	T	T	09 57 31.7	
	SNR=68						
MPOM	Morne Pois Mar	15.61	275	Pn	Pn	09 41 42.6	-2.5
MPOM				IAmb	IAmb	09 41 52.3	
	comp=Z,87nm,1.1s						
BIM	Bigot	15.82	276	Pn	Pn	09 41 46.3	-1.6
H05N1	Guadeloupe/Mar	15.96	282	T	T	09 58 01.9	
	SNR=11						
MAL2	Monte Alegre,	18.00	212		Pn	09 42 15.2	-0.2
BOAV	Boa Vista	19.06	236		P	09 42 26.3	-1.2
BOAV				IAmb	IAmb	09 42 40.0	
	comp=Z,83nm,1.3s						
BOAV	Boa Vista	19.06	236	*e*P	Pn	09 42 28.4	+0.1
NBPB	Pedra_Branca-C	19.61	164	*e*P	Pn	09 42 37.9	+2.9
PCRV	Puerto La Cruz	19.69	262	LR	LR	09 50 08.6	
	comp=Z,299nm,20.8s,slow=37						
PRPB	Parauapebas	20.16	195	*e*P	P	09 42 39.5	0.0
HUMP	Col San Antoni	20.77	286	P	P	09 42 46.9	+0.9
HUMP				IAmb	IAmb	09 42 56.5	
	comp=Z,64nm,1.2s						
ITTB	Itaituba	20.80	212	*e*P	P	09 42 46.9	+0.4
PDPR	Patillas Dam,	20.91	285	P	P	09 42 47.9	+0.3
PDPR				IAmb	IAmb	09 42 51.0	
	comp=Z,64nm,1.4s						
IGPR	InterUniversit	20.98	285	P	P	09 42 49.0	+0.6
IGPR				IAmb	IAmb	09 42 58.6	
	comp=Z,51nm,1.1s						
SJG	San Juan	21.04	285	P	P	09 42 47.6	-1.4
SJG	San Juan	21.04	285	P	P	09 42 47.8	-1.2
	comp=Z,5.4nm,0.2s,baz=87,slow=8.1,SNR=6.9						
SJG				LR	LR	09 49 37.3	
	comp=Z,930nm,21.4s,baz=88,slow=33						
	comp=Z,5.4nm,0.2s						
CELP	Cerrillos	21.44	285	P	P	09 42 55.1	+1.8
OBIP	Obispado Ponce	21.46	285	P	P	09 42 54.3	+0.7
OBIP				IAmb	IAmb	09 43 03.5	
	comp=Z,100nm,1.5s						
UUPR	Utuado, UPR, P	21.60	286	P	P	09 42 54.4	-0.6
UUPR				IAmb	IAmb	09 43 02.3	
	comp=Z,56nm,1.2s						
AOPR	Arecibo Observ	21.65	286	P	P	09 42 55.1	-0.5
AOPR				IAmb	IAmb	09 43 05.9	
	comp=Z,70nm,1.2s						
SMTB	Santa Maria do	22.38	187	*e*P	P	09 43 05.4	+1.9
MACA	Manacapuru-AM	22.85	225		P	09 43 08.6	+0.1
MACA	Manacapuru-AM	22.85	225	*e*P	P	09 43 08.9	+0.4
NPGB	Novo Progresso	22.94	208	*e*P	P	09 43 09.8	+0.4
BAUV	El Baul	23.23	261		P	09 43 11.8	-0.6
DR12	Loma Pena Alta	24.18	286	P	P	09 43 24.6	+3.0
SDBA	SAO DESIDERIO	25.74	180	*e*P	P	09 43 35.3	-0.4
SDV	Santo Domingo	25.74	262	P	P	09 43 36.9	+0.9
SDV				IAmb	IAmb	09 43 44.5	
	comp=Z,26nm,1.1s						
SDV	Santo Domingo	25.74	262	*e*P	P	09 43 36.6	+0.6
SDDR	Presa de Saban	25.99	286	P	P	09 43 39.4	+1.4
SDDR				IAmb	IAmb	09 43 46.3	
	comp=Z,28nm,1.1s						
SNDB	Serra Nova Dou	26.11	195	*e*P	P	09 43 40.8	+1.8
BBTS	Babate	27.44	84	LR	LR	09 51 42.9	
	comp=Z,1µm,21.6s,baz=150,slow=30						
PDRB	Porto dos Gac	27.61	206	*e*P	P	09 43 53.6	+1.0
JANB	Januaria	28.37	179	*e*P	P	09 44 01.7	+2.3
RUSC	La Rusia	28.86	258		P	09 44 05.1	+0.8
BDFB	Brasilia	29.12	186	P	P	09 44 05.8	-0.3
BDFB				IAmb	IAmb	09 44 13.0	
	comp=Z,31nm,1.5s						
BDFB	Brasilia	29.12	186	P	P	09 44 04.0	-2.1
	comp=Z,6.2nm,0.8s,baz=355,slow=8.7,SNR=7.3						
BDFB				LR	LR	09 55 24.1	
	comp=Z,397nm,18.1s,baz=336,slow=36						
	comp=Z,6.2nm,0.8s						
ROSC	El Rosal	30.35	256	LR	LR	09 57 47.8	
	comp=Z,669nm,18.4s,baz=70,slow=39						
TBTG	Tabatinga, AM	30.49	237	*e*P	P	09 44 18.0	-0.2
SALV	Santo Antonio	31.13	201	*e*P	P	09 44 25.5	+1.7
PMOZ	Porto Moniz, M	31.69	48	*i* x	x	09 44 12.0	
PMOZ				*e*SS	SS	09 51 27.7	-26
PMOZ				*e*LR	LR	09 52 22.5	
PMOZ				*i* AMs_20		09 53 45.0	
	comp=Z,270nm,22.0s						
PMAR	Madeira	31.84	48	*i* x	x	09 44 20.6	
PMAR				*e*SS	SS	09 51 16.6	-41
PTLB	Pontes e Lacer	32.06	207	P	P	09 44 31.8	-0.2
PTLB	Pontes e Lacer	32.06	207	*e*P	P	09 44 32.5	+0.6
PMPST	Porto Santo, M	32.45	48	*e*SS	SS	09 51 36.9	-32
SIV	San Ignacio	33.42	209	LR	LR	09 57 42.9	
	comp=Z,273nm,21.2s,baz=32,slow=35						
BBSD	Serra de San D	34.25	208	*e*P	P	09 44 50.6	-0.5
CZSB	Cruzeiro do Su	34.82	234	*e*P	P	09 44 54.6	-1.6
AQDB	Aquidauana	35.42	198		P	09 45 00.6	-0.6
AQDB				IAmb	IAmb	09 45 13.3	
	comp=Z,20nm,1.4s						
AQDB	Aquidauana	35.42	198	*e*P	P	09 45 01.4	+0.3
OTAV	Otavalo	35.83	251	P	P	09 45 05.8	+0.3
OTAV				IAmb	IAmb	09 45 13.6	
	comp=Z,31nm,1.5s						
OTAV	Otavalo	35.83	251	*e*P	P	09 45 04.7	-0.7
M65A	Busby, Falmout	35.88	326	P	P	09 45 06.3	+1.4
	baz=134						
H10N3	ASCENSION HYDR	36.80	123	T	T	10 24 07.7	
	baz=305,slow=75,SNR=283						
H10N2	ASCENSION HYDR	36.81	123	T	T	10 24 12.3	
	baz=305,slow=75,SNR=338						
H10N1	ASCENSION HYDR	36.83	123	T	T	10 24 13.4	
	baz=305,slow=75,SNR=323						
MURT	Porto Murtinho	37.13	200	*e*P	P	09 45 17.2	+1.5
LDASE	Londrina, Braz	37.18	190	*e*P	P	09 45 17.2	+1.0
H10S3	ASCENSION HYDR	37.32	125	T	T	10 24 51.7	
	baz=302,slow=74,SNR=211						
H10S2	ASCENSION HYDR	37.34	125	T	T	10 24 53.0	
	baz=278,slow=74,SNR=236						
LPAZ	La Paz	37.52	219		P	09 45 19.8	0.0
LPAZ	La Paz	37.52	219	P	P	09 45 18.7	-1.1
	comp=Z,4.0nm,0.9s,baz=9.6,slow=4.4,SNR=12						
LPAZ				LR	LR	10 00 36.6	
	comp=Z,681nm,20.3s,baz=32,slow=36						
	comp=Z,4.0nm,0.9s						
ATAH	Atahualpa	39.15	240	LR	LR	10 02 02.7	
	comp=Z,1µm,19.9s,baz=55,slow=37						
PFVI	Vila Bisbo	39.78	47	*i* x	x	09 47 13.5	
PFVI				*e*SS	SS	09 54 41.4	+3.6
DBIC	Dimbokro	39.87	96	P	P	09 45 38.1	-0.8
	comp=Z,14nm,1.1s,baz=284,slow=6.8,SNR=4.0						
DBIC				LR	LR	09 58 32.9	
	comp=Z,607nm,21.7s,baz=295,slow=31						
	comp=Z,14nm,1.1s						
MORF	Marmelete	39.98	47	*i* x	x	09 47 26.3	
PTEO	Sao Teotonio	40.04	47	*i* x	x	09 47 17.9	
PTEO				*e*SS	SS	09 54 54.7	+12
PARRA	Arraiolos	40.41	45	*i* x	x	09 46 28.1	
PBDV	Barranco-do-Ve	40.47	48	*i* x	x	09 47 33.5	
PBDV				*e*SS	SS	09 55 02.8	+11
BG3	Lake Jocassee	40.48	309		P	09 45 44.8	+1.0
PCVE	Castro Verde	40.56	47	*i* x	x	09 47 09.6	
NNA	Nana	40.63	233	LR	LR	10 02 09.0	
	comp=Z,275nm,21.6s,baz=47,slow=36						
PVAQ	Vaqueiros	40.69	47	*i* x	x	09 47 08.6	
PVAQ				*e*LR	LR	09 56 50.8	
PVAQ				*i* AMs_20		10 01 06.3	
	comp=Z,275nm,20.0s						
MOE	Montemor	40.75	46	*i* x	x	09 47 14.1	
152A	Waverly Hall	41.08	305	IAmb	IAmb	09 45 56.9	
	comp=Z,29nm,1.5s						
PMTG	Montargil	41.09	45	*i* x	x	09 47 09.5	
TGUH	Tegucigalpa,Un	41.21	276		P	09 45 50.8	+0.5
TGUH				IAmb	IAmb	09 45 55.3	
	comp=Z,35nm,1.4s						
MDT	Midelt	41.34	55	LR	LR	09 59 31.7	
	comp=Z,419nm,21.9s,baz=262,slow=31						
TKL	Tuckaleechee C	41.37	309	LR	LR	09 59 56.9	
	comp=Z,416nm,20.6s,baz=116,slow=32						
PCAS	Casmilo, Conde	41.38	43	*i* x	x	09 47 06.0	
PCAS				*e*SS	SS	09 55 38.4	+29
PSARD	Sardoal	41.39	44	*i* x	x	09 47 14.3	
CPUP	Villa Florida	41.42	197	P	P	09 45 50.7	-0.9
	comp=Z,0.5nm,0.5s,baz=284,slow=4.8,SNR=4.1						
CPUP				LR	LR	10 02 27.2	
	comp=Z,49nm,21.7s,baz=216,slow=35						
	comp=Z,0.5nm,0.5s						
PESTR	Estremoz	41.44	46	*i* x	x	09 47 26.6	
COI	Coimbra	41.51	43	*i* x	x	09 47 07.3	
PBAR	Barrancos	41.51	47	*i* x	x	09 47 00.3	
PBAR				*e*SS	SS	09 55 25.3	+13
TZTN	Tazewell	41.55	311	IAmb	IAmb	09 46 05.8	
	comp=Z,43nm,1.7s						
PMRV	Marv??o	41.83	45	*i* x	x	09 47 12.6	
PMRV				*e*LR	LR	09 57 26.6	
PMRV				*i* AMs_20		10 00 19.1	
	comp=Z,287nm,18.0s						
MTE	Manteigas	42.19	44	*i* x	x	09 47 20.2	
MTE				*e*SS	SS	09 55 42.6	+17
MTE				*e*LR	LR	09 57 20.8	
MTE				*i* AMs_20		10 01 26.4	
	comp=Z,429nm,20.0s						
W50A	Signal Mountai	42.37	308		P	09 45 60.0	+0.5
W50A				IAmb	IAmb	09 46 07.4	
	comp=Z,48nm,1.7s						
PGAV	Gavieira, Arco	42.49	41	*i* x	x	09 47 04.5	
PGAV				*e*SS	SS	09 55 48.8	+17
PGAV				*e*LR	LR	09 57 47.4	
PGAV				*i* AMs_20		09 59 41.7	
	comp=Z,362nm,20.0s						
POLO	Lamas de Olo	42.50	42	*i* x	x	09 47 17.9	
T50A	Nancy	42.68	311	P	P	09 46 03.8	+1.9
SADO	Sadowa	42.70	324	LR	LR	10 00 22.5	
	comp=Z,319nm,19.9s,baz=160,slow=31						
SWET	Sewanee	42.86	308	IAmb	IAmb	09 46 12.0	
	comp=Z,30nm,1.5s						
MVO	Moncorvo	42.90	43	*e*LR	LR	09 57 58.8	
MVO				*i* AMs_20		10 00 32.2	
	comp=Z,402nm,20.0s						
LRAL	Lakeview Retre	43.01	304		P	09 46 06.1	+1.5
MTO3	Montecristo	43.20	277	P	P	09 46 07.4	+0.8
PB06	IPOC Station P	43.40	214	P	P	09 46 07.5	-0.5
PBRG	Braganca	43.40	42	*i* x	x	09 47 37.0	
R49A	Shelbyville	43.42	312	IAmb	IAmb	09 46 15.6	
	comp=Z,32nm,1.5s						
CLTN	Cedars of Leba	43.46	309	IAmb	IAmb	09 46 15.9	
	comp=Z,33nm,1.9s						
X48A	Hartselle	43.48	306	P	P	09 46 08.7	+0.4
ESDC	Sonseca Array	44.32	46	P	P	09 46 15.4	+0.3
	comp=Z,1.0nm,0.8s,baz=247,slow=8.5,SNR=6.6						
ESDC				LR	LR	10 01 44.5	
	comp=Z,392nm,20.6s,baz=247,slow=32						
	comp=Z,1.0nm,0.8s						
WVT	Waverly	44.62	308	P	P	09 46 18.8	+1.3
SCHQ	Schefferville	44.70	342	P	P	09 46 18.2	+0.4
	comp=Z,4.8nm,0.7s,baz=134,slow=5.3,SNR=9.1						
SCHQ				LR	LR	10 01 58.0	
	comp=Z,308nm,19.9s,baz=142,slow=32						
	comp=Z,4.8nm,0.7s						
TORD	Torodi Ar. Bea	45.19	85		P	09 46 21.5	-0.9
TORD	Torodi Ar. Bea	45.19	85	P	P	09 46 21.1	-1.2
	comp=Z,1.1nm,0.4s,baz=284,slow=7.3,SNR=1.7						
TORD				LR	LR	10 03 10.9	
	comp=Z,1µm,21.0s,baz=283,slow=33						
	comp=Z,1.1nm,0.4s						
FVM	French Village	47.18	310	IAmb	IAmb	09 46 46.4	
	comp=Z,18nm,1.2s						
CCM	Cathedral Cave	47.82	309	P	P	09 46 43.3	+0.7
MIAR	Mount Ida	48.70	304	IAmb	IAmb	09 46 56.7	
	comp=Z,19nm,1.4s						
P40A	Paris	48.87	311	IAmb	IAmb	09 46 57.4	
	comp=Z,14nm,1.1s						
HKT	Hockley	49.75	298	P	P	09 46 58.7	+1.2
HKT				IAmb	IAmb	09 47 04.8	
	comp=Z,15nm,1.3s						
I37A	Lemond, Waseca	51.34	316	IAmb	IAmb	09 47 16.6	
	comp=Z,17nm,1.2s						
T35A	Sooner Cattle	51.55	307		P	09 47 11.2	+0.1
T35A				IAmb	IAmb	09 47 18.5	
	comp=Z,23nm,1.2s						
FRB	Frobisher Bay	52.87	347	LR	LR	10 06 47.4	
	comp=Z,219nm,21.9s,baz=136,slow=33						
KEST	Kesra	53.25	55	P	P	09 47 24.1	+0.3
	comp=Z,3.8nm,0.7s,baz=89,slow=4.9,SNR=4.4						
	comp=Z,3.8nm,0.7s						
SFJD	Kangerlussuaq	53.59	357	LR	LR	10 05 49.7	
	comp=Z,262nm,20.0s,baz=166,slow=31						
BORG	Borgarnes	53.69	12	LR	LR	10 04 13.9	
	comp=Z,215nm,21.1s,baz=214,slow=29						
EPLO	Experimental L	53.73	323	P	P	09 47 29.0	+1.9
DRIO	Del Rio	53.83	297	IAmb	IAmb	09 47 34.6	
	comp=Z,24nm,1.9s						
F33A	5 Mile Ranch,	53.90	317	IAmb	IAmb	09 47 35.5	
	comp=Z,18nm,1.3s						
SMWD	Samnorwood	54.18	304	IAmb	IAmb	09 47 36.9	
	comp=Z,18nm,1.2s						
DOU	Dourbes	54.19	37	*d*P	P	09 47 30.6	+0.2
OZNA	Ozona	54.40	298	IAmb	IAmb	09 47 38.7	
	comp=Z,16nm,1.2s						
AGMN	Agassiz Nation	54.49	320	P	P	09 47 32.6	0.0
AGMN				IAmb	IAmb	09 47 38.8	
	comp=Z,21nm,1.6s						
BCLA	Clavier	54.74	37	*d*P	P	09 47 34.0	-0.4
MEM	Membach	55.23	37	*d*P	P	09 47 38.3	+0.4
	comp=Z,6.2nm,1.3s						
ULM	Lac du Bonnet	55.24	323		P	09 47 36.8	-1.1
ULM	Lac du Bonnet	55.24	323	P	P	09 47 36.9	-1.1
	comp=Z,2.2nm,0.6s,baz=99,slow=8.3,SNR=5.7						
ULM				LR	LR	10 07 26.3	
	comp=Z,419nm,21.8s,baz=104,slow=32						
	comp=Z,2.2nm,0.6s						
BTNL	Ternell	55.29	37	*d*P	P	09 47 38.9	+0.5
BFO	Black Forest	55.79	40		P	09 47 42.1	+0.1
DAVOX	Davos/Dischmat	56.30	42	LR	LR	10 09 50.3	
	comp=Z,199nm,20.0s,baz=261,slow=34						
DAVA	Damuels	56.45	42	*i* P	P	09 47 47.6	+0.7
	comp=Z,2.2nm,0.6s						
TXAR	Lajitas Array	56.48	296	P	P	09 47 46.6	-0.8
	comp=Z,1.2nm,0.8s,baz=113,slow=7.7,SNR=9.8						
TXAR				PcP	PcP	09 48 43.7	-0.5
	comp=Z,0.3nm,0.4s,baz=114,slow=5.4,SNR=5.7						
TXAR				LR	LR	10 10 29.5	
	comp=Z,169nm,21.8s,baz=57,slow=34						
	comp=Z,1.2nm,0.8s						
FUORN	Ofenpass-Fuorn	56.50	43		P	09 47 46.8	-0.6
FETA	Feichten	56.92	42	*i* P	P	09 47 51.3	+1.0
	comp=Z,6.8nm,1.1s						
RETA	Reutte	57.08	42	*i* P	P	09 47 51.5	+0.2
	comp=Z,3.9nm,0.8s						
MOTA	Moosalm	57.26	42	*i* P	P	09 47 52.6	-0.1
	comp=Z,12nm,1.4s,SNR=6.2						
CTI	Castel Tesino	57.26	44		P	09 47 52.9	+0.2
SQTA	Sankt Quirin	57.29	42	*i* P	P	09 47 52.8	-0.1
	comp=Z,10nm,1.0s						
WATA	Walderalm	57.57	42	*i* P	P	09 47 54.9	+0.1
	comp=Z,9.7nm,1.4s						
WTTA	Wattenberg	57.59	42	*i* P	P	09 47 55.3	+0.3
	comp=Z,2.8nm,0.7s						
ABTA	Abfaltersbach	58.02	43	*i* P	P	09 47 57.9	0.0
	comp=Z,16nm,1.3s,SNR=5.3						
FCC	Fort Churchill	58.09	332	IAmb	IAmb	09 48 04.4	
	comp=Z,18nm,1.2s						
MNTX	Cornudas Mount	58.09	299	IAmb	IAmb	09 48 06.2	
	comp=Z,17nm,1.2s						
LESA	Schwarzleotal	58.31	42	*i* P	P	09 48 00.3	+0.4
	comp=Z,11nm,1.2s,SNR=6.0						
KBA	Koelnbreinsper	58.66	43	*i* P	P	09 48 02.4	-0.1
	comp=Z,13nm,1.3s,SNR=5.7						
MYKA	Terra Mystica	58.74	43	*e*P	P	09 48 03.2	+0.2
	comp=Z,8.8nm,1.0s,SNR=6.6						
PLCA	Paso Flores	59.00	203	P	P	09 48 04.9	+0.2
	comp=Z,6.3nm,1.0s,baz=43,slow=6.2,SNR=6.4						
PLCA				LR	LR	10 15 16.0	
	comp=Z,155nm,19.0s,baz=7.5,slow=38						
	comp=Z,6.3nm,1.0s						
PLCA	Paso Flores	59.00	203	*e*P	P	09 48 06.5	+1.7
BIOA	Bad Ischl, Aus	59.01	42	*e*P	P	09 48 04.8	+0.1
	comp=Z,3.8nm,0.8s						
SUMG	Summit	59.18	2		P	09 48 07.1	+1.2
ANMO	Albuquerque	59.23	303		P	09 48 07.9	+1.1
ANMO				IAmb	IAmb	09 48 14.5	
	comp=Z,18nm,1.4s						
ANMO	Albuquerque	59.23	303	IAmb	IAmb	09 48 14.4	
	comp=Z,12nm,1.2s						
ANMO	Albuquerque	59.23	303	LR	LR	10 10 55.5	
	comp=Z,888nm,21.4s,baz=186,slow=33						
OBKA	Obir	59.32	44	*i* P	P	09 48 07.9	+0.8
	comp=Z,11nm,1.7s,SNR=5.5						
KHC	Kasperske Hory	59.35	41	*e*P	P	09 48 04.0	-3.1
KHC	Kasperske Hory	59.35	41	P	P	09 48 07.2	+0.1
	comp=Z,5.3nm,0.4s						
GERES	GERESS Array B	59.35	41	P	P	09 48 06.5	-0.6
	comp=Z,0.8nm,0.8s,baz=188,slow=5.4,SNR=6.1						
GERES				LR	LR	10 12 04.8	
	comp=Z,127nm,19.5s,baz=245,slow=34						
	comp=Z,0.8nm,0.8s						
MOA	Molln	59.46	42	*e*P	P	09 48 07.7	-0.2
	comp=Z,10nm,1.4s						
Y22D	IRIS PASSCAL I	59.54	302	P	P	09 48 08.4	-0.5
	baz=94						
CLL	Collm	59.61	38	P	P	09 48 08.6	-0.2
	comp=Z,5.6nm,1.6s						
CLL	Collm	59.61	38	*i* P	P	09 48 09.1	+0.3
	comp=Z,12nm,1.5s						
CLL				*e*x	x	09 48 15.0	
CLL				*e*x	x	09 48 48.0	
CLL				*e*PP	PP	09 50 20.0	-0.4
CLL				AMS	AMS	10 09 00.0	
	comp=N,100nm,19.5s						
CLL				AMS	AMS	10 09 00.0	
	comp=E,200nm,22.0s						
CLL				AMS	AMS	10 09 00.0	
	comp=Z,200nm,21.5s						
SOKA	Soboth	59.69	44	*i* P	P	09 48 09.7	+0.2
	comp=Z,6.4nm,1.3s,SNR=5.2						
BRG	Berggiesshubel	60.05	39	*e*P	P	09 48 12.4	+0.5
BRG				Amp		09 48 15.1	
	comp=Z,8.0nm,1.3s						
ARSA	Arzberg	60.14	43		P	09 48 12.5	-0.1
ARSA	Arzberg	60.14	43	*e*P	P	09 48 12.0	-0.6
	comp=Z,8.2nm,1.2s						
FFC	Flin Flon	60.35	326		P	09 48 13.2	-0.6
FFC				IAmb	IAmb	09 48 20.3	
	comp=Z,11nm,1.2s						
CONA	Conrad Observa	60.52	42	*e*P	P	09 48 15.0	-0.2
	comp=Z,13nm,1.6s,SNR=11						
RONA	Rosalia, Austr	60.75	43	*e*P	P	09 48 17.4	+0.6
	comp=Z,14nm,1.0s,SNR=6.6						
MVCO	Mesa Verde	61.07	305	IAmb	IAmb	09 48 28.0	
	comp=Z,17nm,1.3s						
KRUC	Moravsky	61.12	41	*e*P	P	09 48 19.0	-0.2
VRAC	Vranov	61.31	41	*e*P	P	09 48 20.8	+0.3
DPC	Dobruska-Polom	61.38	40	P	P	09 48 21.1	+0.1
	comp=Z,6.4nm,2.4s						
MPLH	Magyarpolny	61.47	43	P	P	09 48 22.1	+0.5
	comp=Z,1µmcomp=Z,47nm,1.6s						
KSP	Ksiaz	61.48	39	P	P	09 48 22.0	+0.4
	comp=Z,10nm,2.2s						
MODS	Modra-Piesok	61.54	42	*e*P	P	09 48 22.1	0.0
BLKN	Baker Lake	61.69	337	IAmb	IAmb	09 48 28.9	
	comp=Z,10.0nm,1.0s						
MORC	Moravsky Berou	62.01	41	*e*P	P	09 48 25.6	+0.3
MORH	Mrgy, Hungar	62.04	45	P	P	09 48 25.7	+0.3
	comp=Z,6.3nm,1.7s						
NOA	NORSAR Array B	62.15	27	P	P	09 48 25.2	-0.8
	comp=Z,1.4nm,0.9s,baz=247,slow=6.9,SNR=4.3						
NOA				LR	LR	10 09 53.3	
	comp=Z,90nm,21.3s,baz=210,slow=31						
	comp=Z,1.4nm,0.9s						
LPIG	La Paz	62.44	290	LR	LR	10 14 53.2	
	comp=Z,119nm,21.8s,baz=36,slow=35						
PDAR	Pinedale Array	62.46	311		P	09 48 28.3	-0.3
PDAR	Pinedale Array	62.46	311	P	P	09 48 28.6	-0.1
	comp=Z,2.6nm,1.0s,baz=99,slow=6.5,SNR=13						
PDAR				LR	LR	10 13 03.0	
	comp=Z,199nm,21.1s,baz=107,slow=34						
	comp=Z,2.6nm,1.0s						
VYHS	Vyhne	62.58	42	*e*P	P	09 48 29.5	+0.4
TUC	Tucson	62.70	299		P	09 48 30.8	+0.6
HFS	Hagfors	62.92	29	P	P	09 48 31.1	0.0
	comp=Z,2.6nm,0.9s,baz=222,slow=3.6,SNR=4.4						
HFS				LR	LR	10 11 37.9	
	comp=Z,124nm,19.1s,baz=232,slow=32						
	comp=Z,2.6nm,0.9s						
OJC	Ojcow	63.53	40	P	P	09 48 36.2	+0.9
	comp=Z,16nm,1.6s						
NIE	Niedzica	63.70	41	P	P	09 48 38.0	+1.5
	comp=Z,7.0nm,1.5s						
HOLU	Holmets	64.92	43	P	P	09 48 45.4	+1.0
KWP	Kalwaria Pacla	65.28	41	P	P	09 48 47.3	+0.5
	comp=Z,17nm,1.7s						
BRIU	Brid	65.31	43	P	P	09 48 47.3	+0.3
IDI	Anoyia	65.82	57	LR	LR	10 15 47.8	
	comp=Z,175nm,20.9s,baz=282,slow=34						
MSO	Missoula	66.02	315		P	09 48 52.4	+0.6
MSO				IAmb	IAmb	09 48 58.5	
	comp=Z,16nm,1.5s						
HLID	Hailey	66.07	312	IAmb	IAmb	09 49 00.1	
	comp=Z,17nm,1.6s						
ELK	Elko	66.53	309	LR	LR	10 15 07.1	
	comp=Z,261nm,21.4s,baz=89,slow=33						
BURAR	Bucovina Array	66.69	44		P	09 48 56.6	+0.5
R11B	Troy Canyon, C	66.73	306	IAmb	IAmb	09 49 04.4	
	comp=Z,14nm,1.3s						
MLR	Muntele Rosu	67.02	46		P	09 48 58.7	+0.5
MLR	Muntele Rosu	67.02	46	LR	LR	10 17 36.6	
	comp=Z,140nm,18.8s,baz=272,slow=35						
MLR	Muntele Rosu	67.02	46	P	P	09 48 59.1	+0.9
	comp=Z,17nm,1.5s						
RES	Resolute Bay	67.08	347	LR	LR	10 15 32.8	
	comp=Z,161nm,18.9s,baz=66,slow=34						
PLID	Pearl Lake	67.31	313	IAmb	IAmb	09 49 06.8	
	comp=Z,9.3nm,1.2s						
PFO	Pinyon Flats O	67.47	301		P	09 49 01.9	+0.6
PFO	Pinyon Flats O	67.47	301	LR	LR	10 17 17.3	
	comp=Z,284nm,20.2s,baz=102,slow=35						

RNPP8	Varash	67.50	40	P	P	09 49 01.5	+0.6
RNPP5	Staryi Chortor	67.51	40	P	P	09 49 01.8	+0.8
RNPP9	Sopachiv	67.53	40	P	P	09 49 01.6	+0.5
TESR	Tescani	67.58	45	P	P	09 49 02.4	+0.8
	comp=Z,10nm,2.4s						
VRI	Vrincioaia	67.59	46	P	P	09 49 01.6	-0.1
	comp=Z,9.1nm,1.3s						
KMPD	K-Podol'skiy	67.61	43	P	P	09 49 00.7	-1.0
NEW	Newport	68.29	317	LR	LR	10 17 21.1	
	comp=Z,419nm,19.2s,baz=92,slow=34						
LUBAR	Lubar, Ukraine	68.57	41	P	P	09 49 07.2	-0.5
MI28	Mi28,Pidlybu	68.60	40	P	P	09 49 07.6	-0.2
YKAW1	Yellowknife Wh	68.76	332	IAmb	IAmb	09 49 18.6	
	comp=Z,17nm,1.8s						
YKA	Yellowknife Ar	68.82	332	P	P	09 49 07.2	-1.8
	comp=Z,1.2nm,0.8s,baz=100,slow=6.5,SNR=15						
YKA				LR	LR	10 15 51.2	
	comp=Z,283nm,21.2s,baz=76,slow=33						
	comp=Z,1.2nm,0.8s						
YKAW3	Yellowknife Wh	68.83	332	IAmb	IAmb	09 49 15.0	
	comp=Z,4.4nm,1.0s						
NVAR	Mina Array Bea	68.87	306	P	P	09 49 10.1	0.0
	comp=Z,0.6nm,0.8s,baz=102,slow=5.2,SNR=7.6						
NVAR				LR	LR	10 16 11.1	
	comp=Z,152nm,21.5s,baz=99,slow=33						
	comp=Z,0.6nm,0.8s						
MNK	Minsk	69.07	37	*i* P	P	09 49 11.1	+0.3
	comp=Z,21nm,1.1s,baz=264						
MNK				*i* PP	PP	09 51 43.2	0.0
MNK				*i* PPP	PPP	09 53 23.0	
MNK				*i* S	S	09 58 13.9	-1.5
MNK				*i* SS	SS	10 02 55.8	+15
MNK				*i* SSS	SSS	10 06 13.8	
MNK				*i* LR	LR	10 19 52.0	
FINES	FINESS Array B	69.12	29	P	P	09 49 09.6	-1.3
	comp=Z,1.8nm,0.7s,baz=349,slow=6.0,SNR=4.5						
FINES				LR	LR	10 14 11.7	
	comp=Z,114nm,21.9s,baz=253,slow=31						
	comp=Z,1.8nm,0.7s						
TSUM	Tsumeb	69.50	117	LR	LR	10 13 07.4	
	comp=Z,253nm,21.3s,baz=329,slow=30						
AK12	Malin Array Si	69.52	41	P	P	09 49 13.1	-0.5
AK06	Malin Array Si	69.54	41	P	P	09 49 13.1	-0.6
AK02	Malin Array Si	69.55	41	P	P	09 49 13.8	0.0
AK01	Malin Array Si	69.56	41	P	P	09 49 13.8	0.0
AKASG	Malin Array Be	69.56	41	P	P	09 49 13.1	-0.7
	comp=Z,0.3nm,0.3s,baz=272,slow=5.7,SNR=9.9						
	comp=Z,0.3nm,0.3s						
AKBB	Malin Array Si	69.56	41	P	P	09 49 14.4	+0.6
ARCES	ARCESS Array B	70.59	21	P	P	09 49 19.3	-0.6
	comp=Z,1.9nm,0.5s,baz=251,slow=6.5,SNR=15						
	comp=Z,1.9nm,0.5s						
SPITS	Spitsbergen Ar	71.12	11	LR	LR	10 13 01.0	
	comp=Z,115nm,19.6s,baz=222,slow=30						
BR105	Keskin Array S	72.65	52	P	P	09 49 33.7	+0.7
	comp=Z,2.0nm,0.8s						
BRTR	Keskin Array B	72.67	52	P	P	09 49 32.6	-0.5
	comp=Z,0.6nm,0.8s,baz=269,slow=4.9,SNR=4.6						
	comp=Z,0.6nm,0.8s						
BR104	Keskin Array S	72.67	52	P	P	09 49 33.3	+0.2
	comp=Z,1.7nm,1.2s						
WRGLY	Wrigley	72.94	332	P	P	09 49 34.0	0.0
	baz=94						
KOTAN	Kotaneelee Air	73.05	329	P	P	09 49 34.7	-0.1
	baz=92						
BEAVL	Fort Liard	73.56	329	P	P	09 49 37.7	-0.1
	baz=92						
TOAD	Toad River Com	73.61	328	P	P	09 49 38.0	-0.2
	baz=91						
C36M	Paulatuk	73.68	339	P	P	09 49 38.8	+0.6
	baz=95						
LIRD	Liard River Hi	74.06	328	P	P	09 49 40.5	-0.3
	baz=90						
A36M	Sachs Harbour	74.30	341	IAmb	IAmb	09 49 44.5	
	comp=Z,14nm,0.9s						
A36M	Sachs Harbour	74.30	341	P	P	09 49 41.9	0.0
	baz=95						
EIL	Elat	74.64	63	LR	LR	10 21 34.9	
	comp=Z,172nm,21.5s,baz=250,slow=35						
TGTN	Hyland Airport	75.14	330	P	P	09 49 47.0	0.0
	baz=89						
BBB	Bella Bella	75.38	321	LR	LR	10 20 59.2	
	comp=Z,184nm,19.4s,baz=74,slow=34						
WTLY	Watson Lake, Y	75.42	329	P	P	09 49 48.5	-0.1
	baz=88						
ASF	Jabal al Asfar	76.00	60	LR	LR	10 24 03.7	
	comp=Z,93nm,21.3s,baz=277,slow=36						
DLBC	Dease Lake	76.12	327	IAmb	IAmb	09 49 56.6	
	comp=Z,12nm,1.2s						
DLBC	Dease Lake	76.12	327	LR	LR	10 20 26.4	
	comp=Z,343nm,21.1s,baz=102,slow=33						
DLBC	Dease Lake	76.12	327	P	P	09 49 52.5	-0.2
	baz=87						
U35K	Hyder	76.28	325	P	P	09 49 53.6	+0.1
	baz=86						
T35M	Bob Quinn	76.33	326	P	P	09 49 53.6	-0.3
	baz=86						
MMPY	Sheldon Lake,	76.50	332		P	09 49 55.6	+0.8
MMPY				IAmb	IAmb	09 50 01.9	
	comp=Z,15nm,1.5s						
MMPY	Sheldon Lake,	76.50	332	P	P	09 49 54.2	-0.6
	baz=87						
R33M	Jennings River	76.55	328	IAmb	IAmb	09 50 03.0	
	comp=Z,11nm,1.0s						
R33M	Jennings River	76.55	328	P	P	09 49 55.0	-0.3
	baz=86						
S34M	Telegraph Cree	76.74	327	IAmb	IAmb	09 50 04.2	
	comp=Z,12nm,1.1s						
S34M	Telegraph Cree	76.74	327	P	P	09 49 55.6	-0.6
	baz=86						
INK	Inuvik	77.09	338	LR	LR	10 20 53.1	
	comp=Z,290nm,22.0s,baz=82,slow=33						
INK	Inuvik	77.09	338	P	P	09 49 57.4	-0.5
	baz=86						
V35K	Ketchikan	77.22	324	P	P	09 49 58.2	-0.6
	baz=85						
F31M	Tsiigehtchic	77.24	337	P	P	09 49 58.0	-0.8
	baz=86						
Q32M	Nakina River	77.25	328	P	P	09 49 58.7	-0.6
	baz=85						
P33M	Teslin, Yukon	77.42	329	P	P	09 49 59.5	-0.6
	baz=85						
N32M	Quiet Lake	77.47	330	P	P	09 49 60.0	-0.3
	baz=85						
G31M	Satah River	77.49	336	P	P	09 49 59.3	-0.9
	baz=85						
FARO	Faro, Yukon	77.50	331	P	P	09 50 00.0	-0.4
	baz=85						
WRAK	Wrangell Islan	77.53	325	P	P	09 49 59.6	-1.0
	baz=84						
H31M	Peel River	77.61	335	IAmb	IAmb	09 50 08.3	
	comp=Z,18nm,1.4s						
H31M	Peel River	77.61	335	P	P	09 50 00.5	-0.4
	baz=85						
LSZ	Lusaka	77.65	109	LR	LR	10 18 48.7	
	comp=Z,269nm,19.3s,baz=312,slow=32						
P32M	Atlin	77.93	329	P	P	09 50 02.4	-0.5
	baz=84						
M31M	Drury Creek, Y	77.99	331	P	P	09 50 02.5	-0.6
	baz=84						
U33K	Whale Pass	77.99	325	P	P	09 50 02.1	-1.1
	baz=84						
F30M	Barrier River	78.01	337	P	P	09 50 02.4	-0.7
	baz=84						
CRAG	Craig	78.06	324	P	P	09 50 02.9	-0.7
	baz=84						
G30M	tAoh Zraii Nji	78.24	336	P	P	09 50 03.4	-1.0
	baz=83						
WHY	Whitehorse	78.39	330	P	P	09 50 04.6	-0.9
	baz=83						
R32K	Eaglecrest	78.50	327	P	P	09 50 04.7	-1.2
	baz=83						
MAYO	Mayo, Yukon	78.51	333	P	P	09 50 05.5	-0.5
	baz=83						
EPYK	Eagle Plains	78.52	336	P	P	09 50 05.0	-0.9
	baz=83						
I30M	Mount Dempster	78.52	335	P	P	09 50 05.0	-1.2
	baz=83						
LBTB	Lobatse	78.55	119	LR	LR	10 17 46.6	
	comp=Z,264nm,21.6s,baz=303,slow=30						
J30M	Hart River	78.58	334	P	P	09 50 06.2	-0.3
	baz=83						
S32K	Killisnoo	78.63	327	P	P	09 50 06.6	-0.1
	baz=83						
E29M	Blow River	78.70	338	P	P	09 50 06.4	-0.5
	baz=82						
N31M	Braeburn, Yuko	78.73	331	IAmb	IAmb	09 50 14.4	
	comp=Z,11nm,1.1s						
N31M	Braeburn, Yuko	78.73	331	P	P	09 50 06.4	-0.8
	baz=83						
SKAG	Skagway	78.77	329	P	P	09 50 07.0	-0.4
	baz=83						
D28M	Stokes Point	78.87	339	P	P	09 50 07.6	-0.1
	baz=82						
G29M	Pine Creek	78.96	336	P	P	09 50 08.3	-0.1
	baz=82						
O30N	Mendenhall	78.97	330	P	P	09 50 08.3	-0.3
	baz=82						
SIT	Sitka	79.08	326	P	P	09 50 08.8	-0.3
	baz=82						
R31K	City Hall, Gus	79.12	328	P	P	09 50 09.1	-0.2
	baz=82						
KBZ	Khabaz	79.16	48	LR	LR	10 25 48.9	
	comp=Z,64nm,19.3s,baz=304,slow=36						
H29M	Whitestone	79.20	336	P	P	09 50 09.3	-0.3
	baz=81						
K29M	Barlow Dome	79.20	333	IAmb	IAmb	09 50 13.3	
	comp=Z,27nm,1.9s						
K29M	Barlow Dome	79.20	333	P	P	09 50 09.2	-0.6
	baz=82						
E28M	Babbage River	79.27	338	P	P	09 50 09.4	-0.7
	baz=81,SNR=6.6						
PLBC	Pleasant Camp	79.29	329	P	P	09 50 10.2	-0.1
	baz=82						
I29M	Ogilvie Camp,	79.30	335	P	P	09 50 09.8	-0.5
	baz=81						
N30M	Aishikik Lake	79.35	331	P	P	09 50 10.0	-0.7
	baz=82						
S31K	Pelican	79.44	327	P	P	09 50 11.0	-0.1
	baz=82						
P30M	Million Dollar	79.49	329	P	P	09 50 11.2	-0.3
	baz=81						
MATP	Matopo	79.53	114	LR	LR	10 21 20.5	
	comp=Z,155nm,18.5s,baz=241,slow=33						
F28M	Old Crow	79.56	337	P	P	09 50 11.6	0.0
	baz=80						
BOSA	Boshof	79.56	123	LR	LR	10 17 35.3	
	comp=Z,361nm,19.9s,baz=255,slow=30						
L29M	L29M	79.58	333	P	P	09 50 11.8	-0.1
	baz=81						
HYT	Haines Junctio	79.65	330	P	P	09 50 12.1	-0.3
	baz=81						
D27M	Malcolm River	79.66	339	P	P	09 50 12.2	-0.1
	baz=79						
M29M	Somme Creek	79.84	332	P	P	09 50 13.8	+0.5
	baz=80						
P29M	Windy Craggy	79.95	329	P	P	09 50 13.9	-0.1
	baz=81						
I28M	Miner Creek	79.96	335	P	P	09 50 13.6	-0.4
	baz=80						
DAWY	Dawson	79.98	334	P	P	09 50 13.4	-0.6
	baz=80						
YUK6	Outpost Mounta	80.04	330	P	P	09 50 13.7	-1.0
	baz=80						
E27K	Coleen River	80.09	338	IAmb	IAmb	09 50 17.2	
	comp=Z,9.1nm,0.8s						
E27K	Coleen River	80.09	338	P	P	09 50 13.4	-1.2
	baz=79,SNR=9.2						
YUK4	Talbot Arm	80.11	331	P	P	09 50 13.6	-1.4
	baz=80						
O29M	Mount Kennedy	80.26	330	P	P	09 50 14.8	-0.9
	baz=80						
G27K	Doyon Strip	80.39	336	P	P	09 50 15.9	-0.3
	baz=78						
H27K	Steamboat Moun	80.45	336	P	P	09 50 16.0	-0.6
	baz=78						
C27K	Jago River	80.53	339	P	P	09 50 17.3	+0.4
	baz=77						
I27K	Kandik River	80.62	335	P	P	09 50 17.0	-0.5
	baz=78						
YUK8	Steele Glacier	80.65	331	P	P	09 50 17.5	-0.5
	baz=79						
PNL	Peninsula	80.78	329	P	P	09 50 18.4	0.0
	baz=79						
KIRV	Kirov	80.79	32	LR	LR	10 22 40.3	
	comp=Z,137nm,20.5s,baz=293,slow=33						
YUK3	Moose Creek	80.88	331	P	P	09 50 18.9	-0.3
	baz=79						
BVCY	Beaver Creek	80.94	332	P	P	09 50 18.8	-0.4
	baz=78						
O28M	Mount Upton	80.95	330	P	P	09 50 19.1	-0.5
	baz=79						
PINM	Pinnacle	81.12	330	P	P	09 50 20.7	+0.4
	baz=78						
F26K	Sheenjek River	81.14	338	P	P	09 50 20.9	+0.7
	baz=76						
K27K	Chicken	81.14	334	P	P	09 50 21.0	+0.8
	baz=78						
G26K	Porcupine Rive	81.18	337	IAmb	IAmb	09 50 22.1	
	comp=Z,10nm,0.7s						
G26K	Porcupine Rive	81.18	337	P	P	09 50 20.6	+0.3
	baz=76,SNR=17						
BCAR	Beaver Creek A	81.22	333		P	09 50 20.8	0.0
L27K	Beaver Creek,	81.24	333	P	P	09 50 20.5	-0.3
	baz=78						
I26K	Coal Creek Min	81.31	335	IAmb	IAmb	09 50 29.7	
	comp=Z,25nm,1.9s						
I26K	Coal Creek Min	81.31	335	P	P	09 50 21.2	+0.1
	baz=77						
BMAR	Burnt Mountain	81.36	337		P	09 50 21.6	+0.2
M27K	Edge Creek, AK	81.42	332	P	P	09 50 22.2	+0.3
	baz=78						
CTG	Chitna Glacier	81.47	331	P	P	09 50 22.6	+0.4
	baz=78						
D25K	Kavik River	81.52	339	P	P	09 50 22.4	+0.2
	baz=74						
E25K	Arctic Village	81.55	338	P	P	09 50 23.3	+0.9
	baz=75						
J26L	Joseph Creek	81.67	334	P	P	09 50 23.9	+0.8
	baz=76						
F25K	Christian Rive	81.72	338	P	P	09 50 24.1	+0.9
	baz=75						
M26K	Nabesna, AK	81.92	332	P	P	09 50 25.5	+1.1
	baz=76						
L26K	Log Cabin Wild	81.92	333	P	P	09 50 25.6	+1.2
	baz=76						
MESA	MESA	81.93	330	P	P	09 50 25.3	+0.6
	baz=77						
SCRK	Sand Creek	81.97	334	P	P	09 50 24.9	+0.2
	baz=76						
G25K	Bearman Lake	82.11	337	P	P	09 50 25.2	-0.1
	baz=74						
H25L	Birch Creek	82.14	336	P	P	09 50 25.8	+0.4
	baz=74,SNR=10						
MCARA	McCarthy VSAT	82.17	331	P	P	09 50 26.2	+0.5
	baz=76						
C24K	Franklin Bluff	82.19	340	P	P	09 50 26.3	+0.7
	baz=72						
PRP	Porcupine Dome	82.22	336	IAmb	IAmb	09 50 33.8	
	comp=Z,15nm,1.2s						
PRP	Porcupine Dome	82.22	336	P	P	09 50 26.2	+0.1
	baz=75,SNR=8.6						
CRQE	Cirque	82.35	331	P	P	09 50 27.1	+0.3
	baz=76						
J25K	Salcha River,	82.39	335	P	P	09 50 27.0	+0.1
	baz=75,SNR=6.3						
RIDG	Independent Ri	82.40	334	P	P	09 50 27.5	+0.6
	baz=75						
D24K	Happy Valley	82.41	339	P	P	09 50 27.5	+0.7
	baz=72						
F24K	Squaw Lake	82.57	338	IAmb	IAmb	09 50 31.4	
	comp=Z,21nm,1.9s						
F24K	Squaw Lake	82.57	338	P	P	09 50 28.1	+0.4
	baz=73						
E24K	Your Creek	82.62	338	P	P	09 50 28.8	+0.8
	baz=72						
G24K	Hadweenzic Riv	82.65	337	P	P	09 50 28.9	+0.8
	baz=73,SNR=6.6						
C23K	Itkillik River	82.78	340	P	P	09 50 29.6	+0.8
	baz=71						
K24K	Donnelly Dome	82.78	334	P	P	09 50 29.8	+0.9
	baz=74						
TOLK	Toolik Lake Re	82.82	339	P	P	09 50 29.6	+0.6
	baz=71						
N25K	Chitina, Valde	82.84	332	P	P	09 50 30.1	+0.8
	baz=75						
PAX	Paxson	82.88	333	P	P	09 50 29.3	-0.2
	baz=74						
HARP	HAARP	82.89	333	P	P	09 50 29.8	+0.3
	baz=75						
ILAR	Eielson Array	82.98	335	P	P	09 50 29.5	-0.3
	comp=Z,4.6nm,0.8s,baz=68,slow=4.2,SNR=45						
ILAR				LR	LR	10 28 28.1	
	comp=Z,65nm,18.3s,baz=66,slow=36						
	comp=Z,4.6nm,0.8s						
BMRM	Bremner River	83.01	331	P	P	09 50 30.6	+0.5
	baz=75						
E23K	Chandalar	83.03	339	P	P	09 50 30.3	+0.2
	baz=71						
H24K	Noodor Dome	83.06	336	P	P	09 50 30.6	+0.2
	baz=73						
D23K	Nanushuk River	83.10	340		P	09 50 32.6	+2.2
D23K				IAmb	IAmb	09 50 38.3	
	comp=Z,14nm,1.4s						
D23K	Nanushuk River	83.10	340	P	P	09 50 30.8	+0.4
	baz=70						
POKR	Poker Plat Res	83.10	335	P	P	09 50 30.9	+0.4
	baz=73						
HDA	Harding Lake	83.11	335	P	P	09 50 30.3	-0.2
	baz=73						
KAIM	Kayak Island	83.19	330	P	P	09 50 31.6	+0.6
	baz=75						
COLA	College	83.34	335	P	P	09 50 31.7	0.0
	baz=72						
CCB	Clear Creek Bu	83.39	335	IAmb	IAmb	09 50 39.2	
	comp=Z,12nm,1.1s						
M24K	Tolsona, Glenn	83.43	332	P	P	09 50 32.3	0.0
	baz=74						
KLU	Klutina	83.48	332	P	P	09 50 32.2	-0.5
	baz=74						
B22K	Teshekpuk Lake	83.50	341	P	P	09 50 32.0	-0.4
	baz=68						
COLD	Coldfoot	83.51	338	P	P	09 50 32.5	0.0
	baz=71						
G23K	Bananza Creek	83.61	337	IAmb	IAmb	09 50 41.1	
	comp=Z,15nm,1.4s						
G23K	Bananza Creek	83.61	337	P	P	09 50 33.7	+0.6
	baz=71,SNR=6.7						
EYAK	Cordova Ski Ar	83.67	331	P	P	09 50 33.5	+0.1
	baz=74						
DHY	Denali Highway	83.68	333	P	P	09 50 33.7	0.0
	baz=73						
H23K	Yukon River	83.72	336	P	P	09 50 34.1	+0.5
	baz=71,SNR=8.1						
A22K	Sinclair Lake	83.73	342	P	P	09 50 33.9	+0.4
	baz=67						
E22K	Anaktuvuk Pass	83.78	339	IAmb	IAmb	09 50 42.3	
	comp=Z,11nm,1.2s						
E22K	Anaktuvuk Pass	83.78	339	P	P	09 50 34.5	+0.6
	baz=69						
D22K	Ayikyak River	83.81	340	IAmb	IAmb	09 50 36.5	
	comp=Z,6.7nm,0.9s						
D22K	Ayikyak River	83.81	340	P	P	09 50 34.8	+0.7
	baz=69						
I23K	Minto, Yukon-K	83.87	336	P	P	09 50 34.3	-0.1
	baz=71,SNR=12						
NEA2	Nenana	83.93	335	P	P	09 50 34.5	-0.2
	baz=71						
WAT6	Susitna Watana	83.99	333	P	P	09 50 35.0	-0.2
	baz=72						
SCM	Sheep Creek Mo	84.03	332	P	P	09 50 35.6	+0.2
	baz=73						
A21K	Barrow	84.08	342	P	P	09 50 36.2	+0.8
	baz=65						
G22K	Bettles	84.09	338	P	P	09 50 36.4	+0.9
	baz=70						
F22K	John River	84.13	338	P	P	09 50 36.2	+0.5
	baz=69						
MCK	McKinley	84.15	334	P	P	09 50 36.1	+0.2
	baz=72						
B21K	Ikpikpuk River	84.16	341	P	P	09 50 36.5	+0.7
	baz=67						
GLI	Glacier Island	84.21	331	P	P	09 50 36.5	+0.3
	baz=73						
M23K	Glacier View	84.22	332	P	P	09 50 36.8	+0.5
	baz=72						
WAT1	Susitna Watana	84.27	333	P	P	09 50 36.7	+0.1
	baz=72						
Q23K	Middleton Isla	84.27	330	P	P	09 50 36.6	+0.1
	baz=73						
C21K	Knifeblade Rid	84.40	340	P	P	09 50 36.9	-0.2
	baz=67						
H22K	Ishtalitna Cre	84.41	337	P	P	09 50 37.4	+0.2
	baz=70						
E21K	Killik River	84.41	339	P	P	09 50 37.7	+0.6
	baz=67						
MLY	Manley	84.46	336	IAmb	IAmb	09 50 38.9	
	comp=Z,5.0nm,0.8s						
MLY	Manley	84.46	336	P	P	09 50 37.8	+0.3
	baz=70,SNR=8.1						
SML	Sawmill	84.49	332	P	P	09 50 37.8	+0.1
	baz=72						
P23K	Montague Islan	84.61	330	P	P	09 50 38.3	0.0
	baz=72						
KNK	Knik Glacier	84.67	332	P	P	09 50 39.3	+0.7
	baz=72						
F21K	Alatna River	84.70	338	P	P	09 50 39.2	+0.5
	baz=68						
PWL	Port Wells	84.79	331	P	P	09 50 39.9	+0.7
	baz=72						
B20K	Meade River	84.81	341	P	P	09 50 39.5	+0.4
	baz=65						
TRF	Thorofare Moun	84.81	334	P	P	09 50 39.2	-0.3
	baz=70,SNR=8.2						
BPAW	Bear Paw Mtn.	84.88	335		P	09 50 40.0	+0.4
BPAW	Bear Paw Mtn.	84.88	335	P	P	09 50 39.4	-0.2
	baz=70,SNR=12						
I21K	Tanana	84.90	336	P	P	09 50 39.6	0.0
	baz=69						
PMR	Palmer	84.92	332	P	P	09 50 39.2	-0.6
	baz=71						
G21K	Allakaket	84.98	338	P	P	09 50 40.1	+0.1
	baz=68						
H21K	Melozitna Rive	85.04	337	P	P	09 50 40.0	-0.4
	baz=68,SNR=6.5						
ATD	Arta Tunnel	85.11	79	LR	LR	10 26 35.6	
	comp=Z,22nm,21.3s,baz=298,slow=34						
CUT	Chulitna	85.16	333	P	P	09 50 40.9	0.0
	baz=70						
D20K	Etivluk River	85.19	340	P	P	09 50 40.7	-0.4
	baz=65						
E20K	Nigu River	85.24	340	P	P	09 50 41.6	+0.3
	baz=65						
M22K	Willow	85.31	333	P	P	09 50 42.4	+0.7
	baz=70						
RC01	Rabbit Creek A	85.36	332	P	P	09 50 42.6	+0.6
	baz=70						
CHUM	Lake Minchumin	85.50	335	P	P	09 50 42.7	+0.1
	baz=68						
SEW	Seward	85.56	331	P	P	09 50 43.1	+0.2
	baz=71						
O22K	Cooper Landing	85.56	331	P	P	09 50 43.5	+0.5
	baz=70						
CAST	Castle Rocks	85.58	334	P	P	09 50 42.8	-0.3
	baz=69						
F20K	Avaraart Lake	85.58	338	P	P	09 50 43.2	+0.2
	baz=66						
SUA	Susitna One	85.69	332	P	P	09 50 44.4	+0.5
	baz=70,SNR=6.9						
D19K	Kuna River	85.78	340	P	P	09 50 45.0	+1.0
	baz=64						
PPLA	Purkeypile	85.81	334	P	P	09 50 44.4	0.0
	baz=68,SNR=6.4						
SKT	Skwentna	85.86	333		P	09 50 45.7	+1.2
SKT	Skwentna	85.86	333	P	P	09 50 44.3	-0.2
	baz=69,SNR=5.6						
H20K	Anotleneega Mo	85.90	337	P	P	09 50 45.0	+0.4
	baz=66						
A19K	Wainwright	85.91	342	P	P	09 50 44.7	+0.2
	baz=61						
E19K	Redstone River	85.94	339	IAmb	IAmb	09 50 52.6	
	comp=Z,7.1nm,0.9s						
E19K	Redstone River	85.94	339	P	P	09 50 44.8	+0.1
	baz=64						
C19K	Lookout Ridge	85.98	341	P	P	09 50 44.9	-0.1
	baz=62						
I20K	Naaghedeneel	86.03	336	P	P	09 50 45.2	0.0
	baz=67						
ARTI	Arti	86.03	33	LR	LR	10 27 02.5	
	comp=Z,141nm,19.8s,baz=288,slow=34						
CAPN	Captain Cook N	86.12	332	P	P	09 50 45.5	-0.3
	baz=69						
J20K	Nowinta River	86.14	336	P	P	09 50 46.3	+0.5
	baz=67						
BRSE	Bradley Lake S	86.29	331	P	P	09 50 47.1	+0.4
	baz=70						
F19K	Shaleruckik Mo	86.40	339	IAmb	IAmb	09 50 55.2	
	comp=Z,13nm,1.4s						
F19K	Shaleruckik Mo	86.40	339	P	P	09 50 47.2	+0.2
	baz=64						
K20K	Telida	86.43	335	P	P	09 50 48.0	+0.7
	baz=67						
N20K	Mount Spurr	86.45	332	P	P	09 50 47.3	-0.2
	baz=68						

SPCR	Spurr Chakacha	86.45	332	P	P	09 50 47.0	-0.5
	baz=68						
G19K	Purcell Mounta	86.46	338	P	P	09 50 47.3	-0.1
	baz=64						
H19K	Roundabout Mou	86.48	337	P	P	09 50 47.4	0.0
	baz=65						
B18K	Kokolik River	86.54	342	P	P	09 50 47.5	-0.2
	baz=60						
M20K	Styx River	86.60	333	P	P	09 50 47.7	-0.6
	baz=68						
L20K	Farewell, AK	86.69	334	P	P	09 50 48.0	-0.6
	baz=67						
C18K	Utukok River	86.71	341	IAmb	IAmb	09 50 50.4	
	comp=Z,6.0nm,0.9s						
C18K	Utukok River	86.71	341	P	P	09 50 48.1	-0.5
	baz=61						
HOM	Homer	86.75	331	P	P	09 50 48.9	0.0
	baz=69						
J19K	Poorman	86.81	336	P	P	09 50 48.4	-0.7
	baz=66						
O20K	Slope Mountain	87.05	331	P	P	09 50 50.1	-0.4
	baz=68						
E18K	Tukpahlearik C	87.11	340	P	P	09 50 50.4	-0.1
	baz=61						
G18K	Tagagawik	87.14	338	P	P	09 50 50.4	-0.3
	baz=63						
M19K	Big River Lodg	87.14	333	P	P	09 50 50.7	-0.1
	baz=66						
F18K	Selawik	87.17	339	P	P	09 50 51.0	+0.2
	baz=62						
L19K	White Mountain	87.23	334	IAmb	IAmb	09 50 58.2	
	comp=Z,9.2nm,1.2s						
L19K	White Mountain	87.23	334	P	P	09 50 51.1	-0.2
	baz=66						
H18K	Honhosa River	87.37	337	P	P	09 50 51.7	-0.1
	baz=63						
C17K	DeLong Mountai	87.42	341	P	P	09 50 52.6	+0.6
	baz=59						
J18K	Innoko River	87.47	335	IAmb	IAmb	09 50 60.0	
	comp=Z,7.4nm,0.9s						
J18K	Innoko River	87.47	335	P	P	09 50 52.8	+0.4
	baz=65						
Q20K	Shuyak Island	87.50	330	P	P	09 50 53.4	+0.8
	baz=68						
P19K	Oil Pt	87.50	331	P	P	09 50 52.6	0.0
	baz=68						
RDOG	Red Dog Mine	87.56	341	P	P	09 50 53.3	+0.6
	baz=59						
N19K	Bonanza Creek	87.62	332	P	P	09 50 53.3	0.0
	baz=66						
E17K	Hotham Inlet	87.69	340	P	P	09 50 53.2	-0.1
	baz=60						
O19K	Port Alsworth	87.79	332	P	P	09 50 54.1	+0.2
	baz=66						
D17K	Noatak River	87.80	340	P	P	09 50 53.8	0.0
	baz=59						
F17K	Baldwin Pennin	87.81	339	P	P	09 50 54.6	+0.7
	baz=61						
VNA3	Neumayer Olymp	87.83	169	⇑P	P	09 50 53.7	0.0
	comp=Z,7.9nm,0.8s						
KDAK	Kodiak Island	87.90	329	LR	LR	10 28 55.2	
	comp=Z,239nm,19.4s,baz=87,slow=35						
KDAK	Kodiak Island	87.90	329	P	P	09 50 54.9	+0.5
	baz=68						
M18K	Stony River	87.93	333	P	P	09 50 55.9	+1.3
	baz=65						
Q19K	Cape Douglas,	87.97	331	P	P	09 50 55.5	+0.6
	baz=67						
VNA2	Neumayer--Watz	87.99	168	⇑P	P	09 50 55.1	+0.6
	comp=Z,1.7nm,0.8s,baz=306,slow=10						
L18K	Granite Mounta	88.00	334	P	P	09 50 55.4	+0.5
	baz=64						
H17K	Granite Mounta	88.05	337	P	P	09 50 55.9	+0.7
	baz=62						
G17K	Kiwalik Mounta	88.06	338	P	P	09 50 55.6	+0.5
	baz=61						
C16K	Lisburne Hills	88.21	341	P	P	09 50 56.1	+0.4
	baz=57						
N18K	Kilae Creek	88.30	333	P	P	09 50 56.0	-0.4
	baz=65						
O18K	Koktuh Hills	88.34	332	P	P	09 50 56.6	0.0
	baz=66,SNR=9.6						
K17K	Iditarod	88.45	335	P	P	09 50 57.2	+0.1
	baz=63						
J17K	VABM Dome	88.45	336	P	P	09 50 57.6	+0.6
	baz=62						
OHAK	Old Harbor	88.46	329	P	P	09 50 56.9	-0.2
	baz=67						
P18K	Big Mountain,	88.54	331	P	P	09 50 57.8	+0.3
	baz=66						
M17K	Holitna River	88.67	334	P	P	09 50 58.0	-0.1
	baz=64						
L17K	Donlin	88.71	334	P	P	09 50 59.2	+0.9
	baz=63						
G16K	Koyuk River	88.73	338	P	P	09 50 58.6	+0.3
	baz=60						
Q18K	Katmai Hardscr	88.74	331	P	P	09 50 58.3	-0.3
	baz=66						
I17K	Unalakleet	88.86	337	P	P	09 50 59.2	+0.3
	baz=61						
R18K	Karluk	88.91	329	P	P	09 51 00.1	+0.9
	baz=66						
N17K	Nushagak Hills	88.95	333	P	P	09 51 00.1	+0.7
	baz=64						
J16K	Anvik River	89.11	336	P	P	09 51 00.9	+0.8
	baz=61						
SII	Sitkinak Islan	89.18	329	P	P	09 51 00.4	-0.2
	baz=67						
P17K	Kvichak River	89.18	331	P	P	09 51 01.4	+0.9
	baz=65						
O17K	Koliganek Bris	89.24	332	P	P	09 51 01.2	+0.5
	baz=64						
ABKAR	Akbulak array	89.26	39		P	09 51 01.7	+0.6
Q17K	Contact Creek	89.32	330	P	P	09 51 01.5	+0.1
	baz=65						
F15K	North Star Dit	89.38	339	P	P	09 51 02.3	+0.9
	baz=58						
L16K	Owhat River	89.40	334	P	P	09 51 02.4	+0.9
	baz=62						
SNAA	Sanae	89.49	168	⇑P	P	09 51 01.1	-0.5
	comp=Z,68nm,0.8s						
SNAA	Sanae	89.49	168	P	P	09 51 01.4	-0.2
SNAA				IAmb	IAmb	09 51 04.5	
	comp=Z,8.9nm,1.2s						
SNAA	Sanae	89.49	168	P	P	09 51 00.4	-1.2
	comp=Z,3.5nm,1.1s,baz=311,slow=5.6,SNR=9.1						
SNAA				LR	LR	10 23 35.1	
	comp=Z,241nm,21.1s,baz=306,slow=31						
	comp=Z,3.5nm,1.1s						
M16K	Timber Creek	89.50	334	P	P	09 51 02.5	+0.5
	baz=62						
G15K	Niukluk	89.54	338	P	P	09 51 02.5	+0.4
	baz=58						
N16K	Nishlik Lake	89.67	333	P	P	09 51 03.2	+0.4
	baz=63						
O16K	Kokwok River B	89.77	332	P	P	09 51 04.4	+1.1
	baz=63						
K15K	Wolf Creek Mou	89.97	335	P	P	09 51 04.1	0.0
	baz=60						
P16K	Nushagak River	89.98	332	P	P	09 51 04.1	-0.1
	baz=63						
F14K	Arctic Creek	90.09	339	P	P	09 51 04.7	0.0
	baz=56						
CHIR	Chirikof Islan	90.21	328	P	P	09 51 05.6	+0.2
	baz=65						
ANM	Nome	90.26	338	P	P	09 51 05.8	+0.3
	baz=57						
L15K	Ungalak Mounta	90.26	335	P	P	09 51 05.7	+0.2
	baz=60						
N15K	Kwethluk River	90.40	333	P	P	09 51 06.6	+0.4
	baz=62						
M15K	Kasigluk River	90.40	334	P	P	09 51 06.8	+0.6
	baz=61						
R16K	Pilot Point	90.43	330	P	P	09 51 07.0	+0.6
	baz=64						
J14K	Nanvaranak Lak	90.55	336	P	P	09 51 07.6	+0.8
	baz=58						
TNA	Tin City	90.59	340	P	P	09 51 08.0	+1.1
	baz=54						
O15K	Ungalikthiuk R	90.75	332	P	P	09 51 07.9	0.0
	baz=62						
M14K	Bethel	90.92	334	P	P	09 51 09.4	+0.9
	baz=60						
L14K	Kuka Creek	90.92	335	P	P	09 51 09.2	+0.7
	baz=59						
N14K	Kuskokwak Cree	91.22	333	P	P	09 51 09.4	-0.5
	baz=60						
O14K	Tigyukauivet M	91.36	333	P	P	09 51 10.0	-0.6
	baz=60						
K13K	Kusilvak Mount	91.42	336	P	P	09 51 11.3	+0.4
	baz=58						
M13K	Dall Lake	91.68	334	P	P	09 51 12.0	-0.1
	baz=59						
S14K	Fog Glacier	91.98	330	P	P	09 51 13.5	-0.3
	baz=62						
CHNA	Chernabura Isl	92.68	328	P	P	09 51 16.8	-0.1
	baz=62						
SDPT	Sand Point	92.89	329	P	P	09 51 17.8	+0.1
	baz=61						
M11K	Mekoryuk	92.89	335	P	P	09 51 18.2	+0.5
	baz=56						
GAMB	Gambell	92.97	339	P	P	09 51 18.7	+0.7
	baz=51						
S12K	Black Hills	93.50	330	P	P	09 51 21.1	+0.4
	baz=60						
SPIA	Saint Paul Isl	96.47	333	P	P	09 51 34.8	+0.6
	baz=53						
P08K	Saint George I	96.51	333	P	P	09 51 34.9	+0.6
	baz=54						
TAOE	Nuku Hiva Isla	97.18	263	*e*LR	LR	10 23 07.4	
	comp=Z,208nm,30.6s						
NIKH	Nikolski High	98.32	330	P	P	09 51 42.3	-0.3
	baz=54						
PPT2	Papeete2	107.83	256	*e*LR	LR	10 28 04.3	
	comp=Z,136nm,24.2s						
PPT2				*e*LR	LR	10 28 06.7	
	comp=Z,130nm,36.8s						
WMQ	Urumqi	108.40	34	Pdif	Pdif	09 52 30.4	+2.6
WMQ				LR	LR		
	comp=Z,200nm,24.5s						
TBI	Tubuai	108.52	250	*e*LR	LR	10 28 25.4	
	comp=Z,770nm,37.8s						
VNDA	Vanda	114.55	186	PKP	PKiKP	09 56 41.3	-3.0
	comp=Z,0.7nm,0.6s,baz=90,slow=5.8,SNR=8.5						
HHC	Hu-ho-hao-te	121.66	21	*e*P	PKPdf	09 56 56.3	-3.0
PZH	PanZhiHua	128.63	39	PKP	PKiKP	09 57 13.6	-0.1
NJ2	Nanjing	132.08	19	*e*P	PKPdf	09 57 19.3	0.0
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CMAR	Chiang Mai Arr	132.19	49	PKP	PKPdf	09 57 19.6	-0.3
	comp=Z,0.7nm,0.4s,baz=27,slow=1.8,SNR=1.5						
DZM	Mont Dzumac	149.10	250	*e*LR	LR	10 47 05.0	
	comp=Z,144nm,25.8s						

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*IDC **10** 09:44:32.4±0.6, 13°.44N×44°.72W, h0km, mb3.9/15, mbtmp3.9/16, ML3.5/1, MS3.7/1, Error ellipse: s-maj=24.1km s-min=15.4km az=114.0*

*NEIC **10** 09:44:36.7±0.8, 13°.6N±0°.1×44°.9W±0°.1, h10km±1km, mb4.8/131, Error ellipse: s-maj=21.7km s-min=17.9km az=132.0*

ISC 10 09:44:36.1±0.5**, 13°.59N**±0°.08×**44°.97W**±0°.10**, h15**km**, n131,** σ**1s.59**/77**, mb4.8**/75**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDP	Montagnes des	11.33	223	Pn	Pn	09 47 14.9	-2.8
	0.3nm,0.3s,baz=38,slow=13,SNR=6.6						
	13nm,0.8s						
H05S1	Guadeloupe/Mar	15.43	275	T	T	10 04 07.6	
	SNR=12						
BOAV	Boa Vista	18.98	235	P	Pn	09 48 58.4	+0.4
BOAV	Boa Vista	18.98	235	*e*P	P	09 48 53.2	-4.0
PRPB	Parauapebas	20.22	194	*e*P	Pn	09 49 11.3	-1.4
ITTB	Itaituba	20.80	212	*e*P	P	09 49 17.2	+0.2
SJG	San Juan	20.86	285	LR	LR	09 58 02.6	
	comp=Z,190nm,18.5s,baz=100,slow=38						
SMTB	Santa Maria do	22.46	187	*e*P	P	09 49 38.6	+3.7
MACA	Manacapuru-AM	22.81	224	*e*P	P	09 49 37.2	-1.4
NPGB	Novo Progresso	22.95	207	*e*P	P	09 49 38.8	-1.3
BAUV	El Baul	23.09	261	P	P	09 49 42.8	+1.2
BAUV				IAmb	IAmb	09 49 54.8	
	comp=Z,31nm,0.8s						
SDBA	SAO DESIDERIO	25.83	180	*e*P	P	09 50 09.6	+2.4
TEFE	Tefe	25.88	230	*e*P	P	09 50 07.6	0.0
SNDB	Serra Nova Dou	26.16	194	*e*P	P	09 50 12.0	+1.8
JANB	Januaria	28.47	179	*e*P	P	09 50 33.8	+2.9
BDFB	Brasilia	29.20	186	P	P	09 50 37.8	+0.4
BDFB				IAmb	IAmb	09 50 43.4	
	comp=Z,13nm,0.9s						
BDFB	Brasilia	29.20	186	P	P	09 50 34.8	-2.6
	comp=Z,3.0nm,0.7s,baz=360,slow=11,SNR=3.1						
	comp=Z,3.0nm,0.7s						
BSCB	Bom Sucesso	34.37	180	*e*P	P	09 51 26.7	+3.9
CZSB	Cruzeiro do Su	34.75	234	*e*P	P	09 51 24.8	-1.3
AQDB	Aquidauana	35.46	198	P	P	09 51 32.3	+0.2
AQDB	Aquidauana	35.46	198	*e*P	P	09 51 33.7	+1.6
H10N3	ASCENSION HYDR	36.99	123	T	T	10 30 42.1	
	baz=305,slow=75,SNR=19						
H10N2	ASCENSION HYDR	36.99	123	T	T	10 30 42.4	
	baz=305,slow=75,SNR=21						
H10N1	ASCENSION HYDR	37.01	123	T	T	10 30 43.6	
	baz=305,slow=75,SNR=20						
MURT	Porto Murtinho	37.17	200	*e*P	P	09 51 48.3	+1.7
LDASE	Londrina, Braz	37.25	189	*e*P	P	09 51 51.0	+3.6
LPAZ	La Paz	37.49	218	P	P	09 51 47.5	-2.7
	comp=Z,1.2nm,0.7s,baz=27,slow=7.4,SNR=11						
	comp=Z,1.2nm,0.7s						
LPAZ	La Paz	37.49	218	*e*P	P	09 51 50.4	+0.1
H10S3	ASCENSION HYDR	37.50	125	T	T	10 31 24.7	
	baz=276,slow=74,SNR=17						
H10S2	ASCENSION HYDR	37.52	125	T	T	10 31 22.7	
	baz=304,slow=74,SNR=16						
CPUP	Villa Florida	41.47	197	P	P	09 52 20.4	-2.2
	comp=Z,0.2nm,0.5s,baz=271,slow=8.2,SNR=3.4						
	comp=Z,0.2nm,0.5s						
ESDC	Sonseca Array	44.37	46	P	P	09 52 43.3	-2.8
	comp=Z,0.9nm,0.8s,baz=257,slow=8.5,SNR=4.9						
	comp=Z,0.9nm,0.8s						
ACRG	Accra	44.77	96	P	P	09 52 49.5	0.0
BRDY	Brady	52.44	299	P	P	09 53 49.5	+1.1
HNDO	Hondo	52.50	297	P	P	09 53 49.8	+0.9
HNDO				IAmb	IAmb	09 53 56.5	
	comp=Z,19nm,1.7s						
APMT	Aspermont	53.64	301	P	P	09 53 57.0	-0.3
APMT				IAmb	IAmb	09 54 05.5	
	comp=Z,7.8nm,0.8s						
TXAR	Lajitas Array	56.30	296	P	P	09 54 18.0	+1.3
	comp=Z,0.6nm,0.9s,baz=122,slow=12,SNR=3.8						
TXAR				PcP	PcP	09 55 14.4	+0.3
	comp=Z,0.7nm,0.8s,baz=133,slow=5.5,SNR=4.2						
	comp=Z,0.6nm,0.9s						
VHRN	Van Horn	57.52	298	P	P	09 54 26.6	+1.2
MNTX	Cornudas Mount	57.91	299	P	P	09 54 28.2	+0.3
MNTX				IAmb	IAmb	09 54 35.3	
	comp=Z,20nm,1.9s						
PRED	Cave del Predi	58.69	44	P	P	09 54 33.9	+0.7
PRED				IAmb	IAmb	09 54 40.5	
	comp=Z,11nm,1.2s						
ISCO	Idaho Springs	58.93	308	P	P	09 54 35.7	+0.4
PLCA	Paso Flores	59.02	203	P	P	09 54 34.8	-0.8
	comp=Z,2.9nm,1.1s,baz=46,slow=4.0,SNR=3.2						
	comp=Z,2.9nm,1.1s						
PLCA	Paso Flores	59.02	203	*e*P	P	09 54 37.2	+1.7
S22A	4UR Ranch, Cre	59.61	306		P	09 54 42.1	+2.0
S22A				IAmb	IAmb	09 54 48.9	
	comp=Z,9.9nm,1.2s						
CLL	Collm	59.63	38	*e*P	P	09 54 40.0	+0.4
O20A	White River Ci	60.98	308	IAmb	IAmb	09 54 57.7	
	comp=Z,13nm,1.3s						
PV01	Paradox Valley	61.02	306	IAmb	IAmb	09 54 58.5	
	comp=Z,6.6nm,1.0s						
KRUC	Moravsky	61.16	41	*e*PKP	P	09 54 49.0	-1.0
PV02	Paradox Valley	61.16	306	P	P	09 54 52.6	+2.0
PV13	Radium Mtn., P	61.22	306	IAmb	IAmb	09 54 55.2	
	comp=Z,9.8nm,1.1s						
PV03	Paradox Valley	61.25	306	P	P	09 54 51.3	+0.2
PV16	Nyswonger Mesa	61.31	306	IAmb	IAmb	09 55 00.1	
	comp=Z,8.7nm,1.3s						
VRAC	Vranov	61.34	41	*e*PKP	P	09 54 50.1	-1.2
PV20	West Nyswonger	61.35	306	IAmb	IAmb	09 55 00.4	
	comp=Z,8.4nm,1.1s						
PV10	Paradox Valley	61.41	306	IAmb	IAmb	09 54 56.4	
	comp=Z,13nm,1.2s						
PV05	Paradox Valley	61.43	306	P	P	09 54 52.4	0.0
BLKN	Baker Lake	61.54	337	P	P	09 54 52.8	+0.6
BLKN				IAmb	IAmb	09 54 59.1	
	comp=Z,5.5nm,0.9s						
MORC	Moravsky Berou	62.04	41	*e*PKP	P	09 54 55.2	-0.9
BW06	Boulder Array	62.28	311	IAmb	IAmb	09 55 05.3	
	comp=Z,10nm,1.6s						
PDAR	Pinedale Array	62.28	311	P	P	09 54 58.9	+0.9
PDAR	Pinedale Array	62.28	311	P	P	09 54 59.1	+1.1
	comp=Z,1.4nm,1.0s,baz=95,slow=9.1,SNR=7.8						
	comp=Z,1.4nm,1.0s						
P18A	Preston Nutter	62.46	308	IAmb	IAmb	09 55 08.8	
	comp=Z,13nm,1.5s						
HMU	Henry Mountain	62.72	306	P	P	09 55 02.1	+1.0
HFS	Hagfors	62.92	29	P	P	09 55 01.1	-0.5
	comp=Z,1.4nm,0.6s,baz=30,slow=3.9,SNR=4.4						
	comp=Z,1.4nm,0.6s						
WUAZ	Wupatki	63.09	303	IAmb	IAmb	09 55 11.7	
	comp=Z,5.7nm,1.1s						
FXWY	Fox Creek	63.45	312	P	P	09 55 06.9	+1.1
YHL	Hebgen Lake	63.70	313	IAmb	IAmb	09 55 16.2	
	comp=Z,8.2nm,1.2s						
U15A	North Rim	63.87	304	IAmb	IAmb	09 55 17.9	
	comp=Z,14nm,1.4s						
DLMT	Dillon	64.75	314	IAmb	IAmb	09 55 22.6	
	comp=Z,14nm,1.4s						
PSUT	Pine Spring	65.19	306	IAmb	IAmb	09 55 26.1	
	comp=Z,5.7nm,1.1s						
SPR3	Spring Creek 3	65.58	307	IAmb	IAmb	09 55 28.6	
	comp=Z,12nm,1.4s						
ELK	Elko	66.35	309		P	09 55 26.0	+1.3
ELK				IAmb	IAmb	09 55 32.8	
	comp=Z,5.8nm,1.1s						
R11B	Troy Canyon, C	66.55	306	IAmb	IAmb	09 55 34.3	
	comp=Z,11nm,1.7s						
MFID	Camas Ranch	66.91	312	IAmb	IAmb	09 55 36.1	
	comp=Z,5.2nm,0.9s						
MLR	Muntele Rosu	67.06	46	P	P	09 55 29.9	+0.8
PLID	Pearl Lake	67.13	313	IAmb	IAmb	09 55 41.2	
	comp=Z,18nm,2.0s						
GSC	Goldstone, Bar	67.53	303	P	P	09 55 33.4	+1.2
NEW	Newport	68.11	317	P	P	09 55 36.4	+0.9
NEW				IAmb	IAmb	09 55 42.9	
	comp=Z,10nm,1.2s						
YKA	Yellowknife Ar	68.66	332	P	P	09 55 37.9	-0.7
	comp=Z,1.3nm,1.0s,baz=104,slow=6.6,SNR=12						
	comp=Z,1.3nm,1.0s						
NVAR	Mina Array Bea	68.68	306	P	P	09 55 39.4	-0.1
	comp=Z,0.5nm,0.9s,baz=91,slow=7.4,SNR=3.7						
	comp=Z,0.5nm,0.9s						
J08A	Circle Bar Ran	68.83	311	IAmb	IAmb	09 55 48.3	
	comp=Z,8.2nm,1.4s						
FIA1	FINESS Array S	69.11	29	P	P	09 55 42.8	+1.3
AKASG	Malin Array Be	69.59	41	P	P	09 55 41.8	-2.8
	comp=Z,0.2nm,0.3s,baz=267,slow=6.0,SNR=4.9						
	comp=Z,0.2nm,0.3s						
MXC	Moxie City	70.19	315	IAmb	IAmb	09 55 56.5	
	comp=Z,9.1nm,1.0s						
ARCES	ARCESS Array B	70.55	21	P	P	09 55 49.0	-1.3
	comp=Z,2.2nm,0.7s,baz=250,slow=7.2,SNR=4.0						
	comp=Z,2.2nm,0.7s						
BRTR	Keskin Array B	72.73	52	P	P	09 56 02.5	-1.6
	comp=Z,0.4nm,0.6s,baz=236,slow=13,SNR=3.7						
	comp=Z,0.4nm,0.6s						
R33M	Jennings River	76.39	328	IAmb	IAmb	09 56 33.3	
	comp=Z,12nm,1.3s						
FARO	Faro, Yukon	77.34	331	IAmb	IAmb	09 56 42.2	
	comp=Z,14nm,1.6s						
H31M	Peel River	77.46	335	IAmb	IAmb	09 56 32.1	
	comp=Z,14nm,1.4s						
H29M	Whitestone	79.05	336	IAmb	IAmb	09 56 47.0	
	comp=Z,13nm,1.2s						
G26K	Porcupine Rive	81.03	337	IAmb	IAmb	09 56 58.1	
	comp=Z,9.3nm,0.9s						
BCAR	Beaver Creek A	81.06	333	P	P	09 56 51.9	+1.4
D25K	Kavik River	81.38	339	IAmb	IAmb	09 57 00.3	
	comp=Z,13nm,1.0s						
E25K	Arctic Village	81.41	338	IAmb	IAmb	09 56 56.4	
	comp=Z,12nm,1.6s						
J26L	Joseph Creek	81.51	334	IAmb	IAmb	09 57 04.0	
	comp=Z,12nm,1.6s						
PRP	Porcupine Dome	82.07	336	IAmb	IAmb	09 57 04.0	
	comp=Z,9.4nm,1.0s						
TOLK	Toolik Lake Re	82.68	339	IAmb	IAmb	09 57 06.7	
	comp=Z,7.1nm,1.2s						
IL31		82.83	335	IAmb	IAmb	09 57 07.5	
	comp=Z,7.8nm,0.9s						
ILAR	Eielson Array	82.83	335	P	P	09 57 00.8	+1.1
	comp=Z,2.6nm,0.8s,baz=69,slow=4.4,SNR=24						
	comp=Z,2.6nm,0.8s						
H24K	Noodor Dome	82.91	336	P	P	09 57 00.9	+0.8
H24K				IAmb	IAmb	09 57 08.5	
	comp=Z,7.4nm,1.1s						
CCB	Clear Creek Bu	83.24	335	IAmb	IAmb	09 57 09.4	
	comp=Z,8.3nm,1.0s						
WRH	Wood River Hil	83.41	335	P	P	09 57 03.8	+1.2
G23K	Bananza Creek	83.47	337	IAmb	IAmb	09 57 11.4	
	comp=Z,5.4nm,1.0s						
H23K	Yukon River	83.57	336	IAmb	IAmb	09 57 11.4	
	comp=Z,6.6nm,1.0s						
E22K	Anaktuvuk Pass	83.63	339	IAmb	IAmb	09 57 11.9	
	comp=Z,8.4nm,1.2s						
D22K	Ayikyak River	83.66	340	P	P	09 57 05.3	+1.4
D22K				IAmb	IAmb	09 57 12.1	
	comp=Z,7.4nm,1.1s						
I23K	Minto, Yukon-K	83.72	336	P	P	09 57 05.5	+1.4
I23K				IAmb	IAmb	09 57 11.6	
	comp=Z,7.1nm,1.0s						
B21K	Ikpikpuk River	84.02	341	IAmb	IAmb	09 57 14.3	
	comp=Z,7.8nm,1.1s						
MLY	Manley	84.31	336	IAmb	IAmb	09 57 15.0	
	comp=Z,6.9nm,1.1s						
GHO	Glory Hole Cre	84.61	332	IAmb	IAmb	09 57 16.9	
	comp=Z,7.6nm,1.0s						
TRF	Thorofare Moun	84.66	334	IAmb	IAmb	09 57 16.6	
	comp=Z,7.7nm,0.9s						
BPAW	Bear Paw Mtn.	84.73	335	IAmb	IAmb	09 57 16.7	
	comp=Z,5.6nm,0.8s						
KTH	Kantishna Hill	84.89	334		P	09 57 11.5	+1.2
H21K	Melozitna Rive	84.89	337	P	P	09 57 11.8	+1.6
D20K	Etivluk River	85.04	340	IAmb	IAmb	09 57 19.3	
	comp=Z,8.7nm,1.0s						
IMAR	Indian Mountai	85.13	337	P	P	09 57 12.8	+1.4
SKT	Skwentna	85.70	333	IAmb	IAmb	09 57 22.1	
	comp=Z,12nm,1.2s						
C19K	Lookout Ridge	85.83	341	P	P	09 57 16.3	+1.4
F19K	Shaleruckik Mo	86.25	339	IAmb	IAmb	09 57 24.1	
	comp=Z,11nm,1.4s						
G19K	Purcell Mounta	86.31	338	IAmb	IAmb	09 57 20.2	
	comp=Z,11nm,1.4s						
H19K	Roundabout Mou	86.33	337	IAmb	IAmb	09 57 19.4	
	comp=Z,8.8nm,1.4s						
J19K	Poorman	86.65	336	IAmb	IAmb	09 57 30.8	
	comp=Z,8.4nm,1.2s						
H18K	Honhosa River	87.22	337	P	P	09 57 22.5	+0.8
J18K	Innoko River	87.32	335		P	09 57 23.6	+1.4
J18K				IAmb	IAmb	09 57 29.6	
	comp=Z,6.0nm,1.1s						
G16K	Koyuk River	88.58	338	IAmb	IAmb	09 57 36.6	
	comp=Z,6.6nm,0.9s						
SNAA	Sanae	89.62	168	P	P	09 57 32.4	-0.5
SNAA				IAmb	IAmb	09 57 39.2	
	comp=Z,5.8nm,0.9s						
SNAA	Sanae	89.62	168	P	P	09 57 32.1	-0.8
	comp=Z,0.7nm,0.7s,baz=331,slow=7.6,SNR=3.0						
	comp=Z,0.7nm,0.7s						
BELA	Belgrano 2	91.49	178	P	P	09 57 44.2	+2.8
BELA				IAmb	IAmb	09 57 47.4	
	comp=Z,9.4nm,1.5s						
WMQ	Urumqi	108.41	34	Pdif	Pdif	09 59 01.0	+2.5
WMQ				LR	LR		
	comp=Z,350nm,24.1s						
PZH	PanZhiHua	128.66	39	PKP	PKiKP	10 03 43.7	-0.7
CMAR	Chiang Mai Arr	132.25	49	PKP	PKPdf	10 03 50.1	-0.4
	comp=Z,1.1nm,0.3s,baz=337,slow=4.0,SNR=4.7						

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*ASRS **10** 09:45:35.0±0.6, 54°.57N×86°.49E, h0km, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 10 09:45:37.6±4.0**, 54°.60N×86°.43E, h0**km**, mbtmp2.5**/1**, ML2.6**/1**, Error ellipse: s-maj=29.2km s-min=17.5km az=42.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.15	236	I	I	09 52 50.0	
	baz=57,slow=329,SNR=1.3						
ZALV	Zalesovo Beam	1.15	236	Pg	Pg	09 45 58.6	-1.0
	1.0nm,0.3s,baz=54,slow=20,SNR=11						
ZALV				Lg	Lg	09 46 15.6	
	2.6nm,0.3s,baz=54,slow=27,SNR=13						
KURBB	Kurchatov Arra	6.24	234	Lg	Lg	09 48 57.4	
	baz=53,slow=32,SNR=2.4						
MKAR	Makanchi Array	8.24	200	Pn	Pn	09 47 39.6	+1.2
	0.1nm,0.3s,baz=19,slow=12,SNR=5.3						
MKAR				Lg	Lg	09 50 01.2	

baz=16,slow=36,SNR=2.7
0.1nm,0.4s

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*ZUR **10** 09:54:15.7, 48.°27N×7.°29E, h1^{km}±1^{km}, MLh3.1/67, Error ellipse: s-maj=3050.7km s-min=1009.2km az=91.0*
*STR **10** 09:54:16.6±0.3, 48°N±1°×°±°, h5^{km}, MLv3.0/8, Error ellipse: s-maj=0.0km s-min=0.0km az=111.8, preliminary*
*LDG **10** 09:54:16.4±0.0, 48.°23N×7.°26E, h4^{km}, Md3.4/2, Ml3.4/37, Error ellipse: s-maj=1.0km s-min=0.8km az=149.0*
*BGR **10** 09:54:16.3±0.2, 48.°27N×7.°25E, h10^{km}, ML3.0/14, Error ellipse: s-maj=2.2km s-min=1.1km az=65.0*
*BNS **10** 09:54:16.9±0.6, 48.°28N×7.°30E, h0^{km}±8^{km}, ML2.6*
*BUG **10** 09:54:18.3±0.8, 48.°46N×7.°37E, h0^{km}, MD3.6/8, ML3.5/8*
*PRU **10** 09:54:19.1, 48.°13N×7.°59E, h13^{km}*
ISC 10 09:54:14.8±0.7**, 48.°22N**±0.°01×**7.°24E**±0.°01**, h13**^{km}±4^{km}**,**
n191, σ1^{s}.50/328**, 5C-28D, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECH	Echery	0.06	263	⇑Pg	Pg	09 54 18.1	+0.6
ECH				Sg	Sg	09 54 19.4	+0.1
ECH	Echery	0.06	263	Pg	Pg	09 54 18.0	+0.6
ECH				Sg	Sg	09 54 19.3	0.0
ECH	Echery	0.06	263	ePg	Pg	09 54 18.1	+0.6
ECH				eSg	Sg	09 54 18.9	-0.4
WLS	Welschbruch	0.20	21	Pg	Pg	09 54 19.8	+0.4
WLS				Sg	Sg	09 54 22.4	-0.1
WLS	Welschbruch	0.20	21	⇓iPg	Pg	09 54 19.8	+0.4
WLS				Sg	Sg	09 54 22.4	-0.1
WALT	Westhalten	0.26	175	Pg	Pb	09 54 21.7	+0.5
WALT				Sg	Sb	09 54 25.5	-0.1
ZELS	Zelsheim	0.27	73	Pg	Pb	09 54 21.4	-0.1
ZELS				Sg	Sb	09 54 25.3	-0.7
BREI	Breisach am Rh	0.30	129	Sg	Sb	09 54 27.1	+0.3
VOGT	Vogtsburg - To	0.32	116	Pg	Pb	09 54 22.5	+0.2
VOGT				Sg	Sb	09 54 26.8	-0.6
VOGT	Vogtsburg - To	0.32	116	⇓Pg	Pb	09 54 22.5	+0.2
VOGT				Sg	Sb	09 54 26.8	-0.6
XAFF	Xaffevillers	0.46	294	Pg	Pb	09 54 25.5	+0.9
XAFF				Sg	Sb	09 54 31.9	+0.6
HOHE	HOHENGOEFT	0.47	20	Pg	Pb	09 54 24.8	0.0
HOHE				Sg	Sg	09 54 30.8	+0.6
HINF	Hinteralfeld	0.48	213	ePg	Pb	09 54 26.0	+0.9
HINF				eSg	Sb	09 54 32.3	+0.2
	780nm,0.4s						
STAU	Staufen im Bre	0.49	137	Pg	Pb	09 54 25.7	+0.5
STR	Strasbourg	0.50	44	Pg	Pb	09 54 25.8	+0.3
STR				Sg	Sb	09 54 32.7	+0.1
KIZ	Kirchzarten	0.53	120	Pg	Pb	09 54 26.1	+0.3
KIZ	Kirchzarten	0.53	120	Pg	Pb	09 54 26.1	+0.3
ILLF	Illfurth	0.54	179	Pg	Pn	09 54 27.8	-0.4
ENDD	Endenburg	0.61	147	⇓Pg	Pb	09 54 27.9	+0.6
ENDD	Endenburg	0.61	147	⇓Pg	Pb	09 54 27.9	+0.6
FELD	Feldberg im Sc	0.62	124	Pg	Pb	09 54 27.8	+0.3
HAU	Haudompre	0.64	250	ePg	Pb	09 54 28.0	+0.2
HAU	Haudompre	0.64	250	ePg	Pb	09 54 28.8	+1.0
HAU				eSg	Sb	09 54 36.8	+0.2
HAU				eSn	Sn	09 54 40.9	+1.4
	1µm,0.3s						
OPP	Oppenau	0.69	66	⇑Pg	Pb	09 54 28.7	+0.1
OPP				PmP		09 54 29.8	
OPP				Sg	Sg	09 54 37.4	+0.3
OTER2	Otterbach 2 (B	0.69	159	Pg	Pn	09 54 30.4	+0.2
BERGE	Lenzkirch (DE)	0.72	119	Pg	Pb	09 54 29.6	+0.4
BERGE	Lenzkirch (DE)	0.72	119	ePg	Pn	09 54 30.9	+0.2
BERGE				eSg	Sn	09 54 40.6	-1.0
BERGE				SmS		09 54 42.5	
SBIS2	Binningen	0.72	161	Pg	Pn	09 54 31.4	+0.8
BFO	Black Forest	0.73	81	Pg	Pb	09 54 29.6	+0.2
BFO	Black Forest	0.73	81	⇑Pg	Pb	09 54 29.6	+0.2
BFO				eSg	Sb	09 54 39.0	-0.4
SKAF	Kaiseraugst-Fr	0.76	155	Pg	Pn	09 54 31.7	+0.6
SAUR	Augst-Roemermu	0.76	155	Pg	Pn	09 54 31.6	+0.4
BABA	Baden-Baden-Ne	0.80	52	⇓Pg	Pb	09 54 30.8	+0.2
BABA				PmP		09 54 32.6	
BOURR	Bourrignon	0.83	181	Pg	Pn	09 54 33.0	+0.8
BOURR	Bourrignon	0.83	181	Pg	Pn	09 54 33.0	+0.8
BOURR				Sg	Sn	09 54 44.9	+0.6
MTI02	Mont Terri, (H	0.85	184	Pg	Pn	09 54 33.5	+1.2
METMA	Mettma DE	0.85	127	Pg	Pn	09 54 32.7	+0.3
METMA	Mettma DE	0.85	127	ePg	Pn	09 54 33.2	+0.8
METMA				eSg	Sn	09 54 43.7	-1.1
PEB	Petersbachel	0.89	19	⇓Pg	Pb	09 54 32.5	+0.4
PEB				Sg	Sb	09 54 44.1	+0.2
BALST	Balsthal	0.94	161	ePg	Pn	09 54 35.2	+1.5
BALST				eSg	Sn	09 54 47.7	+0.7
SLE	Schleitheim	0.96	118	ePg	Pn	09 54 34.8	+0.9
SLE				eSg	Sn	09 54 47.3	0.0
ROTE	Rottweil	0.96	94	Pg	Pn	09 54 34.3	+0.4
ROTE				Sg	Sn	09 54 47.4	0.0
BOBI	Bbikon, Wasse	1.00	132	Pg	Pn	09 54 35.5	+1.0
CHMF	Charmoille	1.05	202	⇑Pn	Pn	09 54 36.5	+1.2
CHMF				Sn	Sn	09 54 51.4	+1.6
PAGF	Fort de Pagny	1.06	289	ePg	Pg	09 54 37.0	+1.7
PAGF				eSn	Sn	09 54 51.5	+1.5
	479nm,0.3s						
ROTT	Steinweiler	1.09	33	ePg	Pg	09 54 36.1	+0.4
EMING	Emmingen-Lipti	1.12	107	ePg	Pg	09 54 37.6	+1.2
EMING				eSg	Sn	09 54 52.2	+0.7
LDE	Landau	1.12	32	ePg	Pg	09 54 37.0	+0.5
LDE				eSg	Sg	09 54 51.2	+0.2
A100A	Rottenburg, We	1.15	78	Pg	Pg	09 54 37.3	+0.4
A100A				Sg	Sn	09 54 52.6	+0.5
MSS	Messtetten	1.15	92	ePn	Pg	09 54 37.3	+0.4
MSS	Messtetten	1.15	92	Pn	Pg	09 54 37.3	+0.4
MSS				Pg	Pn	09 54 37.7	+1.1
GALG	Neuhausen (Enz	1.17	61	Pn	Pn	09 54 37.0	+0.2
GALG				Pg	Pg	09 54 38.1	+0.8
GALG				Sg	Sn	09 54 53.0	+0.4
STEIN	Stein am Rhein	1.23	116	Pn	Pg	09 54 39.5	+1.2
STEIN				Pg	Pb	09 54 40.0	+2.3
KTD	Kalmit	1.23	27	Pn	Pn	09 54 37.7	+0.1
KTD				ePg	Pg	09 54 39.2	+0.7
KTD				eSg	Sg	09 54 54.5	+0.1
BRET	Bretten	1.24	50	Pn	Pb	09 54 38.2	+0.1
GUT	Gutenstein	1.26	96	⇓Pn	Pg	09 54 38.9	-0.2
GUT				Pg	Pb	09 54 40.1	+1.7
GUT				Sg	Sg	09 54 56.7	+1.2
FREU	Neufra-Freuden	1.27	89	⇑Pn	Pb	09 54 38.6	+0.1
FREU				Pg	Pg	09 54 39.3	+0.2
A102A	Sigmaringen, J	1.31	93	Pg	Pb	09 54 39.5	+0.3
A102A				Sg	Sg	09 54 58.0	+0.9
WALHA	Wallhausen, DE	1.35	110	⇓Pn	Pg	09 54 41.4	+0.7
WALHA				ePg	Pb	09 54 42.0	+2.1
WALHA				eSg	Sg	09 54 58.7	+0.5
WILA	Wila	1.38	125	ePg	Pg	09 54 43.0	+1.6
WILA				eSg	Sg	09 55 01.0	+1.7
STU	Stuttgart	1.41	66	ePg	Pg	09 54 42.6	+0.8
STU				eSg	Sg	09 54 59.8	-0.4
BUCH	Bad Urach	1.43	80	Sg	Sg	09 55 01.6	+0.9
IMS	Imsbach	1.44	17	Pn	Pn	09 54 40.4	-0.1
IMS				Pg	Pg	09 54 42.7	+0.3
SAVF	Savonnieres en	1.46	286	ePn	Pb	09 54 42.1	+0.3
	baz=105						
SAVF	Savonnieres en	1.46	286	ePg	Pg	09 54 43.5	+0.6
SAVF	Savonnieres en	1.46	286	eP	Pg	09 54 43.8	+0.9
SAVF				eSn	Sb	09 55 00.6	+0.3
	112nm,0.2s						
SAVF				eSg	Sg	09 55 02.3	+0.4
	135nm,0.2s						
SFTF	Sexfontaines	1.47	270	ePn	Pb	09 54 42.3	+0.3
	baz=99						
SFTF	Sexfontaines	1.47	270	ePg	Pg	09 54 43.9	+0.8
SFTF				eSg	Sg	09 55 04.1	+1.9
	62nm,0.1s						
MEZF	Maizieres J'vi	1.49	282	ePg	Pg	09 54 44.3	+1.0
	baz=101						
MEZF				eSn	Sb	09 55 01.3	+0.3
	219nm,0.5s						
A109A	Bad Urach, See	1.50	81	Pg	Pb	09 54 42.6	+0.3
A109A				Sg	Sg	09 55 03.6	+0.7
WMG	Wormeldange-Ha	1.50	338	Pg	Pg	09 54 44.4	+0.8
RIVT	Riveris	1.52	348	ePn	Pb	09 54 43.1	+0.3
RIVT				ePg	Pg	09 54 44.6	+0.7
RIVT				eSg	Sg	09 55 03.7	0.0
A103D	Ravensburg, Wa	1.61	104	Pg	Pg	09 54 46.8	+1.2
A103D				Sn	Sb	09 55 04.5	+0.1
A103D				Sg	Sg	09 55 08.0	+1.5
WLF	Walferdange	1.61	334	dP	Pb	09 54 45.0	+0.7
WLF				dS	Sg	09 55 06.9	+0.2
WLF	Walferdange	1.61	334	ePg	Pg	09 54 46.2	+0.5
WLF				eSg	Sg	09 55 06.1	-0.6
A104C	Biberach, Ahle	1.62	93	Pn	Pg	09 54 45.7	-0.2
A104C				Sg	Sg	09 55 07.6	+0.7
ABH	Alteburg	1.67	7	Pn	Pn	09 54 44.5	+0.8
ABH				ePg	Pg	09 54 46.6	-0.2
ABH				eSg	Sg	09 55 08.4	-0.1
URBA	Urbach, Forsts	1.68	68	Pn	Pn	09 54 44.1	+0.3
URBA				Pg	Pg	09 54 47.4	+0.5
DEGG	Deggingen-Nord	1.69	76	Pn	Pn	09 54 44.7	+0.7
TETT	Tettnang	1.69	109	Pg	Pg	09 54 48.4	+1.2
TETT				Sg	Sg	09 55 10.7	+1.5
A108A	Ulm, Ringingen	1.73	85	Pn	Pb	09 54 46.7	+0.3
WBA	Furth	1.77	35	⇓Pn	Pn	09 54 44.5	-0.6
WBA				Sg	Sg	09 55 12.3	+0.6
CABF	La Chapelle	1.79	206	ePn	Pb	09 54 46.9	-0.6
CABF	La Chapelle	1.79	206	ePg	Pg	09 54 49.9	+0.7
CABF				eSn	Sn	09 55 09.1	+1.0
	131nm,0.5s						
BODE	Bodenheim	1.83	22	ePg	Pg	09 54 49.5	-0.3
BODE				eSg	Sb	09 55 12.2	+1.5
PLONS	Plons/SG	1.86	128	ePn	Pb	09 54 49.0	+0.3
SIND	Sindeldorf	1.93	53	Pn	Pn	09 54 47.4	+0.2
GWBD	Espenschied/He	1.94	13	Sg	Sg	09 55 16.3	-0.9
GWBE	Wiesbaden	1.98	18	⇓Pn	Pn	09 54 48.4	+0.4
GWBE				Sg	Sg	09 55 17.3	-1.3
A107C	Memmingen - Ei	1.99	95	Pg	Pg	09 54 54.1	+1.1
HDH	Heidenheim-Cha	2.01	79	Pg	Pg	09 54 53.7	+0.5
HDH				Sg	Sg	09 55 18.7	-0.6
DAVA	Damuels	2.01	117	ePn	Pb	09 54 51.0	-0.2
	5.4nm,0.2s						
DAVA				eSn	Sb	09 55 17.5	+1.3
	54nm,0.5s						
LOH	Wallersheim-Lo	2.02	347	⇓Pg	Pg	09 54 53.9	+0.4
NAST	IGS Nastaetten	2.02	11	eSn	Sn	09 55 14.9	+1.5
	47nm,0.4s						
TNS	Taunus Mts	2.15	21	ePn	Pn	09 54 50.5	+0.1
TNS				ePg	Pg	09 54 55.1	-0.9
TNS				Sg	Sg	09 55 22.2	-1.7
WOER	Woert	2.16	67	Pg	Pg	09 54 56.5	+0.4
WOER				Sg	Sg	09 55 23.4	-0.7
FACH	Fachingen	2.19	13	Pg	Pg	09 54 56.4	-0.3
A105A	Obersdorf, Sch	2.21	111	Pg	Pg	09 54 59.4	+2.2
OBER	Oberstdorf	2.21	111	ePg	Pg	09 54 58.5	+1.3
KOE	Koeppel	2.23	8	ePn	Pn	09 54 52.6	+1.3
KOE				eSn	Sn	09 55 20.1	+1.3
	54nm,0.6s						
NORI	Noerdlinger Ri	2.31	76	ePn	Pn	09 54 53.5	+1.0
NORI				ePg	Pg	09 54 59.3	+0.3
STB	Steinbach	2.39	354	ePn	Pn	09 54 55.5	+1.9
GIVF	Givet	2.46	321	eP	Pb	09 54 57.9	-0.9
GIVF	Givet	2.46	321	ePg	Pg	09 55 02.1	+0.2
GIVF				eSg	Sg	09 55 32.4	-1.4
	55nm,0.3s						
BTNL	Ternell	2.48	343	dP	Pn	09 54 56.5	+1.7
LOR	Lormes	2.48	249	ePn	Pn	09 54 55.4	+0.6
	baz=79						
LOR	Lormes	2.48	249	ePg	Pg	09 55 02.5	+0.3
	baz=76						
LOR				eSg	Sg	09 55 34.4	+0.1
	76nm,0.3s						
RETA	Reutte	2.48	106	ePn	Pb	09 54 57.7	-1.5
	2.7nm,0.2s						
RETA				Sn	Sb	09 55 29.0	-0.7
	44nm,0.5s						
KLL	Kalltalsperre	2.50	346	ePn	Pn	09 54 56.5	+1.3
KLL				eSn	Sn	09 55 26.5	+1.1
	12nm,0.5s						
MEM	Membach	2.52	342	dP	Pn	09 54 57.1	+1.8
MEM				dPP	Pg	09 55 05.8	+2.8
MEM				dS	Sn	09 55 27.1	+1.2
DREG	Dreilaegerbach	2.53	345	ePn	Pn	09 54 57.3	+1.8
DREG				eSn	Sn	09 55 27.5	+1.3
	15nm,0.3s						
BCLA	Clavier	2.54	331	dP	Pn	09 54 57.6	+2.0
BCLA				dx	x	09 55 05.9	
DOU	Dourbes	2.56	318	dP	Pb	09 54 58.5	-1.9
DOU				dx	x	09 55 06.7	
DOU				dS	Sb	09 55 31.7	0.0
BGES	Gesves	2.58	328	dP	Pb	09 54 59.4	-1.5
BGES				dS	Sn	09 55 29.4	+2.0
BSTI	Sart Tilman	2.60	336	dP	Pn	09 54 57.1	+0.6
BSTI				dPP	Pg	09 55 06.9	+2.3
BMRD	Maredsous	2.64	323	dP	Pn	09 54 58.2	+1.2
BMRD				dS	Sn	09 55 30.6	+1.8
FETA	Feichten	2.65	116	ePn	Pb	09 55 00.7	-1.4
	0.5nm,0.3s						
FETA				Sn	Sb	09 55 33.0	-1.6
	3.9nm,0.3s						
BAIF	Baives	2.71	314	eP	Pb	09 55 01.3	-1.8
BAIF	Baives	2.71	314	ePg	Pg	09 55 06.2	-0.5
BAIF				eSg	Sg	09 55 41.3	-0.5
	32nm,0.4s						
LPL	La Plagne	2.73	188	ePn	Pn	09 54 59.2	+0.7
LPL	La Plagne	2.73	188	ePg	Pg	09 55 07.2	+0.1
LPL				eSn	Sn	09 55 30.5	-0.9
LPL				eSg	Sg	09 55 42.2	-0.3
	24nm,0.5s						
BNS	Bensberg	2.74	359	ePn	Pn	09 55 00.3	+1.9
MOTA	Moosalm	2.75	107	i Pn	Pb	09 55 01.3	-2.5
	1.3nm,0.1s,SNR=5.7						
MOTA				eSn	Sb	09 55 35.2	-2.2
	35nm,0.2s						
HOBG	Hohbusch	2.76	1	ePn	Pn	09 55 00.2	+1.5
SSF	Saint Saulge	2.78	247	ePn	Pn	09 54 59.6	+0.7
SSF	Saint Saulge	2.78	247	ePg	Pg	09 55 07.8	-0.2
SSF				eSg	Sg	09 55 44.1	0.0
	110nm,0.4s						
SMF	Signal de Mont	2.80	237	ePn	Pn	09 54 59.5	+0.3
SMF	Signal de Mont	2.80	237	ePg	Pg	09 55 09.4	+1.1
SMF				eSn	Sn	09 55 33.1	+0.4
SMF				eSg	Sg	09 55 44.7	+0.1
	64nm,0.3s						
SQTA	Sankt Quirin	2.86	109	i Pn	Pn	09 55 01.5	+1.4
	0.6nm,0.1s						
SQTA				Sn	Sb	09 55 38.7	-1.9
	30nm,0.3s						
AVF	Avril sur Loir	3.00	243	ePn	Pn	09 55 02.4	+0.5
AVF	Avril sur Loir	3.00	243	ePg	Pg	09 55 12.9	+0.7
AVF				eSg	Sg	09 55 50.9	-0.2
	16nm,0.3s						
GRFO	Grafenberg	3.00	59	ePg	Pg	09 55 12.9	+0.6
GRF	Grafenberg Arr	3.01	59	ePg	Pg	09 55 12.4	0.0
GRF				eSg	Sg	09 55 49.5	-1.8
WATA	Walderalm	3.06	105	i Pn	Pn	09 55 05.6	+2.7
	0.7nm,0.1s						
WATA				eSn	Sb	09 55 42.7	-3.5
	12nm,0.3s						
WTTA	Wattenberg	3.12	106	i Pn	Pb	09 55 07.4	-2.7
	0.9nm,0.1s						
WTTA				i Sn	Sn	09 55 43.2	+2.3
	4.8nm,0.3s						
HYF	Humbligny	3.25	255	ePn	Pn	09 55 06.6	+1.2
HYF	Humbligny	3.25	255	ePg	Pg	09 55 16.1	-0.9
HYF				eSn	Sn	09 55 43.9	0.0
HYF				eSg	Sg	09 55 59.8	+0.7
BGF	Bois d'Agland	3.42	242	ePn	Pn	09 55 08.1	+0.4
BGF	Bois d'Agland	3.42	242	ePg	Pg	09 55 20.6	+0.3
BGF				eSg	Sg	09 56 04.7	+0.2
	77nm,0.4s						
ORIF	Oris-en-Rattie	3.44	196	ePn	Pn	09 55 09.0	+1.0
ORIF				eSg	Sg	09 56 04.6	-0.5
	21nm,0.3s						
MBDF	Montbardon	3.51	185	eP	Pn	09 55 12.9	+3.8
MBDF				eSg	Sg	09 56 07.0	-0.5
	34nm,0.8s						
LESA	Schwarzleotal	3.75	100	i Pn	Pn	09 55 15.8	+3.5
	3.0nm,0.2s,SNR=8.7						
LESA				i Sn	Sn	09 55 58.3	+2.0
	1.6nm,0.2s						
VIVF	Saint-Julien-l	3.81	209	ePn	Pn	09 55 13.0	-0.1
VIVF	Saint-Julien-l	3.81	209	ePg	Pg	09 55 27.2	-0.5
VIVF				eSn	Sn	09 55 56.5	-1.2
VIVF				eSg	Sg	09 56 15.9	-1.0
	16nm,0.2s						
ABTA	Abfaltersbach	3.87	110	i Pn	Pb	09 55 18.8	-4.1
	2.2nm,0.3s						
ABTA				i Sn	Sn	09 56 03.6	+4.4
	1.2nm,0.2s						
TCF	Toulx Ste Croi	3.94	242	ePn	Pn	09 55 15.9	+1.1
TCF	Toulx Ste Croi	3.94	242	ePg	Pg	09 55 29.3	-0.8
TCF				eSg	Sg	09 56 19.9	-1.2
	5.6nm,0.2s						
NKC	Novy Kostel	3.96	58	eSG	Sg	09 56 18.5	-3.4
	comp=Z,30nm,0.6s						
KBA	Koelnbreinsper	4.28	103	i Pn	Pn	09 55 23.4	+3.7
	1.4nm,0.3s						
KBA				eSn	Sn	09 56 10.5	+0.9
	2.9nm,0.4s						
KHC	Kasperske Hory	4.29	75	ePN	Pn	09 55 22.1	+2.3
KHC				ePG	Pg	09 55 34.3	-2.7
KHC				eSN	Sn	09 56 07.2	-2.5
KHC				eSG	Sg	09 56 30.6	-2.0
	comp=Z,12nm,0.4s						
BIOA	Bad Ischl, Aus	4.33	95	i Pn	Pn	09 55 21.5	+1.3
	2.8nm,0.3s						
BIOA				eSn	Sn	09 56 15.4	+4.8
	27nm,0.6s						
SMRF	Simiane la Rot	4.40	196	ePn	Pn	09 55 22.5	+1.2
HSKC	Hora Svate Kat	4.69	57	eSG	Sg	09 56 41.0	-4.3
	comp=Z,12nm,0.4s						
MOA	Molln	4.73	92	i Pn	Pn	09 55 28.2	+2.5
	0.3nm,0.2s						
MOA				i Sn	Sn	09 56 21.0	+0.7
	0.5nm,0.2s						
CKRC	Cesky Krumlov	4.74	80	eSG	Sg	09 56 45.3	-1.4
	comp=Z,12nm,0.6s						
ZVC	Zvikov	4.75	73	eSG	Sg	09 56 43.8	-3.3
	comp=Z,9.2nm,0.6s						
LASF	Ste Croix	4.77	211	ePn	Pn	09 55 26.2	-0.1
LASF	Ste Croix	4.77	211	ePg	Pg	09 55 45.1	-1.0
LASF				eSg	Sg	09 56 45.8	-2.0
	29nm,0.7s						
CLL	Collm	4.84	48	ePn	Pn	09 55 29.0	+1.7
CLL				ePg	Pg	09 55 46.0	-1.5
CLL				eSn	Sn	09 56 12.0	-11
CLL				eSg	Sg	09 56 47.0	-3.2
	comp=Z,13nm,0.9s						
CAF	Calviac	4.86	229	ePn	Pn	09 55 28.0	+0.5
CAF	Calviac	4.86	229	ePg	Pg	09 55 47.5	-0.3
CAF				eSg	Sg	09 56 49.0	-1.7
	comp=Z,11nm,0.4s						
RJF	Les Rejaudoux	4.90	236	ePn	Pn	09 55 29.3	+1.2
RJF	Les Rejaudoux	4.90	236	ePg	Pg	09 55 48.5	0.0
RJF				eSg	Sg	09 56 50.3	-1.7
	comp=Z,21nm,0.4s						
LMR	La Mourre	4.92	186	ePn	Pn	09 55 28.7	+0.4
LMR				eSn	Sn	09 56 23.5	-1.5
LDF	La Druitiere	4.92	277	ePn	Pn	09 55 30.0	+1.7
LDF	La Druitiere	4.92	277	ePg	Pg	09 55 47.6	-1.3
LDF				eSn	Sn	09 56 22.5	-2.5
LDF				eSg	Sg	09 56 50.6	-2.0
	comp=Z,23nm,0.5s						
BRG	Berggiesshubel	5.10	56	Pg	Pg	09 55 53.1	+0.6
BRG				Sg	Sg	09 56 55.6	-2.9
BRG				Amp		09 57 05.9	
	comp=Z,8.0nm,0.4s						
PRU	Pruhonice	5.11	67	eSG	Sg	09 56 54.9	-3.8
	comp=Z,9.1nm,0.6s						
FLN	La Foliniere	5.16	279	ePn	Pn	09 55 33.3	+1.6
	baz=110						
FLN	La Foliniere	5.16	279	ePg	Pg	09 55 52.0	-1.6
FLN				eSn	Sn	09 56 29.0	-2.0
FLN				eSg	Sg	09 56 58.6	-1.8
	comp=Z,14nm,0.4s						
OBKA	Obir	5.25	106	i Pn	Pn	09 55 36.9	+3.9
	comp=Z,0.4nm,0.3s						
OBKA				eSn	Sn	09 56 37.1	+3.7
	comp=Z,3.3nm,0.6s						
MFF	Saint Martin d	5.27	255	ePn	Pn	09 55 33.6	+0.5
MFF	Saint Martin d	5.27	255	ePn	Pn	09 55 33.7	+0.6
MFF	Saint Martin d	5.27	255	ePg	Pg	09 55 53.7	-2.0
MFF	Saint Martin d	5.27	255	ePg	Pg	09 55 54.0	-1.7
MFF				eSn	Sn	09 56 31.2	-2.5
	comp=Z,6.2nm,0.3s						
MFF				eSn	Sn	09 56 31.4	-2.3
	comp=Z,1.7nm,0.2s						
MFF				eSg	Sg	09 57 01.6	-2.3
	comp=Z,11nm,0.6s						
MFF				eSg	Sb	09 57 01.7	+12
	comp=Z,2.7nm,0.4s						
GRR	Gorron	5.41	275	ePn	Pn	09 55 35.2	+0.2
GRR				eSn	Sn	09 56 34.3	-2.8
	comp=Z,6.1nm,0.2s						
GRR				eSg	Sg	09 57 05.8	-2.5
	comp=Z,7.9nm,0.2s						
SOKA	Soboth	5.51	103	i Pn	Pn	09 55 39.1	+2.7
	comp=Z,0.9nm,0.2s						
SOKA				eSn	Sn	09 56 38.6	-1.1
	comp=Z,1.5nm,0.5s						
TREC	Trest	5.56	76	eSG	Sg	09 57 10.2	-2.9
ARSA	Arzberg	5.67	97	i Pn	Pn	09 55 41.3	+2.6
	comp=Z,0.4nm,0.3s						
ARSA				i Sn	Sn	09 56 43.7	+0.1
	comp=Z,0.9nm,0.4s						
CONA	Conrad Observa	5.79	90	i Pn	Pn	09 55 41.8	+1.5
	comp=Z,0.6nm,0.3s						
CONA				i Sn	Sn	09 56 46.9	+0.4
	comp=Z,0.7nm,0.2s						
MTLF	Montolieu	6.01	218	ePn	Pn	09 55 44.3	+0.9
MTLF	Montolieu	6.01	218	ePg	Pg	09 56 08.0	-1.9
MTLF				eSg	Sg	09 57 25.4	-2.3
	comp=Z,18nm,0.8s						
RONA	Rosalia, Austr	6.10	92	ePn	Pn	09 55 47.7	+3.1
	comp=Z,2.8nm,0.5s						
RONA				eSn	Sn	09 56 55.7	+1.4
	comp=Z,2.3nm,0.5s						
KRUC	Moravsky	6.12	79	eSN	Sn	09 56 56.8	+2.1
VRAC	Vranov	6.28	77	eSN	Sn	09 57 00.0	+1.5
SGMF	Saint Gilles	6.55	274	ePn	Pn	09 55 51.1	+0.5
SGMF				eSn	Sn	09 57 02.2	-2.9
	comp=Z,12nm,0.6s						
MODS	Modra-Piesok	6.70	85	eSG	Sg	09 57 51.4	+1.8
MORC	Moravsky Berou	6.95	73	eSN	Sn	09 57 18.3	+3.1
QUIF	Quistinic	6.98	271	ePn	Pn	09 55 57.1	+0.5
QUIF				eSn	Sn	09 57 10.6	-5.2
	comp=Z,2.3nm,0.3s						
ROSF	Rostrenen	7.02	275	ePn	Pn	09 55 58.4	+1.3
ROSF				eSn	Sn	09 57 12.7	-4.0
	comp=Z,5.3nm,0.4s						
ROSF				eSg	Sg	09 57 56.0	-3.9
	comp=Z,23nm,0.8s						
ETSF	Etsaut	7.63	229	ePg	Pg	09 56 36.9	-3.9

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*JMA **10** 09:56:52.7±0.1, 23.°8N±0.°8×122.°6E±0.°5, h39^{km}, MV2.2/13, NEAR ISHIGAKIJIMA ISLAND*
*TAP **10** 09:56:53.2, 23.°80N×122.°57E, h44^{km}, ML3.0, D*
ISC 10 09:56:52.1±1.0**, 23.°70N**±0.°03×**122.°56E**±0.°02**, h29**^{km}±11^{km}**,**
n87, σ0^{s}.94/151**, 2C-5D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS4	EOS4	0.47	333	P	Pb	09 57 02.6	+0.8
EOS4				eS	Sb	09 57 09.2	+0.9
EOS3	EOS3	0.62	340	⇑iP	Pb	09 57 05.1	+0.7
EOS3				eS	Sb	09 57 13.3	+0.6
EOS2	EOS2	0.77	338	eP	Pn	09 57 07.8	+0.8
EOS2				eS	Sn	09 57 18.1	+0.5
JYNG	Yonagunijimaku	0.83	25	eP	Pb	09 57 07.6	-0.4
JYNG				eS	Sb	09 57 18.0	-0.7
YOJ	Yonaguni jima	0.86	29	P	Pb	09 57 08.3	-0.2
YOJ	Yonaguni jima	0.86	29	S	Sb	09 57 20.1	+0.3
YOJ	Yonaguni jima	0.86	29	eP	Pb	09 57 08.1	-0.5
YOJ				eS	Sb	09 57 19.7	-0.1
YOJ	Yonaguni jima	0.86	29	⇑iP	Pb	09 57 08.0	-0.5
YOJ				eS	Sb	09 57 18.5	-1.2
TEYL	Yanliau Villag	0.89	281	eP	Pb	09 57 08.9	-0.1
TEYL				eS	Sb	09 57 21.1	+0.5
SHUL	Shoufeng	0.91	276	⇓P	Pb	09 57 09.3	-0.1
SHUL				eS	Sb	09 57 21.4	+0.3
TEGC	Jichi Village	0.93	271	eP	Pb	09 57 09.7	0.0
TEGC				eS	Sb	09 57 22.0	+0.3
TWD	Chiawan	0.96	293	⇓P	Pb	09 57 09.4	-0.7
TWD				eS	Sb	09 57 21.1	-1.3
ETL	Fush Village	0.97	298	eP	Pb	09 57 09.4	-0.9
ETL				eS	Sb	09 57 21.6	-1.1
EAHA	Aohua	0.97	310	eP	Pb	09 57 10.2	-0.2
NACB	Ninganchiao	1.00	298	P	Pb	09 57 09.9	-0.9
NACB	Ninganchiao	1.00	298	S	Sb	09 57 22.8	-0.8
NACB	Ninganchiao	1.00	298	⇓P	Pb	09 57 09.8	-0.9
NACB				eS	Sb	09 57 21.5	-2.0
ETM	Tongmen	1.01	285	P	Pb	09 57 10.1	-0.8
ETM				eS	Sb	09 57 21.7	-2.1
EWUT	Wuta	1.03	316	eP	Pb	09 57 11.1	-0.2
EWUT				eS	Sb	09 57 24.3	-0.1

ESL	Shilin	1.03	276	P	Pn	09 57 10.5	-0.2
ENA	Nanau	1.04	314	eP	Pn	09 57 11.1	+0.3
ENA				eS	Sb	09 57 24.0	-0.8
HGSD	Ruisui	1.06	259	⇓iP	Pn	09 57 11.2	+0.2
HGSD				eS	Sb	09 57 23.9	-1.4
WARBT	Fenglin Townsh	1.07	271	P	Pn	09 57 11.3	0.0
WARBT				iS	Sb	09 57 24.6	-1.1
ECBN	Changbin	1.08	250	eP	Pn	09 57 12.2	+0.8
ECBN				eS	Sb	09 57 25.4	-0.6
LXIB	Xiulin Townshi	1.09	287	eP	Pn	09 57 11.4	-0.2
LXIB				eS	Sb	09 57 25.3	-1.1
ETLH	Xiulin Townshi	1.10	297	eP	Pn	09 57 11.8	+0.1
ETLH				eS	Sb	09 57 24.4	-2.2
TWC	Suao	1.11	325	eP	Pn	09 57 12.5	+0.8
TWC				eS	Sb	09 57 24.9	-1.9
EHYH	Wanrong	1.13	260	eP	Pn	09 57 12.8	+0.8
EHYH				eS	Sb	09 57 27.2	-0.2
EHY	Hungye	1.15	260	P	Pn	09 57 13.1	+0.8
EHY				S	Sb	09 57 27.5	-0.4
CHKH	Chenggong	1.18	245	eP	Pn	09 57 13.1	+0.4
CHKH				eS	Sb	09 57 27.1	-1.6
YULB	Yu-li	1.20	255	P	Pn	09 57 14.0	+1.1
YULB	Yu-li	1.20	255	S	Sb	09 57 29.4	+0.2
YULB	Yu-li	1.20	255	eP	Pn	09 57 13.6	+0.7
YULB				eS	Sb	09 57 28.7	-0.5
HATJ	Hateruma jima	1.20	73	eP	Pn	09 57 13.5	+0.6
HATJ				eS	Sb	09 57 28.5	-0.8
TWF1	Yuli	1.21	253	eP	Pn	09 57 13.8	+0.7
TWF1				eS	Sn	09 57 29.1	+0.6
IRIF	Iriomote-Funau	1.25	59	P	Pn	09 57 14.1	+0.5
IRIF				eS	Sn	09 57 29.7	+0.3
CHKT	Chengkung	1.25	241	eP	Pn	09 57 13.9	+0.3
CHKT				eS	Sn	09 57 28.6	-0.9
LATG	Datong	1.25	312	eP	Pn	09 57 14.4	+0.6
LATG				eS	Sn	09 57 29.7	-0.1
WHF	Hehuan Shan	1.26	291	eP	Pn	09 57 14.4	+0.2
WHF				eS	Sn	09 57 29.9	-0.5
FULB	Fuli	1.26	247	eP	Pn	09 57 14.3	+0.5
FULB				eS	Sn	09 57 29.8	-0.1
OWD	Renai	1.29	282	eP	Pn	09 57 14.7	+0.4
OWD				eS	Sn	09 57 30.0	-0.7
NNSB	Datong	1.29	304	P	Pn	09 57 15.0	+0.6
NNSB				eS	Sn	09 57 30.5	-0.3
VWDT	VWDT	1.30	273	⇓P	Pn	09 57 15.2	+1.0
VWDT				eS	Sn	09 57 30.4	-0.3
ENTT	Nioudou	1.30	316	eP	Pn	09 57 15.3	+0.9
NNS	Nan Shan	1.31	304	eP	Pn	09 57 15.2	+0.6
NNS				eS	Sn	09 57 30.8	-0.4
WUSB	Renai	1.35	283	eP	Pn	09 57 15.9	+0.7
WUSB				eS	Sn	09 57 32.6	+0.4
EHD	Haiduan	1.36	246	eP	Pn	09 57 16.0	+0.8
EHD				eS	Sn	09 57 32.3	+0.1
EDH	Donghe	1.36	238	eP	Pn	09 57 15.5	+0.4
EDH				eS	Sn	09 57 31.9	-0.4
FUSB	Fushanzhiwuyua	1.38	320	eP	Pn	09 57 16.5	+1.1
FUSB				eS	Sn	09 57 32.7	0.0
TIPB	Shuangxi	1.43	332	eP	Pn	09 57 16.7	+0.5
TIPB				eS	Sn	09 57 34.2	+0.2
LDUT	Ludao	1.43	225	eP	Pn	09 57 16.5	+0.4
LDUT				eS	Sn	09 57 32.7	-1.3
JKRS	Kuro-shima	1.43	68	eP	Pn	09 57 16.9	+0.7
JKRS				eS	Sn	09 57 35.0	+0.9
YHNB	Yeheng	1.45	312	P	Pb	09 57 18.1	-0.3
YHNB	Yeheng	1.45	312	S	Sn	09 57 34.3	-0.2
YHNB	Yeheng	1.45	312	eP	Pn	09 57 17.3	+0.9
YHNB				eS	Sn	09 57 33.3	-1.2
NSK	Sanguang	1.46	312	eP	Pn	09 57 17.6	+0.9
NSK				eS	Sn	09 57 34.6	-0.3
SSLB	Suanglung	1.47	274	P	Pn	09 57 17.9	+1.2
SSLB	Suanglung	1.47	274	eP	Pn	09 57 17.7	+1.0
ELDTW	Lidau	1.50	250	eP	Pn	09 57 17.8	+0.6
ELDTW				eS	Sn	09 57 36.0	0.0
SXI1	Grass Mountain	1.52	336	eP	Pn	09 57 17.6	+0.1
SMLT	Sun Moon Lake	1.53	277	eP	Pn	09 57 18.8	+1.2
LONT	Longtian	1.53	239	eP	Pb	09 57 20.0	+0.2
LONT				eS	Sn	09 57 37.5	+1.0
WCS	Beigang Elemen	1.55	284	eP	Pn	09 57 19.1	+1.4
WHYT	Xinyi Township	1.56	270	eP	Pn	09 57 19.7	+1.7
TYC	Yuchr	1.57	278	eP	Pn	09 57 19.5	+1.4
TYC				eS	Sn	09 57 38.6	+1.2
WHP	Taichung City	1.58	292	eP	Pn	09 57 20.1	+1.8
JIJ	Ishigaki jima	1.59	65	eP	Pn	09 57 18.6	+0.2
JIJ				eS	Sn	09 57 37.5	-0.5
NFF	Wufeng Townshi	1.61	305	eP	Pn	09 57 20.5	+1.9
NFF				eS	Sn	09 57 39.2	+0.8
ALS	Alishan	1.62	264	eP	Pn	09 57 20.8	+1.8
ALS				eS	Sn	09 57 40.8	+1.7
TWGBT	Beinan	1.62	237	eS	Sn	09 57 39.3	+0.6
TWG	Pinlang	1.62	238	eP	Pn	09 57 19.2	+0.4
TWG				eS	Sn	09 57 39.0	+0.3
LIOB	Emei	1.69	304	eP	Pn	09 57 21.7	+2.0
NSTT	Nanjuang	1.69	303	eP	Pn	09 57 21.7	+1.9
NSTT				eS	Sn	09 57 41.7	+1.1
STYH	Taoyuan	1.72	252	eP	Pn	09 57 20.3	+0.2
STYH				eS	Sn	09 57 40.8	-0.2
WNT	Mingjian	1.72	276	eP	Pb	09 57 22.9	-0.2
CHN5	Tsauling	1.73	267	eP	Pb	09 57 23.1	-0.1
TPUB	Ta-pu	1.81	258	P	Pb	09 57 24.6	0.0
TPUB	Ta-pu	1.81	258	eP	Pb	09 57 24.0	-0.6
TPUB				eS	Sb	09 57 46.1	-0.9
JISG	Ishigakijimahi	1.83	61	eP	Pn	09 57 21.6	0.0
JISG				eS	Sn	09 57 42.9	-1.0
CHN4	Tsaushan	1.83	259	eP	Pb	09 57 24.6	-0.4
CHN4				eS	Sb	09 57 46.8	-0.8
SGST	Jiashian	1.91	252	eP	Pb	09 57 26.3	-0.1
SGST				eS	Sb	09 57 49.1	-0.8
CHN1	Nanshi	1.93	255	eP	Pb	09 57 26.0	-0.7
CHN1				eS	Sb	09 57 50.7	+0.3
TWK	Hsinying	1.95	258	eP	Pb	09 57 26.1	-0.8
TWK				eS	Sn	09 57 49.6	+2.8
MASBT	Mashibuluo	2.08	239	eP	Pn	09 57 26.6	+1.5
MASBT				eS	Sb	09 57 53.2	-1.3
JTJ	Tarama	2.17	64	eP	Pn	09 57 27.5	+1.2
JTJ				eS	Sn	09 57 52.6	+0.3
TSCK	Chigu Township	2.33	257	eP	Pn	09 57 31.1	+2.6
TSCK				eS	Sn	09 57 57.3	+1.0
PTMZ	Houxiangcun	3.40	294	eP	Pn	09 57 43.8	+0.5
PTMZ				eS	Sn	09 58 20.2	-2.6

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*IDC **10** 10:01:39.3±1.4, 21°.41S×169°.65E, h0^{km}, mb3.8/4, mbtmp3.8/5, ML3.6/1, MS3.7/6, Error ellipse: s-maj=40.2km s-min=27.0km az=4.0*

*NEIC **10** 10:01:43.0±1.8, 21°.5S±0°.2×169°.56E±0°.06, h10^{km}±2^{km}, mb4.3/8, Error ellipse: s-maj=28.9km s-min=5.6km az=342.0*

*NOU **10** 10:01:43.6, 21°.52S×169°.50E, h0^{km}, MLv3.9/14, Southeast of Loyalty Islands*

ISC 10 10:01:43.4±0.9, **21°.46S**±0°.08×**169°.64E**±0°.08, **h21**^{km}, **n35, σ1^{s}.01**/33, **mb3.9**/7, **MS3.8**/5, **Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.50	269	P	Pn	10 02 08.5	-0.6
MARNC	Mare, Loyalty	1.50	269	S	Sn	10 02 27.1	-1.0
INH	Isangel	1.93	350	P	Pb	10 02 19.0	+1.1
PINNC	Pines Island,	2.34	240		Pn	10 02 21.6	+1.0
PINNC	Pines Island,	2.34	240	P	Pn	10 02 21.8	+1.1
PINNC	Pines Island,	2.34	240	S	Sn	10 02 49.8	+1.0
YATNC	Mamie plateau,	2.63	256	P	Pn	10 02 24.2	-0.4
YATNC	Mamie plateau,	2.63	256	S	Sn	10 02 56.7	+0.8
OUENC	Ouen Island, N	2.77	249	P	Pn	10 02 27.4	+0.8
DZM	Mont Dzumac	3.04	258		Pn	10 02 30.6	+0.2
DZM	Mont Dzumac	3.04	258	Pn	Pn	10 02 29.5	-0.8
	7.0nm,0.3s,baz=123,slow=9.7,SNR=198						
DZM				LR	LR	10 02 55.7	
	comp=Z,180nm,21.9s,baz=194,slow=25						
DZM				Sn	Sn	10 03 05.4	-0.7
	23nm,0.3s,baz=271,slow=14,SNR=12						
	16nm,0.3s						
DZM	Mont Dzumac	3.04	258	P	Pn	10 02 31.1	+0.8
DZM	Mont Dzumac	3.04	258	S	Sn	10 03 06.3	+0.2
ONTNC	Ouen Toro	3.08	253		Pn	10 02 30.1	-0.8
ONTNC	Ouen Toro	3.08	253	P	Pn	10 02 30.2	-0.6
KOUNC	Koumac, New Ca	5.08	279	P	Pn	10 02 59.9	+1.5
KOUNC	Koumac, New Ca	5.08	279	S	Sn	10 03 58.4	+1.9
RTZ	Ruatahuna	18.23	161		Pn	10 05 57.0	+1.8
RTZ				IAmb	IAmb	10 06 11.9	
	comp=Z,26nm,1.4s						
RPZ	Rata Peaks	22.23	177	LR	LR	10 12 55.4	
	comp=Z,278nm,21.4s,baz=134,slow=30						
WB0	Warramunga Arr	33.00	266	P	P	10 08 17.0	-0.2
WB0				IAmb	IAmb	10 08 53.5	
	comp=Z,9.8nm,1.4s						
WRAB	Tennant Creek	33.01	266	P	P	10 08 16.2	-1.2
WRAB				IAmb	IAmb	10 08 40.8	
	comp=Z,7.9nm,1.4s						
WRA	Warramunga Arr	33.02	266	P	P	10 08 15.6	-1.8
WRA	Warramunga Arr	33.02	266	P	P	10 08 16.6	-0.9
	comp=Z,0.3nm,0.5s,baz=95,slow=8.2,SNR=15						
WRA				LR	LR	10 20 15.1	
	comp=Z,215nm,20.8s,baz=65,slow=34						
	comp=Z,0.3nm,0.5s						
AS31	Alice Springs	33.02	259	P	P	10 08 17.1	-0.4
AS31				IAmb	IAmb	10 08 29.4	
	comp=Z,2.3nm,1.4s						
ASAR	Alice Springs	33.03	259	P	P	10 08 17.1	-0.4
ASAR	Alice Springs	33.03	259	P	P	10 08 16.6	-0.9
	comp=Z,0.7nm,0.6s,baz=86,slow=8.8,SNR=12						
ASAR				LR	LR	10 21 11.6	
	comp=Z,100nm,19.9s,baz=92,slow=36						
	comp=Z,0.7nm,0.6s						
KNRA	Kununurra	39.09	271	P	P	10 09 08.8	-0.6
FITZ	Fitzroy Crossi	41.44	267	P	P	10 09 29.1	+0.2
FITZ	Fitzroy Crossi	41.44	267	LR	LR	10 26 53.3	
	comp=Z,179nm,18.5s,baz=98,slow=36						
QSPA	South Pole Qui	68.61	180	P	P	10 12 45.4	+0.6
QSPA	South Pole Qui	68.61	180	P	P	10 12 44.9	+0.1
	comp=Z,2.6nm,1.2s,baz=328,slow=1.6,SNR=5.9						
	comp=Z,2.6nm,1.2s						
PETK	Petropavlovsk-	74.97	353	LR	LR	10 41 57.8	
	comp=Z,65nm,21.4s,baz=44,slow=32						
SNAA	Sanae	86.97	182	P	P	10 14 25.5	-1.3
	comp=Z,0.4nm,0.8s,baz=182,slow=10,SNR=6.8						
	comp=Z,0.4nm,0.8s						
EKA	Eskdalemuir Ar	145.74	353	PKPbc	PKPdf	10 21 18.8	-1.2
	comp=Z,0.1nm,0.3s,baz=7.8,slow=2.8,SNR=4.2						
GERES	GERESS Array B	146.61	331	PKPbc	PKPbc	10 21 22.4	-1.0
	comp=Z,0.6nm,0.5s,baz=52,slow=1.6,SNR=4.6						

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*CATAC **10** 10:03:59.9±0.5, 13°N±4°×8°9W±°, h36^{km}±5^{km}, M3.4/18, MLv3.4/18, Error ellipse: s-maj=9.0km s-min=3.9km az=25.1, confirmed*

*SNET **10** 10:04:00.5±0.8, 13°.00N×88°.70W, h67^{km}±9^{km}, ML3.1*

*GCG **10** 10:04:00.8±0.6, 12°.93N×88°.70W, h49^{km}±29^{km}, MD4.1, ML3.0*

ISC 10 10:03:59.2±1.7, **12°.82N**±0°.10×**88°.75W**±0°.05, **h62**^{km}±15^{km}, **n55, σ0^{s}.74**/62, **2C-9D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALJI	Alcalda de J	0.53	19	⇓iP	Pn	10 04 11.8	+0.1
ALJI				eS	Sn	10 04 20.4	-0.3
ALJI	Alcalda de J	0.53	19	P	Pn	10 04 11.7	+0.1
TECA	Tecapa	0.71	20	⇓eP	Pn	10 04 13.8	-0.1
TECA				⇓eP		10 04 13.8	
TECO	Alcaldia de Te	0.71	358	eP	Pn	10 04 13.6	-0.2
TECO	Alcaldia de Te	0.71	358	P	Pn	10 04 13.6	-0.2
TECO	Alcaldia de Te	0.71	358	S	Sn	10 04 23.8	-0.6
LCY	Lacayo	0.74	37	eP	Pn	10 04 14.2	0.0
PACA	Pacayal	0.77	33	eP	Pn	10 04 14.5	0.0
PACA				eS	Sn	10 04 25.4	-0.3
PACA	Pacayal	0.77	33	P	Pn	10 04 14.7	+0.2
BLLM	Bellamira	0.79	39	⇑eP	Pn	10 04 14.7	-0.1
COEG	Centro de Oper	0.80	351	⇓eP	Pn	10 04 14.9	0.0
COEG				eS	Sn	10 04 25.6	-0.8
COEG				IAML		10 04 33.9	
	comp=Z,431nm,0.3s						
COEG	Centro de Oper	0.80	351	P	Pn	10 04 14.9	0.0
UESV	Universidad de	0.81	358	P	Pn	10 04 15.1	+0.2
UESV	Universidad de	0.81	358	S	Sn	10 04 25.9	-0.6
LFRS	El Faro	0.85	339	⇑iP	Pn	10 04 15.8	+0.2
LALI	Alcalda de L	0.86	320	eP	Pn	10 04 16.0	+0.5
SCLA	Alcaldia de Sa	0.87	1	⇓iP	Pn	10 04 16.2	+0.4
SCLA	Alcaldia de Sa	0.87	1	P	Pn	10 04 16.2	+0.4
SCLA	Alcaldia de Sa	0.87	1	S	Sn	10 04 29.4	+1.4
PAVA	Las Pavas	0.90	348	eP	Pn	10 04 16.6	+0.4
PAVA	Las Pavas	0.90	348	P	Pn	10 04 16.6	+0.4
PAVA	Las Pavas	0.90	348	S	Sn	10 04 29.5	+0.7
LOMA	Loma Larga	0.91	333	⇓iP	Pn	10 04 16.8	+0.4
LOMA	Loma Larga	0.91	333	P	Pn	10 04 16.7	+0.4
LOMA	Loma Larga	0.91	333	S	Sn	10 04 29.4	+0.4
LCND	La Caada	0.97	60	⇓eP	Pn	10 04 17.0	+0.1
LCND				IAML		10 04 31.5	
	comp=Z,623nm,0.2s						
LCND	La Caada	0.97	60	P	Pn	10 04 17.0	+0.1
CNCH	Conchagua	1.00	63	⇓eP	Pn	10 04 17.5	+0.1
CNCH	Conchagua	1.00	63	P	Pn	10 04 17.5	+0.1
UEES	Universidad Ev	1.01	332	S	Sn	10 04 31.2	+0.1
PIC2	El Picacho	1.04	332	⇓eP	Pn	10 04 18.9	+0.8
PMON	Piamonte	1.04	328	eP	Pn	10 04 18.6	+0.6
PMON	Piamonte	1.04	328	P	Pn	10 04 18.7	+0.7
PMON	Piamonte	1.04	328	S	Sn	10 04 32.3	+0.5
JAYA	Jayaque - finc	1.07	321	eP	Pn	10 04 18.8	+0.4
JAYA	Jayaque - finc	1.07	321	iP	Pn	10 04 18.9	+0.4
JAYA				eS	Sn	10 04 32.4	-0.3
JAYA	Jayaque - finc	1.07	321	P	Pn	10 04 18.8	+0.4
POTN	Potosi Cosigui	1.23	82	P	Pn	10 04 20.8	+0.5
POTN				S	Sn	10 04 36.0	-0.1
CEVE	Cerro Verde	1.31	320	eP	Pn	10 04 22.6	+1.0
CEVE	Cerro Verde	1.31	320	P	Pn	10 04 21.2	-0.5
SBLS	San Blas	1.32	320	eP	Pn	10 04 22.7	+1.0
UNIC	Universidad Ca	1.39	326	P	Pn	10 04 23.7	+1.2
NUBE	Las Nubes	1.47	317	eP	Pn	10 04 22.9	-0.7
NUBE	Las Nubes	1.47	317	iP	Pn	10 04 21.4	-2.3
NUBE	Las Nubes	1.47	317	P	Pn	10 04 21.3	-2.3
MARCA	Marcala la Paz	1.50	28	iP	Pn	10 04 24.1	0.0
MARCA				iS	Sn	10 04 42.4	-0.4
LOAL	Lomas de Alarc	1.54	320	P	Pn	10 04 24.4	-0.1
SLOZ	Alcaldia de Sa	1.56	320	P	Pn	10 04 23.3	-1.6
MTO3	Montecristo	1.67	339	iP	Pn	10 04 27.1	+0.5
MTO3	Montecristo	1.67	339	P	Pn	10 04 27.0	+0.4
ESQI	Esquipulas	1.82	342	P	Pn	10 04 29.4	+1.1
QUEN	Al S del Volca	1.87	97	P	Pn	10 04 29.9	+0.9
TGUH	Tegucigalpa,Un	1.89	49	P	Pn	10 04 29.5	+0.1
TGUH				S	Sn	10 04 50.7	-1.5
LIMN	Finca el Limon	2.34	84	P	Pn	10 04 36.2	+0.8
MATN	Matagalpa	2.76	87	P	Pn	10 04 40.7	-0.4

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*NEIC **10** 10:04:27.2±1.6, 19°.44N±0°.09×68°.11W±0°.04, h10^{km}±2^{km}, ML2.7/20, Md3.0/12(RSPR), Error ellipse: s-maj=14.9km s-min=5.6km az=9.0*

*SDD **10** 10:04:29.3±2.0, 19°.31N×68°.08W, h21^{km}±104^{km}, MD3.5, ML2.4, MW2.7*

*RSPR **10** 10:04:29.2, 19°.42N×68°.14W, h84^{km}±6^{km}, MD3.0/12*

ISC 10 10:04:25.7±1.7, **19°.43N**±0°.08×**68°.08W**±0°.02, **h4**^{km}±11^{km}, **n46, σ0^{s}.91**/58, **13C-2D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.95	198	ePg	Pg	10 04 43.3	-0.6
PCDR				eSg	Sg	10 04 55.8	-0.5
PCDR				IAML		10 05 01.6	
	comp=N,164nm,1.1s						
MIDR	Miches	1.02	245	ePg	Pg	10 04 45.7	+0.5
MIDR				eSg	Sb	10 04 59.8	+0.1
MIDR				IAML		10 05 00.0	
	comp=N,38nm,0.2s						
MIDR				IAML		10 05 00.0	
	comp=N,36nm,0.2s						
MIDR				IAML		10 05 00.6	
	comp=E,56nm,0.4s						
HIDR	Higuey Centro	1.03	216	⇓ePg	Pg	10 04 44.5	-0.9
HIDR				eSg	Sg	10 04 57.2	-1.5
HIDR				IAML		10 04 58.2	
	comp=N,245nm,0.2s						
HIDR				IAML		10 04 59.4	
	comp=E,159nm,0.3s						
SMDR	Samana, DR	1.06	263	⇑eP	Pn	10 04 47.4	+0.1
SMDR	Samana, DR	1.06	263	eS	Sn	10 05 03.0	+0.5
SMDR	Samana, DR	1.06	263	⇓ePg	Pn	10 04 47.3	-0.1
SMDR				⇑eSg	Sn	10 05 01.9	-0.6
SMDR				IAML		10 05 05.8	
	comp=N,73nm,1.1s						
SMDR				IAML		10 05 06.1	
	comp=E,44nm,0.2s						
IDE	Isla Desecheo	1.18	151		Pn	10 04 49.9	+0.9
IDE	Isla Desecheo	1.18	151	⇑eP	Pn	10 04 49.9	+0.9
AGPR	Aguadilla, PR	1.32	136		Pg	10 04 52.0	+0.9
AGPR					Sn	10 05 09.6	+0.6
AGPR	Aguadilla, PR	1.32	136	IAML		10 05 10.4	
	comp=N,113nm,0.6s						
AGPR				IAML		10 05 15.0	
	comp=E,118nm,0.4s						
AGPR	Aguadilla, PR	1.32	136	⇑eP	Pg	10 04 52.0	+0.9
AGPR	Aguadilla, PR	1.32	136	eS	Sn	10 05 09.6	+0.6
AGPR	Aguadilla, PR	1.32	136	ePg	Pg	10 04 51.9	+0.9
AGPR				IAML		10 05 14.8	
	comp=E,113nm,0.3s						
AGPR				IAML		10 05 59.1	
	comp=N,96nm,2.4s						
DR12	Loma Pena Alta	1.39	243		Pb	10 04 52.2	-0.1
DR12					Sb	10 05 09.5	-0.8
HATOM	Hato Mayor del	1.39	243	ePg	Pn	10 04 51.7	-0.1
HATOM				⇑eSg	Sb	10 05 10.4	+0.1
HATOM				IAML		10 05 11.1	
	comp=N,51nm,0.6s						
HATOM				IAML		10 05 12.2	
	comp=E,29nm,0.5s						
PRSN	Puerto Rico Se	1.49	144		Sg	10 05 14.4	+0.7
LSP	Las Mesas	1.56	143		Pg	10 04 55.9	+0.3
LSP					Sg	10 05 16.4	+0.7
LSP	Las Mesas	1.56	143	⇑eP	Pg	10 04 55.9	+0.3
LSP	Las Mesas	1.56	143	eS	Sg	10 05 16.4	+0.7
AOPR	Arecibo Observ	1.65	130		Pb	10 04 56.4	-0.3
AOPR					Sg	10 05 18.8	+0.1
AOPR	Arecibo Observ	1.65	130	IAML		10 05 21.9	
	comp=N,92nm,0.3s						
AOPR	Arecibo Observ	1.65	130	⇑eP	Pb	10 04 56.4	-0.3
AOPR	Arecibo Observ	1.65	130	eS	Sg	10 05 18.8	+0.1
AOPR	Arecibo Observ	1.65	130	ePg	Pg	10 04 57.1	-0.3
AOPR				IAML		10 05 25.3	
	comp=E,205nm,0.3s						
AOPR				IAML		10 05 41.8	
	comp=N,38nm,0.4s						
CRPR	Cabo Rojo, PR	1.68	147		Pb	10 04 57.7	+0.5
CRPR					Sb	10 05 18.7	-0.1
CRPR	Cabo Rojo, PR	1.68	147	⇑eP	Pb	10 04 57.7	+0.5
CRPR	Cabo Rojo, PR	1.68	147	eS	Sb	10 05 18.7	-0.1
CRPR	Cabo Rojo, PR	1.68	147	ePg	Pg	10 04 57.9	0.0
CRPR				IAML		10 05 44.1	
	comp=N,29nm,1.6s						
UUPR	Utuado, UPR, P	1.73	132		Pb	10 04 58.4	+0.2
UUPR					Sb	10 05 20.5	+0.2
UUPR	Utuado, UPR, P	1.73	132	⇑eP	Pb	10 04 58.4	+0.2
UUPR	Utuado, UPR, P	1.73	132	eS	Sb	10 05 20.5	+0.2
EMPR	Esperanza - Ma	1.74	123		Pn	10 04 54.3	-2.4
EMPR					Sb	10 05 20.5	0.0
EMPR	Esperanza - Ma	1.74	123	⇑eP	Pn	10 04 54.3	-2.4
EMPR	Esperanza - Ma	1.74	123	eS	Sb	10 05 20.5	0.0
MLPR	Magueyes Islan	1.75	146	⇑eP	Pb	10 04 58.5	+0.2
MLPR	Magueyes Islan	1.75	146	eS	Sn	10 05 19.4	-0.1
CELP	Cerrillos	1.95	133		Pn	10 04 59.6	0.0
CELP					Sn	10 05 24.9	+0.2
CELP	Cerrillos	1.95	133	⇑eP	Pn	10 04 59.6	0.0
CELP	Cerrillos	1.95	133	eS	Sn	10 05 24.9	+0.2
CELP	Cerrillos	1.95	133	ePg	Pb	10 05 01.4	-0.5
CELP				eSg	Sn	10 05 25.3	+0.7
CELP				IAML		10 05 30.8	
	comp=N,56nm,0.3s						
CELP				IAML		10 05 31.0	
	comp=E,48nm,0.5s						
ECPR	Experimental S	1.96	124	⇑eP	Pb	10 05 01.4	-0.6
ECPR	Experimental S	1.96	124	eS	Sn	10 05 22.0	-2.8
SJG	San Juan	2.24	125	Pn	Pn	10 05 04.9	+1.3
SJG				IAML		10 05 38.1	
	comp=E,44nm,0.4s						
SJG				IAML		10 05 38.3	
	comp=E,40nm,0.4s						
PDPR	Patillas Dam,	2.40	125	Pn	Pb	10 05 07.5	-1.9
HUMP	Col San Antoni	2.46	121	Pn	Pn	10 05 07.0	+0.3
HUMP				IAML		10 05 46.4	
	comp=E,22nm,0.2s						
SDDR	Presa de Saban	3.07	262	Pn	Pn	10 05 17.5	+2.5
SDDR				IAML		10 06 14.9	
	comp=E,25nm,2.3s						
SDDR				IAML		10 06 16.6	
	comp=E,22nm,2.9s						

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*NEIC **10** 10:13:21.0±0.8, 59°.77N±0°.04×153°.17W±0°.07, h106^{km}±3^{km}, Error ellipse: s-maj=5.6km s-min=5.1km az=121.0*

*IDC **10** 10:13:20.8±0.7, 59°.70N×153°.37W, h104^{km}±7^{km}, mb3.8/10, mbtmp4.2/14, MS3.7/1, Error ellipse: s-maj=14.1km s-min=8.8km az=83.0*

*AEIC **10** 10:13:22.0±1.1, 59°.74N±0°.04×153°.13W±0°.08, h102^{km}±3^{km}, ML3.9, ML4.0/194(NEIC), Error ellipse: s-maj=6.5km s-min=4.3km az=130.0*

ISC 10 10:13:21.1±0.5, **59°.76N**±0°.04×**153°.19W**±0°.04, **h108**^{km}±4^{km}, **n209, σ1^{s}.01**/192, **mb4.1**/10, **Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
P19K	Oil Pt	0.11	192		Pn	10 13 35.6	-0.5
P19K	Oil Pt	0.11	192		Sn	10 13 46.7	-0.5
ILS	Iliamna Low So	0.21	17		Pn	10 13 36.0	-0.3
ILS					Sn	10 13 46.9	-0.9
ILSW	Iliamna Southw	0.23	6		Pn	10 13 35.9	-0.5
ILSW				IAML		10 13 47.8	
	comp=E,7µm,0.7s						
ILSW				IAML		10 13 48.6	
	comp=N,3µm,0.5s						
ILSW	Iliamna Southw	0.23	6		Sn	10 13 47.0	-0.9
AU22	Augustine Moun	0.40	193		Pn	10 13 36.7	-0.3
AU22					Sn	10 13 48.3	-0.6
AUCH	Augustine Cone	0.42	198		Pn	10 13 37.0	-0.2
O20K	Slope Mountain	0.43	41		Pn	10 13 37.0	-0.2
O20K					Sn	10 13 49.4	-0.1
RED	Redoubt Volcan	0.69	17		Pn	10 13 38.9	-0.4
RED				IAML		10 13 52.7	
	comp=E,5µm,0.8s						
RED				IAML		10 13 52.8	
	comp=N,2µm,0.9s						
RED	Redoubt Volcan	0.69	17		Sn	10 13 52.1	-0.8
O19K	Port Alsworth	0.72	308		Pn	10 13 39.1	-0.2
O19K	Port Alsworth	0.72	308		Sn	10 13 52.4	-0.6
RDWB	Redoubt West	0.75	13		Sn	10 13 53.2	-0.7
HOM	Homer	0.79	97		Pn	10 13 39.9	0.0
HOM					Sn	10 13 54.4	+0.2
Q19K	Cape Douglas,	0.86	196		Pn	10 13 40.3	-0.4
Q19K				IAML		10 13 58.9	
	comp=E,6µm,0.8s						
Q19K				IAML		10 14 00.6	
	comp=N,5µm,1.0s						
Q19K	Cape Douglas,	0.86	196		Sn	10 13 54.5	-1.0
RDT	Redoubt	0.91	25		Sn	10 13 55.3	-1.0
CNPM	China Poot	1.02	102		Pn	10 13 41.8	-0.5
CNPM				IAML		10 13 58.8	
	comp=E,4µm,0.5s						
CNPM				IAML		10 13 59.1	
	comp=N,6µm,0.7s						
CNPM	China Poot	1.02	102		Sn	10 13 57.1	-1.1
O18K	Koktuh Hills	1.03	276		Pn	10 13 42.1	-0.3
P18K	Big Mountain,	1.10	251		Pn	10 13 42.5	-0.7
P18K	Big Mountain,	1.10	251		Sn	10 13 58.7	-1.1
BRLK	Bradley Lake	1.16	89		Pn	10 13 43.1	-0.7
BRLK				IAML		10 14 00.9	
	comp=N,2µm,0.2s						
BRLK				IAML		10 14 02.0	
	comp=E,3µm,0.2s						
SYI	Shuyak Island	1.22	160		Pn	10 13 44.3	-0.1
SYI				IAML		10 14 03.6	
	comp=E,4µm,0.4s						
SYI				IAML		10 14 03.9	
	comp=N,3µm,0.7s						
BRSE	Bradley Lake S	1.24	90		Sn	10 14 01.2	-1.3
N19K	Bonanza Creek	1.24	329		Pn	10 13 44.5	-0.2
N19K				IAML		10 14 03.0	
	comp=N,2µm,0.8s						
N19K				IAML		10 14 03.4	
	comp=E,823nm,1.0s						
N19K	Bonanza Creek	1.24	329		Sn	10 14 02.3	-0.4
CAPN	Captain Cook N	1.43	44		Pn	10 13 48.3	+1.4
SPCR	Spurr Chakacha	1.52	18		Pn	10 13 48.1	+0.1
N18K	Kilae Creek	1.64	306		Pn	10 13 49.1	-0.2
N18K				IAML		10 14 11.1	
	comp=E,453nm,0.9s						
SLKM	Skilak Lake	1.66	62		Pn	10 13 49.6	-0.1
SLKM				IAML		10 14 11.1	
	comp=N,3µm,0.3s						

SLKM				IAML		10 14 12.0	
	comp=E,3µm,0.2s						
P17K	Kvichak River	1.75	253		Pn	10 13 50.9	+0.1
STLK	Strandline Lak	1.87	20		Pn	10 13 52.2	-0.1
STLK				IAML		10 14 18.2	
	comp=E,456nm,0.5s						
STLK				IAML		10 14 18.4	
	comp=N,450nm,0.5s						
O22K	Cooper Landing	1.88	66		Pn	10 13 52.1	-0.2
ACHA	Angle Creek He	1.91	216		Pn	10 13 52.8	0.0
SEW	Seward	1.91	78		Pn	10 13 52.1	-0.6
SEW				IAML		10 14 22.4	
	comp=E,699nm,0.4s						
SEW				IAML		10 14 24.4	
	comp=N,723nm,0.5s						
KDAK	Kodiak Island	2.01	171		Pn	10 13 52.9	-1.0
KDAK				IAML		10 14 19.6	
	comp=N,1µm,0.3s						
KDAK				IAML		10 14 27.5	
	comp=N,1µm,0.6s						
KDAK	Kodiak Island	2.01	171	P	Pn	10 13 52.7	-1.3
	comp=N,949nm,0.3s,baz=19,slow=6.8,SNR=5529						
KDAK				S	Sn	10 14 17.4	-1.7
	comp=N,323nm,0.3s,baz=3.8,slow=5.7,SNR=12						
KDAK				LR	LR	10 14 45.7	
	comp=N,29nm,21.0s,baz=51,slow=43						
FIS	Fire Island	2.02	45		Pn	10 13 55.1	+1.0
FIS	Fire Island	2.02	45	IAML		10 14 24.4	
	comp=N,2µm,0.4s						
FIS				IAML		10 14 27.9	
	comp=E,2µm,0.5s						
CNTC	Contact Creek	2.05	224		Pn	10 13 54.6	0.0
Q16K	King Salmon	2.09	240		Pn	10 13 55.3	+0.3
SUA	Susitna One	2.09	34		Pn	10 13 55.6	+0.4
M20K	Styx River	2.13	1		Pn	10 13 55.9	+0.2
M19K	Big River Lodg	2.23	345		Pn	10 13 56.8	-0.1
R18K	Karluk	2.30	197		Pn	10 13 56.7	-1.0
R18K	Karluk	2.30	197	IAML		10 14 27.8	
	comp=N,1µm,0.4s						
R18K				IAML		10 14 28.3	
	comp=E,1µm,0.4s						
SKT	Skwentna	2.37	19		Pn	10 13 58.5	-0.1
SKT				IAML		10 14 30.3	
	comp=E,630nm,0.3s						
SKT				IAML		10 14 30.8	
	comp=N,480nm,0.3s						
O16K	Kokwok River B	2.50	268		Pn	10 14 00.4	+0.2
OHAK	Old Harbor	2.54	181		Pn	10 13 59.5	-1.5
OHAK				IAML		10 14 30.9	
	comp=N,401nm,0.4s						
OHAK				IAML		10 14 32.0	
	comp=E,309nm,0.3s						
OHAK	Old Harbor	2.54	181	P	Pn	10 13 59.1	-1.8
OHAK	Old Harbor	2.54	181	S	Sn	10 14 29.8	-1.7
P16K	Nushagak River	2.56	256		Pn	10 14 01.9	+0.7
P16K				IAML		10 14 33.5	
	comp=N,289nm,1.2s						
P16K				IAML		10 14 34.1	
	comp=E,268nm,1.0s						
L19K	White Mountain	2.56	342	IAML		10 14 56.8	
	comp=N,207nm,0.8s						
PWL	Port Wells	2.66	63		Pn	10 14 01.3	-1.1
M17K	Holitna River	2.67	310		Pn	10 14 02.5	0.0
M17K				IAML		10 14 51.4	
	comp=N,261nm,0.8s						
M17K				IAML		10 15 09.3	
	comp=E,220nm,0.8s						
PMR	Palmer	2.71	46		Pn	10 14 02.5	-0.7
PMR				IAML		10 14 35.6	
	comp=N,963nm,0.2s						
PMR				IAML		10 14 35.8	
	comp=E,879nm,0.2s						
PMR	Palmer	2.71	46	P	Pn	10 14 02.3	-0.8
PMR	Palmer	2.71	46	S	Sn	10 14 33.1	-2.4
PLBL	Peulik Blue Cr	2.80	224		Pn	10 14 04.9	+0.6
P23K	Montague Islan	2.93	83		Pn	10 14 05.5	-0.4
P23K				IAML		10 14 39.9	
	comp=E,994nm,0.3s						
P23K				IAML		10 14 42.4	
	comp=N,786nm,0.4s						
L18K	Granite Mounta	3.00	327		Pn	10 14 06.7	-0.3
CUT	Chulitna	3.01	27		Pn	10 14 07.2	+0.2
M16K	Timber Creek	3.13	296		Pn	10 14 09.1	+0.4
SML	Sawmill	3.15	47	IAML		10 14 53.3	
	comp=E,738nm,1.0s						
R16K	Pilot Point	3.17	228		Pn	10 14 10.0	+0.8
R16K				IAML		10 14 49.2	
	comp=N,779nm,1.0s						
R16K				IAML		10 15 00.8	
	comp=E,295nm,0.9s						
PPLA	Purkeypile	3.19	8	IAML		10 14 52.1	
	comp=N,184nm,0.5s						
PPLA				IAML		10 14 52.1	
	comp=E,228nm,1.2s						
GLI	Glacier Island	3.23	67		Pn	10 14 08.7	-1.3
GLI	Glacier Island	3.23	67	IAML		10 14 47.7	
	comp=N,721nm,0.4s						
SII	Sitkinak Islan	3.25	190		Pn	10 14 08.8	-1.5
SII				IAML		10 14 49.6	
	comp=E,672nm,0.3s						
SII				IAML		10 14 58.4	
	comp=N,546nm,0.8s						
SII	Sitkinak Islan	3.25	190	P	Pn	10 14 08.9	-1.5
SII	Sitkinak Islan	3.25	190	S	Sn	10 14 47.7	-0.6
HIN	Hinchinbrook I	3.41	76	IAML		10 14 51.5	
	comp=N,644nm,0.9s						
HIN				IAML		10 14 52.9	
	comp=E,570nm,0.8s						
O15K	Ungalikthiuk R	3.44	263		Pn	10 14 13.8	+1.0
Q23K	Middleton Isla	3.49	92	IAML		10 14 54.1	
	comp=N,467nm,0.3s						
Q23K				IAML		10 14 54.8	
	comp=E,291nm,0.3s						
N15K	Kwethluk River	3.50	280		Pn	10 14 14.6	+1.0
K20K	Telida	3.64	354		Pn	10 14 15.4	0.0
EYAK	Cordova Ski Ar	3.80	75	IAML		10 15 01.4	
	comp=E,152nm,0.3s						
EYAK				IAML		10 15 01.9	
	comp=N,250nm,0.4s						
EYAK	Cordova Ski Ar	3.80	75	P	Pn	10 14 16.0	-1.6
EYAK	Cordova Ski Ar	3.80	75	S	Sn	10 14 58.6	-2.7
K17K	Iditarod	3.86	322		Pn	10 14 18.3	-0.1
K17K				IAML		10 15 40.0	
	comp=E,104nm,1.0s						
DIV	Divide	3.92	66	IAML		10 15 08.6	
	comp=E,207nm,0.4s						
DIV				IAML		10 15 13.2	
	comp=N,323nm,0.3s						
TRF	Thorofare Moun	3.95	19		Pn	10 14 19.7	-0.1
TRF	Thorofare Moun	3.95	19	IAML		10 15 09.3	
	comp=N,305nm,0.4s						
TRF				IAML		10 15 09.9	
	comp=E,161nm,0.5s						
KTH	Kantishna Hill	3.96	15	IAML		10 15 09.9	
	comp=N,148nm,0.7s						
KTH				IAML		10 15 31.4	
	comp=E,130nm,0.9s						
KLU	Klutina	3.98	61		Pn	10 14 18.9	-1.2
KLU				IAML		10 15 05.6	
	comp=E,494nm,0.3s						
J18K	Innoko River	4.08	337		Pn	10 14 21.1	-0.3
CHIR	Chirikof Islan	4.16	199		Pn	10 14 20.9	-1.5
CHIR	Chirikof Islan	4.16	199	IAML		10 15 06.9	
	comp=N,257nm,0.4s						
CHIR				IAML		10 15 07.5	
	comp=E,241nm,0.3s						
CHIR	Chirikof Islan	4.16	199	P	Pn	10 14 19.5	-2.9
CHUM	Lake Minchumin	4.16	5		Pn	10 14 22.6	+0.2
RND	Reindeer	4.21	28	IAML		10 15 14.4	
	comp=E,160nm,0.3s						
RND				IAML		10 15 21.6	
	comp=N,112nm,0.7s						
N14K	Kuskokwak Cree	4.29	276		Pn	10 14 25.2	+1.1
N14K	Kuskokwak Cree	4.29	276	IAML		10 15 50.8	
	comp=N,112nm,1.2s						
N14K				IAML		10 16 17.9	
	comp=E,92nm,1.4s						
DHY	Denali Highway	4.34	37	IAML		10 15 15.1	
	comp=E,363nm,0.4s						
DHY				IAML		10 15 15.7	
	comp=N,373nm,0.3s						
KAIM	Kayak Island	4.43	84		Pn	10 14 25.8	-0.2
BMRM	Bremner River	4.43	70	IAML		10 15 34.1	
	comp=E,212nm,0.8s						
BMRM				IAML		10 15 36.9	
	comp=N,366nm,0.8s						
MCK	McKinley	4.47	25	IAML		10 15 19.1	
	comp=E,118nm,0.4s						
MCK				IAML		10 15 20.7	
	comp=N,127nm,0.6s						
BPAW	Bear Paw Mtn.	4.48	12	IAML		10 15 19.3	
	comp=N,58nm,0.7s						
BPAW				IAML		10 15 25.5	
	comp=E,52nm,0.5s						
M14K	Bethel	4.48	287		Pn	10 14 26.9	+0.2
N25K	Chitina, Valde	4.61	63	IAML		10 15 20.8	
	comp=E,345nm,0.5s						
N25K				IAML		10 15 21.9	
	comp=N,183nm,0.4s						
SUCK	Suckling Hills	4.75	82		Pn	10 14 30.0	-0.3
SUCK				IAML		10 15 24.7	
	comp=N,225nm,0.7s						
SUCK				IAML		10 15 29.2	
	comp=E,175nm,0.4s						
VNHG	Veniaminof 1	4.76	224		Pn	10 14 30.8	+0.1
BWN	Browne	4.76	20		Pn	10 14 30.8	+0.2
BWN	Browne	4.76	20	IAML		10 15 60.0	
	comp=E,154nm,1.3s						
BWN				IAML		10 16 18.9	
	comp=N,170nm,1.2s						
VNFG	Fog Glacier, M	4.86	227		Pn	10 14 32.1	+0.2
VNFG	Fog Glacier, M	4.86	227	IAML		10 15 31.7	
	comp=E,104nm,1.3s						
VNFG				IAML		10 15 32.7	
	comp=N,123nm,1.4s						
PAX	Paxson	4.91	46	IAML		10 15 30.1	
	comp=N,159nm,0.5s						
PAX				IAML		10 15 32.1	
	comp=E,139nm,0.7s						
WASW	Wrangell South	4.92	60		Pn	10 14 31.8	-1.0
L14K	Kuka Creek	4.95	293		Pn	10 14 34.1	+1.1
L14K				IAML		10 16 17.8	
	comp=E,36nm,1.4s						
L14K				IAML		10 16 31.1	
	comp=N,41nm,1.1s						
BGLC	Bering Glacier	4.99	82		Pn	10 14 33.5	-0.1
I20K	Naaghedeneel	5.09	354		Pn	10 14 35.1	+0.2
I20K	Naaghedeneel	5.09	354	IAML		10 15 52.0	
	comp=N,154nm,0.9s						
I20K				IAML		10 16 20.1	
	comp=E,173nm,1.0s						
M13K	Dall Lake	5.13	282		Pn	10 14 35.6	+0.2
M13K	Dall Lake	5.13	282	IAML		10 16 29.7	
	comp=E,30nm,1.4s						
NEA2	Nenana	5.22	20	IAML		10 15 34.4	
	comp=N,43nm,0.8s						
NEA2				IAML		10 15 41.5	
	comp=E,43nm,0.5s						
TGL	Tana Glacier	5.25	75	IAML		10 15 33.7	
	comp=N,139nm,0.6s						
TGL				IAML		10 15 34.5	
	comp=E,151nm,0.5s						
MCARA	McCarthy VSAT	5.27	68	IAML		10 15 38.5	
	comp=N,215nm,0.6s						
WRH	Wood River Hil	5.30	25	IAML		10 15 35.8	
	comp=E,62nm,0.5s						
WRH				IAML		10 15 38.9	
	comp=N,65nm,0.9s						
CYK	Cape Yakataga	5.39	82		Pn	10 14 38.7	-0.3
MLY	Manley	5.41	11		Pn	10 14 38.7	-0.7
PTPK	Patty Peak	5.49	70		Pn	10 14 40.1	-0.5
M26K	Nabesna, AK	5.61	57		Pn	10 14 41.4	-0.6
COLA	College	5.70	24		Pn	10 14 42.7	-0.5
COLA	College	5.70	24	P	Pn	10 14 41.9	-1.3
GRNC	Granite Creek	5.78	75		Pn	10 14 44.2	-0.3
IL31		5.83	28		Pn	10 14 44.0	-0.8
ILAR	Eielson Array	5.83	28	P	Pn	10 14 44.2	-0.6
	comp=N,60nm,0.5s,baz=219,slow=14,SNR=587						
ILAR				S	Sn	10 15 47.0	-3.2
	comp=N,15nm,0.4s,baz=138,slow=18,SNR=9.7						
DOT	Dot Lake	5.83	44		Pn	10 14 44.2	-0.8
SDPT	Sand Point	5.91	225		Pn	10 14 45.2	-0.8
SDPT	Sand Point	5.91	225	P	Pn	10 14 45.2	-0.8
RKAV	Rock Avalanche	5.96	80		Pn	10 14 46.7	-0.2
CHNA	Chernabura Isl	6.04	218	P	Pn	10 14 46.5	-1.3
CNBA	Chernabura Isl	6.04	218		Pn	10 14 45.9	-2.0
IMAR	Indian Mountai	6.25	358		Pn	10 14 50.8	+0.2
L27K	Beaver Creek,	6.38	54		Pn	10 14 50.9	-1.5
YUK2	White River	6.38	66		Pn	10 14 52.0	-0.5
BCAR	Beaver Creek A	6.40	54		Pn	10 14 52.6	-0.1
PCA	Pinnacle	6.51	81		Pn	10 14 53.6	-0.6
BVCY	Beaver Creek	6.54	61		Pn	10 14 54.4	-0.3
YUK8	Steele Glacier	6.80	71		Pn	10 14 58.7	+0.4
BCPM	Bancas Point	6.83	83		Pn	10 14 58.3	-0.2
YKU2	Yakutat	6.86	86	P	Pn	10 14 59.5	+0.6
YKU2	Yakutat	6.86	86	S	Sn	10 16 16.9	+1.6
PNL	Peninsula	6.98	85	P	Pn	10 15 00.0	-0.5
H25L	Birch Creek	7.34	24		Pn	10 15 04.7	-0.6
G24K	Hadweenzic Riv	7.43	18		Pn	10 15 05.7	-0.9
ISLZ	Isanotski Laza	7.61	233		Pn	10 15 08.9	-0.3
COLD	Coldfoot	7.62	9		Pn	10 15 08.2	-0.9
M29M	Somme Creek	7.62	63		Pn	10 15 08.5	-0.8
YUK5	Granite Creek	7.70	73		Pn	10 15 09.7	-0.8
F22K	John River	7.79	3		Pn	10 15 11.6	+0.1
HYT	Haines Junctio	7.87	75		Pn	10 15 12.5	-0.2
E19K	Redstone River	7.93	349		Pn	10 15 13.5	+0.1
F15K	North Star Dit	7.95	324		Pn	10 15 13.9	+0.3
L29M	L29M	7.96	59		Pn	10 15 13.1	-0.7
P30M	Million Dollar	8.16	80		Pn	10 15 15.9	-0.6
E17K	Hotham Inlet	8.30	336		Pn	10 15 15.6	-2.8
E22K	Anaktuvuk Pass	8.43	4		Pn	10 15 20.4	+0.2
K29M	Barlow Dome	8.46	54		Pn	10 15 18.3	-2.5
PLBC	Pleasant Camp	8.54	85		Pn	10 15 21.1	-0.5
BMAR	Burnt Mountain	8.59	23		Pn	10 15 20.4	-2.0
E21K	Killik River	8.72	358		Pn	10 15 24.4	+0.2
N31M	Braeburn, Yuko	8.73	71		Pn	10 15 24.2	-0.1
AKUT	Akutan	8.88	236	P	Pn	10 15 26.5	+0.1
S31K	Pelican	8.97	94		Pn	10 15 26.2	-1.2
D19K	Kuna River	9.03	348		Pn	10 15 27.6	-0.7
E25K	Arctic Village	9.03	18		Pn	10 15 26.7	-1.6
TOLK	Toolik Lake Re	9.05	8		Pn	10 15 28.5	-0.1
SKAG	Skagway	9.06	84	P	Pn	10 15 29.5	+0.8
SKAG	Skagway	9.06	84	S	Sn	10 17 09.3	+0.6
D20K	Etivluk River	9.11	352		Pn	10 15 28.3	-1.1
D22K	Ayikyak River	9.16	1		Pn	10 15 27.9	-2.2
D23K	Nanushuk River	9.31	6		Pn	10 15 32.1	+0.1
H29M	Whitestone	9.33	40		Pn	10 15 30.1	-2.3
C21K	Knifeblade Rid	9.46	357		Pn	10 15 34.1	0.0
BESE	Bessie Mountai	9.48	89		Pn	10 15 34.3	-0.3
SIT	Sitka	9.75	98	P	Pn	10 15 36.0	-2.1
C19K	Lookout Ridge	9.78	346		Pn	10 15 38.3	-0.1
JIS	Juneau Island	9.81	91	P	Pn	10 15 38.9	+0.1
P32M	Atlin	9.85	83		Pn	10 15 38.9	-0.6
G29M	Pine Creek	9.87	37		Pn	10 15 38.9	-0.8
S32K	Killisnoo	9.97	95		Pn	10 15 40.1	-1.0
C23K	Itkillik River	10.18	5		Pn	10 15 42.5	-1.3
P33M	Teslin, Yukon	10.21	79		Pn	10 15 43.5	-0.9
B18K	Kokolik River	10.31	343		Pn	10 15 43.7	-1.9
G30M	tAoh Zraii Nji	10.47	39		Pn	10 15 45.5	-2.4
B22K	Teshekpuk Lake	10.63	360		Pn	10 15 48.3	-1.6
Q32M	Nakina River	10.70	85		Pn	10 15 50.6	-0.6
NIKH	Nikolski High	11.01	239	P	Pn	10 15 57.5	+2.3
CRAG	Craig	11.57	103	P	Pn	10 16 02.8	+0.2
DLBC	Dease Lake	11.96	86	P	Pn	10 16 08.4	+0.5
	comp=N,9.2nm,0.3s,baz=296,slow=8.3,SNR=63						
INK	Inuvik	12.09	37	P	Pn	10 16 08.8	-0.6
	comp=N,2.4nm,0.5s,baz=246,slow=22,SNR=12						
ATKA	Atka Island	13.94	246	P	P	10 16 36.1	-2.1
ADK	Adak	15.31	249	P	P	10 16 52.7	-0.7
YKA	Yellowknife Ar	18.64	65	P	P	10 17 30.1	+0.2
	comp=N,2.0nm,0.6s,baz=310,slow=18,SNR=48						
YKA				pP	pP	10 17 50.8	+1.0
	comp=N,2.3nm,0.8s,baz=285,slow=11,SNR=8.3						
YKA				PcP	PcP	10 21 53.5	0.0
	comp=N,0.1nm,0.3s,baz=297,slow=1.9,SNR=5.2						
YKA				ScP	ScP	10 25 18.8	-0.1
	comp=N,0.2nm,0.5s,baz=288,slow=3.0,SNR=7.7						
PETK	Petropavlovsk-	27.40	278	P	P	10 18 55.5	-0.5
	comp=N,2.9nm,0.7s,baz=72,slow=13,SNR=5.9						
	comp=N,2.9nm,0.7s						
NVAR	Mina Array Bea	30.69	118	P	P	10 19 27.8	+2.2
	comp=N,0.3nm,0.5s,baz=312,slow=7.4,SNR=3.7						
NVAR				pP	pP	10 19 50.7	+1.3
	comp=N,0.1nm,0.3s,baz=312,slow=12,SNR=1.8						
NVAR				PcP	PcP	10 22 21.7	+0.9
	comp=N,0.2nm,0.7s,baz=318,slow=1.3,SNR=3.7						
	comp=N,0.3nm,0.5s						
SPITS	Spitsbergen Ar	42.16	3	P	P	10 21 02.2	0.0
	comp=N,0.4nm,0.2s,baz=21,slow=5.6,SNR=26						
	comp=N,0.4nm,0.2s						
TXAR	Lajitas Array	44.99	110	P	P	10 21 27.2	+1.7
	comp=N,0.3nm,0.6s,baz=316,slow=7.0,SNR=4.0						
TXAR				pP	pP	10 21 50.7	+0.3
	comp=N,0.5nm,0.8s,baz=289,slow=3.8,SNR=3.3						
TXAR				ScP	ScP	10 26 47.0	0.0
	comp=N,0.6nm,0.9s,baz=270,slow=1.3,SNR=4.1						
	comp=N,0.3nm,0.6s						
KSRS	Korea Array	53.14	283	P	P	10 22 27.6	+0.3
	comp=N,3.3nm,0.4s,baz=38,slow=7.1,SNR=14						
	comp=N,3.3nm,0.4s						
SONM	Songino Array	54.86	306	P	P	10 22 41.0	+1.1
	comp=N,5.3nm,0.5s,baz=37,slow=7.7,SNR=14						
	comp=N,5.3nm,0.5s						
ZALV	Zalesovo Beam	57.51	324	P	P	10 22 58.6	+0.1
	comp=N,7.5nm,0.4s,baz=29,slow=7.1,SNR=25						
	comp=N,7.5nm,0.4s						
BVAR	Borovoye Array	62.24	332	P	P	10 23 30.5	-0.3
	comp=N,3.4nm,0.5s,baz=33,slow=7.8,SNR=13						
	comp=N,3.4nm,0.5s						
KURBB	Kurchatov Arra	62.28	326	P	P	10 23 30.8	-0.4
	comp=N,1.5nm,0.5s,baz=29,slow=6.9,SNR=12						
	comp=N,1.5nm,0.5s						
MKAR	Makanchi Array	64.56	321	P	P	10 23 45.6	-0.7
	comp=N,0.7nm,0.5s,baz=44,slow=7.8,SNR=8.7						
	comp=N,0.7nm,0.5s						
KAPI	Kappang	92.81	265	LR	LR	11 06 42.1	
	comp=N,39nm,20.3s,baz=282,slow=34						
BOSA	Boshof	148.84	3	PKPbc	PKPbc	10 32 54.5	-1.1
	comp=N,1.4nm,0.5s,baz=80,slow=2.5,SNR=6.0						
QSPA	South Pole Qui	149.56	180	PKPbc	PKPbc	10 32 55.8	-0.4
	comp=N,2.8nm,0.6s,baz=244,slow=0.6,SNR=32						

AZER ***10*** *10:20:44.1, 38°.50N×45°.33E, h5^{km}, ml2.8*

TEH ***10*** *10:20:44.0, 38°.36N×45°.42E, h6^{km}±97^{km}*

ISC 10 10:20:44.8±1.2**, 38°.41N**±0°.03×**45°.46E**±0°.03**, h1**^{km}±13^{km}**,**
n18, σ0^{s}.93/30**, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISHB	Shabestar	0.17	136	Pg	Pg	10 20 47.6	-0.6
ITBZ	Tabriz	0.57	108	Pg	Pg	10 20 54.7	-0.9
ORD	Ordubad	0.66	39	P	Pg	10 20 58.6	+1.0
ORD				S	Sb	10 21 08.7	-0.4
NAX	Nakhchivan	0.76	2	P	Pb	10 21 00.3	-0.6
NAX				S	Sb	10 21 12.1	+0.2
IAZR	Azarshahr	0.84	151	Pg	Pg	10 20 59.9	-1.0
SBZ	Shahbuz	0.99	4	P	Pb	10 21 04.5	-0.4
SBZ				S	Sb	10 21 18.9	+0.5
MAKU	Maku	1.12	327	Pg	Pg	10 21 05.6	-0.8
IHRS	Heris	1.24	94	Pg	Pg	10 21 08.7	0.0
HYR	Heyderabad	1.39	340	P	Pb	10 21 11.0	-0.7
HYR				S	Sn	10 21 30.8	+0.3
HAKT	HAKKARI	1.63	239	P	Pg	10 21 15.9	-0.2
HAKT				S	Sg	10 21 39.7	+2.6
IHSH	Hashtrud	1.80	127	Pg	Pn	10 21 16.9	-0.4
IGDI	IGDIR	1.81	324	P	Pb	10 21 18.2	-0.7
IGDI				S	Sg	10 21 44.2	+1.1
BLQ	Beylaqan	2.09	51	P	Pb	10 21 23.1	-0.5
BLQ				S	Sb	10 21 51.4	+1.4
AGDM	Agdam	2.12	36	P	Pb	10 21 23.6	-0.5
AGDM				S	Sg	10 21 53.8	+0.8
YRD	Yardimli	2.23	76	P	Pb	10 21 25.9	-0.1
YRD				S	Sg	10 21 57.2	+0.7
LRK	Lerik	2.27	83	P	Pb	10 21 26.6	0.0
LRK				S	Sg	10 21 59.0	+1.3
GDB	GEDABAY	2.32	5	P	Pb	10 21 26.6	-0.9
GDB				S	Sg	10 21 58.0	-1.4
ASTR	Astara	2.62	86	P	Pb	10 21 32.0	-0.4
ASTR				S	Sg	10 22 09.4	+0.5

WEL ***10*** *10:26:34.5, 44°.32S×168°.14E, h18^{km}, ML4.0, Mw3.7, Moment Tensor Solution. s5 Moment tensor: Scale 10^{14} Nm; M$_{rr}$2.79; M$_{\theta\theta}$0.61; M$_{\phi\phi}$-3.39; M$_{r\theta}$1.07; M$_{\theta\phi}$-1.21; M$_{\phi r}$1.93; Fault plane solution: M$_0$3.95000×10^{14} NP1: φ$_s$25.00000°, δ62.00000°, λ101.00000°. NP2: φ$_s$182.00000°, δ30.00000°, λ70.00000°. Principal axes: T -4.3750, Plg71.0000°, Azm320.0000°; N 0.8530, Plg10.0000°, Azm199.0000°; P 3.5220, Plg16.0000°, Azm107.0000°; Stations used: JCZ WKZ EAZ LBZ ODZ REVERSE FAULTING*

WEL ***10*** *10:26:34.5±0.7, 44°S±4°×16°8E±°, h5^{km}, M4.0/18, ML4.1/13, MLv4.0/18 Error ellipse: s-maj=6.6km s-min=3.0km az=130.1, confirmed*

NOU ***10*** *10:26:35.8, 44°.21S×168°.24E, h6^{km}, MLv4.1/9, South Island, New Zealand*

IDC ***10*** *10:26:36.1±8.2, 44°.83S×167°.04E, h0^{km}, mb3.3/2, mbtmp3.3/2, Error ellipse: s-maj=598.7km s-min=80.3km az=41.0*

ISC 10 10:26:33.2±1.3**, 44°.29S**±0°.03×**168°.13E**±0°.04**, h4**^{km}±10^{km}**,**
n46, σ0^{s}.82/55**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSZ	Milford Sound	0.41	200	P	Pb	10 26 42.5	-0.6
MSZ				S	Sg	10 26 47.8	+1.4
NSBS	Neils Beach	0.48	53	P	Pb	10 26 44.5	+0.3
JCZ	Jackson Bay	0.52	66	P	Pb	10 26 44.8	-0.2
JCZ	Jackson Bay	0.52	66	S	Sg	10 26 50.1	+0.1
JCZ	Jackson Bay	0.52	66	P	Pb	10 26 44.8	-0.2
JCZ				S	Sg	10 26 51.5	+1.5
HDWS	Haast DOC Work	0.78	59	P	Pb	10 26 49.8	+0.5
MECS	Makarora Emerg	0.80	86	P	Pb	10 26 49.9	+0.3
WKZ	Wanaka	0.83	131	P	Pb	10 26 50.4	+0.1
QTPS	Queenstown Pol	0.84	153	P	Pb	10 26 49.9	-0.4
MLZ	Mavora Lakes	1.08	180	P	Pb	10 26 54.3	-0.1
MLZ				S	Sb	10 27 08.5	-0.4
EAZ	Earnscleugh	1.26	139	P	Pn	10 26 58.1	+0.4
EAZ				S	Sb	10 27 13.1	-1.2
DCZ	Deep Cove	1.36	210	P	Pn	10 26 59.1	0.0
DCZ				S	Sg	10 27 16.8	-0.2
FOZ	Fox Glacier	1.44	59	P	Pn	10 26 59.8	-0.1
LBZ	Lake Benmore	1.48	94	P	Pg	10 27 01.5	0.0
LBZ				S	Sn	10 27 20.7	+0.3
WHZ	Wether Hill Ro	1.61	184	P	Pn	10 27 02.6	+0.2
GCSZ	Gaunt Creek Bo	1.87	59	P	Pn	10 27 05.5	-0.4
ODZ	Otahua Downs	1.95	114	P	Pb	10 27 09.2	-0.1
ODZ	Otahua Downs	1.95	114	P	Pb	10 27 08.1	-1.1
ODZ				S	Sg	10 27 33.9	-1.9
TUZ	Tuapeka	1.98	148	P	Pb	10 27 08.6	-1.1
TUZ				S	Sb	10 27 33.7	-1.0
TMZ	Timaru	2.07	94	P	Pn	10 27 09.5	+0.7
PYZ	Puysegur Point	2.14	208	P	Pg	10 27 14.2	0.0
PYZ	Puysegur Point	2.14	208	P	Pb	10 27 11.7	-0.8
RPZ	Rata Peaks	2.19	76	P	Pb	10 27 12.6	-0.8
RPZ	Rata Peaks	2.19	76	P	Pn	10 27 11.7	+1.3
ARCZ	Arundel	2.22	82	P	Pn	10 27 11.7	+0.8
WVZ	Waitaha Valley	2.25	58	P	Pn	10 27 10.6	-0.5
SYZ	Scrubby Hill	2.36	163	P	Pn	10 27 14.2	+1.5
SYZ	Scrubby Hill	2.36	163	P	Pn	10 27 13.9	+1.2
HHSZ	Highcliff Hill	2.37	133	P	Pb	10 27 15.6	-0.8
APZ	The Paps	2.54	182	P	Pn	10 27 16.5	+1.2
APZ				S	Sn	10 27 47.9	+1.1
MHCZ	Mount Hutt	2.60	74	P	Pn	10 27 16.7	+0.7
WACZ	Wakanui South	2.70	84	P	Pn	10 27 18.0	+0.7
INZ	Inchbonnie	2.88	58	P	Pn	10 27 19.4	-0.4
RACZ	Rakaia	2.95	80	P	Pn	10 27 22.3	+1.5
OXZ	Oxford	2.99	73	P	Pn	10 27 21.3	-0.1
MQZ	McQueen's Vall	3.32	81	P	Pn	10 27 26.1	+0.2
LTZ	Lake Taylor	3.37	65	P	Pn	10 27 26.6	-0.1
AMCZ	Amberley	3.46	73	P	Pn	10 27 29.0	+1.2
OKCZ	Okains Bay	3.60	83	P	Pn	10 27 31.3	+1.5
DSZ	Denniston Nort	3.71	48	P	Pn	10 27 30.8	-0.5
GVZ	Greta Valley S	3.80	71	P	Pn	10 27 32.4	-0.1
QRZ	Quartz Range	4.75	45	P	Pn	10 27 45.5	0.0
KHEZ	Kahui Hut	6.65	43	P	Pn	10 28 12.0	+0.2
ASAR	Alice Springs	34.69	295	P	P	10 33 23.4	-0.7
	0.3nm,0.7s,baz=136,slow=8.9,SNR=5.1						
	0.3nm,0.7s						
WRA	Warramunga Arr	37.11	300	P	P	10 33 45.1	+0.2
	0.3nm,0.8s,baz=135,slow=7.9,SNR=5.5						
	0.3nm,0.8s						
BRTR	Keskin Array B	146.21	278	PKPbc	PKPbc	10 46 15.2	+0.5
	0.9nm,0.8s,baz=132,slow=4.3,SNR=5.1						

ISK ***10*** *10:28:28.4, 42°.51N×35°.08E, h9^{km}, ML2.5/5*

AFAD ***10*** *10:28:30.2, 42°.27N×35°.18E, h39^{km}±1^{km}, ML1.7*

ISC 10 10:28:29.7±2.9**, 42°.5N**±0°.1×**35°.16E**±0°.06**, h28**^{km}±11^{km}**,**

n11,σ**0s89**/20,**Black Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNOP	**Sinop**	**0.45**	**176**	Pg	**Pb**	**10 28 38.6**	**-0.6**
SNOP				Sg	**Sb**	**10 28 45.8**	**+0.1**
SINP	**Sinop**	**0.49**	**186**	Pg	**Pb**	**10 28 40.0**	**+0.1**
SINP				Sg	**Sb**	**10 28 46.9**	**+0.2**
DIKM	**Dikmen**	**0.82**	**175**	Pg	**Pn**	**10 28 45.4**	**0.0**
BZK	**Bozkurt**	**1.00**	**240**	Pg	**Pn**	**10 28 47.5**	**-0.3**
BZK				Sg	**Sb**	**10 29 01.3**	**+0.1**
BOYA	**Sinop/Boyabat-**	**1.00**	**201**	P	**Pn**	**10 28 47.3**	**-0.6**
BOYA				*i* IAML		10 28 59.0	
	comp=E,55nm,0.3s						
BOYA				S	**Sn**	**10 28 59.3**	**-1.8**
SAMS	**Samsun-Alacam**	**1.35**	**145**	P	**Pn**	**10 28 52.1**	**-0.4**
SAMS				S	**Sn**	**10 29 09.0**	**-0.5**
SAMS				*i* IAML		10 29 14.0	
	comp=N,46nm,0.2s						
SEYI	**Kastamonu-Seyd**	**1.35**	**232**	P	**Pn**	**10 28 53.5**	**+0.7**
SEYI				S	**Sn**	**10 29 09.6**	**-0.1**
SEYI				*i* IAML		10 29 12.0	
	comp=N,31nm,0.6s						
ILGA	**Ilgaz**	**1.78**	**218**	P	**Pn**	**10 28 59.4**	**+0.6**
ILGA				S	**Sn**	**10 29 20.2**	**-0.4**
ILGA				*i* IAML		10 29 38.0	
	comp=E,8.5nm,0.6s						
AYAZ	**Ayas K¶y, M**	**1.80**	**187**	P	**Pn**	**10 29 00.5**	**+1.5**
AYAZ				S	**Sn**	**10 29 20.5**	**-0.5**
AYAZ				*i* IAML		10 29 56.0	
	comp=E,3.2nm,1.1s						
ERBA	**Erbaa**	**2.15**	**146**	P	**Pn**	**10 29 04.4**	**+0.7**
ERBA				S	**Sn**	**10 29 29.7**	**+0.3**
ERBA				*i* IAML		10 29 38.0	
	comp=E,5.8nm,0.5s						
CORM	**Corum**	**2.32**	**190**	Pn	**Pn**	**10 29 08.2**	**+2.0**

IDC 10 10:33:34.2±2.3**,49°.25S**×**108°.68E,h0**^{km}**,mb3.8**/5**,**
mbtmp3.8/5**,Error ellipse: s-maj=91.2km s-min=22.3km**
az=116.0,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**32.32**	**47**	P	P	10 40 05.0	0.0
	0.6nm,0.8s,baz=211,slow=8.3,SNR=6.0						
	0.6nm,0.8s						
VNDA	**Vanda**	**34.64**	**162**	P	P	10 40 24.7	+0.1
	1.2nm,0.7s,baz=293,slow=10,SNR=4.7						
	1.2nm,0.7s						
WRA	**Warramunga Arr**	**35.73**	**44**	P	P	10 40 34.5	-0.1
	0.4nm,0.7s,baz=210,slow=8.3,SNR=2.5						
	0.4nm,0.7s						
QSPA	**South Pole Qui**	**40.88**	**180**	P	P	10 41 17.4	-0.3
	2.3nm,0.8s,baz=326,slow=3.1,SNR=8.7						
	2.3nm,0.8s						
SNAA	**Sanae**	**50.17**	**203**	P	P	10 42 31.0	0.0
	1.6nm,0.9s,baz=148,slow=15,SNR=6.3						
	1.6nm,0.9s						

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*IDC **10** 10:42:08.3±0.6, 52°.90N×167°.91W, h0^{km}, mb4.1/25,*
mbtmp4.1/25, MS3.4/29, Error ellipse: s-maj=18.5km
s-min=12.7km az=175.0
*AEIC **10** 10:42:12.1±3.5, 52°.72N±0°.06×167°.66W±0°.08, h26^{km}±5^{km},*
Error ellipse: s-maj=8.4km s-min=7.0km az=184.0
*NEIC **10** 10:42:15.8±3.0, 52°.91N±0°.06×167°.71W±0°.05, h35^{km}±2^{km},*
mb4.1/119, ML4.3/18, ML4.3(AEIC), Error ellipse:
s-maj=10.3km s-min=5.2km az=169.0
ISC 10 10:42:14.6±0.5**,52°.86N**±0°.07×**167°.69W**±0°.04**,h42**^{km}**,**
n227,σ**1s40**/158**,mb4.2**/50**,MS3.3**/28**,Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKSP	**Okmok Steeple**	**0.54**	**318**		**Pn**	**10 42 24.7**	**-1.3**
OKTU	**Okmok Mt. Tuli**	**0.57**	**338**		**Pn**	**10 42 25.7**	**-0.7**
OKFG	**Magazine Ridge**	**0.57**	**346**		**Pn**	**10 42 25.7**	**-0.7**
OKFG					**Sn**	**10 42 34.8**	**+0.1**
OKCE	**Okmok Cone E**	**0.64**	**333**		**Pn**	**10 42 26.7**	**-0.6**
OKNC	**Okmok New Cone**	**0.66**	**337**		**Pn**	**10 42 27.0**	**-0.6**
NIKH	**Nikolski High**	**0.72**	**280**		**Pn**	**10 42 26.6**	**-1.8**
NIKH				IAML		10 42 36.7	
	comp=E,12µm,0.8s						
NIKH				IAML		10 42 36.8	
	comp=N,20µm,0.6s						
NIKH	**Nikolski High**	**0.72**	**280**		**Sn**	**10 42 36.3**	**-1.9**
NIKH	**Nikolski High**	**0.72**	**280**	P	**Pn**	**10 42 26.5**	**-1.8**
NIKH	**Nikolski High**	**0.72**	**280**	S	**Sn**	**10 42 36.5**	**-1.7**
MAPS	**Pakushin South**	**1.05**	**25**		**Pn**	**10 42 32.0**	**-0.9**
MAPS					**Sn**	**10 42 46.1**	**-0.3**
MGOD	**Makushin Gods**	**1.06**	**27**		**Pn**	**10 42 32.0**	**-1.0**
MGOD					**Sn**	**10 42 46.8**	**+0.1**
MREP	**Makushin Rep't**	**1.11**	**30**		**Pn**	**10 42 33.1**	**-0.7**
MTBL	**Makushin Table**	**1.27**	**28**		**Pn**	**10 42 35.6**	**-0.3**
AKMO	**Akutan Morgan**	**1.59**	**38**		**Pn**	**10 42 39.9**	**-0.4**
AKMO					**Sn**	**10 43 00.4**	**+0.8**
AKRB	**Akutan Reef Bi**	**1.60**	**36**		**Pn**	**10 42 40.5**	**+0.1**
ZRO	**Akutan Zero**	**1.60**	**39**		**Pn**	**10 42 40.1**	**-0.4**
LVA	**Lava Point**	**1.64**	**36**		**Pn**	**10 42 41.3**	**+0.4**
LVA	**Lava Point**	**1.64**	**36**		**Sn**	**10 43 02.5**	**+1.7**
AKUT	**Akutan**	**1.72**	**41**		**Pn**	**10 42 41.7**	**-0.3**
AKUT				IAML		10 43 11.5	
	comp=N,3µm,0.4s						
AKUT				IAML		10 43 11.8	
	comp=E,3µm,0.6s						
AKUT	**Akutan**	**1.72**	**41**		**Sn**	**10 43 02.7**	**0.0**
AKUT	**Akutan**	**1.72**	**41**	P	**Pn**	**10 42 41.4**	**-0.6**
WESE	**West Dahl East**	**2.45**	**47**		**Pn**	**10 42 52.3**	**+0.1**
SSLS	**Shishaldin Sou**	**2.87**	**48**		**Pn**	**10 42 57.8**	**-0.1**
ISLZ	**Isanotski Laza**	**3.01**	**50**		**Pn**	**10 43 00.5**	**+0.7**
ISNN	**Isanotski Nort**	**3.05**	**48**		**Pn**	**10 43 01.2**	**+0.9**
P08K	**Saint George I**	**3.91**	**345**		**Pn**	**10 43 12.9**	**+0.9**
ATKA	**Atka Island**	**4.03**	**263**		**Pn**	**10 43 14.4**	**+0.8**
ATKA				IAML		10 44 21.2	
	comp=N,310nm,0.8s						
ATKA	**Atka Island**	**4.03**	**263**		**Sn**	**10 44 00.1**	**+0.5**
ATKA					Lg	10 44 00.7	
ATKA	**Atka Island**	**4.03**	**263**	P	**Pn**	**10 43 14.5**	**+0.8**
HAG	**Hague Volcano**	**4.20**	**52**		**Pn**	**10 43 16.8**	**+0.6**
PS1A	**Pavlof South-1**	**4.34**	**51**		**Pn**	**10 43 18.9**	**+0.9**
S12K	**Black Hills**	**4.36**	**47**		**Pn**	**10 43 20.5**	**+2.3**
S12K				IAML		10 44 37.4	
	comp=E,325nm,0.7s						
S12K				IAML		10 44 49.1	
	comp=N,233nm,1.0s						
SPIA	**Saint Paul Isl**	**4.57**	**342**		**Pn**	**10 43 22.5**	**+1.3**
SPIA				IAML		10 44 22.7	
	comp=E,248nm,0.5s						
SPIA				IAML		10 44 24.4	
	comp=N,353nm,0.7s						
SDPT	**Sand Point**	**4.92**	**57**		**Pn**	**10 43 27.1**	**+1.1**
SDPT	**Sand Point**	**4.92**	**57**	P	**Pn**	**10 43 27.4**	**+1.4**
GSTR	**Great Sitkin T**	**5.17**	**265**		**Pn**	**10 43 30.8**	**+1.3**
CNBA	**Chernabura Isl**	**5.18**	**64**	Pn	**Pn**	**10 43 29.4**	**-0.2**
CNBA				IAML		10 44 57.4	
	comp=N,164nm,1.0s						
CHNA	**Chernabura Isl**	**5.19**	**64**	P	**Pn**	**10 43 29.5**	**-0.1**
GSSP	**Great Sitkin S**	**5.25**	**265**		**Sn**	**10 44 29.3**	**-0.3**
ADK	**Adak**	**5.60**	**264**		**Pn**	**10 43 36.3**	**+1.0**
ADK	**Adak**	**5.60**	**264**		**Sn**	**10 44 38.7**	**+0.4**
ADK	**Adak**	**5.60**	**264**	P	**Pn**	**10 43 36.2**	**+1.0**
KIRH	**Kanaga Island**	**5.84**	**264**		**Pn**	**10 43 39.2**	**+0.6**
VNFG	**Fog Glacier, M**	**5.84**	**51**		**Pn**	**10 43 39.2**	**+0.4**
KIWB	**Kanaga Island**	**5.89**	**264**		**Pn**	**10 43 40.2**	**+1.0**
KICM	**Kanaga Island**	**5.90**	**265**		**Pn**	**10 43 39.8**	**+0.4**
TAFP	**Tanaga Falls P**	**6.38**	**265**		**Pn**	**10 43 46.5**	**+0.5**
TAFP					**Sn**	**10 45 00.5**	**+3.0**
TASE	**Tanaga Southea**	**6.43**	**265**		**Pn**	**10 43 47.0**	**+0.3**
ANPB	**Aniakchak Plen**	**6.72**	**50**		**Pn**	**10 43 52.2**	**+1.5**
GANE	**Gareloi Northe**	**6.88**	**266**		**Pn**	**10 43 53.4**	**+0.6**
O14K	**Tigyukauivet M**	**7.35**	**27**		**Pn**	**10 44 01.5**	**+2.3**
M11K	**Mekoryuk**	**7.59**	**6**		**Pn**	**10 44 04.4**	**+1.9**
CHIR	**Chirikof Islan**	**7.65**	**62**		**Pn**	**10 44 03.6**	**+0.2**
CHIR	**Chirikof Islan**	**7.65**	**62**	P	**Pn**	**10 44 04.7**	**+1.3**
O15K	**Ungalikthiuk R**	**7.71**	**32**		**Pn**	**10 44 06.6**	**+2.4**
N14K	**Kuskokwak Cree**	**7.82**	**23**		**Pn**	**10 44 08.1**	**+2.3**
M13K	**Dall Lake**	**7.94**	**16**		**Pn**	**10 44 10.2**	**+2.9**
PLK1	**Peulik 1**	**8.02**	**47**		**Pn**	**10 44 10.1**	**+1.6**
P16K	**Nushagak River**	**8.23**	**37**		**Pn**	**10 44 12.9**	**+1.5**
N15K	**Kwethluk River**	**8.44**	**27**		**Pn**	**10 44 16.7**	**+2.5**
CNTC	**Contact Creek**	**8.60**	**46**		**Pn**	**10 44 18.3**	**+1.8**
O16K	**Kokwok River B**	**8.60**	**35**		**Pn**	**10 44 18.3**	**+1.8**
SII	**Sitkinak Islan**	**8.65**	**59**	P	**Pn**	**10 44 18.1**	**+1.0**
ANCK	**Angle Creek**	**8.74**	**47**		**Pn**	**10 44 19.9**	**+1.5**
ACHA	**Angle Creek He**	**8.82**	**48**		**Pn**	**10 44 22.3**	**+2.8**
R18K	**Karluk**	**8.91**	**53**		**Pn**	**10 44 21.6**	**+0.9**
P17K	**Kvichak River**	**8.94**	**40**		**Pn**	**10 44 23.1**	**+2.2**
N16K	**Nishlik Lake**	**9.07**	**29**		**Pn**	**10 44 24.8**	**+1.9**
O17K	**Koliganek Bris**	**9.08**	**36**		**Pn**	**10 44 24.9**	**+1.9**
KAHC	**Katmai Hardscr**	**9.20**	**46**		**Pn**	**10 44 26.7**	**+2.0**
K13K	**Kusilvak Mount**	**9.25**	**9**		**Pn**	**10 44 27.4**	**+2.2**
OHAK	**Old Harbor**	**9.35**	**56**	P	**Pn**	**10 44 25.9**	**-0.7**
L15K	**Ungalak Mounta**	**9.46**	**18**		**Pn**	**10 44 30.9**	**+2.8**
M16K	**Timber Creek**	**9.46**	**27**		**Pn**	**10 44 30.6**	**+2.4**
P18K	**Big Mountain,**	**9.54**	**42**		**Pn**	**10 44 32.5**	**+3.2**
KDAK	**Kodiak Island**	**9.91**	**54**		**Pn**	**10 44 34.1**	**-0.2**
KDAK	**Kodiak Island**	**9.91**	**54**	Pn	**Pn**	**10 44 33.3**	**-1.0**
	comp=N,0.9nm,0.3s,baz=220,slow=4.5,SNR=22						
KDAK				Sn	**Sn**	**10 46 19.6**	**-4.5**
	comp=N,0.3nm,0.3s,baz=113,slow=23,SNR=3.6						
N18K	**Kilae Creek**	**10.15**	**35**		**Pn**	**10 44 39.8**	**+2.1**
J14K	**Nanvaranak Lak**	**10.16**	**11**		**Pn**	**10 44 38.6**	**+1.0**
P19K	**Oil Pt**	**10.52**	**44**		**Pn**	**10 44 43.5**	**+0.8**
ILSW	**Iliamna Southw**	**10.74**	**43**		**Pn**	**10 44 47.0**	**+1.1**
N19K	**Bonanza Creek**	**10.74**	**37**		**Pn**	**10 44 47.9**	**+2.1**
SHEM	**Shemya Is, Ala**	**11.03**	**277**	LR	LR	10 48 45.3	
	comp=N,156nm,20.9s,baz=128,slow=36						
L18K	**Granite Mounta**	**11.07**	**28**		**Pn**	**10 44 52.6**	**+2.4**
J16K	**Anvik River**	**11.10**	**17**		**Pn**	**10 44 52.1**	**+1.6**
GAMB	**Gambell**	**11.15**	**351**		**Pn**	**10 44 53.2**	**+2.0**
RED	**Redoubt Volcan**	**11.15**	**41**		**Pn**	**10 44 51.6**	**+0.3**
CNPM	**China Poot**	**11.32**	**47**		**Pn**	**10 44 55.3**	**+1.7**
J18K	**Innoko River**	**12.09**	**24**		**Pn**	**10 45 05.9**	**+1.9**
O22K	**Cooper Landing**	**12.45**	**45**		**Pn**	**10 45 10.4**	**+1.4**
SKT	**Skwentna**	**12.59**	**37**		**Pn**	**10 45 10.6**	**-0.2**
RC01	**Rabbit Creek A**	**12.76**	**43**		**Pn**	**10 45 14.2**	**+1.0**
H18K	**Honhosa River**	**13.21**	**17**		**Pn**	**10 45 21.7**	**+2.3**
PMR	**Palmer**	**13.28**	**41**		**Pn**	**10 45 21.7**	**+1.5**
EYAK	**Cordova Ski Ar**	**14.24**	**49**	P	**Pn**	**10 45 32.8**	**-0.6**
IMAR	**Indian Mountai**	**14.90**	**23**	Pn	**Pn**	**10 45 44.3**	**+2.3**
BERG	**Berg Lake**	**15.13**	**51**		**Pn**	**10 45 46.7**	**+1.4**
BERG				IAmb	IAmb	10 45 58.4	
	comp=Z,15nm,0.7s						
N25K	**Chitina, Valde**	**15.19**	**46**	IAmb	IAmb	10 46 14.8	
	comp=Z,6.9nm,0.7s						
G21K	**Allakaket**	**15.39**	**22**	IAmb	IAmb	10 46 14.3	
	comp=Z,6.4nm,0.8s						
I23K	**Minto, Yukon-K**	**15.43**	**30**	IAmb	IAmb	10 46 13.7	
	comp=Z,18nm,1.4s						
PAX	**Paxson**	**15.46**	**40**		**Pn**	**10 45 50.8**	**+1.2**
E19K	**Redstone River**	**15.50**	**15**	IAmb	IAmb	10 45 58.1	
	comp=Z,10nm,1.2s						
CRQM	**Cirque**	**15.52**	**50**		**Pn**	**10 45 51.4**	**+1.0**
CRQM				IAmb	IAmb	10 46 16.2	
	comp=Z,16nm,0.9s						
TGL	**Tana Glacier**	**15.66**	**50**	IAmb	IAmb	10 46 13.2	
	comp=Z,20nm,0.7s						
K24K	**Donnelly Dome**	**15.79**	**37**	IAmb	IAmb	10 46 26.7	
	comp=Z,30nm,1.4s						
MCARA	**McCarthy VSAT**	**15.79**	**48**	IAmb	IAmb	10 46 02.2	
	comp=Z,14nm,1.0s						
H23K	**Yukon River**	**15.86**	**28**	IAmb	IAmb	10 46 16.9	
	comp=Z,8.0nm,0.8s						
ILAR	**Eielson Array**	**15.97**	**34**	Pn	**Pn**	**10 45 54.5**	**-1.5**
F21K	**Alatna River**	**15.99**	**20**	IAmb	IAmb	10 46 02.5	
	comp=Z,12nm,1.2s						
GRNC	**Granite Creek**	**16.15**	**51**	IAmb	IAmb	10 46 14.2	
	comp=Z,18nm,0.7s						
H24K	**Noodor Dome**	**16.36**	**30**	IAmb	IAmb	10 46 16.1	
	comp=Z,8.2nm,0.8s						
G23K	**Bananza Creek**	**16.39**	**25**	IAmb	IAmb	10 46 09.9	
	comp=Z,7.1nm,0.6s						
LOGN	**Logan Glacier**	**16.53**	**51**	IAmb	IAmb	10 46 21.9	
	comp=Z,15nm,0.7s						
M27K	**Edge Creek, AK**	**16.67**	**45**	IAmb	IAmb	10 46 24.6	
	comp=Z,7.5nm,0.8s						
O28M	**Mount Upton**	**16.90**	**51**	IAmb	IAmb	10 46 21.0	
	comp=Z,15nm,0.9s						
BCAR	**Beaver Creek A**	**16.99**	**43**		**P**	**10 46 11.1**	**+0.7**
O29M	**Mount Kennedy**	**17.56**	**53**	IAmb	IAmb	10 46 23.1	
	comp=Z,15nm,0.5s						
FYU	**Fort Yukon**	**17.65**	**30**	IAmb	IAmb	10 46 21.5	
	comp=Z,15nm,1.2s						
B21K	**Ikpikpuk River**	**17.88**	**15**	IAmb	IAmb	10 46 31.3	
	comp=Z,16nm,1.2s						
M29M	**Somme Creek**	**18.18**	**47**	IAmb	IAmb	10 46 47.9	
	comp=Z,9.1nm,0.9s						
G26K	**Porcupine Rive**	**18.34**	**30**	IAmb	IAmb	10 46 29.0	
	comp=Z,4.5nm,0.5s						
DAWY	**Dawson**	**18.39**	**41**	P	**P**	**10 46 26.4**	**+0.7**
BMAR	**Burnt Mountain**	**18.41**	**29**		**Pn**	**10 46 26.7**	**+0.4**
L29M	**L29M**	**18.55**	**45**	IAmb	IAmb	10 46 32.0	
	comp=Z,30nm,1.5s						
H27K	**Steamboat Moun**	**18.64**	**34**	IAmb	IAmb	10 46 30.1	
	comp=Z,8.1nm,0.8s						
B22K	**Teshekpuk Lake**	**18.71**	**15**	IAmb	IAmb	10 46 34.8	
	comp=Z,12nm,0.9s						
C23K	**Itkillik River**	**18.77**	**18**	IAmb	IAmb	10 46 31.9	
	comp=Z,13nm,0.6s						
I28M	**Miner Creek**	**18.80**	**37**	IAmb	IAmb	10 46 33.7	
	comp=Z,7.7nm,0.5s						
O30N	**Mendenhall**	**18.86**	**53**	IAmb	IAmb	10 46 35.4	
	comp=Z,16nm,0.8s						
SKAG	**Skagway**	**19.05**	**57**	P	**Pn**	**10 46 35.5**	**+1.5**
D25K	**Kavik River**	**19.27**	**23**	IAmb	IAmb	10 46 41.4	
	comp=Z,8.4nm,0.8s						
I29M	**Ogilvie Camp,**	**19.36**	**38**	IAmb	IAmb	10 46 40.3	
	comp=Z,9.4nm,1.1s						
JIS	**Juneau Island**	**19.46**	**61**	P	**Pn**	**10 46 39.8**	**+0.9**
MAYO	**Mayo, Yukon**	**19.66**	**44**	IAmb	IAmb	10 47 00.3	
	comp=Z,17nm,0.8s						
J30M	**Hart River**	**19.81**	**42**	IAmb	IAmb	10 46 58.8	
	comp=Z,5.2nm,0.7s						
P32M	**Atlin**	**19.88**	**57**	IAmb	IAmb	10 46 52.5	
	comp=Z,9.1nm,0.8s						
F28M	**Old Crow**	**19.96**	**32**	IAmb	IAmb	10 46 44.4	
	comp=Z,5.5nm,0.8s						
I30M	**Mount Dempster**	**20.04**	**40**		**P**	**10 46 43.4**	**-0.5**
I30M				IAmb	IAmb	10 46 49.1	
	comp=Z,6.1nm,0.6s						
CRAG	**Craig**	**20.28**	**69**	P	Pn	10 46 50.4	+1.8
P33M	**Teslin, Yukon**	**20.39**	**55**	P	Pn	10 46 49.7	-0.3
P33M				IAmb	IAmb	10 47 07.0	
	comp=Z,9.4nm,0.7s						
D27M	**Malcolm River**	**20.61**	**27**	IAmb	IAmb	10 47 02.2	
	comp=Z,6.1nm,0.9s						
PETK	**Petropavlovsk-**	**20.73**	**285**	P	**P**	**10 46 49.9**	**-1.4**
	comp=Z,1.7nm,0.6s,baz=80,slow=14,SNR=10						
PETK				LR	LR	10 54 37.2	
	comp=Z,49nm,19.3s,baz=86,slow=36						
	comp=Z,1.7nm,0.6s						
G30M	**tAoh Zraii Nji**	**20.85**	**35**	IAmb	IAmb	10 46 56.1	
	comp=Z,13nm,0.9s						
E29M	**Blow River**	**21.00**	**31**	IAmb	IAmb	10 46 54.7	
	comp=Z,12nm,1.1s						
H31M	**Peel River**	**21.05**	**39**	IAmb	IAmb	10 46 55.0	
	comp=Z,11nm,0.8s						
F30M	**Barrier River**	**21.30**	**34**		**P**	**10 46 56.1**	**-1.2**
F30M				IAmb	IAmb	10 47 01.0	
	comp=Z,17nm,1.2s						
DLBC	**Dease Lake**	**21.75**	**60**	P	**P**	**10 47 03.5**	**+1.2**
	comp=Z,1.8nm,0.8s,baz=275,slow=6.2,SNR=4.7						
	comp=Z,1.8nm,0.8s						
INK	**Inuvik**	**22.37**	**33**		**P**	**10 47 07.2**	**-1.6**
INK				IAmb	IAmb	10 47 10.4	
	comp=Z,8.4nm,0.6s						
INK	**Inuvik**	**22.37**	**33**	P	**P**	**10 47 06.8**	**-2.0**
	comp=Z,7.8nm,0.6s,baz=220,slow=11,SNR=36						
INK				LR	LR	10 56 41.8	
	comp=Z,124nm,19.0s,baz=254,slow=39						
	comp=Z,7.8nm,0.6s						
SEY	**Seymchan**	**23.10**	**312**	P	**P**	**10 47 14.6**	**-1.8**
	comp=Z,3.0nm,0.7s,baz=98,slow=6.6,SNR=8.7						
	comp=Z,3.0nm,0.7s						
MA2	**Magadan**	**23.73**	**303**	P	**P**	**10 47 23.0**	**+0.5**
MA2				IAmb	IAmb	10 47 23.6	
	comp=Z,4.5nm,0.7s						
MA2	**Magadan**	**23.73**	**303**	LR	LR	10 55 55.1	
	comp=Z,73nm,20.9s,baz=65,slow=35						
BBB	**Bella Bella**	**23.88**	**76**	LR	LR	10 54 52.4	
	comp=Z,66nm,20.7s,baz=258,slow=32						
A36M	**Sachs Harbour**	**26.50**	**28**	P	**P**	**10 47 47.6**	**+0.1**
A36M				IAmb	IAmb	10 48 03.5	
	comp=Z,7.8nm,0.8s						
YKAW3	**Yellowknife Wh**	**29.14**	**50**		**P**	**10 48 12.3**	**+1.1**
YKAW3				IAmb	IAmb	10 48 51.5	
	comp=Z,2.7nm,1.1s						
YKA	**Yellowknife Ar**	**29.15**	**50**	P	**P**	**10 48 12.0**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=289,slow=15,SNR=26						
YKA				PcP	**PcP**	**10 51 17.4**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=294,slow=2.9,SNR=8.5						
	comp=Z,0.5nm,0.5s						
YKAW1	**Yellowknife Wh**	**29.20**	**50**	P	**P**	**10 48 12.9**	**+1.1**
YKAW1				IAmb	IAmb	10 48 13.4	
	comp=Z,2.6nm,0.8s						
NEW	**Newport**	**31.90**	**78**	LR	LR	10 59 06.1	
	comp=Z,42nm,18.2s,baz=334,slow=32						
TIXI	**Tiksi**	**32.85**	**329**	LR	LR	11 00 51.0	
	comp=Z,67nm,21.0s,baz=81,slow=34						
YAK	**Yakutsk**	**33.63**	**311**	LR	LR	11 02 08.5	
	comp=Z,47nm,21.3s,baz=83,slow=36						
PNTR	**Pine Nut**	**35.45**	**93**		**P**	**10 49 09.2**	**+2.2**
RES	**Resolute Bay**	**35.48**	**26**	LR	LR	11 05 53.6	
	comp=Z,50nm,19.0s,baz=183,slow=40						
BOZ	**Bozeman (W)**	**36.49**	**78**	IAmb	IAmb	10 49 16.7	
	comp=Z,2.2nm,0.8s						
NVAR	**Mina Array Bea**	**36.66**	**93**	P	**P**	**10 49 18.4**	**+1.2**
	comp=Z,1.5nm,0.7s,baz=296,slow=8.4,SNR=15						
NVAR				PcP	**PcP**	**10 51 39.6**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=276,slow=2.8,SNR=4.8						
	comp=Z,1.5nm,0.7s						
KLR	**Kul'dur**	**37.27**	**289**	LR	LR	11 03 40.7	
	comp=Z,47nm,21.5s,baz=45,slow=35						
HVU	**Hansel Valley**	**37.95**	**84**	IAmb	IAmb	10 49 30.1	
	comp=Z,2.5nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**38.48**	**221**	T	T	11 30 33.0	
	baz=25,slow=75,SNR=926						
H11N3	**WAKE ISLAND Hy**	**38.49**	**220**	T	T	11 30 35.7	
	baz=25,SNR=1390						
H11N1	**WAKE ISLAND Hy**	**38.50**	**221**	T	T	11 30 29.7	
	baz=25,slow=75,SNR=1385						
TPNV	**Topopah Spring**	**38.85**	**93**	P	**P**	**10 49 37.2**	**+1.5**
TPNV				IAmb	IAmb	10 49 38.2	
	comp=Z,7.0nm,1.1s						
DUG	**Dugway, Tooele**	**38.88**	**86**	IAmb	IAmb	10 49 38.2	
	comp=Z,4.2nm,1.1s						
BW06	**Boulder Array**	**39.31**	**81**	IAmb	IAmb	10 49 40.5	
	comp=Z,1.9nm,0.8s						
PD31	**Pinedale Array**	**39.31**	**81**	IAmb	IAmb	10 49 41.1	
	comp=Z,7.3nm,1.4s						
PDAR	**Pinedale Array**	**39.31**	**81**		**P**	**10 49 39.5**	**-0.1**
PDAR	**Pinedale Array**	**39.31**	**81**	P	**P**	**10 49 40.1**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=283,slow=4.1,SNR=12						
PDAR				LR	LR	11 04 06.0	
	comp=Z,24nm,19.9s,baz=325,slow=33						
	comp=Z,1.5nm,0.7s						
GSC	**Goldstone, Bar**	**39.61**	**96**	IAmb	IAmb	10 49 44.3	
	comp=Z,6.0nm,1.1s						
H11S1	**WAKE ISLAND Hy**	**39.67**	**220**	T	T	11 32 04.4	
	baz=24,slow=76,SNR=1458						
H11S2	**WAKE ISLAND Hy**	**39.68**	**220**	T	T	11 32 05.9	
	baz=24,slow=76,SNR=1237						
H11S3	**WAKE ISLAND Hy**	**39.68**	**220**	T	T	11 32 07.2	
	baz=24,slow=76,SNR=843						
P18A	**Preston Nutter**	**40.78**	**85**	IAmb	IAmb	10 49 54.2	
	comp=Z,8.1nm,1.2s						
SRU	**San Rafael Swe**	**40.94**	**86**	IAmb	IAmb	10 49 55.9	
	comp=Z,4.0nm,0.7s						
PFO	**Pinyon Flats O**	**40.97**	**97**	LR	LR	11 02 44.5	
	comp=Z,64nm,18.9s,baz=294,slow=30						
U15A	**North Rim**	**41.59**	**90**		**P**	**10 50 00.2**	**+1.6**
U15A				IAmb	IAmb	10 50 00.6	
	comp=Z,3.8nm,1.0s						
PV22	**Blue Mesa, Par**	**42.35**	**85**		**P**	**10 50 05.7**	**+1.0**
PV22				IAmb	IAmb	10 50 07.4	
	comp=Z,4.6nm,0.9s						
PV04	**Paradox Valley**	**42.37**	**86**	IAmb	IAmb	10 50 06.2	
	comp=Z,5.5nm,0.7s						
PV16	**Nyswonger Mesa**	**42.42**	**86**	IAmb	IAmb	10 50 06.5	
	comp=Z,3.6nm,0.7s						
PV03	**Paradox Valley**	**42.50**	**86**	IAmb	IAmb	10 50 07.0	
	comp=Z,5.5nm,0.7s						
ANMO	**Albuquerque**	**46.12**	**88**	LR	LR	11 07 29.1	
	comp=Z,73nm,21.8s,baz=56,slow=33						
KSRS	**Korea Array**	**46.36**	**277**	P	**P**	**10 50 36.2**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=51,slow=7.3,SNR=2.2						
	comp=Z,0.7nm,0.5s						
FRB	**Frobisher Bay**	**47.98**	**36**	LR	LR	11 12 08.0	
	comp=Z,67nm,19.1s,baz=296,slow=38						
SPITS	**Spitsbergen Ar**	**49.20**	**359**	P	**P**	**10 50 56.5**	**-1.4**
	comp=Z,1.7nm,0.7s,baz=39,slow=4.5,SNR=6.4						
SPITS				PcP	**PcP**	**10 52 20.2**	**-0.2**
	comp=Z,3.7nm,1.0s,baz=92,slow=2.5,SNR=4.2						
	comp=Z,1.7nm,0.7s						
SFJD	**Kangerlussuaq**	**51.48**	**27**	LR	LR	11 17 20.2	
	comp=Z,25nm,18.6s,baz=3.5,slow=41						
TXAR	**Lajitas Array**	**51.72**	**91**	P	**P**	**10 51 17.7**	**0.0**
	comp=Z,4.5nm,0.7s,baz=319,slow=7.4,SNR=26						
	comp=Z,4.5nm,0.7s						
HHC	**Hu-ho-hao-te**	**53.70**	**292**	*e*P	**P**	**10 51 32.8**	**+0.7**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,79nm,4.7s						
SCHQ	**Schefferville**	**54.37**	**44**	P	**P**	**10 51 37.0**	**+0.3**
	comp=Z,4.4nm,0.8s,baz=271,slow=11,SNR=4.0						
SCHQ				LR	LR	11 16 47.8	
	comp=Z,58nm,18.6s,baz=298,slow=38						
	comp=Z,4.4nm,0.8s						
SADO	**Sadowa**	**55.31**	**60**	LR	LR	11 15 47.6	
	comp=Z,32nm,18.5s,baz=194,slow=36						
ARCES	**ARCESS Array B**	**57.54**	**355**	P	**P**	**10 51 57.8**	**-1.3**
	comp=Z,3.2nm,0.9s,baz=6.2,slow=7.3,SNR=1.3						
ARCES				PcP	**PcP**	**10 52 51.7**	**-0.4**
	comp=Z,3.3nm,0.8s,baz=13,slow=3.4,SNR=3.7						
ARCES				LR	LR	11 18 04.7	
	comp=Z,20nm,18.2s,baz=14,slow=38						
	comp=Z,3.2nm,0.9s						
ZALV	**Zalesovo Beam**	**57.75**	**318**	LR	LR	11 17 40.8	
	comp=Z,42nm,20.1s,baz=112,slow=37						
TKL	**Tuckaleechee C**	**59.08**	**71**	LR	LR	11 16 43.9	
	comp=Z,40nm,20.2s,baz=353,slow=35						
BORG	**Borgarnes**	**59.88**	**16**	LR	LR	11 20 08.9	
	comp=Z,17nm,20.0s,baz=312,slow=38						
KURBB	**Kurchatov Arra**	**62.79**	**319**	P	**P**	**10 52 34.7**	**-0.6**
	comp=Z,0.9nm,0.6s,baz=46,slow=7.4,SNR=10						
	comp=Z,0.9nm,0.6s						
BVAR	**Borovoye Array**	**63.90**	**325**	P	**P**	**10 52 42.0**	**-0.7**
	comp=Z,1.5nm,0.4s,baz=38,slow=7.5,SNR=5.7						
BVAR				LR	LR	11 23 59.2	
	comp=Z,41nm,18.1s,baz=97,slow=39						
	comp=Z,1.5nm,0.4s						
MKAR	**Makanchi Array**	**64.21**	**314**	P	**P**	**10 52 43.2**	**-1.6**
	comp=Z,1.0nm,0.7s,baz=53,slow=6.1,SNR=8.5						
	comp=Z,1.0nm,0.7s						
ARTI	**Arti**	**64.73**	**334**	LR	LR	11 23 54.9	
	comp=Z,36nm,19.8s,baz=167,slow=39						
FINES	**FINESS Array B**	**65.52**	**353**	P	**P**	**10 52 51.6**	**-1.4**
	comp=Z,1.7nm,0.7s,baz=7.4,slow=6.0,SNR=8.3						
FINES				LR	LR	11 21 12.1	
	comp=Z,18nm,21.7s,baz=52,slow=36						
	comp=Z,1.7nm,0.7s						
NOA	**NORSAR Array B**	**66.45**	**1**	LR	LR	11 23 06.9	
	comp=Z,5.2nm,18.5s,baz=350,slow=37						
HFS	**Hagfors**	**67.36**	**359**	P	**P**	**10 53 03.9**	**-0.9**
	comp=Z,0.9nm,0.3s,baz=12,slow=3.7,SNR=10.0						
	comp=Z,0.9nm,0.3s						
BELG	**Belogornoye**	**71.03**	**338**	LR	LR	11 26 26.9	
	comp=Z,24nm,18.0s,baz=85,slow=38						
EKA	**Eskdalemuir Ar**	**71.42**	**9**	P	**P**	**10 53 29.7**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=350,slow=4.4,SNR=5.8						
	comp=Z,1.0nm,0.7s						
KSH	**Kashi**	**72.79**	**313**	P	**P**	**10 53 42.7**	**+4.1**
KSH				pmax	pmax		
	comp=Z,5.0nm,0.5s						
AKASG	**Malin Array Be**	**75.83**	**349**	P	**P**	**10 53 54.4**	**-1.6**
	comp=Z,1.5nm,0.5s,baz=23,slow=6.1,SNR=5.1						
	comp=Z,1.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**77.50**	**284**	P	**P**	**10 54 06.0**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=19,slow=7.5,SNR=5.4						
	comp=Z,1.5nm,0.7s						
GERES	**GERESS Array B**	**78.67**	**359**	P	**P**	**10 54 12.2**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=357,slow=5.2,SNR=3.5						
	comp=Z,0.6nm,0.7s						
KBA	**Koelnbreinsper**	**80.44**	**359**	*e*P	**P**	**10 54 22.2**	**+0.4**
	comp=Z,4.7nm,0.9s						
ABTA	**Abfaltersbach**	**80.77**	**360**	*i* P	**P**	**10 54 23.6**	**+0.2**
	comp=Z,0.7nm,0.5s						
SOKA	**Soboth**	**80.82**	**358**	*i* P	**P**	**10 54 24.6**	**+1.0**
	comp=Z,3.9nm,1.1s						
OBKA	**Obir**	**80.99**	**358**	*e*P	**P**	**10 54 24.0**	**-0.6**
	comp=Z,1.6nm,0.7s						
GNI	**Garni**	**83.20**	**336**	LR	LR	11 36 22.1	
	comp=Z,26nm,19.1s,baz=96,slow=39						
BRTR	**Keskin Array B**	**85.95**	**344**	P	**P**	**10 54 50.5**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=46,slow=3.6,SNR=7.4						
	comp=Z,1.2nm,0.6s						
ESDC	**Sonseca Array**	**86.77**	**13**	P	**P**	**10 54 53.9**	**-0.3**

	comp=Z,0.8nm,0.6s,baz=348,slow=4.7,SNR=7.6						
ESDC				LR	LR	11 37 48.9	
	comp=Z,19nm,18.6s,baz=113,slow=38						
	comp=Z,0.8nm,0.6s						
WRA	**Warramunga Arr**	88.11	233	P	P	10 54 59.6	-1.0
	comp=Z,1.2nm,0.7s,baz=32,slow=5.8,SNR=11						
	comp=Z,1.2nm,0.7s						
PCRV	**Puerto La Cruz**	89.73	74	LR	LR	11 33 10.1	
	comp=Z,20nm,20.2s,slow=34						
ASAR	**Alice Springs**	91.50	231	P	P	10 55 15.9	-0.5
	comp=Z,1.1nm,0.8s,baz=36,slow=4.6,SNR=14						
	comp=Z,1.1nm,0.8s						
H03N2	**Juan Fernandez**	115.16	113	T	T	13 06 31.2	
	baz=322,slow=78,SNR=42						
H03N1	**Juan Fernandez**	115.17	113	T	T	13 06 33.5	
	baz=322,slow=78,SNR=46						
H03N3	**Juan Fernandez**	115.17	113	T	T	13 06 23.9	
	baz=322,slow=78,SNR=58						
MAW	**Mawson**	151.90	219	PKPbc	PKPbc	11 02 02.5	-0.8
	comp=Z,3.2nm,0.6s,baz=106,slow=5.6,SNR=6.3						

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*KRNET **10** 10:54:42.8±0.1, 41°.07N×78°.04E, h17^{km}, mb3.0*
*SOME **10** 10:54:42.7, 41°.08N×77°.95E, h10^{km}*
*NNC **10** 10:54:44.8±1.8, 41°.10N×77°.91E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=12.5km s-min=7.9km az=170.0*
ISC 10 10:54:42.6±1.8**, 41°.07N**±0°.07×**77°.92E**±0°.03**, h17**^{km}±12^{km}**, n39,** σ**1ˢ.72**/61**, 10C-13D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	0.67	353	⇑*i*P	Pg	10 54 55.8	-0.1
TARG				⇑*i*S	Sb	10 55 05.6	+0.2
KDJ	**Kajisay**	1.20	333	⇓*i*P	Pg	10 55 05.7	-0.2
KDJ				⇓*i*S	Sn	10 55 22.5	+1.6
PRZ	**Przheval'sk**	1.46	14	⇓*e*P	Pb	10 55 09.9	+0.4
PRZ				⇓*e*S	Sg	10 55 29.4	-0.5
NRN	**Naryn**	1.50	285	⇓*i*P	Pg	10 55 12.4	+0.9
NRN				⇓*i*S	Sg	10 55 33.9	+2.9
ULHL	**Ulahol**	1.73	314	⇓*i*P	Pg	10 55 15.6	-0.2
ULHL				⇓*i*S	Sg	10 55 39.6	+1.3
SATY	**Saty**	2.02	10	Pg	Pg	10 55 20.6	-1.0
	21nm,0.2s						
SATY				Lg	Lg	10 55 47.9	
	35nm,0.1s						
BOOM	**Boomskoye usch**	2.06	315	⇑*i*P	Pb	10 55 20.6	+1.0
BOOM				⇑*i*S	Sg	10 55 48.4	-0.4
ZHN	**Zhinishke**	2.14	10	Pg	Pg	10 55 22.3	-1.4
	20nm,0.2s						
ZHN				Lg	Lg	10 55 50.6	
	64nm,0.2s						
ZHN	**Zhinishke**	2.14	10	*e*P	Pg	10 55 22.3	-1.4
	20nm,0.2s						
ZHN				*e*S	Sg	10 55 50.6	-0.8
	64nm,0.2s						
MDOK	**Medeo**	2.19	343	⇑Pn	Pb	10 55 23.3	+1.3
	13nm,0.5s						
MDOK				Pg	Pg	10 55 23.5	-1.2
	19nm,0.4s						
MDOK				Lg	Lg	10 55 53.2	
	20nm,0.5s						
MDOK				Sn	Sg	10 55 54.4	+1.1
	17nm,0.6s						
IZV	**Izvestkoviy**	2.20	334	Pg	Pg	10 55 23.7	-1.1
	15nm,0.4s						
IZV				Lg	Lg	10 55 53.4	
	40nm,0.3s						
IZV	**Izvestkoviy**	2.20	334	*e*P	Pg	10 55 23.8	-1.1
	15nm,0.4s						
IZV				*e*S	Sg	10 55 53.4	+0.1
	40nm,0.3s						
UZB	**Uzynbulak**	2.24	21	Pg	Pb	10 55 23.8	+1.1
	18nm,0.3s						
UZB				Lg	Lg	10 55 53.5	
	15nm,0.3s						
KOTS	**Kotyrbulak**	2.25	345	Pg	Pg	10 55 24.8	-1.0
	19nm,0.2s						
KOTS				Lg	Lg	10 55 55.2	
	49nm,0.5s						
KOTS	**Kotyrbulak**	2.25	345	*e*P	Pg	10 55 24.8	-1.0
	19nm,0.2s						
KOTS				*e*S	Sg	10 55 55.2	+0.2
	49nm,0.5s						
MTBS	**Maitube**	2.34	332	Pg	Pg	10 55 26.4	-1.2
	15nm,0.2s						
MTBS				Lg	Lg	10 55 57.7	
	23nm,0.4s						
MTBS	**Maitube**	2.34	332	*e*P	Pg	10 55 26.4	-1.2
	15nm,0.2s						
MTBS				*e*S	Sg	10 55 57.7	-0.3
	23nm,0.4s						
SHLS	**Shalkode**	2.38	28	Pg	Pg	10 55 29.4	+1.0
	20nm,0.4s						
SHLS				Lg	Lg	10 56 03.0	
	54nm,0.4s						
SHLS	**Shalkode**	2.38	28	*e*P	Pg	10 55 29.4	+1.0
	20nm,0.4s						
SHLS				*e*S	Sg	10 56 03.0	+3.7
	54nm,0.4s						
KST	**Kastek**	2.46	324	Pg	Pg	10 55 28.5	-1.3
	13nm,0.6s						
KST				Lg	Lg	10 56 01.4	
	33nm,0.4s						
KST	**Kastek**	2.46	324	*e*P	Pg	10 55 28.5	-1.3
	13nm,0.6s						
KST				*e*S	Sg	10 56 01.4	-0.2
	33nm,0.4s						
KPKS	**Kokpek**	2.46	13	Pg	Pb	10 55 27.6	+1.0
	9.2nm,0.4s						
KPKS				Lg	Lg	10 55 59.9	
	39nm,0.2s						
TKM2	**Tokmak 2**	2.54	318	⇑*i*P	Pb	10 55 27.5	-0.4
TKM2				⇑*i*S	Sb	10 55 59.9	+1.0
PDGK	**Podgornoye**	2.54	27	⇑Pn	Pb	10 55 27.9	0.0
	10nm,0.3s						
PDGK				⇓Sn	Sg	10 56 02.6	-1.8
	36nm,0.5s						
KTBS	**Karatobe**	2.80	341	Pg	Pb	10 55 34.0	+1.8
	13nm,0.3s						
KTBS				Lg	Lg	10 56 11.0	
	29nm,0.2s						
ARLS	**Aral**	2.82	288	⇓*e*P	Pb	10 55 31.0	-1.6
ARLS				⇓*e*S	Sb	10 56 06.9	-0.1
KTMS	**Ketmen**	2.99	36	Pg	Pg	10 55 37.9	-2.0
	3.9nm,0.3s						
KTMS				Lg	Lg	10 56 17.6	
	16nm,0.4s						
KTMS	**Ketmen**	2.99	36	*e*P	Pg	10 55 37.9	-2.0
	3.9nm,0.3s						
KTMS				*e*S	Sg	10 56 17.6	-1.0
	16nm,0.4s						
AAK	**Ala-Archa**	3.00	303	⇓Pg	Pg	10 55 39.5	-0.7
	1.4nm,0.8s						
AAK				⇓Lg	Lg	10 56 21.0	
	2.9nm,0.6s						
BLB	**Baldybastay**	3.06	8	Pg	Pb	10 55 38.8	+2.1
	27nm,0.4s						
BLB				Lg	Lg	10 56 19.2	
	27nm,0.3s						
KUU	**Kurty**	3.06	338	Pg	Pb	10 55 39.1	+2.4
	3.4nm,0.1s						
KUU				Lg	Lg	10 56 19.7	
	11nm,0.1s						
KUU	**Kurty**	3.06	338	*e*P	Pb	10 55 39.1	+2.4
	3.4nm,0.1s						
KUU				*e*S	Sg	10 56 19.7	-1.2
	11nm,0.1s						
ARXS	**Arharly**	3.15	359	Pg	Pb	10 55 40.3	+2.1
	6.4nm,0.3s						
ARXS				Lg	Lg	10 56 21.8	
	16nm,0.3s						
AML	**Almayashu**	3.34	290	⇑*i*P	Pb	10 55 39.4	-2.3
AML				⇑*i*S	Sb	10 56 19.9	-2.4
KNOS	**Konyrlen**	3.42	15	Pg	Pg	10 55 45.6	-2.6
	2.4nm,0.4s						
KNOS				Lg	Lg	10 56 30.7	
	8.4nm,0.5s						
MRKS	**Merke**	3.88	297	Pg	Pb	10 55 54.3	+3.6
	2.9nm,0.4s						
MRKS				Lg	Lg	10 56 45.7	
	5.1nm,0.5s						
MRKS	**Merke**	3.88	297	*e*P	Pb	10 55 54.3	+3.6
	2.9nm,0.4s						
MRKS				*e*S	Sg	10 56 45.7	-1.6
	5.1nm,0.5s						
BTLS	**Baital**	4.88	326	Lg	Lg	10 55 44.9	
	6.8nm,1.1s						
BTLS				Pg	Pg	10 56 12.7	-3.4
	3.5nm,0.5s						
BTLS	**Baital**	4.88	326	*e*P	Pg	10 56 12.7	-3.4
	3.5nm,0.5s						
BTLS				*e*S	Sg	10 57 17.4	-1.9
	1.9nm,0.4s						

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*NEIC **10** 10:59:31.3±1.0, 18°.78N±0°.03×155°.17W±0°.02, h10^{km}±2^{km}, Error ellipse: s-maj=5.0km s-min=3.1km az=335.0*
HVO 10 10:59:33.3±1.2**, 18°.82N**±0°.03×**155°.28W**±0°.02**, h12**^{km}±7^{km}**, ML2.8**/33**, ML2.8**/44(NEIC)**, Error ellipse: s-maj=5.1km s-min=1.3km az=144.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HPO	**Honuapo**	0.37	315		Pg	10 59 40.5	-0.3
HPO					Sg	10 59 46.2	+0.4
HTC	**Hot Caves**	0.43	344		Pg	10 59 41.4	-0.5
HLP	**Hilina Pali**	0.47	356		Pg	10 59 42.2	-0.5
HLP					Sg	10 59 49.2	+0.2
KHU	**Kahuku**	0.53	323		Pg	10 59 42.8	-1.0
KHU	**Kahuku**	0.53	323	IAML		10 59 59.9	
	comp=E,791nm,0.5s						
KHU				IAML		11 00 01.4	
	comp=N,627nm,0.8s						
PUH	**Pauahi**	0.55	6		Pg	10 59 42.9	-1.2
PUH	**Pauahi**	0.55	6	IAML		10 59 59.3	
	comp=N,702nm,0.5s						
PUH				IAML		11 00 01.1	
	comp=E,649nm,0.6s						
KNHH	**Kane Nui o Ham**	0.56	10		Pg	10 59 43.2	-1.2
SDHHI	**Sand Hill**	0.57	358		Pg	10 59 43.1	-1.3
SDHHI					Sg	10 59 51.3	-0.6
RIM	**Rim**	0.57	0		Pg	10 59 43.2	-1.3
AIN	**Ainahou**	0.57	343		Pg	10 59 43.6	-1.0
AIN	**Ainahou**	0.57	343	IAML		10 59 59.0	
	comp=E,792nm,0.4s						
KKO	**Keanakako'i**	0.57	1		Pg	10 59 43.3	-1.3
STCH	**Steam Cracks**	0.58	14		Pg	10 59 43.3	-1.3
STCH					Sg	10 59 51.2	-1.2
STCH	**Steam Cracks**	0.58	14	IAML		10 59 59.2	
	comp=E,488nm,0.4s						
WRMHI	**West Rim**	0.58	358		Pg	10 59 43.3	-1.4
WRMHI					Sg	10 59 51.9	-0.6
JCUZ	**Jacuzzi**	0.58	16		Pg	10 59 43.4	-1.3
BYL	**Byron's Ledge**	0.59	1		Pg	10 59 43.4	-1.5
BYL	**Byron's Ledge**	0.59	1	IAML		10 59 59.9	
	comp=E,574nm,0.5s						
BYL				IAML		11 00 02.0	
	comp=N,625nm,0.5s						
NPOC	**North of Pu‘u**	0.59	15		Pg	10 59 43.5	-1.4
OBL	**Observatory Le**	0.59	359		Pg	10 59 43.5	-1.5
OBL					Sg	10 59 52.1	-0.7
UWE	**Uwekahuna**	0.60	358		Pg	10 59 43.5	-1.5
UWE					Sg	10 59 53.0	0.0
UWE	**Uwekahuna**	0.60	358	IAML		11 00 00.4	
	comp=N,588nm,0.4s						
HATHI	**Halema‘uma‘u T**	0.60	1		Pg	10 59 43.5	-1.5
HATHI	**Halema‘uma‘u T**	0.60	1	IAML		11 00 03.3	
	comp=E,811nm,0.8s						
HATHI				IAML		11 00 03.6	
	comp=N,506nm,0.8s						
UWB	**Uwekahuna Bluf**	0.60	360		Pg	10 59 43.4	-1.6
SBLHI	**Steaming Bluff**	0.60	1		Pg	10 59 43.5	-1.6
RSD	**Rainshed**	0.64	360		Pg	10 59 44.1	-1.7
JOKA	**Jonika Flow**	0.66	23		Pg	10 59 44.5	-1.7
JOKA					Sg	10 59 52.8	-2.1
MLH	**Mauna Loa**	0.68	351		Pg	10 59 44.9	-1.6
MLH					Sg	10 59 55.6	+0.1
MLH	**Mauna Loa**	0.68	351	IAML		11 00 00.8	
	comp=N,507nm,0.6s						
MLH				IAML		11 00 01.9	
	comp=E,513nm,0.4s						
MWH	**Mokuaweoweo**	0.73	335		Pg	10 59 45.6	-1.9
MWH	**Mokuaweoweo**	0.73	335	IAML		11 00 13.3	
	comp=N,409nm,1.0s						
MWH				IAML		11 00 14.2	
	comp=E,514nm,0.9s						
ALEP	**Alea Permanent**	0.80	334		Pg	10 59 46.4	-2.4
ALEP					Sg	10 59 58.5	-0.8
HMH	**Humu‘ula Sheep**	0.80	346		Pg	10 59 46.8	-2.1
HMH					Sg	10 59 58.0	-1.5
HMH	**Humu‘ula Sheep**	0.80	346	IAML		11 00 04.3	
	comp=N,287nm,0.4s						
HMH				IAML		11 00 11.9	
	comp=E,257nm,0.5s						
CPH	**Captain Cook**	0.90	318		Pg	10 59 47.6	-3.1
POHA	**Pohakuloa**	0.96	345		Pg	10 59 48.6	-3.3
POHA	**Pohakuloa**	0.96	345		Pg	10 59 49.1	-2.8
POHA				IAML		11 00 11.6	
	comp=E,237nm,0.6s						
POHA				IAML		11 00 13.1	
	comp=E,187nm,0.5s						
HUH	**Hualalai**	1.01	328		Pg	10 59 49.8	-3.0
HUH					Sg	11 00 03.1	-2.9
HPAH	**Hawaii Prepara**	1.27	342		Pn	10 59 52.8	-4.2
HPAH					Sb	11 00 06.7	-6.8

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*IDC **10** 11:03:32.9±1.1, 12°.83S×45°.34E, h0^{km}, mb3.9/5, mbtmp3.9/5, Error ellipse: s-maj=37.1km s-min=31.1km az=153.0*
*NEIC **10** 11:03:35.0±1.5, 12°.86S±0°.07×45°.47E±0°.09, h10^{km}±2^{km}, mb4.4/13, Error ellipse: s-maj=17.4km s-min=8.2km az=305.0*
ISC 10 11:03:34.1±0.7**, 12°.94S**±0°.06×**45°.49E**±0°.08**, h10**^{km}**, n31,** σ**2ˢ.02**/38**, mb4.3**/9**, Northwest of Madagascar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBV	**Sambava**	4.34	97	P	Pn	11 04 41.2	+0.9
SBV				S	Sn	11 05 27.1	-3.9
OPO	**Ambohidratompo**	5.83	164	P	Pn	11 05 03.1	+2.3
OPO				S	Sn	11 06 05.2	-2.7
FIRM	**Firavahana**	5.88	167	P	Pn	11 05 04.0	+2.5
FIRM				S	Sn	11 06 05.0	-4.2
ATG	**Ambohiby**	5.94	174	P	Pn	11 05 04.1	+1.7
ABPO	**Ambohimpanom**	6.27	165		Pn	11 05 08.6	+1.7
ABPO				Sn	Sn	11 06 15.2	-3.5
ABPO	**Ambohimpanom**	6.27	165	P	Pn	11 05 08.8	+2.0
MDSM	**Mandiavato**	6.28	167	P	Pn	11 05 09.2	+2.1
AVY	**Angavokely**	6.33	160	P	Pn	11 05 09.5	+1.7
AVY				S	Sn	11 06 18.3	-2.1
DGRM	**Ambatolahisoa**	6.34	172	P	Pn	11 05 09.9	+2.0
DGRM				S	Sn	11 06 18.1	-2.5
ABM	**Ambohimiarambe**	7.03	165	P	Pn	11 05 19.7	+2.2
ABM				S	Sn	11 06 35.0	-2.6
VOI	**Vohitsoka**	9.00	172	Pn	Pn	11 05 46.0	+1.7
FOMA	**Nahampoana Res**	12.05	174	Pn	Pn	11 06 26.9	+0.9
RER	**Riviere de l'E**	12.76	131	Pn	Pn	11 06 37.0	+1.2
KIBK	**Kibwezi**	12.86	324	Pn	Pn	11 06 35.4	-1.8
LSZ	**Lusaka**	16.95	260		Pn	11 07 31.6	-0.1
POGA	**Pongola**	19.28	220	P	P	11 07 59.2	0.0
POGA				IAmb	IAmb	11 08 06.9	
	comp=Z,38nm,1.5s						
MREMI	**Moremi**	19.66	238	P	Pn	11 08 04.2	-0.6
LPHEP	**Lephephe**	21.32	238	P	P	11 08 21.8	+0.3
LPHEP				IAmb	IAmb	11 08 23.7	
	comp=Z,35nm,1.3s						
LBTB	**Lobatse**	22.29	235	P	P	11 08 31.6	-0.3
LBTB				IAmb	IAmb	11 08 38.4	
	comp=Z,15nm,1.2s						
BOSA	**Boshof**	24.46	227	P	P	11 08 54.2	+0.7
BOSA				IAmb	IAmb	11 09 13.8	
	comp=Z,15nm,1.5s						
BOSA	**Boshof**	24.46	227	P	P	11 08 53.5	0.0
	comp=Z,2.8nm,0.5s,baz=53,slow=8.9,SNR=13						
	comp=Z,2.8nm,0.5s						
GRTLG	**Ghanzi**	24.64	247	P	P	11 08 56.4	+1.2
LKGWB	**Lokgwabe**	25.51	241	P	P	11 08 59.8	-3.3
SUR	**Sutherland**	29.75	225	P	P	11 09 42.7	+1.5
AB31	**Akbulak array**	63.23	11		P	11 14 02.8	+0.2
AB31				IAmb	IAmb	11 14 05.0	
	comp=Z,2.3nm,0.8s						
ABKAR	**Akbulak array**	63.23	11		P	11 14 02.2	-0.4
ABKAR				IAmb	IAmb	11 14 05.0	
	comp=Z,2.3nm,0.8s						
MKAR	**Makanchi Array**	68.00	26	P	P	11 14 33.6	+0.1
	comp=Z,0.2nm,0.5s,baz=215,slow=4.8,SNR=2.6						
	comp=Z,0.2nm,0.5s						
ESDC	**Sonseca Array**	69.66	321	P	P	11 14 43.6	-0.5
	comp=Z,0.4nm,0.6s,baz=128,slow=8.3,SNR=2.3						
	comp=Z,0.4nm,0.6s						
QSPA	**South Pole Qui**	77.15	180	P	P	11 15 30.5	+2.6
ASAR	**Alice Springs**	83.47	113	P	P	11 16 03.9	+1.1
	comp=Z,0.8nm,0.7s,baz=262,slow=4.9,SNR=16						
	comp=Z,0.8nm,0.7s						
WRA	**Warramunga Arr**	84.61	109	P	P	11 16 10.2	+1.7
	comp=Z,1.7nm,0.9s,baz=260,slow=3.1,SNR=10						
	comp=Z,1.7nm,0.9s						

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*IDG **10** 11:12:43.0, 60°.07N×27°.50E, h0^{km}, M3.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*
*HEL **10** 11:12:45.5±0.2, 59°.80N×27°.47E, h0^{km}, ML2.2, Explosion*
*EST **10** 11:12:45.7±0.1, 59°.81N×27°.45E, h0^{km}, ML2.2(HEL), Explosion*
*BER **10** 11:12:46.7±1.1, 59°.66N×27°.54E, h0^{km}, ML2.2(HEL), Suspected explosion*
*IDC **10** 11:12:47.6±1.1, 59°.90N×27°.31E, h0^{km}, mbtmp3.2/4, ML3.0/4, Error ellipse: s-maj=13.6km s-min=7.5km az=83.0*
*DNK **10** 11:12:47.2±0.9, 60°.45N×27°.11E, h0^{km}, ML2.4(UPP), Suspected explosion*
*UPP **10** 11:12:49.4±3.3, 60°.41N×26°.91E, h0^{km}, ML2.4*
ISC 10 11:12:44.2±0.8**, 59°.79N**±0°.03×**27°.35E**±0°.04**, h0**^{km}**, n56,** σ**1ˢ.21**/71**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EE04	**Vaivara Sinima**	0.50	147	*e*P	Pg	11 12 54.2	+0.5
EE04				*e*S	Sg	11 13 01.1	+0.9
PVF	**Pernaja**	1.06	316	*e*P	Pg	11 13 04.7	+0.2
PVF				*e*S	Sb	11 13 19.5	-0.3
EE03	**Tooma soojaam,**	1.07	211	*e*P	Pg	11 13 05.8	+1.0
EE03				*e*S	Sg	11 13 19.6	+1.0
HEL1	**Helsinki**	1.30	288	*e*P	Pg	11 13 09.3	+0.3
HEL1				*e*S	Sg	11 13 26.1	+0.3
VSU	**Vasula**	1.37	194	*e*P	Pg	11 13 08.4	-2.0
VSU	**Vasula**	1.37	194	*e*P	Pg	11 13 10.0	-0.4
VSU				*e*S	Sg	11 13 28.9	+0.6
NUR	**Nurmijarvi**	1.53	299	*e*P	Pn	11 13 13.3	+0.6
NUR				*e*S	Sn	11 13 33.7	+0.4
NUR				MSG		11 13 37.0	
	comp=Z,16nm,0.1s						
MEF	**Metsahovi**	1.54	287	*e*P	Pn	11 13 13.6	+0.7
MEF	**Metsahovi**	1.54	287	*e*P	Pn	11 13 13.7	+0.7
MEF				MSG		11 13 36.0	
	comp=Z,20nm,0.1s						
EE08	**Sarghaua, Vand**	1.57	224	*e*P	Pb	11 13 14.4	+0.3
EE08				*e*S	Sn	11 13 34.7	+0.4
FIA0	**FINESS Array S**	1.77	340	MSG		11 13 42.4	
	comp=Z,11nm,0.1s						
FIA1	**FINESS Array S**	1.77	340	*e*P	Pn	11 13 16.4	+0.3
FIA1				*e*S	Sb	11 13 40.8	+0.5
FIA1				MSG		11 13 42.4	
	comp=Z,13nm,0.1s						
FINES	**FINESS Array B**	1.77	340	Pg	Pn	11 13 16.3	+0.3
	comp=Z,3.8nm,0.3s,baz=155,slow=16,SNR=138						
FINES				Lg	Lg	11 13 40.6	
	comp=Z,8.9nm,0.3s,baz=157,slow=28,SNR=22						
RUF	**Ruokolahti**	1.82	25	*e*P	Pn	11 13 16.4	-0.3
RUF				*e*S	Sn	11 13 40.5	0.0
RUF				MSG		11 13 43.4	
	comp=Z,30nm,0.1s						
EE07	**Piusa Caves, O**	1.96	178	*e*P	Pb	11 13 20.6	-0.1
EE07				*e*SG	Sg	11 13 47.2	+0.1
TVF	**Tvarminne**	2.07	273	*e*P	Pb	11 13 22.7	+0.1
TVF				*e*S	Sb	11 13 49.4	+0.6
TVF				MSG		11 13 52.1	
	comp=Z,15nm,0.2s						
MTSE	**Matsula**	2.11	241	*e*P	Pn	11 13 21.3	+0.5
MTSE	**Matsula**	2.11	241	*e*P	Pb	11 13 23.7	+0.3
MTSE				*e*S	Sb	11 13 49.7	-0.3
KAF	**Kangasniemi**	2.38	348	*e*P	Pn	11 13 25.9	+1.5
KAF				MSG		11 14 01.2	
	comp=Z,6.2nm,0.1s						
EE06	**Soera, Palade,**	2.45	252	*e*P	Pn	11 13 27.7	+2.3
EE06				*e*PB	Pb	11 13 29.3	+0.3
EE06				*e*SB	Sb	11 14 01.1	+1.5
KEF	**Keuruu**	2.67	334	*e*P	Pn	11 13 30.5	+2.1
KEF	**Keuruu**	2.67	334	*e*P	Pn	11 13 30.1	+1.6
KEF				MSG		11 14 09.2	
	comp=Z,12nm,0.2s						
RAF	**Rauma**	3.03	296	*e*P	Pn	11 13 35.7	+2.3
RAF	**Rauma**	3.03	296	*e*P	Pn	11 13 35.4	+2.0
SLIT	**Slitere, Latvi**	3.42	233	*e*P	Pn	11 13 38.9	+0.3
SLIT	**Slitere, Latvi**	3.42	233	*e*PG	Pg	11 13 48.3	-1.3
AAL	**Aland**	3.72	279	P	Pn	11 13 44.6	+1.9
AAL	**Aland**	3.72	279	P	Pn	11 13 44.6	+1.9
VAF	**Ylistaro**	3.96	327	*e*P	Pn	11 13 48.6	+2.5
VAF	**Ylistaro**	3.96	327	*e*P	Pn	11 13 48.5	+2.4
NRTU	**Norrtaelje**	4.41	272	P	Pn	11 13 54.2	+1.9
NRTU	**Norrtaelje**	4.41	272	P	Pn	11 13 54.2	+1.9
GRAU	**Graesoe**	4.45	281	P	Pn	11 13 53.5	+0.7
GRAU				S	Sn	11 14 41.9	-3.3
GRAU	**Graesoe**	4.45	281	P	Pn	11 13 53.5	+0.7
GRAU				S	Sn	11 14 41.9	-3.3
PABE	**Paberze**	4.67	204	*e*P	Pn	11 13 54.6	-1.3
PBUR	**Paburge**	4.76	220	*e*P	Pn	11 13 56.7	-0.3
FLYU	**Flymyra**	4.77	278	P	Pn	11 13 57.8	+0.5
FLYU	**Flymyra**	4.77	278	P	Pn	11 13 57.8	+0.5
HFS	**Hagfors**	6.87	279	Pn	Pn	11 14 26.3	+0.3
	comp=Z,0.3nm,0.3s,baz=77,slow=14,SNR=8.9						
HFS				Lg	Lg	11 16 19.0	
	comp=Z,1.0nm,0.3s,baz=87,slow=30,SNR=6.5						
	comp=Z,0.6nm,0.4s						
NB201	**NORSAR Array S**	8.04	286	*e*P	Pn	11 14 42.0	-0.2
NOA	**NORSAR Array B**	8.08	286	Pn	Pn	11 14 41.8	-0.9
	comp=Z,0.1nm,0.3s,baz=97,slow=11,SNR=18						
NOA				Lg	Lg	11 17 02.2	
	comp=Z,0.1nm,0.3s,baz=79,slow=19,SNR=4.3						
	comp=Z,0.4nm,0.5s						
NAO01	**NORSAR Array S**	8.24	284	*e*P	Pn	11 14 44.8	0.0
STRU	**Stroemstad**	8.28	272	*e*P	Pn	11 14 45.4	+0.1
NC204	**NORSAR Array S**	8.31	287	*e*P	Pn	11 14 47.3	+1.4
SALU	**Saltoluokta**	8.56	336	*e*P	Pn	11 14 50.2	+0.9
HEF	**Hetta**	8.80	351	*e*P	Pn	11 14 52.8	+0.3
LEIR	**Leirfjorden**	9.05	320	*e*P	Pn	11 14 56.7	+0.8
AKASG	**Malin Array Be**	9.18	172	Pn	Pn	11 14 57.8	+0.2
	comp=Z,1.2nm,0.3s,baz=355,slow=12,SNR=5.8						
	comp=Z,0.5nm,0.3s						
STOK	**Stokkvaagen**	9.22	321	*e*P	Pn	11 14 58.5	+0.3
KONS	**Konsvik**	9.29	322	*e*P	Pn	11 14 59.1	-0.1
VAGH	**Vaagaholmen**	9.39	324	*e*P	Pn	11 15 00.6	0.0
SKAR	**Skarslia**	9.51	284	*e*P	Pn	11 15 02.7	+0.4
STEI	**Steigen**	9.73	332	*e*P	Pn	11 15 05.0	-0.2
ARA0	**ARCESS Array S**	9.81	356	*e*P	Pn	11 15 06.6	+0.2
ARCES	**ARCESS Array B**	9.81	356	Pn	Pn	11 15 04.9	-1.5
	comp=Z,0.2nm,0.3s,baz=169,slow=14,SNR=18						
	comp=Z,0.7nm,0.4s						
KEV	**Kevo**	10.01	359	*e*P	Pn	11 15 07.8	-1.1

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*JMA **10** 11:23:49.9±0.2, 34°.5N±0°.6×140°.2E±0°.7, h81^{km}±2^{km}, MV3.0/36, FAR S OFF BOSO PENINSULA*
*IDC **10** 11:23:50.5±4.1, 34°.45N×140°.32E, h84^{km}±30^{km}, mb3.2/4, mbtmp3.6/6, Error ellipse: s-maj=61.7km s-min=21.9km az=73.0*
ISC 10 11:23:50.3±1.0**, 34°.44N**±0°.04×**140°.27E**±0°.05**, h77**^{km}±7^{km}**, n23,** σ**0ˢ.78**/37**, mb3.6**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO3	**Boso 3**	0.41	29	*i* P	Pn	11 24 02.9	+0.3
BSO3				*e*X		11 24 13.7	
BSO4	**Boso 4**	0.55	6	*i* P	Pn	11 24 04.5	+0.4
BSO4				*e*X		11 24 16.4	
BSO1	**Boso 1**	0.62	70	P	Pn	11 24 04.7	+0.4
BSO1				*e*X		11 24 16.9	
TATJ	**Tateyama 2**	0.66	332	*i* P	Pn	11 24 05.7	+0.3
TATJ				S	Sn	11 24 17.8	+1.4
KTR	**Katsuura**	0.70	3	P	Pn	11 24 05.8	0.0
KTR				S	Sn	11 24 17.4	+0.2
JMYK	**Miyake Tsubota**	0.71	238	P	Pn	11 24 05.8	0.0
JMYK				S	Sn	11 24 17.8	+0.6
JKUC	**kamogawauchiur**	0.72	356	P	Pn	11 24 05.9	0.0
JKUC				S	Sn	11 24 18.0	+0.5
JIM2	**Oshima 3**	0.74	292	P	Pn	11 24 05.5	-0.7
JIM2				*e*S	Sn	11 24 16.7	-1.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMKN	Mikurajimanish	0.78	226	iP	Pn	11 24 06.5	-0.1
JMKN				S	Sn	11 24 18.9	+0.2
JTHY	Toshimahigashi	0.81	276	P	Pn	11 24 06.8	-0.1
JTHY				S	Sn	11 24 20.0	+0.7
JIZS	Izushimoda	1.18	284	P	Pn	11 24 10.9	-0.4
JIZS				S	Sn	11 24 26.6	-0.5
JOD2	Odawara 2	1.27	311	P	Pn	11 24 11.8	-0.7
JOD2				S	Sn	11 24 28.1	-1.1
JHJ2	Mitsune	1.38	196	eP	Pn	11 24 14.4	+0.5
JHJ2				S	Sn	11 24 32.2	+0.5
JYN	Shimob	1.76	307	P	Pn	11 24 19.5	+0.5
JYN				S	Sn	11 24 41.5	+0.7
SHZ3	Shizuoka 3	1.80	291	P	Pn	11 24 20.2	+0.6
SHZ3				eS	Sn	11 24 44.2	+2.5
JRY	Ryogami san	1.93	325	P	Pn	11 24 21.3	+0.2
JRY				S	Sn	11 24 44.9	+0.3
JAG	Ashikaga	2.09	342	P	Pn	11 24 23.2	0.0
MJAR	Matsushiro Arr	2.68	322	P	Pn	11 24 32.1	+0.8
	12nm,0.5s,baz=150,slow=11,SNR=28						
MJAR				S	Sn	11 25 03.5	+0.7
	13nm,0.5s,baz=126,slow=13,SNR=10						
JNU	Nakatsue	7.92	263	P	Pn	11 25 44.1	+1.3
	2.6nm,0.3s,baz=79,slow=5.6,SNR=11						
MKAR	Makanchi Array	44.75	304	P	P	11 31 55.6	-0.3
	0.7nm,0.5s,baz=84,slow=11,SNR=6.2						
	0.7nm,0.5s						
KURBB	Kurchatov Arra	46.90	310	P	P	11 32 12.6	-0.2
	0.5nm,0.2s,baz=90,slow=7.2,SNR=1.9						
	0.5nm,0.2s						
WRA	Warramunga Arr	54.38	187	P	P	11 33 08.2	-1.0
	0.2nm,0.4s,baz=2.6,slow=7.7,SNR=6.7						
	0.2nm,0.4s						
ASAR	Alice Springs	58.10	187	P	P	11 33 35.3	-0.5
	0.1nm,0.5s,baz=4.5,slow=6.0,SNR=1.2						
	0.1nm,0.5s						

*SJA **10** 11:43:14.6±0.7, 29°.81S×72°.62W, h10^{km}, ML4.1, MW4.0*

*GUC **10** 11:43:23.2±0.9, 30°.02S×71°.78W, h31^{km}±7^{km}, ML4.0*

ISC 10 11:43:20.0±1.5**, 29°.87S**±0°.03×**72°.08W**±0°.06**, h11**^{km}±11^{km}**, n39, σ2^s.02**/61**, 1C-5D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.73	94	⇓iP	Pg	11 43 33.8	-0.4
CO05				IAML		11 43 43.8	
	comp=E,18µm,0.3s						
CO06	Fray Jorge	0.89	154	⇓eP	Pg	11 43 36.1	-1.0
CO06				IAML		11 43 50.3	
	comp=E,6µm,0.2s						
GO04	Tololo Observa	1.15	105	⇓eP	Pb	11 43 40.5	-1.6
GO04				eS	Sb	11 43 53.1	-3.9
GO04				IAML		11 43 56.5	
	comp=N,22µm,0.4s						
GO04	Tololo Observa	1.15	105	eP	Pb	11 43 40.4	-1.6
LCO	Las Campanas	1.48	55	eP	Pn	11 43 47.3	+0.6
LCO				eS	Sb	11 44 07.2	+0.7
LCO				IAML		11 44 10.9	
	comp=Z,4µm,0.3s						
CO03	El Pedregal	1.54	129	eP	Pn	11 43 46.1	-1.4
CO03				eS	Sn	11 44 04.5	-3.0
CO03				IAML		11 44 07.8	
	comp=N,3µm,0.2s						
CO02	Combarbal	1.62	145	⇓eP	Pn	11 43 48.1	-0.5
CO02				eS	Sn	11 44 06.8	-2.7
CO02				IAML		11 44 16.6	
	comp=N,10µm,0.4s						
CO01	Juntas del Tor	1.73	94	⇓eP	Pn	11 43 50.1	-0.1
CO01				IAML		11 44 12.9	
	comp=N,3µm,0.4s						
AC04	Llanos de Chal	1.88	28	eP	Pn	11 43 52.6	+0.5
AC04				IAML		11 44 24.4	
	comp=E,670nm,0.2s						
AC04	Llanos de Chal	1.88	28	eP	Pn	11 43 52.6	+0.5
AC04				eS	Sg	11 44 20.5	0.0
AC05	El Transito	1.89	57	⇑eP	Pn	11 43 53.4	+1.1
AC05				IAML		11 44 21.9	
	comp=N,1µm,0.3s						
AC05	El Transito	1.89	57	eP	Pn	11 43 53.4	+1.1
AC05				eS	Sb	11 44 19.1	+1.1
AC05				IAML		11 44 21.7	
	comp=Z,524nm,0.2s						
AROD	Rodeo	2.28	98	eP	Pn	11 44 00.1	+2.3
AROD				eS	Sb	11 44 29.9	+0.2
ACDV	Cuesta del Vie	2.58	97	eP	Pn	11 44 04.3	+2.4
ACDV				eS	Sb	11 44 38.8	+0.5
ACDV				IAML		11 44 43.9	
	comp=Z,426nm,0.5s						
ACCO	Cerro Coronel	2.70	106	eP	Pg	11 44 11.6	-0.3
ACCO				eS	Sg	11 44 48.6	+1.7
VA06	Catapilco	2.76	166	IAML		11 45 00.7	
	comp=N,1µm,0.4s						
GO03	Copiapo	2.79	36	IAML		11 44 55.6	
	comp=E,427nm,0.3s						
GO03	Copiapo	2.79	36	eP	Pn	11 44 05.5	+0.9
GO03				eS	Sb	11 44 44.5	+0.4
DOCA	Reserva Natura	2.80	113	eP	Pn	11 44 08.0	+2.9
DOCA				eS	Sb	11 44 44.0	-0.7
DOCA				IAML		11 44 51.5	
	comp=Z,254nm,0.6s						
RTLS	Leoncito	3.07	129	eP	Pn	11 44 11.5	+2.8
RTLS				eS	Sb	11 44 53.5	+1.1
RTLS				IAML		11 44 57.5	
	comp=Z,1µm,1.3s						
AGUA	GUANDACOL	3.15	84	eP	Pn	11 44 13.4	+3.8
AGUA				eS	Sb	11 44 57.0	+2.6
AGUA				IAML		11 45 05.2	
	comp=Z,495nm,0.3s						
VA03	San Esteban	3.17	156	eP	Pn	11 44 11.0	+1.2
VA03				eS	Sn	11 44 47.0	-0.6
VA03				IAML		11 45 03.3	
	comp=Z,438nm,0.7s						
ROCH	El Roble	3.22	164	IAML		11 45 10.2	
	comp=N,650nm,0.5s						
ROCH				eP	Pn	11 44 10.6	-0.1
ROCH				IAML		11 45 10.2	
	comp=N,320nm,0.5s						
ZON	Zonda	3.37	121	eP	Pn	11 44 15.7	+3.1
ZON				eS	Sb	11 44 58.0	-2.8
ZON				IAML		11 45 11.4	
	comp=Z,168nm,0.8s						
MT02	Curacav	3.47	167	eP	Pn	11 44 14.3	+0.3
MT02				eS	Sb	11 45 05.2	+1.6
MT02				IAML		11 45 15.0	
	comp=Z,188nm,0.5s						
PEL	Peldehue	3.47	160	eP	Pn	11 44 14.4	+0.4
PEL				IAML		11 45 15.0	
	comp=E,373nm,0.5s						
VCA	Vinchina	3.57	72	eP	Pn	11 44 19.5	+4.1
VCA				IAML		11 45 22.5	
	comp=Z,442nm,0.4s						
MT05	Renca	3.69	162	eP	Pn	11 44 20.4	+3.4
MT05				eS	Sb	11 45 11.0	+1.0
MT05				IAML		11 45 19.5	
	comp=Z,324nm,1.4s						
CFA	Coronel Fontan	3.73	119	eP	Pn	11 44 19.8	+2.3
CFA				eS	Sb	11 45 08.5	-2.6
MT04	Ro Olivares	3.89	155	eP	Pn	11 44 21.8	+1.9
MT04				eS	Sb	11 45 18.5	+2.6
MT04				IAML		11 45 23.9	
	comp=Z,240nm,1.6s						
AC01	Pan de Azucar	3.94	20	eP	Pn	11 44 19.9	-0.4
AC01				eS	Sg	11 45 27.5	+1.1
MT08	Bocatoma Ro	3.97	154	eP	Pn	11 44 23.2	+2.2
MT08				eS	Sb	11 45 17.7	-0.6
MT08				IAML		11 45 29.6	
	comp=Z,220nm,0.7s						
ARCO	CERRO ARCO	4.00	139	eP	Pn	11 44 24.5	+3.2
ARCO				eS	Sb	11 45 18.5	-0.5
ARCO				IAML		11 45 37.5	
	comp=Z,148nm,0.7s						
MT01	Popeta	4.04	170	eP	Pn	11 44 21.6	-0.2
MT01				eS	Sb	11 45 25.5	+5.5
MT01				IAML		11 45 32.6	
	comp=Z,138nm,0.6s						
MT13	San Alfonso	4.15	159	eP	Pn	11 44 24.6	+1.2
AAGR	Agrelo	4.24	140	e	Pn	11 44 26.3	+1.7
AAGR				eP	Pb	11 44 28.2	-6.4
AAGR				IAML		11 45 41.4	
	comp=Z,208nm,0.7s						
LMEL	Las Melosas	4.27	159	eP	Pn	11 44 26.5	+1.4
LMEL				eS	Sn	11 45 16.4	+1.4
ACLC	CERRO LA CRUZ	4.49	86	eP	Pn	11 44 29.9	+1.8
BO01	Tunca	4.58	170	eP	Pn	11 44 28.5	-0.7

*NEIC **10** 12:12:54.5±2.2, 33°.490N±0°.007×116°.71W±0°.02, h5^{km}±1^{km}, Error ellipse: s-maj=2.9km s-min=2.7km az=73.0*

PAS 10 12:12:55.2±2.0**, 33°.52N**±0°.02×**116°.73W**±0°.03**, h3**^{km}±6^{km}**, ML3.0**/171**, ML2.9**/36(NEIC)**, Error ellipse: s-maj=3.5km s-min=2.4km az=130.0, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRY	Cary Ranch	0.04	353		Pg	12 12 57.2	+0.8
BZNA	Buzz No.'s Pla	0.06	120		Pg	12 12 58.0	+1.4
SNDA	J Saunders Pla	0.10	73		Pg	12 12 59.1	+1.8
FRD	Ford Ranch, An	0.11	104		Pg	12 12 59.0	+1.5
FRD	Ford Ranch, An	0.11	104		Pg	12 12 57.5	+0.1
GVDA	Garner Valley	0.15	18		Pg	12 12 58.2	-0.1
PLM	Palomar	0.20	213		Pg	12 12 59.6	+0.4
PLM					Sg	12 13 02.9	+1.1
POB	Polly Butte	0.23	316		Pg	12 12 59.8	+0.1
PFO	Pinyon Flats O	0.24	68		Pg	12 12 59.9	0.0
PFO				IAML		12 13 03.6	
	2µm,0.6s						
PFO	Pinyon Flats O	0.24	68		Pg	12 13 03.2	+3.3
DGR	Domenigoni Val	0.27	299		Sg	12 13 04.0	+0.1
BORC	Borrego Spring	0.36	134		Pn	12 13 07.2	-0.1
DEVC	Devers	0.43	17		Sg	12 13 09.8	+0.6
BBSC	Beaumont Base	0.45	332		Sg	12 13 10.6	+0.9
JUEM	Julian Eagle M	0.45	166		Sg	12 13 10.3	+0.4
EW2	E Wide Canyon	0.50	33		Sg	12 13 11.5	+0.3
PEC	Perris	0.51	316		Sg	12 13 11.6	-0.2
DPP	Dos Picos Cty	0.55	199		Sg	12 13 13.0	+0.1
GORC	Green Oak Ranc	0.56	229		Sg	12 13 12.7	-0.3
ELS	Elsinore Mount	0.59	282		Pg	12 13 06.3	-0.3
CFT	Crafton Hills	0.60	328		Pg	12 13 06.9	+0.2
BLAC	Blackrock camp	0.62	27		Sg	12 13 14.8	-0.2
CTCC	Cactus City	0.63	78		Sg	12 13 16.4	+0.8
EML	El Monte Cty P	0.64	189		Sg	12 13 15.4	-0.3
SVD	Seven Oaks Dam	0.66	332		Pg	12 13 07.8	0.0
SVD					Sg	12 13 16.8	+0.4
RSBC	Riverside Bore	0.67	312		Pg	12 13 07.7	-0.4
RSBC					Sg	12 13 16.3	-0.5
MONP2	Monument Peak	0.68	158		Pg	12 13 08.2	0.0
MONP2					Sg	12 13 16.9	-0.2
CPE	Camp Elliot	0.70	207		Pg	12 13 08.2	-0.5
CPE					Sg	12 13 17.2	-0.6
CPE	Camp Elliot	0.70	207	IAML		12 13 20.4	
	comp=N,341nm,0.2s						
RVR	Riverside	0.71	311		Pg	12 13 08.4	-0.5
RVR					Sg	12 13 17.7	-0.5
MTRP	Mission Trails	0.75	201		Pg	12 13 09.0	-0.6
BBRC	Big Bear Solar	0.76	348		Pg	12 13 09.5	-0.2
BBRC					Sg	12 13 19.8	+0.2
SDRC	San Diego Road	0.80	193		Pg	12 13 09.8	-0.8
SDRC					Sg	12 13 20.7	-0.4
SDMC	San Diego Miss	0.81	205		Pg	12 13 10.2	-0.6
GTM	Goat Mountain	0.83	22		Pg	12 13 10.6	-0.6
BAR	Barrett	0.84	177		Sg	12 13 21.5	-0.8
MLSC	Mira Loma	0.84	305		Sg	12 13 21.7	-0.6
BOMB	Bombay Beach	0.85	100		Pg	12 13 11.7	+0.2
CHNC	Chino	0.92	301		Pg	12 13 12.4	-0.5
CHNC					Sg	12 13 24.6	-0.2
OLP	Otay Lakes Par	0.93	190		Pg	12 13 11.9	-1.0
OLP					Sg	12 13 24.2	-0.8
CSP	Cedar Springs	0.93	326		Pg	12 13 12.8	-0.3
TKX	Tecate	0.96	174		Pg	12 13 12.6	-1.0
IKP	In-Ko-Pah, Jac	1.01	149		Pg	12 13 14.4	-0.3
BFSC	Mount Baldy Ra	1.05	313		Pg	12 13 14.2	-1.1
BFSC					Sg	12 13 28.1	-0.9
SSK	Sunset Peak	1.05	311		Pg	12 13 14.6	-0.9
YUH	Yuha Desert	1.10	142		Pg	12 13 15.4	-1.0
YUH				IAML		12 13 31.6	
	comp=E,213nm,0.1s						
YUH				IAML		12 13 32.8	
	comp=N,178nm,0.6s						
CBX	Cerro Bola	1.21	177		Pg	12 13 17.1	-1.2
PASC	Pasadena Art C	1.37	299		Pn	12 13 19.8	-1.4
CCX	Cicese	1.65	178		Pn	12 13 24.7	-0.4
CCX				IAML		12 13 48.2	
	comp=N,173nm,0.7s						
ESJX	Sierra Juarez	1.65	156		Pn	12 13 24.4	-0.9
ESJX				IAML		12 13 47.8	
	comp=N,174nm,0.1s						
GLA	Glamis	1.66	106		Pn	12 13 23.3	-2.0
GLA				IAML		12 13 55.5	
	comp=N,98nm,0.7s						
GLA				IAML		12 13 56.0	
	comp=E,132nm,0.7s						
GSC	Goldstone, Bar	1.78	358		Pn	12 13 26.4	-0.5
GSC				IAML		12 13 56.5	
	comp=N,141nm,0.6s						
BLYC	Blythe	1.85	82		Pn	12 13 26.1	-1.7
BLYC				IAML		12 13 54.5	
	comp=N,119nm,0.5s						
BLYC				IAML		12 13 55.2	
	comp=E,120nm,0.5s						
CCAC	Calif City Air	1.94	327		Pn	12 13 28.8	-0.3
CCAC				IAML		12 13 57.4	
	comp=E,126nm,0.4s						
CCAC				IAML		12 13 59.5	
	comp=N,137nm,0.5s						
VTX	Valle De La Tr	2.27	159		Pb	12 13 35.5	-1.3
ISA	Isabella, Lake	2.57	327	Pn	Pn	12 13 37.3	-0.5
BCW	Bitter Crk WRg	2.63	303		Pn	12 13 38.8	+0.1
BCW				IAML		12 14 20.3	
	comp=E,50nm,0.5s						
BCW				IAML		12 14 22.8	
	comp=N,64nm,0.6s						
GWY	Greenwater Val	2.66	1		Pn	12 13 38.4	-0.7
V12A	Nelson	2.69	35		Pn	12 13 39.3	-0.1
W13A	Hualapai Mount	2.83	55		Pn	12 13 41.2	-0.3
Y14A	Wickenburg	3.13	81		Pn	12 13 45.2	-0.3
TPNV	Topopah Spring	3.44	6		Pn	12 13 49.6	-0.2
TPNV				IAML		12 14 46.4	
	comp=N,18nm,0.5s						
DSP	Deep Springs	3.97	346		Pn	12 13 57.4	+0.5
U15A	North Rim	4.66	50		Pn	12 14 06.5	-0.1

IDC 10 12:23:45.7±2.9**, 7°.14S×147°.09E, h0**^{km}**, mb3.4**/2**, mbtmp3.5**/4**, ML2.5**/2**, MS3.5**/1**, Error ellipse: s-maj=77.1km s-min=26.0km az=85.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.25	178	Pn	Pn	12 24 24.3	0.0
	19nm,0.3s,baz=326,slow=6.2,SNR=35						
PMG				Sn	Sb	12 24 55.5	-0.4
	16nm,0.3s,baz=341,slow=23,SNR=7.8						
	44nm,0.3s						
WRA	Warramunga Arr	17.75	223	P	Pn	12 27 54.2	-0.3
	0.1nm,0.3s,baz=56,slow=13,SNR=5.8						
	0.8nm,0.8s						
ASAR	Alice Springs	20.75	216	P	P	12 28 28.1	-0.2
	0.8nm,0.7s,baz=51,slow=9.6,SNR=12						
	0.8nm,0.7s						
LEM	Lembang	39.17	268	LR	LR	12 49 26.2	
	comp=Z,64nm,18.4s,baz=38,slow=39						
MKAR	Makanchi Array	78.43	321	P	P	12 35 48.6	+0.1
	0.4nm,0.7s,baz=110,slow=5.3,SNR=3.8						
	0.4nm,0.7s						

*IDC **10** 12:30:25.5±1.4, 4°.34N×126°.99E, h0^{km}, mb4.0/6, mbtmp4.0/6, Error ellipse: s-maj=134.8km s-min=17.3km az=67.0*

*NEIC **10** 12:30:27.3±0.9, 4°.7N±0°.1×127°.8E±0°.2, h10^{km}±2^{km}, mb4.2/10, Error ellipse: s-maj=27.3km s-min=18.9km az=85.0*

ISC 10 12:30:29.7±1.0**, 4°.6N**±0°.1×**127°.7E**±0°.2**, h35**^{km}**, n21, σ0^s.78**/20**, mb4.1**/11**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	7.46	222	Pn	Pn	12 32 16.9	+0.8
TOLI2	Tolitoli	7.74	244	Pn	Pn	12 32 20.3	+0.4
FAKI	Fak Fak	8.73	149	Pn	Pn	12 32 27.3	-6.3
TPUB	Ta-pu	19.82	340	P	P	12 34 57.3	-0.1
KNRA	Kununurra	20.16	177	P	P	12 34 59.4	-1.8
KNRA				IAmb	IAmb	12 35 04.1	
	comp=Z,6.8nm,1.1s						
FITZ	Fitzroy Crossi	22.64	185	P	P	12 35 27.6	-0.2
WB0	Warramunga Arr	25.08	165	P	P	12 35 52.1	+1.0
WB0				IAmb	IAmb	12 35 54.1	
	comp=Z,9.8nm,1.2s						
WRAB	Tennant Creek	25.23	165	P	P	12 35 53.7	+1.2
WRAB				IAmb	IAmb	12 36 05.4	
	comp=Z,5.9nm,1.1s						
WRA	Warramunga Arr	25.23	165	P	P	12 35 52.3	-0.3
WRA	Warramunga Arr	25.23	165	P	P	12 35 53.2	+0.7
	comp=Z,0.8nm,0.5s,baz=343,slow=10,SNR=30						
	comp=Z,0.8nm,0.5s						
WR8	Warramunga Arr	25.29	165	P	P	12 35 54.2	+1.2
WR8				IAmb	IAmb	12 35 56.0	
	comp=Z,12nm,1.4s						
AS31	Alice Springs	28.73	168	P	P	12 36 24.5	+0.5
AS31				IAmb	IAmb	12 37 00.1	
	comp=Z,2.3nm,1.4s						
ASAR	Alice Springs	28.73	168	P	P	12 36 24.6	+0.7
ASAR	Alice Springs	28.73	168	P	P	12 36 23.9	-0.1
	comp=Z,0.5nm,0.5s,baz=354,slow=7.6,SNR=26						
	comp=Z,0.5nm,0.5s						
STKA	Stephens Creek	38.60	161	P	P	12 37 50.1	+0.5
	comp=Z,1.9nm,0.8s,baz=320,slow=7.9,SNR=1.8						
	comp=Z,1.9nm,0.8s						
EVN	Everest	45.28	305	P	P	12 38 44.7	-0.3
MKAR	Makanchi Array	57.42	324	P	P	12 40 15.5	+0.6
MKAR	Makanchi Array	57.42	324	P	P	12 40 15.3	+0.4
	comp=Z,2.7nm,0.6s,baz=118,slow=7.5,SNR=29						
	comp=Z,2.7nm,0.6s						
MAKZ	Makanchi	57.61	324	P	P	12 40 16.8	+0.5
MAKZ				IAmb	IAmb	12 40 17.1	
	comp=Z,3.1nm,0.7s						
ZALV	Zalesovo Beam	60.28	332	P	P	12 40 34.2	-0.4
	comp=Z,0.5nm,0.3s,baz=119,slow=4.4,SNR=2.6						
	comp=Z,0.5nm,0.3s						
KURBB	Kurchatov Arra	61.55	327	P	P	12 40 42.9	-0.4
	comp=Z,1.7nm,0.5s,baz=128,slow=6.2,SNR=30						
	comp=Z,1.7nm,0.5s						

*IDC **10** 12:31:48.2±1.0, 31°.45N×128°.79E, h0^{km}, mb3.3/5, mbtmp3.6/10, ML3.5/5, MS3.0/10, Error ellipse: s-maj=29.2km s-min=17.0km az=92.0*

*NIED **10** 12:31:48.0, 31°.44N×128°.82E, h14^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.71; $M_{\theta\theta}$2.75; $M_{\phi\phi}$-1.04; $M_{r\theta}$-3.98; $M_{\theta\phi}$7.89; $M_{\phi r}$-0.20; Fault plane solution: $M_0$9.04000×10^{14} NP1: ϕ_s187.00000°, δ63.00000°, λ-176.00000°. NP2: ϕ_s95.00000°, δ86.00000°, λ-27.00000°.*

*JMA **10** 12:31:48.0±0.2, 31°.4N±0°.5×128°.8E±0°.6, h14^{km}±1^{km}, MV4.1/34, SW OFF KYUSHU*

ISC 10 12:31:48.4±0.8**, 31°.43N**±0°.04×**128°.88E**±0°.06**, h10**^{km}**, n25, σ1^s.35**/22**, mb3.4**/5**, MS3.1**/8**, 4D, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.76	71	⇓iP	Pb	12 32 03.1	-0.5
JSJ				⇓eS	Sb	12 32 13.6	-0.3
JFU	Fukue jima 2	1.22	355	P	Pg	12 32 10.5	-1.4
JFU				S	Sn	12 32 26.5	-1.7
JSU	Suzuyama	1.35	87	iP	Pb	12 32 13.0	-0.7
JYAK	Yakushimahirau	1.84	130	P	Pn	12 32 19.0	-1.0
JTZ	Takazaki	1.94	76	⇓iP	Pn	12 32 21.6	+0.2
JTZ				⇓S	Sn	12 32 45.5	-0.4
JTN	Tanegashima 3	1.96	113	P	Pn	12 32 21.4	-0.3
JIU3	Izumi3	1.98	55	P	Pn	12 32 22.0	0.0
JTAJ	Takarajima	2.29	173	P	Pb	12 32 27.8	-2.0
JNU	Nakatsue	2.39	45	Pn	Pb	12 32 31.3	-0.2
	53nm,0.3s,baz=232,slow=7.3,SNR=178						
	308nm,0.6s						
JOW	Kunigami	4.62	187	Pn	Pn	12 33 00.7	+2.5
	1.9nm,0.3s,baz=114,slow=21,SNR=7.2						
JOW				LR	LR	12 34 23.8	
	comp=Z,45nm,19.9s,baz=80,slow=34						
	8.6nm,0.8s						
KSRS	Korea Array	6.06	353	Pn	Pn	12 33 17.2	-0.8
	2.0nm,0.3s,baz=174,slow=14,SNR=17						
KSRS				Sn	Sn	12 34 27.6	+0.2
	2.2nm,0.3s,baz=176,slow=22,SNR=4.8						
KSRS				Lg	Lg	12 34 56.1	
	3.6nm,0.3s,baz=171,slow=30,SNR=7.5						
	1.2nm,0.3s						
ASAJ	Asahikawa	16.64	37	Pn	P	12 35 42.6	-1.4
	0.3nm,0.3s,baz=200,slow=8.2,SNR=7.7						
ASAJ				LR	LR	12 41 12.3	
	comp=Z,46nm,20.1s,baz=203,slow=34						
	3.8nm,0.7s						
KLR	Kul'dur	17.91	6	P	P	12 36 00.5	+2.4
	0.1nm,0.3s,baz=218,slow=7.1,SNR=6.1						
	2.2nm,0.7s						
GUMO	Guam	23.05	137	LR	LR	12 44 51.2	
	comp=Z,22nm,19.1s,baz=69,slow=34						
CMAR	Chiang Mai Arr	29.95	252	LR	LR	12 51 10.6	
	comp=Z,22nm,20.1s,baz=75,slow=39						
PETK	Petropavlovsk-	30.05	35	LR	LR	12 49 36.8	
	comp=Z,16nm,19.3s,baz=168,slow=36						
ZALV	Zalesovo Beam	38.59	319	LR	LR	12 56 42.3	
	comp=Z,31nm,19.8s,baz=109,slow=39						
MKAR	Makanchi Array	38.68	307	P	P	12 39 12.1	-0.1
	0.2nm,0.6s,baz=105,slow=9.1,SNR=2.2						
MKAR				LR	LR	12 56 35.8	
	comp=Z,22nm,18.0s,baz=87,slow=38						
	0.2nm,0.6s						
KURBB	Kurchatov Arra	41.63	312	P	P	12 39 39.1	+2.5
	0.4nm,0.7s,baz=99,slow=9.0,SNR=4.1						
	0.4nm,0.7s						
WRA	Warramunga Arr	51.35	173	P	P	12 40 53.4	+0.2
	0.4nm,0.8s,baz=353,slow=7.8,SNR=2.4						
	0.4nm,0.8s						
ARTI	Arti	53.84	320	LR	LR	13 06 51.2	
	comp=Z,29nm,18.1s,baz=54,slow=39						
AKTO	Aktyubinsk	54.68	312	LR	LR	13 06 17.8	
	comp=Z,62nm,18.1s,baz=86,slow=38						
ASAR	Alice Springs	55.00	174	P	P	12 41 21.7	+1.7
	0.3nm,0.7s,baz=5.2,slow=15,SNR=7.3						
	0.3nm,0.7s						
ILAR	Eielson Array	59.62	30	P	P	12 41 52.2	0.0
	0.3nm,0.6s,baz=278,slow=7.8,SNR=4.7						
	0.3nm,0.6s						
BELG	Belogornoye	60.68	316	LR	LR	13 10 22.8	
	comp=Z,31nm,18.9s,baz=46,slow=38						

*IDC **10** 13:00:54.1±0.8, 31°.28N×130°.35E, h148^{km}±6^{km}, mb3.6/19, mbtmp4.0/24, MS3.0/2, Error ellipse: s-maj=16.5km s-min=8.1km az=102.0*

*NIED **10** 13:00:55.8, 31°.29N×130°.47E, h152^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.37; $M_{\theta\theta}$-0.10; $M_{\phi\phi}$-0.27; $M_{r\theta}$-0.19; $M_{\theta\phi}$-0.26; $M_{\phi r}$2.36; Fault plane solution: $M_0$2.40000×10^{15} NP1: ϕ_s237.00000°, δ7.00000°, λ151.00000°. NP2: ϕ_s356.00000°, δ86.00000°, λ83.00000°.*

*JMA **10** 13:00:55.8±0.1, 31°.3N±0°.3×130°.5E±0°.7, h152^{km}, MD3.9/38, MV4.0/38, SATSUMA PENINSULA REGION*

JMA Felt I J1 at SATSUMA PENINSULA REGION.

*NEIC **10** 13:00:55.7±2.0, 31°.31N±0°.06×130°.41E±0°.10, h159^{km}±7^{km}, mb4.3/30, Error ellipse: s-maj=13.0km s-min=8.3km az=115.0*

ISC 10 13:00:55.0±0.6**, 31°.30N**±0°.04×**130°.43E**±0°.05**, h156**^{km}±5^{km}**, n111, σ1^s.18**/118**, mb4.2**/46**, 4D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSU	Suzuyama	0.21	5	iP	Pn	13 01 16.6	+0.5
JSU				S	Sn	13 01 32.3	0.0
JSU	Suzuyama	0.21	5	A	A	13 01 16.6	
	comp=N,7.0nm,0.6s,comp=E,16nm,2.1s						
JTSR	Tashiro 2	0.44	108	iP	Pn	13 01 17.1	+0.3
JTSR				S	Sn	13 01 32.9	-0.5
JTSR	Tashiro 2	0.44	108	A	A	13 01 17.1	
	comp=N,19nm,0.3s,comp=E,17nm,0.2s						
JSJ	Shimokoshiki	0.72	302	⇓iP	Pn	13 01 18.9	+0.6
JSJ				⇓S	Sn	13 01 36.3	+0.3
JSJ	Shimokoshiki	0.72	302	A	A	13 01 18.9	
	comp=N,3.0nm,0.7s,comp=E,7.0nm,2.3s						
JTN	Tanegashima 3	0.80	144	iP	Pn	13 01 19.2	+0.3
JTN				S	Sn	13 01 36.8	-0.2
JTN	Tanegashima 3	0.80	144	A	A	13 01 19.2	
	comp=N,5.0nm,2.8s,comp=E,6.0nm,1.1s						
JTZ	Takazaki	0.82	43	iP	Pn	13 01 19.4	+0.4
JTZ				S	Sn	13 01 36.6	-0.7
JZO	Okuchi	0.85	10	A	A	13 01 19.8	
	comp=N,4.0nm,3.1s,comp=E,4.0nm,2.1s						
JMTN	Minamitane	0.99	156	iP	Pn	13 01 20.7	+0.4

JMTN				S	Sn	13 01 39.6	+0.1
JMTN	Minamitane	0.99	156	A	A	13 01 20.7	
	comp=N,8.0nm,0.4s,comp=E,4.0nm,1.6s						
JYAK	Yakushimahirau	1.06	176	⇓*i*P	Pn	13 01 21.0	+0.1
JYAK				⇓S	Sn	13 01 39.8	-0.9
JYAK	Yakushimahirau	1.06	176	A	A	13 01 21.0	
	comp=N,4.0nm,0.7s,comp=E,4.0nm,0.5s						
JIU3	Izumi3	1.29	14	*i* P	Pn	13 01 23.6	+0.7
JIU3				*e*S	Sn	13 01 44.4	0.0
JNN	Nakanoshima	1.53	198	P	Pn	13 01 25.8	+0.4
JNN				*e*S	Sn	13 01 48.8	+0.1
JNU	Nakatsue	1.85	12		Pn	13 01 29.1	+0.2
JNU	Nakatsue	1.85	12	P	Pn	13 01 29.3	+0.4
	comp=E,177nm,0.4s,baz=206,slow=7.7,SNR=563						
JNU				S	Sn	13 01 54.0	-1.1
	comp=E,125nm,0.5s,baz=243,slow=21,SNR=10						
JNU	Nakatsue	1.85	12	P	Pn	13 01 29.5	+0.6
JTU	Tsushima	3.33	345	P	Pn	13 01 47.9	+1.2
JMN	Monobe	3.79	49		Pn	13 01 52.8	+0.1
JMN	Monobe	3.79	49	P	Pn	13 01 53.1	+0.4
JMN	Monobe	3.79	49	S	Sn	13 02 34.7	-2.8
JOW	Kunigami	4.84	204	Pn	Pn	13 02 05.4	-1.0
JOW	Kunigami	4.84	204	P	Pn	13 02 05.5	-0.9
	comp=E,10nm,0.2s,baz=105,slow=22,SNR=25						
JOW				S	Sn	13 02 58.2	-3.9
	comp=E,30nm,0.3s,baz=81,slow=28,SNR=12						
JMZ	Minamidaito 2	5.50	173	Pn	Pn	13 02 16.9	+1.7
KSRS	Korea Array	6.48	342	P	Pn	13 02 28.1	+0.1
	comp=E,1.9nm,0.6s,baz=168,slow=14,SNR=11						
INU	Inuyama	6.83	52		Pn	13 02 34.7	+2.0
INU	Inuyama	6.83	52	P	Pn	13 02 35.8	+3.0
INU	Inuyama	6.83	52	S	Sn	13 03 49.2	-0.3
JGF	Kuroka	7.20	52		Pn	13 02 39.1	+1.4
JGF	Kuroka	7.20	52	P	Pn	13 02 40.3	+2.6
JGF	Kuroka	7.20	52	S	Sn	13 03 57.2	-1.3
MJB9	Matsu-Tunnel	8.31	49		Pn	13 02 53.5	+1.0
MJB9					Sn	13 04 26.2	+1.2
MAJO	Matsushiro	8.31	49		Pn	13 02 53.4	+0.9
MAJO					Sn	13 04 25.3	+0.3
MAJO	Matsushiro	8.31	49	P	Pn	13 02 56.2	+3.7
MAJO	Matsushiro	8.31	49	S	Sn	13 04 24.7	-0.3
MJAR	Matsushiro Arr	8.31	49	P	Pn	13 02 54.2	+1.7
	comp=E,7.4nm,0.5s,baz=238,slow=13,SNR=20						
MJAR				S	Sn	13 04 18.6	-6.5
	comp=E,2.4nm,0.5s,baz=228,slow=16,SNR=4.4						
MJAR				LR	LR	13 05 54.0	
	comp=E,35nm,21.8s,baz=208,slow=36						
YHNB	Yeheng	10.37	233	Pn	Pn	13 03 19.6	-0.4
USRK	Ussuriysk Ar.	12.94	5	Pn	Pn	13 03 53.3	+0.3
BJT	Baijiatuau	14.48	311	Pn	Pn	13 04 12.2	-0.4
ASAJ	Asahikawa	15.99	33	P	Pn	13 04 29.7	-1.4
	comp=E,4.6nm,0.8s,baz=224,slow=3.8,SNR=4.2						
JKA	Kamikawa-asahi	15.99	33		Pn	13 04 30.6	-0.6
JKA				IAmb	IAmb	13 04 56.9	
	comp=Z,17nm,1.3s						
KLR	Kul'dur	17.94	3	P	P	13 04 52.5	-0.5
	comp=Z,0.7nm,0.5s,baz=195,slow=7.1,SNR=5.8						
ENH	Enshi	18.03	272	P	Pn	13 04 55.7	-0.1
LZH	Lanzhou	22.60	289	*e*P	P	13 05 44.0	+1.3
LZH				pP	pP	13 05 50.2	-21
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
SONM	Songino Array	24.67	319	P	P	13 06 00.8	-0.5
	comp=Z,1.8nm,0.8s,baz=133,slow=7.4,SNR=6.0						
	comp=Z,1.8nm,0.8s						
GTA	Gaotai	26.16	296	*e*P	P	13 06 15.5	+0.6
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CHTO	Chiang Mai	31.00	254	P	P	13 06 58.7	+0.7
CHTO				IAmb	IAmb	13 06 59.6	
	comp=Z,4.0nm,0.8s						
CM31	Chiang Mai Arr	31.18	253	P	P	13 07 00.0	+0.5
CMAR	Chiang Mai Arr	31.18	253	P	P	13 07 00.2	+0.7
CMAR	Chiang Mai Arr	31.18	253	P	P	13 06 59.9	+0.4
	comp=Z,1.2nm,0.6s,baz=52,slow=6.7,SNR=8.1						
	comp=Z,1.2nm,0.6s						
ZALV	Zalesovo Beam	39.56	318	P	P	13 08 09.6	-1.1
	comp=Z,0.4nm,0.4s,baz=92,slow=10,SNR=2.1						
	comp=Z,0.4nm,0.4s						
MKAR	Makanchi Array	39.82	307	P	P	13 08 12.3	-0.6
	comp=Z,1.0nm,0.7s,baz=92,slow=10,SNR=8.3						
MKAR				ScP	ScP	13 13 49.0	-1.0
	comp=Z,0.6nm,0.8s,baz=134,slow=3.5,SNR=4.7						
	comp=Z,1.0nm,0.7s						
PSI	Prapat	41.06	233	LR	LR	13 26 03.2	
	comp=Z,50nm,18.5s,baz=179,slow=37						
BILL	Bilibino	42.27	19	P	P	13 08 33.4	+0.9
KURBB	Kurchatov Arra	42.70	312	P	P	13 08 36.0	-0.3
	comp=Z,0.5nm,0.5s,baz=99,slow=9.0,SNR=6.8						
	comp=Z,0.5nm,0.5s						
KNRA	Kununurra	46.73	182	P	P	13 09 08.6	+0.1
KNRA				IAmb	IAmb	13 09 28.9	
	comp=Z,7.0nm,1.1s						
BVAR	Borovoye Array	47.92	315	P	P	13 09 17.7	+0.3
	comp=Z,1.8nm,0.5s,baz=98,slow=8.7,SNR=6.7						
	comp=Z,1.8nm,0.5s						
KKAR	Karatay Array	48.22	302	P	P	13 09 20.5	+0.6
FITZ	Fitzroy Crossi	49.33	186	P	P	13 09 28.9	+0.5
WB0	Warramunga Arr	50.92	175	P	P	13 09 40.0	-0.3
WB0				IAmb	IAmb	13 09 41.4	
	comp=Z,13nm,1.4s						
WRAB	Tennant Creek	51.08	175	P	P	13 09 41.4	-0.1
WRAB				IAmb	IAmb	13 09 48.7	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	51.09	175	P	P	13 09 41.1	-0.5
	comp=Z,0.9nm,1.0s,baz=354,slow=7.8,SNR=6.0						
	comp=Z,0.9nm,1.0s						
N15K	Kwethluk River	53.29	36	P	P	13 09 58.8	+1.3
N15K				IAmb	IAmb	13 10 15.2	
	comp=Z,7.4nm,1.3s						
PSA00	Pilbara Seismi	53.54	192	P	P	13 09 59.1	-0.6
PSA00				IAmb	IAmb	13 10 02.4	
	comp=Z,9.0nm,1.3s						
M16K	Timber Creek	53.85	35	P	P	13 10 02.4	+0.9
M16K				IAmb	IAmb	13 10 34.4	
	comp=Z,9.0nm,1.4s						
ABKAR	Akbulak array	54.70	311	P	P	13 10 08.1	+0.3
ASAR	Alice Springs	54.76	176	P	P	13 10 08.3	-0.1
	comp=Z,0.5nm,0.7s,baz=0.1,slow=6.5,SNR=9.2						
	comp=Z,0.5nm,0.7s						
D22K	Ayikyak River	56.48	25	P	P	13 10 21.1	+0.8
D22K				IAmb	IAmb	13 10 43.9	
	comp=Z,4.6nm,1.2s						
KDAK	Kodiak Island	57.33	38	P	P	13 10 26.8	+0.5
RND	Reindeer	58.41	31	P	P	13 10 34.3	+0.3
RND				IAmb	IAmb	13 11 17.0	
	comp=Z,5.2nm,1.3s						
ILAR	Eielson Array	59.08	30	P	P	13 10 39.3	+0.9
	comp=Z,0.2nm,0.6s,baz=281,slow=7.2,SNR=2.8						
	comp=Z,0.2nm,0.6s						
PRP	Porcupine Dome	59.54	29	P	P	13 10 42.9	+1.2
D27M	Malcolm River	60.63	24	P	P	13 10 50.0	+1.0
L27K	Beaver Creek,	61.60	31	P	P	13 10 56.6	+0.9
SPB2	Spitsbergen Ar	64.28	348	P	P	13 11 12.5	-0.6
SPITS	Spitsbergen Ar	64.28	348	P	P	13 11 12.5	-0.6
	comp=Z,1.1nm,0.5s,baz=92,slow=8.3,SNR=11						
	comp=Z,1.1nm,0.5s						
ARCES	ARCESS Array B	66.02	338	P	P	13 11 23.4	-1.0
	comp=Z,1.8nm,0.7s,baz=41,slow=8.1,SNR=4.3						
	comp=Z,1.8nm,0.7s						
KBZ	Khabaz	67.49	308	P	P	13 11 35.1	+1.0
	comp=Z,5.7nm,0.8s,baz=82,slow=2.0,SNR=13						
	comp=Z,5.7nm,0.8s						
FIA1	FINESS Array S	69.42	330	P	P	13 11 44.8	-0.9
FINES	FINESS Array B	69.43	330	P	P	13 11 44.9	-0.9
FINES	FINESS Array B	69.43	330	P	P	13 11 44.6	-1.1
	comp=Z,3.1nm,0.6s,baz=74,slow=5.6,SNR=12						
	comp=Z,3.1nm,0.6s						
AKASG	Malin Array Be	72.95	319	P	P	13 12 06.5	-0.6
	comp=Z,3.4nm,0.6s,baz=56,slow=6.2,SNR=17						
	comp=Z,3.4nm,0.6s						
RAYN	Ar Rayn	74.06	288		P	13 12 14.0	-0.2
RAYN				IAmb	IAmb	13 12 15.4	
	comp=Z,4.7nm,0.9s						
HFS	Hagfors	75.24	332	P	P	13 12 19.1	-1.2
	comp=Z,1.5nm,0.6s,baz=49,slow=6.8,SNR=5.7						
	comp=Z,1.5nm,0.6s						
NC405	NORSAR Array S	75.39	334	P	P	13 12 20.4	-0.7
NC405				IAmb	IAmb	13 12 22.6	
	comp=Z,11nm,1.1s						
BRTR	Keskin Array B	75.46	308		P	13 12 21.8	-0.3
BRTR	Keskin Array B	75.46	308	P	P	13 12 22.6	+0.4
	comp=Z,3.8nm,0.8s,baz=97,slow=5.1,SNR=19						
	comp=Z,3.8nm,0.8s						
NB201	NORSAR Array S	75.59	334	P	P	13 12 21.6	-0.7
NB201				IAmb	IAmb	13 12 26.1	
	comp=Z,9.7nm,1.2s						
NB2	NORSAR Subarra	75.62	334	P	P	13 12 21.4	-1.1
	comp=Z,3.0nm,0.8s,baz=50,slow=5.9						
NOA	NORSAR Array B	75.62	334	P	P	13 12 21.6	-0.9
	comp=Z,0.8nm,0.5s,baz=50,slow=5.5,SNR=6.7						
	comp=Z,0.8nm,0.5s						
NC204	NORSAR Array S	75.64	334	P	P	13 12 21.5	-1.1
BUR08	Bucovina Ar. S	76.77	318		P	13 12 29.0	-0.4
BUR08				IAmb	IAmb	13 12 30.2	
	comp=Z,3.5nm,0.8s						
BURAR	Bucovina Array	76.78	318	P	P	13 12 29.2	-0.1
CLL	Collm	81.09	326	*i* P	P	13 12 52.3	-0.3
	comp=Z,6.0nm,0.9s						
CONA	Conrad Observa	81.77	322	*i* PcP	P	13 12 57.6	+1.2
	comp=Z,4.1nm,0.8s						
GERES	GERESS Array B	82.31	323	P	P	13 12 59.3	+0.1
	comp=Z,0.9nm,0.7s,baz=62,slow=9.7,SNR=4.5						
	comp=Z,0.9nm,0.7s						
ARSA	Arzberg	82.37	321	*e*P	P	13 13 00.1	+0.7
	comp=Z,1.1nm,0.5s						
MOA	Molln	82.65	322	*i* PcP	P	13 13 01.9	+1.0
	comp=Z,3.4nm,0.9s						
SOKA	Soboth	82.99	321	*i* P	P	13 13 03.0	+0.3
	comp=Z,3.4nm,0.8s						
OBKA	Obir	83.35	321	*i* P	P	13 13 05.0	+0.3
	comp=Z,4.7nm,0.9s						
BPMT	Black Pine Rid	83.52	39	P	P	13 13 05.4	-0.3
KBA	Koelnbreinsper	83.63	322	*e*PcP	P	13 13 06.3	+0.2
	comp=Z,2.5nm,0.6s						
LESA	Schwarzleotal	83.75	323	*i* P	P	13 13 06.7	+0.1
	comp=Z,3.7nm,0.6s						
MYKA	Terra Mystica	83.76	322	*e*P	P	13 13 06.5	-0.1
	comp=Z,4.2nm,0.7s						
PRED	Cave del Predi	83.92	322	P	P	13 13 06.4	-1.1
PRED				IAmb	IAmb	13 13 07.6	
	comp=Z,3.1nm,0.7s						
ABTA	Abfaltersbach	84.28	322	*e*P	P	13 13 09.0	-0.3
	comp=Z,7.5nm,1.0s						
STAL	STALIGIAL	84.49	322	P	P	13 13 09.2	-1.1
STAL				IAmb	IAmb	13 13 10.1	
	comp=Z,6.3nm,0.8s						
NVAR	Mina Array Bea	85.63	47	P	P	13 13 17.6	+1.1
	comp=Z,0.6nm,0.6s,baz=306,slow=5.1,SNR=6.8						
	comp=Z,0.6nm,0.6s						
FDMO	Fiordimonte	86.37	319	P	P	13 13 20.2	+0.5

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*MOS **10** 13:12:33.0±0.8, 38°.91N×142°.21E, h49^{km}, mb4.8/19, Error ellipse: s-maj=9.0km s-min=5.3km az=89.5*

*NIED **10** 13:12:34.6, 38°.90N×142°.11E, h45^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.85; M$_{\theta\theta}$0.01; M$_{\phi\phi}$-0.86; M$_{r\theta}$0.54; M$_{\theta\phi}$-0.24; M$_{\phi r}$1.21; Fault plane solution: M$_0$1.59000×10^{15} NP1: φ$_s$186.00000°, δ17.00000°, λ74.00000°. NP2:φ$_s$23.00000°, δ73.00000°, λ95.00000°.*

*JMA **10** 13:12:34.6±0.1, 38°.9N±0°.3×142°.1E±0°.7, h45^{km}±1^{km}, MD4.1/40, MV4.2/40, KINKAZAN REGION*

JMA Felt II J1 at KINKAZAN REGION .

*NEIC **10** 13:12:34.5±2.4, 38°.87N±0°.06×142°.2E±0°.1, h37^{km}±7^{km}, mb4.5/40, Error ellipse: s-maj=14.3km s-min=7.7km az=116.0*

*IDC **10** 13:12:36.1±2.1, 38°.90N×142°.16E, h60^{km}±18^{km}, mb4.0/20, mbtmp4.2/26, MS3.1/12, Error ellipse: s-maj=19.2km s-min=13.2km az=98.0*

ISC 10 13:12:35.1±0.8**, 38°.91N**±0°.05×**142°.17E**±0°.05**, h49**^{km}±5^{km}**, n171, σ1^{s}39**/168**, mb4.5**/55**, MS3.3**/8**, 9C-14D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.43	294	⇓*i*P	Pn	13 12 44.3	-1.2
OFUJ				⇓S	Sn	13 12 50.9	-2.0
OFUJ	Ofunato	0.43	294	A	A	13 12 44.3	
	comp=N,8.0nm,1.0s,comp=E,25nm,1.8s						
JKMT	Kesennumamotoy	0.56	260	⇓*i*P	Pn	13 12 45.5	-1.4
JKMT				⇓S	Sn	13 12 53.0	-2.5
JKMT	Kesennumamotoy	0.56	260	A	A	13 12 45.5	
	comp=N,8.0nm,1.5s,comp=E,14nm,1.5s						
JMK	Ichinoseki	0.75	274	⇓*i*P	Pn	13 12 48.1	-1.2
JMK				⇓S	Sn	13 12 57.6	-2.2
JMK	Ichinoseki	0.75	274	A	A	13 12 48.1	
	comp=N,8.0nm,2.3s,comp=E,10.0nm,1.2s						
JIO	Ouri	0.79	235	⇓*i*P	Pn	13 12 48.5	-1.4
JIO				⇓S	Sn	13 12 58.0	-2.8
JIO	Ouri	0.79	235	A	A	13 12 48.5	
	comp=N,22nm,0.3s,comp=E,17nm,0.5s						
JOM	Ohasama	0.89	310	⇓*i*P	Pn	13 12 50.5	-0.8
JOM				⇓S	Sn	13 13 01.6	-1.6
JOM	Ohasama	0.89	310	A	A	13 12 50.5	
	comp=N,21nm,0.4s,comp=E,19nm,0.3s						
JOFO	Osakifurukawao	1.03	253	A	A	13 12 52.2	
	comp=N,31nm,0.7s,comp=E,30nm,0.5s						
JTH	Tanohata	1.06	347	P	Pn	13 12 52.8	-0.8
JTH				*e*S	Sn	13 13 06.4	-0.9
JSZI	Iwateshizukuis	1.26	312	A	A	13 12 55.7	
	comp=N,7.0nm,2.5s,comp=E,10.0nm,1.5s						
JRG	Rokugo	1.29	293	⇓*i*P	Pn	13 12 56.0	-0.8
JRG	Rokugo	1.29	293	A	A	13 12 56.0	
	comp=N,5.0nm,0.8s,comp=E,8.0nm,0.5s						
JOU	Okura	1.30	246	⇓*i*P	Pn	13 12 55.7	-1.2
JOU	Okura	1.30	246	A	A	13 12 55.7	
	comp=N,7.0nm,0.7s,comp=E,4.0nm,0.5s						
JKEN	Kujiedanarisaw	1.34	345	A	A	13 12 57.3	
	comp=N,8.0nm,0.5s,comp=E,8.0nm,0.5s						
JYK	Kaneyama	1.42	271	⇓*i*P	Pn	13 12 57.5	-0.9
JMM	Marumori	1.50	227		Pn	13 12 58.0	-1.6
JMM	Marumori	1.50	227	P	Pn	13 12 59.7	+0.1
JMM	Marumori	1.50	227	P	Pn	13 12 58.1	-1.6
JMM				*e*S	Sn	13 13 16.2	-1.8
JANG	Nango	1.55	341	*i* P	Pn	13 12 59.7	-0.6
JANG				*e*S	Sn	13 13 19.0	-0.3
JMST	Minamisoumatoc	1.56	221	A	A	13 13 00.0	
	comp=N,5.0nm,0.7s,comp=E,5.0nm,0.8s						
JYW	Yuwa	1.65	293	A	A	13 13 01.3	
	comp=N,10.0nm,1.6s,comp=E,9.0nm,2.7s						
JYS	Shirataka	1.79	248	A	A	13 13 03.2	
	comp=N,5.0nm,3.2s,comp=E,4.0nm,2.1s						
JYAR	Yonezawaarcadi	1.88	239	A	A	13 13 04.5	
	comp=N,6.0nm,1.3s,comp=E,5.0nm,3.3s						
JYA	Atsumi	1.95	261	A	A	13 13 05.4	
	comp=N,4.0nm,0.7s,comp=E,4.0nm,1.7s						
JTM	Tenmabayashi	2.06	336		Pn	13 13 07.7	+0.5
JTM	Tenmabayashi	2.06	336	P	Pn	13 13 08.0	+0.7
JSD	Sado	3.19	255	P	Pn	13 13 21.7	-1.1
ERM	Erimo	3.19	13		Pn	13 13 23.4	+0.6
ERM	Erimo	3.19	13	P	Pn	13 13 23.7	+0.9
ERM	Erimo	3.19	13	*i* P	Pn	13 13 23.0	+0.2
JEM	Erimo	3.19	13	P	Pn	13 13 24.4	+1.6
MAJO	Matsushiro	3.93	234		Pn	13 13 33.5	+0.5
MAJO	Matsushiro	3.93	234	P	Pn	13 13 34.3	+1.3
MAJO	Matsushiro	3.93	234	*i* P	Pn	13 13 33.7	+0.7
MJAR	Matsushiro Arr	3.93	234	P	Pn	13 13 34.0	+1.1
	comp=E,16nm,0.5s,baz=35,slow=13,SNR=51						
MJAR				S	Sn	13 14 21.3	+3.5
	comp=E,11nm,0.6s,baz=77,slow=22,SNR=4.9						
MJAR				LR	LR	13 15 13.7	
	comp=E,186nm,19.5s,baz=84,slow=40						
MJB9	Matsu-Tunnel	3.93	234		Pn	13 13 33.5	+0.6
JGF	Kuroka	5.07	231		Pn	13 13 50.4	+1.8
JGF	Kuroka	5.07	231	P	Pn	13 13 50.1	+1.6
NMR	Nemuro--Hokkai	5.20	30	⇓*i*P	Pn	13 13 49.0	-1.3
NMR				*e*S	Sn	13 14 44.2	-4.8
ASAJ	Asahikawa	5.21	3	P	Pn	13 13 51.4	+0.9
	comp=E,9.0nm,0.4s,baz=208,slow=13,SNR=24						
ASAJ				LR	LR	13 15 55.3	
	comp=E,108nm,20.8s,baz=190,slow=38						
JKA	Kamikawa-asahi	5.21	3		Pn	13 13 51.0	+0.5
INU	Inuyama	5.44	231		Pn	13 13 54.9	+1.3
INU	Inuyama	5.44	231	P	Pn	13 13 55.7	+2.1
	comp=E,36nm,1.2s						
GLVR	Golovnino	5.44	26	*e*P	Pn	13 13 52.9	-0.7
GLVR				*e*S	Sn	13 14 52.7	-2.2
GLVR				pmax	pmax		
	comp=Z,52nm,0.1s						
GLVR				smax	smax		
	comp=N,370nm,0.3s						
GLVR				smax	smax		
	comp=E,156nm,0.3s						
RUSJ	Misakicho	5.68	23	*e*P	Pn	13 13 57.2	+0.3
RUSJ				*e*S	Sn	13 15 00.2	-0.5
YUK	Yuzh-Kuril'sk	5.82	27	P	Pn	13 13 58.5	-0.3
YUK				*e*S	Sn	13 15 00.8	-3.4
YUK				pmax	pmax		
	comp=Z,142nm,0.2s						
YUK				smax	smax		
	comp=N,205nm,0.4s						
YUK				smax	smax		
	comp=E,383nm,0.6s						
SHO	Shikotan	6.07	34	*e*P	Pn	13 14 00.8	-1.4
SHO				*e*S	Sn	13 15 05.9	-4.4
SHO				pmax	pmax		
	comp=Z,17nm,0.3s						
SHO				pmax	pmax		
	comp=N,6.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,6.0nm,0.2s						
SHO				smax	smax		
	comp=N,107nm,0.4s						
SHO				smax	smax		
	comp=E,113nm,0.3s						
KUR	Kuril'sk	7.61	32	*e*P	Pn	13 14 23.4	+0.2
KUR				*e*S	Sn	13 15 44.8	-3.2
KUR				pmax	pmax		
	comp=Z,33nm,0.9s						
KUR				smax	smax		
	comp=N,36nm,0.5s						
KUR				smax	smax		
	comp=E,63nm,0.5s						
YSS	Yuzhno-Sakhali	8.05	3	*e*P	Pn	13 14 30.9	+1.5
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
JMN	Monobe	8.46	235	Pn	Pn	13 14 34.8	-0.2
JMN	Monobe	8.46	235	P	Pn	13 14 35.3	+0.3
	comp=Z,28nm,1.4s						
USA0B	Ussuriysk Arra	9.28	308		Pn	13 14 48.5	+2.3
USA0B	Ussuriysk Arra	9.28	308	*i* P	Pn	13 14 45.7	-0.5
USRK	Ussuriysk Ar.	9.28	308	P	Pn	13 14 47.4	+1.2
	comp=Z,31nm,1.0s,baz=112,slow=13,SNR=20						
USRK				LR	LR	13 18 11.5	
	comp=Z,125nm,19.3s,baz=137,slow=36						
JNU	Nakatsue	10.81	241	P	Pn	13 15 08.1	+0.9
	comp=Z,5.3nm,0.7s,baz=185,slow=2.7,SNR=5.2						
JNU				LR	LR	13 19 33.4	
	comp=Z,80nm,19.7s,baz=44,slow=39						
MDJ	Mudanjiang	10.99	305	P	Pn	13 15 13.5	+4.0
MDJ				pmax	pmax		
	comp=Z,20nm,1.0s						
KSRS	Korea Array	11.31	267	P	Pn	13 15 16.0	+2.0
	comp=Z,2.3nm,0.6s,baz=84,slow=13,SNR=8.6						
KLR	Kul'dur	12.74	327	P	Pn	13 15 33.5	0.0
	comp=Z,1.6nm,0.8s,baz=123,slow=16,SNR=4.3						
KLR				LR	LR	13 20 33.7	
	comp=Z,106nm,18.5s,baz=160,slow=37						
KLR	Kul'dur	12.74	327	*ce*P	Pn	13 15 33.0	-0.4
KLR				pmax	pmax		
	comp=Z,3.0nm,1.3s						
ZEA	Zeya	18.00	330	*e*P	P	13 16 39.6	-1.9
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TIA	Tai'an	20.02	270	P	P	13 17 02.2	-1.6
TIA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2	Nanjing	20.16	257	*e*P	Pn	13 17 06.6	-0.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MA2	Magadan	21.40	12	P	P	13 17 19.1	+0.7
MA2	Magadan	21.40	12	P	P	13 17 18.0	-0.3
	comp=Z,4.3nm,0.7s,baz=188,slow=12,SNR=5.8						
MA2				LR	LR	13 25 08.6	
	comp=Z,18nm,18.9s,baz=236,slow=35						
	comp=Z,4.3nm,0.7s						
MA2	Magadan	21.40	12	P	P	13 17 19.1	+0.7
MA2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NACB	Ninganchiao	22.80	236	P	P	13 17 31.9	-1.8
NACB				IAmb	IAmb	13 18 15.7	
	comp=Z,18nm,1.1s						
HHC	Hu-ho-hao-te	23.52	285	*e*P	P	13 17 41.2	+0.5
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,63nm,5.6s						
HHC				LR	LR		
	comp=N,88nm,14.8s						
HHC				LR	LR		
	comp=E,130nm,13.3s						
HHC				LR	LR		
	comp=Z,130nm,13.3s						
TPUB	Ta-pu	24.04	236	P	P	13 17 44.3	-1.3
YAK	Yakutsk	24.39	346	*e*P	P	13 17 47.7	-0.7
YAK				*e**PP	pP	13 17 59.9	-1.2
YAK				*e*		13 18 18.4	
YAK				*e*		13 21 26.2	
YAK				*e*S	S	13 22 04.2	-0.2
YAK				*e**SS	sS	13 22 26.2	+0.9
YAK				*e*SS	SnSn	13 22 50.5	-1.1
YAK				*e*		13 28 48.0	
YAK				pmax	pmax		
	comp=Z,29nm,1.0s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,67nm,3.5s						
YAK				pmax	pmax		
	comp=N,22nm,2.9s						
YAK				pmax	pmax		
	comp=E,40nm,3.2s						
YAK				smax	smax		
	comp=E,79nm,4.7s						
YAK				smax	smax		
	comp=N,75nm,4.8s						
SEY	Seymchan	24.84	11	*ce*P	P	13 17 53.3	+0.8
SEY				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SONM	Songino Array	27.29	301	P	P	13 18 14.5	-0.5
	comp=Z,0.8nm,0.4s,baz=99,slow=7.9,SNR=4.3						
	comp=Z,0.8nm,0.4s						
ENH	Enshi	28.14	262		P	13 18 22.9	+0.3
ENH				IAmb	IAmb	13 18 25.0	
	comp=Z,13nm,0.7s						
H11N2	WAKE ISLAND Hy	28.66	125	T	T	13 48 50.6	
	baz=317,slow=75,SNR=6818						
H11N1	WAKE ISLAND Hy	28.66	125	T	T	13 48 51.9	
	baz=317,slow=75,SNR=6024						
H11N3	WAKE ISLAND Hy	28.67	125	T	T	13 48 52.5	
	baz=317,slow=75,SNR=5768						
H11S1	WAKE ISLAND Hy	29.43	127	T	T	13 49 50.6	
	baz=318,slow=75,SNR=487						
H11S3	WAKE ISLAND Hy	29.44	127	T	T	13 49 49.8	
	baz=318,slow=75,SNR=759						
H11S2	WAKE ISLAND Hy	29.45	127	T	T	13 49 52.5	
	baz=318,slow=75,SNR=338						
BILL	Bilibino	32.06	17	*i* P	P	13 18 57.6	+0.8
BILL				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GTA	Gaotai	32.63	285	*e*P	P	13 19 03.0	+0.7
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TIXI	Tiksi	33.51	352	LR	LR	13 34 13.3	
	comp=Z,33nm,18.5s,baz=204,slow=39						
PZH	PanZhiHua	35.92	262	P	P	13 19 32.6	+1.7
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,110nm,5.1s						
K13K	Kusilvak Mount	39.44	37	P	P	13 20 01.4	+1.4
K13K				IAmb	IAmb	13 20 09.2	
	comp=Z,10nm,1.3s						
F15K	North Star Dit	40.28	31	P	P	13 20 07.3	+0.4
F15K				IAmb	IAmb	13 20 16.2	
	comp=Z,12nm,1.4s						
M14K	Bethel	40.55	39	P	P	13 20 10.0	+0.8
M14K				IAmb	IAmb	13 20 17.2	
	comp=Z,19nm,1.5s						
ZAA0	Zalesovo Array	41.12	311	P	P	13 20 14.1	+0.1
ZAA0				IAmb	IAmb	13 20 14.5	
	comp=Z,5.3nm,0.6s						
ZALV	Zalesovo Beam	41.12	311	P	P	13 20 14.1	+0.1
ZALV	Zalesovo Beam	41.12	311	P	P	13 20 13.9	-0.1
	comp=Z,4.5nm,0.5s,baz=89,slow=8.3,SNR=18						
ZALV				LR	LR	13 38 10.5	
	comp=Z,36nm,18.3s,baz=88,slow=37						
	comp=Z,4.5nm,0.5s						
ZALV	Zalesovo Beam	41.12	311	*i* P	P	13 20 13.8	-0.2
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.5s						
L16K	Owhat River	41.84	37	P	P	13 20 21.9	+2.1

M16K	Timber Creek	42.03	39	P	P	13 20 23.5	+2.1
C18K	Utukok River	42.34	27	P	P	13 20 25.3	+1.4
C18K				IAmb	IAmb	13 20 29.5	
	comp=Z,6.7nm,1.3s						
CMAR	Chiang Mai Arr	42.57	254	P	P	13 20 26.1	-0.2
	comp=Z,0.6nm,0.3s,baz=50,slow=7.8,SNR=1.8						
	comp=Z,0.6nm,0.3s						
M17K	Holitna River	42.79	38	P	P	13 20 30.2	+2.6
M17K				IAmb	IAmb	13 20 42.9	
	comp=Z,13nm,1.4s						
MK31	Makanchi Array	43.66	301	ceP	P	13 20 34.8	0.0
MKAR	Makanchi Array	43.66	301	P	P	13 20 34.7	-0.1
	comp=Z,5.7nm,0.7s,baz=84,slow=9.8,SNR=38						
MKAR				LR	LR	13 41 01.9	
	comp=Z,23nm,19.4s,baz=72,slow=39						
	comp=Z,5.7nm,0.7s						
J19K	Poorman	43.79	34	P	P	13 20 37.2	+1.6
MAKZ	Makanchi	43.87	301		P	13 20 36.1	-0.3
MAKZ				IAmb	IAmb	13 20 38.4	
	comp=Z,7.4nm,0.8s						
MAKZ	Makanchi	43.87	301	P	P	13 20 36.2	-0.3
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
D20K	Etivluk River	43.99	27	P	P	13 20 38.5	+1.3
B20K	Meade River	44.04	26	P	P	13 20 39.1	+1.6
B20K				IAmb	IAmb	13 20 54.3	
	comp=Z,16nm,1.5s						
KURK	Kurchatov	45.27	307	P	P	13 20 47.2	-0.3
KURK	Kurchatov	45.27	307	ceP	P	13 20 47.0	-0.6
KURK				pmax	pmax		
	comp=Z,19nm,0.9s						
KURBB	Kurchatov Arra	45.34	307	P	P	13 20 47.7	-0.5
	comp=Z,16nm,0.6s,baz=81,slow=8.2,SNR=113						
	comp=Z,16nm,0.6s						
CNPM	China Poot	45.88	41	P	P	13 20 54.5	+2.2
CNPM				IAmb	IAmb	13 21 34.7	
	comp=Z,5.9nm,1.1s						
EVN	Everest	46.84	274		P	13 21 00.9	-0.1
EVN				IAmb	IAmb	13 21 03.7	
	comp=Z,4.1nm,0.6s						
C24K	Franklin Bluff	46.91	26	P	P	13 21 02.0	+1.8
C24K				IAmb	IAmb	13 21 03.3	
	comp=Z,12nm,1.4s						
H24K	Noodor Dome	47.14	32	P	P	13 21 04.1	+1.9
H24K				IAmb	IAmb	13 21 12.4	
	comp=Z,4.1nm,1.3s						
IL31		47.60	33	P	P	13 21 06.8	+1.2
ILAR	Eielson Array	47.60	33	P	P	13 21 05.5	-0.1
	comp=Z,1.0nm,0.7s,baz=269,slow=6.9,SNR=14						
	comp=Z,1.0nm,0.7s						
E27K	Coleen River	49.49	29	P	P	13 21 22.5	+2.3
E27K				IAmb	IAmb	13 22 05.5	
	comp=Z,4.4nm,1.4s						
BVAR	Borovoye Array	49.77	311	P	P	13 21 22.3	-0.2
	comp=Z,7.4nm,0.5s,baz=68,slow=7.8,SNR=24						
BVAR				PcP	PcP	13 22 42.5	-0.2
	comp=Z,1.7nm,0.5s,baz=64,slow=3.4,SNR=4.0						
	comp=Z,7.4nm,0.5s						
BRVK	Borovoye	49.83	311	P	P	13 21 22.8	-0.1
BRVK				IAmb	IAmb	13 21 24.0	
	comp=Z,4.9nm,0.6s						
BRVK	Borovoye	49.83	311	ceP	P	13 21 22.8	-0.1
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AAK	Ala-Archa	50.15	297	LR	LR	13 44 07.4	
	comp=Z,42nm,19.5s,baz=122,slow=38						
G29M	Pine Creek	51.00	30	P	P	13 21 31.9	+0.3
G29M				IAmb	IAmb	13 21 51.0	
	comp=Z,6.3nm,1.2s						
KKAR	Karatay Array	52.72	299	P	P	13 21 44.5	-0.2
KKAR	Karatay Array	52.72	299	P	P	13 21 44.5	-0.2
SVE	Sverdlovsk	54.15	318	eP	P	13 21 55.5	+0.5
SVE				pmax	pmax		
	comp=Z,19nm,0.9s						
NIL	Nilore	54.62	287	P	P	13 21 59.5	+0.7
NIL	Nilore	54.62	287	P	P	13 21 59.5	+0.7
NIL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ARTI	Arti	55.47	318	P	P	13 22 04.5	0.0
ARTI	Arti	55.47	318	P	P	13 22 03.9	-0.6
	comp=Z,9.4nm,0.4s,baz=85,slow=4.6,SNR=12						
	comp=Z,9.4nm,0.4s						
ARTI	Arti	55.47	318	c iP	P	13 22 04.2	-0.3
ARTI						13 24 07.7	
ARTI				S	S	13 29 45.2	-0.5
ARTI				SS	SS	13 33 23.3	-7.1
ARTI				pmax	pmax		
	comp=Z,16nm,0.9s						
KNRA	Kununurra	55.73	196	P	P	13 22 06.9	+0.2
KNRA				IAmb	IAmb	13 22 07.5	
	comp=Z,5.8nm,1.1s						
AB31	Akbulak array	57.20	309	P	P	13 22 16.7	-0.3
ABKAR	Akbulak array	57.20	309	P	P	13 22 16.4	-0.6
AKTO	Aktyubinsk	57.88	311	P	P	13 22 21.0	-0.7
	comp=Z,4.3nm,0.8s,baz=68,slow=12,SNR=12						
	comp=Z,4.3nm,0.8s						
FITZ	Fitzroy Crossi	58.78	198	P	P	13 22 28.4	+0.2
WRAB	Tennant Creek	58.99	189	P	P	13 22 29.1	-0.6
WRAB	Tennant Creek	58.99	189	P	P	13 22 29.1	-0.6
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.4s						
WR8	Warramunga Arr	58.99	188	P	P	13 22 29.1	-0.5
WRA	Warramunga Arr	59.00	189	P	P	13 22 29.2	-0.5
WRA	Warramunga Arr	59.00	189	P	P	13 22 28.9	-0.9
	comp=Z,1.8nm,0.4s,baz=6.5,slow=7.0,SNR=74						
	comp=Z,1.8nm,0.4s						
WRA	Warramunga Arr	59.00	189	i P	P	13 22 29.2	-0.5
WRA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KIRV	Kirov	59.12	322	ceP	P	13 22 29.6	-0.6
RES	Resolute Bay	60.64	15	P	P	13 22 40.5	+0.2
RES				IAmb	IAmb	13 22 41.5	
	comp=Z,2.9nm,0.9s						
RES	Resolute Bay	60.64	15	P	P	13 22 40.5	+0.2
RES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YKA	Yellowknife Ar	61.89	31	P	P	13 22 49.6	+0.6
	comp=Z,0.3nm,0.6s,baz=303,slow=7.6,SNR=3.8						
	comp=Z,0.3nm,0.6s						
ARCES	ARCESS Array B	62.46	339	P	P	13 22 52.7	-0.1
	comp=Z,2.5nm,0.9s,baz=60,slow=7.2,SNR=4.1						
	comp=Z,2.5nm,0.9s						
AS31	Alice Springs	62.72	189	P	P	13 22 54.3	-0.8
ASAR	Alice Springs	62.73	189	P	P	13 22 54.6	-0.4
ASAR	Alice Springs	62.73	189	P	P	13 22 54.7	-0.3
	comp=Z,0.9nm,0.7s,baz=9.8,slow=9.1,SNR=25						
	comp=Z,0.9nm,0.7s						
FIA1	FINESS Array S	67.44	332	P	P	13 23 24.9	-0.3
FINES	FINESS Array B	67.44	332	P	P	13 23 24.8	-0.4
FINES	FINESS Array B	67.44	332	P	P	13 23 24.5	-0.7
	comp=Z,3.5nm,0.6s,baz=30,slow=8.8,SNR=9.0						
	comp=Z,3.5nm,0.6s						
FINES	FINESS Array B	67.44	332	i P	P	13 23 25.3	+0.1
FINES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
O02D	Mt. Diablo Mer	69.55	55	P	P	13 23 39.5	+0.7
O02D				IAmb	IAmb	13 23 45.2	
	comp=Z,5.7nm,1.1s						
KIV	Kislovodsk	70.14	311	eP	P	13 23 43.4	+1.0
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
KBZ	Khabaz	70.14	310	P	P	13 23 42.7	+0.5
	comp=Z,3.0nm,0.9s,baz=35,slow=4.6,SNR=5.1						
	comp=Z,3.0nm,0.9s						
KBZ	Khabaz	70.14	310	ceP	P	13 23 42.5	+0.2
KBZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NC405	NORSAR Array S	72.48	337	P	P	13 23 56.2	+0.1
HFS	Hagfors	72.63	336	P	P	13 23 56.9	-0.2
	comp=Z,2.0nm,0.7s,baz=62,slow=10,SNR=4.2						
	comp=Z,2.0nm,0.7s						
NB2	NORSAR Subarra	72.69	337	P	P	13 23 57.4	-0.1
	comp=Z,0.6nm,0.6s,baz=39,slow=6.2						
NOA	NORSAR Array B	72.69	337	P	P	13 23 57.4	-0.1
	comp=Z,1.0nm,0.7s,baz=39,slow=6.1,SNR=4.6						
NOA				LR	LR	13 58 31.0	
	comp=Z,20nm,21.3s,baz=205,slow=38						
	comp=Z,1.0nm,0.7s						
AKASG	Malin Array Be	73.19	322	P	P	13 23 59.8	-0.7
	comp=Z,1.4nm,0.5s,baz=46,slow=7.5,SNR=6.9						
	comp=Z,1.4nm,0.5s						
SFJD	Kangerlussuaq	73.97	5	P	P	13 24 04.7	-0.1
SFJD	Kangerlussuaq	73.97	5	P	P	13 24 04.7	-0.1
SFJD				pmax	pmax		
	comp=Z,15nm,1.3s						
BURAR	Bucovina Array	77.21	322	P	P	13 24 24.1	+0.3
BURAR	Bucovina Array	77.21	322	P	P	13 24 24.1	+0.3
BURAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BRTR	Keskin Array B	78.06	312	P	P	13 24 28.3	-0.4
BRTR	Keskin Array B	78.06	312	P	P	13 24 28.9	+0.1
	comp=Z,0.6nm,0.4s,baz=114,slow=4.1,SNR=5.8						
	comp=Z,0.6nm,0.4s						
BRTR	Keskin Array B	78.06	312	i P	P	13 24 28.8	0.0
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CLL	Collm	79.77	330	i P	P	13 24 37.9	+0.2
CLL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CLL	Collm	79.77	330	i P	P	13 24 37.9	+0.2
	comp=Z,5.0nm,0.8s						
KHC	Kasperske Hory	81.26	329	ceP	P	13 24 46.9	+1.1
KHC				pmax	pmax		
	comp=Z,7.0nm,1.7s						
GERES	GERESS Array B	81.44	328	LR	LR	14 03 04.6	
	comp=Z,26nm,18.6s,baz=74,slow=37						

**ROM 10 13:16:56.3±0.1, 42°.622N±0°.006×13°.280E±0°.009,
h11^{km}, ML1.3/11, 2C-1D, Error ellipse: s-maj=0.7km
s-min=0.7km az=175.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMA1	SAN MARTINO	0.04	79	⇓P	Pg	13 16 58.9	+0.4
SMA1				S	Sg	13 17 00.5	+0.4
SMA1				AML	AML		
	comp=E,770µm,0.3s						
SMA1				AML	AML		
	comp=N,331µm,0.4s						
SMA1				AML	AML		
	comp=N,289µm,0.1s						
RM33	Pellescritta (	0.12	203	⇑P	Pg	13 16 59.8	+0.4
RM33				S	Sg	13 17 02.1	+0.5
RM33				AML	AML		
	comp=E,285µm,0.3s						
RM33				AML	AML		
	comp=N,157µm,0.1s						
RM33				AML	AML		
	comp=E,292µm,0.2s						
RM33				AML	AML		
	comp=E,259µm,0.2s						
RM33				AML	AML		
	comp=N,136µm,0.1s						
CAMP	Campotosto	0.13	132	P	Pg	13 16 59.8	+0.3
CAMP				S	Sg	13 17 02.2	+0.4
CAMP				AML	AML		
	comp=E,23µm,1.0s						
CAMP				AML	AML		
	comp=N,33µm,0.3s						
CAMP				AML	AML		
	comp=N,33µm,0.3s						
MTRA	Matera	0.16	33	⇑P	Pg	13 17 00.3	+0.4
MTRA				S	Sg	13 17 03.0	+0.6
MTRA				AML	AML		
	comp=E,135µm,0.2s						
MTRA				AML	AML		
	comp=E,150µm,0.3s						
MTRA				AML	AML		
	comp=N,189µm,0.2s						
MTRA				AML	AML		
	comp=N,190µm,0.2s						
LNSS	Leonessa	0.18	264	P	Pg	13 17 00.7	+0.4
LNSS				S	Sg	13 17 03.8	+0.8
TERO	Teramo	0.24	90	P	Pg	13 17 01.5	+0.2
TERO				S	Sg	13 17 05.2	+0.5
TERO				AML	AML		
	comp=E,1810µm,0.4s						
TERO				AML	AML		
	comp=N,1165µm,0.3s						
TERO				AML	AML		
	comp=E,3670µm,0.3s						
TERO				AML	AML		
	comp=N,3365µm,0.4s						
NRCA	Norcia	0.24	330	P	Pg	13 17 01.8	+0.5
NRCA				S	Sg	13 17 05.8	+0.9
NRCA				AML	AML		
	comp=N,1210µm,0.1s						
NRCA				AML	AML		
	comp=E,840µm,0.1s						
NRCA				AML	AML		
	comp=N,1215µm,0.1s						
NRCA				AML	AML		
	comp=E,957µm,0.1s						
NRCA				AML	AML		
	comp=N,1285µm,0.1s						
AQU	L'Aquila	0.28	161	P	Pb	13 17 03.3	-0.2
OFFI	Offida	0.43	44	P	Pb	13 17 05.9	-0.1
CSP1	Cessapalombo	0.47	353	P	Pg	13 17 05.8	+0.2
CSP1				S	Sb	13 17 13.4	-0.4
CSP1				AML	AML		
	comp=N,2675µm,0.8s						
CSP1				AML	AML		
	comp=E,1655µm,1.2s						

**ROM 10 13:17:09.8±0.1, 42°.605N±0°.004×13°.272E±0°.005,
h11^{km}, ML3.1/140, 16C-2D, Error ellipse: s-maj=0.4km
s-min=0.3km az=77.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMA1	SAN MARTINO	0.05	61	⇓P	Pg	13 17 12.4	+0.3
SMA1				S	Sg	13 17 13.9	+0.2
SMA1				AML	AML		
SMA1				AML	AML		
SMA1				AML	AML		
	comp=N,99044µm,0.3s						
SMA1				AML	AML		
SMA1				AML	AML		
RM33	Pellescritta (	0.10	204	⇑P	Pb	13 17 13.3	-0.6
RM33				S	Sg	13 17 15.7	+1.1
RM33				AML	AML		
	comp=E,67700µm,0.3s						
RM33				AML	AML		
	comp=N,44500µm,0.3s						
RM33				AML	AML		
	comp=E,65100µm,0.3s						
RM33				AML	AML		
	comp=N,47400µm,0.3s						
RM33				AML	AML		
	comp=E,67750µm,0.3s						
RM33				AML	AML		
	comp=E,67738µm,0.3s						
RM33				AML	AML		
	comp=N,44470µm,0.3s						
RM33				AML	AML		
	comp=E,65080µm,0.3s						
RM33				AML	AML		
	comp=N,47396µm,0.3s						
RM33				AML	AML		
	comp=E,67750µm,1.7s						
RM33				AML	AML		
	comp=E,65100µm,1.7s						
RM33				AML	AML		
	comp=N,44500µm,1.7s						
RM33				AML	AML		
	comp=N,47400µm,1.7s						
CAMP	Campotosto	0.12	124	⇓P	Pg	13 17 13.3	+0.4
CAMP				S	Sg	13 17 15.6	+0.5
LNSS	Leonessa	0.17	269	⇑P	Pg	13 17 14.2	+0.6
LNSS				S	Sg	13 17 17.3	+1.0
LNSS				AML	AML		
	comp=E,12195µm,0.4s						
LNSS				AML	AML		
	comp=N,12900µm,1.0s						
LNSS				AML	AML		
	comp=E,12205µm,0.4s						
LNSS				AML	AML		
	comp=N,12950µm,1.0s						
LNSS				AML	AML		
	comp=E,12585µm,0.5s						
LNSS				AML	AML		
	comp=E,12210µm,0.5s						
LNSS				AML	AML		
	comp=E,10768µm,0.1s						
LNSS				AML	AML		
	comp=N,11230µm,0.2s						
LNSS				AML	AML		
	comp=E,12034µm,0.1s						
LNSS				AML	AML		
	comp=N,11705µm,0.2s						
LNSS				AML	AML		
	comp=N,12950µm,0.9s						
LNSS				AML	AML		
	comp=N,13800µm,0.9s						
MTRA	Matera	0.18	31	⇑P	Pg	13 17 13.8	+0.1
MTRA				S	Sg	13 17 16.6	+0.2
MTRA				AML	AML		
	comp=E,58900µm,0.4s						
MTRA				AML	AML		
	comp=N,64500µm,1.1s						
MTRA				AML	AML		
	comp=N,64900µm,1.1s						
MTRA				AML	AML		
	comp=E,59100µm,0.4s						
MTRA				AML	AML		
	comp=E,58885µm,0.4s						
MTRA				AML	AML		
	comp=N,50713µm,0.4s						
MTRA				AML	AML		
	comp=E,59069µm,0.4s						
MTRA				AML	AML		
	comp=N,51208µm,0.4s						
MTRA				AML	AML		
	comp=N,64500µm,0.9s						
MTRA				AML	AML		
	comp=N,64900µm,0.9s						
TERO	Teramo	0.24	86	⇑P	Pg	13 17 15.0	+0.1
TERO				S	Sg	13 17 18.6	+0.3
TERO				AML	AML		
	comp=E,27150µm,0.1s						
TERO				AML	AML		
	comp=N,26350µm,0.7s						
TERO				AML	AML		
	comp=E,51250µm,0.2s						
TERO				AML	AML		
	comp=E,51251µm,0.2s						
TERO				AML	AML		
	comp=N,50226µm,0.1s						
TERO				AML	AML		
	comp=E,27139µm,0.1s						
TERO				AML	AML		
	comp=N,23245µm,0.1s						
TERO				AML	AML		
	comp=N,50200µm,0.1s						
TERO				AML	AML		
	comp=E,27150µm,0.2s						
TERO				AML	AML		
	comp=N,26350µm,1.3s						
NRCA	Norcia	0.26	333	P	Pg	13 17 15.3	+0.2
NRCA				S	Sg	13 17 19.2	+0.5
NRCA				AML	AML		
	comp=N,4440µm,0.4s						
NRCA				AML	AML		
	comp=E,11300µm,1.0s						
NRCA				AML	AML		
	comp=N,4445µm,0.4s						
NRCA				AML	AML		
	comp=E,10500µm,1.0s						
NRCA				AML	AML		
	comp=N,4445µm,0.4s						
NRCA				AML	AML		
	comp=E,9385µm,0.1s						
NRCA				AML	AML		
	comp=N,4383µm,0.1s						
NRCA				AML	AML		
	comp=E,10082µm,0.1s						
NRCA				AML	AML		
	comp=N,4737µm,0.1s						
NRCA				AML	AML		
	comp=E,11300µm,1.0s						
NRCA				AML	AML		
	comp=E,10450µm,1.0s						
NRCA				AML	AML		
	comp=N,4435µm,0.4s						
NRCA				AML	AML		
	comp=N,4760µm,0.4s						
AQU	L'Aquila	0.27	159	P	Pg	13 17 15.8	+0.5
AQU				S	Sg	13 17 20.1	+1.2
GIGS	Gran Sasso	0.27	125	⇑P	Pg	13 17 15.5	+0.2
GIGS				S	Sg	13 17 19.7	+0.7
GIGS				AML	AML		
	comp=E,6715µm,0.3s						
GIGS				AML	AML		
	comp=N,7515µm,0.3s						
GIGS				AML	AML		
	comp=E,6505µm,0.1s						
GIGS				AML	AML		
	comp=N,6363µm,0.2s						
GIGS				AML	AML		
	comp=N,7515µm,1.7s						
GIGS				AML	AML		
	comp=E,6715µm,1.7s						
GAVE	Gavelli	0.29	288	⇑P	Pg	13 17 16.1	+0.3
GAVE				S	Sg	13 17 20.8	+1.1
GAVE				AML	AML		
	comp=E,5795µm,0.6s						
GAVE				AML	AML		
	comp=N,1880µm,0.6s						
GAVE				AML	AML		
	comp=N,5835µm,0.7s						
GAVE				AML	AML		
	comp=E,5790µm,0.6s						
GAVE				AML	AML		
	comp=E,5790µm,0.6s						
GAVE				AML	AML		
	comp=N,1880µm,0.7s						
GAVE				AML	AML		
	comp=E,5530µm,0.4s						
GAVE				AML	AML		
	comp=E,5373µm,0.2s						
GAVE				AML	AML		
	comp=N,5466µm,0.5s						
GAVE				AML	AML		
	comp=E,5782µm,0.1s						
GAVE				AML	AML		
	comp=N,1532µm,0.5s						
GAVE				AML	AML		
	comp=N,5835µm,1.3s						
GAVE				AML	AML		
	comp=N,1880µm,1.3s						
MC2	Monte Cornacci	0.31	349	⇑P	Pg	13 17 16.3	+0.1
MC2				S	Sg	13 17 21.5	+1.0
FIAM	Fiamignano	0.36	199	⇑P	Pg	13 17 17.3	+0.4
FIAM				S	Sb	13 17 22.9	-1.0
FIAM				AML	AML		
	comp=E,6430µm,0.5s						
FIAM				AML	AML		
	comp=N,4360µm,1.2s						
FIAM				AML	AML		
	comp=E,3245µm,0.5s						
FIAM				AML	AML		
	comp=E,3248µm,0.5s						
FIAM				AML	AML		
	comp=N,2129µm,0.5s						
FIAM				AML	AML		
	comp=E,6431µm,0.5s						
FIAM				AML	AML		
	comp=N,4262µm,0.5s						
FIAM				AML	AML		
	comp=N,2255µm,1.1s						
FIAM				AML	AML		
	comp=N,4355µm,1.2s						
ARRO	Arrone	0.38	266	⇑P	Pg	13 17 17.5	+0.3
ARRO				S	Sb	13 17 23.5	-0.8
ARRO				AML	AML		
	comp=E,1560µm,1.4s						
ARRO				AML	AML		
	comp=N,1605µm,1.0s						
ARRO				AML	AML		
	comp=E,1388µm,0.2s						
ARRO				AML	AML		
	comp=N,1412µm,0.3s						
ARRO				AML	AML		
	comp=N,1610µm,1.0s						
ARRO				AML	AML		
	comp=E,1555µm,1.4s						
FEMA	Monte Fema	0.39	335	P	Pg	13 17 17.7	+0.1
FEMA				S	Sg	13 17 23.7	+0.8
FEMA				AML	AML		
	comp=E,2715µm,0.7s						
FEMA				AML	AML		
	comp=N,2295µm,0.8s						
FEMA				AML	AML		
	comp=E,2715µm,0.7s						
FEMA				AML	AML		
	comp=N,2295µm,0.7s						
FEMA				AML	AML		

	comp=E,2613µm,0.3s						
FEMA				AML	AML		
	comp=N,2294µm,0.8s						
FEMA				AML	AML		
	comp=E,2715µm,1.3s						
FEMA				AML	AML		
	comp=N,2295µm,1.3s						
MF5	**Montefalcone A**	**0.41**	**20**	⇑P	Pg	13 17 18.2	+0.4
MF5				S	Sb	13 17 24.9	-0.5
MF5				AML	AML		
	comp=E,7225µm,0.5s						
MF5				AML	AML		
	comp=N,7045µm,0.5s						
MF5				AML	AML		
	comp=E,7227µm,0.5s						
MF5				AML	AML		
	comp=N,7045µm,0.5s						
MF5				AML	AML		
	comp=E,7225µm,1.5s						
MTCL	**Monte Cavallo**	**0.44**	**333**	P	Pg	13 17 18.3	-0.1
MTCL				S	Sg	13 17 25.1	+0.9
OFFI	**Offida**	**0.45**	**43**	⇑P	Pb	13 17 19.4	-0.4
OFFI				S	Sb	13 17 27.7	+1.2
OFFI				AML	AML		
	comp=E,11500µm,0.5s						
OFFI				AML	AML		
	comp=N,12250µm,0.7s						
OFFI				AML	AML		
	comp=E,11513µm,0.5s						
OFFI				AML	AML		
	comp=N,12243µm,0.7s						
FDMO	**Fiordimonte**	**0.45**	**343**	⇑P	Pg	13 17 18.6	-0.1
FDMO				S	Sg	13 17 25.4	+0.7
FDMO				AML	AML		
	comp=E,1380µm,0.4s						
FDMO				AML	AML		
	comp=E,1195µm,0.5s						
FDMO				AML	AML		
	comp=N,1202µm,0.4s						
FDMO				AML	AML		
	comp=N,1410µm,1.0s						
FDMO				AML	AML		
	comp=E,1380µm,1.6s						
GUMA	**Gualdo di Mace**	**0.46**	**6**	⇑P	Pg	13 17 19.1	+0.3
GUMA				S	Sb	13 17 26.3	-0.6
GUMA				AML	AML		
	comp=N,10020µm,0.5s						
GUMA				AML	AML		
	comp=E,6885µm,0.8s						
GUMA				AML	AML		
	comp=N,9375µm,0.6s						
GUMA				AML	AML		
	comp=E,7316µm,0.3s						
GUMA				AML	AML		
	comp=N,7977µm,0.7s						
GUMA				AML	AML		
	comp=E,6622µm,0.7s						
GUMA				AML	AML		
	comp=N,7839µm,0.5s						
GUMA				AML	AML		
	comp=E,7920µm,0.8s						
VCEL	**Villa Celiera**	**0.47**	**116**	P	Pg	13 17 19.2	+0.2
VCEL				AML	AML		
	comp=E,16300µm,0.3s						
VCEL				AML	AML		
	comp=N,19300µm,1.5s						
VCEL				AML	AML		
	comp=E,15019µm,0.2s						
VCEL				AML	AML		
	comp=N,19204µm,0.3s						
VCEL				AML	AML		
	comp=E,16300µm,1.7s						
VCEL				AML	AML		
	comp=N,19300µm,0.5s						
CESI	**CESI - Serrava**	**0.48**	**326**	P	Pg	13 17 19.2	0.0
CESI				S	Sg	13 17 26.6	+0.9
CESI				AML	AML		
	comp=E,1305µm,0.8s						
CESI				AML	AML		
	comp=N,1550µm,1.2s						
CESI				AML	AML		
	comp=E,1340µm,0.8s						
CESI				AML	AML		
	comp=N,1620µm,1.2s						
CESI				AML	AML		
	comp=E,1300µm,0.8s						
CESI				AML	AML		
	comp=N,1545µm,1.2s						
CESI				AML	AML		
	comp=E,1076µm,0.4s						
CESI				AML	AML		
	comp=N,1460µm,0.4s						
CESI				AML	AML		
	comp=E,1134µm,0.4s						
CESI				AML	AML		
	comp=N,1445µm,0.4s						
CESI				AML	AML		
	comp=E,904µm,1.2s						
CESI				AML	AML		
	comp=E,1300µm,1.2s						
CESI				AML	AML		
	comp=N,1090µm,0.8s						
CESI				AML	AML		
	comp=N,1545µm,0.8s						
CSP1	**Cessapalombo**	**0.49**	**354**	P	Pg	13 17 19.2	-0.2
SAP2	**Sant'Angelo in**	**0.50**	**11**	P	Pg	13 17 19.8	+0.3
SAP2				S	Sb	13 17 28.0	0.0
SAP2				AML	AML		
	comp=E,2005µm,0.4s						
SAP2				AML	AML		
	comp=N,12600µm,0.6s						
SAP2				AML	AML		
	comp=E,1883µm,0.3s						
SAP2				AML	AML		
	comp=N,11621µm,0.6s						
CESX	**Cesi**	**0.51**	**271**	P	Pg	13 17 19.6	-0.2
CESX				S	Sb	13 17 27.7	-0.6
CESX				AML	AML		
	comp=E,902µm,1.1s						
CESX				AML	AML		
	comp=E,880µm,0.5s						
CESX				AML	AML		
	comp=N,1249µm,0.2s						
CESX				AML	AML		
	comp=N,1250µm,0.2s						
CESX				AML	AML		
	comp=E,902µm,0.9s						
MNTT	**Montottone**	**0.52**	**27**	⇑P	Pb	13 17 20.6	-0.4
MNTT				AML	AML		
	comp=E,5765µm,0.4s						
MNTT				AML	AML		
	comp=N,6485µm,0.5s						
MNTT				AML	AML		
	comp=E,5770µm,0.4s						
MNTT				AML	AML		
	comp=E,5768µm,0.4s						
MNTT				AML	AML		
	comp=N,6480µm,0.5s						
MNTT				AML	AML		
	comp=N,6475µm,0.5s						
TRTR	**Tortoreto Alta**	**0.52**	**67**	⇑P	Pb	13 17 20.9	0.0
TRTR				S	Sn	13 17 30.3	-1.6
TRTR				AML	AML		
	comp=N,10425µm,1.5s						
TRTR				AML	AML		
	comp=E,14771µm,0.3s						
TRTR				AML	AML		
	comp=N,10279µm,0.4s						
TRTR				AML	AML		
	comp=E,14750µm,0.3s						
TRTR				AML	AML		
	comp=N,10425µm,0.5s						
MMP1	**Mompeo**	**0.53**	**228**	P	Pg	13 17 19.9	-0.1
T0110	**Collepietro**	**0.53**	**135**	P	Pg	13 17 20.2	0.0
T0110				S	Sb	13 17 28.8	-0.2
T0110				AML	AML		
	comp=N,6550µm,1.0s						
T0110				AML	AML		
	comp=E,7290µm,1.2s						
T0110				AML	AML		
	comp=E,7205µm,0.4s						
T0110				AML	AML		
	comp=N,5984µm,0.3s						
T0110				AML	AML		
	comp=N,6550µm,1.0s						
T0110				AML	AML		
	comp=E,7290µm,0.8s						
PF6	**Pievefavera**	**0.55**	**354**	P	Pg	13 17 19.9	-0.5
MNTP	**Montappone**	**0.55**	**15**	P	Pg	13 17 20.9	+0.4
MNTP				AML	AML		
	comp=E,3875µm,0.6s						
MNTP				AML	AML		
	comp=N,3355µm,1.2s						
MNTP				AML	AML		
	comp=E,3877µm,0.6s						
MNTP				AML	AML		
	comp=N,2499µm,0.8s						
MNTP				AML	AML		
	comp=N,3355µm,0.8s						
GNU	**Giano nell'Umb**	**0.55**	**291**	P	Pg	13 17 20.6	-0.1
MML1	**Montelago di S**	**0.55**	**337**	P	Pg	13 17 20.4	-0.2
MOMA	**Monte Martano**	**0.56**	**291**	⇑P	Pg	13 17 20.5	-0.1
MOMA				S	Sb	13 17 29.2	-0.4
MOMA				AML	AML		
	comp=N,1192µm,0.9s						
MOMA				AML	AML		
	comp=E,1700µm,1.1s						
MOMA				AML	AML		
	comp=E,1620µm,1.0s						
MOMA				AML	AML		
	comp=N,1324µm,0.9s						
MOMA				AML	AML		
	comp=E,1495µm,0.2s						
MOMA				AML	AML		
	comp=N,1180µm,0.3s						
MOMA				AML	AML		
	comp=E,1580µm,0.2s						
MOMA				AML	AML		
	comp=N,1178µm,0.3s						
MOMA				AML	AML		
	comp=N,1188µm,1.1s						
MOMA				AML	AML		
	comp=N,1324µm,1.1s						
MOMA				AML	AML		
	comp=E,1700µm,0.9s						
MOMA				AML	AML		
	comp=E,1620µm,0.9s						
PTQR	**Pietraquaria**	**0.59**	**171**	P	Pg	13 17 21.0	-0.3
PTQR				AML	AML		
	comp=N,834µm,0.6s						
PTQR				AML	AML		
	comp=E,909µm,0.3s						
PTQR				AML	AML		
	comp=N,833µm,0.6s						
PTQR				AML	AML		
	comp=E,910µm,0.3s						
PTQR				AML	AML		
	comp=N,833µm,1.4s						
SEF1	**Sefro**	**0.59**	**336**	P	Pg	13 17 21.1	-0.2
ASSB	**Assisi San Ben**	**0.63**	**314**	P	Pg	13 17 21.7	-0.3
ASSB				AML	AML		
	comp=N,1152µm,1.0s						
ASSB				AML	AML		
	comp=E,828µm,0.5s						
ASSB				AML	AML		
	comp=N,1123µm,0.3s						
ASSB				AML	AML		
	comp=N,1152µm,1.0s						
ASSB				AML	AML		
	comp=E,826µm,0.5s						
CADA	**Capodarco di F**	**0.69**	**31**	P	Pb	13 17 24.2	+0.4
CERT	**Cerreto**	**0.69**	**198**	P	Pg	13 17 22.7	-0.4
CERT				AML	AML		
	comp=N,2210µm,0.9s						
CERT				AML	AML		
	comp=E,1929µm,0.7s						
CERT				AML	AML		
	comp=N,2210µm,0.9s						
CERT				AML	AML		
	comp=E,1930µm,0.7s						
SNTG	**Esanatoglia**	**0.69**	**340**	P	Pg	13 17 22.7	-0.5
SNTG				AML	AML		
	comp=E,480µm,0.5s						
SNTG				AML	AML		
	comp=N,506µm,0.5s						
SNTG				AML	AML		
	comp=N,522µm,0.5s						
SNTG				AML	AML		
	comp=N,506µm,0.6s						
SNTG				AML	AML		
	comp=E,453µm,0.6s						
SNTG				AML	AML		
	comp=E,480µm,0.5s						
SNTG				AML	AML		
	comp=N,506µm,0.6s						
SNTG				AML	AML		
	comp=E,446µm,0.4s						
SNTG				AML	AML		
	comp=N,522µm,0.5s						
SNTG				AML	AML		
	comp=N,506µm,1.4s						
SNTG				AML	AML		
	comp=N,522µm,1.5s						
MTCE	**Montecelio**	**0.70**	**214**	P	Pg	13 17 22.9	-0.5
MTCE				AML	AML		
	comp=E,1695µm,0.6s						
MTCE				AML	AML		
	comp=N,1161µm,0.5s						
MTCE				AML	AML		
	comp=E,1695µm,0.6s						
MTCE				AML	AML		
	comp=N,1163µm,0.5s						
MTCE				AML	AML		
	comp=E,2290µm,1.4s						
MTCE				AML	AML		
	comp=N,1570µm,0.5s						
TRE1	**Treia**	**0.71**	**2**	P	Pg	13 17 23.5	+0.1
EL6	**Elcito**	**0.73**	**350**	P	Pg	13 17 23.2	-0.8
EL6				S	Sb	13 17 35.4	+0.6
EL6				AML	AML		
	comp=E,1300µm,0.9s						
EL6				AML	AML		
	comp=N,1920µm,0.9s						
EL6				AML	AML		
	comp=N,1915µm,0.9s						
EL6				AML	AML		
	comp=E,1082µm,0.7s						
EL6				AML	AML		
	comp=N,1438µm,0.6s						
EL6				AML	AML		
	comp=E,1305µm,1.1s						
EL6				AML	AML		
	comp=N,1905µm,0.9s						
ATCC	**AVT- Casa Cast**	**0.74**	**322**	P	Pg	13 17 23.9	-0.3
ATCC				AML	AML		
	comp=E,1125µm,1.2s						
ATCC				AML	AML		
	comp=N,954µm,0.5s						
ATCC				AML	AML		
	comp=E,987µm,0.6s						
ATCC				AML	AML		
	comp=N,954µm,0.5s						
ATCC				AML	AML		
	comp=N,952µm,0.5s						
ATCC				AML	AML		
	comp=E,1120µm,1.2s						
INTR	**Introdacqua**	**0.76**	**141**	P	Pg	13 17 23.6	-0.8
INTR				AML	AML		
	comp=N,3125µm,0.6s						
INTR				AML	AML		
	comp=N,3185µm,0.6s						
INTR				AML	AML		
	comp=E,1290µm,1.0s						
INTR				AML	AML		
	comp=E,1915µm,0.9s						
INTR				AML	AML		
	comp=N,3124µm,0.6s						
INTR				AML	AML		
	comp=E,1294µm,1.0s						
INTR				AML	AML		
	comp=N,3184µm,0.6s						
INTR				AML	AML		
	comp=E,1915µm,0.9s						
CIMA	**Civitanova Mar**	**0.76**	**22**	P	Pb	13 17 25.4	+0.4
VVLD	**Villa Vallelon**	**0.78**	**160**	P	Pg	13 17 24.2	-0.6
VVLD				AML	AML		
	comp=E,881µm,0.6s						
VVLD				AML	AML		
	comp=N,962µm,1.6s						
VVLD				AML	AML		
	comp=E,881µm,0.6s						
VVLD				AML	AML		
	comp=N,939µm,0.5s						
VVLD				AML	AML		
	comp=N,962µm,0.4s						
VVLD				AML	AML		
	comp=E,880µm,1.4s						
FOSV	**Fossato di Vic**	**0.79**	**332**	P	Pg	13 17 24.4	-0.5
RCAV	**Rocca di Cave**	**0.80**	**198**	P	Pg	13 17 24.5	-0.6
RCAV				AML	AML		
	comp=E,1340µm,0.6s						
RCAV				AML	AML		
	comp=E,1342µm,0.6s						
RCAV				AML	AML		
	comp=N,2066µm,1.0s						
RCAV				AML	AML		
	comp=N,2065µm,1.0s						
RCAV				AML	AML		
	comp=E,1340µm,1.4s						
GUAR	**Guarcino**	**0.81**	**178**	P	Pg	13 17 25.4	-0.1
MURB	**Monte Urbino**	**0.86**	**320**	P	Pg	13 17 26.1	-0.3
MURB				AML	AML		
	comp=E,1260µm,1.0s						
MURB				AML	AML		
	comp=N,1255µm,1.2s						
MURB				AML	AML		
	comp=E,1375µm,1.0s						
MURB				AML	AML		
	comp=N,1415µm,1.2s						
MURB				AML	AML		
	comp=E,1304µm,0.4s						
MURB				AML	AML		
	comp=N,1297µm,0.3s						
MURB				AML	AML		
	comp=E,1235µm,0.4s						
MURB				AML	AML		
	comp=N,1242µm,0.3s						
MURB				AML	AML		
	comp=N,1410µm,1.2s						
MURB				AML	AML		
	comp=E,1370µm,1.0s						
LPEL	**Lama dei Pelig**	**0.88**	**129**	P	Pg	13 17 26.1	-0.6
LPEL				AML	AML		
	comp=E,2265µm,0.2s						
LPEL				AML	AML		
	comp=E,2088µm,0.2s						
LPEL				AML	AML		
	comp=N,1388µm,0.1s						
LPEL				AML	AML		
	comp=E,2267µm,0.2s						
LPEL				AML	AML		
	comp=N,1596µm,0.1s						
LPEL				AML	AML		
	comp=N,1595µm,0.1s						
LPEL				AML	AML		
	comp=E,2085µm,0.2s						
LPEL				AML	AML		
	comp=N,1430µm,0.4s						
RMP	**Rome, Mte Porz**	**0.90**	**208**	AML	AML		
	comp=N,2110µm,1.0s						
RMP				AML	AML		
	comp=N,2105µm,1.0s						
RMP				AML	AML		
	comp=E,1565µm,0.9s						
SSFR	**Montelago di S**	**0.91**	**337**	P	Pg	13 17 26.2	-1.0
SSFR				AML	AML		
	comp=E,894µm,0.2s						
SSFR				AML	AML		
	comp=E,842µm,0.2s						
SSFR				AML	AML		
	comp=N,827µm,0.8s						
SSFR				AML	AML		
	comp=E,842µm,0.2s						
SSFR				AML	AML		
	comp=N,778µm,0.2s						
SSFR				AML	AML		
	comp=E,893µm,0.2s						
SSFR				AML	AML		
	comp=N,862µm,0.2s						
SSFR				AML	AML		
	comp=E,842µm,0.2s						
SSFR				AML	AML		
	comp=N,870µm,1.3s						
SSFR				AML	AML		
	comp=N,827µm,1.2s						
MGAB	**Montegabbione**	**0.91**	**290**	P	Pg	13 17 26.9	-0.4
MGAB				AML	AML		
	comp=E,1206µm,0.8s						
MGAB				AML	AML		
	comp=N,1041µm,1.1s						
MGAB				AML	AML		
	comp=N,1042µm,1.1s						
MGAB				AML	AML		
	comp=N,961µm,0.8s						
MGAB				AML	AML		
	comp=E,1373µm,0.8s						
MGAB				AML	AML		
	comp=N,951µm,0.5s						
MGAB				AML	AML		
	comp=E,1204µm,0.8s						
MGAB				AML	AML		
	comp=N,990µm,0.6s						
MGAB				AML	AML		
	comp=N,1046µm,0.9s						
MGAB				AML	AML		
	comp=E,1375µm,0.8s						
MGAB				AML	AML		
	comp=E,1200µm,0.8s						
MGAB				AML	AML		
	comp=N,960µm,1.2s						
ARVD	**Arcevia**	**0.93**	**345**	P	Pg	13 17 27.0	-0.6
ARVD				AML	AML		
	comp=E,535µm,0.7s						
ARVD				AML	AML		
	comp=N,387µm,1.2s						
ARVD				AML	AML		
	comp=E,509µm,0.7s						
ARVD				AML	AML		
	comp=N,322µm,0.5s						
ARVD				AML	AML		
	comp=E,535µm,1.3s						
ARVD				AML	AML		
	comp=N,387µm,0.8s						
POFI	**Posta Fibreno**	**0.94**	**160**	P	Pg	13 17 28.0	+0.1
AOI	**Ancona**	**0.97**	**14**	P	Pg	13 17 28.0	-0.5
AOI				AML	AML		
	comp=N,706µm,0.8s						
AOI				AML	AML		
	comp=E,669µm,1.0s						
AOI				AML	AML		
	comp=E,607µm,0.4s						
AOI				AML	AML		
	comp=N,705µm,0.8s						
AOI				AML	AML		
	comp=E,669µm,1.0s						
AOI				AML	AML		
	comp=N,705µm,0.8s						
LRP	**Arpino**	**0.98**	**166**	P	Pn	13 17 29.4	-0.1
ATVO	**AVT- Monte Val**	**1.00**	**321**	P	Pb	13 17 29.2	-0.1
ATVO				AML	AML		
	comp=E,490µm,1.1s						
ATVO				AML	AML		
	comp=N,414µm,1.0s						
ATVO				AML	AML		
	comp=E,391µm,0.9s						
ATVO				AML	AML		
	comp=N,413µm,0.4s						
ATVO				AML	AML		
	comp=E,490µm,0.9s						
ATVO				AML	AML		
	comp=N,414µm,1.0s						
SACS	**San Casciano d**	**1.03**	**284**	P	Pg	13 17 29.4	-0.3
SACS				AML	AML		
	comp=E,388µm,0.7s						
SACS				AML	AML		
	comp=N,588µm,1.1s						
SACS				AML	AML		
	comp=E,388µm,0.7s						
SACS				AML	AML		
	comp=N,588µm,1.1s						
SACS				AML	AML		
	comp=E,397µm,0.7s						
SACS				AML	AML		
	comp=N,583µm,0.9s						
COR1	**Corinaldo**	**1.05**	**349**	P	Pg	13 17 29.9	0.0
ATPI	**Pietralunga -**	**1.06**	**323**	P	Pn	13 17 30.6	-0.1
PIEI	**Pieia**	**1.08**	**330**	P	Pb	13 17 29.9	-0.6
PIEI				AML	AML		
	comp=E,372µm,0.8s						
PIEI				AML	AML		
	comp=N,310µm,1.1s						
PIEI				AML	AML		

	comp=E,321µm,0.4s						
PIEI				AML	AML		
	comp=N,287µm,0.7s						
PIEI				AML	AML		
	comp=E,372µm,1.2s						
TOLF	Tolfa	1.09	241	P	Pb	13 17 30.0	-0.6
TOLF				AML	AML		
	comp=E,445µm,1.0s						
TOLF				AML	AML		
	comp=N,577µm,1.0s						
TOLF				AML	AML		
	comp=E,445µm,1.0s						
TOLF				AML	AML		
	comp=N,554µm,0.7s						
TOLF				AML	AML		
	comp=E,445µm,1.0s						
MPAG	Monte Paganucc	1.09	340	P	Pb	13 17 30.1	-0.7
MPAG				AML	AML		
	comp=E,472µm,1.0s						
MPAG				AML	AML		
	comp=N,517µm,0.9s						
MPAG				AML	AML		
	comp=E,472µm,1.0s						
MPAG				AML	AML		
	comp=N,517µm,0.9s						
MPAG				AML	AML		
	comp=E,473µm,0.8s						
MPAG				AML	AML		
	comp=N,451µm,0.9s						
MPAG				AML	AML		
	comp=E,472µm,1.0s						
MPAG				AML	AML		
	comp=N,516µm,0.9s						
CERA	Filignano	1.15	151	P	Pb	13 17 31.4	-0.3
BADI	Badiali	1.18	321	P	Pg	13 17 32.7	+0.3
CAFI	Castiglion Fio	1.20	308	P	Pb	13 17 32.5	-0.1
CAFI				AML	AML		
	comp=E,220µm,0.7s						
CAFI				AML	AML		
	comp=E,220µm,0.7s						
CAFI				AML	AML		
	comp=N,373µm,0.6s						
CAFI				AML	AML		
	comp=E,212µm,0.7s						
CAFI				AML	AML		
	comp=N,358µm,0.6s						
CAFI				AML	AML		
	comp=N,373µm,0.6s						
MIDA	Miranda	1.21	142	P	Pb	13 17 32.1	-0.6
SF14	Selvena	1.23	278	P	Pn	13 17 32.7	-0.3
SF01	Poggio Pratacc	1.28	280	P	Pb	13 17 34.0	+0.1
SF01				AML	AML		
	comp=N,324µm,0.9s						
SF01				AML	AML		
	comp=E,354µm,1.0s						
SF01				AML	AML		
	comp=N,324µm,0.9s						
SF01				AML	AML		
	comp=E,354µm,1.0s						
SF01				AML	AML		
	comp=N,324µm,1.1s						
CRE	Caprese Michel	1.40	317	P	Pg	13 17 36.4	-0.3
MAON	Monte Argentar	1.59	264	P	Pn	13 17 38.2	+0.3
MAON				AML	AML		
	comp=E,105µm,0.7s						
MAON				AML	AML		
	comp=N,102µm,0.9s						
SGRT	San Giovanni R	2.02	114	P	Pb	13 17 45.4	-1.2
SGRT				AML	AML		
	comp=E,449µm,0.5s						
SGRT				AML	AML		
	comp=N,308µm,0.8s						
SGRT				AML	AML		
	comp=E,449µm,0.5s						
SGRT				AML	AML		
	comp=N,308µm,0.8s						
SGRT				AML	AML		
	comp=E,448µm,1.5s						
SGRT				AML	AML		
	comp=N,308µm,0.8s						
HVAR	Hvar	2.40	75	P	Pn	13 17 49.6	+0.5
VULT	Monte Vulture	2.41	132	AML	AML		
	comp=N,228µm,0.5s						
VULT				AML	AML		
	comp=E,195µm,0.5s						
VULT				AML	AML		
	comp=E,207µm,0.5s						
VULT				AML	AML		
	comp=E,195µm,0.5s						
VULT				AML	AML		
	comp=N,204µm,0.5s						
VULT				AML	AML		
	comp=N,204µm,0.5s						
SKDS	Skadanscina	2.99	10	*e*Pn	Pn	13 17 56.5	-0.7
AMUR	Altamura	3.02	123	AML	AML		
	comp=E,80µm,0.6s						
AMUR				AML	AML		
	comp=N,90µm,0.4s						
A050A	Klekovaca	3.02	51	*e*Pn	Pn	13 17 59.2	+1.5
STON	Ston	3.27	84	*e*Pn	Pn	13 18 01.4	+0.4
BLY	Banja Luka	3.56	52	*e*Pn	Pn	13 18 07.5	+2.6
A051A	Mrakovica	3.56	46	*e*Pn	Pn	13 18 05.5	+0.4
CRES	Cresnjevec Ost	3.58	25	*e*Pn	Pg	13 18 18.6	+0.2
DOSS	Dosso del Somm	3.60	336	P	Pn	13 18 07.1	+1.4
VINO	Villanova	3.65	0	P	Pn	13 18 06.2	-0.1
VINO				AML	AML		
	comp=E,43µm,0.9s						
VINO				AML	AML		
	comp=N,35µm,1.1s						
VINO				AML	AML		
	comp=E,43µm,0.9s						
VINO				AML	AML		
	comp=N,35µm,1.1s						
VINO				AML	AML		
	comp=N,35µm,0.9s						
VINO				AML	AML		
	comp=E,43µm,1.1s						
STAL	STALIGIAL	3.68	354	P	Pn	13 18 07.0	+0.3
STAL				AML	AML		
	comp=E,40µm,0.8s						
STAL				AML	AML		
	comp=N,35µm,1.3s						
STAL				AML	AML		
	comp=E,37µm,0.4s						
STAL				AML	AML		
	comp=N,33µm,0.4s						
STAL				AML	AML		
	comp=E,139µm,0.9s						
STAL				AML	AML		
	comp=N,127µm,1.0s						
STAL				AML	AML		
	comp=N,35µm,0.7s						
MAGA	Magasa	3.70	330	P	Pn	13 18 08.2	+1.2
MAGA				AML	AML		
	comp=E,158µm,0.8s						
MAGA				AML	AML		
	comp=N,78µm,0.4s						
MAGA				AML	AML		
	comp=E,158µm,0.8s						
MAGA				AML	AML		
	comp=N,78µm,0.4s						
TREB	Trebinje	3.75	87	*e*Pn	Pn	13 18 08.4	+0.8
HCY	Herceg Novi	3.86	91	*e*Pn	Pn	13 18 09.6	+0.4
BRY	Bratogost	3.89	84	*e*Pn	Pn	13 18 10.7	+1.0
OBKA	Obir	4.01	13	*e*Pn	Pn	13 18 12.0	+0.7
OBKA	Obir	4.01	13	*e*Pn	Pn	13 18 11.7	+0.5
	comp=N,4.4nm,0.8s						
MYKA	Terra Mystica	4.03	4	*e*Pn	Pn	13 18 11.3	-0.3
	comp=N,1.4nm,0.5s						
KOSI	Kohlern	4.09	341	P	Pn	13 18 13.9	+1.5
ABTA	Abfaltersbach	4.18	353	*e*Pn	Pn	13 18 14.5	+0.9
	comp=N,11nm,0.6s						
UPM	Unac-Piva	4.18	80	*e*Pn	Pn	13 18 15.8	+2.1
SOKA	Soboth	4.26	17	*i* Pn	Pn	13 18 18.5	+3.8
	comp=N,1.1nm,0.5s						
VSL	Villasalto	4.28	225	P	Pn	13 18 17.0	+2.1
DRME	Dracevica, Mon	4.40	93	*e*Pn	Pn	13 18 18.1	+1.6
HAPS	Han Pijesak,Bl	4.40	68	*e*Pn	Pn	13 18 18.5	+1.9
PDG	Podgorica	4.43	90	*e*Pn	Pn	13 18 12.5	-4.4
KBA	Koelnbreinsper	4.47	1	*e*Pn	Pn	13 18 20.0	+2.3
	comp=N,2.9nm,0.6s						
RUDO	Rudo	4.58	75	*e*Pn	Pn	13 18 20.6	+1.6
ERC	Erice	4.59	187	AML	AML		
	comp=E,57µm,0.5s						
ERC				AML	AML		
	comp=N,38µm,0.4s						
BBLS	Lazi&#263i	4.66	72	*e*Pn	Pn	13 18 22.9	+2.8
FETA	Feichten	4.77	339	*i* Pn	Pn	13 18 23.5	+1.7
	comp=N,5.8nm,1.1s						
WTTA	Wattenberg	4.80	347	*i* Pn	Pn	13 18 24.6	+2.4
	comp=N,2.0nm,0.4s						
LESA	Schwarzleotal	4.84	355	*e*Pn	Pn	13 18 24.8	+2.2
	comp=N,2.5nm,1.1s						
SQTA	Sankt Quirin	4.84	343	*e*Pn	Pn	13 18 23.5	+0.8
	comp=N,2.2nm,0.5s						
WATA	Walderalm	4.88	346	*i* Pn	Pn	13 18 27.6	+4.4
	comp=N,5.9nm,0.9s						
ARSA	Arzberg	4.91	18	*e*Pn	Pn	13 18 24.0	+0.4
	comp=N,1.0nm,0.4s						
MOTA	Moosalm	4.98	343	*i* Pn	Pn	13 18 27.0	+2.3
	comp=N,6.6nm,1.2s						
RETA	Reutte	5.20	341	*e*Pn	Pn	13 18 26.5	-1.0
	comp=N,4.0nm,1.3s						
DAVA	Damuels	5.26	334	*e*Pn	Pn	13 18 29.2	+0.7
	comp=N,8.1nm,1.3s						
MOA	Molln	5.29	7	*i* Pn	Pn	13 18 28.3	-0.5
	comp=N,1.4nm,0.7s						
RONA	Rosalia, Austr	5.53	22	*i* Pn	Pn	13 18 31.5	-0.5
	comp=N,2.2nm,0.5s						
CONA	Conrad Observa	5.63	18	*i* Pn	Pn	13 18 32.0	-1.5
	comp=N,1.4nm,0.6s						

IDC ***10*** *13:18:14.8±3.2, 22°.87N×11°.76W, h0^{km}, mb3.8/3, mbtmp3.9/5, ML3.6/2, MS3.4/3, Error ellipse: s-maj=110.7km s-min=33.8km az=81.0*

ISC 10 13:18:14.2±1.6**, 22°.6N**±0°.1×**11°.8W**±0°.3**, h10^{km}, n12,** σ**1^{s}.75**/9**, mb3.8**/3**, MS3.4**/3**, Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDT	Midelt	12.05	30	Lg	Lg	13 24 25.9	
	0.6nm,0.3s,baz=358,slow=18,SNR=2.1						
TORD	Torodi Ar. Bea	15.89	124	Pn	P	13 22 01.1	-0.7
	0.2nm,0.3s,baz=316,slow=14,SNR=2.3						
TORD				Sn	Sn	13 24 55.5	+1.0
	0.3nm,0.3s,baz=310,slow=24,SNR=3.0						
	0.9nm,0.3s						
DBIC	Dimbokro	17.16	156	Pn	P	13 22 18.3	+2.5
	0.2nm,0.3s,baz=346,slow=7.6,SNR=1.9						
DBIC				Sn	Sn	13 25 22.8	-2.5
	0.2nm,0.3s,baz=185,slow=2.7,SNR=1.8						
	2.7nm,0.7s						
I42PT	GRACIOSA ISLAN	21.47	324	I	I	15 20 40.0	
	baz=140,slow=323,SNR=3.4						
HFS	Hagfors	41.61	19	P	P	13 26 01.1	-1.1
	1.6nm,0.6s,baz=202,slow=7.2,SNR=4.7						
	1.6nm,0.6s						
EIL	Elat	42.37	70	LR	LR	13 45 11.4	
	comp=Z,41nm,18.5s,baz=241,slow=38						
MMAI	Mount Meron Ar	42.75	65	LR	LR	13 47 03.3	
	comp=Z,44nm,19.1s,baz=251,slow=41						
SPITS	Spitsbergen Ar	57.24	7	LR	LR	13 55 02.0	
	comp=Z,31nm,18.1s,baz=140,slow=39						
KURBB	Kurchatov Arra	73.12	42	P	P	13 29 45.5	+0.7
	0.6nm,0.6s,baz=281,slow=5.9,SNR=4.5						
	0.6nm,0.6s						
MKAR	Makanchi Array	76.61	45	P	P	13 30 06.2	+1.1
	0.3nm,0.5s,baz=277,slow=4.8,SNR=4.0						
	0.3nm,0.5s						
WRA	Warramunga Arr	148.39	92	PKPbc	PKiKP	13 38 03.6	+0.3
	0.5nm,0.9s,baz=293,slow=2.3,SNR=2.5						
ASAR	Alice Springs	148.50	99	PKPbc	PKPab	13 38 04.0	-1.3
	0.4nm,0.7s,baz=284,slow=2.3,SNR=7.0						

IDC ***10*** *13:26:13.3±0.7, 35°.55N×5°.11E, h0^{km}, mb4.0/19, mbtmp4.0/25, ML4.0/6, MS3.5/22, Error ellipse: s-maj=16.9km s-min=14.0km az=144.0*

MDD ***10*** *13:26:15.4±0.4, 35°.42N×5°.06E, h0^{km}, Mb4.8/79, M_mb4.3/79, Error ellipse: s-maj=3.1km s-min=2.2km az=151.0*

CRAAG ***10*** *13:26:16.1, 35°.65N×4°.91E, Ml4.2, Algerie 03km SE Ouled-Addi-Guebala*

MOS ***10*** *13:26:18.5±1.9, 35°.45N×4°.76E, h32^{km}, mb4.5/10, Error ellipse: s-maj=11.6km s-min=4.5km az=72.9*

NEIC ***10*** *13:26:19.1±2.0, 35°.54N±0°.08×4°.94E±0°.09, h37^{km}±9^{km}, mb4.1/6, Error ellipse: s-maj=11.3km s-min=10.2km az=181.0*

ISC 10 13:26:15.6±0.4**, 35°.52N**±0°.03×**4°.93E**±0°.03**, h10^{km}, n261,** σ**2^{s}.12**/281**, mb4.3**/30**, MS3.5**/19**, 38C-6D, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAF	Djebel Tarf	0.64	303	P	Pg	13 26 27.8	-0.2
CAZD	Ain Tagrout	0.67	16	P	Pg	13 26 28.8	+0.1
CKHR	Kef el Ahmar	0.68	44	P	Pb	13 26 29.4	-0.2
SET	Setif	0.77	29	P	Pg	13 26 30.0	-0.5
CDCN	Doucen	0.95	171	P	Pg	13 26 34.8	+1.0
ATKJ	Tikjda	1.13	325	P	Pg	13 26 37.3	0.0
DFRA	Djebel Bou Aff	1.27	37	P	Pg	13 26 40.0	-0.1
CTEI	Djebel Teioual	1.31	65	P	Pg	13 26 41.0	+0.2
ATKB	Taksebt	1.32	330	P	Pb	13 26 40.8	+0.3
CASM	Ain Smara	1.46	59	P	Pg	13 26 44.1	+0.5
CBOS	Bilal Ibnou Ra	1.69	41	P	Pn	13 26 45.2	+0.1
CKFL	Kef-Lekhel	1.69	58	P	Pn	13 26 46.1	+0.8
CAEH	'Ain El Ouahch	1.99	51	P	Pn	13 26 49.6	+0.2
ABSA	Djebel Ababsia	2.20	69	P	Pn	13 26 52.9	+0.7
CMAH	Djebel Manchou	2.29	61	P	Pn	13 26 54.0	+0.5
OJGS	Djebel Guires	3.41	271	P	Pn	13 27 08.0	-0.9
OKGL	Djebel Kef Gue	3.53	280	P	Pn	13 27 10.0	-0.4
KEST	Kesra	3.60	85		Pn	13 27 12.6	+1.1
KEST	Kesra	3.60	85	Pn	Pn	13 27 12.4	+0.9
	8.1nm,0.3s,baz=295,slow=2.3,SNR=73						
KEST				Lg	Lg	13 27 59.3	
	11nm,0.3s,baz=254,slow=19,SNR=5.9						
OJBR	Djebel Berber	3.74	272	P	Pn	13 27 09.0	-4.4
MAHO	Mahon	4.40	353		Pn	13 27 22.6	+0.3
MAHO	Mahon	4.40	353	Pn	Pn	13 27 23.3	+1.0
MAHO				Sn	Sn	13 28 10.7	-2.9
USTO	Oran	4.47	274	P	Pn	13 27 15.0	-8.4
EIBI	Ibiza	4.52	322	Pn	Pn	13 27 25.5	+1.5
EIBI				Sn	Sn	13 28 15.6	-1.0
EIBI	Ibiza	4.52	322	Pn	Pn	13 27 25.3	+1.3
EIBI				⇑*i*IVmb_VC		13 27 27.1	
	3µm,SNR=7.4						
EIBI				Sn	Sn	13 28 15.7	-1.0
ETOS	Mallorca	4.56	339	Pn	Pn	13 27 25.9	+1.3
ETOS				Sn	Sn	13 28 15.2	-2.5
ETOS	Mallorca	4.56	339	Pn	Pn	13 27 25.9	+1.3
ETOS				⇑*i*IVmb_VC		13 27 29.4	
	936nm,SNR=2.9						
ETOS				Sn	Sn	13 28 14.6	-3.0
EBEN2	Beniarda presa	5.16	309	Pn	Pn	13 27 32.7	-0.2
EBEN2				⇑*i*IVmb_VC		13 27 39.2	
	1µm,SNR=2.9						
EBEN2				Sn	Sn	13 28 31.9	-0.7
CART	Cartagena	5.20	295		Pn	13 27 32.7	-0.8
CART	Cartagena	5.20	295	Pn	Pn	13 27 32.4	-1.0
CART				Sn	Sn	13 28 31.5	-2.0
CART	Cartagena	5.20	295	P	Pn	13 27 24.9	-8.5
VSL	Villasalto	5.31	40		Pn	13 27 33.9	-1.0
VSL	Villasalto	5.31	40	Pn	Pn	13 27 35.2	+0.3
VSL				Sn	Sn	13 28 33.0	-3.2
AFON	Font Roja	5.38	307	Pn	Pn	13 27 37.7	+1.7
AFON				⇑*i*IVmb_VC		13 27 44.3	
	673nm,SNR=2.4						
AFON				Sn	Sn	13 28 38.8	+0.7
ECOL	Islas Columbre	5.51	324	Pn	Pn	13 27 38.4	+0.7
ECOL				Sn	Sn	13 28 39.9	-1.3
EXAHM	Alhama Murcia,	5.62	296	Pn	Pn	13 27 41.5	+2.4
EXAHM				Sn	Sn	13 28 46.4	+2.8
TLOR	Lorca, Murcia	5.74	294	Pn	Pn	13 27 41.1	+0.3
TLOR	Lorca, Murcia	5.74	294	Pn	Pn	13 27 42.1	+1.3
TLOR				Sn	Sn	13 28 48.6	+1.9
ELOR	Lorca, Murcia	5.77	293	Pn	Pn	13 27 42.1	+0.8
ELOR				⇑*i*IVmb_VC		13 27 46.2	
	1µm,SNR=2.1						
ELOR				Sn	Sn	13 28 49.2	+1.6
EZAR	Zarzadilla de	5.82	296	Pn	Pn	13 27 41.8	-0.2
EZAR				⇑*i*IVmb_VC		13 27 48.6	
	2µm,SNR=7.9						
EZAR				Sn	Sn	13 28 50.3	+1.5
EXBUL	Bullas, Murcia	5.86	297	Pn	Pn	13 27 44.4	+1.9
EXBUL				Sn	Sn	13 28 50.5	+0.7
ENIJ	Nijar	5.95	286	Pn	Pn	13 27 43.7	0.0
ENIJ	Nijar	5.95	286	Pn	Pn	13 27 45.1	+1.4
ENIJ				⇑*i*IVmb_VC		13 27 53.5	
	528nm,SNR=3.1						
ENIJ				Sn	Sn	13 28 52.7	+0.7
DGI	Dorgali Grotta	6.04	36	Pn	Pn	13 27 46.9	+1.9
DGI				Sn	Sn	13 28 51.0	-3.3
TAF	Taforalt	6.06	265	P	Pn	13 27 44.4	-0.9
TAF	Taforalt	6.06	265	S	Sb	13 29 19.9	+6.0
EVIV	Cofrentes, Val	6.10	310	Pn	Pn	13 27 45.6	-0.2
EVIV				⇑*i*IVmb_VC		13 27 52.0	
	623nm,SNR=3.4						
EVIV				Sn	Sn	13 28 56.0	+0.4
FIGM	Figuig	6.17	238	P	Pn	13 27 45.1	-1.7
FIGM	Figuig	6.17	238	S	Sg	13 29 30.7	-2.8
ECHE	Chera	6.20	313	Pn	Pn	13 27 49.3	+2.1
ECHE				Sn	Sn	13 28 56.6	-1.5
ECHE	Chera	6.20	313	Pn	Pn	13 27 48.4	+1.2
ECHE				⇑*i*IVmb_VC		13 27 52.8	
	858nm,SNR=6.9						
ECHE				Sn	Sn	13 28 55.5	-2.7
JBK	JBK	6.27	261	P	Pn	13 27 45.4	-3.0
EMOS	Mosqueruela	6.45	320	Pn	Pn	13 27 52.0	+1.2
EMOS				⇑*i*IVmb_VC		13 27 53.7	
	382nm,SNR=2.7						
EMOS				Sn	Sn	13 29 01.1	-3.3
GOG	Mont Gurugu	6.49	270	P	Pn	13 27 47.6	-3.5
ERTA	Horta de San J	6.52	328	Pn	Pn	13 27 52.7	+1.2
ERTA				⇑*i*IVmb_VC		13 27 58.9	
	227nm,SNR=1.8						
ERTA				Sn	Sn	13 29 01.4	-4.6
EPOB	Poblet	6.56	334	Pn	Pn	13 27 52.1	0.0
EPOB				⇑*i*IVmb_VC		13 27 56.6	
	405nm,SNR=5.1						
EPOB				Sn	Sn	13 29 01.6	-5.4
EQES	Quesada	6.82	292	Pn	Pn	13 27 57.0	+1.1
EQES				⇑*i*IVmb_VC		13 28 02.5	
	754nm,SNR=7.4						
EQES				Sn	Sn	13 29 14.7	+1.1
E0901	Celadas (Terue	6.88	318	Pn	Pn	13 27 58.5	+1.9
E0901				⇑*i*IVmb_VC		13 28 03.7	
	542nm,SNR=4.8						
E0901				Sn	Sn	13 29 13.4	-1.6
EQUE	Quentar	6.96	286	Pn	Pn	13 27 58.3	+0.6
EQUE				⇑*i*IVmb_VC		13 28 04.8	
	533nm,SNR=4.7						
EQUE				Sn	Sn	13 29 12.5	-4.4
EQTA	Presa de Quent	6.96	286	Pn	Pn	13 27 58.6	+0.9
CLTB	Caltabellotta	6.97	70	Pn	Pn	13 28 00.9	+3.0
CLTB				Sn	Sn	13 29 24.5	+7.2
EJON	La Jonquera	7.09	348	Pn	Pn	13 28 00.4	+1.0
EJON				Sn	Sn	13 29 17.4	-2.7
EJON	La Jonquera	7.09	348	Pn	Pn	13 28 00.1	+0.6
EJON				⇑*i*IVmb_VC		13 28 05.2	
	599nm,SNR=2.8						
EJON				Sn	Sn	13 29 17.0	-3.1
E0802	Ubeda,Jaen	7.12	293	Sn	Sn	13 29 22.7	+1.8
E0803	Jimena (Jaen)	7.14	291	Pn	Pn	13 27 59.8	-0.3
E0803				Sn	Sn	13 29 21.9	+0.6
AKLM	AKL	7.29	265	P	Pn	13 27 58.7	-3.5
AKLM	AKL	7.29	265	S	Sb	13 29 52.0	+2.8
EGOR	Sierra Gorda,	7.47	285	Pn	Pn	13 28 07.1	+2.4
EGOR				⇑*i*IVmb_VC		13 28 10.1	
	194nm,SNR=1.5						
EGOR				Sn	Sn	13 29 26.1	-3.5
ESAC	San Caprasio	7.49	327	Pn	Pn	13 28 06.5	+1.5
ESAC				⇑*i*IVmb_VC		13 28 12.6	
	730nm,SNR=3.0						
ESAC				Sn	Sn	13 29 28.1	-1.9
CEST	Esterri de Car	7.62	339		Pn	13 28 08.3	+1.5
ETOR	Torete	7.63	316	Pn	Pn	13 28 09.0	+2.1
ETOR				⇑*i*IVmb_VC		13 28 13.5	
	226nm,SNR=2.3						
ETOR				Sn	Sn	13 29 33.8	+0.3
RESU	Resuttano	7.64	71	Pn	Pn	13 28 12.9	+5.9
RESU				Sn	Sn	13 29 37.6	+4.0
PSIM	Granatula de C	7.68	298	Pn	Pn	13 28 09.1	+1.6
PSIM				Sn	Sn	13 29 33.1	-1.4
EMIJ	Mijas	7.93	280	Pn	Pn	13 28 12.9	+1.9
EMIJ				⇑*i*IVmb_VC		13 28 17.5	
	186nm,SNR=1.4						
EMIJ				Sn	Sn	13 29 40.6	-0.1
ECHI	Chisagues Biel	8.02	334	Pn	Pn	13 28 14.1	+1.8
ECHI				⇑*i*IVmb_VC		13 28 20.4	
	116nm,SNR=1.9						
ECHI				Sn	Sn	13 29 39.2	-4.0
EADA	Adamuz	8.07	292	Pn	Pn	13 28 12.9	0.0
EADA				Sn	Sn	13 29 41.7	-2.4
EADA	Adamuz	8.07	292	Pn	Pn	13 28 13.0	+0.2
EADA				⇑*i*IVmb_VC		13 28 21.5	
	86nm,SNR=1.8						
EADA				Sn	Sn	13 29 44.4	+0.2
ESBB	Sonseca Array	8.19	303		Pn	13 28 15.1	+0.7
ESBB	Sonseca Array	8.19	303	Pn	Pn	13 28 16.6	+2.2
ESBB				⇑*i*IVmb_VC		13 28 18.3	
	136nm,SNR=2.0						
ESBB				Sn	Sn	13 29 41.9	-5.1
ESDC	Sonseca Array	8.19	303		Pn	13 28 15.0	+0.6
ESDC	Sonseca Array	8.19	303	Pn	Pn	13 28 14.9	+0.4
ESDC				⇑*i*IVmb_VC		13 28 18.3	
	130nm,SNR=2.0						
ESDC				Sn	Sn	13 29 43.2	-3.8
ESDC	Sonseca Array	8.19	303	Pn	Pn	13 28 14.4	0.0
	0.6nm,0.3s,baz=121,slow=14,SNR=18						
ESDC				Sn	Sn	13 29 44.0	-3.0
	0.5nm,0.3s,baz=120,slow=23,SNR=4.8						
ESDC				LR	LR	13 31 18.4	
	comp=Z,159nm,21.3s,baz=150,slow=37						
	3.3nm,0.4s						
MDT	Midelt	8.36	254	Pn	Pn	13 28 16.2	-0.6
	0.9nm,0.3s,baz=80,slow=16,SNR=8.7						
MDT				Lg	Lg	13 30 41.8	
	1.6nm,0.3s,baz=120,slow=19,SNR=5.3						
	12nm,0.7s						
MDT	Midelt	8.36	254	P	Pn	13 28 14.0	-2.8
PAB	San Pablo	8.39	301		Pn	13 28 17.7	+0.4
PAB	San Pablo	8.39	301	Pn	Pn	13 28 17.4	+0.1
PAB				⇑*i*IVmb_VC		13 28 22.7	
	181nm,SNR=4.2						
PAB				Sn	Sn	13 29 52.9	+0.8
PAB	San Pablo	8.39	301	P	Pn	13 28 17.7	+0.4
MON	Monaco	8.42	12	Pn	Pn	13 28 14.0	-3.6
MON				Sn	Sn	13 29 56.5	+4.0
MD31	MD31	8.46	254	P	Pn	13 28 17.3	-0.9
ARF	Arif	8.66	244	P	Pn	13 28 20.1	-1.0
ECAB	El Cabril	8.69	290	Pn	Pn	13 28 20.8	-0.4
ECAB				⇑*i*IVmb_VC		13 28 24.9	
	108nm,SNR=2.2						
ECAB				Sn	Sn	13 29 57.5	-1.8
GUD	Guadarrama	8.80	308	Pn	Pn	13 28 23.9	+1.0
GUD				⇑*i*IVmb_VC		13 28 30.2	
	107nm,SNR=2.7						
GUD				Sn	Sn	13 30 02.3	+0.1
GUD	Guadarrama	8.80	308	P	Pn	13 28 23.9	+1.0
GUD				S	Sn	13 30 02.3	+0.1
EORO	Oroz-Betelu	8.81	329	Pn	Pn	13 28 25.5	+2.5
EORO				Sn	Sn	13 29 59.3	-3.0
EALK	Alkurruntz	9.16	329	Pn	Pn	13 28 29.9	+2.1
EALK				⇑*i*IVmb_VC		13 28 33.8	
	602nm,SNR=4.6						
EALK				Sn	Sn	13 30 06.2	-4.7
CEL	Celeste	9.20	70		Pn	13 28 29.4	+1.1
CEL	Celeste	9.20	70	Pn	Pn	13 28 33.3	+5.0
CEL				Sn	Sn	13 30 15.2	+3.4
PCP	Piancastagn	9.42	16	Pn	Pn	13 28 32.2	+0.8
PCP				Sn	Sn	13 30 11.7	-5.7
CUC	Castrocucco	9.70	59		Pn	13 28 35.8	+0.6
SSB	Saint Sauveur	9.75	358		Pn	13 28 36.8	+0.9
SSB	Saint Sauveur	9.75	358	P	Pn	13 28 36.8	+0.9
PBAR	Barrancos	9.95	289	*e*P	Pn	13 28 38.1	-0.6
PBAR				*i* Amb		13 28 43.9	
	18nm,1.5s						
ELAN	Lanestosa	10.05	322	Pn	Pn	13 28 42.1	+2.0
ELAN				⇑*i*IVmb_VC		13 28 44.4	
	352nm,SNR=3.1						
ELAN				Sn	Sn	13 30 30.6	-2.3
EBAD	Badajoz	10.07	292	Pn	Pn	13 28 41.3	+1.1
EBAD				⇑*i*IVmb_VC		13 28 44.0	
	81nm,SNR=1.5						
EBAD				Sn	Sn	13 30 28.9	-4.3
TIP	Timpagrande	10.10	65	Pn	Pn	13 28 46.0	+5.3
TIP				Sn	Sn	13 30 33.7	-0.2
PVAQ	Vaqueiros	10.36	284	*e*P	Pn	13 28 51.0	+6.8
PVAQ				*i* Amb		13 29 02.8	
	30nm,1.4s						
PVAQ				*e*LR	LR	13 31 58.0	
PVAQ				*i* AMs_20		13 33 28.4	
	210nm,16.0s						

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ZGR   Zagora            10.38 242   P      Pn      13 28 39.5  -5.2
PESTR Estremoz          10.53 292  eP      Pn      13 28 50.3 +3.7
PESTR                              i Amb           13 29 06.4
      12nm,1.4s
PESTR                              eS      Sn      13 30 45.6 +1.0
PMRV  Marv??o           10.54 295  eP      Pn      13 28 51.9 +5.2
PMRV                               i Amb           13 29 06.0
      24nm,1.4s
PMRV                               eLR     LR      13 32 02.0
PMRV                               i AMs_20        13 32 38.5
      80nm,16.0s
PCBR  Castelo Branco    10.74 297  eP      Pn      13 28 52.1 +2.7
PCBR                               i Amb           13 29 06.5
      24nm,1.6s
PCBR                               eS      Sn      13 30 59.5  +10
MESJ  Messejana         10.81 286  eP      Pn      13 28 51.3 +0.9
MESJ                               i Amb           13 29 01.2
      17nm,1.2s
MVO   Moncorvo          10.95 305  eP      Pn      13 28 53.6 +1.2
MVO                                i Amb           13 28 57.0
      28nm,1.2s
MVO                                eS      Sn      13 31 52.4  +58
MVO                                eLR     LR      13 32 33.1
MVO                                i AMs_20        13 33 35.2
      185nm,16.0s
SENIN Lac Senin/Sane    10.97   9   Pn     Pn      13 28 53.8 +1.0
MTE   Manteigas         10.98 300  eS              13 31 56.4
MTE                                eLR     LR      13 32 44.9
MTE                                i AMs_20        13 33 32.3
      171nm,16.0s
EARI  Arriondas         11.03 318   Pn     Pn      13 28 56.3 +2.8
EARI                              ⇑i IVmb_VC       13 29 00.7
      343nm,SNR=3.8
EARI                                Sn     Sn      13 30 55.2  -1.6
PMTG  Montargil         11.06 293  eP      Pn      13 28 57.2 +3.4
PMTG                               i Amb           13 29 04.2
      22nm,1.5s
PMTG                               eS      Sn      13 30 56.6  -1.0
PBRG  Braganca          11.07 308  eP      Pn      13 28 55.4 +1.4
PBRG                               i Amb           13 28 58.0
      25nm,1.4s
PSARD Sardoal           11.16 295  eP      Pn      13 28 56.8 +1.6
PSARD                              i Amb           13 29 08.0
      26nm,1.4s
PSARD                              eS      Sn      13 31 00.8 +0.8
PVIS  Viseu             11.35 301  eP      Pn      13 28 59.1 +1.3
PVIS                               eS      Sn      13 31 06.8 +2.0
BRANT Les Verrieres     11.46   5   Pn     Pn      13 28 59.7 +0.4
BRANT                               Sn     Sn      13 31 06.5  -1.0
POLO  Lamas de Olo      11.56 304  eP      Pn      13 29 04.4 +3.7
POLO                               i Amb           13 29 20.9
      7.8nm,1.0s
PARRA Arraiolos         11.62 291  eP      Pn      13 28 52.7  -8.8
PARRA                              i Amb           13 28 59.0
      6.4nm,2.4s
LOR   Lormes            11.76 356   P      Pn      13 29 09.7 +6.3
LOR                                 pmax   pmax
      comp=Z,12nm,1.6s
DAVOX Davos/Dischmat    11.84  17   LR     LR      13 33 23.5
      comp=Z,202nm,20.6s,baz=261,slow=36
PCAB  Cabril            11.87 305  eP      Pn      13 29 00.4  -4.5
PCAB                               i Amb           13 29 07.2
      comp=Z,22nm,1.4s
PGAV  Gavieira, Arco    12.14 306  eP      Pn      13 29 13.5 +4.9
PGAV                               i Amb           13 29 14.8
      comp=Z,22nm,1.4s
PGAV                               eS      Sn      13 31 55.5  +31
PGAV                               eLR     LR      13 33 11.8
PGAV                               i AMs_20        13 34 21.9
      comp=Z,151nm,16.0s
FETA  Feichten          12.28  19  i Pn    Pn      13 29 18.5 +7.9
      comp=Z,9.7nm,1.4s
DAVA  Damuels           12.32  16  i Pn    Pn      13 29 18.6 +7.5
      comp=Z,15nm,2.1s
ABTA  Abfaltersbach     12.57  25  i Pn    Pn      13 29 20.6 +6.1
      comp=Z,16nm,1.7s
SQTA  Sankt Quirin      12.59  20  i Pn    Pn      13 29 21.5 +6.6
      comp=Z,13nm,1.3s
MOTA  Moosalm           12.68  19  i Pn    Pn      13 29 22.9 +6.9
      comp=Z,2.9nm,0.6s
TAM   Tamanrasset       12.70 178          Pn      13 29 16.9 +0.5
TAM   Tamanrasset       12.70 178   Pn     Pn      13 29 16.0  -0.5
TAM                                 Sn     Sn      13 31 35.5  -2.5
TAM   Tamanrasset       12.70 178   P      Pn      13 29 16.9 +0.5
RETA  Reutte            12.72  18  i Pn    Pn      13 29 22.2 +5.7
      comp=Z,7.0nm,1.2s
WTTA  Wattenberg        12.76  21  i Pn    Pn      13 29 24.1 +7.0
      comp=Z,15nm,1.9s
ECH   Echery            12.79   7          Pn      13 29 17.5 +0.1
ECH   Echery            12.79   7   P      Pn      13 29 17.5 +0.1
WATA  Walderalm         12.80  21  i Pn    Pn      13 29 24.2 +6.5
      comp=Z,7.5nm,1.2s
MYKA  Terra Mystica     12.88  28  i Pn    Pn      13 29 24.2 +5.5
      comp=Z,11nm,1.6s
BFO   Black Forest      13.04  10          Pn      13 29 21.9 +1.0
BFO   Black Forest      13.04  10   Sn     Sn      13 31 38.7  -7.3
BFO   Black Forest      13.04  10   P      Pn      13 29 21.9 +1.0
OBKA  Obir              13.14  30  i Pn    P       13 29 28.6  -4.0
      comp=Z,3.0nm,0.8s
KBA   Koelnbreinsper    13.15  26   P      Pn      13 29 27.6 +5.1
KBA                                 pmax   pmax
      comp=Z,18nm,1.5s
KBA   Koelnbreinsper    13.15  26  i Pn    P       13 29 28.8  -3.9
      comp=Z,3.2nm,0.7s
LESA  Schwarzleotal     13.22  24  i Pn    P       13 29 29.5  -3.9
      comp=Z,5.6nm,0.6s
SOKA  Soboth            13.48  31  i Pn    Pn      13 29 31.6 +4.7
      comp=Z,0.8nm,0.6s
BIOA  Bad Ischl, Aus    13.78  25  i Pn    P       13 29 36.2  -3.3
      comp=Z,2.7nm,0.5s
MOA   Molln             14.14  27  i Pn    P       13 29 44.3 +0.8
      comp=Z,7.7nm,0.6s
ARSA  Arzberg           14.14  31  i Pn    P       13 29 44.3 +0.8
      comp=Z,2.6nm,0.8s
DOU   Dourbes           14.57 359  dP      Pn      13 29 43.4 +1.7
BMRD  Maredsous         14.77 360  dP      Pn      13 29 44.6 +0.2
GERES GERESS Array B    14.80  23   Pn     Pn      13 29 44.2  -0.7
      comp=Z,0.1nm,0.3s,baz=188,slow=13,SNR=14
GERES                               LR     LR      13 35 42.1
      comp=Z,121nm,19.8s,baz=234,slow=39
      comp=Z,2.4nm,1.0s
CONA  Conrad Observa    14.82  30  ePn     P       13 29 51.0  -0.1
      comp=Z,3.0nm,0.8s
RONA  Rosalia, Austr    14.82  31  i Pn    P       13 29 52.6 +1.5
      comp=Z,4.6nm,1.4s
BGES  Gesves            14.85   0  dP      Pn      13 29 46.1 +0.6
GRF   Grafenberg Arr    14.89  16   P      P       13 29 54.2 +2.4
GRF                                 pmax   pmax
      comp=Z,13nm,1.7s
BCLA  Clavier           14.89   1  dP      Pn      13 29 45.2  -0.8
CKRC  Cesky Krumlov     14.98  25   AMS    AMS     13 35 40.0
      comp=Z,100nm,16.2s
KHC   Kasperske Hory    15.01  22  eP      Pn      13 29 49.3 +1.6
KHC                                 AMS    AMS     13 36 40.0
      comp=Z,200nm,11.9s
KHC   Kasperske Hory    15.01  22ceP       Pn      13 29 49.0 +1.3
KHC                                 pmax   pmax
      comp=Z,25nm,1.4s
BTNL  Ternell           15.08   3  dP      Pn      13 29 49.7 +1.1
MEM   Membach           15.10   3  dP      Pn      13 29 50.5 +1.7
ZVC   Zvikov            15.47  23  eP      Pn      13 29 55.8 +2.0
ZVC                                 AMS    AMS     13 36 00.0
      comp=Z,200nm,16.1s
NKC   Novy Kostel       15.69  18   AMS    AMS     13 36 00.0
      comp=Z,200nm,14.4s
TREC  Trest             15.79  26   AMS    AMS     13 37 10.0
      comp=Z,300nm,15.9s
MOX   Moxa              15.87  16   P      P       13 30 03.8 +1.1
MOX                                 pmax   pmax
      comp=Z,7.0nm,1.1s
KRUC  Moravsky          15.94  28  eP      P       13 30 04.9 +1.4
KRUC  Moravsky          15.94  28   P      P       13 30 04.8 +1.3
KRUC                                pmax   pmax
      comp=Z,10.0nm,1.1s
PRU   Pruhonice         16.06  23   AMS    AMS     13 35 40.0
      comp=Z,200nm,5.3s
GOPC  GO Pecny, Ondr    16.08  24   AMS    AMS     13 36 20.0
      comp=Z,200nm,18.0s
PRA   Prague            16.10  23   AMS    AMS     13 37 00.0
      comp=Z,100nm,10.3s
VRAC  Vranov            16.21  28   Pn     Pn      13 30 03.7 +0.3
      comp=Z,0.5nm,0.3s,baz=215,slow=11,SNR=10
VRAC                                LR     LR      13 36 58.6
      comp=Z,144nm,18.5s,baz=204,slow=40
      comp=Z,2.3nm,0.5s
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VRAC  Vranov            16.21  28  eP      P       13 30 07.7 +1.2
IDI   Anoyia            16.28  85   Pn     Pn      13 30 03.4  -0.9
      comp=Z,3.4nm,0.3s,baz=324,slow=12,SNR=19
      comp=Z,7.6nm,0.9s
HSKC  Hora Svate Kat    16.29  20   AMS    AMS     13 37 10.0
      comp=Z,200nm,13.2s
JAVC  Velka Javorina    16.30  31  eP      P       13 30 08.6 +1.1
RICC  Richard           16.42  21   AMS    AMS     13 36 50.0
      comp=Z,800nm,29.0s
VYHS  Vyhne             16.54  34  eP      P       13 30 13.8 +3.7
VYHS  Vyhne             16.54  34  eP      P       13 30 13.8 +3.7
PVCC  Panska Ves        16.55  22   AMS    AMS     13 39 00.0
      comp=Z,200nm,7.6s
BRG   Berggiesshubel    16.67  20  eP      P       13 30 11.4  -0.1
BRG                                 Amp            13 30 13.5
      comp=Z,3.9nm,1.0s
CLL   Collm             16.81  18  i P     P       13 30 13.0  -0.1
CLL                                 pmax   pmax
      comp=Z,21nm,1.7s
CLL   Collm             16.81  18  i P     P       13 30 13.0  -0.1
      comp=Z,21nm,1.7s
CLL                                i pP    sP      13 30 18.5 +1.0
CLL                                i x     x       13 30 20.7
      comp=Z,24nm,1.7s
CLL                                eSS     S       13 33 37.0 +8.6
KRLC  Kraliky           16.91  27  eP      Pn      13 30 12.0  -0.3
KRLC                                AMS    AMS     13 38 00.0
      comp=Z,200nm,13.5s
KRLC  Kraliky           16.91  27  eP      Pn      13 30 12.0  -0.3
KRLC                                MLR    MLR
      comp=Z,200nm,13.5s
MORC  Moravsky Berou    16.96  29  eP      P       13 30 16.2 +1.4
MORC  Moravsky Berou    16.96  29   P      P       13 30 17.7 +2.9
MORC                                pmax   pmax
      comp=Z,9.0nm,1.8s
DPC   Dobruska-Polom    16.97  26   AMS    AMS     13 37 10.0
      comp=Z,200nm,17.0s
DPC   Dobruska-Polom    16.97  26   P      P       13 30 15.7 +0.8
DPC                                 pmax   pmax
      comp=Z,7.0nm,1.8s
UPC   Upice             17.00  25   AMS    AMS     13 38 10.0
      comp=Z,100nm,18.2s
CHVC  Chvalec           17.08  25   AMS    AMS     13 37 00.0
      comp=Z,200nm,18.7s
KSP   Ksiaz             17.38  25   P      P       13 30 21.5 +2.2
KSP                                 pmax   pmax
      comp=Z,10.0nm,0.8s
NIE   Niedzica          17.87  34   P      P       13 30 29.5 +4.6
NIE                                 pmax   pmax
      comp=Z,4.0nm,1.7s
STHS  Stebnicka Huta    18.32  36  eP      P       13 30 33.1 +3.4
STHS  Stebnicka Huta    18.32  36  eP      P       13 30 33.1 +3.4
KOLS  Kolonicke sedl    18.50  38  eP      Pn      13 30 33.6 +1.7
KOLS  Kolonicke sedl    18.50  38  eP      Pn      13 30 33.6 +1.7
MLR   Muntele Rosu      18.77  52   P      P       13 30 34.3  -0.6
      comp=Z,0.8nm,0.3s,baz=221,slow=19,SNR=4.7
MLR                                 LR     LR      13 38 41.8
      comp=Z,131nm,18.2s,baz=275,slow=40
      comp=Z,2.5nm,0.6s
BSEG  Bad Segeberg      18.79  10   P      Pn      13 30 37.2 +1.9
BSEG                                pmax   pmax
      comp=Z,16nm,1.1s
BUR08 Bucovina Ar. S    19.34  45   P      Pn      13 30 42.2 +0.1
EKA   Eskdalemuir Ar    20.58 347   P      P       13 30 55.3 +0.9
      comp=Z,0.8nm,0.5s,baz=157,slow=11,SNR=5.7
      comp=Z,0.8nm,0.5s
TORD  Torodi Ar. Bea    22.47 188          P       13 31 16.3 +1.2
TORD                                IAmb   IAmb    13 31 28.5
      comp=Z,4.5nm,1.1s
TORD  Torodi Ar. Bea    22.47 188   P      P       13 31 14.8  -0.2
      comp=Z,3.2nm,0.4s,baz=6.3,slow=12,SNR=12
      comp=Z,3.2nm,0.4s
BR131 Keskin Array S    23.07  71  i P     P       13 31 21.8 +0.4
BRTR  Keskin Array B    23.07  71          P       13 31 21.3  -0.1
BRTR  Keskin Array B    23.07  71   P      P       13 31 19.4  -2.0
      comp=Z,1.2nm,0.6s,baz=258,slow=11,SNR=8.9
      comp=Z,1.2nm,0.6s
BRTR  Keskin Array B    23.07  71ceP       P       13 31 22.1 +0.7
BRTR                                pmax   pmax
      comp=Z,1.0nm,0.6s
KIEV  Kiev              23.17  42          P       13 31 19.9  -2.3
KIEV                                IAmb   IAmb    13 31 31.7
      comp=Z,6.8nm,0.8s
KIEV  Kiev              23.17  42   P      P       13 31 19.9  -2.3
KIEV                                pmax   pmax
      comp=Z,7.0nm,0.8s
AKASG Malin Array Be    23.19  42   P      P       13 31 20.0  -2.3
AKASG                               IAmb   IAmb    13 31 29.8
      comp=Z,5.6nm,1.3s
AKASG Malin Array Be    23.19  42   P      P       13 31 19.8  -2.4
      comp=Z,3.3nm,0.5s,baz=243,slow=9.7,SNR=16
AKASG                               LR     LR      13 40 49.1
      comp=Z,79nm,19.7s,baz=231,slow=38
      comp=Z,3.3nm,0.5s
AKASG Malin Array Be    23.19  42ceP       P       13 31 20.3  -2.0
AKASG                               pmax   pmax
      comp=Z,4.0nm,0.6s
AKBB  Malin Array Si    23.19  42          P       13 31 19.8  -2.5
AKBB                                IAmb   IAmb    13 31 31.6
      comp=Z,7.6nm,0.8s
AKBB  Malin Array Si    23.19  42  i P     P       13 31 22.3   0.0
AKBB                                pmax   pmax
      comp=Z,7.0nm,0.6s
PABE  Paberze           23.88  27   P      P       13 31 28.3  -0.7
NACGM Naroch            24.56  31  eP      P       13 31 35.9 +0.5
      comp=Z,16nm,1.0s,baz=228
MNK   Minsk             24.77  33  i P     P       13 31 36.3  -1.0
      comp=Z,19nm,0.7s,baz=229
MNK                                i PP    PnPn    13 32 09.2  -0.1
MNK                                i S     S       13 35 55.6  -3.8
MNK                                i SS    SnSn    13 36 46.8 +1.0
MNK                                i LQ    LQ      13 39 24.6
MNK                                i LR    LR      13 41 17.7
MNK                                i LRM   MLR     13 42 09.5
      comp=Z,70nm,17.3s
MNK   Minsk             24.77  33  i P     P       13 31 36.3  -1.0
MNK                                i               13 32 09.1
MNK                                i S     S       13 35 55.5  -3.8
MNK                                 pmax   pmax
      comp=Z,19nm,0.7s
MNK                                 MLR    MLR
      comp=Z,70nm,17.0s
HFS   Hagfors           25.27  10   P      P       13 31 39.7  -2.0
      comp=Z,1.9nm,0.6s,baz=186,slow=13,SNR=7.6
HFS                                 LR     LR      13 41 58.2
      comp=Z,66nm,19.1s,baz=183,slow=38
      comp=Z,1.9nm,0.6s
NB2   NORSAR Subarra    25.85   7   P      P       13 31 46.4  -0.6
      comp=Z,2.4nm,0.7s,baz=190,slow=9.3
NOA   NORSAR Array B    25.85   7   P      P       13 31 46.0  -1.0
      comp=Z,0.6nm,0.6s,baz=187,slow=9.0,SNR=4.0
      comp=Z,0.6nm,0.6s
VSU   Vasula            27.10  25  i P     P       13 31 58.7 +0.4
VSU                                 pmax   pmax
      comp=Z,9.0nm,0.7s
FINES FINESS Array B    29.21  21   P      P       13 32 14.5  -2.5
      comp=Z,1.5nm,0.8s,baz=166,slow=6.4,SNR=5.5
FINES                               LR     LR      13 45 02.0
      comp=Z,25nm,18.8s,baz=118,slow=39
      comp=Z,1.5nm,0.8s
OBN   Obninsk           29.25  38  eP      P       13 32 18.8 +1.3
OBN                                 *SP    sP      13 32 33.0  +11
OBN                                 pmax   pmax
      comp=Z,6.0nm,0.9s
OBN                                 MLR    MLR
      comp=Z,52nm,17.0s
DBIC  Dimbokro          30.09 200   LR     LR      13 45 28.4
      comp=Z,188nm,19.7s,baz=8.5,slow=38
BORG  Borgarnes         33.24 340   LR     LR      13 46 32.8
      comp=Z,80nm,18.8s,baz=167,slow=37
BORG  Borgarnes         33.24 340  i P     P       13 32 53.7 +1.2
KLMR  Klimovskoe        33.58  30  eP      P       13 32 53.9  -1.6
KLMR                                pmax   pmax
      comp=Z,18nm,1.4s
ARCES ARCESS Array B    35.89  12   P      P       13 33 12.6  -2.9
      comp=Z,1.9nm,0.6s,baz=194,slow=9.4,SNR=8.3
      comp=Z,1.9nm,0.6s
KIRV  Kirov             37.10  37ceP       P       13 33 24.1  -1.7
AKTO  Aktyubinsk        40.71  52   LR     LR      13 52 08.4
      comp=Z,43nm,20.7s,baz=78,slow=38
ARTI  Arti              41.33  43   P      P       13 33 59.2  -2.0
      comp=Z,3.2nm,0.5s,baz=230,slow=5.5,SNR=3.9
      comp=Z,3.2nm,0.5s
SFJD  Kangerlussuaq     44.50 332   LR     LR      13 52 11.0
      comp=Z,47nm,18.0s,baz=98,slow=35
KMBO  Kilima Mbogo      47.32 133  i P     P       13 34 48.9  -1.0
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BRVK  Borovoye          48.20  47ceP       P       13 34 55.3  -0.7
BRVK                                pmax   pmax
      comp=Z,3.0nm,0.8s
FRB   Frobisher Bay     51.59 327   LR     LR      13 54 12.3
      comp=Z,51nm,21.2s,baz=272,slow=32
SCHQ  Schefferville     51.72 316   P      P       13 35 23.1 +0.3
      comp=Z,4.6nm,0.8s,baz=92,slow=12,SNR=4.4
SCHQ                                LR     LR      13 53 15.3
      comp=Z,35nm,21.1s,baz=162,slow=31
      comp=Z,4.6nm,0.8s
KURBB Kurchatov Arra    53.65  49   P      P       13 35 34.7  -2.4
      comp=Z,2.0nm,0.7s,baz=289,slow=8.0,SNR=12
      comp=Z,2.0nm,0.7s
KURK  Kurchatov         53.69  49  i P     P       13 35 35.6  -1.8
KURK                                pmax   pmax
      comp=Z,3.0nm,0.7s
KSH   Kashi             55.14  63   P      P       13 35 47.5  -0.8
KSH                                 pmax   pmax
      comp=Z,5.0nm,0.7s
ZALV  Zalesovo Beam     56.55  44   P      P       13 35 55.5  -2.5
      comp=Z,1.9nm,0.6s,baz=282,slow=8.8,SNR=6.4
ZALV                                LR     LR      14 01 52.3
      comp=Z,40nm,19.0s,baz=158,slow=38
      comp=Z,1.9nm,0.6s
MK31  Makanchi Array    57.11  53ceP       P       13 36 00.3  -1.9
MKAR  Makanchi Array    57.11  53   P      P       13 36 00.3  -1.8
      comp=Z,1.9nm,0.6s,baz=286,slow=5.9,SNR=22
      comp=Z,1.9nm,0.6s
RES   Resolute Bay      58.62 342   LR     LR      14 00 34.9
      comp=Z,47nm,19.9s,baz=48,slow=35
WMQ   Urumqi            61.74  55  eP      P       13 36 37.3 +3.1
WMQ                                 pmax   pmax
      comp=Z,28nm,0.7s
BOSA  Boshof            66.61 161   P      P       13 37 05.9  -0.4
      comp=Z,1.5nm,0.6s,baz=348,slow=5.2,SNR=3.6
      comp=Z,1.5nm,0.6s
ULM   Lac du Bonnet     69.80 318   LR     LR      14 04 42.5
      comp=Z,33nm,18.8s,baz=126,slow=33
YKA   Yellowknife Ar    71.00 335   P      P       13 37 32.6  -0.5
      comp=Z,2.1nm,0.9s,baz=49,slow=6.2,SNR=21
YKA                                 LR     LR      14 07 01.6
      comp=Z,36nm,20.4s,baz=347,slow=34
      comp=Z,2.1nm,0.9s
SONM  Songino Array     71.44  44   LR     LR      14 09 43.8
      comp=Z,108nm,19.8s,baz=111,slow=37
ILAR  Eielson Array     77.61 348   P      P       13 38 11.8 +0.2
      comp=Z,0.7nm,0.5s,baz=2.3,slow=5.4,SNR=18
ILAR                                LR     LR      14 12 51.6
      comp=Z,32nm,21.9s,baz=50,slow=36
      comp=Z,0.7nm,0.5s
HHC   Hu-ho-hao-te      78.47  48  eP      P       13 38 17.2 +0.2
HHC                                 pmax   pmax
      comp=Z,23nm,0.6s
HHC                                 pmax   pmax
      comp=Z,64nm,4.1s
DLBC  Dease Lake        79.12 338   P      P       13 38 21.0 +0.8
      comp=Z,1.2nm,0.7s,baz=318,slow=9.3,SNR=3.0
      comp=Z,1.2nm,0.7s
PZH   PanZhiHua         80.21  65   P      P       13 38 26.5  -0.2
PDAR  Pinedale Array    81.82 317   P      P       13 38 35.1   0.0
      comp=Z,0.2nm,0.4s,baz=5.7,slow=7.4,SNR=5.0
      comp=Z,0.2nm,0.4s
CMAR  Chiang Mai Arr    82.65  73   P      P       13 38 38.1  -1.5
      comp=Z,0.9nm,0.7s,baz=298,slow=7.4,SNR=5.6
      comp=Z,0.9nm,0.7s
CMAR  Chiang Mai Arr    82.65  73ceP       P       13 38 38.7  -0.9
CMAR                                pmax   pmax
      comp=Z,1.0nm,0.7s
SHEM  Shemya Is, Ala    91.61   7   LR     LR      14 22 44.3
      comp=Z,47nm,20.0s,baz=112,slow=37
JNU   Nakatsue          95.00  43   LR     LR      14 23 45.6
      comp=Z,34nm,18.0s,baz=198,slow=36
QSPA  South Pole Qui   125.40 180   PKP    PKPdf   13 45 15.1  -0.7
      comp=Z,1.9nm,1.0s,baz=317,slow=1.1,SNR=5.1
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*IDC **10** 13:36:42.0±2.5, 56.°84N×156.°84W, h45km±23km, mb4.1/25, mbtmp4.3/29, ML4.0/4, MS3.1/15, Error ellipse: s-maj=19.3km s-min=13.1km az=21.0*

*NEIC **10** 13:36:43.2±1.1, 56.°59N±0.°04×156.°47W±0.°05, h68km±7km, mb4.4/66, ML4.2/80, ML4.1(AEIC), Error ellipse: s-maj=5.7km s-min=4.2km az=192.0*

*AEIC **10** 13:36:44.3±1.4, 56.°59N±0.°01×156.°48W±0.°06, h46km±6km, Error ellipse: s-maj=5.0km s-min=0.9km az=111.0*

ISC 10 13:36:43.5±0.7**, 56.°63N**±0.°04×**156.°48W**±0.°03**, h68**km±7km**,**
n538, σ0.°86/522**, mb4.4**/75**, Alaska Peninsula**

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Code  Station Name       Δ°   AZ°   Phase ID           Time      Res
                                    Op     ISC      h  m  s      ISC
ANPK  Aniakchak Peak     0.93 284          Pn      13 37 00.3  -0.8
CHIR  Chirikof Islan     0.94 149          Pn      13 36 60.0  -1.1
CHIR                                IAML           13 37 20.3
      comp=E,8μm,0.6s
CHIR                                IAML           13 37 23.0
      comp=N,7μm,0.8s
CHIR  Chirikof Islan     0.94 149          Sn      13 37 13.0  -1.1
CHIR  Chirikof Islan     0.94 149   P      Pn      13 37 00.2  -0.9
CHIR  Chirikof Islan     0.94 149   P      Pn      13 37 00.0  -1.1
      baz=329,SNR=129
CHIR                                S      Sn      13 37 13.1  -1.1
      baz=329
ANPB  Aniakchak Plen     1.01 281          Pn      13 37 01.2  -0.9
PLBL  Peulik Blue Cr     1.09 350          Pn      13 37 03.3 +0.2
PLBL                                       Sn      13 37 17.8 +0.1
R16K  Pilot Point        1.12 328          Pn      13 37 03.0  -0.4
R16K                                IAML           13 37 19.7
      comp=E,7μm,0.5s
R16K  Pilot Point        1.12 328          Sn      13 37 18.1  -0.1
R16K  Pilot Point        1.12 328   P      Pn      13 37 03.1  -0.2
      baz=148,SNR=112
R16K                                S      Sn      13 37 18.3 +0.1
      baz=148
PLK1  Peulik 1           1.18 357          Pn      13 37 04.4 +0.2
PLK1                                       Sn      13 37 20.6 +1.0
SII   Sitkinak Islan     1.27  92          Pn      13 37 04.8  -0.5
SII   Sitkinak Islan     1.27  92          Sn      13 37 21.7  -0.1
SII   Sitkinak Islan     1.27  92   P      Pn      13 37 05.3  -0.1
SII   Sitkinak Islan     1.27  92   P      Pn      13 37 05.0  -0.4
      baz=273,SNR=85
R18K  Karluk             1.45  49          Pn      13 37 08.3 +0.6
R18K                                       Sn      13 37 25.6  -0.3
R18K  Karluk             1.45  49   IAML           13 37 37.2
      comp=N,4μm,0.5s
R18K                                IAML           13 37 42.0
      comp=E,4μm,0.5s
R18K  Karluk             1.45  49   P      Pn      13 37 08.0 +0.3
      baz=230,SNR=49
VNHG  Veniaminof 1       1.55 256          Pn      13 37 08.7  -0.4
ANCK  Angle Creek        1.66  18          Pn      13 37 11.0 +0.3
ANCK                                       Sn      13 37 32.5 +1.3
Q17K  Contact Creek      1.67  11   P      Pn      13 37 10.9 +0.1
      baz=191,SNR=264
Q17K                                S      Sn      13 37 32.0 +0.6
      baz=191
CNTC  Contact Creek      1.67  11          Pn      13 37 10.8   0.0
CNTC                                       Sn      13 37 32.0 +0.6
ACHA  Angle Creek He     1.71  21          Pn      13 37 11.4 +0.2
ACHA  Angle Creek He     1.71  21          Sn      13 37 32.9 +0.7
S14K  Fog Glacier        1.74 260   P      Pn      13 37 11.4  -0.3
      baz=78,SNR=35
S14K                                S      Sn      13 37 33.3 +0.3
      baz=78
VNFG  Fog Glacier, M     1.74 260          Pn      13 37 11.6  -0.1
VNFG  Fog Glacier, M     1.74 260          Pn      13 37 11.7  -0.1
OHAK  Old Harbor         1.85  70          Pn      13 37 12.5  -0.5
OHAK  Old Harbor         1.85  70   P      Pn      13 37 12.8  -0.2
OHAK  Old Harbor         1.85  70   P      Pn      13 37 12.6  -0.4
      baz=252,SNR=58
OHAK                                S      Sn      13 37 34.8  -0.6
      baz=252
Q16K  King Salmon        2.06 357          Pn      13 37 16.1 +0.3
Q16K                                       Sn      13 37 40.2  -0.2
Q16K  King Salmon        2.06 357   P      Pn      13 37 16.1 +0.3
      baz=177,SNR=60
Q16K                                S      Sn      13 37 40.5   0.0
      baz=177
Q18K  Katmai Hardscr     2.18  21   P      Pn      13 37 17.8 +0.3
      baz=202,SNR=69
Q18K                                S      Sn      13 37 43.6 +0.1
      baz=202
KDAK  Kodiak Island      2.42  60          Pn      13 37 20.4  -0.3
KDAK  Kodiak Island      2.42  60   P      Pn      13 37 20.3  -0.3
      comp=E,23nm,0.3s,baz=47,slow=2.2,SNR=975
KDAK                                S      Sn      13 37 57.5 +8.4
      comp=E,498nm,0.5s,baz=352,slow=22,SNR=8.1
KDAK                                LR     LR      13 38 34.9
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	comp=E,180nm,18.7s,baz=212,slow=45						
	comp=E,59nm,0.3s						
KDAK	Kodiak Island	2.42	60	P	Pn	13 37 20.4	-0.3
	baz=242						
KDAK				S	Sn	13 37 48.3	-0.8
	baz=242						
CHNA	Chernabura Isl	2.52	226	P	Pn	13 37 21.9	-0.1
CHNA	Chernabura Isl	2.52	226	P	Pn	13 37 20.6	-1.4
	baz=44						
CNBA	Chernabura Isl	2.52	225		Pn	13 37 20.5	-1.7
CNBA				IAML		13 38 00.1	
	comp=N,783nm,0.5s						
CNBA				IAML		13 38 03.6	
	comp=E,1µm,0.5s						
P16K	Nushagak River	2.54	342		Pn	13 37 22.5	+0.1
P16K	Nushagak River	2.54	342		Sn	13 37 53.0	+0.8
P16K	Nushagak River	2.54	342	P	Pn	13 37 22.7	+0.3
	baz=161,SNR=34						
P16K				S	Sn	13 37 53.1	+0.9
	baz=161						
P17K	Kvichak River	2.58	0		Pn	13 37 23.0	+0.2
P17K					Sn	13 37 53.3	+0.2
P17K	Kvichak River	2.58	0	P	Pn	13 37 23.1	+0.3
	baz=180,SNR=137						
P17K				S	Sn	13 37 53.1	+0.1
	baz=180						
SDPT	Sand Point	2.59	242		Pn	13 37 22.4	-0.6
SDPT				IAML		13 38 02.5	
	comp=E,1µm,0.5s						
SDPT				IAML		13 38 19.6	
	comp=N,1µm,0.9s						
SDPT	Sand Point	2.59	242	P	Pn	13 37 22.9	-0.1
SDPT	Sand Point	2.59	242	S	Sn	13 37 54.5	+1.2
SDPT	Sand Point	2.59	242	P	Pn	13 37 22.6	-0.4
	baz=59,SNR=24						
SDPT				S	Sn	13 37 53.0	-0.2
	baz=59						
Q19K	Cape Douglas,	2.76	32		Pn	13 37 25.4	0.0
Q19K	Cape Douglas,	2.76	32	P	Pn	13 37 25.9	+0.4
	baz=214,SNR=95						
P18K	Big Mountain,	2.85	13		Pn	13 37 26.5	-0.2
P18K	Big Mountain,	2.85	13	P	Pn	13 37 26.8	+0.1
	baz=194,SNR=116						
P18K				S	Sn	13 37 59.2	-0.7
	baz=194						
Q20K	Shuyak Island	2.96	46	P	Pn	13 37 28.7	+0.6
	baz=229,SNR=47						
SYI	Shuyak Island	2.96	46		Pn	13 37 28.3	+0.2
SYI				IAML		13 38 13.6	
	comp=N,549nm,0.7s						
O16K	Kokwok River B	3.10	345		Pn	13 37 29.7	-0.3
O16K				IAML		13 38 21.5	
	comp=N,480nm,0.7s						
O16K	Kokwok River B	3.10	345	P	Pn	13 37 29.9	0.0
	baz=163,SNR=109						
O15K	Ungalikthiuk R	3.12	326		Pn	13 37 30.4	+0.2
O15K				IAML		13 38 06.1	
	comp=N,584nm,0.9s						
O15K				IAML		13 38 24.3	
	comp=E,549nm,0.9s						
O15K	Ungalikthiuk R	3.12	326	P	Pn	13 37 30.5	+0.2
	baz=144,SNR=284						
O15K				S	Sn	13 38 05.5	-0.8
	baz=144						
O17K	Koliganek Bris	3.17	354	P	Pn	13 37 31.0	+0.1
	baz=174,SNR=98						
O17K				S	Sn	13 38 07.4	-0.1
	baz=174						
AUCH	Augustine Cone	3.18	29		Pn	13 37 31.6	+0.4
PS1A	Pavlof South-1	3.19	250		Pn	13 37 31.2	0.0
AU22	Augustine Moun	3.21	30		Pn	13 37 32.3	+0.8
PVV	Pavlof Volcano	3.24	249		Pn	13 37 31.7	-0.1
S12K	Black Hills	3.26	256		Pn	13 37 31.6	-0.6
S12K				IAML		13 38 26.6	
	comp=N,803nm,0.6s						
S12K	Black Hills	3.26	256	P	Pn	13 37 31.7	-0.4
	baz=72						
S12K				S	Sn	13 38 09.2	-0.5
	baz=72						
O18K	Koktuh Hills	3.31	11		Pn	13 37 32.6	-0.2
O18K				IAML		13 38 32.6	
	comp=E,416nm,1.0s						
O18K	Koktuh Hills	3.31	11	P	Pn	13 37 33.1	+0.2
	baz=192,SNR=84						
P19K	Oil Pt	3.49	28		Pn	13 37 35.4	+0.1
P19K				IAML		13 38 25.6	
	comp=E,470nm,0.8s						
P19K				IAML		13 38 26.0	
	comp=N,647nm,0.7s						
P19K	Oil Pt	3.49	28	P	Pn	13 37 36.2	+0.9
	baz=211,SNR=42						
O14K	Tigyukauivet M	3.67	318		Pn	13 37 37.8	+0.1
O14K				IAML		13 38 20.4	
	comp=N,355nm,0.8s						
O14K				IAML		13 38 44.6	
	comp=E,373nm,0.8s						
O14K	Tigyukauivet M	3.67	318	P	Pn	13 37 37.9	+0.2
	baz=134,SNR=35						
O14K				S	Sn	13 38 18.3	-1.4
	baz=134						
O19K	Port Alsworth	3.75	17	IAML		13 38 43.0	
	comp=N,585nm,0.5s						
O19K	Port Alsworth	3.75	17	P	Pn	13 37 39.4	+0.5
	baz=198,SNR=27						
N17K	Nushagak Hills	3.93	355		Pn	13 37 40.6	-0.7
N17K				IAML		13 38 38.6	
	comp=E,315nm,0.8s						
N17K				IAML		13 38 38.7	
	comp=N,263nm,0.8s						
N17K	Nushagak Hills	3.93	355	P	Pn	13 37 41.4	+0.1
	baz=174,SNR=38						
HOM	Homer	3.98	38		Pn	13 37 42.6	+0.7
HOM	Homer	3.98	38	P	Pn	13 37 42.5	+0.6
	baz=222,SNR=20						
O20K	Slope Mountain	4.02	29	P	Pn	13 37 43.4	+0.9
	baz=212,SNR=62						
CNPM	China Poot	4.02	42		Pn	13 37 42.6	0.0
CNPM				IAML		13 38 36.5	
	comp=N,235nm,0.8s						
CNPM				IAML		13 38 56.4	
	comp=E,220nm,0.9s						
N15K	Kwethluk River	4.03	333	IAML		13 38 33.1	
	comp=N,410nm,0.7s						
N15K				IAML		13 39 02.2	
	comp=E,558nm,0.8s						
N15K	Kwethluk River	4.03	333	P	Pn	13 37 43.4	+0.7
	baz=150,SNR=214						
N16K	Nishlik Lake	4.04	344	P	Pn	13 37 43.4	+0.5
	baz=162,SNR=104						
N18K	Kilae Creek	4.08	4	IAML		13 38 42.3	
	comp=N,313nm,0.7s						
N18K				IAML		13 38 54.5	
	comp=E,339nm,1.0s						
N18K	Kilae Creek	4.08	4	P	Pn	13 37 43.6	+0.2
	baz=184,SNR=49						
N14K	Kuskokwak Cree	4.30	322	IAML		13 39 03.5	
	comp=E,479nm,0.8s						
N14K	Kuskokwak Cree	4.30	322	P	Pn	13 37 46.8	+0.5
	baz=138,SNR=85						
N19K	Bonanza Creek	4.33	13	IAML		13 39 07.3	
	comp=E,261nm,0.8s						
N19K				IAML		13 39 15.5	
	comp=N,191nm,0.8s						
N19K	Bonanza Creek	4.33	13	P	Pn	13 37 47.7	+0.9
	baz=195,SNR=104						
BRSE	Bradley Lake S	4.36	42	P	Pn	13 37 46.8	-0.3
	baz=226,SNR=9.4						
RDJH	Redoubt Jeurge	4.42	24		Pn	13 37 48.5	+0.4
DFR	Drift River	4.44	25		Pn	13 37 49.2	+0.8
M16K	Timber Creek	4.59	345	IAML		13 38 44.3	
	comp=E,225nm,0.5s						
M16K				IAML		13 39 17.0	
	comp=N,236nm,1.1s						
M16K	Timber Creek	4.59	345	P	Pn	13 37 51.0	+0.7
	baz=163,SNR=179						
M15K	Kasigluk River	4.63	333		Pn	13 37 51.1	+0.2
M15K	Kasigluk River	4.63	333	P	Pn	13 37 51.1	+0.2
	baz=150,SNR=86						
SSBA	Shishaldin	4.71	250		Pn	13 37 51.0	-1.0
M17K	Holitna River	4.81	354	P	Pn	13 37 53.8	+0.4
	baz=174,SNR=71						
M18K	Stony River	4.89	4	P	Pn	13 37 54.8	+0.4
	baz=184,SNR=208						
M14K	Bethel	5.03	328	P	Pn	13 37 56.6	+0.4
	baz=143,SNR=121						
CKL	Chakachamna La	5.06	23		Pn	13 37 57.6	+0.7
SEW	Seward	5.08	44		Pn	13 37 56.5	-0.5
SEW	Seward	5.08	44	IAML		13 39 12.6	
	comp=N,125nm,0.9s						
SEW				IAML		13 39 21.1	
	comp=E,110nm,1.0s						
SEW	Seward	5.08	44	P	Pn	13 37 56.4	-0.5
	baz=230						
SLKM	Skilak Lake	5.08	37	IAML		13 39 17.1	
	comp=N,106nm,0.8s						
N20K	Mount Spurr	5.09	24	P	Pn	13 37 57.9	+0.6
	baz=207						
SPCR	Spurr Chakacha	5.09	24		Pn	13 37 58.1	+0.9
SPCR	Spurr Chakacha	5.09	24	P	Pn	13 37 57.8	+0.5
	baz=207,SNR=12						
SPBG	Spurr Blockage	5.11	23		Pn	13 37 57.9	+0.4
SPU	Mount Spurr	5.11	25		Pn	13 37 58.2	+0.8
M13K	Dall Lake	5.23	319		Pn	13 37 59.4	+0.4
M13K				IAML		13 39 32.5	
	comp=E,221nm,1.1s						
M13K				IAML		13 39 43.9	
	comp=N,147nm,0.8s						
M13K	Dall Lake	5.23	319	P	Pn	13 37 59.9	+0.8
	baz=134,SNR=78						
O22K	Cooper Landing	5.24	40		Pn	13 37 59.8	+0.7
O22K	Cooper Landing	5.24	40	P	Pn	13 37 59.8	+0.7
	baz=225,SNR=18						
L16K	Owhat River	5.33	344	IAML		13 39 32.4	
	comp=N,110nm,1.0s						
L16K				IAML		13 39 39.2	
	comp=E,115nm,1.2s						
L16K	Owhat River	5.33	344	P	Pn	13 38 00.1	-0.2
	baz=162,SNR=48						
M19K	Big River Lodg	5.40	11		Pn	13 38 02.0	+0.6
M19K	Big River Lodg	5.40	11	P	Pn	13 38 02.0	+0.6
	baz=192						
STLK	Strandline Lak	5.44	24		Pn	13 38 02.8	+0.8
M20K	Styx River	5.54	17		Pn	13 38 04.4	+1.0
M20K	Styx River	5.54	17	P	Pn	13 38 04.8	+1.4
	baz=199,SNR=81						
L17K	Donlin	5.60	351	P	Pn	13 38 04.2	+0.1
	baz=170,SNR=110						
L18K	Granite Mounta	5.61	359	P	Pn	13 38 04.4	+0.2
	baz=179,SNR=70						
L19K	White Mountain	5.63	8	P	Pn	13 38 05.3	+0.7
	baz=189,SNR=236						
RC01	Rabbit Creek A	5.68	35	P	Pn	13 38 05.5	+0.3
	baz=221,SNR=8.0						
SUA	Susitna One	5.68	29	P	Pn	13 38 05.8	+0.6
	baz=214,SNR=37						
L15K	Ungalak Mounta	5.68	335	P	Pn	13 38 05.2	0.0
	baz=151,SNR=88						
L14K	Kuka Creek	5.71	328	P	Pn	13 38 05.8	+0.2
	baz=143,SNR=256						
P23K	Montague Islan	5.86	51		Pn	13 38 07.3	-0.3
P23K	Montague Islan	5.86	51	P	Pn	13 38 08.1	+0.5
	baz=238						
AKUT	Akutan	5.86	249	P	Pn	13 38 08.5	+0.9
AKUT	Akutan	5.86	249	S	Sn	13 39 16.0	+2.7
SKT	Skwentna	5.94	23		Pn	13 38 09.1	+0.4
SKT	Skwentna	5.94	23	P	Pn	13 38 09.0	+0.4
	baz=207,SNR=16						
AKBBA	Akutan Broad B	5.96	249		Pn	13 38 08.6	-0.4
PWL	Port Wells	6.00	42		Pn	13 38 08.6	-0.9
PWL	Port Wells	6.00	42	P	Pn	13 38 08.9	-0.6
	baz=228,SNR=20						
L20K	Farewell, AK	6.02	12	P	Pn	13 38 10.9	+1.1
	baz=194,SNR=47						
Q23K	Middleton Isla	6.07	58		Pn	13 38 10.3	-0.2
Q23K	Middleton Isla	6.07	58	P	Pn	13 38 10.8	+0.4
	baz=247						
M22K	Willow	6.09	30	P	Pn	13 38 11.1	+0.3
	baz=215						
K17K	Iditarod	6.18	352	P	Pn	13 38 12.4	+0.4
	baz=171,SNR=151						
K15K	Wolf Creek Mou	6.24	338	P	Pn	13 38 13.6	+0.8
	baz=154,SNR=36						
PMR	Palmer	6.25	34		Pn	13 38 13.0	0.0
PMR	Palmer	6.25	34	P	Pn	13 38 13.1	+0.2
	baz=220						
KNK	Knik Glacier	6.34	37	P	Pn	13 38 13.7	-0.5
	baz=224						
M11K	Mekoryuk	6.34	311		Pn	13 38 14.2	+0.1
M11K	Mekoryuk	6.34	311	P	Pn	13 38 14.1	+0.1
	baz=122,SNR=12						
MTBL	Makushin Table	6.41	250		Pn	13 38 15.1	-0.1
GLI	Glacier Island	6.48	45	P	Pn	13 38 15.6	-0.5
	baz=233						
MREP	Makushin Rep’t	6.52	249		Pn	13 38 15.9	-0.8
MGOD	Makushin Gods	6.59	249		Pn	13 38 16.6	-1.2
CUT	Chulitna	6.60	26		Pn	13 38 17.7	+0.1
CUT	Chulitna	6.60	26	P	Pn	13 38 18.2	+0.5
	baz=211						
MAPS	Pakushin South	6.62	249		Pn	13 38 17.8	-0.2
PPLA	Purkeypile	6.65	17		Pn	13 38 19.8	+1.2
PPLA	Purkeypile	6.65	17	P	Pn	13 38 19.9	+1.4
	baz=201,SNR=15						
SML	Sawmill	6.67	35		Pn	13 38 18.8	+0.1
SML	Sawmill	6.67	35	P	Pn	13 38 19.4	+0.7
	baz=222,SNR=6.5						
K13K	Kusilvak Mount	6.77	325		Pn	13 38 20.6	+0.5
K13K	Kusilvak Mount	6.77	325	P	Pn	13 38 20.4	+0.4
	baz=138,SNR=54						
EYAK	Cordova Ski Ar	6.85	51	P	Pn	13 38 20.3	-0.8
EYAK	Cordova Ski Ar	6.85	51	P	Pn	13 38 20.5	-0.6
	baz=239						
M23K	Glacier View	6.85	37	P	Pn	13 38 21.5	+0.3
	baz=225						
K20K	Telida	6.86	9	P	Pn	13 38 21.7	+0.4
	baz=191,SNR=38						
J18K	Innoko River	6.86	359	P	Pn	13 38 21.7	+0.4
	baz=179,SNR=61						
J17K	VABM Dome	6.92	350	P	Pn	13 38 22.0	-0.1
	baz=168,SNR=50						
J16K	Anvik River	6.99	345		Pn	13 38 22.9	-0.2
J16K	Anvik River	6.99	345	P	Pn	13 38 22.9	-0.2
	baz=161,SNR=22						
SCM	Sheep Creek Mo	7.02	38	P	Pn	13 38 23.3	-0.2
	baz=226,SNR=17						
J14K	Nanvaranak Lak	7.11	333		Pn	13 38 24.8	+0.2
J14K	Nanvaranak Lak	7.11	333	P	Pn	13 38 25.1	+0.5
	baz=147,SNR=18						
DIV	Divide	7.15	46		Pn	13 38 25.1	-0.2
CAST	Castle Rocks	7.16	16		Pn	13 38 25.8	+0.4
CAST	Castle Rocks	7.16	16	P	Pn	13 38 25.9	+0.5
	baz=200,SNR=43						
KAIM	Kayak Island	7.17	58	P	Pn	13 38 25.5	0.0
	baz=248						
P08K	Saint George I	7.22	275		Pn	13 38 25.9	-0.2
P08K	Saint George I	7.22	275	P	Pn	13 38 26.2	+0.1
	baz=84						
RAGM	Ragged Mountai	7.24	54		Pn	13 38 26.1	-0.4
GOAT	Goat Mountain	7.30	52		Pn	13 38 27.1	-0.4
KLU	Klutina	7.30	44	P	Pn	13 38 27.5	+0.1
	baz=233,SNR=26						
WAT1	Susitna Watana	7.39	29	P	Pn	13 38 27.8	-0.8
	baz=216						
OKTU	Okmok Mt. Tuli	7.40	249		Pn	13 38 28.4	-0.3
HMT	Hamilton	7.40	55		Pn	13 38 28.7	0.0
J19K	Poorman	7.41	3	P	Pn	13 38 28.9	+0.2
	baz=184,SNR=47						
OKNC	Okmok New Cone	7.41	249		Pn	13 38 28.4	-0.4
WAT6	Susitna Watana	7.43	33	P	Pn	13 38 28.1	-1.2
	baz=220,SNR=10						
NICHA	Nichawak Mount	7.50	56		Pn	13 38 29.6	-0.4
TRF	Thorofare Moun	7.51	22		Pn	13 38 29.7	-0.6
TRF	Thorofare Moun	7.51	22	P	Pn	13 38 29.8	-0.6
	baz=207						
BMRM	Bremner River	7.54	50		Pn	13 38 30.4	-0.3
BMRM	Bremner River	7.54	50	P	Pn	13 38 29.4	-1.2
	baz=240						
SPIA	Saint Paul Isl	7.56	280		Pn	13 38 31.0	+0.1
SPIA	Saint Paul Isl	7.56	280	P	Pn	13 38 31.0	+0.1
	baz=89						
CHUM	Lake Minchumin	7.57	14	P	Pn	13 38 31.5	+0.6
	baz=198,SNR=8.1						
I17K	Unalakleet	7.58	346		Pn	13 38 31.1	0.0
I17K	Unalakleet	7.58	346	P	Pn	13 38 30.8	-0.2
	baz=162,SNR=5.7						
M24K	Tolsona, Glenn	7.60	39		Pn	13 38 30.8	-0.7
M24K	Tolsona, Glenn	7.60	39	P	Pn	13 38 31.9	+0.4
	baz=228,SNR=7.2						
J20K	Nowinta River	7.66	8		Pn	13 38 32.0	-0.2
J20K	Nowinta River	7.66	8	P	Pn	13 38 32.7	+0.5
	baz=190,SNR=16						
BERG	Berg Lake	7.68	55		Pn	13 38 32.0	-0.5
RND	Reindeer	7.79	26		Pn	13 38 33.7	-0.4
GRIN	Grindle Hills	7.81	57		Pn	13 38 34.0	-0.3
N25K	Chitina, Valde	7.89	46		Pn	13 38 35.4	0.0
N25K	Chitina, Valde	7.89	46	P	Pn	13 38 35.1	-0.3
	baz=236						
KHIT	Khitrov Hills	7.91	56		Pn	13 38 35.1	-0.5
DHY	Denali Highway	7.92	32		Pn	13 38 34.7	-1.2
DHY	Denali Highway	7.92	32	P	Pn	13 38 35.8	-0.1
	baz=219						
BPAW	Bear Paw Mtn.	7.97	18	P	Pn	13 38 35.7	-0.8
	baz=202,SNR=13						
NIKH	Nikolski High	8.03	248	P	Pn	13 38 38.0	+0.7
MCK	McKinley	8.05	25	P	Pn	13 38 36.3	-1.3
	baz=211						
WAX	Waxell Ridge	8.09	56		Pn	13 38 37.5	-0.6
CRQE	Cirque	8.10	54	P	Pn	13 38 37.5	-0.9
	baz=245						
GCSA	Galena City Sc	8.15	359	P	Pn	13 38 39.0	+0.2
	baz=178,SNR=28						
HARP	HAARP	8.15	40	P	Pn	13 38 38.5	-0.5
	baz=230						
WACK	Wrangell Chich	8.21	44		Pn	13 38 39.5	-0.5
WASW	Wrangell South	8.23	45		Pn	13 38 40.3	0.0
BARK	Barkley Ridge	8.24	57		Pn	13 38 39.8	-0.4
I20K	Naaghedeneel	8.26	6		Pn	13 38 39.6	-0.7
I20K	Naaghedeneel	8.26	6	P	Pn	13 38 40.1	-0.2
	baz=188						
MESA	MESA	8.41	59		Pn	13 38 42.2	-0.5
MESA	MESA	8.41	59	P	Pn	13 38 41.8	-0.9
	baz=251						
MCARA	McCarthy VSAT	8.42	50	P	Pn	13 38 42.5	-0.1
	baz=241						
PAX	Paxson	8.43	37		Pn	13 38 42.6	-0.2
PAX	Paxson	8.43	37	P	Pn	13 38 43.1	+0.3
	baz=226,SNR=17						
H17K	Granite Mounta	8.51	350	P	Pn	13 38 44.5	+0.8
	baz=167,SNR=49						
BALM	Baldy	8.55	53		Pn	13 38 44.7	+0.2
PTPK	Patty Peak	8.56	52		Pn	13 38 44.9	+0.1
YAH	Yahtse	8.57	58		Pn	13 38 44.2	-0.6
H18K	Honhosa River	8.61	355	P	Pn	13 38 45.8	+0.6
	baz=173,SNR=26						
GRNC	Granite Creek	8.70	56		Pn	13 38 46.9	+0.3
RKAV	Rock Avalanche	8.74	59		Pn	13 38 47.4	+0.3
NEA2	Nenana	8.78	21	P	Pn	13 38 45.5	-1.9
	baz=208,SNR=15						
CHX	Chaix Hills	8.78	61		Pn	13 38 47.6	+0.1
I21K	Tanana	8.86	12		Pn	13 38 48.8	+0.3
I21K	Tanana	8.86	12	P	Pn	13 38 48.7	+0.3
	baz=196						
MLY	Manley	8.88	16		Pn	13 38 47.6	-1.3
MLY	Manley	8.88	16	P	Pn	13 38 48.6	-0.3
	baz=201,SNR=10						
H20K	Anotleneega Mo	8.93	4	P	Pn	13 38 49.4	-0.1
	baz=186,SNR=23						
H19K	Roundabout Mou	8.93	0	P	Pn	13 38 49.6	+0.1
	baz=180,SNR=25						
K24K	Donnelly Dome	8.94	32		Pn	13 38 50.3	+0.6
K24K	Donnelly Dome	8.94	32	P	Pn	13 38 51.0	+1.2
	baz=221,SNR=15						
M26K	Nabesna, AK	8.96	44	P	Pn	13 38 50.5	+0.5
	baz=236,SNR=9.6						
CTG	Chitna Glacier	8.97	55	P	Pn	13 38 50.3	+0.1
	baz=248						
CTGM	Chitina Glacie	8.98	55		Pn	13 38 50.1	-0.2
ANM	Nome	9.08	335		Pn	13 38 52.0	+0.4
ANM	Nome	9.08	335	P	Pn	13 38 52.2	+0.6
	baz=147,SNR=5.5						
CCB	Clear Creek Bu	9.09	24		Pn	13 38 49.3	-2.5
HDA	Harding Lake	9.10	27	P	Pn	13 38 52.4	+0.6
	baz=215,SNR=25						
G17K	Kiwalik Mounta	9.13	349		Pn	13 38 52.8	+0.6
G17K	Kiwalik Mounta	9.13	349	P	Pn	13 38 53.1	+0.8
	baz=165,SNR=16						
G15K	Niukluk	9.16	339		Pn	13 38 53.2	+0.5
G15K	Niukluk	9.16	339	P	Pn	13 38 53.7	+1.0
	baz=153,SNR=9.5						
RIDG	Independent Ri	9.18	34	P	Pn	13 38 52.7	-0.3
	baz=224,SNR=5.8						
L26K	Log Cabin Wild	9.20	40	P	Pn	13 38 53.9	+0.7
	baz=232,SNR=7.6						
PCA	Pinnacle	9.20	61		Pn	13 38 52.9	-0.4
PINM	Pinnacle	9.20	61	P	Pn	13 38 53.1	-0.2
	baz=255						
I23K	Minto, Yukon-K	9.22	19	P	Pn	13 38 52.1	-1.4
	baz=205,SNR=28						
H21K	Melozitna Rive	9.23	10	P	Pn	13 38 54.1	+0.5
	baz=193,SNR=35						
G16K	Koyuk River	9.24	345		Pn	13 38 54.0	+0.3
G16K	Koyuk River	9.24	345	P	Pn	13 38 53.7	-0.1
	baz=159,SNR=6.2						
COLA	College	9.28	23		Pn	13 38 52.6	-1.7
COLA	College	9.28	23	P	Pn	13 38 53.1	-1.2
COLA	College	9.28	23	P	Pn	13 38 53.2	-1.0
	baz=211						
G18K	Tagagawik	9.36	354	P	Pn	13 38 56.1	+0.7
	baz=173,SNR=40						
M27K	Edge Creek, AK	9.37	46		Pn	13 38 55.5	-0.2
M27K	Edge Creek, AK	9.37	46	P	Pn	13 38 56.1	+0.4
	baz=239						
IL31		9.41	26		Pn	13 38 53.7	-2.4
ILAR	Eielson Array	9.41	26		Pn	13 38 55.4	-0.7
ILAR	Eielson Array	9.41	26	P	Pn	13 38 53.6	-2.5
	comp=E,1.0nm,0.3s,baz=214,slow=13,SNR=36						
ILAR				S	Sn	13 40 39.4	-0.8
	comp=E,2.5nm,0.8s,baz=215,slow=20,SNR=4.1						
ILAR				LR	LR	13 42 43.9	
	comp=E,100nm,18.4s,baz=234,slow=39						
	comp=E,2.1nm,0.4s						
O28M	Mount Upton	9.43	57		Pn	13 38 56.3	-0.3
O28M	Mount Upton	9.43	57	P	Pn	13 38 57.2	+0.5
	baz=251,SNR=9.5						
IMAR	Indian Mountai	9.48	7		Pn	13 38 57.0	0.0
PNL	Peninsula	9.53	64	P	Pn	13 38 58.2	+0.5
PNL	Peninsula	9.53	64	P	Pn	13 38 58.6	+0.8
	baz=259						
YUK2	White River	9.53	51		Pn	13 38 57.8	0.0
G19K	Purcell Mounta	9.56	359	P	Pn	13 38 58.0	-0.1
	baz=178,SNR=17						
POKR	Poker Plat Res	9.58	24	P	Pn	13 38 56.9	-1.5
	baz=211						
H22K	Ishtalitna Cre	9.61	13	P	Pn	13 38 59.1	+0.2
	baz=197,SNR=15						
SCRK	Sand Creek	9.61	35		Pn	13 38 57.9	-1.1
SCRK	Sand Creek	9.61	35	P	Pn	13 38 58.3	-0.7
	baz=226						
J25K	Salcha River,	9.68	30	P	Pn	13 38 58.5	-1.2
	baz=219,SNR=28						
YUK3	Moose Creek	9.69	51	P	Pn	13 39 00.0	-0.1
	baz=245,SNR=15						
L27K	Beaver Creek,	9.78	43	P	Pn	13 39 01.3	+0.1
	baz=235						
BCAR	Beaver Creek A	9.80	43		Pn	13 39 01.3	-0.1
YUK8	Steele Glacier	9.80	55		Pn	13 39 02.4	+0.7
YUK8	Steele Glacier	9.80	55	P	Pn	13 39 02.6	+0.9
	baz=249,SNR=12						
H23K	Yukon River	9.81	17	P	Pn	13 39 00.8	-0.7
	baz=203,SNR=6.3						
BVCY	Beaver Creek	9.81	47	P	Pn	13 39 02.4	+0.8
	baz=241						
F15K	North Star Dit	9.92	340		Pn	13 39 04.0	+1.0
F15K	North Star Dit	9.92	340	P	Pn	13 39 04.4	+1.4
	baz=153,SNR=9.9						
G21K	Allakaket	10.02	7	P	Pn	13 39 04.5	+0.1
	baz=189						
F14K	Arctic Creek	10.06	336	P	Pn	13 39 06.2	+1.2
	baz=147,SNR=8.6						
O29M	Mount Kennedy	10.07	61		Pn	13 39 05.4	+0.2
O29M	Mount Kennedy	10.07	61	P	Pn	13 39 05.4	+0.2
	baz=256,SNR=13						
F17K	Baldwin Pennin	10.11	349	P	Pn	13 39 06.6	+1.1
	baz=165						
H24K	Noodor Dome	10.12	21	P	Pn	13 39 03.6	-2.1
	baz=208,SNR=12						
J26L	Joseph Creek	10.12	33		Pn	13 39 04.6	-1.2
J26L	Joseph Creek	10.12	33	P	Pn	13 39 06.1	+0.3
	baz=225						
F18K	Selawik	10.12	353	P	Pn	13 39 05.8	+0.1
	baz=170						
F19K	Shaleruckik Mo	10.26	357		Pn	13 39 08.3	+0.7
F19K	Shaleruckik Mo	10.26	357	P	Pn	13 39 08.7	+1.0
	baz=176,SNR=8.5						
K27K	Chicken	10.28	38	P	Pn	13 39 08.5	+0.6
	baz=230						
YUK4	Talbot Arm	10.33	55	P	Pn	13 39 09.5	+0.7
	baz=250						
YUK6	Outpost Mounta	10.34	58	P	Pn	13 39 08.9	0.0
	baz=253						

P29M	Windy Craggy	10.35	65	P	Pn	13 39 08.6	-0.4
	baz=261						
PRP	Porcupine Dome	10.36	26	P	Pn	13 39 07.6	-1.5
	baz=216,SNR=15						
GAMB	Gambell	10.41	320	P	Pn	13 39 10.4	+0.7
	baz=127						
F20K	Avaraart Lake	10.47	2	P	Pn	13 39 11.6	+1.1
	baz=182,SNR=34						
TNA	Tin City	10.52	333	P	Pn	13 39 12.0	+0.9
	baz=143,SNR=8.0						
G23K	Bananza Creek	10.57	14	P	Pn	13 39 12.2	+0.3
	baz=200,SNR=17						
G22K	Bettles	10.59	11	P	Pn	13 39 13.5	+1.3
	baz=195						
HYT	Haines Junctio	10.71	59	P	Pn	13 39 14.2	+0.2
	baz=255						
F21K	Alatna River	10.73	6	P	Pn	13 39 15.1	+1.0
	baz=189,SNR=12						
E17K	Hotham Inlet	10.79	349	P	Pn	13 39 16.1	+1.3
	baz=164						
P30M	Million Dollar	10.82	63	P	Pn	13 39 16.0	+0.6
	baz=260						
I26K	Coal Creek Min	10.82	31	P	Pn	13 39 14.1	-1.3
	baz=223,SNR=13						
M29M	Somme Creek	10.82	50	P	Pn	13 39 16.0	+0.6
	baz=245,SNR=18						
E19K	Redstone River	10.88	358	P	Pn	13 39 15.9	-0.1
	baz=178						
H25L	Birch Creek	10.91	23	P	Pn	13 39 15.1	-1.5
	baz=213						
G24K	Hadweenzic Riv	10.96	19	P	Pn	13 39 15.7	-1.5
	baz=207,SNR=5.9						
E18K	Tukpahlearik C	11.00	352	P	Pn	13 39 19.5	+1.7
	baz=168,SNR=42						
PLBC	Pleasant Camp	11.02	67	P	Pn	13 39 16.6	-1.5
	baz=264						
S31K	Pelican	11.03	75	P	Pn	13 39 16.8	-1.4
	baz=272						
COLD	Coldfoot	11.03	13	P	Pn	13 39 18.9	+0.7
	baz=198						
N30M	Aishikik Lake	11.08	56	P	Pn	13 39 18.2	-0.7
	baz=253						
F22K	John River	11.10	9	P	Pn	13 39 19.4	+0.3
	baz=192						
ATKA	Atka Island	11.22	254	P	Pn	13 39 21.3	+0.4
DAWY	Dawson	11.25	41	P	Pn	13 39 21.6	+0.5
	baz=236						
L29M	L29M	11.25	47	P	Pn	13 39 21.9	+0.7
	baz=243						
G25K	Bearman Lake	11.28	21	P	Pn	13 39 22.1	+0.6
	baz=210						
R31K	City Hall, Gus	11.29	72	P	Pn	13 39 21.6	-0.1
	baz=270						
O30N	Mendenhall	11.37	60	P	Pn	13 39 23.6	+0.7
	baz=258						
I27K	Kandik River	11.48	32	P	Pn	13 39 24.7	+0.3
	baz=225						
D17K	Noatak River	11.52	347	P	Pn	13 39 26.0	+1.2
	baz=162						
SKAG	Skagway	11.55	67	P	Pn	13 39 25.8	+0.6
	baz=265						
SIT	Sitka	11.59	79	P	Pn	13 39 25.9	+0.2
SIT	Sitka	11.59	79	P	Pn	13 39 26.8	+1.1
	baz=277						
F24K	Squaw Lake	11.63	17	P	Pn	13 39 26.9	+0.5
	baz=204						
E20K	Nigu River	11.68	1	P	Pn	13 39 27.4	+0.4
	baz=181						
N31M	Braeburn, Yuko	11.69	57	P	Pn	13 39 27.7	+0.5
	baz=254						
E22K	Anaktuvuk Pass	11.75	9	P	Pn	13 39 28.0	0.0
	baz=193,SNR=5.0						
K29M	Barlow Dome	11.84	45	P	Pn	13 39 30.2	+0.9
	baz=241						
RDOG	Red Dog Mine	11.84	348	P	Pn	13 39 30.8	+1.6
	baz=162,SNR=8.5						
I28M	Miner Creek	11.89	35	P	Pn	13 39 29.8	-0.2
	baz=230						
E23K	Chandalar	11.90	13	P	Pn	13 39 30.1	+0.1
	baz=199						
E21K	Killik River	11.91	4	P	Pn	13 39 31.3	+1.0
	baz=187						
WHY	Whitehorse	11.93	61		Pn	13 39 31.0	+0.5
WHY	Whitehorse	11.93	61	P	Pn	13 39 31.1	+0.5
	baz=260						
R32K	Eaglecrest	11.93	73	P	Pn	13 39 30.9	+0.4
	baz=271						
D19K	Kuna River	11.94	357	P	Pn	13 39 32.1	+1.6
	baz=176						
G26K	Porcupine Rive	11.94	25	P	Pn	13 39 29.9	-0.6
	baz=216,SNR=5.4						
S32K	Killisnoo	11.95	77	P	Pn	13 39 31.0	+0.4
	baz=275						
H27K	Steamboat Moun	11.96	30	P	Pn	13 39 30.1	-0.8
	baz=223						
E24K	Your Creek	12.06	14		Pn	13 39 30.3	-1.9
E24K	Your Creek	12.06	14	P	Pn	13 39 31.9	-0.3
	baz=202						
F25K	Christian Rive	12.09	20	P	Pn	13 39 30.7	-2.0
	baz=210						
D20K	Etivluk River	12.13	360	P	Pn	13 39 32.6	-0.6
	baz=180						
C18K	Utukok River	12.26	352		Pn	13 39 36.6	+1.7
C18K	Utukok River	12.26	352	P	Pn	13 39 36.2	+1.3
	baz=168,SNR=8.7						
C17K	DeLong Mountai	12.28	348	P	Pn	13 39 36.9	+1.8
	baz=162,SNR=10						
G27K	Doyon Strip	12.35	28	P	Pn	13 39 35.8	-0.4
	baz=221						
C16K	Lisburne Hills	12.37	344	P	Pn	13 39 37.4	+1.0
	baz=157						
I29M	Ogilvie Camp,	12.38	38	P	Pn	13 39 37.2	+0.7
	baz=233,SNR=11						
P32M	Atlin	12.38	67	P	Pn	13 39 36.8	+0.2
	baz=266						
D22K	Ayikyak River	12.42	6		Pn	13 39 37.8	+0.7
D22K	Ayikyak River	12.42	6	P	Pn	13 39 37.0	-0.1
	baz=190						
TOLK	Toolik Lake Re	12.46	12	P	Pn	13 39 37.9	+0.3
	baz=198,SNR=6.2						
F26K	Sheenjek River	12.47	22	P	Pn	13 39 37.7	-0.2
	baz=213						
M31M	Drury Creek, Y	12.52	54	P	Pn	13 39 38.4	-0.1
	baz=253						
E25K	Arctic Village	12.56	19	P	Pn	13 39 38.1	-1.0
	baz=209						
C21K	Knifeblade Rid	12.60	3	P	Pn	13 39 39.9	+0.4
	baz=184,SNR=6.1						
C19K	Lookout Ridge	12.60	355		Pn	13 39 40.4	+0.8
C19K	Lookout Ridge	12.60	355	P	Pn	13 39 40.0	+0.3
	baz=172,SNR=5.2						
J30M	Hart River	12.65	43	P	Pn	13 39 40.6	+0.2
	baz=240,SNR=8.9						
D23K	Nanushuk River	12.66	10		Pn	13 39 40.9	+0.6
D23K	Nanushuk River	12.66	10	P	Pn	13 39 41.0	+0.6
	baz=195,SNR=9.5						
P33M	Teslin, Yukon	12.88	64	P	Pn	13 39 43.6	+0.1
	baz=264						
N32M	Quiet Lake	12.88	60	P	Pn	13 39 44.3	+0.8
	baz=260						
H29M	Whitestone	12.89	34		Pn	13 39 43.5	+0.1
H29M	Whitestone	12.89	34	P	Pn	13 39 44.4	+1.0
	baz=230						
U33K	Whale Pass	12.94	82	P	Pn	13 39 44.3	+0.1
	baz=282						
I30M	Mount Dempster	12.97	40		Pn	13 39 45.6	+1.0
I30M	Mount Dempster	12.97	40	P	Pn	13 39 45.4	+0.7
	baz=238						
FARO	Faro, Yukon	13.00	55	P	Pn	13 39 45.2	+0.2
	baz=255						
B18K	Kokolik River	13.01	352	P	Pn	13 39 45.7	+0.7
	baz=167						
D24K	Happy Valley	13.03	12	P	Pn	13 39 46.3	+0.9
	baz=199						
B21K	Ikpikpuk River	13.07	3	P	Pn	13 39 47.7	+1.8
	baz=185						
CRAG	Craig	13.09	85	P	Pn	13 39 46.9	+0.7
	baz=285						
Q32M	Nakina River	13.10	70	P	Pn	13 39 46.9	+0.4
	baz=270						
WRAK	Wrangell Islan	13.30	81	P	Pn	13 39 49.0	-0.1
	baz=281						
F28M	Old Crow	13.42	28	P	Pn	13 39 50.9	+0.3
	baz=223						
E27K	Coleen River	13.44	24	P	Pn	13 39 51.0	+0.2
	baz=218						
B20K	Meade River	13.44	359		Pn	13 39 49.6	-1.1
B20K	Meade River	13.44	359	P	Pn	13 39 50.8	0.0
	baz=178,SNR=6.2						
G29M	Pine Creek	13.44	32	P	Pn	13 39 51.4	+0.5
	baz=229						
EPYK	Eagle Plains	13.50	36	P	Pn	13 39 51.9	+0.2
	baz=233						
C23K	Itkillik River	13.51	9	P	Pn	13 39 52.1	+0.4
	baz=194						
D25K	Kavik River	13.51	15	P	Pn	13 39 53.3	+1.4
	baz=204,SNR=11						
C24K	Franklin Bluff	13.59	12	P	Pn	13 39 53.0	+0.3
	baz=198						
R33M	Jennings River	13.77	68	P	Pn	13 39 55.9	+0.5
	baz=269						
B22K	Teshekpuk Lake	13.83	4	P	Pn	13 39 56.8	+0.8
	baz=187						
V35K	Ketchikan	13.96	85	P	Pn	13 39 57.9	+0.1
	baz=286						
H31M	Peel River	13.99	40	P	Pn	13 39 57.9	-0.4
	baz=239						
G30M	tAoh Zraii Nji	14.03	34	P	Pn	13 39 58.6	-0.1
	baz=232						
MMPY	Sheldon Lake,	14.03	54	P	Pn	13 39 58.9	+0.1
	baz=256						
C27K	Jago River	14.21	18	P	Pn	13 40 01.4	+0.4
	baz=210						
E28M	Babbage River	14.24	26	P	Pn	13 40 02.1	+0.7
	baz=221						
C26K	Camden Bay	14.27	16	P	Pn	13 40 02.6	+0.8
	baz=207						
DLBC	Dease Lake	14.29	72	P	Pn	13 40 02.4	+0.2
	comp=E,0.4nm,0.3s,baz=284,slow=15,SNR=3.5						
	comp=E,0.9nm,0.4s						
DLBC	Dease Lake	14.29	72	P	Pn	13 40 02.3	+0.2
	baz=274						
T35M	Bob Quinn	14.34	78	P	Pn	13 40 03.4	+0.5
	baz=280						
D27M	Malcolm River	14.42	23	P	Pn	13 40 04.4	+0.5
	baz=216						
A22K	Sinclair Lake	14.45	2	P	Pn	13 40 04.8	+0.7
	baz=183						
E29M	Blow River	14.49	28	P	Pn	13 40 05.3	+0.6
	baz=225						
F30M	Barrier River	14.56	33	P	Pn	13 40 06.0	+0.4
	baz=231,SNR=5.2						
G31M	Satah River	14.62	36		Pn	13 40 05.8	-0.5
G31M	Satah River	14.62	36	P	Pn	13 40 06.2	-0.1
	baz=236						
U35K	Hyder	14.68	82	P	Pn	13 40 08.2	+1.0
	baz=284						
WTLY	Watson Lake, Y	14.88	65	P	Pn	13 40 10.5	+0.7
	baz=268						
TGTN	Hyland Airport	15.23	60	P	Pn	13 40 14.3	0.0
	baz=264						
INK	Inuvik	15.66	32		Pn	13 40 18.2	-1.4
INK	Inuvik	15.66	32	P	Pn	13 40 17.5	-2.1
	comp=E,0.6nm,0.3s,baz=232,slow=13,SNR=22						
INK				LR	LR	13 46 52.4	
	comp=E,53nm,18.2s,baz=245,slow=39						
	comp=E,2.2nm,0.5s						
INK	Inuvik	15.66	32	P	Pn	13 40 20.7	+1.0
	baz=233						
LIRD	Liard River Hi	16.26	67	P	Pn	13 40 28.9	+1.7
	baz=273						
BEAVL	Fort Liard	16.75	65	P	Pn	13 40 35.2	+1.9
	baz=272						
TOAD	Toad River Com	16.75	69	P	Pn	13 40 34.9	+1.5
	baz=276						
BBB	Bella Bella	17.03	93	LR	LR	13 46 20.1	
	comp=E,67nm,18.4s,baz=276,slow=34						
SHEM	Shemya Is, Ala	17.38	269	LR	LR	13 46 51.4	
	comp=E,51nm,18.6s,baz=96,slow=36						
WRGLY	Wrigley	17.65	54	P	Pn	13 40 45.7	+1.3
	baz=263						
C36M	Paulatuk	19.14	35	P	P	13 41 00.4	-0.2
C36M				IAmb	IAmb	13 41 03.2	
	comp=Z,12nm,0.7s						
C36M	Paulatuk	19.14	35	P	P	13 41 01.3	+0.7
	baz=244						
A36M	Sachs Harbour	20.11	28		P	13 41 09.1	-2.1
A36M				IAmb	IAmb	13 41 15.4	
	comp=Z,20nm,0.8s						
A36M	Sachs Harbour	20.11	28	P	P	13 41 12.3	+1.2
	baz=236,SNR=8.8						
BILL	Bilibino	20.34	319	P	P	13 41 12.9	-0.8
YKAW3	Yellowknife Wh	21.68	57	P	P	13 41 29.2	+1.0
YKAW3				IAmb	IAmb	13 41 48.8	
	comp=Z,4.1nm,0.8s						
YKA	Yellowknife Ar	21.69	57	P	P	13 41 29.1	+0.8
	comp=Z,1.0nm,0.8s,baz=279,slow=9.9,SNR=7.8						
YKAW1	Yellowknife Wh	21.75	57	P	P	13 41 29.7	+0.9
YKAW1				IAmb	IAmb	13 41 56.6	
	comp=Z,3.9nm,1.0s						
A04D	Lummi Island	21.77	97	IAmb	IAmb	13 41 35.1	
	comp=Z,12nm,1.0s						
NEW	Newport	25.10	93	LR	LR	13 50 54.5	
	comp=Z,46nm,19.4s,baz=300,slow=34						
J05D	Fort Rock, OR	25.98	106	P	P	13 42 09.3	-0.3
PETK	Petropavlovsk-	26.22	282	P	P	13 42 09.8	-1.8
	comp=Z,2.9nm,0.5s,baz=68,slow=13,SNR=11						
PETK				LR	LR	13 51 58.9	
	comp=Z,26nm,21.7s,baz=93,slow=35						
	comp=Z,2.9nm,0.5s						
MA2	Magadan	27.42	298	LR	LR	13 54 18.8	
	comp=Z,28nm,18.0s,baz=124,slow=39						
MPK	Martis Peak	29.46	110	IAmb	IAmb	13 42 45.2	
	comp=Z,12nm,1.2s						
HLID	Hailey	29.48	98		P	13 42 40.2	-0.8
PAHR	Pah Rah Range	29.50	109	IAmb	IAmb	13 42 45.3	
	comp=Z,11nm,1.2s						
YHB	Horse Butte	30.48	93	IAmb	IAmb	13 42 54.0	
	comp=Z,8.7nm,1.0s						
ELK	Elko	30.95	103	LR	LR	13 53 14.1	
	comp=Z,29nm,21.9s,baz=289,slow=32						
NVAR	Mina Array Bea	31.01	110	P	P	13 42 58.0	+3.4
	comp=Z,3.9nm,0.8s,baz=303,slow=8.6,SNR=24						
NVAR				LR	LR	13 53 00.3	
	comp=Z,64nm,20.2s,baz=314,slow=31						
	comp=Z,3.9nm,0.8s						
LHV	Little Huntoon	31.04	110	IAmb	IAmb	13 42 59.3	
	comp=Z,12nm,1.3s						
H17A	Grant Village	31.05	93	IAmb	IAmb	13 42 59.9	
	comp=Z,6.9nm,0.8s						
DSP	Deep Springs	31.98	111	IAmb	IAmb	13 43 07.7	
	comp=Z,4.1nm,0.9s						
HWUT	Hardware Ranch	32.35	98	IAmb	IAmb	13 43 11.1	
	comp=Z,4.6nm,0.9s						
R11B	Troy Canyon, C	32.49	107		P	13 43 10.8	+3.3
BW06	Boulder Array	32.67	95	IAmb	IAmb	13 43 12.1	
	comp=Z,3.3nm,0.7s						
PD31	Pinedale Array	32.67	95	IAmb	IAmb	13 43 12.1	
	comp=Z,3.2nm,0.7s						
PDAR	Pinedale Array	32.67	95	P	P	13 43 11.6	+2.5
	comp=Z,3.4nm,0.6s,baz=312,slow=5.1,SNR=25						
	comp=Z,3.4nm,0.6s						
GSC	Goldstone, Bar	34.17	112	IAmb	IAmb	13 43 26.1	
	comp=Z,7.5nm,1.3s						
MVU	Marysvale	34.18	103	IAmb	IAmb	13 43 26.8	
	comp=Z,4.6nm,1.0s						
RSSD	Black Hills	34.83	88	P	P	13 43 27.3	-0.5
RSSD				IAmb	IAmb	13 43 30.8	
	comp=Z,4.3nm,0.8s						
PFO	Pinyon Flats O	35.67	113	LR	LR	13 55 16.0	
	comp=Z,22nm,19.3s,baz=286,slow=31						
W13A	Hualapai Mount	35.84	109	IAmb	IAmb	13 43 40.8	
	comp=Z,5.8nm,1.3s						
PV21	Cone Mtn., Par	35.90	100	IAmb	IAmb	13 43 40.2	
	comp=Z,4.7nm,0.8s						
YAK	Yakutsk	36.15	310	LR	LR	13 59 23.9	
	comp=Z,41nm,20.5s,baz=95,slow=38						
PV18	Skein Mesa, Pa	36.16	100	IAmb	IAmb	13 44 10.0	
	comp=Z,5.4nm,0.9s						
PV05	Paradox Valley	36.18	100	IAmb	IAmb	13 43 42.7	
	comp=Z,3.3nm,0.6s						
PV15	Paradox Valley	36.32	99	IAmb	IAmb	13 43 43.9	
	comp=Z,8.3nm,1.2s						
Y14A	Wickenburg	37.20	109	IAmb	IAmb	13 43 52.0	
	comp=Z,6.3nm,1.2s						
X16A	Lo Mia Camp, P	37.65	107	IAmb	IAmb	13 43 56.5	
	comp=Z,6.5nm,1.0s						
113A	Mohawk Valley,	37.71	111	IAmb	IAmb	13 43 56.0	
	comp=Z,5.3nm,1.0s						
NEEM	North Greenlan	38.64	20	*i* P	P	13 43 58.2	-1.7
NEEM				IAmb	IAmb	13 44 00.4	
	comp=Z,7.8nm,1.1s						
214A	Organ Pipe Nat	38.85	111	IAmb	IAmb	13 44 05.8	
	comp=Z,5.6nm,0.9s						
NOR	Nord	40.34	8	*i* P	P	13 44 11.5	-2.1
VHRN	Van Horn	43.90	104	P	P	13 44 42.5	-0.8
VHRN				IAmb	IAmb	13 44 47.9	
	comp=Z,8.2nm,1.2s						
DAG	Danmarks Havn	44.22	13	*i* P	P	13 44 43.1	-2.0
SUMG	Summit	44.24	22	*i* P	P	13 44 44.7	-1.1
SUMG				IAmb	IAmb	13 44 46.6	
	comp=Z,5.7nm,0.8s						
WMOK	Wichita Mounta	44.28	94	P	P	13 44 46.1	0.0
WMOK				IAmb	IAmb	13 44 48.6	
	comp=Z,4.5nm,0.8s						
SPITS	Spitsbergen Ar	45.38	2	P	P	13 44 53.5	-0.8
	comp=Z,0.8nm,0.4s,baz=30,slow=6.8,SNR=11						
	comp=Z,0.8nm,0.4s						
TX31	Lajitas Ar. Si	45.74	104	P	P	13 44 57.1	-0.8
TX31				IAmb	IAmb	13 45 01.3	
	comp=Z,4.1nm,0.9s						
TXAR	Lajitas Array	45.74	104	P	P	13 45 00.5	+2.6
	comp=Z,2.3nm,0.8s,baz=302,slow=5.8,SNR=17						
	comp=Z,2.3nm,0.8s						
DBG	Daneborg	46.11	15	*i* P	P	13 44 59.0	-1.1
DBG				IAmb	IAmb	13 45 00.1	
	comp=Z,8.9nm,0.7s						
ICESG	Greenland Ices	46.50	26	*i* P	P	13 45 03.5	-0.2
ICESG				IAmb	IAmb	13 45 04.6	
	comp=Z,11nm,1.1s						
FCAR	Ozark Folk Cen	47.10	88	P	P	13 45 11.0	+2.6
SOEG	Soedalen	49.12	24	*i* P	P	13 45 22.8	-0.7
SOEG				IAmb	IAmb	13 45 24.2	
	comp=Z,9.8nm,1.0s						
ANGG	Ammassalik, Gr	49.65	29	*i* P	P	13 45 26.8	-0.6
TKL	Tuckaleechee C	51.87	81	LR	LR	14 08 16.3	
	comp=Z,39nm,18.6s,baz=320,slow=36						
KSRS	Korea Array	52.12	282	P	P	13 45 46.0	-0.4
	comp=Z,3.2nm,0.7s,baz=47,slow=6.8,SNR=13						
	comp=Z,3.2nm,0.7s						
ARCES	ARCESS Array B	54.13	359	P	P	13 45 59.8	-1.0
	comp=Z,4.9nm,0.9s,baz=16,slow=8.0,SNR=14						
	comp=Z,4.9nm,0.9s						
BORG	Borgarnes	54.21	22	LR	LR	14 10 33.2	
	comp=Z,16nm,21.3s,baz=342,slow=38						
SONM	Songino Array	55.27	306	P	P	13 46 09.5	-0.1
SONM	Songino Array	55.27	306	P	P	13 46 09.7	+0.1
	comp=Z,4.2nm,0.6s,baz=46,slow=6.6,SNR=16						
SONM				PcP	PcP	13 47 10.5	+1.0
	comp=Z,1.7nm,0.6s,baz=67,slow=2.0,SNR=4.1						
	comp=Z,4.2nm,0.6s						
HHC	Hu-ho-hao-te	58.08	297	*e*P	P	13 46 32.9	+3.4
HHC				S	S	13 54 22.9	-2.2
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,86nm,4.5s						
ZALV	Zalesovo Beam	58.98	323	P	P	13 46 34.2	-1.2
	comp=Z,2.3nm,0.7s,baz=22,slow=8.2,SNR=7.8						
	comp=Z,2.3nm,0.7s						
FINES	FINESS Array B	62.25	359	P	P	13 46 56.6	-0.9
	comp=Z,2.6nm,0.6s,baz=358,slow=9.5,SNR=9.8						
	comp=Z,2.6nm,0.6s						
NB2	NORSAR Subarra	62.27	7	P	P	13 46 57.6	-0.1
	comp=Z,3.8nm,0.7s,baz=354,slow=6.9						
NOA	NORSAR Array B	62.27	7	P	P	13 46 57.7	0.0
	comp=Z,2.5nm,0.6s,baz=353,slow=6.8,SNR=19						
	comp=Z,2.5nm,0.6s						
LYN	LuoYang	62.48	291	P	P	13 46 59.6	+0.2
LYN				pmax	pmax		
	comp=Z,17nm,1.1s						
HFS	Hagfors	63.32	5	P	P	13 47 04.4	-0.2
	comp=Z,4.2nm,0.6s,baz=0.0,slow=3.7,SNR=16						
	comp=Z,4.2nm,0.6s						
KURBB	Kurchatov Arra	63.86	324	P	P	13 47 07.6	-0.7
	comp=Z,2.0nm,0.2s,baz=28,slow=6.1,SNR=5.4						
	comp=Z,2.0nm,0.2s						
ARTI	Arti	63.87	339	P	P	13 47 07.0	-1.3
	comp=Z,3.5nm,0.4s,baz=196,slow=2.7,SNR=3.2						
	comp=Z,3.5nm,0.4s						
BVAR	Borovoye Array	64.16	331	P	P	13 47 09.4	-0.9
	comp=Z,5.9nm,0.5s,baz=28,slow=6.6,SNR=27						
	comp=Z,5.9nm,0.5s						
GTA	Gaotai	64.82	304	*e*P	P	13 47 14.0	-0.9
GTA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
LZH	Lanzhou	65.58	299	*e*P	P	13 47 21.6	+1.7
LZH				pmax	pmax		
	comp=Z,19nm,1.5s						
MKAR	Makanchi Array	65.88	320	P	P	13 47 19.9	-1.6
	comp=Z,1.1nm,0.6s,baz=50,slow=6.6,SNR=12						
	comp=Z,1.1nm,0.6s						
EKA	Eskdalemuir Ar	66.31	16	P	P	13 47 25.0	+0.9
	comp=Z,3.1nm,0.7s,baz=332,slow=4.8,SNR=12						
	comp=Z,3.1nm,0.7s						
BELG	Belogornoye	69.55	345	LR	LR	14 21 10.6	
	comp=Z,27nm,20.2s,baz=67,slow=38						
AKTO	Aktyubinsk	69.55	337	P	P	13 47 44.0	-0.5
	comp=Z,1.2nm,0.3s,baz=1.9,slow=3.9,SNR=7.4						
	comp=Z,1.2nm,0.3s						
AB31	Akbulak array	70.23	336	IAmb	IAmb	13 47 48.8	
	comp=Z,3.5nm,0.9s						
ABKAR	Akbulak array	70.23	336		P	13 47 47.8	-0.9
ABKAR				IAmb	IAmb	13 47 48.8	
	comp=Z,3.6nm,0.9s						
BRG	Berggiesshubel	72.57	6	*e*P	P	13 48 03.4	+0.6
BRG				Amp		13 48 04.2	
	comp=Z,3.0nm,1.0s						
AKASG	Malin Array Be	72.93	356	P	P	13 48 04.1	-0.8
	comp=Z,1.8nm,0.5s,baz=7.7,slow=5.8,SNR=11						
	comp=Z,1.8nm,0.5s						
KKAR	Karatay Array	73.06	326		P	13 48 06.0	+0.1
STHS	Stebnicka Huta	74.31	2	*e*P	P	13 48 13.5	+0.5
PZH	PanZhiHua	74.41	294	P	P	13 48 17.3	+3.2
KSH	Kashi	74.48	320	P	P	13 48 17.7	+3.4
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GERES	GERESS Array B	74.58	7	P	P	13 48 14.8	+0.1
	comp=Z,1.9nm,0.7s,baz=17,slow=5.7,SNR=6.9						
	comp=Z,1.9nm,0.7s						
VYHS	Vyhne	75.17	3	*e*P	P	13 48 18.3	+0.2
MOA	Molln	75.61	6	*i* P	P	13 48 20.6	+0.1
	comp=Z,2.4nm,0.9s						
CONA	Conrad Observa	75.62	5	*i* P	P	13 48 21.7	+1.0
	comp=Z,0.5nm,0.5s						
RETA	Reutte	75.71	9	*i* P	P	13 48 22.6	+1.4
	comp=Z,1.9nm,0.6s						
MOTA	Moosalm	75.88	9	*i* P	P	13 48 23.3	+1.0
	comp=Z,3.8nm,0.9s						
LESA	Schwarzleotal	75.92	8	*e*P	P	13 48 23.1	+0.6
	comp=Z,1.4nm,0.7s						
WATA	Walderalm	75.93	8	*i* P	P	13 48 23.3	+0.8
	comp=Z,3.5nm,0.6s						
WTTA	Wattenberg	76.00	8	*i* P	P	13 48 24.1	+1.1
	comp=Z,4.0nm,0.6s						
SQTA	Sankt Quirin	76.01	9	*i* P	P	13 48 23.5	+0.5
	comp=Z,5.1nm,0.8s						
FETA	Feichten	76.17	9	*i* P	P	13 48 24.9	+1.0
	comp=Z,1.4nm,0.5s						
KBA	Koelnbreinsper	76.31	7	*e*P	P	13 48 25.9	+1.1
	comp=Z,3.6nm,0.9s						
DAVOX	Davos/Dischmat	76.33	10	P	P	13 48 25.0	+0.1
	comp=Z,2.4nm,0.7s,baz=341,slow=17,SNR=3.8						
	comp=Z,2.4nm,0.7s						
ABTA	Abfaltersbach	76.58	8	*i* P	P	13 48 26.0	-0.2
	comp=Z,1.5nm,0.5s						
SOKA	Soboth	76.82	6	*i* P	P	13 48 28.6	+1.1
	comp=Z,2.3nm,0.9s						
OBKA	Obir	76.96	6	*i* P	P	13 48 28.8	+0.5
	comp=Z,9.7nm,0.7s						
KBZ	Khabaz	78.69	346	P	P	13 48 37.9	+0.1
	comp=Z,1.9nm,0.8s,baz=297,slow=3.5,SNR=3.9						
	comp=Z,1.9nm,0.8s						
ESDC	Sonseca Array	81.28	21	P	P	13 48 53.0	+1.0
	comp=Z,2.0nm,0.8s,baz=342,slow=4.8,SNR=12						
	comp=Z,2.0nm,0.8s						
CMAR	Chiang Mai Arr	82.52	292		P	13 48 57.6	-1.1
CMAR	Chiang Mai Arr	82.52	292	P	P	13 48 58.4	-0.3
	comp=Z,4.6nm,0.7s,baz=11,slow=5.6,SNR=26						
	comp=Z,4.6nm,0.7s						
BRTR	Keskin Array B	83.63	352		P	13 49 04.0	-0.3
BRTR	Keskin Array B	83.63	352	P	P	13 49 05.0	+0.6
	comp=Z,1.1nm,0.7s,baz=48,slow=1.8,SNR=7.9						
	comp=Z,1.1nm,0.7s						
QSPA	South Pole Qui	146.41	180	PKPbc	PKPdf	13 56 15.3	+1.7
	comp=Z,4.6nm,0.8s,baz=231,slow=1.4,SNR=14						

TRN 10 13:37:22.1, 18°.21N×62°.18W, h27$^{\text{km}}$, MD3.6, North-west of Barbuda., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANWB	Willy Bob	0.66	145	*e*P	Pn	13 37 36.2	+0.5

ANWB				*e*S	Sn	13 37 48.5	+3.4
SKI	**Saint Kitts**	**1.02**	**211**	*e*P	Pb	13 37 42.2	+1.0
SKI				*e*S	Sb	13 37 56.9	+2.7
ANBD	**Bethesda, Anti**	**1.22**	**161**	*e*P	Pb	13 37 44.6	0.0
ANBD				*e*S	Sb	13 38 01.0	+1.0
MAGL	**Barre de l'ile**	**2.41**	**159**	*e*P	Pn	13 38 01.3	+1.5
DSLB	**Salisbury**	**2.85**	**165**	*e*P	Pn	13 38 07.6	+1.7

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*IDC **10** 13:38:36.7±1.8, 24°.29S×179°.91E, h505^{km}±17^{km}, mb3.5/5, mbtmp4.4/8, Error ellipse: s-maj=26.5km s-min=19.3km az=152.0*

*NEIC **10** 13:38:39.8±1.6, 24°.3S±0°.1×179°.89E±0°.08, h544^{km}±8^{km}, mb4.4/33, Error ellipse: s-maj=20.7km s-min=10.3km az=168.0*

ISC 10 13:38:37.5±0.6, **24°.38S**±0°.07×**179°.93E**±0°.10, **h517**^{km}, **n66**, σ**1^{s}.44**/70, **mb4.3**/21, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**5.24**	**159**	P	**P**	**13 40 07.8**	**+0.4**
MSVF	**Nonsavu**	**6.84**	**345**	P	**P**	**13 40 22.7**	**-0.2**
MSVF	**Nonsavu**	**6.84**	**345**	P	**P**	**13 40 22.2**	**-0.7**
	3.2nm,0.4s,baz=233,slow=22,SNR=11						
PINNC	**Pines Island,**	**11.59**	**276**	P	**P**	**13 41 15.7**	**+3.9**
DZM	**Mont Dzumac**	**12.61**	**278**	P	**P**	**13 41 24.5**	**+1.9**
DZM	**Mont Dzumac**	**12.61**	**278**	P	**P**	**13 41 21.6**	**-1.0**
	7.2nm,0.6s,baz=87,slow=18,SNR=9.0						
KUZ	**Kuaotunu**	**12.85**	**195**	P	P	13 41 30.2	+5.4
WIAZ	**Waiheke Island**	**13.04**	**197**	P	P	13 41 34.9	+8.1
MBAZ	**Motutapu North**	**13.09**	**198**	P	P	13 41 34.7	+7.5
MXZ	**Matakaoa Point**	**13.22**	**186**	P	**P**	**13 41 32.3**	**+3.6**
MKAZ	**Moumakai**	**13.33**	**197**	P	P	13 41 36.2	+6.4
WMGZ	**Waiomatatini S**	**13.46**	**185**	P	**P**	**13 41 33.8**	**+2.6**
HAZ	**Te Kaha**	**13.46**	**187**	P	**P**	**13 41 32.6**	**+1.4**
HAZ				S	**S**	**13 43 54.5**	**+0.1**
RUGZ	**Raukumara Rang**	**13.68**	**188**	P	**P**	**13 41 33.3**	**-0.4**
RUGZ				S	**S**	**13 43 59.7**	**+0.9**
PUZ	**Puketiti**	**13.73**	**186**	P	**P**	**13 41 35.8**	**+1.8**
PUZ				S	**S**	**13 43 58.0**	**-1.5**
URZ	**Urewera**	**14.05**	**189**	P	**P**	**13 41 37.3**	**0.0**
	14nm,1.0s,baz=34,slow=2.4,SNR=8.1						
URZ				S	**S**	**13 44 03.1**	**-2.5**
	6.5nm,0.6s,baz=325,slow=21,SNR=7.9						
URZ	**Urewera**	**14.05**	**189**	P	**P**	**13 41 37.3**	**0.0**
URZ				S	**S**	**13 44 02.7**	**-2.9**
MWZ	**Matawai**	**14.06**	**188**	P	**P**	**13 41 37.5**	**-0.1**
MWZ				S	**S**	**13 44 05.5**	**-0.6**
TLZ	**Tolley Road**	**14.40**	**194**	P	**P**	**13 41 44.1**	**+2.9**
BKZ	**Black Stump Fm**	**15.03**	**190**	P	**P**	**13 41 46.1**	**-1.5**
BKZ				IAmb	IAmb	13 42 00.8	
	comp=Z,14nm,1.4s						
BKZ	**Black Stump Fm**	**15.03**	**190**	P	**P**	**13 41 46.2**	**-1.5**
BKZ				S	**S**	**13 44 19.7**	**-4.8**
TMVZ	**Te Maari**	**15.12**	**193**	P	**P**	**13 41 48.9**	**+0.2**
ETVZ	**East Tongariro**	**15.14**	**193**	P	**P**	**13 41 48.6**	**-0.3**
SNVZ	**South Ngauruho**	**15.21**	**193**	P	**P**	**13 41 49.8**	**+0.1**
MRZ	**Mangatainoka R**	**16.64**	**192**	P	**P**	**13 42 02.5**	**-1.7**
QRZ	**Quartz Range**	**17.54**	**199**	P	**P**	**13 42 12.3**	**-0.3**
DSZ	**Denniston Nort**	**18.59**	**199**	P	**P**	**13 42 22.9**	**+0.6**
OXZ	**Oxford**	**19.99**	**197**	P	**P**	**13 42 37.4**	**+2.4**
ARMA	**Armidale**	**25.79**	**250**	P	**P**	**13 43 28.2**	**+0.9**
ARMA				IAmb	IAmb	13 43 31.8	
	comp=Z,8.1nm,1.2s						
EIDS	**Eidsvold**	**26.17**	**262**	P	**P**	**13 43 30.6**	**+0.2**
EIDS				IAmb	IAmb	13 43 31.9	
	comp=Z,7.7nm,1.1s						
CAN	**Canberra**	**28.85**	**241**	P	**P**	**13 43 55.0**	**+1.1**
CAN				IAmb	IAmb	13 44 02.7	
	comp=Z,30nm,1.4s						
CTAO	**Charters Tower**	**31.41**	**271**		**P**	**13 44 16.7**	**+0.5**
TOO	**Toolangi**	**32.13**	**238**	P	**P**	**13 44 22.9**	**+0.7**
TAU	**Tasmania Unive**	**32.56**	**227**	P	**P**	**13 44 26.5**	**+0.8**
STKA	**Stephens Creek**	**34.48**	**249**	P	**P**	**13 44 42.1**	**0.0**
STKA	**Stephens Creek**	**34.48**	**249**	P	**P**	**13 44 42.4**	**+0.3**
	comp=Z,2.8nm,0.5s,baz=96,slow=11,SNR=15						
	comp=Z,2.8nm,0.5s						
COEN	**Coen**	**36.12**	**280**	P	**P**	**13 44 55.8**	**-0.1**
COEN				IAmb	IAmb	13 45 10.6	
	comp=Z,18nm,1.1s						
BBOO	**Buckleboo**	**39.20**	**247**	P	**P**	**13 45 20.3**	**-0.6**
AS31	**Alice Springs**	**41.89**	**261**		**P**	**13 45 42.1**	**-0.4**
ASAR	**Alice Springs**	**41.89**	**261**	P	**P**	**13 45 42.1**	**-0.5**
ASAR	**Alice Springs**	**41.89**	**261**	P	**P**	**13 45 42.4**	**-0.2**
	comp=Z,2.1nm,0.4s,baz=99,slow=7.6,SNR=91						
ASAR				ScP	**ScP**	**13 50 29.4**	**+2.1**
	comp=Z,1.0nm,1.0s,baz=103,slow=4.6,SNR=4.9						
	comp=Z,2.1nm,0.4s						
WR8	**Warramunga Arr**	**42.16**	**267**		**P**	**13 45 43.8**	**-0.9**
WR8				IAmb	IAmb	13 45 44.7	
	comp=Z,9.1nm,1.0s						
WRAB	**Tennant Creek**	**42.30**	**267**	P	**P**	**13 45 44.9**	**-0.9**
WRAB				IAmb	IAmb	13 45 45.4	
	comp=Z,7.7nm,0.4s						
WB0	**Warramunga Arr**	**42.30**	**267**	P	**P**	**13 45 45.0**	**-0.9**
WB0				IAmb	IAmb	13 45 45.8	
	comp=Z,8.9nm,0.7s						
WRA	**Warramunga Arr**	**42.31**	**267**	P	**P**	**13 45 45.2**	**-0.7**
	comp=Z,7.3nm,0.4s,baz=98,slow=8.4,SNR=156						
WRA				ScP	**ScP**	**13 50 31.5**	**+2.4**
	comp=Z,2.4nm,0.9s,baz=103,slow=4.1,SNR=9.6						
	comp=Z,7.3nm,0.4s						
FORT	**Forrest**	**46.08**	**250**	P	**P**	**13 46 13.9**	**-1.0**
FORT				IAmb	IAmb	13 46 36.7	
	comp=Z,27nm,1.0s						
MTN	**Manton Dam**	**47.42**	**275**	P	**P**	**13 46 23.8**	**-1.4**
MTN				IAmb	IAmb	13 46 38.7	
	comp=Z,33nm,1.5s						
KNRA	**Kununurra**	**48.62**	**270**		**P**	**13 46 33.9**	**-0.3**
KNRA				IAmb	IAmb	13 46 34.3	
	comp=Z,8.4nm,0.7s						
FAKI	**Fak Fak**	**50.66**	**287**	P	**P**	**13 46 48.3**	**-0.9**
FAKI				IAmb	IAmb	13 46 58.1	
	comp=Z,15nm,1.2s						
FITZ	**Fitzroy Crossi**	**50.73**	**266**	P	**P**	**13 46 49.3**	**-0.3**
PSA00	**Pilbara Seismi**	**55.01**	**260**	P	**P**	**13 47 18.8**	**-1.5**
MBWA	**Marble Bar**	**55.22**	**260**	P	**P**	**13 47 21.0**	**-0.8**
MBWA				IAmb	IAmb	13 47 33.8	
	comp=Z,31nm,1.5s						
MORW	**Morawa**	**56.65**	**250**	P	**P**	**13 47 31.0**	**-0.6**
QSPA	**South Pole Qui**	**65.71**	**180**	P	**P**	**13 48 31.1**	**+0.6**
QSPA	**South Pole Qui**	**65.71**	**180**	P	**P**	**13 48 31.0**	**+0.5**
	comp=Z,1.2nm,0.6s,baz=312,slow=2.2,SNR=3.6						
	comp=Z,1.2nm,0.6s						
SLBS	**Sierra La Lagu**	**83.10**	**60**	P	**P**	**13 50 09.5**	**+0.3**
SLBS				IAmb	IAmb	13 50 25.6	
	comp=Z,23nm,1.4s						
O02D	**Mt. Diablo Mer**	**83.46**	**40**	P	**P**	**13 50 10.8**	**+0.2**
O02D				IAmb	IAmb	13 50 39.8	
	comp=Z,11nm,1.4s						
TPNV	**Topopah Spring**	**85.61**	**46**	P	**P**	**13 50 21.5**	**+0.1**
O18K	**Koktuh Hills**	**86.37**	**12**	P	**P**	**13 50 23.3**	**-1.0**
CNPM	**China Poot**	**86.90**	**14**	P	**P**	**13 50 26.2**	**-0.6**
CNPM				IAmb	IAmb	13 50 56.2	
	comp=Z,10nm,1.3s						
SUA	**Susitna One**	**88.75**	**14**	P	**P**	**13 50 34.7**	**-0.7**
SUA				IAmb	IAmb	13 50 47.9	
	comp=Z,3.8nm,1.0s						
TX31	**Lajitas Ar. Si**	**90.74**	**58**	P	**P**	**13 50 46.1**	**+0.6**
TXAR	**Lajitas Array**	**90.74**	**58**	P	**P**	**13 50 46.0**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=213,slow=6.9,SNR=10						
	comp=Z,1.2nm,0.7s						
HFS	**Hagfors**	**143.00**	**349**	PKhKP	PKPpre	13 57 08.1	
	comp=Z,1.6nm,0.4s,baz=48,slow=2.1,SNR=14						
EKA	**Eskdalemuir Ar**	**148.99**	**3**	PKPbc	**PKPbc**	**13 57 25.1**	**-1.6**
	comp=Z,0.3nm,0.4s,baz=339,slow=2.1,SNR=3.8						
CLL	**Collm**	**151.29**	**343**	*i* PKPbc	**PKPbc**	**13 57 31.9**	**-0.2**
CLL				AMS	AMS	14 45 00.0	
	comp=Z,100nm,19.9s						

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*NEIC **10** 13:44:27.1±1.2, 58°.70S±0°.04×25°.1W±0°.2, h21^{km}±5^{km}, mb4.9/35, Error ellipse: s-maj=14.7km s-min=5.8km az=87.0*

*IDC **10** 13:44:27.8±2.0, 58°.60S×25°.15W, h24^{km}±11^{km}, mb4.4/12, mbtmp4.6/13, ML5.4/1, MS4.4/31, Error ellipse: s-maj=19.6km s-min=14.0km az=52.0*

*GCMT **10** 13:44:31.1±0.2, 58°.81S±0°.02×24°.63W±0°.03, h24^{km}, MW5.1/105, Moment Tensor Solution. s61,c86; s105,c143; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$4.42±.21; M$_{\theta\theta}$-0.09±.15; M$_{\phi\phi}$-4.33±.14; M$_{r\theta}$1.68±.23; M$_{\theta\phi}$-1.36±.09; M$_{\phi r}$2.54±.18; Best double couple: M$_0$5.50000×10^{16} NP1:φ$_s$186.00000°, δ30.00000°, λ73.00000°. NP2:φ$_s$26.00000°, δ62.00000°, λ100.00000°. Principal axes: T 5.4130, Plg71.0000°, Azm318.0000°; N 0.1730, Plg9.0000°, Azm201.0000°; P -5.5870, Plg16.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 13:44:27.4±0.3, **58°.61S**±0°.08×**24°.94W**±0°.09, **h28**^{km}, **n408**, σ**0^{s}.95**/379, **mb4.8**/26, **MS4.5**/30, **2C-5D**, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.73**	**299**		**Pn**	**13 46 17.9**	**0.0**
VNA1	**Neumayer--Stat**	**13.96**	**157**	⇓P	**Pn**	**13 47 43.6**	**+0.6**
	comp=Z,38nm,0.3s						
VNA3	**Neumayer Olymp**	**14.16**	**160**	⇓P	**Pn**	**13 47 45.3**	**-0.6**
	comp=Z,19nm,0.3s						
VNA2	**Neumayer--Watz**	**14.36**	**156**	⇓P	**Pn**	**13 47 48.3**	**-0.1**
	comp=Z,15nm,0.2s,baz=321,slow=14						
SNAA	**Sanae**	**15.90**	**154**	⇓P	**Pn**	**13 48 09.3**	**+0.3**
	comp=Z,842nm,0.4s						
SNAA	**Sanae**	**15.90**	**154**	Pn	**Pn**	**13 48 08.7**	**-0.3**
SNAA				IAmb	IAmb	13 48 12.6	
	comp=Z,150nm,1.5s						
SNAA	**Sanae**	**15.90**	**154**	Pn	**Pn**	**13 48 09.0**	**+0.1**
	comp=Z,13nm,0.3s,baz=319,slow=14,SNR=917						
SNAA				LR	LR	13 53 00.3	
	comp=Z,2μm,21.3s,baz=310,slow=32						
	comp=Z,24nm,0.3s						
TROLL	**Troll, Antarti**	**17.41**	**151**	⇓P	**Pn**	**13 48 29.0**	**+1.0**
	comp=Z,841nm,0.4s						
PMSA	**Palmer Station**	**19.28**	**235**	LR	LR	13 55 26.7	
	comp=Z,1μm,18.1s,baz=86,slow=34						
BELA	**Belgrano 2**	**19.63**	**186**		**P**	**13 48 54.0**	**+0.7**
SMAI	**San Martin Ant**	**20.72**	**225**	Pn	**P**	**13 49 06.2**	**+1.1**
SYO	**Syowa Base**	**28.84**	**138**	⇑*e*pP	pP	13 50 26.6	-3.5
QSPA	**South Pole Qui**	**31.64**	**180**	P	**P**	**13 50 49.2**	**+1.4**
	comp=Z,6.0nm,1.0s,baz=302,slow=1.0,SNR=14						
QSPA				LR	LR	14 02 58.3	
	comp=Z,528nm,21.0s,baz=190,slow=35						
	comp=Z,6.0nm,1.0s						
PLTB	**Pedras Altas**	**33.12**	**312**		**P**	**13 51 00.3**	**-0.5**
PLTB				IAmb	IAmb	13 51 02.5	
	comp=Z,11nm,0.9s						
PLTB	**Pedras Altas**	**33.12**	**312**	*e*P	**P**	**13 51 00.4**	**-0.5**
PLCA	**Paso Flores**	**33.69**	**282**		**P**	**13 51 06.3**	**+0.5**
PLCA				IAmb	IAmb	13 51 09.4	
	comp=Z,23nm,1.1s						
PLCA	**Paso Flores**	**33.69**	**282**	P	**P**	**13 51 05.7**	**-0.2**
	comp=Z,15nm,1.0s,baz=134,slow=7.9,SNR=13						
PLCA				LR	LR	14 04 46.7	
	comp=Z,698nm,18.5s,baz=117,slow=36						
	comp=Z,15nm,1.0s						
PLCA	**Paso Flores**	**33.69**	**282**	*e*P	**P**	**13 51 04.7**	**-1.2**
CPSB	**Cacapava Do Su**	**34.26**	**313**	*e*P	**P**	**13 51 11.3**	**+0.5**
CNLB	**Canela**	**34.29**	**317**	*e*P	**P**	**13 51 12.2**	**+1.0**
ITQB	**Itaqui**	**36.17**	**309**	P	**P**	**13 51 27.1**	**-0.1**
ITQB				IAmb	IAmb	13 52 04.4	
	comp=Z,24nm,1.1s						
ITQB	**Itaqui**	**36.17**	**309**	*e*P	**P**	**13 51 26.3**	**-0.8**
ITAB	**Concordia**	**36.64**	**317**	*e*P	**P**	**13 51 31.4**	**+0.2**
BI02	**San Fabin de**	**37.14**	**286**		**P**	**13 51 34.9**	**-0.7**
BI02				IAmb	IAmb	13 51 49.1	
	comp=Z,9.7nm,0.8s						
MAW	**Mawson**	**37.37**	**141**	P	**P**	**13 51 37.9**	**+0.8**
	comp=Z,7.7nm,0.9s,baz=260,slow=9.0,SNR=7.0						
MAW				LR	LR	14 05 25.3	
	comp=Z,1μm,19.6s,baz=252,slow=34						
	comp=Z,7.7nm,0.9s						
BI05	**Punta Hualpn**	**38.05**	**283**	P	**P**	**13 51 42.9**	**-0.2**
PARB	**Paraibuna**	**38.21**	**328**	*e*P	**P**	**13 51 45.9**	**+1.3**
SPB	**Sao Paulo**	**38.48**	**326**	*e*P	**P**	**13 51 48.3**	**+1.4**
CAM01	**Campos-RJ**	**38.67**	**335**	*e*P	**P**	**13 51 50.0**	**+1.6**
BO01	**Tunca**	**38.83**	**288**		**P**	**13 51 49.1**	**-0.6**
BO01				IAmb	IAmb	13 51 52.8	
	comp=Z,24nm,1.1s						
VAO	**Valinhos**	**38.91**	**327**	*e*P	**P**	**13 51 52.2**	**+1.7**
BO04	**La Punta**	**38.92**	**289**	P	**P**	**13 51 49.7**	**-0.8**
BO04				IAmb	IAmb	13 52 04.1	
	comp=Z,26nm,1.1s						
PTGB	**Pitanga**	**38.92**	**319**	*e*P	**P**	**13 51 50.3**	**-0.4**
MT09	**Talagante**	**39.28**	**289**	P	**P**	**13 51 53.4**	**-0.3**
MT09				IAmb	IAmb	13 51 57.8	
	comp=Z,24nm,0.7s						
MT01	**Popeta**	**39.34**	**288**	P	**P**	**13 51 54.0**	**0.0**
MT01				IAmb	IAmb	13 52 11.1	
	comp=Z,18nm,0.8s						
FRTB	**Fartura**	**39.37**	**323**	*e*P	**P**	**13 51 56.1**	**+1.8**
CPUP	**Villa Florida**	**39.42**	**311**	P	**P**	**13 51 53.5**	**-1.2**
CPUP	**Villa Florida**	**39.42**	**311**	P	**P**	**13 51 53.5**	**-1.2**
	comp=Z,1.3nm,0.8s,baz=20,slow=8.0,SNR=7.6						
CPUP				LR	LR	14 07 00.1	
	comp=Z,151nm,20.9s,baz=16,slow=34						
	comp=Z,1.3nm,0.8s						
CPUP	**Villa Florida**	**39.42**	**311**	*e*P	**P**	**13 51 53.7**	**-0.9**
PEL	**Peldehue**	**39.64**	**290**	P	**P**	**13 51 56.3**	**-0.2**
VA05	**Santo Domingo**	**39.68**	**288**	P	**P**	**13 51 56.7**	**-0.1**
CFA	**Coronel Fontan**	**39.70**	**294**	P	**P**	**13 51 56.2**	**-0.9**
	comp=Z,1.6nm,0.5s,baz=161,slow=6.8,SNR=6.1						
CFA				LR	LR	14 08 07.8	
	comp=Z,567nm,20.6s,baz=173,slow=36						
	comp=Z,1.6nm,0.5s						
MT02	**Curacav**	**39.77**	**289**	P	**P**	**13 51 57.3**	**-0.2**
MT02				IAmb	IAmb	13 51 59.3	
	comp=Z,25nm,0.8s						
LDASE	**Londrina, Braz**	**39.83**	**321**	*e*P	**P**	**13 51 59.1**	**+0.9**
SJPY	**San Joaquin**	**40.14**	**313**	*e*P	**P**	**13 51 59.8**	**-0.9**
BSCB	**Bom Sucesso**	**40.22**	**331**	*e*P	**P**	**13 52 03.0**	**+1.6**
RIB01	**Linhares ES**	**40.83**	**337**	*e*P	**P**	**13 52 08.5**	**+2.0**
BB19B	**Bebedouro**	**41.19**	**325**	*e*P	**P**	**13 52 10.4**	**+0.9**
SJMB	**Sao Joao De Ma**	**41.59**	**336**	*e*P	**P**	**13 52 13.8**	**+1.2**
DIAM	**Diamantina, MG**	**42.54**	**333**	*e*P	**P**	**13 52 21.7**	**+1.1**
AC05	**El Transito**	**42.97**	**294**	IAmb	IAmb	13 52 41.1	
	comp=Z,17nm,0.8s						
PMNB	**Patos De Minas**	**43.00**	**329**	*e*P	**P**	**13 52 25.3**	**+1.0**
ITRB	**Iturama**	**43.03**	**324**	*e*P	**P**	**13 52 25.9**	**+1.4**
RPRD	**Ribas do Rio P**	**43.40**	**319**	*e*P	**P**	**13 52 27.3**	**-0.1**
IPMB	**Ipameri, GO**	**44.02**	**327**	*e*P	**P**	**13 52 33.6**	**+1.1**
VNDA	**Vanda**	**44.06**	**182**	P	**P**	**13 52 32.2**	**+0.1**
VNDA	**Vanda**	**44.06**	**182**	P	**P**	**13 52 33.5**	**+1.4**
	comp=Z,3.2nm,0.8s,baz=188,slow=5.9,SNR=15						
VNDA				LR	LR	14 09 54.8	
	comp=Z,230nm,21.5s,baz=178,slow=35						
	comp=Z,3.2nm,0.8s						
AQDB	**Aquidauana**	**44.11**	**316**	P	**P**	**13 52 32.2**	**-0.8**
AQDB	**Aquidauana**	**44.11**	**316**	*e*P	**P**	**13 52 32.0**	**-1.1**
BDQN	**Bodoquena, MS**	**44.52**	**315**	*e*P	**P**	**13 52 34.7**	**-1.6**
H04S2	**CROZET ISLANDS**	**45.45**	**110**	T	T	14 43 16.3	
	baz=225,slow=75,SNR=42						
H04S3	**CROZET ISLANDS**	**45.46**	**110**	T	T	14 43 23.1	
	baz=225,slow=75,SNR=8.4						
H04S1	**CROZET ISLANDS**	**45.47**	**110**	T	T	14 43 14.4	
	baz=225,slow=75,SNR=10						
BOSA	**Boshof**	**45.53**	**71**	P	**P**	**13 52 45.1**	**+0.6**
	comp=Z,6.6nm,0.7s,baz=206,slow=8.8,SNR=11						
BOSA				LR	LR	14 07 41.5	
	comp=Z,529nm,21.2s,baz=208,slow=30						
	comp=Z,6.6nm,0.7s						
JANB	**Januaria**	**45.81**	**333**	*e*P	**P**	**13 52 48.0**	**+1.2**
BDFB	**Brasilia**	**46.19**	**328**	P	**P**	**13 52 48.2**	**-1.5**
BDFB				IAmb	IAmb	13 52 52.0	
	comp=Z,18nm,0.9s						
BDFB	**Brasilia**	**46.19**	**328**	P	**P**	**13 52 51.0**	**+1.3**
	comp=Z,16nm,0.8s,baz=146,slow=5.8,SNR=15						
BDFB				LR	LR	14 11 57.3	
	comp=Z,388nm,18.0s,baz=157,slow=36						
	comp=Z,16nm,0.8s						
ARAG	**Araguaiana, MT**	**47.24**	**324**	*e*P	**P**	**13 52 58.6**	**+0.7**
SALV	**Santo Antonio**	**48.33**	**319**	*e*P	**P**	**13 53 06.2**	**-0.1**
SDBA	**SAO DESIDERIO**	**48.50**	**334**	*e*P	**P**	**13 53 09.0**	**+1.3**
LBTB	**Lobatse**	**48.69**	**69**		**P**	**13 53 10.3**	**+1.2**
LBTB	**Lobatse**	**48.69**	**69**	LR	LR	14 09 45.8	
	comp=Z,847nm,20.3s,baz=208,slow=31						
BBSD	**Serra de San D**	**48.95**	**312**	*e*P	**P**	**13 53 10.1**	**-1.0**
TSUM	**Tsumeb**	**49.97**	**57**	LR	LR	14 09 40.1	
	comp=Z,465nm,22.0s,baz=154,slow=30						
PTLB	**Pontes e Lacer**	**49.98**	**315**	P	**P**	**13 53 18.0**	**-0.9**
PTLB				IAmb	IAmb	13 53 58.4	
	comp=Z,9.8nm,0.9s						
PTLB	**Pontes e Lacer**	**49.98**	**315**	*e*P	**P**	**13 53 18.3**	**-0.6**
H10S2	**ASCENSION HYDR**	**50.16**	**13**	T	T	14 47 50.7	
	baz=187,slow=74,SNR=64						
H10S3	**ASCENSION HYDR**	**50.16**	**13**	T	T	14 47 51.0	
	baz=33,slow=74,SNR=85						
GO01	**Chusmiza**	**50.33**	**301**	IAmb	IAmb	13 53 51.8	
	comp=Z,12nm,1.2s						
SNDB	**Serra Nova Dou**	**50.61**	**326**	*e*P	**P**	**13 53 24.2**	**+0.6**
H10N1	**ASCENSION HYDR**	**51.28**	**13**	T	T	14 49 16.0	
	baz=181,slow=71,SNR=11						
H10N3	**ASCENSION HYDR**	**51.28**	**13**	T	T	14 49 16.1	
	baz=181,slow=71,SNR=32						
QNGWA	**Qangwa**	**51.29**	**61**		**P**	**13 53 30.5**	**+1.6**
H10N2	**ASCENSION HYDR**	**51.29**	**13**	T	T	14 49 16.9	
	baz=181,slow=71,SNR=26						
SMTB	**Santa Maria do**	**52.57**	**331**	*e*P	**P**	**13 53 39.6**	**+1.3**
VILB	**Vilhena**	**52.67**	**315**	P	**P**	**13 53 38.4**	**-0.7**
VILB	**Vilhena**	**52.67**	**315**	*e*P	**P**	**13 53 38.6**	**-0.5**
PDRB	**Porto dos Gac**	**52.67**	**320**	*e*P	**P**	**13 53 38.6**	**-0.5**
LPAZ	**La Paz**	**52.84**	**304**	P	**P**	**13 53 40.7**	**-0.4**
	comp=Z,3.6nm,0.5s,baz=128,slow=3.2,SNR=16						
	comp=Z,3.6nm,0.5s						
LPAZ	**La Paz**	**52.84**	**304**	*e*P	**P**	**13 53 40.4**	**-0.7**
PRPB	**Parauapebas**	**55.73**	**330**	*e*P	**P**	**13 54 02.5**	**+1.1**
NPGB	**Novo Progresso**	**56.51**	**323**	*e*P	**P**	**13 54 07.0**	**+0.1**
LSZ	**Lusaka**	**58.25**	**65**	LR	LR	14 16 06.6	
	comp=Z,875nm,19.5s,baz=194,slow=32						
TMAB	**Tom-Au,PA,Br**	**58.94**	**333**	*e*P	**P**	**13 54 25.9**	**+1.9**
ITTB	**Itaituba**	**59.15**	**324**	*e*P	**P**	**13 54 25.8**	**+0.3**
NNA	**Nana**	**60.54**	**298**	LR	LR	14 18 56.4	
	comp=Z,373nm,21.8s,baz=144,slow=34						
CZSB	**Cruzeiro do Su**	**62.45**	**304**	*e*P	**P**	**13 54 48.7**	**+0.7**
TEFE	**Tefe**	**63.01**	**314**	*e*P	**P**	**13 54 50.4**	**-1.3**
OPO	**Ambohidratompo**	**65.03**	**85**	LR	LR	14 16 48.2	
	comp=Z,226nm,21.7s,baz=14,slow=30						
ATAH	**Atahualpa**	**65.52**	**299**	LR	LR	14 21 24.1	
	comp=Z,242nm,21.8s,baz=182,slow=34						
DBIC	**Dimbokro**	**67.04**	**22**	P	**P**	**13 55 19.1**	**+1.4**
	comp=Z,14nm,0.9s,baz=191,slow=5.4,SNR=7.1						
DBIC				LR	LR	14 18 42.9	
	comp=Z,172nm,19.2s,baz=175,slow=31						
	comp=Z,14nm,0.9s						
BOAV	**Boa Vista**	**67.05**	**321**	P	**P**	**13 55 16.6**	**-1.3**
BOAV	**Boa Vista**	**67.05**	**321**	*e*P	**P**	**13 55 16.8**	**-1.1**
MDP	**Montagnes des**	**67.27**	**330**	LR	LR	14 22 03.9	
	comp=Z,198nm,21.6s,baz=145,slow=34						
OTAV	**Otavalo**	**72.08**	**302**	P	**P**	**13 55 48.8**	**-0.6**
OTAV				IAmb	IAmb	13 55 51.0	
	comp=Z,24nm,1.6s						
OTAV	**Otavalo**	**72.08**	**302**	*e*P	**P**	**13 55 49.6**	**+0.1**
BBTS	**Babate**	**73.33**	**8**	LR	LR	14 23 18.9	
	comp=Z,133nm,18.5s,baz=71,slow=32						
TORD	**Torodi Ar. Bea**	**74.74**	**27**		**P**	**13 56 05.8**	**+1.3**
TORD				IAmb	IAmb	13 56 14.8	
	comp=Z,11nm,1.1s						
TORD	**Torodi Ar. Bea**	**74.74**	**27**	P	**P**	**13 56 06.2**	**+1.7**
	comp=Z,4.1nm,0.4s,baz=200,slow=6.1,SNR=49						
	comp=Z,4.1nm,0.4s						
RUSC	**La Rusia**	**74.90**	**310**	IAmb	IAmb	13 56 05.6	
	comp=Z,17nm,1.2s						
PCRV	**Puerto La Cruz**	**75.70**	**320**	LR	LR	14 29 28.7	
	comp=Z,198nm,20.6s,slow=36						
BAUV	**El Baul**	**75.76**	**316**	P	**P**	**13 56 09.3**	**-1.1**
SDV	**Santo Domingo**	**76.67**	**313**	P	**P**	**13 56 15.1**	**-0.7**
SDV				IAmb	IAmb	13 56 16.5	
	comp=Z,7.1nm,0.8s						
SDV	**Santo Domingo**	**76.67**	**313**	LR	LR	14 30 58.7	
	comp=Z,496nm,19.9s,baz=140,slow=36						
SDV	**Santo Domingo**	**76.67**	**313**	*e*P	**P**	**13 56 15.3**	**-0.5**
NWAO	**Narrogin (SRO)**	**83.50**	**149**	LR	LR	14 30 32.5	
	comp=Z,240nm,19.7s,baz=281,slow=33						
TBI	**Tubuai**	**86.38**	**229**	*e*LR	LR	14 24 21.2	
	comp=Z,835nm,23.5s						
ATD	**Arta Tunnel**	**88.58**	**65**	LR	LR	14 35 12.4	
	comp=Z,24nm,18.9s,baz=177,slow=34						
STKA	**Stephens Creek**	**89.16**	**169**	LR	LR	14 34 24.0	
	comp=Z,284nm,21.5s,baz=203,slow=34						
PPT2	**Papeete2**	**91.60**	**232**	*e*LR	LR	14 26 51.2	
	comp=Z,198nm,21.0s						
PPT2				*e*LR	LR	14 26 53.7	
	comp=Z,188nm,22.5s						
PPT	**Papeete**	**91.62**	**232**	LR	LR	14 30 39.7	
	comp=Z,181nm,20.0s,baz=159,slow=30						
MDT	**Midelt**	**92.65**	**17**	LR	LR	14 34 22.8	
	comp=Z,207nm,19.3s,baz=230,slow=32						
ASAR	**Alice Springs**	**96.17**	**161**	P	**P**	**13 57 52.8**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=194,slow=4.9,SNR=8.6						
ASAR				LR	LR	14 39 15.7	
	comp=Z,404nm,19.0s,baz=209,slow=34						
	comp=Z,1.1nm,0.8s						
KEST	**Kesra**	**98.25**	**28**	LR	LR	14 38 08.4	
	comp=Z,135nm,18.8s,baz=252,slow=33						
DZM	**Mont Dzumac**	**99.07**	**191**	*e*LR	LR	14 30 15.7	
	comp=Z,151nm,23.1s						
ESDC	**Sonseca Array**	**99.47**	**16**	LR	LR	14 39 57.0	
	comp=Z,82nm,18.6s,baz=174,slow=34						
FITZ	**Fitzroy Crossi**	**99.82**	**152**	LR	LR	14 41 56.0	
	comp=Z,173nm,18.1s,baz=206,slow=34						
WRA	**Warramunga Arr**	**99.89**	**160**	LR	LR	14 41 40.9	
	comp=Z,384nm,19.4s,baz=177,slow=34						
PDAR	**Pinedale Array**	**122.71**	**299**	PKP	**PKPdf**	**14 03 19.4**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=134,slow=4.3,SNR=6.9						
ULM	**Lac du Bonnet**	**122.92**	**314**	PKP	**PKPdf**	**14 03 19.3**	**-0.3**
	comp=Z,0.9nm,0.4s,baz=340,slow=11,SNR=4.2						
CMAR	**Chiang Mai Arr**	**123.03**	**110**	PKP	**PKiKP**	**14 03 21.7**	**+0.6**
	comp=Z,0.7nm,0.4s,baz=237,slow=3.1,SNR=5.9						
NVAR	**Mina Array Bea**	**123.47**	**290**	PKP	**PKiKP**	**14 03 23.0**	**+1.3**
	comp=Z,1.9nm,0.8s,baz=156,slow=2.8,SNR=10						
FINES	**FINESS Array B**	**126.09**	**28**	PKP	**PKiKP**	**14 03 25.8**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=309,slow=6.1,SNR=4.5						
PZH	**PanZhiHua**	**131.18**	**107**	PKP	**PKPdf**	**14 03 35.4**	**-1.0**
ARCES	**ARCESS Array B**	**132.87**	**22**	PKP	**PKiKP**	**14 03 38.3**	**-0.9**
	comp=Z,1.1nm,0.5s,baz=270,slow=1.2,SNR=4.6						
BVAR	**Borovoye Array**	**135.10**	**58**	PKP	**PKiKP**	**14 03 44.5**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=197,slow=1.5,SNR=6.2						
BVAR				SKPbc	**SKPbc**	**14 07 10.5**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=163,slow=1.5,SNR=5.3						
MKAR	**Makanchi Array**	**136.52**	**72**	PKP	**PKiKP**	**14 03 47.5**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=158,slow=1.6,SNR=3.8						
MKAR				SKPbc	**SKPbc**	**14 07 16.1**	**+0.4**
	comp=Z,0.9nm,1.0s,baz=250,slow=3.6,SNR=4.8						
WMQ	**Urumqi**	**137.20**	**79**	*e*PKP	**PKiKP**	**14 03 49.2**	**+0.3**
WMQ				LR	LR		
	comp=Z,120nm,23.3s						
KURBB	**Kurchatov Arra**	**137.26**	**66**	PKP	**PKiKP**	**14 03 49.0**	**+0.4**
	comp=Z,0.5nm,0.2s,baz=237,slow=3.4,SNR=1.7						
KURBB				SKPbc	**SKPbc**	**14 07 18.4**	**+0.6**
	comp=Z,0.7nm,0.2s,baz=251,slow=2.9,SNR=6.6						
YKA	**Yellowknife Ar**	**138.87**	**315**	PKhKP	PKPpre	14 03 40.2	
	comp=Z,0.7nm,0.9s,baz=115,slow=2.7,SNR=6.2						
YKA				PKP	**PKiKP**	**14 03 50.2**	**-1.3**
	comp=Z,4.3nm,0.8s,baz=121,slow=1.7,SNR=36						
YKA				SKPbc	**SKPbc**	**14 07 23.0**	**+1.1**
	comp=Z,1.0nm,0.8s,baz=112,slow=2.2,SNR=5.1						
XAN	**Xi'an**	**140.89**	**108**	PKP	**PKiKP**	**14 03 57.4**	**+0.7**
ZALV	**Zalesovo Beam**	**142.36**	**66**	PKP	**PKiKP**	**14 03 57.3**	**-1.7**
	comp=Z,0.8nm,0.4s,baz=264,slow=1.5,SNR=3.7						
WRAK	**Wrangell Islan**	**142.69**	**299**	P	**PKPdf**	**14 03 56.3**	**-0.1**
	baz=124						
DLBC	**Dease Lake**	**142.78**	**303**	P	**PKPdf**	**14 03 56.1**	**-0.6**
	baz=123						
U33K	**Whale Pass**	**142.88**	**298**	P	**PKPdf**	**14 03 56.3**	**-0.5**
	baz=124						
T33K	**Petersburg**	**143.19**	**299**	P	**PKPdf**	**14 03 57.2**	**-0.1**
	baz=124						
TGTN	**Hyland Airport**	**143.68**	**308**	P	**PKPdf**	**14 03 57.7**	**-0.4**
	baz=120						
R33M	**Jennings River**	**143.71**	**304**	P	**PKPdf**	**14 03 57.9**	**-0.5**
	baz=122						
NJ2	**Nanjing**	**143.96**	**121**	*e*P	**PKiKP**	**14 04 02.1**	**-0.9**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
Q32M	**Nakina River**	**144.05**	**303**	P	**PKPdf**	**14 03 58.1**	**-0.9**
	baz=121						
S32K	**Killisnoo**	**144.29**	**299**	P	PKPbc	14 03 57.6	0.0
	baz=122						
SIT	**Sitka**	**144.42**	**298**	P	PKPbc	14 03 58.1	+0.1
	baz=122						
R32K	**Eaglecrest**	**144.69**	**301**	P	**PKPdf**	**14 03 59.4**	**-0.6**
	baz=121						
P33M	**Teslin, Yukon**	**144.93**	**304**	P	**PKPdf**	**14 04 00.3**	**-0.1**
	baz=120						
P32M	**Atlin**	**145.01**	**303**		**PKPdf**	**14 04 00.9**	**+0.4**
P32M	**Atlin**	**145.01**	**303**	P	**PKPdf**	**14 04 00.4**	**-0.2**
	baz=120						
S31K	**Pelican**	**145.31**	**299**	P	**PKPab**	**14 04 01.5**	**+0.4**
	baz=121						
R31K	**City Hall, Gus**	**145.32**	**300**	P	**PKPab**	**14 04 01.4**	**+0.3**
	baz=120						
MMPY	**Sheldon Lake,**	**145.44**	**309**		**PKPab**	**14 04 02.0**	**+0.5**
MMPY	**Sheldon Lake,**	**145.44**	**309**	P	**PKPab**	**14 04 01.6**	**+0.1**
	baz=117						

N32M	**Quiet Lake** baz=118	**145.51**	**306**	P	**PKPab**	**14 04 01.6**	**-0.2**
SKAG	**Skagway** baz=119	**145.66**	**302**	P	**PKPab**	**14 04 02.0**	**-0.3**
C36M	**Paulatuk** baz=113	**145.70**	**322**	P	**PKPab**	**14 04 02.4**	**+0.2**
WHY	**Whitehorse** baz=118	**146.05**	**304**	P	**PKPbc**	**14 04 03.1**	**-0.2**
PLBC	**Pleasant Camp** baz=119	**146.12**	**301**	P	**PKPbc**	**14 04 03.0**	**-0.4**
FARO	**Faro, Yukon** baz=117	**146.12**	**307**	P	**PKPbc**	**14 04 03.3**	**0.0**
HNS	**HongShan**	**146.41**	**111**	⇑PKPbc	**PKPab**	**14 04 06.3**	**+0.5**
BTO	**Baotou**	**146.51**	**102**	*e*PKPbc	**PKPdf**	**14 04 00.4**	**-3.4**
BTO				PKPab	**PKiKP**	**14 04 06.8**	**-1.3**
BTO				pPKP	**pPKPdf**	**14 04 10.6**	**-1.5**
BTO				sPKP		14 04 14.9	
BTO				PP	**PP**	**14 07 21.7**	**-7.4**
BTO				SKS	**SKSdf**	**14 11 06.5**	**-3.8**
BTO				SKKS	SKKSac	14 13 51.2	-27
M31M	**Drury Creek, Y** baz=116	**146.55**	**307**	P	**PKPbc**	**14 04 04.1**	**-0.5**
TIA	**Tai'an**	**146.62**	**115**	PKPbc	**PKPab**	**14 04 06.8**	**+0.1**
O30N	**Mendenhall** baz=117	**146.62**	**304**	P	**PKPbc**	**14 04 04.0**	**-0.9**
P30M	**Million Dollar** baz=118	**146.70**	**302**	P	**PKPbc**	**14 04 05.0**	**-0.2**
N31M	**Braeburn, Yuko** baz=116	**146.82**	**305**	P	**PKPbc**	**14 04 05.3**	**-0.1**
P29M	**Windy Craggy** baz=118	**146.82**	**301**	P	**PKPbc**	**14 04 05.3**	**-0.2**
A36M	**Sachs Harbour** baz=108	**147.03**	**326**	P	**PKPab**	**14 04 06.0**	**-1.2**
HYT	**Haines Junctio** baz=116	**147.27**	**303**	P	**PKPab**	**14 04 07.5**	**-1.2**
N30M	**Aishikik Lake** baz=116,SNR=16	**147.37**	**304**	P	**PKPbc**	**14 04 07.5**	**+0.5**
HHC	**Hu-ho-hao-te**	**147.48**	**104**	*e*P	**PKPdf**	**14 04 04.4**	**-1.0**
O29M	**Mount Kennedy** baz=116	**147.50**	**302**	P	**PKPbc**	**14 04 07.1**	**-0.4**
PNL	**Peninsula** baz=117	**147.58**	**300**	P	**PKPbc**	**14 04 08.0**	**+0.4**
YUK6	**Outpost Mounta** baz=116	**147.70**	**303**	P	**PKPbc**	**14 04 08.4**	**+0.3**
MAYO	**Mayo, Yukon** baz=113,SNR=7.9	**147.76**	**308**	P	**PKPbc**	**14 04 08.3**	**+0.3**
YUK4	**Talbot Arm** baz=115,SNR=23	**147.99**	**304**	P	**PKPbc**	**14 04 09.2**	**+0.4**
H31M	**Peel River** baz=111	**148.00**	**313**	P	**PKPbc**	**14 04 09.0**	**+0.4**
PINM	**Pinnacle** baz=116	**148.16**	**301**	P	**PKPbc**	**14 04 09.5**	**+0.3**
J30M	**Hart River** baz=112,SNR=28	**148.32**	**310**	P	**PKPbc**	**14 04 09.7**	**+0.2**
F31M	**Tsiigehtchic** baz=109,SNR=7.3	**148.34**	**316**	P	**PKPbc**	**14 04 09.5**	**+0.2**
G31M	**Satah River** baz=109,SNR=24	**148.36**	**315**	P	**PKiKP**	**14 04 09.8**	**-1.2**
M29M	**Somme Creek** baz=113,SNR=47	**148.37**	**306**	P	**PKiKP**	**14 04 10.7**	**-0.6**
O28M	**Mount Upton** baz=115,SNR=18	**148.43**	**302**	P	**PKiKP**	**14 04 10.9**	**-0.7**
YUK8	**Steele Glacier** baz=114,SNR=34	**148.46**	**303**	P	**PKiKP**	**14 04 11.0**	**-0.7**
L29M	**L29M** baz=113	**148.50**	**307**	P	**PKiKP**	**14 04 10.8**	**-0.6**
K29M	**Barlow Dome** baz=112,SNR=38	**148.53**	**308**	P	**PKiKP**	**14 04 10.6**	**-1.0**
INK	**Inuvik** baz=108,SNR=33	**148.54**	**318**	P	**PKiKP**	**14 04 10.2**	**-1.0**
I30M	**Mount Dempster** baz=110,SNR=92	**148.58**	**311**	P	**PKiKP**	**14 04 10.7**	**-1.0**
MESA	**MESA** baz=115	**148.96**	**300**	P	**PKiKP**	**14 04 12.3**	**-0.3**
YUK3	**Moose Creek** baz=113	**148.96**	**304**	P	**PKiKP**	**14 04 11.7**	**-1.0**
CTG	**Chitna Glacier** baz=114,SNR=13	**149.02**	**302**	P	**PKiKP**	**14 04 12.6**	**-0.1**
EPYK	**Eagle Plains** baz=108,SNR=30	**149.10**	**313**	P	**PKiKP**	**14 04 12.2**	**-0.4**
G30M	**tAoh Zraii Nji** baz=108,SNR=41	**149.11**	**314**	P	**PKiKP**	**14 04 12.0**	**-0.5**
F30M	**Barrier River** baz=107,SNR=28	**149.14**	**316**	P	**PKiKP**	**14 04 12.2**	**-0.4**
DAWY	**Dawson** baz=110	**149.38**	**308**	P	**PKiKP**	**14 04 12.3**	**-0.9**
I29M	**Ogilvie Camp,** baz=109,SNR=23	**149.38**	**311**	P	**PKiKP**	**14 04 12.3**	**-0.8**
BVCY	**Beaver Creek** baz=112	**149.39**	**305**	P	**PKiKP**	**14 04 12.9**	**-0.4**
BGLC	**Bering Glacier** baz=114	**149.54**	**300**	P	**PKiKP**	**14 04 13.1**	**-0.4**
SONM	**Songino Array** comp=Z,1.8nm,0.4s,baz=199,slow=2.3,SNR=11	**149.60**	**89**	PKPbc	**PKiKP**	**14 04 14.0**	**-0.3**
H29M	**Whitestone** baz=108,SNR=22	**149.69**	**313**	P	**PKiKP**	**14 04 13.3**	**-0.4**
CRQE	**Cirque** baz=113,SNR=8.5	**149.72**	**301**	P	**PKiKP**	**14 04 13.8**	**-0.3**
G29M	**Pine Creek** baz=107,SNR=52	**149.76**	**314**	P	**PKiKP**	**14 04 13.5**	**-0.4**
M27K	**Edge Creek, AK** baz=112	**149.81**	**304**	P	**PKiKP**	**14 04 13.7**	**-0.6**
MCARA	**McCarthy VSAT** baz=112	**149.94**	**302**	P	**PKiKP**	**14 04 14.7**	**+0.3**
KAIM	**Kayak Island** baz=114,SNR=5.2	**149.98**	**299**	P	**PKiKP**	**14 04 14.5**	**0.0**
L27K	**Beaver Creek,** baz=110	**150.04**	**306**	P	**PKiKP**	**14 04 14.8**	**+0.2**
I28M	**Miner Creek** baz=108,SNR=25	**150.06**	**311**	P	**PKiKP**	**14 04 14.3**	**-0.3**
E29M	**Blow River** baz=104,SNR=29	**150.12**	**317**	P	**PKiKP**	**14 04 14.0**	**-0.6**
M26K	**Nabesna, AK** baz=111	**150.31**	**304**	P	**PKiKP**	**14 04 15.3**	**+0.1**
K27K	**Chicken** baz=109	**150.48**	**307**	P	**PKiKP**	**14 04 15.9**	**+0.4**
BMRM	**Bremner River** baz=112,SNR=17	**150.48**	**301**	P	**PKiKP**	**14 04 16.0**	**+0.4**
D28M	**Stokes Point** baz=102	**150.64**	**319**	P	**PKiKP**	**14 04 16.2**	**+0.7**
F28M	**Old Crow** baz=104,SNR=44	**150.65**	**315**	P	**PKiKP**	**14 04 15.7**	**0.0**
Q23K	**Middleton Isla** baz=114	**150.67**	**297**	P	**PKiKP**	**14 04 16.9**	**+1.0**
L26K	**Log Cabin Wild** baz=110,SNR=61	**150.68**	**305**	P	**PKiKP**	**14 04 16.4**	**+0.5**
N25K	**Chitina, Valde** baz=111,SNR=18	**150.72**	**302**	P	**PKiKP**	**14 04 17.0**	**+0.9**
E28M	**Babbage River** baz=102	**150.76**	**317**	P	**PKiKP**	**14 04 15.5**	**-0.4**
I27K	**Kandik River** baz=106,SNR=50	**150.77**	**311**	P	**PKiKP**	**14 04 16.5**	**+0.4**
EYAK	**Cordova Ski Ar** baz=112,SNR=20	**150.84**	**299**	P	**PKiKP**	**14 04 17.1**	**+0.8**
H27K	**Steamboat Moun** baz=105,SNR=50	**150.91**	**312**	P	**PKiKP**	**14 04 16.4**	**+0.1**
G27K	**Doyon Strip** baz=104,SNR=14	**151.12**	**313**	P	**PKiKP**	**14 04 17.2**	**+0.5**
J26L	**Joseph Creek** baz=107,SNR=51	**151.24**	**308**	P	**PKiKP**	**14 04 17.8**	**+0.7**
HARP	**HAARP** baz=110	**151.25**	**303**	P	**PKiKP**	**14 04 17.8**	**+0.8**
SCRK	**Sand Creek** baz=108,SNR=60	**151.26**	**307**	P	**PKiKP**	**14 04 17.9**	**+0.7**
KLU	**Klutina** baz=111,SNR=33	**151.27**	**301**	P	**PKiKP**	**14 04 18.5**	**+1.3**
I26K	**Coal Creek Min** baz=106,SNR=57	**151.31**	**310**	P	**PKiKP**	**14 04 17.5**	**+0.4**
P23K	**Montague Islan** baz=112,SNR=13	**151.38**	**298**	P	**PKiKP**	**14 04 17.9**	**+0.5**
D27M	**Malcolm River** baz=100	**151.40**	**318**	P	**PKiKP**	**14 04 18.2**	**+0.9**
E27K	**Coleen River** baz=102,SNR=16	**151.41**	**316**	P	**PKiKP**	**14 04 17.7**	**+0.5**
RIDG	**Independent Ri** baz=107,SNR=104	**151.55**	**306**	P	**PKiKP**	**14 04 18.6**	**+0.9**
PAX	**Paxson** baz=108,SNR=20	**151.57**	**304**	P	**PKiKP**	**14 04 18.2**	**+0.3**
GLI	**Glacier Island** baz=111,SNR=6.0	**151.58**	**300**	P	**PKiKP**	**14 04 18.3**	**+0.5**
M24K	**Tolsona, Glenn** baz=109,SNR=26	**151.60**	**302**	P	**PKiKP**	**14 04 19.0**	**+1.2**
K24K	**Donnelly Dome** baz=107,SNR=7.3	**151.96**	**306**	P	**PKiKP**	**14 04 19.1**	**+0.6**
G26K	**Porcupine Rive** baz=102,SNR=29	**151.97**	**313**	P	**PKiKP**	**14 04 18.9**	**+0.6**
XLT	**XiLinHaoTe**	**151.99**	**104**	*e*PKPbc	**PKPab**	**14 04 28.9**	**+0.4**
XLT				sPKP		14 04 43.9	
SCM	**Sheep Creek Mo** baz=109,SNR=24	**152.02**	**301**	P	**PKiKP**	**14 04 19.3**	**+0.5**
J25K	**Salcha River,** baz=105,SNR=23	**152.02**	**308**	P	**PKiKP**	**14 04 19.3**	**+0.6**
PWL	**Port Wells** baz=110,SNR=29	**152.13**	**299**	P	**PKiKP**	**14 04 19.6**	**+0.6**
M23K	**Glacier View** baz=109,SNR=18	**152.18**	**301**	P	**PKiKP**	**14 04 19.6**	**+0.6**
F26K	**Sheenjek River** baz=100,SNR=28	**152.26**	**314**	P	**PKiKP**	**14 04 20.2**	**+1.1**
PRP	**Porcupine Dome** baz=104,SNR=14	**152.32**	**309**	P	**PKiKP**	**14 04 20.1**	**+0.7**
SEW	**Seward** baz=111,SNR=7.1	**152.38**	**297**	P	**PKiKP**	**14 04 20.1**	**+0.7**
KNK	**Knik Glacier** baz=109,SNR=7.5	**152.38**	**300**	P	**PKiKP**	**14 04 20.0**	**+0.6**
C27K	**Jago River** baz=97	**152.42**	**318**	P	**PKiKP**	**14 04 20.1**	**+0.9**
DHY	**Denali Highway** baz=107,SNR=19	**152.43**	**304**	P	**PKiKP**	**14 04 20.5**	**+0.8**
WAT6	**Susitna Watana** baz=108,SNR=31	**152.44**	**303**	P	**PKiKP**	**14 04 20.4**	**+0.7**
KSRS	**Korea Array** comp=Z,1.5nm,0.9s,baz=243,slow=1.1,SNR=4.1	**152.46**	**128**	PKPbc	**PKiKP**	**14 04 21.4**	**+1.1**
SML	**Sawmill** baz=109,SNR=18	**152.46**	**301**	P	**PKiKP**	**14 04 20.4**	**+0.8**
H25L	**Birch Creek** baz=102	**152.61**	**311**	P	**PKiKP**	**14 04 21.1**	**+1.3**
HDA	**Harding Lake** baz=105,SNR=8.1	**152.62**	**307**	P	**PKiKP**	**14 04 20.3**	**+0.5**
O22K	**Cooper Landing** baz=110	**152.64**	**298**	P	**PKiKP**	**14 04 20.8**	**+0.9**
ILAR	**Eielson Array** comp=Z,0.4nm,0.8s,baz=229,slow=1.3,SNR=4.1	**152.69**	**308**	PKP	**PKPdf**	**14 04 11.6**	**-1.1**
ILAR comp=Z,18nm,0.8s,baz=142,slow=1.5,SNR=120				PKPbc	**pPKPdf**	**14 04 20.5**	**-0.6**
PMR	**Palmer** baz=109,SNR=10	**152.75**	**300**	P	**PKiKP**	**14 04 21.0**	**+0.9**
F25K	**Christian Rive** baz=100,SNR=15	**152.80**	**314**	P	**PKiKP**	**14 04 21.3**	**+1.1**
G25K	**Bearman Lake** baz=101	**152.82**	**312**	P	**PKiKP**	**14 04 21.5**	**+1.3**
BRSE	**Bradley Lake S** baz=111,SNR=10.0	**152.85**	**296**	P	**PKiKP**	**14 04 21.3**	**+0.8**
RC01	**Rabbit Creek A** baz=109,SNR=9.1	**152.86**	**299**	P	**PKiKP**	**14 04 21.6**	**+1.2**
E25K	**Arctic Village** baz=99,SNR=25	**152.86**	**315**	P	**PKiKP**	**14 04 21.4**	**+1.1**
C26K	**Camden Bay** baz=96	**152.87**	**319**	P	**PKiKP**	**14 04 21.4**	**+1.3**
WAT1	**Susitna Watana** baz=107	**152.87**	**303**	P	**PKiKP**	**14 04 21.5**	**+1.0**
KDAK	**Kodiak Island** baz=114	**152.97**	**291**	P	**PKiKP**	**14 04 21.5**	**+0.8**
POKR	**Poker Plat Res** baz=103	**153.00**	**308**	P	**PKiKP**	**14 04 21.5**	**+0.9**
OHAK	**Old Harbor** baz=115	**153.08**	**290**	P	**PKiKP**	**14 04 22.1**	**+1.2**
COLA	**College** baz=103	**153.12**	**308**	P	**PKiKP**	**14 04 21.4**	**+0.6**
Q20K	**Shuyak Island** baz=112	**153.21**	**293**	P	**PKiKP**	**14 04 22.1**	**+0.9**
SII	**Sitkinak Islan** baz=116	**153.24**	**288**	P	**PKiKP**	**14 04 22.6**	**+1.2**
HOM	**Homer** baz=111	**153.24**	**295**	P	**PKiKP**	**14 04 22.3**	**+1.1**
M22K	**Willow** baz=108,SNR=21	**153.25**	**300**	P	**PKiKP**	**14 04 22.2**	**+1.1**
MCK	**McKinley** baz=105	**153.29**	**305**	P	**PKiKP**	**14 04 22.5**	**+1.2**
D25K	**Kavik River** baz=96	**153.31**	**318**	P	**PKiKP**	**14 04 22.1**	**+0.9**
H24K	**Noodor Dome** baz=101	**153.34**	**310**	P	**PKiKP**	**14 04 22.2**	**+0.9**
G24K	**Hadweenzic Riv** baz=100,SNR=14	**153.35**	**312**	P	**PKiKP**	**14 04 22.3**	**+1.0**
SUA	**Susitna One** baz=108	**153.44**	**299**	P	**PKiKP**	**14 04 22.5**	**+0.8**
CUT	**Chulitna** baz=106,SNR=6.3	**153.51**	**302**	P	**PKiKP**	**14 04 22.7**	**+1.0**
NEA2	**Nenana** baz=103	**153.56**	**307**	P	**PKiKP**	**14 04 22.4**	**+0.6**
CHIR	**Chirikof Islan** baz=116	**153.63**	**285**	P	**PKiKP**	**14 04 23.0**	**+0.9**
F24K	**Squaw Lake** baz=98,SNR=11	**153.64**	**313**	P	**PKiKP**	**14 04 23.1**	**+1.2**
R18K	**Karluk** baz=114	**153.80**	**290**	P	**PKiKP**	**14 04 23.4**	**+1.0**
I23K	**Minto, Yukon-K** baz=102	**153.80**	**308**	P	**PKiKP**	**14 04 23.1**	**+0.9**
TRF	**Thorofare Moun** baz=104	**153.80**	**304**	P	**PKiKP**	**14 04 23.2**	**+0.7**
O20K	**Slope Mountain** baz=110	**153.86**	**296**	P	**PKiKP**	**14 04 23.5**	**+0.9**
Q19K	**Cape Douglas,** baz=111	**153.93**	**293**	P	**PKiKP**	**14 04 23.4**	**+0.6**
E24K	**Your Creek** baz=96,SNR=13	**153.94**	**315**	P	**PKiKP**	**14 04 23.6**	**+1.1**
SKT	**Skwentna** baz=106,SNR=14	**153.95**	**300**	P	**PKiKP**	**14 04 23.4**	**+0.7**
P19K	**Oil Pt** baz=110	**154.00**	**295**	P	**PKiKP**	**14 04 23.5**	**+0.7**
H23K	**Yukon River** baz=100	**154.01**	**309**	P	**PKiKP**	**14 04 23.4**	**+0.6**
N20K	**Mount Spurr** baz=108	**154.03**	**298**	P	**PKiKP**	**14 04 23.5**	**+0.6**
SPCR	**Spurr Chakacha** baz=108	**154.03**	**298**	P	**PKiKP**	**14 04 23.6**	**+0.7**
C24K	**Franklin Bluff** baz=93	**154.16**	**318**	P	**PKiKP**	**14 04 23.8**	**+1.0**
D24K	**Happy Valley** baz=94	**154.17**	**317**	P	**PKiKP**	**14 04 23.8**	**+0.9**
BPAW	**Bear Paw Mtn.** baz=102,SNR=22	**154.26**	**305**	P	**PKiKP**	**14 04 24.0**	**+0.7**
G23K	**Bananza Creek** baz=98,SNR=12	**154.35**	**311**	P	**PKiKP**	**14 04 24.5**	**+1.1**
MLY	**Manley** baz=101,SNR=5.0	**154.35**	**307**	P	**PKiKP**	**14 04 24.0**	**+0.5**
E23K	**Chandalar** baz=95	**154.36**	**314**	P	**PKiKP**	**14 04 24.5**	**+1.0**
TOLK	**Toolik Lake Re** baz=94	**154.40**	**316**	P	**PKiKP**	**14 04 24.6**	**+1.1**
COLD	**Coldfoot** baz=97,SNR=7.9	**154.49**	**312**	P	**PKiKP**	**14 04 24.8**	**+1.2**
Q18K	**Katmai Hardscr** baz=111	**154.49**	**292**	P	**PKiKP**	**14 04 24.6**	**+0.6**
PPLA	**Purkeypile** baz=104,SNR=7.8	**154.50**	**302**	P	**PKiKP**	**14 04 24.8**	**+0.8**
CAST	**Castle Rocks** baz=103,SNR=15	**154.58**	**303**	P	**PKiKP**	**14 04 24.7**	**+0.8**
M20K	**Styx River** baz=106	**154.65**	**300**	P	**PKiKP**	**14 04 24.9**	**+0.6**
O19K	**Port Alsworth** baz=108	**154.69**	**295**	P	**PKiKP**	**14 04 24.8**	**+0.6**
H22K	**Ishtalitna Cre** baz=98,SNR=6.5	**154.77**	**309**	P	**PKiKP**	**14 04 25.5**	**+1.3**
Q17K	**Contact Creek** baz=112	**154.78**	**290**	P	**PKiKP**	**14 04 24.9**	**+0.4**
CHUM	**Lake Minchumin** baz=102,SNR=9.7	**154.78**	**304**	P	**PKiKP**	**14 04 24.9**	**+0.6**
D23K	**Nanushuk River** baz=92	**154.82**	**316**	P	**PKiKP**	**14 04 25.3**	**+1.0**
C23K	**Itkillik River** baz=91	**154.83**	**319**	P	**PKiKP**	**14 04 25.4**	**+1.1**
P18K	**Big Mountain,** baz=110	**154.86**	**293**	P	**PKPbc**	**14 04 24.2**	**-0.4**
I21K	**Tanana** baz=100	**154.90**	**307**	P	**PKiKP**	**14 04 24.4**	**-0.1**
G22K	**Bettles** baz=96	**154.96**	**312**	P	**PKiKP**	**14 04 26.1**	**+1.5**
N19K	**Bonanza Creek** baz=107	**154.96**	**297**	P	**PKiKP**	**14 04 26.0**	**+1.1**
O18K	**Koktuh Hills** baz=109	**155.00**	**294**	P	PKPdf	14 04 26.1	+10
L20K	**Farewell, AK** baz=104	**155.15**	**301**	P	**PKPab**	**14 04 41.2**	**-0.1**
E22K	**Anaktuvuk Pass** baz=93	**155.19**	**314**	P	**PKPab**	**14 04 41.1**	**-0.2**
CHNA	**Chernabura Isl** baz=117	**155.21**	**281**	P	**PKPab**	**14 04 41.6**	**0.0**
M19K	**Big River Lodg** baz=105	**155.23**	**299**	P	**PKPab**	**14 04 41.5**	**-0.1**
F22K	**John River** baz=94	**155.28**	**313**	P	**PKPab**	**14 04 41.6**	**-0.1**
H21K	**Melozitna Rive** baz=98	**155.31**	**308**	P	**PKPab**	**14 04 41.7**	**-0.2**
R16K	**Pilot Point** baz=112	**155.34**	**288**	P	**PKPab**	**14 04 42.2**	**0.0**
P17K	**Kvichak River** baz=109	**155.38**	**292**	P	**PKPab**	**14 04 42.6**	**+0.3**
K20K	**Telida** baz=102	**155.44**	**303**	P	**PKPab**	**14 04 42.9**	**+0.4**
L19K	**White Mountain** baz=104	**155.51**	**300**	P	**PKPab**	**14 04 42.8**	**-0.1**
D22K	**Ayikyak River** baz=91	**155.54**	**316**	P	**PKPab**	**14 04 42.9**	**+0.1**
N18K	**Kilae Creek** baz=107	**155.58**	**296**	P	**PKPab**	**14 04 43.1**	**0.0**
J20K	**Nowinta River** baz=100	**155.63**	**305**	P	**PKPab**	**14 04 43.7**	**+0.5**
F21K	**Alatna River** baz=94	**155.76**	**312**	P	**PKPab**	**14 04 43.6**	**-0.2**
M18K	**Stony River** baz=105	**155.78**	**298**	P	**PKPab**	**14 04 43.8**	**-0.2**
B22K	**Teshekpuk Lake** baz=87	**155.78**	**320**	P	**PKPab**	**14 04 43.2**	**-0.5**
S14K	**Fog Glacier** baz=114	**155.82**	**284**	P	**PKPab**	**14 04 44.0**	**-0.4**
I20K	**Naaghedeneel** baz=98	**155.88**	**306**	P	**PKPab**	**14 04 43.9**	**-0.3**
O17K	**Koliganek Bris** baz=108	**155.88**	**293**	P	**PKPab**	**14 04 44.2**	**-0.3**
SDPT	**Sand Point** baz=116	**155.89**	**282**	P	**PKPab**	**14 04 44.4**	**-0.2**
E21K	**Killik River** baz=91	**156.00**	**315**	P	**PKPab**	**14 04 44.5**	**-0.3**
P16K	**Nushagak River** baz=109	**156.08**	**291**	P	**PKPab**	**14 04 44.8**	**-0.5**
H20K	**Anotleneega Mo** baz=97	**156.15**	**308**	P	**PKPab**	**14 04 45.1**	**-0.4**
N17K	**Nushagak Hills** baz=106	**156.15**	**295**	P	**PKPab**	**14 04 45.1**	**-0.5**
B21K	**Ikpikpuk River** baz=87	**156.22**	**318**	P	**PKPab**	**14 04 45.2**	**-0.4**
J19K	**Poorman** baz=99	**156.24**	**304**	P	**PKPab**	**14 04 45.4**	**-0.5**
A22K	**Sinclair Lake** baz=84	**156.25**	**321**	P	**PKPab**	**14 04 45.0**	**-0.7**
C21K	**Knifeblade Rid** baz=88	**156.30**	**317**	P	**PKPab**	**14 04 45.6**	**-0.4**
O16K	**Kokwok River B** baz=108	**156.31**	**293**	P	**PKPab**	**14 04 45.7**	**-0.6**
L18K	**Granite Mounta** baz=103	**156.36**	**299**	P	**PKPab**	**14 04 47.2**	**+0.7**
M17K	**Holitna River** baz=104	**156.51**	**297**	P	**PKPab**	**14 04 47.9**	**+0.8**
F20K	**Avaraart Lake** baz=92	**156.62**	**312**	P	**PKPab**	**14 04 48.0**	**+0.6**
J18K	**Innoko River** baz=100	**156.62**	**302**	P	**PKPab**	**14 04 48.2**	**+0.6**
A21K	**Barrow** baz=81	**156.75**	**322**	P	**PKPab**	**14 04 48.7**	**+0.9**
H19K	**Roundabout Mou** baz=95	**156.80**	**308**	P	**PKPab**	**14 04 49.0**	**+0.8**
E20K	**Nigu River** baz=89	**156.82**	**315**	P	**PKPab**	**14 04 48.6**	**+0.2**
S12K	**Black Hills** baz=115	**156.86**	**281**	P	**PKPab**	**14 04 49.8**	**+1.0**
N16K	**Nishlik Lake** baz=105	**156.89**	**294**	P	**PKPab**	**14 04 49.7**	**+0.9**
GCSA	**Galena City Sc** baz=97	**156.89**	**306**	P	**PKPab**	**14 04 49.5**	**+0.8**
O15K	**Ungalikthiuk R** baz=108	**157.02**	**291**	P	**PKPab**	**14 04 50.0**	**+0.7**
L17K	**Donlin** baz=102	**157.07**	**299**	P	**PKPab**	**14 04 50.2**	**+0.6**
B20K	**Meade River** baz=84	**157.08**	**319**	P	**PKPab**	**14 04 50.3**	**+1.0**
G19K	**Purcell Mounta** baz=93	**157.11**	**309**	P	**PKPab**	**14 04 50.2**	**+0.6**
M16K	**Timber Creek** baz=104	**157.12**	**296**	P	**PKPab**	**14 04 50.4**	**+0.6**
K17K	**Iditarod** baz=100	**157.19**	**300**	P	**PKPab**	**14 04 50.7**	**+0.7**
E19K	**Redstone River** baz=90	**157.22**	**313**	P	**PKPab**	**14 04 50.0**	**0.0**
F19K	**Shaleruckik Mo** baz=91	**157.42**	**311**	P	**PKPab**	**14 04 51.0**	**+0.1**
N15K	**Kwethluk River** baz=105	**157.44**	**293**	P	**PKPab**	**14 04 51.7**	**+0.5**
L16K	**Owhat River** baz=102	**157.53**	**297**	P	**PKPab**	**14 04 52.2**	**+0.8**
H18K	**Honhosa River** baz=94	**157.56**	**306**	P	**PKPab**	**14 04 52.2**	**+0.6**
J17K	**VABM Dome** baz=98	**157.66**	**302**	P	**PKPab**	**14 04 53.0**	**+0.9**
G18K	**Tagagawik** baz=92	**157.74**	**308**	P	**PKPab**	**14 04 53.1**	**+0.8**
O14K	**Tigyukauivet M** baz=107	**157.75**	**290**	P	**PKPab**	**14 04 53.3**	**+0.9**
M15K	**Kasigluk River** baz=104	**157.86**	**294**	P	**PKPab**	**14 04 53.9**	**+0.9**
C19K	**Lookout Ridge** baz=84	**158.02**	**317**	P	**PKPab**	**14 04 54.3**	**+0.8**
N14K	**Kuskokwak Cree** baz=105	**158.14**	**292**	P	**PKPab**	**14 04 54.7**	**+0.5**
F18K	**Selawik** baz=90	**158.16**	**310**	P	**PKPab**	**14 04 54.2**	**+0.2**
H17K	**Granite Mounta** baz=94	**158.20**	**306**	P	**PKPab**	**14 04 55.5**	**+1.2**
J16K	**Anvik River** baz=97	**158.32**	**301**	P	**PKPab**	**14 04 55.8**	**+0.9**
A19K	**Wainwright** baz=79	**158.38**	**320**	P	**PKPab**	**14 04 55.5**	**+0.5**
I17K	**Unalakleet** baz=96	**158.44**	**303**	P	**PKPab**	**14 04 56.1**	**+0.8**
L15K	**Ungalak Mounta** baz=101	**158.46**	**297**	P	**PKPab**	**14 04 55.9**	**+0.4**
M14K	**Bethel** baz=103	**158.48**	**294**	P	**PKPab**	**14 04 56.2**	**+0.6**
E18K	**Tukpahlearik C** baz=87	**158.52**	**313**	P	**PKPab**	**14 04 56.3**	**+0.7**
G17K	**Kiwalik Mounta** baz=92	**158.54**	**307**	P	**PKPab**	**14 04 56.4**	**+0.6**
K15K	**Wolf Creek Mou** baz=99	**158.59**	**298**	P	**PKPab**	**14 04 57.0**	**+0.9**
C18K	**Utukok River** baz=83	**158.65**	**316**	P	**PKPab**	**14 04 56.8**	**+0.5**
B18K	**Kokolik River** baz=80	**158.77**	**318**	P	**PKPab**	**14 04 57.5**	**+0.8**
F17K	**Baldwin Pennin** baz=89	**158.80**	**310**	P	**PKPab**	**14 04 57.7**	**+0.9**
L14K	**Kuka Creek** baz=101	**158.95**	**295**	P	**PKPab**	**14 04 58.3**	**+0.7**
E17K	**Hotham Inlet** baz=86	**159.01**	**312**	P	**PKPab**	**14 04 58.2**	**+0.5**
M13K	**Dall Lake** baz=103	**159.07**	**293**	P	**PKPab**	**14 04 59.1**	**+0.9**
NIKH	**Nikolski High** baz=120	**159.13**	**270**	P	**PKPab**	**14 04 59.4**	**+0.7**
G16K	**Koyuk River** baz=90	**159.25**	**307**	P	**PKPab**	**14 04 59.1**	**+0.3**
RDOG	**Red Dog Mine** baz=83	**159.34**	**314**	P	**PKPab**	**14 04 59.8**	**+0.5**
C17K	**DeLong Mountai** baz=81	**159.39**	**316**	P	**PKPab**	**14 04 59.9**	**+0.5**
D17K	**Noatak River** baz=84	**159.45**	**313**	P	**PKPab**	**14 05 00.4**	**+0.8**
J14K	**Nanvaranak Lak** baz=97	**159.59**	**299**	P	**PKPab**	**14 05 01.8**	**+1.5**
G15K	**Niukluk** baz=90	**159.96**	**306**	P	**PKPab**	**14 05 02.5**	**+0.6**
K13K	**Kusilvak Mount** baz=98	**159.98**	**297**	P	**PKPab**	**14 05 03.3**	**+1.2**
F15K	**North Star Dit** baz=88	**160.21**	**308**	P	**PKPab**	**14 05 03.9**	**+0.9**
C16K	**Lisburne Hills** baz=80	**160.22**	**315**	P	**PKPab**	**14 05 03.8**	**+0.8**
M11K	**Mekoryuk** baz=101	**160.45**	**292**	P	**PKPab**	**14 05 04.3**	**+0.1**
ANM	**Nome** baz=90	**160.52**	**304**	P	**PKPab**	**14 05 05.0**	**+0.6**
F14K	**Arctic Creek** baz=86	**160.91**	**307**	P	**PKPab**	**14 05 05.4**	**-0.7**
P08K	**Saint George I** baz=111	**161.07**	**279**	P	**PKPab**	**14 05 06.6**	**-0.4**
TNA	**Tin City** baz=85	**161.57**	**308**	P	**PKPab**	**14 05 08.1**	**-0.8**
SPIA	**Saint Paul Isl** baz=109	**161.62**	**280**	P	**PKPab**	**14 05 10.1**	**+0.7**
GAMB	**Gambell** baz=87	**163.31**	**302**	P	**PKPab**	**14 05 12.1**	**-4.6**

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*IDC **10** 14:06:06.2±1.5, 9.°71S×122.°25E, h0^{km}, mb4.0/2, mbtmp3.6/5, ML3.3/3, Error ellipse: s-maj=143.6km*

s-min=24.2km az=59.0

*DJA **10** 14:06:15.2±0.5, 10°S±6°×12°2E±°, h51km±30km, M3.6/9, MLv3.6/9*

ISC 10 14:06:10.3±0.8, **10°.09S**±0°.06×**122°.10E**±0°.06, **h35km, n16,** σ2s.**41**/20, **mb4.1**/3, **1C, Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDFI	Ende, Flores	1.39	343	P	Pn	14 06 33.9	+0.6
MMRI	Maumere	1.45	6	P	Pn	14 06 36.7	+2.7
BASI	Baing, Sumba	1.50	265	P	Pn	14 06 36.5	+1.8
BASI				S	Sn	14 06 53.0	-0.1
BATI	Baumata	1.55	94	P	Pn	14 06 44.5	+9.1
WSI	Waingapu	1.82	283	P	Pn	14 06 41.0	+1.9
SOEI	Soe	2.17	81	P	Pn	14 06 52.8	+8.8
WBSI	Waikabubak, Su	2.70	279	P	Pn	14 06 52.4	+1.1
WBSI				S	Sn	14 07 20.8	-2.0
BSSI	Bau Bau, Buton	4.23	338	P	Pn	14 07 13.0	+0.7
PLAI	Plampang	4.44	286	P	Pn	14 07 16.6	+1.4
PLAI				S	Sn	14 08 03.2	-2.5
FITZ	Fitzroy Crossi	8.67	157	Pn	Pn	14 08 17.1	+3.8
	0.3nm,0.3s,baz=343,slow=7.7,SNR=9.4						
FITZ				Sn	Sn	14 09 49.6	-0.4
	1.6nm,0.3s,baz=194,slow=23,SNR=12						
	1.9nm,0.8s						
WRA	Warramunga Arr	15.35	131	Pn	Pn	14 09 45.7	+1.3
	0.1nm,0.3s,baz=306,slow=14,SNR=7.3						
WRA				Sn	Sn	14 12 28.9	-4.4
	0.3nm,0.3s,baz=299,slow=25,SNR=9.1						
	0.3nm,0.5s						
ASAR	Alice Springs	17.59	142	P	P	14 10 15.8	+2.3
	0.1nm,0.3s,baz=321,slow=13,SNR=9.2						
ASAR				S	Sn	14 13 23.5	-4.3
	0.6nm,0.8s,baz=316,slow=20,SNR=4.1						
	0.5nm,0.8s						
BTO	Baotou	51.66	348	SS	SS	14 26 10.9	+1.1
BTO				pmax	pmax		
	comp=Z,11nm,0.7s						
BTO				pmax	pmax		
	comp=Z,230nm,4.4s						
BTO				LR	LR		
	comp=N,340nm,17.9s						
BTO				LR	LR		
	comp=Z,250nm,7.5s						
MKAR	Makanchi Array	66.84	331	P	P	14 16 58.5	-0.1
	comp=Z,0.9nm,0.7s,baz=138,slow=7.4,SNR=8.6						
	comp=Z,0.9nm,0.7s						
ZALV	Zalesovo Beam	71.17	338	P	P	14 17 24.4	-0.8
	comp=Z,1.0nm,0.5s,baz=135,slow=4.3,SNR=3.6						
	comp=Z,1.0nm,0.5s						
SNAA	Sanae	90.76	195	⇑P	P	14 19 06.4	-3.1
	comp=Z,9.5nm,0.3s						

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*IDC **10** 14:09:09.6±3.1, 13°.06S×166°.98E, h192km±26km, mb3.6/8, mbtmp4.0/9, Error ellipse: s-maj=26.3km s-min=20.4km az=108.0*

*NEIC **10** 14:09:12.5±2.0, 13°.0S±0°.1×167°.0E±0°.1, h222km±8km, mb4.3/28, Error ellipse: s-maj=17.3km s-min=14.3km az=64.0*

ISC 10 14:09:10.1±0.5, **12°.99S**±0°.08×**166°.88E**±0°.08, **h200km, n87,** σ1s.**20**/89, **mb4.2**/20, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	7.67	297	Pn	Pn	14 11 01.5	+2.4
DZM	Mont Dzumac	9.04	183	Pn	Pn	14 11 18.1	+1.1
DZM	Mont Dzumac	9.04	183	P	Pn	14 11 17.6	+0.6
	1.0nm,0.3s,baz=283,slow=23,SNR=0.9						
MSVF	Nonsavu	11.76	115	P	P	14 11 59.6	+2.4
EIDS	Eidsvold	19.32	228	P	Pn	14 13 22.2	-1.5
CTAO	Charters Tower	20.98	248	P	P	14 13 38.4	+0.3
CTAO				IAmb	IAmb	14 14 05.9	
	comp=Z,18nm,1.4s						
RAO	Raoul Island	21.48	141	P	P	14 13 42.7	-0.4
ARMA	Armidale	22.35	217	P	P	14 13 52.0	+0.2
ARMA				IAmb	IAmb	14 14 12.0	
	comp=Z,16nm,1.4s						
NIUE	Niue	23.08	108	P	P	14 13 58.2	-0.1
WCZ	Waipu Caves	23.82	165	P	P	14 14 05.4	+0.6
ABAZ	Army Bay	24.57	164	P	P	14 14 11.5	-0.1
MKAZ	Moumakai	25.13	164	P	P	14 14 16.8	+0.1
HAZ	Te Kaha	26.51	160	P	P	14 14 28.6	-0.5
RUGZ	Raukumara Rang	26.67	161	P	P	14 14 29.2	-1.4
PKGZ	Pakihiroa	26.71	160	P	P	14 14 29.6	-1.4
URZ	Urewera	26.76	162	P	P	14 14 30.1	-1.2
MUGZ	Murupara	26.86	163	P	P	14 14 32.0	-0.3
MWZ	Matawai	26.96	161	P	P	14 14 31.8	-1.4
TWGZ	Tauwhareparae	26.96	160	P	P	14 14 31.8	-1.3
MRHZ	Matea Rd	27.09	163	P	P	14 14 34.2	-0.2
WTVZ	West Tongariro	27.14	165	P	P	14 14 36.5	+1.7
TMVZ	Te Maari	27.17	165	P	P	14 14 36.1	+1.0
ETVZ	East Tongariro	27.19	165	P	P	14 14 35.7	+0.4
NGZ	Ngauruhoe	27.20	165	P	P	14 14 37.5	+2.0
OTVZ	Oturere	27.20	165	P	P	14 14 36.6	+1.1
COVZ	Chateau Observ	27.21	165	P	P	14 14 37.1	+1.6
SNVZ	South Ngauruho	27.22	165	P	P	14 14 37.4	+1.8
MTHZ	Maungataniwha	27.23	163	P	P	14 14 34.8	-0.8
TUVZ	Tukino	27.30	165	P	P	14 14 37.5	+1.2
SNGZ	Shannon Statio	27.31	162	P	P	14 14 34.8	-1.5
WNVZ	Wahianoa	27.34	165	P	P	14 14 38.1	+1.4
RAHZ	Arahi	27.36	163	P	P	14 14 35.6	-1.2
RIGZ	Rimuhau	27.37	161	P	P	14 14 35.2	-1.6
BKZ	Black Stump Fm	27.43	164	P	P	14 14 36.2	-1.1
BKZ				IAmb	IAmb	14 14 38.0	
	comp=Z,12nm,1.1s						
BKZ	Black Stump Fm	27.43	164	P	P	14 14 36.2	-1.1
NMHZ	Naumai	27.45	163	P	P	14 14 37.2	-0.3
MOVZ	Moawhango	27.46	165	P	P	14 14 37.0	-0.6
KWHZ	Kaweka Forest	27.65	164	P	P	14 14 38.7	-0.6
MCHZ	McNeill Hill	27.74	164	P	P	14 14 39.5	-0.6
KRHZ	Kereru	27.84	164	P	P	14 14 39.6	-1.4
PNHZ	Pukenui	28.05	165	P	P	14 14 41.5	-1.4
KAHZ	Kahuranaki	28.12	164	P	P	14 14 41.3	-2.2
TSZ	Takapari Road	28.12	165	P	P	14 14 42.4	-1.1
DVHZ	Dannevirke	28.40	165	P	P	14 14 44.5	-1.4
MRZ	Mangatainoka R	28.60	166	P	P	14 14 46.0	-1.7
OGWZ	Otaki Gorge	28.66	167	P	P	14 14 46.9	-1.2
NNZ	Nelson	28.69	170	P	P	14 14 49.1	+0.7
MRNZ	Matariki Terra	28.77	171	P	P	14 14 49.5	+0.4
BFZ	Birch Farm	28.79	165	P	P	14 14 47.6	-1.7
BFZ	Birch Farm	28.79	165	P	P	14 14 47.5	-1.8
HOWZ	Holdsworth Sta	28.81	166	P	P	14 14 48.1	-1.5
TUWZ	Tuamarina	29.00	169	P	P	14 14 50.7	-0.4
TMWZ	Te Maipa	29.10	166	P	P	14 14 50.7	-1.4
PAWZ	Paruwai Farm	29.25	167	P	P	14 14 52.0	-1.4
STKA	Stephens Creek	29.87	227	P	P	14 15 00.1	+1.1
	comp=Z,0.8nm,0.4s,baz=88,slow=10,SNR=3.7						
	comp=Z,0.8nm,0.4s						
TOO	Toolangi	31.05	214	P	P	14 15 07.7	-1.6
TOO				IAmb	IAmb	14 15 29.8	
	comp=Z,9.2nm,1.4s						
WR8	Warramunga Arr	31.78	253	P	P	14 15 16.6	+0.6
WR8				IAmb	IAmb	14 15 21.4	
	comp=Z,14nm,1.4s						
WB0	Warramunga Arr	31.85	253	P	P	14 15 17.2	+0.6
WB0				IAmb	IAmb	14 15 34.3	
	comp=Z,8.2nm,1.4s						
WRA	Warramunga Arr	31.92	253	P	P	14 15 17.8	+0.6
	comp=Z,0.8nm,0.7s,baz=84,slow=8.9,SNR=4.2						
	comp=Z,0.8nm,0.7s						
AS31	Alice Springs	32.98	246	P	P	14 15 26.5	+0.1
ASAR	Alice Springs	32.98	246	P	P	14 15 26.7	+0.3
ASAR	Alice Springs	32.98	246	P	P	14 15 26.9	+0.5
	comp=Z,0.6nm,0.3s,baz=74,slow=10.0,SNR=13						
ASAR				ScP	ScP	14 21 33.5	+2.6
	comp=Z,0.7nm,0.8s,baz=79,slow=3.3,SNR=6.1						
	comp=Z,0.6nm,0.3s						
KNRA	Kununurra	37.00	261	P	P	14 16 02.5	+1.7
KNRA				IAmb	IAmb	14 16 35.6	
	comp=Z,8.0nm,1.1s						
FITZ	Fitzroy Crossi	40.00	257	P	P	14 16 27.7	+2.0
YOJ	Yonaguni jima	56.74	311	P	P	14 18 31.7	-1.7
JNU	Nakatsue	57.30	324	P	P	14 18 36.1	-1.1
VNDA	Vanda	64.58	181	P	P	14 19 25.9	+0.3
VNDA	Vanda	64.58	181	P	P	14 19 25.5	0.0
	comp=Z,0.7nm,0.6s,baz=8.8,slow=5.4,SNR=3.7						
	comp=Z,0.7nm,0.6s						
CASY	Casey	64.99	202	P	P	14 19 27.7	-0.5
CASY				IAmb	IAmb	14 19 47.0	
	comp=Z,12nm,1.4s						
ATKA	Atka Island	66.96	13	P	P	14 19 39.9	-1.0
KULM	Kulim	68.24	281	P	P	14 19 47.3	-2.5
KULM				IAmb	IAmb	14 19 50.5	
	comp=Z,12nm,1.3s						
CHIR	Chirikof Islan	75.40	21	P	P	14 20 31.4	0.0
QSPA	South Pole Qui	77.03	180	P	P	14 20 40.7	-0.1
QSPA				IAmb	IAmb	14 20 42.1	
	comp=Z,17nm,1.4s						
QSPA	South Pole Qui	77.03	180	P	P	14 20 40.3	-0.5
	comp=Z,4.5nm,0.6s,baz=332,slow=0.7,SNR=48						
	comp=Z,4.5nm,0.6s						
MAW	Mawson	83.35	202	P	P	14 21 14.1	-0.3
	comp=Z,1.5nm,0.5s,baz=72,slow=3.2,SNR=4.5						
	comp=Z,1.5nm,0.5s						
RND	Reindeer	83.41	18	P	P	14 21 15.8	+1.1
RND				IAmb	IAmb	14 21 16.8	
	comp=Z,6.5nm,1.3s						
I21K	Tanana	83.83	16	P	P	14 21 17.3	+0.6
I21K				IAmb	IAmb	14 21 36.6	
	comp=Z,4.8nm,1.5s						
WRH	Wood River Hil	84.42	18	P	P	14 21 20.4	+0.8
CCB	Clear Creek Bu	84.63	18	P	P	14 21 21.6	+0.9
IL31		85.00	18	P	P	14 21 21.9	-0.6
ILAR	Eielson Array	85.00	18	P	P	14 21 22.2	-0.4
ILAR	Eielson Array	85.00	18	P	P	14 21 23.1	+0.5
	comp=Z,1.0nm,0.7s,baz=237,slow=5.4,SNR=18						
ILAR				pP	pP	14 22 10.4	-0.5
	comp=Z,0.6nm,0.6s,baz=246,slow=5.8,SNR=5.5						
	comp=Z,1.0nm,0.7s						
J25K	Salcha River,	85.35	19	P	P	14 21 25.2	+0.7
J25K				IAmb	IAmb	14 21 26.8	
	comp=Z,2.0nm,0.7s						
BELA	Belgrano 2	88.48	176	P	P	14 21 38.2	-1.1
BELA				IAmb	IAmb	14 21 39.5	
	comp=Z,2.9nm,0.7s						
MKAR	Makanchi Array	95.69	317	P	P	14 22 13.6	+0.4
	comp=Z,0.3nm,0.6s,baz=103,slow=5.2,SNR=3.9						
	comp=Z,0.3nm,0.6s						
FINES	FINESS Array B	123.98	339	PKP	PKiKP	14 27 45.6	+1.2
	comp=Z,2.1nm,0.9s,baz=87,slow=3.1,SNR=5.6						
ESDC	Sonseca Array	152.22	345	PKPbc	PKiKP	14 28 43.1	+0.5
	comp=Z,0.2nm,0.4s,baz=9.0,slow=2.3,SNR=5.2						

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*BJI **10** 14:43:05.3, 16°.25S×168°.21E, h170km, mB4.8/5, mb4.4/25*

*NOU **10** 14:43:07.9, 15°.90S×168°.13E, h175km, mb4.7/69, Vanuatu Islands*

*IDC **10** 14:43:08.8±2.5, 15°.94S×167°.93E, h173km±20km, mb3.8/10, mbtmp4.3/12, MS3.7/1, Error ellipse: s-maj=24.7km s-min=15.3km az=84.0*

*NEIC **10** 14:43:08.9±0.9, 16°.0S±0°.1×167°.9E±0°.1, h169km±8km, mb5.0/40, Error ellipse: s-maj=17.4km s-min=15.1km az=123.0*

ISC 10 14:43:08.8±0.5, **15°.92S**±0°.05×**168°.05E**±0°.07, **h177km, n166,** σ1s.**01**/165, **mb4.8**/38, **1C-1D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLAKA	Lakatoro	0.64	253	P	Pn	14 43 33.6	-0.2
VLAKA	Lakatoro	0.64	253	S	Sn	14 43 53.2	+0.1
INH	Isangel	3.79	162	P	Pn	14 44 07.6	+0.4
MARNC	Mare, Loyalty	5.54	180	P	Pn	14 44 28.2	-1.4
MARNC	Mare, Loyalty	5.54	180	S	Sn	14 45 33.0	-0.3
LUES	Luesalemba Tem	5.62	338	P	Pn	14 44 29.2	-1.6
LUES	Luesalemba Tem	5.62	338	S	Sn	14 45 34.8	-0.6
YATNC	Mamie plateau,	6.21	190	P	Pn	14 44 36.7	-1.8
YATNC	Mamie plateau,	6.21	190	S	Sn	14 45 49.7	+0.5
DZM	Mont Dzumac	6.31	194		Pn	14 44 38.5	-1.4
DZM	Mont Dzumac	6.31	194	P	Pn	14 44 40.3	+0.4
	34nm,0.5s,baz=154,slow=20,SNR=63						
DZM	Mont Dzumac	6.31	194	P	Pn	14 44 39.2	-0.7
DZM	Mont Dzumac	6.31	194	S	Sn	14 45 51.6	-0.1
ONTNC	Ouen Toro	6.54	193		Pn	14 44 41.5	-1.2
ONTNC	Ouen Toro	6.54	193	P	Pn	14 44 42.4	-0.4
ONTNC	Ouen Toro	6.54	193	S	Sn	14 45 57.4	+0.5
OUENC	Ouen Island, N	6.57	190	P	Pn	14 44 43.3	+0.1
OUENC	Ouen Island, N	6.57	190	S	Sn	14 45 58.1	+0.4
PINNC	Pines Island,	6.69	185		Pn	14 44 43.7	-1.1
PINNC	Pines Island,	6.69	185	P	Pn	14 44 45.4	+0.6
PINNC	Pines Island,	6.69	185	S	Sn	14 46 00.6	+0.1
HURO	Huro Makira	8.07	311	P	Pn	14 45 02.9	-0.2
HURO	Huro Makira	8.07	311	S	Sn	14 46 34.2	+0.6
NGOA	Tingoa Renbel	8.89	298	P	Pn	14 45 15.5	+1.6
NGOA	Tingoa Renbel	8.89	298	S	Sn	14 46 54.3	+1.1
HNR	Honiara	10.20	308	P	Pn	14 45 30.6	-0.4
	93nm,0.9s,baz=186,slow=6.9,SNR=6.4						
HNR	Honiara	10.20	308	P	Pn	14 45 30.6	-0.4
HNR	Honiara	10.20	308	S	Sn	14 47 25.2	+0.6
TATA	Tatamba Isabel	11.00	312	P	Pn	14 45 41.5	+0.1
EIDS	Eidsvold	18.44	237		P	14 47 11.8	+0.8
EIDS	Eidsvold	18.44	237	P	P	14 47 12.2	+1.2
EIDS	Eidsvold	18.44	237	S	S	14 50 33.6	+1.3
OUZ	Omahuta	19.86	167	P	P	14 47 25.6	-0.6
OUZ	Omahuta	19.86	167	S	S	14 50 59.5	-0.5
OUZ	Omahuta	19.86	167	P	P	14 47 27.0	+0.9
TV1H	Townsville Har	20.53	258	P	P	14 47 33.8	+0.2
WCZ	Waipu Caves	20.72	165	P	P	14 47 37.4	+2.1
ARMA	Armidale	20.85	223	P	P	14 47 37.3	+0.3
CTAO	Charters Tower	21.14	255		P	14 47 39.5	-0.5
CTAO	Charters Tower	21.14	255	P	P	14 47 40.1	0.0
PMG	Port Moresby	21.38	285	P	P	14 47 42.5	-0.1
PMG	Port Moresby	21.38	285	P	P	14 47 43.0	+0.3
	30nm,0.8s,baz=153,slow=2.3,SNR=7.7						
	30nm,0.8s						
PMG	Port Moresby	21.38	285	P	P	14 47 42.9	+0.3
PMG	Port Moresby	21.38	285	S	S	14 51 30.0	+1.0
PMG	Port Moresby	21.38	285	P	P	14 47 42.7	+0.1
PMG	Port Moresby	21.38	285	S	S	14 51 30.1	+1.0
MBAZ	Motutapu North	21.64	165	P	P	14 47 47.2	+2.0
TOZ	Tahuroa Road	22.71	165	P	P	14 47 56.6	+1.3
TOZ				IAmb	IAmb	14 48 19.1	
	comp=Z,60nm,1.9s						
MTSU	Mount Surprise	22.80	261	P	P	14 47 56.5	0.0
TLZ	Tolley Road	23.28	165	P	P	14 48 01.6	+1.0
OMRZ	Omania	23.29	163	P	P	14 48 03.7	+2.9
HIZ	Hauiti	23.29	166	P	P	14 48 02.2	+1.5
HIZ	Hauiti	23.29	166	P	P	14 48 02.0	+1.3
MXZ	Matakaoa Point	23.39	159	P	P	14 48 01.9	+0.3
MXZ				IAmb	IAmb	14 48 24.6	
	comp=Z,56nm,1.2s						
MXZ	Matakaoa Point	23.39	159	P	P	14 48 00.1	-1.5
HAZ	Te Kaha	23.39	160	P	P	14 48 02.3	+0.7
RUGZ	Raukumara Rang	23.55	161	P	P	14 48 05.3	+2.1
PKGZ	Pakihiroa	23.59	160	P	P	14 48 03.9	+0.4
URZ	Urewera	23.65	162	P	P	14 48 04.2	+0.3
PRRZ	Plateau Road	23.66	164	P	P	14 48 05.6	+1.5
PUZ	Puketiti	23.84	160	P	P	14 48 05.3	-0.4
MWZ	Matawai	23.84	161	P	P	14 48 06.2	+0.5
RTZ	Ruatahuna	23.94	163	P	P	14 48 07.2	+0.5
TKGZ	Te Karaka	24.04	161	P	P	14 48 09.7	+2.2
NGZ	Ngauruhoe	24.10	166	P	P	14 48 09.5	+1.2
COEN	Coen	24.11	271		P	14 48 07.5	-1.0
COEN				IAmb	IAmb	14 48 10.5	
	comp=Z,31nm,0.9s						
COEN	Coen	24.11	271	P	P	14 48 08.2	-0.3
SNGZ	Shannon Statio	24.20	162	P	P	14 48 09.0	0.0
RAHZ	Arahi	24.25	163	P	P	14 48 09.9	+0.5
BKZ	Black Stump Fm	24.32	164	P	P	14 48 10.4	+0.3
BKZ				IAmb	IAmb	14 48 11.0	
	comp=Z,11nm,0.4s						
BKZ	Black Stump Fm	24.32	164	P	P	14 48 09.3	-0.8
BKZ	Black Stump Fm	24.32	164	P	P	14 48 10.4	+0.3
NMHZ	Naumai	24.34	163	P	P	14 48 11.3	+1.0
WAZ	Wanganui	24.51	167	P	P	14 48 09.8	-2.1
QLP	Quilpie	24.56	240	P	P	14 48 12.3	-0.1
TSZ	Takapari Road	25.02	166	P	P	14 48 15.9	-0.6
QRZ	Quartz Range	25.12	172	P	P	14 48 18.5	+1.2
QRZ				IAmb	IAmb	14 48 35.3	
	comp=Z,122nm,1.8s						
PXZ	Pawanui	25.23	164	P	P	14 48 17.6	-0.6
TKNZ	Takaka Hill	25.39	171	P	P	14 48 20.4	+0.7
CMSA	Cobar Meteorol	25.63	229	P	P	14 48 21.7	-0.3
NNZ	Nelson	25.63	171	P	P	14 48 22.4	+0.5
NNZ				IAmb	IAmb	14 48 39.6	
	comp=Z,90nm,1.6s						
NNZ	Nelson	25.63	171	P	P	14 48 23.0	+1.1
BFZ	Birch Farm	25.68	166	P	P	14 48 21.7	-0.7
BFZ	Birch Farm	25.68	166	P	P	14 48 21.3	-1.0
THZ	Tophouse	26.10	172	P	P	14 48 26.3	+0.2
LTZ	Lake Taylor	27.02	173	P	P	14 48 33.7	-0.7
QIS	Mount Isa	27.39	256	P	P	14 48 38.0	+0.1
OXZ	Oxford	27.53	174	P	P	14 48 38.3	-0.5
RPZ	Rata Peaks	27.83	175	P	P	14 48 41.7	+0.2
JCZ	Jackson Bay	28.07	179	P	P	14 48 44.2	+0.4
LBZ	Lake Benmore	28.44	177	P	P	14 48 46.8	-0.1
STKA	Stephens Creek	28.83	232	P	P	14 48 49.7	-0.8
STKA				IAmb	IAmb	14 48 52.0	
	comp=Z,44nm,1.2s						
STKA	Stephens Creek	28.83	232	P	P	14 48 50.4	-0.2
	comp=Z,5.2nm,0.5s,baz=63,slow=10,SNR=16						
	comp=Z,5.2nm,0.5s						
STKA	Stephens Creek	28.83	232	P	P	14 48 51.1	+0.5
EAZ	Earnscleugh	29.24	178	P	P	14 48 53.8	-0.2
HTT	Hallett	31.54	231	P	P	14 49 15.0	+0.5
WR8	Warramunga Arr	32.14	258	P	P	14 49 18.0	-1.9
WR8				IAmb	IAmb	14 49 33.6	
	comp=Z,33nm,1.8s						
WB0	Warramunga Arr	32.24	258	P	P	14 49 19.0	-1.7
WB0				IAmb	IAmb	14 50 12.5	
	comp=Z,40nm,2.0s						
WRAB	Tennant Creek	32.28	258	P	P	14 49 18.9	-2.2
WRA	Warramunga Arr	32.29	258	P	P	14 49 18.8	-2.4
	comp=Z,3.7nm,0.7s,baz=85,slow=8.2,SNR=36						
	comp=Z,3.7nm,0.7s						
AS01	Alice Springs	32.94	251	P	P	14 49 25.9	-0.9
AS31	Alice Springs	32.98	251		P	14 49 26.0	-1.2
AS31				IAmb	IAmb	14 49 26.7	
	comp=Z,12nm,0.5s						
ASAR	Alice Springs	32.98	251	P	P	14 49 25.9	-1.3
	comp=Z,24nm,0.5s,baz=78,slow=8.8,SNR=560						
ASAR				PcP	PcP	14 52 05.8	-1.2
	comp=Z,0.9nm,0.6s,baz=67,slow=3.0,SNR=4.2						
ASAR				ScP	ScP	14 55 36.7	+2.1
	comp=Z,0.3nm,0.7s,baz=90,slow=3.0,SNR=4.3						
BBOO	Buckleboo	33.47	234	P	P	14 49 30.7	-0.5
BBOO	Buckleboo	33.47	234	P	P	14 49 31.2	-0.1
KDU	Kakadu	34.60	271	P	P	14 49 41.2	+0.1
MTN	Manton Dam	35.86	270	P	P	14 49 50.7	-1.2
FAKI	Fak Fak	37.52	286	P	P	14 50 05.0	-1.0
FAKI	Fak Fak	37.52	286	P	P	14 50 05.7	-0.3
KNRA	Kununurra	37.77	265		P	14 50 06.7	-1.3
KNRA				IAmb	IAmb	14 50 07.5	
	comp=Z,32nm,1.1s						
FORT	Forrest	39.36	241	P	P	14 50 20.7	-0.4
FORT	Forrest	39.36	241	P	P	14 50 21.0	-0.1
FITZ	Fitzroy Crossi	40.55	261		P	14 50 30.3	-0.8
KMBL	Kambalda	44.67	241	P	P	14 51 03.7	-0.5
PSA00	Pilbara Seismi	45.86	255	P	P	14 51 13.2	-0.4
PSA00				IAmb	IAmb	14 51 21.6	
	comp=Z,102nm,2.0s						
PSA00	Pilbara Seismi	45.86	255	P	P	14 51 13.8	+0.2
MBWA	Marble Bar	45.98	256	P	P	14 51 13.8	-0.7
MBWA				IAmb	IAmb	14 51 14.4	
	comp=Z,20nm,0.6s						
MBWA	Marble Bar	45.98	256	P	P	14 51 14.3	-0.2
MBWA	Marble Bar	45.98	256	P	P	14 51 14.0	-0.5
MEEK	Meekatharra	47.04	248	P	P	14 51 22.5	-0.3
KLBR	Kellerberrin	48.20	242	P	P	14 51 29.8	-1.8
NWAO	Narrogin (SRO)	48.80	240	P	P	14 51 35.3	-0.9
NWAO	Narrogin (SRO)	48.80	240	LR	LR	15 11 03.4	
	comp=Z,69nm,18.6s,baz=20,slow=34						
NWAO	Narrogin (SRO)	48.80	240	P	P	14 51 36.1	-0.1
BLDU	Ballidu	48.99	243	P	P	14 51 37.7	+0.1
MORW	Morawa	49.45	245	P	P	14 51 40.3	-0.8
PLAI	Plampang	49.51	272	P	P	14 51 41.7	-0.1
MUN	Mundaring	49.55	241	P	P	14 51 41.7	-0.2
TOLI2	Tolitoli	49.65	285	P	P	14 51 41.2	-1.6
TOLI2	Tolitoli	49.65	285	P	P	14 51 41.6	-1.2
UGM	Wanagama	56.70	271	P	P	14 52 33.6	-0.8
UGM	Wanagama	56.70	271	P	P	14 52 34.2	-0.2
JOW	Kunigami	57.43	317	P	P	14 52 39.7	+0.5
JOW	Kunigami	57.43	317	P	P	14 52 38.5	-0.7
JGF	Kuroka	58.91	331	P	P	14 52 49.7	+0.3
JMN	Monobe	59.15	327	P	P	14 52 50.6	-0.5
JMN				IAmb	IAmb	14 54 52.8	
	comp=Z,38nm,1.3s						
MJAR	Matsushiro Arr	59.30	332	P	P	14 52 51.6	-0.4
	comp=Z,2.2nm,0.8s,baz=165,slow=7.6,SNR=5.3						
	comp=Z,2.2nm,0.8s						
MAJO	Matsushiro	59.30	332	P	P	14 52 52.6	+0.6
MAJO				IAmb	IAmb	14 53 40.2	
	comp=Z,67nm,1.9s						
MJB9	Matsu-Tunnel	59.31	332	P	P	14 52 52.6	+0.5
MJB9				IAmb	IAmb	14 53 40.2	
	comp=Z,68nm,2.0s						
KSM	Kuching	59.58	281	P	P	14 52 53.6	-0.7
JNU	Nakatsue	60.32	324	P	P	14 52 58.9	-0.1
TPUB	Ta-pu	60.57	309	P	P	14 52 59.9	-1.0
TPUB				IAmb	IAmb	14 53 11.2	
	comp=Z,48nm,1.3s						
YHNB	Yeheng	60.83	311	P	P	14 53 03.2	+0.6
CASY	Casey	62.73	203	P	P	14 53 14.3	-0.3
CASY				IAmb	IAmb	14 55 16.9	
	comp=Z,22nm,1.7s						
KSRS	Korea Array	65.14	326	P	P	14 53 30.9	+0.1
	comp=Z,1.2nm,0.8s,baz=138,slow=6.8,SNR=4.6						
	comp=Z,1.2nm,0.8s						
NJ2	Nanjing	67.05	316	*e*P	P	14 53 46.7	+3.7
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
USRK	Ussuriysk Ar.	68.28	333	P	P	14 53 51.5	+1.1
	comp=Z,1.5nm,0.6s,baz=117,slow=7.1,SNR=4.1						
	comp=Z,1.5nm,0.6s						
CN2	Changchun	71.05	329	P	P	14 54 08.0	+0.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GSI	Gunungsitoli	71.62	277	P	P	14 54 10.6	-1.0
GSI				IAmb	IAmb	14 54 43.5	
	comp=Z,28nm,1.3s						
QSPA	South Pole Qui	74.12	180	P	P	14 54 26.0	+0.6
	comp=Z,1.4nm,0.6s,baz=207,slow=1.0,SNR=17						
	comp=Z,1.4nm,0.6s						
XAN	Xi'an	75.04	312	⇑P	P	14 54 37.8	+6.6
XAN				pmax	pmax		
	comp=Z,5.0nm,0.4s						
CMAR	Chiang Mai Arr	76.12	294	P	P	14 54 38.2	+0.7
	comp=Z,2.0nm,0.7s,baz=118,slow=6.0,SNR=5.7						
CHTO	Chiang Mai	76.25	294	P	P	14 54 38.7	+0.3
PZH	PanZhiHua	76.97	303	P	P	14 54 43.6	+1.2
PZH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC	Hu-ho-hao-te	76.97	320	*e*P	P	14 54 44.2	+2.2
HHC				pmax	pmax		
	comp=Z,28nm,0.7s						
HHC				pmax	pmax		
	comp=Z,69nm,4.2s						
BTO	Baotou	77.81	319	*e*P	P	14 54 42.1	-4.6
BTO				sP	pwP	14 55 39.8	+7.7
BTO				PP	PP	14 57 43.2	-1.8
BTO				S	S	15 04 13.2	-12
BTO	Baotou	77.81	319	SS	SS	15 09 36.1	+6.5
BTO				pmax	pmax		
	comp=Z,18nm,0.5s						
BTO				pmax	pmax		
	comp=Z,260nm,5.2s						
BTO				LR	LR		
	comp=N,260nm,5.7s						
BTO				LR	LR		
	comp=E,230nm,4.5s						
BTO				LR	LR		
	comp=Z,140nm,5.0s						
ACHA	Angle Creek He	79.77	19	P	P	14 54 58.8	+1.9
SONM	Songino Array	83.89	323	P	P	14 55 18.8	+0.1
	comp=Z,1.3nm,0.7s,baz=159,slow=8.9,SNR=4.5						
	comp=Z,1.3nm,0.7s						
GTA	Gaotai	84.03	314	*e*P	P	14 55 20.4	+0.7
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ILAR	Eielson Array	87.42	18	P	P	14 55 34.9	-0.7
	comp=Z,0.1nm,0.5s,baz=238,slow=4.4,SNR=2.4						
	comp=Z,0.1nm,0.5s						
BESE	Bessie Mountai	87.61	26	P	P	14 55 37.9	+1.2
BESE				IAmb	IAmb	14 55 44.4	
	comp=Z,39nm,1.8s						
SYO	Syowa Base	87.79	196	⇓*e*P	P	14 55 37.5	+0.1
EVN	Everest	89.85	299		P	14 55 48.0	-0.7
WMQ	Urumqi	94.09	314	*e*P	P	14 56 08.9	+1.7
MKAR	Makanchi Array	98.58	316	P	P	14 56 28.1	+0.7
	comp=Z,0.2nm,0.6s,baz=91,slow=5.8,SNR=3.3						
	comp=Z,0.2nm,0.6s						

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*IDC **10** 14:50:43.9±0.6, 41°.66N×81°.38W, h0km, mb3.9/8, mbtmp4.0/12, ML3.3/4, MS3.3/6, Error ellipse: s-maj=16.8km s-min=6.4km az=114.0*

*NEIC **10** 14:50:45.3±1.0, 41°.68N±0°.04×81°.46W±0°.05, h2km±1km, mb4.0/27, mb_Lg4.1/177, ML4.0/12, Mwr3.7/47, Error ellipse: s-maj=7.5km s-min=5.9km az=172.0, Moment*

Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}2.38; $M_{\theta\theta}$-0.32; $M_{\phi\phi}$-2.06; $M_{r\theta}$-1.18; $M_{\theta\phi}$4.25; $M_{\phi r}$-0.05; Fault plane solution: $M_0$4.94000×10^{14} NP1: ϕ_s181.19000°,δ62.24000°,λ157.42000°. NP2: ϕ_s282.15000°,δ70.13000°,λ29.68000°. Principal axes: T 3.7995, Plg35.0000°, Azm144.0000°; N 1.7880, Plg55.0000°, Azm313.0000°; P -5.5875, Plg5.0000°, Azm50.0000°;

*NEIC **10** 14:50:45.3, 41°.68N×81°.46W, h2^{km}*

*OTT **10** 14:50:45.3±0.2, 41°.69N×81°.47W, h2^{km}, MN4.5/15, Mw4.0(NEIC)*

OTT South Shore Lake Erie, Felt 84km southeast from Blenheim, On Eastern Background Seismic Zone. Felt in Hamilton, Brantford, Sarnia, Ontario.

ISC 10 14:50:44.9±0.5, **41°.69N**±0°.03×**81°.47W**±0°.03, **h10^{km}, n169,** σ**1^{s}.12**/113, **mb4.0**/15, **MS3.2**/5, **Ohio**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
M52A	Chesterland	0.17	150		Pg	14 50 48.3	-0.2
M52A				IAML		14 50 52.4	
	67μm,0.5s						
M52A				IAML		14 50 53.1	
	68μm,0.4s						
ALLY	Alegheny Colle	0.99	92		Pg	14 51 03.0	-1.0
ALLY				Sg	Sg	14 51 15.9	-1.0
ALLY				IAmb_Lg		14 51 17.6	
	comp=Z,2μm,1.3s						
ALLY	Alegheny Colle	0.99	92	PG	Pg	14 51 03.3	-0.6
ALLY				SG	Sg	14 51 16.3	-0.6
N53A	Lisbon	1.00	151		Pg	14 51 03.0	-1.1
N51A	Ashland	1.03	222		Pg	14 51 03.5	-1.1
N51A				IAML		14 51 23.8	
	comp=Z,4μm,0.3s						
N51A				IAML		14 51 24.0	
	comp=Z,3μm,0.2s						
ERPA	Erie	1.19	68		Pb	14 51 06.2	-1.2
ERPA				Sg	Sb	14 51 21.8	-1.0
ERPA				IAML		14 51 27.9	
	comp=Z,3μm,0.3s						
ERPA				IAML		14 51 28.6	
	comp=Z,3μm,0.6s						
ERPA	Erie	1.19	68	PG	Pb	14 51 06.7	-0.7
ERPA				SG	Sb	14 51 22.3	-0.6
M50A	Fremont	1.22	257		Pn	14 51 07.1	-0.8
K50A	Casco	1.38	322		Pn	14 51 09.9	-0.3
K50A				IAmb_Lg		14 51 31.5	
	comp=Z,1μm,0.9s						
O53A	New Philadelph	1.45	172		Pn	14 51 10.9	-0.2
O53A				IAmb_Lg		14 51 31.6	
	comp=Z,2μm,0.8s						
ELFO	Elginfield	1.51	4	PG	Pn	14 51 12.1	+0.1
ELFO				SG	Sn	14 51 32.1	+0.4
ELFO				Trac		14 51 35.8	
	comp=Z,2μm,0.2s						
O52A	Adamsville	1.59	190		Pn	14 51 13.3	+0.1
O52A				IAmb_Lg		14 51 35.6	
	comp=Z,2μm,0.9s						
O54A	Avella	1.72	151		Pn	14 51 15.6	+0.8
AAM	Ann Arbor	1.74	291		Pn	14 51 16.0	+0.8
TYNO	Tyneside	1.84	40	PN	Pn	14 51 17.7	+1.3
TYNO				SN	Sb	14 51 41.1	-0.5
TYNO				Trac		14 51 44.8	
	comp=Z,2μm,0.3s						
ACSO	Alum Creek Sta	1.85	219		Pn	14 51 17.4	+0.7
P52A	Corning	2.11	194		Pn	14 51 21.2	+0.9
EFO	Effingham	2.13	48	PN	Pn	14 51 21.5	+1.1
EFO				PN	Pb	14 51 21.8	-1.7
EFO				SN	Sn	14 51 48.2	+1.3
EFO				SN	Sb	14 51 48.7	-1.2
EFO				Trac		14 51 51.6	
	comp=Z,1μm,0.4s						
ACTO	Acton	2.18	28	PN	Pn	14 51 22.4	+1.2
ACTO				SN	Sn	14 51 49.7	+1.4
ACTO				Trac		14 51 55.8	
	comp=Z,2μm,0.3s						
N49A	Columbus Grove	2.18	250		Pn	14 51 22.6	+1.4
P53A	Whipple	2.20	178		Pn	14 51 22.9	+1.5
WVNY	West Valley, N	2.25	70		Pn	14 51 23.4	+1.2
WVNY				IAmb_Lg		14 51 57.1	
	comp=Z,1μm,0.8s						
STCO	Saint Catharin	2.28	47	SN	Sn	14 51 52.3	+1.6
BASO	Ashfield	2.33	357	PN	Pn	14 51 24.7	+1.5
BASO				SN	Sn	14 51 53.1	+1.2
BASO				Trac		14 51 59.3	
	comp=Z,2μm,0.3s						
MCWV	Mont Chateau	2.37	148		Pn	14 51 25.4	+1.5
MCWV				IAmb_Lg		14 52 02.4	
	comp=Z,795nm,1.1s						
BWLO	Walkerton	2.44	6	PN	Pn	14 51 26.0	+1.2
BWLO				SN	Sn	14 51 55.9	+1.2
BWLO				Trac		14 52 05.3	
	comp=Z,972nm,0.3s						
I49A	Point Hope	2.46	337		Pn	14 51 25.8	+0.7
I49A				IAmb_Lg		14 52 08.0	
	comp=Z,1μm,1.0s						
TORO	Toronto--Lesli	2.48	38	PN	Pn	14 51 27.6	+2.3
TORO				SN	Sn	14 51 57.0	+1.4
TORO				LG	Lg	14 52 02.0	
TORO				Trac		14 52 04.1	
	comp=Z,6μm,0.2s						
P51A	Williamsport	2.52	209		Pn	14 51 26.5	+0.7
P51A				IAmb_Lg		14 52 06.7	
	comp=Z,725nm,0.7s						
BRCO	Bruce Peninsul	2.56	0	PN	Pn	14 51 29.1	+2.8
BRCO				SN	Sn	14 51 59.6	+2.2
BRCO				Trac		14 52 09.9	
	comp=Z,2μm,0.3s						
O49A	Covington	2.64	236		Pn	14 51 28.8	+1.3
MEDO	Medina	2.67	56		Pn	14 51 28.5	+0.5
MEDO				IAmb_Lg		14 52 08.3	
	comp=Z,932nm,0.9s						
MEDO	Medina	2.67	56	PN	Pn	14 51 28.6	+0.5
MEDO				SN	Sn	14 52 01.7	+1.3
MEDO				Trac		14 52 08.8	
	comp=Z,658nm,0.2s						
Q54A	Coxs Mills	2.75	170		Pn	14 51 30.5	+1.6
Q52A	Bidwell	2.79	193		Pn	14 51 30.1	+0.6
MMNY	Mt. Morris Dam	2.84	67		Pn	14 51 31.0	+0.6
MMNY				IAmb_Lg		14 52 13.8	
	comp=Z,591nm,0.8s						
PKRO	Pickering	2.88	37	PN	Pn	14 51 33.0	+2.2
PKRO				Trac		14 52 13.9	
	comp=Z,3μm,0.3s						
CLWO	Collingwood	2.89	17	PN	Pn	14 51 31.8	+0.8
CLWO				SN	Sn	14 52 06.1	+0.4
CLWO				Trac		14 52 20.8	
	comp=Z,2μm,0.4s						
BMRO	Meriville Lake	2.91	4	PN	Pn	14 51 32.5	+1.3
BMRO				SN	Sn	14 52 07.1	+0.8
BMRO				Trac		14 52 18.7	
	comp=Z,1μm,0.5s						
J47A	Sunmer	2.92	303		Pn	14 51 31.5	+0.1
L56A	Greenwood	2.95	80		Pn	14 51 32.9	+1.0
L56A				IAmb_Lg		14 52 24.7	
	comp=Z,608nm,0.8s						
Q51A	Peebles	3.02	209	IAmb_Lg		14 52 28.9	
	comp=Z,778nm,0.7s						
O48B	Farmland	3.14	244	IAmb_Lg		14 52 26.5	
	comp=Z,726nm,1.0s						
WLVO	Wesleyville	3.18	44	PN	Pn	14 51 34.9	0.0
WLVO				SN	Sn	14 52 13.4	+0.6
WLVO				LG	Lg	14 52 22.5	
WLVO				Trac		14 52 30.1	
	comp=Z,685nm,0.3s						
M57A	Sunshine Farm,	3.28	95	IAmb_Lg		14 52 26.5	
	comp=Z,624nm,0.8s						
SADO	Sadowa	3.52	28	IAmb_Lg		14 52 35.7	
	comp=Z,650nm,1.1s						
SADO	Sadowa	3.52	28	Pn	Pn	14 51 39.4	-0.2
	comp=Z,8.7nm,0.3s,baz=214,slow=12,SNR=40						
SADO				Pg	Pb	14 51 45.4	-1.8
	comp=Z,75nm,0.3s,baz=213,slow=17,SNR=75						
SADO				Lg	Lg	14 52 31.1	
	comp=Z,152nm,0.3s,baz=310,slow=22,SNR=32						
	comp=Z,17nm,0.3s						
SADO	Sadowa	3.52	28	PN	Pn	14 51 39.6	+0.1
SADO				SN	Sn	14 52 21.2	-0.1
SADO				Trac		14 52 32.5	
	comp=Z,254nm,0.2s						
TOBO	Tobermory, Bru	3.54	359	PN	Pn	14 51 40.4	+0.6
TOBO				SN	Sn	14 52 21.6	0.0
TOBO				LG	Lg	14 52 34.5	
TOBO				Trac		14 52 43.8	
	comp=Z,540nm,0.4s						
N58A	Sunbury	3.68	102	IAmb_Lg		14 52 48.0	
	comp=Z,698nm,0.9s						
P48A	Milroy	3.75	235	IAmb_Lg		14 52 49.2	
	comp=Z,433nm,0.9s						
KLBO	Killbear Provi	3.78	14	PN	Pn	14 51 43.5	+0.4
KLBO				SN	Sn	14 52 27.6	-0.1
KLBO				Trac		14 52 46.3	
	comp=Z,160nm,0.2s						
K57A	Scipio Center	3.82	73	IAmb_Lg		14 52 52.9	
	comp=Z,532nm,0.7s						
S54A	Dingess, Beckl	3.88	178	IAmb_Lg		14 52 50.4	
	comp=Z,461nm,1.0s						
PECO	Prince Edward	3.98	54	PN	Pn	14 51 45.4	-0.5
PECO				SN	Sn	14 52 32.8	+0.1
PECO				LG	Lg	14 52 49.3	
PECO				Trac		14 53 01.7	
	comp=Z,356nm,0.4s						
BUKO	Buck Lake	4.04	21	IAmb_Lg		14 52 50.4	
	comp=Z,561nm,0.8s						
MVL	Millersville	4.23	112	IAmb_Lg		14 53 05.1	
	comp=Z,379nm,1.0s						
KSPA	Keystone Colle	4.28	90	IAmb_Lg		14 53 03.5	
	comp=Z,460nm,1.1s						
J57A	Williamstown	4.39	65	IAmb_Lg		14 53 03.9	
	comp=Z,533nm,0.9s						
R49A	Shelbyville	4.43	221	IAmb_Lg		14 53 08.2	
	comp=Z,364nm,0.9s						
SFIN	Lafayette	4.45	255	IAmb_Lg		14 53 04.5	
	comp=Z,501nm,0.8s						
BLA	Blacksburg	4.54	169	IAmb_Lg		14 53 07.2	
	comp=Z,336nm,0.9s						
BLO	Bloomington	4.60	239	IAmb_Lg		14 53 14.0	
	comp=Z,522nm,0.7s						
LUPA	Lehigh Univers	4.73	101	IAmb_Lg		14 53 19.7	
	comp=Z,265nm,0.9s						
HQIL	Hanson Quary C	4.78	273	IAmb_Lg		14 53 18.3	
	comp=Z,519nm,0.9s						
L59A	Walton	4.82	82	IAmb_Lg		14 53 13.9	
	comp=Z,512nm,1.1s						
WCI	Wyandotte Cave	5.07	229	IAmb_Lg		14 53 32.8	
	comp=Z,291nm,1.1s						
BRNJ	Basking Ridge	5.30	99	IAmb_Lg		14 53 44.1	
	comp=Z,300nm,1.1s						
H43A	Windswept, Lux	5.39	303	IAmb_Lg		14 53 37.5	
	comp=Z,256nm,0.8s						
U56A	King	5.40	171	IAmb_Lg		14 53 34.9	
	comp=Z,345nm,0.9s						
J59A	Piesco	5.44	69	IAmb_Lg		14 53 34.2	
	comp=Z,372nm,1.1s						
P61A	Hammonton	5.46	109	IAmb_Lg		14 53 37.7	
	comp=Z,349nm,0.9s						
PAL	Palisades	5.73	94	IAmb_Lg		14 53 43.3	
	comp=Z,240nm,0.7s						
LONY	Lake Ozonia	5.83	58	IAmb_Lg		14 53 45.9	
	comp=Z,223nm,1.0s						
V55A	Taylorsville	5.83	178	IAmb_Lg		14 53 49.1	
	comp=Z,240nm,0.8s						
ACCN	Adirondack Com	6.01	71	IAmb_Lg		14 53 55.2	
	comp=Z,377nm,1.1s						
USIN	University of	6.05	234	IAmb_Lg		14 54 11.8	
	comp=Z,319nm,1.0s						
V53A	Saluda	6.10	190	IAmb_Lg		14 53 59.6	
	comp=Z,310nm,0.8s						
TKL	Tuckaleechee C	6.29	197	IAmb_Lg		14 54 08.9	
	comp=Z,297nm,0.7s						
TKL	Tuckaleechee C	6.29	197	Pn	Pn	14 52 17.8	+0.2
	comp=Z,2.6nm,0.3s,baz=51,slow=8.1,SNR=11						
TKL				Sn	Sn	14 53 27.8	-1.7
	comp=Z,19nm,0.3s,baz=0.1,slow=20,SNR=7.8						
TKL				Lg	Lg	14 53 57.7	
	comp=Z,50nm,0.3s,baz=303,slow=20,SNR=17						
TKL				LR	LR	14 54 53.6	
	comp=Z,131nm,20.4s,baz=194,slow=40						
	comp=Z,5.4nm,0.3s						
T47A	Sharon Grove	6.41	225	IAmb_Lg		14 54 07.1	
	comp=Z,194nm,0.8s						
KMSC	Kings Mountain	6.54	179	IAmb_Lg		14 54 09.5	
	comp=Z,225nm,0.9s						
FRNY	Flat Rock	6.56	59	IAmb_Lg		14 54 12.6	
	comp=Z,229nm,0.8s						
L61B	Northampton	6.58	80	IAmb_Lg		14 54 16.2	
	comp=Z,248nm,0.8s						
JFWS	Jewell Farm	6.62	284	IAmb_Lg		14 54 14.0	
	comp=Z,282nm,0.7s						
W57A	Gilead	6.63	169	IAmb_Lg		14 54 14.1	
	comp=Z,236nm,0.9s						
CPCT	Cooper Cave	6.67	202	IAmb_Lg		14 54 19.0	
	comp=Z,256nm,0.9s						
TRQ	Mont Tremblant	6.74	45	IAmb_Lg		14 54 14.5	
	comp=Z,200nm,0.7s						
BG3	Lake Jocassee	6.78	190	IAmb_Lg		14 54 19.8	
	comp=Z,234nm,0.8s						
J61A	Chester	6.79	73	IAmb_Lg		14 54 27.1	
	comp=Z,221nm,0.9s						
MNTQ	Montreal, Queb	6.85	54	IAmb_Lg		14 54 18.0	
	comp=Z,221nm,0.8s						
PAULI	Pauline	6.86	182	IAmb_Lg		14 54 32.0	
	comp=Z,249nm,0.9s						
VT1	Waterbury	6.91	65	IAmb_Lg		14 54 26.2	
	comp=Z,316nm,0.8s						
UCCT	U. Connecticut	6.92	86	IAmb_Lg		14 54 26.5	
	comp=Z,223nm,1.0s						
HNH	Hanover	7.06	70	IAmb_Lg		14 54 36.1	
	comp=Z,242nm,0.8s						
BIRD	Birdtown, Kers	7.08	173	IAmb_Lg		14 54 34.1	
	comp=Z,227nm,0.9s						
T45A	Paducah	7.25	232	IAmb_Lg		14 54 53.5	
	comp=Z,226nm,0.7s						
SWET	Sewanee	7.35	210	IAmb_Lg		14 54 49.1	
	comp=Z,174nm,0.8s						
SLM	Saint Louis	7.37	248	IAmb_Lg		14 54 35.1	
	comp=Z,219nm,0.9s						
HRV	Adam Dziewonsk	7.42	80	IAmb_Lg		14 54 38.2	
	comp=Z,168nm,0.9s						
LBNH	Lisbon	7.45	67	IAmb_Lg		14 54 37.8	
	comp=Z,253nm,1.1s						
HODGE	Hodges	7.47	185	IAmb_Lg		14 54 47.5	
	comp=Z,173nm,0.9s						
Y58A	Scranton	7.90	169	IAmb_Lg		14 54 56.5	
	comp=Z,243nm,1.1s						
Y60A	Bolivia	8.09	160	IAmb_Lg		14 55 04.9	
	comp=Z,204nm,1.0s						
CCM	Cathedral Cave	8.35	247	IAmb_Lg		14 55 15.8	
	comp=Z,163nm,0.8s						
LNXT	Lenox	8.38	231	IAmb_Lg		14 55 17.8	
	comp=Z,240nm,0.8s						
GOGA	Godfrey	8.41	191	IAmb_Lg		14 55 17.9	
	comp=Z,169nm,0.9s						
HALT	Halls	8.43	229	IAmb_Lg		14 55 34.6	
	comp=Z,187nm,0.8s						
X48A	Hartselle	8.46	213	IAmb_Lg		14 55 29.8	
	comp=Z,132nm,1.0s						
PBMO	Poplar Bluff	8.51	238	IAmb_Lg		14 55 32.1	
	comp=Z,135nm,0.8s						
PEBM	Pemiscott Bayo	8.59	232	IAmb_Lg		14 55 32.8	
	comp=Z,216nm,1.0s						
NHSC	New Hope	8.63	173	IAmb_Lg		14 55 30.2	
	comp=Z,131nm,0.9s						
Y49A	Blount Mountai	8.74	208	IAmb_Lg		14 55 22.9	
	comp=Z,196nm,0.7s						
CSU	Charleston Sou	8.76	172	IAmb_Lg		14 55 31.8	
	comp=Z,154nm,1.0s						
GNAR	Gosnell	8.78	232	IAmb_Lg		14 55 37.2	
	comp=Z,152nm,0.9s						
T42A	Van Buren	8.78	241	IAmb_Lg		14 55 25.0	
	comp=Z,144nm,0.8s						
MET	Memphis--Engin	9.33	228	IAmb_Lg		14 55 51.4	
	comp=Z,198nm,0.7s						
152A	Waverly Hall	9.37	197	IAmb_Lg		14 55 46.1	
	comp=Z,191nm,0.9s						
HBAR	Harrisburg	9.44	233	IAmb_Lg		14 55 52.5	
	comp=Z,172nm,0.8s						
LRAL	Lakeview Retre	9.69	209	IAmb_Lg		14 56 02.2	
	comp=Z,158nm,1.0s						
Z47A	Carrollton	9.96	214	IAmb_Lg		14 56 17.9	
	comp=Z,180nm,0.8s						
ULM	Lac du Bonnet	13.16	315	Pn	Pn	14 53 47.8	-3.9
	comp=Z,1.1nm,0.3s,baz=129,slow=10,SNR=11						
ULM				Lg	Lg	14 57 34.0	
	comp=Z,0.8nm,0.3s,baz=221,slow=18,SNR=3.8						
	comp=Z,4.2nm,0.5s						
SMWD	Samnorwood	16.11	252		Pn	14 54 30.3	-1.0
SMWD				IAmb	IAmb	14 54 33.1	
	comp=Z,12nm,0.6s						
SCHQ	Schefferville	16.32	31	Pn	Pn	14 54 29.9	-4.1
	comp=Z,0.9nm,0.3s,baz=226,slow=12,SNR=8.3						
SCHQ				Sn	Sn	14 57 21.4	-14
	comp=Z,2.1nm,0.3s,baz=74,slow=10.0,SNR=6.5						
SCHQ				Lg	Lg	14 59 08.0	
	comp=Z,2.0nm,0.3s,baz=151,slow=16,SNR=6.9						
	comp=Z,2.1nm,0.3s						
APMT	Aspermont	16.97	247	P	P	14 54 44.4	+0.2
APMT				IAmb	IAmb	14 54 47.4	
	comp=Z,17nm,0.9s						
AMTX	Amarillo	17.24	253		Pn	14 54 45.6	-0.2
AMTX				IAmb	IAmb	14 54 59.7	
	comp=Z,14nm,1.1s						
RTBA	Rita Blanca	17.32	259		Pn	14 54 46.7	-0.1
RTBA				IAmb	IAmb	14 54 51.4	
	comp=Z,8.7nm,0.8s						
SGCY	Sterling City	18.48	244	P	P	14 55 00.8	-0.2
SGCY				IAmb	IAmb	14 55 03.9	
	comp=Z,15nm,0.9s						
OZNA	Ozona	19.10	242	P	P	14 55 07.3	-0.5
SAND	Sanderson	20.38	242	P	P	14 55 22.5	+0.7
PD31	Pinedale Array	20.80	282	P	P	14 55 26.8	+0.4
PDAR	Pinedale Array	20.80	282	P	P	14 55 25.9	-0.4
	comp=Z,1.8nm,0.6s,baz=92,slow=15,SNR=12						
	comp=Z,1.8nm,0.6s						
PV15	Paradox Valley	20.93	270	P	P	14 55 28.6	+0.7
EGMT	Eagleton	20.96	297	P	P	14 55 28.1	+0.1
EGMT				IAmb	IAmb	14 55 34.1	
	comp=Z,6.6nm,0.7s						
LOHW	Long Hollow	21.47	285	P	P	14 55 34.0	+0.3
LOHW				IAmb	IAmb	14 55 36.4	
	comp=Z,5.6nm,0.8s						
TPAW	Teton Pass	21.73	285	P	P	14 55 37.0	+0.5
TPAW				IAmb	IAmb	14 56 16.2	
	comp=Z,7.7nm,1.2s						
TXAR	Lajitas Array	21.80	243	P	P	14 55 37.8	+0.6
	comp=Z,1.5nm,0.8s,baz=52,slow=10,SNR=12						
TXAR				LR	LR	15 04 22.3	
	comp=Z,53nm,19.0s,baz=32,slow=38						
	comp=Z,1.5nm,0.8s						
BSUT	Blindstream Ca	22.06	277	P	P	14 55 41.0	+0.8
BPMT	Black Pine Rid	23.37	293	P	P	14 55 54.0	+0.2
BLKN	Baker Lake	24.18	345	P	P	14 56 01.1	+0.1
BLKN				IAmb	IAmb	14 56 03.9	
	comp=Z,2.3nm,0.8s						
PSUT	Pine Spring	24.89	274	P	P	14 56 07.5	-0.5
PSUT				IAmb	IAmb	14 56 38.4	
	comp=Z,2.2nm,0.8s						
NEW	Newport	25.89	297	P	P	14 56 17.2	+0.3
NEW				IAmb	IAmb	14 56 21.7	
	comp=Z,2.3nm,0.8s						
C09A	Chrisman Ranch	26.66	296	P	P	14 56 24.2	+0.5
YKA	Yellowknife Ar	28.59	328	P	P	14 56 40.5	-0.4
	comp=Z,0.5nm,0.8s,baz=115,slow=8.9,SNR=4.6						
	comp=Z,0.5nm,0.8s						
LPIG	La Paz	29.70	243	LR	LR	15 09 31.1	
	comp=Z,50nm,20.0s,baz=202,slow=38						
POIN	Pond Inlet	31.14	2	P	P	14 57 04.3	+1.0
A36M	Sachs Harbour	37.07	339	P	P	14 57 55.8	+1.2
SIT	Sitka	37.22	313	P	P	14 57 56.3	+0.2
G31M	Satah River	38.05	329	P	P	14 58 03.5	+0.5
BCAR	Beaver Creek A	40.64	323	P	P	14 58 25.2	+0.4
BMAR	Burnt Mountain	42.10	329	P	P	14 58 37.6	+1.0
D25K	Kavik River	42.93	332	P	P	14 58 43.9	+0.5
D25K				IAmb	IAmb	14 58 46.2	
	comp=Z,3.1nm,1.1s						
ILAR	Eielson Array	42.93	325	P	P	14 58 45.6	+2.2
	comp=Z,0.6nm,0.7s,baz=92,slow=7.4,SNR=11						
	comp=Z,0.6nm,0.7s						
E22K	Anaktuvuk Pass	44.87	330	P	P	14 59 00.2	+1.2
E22K				IAmb	IAmb	14 59 34.2	
	comp=Z,4.4nm,1.4s						
L18K	Granite Mounta	47.55	322	P	P	14 59 21.6	+1.5
N17K	Nushagak Hills	48.14	320	P	P	14 59 25.6	+0.8
C16K	Lisburne Hills	49.86	331	P	P	14 59 38.8	+1.1
ESDC	Sonseca Array	56.88	64	LR	LR	15 22 05.2	
	comp=Z,21nm,20.5s,baz=114,slow=33						
ARCES	ARCESS Array B	57.09	24	P	P	15 00 32.6	+1.8
	comp=Z,4.0nm,0.8s,baz=308,slow=6.0,SNR=3.8						
	comp=Z,4.0nm,0.8s						
LPAZ	La Paz	58.99	165	P	P	15 00 46.6	+1.3
	comp=Z,2.7nm,0.7s,baz=347,slow=3.7,SNR=9.8						
	comp=Z,2.7nm,0.7s						
FINES	FINESS Array B	61.80	31	P	P	15 01 04.4	+1.0
FINES	FINESS Array B	61.80	31	P	P	15 01 04.1	+0.7
	comp=Z,3.6nm,1.0s,baz=328,slow=6.8,SNR=3.9						
	comp=Z,3.6nm,1.0s						
DAVOX	Davos/Dischmat	62.02	51	LR	LR	15 25 48.3	
	comp=Z,37nm,21.0s,baz=264,slow=34						
BVAR	Borovoye Array	82.58	17	LR	LR	15 43 34.8	
	comp=Z,38nm,18.6s,baz=42,slow=38						
KURBB	Kurchatov Arra	86.42	13	P	P	15 03 28.5	+1.3
	comp=Z,0.4nm,0.6s,baz=342,slow=4.9,SNR=4.2						
	comp=Z,0.4nm,0.6s						
HHC	Hu-ho-hao-te	97.00	350	*e*P	P	15 04 13.9	-3.0
HHC				pmax	pmax		
	comp=Z,18nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,5.0s						
WRA	Warramunga Arr	142.76	295	PKhKP	PKPpre	15 10 15.2	
	comp=Z,0.2nm,0.6s,baz=50,slow=3.7,SNR=1.4						
STKA	Stephens Creek	144.47	272	PKP	PKPbc	15 10 20.8	+0.9
	comp=Z,1.4nm,0.4s,baz=86,slow=3.3,SNR=3.4						
ASAR	Alice Springs	145.53	290	PKPbc	PKPbc	15 10 24.1	+0.6
	comp=Z,0.6nm,0.6s,baz=51,slow=3.1,SNR=22						

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*IDC **10** 14:51:50.4±13.0, 14°.79S×165°.96E, h0^{km}, mb3.8/3, mbtmp3.8/4, ML3.8/1, Error ellipse: s-maj=236.2km s-min=37.1km az=57.0*

*NOU **10** 14:51:55.5, 14°.88S×166°.88E, h23^{km}, MLv4.7/12, Vanuatu Islands*

ISC 10 14:51:49.6±1.0, **14°.67S**±0°.06×**166°.3E**±0°.2, **h10^{km}, n11,** σ**1^{s}.30**/12, **mb3.8**/3, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLAKA	Lakatoro	1.81	142	P	Pn	14 52 21.1	+0.3
LUES	Luesalemba Tem	4.00	355	P	Pb	14 52 59.7	-0.6
LUES	Luesalemba Tem	4.00	355	S	Sb	14 53 49.9	+1.1
DZM	Mont Dzumac	7.36	179	Pn	Pn	14 53 38.5	+1.3
	1.5nm,0.3s,baz=138,slow=23,SNR=18						
DZM				Sn	Sn	14 54 59.7	-1.3
	2.6nm,0.3s,baz=310,slow=23,SNR=6.6						
	4.6nm,0.4s						
DZM	Mont Dzumac	7.36	179	P	Pn	14 53 38.9	+1.6
YATNC	Mamie plateau,	7.37	176	P	Pn	14 53 38.3	+1.0
ONTNC	Ouen Toro	7.59	179	P	Pn	14 53 42.3	+1.9
OUENC	Ouen Island, N	7.72	176	P	Pn	14 53 43.7	+1.5
STKA	Stephens Creek	28.30	229	P	P	14 57 43.0	-0.5
	0.8nm,0.4s,baz=31,slow=5.9,SNR=4.0						
	0.8nm,0.4s						
WRA	Warramunga Arr	30.90	256	P	P	14 58 06.5	-0.3
	0.5nm,0.9s,baz=83,slow=8.3,SNR=5.3						
	0.5nm,0.9s						
ASAR	Alice Springs	31.79	249	P	P	14 58 13.8	-0.7
	0.5nm,0.4s,baz=78,slow=9.2,SNR=28						
	0.5nm,0.4s						

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*CATAC **10** 15:03:34.7±1.0, 13°N±6°×8°9W±°, h22^{km}±6^{km}, M3.7/18, MLv3.7/18, Error ellipse: s-maj=13.8km s-min=6.9km az=24.3, confirmed*

*SNET **10** 15:03:37.6±1.4, 13°.23N×89°.30W, h50^{km}, ML3.6*

*GCG **10** 15:03:37.2±0.8, 13°.13N×89°.45W, h39^{km}±15^{km}, MD3.7, ML3.0*

ISC 10 15:03:32.7±1.8, **12°.93N**±0°.07×**89°.39W**±0°.04, **h12^{km}**±11^{km}, **n78,** σ**0^{s}.90**/92, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.56	6	*e*P	Pb	15 03 46.0	+1.5
LALI				*e*S	Sb	15 03 52.3	-0.2
LALI	Alcalda de L	0.56	6	*i* P	Pb	15 03 46.0	+1.5
LALI				*i* S	Sb	15 03 52.9	+0.4
LALI				IAML		15 03 54.4	
	comp=N,2μm,0.3s						
LALI	Alcalda de L	0.56	6	P	Pb	15 03 46.1	+1.5
LALI	Alcalda de L	0.56	6	S	Sb	15 03 53.1	+0.6
PANCS	Alcalda de	0.71	16	*e*P	Pg	15 03 47.7	+1.2
PANCS	Alcalda de	0.71	16	S	Sb	15 03 56.8	-0.1
PANCS	Alcalda de	0.71	16	P	Pg	15 03 47.9	+1.4
JAYA	Jayaque - finc	0.73	355	*e*P	Pg	15 03 48.1	+1.3
JAYA				*e*S	Sg	15 03 56.6	+0.2
JAYA	Jayaque - finc	0.73	355	*i* P	Pg	15 03 48.1	+1.3
JAYA				*i* S	Sb	15 03 57.0	-0.5
JAYA	Jayaque - finc	0.73	355	P	Pg	15 03 48.1	+1.3

LOMA	Loma Larga	0.74	16	eP	Pg	15 03 48.5	+1.4
LOMA				eS	Sb	15 03 57.8	-0.1
LOMA	Loma Larga	0.74	16	P	Pg	15 03 48.5	+1.4
LOMA	Loma Larga	0.74	16	S	Sb	15 03 58.4	+0.5
ITCA	Escuela Especi	0.75	8	eP	Pg	15 03 48.5	+1.2
ITCA	Escuela Especi	0.75	8	P	Pn	15 03 58.0	+8.8
LFRS	El Faro	0.76	24	eP	Pg	15 03 48.6	+1.1
PMON	Piamonte	0.79	5	eP	Pg	15 03 48.8	+0.9
PMON				eS	Sb	15 03 58.9	-0.2
PMON	Piamonte	0.79	5	P	Pg	15 03 49.0	+1.1
UTEC	Universidad Te	0.79	13	eP	Pg	15 03 49.1	+1.1
UTEC	Universidad Te	0.79	13	P	Sb	15 03 59.0	-0.2
UEES	Universidad Ev	0.80	10	eP	Pg	15 03 49.1	+0.9
UEES	Universidad Ev	0.80	10	S	Sb	15 03 59.4	0.0
UEES	Universidad Ev	0.80	10	P	Pg	15 03 49.2	+1.1
UESS	Universidad de	0.81	13	eP	Pg	15 03 49.2	+0.9
AEIL	Aeropuerto Ilo	0.81	19	eP	Pg	15 03 49.5	+1.1
BOQS	Boqueron	0.81	7	eP	Pg	15 03 49.5	+1.1
BOQS				eS	Sb	15 03 59.4	-0.6
IGN	Direccin Gen	0.81	15	eP	Pg	15 03 49.3	+0.9
IGN	Direccin Gen	0.81	15	P	Sb	15 04 00.6	+0.8
UDBS	Universidad Do	0.82	16	P	Sb	15 04 00.2	+0.3
PIC2	El Picacho	0.82	9	eP	Pg	15 03 49.7	+1.0
TECO	Alcaldia de Te	0.85	44	eP	Pg	15 03 49.6	+0.6
TECO				eS	Sg	15 03 59.7	-0.4
TECO	Alcaldia de Te	0.85	44	P	Pg	15 03 49.7	+0.6
COEG	Centro de Oper	0.85	35	eP	Pg	15 03 49.7	+0.7
COEG	Centro de Oper	0.85	35	P	Pg	15 03 49.8	+0.7
LFU	La Fuente	0.86	18	eP	Pg	15 03 50.3	+1.0
SNVI	San Vicente	0.87	38	eP	Pg	15 03 50.0	+0.6
CEDA	San Andres	0.87	359	eP	Pg	15 03 50.1	+0.6
LBRS	Las Brisas	0.87	22	eP	Pg	15 03 50.6	+1.0
ALJI	Alcalda de J	0.89	63	eP	Pg	15 03 50.6	+0.7
PAVA	Las Pavas	0.90	29	eP	Pg	15 03 50.5	+0.5
PAVA				eS	Sb	15 04 01.8	-0.5
PAVA	Las Pavas	0.90	29	P	Pg	15 03 50.7	+0.7
UESV	Universidad de	0.92	39	eP	Pg	15 03 50.8	+0.4
UESV	Universidad de	0.92	39	P	Pg	15 03 50.8	+0.4
CEVE	Cerro Verde	0.93	346	eP	Pg	15 03 51.1	+0.5
CEVE				eS	Sg	15 04 03.0	+0.3
CEVE	Cerro Verde	0.93	346	P	Pg	15 03 51.2	+0.6
SBLS	San Blas	0.94	346	eP	Pg	15 03 51.2	+0.4
SNJE	San Jose	0.96	347	eP	Pg	15 03 51.4	+0.2
SCLA	Alcaldia de Sa	1.00	40	eP	Pg	15 03 52.2	+0.2
SCLA				eS	Sb	15 04 04.7	-0.6
SCLA	Alcaldia de Sa	1.00	40	P	Pg	15 03 52.3	+0.2
TECA	Tecapa	1.03	57	eP	Pg	15 03 53.9	+1.4
NUBE	Las Nubes	1.04	338	eP	Pg	15 03 52.4	-0.4
NUBE				eS	Sg	15 04 04.4	-2.0
NUBE	Las Nubes	1.04	338	iP	Pg	15 03 52.5	-0.4
NUBE				iS	Sg	15 04 04.8	-1.7
NUBE	Las Nubes	1.04	338	P	Pg	15 03 52.5	-0.4
PQSS	Presa 15 de Se	1.06	49	eP	Pg	15 03 53.5	+0.4
PQSS				eS	Sg	15 04 04.8	-2.2
FAME	Alcaldia de Sa	1.10	326	P	Pg	15 03 53.3	-0.6
LOAL	Lomas de Alarc	1.13	340	eP	Pg	15 03 54.1	-0.4
LOAL	Lomas de Alarc	1.13	340	P	Pg	15 03 54.4	-0.1
SLOZ	Alcaldia de Sa	1.16	341	eP	Pg	15 03 54.5	-0.5
SLOZ				eS	Sg	15 04 08.2	-1.9
SLOZ	Alcaldia de Sa	1.16	341	P	Pg	15 03 54.6	-0.4
PACA	Pacayal	1.17	62	eP	Pg	15 03 55.6	+0.4
PACA				eS	Sg	15 04 09.2	-1.2
PACA	Pacayal	1.17	62	P	Pg	15 03 55.7	+0.6
LCY	Lacayo	1.17	65	eP	Pg	15 03 55.3	+0.1
RANC	El Ranchito	1.18	65	P	Pg	15 03 50.8	-4.6
VSM	San Miguel	1.19	65	eP	Pg	15 03 55.9	+0.2
BLLM	Bellamira	1.23	65	eP	Pb	15 03 56.2	+0.2
LLGN	La Laguna	1.30	19	eP	Pb	15 03 56.4	-0.8
LLGN	La Laguna	1.30	19	P	Pb	15 03 56.4	-0.8
CAHU	Cacacuatique	1.42	54	eP	Pn	15 03 58.1	-0.4
MTO3	Montecristo	1.47	1	eP	Pn	15 03 58.7	-0.5
MTO3	Montecristo	1.47	1	iP	Pn	15 03 58.8	-0.5
MTO3	Montecristo	1.47	1	P	Pn	15 03 58.8	-0.4
LCND	La Caada	1.51	75	eP	Pn	15 03 59.8	+0.2
CNCH	Conchagua	1.55	77	eP	Pn	15 04 00.9	+0.7
CNCH	Conchagua	1.55	77	P	Pn	15 04 00.2	-0.1
ESQI	Esquipulas	1.62	2	eP	Pn	15 04 01.2	-0.1
ESQI	Esquipulas	1.62	2	P	Pn	15 04 01.4	+0.1
FG16	Alotenango, Sa	1.73	321	iP	Pg	15 04 08.2	+2.3
POLN	Al Sur del Vol	2.52	96	P	Pn	15 04 13.6	0.0

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*NEIC **10** 15:14:25.8±1.2, 18°.99N±0°.07×146°.2E±0°.3, h206^{km}±12^{km}, mb4.2/10, Error ellipse: s-maj=39.2km s-min=6.9km az=100.0*

*IDC **10** 15:14:26.5±3.4, 18°.93N×146°.01E, h210^{km}±25^{km}, mb3.1/4, mbtmp3.9/7, Error ellipse: s-maj=61.2km s-min=14.4km az=80.0*

ISC 10 15:14:24.9±1.4, **19°.03N**±0°.08×**146°.0E**±0°.3, **h200**^{km}, **n20**, σ**0^s.80**/21, **mb3.9**/8, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	5.51	191	Pn	Pn	15 15 46.6	+0.7
GUMO	Guam	5.51	191	P	Pn	15 15 47.7	+1.8
	18nm,0.5s,baz=166,slow=23,SNR=6.1						
GUMO				S	Sn	15 16 48.9	-1.0
	15nm,0.3s,baz=44,slow=23,SNR=1.4						
JOW	Kunigami	18.02	299	P	Pn	15 18 23.3	0.0
JOW	Kunigami	18.02	299	P	Pn	15 18 22.9	-0.5
	9.0nm,0.5s,baz=124,slow=12,SNR=10						
JGF	Kuroka	18.17	337	P	Pn	15 18 24.1	-0.9
JGF				IAmb	IAmb	15 18 53.2	
	comp=Z,18nm,1.3s						
MJAR	Matsushiro Arr	18.73	340	P	Pn	15 18 30.9	-0.5
	comp=Z,1.6nm,0.8s,baz=175,slow=11,SNR=5.0						
MJB9	Matsu-Tunnel	18.73	340	P	Pn	15 18 30.6	-1.0
MJB9				IAmb	IAmb	15 18 30.6	
	comp=Z,16nm,1.4s						
KNRA	Kununurra	38.41	207	P	P	15 21 27.2	-0.1
KNRA				IAmb	IAmb	15 21 45.2	
	comp=Z,9.2nm,1.2s						
WB0	Warramunga Arr	40.19	197	P	P	15 21 41.4	-0.6
WB0				IAmb	IAmb	15 22 09.6	
	comp=Z,5.6nm,1.2s						
WR8	Warramunga Arr	40.34	197	P	P	15 21 43.2	0.0
WR8				IAmb	IAmb	15 22 15.4	
	comp=Z,5.8nm,1.2s						
WRAB	Tennant Creek	40.36	197	P	P	15 21 43.8	+0.4
WRAB				IAmb	IAmb	15 21 52.7	
	comp=Z,9.2nm,1.4s						
WRA	Warramunga Arr	40.37	197	P	P	15 21 43.5	0.0
	comp=Z,0.9nm,0.6s,baz=25,slow=9.1,SNR=21 comp=Z,0.9nm,0.6s						
FITZ	Fitzroy Crossi	41.95	210	P	P	15 21 55.9	-0.4
AS31	Alice Springs	44.03	196	P	P	15 22 13.3	+0.3
ASAR	Alice Springs	44.03	196	P	P	15 22 13.3	+0.2
ASAR	Alice Springs	44.03	196	P	P	15 22 13.1	0.0
	comp=Z,0.4nm,0.7s,baz=12,slow=6.5,SNR=11 comp=Z,0.4nm,0.7s						
STKA	Stephens Creek	50.79	185	P	P	15 23 03.6	-1.3
KURBB	Kurchatov Arra	61.23	318	P	P	15 24 20.2	+1.4
	comp=Z,0.2nm,0.5s,baz=97,slow=7.0,SNR=1.7 comp=Z,0.2nm,0.5s						
ABKAR	Akbulak array	73.26	317	P	P	15 25 34.3	0.0
FINES	FINESS Array B	86.69	335	P	P	15 26 46.0	+0.2
	comp=Z,0.6nm,0.4s,baz=64,slow=4.4,SNR=6.5 comp=Z,0.6nm,0.4s						

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*NIED **10** 15:25:41.3, 34°.93N×138°.23E, h29^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$1.01; M$_{\theta\theta}$-4.84; M$_{\phi\phi}$3.83; M$_{r\theta}$4.36; M$_{\theta\phi}$1.83; M$_{\phi r}$3.96; Fault plane solution: M$_0$7.56000×10^{14} NP1: φ$_s$321.00000°, δ39.00000°, λ172.00000°. NP2: φ$_s$58.00000°, δ85.00000°, λ51.00000°.*

*JMA **10** 15:25:41.3±0.1, 34°.9N±0°.3×138°.2E±0°.4, h29^{km}±1^{km}, MD4.0/20, MV4.1/20, CENTRAL SHIZUOKA PREF*

JMA Felt II J1 at CENTRAL SHIZUOKA PREF .

*IDC **10** 15:25:42.4±1.9, 34°.81N×138°.08E, h44^{km}±18^{km}, mb3.3/8, mbtmp3.6/12, ML3.3/4, MS3.3/4, Error ellipse: s-maj=23.5km s-min=12.2km az=106.0*

ISC 10 15:25:40.8±0.8, **34°.89N**±0°.04×**138°.25E**±0°.04, **h32**^{km}±5^{km}, **n41**, σ**0^s.99**/28, **mb3.6**/8, **3D**, **Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHZ3	Shizuoka 3	0.18	350	iP	Pb	15 25 46.6	-0.5
SHZ3				S	Sb	15 25 50.9	-0.5
SHZ3	Shizuoka 3	0.18	350	A	A	15 25 46.6	
	comp=N,75nm,0.3s,comp=E,45nm,0.3s						
JSG	Sagara	0.22	193	iP	Pn	15 25 47.9	-0.1
JSG				eS	Sb	15 25 53.3	+1.4
JSG	Sagara	0.22	193	A	A	15 25 47.9	
	comp=N,50nm,0.6s,comp=E,36nm,1.0s						
JKKG	Kakegawa	0.25	245	iP	Pn	15 25 47.7	-0.6
JKKG				S	Sb	15 25 52.6	+0.3
JKKS	Kakegawashinom	0.26	237	A	A	15 25 48.0	
	comp=N,78nm,1.1s,comp=E,38nm,0.3s						
HMMJ	Hamamatsu 2	0.43	265	A	A	15 25 50.3	
	comp=N,9.0nm,1.2s,comp=E,9.0nm,0.8s						
JFNN	Fujinakano	0.47	50	⇓iP	Pb	15 25 50.6	-0.3
JFNN	Fujinakano	0.47	50	A	A	15 25 50.6	
	comp=N,15nm,1.5s,comp=E,14nm,0.4s						
JIZS	Izushimoda	0.55	108	iP	Pb	15 25 51.4	-0.6
JIZS				S	Sb	15 25 59.4	-0.4
JIZS	Izushimoda	0.55	108	A	A	15 25 51.4	
	comp=N,12nm,1.0s,comp=E,10.0nm,0.6s						
JNY	Yasuok	0.56	326	iP	Pb	15 25 51.9	-0.5
JNY				S	Sb	15 25 59.8	-0.5
JNY	Yasuok	0.56	326	A	A	15 25 51.9	
	comp=N,25nm,0.4s,comp=E,18nm,0.8s						
JSSY	Shinshiroyabe	0.61	272	A	A	15 25 52.9	
	comp=N,34nm,0.2s,comp=E,26nm,0.2s						
JHTM	Izuhatsuma	0.63	84	A	A	15 25 53.6	
	comp=N,112nm,0.3s,comp=E,103nm,0.3s						
JYN	Shimob	0.65	22	⇓iP	Pb	15 25 53.2	-0.7
JOD2	Odawara 2	0.78	62	iP	Pn	15 25 55.1	-0.6
JOD2	Odawara 2	0.78	62	A	A	15 25 55.1	
	comp=N,4.0nm,0.3s,comp=E,4.0nm,0.7s						
JAO	Obara	0.89	295	A	A	15 25 57.3	
	comp=N,11nm,0.6s,comp=E,9.0nm,0.8s						
JAA	Atsumi	0.94	254	A	A	15 25 58.5	
	comp=N,6.0nm,2.6s,comp=E,5.0nm,0.9s						
JNT	Takato	0.98	355	⇓iP	Pn	15 25 58.5	0.0
JICN	Ichinomiyachia	1.22	290	A	A	15 26 02.4	
	comp=N,12nm,0.9s,comp=E,17nm,0.6s						
JIE	Ise	1.36	249	A	A	15 26 05.0	
	comp=N,3.0nm,0.5s,comp=E,3.0nm,0.7s						
JNG	Nsakai	1.52	356	A	A	15 26 06.7	
	comp=N,4.0nm,1.5s,comp=E,3.0nm,1.6s						
MJAR	Matsushiro Arr	1.65	359	P	Pn	15 26 08.8	+1.3
	comp=E,101nm,0.3s,baz=180,slow=13,SNR=487						
MJAR				S	Sb	15 26 30.7	-0.2
	comp=E,327nm,0.5s,baz=193,slow=27,SNR=11						
MJAR				LR	LR	15 27 00.4	
	comp=E,440nm,19.3s,baz=240,slow=45						
JGK	Kuni	1.70	11	A	A	15 26 09.4	
	comp=N,5.0nm,1.7s,comp=E,4.0nm,0.6s						
JNU	Nakatsue	6.37	256	P	Pn	15 27 11.7	-0.8
	comp=E,0.9nm,0.3s,baz=41,slow=8.3,SNR=7.7 comp=E,5.6nm,1.0s						
KSRS	Korea Array	8.73	290	P	Pn	15 27 46.3	+1.5
	comp=E,0.3nm,0.3s,baz=98,slow=14,SNR=4.8 comp=E,1.1nm,0.6s						
ASAJ	Asahikawa	9.80	19	P	Pn	15 28 01.3	+1.8
	comp=E,0.3nm,0.3s,baz=172,slow=14,SNR=4.7 comp=E,1.9nm,0.6s						
USRK	Ussuriysk Ar.	10.47	334	LR	LR	15 31 57.8	
	comp=E,115nm,19.3s,baz=49,slow=36						
JOW	Kunigami	11.74	230	P	Pn	15 28 26.1	0.0
	comp=E,0.2nm,0.3s,baz=55,slow=19,SNR=2.0 comp=E,8.3nm,0.8s						
KLR	Kul'dur	15.11	343	LR	LR	15 34 55.5	
	comp=E,85nm,20.1s,baz=72,slow=36						
MA2	Magadan	26.03	15	LR	LR	15 42 14.6	
	comp=E,41nm,19.8s,baz=62,slow=38						
SONM	Songino Array	26.97	308	P	P	15 31 19.9	+0.2
	comp=E,0.4nm,0.4s,baz=106,slow=9.1,SNR=2.1						
SONM				LR	LR	15 42 41.1	
	comp=E,120nm,18.1s,baz=66,slow=38 comp=E,0.4nm,0.4s						
MKAR	Makanchi Array	43.12	304	P	P	15 33 37.7	-0.4
	comp=E,0.3nm,0.7s,baz=90,slow=12,SNR=3.6 comp=E,0.3nm,0.7s						
KURBB	Kurchatov Arra	45.33	309	P	P	15 33 55.0	-0.7
	comp=E,1.0nm,0.8s,baz=86,slow=8.0,SNR=9.8 comp=E,1.0nm,0.8s						
BVAR	Borovoye Array	50.14	313	P	P	15 34 32.9	0.0
	comp=E,0.3nm,0.3s,baz=120,slow=8.8,SNR=3.9 comp=E,0.3nm,0.3s						
ILAR	Eielson Array	52.66	31	P	P	15 34 54.3	+2.6
	comp=E,0.3nm,0.5s,baz=285,slow=5.4,SNR=4.3 comp=E,0.3nm,0.5s						
WRA	Warramunga Arr	54.66	185	P	P	15 35 05.5	-1.2
	comp=E,0.8nm,0.6s,baz=0.4,slow=7.6,SNR=16 comp=E,0.8nm,0.6s						
ASAR	Alice Springs	58.38	185	P	P	15 35 33.0	-0.3
	comp=E,0.4nm,0.7s,baz=20,slow=11,SNR=10 comp=E,0.4nm,0.7s						
BRTR	Keskin Array B	78.31	310	P	P	15 37 36.6	-1.4
	comp=E,0.6nm,0.8s,baz=96,slow=5.1,SNR=4.2 comp=E,0.6nm,0.8s						

WEL 10 15:26:42.0±1.0, **34°S**±6°×**17°9E**±1°3, **h12**^{km}, **M4.0**/13, **mB4.3**/2, **ML4.1**/16, **MLv4.0**/13, **Mw(mB)3.5**/2, **Error ellipse: s-maj=16.7km s-min=7.2km az=96.3, confirmed, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	3.56	194	P	Pn	15 27 37.0	-0.1
MXZ				S	Sn	15 28 19.1	0.0
MXZ				T	T	15 30 50.9	
WMGZ	Waiomatatini S	3.79	192	P	Pn	15 27 40.5	+0.2
WMGZ				S	Sn	15 28 26.8	+2.0
HAZ	Te Kaha	3.87	200	P	Pn	15 27 43.1	+1.7
HAZ				S	Sn	15 28 26.5	-0.3
PKGZ	Pakihiroa	3.90	196	P	Pn	15 27 42.3	+0.4
PKGZ				S	Sn	15 28 29.5	+1.9
PUZ	Puketiti	4.06	193	P	Pn	15 27 43.3	-0.8
PUZ				S	Sn	15 28 30.8	-0.8
RUGZ	Raukumara Rang	4.10	200	P	Pn	15 27 45.6	+1.0
TWGZ	Tauwhareparae	4.22	196	P	Pn	15 27 46.5	+0.3
TWGZ				S	Sn	15 28 36.6	+1.1
OPRZ	Ohinepanea	4.39	211	P	Pn	15 27 52.2	+3.6
CNGZ	Carnagh Statio	4.47	192	P	Pn	15 27 49.0	-0.6
MWZ	Matawai	4.48	199	P	Pn	15 27 49.6	-0.2
MWZ				S	Sn	15 28 42.3	+0.3
TKGZ	Te Karaka	4.50	196	P	Pn	15 27 49.7	-0.4
TKGZ				S	Sn	15 28 43.2	+0.9
URZ	Urewera	4.54	204	P	Pn	15 27 50.6	0.0
MBAZ	Motutapu North	4.55	233	P	Pn	15 27 52.3	+1.6
RAGZ	Rawiri	4.67	200	P	Pn	15 27 53.0	+0.6
RIGZ	Rimuhau	4.78	196	P	Pn	15 27 52.8	-1.0
RIGZ				S	Sn	15 28 48.7	-0.5
MUGZ	Murupara	4.86	205	P	Pn	15 27 55.4	+0.4
MUGZ				S	Sn	15 28 53.3	+2.3
OUZ	Omahuta	4.93	255	P	Pn	15 27 54.0	-1.9
SNGZ	Shannon Statio	4.95	199	P	Pn	15 27 56.8	+0.5
SNGZ				S	Sn	15 28 55.2	+1.7
RAHZ	Arahi	5.15	201	P	Pn	15 27 57.2	-1.8
MTHZ	Maungataniwha	5.17	203	P	Pn	15 27 59.8	+0.5
MTHZ				S	Sn	15 28 59.9	+1.1
BKZ	Black Stump Fm	5.57	204	P	Pn	15 28 03.9	-0.9
BKZ				S	Sn	15 29 09.8	+1.1

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*AUST **10** 15:32:08.9±0.3, 30°S±2°×11°8E±°, h10^{km}, mb4.3/3, ML3.2/4, Error ellipse: s-maj=5.1km s-min=4.0km az=88.0*

*NOU **10** 15:32:09.1, 30°.38S×117°.74E, h0^{km}, MLv3.7/11, Western Australia*

ISC 10 15:32:07.8±0.7, **30°.37S**±0°.04×**117°.82E**±0°.04, **h10**^{km}, **n32**, σ**1^s.61**/32, **Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLDU	Ballidu	0.99	255	P	Pg	15 32 27.1	+0.3
BLDU	Ballidu	0.99	255	S	Sg	15 32 38.7	-1.0
BLDU	Ballidu	0.99	255	P	Pg	15 32 26.8	-0.1
BLDU	Ballidu	0.99	255	S	Sg	15 32 39.2	-0.5
KLBR	Kellerberrin	1.22	183	P	Pg	15 32 32.1	+0.8
KLBR	Kellerberrin	1.22	183	S	Sb	15 32 47.1	+0.2
KLBR	Kellerberrin	1.22	183	P	Pb	15 32 31.9	+0.8
KLBR	Kellerberrin	1.22	183	S	Sb	15 32 47.4	+0.5
MORW	Morawa	2.02	310	P	Pn	15 32 43.7	+1.8
MORW	Morawa	2.02	310	S	Sn	15 33 08.4	+1.2
MORW	Morawa	2.02	310	P	Pn	15 32 43.4	+1.5
MORW	Morawa	2.02	310	S	Sn	15 33 08.8	+1.6
MUN	Mundaring	2.12	220	P	Pn	15 32 44.7	+1.4
MUN	Mundaring	2.12	220	S	Sn	15 33 09.7	0.0
MUN	Mundaring	2.12	220	P	Pn	15 32 44.7	+1.4
MUN	Mundaring	2.12	220	S	Sb	15 33 12.8	+0.1
NWAO	Narrogin (SRO)	2.60	191	P	Pn	15 32 51.6	+1.6
NWAO	Narrogin (SRO)	2.60	191	S	Sn	15 33 20.4	-1.2
NWAO	Narrogin (SRO)	2.60	191	P	Pn	15 32 51.6	+1.6
KMBL	Kambalda	3.63	107	P	Pn	15 33 05.5	+1.4
KMBL	Kambalda	3.63	107	S	Sn	15 33 47.4	+0.2
KMBL	Kambalda	3.63	107	P	Pn	15 33 07.0	+2.8
MEEK	Meekatharra	3.78	11	P	Pn	15 33 08.9	+2.6
MEEK	Meekatharra	3.78	11	S	Sn	15 33 48.9	-2.0
MEEK	Meekatharra	3.78	11	P	Pn	15 33 09.9	+3.6
RKGY	Rocky Gully	4.29	189	S	Sn	15 34 03.4	+0.2
GIRL	Giralia	8.34	337	P	Pn	15 34 09.1	+0.3
	comp=Z,150nm,1.6s,comp=Z,0.5nm						
FORT	Forrest	8.84	95	P	Pn	15 34 16.9	+1.2
	comp=Z,31nm,2.0s,comp=Z,0.2nm						
FORT	Forrest	8.84	95	S	Sn	15 35 51.9	-3.5
PSAD3	Pilbara Seismi	8.87	12	P	Pn	15 34 17.0	+0.9
	comp=Z,24nm,2.2s,comp=Z,0.1nm						
MULG	Mulgathing	14.03	94	P	Pn	15 35 25.1	-1.6
FITZ	Fitzroy Crossi	14.14	32	P	Pn	15 35 27.3	-0.9

CATAC 10 15:42:07.2±0.5, **12°N**±6°×**8°7W**±°, **h193**^{km}±3^{km}, **M2.4**/15, **MLv2.4**/15, **Error ellipse: s-maj=16.6km s-min=4.6km az=37.6, confirmed, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNGA	Al SSO del Vol	0.17	18	P	Pn	15 42 33.2	+0.6
CNGN	Cerro Negro	0.17	18	P	Pn	15 42 33.5	+0.8
CNGN	Cerro Negro	0.17	18	S	Sn	15 42 53.3	+0.8
ROCN	Rota Cerro Neg	0.18	3	P	Pn	15 42 33.1	+0.4
ROCN				S	Sn	15 42 54.2	+1.7
MOMN	Momotombo	0.22	71	P	Pn	15 42 33.3	+0.6
MOMN				S	Sn	15 42 53.5	+1.1
HOYN	Al Sur del Vol	0.27	344	P	Pn	15 42 33.3	+0.4
HOYN				S	Sn	15 42 55.1	+2.2
QUEN	Al S del Volca	0.27	339	P	Pn	15 42 33.4	+0.6
HERN	Volcan Telica	0.28	344	P	Pn	15 42 33.2	+0.3
POLN	Al Sur del Vol	0.32	350	P	Pn	15 42 33.4	+0.5
POLN				S	Sn	15 42 55.1	+2.1
SAPS	Ciudad Sandino	0.38	116	S	Sn	15 42 54.8	+1.8
CRIN	San Cristobal	0.46	321	S	Sn	15 42 54.5	+0.7
CRIN	San Cristobal	0.46	321	P	Pn	15 42 33.9	+0.5
LIMN	Finca el Limon	0.81	28	P	Pn	15 42 35.4	+0.3
LIMN	Finca el Limon	0.81	28	S	Sn	15 42 56.7	-0.2
POTN	Potosi Cosigui	0.99	312	P	Pn	15 42 36.0	-0.1
POTN				S	Sn	15 42 58.6	0.0
MATN	Matagalpa	1.00	54	P	Pn	15 42 35.8	-0.5
CSGN	Cosiguina Volc	1.01	309	P	Pn	15 42 36.6	+0.2
CSGN				S	Sn	15 42 59.6	+0.6
CHOHN	Orocuina	1.20	341	S	Sn	15 43 01.8	0.0
ARIN	Rivas	1.26	134	S	Sn	15 43 02.4	+0.3
CNCH	Conchagua	1.41	312	P	Pn	15 42 40.2	+0.7
CNCH	Conchagua	1.41	312	S	Sn	15 43 05.0	+0.2
CARN	Rivas	1.66	133	P	Pn	15 42 41.6	-0.2
CARN				S	Sn	15 43 09.6	+1.0
PACA	Pacayal	1.90	307	S	Sn	15 43 14.0	+0.9
PACA	Pacayal	1.90	307	P	Pn	15 42 44.2	0.0
COEG	Centro de Oper	2.43	302	P	Pn	15 42 49.4	-0.6

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*DJA **10** 15:54:27.4±0.3, 3°S±5°×13°7E±°, h10^{km}, M3.8/6, mb4.0/4, MLv3.6/6*

*IDC **10** 15:54:30.6±1.6, 3°.57S×137°.99E, h0^{km}, mb3.4/2, mbtmp3.5/4, ML3.5/2, MS3.7/2, Error ellipse: s-maj=37.1km s-min=25.9km az=132.0*

ISC 10 15:54:27.7±1.1, **3°.11S**±0°.08×**137°.45E**±0°.05, **h54**^{km}, **n14**, σ**2^s.29**/15, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	1.68	49	P	Pn	15 54 53.2	-1.5
SRPI	Serui, Papua	1.72	315	P	Pn	15 54 54.6	-0.7
BAKI	Biak	2.33	325	P	Pn	15 55 03.0	-0.6
GENI	Genyem	2.76	79	P	Pn	15 55 12.4	+2.9
JAY	Jayapura	3.30	80	Pn	Pn	15 55 18.8	+1.8
	3.4nm,0.3s,baz=248,slow=11,SNR=36						
JAY				Sn	Sn	15 55 53.8	-1.3
	4.7nm,0.3s,baz=140,slow=21,SNR=13 7.0nm,0.3s						
JAY	Jayapura	3.30	80	P	Pn	15 55 18.9	+1.9
RKPI	Ransiki, Papua	3.63	296	P	Pn	15 55 22.7	+1.2
RKPI				S	Sn	15 56 01.8	-1.3
FAKI	Fak Fak	5.20	272	P	Pn	15 55 44.5	+1.6
	0.1nm8.2nm,0.9s						
FAKI				S	Sn	15 56 39.1	-2.5
	0.1nm8.2nm,0.9s						
SWI	Sorong	6.58	290	P	Pn	15 56 03.5	+1.7
	9.1nm,1.0s						
WRA	Warramunga Arr	17.01	190	Pn	P	15 58 25.4	+2.3
	0.3nm,0.3s,baz=13,slow=12,SNR=23						
WRA				Sn	Sn	16 01 25.8	-4.6
	0.1nm,0.3s,baz=13,slow=23,SNR=5.1 0.4nm,0.3s						
GUMO	Guam	18.15	24	S	S	16 02 02.2	+1.4
ASAR	Alice Springs	20.73	189	P	Pn	15 59 09.1	+2.4
	0.6nm,0.3s,baz=20,slow=11,SNR=63						
ASAR				LR	LR	16 06 13.3	
	comp=Z,76nm,18.7s,baz=105,slow=34 0.6nm,0.3s						
JCJ	Chichijima	30.37	8	LR	LR	16 11 16.8	
	comp=Z,421nm,20.9s,baz=192,slow=33						
MKAR	Makanchi Array	69.34	323	P	P	16 05 44.4	+15
	0.2nm,0.5s,baz=123,slow=7.4,SNR=3.1 0.2nm,0.5s						

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*MOS **10** 15:59:55.9±0.9, 17°.34N×147°.75E, h19^{km}, mb5.0/47, Error ellipse: s-maj=9.9km s-min=5.1km az=108.2*

*IDC **10** 15:59:55.7±0.5, 17°.35N×147°.94E, h0^{km}, mb4.6/29, mbtmp4.6/31, ML5.0/2, MS3.6/31, Error ellipse: s-maj=17.1km s-min=11.2km az=85.0*

*NEIC **10** 15:59:58.5±1.4, 17°.40N±0°.06×147°.8E±0°.1, h10^{km}±1^{km}, mb5.0/271, Error ellipse: s-maj=17.4km s-min=10.5km az=93.0*

*DJA **10** 15:59:58.1±0.4, 17°N±5°×14°8E±°, h10^{km}, M5.0/9, mb5.0/9, mB5.1/2, MLv5.0/1, Mw(mB)4.4/2*

*BJI **10** 16:00:02.4, 17°.75N×147°.45E, h25^{km}, mB4.9/13, mb4.6/49, Ms4.1/9, Ms7 3.9/9*

ISC 10 15:59:59.7±0.7, **17°.30N**±0°.04×**147°.85E**±0°.06, **h23**^{km}±4^{km}, **n645**, σ**1^s.04**/535, **mb4.9**/209, **MS3.7**/38, **15C-7D**, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	4.68	218	Pn	Pn	16 01 09.7	+0.7
	38nm,0.3s,baz=117,slow=5.4,SNR=53						
GUMO				Sn	Sn	16 02 01.2	-1.3
	74nm,0.3s,baz=28,slow=21,SNR=9.0						
GUMO				LR	LR	16 03 08.3	
	comp=Z,609nm,19.9s,baz=45,slow=40 98nm,0.3s						
GUMO	Guam	4.68	218	P	Pn	16 01 09.9	+1.0
JCJ	Chichijima	11.07	333	Pn	Pn	16 02 35.7	-1.0
JCJ	Chichijima	11.07	333	Pn	Pn	16 02 34.9	-1.8
	20nm,0.3s,baz=278,slow=23,SNR=5.1 48nm,0.3s						
PATS	Pohnpei	14.58	134	Pn	Pn	16 03 20.1	-4.7
MANU	Manus Island	19.23	181	Pn	Pn	16 04 25.0	+1.5
INU	Inuyama	20.40	334	P	P	16 04 35.5	+0.4
INU				IAmb	IAmb	16 04 37.7	
	comp=Z,103nm,1.1s						
INU	Inuyama	20.40	334	P	Pn	16 04 36.6	-0.7
JOW	Kunigami	20.45	301	P	P	16 04 35.7	0.0
JOW	Kunigami	20.45	301	P	P	16 04 36.0	+0.3
	comp=Z,18nm,0.4s,baz=119,slow=15,SNR=22 comp=Z,18nm,0.4s						
JGF	Kuroka	20.48	335		Pn	16 04 36.6	-1.6
JGF				IAmb	IAmb	16 04 38.0	
	comp=Z,73nm,0.9s						
JGF	Kuroka	20.48	335	P	Pn	16 04 37.0	-1.2
JMN	Monobe	20.61	325		P	16 04 37.9	+0.4
JMN	Monobe	20.61	325	P	Pn	16 04 38.9	-0.9
JAY	Jayapura	20.91	200	P	P	16 04 40.9	+0.1
	comp=Z,25nm,1.0s,baz=300,slow=1.9,SNR=4.5 comp=Z,25nm,1.0s						
JAY	Jayapura	20.91	200	P	Pn	16 04 44.5	+1.1
MJAR	Matsushiro Arr	20.98	338	P	P	16 04 41.0	-0.4
	comp=Z,2.9nm,0.4s,baz=163,slow=9.4,SNR=25 comp=Z,2.9nm,0.4s						
MJAR	Matsushiro Arr	20.98	338	P	P	16 04 41.0	-0.4
MAJO	Matsushiro	20.98	338		P	16 04 41.8	+0.4

MAJO	**Matsushiro**	20.98	338	P	P	16 04 42.0	+0.6
MAJO	**Matsushiro**	20.98	338	P	P	16 04 41.8	+0.4
MAJO				pmax	pmax		
	comp=Z,27nm,0.9s						
MJB9	**Matsu-Tunnel**	20.98	338	P	P	16 04 41.7	+0.3
GENI	**Genyem**	21.17	202	P	P	16 04 48.1	+4.5
JNU	**Nakatsue**	21.95	319	P	P	16 04 52.0	+0.2
JNU	**Nakatsue**	21.95	319	P	P	16 04 52.0	+0.2
	comp=Z,3.4nm,0.5s,baz=60,slow=4.7,SNR=9.3						
	comp=Z,3.4nm,0.5s						
JSD	**Sado**	22.31	340	P	P	16 04 56.5	+0.9
JSD	**Sado**	22.31	340	S	S	16 08 59.4	-0.4
DAV	**Davao City (W)**	24.00	248	LR	LR	16 14 17.6	
	comp=Z,93nm,20.8s,baz=96,slow=36						
JTM	**Tenmabayashi**	24.13	347	P	P	16 05 14.4	+0.6
SWI	**Sorong**	24.35	224	P	P	16 05 17.5	+1.4
	comp=Z,952nmcomp=Z,34nm,0.8s						
ERM	**Erimo**	24.96	352	*ce*P	P	16 05 22.8	+1.4
ERM				pmax	pmax		
	comp=Z,47nm,2.5s						
FAKI	**Fak Fak**	25.31	219	P	P	16 05 24.5	-0.4
NACB	**Ninganchiao**	25.46	290	P	P	16 05 25.1	-1.1
NACB				IAmb	IAmb	16 05 37.0	
	comp=Z,83nm,1.8s						
SSLB	**Suanglung**	25.97	289	P	P	16 05 30.2	-0.7
SSLB				IAmb	IAmb	16 05 41.5	
	comp=Z,24nm,0.9s						
TGY	**Tagaytay City**	26.09	267	LR	LR	16 14 39.2	
	comp=Z,79nm,21.9s,baz=96,slow=34						
PMG	**Port Moresby**	26.54	182	P	P	16 05 36.4	+0.4
PMG				IAmb	IAmb	16 05 49.2	
	comp=Z,50nm,1.3s						
PMG	**Port Moresby**	26.54	182	P	P	16 05 36.3	+0.4
	comp=Z,14nm,0.7s,baz=147,slow=17,SNR=2.6						
PMG				LR	LR	16 15 48.6	
	comp=Z,73nm,20.2s,baz=318,slow=36						
	comp=Z,14nm,0.7s						
PMG	**Port Moresby**	26.54	182	P	P	16 05 36.4	+0.4
PMG				pmax	pmax		
	comp=Z,51nm,1.3s						
KSRS	**Korea Array**	26.66	323	P	P	16 05 36.4	-0.5
	comp=Z,5.2nm,0.8s,baz=147,slow=8.7,SNR=15						
	comp=Z,5.2nm,0.8s						
KS19	**Wonju Array Si**	26.72	323	P	P	16 05 37.2	-0.3
KS19				IAmb	IAmb	16 05 58.1	
	comp=Z,61nm,1.9s						
JKA	**Kamikawa-asahi**	27.10	352	P	P	16 05 40.8	0.0
JKA				IAmb	IAmb	16 05 51.7	
	comp=Z,36nm,1.4s						
ASAJ	**Asahikawa**	27.10	352	P	P	16 05 41.2	+0.4
	comp=Z,3.5nm,0.6s,baz=224,slow=7.8,SNR=5.9						
ASAJ				LR	LR	16 14 56.0	
	comp=Z,73nm,21.2s,baz=182,slow=33						
	comp=Z,3.5nm,0.6s						
MSHR	**Mys Shultsa**	28.94	334	*i* P	P	16 05 55.7	-1.5
VLA	**Vladivostok**	29.09	336	*i* P	P	16 05 59.4	+0.8
VLA				pmax	pmax		
	comp=Z,17nm,0.8s						
YSS	**Yuzhno-Sakhali**	29.87	353	*e*P	P	16 06 03.8	-1.6
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
YSS				MLR	MLR		
	comp=N,100nm,16.0s						
YSS				MLR	MLR		
	comp=E,100nm,14.0s						
USA0B	**Ussuriysk Arra**	29.97	337	P	P	16 06 07.1	+0.8
USA0B				IAmb	IAmb	16 06 08.3	
	comp=Z,33nm,1.6s						
USA0B	**Ussuriysk Arra**	29.97	337	*i* P	P	16 06 05.5	-0.8
USRK	**Ussuriysk Ar.**	29.97	337	P	P	16 06 06.5	+0.2
USRK	**Ussuriysk Ar.**	29.97	337	P	P	16 06 07.0	+0.7
	comp=Z,6.2nm,0.8s,baz=146,slow=11,SNR=12						
	comp=Z,6.2nm,0.8s						
NJ2	**Nanjing**	30.04	305	*e*P	P	16 06 08.6	+1.5
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
LUWI	**Luwuk**	30.70	236	P	P	16 06 11.5	-1.6
LUWI				IAmb	IAmb	16 06 26.5	
	comp=Z,30nm,1.0s						
TOLI2	**Tolitoli**	31.10	242	P	P	16 06 16.0	-0.7
MDJ	**Mudanjiang**	31.26	334	P	P	16 06 18.8	+1.1
MDJ				pmax	pmax		
	comp=Z,14nm,1.0s						
COEN	**Coen**	31.40	189	P	P	16 06 19.5	+0.3
COEN				IAmb	IAmb	16 06 34.3	
	comp=Z,48nm,1.6s						
CN2	**Changchun**	32.50	329	P	P	16 06 27.0	-1.7
CN2				S	S	16 11 39.5	-2.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
KKM	**Kota Kinabalu**	32.88	254	P	P	16 06 31.9	-0.5
TIA	**Tai'an**	33.07	311	P	P	16 06 35.5	+1.7
TIA				PcP	PcP	16 09 18.0	+1.0
BNX	**BinXian**	33.08	333	⇑P	P	16 06 34.0	+0.3
BNX				pmax	pmax		
	comp=Z,2.0nm,0.5s						
TYV	**Tymovskoe**	33.74	354	*e*P	P	16 06 39.2	-0.2
TYV				pmax	pmax		
	comp=Z,200nm,3.8s						
TYV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MTN	**Manton Dam**	34.20	210	P	P	16 06 43.4	-0.3
MTN				IAmb	IAmb	16 06 59.2	
	comp=Z,14nm,1.0s						
KLR	**Kul'dur**	34.42	341	LR	LR	16 24 38.7	
	comp=Z,39nm,18.9s,baz=167,slow=43						
KLR	**Kul'dur**	34.42	341	*ce*P	P	16 06 45.6	+0.3
KLR				pmax	pmax		
	comp=Z,14nm,0.7s						
GRNR	**Gornyy**	34.62	347	⇓*i*P	P	16 06 47.7	+0.7
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GRNR				MLR	MLR		
	comp=Z,70nm,16.0s						
HNS	**HongShan**	35.33	311	⇓P	P	16 06 53.2	-0.1
HNS				pmax	pmax		
	comp=Z,15nm,0.8s						
MTSU	**Mount Surprise**	35.38	186	P	P	16 06 55.5	+1.6
KAPI	**Kappang**	35.52	234	LR	LR	16 19 43.2	
	comp=Z,48nm,21.5s,baz=70,slow=33						
KAPI	**Kappang**	35.52	234	*i* P	P	16 06 52.1	-3.1
KAPI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BJI	**Beijing**	35.55	316	P	P	16 06 55.2	0.0
BJI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BJI				LR	LR		
	comp=Z,65nm,15.7s						
BJI				LR	LR		
	comp=Z,77nm,16.0s						
BJI				LR	LR		
	comp=Z,86nm,17.3s						
PETK	**Petropavlovsk-**	36.56	10	LR	LR	16 21 13.7	
	comp=Z,116nm,20.7s,baz=190,slow=35						
HEH	**HeiHe**	36.75	338	*e*P	P	16 07 05.5	+0.2
HEH				PcP	PcP	16 09 27.2	-0.2
HEH				pmax	pmax		
	comp=Z,31nm,1.1s						
HEH				pmax	pmax		
	comp=Z,120nm,4.6s						
XLT	**XiLinHaoTe**	37.69	322	*e*P	P	16 07 13.7	+0.2
XLT				sP	sP	16 07 24.9	+4.8
XLT				pmax	pmax		
	comp=Z,12nm,0.9s						
KNRA	**Kununurra**	37.79	211		P	16 07 14.1	-0.3
KNRA				IAmb	IAmb	16 07 30.5	
	comp=Z,30nm,1.3s						
QIS	**Mount Isa**	38.48	192	P	P	16 07 23.6	+3.3
XAN	**Xi'an**	38.57	303	P	P	16 07 17.2	-3.8
XAN				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HHC	**Hu-ho-hao-te**	39.03	315	*e*P	P	16 07 26.5	+1.6
HHC				pmax	pmax		
	comp=Z,17nm,0.8s						
HHC				pmax	pmax		
	comp=Z,48nm,5.5s						
HHC				LR	LR		
	comp=Z,85nm,15.3s						
HHC				LR	LR		
	comp=Z,130nm,15.3s						
HHC				LR	LR		
	comp=Z,150nm,15.3s						
WB0	**Warramunga Arr**	39.13	200		P	16 07 25.6	-0.1
GYA	**Guiyang**	39.15	291	⇓P	P	16 07 27.1	+1.0
GYA				pmax	pmax		
	comp=Z,12nm,0.6s						
HIA	**Hailar**	39.17	331	P	P	16 07 26.6	+0.8
HIA	**Hailar**	39.17	331	P	P	16 07 26.3	+0.5
HIA				pmax	pmax		
	comp=Z,26nm,0.8s						
WR8	**Warramunga Arr**	39.27	200	P	P	16 07 26.9	-0.1
WRAB	**Tennant Creek**	39.30	200	P	P	16 07 27.2	0.0
WRAB	**Tennant Creek**	39.30	200	P	P	16 07 27.2	0.0
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WRA	**Warramunga Arr**	39.32	200	P	P	16 07 25.6	-1.7
WRA	**Warramunga Arr**	39.32	200	P	P	16 07 27.3	0.0
	comp=Z,4.9nm,0.7s,baz=23,slow=9.3,SNR=32						
WRA				PcP	PcP	16 09 36.3	+0.5
	comp=Z,2.1nm,0.8s,baz=16,slow=3.3,SNR=7.0						
WRA				LR	LR	16 24 50.1	
	comp=Z,47nm,21.8s,baz=5.5,slow=38						
	comp=Z,4.9nm,0.7s						
WRA	**Warramunga Arr**	39.32	200	*i* P	P	16 07 27.2	0.0
WRA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ZEA	**Zeya**	39.74	341	*e*P	P	16 07 30.4	0.0
ZEA				pmax	pmax		
	comp=N,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.9s						
BTO	**Baotou**	39.99	313	*e*P	P	16 07 30.1	-2.8
BTO				pP	pP	16 07 37.5	+0.1
BTO				sP	sP	16 07 40.7	+1.2
BTO				PP	PnPn	16 09 12.3	+3.9
BTO				S	S	16 13 32.2	-5.1
BTO				pmax	pmax		
	comp=Z,21nm,0.5s						
BTO				pmax	pmax		
	comp=Z,100nm,4.0s						
BTO				LR	LR		
	comp=Z,120nm,5.7s						
BTO				LR	LR		
	comp=Z,200nm,5.9s						
BTO				LR	LR		
	comp=Z,240nm,14.8s						
KSM	**Kuching**	40.11	251		P	16 07 33.5	-0.6
KSM	**Kuching**	40.11	251	P	P	16 07 34.5	+0.5
SHEM	**Shemya Is, Ala**	40.91	24	LR	LR	16 22 24.5	
	comp=Z,91nm,21.3s,baz=304,slow=33						
FITZ	**Fitzroy Crossi**	41.41	213		P	16 07 44.9	+0.3
FITZ	**Fitzroy Crossi**	41.41	213	P	P	16 07 45.6	+1.0
MA2	**Magadan**	42.27	2	P	P	16 07 51.5	+0.4
MA2	**Magadan**	42.27	2	LR	LR	16 22 36.0	
	comp=Z,82nm,21.7s,baz=208,slow=32						
MA2	**Magadan**	42.27	2	P	P	16 07 54.4	+3.2
MA2	**Magadan**	42.27	2	*i* P	P	16 07 49.0	-2.2
MA2				pmax	pmax		
	comp=Z,15nm,1.1s						
AS31	**Alice Springs**	42.93	199	P	P	16 07 57.3	+0.3
ASAR	**Alice Springs**	42.93	199	P	P	16 07 56.9	-0.1
	comp=Z,0.8nm,0.5s,baz=23,slow=6.8,SNR=15						
ASAR				PcP	PcP	16 09 48.0	+0.5
	comp=Z,1.9nm,0.8s,baz=21,slow=4.3,SNR=8.0						
	comp=Z,0.8nm,0.5s						
DZM	**Mont Dzumac**	43.16	154	*e*LR	LR	16 20 10.3	
	comp=Z,270nm,23.1s						
PZH	**PanZhiHua**	43.55	290	P	P	16 08 02.7	+0.5
PZH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PZH				pmax	pmax		
	comp=Z,100nm,4.8s						
CIT	**Chita**	43.94	330	*e*P	P	16 08 02.8	-2.1
CIT				pmax	pmax		
	comp=Z,50nm,1.2s						
ULN	**Ulaanbaatar**	45.13	322		P	16 08 14.0	-0.6
ULN	**Ulaanbaatar**	45.13	322	*i* P	P	16 08 12.8	-1.8
ULN				pmax	pmax		
	comp=Z,12nm,1.4s						
SONM	**Songino Array**	45.51	321	P	P	16 08 17.1	-0.4
SONM	**Songino Array**	45.51	321	P	P	16 08 17.4	-0.1
	comp=Z,7.0nm,0.7s,baz=134,slow=8.1,SNR=21						
SONM				PcP	PcP	16 09 56.3	+0.1
	comp=Z,1.2nm,0.6s,baz=151,slow=3.4,SNR=4.0						
SONM				LR	LR	16 29 03.3	
	comp=Z,100nm,19.3s,baz=110,slow=38						
	comp=Z,7.0nm,0.7s						
SEY	**Seymchan**	45.70	3	*ce*P	P	16 08 19.6	+1.0
SEY				pmax	pmax		
	comp=Z,10.0nm,2.5s						
ATKA	**Atka Island**	45.85	32	P	P	16 08 20.4	+0.5
CM31	**Chiang Mai Arr**	46.44	279	P	P	16 08 24.4	-0.8
CM31				IAmb	IAmb	16 08 27.1	
	comp=Z,13nm,1.1s						
CMAR	**Chiang Mai Arr**	46.44	279	P	P	16 08 25.8	+0.6
	comp=Z,13nm,0.3s,baz=71,slow=9.0,SNR=27						
CMAR				LR	LR	16 27 26.0	
	comp=Z,27nm,21.1s,baz=95,slow=36						
	comp=Z,13nm,0.3s						
YAK	**Yakutsk**	46.48	348	P	P	16 08 23.6	-1.2
YAK	**Yakutsk**	46.48	348	LR	LR	16 28 37.6	
	comp=Z,62nm,21.3s,baz=140,slow=37						
YAK	**Yakutsk**	46.48	348	*d i*P	P	16 08 24.4	-0.4
YAK				*e**PP	pP	16 08 27.5	-2.2
YAK				*e*		16 09 59.0	
YAK				*e*		16 10 13.4	
YAK				*e*PPP	PPP	16 10 53.8	
YAK				*e*S	S	16 15 12.7	+1.2
YAK				*e**SS	pS	16 15 18.1	+1.2
YAK				*e*		16 18 20.2	
YAK				pmax	pmax		
	comp=Z,36nm,0.9s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,107nm,4.6s						
YAK				pmax	pmax		
	comp=E,33nm,3.5s						
YAK				pmax	pmax		
	comp=N,42nm,4.3s						
YAK				smax	smax		
	comp=E,23nm,3.3s						
YAK				smax	smax		
	comp=N,9.0nm,2.6s						
GTA	**Gaotai**	47.02	308	*e*P	P	16 08 30.4	+0.8
GTA				PcP	PcP	16 10 02.8	+1.2
GTA				pmax	pmax		
	comp=N,3.0nm,1.0s						
GTA				LR	LR		
	comp=N,120nm,14.9s						
GTA				LR	LR		
	comp=N,98nm,16.0s						
GTA				LR	LR		
	comp=N,140nm,16.0s						
MBWA	**Marble Bar**	47.12	217	P	P	16 08 30.6	+0.2
PSA00	**Pilbara Seismi**	47.38	216	P	P	16 08 32.7	+0.3
KULM	**Kulim**	47.66	261	P	P	16 08 35.6	+0.8
KULM				IAmb	IAmb	16 08 41.4	
	comp=Z,16nm,1.2s						
KULM	**Kulim**	47.66	261	P	P	16 08 35.7	+0.9
ZAK	**Zakamensk**	48.49	323	*e*P	P	16 08 40.8	0.0
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
IRK	**Irkutsk**	48.80	326	*e*P	P	16 08 40.9	-2.1
IRK				pmax	pmax		
	comp=Z,23nm,1.8s						
NIKH	**Nikolski High**	49.01	33	P	P	16 08 43.5	-1.1
	baz=240						
STKA	**Stephens Creek**	49.26	187	P	P	16 08 45.9	-0.8
STKA	**Stephens Creek**	49.26	187	P	P	16 08 45.5	-1.2
	comp=Z,2.6nm,0.7s,baz=26,slow=13,SNR=8.2						
STKA				LR	LR	16 29 56.9	
	comp=Z,132nm,20.6s,baz=24,slow=36						
	comp=Z,2.6nm,0.7s						
STKA	**Stephens Creek**	49.26	187	P	P	16 08 45.9	-0.8
STKA				pmax	pmax		
	comp=Z,199nm,2.0s						
GOMU	**GeErMu**	50.32	303	P	P	16 08 56.5	+1.2
GOMU				pP	pP	16 09 01.3	+1.3
GOMU				sP	sP	16 09 04.7	+2.8
GOMU				PcP	PcP	16 10 14.3	+0.4
GOMU				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MOY	**Mondy**	50.35	324	*e*P	P	16 08 54.4	-0.6
MOY				pmax	pmax		
	comp=Z,13nm,2.1s						
P08K	**Saint George I**	50.57	29	P	P	16 08 56.3	-0.1
	baz=237						
SPIA	**Saint Paul Isl**	50.57	28	P	P	16 08 55.9	-0.5
	baz=236						
LVA	**Lava Point**	51.06	33	P	P	16 09 00.0	-0.1
BBOO	**Buckleboo**	51.09	193	P	P	16 09 00.7	+0.1
AKUT	**Akutan**	51.19	33	P	P	16 09 01.1	+0.1
GSI	**Gunungsitoli**	51.89	258	P	P	16 09 06.8	-0.2
BILL	**Bilibino**	52.06	9	P	P	16 09 07.1	-0.3
BILL				IAmb	IAmb	16 09 08.8	
	comp=Z,20nm,1.1s						
BILL	**Bilibino**	52.06	9	*ce*P	P	16 09 07.9	+0.5
BILL				pmax	pmax		
	comp=Z,20nm,1.0s						
LSA	**Lhasa**	52.98	294	P	P	16 09 16.6	+1.2
LSA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
S12K	**Black Hills**	53.80	33	P	P	16 09 20.6	+0.1
	baz=245						
GAMB	**Gambell**	54.00	21	P	P	16 09 22.0	+0.3
	baz=230						
M11K	**Mekoryuk**	54.10	26	P	P	16 09 22.6	+0.1
	baz=238						
SDPT	**Sand Point**	54.48	33	P	P	16 09 25.2	-0.2
	baz=247						
CHNA	**Chernabura Isl**	54.76	34	P	P	16 09 27.1	-0.3
	baz=248						
S14K	**Fog Glacier**	55.33	33	P	P	16 09 31.8	+0.2
	baz=247						
M13K	**Dall Lake**	55.33	27	P	P	16 09 32.2	+0.8
	baz=241						
MORW	**Morawa**	55.40	214	P	P	16 09 32.5	+0.1
TIXI	**Tiksi**	55.49	353	LR	LR	16 34 49.5	
	comp=Z,36nm,20.3s,baz=196,slow=38						
K13K	**Kusilvak Mount**	55.55	25	P	P	16 09 33.8	+0.8
K13K				IAmb	IAmb	16 09 35.0	
	comp=Z,18nm,1.0s						
K13K	**Kusilvak Mount**	55.55	25	P	P	16 09 34.1	+1.1
	baz=239,SNR=8.3						
O14K	**Tigyukauivet M**	55.72	29	P	P	16 09 34.9	+0.6
	baz=244						
N14K	**Kuskokwak Cree**	55.83	28	P	P	16 09 36.0	+1.0
	baz=243						
L14K	**Kuka Creek**	56.07	26	P	P	16 09 37.4	+0.7
	baz=241						
M14K	**Bethel**	56.09	27	P	P	16 09 37.5	+0.6
	baz=242,SNR=7.3						
O15K	**Ungalikthiuk R**	56.36	29	P	P	16 09 39.2	+0.3
O15K	**Ungalikthiuk R**	56.36	29	P	P	16 09 39.3	+0.5
	baz=245						
TNA	**Tin City**	56.39	20	P	P	16 09 39.4	+0.5
	baz=233						
J14K	**Nanvaranak Lak**	56.41	24	P	P	16 09 39.7	+0.6
	baz=239						
M15K	**Kasigluk River**	56.62	27	P	P	16 09 41.3	+0.6
	baz=244						
N15K	**Kwethluk River**	56.66	28	IAmb	IAmb	16 09 42.5	
	comp=Z,10nm,0.9s						
N15K	**Kwethluk River**	56.66	28	P	P	16 09 41.0	0.0
	baz=244						
ANM	**Nome**	56.70	22	P	P	16 09 41.3	+0.2
	baz=236						
L15K	**Ungalak Mounta**	56.73	26	P	P	16 09 41.7	+0.3
	baz=242						
WMQ	**Urumqi**	56.76	311	*e*P	P	16 09 44.9	+2.8
R16K	**Pilot Point**	56.81	32	P	P	16 09 42.0	-0.1
	baz=248						
EVN	**Everest**	56.83	292	P	P	16 09 42.2	-1.3
F14K	**Arctic Creek**	56.88	21	P	P	16 09 43.0	+0.6
	baz=235,SNR=7.1						
K15K	**Wolf Creek Mou**	57.01	26	IAmb	IAmb	16 09 45.2	
	comp=Z,12nm,1.1s						
K15K	**Wolf Creek Mou**	57.01	26	P	P	16 09 43.6	+0.2
	baz=242						
P16K	**Nushagak River**	57.17	30	P	P	16 09 45.4	+0.9
O16K	**Kokwok River B**	57.34	29	P	P	16 09 46.1	+0.4
O16K	**Kokwok River B**	57.34	29	P	P	16 09 46.2	+0.4
	baz=247						
N16K	**Nishlik Lake**	57.38	28	P	P	16 09 46.5	+0.3
	baz=246,SNR=9.0						
G15K	**Niukluk**	57.41	22	P	P	16 09 46.6	+0.4
	baz=238						
M16K	**Timber Creek**	57.53	28	P	P	16 09 47.5	+0.4
M16K				IAmb	IAmb	16 09 48.6	
	comp=Z,12nm,1.1s						
M16K	**Timber Creek**	57.53	28	P	P	16 09 47.4	+0.2
	baz=245,SNR=5.1						
F15K	**North Star Dit**	57.58	21	IAmb	IAmb	16 09 49.1	
	comp=Z,14nm,1.1s						
F15K	**North Star Dit**	57.58	21	P	P	16 09 47.9	+0.4
	baz=237						
L16K	**Owhat River**	57.60	27	P	P	16 09 47.4	-0.2
	baz=244						
Q16K	**King Salmon**	57.67	31	P	P	16 09 48.4	+0.3
	baz=249						
J16K	**Anvik River**	57.85	25	IAmb	IAmb	16 09 51.3	
	comp=Z,13nm,0.9s						
J16K	**Anvik River**	57.85	25	P	P	16 09 49.5	+0.2
	baz=242,SNR=8.0						
O17K	**Koliganek Bris**	57.88	29	P	P	16 09 49.4	-0.1
	baz=248						
NWAO	**Narrogin (SRO)**	57.89	210	P	P	16 09 50.4	+0.4
NWAO	**Narrogin (SRO)**	57.89	210	P	P	16 09 50.4	+0.4
NWAO				pmax	pmax		
	comp=Z,358nm,2.0s						
Q17K	**Contact Creek**	57.91	31	P	P	16 09 49.7	-0.2
	baz=250						
P17K	**Kvichak River**	57.97	30	P	P	16 09 50.5	+0.3
	baz=249						
I17K	**Unalakleet**	58.10	24	P	P	16 09 52.0	+1.0
	baz=242						
N17K	**Nushagak Hills**	58.12	28	IAmb	IAmb	16 09 53.2	
	comp=Z,12nm,1.1s						
N17K	**Nushagak Hills**	58.12	28	P	P	16 09 52.3	+1.0
	baz=247,SNR=6.2						
SII	**Sitkinak Islan**	58.22	34	P	P	16 09 52.5	+0.4
	baz=252						
G16K	**Koyuk River**	58.22	22	P	P	16 09 52.2	+0.3
	baz=239						
L17K	**Donlin**	58.29	26	P	P	16 09 53.2	+0.8
	baz=245,SNR=6.5						
M17K	**Holitna River**	58.36	27	IAmb	IAmb	16 09 54.9	
	comp=Z,14nm,0.9s						
M17K	**Holitna River**	58.36	27	P	P	16 09 53.8	+0.9
	baz=246,SNR=6.9						
R18K	**Karluk**	58.40	32	P	P	16 09 53.8	+0.6
	baz=252						
Q18K	**Katmai Hardscr**	58.47	31	P	P	16 09 53.1	-0.8
	baz=250						
J17K	**VABM Dome**	58.51	25	IAmb	IAmb	16 09 56.1	
	comp=Z,12nm,1.0s						
J17K	**VABM Dome**	58.51	25	P	P	16 09 55.1	+1.1
	baz=244,SNR=8.1						
K17K	**Iditarod**	58.53	26	P	P	16 09 55.1	+1.0
	baz=245,SNR=13						
P18K	**Big Mountain,**	58.62	30	P	P	16 09 54.3	-0.5
	baz=250						
N18K	**Kilae Creek**	58.77	29	IAmb	IAmb	16 09 57.6	
	comp=Z,11nm,1.0s						
N18K	**Kilae Creek**	58.77	29	P	P	16 09 56.8	+0.9
	baz=248,SNR=6.5						
O18K	**Koktuh Hills**	58.79	30	P	P	16 09 56.8	+0.8
	baz=250,SNR=5.3						
C16K	**Lisburne Hills**	58.82	18	IAmb	IAmb	16 09 57.0	
	comp=Z,14nm,0.8s						
C16K	**Lisburne Hills**	58.82	18	P	P	16 09 56.3	+0.3
	baz=234,SNR=5.2						
OHAK	**Old Harbor**	58.89	33	P	P	16 09 56.9	+0.3
	baz=253						
G17K	**Kiwalik Mounta**	58.90	22	P	P	16 09 57.4	+0.8
	baz=241,SNR=7.1						
H17K	**Granite Mounta**	58.90	23	IAmb	IAmb	16 09 58.4	
	comp=Z,15nm,0.9s						
H17K	**Granite Mounta**	58.90	23	P	P	16 09 57.5	+0.9
	baz=242,SNR=9.2						
L18K	**Granite Mounta**	59.01	27	IAmb	IAmb	16 09 59.5	
	comp=Z,12nm,1.1s						
L18K	**Granite Mounta**	59.01	27	P	P	16 09 58.2	+0.7
	baz=247,SNR=7.9						
M18K	**Stony River**	59.11	28	P	P	16 09 58.8	+0.6
	baz=248,SNR=5.5						
F17K	**Baldwin Pennin**	59.15	21	P	P	16 09 58.9	+0.6
	baz=240						
D17K	**Noatak River**	59.20	20	P	P	16 09 59.2	+0.5
	baz=237,SNR=10						

Q19K	Cape Douglas,	59.23	31	P	P	16 09 58.0	-1.1
	baz=252						
E17K	Hotham Inlet	59.28	21	P	P	16 09 59.9	+0.7
	baz=239						
O19K	Port Alsworth	59.33	29	P	P	16 09 59.8	+0.2
	baz=250						
KDAK	Kodiak Island	59.42	32	LR	LR	16 37 25.3	
	comp=Z,31nm,18.2s,baz=230,slow=38						
KDAK	Kodiak Island	59.42	32	P	P	16 10 01.1	+0.8
	baz=253						
RDOG	Red Dog Mine	59.45	19	P	P	16 10 00.9	+0.5
	baz=237						
N19K	Bonanza Creek	59.47	29	IAmb	IAmb	16 10 02.5	
	comp=Z,10nm,1.0s						
N19K	Bonanza Creek	59.47	29	P	P	16 10 01.3	+0.5
	baz=250,SNR=6.5						
J18K	Innoko River	59.50	25	P	P	16 10 01.2	+0.3
	baz=246						
H18K	Honhosa River	59.58	23	P	P	16 10 01.6	+0.2
	baz=243						
C17K	DeLong Mountai	59.59	19	P	P	16 10 01.8	+0.4
	baz=237						
P19K	Oil Pt	59.67	30	P	P	16 10 01.7	-0.4
	baz=252,SNR=5.6						
Q20K	Shuyak Island	59.76	32	P	P	16 10 02.5	-0.2
	baz=253						
L19K	White Mountain	59.79	27	IAmb	IAmb	16 10 04.5	
	comp=Z,11nm,1.1s						
L19K	White Mountain	59.79	27	P	P	16 10 03.5	+0.6
	baz=248,SNR=11						
G18K	Tagagawik	59.81	22	P	P	16 10 03.2	+0.3
G18K	Tagagawik	59.81	22	P	P	16 10 03.4	+0.4
	baz=243,SNR=21						
E18K	Tukpahlearik C	59.87	20	P	P	16 10 04.1	+0.8
	baz=240						
M19K	Big River Lodg	59.89	28	P	P	16 10 04.5	+0.9
	baz=249						
GCSA	Galena City Sc	59.97	24	P	P	16 10 04.8	+0.8
	baz=245						
O20K	Slope Mountain	60.09	30	P	P	16 10 05.3	+0.2
	baz=252						
J19K	Poorman	60.16	25	IAmb	IAmb	16 10 06.9	
	comp=Z,11nm,0.9s						
J19K	Poorman	60.16	25	P	P	16 10 05.8	+0.4
	baz=247,SNR=9.7						
C18K	Utukok River	60.30	19	P	P	16 10 06.3	0.0
	baz=239						
L20K	Farewell, AK	60.32	27	P	P	16 10 07.0	+0.4
	baz=249						
ZAA0	Zalesovo Array	60.36	323	P	P	16 10 06.7	-0.2
ZALV	Zalesovo Beam	60.36	323	P	P	16 10 06.6	-0.3
ZALV	Zalesovo Beam	60.36	323	P	P	16 10 06.7	-0.2
	comp=Z,18nm,0.8s,baz=100,slow=6.5,SNR=40						
ZALV				LR	LR	16 38 16.7	
	comp=Z,55nm,19.0s,baz=100,slow=38						
	comp=Z,18nm,0.8s						
HOM	Homer	60.44	31	P	P	16 10 07.5	+0.2
	baz=253						
M20K	Styx River	60.45	28	IAmb	IAmb	16 10 09.9	
	comp=Z,17nm,1.3s						
M20K	Styx River	60.45	28	P	P	16 10 08.1	+0.6
	baz=250,SNR=8.5						
H19K	Roundabout Mou	60.47	23	IAmb	IAmb	16 10 09.1	
	comp=Z,16nm,0.9s						
H19K	Roundabout Mou	60.47	23	P	P	16 10 08.2	+0.8
	baz=245,SNR=12						
G19K	Purcell Mounta	60.49	23	P	P	16 10 08.2	+0.6
	baz=244,SNR=16						
B18K	Kokolik River	60.50	18	P	P	16 10 08.3	+0.8
	baz=238						
F19K	Shaleruckik Mo	60.56	22	P	P	16 10 08.6	+0.7
	baz=243						
K20K	Telida	60.56	26	IAmb	IAmb	16 10 09.6	
	comp=Z,8.3nm,0.8s						
K20K	Telida	60.56	26	P	P	16 10 08.9	+0.8
	baz=249,SNR=10						
CNPM	China Poot	60.60	31	IAmb	IAmb	16 10 09.3	
	comp=Z,14nm,0.9s						
J20K	Nowinta River	60.83	25	P	P	16 10 10.8	+0.9
	baz=248,SNR=17						
BRSE	Bradley Lake S	60.90	31	P	P	16 10 10.8	+0.3
	baz=254						
MK31	Makanchi Array	60.90	314	*ce*P	P	16 10 11.1	+0.3
MKAR	Makanchi Array	60.90	314	P	P	16 10 10.5	-0.3
MKAR	Makanchi Array	60.90	314	P	P	16 10 09.8	-0.9
	comp=Z,1.0nm,0.4s,baz=92,slow=6.6,SNR=38						
MKAR				PcP	PcP	16 10 53.7	-0.5
	comp=Z,3.2nm,0.7s,baz=88,slow=5.7,SNR=9.6						
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	60.90	314	P	P	16 10 10.5	-0.3
I20K	Naaghedeneel	60.93	24	P	P	16 10 11.8	+1.2
	baz=248,SNR=12						
E19K	Redstone River	61.03	21	P	P	16 10 11.5	+0.2
	baz=243						
C19K	Lookout Ridge	61.04	19	IAmb	IAmb	16 10 13.1	
	comp=Z,14nm,0.8s						
C19K	Lookout Ridge	61.04	19	P	P	16 10 12.1	+0.8
	baz=240,SNR=14						
H20K	Anotleneega Mo	61.05	24	P	P	16 10 12.2	+0.8
	baz=247,SNR=16						
MAKZ	Makanchi	61.11	314	P	P	16 10 12.0	-0.2
MAKZ	Makanchi	61.11	314	P	P	16 10 12.0	-0.2
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
A19K	Wainwright	61.16	18	P	P	16 10 12.6	+0.6
	baz=238						
SKT	Skwentna	61.19	28	P	P	16 10 12.6	+0.2
	baz=252,SNR=6.3						
PPLA	Purkeypile	61.20	27	P	P	16 10 13.2	+0.5
PPLA	Purkeypile	61.20	27	P	P	16 10 12.9	+0.3
	baz=251						
D19K	Kuna River	61.21	20	P	P	16 10 12.5	0.0
	baz=242						
F20K	Avaraart Lake	61.38	22	P	P	16 10 14.2	+0.7
F20K				IAmb	IAmb	16 10 15.4	
	comp=Z,9.3nm,0.9s						
F20K	Avaraart Lake	61.38	22	P	P	16 10 14.3	+0.7
	baz=245,SNR=11						
SUA	Susitna One	61.39	29	P	P	16 10 14.6	+0.6
	baz=253						
CAST	Castle Rocks	61.42	26	IAmb	IAmb	16 10 15.3	
	comp=Z,15nm,0.9s						
CAST	Castle Rocks	61.42	26	P	P	16 10 14.4	+0.4
	baz=251,SNR=20						
CHUM	Lake Minchumin	61.48	26	P	P	16 10 15.0	+0.7
	baz=250,SNR=15						
SEW	Seward	61.62	30	P	P	16 10 15.7	+0.4
	baz=255						
IMAR	Indian Mountai	61.67	23	P	P	16 10 15.9	+0.3
E20K	Nigu River	61.74	21	P	P	16 10 16.5	+0.4
	baz=244						
RC01	Rabbit Creek A	61.75	29	P	P	16 10 16.4	+0.2
	baz=254						
M22K	Willow	61.76	28	P	P	16 10 16.5	+0.3
	baz=253						
D20K	Etivluk River	61.80	20	P	P	16 10 16.8	+0.3
	baz=243						
H21K	Melozitna Rive	61.91	24	P	P	16 10 17.7	+0.5
	baz=249,SNR=30						
G21K	Allakaket	61.97	23	P	P	16 10 17.9	+0.3
	baz=248						
I21K	Tanana	62.06	24	P	P	16 10 19.0	+0.8
	baz=250						
BPAW	Bear Paw Mtn.	62.10	26	P	P	16 10 19.0	+0.4
	baz=251,SNR=25						
PMR	Palmer	62.17	29	P	P	16 10 19.6	+0.6
	baz=254						
TRF	Thorofare Moun	62.19	27	P	P	16 10 19.0	-0.3
	baz=252,SNR=12						
B20K	Meade River	62.22	19	P	P	16 10 19.6	+0.4
	baz=242,SNR=9.7						
F21K	Alatna River	62.25	22	P	P	16 10 19.8	+0.3
	baz=247,SNR=6.4						
GHO	Glory Hole Cre	62.31	29	IAmb	IAmb	16 10 28.4	
	comp=Z,10nm,1.1s						
PWL	Port Wells	62.35	30	P	P	16 10 20.4	+0.1
	baz=256						
KNK	Knik Glacier	62.44	29	P	P	16 10 20.9	+0.1
	baz=255						
MLY	Manley	62.51	25	P	P	16 10 21.7	+0.5
MLY	Manley	62.51	25	P	P	16 10 21.6	+0.3
	baz=251,SNR=24						
H22K	Ishtalitna Cre	62.55	24	P	P	16 10 22.2	+0.7
	baz=250,SNR=6.6						
E21K	Killik River	62.56	21	P	P	16 10 21.7	+0.1
	baz=246						
C21K	Knifeblade Rid	62.59	20	P	P	16 10 22.2	+0.5
	baz=245,SNR=5.7						
P23K	Montague Islan	62.59	31	P	P	16 10 21.7	-0.1
	baz=257						
SML	Sawmill	62.60	29	P	P	16 10 22.0	+0.1
	baz=255,SNR=10.0						
SHLS	Shalkode	62.68	310	*e*P	P	16 10 20.0	-2.9
SHLS	Shalkode	62.68	310	*e*P	P	16 10 20.1	-2.9
WAT1	Susitna Watana	62.77	28	P	P	16 10 22.7	-0.4
	baz=254						
RND	Reindeer	62.80	27	IAmb	IAmb	16 10 24.2	
	comp=Z,12nm,1.0s						
F22K	John River	62.82	22	P	P	16 10 23.7	+0.4
	baz=248,SNR=7.0						
B21K	Ikpikpuk River	62.84	19	IAmb	IAmb	16 10 24.9	
	comp=Z,11nm,1.0s						
B21K	Ikpikpuk River	62.84	19	P	P	16 10 23.9	+0.5
	baz=245,SNR=9.4						
G22K	Bettles	62.85	23	P	P	16 10 23.5	0.0
	baz=249						
MCK	McKinley	62.86	27	P	P	16 10 23.4	-0.2
	baz=254						
M23K	Glacier View	62.87	29	P	P	16 10 23.4	-0.3
	baz=256						
GLI	Glacier Island	62.94	30	P	P	16 10 24.3	+0.1
	baz=257						
Q23K	Middleton Isla	62.99	32	P	P	16 10 24.8	+0.3
	baz=258						
UZB	Uzynbulak	63.00	310	*e*P	P	16 10 24.1	-1.0
UZB	Uzynbulak	63.00	310	*e*P	P	16 10 24.2	-1.0
NEA2	Nenana	63.05	26	P	P	16 10 25.6	+0.7
	baz=253,SNR=6.5						
SCM	Sheep Creek Mo	63.06	29	P	P	16 10 25.5	+0.4
	baz=256,SNR=12						
WAT6	Susitna Watana	63.06	28	P	P	16 10 25.0	-0.2
	baz=255,SNR=13						
I23K	Minto, Yukon-K	63.10	25	P	P	16 10 25.7	+0.6
	baz=252,SNR=16						
HIN	Hinchinbrook I	63.12	30	P	P	16 10 25.8	+0.3
D22K	Ayikyak River	63.17	20	IAmb	IAmb	16 10 27.5	
	comp=Z,9.5nm,0.8s						
D22K	Ayikyak River	63.17	20	P	P	16 10 26.4	+0.8
	baz=247,SNR=11						
E22K	Anaktuvuk Pass	63.18	21	IAmb	IAmb	16 10 27.5	
	comp=Z,15nm,1.0s						
E22K	Anaktuvuk Pass	63.18	21	P	P	16 10 26.5	+0.8
	baz=248,SNR=15						
H23K	Yukon River	63.23	24	IAmb	IAmb	16 10 27.8	
	comp=Z,12nm,1.1s						
H23K	Yukon River	63.23	24	P	P	16 10 26.7	+0.6
	baz=252,SNR=14						
KPKS	Kokpek	63.26	310	*e*P	P	16 10 25.9	-0.8
KPKS	Kokpek	63.26	310	*e*P	P	16 10 25.9	-0.8
A22K	Sinclair Lake	63.33	18	P	P	16 10 27.0	+0.5
	baz=244						
G23K	Bananza Creek	63.34	23	IAmb	IAmb	16 10 28.5	
	comp=Z,8.1nm,0.9s						
G23K	Bananza Creek	63.34	23	P	P	16 10 27.6	+0.8
	baz=251,SNR=8.6						
DHY	Denali Highway	63.35	27	IAmb	IAmb	16 10 28.1	
	comp=Z,25nm,1.6s						
DHY	Denali Highway	63.35	27	P	P	16 10 26.7	-0.4
	baz=255,SNR=7.5						
WRH	Wood River Hil	63.42	26	P	P	16 10 26.8	-0.5
WRH				IAmb	IAmb	16 10 27.6	
	comp=Z,11nm,0.9s						
ZHN	Zhinishke	63.43	310	*e*P	P	16 10 26.8	-1.1
ZHN				pmax	pmax		
	comp=Z,14nm,1.1s						
ZHN	Zhinishke	63.43	310	*e*P	P	16 10 26.8	-1.1
	comp=Z,14nm,1.1s						
COLD	Coldfoot	63.44	23	P	P	16 10 28.3	+0.9
	baz=250,SNR=11						
SATY	Saty	63.45	310	*e*P	P	16 10 27.1	-0.9
SATY	Saty	63.45	310	*e*P	P	16 10 27.1	-0.9
TDK	Taldyqorghan	63.49	312	*e*P	P	16 10 27.4	-0.7
TDK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TDK	Taldyqorghan	63.49	312	*e*P	P	16 10 27.5	-0.7
	comp=Z,7.8nm,1.0s						
B22K	Teshekpuk Lake	63.52	19	IAmb	IAmb	16 10 29.1	
	comp=Z,11nm,0.8s						
B22K	Teshekpuk Lake	63.52	19	P	P	16 10 28.0	+0.2
	baz=246,SNR=5.1						
EYAK	Cordova Ski Ar	63.52	30	P	P	16 10 28.4	+0.4
	baz=258						
DIV	Divide	63.63	30	IAmb	IAmb	16 10 30.3	
	comp=Z,14nm,1.1s						
COLA	College	63.63	25	*i* P	P	16 10 29.1	+0.5
COLA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KLU	Klutina	63.64	29	IAmb	IAmb	16 10 30.4	
	comp=Z,10nm,1.0s						
KLU	Klutina	63.64	29	P	P	16 10 29.3	+0.4
	baz=257,SNR=5.9						
M24K	Tolsona, Glenn	63.66	29	P	P	16 10 29.2	+0.2
	baz=257						
KURK	Kurchatov	63.67	318	P	P	16 10 28.8	-0.4
KURK	Kurchatov	63.67	318	*ce*P	P	16 10 29.5	+0.3
KURK				pmax	pmax		
	comp=Z,26nm,1.3s						
KURBB	Kurchatov Arra	63.72	318	P	P	16 10 28.8	-0.7
	comp=Z,14nm,0.8s,baz=98,slow=6.7,SNR=104						
	comp=Z,14nm,0.8s						
POKR	Poker Plat Res	63.87	25	P	P	16 10 29.8	-0.5
	baz=254						
D23K	Nanushuk River	63.87	21	IAmb	IAmb	16 10 32.5	
	comp=Z,13nm,0.9s						
D23K	Nanushuk River	63.87	21	P	P	16 10 31.5	+1.3
	baz=249,SNR=11						
HDA	Harding Lake	63.88	26	IAmb	IAmb	16 10 30.2	
	comp=Z,11nm,1.0s						
HDA	Harding Lake	63.88	26	P	P	16 10 29.6	-0.8
	baz=255,SNR=8.0						
H24K	Noodor Dome	63.89	24	IAmb	IAmb	16 10 32.1	
	comp=Z,16nm,1.1s						
H24K	Noodor Dome	63.89	24	P	P	16 10 31.0	+0.6
	baz=254,SNR=12						
E23K	Chandalar	63.93	22	P	P	16 10 31.6	+0.9
	baz=251,SNR=21						
IL31		64.00	26	P	P	16 10 29.6	-1.4
IL31				IAmb	IAmb	16 10 31.0	
	comp=Z,11nm,0.9s						
ILAR	Eielson Array	64.00	26	P	P	16 10 30.0	-1.1
ILAR	Eielson Array	64.00	26	P	P	16 10 29.2	-1.9
	comp=Z,7.4nm,1.0s,baz=258,slow=5.4,SNR=44						
	comp=Z,7.4nm,1.0s						
ILAR	Eielson Array	64.00	26	P	P	16 10 30.0	-1.1
KAIM	Kayak Island	64.05	31	P	P	16 10 32.0	+0.5
	baz=260						
TOLK	Toolik Lake Re	64.14	21	P	P	16 10 32.5	+0.4
TOLK				IAmb	IAmb	16 10 33.9	
	comp=Z,15nm,1.4s						
TOLK	Toolik Lake Re	64.14	21	P	P	16 10 32.9	+0.9
	baz=250,SNR=6.9						
BMRM	Bremner River	64.15	30	IAmb	IAmb	16 10 34.5	
	comp=Z,17nm,1.2s						
BMRM	Bremner River	64.15	30	P	P	16 10 32.5	+0.2
	baz=259						
PAX	Paxson	64.17	28	IAmb	IAmb	16 10 33.5	
	comp=Z,12nm,1.1s						
PAX	Paxson	64.17	28	P	P	16 10 32.4	0.0
	baz=257,SNR=9.0						
HARP	HAARP	64.19	28	P	P	16 10 32.8	+0.4
	baz=258						
C23K	Itkillik River	64.21	20	P	P	16 10 33.1	+0.7
C23K	Itkillik River	64.21	20	P	P	16 10 33.0	+0.7
	baz=249,SNR=8.3						
K24K	Donnelly Dome	64.23	27	P	P	16 10 32.4	-0.3
	baz=256						
N25K	Chitina, Valde	64.28	29	IAmb	IAmb	16 10 34.9	
	comp=Z,18nm,1.4s						
N25K	Chitina, Valde	64.28	29	P	P	16 10 33.4	+0.3
	baz=259						
G24K	Hadweenzic Riv	64.30	24	IAmb	IAmb	16 10 34.8	
	comp=Z,14nm,1.1s						
G24K	Hadweenzic Riv	64.30	24	P	P	16 10 33.8	+0.7
	baz=254,SNR=13						
E24K	Your Creek	64.34	22	IAmb	IAmb	16 10 35.0	
	comp=Z,9.0nm,0.9s						
E24K	Your Creek	64.34	22	P	P	16 10 34.2	+0.8
	baz=252,SNR=10						
F24K	Squaw Lake	64.38	23	IAmb	IAmb	16 10 35.7	
	comp=Z,10nm,0.9s						
F24K	Squaw Lake	64.38	23	P	P	16 10 34.5	+0.8
	baz=253,SNR=12						
MDOK	Medeo	64.45	310	*e*P	P	16 10 33.8	-0.9
MDOK	Medeo	64.45	310	*e*P	P	16 10 33.8	-0.9
D24K	Happy Valley	64.57	21	P	P	16 10 35.9	+1.1
	baz=251,SNR=14						
J25K	Salcha River,	64.59	26	IAmb	IAmb	16 10 35.2	
	comp=Z,26nm,1.8s						
J25K	Salcha River,	64.59	26	P	P	16 10 34.2	-0.9
	baz=256,SNR=5.5						
RIDG	Independent Ri	64.62	27	P	P	16 10 35.2	0.0
	baz=257,SNR=14						
PRP	Porcupine Dome	64.75	25	P	P	16 10 35.7	-0.4
	baz=256						
C24K	Franklin Bluff	64.79	20	P	P	16 10 36.8	+0.6
	baz=251						
CRQM	Cirque	64.82	30	IAmb	IAmb	16 10 38.2	
	comp=Z,14nm,1.0s						
H25L	Birch Creek	64.82	24	P	P	16 10 36.8	+0.3
	baz=255,SNR=14						
G25K	Bearman Lake	64.84	24	P	P	16 10 37.0	+0.5
	baz=255						
CRQE	Cirque	64.84	30	P	P	16 10 37.0	+0.2
	baz=260,SNR=6.4						
DOT	Dot Lake	64.94	27	IAmb	IAmb	16 10 38.2	
	comp=Z,9.8nm,0.9s						
MCARA	McCarthy VSAT	64.98	30	IAmb	IAmb	16 10 39.6	
	comp=Z,9.5nm,0.9s						
MCARA	McCarthy VSAT	64.98	30	P	P	16 10 38.0	+0.4
	baz=260						
SCRK	Sand Creek	65.04	27	IAmb	IAmb	16 10 39.0	
	comp=Z,17nm,1.3s						
SCRK	Sand Creek	65.04	27	P	P	16 10 37.8	-0.2
	baz=258,SNR=11						
L26K	Log Cabin Wild	65.13	28	IAmb	IAmb	16 10 40.0	
	comp=Z,13nm,1.4s						
L26K	Log Cabin Wild	65.13	28	P	P	16 10 38.9	+0.3
	baz=259						
M26K	Nabesna, AK	65.17	29	P	P	16 10 39.2	+0.3
	baz=260						
F25K	Christian Rive	65.23	23	P	P	16 10 40.1	+0.9
F25K	Christian Rive	65.23	23	P	P	16 10 40.5	+1.3
	baz=255,SNR=22						
MESA	MESA	65.31	31	P	P	16 10 40.5	+0.5
	baz=262						
J26L	Joseph Creek	65.33	26	IAmb	IAmb	16 10 40.9	
	comp=Z,16nm,1.1s						
J26L	Joseph Creek	65.33	26	P	P	16 10 39.9	0.0
	baz=258,SNR=12						
KSH	Kashi	65.34	306	P	P	16 10 44.0	+3.5
KSH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
E25K	Arctic Village	65.40	22	P	P	16 10 41.2	+1.0
	baz=255,SNR=9.7						
D25K	Kavik River	65.45	21	IAmb	IAmb	16 10 42.2	
	comp=Z,14nm,0.9s						
D25K	Kavik River	65.45	21	P	P	16 10 41.0	+0.5
	baz=253,SNR=14						
BMAR	Burnt Mountain	65.58	23	P	P	16 10 42.3	+0.8
I26K	Coal Creek Min	65.67	25	P	P	16 10 41.9	-0.1
	baz=258						
M27K	Edge Creek, AK	65.68	29	IAmb	IAmb	16 10 43.7	
	comp=Z,8.2nm,1.1s						
M27K	Edge Creek, AK	65.68	29	P	P	16 10 42.7	+0.4
	baz=261,SNR=5.2						
CTG	Chitna Glacier	65.72	30	P	P	16 10 43.1	+0.5
	baz=262						
CTGM	Chitina Glacie	65.72	30	IAmb	IAmb	16 10 44.3	
	comp=Z,12nm,1.1s						
HYB	Hyderabad	65.77	282	*e*P	P	16 10 43.5	0.0
G26K	Porcupine Rive	65.77	24	IAmb	IAmb	16 10 45.2	
	comp=Z,12nm,0.9s						
G26K	Porcupine Rive	65.77	24	P	P	16 10 43.6	+1.0
	baz=257,SNR=20						
F26K	Sheenjek River	65.81	23	IAmb	IAmb	16 10 45.1	
	comp=Z,16nm,1.1s						
F26K	Sheenjek River	65.81	23	P	P	16 10 43.8	+0.9
	baz=256,SNR=17						
L27K	Beaver Creek,	65.82	28	IAmb	IAmb	16 10 44.4	
	comp=Z,8.2nm,1.1s						
L27K	Beaver Creek,	65.82	28	P	P	16 10 43.4	+0.3
	baz=260,SNR=7.2						
BCAR	Beaver Creek A	65.84	28	P	P	16 10 42.7	-0.5
LOGN	Logan Glacier	65.86	31	IAmb	IAmb	16 10 45.7	
	comp=Z,18nm,1.3s						
K27K	Chicken	65.88	27	P	P	16 10 43.9	+0.5
	baz=260						
PALK	Pallekele	66.09	270	LR	LR	16 36 48.8	
	comp=Z,66nm,20.6s,baz=116,slow=33						
C26K	Camden Bay	66.11	20	P	P	16 10 45.8	+1.1
	baz=254,SNR=9.9						
PINM	Pinnacle	66.14	31	P	P	16 10 45.5	+0.3
	baz=263						
BVCY	Beaver Creek	66.16	29	P	P	16 10 45.8	+0.6
	baz=262						
SGDS	Sogindy	66.21	310	*e*P	P	16 10 45.2	-0.8
O28M	Mount Upton	66.25	31	IAmb	IAmb	16 10 47.9	
	comp=Z,14nm,1.1s						
O28M	Mount Upton	66.25	31	P	P	16 10 46.6	+0.4
	baz=263,SNR=5.7						
YUK3	Moose Creek	66.25	30	P	P	16 10 46.4	+0.3
	baz=262,SNR=5.6						
I27K	Kandik River	66.36	25	P	P	16 10 46.1	-0.3
	baz=260						
C27K	Jago River	66.44	21	P	P	16 10 47.3	+0.4
	baz=256,SNR=6.4						
H27K	Steamboat Moun	66.51	25	IAmb	IAmb	16 10 49.0	
	comp=Z,12nm,1.0s						
H27K	Steamboat Moun	66.51	25	P	P	16 10 47.8	+0.4
	baz=259,SNR=8.4						
PNL	Peninsula	66.52	32	P	P	16 10 47.8	+0.2
	baz=264						
YUK8	Steele Glacier	66.52	30	P	P	16 10 48.4	+0.5
	baz=263,SNR=5.3						
G27K	Doyon Strip	66.56	24	P	P	16 10 48.3	+0.5
	baz=259,SNR=10						
BTLS	Baital	66.58	312	*e*P	P	16 10 47.6	-0.6
BTLS	Baital	66.58	312	*e*P	P	16 10 47.6	-0.6
E27K	Coleen River	66.86	23	IAmb	IAmb	16 10 51.4	
	comp=Z,11nm,1.3s						
E27K	Coleen River	66.86	23	P	P	16 10 50.2	+0.6
	baz=258,SNR=7.6						
O29M	Mount Kennedy	67.00	31	P	P	16 10 51.7	+0.9
	baz=265,SNR=6.5						
I28M	Miner Creek	67.02	26	P	P	16 10 51.0	+0.2
	baz=261,SNR=8.3						
DAWY	Dawson	67.05	27	IAmb	IAmb	16 10 52.6	
	comp=Z,6.9nm,0.9s						
DAWY	Dawson	67.05	27	P	P	16 10 51.6	+0.6
	baz=262,SNR=5.8						
YUK4	Talbot Arm	67.06	30	P	P	16 10 52.7	+1.4
	baz=264,SNR=5.4						
YUK6	Outpost Mounta	67.16	31	P	P	16 10 52.4	+0.5
	baz=265						
M29M	Somme Creek	67.27	29	IAmb	IAmb	16 10 54.5	
	comp=Z,8.1nm,1.1s						
M29M	Somme Creek	67.27	29	P	P	16 10 53.1	+0.7
	baz=264,SNR=7.8						
D27M	Malcolm River	67.30	21	IAmb	IAmb	16 10 54.4	
	comp=Z,11nm,1.1s						
D27M	Malcolm River	67.30	21	P	P	16 10 53.2	+0.8
	baz=259						
P29M	Windy Craggy	67.36	32	IAmb	IAmb	16 10 55.1	
	comp=Z,14nm,1.1s						
P29M	Windy Craggy	67.36	32	P	P	16 10 53.5	+0.6
	baz=266						
F28M	Old Crow	67.39	23	IAmb	IAmb	16 10 54.7	
	comp=Z,8.9nm,1.1s						
F28M	Old Crow	67.39	23	P	P	16 10 53.5	+0.5
	baz=260,SNR=11						
BRZS	Berezniki	67.44	317	*e*P	P	16 10 52.9	-0.7
BRZS	Berezniki	67.44	317	*e*P	P	16 10 52.9	-0.7
L29M	L29M	67.49	28	IAmb	IAmb	16 10 55.9	
	comp=Z,17nm,1.2s						
L29M	L29M	67.49	28	P	P	16 10 54.6	+0.9
	baz=264,SNR=7.9						
HYT	Haines Junctio	67.57	31	IAmb	IAmb	16 10 56.5	
	comp=Z,16nm,1.2s						
HYT	Haines Junctio	67.57	31	P	P	16 10 55.1	+0.7
	baz=265,SNR=8.3						
I29M	Ogilvie Camp,	67.68	26	IAmb	IAmb	16 10 56.1	
	comp=Z,13nm,1.2s						
I29M	Ogilvie Camp,	67.68	26	P	P	16 10 55.1	+0.2
	baz=263,SNR=7.5						
E28M	Babbage River	67.69	22	IAmb	IAmb	16 10 57.0	
	comp=Z,8.6nm,1.1s						
E28M	Babbage River	67.69	22	P	P	16 10 55.4	+0.5
	baz=260,SNR=5.6						
H29M	Whitestone	67.77	25	IAmb	IAmb	16 11 04.4	
	comp=Z,12nm,1.1s						
H29M	Whitestone	67.77	25	P	P	16 10 55.3	-0.1
	baz=262						
P30M	Million Dollar	67.78	32	P	P	16 10 55.5	-0.2

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      baz=266
N30M  Aishikik Lake      67.82  30  IAmb    IAmb    16 10 57.9
      comp=Z,14nm,1.3s
N30M  Aishikik Lake      67.82  30  P       P       16 10 56.3 +0.4
      baz=266,SNR=5.6
K29M  Barlow Dome        67.84  27  IAmb    IAmb    16 10 57.9
      comp=Z,12nm,1.1s
K29M  Barlow Dome        67.84  27  P       P       16 10 56.6 +0.5
      baz=264,SNR=8.3
NIL   Nilore             68.00 300  P       P       16 10 58.5 +1.1
NIL                                 pmax    pmax
      comp=Z,11nm,0.5s
G29M  Pine Creek         68.00  24  IAmb    IAmb    16 10 58.7
      comp=Z,11nm,1.1s
G29M  Pine Creek         68.00  24  P       P       16 10 57.6 +0.8
      baz=262,SNR=6.1
S31K  Pelican            68.04  34  P       P       16 10 57.6 +0.4
      baz=268
PLBC  Pleasant Camp      68.04  32  P       P       16 10 58.0 +0.8
      baz=267
D28M  Stokes Point       68.09  22  P       P       16 10 58.1 +0.8
      baz=261
E29M  Blow River         68.25  23  P       P       16 10 58.8 +0.5
      baz=262
O30N  Mendenhall         68.26  31  P       P       16 10 59.0 +0.4
      baz=267
J30M  Hart River         68.43  27  IAmb    IAmb    16 11 01.5
      comp=Z,12nm,1.3s
J30M  Hart River         68.43  27  P       P       16 10 59.9 +0.2
      baz=265,SNR=6.6
EPYK  Eagle Plains       68.45  25  IAmb    IAmb    16 11 01.1
      comp=Z,13nm,1.0s
EPYK  Eagle Plains       68.45  25  P       P       16 10 59.8 +0.1
      baz=264
N31M  Braeburn, Yuko     68.45  30  IAmb    IAmb    16 11 01.8
      comp=Z,16nm,1.2s
N31M  Braeburn, Yuko     68.45  30  P       P       16 11 00.5 +0.7
      baz=267,SNR=6.5
I30M  Mount Dempster     68.47  26  P       P       16 10 59.9 -0.1
      baz=265
SIT   Sitka              68.50  35  P       P       16 11 00.4 +0.3
      baz=269
SKAG  Skagway            68.57  32  P       P       16 11 00.6 +0.1
      baz=268
DZA   Taraz              68.64 310  eP      P       16 11 00.5 -0.8
DZA   Taraz              68.64 310  eP      P       16 11 00.6 -0.8
G30M  tAoh Zraii Nji     68.71  24  IAmb    IAmb    16 11 02.5
      comp=Z,13nm,1.2s
G30M  tAoh Zraii Nji     68.71  24  P       P       16 11 01.3  0.0
      baz=264,SNR=5.4
WHY   Whitehorse         68.84  31  P       P       16 11 02.6 +0.3
      baz=268
BVAR  Borovoye Array     68.85 321  P       P       16 11 02.3 -0.1
      comp=Z,23nm,0.7s
BVAR                                LR      LR      16 43 34.6
      comp=Z,66nm,19.7s,baz=103,slow=38
      comp=Z,23nm,0.7s
BRVK  Borovoye           68.91 321  P       P       16 11 03.0 +0.3
BRVK  Borovoye           68.91 321ceP       P       16 11 03.2 +0.5
BRVK                                pmax    pmax
      comp=Z,44nm,1.3s
S32K  Killisnoo          68.92  34  P       P       16 11 02.8 +0.2
      baz=269
F30M  Barrier River      68.94  24  P       P       16 11 03.3 +0.6
      baz=264,SNR=11
R32K  Eaglecrest         68.96  34  P       P       16 11 03.1 +0.1
      baz=269
M31M  Drury Creek, Y     69.14  29  P       P       16 11 04.3 +0.2
      baz=268
KKAR  Karatay Array      69.23 310  P       P       16 11 04.9  0.0
KKAR  Karatay Array      69.23 310  IAmb    IAmb    16 11 06.9
      comp=Z,4.8nm,0.7s
KKAR  Karatay Array      69.23 310  P       P       16 11 04.9  0.0
H31M  Peel River         69.36  25  P       P       16 11 05.2 -0.2
      baz=266,SNR=12
P32M  Atlin              69.40  32  P       P       16 11 05.4 -0.3
      baz=269
G31M  Satah River        69.47  24  IAmb    IAmb    16 11 07.1
      comp=Z,14nm,1.0s
G31M  Satah River        69.47  24  P       P       16 11 05.9  0.0
      baz=266,SNR=9.2
FARO  Faro, Yukon        69.63  29  P       P       16 11 07.1  0.0
      baz=268
F31M  Tsiigehtchic       69.71  24  P       P       16 11 07.4  0.0
      baz=266
U33K  Whale Pass         69.72  36  P       P       16 11 07.2 -0.4
      baz=271
BRLS  Borolday           69.73 310  eP      P       16 11 08.1 +0.1
BRLS  Borolday           69.73 310  eP      P       16 11 08.1 +0.1
CRAG  Craig              69.73  37  P       P       16 11 07.7  0.0
      baz=271
N32M  Quiet Lake         69.74  31  P       P       16 11 07.6 -0.2
      baz=269
GAR   Garm               69.76 306  IAmb    IAmb    16 11 10.1
      comp=Z,16nm,1.3s
INK   Inuvik             69.85  23  IAmb    IAmb    16 11 09.2
      comp=Z,12nm,1.1s
INK   Inuvik             69.85  23  P       P       16 11 08.1 -0.1
INK                                 pmax    pmax
      comp=Z,11nm,1.6s
INK   Inuvik             69.85  23  P       P       16 11 08.1 -0.1
      baz=266,SNR=6.1
P33M  Teslin, Yukon      69.86  32  IAmb    IAmb    16 11 10.3
      comp=Z,26nm,1.8s
P33M  Teslin, Yukon      69.86  32  P       P       16 11 08.7 +0.1
      baz=270
Q32M  Nakina River       70.14  33  P       P       16 11 10.4 -0.1
      baz=271
WRAK  Wrangell Islan     70.14  36  P       P       16 11 10.6 +0.3
      baz=272
V35K  Ketchikan          70.59  37  P       P       16 11 13.4 +0.4
      baz=272
MMPY  Sheldon Lake,      70.61  29  P       P       16 11 13.6 +0.5
      baz=270
PPT   Papeete            70.67 116  LR      LR      16 41 26.0
      comp=Z,104nm,18.0s,baz=318,slow=35
PPT2  Papeete2           70.68 116  eS      S       16 20 28.6 +1.0
      comp=Z,58nm,24.2s
PPT2  Papeete2           70.68 116  eLR     LR      16 32 50.0
      comp=Z,101nm,24.2s
PPT2                                eLR     LR      16 32 51.1
      comp=Z,215nm,27.8s
PPT2                                eLR     LR      16 32 54.3
      comp=Z,74nm,20.2s
S34M  Telegraph Cree     70.76  34  P       P       16 11 14.3 +0.2
      baz=272
R33M  Jennings River     70.80  32  P       P       16 11 14.8 +0.4
      baz=272
T35M  Bob Quinn          71.28  35  P       P       16 11 17.5 +0.3
      baz=273
DLBC  Dease Lake         71.32  33  P       P       16 11 18.3 +0.8
      baz=273
KBL   Kabul              71.34 301  P       P       16 11 17.4 -0.9
KBL                                 pmax    pmax
      comp=Z,8.0nm,0.8s
WTLY  Watson Lake, Y     71.87  32  P       P       16 11 21.1 +0.4
      baz=273
TGTN  Hyland Airport     72.05  30  P       P       16 11 22.2 +0.4
      baz=273
A36M  Sachs Harbour      72.73  19  IAmb    IAmb    16 11 26.6
      comp=Z,12nm,0.9s
A36M  Sachs Harbour      72.73  19  P       P       16 11 25.7 +0.1
      baz=273
BBB   Bella Bella        72.90  40  LR      LR      16 43 16.1
      comp=Z,85nm,18.4s,baz=247,slow=36
C36M  Paulatuk           73.28  22  IAmb    IAmb    16 11 29.6
      comp=Z,17nm,1.0s
C36M  Paulatuk           73.28  22  P       P       16 11 28.7 -0.2
      baz=275
LIRD  Liard River Hi     73.28  32  P       P       16 11 29.6 +0.4
      baz=276
TBI   Tubuai             73.36 122  eS      S       16 20 56.9 -1.2
      comp=Z,187nm,29.0s
TBI   Tubuai             73.36 122  eLR     LR      16 34 10.1
      comp=Z,300nm,31.5s
BEAVL Fort Liard         73.72  31  P       P       16 11 32.1 +0.3
      baz=276
TOAD  Toad River Com     73.79  33  P       P       16 11 32.6 +0.4
      baz=277
WRGLY Wrigley            74.14  28  IAmb    IAmb    16 11 53.9
      comp=Z,14nm,1.3s
WRGLY Wrigley            74.14  28  P       P       16 11 34.7 +0.7
      baz=277
SVE   Sverdlovsk         74.19 325  eP      P       16 11 34.8 +0.3
SVE                                 pmax    pmax
      comp=Z,29nm,1.4s
KOTAN Kotaneelee Air     74.23  31  P       P       16 11 35.2 +0.5
      baz=277
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ARTI  Arti               75.49 325  P       P       16 11 41.5 -0.5
ARTI  Arti               75.49 325c iP      P       16 11 42.1 +0.1
ARTI                                                16 14 29.0
ARTI                                S       S       16 21 25.0 +4.0
ARTI                                SS      SS      16 26 19.8 +8.5
ARTI                                pmax    pmax
      comp=Z,29nm,1.0s
TAOE  Nuku Hiva Isla     75.73 104  eLR     LR      16 35 13.5
      comp=Z,91nm,28.3s
AB31  Akbulak array      75.75 318  P       P       16 11 42.9 -0.7
AB31                                IAmb    IAmb    16 11 44.2
      comp=Z,12nm,0.9s
ABKAR Akbulak array      75.75 318  P       P       16 11 42.8 -0.9
ABKAR Akbulak array      75.75 318  IAmb    IAmb    16 11 44.2
      comp=Z,12nm,0.9s
AKTO  Aktyubinsk         76.76 319  LR      LR      16 47 25.8
      comp=Z,50nm,20.1s,baz=180,slow=37
YKAW3 Yellowknife Wh     78.24  28  P       P       16 11 56.7 -0.7
YKAW3                               IAmb    IAmb    16 11 58.6
      comp=Z,6.0nm,0.8s
YKA   Yellowknife Ar     78.26  28  P       P       16 11 56.9 -0.5
YKA   Yellowknife Ar     78.26  28  P       P       16 11 56.5 -1.0
      comp=Z,4.1nm,0.8s,baz=293,slow=6.0,SNR=35
YKA                                 LR      LR      16 45 26.9
      comp=Z,59nm,20.3s,baz=310,slow=35
      comp=Z,4.1nm,0.8s
YKA   Yellowknife Ar     78.26  28 i P      P       16 11 57.2 -0.3
YKA                                 pmax    pmax
      comp=Z,5.0nm,0.9s
YKAW1 Yellowknife Wh     78.31  28  P       P       16 11 57.5 -0.3
YKAW1                               IAmb    IAmb    16 11 58.7
      comp=Z,6.4nm,0.9s
EUNU  Eureka             78.81   8  P       P       16 12 00.5 +0.1
J05D  Fort Rock, OR      79.00  48  P       P       16 12 02.6 +0.4
PINE  Pine Mountain      79.09  48  IAmb    IAmb    16 12 20.5
      comp=Z,30nm,1.6s
KIRV  Kirov              79.72 328ceP       P       16 12 05.8 +0.2
NEW   Newport            80.56  42  LR      LR      16 40 13.1
      comp=Z,60nm,21.3s,baz=316,slow=30
SPB2  Spitsbergen Ar     80.87 351  P       P       16 12 12.3 +0.9
SPITS Spitsbergen Ar     80.87 351  P       P       16 12 10.9 -0.6
      comp=Z,5.5nm,0.8s,baz=102,slow=6.2,SNR=5.3
      comp=Z,5.5nm,0.8s
J08A  Circle Bar Ran     80.94  47  IAmb    IAmb    16 12 14.2
      comp=Z,19nm,1.5s
WVOR  Wild Horse Val     81.06  48  P       P       16 12 13.8 +0.5
WVOR                                pmax    pmax
      comp=Z,4.0nm,1.7s
BMO   Blue Mountains     81.35  46  IAmb    IAmb    16 12 16.2
      comp=Z,23nm,1.7s
NVAR  Mina Array Bea     82.38  52  P       P       16 12 20.6 +0.1
NVAR  Mina Array Bea     82.38  52  P       P       16 12 20.9 +0.4
      comp=Z,1.5nm,0.7s,baz=250,slow=5.2,SNR=8.1
      comp=Z,1.5nm,0.7s
BELG  Belogornoye        82.55 323  LR      LR      16 52 14.5
      comp=Z,40nm,18.7s,baz=94,slow=38
BELG  Belogornoye        82.55 323d iP      P       16 12 20.7  0.0
BELG                                pmax    pmax
      comp=Z,17nm,1.0s
DSP   Deep Springs       82.93  53  IAmb    IAmb    16 12 25.2
      comp=Z,13nm,1.7s
KLMR  Klimovskoe         83.65 332  eP      P       16 12 23.4 -2.8
KLMR                                pmax    pmax
      comp=Z,26nm,1.5s
UOSS  Minazif            84.31 294  P       P       16 12 30.0 -0.4
UOSS                                IAmb    IAmb    16 12 31.6
      comp=Z,5.2nm,0.8s
GSC   Goldstone, Bar     84.42  55  IAmb    IAmb    16 12 32.4
      comp=Z,16nm,1.7s
ARCES ARCESS Array B     84.44 343  P       P       16 12 29.1 -1.1
      comp=Z,8.1nm,0.9s,baz=336,slow=2.7,SNR=6.1
ARCES                               LR      LR      16 55 06.3
      comp=Z,39nm,20.7s,baz=32,slow=39
      comp=Z,8.1nm,0.9s
SPR3  Spring Creek 3     85.19  51  IAmb    IAmb    16 12 36.9
      comp=Z,14nm,1.5s
BLKN  Baker Lake         85.26  23  IAmb    IAmb    16 12 35.0
      comp=Z,10nm,1.1s
EGMT  Eagleton           85.33  41  IAmb    IAmb    16 12 36.4
      comp=Z,12nm,1.3s
HVU   Hansel Valley      85.42  48  IAmb    IAmb    16 12 37.8
      comp=Z,15nm,1.4s
YHL   Hebgen Lake        85.50  44  IAmb    IAmb    16 12 39.3
      comp=Z,14nm,1.2s
PSUT  Pine Spring        85.69  51  P       P       16 12 37.0 -0.3
PSUT                                IAmb    IAmb    16 12 38.9
      comp=Z,28nm,1.9s
DAG   Danmarks Havn      85.77 357  P       P       16 12 36.6 -0.1
DAG                                 pmax    pmax
      comp=Z,13nm,1.1s
DUG   Dugway, Tooele     85.91  49  IAmb    IAmb    16 12 40.0
      comp=Z,20nm,1.6s
DUG   Dugway, Tooele     85.91  49  P       P       16 12 38.5 +0.2
DUG                                 pmax    pmax
      comp=Z,7.0nm,1.5s
H17A  Grant Village      86.06  45  IAmb    IAmb    16 12 43.3
      comp=Z,15nm,1.4s
YMP   Mirror Lake Pl     86.23  44  IAmb    IAmb    16 12 42.7
      comp=Z,16nm,1.2s
AHID  Auburn Hatcher     86.27  46  IAmb    IAmb    16 12 42.3
      comp=Z,18nm,1.4s
HWUT  Hardware Ranch     86.34  48  IAmb    IAmb    16 12 41.9
      comp=Z,13nm,1.4s
KNB   Kanab              86.95  52  IAmb    IAmb    16 12 45.8
      comp=Z,11nm,1.2s
FFC   Flin Flon          87.16  33  P       P       16 12 43.8 -0.1
FFC                                 IAmb    IAmb    16 12 45.0
      comp=Z,10.0nm,1.1s
FFC   Flin Flon          87.16  33  P       P       16 12 43.8 -0.1
FFC                                 pmax    pmax
      comp=Z,10.0nm,1.1s
PDAR  Pinedale Array     87.33  46  P       P       16 12 45.1 -0.2
PDAR  Pinedale Array     87.33  46  P       P       16 12 44.8 -0.6
      comp=Z,0.6nm,0.5s,baz=258,slow=5.9,SNR=5.6
      comp=Z,0.6nm,0.5s
Q16A  Castle Valley      87.54  50  IAmb    IAmb    16 13 04.3
      comp=Z,18nm,1.5s
U15A  North Rim          87.55  53  P       P       16 12 46.9 +0.3
OBN   Obninsk            87.55 328  LR      LR      16 55 47.0
      comp=Z,42nm,18.1s,baz=46,slow=38
VSR   Storozhevoye       87.86 323  eP      P       16 12 43.6 -3.8
VSR                                 pmax    pmax
      comp=Z,10.0nm,1.0s
VORD  Divnogorie         87.89 323  eP      P       16 12 43.6 -3.9
VORD                                pmax    pmax
      comp=Z,6.0nm,1.0s
SRU   San Rafael Swe     87.94  50  P       P       16 12 48.2 -0.1
SRU                                 IAmb    IAmb    16 12 50.1
      comp=Z,5.2nm,0.8s
SRU   San Rafael Swe     87.94  50  P       P       16 12 48.2 -0.1
SRU                                 pmax    pmax
      comp=Z,5.0nm,0.8s
P18A  Preston Nutter     87.96  49  P       P       16 12 48.1 -0.4
HMU   Henry Mountain     88.19  51  IAmb    IAmb    16 12 51.4
      comp=Z,5.1nm,0.8s
WUAZ  Wupatki            88.56  53  IAmb    IAmb    16 12 54.0
      comp=Z,7.7nm,0.9s
KBZ   Khabaz             88.57 316  P       P       16 12 49.6 -1.3
      comp=Z,7.4nm,0.9s,baz=199,slow=3.4,SNR=13
      comp=Z,7.4nm,0.9s
KBZ   Khabaz             88.57 316ceP       P       16 12 50.5 -0.4
KBZ                                 pmax    pmax
      comp=Z,9.0nm,0.9s
KIV   Kislovodsk         88.62 316  eP      P       16 12 49.7 -1.6
KIV                                 pmax    pmax
      comp=Z,8.0nm,1.0s
214A  Organ Pipe Nat     88.63  57  IAmb    IAmb    16 12 54.2
      comp=Z,9.6nm,1.4s
GNI   Garni              88.64 312  P       P       16 12 50.7 -0.8
GNI                                 pmax    pmax
      comp=Z,14nm,1.4s
FCC   Fort Churchill     88.97  27  P       P       16 12 51.6 -0.7
FCC                                 IAmb    IAmb    16 12 53.1
      comp=Z,6.6nm,0.9s
FCC   Fort Churchill     88.97  27  P       P       16 12 51.7 -0.7
FCC                                 pmax    pmax
      comp=Z,7.0nm,1.0s
FIA1  FINESS Array S     89.00 336  P       P       16 12 50.8 -1.7
FINES FINESS Array B     89.00 336  P       P       16 12 50.9 -1.6
      comp=Z,3.2nm,0.6s,baz=70,slow=5.2,SNR=13
      comp=Z,3.2nm,0.6s
PV05  Paradox Valley     89.36  50  IAmb    IAmb    16 12 56.6
      comp=Z,11nm,1.3s
PV04  Paradox Valley     89.38  50  P       P       16 12 54.4 -0.7
K22A  Casper             89.45  45  IAmb    IAmb    16 12 57.6
      comp=Z,14nm,1.3s
PV03  Paradox Valley     89.48  50  IAmb    IAmb    16 12 56.9
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      comp=Z,14nm,1.3s
TUC   Tucson             90.13  56  P       P       16 12 59.9 +1.3
TUC                                 pmax    pmax
      comp=Z,4.0nm,1.6s
RSSD  Black Hills        90.51  43  P       P       16 13 00.1 -0.2
RSSD                                IAmb    IAmb    16 13 02.0
      comp=Z,21nm,1.8s
RSSD  Black Hills        90.51  43  P       P       16 13 00.1 -0.2
RSSD                                pmax    pmax
      comp=Z,21nm,1.8s
SOC   Sochi              90.74 316  eP      P       16 12 57.3 -3.8
SOC                                 e               16 16 31.3
SOC                                 ePPP    PPP     16 18 32.3
SOC                                 eS      SKSac   16 23 28.3 -3.3
SOC                                 eSS     SS      16 29 58.6 +0.9
SOC                                 eSSS    SSS     16 33 32.6
MNK   Minsk              92.19 330 i P      P       16 13 06.9 -0.6
      comp=Z,14nm,0.8s,baz=56
MNK                                i PP     PP      16 16 46.9 -0.3
MNK                                i PPP    PPP     16 18 29.6
MNK                                i S      SKSac   16 23 39.8 +0.4
MNK                                i PS     PnS     16 25 22.0 -0.6
MNK                                i SS     SS      16 30 21.1 +3.2
MNK                                i SSS    SSS     16 33 59.9
MNK                                i LRM    MLR     16 55 42.0
      comp=Z,38nm,17.6s
MNK   Minsk              92.19 330 i P      P       16 13 06.9 -0.6
MNK                                i                16 16 46.9
MNK                                i S      SKSac   16 23 39.7 +0.4
MNK                                i PS     PnS     16 25 21.9 -0.7
MNK                                i SS     SS      16 30 21.0 +3.2
MNK                                i SSS    SSS     16 33 59.8
MNK                                 pmax    pmax
      comp=Z,14nm,0.8s
MNK                                 MLR     MLR
      comp=Z,38nm,18.0s
ANMO  Albuquerque        92.51  52 i P      P       16 13 09.6 -0.1
ANMO                                pmax    pmax
      comp=Z,3.0nm,1.5s
ULM   Lac du Bonnet      92.57  35  P       P       16 13 08.9 -0.5
      comp=Z,6.0nm,0.9s,baz=338,slow=3.4,SNR=5.1
      comp=Z,6.0nm,0.9s
HFS   Hagfors            94.43 339  P       P       16 13 16.1 -1.6
      comp=Z,1.1nm,0.6s,baz=98,slow=6.0,SNR=1.8
HFS                                 LR      LR      16 59 10.2
      comp=Z,31nm,21.6s,baz=57,slow=38
      comp=Z,1.1nm,0.6s
NOA   NORSAR Array B     94.58 340  LR      LR      17 00 14.7
      comp=Z,27nm,21.3s,baz=25,slow=38
SFJD  Kangerlussuaq      94.84   7  LR      LR      16 55 28.3
      comp=Z,16nm,21.3s,baz=339,slow=35
BRTR  Keskin Array B     96.54 315  P       P       16 13 26.8 -1.2
      comp=Z,1.8nm,0.8s,baz=68,slow=3.3,SNR=8.7
      comp=Z,1.8nm,0.8s
TXAR  Lajitas Array      96.92  57  P       P       16 13 28.7 -1.2
      comp=Z,0.6nm,1.0s,baz=237,slow=4.3,SNR=4.1
      comp=Z,0.6nm,1.0s
SYO   Syowa Base        112.55 202⇓ePdiff   Pdif    16 14 39.4 +1.1
SYO   Syowa Base        112.55 202⇓ePKiKP   PKiKP   16 18 33.6 +0.1
TROLL Troll, Antarti    121.67 192 ⇑P       PKPdf   16 18 51.5 +0.3
      comp=Z,46nm,0.6s
SNAA  Sanae             122.95 191 ⇑P       PKPdf   16 18 52.4 -1.2
      comp=Z,19nm,0.6s
SNAA  Sanae             122.95 191  PKP     PKPdf   16 18 52.9 -0.7
      comp=Z,0.6nm,0.6s,baz=159,slow=4.3,SNR=6.8
VNA2  Neumayer--Watz    124.36 190 ⇑P       PKPdf   16 18 56.4 +0.2
      comp=Z,3.1nm,0.7s,baz=156,slow=1.5
VNA3  Neumayer Olymp    124.42 189 ⇑P       PKPdf   16 18 56.4  0.0
      comp=Z,1.8nm,0.7s
DBIC  Dimbokro          144.01 309  PKP     PKPab   16 19 32.1 +0.3
      comp=Z,3.8nm,0.5s,baz=359,slow=2.8,SNR=6.1
LPAZ  La Paz            145.57  94  PKPbc   PKPdf   16 19 38.4 +0.6
      comp=Z,5.6nm,0.6s,baz=279,slow=2.9,SNR=20
```

IDC ***10*** *16:04:37.6±1.2, 34.°17N×8.°39E, h0^{km}, mb3.6/11, mbtmp3.6/12, ML3.8/1, MS3.0/6, Error ellipse: s-maj=27.9km s-min=15.9km az=120.0*

TUN ***10*** *16:04:38.8, 34.°24N×8.°22E, h0^{km}, MD4.1*

MED_RC ***10*** *16:04:40.0±0.8, 34.°29N×8.°40E, h26^{km}±2^{km}, MW4.1/11, Moment Tensor Solution. Mantle waves: s11,c12; Duration: 1.^{s}0 Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.02±.38; M$_{\theta\theta}$-1.81±.36; M$_{\phi\phi}$1.79±.51; M$_{r\theta}$-0.61±.19; M$_{\theta\phi}$-0.23±.29; M$_{\phi r}$-0.19±.26; Best double couple: M$_0$1.92000×10^{15} NP1:ϕ_s133.00000°, δ74.00000°, λ-171.00000°. NP2:ϕ_s40.00000°, δ82.00000°, λ-16.00000°. Principal axes: T 1.8200, Plg5.0000°, Azm87.0000°; N 0.1900, Plg72.0000°, Azm194.0000°; P -2.0100, Plg17.0000°, Azm356.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

CRAAG ***10*** *16:04:40.3, 34.°29N×8.°40E, Mb4.3, Tunisie*

NEIC ***10*** *16:04:41.1±1.6, 34.°35N±0.°09×8.°39E±0.°04, h10^{km}±1^{km}, mb4.3/8, Error ellipse: s-maj=15.6km s-min=3.9km az=192.0*

ISC 10 16:04:40.2±0.6**, 34.°30N**±0.°05×**8.°41E**±0.°04**, h10^{km}, n47, σ0.^{s}76**/44**, mb3.8**/14**, MS2.8**/3**, Tunisia**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC      h  m  s   ISC
OAR   Oum El Arais       0.24 357  i P      Pg      16 04 44.8 -0.3
BERT  Berda              0.50  96  i P      Pg      16 04 49.7 -0.3
CNGR  Negrine            0.76 284    P      Pn      16 04 56.5 -0.6
THTN  Thala              1.28  10  i P      Pg      16 05 05.4 +0.4
CBBAR Babar              1.31 311    P      Pg      16 05 06.0 +0.5
SGNT  Sidi Gnaou         1.37 117  i P      Pb      16 05 05.8 -0.2
CRHA  Rehia              1.60 337    P      Pb      16 05 09.5 -0.4
TROT  Trozza             1.60  37  i P      Pb      16 05 09.5 -0.5
KEST  Kesra              1.63  28           Pb      16 05 09.7 -0.7
KEST  Kesra              1.63  28    Pn     Pb      16 05 10.1 -0.3
      21nm,0.3s,baz=135,slow=7.5,SNR=120
KEST                                 Lg     Lg      16 05 34.7
      85nm,0.3s,baz=323,slow=23,SNR=25
BTHT  Jabal bu Thady     1.76  61  i P      Pg      16 05 13.9  0.0
CTGD  Timgad             1.98 309    P      Pb      16 05 15.5 -0.9
ABSA  Djebel Ababsia     2.12 339    P      Pn      16 05 16.6 +0.8
CSGS  Sigus              2.30 323    P      Pn      16 05 19.4 +1.1
CMAH  Djebel Manchou     2.46 341    P      Pn      16 05 20.2 -0.3
CASM  Ain Smara          2.51 322    P      Pn      16 05 22.0 +0.8
CKFL  Kef-Lekhel         2.51 327    P      Pn      16 05 21.8 +0.5
VSL   Villasalto         5.25   8           Pn      16 06 00.0 +1.2
CEL   Celeste            7.22  55    Pn     Pn      16 06 27.0 +1.1
CUC   Castrocucco        8.20  44    Pn     Pn      16 06 39.1 -0.3
CEST  Esterri de Car    10.01 328    Pn     Pn      16 07 04.9 +0.7
MDT   Midelt            10.96 266    LR     LR      16 11 44.1
      comp=Z,59nm,20.0s,baz=102,slow=39
ESDC  Sonseca Array     11.25 302    Pn     Pn      16 07 22.3 +1.2
      0.2nm,0.3s,baz=114,slow=13,SNR=3.1
ESDC                                 LR     LR      16 12 19.9
      comp=Z,42nm,19.8s,baz=84,slow=41
      0.3nm,0.3s
SSB   Saint Sauveur     11.37 346    Pn     Pn      16 07 22.5 -0.1
DAVOX Davos/Dischmat    12.52   5    LR     LR      16 12 44.1
      comp=Z,66nm,18.8s,baz=260,slow=38
BRTR  Keskin Array B    20.83  68    P      P       16 09 21.9 -0.2
      0.4nm,0.7s,baz=264,slow=12,SNR=5.8
      0.4nm,0.7s
TORD  Torodi Ar. Bea    21.92 198    P      P       16 09 32.4 -1.4
      2.2nm,0.5s,baz=8.8,slow=10,SNR=2.0
      2.2nm,0.5s
AKASG Malin Array Be    22.34  36    P      P       16 09 36.9 -1.1
      0.6nm,0.4s,baz=235,slow=8.9,SNR=6.1
      0.6nm,0.4s
EKA   Eskdalemuir Ar    22.52 343    P      P       16 09 39.7 -0.3
      0.3nm,0.4s,baz=146,slow=10,SNR=2.6
      0.3nm,0.4s
HFS   Hagfors           26.08   6    P      P       16 10 13.7 -0.1
      1.4nm,0.9s,baz=156,slow=11,SNR=2.1
HFS                                  LR     LR      16 21 56.9
      comp=Z,25nm,18.1s,baz=330,slow=40
      1.4nm,0.9s
NOA   NORSAR Array B    26.82   3    P      P       16 10 19.1 -1.4
      0.3nm,0.6s,baz=181,slow=15,SNR=2.1
NOA                                  LR     LR      16 22 06.1
      comp=Z,14nm,18.2s,baz=205,slow=39
      0.3nm,0.6s
FINES FINESS Array B    29.43  17    P      P       16 10 44.7 +0.9
FINES FINESS Array B    29.43  17    P      P       16 10 42.4 -1.4
      1.4nm,0.7s,baz=197,slow=3.2,SNR=4.7
      1.4nm,0.7s
DBIC  Dimbokro          30.10 207    P      P       16 10 51.1 +1.1
DBIC                                 IAmb   IAmb    16 11 17.1
      comp=Z,16nm,1.2s
ARCES ARCESS Array B    36.55  10    P      P       16 11 44.7 -1.0
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	comp=Z,3.1nm,0.8s,baz=182,slow=8.5,SNR=3.8						
	comp=Z,3.1nm,0.8s						
LVZ	**Lovozero**	**36.85**	**16**	P	**P**	**16 11 48.4**	**0.0**
KURBB	**Kurchatov Arra**	**52.29**	**49**	P	**P**	**16 13 51.3**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=280,slow=8.7,SNR=3.7						
	comp=Z,0.4nm,0.4s						
KURK	**Kurchatov**	**52.33**	**49**	P	**P**	**16 13 52.0**	**-0.1**
MKAR	**Makanchi Array**	**55.57**	**53**	P	**P**	**16 14 15.7**	**-0.2**
MKAR	**Makanchi Array**	**55.57**	**53**	P	**P**	**16 14 15.5**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=277,slow=6.5,SNR=5.0						
	comp=Z,0.3nm,0.5s						
LBTB	**Lobatse**	**61.20**	**162**	P	**P**	**16 14 55.5**	**+0.2**
YKA	**Yellowknife Ar**	**73.30**	**336**	P	**P**	**16 16 12.0**	**+0.5**
	comp=Z,0.5nm,0.9s,baz=41,slow=6.0,SNR=4.8						
	comp=Z,0.5nm,0.9s						
E29M	**Blow River**	**74.59**	**348**	P	**P**	**16 16 19.6**	**+0.6**
E29M				IAmb	IAmb	16 16 25.5	
	comp=Z,2.0nm,1.1s						
D25K	**Kavik River**	**75.03**	**351**	P	**P**	**16 16 22.6**	**+1.0**
D25K				IAmb	IAmb	16 16 51.2	
	comp=Z,4.1nm,1.4s						
G29M	**Pine Creek**	**75.92**	**347**	P	**P**	**16 16 26.4**	**-0.4**
G29M				IAmb	IAmb	16 16 50.2	
	comp=Z,1.7nm,1.0s						
D20K	**Etivluk River**	**76.70**	**354**	P	**P**	**16 16 32.4**	**+1.3**
D20K				IAmb	IAmb	16 17 08.1	
	comp=Z,6.2nm,1.4s						
SIV	**San Ignacio**	**82.79**	**245**	LR	LR	16 52 53.2	
	comp=Z,31nm,18.6s,baz=106,slow=35						

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*DJA **10** 16:11:28.9±0.5, 3°S±4°×13°1E±°, h50^{km}±32^{km}, M3.4/7, MLv3.4/7*

ISC 10 16:11:26.8±1.2, **3°.48S**±0°.07×**131°.32E**±0°.08, **h24**^{km}, **n12**, σ**1^{s}.73**/13, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**1.08**	**59**	P	**Pb**	**16 11 46.6**	**-0.3**
FAKI	**Fak Fak**	**1.08**	**59**	P	**Pn**	**16 11 46.4**	**-0.1**
BNDI	**Bandanaira**	**1.75**	**234**	P	**Pn**	**16 11 57.9**	**+2.2**
BNDI	**Bandanaira**	**1.75**	**234**	P	**Pn**	**16 11 57.9**	**+2.2**
KMPI	**Kaimana, Papua**	**2.39**	**94**	P	**Pn**	**16 12 04.7**	**+0.2**
SWI	**Sorong**	**2.60**	**359**	P	**Pn**	**16 12 06.7**	**-0.6**
SWI				S	**Sn**	**16 12 37.3**	**-0.9**
RKPI	**Ransiki, Papua**	**3.46**	**56**	P	**Pn**	**16 12 19.3**	**+0.1**
NLAI	**Namlea**	**4.22**	**273**	P	**Pn**	**16 12 32.2**	**+2.6**
BAKI	**Biak**	**5.30**	**65**	P	**Pn**	**16 12 46.2**	**+1.7**
DRS	**Darwin Rock St**	**8.91**	**183**	P	**Pn**	**16 13 32.8**	**-1.3**
	8.8nm,0.8s						
KDU	**Kakadu**	**9.22**	**173**	P	**Pn**	**16 13 36.0**	**-2.4**
	7.6nm,1.1s						
MTN	**Manton Dam**	**9.31**	**181**	P	**Pn**	**16 13 38.2**	**-1.4**
	11nm,2.5s						

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*IDC **10** 16:12:10.3±1.4, 41°.21N×134°.93E, h425^{km}±19^{km}, mb2.7/3, mbtmp3.5/7, Error ellipse: s-maj=27.3km s-min=23.2km az=56.0*

*JMA **10** 16:12:10.1±0.4, 41°N±2°×13°5E±°, h461^{km}, MV3.3/20, SEA OF JAPAN*

ISC 10 16:12:09.5±0.9, **41°.10N**±0°.08×**135°.25E**±0°.08, **h450**^{km}, **n18**, σ**1^{s}.80**/22, **mb2.9**/3, **Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIW	**Iwasaki**	**3.64**	**96**	*e*P	**P**	**16 13 22.3**	**+0.7**
JSD	**Sado**	**3.84**	**142**	*e*P	**P**	**16 13 23.4**	**+0.1**
USRK	**Ussuriysk Ar.**	**3.92**	**323**	P	**P**	**16 13 20.9**	**-2.9**
	2.0nm,0.5s,baz=150,slow=7.2,SNR=9.6						
JRG	**Rokugo**	**4.46**	**111**	*e*P	**P**	**16 13 30.1**	**+1.4**
JMK	**Ichinoseki**	**5.06**	**113**	*e*P	**P**	**16 13 35.3**	**+0.9**
JMM	**Marumori**	**5.37**	**125**	*e*P	**P**	**16 13 38.0**	**+0.5**
JHO	**Hitachi**	**6.11**	**135**	*e*P	**P**	**16 13 44.4**	**-0.6**
JHO				*e*S	**S**	**16 14 59.9**	**-3.0**
ASAJ	**Asahikawa**	**6.20**	**58**	P	**P**	**16 13 47.5**	**+1.7**
	4.5nm,0.3s,baz=244,slow=12,SNR=31						
JCH	**Churui**	**6.25**	**73**	*e*P	**P**	**16 13 47.8**	**+1.5**
JCH				*e*S	**S**	**16 15 03.3**	**-2.0**
JHS	**Saijyo**	**6.32**	**196**	*e*P	**P**	**16 13 47.4**	**+0.1**
KSRS	**Korea Array**	**6.75**	**240**	P	**P**	**16 13 50.5**	**-1.0**
	0.9nm,0.5s,baz=66,slow=10,SNR=7.6						
JTKR	**Abashiri--Toko**	**7.01**	**63**	*e*P	**P**	**16 13 56.1**	**+1.9**
BSO3	**Boso 3**	**7.53**	**145**	*e*P	**P**	**16 14 00.0**	**+0.3**
BSO3				*e*S	**S**	**16 15 27.3**	**-2.7**
NEM2	**Nemuro 2**	**8.11**	**70**	*e*P	**P**	**16 14 07.7**	**+1.8**
NEM2				*e*S	**S**	**16 15 40.4**	**-1.2**
KLR	**Kul'dur**	**8.50**	**344**	P	**P**	**16 14 08.8**	**-1.2**
	1.4nm,0.4s,baz=176,slow=8.5,SNR=9.0						
MKAR	**Makanchi Array**	**37.95**	**297**	P	**P**	**16 18 47.3**	**+0.3**
	0.3nm,0.6s,baz=92,slow=7.4,SNR=3.6						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**39.74**	**304**	P	**P**	**16 19 01.6**	**+0.2**
	1.2nm,0.7s,baz=80,slow=8.4,SNR=7.7						
	1.2nm,0.7s						
WRA	**Warramunga Arr**	**60.73**	**181**	P	**P**	**16 21 39.9**	**+3.6**
	0.4nm,0.9s,baz=1.3,slow=6.9,SNR=2.0						
	0.4nm,0.9s						

IDC 10 16:15:34.5±6.3, **19°.76S**×**176°.93W**, **h0**^{km}, **mb3.7**/3, **mbtmp3.7**/3, **MS3.5**/1, **Error ellipse: s-maj=314.7km s-min=60.3km az=149.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**45.67**	**256**	P	P	16 23 57.1	-0.3
	0.4nm,0.6s,baz=89,slow=7.8,SNR=6.9						
ASAR				LR	LR	16 41 56.4	
	comp=Z,58nm,19.2s,baz=322,slow=35						
	0.4nm,0.6s						
WRA	**Warramunga Arr**	**45.70**	**261**	P	P	16 23 57.6	-0.1
	0.6nm,1.0s,baz=98,slow=7.1,SNR=5.3						
	0.6nm,1.0s						
FITZ	**Fitzroy Crossi**	**54.13**	**262**	P	P	16 25 01.7	0.0
	4.0nm,1.0s,baz=82,slow=7.1,SNR=3.1						
	4.0nm,1.0s						
AKASG	**Malin Array Be**	**142.84**	**332**	PKP	PKPdf	16 35 07.7	-2.2
	0.8nm,0.4s,baz=39,slow=4.3,SNR=6.5						
BRTR	**Keskin Array B**	**147.07**	**314**	PKPbc	PKPbc	16 35 19.6	-0.2
	0.2nm,0.5s,baz=126,slow=4.4,SNR=3.9						

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*ISN **10** 16:25:40.9±0.3, 36°.33N×45°.01E, h10^{km}, ML2.7*

*TEH **10** 16:25:40.8, 36°.43N×45°.07E, h10^{km}*

ISC 10 16:25:41.9±1.3, **36°.4N**±0°.1×**45°.2E**±0°.2, **h10**^{km}, **n4**, σ**0^{s}.68**/6, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAHB	**Mahabad**	**0.56**	**49**	Pg	**Pg**	**16 25 53.0**	**0.0**
MAHB				Sg	**Sb**	**16 26 01.7**	**-0.5**
IKRK	**Kirkuk**	**1.21**	**214**	*e*Pg	**Pn**	**16 26 04.5**	**-0.4**
	baz=30						
IKRK				*e*Sg	**Sb**	**16 26 21.0**	**+0.5**
IAZR	**Azarshahr**	**1.43**	**27**	Pg	**Pn**	**16 26 09.0**	**+0.7**
ISHB	**Shabestar**	**1.91**	**10**	Pn	**Pn**	**16 26 14.4**	**-0.4**

IDC 10 16:31:43.8±1.3, **8°.91N**×**126°.52E**, **h0**^{km}, **mb3.5**/4, **mbtmp3.5**/4, **MS2.4**/1, **Error ellipse: s-maj=88.9km s-min=22.7km az=78.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.05**	**207**	LR	LR	16 33 11.2	
	comp=Z,77nm,18.5s,baz=336,slow=43						
WRA	**Warramunga Arr**	**29.69**	**165**	P	P	16 37 51.5	-0.1
	0.4nm,0.7s,baz=346,slow=7.8,SNR=6.3						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**33.17**	**168**	P	P	16 38 22.4	0.0
	0.5nm,1.0s,baz=348,slow=7.3,SNR=11						
	0.5nm,1.0s						
USRK	**Ussuriysk Ar.**	**35.48**	**7**	P	P	16 38 42.0	0.0
	1.6nm,0.6s,baz=187,slow=7.9,SNR=5.2						
	1.6nm,0.6s						
MKAR	**Makanchi Array**	**53.25**	**323**	P	P	16 41 04.2	-0.1
	0.1nm,0.4s,baz=119,slow=7.5,SNR=2.7						
	0.1nm,0.4s						

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*IDC **10** 16:34:51.1±1.3, 9°.46N×93°.47E, h0^{km}, mb3.6/7, mbtmp3.6/7, MS3.2/1, Error ellipse: s-maj=46.6km s-min=20.5km az=58.0*

*BKK **10** 16:34:59.5±1.1, 10°N±13°×9°4E±°, h10^{km}, M4.3/8, mb4.6/3, mB6.5/1, Mjma4.0/8, ML4.3/7, MLv4.2/8, Mw(mB)6.2/1*

ISC 10 16:34:54.6±1.3, **9°.5N**±0°.2×**93°.9E**±0°.1, **h22**^{km}, **n11**, σ**2^{s}.29**/11, **mb3.5**/7, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RNTT	**Ranong**	**4.50**	**90**	P	**Pn**	**16 36 01.1**	**-0.3**
SRIT	**Nakonsritamara**	**5.67**	**98**	P	**Pn**	**16 36 17.6**	**-0.1**
	0.9nm0.6nm0.7nm115nm,0.5s						
SRIT				S	**Sn**	**16 37 18.5**	**-3.7**
	0.9nm0.6nm0.7nm115nm,0.5s						
PSI	**Prapat**	**8.27**	**143**	LR	LR	16 40 50.3	
	comp=Z,157nm,18.5s,baz=316,slow=42						
CMAR	**Chiang Mai Arr**	**10.19**	**28**	Pn	**Pn**	**16 37 22.3**	**+2.6**
	baz=204,slow=15						
MKAR	**Makanchi Array**	**38.51**	**347**	P	**P**	**16 42 14.6**	**-0.8**
	0.5nm,0.8s,baz=157,slow=6.6,SNR=4.0						
	0.5nm,0.8s						
SONM	**Songino Array**	**39.68**	**13**	P	**P**	**16 42 25.1**	**-0.2**
	0.5nm,0.5s,baz=198,slow=8.8,SNR=3.6						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**42.97**	**346**	P	**P**	**16 42 51.1**	**-0.9**
	0.6nm,0.8s,baz=162,slow=7.1,SNR=4.4						
	0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**44.97**	**352**	P	**P**	**16 43 07.4**	**-0.7**
	0.7nm,0.6s,baz=141,slow=9.3,SNR=2.0						
	0.7nm,0.6s						
WRA	**Warramunga Arr**	**49.36**	**127**	P	**P**	**16 43 45.3**	**+2.5**
	0.6nm,1.1s,baz=305,slow=8.6,SNR=5.6						
	0.6nm,1.1s						
ASAR	**Alice Springs**	**51.09**	**131**	P	**P**	**16 43 58.6**	**+2.7**
	1.3nm,1.0s,baz=297,slow=6.6,SNR=7.9						
	1.3nm,1.0s						
BRTR	**Keskin Array B**	**61.25**	**310**	P	**P**	**16 45 06.0**	**-2.4**
	0.8nm,0.7s,baz=111,slow=6.8,SNR=5.6						
	0.8nm,0.7s						

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*SKHL **10** 16:45:31.3±0.1, 46°.80N×141°.60E, h14^{km}, mb3.6/6*

*JMA **10** 16:45:31.3±0.6, 47°N±2°×14°2E±°, h0^{km}, MV2.5/13, SOUTH SAKHALIN*

ISC 10 16:45:31.5±1.6, **46°.81N**±0°.06×**141°.60E**±0°.08, **h9**^{km}, **n7**, σ**0^{s}.54**/11, **Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEVR	**Nevel`sk**	**0.22**	**126**	*e*Pg	**Pg**	**16 45 36.2**	**+0.2**
NEVR				AMB	AMB	16 45 36.7	
	220nm,0.5s						
NEVR				*e*Sg	**Sg**	**16 45 39.6**	**+0.6**
NEVR				A	A	16 45 41.5	
	3μm,0.4s						
NEVR				A	A	16 45 41.5	
	3μm,0.4s						
KHLM	**Kholmsk**	**0.40**	**51**	*e*Pg	**Pg**	**16 45 39.9**	**+0.6**
KHLM				AMB	AMB	16 45 40.6	
	40nm,0.3s						
KHLM				*e*Sg	**Sb**	**16 45 45.9**	**-1.0**
KHLM				A	A	16 45 48.0	
	640nm,0.5s						
KHLM				A	A	16 45 48.0	
	320nm,0.5s						
YSS	**Yuzhno-Sakhali**	**0.81**	**79**	*e*Pg	**Pg**	**16 45 47.0**	**0.0**
YSS				AMB	AMB	16 45 47.7	
	10.0nm,0.5s						
YSS				*e*Sg	**Sg**	**16 45 57.8**	**+0.3**
YSS				A	A	16 45 59.4	
	80nm,0.2s						
YSS				A	A	16 45 59.4	
	80nm,0.2s						
JRBN	**Rebuntou**	**1.43**	**195**	*e*P	**Pb**	**16 45 58.1**	**-0.2**
JRBN				*e*S	**Sg**	**16 46 17.8**	**+0.2**
JWK2	**Keihoku**	**1.50**	**172**	*e*P	**Pb**	**16 45 59.6**	**0.0**
JRR	**Rishiri**	**1.68**	**187**	*e*P	**Pb**	**16 46 02.8**	**+0.2**
JSE	**Soyaes**	**1.97**	**159**	*e*S	**Sb**	**16 46 31.6**	**-0.6**

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*IDC **10** 16:48:15.4±5.3, 44°.01S×168°.62E, h0^{km}, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=196.5km s-min=32.2km az=56.0*

*WEL **10** 16:48:17.7±0.7, 44°S±4°×16°8E±°, h5^{km}, M3.9/7, ML4.0/7, MLv3.9/7, Error ellipse: s-maj=7.7km s-min=3.4km az=130.4, confirmed*

*WEL **10** 16:48:17.7, 44°.33S×168°.15E, h15^{km}, ML3.9, Mw3.7, Moment Tensor Solution. s8 Moment tensor: Scale 10^{14} Nm; M_{rr}1.68; $M_{\theta\theta}$-0.06; $M_{\phi\phi}$-1.62; $M_{r\theta}$2.33; $M_{\theta\phi}$0.08; $M_{\phi r}$3.12; Fault plane solution: $M_0$4.19000×10^{14} NP1: ϕ_s32.00000°, δ80.00000°, λ101.00000°. NP2: ϕ_s165.00000°, δ15.00000°, λ43.00000°. Principal axes: T 4.4980, Plg54.0000°, Azm316.0000°; N -0.6090, Plg11.0000°, Azm210.0000°; P -3.8890, Plg34.0000°, Azm113.0000°; Stations used: JCZ WKZ MLZ EAZ LBZ WHZ ODZ RPZ REVERSE FAULTING*

*NOU **10** 16:48:18.9, 44°.23S×168°.21E, h7^{km}, MLv4.2/12, South Island, New Zealand*

ISC 10 16:48:18.1±0.8, **44°.33S**±0°.04×**168°.16E**±0°.04, **h10**^{km}, **n31**, σ**0^{s}.71**/35, **mb3.4**/3, **South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.38**	**206**	P	**Pg**	**16 48 25.6**	**-0.1**
MSZ				S	**Sg**	**16 48 31.1**	**+0.3**
NSBS	**Neils Beach**	**0.49**	**47**	P	**Pg**	**16 48 27.7**	**+0.1**
JCZ	**Jackson Bay**	**0.52**	**60**	P	**Pg**	**16 48 28.0**	**-0.2**
JCZ	**Jackson Bay**	**0.52**	**60**	P	**Pg**	**16 48 28.0**	**-0.2**
GLNY	**Glenorchy**	**0.56**	**162**	P	**Pg**	**16 48 28.1**	**-0.9**
MECS	**Makarora Emerg**	**0.78**	**83**	P	**Pg**	**16 48 33.0**	**-0.1**
HDWS	**Haast DOC Work**	**0.78**	**55**	P	**Pg**	**16 48 32.9**	**-0.2**
QTPS	**Queenstown Pol**	**0.79**	**153**	P	**Pg**	**16 48 33.0**	**-0.3**
WKZ	**Wanaka**	**0.79**	**129**	P	**Pb**	**16 48 33.5**	**-0.4**
WKZ				S	**Sb**	**16 48 44.0**	**-0.6**
WNPS	**Wanaka Nationa**	**0.79**	**118**	P	**Pg**	**16 48 32.3**	**-1.1**
MLZ	**Mavora Lakes**	**1.04**	**182**	P	**Pg**	**16 48 37.4**	**-0.6**
EAZ	**Earnscleugh**	**1.21**	**138**	P	**Pn**	**16 48 41.2**	**0.0**
DCZ	**Deep Cove**	**1.34**	**212**	P	**Pn**	**16 48 42.2**	**-0.7**
DCZ				S	**Sb**	**16 49 00.1**	**-0.5**
FOZ	**Fox Glacier**	**1.44**	**57**	P	**Pn**	**16 48 43.0**	**-1.2**
FOZ				S	**Sg**	**16 49 03.8**	**-0.5**
LBZ	**Lake Benmore**	**1.45**	**93**	P	**Pb**	**16 48 45.2**	**0.0**
WHZ	**Wether Hill Ro**	**1.57**	**186**	P	**Pn**	**16 48 45.8**	**-0.2**
ODZ	**Otahua Downs**	**1.91**	**113**	P	**Pn**	**16 48 51.6**	**+0.9**
PYZ	**Puysegur Point**	**2.11**	**209**	P	**Pb**	**16 48 57.0**	**+0.5**
RPZ	**Rata Peaks**	**2.17**	**75**	P	**Pn**	**16 48 55.0**	**+0.6**
SYZ	**Scrubby Hill**	**2.31**	**163**	P	**Pn**	**16 48 57.2**	**+1.0**
KHZ	**Kahutara**	**4.36**	**66**	P	**Pn**	**16 49 25.3**	**+0.9**
QRZ	**Quartz Range**	**4.76**	**44**	P	**Pn**	**16 49 28.4**	**-1.5**
SNZO	**South Karori**	**5.68**	**60**	P	**Pn**	**16 49 43.3**	**+0.8**
KHEZ	**Kahui Hut**	**6.66**	**43**	P	**Pn**	**16 49 55.3**	**-0.8**
BFZ	**Birch Farm**	**7.00**	**61**	P	**Pn**	**16 50 01.5**	**+0.9**
HIZ	**Hauiti**	**7.68**	**43**	P	**Pn**	**16 50 09.4**	**-0.7**
OUZ	**Omahuta**	**10.01**	**26**	P	**Pn**	**16 50 41.5**	**-0.5**
ASAR	**Alice Springs**	**34.73**	**295**	P	**P**	**16 55 08.2**	**-0.3**
	0.5nm,0.9s,baz=134,slow=8.7,SNR=4.9						
	0.5nm,0.9s						
WRA	**Warramunga Arr**	**37.16**	**300**	P	**P**	**16 55 29.5**	**+0.3**
	0.4nm,0.6s,baz=135,slow=8.0,SNR=7.9						
	0.4nm,0.6s						
QSPA	**South Pole Qui**	**45.79**	**180**	P	**P**	**16 56 41.1**	**+1.4**
	1.8nm,0.9s,baz=341,slow=4.9,SNR=4.2						
	1.8nm,0.9s						
BRTR	**Keskin Array B**	**146.24**	**278**	PKPbc	**PKPdf**	**17 07 57.5**	**0.0**
	0.9nm,0.8s,baz=111,slow=3.8,SNR=5.3						

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*IDC **10** 16:59:10.0±0.4, 6°.60S×131°.87E, h0^{km}, mb4.9/18, mbtmp5.0/20, ML5.5/3, MS4.6/20, Error ellipse: s-maj=22.9km s-min=11.1km az=77.0*

*BJI **10** 16:59:11.6, 6°.88S×132°.22E, h48^{km}, mB5.2/53, mb5.0/80, Ms5.0/72, Ms7 4.8/68*

*MOS **10** 16:59:16.1±1.0, 6°.55S×131°.93E, h59^{km}, mb5.5/49, MS4.8/5, Error ellipse: s-maj=7.5km s-min=4.8km az=115.7*

*DJA **10** 16:59:17.0±0.2, 7°S±1°×13°2E±°, h56^{km}±2^{km}, M5.4/107, mB5.9/66, mb5.6/107, MLv6.5/17, Mw(mB)5.5/66, MwMwp5.1/31, Mwp5.4/31*

*NEIC **10** 16:59:17.2, 6°.57S×131°.90E, h48^{km}*

*NEIC **10** 16:59:18.5±1.7, 6°.58S±0°.06×131°.86E±0°.07, h61^{km}±1^{km}, mb5.3/214, Mwb5.4/20, Mww5.5/17, Error ellipse: s-maj=12.3km s-min=9.3km az=278.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.39; $M_{\theta\theta}$-1.36; $M_{\phi\phi}$0.97; $M_{r\theta}$-0.05; $M_{\theta\phi}$0.81; $M_{\phi r}$-0.81; Fault plane solution: $M_0$1.67000×10^{17} NP1:ϕ_s246.71000°, δ63.92000°, λ19.03000°. NP2:ϕ_s148.09000°, δ72.97000°, λ152.63000°. Principal axes: T 1.7030, Plg31.0000°, Azm105.0000°; N -0.0681, Plg58.0000°, Azm299.0000°; P -1.6349, Plg6.0000°, Azm199.0000°;*

*NEIC **10** 16:59:18, 6°.57S×131°.88E, h50^{km}, Moment Tensor Solution. Duration: 2^{s}.5 Moment tensor: Scale 10^{17}Nm; M_{rr}0.72; $M_{\theta\theta}$-1.60; $M_{\phi\phi}$0.88; $M_{r\theta}$-0.03; $M_{\theta\phi}$1.70; $M_{\phi r}$-0.65; Fault plane solution: $M_0$2.25000×10^{17} NP1: ϕ_s254.22000°, δ69.15000°, λ14.47000°. NP2: ϕ_s158.97000°, δ76.49000°, λ158.53000°. Principal axes: T 2.0154, Plg25.0000°, Azm115.0000°; N 0.4695, Plg65.0000°, Azm308.0000°; P -2.4848, Plg5.0000°, Azm208.0000°;*

*NEIC **10** 16:59:18, 6°.57S×131°.88E, h50^{km}*

*GCMT **10** 16:59:19.5±0.1, 6°.60S±0°.01×131°.89E±0°.01, h59^{km}±1^{km}, MW5.5/133, Moment Tensor Solution. s112,c198; s133,c231; Duration: 1^{s}.4 Moment tensor: Scale 10^{17} Nm; M_{rr}0.49±.03; $M_{\theta\theta}$-1.73±.03; $M_{\phi\phi}$1.24±.03; $M_{r\theta}$-0.01±.03; $M_{\theta\phi}$1.87±.03; $M_{\phi r}$-0.93±.03; Best double couple: $M_0$2.59400×10^{17} NP1:ϕ_s253.00000°, δ68.00000°, λ11.00000°. NP2:ϕ_s158.00000°, δ79.00000°, λ158.00000°. Principal axes: T 2.5020, Plg23.0000°, Azm114.0000°; N 0.1820, Plg66.0000°, Azm314.0000°; P -2.6850, Plg7.0000°, Azm207.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 16:59:17.2±0.3, **6°.61S**±0°.03×**131°.92E**±0°.04, **h57**^{km}±2^{km}, **h57**^{km}**:pP-P**, **n884**, σ**1^{s}.49**/827, **mb5.2**/197, **MS4.7**/44, **17C-8D, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.50**	**204**		**Pn**	**16 59 44.1**	**+2.2**
SAUI	**Saumlaki**	**1.50**	**204**	P	**Pn**	**16 59 43.9**	**+2.0**
SAUI	**Saumlaki**	**1.50**	**204**	P	**Pn**	**16 59 44.0**	**+2.2**
SAUI				S	**Sn**	**16 59 57.9**	**-2.5**
BNDI	**Bandanaira**	**2.88**	**316**	P	**Pn**	**17 00 02.0**	**+1.3**
BNDI	**Bandanaira**	**2.88**	**316**	P	**Pn**	**17 00 02.0**	**+1.3**
BNDI				S	**Sn**	**17 00 34.1**	**-0.2**
KMPI	**Kaimana, Papua**	**3.42**	**31**	P	**Pn**	**17 00 08.5**	**+0.4**
FAKI	**Fak Fak**	**3.68**	**5**		**Pn**	**17 00 11.4**	**-0.3**
FAKI	**Fak Fak**	**3.68**	**5**	P	**Pn**	**17 00 11.6**	**0.0**
FAKI	**Fak Fak**	**3.68**	**5**	P	**Pn**	**17 00 11.3**	**-0.3**
MSAI	**Masohi**	**4.40**	**317**	P	**Pn**	**17 00 21.8**	**+0.2**
AAI	**Ambon**	**4.71**	**308**	P	**Pn**	**17 00 26.5**	**+0.7**
RKPI	**Ransiki, Papua**	**5.54**	**24**	P	**Pn**	**17 00 38.6**	**+1.4**
SWI	**Sorong**	**5.74**	**353**	P	**Pn**	**17 00 38.0**	**-2.0**
NLAI	**Namlea**	**5.86**	**305**	P	**Pn**	**17 00 42.8**	**+1.3**
	7.6nm11μm27μm2μm,1.1s						
DRS	**Darwin Rock St**	**5.88**	**190**	P	**Pn**	**17 00 41.5**	**-0.2**
KDU	**Kakadu**	**6.07**	**175**	P	**Pn**	**17 00 43.8**	**-0.5**
	comp=Z,0.0nmcomp=Z,4μm,0.8s						
KDU	**Kakadu**	**6.07**	**175**	P	**Pn**	**17 00 43.8**	**-0.5**
MTN	**Manton Dam**	**6.25**	**187**		**Pn**	**17 00 46.7**	**-0.1**
MTN	**Manton Dam**	**6.25**	**187**	P	**Pn**	**17 00 46.3**	**-0.6**
MTN	**Manton Dam**	**6.25**	**187**	P	**Pn**	**17 00 46.8**	**-0.1**
SRPI	**Serui, Papua**	**6.38**	**43**	P	**Pn**	**17 00 49.1**	**+0.5**
BAKI	**Biak**	**6.81**	**38**	P	**Pn**	**17 00 56.6**	**+2.0**
SANI	**Sanana**	**7.45**	**307**	P	**Pn**	**17 01 04.5**	**+1.2**
SANI	**Sanana**	**7.45**	**307**	P	**Pn**	**17 01 02.4**	**-0.9**
SMPI	**Sarmi**	**8.18**	**56**	P	**Pn**	**17 01 13.4**	**+0.1**
	comp=Z,10μmcomp=Z,5μmcomp=Z,301nm,0.9s						
SOEI	**Soe**	**8.20**	**247**		**Pn**	**17 01 13.1**	**-0.6**
SOEI	**Soe**	**8.20**	**247**	P	**Pn**	**17 01 14.6**	**+0.9**
SOEI	**Soe**	**8.20**	**247**	P	**Pn**	**17 01 12.9**	**-0.8**
TNTI	**Ternate**	**8.63**	**328**		**Pn**	**17 01 18.6**	**-0.8**
TNTI	**Ternate**	**8.63**	**328**	P	**Pn**	**17 01 20.0**	**+0.6**
TNTI	**Ternate**	**8.63**	**328**	P	**Pn**	**17 01 19.7**	**+0.3**
	comp=Z,191nm,1.0s						
BATI	**Baumata**	**8.92**	**246**	P	**Pn**	**17 01 23.3**	**-0.2**
GENI	**Genyem**	**9.13**	**64**	P	**Pn**	**17 01 27.1**	**+0.7**
	comp=Z,8μmcomp=Z,9μmcomp=Z,752nm,0.7s						
BBSI	**Bau Bau**	**9.37**	**276**	P	**Pn**	**17 01 32.5**	**+2.9**
	comp=Z,5μmcomp=Z,9μmcomp=Z,826nm,1.1s						
KNRA	**Kununurra**	**9.53**	**199**		**Pn**	**17 01 30.1**	**-1.7**
KNRA	**Kununurra**	**9.53**	**199**	P	**Pn**	**17 01 29.8**	**-2.0**
	comp=Z,0.0nmcomp=Z,2μm,0.7s						
JAY	**Jayapura**	**9.65**	**65**	Pn	**Pn**	**17 01 33.4**	**-0.1**
	comp=Z,16nm,0.3s,baz=244,slow=6.4,SNR=82						
JAY				Sn	**Sn**	**17 03 13.6**	**-7.0**
	comp=Z,30nm,0.3s,baz=148,slow=24,SNR=10						
JAY	**Jayapura**	**9.65**	**65**	P	**Pn**	**17 01 33.2**	**-0.3**
	comp=Z,3μmcomp=Z,373nm,0.9s						
MMRI	**Maumere**	**9.81**	**258**		**Pn**	**17 01 34.6**	**-1.0**
MMRI	**Maumere**	**9.81**	**258**	P	**Pn**	**17 01 36.7**	**+1.1**
MMRI	**Maumere**	**9.81**	**258**	P	**Pn**	**17 01 35.2**	**-0.4**
	comp=Z,8μmcomp=Z,484nm,0.7s						
EDFI	**Ende, Flores**	**10.36**	**257**	P	**Pn**	**17 01 41.6**	**-1.7**
	comp=Z,3μmcomp=Z,199nm,0.6s						
KMSI	**Cibinong**	**10.66**	**312**	P	**Pn**	**17 01 46.7**	**-0.6**
	comp=Z,6μmcomp=Z,6μmcomp=Z,837nm,0.8s						
LUWI	**Luwuk**	**10.67**	**301**		**Pn**	**17 01 46.6**	**-0.8**
LUWI	**Luwuk**	**10.67**	**301**	P	**Pn**	**17 01 49.9**	**+2.5**
LUWI	**Luwuk**	**10.67**	**301**	P	**Pn**	**17 01 47.8**	**+0.4**
	comp=Z,5μmcomp=Z,8μmcomp=Z,755nm,1.1s						
BSSI	**Bau Bau, Buton**	**11.37**	**272**	P	**Pn**	**17 01 57.6**	**+0.6**
	comp=Z,4μmcomp=Z,8μmcomp=Z,620nm,0.9s						
APSI	**Ampana**	**11.71**	**298**	P	**Pn**	**17 02 02.4**	**+0.8**
	comp=Z,5μmcomp=Z,369nm,0.9s						
BASI	**Baing, Sumba**	**11.78**	**251**	P	**Pn**	**17 02 00.6**	**-2.0**
WSI	**Waingapu**	**11.90**	**254**	P	**Pn**	**17 02 01.0**	**-3.3**
BNSI	**Bone**	**11.96**	**280**	P	**Pn**	**17 02 07.8**	**+2.7**
	comp=Z,4μmcomp=Z,3μmcomp=Z,191nm,0.8s						
SGSI	**Sangihe**	**12.05**	**328**	P	**Pn**	**17 02 05.3**	**-1.0**
	comp=Z,5μmcomp=Z,617nm,0.7s						
MRSI	**Marisa**	**12.20**	**305**	P	**Pn**	**17 02 07.7**	**-0.6**
	comp=Z,4μmcomp=Z,3μmcomp=Z,392nm,0.8s						
KAPI	**Kappang**	**12.21**	**277**		**Pn**	**17 02 08.0**	**-0.5**
KAPI	**Kappang**	**12.21**	**277**	Pn	**Pn**	**17 02 09.2**	**+0.7**
	comp=Z,6.4nm,0.3s,baz=104,slow=6.7,SNR=17						
KAPI	**Kappang**	**12.21**	**277**	P	**Pn**	**17 02 08.4**	**-0.1**
KAPI	**Kappang**	**12.21**	**277**	*i* P	**Pn**	**17 02 09.4**	**+0.9**
SPSI	**Sidrap Palu**	**12.38**	**282**	P	**Pn**	**17 02 12.0**	**+1.2**
	comp=Z,3μmcomp=Z,214nm,0.8s						
TTSI	**Tana Toraja**	**12.57**	**286**	P	**Pn**	**17 02 16.0**	**+2.7**
	comp=Z,4μmcomp=Z,3μmcomp=Z,217nm,0.9s						
WBSI	**Waikabubak, Su**	**12.77**	**256**	P	**Pn**	**17 02 14.1**	**-2.0**
FITZ	**Fitzroy Crossi**	**12.96**	**208**	Pn	**Pn**	**17 02 14.8**	**-3.8**
FITZ	**Fitzroy Crossi**	**12.96**	**208**	Pn	**Pn**	**17 02 15.7**	**-3.0**
	comp=Z,256nm,0.3s,baz=28,slow=11,SNR=1012						
FITZ				Sn	Sn	17 04 31.2	-10
	comp=Z,165nm,0.3s,baz=78,slow=20,SNR=8.5						
FITZ				LR	LR	17 08 48.2	
	comp=Z,3μm,18.4s,baz=26,slow=45						
COEN	**Coen**	**13.26**	**124**		**Pn**	**17 02 19.6**	**-3.2**
COEN	**Coen**	**13.26**	**124**	P	**Pn**	**17 02 19.4**	**-3.4**
	comp=Z,796nm,0.9s						
COEN	**Coen**	**13.26**	**124**	P	**Pn**	**17 02 19.9**	**-2.9**
WB0	**Warramunga Arr**	**13.30**	**170**		Pn	17 02 18.2	-5.1
PCI	**Palu**	**13.32**	**295**	P	**Pn**	**17 02 25.1**	**+1.5**
	comp=Z,4μmcomp=Z,8μmcomp=Z,554nm,1.5s						
WRAB	**Tennant Creek**	**13.46**	**170**	*i* P	Pn	17 02 20.5	-4.9
WRAB				pmax	pmax		
	comp=Z,453nm,0.7s						
WRA	**Warramunga Arr**	**13.46**	**170**		Pn	17 02 20.3	-5.2
WRA	**Warramunga Arr**	**13.46**	**170**	Pn	**Pn**	**17 02 21.0**	**-4.6**
	comp=Z,20nm,0.3s,baz=350,slow=13,SNR=368						
WRA				Sn	Sn	17 04 42.1	-11
	comp=Z,129nm,0.3s,baz=350,slow=22,SNR=14						
WRA				LR	LR	17 08 22.7	
	comp=Z,3μm,21.5s,baz=346,slow=41						
WRA	**Warramunga Arr**	**13.46**	**170**	P	**Pn**	**17 02 21.0**	**-4.6**
WR8	**Warramunga Arr**	**13.50**	**170**		Pn	17 02 20.9	-5.2
TOLI2	**Tolitoli**	**13.51**	**304**		**Pn**	**17 02 25.1**	**-1.1**
TOLI2	**Tolitoli**	**13.51**	**304**	P	**Pn**	**17 02 25.7**	**-0.5**
MPSI	**Mapaga**	**13.84**	**299**	P	**Pn**	**17 02 30.7**	**0.0**
	comp=Z,5μmcomp=Z,2μmcomp=Z,168nm,0.9s						
PLAI	**Plampang**	**14.19**	**260**	P	**Pn**	**17 02 31.6**	**-3.7**
PLAI	**Plampang**	**14.19**	**260**	P	**Pn**	**17 02 31.3**	**-4.0**
	comp=Z,3μmcomp=Z,3μmcomp=Z,312nm,0.7s						
DAV	**Davao City (W)**	**14.99**	**335**	Pn	**Pn**	**17 02 43.5**	**-2.2**
	comp=Z,22nm,0.3s,baz=77,slow=2.0,SNR=7.5						
DAV				LR	LR	17 09 11.3	
	comp=Z,698nm,21.4s,baz=137,slow=40						
	comp=Z,91nm,0.3s						
TWSI	**Taliwang, Sumb**	**15.05**	**261**	P	**Pn**	**17 02 44.5**	**-2.1**
	comp=Z,2μmcomp=Z,161nm,0.7s						
PMG	**Port Moresby**	**15.34**	**101**	Pn	**Pn**	**17 02 49.5**	**-0.8**
	comp=Z,34nm,0.3s,baz=323,slow=4.3,SNR=98						

PMG				Sn	Sn	17 05 28.2	-11
	comp=Z,16nm,0.3s,baz=250,slow=14,SNR=2.8						
PMG				LR	LR	17 10 04.6	
	comp=Z,3µm,18.6s,baz=300,slow=42						
PMG	Port Moresby	15.34	101	P	Pn	17 02 50.1	-0.3
PMG	Port Moresby	15.34	101	P	Pn	17 02 50.0	-0.3
PMG	Port Moresby	15.34	101	c iP	Pn	17 02 48.8	-1.5
PMG				pmax	pmax		
	comp=Z,2µm,1.0s						
QIS	Mount Isa	15.74	152	P	Pn	17 02 51.7	-3.8
QIS	Mount Isa	15.74	152	P	Pn	17 02 52.0	-3.4
BKB	Balikpapan	15.90	289	P	Pn	17 02 58.8	+1.4
	comp=Z,6µmcomp=Z,5µmcomp=Z,179nm,1.0s						
MANU	Manus Island	16.05	74	Pn	Pn	17 02 59.5	+0.1
MANU				IAmb	IAmb	17 03 06.5	
	comp=Z,320nm,0.8s						
SRBI	Singaraja	16.64	264	P	Pn	17 03 05.5	-1.2
MTSU	Mount Surprise	16.65	135	P	Pn	17 03 03.5	-3.4
MTSU	Mount Surprise	16.65	135	P	Pn	17 03 04.2	-2.8
AS31	Alice Springs	17.07	174		Pn	17 03 08.1	-3.9
AS31				IAmb	IAmb	17 03 24.1	
	comp=Z,158nm,0.7s						
AS31	Alice Springs	17.07	174	P	Pn	17 03 08.2	-3.9
ASAR	Alice Springs	17.07	174		Pn	17 03 08.2	-3.9
ASAR	Alice Springs	17.07	174	P	Pn	17 03 08.9	-3.1
	comp=Z,34nm,0.3s,baz=358,slow=14,SNR=739						
ASAR				S	Sn	17 06 06.7	-15
	comp=Z,270nm,0.7s,baz=356,slow=26,SNR=12						
ASAR				LR	LR	17 10 34.3	
	comp=Z,3µm,20.4s,baz=351,slow=40						
	comp=Z,169nm,0.7s						
ASAR	Alice Springs	17.07	174	P	Pn	17 03 09.0	-3.1
AS01	Alice Springs	17.07	174	P	Pn	17 03 10.0	-2.1
JAGI	Jajag, Banyuwa	17.71	263	Pn	Pn	17 03 15.0	-5.1
JAGI	Jajag, Banyuwa	17.71	263	P	Pn	17 03 17.3	-2.8
JAGI	Jajag, Banyuwa	17.71	263	P	Pn	17 03 16.3	-3.8
	comp=Z,77nm,0.4s						
MYLDM	Lahad Datu	17.79	311	P	Pn	17 03 20.7	-0.4
MYLDM				IAmb	IAmb	17 03 29.8	
	comp=Z,144nm,0.9s						
MYLDM	Lahad Datu	17.79	311	P	P	17 03 21.5	+0.4
KMMI	Kalianget	17.83	268	P	P	17 03 22.3	+0.7
	comp=Z,5µmcomp=Z,295nm,1.1s						
GMJI	Gumukmas	18.40	264	P	P	17 03 26.9	-0.9
MBWA	Marble Bar	18.67	218	P	P	17 03 28.9	-1.8
MBWA	Marble Bar	18.67	218	P	P	17 03 28.6	-2.1
MBWA	Marble Bar	18.67	218	P	P	17 03 29.3	-1.4
PSA00	Pilbara Seismi	18.91	217	P	P	17 03 31.8	-1.6
PSA00				IAmb	IAmb	17 03 35.1	
	comp=Z,274nm,1.2s						
PSA00	Pilbara Seismi	18.91	217	P	P	17 03 32.2	-1.3
PSA00				IAmb	IAmb	17 03 35.1	
	comp=Z,356nm,0.9s						
PSA00	Pilbara Seismi	18.91	217	P	P	17 03 31.5	-1.9
	comp=Z,262nm,0.8s						
PSA00	Pilbara Seismi	18.91	217	P	P	17 03 32.1	-1.3
BWJI	Bawean	19.17	271	P	P	17 03 36.3	+0.1
	comp=Z,466nm,1.0s						
TV1H	Townsville Har	19.17	132	P	Pn	17 03 36.9	-0.7
CTAO	Charters Tower	19.32	135	P	Pn	17 03 39.6	+0.3
CTAO	Charters Tower	19.32	135	P	Pn	17 03 39.7	+0.3
CTAO	Charters Tower	19.32	135	P	Pn	17 03 39.6	+0.3
CTAO				pmax	pmax		
	comp=Z,1µm,1.2s						
KKM	Kota Kinabalu	20.09	308	P	P	17 03 45.6	-0.8
KKM				IAmb	IAmb	17 03 49.1	
	comp=Z,195nm,0.8s						
KKM	Kota Kinabalu	20.09	308	P	P	17 03 47.0	+0.6
RABL	Rabaul	20.29	84	P	Pn	17 03 50.5	-0.5
NGJI	Ngawi	20.32	267	P	P	17 03 48.9	+0.1
PCJI	Pacitan	20.63	264	P	P	17 03 52.0	-0.2
	comp=Z,176nm,0.7s						
WOJI	Wonogiri, Jawa	20.87	265	P	P	17 03 53.7	-1.0
UGM	Wanagama	21.27	265	P	P	17 03 59.5	+0.5
SMRI	Semarang	21.33	268	P	P	17 03 57.4	-2.3
STKI	Sintang	21.45	287	P	P	17 04 00.5	-0.5
	comp=Z,108nm,1.0s						
QLP	Quilpie	23.07	151	P	P	17 04 19.4	+1.4
GIRL	Giralia	23.34	225	P	P	17 04 21.4	+0.7
GIRL	Giralia	23.34	225	P	P	17 04 21.1	+0.4
MEEK	Meekatharra	23.61	211	P	P	17 04 23.4	+0.2
GUMO	Guam	23.83	33	P	P	17 04 25.3	+0.1
GUMO	Guam	23.83	33	P	P	17 04 25.3	+0.1
GUMO				pmax	pmax		
	comp=Z,421nm,1.3s						
BBJI	Bungbulang	24.10	267	P	P	17 04 28.2	+0.3
LEM	Lembang	24.14	268	LR	LR	17 17 05.7	
	comp=Z,1µm,20.3s,baz=96,slow=45						
LEM	Lembang	24.14	268	P	P	17 04 27.0	-1.3
	comp=Z,2µmcomp=Z,128nm,1.1s						
FORT	Forrest	24.32	188	P	P	17 04 29.6	0.0
FORT	Forrest	24.32	188	P	P	17 04 30.0	+0.5
TPI	Tanjungpandan	24.48	278	P	P	17 04 29.8	-1.5
	comp=Z,57nm,0.7s						
CNJI	Cibinong	24.62	267	P	P	17 04 30.2	-2.3
	comp=Z,2µmcomp=Z,221nm,1.1s						
SKJI	Sukabumi	25.19	268	P	P	17 04 37.1	-0.6
	comp=Z,324nm,0.9s						
CGJI	Cibinong	26.05	268	P	P	17 04 44.4	-1.1
	comp=Z,75nm,1.0s						
EIDS	Eidsvold	26.15	138	P	P	17 04 46.4	+0.1
EIDS	Eidsvold	26.15	138	P	P	17 04 47.1	+0.9
XMI	Christmas Isla	26.22	260	P	P	17 04 47.7	+0.7
BBOO	Buckleboo	26.36	172	P	P	17 04 48.2	+0.2
KMBL	Kambalda	26.36	200	P	P	17 04 48.4	+0.2
STKA	Stephens Creek	26.72	161	P	P	17 04 51.1	-0.2
STKA	Stephens Creek	26.72	161	P	P	17 04 51.9	+0.6
	comp=Z,25nm,0.7s,baz=339,slow=8.6,SNR=46						
STKA				LR	LR	17 17 17.6	
	comp=Z,2µm,19.3s,baz=332,slow=41						
	comp=Z,25nm,0.7s						
STKA	Stephens Creek	26.72	161	P	P	17 04 51.7	+0.4
STKA	Stephens Creek	26.72	161	P	P	17 04 51.1	-0.2
STKA				pmax	pmax		
	comp=Z,745nm,0.8s						
MORW	Morawa	26.91	212	P	P	17 04 53.1	+0.1
MORW				IAmb	IAmb	17 05 24.5	
	comp=Z,225nm,1.3s						
MORW	Morawa	26.91	212	P	P	17 04 53.2	+0.1
HTT	Hallett	27.47	167	P	P	17 04 58.5	+0.4
HTT	Hallett	27.47	167	P	P	17 04 59.5	+1.4
MDSI	Maura Dua	27.69	273	P	P	17 04 58.8	-1.5
TATA	Tatamba Isabel	27.70	95	P	P	17 05 01.1	+0.8
BLDU	Ballidu	27.83	209	P	P	17 05 01.9	+0.6
HNR	Honiara	27.89	98	LR	LR	17 16 57.8	
	comp=Z,1µm,21.2s,baz=270,slow=38						
HNR	Honiara	27.89	98	P	P	17 05 02.9	+0.9
CMSA	Cobar Meteorol	27.95	154	P	P	17 05 02.5	+0.2
KLBR	Kellerberrin	28.17	206	P	P	17 05 04.7	+0.4
NGOA	Tingoa Renbel	28.21	102	P	P	17 05 05.7	+0.9
ALEG	Aligegeo Malai	28.59	96	P	P	17 05 08.9	+0.6
MUN	Mundaring	29.20	208	P	P	17 05 13.8	+0.4
MUN	Mundaring	29.20	208	P	P	17 05 12.9	-0.5
NWAO	Narrogin (SRO)	29.54	206	P	P	17 05 16.6	+0.2
NWAO	Narrogin (SRO)	29.54	206	LR	LR	17 18 49.7	
	comp=Z,1µm,19.8s,baz=343,slow=40						
NWAO	Narrogin (SRO)	29.54	206	P	P	17 05 17.1	+0.7
NWAO	Narrogin (SRO)	29.54	206	P	P	17 05 16.6	+0.2
NWAO				pmax	pmax		
	comp=Z,242nm,1.2s						
ARMA	Armidale	30.06	144	P	P	17 05 22.4	+1.2
ARMA				IAmb	IAmb	17 05 24.1	
	comp=Z,74nm,0.9s						
ARMA	Armidale	30.06	144	P	P	17 05 23.2	+1.9
ARPS	Mount Arapiles	31.36	165	P	P	17 05 33.9	+1.4
MGBR	Mount Gambier	31.96	167	P	P	17 05 39.5	+1.7
PPI	Padang Panjang	32.04	280	P	P	17 05 38.3	-0.4
	comp=Z,60nm,1.6s						
RIV	Riverview	32.42	149	P	P	17 05 44.1	+2.3
RIV				pmax	pmax		
	comp=Z,210nm,1.6s						
CAN	Canberra	32.61	154	P	P	17 05 45.0	+1.4
CAN	Canberra	32.61	154	P	P	17 05 45.3	+1.8
CAN	Canberra	32.61	154	P	P	17 05 45.0	+1.4
CAN				pmax	pmax		
	comp=Z,102nm,1.0s						
CAN	Canberra	32.61	154	P	P	17 05 45.0	+1.4
CAN				pP	pP	17 06 00.6	+2.9
CAN				sP	sP	17 06 07.0	+2.5
YHNB	Yeheng	32.74	342	P	P	17 05 46.1	+1.3
CNB	Canberra Magne	32.77	153	P	P	17 05 47.0	+2.0
MNSI	Mandailing Nat	33.10	282	P	P	17 05 47.8	-0.3
	comp=Z,43nm,0.5s						
TOO	Toolangi	33.20	160	P	P	17 05 50.7	+2.0
TOO	Toolangi	33.20	160	P	P	17 05 50.7	+2.0
TOO				pmax	pmax		
	comp=Z,34nm,1.1s						
KULM	Kulim	33.38	290	P	P	17 05 49.0	-1.5
KULM				IAmb	IAmb	17 06 20.6	
	comp=Z,50nm,1.4s						
KULM	Kulim	33.38	290	P	P	17 05 49.5	-0.9
JOW	Kunigami	33.43	354	P	P	17 05 51.9	+1.2
QIZ	Qiongzhong	33.50	320	P	P	17 05 50.8	-0.7
QIZ				S	S	17 11 09.0	-0.5
QIZ				pmax	pmax		
	comp=Z,190nm,7.9s						
QIZ				LR	LR		
	comp=Z,360nm,12.4s						
QIZ				LR	LR		
	comp=Z,570nm,21.5s						
UBPT	Khong Chiam	34.06	310	P	P	17 05 55.5	-0.8
UBPT	Khong Chiam	34.06	310	P	P	17 05 56.3	0.0
RPSI	Rantau Prapat	34.21	285	P	P	17 05 57.3	-0.4
RPSI				IAmb	IAmb	17 06 21.8	
	comp=Z,51nm,1.0s						
PSI	Prapat	34.24	285	LR	LR	17 22 45.0	
	comp=Z,790nm,19.0s,baz=134,slow=41						
PSI	Prapat	34.24	285	P	P	17 05 57.3	-0.8
PSI				pmax	pmax		
	comp=Z,51nm,1.0s						
GSI	Gunungsitoli	35.17	282	IAmb	IAmb	17 06 28.4	
	comp=Z,68nm,0.9s						
GSI	Gunungsitoli	35.17	282	P	P	17 06 06.7	+0.7
GSI	Gunungsitoli	35.17	282	P	P	17 06 05.1	-0.9
	comp=Z,78nm,0.8s						
SANVU	Saraoutou	35.68	107	P	P	17 06 11.8	+1.5
SANVU				pP	pP	17 06 24.5	-0.1
NOUC	Port Laguerre	36.57	118	P	P	17 06 18.2	+0.3
DZM	Mont Dzumac	36.68	118	P	P	17 06 19.6	+0.7
DZM	Mont Dzumac	36.68	118	eP	P	17 06 18.6	-0.4
	comp=Z,445nm,1.4s						
DZM				eS	S	17 11 50.9	-7.7
	comp=Z,610nm,34.0s						
DZM				eSS	SS	17 14 38.3	-2.3
	comp=Z,1µm,24.2s						
DZM				eLR	LR	17 16 15.7	
	comp=Z,2µm,32.2s						
DZM	Mont Dzumac	36.68	118	P	P	17 06 20.2	+1.2
DZM	Mont Dzumac	36.68	118	P	P	17 06 19.9	+0.9
ONTNC	Ouen Toro	36.77	119	P	P	17 06 19.0	-0.6
LHMI	Lhok Sumawe	36.84	288	P	P	17 06 21.0	+0.8
LHMI	Lhok Sumawe	36.84	288	P	P	17 06 21.0	+0.8
	comp=Z,127nm,0.6s						
MLSI	Meulaboh, Aceh	37.07	286	P	P	17 06 20.4	-1.8
	comp=Z,154nm,0.7s						
YATNC	Mamie plateau,	37.07	118	P	P	17 06 24.2	+2.0
OUENC	Ouen Island, N	37.15	119	P	P	17 06 24.6	+1.8
GULI	GuiLin	38.02	327	P	P	17 06 30.7	+0.7
GULI				pP	pP	17 06 40.7	-3.2
GULI				S	S	17 12 14.4	-4.1
GULI				LR	LR		
	comp=Z,400nm,20.6s						
GULI				LR	LR		
	comp=Z,300nm,15.2s						
GULI				LR	LR		
	comp=Z,520nm,20.0s						
MOO	Moorlands	38.16	162	P	P	17 06 31.5	+0.4
BSI	Banda Aceh	38.48	287	P	P	17 06 31.6	-2.6
TAU	Tasmania Unive	38.63	162	P	P	17 06 36.9	+2.0
SSE	Sheshan	38.87	345	P	P	17 06 38.5	+1.4
SSE				S	S	17 12 36.9	+5.7
SSE				pmax	pmax		
	comp=Z,15nm,0.8s						
SSE				pmax	pmax		
	comp=Z,66nm,3.8s						
SSE				LR	LR		
	comp=Z,190nm,27.8s						
SSE				LR	LR		
	comp=Z,210nm,28.8s						
CNSH	ChangSha	39.15	333	P	P	17 06 49.9	+10
CNSH				S	S	17 12 54.2	+19
CNSH				pmax	pmax		
	comp=Z,14nm,1.5s						
CNSH				LR	LR		
	comp=N,380nm,29.8s						
CNSH				LR	LR		
	comp=E,480nm,34.3s						
CNSH				LR	LR		
	comp=Z,710nm,36.4s						
JNU	Nakatsue	39.52	359	P	P	17 06 41.8	-0.7
JNU	Nakatsue	39.52	359	P	P	17 06 43.6	+1.0
JMN	Monobe	40.16	3	P	P	17 06 49.3	+1.5
NJ2	Nanjing	40.41	343	⇑P	P	17 06 51.1	+1.2
NJ2				S	S	17 12 51.2	-3.1
NJ2				sS	sS	17 13 14.9	-3.8
NJ2				pmax	pmax		
	comp=Z,15nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,190nm,5.2s						
NJ2				LR	LR		
	comp=Z,1µm,13.3s						
NJ2				LR	LR		
	comp=Z,1µm,21.8s						
NJ2				LR	LR		
	comp=Z,2µm,18.9s						
WHN	Wuhan	40.60	336	P	P	17 06 52.7	+1.2
WHN				S	S	17 12 54.1	-3.0
WHN				sS	sS	17 13 20.1	-1.5
WHN				pmax	pmax		
	comp=Z,96nm,0.8s						
CM31	Chiang Mai Arr	40.97	308	IAmb	IAmb	17 07 16.0	
	comp=Z,42nm,1.1s						
CMAR	Chiang Mai Arr	40.97	308	P	P	17 06 54.6	-0.2
	comp=Z,13nm,0.3s,baz=128,slow=8.9,SNR=29						
CMAR				LR	LR	17 27 52.8	
	comp=Z,198nm,19.2s,baz=120,slow=42						
	comp=Z,13nm,0.3s						
GYA	Guiyang	40.99	324	⇑P	P	17 06 59.0	+4.0
GYA				pP	sP	17 07 13.0	-3.0
GYA				S	S	17 13 07.4	+4.0
GYA				pmax	pmax		
	comp=Z,14nm,0.9s						
GYA				pmax	pmax		
	comp=Z,150nm,5.8s						
GYA				LR	LR		
	comp=Z,220nm,18.2s						
GYA				LR	LR		
	comp=Z,230nm,12.9s						
GYA				LR	LR		
	comp=Z,310nm,18.6s						
CHTO	Chiang Mai	41.17	308	P	P	17 06 55.8	-0.6
CHTO				IAmb	IAmb	17 07 02.8	
	comp=Z,39nm,0.8s						
CHTO	Chiang Mai	41.17	308	P	P	17 06 57.4	+1.0
CHTO	Chiang Mai	41.17	308	P	P	17 06 55.8	-0.6
CHTO				pmax	pmax		
	comp=Z,39nm,0.8s						
CHTO	Chiang Mai	41.17	308	P	P	17 06 56.5	+0.1
CHTO				pP	pP	17 07 08.2	-2.6
JGF	Kuroka	42.29	7	IAmb	IAmb	17 07 20.1	
	comp=Z,40nm,0.8s						
JGF	Kuroka	42.29	7	P	P	17 07 07.6	+2.3
KMI	Kunming	42.44	319	⇓P	P	17 07 08.6	+1.7
KMI				S	S	17 13 24.5	-0.5
KMI				pmax	pmax		
	comp=Z,17nm,0.7s						
KMI				LR	LR		
	comp=Z,210nm,22.9s						
KMI				LR	LR		
	comp=Z,250nm,18.5s						
KMI				LR	LR		
	comp=Z,570nm,30.2s						
ENH	Enshi	42.52	331	P	P	17 07 07.1	-0.2
ENH				pP	pP	17 07 18.6	-3.1
TJN	Taejon	42.97	355	i P	P	17 07 11.8	+1.1
MJAR	Matsushiro Arr	43.32	7	P	P	17 07 12.4	-1.2
	comp=Z,9.7nm,0.8s,baz=200,slow=9.0,SNR=19						
MJAR				LR	LR	17 24 41.5	
	comp=Z,1µm,19.8s,baz=156,slow=35						
	comp=Z,9.7nm,0.8s						
MAJO	Matsushiro	43.33	7	P	P	17 07 13.1	-0.6
MAJO	Matsushiro	43.33	7	P	P	17 07 13.6	-0.1
MAJO	Matsushiro	43.33	7	i P	P	17 07 11.6	-2.1
MAJO				pmax	pmax		
	comp=Z,142nm,3.6s						
MAJO	Matsushiro	43.33	7	P	P	17 07 13.3	-0.4
MAJO				pP	pP	17 07 25.0	-3.0
KSAR	Wonju Array Be	43.98	355	P	P	17 07 18.9	0.0
KSAR	Wonju Array Be	43.98	355	P	P	17 07 18.9	0.0
KSRS	Korea Array	43.99	355	P	P	17 07 19.3	+0.4
	comp=Z,2.2nm,0.6s,baz=156,slow=6.8,SNR=13						
	comp=Z,2.2nm,0.6s						
PZH	PanZhiHua	44.04	320	P	P	17 07 19.3	-0.4
PZH				S	S	17 13 49.7	+1.4
PZH				SS	SS	17 17 06.1	-1.2
PZH				pmax	pmax		
	comp=Z,20nm,1.0s						
PZH				pmax	pmax		
	comp=Z,170nm,4.7s						
PZH				LR	LR		
	comp=Z,570nm,19.6s						
PZH				LR	LR		
	comp=Z,580nm,20.3s						
PZH				LR	LR		
	comp=Z,710nm,22.8s						
TIA	Tai'an	44.80	343	P	P	17 07 25.1	-0.4
TIA				pP	pP	17 07 41.4	+1.4
TIA				S	S	17 13 54.0	-4.7
TIA				sS	sS	17 14 24.2	+0.7
TIA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TIA				pmax	pmax		
	comp=Z,200nm,6.6s						
TIA				LR	LR		
	comp=Z,340nm,17.3s						
TIA				LR	LR		
	comp=Z,360nm,15.3s						
TIA				LR	LR		
	comp=Z,600nm,21.0s						
LYN	LuoYang	44.88	337	P	P	17 07 26.6	+0.5
LYN				S	S	17 13 57.1	-2.7
LYN				pmax	pmax		
	comp=Z,29nm,1.0s						
LYN				pmax	pmax		
	comp=Z,210nm,5.5s						
LYN				LR	LR		
	comp=Z,390nm,13.4s						
LYN				LR	LR		
	comp=Z,490nm,21.3s						
LYN				LR	LR		
	comp=Z,460nm,24.4s						
TNCH	TengChong	45.23	315	P	P	17 07 30.4	+1.1
TNCH				S	S	17 14 08.9	+3.3
TNCH				pmax	pmax		
	comp=Z,11nm,0.8s						
TNCH				pmax	pmax		
	comp=Z,150nm,4.5s						
XAN	Xi'an	45.92	333	⇑P	P	17 07 34.3	-0.1
XAN				pP	pP	17 07 49.7	+0.7
XAN				sP	sP	17 07 58.0	+2.5
XAN				S	S	17 14 16.6	+1.6
XAN				pmax	pmax		
	comp=Z,48nm,1.1s						
XAN				pmax	pmax		
	comp=Z,260nm,3.9s						
XAN				LR	LR		
	comp=Z,2µm,15.8s						
XAN				LR	LR		
	comp=Z,2µm,17.2s						
XAN				LR	LR		
	comp=Z,2µm,19.9s						
CD2	Chengdu	46.03	326	P	P	17 07 35.7	+0.4
CD2				S	S	17 14 15.0	-1.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
CD2				pmax	pmax		
	comp=Z,230nm,3.6s						
DL2	Dalian	46.28	349	P	P	17 07 46.9	+10
DL2				S	S	17 14 34.9	+15
DL2				pmax	pmax		
	comp=Z,31nm,0.9s						
DL2				pmax	pmax		
	comp=Z,170nm,4.6s						
DL2				LR	LR		
	comp=N,500nm,24.6s						
DL2				LR	LR		
	comp=E,960nm,21.6s						
DL2				LR	LR		
	comp=Z,760nm,21.1s						
MSVF	Nonsavu	46.31	108	P	P	17 07 38.9	+1.1
MSVF	Nonsavu	46.31	108	P	P	17 07 39.4	+1.6
MSVF	Nonsavu	46.31	108	P	P	17 07 38.9	+1.1
MSVF				pmax	pmax		
	comp=Z,95nm,1.0s						
MSVF	Nonsavu	46.31	108	P	P	17 07 39.5	+1.6
HNS	HongShan	46.64	341	⇓P	P	17 07 40.1	+0.2
HNS				pP	pP	17 07 55.9	+1.4
HNS				S	S	17 14 21.4	-3.7
HNS				pmax	pmax		
	comp=Z,27nm,0.8s						
FUNA	Funafuti	46.88	95	P	P	17 07 42.8	+0.6
OUZ	Omahuta	47.69	133	P	P	17 07 50.5	+2.3
DGTI	Dogotuki	47.74	106	P	P	17 07 50.0	+1.1
JTM	Tenmabayashi	47.91	9	P	P	17 07 51.0	+1.3
BJT	Baijiatuau	48.62	344	IAmb	IAmb	17 08 25.1	
	comp=Z,32nm,0.8s						
BJT	Baijiatuau	48.62	344	P	P	17 07 55.6	+0.3
BJT				pmax	pmax		
	comp=Z,47nm,0.8s						
BJI	Beijing	48.64	344	P	P	17 07 55.4	0.0
BJI				sP	pP	17 08 12.5	+2.5
BJI				S	S	17 14 47.8	-5.6
BJI				pmax	pmax		
	comp=Z,22nm,0.8s						
BJI				pmax	pmax		
	comp=Z,130nm,3.9s						
SNY	Shenyang	48.80	352	⇓P	P	17 07 56.6	0.0
SNY				S	S	17 14 57.3	+1.7
SNY				pmax	pmax		
	comp=Z,14nm,0.9s						
SNY				pmax	pmax		
	comp=Z,39nm,3.6s						
SNY				LR	LR		
	comp=Z,1µm,24.3s						
SNY				LR	LR		
	comp=Z,640nm,20.4s						
SNY				LR	LR		
	comp=Z,2µm,23.5s						
MSHR	Mys Shultsa	48.96	359	i P	P	17 07 57.3	-0.5
PSTR	Posyet	49.03	359	i P	P	17 07 58.4	0.0
JCZ	Jackson Bay	49.30	145	P	P	17 08 02.3	+1.7
ERM	Erimo	49.47	11	P	P	17 08 02.1	+0.4
ERM				IAmb	IAmb	17 08 37.3	
	comp=Z,43nm,1.1s						
ERM	Erimo	49.47	11	P	P	17 08 03.6	+1.9
ERM	Erimo	49.47	11	i P	P	17 08 02.0	+0.4
ERM				pmax	pmax		
	comp=Z,19nm,0.7s						
VLA	Vladivostok	49.49	360	i P	P	17 08 01.2	-0.6
VLA				pmax	pmax		
	comp=Z,33nm,1.2s						
QRZ	Quartz Range	49.70	140	P	P	17 08 05.1	+1.5
QRZ	Quartz Range	49.70	140	P	P	17 08 05.3	+1.7
KUZ	Kuaotunu	49.91	133	P	P	17 08 05.8	+0.6
LZH	Lanzhou	49.99	330	eP	P	17 08 07.2	+1.2
LZH				pP	pP	17 08 22.3	+1.5
LZH				sP	sP	17 08 28.3	+1.1
LZH				S	S	17 15 06.2	-6.6
LZH				pmax	pmax		
	comp=Z,36nm,1.3s						
LZH				LR	LR		
	comp=Z,490nm,16.2s						
LZH				LR	LR		
	comp=Z,390nm,16.5s						
LZH				LR	LR		
	comp=Z,1µm,18.4s						
INZ	Inchbonnie	50.06	142	IAmb	IAmb	17 08 25.0	
	comp=Z,65nm,1.1s						
RPZ	Rata Peaks	50.40	144	LR	LR	17 30 32.9	
	comp=Z,773nm,18.4s,baz=310,slow=37						
RPZ	Rata Peaks	50.40	144	P	P	17 08 09.5	+0.7
THZ	Tophouse	50.44	140	IAmb	IAmb	17 08 11.6	
	comp=Z,46nm,0.8s						
CN2	Changchun	50.51	354	P	P	17 08 09.6	0.0
CN2				S	S	17 15 18.8	-0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,1µm,20.0s						
CN2				LR	LR		
	comp=Z,2µm,20.0s						
CN2				LR	LR		

	comp=Z,2µm,20.0s						
USA0B	**Ussuriysk Arra**	**50.57**	**0**	IAmb	IAmb	17 08 26.3	
	comp=Z,17nm,0.7s						
USA0B	**Ussuriysk Arra**	**50.57**	**0**	*i* P	**P**	**17 08 11.5**	**+1.5**
USRK	**Ussuriysk Ar.**	**50.57**	**0**	P	**P**	**17 08 10.4**	**+0.4**
USRK	**Ussuriysk Ar.**	**50.57**	**0**	P	**P**	**17 08 10.7**	**+0.7**
	comp=Z,8.3nm,0.7s,baz=180,slow=8.2,SNR=21						
	comp=Z,8.3nm,0.7s						
OXZ	**Oxford**	**50.76**	**143**	IAmb	IAmb	17 08 14.6	
	comp=Z,43nm,0.7s						
HHC	**Hu-ho-hao-te**	**50.80**	**340**	*e*P	**P**	**17 08 12.9**	**+0.9**
HHC				pP	pP	17 08 28.4	+1.6
HHC				S	**S**	**17 15 22.9**	**-0.9**
HHC				sS	sS	17 15 46.4	-2.2
HHC				SS	**SS**	**17 19 02.0**	**+2.8**
HHC				pmax	pmax		
	comp=Z,17nm,0.7s						
HHC				pmax	pmax		
	comp=Z,98nm,4.0s						
HHC				LR	LR		
	comp=Z,710nm,18.3s						
HHC				LR	LR		
	comp=Z,1µm,17.6s						
HHC				LR	LR		
	comp=Z,2µm,18.3s						
MDJ	**Mudanjiang**	**51.03**	**358**	P	**P**	**17 08 14.0**	**+0.5**
MDJ				pmax	pmax		
	comp=Z,16nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,160nm,3.6s						
MDJ				LR	LR		
	comp=Z,1µm,17.9s						
MDJ				LR	LR		
	comp=Z,970nm,20.6s						
MDJ				LR	LR		
	comp=Z,2µm,22.7s						
BTO	**Baotou**	**51.12**	**339**	*e*P	P	17 08 22.7	+8.3
BTO				pP	pP	17 08 31.6	+2.4
BTO				sP	sP	17 08 36.6	+0.9
BTO				PP	PP	17 10 21.4	+10
BTO				S	S	17 15 44.0	+16
BTO	**Baotou**	**51.12**	**339**	SS	SS	17 19 17.4	+13
BTO				pmax	pmax		
	comp=Z,24nm,0.7s						
BTO				pmax	pmax		
	comp=Z,290nm,4.4s						
BTO				LR	LR		
	comp=N,810nm,13.0s						
BTO				LR	LR		
	comp=E,1µm,15.3s						
BTO				LR	LR		
	comp=Z,1µm,20.6s						
KHZ	**Kahutara**	**51.19**	**141**	P	**P**	**17 08 15.3**	**+0.6**
SNZO	**South Karori**	**51.36**	**139**	P	**P**	**17 08 16.1**	**0.0**
BKZ	**Black Stump Fm**	**51.53**	**136**	IAmb	IAmb	17 08 18.6	
	comp=Z,55nm,1.0s						
BKZ	**Black Stump Fm**	**51.53**	**136**	P	**P**	**17 08 18.0**	**+0.5**
URZ	**Urewera**	**51.56**	**135**	P	**P**	**17 08 18.3**	**+0.6**
TEY	**Ternei**	**51.58**	**4**	*e*P	**P**	**17 08 18.1**	**+0.5**
TEY				*e*		17 11 26.3	
TEY				*e*		17 15 30.2	
MRZ	**Mangatainoka R**	**51.61**	**138**	P	**P**	**17 08 17.8**	**-0.3**
RTZ	**Ruatahuna**	**51.63**	**135**	P	**P**	**17 08 18.7**	**+0.5**
BFZ	**Birch Farm**	**52.07**	**138**	P	**P**	**17 08 22.9**	**+1.5**
MXZ	**Matakaoa Point**	**52.12**	**133**	P	**P**	**17 08 22.5**	**+0.6**
BNX	**BinXian**	**52.27**	**356**	⇑P	**P**	**17 08 22.7**	**0.0**
BNX				pP	**pP**	**17 08 36.4**	**-1.1**
BNX				S	**S**	**17 15 48.6**	**+5.0**
BNX				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BNX				pmax	pmax		
	comp=Z,110nm,4.3s						
BNX				LR	LR		
	comp=Z,470nm,20.3s						
BNX				LR	LR		
	comp=Z,680nm,17.2s						
BNX				LR	LR		
	comp=Z,1µm,33.7s						
XLT	**XiLinHaoTe**	**52.27**	**346**	*e*P	**P**	**17 08 24.4**	**+1.5**
XLT				sP	pP	17 08 40.6	+2.8
XLT				S	**S**	**17 15 43.9**	**-0.1**
XLT				ScS	**ScS**	**17 18 04.9**	**-2.9**
XLT				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,170nm,4.8s						
XLT				LR	LR		
	comp=Z,87nm,7.8s						
XLT				LR	LR		
	comp=Z,560nm,6.4s						
XLT				LR	LR		
	comp=Z,320nm,16.2s						
LSA	**Lhasa**	**53.26**	**315**	P	**P**	**17 08 30.1**	**-0.8**
LSA				LR	LR		
	comp=Z,480nm,7.3s						
LSA				LR	LR		
	comp=Z,220nm,6.8s						
LSA	**Lhasa**	**53.26**	**315**	P	**P**	**17 08 32.1**	**+1.2**
LSA				pmax	pmax		
	comp=Z,62nm,1.2s						
LSA	**Lhasa**	**53.26**	**315**	P	**P**	**17 08 32.7**	**+1.8**
YSS	**Yuzhno-Sakhali**	**54.19**	**9**	P	**P**	**17 08 37.2**	**+0.4**
YSS				IAmb	IAmb	17 08 52.0	
	comp=Z,33nm,0.8s						
YSS	**Yuzhno-Sakhali**	**54.19**	**9**	P	**P**	**17 08 38.2**	**+1.4**
YSS	**Yuzhno-Sakhali**	**54.19**	**9**	*e*P	**P**	**17 08 37.1**	**+0.4**
YSS				*e*S	**S**	**17 16 06.6**	**-3.0**
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
YSS				pmax	pmax		
	comp=Z,200nm,5.0s						
YSS				smax	smax		
	comp=N,100nm,6.6s						
YSS				smax	smax		
	comp=E,200nm,6.9s						
YSS	**Yuzhno-Sakhali**	**54.19**	**9**	P	**P**	**17 08 37.5**	**+0.8**
GTA	**Gaotai**	**54.58**	**330**	*e*P	**P**	**17 08 41.6**	**+1.7**
GTA				pP	pP	17 08 58.1	+3.2
GTA				ScP	**ScP**	**17 13 36.6**	**+0.4**
GTA				S	**S**	**17 16 13.6**	**-1.8**
GTA				pmax	pmax		
	comp=E,26nm,1.0s						
GTA				LR	LR		
	comp=E,380nm,16.7s						
GTA				LR	LR		
	comp=E,320nm,17.8s						
GTA				LR	LR		
	comp=E,310nm,18.2s						
GOMU	**GeErMu**	**55.00**	**323**	P	**P**	**17 08 46.2**	**+2.9**
GOMU				pP	pP	17 08 51.8	-6.5
GOMU				S	**S**	**17 16 18.8**	**-2.9**
GOMU				sS	sS	17 16 44.5	+0.8
GOMU				pmax	pmax		
	comp=E,8.0nm,1.0s						
GOMU				pmax	pmax		
	comp=E,250nm,5.2s						
GOMU				LR	LR		
	comp=E,360nm,16.9s						
GOMU				LR	LR		
	comp=E,730nm,18.4s						
GOMU				LR	LR		
	comp=E,510nm,19.6s						
EVN	**Everest**	**55.46**	**310**	P	**P**	**17 08 46.4**	**-0.8**
KLR	**Kul'dur**	**55.60**	**360**	*ce*P	**P**	**17 08 48.5**	**+1.5**
KLR				pmax	pmax		
	comp=Z,13nm,1.7s						
AFI	**Afiamalu**	**55.77**	**102**	P	**P**	**17 08 49.6**	**+0.7**
AFI	**Afiamalu**	**55.77**	**102**	P	**P**	**17 08 49.6**	**+0.7**
AFI				pmax	pmax		
	comp=Z,218nm,1.2s						
UGL	**Uglegorsk**	**56.16**	**8**	*e*P	**P**	**17 08 50.7**	**-0.2**
HEH	**HeiHe**	**56.76**	**357**	*e*P	**P**	**17 08 55.3**	**+0.1**
HEH				PcP	**PcP**	**17 09 52.8**	**+2.3**
HEH				S	**S**	**17 16 44.5**	**+0.6**
HEH				pmax	pmax		
	comp=Z,11nm,1.3s						
HEH				LR	LR		
	comp=Z,770nm,13.1s						
HEH				LR	LR		
	comp=Z,760nm,12.7s						
HEH				LR	LR		
	comp=Z,590nm,15.3s						
GRNR	**Gornyy**	**57.28**	**3**	⇓*i*P	**P**	**17 08 59.7**	**+0.8**
GRNR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
HYB	**Hyderabad**	**57.87**	**295**	*e*P	**P**	**17 09 03.4**	**-0.2**
HYB				*e*sP	**sP**	**17 09 26.8**	**+1.6**
HYB				*e*PP	**PP**	**17 11 13.0**	**+0.5**
TYV	**Tymovskoe**	**57.98**	**8**	*e*P	**P**	**17 09 07.5**	**+3.7**
TYV				*e*S	**S**	**17 17 06.4**	**+6.5**
TYV				pmax	pmax		
	comp=Z,10.0nm,2.8s						
TYV				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TYV				smax	smax		
	comp=N,300nm,5.8s						
TYV				smax	smax		
	comp=E,300nm,5.8s						
ULN	**Ulaanbaatar**	**58.51**	**341**	P	**P**	**17 09 07.8**	**+0.1**
ULN				IAmb	IAmb	17 09 40.3	
	comp=Z,29nm,0.8s						
ULN	**Ulaanbaatar**	**58.51**	**341**	*i* P	**P**	**17 09 07.8**	**+0.1**
ULN				pmax	pmax		
	comp=Z,25nm,0.9s						
ULN	**Ulaanbaatar**	**58.51**	**341**	P	**P**	**17 09 08.7**	**+1.0**
SONM	**Songino Array**	**58.70**	**340**	P	**P**	**17 09 09.1**	**+0.1**
SONM				IAmb	IAmb	17 09 41.5	
	comp=Z,18nm,0.8s						
SONM	**Songino Array**	**58.70**	**340**	P	**P**	**17 09 10.2**	**+1.2**
	comp=Z,15nm,1.0s,baz=156,slow=7.3,SNR=42						
	comp=Z,15nm,1.0s						
DRV	**Dumont d'Urvil**	**60.22**	**176**	P	**P**	**17 09 19.7**	**+0.7**
DRV				pP	**pP**	**17 09 36.5**	**+2.0**
ZEA	**Zeya**	**60.25**	**357**	*e*P	**P**	**17 09 20.9**	**+1.5**
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
ZEA				MLR	MLR		
	comp=E,300nm,14.0s						
ZEA				MLR	MLR		
	comp=Z,500nm,16.0s						
CIT	**Chita**	**60.48**	**347**	*e*P	**P**	**17 09 17.6**	**-3.5**
CIT				*e*		17 09 35.6	
CIT				*e*		17 11 32.0	
CIT				*e*		17 13 09.8	
CASY	**Casey**	**61.40**	**190**	P	**P**	**17 09 28.0**	**+0.9**
CASY				IAmb	IAmb	17 10 07.9	
	comp=Z,16nm,0.8s						
CASY	**Casey**	**61.40**	**190**	P	**P**	**17 09 28.2**	**+1.1**
CASY				pP	**pP**	**17 09 43.2**	**+0.7**
ZAK	**Zakamensk**	**61.94**	**340**	*e*P	**P**	**17 09 30.9**	**-0.2**
IRK	**Irkutsk**	**63.20**	**341**	*e*P	**P**	**17 09 39.8**	**+0.5**
IRK				pmax	pmax		
	comp=Z,55nm,1.3s						
PEA0B	**Petropavlovsk-**	**63.38**	**17**	*ce*P	**P**	**17 09 40.9**	**+0.4**
PETK	**Petropavlovsk-**	**63.38**	**17**		**P**	**17 09 41.4**	**+0.9**
PETK	**Petropavlovsk-**	**63.38**	**17**	P	**P**	**17 09 41.1**	**+0.7**
	comp=Z,12nm,0.9s,baz=176,slow=2.8,SNR=16						
	comp=Z,12nm,0.9s						
PETK	**Petropavlovsk-**	**63.38**	**17**	P	**P**	**17 09 41.4**	**+0.9**
PET	**Petropavlovsk**	**63.59**	**18**	P	**P**	**17 09 42.9**	**+1.1**
PET				IAmb	IAmb	17 09 58.6	
	comp=Z,67nm,1.1s						
PET	**Petropavlovsk**	**63.59**	**18**	P	**P**	**17 09 43.4**	**+1.6**
PET	**Petropavlovsk**	**63.59**	**18**	*e*P	**P**	**17 09 43.2**	**+1.4**
PET				*e*S	**S**	**17 18 12.0**	**+0.8**
PET				MLR	MLR		
	comp=Z,1µm,13.0s						
PET				MLR	MLR		
	comp=Z,1µm,15.0s						
MOY	**Mondy**	**63.81**	**339**	*e*P	**P**	**17 09 44.9**	**+1.4**
MOY				pmax	pmax		
	comp=Z,26nm,1.3s						
WMQ	**Urumqi**	**64.12**	**326**	*e*P	**P**	**17 09 47.3**	**+1.6**
WMQ				sP	sP	17 10 07.1	-0.2
WMQ				pmax	pmax		
	comp=Z,80nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,360nm,4.5s						
WMQ				LR	LR		
	comp=Z,900nm,23.3s						
WMQ				LR	LR		
	comp=Z,370nm,22.3s						
MA2	**Magadan**	**67.66**	**10**	P	**P**	**17 10 09.1**	**+1.1**
MA2				IAmb	IAmb	17 10 34.6	
	comp=Z,25nm,1.0s						
MA2	**Magadan**	**67.66**	**10**	*i* P	**P**	**17 10 06.2**	**-1.8**
MA2				pmax	pmax		
	comp=Z,26nm,1.2s						
WUS	**Wushi**	**67.71**	**320**	P	**P**	**17 10 10.6**	**+1.7**
ZSN	**Zaisan**	**67.95**	**328**	*e*P	**P**	**17 10 10.5**	**+0.4**
ZSN				pmax	pmax		
	comp=Z,14nm,0.8s						
ZSN	**Zaisan**	**67.95**	**328**	*e*P	**P**	**17 10 10.6**	**+0.4**
	comp=Z,14nm,0.8s						
NIL	**Nilore**	**68.42**	**310**	P	**P**	**17 10 13.6**	**+0.2**
NIL				IAmb	IAmb	17 10 47.1	
	comp=Z,24nm,0.8s						
NIL	**Nilore**	**68.42**	**310**	P	**P**	**17 10 13.6**	**+0.2**
NIL				pmax	pmax		
	comp=Z,24nm,0.9s						
NIL	**Nilore**	**68.42**	**310**	P	**P**	**17 10 14.6**	**+1.2**
YAK	**Yakutsk**	**68.46**	**359**	P	**P**	**17 10 13.2**	**+0.3**
YAK	**Yakutsk**	**68.46**	**359**	*e*P	**P**	**17 10 13.3**	**+0.4**
YAK				*e**PP	**pP**	**17 10 28.6**	**+0.3**
YAK				*e*		17 10 38.1	
YAK				*e*		17 12 44.7	
YAK				*e*S	**S**	**17 19 11.7**	**+1.6**
YAK				*e**SS	**sS**	**17 19 37.4**	**+2.1**
YAK				*e*		17 20 08.0	
YAK				pmax	pmax		
	comp=Z,76nm,1.2s						
YAK				pmax	pmax		
	comp=N,14nm,1.0s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,196nm,5.6s						
YAK				pmax	pmax		
	comp=N,57nm,4.2s						
YAK				pmax	pmax		
	comp=E,61nm,5.2s						
YAK				smax	smax		
	comp=E,173nm,7.5s						
YAK				smax	smax		
	comp=N,161nm,5.0s						
YAK	**Yakutsk**	**68.46**	**359**	P	**P**	**17 10 13.6**	**+0.7**
SHLS	**Shalkode**	**68.59**	**321**	*e*P	**P**	**17 10 12.9**	**-1.5**
SHLS				pmax	pmax		
	comp=Z,18nm,1.2s						
SHLS	**Shalkode**	**68.59**	**321**	*e*P	**P**	**17 10 12.9**	**-1.5**
	comp=Z,18nm,1.2s						
CCD	**Concordia, Ant**	**68.63**	**182**	P	**P**	**17 10 16.1**	**+1.7**
CCD				pP	**pP**	**17 10 31.2**	**+1.2**
CCD				sP	**PcP**	**17 10 40.1**	**+1.1**
UZB	**Uzynbulak**	**68.86**	**321**	*e*P	**P**	**17 10 16.2**	**+0.2**
UZB				pmax	pmax		
	comp=Z,16nm,1.2s						
UZB	**Uzynbulak**	**68.86**	**321**	*e*P	**P**	**17 10 16.2**	**+0.2**
	comp=Z,16nm,1.2s						
PRZ	**Przheval'sk**	**68.90**	**320**	P	**P**	**17 10 18.9**	**+2.5**
MK31	**Makanchi Array**	**68.96**	**326**	*ce*P	**P**	**17 10 17.5**	**+1.1**
MKAR	**Makanchi Array**	**68.96**	**326**		**P**	**17 10 16.8**	**+0.4**
MKAR	**Makanchi Array**	**68.96**	**326**	P	**P**	**17 10 17.4**	**+1.0**
	comp=Z,6.3nm,0.4s,baz=115,slow=8.2,SNR=84						
	comp=Z,6.3nm,0.4s						
MKAR	**Makanchi Array**	**68.96**	**326**	*i* P	**P**	**17 10 17.3**	**+0.9**
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.4s						
KSH	**Kashi**	**69.03**	**317**	P	**P**	**17 10 19.3**	**+2.1**
KSH				pP	pP	17 10 33.7	+1.1
KSH				pmax	pmax		
	comp=Z,14nm,0.8s						
KSH				LR	LR		
	comp=Z,450nm,21.6s						
KSH				LR	LR		
	comp=Z,230nm,24.1s						
KSH				LR	LR		
	comp=Z,470nm,24.4s						
MAKZ	**Makanchi**	**69.14**	**326**		**P**	**17 10 18.0**	**+0.4**
MAKZ				IAmb	IAmb	17 10 39.9	
	comp=Z,43nm,1.0s						
MAKZ	**Makanchi**	**69.14**	**326**	P	**P**	**17 10 18.0**	**+0.4**
MAKZ				pmax	pmax		
	comp=Z,43nm,1.0s						
MAKZ	**Makanchi**	**69.14**	**326**	P	**P**	**17 10 18.4**	**+0.8**
MAKZ				pP	**pP**	**17 10 31.4**	**-1.6**
SATY	**Saty**	**69.19**	**321**	*e*P	**P**	**17 10 18.3**	**+0.2**
SATY				pmax	pmax		
	comp=Z,20nm,1.0s						
SATY	**Saty**	**69.19**	**321**	*e*P	**P**	**17 10 18.4**	**+0.3**
	comp=Z,20nm,1.0s						
KPKS	**Kokpek**	**69.23**	**321**	*e*P	**P**	**17 10 18.5**	**+0.2**
KPKS	**Kokpek**	**69.23**	**321**	*e*P	**P**	**17 10 18.6**	**+0.2**
KDJ	**Kajisay**	**69.50**	**320**	P	**P**	**17 10 22.0**	**+1.9**
KDJ				pmax	pmax		
	comp=Z,40nm,0.8s						
MDOK	**Medeo**	**70.10**	**320**	*e*P	**P**	**17 10 23.9**	**+0.2**
MDOK	**Medeo**	**70.10**	**320**	*e*P	**P**	**17 10 23.9**	**+0.2**
AAA	**Alma-Ata**	**70.21**	**320**	*e*P	P	17 10 29.1	+4.8
AAA	**Alma-Ata**	**70.21**	**320**	*e*P	**P**	**17 10 24.4**	**+0.1**
	comp=Z,14nm,1.0s						
TKM2	**Tokmak 2**	**70.91**	**320**	P	**P**	**17 10 30.4**	**+1.6**
	SNR=6.9						
SEY	**Seymchan**	**71.09**	**10**	*ce*P	**P**	**17 10 29.9**	**+0.8**
SEY				pmax	pmax		
	comp=Z,23nm,1.7s						
ARLS	**Aral**	**71.24**	**318**	P	**P**	**17 10 32.7**	**+2.0**
ARLS				pmax	pmax		
	comp=Z,50nm,0.9s						
FRU1	**Bishkek**	**71.48**	**319**	P	**P**	**17 10 32.4**	**+0.4**
FRU1				pmax	pmax		
	comp=Z,23nm,0.8s						
AAK	**Ala-Archa**	**71.49**	**319**	P	**P**	**17 10 34.1**	**+2.0**
	SNR=10						
AAK	**Ala-Archa**	**71.49**	**319**		**P**	**17 10 33.0**	**+0.9**
AAK				IAmb	IAmb	17 11 07.4	
	comp=Z,38nm,1.1s						
AAK	**Ala-Archa**	**71.49**	**319**	*i* P	**P**	**17 10 33.1**	**+0.9**
AAK				pmax	pmax		
	comp=Z,39nm,1.5s						
AAK	**Ala-Archa**	**71.49**	**319**	P	**P**	**17 10 34.2**	**+2.0**
AAK	**Ala-Archa**	**71.49**	**319**	P	**P**	**17 10 34.5**	**+2.3**
AAK				pP	**pP**	**17 10 45.5**	**-2.2**
OHH	**Osh**	**71.67**	**316**	P	**P**	**17 10 35.4**	**+2.2**
OHH				pmax	pmax		
	comp=Z,52nm,1.1s						
AML	**Almayashu**	**71.78**	**318**	P	**P**	**17 10 36.3**	**+2.0**
	SNR=18						
USP	**Ospenovka**	**71.78**	**320**	P	**P**	**17 10 35.9**	**+2.1**
	SNR=16						
SGDS	**Sogindy**	**71.78**	**320**	*e*P	**P**	**17 10 33.9**	**+0.1**
EKS2	**Erkin-Say**	**71.97**	**319**	P	**P**	**17 10 37.6**	**+2.6**
	SNR=13						
KBL	**Kabul**	**71.98**	**309**		**P**	**17 10 35.6**	**+0.2**
KBL				IAmb	IAmb	17 11 06.0	
	comp=Z,55nm,1.1s						
KBL	**Kabul**	**71.98**	**309**	P	**P**	**17 10 35.6**	**+0.2**
KBL				pmax	pmax		
	comp=Z,55nm,1.1s						
ZAA0	**Zalesovo Array**	**72.09**	**333**	IAmb	IAmb	17 11 04.6	
	comp=Z,26nm,0.8s						
ZALV	**Zalesovo Beam**	**72.09**	**333**	P	**P**	**17 10 34.8**	**-0.5**
ZALV	**Zalesovo Beam**	**72.09**	**333**	P	**P**	**17 10 35.4**	**+0.1**
	comp=Z,7.8nm,0.6s,baz=128,slow=4.5,SNR=29						
	comp=Z,7.8nm,0.6s						
VNDA	**Vanda**	**72.61**	**173**		**P**	**17 10 38.7**	**+0.6**
VNDA	**Vanda**	**72.61**	**173**	P	**P**	**17 10 39.1**	**+1.0**
	comp=Z,8.9nm,0.9s,baz=315,slow=6.3,SNR=41						
VNDA				S	**S**	**17 19 59.6**	**+1.3**
	comp=Z,1.1nm,1.0s,baz=113,slow=17,SNR=6.0						
VNDA				LR	LR	17 42 41.0	
	comp=Z,460nm,18.2s,baz=346,slow=36						
	comp=Z,8.9nm,0.9s						
ARK	**Arkit**	**72.78**	**317**	P	**P**	**17 10 41.9**	**+2.0**
ARK				pmax	pmax		
	comp=Z,45nm,1.1s						
BTK	**Batken**	**72.83**	**315**	IAmb	IAmb	17 11 07.4	
	comp=Z,43nm,0.8s						
BTK	**Batken**	**72.83**	**315**	P	**P**	**17 10 41.5**	**+1.3**
BTK				pmax	pmax		
	comp=Z,63nm,1.2s						
ADK	**Adak**	**72.87**	**30**	P	**P**	**17 10 41.6**	**+1.6**
BTLS	**Baital**	**72.91**	**321**	*e*P	**P**	**17 10 40.7**	**+0.3**
BTLS	**Baital**	**72.91**	**321**	*e*P	**P**	**17 10 40.8**	**+0.3**
KURBB	**Kurchatov Arra**	**73.19**	**328**	P	**P**	**17 10 42.8**	**+0.9**
	comp=Z,7.7nm,0.6s,baz=127,slow=4.8,SNR=101						
	comp=Z,7.7nm,0.6s						
KURK	**Kurchatov**	**73.19**	**328**		**P**	**17 10 42.2**	**+0.3**
KURK				IAmb	IAmb	17 11 12.2	
	comp=Z,43nm,1.0s						
KURK	**Kurchatov**	**73.19**	**328**	*ce*P	**P**	**17 10 42.9**	**+1.0**
KURK				pmax	pmax		
	comp=Z,15nm,0.7s						
TRKS	**Terek-Say**	**73.23**	**317**	P	**P**	**17 10 44.1**	**+1.5**
TRKS				pmax	pmax		
	comp=Z,16nm,1.4s						
SIMJ	**Simiganj**	**73.56**	**313**		**P**	**17 10 44.6**	**0.0**
SIMJ				IAmb	IAmb	17 11 02.9	
	comp=Z,55nm,0.9s						
DZA	**Taraz**	**73.68**	**318**	*e*P	**P**	**17 10 45.2**	**+0.2**
DZA	**Taraz**	**73.68**	**318**	*e*P	**P**	**17 10 45.2**	**+0.2**
DZET	**Dzherino**	**73.75**	**313**	P	**P**	**17 10 46.7**	**+1.1**
DZET				pmax	pmax		
	comp=Z,51nm,0.9s						
HON	**Honolulu**	**74.08**	**66**		**P**	**17 10 48.9**	**+1.1**
HON	**Honolulu**	**74.08**	**66**	P	**P**	**17 10 48.9**	**+1.1**
HON				pmax	pmax		
	comp=Z,242nm,0.8s						
KIP	**Kipapa**	**74.09**	**66**	*i* P	**P**	**17 10 48.4**	**+0.6**
KIP				pmax	pmax		
	comp=Z,40nm,1.1s						
KKAR	**Karatay Array**	**74.31**	**318**	P	**P**	**17 10 49.0**	**+0.3**
KKAR	**Karatay Array**	**74.31**	**318**	P	**P**	**17 10 49.0**	**+0.3**
ATKA	**Atka Island**	**74.32**	**31**		**P**	**17 10 49.0**	**+0.6**
ATKA	**Atka Island**	**74.32**	**31**	P	**P**	**17 10 49.8**	**+1.3**
BRLS	**Borolday**	**74.73**	**318**	*e*P	**P**	**17 10 51.2**	**0.0**
BRLS	**Borolday**	**74.73**	**318**	*e*P	**P**	**17 10 51.2**	**0.0**
MAW	**Mawson**	**76.01**	**202**	P	**P**	**17 10 58.9**	**+0.9**
	comp=Z,20nm,1.0s,baz=76,slow=7.5,SNR=15						
	comp=Z,20nm,1.0s						
BRZS	**Berezniki**	**76.07**	**325**	*e*P	**P**	**17 10 58.8**	**+0.1**
BRZS	**Berezniki**	**76.07**	**325**	*e*P	**P**	**17 10 58.9**	**+0.1**
TBI	**Tubuai**	**76.98**	**112**	*e*P	**P**	**17 11 01.5**	**-2.9**
	comp=Z,403nm,27.8s						
TBI				*e*S	**S**	**17 20 46.1**	**-2.7**
	comp=Z,700nm,39.5s						
TBI				*e*SS	**SS**	**17 25 46.0**	**-0.7**
	comp=Z,410nm,27.2s						
TBI				*e*LQ	LQ	17 31 42.3	
	comp=Z,2µm,36.5s						
TBI				*e*LR	LR	17 34 55.0	
	comp=Z,1µm,32.8s						
TBI				*e*LR	LR	17 34 57.2	
	comp=Z,5µm,34.0s						
PPT2	**Papeete2**	**77.10**	**106**	*e*P	P	17 10 53.8	-11
	comp=Z,91nm,24.0s						
PPT2				*e*S	**S**	**17 20 44.3**	**-6.1**
	comp=Z,172nm,26.8s						
PPT2				*e*SS	**SS**	**17 25 44.4**	**-4.5**
	comp=Z,199nm,26.2s						
PPT2				*e*LQ	LQ	17 31 43.0	
	comp=Z,446nm,28.0s						
PPT2				*e*LR	LR	17 34 56.8	
	comp=Z,658nm,25.2s						
PPT2				*e*LR	LR	17 35 01.8	
	comp=Z,569nm,32.8s						
PPT	**Papeete**	**77.10**	**106**	P	**P**	**17 11 06.7**	**+1.5**
	comp=Z,60nm,0.9s,baz=2.7,slow=6.9,SNR=4.8						
	comp=Z,60nm,0.9s						
NIKH	**Nikolski High**	**77.50**	**32**	P	**P**	**17 11 08.6**	**+2.0**
NIKH	**Nikolski High**	**77.50**	**32**	P	**P**	**17 11 07.5**	**+0.9**
	baz=241						
TIXI	**Tiksi**	**78.12**	**359**	LR	LR	17 48 00.6	
	comp=Z,465nm,19.8s,baz=180,slow=38						
BILL	**Bilibino**	**78.31**	**13**	P	**P**	**17 11 11.7**	**+0.9**
BILL	**Bilibino**	**78.31**	**13**	*i* P	**P**	**17 11 12.2**	**+1.4**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BVAR	**Borovoye Array**	**78.76**	**327**	P	**P**	**17 11 14.2**	**+0.5**
	comp=Z,10nm,0.6s,baz=120,slow=8.8,SNR=70						
	comp=Z,10nm,0.6s						
BRVK	**Borovoye**	**78.83**	**327**	P	**P**	**17 11 13.9**	**-0.1**
BRVK				IAmb	IAmb	17 11 40.3	
	comp=Z,24nm,0.8s						
BRVK	**Borovoye**	**78.83**	**327**	*ce*P	**P**	**17 11 14.5**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,11nm,0.6s						
SPIA	**Saint Paul Isl**	**78.92**	**28**	P	**P**	**17 11 15.3**	**+1.0**
	baz=239						
P08K	**Saint George I**	**78.95**	**29**	P	**P**	**17 11 15.5**	**+1.0**
	baz=240						
SOHO	**SOHO**	**79.49**	**296**	P	**P**	**17 11 18.4**	**+0.2**
MDH	**Madha**	**79.94**	**297**	P	**P**	**17 11 20.4**	**-0.3**
UOSS	**Minazif**	**79.95**	**297**	P	**P**	**17 11 20.7**	**0.0**
UOSS	**Minazif**	**79.95**	**297**	P	**P**	**17 11 21.3**	**+0.6**
HATD	**Hatta, Dubai**	**79.99**	**297**	P	**P**	**17 11 21.6**	**+0.7**

ASHO	Ashiyiah	80.02	296	P	P	17 11 21.7	+0.5
MSFE	Esma-Masafi	80.08	297	P	P	17 11 22.8	+1.3
SHME	Shamm	80.24	298	P	P	17 11 23.4	+1.2
ASUD	Al Ashush, Dub	80.66	296	P	P	17 11 25.5	+0.9
GAMB	Gambell	81.84	22	P	P	17 11 30.9	+1.0
	baz=237						
MZR	Muzera	82.01	294	P	P	17 11 32.6	+0.9
S12K	Black Hills	82.28	31	P	P	17 11 32.9	+0.5
	baz=246						
M11K	Mekoryuk	82.33	26	P	P	17 11 33.5	+0.9
	baz=242						
SDPT	Sand Point	82.97	32	P	P	17 11 37.4	+1.4
SDPT	Sand Point	82.97	32	P	P	17 11 36.8	+0.8
	baz=248,SNR=7.4						
CHNA	Chernabura Isl	83.25	33	P	P	17 11 37.8	+0.4
CHNA	Chernabura Isl	83.25	33	P	P	17 11 38.3	+0.9
	baz=249						
QSPA	South Pole Qui	83.37	180	P	P	17 11 38.3	+0.2
	comp=Z,22nm,1.0s,baz=307,slow=1.4,SNR=50						
QSPA				LR	LR	17 47 37.2	
	comp=Z,508nm,21.5s,baz=1.0,slow=35						
	comp=Z,22nm,1.0s						
ABKAR	Akbulak array	83.39	321	P	P	17 11 38.1	-0.2
M13K	Dall Lake	83.61	27	P	P	17 11 40.3	+1.2
	baz=245						
K13K	Kusilvak Mount	83.71	25	P	P	17 11 40.5	+0.9
	baz=243						
S14K	Fog Glacier	83.80	31	P	P	17 11 41.1	+0.7
	baz=248						
O14K	Tigyukauivet M	84.09	28	P	P	17 11 42.7	+1.0
	baz=247,SNR=8.7						
TNA	Tin City	84.16	21	P	P	17 11 42.6	+0.7
	baz=240						
N14K	Kuskokwak Cree	84.17	28	P	P	17 11 42.8	+0.8
	baz=246						
L14K	Kuka Creek	84.30	26	P	P	17 11 44.1	+1.5
	baz=245,SNR=12						
M14K	Bethel	84.38	27	P	P	17 11 44.2	+1.2
	baz=246,SNR=18						
J14K	Nanvaranak Lak	84.53	25	P	P	17 11 45.0	+1.2
	baz=244						
ANM	Nome	84.63	23	P	P	17 11 45.0	+0.8
	baz=242						
F14K	Arctic Creek	84.70	22	P	P	17 11 45.7	+1.1
	baz=242						
SYO	Syowa Base	84.72	201⇑	*e*P	P	17 11 44.1	-0.6
SYO	Syowa Base	84.72	201⇓	*i*PcP	PcP	17 11 47.6	-0.4
SYO	Syowa Base	84.72	201⇓	*e*pP	pP	17 12 01.0	+0.2
O15K	Ungalikthiuk R	84.75	29	P	P	17 11 45.9	+1.0
	baz=248,SNR=5.4						
M15K	Kasigluk River	84.93	27	P	P	17 11 47.0	+1.2
	baz=247,SNR=7.6						
L15K	Ungalak Mounta	84.97	26	P	P	17 11 47.1	+1.1
	baz=246,SNR=12						
N15K	Kwethluk River	85.00	28	P	P	17 11 47.0	+0.8
	baz=248,SNR=8.3						
K15K	Wolf Creek Mou	85.20	25	P	P	17 11 48.2	+1.0
	baz=246,SNR=16						
R16K	Pilot Point	85.27	31	P	P	17 11 48.6	+1.0
	baz=250						
G15K	Niukluk	85.33	23	P	P	17 11 49.0	+1.2
	baz=244						
F15K	North Star Dit	85.42	22	P	P	17 11 49.7	+1.4
	baz=243						
SVE	Sverdlovsk	85.43	329	*e*P	P	17 11 48.6	+0.2
SVE				pmax	pmax		
	comp=Z,28nm,0.7s						
P16K	Nushagak River	85.58	29	P	P	17 11 50.0	+0.9
	baz=250						
CHIR	Chirikof Islan	85.72	33	P	P	17 11 50.5	+0.7
	baz=252						
N16K	Nishlik Lake	85.72	28	P	P	17 11 51.1	+1.3
	baz=249,SNR=13						
O16K	Kokwok River B	85.72	29	P	P	17 11 51.1	+1.3
	baz=249,SNR=11						
M16K	Timber Creek	85.84	27	P	P	17 11 52.0	+1.7
	baz=249,SNR=25						
L16K	Owhat River	85.86	26	P	P	17 11 52.0	+1.5
	baz=248,SNR=26						
J16K	Anvik River	85.98	25	P	P	17 11 52.6	+1.5
	baz=247,SNR=16						
G16K	Koyuk River	86.15	22	IAmb	IAmb	17 12 23.1	
	comp=Z,62nm,1.8s						
G16K	Koyuk River	86.15	22	P	P	17 11 52.8	+1.0
	baz=245						
I17K	Unalakleet	86.18	24	P	P	17 11 53.3	+1.3
	baz=247						
O17K	Koliganek Bris	86.26	29	P	P	17 11 53.9	+1.4
	baz=250,SNR=22						
Q17K	Contact Creek	86.36	30	P	P	17 11 53.5	+0.4
	baz=251,SNR=13						
C16K	Lisburne Hills	86.37	19	P	P	17 11 53.4	+0.6
	baz=242						
P17K	Kvichak River	86.39	29	P	P	17 11 53.5	+0.4
	baz=251						
ARTI	Arti	86.47	328	P	P	17 11 52.1	-1.5
ARTI				IAmb	IAmb	17 12 07.0	
	comp=Z,17nm,0.6s						
ARTI	Arti	86.47	328*c*	*i*P	P	17 11 53.1	-0.5
ARTI				*PP	pP	17 12 10.9	+1.3
ARTI						17 15 13.4	
ARTI				S	SKSac	17 22 13.3	-1.8
ARTI				SS	SS	17 28 05.9	-0.8
ARTI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
N17K	Nushagak Hills	86.47	28	P	P	17 11 55.4	+1.9
	baz=250,SNR=11						
L17K	Donlin	86.54	26	P	P	17 11 55.7	+1.9
	baz=249,SNR=13						
ACHA	Angle Creek He	86.62	30	IAmb	IAmb	17 11 55.6	
	comp=Z,17nm,0.7s						
M17K	Holitna River	86.66	27	P	P	17 11 56.5	+2.1
	baz=250,SNR=12						
J17K	VABM Dome	86.66	25	P	P	17 11 56.1	+1.8
	baz=248,SNR=19						
SII	Sitkinak Islan	86.71	32	P	P	17 11 56.3	+1.5
	baz=253						
K17K	Iditarod	86.74	26	P	P	17 11 56.2	+1.4
	baz=249						
G17K	Kiwalik Mounta	86.84	23	P	P	17 11 56.3	+1.1
	baz=247,SNR=7.6						
R18K	Karluk	86.87	31	P	P	17 11 56.1	+0.6
	baz=253						
D17K	Noatak River	86.87	20	P	P	17 11 56.5	+1.2
	baz=244,SNR=13						
H17K	Granite Mounta	86.91	23	P	P	17 11 57.1	+1.5
	baz=248,SNR=7.6						
Q18K	Katmai Hardscr	86.91	30	P	P	17 11 56.0	+0.2
	baz=252,SNR=22						
TAOE	Nuku Hiva Isla	86.97	99	*e*S	S	17 22 29.1	-2.9
	comp=Z,208nm,27.0s						
TAOE	Nuku Hiva Isla	86.97	99	*e*LR	LR	17 39 33.2	
	comp=Z,535nm,23.1s						
F17K	Baldwin Pennin	86.99	22	P	P	17 11 56.6	+0.7
	baz=246						
P18K	Big Mountain,	87.04	29	IAmb	IAmb	17 11 57.8	
	comp=Z,19nm,0.8s						
P18K	Big Mountain,	87.04	29	P	P	17 11 56.6	+0.2
	baz=252,SNR=18						
E17K	Hotham Inlet	87.05	21	P	P	17 11 57.1	+0.9
	baz=246						
N18K	Kilae Creek	87.13	28	P	P	17 11 58.0	+1.2
	baz=251,SNR=19						
C17K	DeLong Mountai	87.17	20	P	P	17 11 57.5	+0.7
	baz=244,SNR=6.0						
O18K	Koktuh Hills	87.19	29	IAmb	IAmb	17 11 58.8	
	comp=Z,16nm,0.8s						
O18K	Koktuh Hills	87.19	29	P	P	17 11 57.8	+0.7
	baz=252,SNR=11						
L18K	Granite Mounta	87.27	26	P	P	17 11 58.9	+1.6
	baz=250,SNR=29						
OHAK	Old Harbor	87.37	32	P	P	17 11 59.5	+1.6
OHAK	Old Harbor	87.37	32	P	P	17 11 59.1	+1.1
	baz=254,SNR=9.7						
M18K	Stony River	87.42	27	P	P	17 11 59.6	+1.5
	baz=251,SNR=19						
H18K	Honhosa River	87.60	23	P	P	17 11 60.0	+1.1
	baz=249						
E18K	Tukpahlearik C	87.62	21	P	P	17 11 59.5	+0.6
	baz=247						
F18K	Selawik	87.64	22	P	P	17 11 59.7	+0.7
	baz=248						
Q19K	Cape Douglas,	87.68	30	P	P	17 11 59.9	+0.5
	baz=253,SNR=8.4						
J18K	Innoko River	87.68	25	IAmb	IAmb	17 12 20.0	
	comp=Z,20nm,1.1s						
J18K	Innoko River	87.68	25	P	P	17 12 00.1	+0.8
	baz=250,SNR=17						
O19K	Port Alsworth	87.72	29	P	P	17 12 00.1	+0.6
	baz=253						
G18K	Tagagawik	87.75	23	P	P	17 12 00.4	+0.7
	baz=249						
N19K	Bonanza Creek	87.83	28	P	P	17 12 00.9	+0.7
	baz=252,SNR=28						
KDAK	Kodiak Island	87.89	31	P	P	17 12 01.3	+0.9
KDAK	Kodiak Island	87.89	31	*i* P	P	17 11 59.4	-1.0
KDAK				pmax	pmax		
	comp=Z,76nm,0.8s						
KDAK	Kodiak Island	87.89	31	P	P	17 12 01.1	+0.7
	baz=254						
C18K	Utukok River	87.91	20	P	P	17 12 00.9	+0.5
	baz=246						
B18K	Kokolik River	88.00	19	P	P	17 12 01.2	+0.5
	baz=246						
GCSA	Galena City Sc	88.05	24	P	P	17 12 01.6	+0.7
	baz=250						
L19K	White Mountain	88.08	27	P	P	17 12 02.1	+0.8
	baz=252,SNR=30						
P19K	Oil Pt	88.09	29	IAmb	IAmb	17 12 02.9	
	comp=Z,10nm,0.6s						
P19K	Oil Pt	88.09	29	P	P	17 12 01.7	+0.3
	baz=254						
M19K	Big River Lodg	88.20	27	P	P	17 12 02.5	+0.6
	baz=253						
Q20K	Shuyak Island	88.21	30	P	P	17 12 02.4	+0.5
	baz=254						
J19K	Poorman	88.31	25	P	P	17 12 03.2	+0.9
	baz=251,SNR=6.0						
F19K	Shaleruckik Mo	88.42	22	P	P	17 12 03.3	+0.6
	baz=249						
G19K	Purcell Mounta	88.44	23	P	P	17 12 03.4	+0.5
	baz=250,SNR=12						
H19K	Roundabout Mou	88.48	23	P	P	17 12 03.9	+0.9
	baz=251,SNR=7.4						
O20K	Slope Mountain	88.50	29	P	P	17 12 04.0	+0.6
	baz=254						
RED	Redoubt Volcan	88.52	29	IAmb	IAmb	17 12 39.2	
	comp=Z,23nm,1.4s						
A19K	Wainwright	88.58	18	P	P	17 12 04.0	+0.6
	baz=246						
L20K	Farewell, AK	88.60	27	P	P	17 12 04.1	+0.4
	baz=253,SNR=10						
C19K	Lookout Ridge	88.63	20	IAmb	IAmb	17 12 20.7	
	comp=Z,17nm,1.1s						
C19K	Lookout Ridge	88.63	20	P	P	17 12 04.6	+0.8
	baz=248,SNR=9.6						
M20K	Styx River	88.76	27	P	P	17 12 05.1	+0.5
	baz=254						
K20K	Telida	88.78	26	P	P	17 12 05.2	+0.6
	baz=253						
E19K	Redstone River	88.84	21	P	P	17 12 05.6	+0.8
	baz=250						
HOM	Homer	88.86	30	P	P	17 12 05.4	+0.5
	baz=255						
D19K	Kuna River	88.90	20	P	P	17 12 05.5	+0.5
	baz=249						
J20K	Nowinta River	88.99	25	IAmb	IAmb	17 12 50.0	
	comp=Z,13nm,0.9s						
J20K	Nowinta River	88.99	25	P	P	17 12 06.2	+0.7
	baz=253,SNR=12						
SPCR	Spurr Chakacha	89.00	28	P	P	17 12 06.7	+1.0
	baz=254						
N20K	Mount Spurr	89.00	28	P	P	17 12 06.7	+1.0
	baz=254						
CNPM	China Poot	89.03	30	IAmb	IAmb	17 12 10.8	
	comp=Z,21nm,0.9s						
I20K	Naaghedeneel	89.04	24	P	P	17 12 06.4	+0.7
	baz=252						
H20K	Anotleneega Mo	89.09	24	P	P	17 12 06.6	+0.7
	baz=252						
F20K	Avaraart Lake	89.26	22	P	P	17 12 07.3	+0.6
	baz=251,SNR=6.1						
BRLK	Bradley Lake	89.26	30	IAmb	IAmb	17 12 12.4	
	comp=Z,19nm,1.0s						
BRSE	Bradley Lake S	89.33	30	P	P	17 12 07.4	+0.2
	baz=256						
RAYN	Ar Rayn	89.34	294	P	P	17 12 08.3	+0.2
RAYN				IAmb	IAmb	17 12 40.0	
	comp=Z,23nm,0.9s						
RAYN	Ar Rayn	89.34	294	P	P	17 12 08.3	+0.2
RAYN				pmax	pmax		
	comp=Z,23nm,0.9s						
RAYN	Ar Rayn	89.34	294	P	P	17 12 08.7	+0.6
CAPN	Captain Cook N	89.39	29	P	P	17 12 07.8	+0.4
	baz=255						
PPLA	Purkeypile	89.47	26	P	P	17 12 07.8	-0.1
	baz=254						
E20K	Nigu River	89.48	21	P	P	17 12 08.2	+0.4
	baz=251						
D20K	Etivluk River	89.49	20	P	P	17 12 08.4	+0.6
	baz=250						
SKT	Skwentna	89.52	27	P	P	17 12 08.2	+0.2
	baz=255,SNR=7.4						
CAST	Castle Rocks	89.65	26	P	P	17 12 09.2	+0.5
	baz=255,SNR=11						
CHUM	Lake Minchumin	89.68	25	P	P	17 12 09.3	+0.6
	baz=254,SNR=17						
IMAR	Indian Mountai	89.68	23	P	P	17 12 08.6	-0.1
B20K	Meade River	89.75	19	IAmb	IAmb	17 12 33.0	
	comp=Z,18nm,1.2s						
B20K	Meade River	89.75	19	P	P	17 12 09.3	+0.4
	baz=250						
SUA	Susitna One	89.75	28	P	P	17 12 09.5	+0.2
	baz=256						
G21K	Allakaket	89.93	23	P	P	17 12 10.7	+0.8
	baz=253						
H21K	Melozitna Rive	89.96	24	P	P	17 12 10.3	+0.3
	baz=254						
O22K	Cooper Landing	90.00	29	P	P	17 12 10.5	+0.3
	baz=257						
SEW	Seward	90.04	29	P	P	17 12 10.7	+0.3
	baz=257						
M22K	Willow	90.11	28	P	P	17 12 11.4	+0.6
	baz=256						
RC01	Rabbit Creek A	90.13	28	IAmb	IAmb	17 12 13.0	
	comp=Z,21nm,0.7s						
RC01	Rabbit Creek A	90.13	28	P	P	17 12 11.4	+0.5
	baz=257,SNR=7.0						
F21K	Alatna River	90.14	22	P	P	17 12 11.3	+0.4
	baz=253						
I21K	Tanana	90.16	24	P	P	17 12 12.3	+1.3
	baz=255						
CUT	Chulitna	90.20	27	P	P	17 12 11.1	0.0
	baz=256						
C21K	Knifeblade Rid	90.26	20	P	P	17 12 11.8	+0.5
	baz=252						
BPAW	Bear Paw Mtn.	90.30	25	P	P	17 12 11.7	0.0
	baz=256						
E21K	Killik River	90.32	21	P	P	17 12 12.0	+0.3
	baz=253						
A21K	Barrow	90.37	18	P	P	17 12 12.2	+0.5
	baz=250						
TRF	Thorofare Moun	90.44	26	P	P	17 12 12.3	-0.2
	baz=256						
B21K	Ikpikpuk River	90.46	20	P	P	17 12 12.8	+0.6
	baz=252,SNR=8.0						
PMR	Palmer	90.53	28	P	P	17 12 13.1	+0.4
	baz=257						
H22K	Ishtalitna Cre	90.59	24	P	P	17 12 13.6	+0.6
	baz=255						
MLY	Manley	90.63	24	P	P	17 12 13.5	+0.2
	baz=256,SNR=9.6						
F22K	John River	90.71	22	P	P	17 12 14.1	+0.6
	baz=254						
PWL	Port Wells	90.75	29	IAmb	IAmb	17 12 45.0	
	comp=Z,42nm,1.6s						
PWL	Port Wells	90.75	29	P	P	17 12 13.8	0.0
	baz=258						
A22K	Sinclair Lake	90.77	18	P	P	17 12 14.1	+0.4
	baz=252						
G22K	Bettles	90.81	23	P	P	17 12 14.6	+0.7
	baz=255						
KNK	Knik Glacier	90.81	28	IAmb	IAmb	17 12 16.5	
	comp=Z,18nm,0.8s						
KNK	Knik Glacier	90.81	28	P	P	17 12 14.6	+0.5
	baz=258						
D22K	Ayikyak River	90.90	21	P	P	17 12 14.9	+0.5
	baz=254						
SML	Sawmill	90.95	28	IAmb	IAmb	17 12 17.0	
	comp=Z,25nm,1.1s						
SML	Sawmill	90.95	28	P	P	17 12 15.4	+0.6
	baz=258						
E22K	Anaktuvuk Pass	91.01	21	IAmb	IAmb	17 12 38.6	
	comp=Z,10nm,0.9s						
E22K	Anaktuvuk Pass	91.01	21	P	P	17 12 15.6	+0.7
	baz=255,SNR=11						
P23K	Montague Islan	91.03	30	P	P	17 12 15.2	+0.1
	baz=259						
RND	Reindeer	91.06	26	IAmb	IAmb	17 12 56.7	
	comp=Z,11nm,0.8s						
B22K	Teshekpuk Lake	91.07	19	IAmb	IAmb	17 12 44.4	
	comp=Z,9.5nm,0.9s						
B22K	Teshekpuk Lake	91.07	19	P	P	17 12 15.2	+0.2
	baz=253,SNR=5.5						
WAT1	Susitna Watana	91.07	27	P	P	17 12 15.3	+0.1
	baz=258						
MCK	McKinley	91.09	26	IAmb	IAmb	17 12 17.7	
	comp=Z,38nm,1.8s						
MCK	McKinley	91.09	26	P	P	17 12 15.8	+0.4
	baz=257						
NEA2	Nenana	91.23	25	P	P	17 12 16.1	+0.1
	baz=257						
I23K	Minto, Yukon-K	91.23	24	IAmb	IAmb	17 13 00.4	
	comp=Z,22nm,1.3s						
I23K	Minto, Yukon-K	91.23	24	P	P	17 12 16.1	+0.2
	baz=257,SNR=11						
M23K	Glacier View	91.23	28	P	P	17 12 16.3	+0.3
	baz=258						
H23K	Yukon River	91.31	24	P	P	17 12 16.7	+0.3
	baz=257,SNR=5.1						
G23K	Bananza Creek	91.32	23	IAmb	IAmb	17 12 32.9	
	comp=Z,8.8nm,0.9s						
G23K	Bananza Creek	91.32	23	P	P	17 12 16.5	+0.1
	baz=256,SNR=5.6						
GLI	Glacier Island	91.35	29	IAmb	IAmb	17 12 18.8	
	comp=Z,15nm,0.8s						
GLI	Glacier Island	91.35	29	P	P	17 12 16.5	-0.1
	baz=259						
COLD	Coldfoot	91.38	22	P	P	17 12 16.6	+0.1
	baz=256						
WAT6	Susitna Watana	91.38	27	P	P	17 12 16.8	-0.2
	baz=258						
SCM	Sheep Creek Mo	91.42	28	IAmb	IAmb	17 15 55.8	
	comp=Z,18nm,0.7s						
SCM	Sheep Creek Mo	91.42	28	P	P	17 12 16.9	-0.1
	baz=259						
Q23K	Middleton Isla	91.44	30	P	P	17 12 16.9	-0.1
	baz=260						
WRH	Wood River Hil	91.61	25	IAmb	IAmb	17 12 47.3	
	comp=Z,7.4nm,0.8s						
D23K	Nanushuk River	91.62	21	IAmb	IAmb	17 12 41.7	
	comp=Z,23nm,1.4s						
D23K	Nanushuk River	91.62	21	P	P	17 12 17.8	+0.2
	baz=256,SNR=9.0						
DHY	Denali Highway	91.64	27	IAmb	IAmb	17 12 45.9	
	comp=Z,8.7nm,0.8s						
DHY	Denali Highway	91.64	27	P	P	17 12 18.3	+0.2
	baz=259,SNR=9.4						
KIRV	Kirov	91.69	329	*i* P	P	17 12 15.9	-2.2
BELG	Belogornoye	91.71	322	*i* P	P	17 12 17.5	-0.9
BELG				pmax	pmax		
	comp=Z,4.0nm,2.3s						
CCB	Clear Creek Bu	91.77	25	IAmb	IAmb	17 12 33.4	
	comp=Z,8.0nm,0.8s						
E23K	Chandalar	91.79	22	IAmb	IAmb	17 12 42.5	
	comp=Z,12nm,0.8s						
E23K	Chandalar	91.79	22	P	P	17 12 19.1	+0.5
	baz=257,SNR=17						
COLA	College	91.80	25	*i* P	P	17 12 20.5	+2.0
COLA				pmax	pmax		
	comp=Z,16nm,2.2s						
COLA	College	91.80	25	P	P	17 12 19.1	+0.6
	baz=258						
C23K	Itkillik River	91.86	20	IAmb	IAmb	17 12 20.0	
	comp=Z,25nm,1.6s						
C23K	Itkillik River	91.86	20	P	P	17 12 19.1	+0.3
	baz=256,SNR=6.6						
EYAK	Cordova Ski Ar	91.94	29	P	P	17 12 19.7	+0.4
	baz=260						
TOLK	Toolik Lake Re	91.94	21	IAmb	IAmb	17 12 39.3	
	comp=Z,8.0nm,0.8s						
TOLK	Toolik Lake Re	91.94	21	P	P	17 12 19.6	+0.3
	baz=257						
H24K	Noodor Dome	91.98	24	IAmb	IAmb	17 12 43.1	
	comp=Z,13nm,1.1s						
H24K	Noodor Dome	91.98	24	P	P	17 12 19.7	+0.2
	baz=258,SNR=11						
M24K	Tolsona, Glenn	92.01	28	IAmb	IAmb	17 12 54.6	
	comp=Z,24nm,1.2s						
M24K	Tolsona, Glenn	92.01	28	P	P	17 12 20.0	+0.3
	baz=260						
KLU	Klutina	92.02	28	P	P	17 12 20.4	+0.6
	baz=260						
POKR	Poker Plat Res	92.02	25	P	P	17 12 20.2	+0.6
	baz=259						
GNI	Garni	92.06	310	*i* P	P	17 12 20.4	-0.2
GNI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HDA	Harding Lake	92.09	25	P	P	17 12 20.6	+0.7
	baz=259						
ILAR	Eielson Array	92.18	25	P	P	17 12 18.6	-1.8
ILAR	Eielson Array	92.18	25	P	P	17 12 19.5	-0.9
	comp=Z,2.9nm,0.6s,baz=276,slow=4.4,SNR=13						
	comp=Z,2.9nm,0.6s						
E24K	Your Creek	92.21	22	P	P	17 12 21.2	+0.7
	baz=258,SNR=6.4						
G24K	Hadweenzic Riv	92.31	23	IAmb	IAmb	17 12 41.3	
	comp=Z,8.8nm,0.9s						
G24K	Hadweenzic Riv	92.31	23	P	P	17 12 21.6	+0.7
	baz=259						
F24K	Squaw Lake	92.32	22	P	P	17 12 21.5	+0.5
	baz=258,SNR=11						
D24K	Happy Valley	92.32	21	IAmb	IAmb	17 12 51.7	
	comp=Z,11nm,0.9s						
D24K	Happy Valley	92.32	21	P	P	17 12 21.6	+0.8
	baz=258						
C24K	Franklin Bluff	92.48	20	P	P	17 12 21.7	+0.1
	baz=258						
PAX	Paxson	92.48	27	P	P	17 12 22.0	+0.2
	baz=260,SNR=7.2						
K24K	Donnelly Dome	92.48	26	P	P	17 12 21.6	-0.2
	baz=260						
KAIM	Kayak Island	92.49	30	P	P	17 12 21.9	0.0
	baz=261						
HARP	HAARP	92.53	28	P	P	17 12 22.0	0.0
	baz=261						
BMRM	Bremner River	92.56	29	P	P	17 12 22.5	+0.3
	baz=261						
N25K	Chitina, Valde	92.66	28	IAmb	IAmb	17 12 25.7	
	comp=Z,6.3nm,0.7s						
N25K	Chitina, Valde	92.66	28	P	P	17 12 23.1	+0.4
	baz=261						
J25K	Salcha River,	92.80	25	P	P	17 12 23.6	+0.3
	baz=261						
G25K	Bearman Lake	92.86	23	P	P	17 12 23.9	+0.5
	baz=260						
PRP	Porcupine Dome	92.88	24	P	P	17 12 23.8	0.0
	baz=261						
RIDG	Independent Ri	92.88	26	P	P	17 12 23.7	0.0
	baz=261						
H25L	Birch Creek	92.89	24	P	P	17 12 24.0	+0.5
	baz=260						
BERG	Berg Lake	92.92	30	IAmb	IAmb	17 12 26.4	
	comp=Z,19nm,1.0s						
BGLC	Bering Glacier	93.08	30	P	P	17 12 24.9	+0.4
	baz=262						
F25K	Christian Rive	93.18	22	P	P	17 12 25.1	+0.2
	baz=261,SNR=5.7						
D25K	Kavik River	93.21	21	P	P	17 12 25.0	0.0
	baz=260						
CRQE	Cirque	93.26	29	P	P	17 12 25.4	-0.2
	baz=262						
NVL	N'lazarevskaya	93.28	197	*e*P	P	17 12 36.2	+11
NVL				pmax	pmax		
	comp=Z,13nm,0.8s						
E25K	Arctic Village	93.29	22	IAmb	IAmb	17 12 56.5	
	comp=Z,28nm,1.6s						
E25K	Arctic Village	93.29	22	P	P	17 12 25.7	+0.2
	baz=261,SNR=7.9						
SCRK	Sand Creek	93.30	26	P	P	17 12 25.4	-0.2
	baz=262						
WAX	Waxell Ridge	93.34	30	IAmb	IAmb	17 12 58.2	
	comp=Z,14nm,0.8s						
MCARA	McCarthy VSAT	93.38	29	P	P	17 12 26.4	+0.4
	baz=263						
TGL	Tana Glacier	93.39	29	IAmb	IAmb	17 12 29.2	
	comp=Z,14nm,1.0s						
L26K	Log Cabin Wild	93.45	27	P	P	17 12 26.8	+0.5
	baz=262						
M26K	Nabesna, AK	93.53	28	P	P	17 12 26.9	+0.3
	baz=263						
J26L	Joseph Creek	93.55	26	IAmb	IAmb	17 12 28.1	
	comp=Z,11nm,1.1s						

J26L	**Joseph Creek**	**93.55**	**26**	P	**P**	**17 12 27.2**	**+0.4**
	baz=262,SNR=11						
BMAR	**Burnt Mountain**	**93.56**	**23**	P	**P**	**17 12 27.7**	**+1.0**
MESA	**MESA**	**93.75**	**30**	P	**P**	**17 12 28.2**	**+0.3**
	baz=263						
F26K	**Sheenjek River**	**93.76**	**22**	IAmb	IAmb	17 12 32.5	
	comp=Z,19nm,1.6s						
F26K	**Sheenjek River**	**93.76**	**22**	P	**P**	**17 12 28.1**	**+0.5**
	baz=262						
G26K	**Porcupine Rive**	**93.79**	**23**	IAmb	IAmb	17 12 52.0	
	comp=Z,11nm,0.9s						
G26K	**Porcupine Rive**	**93.79**	**23**	P	**P**	**17 12 27.9**	**+0.2**
	baz=262,SNR=10						
C26K	**Camden Bay**	**93.81**	**20**	P	**P**	**17 12 28.2**	**+0.5**
	baz=261						
KBZ	**Khabaz**	**93.81**	**313**	P	**P**	**17 12 27.6**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=65,slow=3.2,SNR=2.1						
	comp=Z,1.0nm,0.6s						
KBZ	**Khabaz**	**93.81**	**313**	*i* P	**P**	**17 12 25.5**	**-2.8**
KBZ				pmax	pmax		
	comp=Z,7.0nm,2.3s						
I26K	**Coal Creek Min**	**93.83**	**25**	P	**P**	**17 12 28.3**	**+0.4**
	baz=263						
GRNC	**Granite Creek**	**93.91**	**29**	IAmb	IAmb	17 12 34.7	
	comp=Z,25nm,1.6s						
KIV	**Kislovodsk**	**93.98**	**314**	*e*P	**P**	**17 12 26.5**	**-2.8**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
M27K	**Edge Creek, AK**	**94.04**	**28**	IAmb	IAmb	17 12 33.5	
	comp=Z,6.4nm,0.7s						
M27K	**Edge Creek, AK**	**94.04**	**28**	P	**P**	**17 12 29.5**	**+0.4**
	baz=264,SNR=6.5						
K27K	**Chicken**	**94.14**	**26**	IAmb	IAmb	17 12 31.8	
	comp=Z,9.5nm,0.9s						
K27K	**Chicken**	**94.14**	**26**	P	**P**	**17 12 29.9**	**+0.5**
	baz=264,SNR=9.2						
L27K	**Beaver Creek,**	**94.14**	**27**	P	**P**	**17 12 29.9**	**+0.5**
	baz=264,SNR=12						
CTG	**Chitna Glacier**	**94.14**	**29**	P	**P**	**17 12 29.6**	**0.0**
	baz=264						
CTGM	**Chitina Glacie**	**94.14**	**29**	IAmb	IAmb	17 12 33.2	
	comp=Z,12nm,0.9s						
BCAR	**Beaver Creek A**	**94.16**	**27**	P	**P**	**17 12 30.0**	**+0.4**
C27K	**Jago River**	**94.18**	**20**	P	**P**	**17 12 29.9**	**+0.4**
	baz=262						
I27K	**Kandik River**	**94.50**	**25**	P	**P**	**17 12 32.0**	**+0.9**
	baz=264,SNR=14						
BVCY	**Beaver Creek**	**94.51**	**28**	P	**P**	**17 12 31.7**	**+0.5**
	baz=264						
PINM	**Pinnacle**	**94.59**	**30**	P	**P**	**17 12 32.2**	**+0.6**
	baz=265						
H27K	**Steamboat Moun**	**94.60**	**24**	IAmb	IAmb	17 12 33.8	
	comp=Z,14nm,1.1s						
H27K	**Steamboat Moun**	**94.60**	**24**	P	**P**	**17 12 32.1**	**+0.5**
	baz=264,SNR=17						
G27K	**Doyon Strip**	**94.61**	**23**	IAmb	IAmb	17 12 37.0	
	comp=Z,19nm,1.8s						
G27K	**Doyon Strip**	**94.61**	**23**	P	**P**	**17 12 32.4**	**+0.8**
	baz=264,SNR=5.5						
YUK3	**Moose Creek**	**94.64**	**28**	P	**P**	**17 12 32.7**	**+0.7**
	baz=265						
O28M	**Mount Upton**	**94.68**	**29**	P	**P**	**17 12 32.8**	**+0.5**
	baz=265						
E27K	**Coleen River**	**94.78**	**22**	IAmb	IAmb	17 12 34.0	
	comp=Z,11nm,1.1s						
E27K	**Coleen River**	**94.78**	**22**	P	**P**	**17 12 33.0**	**+0.8**
	baz=264,SNR=8.1						
YUK8	**Steele Glacier**	**94.93**	**29**	P	**P**	**17 12 33.2**	**-0.2**
	baz=265						
PNL	**Peninsula**	**94.98**	**31**	P	**P**	**17 12 33.3**	**0.0**
	baz=266						
TROLL	**Troll, Antarti**	**95.01**	**194**	⇑P	**P**	**17 12 35.3**	**+1.8**
	comp=Z,385nm,0.8s						
D27M	**Malcolm River**	**95.10**	**21**	P	**P**	**17 12 33.7**	**-0.1**
	baz=265						
I28M	**Miner Creek**	**95.19**	**25**	IAmb	IAmb	17 13 16.1	
	comp=Z,15nm,1.1s						
I28M	**Miner Creek**	**95.19**	**25**	P	**P**	**17 12 34.8**	**+0.5**
	baz=266,SNR=13						
BELA	**Belgrano 2**	**95.31**	**183**	P	**P**	**17 12 34.4**	**-0.2**
BELA				IAmb	IAmb	17 13 11.6	
	comp=Z,34nm,1.8s						
DAWY	**Dawson**	**95.32**	**26**	IAmb	IAmb	17 12 36.5	
	comp=Z,10nm,1.0s						
DAWY	**Dawson**	**95.32**	**26**	P	**P**	**17 12 35.4**	**+0.5**
	baz=266,SNR=8.4						
F28M	**Old Crow**	**95.38**	**23**	IAmb	IAmb	17 12 58.5	
	comp=Z,21nm,1.6s						
F28M	**Old Crow**	**95.38**	**23**	P	**P**	**17 12 35.5**	**+0.5**
	baz=266,SNR=5.5						
O29M	**Mount Kennedy**	**95.44**	**30**	P	**P**	**17 12 35.3**	**-0.3**
	baz=266						
YUK4	**Talbot Arm**	**95.47**	**29**	P	**P**	**17 12 36.0**	**+0.2**
	baz=266						
E28M	**Babbage River**	**95.57**	**22**	IAmb	IAmb	17 13 11.0	
	comp=Z,20nm,1.6s						
E28M	**Babbage River**	**95.57**	**22**	P	**P**	**17 12 35.8**	**0.0**
	baz=266						
YUK6	**Outpost Mounta**	**95.59**	**29**	P	**P**	**17 12 36.3**	**-0.1**
	baz=267						
M29M	**Somme Creek**	**95.63**	**28**	IAmb	IAmb	17 12 41.6	
	comp=Z,16nm,1.8s						
M29M	**Somme Creek**	**95.63**	**28**	P	**P**	**17 12 36.4**	**0.0**
	baz=267						
L29M	**L29M**	**95.82**	**27**	IAmb	IAmb	17 12 42.0	
	comp=Z,27nm,1.8s						
L29M	**L29M**	**95.82**	**27**	P	**P**	**17 12 37.6**	**+0.4**
	baz=267						
P29M	**Windy Craggy**	**95.82**	**31**	P	**P**	**17 12 37.2**	**0.0**
	baz=267						
I29M	**Ogilvie Camp,**	**95.86**	**25**	IAmb	IAmb	17 12 54.0	
	comp=Z,12nm,0.9s						
I29M	**Ogilvie Camp,**	**95.86**	**25**	P	**P**	**17 12 37.8**	**+0.5**
	baz=267,SNR=12						
H29M	**Whitestone**	**95.88**	**24**	P	**P**	**17 12 38.2**	**+0.8**
	baz=267						
D28M	**Stokes Point**	**95.90**	**21**	P	**P**	**17 12 38.1**	**+0.8**
	baz=267						
HYT	**Haines Junctio**	**96.00**	**30**	P	**P**	**17 12 38.2**	**+0.1**
	baz=267						
G29M	**Pine Creek**	**96.05**	**23**	IAmb	IAmb	17 12 54.7	
	comp=Z,14nm,0.9s						
G29M	**Pine Creek**	**96.05**	**23**	P	**P**	**17 12 38.9**	**+0.8**
	baz=268,SNR=8.6						
SOC	**Sochi**	**96.10**	**313**	*e*P	**P**	**17 12 36.2**	**-2.6**
SOC				*e*		17 16 30.4	
SOC				*e*PPP	PPP	17 18 36.0	
SOC				*e*S	**SKSac**	**17 23 07.2**	**-3.4**
SOC				*e*SS	**SS**	**17 30 22.4**	**-3.6**
SOC				*e*SSS	SSS	17 34 06.8	
SOC				MLR	MLR		
	comp=Z,138nm,20.0s						
K29M	**Barlow Dome**	**96.13**	**26**	IAmb	IAmb	17 13 06.7	
	comp=Z,12nm,1.4s						
K29M	**Barlow Dome**	**96.13**	**26**	P	**P**	**17 12 39.0**	**+0.4**
	baz=268						
E29M	**Blow River**	**96.16**	**22**	IAmb	IAmb	17 12 39.8	
	comp=Z,21nm,1.9s						
E29M	**Blow River**	**96.16**	**22**	P	**P**	**17 12 38.7**	**+0.2**
	baz=268						
N30M	**Aishikik Lake**	**96.23**	**29**	P	**P**	**17 12 39.4**	**+0.3**
	baz=268						
P30M	**Million Dollar**	**96.24**	**30**	P	**P**	**17 12 39.2**	**+0.1**
	baz=268						
SNAA	**Sanae**	**96.48**	**193**	⇑P	**P**	**17 12 41.4**	**+1.3**
	comp=Z,74nm,0.8s						
SNAA	**Sanae**	**96.48**	**193**	IAmb	IAmb	17 12 58.4	
	comp=Z,16nm,1.4s						
SNAA	**Sanae**	**96.48**	**193**	P	**P**	**17 12 40.3**	**+0.2**
	comp=Z,1.4nm,1.0s,baz=119,slow=0.1,SNR=6.2						
SNAA				LR	LR	17 54 44.0	
	comp=Z,383nm,21.5s,baz=128,slow=35						
	comp=Z,1.4nm,1.0s						
PLBC	**Pleasant Camp**	**96.51**	**31**	P	**P**	**17 12 40.5**	**+0.2**
	baz=268						
S31K	**Pelican**	**96.53**	**32**	P	**P**	**17 12 41.0**	**+0.6**
	baz=268						
EPYK	**Eagle Plains**	**96.55**	**24**	IAmb	IAmb	17 12 42.2	
	comp=Z,12nm,1.1s						
EPYK	**Eagle Plains**	**96.55**	**24**	P	**P**	**17 12 40.8**	**+0.4**
	baz=269,SNR=7.4						
I30M	**Mount Dempster**	**96.67**	**25**	P	**P**	**17 12 41.3**	**+0.3**
	baz=269						
J30M	**Hart River**	**96.67**	**26**	P	**P**	**17 12 41.4**	**+0.3**
	baz=269,SNR=5.5						
O30N	**Mendenhall**	**96.69**	**30**	P	**P**	**17 12 41.2**	**+0.1**
	baz=269						
G30M	**tAoh Zraii Nji**	**96.76**	**23**	IAmb	IAmb	17 12 57.3	
	comp=Z,9.9nm,0.9s						
G30M	**tAoh Zraii Nji**	**96.76**	**23**	P	**P**	**17 12 41.4**	**+0.1**
	baz=269,SNR=8.8						
N31M	**Braeburn, Yuko**	**96.86**	**29**	P	**P**	**17 12 42.6**	**+0.7**
	baz=269						
KLMR	**Klimovskoe**	**96.90**	**330**	*e*P	**P**	**17 12 39.6**	**-2.4**
KLMR				pmax	pmax		
	comp=Z,28nm,1.4s						
F30M	**Barrier River**	**96.94**	**23**	IAmb	IAmb	17 13 12.4	
	comp=Z,15nm,1.4s						
F30M	**Barrier River**	**96.94**	**23**	P	**P**	**17 12 42.8**	**+0.7**
	baz=270						
SIT	**Sitka**	**97.00**	**33**	P	**P**	**17 12 42.7**	**+0.2**
	baz=269						
SKAG	**Skagway**	**97.04**	**31**	P	Pdif	17 12 43.4	+0.6
	baz=269						
WHY	**Whitehorse**	**97.28**	**30**	IAmb	IAmb	17 12 45.6	
	comp=Z,10nm,0.9s						
WHY	**Whitehorse**	**97.28**	**30**	P	Pdif	17 12 44.2	+0.2
	baz=270						
S32K	**Killisnoo**	**97.41**	**33**	P	Pdif	17 12 44.5	0.0
	baz=269						
R32K	**Eaglecrest**	**97.45**	**32**	P	Pdif	17 12 45.2	+0.6
	baz=270						
H31M	**Peel River**	**97.52**	**25**	IAmb	IAmb	17 13 28.0	
	comp=Z,9.5nm,1.2s						
H31M	**Peel River**	**97.52**	**25**	P	Pdif	17 12 45.1	+0.3
	baz=271						
M31M	**Drury Creek, Y**	**97.52**	**28**	P	Pdif	17 12 45.6	+0.7
	baz=270						
G31M	**Satah River**	**97.53**	**23**	IAmb	IAmb	17 12 45.5	
	comp=Z,9.1nm,1.0s						
G31M	**Satah River**	**97.53**	**23**	P	Pdif	17 12 45.0	+0.2
	baz=271,SNR=5.0						
ASF	**Jabal al Asfar**	**97.72**	**302**	LR	LR	18 01 29.0	
	comp=Z,139nm,21.3s,baz=115,slow=38						
F31M	**Tsiigehtchic**	**97.73**	**23**	P	Pdif	17 12 46.1	+0.5
	baz=272						
INK	**Inuvik**	**97.78**	**22**	P	Pdif	17 12 47.0	+1.1
	baz=272						
MOS	**Moscow**	**97.84**	**325**	*e*P	Pdif	17 13 01.6	+15
MOS				pmax	pmax		
	comp=Z,39nm,0.8s						
P32M	**Atlin**	**97.87**	**31**	P	Pdif	17 12 46.8	+0.3
	baz=270						
FARO	**Faro, Yukon**	**98.01**	**28**	P	Pdif	17 12 47.4	+0.3
	baz=271						
VNA2	**Neumayer--Watz**	**98.03**	**192**	⇑P	Pdif	17 12 48.8	+1.8
	comp=Z,1.5nm,0.7s,baz=170,slow=1.8						
N32M	**Quiet Lake**	**98.16**	**29**	P	Pdif	17 12 48.4	+0.6
	baz=271						
U33K	**Whale Pass**	**98.21**	**34**	P	Pdif	17 12 48.1	+0.1
	baz=270						
CRAG	**Craig**	**98.21**	**35**	P	Pdif	17 12 48.1	+0.1
	baz=270						
VNA3	**Neumayer Olymp**	**98.26**	**192**	⇑P	Pdif	17 12 55.9	+7.8
	comp=Z,2.3nm,0.7s						
P33M	**Teslin, Yukon**	**98.31**	**30**	P	**P**	**17 12 48.5**	**0.0**
	baz=271						
OBN	**Obninsk**	**98.44**	**325**	⇓*e*P	Pdif	17 12 52.3	+3.2
OBN				e*SP	sP	17 13 11.1	-0.2
OBN				*e*S	**SKSac**	**17 23 25.8**	**+3.8**
OBN				*i*		17 24 11.9	
OBN				*i*		17 26 17.1	
OBN				*e*SS	**SS**	**17 30 59.9**	**+1.6**
OBN				pmax	pmax		
	comp=Z,32nm,2.2s						
OBN				MLR	MLR		
	comp=Z,201nm,18.0s						
Q32M	**Nakina River**	**98.62**	**31**	P	**P**	**17 12 50.0**	**0.0**
	baz=272						
WRAK	**Wrangell Islan**	**98.64**	**34**	P	Pdif	17 12 50.4	+0.4
	baz=271						
MMPY	**Sheldon Lake,**	**98.97**	**28**	P	Pdif	17 12 51.9	+0.5
	baz=273						
MMAI	**Mount Meron Ar**	**99.02**	**302**	LR	LR	18 02 38.2	
	comp=Z,164nm,21.8s,baz=82,slow=38						
V35K	**Ketchikan**	**99.07**	**35**	P	**Pdif**	**17 12 52.4**	**+0.5**
	baz=272						
S34M	**Telegraph Cree**	**99.25**	**32**	P	**Pdif**	**17 12 52.5**	**-0.2**
	baz=272						
R33M	**Jennings River**	**99.27**	**31**	P	**Pdif**	**17 12 53.1**	**+0.2**
	baz=273						
EIL	**Elat**	**99.28**	**299**	LR	LR	18 03 55.4	
	comp=Z,105nm,19.8s,baz=82,slow=39						
APA	**Apatity**	**99.32**	**337**	⇓*i*P	**Pdif**	**17 12 52.3**	**-0.5**
APA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
T35M	**Bob Quinn**	**99.77**	**33**	P	**Pdif**	**17 12 54.9**	**-0.2**
	baz=273						
DLBC	**Dease Lake**	**99.81**	**32**	P	**Pdif**	**17 12 55.6**	**+0.4**
	baz=273						
A36M	**Sachs Harbour**	**100.21**	**18**	P	**Pdif**	**17 12 56.7**	**+0.1**
	baz=280						
WTLY	**Watson Lake, Y**	**100.32**	**30**	P	**Pdif**	**17 12 57.4**	**-0.1**
	baz=275						
TGTN	**Hyland Airport**	**100.45**	**29**	P	**Pdif**	**17 12 58.0**	**0.0**
	baz=276						
BRTR	**Keskin Array B**	**100.55**	**309**	P	**Pdif**	**17 12 58.5**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=131,slow=3.4,SNR=4.9						
C36M	**Paulatuk**	**101.08**	**21**	P	**Pdif**	**17 13 00.7**	**+0.2**
	baz=281						
BOSA	**Boshof**	**101.31**	**239**	P	**Pdif**	**17 13 03.1**	**+0.4**
	comp=Z,3.1nm,1.0s,baz=137,slow=1.9,SNR=3.8						
BEAVL	**Fort Liard**	**102.17**	**30**	P	**Pdif**	**17 13 05.6**	**0.0**
	baz=278						
TOAD	**Toad River Com**	**102.27**	**31**	P	**Pdif**	**17 13 06.1**	**-0.1**
	baz=278						
WRGLY	**Wrigley**	**102.44**	**27**	P	**Pdif**	**17 13 07.6**	**+0.9**
	baz=280						
FINES	**FINESS Array B**	**103.33**	**332**	Pdiff	**Pdif**	**17 13 09.6**	**-1.1**
	comp=Z,1.9nm,0.8s,baz=126,slow=9.7,SNR=3.8						
FINES				PP	**PKiKP**	**17 17 30.6**	**+1.1**
	comp=Z,2.1nm,0.9s,baz=128,slow=5.3,SNR=3.3						
MNK	**Minsk**	**103.50**	**324**	*i* P	**Pdif**	**17 13 08.6**	**-3.1**
	comp=Z,4.0nm,0.6s,baz=82						
MNK				*i* Pp		17 13 24.0	
MNK				*i* sP	**sPdif**	**17 13 33.4**	**-0.4**
MNK				*i* PP	**PP**	**17 17 24.7**	**-3.3**
MNK				*i* PPP	PPP	17 19 37.4	
MNK				*i* SKS		17 24 28.9	
MNK				*i* S	**Sdif**	**17 24 50.8**	**-4.5**
MNK				*i* sS	SKKSac	17 25 22.2	+54
MNK				*i* PS	**PS**	**17 26 38.2**	**-0.8**
MNK				*i* SS	**SS**	**17 32 09.1**	**+0.6**
MNK				*i* SSS	SSS	17 35 51.4	
MNK	**Minsk**	**103.50**	**324**	*i* P	**Pdif**	**17 13 08.5**	**-3.1**
MNK				*i*		17 17 24.7	
MNK				*i* PPP	PPP	17 19 37.3	
MNK				*i*		17 24 28.8	
MNK				*i* S	**Sdif**	**17 24 50.8**	**-4.5**
MNK				*i* PS	**PS**	**17 26 38.1**	**-0.8**
MNK				*i* SS	**SS**	**17 32 09.0**	**+0.6**
MNK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NACGM	**Naroch**	**104.07**	**325**	*e*Pdif	**Pdif**	**17 13 16.6**	**+2.4**
	baz=82						
YKA	**Yellowknife Ar**	**106.56**	**26**	Pdiff	**Pdif**	**17 13 21.8**	**-3.2**
	comp=Z,0.9nm,0.9s,baz=297,slow=5.0,SNR=7.7						
YKA				PKiKP	**PKiKP**	**17 17 37.4**	**+1.9**
	comp=Z,0.6nm,1.0s,baz=294,slow=2.6,SNR=4.2						
HFS	**Hagfors**	**109.52**	**332**	PP	**PP**	**17 18 12.1**	**+0.1**
	comp=Z,2.2nm,0.8s,baz=113,slow=3.9,SNR=3.8						
NVAR	**Mina Array Bea**	**109.56**	**52**	Pdiff	**Pdif**	**17 13 41.5**	**+2.3**
	comp=Z,0.6nm,0.6s,baz=284,slow=6.0,SNR=4.8						
NOA	**NORSAR Array B**	**110.29**	**334**	PP	**PP**	**17 18 16.2**	**-1.4**
	comp=Z,1.1nm,0.9s,baz=89,slow=7.9,SNR=3.3						
ARSA	**Arzberg**	**112.62**	**319**	*i* PKiKP	**PKiKP**	**17 17 47.8**	**+0.3**
	comp=Z,1.4nm,0.8s						
SOKA	**Soboth**	**113.09**	**318**	*i* PKiKP	**PKiKP**	**17 17 48.8**	**+0.4**
	comp=Z,0.8nm,0.4s						
MOA	**Molln**	**113.27**	**320**	*i* PKiKP	**PKiKP**	**17 17 49.7**	**+1.0**
	comp=Z,4.1nm,1.5s						
GERES	**GERESS Array B**	**113.34**	**321**	PKiKP	**PKiKP**	**17 17 49.3**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=99,slow=4.2,SNR=13						
GERES				PKKPbc	**PKKPab**	**17 28 42.3**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=275,slow=6.6,SNR=3.6						
MYKA	**Terra Mystica**	**114.03**	**318**	*e*PKiKP	**PKiKP**	**17 17 50.4**	**+0.2**
	comp=Z,1.3nm,0.5s						
KBA	**Koelnbreinsper**	**114.09**	**319**	*i* PKP	PKPdf	17 17 49.7	-0.7
	comp=Z,1.3nm,0.4s						
LESA	**Schwarzleotal**	**114.42**	**319**	*i* PKP	PKPdf	17 17 50.4	-0.6
	comp=Z,2.9nm,0.8s						
ABTA	**Abfaltersbach**	**114.74**	**319**	*i* PKP	**PKiKP**	**17 17 51.0**	**-0.5**
	comp=Z,4.4nm,0.7s						
WTTA	**Wattenberg**	**115.15**	**319**	*i* PKiKP	**PKPdf**	**17 17 52.6**	**+0.1**
	comp=Z,10nm,0.5s						
WATA	**Walderalm**	**115.16**	**320**	*i* PKP	**PKiKP**	**17 17 51.1**	**-1.3**
	comp=Z,3.5nm,0.7s						
PDAR	**Pinedale Array**	**115.25**	**46**	PKP	**PKPdf**	**17 17 54.0**	**+1.1**
	comp=Z,1.0nm,0.7s,baz=236,slow=1.1,SNR=7.0						
SQTA	**Sankt Quirin**	**115.44**	**320**	*i* PKP	**PKiKP**	**17 17 52.5**	**-0.5**
	comp=Z,2.0nm,0.4s						
MOTA	**Moosalm**	**115.46**	**320**	*i* PKP	**PKiKP**	**17 17 52.9**	**-0.1**
	comp=Z,2.5nm,0.6s						
RETA	**Reutte**	**115.63**	**320**	*i* PKiKP	**PKPdf**	**17 17 53.6**	**+0.3**
	comp=Z,1.3nm,0.5s						
DAVA	**Damuels**	**116.27**	**320**	*i* PKP	**PKPdf**	**17 17 54.5**	**-0.1**
	comp=Z,4.9nm,0.7s						
DAVOX	**Davos/Dischmat**	**116.44**	**319**	PKP	**PKiKP**	**17 17 55.5**	**+0.5**
	comp=Z,2.9nm,0.6s,baz=191,slow=7.5,SNR=6.2						
Y22D	**IRIS PASSCAL I**	**119.37**	**55**	P	**PKiKP**	**17 18 01.2**	**+0.2**
	baz=283						
ANMO	**Albuquerque**	**119.54**	**54**	*i* PKIKP	**PKPdf**	**17 17 56.3**	**-5.0**
EKA	**Eskdalemuir Ar**	**119.72**	**332**	PKP	**PKPdf**	**17 18 00.1**	**-0.7**
	comp=Z,1.1nm,0.5s,baz=30,slow=2.6,SNR=8.5						
ULM	**Lac du Bonnet**	**121.07**	**34**	PKP	**PKiKP**	**17 18 04.9**	**+1.3**
	comp=Z,1.4nm,0.4s,baz=35,slow=7.6,SNR=2.9						
TXAR	**Lajitas Array**	**123.09**	**59**	PKP	**PKiKP**	**17 18 09.6**	**+1.2**
	comp=Z,2.3nm,0.6s,baz=238,slow=1.0,SNR=25						
TXAR				PKKPbc	**PKKPbc**	**17 27 59.9**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=97,slow=5.0,SNR=3.6						
ESDC	**Sonseca Array**	**128.55**	**317**	PKP	**PKiKP**	**17 18 21.2**	**+2.3**
	comp=Z,0.3nm,0.5s,baz=146,slow=36,SNR=2.3						
PLCA	**Paso Flores**	**128.56**	**158**	PKP	**PKiKP**	**17 18 20.1**	**+1.2**
	comp=Z,3.0nm,0.6s,baz=222,slow=2.1,SNR=11						
MVO	**Moncorvo**	**129.84**	**320**	*e*tx	tx	17 21 37.9	
PCAB	**Cabril**	**130.18**	**321**	*e*tx	tx	17 21 38.9	
PGAV	**Gavieira, Arco**	**130.19**	**321**	*e*tx	tx	17 21 39.0	
POLO	**Lamas de Olo**	**130.21**	**320**	*e*tx	tx	17 21 39.1	
MTE	**Manteigas**	**130.57**	**319**	*e*tx	tx	17 21 40.9	
PVIS	**Viseu**	**130.63**	**320**	*e*tx	tx	17 21 40.8	
PCBR	**Castelo Branco**	**130.82**	**319**	*e*tx	tx	17 21 41.8	
PMRV	**Marv??o**	**130.98**	**318**	*e*tx	tx	17 21 41.6	
PBAR	**Barrancos**	**131.37**	**316**	*e*PP	PP	17 20 53.3	+11
PBAR				*e*tx	tx	17 21 44.1	
PCAS	**Casmilo, Conde**	**131.38**	**319**	*e*PP	PP	17 20 58.8	+17
PESTR	**Estremoz**	**131.40**	**317**	*e*PP	PP	17 20 59.1	+17
PSARD	**Sardoal**	**131.40**	**319**	*e*PP	PP	17 21 00.9	+19
PMTG	**Montargil**	**131.72**	**318**	*e*PP	PP	17 20 55.9	+12
EVO	**Evora**	**131.85**	**317**	*e*PP	PP	17 21 01.1	+16
MOE	**Montemor**	**132.08**	**318**	*e*PP	PP	17 21 01.9	+15
PVAQ	**Vaqueiros**	**132.22**	**316**	*e*PP	PP	17 21 03.8	+16
PCVE	**Castro Verde**	**132.33**	**316**	*e*PP	PP	17 21 00.0	+12
MESJ	**Messejana**	**132.34**	**317**	*e*PP	PP	17 20 59.8	+11
PARRA	**Arraiolos**	**132.39**	**318**	*e*PP	PP	17 20 58.6	+10
PTEO	**Sao Teotonio**	**132.84**	**317**	*e*PP	PP	17 21 09.3	+18
PFVI	**Vila Bisbo**	**133.12**	**316**	*e*PP	PP	17 21 10.4	+17
M65A	**Busby, Falmout**	**139.82**	**27**	P	**PKPdf**	**17 18 39.1**	**0.0**
	baz=324						
NNA	**Nana**	**145.95**	**123**	PKP2	**PKPab**	**17 18 52.3**	**+0.2**
CPUP	**Villa Florida**	**146.05**	**165**	PKPbc	**PKPab**	**17 18 52.3**	**+0.2**
	comp=Z,3.2nm,0.7s,baz=36,slow=2.0,SNR=28						
ITAB	**Concordia**	**146.13**	**174**	*e*P	**PKPdf**	**17 18 51.0**	**+0.2**
PTGB	**Pitanga**	**148.62**	**173**	*e*P	**PKPdf**	**17 18 54.9**	**-0.2**
OTAV	**Otavalo**	**149.04**	**101**	PKIKP	**PKPdf**	**17 18 58.3**	**+1.7**
OTAV	**Otavalo**	**149.04**	**101**	*e*P	**PKPdf**	**17 18 56.0**	**-0.6**
LPAZ	**La Paz**	**149.81**	**139**	PKP	**PKPdf**	**17 18 59.5**	**+1.6**
	comp=Z,21nm,1.1s,baz=334,slow=0.8,SNR=10						
LPAZ				PKPbc	**PKiKP**	**17 19 04.2**	**+0.6**
	comp=Z,35nm,1.0s,baz=52,slow=1.1,SNR=36						
SPB	**Sao Paulo**	**149.98**	**181**	*e*P	**PKPdf**	**17 18 57.2**	**0.0**
CZSB	**Cruzeiro do Su**	**151.61**	**120**	*e*P	**PKPdf**	**17 18 59.8**	**-0.2**
RPRD	**Ribas do Rio P**	**152.52**	**169**	*e*P	**PKPdf**	**17 19 01.8**	**+0.6**
ROSC	**El Rosal**	**153.83**	**92**	PKPbc	**PKiKP**	**17 19 12.3**	**+0.5**
	comp=Z,13nm,0.5s,baz=146,slow=20,SNR=5.0						
PTLB	**Pontes e Lacer**	**155.50**	**154**	*e*P	**PKPdf**	**17 19 06.2**	**+0.7**
IPMB	**Ipameri, GO**	**155.57**	**180**	*e*P	**PKPdf**	**17 19 04.9**	**-0.7**
SALV	**Santo Antonio**	**156.40**	**161**	*e*P	**PKPdf**	**17 19 06.8**	**+0.1**
SDV	**Santo Domingo**	**157.54**	**83**	*e*P	**PKPdf**	**17 19 08.3**	**-0.2**
BDFB	**Brasilia**	**157.90**	**180**	PKP	**PKPdf**	**17 19 09.6**	**+0.9**
	comp=Z,1.4nm,0.3s,baz=163,slow=5.3,SNR=5.1						
TEFE	**Tefe**	**160.66**	**121**	*e*P	**PKPdf**	**17 19 11.7**	**-0.2**
NPGB	**Novo Progresso**	**164.62**	**152**	*e*P	**PKPdf**	**17 19 16.2**	**+0.4**
SMTB	**Santa Maria do**	**164.63**	**182**	*e*P	**PKPdf**	**17 19 16.2**	**+0.4**
ITTB	**Itaituba**	**166.69**	**145**	*e*P	**PKPdf**	**17 19 17.9**	**+0.5**

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*DNK **10** 17:13:52.4±4.8, 71°.19N×11°.38W, h39^{km}±161^{km}, ML1.5*
*BER **10** 17:13:54.2±4.2, 71°.40N×11°.03W, h10^{km}, ML2.3, Mw3.6, ML1.5(DNK), Confirmed Earthquake*
ISC 10 17:13:51.7±2.1**, 71°.6N**±0°.1×**10°.87W**±0°.08**, h16**^{km}±20^{km}**, n16,** σ**2**^{s}**76**/27**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMI	**Jan Mayen**	**0.94**	**132**	*e*P	**Pn**	**17 14 09.9**	**-0.4**
JMI				*e*S	**Sg**	**17 14 21.7**	**-0.6**
JMI				IAML		17 14 23.2	
	comp=Z,105nm,0.3s						
JNW	**Jan Mayen West**	**0.95**	**123**	*e*P	**Pb**	**17 14 10.0**	**+0.1**
JNW				*e*S	**Sg**	**17 14 21.9**	**-0.8**
JNW				IAML		17 14 25.2	
	comp=Z,72nm,0.2s						
JMIC	**Jan Mayen**	**0.96**	**126**	*e*P	**Pb**	**17 14 10.0**	**+0.1**
JMIC				*e*S	**Sg**	**17 14 21.6**	**-1.3**
JMIC				*i* S	**Sg**	**17 14 21.6**	**-1.3**
JMIC				IAML		17 14 23.0	
	comp=Z,89nm,0.2s						
JMIC	**Jan Mayen**	**0.96**	**126**	*i* P	**Pb**	**17 14 09.7**	**-0.2**
JMIC				*i* S	**Sg**	**17 14 21.6**	**-1.3**
JNE	**Jan Mayen East**	**1.01**	**124**	*e*P	**Pg**	**17 14 10.8**	**-0.5**
JNE				*e*S	**Sg**	**17 14 22.9**	**-1.7**
JNE				IAML		17 14 26.6	
	comp=Z,92nm,0.2s						
DBG	**Daneborg**	**3.89**	**319**	*i* P	**Pn**	**17 14 53.5**	**+2.8**
DBG				*i* S	**Sn**	**17 15 32.8**	**-3.2**
DBG				IAML		17 15 35.1	
	comp=Z,3.4nm,0.4s						
DBG	**Daneborg**	**3.89**	**319**	*i* P	**Pn**	**17 14 53.5**	**+2.8**
DBG				*i* S	**Sn**	**17 15 32.8**	**-3.2**
DBG				IAML		17 15 35.1	
	comp=Z,3.4nm,0.4s						
DAG	**Danmarks Havn**	**5.64**	**341**	*i* P	**Pn**	**17 15 17.1**	**+2.4**
DAG				*i* S	**Sn**	**17 16 15.7**	**-3.3**
DAG				IAML		17 16 17.5	
	comp=Z,1.6nm,0.3s						
DAG	**Danmarks Havn**	**5.64**	**341**	*i* P	**Pn**	**17 15 17.1**	**+2.4**
DAG				*i* S	**Sn**	**17 16 15.7**	**-3.3**
DAG				IAML		17 16 17.5	
	comp=Z,1.6nm,0.3s						
HSPB	**Hornsund (broa**	**8.90**	**41**	*e*P	**Pn**	**17 16 03.2**	**+3.8**
BRBB	**Barentsburg B**	**9.17**	**34**	*e*P	Pn	17 16 08.0	+5.0
KBS	**Kingsbay**	**9.30**	**28**	*e*P	**Pn**	**17 16 08.6**	**+3.8**
KBS				*e*S	**Sn**	**17 17 45.3**	**-3.5**
KBS				IAML		17 17 46.7	
	comp=Z,2.3nm,0.6s						
KBS	**Kingsbay**	**9.30**	**28**	*i* P	**Pn**	**17 16 07.9**	**+3.1**
KBS				*i* S	**Sn**	**17 17 45.0**	**-3.8**
SPA0	**Spitsbergen Ar**	**9.60**	**34**	*e*P	**Pn**	**17 16 12.4**	**+3.5**
SPA0				IAML		17 17 49.2	
	comp=Z,1.3nm,0.9s						
NOR	**Nord**	**10.17**	**355**	*e*P	**Pn**	**17 16 17.2**	**+0.6**
NOR				*e*S	Sn	17 18 04.2	-6.0
HOPEN	**Hopen**	**10.87**	**47**	*e*P	**Pn**	**17 16 30.5**	**+4.3**

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*DJA **10** 17:14:48.6±2.2, 18°N±5°×14°8E±°, h13^{km}±16^{km}, M5.6/17, mb5.7/17, mB5.8/13, MLv6.0/1, Mw(mB)5.3/13, MwMwp5.0/1, Mwp5.3/1*
*MOS **10** 17:14:50.9±0.7, 17°.37N×147°.76E, h21^{km}, mb5.8/70, MS5.0/7, Error ellipse: s-maj=9.5km s-min=5.3km az=113.6*
*IDC **10** 17:14:54.0±2.4, 17°.40N×147°.79E, h31^{km}±16^{km}, mb5.2/38, mbtmp5.4/40, ML5.6/2, MS4.7/42, Error ellipse: s-maj=14.8km s-min=9.6km az=83.0*
*NEIC **10** 17:14:53.8±1.6, 17°.41N±0°.06×147°.76E±0°.10, h24^{km}±4^{km}, mb5.8/614, Mww5.4/37, Error ellipse: s-maj=13.2km s-min=9.0km az=89.0*
*BJI **10** 17:14:54.1, 17°.64N×147°.49E, h24^{km}, mB5.3/61, mb5.2/91, Ms5.0/92, Ms7 4.8/90*
*NEIC **10** 17:14:55.3, 17°.39N×147°.75E, h24^{km}*
*GCMT **10** 17:14:55.8±0.1, 17°.26N±0°.01×148°.03E±0°.01, h19^{km}, MW5.4/145, Moment Tensor Solution. s77,c118; s145,c268; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-1.35±.04; M$_{\theta\theta}$-0.13±.02; M$_{\phi\phi}$1.49±.02; M$_{r\theta}$-0.48±.05; M$_{\theta\phi}$-0.37±.01; M$_{\phi r}$-0.00±.04; Best double*

couple: $M_0$1.54800×10^{17} NP1:ϕ_s7.00000°,δ46.00000°, λ-62.00000°. NP2:ϕ_s149.00000°,δ50.00000°, λ-116.00000°. Principal axes: T 1.5730, Plg2.0000°, Azm257.0000°; N -0.0460, Plg20.0000°, Azm167.0000°; P -1.5220, Plg70.0000°, Azm353.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

*NEIC **10** 17:14:55.3, 17.09N×147.96E, h24km, Moment Tensor Solution. Duration: 2.8s Moment tensor: Scale 10^{17}Nm; M_{rr}-1.58; $M_{\theta\theta}$-0.04; $M_{\phi\phi}$1.62; $M_{r\theta}$-0.49; $M_{\theta\phi}$-0.23; $M_{\phi r}$0.59; Fault plane solution: $M_0$1.79000×10^{17} NP1:ϕ_s5.27000°, δ35.54000°,λ-68.44000°. NP2:ϕ_s159.37000°,δ57.27000°, λ-104.71000°. Principal axes: T 1.7799, Plg11.0000°, Azm260.0000°; N 0.0201, Plg12.0000°, Azm167.0000°; P -1.7999, Plg73.0000°, Azm31.0000°;*

ISC 10 17:14:53.7±0.4**, 17.38N**±0.03×**147.79E**±0.04**, h29**km±2km**, h30km:pP-P, n1196, σ1.49**/1046**, mb5.7**/413**, MS4.8**/79**, 19C-19D, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	4.71	217		Pn	17 16 03.1	+0.3
GUMO	Guam	4.71	217	Pn	Pn	17 16 02.5	-0.2
	395nm,0.3s,baz=106,slow=2.8,SNR=218						
GUMO				Sn	Sn	17 16 50.7	-5.6
	380nm,0.3s,baz=44,slow=23,SNR=6.6						
GUMO				LR	LR	17 18 02.9	
	comp=Z,9µm,20.1s,baz=44,slow=40						
	1µm,0.3s						
GUMO	Guam	4.71	217	P	Pn	17 16 03.0	+0.3
GUMO	Guam	4.71	217	P	Pn	17 16 03.1	+0.3
JCJ	Chichijima	10.97	333		Pn	17 17 27.3	-1.4
JCJ	Chichijima	10.97	333	Pn	Pn	17 17 26.9	-1.8
	25nm,0.3s,baz=284,slow=18,SNR=9.7						
JCJ				Sn	Sn	17 19 24.7	-5.8
	80nm,0.3s,baz=266,slow=22,SNR=5.9						
	243nm,0.8s						
JCJ	Chichijima	10.97	333	P	Pn	17 17 29.8	+1.1
PATS	Pohnpei	14.67	134		Pn	17 18 12.5	-6.9
PATS	Pohnpei	14.67	134	P	Pn	17 18 12.4	-6.9
H11S3	WAKE ISLAND Hy	18.02	84	P	Pn	17 18 57.4	-4.5
	baz=80,slow=18,SNR=25						
H11S1	WAKE ISLAND Hy	18.03	84	P	Pn	17 18 58.5	-3.5
H11S2	WAKE ISLAND Hy	18.03	84	P	Pn	17 18 59.2	-2.9
	baz=80,slow=18,SNR=36						
H11N1	WAKE ISLAND Hy	18.26	80	P	P	17 19 02.9	-1.9
	baz=257,slow=13,SNR=51						
H11N2	WAKE ISLAND Hy	18.26	80	P	P	17 19 02.7	-2.2
	baz=257,slow=13,SNR=33						
H11N3	WAKE ISLAND Hy	18.28	80	P	P	17 19 03.5	-1.5
	baz=257,slow=13,SNR=42						
JSG	Sagara	19.25	335	P	P	17 19 16.2	+0.5
JSG				IAmb	IAmb	17 19 22.6	
	comp=Z,549nm,0.8s						
JSG	Sagara	19.25	335	P	Pn	17 19 17.2	+0.4
MANU	Manus Island	19.30	181		Pn	17 19 18.0	+0.3
INU	Inuyama	20.31	334	P	Pn	17 19 28.6	-0.8
INU	Inuyama	20.31	334	P	Pn	17 19 29.5	+0.1
INU	Inuyama	20.31	334	S	Sn	17 23 16.5	-0.9
JOW	Kunigami	20.36	301		P	17 19 29.0	+1.0
JOW				IAmb	IAmb	17 19 31.2	
	comp=Z,318nm,0.7s						
JOW	Kunigami	20.36	301	P	P	17 19 28.4	+0.4
	comp=Z,304nm,0.7s,baz=134,slow=10.0,SNR=127						
JOW				S	S	17 23 11.7	-3.1
	comp=Z,8.6nm,0.7s,baz=90,slow=20,SNR=1.5						
JOW				LR	LR	17 26 57.5	
	comp=Z,3µm,19.6s,baz=127,slow=36						
	comp=Z,304nm,0.7s						
JOW	Kunigami	20.36	301	P	Pn	17 19 29.2	-0.9
JOW	Kunigami	20.36	301	S	Sn	17 23 17.5	-1.3
JGF	Kuroka	20.38	335		Pn	17 19 29.7	-0.7
JGF	Kuroka	20.38	335	P	Pn	17 19 30.2	-0.2
JGF	Kuroka	20.38	335	S	Sn	17 23 18.1	-1.2
JMN	Monobe	20.52	325		P	17 19 29.9	+0.3
JMN				IAmb	IAmb	17 19 37.2	
	comp=Z,324nm,0.9s						
JMN	Monobe	20.52	325	P	Pn	17 19 30.9	-1.1
MJAR	Matsushiro Arr	20.89	338	P	P	17 19 33.2	-0.4
	comp=Z,54nm,0.8s,baz=171,slow=11,SNR=78						
MJAR				S	S	17 23 07.5	-18
	comp=Z,6.1nm,0.4s,baz=156,slow=9.1,SNR=2.7						
	comp=Z,54nm,0.8s						
MAJO	Matsushiro	20.89	338		P	17 19 34.1	+0.5
MAJO				IAmb	IAmb	17 19 39.4	
	comp=Z,259nm,0.8s						
MAJO	Matsushiro	20.89	338	P	Pn	17 19 35.3	-0.9
MAJO	Matsushiro	20.89	338	S	S	17 23 27.7	+2.6
MAJO	Matsushiro	20.89	338	*i* P	P	17 19 34.5	+0.9
MJB9	Matsu-Tunnel	20.89	338		P	17 19 34.2	+0.5
MJB9				IAmb	IAmb	17 19 40.8	
	comp=Z,249nm,0.8s						
JAY	Jayapura	20.97	200	P	P	17 19 35.9	+1.2
	comp=Z,229nm,1.0s,baz=15,slow=5.0,SNR=16						
JAY				LR	LR	17 29 25.9	
	comp=Z,2µm,18.3s,baz=4.0,slow=42						
	comp=Z,229nm,1.0s						
JAY	Jayapura	20.97	200	P	Pn	17 19 36.8	-0.5
GENI	Genyem	21.22	201	P	P	17 19 39.7	+2.4
SMPI	Sarmi	21.23	206	P	P	17 19 39.9	+2.5
JMM	Marumori	21.32	345		P	17 19 39.3	+1.2
JMM				IAmb	IAmb	17 19 55.5	
	comp=Z,287nm,0.7s						
JMM	Marumori	21.32	345	P	P	17 19 40.5	+2.3
BAKI	Biak	21.75	213	P	P	17 19 44.7	+1.7
	comp=Z,2µmcomp=Z,163nm,0.9s						
JNU	Nakatsue	21.85	319		P	17 19 44.3	+0.3
JNU	Nakatsue	21.85	319	P	P	17 19 43.9	-0.2
	comp=Z,54nm,0.7s,baz=88,slow=8.0,SNR=29						
	comp=Z,54nm,0.7s						
JNU	Nakatsue	21.85	319	P	P	17 19 44.5	+0.5
RABL	Rabaul	21.86	168		P	17 19 44.5	+0.2
JSD	Sado	22.21	340	P	P	17 19 49.3	+1.5
JSD	Sado	22.21	340	S	S	17 23 53.7	+2.9
SRPI	Serui, Papua	22.26	212	P	P	17 19 50.1	+1.6
	comp=Z,165nm,0.9s						
RKPI	Ransiki, Papua	23.07	217	P	P	17 19 57.7	+0.6
JTU	Tsushima	23.70	320	P	P	17 20 04.0	+0.9
DAV	Davao City (W)	23.98	247	LR	LR	17 28 18.4	
	comp=Z,2µm,21.8s,baz=92,slow=34						
DAV	Davao City (W)	23.98	247	P	P	17 20 07.5	+1.6
DAV				S	S	17 24 21.0	-0.1
JTM	Tenmabayashi	24.04	347	Pn	P	17 20 07.6	+1.4
JTM	Tenmabayashi	24.04	347	P	P	17 20 07.8	+1.6
YOJ	Yonaguni jima	24.17	291		P	17 20 07.4	-0.2
YOJ	Yonaguni jima	24.17	291	P	P	17 20 07.6	0.0
YOJ	Yonaguni jima	24.17	291	P	P	17 20 07.4	-0.2
YOJ				pmax	pmax		
	comp=Z,117nm,0.7s						
SWI	Sorong	24.37	224	P	P	17 20 09.4	-0.1
	comp=Z,2µmcomp=Z,263nm,0.8s						
KMPI	Kaimana, Papua	25.11	215	P	P	17 20 16.2	0.0
	comp=Z,3µmcomp=Z,281nm,1.5s						
FAKI	Fak Fak	25.34	219		P	17 20 16.9	-1.4
FAKI	Fak Fak	25.34	219	P	P	17 20 18.0	-0.3
FAKI	Fak Fak	25.34	219	P	P	17 20 17.5	-0.8
	comp=Z,1µmcomp=Z,131nm,1.1s						
NACB	Ninganchiao	25.38	290	P	P	17 20 18.0	-0.6
NACB	Ninganchiao	25.38	290	P	P	17 20 18.5	-0.1
YULB	Yu-li	25.52	288	IAmb	IAmb	17 20 25.3	
	comp=Z,98nm,0.6s						
YULB	Yu-li	25.52	288	P	P	17 20 20.2	+0.3
TWGBT	Beinan	25.64	287	P	P	17 20 20.8	-0.2
YHNB	Yeheng	25.67	291	IAmb	IAmb	17 20 26.1	
	comp=Z,185nm,0.8s						
YHNB	Yeheng	25.67	291	P	P	17 20 21.2	-0.1
SSLB	Suanglung	25.89	289	IAmb	IAmb	17 20 25.3	
	comp=Z,206nm,0.8s						
SSLB	Suanglung	25.89	289	P	P	17 20 23.4	+0.1
TNTI	Ternate	26.00	233		P	17 20 23.3	-1.0
TGY	Tagaytay City	26.04	267	LR	LR	17 29 11.1	
	comp=Z,2µm,21.7s,baz=74,slow=33						
TPUB	Ta-pu	26.12	288	P	P	17 20 25.1	-0.2
TJN	Taejon	26.17	320	IAmb	IAmb	17 20 29.1	
	comp=Z,259nm,0.8s						
TJN	Taejon	26.17	320	P	P	17 20 25.2	-0.4
TJN	Taejon	26.17	320	*i* P	P	17 20 25.0	-0.6
KSRS	Korea Array	26.56	323	P	P	17 20 29.1	0.0
	comp=Z,33nm,0.7s,baz=160,slow=8.1,SNR=66						
KSRS				PcP	PcP	17 23 54.6	+1.4
	comp=Z,6.8nm,0.9s,baz=125,slow=2.0,SNR=5.0						
KSRS				ScP	ScP	17 27 29.5	-1.8
	comp=Z,1.8nm,0.9s,baz=75,slow=1.4,SNR=4.1						
	comp=Z,33nm,0.7s						
KSAR	Wonju Array Be	26.57	323		P	17 20 28.8	-0.4
KSAR	Wonju Array Be	26.57	323	P	P	17 20 28.8	-0.4
PMG	Port Moresby	26.62	181		P	17 20 30.0	+0.1
PMG				IAmb	IAmb	17 20 30.9	
	comp=Z,130nm,0.8s						
PMG	Port Moresby	26.62	181	LR	LR	17 30 52.5	
	comp=Z,881nm,20.3s,baz=330,slow=36						
PMG	Port Moresby	26.62	181	P	P	17 20 29.8	0.0
PMG	Port Moresby	26.62	181	P	P	17 20 29.9	+0.1
PMG	Port Moresby	26.62	181	P	P	17 20 30.0	+0.1
PMG				pmax	pmax		
	comp=Z,130nm,0.8s						
INCN	Inchon	27.34	321		P	17 20 36.0	-0.2
INCN	Inchon	27.34	321	P	P	17 20 36.1	-0.1
INCN				P	P	17 20 36.1	-0.1
INCN				S	S	17 25 19.9	+5.7
INCN				S	S	17 25 19.9	+5.7
INCN	Inchon	27.34	321	P	P	17 20 36.0	-0.1
INCN				pmax	pmax		
	comp=Z,117nm,1.0s						
SSE	Sheshan	27.75	304	P	P	17 20 39.2	-0.7
SSE				S	S	17 25 23.8	+3.0
SSE				pmax	pmax		
	comp=Z,34nm,0.7s						
SSE				pmax	pmax		
	comp=Z,97nm,4.5s						
SSE				LR	LR		
	comp=Z,220nm,15.9s						
SSE				LR	LR		
	comp=Z,770nm,16.1s						
QZH	Quanzhou	28.21	290	*e*P	P	17 20 46.5	+2.4
QZH				S	S	17 25 30.5	+2.4
QZH				LR	LR		
	comp=Z,840nm,13.2s						
QZH				LR	LR		
	comp=Z,1µm,17.2s						
QZH				LR	LR		
	comp=Z,2µm,17.7s						
SANI	Sanana	28.90	230	P	P	17 20 49.3	-0.9
PSTR	Posyet	29.05	334	*i* P	P	17 20 52.1	+0.8
HNR	Honiara	29.22	155	LR	LR	17 31 25.0	
	comp=Z,3µm,21.9s,baz=320,slow=34						
YSS	Yuzhno-Sakhali	29.78	353	*i* P	P	17 20 59.0	+1.2
USRK	Ussuriysk Ar.	29.87	337	P	P	17 20 59.8	+1.2
USRK	Ussuriysk Ar.	29.87	337	P	P	17 21 00.2	+1.6
	comp=Z,39nm,0.8s,baz=149,slow=8.9,SNR=52						
USRK				P3KPbc		17 52 58.6	
	comp=Z,2.9nm,0.9s,baz=344,slow=6.3,SNR=6.2						
	comp=Z,39nm,0.8s						
LUWI	Luwuk	30.70	236		P	17 21 04.4	-1.9
LUWI	Luwuk	30.70	236	P	P	17 21 04.8	-1.5
TOLI2	Tolitoli	31.09	242		P	17 21 08.4	-1.3
TOLI2	Tolitoli	31.09	242	P	P	17 21 09.2	-0.5
MYLDM	Lahad Datu	31.12	251		P	17 21 10.3	+0.3
MYLDM	Lahad Datu	31.12	251	P	P	17 21 11.2	+1.2
MDJ	Mudanjiang	31.17	334	P	P	17 21 11.5	+1.5
MDJ				pP	pP	17 21 17.8	+1.3
MDJ				S	S	17 26 17.8	+3.6
MDJ				pmax	pmax		
	comp=Z,79nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,670nm,7.2s						
MDJ				LR	LR		
	comp=Z,870nm,18.6s						
MDJ				LR	LR		
	comp=Z,1µm,17.9s						
MDJ				LR	LR		
	comp=Z,2µm,23.4s						
DL2	Dalian	31.30	319	P	P	17 21 11.0	-0.3
DL2				PcP	PcP	17 24 05.7	+0.6
DL2				S	S	17 26 17.0	+0.6
DL2				pmax	pmax		
	comp=Z,27nm,0.7s						
DL2				pmax	pmax		
	comp=Z,570nm,8.6s						
DL2				LR	LR		
	comp=Z,950nm,18.0s						
DL2				LR	LR		
	comp=Z,2µm,16.5s						
DL2				LR	LR		
	comp=Z,2µm,19.6s						
COEN	Coen	31.47	189	P	P	17 21 13.3	+0.4
	comp=Z,108nm,1.1s						
COEN	Coen	31.47	189	P	P	17 21 13.1	+0.1
HKPS	Hong Kong Po S	31.99	284	IAmb	IAmb	17 21 38.8	
	comp=Z,313nm,2.0s						
SNY	Shenyang	31.99	325	⇓P	P	17 21 17.0	-0.3
SNY				S	S	17 26 25.0	-2.1
SNY				pmax	pmax		
	comp=Z,36nm,1.2s						
SNY				pmax	pmax		
	comp=Z,220nm,5.0s						
SNY				LR	LR		
	comp=Z,1µm,15.9s						
SNY				LR	LR		
	comp=Z,1µm,21.8s						
SNY				LR	LR		
	comp=Z,2µm,19.2s						
CN2	Changchun	32.41	329	P	P	17 21 22.0	+1.1
CN2				PcP	PcP	17 24 08.3	+0.3
CN2				S	S	17 26 34.1	+0.6
CN2				pmax	pmax		
	comp=Z,30nm,0.8s						
CN2				pmax	pmax		
	comp=Z,400nm,7.0s						
CN2				LR	LR		
	comp=Z,1µm,20.0s						
CN2				LR	LR		
	comp=Z,2µm,20.0s						
CN2				LR	LR		
	comp=Z,2µm,20.0s						
GZH	Guangzhou	32.77	286	P	P	17 21 20.5	-3.8
GZH				S	S	17 26 36.2	-3.4
GZH				LR	LR		
	comp=Z,1µm,15.9s						
GZH				LR	LR		
	comp=Z,830nm,20.6s						
GZH				LR	LR		
	comp=Z,2µm,19.4s						
KKM	Kota Kinabalu	32.85	254		P	17 21 25.3	+0.1
KKM				IAmb	IAmb	17 21 41.6	
	comp=Z,166nm,1.0s						
KKM	Kota Kinabalu	32.85	254	P	P	17 21 25.8	+0.5
TIA	Tai'an	32.98	311	P	P	17 21 25.9	-0.2
TIA				pP	sP	17 21 34.0	-1.2
TIA				pmax	pmax		
	comp=Z,60nm,1.1s						
TIA				LR	LR		
	comp=Z,2µm,19.1s						
TIA				LR	LR		
	comp=Z,770nm,14.8s						
TIA				LR	LR		
	comp=Z,2µm,21.7s						
BNX	BinXian	32.99	333	⇓P	P	17 21 26.9	+0.9
BNX				S	S	17 26 44.0	+1.5
BNX				pmax	pmax		
	comp=Z,23nm,0.6s						
BNX				LR	LR		
	comp=Z,1µm,19.0s						
BNX				LR	LR		
	comp=Z,590nm,16.3s						
BNX				LR	LR		
	comp=Z,1µm,21.7s						
WHN	Wuhan	33.12	300	P	P	17 21 28.0	+0.7
WHN				PP	PP	17 22 42.1	-0.4
WHN				PcP	PcP	17 24 11.5	+1.3
WHN				S	S	17 26 44.5	-0.4
WHN				pmax	pmax		
	comp=Z,62nm,0.9s						
WHN				LR	LR		
	comp=Z,2µm,7.3s						
WHN				LR	LR		
	comp=Z,2µm,11.2s						
WHN				LR	LR		
	comp=Z,5µm,18.9s						
KDU	Kakadu	33.49	208	P	P	17 21 29.8	-0.9
	comp=Z,72nm,1.2s						
KDU	Kakadu	33.49	208	P	P	17 21 29.7	-0.9
TYV	Tymovskoe	33.66	354	*e*P	P	17 21 27.6	-4.2
TYV				*e*S	S	17 26 47.3	-5.4
TYV				pmax	pmax		
	comp=Z,28nm,1.5s						
TYV				pmax	pmax		
	comp=Z,300nm,2.3s						
TYV				smax	smax		
	comp=N,6.0nm,1.3s						
TYV				smax	smax		
	comp=E,4.0nm,1.3s						
TYV				smax	smax		
	comp=N,600nm,5.6s						
TYV				smax	smax		
	comp=E,600nm,5.6s						
CNSH	ChangSha	33.78	295	P	P	17 21 33.8	+0.6
CNSH				S	S	17 26 53.9	-1.4
CNSH				pmax	pmax		
	comp=E,13nm,0.8s						
CNSH				LR	LR		
	comp=E,930nm,15.4s						
CNSH				LR	LR		
	comp=E,500nm,14.1s						
CNSH				LR	LR		
	comp=E,870nm,17.9s						
DRS	Darwin Rock St	34.00	211	P	P	17 21 35.1	0.0
MTN	Manton Dam	34.24	210	IAmb	IAmb	17 21 38.9	
	comp=Z,76nm,0.6s						
MTN	Manton Dam	34.24	210	P	P	17 21 36.5	-0.7
	comp=Z,107nm,0.9s						
MTN	Manton Dam	34.24	210	P	P	17 21 36.8	-0.4
KLR	Kul'dur	34.33	341	P	P	17 21 38.3	+0.6
	comp=Z,112nm,0.7s,baz=152,slow=8.3,SNR=313						
	comp=Z,112nm,0.7s						
KLR	Kul'dur	34.33	341	*ce*P	P	17 21 38.6	+0.9
KLR				pmax	pmax		
	comp=Z,119nm,0.7s						
KLR	Kul'dur	34.33	341	*e*P	P	17 21 38.5	+0.9
HNS	HongShan	35.24	311	⇓P	P	17 21 45.5	-0.2
HNS				sP	pwP	17 22 01.0	-0.2
HNS				S	S	17 27 21.4	+3.8
HNS				pmax	pmax		
	comp=Z,140nm,0.8s						
HNS				pmax	pmax		
	comp=Z,330nm,6.3s						
HNS				LR	LR		
	comp=Z,830nm,17.3s						
HNS				LR	LR		
	comp=Z,1µm,16.1s						
HNS				LR	LR		
	comp=Z,1µm,16.7s						
BJT	Baijiatuau	35.45	316	P	P	17 21 48.5	+1.0
MTSU	Mount Surprise	35.46	186	P	P	17 21 48.1	+0.4
	comp=Z,124nm,0.8s						
MTSU	Mount Surprise	35.46	186	P	P	17 21 48.3	+0.6
BJI	Beijing	35.46	316	P	P	17 21 47.0	-0.5
BJI				S	S	17 27 19.2	-1.6
BJI				pmax	pmax		
	comp=Z,47nm,0.8s						
BJI				pmax	pmax		
	comp=Z,170nm,6.0s						
BJI				LR	LR		
	comp=Z,670nm,20.0s						
BJI				LR	LR		
	comp=Z,670nm,20.1s						
BJI				LR	LR		
	comp=Z,1µm,18.5s						
KAPI	Kappang	35.52	234		P	17 21 47.6	-0.7
KAPI				IAmb	IAmb	17 22 03.8	
	comp=Z,124nm,1.1s						
KAPI	Kappang	35.52	234	LR	LR	17 35 50.4	
	comp=Z,438nm,21.4s,baz=38,slow=35						
KAPI	Kappang	35.52	234	P	P	17 21 48.2	-0.1
KAPI				S	S	17 27 24.4	+2.1
KAPI	Kappang	35.52	234	P	P	17 21 47.6	-0.7
KAPI				pmax	pmax		
	comp=Z,124nm,1.1s						
GULI	GuiLin	35.65	289	P	P	17 21 51.1	+1.8
GULI				S	S	17 27 26.6	+2.5
GULI				pmax	pmax		
	comp=Z,100nm,1.3s						
GULI				LR	LR		
	comp=Z,600nm,15.2s						
GULI				LR	LR		
	comp=Z,900nm,18.9s						
GULI				LR	LR		
	comp=Z,1µm,18.4s						
BSSI	Bau Bau, Buton	35.69	231	P	P	17 21 49.4	-0.4
	comp=Z,1µmcomp=Z,107nm,1.2s						
LYN	LuoYang	35.84	305	⇓P	P	17 21 51.0	+0.1
LYN				PcP	PcP	17 24 19.2	+1.2
LYN				pmax	pmax		
	comp=Z,88nm,0.9s						
LYN				pmax	pmax		
	comp=Z,440nm,8.5s						
LYN				LR	LR		
	comp=Z,880nm,14.4s						
LYN				LR	LR		
	comp=Z,2µm,16.5s						
LYN				LR	LR		
	comp=Z,3µm,15.8s						
QIZ	Qiongzhong	36.04	279	IAmb	IAmb	17 21 55.2	
	comp=Z,258nm,1.9s						
QIZ	Qiongzhong	36.04	279	P	P	17 21 53.7	+0.9
QIZ				PP	PnPn	17 23 13.9	-0.3
QIZ				S	S	17 27 30.1	-0.2
QIZ				pmax	pmax		
	comp=Z,52nm,0.8s						
QIZ				pmax	pmax		
	comp=Z,380nm,5.6s						
QIZ				LR	LR		
	comp=Z,660nm,16.5s						
QIZ				LR	LR		
	comp=Z,1µm,20.6s						
BATI	Baumata	36.33	223	LR	LR	17 36 01.0	
	comp=Z,2µm,21.9s,baz=30,slow=35						
TV1H	Townsville Har	36.42	182	P	P	17 21 56.1	+0.2
PETK	Petropavlovsk-	36.49	10	PcP	PcP	17 24 20.3	+0.8
	comp=Z,18nm,1.1s,baz=120,slow=5.3,SNR=2.6						
PET	Petropavlovsk	36.57	11	P	P	17 21 57.2	+0.4
	comp=Z,48nm,2.0s						
EDFI	Ende, Flores	36.60	227	P	P	17 21 56.7	-1.0
HEH	HeiHe	36.65	338	*e*P	P	17 21 58.3	+0.7
HEH				pP	sP	17 22 05.8	-1.3
HEH				PcP	PcP	17 24 20.4	+0.3
HEH				S	S	17 27 39.9	+1.0
HEH				pmax	pmax		
	comp=Z,200nm,1.1s						
HEH				pmax	pmax		
	comp=Z,930nm,6.3s						
HEH				LR	LR		
	comp=Z,1µm,19.1s						
HEH				LR	LR		
	comp=Z,730nm,17.3s						
HEH				LR	LR		
	comp=Z,2µm,20.4s						
TIY	Taiyuan	37.02	310	*e*P	P	17 22 03.2	+2.2
TIY				S	S	17 27 41.1	-3.8
TIY				pmax	pmax		
	comp=Z,47nm,0.7s						
TIY				pmax	pmax		
	comp=Z,270nm,7.1s						
TIY				LR	LR		
	comp=Z,850nm,16.5s						
TIY				LR	LR		
	comp=Z,840nm,18.4s						
TIY				LR	LR		
	comp=Z,1µm,19.8s						
ENH	Enshi	37.14	297	P	P	17 22 02.5	+0.4
CTAO	Charters Tower	37.27	182		P	17 22 03.2	+0.2
CTAO	Charters Tower	37.27	182	P	P	17 22 03.4	+0.3
CTAO	Charters Tower	37.27	182	P	P	17 22 03.3	+0.2
CTAO				pmax	pmax		
	comp=Z,51nm,1.0s						
XLT	XiLinHaoTe	37.59	321	*e*P	P	17 22 07.2	+1.4
XLT				pP	sP	17 22 14.9	-0.2
XLT				PcP	PcP	17 24 24.4	+1.2
XLT				S	S	17 27 54.4	+0.8
XLT				ScS	ScS	17 32 18.4	+1.2
XLT				pmax	pmax		
	comp=Z,70nm,1.5s						
XLT				pmax	pmax		
	comp=Z,400nm,6.5s						
XLT				LR	LR		
	comp=Z,910nm,17.7s						
XLT				LR	LR		
	comp=Z,850nm,18.4s						
KNRA	Kununurra	37.83	211	IAmb	IAmb	17 22 24.4	
	comp=Z,127nm,0.9s						
KNRA	Kununurra	37.83	211	P	P	17 22 07.7	-0.2
	comp=Z,161nm,1.2s						
XAN	Xi'an	38.48	303	⇑P	P	17 22 13.5	+0.1
XAN				pmax	pmax		

	comp=Z,60nm,0.6s						
XAN				pmax	pmax		
	comp=Z,330nm,3.6s						
XAN				LR	LR		
	comp=Z,2µm,15.8s						
XAN				LR	LR		
	comp=Z,2µm,18.5s						
XAN				LR	LR		
	comp=Z,2µm,18.5s						
QIS	**Mount Isa**	**38.55**	**192**	P	**P**	**17 22 13.2**	**-0.8**
	comp=Z,84nm,1.1s						
QIS	**Mount Isa**	**38.55**	**192**	P	**P**	**17 22 14.0**	**+0.1**
HHC	**Hu-ho-hao-te**	**38.94**	**314**	*e*P	**P**	**17 22 17.7**	**+0.5**
HHC				S	**S**	**17 28 19.3**	**+5.2**
HHC				pmax	pmax		
	comp=Z,37nm,0.7s						
HHC				pmax	pmax		
	comp=Z,290nm,6.0s						
HHC				LR	LR		
	comp=Z,910nm,14.5s						
HHC				LR	LR		
	comp=Z,1µm,16.8s						
HHC				LR	LR		
	comp=Z,2µm,16.1s						
GYA	**Guiyang**	**39.07**	**291**	⇑P	**P**	**17 22 19.6**	**+1.1**
GYA				PcP	**PcP**	**17 24 29.9**	**+1.7**
GYA				S	**S**	**17 28 14.6**	**-1.8**
GYA				pmax	pmax		
	comp=Z,42nm,1.2s						
GYA				pmax	pmax		
	comp=Z,350nm,5.5s						
GYA				LR	LR		
	comp=Z,590nm,24.8s						
GYA				LR	LR		
	comp=Z,580nm,19.8s						
GYA				LR	LR		
	comp=Z,990nm,22.8s						
HIA	**Hailar**	**39.07**	**331**	IAmb	IAmb	17 22 20.1	
	comp=Z,145nm,0.7s						
WR8	**Warramunga Arr**	**39.33**	**200**		**P**	**17 22 20.3**	**-0.2**
WRAB	**Tennant Creek**	**39.36**	**200**	P	**P**	**17 22 20.7**	**0.0**
WRAB	**Tennant Creek**	**39.36**	**200**	P	**P**	**17 22 20.7**	**0.0**
WRAB				pmax	pmax		
	comp=Z,92nm,1.1s						
WRA	**Warramunga Arr**	**39.37**	**200**	P	**P**	**17 22 19.9**	**-1.0**
WRA	**Warramunga Arr**	**39.37**	**200**	P	**P**	**17 22 19.8**	**-1.0**
	comp=Z,52nm,0.9s,baz=31,slow=8.9,SNR=130						
WRA				PcP	**PcP**	**17 24 29.7**	**+0.7**
	comp=Z,5.9nm,0.5s,baz=19,slow=3.5,SNR=6.0						
WRA				ScP	**ScP**	**17 28 15.9**	**+0.2**
	comp=Z,7.1nm,1.2s,baz=25,slow=4.3,SNR=6.1						
WRA				LR	LR	17 39 55.9	
	comp=Z,855nm,20.7s,baz=16,slow=38						
	comp=Z,52nm,0.9s						
WRA	**Warramunga Arr**	**39.37**	**200**	*i* P	**P**	**17 22 21.3**	**+0.5**
WRA				pmax	pmax		
	comp=Z,40nm,0.9s						
PLAI	**Plampang**	**39.47**	**231**	P	**P**	**17 22 21.6**	**-0.2**
ZEA	**Zeya**	**39.64**	**341**	*e*P	**P**	**17 22 23.7**	**+1.0**
ZEA				pmax	pmax		
	comp=E,20nm,1.1s						
ZEA				pmax	pmax		
	comp=N,70nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,120nm,0.7s						
BTO	**Baotou**	**39.90**	**313**	*e*P	**P**	**17 22 27.1**	**+1.9**
BTO				pP	**sP**	**17 22 34.5**	**0.0**
BTO				sP	**pwP**	**17 22 39.5**	**-1.2**
BTO				PP	**PP**	**17 23 55.4**	**-1.8**
BTO				S	**S**	**17 28 32.6**	**+4.1**
BTO				pmax	pmax		
	comp=Z,140nm,0.7s						
BTO				pmax	pmax		
	comp=Z,360nm,5.4s						
BTO				LR	LR		
	comp=Z,810nm,16.3s						
BTO				LR	LR		
	comp=Z,2µm,16.3s						
BTO				LR	LR		
	comp=Z,3µm,19.2s						
KSM	**Kuching**	**40.09**	**251**		**P**	**17 22 26.4**	**-0.5**
KSM	**Kuching**	**40.09**	**251**	P	**P**	**17 22 26.7**	**-0.2**
SLVN	**Son La**	**41.50**	**283**		**P**	**17 22 39.4**	**+0.8**
SLVN	**Son La**	**41.50**	**283**	P	**P**	**17 22 39.8**	**+1.2**
JAGI	**Jajag, Banyuwa**	**42.01**	**235**	P	**P**	**17 22 41.4**	**-1.4**
CD2	**Chengdu**	**42.12**	**297**	P	**P**	**17 22 43.3**	**-0.2**
CD2				S	**S**	**17 28 59.3**	**-2.3**
CD2				sS	sS	17 29 11.7	-1.3
CD2				pmax	pmax		
	comp=Z,70nm,1.1s						
CD2				pmax	pmax		
	comp=Z,450nm,6.3s						
CD2				LR	LR		
	comp=Z,570nm,20.3s						
CD2				LR	LR		
	comp=Z,1µm,17.8s						
CD2				LR	LR		
	comp=Z,1µm,18.4s						
MA2	**Magadan**	**42.19**	**2**		**P**	**17 22 44.5**	**+0.8**
MA2				IAmb	IAmb	17 22 46.2	
	comp=Z,364nm,2.0s						
MA2	**Magadan**	**42.19**	**2**	P	**P**	**17 22 42.4**	**-1.2**
	comp=Z,42nm,0.9s,baz=166,slow=6.9,SNR=34						
	comp=Z,42nm,0.9s						
MA2	**Magadan**	**42.19**	**2**	P	**P**	**17 22 45.0**	**+1.3**
MA2	**Magadan**	**42.19**	**2**	*i* P	**P**	**17 22 44.8**	**+1.1**
MA2				pmax	pmax		
	comp=Z,153nm,1.9s						
MA2	**Magadan**	**42.19**	**2**	P	**P**	**17 22 43.7**	**0.0**
	comp=Z,2µmcomp=Z,98nm,1.6s						
INH	**Isangel**	**42.33**	**149**	P	**P**	**17 22 43.9**	**-1.3**
KMI	**Kunming**	**42.53**	**288**	⇓P	**P**	**17 22 48.3**	**+1.1**
KMI				S	**S**	**17 29 09.6**	**+1.4**
KMI				pmax	pmax		
	comp=Z,28nm,1.2s						
KMI				pmax	pmax		
	comp=Z,280nm,6.3s						
KMI				LR	LR		
	comp=Z,300nm,17.7s						
KMI				LR	LR		
	comp=Z,540nm,17.6s						
KMI				LR	LR		
	comp=Z,720nm,19.4s						
EIDS	**Eidsvold**	**42.61**	**176**		**P**	**17 22 47.0**	**-0.4**
EIDS	**Eidsvold**	**42.61**	**176**	P	**P**	**17 22 47.1**	**-0.4**
	comp=Z,27nm,1.1s						
EIDS	**Eidsvold**	**42.61**	**176**	P	**P**	**17 22 47.3**	**-0.1**
AS01	**Alice Springs**	**42.98**	**199**	P	**P**	**17 22 50.4**	**-0.1**
AS31	**Alice Springs**	**42.99**	**199**		**P**	**17 22 50.8**	**+0.2**
AS31	**Alice Springs**	**42.99**	**199**	P	**P**	**17 22 50.3**	**-0.3**
	comp=Z,12nm,0.7s						
ASAR	**Alice Springs**	**42.99**	**199**		**P**	**17 22 50.6**	**0.0**
ASAR	**Alice Springs**	**42.99**	**199**	P	**P**	**17 22 50.2**	**-0.4**
	comp=Z,8.6nm,0.7s,baz=22,slow=7.3,SNR=57						
ASAR				PcP	**PcP**	**17 24 42.0**	**+1.2**
	comp=Z,4.0nm,0.5s,baz=13,slow=3.1,SNR=4.6						
ASAR				ScP	**ScP**	**17 28 30.1**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=1.6,slow=6.1,SNR=3.6						
ASAR				LR	LR	17 40 59.8	
	comp=Z,1µm,22.0s,baz=33,slow=36						
	comp=Z,8.6nm,0.7s						
LZH	**Lanzhou**	**43.03**	**305**	*e*P	**P**	**17 22 51.3**	**+0.2**
LZH				pP	pP	17 22 56.7	-0.9
LZH				sP	sP	17 22 59.4	-0.9
LZH				PcP	**PcP**	**17 24 42.7**	**+1.7**
LZH				S	**S**	**17 29 13.5**	**-1.7**
LZH				pmax	pmax		
	comp=Z,140nm,1.6s						
LZH				pmax	pmax		
	comp=Z,210nm,4.1s						
LZH				LR	LR		
	comp=Z,1µm,14.0s						
LZH				LR	LR		
	comp=Z,1µm,16.8s						
LZH				LR	LR		
	comp=Z,2µm,14.9s						
DZM	**Mont Dzumac**	**43.25**	**154**		**P**	**17 22 53.4**	**+0.6**
DZM	**Mont Dzumac**	**43.25**	**154**	*e*P	**P**	**17 22 52.6**	**-0.2**
	comp=Z,186nm,1.2s						
DZM				*e*S	**S**	**17 29 17.0**	**-1.3**
	comp=Z,522nm,24.2s						
DZM				*e*SS	**SS**	**17 32 37.4**	**+5.0**
	comp=Z,2µm,29.6s						
DZM				*e*LR	LR	17 34 53.6	
	comp=Z,4µm,23.1s						
DZM	**Mont Dzumac**	**43.25**	**154**	LR	LR	17 38 05.5	
	comp=Z,2µm,21.6s,baz=351,slow=32						
DZM	**Mont Dzumac**	**43.25**	**154**	P	**P**	**17 22 53.1**	**+0.3**
PZH	**PanZhiHua**	**43.48**	**290**	⇓P	**P**	**17 22 55.0**	**+0.3**
PZH				S	**S**	**17 29 20.5**	**-1.3**
PZH				pmax	pmax		
	comp=Z,30nm,0.8s						
PZH				pmax	pmax		
	comp=Z,150nm,6.7s						
PZH				LR	LR		
	comp=Z,400nm,17.5s						
PZH				LR	LR		
	comp=Z,460nm,17.3s						
PZH				LR	LR		
	comp=Z,540nm,19.8s						
OUENC	**Ouen Island, N**	**43.73**	**154**	P	**P**	**17 22 57.2**	**+0.7**
QLP	**Quilpie**	**43.84**	**185**	P	**P**	**17 22 56.0**	**-1.3**
	comp=Z,209nm,0.9s						
QLP	**Quilpie**	**43.84**	**185**	P	**P**	**17 22 56.4**	**-0.9**
CIT	**Chita**	**43.84**	**330**	*e*P	**P**	**17 22 58.0**	**+0.8**
CIT				*e*		17 23 08.0	
CIT				*e*		17 24 38.6	
CIT				*e*		17 25 13.4	
CIT				*e*S	**S**	**17 29 28.6**	**+2.2**
CIT				pmax	pmax		
	comp=Z,340nm,1.9s						
KIWB	**Kanaga Island**	**44.13**	**31**		**P**	**17 23 00.4**	**+0.9**
ADK	**Adak**	**44.38**	**31**	P	**P**	**17 23 02.4**	**+1.0**
ADK				IAmb	IAmb	17 23 03.8	
	comp=Z,325nm,1.8s						
ADK	**Adak**	**44.38**	**31**	P	**P**	**17 23 02.7**	**+1.3**
ADK	**Adak**	**44.38**	**31**	P	**P**	**17 23 02.4**	**+1.0**
ADK				pmax	pmax		
	comp=Z,325nm,1.8s						
UGM	**Wanagama**	**44.59**	**239**	P	**P**	**17 23 04.1**	**+0.5**
ULN	**Ulaanbaatar**	**45.03**	**322**		**P**	**17 23 07.2**	**+0.2**
ULN	**Ulaanbaatar**	**45.03**	**322**	P	**P**	**17 23 07.8**	**+0.8**
ULN				P	**P**	**17 23 07.8**	**+0.8**
ULN				S	**S**	**17 29 45.0**	**+1.0**
ULN				S	**S**	**17 29 45.0**	**+1.0**
ULN	**Ulaanbaatar**	**45.03**	**322**	*i* P	**P**	**17 23 06.8**	**-0.1**
ULN				pmax	pmax		
	comp=Z,54nm,0.8s						
SONM	**Songino Array**	**45.41**	**321**	P	**P**	**17 23 10.4**	**+0.5**
SONM				IAmb	IAmb	17 23 13.3	
	comp=Z,71nm,0.6s						
SONM	**Songino Array**	**45.41**	**321**	P	**P**	**17 23 10.5**	**+0.6**
	comp=Z,62nm,0.6s,baz=138,slow=8.5,SNR=156						
SONM				PcP	**PcP**	**17 24 49.5**	**+0.7**
	comp=Z,6.3nm,0.5s,baz=148,slow=2.6,SNR=5.4						
SONM				PKPPKP	**P'P'df**	**17 54 41.5**	**-6.3**
	comp=Z,0.4nm,0.5s,baz=205,slow=6.6,SNR=3.7						
	comp=Z,62nm,0.6s						
SEY	**Seymchan**	**45.62**	**3**	P	**P**	**17 23 12.1**	**+1.0**
	comp=Z,15nm,0.8s,baz=173,slow=7.6,SNR=35						
	comp=Z,15nm,0.8s						
SEY	**Seymchan**	**45.62**	**3**	*ce*P	**P**	**17 23 12.5**	**+1.4**
SEY				pmax	pmax		
	comp=Z,104nm,2.7s						
ATKA	**Atka Island**	**45.81**	**32**		**P**	**17 23 13.1**	**+0.3**
ATKA	**Atka Island**	**45.81**	**32**	P	**P**	**17 23 13.5**	**+0.7**
MSVF	**Nonsavu**	**45.87**	**138**		**P**	**17 23 14.0**	**+0.2**
MSVF	**Nonsavu**	**45.87**	**138**	LR	LR	17 41 32.4	
	comp=Z,1µm,18.6s,baz=335,slow=35						
MSVF	**Nonsavu**	**45.87**	**138**	P	**P**	**17 23 14.7**	**+0.9**
MSVF	**Nonsavu**	**45.87**	**138**	P	**P**	**17 23 14.0**	**+0.2**
MSVF				pmax	pmax		
	comp=Z,48nm,1.0s						
CHTO	**Chiang Mai**	**46.34**	**280**		**P**	**17 23 17.5**	**0.0**
CHTO	**Chiang Mai**	**46.34**	**280**	P	**P**	**17 23 18.2**	**+0.7**
CHTO	**Chiang Mai**	**46.34**	**280**	P	**P**	**17 23 18.3**	**+0.8**
CHTO	**Chiang Mai**	**46.34**	**280**	P	**P**	**17 23 17.5**	**0.0**
CHTO				pmax	pmax		
	comp=Z,26nm,0.7s						
TNCH	**TengChong**	**46.36**	**288**	⇓P	**P**	**17 23 18.3**	**+0.5**
TNCH				S	**S**	**17 30 04.9**	**+1.1**
TNCH				SS	**SS**	**17 33 22.5**	**-7.1**
TNCH				pmax	pmax		
	comp=Z,71nm,0.7s						
TNCH				pmax	pmax		
	comp=Z,270nm,5.1s						
TNCH				LR	LR		
	comp=Z,330nm,17.0s						
TNCH				LR	LR		
	comp=Z,650nm,18.7s						
TNCH				LR	LR		
	comp=Z,2µm,18.6s						
CM31	**Chiang Mai Arr**	**46.38**	**279**	P	**P**	**17 23 18.1**	**+0.3**
CM31				IAmb	IAmb	17 23 20.0	
	comp=Z,76nm,0.8s						
CM31	**Chiang Mai Arr**	**46.38**	**279**	P	**P**	**17 23 18.4**	**+0.6**
CM31				P	**P**	**17 23 18.4**	**+0.6**
CMAR	**Chiang Mai Arr**	**46.38**	**279**	P	**P**	**17 23 19.3**	**+1.5**
	comp=Z,56nm,0.8s,baz=69,slow=6.5,SNR=5.9						
CMAR				LR	LR	17 42 08.5	
	comp=Z,473nm,21.4s,baz=80,slow=35						
	comp=Z,56nm,0.8s						
CMAR	**Chiang Mai Arr**	**46.38**	**279**	*i* P	**P**	**17 23 19.2**	**+1.5**
CMAR				pmax	pmax		
	comp=Z,59nm,0.8s						
YAK	**Yakutsk**	**46.39**	**348**		**P**	**17 23 17.6**	**+0.4**
YAK	**Yakutsk**	**46.39**	**348**	P	**P**	**17 23 17.4**	**+0.2**
	comp=Z,227nm,0.8s,baz=142,slow=1.7,SNR=148						
	comp=Z,227nm,0.8s						
YAK	**Yakutsk**	**46.39**	**348**	*d i*P	**P**	**17 23 17.6**	**+0.4**
YAK				*e**PP	**sP**	**17 23 26.6**	**+0.6**
YAK				*e*		17 24 48.6	
YAK				*e*		17 25 07.4	
YAK				*e*PPP	PPP	17 25 49.6	
YAK				*e*S	**S**	**17 30 01.3**	**-1.5**
YAK				*e*		17 33 06.2	
YAK				*e*SS	**SS**	**17 33 28.9**	**+0.3**
YAK				*e*SSS	SSS	17 34 31.4	
YAK				pmax	pmax		
	comp=Z,245nm,0.9s						
YAK				pmax	pmax		
	comp=N,56nm,1.1s						
YAK				pmax	pmax		
	comp=E,19nm,0.9s						
YAK				pmax	pmax		
	comp=Z,175nm,3.7s						
YAK				pmax	pmax		
	comp=N,128nm,3.8s						
YAK				pmax	pmax		
	comp=E,59nm,3.1s						
YAK				smax	smax		
	comp=E,263nm,4.3s						
YAK				smax	smax		
	comp=N,231nm,4.2s						
YAK				MLR	MLR		
	comp=Z,2µm,24.0s						
YAK				MLR	MLR		
	comp=N,766nm,23.0s						
YAK				MLR	MLR		
	comp=E,447nm,21.0s						
LEM	**Lembang**	**46.41**	**242**	LR	LR	17 42 11.7	
	comp=E,358nm,20.6s,baz=12,slow=35						
BBJI	**Bungbulang**	**46.72**	**241**	P	**P**	**17 23 19.4**	**-1.1**
GTA	**Gaotai**	**46.93**	**308**	*e*P	**P**	**17 23 23.0**	**+1.0**
GTA				pP	pP	17 23 29.7	+1.1
GTA				PcP	**PcP**	**17 24 55.9**	**+1.6**
GTA				S	**S**	**17 30 11.9**	**+0.5**
GTA				SS	**SS**	**17 33 29.7**	**-8.6**
GTA				pmax	pmax		
	comp=E,24nm,1.2s						
GTA				LR	LR		
	comp=E,1µm,17.8s						
GTA				LR	LR		
	comp=E,2µm,18.9s						
GTA				LR	LR		
	comp=E,2µm,18.5s						
MBWA	**Marble Bar**	**47.16**	**217**		**P**	**17 23 23.7**	**0.0**
MBWA				IAmb	IAmb	17 23 39.0	
	comp=Z,82nm,1.0s						
MBWA	**Marble Bar**	**47.16**	**217**	P	**P**	**17 23 24.5**	**+0.8**
	comp=Z,79nm,1.1s						
MBWA	**Marble Bar**	**47.16**	**217**	P	**P**	**17 23 24.7**	**+1.0**
MBWA	**Marble Bar**	**47.16**	**217**	P	**P**	**17 23 24.5**	**+0.8**
PSA00	**Pilbara Seismi**	**47.42**	**216**	P	**P**	**17 23 25.4**	**-0.3**
PSA00				IAmb	IAmb	17 23 41.9	
	comp=Z,103nm,1.2s						
PSA00	**Pilbara Seismi**	**47.42**	**216**	P	**P**	**17 23 26.9**	**+1.2**
BOD	**Bodaibo**	**47.51**	**336**	*e*P	**P**	**17 23 26.3**	**+0.3**
BOD				pmax	pmax		
	comp=Z,76nm,1.7s						
KULM	**Kulim**	**47.62**	**261**	P	**P**	**17 23 29.3**	**+1.7**
SRIT	**Nakonsritamara**	**47.65**	**266**	IAmb	IAmb	17 23 45.9	
	comp=Z,81nm,0.9s						
ARMA	**Armidale**	**47.66**	**176**	IAmb	IAmb	17 23 29.5	
	comp=Z,112nm,1.1s						
ARMA	**Armidale**	**47.66**	**176**	P	**P**	**17 23 28.1**	**+0.5**
ZAK	**Zakamensk**	**48.39**	**323**	*e*P	**P**	**17 23 33.6**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,48nm,0.9s						
CMSA	**Cobar Meteorol**	**48.68**	**182**	P	**P**	**17 23 35.2**	**-0.1**
IRK	**Irkutsk**	**48.71**	**326**	*e*P	**P**	**17 23 35.0**	**-0.4**
IRK				*e*S	**S**	**17 30 39.0**	**+2.9**
IRK				pmax	pmax		
	comp=Z,246nm,2.3s						
NIKH	**Nikolski High**	**48.98**	**33**	P	**P**	**17 23 37.8**	**+0.4**
NIKH	**Nikolski High**	**48.98**	**33**	P	**P**	**17 23 37.4**	**0.0**
	baz=240						
MNAI	**Manna**	**49.25**	**248**	P	**P**	**17 23 40.3**	**+0.2**
STKA	**Stephens Creek**	**49.33**	**187**	P	**P**	**17 23 39.4**	**-0.9**
	comp=Z,34nm,0.9s,baz=352,slow=8.2,SNR=33						
STKA				LR	LR	17 44 29.7	
	comp=Z,2µm,20.8s,baz=4.7,slow=36						
	comp=Z,34nm,0.9s						
STKA	**Stephens Creek**	**49.33**	**187**	P	**P**	**17 23 40.1**	**-0.2**
STKA	**Stephens Creek**	**49.33**	**187**	*i* P	**P**	**17 23 38.9**	**-1.4**
PSI	**Prapat**	**50.07**	**259**	LR	LR	17 43 51.6	
	comp=Z,1µm,21.9s,baz=98,slow=35						
PSI	**Prapat**	**50.07**	**259**	P	**P**	**17 23 47.9**	**+1.4**
GOMU	**GeErMu**	**50.23**	**303**	P	**P**	**17 23 49.5**	**+1.7**
GOMU				pP	pP	17 23 53.0	-1.4
GOMU				sP	sP	17 23 56.4	-0.7
GOMU				PcP	**PcP**	**17 25 07.3**	**+0.7**
GOMU				pmax	pmax		
	comp=Z,88nm,0.7s						
GOMU				LR	LR		
	comp=Z,840nm,17.7s						
GOMU				LR	LR		
	comp=Z,710nm,20.0s						
GOMU				LR	LR		
	comp=Z,1µm,17.7s						
MOY	**Mondy**	**50.25**	**324**	*e*P	**P**	**17 23 47.4**	**+0.1**
MOY				pmax	pmax		
	comp=Z,95nm,1.4s						
P08K	**Saint George I**	**50.53**	**29**	P	**P**	**17 23 49.8**	**+0.7**
	baz=237,SNR=5.2						
SPIA	**Saint Paul Isl**	**50.53**	**28**	P	**P**	**17 23 49.5**	**+0.4**
	baz=236						
LVA	**Lava Point**	**51.02**	**33**	IAmb	IAmb	17 23 54.4	
	comp=Z,103nm,0.8s						
KIP	**Kipapa**	**51.07**	**76**	P	**P**	**17 23 54.6**	**+0.9**
KIP				IAmb	IAmb	17 24 11.6	
	comp=Z,78nm,0.8s						
KIP	**Kipapa**	**51.07**	**76**	P	**P**	**17 23 54.7**	**+0.9**
KIP				pmax	pmax		
	comp=Z,78nm,0.8s						
AKUT	**Akutan**	**51.15**	**33**	IAmb	IAmb	17 24 11.4	
	comp=Z,121nm,1.2s						
AKUT	**Akutan**	**51.15**	**33**	P	**P**	**17 23 54.5**	**+0.7**
BBOO	**Buckleboo**	**51.15**	**193**	IAmb	IAmb	17 23 55.5	
	comp=Z,102nm,0.8s						
BBOO	**Buckleboo**	**51.15**	**193**	P	**P**	**17 23 54.1**	**0.0**
HTT	**Hallett**	**51.23**	**190**	P	**P**	**17 23 54.8**	**+0.1**
FORT	**Forrest**	**51.51**	**202**	IAmb	IAmb	17 24 15.0	
	comp=Z,95nm,0.7s						
FORT	**Forrest**	**51.51**	**202**	P	**P**	**17 23 57.6**	**+0.8**
GIRL	**Giralia**	**51.57**	**221**	P	**P**	**17 23 58.8**	**+1.4**
GSI	**Gunungsitoli**	**51.86**	**258**	P	**P**	**17 24 00.3**	**+0.5**
BILL	**Bilibino**	**51.99**	**9**	P	**P**	**17 24 00.5**	**+0.6**
BILL				IAmb	IAmb	17 24 02.3	
	comp=Z,249nm,1.5s						
BILL	**Bilibino**	**51.99**	**9**	*ce*P	**P**	**17 24 00.8**	**+0.8**
BILL				pmax	pmax		
	comp=Z,194nm,1.5s						
MEEK	**Meekatharra**	**52.13**	**214**	P	**P**	**17 24 01.6**	**0.0**
CAN	**Canberra**	**52.42**	**179**	IAmb	IAmb	17 24 05.9	
	comp=Z,115nm,1.1s						
CAN	**Canberra**	**52.42**	**179**	P	**P**	**17 24 04.4**	**+0.8**
CAN	**Canberra**	**52.42**	**179**	P	**P**	**17 24 05.0**	**+1.4**
CAN				pmax	pmax		
	comp=Z,102nm,1.4s						
CNB	**Canberra Magne**	**52.42**	**178**	P	**P**	**17 24 04.5**	**+0.9**
BRDH	**Bariadhala**	**52.77**	**286**	LR	LR	17 49 03.1	
	comp=Z,737nm,18.0s,baz=144,slow=39						
LSA	**Lhasa**	**52.90**	**294**	P	**P**	**17 24 09.7**	**+1.8**
POHA	**Pohakuloa**	**53.57**	**78**	P	**P**	**17 24 13.2**	**+0.5**
POHA				IAmb	IAmb	17 24 14.7	
	comp=Z,170nm,1.2s						
AIN	**Ainahou**	**53.69**	**78**	IAmb	IAmb	17 24 30.1	
	comp=Z,122nm,0.9s						
S12K	**Black Hills**	**53.76**	**33**	IAmb	IAmb	17 24 30.6	
	comp=Z,70nm,0.8s						
S12K	**Black Hills**	**53.76**	**33**	P	**P**	**17 24 13.2**	**0.0**
	baz=245						
HATHI	**Halema‘uma‘u T**	**53.87**	**78**	IAmb	IAmb	17 24 31.9	
	comp=Z,134nm,1.1s						
GAMB	**Gambell**	**53.95**	**21**	P	**P**	**17 24 15.4**	**+1.0**
	baz=230,SNR=11						
STCH	**Steam Cracks**	**54.00**	**78**	P	**P**	**17 24 16.2**	**+0.6**
M11K	**Mekoryuk**	**54.05**	**26**	P	**P**	**17 24 16.3**	**+1.1**
	baz=238						
JOKA	**Jonika Flow**	**54.10**	**78**	IAmb	IAmb	17 24 32.6	
	comp=Z,74nm,0.9s						
ARPS	**Mount Arapiles**	**54.15**	**186**	P	**P**	**17 24 16.5**	**+0.3**
SDPT	**Sand Point**	**54.45**	**33**	IAmb	IAmb	17 24 35.7	
	comp=Z,122nm,0.9s						
SDPT	**Sand Point**	**54.45**	**33**	P	**P**	**17 24 18.5**	**+0.3**
	baz=247,SNR=7.8						
KMBL	**Kambalda**	**54.48**	**207**	P	**P**	**17 24 18.8**	**0.0**
CHNA	**Chernabura Isl**	**54.72**	**34**	P	**P**	**17 24 20.9**	**+0.7**
	baz=248						
M13K	**Dall Lake**	**55.28**	**27**	IAmb	IAmb	17 24 27.3	
	comp=Z,129nm,1.1s						
M13K	**Dall Lake**	**55.28**	**27**	P	**P**	**17 24 25.6**	**+1.4**
	baz=241,SNR=10						
S14K	**Fog Glacier**	**55.29**	**33**	P	**P**	**17 24 25.0**	**+0.6**
	baz=247,SNR=8.7						
MORW	**Morawa**	**55.43**	**214**	IAmb	IAmb	17 24 27.7	
	comp=Z,120nm,0.9s						
MORW	**Morawa**	**55.43**	**214**	P	**P**	**17 24 25.8**	**+0.1**
K13K	**Kusilvak Mount**	**55.50**	**25**	IAmb	IAmb	17 24 28.5	
	comp=Z,152nm,1.1s						
K13K	**Kusilvak Mount**	**55.50**	**25**	P	**P**	**17 24 27.3**	**+1.5**
	baz=239,SNR=52						
O14K	**Tigyukauivet M**	**55.68**	**29**	P	**P**	**17 24 27.8**	**+0.8**
	baz=244,SNR=8.8						
N14K	**Kuskokwak Cree**	**55.79**	**28**	P	**P**	**17 24 28.8**	**+1.0**
	baz=243,SNR=7.0						
L14K	**Kuka Creek**	**56.02**	**26**	IAmb	IAmb	17 24 32.2	
	comp=Z,94nm,1.1s						
L14K	**Kuka Creek**	**56.02**	**26**	P	**P**	**17 24 30.9**	**+1.4**
	baz=241,SNR=36						
M14K	**Bethel**	**56.05**	**27**	P	**P**	**17 24 31.1**	**+1.5**
	baz=242,SNR=39						
O15K	**Ungalikthiuk R**	**56.31**	**29**	IAmb	IAmb	17 24 33.9	
	comp=Z,171nm,1.4s						
O15K	**Ungalikthiuk R**	**56.31**	**29**	P	**P**	**17 24 32.7**	**+1.1**
	baz=245,SNR=22						
BLDU	**Ballidu**	**56.32**	**212**	P	**P**	**17 24 32.1**	**+0.1**
TNA	**Tin City**	**56.33**	**20**	IAmb	IAmb	17 24 33.9	
	comp=Z,164nm,1.7s						
TNA	**Tin City**	**56.33**	**20**	P	**P**	**17 24 32.6**	**+1.0**
	baz=233,SNR=15						
J14K	**Nanvaranak Lak**	**56.36**	**25**	IAmb	IAmb	17 24 34.6	
	comp=Z,120nm,1.1s						
J14K	**Nanvaranak Lak**	**56.36**	**25**	P	**P**	**17 24 33.2**	**+1.3**
	baz=239						
M15K	**Kasigluk River**	**56.58**	**27**	P	**P**	**17 24 34.3**	**+0.8**
	baz=244,SNR=29						
KLBR	**Kellerberrin**	**56.59**	**211**	P	**P**	**17 24 33.9**	**0.0**
N15K	**Kwethluk River**	**56.61**	**28**	IAmb	IAmb	17 24 36.1	
	comp=Z,200nm,1.5s						
N15K	**Kwethluk River**	**56.61**	**28**	P	**P**	**17 24 35.2**	**+1.4**
	baz=244,SNR=35						
ANM	**Nome**	**56.64**	**22**	P	**P**	**17 24 35.5**	**+1.7**
	baz=236,SNR=7.4						
WMQ	**Urumqi**	**56.67**	**311**	*e*P	**P**	**17 24 36.3**	**+1.8**
WMQ				pP	pP	17 24 40.8	-0.5
WMQ				S	**S**	**17 32 26.7**	**+1.5**
WMQ				pmax	pmax		
	comp=Z,60nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,380nm,6.1s						
WMQ				LR	LR		
	comp=Z,990nm,19.3s						
WMQ				LR	LR		
	comp=Z,710nm,19.3s						
WMQ				LR	LR		

	comp=Z,560nm,20.7s						
L15K	Ungalak Mounta	56.68	26	P	P	17 24 35.0	+0.9
	baz=242,SNR=25						
EVN	Everest	56.75	292	IAmb	IAmb	17 24 42.5	
	comp=Z,226nm,1.9s						
R16K	Pilot Point	56.77	32	P	P	17 24 34.9	0.0
	baz=249						
F14K	Arctic Creek	56.82	21	P	P	17 24 36.6	+1.5
	baz=235,SNR=29						
K15K	Wolf Creek Mou	56.96	26	IAmb	IAmb	17 24 38.8	
	comp=Z,118nm,1.2s						
K15K	Wolf Creek Mou	56.96	26	P	P	17 24 37.5	+1.3
	baz=242,SNR=26						
RAO	Raoul Island	56.97	144	LR	LR	17 46 52.3	
	comp=Z,624nm,18.8s,baz=32,slow=34						
P16K	Nushagak River	57.12	30	P	P	17 24 38.5	+1.1
	baz=247						
CHIR	Chirikof Islan	57.19	34	P	P	17 24 38.3	+0.4
	baz=252						
O16K	Kokwok River B	57.30	29	P	P	17 24 39.4	+0.9
	baz=247,SNR=25						
N16K	Nishlik Lake	57.34	28	P	P	17 24 40.2	+1.3
	baz=246,SNR=50						
G15K	Niukluk	57.36	22	P	P	17 24 40.0	+1.2
	baz=238,SNR=15						
M16K	Timber Creek	57.48	28	P	P	17 24 41.0	+1.1
	baz=245,SNR=36						
F15K	North Star Dit	57.53	21	IAmb	IAmb	17 24 42.1	
	comp=Z,52nm,0.8s						
F15K	North Star Dit	57.53	21	P	P	17 24 41.5	+1.3
	baz=237,SNR=26						
L16K	Owhat River	57.55	27	IAmb	IAmb	17 24 42.5	
	comp=Z,208nm,1.9s						
L16K	Owhat River	57.55	27	P	P	17 24 41.2	+0.8
	baz=244,SNR=20						
Q16K	King Salmon	57.63	31	P	P	17 24 41.0	+0.1
	baz=249						
MUN	Mundaring	57.67	212	P	P	17 24 41.8	+0.3
OUZ	Omahuta	57.76	155	P	P	17 24 42.8	+0.7
J16K	Anvik River	57.80	25	IAmb	IAmb	17 24 44.9	
	comp=Z,70nm,0.8s						
J16K	Anvik River	57.80	25	P	P	17 24 43.9	+1.8
	baz=242,SNR=34						
O17K	Koliganek Bris	57.83	29	P	P	17 24 43.3	+1.0
	baz=248,SNR=31						
Q17K	Contact Creek	57.87	31	P	P	17 24 42.6	-0.1
	baz=250,SNR=12						
P17K	Kvichak River	57.93	30	P	P	17 24 43.3	+0.3
	baz=249,SNR=7.2						
NWAO	Narrogin (SRO)	57.93	210	P	P	17 24 43.7	+0.4
NWAO				IAmb	IAmb	17 24 45.0	
	comp=Z,67nm,0.9s						
NWAO	Narrogin (SRO)	57.93	210	LR	LR	17 53 42.8	
	comp=Z,388nm,18.1s,baz=57,slow=40						
NWAO	Narrogin (SRO)	57.93	210	P	P	17 24 44.4	+1.0
NWAO	Narrogin (SRO)	57.93	210	P	P	17 24 43.7	+0.4
NWAO	Narrogin (SRO)	57.93	210	P	P	17 24 43.7	+0.4
NWAO				pmax	pmax		
	comp=Z,67nm,0.9s						
I17K	Unalakleet	58.05	24	IAmb	IAmb	17 24 46.6	
	comp=Z,127nm,1.2s						
I17K	Unalakleet	58.05	24	P	P	17 24 45.4	+1.7
	baz=242,SNR=9.0						
N17K	Nushagak Hills	58.08	29	IAmb	IAmb	17 24 46.9	
	comp=Z,152nm,1.4s						
N17K	Nushagak Hills	58.08	29	P	P	17 24 45.6	+1.6
	baz=247,SNR=50						
G16K	Koyuk River	58.17	22	P	P	17 24 45.4	+0.8
	baz=239,SNR=9.0						
SII	Sitkinak Islan	58.18	34	P	P	17 24 46.1	+1.2
SII	Sitkinak Islan	58.18	34	P	P	17 24 46.0	+1.1
	baz=252						
L17K	Donlin	58.24	27	P	P	17 24 46.8	+1.6
	baz=245,SNR=31						
M17K	Holitna River	58.31	28	IAmb	IAmb	17 24 48.5	
	comp=Z,74nm,0.9s						
M17K	Holitna River	58.31	28	P	P	17 24 47.4	+1.7
	baz=246,SNR=43						
R18K	Karluk	58.36	32	P	P	17 24 45.8	-0.2
	baz=252						
Q18K	Katmai Hardscr	58.43	31	P	P	17 24 46.1	-0.6
	baz=250,SNR=38						
J17K	VABM Dome	58.46	25	P	P	17 24 48.5	+1.7
	baz=244,SNR=51						
K17K	Iditarod	58.49	26	P	P	17 24 48.6	+1.7
	baz=245						
P18K	Big Mountain,	58.58	30	P	P	17 24 47.3	-0.3
	baz=250,SNR=16						
N18K	Kilae Creek	58.73	29	IAmb	IAmb	17 24 51.3	
	comp=Z,97nm,1.2s						
N18K	Kilae Creek	58.73	29	P	P	17 24 50.0	+1.4
	baz=248,SNR=41						
O18K	Koktuh Hills	58.75	30	IAmb	IAmb	17 24 51.0	
	comp=Z,51nm,0.8s						
O18K	Koktuh Hills	58.75	30	P	P	17 24 49.5	+0.7
	baz=250,SNR=40						
C16K	Lisburne Hills	58.76	19	P	P	17 24 49.5	+0.9
	baz=235,SNR=51						
G17K	Kiwalik Mounta	58.84	22	P	P	17 24 50.7	+1.4
	baz=241,SNR=48						
H17K	Granite Mounta	58.84	23	IAmb	IAmb	17 24 52.0	
	comp=Z,80nm,0.8s						
H17K	Granite Mounta	58.84	23	P	P	17 24 50.9	+1.5
	baz=242,SNR=55						
OHAK	Old Harbor	58.85	33	IAmb	IAmb	17 24 51.6	
	comp=Z,132nm,1.5s						
OHAK	Old Harbor	58.85	33	P	P	17 24 50.4	+0.9
OHAK	Old Harbor	58.85	33	P	P	17 24 50.4	+0.9
	baz=253,SNR=7.2						
L18K	Granite Mounta	58.97	27	IAmb	IAmb	17 24 53.1	
	comp=Z,162nm,1.5s						
L18K	Granite Mounta	58.97	27	P	P	17 24 51.9	+1.7
	baz=247,SNR=48						
M18K	Stony River	59.06	28	P	P	17 24 52.4	+1.5
	baz=248,SNR=51						
F17K	Baldwin Pennin	59.10	21	P	P	17 24 52.5	+1.5
	baz=240,SNR=21						
ZSN	Zaisan	59.13	315	*e*P	P	17 24 52.2	+0.5
ZSN				*e*S	S	17 32 58.5	+1.3
ZSN				pmax	pmax		
	comp=Z,38nm,0.8s						
ZSN	Zaisan	59.13	315	*e*P	P	17 24 52.3	+0.5
	comp=Z,38nm,0.8s						
ZSN				*e*S	S	17 32 58.5	+1.3
D17K	Noatak River	59.14	20	P	P	17 24 52.5	+1.2
	baz=237,SNR=61						
Q19K	Cape Douglas,	59.19	31	IAmb	IAmb	17 24 51.9	
	comp=Z,45nm,0.7s						
Q19K	Cape Douglas,	59.19	31	P	P	17 24 51.4	-0.5
	baz=252,SNR=17						
E17K	Hotham Inlet	59.23	21	P	P	17 24 53.3	+1.4
	baz=239,SNR=19						
O19K	Port Alsworth	59.29	29	P	P	17 24 53.3	+0.8
	baz=250,SNR=7.2						
KDAK	Kodiak Island	59.38	32	P	P	17 24 53.7	+0.6
	baz=253						
RDOG	Red Dog Mine	59.39	19	IAmb	IAmb	17 24 55.4	
	comp=Z,45nm,0.8s						
RDOG	Red Dog Mine	59.39	19	P	P	17 24 54.2	+1.1
	baz=237,SNR=7.7						
N19K	Bonanza Creek	59.42	29	P	P	17 24 55.0	+1.5
	baz=250,SNR=45						
J18K	Innoko River	59.45	25	IAmb	IAmb	17 24 55.9	
	comp=Z,97nm,1.8s						
J18K	Innoko River	59.45	25	P	P	17 24 54.5	+0.9
	baz=246,SNR=27						
MOO	Moorlands	59.52	181	P	P	17 24 55.3	+1.1
H18K	Honhosa River	59.53	23	P	P	17 24 55.0	+0.9
	baz=244						
C17K	DeLong Mountai	59.54	19	P	P	17 24 55.3	+1.2
	baz=237,SNR=33						
P19K	Oil Pt	59.62	30	P	P	17 24 54.9	0.0
	baz=252,SNR=34						
Q20K	Shuyak Island	59.72	32	P	P	17 24 55.9	+0.5
	baz=253,SNR=18						
SYI	Shuyak Island	59.72	32	IAmb	IAmb	17 24 56.4	
	comp=Z,73nm,0.8s						
F18K	Selawik	59.73	22	P	P	17 24 56.4	+1.0
	baz=241,SNR=9.9						
L19K	White Mountain	59.75	27	IAmb	IAmb	17 24 58.1	
	comp=Z,83nm,1.2s						
L19K	White Mountain	59.75	27	P	P	17 24 56.8	+1.2
	baz=249,SNR=34						
G18K	Tagagawik	59.76	22	P	P	17 24 56.7	+1.0
	baz=243,SNR=82						
ILSW	Iliamna Southw	59.77	30	IAmb	IAmb	17 24 57.0	
	comp=Z,163nm,1.6s						
E18K	Tukpahlearik C	59.81	20	IAmb	IAmb	17 24 58.5	
	comp=Z,62nm,0.7s						
E18K	Tukpahlearik C	59.81	20	P	P	17 24 57.3	+1.4
	baz=240						
M19K	Big River Lodg	59.85	28	P	P	17 24 57.6	+1.3
	baz=249						
GCSA	Galena City Sc	59.92	24	P	P	17 24 57.4	+0.7
	baz=245,SNR=13						
TAU	Tasmania Unive	59.99	180	P	P	17 24 57.7	+0.3
O20K	Slope Mountain	60.05	30	P	P	17 24 57.7	-0.1
	baz=252,SNR=12						
RED	Redoubt Volcan	60.09	30	IAmb	IAmb	17 24 59.0	
	comp=Z,138nm,1.6s						
J19K	Poorman	60.11	25	IAmb	IAmb	17 25 00.5	
	comp=Z,60nm,0.8s						
J19K	Poorman	60.11	25	P	P	17 24 59.2	+1.1
	baz=247,SNR=95						
C18K	Utukok River	60.25	19	IAmb	IAmb	17 25 00.4	
	comp=Z,38nm,0.7s						
C18K	Utukok River	60.25	19	P	P	17 24 59.8	+0.7
	baz=239,SNR=50						
ZALV	Zalesovo Beam	60.27	323	P	P	17 24 59.4	+0.1
ZALV	Zalesovo Beam	60.27	323	P	P	17 24 59.6	+0.3
	comp=Z,145nm,0.6s,baz=103,slow=7.1,SNR=447						
ZALV				PcP	PcP	17 25 44.6	+0.2
	comp=Z,22nm,0.6s,baz=118,slow=2.7,SNR=5.1						
ZALV				LR	LR	17 53 08.9	
	comp=Z,923nm,18.8s,baz=99,slow=38						
ZALV				PKPPKP	P'P'df	17 54 18.6	-7.6
	comp=Z,0.5nm,0.4s,baz=266,slow=4.5,SNR=5.9						
	comp=Z,145nm,0.6s						
L20K	Farewell, AK	60.28	27	P	P	17 25 00.6	+1.2
	baz=249,SNR=32						
HOM	Homer	60.40	31	P	P	17 24 60.0	-0.1
	baz=253						
M20K	Styx River	60.40	28	P	P	17 25 01.6	+1.4
	baz=250						
H19K	Roundabout Mou	60.41	23	P	P	17 25 01.4	+1.3
	baz=245,SNR=85						
B18K	Kokolik River	60.44	18	P	P	17 25 01.7	+1.5
	baz=238,SNR=40						
G19K	Purcell Mounta	60.44	23	P	P	17 25 01.4	+1.1
	baz=244,SNR=102						
F19K	Shaleruckik Mo	60.50	22	P	P	17 25 01.2	+0.5
	baz=243,SNR=21						
K20K	Telida	60.51	26	P	P	17 25 02.5	+1.7
	baz=249						
N20K	Mount Spurr	60.60	29	P	P	17 25 01.8	+0.2
	baz=252						
SPCR	Spurr Chakacha	60.60	29	P	P	17 25 01.8	+0.3
	baz=252						
J20K	Nowinta River	60.78	25	P	P	17 25 04.5	+1.9
	baz=248,SNR=97						
BRLK	Bradley Lake	60.79	31	IAmb	IAmb	17 25 03.6	
	comp=Z,61nm,0.8s						
MK31	Makanchi Array	60.81	314	*ce*P	P	17 25 03.8	+0.6
MKAR	Makanchi Array	60.81	314	P	P	17 25 03.3	+0.1
MKAR	Makanchi Array	60.81	314	P	P	17 25 03.1	-0.1
	comp=Z,16nm,0.5s,baz=90,slow=9.0,SNR=177						
MKAR				PKPPKP	P'P'df	17 54 14.5	-11
	comp=Z,0.6nm,1.0s,baz=27,slow=8.4,SNR=4.7						
MKAR				PKP2bc		17 54 29.6	
	comp=Z,1.1nm,0.9s,baz=290,slow=5.0,SNR=3.9						
MKAR				P4KPbc		18 02 08.7	
	comp=Z,0.4nm,0.7s,baz=95,slow=6.1,SNR=3.9						
	comp=Z,16nm,0.5s						
MKAR	Makanchi Array	60.81	314	*i* P	P	17 25 03.5	+0.3
MKAR				pmax	pmax		
	comp=Z,16nm,0.5s						
BRSE	Bradley Lake S	60.86	31	P	P	17 25 03.3	0.0
	baz=254,SNR=14						
I20K	Naaghedeneel	60.88	24	P	P	17 25 05.0	+1.7
	baz=248,SNR=62						
CAPN	Captain Cook N	60.95	29	P	P	17 25 04.8	+1.0
	baz=253						
E19K	Redstone River	60.97	21	IAmb	IAmb	17 25 06.4	
	comp=Z,52nm,0.9s						
E19K	Redstone River	60.97	21	P	P	17 25 05.2	+1.2
	baz=243						
C19K	Lookout Ridge	60.98	19	P	P	17 25 05.5	+1.5
	baz=240,SNR=97						
H20K	Anotleneega Mo	61.00	24	P	P	17 25 05.5	+1.4
	baz=247,SNR=95						
MAKZ	Makanchi	61.02	314	P	P	17 25 04.9	+0.2
MAKZ				IAmb	IAmb	17 25 07.8	
	comp=Z,36nm,0.7s						
MAKZ	Makanchi	61.02	314	P	P	17 25 04.9	+0.2
MAKZ				pmax	pmax		
	comp=Z,36nm,0.7s						
A19K	Wainwright	61.10	18	P	P	17 25 06.2	+1.5
	baz=238						
SKT	Skwentna	61.15	28	P	P	17 25 05.1	-0.1
	baz=252,SNR=36						
PPLA	Purkeypile	61.15	27	P	P	17 25 06.5	+1.1
	baz=251,SNR=38						
D19K	Kuna River	61.15	20	P	P	17 25 06.1	+1.0
	baz=242						
SLKM	Skilak Lake	61.32	30	IAmb	IAmb	17 25 08.5	
	comp=Z,143nm,1.4s						
F20K	Avaraart Lake	61.32	22	P	P	17 25 07.7	+1.4
	baz=245,SNR=64						
SUA	Susitna One	61.35	29	P	P	17 25 06.6	-0.1
	baz=253						
CAST	Castle Rocks	61.37	26	IAmb	IAmb	17 25 08.9	
	comp=Z,76nm,0.8s						
CAST	Castle Rocks	61.37	26	P	P	17 25 07.7	+1.0
	baz=251,SNR=124						
CHUM	Lake Minchumin	61.43	26	P	P	17 25 08.5	+1.5
	baz=250,SNR=95						
O22K	Cooper Landing	61.55	30	P	P	17 25 08.3	+0.4
	baz=254,SNR=12						
SEW	Seward	61.58	30	IAmb	IAmb	17 25 09.7	
	comp=Z,116nm,1.2s						
SEW	Seward	61.58	30	P	P	17 25 08.5	+0.4
	baz=255,SNR=18						
IMAR	Indian Mountai	61.62	23	P	P	17 25 09.0	+0.7
E20K	Nigu River	61.68	21	P	P	17 25 10.0	+1.3
	baz=244						
RC01	Rabbit Creek A	61.71	29	P	P	17 25 08.9	-0.1
	baz=254,SNR=25						
M22K	Willow	61.72	29	P	P	17 25 08.9	-0.1
	baz=253,SNR=9.7						
D20K	Etivluk River	61.74	20	P	P	17 25 10.3	+1.1
	baz=244						
URZ	Urewera	61.81	154	LR	LR	17 52 38.7	
	comp=Z,1µm,18.1s,baz=41,slow=37						
URZ	Urewera	61.81	154	P	P	17 25 09.1	-0.8
CUT	Chulitna	61.84	28	P	P	17 25 09.7	-0.1
	baz=253						
H21K	Melozitna Rive	61.86	24	P	P	17 25 11.4	+1.4
	baz=249,SNR=148						
G21K	Allakaket	61.91	23	IAmb	IAmb	17 25 12.9	
	comp=Z,115nm,1.4s						
G21K	Allakaket	61.91	23	P	P	17 25 11.6	+1.3
	baz=248						
I21K	Tanana	62.01	25	P	P	17 25 12.5	+1.6
	baz=250						
BPAW	Bear Paw Mtn.	62.05	26	P	P	17 25 12.2	+0.9
	baz=251,SNR=140						
PMR	Palmer	62.13	29	IAmb	IAmb	17 25 13.1	
	comp=Z,96nm,1.3s						
PMR	Palmer	62.13	29	P	P	17 25 11.9	+0.1
	baz=254,SNR=6.7						
TRF	Thorofare Moun	62.15	27	IAmb	IAmb	17 25 13.5	
	comp=Z,90nm,0.9s						
TRF	Thorofare Moun	62.15	27	P	P	17 25 12.3	+0.1
	baz=252,SNR=58						
B20K	Meade River	62.17	19	P	P	17 25 13.2	+1.3
	baz=242,SNR=68						
F21K	Alatna River	62.19	22	IAmb	IAmb	17 25 14.6	
	comp=Z,82nm,1.6s						
F21K	Alatna River	62.19	22	P	P	17 25 13.2	+1.1
	baz=247,SNR=40						
QRZ	Quartz Range	62.30	159	IAmb	IAmb	17 25 15.0	
	comp=Z,88nm,1.0s						
QRZ	Quartz Range	62.30	159	P	P	17 25 14.0	+0.8
PWL	Port Wells	62.31	30	P	P	17 25 13.6	+0.5
	baz=256,SNR=68						
BKZ	Black Stump Fm	62.33	155	P	P	17 25 12.7	-0.7
KNK	Knik Glacier	62.39	29	IAmb	IAmb	17 25 15.3	
	comp=Z,89nm,1.0s						
KNK	Knik Glacier	62.39	29	P	P	17 25 14.1	+0.5
	baz=255,SNR=24						
MLY	Manley	62.46	25	IAmb	IAmb	17 25 16.3	
	comp=Z,113nm,1.0s						
MLY	Manley	62.46	25	P	P	17 25 15.1	+1.1
	baz=251,SNR=149						
H22K	Ishtalitna Cre	62.49	24	P	P	17 25 15.6	+1.3
	baz=250,SNR=48						
E21K	Killik River	62.51	21	P	P	17 25 15.5	+1.2
	baz=246,SNR=36						
C21K	Knifeblade Rid	62.53	20	P	P	17 25 15.8	+1.4
	baz=245,SNR=45						
P23K	Montague Islan	62.55	31	P	P	17 25 15.8	+1.2
	baz=257,SNR=16						
SML	Sawmill	62.55	29	P	P	17 25 15.2	+0.5
	baz=255,SNR=86						
SHLS	Shalkode	62.59	310	*e*P	P	17 25 13.7	-1.7
SHLS	Shalkode	62.59	310	*e*P	P	17 25 13.7	-1.7
WAT1	Susitna Watana	62.73	28	P	P	17 25 16.0	+0.2
	baz=254						
F22K	John River	62.77	22	P	P	17 25 17.6	+1.6
	baz=248,SNR=50						
B21K	Ikpikpuk River	62.79	19	IAmb	IAmb	17 25 17.9	
	comp=Z,51nm,0.8s						
B21K	Ikpikpuk River	62.79	19	P	P	17 25 17.1	+1.1
	baz=245,SNR=50						
G22K	Bettles	62.80	23	P	P	17 25 17.1	+0.9
	baz=250						
MCK	McKinley	62.81	27	IAmb	IAmb	17 25 18.7	
	comp=Z,89nm,1.2s						
MCK	McKinley	62.81	27	P	P	17 25 16.4	0.0
	baz=254,SNR=18						
M23K	Glacier View	62.83	29	P	P	17 25 17.0	+0.5
	baz=256,SNR=22						
MRNZ	Matariki Terra	62.89	159	P	P	17 25 16.2	-0.9
GLI	Glacier Island	62.90	30	P	P	17 25 17.7	+0.7
	baz=257,SNR=18						
UZB	Uzynbulak	62.91	310	*e*P	P	17 25 18.0	+0.4
UZB	Uzynbulak	62.91	310	*e*P	P	17 25 18.0	+0.4
A21K	Barrow	62.94	17	P	P	17 25 18.4	+1.3
	baz=242,SNR=8.9						
Q23K	Middleton Isla	62.95	32	P	P	17 25 18.8	+1.6
	baz=258						
NEA2	Nenana	63.00	26	IAmb	IAmb	17 25 19.7	
	comp=Z,168nm,1.7s						
NEA2	Nenana	63.00	26	P	P	17 25 17.6	0.0
	baz=253,SNR=48						
SCM	Sheep Creek Mo	63.02	29	P	P	17 25 18.7	+0.8
	baz=256,SNR=75						
WAT6	Susitna Watana	63.02	28	P	P	17 25 18.3	+0.4
	baz=255,SNR=68						
I23K	Minto, Yukon-K	63.05	25	P	P	17 25 19.0	+1.1
	baz=252,SNR=110						
D22K	Ayikyak River	63.11	21	IAmb	IAmb	17 25 20.6	
	comp=Z,62nm,0.7s						
D22K	Ayikyak River	63.11	21	P	P	17 25 19.8	+1.5
	baz=247,SNR=67						
E22K	Anaktuvuk Pass	63.13	21	P	P	17 25 19.8	+1.4
	baz=249,SNR=116						
KPKS	Kokpek	63.16	310	*e*P	P	17 25 19.6	+0.4
KPKS				*e*S	S	17 33 49.7	+0.9
KPKS	Kokpek	63.16	310	*e*P	P	17 25 19.6	+0.4
KPKS				*e*S	S	17 33 49.8	+0.9
H23K	Yukon River	63.19	24	P	P	17 25 20.1	+1.3
	baz=252,SNR=48						
TCW	Tory Channel	63.26	158	P	P	17 25 18.8	-0.7
MRZ	Mangatainoka R	63.26	157	IAmb	IAmb	17 25 21.7	
	comp=Z,60nm,1.0s						
THZ	Tophouse	63.26	159	IAmb	IAmb	17 25 26.3	
	comp=Z,136nm,1.9s						
A22K	Sinclair Lake	63.27	18	P	P	17 25 20.6	+1.3
	baz=244,SNR=24						
G23K	Bananza Creek	63.28	23	P	P	17 25 20.9	+1.4
	baz=251,SNR=75						
DHY	Denali Highway	63.31	27	IAmb	IAmb	17 25 21.7	
	comp=Z,112nm,1.3s						
DHY	Denali Highway	63.31	27	P	P	17 25 20.2	+0.3
	baz=255,SNR=40						
ZHN	Zhinishke	63.34	310	*e*P	P	17 25 20.8	+0.4
ZHN	Zhinishke	63.34	310	*e*P	P	17 25 20.9	+0.4
SATY	Saty	63.36	310	*e*P	P	17 25 20.9	+0.4
SATY				*e*S	S	17 33 52.0	+0.7
SATY	Saty	63.36	310	*e*P	P	17 25 21.0	+0.4
SATY				*e*S	S	17 33 52.1	+0.7
WRH	Wood River Hil	63.37	26	IAmb	IAmb	17 25 21.1	
	comp=Z,63nm,0.8s						
COLD	Coldfoot	63.39	23	IAmb	IAmb	17 25 22.8	
	comp=Z,156nm,1.5s						
COLD	Coldfoot	63.39	23	P	P	17 25 21.5	+1.4
	baz=251,SNR=61						
TDK	Taldyqorghan	63.40	312	*e*P	P	17 25 21.2	+0.6
TDK				pmax	pmax		
	comp=Z,40nm,0.8s						
TDK	Taldyqorghan	63.40	312	*e*P	P	17 25 21.2	+0.6
	comp=Z,40nm,0.8s						
B22K	Teshekpuk Lake	63.46	19	IAmb	IAmb	17 25 22.1	
	comp=Z,59nm,0.7s						
B22K	Teshekpuk Lake	63.46	19	P	P	17 25 21.5	+1.0
	baz=246,SNR=32						
EYAK	Cordova Ski Ar	63.48	30	IAmb	IAmb	17 25 39.3	
	comp=Z,75nm,0.9s						
EYAK	Cordova Ski Ar	63.48	30	P	P	17 25 21.9	+1.2
	baz=258,SNR=12						
SNZO	South Karori	63.50	158	P	P	17 25 20.2	-0.9
BFZ	Birch Farm	63.53	156	IAmb	IAmb	17 25 21.8	
	comp=Z,178nm,1.6s						
BFZ	Birch Farm	63.53	156	P	P	17 25 20.9	-0.4
CCB	Clear Creek Bu	63.54	26	IAmb	IAmb	17 25 22.3	
	comp=Z,90nm,1.4s						
KURK	Kurchatov	63.58	318	P	P	17 25 21.6	0.0
KURK				IAmb	IAmb	17 25 23.7	
	comp=Z,113nm,1.1s						
KURK	Kurchatov	63.58	318	P	P	17 25 22.3	+0.7
KURK				P	P	17 25 22.3	+0.7
KURK	Kurchatov	63.58	318	*ce*P	P	17 25 22.1	+0.5
KURK				pmax	pmax		
	comp=Z,254nm,1.7s						
COLA	College	63.58	25	P	P	17 25 21.3	-0.1
COLA	College	63.58	25	P	P	17 25 22.4	+1.0
COLA	College	63.58	25	*i* P	P	17 25 21.2	-0.2
COLA				pmax	pmax		
	comp=Z,40nm,0.8s						
COLA	College	63.58	25	P	P	17 25 21.3	-0.1
	baz=254						
KLU	Klutina	63.59	29	IAmb	IAmb	17 25 23.9	
	comp=Z,90nm,1.2s						
KLU	Klutina	63.59	29	P	P	17 25 22.7	+1.0
	baz=258,SNR=36						
M24K	Tolsona, Glenn	63.61	29	P	P	17 25 23.1	+1.3
	baz=257,SNR=19						
KURBB	Kurchatov Arra	63.62	318	P	P	17 25 22.2	+0.3
	comp=Z,101nm,0.7s,baz=98,slow=6.9,SNR=620						
KURBB				PKPPKP	P'P'df	17 54 14.2	-6.7
	comp=Z,0.9nm,0.3s,baz=279,slow=3.2,SNR=6.0						
KURBB				LR	LR	17 54 57.3	
	comp=Z,1µm,19.2s,baz=124,slow=38						
	comp=Z,101nm,0.7s						
INZ	Inchbonnie	63.65	161	IAmb	IAmb	17 25 22.6	
	comp=Z,64nm,1.0s						
D23K	Nanushuk River	63.82	21	P	P	17 25 24.6	+1.6
	baz=249,SNR=72						
POKR	Poker Plat Res	63.82	25	IAmb	IAmb	17 25 24.2	
	comp=Z,83nm,1.4s						
POKR	Poker Plat Res	63.82	25	P	P	17 25 23.0	0.0
	baz=254,SNR=8.8						
HDA	Harding Lake	63.83	26	IAmb	IAmb	17 25 23.3	
	comp=Z,43nm,0.8s						
HDA	Harding Lake	63.83	26	P	P	17 25 23.0	-0.1
	baz=255,SNR=36						
H24K	Noodor Dome	63.84	24	IAmb	IAmb	17 25 25.8	
	comp=Z,80nm,0.9s						
H24K	Noodor Dome	63.84	24	P	P	17 25 24.4	+1.2
	baz=254,SNR=82						
E23K	Chandalar	63.88	22	P	P	17 25 25.1	+1.7
	baz=251,SNR=120						
IL31		63.95	26	IAmb	IAmb	17 25 24.6	
	comp=Z,106nm,1.1s						
ILAR	Eielson Array	63.95	26	P	P	17 25 23.0	-0.9
ILAR	Eielson Array	63.95	26	P	P	17 25 23.1	-0.7
	comp=Z,41nm,0.9s,baz=257,slow=5.5,SNR=202						
ILAR				PKPPKP	P'P'df	17 54 10.0	-10
	comp=Z,0.3nm,0.4s,baz=218,slow=1.2,SNR=4.4						
	comp=Z,41nm,0.9s						
LTZ	Lake Taylor	63.97	160	P	P	17 25 23.7	-0.5
KAIM	Kayak Island	64.01	31	P	P	17 25 25.8	+1.5
	baz=260,SNR=15						
KHZ	Kahutara	64.06	159	P	P	17 25 23.3	-1.4
TOLK	Toolik Lake Re	64.08	21	P	P	17 25 26.2	+1.5
	baz=251,SNR=49						
BMRM	Bremner River	64.11	30	P	P	17 25 25.9	+0.9
	baz=259,SNR=33						
RAR	Rarotonga	64.12	125	LR	LR	17 50 37.4	
	comp=Z,668nm,18.4s,baz=290,slow=33						
PAX	Paxson	64.13	28	IAmb	IAmb	17 25 27.1	
	comp=Z,144nm,1.4s						

PAX	**Paxson**	64.13	28	P	P	17 25 25.8	+0.6
	baz=257,SNR=65						
HARP	**HAARP**	64.14	28	P	P	17 25 26.2	+1.0
	baz=258,SNR=26						
C23K	**Itkillik River**	64.15	20	P	P	17 25 26.5	+1.4
	baz=249,SNR=72						
HMT	**Hamilton**	64.16	31	IAmb	IAmb	17 25 27.7	
	comp=Z,133nm,1.3s						
K24K	**Donnelly Dome**	64.18	27	IAmb	IAmb	17 25 26.5	
	comp=Z,63nm,0.9s						
K24K	**Donnelly Dome**	64.18	27	P	P	17 25 25.9	+0.4
	baz=256,SNR=23						
N25K	**Chitina, Valde**	64.24	29	P	P	17 25 27.1	+1.1
	baz=259,SNR=32						
G24K	**Hadweenzic Riv**	64.25	24	P	P	17 25 27.1	+1.3
	baz=254,SNR=87						
E24K	**Your Creek**	64.28	22	IAmb	IAmb	17 25 28.2	
	comp=Z,50nm,0.8s						
E24K	**Your Creek**	64.28	22	P	P	17 25 27.3	+1.3
	baz=252,SNR=111						
F24K	**Squaw Lake**	64.33	23	P	P	17 25 27.9	+1.5
	baz=253,SNR=83						
MDOK	**Medeo**	64.36	310	*e*P	P	17 25 27.4	+0.3
MDOK				*e*S	S	17 34 04.4	+0.6
MDOK	**Medeo**	64.36	310	*e*P	P	17 25 27.5	+0.3
MDOK				*e*S	S	17 34 04.4	+0.6
OXZ	**Oxford**	64.38	161	P	P	17 25 24.9	-2.0
OXZ				IAmb	IAmb	17 25 40.6	
	comp=Z,38nm,0.7s						
GVZ	**Greta Valley S**	64.38	160	P	P	17 25 26.2	-0.7
RPZ	**Rata Peaks**	64.42	161	LR	LR	17 51 13.0	
	comp=Z,497nm,21.2s,baz=334,slow=34						
AAA	**Alma-Ata**	64.45	310	*e*P	P	17 25 28.2	+0.6
AAA				pmax	pmax		
	comp=Z,75nm,0.8s						
AAA	**Alma-Ata**	64.45	310	*e*P	P	17 25 28.2	+0.6
	comp=Z,75nm,0.8s						
D24K	**Happy Valley**	64.51	21	P	P	17 25 29.2	+1.7
	baz=251,SNR=96						
J25K	**Salcha River,**	64.55	26	P	P	17 25 27.5	-0.3
	baz=256,SNR=57						
RIDG	**Independent Ri**	64.57	27	P	P	17 25 28.5	+0.5
	baz=257,SNR=71						
BGLC	**Bering Glacier**	64.60	31	P	P	17 25 30.0	+1.8
	baz=261						
PRP	**Porcupine Dome**	64.70	25	P	P	17 25 27.4	-1.5
	baz=256,SNR=20						
C24K	**Franklin Bluff**	64.74	20	P	P	17 25 30.3	+1.4
	baz=251						
H25L	**Birch Creek**	64.77	24	P	P	17 25 30.4	+1.2
	baz=255,SNR=30						
G25K	**Bearman Lake**	64.79	24	P	P	17 25 30.7	+1.5
	baz=255,SNR=41						
CRQE	**Cirque**	64.80	30	P	P	17 25 30.6	+1.0
	baz=260,SNR=34						
DOT	**Dot Lake**	64.89	27	IAmb	IAmb	17 25 31.8	
	comp=Z,53nm,0.8s						
TGL	**Tana Glacier**	64.93	30	IAmb	IAmb	17 25 32.8	
	comp=Z,150nm,1.4s						
MCARA	**McCarthy VSAT**	64.94	30	IAmb	IAmb	17 25 32.6	
	comp=Z,80nm,1.0s						
MCARA	**McCarthy VSAT**	64.94	30	P	P	17 25 31.6	+1.2
	baz=260,SNR=21						
SCRK	**Sand Creek**	64.99	27	P	P	17 25 31.3	+0.5
	baz=258,SNR=101						
L26K	**Log Cabin Wild**	65.09	28	IAmb	IAmb	17 25 33.6	
	comp=Z,68nm,1.3s						
L26K	**Log Cabin Wild**	65.09	28	P	P	17 25 32.4	+1.0
	baz=259,SNR=23						
M26K	**Nabesna, AK**	65.13	29	P	P	17 25 32.7	+1.0
	baz=260,SNR=25						
F25K	**Christian Rive**	65.18	23	P	P	17 25 33.6	+1.7
	baz=255,SNR=105						
KSH	**Kashi**	65.25	306	P	P	17 25 36.1	+3.1
KSH				sP	pwP	17 25 46.4	-2.4
KSH				S	S	17 34 20.0	+5.1
KSH				pmax	pmax		
	comp=Z,44nm,0.8s						
KSH				pmax	pmax		
	comp=Z,370nm,7.7s						
KSH				LR	LR		
	comp=Z,710nm,16.8s						
KSH				LR	LR		
	comp=Z,630nm,19.9s						
KSH				LR	LR		
	comp=Z,620nm,18.9s						
MESA	**MESA**	65.27	31	P	P	17 25 34.3	+1.6
	baz=262,SNR=17						
J26L	**Joseph Creek**	65.28	26	P	P	17 25 33.2	+0.5
	baz=258,SNR=110						
E25K	**Arctic Village**	65.34	22	P	P	17 25 34.7	+1.7
	baz=255,SNR=66						
D25K	**Kavik River**	65.39	21	P	P	17 25 34.6	+1.3
	baz=253,SNR=111						
TKM2	**Tokmak 2**	65.42	310	P	P	17 25 36.0	+1.9
	SNR=18						
GRNC	**Granite Creek**	65.45	31	IAmb	IAmb	17 25 36.2	
	comp=Z,96nm,1.2s						
BMAR	**Burnt Mountain**	65.53	23	P	P	17 25 35.6	+1.4
I26K	**Coal Creek Min**	65.62	26	IAmb	IAmb	17 25 35.6	
	comp=Z,90nm,1.5s						
I26K	**Coal Creek Min**	65.62	26	P	P	17 25 34.5	-0.2
	baz=258,SNR=29						
M27K	**Edge Creek, AK**	65.64	29	IAmb	IAmb	17 25 37.4	
	comp=Z,135nm,1.6s						
M27K	**Edge Creek, AK**	65.64	29	P	P	17 25 36.1	+1.0
	baz=261,SNR=27						
CTG	**Chitna Glacier**	65.68	30	P	P	17 25 36.6	+1.2
	baz=262,SNR=33						
CTGM	**Chitina Glacie**	65.68	30	IAmb	IAmb	17 25 37.9	
	comp=Z,128nm,1.2s						
HYB	**Hyderabad**	65.70	282	*e*P	P	17 25 36.4	+0.2
HYB				*e*pP	pP	17 25 44.0	+0.9
HYB				*e*PcP	PcP	17 26 07.4	+0.1
HYB				*e*S	S	17 34 22.1	+1.3
G26K	**Porcupine Rive**	65.72	24	IAmb	IAmb	17 25 54.8	
	comp=Z,103nm,1.1s						
G26K	**Porcupine Rive**	65.72	24	P	P	17 25 37.2	+1.8
	baz=257,SNR=108						
F26K	**Sheenjek River**	65.76	23	P	P	17 25 37.5	+1.9
	baz=256,SNR=121						
L27K	**Beaver Creek,**	65.78	28	IAmb	IAmb	17 25 38.0	
	comp=Z,97nm,1.4s						
L27K	**Beaver Creek,**	65.78	28	P	P	17 25 36.8	+1.0
	baz=261,SNR=50						
BCAR	**Beaver Creek A**	65.79	28	P	P	17 25 35.8	-0.1
LOGN	**Logan Glacier**	65.82	31	IAmb	IAmb	17 25 38.8	
	comp=Z,111nm,1.3s						
K27K	**Chicken**	65.83	27	IAmb	IAmb	17 25 38.8	
	comp=Z,113nm,1.2s						
K27K	**Chicken**	65.83	27	P	P	17 25 37.6	+1.5
	baz=260,SNR=72						
PALK	**Pallekele**	66.04	270	LR	LR	17 52 05.9	
	comp=Z,576nm,21.8s,baz=78,slow=34						
PALK	**Pallekele**	66.04	270	P	P	17 25 39.1	+0.7
CHMS	**Chumysh**	66.04	310	P	P	17 25 39.4	+1.5
	SNR=12						
C26K	**Camden Bay**	66.05	20	P	P	17 25 39.5	+2.1
	baz=255,SNR=54						
PCA	**Pinnacle**	66.10	31	IAmb	IAmb	17 25 56.5	
	comp=Z,59nm,0.9s						
PINM	**Pinnacle**	66.10	31	P	P	17 25 39.0	+1.0
	baz=263,SNR=9.5						
BVCY	**Beaver Creek**	66.11	29	P	P	17 25 39.2	+1.2
	baz=262,SNR=6.4						
SGDS	**Sogindy**	66.11	310	*e*P	P	17 25 39.0	+0.6
FRU1	**Bishkek**	66.14	310	IAmb	IAmb	17 25 41.7	
	comp=Z,88nm,1.5s						
O28M	**Mount Upton**	66.21	31	IAmb	IAmb	17 25 57.8	
	comp=Z,60nm,0.8s						
O28M	**Mount Upton**	66.21	31	P	P	17 25 40.2	+1.3
	baz=263,SNR=44						
YUK3	**Moose Creek**	66.21	30	P	P	17 25 40.0	+1.1
	baz=262,SNR=47						
USP	**Ospenovka**	66.22	310	P	P	17 25 40.2	+1.2
	SNR=8.5						
AAK	**Ala-Archa**	66.24	309	P	P	17 25 40.7	+1.4
	SNR=11						
AAK	**Ala-Archa**	66.24	309	P	P	17 25 39.4	+0.1
AAK	**Ala-Archa**	66.24	309	P	P	17 25 40.0	+0.6
AAK				P	P	17 25 40.0	+0.6
AAK	**Ala-Archa**	66.24	309	*ce*P	P	17 25 40.8	+1.4
AAK				pmax	pmax		
	comp=Z,33nm,1.7s						
AAK	**Ala-Archa**	66.24	309	*i* P	P	17 25 40.0	+0.6
	SNR=11						
UCH	**Uchtor**	66.24	309	P	P	17 25 42.0	+2.3
	SNR=5.7						
I27K	**Kandik River**	66.31	25	P	P	17 25 39.8	+0.5
	baz=260,SNR=41						
C27K	**Jago River**	66.38	21	P	P	17 25 41.0	+1.5
	baz=256,SNR=39						
BCPM	**Bancas Point**	66.39	32	IAmb	IAmb	17 26 01.7	
	comp=Z,109nm,1.1s						
H27K	**Steamboat Moun**	66.46	25	IAmb	IAmb	17 25 42.6	
	comp=Z,118nm,1.2s						
H27K	**Steamboat Moun**	66.46	25	P	P	17 25 41.2	+1.1
	baz=259,SNR=112						
YUK8	**Steele Glacier**	66.48	30	P	P	17 25 42.1	+1.5
	baz=263,SNR=38						
PNL	**Peninsula**	66.48	32	P	P	17 25 41.7	+1.3
PNL	**Peninsula**	66.48	32	P	P	17 25 41.5	+1.1
	baz=264,SNR=8.4						
BTLS	**Baital**	66.49	312	*e*P	P	17 25 41.1	+0.4
BTLS				*e*S	S	17 34 30.4	+0.9
BTLS	**Baital**	66.49	312	*e*P	P	17 25 41.1	+0.4
BTLS				*e*S	S	17 34 30.5	+0.9
G27K	**Doyon Strip**	66.52	24	P	P	17 25 41.7	+1.2
	baz=259,SNR=45						
EKS2	**Erkin-Say**	66.77	309	P	P	17 25 43.4	+0.7
	SNR=15						
E27K	**Coleen River**	66.81	23	IAmb	IAmb	17 25 45.0	
	comp=Z,151nm,1.6s						
E27K	**Coleen River**	66.81	23	P	P	17 25 43.5	+1.2
	baz=259,SNR=51						
AML	**Almayashu**	66.86	309	P	P	17 25 44.5	+0.9
	SNR=28						
O29M	**Mount Kennedy**	66.96	31	P	P	17 25 45.3	+1.8
	baz=265,SNR=35						
I28M	**Miner Creek**	66.97	26	P	P	17 25 44.3	+0.8
	baz=261,SNR=63						
DAWY	**Dawson**	67.00	27	IAmb	IAmb	17 25 46.2	
	comp=Z,103nm,1.3s						
DAWY	**Dawson**	67.00	27	P	P	17 25 44.8	+1.1
	baz=262,SNR=38						
YUK4	**Talbot Arm**	67.02	30	P	P	17 25 46.0	+2.0
	baz=264,SNR=44						
YUK6	**Outpost Mounta**	67.12	31	P	P	17 25 46.4	+1.6
	baz=265,SNR=26						
M29M	**Somme Creek**	67.22	29	IAmb	IAmb	17 25 48.1	
	comp=Z,75nm,1.2s						
M29M	**Somme Creek**	67.22	29	P	P	17 25 46.7	+1.5
	baz=264,SNR=58						
D27M	**Malcolm River**	67.24	21	P	P	17 25 46.7	+1.6
	baz=259,SNR=35						
P29M	**Windy Craggy**	67.32	32	IAmb	IAmb	17 25 48.8	
	comp=Z,144nm,1.4s						
P29M	**Windy Craggy**	67.32	32	P	P	17 25 47.4	+1.7
	baz=266,SNR=24						
F28M	**Old Crow**	67.34	23	IAmb	IAmb	17 25 48.3	
	comp=Z,130nm,1.5s						
F28M	**Old Crow**	67.34	23	P	P	17 25 47.0	+1.2
	baz=260,SNR=54						
BRZS	**Berezniki**	67.35	317	*e*P	P	17 25 46.6	+0.5
BRZS				*e*S	S	17 34 40.9	+1.2
BRZS	**Berezniki**	67.35	317	*e*P	P	17 25 46.7	+0.5
BRZS				*e*S	S	17 34 41.0	+1.2
L29M	**L29M**	67.45	28	P	P	17 25 48.2	+1.7
	baz=264,SNR=83						
HYT	**Haines Junctio**	67.53	31	P	P	17 25 48.9	+1.7
	baz=265,SNR=60						
E28M	**Babbage River**	67.63	22	IAmb	IAmb	17 25 50.6	
	comp=Z,56nm,1.1s						
E28M	**Babbage River**	67.63	22	P	P	17 25 48.9	+1.4
	baz=260,SNR=65						
I29M	**Ogilvie Camp,**	67.63	26	IAmb	IAmb	17 25 49.8	
	comp=Z,182nm,1.6s						
I29M	**Ogilvie Camp,**	67.63	26	P	P	17 25 48.4	+0.8
	baz=263,SNR=63						
H29M	**Whitestone**	67.72	25	P	P	17 25 49.2	+1.1
	baz=262,SNR=47						
P30M	**Million Dollar**	67.75	32	P	P	17 25 50.0	+1.6
	baz=266,SNR=32						
N30M	**Aishikik Lake**	67.78	30	IAmb	IAmb	17 25 51.6	
	comp=Z,93nm,1.3s						
N30M	**Aishikik Lake**	67.78	30	P	P	17 25 50.2	+1.5
	baz=266,SNR=36						
K29M	**Barlow Dome**	67.80	27	IAmb	IAmb	17 25 51.6	
	comp=Z,132nm,1.4s						
K29M	**Barlow Dome**	67.80	27	P	P	17 25 50.3	+1.5
	baz=264,SNR=42						
NIL	**Nilore**	67.91	300	P	P	17 25 50.2	+0.2
NIL	**Nilore**	67.91	300	P	P	17 25 50.2	+0.2
NIL				pmax	pmax		
	comp=Z,122nm,0.9s						
G29M	**Pine Creek**	67.95	24	P	P	17 25 50.9	+1.4
	baz=262,SNR=67						
S31K	**Pelican**	68.00	34	IAmb	IAmb	17 25 52.6	
	comp=Z,106nm,1.6s						
S31K	**Pelican**	68.00	34	P	P	17 25 51.1	+1.1
	baz=268						
PLBC	**Pleasant Camp**	68.01	32	P	P	17 25 51.5	+1.5
	baz=267,SNR=23						
D28M	**Stokes Point**	68.04	22	P	P	17 25 51.3	+1.3
	baz=261,SNR=5.4						
E29M	**Blow River**	68.20	23	P	P	17 25 52.1	+1.0
	baz=262,SNR=34						
O30N	**Mendenhall**	68.22	31	P	P	17 25 52.6	+1.2
	baz=267,SNR=23						
J30M	**Hart River**	68.39	27	IAmb	IAmb	17 25 55.1	
	comp=Z,158nm,1.6s						
J30M	**Hart River**	68.39	27	P	P	17 25 53.7	+1.2
	baz=265,SNR=61						
EPYK	**Eagle Plains**	68.40	25	IAmb	IAmb	17 25 54.7	
	comp=Z,148nm,1.4s						
EPYK	**Eagle Plains**	68.40	25	P	P	17 25 53.3	+0.9
	baz=264,SNR=45						
N31M	**Braeburn, Yuko**	68.41	30	P	P	17 25 54.2	+1.6
	baz=267,SNR=25						
I30M	**Mount Dempster**	68.42	26	P	P	17 25 53.5	+0.8
	baz=265,SNR=28						
SIT	**Sitka**	68.47	35	P	P	17 25 53.7	+0.8
	baz=269						
MAYO	**Mayo, Yukon**	68.50	28	P	P	17 25 54.7	+1.6
	baz=266,SNR=6.0						
SKAG	**Skagway**	68.53	32	IAmb	IAmb	17 25 56.2	
	comp=Z,143nm,1.6s						
SKAG	**Skagway**	68.53	32	P	P	17 25 54.9	+1.6
	baz=268,SNR=14						
DZA	**Taraz**	68.55	310	*e*P	P	17 25 54.3	+0.5
DZA	**Taraz**	68.55	310	*e*P	P	17 25 54.3	+0.5
G30M	**tAoh Zraii Nji**	68.66	24	IAmb	IAmb	17 25 56.0	
	comp=Z,127nm,1.4s						
G30M	**tAoh Zraii Nji**	68.66	24	P	P	17 25 54.9	+0.9
	baz=264,SNR=53						
BESE	**Bessie Mountai**	68.75	33	IAmb	IAmb	17 25 57.5	
	comp=Z,106nm,1.4s						
BVAR	**Borovoye Array**	68.75	321	P	P	17 25 55.4	+0.5
	comp=Z,204nm,0.6s,baz=93,slow=7.7,SNR=1192						
BVAR				LR	LR	17 58 47.4	
	comp=Z,944nm,19.1s,baz=85,slow=38						
	comp=Z,204nm,0.6s						
WHY	**Whitehorse**	68.81	31	P	P	17 25 56.4	+1.2
	baz=268,SNR=36						
BRVK	**Borovoye**	68.82	321	P	P	17 25 55.5	+0.3
BRVK	**Borovoye**	68.82	321	P	P	17 25 56.7	+1.5
BRVK				P	P	17 25 56.7	+1.5
BRVK	**Borovoye**	68.82	321	*ce*P	P	17 25 56.0	+0.8
BRVK				pmax	pmax		
	comp=Z,199nm,0.8s						
S32K	**Killisnoo**	68.88	34	P	P	17 25 56.5	+1.1
	baz=269,SNR=9.0						
F30M	**Barrier River**	68.89	24	P	P	17 25 56.7	+1.2
	baz=264,SNR=81						
R32K	**Eaglecrest**	68.92	34	P	P	17 25 57.2	+1.4
	baz=269,SNR=6.8						
M31M	**Drury Creek, Y**	69.10	29	IAmb	IAmb	17 25 59.3	
	comp=Z,144nm,1.7s						
M31M	**Drury Creek, Y**	69.10	29	P	P	17 25 57.9	+1.0
	baz=268,SNR=28						
KK31	**Karatay Array**	69.14	310	IAmb	IAmb	17 26 00.3	
	comp=Z,48nm,0.8s						
KKAR	**Karatay Array**	69.14	310	P	P	17 25 57.3	-0.1
KKAR	**Karatay Array**	69.14	310	IAmb	IAmb	17 26 00.3	
	comp=Z,50nm,0.8s						
KKAR	**Karatay Array**	69.14	310	P	P	17 25 57.3	-0.1
H31M	**Peel River**	69.32	26	P	P	17 25 59.0	+0.8
	baz=266,SNR=64						
P32M	**Atlin**	69.36	32	IAmb	IAmb	17 26 01.2	
	comp=Z,79nm,1.4s						
P32M	**Atlin**	69.36	32	P	P	17 25 59.7	+1.2
	baz=269,SNR=13						
G31M	**Satah River**	69.42	24	P	P	17 25 59.4	+0.7
	baz=266,SNR=66						
FARO	**Faro, Yukon**	69.59	29	IAmb	IAmb	17 26 02.2	
	comp=Z,86nm,1.6s						
FARO	**Faro, Yukon**	69.59	29	P	P	17 26 00.9	+1.0
	baz=269,SNR=11						
BRLS	**Borolday**	69.64	310	*e*P	P	17 26 01.9	+1.4
BRLS	**Borolday**	69.64	310	*e*P	P	17 26 01.9	+1.4
F31M	**Tsiigehtchic**	69.66	24	IAmb	IAmb	17 26 01.8	
	comp=Z,89nm,1.2s						
F31M	**Tsiigehtchic**	69.66	24	P	P	17 26 00.7	+0.5
	baz=266,SNR=10						
GAR	**Garm**	69.67	306	IAmb	IAmb	17 26 02.8	
	comp=Z,83nm,1.2s						
U33K	**Whale Pass**	69.68	36	IAmb	IAmb	17 26 03.2	
	comp=Z,160nm,1.6s						
U33K	**Whale Pass**	69.68	36	P	P	17 26 01.9	+1.4
	baz=271,SNR=8.0						
CRAG	**Craig**	69.70	37	P	P	17 26 01.2	+0.6
	baz=271						
N32M	**Quiet Lake**	69.70	31	P	P	17 26 01.9	+1.3
	baz=269						
T33K	**Petersburg**	69.77	35	P	P	17 26 01.9	+1.0
	baz=271						
INK	**Inuvik**	69.80	23	IAmb	IAmb	17 26 02.7	
	comp=Z,109nm,1.3s						
INK	**Inuvik**	69.80	23	P	P	17 26 01.4	+0.4
	baz=266,SNR=37						
P33M	**Teslin, Yukon**	69.82	32	IAmb	IAmb	17 26 03.9	
	comp=Z,111nm,1.6s						
P33M	**Teslin, Yukon**	69.82	32	P	P	17 26 02.5	+1.1
	baz=270,SNR=23						
CHM	**Chimkent**	69.87	309	*e*P	P	17 26 02.5	+0.5
CHM	**Chimkent**	69.87	309	*e*P	P	17 26 02.5	+0.5
Q32M	**Nakina River**	70.10	33	IAmb	IAmb	17 26 06.4	
	comp=Z,121nm,1.6s						
Q32M	**Nakina River**	70.10	33	P	P	17 26 04.9	+1.6
	baz=271,SNR=12						
WRAK	**Wrangell Islan**	70.11	36	IAmb	IAmb	17 26 05.8	
	comp=Z,100nm,1.4s						
WRAK	**Wrangell Islan**	70.11	36	P	P	17 26 04.6	+1.5
	baz=272,SNR=7.2						
V35K	**Ketchikan**	70.56	37	IAmb	IAmb	17 26 09.1	
	comp=Z,117nm,1.6s						
V35K	**Ketchikan**	70.56	37	P	P	17 26 06.6	+0.7
	baz=273						
MMPY	**Sheldon Lake,**	70.57	29	IAmb	IAmb	17 26 08.9	
	comp=Z,107nm,1.6s						
MMPY	**Sheldon Lake,**	70.57	29	P	P	17 26 07.4	+1.5
	baz=270,SNR=28						
SIMJ	**Simiganj**	70.72	306	P	P	17 26 06.9	-0.5
SIMJ				IAmb	IAmb	17 26 09.4	
	comp=Z,60nm,1.1s						
S34M	**Telegraph Cree**	70.72	34	IAmb	IAmb	17 26 09.8	
	comp=Z,80nm,1.4s						
S34M	**Telegraph Cree**	70.72	34	P	P	17 26 08.5	+1.6
	baz=272,SNR=19						
PPT	**Papeete**	70.75	116	P	P	17 26 08.7	+1.1
	comp=Z,39nm,0.9s,baz=273,slow=18,SNR=4.8						
PPT				LR	LR	17 54 39.1	
	comp=Z,2µm,18.2s,baz=303,slow=34						
	comp=Z,39nm,0.9s						
PPT2	**Papeete2**	70.76	116	*e*LQ	LQ	17 44 27.8	
	comp=Z,820nm,25.8s						
PPT2				*e*LR	LR	17 47 40.8	
	comp=Z,932nm,19.8s						
PPT2				*e*LR	LR	17 47 41.8	
	comp=Z,991nm,23.2s						
R33M	**Jennings River**	70.76	32	IAmb	IAmb	17 26 10.3	
	comp=Z,125nm,1.6s						
R33M	**Jennings River**	70.76	32	P	P	17 26 08.7	+1.5
	baz=272,SNR=32						
T35M	**Bob Quinn**	71.24	35	P	P	17 26 11.6	+1.6
	baz=273,SNR=18						
KBL	**Kabul**	71.25	301	P	P	17 26 10.7	-0.1
KBL				IAmb	IAmb	17 26 12.6	
	comp=Z,60nm,0.9s						
KBL	**Kabul**	71.25	301	P	P	17 26 11.3	+0.5
	SNR=24						
KBL				P	P	17 26 11.3	+0.5
	SNR=24						
KBL	**Kabul**	71.25	301	P	P	17 26 10.7	-0.1
KBL				pmax	pmax		
	comp=Z,60nm,0.9s						
DLBC	**Dease Lake**	71.29	33	IAmb	IAmb	17 26 13.3	
	comp=Z,154nm,1.4s						
DLBC	**Dease Lake**	71.29	33	P	P	17 26 12.0	+1.6
	baz=273,SNR=41						
U35K	**Hyder**	71.43	36	P	P	17 26 11.9	+0.7
	baz=274						
WTLY	**Watson Lake, Y**	71.83	32	IAmb	IAmb	17 26 16.5	
	comp=Z,226nm,1.7s						
WTLY	**Watson Lake, Y**	71.83	32	P	P	17 26 15.0	+1.4
	baz=273,SNR=24						
TGTN	**Hyland Airport**	72.01	30	P	P	17 26 16.0	+1.4
	baz=273,SNR=5.3						
A36M	**Sachs Harbour**	72.67	19	IAmb	IAmb	17 26 20.1	
	comp=Z,69nm,0.8s						
A36M	**Sachs Harbour**	72.67	19	P	P	17 26 19.0	+0.7
	baz=273,SNR=32						
C36M	**Paulatuk**	73.23	22	IAmb	IAmb	17 26 23.2	
	comp=Z,97nm,1.1s						
C36M	**Paulatuk**	73.23	22	P	P	17 26 22.0	+0.4
	baz=275,SNR=19						
LIRD	**Liard River Hi**	73.25	32	P	P	17 26 22.6	+0.6
	baz=276						
TBI	**Tubuai**	73.45	122	*e*LQ	LQ	17 45 11.4	
	comp=Z,3µm,36.8s						
TBI				*e*LR	LR	17 48 50.2	
	comp=Z,1µm,27.2s						
BEAVL	**Fort Liard**	73.68	31	P	P	17 26 25.8	+1.2
	baz=276,SNR=18						
TOAD	**Toad River Com**	73.75	33	P	P	17 26 26.0	+1.0
	baz=277,SNR=22						
WRGLY	**Wrigley**	74.09	28	IAmb	IAmb	17 26 29.2	
	comp=Z,77nm,1.2s						
WRGLY	**Wrigley**	74.09	28	P	P	17 26 28.2	+1.4
	baz=277,SNR=7.8						
SVE	**Sverdlovsk**	74.09	325	*c* *i*P	P	17 26 28.1	+1.1
SVE				*e*S	S	17 35 57.9	0.0
SVE				pmax	pmax		
	comp=Z,210nm,1.5s						
KOTAN	**Kotaneelee Air**	74.19	31	P	P	17 26 28.7	+1.2
	baz=277,SNR=6.4						
OZB	**Mount Ozzard**	74.97	43	IAmb	IAmb	17 26 35.0	
	comp=Z,78nm,1.1s						
ARTI	**Arti**	75.39	325	P	P	17 26 34.8	+0.3
ARTI	**Arti**	75.39	325	LR	LR	18 01 40.7	
	comp=Z,530nm,20.7s,baz=94,slow=37						
ARTI	**Arti**	75.39	325	*d* *i*P	P	17 26 35.0	+0.5
ARTI						17 26 48.5	
ARTI						17 29 20.8	
ARTI				S	S	17 36 13.0	+0.6
ARTI				SS	SS	17 41 01.6	-0.8
ARTI				pmax	pmax		
	comp=Z,213nm,1.1s						
ABKAR	**Akbulak array**	75.66	317	P	P	17 26 36.1	-0.1
TAOE	**Nuku Hiva Isla**	75.80	104	*e*S	S	17 36 19.8	+1.3
	comp=Z,260nm,26.7s						
TAOE				*e*SS	SS	17 40 59.0	-12
	comp=Z,530nm,32.2s						
TAOE				*e*LR	LR	17 49 48.9	
	comp=Z,535nm,23.1s						
WISH	**Wishkah**	76.43	45	IAmb	IAmb	17 26 48.9	
	comp=Z,136nm,1.5s						
KRPM	**Rodgers**	77.44	51	IAmb	IAmb	17 26 49.7	
	comp=Z,203nm,1.5s						
KMPM	**Mount Pierce**	77.52	51	IAmb	IAmb	17 27 06.2	
	comp=Z,63nm,0.9s						
BUCK	**Buck Mountain**	77.55	47	IAmb	IAmb	17 26 50.2	
	comp=Z,140nm,1.3s						
D05A	**Enumclaw**	77.61	44	IAmb	IAmb	17 26 50.3	
	comp=Z,181nm,1.6s						
H04D	**Lebanon**	77.66	47	IAmb	IAmb	17 26 50.5	
	comp=Z,121nm,1.5s						
G04A	**Mulino**	77.69	46	IAmb	IAmb	17 27 06.6	
	comp=Z,70nm,0.9s						
KHMM	**Horse Mountain**	77.72	51	IAmb	IAmb	17 26 51.3	
	comp=Z,140nm,1.6s						
KMRM	**Mail Ridge**	77.87	52	IAmb	IAmb	17 26 52.1	
	comp=Z,183nm,1.8s						
KCPM	**Cahto Peak**	78.08	52	IAmb	IAmb	17 27 09.1	
	comp=Z,75nm,1.0s						
YKAW3	**Yellowknife Wh**	78.19	28	IAmb	IAmb	17 26 51.8	
	comp=Z,36nm,0.9s						
YKA	**Yellowknife Ar**	78.21	28	P	P	17 26 49.8	-0.5
	comp=Z,20nm,0.9s,baz=293,slow=5.9,SNR=123						
YKA				LR	LR	18 00 29.9	
	comp=Z,789nm,20.5s,baz=278,slow=35						
	comp=Z,20nm,0.9s						

YKA	Yellowknife Ar	78.21	28	*i* P	P	17 26 50.5	+0.2
YKA				pmax	pmax		
	comp=Z,17nm,0.8s						
YKAW1	Yellowknife Wh	78.27	28	IAmb	IAmb	17 26 52.3	
	comp=Z,40nm,0.9s						
J04A	Umpqua Nationa	78.38	48	IAmb	IAmb	17 26 54.4	
	comp=Z,85nm,1.1s						
I05D	Terrebonne, OR	78.67	47	IAmb	IAmb	17 26 55.9	
	comp=Z,171nm,1.9s						
GDXM	Geysers	78.88	53	IAmb	IAmb	17 26 57.5	
	comp=Z,100nm,1.5s						
MCCM	Marconi Confer	78.96	53	IAmb	IAmb	17 26 57.2	
	comp=Z,201nm,1.7s						
J05D	Fort Rock, OR	78.99	48	IAmb	IAmb	17 26 57.9	
	comp=Z,90nm,1.2s						
PINE	Pine Mountain	79.08	48	IAmb	IAmb	17 26 58.5	
	comp=Z,198nm,1.4s						
E07A	Sunnyside	79.17	45	IAmb	IAmb	17 26 58.5	
	comp=Z,138nm,1.6s						
WAH2	Wahluke Slope	79.32	44	IAmb	IAmb	17 26 59.1	
	comp=Z,129nm,1.5s						
HATC	Hat Creek Radi	79.41	51	IAmb	IAmb	17 26 60.0	
	comp=Z,140nm,1.4s						
KIRV	Kirov	79.63	328	P	P	17 26 57.9	-0.2
	comp=Z,71nm,0.7s,baz=77,slow=4.7,SNR=38						
	comp=Z,71nm,0.7s						
KIRV	Kirov	79.63	328	*ce*P	P	17 26 58.7	+0.6
D08A	Wollman Farm,	79.68	44	IAmb	IAmb	17 27 01.0	
	comp=Z,93nm,1.4s						
ORV	Oroville	79.68	52	IAmb	IAmb	17 27 00.9	
	comp=Z,94nm,1.4s						
YPT	Yellepit	79.90	45	IAmb	IAmb	17 27 02.5	
	comp=Z,115nm,1.6s						
RES	Resolute Bay	80.22	14	IAmb	IAmb	17 27 03.5	
	comp=Z,142nm,1.8s						
RES	Resolute Bay	80.22	14	LR	LR	18 01 20.9	
	comp=Z,280nm,21.1s,baz=291,slow=35						
E09A	Wood Farm, Sta	80.33	44	IAmb	IAmb	17 27 04.6	
	comp=Z,89nm,1.4s						
HOPEN	Hopen	80.38	348	*e*P	P	17 27 03.0	+1.1
HOPEN				IAmb	IAmb	17 27 03.9	
	comp=Z,94nm,1.0s						
LNOR	Lincton Mounta	80.40	45	IAmb	IAmb	17 27 05.2	
	comp=Z,139nm,1.9s						
BBGB	Big Mountain B	80.77	55	IAmb	IAmb	17 27 23.8	
	comp=Z,76nm,1.0s						
SPA0	Spitsbergen Ar	80.78	351	*e*P	P	17 27 04.0	-0.1
SPITS	Spitsbergen Ar	80.78	351	P	P	17 27 03.3	-0.7
	comp=Z,17nm,0.6s,baz=93,slow=5.8,SNR=31						
SPITS				PKKPbc	PKKPbc	17 45 42.3	-3.0
	comp=Z,0.8nm,0.4s,baz=140,slow=2.8,SNR=7.6						
SPITS				LR	LR	18 05 03.8	
	comp=Z,611nm,20.6s,baz=20,slow=37						
	comp=Z,17nm,0.6s						
KBS	Kingsbay	80.86	352	P	P	17 27 05.0	+0.6
KBS	Kingsbay	80.86	352	*i* P	P	17 27 05.2	+0.8
KBS				pmax	pmax		
	comp=Z,29nm,0.8s						
KBS	Kingsbay	80.86	352	*e*P	P	17 27 05.8	+1.4
KBS				IAmb	IAmb	17 27 05.9	
	comp=Z,46nm,0.9s						
KBS	Kingsbay	80.86	352	*i* P	P	17 27 04.6	+0.1
NOR	Nord	80.89	358	*i* P	P	17 27 03.0	-1.6
NOR				IAmb	IAmb	17 27 05.8	
	comp=Z,25nm,1.2s						
J08A	Circle Bar Ran	80.92	47	IAmb	IAmb	17 27 08.0	
	comp=Z,104nm,1.3s						
WVOR	Wild Horse Val	81.05	48	IAmb	IAmb	17 27 08.7	
	comp=Z,109nm,1.4s						
WVOR	Wild Horse Val	81.05	48	P	P	17 27 07.1	+0.8
BMO	Blue Mountains	81.34	46	IAmb	IAmb	17 27 09.9	
	comp=Z,101nm,1.4s						
WAKR	Walker	81.50	52	IAmb	IAmb	17 27 11.7	
	comp=Z,155nm,1.8s						
HSPB	Hornsund (broa	81.73	350	*e*P	P	17 27 09.7	+0.6
HSPB	Hornsund (broa	81.73	350	*e*P	P	17 27 10.2	+1.2
RYN	Ryan	82.16	52	IAmb	IAmb	17 27 14.8	
	comp=Z,156nm,1.8s						
JLN	Jalan Bani Buh	82.17	291	P	P	17 27 13.5	+1.1
JLN				P	P	17 27 13.5	+1.1
LVZ	Lovozero	82.37	339	P	P	17 27 11.8	-0.8
LVZ				IAmb	IAmb	17 27 13.7	
	comp=Z,143nm,1.7s						
LVZ	Lovozero	82.37	339	P	P	17 27 11.9	-0.8
LVZ				pmax	pmax		
	comp=Z,143nm,1.7s						
NVAR	Mina Array Bea	82.38	52	P	P	17 27 13.5	0.0
NVAR	Mina Array Bea	82.38	52	P	P	17 27 14.3	+0.8
	comp=Z,7.7nm,0.6s,baz=272,slow=5.8,SNR=55						
	comp=Z,7.7nm,0.6s						
BELG	Belogornoye	82.45	323	LR	LR	18 06 05.8	
	comp=Z,738nm,19.9s,baz=73,slow=37						
BELG	Belogornoye	82.45	323	*i* P	P	17 27 13.8	+0.5
BELG				pmax	pmax		
	comp=Z,123nm,0.9s						
MFID	Camas Ranch	82.76	47	IAmb	IAmb	17 27 17.6	
	comp=Z,137nm,1.4s						
DSP	Deep Springs	82.92	53	IAmb	IAmb	17 27 18.9	
	comp=Z,115nm,1.6s						
BIDO	Bidbid	82.94	292	P	P	17 27 18.5	+2.1
	SNR=6.0						
BIDO				P	P	17 27 18.5	+2.1
	SNR=6.0						
APA	Apatity	82.94	339	⇓*i*P	P	17 27 13.2	-2.4
APA				pmax	pmax		
	comp=Z,49nm,0.7s						
SMDO	Samad	83.13	292	P	P	17 27 19.1	+1.5
SMDO				P	P	17 27 19.1	+1.5
JMDO	Jabal Madar	83.27	291	P	P	17 27 20.2	+2.0
JMDO				P	P	17 27 20.2	+2.0
CCAC	Calif City Air	83.51	55	IAmb	IAmb	17 27 21.7	
	comp=Z,46nm,0.9s						
KLMR	Klimovskoe	83.55	332	*e*P	P	17 27 16.5	-2.3
KLMR				*e*		17 30 30.0	
KLMR				pmax	pmax		
	comp=Z,162nm,1.8s						
KLMR				MLR	MLR		
	comp=Z,680nm,18.0s						
HOQ	Hoqain	83.64	293	P	P	17 27 21.0	+1.0
HOQ				P	P	17 27 21.0	+1.0
PASC	Pasadena Art C	83.66	56	IAmb	IAmb	17 27 21.8	
	comp=Z,54nm,1.1s						
MHTO	MHTO	83.77	290	P	P	17 27 21.5	+0.8
	SNR=5.3						
MHTO				P	P	17 27 21.5	+0.8
	SNR=5.3						
BSY	Bisya	83.97	292	P	P	17 27 23.0	+1.2
BSY				P	P	17 27 23.0	+1.2
ELK	Elko	83.97	49	IAmb	IAmb	17 27 24.1	
	comp=Z,40nm,0.9s						
ELK	Elko	83.97	49	P	P	17 27 22.5	+0.8
SHME	Shamm	83.98	295	P	P	17 27 23.6	+1.9
	SNR=7.9						
SHME				P	P	17 27 23.6	+1.9
	SNR=7.9						
SHME	Shamm	83.98	295	*i* P	P	17 27 23.0	+1.3
	SNR=7.9						
MDH	Madha	84.05	295	P	P	17 27 23.3	+1.2
MDH				P	P	17 27 23.3	+1.2
MDH	Madha	84.05	295	*i* P	P	17 27 21.9	-0.2
	SNR=11						
MASF	Masafi	84.15	295	P	P	17 27 23.9	+1.2
	SNR=20						
MASF				P	P	17 27 23.9	+1.2
	SNR=20						
MSFE	Esma-Masafi	84.15	295	*i* P	P	17 27 23.9	+1.2
	SNR=20						
SOHO	SOHO	84.17	293	P	P	17 27 24.1	+1.4
SOHO				P	P	17 27 24.1	+1.4
SOHO	SOHO	84.17	293	*i* P	P	17 27 23.1	+0.4
	SNR=28						
HAMF	Hammerfest	84.18	344	*e*P	P	17 27 22.0	+0.1
HAMF				IAmb	IAmb	17 27 22.1	
	comp=Z,54nm,1.0s						
UOSS	Minazif	84.23	294	P	P	17 27 23.4	+0.3
UOSS				IAmb	IAmb	17 27 24.6	
	comp=Z,46nm,1.1s						
UOSS	Minazif	84.23	294	P	P	17 27 24.2	+1.2
UOSS				P	P	17 27 24.2	+1.2
UOSS	Minazif	84.23	294	*i* P	P	17 27 23.4	+0.3
	SNR=7.4						
HATD	Hatta, Dubai	84.33	294	P	P	17 27 25.1	+1.5
	SNR=19						
HATD				P	P	17 27 25.1	+1.5
	SNR=19						
HATD	Hatta, Dubai	84.33	294	*i* P	P	17 27 24.1	+0.5
	SNR=19						
ARA0	ARCESS Array S	84.35	343	*e*P	P	17 27 22.6	-0.1
ARCES	ARCESS Array B	84.35	343	P	P	17 27 23.1	+0.4
ARCES				IAmb	IAmb	17 27 23.8	
	comp=Z,59nm,0.9s						
ARCES	ARCESS Array B	84.35	343	P	P	17 27 22.6	-0.2
	comp=Z,39nm,0.7s,baz=61,slow=6.7,SNR=96						
ARCES				LR	LR	18 09 59.8	
	comp=Z,643nm,20.9s,baz=48,slow=39						
	comp=Z,39nm,0.7s						
ARCES	ARCESS Array B	84.35	343	P	P	17 27 23.1	+0.4
ARCES				pmax	pmax		
	comp=Z,59nm,0.9s						
TPNV	Topopah Spring	84.36	53	IAmb	IAmb	17 27 25.9	
	comp=Z,118nm,1.7s						
DLMT	Dillon	84.37	44	IAmb	IAmb	17 27 25.6	
	comp=Z,103nm,1.8s						
ARQ	Araqi	84.41	293	P	P	17 27 26.0	+2.0
	SNR=12						
ARQ				P	P	17 27 26.0	+2.0
	SNR=12						
ELS	Elsinore Mount	84.41	57	IAmb	IAmb	17 27 25.8	
	comp=Z,73nm,1.3s						
GSC	Goldstone, Bar	84.42	55	IAmb	IAmb	17 27 26.1	
	comp=Z,59nm,1.2s						
ASHO	Ashiyiah	84.43	294	P	P	17 27 26.0	+1.9
	SNR=12						
ASHO				P	P	17 27 26.0	+1.9
	SNR=12						
ASHO	Ashiyiah	84.43	294	*i* P	P	17 27 24.3	+0.2
	SNR=18						
R11B	Troy Canyon, C	84.44	52	IAmb	IAmb	17 27 26.5	
	comp=Z,104nm,1.6s						
DQM	DQM	84.45	289	P	P	17 27 25.6	+1.4
DQM				P	P	17 27 25.6	+1.4
S11A	Rachel	84.53	52	IAmb	IAmb	17 28 24.0	
	comp=Z,64nm,1.2s						
NAZ	Nazwa, Dubai	84.69	294	P	P	17 27 26.2	+0.9
	SNR=7.0						
NAZ	Nazwa, Dubai	84.69	294	*i* P	P	17 27 27.0	+1.6
	SNR=9.6						
NEEM	North Greenlan	84.72	4	*i* P	P	17 27 23.9	-1.0
NEEM				IAmb	IAmb	17 27 27.3	
	comp=Z,526nm,1.8s						
FAQ	Al Faqa, Dubai	84.82	294	P	P	17 27 26.7	+0.7
	SNR=5.6						
FAQ	Al Faqa, Dubai	84.82	294	*i* P	P	17 27 26.4	+0.4
	SNR=10						
ALNE	Al Ain	84.88	293	P	P	17 27 27.8	+1.4
	SNR=21						
ALNE				P	P	17 27 27.8	+1.4
	SNR=21						
ALNE	Al Ain	84.88	293	*i* P	P	17 27 27.0	+0.7
	SNR=20						
BOZ	Bozeman (W)	84.93	44	IAmb	IAmb	17 27 28.6	
	comp=Z,97nm,1.6s						
ASUD	Al Ashush, Dub	85.08	294	P	P	17 27 28.2	+0.9
	SNR=5.4						
ASUD	Al Ashush, Dub	85.08	294	*i* P	P	17 27 28.1	+0.8
	SNR=7.6						
SPR3	Spring Creek 3	85.18	51	IAmb	IAmb	17 27 30.5	
	comp=Z,125nm,1.4s						
POIN	Pond Inlet	85.19	12	IAmb	IAmb	17 27 28.6	
	comp=Z,102nm,1.6s						
PFO	Pinyon Flats O	85.20	56	P	P	17 27 27.7	-0.2
PFO				IAmb	IAmb	17 27 29.9	
	comp=Z,78nm,1.4s						
PFO	Pinyon Flats O	85.20	56	P	P	17 27 27.7	-0.2
PFO				pmax	pmax		
	comp=Z,78nm,1.4s						
BLKN	Baker Lake	85.21	23	IAmb	IAmb	17 27 28.6	
	comp=Z,70nm,1.2s						
AJN	Ajban	85.40	294	P	P	17 27 30.1	+1.2
	SNR=7.7						
AJN	Ajban	85.40	294	*i* P	P	17 27 29.1	+0.2
	SNR=11						
CBX	Cerro Bola	85.42	58	IAmb	IAmb	17 27 30.9	
	comp=Z,59nm,1.2s						
YHB	Horse Butte	85.51	45	IAmb	IAmb	17 27 32.3	
	comp=Z,103nm,1.3s						
MAK	Makhachkala	85.62	314	*e*P	P	17 27 29.5	-0.1
MAK				*e*		17 30 53.4	
MAK				*e*PPP	PPP	17 32 42.4	
MAK				*e*		17 37 51.4	
MAK				*e*SS	SS	17 43 38.9	+3.2
MAK				*e*SSS	SSS	17 47 11.2	
MAK				pmax	pmax		
	comp=Z,451nm,1.5s						
MAK				MLR	MLR		
	comp=Z,2µm,19.0s						
PSUT	Pine Spring	85.68	51	IAmb	IAmb	17 27 32.6	
	comp=Z,49nm,1.0s						
DAG	Danmarks Havn	85.69	357	P	P	17 27 29.5	+0.2
DAG				pmax	pmax		
	comp=Z,100nm,1.5s						
DAG	Danmarks Havn	85.69	357	*i* P	P	17 27 29.0	-0.3
DAG				IAmb	IAmb	17 27 30.8	
	comp=Z,150nm,1.4s						
JETT	Jettan, Norway	85.74	344	*e*P	P	17 27 30.3	+0.5
JETT				IAmb	IAmb	17 27 30.8	
	comp=Z,143nm,0.6s						
UMZA	Um Al Zommool	85.78	292	P	P	17 27 31.8	+1.0
UMZA				P	P	17 27 31.8	+1.0
V12A	Nelson	85.81	54	IAmb	IAmb	17 27 33.3	
	comp=Z,82nm,1.5s						
YFT	Old Faithful	85.85	45	IAmb	IAmb	17 27 35.3	
	comp=Z,81nm,1.2s						
DUG	Dugway, Tooele	85.90	49	IAmb	IAmb	17 27 33.6	
	comp=Z,64nm,1.1s						
YUH	Yuha Desert	85.92	57	IAmb	IAmb	17 27 33.4	
	comp=Z,57nm,1.4s						
FXWY	Fox Creek	86.00	46	IAmb	IAmb	17 27 34.5	
	comp=Z,70nm,1.3s						
TRO	Tromso	86.08	344	*e*P	P	17 27 31.8	+0.4
TRO				IAmb	IAmb	17 27 32.1	
	comp=Z,50nm,0.7s						
ESJX	Sierra Juarez	86.09	58	IAmb	IAmb	17 27 34.8	
	comp=Z,75nm,1.4s						
TPAW	Teton Pass	86.11	46	IAmb	IAmb	17 27 35.0	
	comp=Z,83nm,1.4s						
LKRN	Lenkeran, Azer	86.11	309	P	P	17 27 32.7	+0.6
AHID	Auburn Hatcher	86.25	46	IAmb	IAmb	17 27 35.4	
	comp=Z,64nm,1.1s						
LOHW	Long Hollow	86.30	45	IAmb	IAmb	17 27 35.8	
	comp=Z,64nm,1.6s						
VRH	Novokhopyorsk	86.30	323	*e*P	P	17 27 31.7	-1.1
VRH				pmax	pmax		
	comp=Z,25nm,0.4s						
HWUT	Hardware Ranch	86.32	48	IAmb	IAmb	17 27 35.6	
	comp=Z,61nm,1.1s						
VTX	Valle De La Tr	86.42	58	IAmb	IAmb	17 27 36.2	
	comp=Z,61nm,1.4s						
SEKA	Sheki	86.42	312	P	P	17 27 33.8	0.0
CTU	Camp Tracy	86.50	49	IAmb	IAmb	17 27 36.4	
	comp=Z,70nm,1.3s						
LCMT	Little Creek M	86.63	52	IAmb	IAmb	17 27 37.6	
	comp=Z,79nm,1.5s						
MOS	Moscow	86.64	328	*e*P	P	17 27 32.5	-1.9
MOS				*e*		17 30 54.2	
MOS				*e*S	SKSac	17 37 56.2	-2.8
MOS				pmax	pmax		
	comp=Z,300nm,2.1s						
MOS				pmax	pmax		
	comp=Z,103nm,1.9s						
MOS				MLR	MLR		
	comp=Z,600nm,20.0s						
MNGR	Mingechevir, A	86.65	312	P	P	17 27 35.3	+0.5
GLA	Glamis	86.67	57	IAmb	IAmb	17 27 37.4	
	comp=Z,82nm,1.5s						
JLU	Jordanelle	86.75	49	IAmb	IAmb	17 27 37.8	
	comp=Z,112nm,1.3s						
MPU	Maple Canyon	86.82	49	IAmb	IAmb	17 27 38.1	
	comp=Z,110nm,1.6s						
OUL	Oulu	86.84	339	P	P	17 27 34.8	-0.3
OUL				pmax	pmax		
	comp=Z,91nm,0.8s						
KULLO	Kullorsuaq	86.87	7	*i* P	P	17 27 33.4	-1.8
KULLO				IAmb	IAmb	17 27 37.1	
	comp=Z,234nm,1.6s						
FFC	Flin Flon	87.12	33	P	P	17 27 36.9	+0.1
FFC				IAmb	IAmb	17 27 38.6	
	comp=Z,99nm,1.2s						
FFC	Flin Flon	87.12	33	P	P	17 27 36.9	+0.1
FFC				pmax	pmax		
	comp=Z,99nm,1.3s						
JRN	Qarnain Island	87.14	295	P	P	17 27 38.1	+0.6
JRN				P	P	17 27 38.1	+0.6
MZR	Muzera	87.18	293	P	P	17 27 38.1	+0.4
	SNR=15						
MZR	Muzera	87.18	293	*i* P	P	17 27 38.7	+0.9
	SNR=32						
GANJ	Ganja	87.24	312	P	P	17 27 37.9	+0.2
PDAR	Pinedale Array	87.31	46	P	P	17 27 37.9	-0.4
PDAR	Pinedale Array	87.31	46	P	P	17 27 37.8	-0.5
	comp=Z,2.4nm,0.5s,baz=248,slow=2.6,SNR=32						
	comp=Z,2.4nm,0.5s						
GHWR	Ruwais	87.42	294	P	P	17 27 39.1	+0.2
GHWR				P	P	17 27 39.1	+0.2
DMTO	DMTO	87.44	288	P	P	17 27 39.7	+0.7
OBN	Obninsk	87.46	328	P	P	17 27 36.3	-2.0
	comp=Z,13nm,0.4s,baz=358,slow=5.2,SNR=11						
OBN				LR	LR	18 09 04.0	
	comp=Z,707nm,21.6s,baz=16,slow=37						
	comp=Z,13nm,0.4s						
OBN	Obninsk	87.46	328	*d i*P	P	17 27 37.7	-0.6
OBN				*i*		17 27 39.8	
OBN				*e**PP	sP	17 27 47.1	-0.3
OBN				*i*		17 31 08.9	
OBN				S	S	17 38 11.0	-6.3
OBN				*i* PPS	PPS	17 39 53.3	
OBN				*e*SS	SS	17 44 08.4	+6.5
OBN				pmax	pmax		
	comp=Z,130nm,2.1s						
OBN				MLR	MLR		
	comp=Z,686nm,20.0s						
U15A	North Rim	87.54	53	IAmb	IAmb	17 27 42.2	
	comp=Z,36nm,1.0s						
VORR	Voronezh	87.55	324	*e*P	P	17 27 38.4	-0.5
VORR				pmax	pmax		
	comp=Z,61nm,0.4s						
113A	Mohawk Valley,	87.60	57	IAmb	IAmb	17 27 41.7	
	comp=Z,81nm,1.7s						
VSR	Storozhevoye	87.77	323	*e*P	P	17 27 35.6	-4.3
VSR				pmax	pmax		
	comp=Z,50nm,1.0s						
VORD	Divnogorie	87.80	323	*e*P	P	17 27 36.7	-3.4
VORD				pmax	pmax		
	comp=Z,40nm,1.0s						
GUDG	Gudauri	87.88	314	P	P	17 27 41.4	+0.4
DOK	Doka	87.92	289	P	P	17 27 41.7	+0.4
DOK				P	P	17 27 41.7	+0.4
CASY	Casey	87.94	194	P	P	17 27 39.2	-1.0
NCK	Nalchik	88.10	315	*i* P	P	17 27 41.7	-0.1
NCK				pmax	pmax		
	comp=Z,212nm,1.6s						
RBK	Rabkut	88.18	288	P	P	17 27 44.4	+1.7
RBK				P	P	17 27 44.4	+1.7
HMU	Henry Mountain	88.19	51	IAmb	IAmb	17 27 44.5	
	comp=Z,73nm,1.3s						
DBG	Daneborg	88.20	357	*i* P	P	17 27 40.8	-0.7
DBG				IAmb	IAmb	17 27 43.4	
	comp=Z,102nm,1.7s						
STEI	Steigen	88.23	344	*e*P	P	17 27 42.0	+0.2
NAX	Nakhchivan	88.36	311	P	P	17 27 43.4	+0.3
WHFO	Wadi Hawf	88.45	288	P	P	17 27 45.1	+1.2
KBZ	Khabaz	88.48	316	P	P	17 27 42.1	-1.4
	comp=Z,42nm,1.0s,baz=84,slow=2.5,SNR=68						
	comp=Z,42nm,1.0s						
KBZ	Khabaz	88.48	316	*ce*P	P	17 27 43.2	-0.3
KBZ				pmax	pmax		
	comp=Z,72nm,1.1s						
SHMA	Al-Shehemyia	88.48	296	P	P	17 27 43.3	-0.5
	SNR=5.8						
TRLG	Trialeti	88.48	313	P	P	17 27 42.7	-1.1
KIV	Kislovodsk	88.53	316		P	17 27 43.1	-0.8
KIV				IAmb	IAmb	17 27 44.7	
	comp=Z,47nm,0.9s						
KIV	Kislovodsk	88.53	316	*e*P	P	17 27 43.1	-0.8
KIV				*e*		17 38 08.6	
KIV				*e*SS	SS	17 44 19.3	+0.8
KIV				pmax	pmax		
	comp=Z,42nm,1.1s						
KIV				pmax	pmax		
	comp=Z,63nm,3.8s						
KIV	Kislovodsk	88.53	316	P	P	17 27 43.5	-0.4
GNI	Garni	88.55	312	P	P	17 27 44.1	0.0
GNI				IAmb	IAmb	17 27 47.5	
	comp=Z,87nm,1.4s						
GNI	Garni	88.55	312	LR	LR	18 12 03.1	
	comp=Z,247nm,18.5s,baz=76,slow=39						
GNI	Garni	88.55	312	P	P	17 27 44.9	+0.7
GNI				P	P	17 27 44.9	+0.7
GNI	Garni	88.55	312	*i* P	P	17 27 44.1	0.0
GNI				pmax	pmax		
	comp=Z,58nm,1.3s						
GNI	Garni	88.55	312	P	P	17 27 44.5	+0.4
GNI	Garni	88.55	312	P	P	17 27 43.9	-0.2
	comp=Z,615nmcomp=Z,44nm,1.4s						
FAUS	Fauske	88.61	343	*e*P	P	17 27 43.8	+0.1
TRNA	Turayna	88.62	295	P	P	17 27 46.0	+1.4
	SNR=5.2						
214A	Organ Pipe Nat	88.63	57	IAmb	IAmb	17 27 47.2	
	comp=Z,83nm,1.3s						
SHA1	Shidzhatmaz	88.64	316	*i* P	P	17 27 43.6	-1.0
X16A	Lo Mia Camp, P	88.88	54	IAmb	IAmb	17 27 48.8	
	comp=Z,48nm,1.4s						
FINES	FINESS Array B	88.90	336	P	P	17 27 43.9	-1.2
	comp=Z,32nm,0.5s,baz=66,slow=4.7,SNR=263						
FINES				PP	PP	17 31 11.0	-3.1
	comp=Z,11nm,0.9s,baz=52,slow=9.9,SNR=4.5						
FINES				PKKPbc	PKKPbc	17 45 24.4	-1.3
	comp=Z,1.5nm,0.8s,baz=106,slow=6.8,SNR=3.3						
FINES				LR	LR	18 10 55.9	
	comp=Z,490nm,20.4s,baz=60,slow=38						
	comp=Z,32nm,0.5s						
FINES	FINESS Array B	88.90	336	*i* P	P	17 27 44.4	-0.7
FINES				pmax	pmax		
	comp=Z,32nm,0.5s						
FCC	Fort Churchill	88.92	27	IAmb	IAmb	17 27 46.8	
	comp=Z,90nm,1.4s						
SMRA	Abu-Samra	88.95	295	P	P	17 27 45.5	-0.6
	SNR=5.3						
ABTO	Aybut	89.05	288	P	P	17 27 47.6	+0.9
ABTO				P	P	17 27 47.6	+0.9
O20A	White River Ci	89.20	48	IAmb	IAmb	17 27 49.2	
	comp=Z,81nm,1.2s						
ERBR	Yeremizino-Bor	89.27	318	*e*P	P	17 27 45.7	-1.5
ERBR				pmax	pmax		
	comp=Z,136nm,0.8s						
PV05	Paradox Valley	89.35	50	IAmb	IAmb	17 27 50.2	
	comp=Z,87nm,1.3s						
PV13	Radium Mtn., P	89.52	50	IAmb	IAmb	17 27 50.8	
	comp=Z,82nm,1.2s						
PV07	Paradox Valley	89.54	50	IAmb	IAmb	17 27 50.9	
	comp=Z,58nm,1.2s						
PV15	Paradox Valley	89.70	50	IAmb	IAmb	17 27 51.6	
	comp=Z,72nm,1.3s						
PV01	Paradox Valley	89.71	50	IAmb	IAmb	17 27 51.6	
	comp=Z,87nm,1.3s						
MOR8	Moi Rana	89.72	343	*e*P	P	17 27 48.0	-0.8
MOR8				IAmb	IAmb	17 27 48.8	
	comp=Z,18nm,0.8s						
W18A	Petrified Fore	89.95	53	IAmb	IAmb	17 27 53.6	
	comp=Z,106nm,1.4s						
X18A	Snowflake	89.99	54	IAmb	IAmb	17 27 53.9	
	comp=Z,65nm,1.3s						
STOK	Stokkvaagen	89.99	343	*e*P	P	17 27 50.0	-0.1
TUC	Tucson	90.13	56	P	P	17 27 52.2	+0.6
TUC				IAmb	IAmb	17 27 54.5	
	comp=Z,72nm,1.4s						
TUC	Tucson	90.13	56	P	P	17 27 52.2	+0.6
TUC				pmax	pmax		
	comp=Z,72nm,1.4s						
SUMG	Summit	90.17	2	IAmb	IAmb	17 27 54.0	
	comp=Z,76nm,1.5s						
SUMG	Summit	90.17	2	*i* P	P	17 27 50.9	-0.4
SUMG				IAmb	IAmb	17 27 53.0	
	comp=Z,29nm,1.0s						
JMIC	Jan Mayen	90.35	352	LR	LR	18 07 46.2	
	comp=Z,92nm,21.6s,baz=50,slow=35						
VSU	Vasula	90.36	333	*ce*P	P	17 27 50.6	-1.4
VSU				pmax	pmax		
	comp=Z,80nm,1.7s						
RSSD	Black Hills	90.49	43	P	P	17 27 53.2	0.0
RSSD				IAmb	IAmb	17 27 55.1	
	comp=Z,97nm,1.4s						
RSSD	Black Hills	90.49	43	P	P	17 27 53.2	0.0
RSSD				pmax	pmax		
	comp=Z,97nm,1.5s						
SOC	Sochi	90.65	316	*e*P	P	17 27 50.2	-3.5
SOC				*e*S	SKSac	17 38 18.1	-5.4
SOC				*e*SS	SS	17 44 45.8	-3.1

SOC				eSSS	SSS	17 48 29.6	
SOC				pmax	pmax		
	comp=Z,33nm,0.7s						
SRIG	Santa Rosalia	90.66	61	IAmb	IAmb	17 27 56.5	
	comp=Z,90nm,1.5s						
GURO	Guroymak-BITLI	91.09	311	IAmb	IAmb	17 27 57.5	
	comp=Z,67nm,1.4s						
S22A	4UR Ranch, Cre	91.13	50	IAmb	IAmb	17 27 59.0	
	comp=Z,73nm,1.4s						
HSIG		91.15	59	IAmb	IAmb	17 27 58.7	
	comp=Z,79nm,1.5s						
ISCO	Idaho Springs	91.19	48	IAmb	IAmb	17 27 59.3	
	comp=Z,58nm,1.5s						
ANN	Anapa	91.61	318	eP	P	17 27 56.3	-1.8
ANN				pmax	pmax		
	comp=Z,64nm,1.4s						
NSS	Namsos	91.63	342	eP	P	17 27 56.9	-0.9
319A	Douglas	91.66	57	IAmb	IAmb	17 28 01.8	
	comp=Z,84nm,1.4s						
Q24A	Divide	91.86	48	IAmb	IAmb	17 28 02.1	
	comp=Z,35nm,1.3s						
MNK	Minsk	92.09	330	i P	P	17 28 00.1	0.0
	comp=E,26nm,0.9s						
MNK				i P	P	17 28 00.1	0.0
	comp=N,19nm,1.0s						
MNK				i P	P	17 28 00.1	0.0
	comp=Z,56nm,1.0s,baz=56						
MNK				i PP	PP	17 31 40.6	+1.0
MNK				i PPP	PPP	17 33 48.8	
MNK				i SKS	SKSac	17 38 12.3	-19
MNK				i S	SKSac	17 38 30.3	-1.0
MNK				i PS	PnS	17 40 16.2	+1.5
MNK				i SS	SS	17 45 20.0	+11
MNK				i SSS	SSS	17 48 48.7	
MNK				i LRM	MLR	18 10 28.2	
	comp=E,131nm,18.5s						
MNK				i LRM	MLR	18 10 50.5	
	comp=N,212nm,16.1s						
MNK				i LRM	MLR	18 10 54.9	
	comp=Z,379nm,18.2s						
MNK	Minsk	92.09	330	i P	P	17 28 00.1	0.0
MNK				i		17 31 40.5	
MNK				i PPP	PPP	17 33 48.7	
MNK				i S	SKSac	17 38 30.2	-1.0
MNK				i PS	PnS	17 40 16.2	+1.5
MNK				i SS	SS	17 45 19.9	+11
MNK				i SSS	SSS	17 48 48.7	
MNK				pmax	pmax		
	comp=Z,56nm,1.0s						
MNK				pmax	pmax		
	comp=E,26nm,0.9s						
MNK				pmax	pmax		
	comp=N,19nm,1.0s						
MNK				MLR	MLR		
	comp=N,212nm,16.0s						
MNK				MLR	MLR		
	comp=Z,379nm,18.0s						
SDCO	Great Sand Dun	92.10	49	IAmb	IAmb	17 28 03.1	
	comp=Z,58nm,1.6s						
NACGM	Naroch	92.39	330	eP	P	17 28 01.5	0.0
Y22D	IRIS PASSCAL I	92.49	53	P	P	17 28 03.1	+0.5
	baz=293						
ANMO	Albuquerque	92.50	52	P	P	17 28 02.7	0.0
ANMO				IAmb	IAmb	17 28 05.2	
	comp=Z,34nm,1.2s						
ANMO	Albuquerque	92.50	52	P	P	17 28 02.7	0.0
ANMO				pmax	pmax		
	comp=Z,34nm,1.2s						
ULM	Lac du Bonnet	92.54	35	IAmb	IAmb	17 28 03.6	
	comp=Z,52nm,1.1s						
ULM	Lac du Bonnet	92.54	35	P	P	17 28 01.7	-0.6
	comp=Z,26nm,1.0s,baz=304,slow=6.0,SNR=26						
ULM				LR	LR	18 09 59.6	
	comp=Z,569nm,18.2s,baz=306,slow=36						
	comp=Z,26nm,1.0s						
T25A	Trinidad	93.14	50	IAmb	IAmb	17 28 08.0	
	comp=Z,44nm,1.2s						
AK03	Malin Array Si	93.50	326	P	P	17 28 05.6	-1.1
AKASG	Malin Array Be	93.51	326	P	P	17 28 06.4	-0.3
AKASG	Malin Array Be	93.51	326	P	P	17 28 05.1	-1.7
	comp=Z,2.3nm,0.6s,baz=52,slow=5.0,SNR=18						
AKASG				PP	PP	17 31 48.3	-2.5
	comp=Z,4.2nm,0.8s,baz=49,slow=8.7,SNR=5.9						
	comp=Z,2.3nm,0.6s						
AKASG	Malin Array Be	93.51	326	i P	P	17 28 05.5	-1.2
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKBB	Malin Array Si	93.51	326	ceP	P	17 28 07.2	+0.5
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.7s						
AKBB	Malin Array Si	93.51	326	P	P	17 28 05.6	-1.1
AK01	Malin Array Si	93.52	326	P	P	17 28 06.7	-0.1
KIEV	Kiev	93.52	326	P	P	17 28 05.7	-1.1
KIEV	Kiev	93.52	326	P	P	17 28 05.7	-1.1
KIEV	Kiev	93.52	326	P	P	17 28 05.3	-1.5
AK09	Malin Array Si	93.53	326	P	P	17 28 06.7	-0.1
AK04	Malin Array Si	93.53	326	P	P	17 28 06.7	-0.1
AK08	Malin Array Si	93.53	326	P	P	17 28 06.7	-0.1
AK23	Malin Array Si	93.53	326	P	P	17 28 06.7	-0.1
AGMN	Agassiz Nation	93.55	37	IAmb	IAmb	17 28 08.1	
	comp=Z,37nm,1.1s						
ICESG	Greenland Ices	93.60	3	i P	P	17 28 06.2	-1.0
ICESG				IAmb	IAmb	17 28 09.3	
	comp=Z,63nm,1.5s						
SIM	Simferopol'	93.63	319	eP	P	17 28 07.4	0.0
SIM				e		17 31 56.0	
SIM				ePS	PS	17 40 33.0	+1.8
SIM				pmax	pmax		
	comp=Z,14nm,0.8s						
SLBS	Sierra La Lagu	93.86	64	P	P	17 28 09.9	+0.9
SLBS				IAmb	IAmb	17 28 12.1	
	comp=Z,73nm,1.5s						
RAYN	Ar Rayn	93.94	296	P	P	17 28 08.8	-0.6
RAYN	Ar Rayn	93.94	296	P	P	17 28 08.7	-0.6
RAYN	Ar Rayn	93.94	296	P	P	17 28 08.8	-0.6
RAYN				pmax	pmax		
	comp=Z,15nm,0.8s						
RAYN	Ar Rayn	93.94	296	i P	P	17 28 08.7	-0.6
	SNR=17						
EPLO	Experimental L	94.02	35	IAmb	IAmb	17 28 10.3	
	comp=Z,57nm,1.2s						
NC303	NORSAR Array S	94.30	340	IAmb	IAmb	17 28 39.6	
	comp=Z,51nm,1.6s						
HFS	Hagfors	94.33	339	P	P	17 28 08.8	-1.5
	comp=Z,12nm,0.6s,baz=82,slow=3.1,SNR=55						
HFS				PP	PP	17 31 56.2	-0.7
	comp=Z,7.8nm,0.8s,baz=68,slow=12,SNR=5.8						
HFS				PKKPbc	PKKPdf	17 45 09.0	-1.2
	comp=Z,0.6nm,0.4s,baz=182,slow=4.0,SNR=7.0						
	comp=Z,12nm,0.6s						
FRB	Frobisher Bay	94.37	15	LR	LR	18 11 12.5	
	comp=Z,275nm,21.0s,baz=325,slow=36						
DOMB	Dombas	94.38	342	eP	P	17 28 10.5	-0.1
DOMB				IAmb	IAmb	17 28 11.2	
	comp=Z,19nm,1.0s						
NB2	NORSAR Subarra	94.48	340	P	P	17 28 09.8	-1.3
	comp=Z,3.3nm,0.6s,baz=44,slow=4.8						
NB2				PP	PP	17 31 49.2	-8.9
	comp=Z,47nm,2.0s,baz=42,slow=7.9						
NB2	NORSAR Subarra	94.48	340	P	P	17 28 09.8	-1.3
	baz=44,slow=4.8						
NOA	NORSAR Array B	94.48	340	P	P	17 28 09.7	-1.4
	comp=Z,3.8nm,0.6s,baz=45,slow=4.7,SNR=27						
NOA				PP	PP	17 31 58.4	+0.3
	comp=Z,3.1nm,0.8s,baz=45,slow=8.3,SNR=7.0						
	comp=Z,3.8nm,0.6s						
F33A	5 Mile Ranch,	94.56	39	IAmb	IAmb	17 28 13.0	
	comp=Z,70nm,1.5s						
NC602	NORSAR Array S	94.61	340	eP	P	17 28 10.6	-1.0
NORES	NORESS Array B	94.61	340	P	P	17 28 11.9	+0.3
MNTX	Cornudas Mount	94.61	55	IAmb	IAmb	17 28 14.8	
	comp=Z,38nm,1.3s						
SUW	Suwalki	94.61	331	eP	P	17 28 10.7	-1.1
NAO01	NORSAR Array S	94.74	340	IAmb	IAmb	17 28 26.2	
	comp=Z,48nm,1.7s						
SFJD	Kangerlussuaq	94.77	7	P	P	17 28 12.6	+0.4
SFJD	Kangerlussuaq	94.77	7	LR	LR	18 12 43.4	
	comp=Z,149nm,19.9s,baz=346,slow=37						
SFJD	Kangerlussuaq	94.77	7	P	P	17 28 12.6	+0.4
SFJD				pmax	pmax		
	comp=Z,148nm,2.0s						
SFJD	Kangerlussuaq	94.77	7	i P	P	17 28 08.3	-3.9
SFJD				IAmb	IAmb	17 28 12.8	
	comp=Z,32nm,1.1s						
AKN	Aaknes	94.88	343	eP	P	17 28 13.4	+0.6
VNDA	Vanda	95.06	177	P	P	17 28 12.7	-0.5
	comp=Z,12nm,1.2s,baz=327,slow=6.1,SNR=14						
VNDA				LR	LR	18 10 19.4	
	comp=Z,230nm,18.7s,baz=350,slow=35						
	comp=Z,12nm,1.2s						
VHRN	Van Horn	95.29	56	IAmb	IAmb	17 28 18.1	
	comp=Z,43nm,1.4s						
ECSD	EROS Data Cent	95.42	41	IAmb	IAmb	17 28 16.8	
	comp=Z,53nm,1.6s						
SKAR	Skarslia	95.67	341	eP	P	17 28 16.9	+0.4
MSTX	Muleshoe	95.68	52	IAmb	IAmb	17 28 18.9	
	comp=Z,47nm,1.5s						
CBKS	Cedar Bluff	95.73	47	IAmb	IAmb	17 28 18.6	
	comp=Z,38nm,1.1s						
ILGA	Ilgaz	95.76	316	IAmb	IAmb	17 30 55.3	
	comp=Z,31nm,1.0s						
HYA	Hoyanger	95.92	342	eP	P	17 28 17.8	+0.3
HYA				IAmb	IAmb	17 28 18.4	
	comp=Z,23nm,0.8s						
AMTX	Amarillo	96.10	51	IAmb	IAmb	17 28 21.2	
	comp=Z,50nm,1.3s						
KMPD	K-Podol'skiy	96.20	325	P	P	17 28 18.5	-0.6
BRTR	Keskin Array B	96.45	315	P	P	17 28 19.4	-1.2
BRTR	Keskin Array B	96.45	315	P	P	17 28 19.6	-1.0
	comp=Z,7.8nm,0.8s,baz=88,slow=3.2,SNR=50						
	comp=Z,7.8nm,0.8s						
TXAR	Lajitas Array	96.92	57	P	P	17 28 23.1	+0.2
TXAR	Lajitas Array	96.92	57	P	P	17 28 22.0	-0.9
	comp=Z,4.0nm,1.1s,baz=288,slow=1.2,SNR=20						
TXAR				PKKPbc	PKKPdf	17 45 05.1	-0.5
	comp=Z,0.6nm,0.7s,baz=131,slow=5.7,SNR=4.4						
	comp=Z,4.0nm,1.1s						
TXAR	Lajitas Array	96.92	57	P	P	17 28 23.1	+0.2
E38A	The Farm, Brul	96.93	37	IAmb	IAmb	17 28 23.2	
	comp=Z,46nm,1.5s						
ANTO	Ankara	96.95	315	P	P	17 28 22.3	-0.5
ANTO				IAmb	IAmb	17 28 23.4	
	comp=Z,77nm,1.8s						
ANTO	Ankara	96.95	315	P	P	17 28 22.3	-0.5
ANTO				pmax	pmax		
	comp=Z,77nm,1.8s						
SMWD	Samnorwood	97.06	50	IAmb	IAmb	17 28 25.6	
	comp=Z,56nm,1.7s						
DKNS	Dickens	97.20	52	IAmb	IAmb	17 28 26.1	
	comp=Z,43nm,1.4s						
SAND	Sanderson	97.88	55	IAmb	IAmb	17 31 21.8	
	comp=Z,12nm,1.1s						
APMT	Aspermont	97.95	52	IAmb	IAmb	17 28 29.3	
	comp=Z,60nm,1.7s						
MLR	Muntele Rosu	98.25	323	IAmb	IAmb	17 31 24.0	
	comp=Z,42nm,1.8s						
MMAI	Mount Meron Ar	98.31	308	P	P	17 28 28.3	-0.8
	comp=Z,3.9nm,0.7s,baz=58,slow=5.0,SNR=8.5						
	comp=Z,3.9nm,0.7s						
ABTX	Abilene, Hawle	98.62	52	IAmb	IAmb	17 28 32.4	
	comp=Z,57nm,1.5s						
JCT	Junction City	99.46	54	IAmb	IAmb	17 28 36.9	
	comp=Z,66nm,1.9s						
LANS	Liptovska Anna	99.49	329	ePP	PP	17 32 33.4	-3.6
MORC	Moravsky Berou	100.02	330	ePDIFF	Pdif	17 28 37.7	+1.4
MORC	Moravsky Berou	100.02	330	ePP	PP	17 32 42.1	+1.2
VYHS	Vyhne	100.23	328	i P	Pdif	17 28 37.1	-0.2
VYHS				e		17 32 44.1	
VYHS	Vyhne	100.23	328	ePDIFF	Pdif	17 28 37.1	-0.2
VYHS				ePP	PP	17 32 44.1	+1.5
VRAC	Vranov	100.79	330	ePP	PP	17 32 45.9	-0.9
BRG	Berggiesshubel	100.92	332⇓	ePif		17 28 39.5	
BRG				Amp		17 28 40.2	
	comp=Z,3.6nm,1.0s						
BRG	Berggiesshubel	100.92	332	P	PP	17 32 54.4	+6.7
BRG				Amp		17 32 55.2	
	comp=Z,13nm,1.1s						
BRG	Berggiesshubel	100.92	332	P	PKiKP	17 33 04.2	-1.4
BRG				Amp		17 33 05.2	
	comp=Z,21nm,1.3s						
SRO	Srobarova	100.95	328	ePP	PP	17 32 49.7	+1.7
CLL	Collm	101.02	333	eP	Pdif	17 28 34.0	-6.6
CLL				i		17 32 48.3	
CLL				pmax	pmax		
	comp=Z,97nm,2.1s						
CLL				MLR	MLR		
	comp=Z,400nm,18.6s						
CLL	Collm	101.02	333	ePdifflp		17 28 34.0	
CLL				i Pdif	Pdif	17 28 39.7	-0.9
	comp=Z,22nm,1.7s						
CLL				esPdif	sPdif	17 28 53.0	+3.3
CLL				i x	x	17 32 35.5	
CLL				i PP	PP	17 32 48.3	-0.1
	comp=Z,97nm,2.1s						
CLL				esPP		17 32 59.0	
CLL				ePPS	PPS	17 42 42.0	
CLL				eSS	SS	17 47 18.0	+3.0
CLL				AMS	AMS	18 13 00.0	
	comp=N,300nm,20.3s						
CLL				AMS	AMS	18 13 00.0	
	comp=E,500nm,20.8s						
CLL				AMS	AMS	18 21 00.0	
	comp=Z,400nm,18.6s						
KRUC	Moravsky	101.05	330	ePDIFF	Pdif	17 28 39.5	-1.4
KRUC				ePP	PP	17 32 48.3	-0.4
MODS	Modra-Piesok	101.09	329	ePP	PKiKP	17 32 50.8	-15
TREC	Trest	101.33	330	ePP	PKiKP	17 32 52.7	-14
ZVC	Zvikov	101.83	331	ePP	PKiKP	17 32 57.7	-10
RONA	Rosalia, Austr	102.03	329	i PP	PP	17 32 57.8	+1.6
	comp=Z,11nm,1.3s						
CONA	Conrad Observa	102.09	329	i PP	PP	17 32 58.1	+1.4
	comp=Z,26nm,1.5s,SNR=6.7						
CKRC	Cesky Krumlov	102.21	331	ePP	PKiKP	17 32 57.8	-10
SCHQ	Schefferville	102.27	20	Pdiff	Pdif	17 28 46.2	+0.1
	comp=Z,5.5nm,0.9s,baz=266,slow=1.9,SNR=4.0						
KHC	Kasperske Hory	102.33	331	ePP	PKiKP	17 32 59.0	-9.3
GERES	GERESS Array B	102.48	331	PP	PP	17 32 59.3	-0.2
	comp=Z,10nm,1.1s,baz=317,slow=7.3,SNR=17						
GERES				PKKPbc	PKKPbc	17 44 48.5	-0.7
	comp=Z,0.3nm,0.7s,baz=264,slow=8.9,SNR=5.3						
ARSA	Arzberg	102.72	329	i PP	PP	17 33 02.8	+1.4
	comp=Z,15nm,1.4s,SNR=6.2						
MOA	Molln	102.92	330	i PP	PP	17 33 01.9	-0.9
	comp=Z,19nm,1.5s						
BIOA	Bad Ischl, Aus	103.33	330	ePKiKP	PKiKP	17 33 07.8	-2.3
	comp=Z,2.9nm,0.7s						
SOKA	Soboth	103.36	329	ePP	PP	17 33 04.7	-1.5
	comp=Z,17nm,1.3s						
EKA	Eskdalemuir Ar	103.49	343	PP	PP	17 33 05.5	-1.2
	comp=Z,4.1nm,0.7s,baz=27,slow=5.7,SNR=7.2						
OBKA	Obir	103.72	329	ePP	PP	17 33 06.6	-2.3
	comp=Z,33nm,0.9s,SNR=8.1						
KBA	Koelnbreinsper	103.90	330	ePKiKP	PKiKP	17 33 10.6	-0.7
	comp=Z,26nm,1.5s						
LESA	Schwarzleotal	103.97	330	ePKiKP	PKiKP	17 33 11.2	-0.2
	comp=Z,28nm,1.1s,SNR=5.7						
MYKA	Terra Mystica	104.08	329	i PP	PP	17 33 08.8	-2.7
	comp=Z,18nm,1.4s						
BTNL	Ternell	104.40	336	dPP	PKiKP	17 33 13.3	+1.3
MEM	Membach	104.43	336	dPdif	Pdif	17 28 56.1	+0.3
MEM				dPP	PP	17 33 14.1	+0.2
MEM				dPKP	PP	17 33 14.5	+0.6
ABTA	Abfaltersbach	104.54	330	ePKiKP	PKiKP	17 33 13.1	+0.7
	comp=Z,4.4nm,0.8s						
WATA	Walderalm	104.55	331	ePP	PP	17 33 15.9	+0.8
	comp=Z,27nm,1.2s,SNR=6.3						
WTTA	Wattenberg	104.58	331	i PP	PP	17 33 16.2	+0.9
	comp=Z,32nm,1.5s						
MOTA	Moosalm	104.77	331	i PP	PP	17 33 16.8	+0.2
	comp=Z,27nm,1.5s						
SQTA	Sankt Quirin	104.81	331	epPKiKP	PKiKP	17 33 19.6	+6.7
	comp=Z,15nm,1.1s						
RETA	Reutte	104.82	331	ePKiKP	PKiKP	17 33 14.5	+1.6
	comp=Z,10.0nm,1.3s						
BCLA	Clavier	104.86	336	dPKP	PP	17 33 18.3	+1.3
WLF	Walferdange	105.12	335	dPP	PP	17 33 18.8	-0.2
FETA	Feichten	105.18	331	ePKiKP	PKiKP	17 33 12.9	-0.8
	comp=Z,7.6nm,1.5s						
DAVA	Damuels	105.37	332	i pPKiKP	PKiKP	17 33 22.8	+8.7
	comp=Z,6.1nm,0.8s						
DAVOX	Davos/Dischmat	105.75	331	PP	PP	17 33 24.2	+0.3
	comp=Z,5.2nm,0.8s,baz=35,slow=13,SNR=5.3						
QSPA	South Pole Qui	107.20	180	PKiKP	PKiKP	17 33 14.5	-2.1
	comp=Z,2.7nm,0.8s,baz=183,slow=0.2,SNR=3.1						
SYO	Syowa Base	112.61	202⇓	ePdiff	Pdif	17 29 35.4	+3.8
PGAV	Gavieira, Arco	116.94	340	ePP	PP	17 34 46.4	+2.4
MVO	Moncorvo	117.25	339	ePP	PP	17 34 50.9	+4.7
POLO	Lamas de Olo	117.32	340	ePP	PP	17 34 49.9	+3.3
ESDC	Sonseca Array	117.42	336	PKP	PKiKP	17 33 37.6	+0.6
	comp=Z,0.5nm,0.6s,baz=33,slow=2.4,SNR=2.2						
ESDC				PKKPbc	PKKPbc	17 43 59.9	-1.0
	comp=Z,3.9nm,1.0s,baz=208,slow=2.6,SNR=10						
PVIS	Viseu	117.94	339	ePP	PP	17 34 54.3	+3.3
MTE	Manteigas	118.10	339	ePP	PP	17 34 56.6	+4.5
COI	Coimbra	118.57	339	ePP	PP	17 34 57.8	+2.6
PCAS	Casmilo, Conde	118.74	339	ePP	PP	17 35 02.8	+6.3
PMRV	Marv??o	118.91	338	ePP	PP	17 35 00.8	+3.2
PESTR	Estremoz	119.48	338	ePP	PP	17 35 03.4	+1.8
PMTG	Montargil	119.53	339	ePP	PP	17 35 05.7	+3.8
PBAR	Barrancos	119.90	337	ePP	PP	17 35 06.3	+1.9
EVO	Evora	119.93	338	ePP	PP	17 35 06.3	+1.6
MOE	Montemor	120.06	338	ePP	PP	17 35 08.1	+2.6
MESJ	Messejana	120.62	338	ePP	PP	17 35 10.8	+1.4
MESJ	Messejana	120.62	338	ePP	PP	17 35 11.8	+2.4
PCVE	Castro Verde	120.74	338	ePP	PP	17 35 14.1	+3.9
PVAQ	Vaqueiros	120.83	337	ePP	PP	17 35 13.8	+3.0
PBDV	Barranco-do-Ve	121.05	337	ePP	PP	17 35 16.8	+4.4
PTEO	Sao Teotonio	121.06	338	ePP	PP	17 35 16.2	+3.8
MORF	Marmelete	121.25	338	ePP	PP	17 35 15.1	+1.3
MORF	Marmelete	121.25	338	ePP	PP	17 35 17.5	+3.7
PFVI	Vila Bisbo	121.47	338	ePP	PP	17 35 17.6	+2.4
TROLL	Troll, Antarti	121.74	192	⇑P	PKiKP	17 33 45.1	+0.6
	comp=Z,197nm,0.6s						
SNAA	Sanae	123.02	191	⇑P	PKPdf	17 33 46.7	0.0
	comp=Z,56nm,0.5s						
SNAA	Sanae	123.02	191	PKP	PKiKP	17 33 47.0	+0.1
	comp=Z,2.9nm,0.6s,baz=206,slow=6.1,SNR=29						
SNAA	Sanae	123.02	191	PKIKP	PKiKP	17 33 47.0	+0.1
MDT	Midelt	123.54	332	PKP	PKPdf	17 33 48.7	-0.3
	comp=Z,2.6nm,0.6s,baz=262,slow=4.0,SNR=4.4						
VNA2	Neumayer--Watz	124.42	190	⇑P	PKiKP	17 33 49.8	+0.2
	comp=Z,10.0nm,0.6s,baz=165,slow=1.1						
VNA3	Neumayer Olymp	124.49	189	⇑P	PKPdf	17 33 49.6	+0.1
	comp=Z,4.4nm,0.6s						
VNA1	Neumayer--Stat	124.81	189	⇑P	PKPdf	17 33 49.9	-0.1
	comp=Z,16nm,1.2s						
BOSA	Boshof	126.37	247	PKP	PKiKP	17 33 54.8	-0.1
	comp=Z,2.0nm,0.7s,baz=255,slow=0.3,SNR=5.8						
OTAV	Otavalo	131.24	74	eP	PKPdf	17 34 03.1	-1.5
SDV	Santo Domingo	133.92	58	eP	PKPdf	17 34 08.6	-0.7
TORD	Torodi Ar. Bea	134.83	310	PKhKP	PKPpre	17 34 04.7	
	comp=Z,2.1nm,0.3s,baz=352,slow=2.1,SNR=2.0						
TORD				PKP	PKPdf	17 34 11.2	+0.5
	comp=Z,3.9nm,0.5s,baz=36,slow=3.6,SNR=3.2						
PLCA	Paso Flores	139.65	133	PKhKP	PKPpre	17 34 12.4	
	comp=Z,2.9nm,0.9s,baz=254,slow=2.4,SNR=3.4						
PLCA	Paso Flores	139.65	133	eP	PKPdf	17 34 19.8	+0.8
DBIC	Dimbokro	143.92	309	PKP	PKPbc	17 34 24.9	-0.1
	comp=Z,30nm,0.5s,baz=58,slow=3.3,SNR=56						
DBIC	Dimbokro	143.92	309	PKIKP	PKPbc	17 34 25.0	-0.1
LPAZ	La Paz	145.63	94	PKPbc	PKPab	17 34 32.1	+0.6
	comp=Z,34nm,0.4s,baz=320,slow=2.4,SNR=143						
LPAZ	La Paz	145.63	94	eP	PKPab	17 34 32.1	+0.6
LPAZ	La Paz	145.63	94	eP	PKPdf	17 34 30.6	-0.3
BBSD	Serra de San D	152.89	94	eP	PKPdf	17 34 40.7	-1.0
BBSD	Serra de San D	152.89	94	eP	PKPdf	17 34 41.7	0.0
CPUP	Villa Florida	155.08	115	PKP	PKPdf	17 34 45.0	+0.4
	comp=Z,0.4nm,0.4s,baz=131,slow=1.3,SNR=4.9						
CPUP				PKPab	PKPab	17 35 09.8	+0.7
	comp=Z,7.0nm,1.1s,baz=134,slow=5.0,SNR=11						
SALV	Santo Antonio	157.45	90	eP	PKPdf	17 34 38.4	-10
PCMB	Pacaembu	161.56	106	eP	PKPab	17 35 38.5	+1.1
ITRB	Iturama	162.63	100	eP	PKPab	17 35 26.3	-16
SMTB	Santa Maria do	162.81	62	eP	PKPdf	17 34 53.6	-0.5
SPB	Sao Paulo	164.46	116	eP	PKPdf	17 34 55.4	+0.1
BDFB	Brasilia	164.74	86	PKP	PKPdf	17 34 56.0	+0.2
	comp=Z,3.2nm,0.7s,baz=342,slow=3.7,SNR=4.7						
NBPB	Pedra_Branca-C	166.20	32	eP	PKPdf	17 34 57.2	+0.1
SDBA	SAO DESIDERIO	166.78	70	eP	PKPdf	17 34 58.9	+1.4

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*IDC **10** 17:18:50.6±0.5, 43°.57N×146°.71E, h0^{km}, mb4.5/25, mbtmp4.5/28, ML3.3/2, MS4.3/4, Error ellipse: s-maj=16.2km s-min=13.5km az=116.0*

*MOS **10** 17:18:53.4±0.9, 43°.31N×146°.92E, h44^{km}, mb5.0/20, Error ellipse: s-maj=7.4km s-min=6.1km az=115.6*

MOS Felt (IV) at Golovnino, Goryachiy Plyazh, Malokuril'skoye, Lagunnoye, Yuzhno-Kuril'sk.

*BJI **10** 17:18:54.7, 43°.39N×146°.67E, h40^{km}, mB5.1/5, mb4.8/24, Ms4.7/8, Ms7 4.5/8*

*SKHL **10** 17:18:55.6±0.4, 43°.40N×146°.90E, h49^{km}±5^{km}, mb5.7/7, mbv5.2/3, ms4.2/3*

*NIED **10** 17:18:56.5, 43°.43N×146°.66E, h45^{km}, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.28; $M_{\theta\theta}$0.67; $M_{\phi\phi}$0.62; $M_{r\theta}$0.08; $M_{\theta\phi}$-0.64; $M_{\phi r}$0.84; Fault plane solution: $M_0$1.52000×10^{16} NP1: ϕ_s296.00000°, δ37.00000°, λ-125.00000°. NP2: ϕ_s156.00000°, δ60.00000°, λ-67.00000°.*

*JMA **10** 17:18:56.5±0.2, 43°.4N±0°.8×14°7E±°, h45^{km}±2^{km}, MD4.6/35, MV5.2/35, E OFF HOKKAIDO*

JMA Felt II J1 at E OFF HOKKAIDO .

*NEIC **10** 17:18:59.3±1.8, 43°.55N±0°.10×146°.6E±0°.1, h63^{km}±6^{km}, mb4.9/64, Error ellipse: s-maj=16.0km s-min=12.4km az=127.0*

ISC 10 17:18:55.8±0.4, **43°.49N**±0°.05×**146°.72E**±0°.04, **h40**^{km}±1^{km}, **h40**^{km}**:pP-P, n326,** $\sigma 1^{s}46$/323, **mb4.8**/98, **MS4.6**/4, **30C-18D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	0.39	12d	i PN	Pn	17 19 06.0	+0.9
SHO				i S	Sn	17 19 11.9	+0.3
SHO				pmax	pmax		
	comp=Z,8µm,0.2s						
SHO				smax	smax		
	comp=N,77µm,0.2s						
SHO				smax	smax		
	comp=E,146µm,0.5s						
SHO	Shikotan	0.39	12	i P	Pn	17 19 06.3	+1.2
SHO				AMB	AMB	17 19 06.9	
	comp=E,5µm,0.3s						
SHO				i S	Sn	17 19 12.3	+0.7
SHO				A	A	17 19 12.7	
	comp=E,99µm,0.5s						
SHO				A	A	17 19 12.7	
	comp=E,72µm,0.5s						
NEM2	Nemuro 2	0.72	260	i P	Pn	17 19 09.8	+0.3
NEM2				eS	Sn	17 19 19.3	0.0
NEM2	Nemuro 2	0.72	260	A	A	17 19 09.8	
	comp=N,39nm,1.0s,comp=E,57nm,2.1s						
NMR	Nemuro--Hokkai	0.73	261⇑	i PN	Pn	17 19 09.7	+0.1
NMR				i S	Sn	17 19 19.2	-0.3
NMR	Nemuro--Hokkai	0.73	261	i P	Pn	17 19 09.9	+0.3
NMR				i S	Sn	17 19 19.3	-0.3
YUK	Yuzh-Kuril'sk	0.82	311c	i PN	Pn	17 19 11.1	+0.2
YUK				i S	Sn	17 19 21.6	-0.3
YUK				pmax	pmax		
	comp=Z,8µm,0.3s						
YUK				pmax	pmax		
	comp=E,2µm,0.1s						
YUK				smax	smax		
	comp=N,34µm,0.2s						
YUK				smax	smax		
	comp=E,66µm,0.2s						
YUK	Yuzh-Kuril'sk	0.82	311	i P	Pn	17 19 11.3	+0.4
YUK				AMB	AMB	17 19 12.1	
	comp=E,9µm,0.3s						
YUK				i S	Sn	17 19 21.7	-0.2
YUK				A	A	17 19 22.8	
	comp=E,53µm,0.5s						
YUK				A	A	17 19 22.8	
	comp=E,56µm,0.5s						
GLVR	Golovnino	0.91	286⇑	i PN	Pn	17 19 12.6	+0.6
GLVR				eS	Sn	17 19 23.8	0.0
GLVR				pmax	pmax		
	comp=N,388nm,0.2s						
GLVR				pmax	pmax		
	comp=E,570nm,0.2s						
GLVR				pmax	pmax		
	comp=Z,6µm,0.2s						
GLVR				smax	smax		
	comp=E,28µm,0.2s						
GLVR				smax	smax		
	comp=N,60µm,0.1s						
GLVR	Golovnino	0.91	286	i P	Pn	17 19 12.5	+0.6
GLVR				AMB	AMB	17 19 13.2	
	comp=N,6µm,0.2s						
GLVR				eS	Sn	17 19 23.8	0.0
GLVR				A	A	17 19 27.0	
	comp=N,60µm,0.1s						
GLVR				A	A	17 19 27.0	
	comp=N,28µm,0.1s						
JKHN	Kushirohamanak	1.21	251	eP	Pn	17 19 16.7	+0.5

JKHN				*e*S	**Sn**	**17 19 31.8**	**+0.5**
JKHN	**Kushirohamanak**	**1.21**	**251**	A	A	17 19 16.7	
	comp=N,30nm,0.8s,comp=E,36nm,1.7s						
RUSJ	**Misakicho**	**1.23**	**300**	⇓*i*PN	**Pn**	**17 19 17.5**	**+1.1**
RUSJ				*i* S	**Sn**	**17 19 34.5**	**+2.7**
JRA	**Rausu**	**1.24**	**292**	P	**Pn**	**17 19 17.5**	**+0.9**
JRA				*e*S	**Sn**	**17 19 32.7**	**+0.6**
JRA	**Rausu**	**1.24**	**292**	A	A	17 19 17.5	
	comp=N,21nm,1.7s,comp=E,34nm,1.5s						
JNSB	**Nemuroshibetsu**	**1.28**	**283**	P	**Pn**	**17 19 18.0**	**+0.9**
JNSB				*e*S	**Sn**	**17 19 33.8**	**+0.8**
JNSB	**Nemuroshibetsu**	**1.28**	**283**	A	A	17 19 18.0	
	comp=N,50nm,2.3s,comp=E,47nm,1.5s						
AKK	**Akkeshi**	**1.45**	**252**	*e*P	**Pn**	**17 19 19.5**	**0.0**
JNK	**Nakash**	**1.46**	**274**	*i* P	**Pn**	**17 19 20.2**	**+0.6**
JNK				*e*S	**Sn**	**17 19 37.5**	**+0.1**
JNK	**Nakash**	**1.46**	**274**	A	A	17 19 20.2	
	comp=N,25nm,1.0s,comp=E,21nm,1.0s						
JAK	**Akkeshi**	**1.56**	**252**	*i* P	**Pn**	**17 19 21.3**	**+0.3**
JAK				*e*S	**Sn**	**17 19 40.1**	**+0.2**
JAK	**Akkeshi**	**1.56**	**252**	A	A	17 19 21.3	
	comp=N,21nm,1.3s,comp=E,29nm,1.8s						
KUR	**Kuril'sk**	**1.93**	**25**	*c* *i*PN	**Pn**	**17 19 26.0**	**0.0**
KUR				*e*S	**Sn**	**17 19 48.3**	**-0.7**
KUR				pmax	pmax		
	comp=Z,2µm,0.9s						
KUR				smax	smax		
	comp=N,7µm,0.2s						
KUR				smax	smax		
	comp=E,2µm,0.2s						
KUR	**Kuril'sk**	**1.93**	**25**	*i* P	**Pn**	**17 19 26.9**	**+0.9**
KUR				AMB	AMB	17 19 28.9	
	comp=E,900nm,0.2s						
KUR				*i* S	**Sn**	**17 19 48.4**	**-0.6**
KUR				A	A	17 19 51.7	
	comp=E,5µm,0.3s						
KUR				A	A	17 19 51.7	
	comp=E,4µm,0.3s						
JTKR	**Abashiri--Toko**	**2.09**	**284**	*i* P	**Pn**	**17 19 30.1**	**+1.8**
JTKR				*e*S	**Sn**	**17 19 55.1**	**+2.1**
JTKR	**Abashiri--Toko**	**2.09**	**284**	A	A	17 19 30.1	
	comp=N,5.0nm,2.3s,comp=E,4.0nm,3.0s						
JAR	**Ashorobuto**	**2.16**	**266**	P	**Pn**	**17 19 30.5**	**+1.3**
JAR				*e*S	**Sn**	**17 19 55.6**	**+0.9**
JAR	**Ashorobuto**	**2.16**	**266**	A	A	17 19 30.5	
	comp=N,14nm,1.0s,comp=E,12nm,1.0s						
JOB	**Onbets**	**2.19**	**255**	P	**Pn**	**17 19 30.5**	**+0.9**
JOB				*e*S	**Sn**	**17 19 56.0**	**+0.5**
JOB	**Onbets**	**2.19**	**255**	A	A	17 19 30.5	
	comp=N,10.0nm,2.8s,comp=E,11nm,1.1s						
JMP	**Maruseppu**	**2.49**	**283**	A	A	17 19 35.4	
	comp=N,10.0nm,1.3s,comp=E,4.0nm,2.2s						
JCH	**Churui**	**2.61**	**252**	A	A	17 19 36.7	
	comp=N,10.0nm,1.4s,comp=E,6.0nm,0.9s						
ERM	**Erimo**	**3.01**	**242**		**Pn**	**17 19 43.5**	**+2.6**
ERM	**Erimo**	**3.01**	**242**	*i* PN	**Pn**	**17 19 42.2**	**+1.3**
JEM	**Erimo**	**3.01**	**242**	A	A	17 19 42.2	
	comp=N,6.0nm,1.2s,comp=E,5.0nm,2.8s						
JKA	**Kamikawa-asahi**	**3.05**	**283**	Pn	**Pn**	**17 19 43.8**	**+2.4**
JKA	**Kamikawa-asahi**	**3.05**	**283**	*e*P	**Pn**	**17 19 43.8**	**+2.4**
ASAJ	**Asahikawa**	**3.05**	**283**	Pn	**Pn**	**17 19 43.4**	**+1.9**
	comp=E,16nm,0.3s,baz=96,slow=12,SNR=91						
ASAJ				Sn	**Sn**	**17 20 18.6**	**+1.9**
	comp=E,40nm,0.3s,baz=119,slow=13,SNR=6.0						
ASAJ				LR	LR	17 20 52.3	
	comp=E,2µm,21.7s,baz=116,slow=40						
ASAJ	**Asahikawa**	**3.05**	**283**	PN	**Pn**	**17 19 43.8**	**+2.4**
JNBK	**Urakawa-nobuka**	**3.16**	**249**	A	A	17 19 44.4	
	comp=N,8.0nm,1.6s,comp=E,11nm,0.8s						
JAB	**Ashibetsu**	**3.27**	**272**	A	A	17 19 46.3	
	comp=N,5.0nm,1.3s,comp=E,5.0nm,4.1s						
YSS	**Yuzhno-Sakhali**	**4.45**	**322**		**Pn**	**17 20 02.7**	**+2.0**
YSS	**Yuzhno-Sakhali**	**4.45**	**322**	⇑*e*PN	**Pn**	**17 20 02.2**	**+1.5**
YSS				pmax	pmax		
	comp=Z,200nm,4.0s						
YSS				pmax	pmax		
	comp=Z,80nm,0.5s						
YSS				MLR	MLR		
	comp=Z,2µm,16.0s						
YSS	**Yuzhno-Sakhali**	**4.45**	**322**	*e*P	**Pn**	**17 20 02.9**	**+2.2**
YSS				AMB	AMB	17 20 12.1	
	comp=Z,200nm,4.0s						
YSS				*e*S	**Sn**	**17 20 54.1**	**+2.9**
YSS				AMS	AMS	17 21 46.2	
	comp=Z,1µm,16.0s						
YSS				AMS	AMS	17 21 46.2	
	comp=Z,600nm,16.0s						
UGL	**Uglegorsk**	**6.45**	**332**	⇓*e*PN	**Pn**	**17 20 29.1**	**+1.0**
UGL				MLR	MLR		
	comp=N,500nm,10.0s						
UGL				MLR	MLR		
	comp=E,500nm,7.0s						
UGL	**Uglegorsk**	**6.45**	**332**	*e*P	**Pn**	**17 20 31.6**	**+3.5**
UGL				*e*S	**Sn**	**17 21 40.1**	**-0.2**
UGL				AMS	AMS	17 23 10.0	
	comp=E,620nm,8.0s						
UGL				AMS	AMS	17 23 10.0	
	comp=E,750nm,8.0s						
JMM	**Marumori**	**7.20**	**221**	Pn	**Pn**	**17 20 37.8**	**-0.6**
TEY	**Ternei**	**7.42**	**285**	⇑*e*PN	Pn	17 20 47.1	+5.6
TEY				pmax	pmax		
	comp=Z,20nm,1.3s						
TEY				pmax	pmax		
	comp=E,30nm,1.2s						
TEY	**Ternei**	**7.42**	**285**	*e*P	Pn	17 20 47.1	+5.6
TEY				AMB	AMB	17 20 48.7	
	comp=E,20nm,0.2s						
TYV	**Tymovskoe**	**7.88**	**341**	*e*PN	Pn	17 20 52.3	+4.7
TYV				pmax	pmax		
	comp=Z,100nm,2.2s						
TYV				pmax	pmax		
	comp=Z,12nm,1.2s						
TYV	**Tymovskoe**	**7.88**	**341**	*e*P	**Pn**	**17 20 50.6**	**+3.0**
TYV				AMB	AMB	17 20 55.1	
	comp=Z,100nm,2.2s						
TYV				*e*S	**Sn**	**17 22 14.7**	**-0.7**
TYV				AMS	AMS	17 23 42.7	
	comp=Z,920nm,13.0s						
TYV				AMS	AMS	17 23 42.7	
	comp=Z,860nm,13.0s						
MJB9	**Matsu-Tunnel**	**9.52**	**226**	Pn	**Pn**	**17 21 09.6**	**-0.8**
MAJO	**Matsushiro**	**9.52**	**226**	Pn	**Pn**	**17 21 09.1**	**-1.2**
MAJO	**Matsushiro**	**9.52**	**226**	*i* PN	**Pn**	**17 21 09.6**	**-0.7**
MJAR	**Matsushiro Arr**	**9.52**	**226**	Pn	**Pn**	**17 21 09.7**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=31,slow=13,SNR=4.7						
	comp=Z,30nm,0.8s						
SKR	**Severo-Kuril's**	**9.63**	**38**	*e*PN	**Pn**	**17 21 14.3**	**+2.6**
SKR				pmax	pmax		
	comp=Z,1µm,2.3s						
SKR	**Severo-Kuril's**	**9.63**	**38**	*e*P	**Pn**	**17 21 14.2**	**+2.6**
SKR				AMB	AMB	17 21 21.5	
	comp=Z,210nm,0.7s						
SKR				AMB	AMB	17 21 22.8	
	comp=Z,600nm,3.2s						
SKR				*e*S	**Sn**	**17 22 56.1**	**-2.3**
GRNR	**Gornyy**	**10.10**	**320**	⇓*i*PN	Pn	17 21 22.9	+4.7
GRNR				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GRNR	**Gornyy**	**10.10**	**320**	*e*P	Pn	17 21 22.9	+4.7
OKH	**Okha**	**10.37**	**347**	*e*P	**Pn**	**17 21 25.6**	**+3.8**
NKL	**Nikolayevsk**	**10.46**	**340**	*e*P	**Pn**	**17 21 25.7**	**+2.7**
PAU	**Pauzhetka**	**10.49**	**37**	*e*P	**Pn**	**17 21 24.4**	**+0.9**
PAU				AMB	AMB	17 21 35.3	
	comp=Z,170nm,0.4s						
PAU				*e*S	**Sn**	**17 23 17.0**	**-2.6**
USRK	**Ussuriysk Ar.**	**10.67**	**279**	LR	LR	17 25 47.8	
	comp=Z,1µm,20.2s,baz=148,slow=39						
INU	**Inuyama**	**11.06**	**226**	Pn	**Pn**	**17 21 32.1**	**+0.8**
MSHR	**Mys Shultsa**	**11.43**	**271**	*i* PN	**Pn**	**17 21 39.6**	**+3.3**
PSTR	**Posyet**	**11.67**	**271**	*i* PN	**Pn**	**17 21 42.1**	**+2.4**
PSTR	**Posyet**	**11.67**	**271**	*e*P	**Pn**	**17 21 42.1**	**+2.4**
PEA0B	**Petropavlovsk-**	**12.07**	**33**		**Pn**	**17 21 46.8**	**+1.7**
PEA0B	**Petropavlovsk-**	**12.07**	**33**	*i* PN	**Pn**	**17 21 44.7**	**-0.3**
PETK	**Petropavlovsk-**	**12.07**	**33**		**Pn**	**17 21 46.2**	**+1.2**
PETK	**Petropavlovsk-**	**12.07**	**33**	Pn	**Pn**	**17 21 44.6**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=204,slow=11,SNR=17						
	comp=Z,4.4nm,0.5s						
PETK	**Petropavlovsk-**	**12.07**	**33**	PN	**Pn**	**17 21 46.2**	**+1.2**
PET	**Petropavlovsk**	**12.40**	**36**	*c* *e*P	**P**	**17 21 58.6**	**-2.1**
PET	**Petropavlovsk**	**12.40**	**36**	*e*PN	**P**	**17 21 58.2**	**-2.5**
PET				*e*S	**Sn**	**17 24 11.3**	**+5.1**
PET				pmax	pmax		
	comp=Z,52nm,0.9s						
PET				pmax	pmax		
	comp=Z,400nm,9.5s						
PET				pmax	pmax		
	comp=Z,600nm,7.6s						
PET				MLR	MLR		
	comp=Z,400nm,12.0s						
PET				MLR	MLR		
	comp=Z,500nm,11.0s						
PET	**Petropavlovsk**	**12.40**	**36**	*e*P	**Pn**	**17 21 49.2**	**-0.3**
PET	**Petropavlovsk**	**12.40**	**36**	pmax	pmax		
	comp=Z,69nm,1.7s						
KSRS	**Korea Array**	**15.51**	**253**	Pn	**Pn**	**17 22 32.1**	**+0.7**
	comp=Z,8.2nm,0.9s,baz=60,slow=12,SNR=5.6						
JNU	**Nakatsue**	**16.15**	**235**	LR	LR	17 27 52.8	
	comp=Z,2µm,20.3s,baz=129,slow=34						
KBG	**Krutoberegovo**	**16.36**	**33**	*e*P	**Pn**	**17 22 39.8**	**-2.4**
TJN	**Taejon**	**16.44**	**251**	P	**Pn**	**17 22 44.0**	**+0.6**
DL2	**Dalian**	**19.40**	**265**	P	**Pn**	**17 23 19.6**	**0.0**
DL2				pmax	pmax		
	comp=Z,49nm,1.0s						
JOW	**Kunigami**	**22.36**	**228**		**P**	**17 23 51.0**	**+0.6**
JOW	**Kunigami**	**22.36**	**228**	P	**P**	**17 23 52.7**	**+2.4**
	comp=Z,31nm,0.8s,baz=86,slow=10,SNR=5.3						
	comp=Z,31nm,0.8s						
TIA	**Tai'an**	**23.77**	**262**	P	**P**	**17 24 04.4**	**0.0**
TIA				pmax	pmax		
	comp=Z,25nm,1.2s						
NJ2	**Nanjing**	**24.70**	**252**	*e*P	**P**	**17 24 13.2**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HNS	**HongShan**	**25.01**	**267**	⇓P	**P**	**17 24 17.6**	**+1.9**
HNS				PP	**PnPn**	**17 24 53.8**	**+3.7**
HNS				pmax	pmax		
	comp=Z,38nm,1.5s						
HHC	**Hu-ho-hao-te**	**26.07**	**276**	*e*P	**P**	**17 24 25.3**	**-0.2**
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,4.4s						
HHC				LR	LR		
	comp=Z,310nm,14.5s						
HHC				LR	LR		
	comp=Z,350nm,16.8s						
HHC				LR	LR		
	comp=Z,670nm,16.8s						
BTO	**Baotou**	**27.26**	**277**	*e*P	**P**	**17 24 32.1**	**-4.1**
BTO				pP	**pP**	**17 24 40.7**	**-6.5**
BTO				sP	**sP**	**17 24 48.3**	**-3.8**
BTO				PP	**PnPn**	**17 25 17.2**	**-3.8**
BTO				S	**S**	**17 29 05.7**	**-7.0**
BTO				pmax	pmax		
	comp=Z,38nm,0.7s						
BTO				pmax	pmax		
	comp=Z,260nm,4.7s						
BTO				LR	LR		
	comp=N,1µm,12.0s						
BTO				LR	LR		
	comp=E,1µm,14.8s						
BTO				LR	LR		
	comp=Z,1µm,18.7s						
H11N2	**WAKE ISLAND Hy**	**29.11**	**138**	T	T	17 55 37.4	
	baz=329,slow=75						
H11N1	**WAKE ISLAND Hy**	**29.13**	**138**	T	T	17 55 40.8	
	baz=329,slow=75						
H11N3	**WAKE ISLAND Hy**	**29.13**	**138**	T	T	17 55 36.1	
	baz=329,slow=75						
TPUB	**Ta-pu**	**29.46**	**235**	P	**P**	**17 24 55.9**	**+0.1**
H11S1	**WAKE ISLAND Hy**	**30.07**	**140**	T	T	17 56 47.6	
	baz=331,slow=76						
H11S3	**WAKE ISLAND Hy**	**30.07**	**140**	T	T	17 56 45.1	
	baz=331,slow=76						
H11S2	**WAKE ISLAND Hy**	**30.09**	**140**	T	T	17 56 46.0	
	baz=331,slow=76						
XAN	**Xi'an**	**30.72**	**265**	P	**P**	**17 25 06.4**	**-0.5**
XAN				pmax	pmax		
	comp=Z,19nm,0.9s						
KDAK	**Kodiak Island**	**39.65**	**47**	*i* P	**P**	**17 26 21.8**	**-1.5**
KDAK				pmax	pmax		
	comp=Z,26nm,0.9s						
PZH	**PanZhiHua**	**40.03**	**260**	P	**P**	**17 26 27.8**	**+0.8**
ZALV	**Zalesovo Beam**	**40.90**	**307**	P	**P**	**17 26 34.2**	**+0.5**
	comp=Z,6.8nm,0.7s,baz=108,slow=5.3,SNR=0.7						
ZALV				PcP	**PcP**	**17 28 34.8**	**+1.3**
	comp=Z,5.0nm,0.5s,baz=68,slow=3.7,SNR=4.1						
	comp=Z,6.8nm,0.7s						
COLA	**College**	**41.47**	**36**	*i* P	**P**	**17 26 37.7**	**-0.5**
COLA				pmax	pmax		
	comp=Z,45nm,1.2s						
ILAR	**Eielson Array**	**41.88**	**36**	P	**P**	**17 26 42.1**	**+0.5**
	comp=Z,10nm,1.0s,baz=255,slow=5.1,SNR=1.6						
	comp=Z,10nm,1.0s						
WMQ	**Urumqi**	**41.90**	**292**	*e*P	**P**	**17 26 43.9**	**+1.8**
WMQ				LR	LR		
	comp=Z,940nm,17.1s						
WMQ				LR	LR		
	comp=Z,740nm,20.1s						
WMQ				LR	LR		
	comp=Z,560nm,19.9s						
ZSN	**Zaisan**	**42.55**	**298**	*e*P	**P**	**17 26 47.9**	**+0.6**
ZSN				pmax	pmax		
	comp=Z,38nm,1.5s						
ZSN	**Zaisan**	**42.55**	**298**	*e*P	**P**	**17 26 47.1**	**-0.2**
	comp=Z,38nm,1.5s						
TNCH	**TengChong**	**43.23**	**261**	*e*P	**P**	**17 26 55.0**	**+1.7**
TNCH				pP	pP	17 27 06.1	+1.5
TNCH				sP	sP	17 27 11.1	+1.7
TNCH				pmax	pmax		
	comp=Z,14nm,0.7s						
MK31	**Makanchi Array**	**44.43**	**298**	*i* P	**P**	**17 27 02.6**	**+0.1**
MKAR	**Makanchi Array**	**44.43**	**298**	P	**P**	**17 27 02.5**	**+0.1**
	comp=Z,7.0nm,0.7s,baz=86,slow=9.6,SNR=2.9						
	comp=Z,7.0nm,0.7s						
SEM	**Semipalatinsk**	**44.52**	**303**	*e*P	**P**	**17 27 04.0**	**+0.6**
SEM	**Semipalatinsk**	**44.52**	**303**	*e*P	**P**	**17 27 04.0**	**+0.6**
KURK	**Kurchatov**	**45.41**	**304**	P	**P**	**17 27 10.7**	**+0.5**
KURK	**Kurchatov**	**45.41**	**304**	*e*P	**P**	**17 27 10.7**	**+0.5**
KURBB	**Kurchatov Arra**	**45.50**	**304**	P	**P**	**17 27 10.7**	**-0.2**
	comp=Z,5.4nm,0.9s,baz=94,slow=7.4,SNR=0.9						
	comp=Z,5.4nm,0.9s						
O29M	**Mount Kennedy**	**46.34**	**42**		**S**	**17 34 02.3**	**+0.4**
CMAR	**Chiang Mai Arr**	**47.15**	**253**	P	**P**	**17 27 23.2**	**-1.1**
	comp=Z,1.2nm,0.6s,baz=51,slow=7.7,SNR=2.1						
	comp=Z,1.2nm,0.6s						
TDK	**Taldyqorghan**	**47.61**	**297**	*e*P	**P**	**17 27 28.1**	**+0.6**
TDK				pmax	pmax		
	comp=Z,20nm,0.9s						
TDK	**Taldyqorghan**	**47.61**	**297**	*e*P	**P**	**17 27 28.1**	**+0.6**
	comp=Z,20nm,0.9s						
SHLS	**Shalkode**	**47.68**	**294**	*e*P	**P**	**17 27 26.4**	**-1.8**
SHLS	**Shalkode**	**47.68**	**294**	*e*P	**P**	**17 27 26.5**	**-1.8**
UZB	**Uzynbulak**	**47.97**	**294**	*e*P	**P**	**17 27 30.9**	**+0.4**
UZB	**Uzynbulak**	**47.97**	**294**	*e*P	**P**	**17 27 30.9**	**+0.4**
KPKS	**Kokpek**	**48.06**	**295**	*e*P	**P**	**17 27 31.6**	**+0.5**
KPKS	**Kokpek**	**48.06**	**295**	*e*P	**P**	**17 27 31.6**	**+0.5**
ZHN	**Zhinishke**	**48.35**	**295**	*e*P	**P**	**17 27 33.8**	**+0.4**
ZHN				pmax	pmax		
	comp=Z,11nm,1.3s						
ZHN	**Zhinishke**	**48.35**	**295**	*e*P	**P**	**17 27 33.9**	**+0.4**
	comp=Z,11nm,1.3s						
SATY	**Saty**	**48.42**	**294**	*e*P	**P**	**17 27 34.1**	**+0.2**
SATY				pmax	pmax		
	comp=Z,12nm,1.2s						
SATY	**Saty**	**48.42**	**294**	*e*P	**P**	**17 27 34.1**	**+0.2**
	comp=Z,12nm,1.2s						
BRZS	**Berezniki**	**49.24**	**305**	*e*P	**P**	**17 27 40.7**	**+0.7**
BRZS	**Berezniki**	**49.24**	**305**	*e*P	**P**	**17 27 40.7**	**+0.7**
MDOK	**Medeo**	**49.27**	**295**	*e*P	**P**	**17 27 40.8**	**+0.3**
MDOK	**Medeo**	**49.27**	**295**	*e*P	**P**	**17 27 40.9**	**+0.3**
AAA	**Alma-Ata**	**49.34**	**295**	*e*P	**P**	**17 27 41.4**	**+0.5**
AAA	**Alma-Ata**	**49.34**	**295**	*e*P	**P**	**17 27 41.4**	**+0.5**
AAA	**Alma-Ata**	**49.34**	**295**	*e*P	**P**	**17 27 41.4**	**+0.5**
BVAR	**Borovoye Array**	**49.42**	**309**	P	**P**	**17 27 42.7**	**+1.4**
	comp=Z,5.3nm,0.7s,baz=72,slow=8.0,SNR=0.8						
BVAR				PcP	**PcP**	**17 29 04.1**	**+1.0**
	comp=Z,2.5nm,0.4s,baz=73,slow=4.6,SNR=1.6						
	comp=Z,5.3nm,0.7s						
BTLS	**Baital**	**50.41**	**299**	*e*P	**P**	**17 27 49.6**	**+0.7**
BTLS	**Baital**	**50.41**	**299**	*e*P	**P**	**17 27 49.6**	**+0.7**
SGDS	**Sogindy**	**50.73**	**296**	*e*P	**P**	**17 27 51.9**	**+0.5**
AAK	**Ala-Archa**	**51.19**	**296**	*i* P	**P**	**17 27 56.6**	**+1.6**
AAK				pmax	pmax		
	comp=Z,15nm,1.1s						
AAK	**Ala-Archa**	**51.19**	**296**	*e*P	**P**	**17 27 56.6**	**+1.6**
KSH	**Kashi**	**51.66**	**291**	P	P	17 28 04.1	+5.5
KSH				pP	sP	17 28 18.0	+3.1
KSH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
DZA	**Taraz**	**53.13**	**297**	*e*P	**P**	**17 28 09.7**	**+0.5**
DZA				pmax	pmax		
	comp=Z,13nm,1.0s						
DZA	**Taraz**	**53.13**	**297**	*e*P	**P**	**17 28 09.8**	**+0.5**
	comp=Z,13nm,1.0s						
BRLS	**Borolday**	**54.02**	**298**	*e*P	**P**	**17 28 18.0**	**+2.2**
BRLS	**Borolday**	**54.02**	**298**	*e*P	**P**	**17 28 18.0**	**+2.2**
CHM	**Chimkent**	**54.52**	**297**	*e*P	**P**	**17 28 19.9**	**+0.4**
CHM	**Chimkent**	**54.52**	**297**	*e*P	**P**	**17 28 19.9**	**+0.4**
YKA	**Yellowknife Ar**	**56.19**	**34**	P	**P**	**17 28 31.9**	**+0.9**
	comp=Z,5.2nm,0.8s,baz=352,slow=0.9,SNR=5.6						
	comp=Z,5.2nm,0.8s						
YKA	**Yellowknife Ar**	**56.19**	**34**	P	**P**	**17 28 32.0**	**+0.9**
ARCES	**ARCESS Array B**	**59.38**	**340**	PcP	**PcP**	**17 29 41.8**	**+0.9**
	comp=Z,4.0nm,0.8s,baz=31,slow=4.2,SNR=1.8						
WRA	**Warramunga Arr**	**64.14**	**193**	P	**P**	**17 29 25.4**	**-0.5**
	comp=Z,7.6nm,1.0s,baz=12,slow=7.0,SNR=7.3						
	comp=Z,7.6nm,1.0s						
FINES	**FINESS Array B**	**64.96**	**333**	P	**P**	**17 29 31.5**	**+0.7**
	comp=Z,3.1nm,0.6s,baz=38,slow=6.4,SNR=1.8						
	comp=Z,3.1nm,0.6s						
DZM	**Mont Dzumac**	**67.71**	**160**	P	**P**	**17 29 52.6**	**+3.7**
ASAR	**Alice Springs**	**67.86**	**193**	P	**P**	**17 29 51.2**	**+1.5**
	comp=Z,7.5nm,0.7s,baz=9.4,slow=5.5,SNR=14						
	comp=Z,7.5nm,0.7s						
NVAR	**Mina Array Bea**	**67.98**	**58**	P	**P**	**17 29 52.4**	**+1.6**
	comp=Z,4.1nm,0.8s,baz=297,slow=5.7,SNR=4.6						
	comp=Z,4.1nm,0.8s						
DSP	**Deep Springs**	**68.85**	**58**	P	**P**	**17 29 57.1**	**+1.1**
DSP				IAmb	IAmb	17 29 59.1	
	comp=Z,14nm,1.2s						
LAO	**LASA Array**	**69.48**	**45**		**P**	**17 29 59.7**	**-0.2**
KIV	**Kislovodsk**	**69.70**	**312**	*e*P	**P**	**17 30 01.7**	**+0.4**
KIV				pmax	pmax		
	comp=Z,17nm,1.1s						
KIV	**Kislovodsk**	**69.70**	**312**	*e*P	**P**	**17 30 01.7**	**+0.4**
NB2	**NORSAR Subarra**	**69.73**	**339**	P	**P**	**17 30 01.4**	**+0.3**
	comp=Z,2.4nm,0.8s,baz=34,slow=6.5						
NB2	**NORSAR Subarra**	**69.73**	**339**	P	**P**	**17 30 04.6**	**+3.5**
NOA	**NORSAR Array B**	**69.73**	**339**	P	**P**	**17 30 00.9**	**-0.1**
	comp=Z,4.0nm,0.9s,baz=33,slow=6.5,SNR=6.1						
	comp=Z,4.0nm,0.9s						
NOA	**NORSAR Array B**	**69.73**	**339**	P	**P**	**17 30 01.0**	**-0.1**
KBZ	**Khabaz**	**69.73**	**311**	P	**P**	**17 30 03.5**	**+2.2**
	comp=Z,9.8nm,0.8s,baz=24,slow=3.1,SNR=4.1						
	comp=Z,9.8nm,0.8s						
HFS	**Hagfors**	**69.81**	**337**	P	**P**	**17 30 01.5**	**0.0**
	comp=Z,1.8nm,0.4s,baz=35,slow=5.9,SNR=8.6						
	comp=Z,1.8nm,0.4s						
BW06	**Boulder Array**	**70.31**	**49**	P	**P**	**17 30 05.8**	**+0.5**
PD31	**Pinedale Array**	**70.31**	**49**	P	**P**	**17 30 06.5**	**+1.3**
PDAR	**Pinedale Array**	**70.31**	**49**	P	**P**	**17 30 05.6**	**+0.3**
	comp=Z,7.3nm,1.1s,baz=318,slow=2.0,SNR=7.8						
	comp=Z,7.3nm,1.1s						
BSUT	**Blindstream Ca**	**71.11**	**52**	P	**P**	**17 30 11.5**	**+1.2**
SHPR	**Sheep Range**	**71.13**	**57**	P	**P**	**17 30 11.7**	**+1.5**
AKASG	**Malin Array Be**	**71.60**	**324**	P	**P**	**17 30 12.9**	**+0.3**
AKASG	**Malin Array Be**	**71.60**	**324**	P	**P**	**17 30 12.6**	**0.0**
	comp=Z,1.2nm,0.3s,baz=41,slow=6.6,SNR=12						
	comp=Z,1.2nm,0.3s						
AKASG	**Malin Array Be**	**71.60**	**324**	P	**P**	**17 30 12.9**	**+0.3**
AKASG				pmax	pmax		
	comp=Z,7.0nm,1.3s						
AKBB	**Malin Array Si**	**71.60**	**324**		**P**	**17 30 12.6**	**0.0**
AKBB				IAmb	IAmb	17 30 13.6	
	comp=Z,17nm,1.1s						
AKBB	**Malin Array Si**	**71.60**	**324**	P	**P**	**17 30 12.6**	**0.0**
AKBB				pmax	pmax		
	comp=Z,17nm,1.1s						
KIEV	**Kiev**	**71.61**	**324**		**P**	**17 30 12.6**	**0.0**
KIEV				IAmb	IAmb	17 30 13.6	
	comp=Z,16nm,1.1s						
KIEV	**Kiev**	**71.61**	**324**	⇑P	**P**	**17 30 13.0**	**+0.3**
KIEV	**Kiev**	**71.61**	**324**	⇑P	**P**	**17 30 13.0**	**+0.3**
LCMT	**Little Creek M**	**71.97**	**56**	P	**P**	**17 30 17.1**	**+1.9**
PFO	**Pinyon Flats O**	**72.20**	**60**	LR	LR	18 05 59.5	
	comp=Z,370nm,18.0s,baz=275,slow=39						
W13A	**Hualapai Mount**	**72.83**	**58**	P	**P**	**17 30 21.9**	**+1.3**
HMU	**Henry Mountain**	**72.85**	**54**	P	**P**	**17 30 21.7**	**+1.0**
HMU				IAmb	IAmb	17 30 23.0	
	comp=Z,15nm,1.0s						
EPLO	**Experimental L**	**73.25**	**36**	P	**P**	**17 30 22.6**	**+0.1**
EPLO				IAmb	IAmb	17 30 23.6	
	comp=Z,21nm,1.1s						
AGMN	**Agassiz Nation**	**73.34**	**38**	P	**P**	**17 30 23.1**	**+0.1**
AGMN				IAmb	IAmb	17 30 24.2	
	comp=Z,19nm,1.2s						
PV22	**Blue Mesa, Par**	**73.58**	**52**		**P**	**17 30 26.4**	**+1.5**
PV20	**West Nyswonger**	**73.61**	**53**	P	**P**	**17 30 26.3**	**+1.3**
PV04	**Paradox Valley**	**73.61**	**53**	P	**P**	**17 30 26.3**	**+1.3**
PV04				IAmb	IAmb	17 31 35.2	
	comp=Z,28nm,1.5s						
PV17	**East Wray Mesa**	**73.66**	**53**	P	**P**	**17 30 26.6**	**+1.2**
PV05	**Paradox Valley**	**73.71**	**53**	P	**P**	**17 30 26.9**	**+1.3**
STKA	**Stephens Creek**	**75.15**	**185**	P	**P**	**17 30 35.8**	**+2.3**
	comp=Z,5.8nm,0.9s,baz=14,slow=3.0,SNR=4.1						
	comp=Z,5.8nm,0.9s						
MARD	**Mardin**	**75.25**	**308**		**P**	**17 30 35.3**	**+0.8**
EYMN	**Ely**	**75.53**	**36**	P	**P**	**17 30 35.5**	**-0.2**
EYMN				IAmb	IAmb	17 30 37.0	
	comp=Z,20nm,1.1s						
BUR08	**Bucovina Ar. S**	**75.64**	**323**	IAmb	IAmb	17 31 01.9	
	comp=Z,8.4nm,0.9s						
BURAR	**Bucovina Array**	**75.66**	**323**	⇑P	**P**	**17 30 38.0**	**+1.4**
BURAR	**Bucovina Array**	**75.66**	**323**	⇑P	**P**	**17 30 38.0**	**+1.4**
OJC	**Ojcow**	**75.83**	**328**	*e*P	**P**	**17 30 37.8**	**+0.4**
KOLS	**Kolonicke sedl**	**75.87**	**326**	*e*P	**P**	**17 30 38.7**	**+1.0**
KOLS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KOLS	**Kolonicke sedl**	**75.87**	**326**	*e*P	**P**	**17 30 38.7**	**+1.0**
STHS	**Stebnicka Huta**	**75.90**	**327**	*e*P	**P**	**17 30 38.1**	**+0.2**
STHS				pmax	pmax		
	comp=Z,11nm,1.4s						
STHS	**Stebnicka Huta**	**75.90**	**327**	*e*P	**P**	**17 30 38.1**	**+0.2**
ONER	**Baraj Valea Uz**	**76.12**	**322**	⇑P	**P**	**17 30 40.4**	**+1.3**
NIE	**Niedzica**	**76.28**	**327**	*e*P	**P**	**17 30 40.7**	**+0.7**
VRI	**Vrincioaia**	**76.33**	**321**	⇓P	P	17 30 45.5	+5.1
VRI	**Vrincioaia**	**76.33**	**321**	⇓P	P	17 30 45.5	+5.1
ECSD	**EROS Data Cent**	**76.37**	**42**	IAmb	IAmb	17 30 42.1	
	comp=Z,19nm,1.2s						
PLOR	**Plostina**	**76.37**	**322**	⇓P	P	17 30 46.2	+5.5
PLOR	**Plostina**	**76.37**	**322**	⇓P	P	17 30 46.2	+5.6
TURR	**Turia**	**76.50**	**322**	⇑P	**P**	**17 30 43.6**	**+2.2**
LANS	**Liptovska Anna**	**76.82**	**328**	*e*P	**P**	**17 30 45.3**	**+2.1**
LANS				pmax	pmax		
	comp=Z,8.0nm,1.2s						
LANS	**Liptovska Anna**	**76.82**	**328**	*e*P	**P**	**17 30 45.2**	**+2.1**
DOPR	**Dopca**	**76.85**	**322**	⇓P	**P**	**17 30 46.4**	**+3.1**
MLR	**Muntele Rosu**	**76.97**	**322**	⇑P	**P**	**17 30 48.5**	**+4.4**
MLR	**Muntele Rosu**	**76.97**	**322**	⇑P	**P**	**17 30 48.5**	**+4.4**
MORC	**Moravsky Berou**	**77.05**	**329**	IAmb	IAmb	17 30 57.7	
	comp=Z,16nm,1.3s						
MORC	**Moravsky Berou**	**77.05**	**329**	*e*P	**P**	**17 30 45.3**	**+0.9**
MORC	**Moravsky Berou**	**77.05**	**329**	⇑P	**P**	**17 30 45.8**	**+1.4**
MORC	**Moravsky Berou**	**77.05**	**329**	⇑P	**P**	**17 30 45.8**	**+1.4**
MORC	**Moravsky Berou**	**77.05**	**329**	*e*pP	pP	17 30 56.6	+0.1
CLL	**Collm**	**77.40**	**332**	IAmb	IAmb	17 32 51.0	
	comp=Z,16nm,1.0s						
CLL	**Collm**	**77.40**	**332**	*i* P	**P**	**17 30 46.3**	**+0.1**
CLL				*i* *PP	**PcP**	**17 30 57.4**	**+0.8**
CLL				pmax	pmax		
	comp=Z,19nm,1.1s						
CLL	**Collm**	**77.40**	**332**	*i* P	**P**	**17 30 46.3**	**+0.1**
	comp=Z,19nm,1.1s						
CLL				*i* PcP	**PcP**	**17 30 57.4**	**+0.8**
CLL				*i* x	x	17 31 01.5	
VOIR		**77.41**	**322**	⇓P	**P**	**17 30 48.5**	**+2.0**
VOIR		**77.41**	**322**	⇓P	**P**	**17 30 48.5**	**+2.0**
BRG	**Berggiesshubel**	**77.44**	**332**	*e*P	**P**	**17 30 48.1**	**+1.6**
BRG				Amp		17 30 49.1	
	comp=Z,3.1nm,1.0s						
BRTR	**Keskin Array B**	**77.49**	**313**		**P**	**17 30 47.1**	**-0.1**
BRTR	**Keskin Array B**	**77.49**	**313**	P	**P**	**17 30 47.9**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=71,slow=6.8,SNR=3.0						
	comp=Z,0.5nm,0.4s						
VYHS	**Vyhne**	**77.59**	**327**	*e*P	**P**	**17 30 48.9**	**+1.5**
VYHS				pmax	pmax		
	comp=Z,9.0nm,1.4s						
VYHS	**Vyhne**	**77.59**	**327**	*e*P	**P**	**17 30 48.9**	**+1.5**
PSZ	**Piszkesteto**	**77.64**	**327**	IAmb	IAmb	17 32 45.4	
	comp=Z,22nm,1.5s						
PSZ	**Piszkesteto**	**77.64**	**327**	⇑P	**P**	**17 30 49.2**	**+1.4**
PSZ	**Piszkesteto**	**77.64**	**327**	⇑P	**P**	**17 30 49.2**	**+1.4**
JAVC	**Velka Javorina**	**77.75**	**328**	*e*P	**P**	**17 30 50.1**	**+1.8**
VRAC	**Vranov**	**77.79**	**329**	*e*P	**P**	**17 30 49.5**	**+1.0**
VRAC				*e*pP	**pP**	**17 31 00.4**	**-0.2**

VRAC	**Vranov**	**77.79**	**329**	⇓P	**P**	**17 30 49.5**	**+1.0**
VRAC	**Vranov**	**77.79**	**329**	⇓P	**P**	**17 30 49.5**	**+1.0**
ANTO	**Ankara**	**77.83**	**314**	P	**P**	**17 30 49.4**	**+0.4**
ANTO				IAmb	IAmb	17 31 02.0	
	comp=Z,10nm,0.8s						
ANTO	**Ankara**	**77.83**	**314**	P	**P**	**17 30 49.4**	**+0.4**
ANTO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SCHQ	**Schefferville**	**77.97**	**19**	P	**P**	**17 30 49.4**	**0.0**
	comp=Z,6.9nm,0.9s,baz=358,slow=4.7,SNR=3.7						
	comp=Z,6.9nm,0.9s						
KRUC	**Moravsky**	**78.06**	**329**	*e*P	**P**	**17 30 50.6**	**+0.6**
KRUC				*e*pP	**pP**	**17 31 01.9**	**-0.3**
EKA	**Eskdalemuir Ar**	**78.28**	**343**	P	**P**	**17 30 51.3**	**+0.3**
	comp=Z,6.9nm,0.9s,baz=25,slow=5.2,SNR=9.6						
	comp=Z,6.9nm,0.9s						
MODS	**Modra-Piesok**	**78.30**	**328**	*e*P	**P**	**17 30 52.6**	**+1.3**
MODS				pmax	pmax		
	comp=Z,18nm,1.2s						
MODS	**Modra-Piesok**	**78.30**	**328**	*e*P	**P**	**17 30 52.6**	**+1.3**
SRO	**Srobarova**	**78.35**	**327**	*e*P	**P**	**17 30 53.4**	**+1.8**
SRO				pmax	pmax		
	comp=Z,15nm,1.3s						
SRO	**Srobarova**	**78.35**	**327**	*e*P	**P**	**17 30 53.4**	**+1.8**
SURR	**Surduc**	**78.44**	**324**	⇑P	**P**	**17 30 53.1**	**+0.9**
BZS	**Buzias**	**78.77**	**324**	⇑P	**P**	**17 30 54.6**	**+0.7**
BZS	**Buzias**	**78.77**	**324**	⇑P	**P**	**17 30 54.6**	**+0.7**
KHC	**Kasperske Hory**	**79.03**	**331**	*e*P	**P**	**17 30 53.0**	**-2.4**
KHC	**Kasperske Hory**	**79.03**	**331**	*e*P	**P**	**17 30 53.0**	**-2.4**
CONA	**Conrad Observa**	**79.20**	**329**	*i* P	**P**	**17 30 57.9**	**+1.5**
	comp=Z,8.0nm,1.3s						
CONA				*i* pP	**pP**	**17 31 09.2**	**+0.6**
	comp=Z,6.9nm,0.9s						
RONA	**Rosalia, Austr**	**79.23**	**328**	*i* P	**P**	**17 30 58.2**	**+1.7**
	comp=Z,8.3nm,1.1s						
RONA				*i* pP	**pP**	**17 31 09.4**	**+0.7**
	comp=Z,7.4nm,1.2s						
GERES	**GERESS Array B**	**79.23**	**331**	P	**P**	**17 30 55.9**	**-0.7**
	comp=Z,1.3nm,0.8s,baz=297,slow=8.8,SNR=6.5						
	comp=Z,1.3nm,0.8s						
GRA1	**Grafenberg Arr**	**79.37**	**332**	IAmb	IAmb	17 30 59.3	
	comp=Z,12nm,0.9s						
GRF	**Grafenberg Arr**	**79.37**	**332**	*e*P	**P**	**17 30 58.4**	**+1.2**
	comp=Z,12nm,1.1s,baz=31,slow=4.5						
MOA	**Molln**	**79.86**	**330**	*i* P	**P**	**17 31 00.8**	**+0.9**
	comp=Z,4.3nm,1.2s						
MOA				*i* pP	**pP**	**17 31 12.3**	**+0.2**
	comp=Z,2.6nm,0.8s						
ARSA	**Arzberg**	**79.89**	**329**	*i* P	**P**	**17 31 01.3**	**+1.2**
	comp=Z,3.0nm,1.1s						
ARSA				*i* pP	**pP**	**17 31 12.6**	**+0.3**
	comp=Z,5.2nm,1.4s						
BTNL	**Ternell**	**80.21**	**336**	*d*P	**P**	**17 31 02.0**	**+0.2**
BIOA	**Bad Ischl, Aus**	**80.22**	**330**	*i* P	**P**	**17 31 02.9**	**+1.0**
	comp=Z,9.4nm,1.2s						
BIOA				*i* pP	**pP**	**17 31 14.2**	**+0.2**
	comp=Z,14nm,1.2s						
MEM	**Membach**	**80.23**	**336**	*d*P	**P**	**17 31 02.8**	**+1.0**
RDO	**Rodhopi**	**80.50**	**319**		**P**	**17 31 01.9**	**-1.6**
RDO				IAmb	IAmb	17 31 17.0	
	comp=Z,15nm,0.9s						
SOKA	**Soboth**	**80.56**	**329**	*e*P	**P**	**17 31 04.7**	**+1.0**
	comp=Z,9.4nm,1.1s,SNR=5.6						
SOKA				*i* pP	**pP**	**17 31 15.9**	**0.0**
	comp=Z,8.9nm,0.9s						
BCLA	**Clavier**	**80.61**	**336**	*d*P	**P**	**17 31 04.1**	**+0.3**
	comp=Z,5.7nm,1.3s						
LESA	**Schwarzleotal**	**80.80**	**330**	*i* P	**P**	**17 31 06.2**	**+1.2**
	comp=Z,8.3nm,1.0s						
LESA				*i* pP	**pP**	**17 31 17.6**	**+0.4**
	comp=Z,9.5nm,0.9s						
VLDQ	**Val d'Or**	**80.84**	**28**	IAmb	IAmb	17 31 05.4	
	comp=Z,18nm,1.0s						
SMWD	**Samnorwood**	**80.85**	**50**	IAmb	IAmb	17 32 35.1	
	comp=Z,21nm,1.3s						
KBA	**Koelnbreinsper**	**80.85**	**330**	*e*P	**P**	**17 31 06.5**	**+1.1**
	comp=Z,11nm,1.2s						
KBA				*i* pP	**pP**	**17 31 17.9**	**+0.3**
	comp=Z,7.9nm,0.9s						
OBKA	**Obir**	**80.88**	**329**	*e*P	**P**	**17 31 06.0**	**+0.5**
	comp=Z,1.9nm,0.7s						
OBKA				*i* pP	**pP**	**17 31 17.4**	**-0.3**
	comp=Z,1.8nm,0.6s						
WLF	**Walferdange**	**81.02**	**335**	*d*P	**P**	**17 31 08.2**	**+2.1**
MYKA	**Terra Mystica**	**81.12**	**329**	*i* P	**P**	**17 31 06.6**	**-0.1**
	comp=Z,4.9nm,1.1s						
MYKA				*i* pP	**pP**	**17 31 18.5**	**-0.5**
	comp=Z,5.8nm,1.0s						
VHRN	**Van Horn**	**81.22**	**56**	IAmb	IAmb	17 31 10.1	
	comp=Z,11nm,1.0s						
WATA	**Walderalm**	**81.27**	**331**	*i* P	**P**	**17 31 08.5**	**+0.9**
	comp=Z,5.2nm,0.6s						
WATA				*i* pP	**pP**	**17 31 19.9**	**+0.1**
	comp=Z,9.4nm,0.9s						
WTTA	**Wattenberg**	**81.31**	**331**	*i* P	**P**	**17 31 08.8**	**+1.0**
	comp=Z,5.9nm,0.6s						
WTTA				*i* pP	**pP**	**17 31 20.2**	**+0.1**
	comp=Z,9.5nm,1.0s						
MMAI	**Mount Meron Ar**	**81.39**	**308**	P	**P**	**17 31 10.0**	**+1.6**
	comp=Z,1.6nm,0.4s,baz=59,slow=4.1,SNR=6.1						
	comp=Z,1.6nm,0.4s						
RETA	**Reutte**	**81.42**	**332**	*i* P	**P**	**17 31 09.3**	**+0.9**
	comp=Z,6.8nm,1.2s						
RETA				*i* pP	**pP**	**17 31 20.6**	**+0.1**
	comp=Z,7.7nm,1.0s						
MOTA	**Moosalm**	**81.42**	**331**	*e*P	**P**	**17 31 09.3**	**+0.9**
	comp=Z,13nm,1.1s,SNR=5.1						
MOTA				*i* pP	**pP**	**17 31 20.8**	**+0.1**
	comp=Z,13nm,0.9s						
ABTA	**Abfaltersbach**	**81.43**	**330**	*i* pP	pP	17 31 19.8	-0.9
	comp=Z,4.2nm,1.0s						
SQTA	**Sankt Quirin**	**81.49**	**331**	*e*P	**P**	**17 31 09.7**	**+0.9**
	comp=Z,11nm,1.2s						
SQTA				*i* pP	**pP**	**17 31 21.2**	**+0.2**
	comp=Z,6.3nm,0.8s						
T35A	**Sooner Cattle**	**81.52**	**46**	IAmb	IAmb	17 31 27.0	
	comp=Z,8.7nm,0.8s						
P40A	**Paris**	**81.78**	**42**	IAmb	IAmb	17 31 12.0	
	comp=Z,18nm,1.1s						
RAYN	**Ar Rayn**	**81.82**	**295**	P	**P**	**17 31 10.1**	**-0.7**
RAYN	**Ar Rayn**	**81.82**	**295**	P	**P**	**17 31 10.1**	**-0.7**
RAYN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
FETA	**Feichten**	**81.83**	**331**	*i* P	**P**	**17 31 09.1**	**-1.5**
	comp=Z,6.4nm,1.3s						
FETA				*i* pP	**pP**	**17 31 23.0**	**+0.1**
	comp=Z,8.5nm,1.0s						
DAVA	**Damuels**	**81.90**	**332**	*i* P	**P**	**17 31 11.9**	**+0.9**
	comp=Z,6.4nm,1.0s						
DAVA				*i* pP	**pP**	**17 31 23.1**	**-0.1**
	comp=Z,5.2nm,0.9s						
ECH	**Echery**	**81.99**	**334**	IAmb	IAmb	17 33 27.1	
	comp=Z,13nm,1.2s						
PDG	**Podgorica**	**82.34**	**324**	IAmb	IAmb	17 31 25.3	
	comp=Z,13nm,0.8s						
PDG	**Podgorica**	**82.34**	**324**	⇑P	**P**	**17 31 14.5**	**+1.4**
TXAR	**Lajitas Array**	**83.05**	**56**		**P**	**17 31 17.2**	**0.0**
TXAR	**Lajitas Array**	**83.05**	**56**	P	**P**	**17 31 16.8**	**-0.4**
	comp=Z,6.3nm,0.9s,baz=298,slow=3.3,SNR=19						
	comp=Z,6.3nm,0.9s						
TXAR	**Lajitas Array**	**83.05**	**56**	P	**P**	**17 31 17.2**	**0.0**
CCM	**Cathedral Cave**	**83.33**	**42**	P	**P**	**17 31 18.7**	**+0.3**
CCM	**Cathedral Cave**	**83.33**	**42**	P	**P**	**17 31 18.7**	**+0.3**
CCM				pmax	pmax		
	comp=Z,13nm,0.6s						
FDMO	**Fiordimonte**	**84.37**	**328**	IAmb	IAmb	17 31 36.9	
	comp=Z,15nm,1.2s						
PBMO	**Poplar Bluff**	**84.73**	**43**	IAmb	IAmb	17 32 38.6	
	comp=Z,8.7nm,0.8s						
MIAR	**Mount Ida**	**84.87**	**46**	IAmb	IAmb	17 31 28.2	
	comp=Z,10nm,0.9s						
MATE	**Matera**	**84.89**	**324**	⇑P	**P**	**17 31 27.9**	**+1.7**
WHAR	**Wooly Hollow**	**84.96**	**45**	IAmb	IAmb	17 31 28.2	
	comp=Z,14nm,1.0s						
TIP	**Timpagrande**	**86.09**	**323**	⇑P	**P**	**17 31 33.8**	**+1.4**
T47A	**Sharon Grove**	**86.17**	**40**	IAmb	IAmb	17 31 34.5	
	comp=Z,12nm,1.1s						
T50A	**Nancy**	**87.19**	**39**	IAmb	IAmb	17 31 39.4	
	comp=Z,10nm,1.0s						
SWET	**Sewanee**	**88.16**	**41**	IAmb	IAmb	17 31 43.6	
	comp=Z,11nm,1.1s						
ESDC	**Sonseca Array**	**93.08**	**338**	P	**P**	**17 32 05.1**	**-0.2**
	comp=Z,1.6nm,0.9s,baz=20,slow=3.9,SNR=7.8						
	comp=Z,1.6nm,0.9s						
VNDA	**Vanda**	**121.10**	**176**	PKP	**PKiKP**	**17 37 43.7**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=298,slow=3.9,SNR=2.6						
QSPA	**South Pole Qui**	**133.23**	**180**	PKP	**PKiKP**	**17 38 06.8**	**-0.4**
	comp=Z,2.7nm,0.8s,baz=336,slow=0.9,SNR=6.0						
H03N2	**Juan Fernandez**	**143.28**	**90**	T	T	20 18 37.0	
	baz=303,slow=77,SNR=23						
H03N3	**Juan Fernandez**	**143.29**	**90**	T	T	20 18 18.8	
	baz=303,slow=77,SNR=13						
H03N1	**Juan Fernandez**	**143.29**	**90**	T	T	20 18 19.4	
	baz=303,slow=77,SNR=7.2						
BELA	**Belgrano 2**	**145.50**	**179**		**PKPdf**	**17 38 28.0**	**+0.1**
TROLL	**Troll, Antarti**	**146.64**	**199**	⇑P	**PKPab**	**17 38 33.7**	**+0.6**
	comp=Z,697nm,0.7s						
AC05	**El Transito**	**147.04**	**76**		**PKPdf**	**17 38 31.2**	**-1.0**
SNAA	**Sanae**	**148.11**	**198**	⇑P	**PKiKP**	**17 38 37.1**	**-0.4**
	comp=Z,131nm,0.9s						
SNAA	**Sanae**	**148.11**	**198**		**PKiKP**	**17 38 37.0**	**-0.6**
SNAA	**Sanae**	**148.11**	**198**	PKPbc	**PKPbc**	**17 38 36.6**	**+0.8**
	comp=Z,6.7nm,0.9s,baz=174,slow=0.6,SNR=10.0						
MT02	**Curacav**	**148.85**	**84**	PKPbc	**PKiKP**	**17 38 40.0**	**-0.2**
VA03	**San Esteban**	**149.02**	**82**	PKPbc	**PKiKP**	**17 38 40.4**	**-0.3**
MT01	**Popeta**	**149.07**	**85**	PKPbc	**PKPbc**	**17 38 40.1**	**+0.7**
PEL	**Peldehue**	**149.12**	**83**	PKPbc	**PKPbc**	**17 38 39.6**	**0.0**
PEL	**Peldehue**	**149.12**	**83**	PKP2	**PKPbc**	**17 38 39.6**	**0.0**
MT05	**Renca**	**149.21**	**84**	PKPbc	**PKPbc**	**17 38 40.5**	**+0.7**
MT09	**Talagante**	**149.22**	**84**	PKPbc	**PKPbc**	**17 38 40.3**	**+0.4**
MT16	**CCHEN**	**149.38**	**84**	PKPbc	**PKiKP**	**17 38 41.4**	**0.0**
MT03	**Universidad Ad**	**149.42**	**84**	PKPbc	**PKiKP**	**17 38 41.2**	**-0.2**
BO01	**Tunca**	**149.44**	**86**	PKPbc	**PKPbc**	**17 38 40.7**	**+0.4**
BDFB	**Brasilia**	**149.53**	**29**	PKPbc	**PKPbc**	**17 38 41.6**	**+0.6**
	comp=Z,6.1nm,0.8s,baz=8.1,slow=2.0,SNR=5.8						
VNA2	**Neumayer--Watz**	**149.65**	**197**	⇑P	**PKiKP**	**17 38 41.3**	**+0.6**
	comp=Z,18nm,0.7s,baz=133,slow=0.8						
VNA3	**Neumayer Olymp**	**149.84**	**195**	⇑P	**PKiKP**	**17 38 41.4**	**+0.4**
	comp=Z,9.5nm,0.8s						
VNA1	**Neumayer--Stat**	**150.04**	**196**	⇑P	**PKiKP**	**17 38 42.0**	**+0.6**
	comp=Z,19nm,1.0s						
PLCA	**Paso Flores**	**152.36**	**97**	PKPbc	**PKiKP**	**17 38 48.2**	**+0.9**
	comp=Z,3.0nm,0.8s,baz=284,slow=3.8,SNR=4.4						
PLCA				PKPab	**sPKPdf**	**17 38 59.6**	**+2.6**
	comp=Z,4.4nm,0.9s,baz=248,slow=7.9,SNR=3.4						

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*IDC **10** 17:49:20.0±1.1, 30°.71N×131°.26E, h0^{km}, mb3.8/13, mbtmp3.7/18, ML2.9/5, Error ellipse: s-maj=33.7km s-min=13.9km az=86.0*

*NEIC **10** 17:49:22.6±2.7, 30°.61N±0°.07×131°.26E±0°.10, h20^{km}±6^{km}, mb4.3/6, Error ellipse: s-maj=14.6km s-min=5.1km az=126.0*

*JMA **10** 17:49:24.1±0.2, 30°.7N±0°.5×13°2E±°, h35^{km}±2^{km}, MV3.5/38, SE OFF OSUMI PEN*

ISC 10 17:49:26.0±1.0**, 30°.68N**±0°.04×**131°.38E**±0°.07**, h48**^{km}±8^{km}**, n42, σ1^{s}39**/50**, mb3.8**/16**, 2D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTN	**Tanegashima 3**	**0.34**	**266**	⇓*i*P	**Pn**	**17 49 34.3**	**-1.1**
JTN				⇓*e*S	**Sn**	**17 49 41.8**	**-0.2**
JMTN	**Minamitane**	**0.50**	**236**	*i* P	**Pn**	**17 49 36.8**	**-0.3**
JMTN				*e*S	**Sn**	**17 49 46.4**	**+1.4**
JTSR	**Tashiro 2**	**0.62**	**321**	*i* P	**Pn**	**17 49 38.1**	**-0.7**
JTSR				*e*S	**Sn**	**17 49 49.1**	**+1.2**
JNAR	**Kushima--Naru**	**0.85**	**354**	*i* P	**Pn**	**17 49 40.8**	**-0.9**
JYAK	**Yakushimahirau**	**0.87**	**240**	*i* P	**Pn**	**17 49 41.9**	**0.0**
JYAK				*e*S	**Sn**	**17 49 55.7**	**+2.2**
JNKG	**Nichinankitago**	**0.98**	**360**	*i* P	**Pn**	**17 49 42.6**	**-0.9**
JNKG				*e*S	**Sn**	**17 49 56.9**	**+0.7**
JKC	**Kuchinoerabu**	**1.04**	**258**	*e*P	**Pn**	**17 49 44.8**	**+0.6**
JSU	**Suzuyama**	**1.14**	**316**	*i* P	**Pn**	**17 49 45.5**	**-0.2**
JTZ	**Takazaki**	**1.25**	**349**	*i* P	**Pn**	**17 49 46.7**	**-0.3**
JTZ				S	**Sn**	**17 50 03.7**	**+1.0**
JTSN	**Tsuno**	**1.57**	**4**	*e*P	**Pn**	**17 49 50.3**	**-1.1**
JZO	**Okuchi**	**1.60**	**336**	P	**Pn**	**17 49 51.7**	**-0.2**
JNU	**Nakatsue**	**2.47**	**350**		**Pn**	**17 50 03.6**	**-0.3**
JNU	**Nakatsue**	**2.47**	**350**	Pn	**Pn**	**17 50 02.5**	**-1.3**
	3.4nm,0.3s,baz=186,slow=15,SNR=56						
JNU				Sn	**Sn**	**17 50 31.2**	**-1.7**
	8.2nm,0.3s,baz=165,slow=14,SNR=4.0						
JNU				Lg	Lg	17 50 38.6	
	8.3nm,0.3s,baz=216,slow=19,SNR=5.6						
	7.7nm,0.3s						
JMN	**Monobe**	**3.71**	**34**	Pn	**Pn**	**17 50 19.5**	**-1.3**
JOW	**Kunigami**	**4.70**	**216**	Pn	**Pn**	**17 50 30.9**	**-3.5**
JOW	**Kunigami**	**4.70**	**216**	Pn	**Pn**	**17 50 33.0**	**-1.5**
	1.1nm,0.3s,baz=104,slow=20,SNR=6.3						
JOW				Sn	**Sn**	**17 51 24.8**	**-2.9**
	2.2nm,0.3s,baz=69,slow=30,SNR=10						
	2.4nm,0.3s						
INU	**Inuyama**	**6.64**	**44**	Pn	**Pn**	**17 51 01.5**	**+0.5**
JGF	**Kuroka**	**7.02**	**44**	Pn	**Pn**	**17 51 04.6**	**-1.6**
KSRS	**Korea Array**	**7.34**	**338**	Pn	**Pn**	**17 51 08.3**	**-2.2**
	0.2nm,0.3s,baz=156,slow=15,SNR=2.5						
	0.5nm,0.5s						
MAJO	**Matsushiro**	**8.16**	**42**	Pn	**Pn**	**17 51 20.3**	**-1.6**
MJB9	**Matsu-Tunnel**	**8.16**	**42**	Pn	**Pn**	**17 51 21.6**	**-0.3**
MJAR	**Matsushiro Arr**	**8.16**	**42**	Pn	**Pn**	**17 51 20.2**	**-1.7**
	0.1nm,0.3s,baz=243,slow=14,SNR=1.9						
	0.6nm,0.4s						
KLR	**Kul'dur**	**18.53**	**1**	P	**Pn**	**17 53 39.4**	**+0.4**
	0.1nm,0.3s,baz=198,slow=8.7,SNR=4.1						
	0.8nm,0.5s						
SONM	**Songino Array**	**25.67**	**319**	P	**P**	**17 54 52.3**	**+0.8**
	1.1nm,0.5s,baz=136,slow=10,SNR=6.1						
	1.1nm,0.5s						
ZALV	**Zalesovo Beam**	**40.56**	**319**	P	**P**	**17 56 60.0**	**-0.6**
	0.4nm,0.3s,baz=104,slow=7.9,SNR=1.6						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**40.84**	**307**	P	**P**	**17 57 02.5**	**-0.4**
	0.4nm,0.8s,baz=88,slow=9.6,SNR=2.4						
	0.4nm,0.8s						
KURBB	**Kurchatov Arra**	**43.71**	**313**	P	**P**	**17 57 26.1**	**-0.1**
	1.0nm,0.8s,baz=96,slow=8.8,SNR=7.0						
	1.0nm,0.8s						
BVAR	**Borovoye Array**	**48.93**	**316**	P	**P**	**17 58 07.5**	**+0.4**
	2.0nm,0.5s,baz=97,slow=9.2,SNR=16						
	2.0nm,0.5s						
WB0	**Warramunga Arr**	**50.24**	**176**	P	**P**	**17 58 17.0**	**-0.4**
WB0				IAmb	IAmb	17 58 56.5	
	comp=Z,4.0nm,1.1s						
WRAB	**Tennant Creek**	**50.40**	**176**	P	**P**	**17 58 18.5**	**-0.2**
WRA	**Warramunga Arr**	**50.41**	**176**	P	**P**	**17 58 19.7**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=350,slow=7.7,SNR=2.0						
	comp=Z,0.3nm,0.7s						
ASAR	**Alice Springs**	**54.09**	**177**	P	**P**	**17 58 48.4**	**+2.4**
	comp=Z,0.2nm,0.7s,baz=9.8,slow=12,SNR=1.3						
	comp=Z,0.2nm,0.7s						
AB31	**Akbulak array**	**55.72**	**311**		**P**	**17 58 56.4**	**-1.1**
AB31				IAmb	IAmb	17 59 08.7	
	comp=Z,1.3nm,0.7s						
ABKAR	**Akbulak array**	**55.72**	**311**		**P**	**17 58 56.3**	**-1.2**
B22K	**Teshekpuk Lake**	**56.48**	**23**	P	**P**	**17 59 06.2**	**+3.6**
B22K				IAmb	IAmb	17 59 21.1	
	comp=Z,7.8nm,1.4s						
KBZ	**Khabaz**	**68.52**	**309**	P	**P**	**18 00 21.9**	**-1.5**
	comp=Z,1.1nm,0.5s,baz=119,slow=5.4,SNR=5.4						
	comp=Z,1.1nm,0.5s						
FINES	**FINESS Array B**	**70.37**	**331**	P	**P**	**18 00 33.4**	**-1.1**
	comp=Z,0.7nm,0.5s,baz=57,slow=8.0,SNR=5.9						
	comp=Z,0.7nm,0.5s						
AKASG	**Malin Array Be**	**73.95**	**320**	P	**P**	**18 00 54.9**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=56,slow=5.8,SNR=1.6						
	comp=Z,0.3nm,0.3s						
HFS	**Hagfors**	**76.16**	**333**	P	**P**	**18 01 08.6**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=39,slow=9.6,SNR=2.0						
	comp=Z,1.3nm,0.8s						
BR131	**Keskin Array S**	**76.48**	**308**	P	**P**	**18 01 12.4**	**+1.2**
BR131				IAmb	IAmb	18 01 13.2	
	comp=Z,2.2nm,0.8s						
BRTR	**Keskin Array B**	**76.48**	**308**	P	**P**	**18 01 12.1**	**+1.0**
	comp=Z,1.5nm,0.8s,baz=100,slow=5.1,SNR=9.1						
	comp=Z,1.5nm,0.8s						
NOA	**NORSAR Array B**	**76.54**	**334**	P	**P**	**18 01 10.2**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=56,slow=8.6,SNR=1.1						
	comp=Z,0.3nm,0.6s						

JMA 10 17:52:12.3±0.0**, 35°.43N**±0°.09×**137°.6E**±0°.1**, h13**^{km}**, MV0.8**/30**, SE GIFU PREF, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JGF	**Kuroka**	**0.24**	**316**	*i* P	Pg	17 52 17.4	0.0
JGF				*e*S	Sg	17 52 20.8	-0.1
JGF	**Kuroka**	**0.24**	**316**	Sn	Pg	17 52 17.3	-0.2
JNY	**Yasuok**	**0.26**	**106**	P	Pg	17 52 17.7	-0.1
JNY				*e*S	Sg	17 52 21.4	-0.1
SHZ3	**Shizuoka 3**	**0.65**	**124**	*e*P	Pg	17 52 24.3	-0.6
JNT	**Takato**	**0.65**	**47**	*e*S	Sg	17 52 33.4	-0.2
JYTA	**Yamagatataniai**	**0.69**	**284**	P	Pg	17 52 25.6	-0.2
JYTA				*e*S	Sg	17 52 34.7	-0.2

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*IDC **10** 18:07:31.9±2.2, 37°.54N×78°.33E, h0^{km}, mb3.5/3, mbtmp3.4/7, ML3.2/3, Error ellipse: s-maj=27.8km s-min=26.5km az=147.0*

*NNC **10** 18:07:37.4±2.9, 37°.61N×78°.07E, h16^{km}±10^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=19.4km s-min=15.4km az=2.0*

ISC 10 18:07:33.2±1.8**, 37°.5N**±0°.1×**78°.30E**±0°.10**, h10**^{km}**, n17, σ2^{s}52**/22**, mb3.5**/3**, 7C-2D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDOK	**Medeo**	**5.79**	**351**	Pg	**Pb**	**18 09 18.5**	**+4.1**
	12nm,0.8s						
MDOK				Pg	**Pg**	**18 09 21.5**	**-2.6**
	6.7nm,0.8s						
MDOK				Lg	Lg	18 10 33.8	
	22nm,0.7s						
MDOK				Lg	Lg	18 10 34.1	
	20nm,0.7s						
MTBS	**Maitube**	**5.86**	**346**	Pg	**Pg**	**18 09 22.3**	**-3.0**
	2.6nm,0.3s						
MTBS				Lg	Lg	18 10 35.6	
	11nm,0.3s						
KST	**Kastek**	**5.87**	**343**	Pg	**Pg**	**18 09 23.5**	**-2.1**
	5.4nm,0.7s						
KST				Lg	Lg	18 10 37.5	
	14nm,0.7s						
PDGK	**Podgornoye**	**5.95**	**8**	⇑Pn	**Pn**	**18 09 03.3**	**+1.9**
	2.8nm,0.3s						
PDGK				⇓Lg	Lg	18 10 40.9	
	24nm,0.8s						
AAK	**Ala-Archa**	**5.95**	**332**	Pn	**Pn**	**18 09 04.3**	**+2.8**
	0.5nm,0.3s,baz=153,slow=6.8,SNR=2.0						
AAK				Pg	**Pb**	**18 09 19.6**	**+2.5**
	2.2nm,0.3s,baz=149,slow=10,SNR=9.1						
AAK				Lg	Lg	18 10 37.3	
	2.3nm,0.3s,baz=233,slow=20,SNR=4.5						
	1.0nm,0.3s						
AAK	**Ala-Archa**	**5.95**	**332**	⇑Pg	**Pb**	**18 09 20.6**	**+3.6**
	0.4nm,0.3s						
AAK				⇓Lg	Lg	18 10 36.3	
	8.1nm,0.8s						
DGS	**Degeres**	**6.10**	**342**	Pg	**Pg**	**18 09 25.7**	**-4.3**
	4.0nm,0.6s						
DGS				Lg	Lg	18 10 42.0	
	20nm,0.7s						
KK31	**Karatay Array**	**8.21**	**316**	⇑Pn	**Pn**	**18 09 31.1**	**-1.2**
	0.6nm,0.4s,baz=126,slow=13,SNR=5.3						
KK31				⇑Sn	**Sn**	**18 11 04.4**	**-0.6**
	2.5nm,0.6s,baz=113,slow=26,SNR=5.0						
MAKZ	**Makanchi**	**9.74**	**15**	⇑Pn	**Pn**	**18 09 54.5**	**+1.2**
	2.9nm,0.5s						
MK31	**Makanchi Array**	**9.80**	**16**	⇑Pn	**Pn**	**18 09 54.8**	**+0.7**
	1.1nm,0.4s,baz=195,slow=12,SNR=50						
MK31				⇑Sn	**Sn**	**18 11 47.3**	**+3.1**
	1.0nm,0.4s,baz=202,slow=25,SNR=6.5						
MKAR	**Makanchi Array**	**9.80**	**16**	Pn	**Pn**	**18 09 55.1**	**+1.0**
	0.7nm,0.3s,baz=202,slow=13,SNR=41						
MKAR				Sn	**Sn**	**18 11 40.6**	**-3.5**
	0.8nm,0.3s,baz=200,slow=27,SNR=5.4						
	1.1nm,0.3s						
KURBB	**Kurchatov Arra**	**13.18**	**1**	Pn	**Pn**	**18 10 39.3**	**-0.9**
	0.1nm,0.4s,baz=188,slow=12,SNR=1.7						
KURBB				Lg	Lg	18 14 25.3	
	baz=188,slow=2.6,SNR=1.4						
BVAR	**Borovoye Array**	**16.53**	**343**	Pn	**P**	**18 11 29.1**	**+1.6**
	0.1nm,0.3s,baz=151,slow=9.9,SNR=14						
ZALV	**Zalesovo Beam**	**17.11**	**13**	P	**Pn**	**18 11 30.6**	**-1.6**
	0.1nm,0.3s,baz=211,slow=14,SNR=3.8						
	0.4nm,0.4s						
SONM	**Songino Array**	**23.01**	**54**	P	**P**	**18 12 36.9**	**-1.3**
	0.3nm,0.4s,baz=236,slow=9.8,SNR=1.6						
	0.3nm,0.4s						
BRTR	**Keskin Array B**	**34.72**	**288**	P	**P**	**18 14 22.9**	**-0.5**
	0.5nm,0.8s,baz=54,slow=2.5,SNR=3.6						
	0.5nm,0.8s						
FINES	**FINESS Array B**	**40.07**	**324**	P	**P**	**18 15 08.2**	**-0.1**
	1.1nm,0.7s,baz=113,slow=9.4,SNR=5.5						
	1.1nm,0.7s						

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*IDC **10** 19:03:28.3±0.6, 58°.46S×25°.02W, h0^{km}, mb4.3/10, mbtmp4.3/11, ML4.5/1, MS3.8/1, Error ellipse: s-maj=29.1km s-min=16.9km az=68.0*

*NEIC **10** 19:03:30.9±2.1, 58°.59S±0°.10×25°.4W±0°.2, h10^{km}±1^{km}, mb4.5/18, Error ellipse: s-maj=22.7km s-min=15.0km az=112.0*

ISC 10 19:03:32.7±0.5**, 58°.56S**±0°.09×**25°.2W**±0°.1**, h28**^{km}**, n148, σ0^{s}80**/142**, mb4.4**/16**, 6C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**14.05**	**156**	⇑P	**Pn**	**19 06 48.5**	**-1.1**
	comp=Z,7.5nm,0.3s						
VNA3	**Neumayer Olymp**	**14.25**	**159**	⇑P	**Pn**	**19 06 50.6**	**-1.8**
	comp=Z,6.1nm,0.3s						
VNA2	**Neumayer--Watz**	**14.45**	**156**	⇑P	**Pn**	**19 06 53.2**	**-1.9**
	comp=Z,6.8nm,0.5s,baz=326,slow=14						
SNAA	**Sanae**	**16.00**	**154**	⇑P	**Pn**	**19 07 14.5**	**-1.1**
	comp=Z,192nm,0.5s						
SNAA	**Sanae**	**16.00**	**154**	⇑S	Sn	19 09 59.4	-12
	comp=N,62nm,0.5s						
SNAA	**Sanae**	**16.00**	**154**		**Pn**	**19 07 14.4**	**-1.1**
SNAA	**Sanae**	**16.00**	**154**	Pn	**Pn**	**19 07 14.6**	**-0.9**
	comp=N,1.7nm,0.3s,baz=320,slow=15,SNR=107						
SNAA				Sn	Sn	19 10 01.3	-10
	comp=N,0.2nm,0.3s,baz=331,slow=18,SNR=3.6						
	comp=N,4.5nm,0.4s						
TROLL	**Troll, Antarti**	**17.51**	**151**	⇑P	**Pn**	**19 07 34.0**	**-0.6**
	comp=Z,234nm,0.3s						
BELA	**Belgrano 2**	**19.67**	**186**	P	**P**	**19 07 59.2**	**+0.2**
SMAI	**San Martin Ant**	**20.67**	**225**	P	**P**	**19 08 09.4**	**-0.4**
QSPA	**South Pole Qui**	**31.69**	**180**	P	**P**	**19 09 54.6**	**+1.0**
QSPA	**South Pole Qui**	**31.69**	**180**	P	**P**	**19 09 54.6**	**+1.0**
	comp=Z,2.4nm,0.7s,baz=196,slow=2.6,SNR=20						
	comp=Z,2.4nm,0.7s						
PLTB	**Pedras Altas**	**32.99**	**312**	P	**P**	**19 10 03.3**	**-1.8**
PLTB				IAmb	IAmb	19 10 40.0	
	comp=Z,14nm,1.3s						
PLCA	**Paso Flores**	**33.56**	**282**	P	**P**	**19 10 10.8**	**+0.8**
PLCA				IAmb	IAmb	19 10 11.2	
	comp=Z,5.8nm,1.1s						
PLCA	**Paso Flores**	**33.56**	**282**	P	**P**	**19 10 10.6**	**+0.5**
	comp=Z,3.5nm,0.9s,baz=170,slow=5.7,SNR=5.5						
	comp=Z,3.5nm,0.9s						
LR04	**Corral**	**35.67**	**280**	P	**P**	**19 10 27.8**	**-0.3**
MAW	**Mawson**	**37.49**	**141**	P	**P**	**19 10 43.3**	**-0.1**
	comp=Z,3.2nm,0.9s,baz=233,slow=16,SNR=3.1						
	comp=Z,3.2nm,0.9s						
BI05	**Punta Hualpn**	**37.92**	**284**	P	**P**	**19 10 47.7**	**+0.4**
MT09	**Talagante**	**39.15**	**289**	P	**P**	**19 10 58.3**	**+0.5**
MT09				IAmb	IAmb	19 10 59.4	
	comp=Z,8.3nm,0.7s						
MT01	**Popeta**	**39.21**	**289**	P	**P**	**19 10 57.2**	**-0.9**
MT01				IAmb	IAmb	19 11 38.1	
	comp=Z,27nm,1.5s						
MT02	**Curacav**	**39.64**	**289**	P	**P**	**19 11 02.2**	**+0.4**
MT02				IAmb	IAmb	19 11 31.0	
	comp=Z,24nm,1.2s						
AC05	**El Transito**	**42.84**	**294**	P	**P**	**19 11 27.9**	**-0.4**
AC05				IAmb	IAmb	19 12 08.4	
	comp=Z,18nm,1.4s						
VNDA	**Vanda**	**44.11**	**182**	P	**P**	**19 11 39.4**	**+1.6**
	comp=Z,2.0nm,0.8s,baz=184,slow=6.5,SNR=8.5						
	comp=Z,2.0nm,0.8s						
H04S2	**CROZET ISLANDS**	**45.58**	**111**	T	T	20 02 21.4	
	baz=225,slow=76,SNR=7.6						
H04S3	**CROZET ISLANDS**	**45.59**	**111**	T	T	20 02 22.6	
	baz=225,slow=76,SNR=7.4						
H04S1	**CROZET ISLANDS**	**45.60**	**111**	T	T	20 02 18.2	
	baz=225,slow=76,SNR=6.8						
BDFB	**Brasilia**	**46.09**	**329**	P	**P**	**19 11 54.6**	**+0.4**
	comp=Z,3.5nm,0.6s,baz=141,slow=5.2,SNR=5.6						
	comp=Z,3.5nm,0.6s						
LBTB	**Lobatse**	**48.78**	**69**	LR	LR	19 29 22.1	
	comp=Z,87nm,18.6s,baz=232,slow=32						
GO01	**Chusmiza**	**50.20**	**302**	P	**P**	**19 12 26.2**	**-0.3**
GO01				IAmb	IAmb	19 12 31.3	
	comp=Z,3.7nm,1.0s						
LPAZ	**La Paz**	**52.72**	**305**	P	**P**	**19 12 44.5**	**-1.0**
LPAZ				IAmb	IAmb	19 12 46.9	
	comp=Z,1.6nm,0.5s						
LPAZ	**La Paz**	**52.72**	**305**	P	**P**	**19 12 44.8**	**-0.7**
	comp=Z,1.4nm,0.4s,baz=134,slow=8.4,SNR=6.5						
	comp=Z,1.4nm,0.4s						

BOAV	Boa Vista	66.93	321	P	P	19 14 21.9	-0.6
DBIC	Dimbokro	67.04	22	P	P	19 14 23.5	+0.5
DBIC	Dimbokro	67.04	22	P	P	19 14 22.5	-0.5
	comp=Z,4.8nm,1.0s,baz=196,slow=8.2,SNR=3.6						
	comp=Z,4.8nm,1.0s						
TORD	Torodi Ar. Bea	74.75	27	P	P	19 15 10.7	+0.9
TORD				IAmb	IAmb	19 15 11.5	
	comp=Z,2.8nm,0.8s						
TORD	Torodi Ar. Bea	74.75	27	P	P	19 15 10.2	+0.4
	comp=Z,3.1nm,0.5s,baz=208,slow=6.4,SNR=3.0						
	comp=Z,3.1nm,0.5s						
STKA	Stephens Creek	89.23	169	P	P	19 16 26.2	+0.4
	comp=Z,0.8nm,0.5s,baz=186,slow=18,SNR=1.4						
	comp=Z,0.8nm,0.5s						
ASAR	Alice Springs	96.26	161	P	P	19 16 57.5	-0.8
	comp=Z,0.5nm,0.6s,baz=182,slow=4.6,SNR=12						
	comp=Z,0.5nm,0.6s						
ULM	Lac du Bonnet	122.80	314	PKP	PKPdf	19 22 24.0	-0.7
	comp=Z,1.1nm,0.5s,baz=63,slow=2.3,SNR=4.0						
CMAR	Chiang Mai Arr	123.16	110	PKP	PKPdf	19 22 25.4	-1.0
	comp=Z,0.6nm,0.8s,baz=205,slow=3.3,SNR=4.4						
FINES	FINESS Array B	126.10	28	PKP	PKPdf	19 22 30.0	-0.6
	comp=Z,1.2nm,0.7s,baz=132,slow=2.8,SNR=6.0						
BVAR	Borovoye Array	135.18	59	PKP	PKPdf	19 22 48.4	+0.3
	comp=Z,0.6nm,0.5s,baz=245,slow=2.4,SNR=3.1						
YKA	Yellowknife Ar	138.75	315	PKP	PKPdf	19 22 53.5	-0.9
	comp=Z,1.0nm,0.7s,baz=127,slow=1.6,SNR=8.4						
P33M	Teslin, Yukon	144.81	304	P	PKPdf	19 23 06.0	+0.5
	baz=120						
MMPY	Sheldon Lake,	145.31	309	P	PKPab	19 23 07.0	+0.7
	baz=118						
N32M	Quiet Lake	145.38	306	P	PKPab	19 23 07.4	+0.7
	baz=119						
WHY	Whitehorse	145.92	304	P	PKPbc	19 23 08.7	+0.5
	baz=118						
FARO	Faro, Yukon	146.00	307	P	PKPab	19 23 09.0	+0.1
	baz=117						
M31M	Drury Creek, Y	146.42	307	P	PKPbc	19 23 09.9	+0.3
	baz=117						
O30N	Mendenhall	146.50	304	P	PKPab	19 23 11.2	+0.3
	baz=118						
N31M	Braeburn, Yuko	146.69	305	P	PKPbc	19 23 10.7	+0.3
	baz=117						
P29M	Windy Craggy	146.69	301	P	PKPab	19 23 11.9	+0.2
	baz=118						
A36M	Sachs Harbour	146.92	326	P	PKPbc	19 23 11.2	+0.5
	baz=109						
HYT	Haines Junctio	147.14	303	P	PKPbc	19 23 12.8	+1.0
	baz=117						
N30M	Aishikik Lake	147.24	305	P	PKPbc	19 23 12.9	+0.9
	baz=116						
PNL	Peninsula	147.45	301	P	PKPbc	19 23 13.6	+1.1
	baz=118						
YUK4	Talbot Arm	147.87	304	P	PKPbc	19 23 14.6	+0.8
	baz=115						
H31M	Peel River	147.87	313	P	PKPbc	19 23 13.7	+0.2
	baz=112						
PINM	Pinnacle	148.03	301	P	PKiKP	19 23 15.4	-0.5
	baz=116						
J30M	Hart River	148.20	310	P	PKPbc	19 23 15.3	+0.8
	baz=112						
G31M	Satah River	148.24	315	P	PKPbc	19 23 14.4	+0.1
	baz=110,SNR=5.8						
M29M	Somme Creek	148.25	306	P	PKPbc	19 23 15.5	+0.8
	baz=114						
O28M	Mount Upton	148.30	302	P	PKiKP	19 23 16.6	-0.1
	baz=116						
YUK8	Steele Glacier	148.33	303	P	PKPbc	19 23 16.1	+1.0
	baz=115						
L29M	L29M	148.37	307	P	PKiKP	19 23 16.0	-0.5
	baz=113						
K29M	Barlow Dome	148.40	309	P	PKPbc	19 23 15.4	+0.4
	baz=112						
INK	Inuvik	148.42	318	PKPbc	PKPdf	19 23 12.8	+1.6
	comp=Z,4.8nm,0.6s,baz=85,slow=4.6,SNR=8.7						
INK	Inuvik	148.42	318	P	PKPbc	19 23 15.3	+0.5
	baz=108						
I30M	Mount Dempster	148.45	311	P	PKPbc	19 23 15.8	+0.7
	baz=111						
YUK3	Moose Creek	148.83	304	P	PKPbc	19 23 16.7	+0.3
	baz=114						
CTG	Chitna Glacier	148.89	302	P	PKPbc	19 23 17.1	+0.7
	baz=115						
EPYK	Eagle Plains	148.98	313	P	PKPbc	19 23 16.5	+0.2
	baz=109,SNR=7.8						
G30M	tAoh Zraii Nji	148.99	315	P	PKPbc	19 23 17.2	+0.9
	baz=108,SNR=9.8						
F30M	Barrier River	149.02	316	P	PKPbc	19 23 16.9	+0.5
	baz=108,SNR=6.0						
DAWY	Dawson	149.25	308	P	PKPbc	19 23 17.0	-0.1
	baz=111						
BVCY	Beaver Creek	149.26	305	P	PKPbc	19 23 17.6	+0.5
	baz=113						
H29M	Whitestone	149.56	313	P	PKPbc	19 23 18.2	+0.5
	baz=108,SNR=7.3						
CRQE	Cirque	149.59	301	P	PKiKP	19 23 19.2	0.0
	baz=114						
G29M	Pine Creek	149.64	314	P	PKPbc	19 23 18.6	+0.7
	baz=107,SNR=12						
M27K	Edge Creek, AK	149.68	304	P	PKPbc	19 23 19.0	+0.7
	baz=112						
SONM	Songino Array	149.72	89	PKPbc	PKPbc	19 23 18.7	-0.2
	comp=Z,2.2nm,0.8s,baz=220,slow=3.2,SNR=12						
MCARA	McCarthy VSAT	149.81	302	P	PKPbc	19 23 19.1	+0.6
	baz=113						
L27K	Beaver Creek,	149.91	306	P	PKiKP	19 23 19.6	0.0
	baz=111						
I28M	Miner Creek	149.94	311	P	PKPbc	19 23 19.5	+0.7
	baz=108,SNR=5.4						
E29M	Blow River	150.00	317	P	PKPbc	19 23 19.0	+0.2
	baz=105						
M26K	Nabesna, AK	150.18	304	P	PKPbc	19 23 19.7	+0.3
	baz=111						
K27K	Chicken	150.35	307	P	PKiKP	19 23 21.0	+0.6
	baz=109						
BMRM	Bremner River	150.35	301	P	PKiKP	19 23 21.2	+0.6
	baz=113						
D28M	Stokes Point	150.52	319	P	PKiKP	19 23 22.0	+1.4
	baz=103						
F28M	Old Crow	150.52	315	P	PKiKP	19 23 20.8	0.0
	baz=105						
L26K	Log Cabin Wild	150.55	305	P	PKiKP	19 23 21.3	+0.4
	baz=110						
N25K	Chitina, Valde	150.59	302	P	PKiKP	19 23 21.4	+0.2
	baz=112						
E28M	Babbage River	150.64	317	P	PKPbc	19 23 20.2	-0.1
	baz=103						
I27K	Kandik River	150.65	311	P	PKiKP	19 23 21.5	+0.4
	baz=107,SNR=8.0						
EYAK	Cordova Ski Ar	150.71	300	P	PKiKP	19 23 21.6	+0.4
	baz=113						
H27K	Steamboat Moun	150.79	312	P	PKiKP	19 23 21.7	+0.3
	baz=106,SNR=14						
G27K	Doyon Strip	150.99	313	P	PKiKP	19 23 22.2	+0.4
	baz=105						
J26L	Joseph Creek	151.12	308	P	PKiKP	19 23 22.9	+0.7
	baz=108,SNR=12						
SCRK	Sand Creek	151.13	307	P	PKiKP	19 23 22.9	+0.7
	baz=108,SNR=12						
KLU	Klutina	151.14	301	P	PKiKP	19 23 23.1	+0.8
	baz=111,SNR=5.6						
I26K	Coal Creek Min	151.18	310	P	PKiKP	19 23 22.6	+0.5
	baz=106,SNR=21						
P23K	Montague Islan	151.25	298	P	PKiKP	19 23 23.1	+0.7
	baz=113						
D27M	Malcolm River	151.28	318	P	PKiKP	19 23 22.9	+0.6
	baz=101						
E27K	Coleen River	151.29	316	P	PKiKP	19 23 22.6	+0.3
	baz=102						
RIDG	Independent Ri	151.42	306	P	PKiKP	19 23 23.7	+1.0
	baz=108,SNR=16						
PAX	Paxson	151.44	304	P	PKiKP	19 23 23.4	+0.5
	baz=109,SNR=5.4						
GLI	Glacier Island	151.45	300	P	PKPbc	19 23 22.6	+0.3
	baz=112						
M24K	Tolsona, Glenn	151.47	302	P	PKiKP	19 23 24.3	+1.4
	baz=110						
G26K	Porcupine Rive	151.84	313	P	PKiKP	19 23 23.9	+0.4
	baz=103						
SCM	Sheep Creek Mo	151.89	302	P	PKiKP	19 23 25.1	+1.3
	baz=110,SNR=6.0						
J25K	Salcha River,	151.89	308	P	PKiKP	19 23 24.8	+1.1
	baz=106,SNR=5.4						
PWL	Port Wells	152.00	299	P	PKiKP	19 23 24.8	+0.9
	baz=111,SNR=9.2						
M23K	Glacier View	152.05	301	P	PKiKP	19 23 24.9	+0.9
	baz=110						
F26K	Sheenjek River	152.13	314	P	PKiKP	19 23 25.1	+1.0
	baz=101						
PRP	Porcupine Dome	152.19	310	P	PKiKP	19 23 24.9	+0.5
	baz=104						
SEW	Seward	152.25	297	P	PKPbc	19 23 22.6	-1.6
	baz=112						
KNK	Knik Glacier	152.25	300	P	PKiKP	19 23 25.9	+1.4
	baz=110						
C27K	Jago River	152.30	319	P	PKiKP	19 23 25.8	+1.5
	baz=98						
DHY	Denali Highway	152.30	304	P	PKiKP	19 23 25.8	+1.0
	baz=108						
WAT6	Susitna Watana	152.31	303	P	PKiKP	19 23 25.3	+0.5
	baz=108,SNR=10						
SML	Sawmill	152.33	301	P	PKiKP	19 23 24.9	+0.2
	baz=109,SNR=5.4						
H25L	Birch Creek	152.49	311	P	PKiKP	19 23 25.8	+1.1
	baz=103						
HDA	Harding Lake	152.50	307	P	PKiKP	19 23 25.8	+1.0
	baz=105						
ILAR	Eielson Array	152.56	308	PKPbc	PKPbc	19 23 25.1	+0.3
	comp=Z,2.9nm,0.6s,baz=140,slow=4.9,SNR=28						
F25K	Christian Rive	152.68	314	P	PKiKP	19 23 26.4	+1.2
	baz=100						
G25K	Bearman Lake	152.70	312	P	PKiKP	19 23 26.0	+0.8
	baz=102						
E25K	Arctic Village	152.74	315	P	PKiKP	19 23 26.7	+1.4
	baz=99						
KDAK	Kodiak Island	152.84	291	P	PKiKP	19 23 26.1	+0.3
	baz=114						
MCK	McKinley	153.16	305	P	PKiKP	19 23 26.6	+0.3
	baz=105						
D25K	Kavik River	153.19	318	P	PKiKP	19 23 26.9	+0.6
	baz=96						
H24K	Noodor Dome	153.22	310	P	PKiKP	19 23 27.1	+0.7
	baz=102						
G24K	Hadweenzic Riv	153.22	312	P	PKPbc	19 23 26.4	+0.2
	baz=101						
SUA	Susitna One	153.31	300	P	PKiKP	19 23 28.1	+1.3
	baz=108						
NEA2	Nenana	153.43	307	P	PKPbc	19 23 27.0	+0.3
	baz=104						
TRF	Thorofare Moun	153.67	304	P	PKiKP	19 23 28.5	+0.9
	baz=105						
I23K	Minto, Yukon-K	153.68	308	P	PKPbc	19 23 27.5	+0.3
	baz=102						
O20K	Slope Mountain	153.72	296	P	PKiKP	19 23 27.9	+0.3
	baz=110						
E24K	Your Creek	153.82	315	P	PKiKP	19 23 29.2	+1.6
	baz=97						
SKT	Skwentna	153.82	300	P	PKiKP	19 23 28.4	+0.6
	baz=107						
P19K	Oil Pt	153.86	295	P	PKiKP	19 23 29.2	+1.4
	baz=111						
BPAW	Bear Paw Mtn.	154.13	305	P	PKiKP	19 23 29.3	+1.0
	baz=103						
G23K	Bananza Creek	154.22	311	P	PKiKP	19 23 29.7	+1.3
	baz=99						
E23K	Chandalar	154.24	315	P	PKiKP	19 23 28.8	+0.3
	baz=96						
TOLK	Toolik Lake Re	154.28	316	P	PKiKP	19 23 30.2	+1.7
	baz=95						
PPLA	Purkeypile	154.37	302	P	PKiKP	19 23 29.4	+0.4
	baz=105						
CAST	Castle Rocks	154.45	303	P	PKPbc	19 23 29.0	+0.1
	baz=104						
O18K	Koktuh Hills	154.87	294	P	PKiKP	19 23 30.8	+0.9
	baz=109						
H21K	Melozitna Rive	155.19	309	P	PKPdf	19 23 30.9	+9.4
	baz=99						

IDC ***10*** *19:17:54.1±0.8, 17°.61S×172°.44W, $h0^{km}$, mb4.2/8, mbtmp4.2/8, MS3.7/15, Error ellipse: s-maj=32.2km s-min=20.7km az=137.0*

NEIC ***10*** *19:17:54.7±1.5, 18°.0S±0°.2×172°.0W±0°.1, $h10^{km}\pm1^{km}$, mb4.8/39, Error ellipse: s-maj=27.5km s-min=14.1km az=24.0*

NOU ***10*** *19:18:15.2, 18°.29S×173°.11W, $h57^{km}$, mb4.9/11, Tonga Islands*

ISC 10 19:17:58.5±0.6**, 17°.7S**±0°.1×**172°.41W**±0°.10**, $h21^{km}$, n101,** σ**2^{s}.07**/66**, mb4.8**/35**, MS3.8**/15**, 4C, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	2.72	120		Pn	19 18 31.9	-9.0
NIUE				Sn	Sn	19 18 58.8	-15
AFI	Afiamalu	3.82	9	Pn	Pn	19 18 49.2	-6.9
LKBA	Tubou, Lakemba	6.12	264	P	Pn	19 19 33.3	+5.6
MSVF	Nonsavu	9.09	268	Pn	Pn	19 20 06.8	-1.9
MSVF	Nonsavu	9.09	268	Pn	Pn	19 20 13.6	+5.0
	0.8nm,0.3s,baz=125,slow=12,SNR=8.8						
MSVF				LR	LR	19 23 12.8	
	comp=Z,829nm,20.5s,baz=67,slow=35						
MSVF	Nonsavu	9.09	268	P	Pn	19 20 14.8	+6.2
RAR	Rarotonga	12.42	108	Pn	Pn	19 20 43.8	-10
VLAKA	Lakatoro	19.36	272	P	Pn	19 22 29.5	+5.4
PINNC	Pines Island,	19.53	252	P	Pn	19 22 26.8	+0.8
DZM	Mont Dzumac	20.35	254	*e*S	S	19 26 17.9	-3.2
	390nm,27.9s						
DZM				*e*LR	LR	19 27 26.8	
	516nm,25.8s						
GRZ	Great Barrier	21.37	208	P	P	19 22 45.3	+0.8
OUZ	Omahuta	21.44	213	P	P	19 22 46.0	+0.7
WCZ	Waipu Caves	21.63	210	P	P	19 22 46.8	-0.6
KUZ	Kuaotunu	21.67	207	P	P	19 22 52.2	+4.5
PPT2	Papeete2	21.76	93	*e*LR	LR	19 27 36.6	
	200nm,23.0s						
PPT2				*e*LR	LR	19 27 43.7	
	241nm,22.2s						
PPT	Papeete	21.76	93	LR	LR	19 28 54.5	
	comp=Z,128nm,20.1s,baz=300,slow=30						
ABAZ	Army Bay	21.94	208	P	P	19 22 54.0	+3.4
WIAZ	Waiheke Island	21.97	208	P	P	19 22 53.1	+2.2
ETAZ	East Tamaki Re	22.19	208	P	P	19 22 55.9	+2.6
TBI	Tubuai	22.20	108	*e*S	S	19 26 37.5	-20
	1μm,27.2s						
TBI				*e*LR	LR	19 27 56.5	
	2μm,27.2s						
MKAZ	Moumakai	22.21	207	P	P	19 22 56.3	+2.8
AWAZ	Awhitu Peninsu	22.41	208	P	P	19 22 58.1	+2.4
URZ	Urewera	22.44	202	LR	LR	19 31 30.8	
	comp=Z,117nm,19.1s,baz=104,slow=36						
BKZ	Black Stump Fm	23.47	202	P	P	19 23 12.1	+5.4
HIZ	Hauiti	23.53	206	P	P	19 23 08.5	+1.3
KRHZ	Kereru	23.93	202	P	P	19 23 08.7	-2.4
VRZ	Vera Road	24.09	205	P	P	19 23 12.8	+0.3
PNHZ	Pukenui	24.23	202	P	P	19 23 11.2	-2.8
QRZ	Quartz Range	26.45	206	P	P	19 23 39.1	+5.2
KHZ	Kahutara	27.39	203	P	P	19 23 48.1	+5.7
HNR	Honiara	28.07	283	LR	LR	19 33 16.5	
	comp=Z,235nm,21.5s,baz=54,slow=33						
TAOE	Nuku Hiva Isla	32.56	79	*e*LR	LR	19 32 46.4	
	185nm,22.7s						
EIDS	Eidsvold	34.72	251		P	19 24 44.7	-2.5
EIDS				IAmb	IAmb	19 24 47.0	
	comp=Z,21nm,1.4s						
ARMA	Armidale	35.04	242	P	P	19 24 49.6	-0.5
CNB	Canberra Magne	38.16	235	P	P	19 25 21.7	+5.2
CTAO	Charters Tower	39.11	260	P	P	19 25 23.1	-1.6
PMG	Port Moresby	40.09	276	LR	LR	19 39 50.2	
	comp=Z,139nm,18.6s,baz=126,slow=33						
CMSA	Cobar Meteorol	40.26	242	P	P	19 25 39.1	+5.0
STKA	Stephens Creek	43.76	242		P	19 26 01.8	-0.9
STKA	Stephens Creek	43.76	242	P	P	19 26 01.9	-0.9
	comp=Z,6.0nm,0.7s,baz=87,slow=10.0,SNR=6.6						
STKA				LR	LR	19 42 07.9	
	comp=Z,130nm,18.6s,baz=69,slow=33						
	comp=Z,6.0nm,0.7s						
STKA	Stephens Creek	43.76	242	P	P	19 26 08.3	+5.6
HTT	Hallett	46.20	240	P	P	19 26 27.5	+5.4
WB0	Warramunga Arr	50.25	259		P	19 26 52.1	-1.5
WB0				IAmb	IAmb	19 26 53.6	
	comp=Z,14nm,0.8s						
WRAB	Tennant Creek	50.27	259	P	P	19 26 52.4	-1.4
WRAB				IAmb	IAmb	19 26 56.8	
	comp=Z,15nm,1.1s						
WRA	Warramunga Arr	50.28	259		P	19 26 52.3	-1.5
WRA	Warramunga Arr	50.28	259	P	P	19 26 52.6	-1.2
	comp=Z,7.8nm,0.8s,baz=96,slow=7.7,SNR=68						
	comp=Z,7.8nm,0.8s						
AS31	Alice Springs	50.34	254		P	19 26 53.7	-0.5
AS31				IAmb	IAmb	19 26 54.9	
	comp=Z,13nm,0.8s						
ASAR	Alice Springs	50.34	254		P	19 26 53.5	-0.8
ASAR	Alice Springs	50.34	254	P	P	19 26 53.8	-0.5
	comp=Z,44nm,0.7s,baz=90,slow=8.6,SNR=387						
KNRA	Kununurra	56.19	263		P	19 27 37.3	0.0
KNRA				IAmb	IAmb	19 27 54.2	
	comp=Z,19nm,1.4s						
VNDA	Vanda	61.20	186	P	P	19 28 12.3	+1.1
	comp=Z,2.2nm,1.0s,baz=18,slow=6.0,SNR=4.9						
	comp=Z,2.2nm,1.0s						
NWAO	Narrogin (SRO)	64.34	241	LR	LR	19 53 39.6	
	comp=Z,76nm,18.7s,baz=294,slow=33						
DAV	Davao City (W)	65.98	286	LR	LR	19 55 40.2	
	comp=Z,28nm,19.3s,baz=117,slow=34						
TOLI2	Tolitoli	68.32	278		P	19 28 59.8	+1.1
QSPA	South Pole Qui	72.36	180		P	19 29 21.8	-0.9
QSPA	South Pole Qui	72.36	180	P	P	19 29 21.8	-0.9
	comp=Z,5.7nm,1.1s,baz=38,slow=1.3,SNR=7.3						
	comp=Z,5.7nm,1.1s						
LPIG	La Paz	73.45	57	LR	LR	19 52 16.7	
	comp=Z,51nm,21.8s,baz=216,slow=28						
PFO	Pinyon Flats O	73.81	46	LR	LR	19 54 21.7	
	comp=Z,41nm,19.7s,baz=128,slow=30						
NVAR	Mina Array Bea	75.41	41	P	P	19 29 40.4	-0.7
	comp=Z,0.7nm,0.7s,baz=224,slow=9.4,SNR=4.8						
	comp=Z,0.7nm,0.7s						
KSM	Kuching	78.34	275		P	19 29 59.0	+1.1
M16K	Timber Creek	79.19	7		P	19 30 01.8	+0.3
M16K				IAmb	IAmb	19 30 03.8	
	comp=Z,13nm,1.1s						
K15K	Wolf Creek Mou	80.19	5		P	19 30 06.5	-0.4
TXAR	Lajitas Array	81.11	55	P	P	19 30 12.9	+0.3
	comp=Z,1.6nm,1.1s,baz=215,slow=6.1,SNR=6.5						
	comp=Z,1.6nm,1.1s						
ANMO	Albuquerque	81.56	49	LR	LR	19 58 14.7	
	comp=Z,42nm,18.8s,baz=332,slow=30						
J18K	Innoko River	81.83	7	P	P	19 30 15.4	-0.2
NJ2	Nanjing	82.30	307	*e*P	P	19 30 21.1	+2.3
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
J20K	Nowinta River	82.83	8	P	P	19 30 20.1	-0.7
J20K				IAmb	IAmb	19 30 21.7	
	comp=Z,5.2nm,1.0s						
PDAR	Pinedale Array	83.35	41	LR	LR	20 00 29.7	
	comp=Z,25nm,19.7s,baz=252,slow=31						
M27K	Edge Creek, AK	83.36	14	IAmb	IAmb	19 30 24.9	
	comp=Z,6.0nm,1.1s						
WRH	Wood River Hil	84.03	10	P	P	19 30 25.2	-1.8
WRH				IAmb	IAmb	19 30 27.5	
	comp=Z,8.7nm,1.2s						
MLY	Manley	84.12	9		P	19 30 26.6	-0.9
MLY				IAmb	IAmb	19 32 18.1	
	comp=Z,8.2nm,1.5s						
CCB	Clear Creek Bu	84.24	10		P	19 30 26.0	-2.0
CCB				IAmb	IAmb	19 30 28.9	
	comp=Z,6.2nm,1.2s						
ILAR	Eielson Array	84.51	11	P	P	19 30 27.6	-1.9
	comp=Z,0.6nm,0.7s,baz=226,slow=6.3,SNR=6.7						
	comp=Z,0.6nm,0.7s						
IMAR	Indian Mountai	84.61	8	P	P	19 30 29.0	-0.9
L29M	L29M	84.89	15	IAmb	IAmb	19 30 32.0	
	comp=Z,6.5nm,1.2s						
F19K	Shaleruckik Mo	84.99	6	P	P	19 30 30.7	-1.0
F19K				IAmb	IAmb	19 30 32.8	
	comp=Z,7.5nm,0.9s						
E18K	Tukpahlearik C	85.32	5	P	P	19 30 32.7	-0.7
F20K	Avaraart Lake	85.41	6	IAmb	IAmb	19 30 35.1	
	comp=Z,5.7nm,1.0s						
PRP	Porcupine Dome	85.44	11	IAmb	IAmb	19 30 35.1	
	comp=Z,8.2nm,1.2s						
G23K	Bananza Creek	85.81	9	IAmb	IAmb	19 30 53.5	
	comp=Z,13nm,1.8s						
D19K	Kuna River	86.58	5	IAmb	IAmb	19 30 49.6	
	comp=Z,7.8nm,1.1s						
H27K	Steamboat Moun	86.83	12	IAmb	IAmb	19 32 25.5	
	comp=Z,11nm,1.9s						
E22K	Anaktuvuk Pass	86.90	8	IAmb	IAmb	19 31 11.4	
	comp=Z,11nm,1.6s						
D20K	Etivluk River	86.93	6	IAmb	IAmb	19 30 52.7	
	comp=Z,12nm,1.4s						
G26K	Porcupine Rive	87.04	11	IAmb	IAmb	19 30 44.1	
	comp=Z,9.7nm,1.2s						
BMAR	Burnt Mountain	87.33	10	P	P	19 30 42.6	-0.7
TROLL	Troll, Antarti	90.45	178	⇑P	P	19 30 57.2	-1.1
	comp=Z,74nm,0.6s						
VNA3	Neumayer Olymp	90.49	174	⇑P	P	19 30 56.4	-2.0
	comp=Z,2.2nm,0.7s						
SNAA	Sanae	90.57	177	⇑P	P	19 30 57.8	-1.0
	comp=Z,19nm,0.6s						
SNAA	Sanae	90.57	177	P	P	19 30 56.4	-2.4
	comp=Z,1.0nm,0.8s,baz=227,slow=5.2,SNR=6.1						
	comp=Z,1.0nm,0.8s						
VNA2	Neumayer--Watz	90.99	175	⇑P	P	19 31 00.6	-0.2
	comp=Z,1.8nm,0.6s,baz=186,slow=4.5						
HHC	Hu-ho-hao-te	91.28	313	*e*P	P	19 31 03.7	+1.1
HHC				pmax	pmax		
	comp=Z,16nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,4.3s						
ATAH	Atahualpa	91.66	98	LR	LR	20 01 52.3	
	comp=Z,46nm,20.0s,baz=224,slow=29						
PZH	PanZhiHua	94.15	296	P	P	19 31 17.1	+0.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.8s						
CMAR	Chiang Mai Arr	94.23	288	LR	LR	20 13 37.9	
	comp=Z,12nm,18.7s,baz=185,slow=36						
LPAZ	La Paz	98.14	110	LR	LR	20 05 45.0	
	comp=Z,34nm,21.9s,baz=270,slow=29						
CLL	Collm	146.20	354	*e*PKPbc	PKPdf	19 37 36.0	-0.1
	comp=Z,4.0nm,0.5s						
CLL				*i* (PKPab)	PKPab	19 37 38.4	+0.6
CLL				*i* x	x	19 37 45.2	
CLL				AMS	AMS	21 51 00.0	
	comp=Z,100nm,18.6s						
KSP	Ksiaz	146.21	350	*e*PKP	PKPab	19 37 37.6	-0.3
NIE	Niedzica	146.74	345	*e*PKP	PKPdf	19 37 35.5	-1.6
VYHS	Vyhne	147.95	346	*e*PKP	PKiKP	19 37 43.1	-1.0
BRTR	Keskin Array B	148.53	320	PKPbc	PKPdf	19 37 41.2	+0.6
	comp=Z,1.0nm,0.7s,baz=145,slow=2.6,SNR=5.6						

IDC ***10*** *19:20:50.9±0.8, 30°.21S×179°.31W, $h355^{km}\pm8^{km}$, mb3.6/3, mbtmp4.5/5, Error ellipse: s-maj=32.7km s-min=17.6km az=146.0*

ISC 10 19:20:50.7±0.7**, 30°.41S**±0°.08×**179°.3W**±0°.1**, $h350^{km}$, n47,** σ**2^{s}.07**/72**, mb3.6**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.62	46	P	Pn	19 21 41.4	+1.7
GLKZ				S	S	19 22 10.2	-8.6
RIZ	Raoul Island	1.63	45	P	Pn	19 21 39.5	-0.2
RAO	Raoul Island	1.63	45	P	Pn	19 21 41.4	+1.7
	309nm,0.2s,baz=204,slow=20,SNR=6.9						
RAO				S	S	19 22 18.9	0.0
	283nm,0.2s,baz=288,slow=20,SNR=2.0						
MXZ	Matakaoa Point	7.42	195	P	Pn	19 22 41.0	+3.1
MXZ				S	S	19 24 04.2	-0.9
WMGZ	Waiomatatini S	7.64	194	P	Pn	19 22 43.5	+3.0
WMGZ				S	S	19 24 09.4	-0.6
HAZ	Te Kaha	7.73	198	P	Pn	19 22 45.0	+3.4
HAZ				S	S	19 24 12.5	+0.6
PKGZ	Pakihiroa	7.76	196	P	Pn	19 22 45.0	+3.0
PKGZ				S	S	19 24 09.0	-3.6
PUZ	Puketiti	7.92	194	P	Pn	19 22 47.6	+3.8
PUZ				S	S	19 24 15.0	-1.0
RUGZ	Raukumara Rang	7.96	198	P	Pn	19 22 47.4	+3.0
RUGZ				S	S	19 24 16.9	-0.1
TWGZ	Tauwhareparae	8.08	196	P	P	19 22 50.6	+1.8
TWGZ				S	S	19 24 19.0	-0.6
MWZ	Matawai	8.34	198	P	P	19 22 53.6	+1.9
MWZ				S	S	19 24 22.3	-3.0
TKGZ	Te Karaka	8.36	196	P	P	19 22 52.5	+0.7
TKGZ				S	S	19 24 25.7	+0.1
URZ	Urewera	8.39	200	P	P	19 22 52.6	+0.5
	4.4nm,0.3s,baz=91,slow=4.6,SNR=13						
URZ				S	S	19 24 25.6	-0.6
	18nm,0.4s,baz=111,slow=14,SNR=15						
URZ	Urewera	8.39	200	P	Pn	19 22 49.8	+0.5
URZ				S	S	19 24 25.5	-0.7
RAGZ	Rawiri	8.53	198	P	P	19 22 54.0	+0.3
RAGZ				S	S	19 24 28.4	-0.9
RIGZ	Rimuhau	8.64	196	S	S	19 24 27.2	-4.5
MUGZ	Murupara	8.69	201	P	P	19 22 55.8	+0.3
MUGZ				S	S	19 24 28.7	-4.2
SNGZ	Shannon Statio	8.81	198	P	P	19 22 56.7	-0.2
SNGZ				S	S	19 24 34.2	-1.3

PRGZ	Paritu Road	8.82	195	S	S	19 24 34.9	-0.7
MTHZ	Maungataniwha	9.02	200	P	P	19 23 01.0	+1.8
MTHZ				S	S	19 24 39.1	-0.9
MHGZ	Mahia Peninsul	9.03	194	S	S	19 24 35.9	-4.4
NMHZ	Naumai	9.26	199	P	P	19 23 02.8	+1.0
NMHZ				S	S	19 24 45.1	-0.2
BKZ	Black Stump Fm	9.41	201	P	P	19 23 03.7	+0.1
BKZ				S	S	19 24 45.3	-3.4
OTVZ	Oturere	9.68	204	P	P	19 23 06.6	-0.1
OTVZ				S	S	19 24 55.1	+0.2
SNVZ	South Ngauruho	9.71	204	P	P	19 23 08.0	+0.9
SNVZ				S	S	19 24 58.7	+3.1
NGZ	Ngauruhoe	9.72	204	P	Pn	19 23 06.0	+0.7
TUVZ	Tukino	9.78	204	P	P	19 23 08.8	+1.0
TUVZ				S	S	19 24 55.1	-1.9
FWVZ	Far West T-bar	9.80	204	P	P	19 23 08.9	+0.8
WNVZ	Wahianoa	9.85	204	P	P	19 23 08.6	0.0
WNVZ				S	S	19 24 57.4	-1.2
KAHZ	Kahuranaki	9.89	198	P	P	19 23 09.9	+1.1
KAHZ				S	S	19 24 57.8	-1.3
KRHZ	Kereru	9.89	200	S	S	19 24 55.6	-3.5
PXZ	Pawanui	10.11	197	P	P	19 23 11.4	+0.1
PXZ				S	S	19 24 59.3	-4.8
PNHZ	Pukenui	10.19	200	S	S	19 25 00.9	-4.9
WAZ	Wanganui	10.45	205	S	S	19 25 11.3	-0.2
RPZ	Rata Peaks	15.36	207	P	P	19 24 09.5	+0.4
	18nm,0.6s,baz=39,slow=7.0,SNR=14						
PPT	Papeete	29.87	71	P	P	19 26 25.8	-1.5
	16nm,0.5s,baz=163,slow=19,SNR=1.5						
	16nm,0.5s						
ASAR	Alice Springs	42.03	268	P	P	19 28 07.7	-1.7
	0.8nm,0.6s,baz=98,slow=7.4,SNR=0.5						
ASAR				S	S	19 34 03.5	+1.6
	0.4nm,0.9s,baz=78,slow=18,SNR=4.2						
	0.8nm,0.6s						
WRA	Warramunga Arr	43.02	273	P	P	19 28 16.1	-1.2
	2.8nm,0.6s,baz=111,slow=7.6,SNR=11						
	2.8nm,0.6s						
MKAR	Makanchi Array	116.95	310	PKP	PKPdf	19 38 52.5	-1.5
	0.2nm,0.7s,baz=27,slow=9.7,SNR=1.7						
KURBB	Kurchatov Arra	120.31	314	PKP	PKPdf	19 38 58.9	-1.3
	0.2nm,0.5s,baz=87,slow=3.3,SNR=1.6						
BVAR	Borovoye Array	125.66	316	PKP	PKPdf	19 39 09.9	-0.5
	0.3nm,0.5s,baz=4.1,slow=2.0,SNR=2.2						
FINES	FINESS Array B	144.78	339	PKP	PKPdf	19 39 44.0	-1.5
	3.5nm,0.6s,baz=54,slow=4.7,SNR=31						
NOA	NORSAR Array B	148.59	350	PKPbc	PKPdf	19 39 55.1	+3.2
	0.8nm,1.0s,baz=65,slow=1.1,SNR=1.3						
HFS	Hagfors	149.03	347	PKPbc	PKPdf	19 39 55.7	+3.1
	2.1nm,0.8s,baz=62,slow=3.5,SNR=6.0						
MMAI	Mount Meron Ar	150.49	284	PKPbc	PKPbc	19 40 02.2	+0.6
	0.3nm,0.3s,baz=84,slow=4.3,SNR=1.8						
AKASG	Malin Array Be	150.65	322	PKPbc	PKPbc	19 40 00.3	-1.0
	1.1nm,0.6s,baz=50,slow=2.7,SNR=8.0						
BRTR	Keskin Array B	151.66	298	PKPbc	PKPbc	19 40 03.3	-0.9
	0.2nm,0.3s,baz=107,slow=4.6,SNR=1.7						

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*NEIC **10** 19:30:07.4±2.7, 35°.00N±0°.09×135°.7E±0°.1, h366^{km}±10^{km}, mb4.2/6, Error ellipse: s-maj=15.5km s-min=11.6km az=124.0*

*IDC **10** 19:30:07.6±1.1, 35°.06N×135°.80E, h369^{km}±12^{km}, mb2.9/9, mbtmp3.8/15, Error ellipse: s-maj=18.9km s-min=14.2km az=74.0*

*JMA **10** 19:30:08.2±0.1, 35°.1N±0°.8×135°.6E±0°.7, h358^{km}±1^{km}, MV3.5/36, MID KYOTO PREF*

*NIED **10** 19:30:08.2, 35°.11N×135°.65E, h358^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.68; $M_{\theta\theta}$1.11; $M_{\phi\phi}$-0.43; $M_{r\theta}$0.19; $M_{\theta\phi}$0.60; $M_{\phi r}$-0.70; Fault plane solution: $M_0$1.35000×10^{15} NP1: ϕ_s286.00000°, δ58.00000°, λ-35.00000°. NP2: ϕ_s36.00000°, δ61.00000°, λ-143.00000°.*

ISC 10 19:30:06.7±0.6, 35°.08N±0°.06×135°.75E±0°.06, h366^{km}±6^{km}, n56, σ1^{s}45/68, mb3.2/12, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWT	Wachi	0.35	306	*e*P	Pn	19 30 53.0	+0.6
JWT				*e*S	S	19 31 28.2	-1.0
JWY	Kouya	0.86	189	P	Pn	19 30 54.8	+0.9
JWY				S	S	19 31 30.8	-0.9
JYTA	Yamagatataniai	0.96	57	P	Pn	19 30 55.3	+1.4
JYTA				*e*S	S	19 31 32.0	+0.1
JIE	Ise	1.04	131	P	Pn	19 30 55.8	+1.4
JIE				S	S	19 31 33.0	+0.4
INU	Inuyama	1.07	75		Pn	19 30 55.7	+1.3
JTNC	Tanabenakahech	1.26	185	P	Pn	19 30 56.2	+0.8
JTNC				S	S	19 31 33.5	-0.9
JKG	Kaga	1.29	21	P	Pn	19 30 56.3	+1.0
JKG				*e*S	S	19 31 33.5	-0.8
JGF	Kuroka	1.42	68		Pn	19 30 57.0	+1.0
JAI	Aioi	1.67	220	*e*P	Pn	19 30 57.9	+0.5
JAI				*e*S	S	19 31 37.1	-1.1
TTO1	TONANKAI O.B.S	1.68	149	*e*P	Pn	19 30 59.2	+2.0
JSG	Sagara	2.04	101		Pn	19 31 01.5	+1.8
JMN	Monobe	2.05	230	Pn	Pn	19 31 00.1	+0.2
JMN	Monobe	2.05	230	*e*P	Pn	19 31 00.5	+0.6
JMN				*e*S	S	19 31 41.4	-1.3
JHS	Saijyo	2.16	269	*e*P	Pn	19 31 01.2	+0.6
JHS				*e*S	S	19 31 42.8	-1.2
JYN	Shimob	2.33	79	P	Pn	19 31 03.2	+1.4
JOI	OKI	2.37	301	*e*P	Pn	19 31 02.5	+0.5
MAJO	Matsushiro	2.48	53		Pn	19 31 04.0	+1.1
MAT	Matsushiro	2.48	53	P	Pn	19 31 04.3	+1.4
MJB9	Matsu-Tunnel	2.48	53		Pn	19 31 05.5	+2.7
MJAR	Matsushiro Arr	2.48	53	P	Pn	19 31 04.5	+1.6
	48nm,0.8s,baz=227,slow=6.2,SNR=93						
JSZ	Suzu	2.70	28	*e*P	Pn	19 31 06.0	+1.4
JRY	Ryogami san	2.74	69	*e*P	Pn	19 31 06.4	+1.4
JOD2	Odawara 2	2.74	85	*e*P	Pn	19 31 06.6	+1.5
JHG	Hegura jima	2.92	18	*e*P	Pn	19 31 08.3	+1.8
JNA	Nagahama	3.10	242	*e*P	Pn	19 31 09.0	+0.8
JTO	Tosashimizu	3.30	229	P	Pn	19 31 10.6	+0.6
JTO				*e*S	S	19 31 59.8	-1.1
JAG	Ashikaga	3.30	65	*e*P	Pn	19 31 10.3	+0.4
JAG				*e*S	S	19 31 59.7	-1.2
JSD	Sado	3.58	34	Pn	Pn	19 31 13.4	+1.0
JNU	Nakatsue	4.49	246	P	Pn	19 31 22.5	+0.8
	4.9nm,0.7s,baz=64,slow=2.2,SNR=6.1						
JMM	Marumori	4.93	54		Pn	19 31 26.9	+0.8
JMM					S	19 32 28.3	-2.2
KSRS	Korea Array	6.75	293	P	P	19 31 47.5	-0.1
	4.1nm,0.7s,baz=106,slow=13,SNR=13						
ERM	Erimo	9.03	38	Pn	Pn	19 32 13.5	+0.5
USA0B	Ussuriysk Arra	9.56	344		Pn	19 32 20.5	+1.2
USRK	Ussuriysk Ar.	9.56	344	P	P	19 32 20.8	+0.4
	45nm,0.7s,baz=168,slow=11,SNR=79						
JOW	Kunigami	10.42	220	Pn	Pn	19 32 26.9	-2.8
ASAJ	Asahikawa	10.46	28	P	Pn	19 32 30.1	+0.2
	2.8nm,0.3s,baz=199,slow=8.1,SNR=16						
ASAJ				S	S	19 34 21.1	-6.2
	11nm,0.8s,baz=262,slow=32,SNR=7.6						
JKA	Kamikawa-asahi	10.46	28	Pn	Pn	19 32 28.8	-1.1
YSS	Yuzhno-Sakhali	12.98	22	P	P	19 32 58.9	+0.7
KLR	Kul'dur	14.45	349	P	P	19 33 15.7	+1.4
	2.1nm,0.7s,baz=166,slow=8.5,SNR=7.4						
SSLB	Suanglung	17.08	233	P	P	19 33 41.2	-2.0
TPUB	Ta-pu	17.64	232	P	P	19 33 47.1	-2.0
TPUB				IAmb	IAmb	19 34 29.3	
	comp=Z,28nm,1.2s						
ENH	Enshi	22.59	265	P	P	19 34 35.6	-1.5
ENH				IAmb	IAmb	19 34 39.0	
	comp=Z,12nm,0.8s						
SONM	Songino Array	25.26	309	P	P	19 35 03.5	+2.4
	comp=Z,0.3nm,0.5s,baz=116,slow=9.3,SNR=2.1						
	comp=Z,0.3nm,0.5s						
UBPT	Khong Chiam	33.55	242	P	P	19 36 14.2	+0.4
CMAR	Chiang Mai Arr	36.55	253	P	P	19 36 39.6	+0.5
	comp=Z,0.7nm,0.5s,baz=56,slow=9.0,SNR=1.7						
	comp=Z,0.7nm,0.5s						
FAKI	Fak Fak	37.94	186	P	P	19 36 50.6	-0.1
FAKI				IAmb	IAmb	19 37 24.7	
	comp=Z,23nm,1.4s						
ZALV	Zalesovo Beam	39.91	314	P	P	19 37 06.5	+0.1
	comp=Z,0.5nm,0.5s,baz=94,slow=6.5,SNR=1.9						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	41.31	303	P	P	19 37 18.8	+0.9
	comp=Z,0.5nm,0.7s,baz=87,slow=9.4,SNR=5.1						
	comp=Z,0.5nm,0.7s						
BVAR	Borovoye Array	48.51	313	P	P	19 38 15.1	+1.3
	comp=Z,0.3nm,0.3s,baz=102,slow=9.4,SNR=2.0						
	comp=Z,0.3nm,0.3s						
WRA	Warramunga Arr	54.73	182	P	P	19 38 60.0	+0.3
	comp=Z,0.7nm,0.7s,baz=358,slow=7.8,SNR=9.3						
	comp=Z,0.7nm,0.7s						
AB31	Akbulak array	55.67	310	P	P	19 39 06.7	+0.7
AB31				IAmb	IAmb	19 39 07.0	
	comp=Z,1.9nm,0.5s						
ABKAR	Akbulak array	55.67	310	P	P	19 39 06.7	+0.7
ASAR	Alice Springs	58.45	182	P	P	19 39 26.2	+0.7
	comp=Z,0.6nm,0.8s,baz=12,slow=13,SNR=6.1						
	comp=Z,0.6nm,0.8s						
FINES	FINESS Array B	68.34	331	P	P	19 40 29.3	+0.1
	comp=Z,2.0nm,0.9s,baz=46,slow=8.2,SNR=1.9						
	comp=Z,2.0nm,0.9s						
NVAR	Mina Array Bea	79.80	50	P	P	19 41 35.3	-0.2
	comp=Z,0.2nm,0.3s,baz=342,slow=5.8,SNR=1.9						
	comp=Z,0.2nm,0.3s						
RSSD	Black Hills	84.28	39		pP	19 43 25.7	+2.7

IDC 10 19:41:01.9±6.3, 14°.64S×174°.62W, h0^{km}, mb4.0/4, mbtmp4.0/4, ML6.3/1, Error ellipse: s-maj=138.6km s-min=45.1km az=45.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	14.86	191	Pn	Pn	19 44 35.3	+1.9
	116nm,0.3s,baz=0.0,slow=20,SNR=6.2						
WRA	Warramunga Arr	48.87	256	P	P	19 49 49.5	-0.4
	0.7nm,0.6s,baz=92,slow=7.4,SNR=21						
	0.7nm,0.6s						
ASAR	Alice Springs	49.23	251	P	P	19 49 51.5	-1.0
	3.1nm,0.6s,baz=88,slow=8.6,SNR=61						
	3.1nm,0.6s						
FITZ	Fitzroy Crossi	57.21	258	P	P	19 50 53.0	+1.6
	1.7nm,0.9s,baz=90,slow=1.0,SNR=1.7						
	1.7nm,0.9s						
VNDA	Vanda	64.01	186	P	P	19 51 36.4	-0.4
	0.7nm,0.5s,baz=28,slow=5.8,SNR=2.9						
	0.7nm,0.5s						

DJA 10 19:45:19.6±0.4, 2°S±3°×12°8E±°, h55^{km}±17^{km}, M3.3/10, mB4.6/1, mb4.0/1, MLv2.9/10, Mw(mB)3.9/1, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NLAI	Namlea	1.51	213	P	Pn	19 45 44.7	+0.3
NLAI				S	Sn	19 46 03.4	+0.4
MSAI	Masohi	1.71	144	P	Pn	19 45 46.8	-0.2
MSAI				S	Sn	19 46 09.0	+1.3
AAI	Ambon	1.74	171	P	Pn	19 45 48.4	+0.9
SANI	Sanana	1.93	267	P	Pn	19 45 50.1	0.0
SANI				S	Sn	19 46 13.5	+0.2
TNTI	Ternate	2.77	348	P	Pn	19 46 01.6	0.0
SWI	Sorong	3.51	72	P	Pn	19 46 11.0	-0.7
SWI	Sorong	3.51	72	P	Pn	19 46 11.9	+0.2
FAKI	Fak Fak	4.43	103	P	Pn	19 46 21.6	-2.7
LUWI	Luwuk	5.23	280	P	Pn	19 46 35.6	+0.4

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*IDC **10** 19:45:28.4±1.9, 2°.86N×126°.43E, h0^{km}, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=183.1km s-min=22.3km az=66.0*

*DJA **10** 19:45:33.7±1.2, 3°N±5°×12°7E±°, h34^{km}±23^{km}, M3.5/8, mb3.7/2, MLv3.4/8*

ISC 10 19:45:33.2±1.4, 3°.2N±0°.1×127°.2E±0°.1, h44^{km}, n8, σ0^{s}99/9, mb3.4/4, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.73	285	P	Pn	19 46 00.0	-0.9
SGSI				S	Sn	19 46 21.2	-0.6
TNTI	Ternate	2.45	176	P	Pn	19 46 10.3	-0.5
KMSI	Cibinong	4.17	231	P	Pn	19 46 33.4	-1.0
MRSI	Marisa	5.94	243	P	Pn	19 47 00.2	+1.6
WRA	Warramunga Arr	24.08	163	P	P	19 50 44.2	-0.5
	0.4nm,0.4s,baz=340,slow=10,SNR=7.5						
	0.4nm,0.4s						
ASAR	Alice Springs	27.53	167	P	P	19 51 16.2	+0.2
	0.3nm,0.7s,baz=342,slow=7.7,SNR=1.9						
	0.3nm,0.7s						
MKAR	Makanchi Array	58.23	325	P	P	19 55 23.9	+0.7
	0.2nm,0.4s,baz=117,slow=8.1,SNR=7.9						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	62.41	327	P	P	19 55 52.1	+0.5
	0.3nm,0.3s,baz=136,slow=6.1,SNR=5.4						
	0.3nm,0.3s						

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*SSNC **10** 19:46:57.5±1.2, 18°.40N×73°.54W, h7^{km}±13^{km}, MD3.1, ML2.6, MW3.1*

*SDD **10** 19:46:57.5±1.4, 18°.61N×73°.52W, h20^{km}±177^{km}, MD3.5, ML2.5, MW2.9*

*OSPL **10** 19:46:57.9±1.5, 18°.54N×73°.48W, h0^{km}±6^{km}, ML2.5*

ISC 10 19:46:53.2±1.4, 18°.58N±0°.07×73°.50W±0°.03, h5^{km}±11^{km}, n25, σ1^{s}02/43, 3C, Haiti region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAKH	Jacmel	0.99	110	*e*P	Pn	19 47 14.1	+0.3
JAKH				*e*S	Sb	19 47 26.6	+0.3
JAKH				IAML		19 47 29.3	
	comp=E,124nm,0.3s						
JAKH				IAML		19 47 32.7	
	comp=N,174nm,0.4s						
PAPH	Port-au-Prince	1.14	93	*e*P	Pn	19 47 16.7	+0.9
PAPH				*e*S	Sn	19 47 31.8	-0.1
PAPH				IAML		19 47 36.5	
	comp=N,268nm,0.3s						
PAPH				IAML		19 47 37.2	
	comp=E,234nm,0.2s						
PAPH	Port-au-Prince	1.14	93	*i* P	Pn	19 47 16.7	+0.9
PAPH				*e*S	Sn	19 47 32.3	+0.5
PAPH				IAML		19 47 35.4	
	comp=Z,119nm,0.4s						
JIDR	Jimani	1.57	93	*e*Pg	Pg	19 47 25.3	+1.9
JIDR				IAML		19 47 50.3	
	comp=N,82nm,1.2s						
MASC	Masc	1.73	337	⇑*e*P	Pg	19 47 27.8	+1.3
MASC				*e*S	Sg	19 47 49.3	+0.3
MASC				IAML		19 47 50.9	
	comp=E,54nm,0.5s						
MASC				IAML		19 47 51.2	
	comp=N,27nm,0.6s						
MASC	Masc	1.73	337	*e*Pg	Pg	19 47 27.8	+1.3
MASC				IAML		19 47 51.6	
	comp=N,25nm,0.4s						
MASC	Masc	1.73	337	*i* P	Pg	19 47 27.8	+1.3
MASC				*e*S	Sg	19 47 49.7	+0.7
MASC				IAML		19 47 51.8	
	comp=Z,17nm,0.3s						
LOBH	Bahia de las A	1.91	112	*i* P	Pb	19 47 28.5	0.0
LOBH				*e*S	Sb	19 47 52.5	-0.1
LOBH				IAML		19 47 55.6	
	comp=Z,62nm,2.2s						
LODU1	El Espartillar	1.94	96	*i* P	Pg	19 47 30.7	+0.3
LODU1				IAML		19 47 56.8	
	comp=Z,93nm,0.5s						
GTBY	Guantanamo Bay	2.03	312	*e*P	Pg	19 47 31.2	-1.0
GTBY				*e*S	Sg	19 47 58.3	-0.2
GTBY				IAML		19 48 10.0	
	comp=Z,37nm,0.5s						
GTBY				IAML		19 48 11.3	
	comp=Z,80nm,2.5s						
GTBY	Guantanamo Bay	2.03	312	*e*Pg	Pg	19 47 31.8	-0.3
GTBY				IAML		19 48 04.2	
	comp=N,32nm,1.4s						
GTBY	Guantanamo Bay	2.03	312	*i* P	Pg	19 47 31.9	-0.3
GTBY				IAML		19 48 00.9	
	comp=Z,26nm,1.4s						
QMBU	Quimbuelo	2.03	323	*e*P	Pb	19 47 31.0	+0.3
QMBU				*e*S	Sb	19 47 56.2	-0.1
QMBU				IAML		19 48 01.4	
	comp=Z,64nm,20.1s						
QMBU				IAML		19 48 01.5	
	comp=N,28nm,0.4s						
QMBU				IAML		19 48 03.0	
	comp=E,59nm,2.8s						
QMBU	Quimbuelo	2.03	323	*e*Pg	Pb	19 47 31.0	+0.3
QMBU				IAML		19 48 01.2	
	comp=N,28nm,0.3s						
REDR	Restauracion	2.08	73	*e*Pg	Pn	19 47 29.1	+0.4
REDR				*e*Sg	Sn	19 47 52.5	-2.5
REDR				IAML		19 47 53.8	
	comp=N,78nm,0.1s						
REDR				IAML		19 47 54.1	
	comp=E,85nm,0.1s						
SDDR	Presa de Saban	2.14	79	*e*P	Pg	19 47 33.5	-0.7
SDDR				*e*S	Sg	19 48 01.3	-0.6
SDDR				IAML		19 48 04.0	
	comp=E,25nm,0.3s						
SDDR				IAML		19 48 07.4	
	comp=E,37nm,0.4s						
SDDR	Presa de Saban	2.14	79	⇑*e*Pg	Pg	19 47 34.0	-0.2
SDDR				⇑*e*Sg	Sg	19 48 01.9	0.0
SDDR				IAML		19 48 06.3	
	comp=E,21nm,0.5s						
SDDR				IAML		19 48 07.2	
	comp=N,36nm,0.5s						
SDDR	Presa de Saban	2.14	79	*i* P	Pg	19 47 33.7	-0.5
SDDR				IAML		19 48 05.6	
	comp=Z,26nm,0.5s						
LOVI	El Cajuil, Ovi	2.17	111	*i* P	Pb	19 47 32.6	-0.4
LOVI				*e*S	Sb	19 47 59.4	-0.8
LOVI				IAML		19 48 09.5	
	comp=Z,81nm,0.9s						
NMDO	Nuevo Mundo	2.42	325	*e*P	Pg	19 47 38.6	-1.0
NMDO				*e*S	Sg	19 48 10.5	-0.5
NMDO				IAML		19 48 12.1	
	comp=E,11nm,0.1s						
NMDO				IAML		19 48 15.2	
	comp=N,11nm,0.4s						
RCC	Rio Carpintero	2.51	305	*e*P	Pb	19 47 37.2	-1.5
RCC				*e*S	Sb	19 48 08.8	-1.1
RCC				IAML		19 48 17.4	
	comp=E,16nm,0.5s						
RCC				IAML		19 48 17.5	
	comp=N,17nm,0.2s						
MARVS	Santiago de Cu	2.67	302	*e*P	Pb	19 47 40.6	-0.9
MARVS				*e*S	Sg	19 48 17.8	-1.3
MARVS				IAML		19 48 21.7	
	comp=E,23nm,0.4s						
MARVS				IAML		19 48 21.8	
	comp=N,27nm,0.1s						
PINC	Pinares de May	2.88	312	*e*P	Pb	19 47 43.0	-2.0
PINC				*e*S	Sb	19 48 20.6	+0.1
PINC				IAML		19 48 21.5	
	comp=E,12nm,0.0s						
PINC				IAML		19 48 22.4	
	comp=N,5.6nm,0.0s						
LMGC	Las Mercedes	3.62	295	*e*P	Pn	19 47 51.7	+1.7
LMGC				*e*S	Sn	19 48 33.0	-0.2
LMGC				IAML		19 48 34.9	
	comp=N,12nm,0.1s						
LMGC				IAML		19 48 35.1	
	comp=E,6.7nm,0.1s						
PILO	Pilon	3.92	290	*e*P	Pn	19 47 56.2	+2.1
PILO				*e*S	Sn	19 48 41.5	+0.9

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*IDC **10** 19:47:41.8±1.0, 21°.99S×175°.11W, h0^{km}, mb3.9/6, mbtmp3.9/8, ML4.3/2, MS3.2/4, Error ellipse: s-maj=31.3km s-min=26.7km az=71.0*

ISC 10 19:47:46.9±0.9, 22°.0S±0°.1×175°.2W±0°.2, h33^{km}, n18, σ0^{s}76/15, mb4.1/8, 3C, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	7.66	303	Pn	Pn	19 49 36.3	0.0
	0.3nm,0.3s,baz=210,slow=8.1,SNR=1.7						
MSVF				LR	LR	19 51 26.5	
	comp=Z,60nm,21.0s,baz=77,slow=29						
	6.3nm,0.9s						
RAR	Rarotonga	14.36	90	LR	LR	19 56 14.6	
	comp=Z,81nm,19.3s,baz=295,slow=36						
URZ	Urewera	17.49	201	P	Pn	19 51 47.5	-0.7
	0.4nm,0.3s,baz=351,slow=5.9,SNR=2.5						
	4.6nm,1.0s						
PPT	Papeete	24.49	84	LR	LR	20 02 08.8	
	comp=Z,56nm,18.2s,baz=150,slow=36						
STKA	Stephens Creek	39.54	246	LR	LR	20 10 49.3	
	comp=Z,80nm,18.3s,baz=189,slow=35						
ASAR	Alice Springs	46.74	258	P	P	19 56 12.8	-0.6
	1.3nm,0.8s,baz=92,slow=7.9,SNR=13						
	1.3nm,0.8s						
WRA	Warramunga Arr	47.00	263	P	P	19 56 15.4	0.0
	0.8nm,0.8s,baz=94,slow=8.0,SNR=8.0						
	0.8nm,0.8s						
FITZ	Fitzroy Crossi	55.43	263	P	P	19 57 20.1	+1.5
	1.8nm,0.9s,baz=148,slow=9.4,SNR=2.1						
	1.8nm,0.9s						
QSPA	South Pole Qui	68.06	180	P	P	19 58 43.6	+0.5
	5.2nm,0.8s,baz=43,slow=1.1,SNR=20						
	5.2nm,0.8s						
SNAA	Sanae	86.41	178	⇑P	P	20 00 26.0	+0.3
	comp=Z,19nm,0.8s						
SNAA	Sanae	86.41	178	P	P	20 00 26.0	+0.3
	comp=Z,0.8nm,0.8s,baz=143,slow=10,SNR=2.3						
	comp=Z,0.8nm,0.8s						
VNA3	Neumayer Olymp	86.44	175	⇑P	P	20 00 25.6	-0.2
	comp=Z,2.8nm,0.7s						
VNA2	Neumayer--Watz	86.91	176	⇑P	P	20 00 28.3	+0.2
	comp=Z,2.1nm,0.8s,baz=148,slow=8.0						
ILAR	Eielson Array	89.23	12	P	P	20 00 39.3	+0.3
	comp=Z,0.2nm,0.6s,baz=213,slow=6.5,SNR=2.0						
	comp=Z,0.2nm,0.6s						
AKASG	Malin Array Be	145.59	332	PKPbc	PKPdf	20 07 21.6	+0.1
	comp=Z,1.6nm,0.7s,baz=41,slow=3.8,SNR=9.8						
BRTR	Keskin Array B	149.80	312	PKPbc	PKPbc	20 07 33.5	-0.3
	comp=Z,0.8nm,0.7s,baz=131,slow=5.9,SNR=5.0						
MMAI	Mount Meron Ar	150.84	299	PKPbc	PKiKP	20 07 37.4	+0.3
	comp=Z,0.9nm,0.5s,baz=66,slow=10,SNR=4.4						
GERES	GERESS Array B	152.31	347	PKPbc	PKPbc	20 07 37.7	-1.7
	comp=Z,0.2nm,0.4s,baz=41,slow=6.4,SNR=1.7						

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*SJA **10** 20:20:39.8±0.6, 24°.29S×67°.02W, h205^{km}±5^{km}, ML3.6, MW3.7*

*IDC **10** 20:20:40.0±2.0, 24°.18S×66°.75W, h165^{km}±20^{km}, mb3.4/4, mbtmp3.8/8, Error ellipse: s-maj=29.5km s-min=14.9km az=91.0*

*GUC **10** 20:20:42.5±0.7, 24°.24S×67°.36W, h220^{km}±9^{km}, ML4.0*

ISC 10 20:20:40.8±0.7, 24°.25S±0°.04×67°.02W±0°.03, h182^{km}±7^{km}, n51, σ2^{s}19/84, mb3.4/3, 7C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALTA		0.62	88	*e*P	Pn	20 21 08.5	+1.5
SLA	San Lorenzo	1.46	109	*e*P	Pn	20 21 14.4	+1.7
SLA				*e*S	Sn	20 21 39.7	+2.2
SLA				IAML		20 21 39.9	
	comp=Z,153nm,0.7s						
AF01	San Pedro de A	1.67	320	*e*P	Pn	20 21 17.5	+2.6
AF01	San Pedro de A	1.67	320	*e*P	Pn	20 21 12.8	-2.1
AF01				*e*S	Sn	20 21 33.8	-7.5
AF01				IAML		20 22 01.2	
	comp=Z,155nm,0.5s						
AZAP	Zapla	1.79	90	*e*P	Pn	20 21 17.2	+1.2
AZAP				*e*S	Sn	20 21 45.8	+2.5
AZAP				IAML		20 21 46.2	
	comp=Z,133nm,0.6s						
FSA	Cafayete	2.08	153	*e*P	Pn	20 21 20.2	+1.2
FSA				*e*S	Sn	20 21 42.9	-6.0
YJA	Yavi	2.49	34	*e*P	Pn	20 21 25.9	+2.0
GO02	Mina Guanaco	2.51	248	⇑*i*P	Pn	20 21 25.3	+1.3
GO02				*i* S	Sn	20 21 58.3	+0.7
GO02	Mina Guanaco	2.51	248	*e*P	Pn	20 21 24.6	+0.7
GO02				*e*S	Sn	20 21 58.8	+1.3
PB06	IPOC Station P	2.80	303	⇑*i*P	Pn	20 21 28.7	+1.4
PB06				*i* S	Sn	20 22 02.8	-0.6
PB06				IAML		20 22 06.1	
	comp=N,392nm,0.3s						
PB06	IPOC Station P	2.80	303	*e*P	Pn	20 21 28.7	+1.4
PB06				*e*S	Sn	20 22 04.2	+0.8
PB06				IAML		20 22 10.7	
	comp=Z,223nm,0.3s						
ALOL	LOMAS DE OLMED	2.81	82	*e*P	Pn	20 21 23.2	-4.1
PB14	IPOC Station P	3.10	262	*e*P	Pn	20 21 31.7	+0.6
PB14				*i* S	Sn	20 22 08.5	-1.8
PB14				IAML		20 22 10.6	
	comp=E,214nm,0.5s						
PB14	IPOC Station P	3.10	262	*e*P	Pn	20 21 31.8	+0.8
PB14				*e*S	Sn	20 22 09.6	-0.6
PB14				IAML		20 22 15.5	
	comp=Z,185nm,0.3s						
PB09	IPOC Station P	3.18	320	⇑*i*P	Pn	20 21 33.5	+1.5
PB09				*i* S	Sn	20 22 12.3	+0.4
PB09				IAML		20 22 15.8	
	comp=N,130nm,0.5s						

PB09	IPOC Station P	3.18	320	*e*P	Pn	20 21 33.7	+1.8
PB09				*e*S	Sn	20 22 13.1	+1.3
PB09				IAML		20 22 16.4	
	comp=Z,98nm,0.2s						
AC02	Maricunga	3.20	216	*e*P	Pn	20 21 33.8	+1.3
AC02	Maricunga	3.20	216	*e*P	Pn	20 21 34.0	+1.5
AC02				*e*S	Sn	20 22 01.5	-11
PB05	IPOC Station P	3.23	295	⇓*e*P	Pn	20 21 33.2	+0.8
PB05				*i* S	Sn	20 22 10.8	-1.9
PB05				IAML		20 22 14.5	
	comp=E,112nm,0.5s						
PB05	IPOC Station P	3.23	295	*e*P	Pn	20 21 33.3	+0.8
PB05				*e*S	Sn	20 22 13.3	+0.5
PB05				IAML		20 22 13.9	
	comp=Z,98nm,0.3s						
PB10	IPOC Station P	3.31	282	⇑*i*P	Pn	20 21 34.4	+1.0
PB10				*i* S	Sn	20 22 12.0	-2.4
PB10	IPOC Station P	3.31	282	*e*P	Pn	20 21 34.4	+1.0
PB10				*e*S	Sn	20 22 14.6	+0.2
PB10				IAML		20 22 15.4	
	comp=Z,120nm,0.3s						
PB03	IPOC Station P	3.33	311	⇑*i*P	Pn	20 21 34.6	+0.9
PB03				*i* S	Sn	20 22 13.4	-1.8
PB03	IPOC Station P	3.33	311	*e*P	Pn	20 21 34.7	+0.9
PB03				*e*S	Sn	20 22 14.4	-0.7
PB03				IAML		20 22 18.9	
	comp=Z,296nm,0.2s						
AC01	Pan de Azucar	3.75	239	*e*P	Pn	20 21 38.6	-0.2
AC01				*i* S	Sn	20 22 21.8	-2.4
AC01	Pan de Azucar	3.75	239	*e*P	Pn	20 21 38.7	-0.1
AC01				*e*S	Sn	20 22 22.4	-1.8
AC01				IAML		20 22 27.2	
	comp=Z,68nm,0.2s						
PB01	IPOC Station P	3.92	324	⇑*i*P	Pn	20 21 41.3	+0.2
PB01				*i* S	Sn	20 22 26.2	-2.0
PB01	IPOC Station P	3.92	324	*e*P	Pn	20 21 41.5	+0.4
PB01				*e*S	Sn	20 22 28.1	0.0
PB01				IAML		20 22 32.0	
	comp=Z,107nm,0.2s						
AC06	Mina Casimiro	4.31	223	*e*P	Pn	20 21 45.4	-0.6
GO03	Copiapo	4.41	220	⇑*e*P	Pn	20 21 47.0	-0.3
GO03				*i* S	Sn	20 22 37.1	-2.3
GO03	Copiapo	4.41	220	*e*P	Pn	20 21 47.2	0.0
GO03				*e*S	Sn	20 22 37.3	-2.1
PB08	IPOC Station P	4.54	334	*e*P	Pn	20 21 50.2	+1.0
PB08				*e*S	Sn	20 22 42.4	-0.5
PB08				IAML		20 22 48.0	
	comp=Z,51nm,0.2s						
TA01	Diego Aracena	4.69	321	*e*P	Pn	20 21 50.2	-0.6
TA01				*e*S	Sn	20 22 43.6	-2.0
TA01				IAML		20 22 50.9	
	comp=Z,34nm,0.7s						
GO01	Chusmiza	4.98	336	*e*P	Pn	20 21 57.0	+1.9
PB11	IPOC Station P	5.09	331	*e*P	Pn	20 21 55.3	-0.8
PB11				*e*S	Sn	20 22 54.7	-0.6
PB11				IAML		20 22 56.2	
	comp=Z,71nm,0.3s						
ACLC	CERRO LA CRUZ	5.16	179	*e*P	Pn	20 21 58.0	+1.0
ACLC				*e*S	Sn	20 22 52.0	-4.9
AC04	Llanos de Chal	5.36	222	*e*P	Pn	20 21 58.2	-1.2
AC04	Llanos de Chal	5.36	222	*e*P	Pn	20 21 58.6	-0.9
AC04				*e*S	Sn	20 22 58.8	-2.6
AC04				IAML		20 23 05.1	
	comp=Z,29nm,0.5s						
AGUA	GUANDACOL	5.38	194	*e*P	Pn	20 22 01.6	+1.9
AGUA				*e*S	Sn	20 23 04.0	+2.0
AGUA				IAML		20 23 07.5	
	comp=Z,21nm,3.3s						
AC05	El Transito	5.42	212	*e*P	Pn	20 22 00.3	0.0
AC05				*e*S	Sn	20 22 55.0	-7.9
AC05				IAML		20 23 29.2	
	comp=Z,13nm,2.2s						
CFA	Coronel Fontan	7.41	188	P	Pn	20 22 26.2	-0.1
	comp=Z,0.9nm,0.3s,baz=57,slow=19,SNR=8.6						
CFA				S	Sn	20 23 44.2	-5.5
	comp=Z,3.6nm,0.2s,baz=300,slow=20,SNR=14						
LPAZ	La Paz	7.99	352	P	Pn	20 22 35.0	+0.4
	comp=Z,2.4nm,0.3s,baz=108,slow=2.1,SNR=16						
LPAZ				S	Sn	20 24 01.7	-2.9
	comp=Z,1.3nm,0.5s,baz=135,slow=10.0,SNR=1.9						
PLCA	Paso Flores	16.70	189	P	Pn	20 24 26.6	+2.3
	comp=Z,1.7nm,0.9s,baz=2.8,slow=11,SNR=3.2						
BDFB	Brasilia	19.80	68	P	P	20 24 54.6	-2.8
	comp=Z,2.1nm,0.4s,baz=195,slow=12,SNR=4.0						
SNAA	Sanae	59.12	161	P	P	20 30 22.7	+0.9
	comp=Z,0.6nm,0.9s,baz=232,slow=11,SNR=5.7						
	comp=Z,0.6nm,0.9s						
TXAR	Lajitas Array	63.87	325	P	P	20 30 55.5	+1.4
	comp=Z,0.3nm,0.7s,baz=111,slow=5.5,SNR=3.5						
	comp=Z,0.3nm,0.7s						
QSPA	South Pole Qui	65.96	180	P	P	20 31 08.8	+1.6
	comp=Z,0.7nm,0.4s,baz=129,slow=1.5,SNR=6.7						
	comp=Z,0.7nm,0.4s						
TORD	Torodi Ar. Bea	76.68	69	P	P	20 32 11.4	-0.7
	comp=Z,1.0nm,0.3s,baz=272,slow=4.3,SNR=1.4						
	comp=Z,1.0nm,0.3s						
ASAR	Alice Springs	128.22	205	PKP	PKiKP	20 39 26.5	-0.2
	comp=Z,0.3nm,0.8s,baz=146,slow=0.7,SNR=1.4						
WRA	Warramunga Arr	131.40	207	PKP	PKiKP	20 39 32.7	-0.4
	comp=Z,0.2nm,0.5s,baz=158,slow=1.8,SNR=8.4						
MKAR	Makanchi Array	146.73	40	PKPbc	PKPab	20 40 02.0	-0.7
	comp=Z,0.8nm,0.4s,baz=348,slow=2.5,SNR=16						

IDC ***10*** *20:25:19.5±0.5, 16°.08S×178°.26E, h0*^{km}*, mb4.6/21, mbtmp4.5/21, MS3.9/48, Error ellipse: s-maj=17.9km s-min=12.6km az=123.0*

NEIC ***10*** *20:25:21.3±2.6, 16°.15S±0°.10×178°.4E±0°.1, h11*^{km}*±1*^{km}*, mb5.0/91, Error ellipse: s-maj=20.1km s-min=12.7km az=112.0*

GCMT ***10*** *20:25:24.3±0.3, 16°.00S±0°.02×178°.30E±0°.03, h12*^{km}*, MW4.8/86, Moment Tensor Solution. s31,c38; s86,c124; Duration: 0 Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*-2.05±.07;* $M_{\theta\theta}$*1.88±.06;* $M_{\phi\phi}$*0.17±.07;* $M_{r\theta}$*-0.81±.22;* $M_{\theta\phi}$*0.99±.06;* $M_{\phi r}$*0.46±.28; Best double couple:* M_0*2.39500×10*^{16} *NP1:*ϕ_s*227.00000°,δ41.00000°,λ-120.00000°. NP2:* ϕ_s*84.00000°,δ55.00000°,λ-66.00000°. Principal axes: T 2.4040, Plg7.0000°, Azm157.0000°; N -0.0140, Plg19.0000°, Azm250.0000°; P -2.3850, Plg69.0000°, Azm47.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 20:25:22.1±0.4**, 16°.11S**±0°.06×**178°.35E**±0°.08**, h17**^{km}**, n185, σ1**^{s}**.10**/119**, mb4.9**/73**, MS4.0**/48**, 8C-5D, Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	1.64	190	Pn	Pn	20 25 49.3	-1.0
MSVF	Nonsavu	1.64	190	Pn	Pn	20 25 49.4	-0.8
	67nm,0.3s,baz=22,slow=7.2,SNR=113						
MSVF				Sn	Sb	20 26 12.9	+0.5
	269nm,0.3s,baz=356,slow=19,SNR=10.0						
MSVF				LR	LR	20 26 30.3	
	comp=Z,3µm,18.7s,baz=5.9,slow=42						
PINNC	Pines Island,	12.15	236	Pn	Pn	20 28 13.5	-0.9
DZM	Mont Dzumac	12.71	240	Pn	Pn	20 28 18.1	-4.2
DZM	Mont Dzumac	12.71	240	*e*P	Pn	20 28 25.2	+2.9
	50nm,1.2s						
DZM				*e*LR	LR	20 31 18.7	
	390nm,27.4s						
ONTNC	Ouen Toro	12.81	239	Pn	Pn	20 28 23.1	-0.4
HNR	Honiara	19.12	288	LR	LR	20 36 01.5	
	comp=Z,512nm,18.3s,baz=68,slow=34						
RAR	Rarotonga	21.34	107	P	P	20 30 08.7	+0.2
	15nm,0.5s,baz=276,slow=17,SNR=1.5						
RAR				LR	LR	20 36 55.0	
	comp=Z,182nm,19.4s,baz=286,slow=32						
	15nm,0.5s						
TOZ	Tahuroa Road	21.68	186		P	20 30 14.3	+2.2
TOZ				IAmb	IAmb	20 30 18.8	
	comp=Z,112nm,1.4s						
URZ	Urewera	22.09	183	LR	LR	20 37 22.2	
	comp=Z,713nm,18.7s,baz=96,slow=33						
RPZ	Rata Peaks	28.21	191	LR	LR	20 41 30.7	
	comp=Z,325nm,18.3s,baz=15,slow=34						
PPT2	Papeete2	30.72	97	*e*LQ	LQ	20 38 19.9	
	comp=Z,478nm,39.8s						
PPT2				*e*LR	LR	20 39 25.9	
	comp=Z,384nm,29.5s						
PPT2				*e*LR	LR	20 39 30.2	
	comp=Z,249nm,33.5s						
PPT	Papeete	30.72	97	LR	LR	20 42 49.9	
	comp=Z,44nm,19.1s,baz=238,slow=34						
TBI	Tubuai	31.10	109	*e*S	S	20 36 42.6	-2.1
	comp=Z,370nm,26.8s						
TBI				*e*LQ	LQ	20 38 33.1	
	comp=Z,3µm,27.0s						
TBI				*e*LR	LR	20 39 42.4	
	comp=Z,3µm,30.8s						
CAN	Canberra	32.45	228	P	P	20 31 52.4	+0.8
CAN				IAmb	IAmb	20 31 55.2	
	comp=Z,40nm,1.4s						
TOO	Toolangi	36.00	227	P	P	20 32 23.1	+0.7
H11S2	WAKE ISLAND Hy	36.24	341	T	T	21 11 04.4	
	baz=163,slow=75,SNR=9.0						
H11S3	WAKE ISLAND Hy	36.25	341	T	T	21 10 40.3	
	baz=163,slow=75,SNR=10						
H11S1	WAKE ISLAND Hy	36.26	341	T	T	21 10 40.9	
	baz=163,slow=75,SNR=7.2						
STKA	Stephens Creek	36.85	238		P	20 32 30.6	+0.9
STKA	Stephens Creek	36.85	238	P	P	20 32 30.8	+1.1
	comp=Z,27nm,0.9s,baz=66,slow=7.4,SNR=28						
STKA				LR	LR	20 46 22.9	
	comp=Z,119nm,19.9s,baz=35,slow=34						
	comp=Z,27nm,0.9s						
TAOE	Nuku Hiva Isla	41.10	85	*e*LR	LR	20 44 26.8	
	comp=Z,220nm,26.2s						
BBOO	Buckleboo	41.62	239	P	P	20 33 09.9	+0.4
BBOO				IAmb	IAmb	20 33 12.3	
	comp=Z,38nm,1.0s						
WR8	Warramunga Arr	41.78	258	P	P	20 33 10.4	-0.6
WB0	Warramunga Arr	41.89	258		P	20 33 11.1	-0.9
WB0				IAmb	IAmb	20 33 13.6	
	comp=Z,30nm,1.2s						
WRA	Warramunga Arr	41.93	258		P	20 33 10.9	-1.4
WRA	Warramunga Arr	41.93	258	P	P	20 33 11.0	-1.3
	comp=Z,8.5nm,1.1s,baz=89,slow=8.8,SNR=22						
WRA				PcP	PcP	20 35 07.3	-0.4
	comp=Z,2.8nm,1.0s,baz=84,slow=3.7,SNR=4.9						
	comp=Z,8.5nm,1.1s						
AS31	Alice Springs	42.33	252		P	20 33 15.2	-0.3
ASAR	Alice Springs	42.33	252		P	20 33 13.2	-2.2
ASAR	Alice Springs	42.33	252	P	P	20 33 15.1	-0.4
	comp=Z,8.3nm,0.9s,baz=82,slow=8.7,SNR=34						
ASAR				PcP	PcP	20 35 08.3	-0.7
	comp=Z,2.2nm,1.0s,baz=100,slow=3.7,SNR=5.3						
ASAR				LR	LR	20 49 10.1	
	comp=Z,167nm,20.0s,baz=90,slow=34						
	comp=Z,8.3nm,0.9s						
GUMO	Guam	44.34	310	LR	LR	20 49 47.8	
	comp=Z,81nm,19.7s,baz=122,slow=33						
MTN	Manton Dam	45.76	268	P	P	20 33 41.5	-1.5
MTN				IAmb	IAmb	20 33 48.2	
	comp=Z,23nm,1.1s						
KNRA	Kununurra	47.59	263	P	P	20 33 55.5	-1.9
FORT	Forrest	48.01	243	P	P	20 34 00.3	-0.2
FITZ	Fitzroy Crossi	50.27	260	LR	LR	20 54 14.0	
	comp=Z,185nm,20.4s,baz=82,slow=35						
BATI	Baumata	53.45	269	LR	LR	20 56 15.6	
	comp=Z,142nm,19.3s,baz=250,slow=35						
PSA00	Pilbara Seismi	55.37	255	P	P	20 34 55.5	-0.2
JCJ	Chichijima	55.46	320	LR	LR	20 53 38.1	
	comp=Z,328nm,21.7s,baz=128,slow=31						
DAV	Davao City (W)	57.08	290	LR	LR	20 56 39.7	
	comp=Z,50nm,21.6s,baz=105,slow=33						
KAPI	Kappang	58.47	274	P	P	20 35 17.7	0.0
	comp=Z,3.2nm,0.4s,baz=140,slow=7.9,SNR=1.8						
	comp=Z,3.2nm,0.4s						
VNDA	Vanda	61.99	184		P	20 35 40.8	0.0
VNDA	Vanda	61.99	184	P	P	20 35 41.2	+0.4
	comp=Z,2.6nm,0.8s,baz=28,slow=6.8,SNR=9.3						
VNDA				LR	LR	20 59 25.3	
	comp=Z,79nm,18.6s,baz=4.5,slow=33						
	comp=Z,2.6nm,0.8s						
SBA	Scott Base	62.03	183	P	P	20 35 43.0	+1.9
TGY	Tagaytay City	64.18	295	LR	LR	21 00 09.7	
	comp=Z,59nm,21.1s,baz=335,slow=33						
MJAR	Matsushiro Arr	64.64	325	P	P	20 35 58.0	-1.0
	comp=Z,2.8nm,1.1s,baz=152,slow=7.0,SNR=3.7						
MJAR				LR	LR	20 58 11.9	
	comp=Z,210nm,21.2s,baz=144,slow=30						
	comp=Z,2.8nm,1.1s						
JOW	Kunigami	64.69	311	LR	LR	21 01 27.7	
	comp=Z,86nm,19.6s,baz=134,slow=34						
JNU	Nakatsue	66.71	318	LR	LR	21 00 21.1	
	comp=Z,132nm,21.7s,baz=130,slow=32						
ASAJ	Asahikawa	68.25	333	LR	LR	21 03 53.6	
	comp=Z,216nm,18.9s,baz=162,slow=34						
SHEM	Shemya Is, Ala	68.65	357	LR	LR	21 00 21.7	
	comp=Z,224nm,20.7s,baz=107,slow=31						
KSM	Kuching	69.37	278	P	P	20 36 29.3	-0.2
PETK	Petropavlovsk-	71.20	347	P	P	20 36 37.9	-2.0
	comp=Z,3.4nm,1.0s,baz=150,slow=4.5,SNR=3.2						
PETK				LR	LR	21 03 25.4	
	comp=Z,76nm,19.7s,baz=154,slow=32						
	comp=Z,3.4nm,1.0s						
USRK	Ussuriysk Ar.	73.41	327	LR	LR	21 03 09.8	
	comp=Z,172nm,21.4s,baz=161,slow=31						
QSPA	South Pole Qui	73.93	180	P	P	20 36 56.8	+0.5
	comp=Z,34nm,1.0s,baz=19,slow=3.0,SNR=46						
QSPA				LR	LR	21 06 10.0	
	comp=Z,123nm,19.1s,baz=42,slow=33						
	comp=Z,34nm,1.0s						
NJ2	Nanjing	74.41	311	*e*P	P	20 37 02.3	+2.9
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
CN2	Changchun	76.72	324	P	P	20 37 13.2	+0.8
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
KLR	Kul'dur	77.01	331	LR	LR	21 05 54.0	
	comp=Z,170nm,22.0s,baz=155,slow=32						
SAO	San Andreas Ge	77.34	46	P	P	20 37 15.9	-0.1
SAO				IAmb	IAmb	20 37 18.7	
	comp=Z,14nm,0.9s						
KDAK	Kodiak Island	77.45	15	LR	LR	21 04 02.6	
	comp=Z,135nm,21.0s,baz=201,slow=30						
PMPB	Monarch Peak	77.50	46	P	P	20 37 15.6	-1.5
O02D	Mt. Diablo Mer	78.25	42	IAmb	IAmb	20 37 24.4	
	comp=Z,19nm,1.4s						
O18K	Koktuh Hills	78.68	13	P	P	20 37 22.8	-0.1
MA2	Magadan	78.68	346	LR	LR	21 09 07.4	
	comp=Z,99nm,19.0s,baz=144,slow=33						
CMB	Columbia Colle	78.72	45	P	P	20 37 24.2	+0.5
AFDM	Forest Hills D	78.79	44	P	P	20 37 22.7	-1.5
P19K	Oil Pt	78.95	14	P	P	20 37 23.6	-0.9
M16K	Timber Creek	78.99	11	P	P	20 37 25.7	+1.1
M16K				IAmb	IAmb	20 37 36.9	
	comp=Z,12nm,1.1s						
YBH	Yreka Blue Hor	79.15	41	P	P	20 37 24.7	-1.4
YBH				IAmb	IAmb	20 37 29.1	
	comp=Z,24nm,1.7s						
O19K	Port Alsworth	79.18	14	P	P	20 37 26.0	+0.3
PFO	Pinyon Flats O	79.36	50	P	P	20 37 28.3	+0.8
	comp=Z,4.1nm,0.9s,baz=253,slow=3.5,SNR=4.8						
PFO				LR	LR	21 04 41.7	
	comp=Z,58nm,19.6s,baz=190,slow=30						
	comp=Z,4.1nm,0.9s						
DSP	Deep Springs	80.05	46	IAmb	IAmb	20 37 33.7	
	comp=Z,13nm,1.0s						
LPIG	La Paz	80.27	61	LR	LR	21 05 06.8	
	comp=Z,37nm,19.2s,baz=72,slow=30						
GRAC	Grapevine Rang	80.29	47	IAmb	IAmb	20 39 40.0	
	comp=Z,15nm,0.7s						
NVAR	Mina Array Bea	80.33	45	P	P	20 37 33.0	+0.2
NVAR	Mina Array Bea	80.33	45	P	P	20 37 33.9	+1.2
	comp=Z,7.2nm,1.0s,baz=230,slow=8.8,SNR=16						
NVAR				LR	LR	21 04 54.2	
	comp=Z,75nm,20.2s,baz=218,slow=30						
	comp=Z,7.2nm,1.0s						
GWY	Greenwater Val	80.40	48	IAmb	IAmb	20 37 35.1	
	comp=Z,12nm,1.1s						
SLKM	Skilak Lake	80.43	15	IAmb	IAmb	20 37 33.1	
	comp=Z,14nm,1.1s						
NV11	Mina Array Sit	80.44	45	IAmb	IAmb	20 37 35.7	
	comp=Z,16nm,1.2s						
J16K	Anvik River	80.82	9	IAmb	IAmb	20 37 36.2	
	comp=Z,14nm,1.2s						
J05D	Fort Rock, OR	80.90	40		P	20 37 37.3	+1.7
SUA	Susitna One	81.13	14	IAmb	IAmb	20 40 04.8	
	comp=Z,11nm,0.6s						
SEY	Seymchan	81.36	348	LR	LR	21 09 36.5	
	comp=Z,140nm,19.9s,baz=175,slow=33						
GYA	Guiyang	81.45	301	⇓P	P	20 37 40.8	+1.9
GYA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
V12A	Nelson	81.50	49	IAmb	IAmb	20 37 41.4	
	comp=Z,22nm,1.6s						
K20K	Telida	82.07	12	IAmb	IAmb	20 37 43.1	
	comp=Z,20nm,1.4s						
PRN	Pahroc Range	82.12	48	IAmb	IAmb	20 37 45.0	
	comp=Z,19nm,1.1s						
R11B	Troy Canyon, C	82.17	47	IAmb	IAmb	20 37 44.8	
	comp=Z,17nm,1.7s						
BBB	Bella Bella	82.28	30	LR	LR	21 05 48.5	
	comp=Z,105nm,21.8s,baz=234,slow=30						
BMRM	Bremner River	82.33	17	P	P	20 37 42.8	+0.2
BMRM				IAmb	IAmb	20 37 46.2	
	comp=Z,11nm,1.2s						
I07A	Izee	82.39	40	IAmb	IAmb	20 37 55.6	
	comp=Z,32nm,1.8s						
H17K	Granite Mounta	82.48	9	P	P	20 37 43.5	+0.3
H17K				IAmb	IAmb	20 37 55.6	
	comp=Z,9.6nm,1.2s						
J08A	Circle Bar Ran	82.66	41	IAmb	IAmb	20 37 56.9	
	comp=Z,14nm,1.4s						
XAN	Xi'an	82.71	308	⇑P	P	20 37 46.5	+1.3
XAN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KTH	Kantishna Hill	82.91	13	IAmb	IAmb	20 37 58.0	
	comp=Z,13nm,1.3s						
TRF	Thorofare Moun	82.96	14	IAmb	IAmb	20 38 07.3	
	comp=Z,12nm,1.3s						
A04D	Lummi Island	83.01	35	P	P	20 37 46.7	+0.4
DHY	Denali Highway	83.33	15	P	P	20 37 47.2	-0.8
G08A	Pilot Rock	83.34	39	IAmb	IAmb	20 38 00.3	
	comp=Z,12nm,1.3s						
SPR3	Spring Creek 3	83.34	46	IAmb	IAmb	20 37 50.8	
	comp=Z,17nm,1.3s						
PSUT	Pine Spring	83.47	47	IAmb	IAmb	20 37 51.6	
	comp=Z,9.6nm,1.0s						
ELK	Elko	83.52	44	P	P	20 37 50.2	+0.8
	comp=Z,4.9nm,1.0s,baz=240,slow=5.5,SNR=13						
ELK				LR	LR	21 07 23.1	
	comp=Z,65nm,19.4s,baz=259,slow=30						
	comp=Z,4.9nm,1.0s						
MCK	McKinley	83.52	14	IAmb	IAmb	20 38 02.0	
	comp=Z,17nm,1.3s						
NEA2	Nenana	84.22	14	IAmb	IAmb	20 37 55.6	
	comp=Z,20nm,2.0s						
MFID	Camas Ranch	84.38	42	IAmb	IAmb	20 37 56.1	
	comp=Z,17nm,1.5s						
MAW	Mawson	84.48	200	P	P	20 37 53.7	+0.1
	comp=Z,12nm,1.0s,baz=126,slow=6.7,SNR=9.2						
MAW				LR	LR	21 13 11.9	
	comp=Z,68nm,18.1s,baz=92,slow=34						
	comp=Z,12nm,1.0s						
IMAR	Indian Mountai	84.49	11	P	P	20 37 53.0	-0.5
RIDG	Independent Ri	84.53	16	IAmb	IAmb	20 37 57.4	
	comp=Z,16nm,1.3s						
CCB	Clear Creek Bu	84.56	14	IAmb	IAmb	20 37 54.4	
	comp=Z,7.1nm,1.0s						
DOT	Dot Lake	84.66	16	IAmb	IAmb	20 37 58.1	
	comp=Z,16nm,1.5s						
E18K	Tukpahlearik C	84.72	8	IAmb	IAmb	20 37 56.5	
	comp=Z,7.8nm,1.1s						
BCAR	Beaver Creek A	84.81	17	P	P	20 37 53.7	-1.6
IL31		84.88	14	IAmb	IAmb	20 37 56.1	
	comp=Z,8.3nm,1.1s						
ILAR	Eielson Array	84.88	14	P	P	20 37 54.0	-1.5
ILAR	Eielson Array	84.88	14	P	P	20 37 54.9	-0.7
	comp=Z,3.4nm,0.8s,baz=236,slow=6.3,SNR=34						
ILAR				LR	LR	21 08 55.3	
	comp=Z,85nm,21.4s,baz=240,slow=31						
	comp=Z,3.4nm,0.8s						
SCRK	Sand Creek	84.94	16	IAmb	IAmb	20 37 59.8	
	comp=Z,17nm,1.6s						
PLID	Pearl Lake	85.06	40	IAmb	IAmb	20 37 59.2	
	comp=Z,12nm,1.6s						
BGU	Big Grassy Mou	85.09	45	IAmb	IAmb	20 37 59.0	
	comp=Z,8.2nm,1.3s						
CMAR	Chiang Mai Arr	85.35	291	P	P	20 37 59.3	+0.3
CMAR	Chiang Mai Arr	85.35	291	P	P	20 37 59.5	+0.5
	comp=Z,1.7nm,0.8s,baz=98,slow=2.9,SNR=7.2						
CMAR				LR	LR	21 13 38.9	
	comp=Z,32nm,20.2s,baz=235,slow=34						
	comp=Z,1.7nm,0.8s						
DLBC	Dease Lake	85.45	24	LR	LR	21 10 49.9	
	comp=Z,66nm,19.0s,baz=264,slow=32						
PZH	PanZhiHua	85.57	299	P	P	20 38 01.7	+1.6
PZH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.1s						
NEW	Newport	85.93	37	LR	LR	21 12 06.5	
	comp=Z,46nm,18.0s,baz=184,slow=33						
BSUT	Blindstream Ca	86.49	46	IAmb	IAmb	20 38 06.3	
	comp=Z,8.0nm,1.1s						
PMSA	Palmer Station	86.66	158	LR	LR	21 08 02.9	
	comp=Z,124nm,20.2s,baz=268,slow=30						
YAK	Yakutsk	86.78	339	LR	LR	21 16 21.9	
	comp=Z,51nm,18.3s,baz=117,slow=35						
ANMO	Albuquerque	87.45	53	P	P	20 38 07.9	-1.3
ANMO	Albuquerque	87.45	53	P	P	20 38 09.8	+0.6
	comp=Z,4.3nm,0.8s,baz=335,slow=3.3,SNR=8.0						
ANMO				LR	LR	21 13 51.0	
	comp=Z,36nm,18.8s,baz=348,slow=33						
	comp=Z,4.3nm,0.8s						
FXWY	Fox Creek	87.60	43	IAmb	IAmb	20 41 16.5	
	comp=Z,10nm,1.6s						
TX31	Lajitas Ar. Si	87.69	59	IAmb	IAmb	20 38 12.6	
	comp=Z,6.2nm,1.1s						
TXAR	Lajitas Array	87.69	59	P	P	20 38 11.4	+1.1
TXAR	Lajitas Array	87.69	59	P	P	20 38 12.0	+1.6
	comp=Z,2.7nm,1.0s,baz=224,slow=5.2,SNR=15						
TXAR				LR	LR	21 12 54.5	
	comp=Z,21nm,18.3s,baz=216,slow=32						
	comp=Z,2.7nm,1.0s						
BOZ	Bozeman (W)	88.04	41	IAmb	IAmb	20 41 01.1	
	comp=Z,4.9nm,0.8s						
PD31	Pinedale Array	88.22	45	IAmb	IAmb	20 41 11.6	
	comp=Z,4.3nm,0.7s						
PDAR	Pinedale Array	88.22	45	P	P	20 38 11.6	-1.2
PDAR	Pinedale Array	88.22	45	P	P	20 38 12.9	+0.1
	comp=Z,1.4nm,0.9s,baz=192,slow=4.1,SNR=11						
PDAR				LR	LR	21 13 28.8	
	comp=Z,28nm,18.2s,baz=264,slow=33						
	comp=Z,1.4nm,0.9s						
SONM	Songino Array	90.18	320	P	P	20 38 21.7	0.0
	comp=Z,0.6nm,0.6s,baz=108,slow=4.8,SNR=5.3						
SONM				LR	LR	21 13 39.1	
	comp=Z,65nm,21.3s,baz=87,slow=32						
	comp=Z,0.6nm,0.6s						
SYO	Syowa Base	90.18	194	⇑*i*P	P	20 38 21.0	-0.2
SYO	Syowa Base	90.18	194	⇑*e*sP	sP	20 38 26.2	-1.6
INK	Inuvik	91.00	16	LR	LR	21 13 20.2	
	comp=Z,49nm,20.1s,baz=256,slow=32						
TROLL	Troll, Antarti	92.05	181	⇑P	P	20 38 30.1	0.0
	comp=Z,1µm,0.8s						
SNAA	Sanae	92.44	180	⇑P	P	20 38 31.4	-0.4
	comp=Z,213nm,1.1s						
SNAA	Sanae	92.44	180	P	P	20 38 30.9	-0.9
SNAA	Sanae	92.44	180	P	P	20 38 31.3	-0.4
	comp=Z,11nm,1.0s,baz=197,slow=2.7,SNR=19						
SNAA				LR	LR	21 18 48.6	
	comp=Z,63nm,18.1s,baz=314,slow=35						
	comp=Z,11nm,1.0s						
RSSD	Black Hills	92.46	45	P	P	20 38 30.3	-2.1
VNA3	Neumayer Olymp	92.69	177	⇑P	P	20 38 32.6	-0.3
	comp=Z,14nm,0.8s						
VNA2	Neumayer--Watz	93.10	178	⇑P	P	20 38 34.8	0.0
	comp=Z,12nm,0.8s,baz=193,slow=3.4						
VNA1	Neumayer--Stat	93.34	178	⇑P	P	20 38 35.9	+0.1
	comp=Z,24nm,1.0s						
TIXI	Tiksi	93.65	346	LR	LR	21 13 50.8	
	comp=Z,58nm,21.8s,baz=189,slow=31						
YKA	Yellowknife Ar	94.03	25	P	P	20 38 39.4	+0.5
	comp=Z,0.4nm,0.8s,baz=267,slow=4.1,SNR=4.0						
YKA				LR	LR	21 17 18.9	
	comp=Z,85nm,18.2s,baz=270,slow=33						
	comp=Z,0.4nm,0.8s						
PLCA	Paso Flores	94.81	135	LR	LR	21 10 56.9	
	comp=Z,62nm,21.6s,baz=245,slow=29						
ULM	Lac du Bonnet	99.56	40	LR	LR	21 17 29.0	
	comp=Z,67nm,18.3s,baz=250,slow=31						
WMQ	Urumqi	101.43	312	*e*P	Pdif	20 39 14.3	+1.4
WMQ				LR	LR		
	comp=Z,130nm,22.5s						
GRA1	Grafenberg Arr	144.91	345		PKPdf	20 44 57.7	-0.7
GERES	GERESS Array B	145.02	342	PKP	PKPab	20 44 57.5	-0.5
	comp=Z,2.4nm,0.8s,baz=26,slow=4.8,SNR=5.8						
MEM	Membach	145.03	351	*d*PKP	PKPdf	20 44 59.2	+0.8
CONA	Conrad Observa	145.14	339	*i* PKP	PKPdf	20 44 59.4	+0.5
	comp=Z,7.3nm,1.1s						
RONA	Rosalia, Austr	145.19	339	*i* PKP	PKPdf	20 44 59.5	+0.6
	comp=Z,5.7nm,1.4s						
BCLA	Clavier	145.32	352	*d*PKP	PKPdf	20 44 58.8	-0.2
DOU	Dourbes	145.72	353	*d*PKP	PKPbc	20 44 59.8	-0.2
MOA	Molln	145.73	341	*i* PKP	PKPab	20 45 01.0	+0.4

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,8.0nm,1.1s						
ARSA	Arzberg	145.84	339	*i* PKP	PKPab	20 45 01.1	+0.1
	comp=Z,5.5nm,1.2s						
WLF	Walferdange	145.94	351		PKPdf	20 44 57.1	-3.0
WLF	Walferdange	145.94	351	*d*PKP	PKPab	20 45 01.4	+0.2
BIOA	Bad Ischl, Aus	146.07	341	*i* PKP	PKPab	20 45 01.4	-0.4
	comp=Z,3.9nm,1.0s						
SOKA	Soboth	146.50	339	*i* PKP	PKPbc	20 45 02.7	0.0
	comp=Z,4.5nm,1.0s						
LESA	Schwarzleotal	146.60	342	*i* PKP	PKPab	20 45 03.1	-0.8
	comp=Z,3.8nm,0.8s						
KBA	Koelnbreinsper	146.71	341	*i* PKP	PKPbc	20 45 03.2	-0.1
	comp=Z,2.2nm,0.5s						
OBKA	Obir	146.82	339	*i* PKP	PKPbc	20 45 03.5	-0.1
	comp=Z,3.7nm,1.2s						
BFO	Black Forest	146.84	348		PKPdf	20 45 02.1	+0.4
WATA	Walderalm	146.99	343	*i* PKP	PKPbc	20 45 04.4	+0.3
	comp=Z,5.7nm,1.0s						
MYKA	Terra Mystica	147.01	340	*i* PKP	PKPbc	20 45 03.6	-0.5
	comp=Z,5.6nm,0.9s						
WTTA	Wattenberg	147.04	343	*i* PKP	PKPbc	20 45 04.0	-0.3
	comp=Z,5.7nm,0.8s						
RETA	Reutte	147.07	344	*i* PKP	PKPab	20 45 04.6	-1.1
	comp=Z,6.1nm,1.1s						
MOTA	Moosalm	147.11	344	*i* PKP	PKPbc	20 45 04.8	+0.4
	comp=Z,6.6nm,0.9s						
SQTA	Sankt Quirin	147.19	344	*i* PKP	PKPab	20 45 05.2	-1.1
	comp=Z,8.0nm,0.9s						
PRED	Cave del Predi	147.20	340		PKPbc	20 45 04.7	+0.1
LJU	Ljubljana	147.23	339	*e*PKPbc	PKPbc	20 45 04.4	-0.2
ABTA	Abfaltersbach	147.25	342	*i* PKP	PKPbc	20 45 04.7	-0.1
	comp=Z,6.2nm,1.1s						
CRNS	Crni Vrh	147.29	339	*i* PKPbc	PKPbc	20 45 04.1	-0.7
BOJS	Bojanci	147.44	338	*i* PKPbc	PKPbc	20 45 05.5	+0.3
DAVA	Damuels	147.47	345	*i* PKP	PKPbc	20 45 06.0	+0.6
	comp=Z,8.9nm,1.4s						
FETA	Feichten	147.51	344	*i* PKP	PKPbc	20 45 04.9	-0.6
	comp=Z,6.0nm,0.9s						
PDG	Podgorica	148.23	330		PKPbc	20 45 07.5	+0.1
TUE	Stuetta	148.37	345		PKPbc	20 45 07.4	-0.5
ESDC	Sonseca Array	156.43	4	PKP	PKPdf	20 45 17.4	+1.0
	comp=Z,0.4nm,1.0s,baz=339,slow=5.8,SNR=2.0						
ESDC				PKPab	PKPab	20 45 44.6	-0.1
	comp=Z,0.5nm,0.8s,baz=319,slow=6.4,SNR=4.8						
TORD	Torodi Ar. Bea	175.62	228	PKPab	PKPab	20 47 08.5	-1.3
	comp=Z,1.8nm,0.3s,baz=100,slow=3.4,SNR=2.0						

DNK ***10*** *20:37:15.4±4.1, 71°.66N×4°.89W, h15^{km}, ML1.4*
BER ***10*** *20:37:17.3±2.3, 71°.76N×4°.70W, h10^{km}, Mw3.7, ML1.4(DNK), Confirmed Earthquake*
ISC 10 20:37:12.8±1.3**, 71°.84N**±0°.10×**4°.49W**±0°.08**, h10**^{km}**, n18, σ2^{s}57**/23**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNW	Jan Mayen West	1.50	239	*e*P	Pb	20 37 40.3	-0.4
JNW				*e*S	Sn	20 37 59.0	-0.4
JMIC	Jan Mayen	1.55	238	*e*S	Sn	20 37 59.0	-1.4
JMIC				IAML		20 38 05.4	
	comp=Z,14nm,0.4s						
JMIC	Jan Mayen	1.55	238	*i* P	Pn	20 37 39.2	-1.2
JMIC				*i* S	Sn	20 37 59.2	-1.3
DBG	Daneborg	5.21	306	*i* P	Pn	20 38 33.5	+2.8
DBG				*i* S	Sn	20 39 28.9	-1.9
DBG				IAML		20 39 34.1	
	comp=Z,0.8nm,0.2s						
DBG	Daneborg	5.21	306	*i* P	Pn	20 38 33.5	+2.8
DBG				*i* S	Sn	20 39 28.9	-1.9
DBG				IAML		20 39 34.1	
	comp=Z,0.8nm,0.2s						
DAG	Danmarks Havn	6.25	329	*i* P	Pn	20 38 48.0	+3.1
DAG				IAML		20 40 00.4	
	comp=Z,2.3nm,0.2s						
DAG	Danmarks Havn	6.25	329	*i* P	Pn	20 38 48.0	+3.1
DAG				IAML		20 40 00.4	
	comp=Z,2.3nm,0.2s						
HSPB	Hornsund (broa	7.43	37	*e*P	Pn	20 39 02.7	+1.6
HSPB				*e*S	Sn	20 40 25.0	-0.2
HSPB				IAML		20 40 30.3	
	comp=Z,88nm,0.4s						
BRBA	Barentsburg A	7.86	29	*e*S	Sn	20 40 30.8	-5.1
BRBA				IAML		20 40 36.0	
	comp=Z,7.5nm,0.2s						
BRBB	Barentsburg B	7.89	29	*e*P	Pn	20 39 09.6	+2.3
BRBB				*e*S	Sn	20 40 33.1	-3.3
KBS	Kingsbay	8.19	23	*e*P	Pn	20 39 14.2	+2.7
KBS				IAML		20 39 16.2	
	comp=Z,1.8nm,0.5s						
KBS	Kingsbay	8.19	23	*i* P	Pn	20 39 14.5	+3.0
KBS				*e*S	Sn	20 40 41.7	-2.2
SPA0	Spitsbergen Ar	8.28	31	*e*P	Pn	20 39 15.7	+3.0
SPA0				IAML		20 39 20.8	
	comp=Z,1.9nm,0.8s						
HOPEN	Hopen	9.21	46	*e*P	Pn	20 39 27.1	+1.7
NOR	Nord	10.16	350	*i* P	Pn	20 39 40.3	+1.9
NOR	Nord	10.16	350	*i* P	Pn	20 39 40.3	+1.9
SUMG	Summit	10.33	290	*e*P	Pn	20 39 34.1	-7.1
SUMG	Summit	10.33	290	*e*P	Pn	20 39 34.1	-7.1

NNC 10 21:18:21.6±2.1**, 37°.78N×78°.43E, h14**^{km}±11^{km}**, mb4.1, mpv3.8, 6C-5D, Error ellipse: s-maj=16.8km s-min=13.9km az=99.0, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	5.27	360	Pg	Pb	21 19 58.0	+4.4
	12nm,0.4s						
SATY				Lg	Lg	21 21 11.3	
	22nm,0.4s						
UZB	Uzynbulak	5.38	5	Pg	Pb	21 19 59.3	+3.9
	4.8nm,0.2s						
UZB				Lg	Lg	21 21 13.0	
	13nm,0.5s						
ZHN	Zhinishke	5.38	0	Pg	Pg	21 20 01.6	-3.1
ZHN				Lg	Lg	21 21 16.1	
IZV	Izvestkoviy	5.43	346	Pg	Pb	21 19 58.1	+1.9
IZV				Lg	Lg	21 21 09.8	
SHLS	Shalkode	5.43	8	Pg	Pg	21 20 01.6	-4.0
	8.4nm,0.3s						
SHLS				Lg	Lg	21 21 16.0	
	38nm,0.7s						
MDOK	Medeo	5.48	349	⇓Pg	Pb	21 19 59.3	+2.2
	10nm,0.7s						
MDOK				Pg	Pg	21 20 00.5	-6.0
	11nm,0.4s						
MDOK				Lg	Lg	21 21 14.0	
	16nm,0.6s						
MDOK				⇓Lg	Lg	21 21 15.0	
	23nm,0.7s						
KOTS	Kotyrbulak	5.54	350	Pg	Pg	21 20 03.2	-4.5
	6.9nm,0.3s						
KOTS				Lg	Lg	21 21 18.6	
	25nm,0.6s						
MTBS	Maitube	5.56	345	Pg	Pg	21 20 04.0	-3.9
	2.8nm,0.3s						
MTBS				Lg	Lg	21 21 20.1	
	11nm,0.4s						
KST	Kastek	5.58	341	Pg	Pg	21 20 05.6	-2.9
	6.2nm,0.6s						
KST				Lg	Lg	21 21 23.2	
	16nm,0.5s						
PDGK	Podgornoye	5.60	8	⇑Pn	Pn	21 19 45.6	+1.0
	3.5nm,0.4s						
PDGK				⇑Pg	Pb	21 20 01.7	+2.5
	3.5nm,0.3s						
PDGK				⇓Lg	Lg	21 21 16.6	
	16nm,0.6s						
KPKS	Kokpek	5.68	2	Pg	Pg	21 20 05.7	-4.7
	2.0nm,0.3s						
KPKS				Lg	Lg	21 21 23.7	
	30nm,0.5s						
AAK	Ala-Archa	5.71	329	⇑Pg	Pb	21 20 04.5	+3.5
	1.0nm,0.5s						
AAK				⇓Lg	Lg	21 21 22.1	
	5.1nm,0.7s						
DGS	Degeres	5.82	341	Pg	Pb	21 20 07.9	+5.0
DGS				Lg	Lg	21 21 26.4	
BLB	Baldybastay	6.31	0	Pg	Pg	21 20 18.2	-4.2
	12nm,0.4s						
BLB				Lg	Lg	21 21 44.8	
	10.0nm,0.4s						
KK31	Karatay Array	8.04	314	⇓Pn	Pn	21 20 18.5	+0.6
	0.2nm,0.2s,baz=130,slow=13,SNR=6.8						
KK31				⇑Lg	Lg	21 22 36.0	
	5.0nm,0.9s,baz=116,slow=27,SNR=4.2						
MAKZ	Makanchi	9.40	15	⇑Pn	Pn	21 20 36.9	+0.4
	2.8nm,0.4s						
MK31	Makanchi Array	9.45	16	Pn	Pn	21 20 37.0	-0.2
	1.4nm,0.4s,baz=196,slow=12,SNR=100						
MK31				⇑Sn	Sn	21 22 22.5	-0.8
	1.6nm,0.6s,baz=196,slow=25,SNR=4.8						

IDC 10 21:37:50.5±2.2**, 1°.83N×127°.32E, h0**^{km}**, mb3.2**/3**, mbtmp3.2**/3**, Error ellipse: s-maj=149.6km s-min=28.3km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.71	163	P	P	21 42 52.7	-1.4
	0.5nm,0.5s,baz=342,slow=11,SNR=11						
	0.5nm,0.5s						
ASAR	Alice Springs	26.14	166	P	P	21 43 27.8	+1.1
	0.1nm,0.4s,baz=345,slow=12,SNR=4.4						
	0.1nm,0.4s						
MKAR	Makanchi Array	59.44	326	P	P	21 47 55.3	+0.1
	0.1nm,0.3s,baz=111,slow=8.2,SNR=1.9						
	0.1nm,0.3s						

IDC ***10*** *21:48:45.3±1.9, 3°.04S×128°.93E, h0^{km}, mb3.6/3, mbtmp3.6/5, ML3.8/2, MS2.0/1, Error ellipse: s-maj=117.3km s-min=23.5km az=72.0*
DJA ***10*** *21:48:50.1±0.9, 3°S±3°×12°9E±°, h28^{km}±9^{km}, M3.9/13, mb4.0/6, MLv3.8/13*
ISC 10 21:48:48.7±0.8**, 2°.95S**±0°.07×**129°.50E**±0°.05**, h28**^{km}**, n19, σ2^{s}26**/22**, mb3.8**/3**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.70	236	P	Pb	21 49 04.2	+1.9
AAI	Ambon	1.50	241	P	Pn	21 49 16.5	+2.7
BNDI	Bandanaira	1.61	166	P	Pb	21 49 20.5	+2.7
NLAI	Namlea	2.42	263	P	Pn	21 49 28.2	+1.8
NLAI				S	Sn	21 49 57.2	+2.1
SWI	Sorong	2.72	40	P	Pn	21 49 30.6	0.0
SWI				S	Sn	21 50 02.2	-0.3
FAKI	Fak Fak	2.74	89	P	Pn	21 49 31.9	+1.0
FAKI				S	Sn	21 50 05.1	+2.0
SANI	Sanana	3.63	284	P	Pn	21 49 42.6	-0.5
RKPI	Ransiki, Papua	4.88	73	P	Pn	21 50 00.7	+0.3
BAKI	Biak	6.83	75	P	Pn	21 50 29.7	+2.6
	0.1nm23nm,1.1s						
LUWI	Luwuk	6.99	286	P	Pn	21 50 29.9	+0.6
APSI	Ampana	8.11	284	P	Pn	21 50 44.6	-0.1
DAV	Davao City (W)	10.70	339	LR	LR	21 55 34.6	
	comp=Z,8.5nm,20.5s,baz=74,slow=39						
FITZ	Fitzroy Crossi	15.52	194	Pn	Pn	21 52 24.9	-0.9
	0.3nm,0.3s,baz=17,slow=9.0,SNR=7.5						
	0.6nm,0.5s						
GMJI	Gumukmas	16.83	251	P	Pn	21 52 32.2	-10
WRA	Warramunga Arr	17.53	165	P	Pn	21 52 50.5	-0.8
	0.4nm,0.3s,baz=343,slow=12,SNR=23						
WRA				S	Sn	21 56 00.1	-5.8
	0.2nm,0.5s,baz=339,slow=24,SNR=1.5						
	1.0nm,0.5s						
ASAR	Alice Springs	21.03	169	P	P	21 53 31.6	+1.1
	1.5nm,0.3s,baz=353,slow=12,SNR=33						
ASAR				S	S	21 57 20.1	-3.3
	0.6nm,0.8s,baz=350,slow=20,SNR=2.4						
	1.5nm,0.3s						
LWLI	Liwa	25.46	265	P	P	21 54 11.9	-2.9
MKAR	Makanchi Array	64.60	326	P	P	21 59 22.1	-1.6
	0.3nm,0.8s,baz=114,slow=8.1,SNR=3.8						
	0.3nm,0.8s						
KURBB	Kurchatov Arra	68.83	328	P	P	21 59 50.8	+0.3
	0.4nm,0.5s,baz=126,slow=5.7,SNR=4.3						
	0.4nm,0.5s						

IDC ***10*** *22:03:14.7±1.1, 71°.28N×4°.36W, h0^{km}, mb3.3/5, mbtmp3.5/9, ML2.7/3, MS3.0/6, Error ellipse: s-maj=21.9km s-min=17.6km az=16.0*
NAO ***10*** *22:03:14.6±2.1, 71°.48N×3°.96W, ML3.6*
BER ***10*** *22:03:17.4±4.2, 71°.59N×4°.08W, h10^{km}, Mw3.8, ML3.6(NAO), Confirmed Earthquake*
DNK ***10*** *22:03:19.0±4.1, 71°.48N×4°.78W, h48^{km}±146^{km}, ML1.3*
ISC 10 22:03:14.5±0.6**, 71°.61N**±0°.06×**4°.36W**±0°.04**, h11**^{km}**, n61, σ2^{s}00**/67**, mb3.3**/5**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNW	Jan Mayen West	1.43	248	*e*P	Pg	22 03 43.8	+1.8
JNW				*e*S	Sg	22 04 00.9	+0.3
JNW				IAML		22 04 16.6	
	comp=Z,29nm,0.4s						
JMIC	Jan Mayen	1.48	247	Pn	Pn	22 03 39.5	-1.4
	comp=Z,4.8nm,0.3s,baz=161,slow=18,SNR=1.7						
JMIC				Sn	Sg	22 04 01.3	-0.6
	comp=Z,8.6nm,0.3s,baz=177,slow=21,SNR=2.6						
JMIC	Jan Mayen	1.48	247	IAML		22 04 06.6	
	comp=Z,24nm,0.4s						
JMIC	Jan Mayen	1.48	247	*i* P	Pn	22 03 39.2	-1.8
JMI	Jan Mayen	1.57	246	*e*P	Pb	22 03 42.9	-0.5
JMI				*e*S	Sg	22 04 05.7	+0.9
JMI				IAML		22 04 13.4	
	comp=Z,28nm,1.0s						
DBG	Daneborg	5.38	308	Pn	Pn	22 04 37.4	+2.8
DBG				Sn	Sn	22 05 35.5	-0.8
DBG	Daneborg	5.38	308	*i* P	Pn	22 04 36.7	+2.2
DBG				*i* S	Sn	22 05 33.3	-3.1
DBG				IAML		22 05 39.7	
	comp=Z,0.8nm,0.2s						
DBG	Daneborg	5.38	308	*i* P	Pn	22 04 36.7	+2.2
DBG				*i* S	Sn	22 05 33.3	-3.1
DBG				IAML		22 05 39.7	
	comp=Z,0.8nm,0.2s						
DAG	Danmarks Havn	6.47	330	*i* P	Pn	22 04 51.4	+2.0
DAG				*i* S	Sn	22 05 55.2	-7.9
DAG				IAML		22 06 04.4	
	comp=Z,1.7nm,0.3s						
DAG	Danmarks Havn	6.47	330	*i* P	Pn	22 04 51.4	+2.0
DAG				*i* S	Sn	22 05 55.2	-7.9
DAG				IAML		22 06 04.4	
	comp=Z,1.7nm,0.3s						
LOF	Lofoten	7.08	111	Pn	Pn	22 04 56.9	-0.9
LOF	Lofoten	7.08	111	*e*P	Pn	22 04 56.5	-1.3
BJO1	Bjornoya	7.38	56	Pn	Pn	22 05 03.7	+1.8
BJO1	Bjornoya	7.38	56	*e*P	Pn	22 05 03.8	+1.8
HSPB	Hornsund (broa	7.59	36	Pn	Pn	22 05 06.3	+1.5
HSPB	Hornsund (broa	7.59	36	*e*P	Pn	22 05 06.4	+1.5
TRO	Tromso	7.97	93	Pn	Pn	22 05 08.0	-2.0
TRO	Tromso	7.97	93	*e*P	Pn	22 05 08.0	-2.0
BRBA	Barentsburg A	8.05	28	Pn	Pn	22 05 13.1	+2.0
BRBA	Barentsburg A	8.05	28	Pn	Pn	22 05 13.1	+2.0
KONS	Konsvik	8.06	121	*e*P	Pn	22 05 08.9	-2.4
KONS				*e*S	Sn	22 06 30.8	-12
KONS				IAML		22 06 34.0	
	comp=Z,3.5nm,0.9s						
FAUS	Fauske	8.07	112	*e*P	Pn	22 05 10.4	-1.0
BRBB	Barentsburg B	8.07	28	Pn	Pn	22 05 13.6	+2.2
BRBB	Barentsburg B	8.07	28	Pn	Pn	22 05 13.6	+2.2
STOK	Stokkvaagen	8.16	122	*e*P	Pn	22 05 11.7	-1.0
KBS	Kingsbay	8.39	22	Pn	Pn	22 05 18.9	+3.1
KBS				Sn	Sn	22 06 48.0	-2.3
KBS	Kingsbay	8.39	22	*e*P	Pn	22 05 18.8	+3.0
KBS				*e*S	Sn	22 06 43.8	-6.5
KBS				IAML		22 06 44.2	
	comp=Z,3.6nm,0.7s						
KBS	Kingsbay	8.39	22	*i* P	Pn	22 05 17.7	+1.9
SPA0	Spitsbergen Ar	8.46	30	Pn	Pn	22 05 19.9	+3.1
	baz=219,slow=18						
SPA0	Spitsbergen Ar	8.46	30	Pn	Pn	22 05 19.9	+3.1
	baz=219,slow=18						
SPITS	Spitsbergen Ar	8.46	30	Pn	Pn	22 05 19.8	+3.0
	comp=Z,1.4nm,0.3s,baz=218,slow=16,SNR=42						
KIF	Kilpisjarvi	8.85	95	Pn	Pn	22 05 20.7	-1.3
KIF				Sn	Sn	22 06 51.1	-10
KIF	Kilpisjarvi	8.85	95	Pn	Pn	22 05 20.7	-1.3
KIF				Sn	Sn	22 06 51.1	-10
SALU	Saltoluokta	9.03	107	*e*P	Pn	22 05 24.1	-0.6
NSS	Namsos	9.33	131	*e*P	Pn	22 05 27.8	-0.9
HOPEN	Hopen	9.35	45	Pn	Pn	22 05 30.5	+1.7
HOPEN	Hopen	9.35	45	*e*P	Pn	22 05 30.7	+1.8
HEF	Hetta	10.05	95	*e*P	Pn	22 05 36.4	-2.1
HEF				Pn	Pn	22 05 37.6	-0.9
ARA0	ARCESS Array S	10.10	87	Pn	Pn	22 05 38.0	-1.2
	baz=290,slow=12						
ARA0	ARCESS Array S	10.10	87	Pn	Pn	22 05 38.0	-1.2
	baz=290,slow=12						
ARCES	ARCESS Array B	10.10	87	Pn	Pn	22 05 38.3	-0.9
	comp=Z,0.1nm,0.3s,baz=289,slow=12,SNR=12						
ARCES				Sn	Sn	22 07 31.3	-0.9
	comp=Z,0.3nm,0.3s,baz=223,slow=26,SNR=5.2						
ARCES				LR	LR	22 08 59.8	
	comp=Z,38nm,19.7s,baz=322,slow=34						
NOR	Nord	10.40	350	Pn	Pn	22 05 46.4	+3.2
NOR				Sn	Sn	22 07 35.2	-4.3
NOR	Nord	10.40	350	Pn	Pn	22 05 46.4	+3.2
NOR				Sn	Sn	22 07 35.2	-4.3
AKN	Aaknes	10.44	149	Pn	Pn	22 05 44.5	+0.6
AKN	Aaknes	10.44	149	Pn	Pn	22 05 44.5	+0.6
NOA	NORSAR Array B	12.26	142	Pn	Pn	22 06 07.4	-1.4
	baz=338,slow=14,SNR=2.1						
NOA				LR	LR	22 10 34.2	
	comp=Z,67nm,19.8s,baz=340,slow=37						
	comp=Z,0.4nm,0.6s						
NRA0	NORESS Array S	12.60	142	Pn	Pn	22 06 14.0	+0.6
	baz=328,slow=18						
NRA0	NORESS Array S	12.60	142	Pn	Pn	22 06 14.0	+0.6
	baz=328,slow=18						
HFS	Hagfors	13.59	139	Pn	Pn	22 06 27.0	+0.1
	baz=322,slow=9.3						
HFS	Hagfors	13.59	139	Pn	Pn	22 06 25.9	-1.0
	comp=Z,0.3nm,0.3s,baz=345,slow=11,SNR=7.2						
HFS				LR	LR	22 11 15.5	
	comp=Z,82nm,20.3s,baz=312,slow=36						
	comp=Z,1.9nm,0.6s						
HFS	Hagfors	13.59	139	Pn	Pn	22 06 27.0	+0.1
	baz=322,slow=9.3						
FINES	FINESS Array B	15.61	115	Pn	Pn	22 06 53.4	-0.6
	comp=Z,0.1nm,0.3s,baz=354,slow=9.6,SNR=4.5						
FINES				LR	LR	22 12 11.3	
	comp=Z,54nm,18.2s,baz=265,slow=35						
	comp=Z,2.6nm,1.0s						
EKA	Eskdalemuir Ar	16.35	178	Pn	P	22 07 05.0	-1.6
	baz=356,slow=11						
KLMR	Klimovskoe	20.13	100	*e*P	P	22 07 48.5	+0.4
GERES	GERESS Array B	24.32	150	P	P	22 08 29.7	-2.2
	comp=Z,0.2nm,0.5s,baz=347,slow=8.0,SNR=1.9						
	comp=Z,0.2nm,0.5s						
AKASG	Malin Array Be	25.84	126	P	P	22 08 44.5	-1.0
	comp=Z,0.2nm,0.2s,baz=337,slow=9.5,SNR=1.8						
	comp=Z,0.2nm,0.2s						
BELG	Belogornoye	29.64	103	LR	LR	22 21 07.9	
	comp=Z,20nm,20.7s,baz=229,slow=36						
MLR	Muntele Rosu	29.91	135	LR	LR	22 20 18.8	
	comp=Z,46nm,18.2s,baz=272,slow=34						
ESDC	Sonseca Array	32.01	179	P	P	22 09 41.5	+0.9
	comp=Z,0.4nm,0.6s,baz=1.5,slow=8.0,SNR=4.1						
	comp=Z,0.4nm,0.6s						
KURBB	Kurchatov Arra	40.88	75	P	P	22 10 58.4	+2.4
	comp=Z,0.4nm,0.6s,baz=335,slow=6.3,SNR=1.9						
	comp=Z,0.4nm,0.6s						
ILAR	Eielson Array	41.51	337	P	P	22 11 06.6	+5.5
	comp=Z,0.3nm,0.8s,baz=20,slow=8.1,SNR=2.4						
	comp=Z,0.3nm,0.8s						

DNK ***10*** *22:05:11.0±4.6, 71°.88N×4°.69W, h0^{km}±142^{km}, ML1.3*
BER ***10*** *22:05:13.1±3.0, 71°.80N×4°.65W, h10^{km}, Mw3.5, ML1.3(DNK), Confirmed Earthquake*
ISC 10 22:04:58.5±1.4**, 72°.45N**±0°.07×**3°.98W**±0°.07**, h10**^{km}**, n16, σ1^{s}94**/19**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNW	Jan Mayen West	2.00	227	*e*S	Sn	22 05 55.5	-1.7
JNW				IAML		22 05 56.8	
	comp=Z,16nm,0.5s						
JMIC	Jan Mayen	2.05	226	*e*S	Sn	22 05 55.8	-2.7
JMIC				IAML		22 05 57.5	
	comp=Z,14nm,0.8s						
JMIC	Jan Mayen	2.05	226	*i* P	Pb	22 05 35.2	-0.5
JMIC				*i* S	Sn	22 06 00.1	+1.6
JMI	Jan Mayen	2.14	227	*e*S	Sn	22 05 58.6	-2.2
JMI				IAML		22 05 58.8	
	comp=Z,27nm,0.5s						
DBG	Daneborg	5.02	299	*i* P	Pb	22 06 27.1	+0.8
DBG				*i* S	Sb	22 07 26.9	+0.4
DBG				IAML		22 07 32.5	
	comp=Z,0.9nm,0.2s						
DBG	Daneborg	5.02	299	*i* P	Pb	22 06 27.1	+0.8
DBG				*i* S	Sb	22 07 26.9	+0.4
DBG				IAML		22 07 32.5	
	comp=Z,0.9nm,0.2s						
DAG	Danmarks Havn	5.83	325	*i* P	Pb	22 06 43.0	+3.0
DAG				*i* S	Sb	22 07 47.8	-1.9
DAG				IAML		22 07 53.9	
	comp=Z,1.5nm,0.2s						
DAG	Danmarks Havn	5.83	325	*i* P	Pb	22 06 43.0	+3.0
DAG				*i* S	Sb	22 07 47.8	-1.9
DAG				IAML		22 07 53.9	
	comp=Z,1.5nm,0.2s						
HSPB	Hornsund (broa	6.85	39	*e*P	Pb	22 06 59.7	+2.3
BRBA	Barentsburg A	7.26	31	*e*P	Pb	22 07 06.3	+2.0
BRBB	Barentsburg B	7.28	31	*e*P	Pb	22 07 05.5	+0.8
KBS	Kingsbay	7.57	24	*e*P	Pb	22 07 07.8	-1.9
KBS				IAML		22 08 21.6	
	comp=Z,3.1nm,0.6s						
KBS	Kingsbay	7.57	24	*i* P	Pb	22 07 09.9	+0.3
SPA0	Spitsbergen Ar	7.68	32	*e*P	Pb	22 07 10.2	-1.4
HOPEN	Hopen	8.69	49	*e*P	Pn	22 07 22.9	+19
NOR	Nord	9.59	349	*e*P	Pn	22 07 34.4	+18

IDC ***10*** *22:06:17.2±3.0, 24°.21S×179°.92E, h550^{km}±39^{km}, mb3.1/4, mbtmp4.0/5, Error ellipse: s-maj=43.0km s-min=32.6km az=178.0*
ISC 10 22:06:17.0±1.6**, 24°.2S**±0°.2×**179°.9E**±0°.3**, h550**^{km}**, n7, σ0^{s}07**/6**, mb3.7**/4**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.70	345	P	P	22 08 02.3	0.0
	10nm,1.0s,baz=140,slow=15,SNR=1.6						
URZ	Urewera	14.19	189	P	P	22 09 08.9	-9.0
	2.3nm,0.6s,baz=11,slow=5.2,SNR=1.9						
URZ				S	S	22 11 36.8	-10
	3.0nm,0.6s,baz=38,slow=17,SNR=6.1						
STKA	Stephens Creek	34.53	249	P	P	22 12 19.9	0.0
	1.5nm,0.5s,baz=92,slow=11,SNR=4.2						
	1.5nm,0.5s						
ASAR	Alice Springs	41.91	261	P	P	22 13 20.1	+0.1
	0.6nm,0.4s,baz=92,slow=7.6,SNR=18						
	0.6nm,0.4s						
WRA	Warramunga Arr	42.31	267	P	P	22 13 23.1	0.0
	1.8nm,0.5s,baz=99,slow=7.5,SNR=49						
	1.8nm,0.5s						
QSPA	South Pole Qui	65.85	180	P	P	22 16 08.2	0.0
	1.6nm,1.1s,baz=336,slow=4.8,SNR=3.3						
	1.6nm,1.1s						
HFS	Hagfors	142.85	349	PKP	PKPdf	22 24 47.6	0.0
	0.8nm,0.5s,baz=39,slow=5.5,SNR=6.9						

IDC ***10*** *22:20:39.6±1.4, 3°.77N×125°.16E, h0^{km}, mb3.9/5, mbtmp3.9/5, MS3.1/1, Error ellipse: s-maj=157.3km s-min=24.8km az=66.0*
DJA ***10*** *22:20:53.9±0.6, 4°N±4°×12°6E±°, h113^{km}±4^{km}, M4.3/12, mb4.0/6, mB5.4/3, MLv4.3/12, Mw(mB)4.9/3*
ISC 10 22:20:50.5±0.9**, 4°.18N**±0°.09×**126°.33E**±0°.10**, h100**^{km}**, n15, σ1^{s}66**/16**, mb3.8**/5**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	0.94	239	P	Pn	22 21 12.9	+2.6
SGSI				S	Sn	22 21 27.1	+2.0
TNTI	Ternate	3.54	163	P	Pn	22 21 44.8	+1.3
TNTI				S	Sn	22 22 23.9	-0.5
MRSI	Marisa	5.72	230	P	Pn	22 22 13.2	+0.1
SANI	Sanana	6.19	183	P	Pn	22 22 16.4	-3.1
SWI	Sorong	7.02	135	P	Pn	22 22 32.1	+1.3
	0.1nm9.9nm,1.1s						
NLAI	Namlea	7.41	174	P	Pn	22 22 34.6	-1.4
MPSI	Mapaga	7.47	239	P	Pn	22 22 36.1	-0.8
AAI	Ambon	8.03	167	P	Pn	22 22 45.2	+0.7
FAKI	Fak Fak	9.20	140	P	Pn	22 23 03.2	+2.8
WRA	Warramunga Arr	25.23	162	P	P	22 26 07.2	0.0
	0.7nm,0.7s,baz=336,slow=11,SNR=7.4						
	0.7nm,0.7s						
SONM	Songino Array	46.75	342	P	P	22 29 09.3	-0.6
	0.3nm,0.6s,baz=142,slow=7.3,SNR=2.6						
	0.3nm,0.6s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	56.97	325	P	P	22 30 24.7	-0.9
	0.9nm,0.6s,baz=120,slow=8.1,SNR=12						
	0.9nm,0.6s						
MA2	Magadan	58.37	14	LR	LR	22 56 45.3	
	comp=Z,17nm,19.7s,baz=94,slow=37						
KURBB	Kurchatov Arra	61.15	327	P	P	22 30 54.3	-0.1
	2.0nm,0.2s,baz=128,slow=6.3,SNR=11						
	2.0nm,0.2s						
BVAR	Borovoye Array	66.73	327	P	P	22 31 30.9	0.0
	0.8nm,0.6s,baz=126,slow=7.5,SNR=5.6						
	0.8nm,0.6s						

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*UCR **10** 22:21:25.6±1.1, 11°61N×85°94W, h147km±5km, MW3.9*

*CATAC **10** 22:21:25.9±0.5, 12°N±3°×8°6W±°, h136km±3km, M3.1/20, MLv3.1/20, Error ellipse: s-maj=7.7km s-min=3.8km az=43.0, confirmed*

ISC 10 22:21:25.3±1.7, **11°59N**±0°04×**86°03W**±0°06, **h150**km±10km, **n61**, σ**0^{s}49**/74, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NADN	Granada	0.16	358	eP	Pn	22 21 45.5	0.0
JAPN	Al SSO del Vol	0.35	100	eP	Pn	22 21 46.4	+0.4
JAPN	Al SSO del Vol	0.35	100	P	Pn	22 21 46.6	+0.6
NANN	Nandasmo	0.36	345	P	Pn	22 21 47.0	+0.9
NANN	Nandasmo	0.36	345	S	Sn	22 22 03.2	+1.2
SABN	Sabanita	0.39	340	P	Pn	22 21 45.1	-1.1
CONN	Concepcion	0.39	93	P	Pn	22 21 46.2	0.0
CONN				S	Sn	22 22 01.8	-0.3
MAS3	Al N del Volca	0.46	341	P	Pn	22 21 46.5	0.0
UNAN	Cigeo UNAN	0.57	335	P	Pn	22 21 46.7	-0.3
UNAN				S	Sn	22 22 04.3	+0.6
MGAN	Managua	0.60	339	P	Pn	22 21 47.2	0.0
MGAN	Managua	0.60	339	S	Sn	22 22 04.0	+0.1
TISN	Laguna Tiscapa	0.60	337	P	Pn	22 21 47.0	-0.2
CARN	Rivas	0.64	129	eP	Pn	22 21 47.5	+0.1
CARN				eS	Sn	22 22 04.1	-0.1
CARN	Rivas	0.64	129	P	Pn	22 21 47.7	+0.3
CARN				S	Sn	22 22 04.3	+0.2
LCRUZ	La Cruz	0.64	142	eP	Pn	22 21 47.3	-0.2
LCRUZ				eS	Sn	22 22 04.0	-0.3
SAPS	Ciudad Sandino	0.69	327	S	Sn	22 22 05.0	+0.1
SAPS	Ciudad Sandino	0.69	327	P	Pn	22 21 47.8	0.0
ACON	Acoyapa	0.92	66	eP	Pn	22 21 49.2	-0.2
ACON	Acoyapa	0.92	66	P	Pn	22 21 49.2	-0.2
ACON	Acoyapa	0.92	66	S	Sn	22 22 06.9	-0.8
BOAB	BOACO BROADBAN	0.93	22	S	Sn	22 22 07.0	-1.0
BOAB	BOACO BROADBAN	0.93	22	P	Pn	22 21 49.2	-0.3
MOMN	Momotombo	0.96	328	P	Pn	22 21 49.4	-0.4
MOMN				S	Sn	22 22 08.3	-0.2
BUAI	Buenos Aires	0.98	136	eP	Pn	22 21 50.2	+0.2
BUAI				eS	Sn	22 22 09.2	+0.4
PEJA	Penjamo Buenos	0.98	134	eP	Pn	22 21 50.1	+0.1
LAPC	Finca la Perla	1.00	144	eP	Pn	22 21 49.9	-0.2
VORI	VORI	1.01	139	eP	Pn	22 21 51.0	+0.5
VRLE	La Escondida,	1.03	141	eP	Pn	22 21 50.9	+0.4
ELI1	Hacienda Flor	1.05	154	eP	Pn	22 21 51.0	+0.5
ALIBA	Liberia Airpor	1.09	154	eP	Pn	22 21 51.6	+0.7
ALIBA				eS	Sn	22 22 11.4	+0.9
CNGA	Al SSO del Vol	1.12	324	P	Pn	22 21 51.1	-0.1
CNGA				S	Sn	22 22 10.2	-0.7
CNGN	Cerro Negro	1.12	324	eP	Pn	22 21 51.0	-0.2
CNGN	Cerro Negro	1.12	324	P	Pn	22 21 51.0	-0.2
MESS	Mesas	1.17	136	eP	Pn	22 21 51.8	+0.1
HORNC	Hornillas	1.20	136	eP	Pn	22 21 52.4	+0.4
CUI	Cuipilapa	1.25	137	eP	Pn	22 21 52.7	+0.2
HOYN	Al Sur del Vol	1.27	322	P	Pn	22 21 52.6	-0.1
HOYN				S	Sn	22 22 13.4	-0.3
QUEN	Al S del Volca	1.28	321	P	Pn	22 21 52.9	+0.2
HERN	Volcan Telica	1.28	322	P	Pn	22 21 52.7	-0.1
HERN	Volcan Telica	1.28	322	S	Sn	22 22 13.3	-0.5
BAGA	Bagaces	1.29	144	eS	Sn	22 22 13.7	-0.1
POLN	Al Sur del Vol	1.31	324	P	Pn	22 21 53.0	+0.1
POLN				S	Sn	22 22 14.3	+0.2
SACU	Santa Cruz	1.39	162	eP	Pn	22 21 54.1	+0.4
PLVR	Palo Verde	1.40	152	eP	Pn	22 21 54.2	+0.1
PLVR				eS	Sn	22 22 15.8	-0.2
INVE	Universidad In	1.45	139	eP	Pn	22 21 55.0	+0.6
QUEB	Quebradon, Cot	1.47	131	eP	Pn	22 21 54.7	+0.1
CRIN	San Cristobal	1.49	318	eP	Pn	22 21 54.8	-0.1
CRIN	San Cristobal	1.49	318	P	Pn	22 21 54.8	-0.1
NICO	Nicoya	1.55	158	eP	Pn	22 21 55.7	+0.3
JTS	Las Juntas de	1.67	141	eP	Pn	22 21 57.0	+0.2
JUNT	Juntas	1.67	141	eS	Sn	22 22 20.0	-0.7
INDI	Punta indio, G	1.79	163	P	Pn	22 21 58.1	+0.1
INDI	Punta indio, G	1.79	163	S	Sn	22 22 21.3	-1.8
ESPN	Las Esperanzas	1.79	70	eP	Pn	22 21 57.9	-0.2
RCPN	Sur Rio San Ju	1.93	358	P	Pn	22 22 00.4	+0.7
JCR1	Jicaral	1.95	152	eP	Pn	22 22 00.3	+0.4
RCVN	Varillal2	1.99	355	P	Pn	22 22 01.2	+0.7
RCVN	Varillal2	1.99	355	S	Sn	22 22 28.1	+0.5
CBL1	Cabuya	2.19	155	eP	Pn	22 22 02.8	+0.1
BLUN	Bluefields	2.24	79	P	Pn	22 22 03.2	-0.2
BLUN				S	Sn	22 22 33.0	+0.5
DRK0	Durika	3.58	130	eS	Sn	22 23 02.8	-0.2

DJA 10 22:23:47.2±0.6, **3°S**±4°×**12°8E**±°, **h26**km±8km, **M3.9**/12, **mB5.1**/1, **mb4.4**/7, **MLv3.7**/12, **Mw(mB)4.5**/1, **Ceram Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NLAI	Namlea	0.64	246	P	Pn	22 24 00.6	0.0
AAI	Ambon	0.86	144	P	Pb	22 24 03.3	-0.3
AAI				S	Sn	22 24 15.5	0.0
MSAI	Masohi	1.29	106	P	Pb	22 24 10.9	+0.1
SANI	Sanana	1.94	298	P	Pn	22 24 17.6	-0.8
SANI				S	Sn	22 24 39.7	-2.2
SWI	Sorong	4.14	60	P	Pn	22 24 49.3	+0.5
FAKI	Fak Fak	4.55	89	P	Pn	22 24 54.3	-0.2
LUWI	Luwuk	5.28	291	P	Pn	22 25 05.3	+0.8
	0.1nm2μm25nm,0.7s						
SAUI	Saumlaki	6.13	144	P	Pn	22 25 15.8	-0.4
APSI	Ampana	6.38	289	P	Pn	22 25 20.7	+1.1
	0.1nm30nm,0.7s						
MRSI	Marisa	6.70	301	P	Pn	22 25 23.3	-0.6
	0.1nm17nm,0.5s						
BNSI	Bone	7.70	259	P	Pn	22 25 38.5	+0.8
BSSI	Bau Bau, Buton	7.83	246	P	Pn	22 25 40.8	+1.2

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*CATAC **10** 22:55:45.7±0.8, 11°N±5°×8°8W±°, h1km, M3.9/18, MLv3.9/18, Error ellipse: s-maj=11.8km s-min=8.3km az=34.8, confirmed*

*IDC **10** 22:55:47.5±1.5, 11°58N×87°16W, h0km, mb4.0/4, mbtmp4.1/4, Error ellipse: s-maj=69.2km s-min=23.6km az=59.0*

*NEIC **10** 22:55:56.3±1.4, 11°79N±0°07×87°51W±0°07, h35km±7km, mb4.2/17, Error ellipse: s-maj=12.4km s-min=8.2km az=223.0*

ISC 10 22:55:55.5±0.9, **11°69N**±0°07×**87°59W**±0°06, **h37**km, **n55**, σ**1^{s}35**/55, **mb4.2**/12, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CRIN	San Cristobal	1.13	27	Pn	Pn	22 56 14.7	-0.3
CRIN	San Cristobal	1.13	27	P	Pn	22 56 14.8	-0.1
QUEN	Al S del Volca	1.15	39	P	Pn	22 56 14.7	-0.4
HOYN	Al Sur del Vol	1.17	39	P	Pn	22 56 15.2	-0.2
HERN	Volcan Telica	1.18	39	Pn	Pn	22 56 14.8	-0.8
HERN	Volcan Telica	1.18	39	P	Pn	22 56 15.1	-0.4
CNGA	Al SSO del Vol	1.18	47	P	Pn	22 56 15.0	-0.5
CNGN	Cerro Negro	1.19	47	Pn	Pn	22 56 14.3	-1.3
CNGN	Cerro Negro	1.19	47	P	Pn	22 56 14.8	-0.8
POLN	Al Sur del Vol	1.22	38	P	Pn	22 56 15.3	-0.8
MOMN	Momotombo	1.25	55	P	Pn	22 56 15.5	-0.9
MOMN				S	Sn	22 56 35.2	+3.1
SAPS	Ciudad Sandino	1.25	67	P	Pn	22 56 17.2	+0.7
CSGN	Cosiguina Volc	1.28	1	P	Pn	22 56 16.4	-0.6
POTN	Potosi Cosigui	1.30	3	P	Pn	22 56 16.7	-0.6
POTN				S	Sn	22 56 38.5	+5.1
UNAN	Cigeo UNAN	1.35	72	P	Pn	22 56 18.2	+0.3
TISN	Laguna Tiscapa	1.36	71	P	Pn	22 56 17.1	-1.0
MGAN	Managua	1.39	71	Pn	Pn	22 56 16.6	-1.8
NANN	Nandasmo	1.46	80	P	Pn	22 56 19.1	-0.2
CNCH	Conchagua	1.60	351	P	Pn	22 56 20.8	-0.5
LCND	La Caada	1.64	350	P	Pn	22 56 21.5	-0.3
LIMN	Finca el Limon	1.81	41	P	Pn	22 56 23.7	-0.5
CHOHN	Orocuina	1.83	13	P	Pn	22 56 24.4	-0.2
CHOHN	Orocuina	1.83	13	S	Sn	22 57 02.2	+16
PACA	Pacayal	1.91	338	P	Pn	22 56 25.6	-0.1
BOAB	BOACO BROADBAN	2.02	68	Pn	Pn	22 56 24.8	-2.3
BOAB	BOACO BROADBAN	2.02	68	P	Pn	22 56 25.5	-1.6
MATN	Matagalpa	2.04	53	P	Pn	22 56 25.2	-2.2
TGUH	Tegucigalpa,Un	2.37	7	Pn	Pn	22 56 31.7	-0.3
TGUH	Tegucigalpa,Un	2.37	7	P	Pn	22 56 30.8	-1.2
ACON	Acoyapa	2.38	83	Pn	Pn	22 56 30.9	-1.1
JTS	Las Juntas de	2.94	118	Pn	Pn	22 56 39.8	+0.1
MTO3	Montecristo	3.20	327	Pn	Pn	22 56 43.1	-0.4
ESPN	Las Esperanzas	3.25	81	Pn	Pn	22 56 46.0	+2.0
LCR2	La Lucha 2	4.02	118	Pn	Pn	22 56 54.5	-0.2
HBVL	Hebbronville	18.51	327	P	Pn	23 00 10.7	+1.6
833A	Chaparral WMA,	19.90	328	P	P	23 00 24.0	+0.1
833A				IAmb	IAmb	23 00 25.6	
	comp=Z,12nm,0.8s						
HNDO	Hondo	20.82	330	P	P	23 00 33.5	-0.5
TXAR	Lajitas Array	23.08	322	P	P	23 00 58.7	+0.6
	comp=Z,1.0nm,0.5s,baz=136,slow=10,SNR=12						
	comp=Z,1.0nm,0.5s						
TX31	Lajitas Ar. Si	23.08	322	P	P	23 00 59.1	+0.9
W50A	Signal Mountai	23.50	5	P	P	23 01 02.3	+0.2
W50A				IAmb	IAmb	23 01 03.0	
	comp=Z,4.3nm,0.7s						
CPCT	Cooper Cave	23.82	6	P	P	23 01 04.8	-0.4
CPCT				IAmb	IAmb	23 01 14.2	
	comp=Z,9.6nm,1.3s						
TKL	Tuckaleechee C	24.11	8	P	P	23 01 07.5	-0.3
TKL				IAmb	IAmb	23 01 38.1	
	comp=Z,9.6nm,1.2s						
FCAR	Ozark Folk Cen	24.44	351	P	P	23 01 10.0	-0.8
FCAR				IAmb	IAmb	23 01 10.0	
	comp=Z,3.1nm,0.7s						
U49A	Red Boiling Sp	24.77	3	P	P	23 01 12.7	-1.1
TZTN	Tazewell	25.01	8	P	P	23 01 13.8	-2.3
TZTN				IAmb	IAmb	23 01 24.3	
	comp=Z,13nm,1.3s						
T47A	Sharon Grove	25.19	1	P	P	23 01 17.0	-0.6
T47A				IAmb	IAmb	23 01 17.3	
	comp=Z,6.8nm,0.8s						
T42A	Van Buren	25.43	353	P	P	23 01 18.5	-1.2
T42A				IAmb	IAmb	23 01 18.6	
	comp=Z,2.2nm,0.6s						
S51A	Beattyville	26.09	7	P	P	23 01 25.0	-0.8
S51A				IAmb	IAmb	23 01 49.7	
	comp=Z,7.7nm,1.1s						
Q51A	Peebles	27.48	7	P	P	23 01 38.1	-0.3
LPAZ	La Paz	33.81	145	P	P	23 02 29.4	-5.7
	comp=Z,5.4nm,0.3s,baz=289,slow=6.1,SNR=37						
	comp=Z,5.4nm,0.3s						
PDAR	Pinedale Array	36.38	332	P	P	23 02 56.0	-0.5
	comp=Z,0.2nm,0.3s,baz=142,slow=8.2,SNR=2.1						
	comp=Z,0.2nm,0.3s						
G62A	West of Eustis	36.46	20	P	P	23 02 56.5	-0.4
VILB	Vilhena	36.58	131	P	P	23 02 60.0	+1.7
F64A	Sherman	37.79	22	P	P	23 03 06.5	-1.7
SCHQ	Schefferville	46.04	17	P	P	23 04 12.7	-2.8
	comp=Z,2.5nm,0.5s,baz=206,slow=7.9,SNR=5.0						
	comp=Z,2.5nm,0.5s						

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*NAO **10** 23:00:35.6±0.8, 71°50N×4°01W, ML3.9*

*MOS **10** 23:00:36.7±1.4, 71°52N×3°85W, h10km, mb4.4/16, Error ellipse: s-maj=19.0km s-min=7.0km az=97.7*

*IDC **10** 23:00:37.5±0.7, 71°37N×4°02W, h0km, mb3.7/14, mbtmp3.7/20, ML3.3/5, MS3.6/59, Error ellipse: s-maj=16.7km s-min=12.6km az=27.0*

*NEIC **10** 23:00:38.3±1.9, 71°60N±0°08×3°8W±0°2, h10km±1km, mb4.2/33, Error ellipse: s-maj=13.5km s-min=12.6km az=202.0*

*BER **10** 23:00:39.6±3.8, 71°62N×4°10W, h10km, Mw4.5, ML3.9(NAO), Confirmed Earthquake*

*DNK **10** 23:00:46.8±5.1, 71°86N×4°47W, h51km±44km, ML2.4*

ISC 10 23:00:38.1±0.4, **71°61N**±0°05×**4°05W**±0°04, **h12**km, **n266**, σ**2^{s}06**/234, **mb4.2**/52, **MS3.6**/59, **3C-1D, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JNE	Jan Mayen East	1.51	248	eP	Pn	23 01 05.2	+0.3
JNE				IAML		23 01 24.4	
	comp=Z,75nm,0.5s						
JNW	Jan Mayen West	1.53	250	eP	Pn	23 01 04.6	-0.6
JNW				IAML		23 01 27.9	
	comp=Z,70nm,0.5s						
JMIC	Jan Mayen	1.57	249	Pn	Pn	23 01 04.7	-1.0
JMIC				Lg	Lg	23 01 23.8	
JMIC	Jan Mayen	1.57	249	Pn	Pn	23 01 04.8	-1.0
	comp=Z,6.4nm,0.3s,baz=74,slow=6.9,SNR=9.6						
JMIC				Sn	Sn	23 01 23.7	-2.3
	comp=Z,12nm,0.3s,baz=164,slow=22,SNR=8.7						
JMIC				LR	LR	23 01 33.9	
	comp=Z,213nm,19.8s,baz=61,slow=37						
JMIC	Jan Mayen	1.57	249	eP	Pn	23 01 05.0	-0.7
JMIC				eS	Sn	23 01 23.9	-2.0
JMIC				IAML		23 01 37.4	
	comp=Z,53nm,0.6s						
JMIC	Jan Mayen	1.57	249	i P	Pn	23 01 04.1	-1.6
JMIC				i S	Sn	23 01 23.7	-2.3
JMI	Jan Mayen	1.66	248	Pn	Pn	23 01 06.6	-0.4
JMI				Lg	Lg	23 01 26.6	
JMI	Jan Mayen	1.66	248	eP	Pn	23 01 06.7	-0.3
JMI				eS	Sn	23 01 26.3	-1.9
JMI				IAML		23 01 30.4	
	comp=Z,59nm,0.4s						
DBG	Daneborg	5.46	307	Pn	Pn	23 01 58.6	-0.5
DBG				Sn	Sn	23 02 56.2	-5.6
DBG	Daneborg	5.46	307	i P	Pn	23 01 58.4	-0.7
DBG				i S	Sn	23 02 55.6	-6.2
DBG				IAML		23 03 11.8	
	comp=Z,18nm,0.5s						
DBG	Daneborg	5.46	307	i P	Pn	23 01 58.4	-0.7
DBG				i S	Sn	23 02 55.6	-6.2
DBG				IAML		23 03 11.8	
	comp=Z,18nm,0.5s						
SCO	Scoresbysund	5.94	268	Pn	Pn	23 02 06.6	+1.0
SCO	Scoresbysund	5.94	268	P	Pn	23 02 06.6	+1.0
SCO	Scoresbysund	5.94	268	i P	Pn	23 02 06.7	+1.0
SCO	Scoresbysund	5.94	268	i P	Pn	23 02 06.7	+1.0
DAG	Danmarks Havn	6.52	329	i P	Pn	23 02 11.8	-1.9
DAG				i S	Sn	23 03 17.2	-11
DAG				IAML		23 03 28.6	
	comp=Z,20nm,0.7s						
DAG	Danmarks Havn	6.52	329	i P	Pn	23 02 11.8	-1.9
DAG				i S	Sn	23 03 17.2	-11
DAG				IAML		23 03 28.6	
	comp=Z,20nm,0.7s						
LOF	Lofoten	6.98	111	Pn	Pn	23 02 17.6	-2.4
LOF	Lofoten	6.98	111	eP	Pn	23 02 18.1	-1.9
LOF				IAML		23 02 26.4	
	comp=Z,8.3nm,0.6s						
BJO1	Bjornoya	7.30	56	Pn	Pn	23 02 24.3	0.0
BJO1	Bjornoya	7.30	56	eP	Pn	23 02 24.6	+0.3
BJO1	Bjornoya	7.30	56	Pn	Pn	23 02 24.3	0.0
HSPB	Hornsund (broa	7.53	35	Pn	Pn	23 02 27.6	0.0
HSPB	Hornsund (broa	7.53	35	eP	Pn	23 02 27.0	-0.6
HSPB	Hornsund (broa	7.53	35	eP	Pn	23 02 27.8	+0.2
STEI	Steigen	7.61	110	eP	Pn	23 02 26.7	-2.0
STEI				IAML		23 02 34.6	
	comp=Z,27nm,0.4s						
VAGH	Vaagaholmen	7.85	120	eP	Pn	23 02 30.5	-1.4
TRO	Tromso	7.87	93	Pn	Pn	23 02 28.9	-3.2
TRO				Sn	Sn	23 03 49.8	-11
TRO	Tromso	7.87	93	eP	Pn	23 02 29.0	-3.2
FAUS	Fauske	7.97	113	Pn	Pn	23 02 31.3	-2.3
FAUS	Fauske	7.97	113	eP	Pn	23 02 32.9	-0.7
KONS	Konsvik	7.98	122	Pn	Pn	23 02 31.5	-2.2
KONS	Konsvik	7.98	122	eP	Pn	23 02 31.4	-2.3
BRBA	Barentsburg A	8.00	28	Pn	Pn	23 02 34.5	+0.6
BRBA	Barentsburg A	8.00	28	eP	Pn	23 02 33.6	-0.3
BRBA				IAML		23 02 34.9	
	comp=Z,13nm,0.5s						
BRBB	Barentsburg B	8.02	28	Pn	Pn	23 02 34.0	-0.2
BRBB	Barentsburg B	8.02	28	eP	Pn	23 02 34.1	-0.2
STOK	Stokkvaagen	8.08	123	Pn	Pn	23 02 33.3	-1.7
STOK	Stokkvaagen	8.08	123	eP	Pn	23 02 33.0	-2.0
STOK				IAML		23 02 40.3	
	comp=Z,5.3nm,0.7s						
LEIR	Leirfjorden	8.27	123	eP	Pn	23 02 35.9	-1.8
LEIR				IAML		23 02 39.2	
	comp=Z,7.7nm,0.5s						
KBS	Kingsbay	8.36	21		Pn	23 02 38.5	-0.3
KBS	Kingsbay	8.36	21	Pn	Pn	23 02 39.9	+1.1
KBS				Sn	Sn	23 04 08.3	-4.5
KBS	Kingsbay	8.36	21	i P	Pn	23 02 38.5	-0.3
KBS	Kingsbay	8.36	21	eP	Pn	23 02 39.4	+0.6
KBS				IAML		23 02 41.1	
	comp=Z,15nm,0.5s						
KBS	Kingsbay	8.36	21	i P	Pn	23 02 39.9	+1.1
JETT	Jettan, Norway	8.37	92	Pn	Pn	23 02 36.6	-2.5
JETT	Jettan, Norway	8.37	92	Pn	Pn	23 02 36.6	-2.5
SPA0	Spitsbergen Ar	8.41	29	Pn	Pn	23 02 40.9	+1.4
	baz=216,slow=18						
SPA0	Spitsbergen Ar	8.41	29	eP	Pn	23 02 40.8	+1.2
SPA0				eS	Sg	23 04 56.7	-11
SPA0	Spitsbergen Ar	8.41	29	Pn	Pn	23 02 40.9	+1.4
	baz=216,slow=18						
SPB2	Spitsbergen Ar	8.41	29		Pn	23 02 40.5	+0.9
SPITS	Spitsbergen Ar	8.41	29	Pn	Pn	23 02 40.8	+1.2
	comp=Z,5.6nm,0.3s,baz=217,slow=16,SNR=156						
KIF	Kilpisjarvi	8.75	95	Pn	Pn	23 02 41.8	-2.4
KIF				Sn	Sn	23 04 13.7	-8.9
KIF	Kilpisjarvi	8.75	95	eP	Pn	23 02 42.0	-2.2
SALU	Saltoluokta	8.94	107	eP	Pn	23 02 45.7	-1.1
HAMF	Hammerfest	8.99	83	eP	Pn	23 02 46.8	-0.8
NSS	Namsos	9.26	132	eP	Pn	23 02 51.0	-0.1
NSS				IAML		23 03 03.8	
	comp=Z,7.4nm,0.5s						
HOPEN	Hopen	9.28	45	Pn	Pn	23 02 52.0	+0.6
HOPEN	Hopen	9.28	45	eP	Pn	23 02 51.2	-0.2
HOPEN	Hopen	9.28	45	eP	Pn	23 02 51.6	+0.2
BORG	Borgarnes	9.38	231	Pn	Pn	23 02 54.0	+1.1
BORG	Borgarnes	9.38	231	Pn	Pn	23 02 50.6	-2.3
	comp=Z,0.2nm,0.3s,baz=90,slow=12,SNR=1.6						
BORG				LR	LR	23 05 50.4	
	comp=Z,53nm,20.5s,baz=36,slow=34						
	comp=Z,2.8nm,0.8s						
BORG	Borgarnes	9.38	231	P	Pn	23 02 54.0	+1.1
BORG	Borgarnes	9.38	231	i P	Pn	23 02 58.1	+5.2
BORG	Borgarnes	9.38	231	i P	Pn	23 02 58.1	+5.2
SOFL	Sornfelli, Far	9.65	188	eP	Pn	23 02 57.0	+0.4
SOFL				IAML		23 03 08.7	
	comp=Z,34nm,0.5s						
HEF	Hetta	9.95	95	Pn	Pn	23 02 58.1	-2.5
HEF	Hetta	9.95	95	eP	Pn	23 02 58.3	-2.4
ARA0	ARCESS Array S	10.00	88	Pn	Pn	23 02 59.4	-1.9
	baz=291,slow=12						
ARA0	ARCESS Array S	10.00	88	Pn	Pn	23 02 59.4	-1.9
	baz=291,slow=12						
ARCES	ARCESS Array B	10.00	88	Pn	Pn	23 03 00.0	-1.3
ARCES	ARCESS Array B	10.00	88	Pn	Pn	23 02 59.5	-1.9
	comp=Z,0.3nm,0.3s,baz=290,slow=12,SNR=14						
ARCES				LR	LR	23 06 21.9	
	comp=Z,208nm,19.5s,baz=286,slow=34						
ARCES	ARCESS Array B	10.00	88	P	Pn	23 03 00.0	-1.3
AKN	Aaknes	10.39	150	Pn	Pn	23 03 05.6	-1.1
AKN				Sn	Sn	23 04 52.0	-11
AKN	Aaknes	10.39	150	Pn	Pn	23 03 05.6	-1.1
AKN				Sn	Sn	23 04 52.0	-11
NOR	Nord	10.42	350	Pn	Pn	23 03 06.0	-1.0
NOR				Sn	Sn	23 04 55.4	-8.0
NOR	Nord	10.42	350	i P	Pn	23 03 06.0	-1.0
NOR				eS	Sn	23 04 51.4	-12
NOR				IAML		23 05 01.1	
	comp=Z,4.9nm,0.7s						
SUMG	Summit	10.54	291		Pn	23 03 09.8	+0.7
SUMG	Summit	10.54	291	P	Pn	23 03 09.8	+0.7
SUMG	Summit	10.54	291	i P	Pn	23 03 10.0	+0.9
SUMG	Summit	10.54	291	i P	Pn	23 03 10.0	+0.9
FOO	Floro	10.66	156	eP	Pn	23 03 10.0	-0.4
FOO				IAML		23 03 14.9	
	comp=Z,4.1nm,1.0s						
SUE	Sulen	11.15	157	e	Pn	23 03 15.1	-2.0
HYA	Hoyanger	11.23	154	e	Pn	23 03 18.2	0.0
LRW	Lerwick	11.58	173	Pn	Pn	23 03 22.2	-0.8
LRW				Sn	Sn	23 05 19.5	-12
LRW	Lerwick	11.58	173	eP	Pn	23 03 22.5	-0.5
BAS03	BAS03	11.69	157	e	Pn	23 03 23.6	-0.9
NC204	NORSAR Array S	11.89	143	Pn	Pn	23 03 26.8	-0.5
NC204	NORSAR Array S	11.89	143	e	Pn	23 03 26.1	-1.2
SKAR	Skarslia	12.02	150	eP	Pn	23 03 27.3	-1.7
NC303	NORSAR Array S	12.05	142	Pn	Pn	23 03 29.9	+0.4
ICESG	Greenland Ices	12.12	275	i P	Pn	23 03 31.6	+1.0
ICESG	Greenland Ices	12.12	275	i P	Pn	23 03 31.6	+1.0
NBO00	NORSAR Array S	12.12	144	Pn	Pn	23 03 30.9	+0.6
NB2	NORSAR Subarra	12.20	143	Pn	Pn	23 03 31.4	-0.1
NB2	NORSAR Subarra	12.20	143	Pn	Pn	23 03 31.4	-0.1
NOA	NORSAR Array B	12.20	143	Pn	Pn	23 03 30.0	-1.4
	baz=327,slow=13,SNR=3.8						
NOA				LR	LR	23 07 56.5	
	comp=Z,522nm,20.9s,baz=335,slow=37						
	comp=Z,0.3nm,0.5s						
NB201	NORSAR Array S	12.20	142	Pn	Pn	23 03 32.3	+0.8
NC405	NORSAR Array S	12.22	141	Pn	Pn	23 03 32.8	+1.0
NC602	NORSAR Array S	12.54	143	Pn	Pn	23 03 35.0	-1.1
KONO	Kongsberg	13.21	148	Pn	Pn	23 03 45.5	+0.4
KONO	Kongsberg	13.21	148	eP	Pn	23 03 44.9	-0.3
KONO	Kongsberg	13.21	148	i P	Pn	23 03 48.3	+3.2
NEEM	North Greenlan	13.43	316	i P	Pn	23 03 47.4	-1.0
NEEM	North Greenlan	13.43	316	i P	Pn	23 03 47.4	-1.0
HFS	Hagfors	13.52	139	Pn	Pn	23 03 48.0	-1.5
	baz=318,slow=16						
HFS	Hagfors	13.52	139	Pn	Pn	23 03 48.3	-1.2
	comp=Z,0.3nm,0.3s,baz=344,slow=9.9,SNR=10						
HFS				LR	LR	23 08 37.7	
	comp=Z,603nm,21.7s,baz=314,slow=36						
	comp=Z,4.0nm,0.8s						
HFS	Hagfors	13.52	139	Pn	Pn	23 03 48.0	-1.5
	baz=318,slow=16						
FIA0	FINESS Array S	15.51	116	P	Pn	23 04 14.3	-2.1
	baz=320,slow=11						
FIA0	FINESS Array S	15.51	116	P	Pn	23 04 14.3	-2.1
	baz=320,slow=11						
FIA1	FINESS Array S	15.51	116	Pn	Pn	23 04 14.6	-1.7
FINES	FINESS Array B	15.51	116	Pn	Pn	23 04 14.0	-2.3
FINES	FINESS Array B	15.51	116	Pn	Pn	23 04 14.2	-2.1
	comp=Z,0.2nm,0.3s,baz=339,slow=10,SNR=9.8						
FINES				LR	LR	23 09 33.7	
	comp=Z,486nm,19.1s,baz=344,slow=35						
	comp=Z,4.1nm,0.9s						
EKA	Eskdalemuir Ar	16.34	178	Pn	Pn	23 04 24.2	-2.9
	baz=9.9,slow=10						
	comp=Z,1.2nm,0.6s						
LSH	Leshukonskoye	19.08	86	eP	Pn	23 05 01.4	+0.5
EUNU	Eureka	19.75	329		P	23 05 08.2	+0.8
EUNU				IAmb	IAmb	23 05 17.0	
	comp=Z,12nm,0.9s						
KLMR	Klimovskoe	20.04	100	eP	Pn	23 05 12.4	+0.1
KLMR	Klimovskoe	20.04	100	eP	P	23 05 10.8	+0.3
KLMR				pmax	pmax		
	comp=Z,48nm,1.3s						
SUW	Suwalki	21.24	132	P	P	23 05 22.6	-0.9
SUW	Suwalki	21.24	132	P	P	23 05 22.6	-0.9
NACGM	Naroch	21.32	126	eP	P	23 05 25.1	+0.7
	comp=Z,6.0nm,0.9s,baz=335						
POIN	Pond Inlet	21.38	308		P	23 05 25.3	+0.3
POIN				IAmb	IAmb	23 05 34.3	
	comp=Z,13nm,1.1s						
MEM	Membach	21.56	162	dP	P	23 05 31.8	+4.7
CLL	Collm	21.77	150	P	P	23 05 27.1	-2.2
CLL	Collm	21.77	150	i P	P	23 05 29.4	+0.1
CLL				e		23 05 32.0	
CLL				eS	S	23 09 25.0	-4.5
CLL				pmax	pmax		
	comp=Z,12nm,1.6s						
CLL	Collm	21.77	150	i P	P	23 05 29.4	+0.1
	comp=Z,12nm,1.6s						
CLL				ex	x	23 05 32.0	
CLL				i x	x	23 05 37.5	
CLL				eS	S	23 09 25.0	-4.5
CLL				AMS	AMS	23 12 00.0	
	comp=Z,200nm,21.4s						
BRG	Berggiesshubel	22.34	149	eP	P	23 05 39.0	+3.6
BRG				Amp		23 05 42.9	
	comp=Z,4.5nm,0.9s						
CHVC	Chvalec	22.98	146	eP	P	23 05 44.2	+2.0
CHVC	Chvalec	22.98	146	eP	P	23 05 44.2	+2.0
OSTC	Ostas	23.04	146	eP	P	23 05 46.5	+3.7
OSTC	Ostas	23.04	146	eP	P	23 05 46.5	+3.7
UPC	Upice	23.05	146	eP	P	23 05 48.2	+5.3
UPC	Upice	23.05	146	eP	P	23 05 48.2	+5.3
MOS	Moscow	23.63	110	eP	P	23 05 46.5	-2.1
MOS				eS	S	23 09 58.3	-4.3
OBN	Obninsk	23.85	112⇑	eP	P	23 05 51.1	+0.3
OBN				*PP	pP	23 05 53.0	-0.8

OBN				e*SP	sP	23 05 55.1	0.0
OBN				ePPP	PPP	23 06 27.9	
OBN						23 09 29.0	
OBN				eS	S	23 10 08.5	+2.4
OBN				SSS	SSS	23 10 55.0	
OBN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
OBN				MLR	MLR		
	comp=Z,55nm,13.0s						
MORC	Moravsky Berou	24.03	144	eP	P	23 05 54.4	+1.8
ECH	Echery	24.04	161	P	P	23 05 52.8	+0.1
ECH				IAmb	IAmb	23 06 02.9	
	comp=Z,9.0nm,1.3s						
ECH	Echery	24.04	161	P	P	23 05 52.8	+0.1
ECH				pmax	pmax		
	comp=Z,9.0nm,1.3s						
BFO	Black Forest	24.05	159	P	P	23 05 52.2	-0.6
BFO				IAmb	IAmb	23 06 03.8	
	comp=Z,13nm,1.4s						
BFO	Black Forest	24.05	159	P	P	23 05 52.2	-0.6
BFO				pmax	pmax		
	comp=Z,13nm,1.4s						
RES	Resolute Bay	24.09	319	LR	LR	23 14 58.6	
	comp=Z,281nm,20.7s,baz=52,slow=36						
GEC2	GERESS Array S	24.27	151	P	P	23 05 54.5	-0.4
GERES	GERESS Array B	24.27	151	P	P	23 05 55.0	+0.1
	comp=Z,1.0nm,1.0s,baz=356,slow=12,SNR=1.9						
GERES				LR	LR	23 15 03.2	
	comp=Z,129nm,21.3s,baz=352,slow=36						
	comp=Z,1.0nm,1.0s						
GERES	GERESS Array B	24.27	151	P	P	23 05 55.0	+0.1
VRAC	Vranov	24.30	146	LR	LR	23 15 07.4	
	comp=Z,157nm,21.4s,baz=345,slow=36						
VRAC	Vranov	24.30	146	eP	P	23 05 57.0	+1.9
FRB	Frobisher Bay	24.48	284	LR	LR	23 15 02.8	
	comp=Z,197nm,19.5s,baz=53,slow=35						
KRUC	Moravsky	24.51	146	eP	P	23 05 57.8	+0.9
KIRV	Kirov	24.93	93	LR	LR	23 15 12.2	
	comp=Z,116nm,18.4s,baz=321,slow=35						
KIRV	Kirov	24.93	93	i P	P	23 06 01.6	+1.0
RETA	Reutte	25.18	156	eP	P	23 06 04.8	+1.7
	comp=Z,4.6nm,1.2s						
DAVA	Damuels	25.27	157	i P	P	23 06 05.7	+1.8
	comp=Z,5.4nm,1.1s						
MODS	Modra-Piesok	25.33	145	eP	P	23 06 10.3	+5.9
MODS	Modra-Piesok	25.33	145	eP	P	23 06 10.2	+5.9
MOTA	Moosalm	25.36	155	i pP	pP	23 06 07.3	-0.4
	comp=Z,5.6nm,0.9s						
WATA	Walderalm	25.43	155	i pP	pP	23 06 08.4	0.0
	comp=Z,6.5nm,1.2s						
SQTA	Sankt Quirin	25.50	155	i pP	pP	23 06 09.2	+0.2
	comp=Z,2.9nm,0.5s						
VYHS	Vyhne	25.50	143	eP	P	23 06 11.7	+5.8
VYHS	Vyhne	25.50	143	eP	P	23 06 11.7	+5.8
LESA	Schwarzleotal	25.50	153	i pP	pP	23 06 09.1	+0.2
	comp=Z,1.1nm,0.6s						
CONA	Conrad Observa	25.51	148	i pP	pP	23 06 08.5	-0.6
	comp=Z,7.0nm,1.1s						
WTTA	Wattenberg	25.51	155	i pP	pP	23 06 09.4	+0.2
	comp=Z,4.0nm,0.7s						
AKASG	Malin Array Be	25.76	127	P	P	23 06 07.3	-0.9
	comp=Z,3.5nm,0.7s,baz=337,slow=9.6,SNR=11						
AKASG				LR	LR	23 15 55.0	
	comp=Z,293nm,19.5s,baz=328,slow=36						
	comp=Z,3.5nm,0.7s						
AKBB	Malin Array Si	25.76	127		P	23 06 07.3	-0.9
AKBB	Malin Array Si	25.76	127	i P	P	23 06 07.1	-1.1
AKBB				pmax	pmax		
	comp=Z,14nm,1.8s						
DAVOX	Davos/Dischmat	25.76	158	LR	LR	23 17 44.0	
	comp=Z,83nm,18.5s,baz=83,slow=40						
KIEV	Kiev	25.76	127		P	23 06 07.3	-0.9
KIEV	Kiev	25.76	127	P	P	23 06 07.3	-0.9
KIEV				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CTI	Castel Tesino	26.71	155	P	P	23 06 17.0	+0.1
CTI	Castel Tesino	26.71	155	P	P	23 06 17.0	+0.1
CTI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BEHE	Becsehely	27.08	147	P	P	23 06 20.8	+0.6
BEHE				IAmb	IAmb	23 06 50.2	
	comp=Z,3.1nm,0.6s						
BELG	Belogornoye	29.54	103	LR	LR	23 17 55.6	
	comp=Z,318nm,18.0s,baz=308,slow=35						
ARTI	Arti	29.56	88	LR	LR	23 18 09.8	
	comp=Z,136nm,19.6s,baz=328,slow=36						
ARTI	Arti	29.56	88c	iP	P	23 06 42.4	+0.2
ARTI						23 07 36.6	
ARTI				S	S	23 11 37.4	+0.9
ARTI				pmax	pmax		
	comp=Z,11nm,2.2s						
MLR	Muntele Rosu	29.84	135	LR	LR	23 19 09.8	
	comp=Z,313nm,19.1s,baz=312,slow=38						
SCHQ	Schefferville	30.97	271	LR	LR	23 18 16.3	
	comp=Z,178nm,18.7s,baz=2.5,slow=34						
ESDC	Sonseca Array	32.01	180	P	P	23 07 02.9	-1.1
	comp=Z,0.5nm,0.8s,baz=359,slow=7.4,SNR=5.1						
ESDC				LR	LR	23 19 24.3	
	comp=Z,70nm,18.9s,baz=354,slow=36						
	comp=Z,0.5nm,0.8s						
TIXI	Tiksi	33.80	25	LR	LR	23 19 41.9	
	comp=Z,28nm,20.3s,baz=350,slow=34						
AKTO	Aktyubinsk	34.50	94	LR	LR	23 21 04.6	
	comp=Z,150nm,19.0s,baz=356,slow=36						
SOC	Sochi	35.11	119	eP	P	23 07 31.7	+0.8
SOC				eS	S	23 13 06.1	+3.1
SOC				eSS	SnSn	23 15 20.1	+1.1
SOC				MLR	MLR		
	comp=Z,207nm,16.0s						
VAE	Valguarnera	35.50	154	LR	LR	23 21 22.3	
	comp=Z,96nm,20.4s,baz=324,slow=35						
KIV	Kislovodsk	35.61	115	eP	P	23 07 34.8	-0.5
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,61nm,16.0s						
KVAR	Kislovodsk Arr	35.61	115	LR	LR	23 21 05.8	
	comp=Z,74nm,21.8s,baz=291,slow=35						
SHA1	Shidzhatmaz	35.80	116	i P	P	23 07 36.9	-0.2
KBZ	Khabaz	35.88	115	P	P	23 07 39.5	+2.2
	comp=Z,1.9nm,0.8s,baz=331,slow=5.8,SNR=4.5						
KBZ				LR	LR	23 20 38.0	
	comp=Z,52nm,20.1s,baz=342,slow=34						
	comp=Z,1.9nm,0.8s						
KBZ	Khabaz	35.88	115	i P	P	23 07 38.4	+1.0
KBZ				pmax	pmax		
	comp=Z,8.0nm,1.5s						
ILGA	Ilgaz	35.89	128		P	23 07 37.7	-0.1
BRVK	Borovoye	36.12	80	i P	P	23 07 41.5	+2.1
BRVK				pmax	pmax		
	comp=Z,12nm,3.9s						
BVAR	Borovoye Array	36.18	80	P	P	23 07 41.0	+1.1
	comp=Z,2.1nm,0.9s,baz=324,slow=7.3,SNR=9.1						
BVAR				LR	LR	23 22 09.7	
	comp=Z,44nm,19.6s,baz=317,slow=36						
	comp=Z,2.1nm,0.9s						
INK	Inuvik	36.36	331	LR	LR	23 24 39.0	
	comp=Z,70nm,18.3s,baz=348,slow=39						
KEST	Kesra	36.62	162	LR	LR	23 23 07.7	
	comp=Z,108nm,19.1s,baz=9.7,slow=37						
E29M	Blow River	36.93	334	P	P	23 07 47.5	+1.2
E29M				IAmb	IAmb	23 07 59.7	
	comp=Z,8.9nm,1.5s						
C23K	Itkillik River	37.10	342	P	P	23 07 49.5	+1.9
BRTR	Keskin Array B	37.12	129	P	P	23 07 48.3	0.0
BRTR	Keskin Array B	37.12	129	P	P	23 07 47.1	-1.2
	comp=Z,0.5nm,0.3s,baz=337,slow=6.5,SNR=6.3						
	comp=Z,0.5nm,0.3s						
BRTR	Keskin Array B	37.12	129	P	P	23 07 48.3	0.0
D25K	Kavik River	37.14	339	P	P	23 07 48.1	+0.1
MAK	Makhachkala	37.92	111c	iP	P	23 07 50.4	-4.4
MAK				eS	S	23 13 40.3	-5.6
MAK				MLR	MLR		
	comp=Z,256nm,19.0s						
YKA	Yellowknife Ar	37.99	315	P	P	23 07 56.4	+1.2
	comp=Z,0.7nm,0.7s,baz=24,slow=9.3,SNR=4.1						
YKA				LR	LR	23 22 29.7	
	comp=Z,138nm,20.5s,baz=70,slow=34						
	comp=Z,0.7nm,0.7s						
G29M	Pine Creek	38.33	333	P	P	23 07 57.9	-0.2
G29M				IAmb	IAmb	23 08 09.7	
	comp=Z,5.4nm,0.9s						
E23K	Chandalar	38.71	340	P	P	23 08 02.4	+1.1
E23K				IAmb	IAmb	23 08 09.0	
	comp=Z,3.6nm,0.8s						
BMAR	Burnt Mountain	38.72	337	P	P	23 08 03.7	+2.3
D20K	Etivluk River	38.75	344	P	P	23 08 02.4	+0.8
D20K				IAmb	IAmb	23 08 19.9	
	comp=Z,6.4nm,1.4s						
MDT	Midelt	38.85	181	LR	LR	23 22 52.1	
	comp=Z,53nm,18.6s,baz=43,slow=35						
E22K	Anaktuvuk Pass	38.86	341	P	P	23 08 01.2	-1.4
C18K	Utukok River	39.17	347	P	P	23 08 06.3	+1.2
C18K				IAmb	IAmb	23 08 14.7	
	comp=Z,8.7nm,1.4s						
I30M	Mount Dempster	39.66	331	P	P	23 08 10.3	+1.0
I30M				IAmb	IAmb	23 08 16.2	
	comp=Z,5.3nm,1.0s						
GNI	Garni	39.70	116	LR	LR	23 25 05.4	
	comp=Z,92nm,19.5s,baz=329,slow=37						
GNI	Garni	39.70	116	i P	P	23 08 09.6	-0.4
GNI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZALV	Zalesovo Beam	39.77	67	LR	LR	23 28 58.6	
	comp=Z,20nm,19.0s,baz=280,slow=43						
C16K	Lisburne Hills	39.81	349	P	P	23 08 11.2	+0.8
J30M	Hart River	40.25	330	P	P	23 08 13.0	-1.3
F20K	Avaraart Lake	40.29	343	P	P	23 08 14.6	+0.2
F20K				IAmb	IAmb	23 08 22.5	
	comp=Z,4.8nm,0.9s						
BILL	Bilibino	40.45	6	i P	P	23 08 17.8	+2.1
BILL				pmax	pmax		
	comp=Z,7.0nm,1.7s						
I26K	Coal Creek Min	40.56	335	P	P	23 08 18.5	+1.9
PRP	Porcupine Dome	40.66	337	P	P	23 08 17.7	0.0
KURK	Kurchatov	40.73	75	i P	P	23 08 19.5	+1.3
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KURBB	Kurchatov Arra	40.79	75	P	P	23 08 18.9	+0.2
	comp=Z,1.5nm,0.8s,baz=335,slow=7.0,SNR=8.6						
	comp=Z,1.5nm,0.8s						
K29M	Barlow Dome	41.13	331	P	P	23 08 22.8	+1.4
K29M				IAmb	IAmb	23 08 29.4	
	comp=Z,5.0nm,0.9s						
IMAR	Indian Mountai	41.15	342	P	P	23 08 22.6	+1.1
MMPY	Sheldon Lake,	41.23	326	P	P	23 08 22.5	+0.2
MMPY				IAmb	IAmb	23 08 30.4	
	comp=Z,8.6nm,1.3s						
G19K	Purcell Mounta	41.30	344	P	P	23 08 22.4	-0.4
G19K				IAmb	IAmb	23 08 32.2	
	comp=Z,5.3nm,0.9s						
J25K	Salcha River,	41.51	336	P	P	23 08 25.6	+1.0
J25K				IAmb	IAmb	23 08 32.1	
	comp=Z,6.2nm,1.4s						
ILAR	Eielson Array	41.55	337	P	P	23 08 27.2	+2.4
	comp=Z,0.9nm,0.9s,baz=8.3,slow=7.0,SNR=9.6						
ILAR				LR	LR	23 27 26.3	
	comp=Z,67nm,20.0s,baz=14,slow=38						
	comp=Z,0.9nm,0.9s						
COLA	College	41.57	338	eP	P	23 08 26.4	+1.5
COLA				pmax	pmax		
	comp=Z,26nm,3.7s						
F15K	North Star Dit	42.31	348	P	P	23 08 30.9	-0.2
BCAR	Beaver Creek A	42.50	333	P	P	23 08 34.1	+1.4
L27K	Beaver Creek,	42.51	333	P	P	23 08 33.6	+0.9
YAK	Yakutsk	42.88	30	LR	LR	23 27 08.0	
	comp=Z,29nm,18.4s,baz=144,slow=37						
SADO	Sadowa	43.64	274	LR	LR	23 26 02.6	
	comp=Z,115nm,18.3s,baz=143,slow=35						
ULM	Lac du Bonnet	43.90	292	P	P	23 08 47.8	+3.8
	comp=Z,2.6nm,0.9s,baz=82,slow=5.0,SNR=3.1						
ULM				LR	LR	23 26 32.3	
	comp=Z,78nm,18.8s,baz=12,slow=35						
	comp=Z,2.6nm,0.9s						
MMAI	Mount Meron Ar	43.93	130	P	P	23 08 45.2	+0.7
	comp=Z,0.1nm,0.3s,baz=42,slow=9.0,SNR=3.9						
MMAI				LR	LR	23 28 12.2	
	comp=Z,54nm,21.2s,baz=296,slow=38						
	comp=Z,0.1nm,0.3s						
SEY	Seymchan	44.75	15	i P	P	23 08 49.4	-1.3
SEY				pmax	pmax		
	comp=Z,6.0nm,1.4s						
DLBC	Dease Lake	44.89	323	LR	LR	23 27 51.1	
	comp=Z,249nm,19.0s,baz=70,slow=36						
KK31	Karatay Array	44.96	87	P	P	23 08 52.6	0.0
KK31				IAmb	IAmb	23 09 03.2	
	comp=Z,3.9nm,1.1s						
KK31	Karatay Array	44.96	87	P	P	23 08 52.6	0.0
KK31				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KKAR	Karatay Array	44.96	87	P	P	23 08 51.2	-1.4
KKAR	Karatay Array	44.96	87	P	P	23 08 51.2	-1.4
ASF	Jabal al Asfar	45.10	128	LR	LR	23 28 59.1	
	comp=Z,79nm,20.8s,baz=4.3,slow=38						
MKAR	Makanchi Array	45.34	75	P	P	23 08 57.6	+2.1
	comp=Z,0.7nm,0.8s,baz=348,slow=6.6,SNR=6.9						
MKAR				LR	LR	23 31 20.3	
	comp=Z,26nm,19.1s,baz=335,slow=41						
	comp=Z,0.7nm,0.8s						
AAK	Ala-Archa	46.64	84	LR	LR	23 28 40.8	
	comp=Z,42nm,18.2s,baz=324,slow=36						
AAK	Ala-Archa	46.64	84	i P	P	23 09 07.4	+1.3
AAK				pmax	pmax		
	comp=Z,5.0nm,1.5s						
EIL	Elat	47.02	132	LR	LR	23 31 45.1	
	comp=Z,50nm,18.4s,baz=4.5,slow=40						
MA2	Magadan	47.92	17	LR	LR	23 27 36.6	
	comp=Z,12nm,21.8s,baz=345,slow=34						
KDAK	Kodiak Island	49.03	338	LR	LR	23 30 39.3	
	comp=Z,58nm,21.5s,baz=24,slow=37						
KSH	Kashi	49.94	84	P	P	23 09 34.2	+2.7
KSH				pP	pwP	23 09 38.7	+1.3
KSH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BBB	Bella Bella	50.38	319	LR	LR	23 31 11.7	
	comp=Z,100nm,18.8s,baz=33,slow=36						
SONM	Songino Array	51.24	54	P	P	23 09 45.1	+3.9
	comp=Z,0.4nm,0.5s,baz=324,slow=7.1,SNR=2.3						
SONM				LR	LR	23 36 28.0	
	comp=Z,35nm,18.2s,baz=256,slow=42						
	comp=Z,0.4nm,0.5s						
NEW	Newport	51.51	308	LR	LR	23 31 01.0	
	comp=Z,98nm,19.4s,baz=14,slow=35						
TKL	Tuckaleechee C	53.38	273	LR	LR	23 30 34.0	
	comp=Z,75nm,18.3s,baz=16,slow=34						
PDAR	Pinedale Array	54.62	300	LR	LR	23 33 20.1	
	comp=Z,84nm,18.5s,baz=9.5,slow=36						
ELK	Elko	58.04	303	LR	LR	23 35 42.3	
	comp=Z,70nm,19.1s,baz=20,slow=36						
HHC	Hu-ho-hao-te	59.08	53	eP	P	23 10 37.4	-0.4
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,4.7s						
ANMO	Albuquerque	61.01	293	LR	LR	23 36 47.5	
	comp=Z,77nm,20.1s,baz=120,slow=36						
NVAR	Mina Array Bea	61.02	305	LR	LR	23 38 36.6	
	comp=Z,60nm,18.6s,baz=100,slow=37						
DBIC	Dimbokro	64.87	181	LR	LR	23 41 24.6	
	comp=Z,33nm,18.6s,baz=5.0,slow=38						
PFO	Pinyon Flats O	65.07	302	LR	LR	23 42 07.8	
	comp=Z,51nm,18.8s,baz=36,slow=38						
TXAR	Lajitas Array	65.43	289	P	P	23 11 23.8	+3.4
	comp=Z,0.3nm,0.7s,baz=29,slow=6.5,SNR=2.0						
TXAR				LR	LR	23 39 51.4	
	comp=Z,57nm,18.4s,baz=15,slow=36						
	comp=Z,0.3nm,0.7s						
PZH	PanZhiHua	69.91	67	P	P	23 11 49.6	+0.8
LPIG	La Paz	72.31	293	LR	LR	23 44 30.6	
	comp=Z,69nm,18.1s,baz=53,slow=36						
MDP	Montagnes des	72.97	231	LR	LR	23 37 28.2	
	comp=Z,22nm,18.8s,baz=264,slow=30						
CMAR	Chiang Mai Arr	76.66	72	LR	LR	23 52 23.9	
	comp=Z,14nm,18.6s,baz=210,slow=40						
LSZ	Lusaka	89.38	149	LR	LR	00 00 02.7	
	comp=Z,36nm,18.0s,baz=132,slow=40						
PSI	Prapat	91.44	77	LR	LR	23 59 46.5	
	comp=Z,121nm,18.2s,baz=172,slow=39						
TSUM	Tsumeb	91.79	160	LR	LR	23 59 11.0	
	comp=Z,36nm,18.5s,baz=342,slow=38						
LBTB	Lobatse	98.54	153	LR	LR	00 00 16.9	
	comp=Z,26nm,19.3s,baz=70,slow=36						

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*IDC **10** 23:02:13.6±7.6, 0°.64N×121°.69E, h0km, mb3.9/3, mbtmp3.9/5, ML4.0/2, Error ellipse: s-maj=119.0km s-min=62.3km az=147.0*

*NEIC **10** 23:02:17.2±2.2, 0°.34N±0°.07×120°.4E±0°.1, h14km±8km, mb4.7/21, Error ellipse: s-maj=17.0km s-min=6.2km az=120.0*

*DJA **10** 23:02:21.8±0.5, 0°N±3°×12°1E±°, h33km±12km, M4.2/18, mb4.3/8, MLv4.2/18*

ISC 10 23:02:20.9±0.8**, 0°.45N**±0°.04×**120°.84E**±0°.05**, h35km, n51, σ2s.52**/48**, mb4.6**/14**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOLI2	Tolitoli	0.66	355		Pn	23 02 34.7	+0.9
TOLI2				Sg	Sn	23 02 44.6	+1.7
TOLI2	Tolitoli	0.66	355	P	Pn	23 02 34.9	+1.1
MPSI	Mapaga	0.95	263	P	Pn	23 02 39.6	+1.9
MRSI	Marisa	1.10	89	P	Pn	23 02 40.8	+1.0
MRSI				S	Sn	23 02 56.5	+2.7
APSI	Ampana	1.57	149	P	Pn	23 02 47.4	+1.1
PCI	Palu	1.68	217	P	Pn	23 02 49.4	+1.6
LUWI	Luwuk	2.43	127		Pn	23 03 00.5	+2.3
LUWI				Sn	Sn	23 03 33.4	+6.7
LUWI	Luwuk	2.43	127	P	Pn	23 03 00.6	+2.5
KMSI	Cibinong	3.14	88	P	Pn	23 03 10.7	+2.8
TTSI	Tana Toraja	3.62	196	P	Pn	23 03 17.1	+2.6
BKB	Balikpapan	4.29	247	P	Pn	23 03 23.9	+0.1
SPSI	Sidrap Palu	4.51	194	P	Pn	23 03 28.5	+1.7
KDI	Kendari	4.72	158	P	Pn	23 03 31.4	+1.7
BNSI	Bone	4.87	189	P	Pn	23 03 34.6	+2.9
KAPI	Kappang	5.54	191	Pn	Pn	23 03 37.0	-3.8
KAPI	Kappang	5.54	191	Pn	Pn	23 03 42.0	+1.2
	1.8nm,0.3s,baz=27,slow=14,SNR=7.3						
KAPI				Sn	Sn	23 04 44.8	+1.5
	1.3nm,0.3s,baz=37,slow=20,SNR=1.9						
	4.3nm,0.4s						
KAPI	Kappang	5.54	191	P	Pn	23 03 43.5	+2.7
SANI	Sanana	5.71	116	P	Pn	23 03 42.0	-1.3
SANI	Sanana	5.71	116	P	Pn	23 03 41.5	-1.8
	0.1nm15nm,0.7s						
BBSI	Bau Bau	6.14	164	P	Pn	23 03 50.9	+1.7
	0.2nm46nm,0.9s						
BSSI	Bau Bau, Buton	6.56	183	P	Pn	23 03 55.5	+0.6
	0.2nm31nm,1.2s						
KKM	Kota Kinabalu	7.23	320	P	Pn	23 04 07.6	+3.4
NLAI	Namlea	7.25	120	P	Pn	23 04 04.6	+0.2
FITZ	Fitzroy Crossi	19.03	166	P	P	23 06 38.0	-2.0
FITZ	Fitzroy Crossi	19.03	166	P	P	23 06 37.6	-2.3
	0.6nm,0.3s,baz=4.5,slow=7.9,SNR=11						
	2.4nm,0.5s						
WB0	Warramunga Arr	24.09	147	P	P	23 07 28.5	-4.8
WRA	Warramunga Arr	24.20	148	P	P	23 07 31.0	-3.4
WRA	Warramunga Arr	24.20	148	P	P	23 07 29.2	-5.2
	1.9nm,0.5s,baz=328,slow=10,SNR=34						
	1.9nm,0.5s						
WR8	Warramunga Arr	24.30	147	P	P	23 07 30.3	-5.0
ASAR	Alice Springs	27.12	153	P	P	23 07 56.6	-4.3
	0.7nm,0.6s,baz=333,slow=9.0,SNR=11						
	0.7nm,0.6s						
STKA	Stephens Creek	37.68	150	P	P	23 09 29.4	-3.6
	1.3nm,0.4s,baz=332,slow=9.4,SNR=5.1						
	1.3nm,0.4s						
INZ	Inchbonnie	62.46	140		P	23 12 40.6	-0.1
BKZ	Black Stump Fm	64.30	135	P	P	23 12 55.4	+2.3
D19K	Kuna River	86.29	21		P	23 14 59.1	+0.2
D19K				IAmb	IAmb	23 14 59.6	
	comp=Z,4.0nm,0.8s						
B20K	Meade River	86.84	20	P	P	23 15 01.3	-0.1
B20K				IAmb	IAmb	23 15 01.9	
	comp=Z,4.7nm,0.7s						
D20K	Etivluk River	86.87	21	P	P	23 15 01.6	-0.1
D20K				IAmb	IAmb	23 15 02.8	
	comp=Z,3.2nm,0.7s						
B21K	Ikpikpuk River	87.67	20	P	P	23 15 06.3	+0.8
B21K				IAmb	IAmb	23 15 07.4	
	comp=Z,3.0nm,0.9s						
G21K	Allakaket	87.85	24	P	P	23 15 07.1	+0.7
G21K				IAmb	IAmb	23 15 09.5	
	comp=Z,2.6nm,0.7s						
F21K	Alatna River	87.91	23	P	P	23 15 08.2	+1.5
H21K	Melozitna Rive	88.08	24	P	P	23 15 08.4	+0.9
H21K				IAmb	IAmb	23 15 11.6	
	comp=Z,2.1nm,0.7s						
E23K	Chandalar	89.42	22		P	23 15 16.1	+2.2
E23K				IAmb	IAmb	23 15 17.8	
	comp=Z,2.7nm,0.6s						
TOLK	Toolik Lake Re	89.43	21	P	P	23 15 15.3	+1.4
F24K	Squaw Lake	90.08	23		P	23 15 18.4	+1.4
F24K				IAmb	IAmb	23 15 22.1	
	comp=Z,2.5nm,0.7s						
D25K	Kavik River	90.57	21	P	P	23 15 20.0	+0.8
D25K				IAmb	IAmb	23 15 23.2	
	comp=Z,2.0nm,0.7s						
C27K	Jago River	91.49	20	P	P	23 15 25.0	+1.6
C27K				IAmb	IAmb	23 15 28.4	
	comp=Z,3.3nm,0.9s						
I28M	Miner Creek	93.43	24		P	23 15 40.6	+8.0
I28M				IAmb	IAmb	23 15 41.2	
	comp=Z,2.6nm,0.7s						
H29M	Whitestone	93.94	24		P	23 15 42.3	+7.5
G29M	Pine Creek	93.96	23		P	23 15 41.7	+6.8
G30M	tAoh Zraii Nji	94.64	23		P	23 15 44.7	+6.6
I30M	Mount Dempster	94.94	24		P	23 15 47.9	+8.4
H31M	Peel River	95.64	24		P	23 15 50.6	+8.0

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*IDC **10** 23:03:45.2±0.4, 14°.27N×120°.68E, h185km±3km, mb3.6/19, mbtmp4.1/20, Error ellipse: s-maj=21.1km s-min=9.5km az=72.0*

*NEIC **10** 23:03:46.1±1.2, 14°.35N±0°.09×120°.8E±0°.1, h185km±5km, mb4.2/32, Error ellipse: s-maj=20.1km s-min=12.6km az=85.0*

ISC 10 23:03:45.3±0.5**, 14°.26N**±0°.07×**120°.7E**±0°.1**, h185km, n63, σ0s.81**/63**, mb4.0**/34**, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	Tagaytay City	0.28	123	P	Pn	23 04 10.8	+0.8
	2µm,0.5s,baz=290,slow=1.7,SNR=25						
TGY				S	Sn	23 04 29.8	+0.7
	2µm,0.5s,baz=3.5,slow=19,SNR=7.3						
YULB	Yu-li	9.10	4	Pn	Pn	23 05 53.2	+0.1
YHNB	Yeheng	10.38	3	Pn	Pn	23 06 11.6	+1.9
TOLI2	Tolitoli	13.06	180		Pn	23 06 45.9	+1.7
KAPI	Kappang	19.17	183	P	Pn	23 07 57.2	-0.8
KAPI				IAmb	IAmb	23 07 59.7	
	comp=Z,16nm,1.1s						
KAPI	Kappang	19.17	183	P	Pn	23 07 56.6	-1.4
	comp=Z,7.0nm,0.5s,baz=9.7,slow=8.9,SNR=4.6						
FAKI	Fak Fak	20.56	145	P	Pn	23 08 13.5	-1.3
FAKI				IAmb	IAmb	23 08 33.6	
	comp=Z,10nm,1.1s						
CMAR	Chiang Mai Arr	21.28	284	P	P	23 08 17.0	-0.4
	comp=Z,1.0nm,0.3s,baz=97,slow=8.2,SNR=5.7						
	comp=Z,1.0nm,0.3s						
JMN	Monobe	22.78	29	P	P	23 08 31.4	-0.6
TJN	Taejon	22.82	14	P	P	23 08 30.5	-1.7
JCJ	Chichijima	23.77	54	P	P	23 08 39.0	-2.0
KSRS	Korea Array	23.98	14	P	P	23 08 42.3	-0.5
	comp=Z,1.4nm,0.6s,baz=199,slow=10,SNR=5.3						
	comp=Z,1.4nm,0.6s						
LHMI	Lhok Sumawe	25.04	251	P	P	23 08 51.3	-1.3
GTA	Gaotai	31.06	328	eP	P	23 09 47.6	+1.5
GTA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
USRK	Ussuriysk Ar.	31.36	16	P	P	23 09 48.6	+0.2
	comp=Z,1.9nm,0.6s,baz=203,slow=8.7,SNR=4.1						
	comp=Z,1.9nm,0.6s						
FITZ	Fitzroy Crossi	32.52	171	P	P	23 09 58.8	0.0
FITZ	Fitzroy Crossi	32.52	171	P	P	23 09 58.2	-0.6
	comp=Z,3.1nm,1.0s,baz=6.6,slow=4.9,SNR=6.8						
	comp=Z,3.1nm,1.0s						
EVN	Everest	34.28	299	P	P	23 10 15.3	+0.5
EVN				IAmb	IAmb	23 10 16.1	
	comp=Z,4.1nm,0.6s						
SONM	Songino Array	35.52	343	P	P	23 10 24.6	+0.1
SONM	Songino Array	35.52	343	P	P	23 10 24.6	+0.1
	comp=Z,2.4nm,0.6s,baz=162,slow=9.8,SNR=12						
	comp=Z,2.4nm,0.6s						
WB0	Warramunga Arr	36.40	158	P	P	23 10 32.3	+0.1
WB0				IAmb	IAmb	23 10 35.6	
	comp=Z,11nm,1.5s						
WRAB	Tennant Creek	36.54	158	P	P	23 10 33.5	+0.2
WRAB				IAmb	IAmb	23 10 33.9	
	comp=Z,6.3nm,1.1s						
WRA	Warramunga Arr	36.54	158	P	P	23 10 33.5	+0.1
WRA	Warramunga Arr	36.54	158	P	P	23 10 32.8	-0.6
	comp=Z,0.8nm,0.3s,baz=330,slow=10.0,SNR=16						
	comp=Z,0.8nm,0.3s						
WR8	Warramunga Arr	36.61	158	P	P	23 10 34.2	+0.3
WR8				IAmb	IAmb	23 11 03.7	
	comp=Z,11nm,1.4s						

AS31	Alice Springs	39.84	161	P	P	23 11 02.2	+1.3
ASAR	Alice Springs	39.85	161	P	P	23 11 01.9	+0.9
ASAR	Alice Springs	39.85	161	P	P	23 11 01.5	+0.6
	comp=Z,0.8nm,0.4s,baz=336,slow=7.5,SNR=18						
	comp=Z,0.8nm,0.4s						
FORT	Forrest	45.34	171	P	P	23 11 45.0	0.0
MKAR	Makanchi Array	45.58	323	P	P	23 11 47.3	+0.5
MKAR	Makanchi Array	45.58	323	P	P	23 11 47.0	+0.2
	comp=Z,0.4nm,0.3s,baz=109,slow=8.4,SNR=12						
	comp=Z,0.4nm,0.3s						
MAKZ	Makanchi	45.77	323	P	P	23 11 48.2	-0.1
PETK	Petropavlovsk-	48.54	29	P	P	23 12 09.5	0.0
	comp=Z,2.3nm,0.7s,baz=248,slow=1.6,SNR=4.0						
	comp=Z,2.3nm,0.7s						
ZAA0	Zalesovo Array	48.56	332	P	P	23 12 09.5	-0.2
ZALV	Zalesovo Beam	48.56	332	P	P	23 12 09.3	-0.3
ZALV	Zalesovo Beam	48.56	332	P	P	23 12 09.1	-0.5
	comp=Z,2.3nm,0.4s,baz=116,slow=6.9,SNR=11						
	comp=Z,2.3nm,0.4s						
ARSB	Arslanbob	49.28	313	P	P	23 12 16.4	+0.9
KURBB	Kurchatov Arra	49.72	326	P	P	23 12 18.7	+0.2
	comp=Z,5.0nm,0.7s,baz=131,slow=7.9,SNR=33						
	comp=Z,5.0nm,0.7s						
KURK	Kurchatov	49.72	326		P	23 12 19.1	+0.5
GAR	Garm	50.56	309	P	P	23 12 25.2	-0.1
GAR				IAmb	IAmb	23 12 25.9	
	comp=Z,6.2nm,0.9s						
KK31	Karatay Array	51.58	314		P	23 12 33.1	+0.5
KK31				IAmb	IAmb	23 12 33.8	
	comp=Z,3.2nm,0.8s						
KKAR	Karatay Array	51.58	314		P	23 12 33.1	+0.5
KKAR				IAmb	IAmb	23 12 33.8	
	comp=Z,3.3nm,0.8s						
KKAR	Karatay Array	51.58	314	P	P	23 12 33.3	+0.7
BVAR	Borovoye Array	55.31	326	P	P	23 12 59.8	+0.3
	comp=Z,4.3nm,0.6s,baz=113,slow=8.4,SNR=41						
	comp=Z,4.3nm,0.6s						
BRVK	Borovoye	55.38	326		P	23 13 00.5	+0.5
AB31	Akbulak array	60.31	319		P	23 13 34.5	+0.1
AB31				IAmb	IAmb	23 13 35.1	
	comp=Z,3.4nm,0.6s						
ABKAR	Akbulak array	60.31	319		P	23 13 34.5	+0.1
ABKAR				IAmb	IAmb	23 13 35.1	
	comp=Z,3.4nm,0.6s						
ARCES	ARCESS Array B	78.56	339	P	P	23 15 25.5	-0.4
	comp=Z,5.4nm,1.1s,baz=75,slow=6.4,SNR=6.4						
	comp=Z,5.4nm,1.1s						
BRTR	Keskin Array B	78.80	308	P	P	23 15 27.4	-0.6
	comp=Z,0.4nm,0.7s,baz=107,slow=5.0,SNR=3.7						
	comp=Z,0.4nm,0.7s						
SPITS	Spitsbergen Ar	79.04	348	P	P	23 15 28.0	-0.4
	comp=Z,0.9nm,0.4s,baz=83,slow=8.5,SNR=6.9						
	comp=Z,0.9nm,0.4s						
I26K	Coal Creek Min	79.72	25	P	P	23 15 32.4	+0.2
I26K				IAmb	IAmb	23 15 35.8	
	comp=Z,4.1nm,0.7s						
E27K	Coleen River	79.72	22	P	P	23 15 32.6	+0.4
FINES	FINESS Array B	79.80	331	P	P	23 15 31.9	-0.7
	comp=Z,1.2nm,0.5s,baz=54,slow=5.4,SNR=12						
	comp=Z,1.2nm,0.5s						
F28M	Old Crow	80.49	23	P	P	23 15 37.1	+0.7
F28M				IAmb	IAmb	23 15 37.9	
	comp=Z,2.9nm,0.8s						
MLR	Muntele Rosu	83.25	315	P	P	23 15 51.0	-0.3
MLR				IAmb	IAmb	23 16 10.6	
	comp=Z,3.8nm,1.2s						
N30M	Aishikik Lake	83.33	28	P	P	23 15 50.7	-0.7
N30M				IAmb	IAmb	23 16 20.0	
	comp=Z,5.7nm,0.9s						
M31M	Drury Creek, Y	84.31	27	P	P	23 15 56.2	0.0
M31M				IAmb	IAmb	23 15 58.0	
	comp=Z,3.0nm,0.8s						
WHY	Whitehorse	84.60	29	P	P	23 15 57.4	-0.4
HFS	Hagfors	85.98	331	P	P	23 16 03.4	-1.2
	comp=Z,1.1nm,0.6s,baz=359,slow=5.9,SNR=4.6						
	comp=Z,1.1nm,0.6s						
NB2	NORSAR Subarra	86.76	333	P	P	23 16 06.8	-1.6
	comp=Z,1.8nm,0.8s,baz=67,slow=4.8						
NOA	NORSAR Array B	86.76	333	P	P	23 16 06.5	-1.8
	comp=Z,0.8nm,0.7s,baz=67,slow=4.6,SNR=6.0						
	comp=Z,0.8nm,0.7s						
YKA	Yellowknife Ar	92.27	22	P	P	23 16 34.4	+0.3
	comp=Z,1.2nm,0.8s,baz=310,slow=4.9,SNR=7.3						
	comp=Z,1.2nm,0.8s						
TXAR	Lajitas Array	119.08	44	PKP	PKiKP	23 22 12.8	-0.1
	comp=Z,0.3nm,0.5s,baz=199,slow=1.7,SNR=6.2						

IDC 10 23:08:34.9±2.3, 6°.54S×129°.62E, h0^{km}, mb3.3/1, mbtmp3.7/4, ML4.0/3, Error ellipse: s-maj=80.5km s-min=29.9km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.13	198	Pn	Pn	23 11 30.8	+1.7
	0.6nm,0.3s,baz=24,slow=12,SNR=23						
FITZ				Sn	Sn	23 13 32.8	-12
	0.7nm,0.3s,baz=65,slow=17,SNR=7.6						
	1.3nm,0.2s						
WRA	Warramunga Arr	14.09	161	Pn	Pn	23 11 54.8	-1.2
	0.8nm,0.3s,baz=339,slow=13,SNR=18						
WRA				Sn	Sn	23 14 20.9	-12
	0.7nm,0.3s,baz=337,slow=22,SNR=6.8						
	0.8nm,0.4s						
ASAR	Alice Springs	17.52	167	P	Pn	23 12 40.3	-0.6
	0.5nm,0.3s,baz=339,slow=9.6,SNR=12						
ASAR				S	Sn	23 15 42.7	-14
	0.2nm,0.5s,baz=356,slow=28,SNR=2.2						
	0.7nm,0.4s						
MKAR	Makanchi Array	67.64	327	P	P	23 19 33.7	0.0
	0.2nm,0.5s,baz=122,slow=7.5,SNR=2.6						
	0.2nm,0.5s						

BER 10 23:10:09.7±3.2, 71°.50N×4°.04W, h10^{km}, Mw3.8, ML1.3(DNK), Confirmed Earthquake

DNK 10 23:10:10.6±3.5, 71°.48N×4°.30W, h30^{km}±92^{km}, ML1.3

ISC 10 23:10:07.1±0.9, 71°.64N±0°.07×4°.16W±0°.06, h12^{km}, n35, σ1^{s}.32/40, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNE	Jan Mayen East	1.48	246	*e*S	Sn	23 10 52.9	+0.2
JNE				IAML		23 11 12.1	
	comp=Z,29nm,0.6s						
JNW	Jan Mayen West	1.50	248	*e*P	Pn	23 10 34.7	+0.9
JNW				*e*S	Sn	23 10 53.2	0.0
JNW				IAML		23 11 10.3	
	comp=Z,17nm,0.7s						
JMIC	Jan Mayen	1.54	247	*e*P	Pn	23 10 35.4	+1.0
JMIC				*e*S	Sn	23 10 53.8	-0.5
JMIC				IAML		23 11 13.7	
	comp=Z,13nm,0.6s						
JMIC	Jan Mayen	1.54	247	*i* P	Pn	23 10 34.6	+0.2
JMI	Jan Mayen	1.64	246	*e*P	Pn	23 10 36.5	+0.9
JMI				*e*S	Sn	23 10 56.5	-0.1
JMI				IAML		23 10 57.0	
	comp=Z,15nm,0.7s						
DBG	Daneborg	5.41	307	*i* P	Pn	23 11 27.7	+0.3
DBG				*i* S	Sn	23 12 27.2	-2.3
DBG				IAML		23 12 30.0	
	comp=Z,1.2nm,0.2s						
DBG	Daneborg	5.41	307	*i* P	Pn	23 11 27.7	+0.3
DBG				*i* S	Sn	23 12 27.2	-2.3
DBG				IAML		23 12 30.0	
	comp=Z,1.2nm,0.2s						
DAG	Danmarks Havn	6.47	329	*i* P	Pn	23 11 42.6	+0.6
DAG				*e*S	Sn	23 12 44.9	-11
DAG				IAML		23 12 55.2	
	comp=Z,1.2nm,0.2s						
DAG	Danmarks Havn	6.47	329	*i* P	Pn	23 11 42.6	+0.6
DAG				IAML		23 12 55.2	
	comp=Z,1.2nm,0.2s						
LOF	Lofoten	7.03	111	*e*P	Pn	23 11 48.8	-0.8
LOF				*e*S	Sn	23 12 58.8	-11
BJO1	Bjornoya	7.31	56	*e*P	Pn	23 11 54.9	+1.5
HSPB	Hornsund (broa	7.53	36	*e*P	Pn	23 11 57.6	+1.1
HSPB				IAML		23 11 58.1	
	comp=Z,1.9nm,0.2s						
STEI	Steigen	7.66	110	*e*P	Pn	23 11 56.5	-1.7
STEI				*e*S	Sn	23 13 14.5	-10
STEI				IAML		23 13 24.9	
	comp=Z,2.7nm,0.8s						
TRO	Tromso	7.91	94	*e*P	Pn	23 11 59.0	-2.6
TRO				IAML		23 13 13.0	
	comp=Z,1.8nm,0.7s						
TRO				*e*S	Sn	23 13 18.1	-13
BRBA	Barentsburg A	7.99	28	*e*P	Pn	23 12 04.9	+2.1
BRBB	Barentsburg B	8.02	28	*e*P	Pn	23 12 04.3	+1.3
FAUS	Fauske	8.02	113	*e*P	Pn	23 12 01.0	-2.2
FAUS				*e*S	Sn	23 13 23.2	-10
KONS	Konsvik	8.03	121	*e*P	Pn	23 12 03.2	-0.1
KONS				*e*S	Sn	23 13 22.3	-12
KONS				IAML		23 13 36.3	
	comp=Z,2.6nm,0.7s						
STOK	Stokkvaagen	8.12	122	*e*P	Pn	23 12 04.0	-0.6
STOK				*e*S	Sn	23 13 25.7	-10
STOK				IAML		23 13 40.6	
	comp=Z,2.5nm,0.8s						
LEIR	Leirfjorden	8.32	123	*e*P	Pn	23 12 05.6	-1.6
LEIR				*e*S	Sn	23 13 29.2	-12
LEIR				IAML		23 13 32.4	
	comp=Z,2.6nm,1.0s						
KBS	Kingsbay	8.34	22	*e*P	Pn	23 12 09.8	+2.2
KBS				IAML		23 12 10.7	
	comp=Z,4.9nm,0.4s						
KBS	Kingsbay	8.34	22	*i* P	Pn	23 12 08.8	+1.3
SPA0	Spitsbergen Ar	8.40	30	*e*P	Pn	23 12 10.9	+2.5
JETT	Jettan, Norway	8.41	92	*e*P	Pn	23 12 08.2	-0.4
KIF	Kilpisjarvi	8.79	95	*e*P	Pn	23 12 11.9	-1.8
SALU	Saltoluokta	8.98	107	*e*P	Pn	23 12 17.2	+0.8
HOPEN	Hopen	9.28	45	*e*P	Pn	23 12 21.8	+1.4
SOFL	Sornfelli, Far	9.67	188	*e*P	Pn	23 12 26.0	+0.1
HEF	Hetta	9.99	95	*e*P	Pn	23 12 28.9	-1.3
NOR	Nord	10.38	350	*i* P	Pn	23 12 36.0	+0.6
NOR	Nord	10.38	350	*i* P	Pn	23 12 36.0	+0.6
AKN	Aaknes	10.43	150	*e*P	Pn	23 12 35.9	-0.4
LRW	Lerwick	11.62	173	*e*P	Pn	23 12 52.9	+0.5
NEEM	North Greenlan	13.38	316	*i* P	Pn	23 13 17.2	+0.5
NEEM	North Greenlan	13.38	316	*i* P	Pn	23 13 17.2	+0.5

HEL 10 23:27:40.7±0.6, 67°.84N×20°.16E, h0^{km}, ML0.9, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LANU	Lannavaara	0.73	72	PG	Pg	23 27 54.5	-0.1
LANU				SG	Sg	23 28 03.4	-0.6
KIF	Kilpisjarvi	1.19	11	PG	Pg	23 28 02.8	-0.8
KIF				MSG		23 28 18.0	
	comp=Z,1.1nm,0.2s						
KIF				SG	Sg	23 28 18.6	-0.4
PAJU	Pajala	1.41	124	PG	Pn	23 28 05.0	-2.5
	baz=306						
PAJU				SG	Sg	23 28 23.6	-2.2
HEF	Hetta	1.43	65	PG	Pn	23 28 05.8	-2.1
HEF				MSG		23 28 23.7	
	comp=Z,0.7nm,0.2s						
HEF				SN	Sn	23 28 28.7	+1.3
ERTU	Ertsjaerv	1.52	148	PG	Pn	23 28 08.5	-0.6
ERTU				SG	Sg	23 28 28.4	-0.9
KLF	Kolari	1.58	111	PG	Pn	23 28 08.6	-1.4
KLF				MSG		23 28 28.1	
	comp=Z,0.5nm,0.2s						
KLF				SG	Sn	23 28 30.4	-0.7
TRO	Tromso	1.86	347	SG	Sn	23 28 36.3	-1.5
TOF	Tornio	2.41	135	MSG		23 28 52.0	
	comp=Z,0.4nm,0.2s						
TOF				SB	Sb	23 28 54.1	-1.0

KRNET 10 23:39:52.2±0.1, 43°.04N×70°.26E, h21^{km}, mb3.3

SOME 10 23:39:52.7, 42°.87N×70°.28E, h5^{km}

NNC 10 23:39:53.6±0.8, 43°.02N×70°.33E, h2^{km}±5^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=6.7km s-min=4.3km az=157.0

ISC 10 23:39:53.2±0.9, 43°.00N±0°.03×70°.29E±0°.02, h9^{km}±6^{km}, n66, σ1^{s}.38/117, 51C-26D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK07	Karatay Array	0.18	60	⇓P	Pg	23 39 56.5	-0.5
KK07				⇑S	Sg	23 39 59.6	-0.1
KK08	Karatay Array	0.18	54	⇑P	Pg	23 39 56.4	-0.6
KK08				⇑S	Sg	23 39 59.4	-0.3
KK03	Karatay Array	0.19	56	⇑P	Pg	23 39 56.6	-0.6
KK03				⇑S	Sg	23 39 59.9	0.0
KK01	Karatay Array	0.19	56	⇑P	Pg	23 39 56.7	-0.6
KK01				⇑S	Sg	23 39 60.0	0.0
KK02	Karatay Array	0.20	57	⇑P	Pg	23 39 56.8	-0.6
KK02				⇓S	Sg	23 40 00.1	0.0
KK04	Karatay Array	0.20	55	⇓P	Pg	23 39 56.8	-0.5
KK04				⇑S	Sg	23 40 00.0	-0.1
KK31	Karatay Array	0.20	57	⇑P	Pg	23 39 56.7	-0.6
	16nm,0.2s						
KK31				⇑S	Sg	23 40 00.1	+0.1
	187nm,0.3s,baz=235,slow=40,SNR=4.2						
KKAR	Karatay Array	0.20	57	⇓*e*P	Pg	23 39 56.9	-0.4
KKAR				⇓*e*S	Sg	23 40 00.4	+0.3
KK06	Karatay Array	0.20	61	⇓P	Pg	23 39 56.9	-0.5
KK06				⇑S	Sg	23 40 00.0	-0.2
KK09	Karatay Array	0.20	51	⇑P	Pg	23 39 56.8	-0.6
KK09				⇑S	Sg	23 39 59.9	-0.3
KK05	Karatay Array	0.21	55	⇑P	Pg	23 39 57.0	-0.6
KK05				⇑S	Sg	23 40 00.2	-0.3
BRLS	Borolday	0.33	276	P	Pb	23 40 00.7	-0.6
	78nm,0.2s						
BRLS				S	Sb	23 40 07.3	+0.5
	241nm,0.3s						
BRLS	Borolday	0.33	276	*e*P	Pb	23 40 00.7	-0.6
BRLS				*e*S	Sb	23 40 06.7	-0.1
BRLS	Borolday	0.33	276	*e*P	Pb	23 40 00.7	-0.6
	78nm,0.2s						
BRLS				*e*S	Sb	23 40 06.7	-0.1
	241nm,0.3s						
DZA	Taraz	0.77	97	P	Pg	23 40 07.6	-0.5
	35nm,0.3s						
DZA				S	Sg	23 40 18.2	0.0
	308nm,0.3s						
DZA	Taraz	0.77	97	*e*P	Pg	23 40 07.7	-0.5
DZA				*e*S	Sg	23 40 18.3	0.0
DZA	Taraz	0.77	97	*e*P	Pg	23 40 07.7	-0.5
	35nm,0.3s						
DZA				*e*S	Sg	23 40 18.2	0.0
	308nm,0.3s						
CHM	Chimkent	0.84	217	*e*P	Pg	23 40 08.9	-0.6
CHM				*e*S	Sg	23 40 20.5	0.0
CHM	Chimkent	0.84	217	*e*P	Pg	23 40 08.9	-0.6
	43nm,0.1s						
CHM				*e*S	Sg	23 40 20.5	0.0
	351nm,0.2s						
TRKS	Terek-Say	1.60	156	⇑*e*P	Pb	23 40 23.2	+0.2
TRKS				⇑*e*S	Sg	23 40 45.9	+1.3
MNAS	Manas	1.71	107	⇓*e*P	Pn	23 40 23.8	+0.4
MNAS				⇓*e*S	Sb	23 40 46.8	+0.2
ARK	Arkit	1.73	133	⇑*e*P	Pn	23 40 24.1	+0.6
ARK				⇑*e*S	Sb	23 40 47.4	+0.4
MRKS	Merke	2.18	96	Pg	Pb	23 40 33.2	+0.4
	9.4nm,0.2s						
MRKS				Lg	Lg	23 41 02.9	
	56nm,0.3s						
MRKS	Merke	2.18	96	*e*P	Pb	23 40 33.2	+0.4
	9.4nm,0.2s						
MRKS				*e*S	Sg	23 41 02.9	-0.2
	56nm,0.3s						
EKS2	Erkin-Say	2.59	96	⇓*e*P	Pn	23 40 35.8	+0.4
EKS2				⇓*e*S	Sn	23 41 07.7	+0.6
ARSB	Arslanbob	2.61	129	⇑*e*P	Pn	23 40 36.4	+0.7
ARSB				⇑*e*S	Sn	23 41 08.5	+0.9
AML	Almayashu	2.66	108	⇑*e*P	Pn	23 40 37.2	+0.5
AML				⇑*e*S	Sn	23 41 10.1	+0.9
BTK	Batken	2.96	172	⇑*e*P	Pn	23 40 41.1	+0.6
BTK				⇑*e*S	Sn	23 41 16.8	+0.6
USP	Ospenovka	3.10	84	⇓*e*P	Pn	23 40 42.7	+0.4
USP				⇓*e*S	Sn	23 41 19.6	+0.2
OHH	Osh	3.10	142	⇑*e*P	Pn	23 40 43.1	+0.7
OHH				⇑*e*S	Sn	23 41 20.1	+0.5
AAK	Ala-Archa	3.12	95	⇑Pn	Pn	23 40 44.6	+1.9
	0.7nm,0.5s						
AAK				⇑Lg	Lg	23 41 33.4	
	3.7nm,0.6s						
AAK	Ala-Archa	3.12	95	⇑*e*P	Pn	23 40 43.2	+0.5
AAK				⇑*e*S	Sn	23 41 20.5	+0.4
ARLS	Aral	3.20	109	⇑*i*P	Pn	23 40 44.5	+0.7
ARLS				⇑*e*S	Sn	23 41 22.8	+0.7
FRU1	Bishkek	3.20	92	⇑*e*P	Pn	23 40 44.1	+0.4
FRU1				⇑*e*S	Sn	23 41 21.9	-0.1
SGDS	Sogindy	3.21	80	Pg	Pb	23 40 51.4	+1.0
	4.8nm,0.4s						
SGDS				Lg	Lg	23 41 33.3	
	23nm,0.6s						
UCH	Uchtor	3.21	102	⇓*e*P	Pn	23 40 44.8	+0.5
UCH				⇓*e*S	Sn	23 41 23.3	+0.4
CHMS	Chumysh	3.27	88	⇑*e*P	Pn	23 40 45.3	+0.5
CHMS				⇑*e*S	Sn	23 41 24.0	+0.1
SALK	Salom-Alik	3.38	128	⇓*e*P	Pn	23 40 47.1	+0.8
SALK				⇓*e*S	Sn	23 41 27.2	+0.6
BTLS	Baital	3.40	52	Pg	Pg	23 40 57.8	-0.5
	20nm,0.5s						
BTLS				Lg	Lg	23 41 44.4	
	19nm,0.3s						
BTLS	Baital	3.40	52	*e*P	Pg	23 40 57.8	-0.5
	20nm,0.5s						
BTLS				*e*S	Sg	23 41 44.4	+2.1
	19nm,0.3s						
KBK	Karagaybulak	3.45	94	⇓*e*P	Pn	23 40 47.8	+0.6
KBK				⇓*e*S	Sn	23 41 28.4	+0.1
DRK	Karamyk	3.69	162	⇑*e*P	Pn	23 40 51.5	+0.7
DRK				⇑*e*S	Sn	23 41 34.6	0.0
SFK	Sufi-Kurgan	3.84	140	⇑*e*P	Pn	23 40 53.7	+1.0
SFK				⇑*e*S	Sn	23 41 38.0	0.0
TKM2	Tokmak 2	3.90	89	⇑*e*P	Pn	23 40 54.0	+0.5
TKM2				⇑*e*S	Sn	23 41 39.3	-0.2
DGS	Degeres	4.02	85	Pg	Pg	23 41 07.5	-2.8
	6.5nm,0.7s						
DGS				Lg	Lg	23 42 01.0	
	39nm,0.7s						
KST	Kastek	4.16	87	Pg	Pg	23 41 10.0	-3.0
	3.0nm,0.3s						
KST				Lg	Lg	23 42 05.7	
	24nm,0.8s						
KST	Kastek	4.16	87	*e*P	Pg	23 41 09.9	-3.0
	3.0nm,0.3s						
KST				*e*S	Sg	23 42 05.7	-1.2
	24nm,0.8s						
BOOM	Boomskoye usch	4.20	95	⇓*e*P	Pn	23 40 57.8	+0.3
BOOM				⇓*e*S	Sn	23 41 45.6	-1.1
MTBS	Maitube	4.50	86	*e*P	Pg	23 41 16.6	-2.8
	1.0nm,0.1s						
MTBS				*e*S	Sg	23 42 16.4	-1.3
	16nm,0.6s						
NRN	Naryn	4.52	108	⇑*e*P	Pn	23 41 02.6	+0.4
NRN				⇑*e*S	Sn	23 41 54.0	-1.0
IZV	Izvestkoviy	4.64	87	Pg	Pg	23 41 19.5	-2.5
	5.3nm,0.6s						
IZV				Lg	Lg	23 42 21.5	
	19nm,0.5s						
IZV	Izvestkoviy	4.64	87	*e*P	Pg	23 41 19.6	-2.5
	5.3nm,0.6s						
IZV				*e*S	Sg	23 42 21.5	-0.7
	19nm,0.5s						
KTBS	Karatobe	4.72	79	Pg	Pb	23 41 19.6	+3.5
	2.7nm,0.4s						
KTBS				Lg	Lg	23 42 22.0	
	24nm,0.5s						
MDOK	Medeo	4.96	86	Pg	Pb	23 41 23.0	+2.7
	4.1nm,0.7s						
MDOK				Pg	Pg	23 41 25.8	-2.4
	2.3nm,0.3s						
MDOK				⇑Lg	Lg	23 42 30.7	
	8.8nm,0.6s						
MDOK				Lg	Lg	23 42 32.1	
	5.9nm,0.7s						
KOTS	Kotyrbulak	5.00	85	Pg	Pb	23 41 24.4	+3.4
	2.1nm,0.5s						
KOTS				Lg	Lg	23 42 30.2	
	22nm,0.6s						
KOTS	Kotyrbulak	5.00	85	*e*P	Pb	23 41 24.4	+3.4
	2.1nm,0.5s						
KOTS				*e*S	Sg	23 42 30.2	-3.6
	22nm,0.6s						
ARXS	Arharly	5.61	75	Pg	Pg	23 41 37.2	-3.4
	2.4nm,0.6s						
ARXS				Lg	Lg	23 42 51.8	
	19nm,0.8s						
KPKS	Kokpek	6.15	83	Pg	Pg	23 41 46.9	-4.1
	0.6nm,0.2s						
KPKS				Lg	Lg	23 43 09.0	
	17nm,0.6s						
UZB	Uzynbulak	6.40	86	Pg	Pg	23 41 52.4	-3.3
	2.3nm,0.2s						
UZB				Lg	Lg	23 43 18.0	
	8.1nm,0.6s						
UZB	Uzynbulak	6.40	86	*e*P	Pg	23 41 52.5	-3.3
UZB				*e*S	Sg	23 43 18.0	-0.6
PDGK	Podgornoye	6.74	84	⇓Pg	Pg	23 41 56.5	-5.7
	4.9nm,1.2s						
PDGK				⇑Lg	Lg	23 43 26.1	
	4.6nm,0.6s						
MK31	Makanchi Array	9.33	62	⇓Pn	Pn	23 42 07.5	-0.3
	0.9nm,0.5s,baz=254,slow=19,SNR=18						
MK31				⇑Sn	Sn	23 43 54.9	+2.1
	0.3nm,0.4s,baz=246,slow=25,SNR=2.9						
MK31				⇑Lg	Lg	23 44 48.5	
	2.6nm,0.8s,baz=242,slow=28,SNR=4.9						
KURBB	Kurchatov Arra	9.49	34	⇓Pn	Pn	23 42 08.8	-1.1
	1.2nm,0.8s						
KURBB				⇓Lg	Lg	23 44 52.0	
	10nm,0.6s						
AB31	Akbulak array	9.52	315	Pn	Pn	23 42 11.0	+0.6
	0.5nm,0.4s,baz=128,slow=14,SNR=23						
AB31				Sn	Sn	23 43 57.5	0.0
	1.6nm,0.8s,baz=119,slow=22,SNR=4.8						
BVA0	Borovoye Array	10.03	0	Pn	Pn	23 42 15.8	-1.7
	2.2nm,0.7s,baz=169,slow=13,SNR=19						
BVA0				⇓Sn	Sn	23 44 07.9	-2.1
	1.1nm,0.4s,baz=168,slow=22,SNR=5.1						
AKTO	Aktyubinsk	11.23	316	⇑Pn	Pn	23 42 35.4	+1.7
	0.6nm,0.4s						
AKTO				⇓Sn	Sn	23 44 41.6	+2.3
	2.2nm,1.1s						

GCG 11 00:08:16.3±4.5, 15°.57N×94°.80W, h5^{km}±62^{km}, MD4.5, ML3.6

MEX 11 00:08:21.6±0.7, 15°.41N×94°.76W, h17^{km}±9^{km}, MD4.2

ISC 11 00:08:13.3±1.3, 15°.26N±0°.04×94°.70W±0°.02, h14^{km}±10^{km}, n42, σ2^{s}.34/74, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.45	291	*e*P	Pg	00 08 42.4	+1.1
HUIG				*e*S	Sb	00 08 57.9	-0.7
HUIG	Huatulco	1.45	291	*e*P	Pg	00 08 42.2	+1.0
HUIG				*i* S	Sn	00 08 57.1	-1.0
HUIG				IAML		00 08 58.8	
	comp=N,210nm,0.2s						
PCIG		1.49	72	*i* P	Pg	00 08 44.3	+2.4
PCIG				*e*S	Sg	00 09 01.9	+0.5
TGIG		2.14	45	*e*P	Pg	00 08 53.7	-0.6
TGIG				*i* S	Sb	00 09 17.4	-1.0
TGIG		2.14	45	*i* P	Pg	00 08 53.6	-0.7
TGIG				*i* S	Sb	00 09 17.2	-1.2
TGIG				IAML		00 09 20.3	
	comp=E,1μm,0.4s						
TGBT	Tuxtla Gutierr	2.16	45	*i* P	Pg	00 08 54.2	-0.5
TGBT				*e*S	Sb	00 09 20.1	+1.2
THIG		2.37	98	*e*P	Pb	00 08 55.3	-0.5
THIG				*e*S	Sb	00 09 23.9	-1.1
PATR	El Naranjo	2.38	93	*e*P	Pg	00 08 58.0	-1.0
PATR				*e*S	Sb	00 09 25.4	-0.1
PAVE	Pavencul	2.43	91	*e*P	Pg	00 08 59.2	-0.7
PAVE				*e*S	Sb	00 09 26.5	-0.5
PEIG	Puerto Escondi	2.48	288	*i* P	Pb	00 08 56.9	-0.7
PEIG				*e*S	Sn	00 09 22.1	-1.3
OXLC	Oaxaca	2.64	313	*e*P	Pg	00 09 04.4	+0.5
OXLC				*e*S	Sn	00 09 29.7	+2.0
OXBJ	Oaxaca	2.65	313	*e*P	Pg	00 09 04.2	0.0
OXBJ				*e*S	Sn	00 09 28.9	+0.9
NEUV	Arroyo Zacate	2.66	337	*i* P	Pb	00 08 58.8	-2.0
NEUV				*i* S	Sn	00 09 26.9	-1.1
VHO	Vista Hermosa	2.66	313	*e*P	Pb	00 09 00.9	0.0
VHO				*e*S	Sb	00 09 31.0	-2.6
CCIG	Comitan	2.67	67	*i* P	Pb	00 09 00.3	-0.7
CCIG				*i* S	Sb	00 09 34.0	+0.4
CCIG	Comitan	2.67	67	*e*P	Pn	00 08 57.4	+1.4
CCIG				*i* S	Sb	00 09 34.1	+0.4
TUIG	Tuzandepetl	2.77	5	*e*P	Pb	00 09 01.1	-1.6
TUIG				*e*S	Sn	00 09 32.1	+1.4
RTAL	Retalhuleu	2.99	104	*e*P	Pg	00 09 08.9	-1.7
RTAL				*e*S	Sb	00 09 42.6	-0.3
HUEH	Huehuetenango	3.08	88	*e*P	Pg	00 09 11.0	-1.4
HUEH				*e*S	Sb	00 09 48.5	+2.8
YOIG	Yosondua	3.17	301	*e*P	Pb	00 09 08.4	-1.2

YOIG				eS	Sn	00 09 42.0	+1.1
PMUV	Sontecomapan	3.29	353	eP	Pn	00 08 58.5	-6.1
PMUV				eS	Sn	00 09 40.0	-3.7
STG8	El Palmar, Qui	3.33	103	eP	Pn	00 09 07.4	+2.2
STG8				i S	Sn	00 09 40.7	-4.1
STG8				IAML		00 09 49.5	
	comp=E,304nm,0.5s						
PNIG	Pinotepa	3.49	289	eP	Pb	00 09 11.6	-3.3
PNIG				eS	Sn	00 09 46.8	-1.6
TXIG	Tlaxiaco	3.56	304	eP	Pb	00 09 14.2	-2.0
TXIG				i S	Sn	00 09 52.0	+1.6
TOIG	Toxpalan	3.62	322	eP	Pb	00 09 15.2	-2.0
TOIG				eS	Sn	00 09 52.5	+0.6
HLIG	Huajuapan de L	3.93	311	eP	Pb	00 09 19.8	-2.7
HLIG				eS	Sn	00 09 60.0	+0.5
TPIG	Tehuac#an	4.05	321	eS	Sn	00 10 03.8	+1.3
FTIG	Fresnillo de T	4.22	309	eP	Pb	00 09 24.0	-3.4
FTIG				eS	Sn	00 10 08.4	+1.8
MGIG	Malinaltepec	4.26	298	eP	Pb	00 09 24.1	-4.2
MGIG				eS	Sn	00 10 09.5	+1.8
TLIG	Tlapa	4.37	302	eP	Pn	00 09 23.5	+4.1
TLIG				eS	Sn	00 10 09.4	-0.8
CRIG	Cruz Grande	4.51	290	eP	Pn	00 09 25.3	+4.0
CRIG				eS	Sn	00 10 10.3	-3.3
JAUV	Jalcomulco	4.56	334	eP	Pn	00 09 24.1	+2.2
JAUV				eS	Sn	00 10 09.7	-5.0
NUBE	Las Nubes	4.95	105	eS	Sb	00 10 36.4	-2.9
DAIG	Los Arroyos	5.08	291	eP	Pn	00 09 33.1	+4.1
DAIG				eS	Sn	00 10 25.9	-1.6
PBCV	Popocatepetl	5.23	316	eS	Sn	00 10 36.8	+4.9
PPPT	Popocatepetl	5.27	315	eP	Pb	00 09 40.0	-5.6
PPPT				eS	Sn	00 10 36.3	+3.3
PBPN	Popocatepetl	5.32	316	eP	Pb	00 09 40.1	-6.4
PBPN				eS	Sn	00 10 38.1	+3.8
PBPN				eS	Sb	00 10 44.3	-6.1
PPM	Popocatepetl	5.34	316	eP	Pb	00 09 40.6	-6.1
PPM				eS	Sn	00 10 39.3	+4.7
MEIG	Mezcala	5.42	300	eS	Sn	00 10 35.0	-1.1
YAIG	Yautepec	5.51	311	eP	Pn	00 09 41.4	+6.3
YAIG				eS	Sn	00 10 37.3	-1.1
PLIG	Platanillo	5.56	305	eS	Sn	00 10 39.0	-0.6
ARIG	Puente Sto Nin	6.19	300	eP	Pn	00 09 51.7	+7.3
ARIG				eS	Sn	00 10 53.2	-1.9

CATAC 11 00:08:50.0±0.4**, 12°N**±3°×**8°8W**±°**, h29^{km}, M3.2**/18**,**
MLv3.2/18**, Error ellipse: s-maj=7.0km s-min=3.1km**
az=29.4, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSGN	Cosiguina Volc	0.60	10	P	Pn	00 09 03.8	+1.1
CSGN				S	Sn	00 09 14.1	+2.5
POTN	Potosi Cosigui	0.63	14	P	Pn	00 09 03.8	+0.7
POTN				S	Sn	00 09 14.3	+2.0
CRIN	San Cristobal	0.68	62	S	Sn	00 09 16.4	+2.9
CRIN	San Cristobal	0.68	62	P	Pn	00 09 05.2	+1.4
PKGN	Cerro Pekin	0.73	67	P	Pn	00 09 05.0	+0.6
PKGN				S	Sn	00 09 15.8	+1.1
ALEN	Leon	0.78	84	S	Sn	00 09 16.4	+0.5
ALEN	Leon	0.78	84	P	Pb	00 09 04.5	-0.7
QUEN	Al S del Volca	0.82	75	P	Pb	00 09 06.1	+0.2
QUEN				S	Sn	00 09 18.2	+1.2
HERN	Volcan Telica	0.85	74	S	Sn	00 09 18.5	+0.9
HERN	Volcan Telica	0.85	74	P	Pn	00 09 06.1	0.0
HOYN	Al Sur del Vol	0.85	75	P	Pn	00 09 06.1	0.0
HOYN				S	Sn	00 09 18.5	+0.9
POLN	Al Sur del Vol	0.88	72	P	Pn	00 09 06.3	-0.1
POLN				S	Sn	00 09 19.1	+0.8
CNCH	Conchagua	0.90	350	S	Sn	00 09 19.8	+0.7
CNCH	Conchagua	0.90	350	P	Pn	00 09 06.9	-0.1
LCND	La Caada	0.95	347	P	Pn	00 09 06.9	-0.6
LCND	La Caada	0.95	347	S	Sb	00 09 20.3	+0.1
CNGA	Al SSO del Vol	0.95	83	P	Pn	00 09 07.5	0.0
CNGA				S	Sb	00 09 20.8	+0.6
CNGN	Cerro Negro	0.95	83	P	Pn	00 09 07.7	+0.1
CNGN	Cerro Negro	0.95	83	S	Sb	00 09 20.7	+0.4
LEVN	Ruinas Leon Vi	1.03	89	S	Sn	00 09 20.9	-1.0
MOMN	Momotombo	1.10	89	P	Pn	00 09 09.6	0.0
MOMN				S	Sn	00 09 23.9	+0.1
CHOHN	Orocuina	1.20	24	S	Sn	00 09 25.4	-1.0
CHOHN	Orocuina	1.20	24	P	Pn	00 09 10.2	-0.8
RANC	El Ranchito	1.21	330	P	Pn	00 09 11.1	-0.1
ALJI	Alcalda de J	1.29	317	S	Sb	00 09 29.2	-0.7
ALJI	Alcalda de J	1.29	317	P	Pn	00 09 11.2	-0.9
UNAN	Cigeo UNAN	1.39	101	S	Sn	00 09 31.1	+0.2
LIMN	Finca el Limon	1.44	62	P	Pn	00 09 13.3	-1.0
LIMN	Finca el Limon	1.44	62	S	Sn	00 09 31.6	-0.6
TGUH	Tegucigalpa,Un	1.71	13	P	Pn	00 09 17.2	-0.8
TGUH				S	Sn	00 09 37.6	-1.4
RCVN	Varillal2	1.87	50	S	Sn	00 09 42.0	-0.9
RCVN	Varillal2	1.87	50	P	Pn	00 09 19.3	-0.9
RCPN	Sur Rio San Ju	1.91	53	P	Pn	00 09 19.8	-0.9

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*BEO **11** 00:13:23.4±0.5, 43°.92N×17°.33E, h3^{km}±9^{km}, ML2.0/7*
*PDG **11** 00:13:23.5±0.1, 43°.80N×17°.21E, h0^{km}±11^{km}, ML2.7/10,*
Error ellipse: s-maj=0.3km s-min=0.7km az=0.0
*RHSSO **11** 00:13:24.0±0.2, 43°.89N×17°.29E, h4^{km}±1^{km}, ML2.3/13*
*VIE **11** 00:13:26.3±1.1, 44°.11N×17°.54E, h8^{km}, mb2.3/6, ml2.0/6,*
Error ellipse: s-maj=14.4km s-min=8.1km az=51.0 77 km
WNW of Sarajevo
ISC 11 00:13:23.3±1.1**, 43°.91N**±0°.02×**17°.32E**±0°.02**, h1**^{km}±10^{km}**,**
n56, σ0^{s}95/104**, 10C-8D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RICI	Ricice	0.44	198	i Pg	Pg	00 13 31.2	-0.5
RICI				Sg	Sg	00 13 37.8	+0.4
MAKA	Makarska	0.66	199	ePg	Pg	00 13 35.8	-0.2
MAKA				Sg	Sg	00 13 44.8	+0.3
KIJV	Kijevo	0.67	278	ePg	Pg	00 13 36.2	+0.1
KIJV				Sg	Sg	00 13 45.9	+1.1
A050A	Klekovaca	0.81	315	⇑iPg	Pg	00 13 38.1	-0.7
A050A				eSg	Sg	00 13 50.1	+0.9
BLY	Banja Luka	0.84	353	⇓iPg	Pg	00 13 39.1	-0.4
BLY				eSg	Sb	00 13 51.9	-0.8
BLY	Banja Luka	0.84	353	ePg	Pg	00 13 39.3	-0.2
BLY				eSg	Sb	00 13 51.9	-0.8
SLATY	Slatina	0.92	359	ePg	Pg	00 13 40.6	-0.3
SLATY				eSg	Sb	00 13 54.6	-0.2
HVAR	Hvar	0.97	221	ePg	Pg	00 13 41.8	0.0
HVAR				Sg	Sg	00 13 54.6	+0.2
DOB	Doboj	0.99	34	ePg	Pg	00 13 42.2	-0.2
DOB				eSg	Sg	00 13 55.8	+0.5
STON	Ston	1.07	165	⇑iPg	Pg	00 13 42.1	-1.8
STON				eSg	Sg	00 13 57.4	-0.5
STON	Ston	1.07	165	ePg	Pg	00 13 42.7	-1.2
STON				Sg	Sg	00 13 56.9	-1.0
STON	Ston	1.07	165	ePg	Pg	00 13 42.1	-1.8
STON				eSg	Sg	00 13 58.8	+0.9
A051A	Mrakovica	1.14	345	⇓iPg	Pg	00 13 44.8	-0.4
A051A				eSg	Sb	00 14 01.5	+0.2
PRIJ	Prijedor	1.15	338	⇑iPg	Pg	00 13 45.1	-0.3
PRIJ				eSg	Sb	00 14 01.2	-0.3
MORI	Morici	1.17	268	i Pg	Pg	00 13 44.9	-0.8
MORI				Sg	Sg	00 14 01.3	+0.5
LSTV	Lastovo	1.18	195	ePg	Pg	00 13 45.4	-0.6
LSTV				Sg	Sg	00 14 01.5	+0.2
HAPS	Han Pijesak,Bl	1.19	81	⇑iPg	Pg	00 13 45.6	-0.5
HAPS				eSg	Sg	00 14 02.4	+0.8
HAPS	Han Pijesak,Bl	1.19	81	ePg	Pg	00 13 46.1	0.0
HAPS				eSg	Sg	00 14 00.9	-0.7
ZIRJ	Zirje	1.24	259	i Pg	Pg	00 13 45.9	-1.2
ZIRJ				Sg	Sb	00 14 04.5	+0.4
BRY	Bratogost	1.34	138	ePg	Pn	00 13 47.8	-1.6
BRY				eSg	Sg	00 14 07.1	+0.6
BRY	Bratogost	1.34	138	⇓iPg	Pn	00 13 47.9	-1.5
BRY				i Sg	Sn	00 14 08.5	+0.5
UPM	Unac-Piva	1.35	121	ePg	Pn	00 13 49.1	-0.5
UPM				eSg	Sb	00 14 07.6	+0.1
UPM	Unac-Piva	1.35	121	⇑iPg	Pn	00 13 48.8	-0.8
UPM				i Sg	Sn	00 14 09.9	+1.6
DBRK	Dubrovnik	1.38	154	ePg	Pn	00 13 49.5	-0.3
DBRK				Sg	Sg	00 14 07.9	+0.3
TREB	Trebinje	1.41	147	ePg	Pn	00 13 49.5	-0.7
TREB				eSg	Sb	00 14 09.2	+0.2
BBLS	Lazi&#263i	1.51	91	⇑iPn	Pn	00 13 51.4	-0.2
BBLS				eSn	Sg	00 14 12.2	+0.4
BBLS	Lazi&#263i	1.51	91	ePg	Pn	00 13 51.3	-0.3
BBLS				eSg	Sg	00 14 12.6	+0.8
RUDO	Rudo	1.51	100	eSn	Sn	00 14 11.9	-0.1
PLE	Pljevlja	1.61	110	⇓iPn	Pn	00 13 53.3	+0.2
PLE				i Sn	Sg	00 14 19.7	+4.6
DUGI	Dugi Otok	1.64	274	ePn	Pb	00 13 54.6	+0.3
DUGI				Sn	Sg	00 14 18.1	+2.2
HCY	Herceg Novi	1.70	149	ePn	Pn	00 13 54.2	+0.1
HCY				eSn	Sn	00 14 16.7	+0.2
HCY	Herceg Novi	1.70	149	⇓iPn	Pn	00 13 54.0	-0.1
HCY				i Sn	Sg	00 14 19.3	+1.5
TEKS	Tekeris	1.71	67	ePn	Pn	00 13 54.2	-0.2
TEKS				eSn	Sb	00 14 18.1	+0.4
TEKS	Tekeris	1.71	67	ePg	Pn	00 13 53.3	-1.1
CEME	Cevo	1.79	139	⇓iPn	Pn	00 13 56.0	+0.4
CEME				i Sn	Sg	00 14 22.5	+1.5
KOME	Kolasin	1.92	123	⇑iPn	Pb	00 13 58.7	-0.5
KOME				i Sn	Sg	00 14 26.4	+1.4
BUM	Brajici-Budva	1.98	144	⇑iPn	Pn	00 13 59.0	+0.9
BUM				i Sn	Sb	00 14 26.5	+1.1
SJES	Sjenica	2.04	108	ePn	Pn	00 13 58.4	-0.5
SJES				eSn	Sn	00 14 25.4	+0.4
SJES	Sjenica	2.04	108	ePg	Pn	00 13 59.4	+0.5
PDG	Podgorica	2.05	136	⇑iPn	Pn	00 13 59.8	+0.8
PDG				eSn	Sn	00 14 25.3	+0.1
PDG	Podgorica	2.05	136	⇑iPn	Pn	00 14 00.1	+1.1
PDG				i Sn	Sg	00 14 28.8	-0.3
IVAS	Ivanjica	2.08	98	ePg	Pn	00 13 58.9	-0.6
IVA	Berane	2.14	118	⇓iPn	Pn	00 14 01.8	+1.4
IVA				i Sn	Sg	00 14 31.8	-0.4
FRGS	Fruska Gora	2.17	54	ePn	Pn	00 14 01.8	+1.1
FRGS				eSn	Sb	00 14 29.6	-1.4
DRME	Dracevica, Mon	2.20	141	ePn	Pn	00 14 01.3	+0.2
DRME				eSn	Sn	00 14 28.8	-0.1
DRME	Dracevica, Mon	2.20	141	⇓iPn	Pn	00 14 02.1	+1.0
DRME				i Sn	Sb	00 14 32.5	+0.8
TRUS	Trudelj	2.25	81	ePg	Pn	00 14 01.2	-0.5
CRES	Cresnjevec Ost	2.33	326	ePn	Pn	00 14 02.6	-0.2
CRES				eSn	Sn	00 14 32.2	+0.1
SELS	Selova	2.85	103	ePn	Pn	00 14 10.0	0.0
SOKA	Soboth	3.20	331	i Pn	Pn	00 14 14.9	0.0
	0.7nm,0.2s						
SOKA				i Sn	Sn	00 14 51.7	-2.1
	0.5nm,0.3s						
OBKA	Obir	3.25	324	ePn	Pn	00 14 15.4	-0.2
OBKA				eSn	Sn	00 14 54.9	-0.2
OBKA	Obir	3.25	324	ePn	Pn	00 14 16.6	+1.0
	1.7nm,0.4s						
ARSA	Arzberg	3.57	340	i Pn	Pn	00 14 20.1	+0.2
	3.6nm,0.3s						
ARSA				i Sn	Sn	00 15 00.9	-1.9
	1.0nm,0.4s						
RONA	Rosalia, Austr	3.86	350	i Pn	Pn	00 14 24.0	+0.1
	2.2nm,0.4s						
CONA	Conrad Observa	4.14	346	i Pn	Pn	00 14 28.1	+0.2
	1.3nm,0.3s						
CONA				i Sn	Sn	00 15 15.9	-1.1
	0.4nm,0.2s						
MOA	Molln	4.48	333	i Pn	Pn	00 14 33.5	+1.1
	1.6nm,0.3s						
MOA				i Sn	Sn	00 15 26.1	+0.9
	1.0nm,0.3s						

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*IDC **11** 00:26:18.6±0.7, 7°.51S×12°.80W, h0^{km}, mb3.9/13,*
mbtmp3.9/14, ML3.6/1, MS3.6/39, Error ellipse:
s-maj=31.3km s-min=17.5km az=106.0
*NEIC **11** 00:26:20.7±1.6, 7°.3S±0°.1×13°.02W±0°.09, h10^{km}±1^{km},*
mb4.8/27, Error ellipse: s-maj=20.6km s-min=13.6km
az=156.0
ISC 11 00:26:19.7±0.5**, 7°.37S**±0°.09×**12°.99W**±0°.08**, h10**^{km}**, n81,**
σ1^{s}02/43**, mb4.5**/27**, MS3.6**/38**, 4C-1D, Ascension Island**
region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASCN	Ascension	1.47	248	Pn	Pn	00 26 46.4	+0.1
H10N1	ASCENSION HYDR	1.55	252	T	T	00 28 31.4	
	baz=76,slow=14,SNR=7105						
H10N2	ASCENSION HYDR	1.55	253	T	T	00 28 32.6	
	baz=76,slow=14,SNR=6815						
H10N3	ASCENSION HYDR	1.57	253	T	T	00 28 33.1	
	baz=76,slow=14,SNR=7125						
DBIC	Dimbokro	16.14	30	P	P	00 30 10.3	+0.3
DBIC	Dimbokro	16.14	30	Pn	Pn	00 30 05.8	-0.9
	0.3nm,0.3s,baz=212,slow=11,SNR=5.9						
DBIC				LR	LR	00 34 59.3	
	comp=Z,174nm,20.0s,baz=191,slow=32						
	2.8nm,0.8s						
MBO	M'Bour	21.98	350	P	P	00 31 12.2	-1.8
MBO				IAmb	IAmb	00 31 29.0	
	comp=Z,74nm,1.3s						
RCBR	Riachuelo	22.81	272	P	P	00 31 23.0	-0.1
RCBR				IAmb	IAmb	00 31 33.4	
	comp=Z,37nm,1.3s						
SACV	Santiago Islan	24.57	335	P	P	00 31 40.7	+0.6
TORD	Torodi Ar. Bea	25.07	36	P	P	00 31 44.1	-0.4
TORD	Torodi Ar. Bea	25.07	36	P	P	00 31 43.6	-1.0
	comp=Z,2.0nm,0.3s,baz=215,slow=9.8,SNR=1.7						
	comp=Z,2.0nm,0.3s						
TSUM	Tsumeb	31.93	115	LR	LR	00 43 02.3	
	comp=Z,214nm,21.8s,baz=324,slow=32						
WIN	Windhoek	32.66	121		P	00 32 52.0	-0.5
WIN				IAmb	IAmb	00 32 53.0	
	comp=Z,31nm,1.7s						
BDFB	Brasilia	35.25	253	LR	LR	00 45 07.3	
	comp=Z,171nm,20.4s,baz=144,slow=32						
VAO	Valinhos	36.16	241	P	P	00 33 22.6	0.0
VAO				IAmb	IAmb	00 34 40.1	
	comp=Z,29nm,1.5s						
PHPEN	Phepeng	38.63	122	P	P	00 33 43.9	+0.3
PHPEN				IAmb	IAmb	00 35 11.3	
	comp=Z,28nm,1.7s						
MDT	Midelt	40.75	11	LR	LR	00 50 37.3	
	comp=Z,90nm,18.1s,baz=184,slow=36						
LBTB	Lobatse	40.80	120	P	P	00 34 03.4	+1.7
LBTB				IAmb	IAmb	00 34 14.0	
	comp=Z,46nm,1.9s						
LBTB	Lobatse	40.80	120	LR	LR	00 49 05.0	
	comp=Z,130nm,19.3s,baz=287,slow=34						
LSZ	Lusaka	41.07	105	LR	LR	00 48 20.3	
	comp=Z,167nm,20.8s,baz=314,slow=32						
MAL2	Monte Alegre,	41.38	275	P	P	00 34 06.5	0.0
MAL2				IAmb	IAmb	00 34 17.6	
	comp=Z,54nm,1.9s						
MDP	Montagnes des	41.46	286	LR	LR	00 48 32.8	
	comp=Z,41nm,18.1s,baz=114,slow=32						
BOSA	Boshof	41.79	125	P	P	00 34 07.9	-1.9
	comp=Z,1.3nm,0.8s,baz=278,slow=7.1,SNR=3.0						
BOSA				LR	LR	00 48 33.3	
	comp=Z,139nm,18.7s,baz=278,slow=32						
	comp=Z,1.3nm,0.8s						
MBAR	Mbarara	44.11	83	P	P	00 34 28.2	-0.7
MBAR				IAmb	IAmb	00 34 34.6	
	comp=Z,20nm,1.7s						
CPUP	Villa Florida	46.14	240	LR	LR	00 52 33.7	
	comp=Z,33nm,18.3s,baz=296,slow=34						
ESDC	Sonseca Array	47.55	9	LR	LR	00 55 31.2	
	comp=Z,44nm,18.3s,baz=166,slow=37						
KEST	Kesra	47.75	25	P	P	00 34 57.7	+0.5
	comp=Z,3.0nm,0.9s,baz=216,slow=8.7,SNR=2.1						
KEST				LR	LR	00 55 17.9	
	comp=Z,92nm,19.2s,baz=249,slow=36						
	comp=Z,3.0nm,0.9s						
SIV	San Ignacio	47.76	255	LR	LR	00 54 12.7	
	comp=Z,98nm,18.9s,baz=113,slow=35						
LODK	Lodwar	49.43	79	P	P	00 35 10.0	-0.5
CEST	Esterri de Car	51.40	13	P	P	00 35 24.2	-0.7
VAE	Valguarnera	51.44	28	LR	LR	00 56 23.8	
	comp=Z,52nm,21.6s,baz=184,slow=35						
FDF	Fort de France	52.56	295	P	P	00 35 32.4	-1.6
TIP	Timpagrande	53.91	29	P	P	00 35 44.5	+1.0
CUC	Castrocucco	54.12	27	P	P	00 35 44.1	-0.9
PCRV	Puerto La Cruz	54.30	288	LR	LR	00 57 45.8	
	comp=Z,36nm,19.1s,slow=35						
LPAZ	La Paz	54.55	255	P	P	00 35 49.0	-0.3
LPAZ	La Paz	54.55	255	P	P	00 35 50.2	+0.9
	comp=Z,0.9nm,0.7s,baz=45,slow=2.3,SNR=5.0						
LPAZ				LR	LR	00 58 25.3	
	comp=Z,75nm,21.0s,baz=61,slow=35						
	comp=Z,0.9nm,0.7s						
OSSC	Osservatorio P	55.22	21	P	P	00 35 52.8	-0.1
PB18	Visviri	55.91	254	P	P	00 35 58.9	-0.1
GO02	Mina Guanaco	56.73	245	P	P	00 36 04.4	-0.1
GO02				IAmb	IAmb	00 36 16.5	
	comp=Z,8.3nm,1.1s						
DAVOX	Davos/Dischmat	57.63	18	LR	LR	01 01 16.7	
	comp=Z,72nm,19.4s,baz=264,slow=36						
PDG	Podgorica	57.63	28	P	P	00 36 09.6	-0.5
PDG				IAmb	IAmb	00 36 18.9	
	comp=Z,20nm,2.0s						
CO01	Juntas del Tor	57.94	239	P	P	00 36 12.4	-0.5
CO01				IAmb	IAmb	00 36 25.9	
	comp=Z,9.6nm,1.1s						
SJG	San Juan	58.25	296	LR	LR	00 55 25.0	
	comp=Z,32nm,21.0s,baz=70,slow=30						
BFO	Black Forest	58.56	17	P	P	00 36 17.3	+0.8
BFO				IAmb	IAmb	00 36 26.5	
	comp=Z,20nm,1.8s						
PRED	Cave del Predi	58.57	21	P	P	00 36 17.1	+0.4
PRED				IAmb	IAmb	00 36 52.8	
	comp=Z,8.1nm,1.6s						
EIL	Elat	58.97	49	LR	LR	01 01 55.8	
	comp=Z,39nm,18.2s,baz=192,slow=36						
SDV	Santo Domingo	59.67	285	LR	LR	00 59 33.2	
	comp=Z,38nm,20.8s,baz=68,slow=33						
GEC2	GERESS Array S	60.68	20	P	P	00 36 31.2	0.0
GEC2				IAmb	IAmb	00 36 58.9	
	comp=Z,9.7nm,1.6s						
GERES	GERESS Array B	60.68	20	P	P	00 36 33.6	+2.4
	comp=Z,0.3nm,0.5s,baz=206,slow=10,SNR=1.5						
GERES				LR	LR	01 03 09.2	
	comp=Z,44nm,19.2s,baz=242,slow=36						
	comp=Z,0.3nm,0.5s						
MMAI	Mount Meron Ar	61.04	46	LR	LR	01 04 36.4	
	comp=Z,25nm,18.1s,baz=225,slow=38						
ASF	Jabal al Asfar	61.68	47	LR	LR	01 03 44.4	
	comp=Z,58nm,18.4s,baz=263,slow=36						
VRAC	Vranov	62.09	21	LR	LR	01 02 27.0	
	comp=Z,60nm,21.5s,baz=218,slow=35						
ROSC	El Rosal	62.39	279	LR	LR	01 02 12.8	
	comp=Z,150nm,19.6s,baz=90,slow=34						
NNA	Nana	63.00	260	LR	LR	01 04 23.2	
	comp=Z,100nm,18.4s,baz=103,slow=36						
VNA2	Neumayer--Watz	63.58	178	⇑P	P	00 36 55.0	+4.8
	comp=Z,2.1nm,0.7s,baz=354,slow=4.0						
BRTR	Keskin Array B	63.63	39	P	P	00 36 51.8	+0.5
	comp=Z,0.2nm,0.3s,baz=201,slow=6.6,SNR=4.7						
	comp=Z,0.2nm,0.3s						
VNA3	Neumayer Olymp	63.84	179	⇑P	P	00 36 56.2	+4.2
	comp=Z,1.5nm,0.8s						
BNN	Bunyan	64.53	41	P	P	00 36 57.9	+0.7
SNAA	Sanae	64.54	176	⇑P	P	00 37 02.1	+5.5
	comp=Z,44nm,0.9s						
SNAA	Sanae	64.54	176	P	P	00 36 58.1	+1.5
SNAA				IAmb	IAmb	00 37 07.5	
	comp=Z,8.2nm,1.3s						
SNAA	Sanae	64.54	176	P	P	00 36 58.0	+1.3
	comp=Z,1.8nm,0.9s,baz=353,slow=4.4,SNR=6.7						
	comp=Z,1.8nm,0.9s						
ATAH	Atahualpa	64.83	266	LR	LR	01 05 00.1	
	comp=Z,142nm,18.7s,baz=109,slow=36						
TROLL	Troll, Antarti	65.28	175	⇑P	P	00 37 06.5	+4.9
	comp=Z,67nm,0.7s						
AKASG	Malin Array Be	68.36	27	P	P	00 37 21.5	+0.2
	comp=Z,0.5nm,0.6s,baz=226,slow=7.4,SNR=6.8						
AKASG				LR	LR	01 08 37.8	
	comp=Z,33nm,19.3s,baz=236,slow=37						
	comp=Z,0.5nm,0.6s						
SYO	Syowa Base	70.36	162	⇓eP	P	00 37 33.0	-0.4
HFS	Hagfors	70.54	14	P	P	00 37 36.3	+1.8
	comp=Z,1.0nm,0.8s,baz=164,slow=5.7,SNR=1.6						
HFS				LR	LR	01 09 33.1	
	comp=Z,24nm,19.0s,baz=216,slow=37						
	comp=Z,1.0nm,0.8s						
NOA	NORSAR Array B	70.80	12	LR	LR	01 11 00.1	
	comp=Z,18nm,18.4s,baz=215,slow=38						
GNI	Garni	71.09	43	LR	LR	01 09 52.5	
	comp=Z,21nm,21.2s,baz=254,slow=37						
FINES	FINESS Array B	75.04	18	P	P	00 38 02.7	+1.5
	comp=Z,1.1nm,0.8s,baz=183,slow=7.6,SNR=3.9						
FINES				LR	LR	01 13 06.4	
	comp=Z,27nm,18.3s,baz=232,slow=37						
	comp=Z,1.1nm,0.8s						
MAW	Mawson	77.84	158	P	P	00 38 16.1	-1.0
	comp=Z,2.2nm,1.0s,baz=262,slow=7.1,SNR=2.1						
	comp=Z,2.2nm,1.0s						
BELG	Belogornoye	78.61	33	LR	LR	01 16 43.5	
	comp=Z,21nm,18.2s,baz=210,slow=38						
SADO	Sadowa	78.69	318	LR	LR	01 05 20.9	
	comp=Z,58nm,20.0s,baz=140,slow=30						
TKL	Tuckaleechee C	78.94	308	LR	LR	01 05 12.9	
	comp=Z,56nm,19.6s,baz=132,slow=30						
ARCES	ARCESS Array B	81.16	13	LR	LR	01 14 47.4	
	comp=Z,24nm,19.5s,baz=324,slow=36						
KIRV	Kirov	82.41	28	LR	LR	01 17 33.6	
	comp=Z,26nm,18.3s,baz=271,slow=37						
QSPA	South Pole Qui	82.74	180	P	P	00 38 42.2	-1.6
	comp=Z,0.4nm,0.5s,baz=150,slow=2.0,SNR=6.3						
	comp=Z,0.4nm,0.5s						
ARTI	Arti	85.97	32	LR	LR	01 20 49.4	
	comp=Z,19nm,18.5s,baz=216,slow=38						
ULM	Lac du Bonnet	91.08	320	LR	LR	01 12 16.9	
	comp=Z,54nm,20.1s,baz=96,slow=30						
TXAR	Lajitas Array	94.15	299	P	P	00 39 40.7	+1.4
	comp=Z,0.2nm,0.7s,baz=85,slow=3.4,SNR=3.5						
	comp=Z,0.2nm,0.7s						
PALK	Pallekele	94.55	83	LR	LR	01 18 05.2	
	comp=Z,49nm,21.3s,baz=266,slow=33						

IDC 11 00:33:15.5±3.7**, 19°.48S**×**176°.04W, h0**^{km}**, mb3.9**/2**,**
mbtmp3.9/2**, Error ellipse: s-maj=201.7km**
s-min=53.6km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	46.55	256	P	P	00 41 45.6	+0.2
	2.0nm,0.8s,baz=88,slow=8.7,SNR=14						
ASAR				PcP	PcP	00 43 17.6	-2.1
	0.3nm,0.5s,baz=117,slow=4.1,SNR=4.7						
	2.0nm,0.8s						
WRA	Warramunga Arr	46.58	261	P	P	00 41 45.5	-0.1
	0.5nm,0.3s,baz=96,slow=8.0,SNR=34						
	0.5nm,0.3s						
BRTR	Keskin Array B	147.48	315	PKPbc	PKPbc	00 53 00.8	-1.1
	0.3nm,0.5s,baz=58,slow=3.6,SNR=3.0						
MMAI	Mount Meron Ar	148.88	302	PKPbc	PKiKP	00 53 06.5	-0.6
	0.6nm,0.5s,baz=90,slow=1.4,SNR=4.3						

CATAC 11 00:42:10.6±0.6**, 11°N**±3°×**8°7W**±°**, h24**^{km}±6^{km}**, M3.3**/20**,**
MLv3.3/20**, Error ellipse: s-maj=7.6km s-min=3.7km**
az=30.8, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAPS	Ciudad Sandino	1.06	35	P	Pn	00 42 30.1	0.0
SABN	Sabanita	1.07	52	P	Pn	00 42 29.1	-1.1
NANN	Nandasmo	1.09	54	P	Pb	00 42 31.3	+0.4
NANN	Nandasmo	1.09	54	S	Sn	00 42 46.0	+1.1
UNAN	Cigeo UNAN	1.10	42	P	Pb	00 42 31.0	+0.1
UNAN				S	Sn	00 42 46.1	+1.1
MAS3	Al N del Volca	1.10	49	P	Pn	00 42 30.0	-0.6
TISN	Laguna Tiscapa	1.12	41	P	Pn	00 42 30.6	-0.3
MOMN	Momotombo	1.21	23	P	Pn	00 42 31.5	-0.6
MOMN				S	Sn	00 42 47.0	-0.7
CNGA	Al SSO del Vol	1.23	15	P	Pn	00 42 32.4	0.0
CNGA				S	Sn	00 42 48.5	+0.1
CNGN	Cerro Negro	1.24	15	S	Sb	00 42 49.4	+0.3
QUEN	Al S del Volca	1.30	7	P	Pn	00 42 33.1	-0.3
HOYN	Al Sur del Vol	1.31	8	P	Pn	00 42 33.1	-0.4
JAPN	Al SSO del Vol	1.34	80	P	Pn	00 42 34.3	+0.4
POLN	Al Sur del Vol	1.36	9	P	Pn	00 42 33.9	-0.3
POLN				S	Sb	00 42 52.4	-0.2
CRIN	San Cristobal	1.40	359	P	Pn	00 42 34.6	-0.2
CARN	Rivas	1.48	94	P	Pn	00 42 36.5	+0.7
CARN				S	Sb	00 42 55.7	-0.1
CSGN	Cosiguina Volc	1.75	343	P	Pn	00 42 39.2	-0.4
CSGN				S	Sn	00 43 02.2	+1.0
BOAB	BOACO BROADBAN	1.76	49	S	Sn	00 43 02.1	+0.9
BOAB	BOACO BROADBAN	1.76	49	P	Pn	00 42 39.1	-0.5
POTN	Potosi Cosigui	1.76	345	P	Pn	00 42 39.8	+0.2
POTN				S	Sn	00 43 01.6	+0.3
LIMN	Finca el Limon	1.87	20	P	Pn	00 42 41.1	-0.2
ACON	Acoyapa	1.93	70	P	Pn	00 42 41.6	-0.4
ACON	Acoyapa	1.93	70	S	Sn	00 43 06.0	+0.4
MATN	Matagalpa	1.95	33	P	Pn	00 42 41.0	-1.4
MATN	Matagalpa	1.95	33	S	Sn	00 43 05.1	-1.0
CNCH	Conchagua	2.12	338	P	Pn	00 42 44.4	-0.3
RCPN	Sur Rio San Ju	2.40	22	P	Pn	00 42 49.0	+0.5

RCVN	Varillal2	2.42	20	P	Pn	00 42 49.0	+0.2
RCVN	Varillal2	2.42	20	S	Sn	00 43 19.0	+1.3
PACA	Pacayal	2.51	330	P	Pn	00 42 50.7	+0.7
PACA	Pacayal	2.51	330	S	Sn	00 43 20.8	+0.9
TGUH	Tegucigalpa,Un	2.76	355	P	Pn	00 42 52.9	-0.6
TGUH				S	Sn	00 43 26.7	+0.6

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*IDC **11** 01:03:44.9±0.9, 55°.39S×29°.46W, h0^{km}, mb4.1/6, mbtmp4.1/7, ML4.2/1, MS3.4/10, Error ellipse: s-maj=36.8km s-min=18.9km az=58.0*

*NEIC **11** 01:03:46.4±1.9, 55°.4S±0°.1×29°.7W±0°.2, h10^{km}±1^{km}, mb4.6/32, Error ellipse: s-maj=21.0km s-min=14.5km az=200.0*

ISC 11 01:03:46.5±0.5**, 55°.43S**±0°.09×**29°.84W**±0°.08**, h10**^{km}**, n67, σ1^{s}35**/56**, mb4.6**/20**, MS3.5**/9**, 5C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	4.01	284		Pn	01 04 48.2	+0.2
HOPE				Sn	Sn	01 05 30.0	-4.9
VNA1	Neumayer--Stat	17.95	157	⇑P	Pn	01 07 56.9	+1.1
	comp=Z,5.4nm,0.5s						
VNA3	Neumayer Olymp	18.10	159	⇑P	Pn	01 07 57.6	-0.1
	comp=Z,14nm,0.8s						
VNA2	Neumayer--Watz	18.35	157	⇑P	Pn	01 08 00.5	-0.2
	comp=Z,0.1nm,0.3s,baz=317,slow=12						
SNAA	Sanae	19.93	155	⇑P	P	01 08 16.9	-1.2
	comp=Z,45nm,0.4s						
SNAA	Sanae	19.93	155		P	01 08 17.8	-0.4
SNAA	Sanae	19.93	155	P	P	01 08 17.1	-1.0
	comp=Z,0.6nm,0.3s,baz=305,slow=12,SNR=74						
SNAA				LR	LR	01 15 30.9	
	comp=Z,59nm,18.2s,baz=317,slow=36						
	comp=Z,3.4nm,0.6s						
TROLL	Troll, Antarti	21.48	153	⇑P	P	01 08 33.1	-1.9
	comp=Z,15nm,0.3s						
BELA	Belgrano 2	22.61	183	P	P	01 08 47.9	+1.0
MG02	Cerro Sombrero	23.03	260	P	P	01 08 53.3	+1.9
MG05	Puerto Natales	25.32	261	P	P	01 09 13.1	0.0
MG05				IAmb	IAmb	01 09 25.6	
	comp=Z,17nm,1.1s						
TRQA	Tornquist	27.70	295	P	P	01 09 35.5	+0.8
TRQA				IAmb	IAmb	01 09 49.2	
	comp=Z,22nm,1.5s						
PLCA	Paso Flores	30.41	282	LR	LR	01 21 35.1	
	comp=Z,33nm,20.5s,baz=128,slow=35						
ITQB	Itaqui	32.06	312	P	P	01 10 13.3	0.0
QSPA	South Pole Qui	34.83	180	P	P	01 10 37.4	+0.1
QSPA				IAmb	IAmb	01 10 51.0	
	comp=Z,9.7nm,1.2s						
QSPA	South Pole Qui	34.83	180	P	P	01 10 38.2	+0.9
	comp=Z,3.6nm,1.0s,baz=187,slow=6.6,SNR=10						
QSPA				LR	LR	01 23 17.5	
	comp=Z,87nm,20.6s,baz=203,slow=34						
	comp=Z,3.6nm,1.0s						
CPUP	Villa Florida	35.29	314	P	P	01 10 42.6	+1.3
	comp=Z,0.5nm,0.7s,baz=338,slow=9.9,SNR=3.8						
CPUP				LR	LR	01 24 10.6	
	comp=Z,10.0nm,19.5s,baz=32,slow=35						
	comp=Z,0.5nm,0.7s						
BO04	La Punta	35.33	290	P	P	01 10 44.4	+2.6
BO04				IAmb	IAmb	01 10 50.4	
	comp=Z,11nm,1.4s						
MT09	Talagante	35.69	290	P	P	01 10 44.9	-0.1
MT01	Popeta	35.76	290	P	P	01 10 44.6	-0.8
MT01				IAmb	IAmb	01 10 51.9	
	comp=Z,13nm,1.2s						
MT02	Curacav	36.17	290	P	P	01 10 49.8	+0.9
MT02				IAmb	IAmb	01 10 56.5	
	comp=Z,16nm,1.2s						
VA06	Catapilco	36.79	291	P	P	01 10 55.2	+1.0
CO02	Combarbal	37.69	293	P	P	01 11 03.4	+1.3
CO02				IAmb	IAmb	01 11 13.3	
	comp=Z,20nm,1.2s						
CO01	Juntas del Tor	38.19	295	P	P	01 11 06.0	-0.4
CO01				IAmb	IAmb	01 11 11.2	
	comp=Z,8.1nm,0.8s						
GO04	Tololo Observa	38.40	294	P	P	01 11 08.9	+0.7
GO04				IAmb	IAmb	01 11 11.4	
	comp=Z,9.0nm,0.8s						
AC05	El Transito	39.20	296	P	P	01 11 15.7	+0.9
MAW	Mawson	41.53	145	P	P	01 11 34.0	+0.6
	comp=Z,2.1nm,0.9s,baz=252,slow=6.4,SNR=1.7						
MAW				LR	LR	01 26 09.6	
	comp=Z,63nm,19.0s,baz=267,slow=32						
	comp=Z,2.1nm,0.9s						
GO02	Mina Guanaco	41.88	300	P	P	01 11 37.7	+0.5
GO02				IAmb	IAmb	01 11 39.5	
	comp=Z,10nm,0.9s						
PB01	IPOC Station P	45.31	303	P	P	01 12 05.7	+1.1
PB01				IAmb	IAmb	01 12 06.3	
	comp=Z,11nm,1.3s						
PTLB	Pontes e Lacer	45.82	319	P	P	01 12 08.6	+0.1
PTLB				IAmb	IAmb	01 12 11.3	
	comp=Z,7.0nm,0.8s						
GO01	Chusmiza	46.35	304	P	P	01 12 14.2	+0.9
VNDA	Vanda	47.12	183	P	P	01 12 17.5	-0.5
VNDA	Vanda	47.12	183	P	P	01 12 17.2	-0.8
	comp=Z,1.3nm,0.8s,baz=184,slow=10,SNR=6.0						
	comp=Z,1.3nm,0.8s						
BOSA	Boshof	47.29	79	P	P	01 12 18.5	-1.7
BOSA	Boshof	47.29	79	P	P	01 12 18.2	-1.9
	comp=Z,6.4nm,1.2s,baz=208,slow=8.6,SNR=3.6						
BOSA				LR	LR	01 27 15.1	
	comp=Z,73nm,19.9s,baz=192,slow=30						
	comp=Z,6.4nm,1.2s						
PB16	IPOC Station P	47.65	305	P	P	01 12 24.8	+1.3
LPAZ	La Paz	48.80	308	P	P	01 12 33.5	+1.1
LPAZ				IAmb	IAmb	01 12 38.3	
	comp=Z,5.1nm,0.9s						
LPAZ	La Paz	48.80	308	P	P	01 12 33.5	+1.1
	comp=Z,4.6nm,0.4s,baz=120,slow=5.0,SNR=25						
LPAZ				LR	LR	01 33 26.9	
	comp=Z,18nm,20.6s,baz=238,slow=36						
	comp=Z,4.6nm,0.4s						
KOOLE	Kule	48.96	69	P	P	01 12 31.6	-1.6
H10N1	ASCENSION HYDR	49.00	20	T	T	02 05 18.3	
	baz=190,slow=75,SNR=9.1						
H10N3	ASCENSION HYDR	49.00	20	T	T	02 05 25.3	
	baz=190,slow=75,SNR=23						
H10N2	ASCENSION HYDR	49.02	20	T	T	02 05 19.0	
	baz=190,slow=75,SNR=24						
H04S2	CROZET ISLANDS	49.17	116	T	T	02 05 53.6	
	baz=230						
H04S3	CROZET ISLANDS	49.18	116	T	T	02 06 00.7	
	baz=230						
H04S1	CROZET ISLANDS	49.19	116	T	T	02 05 58.0	
	baz=230						
KGCAE	Kacgae	50.16	71	P	P	01 12 41.3	-0.9
KGCAE				IAmb	IAmb	01 12 48.4	
	comp=Z,16nm,1.4s						
LBTB	Lobatse	50.29	76	P	P	01 12 41.4	-1.7
LBTB				IAmb	IAmb	01 12 44.8	
	comp=Z,7.2nm,1.2s						
MREMI	Moremi	53.25	76	P	P	01 13 04.5	-0.8
SAML	Samuel	53.31	317	P	P	01 13 04.7	-0.9
SAML				IAmb	IAmb	01 13 07.9	
	comp=Z,5.8nm,1.1s						
LSZ	Lusaka	59.57	72	LR	LR	01 37 42.2	
	comp=Z,74nm,18.1s,baz=158,slow=34						
BOAV	Boa Vista	62.89	325	P	P	01 14 13.3	+0.6
PCRV	Puerto La Cruz	71.54	324	LR	LR	01 46 48.2	
	comp=Z,39nm,20.3s,slow=36						
SDV	Santo Domingo	72.52	317	LR	LR	01 49 29.0	
	comp=Z,87nm,18.3s,baz=116,slow=38						
TORD	Torodi Ar. Bea	73.28	32	P	P	01 15 17.3	-0.6
SNZO	South Karori	81.39	198	P	P	01 16 02.3	-0.8
YKA	Yellowknife Ar	134.71	319	PKP	PKPdf	01 23 03.8	+0.1
	comp=Z,0.2nm,0.4s,baz=86,slow=2.5,SNR=4.2						
BCPM	Bancas Point	143.82	307		PKPab	01 23 18.5	+1.0
J30M	Hart River	144.19	315	PKPdf	PKPab	01 23 19.2	+0.2
L29M	L29M	144.40	312		PKPab	01 23 19.8	+0.1
F30M	Barrier River	144.98	320		PKPbc	01 23 21.4	-0.2
G29M	Pine Creek	145.61	318		PKPdf	01 23 22.4	-0.9
E29M	Blow River	145.96	321		PKPdf	01 23 23.2	-0.7
F28M	Old Crow	146.49	319		PKPdf	01 23 25.7	+0.9
H27K	Steamboat Moun	146.77	317		PKPdf	01 23 27.1	+1.6
I26K	Coal Creek Min	147.18	315		PKPdf	01 23 28.0	+1.9
JOW	Kunigami	147.30	142	PKPbc	PKPdf	01 23 27.2	-0.3
	comp=Z,7.8nm,0.8s,baz=315,slow=8.6,SNR=3.5						
ILAR	Eielson Array	148.59	313	PKPbc	PKPdf	01 23 32.1	+3.7
	comp=Z,3.7nm,0.8s,baz=127,slow=1.7,SNR=32						

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*MOS **11** 01:21:16.0±1.0, 38°.51N×141°.73E, h57^{km}, mb4.8/29, Error ellipse: s-maj=8.0km s-min=4.9km az=91.4*

*BJI **11** 01:21:16.9, 38°.44N×141°.80E, h75^{km}, mB4.9/10, mb4.7/42, Ms3.8/6, Ms7 3.8/6*

*NIED **11** 01:21:18.1, 38°.42N×141°.65E, h59^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$4.41; M$_{\theta\theta}$-2.68; M$_{\phi\phi}$-1.74; M$_{r\theta}$2.03; M$_{\theta\phi}$-2.95; M$_{\phi r}$-0.96; Fault plane solution: M$_0$5.34000×10^{15} NP1: φ$_s$208.00000°, δ44.00000°, λ55.00000°. NP2: φ$_s$72.00000°, δ55.00000°, λ119.00000°.*

*JMA **11** 01:21:18.1±0.1, 38°.4N±0°.2×141°.7E±0°.5, h59^{km}, MD4.5/40, MW4.5/40, KINKAZAN REGION*

JMA Felt III J1 at KINKAZAN REGION .

*NEIC **11** 01:21:18.5±1.4, 38°.48N±0°.07×141°.6E±0°.1, h58^{km}±7^{km}, mb4.6/180, Error ellipse: s-maj=15.1km s-min=7.3km az=123.0*

*IDC **11** 01:21:19.1±1.7, 38°.44N×141°.70E, h70^{km}±15^{km}, mb4.0/27, mbtmp4.3/34, MS3.4/36, Error ellipse: s-maj=13.9km s-min=10.1km az=117.0*

ISC 11 01:21:17.8±0.5**, 38°.45N**±0°.04×**141°.80E**±0°.04**, h60**^{km}±3^{km}**, h61**^{km}**:pP-P, n585, σ1^{s}48**/546**, mb4.5**/160**, 10C-14D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	0.30	242	*i* P	Pn	01 21 27.3	-0.6
JIKH				*e*S	Sn	01 21 34.1	-1.2
JIKH	Ishinomakikobu	0.30	242	A	A	01 21 27.3	
	comp=N,71nm,0.4s,comp=E,34nm,0.5s						
JIO	Ouri	0.36	270	*i* P	Pn	01 21 27.7	-0.7
JIO				S	Sn	01 21 34.4	-1.7
JIO	Ouri	0.36	270	A	A	01 21 27.7	
	comp=N,76nm,2.8s,comp=E,35nm,1.6s						
JKMT	Kesennumamotoy	0.44	324	⇓*i*P	Pn	01 21 29.3	+0.1
JKMT				⇓S	Sn	01 21 37.0	-0.5
JKMT	Kesennumamotoy	0.44	324	A	A	01 21 29.3	
	comp=N,68nm,1.9s,comp=E,19nm,1.8s						
OFUJ	Ofunato	0.64	350	⇓*i*P	Pn	01 21 31.8	+0.5
OFUJ				⇓*e*S	Sn	01 21 41.8	+0.6
OFUJ	Ofunato	0.64	350	A	A	01 21 31.8	
	comp=N,49nm,1.1s,comp=E,24nm,0.6s						
JMK	Ichinoseki	0.68	318	⇓*i*P	Pn	01 21 31.7	-0.1
JMK				⇓*e*S	Sn	01 21 41.5	-0.5
JMK	Ichinoseki	0.68	318	A	A	01 21 31.7	
	comp=N,107nm,0.9s,comp=E,39nm,0.9s						
JOFO	Osakifurukawao	0.72	282	A	A	01 21 31.2	
	comp=N,125nm,2.0s,comp=E,108nm,1.3s						
JOU	Okura	0.90	265	*i* P	Pn	01 21 33.3	-1.3
JOU				*e*S	Sn	01 21 44.6	-2.3
JOU	Okura	0.90	265	A	A	01 21 33.3	
	comp=N,51nm,0.6s,comp=E,40nm,0.7s						
JMM	Marumori	0.99	234	Pn	Pn	01 21 34.1	-1.6
JMM				Sn	Sn	01 21 46.0	-3.0
JMM	Marumori	0.99	234	P	Pn	01 21 34.2	-1.5
JMM	Marumori	0.99	234	*i* P	Pn	01 21 34.0	-1.6
JMM				*e*S	Sn	01 21 46.0	-3.0
JMM	Marumori	0.99	234	A	A	01 21 34.0	
	comp=N,26nm,0.6s,comp=E,24nm,0.8s						
JMST	Minamisoumatoc	1.02	225	A	A	01 21 35.1	
	comp=N,24nm,0.5s,comp=E,23nm,0.9s						
JOM	Ohasama	1.09	339	⇓*i*P	Pn	01 21 37.4	+0.2
JOM	Ohasama	1.09	339	A	A	01 21 37.4	
	comp=N,15nm,0.6s,comp=E,18nm,0.4s						
JYK	Kaneyama	1.22	293	⇓*i*P	Pn	01 21 38.0	-0.8
JYK				⇓*e*S	Sn	01 21 52.7	-1.7
JYK	Kaneyama	1.22	293	A	A	01 21 38.0	
	comp=N,26nm,1.3s,comp=E,17nm,2.6s						
JFK	Kawauchi	1.31	214	*i* P	Pn	01 21 38.9	-1.1
JFK				*e*S	Sn	01 21 54.4	-2.2
JRG	Rokugo	1.31	316	⇓*i*P	Pn	01 21 39.9	-0.1
JRG	Rokugo	1.31	316	A	A	01 21 39.9	
	comp=N,20nm,0.6s,comp=E,16nm,0.4s						
JYS	Shirataka	1.39	261	*i* P	Pn	01 21 39.9	-1.1
JYS				S	Sn	01 21 56.5	-1.8
JYS	Shirataka	1.39	261	A	A	01 21 39.9	
	comp=N,46nm,0.7s,comp=E,45nm,1.0s						
JYAR	Yonezawaarcadi	1.42	248	A	A	01 21 40.2	
	comp=N,31nm,0.4s,comp=E,34nm,1.3s						
JSZI	Iwateshizukuis	1.45	333	A	A	01 21 42.3	
	comp=N,17nm,3.8s,comp=E,20nm,2.1s						
JOTO	OTAMA OYAMA	1.46	233	*i* P	Pn	01 21 40.9	-1.2
JYYZ	Yamagatayuza	1.57	292	A	A	01 21 42.8	
	comp=N,31nm,4.4s,comp=E,19nm,3.2s						
JYA	Atsumi	1.65	276	⇓*i*P	Pn	01 21 43.5	-1.0
JYA	Atsumi	1.65	276	A	A	01 21 43.5	
	comp=N,17nm,1.5s,comp=E,23nm,1.0s						
JYW	Yuwa	1.65	312	A	A	01 21 44.5	
	comp=N,20nm,1.2s,comp=E,25nm,0.8s						
JKEN	Kujiedanarisaw	1.75	358	A	A	01 21 47.3	
	comp=N,40nm,1.0s,comp=E,21nm,0.8s						
JANG	Nango	1.93	353	A	A	01 21 49.7	
	comp=N,6.0nm,1.6s,comp=E,4.0nm,0.4s						
JNTW	Noshirotokiwa	2.22	325	A	A	01 21 52.8	
	comp=N,19nm,2.1s,comp=E,17nm,2.5s						
JTM	Tenmabayashi	2.40	347	Pn	Pn	01 21 55.3	+0.6
JTM	Tenmabayashi	2.40	347	P	Pn	01 21 55.8	+1.1
JTM	Tenmabayashi	2.40	347	S	Sn	01 22 24.8	+1.9
JOG3	Oga3	2.57	306	A	A	01 21 51.3	
	comp=N,6.0nm,1.7s,comp=E,8.0nm,2.4s						
JSD	Sado	2.82	263	P	Pn	01 21 59.0	-1.4
MJAR	Matsushiro Arr	3.44	237	P	Pn	01 22 09.3	+0.4
	comp=E,110nm,1.0s,baz=40,slow=12,SNR=100						
MJAR				S	Sn	01 22 48.4	0.0
	comp=E,26nm,0.4s,baz=235,slow=19,SNR=4.9						
MJAR				LR	LR	01 23 45.5	
	comp=E,742nm,18.5s,baz=33,slow=44						
MAJO	Matsushiro	3.44	237	Pn	Pn	01 22 09.1	+0.2
MAJO	Matsushiro	3.44	237	P	Pn	01 22 09.6	+0.7
MAJO	Matsushiro	3.44	237	*i* P	Pn	01 22 09.3	+0.4
MJB9	Matsu-Tunnel	3.44	237	Pn	Pn	01 22 10.3	+1.3
ERM	Erimo	3.71	16		Pn	01 22 12.5	-0.1
ERM	Erimo	3.71	16	P	Pn	01 22 12.4	-0.1
ERM	Erimo	3.71	16	*ce*P	Pn	01 22 13.2	+0.7
ERM				pmax	pmax		
	comp=Z,51nm,0.6s						
JEM	Erimo	3.71	16	P	Pn	01 22 12.5	0.0
JGF	Kuroka	4.56	233	Pn	Pn	01 22 25.2	+0.9
JGF	Kuroka	4.56	233	P	Pn	01 22 25.6	+1.3
INU	Inuyama	4.93	233	Pn	Pn	01 22 29.6	+0.3
INU	Inuyama	4.93	233	P	Pn	01 22 31.7	+2.4
ASAJ	Asahikawa	5.69	6	P	Pn	01 22 39.8	+0.1
	comp=Z,25nm,0.3s,baz=218,slow=10,SNR=20						
ASAJ				S	Sn	01 23 40.3	-3.3
	comp=Z,35nm,0.4s,baz=243,slow=12,SNR=3.9						
ASAJ				LR	LR	01 25 18.1	
	comp=Z,148nm,21.2s,baz=178,slow=42						
JKA	Kamikawa-asahi	5.69	6	Pn	Pn	01 22 39.8	+0.1
NMR	Nemuro--Hokkai	5.74	30	*e*P	Pn	01 22 38.8	-1.6
NMR				*e*S	Sn	01 23 40.1	-4.7
GLVR	Golovnino	5.98	27	*e*P	Pn	01 22 42.8	-0.8
GLVR				*e*S	Sn	01 23 47.4	-3.3
GLVR				pmax	pmax		
	comp=N,52nm,0.2s						
GLVR				pmax	pmax		
	comp=Z,164nm,0.2s						
GLVR				pmax	pmax		
	comp=E,25nm,0.1s						
GLVR				smax	smax		
	comp=N,511nm,0.2s						
GLVR				smax	smax		
	comp=E,1μm,0.2s						
RUSJ	Misakicho	6.21	24	*e*P	Pn	01 22 47.0	+0.2
RUSJ				*e*S	Sn	01 23 55.2	-1.2
YUK	Yuzh-Kuril'sk	6.36	27	*e*P	Pn	01 22 48.8	0.0
YUK				*e*S	Sn	01 23 56.4	-3.6
YUK				pmax	pmax		
	comp=N,132nm,0.2s						
YUK				pmax	pmax		
	comp=Z,301nm,0.2s						
YUK				smax	smax		
	comp=N,891nm,0.3s						
YUK				smax	smax		
	comp=E,870nm,0.3s						
SHO	Shikotan	6.61	33	*e*P	Pn	01 22 51.4	-0.8
SHO				*e*S	Sn	01 24 00.6	-5.5
SHO				pmax	pmax		
	comp=N,13nm,0.3s						
SHO				pmax	pmax		
	comp=Z,24nm,0.3s						
SHO				smax	smax		
	comp=E,380nm,0.2s						
SHO				smax	smax		
	comp=N,185nm,0.1s						
KUR	Kuril'sk	8.14	32	⇓*i*P	Pn	01 23 12.9	-0.3
KUR				*i* S	Sn	01 24 41.1	-2.7
KUR				pmax	pmax		
	comp=Z,53nm,0.7s						
KUR				smax	smax		
	comp=N,106nm,0.5s						
KUR				smax	smax		
	comp=E,160nm,0.5s						
YSS	Yuzhno-Sakhali	8.53	4	Pn	Pn	01 23 18.1	-0.3
YSS	Yuzhno-Sakhali	8.53	4	*e*P	Pn	01 23 18.2	-0.3
YSS				*e*S	Sn	01 24 48.1	-5.0
YSS				pmax	pmax		
	comp=Z,30nm,0.6s						
YSS				pmax	pmax		
	comp=N,50nm,0.5s						
YSS				MLR	MLR		
	comp=Z,200nm,13.0s						
MSHR	Mys Shultsa	9.10	300	*i* P	Pn	01 23 25.0	-1.3
USA0B	Ussuriysk Arra	9.35	311	Pn	Pn	01 23 29.7	0.0
USA0B	Ussuriysk Arra	9.35	311	*i* P	Pn	01 23 29.4	-0.3
USRK	Ussuriysk Ar.	9.35	311	Pn	Pn	01 23 29.9	+0.1
USRK	Ussuriysk Ar.	9.35	311	P	Pn	01 23 30.4	+0.6
	comp=Z,33nm,0.6s,baz=122,slow=13,SNR=41						
USRK				LR	LR	01 26 51.9	
	comp=Z,211nm,19.3s,baz=168,slow=36						
JNU	Nakatsue	10.34	242	P	Pn	01 23 43.9	+0.4
	comp=Z,9.2nm,0.8s,baz=55,slow=16,SNR=2.8						
JNU				LR	LR	01 27 54.2	
	comp=Z,253nm,18.4s,baz=48,slow=38						
KSRS	Korea Array	11.01	269	P	Pn	01 23 53.8	+1.4
	comp=Z,3.3nm,0.7s,baz=86,slow=14,SNR=8.4						
MDJ	Mudanjiang	11.03	308	P	Pn	01 23 55.6	+3.0
MDJ				pmax	pmax		
	comp=Z,24nm,1.2s						
TYV	Tymovskoe	12.42	3	*e*P	Pn	01 24 10.6	-1.1
TYV				pmax	pmax		
	comp=Z,100nm,4.3s						
TYV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BNX	BinXian	12.93	309	⇓P	Pn	01 24 16.9	-1.6
BNX				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KLR	Kul'dur	12.97	329	P	Pn	01 24 19.7	+0.4
	comp=Z,0.8nm,0.4s,baz=123,slow=12,SNR=8.8						
KLR				LR	LR	01 29 12.6	
	comp=Z,146nm,20.1s,baz=111,slow=37						
KLR	Kul'dur	12.97	329	*i* P	Pn	01 24 19.6	+0.4
KLR				pmax	pmax		
	comp=Z,7.0nm,1.8s						
CN2	Changchun	13.43	299	P	Pn	01 24 25.3	-0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HEH	HeiHe	15.62	324	*e*P	P	01 25 00.6	+3.5
HEH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DL2	Dalian	15.77	278	P	P	01 24 59.2	+0.4
DL2				pmax	pmax		
	comp=Z,34nm,1.0s						
JOW	Kunigami	16.23	228	LR	LR	01 31 22.0	
	comp=Z,43nm,19.6s,baz=102,slow=37						
ZEA	Zeya	18.26	332	*e*P	P	01 25 24.6	-1.6
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PETK	Petropavlovsk-	18.31	32		P	01 25 26.9	+0.1
PETK	Petropavlovsk-	18.31	32	P	P	01 25 26.6	-0.3
	comp=Z,4.7nm,0.8s,baz=231,slow=7.1,SNR=5.4						
PETK				LR	LR	01 32 30.2	
	comp=Z,47nm,18.3s,baz=220,slow=36						
PETK	Petropavlovsk-	18.31	32	P	P	01 25 26.9	+0.1
TIA	Tai'an	19.74	271	P	P	01 25 42.5	-0.1
TIA				pmax	pmax		
	comp=Z,19nm,0.8s						
NJ2	Nanjing	19.78	258	*e*P	P	01 25 42.2	-0.8
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
XLT	XiLinHaoTe	20.07	294	*e*P	P	01 25 44.4	-1.8
XLT				pP	pP	01 25 59.0	-0.3
XLT				pmax	pmax		
	comp=Z,20nm,0.7s						
HNS	HongShan	21.38	276	⇓P	P	01 25 59.1	-1.1
HNS				pmax	pmax		
	comp=Z,16nm,0.7s						
MA2	Magadan	21.90	12	P	P	01 26 05.5	-0.1
MA2				IAmb	IAmb	01 26 09.0	
	comp=Z,21nm,0.9s						
MA2	Magadan	21.90	12	P	P	01 26 06.0	+0.3
	comp=Z,12nm,0.6s,baz=198,slow=9.6,SNR=8.0						
MA2				LR	LR	01 34 07.6	
	comp=Z,75nm,21.3s,baz=126,slow=35						
	comp=Z,12nm,0.6s						
MA2	Magadan	21.90	12	*i* P	P	01 26 04.9	-0.7
MA2				pmax	pmax		
	comp=Z,27nm,1.0s						
HHC	Hu-ho-hao-te	23.35	285	*e*P	P	01 26 20.2	-0.8
HHC				pmax	pmax		
	comp=Z,18nm,0.8s						
LYN	LuoYang	23.85	270	P	P	01 26 23.5	-2.0
LYN				pmax	pmax		
	comp=Z,26nm,0.8s						
WHN	Wuhan	23.90	259	P	P	01 26 30.7	+4.8
BTO	Baotou	24.54	285	*e*P	P	01 26 30.9	-0.9
BTO				pP	pP	01 26 47.3	+0.7
BTO				sP	sP	01 26 59.3	+5.4
BTO				PP	PnPn	01 27 10.1	+4.4
BTO				S	S	01 30 47.5	-0.9
BTO				SS	SnSn	01 31 42.4	+4.2
BTO				pmax	pmax		
	comp=Z,23nm,0.5s						
BTO				pmax	pmax		
	comp=Z,72nm,3.6s						
BTO				LR	LR		
	comp=Z,220nm,7.1s						
BTO				LR	LR		
	comp=Z,220nm,4.9s						
YAK	Yakutsk	24.76	346	P	P	01 26 31.1	-2.3
YAK	Yakutsk	24.76	346	*ce*P	P	01 26 33.5	+0.1
YAK				pmax	pmax		
	comp=Z,18nm,0.6s						
SEY	Seymchan	25.34	11	LR	LR	01 37 03.7	
	comp=Z,44nm,19.6s,baz=160,slow=37						
SEY	Seymchan	25.34	11	*ce*P	P	01 26 38.5	-0.2
SEY				pmax	pmax		
	comp=Z,20nm,1.7s						
XAN	Xi'an	26.80	271	P	P	01 26 53.1	+0.8
XAN				pmax	pmax		
	comp=Z,15nm,0.7s						
ULN	Ulaanbaatar	26.84	302	P	P	01 26 52.2	-0.4
ULN	Ulaanbaatar	26.84	302	*i* P	P	01 26 51.0	-1.6
ULN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SONM	Songino Array	27.28	302	P	P	01 26 56.9	+0.4
SONM	Songino Array	27.28	302	P	P	01 26 57.5	+1.0
	comp=Z,2.3nm,0.7s,baz=90,slow=9.8,SNR=10						
SONM				LR	LR	01 38 06.5	
	comp=Z,96nm,18.5s,baz=44,slow=37						
	comp=Z,2.3nm,0.7s						
H11N2	WAKE ISLAND Hy	28.64	124	T	T	01 57 24.2	
	baz=316,slow=75,SNR=605						
H11N1	WAKE ISLAND Hy	28.65	124	T	T	01 57 29.0	
	baz=316,slow=75,SNR=914						
H11N3	WAKE ISLAND Hy	28.66	124	T	T	01 57 26.4	
	baz=316,slow=75,SNR=762						
H11S1	WAKE ISLAND Hy	29.40	126	T	T	01 58 23.4	
	baz=318,slow=75,SNR=221						
H11S3	WAKE ISLAND Hy	29.40	126	T	T	01 58 32.9	
	baz=318,slow=75,SNR=379						
H11S2	WAKE ISLAND Hy	29.42	126	T	T	01 58 25.8	
	baz=318,slow=75,SNR=229						
LZH	Lanzhou	30.16	277	*e*P	P	01 27 27.1	+4.8
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
GTA	Gaotai	32.47	285	*e*P	P	01 27 43.0	+0.5
GTA				PcP	PcP	01 30 28.7	+0.4
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GTA				LR	LR		
	comp=Z,120nm,14.2s						
GTA				LR	LR		
	comp=Z,140nm,16.7s						
GTA				LR	LR		
	comp=Z,190nm,17.8s						
BILL	Bilibino	32.58	17	P	P	01 27 43.4	+0.4
BILL	Bilibino	32.58	17	*ce*P	P	01 27 44.2	+1.2
BILL				pmax	pmax		

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      comp=Z,8.0nm,1.7s
TIXI  Tiksi              33.92 353  LR     LR     01 42 40.9
      comp=Z,55nm,19.1s,baz=186,slow=38
DAV   Davao City (W)     34.52 209  LR     LR     01 40 39.1
      comp=Z,35nm,20.8s,baz=344,slow=34
PZH   PanZhiHua          35.57 262  P      P      01 28 10.3 +0.8
PZH                                 pmax   pmax
      comp=Z,10.0nm,0.7s
PZH                                 pmax   pmax
      comp=Z,100nm,4.8s
SPIA  Saint Paul Isl     36.31  43  P      P      01 28 15.8 +0.5
      baz=260
P08K  Saint George I     36.60  44  P      P      01 28 17.9 +0.2
      baz=262
NIKH  Nikolski High      36.62  50  P      P      01 28 19.1 +1.1
      baz=267
TNA   Tin City           39.47  30  P      P      01 28 41.4  -0.4
TNA                                 IAmb   IAmb   01 28 51.6
      comp=Z,7.4nm,0.9s
TNA   Tin City           39.47  30  P      P      01 28 41.9 +0.1
      baz=252
FALS  False Pass         39.91  47  P      P      01 28 46.3 +0.8
      baz=269
K13K  Kusilvak Mount     39.97  36  P      P      01 28 47.0 +0.9
      baz=260
F14K  Arctic Creek       40.08  31  P      P      01 28 48.6 +1.7
      baz=254
ANM   Nome               40.23  32  P      P      01 28 49.2 +1.1
      baz=256
M13K  Dall Lake          40.36  39  P      P      01 28 50.1 +0.8
      baz=263
J14K  Nanvaranak Lak     40.63  35  P      P      01 28 52.5 +1.0
      baz=260
S12K  Black Hills        40.70  46  P      P      01 28 53.1 +1.0
      baz=269
L14K  Kuka Creek         40.81  37  P      P      01 28 54.4 +1.5
      baz=262
F15K  North Star Dit     40.82  31  P      P      01 28 54.0 +1.0
F15K  North Star Dit     40.82  31  P      P      01 28 54.0 +1.0
      baz=255
G15K  Niukluk            40.89  32  P      P      01 28 55.1 +1.5
      baz=257
M14K  Bethel             41.08  38  P      P      01 28 56.3 +1.1
      baz=264
N14K  Kuskokwak Cree     41.13  40  P      P      01 28 56.2 +0.6
      baz=265
ZAA0  Zalesovo Array     41.20 311  P      P      01 28 56.1  -0.2
ZAA0                                IAmb   IAmb   01 29 17.2
      comp=Z,7.0nm,0.8s
ZALV  Zalesovo Beam      41.20 311  P      P      01 28 55.5  -0.8
ZALV  Zalesovo Beam      41.20 311  P      P      01 28 55.9  -0.4
      comp=Z,3.3nm,0.5s,baz=87,slow=9.1,SNR=13
ZALV                                PcP    PcP    01 30 53.5  -0.7
      comp=Z,1.4nm,0.3s,baz=106,slow=2.5,SNR=4.2
ZALV                                LR     LR     01 46 50.7
      comp=Z,43nm,18.0s,baz=100,slow=37
      comp=Z,3.3nm,0.5s
O14K  Tigyukauivet M     41.29  41  P      P      01 28 57.9 +1.0
      baz=266
C16K  Lisburne Hills     41.30  27  P      P      01 28 57.9 +1.1
C16K  Lisburne Hills     41.30  27  P      P      01 28 58.2 +1.4
      baz=252
K15K  Wolf Creek Mou     41.48  36  P      P      01 28 59.6 +1.1
      baz=262
SDPT  Sand Point         41.59  47  P      P      01 29 00.5 +1.0
      baz=271
G16K  Koyuk River        41.67  31  P      P      01 29 01.5 +1.5
      baz=258
M15K  Kasigluk River     41.70  39  P      P      01 29 01.9 +1.7
      baz=265
D17K  Noatak River       41.94  28  P      P      01 29 03.4 +1.3
      baz=255,SNR=5.7
N15K  Kwethluk River     41.95  39  P      P      01 29 04.6 +2.3
N15K                                IAmb   IAmb   01 29 05.5
      comp=Z,8.7nm,1.1s
N15K  Kwethluk River     41.95  39  P      P      01 29 03.3 +0.9
      baz=266
O15K  Ungalikthiuk R     42.02  41  P      P      01 29 04.1 +1.2
O15K                                IAmb   IAmb   01 29 05.9
      comp=Z,10.0nm,1.1s
O15K  Ungalikthiuk R     42.02  41  P      P      01 29 03.9 +1.0
      baz=267
J16K  Anvik River        42.05  35  P      P      01 29 04.3 +1.3
      baz=262
I17K  Unalakleet         42.09  34  P      P      01 29 04.4 +1.0
      baz=261
S14K  Fog Glacier        42.11  45  P      P      01 29 04.4 +0.6
      baz=271
CHNA  Chernabura Isl     42.12  47  P      P      01 29 04.8 +1.0
      baz=272
C17K  DeLong Mountai     42.12  27  P      P      01 29 04.6 +1.0
      baz=254
CMAR  Chiang Mai Arr     42.17 254  P      P      01 29 05.7 +1.1
      comp=Z,2.6nm,0.3s,baz=42,slow=7.4,SNR=5.4
CMAR                                LR     LR     01 48 27.2
      comp=Z,21nm,18.1s,baz=170,slow=39
      comp=Z,2.6nm,0.3s
E17K  Hotham Inlet       42.26  29  P      P      01 29 05.7 +1.0
      baz=257
F17K  Baldwin Pennin     42.34  30  P      P      01 29 06.5 +1.2
      baz=258
L16K  Owhat River        42.38  37  P      P      01 29 06.7 +0.9
      baz=265
G17K  Kiwalik Mounta     42.39  31  P      P      01 29 07.5 +1.7
      baz=260
M16K  Timber Creek       42.57  38  P      P      01 29 09.1 +1.7
M16K  Timber Creek       42.57  38  P      P      01 29 08.5 +1.1
      baz=266
H17K  Granite Mounta     42.60  32  P      P      01 29 09.2 +1.7
      baz=261
N16K  Nishlik Lake       42.62  39  P      P      01 29 09.7 +1.8
      baz=267
J17K  VABM Dome          42.74  35  P      P      01 29 09.8 +1.1
J17K                                IAmb   IAmb   01 29 12.3
      comp=Z,10nm,1.1s
J17K  VABM Dome          42.74  35  P      P      01 29 10.4 +1.7
      baz=263
E18K  Tukpahlearik C     42.80  29  P      P      01 29 10.9 +1.8
E18K                                IAmb   IAmb   01 29 12.5
      comp=Z,14nm,1.2s
E18K  Tukpahlearik C     42.80  29  P      P      01 29 10.7 +1.6
      baz=258,SNR=8.2
B18K  Kokolik River      42.85  26  P      P      01 29 10.7 +1.2
      baz=254
C18K  Utukok River       42.87  27         P      01 29 10.9 +1.1
C18K                                IAmb   IAmb   01 29 12.2
      comp=Z,5.3nm,0.7s
C18K  Utukok River       42.87  27  P      P      01 29 11.4 +1.6
      baz=256,SNR=9.0
O16K  Kokwok River B     42.92  40  P      P      01 29 11.6 +1.4
      baz=268
P16K  Nushagak River     42.96  41  P      P      01 29 11.6 +1.1
      baz=269
L17K  Donlin             42.97  37  P      P      01 29 11.9 +1.4
      baz=265
F18K  Selawik            43.00  30  P      P      01 29 12.1 +1.4
      baz=259
K17K  Iditarod           43.02  36  P      P      01 29 13.3 +2.3
K17K  Iditarod           43.02  36  P      P      01 29 12.6 +1.6
      baz=265
G18K  Tagagawik          43.27  31         P      01 29 14.0 +1.0
G18K                                IAmb   IAmb   01 29 16.9
      comp=Z,16nm,1.5s
G18K  Tagagawik          43.27  31  P      P      01 29 14.3 +1.3
      baz=261,SNR=8.2
H18K  Honhosa River      43.28  32  P      P      01 29 14.6 +1.5
H18K  Honhosa River      43.28  32  P      P      01 29 14.9 +1.9
      baz=262
A19K  Wainwright         43.33  25  P      P      01 29 14.3 +1.0
      baz=254
M17K  Holitna River      43.33  38  P      P      01 29 15.2 +1.7
      baz=267
N17K  Nushagak Hills     43.41  39  P      P      01 29 14.9 +0.8
      baz=268
O17K  Koliganek Bris     43.43  40  P      P      01 29 14.9 +0.6
      baz=269
C19K  Lookout Ridge      43.55  26         P      01 29 16.5 +1.3
C19K                                IAmb   IAmb   01 29 18.2
      comp=Z,9.6nm,1.1s
C19K  Lookout Ridge      43.55  26  P      P      01 29 16.3 +1.1
      baz=257,SNR=6.4
MK31  Makanchi Array     43.64 301 i P     P      01 29 15.0  -1.3
MKAR  Makanchi Array     43.64 301  P      P      01 29 15.5  -0.8
MKAR  Makanchi Array     43.64 301  P      P      01 29 15.8  -0.5
      comp=Z,2.7nm,0.7s,baz=84,slow=10,SNR=22
MKAR                                PcP    PcP    01 31 03.5 +0.9
      comp=Z,0.8nm,0.6s,baz=91,slow=4.8,SNR=2.1
MKAR                                LR     LR     01 49 21.7
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      comp=Z,42nm,18.1s,baz=60,slow=39
      comp=Z,2.7nm,0.7s
L18K  Granite Mounta     43.73  37  P      P      01 29 17.1 +0.4
L18K  Granite Mounta     43.73  37  P      P      01 29 18.1 +1.5
      baz=267
P17K  Kvichak River      43.76  41  P      P      01 29 18.6 +1.6
      baz=270
F19K  Shaleruckik Mo     43.77  30  P      P      01 29 18.8 +1.9
      baz=261
J18K  Innoko River       43.80  35  P      P      01 29 18.8 +1.5
      baz=265
MAKZ  Makanchi           43.85 301  P      P      01 29 17.1  -0.8
MAKZ  Makanchi           43.85 301  P      P      01 29 17.1  -0.8
MAKZ                                pmax   pmax
      comp=Z,5.0nm,0.8s
D19K  Kuna River         43.94  27         P      01 29 19.4 +1.1
D19K                                IAmb   IAmb   01 29 21.2
      comp=Z,19nm,1.1s
D19K  Kuna River         43.94  27  P      P      01 29 19.7 +1.3
      baz=259,SNR=18
N18K  Kilae Creek        44.05  39  P      P      01 29 20.1 +0.7
N18K                                IAmb   IAmb   01 29 22.9
      comp=Z,7.4nm,0.9s
N18K  Kilae Creek        44.05  39  P      P      01 29 20.9 +1.5
      baz=269
E19K  Redstone River     44.08  29         P      01 29 20.8 +1.3
E19K                                IAmb   IAmb   01 29 22.6
      comp=Z,10nm,1.0s
E19K  Redstone River     44.08  29  P      P      01 29 20.8 +1.3
      baz=261,SNR=13
M18K  Stony River        44.10  38  P      P      01 29 21.7 +2.0
      baz=268
H19K  Roundabout Mou     44.12  32         P      01 29 21.1 +1.3
H19K                                IAmb   IAmb   01 29 22.9
      comp=Z,12nm,1.1s
H19K  Roundabout Mou     44.12  32  P      P      01 29 21.2 +1.4
      baz=264,SNR=7.5
J19K  Poorman            44.33  34  P      P      01 29 21.8 +0.3
      baz=266,SNR=5.6
P18K  Big Mountain,      44.38  41  P      P      01 29 23.4 +1.4
      baz=271
O18K  Koktuh Hills       44.39  40  P      P      01 29 23.2 +1.2
      baz=271
D20K  Etivluk River      44.52  27  P      P      01 29 24.5 +1.5
D20K  Etivluk River      44.52  27  P      P      01 29 23.8 +0.8
      baz=260,SNR=17
B20K  Meade River        44.58  25         P      01 29 25.1 +1.7
B20K  Meade River        44.58  25  P      P      01 29 24.3 +0.9
      baz=258,SNR=9.4
L19K  White Mountain     44.59  37  P      P      01 29 24.0 +0.4
      baz=268
E20K  Nigu River         44.60  28  P      P      01 29 24.3 +0.6
      baz=261,SNR=12
F20K  Avaraart Lake      44.60  30  P      P      01 29 24.5 +1.0
      baz=263
N19K  Bonanza Creek      44.74  39  P      P      01 29 25.4 +0.4
      baz=270
H20K  Anotleneega Mo     44.77  32  P      P      01 29 26.7 +1.7
      baz=265
M19K  Big River Lodg     44.80  37  P      P      01 29 26.8 +1.5
      baz=269
K20K  Telida             44.99  35  P      P      01 29 28.2 +1.5
      baz=268
J20K  Nowinta River      44.99  34  P      P      01 29 28.2 +1.5
      baz=267
A21K  Barrow             45.03  24  P      P      01 29 28.0 +1.0
      baz=258
L20K  Farewell, AK       45.05  36  P      P      01 29 28.6 +1.4
      baz=269
C21K  Knifeblade Rid     45.25  27  P      P      01 29 30.1 +1.3
      baz=262,SNR=14
KURK  Kurchatov          45.31 307  P      P      01 29 28.6  -0.8
KURK  Kurchatov          45.31 307ceP      P      01 29 26.3  -3.2
KURK                                pmax   pmax
      comp=Z,18nm,0.7s
B21K  Ikpikpuk River     45.38  26         P      01 29 31.6 +2.0
B21K  Ikpikpuk River     45.38  26  P      P      01 29 30.8 +1.1
      baz=261,SNR=22
KURBB Kurchatov Arra     45.39 307  P      P      01 29 29.2  -0.9
      comp=Z,14nm,0.7s,baz=82,slow=8.1,SNR=136
      comp=Z,14nm,0.7s
P19K  Oil Pt             45.39  40  P      P      01 29 31.7 +1.7
      baz=272
M20K  Styx River         45.40  37  P      P      01 29 31.1 +1.1
      baz=270
G21K  Allakaket          45.42  31  P      P      01 29 31.9 +1.7
G21K  Allakaket          45.42  31  P      P      01 29 31.8 +1.7
      baz=265
E21K  Killik River       45.44  28  P      P      01 29 31.4 +1.1
E21K                                IAmb   IAmb   01 29 33.0
      comp=Z,9.5nm,0.9s
E21K  Killik River       45.44  28  P      P      01 29 31.1 +0.8
      baz=263
F21K  Alatna River       45.49  30  P      P      01 29 32.1 +1.4
      baz=265
A22K  Sinclair Lake      45.49  24  P      P      01 29 31.8 +1.3
      baz=260,SNR=8.2
OHAK  Old Harbor         45.51  44  P      P      01 29 32.4 +1.5
      baz=275
H21K  Melozitna Rive     45.64  32  P      P      01 29 33.4 +1.5
H21K                                IAmb   IAmb   01 29 35.0
      comp=Z,9.9nm,1.4s
H21K  Melozitna Rive     45.64  32  P      P      01 29 33.4 +1.5
      baz=267
PPLA  Purkeypile         45.83  36  P      P      01 29 34.8 +1.2
      baz=270
KDAK  Kodiak Island      45.84  43  LR     LR     01 47 53.1
      comp=Z,32nm,22.0s,baz=218,slow=35
KDAK  Kodiak Island      45.84  43  P      P      01 29 34.8 +1.2
      baz=275
N20K  Mount Spurr        45.85  38  P      P      01 29 35.2 +1.5
      baz=272
SPCR  Spurr Chakacha     45.85  38  P      P      01 29 35.2 +1.5
      baz=272
Q20K  Shuyak Island      45.88  42  P      P      01 29 35.6 +1.8
      baz=274
CAST  Castle Rocks       45.88  35  P      P      01 29 35.4 +1.6
CAST  Castle Rocks       45.88  35  P      P      01 29 35.4 +1.6
      baz=270
B22K  Teshekpuk Lake     45.89  25         P      01 29 34.7 +1.0
B22K                                IAmb   IAmb   01 29 38.0
      comp=Z,8.7nm,0.9s
B22K  Teshekpuk Lake     45.89  25  P      P      01 29 35.1 +1.4
      baz=262,SNR=9.1
D22K  Ayikyak River      45.96  27         P      01 29 35.9 +1.5
D22K  Ayikyak River      45.96  27  P      P      01 29 35.8 +1.4
      baz=264,SNR=14
F22K  John River         46.02  29  P      P      01 29 36.3 +1.4
      baz=266
SKT   Skwentna           46.15  37  P      P      01 29 37.8 +1.8
      baz=272
E22K  Anaktuvuk Pass     46.21  28         P      01 29 37.8 +1.5
E22K                                IAmb   IAmb   01 29 39.5
      comp=Z,11nm,0.9s
E22K  Anaktuvuk Pass     46.21  28  P      P      01 29 38.0 +1.6
      baz=265,SNR=13
G22K  Bettles            46.24  30  P      P      01 29 38.0 +1.5
      baz=267
H22K  Ishtalitna Cre     46.24  32  P      P      01 29 38.1 +1.4
      baz=268
BPAW  Bear Paw Mtn.      46.37  34  P      P      01 29 38.8 +1.1
      baz=270
MLY   Manley             46.49  33  P      P      01 29 40.4 +1.8
      baz=269
SUA   Susitna One        46.54  38         P      01 29 40.8 +1.7
SUA                                 IAmb   IAmb   01 29 42.7
      comp=Z,8.5nm,1.0s
SUA   Susitna One        46.54  38  P      P      01 29 40.8 +1.7
      baz=273
D23K  Nanushuk River     46.69  27         P      01 29 41.3 +1.3
D23K                                IAmb   IAmb   01 29 43.6
      comp=Z,16nm,1.3s
D23K  Nanushuk River     46.69  27  P      P      01 29 41.4 +1.3
      baz=266,SNR=7.1
C23K  Itkillik River     46.79  26         P      01 29 42.2 +1.4
C23K  Itkillik River     46.79  26  P      P      01 29 41.9 +1.1
      baz=265,SNR=20
G23K  Bananza Creek      46.82  30  P      P      01 29 42.5 +1.4
      baz=268
H23K  Yukon River        47.00  32  P      P      01 29 43.9 +1.4
      baz=270,SNR=6.8
E23K  Chandalar          47.03  29         P      01 29 44.4 +1.6
E23K  Chandalar          47.03  29  P      P      01 29 43.6 +0.8
      baz=268,SNR=14
RC01  Rabbit Creek A     47.05  38  P      P      01 29 44.7 +1.7
      baz=274
TOLK  Toolik Lake Re     47.07  28  P      P      01 29 43.9 +0.9
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TOLK                                IAmb   IAmb   01 29 46.1
      comp=Z,5.4nm,0.9s
TOLK  Toolik Lake Re     47.07  28  P      P      01 29 44.0 +0.9
      baz=267,SNR=6.4
I23K  Minto, Yukon-K     47.07  33  P      P      01 29 45.1 +2.0
      baz=270
NEA2  Nenana             47.20  33  P      P      01 29 45.4 +1.3
NEA2  Nenana             47.20  33  P      P      01 29 46.0 +1.9
      baz=271
SEW   Seward             47.27  39  P      P      01 29 46.6 +2.0
      baz=275
MCK   McKinley           47.29  34  P      P      01 29 46.6 +1.7
      baz=272
PMR   Palmer             47.31  37  P      P      01 29 46.8 +1.8
      baz=274
D24K  Happy Valley       47.37  27         P      01 29 46.7 +1.3
D24K  Happy Valley       47.37  27  P      P      01 29 46.6 +1.3
      baz=267,SNR=10
GHO   Glory Hole Cre     47.39  37  P      P      01 29 47.1 +1.3
C24K  Franklin Bluff     47.44  26  P      P      01 29 47.5 +1.6
C24K  Franklin Bluff     47.44  26  P      P      01 29 46.7 +0.9
      baz=267
E24K  Your Creek         47.45  29  P      P      01 29 47.4 +1.4
E24K                                IAmb   IAmb   01 29 49.3
      comp=Z,8.2nm,0.8s
E24K  Your Creek         47.45  29  P      P      01 29 47.6 +1.6
      baz=269,SNR=12
WAT1  Susitna Watana     47.50  36  P      P      01 29 48.1 +1.6
      baz=273
KNK   Knik Glacier       47.64  38  P      P      01 29 48.8 +1.2
      baz=275
F24K  Squaw Lake         47.67  29  P      P      01 29 49.2 +1.4
F24K  Squaw Lake         47.67  29  P      P      01 29 49.0 +1.2
      baz=270
SML   Sawmill            47.67  37  P      P      01 29 49.1 +1.3
SML                                 IAmb   IAmb   01 29 50.2
      comp=Z,8.1nm,0.8s
SML   Sawmill            47.67  37  P      P      01 29 49.8 +1.9
      baz=274
H24K  Noodor Dome        47.68  32         P      01 29 49.5 +1.6
H24K                                IAmb   IAmb   01 29 51.4
      comp=Z,6.0nm,1.1s
H24K  Noodor Dome        47.68  32  P      P      01 29 49.5 +1.6
      baz=271,SNR=5.6
G24K  Hadweenzic Riv     47.83  30  P      P      01 29 50.5 +1.5
      baz=271
POKR  Poker Plat Res     47.89  33  P      P      01 29 50.6 +1.2
POKR  Poker Plat Res     47.89  33  P      P      01 29 50.7 +1.3
      baz=272,SNR=5.2
WAT6  Susitna Watana     47.89  36  P      P      01 29 50.6 +0.9
      baz=274
M23K  Glacier View       47.96  37  P      P      01 29 51.8 +1.8
      baz=275
DHY   Denali Highway     48.02  35  P      P      01 29 52.4 +1.7
      baz=274
TARG  Taragay, Kyrgy     48.06 295  P      P      01 29 50.8  -0.8
TARG                                IAmb   IAmb   01 30 14.0
      comp=Z,7.0nm,0.8s
TARG  Taragay, Kyrgy     48.06 295  P      P      01 29 50.8  -0.8
TARG                                pmax   pmax
      comp=Z,7.0nm,0.8s
HDA   Harding Lake       48.13  34  P      P      01 29 51.8 +0.5
HDA                                 IAmb   IAmb   01 29 53.2
      comp=Z,6.4nm,1.0s
HDA   Harding Lake       48.13  34  P      P      01 29 52.9 +1.6
      baz=273
IL31                     48.13  33  P      P      01 29 51.8 +0.5
IL31                                IAmb   IAmb   01 29 52.8
      comp=Z,4.5nm,0.8s
ILAR  Eielson Array      48.13  33  P      P      01 29 52.5 +1.2
      comp=Z,2.7nm,0.8s,baz=269,slow=6.6,SNR=29
      comp=Z,2.7nm,0.8s
SCM   Sheep Creek Mo     48.15  37  P      P      01 29 53.1 +1.6
      baz=275
D25K  Kavik River        48.25  27  P      P      01 29 53.1 +0.9
D25K  Kavik River        48.25  27  P      P      01 29 53.4 +1.2
      baz=270,SNR=14
P23K  Montague Islan     48.30  39  P      P      01 29 53.5 +0.9
      baz=277
GLI   Glacier Island     48.35  38  P      P      01 29 54.5 +1.4
      baz=276
G25K  Bearman Lake       48.38  30  P      P      01 29 54.7 +1.5
      baz=272
F25K  Christian Rive     48.53  29         P      01 29 55.1 +0.7
F25K                                IAmb   IAmb   01 29 57.5
      comp=Z,4.4nm,0.7s
F25K  Christian Rive     48.53  29  P      P      01 29 55.8 +1.4
      baz=272,SNR=8.5
E25K  Arctic Village     48.55  29  P      P      01 29 55.7 +1.2
E25K                                IAmb   IAmb   01 29 58.0
      comp=Z,12nm,1.4s
E25K  Arctic Village     48.55  29  P      P      01 29 56.0 +1.6
      baz=271,SNR=7.6
M24K  Tolsona, Glenn     48.66  37  P      P      01 29 56.8 +1.3
      baz=276
PRP   Porcupine Dome     48.67  32  P      P      01 29 57.0 +1.4
      baz=274
K24K  Donnelly Dome      48.68  34  P      P      01 29 56.8 +1.2
      baz=275
KLU   Klutina            48.85  37  P      P      01 29 58.4 +1.4
      baz=277
Q23K  Middleton Isla     48.90  40  P      P      01 29 59.0 +1.8
      baz=278
BMAR  Burnt Mountain     48.94  29  P      P      01 29 58.3 +0.7
EYAK  Cordova Ski Ar     49.05  39  P      P      01 29 59.4 +1.0
      baz=278
F26K  Sheenjek River     49.10  29  P      P      01 30 00.2 +1.5
F26K  Sheenjek River     49.10  29  P      P      01 30 00.0 +1.3
      baz=273,SNR=18
HARP  HAARP              49.10  36  P      P      01 30 00.1 +1.3
      baz=277
C27K  Jago River         49.18  26  P      P      01 29 59.5 +0.2
C27K  Jago River         49.18  26  P      P      01 30 00.9 +1.6
      baz=272,SNR=6.8
G26K  Porcupine Rive     49.28  30  P      P      01 30 00.7 +0.6
G26K                                IAmb   IAmb   01 30 03.9
      comp=Z,11nm,1.4s
G26K  Porcupine Rive     49.28  30  P      P      01 30 01.7 +1.6
      baz=274
SCRK  Sand Creek         49.45  34  P      P      01 30 02.7 +1.1
SCRK                                IAmb   IAmb   01 30 03.7
      comp=Z,12nm,1.4s
SCRK  Sand Creek         49.45  34  P      P      01 30 03.1 +1.5
      baz=276,SNR=5.4
N25K  Chitina, Valde     49.46  37  P      P      01 30 02.9 +1.3
      baz=278
BMRM  Bremner River      49.55  38  P      P      01 30 03.7 +1.5
      baz=278
J26L  Joseph Creek       49.58  33  P      P      01 30 04.0 +1.5
      baz=276
I26K  Coal Creek Min     49.67  32  P      P      01 30 04.6 +1.5
      baz=276
KAIM  Kayak Island       49.80  39  P      P      01 30 05.4 +1.3
      baz=279
L26K  Log Cabin Wild     49.85  35  P      P      01 30 05.2 +0.7
L26K                                IAmb   IAmb   01 30 07.8
      comp=Z,5.6nm,0.9s
L26K  Log Cabin Wild     49.85  35  P      P      01 30 05.5 +1.0
      baz=278
BVAR  Borovoye Array     49.86 311  P      P      01 30 04.0  -0.7
      comp=Z,2.2nm,0.5s,baz=64,slow=6.8,SNR=11
BVAR                                PcP    PcP    01 31 24.4   0.0
      comp=Z,2.8nm,0.5s,baz=62,slow=3.9,SNR=6.0
BVAR                                LR     LR     01 52 10.6
      comp=Z,33nm,18.6s,baz=94,slow=37
      comp=Z,2.2nm,0.5s
BRVK  Borovoye           49.91 312  P      P      01 30 04.1  -1.0
BRVK                                IAmb   IAmb   01 30 26.6
      comp=Z,3.9nm,0.8s
BRVK  Borovoye           49.91 312ceP      P      01 30 05.2 +0.1
BRVK                                pmax   pmax
      comp=Z,5.0nm,1.0s
E27K  Coleen River       50.03  28         P      01 30 06.8 +1.0
E27K                                IAmb   IAmb   01 30 09.1
      comp=Z,8.7nm,1.1s
E27K  Coleen River       50.03  28  P      P      01 30 06.8 +1.0
      baz=275,SNR=9.6
AAK   Ala-Archa          50.10 297  LR     LR     01 52 10.5
      comp=Z,64nm,18.4s,baz=114,slow=37
AAK   Ala-Archa          50.10 297 i P     P      01 30 04.5  -2.4
AAK                                 pmax   pmax
      comp=Z,4.0nm,1.1s
M26K  Nabesna, AK        50.10  36  P      P      01 30 08.0 +1.5
      baz=278
KSH   Kashi              50.12 293  P      P      01 30 10.5 +3.5
KSH                                 pmax   pmax
      comp=Z,3.0nm,0.5s
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G27K	Doyon Strip	50.13	30	P	P	01 30 07.7	+1.1
G27K	Doyon Strip	50.13	30	P	P	01 30 08.4	+1.9
	baz=276						
D27M	Malcolm River	50.17	27		P	01 30 08.5	+1.6
D27M				IAmb	IAmb	01 30 09.6	
	comp=Z,3.7nm,0.7s						
D27M	Malcolm River	50.17	27	P	P	01 30 08.4	+1.5
	baz=274						
MCARA	McCarthy VSAT	50.24	37	P	P	01 30 09.9	+2.4
	baz=279						
H27K	Steamboat Moun	50.24	31		P	01 30 08.6	+1.1
H27K				IAmb	IAmb	01 30 12.0	
	comp=Z,7.5nm,1.4s						
H27K	Steamboat Moun	50.24	31	P	P	01 30 09.2	+1.7
	baz=277						
I27K	Kandik River	50.28	32	P	P	01 30 10.1	+2.3
	baz=277						
K27K	Chicken	50.28	34	P	P	01 30 09.4	+1.7
K27K				IAmb	IAmb	01 30 10.8	
	comp=Z,4.7nm,0.9s						
K27K	Chicken	50.28	34	P	P	01 30 09.9	+2.2
	baz=278						
CRQE	Cirque	50.31	38	P	P	01 30 10.0	+1.8
	baz=280						
L27K	Beaver Creek,	50.53	35		P	01 30 11.3	+1.6
L27K				IAmb	IAmb	01 30 13.0	
	comp=Z,6.7nm,1.0s						
L27K	Beaver Creek,	50.53	35	P	P	01 30 11.8	+2.1
	baz=279,SNR=6.6						
BCAR	Beaver Creek A	50.55	35	P	P	01 30 11.7	+1.9
M27K	Edge Creek, AK	50.62	36	P	P	01 30 11.9	+1.4
M27K				IAmb	IAmb	01 30 13.6	
	comp=Z,4.8nm,0.9s						
M27K	Edge Creek, AK	50.62	36	P	P	01 30 11.4	+1.0
	baz=279						
F28M	Old Crow	50.73	29	IAmb	IAmb	01 30 14.5	
	comp=Z,11nm,1.3s						
F28M	Old Crow	50.73	29	P	P	01 30 12.4	+1.3
	baz=277,SNR=6.0						
E28M	Babbage River	50.75	28	IAmb	IAmb	01 30 14.0	
	comp=Z,4.4nm,0.8s						
E28M	Babbage River	50.75	28	P	P	01 30 12.6	+1.4
	baz=276,SNR=7.8						
D28M	Stokes Point	50.95	27	P	P	01 30 14.3	+1.7
	baz=276						
MESA	MESA	50.97	39	P	P	01 30 14.8	+1.6
	baz=281						
I28M	Miner Creek	50.99	32	IAmb	IAmb	01 30 18.1	
	comp=Z,4.6nm,1.1s						
I28M	Miner Creek	50.99	32	P	P	01 30 14.3	+1.1
	baz=279,SNR=6.4						
E29M	Blow River	51.37	28	P	P	01 30 16.6	+0.7
	baz=278,SNR=10						
YUK3	Moose Creek	51.38	36	P	P	01 30 18.2	+1.9
	baz=281						
DAWY	Dawson	51.45	33	P	P	01 30 17.9	+1.4
	baz=280						
H29M	Whitestone	51.51	31	P	P	01 30 18.2	+1.3
	baz=279						
G29M	Pine Creek	51.54	30	P	P	01 30 19.1	+2.0
	baz=279,SNR=8.2						
ARSB	Arslanbob	51.61	296	IAmb	IAmb	01 30 35.3	
	comp=Z,6.8nm,0.7s						
I29M	Ogilvie Camp,	51.68	32	P	P	01 30 19.9	+1.6
	baz=280						
O28M	Mount Upton	51.71	38	P	P	01 30 20.4	+1.6
	baz=282						
PINM	Pinnacle	51.82	39	P	P	01 30 21.1	+1.7
	baz=282						
EPYK	Eagle Plains	52.15	30	P	P	01 30 23.2	+1.5
	baz=281,SNR=10						
M29M	Somme Creek	52.17	35	IAmb	IAmb	01 30 25.1	
	comp=Z,3.6nm,0.8s						
M29M	Somme Creek	52.17	35	P	P	01 30 23.4	+1.4
	baz=282,SNR=5.3						
L29M	L29M	52.18	35	P	P	01 30 23.6	+1.6
	baz=282,SNR=7.5						
G30M	tAoh Zraii Nji	52.23	30	IAmb	IAmb	01 30 25.2	
	comp=Z,11nm,1.1s						
G30M	tAoh Zraii Nji	52.23	30	P	P	01 30 24.0	+1.7
	baz=281,SNR=6.5						
F30M	Barrier River	52.28	29	P	P	01 30 24.4	+1.7
	baz=280,SNR=10						
K29M	Barlow Dome	52.30	34	P	P	01 30 24.4	+1.4
	baz=282,SNR=7.0						
YUK4	Talbot Arm	52.32	37	P	P	01 30 25.3	+2.1
	baz=283						
I30M	Mount Dempster	52.50	32	P	P	01 30 26.4	+2.0
	baz=282,SNR=29						
YUK6	Outpost Mounta	52.54	37	P	P	01 30 26.2	+1.3
	baz=283						
O29M	Mount Kennedy	52.59	38	P	P	01 30 26.1	+0.9
	baz=284						
J30M	Hart River	52.66	33	IAmb	IAmb	01 30 28.8	
	comp=Z,5.7nm,1.1s						
J30M	Hart River	52.66	33	P	P	01 30 27.0	+1.4
	baz=282						
KKAR	Karatay Array	52.69	299	P	P	01 30 24.9	-1.2
KKAR	Karatay Array	52.69	299	IAmb	IAmb	01 30 48.0	
	comp=Z,3.2nm,0.8s						
KKAR	Karatay Array	52.69	299	P	P	01 30 24.9	-1.2
HYT	Haines Junctio	52.98	37	P	P	01 30 29.4	+1.4
	baz=284,SNR=5.2						
INK	Inuvik	52.98	28	IAmb	IAmb	01 30 30.3	
	comp=Z,8.3nm,1.1s						
INK	Inuvik	52.98	28	LR	LR	01 55 09.7	
	comp=Z,46nm,19.3s,baz=266,slow=38						
INK	Inuvik	52.98	28	P	P	01 30 28.6	+0.9
	baz=282,SNR=6.4						
G31M	Satah River	52.99	29	IAmb	IAmb	01 30 29.9	
	comp=Z,5.0nm,0.9s						
G31M	Satah River	52.99	29	P	P	01 30 29.0	+1.2
	baz=282,SNR=5.2						
N30M	Aishikik Lake	53.02	36	P	P	01 30 29.6	+1.3
	baz=284						
F31M	Tsiigehtchic	53.09	29	P	P	01 30 29.9	+1.4
	baz=282						
P29M	Windy Craggy	53.16	39	P	P	01 30 30.6	+1.3
	baz=285						
H31M	Peel River	53.21	31	P	P	01 30 31.3	+1.8
	baz=283,SNR=12						
P30M	Million Dollar	53.42	38	P	P	01 30 32.8	+1.6
	baz=285						
N31M	Braeburn, Yuko	53.62	36	IAmb	IAmb	01 30 36.3	
	comp=Z,8.5nm,1.1s						
N31M	Braeburn, Yuko	53.62	36	P	P	01 30 34.1	+1.5
	baz=285						
O30N	Mendenhall	53.66	37	P	P	01 30 34.3	+1.4
	baz=285						
PLBC	Pleasant Camp	53.88	39	P	P	01 30 36.1	+1.6
	baz=286						
M31M	Drury Creek, Y	54.07	35	P	P	01 30 37.1	+1.2
	baz=286						
WHY	Whitehorse	54.27	37	P	P	01 30 38.2	+0.8
	baz=286						
SVE	Sverdlovsk	54.30	318	*e*P	P	01 30 37.9	+0.4
SVE				pmax	pmax		
	comp=Z,16nm,0.8s						
NIL	Nilore	54.48	287	P	P	01 30 38.4	-0.9
NIL	Nilore	54.48	287	P	P	01 30 38.4	-0.9
NIL				pmax	pmax		
	comp=Z,11nm,0.7s						
FARO	Faro, Yukon	54.54	35	P	P	01 30 41.1	+1.8
	baz=286						
A36M	Sachs Harbour	54.83	22	P	P	01 30 42.5	+1.3
	baz=287						
SIT	Sitka	55.12	41	P	P	01 30 45.1	+1.7
	baz=288						
P32M	Atlin	55.14	38	P	P	01 30 44.3	+0.7
	baz=288						
MMPY	Sheldon Lake,	55.35	34	IAmb	IAmb	01 30 48.8	
	comp=Z,10nm,1.4s						
MMPY	Sheldon Lake,	55.35	34	P	P	01 30 45.3	+0.1
	baz=288						
S32K	Killisnoo	55.37	41	P	P	01 30 46.2	+0.9
	baz=289						
P33M	Teslin, Yukon	55.38	37	P	P	01 30 46.5	+1.1
	baz=288						
SIMJ	Simiganj	55.45	295	P	P	01 30 44.6	-1.7
SIMJ				IAmb	IAmb	01 31 07.7	
	comp=Z,5.3nm,0.8s						
ARTI	Arti	55.62	318	P	P	01 30 46.1	-0.9
ARTI	Arti	55.62	318	LR	LR	01 56 54.3	
	comp=Z,47nm,18.4s,baz=60,slow=38						
ARTI	Arti	55.62	318	*c i*P	P	01 30 46.5	-0.6
ARTI				*PP	sP	01 31 06.6	-3.3
ARTI				S	S	01 38 27.0	-1.3
ARTI				SS	SS	01 42 11.9	-1.6
ARTI				pmax	pmax		
	comp=Z,7.0nm,0.5s						
C36M	Paulatuk	56.02	25	IAmb	IAmb	01 30 51.5	
	comp=Z,8.1nm,0.9s						
C36M	Paulatuk	56.02	25	P	P	01 30 50.9	+1.2
	baz=289						
Q32M	Nakina River	56.04	39	P	P	01 30 51.2	+0.8
	baz=289						
R33M	Jennings River	56.53	38	P	P	01 30 55.0	+1.3
	baz=290						
U33K	Whale Pass	56.58	42	P	P	01 30 55.1	+1.2
	baz=291						
S34M	Telegraph Cree	56.96	39	P	P	01 30 57.7	+1.1
	baz=291						
AB31	Akbulak array	57.27	310	IAmb	IAmb	01 31 19.9	
	comp=Z,3.6nm,0.6s						
ABKAR	Akbulak array	57.27	310	P	P	01 30 57.4	-1.5
ABKAR	Akbulak array	57.27	310	IAmb	IAmb	01 31 19.9	
	comp=Z,3.6nm,0.6s						
WTLY	Watson Lake, Y	57.30	37	P	P	01 31 00.0	+1.0
	baz=291						
DLBC	Dease Lake	57.32	39	P	P	01 31 00.3	+1.0
	baz=291						
V35K	Ketchikan	57.66	42	P	P	01 31 02.2	+0.6
	baz=292						
T35M	Bob Quinn	57.75	40	P	P	01 31 03.1	+0.9
	baz=292						
AKTO	Aktyubinsk	57.96	311	LR	LR	01 55 45.4	
	comp=Z,30nm,19.0s,baz=73,slow=36						
WRGLY	Wrigley	58.48	32	P	P	01 31 08.7	+1.6
	baz=294						
WR8	Warramunga Arr	58.50	188	P	P	01 31 07.2	-0.6
WRA	Warramunga Arr	58.51	188	P	P	01 31 06.9	-0.9
WRA	Warramunga Arr	58.51	188	P	P	01 31 06.9	-0.9
	comp=Z,3.0nm,0.5s,baz=5.2,slow=6.8,SNR=59						
	comp=Z,3.0nm,0.5s						
LIRD	Liard River Hi	58.84	37	P	P	01 31 11.4	+1.7
	baz=294						
KIRV	Kirov	59.31	323	LR	LR	01 57 00.3	
	comp=Z,32nm,19.1s,baz=93,slow=36						
KIRV	Kirov	59.31	323	*ce*P	P	01 31 13.3	+0.3
TOAD	Toad River Com	59.47	37	P	P	01 31 16.0	+1.8
	baz=295						
NOR	Nord	59.66	356	*e*P	P	01 31 14.8	-0.3
NOR				IAmb	IAmb	01 31 16.4	
	comp=Z,2.6nm,0.9s						
ASAR	Alice Springs	62.23	188	P	P	01 31 33.0	-0.3
	comp=Z,1.8nm,0.7s,baz=10,slow=5.4,SNR=14						
	comp=Z,1.8nm,0.7s						
ASAR	Alice Springs	62.23	188	P	P	01 31 33.0	-0.3
YKA	Yellowknife Ar	62.43	31	P	P	01 31 35.0	+0.9
	comp=Z,2.3nm,0.8s,baz=306,slow=7.2,SNR=10						
	comp=Z,2.3nm,0.8s						
YKA	Yellowknife Ar	62.43	31	P	P	01 31 35.0	+0.9
KLMR	Klimovskoe	62.73	327	*e*P	P	01 31 33.3	-2.8
KLMR				pmax	pmax		
	comp=Z,15nm,1.3s						
ARCES	ARCESS Array B	62.78	339	P	P	01 31 36.7	+0.3
	comp=Z,1.2nm,0.6s,baz=61,slow=8.5,SNR=6.5						
ARCES				LR	LR	02 01 29.6	
	comp=Z,21nm,21.5s,baz=5.5,slow=38						
	comp=Z,1.2nm,0.6s						
BELG	Belogornoye	62.98	317	LR	LR	02 02 58.2	
	comp=Z,29nm,19.2s,baz=126,slow=40						
BELG	Belogornoye	62.98	317	*i* P	P	01 31 36.1	-1.8
BELG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PALK	Pallekele	62.98	257	*i* P	P	01 31 35.8	-2.7
NEEM	North Greenlan	64.10	3	*i* P	P	01 31 45.4	+0.1
NEEM				IAmb	IAmb	01 31 46.4	
	comp=Z,9.0nm,1.0s						
DAG	Danmarks Havn	64.39	355	*e*P	P	01 31 46.7	-0.1
DAG				IAmb	IAmb	01 31 47.0	
	comp=Z,3.5nm,0.7s						
OBN	Obninsk	67.15	323	*e*P	P	01 32 03.8	-1.1
OBN				*e*		01 32 26.6	
OBN				*e*PPP	PPP	01 36 08.0	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
FINES	FINESS Array B	67.71	332	P	P	01 32 07.9	-0.4
	comp=Z,1.9nm,0.6s,baz=38,slow=9.6,SNR=11						
FINES				LR	LR	02 02 58.9	
	comp=Z,30nm,19.5s,baz=45,slow=37						
	comp=Z,1.9nm,0.6s						
BLKN	Baker Lake	67.97	23	P	P	01 32 10.2	+0.3
NEW	Newport	68.90	45	IAmb	IAmb	01 32 18.6	
	comp=Z,6.6nm,1.1s						
PINE	Pine Mountain	69.19	50	IAmb	IAmb	01 32 21.6	
	comp=Z,8.6nm,1.0s						
SUMG	Summit	69.27	0	IAmb	IAmb	01 32 19.8	
	comp=Z,6.6nm,0.7s						
SUMG	Summit	69.27	0	*e*P	P	01 32 19.1	+0.6
SUMG				IAmb	IAmb	01 32 19.6	
	comp=Z,7.1nm,0.7s						
STKA	Stephens Creek	69.97	180	P	P	01 32 22.4	-0.2
	comp=Z,0.6nm,0.2s,baz=5.2,slow=11,SNR=1.5						
STKA				LR	LR	02 03 54.7	
	comp=Z,58nm,19.0s,baz=270,slow=36						
	comp=Z,0.6nm,0.2s						
KIV	Kislovodsk	70.21	311	*e*P	P	01 32 24.0	-0.3
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV	Kislovodsk	70.21	311	P	P	01 32 23.3	-1.0
	comp=Z,12nm,1.0s						
KBZ	Khabaz	70.22	310	P	P	01 32 23.9	-0.2
	comp=Z,3.0nm,0.9s,baz=4.2,slow=5.5,SNR=5.0						
	comp=Z,3.0nm,0.9s						
KBZ	Khabaz	70.22	310	P	P	01 32 24.0	-0.2
J08A	Circle Bar Ran	70.92	50	IAmb	IAmb	01 32 31.3	
	comp=Z,5.8nm,1.0s						
GNI	Garni	71.11	306	LR	LR	02 07 04.8	
	comp=Z,25nm,18.5s,baz=117,slow=39						
MNK	Minsk	71.50	326	*i* P	P	01 32 28.3	-3.5
	comp=E,5.0nm,0.8s						
MNK				*i* P	P	01 32 28.3	-3.5
	comp=N,8.0nm,1.0s						
MNK				*i* P	P	01 32 28.3	-3.5
	comp=Z,6.0nm,0.8s,baz=49						
MNK				*i* pP	pP	01 32 47.0	-1.4
MNK				*i* PP	PP	01 35 13.6	+3.2
MNK				*i* PPP	PPP	01 36 55.7	
MNK				*i* S	S	01 41 42.1	-3.6
MNK				*i* SS	SS	01 46 23.0	+2.5
MNK				*i* SSS	SSS	01 49 37.4	
MNK				*i* LRM	MLR	02 07 00.8	
	comp=Z,41nm,4.3s						
MNK	Minsk	71.50	326	*i* P	P	01 32 28.2	-3.5
MNK				*i* *PP	pP	01 32 46.9	-1.4
MNK				*i*		01 35 13.6	
MNK				*i* PPP	PPP	01 36 55.6	
MNK				*i* S	S	01 41 42.0	-3.6
MNK				*i* SS	SS	01 46 22.9	+2.5
MNK				pmax	pmax		
	comp=N,8.0nm,1.0s						
MNK				pmax	pmax		
	comp=E,5.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MNK				MLR	MLR		
	comp=Z,41nm,4.0s						
NACGM	Naroch	71.71	327	*e*P	P	01 32 33.5	+0.5
	comp=Z,6.0nm,0.9s,baz=49						
BEKR	Beckworth	71.76	53	IAmb	IAmb	01 32 36.5	
	comp=Z,7.3nm,1.1s						
FFC	Flin Flon	72.35	33	P	P	01 32 37.4	+0.5
FFC				IAmb	IAmb	01 32 38.6	
	comp=Z,7.0nm,1.0s						
FFC	Flin Flon	72.35	33	P	P	01 32 37.4	+0.5
FFC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ICESG	Greenland Ices	72.77	1	*e*P	P	01 32 40.0	+0.4
ICESG				IAmb	IAmb	01 32 40.1	
	comp=Z,39nm,1.6s						
HFS	Hagfors	72.92	336	P	P	01 32 40.5	+0.3
	comp=Z,2.8nm,0.5s,baz=51,slow=5.9,SNR=24						
HFS				LR	LR	02 07 38.2	
	comp=Z,56nm,20.3s,baz=26,slow=38						
	comp=Z,2.8nm,0.5s						
NB2	NORSAR Subarra	73.00	337	P	P	01 32 40.7	0.0
	comp=Z,1.3nm,0.6s,baz=39,slow=6.2						
NB2	NORSAR Subarra	73.00	337	P	P	01 32 40.6	-0.2
NOA	NORSAR Array B	73.00	337	P	P	01 32 40.5	-0.2
	comp=Z,2.5nm,0.8s,baz=39,slow=6.0,SNR=12						
NOA				LR	LR	02 08 30.4	
	comp=Z,34nm,20.6s,baz=35,slow=39						
	comp=Z,2.5nm,0.8s						
EGMT	Eagleton	73.00	42	IAmb	IAmb	01 32 43.3	
	comp=Z,11nm,0.9s						
DLMT	Dillon	73.12	45	IAmb	IAmb	01 32 46.8	
	comp=Z,7.8nm,1.1s						
NORES	NORESS Array B	73.14	337	P	P	01 32 41.2	-0.3
AK03	Malin Array Si	73.35	322	P	P	01 32 41.1	-1.8
AKASG	Malin Array Be	73.37	322	P	P	01 32 42.3	-0.7
	comp=Z,1.0nm,0.4s,baz=47,slow=5.8,SNR=8.6						
AKASG				LR	LR	02 08 12.8	
	comp=Z,24nm,18.4s,baz=43,slow=38						
	comp=Z,1.0nm,0.4s						
AKBB	Malin Array Si	73.37	322	*ce*P	P	01 32 40.3	-2.7
AKBB				pmax	pmax		
	comp=Z,44nm,3.8s						
AKBB	Malin Array Si	73.37	322	P	P	01 32 41.5	-1.5
KIEV	Kiev	73.38	322	P	P	01 32 41.8	-1.2
	comp=Z,33nm,0.7s						
LHV	Little Huntoon	73.87	54	IAmb	IAmb	01 32 49.8	
	comp=Z,6.1nm,1.0s						
NVAR	Mina Array Bea	73.89	54	P	P	01 32 46.9	+0.3
NVAR	Mina Array Bea	73.89	54	P	P	01 32 47.7	+1.0
	comp=Z,1.9nm,0.8s,baz=282,slow=6.2,SNR=14						
	comp=Z,1.9nm,0.8s						
SFJD	Kangerlussuaq	74.45	5	LR	LR	02 10 04.6	
	comp=Z,26nm,18.5s,baz=222,slow=39						
RNPP9	Sopachiv	74.46	324	P	P	01 32 48.7	-0.6
RLMT	Red Lodge	75.10	44	IAmb	IAmb	01 32 56.6	
	comp=Z,12nm,1.4s						
TPAW	Teton Pass	75.21	46	IAmb	IAmb	01 32 58.7	
	comp=Z,8.5nm,1.4s						
KMPD	K-Podol'skiy	76.13	322	P	P	01 32 57.7	-1.3
DUG	Dugway, Tooele	76.20	50	IAmb	IAmb	01 33 02.7	
	comp=Z,9.4nm,1.3s						
PD31	Pinedale Array	76.45	46	IAmb	IAmb	01 33 02.9	
	comp=Z,3.3nm,0.6s						
PDAR	Pinedale Array	76.45	46	P	P	01 33 01.3	0.0
PDAR	Pinedale Array	76.45	46	P	P	01 33 02.5	+1.2
	comp=Z,2.9nm,0.6s,baz=280,slow=3.0,SNR=20						
	comp=Z,2.9nm,0.6s						
PSUT	Pine Spring	76.60	51	IAmb	IAmb	01 33 05.0	
	comp=Z,5.7nm,1.2s						
STNU	Starunia	76.97	323	P	P	01 33 03.0	-0.8
ILGA	Ilgaz	77.24	313	P	P	01 33 06.1	+0.4
BUR08	Bucovina Ar. S	77.38	322		P	01 33 06.1	-0.1
BUR08				IAmb	IAmb	01 33 31.2	
	comp=Z,5.6nm,1.1s						
KOLS	Kolonicke sedl	77.86	324	*e*P	P	01 33 07.5	-1.2
KOLS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KOLS	Kolonicke sedl	77.86	324	*e*P	P	01 33 07.5	-1.2
KOLS				*e*PP	PP	01 36 04.5	+0.1
STHS	Stebnicka Huta	77.98	325	*e*P	P	01 33 02.2	-7.2
STHS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
STHS	Stebnicka Huta	77.98	325	*e*P	P	01 33 02.2	-7.2
STHS				*e*PP	PP	01 36 03.0	-2.4
BRTR	Keskin Array B	78.14	312	P	P	01 33 10.1	-0.6
	comp=Z,0.4nm,0.4s,baz=336,slow=2.7,SNR=5.0						
	comp=Z,0.4nm,0.4s						
ULM	Lac du Bonnet	78.15	34	P	P	01 33 10.0	-0.3
	comp=Z,2.5nm,0.8s,baz=315,slow=7.1,SNR=3.6						
	comp=Z,2.5nm,0.8s						
BR104	Keskin Array S	78.15	312	P	P	01 33 09.3	-1.4
BERU	Beregovo	78.18	323	P	P	01 33 11.1	+0.6
SRU	San Rafael Swe	78.25	49	IAmb	IAmb	01 33 13.8	
	comp=Z,7.6nm,1.0s						
HMU	Henry Mountain	78.87	50	IAmb	IAmb	01 33 17.5	
	comp=Z,7.2nm,1.0s						
LANS	Liptovska Anna	78.97	326	*e*P	P	01 33 15.8	+0.9
LANS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LANS	Liptovska Anna	78.97	326	*e*P	P	01 33 15.8	+0.9
STEB	Steborice	79.12	327	*e*P	P	01 33 14.7	-1.0
MORC	Moravsky Berou	79.34	327	*e*P	P	01 33 17.1	+0.2
DPC	Dobruska-Polom	79.42	328	*e*P	P	01 33 16.9	-0.5
DPC	Dobruska-Polom	79.42	328	*e*P	P	01 33 16.9	-0.5
PV21	Cone Mtn., Par	79.53	49	IAmb	IAmb	01 33 21.0	
	comp=Z,6.2nm,0.9s						
PV22	Blue Mesa, Par	79.65	49	IAmb	IAmb	01 33 21.7	
	comp=Z,7.1nm,1.0s						
PV16	Nyswonger Mesa	79.72	49	IAmb	IAmb	01 33 22.2	
	comp=Z,6.8nm,0.9s						
PV05	Paradox Valley	79.77	49	IAmb	IAmb	01 33 22.6	
	comp=Z,12nm,1.1s						
PV18	Skein Mesa, Pa	79.77	49	IAmb	IAmb	01 33 22.4	
	comp=Z,9.8nm,0.9s						
PV13	Radium Mtn., P	79.88	49	IAmb	IAmb	01 33 23.1	
	comp=Z,8.7nm,1.0s						
PV02	Paradox Valley	79.90	49	IAmb	IAmb	01 33 23.4	
	comp=Z,13nm,1.2s						
CLL	Collm	80.02	330	*i* P	P	01 33 20.2	-0.3
CLL				*i*		01 33 42.1	
CLL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CLL	Collm	80.02	330	*i* P	P	01 33 20.2	-0.3
	comp=Z,7.0nm,1.0s						
CLL				*i* x	x	01 33 34.8	
CLL				*i* (sP)	sP	01 33 42.1	-1.8
	comp=Z,6.0nm,1.0s						
WUAZ	Wupatki	80.05	52	IAmb	IAmb	01 33 24.2	
	comp=Z,5.1nm,0.9s						
VRAC	Vranov	80.10	327	LR	LR	02 12 33.8	
	comp=Z,32nm,18.3s,baz=35,slow=38						
VRAC	Vranov	80.10	327	*e*P	P	01 33 21.3	+0.3
KRUC	Moravsky	80.37	327	*e*P	P	01 33 20.1	-2.3
MODS	Modra-Piesok	80.51	326	*e*P	P	01 33 18.7	-4.5
MODS				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MODS	Modra-Piesok	80.51	326	*e*P	P	01 33 18.7	-4.5
F33A	5 Mile Ranch,	81.21	37	IAmb	IAmb	01 33 28.6	
	comp=Z,7.1nm,1.1s						
MMAI	Mount Meron Ar	81.40	305	P	P	01 33 27.6	-0.7
	comp=Z,0.2nm,0.3s,baz=4.0,slow=5.9,SNR=4.0						
	comp=Z,0.2nm,0.3s						
CKRC	Cesky Krumlov	81.44	328	*e*P	P	01 33 28.1	-0.1
CKRC	Cesky Krumlov	81.44	328	*e*P	P	01 33 28.1	-0.1
RONA	Rosalia, Austr	81.45	326	*i* P	P	01 33 29.0	+0.7
	comp=Z,4.8nm,0.8s						
RONA				*i* pP	pP	01 33 44.2	-0.9
	comp=Z,2.8nm,0.7s						
CONA	Conrad Observa	81.47	327	*i* P	P	01 33 29.0	+0.6
	comp=Z,2.3nm,0.8s						
CONA				*i* pP	pP	01 33 45.0	-0.2
	comp=Z,2.4nm,0.8s						
KHC	Kasperske Hory	81.50	329	*e*P	P	01 33 28.4	-0.1
KHC	Kasperske Hory	81.50	329	*ce*P	P	01 33 29.4	+0.9
KHC				pmax	pmax		
	comp=Z,17nm,2.5s						
GERES	GERESS Array B	81.67	328	P	P	01 33 29.2	-0.3
	comp=Z,0.7nm,0.7s,baz=48,slow=5.9,SNR=4.3						
	comp=Z,0.7nm,0.7s						
EKA	Eskdalemuir Ar	81.90	341	P	P	01 33 31.1	+0.7
	comp=Z,0.9nm,0.7s,baz=19,slow=5.7,SNR=3.9						
	comp=Z,0.9nm,0.7s						
ARSA	Arzberg	82.13	326	*i* P	P	01 33 32.1	+0.3
	comp=Z,2.0nm,0.6s						
ARSA				*i* pP	pP	01 33 48.1	-0.6
	comp=Z,1.6nm,0.6s						
BIOA	Bad Ischl, Aus	82.60	328	*i* P	P	01 33 34.5	+0.2
	comp=Z,2.1nm,0.5s						
BIOA				*i* pP	pP	01 33 50.4	-0.7
	comp=Z,2.6nm,0.6s						
ECSD	EROS Data Cent	82.61	39	IAmb	IAmb	01 33 35.5	
	comp=Z,4.3nm,0.8s						
SOKA	Soboth	82.79	326	*i* P	P	01 33 35.2	-0.1
	comp=Z,4.0nm,1.0s						
SOKA				*i* pP	pP	01 33 51.5	-0.7
	comp=Z,5.1nm,1.0s						
OBKA	Obir	83.13	326	*i* P	P	01 33 35.4	-1.7
	comp=Z,2.1nm,1.0s						
OBKA				*i* pP	pP	01 33 52.6	-1.4
	comp=Z,2.6nm,1.1s						
KBA	Koelnbreinsper	83.20	327	*i* P	P	01 33 37.3	-0.4
	comp=Z,2.4nm,0.6s						
LESA	Schwarzleotal	83.21	328	*i* P	P	01 33 36.9	-0.6
	comp=Z,2.3nm,0.6s						
LESA				*i* pP	pP	01 33 53.0	-1.4
	comp=Z,3.7nm,0.7s						
MYKA	Terra Mystica	83.43	327	*i* P	P	01 33 37.9	-0.8
	comp=Z,2.2nm,0.6s						
MYKA				*i* pP	pP	01 33 54.0	-1.5
	comp=Z,1.9nm,0.8s						
ANMO	Albuquerque	83.44	50		P	01 33 40.8	+1.7
ANMO				IAmb	IAmb	01 33 42.7	
	comp=Z,5.0nm,1.1s						
ANMO	Albuquerque	83.44	50	LR	LR	02 07 59.3	
	comp=Z,23nm,20.1s,baz=304,slow=34						

ANMO	**Albuquerque**	**83.44**	**50**	P	**P**	**01 33 40.8**	**+1.7**
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ABTA	**Abfaltersbach**	**83.82**	**328**	*i* pP	pP	01 33 55.8	-1.7
	comp=Z,2.3nm,0.6s						
SCHQ	**Schefferville**	**83.89**	**16**	P	**P**	**01 33 41.2**	**+0.5**
	comp=Z,4.2nm,0.8s,baz=330,slow=5.6,SNR=5.9						
	comp=Z,4.2nm,0.8s						
MOTA	**Moosalm**	**83.92**	**329**	*e*P	**P**	**01 33 40.7**	**-0.6**
	comp=Z,6.6nm,1.3s						
RETA	**Reutte**	**83.95**	**329**	*i* P	**P**	**01 33 41.4**	**+0.1**
	comp=Z,10.0nm,1.5s						
RETA				*i* pP	**pP**	**01 33 57.5**	**-0.6**
	comp=Z,6.0nm,1.0s						
DAVA	**Damuels**	**84.46**	**329**	*i* P	**P**	**01 33 44.0**	**0.0**
	comp=Z,8.1nm,1.2s						
DAVA				*i* pP	**pP**	**01 33 59.8**	**-1.0**
	comp=Z,5.1nm,0.9s						
FUORN	**Ofenpass-Fuorn**	**84.85**	**329**	P	**P**	**01 33 44.9**	**-1.2**
PPT2	**Papeete2**	**85.01**	**117**	*e*LR	LR	02 00 38.0	
	comp=Z,128nm,26.2s						
PPT2				*e*LR	LR	02 00 45.9	
	comp=Z,56nm,22.5s						
DKNS	**Dickens**	**87.61**	**48**	IAmb	IAmb	01 34 02.9	
	comp=Z,4.1nm,0.8s						
TXAR	**Lajitas Array**	**89.01**	**53**	P	**P**	**01 34 07.2**	**+0.8**
TXAR	**Lajitas Array**	**89.01**	**53**	P	**P**	**01 34 07.8**	**+1.4**
	comp=Z,2.2nm,0.7s,baz=298,slow=3.4,SNR=24						
	comp=Z,2.2nm,0.7s						
SADO	**Sadowa**	**89.30**	**28**	LR	LR	02 20 50.3	
	comp=Z,27nm,18.5s,baz=150,slow=40						
CCM	**Cathedral Cave**	**89.57**	**39**	P	**P**	**01 34 09.3**	**+0.6**
CCM	**Cathedral Cave**	**89.57**	**39**	P	**P**	**01 34 09.3**	**+0.6**
CCM				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MIAR	**Mount Ida**	**91.07**	**43**	P	**P**	**01 34 16.6**	**+0.8**
MIAR	**Mount Ida**	**91.07**	**43**	P	**P**	**01 34 16.6**	**+0.8**
MIAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KEST	**Kesra**	**94.08**	**323**	LR	LR	02 19 31.8	
	comp=Z,40nm,18.6s,baz=356,slow=37						
ESDC	**Sonseca Array**	**96.15**	**334**	LR	LR	02 22 57.4	
	comp=Z,65nm,18.6s,baz=30,slow=38						
QSPA	**South Pole Qui**	**128.19**	**180**	PKP	**PKPdf**	**01 40 15.3**	**-0.9**
	comp=Z,0.7nm,0.6s,baz=297,slow=1.4,SNR=5.7						
SNAA	**Sanae**	**142.19**	**197**	PKhKP	PKPpre	01 40 36.3	
	comp=Z,0.9nm,0.8s,baz=204,slow=3.3,SNR=14						

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*KRNET **11** 01:31:50.7±0.1, 39°.31N×72°.52E, h16^{km}, mb3.5*

*SOME **11** 01:31:57.2, 39°.68N×72°.23E, h10^{km}*

*NNC **11** 01:31:58.8±3.2, 39°.62N×72°.41E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=25.1km s-min=14.1km az=170.0*

ISC 11 01:31:53.2±1.0**, 39°.47N**±0°.05×**72°.47E**±0°.03**, h10^{km}, n44, σ2^{s}.17**/75**, 35C-14D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.52**	**271**	⇑*e*P	**Pg**	**01 32 02.0**	**-1.4**
DRK				⇑*i*S	**Sg**	**01 32 10.1**	**-0.2**
SFK	**Sufi-Kurgan**	**0.96**	**55**	⇑*i*P	**Pg**	**01 32 10.4**	**-1.4**
SFK				⇑*e*S	**Sb**	**01 32 24.6**	**-0.5**
OHH	**Osh**	**1.08**	**13**	⇑*e*P	**Pn**	**01 32 13.9**	**-0.6**
OHH				⇑*e*S	**Sn**	**01 32 30.7**	**+1.1**
BTK	**Batken**	**1.40**	**295**	⇓*e*P	**Pb**	**01 32 18.9**	**-0.7**
BTK				⇓*e*S	**Sg**	**01 32 39.3**	**+0.9**
GAR	**Garm**	**1.74**	**255**	⇓*e*P	**Pn**	**01 32 22.8**	**-0.8**
GAR				⇓*e*S	**Sb**	**01 32 46.2**	**-1.1**
SALK	**Salom-Alik**	**1.75**	**36**	⇑*e*P	**Pb**	**01 32 25.0**	**-0.5**
SALK				⇑*e*S	**Sg**	**01 32 50.1**	**+0.6**
ARSB	**Arslanbob**	**1.89**	**12**	⇑*e*P	**Pb**	**01 32 27.7**	**-0.3**
ARSB				⇑*e*S	**Sg**	**01 32 54.7**	**+0.6**
TRKS	**Terek-Say**	**2.29**	**334**	⇓*e*P	**Pb**	**01 32 32.5**	**-2.3**
TRKS				⇓*e*S	**Sb**	**01 33 03.0**	**-0.3**
ARK	**Arkit**	**2.36**	**351**	⇑*e*P	**Pb**	**01 32 34.5**	**-1.4**
ARK				⇑*e*S	**Sb**	**01 33 06.4**	**+1.3**
ARLS	**Aral**	**2.77**	**30**	⇑*e*P	**Pn**	**01 32 39.3**	**+1.4**
ARLS				⇑*e*S	**Sb**	**01 33 15.1**	**-2.0**
AML	**Almayashu**	**2.81**	**19**	⇑*i*P	**Pn**	**01 32 40.7**	**+2.0**
AML				⇑*e*S	**Sb**	**01 33 17.2**	**-1.3**
MNAS	**Manas**	**3.01**	**0**	⇓*e*P	**Pn**	**01 32 43.5**	**+2.3**
MNAS				⇓*e*S	**Sb**	**01 33 22.0**	**-2.0**
UCH	**Uchtor**	**3.16**	**29**	⇑*e*P	**Pn**	**01 32 45.2**	**+1.7**
UCH				⇑*e*S	**Sb**	**01 33 25.0**	**-3.5**
MRKS	**Merke**	**3.32**	**10**	Pg	**Pg**	**01 32 54.8**	**-2.1**
	8.9nm,0.3s						
MRKS				Lg	Lg	01 33 35.3	
	15nm,0.3s						
MRKS	**Merke**	**3.32**	**10**	*e*P	**Pg**	**01 32 54.8**	**-2.1**
	7.1nm,0.4s						
MRKS				*e*S	**Sb**	**01 33 35.3**	**+2.5**
	20nm,0.4s						
NRN	**Naryn**	**3.33**	**53**	⇓*e*P	**Pn**	**01 32 46.2**	**+0.5**
NRN				⇓*e*S	**Sn**	**01 33 26.9**	**+1.4**
EKS2	**Erkin-Say**	**3.34**	**17**	⇑*e*P	**Pn**	**01 32 47.8**	**+2.2**
EKS2				⇑*e*S	**Sb**	**01 33 29.3**	**-4.0**
AAK	**Ala-Archa**	**3.51**	**25**	⇑Pn	**Pb**	**01 32 53.9**	**-1.8**
	0.7nm,0.5s						
AAK				⇑Sn	**Sb**	**01 33 39.4**	**+1.0**
	2.0nm,0.5s						
AAK	**Ala-Archa**	**3.51**	**25**	⇑*e*P	**Pn**	**01 32 50.1**	**+2.0**
AAK				⇑*e*S	**Sn**	**01 33 33.3**	**+3.5**
KBK	**Karagaybulak**	**3.69**	**30**	⇑*e*P	**Pn**	**01 32 52.5**	**+2.0**
KBK				⇑*e*S	**Sn**	**01 33 37.5**	**+3.3**
FRU1	**Bishkek**	**3.71**	**25**	⇑*i*P	**Pn**	**01 32 53.0**	**+2.3**
FRU1				⇑*e*S	**Sn**	**01 33 38.4**	**+3.9**
KK31	**Karatay Array**	**3.92**	**338**	Pn	**Pb**	**01 32 57.7**	**-4.7**
	2.3nm,0.2s,baz=148,slow=11,SNR=95						
KK31				⇑Sn	**Sb**	**01 33 47.1**	**-2.7**
	11nm,0.5s,baz=153,slow=24,SNR=10						
KKAR	**Karatay Array**	**3.92**	**338**	⇓*e*P	**Pn**	**01 32 56.0**	**+2.5**
KKAR				⇓*e*S	**Sn**	**01 33 43.6**	**+4.1**
CHMS	**Chumysh**	**3.92**	**25**	⇓*e*P	**Pn**	**01 32 55.5**	**+2.0**
CHMS				⇓*e*S	**Sn**	**01 33 42.8**	**+3.2**
BRLS	**Borolday**	**4.07**	**332**	Pg	**Pb**	**01 33 06.9**	**+1.8**
	3.6nm,0.3s						
BRLS				Lg	Lg	01 33 57.7	
	7.7nm,0.5s						
BRLS	**Borolday**	**4.07**	**332**	*e*P	**Pb**	**01 33 04.1**	**-1.0**
	3.1nm,0.2s						
BRLS				*e*S	**Sb**	**01 33 51.3**	**-3.0**
	7.5nm,0.3s						
USP	**Ospenovka**	**4.09**	**21**	⇑*e*P	**Pn**	**01 32 58.0**	**+2.1**
USP				⇑*e*S	**Sn**	**01 33 47.1**	**+3.3**
TKM2	**Tokmak 2**	**4.18**	**33**	⇑*e*P	**Pn**	**01 32 59.0**	**+1.8**
TKM2				⇑*e*S	**Sn**	**01 33 49.0**	**+2.8**
SGDS	**Sogindy**	**4.29**	**21**	Pg	**Pg**	**01 33 15.3**	**-0.2**
	2.0nm,0.4s						
SGDS				Lg	Lg	01 34 10.4	
	7.3nm,0.6s						
KST	**Kastek**	**4.43**	**35**	Pg	**Pg**	**01 33 17.7**	**-0.4**
	3.3nm,0.6s						
KST				Lg	Lg	01 34 14.6	
	10nm,0.7s						
KST	**Kastek**	**4.43**	**35**	*e*P	**Pg**	**01 33 17.7**	**-0.4**
	3.3nm,0.6s						
KST				*e*S	**Sg**	**01 34 14.6**	**-1.0**
	10nm,0.7s						
DGS	**Degeres**	**4.51**	**32**	Pg	**Pg**	**01 33 19.3**	**-0.4**
	3.7nm,0.5s						
DGS				Lg	Lg	01 34 18.0	
	7.5nm,0.6s						
IZV	**Izvestkoviy**	**4.74**	**40**	Pg	**Pg**	**01 33 23.1**	**-0.9**
	3.4nm,0.5s						
IZV				Lg	Lg	01 34 23.9	
	15nm,0.6s						
IZV	**Izvestkoviy**	**4.74**	**40**	*e*P	**Pg**	**01 33 23.1**	**-0.9**
	3.4nm,0.5s						
IZV				*e*S	**Sg**	**01 34 23.9**	**-1.4**
	15nm,0.6s						
MDOK	**Medeo**	**5.05**	**42**	Pg	**Pg**	**01 33 29.1**	**-0.8**
	2.1nm,0.6s						
MDOK				Lg	Lg	01 34 34.1	
	7.1nm,0.8s						
KOTS	**Kotyrbulak**	**5.13**	**41**	Pg	**Pg**	**01 33 30.8**	**-0.8**
	4.9nm,0.6s						
KOTS				Lg	Lg	01 34 37.1	
	28nm,0.6s						
KOTS	**Kotyrbulak**	**5.13**	**41**	*e*P	**Pg**	**01 33 30.8**	**-0.8**
	4.9nm,0.6s						
KOTS				*e*S	**Sg**	**01 34 37.0**	**-0.9**
	28nm,0.6s						
KUU	**Kurty**	**5.28**	**32**	*e*P	**Pg**	**01 33 32.2**	**-2.2**
	2.3nm,0.1s						
KUU				*e*S	**Sg**	**01 34 39.9**	**-2.9**
	6.7nm,0.2s						
KTBS	**Karatobe**	**5.28**	**35**	Pg	**Pg**	**01 33 33.3**	**-1.1**
	1.7nm,0.4s						
KTBS				Lg	Lg	01 34 41.3	
	8.2nm,0.8s						
BTLS	**Baital**	**5.69**	**11**	Pg	**Pg**	**01 33 39.3**	**-2.8**
	2.2nm,0.3s						
BTLS				Lg	Lg	01 34 51.9	
	2.6nm,0.4s						
BTLS	**Baital**	**5.69**	**11**	*e*P	**Pg**	**01 33 39.3**	**-2.8**
	2.2nm,0.3s						
BTLS				*e*S	**Sg**	**01 34 51.9**	**-3.9**
	2.6nm,0.4s						
BLB	**Baldybastay**	**6.44**	**42**	Pg	**Pg**	**01 33 51.8**	**-4.8**
	5.9nm,0.6s						
BLB				Lg	Lg	01 35 13.5	
	3.6nm,0.7s						
AB31	**Akbulak array**	**13.25**	**322**	⇑P	**Pn**	**01 35 00.8**	**-0.5**
	0.3nm,0.4s,baz=133,slow=8.5,SNR=14						
AKTO	**Aktyubinsk**	**14.97**	**322**	⇑P	**P**	**01 35 32.8**	**+2.5**
	1.2nm,0.6s						

NEIC 11 01:48:24.0±2.2**, 43°.24N**±0°.04×**127°.4W**±0°.2**, h10^{km}**±2^{km}**, ML2.7**/62**, Error ellipse: s-maj=21.4km s-min=3.7km az=252.0, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**2.29**	**98**	Pn	Pn	01 49 00.2	-1.7
KEBM				IAML		01 49 28.4	
	comp=E,59nm,0.9s						
KEBM				IAML		01 49 30.3	
	comp=N,54nm,1.4s						
J01E	**Myrtle Point**	**2.55**	**91**	Pn	Pn	01 49 03.6	-1.8
J01E				IAML		01 49 35.5	
	comp=E,30nm,0.9s						
J01E				IAML		01 49 37.5	
	comp=N,24nm,1.5s						
KBO	**Bosley Butte**	**2.57**	**113**	Pn	Pn	01 49 04.7	-1.1
KBO				IAML		01 49 23.8	
	comp=E,53nm,1.5s						
KBO				IAML		01 50 48.0	
	comp=N,30nm,1.5s						
I02E	**Swisshome, OR**	**2.73**	**70**	Pn	Pn	01 49 06.7	-1.2
I02E				IAML		01 49 39.4	
	comp=E,26nm,1.4s						
I02E				IAML		01 49 43.6	
	comp=N,25nm,1.4s						
K02D	**Willamette Mer**	**2.81**	**100**	Pn	Pn	01 49 07.8	-1.2
KSXB	**Camp Six Broad**	**2.98**	**117**	Pn	Pn	01 49 10.6	-0.7
I03D	**Drain, OR**	**3.00**	**80**		Pn	01 49 10.2	-1.3
I03D				IAML		01 49 45.7	
	comp=E,15nm,1.3s						
I03D				IAML		01 49 46.0	
	comp=N,14nm,0.4s						
L02F	**Cave Junction**	**3.05**	**110**	Pn	Pn	01 49 12.4	+0.1
COR	**Corvallis**	**3.26**	**64**	Pn	Pn	01 49 14.8	-0.4
COR				IAML		01 49 53.8	
	comp=N,18nm,1.1s						
COR				IAML		01 49 58.3	
	comp=N,18nm,1.5s						
HEBO	**Mount Hebo**	**3.29**	**52**	Pn	Pn	01 49 14.7	-0.9
BUCK	**Buck Mountain**	**3.35**	**72**		Pn	01 49 16.5	0.0
BUCK				IAML		01 49 58.6	
	comp=E,15nm,1.3s						
BBOR	**Butler Butte**	**3.49**	**94**		Pn	01 49 18.2	-0.3
BBOR				IAML		01 50 02.2	
	comp=E,9.2nm,0.9s						
G03D	**McMinnville, O**	**3.58**	**55**	Pn	Pn	01 49 19.0	-0.5
G03D				IAML		01 50 04.8	
	comp=N,23nm,1.4s						
G03D				IAML		01 50 10.1	
	comp=E,21nm,1.4s						
H04D	**Lebanon**	**3.62**	**68**		Pn	01 49 20.3	+0.2
H04D				IAML		01 50 03.8	
	comp=E,23nm,0.8s						
H04D				IAML		01 50 04.4	
	comp=N,16nm,0.7s						
I04A	**Tendick Farm,**	**3.68**	**80**		Pn	01 49 20.7	-0.3
I04A				IAML		01 50 11.4	
	comp=E,9.2nm,1.1s						
J04A	**Umpqua Nationa**	**3.88**	**88**		Pn	01 49 22.6	-1.3
H04A	**Detroit Lake**	**4.04**	**67**		Pn	01 49 26.2	+0.2
H04A				IAML		01 50 12.8	
	comp=N,11nm,0.4s						
H04A				IAML		01 50 14.2	
	comp=E,13nm,0.4s						
G04A	**Mulino**	**4.06**	**59**		Pn	01 49 26.1	0.0
K04D	**Chiloquin, OR**	**4.21**	**97**		Pn	01 49 25.9	-2.4
E03A	**Lebam**	**4.29**	**38**	Pn	Pn	01 49 29.1	-0.2
HOOD	**Mount Hood Mea**	**4.63**	**61**		Pn	01 49 34.6	+0.4
MTMW	**Mount Mitchell**	**4.64**	**51**		Pn	01 49 35.3	+1.1
FL2	**Flat Top 2**	**4.67**	**49**		Pn	01 49 35.6	+1.1
ERK	**Elk Rock**	**4.74**	**48**		Pn	01 49 36.4	+0.9
PINE	**Pine Mountain**	**4.74**	**81**	Pn	Pn	01 49 33.9	-1.8
PINE				IAML		01 50 15.7	
	comp=N,3.6nm,0.9s						
SEPW	**September Lobe**	**4.76**	**50**		Pn	01 49 37.5	+1.6
STD	**Studebaker Rid**	**4.76**	**49**		Pn	01 49 36.9	+1.0
B201	**Coldwater, Mou**	**4.78**	**48**		Pn	01 49 36.8	+0.8
G05A	**Wamic**	**4.82**	**63**		Pn	01 49 36.9	+0.3
G05A				IAML		01 51 56.6	
	comp=E,6.4nm,1.4s						
G05A				IAML		01 51 58.3	
	comp=N,7.9nm,1.3s						
TDL	**Tradedollar La**	**4.83**	**48**		Pn	01 49 37.7	+0.8
NLWA	**Neilton Lookou**	**4.84**	**30**	Pn	Pn	01 49 37.2	+0.2
NLWA				IAML		01 50 37.1	
	comp=N,9.2nm,1.4s						
KOSW	**Kosmos**	**4.92**	**47**		Pn	01 49 39.2	+1.3
AWST	**Adams West**	**4.96**	**52**		Pn	01 49 39.8	+1.1
G06A	**Carlson Farm,**	**5.26**	**65**	Pn	Pn	01 49 42.3	-0.5
G06A				IAML		01 50 36.9	
	comp=N,3.0nm,1.5s						
REMR	**Mount Rainier-**	**5.33**	**46**		Pn	01 49 45.0	+1.2
GNW	**Green Mountain**	**5.40**	**35**		Pn	01 49 44.6	+0.1
PANH	**Panhandle Gap,**	**5.46**	**47**		Pn	01 49 46.7	+1.1
D05A	**Enumclaw**	**5.50**	**42**	Pn	Pn	01 49 46.8	+0.9
B04A	**Port Angeles**	**5.54**	**28**	Pn	Pn	01 49 47.5	+1.1
HTW	**Haystack Looko**	**6.04**	**39**		Pn	01 49 54.5	+1.0
G08A	**Pilot Rock**	**6.41**	**68**	Pn	Pn	01 49 58.6	0.0
BBB	**Bella Bella**	**8.96**	**357**	Pn	Pn	01 50 32.0	-1.3

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*CNRM **11** 01:52:15.8, 37°.43N×1°.89W, h80^{km}*

*MDD **11** 01:52:15.4±0.2, 37°.34N×2°.04W, h2^{km}±1^{km}, mb_Lg3.4/71, Error ellipse: s-maj=1.6km s-min=1.1km az=147.0*

*IGIL **11** 01:52:16.2, 37°.34N×2°.04W, h2^{km}*

*SFS **11** 01:52:16.8, 37°.29N×1°.92W, h21^{km}, ML3.6/17, ML3.3/22, MLv3.2/22*

*INMG **11** 01:52:16.2±1.6, 37°.31N×1°.96W, h15^{km}±2^{km}, ML3.0, Error ellipse: s-maj=2.7km s-min=1.4km az=148.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Lorca (ESP)*

ISC 11 01:52:14.4±1.0**, 37°.36N**±0°.02×**1°.99W**±0°.02**, h9^{km}**±9^{km}**, n111, σ1^{s}.40**/237**, 5C-1D, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELOR	**Lorca, Murcia**	**0.34**	**35**	⇑Pg	**Pb**	**01 52 23.2**	**+0.6**
ELOR				Sg	**Sb**	**01 52 28.2**	**+0.1**
ELOR				*i* IVmb_Lg		01 52 29.7	
TLOR	**Lorca, Murcia**	**0.38**	**39**	Pg	**Pb**	**01 52 24.0**	**+0.7**
TLOR				Sg	**Sb**	**01 52 29.7**	**+0.5**
TLOR	**Lorca, Murcia**	**0.38**	**39**	⇑Pg	**Pb**	**01 52 24.0**	**+0.7**
TLOR				Sg	**Sb**	**01 52 29.9**	**+0.6**
ENIJ	**Nijar**	**0.43**	**204**	Pg	**Pg**	**01 52 23.4**	**+0.6**
ENIJ				Sg	**Sg**	**01 52 28.0**	**-0.4**
ENIJ	**Nijar**	**0.43**	**204**	⇑Pg	**Pg**	**01 52 23.4**	**+0.6**
ENIJ				Sg	**Sg**	**01 52 27.3**	**-1.1**
EZAR	**Zarzadilla de**	**0.56**	**24**	Pg	**Pb**	**01 52 26.2**	**-0.3**
EZAR				Sg	**Sb**	**01 52 35.1**	**+0.4**
EZAR				*i* IVmb_Lg		01 52 39.4	
EXMAZ	**Mazarron**	**0.59**	**67**	Pg	**Pb**	**01 52 27.5**	**+0.6**
EXMAZ				Sg	**Sb**	**01 52 35.4**	**+0.1**
EXAHM	**Alhama Murcia,**	**0.65**	**42**	Pg	**Pn**	**01 52 29.1**	**-0.7**
EXAHM				Sg	**Sb**	**01 52 37.5**	**+0.4**
EXBUL	**Bullas, Murcia**	**0.73**	**21**	Pg	**Pb**	**01 52 30.1**	**+0.8**
EXBUL				Sg	**Sb**	**01 52 39.7**	**+0.2**
CART	**Cartagena**	**0.82**	**74**	Pg	**Pb**	**01 52 31.3**	**+0.6**
CART				Sg	**Sb**	**01 52 42.0**	**+0.2**
CART	**Cartagena**	**0.82**	**74**	P	**Pn**	**01 52 31.5**	**-0.5**
CART	**Cartagena**	**0.82**	**74**	S	**Sn**	**01 52 44.0**	**-0.3**
EXEJI	**El Ejido**	**0.88**	**228**	Pg	**Pg**	**01 52 31.6**	**+0.2**
EXEJI				Sg	**Sg**	**01 52 41.7**	**-1.1**
EXTPC	**Torre Pacheco**	**0.90**	**65**	Pg	**Pb**	**01 52 32.6**	**+0.4**
EXTPC				Sg	**Sb**	**01 52 45.3**	**+0.9**
EQES	**Quesada**	**0.97**	**297**	Pg	**Pn**	**01 52 34.2**	**-0.1**
EQES				Sg	**Sn**	**01 52 47.6**	**-0.6**
EQES				*i* IVmb_Lg		01 52 52.3	
EXPDH	**Pilar de la Ho**	**1.08**	**62**	Pg	**Pn**	**01 52 35.7**	**0.0**
EXPDH				Sg	**Sn**	**01 52 50.6**	**-0.2**
EQUE	**Quentar**	**1.17**	**263**	⇑Pg	**Pg**	**01 52 36.6**	**-0.3**
EQUE				Sg	**Sg**	**01 52 50.5**	**-1.6**
EQUE				*i* IVmb_Lg		01 52 59.6	
EQTA	**Presa de Quent**	**1.17**	**263**	Pg	**Pg**	**01 52 36.6**	**-0.3**
EQTA				Sg	**Sn**	**01 52 54.4**	**+1.2**
ETRV	**Los Montesinos**	**1.17**	**56**	Pg	**Pn**	**01 52 37.5**	**+0.6**
ETRV				Sg	**Sn**	**01 52 53.3**	**+0.3**
ETRV				*i* IVmb_Lg		01 53 06.2	
E0803	**Jimena (Jaen)**	**1.27**	**292**	Pg	**Pg**	**01 52 40.1**	**+1.3**
E0803				Sg	**Sn**	**01 52 56.1**	**+0.5**
E0802	**Ubeda,Jaen**	**1.28**	**301**	Pg	**Pg**	**01 52 39.4**	**+0.3**
E0802				Sg	**Sn**	**01 52 58.0**	**+2.1**
EXCAB	**Granada**	**1.29**	**262**	Pg	**Pg**	**01 52 39.3**	**+0.1**
EXCAB				Sg	**Sb**	**01 52 53.9**	**-1.8**
EGOR	**Sierra Gorda,**	**1.71**	**262**	Pn	**Pb**	**01 52 46.3**	**+0.2**
EGOR	**Sierra Gorda,**	**1.71**	**262**	Pn	**Pn**	**01 52 45.0**	**+0.4**
EGOR				Pg	**Pb**	**01 52 46.2**	**0.0**
EGOR				Sn	**Sn**	**01 53 04.9**	**-1.7**
EGOR				*i* IVmb_Lg		01 53 16.6	
AFON	**Font Roja**	**1.73**	**41**	Pn	**Pn**	**01 52 45.3**	**+0.6**
AFON				Sn	**Sn**	**01 53 07.5**	**+0.5**
AFON				*i* IVmb_Lg		01 53 25.1	
EBEN2	**Beniarda presa**	**1.93**	**47**	Pn	**Pn**	**01 52 47.5**	**0.0**
EBEN2				Sn	**Sn**	**01 53 10.4**	**-1.5**
EBEN2				*i* IVmb_Lg		01 53 33.0	
PSIM	**Granatula de C**	**2.02**	**317**	Pn	**Pn**	**01 52 49.6**	**+1.0**
PSIM				Pg	**Pb**	**01 52 52.0**	**+0.8**
PSIM				Sn	**Sn**	**01 53 13.5**	**-0.5**
PSIM				Sg	**Sg**	**01 53 18.8**	**-0.4**
EVIV	**Cofrentes, Val**	**2.02**	**20**	Pn	**Pn**	**01 52 49.6**	**+1.0**
EVIV				Pg	**Pg**	**01 52 53.2**	**+0.1**
EVIV				Sn	**Sn**	**01 53 14.3**	**+0.2**
EVIV				Sg	**Sg**	**01 53 19.8**	**+0.5**
EVIV				*i* IVmb_Lg		01 53 22.6	
EMAL	**Malaga-Limoner**	**2.04**	**254**	Pn	**Pb**	**01 52 51.5**	**-0.1**
EMAL				Sn	**Sn**	**01 53 15.9**	**+1.3**
EADA	**Adamuz**	**2.20**	**292**	Pn	**Pn**	**01 52 51.8**	**+0.6**
EADA				Sn	**Sn**	**01 53 17.5**	**-1.1**
EADA	**Adamuz**	**2.20**	**292**	Pn	**Pn**	**01 52 51.8**	**+0.6**
EADA				Sn	**Sn**	**01 53 18.8**	**+0.2**
EADA				Sg	**Sb**	**01 53 23.3**	**+1.5**
EADA				*i* IVmb_Lg		01 53 29.6	
GOG	**Mont Gurugu**	**2.29**	**201**	P	**Pn**	**01 52 51.9**	**-0.4**
ECHE	**Chera**	**2.36**	**19**	Pn	**Pn**	**01 52 54.6**	**+1.2**
ECHE	**Chera**	**2.36**	**19**	Pn	**Pn**	**01 52 54.6**	**+1.2**
ECHE				Sn	**Sn**	**01 53 21.4**	**-1.1**
ECHE				Sg	**Sg**	**01 53 30.7**	**+0.4**
ECHE				*i* IVmb_Lg		01 53 42.9	
EMIJ	**Mijas**	**2.37**	**251**	Pn	**Pn**	**01 52 55.2**	**+1.7**
EMIJ	**Mijas**	**2.37**	**251**	Pn	**Pn**	**01 52 52.8**	**-0.7**
EMIJ				Sn	**Sn**	**01 53 22.7**	**0.0**
TAF	**Taforalt**	**2.57**	**188**	P	**Pn**	**01 52 56.9**	**+0.6**
PALE	**Palemas**	**2.66**	**217**	P	**Pn**	**01 52 58.1**	**+0.6**
ESDC	**Sonseca Array**	**2.78**	**327**	Pn	**Pn**	**01 52 59.3**	**+0.2**
ESDC				Pg	**Pb**	**01 53 05.1**	**+0.8**
ESDC				Sn	**Sn**	**01 53 29.4**	**-3.4**
ESDC				Sg	**Sb**	**01 53 41.0**	**+2.5**
ESDC				*i* IVmb_Lg		01 53 46.8	
ESBB	**Sonseca Array**	**2.78**	**327**	Pn	**Pn**	**01 52 59.3**	**+0.2**
ESBB				Sn	**Sn**	**01 53 27.7**	**-5.2**
ESBB				Sg	**Sg**	**01 53 41.8**	**-1.9**
ESBB				*i* IVmb_Lg		01 53 47.4	
EXCBR	**El Cabril**	**2.81**	**286**	Pn	**Pn**	**01 53 00.3**	**+0.8**
EXCBR				Sn	**Sn**	**01 53 32.9**	**-0.5**
ECAB	**El Cabril**	**2.81**	**286**	Pn	**Pn**	**01 52 60.0**	**+0.4**
ECAB				Sn	**Sn**	**01 53 31.9**	**-1.7**
ECAB				Sg	**Sg**	**01 53 43.8**	**-1.0**
ECAB	**El Cabril**	**2.81**	**286**	Pn	**Pn**	**01 52 60.0**	**+0.4**
ECAB				Sn	**Sn**	**01 53 33.3**	**-0.3**
ECAB				Sg	**Sg**	**01 53 42.4**	**-2.3**
ECAB				*i* IVmb_Lg		01 53 46.2	
PAB	**San Pablo**	**2.86**	**320**	Pn	**Pn**	**01 53 01.0**	**+0.7**
PAB				Pg	**Pg**	**01 53 08.6**	**-0.6**
PAB				Sn	**Sn**	**01 53 32.7**	**-2.1**
PAB				Sg	**Sg**	**01 53 46.5**	**+0.2**
PAB				*i* IVmb_Lg		01 53 50.8	
EJIF	**Jimena Fronter**	**2.94**	**253**	Pn	**Pn**	**01 53 00.8**	**-0.4**
UCM	**Universidad Co**	**3.10**	**342**	Pn	**Pn**	**01 53 04.7**	**+1.2**
UCM				Sg	**Sg**	**01 53 53.9**	**-0.1**
EIBI	**Ibiza**	**3.11**	**57**	Pn	**Pn**	**01 53 04.0**	**+0.5**
EIBI				Sn	**Sn**	**01 53 37.6**	**-3.2**
EIBI	**Ibiza**	**3.11**	**57**	Pn	**Pn**	**01 53 04.1**	**+0.5**
EIBI				Sn	**Sn**	**01 53 38.8**	**-2.0**
EIBI				*i* IVmb_Lg		01 53 44.9	
ESPR	**Espera**	**3.13**	**262**	Pn	**Pn**	**01 53 03.5**	**-0.4**
ESPR				Sn	**Sn**	**01 53 42.8**	**+1.4**
ESPR				*i* IVmb_Lg		01 54 11.1	
E0901	**Celadas (Terue**	**3.18**	**12**	Pn	**Pn**	**01 53 05.2**	**+0.4**
E0901				Pg	**Pg**	**01 53 14.2**	**-1.2**
E0901				Sn	**Sn**	**01 53 42.8**	**-0.1**
E0901				Sg	**Sg**	**01 53 57.4**	**+0.7**
E0901				*i* IVmb_Lg		01 54 05.5	
EMOS	**Mosqueruela**	**3.22**	**21**	Pn	**Pn**	**01 53 05.4**	**+0.1**
EMOS				Sn	**Sn**	**01 53 42.8**	**-1.1**
EMOS				Sg	**Sg**	**01 53 57.4**	**-0.5**
AKLM	**AKL**	**3.23**	**209**	P	**Pn**	**01 53 05.5**	**+0.2**
ECOL	**Islas Columbre**	**3.28**	**39**	Pn	**Pn**	**01 53 07.4**	**+1.4**
ECOL				Sn	**Sn**	**01 53 45.4**	**+0.3**
ETOR	**Torete**	**3.45**	**359**	Pn	**Pn**	**01 53 09.2**	**+0.8**
ETOR				Pg	**Pg**	**01 53 18.9**	**-1.7**
ETOR				Sn	**Sn**	**01 53 48.2**	**-1.2**
ETOR				Sg	**Sg**	**01 54 05.6**	**+0.3**
ETOR				*i* IVmb_Lg		01 54 10.1	
GUD	**Guadarrama**	**3.68**	**333**	Pn	**Pn**	**01 53 12.9**	**+1.3**
GUD				Pg	**Pb**	**01 53 22.2**	**+2.4**
GUD				Sn	**Sn**	**01 53 53.5**	**-1.7**
GUD				Sg	**Sg**	**01 54 13.4**	**+0.6**
GUD				*i* IVmb_Lg		01 54 16.3	
EMIN	**Mina Concepcio**	**3.74**	**278**	Pn	**Pn**	**01 53 12.6**	**+0.2**
EMIN				Sn	**Sn**	**01 53 55.4**	**-1.2**
EMIN	**Mina Concepcio**	**3.74**	**278**	Pn	**Pn**	**01 53 12.9**	**+0.6**
EMIN				Sn	**Sn**	**01 53 54.7**	**-1.8**
EMIN				Sg	**Sb**	**01 54 10.3**	**+4.1**
EMIN				*i* IVmb_Lg		01 54 18.8	
ERTA	**Horta de San J**	**4.02**	**26**	Pn	**Pn**	**01 53 18.1**	**+2.0**
ERTA				Sn	**Sn**	**01 54 03.8**	**+0.6**
PBAR	**Barrancos**	**4.08**	**283**	Pn	**Pn**	**01 53 17.5**	**+0.5**
PBAR				Sn	**Sn**	**01 54 03.4**	**-1.5**
PBAR	**Barrancos**	**4.08**	**283**	*e*Pn	**Pn**	**01 53 17.6**	**+0.6**
PBAR				*e*Sn	**Sn**	**01 54 04.8**	**0.0**
PBAR				*e*Sg	**Sg**	**01 54 23.2**	**-2.4**
PBAR				*i* AML	AML	01 54 34.7	
PBAR				*i* AML	AML	01 54 35.0	
PBAR				*i* AML	AML	01 54 35.5	
EPLA	**Plasencia**	**4.18**	**311**	Pn	**Pn**	**01 53 18.5**	**+0.1**
EPLA				Pg	**Pb**	**01 53 29.8**	**+1.6**
EPLA				Sn	**Sn**	**01 54 06.7**	**-0.7**
EPLA				*i* IVmb_Lg		01 54 35.7	
EBAD	**Badajoz**	**4.20**	**291**	Pn	**Pn**	**01 53 18.8**	**+0.1**
EBAD				Sn	**Sn**	**01 54 07.5**	**-0.3**
EBAD	**Badajoz**	**4.20**	**291**	Pn	**Pn**	**01 53 18.8**	**+0.1**
EBAD				Sn	**Sn**	**01 54 05.0**	**-2.9**
EBAD				Sg	**Sg**	**01 54 26.8**	**-2.6**
EBAD				*i* IVmb_Lg		01 54 31.9	
EGRO	**El Granado**	**4.38**	**274**	Pn	**Pn**	**01 53 21.4**	**+0.4**
EGRO				Sn	**Sn**	**01 54 11.7**	**-0.4**
EGRO	**El Granado**	**4.38**	**274**	Pn	**Pn**	**01 53 21.3**	**+0.4**
EGRO				Sn	**Sn**	**01 54 09.4**	**-2.7**
EGRO				Sg	**Sb**	**01 54 29.5**	**+5.2**
EGRO				*i* IVmb_Lg		01 54 41.6	
ETOS	**Mallorca**	**4.46**	**56**	Pn	**Pn**	**01 53 23.3**	**+1.1**
ETOS				Sn	**Sn**	**01 54 11.9**	**-2.5**
ETOS	**Mallorca**	**4.46**	**56**	Pn	**Pn**	**01 53 23.4**	**+1.1**
ETOS				Sn	**Sn**	**01 54 12.9**	**-1.4**
ETOS				*i* IVmb_Lg		01 55 07.5	
ESAC	**San Caprasio**	**4.51**	**15**	Pn	**Pn**	**01 53 23.2**	**+0.3**
ESAC				Sg	**Sg**	**01 54 37.0**	**-2.1**
PVAQ	**Vaqueiros**	**4.56**	**272**	Pn	**Pn**	**01 53 23.9**	**+0.3**
PVAQ	**Vaqueiros**	**4.56**	**272**	*e*Pn	**Pn**	**01 53 23.9**	**+0.3**

PVAQ				eSn	Sn	01 54 15.4	-1.3
IFR	Ifrane	4.62	215	Pn	Pn	01 53 25.2	+0.7
EPOB	Poblet	4.64	30	Pn	Pn	01 53 25.1	+0.4
EPOB				Sn	Sn	01 54 17.9	-0.7
EPOB				i IVmb_Lg		01 54 55.8	
PESTR	Estremoz	4.67	290	Sn	Sn	01 54 17.7	-1.6
PESTR	Estremoz	4.67	290	ePn	Pn	01 53 24.7	-0.3
PESTR				eSn	Sn	01 54 18.3	-1.0
PESTR				eSg	Sg	01 54 40.6	-3.6
PESTR				i AML	AML	01 54 51.0	
PESTR				i AML	AML	01 54 52.3	
PESTR				i AML	AML	01 54 53.0	
PBEJ	Beja	4.71	280	ePn	Pn	01 53 26.8	+1.2
PBEJ				eSn	Sn	01 54 19.2	-1.1
PBEJ				i AML	AML	01 54 50.3	
PBEJ				i AML	AML	01 54 53.2	
PBEJ				i AML	AML	01 54 55.7	
PMRV	Marv??o	4.72	298	ePn	Pn	01 53 26.8	+1.0
PMRV				eSn	Sn	01 54 19.9	-0.7
PMRV				eSg	Sg	01 54 43.9	-2.0
PMRV				i AML	AML	01 54 49.5	
PMRV				i AML	AML	01 54 56.5	
PMRV				i AML	AML	01 54 57.2	
PBDV	Barranco-do-Ve	4.74	270	ePn	Pn	01 53 27.0	+1.0
PBDV				eSn	Sn	01 54 19.8	-1.4
PBDV				i AML	AML	01 54 57.3	
PBDV				i AML	AML	01 54 59.1	
PBDV				i AML	AML	01 54 59.2	
EJUZ	Juzbado, Salam	4.79	322	Pn	Pn	01 53 26.9	+0.1
PCVE	Castro Verde	4.82	275	Pn	Pn	01 53 27.3	+0.2
PCVE				Sn	Sn	01 54 22.2	-0.9
PCVE	Castro Verde	4.82	275	ePn	Pn	01 53 27.4	+0.2
PCVE				eSn	Sn	01 54 22.8	-0.2
PCVE				i AML	AML	01 54 50.0	
PCVE				i AML	AML	01 54 55.9	
PCVE				i AML	AML	01 55 00.7	
EVO	Evora	4.90	286	Pn	Pn	01 53 29.2	+0.9
EVO				Sn	Sn	01 54 24.0	-1.1
EVO	Evora	4.90	286	ePn	Pn	01 53 29.2	+0.9
EVO				eSn	Sn	01 54 24.1	-1.1
EVO				eSg	Sg	01 54 48.4	-3.4
EVO				i AML	AML	01 54 54.2	
EVO				i AML	AML	01 54 54.5	
EVO				i AML	AML	01 55 03.7	
PCBR	Castelo Branco	4.96	302	ePn	Pn	01 53 30.3	+1.3
PCBR				eSn	Sn	01 54 26.2	-0.3
PCBR				i AML	AML	01 54 58.9	
PCBR				i AML	AML	01 55 03.0	
PCBR				i AML	AML	01 55 03.3	
MESJ	Messejana	4.97	277	eP	Pn	01 53 29.3	+0.1
MESJ	Messejana	4.97	277	⇓ePn	Pn	01 53 29.5	+0.3
MESJ				eSn	Sn	01 54 25.4	-1.4
MESJ				eSg	Sg	01 54 50.4	-3.6
MESJ				i AML	AML	01 55 00.8	
MESJ				i AML	AML	01 55 01.2	
MESJ				i AML	AML	01 55 04.0	
MOE	Montemor	5.16	285	eSn	Sn	01 54 30.5	-1.0
MOE				eSg	Sg	01 54 57.2	-2.9
MOE				i AML	AML	01 55 00.3	
MOE				i AML	AML	01 55 01.5	
MOE				i AML	AML	01 55 10.5	
PMTG	Montargil	5.20	291	ePn	Pn	01 53 33.2	+0.9
PMTG				eSn	Sn	01 54 31.2	-1.2
PMTG				eSg	Sg	01 55 00.0	-1.3
PMTG				i AML	AML	01 55 04.9	
PMTG				i AML	AML	01 55 09.8	
PMTG				i AML	AML	01 55 14.7	
MTE	Manteigas	5.29	307	ePn	Pn	01 53 35.9	+2.2
MTE				eSn	Sn	01 54 35.7	+1.0
MTE				i AML	AML	01 55 06.9	
MTE				i AML	AML	01 55 08.7	
MTE				i AML	AML	01 55 12.4	
MORF	Marmelete	5.31	271	ePn	Pn	01 53 34.3	+0.4
MORF				eSn	Sn	01 54 34.3	-1.0
MORF				i AML	AML	01 54 36.7	
MORF				i AML	AML	01 54 36.9	
MORF				i AML	AML	01 54 37.3	
PSARD	Sardoal	5.33	297	ePn	Pn	01 53 35.4	+1.2
PSARD				eSn	Sn	01 54 34.5	-1.2
PSARD				i AML	AML	01 55 06.5	
PSARD				i AML	AML	01 55 08.6	
PSARD				i AML	AML	01 55 10.6	
PTEO	Sao Teotonio	5.36	274	ePn	Pn	01 53 35.3	+0.8
PTEO				eSn	Sn	01 54 35.0	-1.4
PTEO				eSg	Sg	01 55 05.8	-0.7
PTEO				i AML	AML	01 55 12.7	
PTEO				i AML	AML	01 55 18.1	
PTEO				i AML	AML	01 55 19.6	
MVO	Moncorvo	5.45	316	ePn	Pn	01 53 37.0	+1.1
MVO				eSn	Sn	01 54 37.1	-1.6
MVO				i AML	AML	01 55 16.4	
MVO				i AML	AML	01 55 17.0	
MVO				i AML	AML	01 55 20.8	
ECHI	Chisagues Biel	5.55	17	Pn	Pn	01 53 38.1	+0.8
PVIS	Viseu	5.69	308	ePn	Pn	01 53 40.1	+1.0
PVIS				eSn	Sn	01 54 43.2	-1.3
PARRA	Arraiolos	5.75	287	ePn	Pn	01 53 30.4	-10
PARRA				eSn	Sn	01 54 26.7	-19
PARRA				i AML	AML	01 54 59.0	
PARRA				i AML	AML	01 55 00.6	
PARRA				i AML	AML	01 55 03.7	
PCAS	Casmilo, Conde	5.76	300	⇑iPn	Pn	01 53 42.1	+2.1
PCAS				eSn	Sn	01 54 44.5	-1.7
PCAS				eSg	Sg	01 55 17.8	-1.4
PCAS				i AML	AML	01 55 18.8	
PCAS				i AML	AML	01 55 20.4	
PCAS				i AML	AML	01 55 24.7	
PBRG	Braganca	5.76	322	ePn	Pn	01 53 41.8	+1.7
PBRG				eSg	Sg	01 55 17.2	-2.0
PBRG				i AML	AML	01 55 24.9	
PBRG				i AML	AML	01 55 27.6	
PBRG				i AML	AML	01 55 31.2	
PSBE	So Bento	5.76	294	ePn	Pn	01 53 42.0	+2.0
PSBE				eSn	Sn	01 54 45.4	-0.9
PSBE				eSg	Sg	01 55 17.0	-2.3
PSBE				i AML	AML	01 55 24.3	
PSBE				i AML	AML	01 55 25.0	
PSBE				i AML	AML	01 55 29.8	
COI	Coimbra	5.77	301	ePn	Pn	01 53 41.8	+1.7
COI				eSn	Sn	01 54 44.3	-2.1
COI				eSg	Sg	01 55 18.6	-0.9
COI				i AML	AML	01 55 22.1	
COI				i AML	AML	01 55 22.4	
COI				i AML	AML	01 55 33.7	
ECAL	Calabor	5.86	323	Pn	Pn	01 53 41.5	0.0
ECAL				Sn	Sn	01 54 47.3	-1.5
ECAL				i IVmb_Lg		01 55 32.8	
EALK	Alkurruntz	5.86	3	Pn	Pn	01 53 43.6	+2.1
EALK				Sn	Sn	01 54 47.6	-1.2
EALK				i IVmb_Lg		01 55 34.0	
PVRL	Vila Real	5.91	313	ePn	Pn	01 53 45.1	+3.0
PVRL				eSg	Sg	01 55 20.5	-3.7
PVRL				i AML	AML	01 55 30.3	
PVRL				i AML	AML	01 55 42.7	
PVRL				i AML	AML	01 55 50.3	
PMAFR	Mafra	5.96	288	eSn	Sn	01 54 50.0	-1.2
PMAFR				i AML	AML	01 55 33.0	
PMAFR				i AML	AML	01 55 39.8	
PMAFR				i AML	AML	01 55 54.0	
ELAN	Lanestosa	5.96	350	Pn	Pn	01 53 43.7	+0.8
ELAN				Sn	Sn	01 54 49.5	-1.8
ELAN				Sg	Sg	01 55 25.6	-0.2
ELAN				i IVmb_Lg		01 55 37.5	
POLO	Lamas de Olo	6.02	313	ePn	Pn	01 53 45.0	+1.3
POLO				eSn	Sn	01 54 51.4	-1.4
POLO				i AML	AML	01 55 32.5	
POLO				i AML	AML	01 55 32.6	
POLO				i AML	AML	01 55 46.8	
PTO	Porto	6.37	308	ePn	Pn	01 53 49.2	+0.9
PTO				eSg	Sg	01 55 34.7	-4.0
PTO				i AML	AML	01 55 44.5	
PTO				i AML	AML	01 55 50.8	
PTO				i AML	AML	01 56 00.5	
PCAB	Cabril	6.37	315	ePn	Pn	01 53 49.8	+1.3
EARI	Arriondas	6.42	338	Pn	Pn	01 53 49.6	+0.5
EARI				Sn	Sn	01 55 00.9	-1.6
EARI				i IVmb_Lg		01 55 45.4	
ELOB	Lobios	6.50	316	Pn	Pn	01 53 50.5	+0.2
ELOB				Sn	Sn	01 55 02.0	-2.5
ELOB				i IVmb_Lg		01 55 51.4	
PGAV	Gavieira, Arco	6.68	315	ePn	Pn	01 53 53.8	+1.0
PGAV				eSn	Sn	01 55 08.0	-1.0
PGAV				i AML	AML	01 55 55.3	
PGAV				i AML	AML	01 56 01.1	
PGAV				i AML	AML	01 56 06.2	
EPON	Pontenova	7.14	328	Pn	Pn	01 53 58.2	-0.8
EPON				i IVmb_Lg		01 56 10.2	

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*CATAC **11** 01:53:15.4±0.5, 13°N±3°×9°0W±°, h30^{km}±3^{km}, M3.3/19, MLv3.3/19, Error ellipse: s-maj=7.4km s-min=3.7km az=20.1, confirmed*

*SNET **11** 01:53:16.7±0.7, 13°.31N×89°.48W, h55^{km}±7^{km}, ML3.3*

*GCG **11** 01:53:17.0±0.7, 13°.32N×89°.47W, h51^{km}±7^{km}, MD3.6, ML3.6*

ISC 11 01:53:18.2±1.7**, 13°.28N**±0°.08×**89°.45W**±0°.04**, h43**^{km}±9^{km}**, n69,** σ1^{s}.**10**/76**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.24	30	i P	Pn	01 53 25.6	-0.6
LALI				i S	Sn	01 53 31.7	-0.1
LALI	Alcalda de L	0.24	30	P	Pn	01 53 25.4	-0.7
LALI	Alcalda de L	0.24	30	S	Sn	01 53 32.7	+1.0
JAYA	Jayaque - finc	0.38	360	eP	Pn	01 53 26.8	-0.9
JAYA				eS	Sn	01 53 34.3	-0.1
JAYA				IAML		01 53 35.8	
	comp=Z,2µm,0.3s						
JAYA	Jayaque - finc	0.38	360	i P	Pn	01 53 26.8	-0.9
JAYA				i S	Sn	01 53 34.4	-0.1
JAYA	Jayaque - finc	0.38	360	P	Pn	01 53 26.8	-0.9
PANCS	Alcalda de	0.42	38	S	Sn	01 53 35.8	+0.6
PANCS	Alcalda de	0.42	38	P	Pn	01 53 27.2	-0.9
ITCA	Escuela Especi	0.43	23	P	Pn	01 53 27.7	-0.7
ITCA	Escuela Especi	0.43	23	S	Sn	01 53 36.4	+1.0
PMON	Piamonte	0.45	17	eP	Pn	01 53 28.1	-0.6
PMON	Piamonte	0.45	17	S	Sn	01 53 37.3	+1.3
PMON	Piamonte	0.45	17	P	Pn	01 53 27.9	-0.7
LOMA	Loma Larga	0.46	36	eP	Pn	01 53 28.0	-0.7
LOMA				eS	Sn	01 53 37.1	+1.1
LOMA				IAML		01 53 39.6	
	comp=Z,2µm,0.2s						
LOMA	Loma Larga	0.46	36	P	Pn	01 53 27.9	-0.8
UEES	Universidad Ev	0.48	25	eP	Pn	01 53 28.3	-0.7
UEES	Universidad Ev	0.48	25	P	Pn	01 53 28.3	-0.7
UEES	Universidad Ev	0.48	25	S	Sn	01 53 37.8	+1.2
BOQS	Boqueron	0.48	20	eP	Pn	01 53 28.5	-0.6
UTEC	Universidad Te	0.49	30	S	Sn	01 53 37.9	+1.3
UTEC	Universidad Te	0.49	30	P	Pn	01 53 28.0	-1.0
LFRS	El Faro	0.51	47	eP	Pn	01 53 28.8	-0.5
IGN	Direccin Gen	0.51	32	P	Pn	01 53 28.6	-0.7
IGN	Direccin Gen	0.51	32	S	Sn	01 53 38.6	+1.4
UDBS	Universidad Do	0.52	33	S	Sn	01 53 38.7	+1.4
UDBS	Universidad Do	0.52	33	P	Pn	01 53 28.9	-0.6
CEDA	San Andres	0.53	6	S	Sn	01 53 38.4	+0.9
CEDA	San Andres	0.53	6	P	Pn	01 53 28.4	-1.1
LFU	La Fuente	0.57	35	eP	Pn	01 53 29.8	-0.3
CEVE	Cerro Verde	0.57	343	eP	Pn	01 53 29.3	-1.0
CEVE				eS	Sn	01 53 39.4	+0.5
CEVE	Cerro Verde	0.57	343	P	Pn	01 53 29.3	-1.0
SBLS	San Blas	0.59	343	eP	Pn	01 53 29.4	-1.0
SNJE	San Jose	0.61	345	eP	Pn	01 53 29.7	-1.0
COEG	Centro de Oper	0.65	58	eP	Pn	01 53 30.2	-0.9
COEG				eS	Sn	01 53 40.9	+0.5
COEG	Centro de Oper	0.65	58	P	Pn	01 53 30.2	-0.9
PAVA	Las Pavas	0.66	49	eP	Pn	01 53 30.9	-0.4
PAVA	Las Pavas	0.66	49	S	Sn	01 53 42.1	+1.4
PAVA	Las Pavas	0.66	49	P	Pn	01 53 30.7	-0.6
TECO	Alcaldia de Te	0.70	68	eP	Pn	01 53 30.5	-1.3
TECO	Alcaldia de Te	0.70	68	P	Pn	01 53 30.4	-1.3
TECO	Alcaldia de Te	0.70	68	S	Sn	01 53 41.5	0.0
NUBE	Las Nubes	0.70	333	eP	Pn	01 53 30.4	-1.5
NUBE	Las Nubes	0.70	333	i P	Pn	01 53 30.4	-1.5
NUBE				i S	Sn	01 53 41.0	-0.7
NUBE	Las Nubes	0.70	333	P	Pn	01 53 30.4	-1.5
UNIC	Universidad Ca	0.71	352	P	Pn	01 53 31.0	-0.9
UNIC	Universidad Ca	0.71	352	S	Sn	01 53 42.6	+0.8
UESV	Universidad de	0.74	61	P	Pn	01 53 31.3	-1.0
UESV	Universidad de	0.74	61	S	Sn	01 53 43.3	+0.9
LOAL	Lomas de Alarc	0.79	336	P	Pn	01 53 31.5	-1.5
LOAL	Lomas de Alarc	0.79	336	S	Sn	01 53 44.3	+0.7
FAME	Alcaldia de Sa	0.79	316	S	Sn	01 53 41.9	-1.7
FAME	Alcaldia de Sa	0.79	316	P	Pn	01 53 30.9	-2.1
SLOZ	Alcaldia de Sa	0.81	336	S	Sn	01 53 44.8	+0.5
SLOZ	Alcaldia de Sa	0.81	336	P	Pn	01 53 32.2	-1.1
SCLA	Alcaldia de Sa	0.82	59	i P	Pn	01 53 32.6	-0.8
SCLA	Alcaldia de Sa	0.82	59	P	Pn	01 53 32.7	-0.7
SCLA	Alcaldia de Sa	0.82	59	S	Sn	01 53 45.8	+1.4
ALJI	Alcalda de J	0.86	86	S	Sn	01 53 44.7	-0.5
ALJI	Alcalda de J	0.86	86	P	Pn	01 53 32.3	-1.5
PACA	Pacayal	1.11	80	eP	Pn	01 53 37.3	-0.2
PACA	Pacayal	1.11	80	S	Sn	01 53 52.5	+0.8
PACA	Pacayal	1.11	80	P	Pn	01 53 36.6	-0.9
MTO3	Montecristo	1.12	4	i P	Pn	01 53 36.5	-1.2
MTO3	Montecristo	1.12	4	i P	Pn	01 53 36.5	-1.2
MTO3	Montecristo	1.12	4	P	Pn	01 53 36.4	-1.2
MTO3	Montecristo	1.12	4	S	Sn	01 53 52.3	+0.2
BLLM	Bellamira	1.19	82	eP	Pn	01 53 38.0	-0.5
LCND	La Caada	1.52	89	eP	Pn	01 53 41.8	-1.1
STG8	El Palmar, Qui	2.19	303	i P	Pn	01 53 56.2	+3.9
STG8				IAML		01 54 10.0	
	comp=N,275nm,0.2s						

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*JMA **11** 01:59:06.6±0.2, 35°.8N±0°.5×140°.2E±0°.7, h60^{km}±1^{km}, MV3.7/39, NORTHERN CHIBA PREF*

JMA Felt II J1 at NORTHERN CHIBA PREF .

*IDC **11** 01:59:06.6±1.6, 35°.70N×140°.32E, h65^{km}±13^{km}, mb4.0/27, mbtmp4.3/33, MS3.3/16, Error ellipse: s-maj=13.0km s-min=11.9km az=54.0*

*NIED **11** 01:59:06.6, 35°.81N×140°.19E, h60^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-3.23; M$_{\theta\theta}$-0.37; M$_{\phi\phi}$3.60; M$_{r\theta}$-0.95; M$_{\theta\phi}$0.20; M$_{\phi r}$0.49; Fault plane solution: M$_{0}$3.60000×10^{15} NP1:φ$_{s}$19.00000°, δ44.00000°, λ-65.00000°. NP2:φ$_{s}$167.00000°, δ51.00000°, λ-112.00000°.*

*MOS **11** 01:59:07.2±1.0, 35°.97N×140°.17E, h74^{km}, mb4.7/50 Error ellipse: s-maj=8.0km s-min=5.2km az=113.2*

*NEIC **11** 01:59:08.4, 35°.77N×140°.20E, h70^{km}*

*NEIC **11** 01:59:08.3±1.7, 35°.79N±0°.06×140°.20E±0°.08, h70^{km}±6^{km}, mb4.5/207, Mwr4.3/14, Error ellipse: s-maj=10.3km s-min=7.8km az=110.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-2.67; M$_{\theta\theta}$-0.61; M$_{\phi\phi}$3.27; M$_{r\theta}$-0.52; M$_{\theta\phi}$-0.06; M$_{\phi r}$0.16; Fault plane solution: M$_{0}$3.07000×10^{15} NP1:φ$_{s}$12.29000°, δ44.98000°, λ-70.98000°. NP2:φ$_{s}$166.31000°, δ48.07000°, λ-108.04000°. Principal axes: T 3.2781, Plg2.0000°, Azm269.0000°; N -0.4833, Plg13.0000°, Azm179.0000°; P -2.7948, Plg77.0000°, Azm6.0000°;*

ISC 11 01:59:07.6±0.5**, 35°.77N**±0°.04×**140°.23E**±0°.04**, h72**^{km}±3^{km}**, n653,** σ1^{s}.**20**/671**, mb4.5**/164**, 13C-1D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSMT	Sammumatsuo	0.22	126	eP	Pn	01 59 17.1	-1.4
JIHU	Itakohorinouch	0.31	51	P	Pn	01 59 17.3	-1.7
JIHU				S	Sn	01 59 25.5	-1.8
TOK	Tokyo	0.40	258	eP	Pn	01 59 18.5	-1.1
TOK				eS	Sn	01 59 28.4	0.0
JYT	Yasato	0.46	356	i P	Pn	01 59 17.9	-2.3
JYT				S	Sn	01 59 26.2	-3.1
JAG	Ashikaga	0.91	316	i P	Pn	01 59 23.2	-1.8
JAG				eS	Sn	01 59 35.6	-2.4
BSO3	Boso 3	1.00	167	P	Pn	01 59 24.2	-1.6
JOD2	Odawara 2	1.06	242	i P	Pn	01 59 24.9	-2.1
JOD2				S	Sn	01 59 38.2	-3.2
JRY	Ryogami san	1.11	283	i P	Pn	01 59 26.3	-1.2
JIM2	Oshima 3	1.24	212	eP	Pn	01 59 26.7	-2.5
JIM2				eS	Sn	01 59 41.9	-3.6
JKT	Katashina	1.27	322	i P	Pn	01 59 28.2	-1.5
BSO1	Boso 1	1.27	151	eP	Pn	01 59 27.4	-1.7
JYN	Shimob	1.40	259	i P	Pn	01 59 29.8	-1.6
MJAR	Matsushiro Arr	1.81	296	P	Pn	01 59 35.6	-1.1
	343nm,0.5s,baz=102,slow=14,SNR=707						
MJAR				S	Sn	02 00 00.7	+1.9
	196nm,0.6s,baz=284,slow=20,SNR=4.2						
MAJO	Matsushiro	1.81	296		Pn	01 59 36.1	-0.6
MAJO	Matsushiro	1.81	296	P	Pn	01 59 36.4	-0.3
MAJO	Matsushiro	1.81	296	i P	Pn	01 59 36.0	-0.7
MJB9	Matsu-Tunnel	1.81	296		Pn	01 59 37.3	+0.5
JSG	Sagara	2.00	237		Pn	01 59 39.3	+0.1
JSG	Sagara	2.00	237	P	Pn	01 59 40.3	+1.0
JMM	Marumori	2.14	12		Pn	01 59 41.1	0.0
JMM				Sn	Sn	02 00 06.9	+0.3
JMM	Marumori	2.14	12	P	Pn	01 59 41.3	+0.2
JGF	Kuroka	2.35	267		Pn	01 59 44.1	+0.2
JGF	Kuroka	2.35	267	P	Pn	01 59 44.0	0.0
INU	Inuyama	2.66	262		Pn	01 59 47.5	-0.6
INU	Inuyama	2.66	262	P	Pn	01 59 47.4	-0.7
JHJ2	Mitsune	2.68	187	Pn	Pn	01 59 48.6	+0.2
JHJ2	Mitsune	2.68	187	P	Pn	01 59 48.9	+0.5
JSD	Sado	2.76	326	P	Pn	01 59 48.8	-0.7
JTM	Tenmabayashi	5.05	7		Pn	02 00 20.5	-0.2
JTM	Tenmabayashi	5.05	7	P	Pn	02 00 20.8	+0.1
JMN	Monobe	5.61	251		Pn	02 00 27.9	-0.6
JMN	Monobe	5.61	251	P	Pn	02 00 28.3	-0.2
ERM	Erimo	6.64	19		Pn	02 00 40.7	-1.7
ERM	Erimo	6.64	19	ceP	Pn	02 00 41.6	-0.8
ERM				pmax	pmax		
	comp=Z,24nm,0.8s						
JEM	Erimo	6.64	19	P	Pn	02 00 40.6	-1.8
JNU	Nakatsue	8.17	254	P	Pn	02 01 02.7	-0.7
	comp=Z,12nm,0.8s,baz=60,slow=7.8,SNR=6.1						
JNU				LR	LR	02 04 48.5	
	comp=Z,215nm,18.5s,baz=66,slow=42						
ASAJ	Asahikawa	8.53	12	P	Pn	02 01 06.2	-2.0
	comp=Z,8.1nm,0.5s,baz=202,slow=16,SNR=5.9						
ASAJ				S	Sn	02 02 36.1	-6.7
	comp=Z,10nm,0.6s,baz=46,slow=17,SNR=4.0						
JKA	Kamikawa-asahi	8.53	12	Pn	Pn	02 01 05.8	-2.4
JCJ	Chichijima	8.81	169	Pn	Pn	02 01 09.6	-2.6
JCJ	Chichijima	8.81	169	P	Pn	02 01 08.3	-3.8
	comp=Z,62nm,0.4s,baz=273,slow=20,SNR=5.8						
JCJ	Chichijima	8.81	169	P	Pn	02 01 12.2	0.0
SHO	Shikotan	9.54	30	P	Pn	02 01 18.3	-3.8
MSHR	Mys Shultsa	9.79	317	i P	Pn	02 01 25.1	-0.3
KSRS	Korea Array	10.04	283	P	Pn	02 01 31.2	+2.4
	comp=Z,12nm,0.7s,baz=98,slow=14,SNR=39						
KSAR	Wonju Array Be	10.07	283		Pn	02 01 29.8	+0.5
KSAR	Wonju Array Be	10.07	283	P	Pn	02 01 29.8	+0.5
KS19	Wonju Array Si	10.09	283		Pn	02 01 30.0	+0.5
TJN	Taejon	10.43	277	i P	Pn	02 01 35.0	+0.7
USA0B	Ussuriysk Arra	10.52	326	i P	Pn	02 01 36.7	+1.3
USRK	Ussuriysk Ar.	10.52	326	P	Pn	02 01 35.4	0.0
	comp=Z,6.3nm,0.7s,baz=134,slow=11,SNR=9.2						
YSS	Yuzhno-Sakhali	11.33	9	eP	Pn	02 01 44.0	-2.4
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
CN2	Changchun	13.90	310	P	P	02 02 25.0	-1.9
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BNX	BinXian	13.90	320	⇑P	Pn	02 02 20.2	-0.9
BNX				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KLR	Kul'dur	14.82	338	P	Pn	02 02 32.7	-0.3
	comp=Z,1.7nm,0.5s,baz=138,slow=14,SNR=5.4						
KLR	Kul'dur	14.82	338	ceP	Pn	02 02 30.6	-2.4
KLR				pmax	pmax		
	comp=Z,7.0nm,2.5s						
DL2	Dalian	15.12	287	P	P	02 02 41.4	+0.8
DL2				pmax	pmax		
	comp=Z,58nm,1.0s						
TYV	Tymovskoe	15.19	6	eP	P	02 02 41.6	+0.4
TYV				pmax	pmax		
	comp=Z,15nm,0.8s						
TYV				pmax	pmax		
	comp=Z,100nm,3.0s						
ZEA	Zeya	20.13	337	eP	P	02 03 32.8	-2.8
ZEA				pmax	pmax		
	comp=Z,20nm,0.7s						
HNS	HongShan	20.55	282	⇓P	P	02 03 38.2	-2.0
HNS				pmax	pmax		
	comp=Z,11nm,0.7s						
PEA0B	Petropavlovsk-	21.25	30	P	P	02 03 47.6	0.0
PEA0B	Petropavlovsk-	21.25	30	P	P	02 03 47.6	0.0
PEA0B				pmax	pmax		
	comp=Z,12nm,1.1s						
PETK	Petropavlovsk-	21.25	30	P	P	02 03 47.5	-0.1
PETK	Petropavlovsk-	21.25	30	P	P	02 03 46.1	-1.5
	comp=Z,5.5nm,0.8s,baz=214,slow=10,SNR=6.9						
	comp=Z,5.5nm,0.8s						
PETK	Petropavlovsk-	21.25	30	P	P	02 03 47.5	-0.1
HHC	Hu-ho-hao-te	23.00	291	eP	P	02 04 06.9	+0.4
HHC				pmax	pmax		
	comp=Z,15nm,0.7s						
MA2	Magadan	24.79	13		P	02 04 23.6	+1.1
MA2				IAmb	IAmb	02 04 24.8	
	comp=Z,15nm,0.7s						
MA2	Magadan	24.79	13	LR	LR	02 15 34.8	
	comp=Z,25nm,19.3s,baz=128,slow=40						
MA2	Magadan	24.79	13	i P	P	02 04 22.9	+0.5
MA2				pmax	pmax		
	comp=Z,15nm,0.7s						
MA2	Magadan	24.79	13	P	P	02 04 22.7	+0.3
	comp=Z,27nm,0.7s						
YAK	Yakutsk	27.11	349	P	P	02 04 44.0	+0.6
SONM	Songino Array	27.73	306	P	P	02 04 49.6	+0.3
SONM	Songino Array	27.73	306	P	P	02 04 48.3	-1.0
	comp=Z,1.8nm,0.7s,baz=123,slow=11,SNR=5.3						
	comp=Z,1.8nm,0.7s						
SONM	Songino Array	27.73	306	P	P	02 04 49.6	+0.3
SONM				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SEY	Seymchan	28.21	12	P	P	02 04 51.9	-1.4
	comp=Z,1.0nm,0.4s,baz=197,slow=19,SNR=4.0						
	comp=Z,1.0nm,0.4s						
SEY	Seymchan	28.21	12	i P	P	02 04 52.5	-0.7
SEY				pmax	pmax		
	comp=Z,7.0nm,1.5s						
H11N2	WAKE ISLAND Hy	28.37	117	T	T	02 34 45.9	
	baz=308,slow=75,SNR=26						
H11N1	WAKE ISLAND Hy	28.38	117	T	T	02 34 50.9	
	baz=308,slow=75,SNR=21						
H11N3	WAKE ISLAND Hy	28.39	117	T	T	02 34 55.7	
	baz=308,slow=75,SNR=20						
H11S3	WAKE ISLAND Hy	29.02	119	T	T	02 36 03.6	
	baz=314,slow=76,SNR=8.4						
H11S1	WAKE ISLAND Hy	29.03	119	T	T	02 36 01.3	
	baz=314,slow=76,SNR=13						
H11S2	WAKE ISLAND Hy	29.04	119	T	T	02 35 40.0	
	baz=314,slow=76,SNR=8.4						
LZH	Lanzhou	29.36	281	eP	P	02 05 06.5	+2.6
LZH				pP	pP	02 05 12.8	-8.2
LZH				pmax	pmax		
	comp=Z,19nm,1.4s						
DAV	Davao City (W)	31.57	209	LR	LR	02 20 25.2	
	comp=Z,24nm,18.5s,baz=357,slow=40						
GTA	Gaotai	32.04	289	eP	P	02 05 27.6	+0.1
GTA				PcP	PcP	02 08 16.4	+0.8
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PZH	PanZhiHua	34.03	265	P	P	02 05 46.8	+1.8
BILL	Bilibino	35.50	17	ceP	P	02 05 57.8	+0.8
BILL				pmax	pmax		
	comp=Z,12nm,1.7s						
TIXI	Tiksi	36.43	354	LR	LR	02 22 58.3	
	comp=Z,36nm,19.0s,baz=344,slow=39						
SPIA	Saint Paul Isl	39.14	41	P	P	02 06 28.3	+0.5
	baz=258						
NIKH	Nikolski High	39.32	48	P	P	02 06 30.5	+1.1
	baz=265						
LUWI	Luwuk	40.09	208	P	P	02 06 37.2	+1.1
CMAR	Chiang Mai Arr	40.26	256	LR	LR	02 23 31.3	
	comp=Z,24nm,20.0s,baz=60,slow=36						
GAMB	Gambell	40.28	31	P	P	02 06 38.2	+0.9
	baz=249						
M11K	Mekoryuk	41.84	37	P	P	02 06 51.1	+1.1
	baz=259						
ZAA0	Zalesovo Array	42.07	313		P	02 06 50.9	-1.1
ZAA0				IAmb	IAmb	02 06 54.1	
	comp=Z,4.5nm,0.9s						
ZALV	Zalesovo Beam	42.07	313	P	P	02 06 52.5	+0.5
ZALV	Zalesovo Beam	42.07	313	P	P	02 06 52.2	+0.2
	comp=Z,3.4nm,0.6s,baz=88,slow=9.0,SNR=9.5						
ZALV				PcP	PcP	02 08 45.6	0.0
	comp=Z,2.4nm,0.6s,baz=90,slow=1.8,SNR=5.6						
	comp=Z,3.4nm,0.6s						
ZALV	Zalesovo Beam	42.07	313	P	P	02 06 52.5	+0.5

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TNA   Tin City         42.42  29  P      P      02 06 56.0 +1.3
      baz=251
K13K  Kusilvak Mount   42.88  35  P      P      02 07 00.1 +1.6
      baz=259
F14K  Arctic Creek     43.02  29  P      P      02 07 00.9 +1.3
      baz=253
ANM   Nome             43.16  31  P      P      02 07 01.5 +0.7
      baz=255
M13K  Dall Lake        43.24  37  P      P      02 07 02.8 +1.5
      baz=262
S12K  Black Hills      43.47  44  P      P      02 07 04.6 +1.2
      baz=268
J14K  Nanvaranak Lak   43.55  34  P      P      02 07 05.0 +1.1
      baz=259
L14K  Kuka Creek       43.70  36  P      P      02 07 06.8 +1.7
      baz=261
F15K  North Star Dit   43.76  29  P      P      02 07 06.0 +0.5
F15K                              IAmb   IAmb   02 07 08.7
      comp=Z,9.3nm,1.1s
F15K  North Star Dit   43.76  29  P      P      02 07 06.1 +0.5
      baz=255,SNR=6.5
G15K  Niukluk          43.83  30  P      P      02 07 06.9 +0.8
      baz=256
M14K  Bethel           43.97  37  P      P      02 07 08.7 +1.4
M14K                              IAmb   IAmb   02 07 10.1
      comp=Z,6.1nm,0.8s
M14K  Bethel           43.97  37  P      P      02 07 08.9 +1.7
      baz=262
MK31  Makanchi Array   43.99 303  P      P      02 07 08.5 +0.8
MK31                              IAmb   IAmb   02 07 09.8
      comp=Z,5.3nm,0.9s
MK31  Makanchi Array   43.99 303ceP      P      02 07 08.2 +0.5
MKAR  Makanchi Array   43.99 303         P      02 07 07.8 +0.1
MKAR  Makanchi Array   43.99 303  P      P      02 07 07.9 +0.2
      comp=Z,3.9nm,0.8s,baz=83,slow=9.9,SNR=26
MKAR                              PcP    PcP    02 08 52.2  0.0
      comp=Z,1.1nm,0.7s,baz=82,slow=2.7,SNR=4.3
MKAR                              LR     LR     02 25 26.7
      comp=Z,32nm,19.6s,baz=68,slow=36
      comp=Z,3.9nm,0.8s
N14K  Kuskokwak Cree   44.00  38  P      P      02 07 08.4 +0.9
      baz=264
O14K  Tigyukauivet M   44.15  39  P      P      02 07 08.7  0.0
      baz=265
MAKZ  Makanchi         44.20 303  P      P      02 07 08.3 -1.1
MAKZ                              IAmb   IAmb   02 07 11.7
      comp=Z,6.0nm,0.9s
MAKZ  Makanchi         44.20 303  P      P      02 07 08.3 -1.1
MAKZ                              pmax   pmax
      comp=Z,6.0nm,0.9s
C16K  Lisburne Hills   44.25  26         P      02 07 10.1 +0.7
C16K  Lisburne Hills   44.25  26  P      P      02 07 10.8 +1.4
      baz=251,SNR=12
L15K  Ungalak Mounta   44.32  35  P      P      02 07 11.4 +1.3
      baz=262
SDPT  Sand Point       44.36  45  P      P      02 07 11.5 +1.0
      baz=269
K15K  Wolf Creek Mou   44.39  35  P      P      02 07 13.0 +2.4
K15K  Wolf Creek Mou   44.39  35  P      P      02 07 11.2 +0.6
      baz=261
M15K  Kasigluk River   44.58  37  P      P      02 07 12.4 +0.3
      baz=264
G16K  Koyuk River      44.61  30  P      P      02 07 13.2 +0.9
      baz=257
N15K  Kwethluk River   44.82  38  P      P      02 07 15.0 +0.9
N15K                              IAmb   IAmb   02 07 32.7
      comp=Z,8.0nm,1.1s
N15K  Kwethluk River   44.82  38  P      P      02 07 14.8 +0.7
      baz=265
CHNA  Chernabura Isl   44.87  45  P      P      02 07 15.3 +0.8
      baz=271
O15K  Ungalikthiuk R   44.88  39  P      P      02 07 15.1 +0.5
O15K                              IAmb   IAmb   02 07 17.2
      comp=Z,6.0nm,0.9s
O15K  Ungalikthiuk R   44.88  39  P      P      02 07 15.3 +0.8
      baz=266
D17K  Noatak River     44.90  27  P      P      02 07 15.6 +1.0
      baz=254,SNR=13
S14K  Fog Glacier      44.90  43  P      P      02 07 15.6 +0.7
      baz=269
I17K  Unalakleet       45.02  32  P      P      02 07 16.2 +0.7
      baz=260
RDOG  Red Dog Mine     45.06  26  P      P      02 07 16.7 +0.9
RDOG                              IAmb   IAmb   02 07 18.4
      comp=Z,8.2nm,0.9s
RDOG  Red Dog Mine     45.06  26  P      P      02 07 17.2 +1.3
      baz=254
C17K  DeLong Mountai   45.08  26  P      P      02 07 17.2 +1.2
      baz=254,SNR=7.3
E17K  Hotham Inlet     45.21  28  P      P      02 07 18.5 +1.5
      baz=256
L16K  Owhat River      45.28  36  P      P      02 07 18.7 +1.0
L16K  Owhat River      45.28  36  P      P      02 07 18.7 +1.0
      baz=264
F17K  Baldwin Pennin   45.28  29  P      P      02 07 19.1 +1.5
F17K                              IAmb   IAmb   02 07 20.0
      comp=Z,7.3nm,0.8s
F17K  Baldwin Pennin   45.28  29  P      P      02 07 18.3 +0.7
      baz=257
G17K  Kiwalik Mounta   45.33  30  P      P      02 07 18.5 +0.5
      baz=259
M16K  Timber Creek     45.45  37  P      P      02 07 20.2 +1.1
M16K                              IAmb   IAmb   02 07 21.8
      comp=Z,7.1nm,1.1s
M16K  Timber Creek     45.45  37  P      P      02 07 19.3 +0.2
      baz=265
N16K  Nishlik Lake     45.50  37  P      P      02 07 19.1 -0.4
      baz=266
H17K  Granite Mounta   45.53  31  P      P      02 07 20.0 +0.4
      baz=260
EVN   Everest          45.56 276  P      P      02 07 22.6 +1.5
EVN                               IAmb   IAmb   02 07 25.4
      comp=Z,4.7nm,0.5s
J17K  VABM Dome        45.66  33         P      02 07 22.1 +1.4
J17K                              IAmb   IAmb   02 07 23.2
      comp=Z,4.6nm,0.9s
J17K  VABM Dome        45.66  33  P      P      02 07 21.0 +0.4
      baz=262
E18K  Tukpahlearik C   45.75  28         P      02 07 22.3 +1.0
E18K                              IAmb   IAmb   02 07 24.3
      comp=Z,7.9nm,1.1s
E18K  Tukpahlearik C   45.75  28  P      P      02 07 22.6 +1.3
      baz=257,SNR=6.3
O16K  Kokwok River B   45.79  39  P      P      02 07 22.3 +0.6
O16K  Kokwok River B   45.79  39  P      P      02 07 22.5 +0.8
      baz=267
B18K  Kokolik River    45.80  25  P      P      02 07 23.1 +1.4
      baz=254,SNR=6.2
C18K  Utukok River     45.83  26         P      02 07 23.3 +1.3
C18K  Utukok River     45.83  26  P      P      02 07 23.4 +1.3
      baz=255,SNR=18
L17K  Donlin           45.87  35  P      P      02 07 23.5 +1.1
      baz=264
K17K  Iditarod         45.93  34  P      P      02 07 24.4 +1.5
K17K                              IAmb   IAmb   02 07 25.4
      comp=Z,6.2nm,0.8s
K17K  Iditarod         45.93  34  P      P      02 07 24.1 +1.3
      baz=264
F18K  Selawik          45.94  29  P      P      02 07 23.7 +0.9
      baz=259
KURK  Kurchatov        45.97 309         P      02 07 23.6 +0.3
KURK  Kurchatov        45.97 309ceP      P      02 07 23.2 -0.1
KURK                              pmax   pmax
      comp=Z,21nm,0.7s
KURBB Kurchatov Arra   46.04 309  P      P      02 07 23.5 -0.3
      comp=Z,7.9nm,0.6s,baz=84,slow=8.2,SNR=36
KURBB                             PcP    PcP    02 08 57.9 -1.2
      comp=Z,1.2nm,0.7s,baz=87,slow=3.3,SNR=3.3
      comp=Z,7.9nm,0.6s
G18K  Tagagawik        46.21  30         P      02 07 25.6 +0.6
G18K                              IAmb   IAmb   02 07 26.9
      comp=Z,5.1nm,0.8s
G18K  Tagagawik        46.21  30  P      P      02 07 25.9 +0.9
      baz=260,SNR=6.6
H18K  Honhosa River    46.22  31  P      P      02 07 25.6 +0.6
H18K                              IAmb   IAmb   02 07 27.0
      comp=Z,4.1nm,0.8s
H18K  Honhosa River    46.22  31  P      P      02 07 26.6 +1.6
      baz=262
M17K  Holitna River    46.22  36  P      P      02 07 27.1 +2.0
M17K                              IAmb   IAmb   02 07 28.1
      comp=Z,6.6nm,1.0s
M17K  Holitna River    46.22  36  P      P      02 07 26.7 +1.6
      baz=266
A19K  Wainwright       46.28  24  P      P      02 07 26.5 +1.0
      baz=254
N17K  Nushagak Hills   46.29  37  P      P      02 07 26.6 +1.0
      baz=267
O17K  Koliganek Bris   46.30  38  P      P      02 07 26.8 +1.1
      baz=268
C19K  Lookout Ridge    46.50  25         P      02 07 29.2 +1.9
C19K  Lookout Ridge    46.50  25  P      P      02 07 28.0 +0.7
      baz=257,SNR=12
P17K  Kvichak River    46.62  39  P      P      02 07 28.8 +0.5
      baz=269
L18K  Granite Mounta   46.63  35  P      P      02 07 30.2 +1.8
L18K  Granite Mounta   46.63  35  P      P      02 07 29.2 +0.9
      baz=266
F19K  Shaleruckik Mo   46.72  29  P      P      02 07 30.6 +1.7
      baz=260
J18K  Innoko River     46.73  33  P      P      02 07 30.5 +1.4
      baz=265
G19K  Purcell Mounta   46.88  30  P      P      02 07 31.4 +1.1
      baz=262
D19K  Kuna River       46.89  26         P      02 07 32.1 +1.8
D19K  Kuna River       46.89  26  P      P      02 07 31.2 +0.9
      baz=259,SNR=9.9
Q17K  Contact Creek    46.90  41  P      P      02 07 32.0 +1.4
      baz=270
N18K  Kilae Creek      46.93  37  P      P      02 07 32.6 +1.9
N18K                              IAmb   IAmb   02 07 33.9
      comp=Z,4.4nm,1.1s
N18K  Kilae Creek      46.93  37  P      P      02 07 31.2 +0.5
      baz=268
M18K  Stony River      47.00  36  P      P      02 07 31.6 +0.4
      baz=267
E19K  Redstone River   47.03  28         P      02 07 33.0 +1.7
E19K  Redstone River   47.03  28  P      P      02 07 32.2 +0.8
      baz=260,SNR=12
H19K  Roundabout Mou   47.06  31         P      02 07 33.2 +1.6
H19K                              IAmb   IAmb   02 07 34.3
      comp=Z,7.9nm,1.1s
H19K  Roundabout Mou   47.06  31  P      P      02 07 32.7 +1.1
      baz=263,SNR=5.7
ACHA  Angle Creek He   47.20  41  P      P      02 07 33.2 +0.3
P18K  Big Mountain,    47.24  39  P      P      02 07 34.1 +0.9
      baz=270
O18K  Koktuh Hills     47.26  38         P      02 07 35.7 +2.5
O18K                              IAmb   IAmb   02 07 37.7
      comp=Z,4.3nm,0.8s
O18K  Koktuh Hills     47.26  38  P      P      02 07 33.7 +0.5
      baz=269
J19K  Poorman          47.26  33         P      02 07 34.5 +1.3
J19K  Poorman          47.26  33  P      P      02 07 34.1 +0.9
      baz=265,SNR=6.3
Q18K  Katmai Hardscr   47.36  40  P      P      02 07 35.1 +0.9
      baz=271
D20K  Etivluk River    47.48  26  P      P      02 07 36.4 +1.5
D20K  Etivluk River    47.48  26  P      P      02 07 35.6 +0.8
      baz=260,SNR=9.2
L19K  White Mountain   47.49  35  P      P      02 07 36.8 +1.7
L19K  White Mountain   47.49  35  P      P      02 07 35.7 +0.7
      baz=268
B20K  Meade River      47.53  24         P      02 07 36.9 +1.7
B20K  Meade River      47.53  24  P      P      02 07 36.1 +0.9
      baz=258,SNR=15
F20K  Avaraart Lake    47.55  29  P      P      02 07 36.5 +1.2
      baz=262
E20K  Nigu River       47.55  27  P      P      02 07 36.5 +1.0
      baz=261,SNR=8.5
N19K  Bonanza Creek    47.63  37  P      P      02 07 36.6 +0.4
      baz=269
R18K  Karluk           47.68  41  P      P      02 07 36.8 +0.3
      baz=272
M19K  Big River Lodg   47.70  36  P      P      02 07 36.3 -0.3
      baz=268
H20K  Anotleneega Mo   47.71  31  P      P      02 07 37.3 +0.6
      baz=264
I20K  Naaghedeneel     47.82  32  P      P      02 07 38.4 +0.9
      baz=266
SII   Sitkinak Islan   47.87  43  P      P      02 07 39.4 +1.3
      baz=273
K20K  Telida           47.90  34  P      P      02 07 40.4 +2.2
K20K                              IAmb   IAmb   02 07 41.1
      comp=Z,4.3nm,0.8s
K20K  Telida           47.90  34  P      P      02 07 39.7 +1.5
      baz=267,SNR=5.6
J20K  Nowinta River    47.92  33         P      02 07 39.9 +1.6
J20K                              IAmb   IAmb   02 07 41.1
      comp=Z,6.8nm,1.1s
J20K  Nowinta River    47.92  33  P      P      02 07 39.7 +1.5
      baz=266,SNR=5.0
L20K  Farewell, AK     47.96  35  P      P      02 07 39.3 +0.7
      baz=268
A21K  Barrow           47.99  23  P      P      02 07 39.2 +0.6
      baz=258,SNR=5.2
Q19K  Cape Douglas,    48.06  40  P      P      02 07 40.0 +0.5
Q19K  Cape Douglas,    48.06  40  P      P      02 07 40.1 +0.5
      baz=272
TARG  Taragay, Kyrgy   48.11 297  P      P      02 07 40.5 -0.1
TARG  Taragay, Kyrgy   48.11 297  P      P      02 07 40.5 -0.1
TARG                              pmax   pmax
      comp=Z,9.0nm,0.8s
C21K  Knifeblade Rid   48.20  26  P      P      02 07 41.8 +1.4
      baz=261,SNR=7.5
P19K  Oil Pt           48.26  39  P      P      02 07 41.7 +0.7
P19K  Oil Pt           48.26  39  P      P      02 07 41.5 +0.5
      baz=271
M20K  Styx River       48.29  36  P      P      02 07 41.7 +0.4
      baz=269
B21K  Ikpikpuk River   48.33  25         P      02 07 43.2 +1.8
B21K  Ikpikpuk River   48.33  25  P      P      02 07 42.0 +0.6
      baz=261,SNR=13
G21K  Allakaket        48.36  29  P      P      02 07 42.6 +0.9
      baz=265
E21K  Killik River     48.39  27  P      P      02 07 42.8 +0.9
E21K                              IAmb   IAmb   02 07 44.2
      comp=Z,6.8nm,0.9s
E21K  Killik River     48.39  27  P      P      02 07 42.9 +1.0
      baz=263
F21K  Alatna River     48.44  28  P      P      02 07 43.3 +1.0
      baz=264
A22K  Sinclair Lake    48.45  23  P      P      02 07 43.3 +1.1
      baz=260,SNR=8.4
KDJ   Kajisay          48.46 298  P      P      02 07 44.0 +0.9
KDJ                               IAmb   IAmb   02 07 45.5
      comp=Z,5.3nm,0.8s
KDJ   Kajisay          48.46 298  P      P      02 07 44.0 +0.9
KDJ                               pmax   pmax
      comp=Z,5.0nm,0.8s
H21K  Melozitna Rive   48.58  31  P      P      02 07 45.0 +1.6
H21K  Melozitna Rive   48.58  31  P      P      02 07 44.5 +1.1
      baz=266
KDAK  Kodiak Island    48.67  41  P      P      02 07 44.9 +0.8
KDAK  Kodiak Island    48.67  41  P      P      02 07 44.9 +0.8
KDAK                              pmax   pmax
      comp=Z,13nm,1.2s
KDAK  Kodiak Island    48.67  41  P      P      02 07 44.2  0.0
      baz=274
Q20K  Shuyak Island    48.73  40  P      P      02 07 45.3 +0.7
      baz=273
SYI   Shuyak Island    48.73  40  P      P      02 07 45.1 +0.6
N20K  Mount Spurr      48.74  37  P      P      02 07 45.3 +0.6
      baz=271
SPCR  Spurr Chakacha   48.74  37  P      P      02 07 45.6 +0.8
      baz=271
PPLA  Purkeypile       48.74  34  P      P      02 07 45.7 +0.9
      baz=269
CAST  Castle Rocks     48.80  34  P      P      02 07 45.9 +0.8
      baz=269
B22K  Teshekpuk Lake   48.85  24         P      02 07 45.4 +0.1
B22K  Teshekpuk Lake   48.85  24  P      P      02 07 46.4 +1.1
      baz=262,SNR=5.5
I21K  Tanana           48.90  31  P      P      02 07 46.3 +0.5
      baz=268
D22K  Ayikyak River    48.91  26         P      02 07 47.7 +1.8
D22K  Ayikyak River    48.91  26  P      P      02 07 46.9 +1.0
      baz=264,SNR=7.4
F22K  John River       48.97  28  P      P      02 07 47.8 +1.4
      baz=265
SKT   Skwentna         49.05  35  P      P      02 07 47.9 +0.9
      baz=271
HOM   Homer            49.06  39  P      P      02 07 48.0 +0.9
      baz=273
E22K  Anaktuvuk Pass   49.16  27         P      02 07 49.4 +1.6
E22K                              IAmb   IAmb   02 07 50.5
      comp=Z,6.8nm,1.0s
E22K  Anaktuvuk Pass   49.16  27  P      P      02 07 48.4 +0.6
      baz=265,SNR=13
H22K  Ishtalitna Cre   49.18  30  P      P      02 07 48.7 +0.7
      baz=267
G22K  Bettles          49.19  29  P      P      02 07 49.2 +1.2
      baz=266
BOOM  Boomskoye usch   49.26 298  P      P      02 07 50.5 +1.3
BOOM  Boomskoye usch   49.26 298  P      P      02 07 50.5 +1.3
BOOM                              pmax   pmax
      comp=Z,20nm,1.2s
CNPM  China Poot       49.28  39  P      P      02 07 49.7 +0.9
BPAW  Bear Paw Mtn.    49.30  33  P      P      02 07 50.4 +1.5
BPAW  Bear Paw Mtn.    49.30  33  P      P      02 07 49.8 +0.9
      baz=269
KTH   Kantishna Hill   49.32  33         P      02 07 48.4 -0.8
KTH                               IAmb   IAmb   02 07 51.3
      comp=Z,6.7nm,1.1s
MLY   Manley           49.42  31         P      02 07 51.6 +1.8
MLY                               IAmb   IAmb   02 07 52.6
      comp=Z,6.2nm,1.1s
MLY   Manley           49.42  31  P      P      02 07 50.5 +0.7
      baz=269,SNR=6.6
SUA   Susitna One      49.44  36  P      P      02 07 51.0 +0.9
SUA                               IAmb   IAmb   02 07 52.5
      comp=Z,3.9nm,0.9s
SUA   Susitna One      49.44  36  P      P      02 07 50.3 +0.2
      baz=272
BRSE  Bradley Lake S   49.52  38  P      P      02 07 51.4 +0.8
      baz=273
TRF   Thorofare Moun   49.61  34  P      P      02 07 51.8 +0.4
      baz=270
D23K  Nanushuk River   49.64  26  P      P      02 07 53.3 +1.8
D23K                              IAmb   IAmb   02 07 54.0
      comp=Z,3.3nm,1.0s
D23K  Nanushuk River   49.64  26  P      P      02 07 51.4  0.0
      baz=266
M22K  Willow           49.72  36  P      P      02 07 52.0 -0.1
      baz=272
C23K  Itkillik River   49.74  25         P      02 07 53.2 +1.1
C23K  Itkillik River   49.74  25  P      P      02 07 53.3 +1.1
      baz=265,SNR=5.7
G23K  Bananza Creek    49.76  29  P      P      02 07 53.2 +0.8
      baz=268
H23K  Yukon River      49.94  30  P      P      02 07 54.7 +1.0
H23K  Yukon River      49.94  30  P      P      02 07 55.3 +1.6
      baz=269,SNR=5.7
RC01  Rabbit Creek A   49.94  37  P      P      02 07 55.4 +1.6
      baz=273
E23K  Chandalar        49.98  27         P      02 07 55.5 +1.4
E23K  Chandalar        49.98  27  P      P      02 07 54.4 +0.3
      baz=267,SNR=8.9
I23K  Minto, Yukon-K   50.01  31  P      P      02 07 55.0 +0.8
I23K  Minto, Yukon-K   50.01  31  P      P      02 07 55.3 +1.1
      baz=270
TOLK  Toolik Lake Re   50.02  27  P      P      02 07 55.4 +1.0
TOLK                              IAmb   IAmb   02 07 57.0
      comp=Z,8.0nm,1.1s
TOLK  Toolik Lake Re   50.02  27  P      P      02 07 55.1 +0.7
      baz=267
KSH   Kashi            50.06 295  P      P      02 07 59.0 +3.8
KSH                               pmax   pmax
      comp=Z,5.0nm,0.8s
NEA2  Nenana           50.13  32  P      P      02 07 56.0 +0.7
NEA2  Nenana           50.13  32  P      P      02 07 55.9 +0.7
      baz=271,SNR=5.5
SEW   Seward           50.14  38  P      P      02 07 56.1 +0.8
      baz=274
PMR   Palmer           50.20  36  P      P      02 07 56.2 +0.5
      baz=273
MCK   McKinley         50.21  33  P      P      02 07 56.7 +0.9
      baz=272
AAK   Ala-Archa        50.26 299         P      02 07 57.1 +0.4
AAK                               IAmb   IAmb   02 07 59.1
      comp=Z,4.8nm,0.8s
AAK   Ala-Archa        50.26 299ceP      P      02 07 55.4 -1.3
AAK                               pmax   pmax
      comp=Z,4.0nm,0.8s
D24K  Happy Valley     50.32  26  P      P      02 07 57.6 +1.1
D24K                              IAmb   IAmb   02 07 59.2
      comp=Z,6.0nm,1.0s
D24K  Happy Valley     50.32  26  P      P      02 07 57.4 +0.9
      baz=267
C24K  Franklin Bluff   50.40  25  P      P      02 07 58.1 +1.0
      baz=267
E24K  Your Creek       50.40  27  P      P      02 07 59.0 +1.8
E24K                              IAmb   IAmb   02 08 00.7
      comp=Z,3.6nm,0.9s
E24K  Your Creek       50.40  27  P      P      02 07 57.8 +0.6
      baz=268,SNR=5.3
WAT1  Susitna Watana   50.41  34  P      P      02 07 57.9 +0.5
      baz=273
KNK   Knik Glacier     50.54  36  P      P      02 07 59.5 +1.2
      baz=274
WRH   Wood River Hil   50.56  32  P      P      02 07 59.9 +1.5
WRH                               IAmb   IAmb   02 08 01.7
      comp=Z,2.9nm,0.8s
SML   Sawmill          50.57  36  P      P      02 07 59.3 +0.7
      baz=274
F24K  Squaw Lake       50.62  28  P      P      02 08 00.0 +1.1
      baz=269
H24K  Noodor Dome      50.62  30  P      P      02 08 00.8 +1.9
H24K                              IAmb   IAmb   02 08 01.5
      comp=Z,3.0nm,0.8s
H24K  Noodor Dome      50.62  30  P      P      02 07 59.8 +0.9
      baz=271
PWL   Port Wells       50.64  37  P      P      02 07 59.5 +0.4
      baz=274
COLA  College          50.65  32 i P      P      02 07 59.0  0.0
COLA                              pmax   pmax
      comp=Z,7.0nm,1.0s
BVAR  Borovoye Array   50.72 313  P      P      02 08 00.5 +0.6
      comp=Z,1.6nm,0.5s,baz=69,slow=6.7,SNR=8.8
BVAR                              PcP    PcP    02 09 16.4 +0.4
      comp=Z,1.4nm,0.6s,baz=4.8,slow=1.8,SNR=4.4
BVAR                              LR     LR     02 29 58.8
      comp=Z,31nm,18.1s,baz=89,slow=36
      comp=Z,1.6nm,0.5s
G24K  Hadweenzic Riv   50.78  29  P      P      02 08 01.0 +0.9
      baz=270
BRVK  Borovoye         50.78 313  P      P      02 08 00.5 +0.3
BRVK  Borovoye         50.78 313ceP      P      02 07 59.4 -0.8
BRVK                              pmax   pmax
      comp=Z,2.0nm,0.8s
WAT6  Susitna Watana   50.80  35  P      P      02 08 01.3 +0.8
      baz=274
POKR  Poker Plat Res   50.82  31  P      P      02 08 00.9 +0.5
POKR  Poker Plat Res   50.82  31  P      P      02 08 01.2 +0.8
      baz=272
DHY   Denali Highway   50.94  34  P      P      02 08 02.0 +0.5
      baz=273
SCM   Sheep Creek Mo   51.04  36  P      P      02 08 03.3 +1.1
SCM                               IAmb   IAmb   02 08 03.9
      comp=Z,4.5nm,0.7s
SCM   Sheep Creek Mo   51.04  36  P      P      02 08 03.3 +1.1
SCM                               pmax   pmax
      comp=Z,4.0nm,0.7s
SCM   Sheep Creek Mo   51.04  36  P      P      02 08 03.0 +0.8
      baz=274
HDA   Harding Lake     51.06  32  P      P      02 08 02.0 -0.2
HDA                               IAmb   IAmb   02 08 03.1
      comp=Z,3.4nm,0.8s
HDA   Harding Lake     51.06  32  P      P      02 08 03.0 +0.8
      baz=273
IL31                   51.07  32  P      P      02 08 01.6 -0.6
IL31                              IAmb   IAmb   02 08 03.7
      comp=Z,4.7nm,0.8s
ILAR  Eielson Array    51.07  32  P      P      02 08 03.0 +0.8
ILAR  Eielson Array    51.07  32  P      P      02 08 02.8 +0.5
      comp=Z,2.2nm,0.6s,baz=271,slow=6.4,SNR=31
ILAR                              LR     LR     02 31 13.4
      comp=Z,21nm,18.9s,baz=272,slow=38
      comp=Z,2.2nm,0.6s
ILAR  Eielson Array    51.07  32  P      P      02 08 03.0 +0.8
P23K  Montague Islan   51.17  38  P      P      02 08 04.0 +0.9
      baz=276
D25K  Kavik River      51.20  26  P      P      02 08 03.5 +0.3
D25K                              IAmb   IAmb   02 08 05.6
      comp=Z,3.4nm,0.8s
D25K  Kavik River      51.20  26  P      P      02 08 03.6 +0.3
      baz=269
GLI   Glacier Island   51.24  37  P      P      02 08 04.7 +1.1
      baz=275
G25K  Bearman Lake     51.32  29  P      P      02 08 04.8 +0.7
      baz=272
H25L  Birch Creek      51.45  30  P      P      02 08 06.2 +1.2
      baz=272
F25K  Christian Rive   51.48  28         P      02 08 06.3 +1.0
F25K  Christian Rive   51.48  28  P      P      02 08 06.0 +0.6
      baz=271
E25K  Arctic Village   51.50  27  P      P      02 08 05.2 -0.2
E25K                              IAmb   IAmb   02 08 08.6
      comp=Z,5.0nm,1.1s
E25K  Arctic Village   51.50  27  P      P      02 08 05.9 +0.4
      baz=271
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M24K	Tolsona, Glenn	51.56	35	P	P	02 08 06.6	+0.6
	baz=275						
PRP	Porcupine Dome	51.60	31	P	P	02 08 07.0	+0.6
PRP				IAmb	IAmb	02 08 09.6	
	comp=Z,1.9nm,0.6s						
PRP	Porcupine Dome	51.60	31	P	P	02 08 06.4	-0.1
	baz=273						
ARSB	Arslanbob	51.71	298	P	P	02 08 08.2	+0.6
ARSB	Arslanbob	51.71	298	P	P	02 08 08.2	+0.6
ARSB				pmax	pmax		
	comp=Z,9.0nm,0.8s						
J25K	Salcha River,	51.73	32	P	P	02 08 08.2	+0.9
	baz=274						
KLU	Klutina	51.74	36	P	P	02 08 08.0	+0.5
	baz=276						
Q23K	Middleton Isla	51.77	39	P	P	02 08 07.6	+0.1
	baz=277						
PAX	Paxson	51.81	34	P	P	02 08 08.0	+0.1
	baz=275						
DIV	Divide	51.85	36	P	P	02 08 08.7	+0.4
BMAR	Burnt Mountain	51.89	28	P	P	02 08 09.2	+0.8
EYAK	Cordova Ski Ar	51.93	37	P	P	02 08 08.7	0.0
	baz=277						
HARP	HAARP	52.01	35	P	P	02 08 09.1	-0.2
	baz=276						
RIDG	Independent Ri	52.02	33	P	P	02 08 08.8	-0.7
	baz=275						
F26K	Sheenjek River	52.05	28	P	P	02 08 10.3	+0.8
F26K	Sheenjek River	52.05	28	P	P	02 08 10.9	+1.3
	baz=273,SNR=9.8						
C27K	Jago River	52.14	26	P	P	02 08 10.0	-0.1
C27K	Jago River	52.14	26	P	P	02 08 10.9	+0.7
	baz=272						
G26K	Porcupine Rive	52.23	29	P	P	02 08 11.9	+1.1
G26K	Porcupine Rive	52.23	29	P	P	02 08 11.5	+0.7
	baz=274						
KNRA	Kununurra	52.31	194	P	P	02 08 11.8	-0.1
N25K	Chitina, Valde	52.36	36	P	P	02 08 12.7	+0.6
	baz=277						
DOT	Dot Lake	52.38	33	P	P	02 08 13.1	+1.1
SCRK	Sand Creek	52.38	33		P	02 08 13.1	+0.9
SCRK				IAmb	IAmb	02 08 13.9	
	comp=Z,4.2nm,0.8s						
SCRK	Sand Creek	52.38	33	P	P	02 08 12.4	+0.3
	baz=276,SNR=5.9						
BMRM	Bremner River	52.44	37	P	P	02 08 13.6	+1.0
	baz=277						
J26L	Joseph Creek	52.51	32	P	P	02 08 13.4	+0.3
	baz=276						
I26K	Coal Creek Min	52.61	31	P	P	02 08 13.8	+0.1
	baz=275						
KAIM	Kayak Island	52.67	38	P	P	02 08 15.2	+1.0
	baz=278						
L26K	Log Cabin Wild	52.77	34	P	P	02 08 15.9	+0.9
	baz=277						
KK31	Karatay Array	52.94	301	P	P	02 08 16.3	-0.2
KK31				IAmb	IAmb	02 08 19.1	
	comp=Z,4.9nm,0.9s						
KK31	Karatay Array	52.94	301	P	P	02 08 16.3	-0.2
KK31				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KKAR	Karatay Array	52.94	301	P	P	02 08 16.8	+0.3
KKAR	Karatay Array	52.94	301	P	P	02 08 16.1	-0.4
KKAR				IAmb	IAmb	02 08 19.1	
	comp=Z,5.1nm,0.9s						
KKAR	Karatay Array	52.94	301	P	P	02 08 16.8	+0.3
E27K	Coleen River	52.98	27		P	02 08 17.0	+0.6
E27K				IAmb	IAmb	02 08 18.8	
	comp=Z,3.0nm,0.9s						
E27K	Coleen River	52.98	27	P	P	02 08 17.5	+1.1
	baz=274						
M26K	Nabesna, AK	53.01	35	P	P	02 08 17.8	+1.0
	baz=278						
G27K	Doyon Strip	53.08	29	P	P	02 08 18.2	+1.0
G27K	Doyon Strip	53.08	29	P	P	02 08 17.8	+0.6
	baz=276						
D27M	Malcolm River	53.13	26	P	P	02 08 19.0	+1.5
D27M				IAmb	IAmb	02 08 27.5	
	comp=Z,3.3nm,1.1s						
D27M	Malcolm River	53.13	26	P	P	02 08 18.3	+0.7
	baz=274						
DRK	Karamyk	53.14	296	P	P	02 08 18.3	-0.1
DRK	Karamyk	53.14	296	P	P	02 08 18.3	-0.1
DRK				pmax	pmax		
	comp=Z,10.0nm,0.3s						
MCARA	McCarthy VSAT	53.14	36	P	P	02 08 18.4	+0.7
	baz=278						
H27K	Steamboat Moun	53.19	30		P	02 08 19.2	+1.2
H27K	Steamboat Moun	53.19	30	P	P	02 08 18.5	+0.5
	baz=276						
CRQE	Cirque	53.20	37	P	P	02 08 18.3	0.0
	baz=279						
BGLC	Bering Glacier	53.20	37	P	P	02 08 18.9	+0.8
	baz=279						
K27K	Chicken	53.21	32	P	P	02 08 19.4	+1.3
K27K				IAmb	IAmb	02 08 20.7	
	comp=Z,4.3nm,1.1s						
K27K	Chicken	53.21	32	P	P	02 08 18.7	+0.5
	baz=277						
I27K	Kandik River	53.22	30	P	P	02 08 18.4	+0.1
	baz=276						
L27K	Beaver Creek,	53.45	34		P	02 08 21.4	+1.5
L27K				IAmb	IAmb	02 08 22.2	
	comp=Z,2.3nm,0.8s						
L27K	Beaver Creek,	53.45	34	P	P	02 08 21.0	+1.0
	baz=278						
BCAR	Beaver Creek A	53.47	34	P	P	02 08 22.1	+2.0
M27K	Edge Creek, AK	53.53	35	P	P	02 08 22.2	+1.6
M27K				IAmb	IAmb	02 08 23.3	
	comp=Z,4.2nm,0.8s						
M27K	Edge Creek, AK	53.53	35	P	P	02 08 21.7	+1.0
	baz=279						
F28M	Old Crow	53.68	28	P	P	02 08 22.1	+0.4
F28M	Old Crow	53.68	28	P	P	02 08 22.0	+0.4
	baz=276						
E28M	Babbage River	53.70	27	P	P	02 08 22.5	+0.8
E28M	Babbage River	53.70	27	P	P	02 08 21.9	+0.2
	baz=276						
MESA	MESA	53.85	37	P	P	02 08 22.6	-0.6
	baz=280						
D28M	Stokes Point	53.91	26	P	P	02 08 23.4	+0.3
	baz=276						
I28M	Miner Creek	53.93	31		P	02 08 25.4	+1.9
I28M				IAmb	IAmb	02 08 27.1	
	comp=Z,4.5nm,1.1s						
I28M	Miner Creek	53.93	31	P	P	02 08 24.0	+0.5
	baz=278						
CTG	Chitna Glacier	54.01	36	P	P	02 08 23.8	-0.4
	baz=280						
YUK3	Moose Creek	54.29	35	P	P	02 08 26.7	+0.4
	baz=280						
E29M	Blow River	54.33	27	P	P	02 08 27.7	+1.5
E29M				IAmb	IAmb	02 08 28.8	
	comp=Z,2.7nm,0.8s						
E29M	Blow River	54.33	27	P	P	02 08 26.1	-0.1
	baz=278						
DAWY	Dawson	54.38	32	P	P	02 08 26.9	+0.2
	baz=280						
H29M	Whitestone	54.46	30	P	P	02 08 27.5	+0.3
	baz=279						
G29M	Pine Creek	54.49	29	P	P	02 08 29.4	+2.0
G29M				IAmb	IAmb	02 08 49.2	
	comp=Z,3.2nm,0.9s						
G29M	Pine Creek	54.49	29	P	P	02 08 27.4	-0.1
	baz=279						
O28M	Mount Upton	54.60	36	P	P	02 08 28.4	-0.2
	baz=281						
I29M	Ogilvie Camp,	54.62	31	P	P	02 08 28.3	-0.1
	baz=280						
PINM	Pinnacle	54.70	37	P	P	02 08 29.0	-0.2
	baz=282						
YUK8	Steele Glacier	54.70	36	P	P	02 08 29.2	-0.2
	baz=281						
M29M	Somme Creek	55.08	34	P	P	02 08 34.1	+2.2
M29M				IAmb	IAmb	02 08 34.9	
	comp=Z,3.3nm,0.7s						
M29M	Somme Creek	55.08	34	P	P	02 08 32.1	+0.2
	baz=281,SNR=6.6						
EPYK	Eagle Plains	55.09	29	P	P	02 08 33.8	+2.0
EPYK	Eagle Plains	55.09	29	P	P	02 08 32.5	+0.7
	baz=280,SNR=7.2						
L29M	L29M	55.10	33		P	02 08 35.1	+3.1
L29M				IAmb	IAmb	02 08 35.4	
	comp=Z,6.5nm,1.0s						
L29M	L29M	55.10	33	P	P	02 08 32.9	+1.0
	baz=281,SNR=5.4						
G30M	tAoh Zraii Nji	55.18	28		P	02 08 33.4	+1.0
G30M				IAmb	IAmb	02 08 37.5	
	comp=Z,6.5nm,1.1s						
G30M	tAoh Zraii Nji	55.18	28	P	P	02 08 32.1	-0.3
	baz=280						
PNL	Peninsula	55.22	38	P	P	02 08 32.4	-0.4
	baz=283						
YUK4	Talbot Arm	55.22	35	P	P	02 08 34.5	+1.4
	baz=282						
K29M	Barlow Dome	55.23	32	P	P	02 08 34.6	+1.7
K29M	Barlow Dome	55.23	32	P	P	02 08 33.5	+0.6
	baz=281						
F30M	Barrier River	55.23	28		P	02 08 34.0	+1.3
F30M	Barrier River	55.23	28	P	P	02 08 33.6	+0.9
	baz=280						
FITZ	Fitzroy Crossi	55.33	197	P	P	02 08 33.8	-0.2
YUK6	Outpost Mounta	55.44	36	P	P	02 08 35.8	+1.2
	baz=282						
I30M	Mount Dempster	55.44	31		P	02 08 35.6	+1.2
I30M	Mount Dempster	55.44	31	P	P	02 08 35.7	+1.2
	baz=281,SNR=9.7						
SIMJ	Simiganj	55.46	296		P	02 08 35.9	+0.9
SIMJ				IAmb	IAmb	02 08 40.8	
	comp=Z,5.0nm,1.0s						
O29M	Mount Kennedy	55.48	37	P	P	02 08 35.2	+0.4
O29M	Mount Kennedy	55.48	37	P	P	02 08 36.0	+1.2
	baz=283						
J30M	Hart River	55.59	31	P	P	02 08 36.9	+1.3
	baz=282						
WRA	Warramunga Arr	55.69	187	P	P	02 08 35.4	-1.2
WRA	Warramunga Arr	55.69	187	P	P	02 08 35.1	-1.5
	comp=Z,2.3nm,0.7s,baz=1.2,slow=7.6,SNR=29						
WRA				PcP	PcP	02 09 35.0	-0.1
	comp=Z,1.0nm,0.7s,baz=2.9,slow=4.2,SNR=1.7						
	comp=Z,2.3nm,0.7s						
WRA	Warramunga Arr	55.69	187	P	P	02 08 35.4	-1.2
HYT	Haines Junctio	55.88	36		P	02 08 39.5	+1.8
HYT				IAmb	IAmb	02 08 42.0	
	comp=Z,4.6nm,0.7s						
HYT	Haines Junctio	55.88	36	P	P	02 08 38.7	+1.1
	baz=283,SNR=5.9						
N30M	Aishikik Lake	55.93	35	P	P	02 08 38.7	+0.8
	baz=283						
INK	Inuvik	55.94	27	P	P	02 08 38.4	+0.6
INK	Inuvik	55.94	27	P	P	02 08 38.4	+0.6
INK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
INK	Inuvik	55.94	27	P	P	02 08 38.8	+1.0
	baz=282						
G31M	Satah River	55.94	28	P	P	02 08 39.0	+1.2
G31M	Satah River	55.94	28	P	P	02 08 39.0	+1.2
	baz=282						
F31M	Tsiigehtchic	56.04	28	P	P	02 08 39.9	+1.5
	baz=282						
P29M	Windy Craggy	56.04	37	P	P	02 08 39.6	+0.8
	baz=284						
H31M	Peel River	56.15	30		P	02 08 40.2	+0.8
H31M				IAmb	IAmb	02 08 41.9	
	comp=Z,6.2nm,1.0s						
H31M	Peel River	56.15	30	P	P	02 08 40.8	+1.4
	baz=283						
P30M	Million Dollar	56.30	37	P	P	02 08 41.6	+0.9
	baz=284						
N31M	Braeburn, Yuko	56.53	35	P	P	02 08 42.5	+0.3
	baz=284						
O30N	Mendenhall	56.56	36	P	P	02 08 42.9	+0.5
	baz=284						
PLBC	Pleasant Camp	56.77	37	P	P	02 08 44.8	+1.0
	baz=285						
ARTI	Arti	56.78	319		P	02 08 43.9	-0.1
ARTI	Arti	56.78	319	*c i*P	P	02 08 43.6	-0.4
ARTI				*PP	pP	02 09 02.2	-0.2
ARTI						02 09 37.8	
ARTI						02 10 48.2	
ARTI				S	S	02 16 30.1	-1.3
ARTI				SS	SS	02 20 17.2	-2.5
ARTI				pmax	pmax		
	comp=Z,11nm,0.6s						
M31M	Drury Creek, Y	56.99	34	P	P	02 08 46.3	+0.9
	baz=285						
WHY	Whitehorse	57.17	36	P	P	02 08 48.3	+1.5
WHY	Whitehorse	57.17	36	P	P	02 08 47.5	+0.7
	baz=286						
S31K	Pelican	57.23	39	P	P	02 08 48.0	+0.9
	baz=286						
SKAG	Skagway	57.27	37	P	P	02 08 48.1	+0.7
	baz=286						
FARO	Faro, Yukon	57.45	34	P	P	02 08 49.6	+1.0
	baz=286						
A36M	Sachs Harbour	57.78	22		P	02 08 52.6	+1.9
A36M	Sachs Harbour	57.78	22	P	P	02 08 51.6	+0.9
	baz=287						
N32M	Quiet Lake	57.88	35	P	P	02 08 52.4	+0.7
	baz=287						
SIT	Sitka	57.96	40	P	P	02 08 52.8	+0.6
	baz=287						
R32K	Eaglecrest	58.02	38	P	P	02 08 52.8	+0.2
	baz=287						
AB31	Akbulak array	58.02	310		P	02 08 53.0	+0.2
ABKAR	Akbulak array	58.02	310		P	02 08 52.7	-0.1
ABKAR	Akbulak array	58.02	310		P	02 08 53.2	+0.3
ABKAR				IAmb	IAmb	02 08 53.5	
	comp=Z,4.2nm,0.6s						
P32M	Atlin	58.03	37	P	P	02 08 52.0	-0.8
	baz=287						
S32K	Killisnoo	58.23	39	P	P	02 08 53.7	-0.3
	baz=288						
MMPY	Sheldon Lake,	58.27	33	P	P	02 08 54.7	+0.2
	baz=287						
P33M	Teslin, Yukon	58.27	36	P	P	02 08 55.9	+1.3
	baz=287						
C36M	Paulatuk	58.97	24	P	P	02 08 59.7	+0.6
	baz=289						
ASAR	Alice Springs	59.42	187	P	P	02 09 01.9	-0.9
	comp=Z,0.6nm,0.6s,baz=16,slow=11,SNR=6.6						
ASAR				PcP	PcP	02 09 50.0	+0.2
	comp=Z,0.7nm,0.7s,baz=344,slow=3.4,SNR=1.9						
	comp=Z,0.6nm,0.6s						
S34M	Telegraph Cree	59.84	38	P	P	02 09 06.1	+0.9
	baz=290						
DLBC	Dease Lake	60.20	37	P	P	02 09 08.6	+0.7
	baz=290						
T35M	Bob Quinn	60.61	39	P	P	02 09 12.2	+1.6
	baz=291						
KIRV	Kirov	60.68	323	*i* P	P	02 09 09.8	-1.1
SPITS	Spitsbergen Ar	61.57	349	P	P	02 09 17.9	+1.1
	comp=Z,2.5nm,0.8s,baz=43,slow=8.7,SNR=2.2						
	comp=Z,2.5nm,0.8s						
MSVF	Nonsavu	64.15	140	LR	LR	02 39 34.1	
	comp=Z,84nm,18.0s,baz=186,slow=38						
ARCES	ARCESS Array B	64.84	339	P	P	02 09 38.3	-0.2
	comp=Z,6.1nm,0.9s,baz=61,slow=6.2,SNR=5.2						
	comp=Z,6.1nm,0.9s						
YKA	Yellowknife Ar	65.37	30	P	P	02 09 40.6	-1.3
	comp=Z,1.0nm,0.8s,baz=302,slow=6.9,SNR=5.6						
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	65.37	30	*i* P	P	02 09 43.0	+1.0
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
OBN	Obninsk	68.53	323	*e*P	P	02 10 01.6	-0.5
OBN				*e**PP	PcP	02 10 24.2	-2.6
OBN				*e*		02 10 28.0	
OBN				*e**SP	sP	02 10 33.5	+4.4
OBN				*e*		02 12 34.2	
OBN				*e*PPP	PPP	02 14 13.0	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
VSR	Storozhevoye	69.25	319	*e*P	P	02 10 05.0	-1.7
VSR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VORD	Divnogorie	69.31	318	*e*P	P	02 10 05.1	-1.9
VORD				pmax	pmax		
	comp=Z,5.0nm,0.9s						
FINES	FINESS Array B	69.48	332	P	P	02 10 07.7	-0.2
	comp=Z,4.6nm,0.7s,baz=81,slow=6.6,SNR=14						
FINES				LR	LR	02 46 19.0	
	comp=Z,16nm,18.7s,baz=15,slow=41						
	comp=Z,4.6nm,0.7s						
FINES	FINESS Array B	69.48	332	*i* P	P	02 10 08.3	+0.4
FINES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KBZ	Khabaz	71.00	310	P	P	02 10 18.2	+0.7
	comp=Z,4.0nm,0.9s,baz=48,slow=4.0,SNR=7.0						
	comp=Z,4.0nm,0.9s						
KBZ	Khabaz	71.00	310	*ce*P	P	02 10 16.5	-1.0
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KIV	Kislovodsk	71.01	311	*e*P	P	02 10 15.4	-2.3
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
VSU	Vasula	71.05	329	*ce*P	P	02 10 15.4	-2.1
VSU				pmax	pmax		
	comp=Z,29nm,2.5s						
PINE	Pine Mountain	71.88	49		P	02 10 25.2	+2.1
PINE				IAmb	IAmb	02 10 25.6	
	comp=Z,5.6nm,0.8s						
SUMG	Summit	71.94	360		P	02 10 24.1	+0.9
SUMG				IAmb	IAmb	02 10 25.2	
	comp=Z,5.2nm,0.8s						
SUMG	Summit	71.94	360	P	P	02 10 24.1	+0.9
SUMG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
J05D	Fort Rock, OR	71.97	49	P	P	02 10 25.1	+1.5
J05D				IAmb	IAmb	02 10 25.9	
	comp=Z,3.3nm,0.8s						
MNK	Minsk	73.00	326	*i* P	P	02 10 29.4	+0.1
	comp=E,9.0nm,0.9s						
MNK				*i* P	P	02 10 29.4	+0.1
	comp=N,12nm,0.9s						
MNK				*i* P	P	02 10 29.4	+0.1
	comp=Z,11nm,0.9s,baz=52						
MNK				*i* pP	pP	02 10 50.3	+1.8
MNK				*i* PP	PP	02 13 11.7	-0.3
MNK				*i* PPP	PPP	02 14 58.9	
MNK				*i* S	S	02 19 49.8	-0.7
MNK				*i* sS	SKSac	02 20 27.6	-0.8
MNK				*i* SS	SS	02 24 32.0	+0.7
MNK				*i* SSS	SSS	02 27 54.2	
MNK				*i* LQ	LQ	02 37 18.7	
MNK				*i* LR	LR	02 42 37.5	
MNK				*i* LRM	MLR	02 46 28.1	
	comp=Z,26nm,16.0s						
MNK				*i* LRM	MLR	02 46 37.8	
	comp=N,104nm,19.6s						
MNK				*i* LRM	MLR	02 46 46.5	
	comp=E,105nm,21.0s						
MNK	Minsk	73.00	326	*i* P	P	02 10 29.4	+0.1
MNK				*i* *PP	pP	02 10 50.2	+1.8
MNK				*i*		02 13 11.7	
MNK				*i* PPP	PPP	02 14 58.9	
MNK				*i* S	S	02 19 49.7	-0.7
MNK				*i* *SS	SKSac	02 20 27.6	-0.8
MNK				*i* SS	SS	02 24 32.0	+0.7
MNK				pmax	pmax		
	comp=Z,11nm,0.9s						
MNK				pmax	pmax		
	comp=E,9.0nm,0.9s						
MNK				MLR	MLR		
	comp=Z,26nm,16.0s						
MNK				MLR	MLR		
	comp=N,104nm,20.0s						
MNK				MLR	MLR		
	comp=E,105nm,21.0s						
NACGM	Naroch	73.25	326	*e*P	P	02 10 31.2	+0.5
	comp=Z,7.0nm,0.8s,baz=51						
BMO	Blue Mountains	73.48	46	P	P	02 10 33.9	+1.4
BMO	Blue Mountains	73.48	46	P	P	02 10 33.9	+1.4
BMO				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BEKR	Beckworth	74.38	52	P	P	02 10 38.9	+1.0
BEKR				IAmb	IAmb	02 10 40.0	
	comp=Z,3.9nm,0.9s						
OVMT	Ovando	74.67	43	P	P	02 10 39.6	+0.2
AK03	Malin Array Si	74.69	322	P	P	02 10 39.0	-0.2
AKASG	Malin Array Be	74.71	322	P	P	02 10 39.0	-0.3
AKASG	Malin Array Be	74.71	322	P	P	02 10 39.1	-0.2
	comp=Z,5.6nm,0.6s,baz=50,slow=5.8,SNR=43						
	comp=Z,5.6nm,0.6s						
AKBB	Malin Array Si	74.71	322	P	P	02 10 38.4	-0.9
AKBB	Malin Array Si	74.71	322	*ce*P	P	02 10 37.9	-1.4
AKBB				pmax	pmax		
	comp=Z,8.0nm,0.7s						
AKBB	Malin Array Si	74.71	322	P	P	02 10 38.7	-0.6
AK01	Malin Array Si	74.72	322	P	P	02 10 38.7	-0.7
KIEV	Kiev	74.72	322		P	02 10 38.4	-1.0
KIEV	Kiev	74.72	322	P	P	02 10 38.4	-1.0
KIEV				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KIEV	Kiev	74.72	322	P	P	02 10 38.9	-0.5
	comp=Z,47nm,1.2s						
AK04	Malin Array Si	74.72	322	P	P	02 10 38.8	-0.6
NC405	NORSAR Array S	74.76	337	P	P	02 10 39.7	+0.2
BPMT	Black Pine Rid	74.79	43	P	P	02 10 40.6	+0.4
HFS	Hagfors	74.84	335	P	P	02 10 40.2	+0.2
	comp=Z,2.6nm,0.8s,baz=73,slow=5.1,SNR=7.8						
	comp=Z,2.6nm,0.8s						
NC204	NORSAR Array S	74.94	337	P	P	02 10 41.1	+0.5
NB201	NORSAR Array S	74.94	337	P	P	02 10 41.1	+0.5
NB2	NORSAR Subarra	74.97	337	P	P	02 10 40.7	0.0
	comp=Z,6.6nm,0.9s,baz=41,slow=5.9						
NB2	NORSAR Subarra	74.97	337	P	P	02 10 40.7	0.0
NOA	NORSAR Array B	74.97	337	P	P	02 10 40.8	0.0
	comp=Z,2.7nm,0.7s,baz=40,slow=5.8,SNR=14						
NOA				LR	LR	02 46 22.3	
	comp=Z,10nm,20.1s,baz=300,slow=38						
	comp=Z,2.7nm,0.7s						
PAHR	Pah Rah Range	75.09	52		P	02 10 42.3	+0.3
FFC	Flin Flon	75.28	32	P	P	02 10 42.6	0.0
FFC				IAmb	IAmb	02 10 43.5	
	comp=Z,3.9nm,0.8s						
FFC	Flin Flon	75.28	32	P	P	02 10 42.6	0.0
FFC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MI28	Mi28,Pidlybu	75.33	323	P	P	02 10 41.9	-1.0
LRM	Limekiln Ridge	75.71	44	P	P	02 10 47.0	+1.4
RNPP9	Sopachiv	75.89	324	P	P	02 10 45.3	-0.8
DLMT	Dillon	75.91	44	P	P	02 10 47.8	+1.2
DLMT				IAmb	IAmb	02 10 48.8	
	comp=Z,5.7nm,0.8s						
RNPP5	Staryi Chortor	76.01	324	P	P	02 10 46.5	-0.3
BOZ	Bozeman (W)	76.31	43		P	02 10 49.2	+0.4
BOZ				IAmb	IAmb	02 10 51.0	
	comp=Z,5.2nm,1.0s						
BOZ	Bozeman (W)	76.31	43	P	P	02 10 49.2	+0.4
BOZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LHV	Little Huntoon	76.48	53	P	P	02 10 50.9	+1.2
LHV				IAmb	IAmb	02 10 52.9	
	comp=Z,5.7nm,1.1s						
NVAR	Mina Array Bea	76.51	52	P	P	02 10 50.6	+0.4
NVAR	Mina Array Bea	76.51	52	P	P	02 10 51.3	+1.2
	comp=Z,1.8nm,0.8s,baz=295,slow=5.4,SNR=14						
	comp=Z,1.8nm,0.8s						
HORU	Horodok	77.05	322	P	P	02 10 52.2	-0.5
ELK	Elko	77.09	49		P	02 10 54.5	+1.1
ELK	Elko	77.09	49	P	P	02 10 54.5	+1.1
ELK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KMPD	K-Podol'skiy	77.45	321	P	P	02 10 53.8	-1.1
FXWY	Fox Creek	77.85	45	P	P	02 10 58.3	+0.7
RLMT	Red Lodge	77.91	43	P	P	02 10 58.5	+0.5
HVU	Hansel Valley	77.96	47	P	P	02 10 59.0	+0.8
HVU				IAmb	IAmb	02 11 00.7	
	comp=Z,3.6nm,0.7s						
HVU	Hansel Valley	77.96	47	P	P	02 10 59.0	+0.8
HVU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TPAW	Teton Pass	77.98	45	P	P	02 10 59.3	+0.9
TPAW				IAmb	IAmb	02 11 00.7	
	comp=Z,2.7nm,0.8s						
ILGA	Ilgaz	78.12	312	P	P	02 10 58.5	-0.6
BNN	Bunyan	78.12	309	P	P	02 10 59.0	0.0
R11B	Troy Canyon, C	78.29	51		P	02 11 00.1	0.0
KSV	Kosov	78.32	322	P	P	02 10 58.9	-0.9
BGU	Big Grassy Mou	78.33	48	P	P	02 10 59.5	-0.7
STNU	Starunia	78.34	322	P	P	02 10 59.6	-0.3
BUR08	Bucovina Ar. S	78.69	321	P	P	02 11 01.9	-0.1
BUR08				IAmb	IAmb	02 11 03.2	
	comp=Z,3.7nm,0.8s						
SPR3	Spring Creek 3	78.69	50	P	P	02 11 02.8	+0.3
TPNV	Topopah Spring	78.69	53	P	P	02 11 02.1	-0.2
TPNV	Topopah Spring	78.69	53	P	P	02 11 02.1	-0.2
TPNV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BURAR	Bucovina Array	78.70	321	P	P	02 11 01.7	-0.4
BURAR				IAmb	IAmb	02 11 03.6	
	comp=Z,3.8nm,0.7s						
BURAR	Bucovina Array	78.70	321	P	P	02 11 01.7	-0.4
BURAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
DUG	Dugway, Tooele	78.90	48		P	02 11 03.4	0.0

DUG				IAmb	IAmb	02 11 05.5	
	comp=Z,2.6nm,0.7s						
DUG	Dugway, Tooele	78.90	48	P	P	02 11 03.4	0.0
DUG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BR131	Keskin Array S	78.97	311	P	P	02 11 02.5	-1.2
BR131	Keskin Array S	78.97	311	P	P	02 11 02.5	-1.2
BR131				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRTR	Keskin Array B	78.97	311	P	P	02 11 02.2	-1.5
BRTR	Keskin Array B	78.97	311	P	P	02 11 04.7	+1.0
	comp=Z,1.2nm,0.7s,baz=84,slow=4.1,SNR=11						
	comp=Z,1.2nm,0.7s						
BRTR	Keskin Array B	78.97	311	*i* P	P	02 11 04.6	+0.9
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BR106	Keskin Array S	78.97	311	P	P	02 11 04.1	+0.4
	comp=Z,2.6nm,1.1s						
BR104	Keskin Array S	78.98	311	P	P	02 11 03.8	+0.1
	comp=Z,2.7nm,0.9s						
PRN	Pahroc Range	79.19	52	P	P	02 11 04.8	-0.2
PD31	Pinedale Array	79.23	45	P	P	02 11 05.8	+0.6
PDAR	Pinedale Array	79.23	45	P	P	02 11 05.6	+0.4
PDAR	Pinedale Array	79.23	45	P	P	02 11 06.2	+1.0
	comp=Z,1.8nm,0.6s,baz=262,slow=2.9,SNR=13						
	comp=Z,1.8nm,0.6s						
KOLS	Kolonicke sedl	79.28	324	*e*P	P	02 11 06.3	+1.3
KOLS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KOLS	Kolonicke sedl	79.28	324	*e*P	P	02 11 06.3	+1.3
MUKU	Mukachevo	79.40	323	P	P	02 11 05.0	-0.7
STHS	Stebnicka Huta	79.43	324	*e*P	P	02 11 09.0	+3.1
STHS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
STHS	Stebnicka Huta	79.43	324	*e*P	P	02 11 09.0	+3.1
OJC	Ojcow	79.55	326	P	P	02 11 06.7	+0.2
	comp=Z,7.2nm,1.0s						
BERU	Beregovo	79.57	323	P	P	02 11 07.0	+0.4
SHPR	Sheep Range	79.66	52	P	P	02 11 08.4	+0.9
NIE	Niedzica	79.88	325	P	P	02 11 08.2	-0.1
	comp=Z,3.6nm,2.8s						
VOIR		80.23	320	P	P	02 11 09.6	-0.8
	comp=Z,2.2nm,1.1s						
PFO	Pinyon Flats O	80.53	55	P	P	02 11 13.6	+1.3
PFO				IAmb	IAmb	02 11 14.4	
	comp=Z,6.0nm,1.0s						
PFO	Pinyon Flats O	80.53	55	LR	LR	02 40 07.7	
	comp=Z,22nm,20.0s,baz=200,slow=31						
PFO	Pinyon Flats O	80.53	55	P	P	02 11 13.6	+1.3
PFO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LCMT	Little Creek M	80.58	51	P	P	02 11 13.0	+0.5
LCMT				IAmb	IAmb	02 11 15.9	
	comp=Z,5.0nm,1.0s						
KSP	Ksiaz	80.66	328	P	P	02 11 12.8	+0.3
	comp=Z,6.2nm,1.1s						
P18A	Preston Nutter	80.80	48	P	P	02 11 13.9	+0.1
P18A				IAmb	IAmb	02 11 17.1	
	comp=Z,4.3nm,0.8s						
KNB	Kanab	80.84	51	P	P	02 11 13.4	-0.5
KNB	Kanab	80.84	51	P	P	02 11 13.4	-0.5
KNB				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MORC	Moravsky Berou	80.89	326	P	P	02 11 12.9	-0.9
MORC				IAmb	IAmb	02 11 15.4	
	comp=Z,4.0nm,1.0s						
MORC	Moravsky Berou	80.89	326	P	P	02 11 12.9	-0.9
MORC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SRU	San Rafael Swe	80.96	48	P	P	02 11 14.3	-0.2
SRU				IAmb	IAmb	02 11 16.8	
	comp=Z,5.0nm,0.7s						
SRU	San Rafael Swe	80.96	48	P	P	02 11 14.3	-0.2
SRU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ULM	Lac du Bonnet	81.08	33	P	P	02 11 16.1	+1.4
	comp=Z,1.0nm,0.5s,baz=326,slow=7.3,SNR=2.0						
	comp=Z,1.0nm,0.5s						
VYHS	Vyhne	81.21	325	*e*P	P	02 11 15.6	+0.1
VYHS				pmax	pmax		
	comp=Z,4.0nm,0.2s						
VYHS	Vyhne	81.21	325	*e*P	P	02 11 15.6	+0.1
W13A	Hualapai Mount	81.33	53	P	P	02 11 15.8	-0.8
RSSD	Black Hills	81.40	41	P	P	02 11 15.2	-1.6
RSSD	Black Hills	81.40	41	P	P	02 11 15.2	-1.6
RSSD				pmax	pmax		
	comp=Z,3.0nm,1.1s						
U15A	North Rim	81.54	51	P	P	02 11 18.6	+0.8
U15A				IAmb	IAmb	02 11 20.6	
	comp=Z,3.8nm,0.8s						
HMU	Henry Mountain	81.56	49	P	P	02 11 17.7	-0.1
HMU				IAmb	IAmb	02 11 20.2	
	comp=Z,6.1nm,1.0s						
CLL	Collm	81.71	330	P	P	02 11 17.0	-1.0
CLL				IAmb	IAmb	02 11 18.9	
	comp=Z,5.0nm,0.9s						
CLL	Collm	81.71	330	*i* P	P	02 11 17.9	-0.1
CLL				*i* *SP	sP	02 11 44.8	-0.5
CLL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CLL	Collm	81.71	330	P	P	02 11 17.6	-0.4
	comp=Z,5.8nm,0.9s						
CLL	Collm	81.71	330	*i* P	P	02 11 17.9	-0.1
	comp=Z,5.0nm,0.9s						
CLL				*i* sP	sP	02 11 44.8	-0.5
ESJX	Sierra Juarez	81.84	56	P	P	02 11 19.4	+0.1
ESJX				IAmb	IAmb	02 11 21.7	
	comp=Z,7.6nm,1.1s						
MMAI	Mount Meron Ar	81.91	305	P	P	02 11 20.1	+0.6
	comp=Z,1.4nm,0.6s,baz=8.1,slow=2.9,SNR=6.6						
	comp=Z,1.4nm,0.6s						
PV21	Cone Mtn., Par	82.24	48	P	P	02 11 21.6	+0.2
PV21				IAmb	IAmb	02 11 23.2	
	comp=Z,3.5nm,0.7s						
PV23	Carpenter Ridg	82.29	48	P	P	02 11 22.8	+1.1
PV10	Paradox Valley	82.32	48	P	P	02 11 23.0	+1.2
PV22	Blue Mesa, Par	82.37	48	P	P	02 11 22.9	+0.9
PV20	West Nyswonger	82.39	48	P	P	02 11 22.6	+0.5
PV04	Paradox Valley	82.39	48	P	P	02 11 22.8	+0.7
PV04				IAmb	IAmb	02 11 24.7	
	comp=Z,4.5nm,0.9s						
PV17	East Wray Mesa	82.43	48	P	P	02 11 22.3	-0.1
PV17				IAmb	IAmb	02 11 24.3	
	comp=Z,5.9nm,0.8s						
PV16	Nyswonger Mesa	82.44	48	P	P	02 11 21.8	-0.5
PV16				IAmb	IAmb	02 11 24.4	
	comp=Z,4.0nm,0.8s						
PV11	David Mesa, Pa	82.47	48	P	P	02 11 22.3	-0.3
PV11				IAmb	IAmb	02 11 24.5	
	comp=Z,5.7nm,0.9s						
PV05	Paradox Valley	82.48	48	P	P	02 11 22.5	-0.1
PV18	Skein Mesa, Pa	82.48	48	P	P	02 11 22.6	0.0
PV18				IAmb	IAmb	02 11 24.5	
	comp=Z,6.3nm,0.8s						
PV03	Paradox Valley	82.52	48	P	P	02 11 23.2	+0.4
PV03				IAmb	IAmb	02 11 25.3	
	comp=Z,6.7nm,1.1s						
PV13	Radium Mtn., P	82.59	48	P	P	02 11 23.9	+0.6
PV13				IAmb	IAmb	02 11 25.7	
	comp=Z,7.1nm,0.9s						
PV02	Paradox Valley	82.61	48	P	P	02 11 23.7	+0.4
PV02				IAmb	IAmb	02 11 30.4	
	comp=Z,6.8nm,1.0s						
Y14A	Wickenburg	82.62	53	P	P	02 11 23.0	-0.2
WUAZ	Wupatki	82.69	51	P	P	02 11 24.6	+0.9
WUAZ				IAmb	IAmb	02 11 26.3	
	comp=Z,6.5nm,0.9s						
PV01	Paradox Valley	82.76	48	P	P	02 11 24.7	+0.6
113A	Mohawk Valley,	82.84	55	P	P	02 11 23.4	-0.8
KHC	Kasperske Hory	83.11	328	*ce*P	P	02 11 26.9	+1.5
KHC				pmax	pmax		
	comp=Z,9.0nm,1.3s						
GERES	GERESS Array B	83.27	328	P	P	02 11 26.5	+0.1
	comp=Z,0.4nm,0.5s,baz=68,slow=3.5,SNR=3.5						
	comp=Z,0.4nm,0.5s						
X16A	Lo Mia Camp, P	83.33	52	P	P	02 11 26.7	-0.3
X16A				IAmb	IAmb	02 11 30.4	
	comp=Z,5.5nm,1.0s						
MVCO	Mesa Verde	83.40	48	P	P	02 11 28.1	+0.7
MVCO				IAmb	IAmb	02 11 29.8	
	comp=Z,6.4nm,0.9s						
ARSA	Arzberg	83.65	326	P	P	02 11 28.3	+0.1
EKA	Eskdalemuir Ar	83.99	340	P	P	02 11 29.7	-0.1
	comp=Z,1.5nm,0.8s,baz=51,slow=5.8,SNR=3.7						
	comp=Z,1.5nm,0.8s						
S22A	4UR Ranch, Cre	84.06	47	P	P	02 11 30.5	-0.3
S22A				IAmb	IAmb	02 11 33.7	
	comp=Z,4.8nm,1.0s						
F33A	5 Mile Ranch,	84.11	36	P	P	02 11 29.9	-0.6
X18A	Snowflake	84.22	51	P	P	02 11 32.2	+0.7
X18A				IAmb	IAmb	02 11 33.4	
	comp=Z,3.4nm,0.7s						
SDCO	Great Sand Dun	84.85	47	P	P	02 11 34.9	+0.1
SDCO				IAmb	IAmb	02 11 37.3	
	comp=Z,4.0nm,1.1s						
PPT	Papeete	84.94	116	LR	LR	02 53 56.6	
	comp=Z,28nm,18.1s,baz=7.0,slow=39						
TUC	Tucson	85.09	53	P	P	02 11 35.6	-0.3
TUC				IAmb	IAmb	02 11 38.2	
	comp=Z,3.0nm,0.8s						
TUC	Tucson	85.09	53	P	P	02 11 35.6	-0.3
TUC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PDG	Podgorica	85.33	320	P	P	02 11 36.3	-0.4
ANMO	Albuquerque	86.13	49	P	P	02 11 41.7	+0.6
ANMO				IAmb	IAmb	02 11 44.1	
	comp=Z,3.3nm,1.1s						
ANMO	Albuquerque	86.13	49	P	P	02 11 41.9	+0.8
ANMO				IAmb	IAmb	02 11 44.1	
	comp=Z,2.7nm,1.0s						
ANMO	Albuquerque	86.13	49	P	P	02 11 40.1	-1.0
ANMO				IAmb	IAmb	02 11 44.2	
	comp=Z,2.7nm,0.9s						
ANMO	Albuquerque	86.13	49	P	P	02 11 41.9	+0.8
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SBM	South Baldy	86.32	50	P	P	02 11 43.4	+1.1
DAVOX	Davos/Dischmat	86.51	328	LR	LR	02 53 36.0	
	comp=Z,14nm,19.0s,baz=89,slow=38						
SCHQ	Schefferville	86.81	15	P	P	02 11 43.7	-0.1
	comp=Z,1.7nm,0.6s,baz=358,slow=2.0,SNR=4.1						
	comp=Z,1.7nm,0.6s						
VAE	Valguarnera	91.49	320	LR	LR	02 58 56.0	
	comp=Z,34nm,18.7s,baz=128,slow=39						
TX31	Lajitas Ar. Si	91.65	52	P	P	02 12 08.6	+1.4
TX31				IAmb	IAmb	02 12 08.8	
	comp=Z,1.7nm,0.8s						
TXAR	Lajitas Array	91.65	52	P	P	02 12 08.2	+1.1
TXAR	Lajitas Array	91.65	52	P	P	02 12 07.9	+0.8
	comp=Z,1.5nm,0.8s,baz=305,slow=3.5,SNR=15						
	comp=Z,1.5nm,0.8s						
TXAR	Lajitas Array	91.65	52	P	P	02 12 08.2	+1.1
TKL	Tuckaleechee C	97.96	35	LR	LR	02 57 21.6	
	comp=Z,13nm,21.0s,baz=354,slow=36						
QSPA	South Pole Qui	125.52	180	PKP	PKPdf	02 17 58.3	-1.3
	comp=Z,2.6nm,1.1s,baz=316,slow=2.9,SNR=4.2						
NVL	N'lazarevskaya	135.77	202	*e*P	Pdif	02 15 34.0	+11
NVL				pmax	pmax		
	comp=Z,12nm,1.0s						
LPAZ	La Paz	148.15	60	PKPbc	PKPbc	02 18 47.1	+0.7
	comp=Z,2.6nm,0.9s,baz=282,slow=5.0,SNR=9.2						

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*NEIC **11** 02:29:22.5±1.1, 18°.9N±0°.2×64°.5W±0°.1, h35^{km}±2^{km}, ML2.5/20, Md3.2/7(RSPR), Error ellipse: s-maj=30.3km s-min=13.7km az=157.0*

*RSPR **11** 02:29:23.7, 18°.86N×64°.50W, h34^{km}±26^{km}, MD3.2/7*

ISC 11 02:29:22.7±1.8**, 18°.8N**±0°.2×**64°.47W**±0°.04**, h35**^{km}**, n44, σ0^{s}.65**/48**, 4C-8D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUMP	Col San Antoni	1.45	245		Pn	02 29 45.9	-0.5
HUMP					Sn	02 30 04.3	+0.1
HUMP	Col San Antoni	1.45	245	IAML		02 30 07.9	
	comp=N,53nm,0.2s						
HUMP				IAML		02 30 10.1	
	comp=E,46nm,0.2s						
HUMP	Col San Antoni	1.45	245	⇑*e*P	Pn	02 29 45.9	-0.5
HUMP	Col San Antoni	1.45	245	*e*S	Sn	02 30 04.3	+0.1
PDPR	Patillas Dam,	1.65	244	Pn	Pn	02 29 48.8	-0.4
PDPR				IAML		02 30 15.0	
	comp=E,29nm,0.2s						
PDPR	Patillas Dam,	1.65	244	⇑*e*P	Pn	02 29 49.0	-0.2
PDPR	Patillas Dam,	1.65	244	*e*S	Sn	02 30 09.6	+0.4
SJG	San Juan	1.73	248	Pn	Pn	02 29 49.8	-0.4
IGPR	InterUniversit	1.75	243		Pn	02 29 51.4	+0.9
IGPR					Sn	02 30 11.9	+0.3
IGPR	InterUniversit	1.75	243	IAML		02 30 23.0	
	comp=N,41nm,0.2s						
IGPR				IAML		02 30 24.6	
	comp=E,57nm,0.3s						
IGPR	InterUniversit	1.75	243	⇓*e*P	Pn	02 29 51.4	+0.9
IGPR	InterUniversit	1.75	243	*e*S	Sn	02 30 11.9	+0.3
ECPR	Experimental S	1.85	257	⇑*e*P	Pn	02 29 51.6	-0.3
ECPR	Experimental S	1.85	257	*e*S	Sn	02 30 14.4	+0.2
EMPR	Esperanza - Ma	1.98	262		Pn	02 29 53.2	-0.4
EMPR	Esperanza - Ma	1.98	262		Sn	02 30 16.4	-0.9
EMPR	Esperanza - Ma	1.98	262	IAML		02 30 09.5	
	comp=N,99nm,1.6s						
EMPR	Esperanza - Ma	1.98	262	⇓*e*P	Pn	02 29 53.2	-0.4
EMPR	Esperanza - Ma	1.98	262	*e*S	Sn	02 30 16.4	-0.9
CELP	Cerrillos	2.12	252		Pn	02 29 55.7	+0.1
CELP					Sn	02 30 19.9	-0.9
CELP	Cerrillos	2.12	252	⇓*e*P	Pn	02 29 55.7	+0.1
CELP	Cerrillos	2.12	252	*e*S	Sn	02 30 19.9	-0.9
OBIP	Obispado Ponce	2.15	251		Pn	02 29 56.1	0.0
OBIP					Sn	02 30 22.3	+0.7
OBIP	Obispado Ponce	2.15	251	IAML		02 30 39.6	
	comp=E,22nm,2.6s						
OBIP				IAML		02 30 40.7	
	comp=N,23nm,1.5s						
OBIP	Obispado Ponce	2.15	251	⇓*e*P	Pn	02 29 56.1	0.0
OBIP	Obispado Ponce	2.15	251	*e*S	Sn	02 30 22.3	+0.7
UUPR	Utuado, UPR, P	2.20	257		Pn	02 29 56.7	0.0
UUPR					Sn	02 30 22.3	-0.4
UUPR	Utuado, UPR, P	2.20	257	⇑*e*P	Pn	02 29 56.7	0.0
UUPR	Utuado, UPR, P	2.20	257	*e*S	Sn	02 30 22.3	-0.4
AOPR	Arecibo Observ	2.21	260		Pn	02 29 57.9	+1.0
AOPR					Sn	02 30 22.8	-0.2
AOPR	Arecibo Observ	2.21	260	IAML		02 30 50.4	
	comp=N,32nm,0.3s						
AOPR	Arecibo Observ	2.21	260	⇓*e*P	Pn	02 29 57.9	+1.0
AOPR	Arecibo Observ	2.21	260	*e*S	Sn	02 30 22.8	-0.2
LSP	Las Mesas	2.56	257		Pn	02 30 02.2	+0.5
LSP					Sn	02 30 31.0	-0.5
LSP	Las Mesas	2.56	257	⇓*e*P	Pn	02 30 02.2	+0.5
LSP	Las Mesas	2.56	257	*e*S	Sn	02 30 31.0	-0.5
MLPR	Magueyes Islan	2.57	253	⇓*e*P	Pn	02 30 02.5	+0.7
MLPR	Magueyes Islan	2.57	253	*e*S	Sn	02 30 32.5	+0.5
CRPR	Cabo Rojo, PR	2.62	254		Pn	02 30 02.9	+0.4
CRPR					Sn	02 30 33.1	-0.1
CRPR	Cabo Rojo, PR	2.62	254	IAML		02 30 35.9	
	comp=E,26nm,2.4s						
CRPR				IAML		02 31 36.9	
	comp=N,32nm,2.6s						
CRPR	Cabo Rojo, PR	2.62	254	⇓*e*P	Pn	02 30 02.9	+0.4
CRPR	Cabo Rojo, PR	2.62	254	*e*S	Sn	02 30 33.1	-0.1
ANWB	Willy Bob	2.77	113	*e*P	Pn	02 30 05.2	+0.7
ANWB				*e*S	Sn	02 30 38.0	+1.2
ANBD	Bethesda, Anti	3.08	123	*e*P	Pn	02 30 08.7	-0.1
ANBD				*e*S	Sn	02 30 42.3	-2.3

IDC 11 02:38:16.5±20.0**, 17°.49S**×**172°.04W, h0**^{km}**, mb4.3**/5**, mbtmp4.3**/5**, Error ellipse: s-maj=387.0km s-min=48.5km az=64.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	22.77	203	P	P	02 43 21.2	+0.7
	1.3nm,0.4s,baz=45,slow=9.6,SNR=2.0						
	1.3nm,0.4s						
RPZ	Rata Peaks	29.79	205	P	P	02 44 24.1	-1.0
	6.5nm,0.5s,baz=39,slow=14,SNR=2.3						
	6.5nm,0.5s						
STKA	Stephens Creek	44.17	242	P	P	02 46 28.3	+0.9
	2.6nm,0.6s,baz=79,slow=5.2,SNR=5.4						
	2.6nm,0.6s						
WRA	Warramunga Arr	50.67	258	P	P	02 47 16.9	-1.3
	0.8nm,0.6s,baz=97,slow=7.7,SNR=11						
	0.8nm,0.6s						
ASAR	Alice Springs	50.74	253	P	P	02 47 19.1	+0.4
	6.7nm,0.6s,baz=96,slow=8.0,SNR=101						
	6.7nm,0.6s						

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*IDC **11** 02:38:30.1±2.1, 58°.81N×154°.98W, h110^{km}±33^{km}, mb3.6/4, mbtmp3.8/8, Error ellipse: s-maj=34.5km s-min=26.3km az=115.0*

*NEIC **11** 02:38:31.3±1.5, 58°.77N±0°.04×154°.77W±0°.07, h127^{km}±4^{km}, Error ellipse: s-maj=5.3km s-min=4.9km az=155.0*

*AEIC **11** 02:38:32.9±1.8, 58°.76N±0°.03×154°.76W±0°.07, h118^{km}±4^{km}, ML3.4, mb3.8/3(NEIC), ML3.4/144(NEIC), Error ellipse: s-maj=5.2km s-min=4.8km az=125.0*

ISC 11 02:38:31.1±0.7**, 58°.79N**±0°.04×**154°.70W**±0°.04**, h130**^{km}±6^{km}**, n255, σ0^{s}.98**/243**, mb3.9**/7**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAHC	Katmai Hardscr	0.22	229		Pn	02 38 48.5	-0.6
KAHC	Katmai Hardscr	0.22	229		Pn	02 38 48.5	-0.6
KAHC					Sn	02 39 00.4	-2.3
KAPH	Katmai Pasha	0.27	136		Pn	02 38 49.2	0.0
KAPH					Sn	02 39 02.4	-0.5
KAHG	Katmai Hook Gl	0.31	165		Pn	02 38 49.2	-0.1
KAHG					Sn	02 39 02.5	-0.7
KAWH	Katmai	0.41	187		Pn	02 38 49.4	-0.4
Q19K	Cape Douglas,	0.56	75		Pn	02 38 50.7	+0.1
Q19K	Cape Douglas,	0.56	75		Sn	02 39 05.2	-0.2
P18K	Big Mountain,	0.66	336		Pn	02 38 50.7	-0.6
P18K					Sn	02 39 04.8	-1.7
P18K	Big Mountain,	0.66	336	IAML		02 39 05.2	
	comp=E,314nm,0.8s						
P18K				IAML		02 39 05.5	
	comp=N,463nm,0.9s						
ACHA	Angle Creek He	0.67	210		Pn	02 38 50.9	-0.4
ACHA	Angle Creek He	0.67	210		Sn	02 39 05.4	-1.3
ANCK	Angle Creek	0.73	216		Pn	02 38 51.5	-0.2
ANCK					Sn	02 39 06.2	-1.1
CNTC	Contact Creek	0.82	230		Pn	02 38 52.0	-0.5
CNTC					Sn	02 39 07.1	-1.5
KJL	Kejulik	0.87	212		Pn	02 38 52.9	0.0
P17K	Kvichak River	0.99	295		Pn	02 38 53.5	-0.3
P17K					Sn	02 39 09.9	-1.2
Q16K	King Salmon	1.03	265		Pn	02 38 54.0	-0.2
O18K	Koktuh Hills	1.10	346		Pn	02 38 54.7	-0.2
O18K				IAML		02 39 12.5	
	comp=E,218nm,1.1s						
O18K				IAML		02 39 13.0	
	comp=N,223nm,0.7s						
O18K	Koktuh Hills	1.10	346		Sn	02 39 11.9	-1.2
P19K	Oil Pt	1.15	40		Pn	02 38 56.4	+0.9
P19K	Oil Pt	1.15	40	IAML		02 39 15.6	
	comp=E,1μm,0.8s						
P19K				IAML		02 39 15.6	
	comp=N,968nm,0.6s						
SYI	Shuyak Island	1.22	98		Pn	02 38 56.6	+0.5
SYI	Shuyak Island	1.22	98		Sn	02 39 15.1	0.0
R18K	Karluk	1.23	174		Pn	02 38 55.4	-0.8
R18K					Sn	02 39 13.4	-2.0
R18K	Karluk	1.23	174	IAML		02 39 15.9	
	comp=N,1μm,0.4s						
PLK1	Peulik 1	1.41	226		Pn	02 38 58.2	+0.1
PLK1					Sn	02 39 18.4	-0.3
O19K	Port Alsworth	1.42	8		Pn	02 38 58.5	+0.3
O19K	Port Alsworth	1.42	8	IAML		02 39 19.8	
	comp=N,441nm,0.4s						
O19K				IAML		02 39 20.0	
	comp=E,518nm,0.5s						
ILSW	Iliamna Southw	1.44	33		Pn	02 38 58.9	+0.4
ILS	Iliamna Low So	1.44	35		Pn	02 38 59.3	+0.7
KDAK	Kodiak Island	1.51	131		Pn	02 38 59.0	-0.2
KDAK				IAML		02 39 22.5	
	comp=E,329nm,0.3s						
KDAK				IAML		02 39 24.7	
	comp=E,375nm,0.3s						
KDAK	Kodiak Island	1.51	131	P	Pn	02 38 58.7	-0.4
	comp=E,293nm,0.3s,baz=93,slow=2.6,SNR=1592						
KDAK				S	Sn	02 39 20.0	-0.6
	comp=E,101nm,0.3s,baz=211,slow=24,SNR=13						
PLBL	Peulik Blue Cr	1.57	227		Pn	02 39 00.0	+0.1
O17K	Koliganek Bris	1.58	310		Pn	02 38 59.7	-0.2
O17K					Sn	02 39 20.9	-1.1
O20K	Slope Mountain	1.67	38		Pn	02 39 02.4	+1.2
P16K	Nushagak River	1.73	279		Pn	02 39 01.7	+0.1
P16K				IAML		02 39 25.1	
	comp=N,234nm,0.8s						
P16K				IAML		02 39 25.9	
	comp=E,249nm,0.9s						
P16K	Nushagak River	1.73	279		Sn	02 39 24.4	-0.6
OHAK	Old Harbor	1.74	154		Pn	02 39 01.4	-0.5
OHAK				IAML		02 39 23.9	
	comp=N,467nm,0.5s						
OHAK				IAML		02 39 24.6	
	comp=E,225nm,0.4s						
OHAK	Old Harbor	1.74	154		Sn	02 39 23.4	-2.0
OHAK	Old Harbor	1.74	154	P	Pn	02 39 01.3	-0.6
HOM	Homer	1.80	60		Pn	02 39 03.3	+0.8
RED	Redoubt Volcan	1.91	30		Pn	02 39 04.9	+1.0
O16K	Kokwok River B	1.92	296		Pn	02 39 04.0	0.0
O16K	Kokwok River B	1.92	296		Sn	02 39 27.7	-1.6
CNPM	China Poot	1.93	66		Pn	02 39 04.8	+0.6
RDSO	Redoubt South	1.94	30		Pn	02 39 05.3	+0.9
RDWB	Redoubt West	1.95	28		Pn	02 39 05.3	+0.8
N18K	Kilae Creek	1.99	343		Pn	02 39 05.4	+0.5
N18K				IAML		02 39 30.8	
	comp=E,135nm,1.1s						
N18K				IAML		02 39 30.9	
	comp=N,160nm,1.0s						
NCT	North Crescent	1.99	26		Pn	02 39 05.8	+0.8
N19K	Bonanza Creek	2.03	3		Pn	02 39 06.2	+0.8
RDJH	Redoubt Jeurge	2.05	27		Pn	02 39 06.6	+0.9
DFR	Drift River	2.08	29		Pn	02 39 06.8	+0.8
RDT	Redoubt	2.13	32		Pn	02 39 07.6	+0.9
N17K	Nushagak Hills	2.15	325		Pn	02 39 07.2	+0.4
N17K				IAML		02 39 34.4	
	comp=N,173nm,1.1s						
BRLK	Bradley Lake	2.19	62		Pn	02 39 07.6	+0.3
BRLK				IAML		02 39 35.9	
	comp=E,371nm,0.2s						
BRLK				IAML		02 39 38.4	
	comp=N,432nm,0.3s						
BRSE	Bradley Lake S	2.25	63		Pn	02 39 08.2	+0.2
SII	Sitkinak Islan	2.25	173		Pn	02 39 07.9	-0.3
SII	Sitkinak Islan	2.25	173	P	Pn	02 39 07.9	-0.3
SII	Sitkinak Islan	2.25	173	S	Sn	02 39 34.7	-1.9
N16K	Nishlik Lake	2.67	311		Pn	02 39 13.9	+0.6
O15K	Ungalikthiuk R	2.68	280		Pn	02 39 13.6	+0.1
SPWE	Spurr West	2.71	22		Pn	02 39 15.4	+1.4
SPCR	Spurr Chakacha	2.72	26		Pn	02 39 15.2	+1.1
SPBG	Spurr Blockage	2.74	24		Pn	02 39 15.8	+1.5
SPCN	Chakachatna No	2.75	26		Pn	02 39 15.9	+1.4
ANPB	Aniakchak Plen	2.77	225		Pn	02 39 14.6	-0.1
M18K	Stony River	2.77	349		Pn	02 39 15.4	+0.8
SLKM	Skilak Lake	2.85	51		Pn	02 39 16.4	+0.7
SLKM				IAML		02 39 51.4	
	comp=N,186nm,0.2s						
SLKM				IAML		02 39 52.4	
	comp=E,201nm,0.2s						
M17K	Holitna River	2.96	334		Pn	02 39 17.8	+0.7
M17K				IAML		02 39 53.9	
	comp=E,141nm,1.0s						
SEW	Seward	2.98	62		Pn	02 39 17.7	+0.3
SEW	Seward	2.98	62	IAML		02 39 53.2	
	comp=E,147nm,0.8s						
SEW				IAML		02 39 55.2	
	comp=N,77nm,0.4s						
O22K	Cooper Landing	3.04	54		Pn	02 39 19.3	+1.2
STLK	Strandline Lak	3.07	27		Pn	02 39 19.5	+0.9
N15K	Kwethluk River	3.08	299		Pn	02 39 19.4	+0.7
N15K				IAML		02 39 56.6	
	comp=N,54nm,0.8s						
M16K	Timber Creek	3.10	318		Pn	02 39 19.6	+0.7
M19K	Big River Lodg	3.13	3		Pn	02 39 20.4	+1.1
M20K	Styx River	3.20	13		Pn	02 39 21.3	+1.1
SUA	Susitna One	3.33	35		Pn	02 39 23.1	+1.1
SUA	Susitna One	3.33	35	IAML		02 40 03.6	
	comp=E,124nm,0.8s						
SUA				IAML		02 40 04.0	
	comp=N,110nm,0.5s						
RC01	Rabbit Creek A	3.40	45		Pn	02 39 23.1	+0.3
RC01				IAML		02 40 03.9	
	comp=N,156nm,0.4s						
RC01				IAML		02 40 04.0	
	comp=E,168nm,0.4s						
L19K	White Mountain	3.40	359		Pn	02 39 23.9	+1.1
L19K				IAML		02 40 06.5	
	comp=E,56nm,1.1s						
L19K				IAML		02 40 08.0	
	comp=N,50nm,1.1s						

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O14K  Tigyukauivet M    3.43 281            Pn        02 39 23.4 +0.3
VNHG  Veniaminof 1      3.53 225            Pn        02 39 25.0 +0.4
SKT   Skwentna          3.56  25            Pn        02 39 25.9 +0.9
SKT                               IAML                02 40 12.4
      comp=E,49nm,0.2s
SKT                               IAML                02 40 15.4
      comp=N,37nm,0.3s
L18K  Granite Mounta    3.58 345            Pn        02 39 25.9 +0.7
L18K                              IAML                02 40 10.7
      comp=N,27nm,1.0s
M15K  Kasigluk River    3.58 305            Pn        02 39 25.8 +0.6
L20K  Farewell, AK      3.72   6            Pn        02 39 28.3 +1.2
M22K  Willow            3.75  36            Pn        02 39 28.1 +0.8
N14K  Kuskokwak Cree    3.75 291            Pn        02 39 28.1 +0.7
N14K                              IAML                02 40 26.2
      comp=N,44nm,1.9s
N14K                              IAML                02 41 35.4
      comp=E,31nm,1.7s
L16K  Owhat River       3.77 323            Pn        02 39 28.3 +0.6
L16K  Owhat River       3.77 323  IAML                02 40 25.1
      comp=E,27nm,1.0s
L17K  Donlin            3.80 334            Pn        02 39 28.7 +0.6
PWL   Port Wells        3.82  54            Pn        02 39 28.3 -0.1
P23K  Montague Islan    3.92  69            Pn        02 39 30.5 +0.8
PMR   Palmer            3.95  42            Pn        02 39 29.5 -0.5
PMR   Palmer            3.95  42  IAML                02 40 15.6
      comp=E,60nm,0.4s
PMR                               IAML                02 40 18.7
      comp=N,46nm,0.4s
PMR   Palmer            3.95  42  P         Pn        02 39 29.6 -0.5
KNK   Knik Glacier      4.08  47            Pn        02 39 31.6 -0.2
KNK   Knik Glacier      4.08  47  IAML                02 40 19.8
      comp=N,102nm,0.5s
GHO   Glory Hole Cre    4.15  41            Pn        02 39 32.3 -0.5
GHO   Glory Hole Cre    4.15  41  IAML                02 40 21.3
      comp=E,94nm,0.4s
GHO                               IAML                02 40 21.5
      comp=N,77nm,0.3s
M14K  Bethel            4.17 301            Pn        02 39 33.2 +0.4
CUT   Chulitna          4.23  29            Pn        02 39 34.4 +0.6
PPLA  Purkeypile        4.30  16            Pn        02 39 36.5 +1.7
PPLA                              IAML                02 40 29.5
      comp=E,16nm,0.7s
PPLA                              IAML                02 40 33.7
      comp=N,17nm,0.8s
K17K  Iditarod          4.32 337            Pn        02 39 35.7 +0.8
K17K  Iditarod          4.32 337  IAML                02 40 41.0
      comp=E,42nm,1.1s
K17K                              IAML                02 40 43.3
      comp=N,23nm,0.8s
Q23K  Middleton Isla    4.35  78            Pn        02 39 35.9 +0.5
GLI   Glacier Island    4.37  58            Pn        02 39 34.8 -0.9
SML   Sawmill           4.38  44            Pn        02 39 35.3 -0.5
SML   Sawmill           4.38  44  IAML                02 40 25.4
      comp=E,33nm,0.7s
SML                               IAML                02 40 27.1
      comp=N,48nm,0.7s
L15K  Ungalak Mounta    4.45 313            Pn        02 39 36.9 +0.2
HIN   Hinchinbrook I    4.47  65            Pn        02 39 37.0 +0.1
K20K  Telida            4.59   4            Pn        02 39 39.6 +1.0
K20K  Telida            4.59   4  IAML                02 40 31.6
      comp=E,14nm,1.8s
M23K  Glacier View      4.59  46            Pn        02 39 38.5 -0.2
FID   Port Fidalgo      4.60  61            Pn        02 39 37.7 -0.9
SDPT  Sand Point        4.67 225  P         Pn        02 39 40.6 +0.9
M13K  Dall Lake         4.69 294            Pn        02 39 41.2 +1.4
M13K  Dall Lake         4.69 294  IAML                02 40 52.8
      comp=N,31nm,2.3s
M13K                              IAML                02 41 15.0
      comp=E,22nm,1.9s
L14K  Kuka Creek        4.75 306            Pn        02 39 41.8 +1.2
L14K  Kuka Creek        4.75 306  IAML                02 40 59.4
      comp=E,14nm,1.2s
L14K                              IAML                02 41 22.4
      comp=N,14nm,1.0s
SCM   Sheep Creek Mo    4.77  47            Pn        02 39 41.1 +0.1
SCM   Sheep Creek Mo    4.77  47  IAML                02 40 37.7
      comp=N,63nm,0.6s
SCM                               IAML                02 40 38.8
      comp=E,59nm,0.3s
J18K  Innoko River      4.79 349            Pn        02 39 41.9 +0.7
J18K  Innoko River      4.79 349  IAML                02 41 02.5
      comp=E,14nm,1.6s
CHNA  Chernabura Isl    4.79 216  P         Pn        02 39 40.5 -0.8
CNBA  Chernabura Isl    4.80 216            Pn        02 39 39.8 -1.6
CNBA  Chernabura Isl    4.80 216  IAML                02 40 54.4
      comp=N,35nm,3.5s
CNBA                              IAML                02 41 09.6
      comp=E,34nm,3.2s
CAST  Castle Rocks      4.81  14            Pn        02 39 42.7 +1.2
EYAK  Cordova Ski Ar    4.87  65            Pn        02 39 41.9 -0.3
EYAK  Cordova Ski Ar    4.87  65  IAML                02 40 36.3
      comp=E,48nm,0.4s
EYAK                              IAML                02 40 39.2
      comp=N,52nm,0.4s
EYAK  Cordova Ski Ar    4.87  65  P         Pn        02 39 42.8 +0.6
K15K  Wolf Creek Mou    4.87 319            Pn        02 39 42.5 +0.2
K15K  Wolf Creek Mou    4.87 319  IAML                02 41 06.5
      comp=E,13nm,3.0s
WAT7  Susitna Watana    4.96  33            Pn        02 39 43.4 -0.2
WAT1  Susitna Watana    5.05  34            Pn        02 39 44.4 -0.3
S12K  Black Hills       5.05 235            Pn        02 39 45.5 +0.7
S12K  Black Hills       5.05 235  IAML                02 40 49.8
      comp=N,26nm,1.4s
S12K                              IAML                02 41 11.1
      comp=E,33nm,2.3s
DIV   Divide            5.06  59            Pn        02 39 45.8 +0.9
DIV                               IAML                02 40 44.3
      comp=E,52nm,0.4s
J17K  VABM Dome         5.09 337            Pn        02 39 45.3 +0.2
J17K  VABM Dome         5.09 337  IAML                02 41 09.1
      comp=N,13nm,1.2s
J17K                              IAML                02 41 09.9
      comp=E,18nm,1.4s
WAT6  Susitna Watana    5.11  39            Pn        02 39 45.4 -0.2
PS1A  Pavlof South-1    5.11 232            Pn        02 39 46.1 +0.5
KTH   Kantishna Hill    5.12  19            Pn        02 39 46.0 +0.4
KTH   Kantishna Hill    5.12  19  IAML                02 40 45.6
      comp=N,19nm,0.4s
KTH                               IAML                02 40 45.6
      comp=E,16nm,0.6s
TRF   Thorofare Moun    5.14  23            Pn        02 39 46.2 +0.2
TRF   Thorofare Moun    5.14  23  IAML                02 40 47.1
      comp=N,44nm,0.5s
TRF                               IAML                02 40 48.5
      comp=E,26nm,0.5s
KLU   Klutina           5.15  55            Pn        02 39 46.1  0.0
J19K  Poorman           5.24 356            Pn        02 39 48.1 +0.9
J19K                              IAML                02 40 50.9
      comp=N,9.3nm,1.9s
RAGM  Ragged Mountai    5.34  68            Pn        02 39 49.3 +0.7
J16K  Anvik River       5.34 330            Pn        02 39 49.4 +0.8
M24K  Tolsona, Glenn    5.37  48            Pn        02 39 49.4 +0.4
KAIM  Kayak Island      5.38  73            Pn        02 39 50.4 +1.3
J20K  Nowinta River     5.41   3            Pn        02 39 50.3 +0.8
RND   Reindeer          5.43  29            Pn        02 39 49.7 -0.1
HMT   Hamilton          5.53  69            Pn        02 39 52.2 +1.0
BMRM  Bremner River     5.53  62            Pn        02 39 51.8 +0.6
DHY   Denali Highway    5.59  37            Pn        02 39 51.6 -0.4
BPAW  Bear Paw Mtn.     5.62  17            Pn        02 39 52.9 +0.6
NICHA Nichawak Mount    5.65  71            Pn        02 39 53.9 +1.1
MCK   McKinley          5.68  27            Pn        02 39 53.4 +0.3
N25K  Chitina, Valde    5.77  56            Pn        02 39 55.0 +0.5
BERG  Berg Lake         5.81  69            Pn        02 39 55.7 +0.8
K13K  Kusilvak Mount    5.86 307            Pn        02 39 56.8 +1.2
I17K  Unalakleet        5.87 333            Pn        02 39 56.5 +0.9
J14K  Nanvaranak Lak    5.88 316            Pn        02 39 56.1 +0.3
HARP  HAARP             5.93  48            Pn        02 39 57.4 +0.9
GRIN  Grindle Hills     5.98  71            Pn        02 39 58.3 +1.1
KHIT  Khitrov Hills     6.04  69            Pn        02 39 58.7 +0.6
WACK  Wrangell Chich    6.06  54            Pn        02 39 59.8 +1.4
PAX   Paxson            6.15  43            Pn        02 39 59.7 +0.1
CRQM  Cirque            6.16  66            Pn        02 40 00.5 +0.7
WAX   Waxell Ridge      6.24  69            Pn        02 40 01.7 +1.0
MCARA McCarthy VSAT     6.39  61            Pn        02 40 03.9 +1.2
BARK  Barkley Ridge     6.41  70            Pn        02 40 04.2 +1.2
NEA2  Nenana            6.41  22            Pn        02 40 02.5 -0.4
ISLZ  Isanotski Laza    6.41 234            Pn        02 40 02.3 -0.8
WRH   Wood River Hil    6.51  26            Pn        02 40 03.4 -0.8
MLY   Manley            6.54  15            Pn        02 40 04.5 -0.1
SSLS  Shishaldin Sou    6.54 235            Pn        02 40 05.7 +0.9
PTPK  Patty Peak        6.59  63            Pn        02 40 06.5 +1.0
K24K  Donnelly Dome     6.61  37            Pn        02 40 06.8 +1.1
H18K  Honhosa River     6.61 346            Pn        02 40 05.9 +0.3
MESA  MESA              6.64  72            Pn        02 40 07.5 +1.2
H20K  Anotleneega Mo    6.73 359            Pn        02 40 07.0 -0.2
HDA   Harding Lake      6.74  30            Pn        02 40 06.7 -0.6
YAH   Yahtse            6.77  71            Pn        02 40 09.3 +1.3
MENT  Mentasta          6.78  48            Pn        02 40 08.9 +0.9
M26K  Nabesna, AK       6.80  53            Pn        02 40 09.4 +1.1
GRNC  Granite Creek     6.82  68            Pn        02 40 10.0 +1.3
I23K  Minto, Yukon-K    6.86  19            Pn        02 40 09.1 +0.2
RIDG  Independent Ri    6.87  40            Pn        02 40 09.3 +0.2
COLA  College           6.91  25            Pn        02 40 09.7 +0.2
COLA  College           6.91  25  P         Pn        02 40 09.6  0.0
H21K  Melozitna Rive    6.95   6            Pn        02 40 11.8 +1.6
RKAV  Rock Avalanche    6.96  72            Pn        02 40 12.1 +1.7
L26K  Log Cabin Wild    6.97  48            Pn        02 40 11.2 +0.7
IL31                    7.05  28            Pn        02 40 10.9 -0.5
ILAR  Eielson Array     7.05  28            Pn        02 40 10.8 -0.7
ILAR  Eielson Array     7.05  28  P         Pn        02 40 10.6 -0.9
      comp=N,8.7nm,0.5s,baz=214,slow=13,SNR=111
ILAR                              S         Sn        02 41 23.8 -6.3
      comp=N,2.3nm,0.4s,baz=336,slow=33,SNR=9.7
CTGM  Chitina Glacie    7.07  66            Pn        02 40 13.4 +1.5
DOT   Dot Lake          7.07  42            Pn        02 40 13.1 +1.2
LOGN  Logan Glacier     7.20  68            Pn        02 40 14.8 +1.1
POKR  Poker Plat Res    7.21  25            Pn        02 40 13.9 +0.3
IMAR  Indian Mountai    7.23   3            Pn        02 40 15.3 +1.3
M27K  Edge Creek, AK    7.25  55            Pn        02 40 15.2 +0.8
H22K  Ishtalitna Cre    7.29  11            Pn        02 40 14.9 +0.1
SCRK  Sand Creek        7.31  40            Pn        02 40 14.1 -1.0
J25K  Salcha River,     7.33  33            Pn        02 40 14.6 -0.7
G18K  Tagagawik         7.36 347            Pn        02 40 15.1 -0.6
H23K  Yukon River       7.46  17            Pn        02 40 16.9 -0.1
PCA   Pinnacle          7.48  74            Pn        02 40 19.2 +1.9
L27K  Beaver Creek,     7.59  50            Pn        02 40 18.9 +0.1
BCAR  Beaver Creek A    7.61  50            Pn        02 40 20.1 +1.1
H24K  Noodor Dome       7.75  21            Pn        02 40 20.6 -0.3
G21K  Allakaket         7.77   4            Pn        02 40 22.6 +1.3
BCPM  Bancas Point      7.78  75            Pn        02 40 23.4 +2.0
J26L  Joseph Creek      7.80  38            Pn        02 40 20.9 -0.7
PNL   Peninsula         7.90  77  P         Pn        02 40 24.1 +1.1
PNL   Peninsula         7.90  77  S         Sn        02 41 50.0 -0.7
PRP   Porcupine Dome    7.99  29            Pn        02 40 23.8 -0.5
K27K  Chicken           8.01  44            Pn        02 40 24.8 +0.4
MTBL  Makushin Table    8.21 239            Pn        02 40 27.6 +0.3
G23K  Bananza Creek     8.23  13            Pn        02 40 27.3 -0.1
F20K  Avaraart Lake     8.30 357            Pn        02 40 30.3 +2.0
F15K  North Star Dit    8.34 330            Pn        02 40 31.0 +2.2
MGOD  Makushin Gods     8.41 239            Pn        02 40 29.8 -0.2
I26K  Coal Creek Min    8.48  35            Pn        02 40 30.3 -0.4
G24K  Hadweenzic Riv    8.60  20            Pn        02 40 31.2 -1.1
COLD  Coldfoot          8.71  12            Pn        02 40 34.5 +0.7
P29M  Windy Craggy      8.74  77            Pn        02 40 35.8 +1.5
M29M  Somme Creek       8.78  58            Pn        02 40 35.1 +0.2
DAWY  Dawson            9.03  48            Pn        02 40 37.4 -0.7
L29M  L29M              9.14  55            Pn        02 40 39.6  0.0
N30M  Aishikik Lake     9.18  66            Pn        02 40 40.7 +0.5
OKTU  Okmok Mt. Tuli    9.21 240            Pn        02 40 39.6 -1.1
F24K  Squaw Lake        9.28  16            Pn        02 40 41.2 -0.3
G26K  Porcupine Rive    9.57  27            Pn        02 40 45.3  0.0
I28M  Miner Creek       9.59  40            Pn        02 40 45.1 -0.7
H27K  Steamboat Moun    9.61  34            Pn        02 40 45.0 -1.0
K29M  Barlow Dome       9.67  51            Pn        02 40 47.4 +0.5
E24K  Your Creek        9.72  14            Pn        02 40 47.6 +0.2
F25K  Christian Rive    9.72  21            Pn        02 40 46.2 -1.3
NIKH  Nikolski High     9.85 240  P         Pn        02 40 49.5 +0.3
SIT   Sitka            10.45  91  P         Pn        02 40 59.2 +2.1
DLBC  Dease Lake       12.84  81  P         Pn        02 41 31.2 +2.4
      comp=N,0.9nm,0.4s,baz=247,slow=17,SNR=6.2
DLBC                              S         Sn        02 43 42.0 -8.2
      comp=N,1.6nm,1.0s,baz=354,slow=26,SNR=1.6
INK   Inuvik           13.33  36  P         Pn        02 41 36.1 +1.3
      comp=N,0.8nm,0.5s,baz=224,slow=11,SNR=4.0
YKA   Yellowknife Ar   19.77  62  P         P         02 42 52.8 +2.3
      comp=N,0.4nm,0.6s,baz=283,slow=12,SNR=4.5
SONM  Songino Array    54.79 305  P         P         02 47 48.2 +1.1
      comp=N,2.7nm,0.7s,baz=46,slow=7.0,SNR=8.9
      comp=N,2.7nm,0.7s
ZALV  Zalesovo Beam    57.83 323  P         P         02 48 08.8 +0.4
      comp=N,1.3nm,0.5s,baz=18,slow=7.4,SNR=4.3
      comp=N,1.3nm,0.5s
KURBB Kurchatov Arra   62.64 325  P         P         02 48 40.4 -0.7
      comp=N,0.7nm,0.5s,baz=30,slow=5.9,SNR=4.6
      comp=N,0.7nm,0.5s
MK31  Makanchi Array   64.82 320  P         P         02 48 55.8 +0.2
MK31                              IAmb      IAmb      02 49 32.9
      comp=Z,2.3nm,1.4s
MKAR  Makanchi Array   64.82 320  P         P         02 48 55.4 -0.2
      comp=Z,0.3nm,0.4s,baz=31,slow=5.6,SNR=4.8
      comp=Z,0.3nm,0.4s
AB31  Akbulak array    68.64 336  P         P         02 49 18.9 -0.7
AB31                              IAmb      IAmb      02 49 53.1
      comp=Z,1.9nm,1.2s
ABKAR Akbulak array    68.64 336  P         P         02 49 19.0 -0.6
ABKAR                             IAmb      IAmb      02 49 53.1
      comp=Z,1.9nm,1.2s
ABKAR Akbulak array    68.64 336  P         P         02 49 19.7 +0.1
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NEIC ***11*** *02:45:41.5±1.9, 29.°8S±0.°1×178.°63W±0.°05, h35km±2km, mb4.5/12, Error ellipse: s-maj=22.1km s-min=7.6km az=171.0*

IDC ***11*** *02:45:42.6±1.3, 29.°69S×178.°37W, h71km±20km, mb3.6/4, mbtmp3.9/4, Error ellipse: s-maj=39.4km s-min=31.1km az=14.0*

ISC 11 02:45:40.9±0.6**, 29.°7S**±0.°1×**178.°67W**±0.°09**, h35km, n27, σ1.s08**/23**, mb4.3**/9**, Kermadec Islands**

```
Code  Station Name        Δ°  AZ°    Phase ID             Time      Res
                                     Op        ISC        h  m  s   ISC
RAO   Raoul Island      0.80  56     Pn        Pn         02 45 55.5 -0.1
RAO                                            Sn         02 46 05.7 -0.5
RAO   Raoul Island      0.80  56     P         Pn         02 45 55.7 +0.1
      286nm,0.2s,baz=203,slow=20,SNR=1.8
RAO                                  S         Sn         02 46 08.4 +2.1
      1μm,0.3s,baz=321,slow=23,SNR=12
KHZ   Kahutara         14.15 204     Pn        Pn         02 48 59.4 +0.6
ARMA  Armidale         25.68 261     P         P          02 51 07.5 -0.3
ARMA                                 IAmb      IAmb       02 51 28.5
      comp=Z,13nm,1.3s
EIDS  Eidsvold         27.12 272     P         P          02 51 21.5 +0.8
HNR   Honiara          28.41 311     P         P          02 51 32.0 -0.2
STKA  Stephens Creek   34.07 256     P         P          02 52 23.4 +1.3
STKA  Stephens Creek   34.07 256     P         P          02 52 22.2 +0.2
      comp=Z,2.0nm,0.7s,baz=110,slow=15,SNR=2.1
      comp=Z,2.0nm,0.7s
COEN  Coen             38.52 286     P         P          02 52 59.2 -1.0
COEN                                 IAmb      IAmb       02 53 05.5
      comp=Z,10.0nm,1.1s
ASAR  Alice Springs    42.57 266     P         P          02 53 33.6  0.0
      comp=Z,0.4nm,0.6s,baz=107,slow=8.1,SNR=5.4
      comp=Z,0.4nm,0.6s
WR8   Warramunga Arr   43.35 272     P         P          02 53 41.1 +1.2
WR8                                  IAmb      IAmb       02 53 48.7
      comp=Z,8.7nm,1.3s
WRA   Warramunga Arr   43.49 272     P         P          02 53 41.2 +0.2
WRA   Warramunga Arr   43.49 272     P         P          02 53 41.5 +0.5
      comp=Z,0.9nm,0.4s,baz=111,slow=8.1,SNR=12
      comp=Z,0.9nm,0.4s
WB0   Warramunga Arr   43.51 272     P         P          02 53 41.4 +0.2
WB0                                  IAmb      IAmb       02 53 44.1
      comp=Z,13nm,1.4s
VNDA  Vanda            48.73 186     P         P          02 54 21.9 +0.4
PSA00 Pilbara Seismi   55.47 263     P         P          02 55 13.0 +0.6
CASY  Casey            55.48 208     P         P          02 55 11.9 +0.1
CASY                                 IAmb      IAmb       02 55 21.2
      comp=Z,19nm,1.4s
QSPA  South Pole Qui   60.41 180     P         P          02 55 45.3 -1.2
QSPA                                 IAmb      IAmb       02 55 54.0
      comp=Z,6.5nm,1.5s
QSPA  South Pole Qui   60.41 180     P         P          02 55 44.7 -1.8
      comp=Z,1.1nm,0.6s,baz=11,slow=5.3,SNR=7.2
      comp=Z,1.1nm,0.6s
H03S2 Juan Fernandez   81.33 124     T         T          04 26 57.7
      baz=238,slow=74,SNR=3.3
H03S1 Juan Fernandez   81.35 124     T         T          04 26 58.3
      baz=238,slow=74,SNR=4.0
H03S3 Juan Fernandez   81.35 124     T         T          04 26 57.2
      baz=238,slow=74,SNR=5.7
H10N3 ASCENSION HYDR139.69 155       T         T          05 40 42.3
      baz=203,slow=75,SNR=7.6
H10N1 ASCENSION HYDR139.69 155       T         T          05 40 47.1
      baz=203,slow=75,SNR=8.7
H10N2 ASCENSION HYDR139.70 155       T         T          05 40 49.9
      baz=203,slow=75,SNR=8.0
FINES FINESS Array B  144.29 340     PKP       PKPab      03 05 07.8 -2.6
      comp=Z,0.8nm,0.4s,baz=58,slow=3.6,SNR=9.5
HFS   Hagfors         148.44 348     PKPbc     PKPdf      03 05 20.2 +0.7
      comp=Z,2.9nm,1.0s,baz=57,slow=5.3,SNR=4.0
```

IDC ***11*** *03:18:29.9±1.7, 6.°45S×133.°04E, h0km, mb3.5/1, mbtmp3.9/5, ML4.1/4, Error ellipse: s-maj=42.1km s-min=25.1km az=92.0*

ISC 11 03:18:34.2±0.8**, 6.°61S**±0.°07×**133.°01E**±0.°08**, h35km, n15, σ1.s54**/14**, Aru Islands region**

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Code  Station Name        Δ°  AZ°    Phase ID             Time      Res
                                     Op        ISC        h  m  s   ISC
BNDI  Bandanaira        3.72 304     P         Pn         03 19 29.1 -0.1
BNDI  Bandanaira        3.72 304     S         Sn         03 20 12.3 +0.4
FAKI  Fak Fak           3.74 348     P         Pn         03 19 24.3 -5.2
KDU   Kakadu            6.07 185     P         Pn         03 20 06.9 +5.4
DRS   Darwin Rock St    6.15 200     P         Pn         03 20 09.9 +7.2
DRS   Darwin Rock St    6.15 200     S         Sn         03 21 25.0  +13
SANI  Sanana            8.34 303     P         Pn         03 20 31.4 -1.3
JAY   Jayapura          8.68  62     Pn        Pn         03 20 36.4 -1.0
      1.6nm,0.3s,baz=204,slow=13,SNR=6.9
      2.5nm,0.3s
COEN  Coen             12.38 127     P         Pn         03 21 28.6 +0.5
WRA   Warramunga Arr   13.32 175     Pn        Pn         03 21 41.8 +0.8
      0.9nm,0.3s,baz=356,slow=13,SNR=19
WRA                                  Sn        Sn         03 24 06.3 -1.6
      1.3nm,0.3s,baz=359,slow=23,SNR=7.2
WRA                                  Lg        Lg         03 25 38.3
      1.7nm,0.3s,baz=357,slow=28,SNR=6.4
      1.0nm,0.3s
FITZ  Fitzroy Crossi   13.50 212     Pn        Pn         03 21 45.9 +2.5
      0.9nm,0.3s,baz=30,slow=9.0,SNR=6.1
FITZ                                 Sn        Sn         03 24 10.7 -1.4
      3.2nm,0.3s,baz=248,slow=22,SNR=8.3
      2.9nm,0.4s
QIS   Mount Isa        15.27 156     P         Pn         03 22 08.7 +1.3
AS01  Alice Springs    16.98 177     P         P          03 22 31.4 +0.5
ASAR  Alice Springs    16.98 177     P         Pn         03 22 30.6 +1.3
      0.5nm,0.3s,baz=352,slow=9.6,SNR=22
ASAR                                 S         Sn         03 25 34.4 -2.7
      0.8nm,0.5s,baz=353,slow=26,SNR=2.8
      1.9nm,0.5s
MKAR  Makanchi Array   69.57 325     P         P          03 29 39.9 +0.2
      0.3nm,0.6s,baz=118,slow=7.2,SNR=4.3
      0.3nm,0.6s
```

SNET ***11*** *03:23:58.9±1.2, 13.°30N×89.°66W, h59km, ML3.9*

GCG ***11*** *03:23:59.9±0.8, 13.°42N×89.°61W, h61km±4km, MD4.2, ML3.6, MW3.3*

CATAC ***11*** *03:23:59.6±0.4, 13°N±3°×9°0W±°, h40km±3km, M3.9/26, MLv3.9/26, Error ellipse: s-maj=6.8km s-min=3.4km az=29.4, confirmed*

ISC 11 03:23:59.6±1.6**, 13.°34N**±0.°07×**89.°64W**±0.°05**, h62km**±7km**, n100, σ0.s39**/113**, El Salvador**

```
Code  Station Name        Δ°  AZ°    Phase ID             Time      Res
                                     Op        ISC        h  m  s   ISC
LALI  Alcalda de L      0.34  64   i P         Pn         03 24 09.9 -0.3
LALI  Alcalda de L      0.34  64   i P         Pn         03 24 09.9 -0.3
LALI                               eS          Sn         03 24 17.1 -0.9
LALI                                 IAML                 03 24 18.7
      comp=E,2μm,0.3s
LALI  Alcalda de L      0.34  64     P         Pn         03 24 10.0 -0.3
LALI  Alcalda de L      0.34  64     S         Sn         03 24 18.1 +0.1
JAYA  Jayaque - finc    0.36  30   i P         Pn         03 24 10.4 -0.2
JAYA                               eS          Sn         03 24 18.4 -0.2
JAYA  Jayaque - finc    0.36  30   i P         Pn         03 24 10.4 -0.2
JAYA                               eS          Sn         03 24 18.4 -0.2
JAYA  Jayaque - finc    0.36  30     P         Pn         03 24 10.4 -0.2
ITCA  Escuela Especi    0.48  46   eP          Pn         03 24 11.5 -0.2
ITCA  Escuela Especi    0.48  46     S         Sn         03 24 20.4  0.0
ITCA  Escuela Especi    0.48  46     P         Pn         03 24 11.5 -0.2
CEVE  Cerro Verde       0.49   2   eP          Pn         03 24 11.9  0.0
CEVE                               eS          Sn         03 24 21.4 +0.6
CEVE  Cerro Verde       0.49   2     P         Pn         03 24 11.9  0.0
PMON  Piamonte          0.49  40   eP          Pn         03 24 11.6 -0.1
PMON                               eS          Sn         03 24 20.9 +0.4
PMON  Piamonte          0.49  40     P         Pn         03 24 11.6 -0.1
SBLS  San Blas          0.50   2   eP          Pn         03 24 11.9 -0.1
CEDA  San Andres        0.52  27   eP          Pn         03 24 12.3 +0.3
CEDA  San Andres        0.52  27     S         Sn         03 24 21.7 +0.7
CEDA  San Andres        0.52  27     P         Pn         03 24 12.2 +0.2
PANCS Alcalda de        0.52  59     P         Pn         03 24 11.8 -0.2
PANCS Alcalda de        0.52  59     S         Sn         03 24 20.7 -0.4
BOQS  Boqueron          0.53  41   eP          Pn         03 24 12.3  0.0
SNJE  San Jose          0.53   3   eP          Pn         03 24 12.2 -0.1
SNJE                               eP                     03 24 12.3
SNJE                               eS          Sn         03 24 21.8 +0.4
UEES  Universidad Ev    0.54  46   eP          Pn         03 24 12.3  0.0
UEES                               eS          Sn         03 24 21.7 +0.3
UEES  Universidad Ev    0.54  46     P         Pn         03 24 12.3  0.0
SEMO  Seminario San     0.54  48     S         Sn         03 24 21.7 +0.1
SEMO  Seminario San     0.54  48     P         Pn         03 24 12.2 -0.1
LOMA  Loma Larga        0.55  56   eP          Pn         03 24 12.5 +0.1
LOMA                               eS          Sn         03 24 22.2 +0.5
LOMA  Loma Larga        0.55  56     P         Pn         03 24 12.6 +0.1
RTR   El Retiro         0.55 359   eP          Pn         03 24 13.2 +0.7
UTEC  Universidad Te    0.56  50   eP          Pn         03 24 12.5  0.0
UTEC                               eS          Sn         03 24 21.9 +0.2
UTEC  Universidad Te    0.56  50     S         Sn         03 24 22.1 +0.2
UTEC  Universidad Te    0.56  50     P         Pn         03 24 12.3 -0.2
NUBE  Las Nubes         0.58 346   eP          Pn         03 24 12.7 -0.1
NUBE                               eS          Sn         03 24 22.0 -0.3
NUBE  Las Nubes         0.58 346   i P         Pn         03 24 12.6 -0.2
NUBE                               eS          Sn         03 24 22.5 +0.2
NUBE  Las Nubes         0.58 346     P         Pn         03 24 12.6 -0.1
IGN   Direccin Gen      0.59  51     P         Pn         03 24 12.7 -0.1
IGN   Direccin Gen      0.59  51     S         Sn         03 24 22.7 +0.3
UDBS  Universidad Do    0.60  51   eS          Sn         03 24 23.2 +0.6
UDBS  Universidad Do    0.60  51     S         Sn         03 24 23.1 +0.5
UDBS  Universidad Do    0.60  51     P         Pn         03 24 12.9  0.0
AEIL  Aeropuerto Ilo    0.62  55   eP          Pn         03 24 13.6 +0.4
AEIL                               eS          Sn         03 24 23.9 +0.9
FAME  Alcaldia de Sa    0.62 324     S         Sn         03 24 22.9  0.0
FAME  Alcaldia de Sa    0.62 324     P         Pn         03 24 12.8 -0.3
LFRS  El Faro           0.63  63   i P         Pn         03 24 13.2 -0.1
UNIC  Universidad Ca    0.64   8   eP          Pn         03 24 13.0 -0.4
UNIC  Universidad Ca    0.64   8     P         Pn         03 24 13.1 -0.4
UNIC  Universidad Ca    0.64   8     S         Sn         03 24 24.1 +0.6
LFU   La Fuente         0.65  51   eP          Pn         03 24 13.7 +0.1
LOAL  Lomas de Alarc    0.67 348   eS          Sn         03 24 24.9 +0.9
LOAL  Lomas de Alarc    0.67 348     S         Sn         03 24 24.8 +0.9
LOAL  Lomas de Alarc    0.67 348     P         Pn         03 24 13.8 +0.1
SLOZ  Alcaldia de Sa    0.70 348   eP          Pn         03 24 13.9 -0.1
SLOZ  Alcaldia de Sa    0.70 348     P         Pn         03 24 13.9 -0.1
SLOZ  Alcaldia de Sa    0.70 348     S         Sn         03 24 25.2 +0.6
PAVA  Las Pavas         0.78  61   i P         Pn         03 24 15.0 -0.1
PAVA  Las Pavas         0.78  61     S         Sn         03 24 26.8 +0.5
PAVA  Las Pavas         0.78  61     P         Pn         03 24 15.0 -0.1
COEG  Centro de Oper    0.79  69   i P         Pn         03 24 14.9 -0.2
COEG                               eS          Sn         03 24 26.6  0.0
COEG  Centro de Oper    0.79  69     P         Pn         03 24 15.2  0.0
TECO  Alcaldia de Te    0.86  77   eP          Pn         03 24 15.7 -0.3
TECO  Alcaldia de Te    0.86  77     S         Sn         03 24 27.5 -0.5
TECO  Alcaldia de Te    0.86  77     P         Pn         03 24 15.6 -0.3
UESV  Universidad de    0.88  70     P         Pn         03 24 16.0 -0.2
UESV  Universidad de    0.88  70     S         Sn         03 24 28.5  0.0
SCLA  Alcaldia de Sa    0.95  68   eP          Pn         03 24 17.0 -0.2
SCLA  Alcaldia de Sa    0.95  68     S         Sn         03 24 30.4 +0.1
SCLA  Alcaldia de Sa    0.95  68     P         Pn         03 24 17.1 -0.2
ALJI  Alcalda de J      1.04  91   eP          Pn         03 24 18.1 -0.1
ALJI                               eS          Sn         03 24 30.9 -1.2
ALJI  Alcalda de J      1.04  91     P         Pn         03 24 18.0 -0.3
ALJI  Alcalda de J      1.04  91     S         Sn         03 24 31.2 -0.8
LLGN  La Laguna         1.06  39   eP          Pn         03 24 18.1 -0.5
LLGN  La Laguna         1.06  39     S         Sn         03 24 32.4 -0.3
LLGN  La Laguna         1.06  39     P         Pn         03 24 18.1 -0.5
MTO3  Montecristo       1.09  14   i P         Pn         03 24 18.6 -0.6
MTO3  Montecristo       1.09  14   i P         Pn         03 24 18.5 -0.6
MTO3  Montecristo       1.09  14     P         Pn         03 24 18.5 -0.6
MTO3  Montecristo       1.09  14     S         Sn         03 24 33.1 -0.4
TECA  Tecapa            1.12  82   eP          Pn         03 24 19.1 -0.3
TECA                               eP                     03 24 19.3
ESQI  Esquipulas        1.25  13   i P         Pn         03 24 20.9 -0.2
ESQI  Esquipulas        1.25  13     S         Sn         03 24 37.0 -0.1
ESQI  Esquipulas        1.25  13     P         Pn         03 24 20.8 -0.3
FG16  Alotenango, Sa    1.26 318   i P         Pn         03 24 27.0 +5.6
FG16                               i S         Sn         03 24 47.8  +10
```

FG16				IAML		03 24 58.3	
	comp=E,2μm,0.3s						
FG8	Yepocapa, Chim	1.28	316	i P	Pn	03 24 27.1	+5.5
FG8				i S	Sn	03 24 48.2	+10
PACA	Pacayal	1.29	84	S	Sn	03 24 38.5	+0.5
LCY	Lacayo	1.31	86	eP	Pn	03 24 22.3	+0.4
BLLM	Bellamira	1.37	86	eP	Pn	03 24 23.0	+0.3
ESSG	Sabana Grande	1.56	312	i S	Sn	03 24 44.3	-0.1
ESSG				IAML		03 24 47.1	
	comp=E,682nm,0.5s						
LCND	La Caada	1.70	91	i P	Pn	03 24 27.1	0.0
LCND	La Caada	1.70	91	P	Pn	03 24 27.1	0.0
LCND	La Caada	1.70	91	S	Sn	03 24 47.9	0.0
CNCH	Conchagua	1.76	92	eP	Pn	03 24 27.8	-0.1
CNCH	Conchagua	1.76	92	S	Sn	03 24 50.5	+1.1
CNCH	Conchagua	1.76	92	P	Pn	03 24 27.8	-0.1
MARCA	Marcala la Paz	1.76	62	i P	Pn	03 24 27.7	-0.3
MARCA				i S	Sn	03 24 49.4	0.0
STG8	El Palmar, Qui	2.00	304	i S	Sn	03 25 05.7	+10
STG8				IAML		03 25 12.9	
	comp=N,356nm,0.2s						
POTN	Potosi Cosigui	2.10	99	P	Pn	03 24 32.8	+0.3
POTN				S	Sn	03 24 58.5	+0.9
TGUH	Tegucigalpa,Un	2.41	72	P	Pn	03 24 36.5	-0.3
CNGN	Cerro Negro	2.98	106	P	Pn	03 24 44.4	-0.1
CNGN	Cerro Negro	2.98	106	S	Sn	03 25 19.8	+0.5
LIMN	Finca el Limon	3.20	95	P	Pn	03 24 47.2	-0.3

CATAC 11 03:30:23.4±0.6, 11°N±2°×8°6W±°, h19^{km}±4^{km}, M2.9/14, MLv2.9/14, Error ellipse: s-maj=6.1km s-min=3.0km az=56.8, confirmed, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CARN	Rivas	0.83	73	P	Pb	03 30 39.4	+0.1
CARN				S	Sn	03 30 51.9	0.0
JAPN	Al SSO del Vol	0.87	48	P	Pn	03 30 40.6	0.0
MORN	Al O del Volca	0.90	48	P	Pb	03 30 40.7	+0.2
UNAN	Cigeo UNAN	1.17	3	P	Pn	03 30 44.2	-0.6
UNAN				S	Sb	03 30 59.7	-0.1
WILN	Americas 2	1.22	7	P	Pn	03 30 45.4	-0.2
WILN				S	Sg	03 31 03.7	+0.6
CMARA	Lajas Hojancha	1.28	136	P	Pn	03 30 44.7	-1.6
CMARA	Lajas Hojancha	1.28	136	S	Sn	03 31 03.5	+0.5
INDI	Punta indio, G	1.34	142	P	Pn	03 30 46.5	-0.6
INDI	Punta indio, G	1.34	142	S	Sg	03 31 05.8	-1.0
MOMN	Momotombo	1.48	352	P	Pn	03 30 48.7	-0.3
MOMN				S	Sn	03 31 07.7	-0.2
ACON	Acoyapa	1.53	48	S	Sb	03 31 09.9	-0.2
ACON	Acoyapa	1.53	48	P	Pn	03 30 49.1	-0.7
CNGA	Al SSO del Vol	1.59	347	P	Pn	03 30 50.5	-0.1
CNGN	Cerro Negro	1.59	347	S	Sn	03 31 11.3	+0.5
BOAB	BOACO BROADBAN	1.64	23	P	Pn	03 30 50.5	-0.8
BOAB	BOACO BROADBAN	1.64	23	S	Sn	03 31 11.4	-0.4
HOYN	Al Sur del Vol	1.72	344	S	Sn	03 31 14.7	+0.7
SOCE	Pocosol	1.77	108	P	Pn	03 30 53.0	-0.2
SOCE	Pocosol	1.77	108	S	Sn	03 31 15.3	+0.1
PKGN	Cerro Pekin	1.83	340	P	Pn	03 30 54.5	+0.6
PKGN				S	Sb	03 31 18.1	-0.9
COVE	Coope Vega, Sa	1.91	96	P	Pn	03 30 55.8	+0.9
MATN	Matagalpa	2.02	11	P	Pn	03 30 56.9	+0.3
MATN	Matagalpa	2.02	11	S	Sn	03 31 21.0	-0.4
LIMN	Finca el Limon	2.11	359	P	Pn	03 30 58.2	+0.4
BLUN	Bluefields	2.72	67	P	Pn	03 31 06.4	+0.2
BLUN				S	Sn	03 31 40.2	+1.6

KOLA 11 04:17:23.5, 67°.62N×33°.87E, h0^{km}, ML1.4, Error ellipse: s-maj=1.9km s-min=1.0km az=150.0, Khibiny, mines Rasvumchorr, Central

HEL 11 04:17:23.0±0.5, 68°.16N×33°.73E, h0^{km}, ML1.2, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVZ	Lovozero	0.43	126	P	Pg	04 17 30.9	-0.4
LVZ				S	Sg	04 17 36.4	-0.5
LVZ	Lovozero	0.43	126	PG	Pg	04 17 30.9	-0.4
LVZ				SG	Sg	04 17 36.5	-0.4
APA	Apatity	0.60	192	P	Pg	04 17 26.9	-7.6
APA				S	Sg	04 17 29.4	-13
APA0	Apatity Array	0.62	207	P	Pg	04 17 29.4	-5.4
APA0				S	Sg	04 17 34.0	-8.8
KVDA	Kovda	1.51	193	P	Pn	04 17 42.5	-8.6
KVDA				S	Sg	04 17 54.5	-17
VRF	Varrio	1.61	257	PN	Pn	04 17 53.0	+0.4
	baz=82						
VRF				MSG		04 18 10.9	
	comp=Z,1.4nm,0.2s						
VRF				SN	Sn	04 18 13.8	-0.2
RAJF	Raja-Jooseppi	2.04	282	PG	Pn	04 17 59.1	+0.6
VADS	Vadso	2.52	324	S	Sg	04 18 47.2	+3.5
MSF	Maaselka	2.91	221	PN	Pn	04 18 09.5	-0.9
MSF				SN	Sn	04 18 43.0	-3.0
ARA0	ARCESS Array S	3.29	299	PB	Pb	04 18 20.2	-1.9
	baz=119						
ARCES	ARCESS Array B	3.29	299	P	Pb	04 18 20.1	-2.0
KTK1	Kautokeino	3.94	287	PB	Pb	04 18 30.5	-2.8

HEL 11 04:18:42.5±0.4, 67°.82N×20°.16E, h0^{km}, ML1.4, Suspected explosion

UPP 11 04:18:42.5±0.0, 67°.85N×20°.25E, h0^{km}, ML2.3, Confirmed Induced event, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.12	17	P	Pg	04 18 44.8	+0.1
KUA				S	Sg	04 18 46.9	+0.7
RATU	Laukkuluspa	0.25	265	P	Pg	04 18 47.4	+0.2
RATU				S	Sg	04 18 51.1	+0.6
KOVU	Salmi	0.38	355	P	Pg	04 18 50.0	+0.2
KOVU				S	Sg	04 18 55.5	+0.8
LANU	Lannavaara	0.69	72	PB	Pb	04 18 57.8	+0.4
LANU				SG	Sb	04 19 06.9	-0.6
DUNU	Dundret	0.74	170	P	Pg	04 18 56.3	-0.3
DUNU				S	Sg	04 19 06.9	+0.8
MASU	Masugnsbyn	0.78	119	P	Pg	04 18 57.2	-0.1
MASU				S	Sg	04 19 07.6	+0.3
SALU	Saltoluokta	0.81	236	P	Pg	04 18 57.8	-0.3
SALU				S	Sg	04 19 09.3	+0.8
SALU	Saltoluokta	0.81	236	eP	Pg	04 18 57.7	-0.3
KIF	Kilpisjarvi	1.18	10	eP	Pn	04 19 06.2	0.0
KIF	Kilpisjarvi	1.18	10	PN	Pn	04 19 06.6	+0.4
KIF				MSG		04 19 20.4	
	comp=Z,4.1nm,0.2s						
KIF				SB	Sb	04 19 21.2	-0.4
PAJU	Pajala	1.38	125	P	Pg	04 19 08.2	-0.7
PAJU				S	Sg	04 19 26.4	-0.3
PAJU	Pajala	1.38	125	SB	Sg	04 19 26.8	+0.1
PAJU	Pajala	1.38	125	PN	Pg	04 19 08.1	-0.8
	baz=307						
PAJU				SN	Sg	04 19 26.8	+0.1
HEF	Hetta	1.40	65	PG	Pn	04 19 08.8	-0.5
	baz=245						
HEF				MSG		04 19 25.8	
	comp=Z,1.9nm,0.2s						
HEF				SN	Sb	04 19 28.0	+0.1
ERTU	Ertsjaerv	1.50	149	P	Pn	04 19 10.2	-0.4
ERTU	Ertsjaerv	1.50	149	PN	Pb	04 19 10.9	-0.3
ERTU				SN	Sn	04 19 31.1	+0.2
KLF	Kolari	1.55	112	PN	Pb	04 19 11.8	-0.3
KLF				MSG		04 19 29.7	
	comp=Z,1.8nm,0.2s						
KLF				SN	Sg	04 19 32.8	+0.5
KTK1	Kautokeino	1.61	42	PG	Pn	04 19 11.5	-0.7
	baz=225						
KTK1	Kautokeino	1.61	42	SN	Pn	04 19 11.5	-0.7
TRO	Tromso	1.86	346	PG	Pb	04 19 16.9	-0.4
TRO				SG	Sb	04 19 40.8	-0.2
KALU	Kalix	2.34	147	PG	Pb	04 19 23.8	-1.7
KALU				SG	Sb	04 19 54.9	0.0
TOF	Tornio	2.39	136	SB	Pg	04 19 25.3	-2.9
TOF	Tornio	2.39	136	PG	Pb	04 19 25.3	-1.0
TOF				MSG		04 19 53.5	
	comp=Z,1.7nm,0.2s						
TOF				SG	Sb	04 19 57.4	+1.1
ARA0	ARCESS Array S	2.56	46	SG	Sb	04 20 01.4	0.0
RAJF	Raja-Jooseppi	3.08	74	SG	Sb	04 20 17.1	+1.0
RANF	Ranua	3.16	122	SG	Sb	04 20 20.8	+2.3

NEIC 11 04:28:45.3±1.8, 24°.2S±0°.1×179°.3W±0°.2, h471^{km}±7^{km}, mb4.5/25, Error ellipse: s-maj=24.1km s-min=15.7km az=92.0

NOU 11 04:28:46.3, 24°.19S×179°.15W, h515^{km}, mb4.2/17, South of Fiji Islands

IDC 11 04:28:48.4±1.9, 24°.16S×179°.61W, h502^{km}±19^{km}, mb3.7/5, mbtmp4.6/7, Error ellipse: s-maj=21.1km s-min=18.1km az=159.0

ISC 11 04:28:47.1±0.7, 24°.25S±0°.06×179°.44W±0°.10, h500^{km}, n94, σ1^{s}19/98, mb4.4/14, 1C, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	5.17	165	P	P	04 30 14.0	-1.5
GLKZ				S	S	04 31 27.1	-0.7
MSVF	Nonsavu	6.89	340	P	P	04 30 31.6	-0.9
	17nm,0.5s,baz=235,slow=23,SNR=24						
MSVF	Nonsavu	6.89	340	P	P	04 30 31.7	-0.8
DGTI	Dogotuki	7.95	354	P	P	04 30 43.0	-0.1
YSA	Yasawairara	8.02	339	P	P	04 30 43.7	-0.1
PINNC	Pines Island,	12.15	275	P	P	04 31 26.9	-0.4
OUZ	Omahuta	12.49	207	P	P	04 31 32.2	+1.5
OUZ	Omahuta	12.49	207	P	P	04 31 32.1	+1.5
OUENC	Ouen Island, N	12.74	275	P	P	04 31 35.1	+1.6
YATNC	Mamie plateau,	12.77	277	P	P	04 31 35.5	+1.7
WCZ	Waipu Caves	12.83	203	P	P	04 31 35.7	+1.4
DZM	Mont Dzumac	13.17	277	P	P	04 31 39.3	+1.1
	13nm,0.8s,baz=92,slow=14,SNR=13						
DZM	Mont Dzumac	13.17	277	P	P	04 31 39.8	+1.6
MXZ	Matakaoa Point	13.41	188	P	P	04 31 40.3	0.0
MXZ	Matakaoa Point	13.41	188	P	P	04 31 40.4	0.0
MXZ	Matakaoa Point	13.41	188	P	P	04 31 39.9	-0.5
HAZ	Te Kaha	13.67	189	P	P	04 31 41.5	-1.6
HAZ				S	S	04 34 10.3	+2.0
URZ	Urewera	14.27	191	P	P	04 31 46.5	-3.0
	8.6nm,0.6s,baz=26,slow=2.8,SNR=7.8						
URZ				S	S	04 34 17.7	-2.2
	5.3nm,0.6s,baz=166,slow=22,SNR=17						
URZ	Urewera	14.27	191	P	P	04 31 49.3	-0.2
URZ	Urewera	14.27	191	P	P	04 31 48.5	-1.0
URZ				S	S	04 34 19.5	-0.5
MWZ	Matawai	14.28	190	P	P	04 31 49.3	-0.3
MWZ				S	S	04 34 20.0	-0.1
RTZ	Ruatahuna	14.64	191		S	04 34 27.8	+0.6
BKZ	Black Stump Fm	15.27	192	P	P	04 32 00.1	+0.1
BKZ				IAmb	IAmb	04 32 03.3	
	comp=Z,21nm,1.3s						
BKZ	Black Stump Fm	15.27	192	P	P	04 32 00.6	+0.6
BKZ	Black Stump Fm	15.27	192	P	P	04 31 59.8	-0.1
TMVZ	Te Maari	15.38	194	P	P	04 32 02.3	+1.1
ETVZ	East Tongariro	15.40	194	P	P	04 32 02.3	+0.9
TWVZ	Taurewa	15.40	195	P	P	04 32 02.6	+1.2
OTVZ	Oturere	15.44	194	P	P	04 32 01.7	-0.2
NGZ	Ngauruhoe	15.46	195	P	P	04 32 04.2	+2.1
SNVZ	South Ngauruho	15.47	194	P	P	04 32 02.9	+0.8
MOVZ	Moawhango	15.65	194	P	P	04 32 04.0	+0.1
KAHZ	Kahuranaki	15.81	190	P	P	04 32 06.5	+0.9
PXZ	Pawanui	16.04	190	P	P	04 32 07.9	0.0
TSZ	Takapari Road	16.23	193	P	P	04 32 10.4	+0.4
BFZ	Birch Farm	16.78	191	P	P	04 32 14.5	-1.2
BFZ	Birch Farm	16.78	191	P	P	04 32 14.8	-0.9
BFZ	Birch Farm	16.78	191	P	P	04 32 14.2	-1.5
MRZ	Mangatainoka R	16.89	193	P	P	04 32 13.5	-3.3
MRZ				IAmb	IAmb	04 32 18.6	
	comp=Z,22nm,1.2s						
MRZ	Mangatainoka R	16.89	193	P	P	04 32 14.2	-2.6
TKNZ	Takaka Hill	17.91	199	P	P	04 32 26.0	-0.4
NNZ	Nelson	17.95	198	P	P	04 32 25.9	-1.0
THZ	Tophouse	18.59	198	P	P	04 32 32.0	-0.8
DSZ	Denniston Nort	18.91	201	P	P	04 32 35.4	-0.3
KHZ	Kahutara	19.03	196	P	P	04 32 35.7	-1.0
KHZ	Kahutara	19.03	196	P	P	04 32 35.4	-1.3
GVZ	Greta Valley S	19.68	197	P	P	04 32 41.3	-1.3
LTZ	Lake Taylor	19.72	198	P	P	04 32 43.2	+0.2
LTZ				IAmb	IAmb	04 32 48.0	
	comp=Z,38nm,1.3s						
OXZ	Oxford	20.28	198	P	P	04 32 47.3	-0.8
RPZ	Rata Peaks	20.93	200	P	P	04 32 53.6	-0.4
FOZ	Fox Glacier	21.17	202	P	P	04 32 54.3	-1.8
JCZ	Jackson Bay	22.00	203	P	P	04 33 03.4	-0.4
HNR	Honiara	24.57	303	P	P	04 33 26.5	-0.4
ARMA	Armidale	26.39	250	P	P	04 33 43.8	+0.8
EIDS	Eidsvold	26.76	261	P	P	04 33 46.6	+0.4
EIDS				IAmb	IAmb	04 33 47.7	
	comp=Z,7.8nm,0.8s						
CAN	Canberra	29.42	241	P	P	04 34 10.1	+0.7
CAN				IAmb	IAmb	04 34 25.4	
	comp=Z,15nm,1.3s						
CMSA	Cobar Meteorol	31.57	249	P	P	04 34 28.3	+0.3
CTAO	Charters Tower	31.99	271		P	04 34 31.9	+0.1
CTAO	Charters Tower	31.99	271	P	P	04 34 32.4	+0.6
TOO	Toolangi	32.70	238	P	P	04 34 37.9	+0.3
QLP	Quilpie	32.83	258	P	P	04 34 39.4	+0.6
TAU	Tasmania Unive	33.08	228	P	P	04 34 41.1	+0.5
STKA	Stephens Creek	35.07	249	P	P	04 34 58.0	+0.3
STKA				IAmb	IAmb	04 35 26.1	
	comp=Z,31nm,1.2s						
STKA	Stephens Creek	35.07	249	P	P	04 34 58.0	+0.3
	comp=Z,2.8nm,0.3s,baz=92,slow=11,SNR=13						
	comp=Z,2.8nm,0.3s						
BBOO	Buckleboo	39.78	247	P	P	04 35 35.7	-0.6
BBOO				IAmb	IAmb	04 36 04.1	
	comp=Z,60nm,1.5s						
AS31	Alice Springs	42.49	261		P	04 35 57.4	-0.6
ASAR	Alice Springs	42.49	261	P	P	04 35 57.5	-0.5
ASAR	Alice Springs	42.49	261	P	P	04 35 57.8	-0.3
	comp=Z,5.9nm,0.8s,baz=96,slow=7.3,SNR=44						
ASAR				S	S	04 41 39.1	-4.5
	comp=Z,1.0nm,1.1s,baz=104,slow=14,SNR=3.2						
	comp=Z,5.9nm,0.8s						
WR8	Warramunga Arr	42.75	266		P	04 35 59.3	-0.7
WR8				IAmb	IAmb	04 36 00.1	
	comp=Z,11nm,0.8s						
WRAB	Tennant Creek	42.89	266	P	P	04 36 00.6	-0.6
WRAB				IAmb	IAmb	04 36 01.1	
	comp=Z,16nm,1.1s						
WB0	Warramunga Arr	42.89	267		P	04 36 00.5	-0.7
WB0				IAmb	IAmb	04 36 01.2	
	comp=Z,17nm,0.7s						
WRA	Warramunga Arr	42.90	266		P	04 36 00.6	-0.7
WRA	Warramunga Arr	42.90	266	P	P	04 36 00.5	-0.7
	comp=Z,16nm,0.6s,baz=98,slow=8.2,SNR=151						
WRA				S	S	04 41 47.6	-1.9
	comp=Z,0.6nm,1.0s,baz=111,slow=14,SNR=2.7						
	comp=Z,16nm,0.6s						
KNRA	Kununurra	49.20	270		P	04 36 49.1	-0.2
KNRA				IAmb	IAmb	04 36 50.0	
	comp=Z,14nm,0.8s						
FITZ	Fitzroy Crossi	51.32	266	P	P	04 37 05.1	+0.3
MORW	Morawa	57.24	250	P	P	04 37 45.9	-0.6
MORW				IAmb	IAmb	04 37 56.7	
	comp=Z,44nm,1.4s						
TOLI2	Tolitoli	63.16	284	P	P	04 38 26.9	+0.9
TOLI2				IAmb	IAmb	04 38 27.6	
	comp=Z,5.6nm,0.6s						
QSPA	South Pole Qui	65.84	180	P	P	04 38 44.2	+1.9
QSPA	South Pole Qui	65.84	180	P	P	04 38 43.8	+1.6
	comp=Z,3.0nm,0.7s,baz=2.8,slow=0.9,SNR=23						
	comp=Z,3.0nm,0.7s						
ADK	Adak	75.84	2	P	P	04 39 41.1	-0.1
CMAR	Chiang Mai Arr	90.13	290	P	P	04 40 55.8	+1.9
	comp=Z,0.6nm,0.3s,baz=125,slow=3.0,SNR=5.2						
	comp=Z,0.6nm,0.3s						
KURBB	Kurchatov Arra	115.85	316	PKP	PKPdf	04 46 31.6	-0.6
	comp=Z,0.5nm,0.3s,baz=93,slow=2.1,SNR=4.1						
BVAR	Borovoye Array	121.04	319	PKP	PKPdf	04 46 41.1	-1.0
	comp=Z,1.6nm,0.5s,baz=80,slow=3.9,SNR=4.9						
ARCES	ARCESS Array B	132.33	348	PKP	PKPdf	04 47 03.2	0.0
	comp=Z,0.5nm,0.4s,baz=58,slow=1.6,SNR=11						
FINES	FINESS Array B	138.94	342	PKhKP	PKPpre	04 47 09.8	
	comp=Z,0.4nm,0.3s,baz=61,slow=3.5,SNR=4.5						
FINES				PKP	PKPdf	04 47 15.9	+0.2
	comp=Z,2.1nm,1.0s,baz=78,slow=4.4,SNR=1.9						
NB2	NORSAR Subarra	142.50	352	PKP	PKPdf	04 47 19.4	-2.8
	comp=Z,0.7nm,0.8s,baz=14,slow=3.1						
NOA	NORSAR Array B	142.50	352	PKhKP	PKPpre	04 47 17.7	
	comp=Z,1.1nm,0.8s,baz=14,slow=2.4,SNR=4.0						
HFS	Hagfors	142.99	349	PKhKP	PKPpre	04 47 20.5	
	comp=Z,2.6nm,0.5s,baz=52,slow=2.4,SNR=21						
PABE	Paberze	144.34	337		PKPbc	04 47 25.1	-0.1
AKASG	Malin Array Be	145.54	327	PKPbc	PKPbc	04 47 28.8	-0.1
	comp=Z,0.7nm,0.3s,baz=47,slow=3.4,SNR=8.5						
BRTR	Keskin Array B	148.20	307	PKPbc	PKPbc	04 47 36.9	+0.2
	comp=Z,0.9nm,0.6s,baz=132,slow=2.1,SNR=6.2						
MMAI	Mount Meron Ar	148.31	294	PKPbc	PKiKP	04 47 38.8	+0.5
	comp=Z,2.8nm,0.4s,baz=73,slow=7.1,SNR=8.8						
EKA	Eskdalemuir Ar	148.83	4	PKPbc	PKPbc	04 47 37.5	-0.1
	comp=Z,0.6nm,0.4s,baz=347,slow=2.2,SNR=5.7						
CLL	Collm	151.34	344	⇑iPKPbc	PKiKP	04 47 44.5	+0.7
	comp=Z,7.0nm,0.8s						

IDC 11 05:00:53.6±0.7, 18°.80S×70°.22W, h59^{km}±5^{km}, mb3.9/12, mbtmp4.2/16, MS3.2/8, Error ellipse: s-maj=20.0km s-min=13.1km az=70.0

GUC 11 05:00:53.9±0.8, 18°.92S×70°.33W, h49^{km}±5^{km}, ML4.6

NEIC 11 05:00:53.4, 18°.88S×70°.40W, h61^{km}

NEIC 11 05:00:53.2±1.6, 18°.89S±0°.04×70°.40W±0°.04, h58^{km}±4^{km}, mb4.5/58, Mwr4.3/23, Mwr4.4(GUC), Error ellipse: s-maj=7.1km s-min=3.9km az=125.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.63; $M_{\theta\theta}$-1.67; $M_{\phi\phi}$0.04; $M_{r\theta}$-1.03; $M_{\theta\phi}$1.17; $M_{\phi r}$3.52; Fault plane solution: $M_0$4.19000×10^{15} NP1:ϕ_s91.38000°, δ23.49000°, λ28.50000°. NP2:ϕ_s334.91000°, δ79.03000°, λ110.91000°. Principal axes: T 4.4492, Plg52.0000°, Azm269.0000°; N -0.5762, Plg21.0000°, Azm151.0000°; P -3.8730, Plg31.0000°, Azm48.0000°;

VAO 11 05:00:54.5±0.7, 18°.69S×70°.08W, h69^{km}±6^{km}, mb4.5

ISC 11 05:00:52.8±0.5, 18°.85S±0°.03×70°.33W±0°.06, h61^{km}±4^{km}, n151, σ1^{s}52/130, mb4.4/36, 4C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	Chacalluta	0.48	359		Pn	05 01 05.2	+0.5
AP01				Sn	Sn	05 01 14.2	+0.9
AP01	Chacalluta	0.48	359	⇑eP	Pn	05 01 05.2	+0.5
AP01				eS	Sn	05 01 13.7	+0.4
AP01				IAML		05 01 14.6	
	comp=E,51μm,0.3s						
PB16	IPOC Station P	0.94	57		Pn	05 01 11.6	+0.9
PB16				Sn	Sn	05 01 25.3	+1.5
PB16	IPOC Station P	0.94	57	eP	Pn	05 01 11.6	+0.9
PB16				eS	Sn	05 01 24.3	+0.5
PB16				IAML		05 01 26.4	
	comp=N,18μm,0.3s						
PB11	IPOC Station P	1.11	145		Pn	05 01 13.1	+0.6
PB11	IPOC Station P	1.11	145	⇑eP	Pn	05 01 13.1	+0.6
PB11				IAML		05 01 29.0	
	comp=N,28μm,0.4s						
GO01	Chusmiza	1.35	127		Pn	05 01 17.3	+1.4
GO01	Chusmiza	1.35	127	⇑eP	Pn	05 01 17.4	+1.4
GO01				eS	Sn	05 01 35.2	+2.0
GO01				IAML		05 01 36.2	
	comp=N,20μm,0.3s						
TA02	Huaiquique	1.42	172		Pn	05 01 17.2	+0.7
TA02	Huaiquique	1.42	172	eP	Pn	05 01 17.3	+0.8
TA02				IAML		05 01 37.8	
	comp=N,30μm,0.4s						
PB18	Visviri	1.50	33	Pn	Pn	05 01 21.3	+3.3
PB18	Visviri	1.50	33	⇓eP	Pn	05 01 21.3	+3.3
PB08	IPOC Station P	1.70	139	Pn	Pn	05 01 21.9	+1.3
PB08	IPOC Station P	1.70	139	⇑eP	Pn	05 01 21.9	+1.3
PB08				IAML		05 01 46.0	
	comp=E,9μm,0.2s						
TA01	Diego Aracena	1.71	175	eP	Pn	05 01 21.0	+0.6
TA01				IAML		05 01 48.7	
	comp=E,13μm,0.5s						
PB01	IPOC Station P	2.32	160	Pn	Pn	05 01 29.4	+0.6
PB01	IPOC Station P	2.32	160	eP	Pn	05 01 29.4	+0.6
PB01				IAML		05 02 04.5	
	comp=N,3μm,0.2s						
PB09	IPOC Station P	3.10	161	Pn	Pn	05 01 41.0	+1.4
PB09	IPOC Station P	3.10	161	eP	Pn	05 01 41.0	+1.4
PB09				IAML		05 02 38.3	
	comp=E,3μm,0.4s						
PB03	IPOC Station P	3.23	170	Pn	Pn	05 01 41.6	+0.3
PB03	IPOC Station P	3.23	170	eP	Pn	05 01 41.5	+0.3
PB03				IAML		05 02 36.7	
	comp=E,2μm,0.4s						
LPAZ	La Paz	3.31	40	Pn	Pn	05 01 47.3	+4.6
LPAZ	La Paz	3.31	40	P	Pn	05 01 46.8	+4.0
	comp=E,37nm,0.4s,baz=231,slow=6.5,SNR=255						
LPAZ				LR	LR	05 03 18.9	
	comp=E,377nm,19.9s,baz=260,slow=45						
LPAZ	La Paz	3.31	40	eP	Pn	05 01 40.1	-2.6
PB06	IPOC Station P	3.90	170	Pn	Pn	05 01 50.5	+0.1
PB05	IPOC Station P	3.98	178		Pn	05 01 50.7	-0.8
AF01	San Pedro de A	4.55	154	Pn	Pn	05 02 02.4	+2.9
PB10	IPOC Station P	4.64	183	Pn	Pn	05 01 59.6	-0.8
PB14	IPOC Station P	5.75	181	Pn	Pn	05 02 14.6	-1.2
GO02	Mina Guanaco	6.32	174	Pn	Pn	05 02 23.5	-0.2
NNA	Nana	9.27	316	P	Pn	05 03 05.8	+1.9
	comp=E,6.3nm,0.3s,baz=184,slow=1.8,SNR=5.7						
NNA				S	Sn	05 04 41.3	-5.5
	comp=E,3.8nm,0.3s,baz=200,slow=10,SNR=1.3						
SIV	San Ignacio	9.29	74	P	Pn	05 03 04.0	-0.1
	comp=E,25nm,0.5s,baz=263,slow=8.6,SNR=60						
BBSD	Serra de San D	9.40	81	eP	Pn	05 03 04.0	-1.6
PTLB	Pontes e Lacer	11.22	74	Pn	Pn	05 03 31.7	+1.2
PTLB	Pontes e Lacer	11.22	74	eP	Pn	05 03 28.6	-2.0
CZSB	Cruzeiro do Su	11.29	348		Pn	05 03 30.9	-0.6
CZSB	Cruzeiro do Su	11.29	348	eP	Pn	05 03 30.9	-0.6
VILB	Vilhena	11.37	60	Pn	Pn	05 03 33.7	+1.1
VILB	Vilhena	11.37	60	eP	Pn	05 03 30.8	-1.8
MURT	Porto Murtinho	12.26	105	eP	Pn	05 03 43.4	-1.3
CFA	Coronel Fontan	12.84	172	P	Pn	05 03 48.7	-3.8
	comp=E,0.5nm,0.3s,baz=340,slow=12,SNR=8.0						
CFA				S	Sn	05 06 02.4	-11
	comp=E,0.9nm,0.6s,baz=34,slow=17,SNR=1.4						
AQDB	Aquidauana	13.88	99	P	P	05 04 11.0	-2.0
AQDB	Aquidauana	13.88	99	eP	Pn	05 04 05.5	-1.2
ATAH	Atahualpa	14.04	325	P	Pn	05 04 10.5	+1.2
	comp=E,1.8nm,0.6s,baz=17,slow=22,SNR=1.9						
CPUP	Villa Florida	14.12	124	P	Pn	05 04 08.9	-0.9
	comp=E,0.3nm,0.4s,baz=165,slow=12,SNR=5.7						
SALV	Santo Antonio	14.28	80	eP	Pn	05 04 10.4	-1.6
MT08	Bocatoma Ro	14.54	179	P	P	05 04 19.3	-1.1
TBTG	Tabatinga, AM	14.58	2		Pn	05 04 15.6	-0.4
TBTG	Tabatinga, AM	14.58	2	eP	Pn	05 04 15.2	-0.8
MT09	Talagante	14.87	182		Pn	05 04 19.5	-0.3
PDRB	Porto dos Gac	14.96	63	eP	Pn	05 04 15.6	-5.3
RPRD	Ribas do Rio P	15.75	99	eP	Pn	05 04 29.5	-1.5
BO02	Sierra Bellavi	15.88	181	Pn	Pn	05 04 32.0	-0.6
TEFE	Tefe	16.24	21	eP	Pn	05 04 35.7	-1.4
H03N1	Juan Fernandez	16.43	206	T	T	05 21 36.5	
	baz=31,slow=73,SNR=1103						
H03N2	Juan Fernandez	16.44	206	T	T	05 21 36.8	
	baz=31,slow=73,SNR=777						
H03N3	Juan Fernandez	16.45	206	T	T	05 21 35.8	
	baz=31,slow=73,SNR=939						
ML02	Panimavida	16.87	183	P	Pn	05 04 43.4	-1.5
TRCB	Terra Rica	17.00	106	eP	Pn	05 04 46.1	-0.6
MACA	Manacapuru-AM	18.23	32		P	05 05 00.3	-1.0
MACA	Manacapuru-AM	18.23	32	eP	P	05 04 59.6	-1.7
LDASE	Londrina, Braz	18.48	107	eP	Pn	05 05 03.5	-1.3
NPGB	Novo Progresso	18.71	53	eP	P	05 05 05.4	-1.1
SNDB	Serra Nova Dou	19.58	72	eP	P	05 05 14.8	-1.2
SLOR	San Lorenzo -	19.71	335	P	P	05 05 17.0	-1.0
PLTB	Pedras Altas	19.81	134		P	05 05 18.3	-0.2
ITTB	Itaituba	20.27	47	eP	P	05 05 22.1	-1.4
TRQA	Tornquist	20.48	161	P	P	05 05 26.0	+0.4
OTAV	Otavalo	20.58	336	eP	P	05 05 27.3	-0.1
IPMB	Ipameri, GO	21.01	91	eP	P	05 05 27.2	-4.4
BDFB	Brasilia	21.55	85		P	05 05 35.0	-2.5
BDFB	Brasilia	21.55	85	P	P	05 05 34.8	-2.6
	comp=E,4.5nm,0.6s,baz=266,slow=9.0,SNR=11						
BDFB				LR	LR	05 15 23.9	
	comp=E,33nm,19.6s,baz=60,slow=41						
PLCA	Paso Flores	21.81	180		P	05 05 38.2	-1.7
PLCA				IAmb	IAmb	05 05 44.7	
	comp=Z,18nm,1.3s						
PLCA	Paso Flores	21.81	180	P	P	05 05 40.9	+1.0
	comp=Z,6.9nm,0.8s,baz=359,slow=11,SNR=19						
PLCA				LR	LR	05 13 35.1	
	comp=Z,71nm,18.8s,baz=348,slow=35						
	comp=Z,6.9nm,0.8s						
PLCA	Paso Flores	21.81	180	eP	P	05 05 42.9	+2.9
MAL2	Monte Alegre,	23.03	45		P	05 05 51.2	-1.9
MAL2				IAmb	IAmb	05 05 53.7	
	comp=Z,12nm,0.7s						
BOAV	Boa Vista	23.22	26		P	05 05 54.3	-0.5
BOAV				IAmb	IAmb	05 05 58.3	
	comp=Z,12nm,0.9s						

BOAV	Boa Vista	23.22	26	*e*P	P	05 05 53.3	-1.5
SMTB	Santa Maria do	24.18	69	*e*P	P	05 06 02.0	-1.7
RUSC	La Rusia	24.74	353		P	05 06 09.3	0.0
RUSC				IAmb	IAmb	05 06 13.2	
	comp=Z,18nm,1.1s						
JANB	Januaria	25.16	85	*e*P	P	05 06 12.2	-0.6
SDV	Santo Domingo	27.57	359	LR	LR	05 18 39.1	
	comp=Z,45nm,19.4s,baz=240,slow=39						
PCRV	Puerto La Cruz	29.39	11	LR	LR	05 19 58.1	
	comp=Z,106nm,20.4s,slow=39						
SJG	San Juan	36.96	7	LR	LR	05 23 53.1	
	comp=Z,30nm,20.6s,baz=222,slow=37						
HBVL	Hebbronville	53.28	328	IAmb	IAmb	05 10 16.4	
	comp=Z,8.2nm,1.2s						
HNDO	Hondo	55.62	329	P	P	05 10 23.5	+0.9
TKL	Tuckaleechee C	55.69	347	LR	LR	05 34 24.1	
	comp=Z,24nm,21.9s,baz=355,slow=36						
DRIO	Del Rio	56.19	328		P	05 10 26.9	+0.3
DRIO				IAmb	IAmb	05 10 28.6	
	comp=Z,4.3nm,0.8s						
MIAR	Mount Ida	57.52	337	P	P	05 10 36.0	0.0
MIAR				IAmb	IAmb	05 10 37.4	
	comp=Z,5.0nm,0.7s						
TXAR	Lajitas Array	57.70	325	P	P	05 10 38.2	+0.8
	comp=Z,0.9nm,0.6s,baz=153,slow=9.3,SNR=12						
	comp=Z,0.9nm,0.6s						
ABTX	Abilene, Hawle	58.37	331	IAmb	IAmb	05 10 43.7	
	comp=Z,4.4nm,0.8s						
MNHN	Monahans	58.82	328	IAmb	IAmb	05 10 47.1	
	comp=Z,5.8nm,1.1s						
HHAR	Hobbs	59.21	338	IAmb	IAmb	05 10 49.3	
	comp=Z,4.6nm,1.0s						
MGMO	Mountain Grove	59.42	340	IAmb	IAmb	05 10 50.7	
	comp=Z,8.2nm,1.2s						
FVM	French Village	59.61	342		P	05 10 50.8	+0.4
OK029	Liberty Lake	60.12	335	P	P	05 10 53.5	-0.5
MNTX	Cornudas Mount	60.47	326	IAmb	IAmb	05 10 57.6	
	comp=Z,1.7nm,0.8s						
CROK	Carrier	60.95	335	P	P	05 10 59.3	-0.3
BELA	Belgrano 2	61.54	172	P	P	05 11 03.6	+0.5
BELA				IAmb	IAmb	05 11 09.9	
	comp=Z,5.1nm,1.4s						
319A	Douglas	62.38	323	IAmb	IAmb	05 11 12.2	
	comp=Z,4.3nm,0.8s						
VNA3	Neumayer Olymp	63.00	162	⇓P	P	05 11 14.6	+1.6
	comp=Z,2.4nm,0.8s						
SNAA	Sanae	65.20	161	⇓P	P	05 11 28.6	+1.1
	comp=Z,46nm,0.6s						
SNAA	Sanae	65.20	161	P	P	05 11 28.4	+0.9
SNAA				IAmb	IAmb	05 11 29.6	
	comp=Z,2.4nm,0.7s						
SNAA	Sanae	65.20	161	P	P	05 11 28.5	+1.1
	comp=Z,1.9nm,0.6s,baz=274,slow=7.6,SNR=20						
	comp=Z,1.9nm,0.6s						
SDCO	Great Sand Dun	65.30	330	IAmb	IAmb	05 11 31.2	
	comp=Z,3.4nm,0.8s						
D62A	Allapoint, All	65.64	1	P	P	05 11 29.9	-0.5
MVCO	Mesa Verde	66.36	327	P	P	05 11 34.1	-1.5
TROLL	Troll, Antarti	66.92	161	⇓P	P	05 11 39.6	+1.1
	comp=Z,149nm,0.6s						
VLDQ	Val d'Or	66.96	355	P	P	05 11 39.9	+1.1
VLDQ				IAmb	IAmb	05 11 43.8	
	comp=Z,9.6nm,1.2s						
PV01	Paradox Valley	67.11	328	P	P	05 11 38.6	-1.7
PV15	Paradox Valley	67.22	328	IAmb	IAmb	05 11 44.4	
	comp=Z,4.6nm,0.9s						
HMU	Henry Mountain	68.07	326	IAmb	IAmb	05 12 28.0	
	comp=Z,3.6nm,1.0s						
KNB	Kanab	68.51	324	IAmb	IAmb	05 11 52.7	
	comp=Z,5.4nm,1.0s						
MVU	Marysvale	69.26	326	IAmb	IAmb	05 11 57.0	
	comp=Z,3.7nm,0.9s						
DBIC	Dimbokro	69.31	75	P	P	05 11 55.3	+1.0
	comp=Z,2.1nm,0.5s,baz=248,slow=7.6,SNR=5.8						
	comp=Z,2.1nm,0.5s						
PDAR	Pinedale Array	71.16	331	P	P	05 12 06.6	+1.3
	comp=Z,0.5nm,0.7s,baz=147,slow=4.2,SNR=4.7						
	comp=Z,0.5nm,0.7s						
EPLO	Experimental L	71.31	344	P	P	05 12 06.0	+0.3
EPLO				IAmb	IAmb	05 12 22.2	
	comp=Z,3.8nm,0.8s						
QSPA	South Pole Qui	71.32	180	P	P	05 12 06.4	+0.5
QSPA				IAmb	IAmb	05 12 32.4	
	comp=Z,4.1nm,0.9s						
QSPA	South Pole Qui	71.32	180	P	P	05 12 07.5	+1.6
	comp=Z,2.3nm,0.7s,baz=188,slow=0.8,SNR=22						
QSPA				pP	pP	05 12 24.4	+1.7
	comp=Z,1.8nm,0.7s,baz=168,slow=2.7,SNR=3.7						
	comp=Z,2.3nm,0.7s						
ULM	Lac du Bonnet	72.41	343	P	P	05 12 12.4	+0.1
	comp=Z,2.9nm,0.6s,baz=159,slow=6.5,SNR=6.9						
	comp=Z,2.9nm,0.6s						
ELK	Elko	72.50	326	IAmb	IAmb	05 12 15.5	
	comp=Z,5.8nm,1.5s						
NVAR	Mina Array Bea	72.59	322	P	P	05 12 15.2	+1.3
	comp=Z,1.0nm,0.9s,baz=148,slow=4.9,SNR=6.4						
	comp=Z,1.0nm,0.9s						
YNE	Yellowstone No	73.10	332	IAmb	IAmb	05 12 35.8	
	comp=Z,6.6nm,0.8s						
TORD	Torodi Ar. Bea	77.76	71	P	P	05 12 43.5	-0.3
TORD				IAmb	IAmb	05 13 03.3	
	comp=Z,4.1nm,0.9s						
TORD	Torodi Ar. Bea	77.76	71	P	P	05 12 43.7	-0.2
	comp=Z,3.5nm,0.4s,baz=259,slow=5.5,SNR=8.8						
TORD				pP	pP	05 12 59.6	-1.5
	comp=Z,5.4nm,0.8s,baz=274,slow=4.8,SNR=6.7						
	comp=Z,3.5nm,0.4s						
VNDA	Vanda	79.21	190	P	P	05 12 52.2	+1.3
	comp=Z,1.6nm,0.8s,baz=110,slow=3.6,SNR=5.4						
	comp=Z,1.6nm,0.8s						
ESDC	Sonseca Array	84.91	45	P	P	05 13 22.2	+0.9
	comp=Z,1.1nm,1.0s,baz=253,slow=5.3,SNR=4.0						
ESDC				pP	pP	05 13 39.6	+0.9
	comp=Z,0.7nm,0.8s,baz=252,slow=4.4,SNR=3.0						
	comp=Z,1.1nm,1.0s						
YKA	Yellowknife Ar	88.26	341	P	P	05 13 38.0	+1.0
	comp=Z,2.1nm,0.7s,baz=134,slow=4.2,SNR=18						
YKA				pP	pP	05 13 54.3	0.0
	comp=Z,2.6nm,0.9s,baz=135,slow=4.5,SNR=7.2						
	comp=Z,2.1nm,0.7s						
BORG	Borgarnes	91.36	19	LR	LR	05 50 39.1	
	comp=Z,15nm,21.2s,baz=306,slow=33						
MODS	Modra-Piesok	102.30	43	*e*PDIFF	Pdif	05 14 42.3	+0.8
STHS	Stebnicka Huta	105.09	43	*e*PDIFF	Pdif	05 15 00.8	+7.0
STHS				*e*PP	PP	05 19 17.0	+1.6
H11S2	WAKE ISLAND Hy	126.17	279	T	T	07 38 48.8	
	baz=101,slow=75,SNR=439						
H11S1	WAKE ISLAND Hy	126.18	279	T	T	07 38 48.5	
	baz=101,slow=75,SNR=523						
H11N3	WAKE ISLAND Hy	126.19	281	T	T	07 38 54.1	
	baz=100,slow=75,SNR=401						
H11S3	WAKE ISLAND Hy	126.19	279	T	T	07 38 49.3	
	baz=101,slow=75,SNR=350						
H11N2	WAKE ISLAND Hy	126.20	281	T	T	07 38 55.2	
	baz=100,slow=75,SNR=317						
H11N1	WAKE ISLAND Hy	126.21	281	T	T	07 38 59.7	
	baz=100,slow=75,SNR=261						
ASAR	Alice Springs	131.57	210	PKP	PKPdf	05 19 59.7	+0.2
	comp=Z,0.5nm,0.6s,baz=141,slow=2.2,SNR=6.2						
MORW	Morawa	131.96	188	PKPdf	PKPdf	05 19 59.8	-0.2
BVAR	Borovoye Array	134.33	32	PKP	PKiKP	05 20 04.3	-0.7
	comp=Z,0.6nm,0.5s,baz=336,slow=3.2,SNR=2.1						
WRA	Warramunga Arr	134.48	213	PKP	PKPdf	05 20 05.6	+0.6
	comp=Z,0.9nm,0.6s,baz=148,slow=1.7,SNR=9.2						
KURBB	Kurchatov Arra	139.81	31	PKP	PKPdf	05 20 13.5	-0.4
	comp=Z,0.3nm,0.3s,baz=305,slow=2.4,SNR=4.3						
ZALV	Zalesovo Beam	140.09	23	PKP	PKiKP	05 20 16.0	-0.7
	comp=Z,2.1nm,0.6s,baz=336,slow=3.3,SNR=5.7						
MAKZ	Makanchi	144.04	33	PKPdf	PKPdf	05 20 20.2	-1.4
MKAR	Makanchi Array	144.21	33	PKPdf	PKPdf	05 20 21.6	-0.3
MKAR	Makanchi Array	144.21	33	PKP	PKPdf	05 20 20.5	-1.3
	comp=Z,1.0nm,0.7s,baz=316,slow=3.1,SNR=7.7						
KLR	Kul'dur	144.87	335	PKP	PKPdf	05 20 22.8	-0.1
	comp=Z,1.1nm,0.7s,baz=68,slow=5.6,SNR=4.0						
COCO	West Island	146.66	157	PKPdf	PKPdf	05 20 25.1	-1.8
USRK	Ussuriysk Ar.	148.57	328	PKPab	PKiKP	05 20 34.7	+0.2
USRK	Ussuriysk Ar.	148.57	328	PKPbc	PKiKP	05 20 34.5	+0.1
	comp=Z,4.3nm,0.7s,baz=64,slow=0.7,SNR=7.0						
SONM	Songino Array	150.97	5	PKPbc	PKiKP	05 20 40.5	+1.0
	comp=Z,1.3nm,0.6s,baz=347,slow=6.1,SNR=5.7						

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*IDC **11** 05:13:15.5±0.9, 56°.49N×164°.20E, h0^{km}, mb3.7/14, mbtmp3.8/16, ML3.4/2, MS3.3/29, Error ellipse: s-maj=27.0km s-min=14.3km az=158.0*

*KRSC **11** 05:13:16.0±1.6, 56°.09N×164°.36E, h23^{km}±22^{km}, Ml4.4*

*MOS **11** 05:13:16.0±1.1, 56°.25N×164°.43E, h22^{km}, mb3.9/2, Error ellipse: s-maj=8.6km s-min=5.1km az=52.6*

*NEIC **11** 05:13:19.9±2.7, 56°.8N±0°.1×162°.8E±0°.3, h10^{km}±2^{km}, mb4.2/27, Error ellipse: s-maj=33.6km s-min=6.3km az=129.0*

ISC 11 05:13:14.9±1.5, 56°.18N±0°.04×164°.42E±0°.04, h2^{km}±10^{km}, n157, σ1^{s}.63/132, mb4.1/25, MS3.4/24, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.90	272	PN	Pg	05 13 32.0	-0.1
KBTR				S	Sg	05 13 43.4	-0.3
KBTR	Krutoberegovo	0.90	272	*e*P	Pg	05 13 32.1	-0.1
KBTR				*e*S	Sg	05 13 43.5	-0.3
KBG	Krutoberegovo	0.96	275	PN	Pg	05 13 33.1	-0.2
KBG				S	Sg	05 13 45.7	-0.1
KBG	Krutoberegovo	0.96	275	*e*P	Pg	05 13 33.1	-0.2
KBG				*e*S	Sg	05 13 45.8	-0.1
BKI	Bering	1.31	138	PN	Pn	05 13 39.7	-0.6
BKI				S	Sb	05 13 56.4	-1.2
BKI	Bering	1.31	138	*e*P	Pn	05 13 39.8	-0.6
BKI				*e*S	Sb	05 13 56.4	-1.2
SMKR	Semkarok	1.69	285	PN	Pn	05 13 45.1	-0.5
SMKR				S	Sn	05 14 06.1	-1.8
SMKR	Semkarok	1.69	285	*e*P	Pn	05 13 45.2	-0.5
SMKR				*e*S	Sn	05 14 06.1	-1.8
BDR	Baidarnaya	1.83	284	*e*S	Sn	05 14 10.6	-0.7
SRKR	Sorokina	1.87	286	*e*S	Sn	05 14 11.3	-0.9
ZLN	Zelenaya	2.04	267	PN	Pn	05 13 51.1	+0.8
ZLN	Zelenaya	2.04	267	*e*P	Pn	05 13 51.2	+0.8
BZGR	Bezymyannyi-Gr	2.10	265	PN	Pn	05 13 51.7	+0.4
BZGR				S	Sn	05 14 17.8	-0.3
BZGR	Bezymyannyi-Gr	2.10	265	*e*P	Pn	05 13 51.7	+0.4
BZGR				*e*S	Sn	05 14 17.9	-0.3
KLY	Klyuchi	2.11	275	PN	Pn	05 13 49.8	-1.4
KLY				S	Sn	05 14 14.7	-3.3
KLY	Klyuchi	2.11	275	*e*P	Pn	05 13 49.9	-1.4
KLY				*e*S	Sn	05 14 14.8	-3.3
KRSR	Krestovskiy	2.16	273	PN	Pn	05 13 52.0	0.0
KRSR	Krestovskiy	2.16	273	*e*P	Pn	05 13 52.1	0.0
BZWR	Bezymyannyi-We	2.21	266	PN	Pn	05 13 53.5	+0.7
BZWR	Bezymyannyi-We	2.21	266	*e*P	Pn	05 13 53.6	+0.7
BZMR	Bezymyannaya	2.22	265	PN	Pn	05 13 53.6	+0.7
BZMR	Bezymyannaya	2.22	265	*e*P	Pn	05 13 53.7	+0.7
MKZ	Mys Kozlova	2.24	224	PN	Pn	05 13 52.3	-0.7
MKZ				S	Sn	05 14 17.8	-3.4
MKZ	Mys Kozlova	2.24	224	*e*P	Pn	05 13 52.3	-0.7
MKZ				*e*S	Sn	05 14 17.8	-3.4
KIRR	Kirishev	2.30	266	PN	Pn	05 13 54.8	+0.8
KIRR				S	Sn	05 14 23.0	0.0
KIRR	Kirishev	2.30	266	*e*P	Pn	05 13 54.9	+0.8
KIRR				*e*S	Sn	05 14 23.0	0.0
KPT	Kopyto	2.37	267	PN	Pn	05 13 55.9	+1.0
KPT	Kopyto	2.37	267	*e*P	Pn	05 13 55.9	+1.0
KMNR	Kamenistaya	2.39	261	PN	Pn	05 13 55.9	+0.7
KMNR	Kamenistaya	2.39	261	*e*P	Pn	05 13 55.9	+0.7
TUMD	Tumrok D	2.48	248	PN	Pn	05 13 56.8	+0.4
TUMD	Tumrok D	2.48	248	*e*P	Pn	05 13 56.8	+0.4
KOZ	Kozyrevsk	2.55	269	PN	Pn	05 13 58.8	+1.4
KOZ				S	Sn	05 14 29.9	+0.9
KOZ	Kozyrevsk	2.55	269	*e*P	Pn	05 13 58.8	+1.4
KOZ				*e*S	Sn	05 14 29.9	+0.9
SRDR	Sredinnyy	2.63	275	PN	Pn	05 13 59.3	+0.8
SRDR				S	Sn	05 14 31.5	+0.5
SRDR	Sredinnyy	2.63	275	*e*P	Pn	05 13 59.3	+0.8
SRDR				*e*S	Sn	05 14 31.6	+0.5
OSSR	Ossora	3.16	347	PN	Pn	05 14 05.0	-0.7
OSSR	Ossora	3.16	347	*e*P	Pn	05 14 05.1	-0.7
ESO	Esso	3.22	268	PN	Pn	05 14 07.3	+0.8
ESO	Esso	3.22	268	*e*P	Pn	05 14 07.4	+0.8
KII	Karymskiy	3.58	235	PN	Pn	05 14 12.9	+1.4
KII	Karymskiy	3.58	235	*e*P	Pn	05 14 12.9	+1.4
SPN	Mys Shipunski	4.01	221	PN	Pn	05 14 16.5	-0.8
SPN	Mys Shipunski	4.01	221	*e*P	Pn	05 14 16.5	-0.8
SPN				*e*S	Sn	05 14 59.6	-5.3
SDLR	Sedlovina	4.33	230	PN	Pn	05 14 22.6	+0.7
SDLR	Sedlovina	4.33	230	*e*P	Pn	05 14 22.7	+0.7
KRER	Koryakskii	4.37	231	PN	Pn	05 14 24.4	+1.9
KRER	Koryakskii	4.37	231	*e*P	Pn	05 14 24.4	+1.9
KRX	Arik	4.38	232	PN	Pn	05 14 25.2	+2.7
KRX	Arik	4.38	232	*e*P	Pn	05 14 25.3	+2.7
SMAR	Somma	4.38	230	PN	Pn	05 14 23.4	+0.8
SMAR	Somma	4.38	230	*e*P	Pn	05 14 23.4	+0.8
AVH	Avacha	4.40	231	PN	Pn	05 14 24.0	+1.2
AVH	Avacha	4.40	231	*e*P	Pn	05 14 24.1	+1.2
UGLR	Uglovaya	4.41	230	PN	Pn	05 14 23.9	+1.0
UGLR	Uglovaya	4.41	230	*e*P	Pn	05 14 24.0	+1.0
KOK	Koryaka	4.43	232	PN	Pn	05 14 25.7	+2.5
KOK	Koryaka	4.43	232	*e*P	Pn	05 14 25.7	+2.5
GNL	Ganaly	4.49	239	PN	Pn	05 14 25.7	+1.6
GNL	Ganaly	4.49	239	*e*P	Pn	05 14 25.7	+1.6
PET	Petropavlovsk	4.61	229	Pn	Pn	05 14 26.1	+0.6
PET	Petropavlovsk	4.61	229	*e*PN	Pn	05 14 25.7	+0.1
PET				pmax	pmax		
	comp=Z,28nm,0.6s						
PET				MLR	MLR		
	comp=Z,200nm,7.0s						
PET				MLR	MLR		
	comp=Z,400nm,9.0s						
PEA0B	Petropavlovsk-	4.97	235	Pn	Pn	05 14 32.0	+1.4
PEA0B	Petropavlovsk-	4.97	235	*i* PN	Pn	05 14 30.6	0.0
PETK	Petropavlovsk-	4.97	235	Pn	Pn	05 14 30.6	0.0
PETK	Petropavlovsk-	4.97	235	Pn	Pn	05 14 31.7	+1.1
	comp=Z,1.0nm,0.3s,baz=69,slow=16,SNR=12						
PETK				Sn	Sn	05 15 32.5	+3.8
	comp=Z,0.8nm,0.3s,baz=57,slow=24,SNR=2.7						
PETK				LR	LR	05 16 02.8	
	comp=Z,32nm,19.7s,baz=45,slow=33						
	comp=Z,6.8nm,0.7s						
RUS	Russkaya	5.11	225	PN	Pn	05 14 33.3	+0.9
RUS	Russkaya	5.11	225	*e*P	Pn	05 14 33.3	+0.9
GRL	Gorelyy	5.20	228	PN	Pn	05 14 35.8	+2.1
GRL	Gorelyy	5.20	228	*e*P	Pn	05 14 35.9	+2.1
MTVR	Mutnovka	5.20	227	PN	Pn	05 14 35.4	+1.5
MTVR	Mutnovka	5.20	227	*e*P	Pn	05 14 35.4	+1.5
APC	Apacha	5.34	235	PN	Pn	05 14 38.3	+2.7
APC	Apacha	5.34	235	*e*P	Pn	05 14 38.4	+2.7
ASAK	Asacha	5.39	228	PN	Pn	05 14 38.0	+1.6
ASAK	Asacha	5.39	228	*e*P	Pn	05 14 38.1	+1.6
SHEM	Shemya Is, Ala	6.62	117	LR	LR	05 16 43.6	
	comp=Z,173nm,21.9s,baz=318,slow=30						
MA2	Magadan	8.03	301	LR	LR	05 18 09.7	
	comp=Z,51nm,19.4s,baz=298,slow=38						
MA2	Magadan	8.03	301	*i* PN	Pn	05 15 12.4	-0.2
BILL	Bilibino	11.93	3	Pn	Pn	05 16 03.5	-2.4
BILL	Bilibino	11.93	3	*i* PN	Pn	05 16 08.2	+2.3
F15K	North Star Dit	17.59	45	P	P	05 17 28.2	+6.1
L14K	Kuka Creek	17.69	59		P	05 17 27.7	+4.6
L14K				IAmb	IAmb	05 17 29.7	
	comp=Z,12nm,0.6s						
K15K	Wolf Creek Mou	18.29	56		P	05 17 36.1	+6.3
JKA	Kamikawa-asahi	18.38	238	P	Pn	05 17 29.8	-1.0
JKA				IAmb	IAmb	05 17 33.5	
	comp=Z,23nm,0.9s						
ASAJ	Asahikawa	18.38	238	P	Pn	05 17 31.3	+0.5
	comp=Z,0.5nm,0.3s,baz=54,slow=4.9,SNR=15						
ASAJ				LR	LR	05 25 13.4	
	comp=Z,105nm,18.3s,baz=73,slow=39						
	comp=Z,22nm,0.9s						
ASAJ	Asahikawa	18.38	238	P	Pn	05 17 29.8	-1.0
ASAJ				pmax	pmax		
	comp=Z,23nm,0.9s						
YAK	Yakutsk	18.60	303	LR	LR	05 25 19.7	
	comp=Z,55nm,18.6s,baz=74,slow=40						
L16K	Owhat River	19.24	58	P	Pn	05 17 48.5	+7.5
J17K	VABM Dome	19.50	53	P	Pn	05 17 52.4	+8.2
J17K				IAmb	IAmb	05 17 57.5	
	comp=Z,16nm,1.4s						
ERM	Erimo	19.75	233	P	P	05 17 45.5	-0.3
ERM	Erimo	19.75	233	P	P	05 17 45.6	-0.3
ERM				pmax	pmax		
	comp=Z,48nm,1.5s						
K17K	Iditarod	19.81	55		Pn	05 17 55.1	+7.2
K17K				IAmb	IAmb	05 18 00.5	
	comp=Z,10nm,1.0s						
C18K	Utukok River	19.87	37		Pn	05 17 49.1	+0.4
M17K	Holitna River	20.22	59		Pn	05 17 58.0	+5.2
M17K				IAmb	IAmb	05 18 07.5	
	comp=Z,16nm,1.3s						
C19K	Lookout Ridge	20.58	37		Pn	05 18 00.0	+3.0
KLR	Kul'dur	20.83	264	LR	LR	05 26 39.9	
	comp=Z,49nm,18.1s,baz=18,slow=39						
KLR	Kul'dur	20.83	264	*i* P	P	05 17 57.1	-0.5
KLR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
D19K	Kuna River	20.89	39		Pn	05 18 04.7	+4.1
E19K	Redstone River	20.93	42		Pn	05 18 03.4	+2.4
E19K				IAmb	IAmb	05 18 11.9	
	comp=Z,12nm,1.4s						
D20K	Etivluk River	21.48	39	P	P	05 18 08.7	+4.3
D20K				IAmb	IAmb	05 18 18.3	
	comp=Z,9.6nm,1.2s						
TIXI	Tiksi	21.49	330	LR	LR	05 26 49.8	
	comp=Z,62nm,19.7s,baz=222,slow=38						
B20K	Meade River	21.70	35	P	P	05 18 09.2	+2.4
K20K	Telida	21.75	54	P	P	05 18 15.9	+8.5
K20K				IAmb	IAmb	05 18 21.6	
	comp=Z,11nm,1.3s						
IMAR	Indian Mountai	22.03	47	P	P	05 18 18.5	+8.1
G21K	Allakaket	22.19	45		P	05 18 19.4	+7.2
G21K				IAmb	IAmb	05 18 25.5	
	comp=Z,8.2nm,1.2s						
B21K	Ikpikpuk River	22.42	37		P	05 18 16.6	+2.1
B21K				IAmb	IAmb	05 18 27.6	
	comp=Z,16nm,1.5s						
KDAK	Kodiak Island	23.20	68	P	P	05 18 23.0	+0.3
	comp=Z,6.3nm,0.8s,baz=88,slow=11,SNR=1.7						
	comp=Z,6.3nm,0.8s						
USRK	Ussuriysk Ar.	23.73	253	LR	LR	05 27 37.8	
	comp=Z,74nm,20.8s,baz=41,slow=36						
H23K	Yukon River	23.74	47	P	P	05 18 34.2	+6.0
C23K	Itkillik River	23.82	37	P	P	05 18 33.2	+4.3
C23K				IAmb	IAmb	05 18 40.8	
	comp=Z,12nm,1.5s						
E23K	Chandalar	23.88	42		P	05 18 33.9	+4.3
E23K				IAmb	IAmb	05 18 42.6	
	comp=Z,4.6nm,0.8s						
NEA2	Nenana	23.94	50	P	P	05 18 37.6	+7.5
NEA2				IAmb	IAmb	05 18 44.2	
	comp=Z,5.9nm,1.2s						
TOLK	Toolik Lake Re	23.98	40	P	P	05 18 35.8	+5.4
TOLK				IAmb	IAmb	05 18 42.4	
	comp=Z,3.2nm,0.6s						
E24K	Your Creek	24.31	42	IAmb	IAmb	05 18 46.5	
	comp=Z,7.6nm,1.1s						
ILAR	Eielson Array	24.87	50	P	P	05 18 38.2	-0.4
	comp=Z,0.3nm,0.5s,baz=270,slow=9.6,SNR=6.1						
	comp=Z,0.3nm,0.5s						
SCM	Sheep Creek Mo	24.98	57	P	P	05 18 48.4	+8.7
MJAR	Matsushiro Arr	26.43	233	LR	LR	05 30 08.8	
	comp=Z,71nm,19.4s,baz=36,slow=38						
KSRS	Korea Array	30.71	248	P	P	05 19 31.6	+0.6
	comp=Z,0.7nm,0.5s,baz=40,slow=9.7,SNR=1.9						
	comp=Z,0.7nm,0.5s						
JNU	Nakatsue	32.65	239	LR	LR	05 34 04.7	
	comp=Z,44nm,18.1s,baz=36,slow=38						
DLBC	Dease Lake	34.22	58	LR	LR	05 33 56.2	
	comp=Z,89nm,19.6s,baz=310,slow=36						
SONM	Songino Array	35.70	282	P	P	05 20 14.5	-0.1
	comp=Z,0.3nm,0.3s,baz=40,slow=9.5,SNR=1.5						
	comp=Z,0.3nm,0.3s						
H11N2	WAKE ISLAND Hy	36.44	176	T	T	05 59 16.3	
	baz=358,slow=74						
H11N3	WAKE ISLAND Hy	36.45	176	T	T	05 59 17.4	
	baz=358						
H11N1	WAKE ISLAND Hy	36.46	176	T	T	05 59 22.1	
	baz=358,slow=74						
H11S1	WAKE ISLAND Hy	37.65	176	T	T	06 00 47.4	
	baz=359						
H11S3	WAKE ISLAND Hy	37.66	176	T	T	06 00 31.8	
	baz=359						
H11S2	WAKE ISLAND Hy	37.67	176	T	T	06 00 44.4	
	baz=359						
JOW	Kunigami	39.13	237	LR	LR	05 37 02.6	
	comp=Z,78nm,20.9s,baz=142,slow=36						
YKA	Yellowknife Ar	39.19	47	P	P	05 20 44.9	+1.0
	comp=Z,0.3nm,0.8s,baz=297,slow=9.1,SNR=1.7						
	comp=Z,0.3nm,0.8s						
NJ2	Nanjing	39.62	252	*e*P	P	05 20 49.0	+1.2
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SPITS	Spitsbergen Ar	44.49	351	P	P	05 21 23.9	-3.1
	comp=Z,3.7nm,0.8s,baz=46,slow=6.2,SNR=2.8						
	comp=Z,3.7nm,0.8s						
NEW	Newport	46.24	65	LR	LR	05 43 03.3	
	comp=Z,22nm,18.1s,baz=299,slow=39						
KURK	Kurchatov	48.24	302	P	P	05 21 56.3	-0.5
KURBB	Kurchatov Arra	48.35	302	P	P	05 21 56.3	-1.4
	comp=Z,0.4nm,0.3s,baz=48,slow=7.4,SNR=4.4						
	comp=Z,0.4nm,0.3s						
MKAR	Makanchi Array	49.08	296	P	P	05 22 02.1	-1.3
	comp=Z,0.1nm,0.4s,baz=74,slow=6.2,SNR=1.8						
	comp=Z,0.1nm,0.4s						
BVAR	Borovoye Array	50.44	309	P	P	05 22 12.4	-1.1
	comp=Z,1.8nm,0.6s,baz=47,slow=8.7,SNR=9.2						
BVAR				LR	LR	05 46 55.7	
	comp=Z,27nm,20.8s,baz=58,slow=40						
	comp=Z,1.8nm,0.6s						
ARCES	ARCESS Array B	51.11	343	LR	LR	05 45 39.8	
	comp=Z,22nm,18.9s,baz=322,slow=38						
PDAR	Pinedale Array	53.88	65	P	P	05 22 39.6	0.0
	comp=Z,0.3nm,0.5s,baz=326,slow=8.4,SNR=2.3						
PDAR				LR	LR	05 44 28.3	
	comp=Z,13nm,18.2s,baz=316,slow=35						
	comp=Z,0.3nm,0.5s						
KIRV	Kirov	54.38	324	LR	LR	05 47 31.2	
	comp=Z,32nm,19.8s,baz=11,slow=38						
FINES	FINESS Array B	58.24	338	P	P	05 23 08.0	-2.2
	comp=Z,1.6nm,0.8s,baz=27,slow=7.1,SNR=2.5						
FINES				LR	LR	05 50 20.9	
	comp=Z,24nm,21.8s,baz=38,slow=38						
	comp=Z,1.6nm,0.8s						
FINES	FINESS Array B	58.24	338	P	P	05 23 08.0	-2.2
OBN	Obninsk	61.22	329	*e*P	P	05 23 31.4	+0.6
OBN				*e*		05 25 46.4	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NOA	NORSAR Array B	61.23	346	P	P	05 23 29.9	-1.0
	comp=Z,0.5nm,0.6s,baz=3.6,slow=9.8,SNR=3.2						
	comp=Z,0.5nm,0.6s						
CMAR	Chiang Mai Arr	61.24	260	P	P	05 23 32.5	+1.0
	comp=Z,0.9nm,0.3s,baz=33,slow=7.2,SNR=1.7						
CMAR				LR	LR	05 51 15.6	
	comp=Z,36nm,19.4s,baz=85,slow=37						
	comp=Z,0.9nm,0.3s						
SCHQ	Schefferville	61.72	31	LR	LR	05 52 03.1	
	comp=Z,22nm,20.1s,baz=324,slow=38						
TXAR	Lajitas Array	67.18	71	P	P	05 24 11.3	+0.9
	comp=Z,0.2nm,0.5s,baz=301,slow=5.1,SNR=5.9						
	comp=Z,0.2nm,0.5s						
AKASG	Malin Array Be	67.20	331	LR	LR	05 55 55.4	
	comp=Z,35nm,19.1s,baz=20,slow=38						
GNI	Garni	71.32	315	LR	LR	06 01 44.1	
	comp=Z,26nm,19.7s,baz=26,slow=41						
VRAC	Vranov	71.52	338	LR	LR	06 00 11.4	
	comp=Z,24nm,18.9s,baz=348,slow=40						
TKL	Tuckaleechee C	71.82	53	LR	LR	05 57 02.2	
	comp=Z,25nm,18.8s,baz=334,slow=37						
GERES	GERESS Array B	72.53	340	LR	LR	05 59 35.5	
	comp=Z,16nm,20.2s,baz=2.5,slow=38						
MLR	Muntele Rosu	72.86	331	LR	LR	05 57 57.3	
	comp=Z,52nm,20.3s,baz=79,slow=37						
ASF	Jabal al Asfar	81.35	317	LR	LR	06 05 03.6	
	comp=Z,28nm,18.0s,baz=169,slow=38						
EIL	Elat	84.32	318	LR	LR	06 06 26.5	
	comp=Z,28nm,19.1s,baz=232,slow=38						
RAO	Raoul Island	86.41	165	LR	LR	05 58 59.3	
	comp=Z,116nm,20.5s,baz=102,slow=32						
QSPA	South Pole Qui	145.93	180	PKPbc	PKPab	05 32 56.6	+1.5
	comp=Z,1.3nm,1.1s,baz=44,slow=17,SNR=2.0						

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*ASRS **11** 05:28:14.0±0.5, 55°.54N×86°.16E, h0^{km}, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 11 05:28:15.1±3.7, 55°.55N×86°.38E, h0^{km}, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=29.2km s-min=26.9km az=15.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.84	210	I	I	05 39 40.0	
	baz=25,slow=328,SNR=3.1						
ZALV	Zalesovo Beam	1.84	210	Pg	Pn	05 28 48.3	+0.4
	3.0nm,0.3s,baz=33,slow=17,SNR=22						
ZALV				Lg	Lg	05 29 13.5	
	2.3nm,0.3s,baz=34,slow=28,SNR=6.5						
KURBB	Kurchatov Arra	6.83	227	Pn	Pn	05 29 56.0	-0.4

	0.1nm,0.3s,baz=43,slow=14,SNR=2.8						
KURBB				Lg	Lg	05 31 53.2	
	baz=47,slow=30,SNR=4.8						
	0.3nm,0.3s						
MKAR	Makanchi Array	9.14	198	Pn	Pn	05 30 28.6	+0.6
	0.1nm,0.3s,baz=21,slow=13,SNR=2.1						
	0.2nm,0.6s						

IDC 11 05:28:57.3±1.8, 30°.33S×118°.13E, h0^{km}, mb3.5/1, mbtmp3.5/5, ML3.5/3, Error ellipse: s-maj=54.6km s-min=28.2km az=122.0

AUST 11 05:28:59.9±0.3, 30°S±2°×11°8E±°, h10^{km}, mb4.9/2, ML3.2/5, Error ellipse: s-maj=5.2km s-min=4.4km az=80.9

NOU 11 05:28:59.6, 30°.41S×117°.72E, h0^{km}, MLv3.8/12, Western Australia

ISC 11 05:28:58.7±0.8, 30°.38S±0°.03×117°.81E±0°.04, h10^{km}, n33, σ1^s.54/35, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLDU	Ballidu	0.98	256	P	Pg	05 29 17.5	0.0
BLDU	Ballidu	0.98	256	S	Sg	05 29 29.3	-0.9
BLDU	Ballidu	0.98	256	P	Pg	05 29 17.4	-0.1
BLDU	Ballidu	0.98	256	S	Sg	05 29 29.5	-0.7
KLBR	Kellerberrin	1.21	182	P	Pg	05 29 22.6	+0.6
KLBR	Kellerberrin	1.21	182	S	Sb	05 29 37.5	0.0
KLBR	Kellerberrin	1.21	182	P	Pg	05 29 22.6	+0.6
KLBR	Kellerberrin	1.21	182	S	Sb	05 29 37.7	+0.2
MORW	Morawa	2.02	310	P	Pn	05 29 34.1	+1.4
MORW	Morawa	2.02	310	S	Sn	05 29 58.9	+0.9
MORW	Morawa	2.02	310	P	Pn	05 29 34.2	+1.4
MORW	Morawa	2.02	310	S	Sn	05 29 59.3	+1.3
MUN	Mundaring	2.10	220	P	Pn	05 29 35.3	+1.3
MUN	Mundaring	2.10	220	S	Sn	05 30 00.5	+0.3
MUN	Mundaring	2.10	220	P	Pn	05 29 35.5	+1.5
MUN	Mundaring	2.10	220	S	Sn	05 30 00.1	-0.1
NWAO	Narrogin (SRO)	2.59	191	P	Pn	05 29 42.2	+1.5
NWAO	Narrogin (SRO)	2.59	191	S	Sn	05 30 11.1	-1.1
NWAO	Narrogin (SRO)	2.59	191	Pn	Pn	05 29 42.0	+1.4
	8.5nm,0.7s,baz=30,slow=14,SNR=9.3						
NWAO				Sn	Sn	05 30 11.7	-0.5
	5.7nm,0.3s,baz=261,slow=16,SNR=14						
NWAO				Lg	Lg	05 30 18.1	
	14nm,0.3s,baz=95,slow=23,SNR=44						
NWAO	Narrogin (SRO)	2.59	191	P	Pn	05 29 42.3	+1.6
NWAO	Narrogin (SRO)	2.59	191	S	Sn	05 30 12.8	+0.6
KMBL	Kambalda	3.64	107	P	Pn	05 29 56.3	+1.2
KMBL	Kambalda	3.64	107	P	Pn	05 29 57.3	+2.2
MEEK	Meekatharra	3.79	11	P	Pn	05 29 59.2	+2.0
MEEK	Meekatharra	3.79	11	S	Sn	05 30 40.9	-1.0
MEEK	Meekatharra	3.79	11	P	Pn	05 30 00.5	+3.3
RKGY	Rocky Gully	4.28	189	P	Pn	05 30 05.1	+1.2
RKGY				S	Sn	05 30 54.2	+0.3
GIRL	Giralia	8.34	337	P	Pn	05 31 00.7	+1.0
	comp=Z,324nm,1.9s,comp=Z,0.8nm						
FORT	Forrest	8.85	95	P	Pn	05 31 07.4	+0.7
	comp=Z,39nm,1.2s,comp=Z,0.2nm						
FITZ	Fitzroy Crossi	14.15	32	Pn	Pn	05 32 18.0	-1.2
	comp=Z,0.4nm,0.3s,baz=217,slow=11,SNR=14						
FITZ				Sn	Sn	05 34 44.9	-11
	comp=Z,0.2nm,0.3s,baz=268,slow=14,SNR=2.7						
	comp=Z,3.2nm,0.7s						
ASAR	Alice Springs	15.82	69	Pn	Pn	05 32 38.0	-3.7
	comp=Z,0.2nm,0.3s,baz=242,slow=11,SNR=8.2						
ASAR				Sn	Sn	05 35 24.0	-13
	baz=246,slow=20						
	comp=Z,0.6nm,0.4s						
WRA	Warramunga Arr	18.20	59	P	Pn	05 33 07.7	-3.9
	comp=Z,0.1nm,0.3s,baz=232,slow=13,SNR=6.7						
WRA				S	Sn	05 36 19.0	-16
	comp=Z,0.5nm,0.7s,baz=237,slow=23,SNR=2.7						
	comp=Z,0.4nm,0.6s						
MKAR	Makanchi Array	83.24	336	P	P	05 41 25.5	+0.4
	comp=Z,0.3nm,0.6s,baz=150,slow=6.0,SNR=2.2						
	comp=Z,0.3nm,0.6s						

IDC 11 05:39:47.3±1.2, 1°.51S×120°.80E, h0^{km}, mb3.6/5, mbtmp3.7/5, Error ellipse: s-maj=108.6km s-min=20.3km az=58.0

DJA 11 05:39:48.9±0.2, 2°S±1°×12°1E±°, h10^{km}, M4.2/12, mb4.5/3, MLv4.1/12

ISC 11 05:39:47.6±0.7, 1°.88S±0°.04×120°.54E±0°.05, h10^{km}, n15, σ1^s.61/21, mb3.8/5, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCI	Palu	1.19	324	P	Pn	05 40 09.4	-1.0
PCI				S	Sn	05 40 27.9	+1.2
TTSI	Tana Toraja	1.37	212	P	Pb	05 40 12.4	-0.9
TTSI				S	Sb	05 40 30.0	-0.9
APSI	Ampana	1.46	49	P	Pg	05 40 14.9	-0.8
SPSI	Sidrap Palu	2.21	200	P	Pb	05 40 26.7	-1.1
SPSI				S	Sb	05 40 54.1	-1.2
MPSI	Mapaga	2.29	344	P	Pn	05 40 26.0	+0.5
MPSI				S	Sb	05 40 55.3	-2.1
LUWI	Luwuk	2.38	70	P	Pn	05 40 26.7	+0.1
LUWI				S	Sb	05 40 57.9	-2.0
BNSI	Bone	2.55	190	P	Pb	05 40 32.4	-1.0
BNSI				S	Sb	05 41 03.3	-1.5
MRSI	Marisa	2.72	31	P	Pn	05 40 32.4	+1.0
BKB	Balikpapan	3.70	279	P	Pn	05 40 47.3	+2.5
NLAI	Namlea	6.69	102	P	Pn	05 41 27.5	+1.5
	0.2nm29nm,0.7s						
WRA	Warramunga Arr	22.46	144	P	P	05 44 48.4	+1.3
	0.5nm,0.7s,baz=320,slow=11,SNR=5.7						
	0.5nm,0.7s						
ASAR	Alice Springs	25.23	150	P	P	05 45 17.9	+3.9
	0.7nm,0.7s,baz=332,slow=9.7,SNR=7.2						
	0.7nm,0.7s						
CMAR	Chiang Mai Arr	29.33	314	P	P	05 45 51.4	+0.6
	0.8nm,0.3s,baz=124,slow=8.9,SNR=4.5						
	0.8nm,0.3s						
SONM	Songino Array	51.03	348	P	P	05 48 49.6	-0.4
	1.2nm,0.6s,baz=157,slow=6.8,SNR=4.5						
	1.2nm,0.6s						
MKAR	Makanchi Array	58.96	330	P	P	05 49 46.7	-0.6
	0.5nm,0.7s,baz=132,slow=8.0,SNR=4.6						
	0.5nm,0.7s						

IDC 11 05:45:52.0±0.5, 2°.37N×116°.78E, h0^{km}, mb4.4/16, mbtmp4.4/17, ML4.4/1, MS3.5/11, Error ellipse: s-maj=38.9km s-min=11.5km az=62.0

NEIC 11 05:45:55.0±1.6, 2°.46N±0°.06×116°.95E±0°.04, h10^{km}±1^{km}, mb4.7/40, Error ellipse: s-maj=11.5km s-min=5.2km az=211.0

DJA 11 05:45:56.3±0.5, 3°N±2°×11°7E±°, h19^{km}±4^{km}, M4.9/25, mb4.8/25, mB5.5/7, MLv4.8/14, Mw(mB)5.0/7

ISC 11 05:45:54.7±0.4, 2°.48N±0°.05×117°.04E±0°.07, h10^{km}, n108, σ1^s.30/90, mb4.7/42, MS3.6/7, 1D, Borneo

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMKI	Samarinda	2.91	177	Pn	Pn	05 46 41.8	+0.7
SMKI				S	Sn	05 47 19.7	+3.5
MYLDM	Lahad Datu	3.05	28		Pn	05 46 43.7	+0.7
MPSI	Mapaga	3.56	127	P	Pn	05 46 50.0	0.0
KKM	Kota Kinabalu	3.63	347		Pn	05 46 51.5	+0.4
BKB	Balikpapan	3.72	182	Pn	Pn	05 46 50.5	-1.7
TOLI2	Tolitoli	3.98	110		Pn	05 46 56.0	+0.3
PCI	Palu	4.37	140	P	Pn	05 47 01.7	+0.5
MRSI	Marisa	5.29	112	P	Pn	05 47 14.0	+0.2
	0.4nm89nm,0.7s						
APSI	Ampana	5.71	126	P	Pn	05 47 21.7	+2.1
	0.5nm1µm104nm,0.9s						
STKI	Sintang	6.06	247	P	Pn	05 47 25.5	+1.1
TTSI	Tana Toraja	6.15	153	P	Pn	05 47 27.5	+1.8
	0.4nm99nm,0.7s						
LUWI	Luwuk	6.71	121	Pn	Pn	05 47 32.6	-0.8
LUWI	Luwuk	6.71	121	P	Pn	05 47 33.5	+0.1
	0.4nm2µm103nm,0.8s						
SPSI	Sidrap Palu	6.96	157	P	Pn	05 47 38.0	+1.2
	0.5nm148nm,1.0s						
BNSI	Bone	7.49	156	P	Pn	05 47 46.0	+1.9
	0.3nm81nm,0.8s						
KAPI	Kappang	7.92	160		Pn	05 47 51.5	+1.5
KAPI	Kappang	7.92	160	Pn	Pn	05 47 49.7	-0.3
	5.1nm,0.3s,baz=316,slow=12,SNR=17						
KAPI				Sn	Sn	05 49 17.3	-2.5
	1.3nm,0.3s,baz=128,slow=19,SNR=1.1						
KAPI				LR	LR	05 52 03.9	
	comp=Z,148nm,18.6s,baz=317,slow=47						
	37nm,0.6s						
DAV	Davao City (W)	9.65	62	LR	LR	05 52 04.0	
	comp=Z,146nm,18.4s,baz=172,slow=37						
GMJI	Gumukmas	11.27	199	P	Pn	05 48 37.0	+1.1
NLAI	Namlea	11.55	119	P	Pn	05 48 39.8	+0.1
	30nm,0.9s						
WSI	Waingapu	12.50	165	P	Pn	05 48 54.9	+2.2
LEM	Lembang	13.19	225	LR	LR	05 54 28.3	
	comp=Z,264nm,18.6s,baz=290,slow=40						
SOEI	Soe	14.13	149	P	Pn	05 49 19.4	+4.3
	61nm,1.1s						
MDSI	Maura Dua	14.60	242	P	Pn	05 49 24.1	+2.6
	15nm,1.4s						
SWI	Sorong	14.60	103	P	Pn	05 49 22.1	+0.6
	26nm,0.7s						
FAKI	Fak Fak	16.12	109	Pn	Pn	05 49 43.0	+1.4
FAKI	Fak Fak	16.12	109	P	Pn	05 49 42.8	+1.2
	29nm,1.0s						
RPSI	Rantau Prapat	18.10	271	P	Pn	05 50 06.1	-0.3
PSI	Prapat	18.10	271	P	Pn	05 50 06.1	-0.5
	5.8nm,0.8s,baz=80,slow=10.0,SNR=6.2						
PSI				LR	LR	05 56 23.9	
	comp=Z,197nm,20.0s,baz=126,slow=35						
GSI	Gunungsitoli	19.49	267		P	05 50 21.6	-0.6
GSI				IAmb	IAmb	05 50 25.4	
	comp=Z,51nm,0.8s						
GSI	Gunungsitoli	19.49	267	P	P	05 50 22.0	-0.1
	comp=Z,5µmcomp=Z,76nm,0.8s						
SMPI	Sarmi	22.11	101	P	P	05 50 51.4	+0.9
FITZ	Fitzroy Crossi	22.14	158	P	P	05 50 51.2	+0.5
MBWA	Marble Bar	23.64	174	P	P	05 51 05.3	-1.0
MBWA				IAmb	IAmb	05 51 06.8	
	comp=Z,32nm,1.4s						
CMAR	Chiang Mai Arr	23.80	313		P	05 51 07.7	-0.3
CMAR	Chiang Mai Arr	23.80	313	P	P	05 51 06.2	-1.8
	comp=Z,0.9nm,0.3s,baz=143,slow=9.2,SNR=9.3						
CMAR				LR	LR	06 02 38.5	
	comp=Z,79nm,18.2s,baz=165,slow=42						
	comp=Z,0.9nm,0.3s						
PSA00	Pilbara Seismi	24.06	174	P	P	05 51 09.2	-1.1
PSA00				IAmb	IAmb	05 51 45.1	
	comp=Z,32nm,1.4s						
WB0	Warramunga Arr	27.91	143	P	P	05 51 45.3	0.0
WB0				IAmb	IAmb	05 51 54.9	
	comp=Z,16nm,1.4s						
WRAB	Tennant Creek	28.02	143	P	P	05 51 45.4	-0.8
WRA	Warramunga Arr	28.02	143	P	P	05 51 46.5	+0.4
WRA	Warramunga Arr	28.02	143	P	P	05 51 45.4	-0.7
	comp=Z,3.9nm,0.9s,baz=328,slow=9.3,SNR=18						
WRA				PcP	PcP	05 55 00.4	-0.8
	comp=Z,0.8nm,0.8s,baz=324,slow=2.7,SNR=5.2						
	comp=Z,3.9nm,0.9s						
PZH	PanZhiHua	28.04	330	P	P	05 51 48.4	+2.0
PZH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,110nm,5.3s						
WR8	Warramunga Arr	28.12	143	P	P	05 51 46.9	-0.2
ASAR	Alice Springs	30.74	149	P	P	05 52 10.3	0.0
	comp=Z,0.7nm,0.4s,baz=320,slow=6.8,SNR=10						
ASAR				PcP	PcP	05 55 07.5	-0.7
	comp=Z,1.7nm,0.8s,baz=323,slow=1.7,SNR=11						
ASAR				LR	LR	06 04 37.3	
	comp=Z,83nm,18.5s,baz=278,slow=37						
	comp=Z,0.7nm,0.4s						
LYN	LuoYang	32.19	353	P	P	05 52 24.8	+1.9
LYN				pmax	pmax		
	comp=Z,22nm,0.8s						
LZH	Lanzhou	35.60	341	*e*P	P	05 52 49.5	-3.3
LZH				pP	pP	05 52 53.8	-2.1
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
EVN	Everest	38.40	314		P	05 53 15.0	-2.2
HHC	Hu-ho-hao-te	38.51	353	*e*P	P	05 53 18.2	+0.8
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						
MJAR	Matsushiro Arr	39.12	27	P	P	05 53 22.5	0.0
	comp=Z,4.0nm,1.0s,baz=200,slow=7.8,SNR=4.6						
MJAR				LR	LR	06 08 51.2	
	comp=Z,32nm,21.2s,baz=284,slow=35						
	comp=Z,4.0nm,1.0s						
BBOO	Buckleboo	39.45	154	P	P	05 53 25.0	-0.1
BBOO				IAmb	IAmb	05 53 25.7	
	comp=Z,25nm,1.3s						
GTA	Gaotai	39.96	339	*e*P	P	05 53 30.3	+0.7
GTA				pP	pP	05 53 33.9	+1.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
STKA	Stephens Creek	41.36	148	P	P	05 53 41.0	-0.1
STKA	Stephens Creek	41.36	148	P	P	05 53 40.2	-0.8
	comp=Z,8.3nm,0.8s,baz=308,slow=8.6,SNR=11						
	comp=Z,8.3nm,0.8s						
MDJ	Mudanjiang	43.40	13	P	P	05 53 58.6	+1.1
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ULN	Ulaanbaatar	46.03	351		P	05 54 18.9	+0.3
SONM	Songino Array	46.11	350		P	05 54 19.0	-0.2
SONM				IAmb	IAmb	05 54 21.8	
	comp=Z,8.5nm,1.0s						
SONM	Songino Array	46.11	350	P	P	05 54 18.4	-0.8
	comp=Z,9.3nm,1.0s,baz=170,slow=8.1,SNR=17						
	comp=Z,9.3nm,1.0s						
CAN	Canberra	48.05	144	P	P	05 54 35.0	+0.5
HEH	HeiHe	48.41	9	*e*P	P	05 54 38.1	+1.2
HEH				pmax	pmax		
	comp=Z,20nm,0.8s						
HEH				pmax	pmax		
	comp=Z,160nm,4.5s						
WMQ	Urumqi	48.70	332	*e*P	P	05 54 41.4	+2.0
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
KSH	Kashi	52.42	320	P	P	05 55 08.5	+0.8
KSH				sP	sP	05 55 16.1	+4.0
KSH				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MKAR	Makanchi Array	53.47	331		P	05 55 15.1	-0.1
MKAR	Makanchi Array	53.47	331	P	P	05 55 14.6	-0.5
	comp=Z,8.3nm,0.8s,baz=134,slow=7.1,SNR=40						
MKAR				PcP	PcP	05 56 21.6	-0.6
	comp=Z,1.0nm,0.8s,baz=142,slow=4.5,SNR=4.2						
	comp=Z,8.3nm,0.8s						
MAKZ	Makanchi	53.63	331		P	05 55 16.7	+0.3
KBL	Kabul	54.82	311		P	05 55 25.2	-0.3
ARSB	Arslanbob	55.32	320		P	05 55 27.3	-1.6
SIMJ	Simiganj	56.65	316		P	05 55 37.5	-0.9
ZALV	Zalesovo Beam	57.70	338		P	05 55 44.9	-0.5
ZALV	Zalesovo Beam	57.70	338	P	P	05 55 44.3	-1.2
	comp=Z,1.9nm,0.6s,baz=116,slow=6.8,SNR=8.3						
	comp=Z,1.9nm,0.6s						
KURBB	Kurchatov Arra	57.92	332	P	P	05 55 46.4	-0.6
	comp=Z,4.2nm,1.0s,baz=124,slow=8.1,SNR=18						
	comp=Z,4.2nm,1.0s						
KURK	Kurchatov	57.94	332		P	05 55 46.2	-0.9
KURK				IAmb	IAmb	05 55 49.5	
	comp=Z,9.6nm,1.0s						
BVAR	Borovoye Array	63.35	331	P	P	05 56 23.3	-0.8
	comp=Z,2.6nm,0.7s,baz=111,slow=11,SNR=11						
	comp=Z,2.6nm,0.7s						
MSVF	Nonsavu	63.35	111	LR	LR	06 26 30.3	
	comp=Z,83nm,18.6s,baz=193,slow=38						
RPZ	Rata Peaks	66.67	140	P	P	05 56 45.8	0.0
	comp=Z,14nm,0.7s,baz=53,slow=4.9,SNR=4.8						
	comp=Z,14nm,0.7s						
AB31	Akbulak array	67.17	323		P	05 56 48.1	-0.7
AB31				IAmb	IAmb	05 56 51.0	
	comp=Z,5.8nm,1.1s						
ABKAR	Akbulak array	67.17	323		P	05 56 48.3	-0.6
ABKAR				IAmb	IAmb	05 56 51.0	
	comp=Z,5.8nm,1.1s						
ABKAR	Akbulak array	67.17	323		P	05 56 47.9	-1.0
RTZ	Ruatahuna	68.57	133	P	P	05 56 57.8	-0.3
RAYN	Ar Rayn	72.09	294		P	05 57 17.9	-2.0
RAYN				IAmb	IAmb	05 57 20.4	
	comp=Z,6.4nm,1.1s						
KIRV	Kirov	76.36	330	LR	LR	06 32 34.4	
	comp=Z,26nm,18.1s,baz=87,slow=37						
BRTR	Keskin Array B	83.34	310		P	05 58 21.3	-1.2
BRTR	Keskin Array B	83.34	310	P	P	05 58 20.4	-2.0
	comp=Z,1.4nm,0.9s,baz=121,slow=6.2,SNR=7.4						
	comp=Z,1.4nm,0.9s						
J16K	Anvik River	84.35	27		P	05 58 26.9	0.0
L16K	Owhat River	84.73	28	IAmb	IAmb	05 58 32.0	
	comp=Z,4.7nm,0.8s						
H17K	Granite Mounta	84.81	25	IAmb	IAmb	05 58 32.6	
	comp=Z,6.0nm,0.8s						
K17K	Iditarod	85.35	27		P	05 58 32.9	+0.9
G19K	Purcell Mounta	86.07	24	IAmb	IAmb	05 58 38.5	
	comp=Z,4.9nm,0.8s						
E19K	Redstone River	86.08	23	IAmb	IAmb	05 58 39.2	
	comp=Z,5.3nm,0.9s						
D20K	Etivluk River	86.37	21	IAmb	IAmb	05 58 39.5	
	comp=Z,4.5nm,0.9s						
AKASG	Malin Array Be	86.71	320	P	P	05 58 36.5	-2.4
	comp=Z,0.7nm,0.5s,baz=82,slow=4.5,SNR=7.7						
	comp=Z,0.7nm,0.5s						
B22K	Teshekpuk Lake	87.53	20		P	05 58 42.9	+0.5
B22K				IAmb	IAmb	05 58 44.9	
	comp=Z,4.8nm,0.8s						
SYO	Syowa Base	87.81	201	⇓*e*P	P	05 58 43.4	-0.4
FINES	FINESS Array B	88.30	331	P	P	05 58 43.8	-2.5
	comp=Z,2.6nm,1.0s,baz=132,slow=2.1,SNR=2.8						
	comp=Z,2.6nm,1.0s						
C23K	Itkillik River	88.50	20	IAmb	IAmb	05 58 50.1	
	comp=Z,7.0nm,1.2s						
SPITS	Spitsbergen Ar	89.78	348	P	P	05 58 50.5	-2.5
	comp=Z,3.3nm,0.9s,baz=86,slow=9.2,SNR=2.0						
	comp=Z,3.3nm,0.9s						
I26K	Coal Creek Min	91.86	24	IAmb	IAmb	05 59 03.3	
	comp=Z,3.3nm,0.9s						
G27K	Doyon Strip	92.18	23	IAmb	IAmb	05 59 05.6	
	comp=Z,3.6nm,1.4s						
LBTB	Lobatse	92.35	245	LR	LR	06 34 55.1	
	comp=Z,53nm,20.9s,baz=84,slow=32						
QSPA	South Pole Qui	92.40	180	P	P	05 59 04.9	-0.6
QSPA				IAmb	IAmb	05 59 45.6	
	comp=Z,6.6nm,1.5s						
QSPA	South Pole Qui	92.40	180	P	P	05 59 02.8	-2.6
	comp=Z,1.5nm,0.9s,baz=324,slow=2.5,SNR=5.8						
	comp=Z,1.5nm,0.9s						
DAVOX	Davos/Dischmat	99.87	318	LR	LR	06 50 47.4	
	comp=Z,26nm,18.8s,baz=84,slow=39						
SNAA	Sanae	101.44	196	P	Pdif	05 59 42.8	-3.4
	comp=Z,0.8nm,0.8s,baz=168,slow=23,SNR=2.2						
TORD	Torodi Ar. Bea	114.01	285	PKiKP	PKiKP	06 04 32.5	-2.7
	comp=Z,0.3nm,0.7s,baz=58,slow=3.4,SNR=2.4						
DGMT	Dagmar	117.90	30	PKPdf	PKPdf	06 04 39.4	-2.4
ESPZ	Base Esperanza	119.06	183	PKPdf	PKPdf	06 04 42.9	-0.6
K30B	Basset	124.20	32	PKPdf	PKPdf	06 04 51.4	-2.7
SPMN	Marine on St.	125.59	26	PKPdf	PKPdf	06 04 55.7	-0.9
LPAZ	La Paz	165.37	160	PKPab	PKPab	06 06 57.3	-1.5
	comp=Z,1.8nm,1.0s,baz=312,slow=1.4,SNR=5.0						

ASRS 11 05:46:42.0±0.9, 53°.63N×88°.11E, h0^{km}, M2.8, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.

IDC 11 05:46:45.2±3.3, 53°.57N×87°.84E, h0^{km}, mbtmp2.6/2, ML1.8/1, Error ellipse: s-maj=28.0km s-min=17.2km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.83	283	I	I	05 58 32.0	
	0.1nm,1.2s,baz=98,slow=320,SNR=23						
ZALV	Zalesovo Beam	1.83	283	Pg	Pn	05 47 18.1	+0.2
	0.9nm,0.3s,baz=104,slow=12,SNR=14						
ZALV				Lg	Lg	05 47 44.1	
	1.0nm,0.3s,baz=105,slow=27,SNR=18						
KURBB	Kurchatov Arra	6.45	247	Pn	Pn	05 48 20.5	-0.8
	baz=64,slow=14,SNR=3.0						
KURBB				Lg	Lg	05 50 10.4	
	0.1nm,0.3s,baz=64,slow=30,SNR=9.7						
	0.3nm,0.3s						
MKAR	Makanchi Array	7.66	210	Pn	Pn	05 48 40.4	+2.4
	0.1nm,0.4s,baz=27,slow=12,SNR=1.8						
MKAR				Lg	Lg	05 50 47.9	
	baz=28,slow=34						

IDC 11 05:48:54.5±58.0, 14°.55S×168°.26E, h0^{km}, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=980.9km s-min=119.9km az=67.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	29.84	230	P	P	05 55 03.6	0.0
	2.0nm,0.7s,baz=63,slow=11,SNR=1.3						
	2.0nm,0.7s						
WRA	Warramunga Arr	32.80	256	P	P	05 55 29.9	+0.1
	1.7nm,0.7s,baz=87,slow=8.9,SNR=17						
	1.7nm,0.7s						
ASAR	Alice Springs	33.64	249	P	P	05 55 36.9	-0.2
	0.2nm,0.4s,baz=80,slow=9.1,SNR=7.3						
	0.2nm,0.4s						

IDC 11 05:55:19.6±0.3, 28°.76S×178°.38W, h209^{km}±3^{km}, mb4.1/17, mbtmp4.7/19, Error ellipse: s-maj=13.0km s-min=10.9km az=89.0

NEIC 11 05:55:21.1±1.7, 28°.9S±0°.1×178°.4W±0°.1, h214^{km}±5^{km}, mb4.7/33, Error ellipse: s-maj=19.0km s-min=11.4km az=214.0

ISC 11 05:55:22.0±0.3, 29°.15S±0°.04×178°.45W±0°.07, h231^{km}, n184, σ2^s.37/174, mb4.7/43, 3C-6D, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIZ	Raoul Island	0.46	102	P	Pn	05 55 50.4	-2.1
RIZ				S	S	05 56 12.5	-3.9
GLKZ	Green Lake	0.47	104	P	Pn	05 55 50.2	-2.4
GLKZ				S	S	05 56 11.8	-4.7
RAO	Raoul Island	0.47	102		Pn	05 55 50.3	-2.2
RAO				Sn	S	05 56 11.6	-4.8
RAO	Raoul Island	0.47	102	P	Pn	05 55 50.1	-2.4
	2µm,0.3s,baz=119,slow=7.0,SNR=57						
RAO				S	S	05 56 11.2	-5.2
	7µm,0.3s,baz=65,slow=22,SNR=12						
MXZ	Matakaoa Point	8.81	197	Pn	Pn	05 57 23.3	-2.2
MXZ				Sn	S	05 59 01.6	-3.4
MXZ	Matakaoa Point	8.81	197	S	S	05 59 01.4	-3.6
MXZ	Matakaoa Point	8.81	197	P	Pn	05 57 21.5	-4.0
WMGZ	Waiomatatini S	9.03	196	S	S	05 59 07.2	-2.9
WMGZ	Waiomatatini S	9.03	196	P	Pn	05 57 24.5	-3.8
OUZ	Omahuta	9.05	226	P	P	05 57 35.2	-1.5
WCZ	Waipu Caves	9.10	220	P	P	05 57 33.8	-3.4
HAZ	Te Kaha	9.14	199	S	S	05 59 10.8	-1.8
HAZ	Te Kaha	9.14	199	P	Pn	05 57 26.1	-3.5
PKGZ	Pakihiroa	9.16	198	P	Pn	05 57 25.9	-4.1
PUZ	Puketiti	9.31	196	S	S	05 59 13.0	-3.6
PUZ	Puketiti	9.31	196	P	Pn	05 57 27.1	-4.7
RUGZ	Raukumara Rang	9.36	199	P	Pn	05 57 29.8	-2.9
TWGZ	Tauwhareparae	9.48	197	P	Pn	05 57 31.4	-2.6
TWGZ				S	S	05 59 19.0	-1.7
MKAZ	Moumakai	9.57	212	P	Pn	05 57 37.6	+2.5
MWZ	Matawai	9.75	199	P	Pn	05 57 33.7	-3.8
TKGZ	Te Karaka	9.76	197	P	Pn	05 57 33.2	-4.4
URZ	Urewera	9.81	201	P	Pn	05 57 34.0	-4.2
	4.7nm,0.3s,baz=7.6,slow=4.0,SNR=13						
URZ				S	S	05 59 22.1	-6.2
	75nm,0.4s,baz=37,slow=1.4,SNR=6.3						
URZ	Urewera	9.81	201	P	Pn	05 57 34.5	-3.6
RIGZ	Rimuhau	10.03	197	P	Pn	05 57 37.6	-3.5
MUGZ	Murupara	10.11	202	P	Pn	05 57 39.0	-3.1
PRGZ	Paritu Road	10.21	196	P	Pn	05 57 40.1	-3.2
SNGZ	Shannon Statio	10.22	199	P	Pn	05 57 39.2	-4.3
KNZ	Kokohu	10.36	197	P	Pn	05 57 43.2	-1.9
WPRZ	Whakapapatarin	10.36	204	P	P	05 57 52.7	+1.4
MHGZ	Mahia Peninsul	10.42	196	P	Pn	05 57 41.8	-4.2
MTHZ	Maungataniwha	10.43	201	P	Pn	05 57 44.2	-2.0
NMHZ	Naumai	10.67	200	P	Pn	05 57 44.6	-4.6
ARHZ	Aropaoanui	10.77	199	P	Pn	05 57 46.3	-4.0
BKZ	Black Stump Fm	10.83	201	P	Pn	05 57 48.5	-2.7
TMVZ	Te Maari	11.05	204	P	Pn	05 57 51.3	-2.8
ETVZ	East Tongariro	11.07	204	P	Pn	05 57 52.2	-2.1
NNVZ	North Ngauruho	11.10	205	P	Pn	05 57 55.5	+0.8
OTVZ	Oturere	11.11	204	P	Pn	05 57 51.9	-3.0
TWVZ	Taurewa	11.11	205	P	Pn	05 57 54.9	+0.1
SNVZ	South Ngauruho	11.14	204	P	Pn	05 57 52.2	-3.1
NGZ	Ngauruhoe	11.14	205	P	Pn	05 57 53.3	-2.0
FWVZ	Far West T-bar	11.23	205	P	Pn	05 57 53.9	-2.6
KAHZ	Kahuranaki	11.29	199	P	Pn	05 57 52.1	-5.0
KRHZ	Kereru	11.30	201	P	Pn	05 57 51.7	-5.5
VRZ	Vera Road	11.42	208	P	Pn	05 57 59.6	+1.0
PNHZ	Pukenui	11.60	201	P	Pn	05 57 54.6	-6.4
PKE	Pukeiti	11.81	210	P	P	05 58 05.6	-1.9
MSVF	Nonsavu	11.81	343		Pn	05 57 59.6	-4.2
MSVF	Nonsavu	11.81	343	P	Pn	05 57 59.2	-4.6
	126nm,0.9s,baz=152,slow=11,SNR=41						
TSZ	Takapari Road	11.81	201	P	Pn	05 57 59.6	-4.0
NEZ	North Egmont	11.82	209	P	P	05 58 05.8	-1.9

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KHEZ  Kahui Hut        11.88 210  P      P       05 58 08.3  0.0
WAZ   Wanganui         11.88 205  P      Pn      05 58 03.5 -0.9
BFZ   Birch Farm       12.29 199  P      Pn      05 58 04.4 -5.1
MRZ   Mangatainoka R   12.48 201         Pn      05 58 05.7 -6.2
MRZ   Mangatainoka R   12.48 201  P      Pn      05 58 02.9 -9.0
HOWZ  Holdsworth Sta   12.71 201  P      Pn      05 58 08.4 -6.4
OGWZ  Otaki Gorge      12.75 202  P      Pn      05 58 08.5 -6.7
TMWZ  Te Maipa         12.79 200  P      Pn      05 58 11.8 -4.0
KIW   Kapiti Island    12.88 203  P      Pn      05 58 11.2 -5.6
MTW   Mount Morrison   12.96 201  P      Pn      05 58 12.9 -4.9
CAW   Cannon Point     13.05 202  P      Pn      05 58 11.1 -7.8
TRWZ  Traveller        13.12 200  P      Pn      05 58 15.3 -4.5
DUWZ  D'Urville Isla   13.19 206  P      Pn      05 58 18.5 -2.3
MSWZ  Moikau Station   13.27 201  P      Pn      05 58 17.4 -4.3
BHW   Baring Head      13.38 202  P      Pn      05 58 18.6 -4.5
PLWZ  Palliser         13.41 201  P      Pn      05 58 18.6 -4.8
TCW   Tory Channel     13.41 204  P      Pn      05 58 15.9 -7.5
TUWZ  Tuamarina        13.73 205  P      Pn      05 58 23.7 -3.5
TUWZ  Tuamarina        13.73 205  P      Pn      05 58 22.8 -4.4
NNZ   Nelson           13.76 207  P      Pn      05 58 24.4 -3.2
TKNZ  Takaka Hill      13.77 208  P      Pn      05 58 26.3 -1.6
BSWZ  Blackbirch Sta   14.00 204  P      Pn      05 58 28.2 -2.4
MRNZ  Matariki Terra   14.16 208  P      Pn      05 58 30.6 -2.0
PINNC Pines Island,    14.26 294  P      P       05 58 35.1 +0.3
DZM   Mont Dzumac      15.34 294         Pn      05 58 48.4 +1.3
DZM                               IAmb   IAmb    05 58 51.8
      comp=Z,30nm,0.8s
DZM   Mont Dzumac      15.34 294  P      Pn      05 58 48.2 +1.1
      comp=Z,30nm,0.8s,baz=111,slow=13,SNR=26
RAR   Rarotonga        18.64  69  P      P       05 59 19.3 -3.5
      comp=Z,44nm,0.8s,baz=57,slow=21,SNR=4.1
ARMA  Armidale         25.97 260         P       06 00 36.1 +2.5
ARMA                              IAmb   IAmb    06 00 38.5
      comp=Z,13nm,0.7s
EIDS  Eidsvold         27.31 271  P      P       06 00 45.9 +0.4
CAN   Canberra         28.13 249         P       06 00 53.1 +0.4
CAN                               IAmb   IAmb    06 00 57.6
      comp=Z,21nm,1.1s
CTAO  Charters Tower   33.23 278         P       06 01 38.4 +0.8
CTAO                              IAmb   IAmb    06 01 40.0
      comp=Z,23nm,0.7s
STKA  Stephens Creek   34.40 255         P       06 01 48.8 +1.4
STKA  Stephens Creek   34.40 255  P      P       06 01 48.2 +0.7
      comp=Z,17nm,0.7s,baz=93,slow=10.0,SNR=25
      comp=Z,17nm,0.7s
COEN  Coen             38.56 285  P      P       06 02 23.4 +0.6
COEN                              IAmb   IAmb    06 02 25.2
      comp=Z,21nm,1.0s
BBOO  Buckleboo        38.95 253  P      P       06 02 26.3 +0.5
BBOO                              IAmb   IAmb    06 02 42.9
      comp=Z,38nm,1.4s
AS31  Alice Springs    42.80 266         P       06 02 57.6 +0.2
ASAR  Alice Springs    42.80 266  P      P       06 02 57.2 -0.1
      comp=Z,11nm,0.6s,baz=97,slow=6.8,SNR=93
ASAR                              PcP    PcP     06 04 44.2  0.0
      comp=Z,2.3nm,0.7s,baz=108,slow=5.1,SNR=5.4
ASAR                              ScP    ScP     06 08 14.0 +1.1
      comp=Z,0.9nm,0.7s,baz=111,slow=3.7,SNR=3.8
      comp=Z,11nm,0.6s
WR8   Warramunga Arr   43.53 271         P       06 03 02.9 -0.3
WRA   Warramunga Arr   43.67 271  P      P       06 03 03.6 -0.7
WRA   Warramunga Arr   43.67 271  P      P       06 03 03.6 -0.7
      comp=Z,6.3nm,0.6s,baz=109,slow=8.0,SNR=55
WRA                               PcP    PcP     06 04 47.5 +0.3
      comp=Z,7.0nm,0.8s,baz=111,slow=3.1,SNR=10
WRA                               ScP    ScP     06 08 17.3 +0.8
      comp=Z,1.0nm,0.9s,baz=115,slow=3.7,SNR=4.5
      comp=Z,6.3nm,0.6s
WB0   Warramunga Arr   43.69 271         P       06 03 04.1 -0.4
WB0                               IAmb   IAmb    06 03 05.3
      comp=Z,8.0nm,0.6s
FORT  Forrest          46.00 254         P       06 03 22.5  0.0
VNDA  Vanda            49.29 186         P       06 03 50.8 +3.8
VNDA                              IAmb   IAmb    06 03 52.0
      comp=Z,13nm,0.9s
VNDA  Vanda            49.29 186  P      P       06 03 50.0 +3.0
      comp=Z,7.9nm,0.7s,baz=6.8,slow=8.4,SNR=31
      comp=Z,7.9nm,0.7s
KNRA  Kununurra        50.23 274         P       06 03 55.3 +0.4
KNRA                              IAmb   IAmb    06 03 56.0
      comp=Z,20nm,1.4s
FITZ  Fitzroy Crossi   51.98 269  P      P       06 04 08.2 +0.3
FAKI  Fak Fak          53.55 290  P      P       06 04 18.5 -0.9
MBWA  Marble Bar       55.98 263  P      P       06 04 36.7 -0.1
CASY  Casey            56.06 207  P      P       06 04 37.6 +1.0
MORW  Morawa           56.52 253  P      P       06 04 40.4 -0.1
MORW                              IAmb   IAmb    06 04 40.7
      comp=Z,17nm,0.8s
SOEI  Soe              56.80 278  P      P       06 04 42.1 -0.6
      comp=Z,37nm,1.2s
EDFI  Ende, Flores     59.51 277  P      P       06 05 00.4 -1.1
      comp=Z,14nm,1.3s
QSPA  South Pole Qui   60.95 180         P       06 05 14.0 +3.6
QSPA  South Pole Qui   60.95 180  P      P       06 05 14.1 +3.6
      comp=Z,29nm,0.8s,baz=8.2,slow=0.7,SNR=140
      comp=Z,29nm,0.8s
SMAI  San Martin Ant   70.73 158  P      P       06 06 14.7 +2.3
SMAI                              IAmb   IAmb    06 06 15.9
      comp=Z,10nm,0.9s
BELA  Belgrano 2       71.07 172  P      P       06 06 16.1 +1.7
BELA                              IAmb   IAmb    06 06 17.2
      comp=Z,11nm,0.9s
MAW   Mawson           73.33 201  P      P       06 06 30.1 +2.2
      comp=Z,33nm,1.0s,baz=121,slow=7.7,SNR=37
      comp=Z,33nm,1.0s
KSM   Kuching          74.41 281  P      P       06 06 34.8 -0.3
KSM                               IAmb   IAmb    06 06 35.6
      comp=Z,23nm,0.8s
MJAR  Matsushiro Arr   77.00 325  P      P       06 06 46.9 -2.3
      comp=Z,6.2nm,0.9s,baz=157,slow=5.0,SNR=10
      comp=Z,6.2nm,0.9s
SYO   Syowa Base       78.24 193⇓iP      P       06 06 57.6 +2.0
SYO   Syowa Base       78.24 193⇑isP     sP      06 08 09.0 -5.4
TROLL Troll, Antarti   79.11 180 ⇑P      P       06 07 02.4 +1.8
      comp=Z,1μm,0.7s
SNAA  Sanae            79.41 179 ⇓P      P       06 07 03.8 +1.8
      comp=Z,161nm,0.6s
SNAA  Sanae            79.41 179  P      P       06 07 03.8 +1.8
SNAA                              IAmb   IAmb    06 07 04.9
      comp=Z,17nm,1.1s
SNAA  Sanae            79.41 179  P      P       06 07 03.5 +1.5
      comp=Z,8.3nm,0.7s,baz=200,slow=8.8,SNR=58
      comp=Z,8.3nm,0.7s
VNA3  Neumayer Olymp   79.57 176 ⇓P      P       06 07 04.2 +1.3
      comp=Z,38nm,0.7s
VNA2  Neumayer--Watz   80.00 177 ⇓P      P       06 07 07.2 +2.0
      comp=Z,28nm,0.8s,baz=181,slow=5.0
VNA1  Neumayer--Stat   80.23 177 ⇓P      P       06 07 08.5 +2.2
      comp=Z,39nm,1.1s
H03S2 Juan Fernandez   81.48 124  T      T       07 37 03.9
      baz=241,slow=74,SNR=8.1
H03S1 Juan Fernandez   81.49 124  T      T       07 37 28.0
      baz=241,slow=74,SNR=7.5
H03S3 Juan Fernandez   81.50 124  T      T       07 37 32.9
      baz=241,slow=74,SNR=7.9
H03N3 Juan Fernandez   81.67 124  T      T       07 37 42.1
      baz=240,slow=74
H03N2 Juan Fernandez   81.67 124  T      T       07 37 45.2
      baz=240,slow=74
H03N1 Juan Fernandez   81.68 124  T      T       07 37 41.0
      baz=240
KSRS  Korea Array      83.15 320  P      P       06 07 21.6 -0.3
      comp=Z,3.0nm,0.7s,baz=138,slow=5.3,SNR=10
      comp=Z,3.0nm,0.7s
PLCA  Paso Flores      83.64 133  P      P       06 07 26.3 +1.5
      comp=Z,4.3nm,0.9s,baz=222,slow=6.5,SNR=7.3
      comp=Z,4.3nm,0.9s
PETK  Petropavlovsk-   84.51 346  P      P       06 07 26.0 -2.5
      comp=Z,5.0nm,0.7s,baz=130,slow=6.6,SNR=4.0
      comp=Z,5.0nm,0.7s
RPSI  Rantau Prapat    84.86 276  P      P       06 07 30.1 -1.1
NJ2   Nanjing          85.14 311 eP      P       06 07 35.6 +3.5
NJ2                               pmax   pmax
      comp=Z,12nm,0.6s
GSI   Gunungsitoli     85.36 274  P      P       06 07 34.4 +0.7
USRK  Ussuriysk Ar.    85.91 327  P      P       06 07 35.2 -0.4
      comp=Z,3.2nm,0.8s,baz=141,slow=3.2,SNR=6.1
      comp=Z,3.2nm,0.8s
O02D  Mt. Diablo Mer   86.18  39  P      P       06 07 37.5 +0.4
O02D                              IAmb   IAmb    06 07 38.3
      comp=Z,14nm,1.1s
MT01  Popeta           86.93 127  P      P       06 07 42.1 +1.0
MT01                              IAmb   IAmb    06 07 42.9
      comp=Z,11nm,0.8s
WHN   Wuhan            87.28 307 ⇑P      P       06 07 42.6  0.0
WHN                               pmax   pmax
      comp=Z,62nm,1.0s
NVAR  Mina Array Bea   87.59  43  P      P       06 07 42.4 -1.8
      comp=Z,2.2nm,0.9s,baz=222,slow=7.7,SNR=14
      comp=Z,2.2nm,0.9s
Y14A  Wickenburg       88.11  49  P      P       06 07 46.9 +0.3
CN2   Changchun        88.91 323  P      P       06 07 52.8 +2.9
CN2                               pmax   pmax
      comp=Z,10.0nm,0.5s
X16A  Lo Mia Camp, P   89.44  50  P      P       06 07 53.3 +0.3
X16A                              IAmb   IAmb    06 07 54.3
      comp=Z,5.3nm,1.1s
LYN   LuoYang          90.91 310  P      P       06 08 00.0 +0.5
LYN                               pmax   pmax
      comp=Z,17nm,1.1s
TXAR  Lajitas Array    92.05  57  P      P       06 08 03.9 -1.1
      comp=Z,0.3nm,0.7s,baz=212,slow=6.8,SNR=4.7
      comp=Z,0.3nm,0.7s
CMAR  Chiang Mai Arr   92.62 290  P      P       06 08 08.0 +0.2
      comp=Z,1.8nm,0.2s,baz=122,slow=5.1,SNR=10.0
      comp=Z,1.8nm,0.2s
XAN   Xi'an            93.05 307  P      P       06 08 09.9 +0.4
XAN                               pmax   pmax
      comp=Z,12nm,1.2s
PZH   PanZhiHua        94.38 298  P      P       06 08 18.3 +2.4
PZH                               pmax   pmax
      comp=Z,7.0nm,1.0s
PZH                               pmax   pmax
      comp=Z,100nm,5.5s
HHC   Hu-ho-hao-te     95.09 314 eP      P       06 08 23.1 +4.4
HHC                               pmax   pmax
      comp=Z,18nm,0.6s
PDAR  Pinedale Array   95.50  44  P      P       06 08 18.7 -2.0
      comp=Z,0.1nm,0.3s,baz=235,slow=4.5,SNR=1.7
      comp=Z,0.1nm,0.3s
ILAR  Eielson Array    96.80  13  P      P       06 08 24.5 -1.3
      comp=Z,0.3nm,0.9s,baz=252,slow=4.7,SNR=2.8
      comp=Z,0.3nm,0.9s
MKAR  Makanchi Array  116.67 311  PKP    PKPdf   06 13 37.1 -1.2
      comp=Z,1.2nm,0.5s,baz=210,slow=1.0,SNR=7.2
ZALV  Zalesovo Beam   116.84 319  PKP    PKPdf   06 13 36.2 -2.2
      comp=Z,1.1nm,0.6s,baz=225,slow=0.6,SNR=4.1
BOSA  Boshof          118.25 204  PKP    PKiKP   06 13 43.2 +1.0
      comp=Z,1.2nm,0.5s,baz=183,slow=2.7,SNR=4.4
KURBB Kurchatov Arra  119.94 314  PKP    PKPdf   06 13 43.3 -1.2
      comp=Z,3.6nm,0.6s,baz=108,slow=1.9,SNR=22
BVAR  Borovoye Array  125.24 316  PKP    PKPdf   06 13 53.9 -0.7
      comp=Z,7.5nm,0.6s,baz=104,slow=2.2,SNR=24
ARCES ARCESS Array B  137.29 348  PKhKP  PKPpre  06 14 10.0
      comp=Z,3.3nm,1.0s,baz=89,slow=1.2,SNR=7.0
ARCES                             PKP    PKPdf   06 14 15.8 -1.1
      comp=Z,3.3nm,0.7s,baz=66,slow=1.5,SNR=6.4
H10S3 ASCENSION HYDR139.02 155    T      T       08 50 30.1
      baz=204,slow=74,SNR=10.0
H10S2 ASCENSION HYDR139.02 155    T      T       08 50 32.9
      baz=16,slow=74,SNR=6.5
H10N3 ASCENSION HYDR140.10 155    T      T       08 51 34.1
      baz=203,slow=74
H10N1 ASCENSION HYDR140.10 155    T      T       08 51 36.8
      baz=203
H10N2 ASCENSION HYDR140.12 155    T      T       08 52 03.1
      baz=203,slow=74
FINES FINESS Array B  143.84 340  PKP    PKPab   06 14 25.7 -0.9
      comp=Z,6.0nm,0.5s,baz=52,slow=3.8,SNR=45
KBZ   Khabaz          144.08 305  PKP    PKPbc   06 14 28.0 -0.5
      comp=Z,2.9nm,0.7s,baz=238,slow=3.1,SNR=4.6
DOMB  Dombas          146.73 354 eP      PKPdf   06 14 34.2 +0.3
AKN   Aaknes          146.78 355 eP      PKPdf   06 14 34.3 +0.4
NB2   NORSAR Subarra  147.46 351  PKP    PKPbc   06 14 36.4 -1.6
      comp=Z,4.4nm,0.6s,baz=13,slow=4.4
NB2   NORSAR Subarra  147.46 351  PKP    PKPbc   06 14 36.4 -1.6
      baz=13,slow=4.4
NOA   NORSAR Array B  147.46 351  PKPbc  PKPbc   06 14 36.6 -1.4
      comp=Z,2.6nm,0.5s,baz=14,slow=4.4,SNR=14
NC602 NORSAR Array S  147.71 351 eP      PKPdf   06 14 36.0 +0.6
HYA   Hoyanger        147.84 356 eP      PKPbc   06 14 37.7 -1.2
HFS   Hagfors         147.95 349  PKPbc  PKPbc   06 14 37.6 -1.6
      comp=Z,6.6nm,0.5s,baz=90,slow=4.4,SNR=27
SUE   Sulen           148.02 357 eP      PKPdf   06 14 35.6 -0.3
SKAR  Skarslia        148.15 354 eP      PKPbc   06 14 39.2 -0.7
MNK   Minsk           148.31 330 i PKiKP PKiKP   06 14 41.2 -0.6
      comp=Z,28nm,0.9s,baz=331
MNK                              i pPKiKP pPKPbc 06 15 38.0 -0.3
MNK                              i PP    PP      06 18 09.9 -1.2
MNK                              i SKS   SKSdf   06 21 23.6 +1.0
MNK                              i PPP   PPP     06 21 31.4
MNK                              i SKKS  SKKSdf  06 30 21.3 -1.3
MNK                              i SS    SS      06 36 59.4 +0.4
MNK                              i SSS   SSS     06 42 37.7
NACGM Naroch          148.50 332⇓iPKiKP  PKPbc   06 14 40.5 -0.3
      comp=Z,27nm,0.9s,baz=46
ASK   Askoy           148.57 357 eP      PKPbc   06 14 38.9 -1.9
KONO  Kongsberg       149.02 352 eP      PKPbc   06 14 40.5 -1.5
ODD1  Odda            149.05 355 eP      PKPbc   06 14 39.4 -2.7
BLS5  Blasjo          149.55 355 eP      PKPbc   06 14 40.5 -2.9
AKASG Malin Array Be  150.07 324  PKPbc  PKPbc   06 14 44.0 -0.8
      comp=Z,15nm,0.4s,baz=47,slow=3.2,SNR=77
MMAI  Mount Meron Ar  150.83 286  PKPbc  PKiKP   06 14 48.4 +0.6
      comp=Z,7.9nm,0.5s,baz=74,slow=3.0,SNR=27
BRTR  Keskin Array B  151.65 300  PKPbc  PKPbc   06 14 48.7 -0.4
      comp=Z,3.6nm,0.6s,baz=131,slow=3.4,SNR=20
BRTR                              PKPab  PKPab   06 14 58.6 -0.1
      comp=Z,3.5nm,0.8s,baz=107,slow=3.8,SNR=8.8
CLL   Collm           156.26 342 i PKPab PKPab   06 15 17.2 -0.5
      comp=Z,5.0nm,0.6s
BRG   Berggiesshubel  156.38 340 i PKP   PKPab   06 15 18.2  0.0
BRG                              er              06 57 10.4
GERES GERESS Array B  158.24 338  PKPab  PKPab   06 15 26.5 +0.1
      comp=Z,0.9nm,0.6s,baz=55,slow=12,SNR=4.8
TORD  Torodi Ar. Bea  164.07 181  PKP    PKPdf   06 14 58.2  0.0
      comp=Z,1.8nm,1.0s,baz=2.0,slow=3.0,SNR=6.6
TORD                              PKPab  PKPab   06 15 54.0 +1.5
      comp=Z,6.2nm,0.9s,baz=162,slow=2.7,SNR=20
TORD                              PP     PP      06 19 39.8 +2.4
      comp=Z,1.1nm,1.1s,baz=162,slow=4.2,SNR=3.5
ESDC  Sonseca Array   168.56  22  PKPab  PKPab   06 16 09.8 -2.2
      comp=Z,0.5nm,0.8s,baz=329,slow=4.1,SNR=2.4
```

WEL 11 05:56:52.1±0.5,39°S±3°×17°6E±°,h5km,M1.9/6,ML2.2/7, MLv1.9/6,Error ellipse: s-maj=4.5km s-min=3.8km az=64.8,confirmed,North Island

```
Code  Station Name      Δ°   AZ°   Phase ID        Time      Res
                                   Op     ISC      h  m  s   ISC
WPRZ  Whakapapatarin   0.10 337    P      Pg       05 56 54.5 +0.3
WPRZ                               S      Sg       05 56 56.3 +0.7
ALRZ  Allen Road       0.11  64    P      Pg       05 56 54.9 +0.4
PRRZ  Plateau Road     0.18  51    P      Pg       05 56 56.3 +0.5
PRRZ                               S      Sg       05 56 59.2 +1.1
WHTZ  Whakaora         0.21 255    P      Pg       05 56 57.1 +0.9
HRRZ  Handcock Road    0.23  14    P      Pg       05 56 57.5 +0.9
HRRZ                               S      Sg       05 57 01.3 +1.7
MRHZ  Matea Rd         0.27 144    P      Pg       05 56 57.9 +0.4
MRHZ                               S      Sg       05 57 01.9 +0.8
KUTZ  Kaahu Road       0.33 292    P      Pg       05 56 58.9 +0.4
MUGZ  Murupara         0.46  73    P      Pg       05 57 01.7 +0.8
MUGZ                               S      Sg       05 57 08.0 +1.1
BKZ   Black Stump Fm   0.59 158    P      Pg       05 57 04.1 +0.6
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*SDD **11** 05:58:36.8±1.9,19°.43N×68°.12W,h23km±140km,MD3.3, ML2.1,MW2.7*

*NEIC **11** 05:58:37.7±2.2,19°.15N±0°.05×68°.16W±0°.03,h10km±2km, ML2.3/20,Md2.8/12(RSPR),Error ellipse: s-maj=9.5km s-min=4.2km az=12.0*

*RSPR **11** 05:58:38.4,19°.26N×68°.21W,h85km±7km,MD2.8/12*

ISC 11 05:58:36.8±1.8,19°.28N±0°.07×68°.16W±0°.03,h14km±12km, n51,σ0s.71/57,20C-2D,North Atlantic Ocean

```
Code  Station Name      Δ°   AZ°   Phase ID        Time      Res
                                   Op     ISC      h  m  s   ISC
HIDR  Higuey Centro    0.87 218⇑eP      Pn       05 58 55.1 +0.5
HIDR  Higuey Centro    0.87 218 eS      Sg       05 59 05.6 +0.5
HIDR  Higuey Centro    0.87 218⇑ePg     Pb       05 58 53.0 -0.7
HIDR                           ⇑eSg     Sn       05 59 07.5 +0.5
HIDR                            IAML             05 59 10.5
      comp=N,50nm,1.6s
MIDR  Miches           0.90 251⇑ePg     Pb       05 58 53.8 -0.3
MIDR                           ⇑eSg     Sn       05 59 07.6 -0.1
MIDR                            IAML             05 59 09.2
      comp=N,24nm,0.4s
SMDR  Samana, DR       0.97 271⇑eP      Pb       05 58 55.6 +0.1
SMDR  Samana, DR       0.97 271 eS      Sn       05 59 10.5 +0.8
SMDR  Samana, DR       0.97 271⇑ePg     Pb       05 58 54.3 -1.2
SMDR                           ⇑eSg     Sg       05 59 08.8 +0.4
SMDR                            IAML             05 59 29.1
      comp=N,36nm,1.1s
IDE   Isla Desecheo    1.10 144         Pb       05 58 57.2 -0.4
IDE                                     Sn       05 59 14.3 +1.5
IDE   Isla Desecheo    1.10 144⇑eP      Pb       05 58 57.2 -0.4
IDE   Isla Desecheo    1.10 144 eS      Sn       05 59 14.3 +1.5
DR12  Loma Pena Alta   1.26 247 Pn      Pn       05 58 59.5 -0.5
HATOM Hato Mayor del   1.26 247⇑ePg     Pn       05 59 00.1 +0.1
HATOM                          ⇑eSg     Sn       05 59 16.8  0.0
HATOM                           IAML             05 59 19.1
      comp=N,23nm,0.7s
AGPR  Aguadilla, PR    1.28 129         Pn       05 58 59.5 -0.7
AGPR                                    Sb       05 59 16.5 -0.5
AGPR  Aguadilla, PR    1.28 129 IAML             05 59 42.5
      comp=N,74nm,2.3s
AGPR  Aguadilla, PR    1.28 129⇑eP      Pn       05 58 59.5 -0.7
AGPR  Aguadilla, PR    1.28 129 eS      Sb       05 59 16.5 -0.5
AGPR  Aguadilla, PR    1.28 129⇑ePg     Pn       05 59 00.2  0.0
AGPR                           ⇑eSg     Sg       05 59 18.3 +0.2
AGPR                            IAML             05 59 55.9
      comp=N,71nm,1.6s
PRSN  Puerto Rico Se   1.43 138 Pn      Pn       05 59 02.0 -0.3
PRSN                            IAML             05 59 25.5
      comp=N,44nm,0.3s
PRSN                            IAML             05 59 28.2
      comp=E,64nm,0.3s
LSP   Las Mesas        1.50 137         Pn       05 59 03.3  0.0
LSP                                     Sn       05 59 22.7  0.0
LSP   Las Mesas        1.50 137⇓eP      Pn       05 59 03.3  0.0
LSP   Las Mesas        1.50 137 eS      Sn       05 59 22.7  0.0
CRPR  Cabo Rojo, PR    1.61 142         Pn       05 59 05.4 +0.6
CRPR                            IAML             05 59 26.4
      comp=E,30nm,2.8s
CRPR  Cabo Rojo, PR    1.61 142         Sb       05 59 26.3 -0.2
CRPR  Cabo Rojo, PR    1.61 142 IAML             05 59 18.6
      comp=N,26nm,2.6s
CRPR  Cabo Rojo, PR    1.61 142⇑eP      Pn       05 59 05.4 +0.6
CRPR  Cabo Rojo, PR    1.61 142 eS      Sb       05 59 26.3 -0.2
AOPR  Arecibo Observ   1.62 125         Pb       05 59 06.2 -0.4
AOPR                                    Sb       05 59 26.9  0.0
AOPR  Arecibo Observ   1.62 125 IAML             05 59 35.7
      comp=N,31nm,2.1s
AOPR                            IAML             05 59 37.4
      comp=E,44nm,0.3s
AOPR  Arecibo Observ   1.62 125⇑eP      Pb       05 59 06.2 -0.4
AOPR  Arecibo Observ   1.62 125 eS      Sb       05 59 26.9  0.0
MLPR  Magueyes Islan   1.68 141⇓eP      Pn       05 59 06.3 +0.6
MLPR  Magueyes Islan   1.68 141 eS      Sb       05 59 28.4 -0.1
UUPR  Utuado, UPR, P   1.70 127         Pn       05 59 06.4 +0.3
UUPR                                    Sn       05 59 26.6 -1.1
UUPR  Utuado, UPR, P   1.70 127⇑eP      Pn       05 59 06.4 +0.3
UUPR  Utuado, UPR, P   1.70 127 eS      Sn       05 59 26.6 -1.1
EMPR  Esperanza - Ma   1.73 117 Pn      Pn       05 59 05.9 -0.6
CELP  Cerrillos        1.92 129         Sn       05 59 32.2 -0.8
CELP  Cerrillos        1.92 129 Pn      Pn       05 59 08.2 -0.9
CELP                            IAML             05 59 38.1
      comp=N,21nm,1.8s
CELP  Cerrillos        1.92 129 eS      Sn       05 59 32.2 -0.8
OBIP  Obispado Ponce   1.92 130 Pn      Pn       05 59 07.5 -1.6
ECPR  Experimental S   1.95 119⇑eP      Pn       05 59 09.6 +0.1
ECPR  Experimental S   1.95 119 eS      Sn       05 59 34.2 +0.4
GCPR  Guaynabo City    2.19 116         Pn       05 59 13.3 +0.5
GCPR  Guaynabo City    2.19 116         Sn       05 59 40.8 +1.1
GCPR  Guaynabo City    2.19 116 IAML             05 59 38.6
      comp=N,16nm,3.0s
GCPR  Guaynabo City    2.19 116⇑eP      Pn       05 59 13.3 +0.5
GCPR  Guaynabo City    2.19 116 eS      Sn       05 59 40.8 +1.1
HUMP  Col San Antoni   2.46 117         Pn       05 59 17.8 +1.2
HUMP                                    Sn       05 59 47.1 +0.7
HUMP  Col San Antoni   2.46 117 IAML             06 00 01.1
      comp=N,15nm,2.1s
HUMP                            IAML             06 00 42.8
      comp=E,13nm,2.8s
HUMP  Col San Antoni   2.46 117⇑eP      Pn       05 59 17.8 +1.2
HUMP  Col San Antoni   2.46 117 eS      Sn       05 59 47.1 +0.7
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*SNET **11** 06:04:48.7±0.8,13°.39N×89°.61W,h64km±4km,ML3.0*

*GCG **11** 06:04:48.6±0.6,13°.39N×89°.64W,h63km±5km,MD3.7, ML2.1*

*CATAC **11** 06:04:48.6±0.5,13°N±4°×9°0W±°,h38km±3km,M3.0/16, MLv3.0/16,Error ellipse: s-maj=8.5km s-min=4.6km az=23.9,confirmed*

ISC 11 06:04:49.0±2.2,13°.35N±0°.10×89°.64W±0°.07,h60km±10km, n61,σ0s.38/68,El Salvador

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Code  Station Name      Δ°   AZ°   Phase ID        Time      Res
                                   Op     ISC      h  m  s   ISC
LALI  Alcalda de L     0.34  67  eP     Pn       06 04 59.2 -0.2
LALI                             eS     Sn       06 05 07.0  0.0
LALI  Alcalda de L     0.34  67  i P    Pn       06 04 59.1 -0.4
LALI                             i S    Sn       06 05 07.2 +0.2
LALI  Alcalda de L     0.34  67   P     Pn       06 04 59.0 -0.4
LALI  Alcalda de L     0.34  67   S     Sn       06 05 06.8 -0.2
JAYA  Jayaque - finc   0.35  32  i P    Pn       06 04 59.5 -0.3
JAYA                             eS     Sn       06 05 07.6 +0.1
JAYA                              IAML           06 05 08.5
      comp=Z,1μm,0.3s
JAYA  Jayaque - finc   0.35  32  i P    Pn       06 04 59.5 -0.3
JAYA                             i S    Sn       06 05 07.7 +0.1
JAYA  Jayaque - finc   0.35  32   P     Pn       06 04 59.5 -0.3
CEVE  Cerro Verde      0.47   2  eP     Pn       06 05 00.7 -0.3
CEVE  Cerro Verde      0.47   2   P     Pn       06 05 01.0  0.0
CEVE  Cerro Verde      0.47   2   S     Sn       06 05 09.9 +0.3
ITCA  Escuela Especi   0.48  48   S     Sn       06 05 09.5  0.0
ITCA  Escuela Especi   0.48  48   P     Pn       06 05 00.5 -0.4
PMON  Piamonte         0.48  42  eP     Pn       06 05 00.7 -0.2
PMON  Piamonte         0.48  42   P     Pn       06 05 00.7 -0.2
PMON  Piamonte         0.48  42   S     Sn       06 05 10.3 +0.7
SBLS  San Blas         0.48   2  eP     Pn       06 05 00.9 -0.1
SBLS                             eP              06 05 01.1
CEDA  San Andres       0.51  28   S     Sn       06 05 10.4 +0.4
CEDA  San Andres       0.51  28   P     Pn       06 05 01.1  0.0
SNJE  San Jose         0.51   4  eP     Pn       06 05 01.3  0.0
UEES  Universidad Ev   0.53  47  eP     Pn       06 05 01.3 -0.1
UEES  Universidad Ev   0.53  47   P     Pn       06 05 01.4 -0.1
UEES  Universidad Ev   0.53  47   S     Sn       06 05 10.4 -0.1
PIC2  El Picacho       0.54  44  eP     Pn       06 05 01.6  0.0
RTR   El Retiro        0.54 360  eP     Pn       06 05 01.8 +0.1
LOMA  Loma Larga       0.54  58  eP     Pn       06 05 01.4 -0.1
LOMA  Loma Larga       0.54  58   S     Sn       06 05 11.3 +0.6
LOMA  Loma Larga       0.54  58   P     Pn       06 05 01.4 -0.1
UTEC  Universidad Te   0.55  51   P     Pn       06 05 01.4 -0.2
UTEC  Universidad Te   0.55  51   S     Sn       06 05 10.9 +0.1
NUBE  Las Nubes        0.56 346  eP     Pn       06 05 01.7 -0.1
NUBE                             eS     Sn       06 05 11.6 +0.5
NUBE  Las Nubes        0.56 346  i P    Pn       06 05 01.6 -0.1
NUBE                             i S    Sn       06 05 11.7 +0.5
NUBE  Las Nubes        0.56 346   P     Pn       06 05 01.6 -0.3
FAME  Alcaldia de Sa   0.61 324   P     Pn       06 05 01.9 -0.2
FAME  Alcaldia de Sa   0.61 324   S     Sn       06 05 11.8  0.0
AEIL  Aeropuerto Ilo   0.62  56  eP     Pn       06 05 02.3  0.0
LFRS  El Faro          0.63  65  eP     Pn       06 05 02.2 -0.3
UNIC  Universidad Ca   0.63   8   P     Pn       06 05 02.0 -0.5
UNIC  Universidad Ca   0.63   8   S     Sn       06 05 12.5 +0.1
SLOZ  Alcaldia de Sa   0.68 349  eP     Pn       06 05 03.0 -0.2
SLOZ  Alcaldia de Sa   0.68 349   S     Sn       06 05 14.3 +0.9
SLOZ  Alcaldia de Sa   0.68 349   P     Pn       06 05 02.9 -0.2
PAVA  Las Pavas        0.78  62   P     Pn       06 05 04.0 -0.3
PAVA  Las Pavas        0.78  62   S     Sn       06 05 16.4 +0.9
COEG  Centro de Oper   0.79  70  eP     Pn       06 05 04.0 -0.4
COEG                              IAML           06 05 05.2
      comp=Z,262nm,0.3s
COEG                             eS     Sn       06 05 15.7  0.0
COEG  Centro de Oper   0.79  70   P     Pn       06 05 03.9 -0.4
TECO  Alcaldia de Te   0.86  78  eP     Pn       06 05 04.7 -0.5
TECO  Alcaldia de Te   0.86  78   P     Pn       06 05 04.7 -0.5
TECO  Alcaldia de Te   0.86  78   S     Sn       06 05 17.2 -0.1
SCLA  Alcaldia de Sa   0.96  69  eP     Pn       06 05 06.0 -0.4
SCLA  Alcaldia de Sa   0.96  69   P     Pn       06 05 05.9 -0.6
SCLA  Alcaldia de Sa   0.96  69   S     Sn       06 05 19.7 +0.2
MTO3  Montecristo      1.08  15  eP     Pn       06 05 07.7 -0.6
MTO3  Montecristo      1.08  15  i P    Pn       06 05 07.8 -0.4
MTO3  Montecristo      1.08  15   S     Sn       06 05 22.2 -0.3
MTO3  Montecristo      1.08  15   P     Pn       06 05 07.6 -0.6
ESQI  Esquipulas       1.24  14  i P    Pn       06 05 10.0 -0.2
PACA  Pacayal          1.29  85  eP     Pn       06 05 11.1 +0.2
PACA  Pacayal          1.29  85   P     Pn       06 05 11.2 +0.2
PACA  Pacayal          1.29  85   S     Sn       06 05 28.6 +1.2
LCND  La Caada         1.71  91  eP     Pn       06 05 16.3 -0.2
LCND  La Caada         1.71  91   P     Pn       06 05 16.1 -0.4
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ASRS 11 06:08:22.0±0.9**,54°.12N**×**86°.44E,h0^{km},M2.6,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.,Southwestern Siberia**

ASRS 11 06:09:16.0±0.4**,54°.42N**×**86°.74E,h0^{km},M2.3,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.,Southwestern Siberia**

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*ISN **11** 06:11:26.4±0.4,34°.92N×45°.83E,h14^{km}±5^{km},ML2.6*
*TEH **11** 06:11:26.8,34°.91N×45°.84E,h10^{km}±97^{km}*
ISC 11 06:11:27.1±1.3**,34°.89N**±0°.05×**45°.84E**±0°.03**,h13**^{km}±14^{km}**,n11,**σ**0**^{s}**.64**/16**,Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KGS1	**Ghasr-e-Shirin**	**0.44**	**208**	Pg	**Pb**	**06 11 36.1**	**-0.6**
KGS1				Sg	**Sb**	**06 11 43.1**	**-0.2**
IDHR	**Dehrash**	**0.49**	**113**	Pg	**Pg**	**06 11 36.7**	**-0.1**
IDHR				Sg	**Sb**	**06 11 44.7**	**-0.2**
GLG1	**Gilan-e-Gharb**	**0.78**	**176**	Pg	**Pg**	**06 11 42.0**	**-0.2**
IGHG	**Ghaleghazi**	**0.82**	**133**	Pg	**Pg**	**06 11 42.7**	**-0.3**
ILIN	**Lien**	**0.92**	**88**	Pg	**Pb**	**06 11 45.0**	**-0.1**
KCHF	**Cheshme Sefid,**	**1.17**	**122**	Pg	**Pn**	**06 11 49.1**	**-0.2**
ILBA	**Ilam Banvizeh**	**1.30**	**166**	Pg	**Pb**	**06 11 51.6**	**+0.1**
IKRK	**Kirkuk**	**1.33**	**293**	*e*Pn	**Pg**	**06 11 52.0**	**-0.6**
IKRK				*e*Sn	**Sg**	**06 12 11.0**	**+1.0**
SNQR	**Sonqor, Kerman**	**1.47**	**91**	Pg	**Pg**	**06 11 55.0**	**-0.4**
IBDR	**Badra**	**1.78**	**178**	*e*Pn	**Pb**	**06 11 59.0**	**-0.6**
IBDR				*e*Sn	**Sb**	**06 12 22.5**	**+0.7**
IBDR				AML	AML	06 12 23.1	
	comp=N,81nm,0.4s						
IBDR				AML	AML	06 12 27.5	
	comp=E,67nm,0.3s						
BHD	**Baghdad**	**2.02**	**217**	*e*Pn	**Pn**	**06 12 02.0**	**+1.1**
BHD				*e*Sn	**Sb**	**06 12 28.0**	**-0.8**

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*ASRS **11** 06:16:51.0±0.4,53°.65N×91°.07E,h0^{km},M3.4,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*
*NNC **11** 06:17:00.4±2.9,53°.51N×90°.58E,h0^{km},mb3.7,mpv3.4, Error ellipse: s-maj=22.3km s-min=16.0km az=60.0, Suspected Mining explosion.*
*IDC **11** 06:17:01.3±3.1,53°.43N×90°.48E,h0^{km},mbtmp3.3/3, ML2.8/3,Error ellipse: s-maj=26.7km s-min=22.0km az=60.0*
ISC 11 06:16:58.8±4.3**,53°.7N**±0°.1×**90°.5E**±0°.2**,h0^{km},n8,**σ**1**^{s}**.82**/11**, 8C-1D,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**3.38**	**277**	I	I	06 38 35.0	
	0.1nm,1.2s,baz=92,slow=322,SNR=15						
ZAA0	**Zalesovo Array**	**3.38**	**277**	⇑Pg	**Pg**	**06 18 04.6**	**+1.0**
	1.7nm,0.7s						
ZAA0				⇓Lg	Lg	06 18 49.9	
	21nm,1.0s						
ZALV	**Zalesovo Beam**	**3.38**	**277**	Pn	**Pb**	**06 17 57.5**	**-2.1**
	1.3nm,0.3s,baz=96,slow=16,SNR=11						
ZALV				Lg	Lg	06 18 49.1	
	1.4nm,0.3s,baz=93,slow=26,SNR=3.8						
	2.6nm,0.3s						
KURK	**Kurchatov**	**7.88**	**253**	⇑Pn	**Pn**	**06 18 54.8**	**+0.3**
	1.6nm,1.0s						
KURK				⇑Sn	**Sn**	**06 20 25.8**	**+1.4**
	10nm,0.8s						
KURK				⇑Lg	Lg	06 21 12.8	
	12nm,0.8s						
KURBB	**Kurchatov Arra**	**7.97**	**252**	Pn	**Pn**	**06 18 56.8**	**+0.9**
	0.2nm,0.3s,baz=65,slow=14,SNR=12						
KURBB				Sn	**Sn**	**06 20 26.6**	**-0.1**
	0.1nm,0.3s,baz=67,slow=25,SNR=8.7						
KURBB				Lg	Lg	06 21 09.3	
	baz=63,slow=33,SNR=1.5						
	2.2nm,0.6s						
KURBB	**Kurchatov Arra**	**7.97**	**252**	⇑Pn	**Pn**	**06 18 56.6**	**+0.7**
	3.0nm,0.5s						
KURBB				⇑Lg	Lg	06 21 13.8	
	36nm,0.8s						
MK31	**Makanchi Array**	**8.66**	**221**	Pn	**Pn**	**06 19 06.5**	**+1.1**
	1.9nm,0.8s,baz=38,slow=12,SNR=12						
MK31				⇑Sn	**Sn**	**06 20 45.3**	**+1.6**
	3.9nm,0.8s						
MK31				⇑Lg	Lg	06 21 33.6	
	13nm,0.8s,baz=40,slow=26,SNR=4.0						
MKAR	**Makanchi Array**	**8.66**	**221**	Pn	**Pn**	**06 19 06.3**	**+0.9**
	0.3nm,0.3s,baz=33,slow=13,SNR=8.3						
MKAR				Sn	**Sn**	**06 20 40.1**	**-3.6**
	baz=40,slow=23,SNR=2.3						
MKAR				Lg	Lg	06 21 28.8	
	0.1nm,0.3s,baz=38,slow=27,SNR=5.3						
	0.6nm,0.5s						

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*SJA **11** 06:38:02.3±1.9,32°.29S×73°.02W,h19^{km}±84^{km},ML3.9, MW3.8*
*IDC **11** 06:38:07.9±1.4,32°.04S×72°.43W,h0^{km},mb3.8/3, mbtmp3.6/7,ML3.6/4,MS3.0/2,Error ellipse: s-maj=36.8km s-min=25.8km az=107.0*
*GUC **11** 06:38:11.3±0.9,32°.11S×72°.18W,h29^{km}±4^{km},ML3.5*
ISC 11 06:38:11.4±1.1**,32°.14S**±0°.03×**72°.22W**±0°.06**,h24**^{km}±7^{km}**, n58,**σ**1**^{s}**.93**/69**,6C-1D,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	**Catapilco**	**0.89**	**119**	⇓*i*P	**Pn**	**06 38 27.1**	**-1.4**
VA06				*e*S	**Sb**	**06 38 38.7**	**-1.0**
VA06				IAML		06 38 41.6	
	comp=N,3µm,0.4s						
VA01	**Torpederas**	**1.01**	**151**	*e*P	**Pn**	**06 38 29.9**	**-0.2**
ROC1	**El Roble**	**1.32**	**130**	*e*P	**Pb**	**06 38 34.7**	**-1.0**
ROC1				*e*S	**Sb**	**06 38 54.1**	**+1.7**
ROCH	**El Roble**	**1.32**	**129**	⇑*e*P	**Pn**	**06 38 34.6**	**-0.1**
ROCH				⇑*e*P	**Pn**	**06 38 34.6**	**-0.1**
ROCH				*e*S	**Sb**	**06 38 51.8**	**-0.5**
ROCH				IAML		06 39 02.1	
	comp=N,2µm,0.5s						
ROCH				IAML		06 39 02.2	
	comp=N,1µm,0.6s						
CO02	**Combarbal**	**1.40**	**49**	⇑*e*P	**Pb**	**06 38 35.2**	**-1.7**
CO02				*e*S	**Sb**	**06 38 53.6**	**-0.8**
CO02				IAML		06 38 58.0	
	comp=E,4µm,0.4s						
CO02	**Combarbal**	**1.40**	**49**	*e*P	**Pb**	**06 38 35.4**	**-1.6**
CO02				*e*S	**Sb**	**06 38 54.7**	**+0.4**
CO02				IAML		06 38 56.3	
	comp=Z,1µm,0.3s						
MT02	**Curacav**	**1.45**	**141**	*e*P	**Pn**	**06 38 36.3**	**+0.1**
CO06	**Fray Jorge**	**1.54**	**19**	⇑*e*P	**Pn**	**06 38 36.9**	**-0.6**
CO06				IAML		06 39 08.0	
	comp=E,610nm,0.4s						
VA03	**San Esteban**	**1.55**	**114**	⇑*e*P	**Pn**	**06 38 37.6**	**0.0**
VA03				IAML		06 39 03.8	
	comp=N,3µm,0.5s						
VA03	**San Esteban**	**1.55**	**114**	*e*P	**Pn**	**06 38 37.8**	**+0.2**
VA03				*e*S	**Sb**	**06 39 00.1**	**+1.4**
VA03				IAML		06 39 03.8	
	comp=Z,1µm,0.3s						
VA05	**Santo Domingo**	**1.60**	**161**	*e*P	**Pn**	**06 38 38.5**	**+0.2**
VA05				IAML		06 39 10.6	
	comp=E,912nm,0.3s						
PEL	**Peldehue**	**1.64**	**128**	*e*P	**Pn**	**06 38 39.1**	**+0.2**
PEL				IAML		06 39 04.7	
	comp=N,972nm,0.3s						
PEL	**Peldehue**	**1.64**	**128**	*e*P	**Pn**	**06 38 38.7**	**-0.2**
PEL				*e*S	**Sb**	**06 39 00.8**	**-0.6**
MT10	**Hacienda Santa**	**1.82**	**129**	*e*P	**Pn**	**06 38 42.0**	**+0.6**
MT10				IAML		06 39 11.7	
	comp=N,2µm,0.5s						
CO03	**El Pedregal**	**1.84**	**46**	*e*P	**Pn**	**06 38 41.9**	**+0.3**
CO03				IAML		06 39 12.5	
	comp=E,704nm,0.5s						
CO03	**El Pedregal**	**1.84**	**46**	*e*P	**Pb**	**06 38 42.4**	**-2.1**
CO03				IAML		06 39 18.8	
	comp=Z,293nm,0.5s						
MT14	**Cerro Cal¡n**	**1.90**	**132**	*e*P	**Pn**	**06 38 43.2**	**+0.7**
MT14				IAML		06 39 19.3	
	comp=E,951nm,0.4s						
MT01	**Popeta**	**1.91**	**155**	IAML		06 39 21.7	
	comp=E,383nm,0.5s						
MT16	**CCHEN**	**1.93**	**132**	*e*P	**Pn**	**06 38 43.6**	**+0.7**
MT16				IAML		06 39 18.3	
	comp=N,270nm,0.6s						
MT09	**Talagante**	**1.94**	**148**	*e*P	**Pn**	**06 38 43.9**	**+0.8**
MT09				IAML		06 39 23.8	
	comp=N,533nm,0.5s						
FCH	**Farellones**	**2.02**	**127**	⇑*e*P	**Pn**	**06 38 44.9**	**+0.5**
FCH				IAML		06 39 12.7	
	comp=E,249nm,0.2s						
MT15	**Las Vizcachas**	**2.06**	**136**	*e*P	**Pn**	**06 38 45.6**	**+1.1**
MT15				IAML		06 39 23.8	
	comp=N,676nm,0.3s						
MT08	**Bocatoma Ro**	**2.27**	**126**	*e*P	**Pn**	**06 38 48.9**	**+1.2**
MT08				IAML		06 39 32.5	
	comp=N,245nm,0.5s						
MT13	**San Alfonso**	**2.29**	**135**	*e*P	**Pn**	**06 38 49.0**	**+1.2**
MT13				IAML		06 39 26.1	
	comp=E,456nm,0.3s						
BO04	**La Punta**	**2.29**	**144**	*e*P	**Pn**	**06 38 49.3**	**+1.4**
BO04				IAML		06 39 29.6	
	comp=E,389nm,0.6s						
GO04	**Tololo Observa**	**2.31**	**32**	*e*P	**Pn**	**06 38 48.1**	**-0.1**
GO04	**Tololo Observa**	**2.31**	**32**	*e*P	**Pn**	**06 38 48.3**	**+0.1**
GO04				*e*S	**Sb**	**06 39 25.4**	**+4.7**
AUSP	**Uspallata**	**2.41**	**93**	*e*P	**Pb**	**06 38 52.5**	**-1.8**
AUSP				*e*S	**Sb**	**06 39 26.4**	**+2.8**
BO01	**Tunca**	**2.44**	**157**	*e*P	**Pn**	**06 38 50.3**	**+0.4**
BO01				IAML		06 39 33.4	
	comp=E,123nm,0.3s						
RTLS	**Leoncito**	**2.51**	**83**	*e*P	**Pb**	**06 38 54.0**	**-2.0**
RTLS				*e*S	**Sb**	**06 39 29.0**	**+2.4**
RTLS				IAML		06 39 39.6	
	comp=Z,781nm,0.7s						
CO01	**Juntas del Tor**	**2.82**	**41**	*e*P	**Pn**	**06 38 56.4**	**+1.0**
CO01				IAML		06 39 40.9	
	comp=N,159nm,0.4s						
ARCO	**CERRO ARCO**	**2.87**	**105**	*e*P	**Pb**	**06 39 00.2**	**-1.9**
ARCO				*e*S	**Sb**	**06 39 40.0**	**+3.2**
ARCO				IAML		06 39 49.4	
	comp=Z,148nm,0.5s						
GO05	**Hualane**	**2.88**	**175**	*e*P	**Pn**	**06 38 56.0**	**+0.2**
GO05				IAML		06 39 30.0	
	comp=E,106nm,0.7s						
BO02	**Sierra Bellavi**	**2.91**	**156**	*e*P	**Pn**	**06 38 57.7**	**+1.3**
BO02				IAML		06 39 53.6	
	comp=N,310nm,0.3s						
DOCA	**Reserva Natura**	**2.93**	**67**	*e*P	**Pb**	**06 39 01.1**	**-2.1**
DOCA				IAML		06 39 50.4	
	comp=Z,136nm,1.8s						
AAGR	**Agrelo**	**3.02**	**109**	*e*P	**Pb**	**06 39 01.8**	**-2.8**
AAGR				IAML		06 39 52.0	
	comp=Z,143nm,0.8s						
AROD	**Rodeo**	**3.07**	**51**	*e*P	**Pb**	**06 39 02.8**	**-2.7**
AROD				*e*S	**Sb**	**06 39 44.0**	**+1.4**
ACCO	**Cerro Coronel**	**3.11**	**61**	*e*P	**Pb**	**06 39 07.4**	**+1.2**
ACCO				*e*S	**Sb**	**06 39 49.6**	**+5.6**
RTLL	**Cerro Villicun**	**3.29**	**77**	*e*P	**Pb**	**06 39 05.0**	**-4.2**
ACDV	**Cuesta del Vie**	**3.30**	**54**	*e*P	**Pb**	**06 39 05.4**	**-4.1**
ACDV				IAML		06 40 19.0	
	comp=Z,65nm,0.6s						
CFA	**Coronel Fontan**	**3.43**	**82**	Pn	**Pn**	**06 39 06.2**	**+2.7**
	comp=Z,3.8nm,0.3s,baz=249,slow=13,SNR=33						
CFA				Sn	**Sb**	**06 39 48.0**	**-4.9**
	comp=Z,4.7nm,0.3s,baz=76,slow=15,SNR=5.9						
	comp=Z,9.2nm,0.3s						
AGUA	**GUANDACOL**	**4.16**	**52**	*e*P	Pn	06 39 17.2	+3.6
AGUA				IAML		06 40 27.3	
	comp=Z,112nm,0.6s						
VCA	**Vinchina**	**4.85**	**47**	*e*P	**Pn**	**06 39 26.2**	**+3.1**
VCA				IAML		06 40 43.5	
	comp=Z,100nm,0.6s						
ACLC	**CERRO LA CRUZ**	**5.28**	**61**	*e*P	**Pn**	**06 39 31.9**	**+2.8**
ACLC				IAML		06 40 48.0	
	comp=Z,63nm,0.6s						
MRA	**San Martin**	**5.52**	**95**	*e*P	**Pn**	**06 39 32.9**	**+0.6**
MRA				IAML		06 41 10.1	
	comp=Z,45nm,0.7s						
H03N1	**Juan Fernandez**	**5.78**	**255**	T	T	06 45 46.0	
	baz=84,slow=72,SNR=58						
H03N3	**Juan Fernandez**	**5.79**	**255**	T	T	06 45 39.1	
	baz=84,slow=72,SNR=84						
H03N2	**Juan Fernandez**	**5.80**	**255**	T	T	06 45 41.9	
	baz=84,slow=72,SNR=53						
PLCA	**Paso Flores**	**8.69**	**172**	Pn	**Pn**	**06 40 17.2**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=336,slow=12,SNR=6.6						
	comp=Z,0.6nm,0.3s						
CPUP	**Villa Florida**	**14.23**	**70**	Sn	**Sn**	**06 44 08.1**	**-0.5**
	baz=140,slow=15,SNR=2.9						
LPAZ	**La Paz**	**16.21**	**14**	Pn	**P**	**06 41 59.2**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=185,slow=9.6,SNR=5.4						
LPAZ				LR	LR	06 47 13.8	
	comp=Z,25nm,21.5s,baz=161,slow=34						
	comp=Z,1.3nm,0.8s						
SIV	**San Ignacio**	**19.00**	**35**	P	**Pn**	**06 42 31.2**	**-1.2**
	baz=194,slow=8.1,SNR=3.9						
	comp=Z,0.5nm,0.5s						
BDFB	**Brasilia**	**27.46**	**59**	P	**P**	**06 43 56.1**	**+0.1**
	comp=Z,3.0nm,0.8s,baz=190,slow=7.3,SNR=3.7						
BDFB				LR	LR	06 56 28.0	
	comp=Z,56nm,18.4s,baz=131,slow=40						
	comp=Z,3.0nm,0.8s						
SNAA	**Sanae**	**53.37**	**158**	P	**P**	**06 47 29.6**	**+1.0**
	comp=Z,0.9nm,0.9s,baz=3.1,slow=5.1,SNR=2.7						
	comp=Z,0.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**83.73**	**70**	P	**P**	**06 50 39.7**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=214,slow=1.6,SNR=1.6						
	comp=Z,0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**151.59**	**41**	PKPbc	**PKiKP**	**06 58 04.3**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=304,slow=3.1,SNR=4.2						
ZALV	**Zalesovo Beam**	**152.72**	**30**	PKPbc	**PKiKP**	**06 58 04.7**	**-1.1**
	comp=Z,0.9nm,0.5s,baz=336,slow=3.2,SNR=3.5						
ZALV				PKPab	**sPKPbc**	**06 58 16.3**	**+1.6**
	comp=Z,1.0nm,0.6s,baz=259,slow=2.2,SNR=3.6						
MKAR	**Makanchi Array**	**155.62**	**46**	PKPab	**PKPab**	**06 58 30.0**	**+0.9**
	comp=Z,0.1nm,0.5s,baz=299,slow=4.3,SNR=1.7						

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*ISN **11** 06:50:48.6±0.4,34°.61N×45°.53E,h12^{km}±10^{km},ML2.9*
*TEH **11** 06:50:48.9,34°.60N×45°.55E,h10^{km}±36^{km}*
ISC 11 06:50:49.0±1.1**,34°.62N**±0°.04×**45°.54E**±0°.04**,h9**^{km}±10^{km}**, n13,**σ**0**^{s}**.70**/18**,Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KGS1	**Ghasr-e-Shirin**	**0.12**	**161**	Pg	**Pg**	**06 50 52.0**	**+0.3**
GLG1	**Gilan-e-Gharb**	**0.59**	**149**	Pg	**Pg**	**06 51 00.2**	**-0.1**
IDHR	**Dehrash**	**0.70**	**83**	Pg	**Pg**	**06 51 02.2**	**-0.3**
IDHR				Sg	**Sb**	**06 51 13.1**	**-0.3**
IGHG	**Ghaleghazi**	**0.90**	**108**	Pg	**Pb**	**06 51 06.5**	**-0.4**
ILBA	**Ilam Banvizeh**	**1.13**	**151**	Pg	**Pb**	**06 51 09.7**	**-1.1**
ILIN	**Lien**	**1.21**	**75**	Pg	**Pn**	**06 51 11.9**	**-0.5**
IKRK	**Kirkuk**	**1.26**	**309**	*e*Pg	**Pg**	**06 51 13.0**	**-0.2**
IKRK				*e*Sg	**Sg**	**06 51 30.5**	**+1.0**
IKRK				AML	AML	06 51 39.5	
	comp=N,459nm,0.5s						
IKRK				AML	AML	06 51 41.2	
	comp=E,205nm,0.5s						
KCHF	**Cheshme Sefid,**	**1.28**	**105**	Pg	**Pg**	**06 51 14.3**	**+0.6**
IBDR	**Badra**	**1.54**	**168**	*e*Pn	**Pb**	**06 51 17.5**	**-0.1**
IBDR				*e*Sn	**Sg**	**06 51 38.5**	**+0.1**
IBDR				AML	AML	06 51 44.6	
	comp=E,149nm,0.2s						
IBDR				AML	AML	06 51 51.4	
	comp=N,130nm,0.4s						
BHD	**Baghdad**	**1.65**	**216**	*e*Pn	**Pb**	**06 51 19.0**	**-0.6**
BHD				*e*Sn	**Sg**	**06 51 41.1**	**-1.1**
SNQR	**Sonqor, Kerman**	**1.73**	**81**	Pg	**Pb**	**06 51 21.3**	**+0.1**
IBZA	**Bozab**	**1.92**	**94**	Pn	**Pb**	**06 51 23.8**	**-0.6**
RAFI	**Al-Rafai**	**2.92**	**170**	*e*Pn	**Pn**	**06 51 36.5**	**+0.8**
RAFI				*e*Sn	**Sn**	**06 52 12.0**	**+1.0**

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*SGS **11** 06:58:25.1,30°.77N×34°.79E,h14^{km},Ml2.2*
*JSO **11** 06:58:26.7±0.3,31°N±2°×3°5E±°,h13^{km},M2.5/12, Md2.9/12,Mjma2.5/10,ML2.2/12,MLv2.4/12,MLv2.4/12*
*GII **11** 06:58:26.5±0.0,30°.58N±0°.03×35°.378E±0°.009, h13^{km},Mws2.2/9,confirmed*
ISC 11 06:58:26.3±0.9**,30°.58N**±0°.02×**35°.33E**±0°.03**,h16**^{km}±10^{km}**, n54,**σ**0**^{s}**.54**/61**,4C,Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EYHV	**Ein Yahav**	**0.11**	**315**	P	**Pb**	**06 58 30.1**	**0.0**
EYHV				S	**Sb**	**06 58 33.4**	**+0.8**
MSPR	**Moshav SAPIR**	**0.13**	**286**	P	**Pb**	**06 58 30.5**	**+0.1**
MSPR				S	**Sb**	**06 58 33.8**	**+0.8**
ZFRI	**Zfri**	**0.13**	**259**	P	**Pb**	**06 58 30.4**	**-0.1**
ZFRI	**Zfri**	**0.13**	**259**	⇑P	**Pb**	**06 58 30.6**	**+0.1**
ZFRI				S	**Sb**	**06 58 33.8**	**+0.6**
ZUKM	**Zukim**	**0.17**	**238**	P	**Pb**	**06 58 31.1**	**0.0**
ZUKM				S	**Sb**	**06 58 34.7**	**+0.5**
IDAN	**Idan**	**0.26**	**349**	P	**Pg**	**06 58 32.0**	**0.0**
NTKR	**Neot Hakikar**	**0.35**	**7**	P	**Pg**	**06 58 34.0**	**+0.3**
NTKR				S	**Sb**	**06 58 40.1**	**+0.5**
PRNI	**Paran**	**0.36**	**231**	P	**Pb**	**06 58 34.4**	**0.0**
PRNI	**Paran**	**0.36**	**231**	⇑P	**Pb**	**06 58 34.4**	**0.0**
PRNI	**Paran**	**0.36**	**231**	S	**Sb**	**06 58 40.5**	**+0.7**
HSNJ	**Maan**	**0.45**	**136**	P	**Pg**	**06 58 35.0**	**-0.4**
HRFI	**Mount Harif**	**0.60**	**205**	P	**Pg**	**06 58 37.9**	**-0.2**
HRFI	**Mount Harif**	**0.60**	**205**	⇑P	**Pg**	**06 58 38.0**	**-0.2**
HRFI	**Mount Harif**	**0.60**	**205**	S	**Sg**	**06 58 46.5**	**+0.4**
ARADI	**Arad**	**0.67**	**352**	P	**Pg**	**06 58 39.1**	**-0.5**
ARADI				S	**Sg**	**06 58 48.6**	**+0.1**
KRMI	**Paran Flat**	**0.70**	**229**	P	**Pg**	**06 58 39.7**	**-0.3**
KRMI	**Paran Flat**	**0.70**	**229**	⇑P	**Pg**	**06 58 39.7**	**-0.3**
KRMI	**Paran Flat**	**0.70**	**229**	S	**Sb**	**06 58 49.8**	**+0.3**
YTVT	**Yotvata**	**0.72**	**199**	P	**Pg**	**06 58 40.3**	**-0.2**
YTVT				S	**Sb**	**06 58 51.1**	**+0.9**
MSBI	**Mazada**	**0.73**	**2**	P	**Pb**	**06 58 41.0**	**+0.3**
MSBI	**Mazada**	**0.73**	**2**	P	**Pg**	**06 58 40.1**	**-0.6**
MSBI	**Mazada**	**0.73**	**2**	S	**Sg**	**06 58 50.2**	**-0.1**
GHAJ	**Ghor Haditha**	**0.75**	**16**	P	**Pg**	**06 58 40.8**	**-0.2**
GHAJ	**Ghor Haditha**	**0.75**	**16**	P	**Pg**	**06 58 40.3**	**-0.6**
SAMR	**Samar**	**0.79**	**200**	P	**Pg**	**06 58 41.3**	**-0.4**
YTIR	**Yattir**	**0.80**	**347**	P	**Pg**	**06 58 41.3**	**-0.7**
YTIR	**Yattir**	**0.80**	**347**	P	**Pg**	**06 58 41.6**	**-0.4**
YTIR	**Yattir**	**0.80**	**347**	S	**Sg**	**06 58 52.3**	**-0.3**
ELFZ	**Elifaz**	**0.83**	**199**	P	**Pg**	**06 58 41.9**	**-0.5**
MBRI	**Mt Berech**	**0.86**	**205**	P	**Pg**	**06 58 42.6**	**-0.5**
MBRI	**Mt Berech**	**0.86**	**205**	P	**Pg**	**06 58 42.5**	**-0.6**
MBRI	**Mt Berech**	**0.86**	**205**	S	**Sb**	**06 58 55.5**	**+1.2**
KZIT	**Kziot**	**0.86**	**292**	P	**Pg**	**06 58 41.5**	**-1.7**
KZIT	**Kziot**	**0.86**	**292**	P	**Pg**	**06 58 43.2**	**0.0**
KZIT	**Kziot**	**0.86**	**292**	S	**Sb**	**06 58 54.8**	**+0.5**
AQBJ	**Aqaba**	**0.88**	**196**	P	**Pg**	**06 58 43.4**	**-0.1**
EIL	**Elat**	**0.96**	**200**	P	**Pb**	**06 58 44.2**	**-0.5**
EIL	**Elat**	**0.96**	**200**	P	**Pb**	**06 58 44.4**	**-0.3**
EIL	**Elat**	**0.96**	**200**	S	**Sb**	**06 58 57.8**	**+0.6**
DSI	**Dead Sea**	**0.99**	**3**	P	**Pb**	**06 58 45.0**	**-0.1**
DSI	**Dead Sea**	**0.99**	**3**	P	**Pb**	**06 58 45.0**	**-0.1**
DSI	**Dead Sea**	**0.99**	**3**	S	**Sg**	**06 58 58.8**	**+0.3**
AMAZ	**Amatzia**	**1.01**	**340**	P	**Pb**	**06 58 45.3**	**-0.2**
AMAZ	**Amatzia**	**1.01**	**340**	S	**Sg**	**06 58 59.3**	**0.0**
HQLS		**1.30**	**190**	P	**Pn**	**06 58 50.2**	**+0.4**
HQLS		**1.30**	**190**	S	**Sg**	**06 59 08.5**	**+0.3**
JMOS	**Jabal al Moall**	**1.42**	**188**	S	**Sg**	**06 59 12.0**	**-0.2**
JMOS	**Jabal al Moall**	**1.42**	**188**	P	**Pn**	**06 58 52.0**	**+0.5**
HAQS	**Haql**	**1.57**	**193**	P	**Pn**	**06 58 53.1**	**-0.4**
JLOS		**1.84**	**176**	P	**Pn**	**06 58 56.7**	**-0.8**
TAYS	**Tayyib Ism**	**2.06**	**191**	P	**Pn**	**06 59 00.2**	**-0.1**
BDAS	**Al Bad`**	**2.15**	**185**	P	**Pb**	**06 59 03.7**	**-1.2**
AYUS	**`Aynunah**	**2.38**	**181**	P	**Pb**	**06 59 09.8**	**+1.0**
WTBKS	**WTBKS**	**2.54**	**168**	P	**Pb**	**06 59 11.1**	**-0.5**

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*MOS **11** 07:00:01.8±0.9,21°.31S×174°.29W,h10^{km},mb5.2/27, MS4.6/5,Error ellipse: s-maj=10.8km s-min=9.8km az=80.3*
*BJI **11** 07:00:01.0,20°.76S×173°.52W,h7^{km},mB5.5/14,mb5.3/37, Ms4.9/8,Ms7 4.7/9*
*NEIC **11** 07:00:01.8±2.1,21°.23S±0°.05×173°.84W±0°.07,h10^{km}±1^{km}, mb5.2/281,Error ellipse: s-maj=12.4km s-min=6.6km az=236.0*
*IDC **11** 07:00:01.3±0.4,21°.26S×174°.24W,h0^{km},mb4.8/19, mbtmp4.8/22,ML4.8/3,MS4.2/37,Error ellipse: s-maj=17.3km s-min=13.9km az=113.0*
*GCMT **11** 07:00:05.8±0.3,21°.47S±0°.02×173°.68W±0°.02,h20^{km}, MW5.0/95,Moment Tensor Solution. s39,c47; s95,c114; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.29±.17; M$_{\theta\theta}$-1.47±.10; M$_{\phi\phi}$-1.82±.10; M$_{r\theta}$1.41±.20; M$_{\theta\phi}$-0.95±.05; M$_{\phi r}$1.03±.17; Best double couple: M$_0$3.42200×10^{16} NP1:ϕ_s216.00000°,δ30.00000°,λ81.00000°. NP2: ϕ_s46.00000°,δ60.00000°,λ95.00000°. Principal axes: T 3.7800, Plg74.0000°, Azm330.0000°; N -0.7150, Plg4.0000°, Azm224.0000°; P -3.0650, Plg15.0000°, Azm133.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NOU **11** 07:00:05.2,21°.23S×173°.51W,h62^{km},mb5.1/12,Tonga Islands*
ISC 11 07:00:04.4±0.3**,21°.53S**±0°.04×**174°.00W**±0°.05**,h25^{km}, n783,**σ**1**^{s}**.40**/645**,mb5.2**/197**,MS4.5**/50**,30C-33D,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**4.54**	**58**	Pn	Pn	07 01 04.2	-7.4
NIUE	**Niue**	**4.54**	**58**	P	Pn	07 01 02.1	-10
NIUE				S	Sn	07 01 48.5	-15
NIUE	**Niue**	**4.54**	**58**	P	Pn	07 01 04.2	-7.4
NIUE	**Niue**	**4.54**	**58**	S	Sn	07 01 49.8	-14
TAVE	**Taveuni**	**7.36**	**310**	P	**Pn**	**07 01 52.8**	**+2.5**
AFI	**Afiamalu**	**7.87**	**16**		Pn	07 01 50.4	-7.0
AFI	**Afiamalu**	**7.87**	**16**	P	Pn	07 01 51.5	-6.0
AFI				pmax	pmax		
	comp=Z,129nm,1.3s						
DGTI	**Dogotuki**	**7.88**	**310**	P	**Pn**	**07 01 59.2**	**+1.6**
MSVF	**Nonsavu**	**8.39**	**295**		**Pn**	**07 02 04.3**	**-0.3**
MSVF	**Nonsavu**	**8.39**	**295**	Pn	**Pn**	**07 02 05.7**	**+1.1**
	comp=Z,2.6nm,0.3s,baz=129,slow=11,SNR=64						
MSVF				LR	LR	07 04 58.5	
	comp=Z,3µm,19.5s,baz=119,slow=37						
MSVF	**Nonsavu**	**8.39**	**295**	P	**Pn**	**07 02 08.4**	**+3.9**
MSVF	**Nonsavu**	**8.39**	**295***c*	*i*P	**Pn**	**07 02 08.1**	**+3.6**
RIZ	**Raoul Island**	**8.46**	**204**	P	**Pn**	**07 02 06.8**	**+1.4**
RIZ				S	**Sn**	**07 03 40.6**	**+0.5**
RAO	**Raoul Island**	**8.46**	**204**	Pn	**Pn**	**07 02 07.5**	**+2.1**
RAO	**Raoul Island**	**8.46**	**204**	Pn	**Pn**	**07 02 06.8**	**+1.4**
	comp=Z,80nm,0.3s,baz=99,slow=20,SNR=2.7						
RAO				Sn	**Sn**	**07 03 41.5**	**+1.4**
	comp=Z,104nm,0.3s,baz=228,slow=23,SNR=7.7						
RAO				LR	LR	07 05 01.2	
	comp=Z,465nm,18.8s,baz=87,slow=35						
	comp=Z,302nm,0.5s						
RAO	**Raoul Island**	**8.46**	**204**	P	**Pn**	**07 02 08.9**	**+3.5**
GLKZ	**Green Lake**	**8.47**	**204**	P	**Pn**	**07 02 05.8**	**+0.2**
GLKZ				S	**Sn**	**07 03 37.9**	**-2.5**
RAR	**Rarotonga**	**13.26**	**91**	Pn	Pn	07 03 04.6	-6.6
RAR	**Rarotonga**	**13.26**	**91**	Pn	Pn	07 03 04.5	-6.7
	comp=Z,23nm,0.3s,baz=272,slow=8.8,SNR=11						
RAR				Sn	Sn	07 05 17.9	-20
	comp=Z,3.8nm,0.3s,baz=212,slow=16,SNR=1.3						
RAR				LR	LR	07 07 44.3	
	comp=Z,1µm,19.7s,baz=290,slow=34						
RAR	**Rarotonga**	**13.26**	**91**	P	Pn	07 03 04.5	-6.7
PINNC	**Pines Island,**	**17.23**	**263**		**P**	**07 04 04.7**	**-0.1**
WMGZ	**Waiomatatini S**	**17.50**	**200**	P	**Pn**	**07 04 03.8**	**-3.0**
PKGZ	**Pakihiroa**	**17.66**	**201**	P	**Pn**	**07 04 05.9**	**-2.8**
HAZ	**Te Kaha**	**17.66**	**202**	P	**Pn**	**07 04 06.9**	**-1.8**
HAZ				S	**Sn**	**07 07 15.9**	**-8.8**
PUZ	**Puketiti**	**17.79**	**200**	P	**P**	**07 04 14.7**	**+3.8**
PUZ				S	Sn	07 07 14.8	-13
OUENC	**Ouen Island, N**	**17.79**	**264**	P	**P**	**07 04 13.8**	**+2.7**
RUGZ	**Raukumara Rang**	**17.89**	**202**	P	**Pn**	**07 04 08.8**	**-2.8**
DZM	**Mont Dzumac**	**18.17**	**265**		**P**	**07 04 15.7**	**+0.3**
DZM	**Mont Dzumac**	**18.17**	**265**	*e*P	**P**	**07 04 16.3**	**+1.0**
	comp=Z,88nm,1.0s						
DZM				*e*S	**Sn**	**07 07 35.1**	**-2.3**
	comp=Z,215nm,22.7s						
DZM				*e*LR	LR	07 08 34.2	
	comp=Z,599nm,21.8s						
DZM	**Mont Dzumac**	**18.17**	**265**	P	**Pn**	**07 04 14.1**	**-1.1**
	comp=Z,0.7nm,0.3s,baz=85,slow=17,SNR=16						
	comp=Z,24nm,0.8s						
DZM	**Mont Dzumac**	**18.17**	**265**	P	**P**	**07 04 18.4**	**+3.1**
TKGZ	**Te Karaka**	**18.25**	**201**	P	**P**	**07 04 21.6**	**+5.6**
URZ	**Urewera**	**18.35**	**203**	P	**Pn**	**07 04 19.5**	**+2.3**
	comp=Z,1.7nm,0.3s,baz=141,slow=2.5,SNR=26						
URZ				S	Sn	07 07 27.8	-14
	comp=Z,14nm,0.8s,baz=89,slow=23,SNR=7.4						
	comp=Z,27nm,0.7s						
URZ	**Urewera**	**18.35**	**203**	P	**Pn**	**07 04 19.7**	**+2.6**
VLAKA	**Lakatoro**	**18.39**	**284**	P	**Pn**	**07 04 19.7**	**+1.9**

MUGZ	Murupara	18.66	203	P	Pn	07 04 22.5	+1.5
PRGZ	Paritu Road	18.68	200	P	Pn	07 04 26.1	+4.8
RTZ	Ruatahuna	18.71	203		Pn	07 04 23.5	+1.8
SNGZ	Shannon Statio	18.73	201	P	Pn	07 04 23.6	+1.7
MHGZ	Mahia Peninsul	18.88	200	P	Pn	07 04 25.1	+1.4
BKZ	Black Stump Fm	19.37	203		Pn	07 04 30.0	+0.4
BKZ	Black Stump Fm	19.37	203	P	Pn	07 04 30.5	+0.9
NGZ	Ngauruhoe	19.71	205	P	Pn	07 04 37.8	+4.0
BFZ	Birch Farm	20.81	201	P	Pn	07 04 46.4	-0.1
BFZ	Birch Farm	20.81	201	P	Pn	07 04 46.3	-0.2
BFZ	Birch Farm	20.81	201	P	P	07 04 45.2	+1.2
BFZ				S	S	07 08 21.8	-13
MRZ	Mangatainoka R	21.02	203		P	07 04 47.4	+1.1
MRZ	Mangatainoka R	21.02	203	P	P	07 04 48.2	+2.0
MRZ				S	S	07 08 25.5	-14
HOWZ	Holdsworth Sta	21.25	202	P	P	07 04 51.0	+2.3
HOWZ				S	S	07 08 29.4	-14
OGWZ	Otaki Gorge	21.31	203	P	P	07 04 50.8	+1.5
OGWZ				S	S	07 08 34.4	-10
TMWZ	Te Maipa	21.31	201	P	P	07 04 52.9	+3.6
TMWZ				S	S	07 08 32.7	-12
MSWZ	Moikau Station	21.80	202	P	P	07 04 54.5	-0.2
TCW	Tory Channel	21.98	204	P	P	07 04 56.5	-0.1
TCW				S	S	07 08 47.2	-11
TUWZ	Tuamarina	22.30	204	P	P	07 05 00.2	+0.3
NNZ	Nelson	22.34	206	P	P	07 05 08.1	+7.7
NNZ				S	S	07 08 59.5	-5.1
TKNZ	Takaka Hill	22.36	207	P	P	07 05 08.5	+7.9
QRZ	Quartz Range	22.37	208	P	P	07 05 05.1	+4.4
MRNZ	Matariki Terra	22.75	206	P	P	07 05 09.9	+5.1
MRNZ				S	S	07 09 07.5	-4.5
TBI	Tubuai	22.75	99	*e*S	S	07 09 08.9	-3.5
	comp=Z,5µm,27.5s						
TBI				*e*LR	LR	07 10 28.4	
	comp=Z,1µm,23.2s						
TBI				*e*LR	LR	07 10 28.6	
	comp=Z,2µm,21.5s						
THZ	Tophouse	22.99	206	P	P	07 05 07.9	+0.5
THZ				S	S	07 09 09.3	-7.0
KHZ	Kahutara	23.30	204	P	P	07 05 11.6	+1.3
KHZ				S	S	07 09 17.2	-4.1
PPT2	Papeete2	23.34	85	*e*S	S	07 09 17.2	-5.4
	comp=Z,1µm,25.5s						
PPT2				*e*LR	LR	07 10 38.2	
	comp=Z,634nm,20.8s						
PPT2				*e*LR	LR	07 10 39.7	
	comp=Z,522nm,22.0s						
PPT	Papeete	23.35	85	LR	LR	07 12 50.3	
	comp=Z,882nm,18.7s,baz=282,slow=33						
INZ	Inchbonnie	24.39	207	P	P	07 05 22.3	+1.6
OXZ	Oxford	24.65	205	P	P	07 05 26.2	+3.2
OXZ				IAmb	IAmb	07 05 43.4	
	comp=Z,36nm,0.8s						
FOZ	Fox Glacier	25.74	208		P	07 05 37.1	+4.2
HNR	Honiara	27.78	292	LR	LR	07 14 58.8	
	comp=Z,223nm,21.9s,baz=174,slow=33						
ARMA	Armidale	32.04	247	P	P	07 06 29.5	+0.2
ARMA	Armidale	32.04	247	P	P	07 06 26.8	-2.5
EIDS	Eidsvold	32.20	256	P	P	07 06 31.0	+0.3
EIDS	Eidsvold	32.20	256	P	P	07 06 30.3	-0.4
	comp=Z,12nm,1.5s						
TAOE	Nuku Hiva Isla	34.93	74	*e*LR	LR	07 16 06.0	
	comp=Z,415nm,21.3s						
CAN	Canberra	35.11	239	P	P	07 06 56.4	+0.5
CAN	Canberra	35.11	239	P	P	07 06 56.4	+0.5
CAN				pmax	pmax		
	comp=Z,24nm,1.4s						
CTAO	Charters Tower	37.11	265	P	P	07 07 12.4	-0.8
CTAO				IAmb	IAmb	07 07 48.0	
	comp=Z,58nm,1.8s						
CTAO	Charters Tower	37.11	265	P	P	07 07 12.4	-0.8
CTAO				pmax	pmax		
	comp=Z,58nm,1.8s						
CMSA	Cobar Meteorol	37.23	246	P	P	07 07 12.0	-2.1
QLP	Quilpie	38.34	254	P	P	07 07 23.8	+0.3
	comp=Z,39nm,1.6s						
TOO	Toolangi	38.37	236	P	P	07 07 24.3	+0.6
TOO	Toolangi	38.37	236	P	P	07 07 24.3	+0.6
TOO				pmax	pmax		
	comp=Z,20nm,1.8s						
PMG	Port Moresby	39.21	282	P	P	07 07 30.1	-0.8
PMG				IAmb	IAmb	07 08 46.2	
	comp=Z,44nm,1.1s						
PMG	Port Moresby	39.21	282	P	P	07 07 28.8	-2.1
	comp=Z,21nm,0.8s,baz=62,slow=14,SNR=2.5						
PMG				LR	LR	07 21 13.0	
	comp=Z,196nm,18.7s,baz=150,slow=33						
	comp=Z,21nm,0.8s						
PMG	Port Moresby	39.21	282	P	P	07 07 30.1	-0.8
PMG				pmax	pmax		
	comp=Z,44nm,1.1s						
STKA	Stephens Creek	40.74	246	P	P	07 07 43.0	-0.5
STKA				IAmb	IAmb	07 07 43.8	
	comp=Z,63nm,0.9s						
STKA	Stephens Creek	40.74	246	P	P	07 07 40.8	-2.6
STKA	Stephens Creek	40.74	246	P	P	07 07 42.6	-0.8
	comp=Z,10nm,0.8s,baz=90,slow=9.7,SNR=12						
STKA				LR	LR	07 23 45.9	
	comp=Z,246nm,19.4s,baz=63,slow=35						
	comp=Z,10nm,0.8s						
MANU	Manus Island	42.29	292	P	P	07 07 55.8	-0.5
MANU				IAmb	IAmb	07 08 11.3	
	comp=Z,111nm,1.8s						
HTT	Hallett	43.09	244	P	P	07 07 59.5	-3.2
BBOO	Buckleboo	45.46	245	P	P	07 08 21.0	-0.7
JAY	Jayapura	47.91	287	P	P	07 08 38.4	-2.7
	comp=Z,40nm,0.9s						
AS31	Alice Springs	47.92	257	P	P	07 08 40.1	-1.1
AS31	Alice Springs	47.92	257	P	P	07 08 38.9	-2.2
	comp=Z,9.5nm,1.1s						
ASAR	Alice Springs	47.92	257	P	P	07 08 40.1	-1.0
ASAR	Alice Springs	47.92	257	P	P	07 08 39.6	-1.5
	comp=Z,26nm,0.9s,baz=90,slow=7.9,SNR=123						
ASAR				LR	LR	07 29 14.9	
	comp=Z,314nm,18.1s,baz=101,slow=37						
	comp=Z,26nm,0.9s						
ASAR	Alice Springs	47.92	257	P	P	07 08 40.1	-1.0
WR8	Warramunga Arr	48.01	262	P	P	07 08 40.0	-1.8
WR8				IAmb	IAmb	07 08 42.1	
	comp=Z,27nm,1.1s						
WB0	Warramunga Arr	48.14	262	P	P	07 08 41.3	-1.6
WRAB	Tennant Creek	48.15	262	P	P	07 08 41.1	-1.8
WRAB				IAmb	IAmb	07 08 43.6	
	comp=Z,24nm,1.1s						
WRAB	Tennant Creek	48.15	262	⇓*e*P	P	07 08 40.7	-2.2
WRAB				pmax	pmax		
	comp=Z,26nm,1.0s						
WRA	Warramunga Arr	48.16	262	P	P	07 08 40.6	-2.3
	comp=Z,19nm,1.0s,baz=97,slow=7.3,SNR=60						
	comp=Z,19nm,1.0s						
SMPI	Sarmi	49.93	286	P	P	07 08 53.2	-3.3
	comp=Z,22nm,1.2s						
MTN	Manton Dam	52.90	270	P	P	07 09 18.4	-0.4
MTN				IAmb	IAmb	07 10 13.7	
	comp=Z,67nm,1.9s						
GUMO	Guam	53.36	307	LR	LR	07 31 09.1	
	comp=Z,66nm,18.1s,baz=130,slow=35						
KNRA	Kununurra	54.31	266	IAmb	IAmb	07 09 28.4	
	comp=Z,57nm,1.8s						
KNRA				P	P	07 09 28.8	-0.4
KNRA	Kununurra	54.31	266	P	P	07 09 25.3	-3.8
FAKI	Fak Fak	55.37	282	P	P	07 09 34.3	-2.5
FAKI				IAmb	IAmb	07 09 35.8	
	comp=Z,25nm,1.2s						
FAKI	Fak Fak	55.37	282	P	P	07 09 33.2	-3.6
	comp=Z,19nm,1.2s						
FITZ	Fitzroy Crossi	56.59	262	P	P	07 09 43.7	-1.8
FITZ	Fitzroy Crossi	56.59	262	P	P	07 09 43.1	-2.4
	comp=Z,3.3nm,1.4s						
SWI	Sorong	57.12	284	P	P	07 09 47.6	-1.7
VNDA	Vanda	57.25	186	P	P	07 09 50.3	+1.0
VNDA	Vanda	57.25	186	P	P	07 09 53.3	+4.0
	comp=Z,3.4nm,0.9s,baz=12,slow=6.7,SNR=9.0						
VNDA				LR	LR	07 30 07.7	
	comp=Z,138nm,20.5s,baz=18,slow=31						
	comp=Z,3.4nm,0.9s						
SOEI	Soe	60.26	271	P	P	07 10 10.9	-0.5
BATI	Baumata	60.67	270	LR	LR	07 35 12.0	
	comp=Z,320nm,19.8s,baz=210,slow=35						
KLBR	Kellerberrin	61.00	245	P	P	07 10 15.7	-0.4
	comp=Z,75nm,0.9s						
PSA00	Pilbara Seismi	61.07	257		P	07 10 15.2	-1.4
PSA00				IAmb	IAmb	07 10 19.4	
	comp=Z,22nm,1.0s						
PSA00	Pilbara Seismi	61.07	257	P	P	07 10 15.4	-1.2
PSA00				IAmb	IAmb	07 10 21.4	
	comp=Z,16nm,1.2s						
NWAO	Narrogin (SRO)	61.25	243	P	P	07 10 18.1	+0.4
NWAO	Narrogin (SRO)	61.25	243	LR	LR	07 35 21.8	
	comp=Z,284nm,18.4s,baz=82,slow=35						
NWAO	Narrogin (SRO)	61.25	243	P	P	07 10 18.1	+0.4
NWAO				pmax	pmax		
	comp=Z,181nm,1.7s						
MBWA	Marble Bar	61.27	257	P	P	07 10 16.9	-1.1
MBWA				IAmb	IAmb	07 10 17.6	
	comp=Z,23nm,1.0s						
MBWA	Marble Bar	61.27	257	P	P	07 10 16.1	-1.9
	comp=Z,33nm,2.3s						
TNTI	Ternate	61.33	283	P	P	07 10 16.3	-2.2
SANI	Sanana	61.44	280	P	P	07 10 17.0	-2.2
	comp=Z,33nm,1.1s						
MORW	Morawa	62.89	248	P	P	07 10 29.5	+0.7
EDFI	Ende, Flores	62.99	271	P	P	07 10 27.2	-2.6
	comp=Z,552nmcomp=Z,11nm,0.8s						
CASY	Casey	64.64	206		P	07 10 41.8	+2.1
CASY				IAmb	IAmb	07 10 44.4	
	comp=Z,13nm,0.9s						
LUWI	Luwuk	64.79	279	P	P	07 10 41.1	-0.4
DAV	Davao City (W)	65.70	289	LR	LR	07 37 25.0	
	comp=Z,34nm,18.3s,baz=172,slow=34						
KAPI	Kappang	66.09	274	LR	LR	07 39 32.8	
	comp=Z,87nm,18.9s,baz=112,slow=36						
TOLI2	Tolitoli	67.47	281		P	07 10 57.2	-1.5
TOLI2				IAmb	IAmb	07 10 58.2	
	comp=Z,21nm,1.1s						
QSPA	South Pole Qui	68.55	180		P	07 11 05.9	+1.1
QSPA				IAmb	IAmb	07 11 34.1	
	comp=Z,26nm,1.2s						
QSPA	South Pole Qui	68.55	180	P	P	07 11 07.7	+2.9
	comp=Z,7.8nm,0.9s,baz=342,slow=0.7,SNR=30						
QSPA				LR	LR	07 36 50.8	
	comp=Z,207nm,20.9s,baz=64,slow=32						
	comp=Z,7.8nm,0.9s						
MYLDM	Lahad Datu	71.20	284	P	P	07 11 21.5	-0.3
AMKA	Amchitka	72.83	356	P	P	07 11 28.6	-2.1
MJAR	Matsushiro Arr	73.29	321	P	P	07 11 32.9	-1.0
	comp=Z,22nm,1.1s,baz=153,slow=5.6,SNR=17						
MJAR				LR	LR	07 40 14.5	
	comp=Z,68nm,18.7s,baz=117,slow=33						
	comp=Z,22nm,1.1s						
MAJO	Matsushiro	73.30	321		P	07 11 33.2	-0.6
MAJO				IAmb	IAmb	07 11 34.1	
	comp=Z,26nm,1.2s						
MAJO	Matsushiro	73.30	321	⇓*i*P	P	07 11 33.2	-0.6
MAJO				pmax	pmax		
	comp=Z,78nm,3.7s						
KKM	Kota Kinabalu	73.63	283		P	07 11 35.5	-0.9
KKM				IAmb	IAmb	07 11 36.8	
	comp=Z,21nm,1.1s						
JOW	Kunigami	73.71	308	LR	LR	07 39 31.9	
	comp=Z,66nm,19.2s,baz=170,slow=32						
JMN	Monobe	74.05	317		P	07 11 37.2	-1.2
NIKH	Nikolski High	74.32	3	P	P	07 11 38.6	-0.8
	baz=185						
JNU	Nakatsue	75.62	315	P	P	07 11 46.1	-1.4
JNU	Nakatsue	75.62	315	LR	LR	07 39 58.6	
	comp=Z,49nm,19.7s,baz=155,slow=32						
SMAI	San Martin Ant	76.30	158	P	P	07 11 51.4	+0.6
ASAJ	Asahikawa	76.46	329	LR	LR	07 42 41.3	
	comp=Z,112nm,18.1s,baz=156,slow=34						
CHNA	Chernabura Isl	77.05	8	P	P	07 11 54.5	-0.5
	baz=194						
SDPT	Sand Point	77.44	8	P	P	07 11 56.5	-0.7
	baz=193						
PFO	Pinyon Flats O	77.53	46	⇓*e*P	P	07 11 58.5	+0.1
PFO				pmax	pmax		
	comp=Z,11nm,1.1s						
S12K	Black Hills	77.59	7	P	P	07 11 57.5	-0.6
	baz=191						
P08K	Saint George I	77.92	3	P	P	07 11 59.6	-0.2
	baz=184						
PET	Petropavlovsk	77.95	344	*e*P	P	07 12 02.8	+2.8
PET				*e*S	S	07 21 54.6	+2.9
PET				pmax	pmax		
	comp=Z,36nm,1.1s						
PET				MLR	MLR		
	comp=Z,300nm,19.0s						
AFDM	Forest Hills D	77.98	40	IAmb	IAmb	07 12 04.0	
	comp=Z,18nm,1.3s						
BELA	Belgrano 2	78.04	172		P	07 12 02.1	+1.7
ORV	Oroville	78.07	39		P	07 11 59.0	-2.1
ORV				IAmb	IAmb	07 12 03.8	
	comp=Z,28nm,1.6s						
ORV	Oroville	78.07	39	P	P	07 11 59.0	-2.1
ORV				pmax	pmax		
	comp=Z,28nm,1.7s						
PEA0B	Petropavlovsk-	78.28	343	⇑*e*P	P	07 12 02.2	+0.3
PETK	Petropavlovsk-	78.28	343		P	07 11 59.8	-2.2
PETK	Petropavlovsk-	78.28	343	P	P	07 12 00.8	-1.1
	comp=Z,17nm,1.1s,baz=112,slow=10.0,SNR=7.1						
PETK				LR	LR	07 41 41.1	
	comp=Z,154nm,20.4s,baz=146,slow=32						
	comp=Z,17nm,1.1s						
SPIA	Saint Paul Isl	78.47	2	P	P	07 12 02.8	0.0
	baz=183						
S14K	Fog Glacier	78.47	8	P	P	07 12 03.0	0.0
	baz=194						
YSS	Yuzhno-Sakhali	78.53	331	P	P	07 12 02.4	-1.0
YSS				IAmb	IAmb	07 12 04.0	
	comp=Z,14nm,0.7s						
YSS	Yuzhno-Sakhali	78.53	331	*e*P	P	07 12 03.5	+0.1
YSS				*e*S	S	07 21 56.7	-1.5
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				MLR	MLR		
	comp=N,100nm,15.0s						
CHIR	Chirikof Islan	78.61	10	P	P	07 12 03.5	-0.2
	baz=197						
YBH	Yreka Blue Hor	78.83	37	IAmb	IAmb	07 12 08.5	
	comp=Z,25nm,1.4s						
PMSA	Palmer Station	78.84	156	LR	LR	07 42 11.2	
	comp=Z,210nm,18.1s,baz=230,slow=32						
PNTR	Pine Nut	78.89	40	IAmb	IAmb	07 12 09.6	
	comp=Z,26nm,1.0s						
BEKR	Beckworth	78.94	39	IAmb	IAmb	07 12 08.9	
	comp=Z,24nm,1.3s						
LHV	Little Huntoon	79.03	41	P	P	07 12 04.8	-1.6
LHV				IAmb	IAmb	07 12 13.8	
	comp=Z,34nm,1.3s						
RYN	Ryan	79.26	41	IAmb	IAmb	07 12 14.1	
	comp=Z,20nm,1.1s						
NVAR	Mina Array Bea	79.27	41	P	P	07 12 08.9	+0.9
	comp=Z,9.1nm,0.9s,baz=225,slow=7.6,SNR=41						
	comp=Z,9.1nm,0.9s						
L04D	Klamath Falls	79.38	36	IAmb	IAmb	07 12 25.2	
	comp=Z,32nm,1.3s						
PAHR	Pah Rah Range	79.42	40	IAmb	IAmb	07 12 11.6	
	comp=Z,23nm,1.3s						
SII	Sitkinak Islan	79.57	11	P	P	07 12 08.8	-0.1
	baz=198						
R16K	Pilot Point	79.99	9	P	P	07 12 11.2	+0.1
	baz=195						
KSRS	Korea Array	80.16	317	P	P	07 12 12.6	+0.1
	comp=Z,9.8nm,1.1s,baz=143,slow=5.9,SNR=22						
KSRS				LR	LR	07 43 34.2	
	comp=Z,26µm,20.9s,baz=110,slow=33						
	comp=Z,9.8nm,1.1s						
J04A	Umpqua Nationa	80.17	36	IAmb	IAmb	07 12 15.0	
	comp=Z,20nm,0.7s						
KSAR	Wonju Array Be	80.18	317		P	07 12 12.8	+0.2
KSAR	Wonju Array Be	80.18	317	P	P	07 12 12.8	+0.2
OHAK	Old Harbor	80.36	11	P	P	07 12 13.5	+0.4
	baz=199						
R18K	Karluk	80.48	11	P	P	07 12 14.1	+0.3
	baz=198						
J05D	Fort Rock, OR	80.67	36	IAmb	IAmb	07 12 22.1	
	comp=Z,28nm,1.0s						
Q17K	Contact Creek	80.91	10	P	P	07 12 15.8	-0.4
	baz=197,SNR=7.5						
KDAK	Kodiak Island	81.01	11	P	P	07 12 16.1	-0.5
	baz=200						
O14K	Tigyukauivet M	81.17	7	P	P	07 12 16.9	-0.5
	baz=192						
O15K	Ungalikthiuk R	81.25	7	P	P	07 12 17.0	-0.9
	baz=193						
G04A	Mulino	81.29	34	IAmb	IAmb	07 12 22.1	
	comp=Z,25nm,0.8s						
P16K	Nushagak River	81.35	8	P	P	07 12 17.8	-0.5
	baz=195						
MSHR	Mys Shultsa	81.37	322	*i* P	P	07 12 18.6	-0.3
MSHR				pmax	pmax		
	comp=Z,21nm,1.0s						
Q18K	Katmai Hardscr	81.42	10	P	P	07 12 18.0	-0.9
	baz=198,SNR=5.4						
TYV	Tymovskoe	81.55	334	*e*P	P	07 12 18.7	-1.0
TYV				*e*S	S	07 22 24.1	-5.8
TYV				pmax	pmax		
	comp=Z,13nm,1.4s						
TYV				pmax	pmax		
	comp=Z,100nm,4.6s						
TYV				smax	smax		
	comp=N,200nm,5.6s						
TYV				smax	smax		
	comp=E,300nm,5.6s						
P17K	Kvichak River	81.72	9	P	P	07 12 19.7	-0.7
	baz=196,SNR=6.0						
N14K	Kuskokwak Cree	81.78	6	P	P	07 12 20.6	0.0
	baz=191						
HOOD	Mount Hood Mea	81.80	34	IAmb	IAmb	07 12 23.8	
	comp=Z,14nm,0.9s						
Q20K	Shuyak Island	81.83	11	P	P	07 12 20.5	-0.4
	baz=200						
MAW	Mawson	81.83	199	P	P	07 12 23.4	+2.3
	comp=Z,5.3nm,0.8s,baz=128,slow=8.5,SNR=8.6						
MAW				LR	LR	07 47 23.5	
	comp=Z,263nm,19.3s,baz=116,slow=35						
	comp=Z,5.3nm,0.8s						
M11K	Mekoryuk	81.87	4	P	P	07 12 20.4	-0.6
	baz=187						
O16K	Kokwok River B	81.88	8	IAmb	IAmb	07 12 21.1	
	comp=Z,20nm,1.1s						
O16K	Kokwok River B	81.88	8	P	P	07 12 20.4	-0.8
	baz=195,SNR=6.0						
Q19K	Cape Douglas,	81.91	11	P	P	07 12 20.8	-0.6
	baz=199						
USA0B	Ussuriysk Arra	81.95	324	c*e*P	P	07 12 22.4	+0.5
USRK	Ussuriysk Ar.	81.95	324	P	P	07 12 20.2	-1.7
USRK	Ussuriysk Ar.	81.95	324	P	P	07 12 21.6	-0.3
	comp=Z,8.4nm,1.1s,baz=98,slow=1.9,SNR=9.7						
USRK				LR	LR	07 44 23.7	
	comp=Z,294nm,20.6s,baz=138,slow=33						
	comp=Z,8.4nm,1.1s						
P18K	Big Mountain,	82.09	10	IAmb	IAmb	07 12 22.7	
	comp=Z,22nm,1.1s						
P18K	Big Mountain,	82.09	10	P	P	07 12 21.4	-0.9
	baz=197,SNR=6.9						
M13K	Dall Lake	82.11	5	P	P	07 12 21.9	-0.5
	baz=190						
I07A	Izee	82.14	36	IAmb	IAmb	07 12 26.1	
	comp=Z,19nm,1.3s						
O17K	Koliganek Bris	82.19	9	P	P	07 12 22.1	-0.7
	baz=196						
N15K	Kwethluk River	82.19	7	P	P	07 12 22.4	-0.5
	baz=193						
J08A	Circle Bar Ran	82.26	37	IAmb	IAmb	07 12 26.6	
	comp=Z,32nm,1.4s						
G06A	Carlson Farm,	82.28	35	P	P	07 12 21.3	-2.5
H03S2	Juan Fernandez	82.32	123	T	T	08 44 59.2	
	baz=253						
H03S1	Juan Fernandez	82.33	123	T	T	08 45 01.1	
	baz=253						
H03S3	Juan Fernandez	82.34	123	T	T	08 44 56.3	
	baz=253,SNR=3.6						
O18K	Koktuh Hills	82.54	9	P	P	07 12 24.3	-0.4
	baz=197,SNR=6.6						
M14K	Bethel	82.57	6	IAmb	IAmb	07 12 26.4	
	comp=Z,26nm,1.0s						
M14K	Bethel	82.57	6	P	P	07 12 25.1	+0.4
	baz=191,SNR=8.8						
M15K	Kasigluk River	82.64	7	P	P	07 12 25.4	+0.2
	baz=192,SNR=15						
N16K	Nishlik Lake	82.65	8	P	P	07 12 25.7	+0.4
	baz=194						
P19K	Oil Pt	82.66	10	P	P	07 12 25.1	-0.2
	baz=199						
N17K	Nushagak Hills	82.90	8	P	P	07 12 26.4	-0.1
	baz=196						
HOM	Homer	82.95	11	P	P	07 12 26.1	-0.7
	baz=201						
O19K	Port Alsworth	83.00	10	P	P	07 12 26.5	-0.5
	baz=198						
L14K	Kuka Creek	83.08	5	P	P	07 12 27.7	+0.3
	baz=190,SNR=12						
PGC	Sidney	83.16	31	IAmb	IAmb	07 12 30.9	
	comp=Z,33nm,1.5s						
M16K	Timber Creek	83.16	7	P	P	07 12 28.2	+0.3
	baz=194,SNR=16						
O20K	Slope Mountain	83.17	11	P	P	07 12 27.5	-0.5
	baz=200						
BRSE	Bradley Lake S	83.19	12	P	P	07 12 27.9	-0.1
	baz=202						
G08A	Pilot Rock	83.22	36	IAmb	IAmb	07 12 35.2	
	comp=Z,24nm,1.1s						
N18K	Kilae Creek	83.23	9	P	P	07 12 27.6	-0.6
	baz=197						
MXC	Moxie City	83.34	34	IAmb	IAmb	07 12 31.9	
	comp=Z,20nm,1.2s						
NJ2	Nanjing	83.43	308	*e*P	P	07 12 30.6	+0.7
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
K13K	Kusilvak Mount	83.51	4	IAmb	IAmb	07 12 31.4	
	comp=Z,18nm,1.1s						
K13K	Kusilvak Mount	83.51	4	P	P	07 12 29.8	+0.2
	baz=188,SNR=5.9						
L15K	Ungalak Mounta	83.53	6	P	P	07 12 29.5	-0.2
	baz=192,SNR=21						
MDJ	Mudanjiang	83.54	323	P	P	07 12 30.2	0.0
MDJ				S	S	07 22 57.4	+6.9
MDJ				pmax	pmax		
	comp=Z,11nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,230nm,5.8s						
N19K	Bonanza Creek	83.56	9	IAmb	IAmb	07 12 30.3	
	comp=Z,10nm,0.9s						
N19K	Bonanza Creek	83.56	9	P	P	07 12 29.5	-0.5
	baz=198						
M17K	Holitna River	83.71	8	IAmb	IAmb	07 12 32.6	
	comp=Z,22nm,1.1s						
M17K	Holitna River	83.71	8	P	P	07 12 31.0	+0.3
	baz=195,SNR=5.4						
DUG	Dugway, Tooele	83.74	42	P	P	07 12 33.3	+1.8
DUG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
L16K	Owhat River	83.77	7		P	07 12 29.0	-2.0
L16K				IAmb	IAmb	07 12 32.8	
	comp=Z,20nm,1.1s						
L16K	Owhat River	83.77	7	P	P	07 12 31.2	+0.3
	baz=193,SNR=11						
SEW	Seward	83.78	12	P	P	07 12 30.3	-0.7
	baz=203						
Q23K	Middleton Isla	83.81	14	P	P	07 12 30.9	-0.2
	baz=206						
MFID	Camas Ranch	83.81	39	IAmb	IAmb	07 12 34.5	
	comp=Z,19nm,1.3s						
LL02	Futaleuf	83.95	134		P	07 12 33.1	+0.5
LL02				IAmb	IAmb	07 12 37.0	
	comp=Z,27nm,1.4s						
M18K	Stony River	84.02	9	P	P	07 12 32.2	0.0
	baz=197						
Q16A	Castle Valley	84.07	44	IAmb	IAmb	07 12 37.0	
	comp=Z,35nm,1.8s						
O22K	Cooper Landing	84.07	12	P	P	07 12 32.2	-0.3
	baz=202						
P23K	Montague Islan	84.09	13	P	P	07 12 32.6	0.0
	baz=205						
K15K	Wolf Creek Mou	84.13	6	P	P	07 12 33.3	+0.5
	baz=191,SNR=54						
N20K	Mount Spurr	84.30	10	P	P	07 12 32.8	-1.0
	baz=200						
SPCR	Spurr Chakacha	84.30	10	P	P	07 12 32.6	-1.2
	baz=200						
L17K	Donlin	84.32	7	P	P	07 12 33.9	+0.1
	baz=194,SNR=11						
D08A	Wollman Farm,	84.37	34	IAmb	IAmb	07 12 36.6	
	comp=Z,16nm,0.9s						
J14K	Nanvaranak Lak	84.40	5	IAmb	IAmb	07 12 35.5	
	comp=Z,13nm,1.1s						
J14K	Nanvaranak Lak	84.40	5	P	P	07 12 34.6	+0.5
	baz=190						
Y22D	IRIS PASSCAL I	84.41	50	P	P	07 12 33.0	-2.1
	baz=240						
TXAR	Lajitas Array	84.51	56	P	P	07 12 37.0	+1.4
	comp=Z,4.7nm,1.1s,baz=215,slow=5.8,SNR=16						
	comp=Z,4.7nm,1.1s						
SRU	San Rafael Swe	84.59	44	IAmb	IAmb	07 12 39.0	
	comp=Z,24nm,1.4s						
L18K	Granite Mounta	84.60	8	IAmb	IAmb	07 12 53.2	
	comp=Z,21nm,1.2s						
L18K	Granite Mounta	84.60	8	P	P	07 12 35.5	+0.3
	baz=196,SNR=11						

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RC01  Rabbit Creek A    84.63  12     P      P      07 12 35.4  0.0
      baz=202
V35K  Ketchikan         84.63  23     P      P      07 12 35.4 -0.1
      baz=219
STLK  Strandline Lak    84.64  10     IAmb   IAmb   07 12 40.4
      comp=Z,12nm,0.9s
HVU   Hansel Valley     84.67  41     IAmb   IAmb   07 12 38.0
      comp=Z,22nm,1.7s
KAIM  Kayak Island      84.69  14     P      P      07 12 35.4 -0.3
      baz=207
PWL   Port Wells        84.69  12     IAmb   IAmb   07 12 54.8
      comp=Z,22nm,1.0s
PWL   Port Wells        84.69  12     P      P      07 12 35.0 -0.7
      baz=204
U33K  Whale Pass        84.72  22     P      P      07 12 35.3 -0.6
      baz=218
PLID  Pearl Lake        84.72  37     IAmb   IAmb   07 12 38.9
      comp=Z,12nm,1.1s
SIT   Sitka             84.75  20     P      P      07 12 35.3 -0.7
      baz=216
M20K  Styx River        84.79  10     IAmb   IAmb   07 12 57.5
      comp=Z,16nm,1.4s
M20K  Styx River        84.79  10     P      P      07 12 35.5 -0.8
      baz=199
SUA   Susitna One       84.80  11     P      P      07 12 35.4 -0.9
      baz=202
L19K  White Mountain    84.81   9     P      P      07 12 35.7 -0.7
      baz=198,SNR=7.6
K17K  Iditarod          84.88   7     IAmb   IAmb   07 12 43.8
      comp=Z,13nm,1.1s
K17K  Iditarod          84.88   7     P      P      07 12 36.5 -0.1
      baz=194,SNR=5.8
EYAK  Cordova Ski Ar    84.95  14     P      P      07 12 35.3 -1.6
      baz=206
GLI   Glacier Island    84.96  13     P      P      07 12 36.0 -1.1
      baz=205,SNR=6.3
B08A  Colville Reser    85.00  33     IAmb   IAmb   07 12 39.6
      comp=Z,14nm,1.1s
GAMB  Gambell           85.04   1     P      P      07 12 37.2 -0.1
      baz=182,SNR=5.1
SKT   Skwentna          85.14  10     P      P      07 12 37.2 -0.8
      baz=201
KNK   Knik Glacier      85.17  12     P      P      07 12 37.5 -0.6
      baz=204
M22K  Willow            85.18  11     P      P      07 12 37.5 -0.5
      baz=202
ANMO  Albuquerque       85.18  50     P      P      07 12 36.8 -2.3
ANMO                                  IAmb   IAmb   07 12 46.0
      comp=Z,16nm,1.1s
ANMO  Albuquerque       85.18  50⇓eP         P      07 12 40.0 +1.0
ANMO                                  pmax   pmax
      comp=Z,9.0nm,1.1s
C09A  Chrisman Ranch    85.18  34     IAmb   IAmb   07 12 41.0
      comp=Z,27nm,1.4s
J16K  Anvik River       85.19   6     IAmb   IAmb   07 12 40.0
      comp=Z,20nm,0.9s
J16K  Anvik River       85.19   6     P      P      07 12 38.2  0.0
      baz=192,SNR=14
PV18  Skein Mesa, Pa    85.19  46     IAmb   IAmb   07 12 41.9
      comp=Z,30nm,1.5s
S31K  Pelican           85.20  19     P      P      07 12 37.6 -0.6
      baz=215
PMR   Palmer            85.21  12     IAmb   IAmb   07 12 40.3
      comp=Z,9.0nm,0.9s
PMR   Palmer            85.21  12     P      P      07 12 37.7 -0.5
      baz=203
WRAK  Wrangell Islan    85.23  22     P      P      07 12 37.5 -1.0
      baz=218
LLLB  Lillooet          85.24  30     IAmb   IAmb   07 12 41.3
      comp=Z,22nm,1.3s
L20K  Farewell, AK      85.24   9     P      P      07 12 37.7 -0.8
      baz=198
S32K  Killisnoo         85.32  20     P      P      07 12 38.2 -0.7
      baz=216
KLR   Kul'dur           85.35 328     LR     LR     07 45 57.2
      comp=Z,160nm,20.9s,baz=194,slow=32
KLR   Kul'dur           85.35 328c iP        P      07 12 39.4 +0.1
KLR                                   pmax   pmax
      comp=Z,8.0nm,1.2s
CN2   Changchun         85.42 321     P      P      07 12 40.3 +0.5
CN2                                   S      S      07 23 10.2 +0.8
CN2                                   pmax   pmax
      comp=Z,20nm,1.1s
CN2                                   LR     LR
      comp=Z,100nm,18.0s
CN2                                   LR     LR
      comp=Z,200nm,18.0s
CN2                                   LR     LR
      comp=Z,200nm,20.0s
BNX   BinXian           85.45 323 ⇓P         P      07 12 40.0 +0.2
BNX                                   pmax   pmax
      comp=Z,25nm,1.0s
J17K  VABM Dome         85.46   7     IAmb   IAmb   07 12 41.2
      comp=Z,18nm,1.0s
J17K  VABM Dome         85.46   7     P      P      07 12 39.4 -0.1
      baz=194,SNR=14
DIV   Divide            85.46  13     IAmb   IAmb   07 12 45.1
      comp=Z,16nm,0.9s
MESA  MESA              85.50  15     P      P      07 12 39.6 -0.4
      baz=210
SML   Sawmill           85.56  12     P      P      07 12 39.4 -0.7
      baz=204
BMRM  Bremner River     85.58  14     P      P      07 12 40.0 -0.2
      baz=207,SNR=7.7
M23K  Glacier View      85.67  12     P      P      07 12 40.5 -0.1
      baz=204
CRQM  Cirque            85.72  15     IAmb   IAmb   07 12 43.5
      comp=Z,19nm,1.0s
PNL   Peninsula         85.72  17     P      P      07 12 40.5 -0.4
      baz=212
CRQE  Cirque            85.73  15     P      P      07 12 40.9 -0.2
      baz=208,SNR=6.0
KLU   Klutina           85.76  13     IAmb   IAmb   07 12 45.7
      comp=Z,19nm,1.2s
KLU   Klutina           85.76  13     P      P      07 12 40.6 -0.5
      baz=206
I17K  Unalakleet        85.77   6     P      P      07 12 40.9  0.0
      baz=192
ISLE  Juniper Island    85.78  15     IAmb   IAmb   07 12 42.4
      comp=Z,21nm,0.9s
SCM   Sheep Creek Mo    85.78  12     P      P      07 12 40.6 -0.6
      baz=205,SNR=9.8
TGL   Tana Glacier      85.80  15     IAmb   IAmb   07 12 46.6
      comp=Z,15nm,0.9s
J18K  Innoko River      85.80   8     P      P      07 12 41.4 +0.2
      baz=196,SNR=20
MA2   Magadan           85.81 343     LR     LR     07 46 05.8
      comp=Z,217nm,20.4s,baz=153,slow=32
MA2   Magadan           85.81 343⇓iP         P      07 12 40.5 -0.8
MA2                                   pmax   pmax
      comp=Z,12nm,1.0s
MA2   Magadan           85.81 343     P      P      07 12 40.7 -0.6
      comp=Z,9.2nm,1.2s
PLCA  Paso Flores       85.84 132     P      P      07 12 43.6 +1.3
      comp=Z,7.5nm,1.2s,baz=220,slow=4.4,SNR=4.1
PLCA                                  LR     LR     07 43 06.7
      comp=Z,146nm,19.3s,baz=242,slow=30
      comp=Z,7.5nm,1.2s
PINM  Pinnacle          85.86  16     P      P      07 12 41.0 -0.7
      baz=211
PPLA  Purkeypile        85.90  10     P      P      07 12 40.9 -1.0
      baz=200
R32K  Eaglecrest        85.99  20     P      P      07 12 41.3 -0.9
      baz=216
GRNC  Granite Creek     86.03  15     IAmb   IAmb   07 12 47.4
      comp=Z,18nm,1.0s
K20K  Telida            86.05   9     IAmb   IAmb   07 12 43.5
      comp=Z,18nm,1.1s
K20K  Telida            86.05   9     P      P      07 12 42.1 -0.3
      baz=198,SNR=12
NEW   Newport           86.08  34     LR     LR     07 45 58.7
      comp=Z,513nm,18.9s,baz=220,slow=32
NEW   Newport           86.08  34     P      P      07 12 44.3 +1.3
NEW                                   pmax   pmax
      comp=Z,7.0nm,1.5s
ANM   Nome              86.08   4     P      P      07 12 41.9 -0.6
      baz=188
WHN   Wuhan             86.08 305 ⇓P         P      07 12 44.1 +0.8
N25K  Chitina, Valde    86.15  14     IAmb   IAmb   07 12 48.7
      comp=Z,20nm,1.0s
N25K  Chitina, Valde    86.15  14     P      P      07 12 42.7 -0.3
      baz=207,SNR=9.9
P29M  Windy Craggy      86.15  18     IAmb   IAmb   07 12 48.9
      comp=Z,13nm,0.9s
P29M  Windy Craggy      86.15  18     P      P      07 12 42.4 -0.6
      baz=213
M24K  Tolsona, Glenn    86.26  13     P      P      07 12 43.4 -0.1
      baz=206
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LOGN  Logan Glacier     86.30  16     IAmb   IAmb   07 12 49.2
      comp=Z,24nm,1.0s
MCARA McCarthy VSAT     86.30  14     IAmb   IAmb   07 13 03.6
      comp=Z,15nm,1.0s
MCARA McCarthy VSAT     86.30  14     P      P      07 12 43.6 -0.1
      baz=208
CTG   Chitna Glacier    86.34  15     P      P      07 12 44.0 -0.1
      baz=210,SNR=8.3
CTGM  Chitina Glacie    86.34  15     IAmb   IAmb   07 12 45.3
      comp=Z,14nm,0.8s
WAT6  Susitna Watana    86.38  12     P      P      07 12 44.0 -0.3
      baz=204,SNR=9.5
T35M  Bob Quinn         86.40  22     P      P      07 12 43.7 -0.6
      baz=220
PLBC  Pleasant Camp     86.40  18     P      P      07 12 44.1 -0.1
      baz=215
CAST  Castle Rocks      86.41  10     IAmb   IAmb   07 13 01.7
      comp=Z,13nm,1.0s
CAST  Castle Rocks      86.41  10     P      P      07 12 42.6 -1.6
      baz=200,SNR=11
J19K  Poorman           86.44   8     P      P      07 12 44.9 +0.5
      baz=197,SNR=12
WAT1  Susitna Watana    86.46  11     P      P      07 12 43.7 -0.8
      baz=203
O28M  Mount Upton       86.46  16     IAmb   IAmb   07 12 50.8
      comp=Z,12nm,0.9s
O28M  Mount Upton       86.46  16     P      P      07 12 44.1 -0.7
      baz=211,SNR=7.6
O29M  Mount Kennedy     86.48  17     IAmb   IAmb   07 12 48.0
      comp=Z,34nm,1.5s
O29M  Mount Kennedy     86.48  17     P      P      07 12 44.1 -0.7
      baz=213
SYO   Syowa Base        86.51 192⇑esP        sP     07 12 50.1 -2.9
G15K  Niukluk           86.59   4     P      P      07 12 45.1 +0.1
      baz=189,SNR=6.1
TROLL Troll, Antarti    86.67 179 ⇓P         P      07 12 48.3 +2.5
      comp=Z,264nm,0.8s
SKAG  Skagway           86.70  19     IAmb   IAmb   07 12 47.9
      comp=Z,14nm,1.1s
SKAG  Skagway           86.70  19     P      P      07 12 45.6 -0.1
      baz=216
KTH   Kantishna Hill    86.72  10     IAmb   IAmb   07 12 47.0
      comp=Z,20nm,1.2s
TRF   Thorofare Moun    86.73  10     P      P      07 12 45.0 -1.0
      baz=202,SNR=23
HARP  HAARP             86.73  13     P      P      07 12 44.6 -1.2
      baz=206
P30M  Million Dollar    86.78  18     P      P      07 12 44.8 -1.3
      baz=214
CHUM  Lake Minchumin    86.81   9     P      P      07 12 45.1 -0.9
      baz=200,SNR=8.8
S34M  Telegraph Cree    86.81  21     P      P      07 12 45.9 -0.3
      baz=219
J20K  Nowinta River     86.82   9     IAmb   IAmb   07 12 47.4
      comp=Z,18nm,1.0s
J20K  Nowinta River     86.82   9     P      P      07 12 46.0 -0.2
      baz=198,SNR=12
VNA3  Neumayer Olymp    86.83 175 ⇓P         P      07 12 53.8 +7.4
      comp=Z,5.3nm,0.9s
SNAA  Sanae             86.84 177 ⇓P         P      07 12 48.6 +2.0
      comp=Z,123nm,0.9s
SNAA  Sanae             86.84 177            P      07 12 47.0 +0.5
SNAA                                  IAmb   IAmb   07 12 50.6
      comp=Z,16nm,1.2s
SNAA  Sanae             86.84 177     P      P      07 12 48.2 +1.6
      comp=Z,6.1nm,0.9s,baz=214,slow=5.3,SNR=15
SNAA                                  LR     LR     07 48 53.3
      comp=Z,180nm,20.1s,baz=176,slow=34
      comp=Z,6.1nm,0.9s
H17K  Granite Mounta    86.87   6     IAmb   IAmb   07 12 47.6
      comp=Z,16nm,1.2s
H17K  Granite Mounta    86.87   6     P      P      07 12 46.2 -0.2
      baz=193,SNR=8.7
DHY   Denali Highway    86.90  12     IAmb   IAmb   07 12 57.7
      comp=Z,13nm,1.1s
DHY   Denali Highway    86.90  12     P      P      07 12 45.8 -1.0
      baz=204
F14K  Arctic Creek      86.93   3     P      P      07 12 46.5 -0.1
      baz=187,SNR=5.8
TNA   Tin City          86.94   3     IAmb   IAmb   07 12 47.9
      comp=Z,14nm,1.0s
TNA   Tin City          86.94   3     P      P      07 12 46.6 -0.1
      baz=185,SNR=6.4
YUK8  Steele Glacier    87.01  16     P      P      07 12 46.7 -0.8
      baz=211
GCSA  Galena City Sc    87.01   7     P      P      07 12 47.3 +0.3
      baz=196
YUK6  Outpost Mounta    87.08  17     P      P      07 12 47.5 -0.4
      baz=213
G16K  Koyuk River       87.11   5     IAmb   IAmb   07 12 49.0
      comp=Z,16nm,1.2s
G16K  Koyuk River       87.11   5     P      P      07 12 47.6 +0.1
      baz=191
PAX   Paxson            87.18  13     P      P      07 12 47.9 -0.2
      baz=206,SNR=6.6
PDAR  Pinedale Array    87.20  42            P      07 12 47.0 -1.8
PDAR  Pinedale Array    87.20  42     P      P      07 12 49.2 +0.4
      comp=Z,2.6nm,1.0s,baz=243,slow=2.6,SNR=8.3
      comp=Z,2.6nm,1.0s
M26K  Nabesna, AK       87.20  14     IAmb   IAmb   07 12 51.0
      comp=Z,19nm,1.0s
M26K  Nabesna, AK       87.20  14     P      P      07 12 48.5 +0.3
      baz=208,SNR=21
HYT   Haines Junctio    87.21  17     P      P      07 12 47.9 -0.5
      baz=214
BPAW  Bear Paw Mtn.     87.22  10     P      P      07 12 47.7 -0.5
      baz=201
MCK   McKinley          87.22  11     P      P      07 12 48.3 +0.1
      baz=203,SNR=17
H18K  Honhosa River     87.24   7     IAmb   IAmb   07 12 49.2
      comp=Z,16nm,1.2s
H18K  Honhosa River     87.24   7     P      P      07 12 48.1 -0.2
      baz=194,SNR=5.8
Q32M  Nakina River      87.25  20     IAmb   IAmb   07 12 49.8
      comp=Z,13nm,1.2s
Q32M  Nakina River      87.25  20     P      P      07 12 48.1 -0.5
      baz=218
YUK3  Moose Creek       87.25  15     P      P      07 12 48.4 -0.2
      baz=211,SNR=13
F15K  North Star Dit    87.26   4     P      P      07 12 48.2 -0.1
      baz=188
P32M  Atlin             87.30  19     P      P      07 12 48.3 -0.3
      baz=217
VNA2  Neumayer--Watz    87.32 176 ⇓P         P      07 12 50.5 +1.7
      comp=Z,7.0nm,0.7s,baz=193,slow=4.1
YUK4  Talbot Arm        87.34  16     P      P      07 12 49.2 +0.2
      baz=212
G17K  Kiwalik Mounta    87.36   6     P      P      07 12 48.7 -0.1
      baz=192,SNR=8.2
I20K  Naaghedeneel      87.36   8     IAmb   IAmb   07 12 50.2
      comp=Z,20nm,1.0s
I20K  Naaghedeneel      87.36   8     P      P      07 12 48.4 -0.3
      baz=198,SNR=5.9
M27K  Edge Creek, AK    87.42  14     P      P      07 12 49.3 -0.1
      baz=210,SNR=22
MENT  Mentasta          87.52  13     IAmb   IAmb   07 12 52.5
      comp=Z,16nm,1.1s
VNA1  Neumayer--Stat    87.52 175 ⇓P         P      07 12 52.4 +2.7
      comp=Z,13nm,1.1s
O30N  Mendenhall        87.56  18     IAmb   IAmb   07 12 55.8
      comp=Z,11nm,0.9s
O30N  Mendenhall        87.56  18     P      P      07 12 50.3 +0.4
      baz=215,SNR=7.5
DLBC  Dease Lake        87.59  21     P      P      07 12 49.7 -0.4
      baz=220
L26K  Log Cabin Wild    87.68  13     IAmb   IAmb   07 13 09.9
      comp=Z,16nm,1.2s
L26K  Log Cabin Wild    87.68  13     P      P      07 12 50.5 +0.1
      baz=208,SNR=10
BVCY  Beaver Creek      87.71  15     P      P      07 12 50.4 -0.2
      baz=210,SNR=16
WHY   Whitehorse        87.81  18     IAmb   IAmb   07 12 56.5
      comp=Z,14nm,1.0s
WHY   Whitehorse        87.81  18     P      P      07 12 50.6 -0.6
      baz=216
H19K  Roundabout Mou    87.82   7     P      P      07 12 51.3 +0.4
      baz=196,SNR=14
N30M  Aishikik Lake     87.85  17     P      P      07 12 51.2 -0.2
      baz=214
K24K  Donnelly Dome     87.87  12     P      P      07 12 51.5 +0.2
      baz=206,SNR=9.4
G18K  Tagagawik         87.93   6     IAmb   IAmb   07 12 52.6
      comp=Z,21nm,1.2s
G18K  Tagagawik         87.93   6     P      P      07 12 51.2 -0.4
      baz=194,SNR=12
H20K  Anotleneega Mo    87.98   8     P      P      07 12 52.0 +0.3
      baz=198,SNR=9.9
NEA2  Nenana            87.99  10     P      P      07 12 50.9 -0.9
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      baz=203
RIDG  Independent Ri    88.00  13     IAmb   IAmb   07 12 57.6
      comp=Z,14nm,1.0s
RIDG  Independent Ri    88.00  13     P      P      07 12 51.6 -0.4
      baz=207,SNR=8.7
R33M  Jennings River    88.01  20     P      P      07 12 51.5 -0.7
      baz=219
L27K  Beaver Creek,     88.05  14     IAmb   IAmb   07 13 11.7
      comp=Z,15nm,1.3s
L27K  Beaver Creek,     88.05  14     P      P      07 12 51.9 -0.3
      baz=210,SNR=9.5
BCAR  Beaver Creek A    88.06  14            P      07 12 50.8 -1.4
P33M  Teslin, Yukon     88.07  19     P      P      07 12 52.0 -0.4
      baz=218
I21K  Tanana            88.08   9     IAmb   IAmb   07 12 54.5
      comp=Z,25nm,1.4s
I21K  Tanana            88.08   9     P      P      07 12 51.2 -1.0
      baz=200
DOT   Dot Lake          88.08  13     IAmb   IAmb   07 13 11.5
      comp=Z,20nm,1.1s
MLY   Manley            88.13  10     P      P      07 12 51.7 -0.9
      baz=201,SNR=8.2
HEH   HeiHe             88.18 327 eP         P      07 12 52.6 -0.4
HEH                                   S      S      07 23 32.8 -2.9
HEH                                   pmax   pmax
      comp=Z,13nm,1.2s
HEH                                   pmax   pmax
      comp=Z,170nm,4.7s
HEH                                   LR     LR
      comp=Z,140nm,20.6s
HEH                                   LR     LR
      comp=Z,170nm,16.9s
HEH                                   LR     LR
      comp=Z,290nm,20.3s
HDA   Harding Lake      88.20  11     IAmb   IAmb   07 12 55.0
      comp=Z,11nm,0.8s
HDA   Harding Lake      88.20  11     P      P      07 12 52.4 -0.4
      baz=205,SNR=13
F17K  Baldwin Pennin    88.23   5     P      P      07 12 52.5 -0.4
      baz=192
N31M  Braeburn, Yuko    88.23  17     IAmb   IAmb   07 12 59.4
      comp=Z,9.7nm,0.9s
N31M  Braeburn, Yuko    88.23  17     P      P      07 12 52.5 -0.6
      baz=215
RPSI  Rantau Prapat     88.25 274            P      07 12 54.5 +0.2
CCB   Clear Creek Bu    88.26  11     IAmb   IAmb   07 13 11.8
      comp=Z,19nm,1.2s
SEY   Seymchan          88.27 345     LR     LR     07 48 17.8
      comp=Z,132nm,20.1s,baz=154,slow=33
SEY   Seymchan          88.27 345ceP         P      07 12 52.7 -0.4
SEY                                   pmax   pmax
      comp=Z,25nm,1.1s
PSI   Prapat            88.29 274     LR     LR     07 55 22.3
      comp=Z,165nm,18.1s,baz=162,slow=38
PSI   Prapat            88.29 274     P      P      07 12 54.5 -0.1
PSI                                   pmax   pmax
      comp=Z,34nm,1.1s
M29M  Somme Creek       88.32  16     IAmb   IAmb   07 12 59.2
      comp=Z,8.0nm,0.9s
M29M  Somme Creek       88.32  16     P      P      07 12 52.8 -0.8
      baz=213,SNR=10
G19K  Purcell Mounta    88.34   7     P      P      07 12 53.4  0.0
      baz=196,SNR=8.8
SCRK  Sand Creek        88.39  13     IAmb   IAmb   07 12 56.5
      comp=Z,12nm,1.2s
SCRK  Sand Creek        88.39  13     P      P      07 12 53.5 -0.4
      baz=208,SNR=9.9
H21K  Melozitna Rive    88.41   9     IAmb   IAmb   07 12 55.4
      comp=Z,16nm,1.5s
H21K  Melozitna Rive    88.41   9     P      P      07 12 53.9 +0.1
      baz=200,SNR=8.3
I23K  Minto, Yukon-K    88.46  10     P      P      07 12 53.6 -0.4
      baz=203,SNR=6.0
COLA  College           88.46  11c iP        P      07 12 53.3 -0.7
COLA                                  pmax   pmax
      comp=Z,22nm,1.1s
COLA  College           88.46  11     P      P      07 12 53.6 -0.4
      baz=204
F18K  Selawik           88.53   6     P      P      07 12 53.7 -0.5
      baz=193
IL31                    88.54  11     IAmb   IAmb   07 13 13.9
      comp=Z,20nm,1.3s
ILAR  Eielson Array     88.54  11     P      P      07 12 53.4 -1.0
ILAR  Eielson Array     88.54  11     P      P      07 12 53.8 -0.6
      comp=Z,8.1nm,1.1s,baz=212,slow=5.7,SNR=33
      comp=Z,8.1nm,1.1s
IMAR  Indian Mountai    88.59   8     P      P      07 12 54.2 -0.5
J25K  Salcha River,     88.68  12     P      P      07 12 54.6 -0.6
      baz=206,SNR=14
N32M  Quiet Lake        88.73  19     P      P      07 12 54.5 -1.0
      baz=217
POKR  Poker Plat Res    88.76  11     P      P      07 12 54.8 -0.7
      baz=204,SNR=7.0
E17K  Hotham Inlet      88.81   5     P      P      07 12 55.7  0.0
      baz=191
K27K  Chicken           88.84  13     IAmb   IAmb   07 13 15.8
      comp=Z,17nm,1.2s
K27K  Chicken           88.84  13     P      P      07 12 55.7 -0.1
      baz=209
H22K  Ishtalitna Cre    88.84   9     P      P      07 12 55.4 -0.5
      baz=201,SNR=7.1
F19K  Shaleruckik Mo    88.94   6     IAmb   IAmb   07 12 57.3
      comp=Z,10nm,0.9s
F19K  Shaleruckik Mo    88.94   6     P      P      07 12 55.9 -0.3
      baz=195,SNR=14
J26L  Joseph Creek      88.94  13     P      P      07 12 56.3 -0.1
      baz=208,SNR=43
L29M  L29M              88.96  15     P      P      07 12 56.4 -0.1
      baz=213,SNR=15
HNS   HongShan          89.02 311 ⇑P         P      07 13 02.9 +5.6
HNS                                   pmax   pmax
      comp=Z,12nm,0.8s
H23K  Yukon River       89.05  10     P      P      07 12 56.4 -0.5
      baz=202
G21K  Allakaket         89.13   8     P      P      07 12 57.3 +0.1
      baz=199,SNR=7.0
M31M  Drury Creek, Y    89.20  17     P      P      07 12 57.2 -0.4
      baz=216
E18K  Tukpahlearik C    89.25   5     IAmb   IAmb   07 12 59.0
      comp=Z,13nm,1.0s
E18K  Tukpahlearik C    89.25   5     P      P      07 12 57.2 -0.4
      baz=192,SNR=9.2
BJI   Beijing           89.27 314     P      P      07 13 09.8  +11
BJI   Beijing           89.27 314     S      S      07 23 59.6  +13
BJI                                   pmax   pmax
      comp=Z,4.0nm,0.8s
WTLY  Watson Lake, Y    89.27  21     P      P      07 12 57.8 -0.3
      baz=221
LYN   LuoYang           89.32 308     P      P      07 12 59.1 +0.3
LYN                                   pmax   pmax
      comp=Z,33nm,1.1s
D17K  Noatak River      89.33   4     P      P      07 12 57.7 -0.4
      baz=190
H24K  Noodor Dome       89.34  10     P      P      07 12 57.3 -0.9
      baz=204
F20K  Avaraart Lake     89.37   7     P      P      07 12 58.1 -0.1
      baz=197
PRP   Porcupine Dome    89.46  11     IAmb   IAmb   07 13 01.4
      comp=Z,13nm,1.0s
PRP   Porcupine Dome    89.46  11     P      P      07 12 58.4 -0.6
      baz=206,SNR=13
DAWY  Dawson            89.47  14     IAmb   IAmb   07 13 04.7
      comp=Z,11nm,0.9s
DAWY  Dawson            89.47  14     P      P      07 12 58.9  0.0
      baz=212,SNR=16
FARO  Faro, Yukon       89.52  18     P      P      07 12 58.8 -0.3
      baz=217
TOAD  Toad River Com    89.58  23     P      P      07 12 58.7 -0.8
      baz=224
E19K  Redstone River    89.60   6     IAmb   IAmb   07 13 00.6
      comp=Z,14nm,0.9s
E19K  Redstone River    89.60   6     P      P      07 12 58.6 -0.7
      baz=195,SNR=20
LIRD  Liard River Hi    89.68  22     P      P      07 12 59.3 -0.6
      baz=224
RDOG  Red Dog Mine      89.69   4     P      P      07 12 59.2 -0.6
      baz=190
K29M  Barlow Dome       89.73  15     IAmb   IAmb   07 13 03.4
      comp=Z,19nm,1.1s
K29M  Barlow Dome       89.73  15     P      P      07 12 59.9 -0.3
      baz=213,SNR=20
I26K  Coal Creek Min    89.73  12     IAmb   IAmb   07 13 06.1
      comp=Z,8.7nm,0.8s
I26K  Coal Creek Min    89.73  12     P      P      07 13 00.0 +0.1
      baz=208,SNR=11
C16K  Lisburne Hills    89.77   3     P      P      07 12 59.6 -0.5
      baz=188
G22K  Bettles           89.78   9     P      P      07 12 59.9 -0.3
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	baz=201						
G23K	Bananza Creek	89.80	9	P	P	07 13 00.1	-0.3
	baz=202						
F21K	Alatna River	89.80	8	P	P	07 13 00.2	-0.1
	baz=199						
MAYO	Mayo, Yukon	89.93	16	P	P	07 13 01.4	+0.4
	baz=215,SNR=17						
J29N	Klondike Camp	90.07	15	P	P	07 13 01.6	-0.1
	baz=213						
H25L	Birch Creek	90.09	11	P	P	07 13 01.7	+0.1
	baz=206						
C17K	DeLong Mountai	90.09	4	P	P	07 13 01.4	-0.2
	baz=190						
G24K	Hadweenzic Riv	90.19	10	P	P	07 13 01.3	-0.8
	baz=204						
F22K	John River	90.24	8	P	P	07 13 02.3	-0.1
	baz=200						
COLD	Coldfoot	90.26	9	P	P	07 13 02.5	+0.1
	baz=202						
I27K	Kandik River	90.31	13	P	P	07 13 02.7	-0.1
	baz=210						
ZEA	Zeya	90.38	329	eP	P	07 13 04.1	+0.8
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
C18K	Utukok River	90.40	5	P	P	07 13 02.7	-0.4
	baz=192,SNR=6.8						
GYA	Guiyang	90.41	298	⇓P	P	07 13 05.5	+1.2
GYA				pmax	pmax		
	comp=Z,18nm,1.1s						
MMPY	Sheldon Lake,	90.42	18	P	P	07 13 02.5	-0.9
	baz=219						
E20K	Nigu River	90.48	7	P	P	07 13 03.6	+0.1
	baz=196,SNR=14						
BILL	Bilibino	90.48	353		P	07 13 03.1	-0.4
BILL	Bilibino	90.48	353	ceP	P	07 13 03.1	-0.4
BILL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
G25K	Bearman Lake	90.49	11	P	P	07 13 02.7	-0.8
	baz=206						
TGTN	Hyland Airport	90.50	20	P	P	07 13 03.2	-0.6
	baz=222						
D19K	Kuna River	90.52	6	IAmb	IAmb	07 13 04.7	
	comp=Z,13nm,1.0s						
D19K	Kuna River	90.52	6	P	P	07 13 02.9	-0.8
	baz=195,SNR=9.6						
I28M	Miner Creek	90.53	14	IAmb	IAmb	07 13 06.4	
	comp=Z,25nm,1.5s						
I28M	Miner Creek	90.53	14	P	P	07 13 03.2	-0.7
	baz=211,SNR=9.6						
BEAVL	Fort Liard	90.59	22	P	P	07 13 03.3	-0.8
	baz=224						
J30M	Hart River	90.63	15	P	P	07 13 04.3	-0.1
	baz=214,SNR=13						
I29M	Ogilvie Camp,	90.82	14	IAmb	IAmb	07 13 24.4	
	comp=Z,13nm,1.4s						
I29M	Ogilvie Camp,	90.82	14	P	P	07 13 04.5	-0.6
	baz=213,SNR=8.7						
H27K	Steamboat Moun	90.87	13	IAmb	IAmb	07 13 25.9	
	comp=Z,16nm,1.3s						
H27K	Steamboat Moun	90.87	13	P	P	07 13 05.0	-0.4
	baz=210,SNR=9.9						
D20K	Etivluk River	90.87	6	IAmb	IAmb	07 13 06.6	
	comp=Z,14nm,1.1s						
D20K	Etivluk River	90.87	6	P	P	07 13 05.5	+0.2
	baz=196,SNR=12						
F24K	Squaw Lake	90.88	10	P	P	07 13 05.3	-0.1
	baz=204						
E22K	Anaktuvuk Pass	90.88	8	P	P	07 13 05.5	+0.1
	baz=200,SNR=9.2						
HKT	Hockley	90.89	58	⇓eP	P	07 13 03.5	-2.7
HKT				pmax	pmax		
	comp=Z,13nm,1.6s						
E21K	Killik River	90.90	7	P	P	07 13 05.2	-0.2
	baz=198						
KOTAN	Kotaneelee Air	90.92	23	P	P	07 13 05.5	-0.2
	baz=225						
C19K	Lookout Ridge	90.98	5	IAmb	IAmb	07 13 07.2	
	comp=Z,15nm,1.0s						
C19K	Lookout Ridge	90.98	5	P	P	07 13 06.2	+0.4
	baz=193,SNR=14						
B18K	Kokolik River	91.06	4	P	P	07 13 06.5	+0.4
	baz=191,SNR=5.4						
G26K	Porcupine Rive	91.07	11	P	P	07 13 06.4	+0.2
	baz=208,SNR=10						
E23K	Chandalar	91.11	9	P	P	07 13 06.7	+0.2
	baz=202,SNR=5.3						
I30M	Mount Dempster	91.15	15	P	P	07 13 07.1	+0.3
	baz=214,SNR=30						
XLT	XiLinHaoTe	91.20	317	eP	P	07 13 09.0	+1.5
XLT				pmax	pmax		
	comp=Z,5.0nm,1.2s						
E24K	Your Creek	91.30	9	P	P	07 13 07.3	0.0
	baz=203						
F25K	Christian Rive	91.31	10	P	P	07 13 07.4	0.0
	baz=206						
RSSD	Black Hills	91.34	43	P	P	07 13 05.8	-2.5
RSSD				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BMAR	Burnt Mountain	91.35	11		P	07 13 06.5	-1.0
G27K	Doyon Strip	91.35	12	P	P	07 13 07.8	+0.2
	baz=210,SNR=8.6						
D22K	Ayikyak River	91.47	8	IAmb	IAmb	07 13 14.9	
	comp=Z,7.7nm,0.9s						
D22K	Ayikyak River	91.47	8	P	P	07 13 08.0	-0.1
	baz=200,SNR=11						
C21K	Knifeblade Rid	91.49	7	P	P	07 13 08.3	+0.2
	baz=198,SNR=7.7						
H29M	Whitestone	91.53	14	IAmb	IAmb	07 13 28.6	
	comp=Z,20nm,1.2s						
H29M	Whitestone	91.53	14	P	P	07 13 08.6	+0.2
	baz=213,SNR=14						
TOLK	Toolik Lake Re	91.66	9	P	P	07 13 08.9	-0.1
	baz=202						
F26K	Sheenjek River	91.66	11	P	P	07 13 08.9	-0.1
	baz=207,SNR=10.0						
XAN	Xi'an	91.74	306	P	P	07 13 10.8	+0.6
XAN				pP	sP	07 13 20.6	+2.1
XAN				pmax	pmax		
	comp=Z,24nm,1.1s						
XAN				pmax	pmax		
	comp=Z,210nm,6.5s						
E25K	Arctic Village	91.80	10	P	P	07 13 09.6	0.0
	baz=206,SNR=11						
D23K	Nanushuk River	91.81	8	P	P	07 13 09.8	+0.2
	baz=201,SNR=5.9						
FNO	Franklin	91.90	53	P	P	07 13 10.1	-0.7
A19K	Wainwright	91.94	4	P	P	07 13 10.2	0.0
	baz=192						
B21K	Ikpikpuk River	91.96	7	P	P	07 13 10.3	+0.1
	baz=198						
EPYK	Eagle Plains	92.02	14	IAmb	IAmb	07 13 30.8	
	comp=Z,19nm,1.3s						
EPYK	Eagle Plains	92.02	14	P	P	07 13 10.3	-0.4
	baz=214,SNR=7.5						
B20K	Meade River	92.07	6	IAmb	IAmb	07 13 12.1	
	comp=Z,11nm,1.1s						
B20K	Meade River	92.07	6	P	P	07 13 10.6	-0.1
	baz=195						
H31M	Peel River	92.12	15	IAmb	IAmb	07 13 33.8	
	comp=Z,12nm,1.1s						
H31M	Peel River	92.12	15	P	P	07 13 10.8	-0.3
	baz=216						
G29M	Pine Creek	92.19	13	IAmb	IAmb	07 13 14.1	
	comp=Z,13nm,1.1s						
G29M	Pine Creek	92.19	13	P	P	07 13 11.2	-0.2
	baz=213,SNR=9.0						
NNA	Nana	92.19	104	LR	LR	07 46 51.3	
	comp=Z,120nm,18.8s,baz=275,slow=30						
D24K	Happy Valley	92.24	9	P	P	07 13 11.3	-0.2
	baz=203						
F28M	Old Crow	92.40	12	P	P	07 13 12.2	-0.1
	baz=211,SNR=8.5						
E27K	Coleen River	92.56	12	IAmb	IAmb	07 13 33.1	
	comp=Z,12nm,1.1s						
E27K	Coleen River	92.56	12	P	P	07 13 13.3	+0.2
	baz=210,SNR=11						
ATAH	Atahualpa	92.60	99	LR	LR	07 47 48.2	
	comp=Z,225nm,18.0s,baz=284,slow=31						
C23K	Itkillik River	92.63	8	IAmb	IAmb	07 13 43.8	
	comp=Z,24nm,1.9s						
C23K	Itkillik River	92.63	8	P	P	07 13 13.7	+0.4
	baz=202						
G30M	tAoh Zraii Nji	92.64	14	P	P	07 13 13.7	+0.2
	baz=215,SNR=14						
D25K	Kavik River	92.76	9	P	P	07 13 13.8	-0.2
	baz=205						
HHC	Hu-ho-hao-te	92.76	313	eP	P	07 13 16.1	+1.3
HHC				pmax	pmax		
	comp=Z,17nm,0.6s						
B22K	Teshekpuk Lake	92.77	7	IAmb	IAmb	07 13 15.4	
	comp=Z,13nm,1.4s						
B22K	Teshekpuk Lake	92.77	7	P	P	07 13 13.9	0.0
	baz=199						
C24K	Franklin Bluff	92.78	9	IAmb	IAmb	07 13 15.6	
	comp=Z,11nm,1.2s						
C24K	Franklin Bluff	92.78	9	P	P	07 13 13.7	-0.3
	baz=203						
AC02	Maricunga	92.85	120	P	P	07 13 15.5	-0.7
AC02				IAmb	IAmb	07 13 20.9	
	comp=Z,14nm,1.3s						
G31M	Satah River	93.04	15	P	P	07 13 15.3	0.0
	baz=216,SNR=12						
KMI	Kunming	93.15	296	P	P	07 13 18.8	+1.7
KMI				pmax	pmax		
	comp=Z,23nm,1.0s						
KMI				LR	LR		
	comp=Z,170nm,21.0s						
A22K	Sinclair Lake	93.24	6	P	P	07 13 15.6	-0.5
	baz=198						
T35A	Sooner Cattle	93.25	52	P	P	07 13 15.1	-2.0
F30M	Barrier River	93.26	14	IAmb	IAmb	07 13 19.2	
	comp=Z,9.0nm,1.1s						
F30M	Barrier River	93.26	14	P	P	07 13 16.0	-0.3
	baz=215						
WRGLY	Wrigley	93.29	21	P	P	07 13 16.1	-0.4
	baz=226						
E28M	Babbage River	93.31	12	IAmb	IAmb	07 13 23.3	
	comp=Z,8.7nm,1.1s						
E28M	Babbage River	93.31	12	P	P	07 13 16.3	-0.3
	baz=212,SNR=8.1						
A21K	Barrow	93.39	6	P	P	07 13 16.8	0.0
	baz=196						
C27K	Jago River	93.45	10	P	P	07 13 17.3	+0.1
	baz=208						
E29M	Blow River	93.45	13	P	P	07 13 16.3	-0.9
E29M	Blow River	93.45	13	P	P	07 13 16.7	-0.5
	baz=213						
C26K	Camden Bay	93.52	10	P	P	07 13 17.6	+0.2
	baz=207						
F31M	Tsiigehtchic	93.58	14	P	P	07 13 17.4	-0.4
	baz=217						
D27M	Malcolm River	93.59	11	IAmb	IAmb	07 13 38.6	
	comp=Z,11nm,1.1s						
D27M	Malcolm River	93.59	11	P	P	07 13 17.7	-0.2
	baz=210						
BTO	Baotou	93.71	312	eP	P	07 13 19.3	+0.1
BTO				PP	PP	07 17 04.7	-0.1
BTO				S	S	07 24 28.6	+1.6
BTO				pmax	pmax		
	comp=Z,25nm,0.9s						
BTO				pmax	pmax		
	comp=Z,130nm,3.7s						
BTO				LR	LR		
	comp=Z,200nm,4.6s						
BTO				LR	LR		
	comp=Z,160nm,4.3s						
BTO				LR	LR		
	comp=Z,230nm,16.3s						
CMAR	Chiang Mai Arr	93.98	288	P	P	07 13 22.0	+1.2
	comp=Z,5.9nm,0.7s,baz=116,slow=3.1,SNR=32						
CMAR				LR	LR	07 55 29.5	
	comp=Z,28nm,18.8s,baz=180,slow=36						
	comp=Z,5.9nm,0.7s						
CMAR	Chiang Mai Arr	93.98	288	i P	P	07 13 22.7	+1.9
CMAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
D28M	Stokes Point	94.08	12	P	P	07 13 20.4	+0.4
	baz=212						
CHTO	Chiang Mai	94.11	288		P	07 13 22.5	+1.1
CHTO				IAmb	IAmb	07 13 23.6	
	comp=Z,12nm,0.9s						
CHTO	Chiang Mai	94.11	288	P	P	07 13 22.5	+1.1
CHTO				pmax	pmax		
	comp=Z,12nm,1.0s						
INK	Inuvik	94.33	14		P	07 13 20.9	-0.3
INK	Inuvik	94.33	14	LR	LR	07 53 05.7	
	comp=Z,122nm,18.2s,baz=217,slow=34						
INK	Inuvik	94.33	14	P	P	07 13 20.9	-0.3
INK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
INK	Inuvik	94.33	14	P	P	07 13 20.8	-0.3
	baz=217						
YAK	Yakutsk	94.49	337	LR	LR	07 51 07.8	
	comp=Z,62nm,19.7s,baz=119,slow=33						
PZH	PanZhiHua	94.50	297	P	P	07 13 24.8	+1.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,130nm,5.8s						
YKA	Yellowknife Ar	95.92	24	P	P	07 13 27.9	-0.7
	comp=Z,1.1nm,0.9s,baz=247,slow=4.3,SNR=6.9						
	comp=Z,1.1nm,0.9s						
ECSD	EROS Data Cent	95.97	45	IAmb	IAmb	07 13 45.2	
	comp=Z,12nm,1.2s						
C36M	Paulatuk	97.38	16	IAmb	IAmb	07 13 35.7	
	comp=Z,7.0nm,1.1s						
C36M	Paulatuk	97.38	16	P	P	07 13 34.4	-0.7
	baz=226						
LPAZ	La Paz	98.21	111	LR	LR	07 51 32.2	
	comp=Z,211nm,18.2s,baz=256,slow=31						
ULN	Ulaanbaatar	98.60	318	⇓eP	Pdif	07 13 42.5	+1.2
ULN				pmax	pmax		
	comp=Z,8.0nm,1.4s						
A36M	Sachs Harbour	98.96	14	P	P	07 13 41.7	-0.5
	baz=225						
SONM	Songino Array	99.00	318	LR	LR	07 57 43.9	
	comp=Z,38nm,18.4s,baz=352,slow=35						
GTA	Gaotai	100.53	308	eP	Pdif	07 13 52.0	+1.9
GTA				sP	sPdif	07 13 59.0	+0.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
WMQ	Urumqi	110.43	310	ePKP	PKiKP	07 18 32.1	-2.6
ZSN	Zaisan	112.95	314	i PKIKP	PKiKP	07 18 38.4	-0.8
ZSN	Zaisan	112.95	314	ePKiKP	PKiKP	07 18 38.5	-0.8
M65A	Busby, Falmout	113.74	53	P	PKiKP	07 18 40.3	-0.6
	baz=262						
MK31	Makanchi Array	114.63	313	⇑iPKIKP	PKPdf	07 18 41.3	-1.2
MKAR	Makanchi Array	114.63	313	PKP	PKPdf	07 18 42.0	-0.5
	comp=Z,0.8nm,0.8s,baz=88,slow=1.2,SNR=6.2						
SEM	Semipalatinsk	116.24	317	ePKIKP	PKPdf	07 18 44.6	-1.1
SEM	Semipalatinsk	116.24	317	ePKP	PKPdf	07 18 44.7	-1.1
SHLS	Shalkode	116.27	309	ePKIKP	PKPdf	07 18 44.1	-1.8
SHLS	Shalkode	116.27	309	ePKP	PKPdf	07 18 44.1	-1.8
UZB	Uzynbulak	116.59	308	ePKIKP	PKPdf	07 18 45.4	-1.2
UZB	Uzynbulak	116.59	308	ePKP	PKPdf	07 18 45.4	-1.2
KPKS	Kokpek	116.86	309	ePKIKP	PKPdf	07 18 45.8	-1.2
KPKS	Kokpek	116.86	309	ePKP	PKPdf	07 18 45.8	-1.2
SATY	Saty	117.03	308	ePKIKP	PKPdf	07 18 46.2	-1.2
SATY	Saty	117.03	308	ePKP	PKPdf	07 18 46.3	-1.2
TDK	Taldyqorghan	117.18	311	ePKIKP	PKPdf	07 18 46.4	-1.0
TDK	Taldyqorghan	117.18	311	ePKP	PKPdf	07 18 46.5	-1.0
KURK	Kurchatov	117.28	317	⇑iPKIKP	PKPdf	07 18 47.4	0.0
KURBB	Kurchatov Arra	117.34	317	PKP	PKPdf	07 18 47.0	-0.5
	comp=Z,1.2nm,0.7s,baz=88,slow=1.7,SNR=15						
MDOK	Medeo	118.03	308	ePKIKP	PKPdf	07 18 47.9	-1.4
MDOK	Medeo	118.03	308	ePKP	PKPdf	07 18 48.0	-1.4
KUU	Kurty	118.59	309	ePKIKP	PKPdf	07 18 49.0	-1.2
KUU	Kurty	118.59	309	ePKP	PKPdf	07 18 49.0	-1.2
SGDS	Sogindy	119.81	309	ePKP	PKPdf	07 18 51.3	-1.4
BTLS	Baital	120.27	310	ePKIKP	PKPdf	07 18 52.2	-1.2
BTLS	Baital	120.27	310	ePKP	PKPdf	07 18 52.2	-1.2
BVAR	Borovoye Array	122.27	320	PKP	PKPdf	07 18 56.9	-0.1
	comp=Z,2.3nm,0.6s,baz=78,slow=2.1,SNR=12						
BRVK	Borovoye	122.33	320	dePKIKP	PKPdf	07 18 57.1	0.0
SPITS	Spitsbergen Ar	123.08	357	PKP	PKPdf	07 18 57.9	0.0
	comp=Z,4.9nm,0.9s,baz=336,slow=3.2,SNR=2.5						
BRLS	Borolday	123.31	308	ePKIKP	PKPdf	07 18 58.4	-0.9
BRLS	Borolday	123.31	308	ePKP	PKPdf	07 18 58.4	-0.9
CHM	Chimkent	123.48	307	ePKIKP	PKPdf	07 18 58.4	-1.3
CHM	Chimkent	123.48	307	ePKP	PKPdf	07 18 58.4	-1.3
BOSA	Boshof	126.79	201	PKP	PKiKP	07 19 08.3	+1.2
	comp=Z,4.0nm,0.9s,baz=148,slow=1.1,SNR=3.8						
ARTI	Arti	128.26	326		PKPdf	07 19 08.7	+0.4
ARTI	Arti	128.26	326	i PKIKP	PKPdf	07 19 06.5	-1.8
ARTI						07 21 08.4	
ARTI						07 26 17.5	
ARCES	ARCESS Array B	130.56	351	PKP	PKPdf	07 19 12.5	+0.2
	comp=Z,3.3nm,0.8s,baz=40,slow=6.3,SNR=2.6						
KIRV	Kirov	131.69	331	⇑ePKIKP	PKPdf	07 19 14.8	+0.1
BELG	Belogornoye	135.63	324	⇓ePKIKP	PKPdf	07 19 22.4	+0.1
FINES	FINESS Array B	137.75	346	PKP	PKPdf	07 19 26.2	+0.3
	comp=Z,1.1nm,0.8s,baz=357,slow=5.6,SNR=3.7						
OBN	Obninsk	139.39	333	ePKIKP	PKPdf	07 19 28.7	-0.5
OBN				e		07 22 24.0	
OBN				ePPP	PPP	07 25 24.0	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NOA	NORSAR Array B	140.35	356	PKP	PKPdf	07 19 32.5	+1.7
	comp=Z,0.8nm,1.0s,baz=14,slow=2.6,SNR=1.6						
HFS	Hagfors	141.05	354	PKP	PKPdf	07 19 30.7	-1.4
	comp=Z,1.1nm,0.6s,baz=27,slow=4.8,SNR=1.8						
GNI	Garni	142.27	308	⇓ePKIKP	PKPdf	07 19 35.7	+0.6
KBZ	Khabaz	142.29	315	⇓ePKIKP	PKPdf	07 19 33.9	-0.9
KIV	Kislovodsk	142.33	315	i PKIKP	PKPdf	07 19 35.5	+0.5
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MNK	Minsk	143.16	339	i PKP	PKPbc	07 19 33.4	+0.4
	baz=35						
MNK				i PKiKP	PKPdf	07 19 37.6	+1.6
MNK				i PPP	PPP	07 25 53.9	
MNK				i SKS	SKSdf	07 26 10.1	-34
MNK				i SKKS	SKKSdf	07 35 25.1	-37
MNK				i SS	SS	07 41 26.7	+3.3
MNK				i SSS	SSS	07 46 14.7	
MNK				i LQ	LQ	08 14 38.0	
MNK				i LRM	MLR	08 22 07.8	
	comp=Z,147nm,20.5s						
MNK	Minsk	143.16	339	i PKIKP	PKPbc	07 19 33.3	+0.4
MNK				i		07 19 37.5	
MNK				i PPP	PPP	07 25 53.8	
MNK				i SS	SS	07 41 26.6	+3.2
MNK				MLR	MLR		
	comp=N,616nm,25.0s						
MNK				MLR	MLR		
	comp=E,691nm,26.0s						
MNK				MLR	MLR		
	comp=Z,147nm,21.0s						
RAYN	Ar Rayn	143.53	281		PKPbc	07 19 36.5	+1.4
RAYN	Ar Rayn	143.53	281	PKIKP	PKPbc	07 19 36.5	+1.4
VSLR	Vesyoloye	144.28	316	⇑ePKIKP	PKPbc	07 19 37.2	+0.6
EKA	Eskdalemuir Ar	145.56	9	PKPbc	PKPdf	07 19 40.0	-0.2
	comp=Z,1.4nm,0.6s,baz=333,slow=2.9,SNR=4.4						
EKA	Eskdalemuir Ar	145.56	9	PKIKP	PKPdf	07 19 40.0	-0.2
AK23	Malin Array Si	145.65	334	PKP	PKPdf	07 19 39.5	-0.9
AKASG	Malin Array Be	145.66	334		PKPdf	07 19 40.3	-0.1
AKASG	Malin Array Be	145.66	334	PKPbc	PKPdf	07 19 39.5	-0.9
	comp=Z,8.0nm,0.8s,baz=38,slow=3.6,SNR=49						
AKASG	Malin Array Be	145.66	334	PKIKP	PKPdf	07 19 40.3	-0.1
AKBB	Malin Array Si	145.66	334		PKPdf	07 19 40.2	-0.3
AKBB	Malin Array Si	145.66	334	c iPKIKP	PKPdf	07 19 40.0	-0.5
AKBB	Malin Array Si	145.66	334	PKP	PKPdf	07 19 39.9	-0.5
KIEV	Kiev	145.67	334		PKPdf	07 19 40.0	-0.4
KIEV	Kiev	145.67	334	⇓P	PKPdf	07 19 40.4	-0.1
KIEV	Kiev	145.67	334	PKIKP	PKPdf	07 19 40.1	-0.4
KIEV	Kiev	145.67	334	PKP	PKPdf	07 19 39.7	-0.8
AK06	Malin Array Si	145.76	333	PKP	PKPdf	07 19 40.1	-0.5
AK14	Malin Array Si	145.76	334	PKP	PKPdf	07 19 39.9	-0.7
MARD	Mardin	146.09	305	PKPbc	PKPbc	07 19 43.2	+0.5
MI28	Mi28,Pidlybu	146.10	335	PKP	PKPdf	07 19 41.1	-0.1
RNPP9	Sopachiv	146.38	337	PKP	PKPdf	07 19 41.1	-0.6
RNPP8	Varash	146.46	337	PKP	PKPdf	07 19 42.5	+0.7
SIM	Simferopol'	147.14	322	ePKP2	PKPbc	07 19 45.2	-0.2
SIM				pmax	pmax		
	comp=Z,30nm,1.1s						
GAZ	Gaziantep	148.82	307		PKiKP	07 19 51.5	-0.1
OJC	Ojcow	149.37	342	ePKP	PKPbc	07 19 51.2	+0.2
KSP	Ksiaz	149.65	347	ePKP	PKPbc	07 19 52.3	+0.5
STHS	Stebnicka Huta	149.65	340	ePKIKP	PKPdf	07 19 46.7	-0.5
STHS				e		07 19 50.1	
STHS	Stebnicka Huta	149.65	340	ePKP	PKPdf	07 19 46.7	-0.5
STHS				e		07 19 50.1	
STHS				e		07 19 57.0	
BURAR	Bucovina Array	149.71	334	PKPbc	PKPbc	07 19 52.0	-0.1
BURAR	Bucovina Array	149.71	334	⇓P	PKPab	07 20 02.0	+4.7
BURAR	Bucovina Array	149.71	334	⇓PKP2	PKPab	07 20 02.0	+4.7
CLL	Collm	149.78	351	ePKHKP	PKPpre	07 19 48.0	
CLL				i		07 19 56.1	
CLL				pmax	pmax		
	comp=Z,14nm,1.8s						
CLL				pmax	pmax		
	comp=Z,23nm,1.0s						
CLL	Collm	149.78	351	ePKPdf	PKPdf	07 19 48.0	+0.7
	comp=Z,14nm,1.8s						
CLL				i PKPbc	PKPbc	07 19 51.7	-0.3
	comp=Z,18nm,1.5s						
CLL				i PKPab	sPKPdf	07 19 56.1	+0.1
	comp=Z,23nm,1.0s						
CLL				ePKPlp		07 20 03.0	
OSTC	Ostas	149.94	347	⇑ePKP	PKPbc	07 19 52.7	+0.2
OSTC	Ostas	149.94	347	ePKP2	PKPbc	07 19 52.7	+0.2
NIE	Niedzica	149.94	341	ePKP	PKPbc	07 19 53.4	+0.8
BRG	Berggiesshubel	150.06	350	ePKP	PKiKP	07 19 53.8	+0.2
BRG	Berggiesshubel	150.06	350	P	PKPab	07 19 58.5	0.0
DPC	Dobruska-Polom	150.11	347	⇑ePKP	PKiKP	07 19 54.6	+0.8
DPC				AMS	AMS	08 35 30.0	
	comp=Z,200nm,18.7s						
DPC	Dobruska-Polom	150.11	347	ePKP2	PKiKP	07 19 54.6	+0.8
DPC				MLR	MLR		
	comp=Z,200nm,18.7s						
STEB	Steborice	150.16	345	ePKP	PKPbc	07 19 53.7	+0.7
ONER	Baraj Valea Uz	150.20	331	⇓P	PKiKP	07 19 54.4	+0.3
KRLC	Kraliky	150.27	346	AMS	AMS	08 37 20.0	
	comp=Z,100nm,14.3s						
BR131	Keskin Array S	150.27	314		PKPbc	07 19 53.3	-0.5
BR131	Keskin Array S	150.27	314	d iPKP2	PKPbc	07 19 54.0	+0.2
BRTR	Keskin Array B	150.27	314		PKPbc	07 19 53.1	-0.7
BRTR	Keskin Array B	150.27	314	PKPbc	PKPbc	07 19 54.0	+0.2
	comp=Z,4.8nm,0.9s,baz=141,slow=12,SNR=3.7						
BRTR	Keskin Array B	150.27	314	PKP2	PKPbc	07 19 53.1	-0.7
TPGR	Topolog	150.30	327	⇓P	PKPbc	07 19 54.3	+0.8
KIRS	Kirsehir-Merke	150.37	313	⇓P	PKPbc	07 19 54.4	+0.5
MORC	Moravsky Berou	150.37	345	ePKP	PKPbc	07 19 53.7	+0.1
MORC	Moravsky Berou	150.37	345	⇑P	PKiKP	07 19 54.9	+0.6
MORC	Moravsky Berou	150.37	345	⇑PKIKP	PKiKP	07 19 54.9	+0.6
HSKC	Hora Svate Kat	150.40	350	AMS	AMS	08 36 30.0	
	comp=Z,200nm,20.3s						
LANS	Liptovska Anna	150.43	342	ePKIKP	PKPdf	07 19 47.3	-1.1
LANS				e		07 19 53.3	
LANS	Liptovska Anna	150.43	342	ePKP	PKPdf	07 19 47.3	-1.1
LANS				e		07 19 53.3	
LANS				e		07 20 01.3	
PLOR	Plostina	150.44	330	⇓P	PKiKP	07 19 55.1	+0.5
PLOR	Plostina	150.44	330	⇓PKIKP	PKiKP	07 19 55.1	+0.5
TURR	Turia	150.58	331	⇓P	PKPab	07 19 59.6	-1.3
ANTO	Ankara	150.76	315	⇑P	PKPbc	07 19 55.4	+0.6
ANTO	Ankara	150.76	315	⇑PKIKP	PKPbc	07 19 55.4	+0.6
PRU	Pruhonice	150.81	349	AMS	AMS	08 35 10.0	
	comp=Z,100nm,16.4s						
GOPC	GO Pecny, Ondr	150.83	348	AMS	AMS	08 37 40.0	
	comp=Z,200nm,19.6s						
DOPR	Dopca	150.93	332	⇑P	PKiKP	07 19 56.7	+1.1
VRAC	Vranov	151.03	346	ePKP	PKPbc	07 19 55.5	+0.4
VRAC	Vranov	151.03	346	⇑P	PKPab	07 20 03.6	+1.0
JAVC	Velka Javorina	151.18	344	ePKP	PKPbc	07 19 55.8	+0.3
VYHS	Vyhne	151.20	342	ePKIKP	PKPbc	07 19 56.3	+0.8
VYHS				e		07 20 00.2	
VYHS	Vyhne	151.20	342	ePKP	PKPbc	07 19 56.3	+0.8
VYHS				e		07 20 00.2	
KRUC	Moravsky	151.31	346	ePKP	PKPbc	07 19 56.1	+0.4
MARR	Marisel-Cluj	151.31	335	⇓P	PKPbc	07 19 56.8	+0.8
PSZ	Piszkesteto	151.40	340		PKPab	07 20 04.3	0.0
PSZ	Piszkesteto	151.40	340	⇑P	PKPab	07 20 05.2	+1.0
ZVC	Zvikov	151.40	349	AMS	AMS	08 30 00.0	
	comp=Z,200nm,21.5s						
VOIR		151.49	331	⇑P	PKiKP	07 19 57.9	+1.1
SMOL	Smolenice	151.56	344	ePKIKP	PKPdf	07 19 53.0	+2.8
MMAI	Mount Meron Ar	151.56	300	PKPbc	PKPbc	07 19 57.5	+0.6
	comp=Z,3.1nm,0.7s,baz=48,slow=2.1,SNR=7.9						
GRF	Grafenberg Arr	151.59	353	ePKPab	PKPab	07 20 04.9	0.0
	baz=9.9,slow=3.6						
ARR	Arges	151.73	332	⇓P	PKiKP	07 19 58.4	+1.0
MODS	Modra-Piesok	151.73	344	ePKIKP	PKPdf	07 19 51.2	+0.8
MODS				e		07 19 57.8	
MODS				e		07 20 01.8	
MODS	Modra-Piesok	151.73	344	ePKP	PKPdf	07 19 51.2	+0.8
MODS				e		07 19 57.8	
MODS				e		07 20 01.8	
MODS				e		07 54 51.4	
MODS				e		07 55 03.3	
MODS				e		07 55 33.4	
MODS				e		07 55 47.4	
MODS				e		07 56 10.9	
KHC	Kasperske Hory	151.80	349	⇑ePKP	PKPbc	07 19 56.8	-0.1
KHC				AMS	AMS	08 36 50.0	
	comp=Z,100nm,12.3s						
KHC	Kasperske Hory	151.80	349	ePKIKP	PKPbc	07 19 56.8	-0.1

KHC MLR MLR
comp=Z,100nm,12.3s
SRO Srobarova 151.96 342 *e*PKIKP **PKPbc 07 19 55.5 -1.7**
SRO Srobarova 151.96 342 *e*PKP **PKPbc 07 19 55.5 -1.7**
CKRC Cesky Krumlov 151.97 348 AMS AMS 08 32 30.0
comp=Z,200nm,19.3s
GERES GERESS Array B 152.06 349 PKPbc **PKPbc 07 19 57.2 -0.4**
comp=Z,1.3nm,0.8s,baz=294,slow=10.0,SNR=5.6
SURR Surduc 152.47 335 ⇑P **PKPbc 07 19 58.7 +0.2**
CONA Conrad Observa 152.49 346 *i* PKiKP **PKPbc 07 19 59.1 +0.5**
comp=Z,7.0nm,1.4s
CONA *i* PKP **PKPab 07 20 09.5 +0.6**
comp=Z,17nm,1.2s
GZR Gura Zlata 152.50 334 ⇓P **PKPbc 07 19 58.8 +0.2**
RONA Rosalia, Austr 152.60 345 *i* PKiKP **PKiKP 07 20 00.0 +1.0**
comp=Z,5.8nm,0.9s
RONA *i* pPKP **PKPab 07 20 10.5 +1.2**
comp=Z,15nm,1.1s
BZS Buzias 152.78 336 ⇑P **PKiKP 07 20 00.1 +0.8**
MOA Molln 152.91 348 *e*PKP **PKPbc 07 19 59.5 0.0**
comp=Z,4.0nm,1.2s
MOA *i* PKP **PKPab 07 20 11.4 +0.9**
comp=Z,11nm,1.2s
HERR Herculane 153.07 334 ⇓P **PKPbc 07 20 00.1 +0.3**
BIOA Bad Ischl, Aus 153.18 349 *i* PKiKP **PKPbc 07 20 00.7 +0.6**
comp=Z,2.1nm,0.5s
BIOA *i* PKP **PKPab 07 20 12.4 +0.7**
comp=Z,21nm,1.3s
BFO Black Forest 153.20 357 PKPab 07 20 10.8 -0.9
ARSA Arzberg 153.21 346 *i* PKiKP **PKPbc 07 20 00.7 +0.6**
comp=Z,3.6nm,0.9s
ARSA *i* PKP **PKPab 07 20 12.6 +0.9**
comp=Z,7.3nm,1.2s
MDVR Moldovita 153.43 334 ⇑P **PKPab 07 20 12.8 -0.1**
LESA Schwarzleotal 153.61 350 *i* PKiKP **PKPbc 07 20 01.6 +0.5**
comp=Z,1.7nm,0.5s
LESA *i* PKP **PKPab 07 20 14.1 +0.6**
comp=Z,11nm,1.1s
RETA Reutte 153.82 353 *i* PKP **PKPab 07 20 14.7 +0.3**
comp=Z,16nm,1.1s
KBA Koelnbreinsper 153.83 349 *i* PKiKP **PKPbc 07 20 01.8 +0.2**
comp=Z,5.8nm,1.5s
KBA *e*PKP **PKPab 07 20 14.8 +0.2**
comp=Z,12nm,1.1s
SOKA Soboth 153.86 346 *e*PKiKP **PKPbc 07 20 02.0 +0.3**
comp=Z,4.8nm,1.1s
SOKA *i* PKP **PKPab 07 20 15.0 +0.3**
comp=Z,9.5nm,1.0s
MOTA Moosalm 153.92 352 *i* PKP **PKPab 07 20 15.1 +0.1**
comp=Z,13nm,0.9s
OBKA Obir 154.13 346 *i* PKP **PKPab 07 20 14.9 -0.9**
comp=Z,5.7nm,0.9s
MYKA Terra Mystica 154.20 348 *e*PKP **PKPbc 07 20 02.4 +0.1**
comp=Z,1.6nm,0.4s
MYKA *i* PKP **PKPab 07 20 15.6 -0.5**
comp=Z,7.8nm,0.9s
ABTA Abfaltersbach 154.29 350 *i* PKiKP **PKPbc 07 20 02.8 +0.2**
comp=Z,6.5nm,1.1s
ABTA *i* PKP **PKPab 07 20 16.3 -0.1**
comp=Z,8.8nm,1.0s
EZN Ezine 154.84 321 ⇑P **PKPab 07 20 19.7 +0.8**
EZN Ezine 154.84 321 ⇑PKP2 **PKPab 07 20 19.7 +0.8**
ESDC Sonseca Array 160.01 23 PKP **PKPdf 07 20 02.2 +0.5**
comp=Z,0.3nm,0.3s,baz=333,slow=0.6,SNR=2.8
ESDC PKPab **PKPab 07 20 40.8 -0.5**
comp=Z,1.0nm,0.9s,baz=330,slow=4.6,SNR=4.1
DBIC Dimbokro 161.88 143 PKP **PKPdf 07 20 05.6 +1.2**
comp=Z,7.1nm,0.9s,baz=289,slow=5.7,SNR=3.8
TORD Torodi Ar. Bea 170.71 153 PKP **PKPdf 07 20 11.2 0.0**
comp=Z,1.0nm,0.8s,baz=339,slow=1.8,SNR=4.9
TORD PKPab **PKPab 07 21 30.7 +1.9**
comp=Z,2.0nm,1.1s,baz=193,slow=2.1,SNR=4.5

*ASRS **11** 07:00:17.0±1.8, 53°.61N×87°.85E, h0^{km}, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 11 07:00:19.6±3.7**, 53°.55N×87°.86E, h0**^{km}**, mbtmp2.5**/2**, ML2.3**/2**, Error ellipse: s-maj=33.6km s-min=18.0km az=56.0, Southwestern Siberia**

Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
I46RU ZALESOVO INFRA 1.85 284 I I 07 11 32.5
0.1nm,1.0s,baz=100,slow=318,SNR=18
ZALV Zalesovo Beam 1.85 284 Pg Pn 07 00 52.3 -0.2
0.5nm,0.3s,baz=102,slow=13,SNR=4.2
ZALV Lg Lg 07 01 18.2
0.8nm,0.3s,baz=105,slow=23,SNR=7.0
KURBB Kurchatov Arra 6.45 247 Pn Pn 07 01 56.8 +1.1
baz=56,slow=14,SNR=3.5
0.2nm,0.3s
MKAR Makanchi Array 7.65 210 Pn Pn 07 02 13.1 +1.0
0.1nm,0.3s,baz=28,slow=14,SNR=1.8
MKAR Lg Lg 07 04 21.9
0.1nm,0.3s,baz=29,slow=30,SNR=5.9
0.1nm,0.3s

*ASRS **11** 07:10:04.0±1.3, 54°.72N×83°.77E, h0^{km}, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 11 07:10:06.0±1.6**, 54°.62N×83°.77E, h0**^{km}**, mbtmp2.9**/3**, ML2.3**/3**, Error ellipse: s-maj=14.8km s-min=9.8km az=7.0, Southwestern Siberia**

Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
I46RU ZALESOVO INFRA 0.92 137 I I 07 16 00.0
baz=316,slow=316,SNR=1.6
ZALV Zalesovo Beam 0.92 137 Pg Pg 07 10 23.1 -0.4
1.4nm,0.3s,baz=318,slow=14,SNR=11
ZALV Lg Lg 07 10 36.3
5.0nm,0.3s,baz=319,slow=29,SNR=24
KURBB Kurchatov Arra 5.12 221 Pn Pn 07 11 24.2 +0.4
baz=40,slow=14,SNR=8.7
KURBB Pg Pb 07 11 39.1 +2.8
0.1nm,0.3s,baz=38,slow=16,SNR=18
KURBB Lg Lg 07 12 48.2
0.1nm,0.3s,baz=43,slow=30,SNR=6.8
0.6nm,0.7s
MKAR Makanchi Array 7.89 187 Pn Pn 07 12 02.6 +0.7
0.1nm,0.3s,baz=10,slow=12,SNR=4.0
MKAR Lg Lg 07 14 16.7
0.1nm,0.3s,baz=9.1,slow=28,SNR=4.3
0.2nm,0.5s
BVAR Borovoye Array 8.08 264 Pn Pn 07 12 02.9 -1.5
baz=68,slow=13,SNR=3.5
0.8nm,0.4s

*NEIC **11** 07:24:20.7, 37°.47N×116°.70W, h16^{km}*

*NEIC **11** 07:24:20.3±1.4, 37°.485N±0°.007×116°.69W±0°.01, h10^{km}±2^{km}, Error ellipse: s-maj=3.1km s-min=2.1km az=148.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-3.37; M$_{\theta\theta}$0.99; M$_{\phi\phi}$2.38; M$_{r\theta}$-2.86; M$_{\theta\phi}$7.32; M$_{\phi r}$-0.15; Fault plane solution: M$_0$8.41000×10^{14} NP1:ϕ_s81.89000°, δ75.22000°, λ-30.01000°. NP2: ϕ_s180.28000°, δ61.08000°, λ-163.05000°. Principal axes: T 9.3691, Plg9.0000°, Azm134.0000°; N -2.4618, Plg57.0000°, Azm238.0000°; P -6.9073, Plg31.0000°, Azm38.0000°;*

*REN **11** 07:24:20.7±0.9, 37°.47N±0°.02×116°.70W±0°.01, h16^{km}±8^{km}, ML4.1/14, ML4.0/102(NEIC), Mwr3.9/114(NEIC) Error ellipse: s-maj=2.5km s-min=1.7km az=180.0*

*IDC **11** 07:24:21.1±0.6, 37°.55N×116°.69W, h0^{km}, mb3.7/4, mbtmp3.5/11, ML3.2/7, MS3.2/6, Error ellipse: s-maj=7.3km s-min=5.5km az=76.0*

ISC 11 07:24:20.7±1.2**, 37°.50N**±0°.02×**116°.68W**±0°.02**, h4**^{km}±9^{km}**, n80,** σ**0^s.93**/83**, mb3.7**/5**, Southern Nevada**

Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
GMN Gold Mountain 0.50 247 Pg 07 24 30.2 -0.2
GMN Sg **Sg 07 24 36.6 -0.3**
GMN IAML 07 24 37.2
comp=N,13µm,0.7s
SGV South Grapevin 0.59 209 Pg 07 24 31.7 -0.3
SGV **Sg 07 24 39.3 -0.3**
MZP Montezuma Peak 0.59 290 Pg 07 24 31.9 -0.3
MZP Sg **Sg 07 24 40.2 +0.3**
TPNV Topopah Spring 0.65 148 Pg 07 24 33.1 0.0
TPNV IAML 07 24 48.6
comp=N,8µm,0.5s
TPNV IAML 07 24 48.0
comp=N,8µm,0.8s
TPH Tonopah 0.72 324 Pg 07 24 34.7 +0.2
GRAC Grapevine Rang 0.74 228 Pg 07 24 34.5 -0.4
GRAC Sg **Sg 07 24 44.3 -0.2**
GRAC IAML 07 24 54.3
comp=E,7µm,0.3s
GRAC IAML 07 24 56.1
comp=N,7µm,0.4s
CPY CP-1 0.75 138 Pg 07 24 34.7 -0.4
S11A Rachel 0.76 78 Pg 07 24 34.4 -0.9
S11A Sg **Sg 07 24 45.1 0.0**
S11A IAML 07 25 01.5
comp=E,9µm,0.7s
LCH Last Change Ra 0.81 251 Pg 07 24 36.0 -0.2
NSP Numbskull Pass 0.85 154 Pg 07 24 36.6 -0.5
SDH Striped Hills 0.89 162 Pg 07 24 37.2 -0.7
MCY Mercury 1.01 145 Pg 07 24 39.4 -0.7
DSP Deep Springs 1.03 263 Pg 07 24 40.0 -0.5
DSP IAML 07 24 57.4
comp=E,4µm,0.8s
DSP IAML 07 24 58.2
comp=N,2µm,0.6s
FURC Furnace Creek, 1.04 188 Pg 07 24 40.3 -0.3
AMDNV Amargosa 1.09 163 Pb 07 24 40.7 -1.4
R11B Troy Canyon, C 1.22 45 Pn 07 24 43.5 -1.2
PRN Pahroc Range 1.30 93 Pn 07 24 45.2 -0.6
GWY Greenwater Val 1.31 180 Pn 07 24 44.7 -1.3
TIN Tinemaha, Big 1.31 251 Pg 07 24 45.6 -0.2
Q09A Carvers 1.39 344 Pb 07 24 46.9 -0.5
BHPR Bishop 1.45 263 Pn 07 24 47.3 -0.7
NV11 Mina Array Sit 1.49 309 Pn 07 24 47.5 -1.0
NV11 IAML 07 25 11.5
comp=N,1µm,0.9s
NV11 IAML 07 25 15.3
comp=E,1µm,1.0s
BENR Benton 1.52 279 Pn 07 24 48.1 -0.9
CWC Cottonwood Cre 1.54 227 Pb 07 24 49.6 -0.3
SHPR Sheep Range 1.57 129 Pn 07 24 48.8 -0.8
SHPR IAML 07 25 20.2
comp=E,1µm,0.6s
NV08 Mina Array Sit 1.58 306 Pn 07 24 48.6 -1.1
NVAR Mina Array Bea 1.58 307 Pn 07 24 48.8 -1.1
NVAR Mina Array Bea 1.58 307 Pg **Pn 07 24 49.5 -0.4**
comp=E,239nm,0.3s,baz=235,slow=11,SNR=1713
NVAR LR LR 07 24 56.0
comp=E,68nm,20.4s,baz=171,slow=24
NVAR Lg Lg 07 25 10.2
comp=E,290nm,0.3s,baz=199,slow=16,SNR=11
NV09 Mina Array Sit 1.61 306 Pn 07 24 49.4 -0.8
LHV Little Huntoon 1.63 298 Pn 07 24 49.5 -0.7
LHV IAML 07 25 14.7
comp=N,3µm,0.8s
MLAC Mammoth, Mammo 1.72 275 Pn 07 24 51.3 -0.4
MCBM Casa Benchmark 1.77 275 Pn 07 24 51.9 -0.5
RYN Ryan 1.84 308 Pn 07 24 52.5 -0.8
RYN IAML 07 25 21.6
comp=N,1µm,0.6s
RYN IAML 07 25 21.9
comp=E,2µm,0.5s
MDYM Dry Creek 1.86 276 Pn 07 24 53.5 -0.2
TUQ Turquoise Moun 2.15 163 Pn 07 24 56.3 -1.1
GSC Goldstone, Bar 2.19 183 Pn 07 24 56.9 -1.1
GSC IAML 07 25 30.9
comp=N,1µm,0.7s
GSC IAML 07 25 31.0
comp=E,1µm,0.6s
V12A Nelson 2.30 140 Pn 07 24 58.7 -0.8
V12A IAML 07 25 39.9
comp=N,698nm,0.6s
V12A IAML 07 25 42.1
comp=E,602nm,0.8s
SPR3 Spring Creek 3 2.38 50 Pn 07 24 59.3 -1.6
SPR3 IAML 07 25 35.1
comp=E,802nm,0.9s
SPR3 IAML 07 25 45.0
comp=N,866nm,0.8s
WAKR Walker 2.40 296 Pn 07 25 00.4 -0.6
PSUT Pine Spring 2.46 64 Pn 07 25 01.0 -0.9
PSUT IAML 07 25 39.5
comp=N,1µm,0.7s
CCAC Calif City Air 2.58 205 Pn 07 25 02.8 -0.5
CCAC IAML 07 25 44.9
comp=N,515nm,1.0s
CCAC IAML 07 25 50.5
comp=E,676nm,1.4s
LCMT Little Creek M 2.79 99 Pn 07 25 05.8 -0.4
LCMT IAML 07 25 49.4
comp=N,484nm,0.9s
LCMT IAML 07 25 51.6
comp=E,432nm,0.8s
PNTR Pine Nut 2.79 306 Pn 07 25 05.7 -0.8
PNTR IAML 07 25 54.1
comp=N,843nm,0.9s
PNTR IAML 07 25 57.4
comp=E,719nm,0.8s
GMRC Granite Mounta 2.83 163 Pn 07 25 05.7 -1.1
PAHR Pah Rah Range 3.06 317 Pn 07 25 09.8 -0.2
KNB Kanab 3.12 98 Pn 07 25 10.6 -0.2
KNB Kanab 3.12 98 IAML 07 26 03.0
comp=E,426nm,0.7s
KNB IAML 07 26 05.3
comp=N,375nm,1.1s
MPK Martis Peak 3.19 305 Pn 07 25 12.0 +0.1
MPK Martis Peak 3.19 305 IAML 07 26 08.4
comp=E,384nm,1.1s
MPK IAML 07 26 08.9
comp=N,520nm,0.9s
W13A Hualapai Mount 3.29 136 Pn 07 25 13.0 -0.3
PEAR Peavine Mounta 3.33 310 Pn 07 25 14.3 +0.5
ELK Elko 3.43 19 Pn 07 25 14.3 -1.0
ELK IAML 07 26 11.9
comp=N,234nm,0.8s
ELK IAML 07 26 12.2
comp=N,185nm,0.7s
ELK Elko 3.43 19 Pn **Pn 07 25 15.1 -0.2**
comp=N,2.0nm,0.3s,baz=200,slow=10,SNR=44
ELK Pg **Pb 07 25 22.1 -0.2**
comp=N,7.7nm,0.3s,baz=208,slow=13,SNR=55
ELK Sn **Sn 07 25 55.8 -0.7**
comp=N,8.4nm,0.3s,baz=234,slow=13,SNR=3.9
ELK Lg Lg 07 26 07.4
comp=N,63nm,0.3s,baz=240,slow=16,SNR=3.1
ELK LR LR 07 26 56.0
comp=N,197nm,18.0s,baz=188,slow=46
comp=N,4.7nm,0.3s
PASC Pasadena Art C 3.54 201 Pn 07 25 16.2 -0.3
PASC IAML 07 26 19.4
comp=E,171nm,1.0s
PMPB Monarch Peak 3.54 250 Pn 07 25 17.0 +0.4
PMPB IAML 07 26 15.6
comp=E,475nm,0.9s
PMPB IAML 07 26 27.0
comp=N,292nm,1.0s
MVU Marysvale 3.67 73 Pn 07 25 19.4 +0.8
U15A North Rim 3.67 106 IAML 07 26 19.3
comp=N,474nm,0.9s
U15A IAML 07 26 28.8
comp=E,338nm,0.8s
AFDM Forest Hills D 3.68 295 Pn 07 25 18.2 -0.2
BEKR Beckworth 3.73 311 Pn 07 25 19.9 +0.6
PFO Pinyon Flats O 3.88 177 Pn 07 25 20.3 -1.0
PFO Pinyon Flats O 3.88 177 Pn **Pn 07 25 20.6 -0.7**
comp=E,1.9nm,0.3s,baz=4.2,slow=14,SNR=19
PFO Pg **Pb 07 25 31.5 +1.7**
comp=E,16nm,0.3s,baz=347,slow=13,SNR=38
PFO Sn **Sn 07 26 06.6 -0.8**
comp=E,5.5nm,0.3s,baz=286,slow=24,SNR=6.0
PFO Lg Lg 07 26 22.3
comp=E,23nm,0.3s,baz=82,slow=20,SNR=7.4
comp=E,5.7nm,0.3s
ELS Elsinore Mount 3.89 189 Pn 07 25 21.2 -0.1
ELS IAML 07 26 22.7
comp=E,148nm,0.8s
ELS IAML 07 26 28.8
comp=N,108nm,0.7s
ORV Oroville 4.30 300 Pn 07 25 26.2 -0.8
BGU Big Grassy Mou 4.45 38 Pn 07 25 28.5 -0.6
BGU IAML 07 27 07.8
comp=E,81nm,0.9s
GLA Glamis 4.69 161 Pn 07 25 31.4 -0.9
WUAZ Wupatki 4.71 113 Pn 07 25 33.5 +0.8
HATC Hat Creek Radi 4.98 313 IAML 07 27 30.1
comp=N,112nm,2.1s
HATC IAML 07 27 45.8
comp=E,77nm,2.6s
PINE Pine Mountain 7.07 334 Pn 07 26 03.2 -2.0
PDAR Pinedale Array 7.58 44 Pn **Pn 07 26 14.7 +2.5**
comp=E,0.2nm,0.3s,baz=235,slow=12,SNR=15
PDAR Lg Lg 07 28 18.7
comp=E,0.4nm,0.3s,baz=227,slow=32,SNR=1.4
comp=E,1.9nm,0.8s
ANMO Albuquerque 8.64 104 Pn **Pn 07 26 28.3 +1.5**
comp=E,0.3nm,0.3s,baz=10,slow=12,SNR=6.1
ANMO Lg Lg 07 28 48.2
comp=E,0.2nm,0.3s,baz=286,slow=16,SNR=3.4
ANMO LR LR 07 30 16.3
comp=E,57nm,18.6s,baz=17,slow=41
comp=E,0.6nm,0.4s
NEW Newport 10.77 358 Pn **Pn 07 26 56.2 +0.5**
comp=E,0.1nm,0.3s,baz=62,slow=4.3,SNR=2.1
NEW Lg Lg 07 29 55.3
baz=254,slow=20
NEW LR LR 07 30 51.4
comp=E,65nm,18.0s,baz=200,slow=36
comp=E,0.8nm,0.6s
TXAR Lajitas Array 13.57 123 Pn **Pn 07 27 37.5 +3.4**
baz=312,slow=10,SNR=2.0
TXAR LR LR 07 33 35.1
comp=E,43nm,18.5s,baz=280,slow=41
comp=E,0.3nm,0.9s
ULM Lac du Bonnet 19.60 43 P **Pn 07 28 51.1 0.0**
comp=E,0.2nm,0.3s,baz=201,slow=15,SNR=3.0
comp=E,2.4nm,0.8s
DLBC Dease Lake 22.70 342 P **P 07 29 25.1 +1.8**
comp=E,2.0nm,0.8s,baz=192,slow=4.5,SNR=7.2
comp=E,2.0nm,0.8s
YKA Yellowknife Ar 25.06 2 P **P 07 29 45.8 -0.1**
comp=E,0.9nm,0.8s,baz=187,slow=9.5,SNR=6.7
comp=E,0.9nm,0.8s
ILAR Eielson Array 32.62 336 P **P 07 30 53.3 0.0**
comp=E,0.2nm,0.5s,baz=146,slow=7.9,SNR=4.5
comp=E,0.2nm,0.5s
PCRV Puerto La Cruz 53.99 106 LR LR 07 58 38.1
comp=E,95nm,20.8s,slow=38
MDP Montagnes des 66.40 102 LR LR 08 07 44.0
comp=E,42nm,19.0s,baz=208,slow=39
BVAR Borovoye Array 89.64 356 P **P 07 37 20.2 +0.5**
comp=E,2.2nm,0.7s,baz=345,slow=2.2,SNR=9.5
comp=E,2.2nm,0.7s
HHC Hu-ho-hao-te 90.39 326 *e*P **P 07 37 21.3 -2.2**
HHC pmax pmax
comp=Z,14nm,0.6s

BER 11 07:27:45.5±1.7**, 71°.86N×2°.18W, h10**^{km}**, Mw4.0, Confirmed Earthquake, Jan Mayen Island region**

Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
LOF Lofoten 6.55 117 *e*P Pn 07 29 18.9 -2.7
LOF IAML 07 29 20.1
comp=Z,3.8nm,0.8s
STEI Steigen 7.16 115 *e*P Pn 07 29 26.8 -3.3
STEI IAML 07 29 27.8
comp=Z,6.3nm,0.3s
KONS Konsvik 7.63 127 *e*P Pn 07 29 33.1 -3.5
STOK Stokkvaagen 7.74 128 *e*P Pn 07 29 35.3 -2.7
JETT Jettan, Norway 7.80 96 *e*P Pn 07 29 35.4 -3.5
KIF Kilpisjarvi 8.20 99 *e*P Pn 07 29 41.2 -3.0
SALU Saltoluokta 8.46 112 *e*P Pn 07 29 45.1 -2.9

*NEIC **11** 07:29:19.0±1.0, 37°.50N±0°.01×116°.70W±0°.01, h10^{km}±2^{km}, Error ellipse: s-maj=3.1km s-min=2.3km az=87.0*

REN 11 07:29:19.2±0.8**, 37°.48N**±0°.02×**116°.71W**±0°.01**, h15**^{km}±7^{km}**, ML2.8**/32**, ML2.6**/60(NEIC)**, Error ellipse: s-maj=2.5km s-min=1.6km az=191.0, Southern Nevada**

Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
GMN Gold Mountain 0.47 248 Pg 07 29 28.8 0.0
GMN Sg Sg 07 29 35.0 -0.1
GMN IAML 07 29 35.9
comp=N,618nm,0.3s
GMN IAML 07 29 36.2
comp=E,528nm,0.3s
SGV South Grapevin 0.56 208 Pg 07 29 30.3 0.0
MZP Montezuma Peak 0.58 293 Pg 07 29 30.5 -0.2
MZP Sg 07 29 38.3 -0.2
MZP IAML 07 29 39.3
comp=E,226nm,0.2s
TPNV Topopah Spring 0.64 145 Pg 07 29 31.8 -0.1
TPNV Sg Sg 07 29 40.4 0.0
TPNV IAML 07 29 45.5
comp=E,218nm,0.4s
TPNV IAML 07 29 51.8
comp=E,206nm,0.3s
GRAC Grapevine Rang 0.71 228 Pg Pg 07 29 33.1 0.0
GRAC Sg Sg 07 29 42.5 0.0
TPH Tonopah 0.72 326 Pg 07 29 33.4 +0.1
CPY CP-1 0.76 136 Pg 07 29 33.4 -0.6
S11A Rachel 0.78 78 Pg 07 29 33.2 -1.2
LCH Last Change Ra 0.79 252 Pb 07 29 34.7 0.0
NSP Numbskull Pass 0.85 152 Pb 07 29 35.3 -0.4
SDH Striped Hills 0.88 160 Pb 07 29 35.8 -0.5
DSP Deep Springs 1.01 264 Pg 07 29 38.7 0.0
DSP Deep Springs 1.01 264 IAML 07 29 55.8
comp=E,140nm,0.6s
DSP IAML 07 29 55.9
comp=N,143nm,0.4s
MCY Mercury 1.01 144 Pb 07 29 38.1 -0.3
FURC Furnace Creek, 1.02 187 Pn 07 29 39.4 +0.5
AMDNV Amargosa 1.08 161 Pb 07 29 39.5 0.0
R11B Troy Canyon, C 1.24 45 Pg Pn 07 29 42.2 +0.1
GWY Greenwater Val 1.29 179 Pb 07 29 43.6 +0.3
GWY IAML 07 30 04.9
comp=E,137nm,0.4s
GWY IAML 07 30 05.8
comp=N,119nm,0.5s
PRN Pahroc Range 1.32 93 Pb 07 29 44.0 +0.2
Q09A Carvers 1.40 345 Pn 07 29 44.1 -0.3
BHPR Bishop 1.43 263 Pg 07 29 46.6 -0.1
NV11 Mina Array Sit 1.49 310 Pn 07 29 45.4 -0.1
BENR Benton 1.50 280 Pb 07 29 46.8 -0.1
NV08 Mina Array Sit 1.57 306 Pn 07 29 47.3 +0.6
SHPR Sheep Range 1.57 128 Pn 07 29 46.7 0.0
NVAR Mina Array Bea 1.58 307 Pn 07 29 46.8 0.0
NV09 Mina Array Sit 1.60 307 Pb 07 29 48.2 -0.4
MGNR McGee Canyon 1.61 283 Pb 07 29 48.6 -0.2
LHV Little Huntoon 1.62 299 Pn 07 29 47.3 +0.2
LHV IAML 07 30 17.1
comp=N,60nm,0.5s
LHV IAML 07 30 19.3
comp=E,98nm,0.6s
RYN Ryan 1.83 309 Pn 07 29 50.1 -0.2
RYN IAML 07 30 21.1
comp=N,43nm,0.3s
RYN IAML 07 30 21.0
comp=E,49nm,0.3s
GSC Goldstone, Bar 2.17 182 Pn 07 29 54.7 -0.2
GSC IAML 07 30 29.4
comp=N,32nm,0.7s
GSC IAML 07 30 29.5
comp=E,36nm,0.6s
V12A Nelson 2.30 139 Pn 07 29 56.6 0.0
SPR3 Spring Creek 3 2.41 50 Pn 07 29 58.2 -0.2
SPR3 IAML 07 30 35.4
comp=N,39nm,0.4s
SPR3 IAML 07 30 39.6
comp=E,31nm,0.5s
PSUT Pine Spring 2.49 64 Pn Pn 07 29 59.9 +0.6
PNTR Pine Nut 2.79 306 Pn Pn 07 30 04.4 +1.0
PNTR IAML 07 30 55.2
comp=N,17nm,0.8s
PNTR IAML 07 30 56.4
comp=E,19nm,0.9s
LCMT Little Creek M 2.80 99 Pn 07 30 03.6 0.0
PAHR Pah Rah Range 3.06 318 Pn Pn 07 30 07.2 +0.1
KNB Kanab 3.14 97 Pn 07 30 08.8 +0.6
KNB IAML 07 31 03.8
comp=N,11nm,1.5s
KNB IAML 07 31 05.0
comp=E,12nm,1.1s
ELK Elko 3.46 19 Pn Pn 07 30 12.8 +0.2
ELK IAML 07 31 11.6
comp=E,12nm,0.3s
U15A North Rim 3.69 105 Pn Pn 07 30 15.8 -0.1
U15A IAML 07 31 18.2
comp=N,10nm,0.7s
U15A IAML 07 31 26.0

	comp=E,8.4nm,1.4s						
BGU	Big Grassy Mou	4.47	39	Pn	Pn	07 30 26.1	-0.5
BGU				IAML		07 31 14.2	
	comp=E,8.0nm,4.8s						
BGU				IAML		07 32 09.0	
	comp=N,5.7nm,4.7s						

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*NEIC **11** 07:31:36.2±1.4, 36°.895N±0°.008×121°.251W±0°.009, $h10^{km}\pm1^{km}$, Error ellipse: s-maj=2.9km s-min=1.4km az=276.0*

NCEDC 11 07:31:36.1±1.4, **36°.891N**±0°.009×**121°.24W**±0°.01, **$h8^{km}$**$\pm7^{km}$, **Mwr3.1**/4, **ML2.9**/56(NEIC), **Error ellipse: s-maj=1.4km s-min=1.1km az=134.0, Central California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PACP	Pacheco Peak	0.12	343		Pg	07 31 39.2	+0.2
PACP					Sg	07 31 41.6	+0.7
PACP	Pacheco Peak	0.12	343	IAML		07 31 42.0	
	comp=N,29µm,0.3s						
PACP				IAML		07 31 42.0	
	comp=E,38µm,0.3s						
HFEM	San Felipe	0.16	306		Pg	07 31 39.8	+0.3
HPCM	Pacheco Lake	0.17	351		Pg	07 31 40.0	+0.2
HPCM					Sg	07 31 42.9	+0.6
SLD	San Luis Dam	0.18	5		Pg	07 31 40.1	+0.1
SLD					Sg	07 31 43.1	+0.5
SAO	San Andreas Ge	0.21	232		Sg	07 31 44.9	+1.6
SAO	San Andreas Ge	0.21	232	Pg	Pg	07 31 40.7	+0.3
HCAM	Canada Road	0.24	305		Pg	07 31 41.3	+0.4
FRP	Fremont Peak	0.24	235		Pg	07 31 41.5	+0.5
GHS	Gilroy Hot Spr	0.26	321		Pg	07 31 41.9	+0.4
BJOM	Mount Johnson	0.27	192		Pg	07 31 42.3	+0.8
BSRM	Salinas Radio	0.32	225		Pg	07 31 42.7	+0.3
SCZ	Santa Cruz	0.32	204		Pg	07 31 42.6	+0.1
SCZ	Santa Cruz	0.32	204	IAML		07 31 47.5	
	comp=E,596nm,0.4s						
SCZ				IAML		07 31 47.6	
	comp=N,1µm,0.4s						
SCKWR	San Luis Creek	0.32	25		Pg	07 31 43.3	+0.8
HTUM	Tustin Road	0.33	259		Pg	07 31 43.2	+0.6
HCBM	Chamberlain	0.34	277		Pg	07 31 43.5	+0.6
HLPM	Lions Peak	0.35	296		Pg	07 31 43.2	+0.2
BBGB	Big Mountain B	0.35	152		Pg	07 31 43.7	+0.6
BJCM	Johnson Can.	0.36	199		Pg	07 31 43.4	+0.1
HCOM	Corn Cob Canyo	0.37	270		Pg	07 31 44.2	+0.7
HERM	Elkhorn Road	0.39	256		Pb	07 31 44.5	-0.7
CADM	Anderson Res.	0.41	312		Pg	07 31 44.5	+0.3
BMSM	Mercy Hot Spri	0.43	123		Pg	07 31 45.0	+0.4
JELB	Ellicott, Sant	0.47	275		Pg	07 31 45.9	+0.6
JLAB	Laurel Hill	0.47	304		Pg	07 31 45.7	+0.4
BSGM	Shirttail Gulc	0.48	181		Pg	07 31 45.4	0.0
BABI	Panoche/Babies	0.49	140		Pg	07 31 46.0	+0.4
LRV	Little Rabbit	0.50	159		Pb	07 31 46.6	-0.6
CCOB	Coe Ranch Numb	0.50	317		Pg	07 31 46.4	+0.5
ARN	Arnold Ranch	0.51	333		Pg	07 31 46.5	+0.4
BSMM	Soledad Missio	0.53	196		Pg	07 31 46.7	+0.3
MHC	Mount Hamilton	0.55	325		Pg	07 31 47.2	+0.3
HMOM	Monterey	0.61	242		Pg	07 31 48.3	+0.3
MTOS	Mt Oso, Westle	0.62	354		Pg	07 31 48.5	+0.5
MTOS	Mt Oso, Westle	0.62	354	IAML		07 32 01.9	
	comp=E,1µm,0.4s						
BPRM	Ponciano Ridge	0.62	219		Pg	07 31 48.3	+0.1
SCCB	Santa Clara Co	0.64	309		Pg	07 31 48.6	+0.2
JJOM	Saint Joseph's	0.67	298		Pg	07 31 48.8	-0.3
CMLM	Mount Lewis	0.67	331		Pg	07 31 49.4	+0.3
CALM	Calaveras Res.	0.71	322		Pg	07 31 50.0	+0.1
PMPB	Monarch Peak	0.76	152		Pg	07 31 51.2	+0.4
PMPB				IAML		07 32 06.5	
	comp=N,797nm,0.6s						
PMPB				IAML		07 32 12.3	
	comp=E,496nm,0.8s						
CSTL	Corral Hollow	0.77	345		Pb	07 31 51.9	0.0
CSTL	Corral Hollow	0.77	345		Pn	07 31 52.8	-0.6
PCCM	Crazy Canyon	0.80	175		Pb	07 31 52.0	-0.3
JSJM	St Joseph	0.81	303		Pg	07 31 52.0	+0.2
MYLM	Yosemite Lake	0.82	53		Pg	07 31 51.6	-0.3
WENL	Wente Vineyard	0.84	331		Pg	07 31 52.3	+0.1
JBMM	Black Mountain	0.84	301		Pg	07 31 52.2	-0.2
PJUM	Juniper Ridge	0.84	142		Pg	07 31 52.7	+0.3
HULI	Fort Hunter Li	0.87	180		Pg	07 31 52.9	+0.1
CVLM	Vallecito	0.87	327		Pb	07 31 53.5	-0.1
CBZL	Buffer Zone	0.88	335		Pb	07 31 54.2	+0.5
CBZL	Buffer Zone	0.88	335		Pb	07 31 54.3	+0.6
PPTM	Peach Tree Val	0.89	152		Pb	07 31 53.9	+0.1
JFP	Foothills Park	0.89	302		Pg	07 31 52.9	-0.4
PDRM	Domengine Ranc	0.90	128		Pb	07 31 53.9	-0.1
JSFB	Stanford Teles	0.90	305		Pg	07 31 53.1	-0.4
PSAM	San Ardo	0.91	162		Pg	07 31 53.6	0.0
CNIC	Niles Canyon	0.92	321		Pg	07 31 53.7	-0.1
LEGD	La Grand CA	0.93	69		Pg	07 31 53.2	-0.8
JPSM		0.94	289		Pg	07 31 53.6	-0.5
JRSC	Jasper Ridge	0.95	303		Pg	07 31 53.4	-0.9
PWMM	Westland Maint	0.95	119		Pb	07 31 54.9	+0.1
PSMM	Smith Mountain	0.97	147		Pg	07 31 54.8	0.0
CBSNC	Byron Hot Spri	0.98	341		Pb	07 31 55.2	-0.1
CMOB	Morgan Territo	1.02	334		Pg	07 31 55.5	-0.3
C055	Cottonwood Ave	1.03	318	Pg	Pg	07 31 55.9	-0.1
PHPM	Hope Ranch	1.04	150		Pg	07 31 56.1	-0.1
JCHM	Cahill Ridge	1.10	305		Pg	07 31 55.6	-1.6
PKD	Bear Valley Ra	1.10	149		Pg	07 31 57.0	-0.3
MHDM	Hidden Dam	1.10	78		Pg	07 31 56.0	-1.3
PVCM	Vineyard Canyo	1.12	149		Pg	07 31 57.6	-0.1
PSTM	Stockdale Moun	1.13	148		Pg	07 31 57.7	-0.1
BGC	Bolinger Road	1.13	325		Pg	07 31 56.9	-0.9
PPO	Portuguese Can	1.14	154		Pg	07 31 58.0	0.0
PANM	San Antonio Re	1.14	166		Pg	07 31 57.4	-0.7
BUCR	Buckhorn Ranch	1.17	48		Pg	07 31 57.1	-1.5
BDM	Black Diamond	1.17	335		Pb	07 31 57.7	-1.0
CTM	Castle Mountai	1.20	142		Pn	07 31 59.3	0.0
JSBM	San Bruno Moun	1.21	311		Pb	07 31 57.6	-1.7
PHFM	Heflinger Ranc	1.22	146		Pb	07 31 59.0	-0.3
JMGM	Milagra Ridge	1.23	308		Pn	07 31 57.5	-2.2
PKEM	Kettleman Hill	1.23	132		Pn	07 31 59.5	-0.2
BKS	Berkeley--Byer	1.26	321		Pn	07 31 59.2	-0.9
GHC	Gold Hill	1.28	146		Pn	07 32 00.1	-0.2
RAMR	Ramage Ranch	1.29	166		Pn	07 31 59.5	-0.9
LCUV	Le Cuvier	1.30	161		Pn	07 31 59.6	-1.0
MMIM	Miami Mountain	1.31	66		Pn	07 31 59.8	-1.0
CMB	Columbia Colle	1.33	31		Pn	07 31 59.6	-1.4
CMB					Sb	07 32 18.1	-0.5
CMB				IAML		07 32 21.3	
	comp=N,136nm,0.5s						
JPRM	Presidio of Sa	1.33	313		Pn	07 32 00.8	-0.2
PKLM	Kerr Lake	1.33	147		Pn	07 32 00.7	-0.3
CSPM	San Pablo Ridg	1.36	322		Pn	07 32 00.8	-0.7
PMRM	Maxey Ranch	1.37	143		Pn	07 32 01.4	-0.1
PCBM	Cambria	1.38	174		Pn	07 32 00.7	-0.9
TCHL	Shandon	1.38	150		Pn	07 32 01.6	-0.1
TCAS	Cass Winery, P	1.39	156		Pn	07 32 01.1	-0.7
PAGB	Antelope Grade	1.41	145		Pn	07 32 01.7	-0.3
JEPS	Jepson Natural	1.44	341		Pn	07 32 01.7	-0.8
TSCN	Private Proper	1.53	151		Pn	07 32 03.5	-0.2
KCC	Kaiser Creek	1.60	74		Pn	07 32 04.8	+0.1
WELL	Weller Preserv	1.60	15		Pn	07 32 04.3	-0.4
VOG	Valley Oaks Go	1.60	110		Pn	07 32 04.4	-0.3
PBPM	Bitterwater Pu	1.61	144		Pn	07 32 04.5	-0.4
EFD	Emergency Oper	1.62	165		Pn	07 32 04.1	-0.9
NADM	Allendale	1.67	340		Pn	07 32 05.5	-0.2
VPDC	Valencia Peak	1.68	169		Pn	07 32 05.2	-0.6
NOLM	Olema	1.68	313		Pn	07 32 04.2	-1.6
DPD	Davis Peak	1.70	167		Pn	07 32 05.4	-0.6
QRDG	Quail Ridge Na	1.74	336		Pn	07 32 05.8	-0.8
CVS	Carmenet Viney	1.74	327		Pn	07 32 05.6	-1.1
OAKV	Oakville Exper	1.79	329		Pn	07 32 06.3	-1.0
MCCM	Marconi Confer	1.81	314		Pn	07 32 06.2	-1.2
MCCM				IAML		07 32 40.9	
	comp=N,106nm,0.8s						
SMMC	Simmler	1.87	147		Pn	07 32 08.0	-0.4
NTYM	Taylor	1.87	323		Pn	07 32 07.3	-1.1
MRDM	Red Cones	1.88	67		Pb	07 32 10.0	-0.9
MINS	Minaret Summit	1.90	66		Pn	07 32 09.9	+0.8
MMPM	Mammoth Pass	1.91	67		Pn	07 32 10.2	+1.0
MLIM	Lincoln Peak	1.92	67		Pb	07 32 11.2	-0.5
MDCM	Deadman Creek	1.94	64		Pn	07 32 10.7	+1.1
MDYM	Dry Creek	1.94	66		Pb	07 32 11.2	-0.6
MMLB	Mammoth Lakes	1.96	66		Pb	07 32 11.5	-0.8
MLCM	Laurel Creek C	1.99	68		Pb	07 32 11.9	-0.9
MCSM	Casa Diablo Ho	2.01	67		Pb	07 32 12.5	-0.6
MCBM	Casa Benchmark	2.02	67		Pb	07 32 12.4	-0.8
VES	Vestal, Richgr	2.03	120		Pn	07 32 08.5	-2.1
CRGC	Crocker Grade	2.05	143		Pn	07 32 09.8	-1.2
MDRNC	Doe Ridge	2.06	68		Pb	07 32 13.2	-0.7
AFDM	Forest Hills D	2.06	6		Pn	07 32 11.0	-0.1
NHSM	Mount Saint He	2.07	329		Pn	07 32 10.7	-0.5
SPG2	Springville 2	2.11	108		Pn	07 32 11.0	-0.7
WAKR	Walker	2.15	41		Pn	07 32 13.5	+0.9
WAKR				IAML		07 32 43.6	
	comp=N,95nm,0.7s						
MGNR	McGee Canyon	2.23	65		Pb	07 32 16.5	-0.3
GDXM	Geysers	2.27	328		Pn	07 32 13.9	-0.1
GSSM	Skaggs Springs	2.29	323		Pn	07 32 12.6	-1.6
BCW	Bitter Crk WRg	2.45	142		Pn	07 32 16.6	+0.1
BCW				IAML		07 33 13.2	
	comp=N,50nm,1.0s						
BCW				IAML		07 33 24.1	
	comp=E,51nm,1.3s						
PNTR	Pine Nut	2.55	30	Pn	Pn	07 32 18.4	+0.4
ISA	Isabella, Lake	2.55	118		Pn	07 32 17.8	-0.1
ISA				IAML		07 33 04.9	
	comp=N,50nm,0.6s						
ISA				IAML		07 33 06.6	
	comp=E,42nm,0.8s						
LHV	Little Huntoon	2.56	57	Pn	Pn	07 32 19.4	+1.5
MPK	Martis Peak	2.58	21		Pn	07 32 19.4	+0.9
MPK				IAML		07 33 01.9	
	comp=E,74nm,0.9s						
MPK				IAML		07 33 06.4	
	comp=N,77nm,0.7s						
DSP	Deep Springs	2.66	79		Pn	07 32 19.5	+0.3
DSP				IAML		07 33 05.6	
	comp=N,48nm,0.9s						
DSP				IAML		07 33 07.3	
	comp=E,42nm,0.8s						
ORV	Oroville	2.67	356	Pn	Pn	07 32 19.2	-0.2
RYN	Ryan	2.77	50		Pn	07 32 21.1	+0.2
RYN				IAML		07 33 03.4	
	comp=N,57nm,0.6s						
NVAR	Mina Array Bea	2.79	56		Pn	07 32 21.2	-0.1
BEKR	Beckworth	3.05	13		Pn	07 32 25.2	+0.4
BEKR				IAML		07 33 20.4	
	comp=E,24nm,0.6s						
GRAC	Grapevine Rang	3.11	87	Pn	Pn	07 32 25.8	+0.3
CCAC	Calif City Air	3.14	123		Pn	07 32 26.1	+0.2
CCAC				IAML		07 33 24.0	
	comp=E,36nm,1.4s						
CCAC				IAML		07 33 28.9	
	comp=N,41nm,0.9s						
PAHR	Pah Rah Range	3.17	27		Pn	07 32 26.8	+0.4
GMN	Gold Mountain	3.21	82	Pn	Pn	07 32 27.9	+0.8
O02D	Mt. Diablo Mer	3.50	340	Pn	Pn	07 32 31.4	+0.5
GSC	Goldstone, Bar	3.93	113	Pn	Pn	07 32 36.9	+0.1
GSC				IAML		07 33 47.4	
	comp=N,13nm,0.7s						
GSC				IAML		07 33 52.7	
	comp=E,14nm,0.8s						
TPNV	Topopah Spring	4.00	88		Pn	07 32 38.4	+0.5
TPNV				IAML		07 33 46.9	
	comp=E,22nm,1.0s						
TPNV				IAML		07 33 50.4	
	comp=E,20nm,1.2s						

WEL 11 07:36:49.0±1.4, **32°S**±13°×**17°9W**±3°1, **$h400^{km}$**, **M3.9**/18, **mB4.4**/13, **ML5.1**/11, **MLv4.7**/18, **Mw(mB)3.6**/13, **Error ellipse: s-maj=41.7km s-min=12.0km az=107.0, confirmed, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	6.40	199	P	Pn	07 38 26.2	+0.3
MXZ				S	S	07 39 44.3	-0.8
WMGZ	Waiomatatini S	6.62	198	P	P	07 38 29.1	+0.2
WMGZ				S	S	07 39 49.4	+0.1
HAZ	Te Kaha	6.74	202	P	Pn	07 38 29.5	-0.2
HAZ				S	S	07 39 51.1	-0.7
PKGZ	Pakihiroa	6.75	200	P	Pn	07 38 29.9	+0.1
PKGZ				S	S	07 39 53.8	+1.7
KUZ	Kuaotunu	6.76	218	P	Pn	07 38 29.3	-0.6
PUZ	Puketiti	6.89	198	P	Pn	07 38 30.6	-0.8
PUZ				S	S	07 39 54.2	-0.8
RUGZ	Raukumara Rang	6.96	202	P	P	07 38 32.9	0.0
RUGZ				S	S	07 39 52.9	-3.8
WCZ	Waipu Caves	7.03	229	P	Pn	07 38 33.2	+0.3
TWGZ	Tauwhareparae	7.07	199	P	Pn	07 38 33.5	+0.1
TWGZ				S	S	07 40 00.4	+1.7
MBAZ	Motutapu North	7.24	222	P	P	07 38 35.9	+0.1
OPRZ	Ohinepanea	7.26	208	P	P	07 38 37.1	+1.1
CNGZ	Carnagh Statio	7.30	197	P	P	07 38 40.0	+3.5
CNGZ				S	S	07 40 03.5	+0.2
MKAZ	Moumakai	7.33	219	P	Pn	07 38 33.5	-2.8
MWZ	Matawai	7.35	201	P	Pn	07 38 36.3	-0.3
MWZ				S	S	07 40 03.4	-1.0
TKGZ	Te Karaka	7.35	199	P	Pn	07 38 36.2	-0.3
TKGZ				S	S	07 40 04.0	-0.4
URZ	Urewera	7.42	204	P	Pn	07 38 35.9	-1.3
URZ				S	S	07 40 06.2	+0.4
RAGZ	Rawiri	7.53	201	P	Pn	07 38 38.4	-0.3
RAGZ				S	S	07 40 08.5	+0.2
RIGZ	Rimuhau	7.62	199	P	P	07 38 40.1	0.0
RIGZ				S	S	07 40 08.6	-1.6
TOZ	Tahuroa Road	7.64	214	P	P	07 38 41.6	+1.3
MUGZ	Murupara	7.73	205	P	Pn	07 38 40.3	-0.5
MUGZ				S	S	07 40 12.6	+0.2
RTZ	Ruatahuna	7.78	203	P	Pn	07 38 41.0	-0.4
PRGZ	Paritu Road	7.79	198	P	P	07 38 43.8	+1.8
PRGZ				S	S	07 40 17.8	+4.1
SNGZ	Shannon Statio	7.82	201	P	Pn	07 38 41.4	-0.4
SNGZ				S	S	07 40 15.1	+0.9
KNZ	Kokohu	7.94	199	P	Pn	07 38 41.9	-1.3
KNZ				S	S	07 40 14.6	-2.1
MHGZ	Mahia Peninsul	8.00	197	P	Pn	07 38 44.0	+0.1
MHGZ				S	S	07 40 18.3	+0.2
RAHZ	Arahi	8.02	202	P	P	07 38 44.4	-0.1
RAHZ				S	S	07 40 18.7	+0.3
MTHZ	Maungataniwha	8.04	203	P	P	07 38 45.4	+0.6
TLZ	Tolley Road	8.10	212	P	P	07 38 45.5	0.0
WHHZ	Waihua	8.12	201	P	P	07 38 45.9	+0.3
WHHZ				S	S	07 40 20.4	-0.1
MRHZ	Matea Rd	8.18	206	P	Pn	07 38 45.9	0.0
NMHZ	Naumai	8.27	203	P	Pn	07 38 47.2	+0.1
NMHZ				S	S	07 40 24.0	+0.1
ARHZ	Aropaoanui	8.36	201	P	Pn	07 38 47.7	-0.3
BKZ	Black Stump Fm	8.44	204	P	Pn	07 38 47.0	-2.0
BKZ				S	S	07 40 26.5	-0.9
MCHZ	McNeill Hill	8.62	202	P	Pn	07 38 50.4	-0.6
MCHZ				S	S	07 40 31.5	+0.4
TMVZ	Te Maari	8.69	208	P	P	07 38 52.1	0.0
KWHZ	Kaweka Forest	8.70	204	P	Pn	07 38 51.6	-0.3
KWHZ				S	S	07 40 34.2	+1.4
CKHZ	Cape Kidnapper	8.70	200	P	P	07 38 53.2	+1.2
CKHZ				S	S	07 40 32.9	+0.1
ETVZ	East Tongariro	8.71	208	P	Pn	07 38 51.9	-0.2
WTVZ	West Tongariro	8.74	208	P	Pn	07 38 52.1	-0.4
NNVZ	North Ngauruho	8.74	208	P	P	07 38 53.5	+0.8
OTVZ	Oturere	8.75	208	P	Pn	07 38 52.5	-0.2
SNVZ	South Ngauruho	8.78	208	P	Pn	07 38 52.8	-0.3
NGZ	Ngauruhoe	8.79	208	P	Pn	07 38 52.6	-0.4
FWVZ	Far West T-bar	8.87	208	P	Pn	07 38 53.7	-0.4
MAVZ	Matarangi	8.88	208	P	Pn	07 38 51.9	-2.4
WHVZ	Whangaehu Hut	8.88	208	P	Pn	07 38 53.4	-0.9
WHVZ				S	S	07 40 37.3	+0.2
KAHZ	Kahuranaki	8.89	201	P	Pn	07 38 53.1	-1.0
KRHZ	Kereru	8.91	203	P	Pn	07 38 53.8	-0.6
KRHZ				S	S	07 40 35.9	-1.4
TRVZ	Turoa	8.91	208	P	Pn	07 38 54.1	-0.6
WNVZ	Wahianoa	8.92	208	P	Pn	07 38 51.8	-2.8
WNVZ				S	S	07 40 36.5	-1.2
MOVZ	Moawhango	8.93	207	P	Pn	07 38 53.7	-0.9
MOVZ				S	S	07 40 35.6	-2.1
PWZ	Pawanui	9.11	200	P	Pn	07 38 56.7	+0.1
PWZ				S	S	07 40 42.1	+0.7
PXZ	Pawanui	9.11	200	P	Pn	07 38 56.9	+0.3
PXZ				S	S	07 40 39.5	-1.9
WPHZ	Waipukurau	9.27	202	P	Pn	07 38 59.8	+1.3
WPHZ				S	S	07 40 45.3	+0.5
PRHZ	Porangahau	9.39	201	P	Pn	07 39 00.4	+0.5
PRHZ				S	S	07 40 47.7	+0.4
TSZ	Takapari Road	9.42	204	P	P	07 38 59.5	-0.6
TSZ				S	S	07 40 46.5	-1.5
NEZ	North Egmont	9.53	214	P	Pn	07 39 04.8	+3.3
WAZ	Wanganui	9.53	209	P	P	07 38 59.3	-2.0
WAZ				S	S	07 40 50.5	+0.4
DVHZ	Dannevirke	9.57	202	P	P	07 39 00.8	-0.9
DVHZ				S	S	07 40 49.0	-2.0
ANWZ	Angora Road	9.62	201	P	Pn	07 39 03.2	+0.7
ANWZ				S	S	07 40 52.1	+0.2
PRWZ	Pori Road	9.87	203	P	Pn	07 39 06.1	+0.7
PRWZ				S	S	07 40 55.2	-1.8

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*NNC **11** 07:45:00.8±2.1, 42°.43N×80°.54E, $h0^{km}$, mb3.0, mpv3.0, Error ellipse: s-maj=13.3km s-min=11.0km az=151.0*

*SOME **11** 07:45:00.1, 42°.38N×80°.65E, $h25^{km}$*

*KRNET **11** 07:45:03.3±0.1, 41°.98N×80°.19E, mb3.0*

ISC 11 07:45:01.7±2.1, **42°.46N**±0°.07×**80°.57E**±0°.08, **$h30^{km}$**$\pm14^{km}$, **n20**, σ**$2^{s}.56$**/35, **9C-6D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	1.00	351	P	Pb	07 45 20.8	+0.2
	1.2nm,0.1s						
KTMS				S	Sn	07 45 35.5	+2.5
	6.4nm,0.1s						
KTMS	Ketmen	1.00	351	*e*P	Pb	07 45 20.8	+0.2
	1.2nm,0.1s						
KTMS				*e*S	Sn	07 45 35.5	+2.5
	6.4nm,0.1s						
SHLS	Shalkode	1.08	311	P	Pn	07 45 17.4	-3.5
	9.0nm,0.1s						
SHLS				S	Sn	07 45 30.1	-4.8
	48nm,0.3s						
SHLS	Shalkode	1.08	311	*e*P	Pn	07 45 17.4	-3.5
	9.0nm,0.1s						
SHLS				*e*S	Sn	07 45 30.1	-4.8
	48nm,0.3s						
PDGK	Podgornoye	1.18	318	⇓P	Pn	07 45 22.0	-0.3
	2.3nm,0.3s						
PDGK				⇑S	Sn	07 45 38.7	+1.3
	2.3nm,0.2s						
UZB	Uzynbulak	1.33	302	P	Pb	07 45 25.7	-0.4
	4.8nm,0.2s						
UZB				S	Sb	07 45 44.6	+1.6
	6.0nm,0.1s						
PRZ	Przheval'sk	1.61	272	⇑*i*P	Pb	07 45 30.4	-0.4
PRZ				⇑*i*S	Sb	07 45 49.9	-0.9
SATY	Saty	1.71	291	P	Pb	07 45 32.4	-0.1
	7.3nm,0.2s						
SATY				S	Sb	07 45 55.6	+2.0
	22nm,0.1s						
KPKS	Kokpek	1.72	307	P	Pb	07 45 31.9	-0.7
	2.9nm,0.2s						
KPKS				S	Sb	07 45 54.8	+1.0
	24nm,0.3s						
DJR	Jarkent	1.96	343	Pg	Pb	07 45 37.8	+1.0
	1.8nm,0.2s						
DJR				Lg	Lg	07 46 04.9	
	15nm,0.5s						
DJR	Jarkent	1.96	343	*e*P	Pb	07 45 37.0	+0.2
	1.8nm,0.1s						
DJR				*e*S	Sb	07 46 03.6	+2.8
	20nm,0.4s						
KNOS	Konyrlen	2.16	332	Pg	Pb	07 45 39.7	-0.4
	4.4nm,0.3s						
KNOS				Lg	Lg	07 46 09.5	
	28nm,0.4s						
TARG	Taragay, Kyrgy	2.18	252	⇑*e*P	Pn	07 45 36.7	+0.4
TARG				⇑*i*S	Sn	07 46 01.7	-0.9
BLB	Baldybastay	2.24	318	Pg	Pb	07 45 40.7	-0.9
	32nm,0.3s						
BLB				Lg	Lg	07 46 10.8	
	22nm,0.1s						
KDJ	Kajisay	2.54	264	⇓*i*P	Pb	07 45 43.7	-2.9
KDJ				⇓*i*S	Sn	07 46 12.9	+1.9
KTBS	Karatobe	3.12	295	Pg	Pb	07 45 56.3	0.0
	1.0nm,0.3s						
KTBS				Lg	Lg	07 46 36.6	
	19nm,0.5s						
BOOM	Boomskoye usch	3.43	272	⇑*e*P	Pn	07 45 56.9	+3.7
BOOM				⇑*e*S	Sn	07 46 36.0	+3.1
NRN	Naryn	3.56	255	⇓*i*P	Pn	07 45 57.2	+2.0
NRN				⇓*i*S	Sn	07 46 36.4	0.0
TKM2	Tokmak 2	3.70	279	⇑*i*P	Pb	07 46 01.6	-4.8
TKM2				⇑*i*S	Sn	07 46 44.3	+4.7
MK31	Makanchi Array	4.51	15	⇓Pn	Pn	07 46 12.9	+5.0
	0.2nm,0.2s,baz=188,slow=13,SNR=46						
MK31				Sn	Sb	07 47 09.9	-4.0
	0.2nm,0.2s,baz=188,slow=23,SNR=6.7						

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*IDC **11** 07:46:21.9±2.6, 38°.79N×123°.26W, $h0^{km}$, mbtmp3.7/5, ML3.3/4, Error ellipse: s-maj=25.9km s-min=20.1km az=114.0*

*NEIC **11** 07:46:25.1±2.1, 38°.82N±0°.01×122°.82W±0°.02, $h5^{km}\pm4^{km}$, Error ellipse: s-maj=2.1km s-min=1.6km az=74.0*

*NCEDC **11** 07:46:25.5±2.2, 38°.81N±0°.01×122°.82W±0°.02, $h2^{km}\pm4^{km}$, Mwr4.1/7, mb4.1/6(NEIC), ML3.5/91(NEIC), Error ellipse: s-maj=2.0km s-min=1.6km az=77.0*

ISC 11 07:46:26.2±0.7, **38°.79N**±0°.02×**122°.83W**±0°.02, **$h10^{km}$**, **n160**, σ**$1^{s}.08$**/160, **Northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GDXM	Geysers	0.03	61		Pg	07 46 26.2	-2.0
GGPM	Geyser Peak	0.03	206		Pg	07 46 26.8	-1.4
GAXM	Alexander Vall	0.10	147		Pg	07 46 27.8	-1.0
GSGM	Seigler Mounta	0.12	51		Pg	07 46 28.1	-0.9
GBGM	Boggs Mountain	0.12	80		Pg	07 46 28.1	-1.1
GRTM	Round Top Moun	0.19	40		Pg	07 46 29.2	-1.0
GRTM					Sg	07 46 32.2	-0.8
NHSM	Mount Saint He	0.21	130		Pg	07 46 30.0	-0.7
HOPS	Hopland Field	0.28	316		Pg	07 46 31.2	-0.7
HOPS				IAML		07 46 36.8	
	comp=E,11µm,0.8s						
NMTM	Middletown	0.30	88		Pg	07 46 31.7	-0.5
MNRC	McLaughlin Min	0.31	74		Pg	07 46 32.2	-0.3
MNRC	McLaughlin Min	0.31	74	IAML		07 46 39.9	
	comp=N,13µm,0.9s						
MNRC				IAML		07 46 40.7	
	comp=E,11µm,1.1s						
GSNM	Snow Mountain	0.32	297		Pg	07 46 32.1	-0.6
GHGM	Hogback Ridge	0.33	0		Pg	07 46 32.0	-0.9
GALB	Galbreath Wild	0.34	281		Pg	07 46 32.6	-0.5
GHCM	House Creek	0.35	237		Pg	07 46 33.1	-0.1
NTYM	Taylor	0.42	162		Pb	07 46 34.6	-1.2
OAKV	Oakville Exper	0.49	138		Pg	07 46 35.5	-0.2
GGUM	Gualala	0.53	277		Pb	07 46 36.4	-1.3
CVS	Carmenet Viney	0.53	147		Pg	07 46 36.2	-0.4
CVS	Carmenet Viney	0.53	147	IAML		07 46 45.4	
	comp=E,5µm,0.4s						
CVS				IAML		07 46 48.0	
	comp=N,3µm,0.8s						
GWRM	Wonder Ranch	0.55	318		Pg	07 46 36.4	-0.6
QRDG	Quail Ridge Na	0.62	120		Pb	07 46 38.3	-0.9
MCCM	Marconi Confer	0.65	184		Pb	07 46 39.3	-0.4
MCCM				Sg	Sg	07 46 46.8	-0.6
MCCM				IAML		07 46 54.4	
	comp=N,3µm,0.7s						
MCCM				IAML		07 46 56.2	
	comp=E,2µm,0.9s						
GFC	Funks Creek	0.68	38		Pn	07 46 40.8	-1.1
NADM	Allendale	0.75	116		Pn	07 46 41.8	-1.1
NOLM	Olema	0.75	178		Pb	07 46 40.7	-0.7
DCMP	DeCamp, Califo	0.78	330		Pg	07 46 40.8	-0.5
RUSS	Russell Ranch	0.79	108		Pn	07 46 42.8	-0.6
NPRM	Point Reyes	0.81	191		Pb	07 46 42.2	-0.2
GTC	Three Chop Rid	0.83	317		Pb	07 46 41.8	-1.0
NLHM	Lake Herman	0.86	142		Pb	07 46 42.4	-0.8
MNDO	Woodland Fire	0.88	306		Pn	07 46 43.9	-0.9
OSUM	Sutter Buttes	0.90	58		Pg	07 46 42.5	-0.9
CPMM	Point Molate	0.91	159		Pb	07 46 43.2	-0.8
CSPM	San Pablo Ridg	0.93	154		Pn	07 46 44.2	-1.1
CPIM	Pinole Ridge	0.94	149		Pb	07 46 43.8	-0.7
JEPS	Jepson Natural	0.95	124		Pn	07 46 45.3	-0.3
GVV	Valley View	0.99	7		Pn	07 46 45.9	-0.4
CTAM	Taylor	1.00	140		Pn	07 46 45.8	-0.4
BRK	Berkeley--Havi	1.02	154		Pb	07 46 45.3	-0.7
BL67	Building 67, L	1.02	154		Pn	07 46 45.7	-0.9
VAK	Adit at Lawren	1.02	153		Pb	07 46 45.5	-0.5
CVPM	Vollmer Peak	1.02	152		Pn	07 46 45.8	-0.9
BKS	Berkeley--Byer	1.03	153		Pg	07 46 45.0	-1.0
HMR	Hamilton Ranch	1.03	128		Pn	07 46 46.5	-0.2
JPRM	Presidio of Sa	1.03	164		Pg	07 46 45.1	-1.0
CYBM	Yerba Buena Is	1.05	159		Pg	07 46 45.6	-0.8

KCPM	Cahto Peak	1.07	327		Pb	07 46 46.3	-0.6
KCPM				Sg	Sg	07 46 59.4	-1.3
KCPM				IAML		07 47 07.6	
	comp=N,2μm,1.7s						
FARB	Farallon Islan	1.10	187		Pb	07 46 46.0	-1.4
FARB	Farallon Islan	1.10	187	IAML		07 47 05.2	
	comp=E,857nm,0.4s						
OSTM	Stimpson Lane	1.11	59		Pb	07 46 45.4	-2.2
GROM	Round Mountain	1.13	6		Pn	07 46 47.7	-0.5
BDM	Black Diamond	1.13	138		Pb	07 46 46.3	-1.5
CMCM	Mills College	1.13	153		Pn	07 46 47.5	-0.6
KBNM	Bluenose Ridge	1.13	345		Pn	07 46 48.0	-0.3
KIPM	Iron Peak	1.13	334		Pg	07 46 47.4	-0.7
BGC	Bolinger Road	1.15	148		Pb	07 46 47.0	-1.2
JSBM	San Bruno Moun	1.16	163		Pb	07 46 47.6	-0.9
JMGM	Milagra Ridge	1.19	166		Pb	07 46 47.7	-1.1
SAC	San Andreas	1.25	165		Pn	07 46 49.0	-0.7
SFRE	Sierra Foothil	1.26	68		Pn	07 46 47.8	-2.0
C055	Cottonwood Ave	1.27	153		Pg	07 46 50.1	-0.4
CMOB	Morgan Territo	1.27	140		Pn	07 46 48.8	-1.3
OGOM	Van Goodin Ran	1.27	47		Pn	07 46 48.1	-2.0
ORV	Oroville	1.28	53		Pn	07 46 48.0	-2.2
ORV				Sg	Sb	07 47 05.6	-1.3
JCHM	Cahill Ridge	1.32	164		Pn	07 46 49.3	-1.5
CBSNC	Byron Hot Spri	1.35	136		Pn	07 46 50.1	-1.0
CNIC	Niles Canyon	1.36	150		Pn	07 46 50.1	-1.2
O02D	Mt. Diablo Mer	1.38	1		Pb	07 46 51.7	-0.5
O02D	Mt. Diablo Mer	1.38	1	Pn	Pg	07 46 52.4	-0.3
O02D				IAML		07 46 55.9	
	comp=N,486nm,1.4s						
O02D				IAML		07 47 21.0	
	comp=E,251nm,1.7s						
CVLM	Vallecito	1.40	146		Pb	07 46 51.7	-0.8
CBZL	Buffer Zone	1.41	141		Pb	07 46 51.6	-1.0
WENL	Wente Vineyard	1.44	144		Pn	07 46 51.4	-1.0
AFDM	Forest Hills D	1.46	83		Pn	07 46 51.0	-1.6
JRSC	Jasper Ridge	1.46	161		Pn	07 46 50.8	-1.9
JSFB	Stanford Teles	1.48	160		Pn	07 46 52.0	-1.0
LTCM	Tuscan Springs	1.51	21		Pn	07 46 51.7	-1.7
JFP	Foothills Park	1.52	161		Pn	07 46 52.5	-1.0
LBPM	Beegum Peak	1.52	358		Pb	07 46 53.9	-0.7
BRIC	Briceland Vine	1.56	328		Pn	07 46 53.5	-0.5
CSTL	Corral Hollow	1.56	137		Pn	07 46 53.1	-0.9
CALM	Calaveras Res.	1.57	149		Pn	07 46 53.3	-0.8
JBMM	Black Mountain	1.57	160		Pn	07 46 53.0	-1.2
JSJM	St Joseph	1.57	158		Pn	07 46 53.1	-1.0
KMRM	Mail Ridge	1.58	335		Pn	07 46 54.1	-0.3
KMRM				IAML		07 47 34.1	
	comp=N,846nm,1.9s						
KMRM				IAML		07 47 42.5	
	comp=E,656nm,1.3s						
CMLM	Mount Lewis	1.61	144		Pn	07 46 53.9	-0.9
JPSM		1.64	167		Pn	07 46 53.6	-1.5
WELL	Weller Preserv	1.68	102		Pn	07 46 54.7	-1.1
LCMM	Colby Mountain	1.69	36		Pn	07 46 55.9	-0.1
MHC	Mount Hamilton	1.73	147		Pn	07 46 55.5	-0.9
MTOS	Mt Oso, Westle	1.75	137		Pn	07 46 55.7	-0.9
ARN	Arnold Ranch	1.77	144		Pn	07 46 56.2	-0.8
CCOB	Coe Ranch Numb	1.78	149		Pn	07 46 56.7	-0.4
CADM	Anderson Res.	1.88	149		Pn	07 46 57.6	-0.9
KHBM	Hayfork Bally	1.89	351		Pn	07 46 59.1	+0.4
KMPM	Mount Pierce	1.91	329	Pn	Pn	07 46 58.9	0.0
KMPM				IAML		07 47 44.1	
	comp=N,422nm,2.1s						
WEAV	Weaverville	1.95	356		Pn	07 46 60.0	+0.4
LRDM	Redding Peak	1.97	32		Pn	07 46 59.8	0.0
HLPM	Lions Peak	1.99	151		Pn	07 46 58.6	-1.3
GHS	Gilroy Hot Spr	2.02	147		Pn	07 46 59.3	-1.1
JELB	Ellicott, Sant	2.02	157		Pn	07 46 59.6	-0.8
DONR	Donner Summit	2.03	73		Pn	07 47 01.2	+0.5
CMB	Columbia Colle	2.06	111		Pn	07 47 00.4	-0.6
HCBM	Chamberlain	2.08	153		Pn	07 47 00.1	-1.0
HCOM	Corn Cob Canyo	2.10	155		Pn	07 47 00.4	-1.1
HPCM	Pacheco Lake	2.12	144		Pn	07 47 00.9	-0.8
HFEM	San Felipe	2.13	148		Pn	07 47 00.9	-1.0
HTUM	Tustin Road	2.18	154		Pn	07 47 01.2	-1.3
BEKR	Beckworth	2.19	60		Pn	07 47 02.2	-0.7
BEKR				IAML		07 47 35.1	
	comp=E,200nm,0.9s						
KHMM	Horse Mountain	2.19	342		Pn	07 47 02.8	-0.1
KHMM				IAML		07 47 57.8	
	comp=N,229nm,1.7s						
KHMM				IAML		07 48 07.1	
	comp=E,342nm,1.9s						
JCC	Jacoby Creek,	2.22	336		Pn	07 47 03.3	+0.2
JCC				IAML		07 48 02.6	
	comp=N,192nm,2.7s						
JCC				IAML		07 48 03.6	
	comp=E,344nm,2.0s						
MPK	Martis Peak	2.23	76		Pn	07 47 04.0	+0.4
HATC	Hat Creek Radi	2.28	27		Pn	07 47 04.1	+0.1
HATC				IAML		07 48 10.3	
	comp=E,376nm,2.2s						
HATC				IAML		07 48 10.4	
	comp=N,190nm,2.4s						
FRP	Fremont Peak	2.30	152		Pn	07 47 02.3	-1.9
SAO	San Andreas Ge	2.30	151		Pn	07 47 02.6	-1.6
SAO	San Andreas Ge	2.30	151		Pn	07 47 03.0	-1.2
PEAR	Peavine Mounta	2.37	69		Pb	07 47 06.7	-2.4
BUCR	Buckhorn Ranch	2.38	117		Pn	07 47 05.5	0.0
PNTR	Pine Nut	2.53	82	Pn	Pn	07 47 07.3	-0.3
KRPM	Rodgers	2.53	339	Pn	Pn	07 47 07.9	+0.4
KRPM				IAML		07 48 11.5	
	comp=N,260nm,2.0s						
KRPM				IAML		07 48 32.8	
	comp=E,188nm,2.4s						
BBGB	Big Mountain B	2.63	147		Pn	07 47 08.7	-0.1
WAKR	Walker	2.67	95	Pn	Pn	07 47 10.8	+1.4
WAKR				IAML		07 47 49.4	
	comp=N,199nm,1.1s						
WAKR				IAML		07 47 50.6	
	comp=E,154nm,0.8s						
BMSM	Mercy Hot Spri	2.67	142		Pn	07 47 09.1	-0.3
PAHR	Pah Rah Range	2.82	70		Pn	07 47 11.5	0.0
PAHR				IAML		07 47 57.3	
	comp=E,101nm,1.2s						
PAHR				IAML		07 48 11.9	
	comp=N,135nm,1.9s						
KRMB	Red Mountain	2.85	343		Pn	07 47 13.2	+1.3
PMPB	Monarch Peak	3.04	147	Pn	Pn	07 47 14.6	+0.2
PMPB				IAML		07 48 16.4	
	comp=E,170nm,1.6s						
PMPB				IAML		07 48 36.6	
	comp=N,180nm,1.4s						
KSXB	Camp Six Broad	3.14	345		Pn	07 47 15.6	-0.2
KSXB				IAML		07 48 32.4	
	comp=E,88nm,2.2s						
MDCM	Deadman Creek	3.17	109		Pn	07 47 18.2	+1.8
MINS	Minaret Summit	3.18	110		Pn	07 47 18.4	+1.8
RYN	Ryan	3.37	91		Pn	07 47 19.8	+0.7
RYN				IAML		07 48 16.9	
	comp=E,102nm,2.2s						
RYN				IAML		07 48 29.8	
	comp=N,80nm,1.8s						
LHV	Little Huntoon	3.43	98		Pn	07 47 21.2	+1.5
L04D	Klamath Falls	3.44	6	Pn	Pn	07 47 19.8	-0.2
L04D				IAML		07 48 52.0	
	comp=E,65nm,2.7s						
NVAR	Mina Array Bea	3.56	94		Pn	07 47 22.8	+1.0
NVAR	Mina Array Bea	3.56	94	Pn	Pn	07 47 22.3	+0.6
	comp=E,1.8nm,0.3s,baz=269,slow=15,SNR=68						
NVAR				Pg	Pb	07 47 29.7	+0.3
	comp=E,8.0nm,0.3s,baz=276,slow=20,SNR=43						
NVAR				Lg	Lg	07 48 23.8	
	comp=E,1.9nm,0.3s,baz=264,slow=32,SNR=1.8						
	comp=E,8.1nm,0.7s						
KBO	Bosley Butte	3.58	343	Pn	Pn	07 47 19.6	-2.3
KBO				IAML		07 48 59.8	
	comp=N,133nm,2.3s						
KBO				IAML		07 49 08.1	
	comp=E,124nm,3.0s						
NV11	Mina Array Sit	3.68	94		Pn	07 47 24.1	+0.8
NV11				IAML		07 48 26.9	
	comp=N,117nm,2.1s						
NV11				IAML		07 48 35.8	
	comp=E,99nm,2.1s						
K02D	Willamette Mer	3.95	351		Pn	07 47 26.3	-0.7
K02D				IAML		07 49 05.4	
	comp=N,40nm,2.3s						
K02D				IAML		07 49 15.6	
	comp=E,41nm,4.8s						
KEBM	Edson Butte	4.23	345	Pn	Pn	07 47 30.6	-0.3
KEBM				IAML		07 48 01.9	
	comp=N,80nm,1.1s						
Q09A	Carvers	4.41	88		Pn	07 47 32.7	-0.7
MZP	Montezuma Peak	4.42	103		Pn	07 47 34.4	+0.8
J01E	Myrtle Point	4.44	349	Pn	Pn	07 47 32.9	-0.7
J01E				IAML		07 49 25.1	
	comp=E,67nm,3.0s						
J01E				IAML		07 49 31.7	
	comp=N,41nm,2.0s						
BCW	Bitter Crk WRg	4.72	144		Pn	07 47 37.7	+0.1
WVOR	Wild Horse Val	4.83	40	Pn	Pn	07 47 39.9	+0.7
WVOR				IAML		07 49 38.0	
	comp=N,27nm,3.3s						
WVOR				IAML		07 49 54.4	
	comp=N,20nm,4.7s						
CCAC	Calif City Air	5.29	132	Pn	Pn	07 47 45.7	+0.3
PASC	Pasadena Art C	5.94	140	Pn	Pn	07 47 53.5	-0.7
GSC	Goldstone, Bar	5.94	124		Pn	07 47 53.4	-1.0
ELK	Elko	6.16	69		Pn	07 47 56.8	-0.7
ELK	Elko	6.16	69	Pn	Pn	07 47 58.5	+1.0
	comp=N,0.2nm,0.3s,baz=263,slow=12,SNR=23						
ELK				Sn	Sn	07 49 12.4	+4.3
	comp=N,0.1nm,0.3s,baz=297,slow=13,SNR=3.1						
ELK				Lg	Lg	07 49 39.2	
	comp=N,0.3nm,0.3s,baz=360,slow=8.4,SNR=3.1						
	comp=N,6.0nm,0.9s						
SPR3	Spring Creek 3	6.63	86	Pn	Pn	07 48 02.5	-1.5
PSUT	Pine Spring	7.03	89	Pn	Pn	07 48 09.2	-0.1
PFO	Pinyon Flats O	7.29	133	Pn	Pn	07 48 12.1	-0.8
PFO	Pinyon Flats O	7.29	133	Pn	Pn	07 48 13.6	+0.6
	comp=N,0.4nm,0.3s,baz=303,slow=14,SNR=5.9						
PFO				Lg	Lg	07 50 13.0	
	baz=206,slow=8.5						
	comp=N,1.6nm,0.5s						
PDAR	Pinedale Array	10.81	64	Pn	Pn	07 49 07.2	+5.9
	comp=N,5.5nm,1.0s,baz=250,slow=12,SNR=26						
VHRN	Van Horn	16.67	113		P	07 50 22.5	0.0
HTMS	Hat Mesa	16.82	106	P	P	07 50 24.0	-0.1
MSTX	Muleshoe	16.84	100	P	P	07 50 24.4	0.0
MSTX				IAmb	IAmb	07 50 27.6	
	comp=Z,27nm,1.5s						
TXAR	Lajitas Array	18.44	115	Pn	Pn	07 50 45.5	+3.5
	baz=306,slow=12,SNR=19						
	comp=Z,5.2nm,1.2s						
ECSD	EROS Data Cent	20.27	68		Pn	07 51 02.2	-1.6
ECSD				IAmb	IAmb	07 51 06.2	
	comp=Z,8.8nm,1.3s						
BRDY	Brady	20.86	104	P	P	07 51 08.8	+0.4
BRDY				IAmb	IAmb	07 51 14.3	
	comp=Z,3.3nm,0.9s						
N35A	Tabor	20.95	76	P	Pn	07 51 10.0	-1.8

IDC 11 07:51:50.6±3.8,**30°.40N**×**140°.93E,h0**^{km}**,mb3.3**/4,**mbtmp3.3**/5,**ML2.4**/1,**Error ellipse: s-maj=147.7km s-min=24.1km az=72.0,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	6.53	340	Pn	Pn	07 53 26.9	-1.1
	0.1nm,0.3s,baz=160,slow=10,SNR=4.4						
	1.0nm,0.3s						
MKAR	Makanchi Array	47.56	307	P	P	08 00 28.3	+0.3
	0.2nm,0.6s,baz=86,slow=7.8,SNR=2.7						
	0.2nm,0.6s						
KURBB	Kurchatov Arra	49.97	313	P	P	08 00 46.1	-0.2
	0.3nm,0.8s,baz=91,slow=9.3,SNR=3.1						
	0.3nm,0.8s						
WRA	Warramunga Arr	50.45	188	P	P	08 00 50.3	+0.1
	0.2nm,0.5s,baz=4.7,slow=7.4,SNR=6.7						
	0.2nm,0.5s						
ASAR	Alice Springs	54.18	188	P	P	08 01 17.3	-0.6
	0.1nm,0.5s,baz=5.1,slow=6.3,SNR=1.1						
	0.1nm,0.5s						

ASRS ***11*** *08:15:15.0±1.1,53°.43N×87°.50E,h0*^{km}*,M2.4,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 11 08:15:18.0±3.0,**53°.44N**×**87°.51E,h0**^{km}**,mbtmp3.1**/2,**ML2.7**/2,**Error ellipse: s-maj=28.6km s-min=15.7km az=57.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.68	289	I	I	08 25 30.0	
	0.1nm,0.5s,baz=108,slow=319,SNR=3.7						
ZALV	Zalesovo Beam	1.68	289	Pg	Pn	08 15 48.0	-0.6
	1.8nm,0.3s,baz=107,slow=14,SNR=12						
ZALV				Lg	Lg	08 16 11.9	
	1.3nm,0.3s,baz=106,slow=24,SNR=6.5						
KURBB	Kurchatov Arra	6.21	247	Pn	Pn	08 16 50.8	-0.1
	0.1nm,0.3s,baz=62,slow=14,SNR=5.6						
KURBB				Lg	Lg	08 18 35.1	
	baz=64,slow=32,SNR=2.7						
	0.8nm,0.4s						
MKAR	Makanchi Array	7.45	209	Pn	Pn	08 17 09.5	+1.7
	0.2nm,0.3s,baz=28,slow=13,SNR=7.4						
	0.4nm,0.3s						

NNC ***11*** *08:18:08.8±1.2,44°.75N×81°.78E,h0*^{km}*,mb3.6,mpv3.4, Error ellipse: s-maj=14.5km s-min=5.4km az=124.0, Suspected Mining explosion.*

SOME ***11*** *08:18:09.8,44°.68N×81°.82E,h25*^{km}

ISC 11 08:18:07.5±1.4,**44°.64N**±0°.06×**81°.86E**±0°.08,**h0**^{km}**,n14,** σ**0**^{s}**.93**/23,**6C,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	Jarkent	1.52	259	P	Pg	08 18 37.2	+0.7
	11nm,0.1s						
DJR				S	Sn	08 18 56.8	+0.4
	5.6nm,0.1s						
DJR	Jarkent	1.52	259	*e*P	Pb	08 18 36.7	+0.2
	11nm,0.1s						
DJR				*e*S	Sg	08 18 55.7	-0.4
	11nm,0.2s						
KTMS	Ketmen	1.62	223	P	Pg	08 18 39.1	+0.7
	4.4nm,0.1s						
KTMS				S	Sg	08 18 59.9	+0.5
	20nm,0.4s						
KTMS	Ketmen	1.62	223	*e*P	Pg	08 18 39.1	+0.7
	4.4nm,0.1s						
KTMS				*e*S	Sg	08 18 59.9	+0.5
	20nm,0.4s						
KNOS	Konyrlen	1.94	263	P	Pb	08 18 44.3	+0.5
	18nm,0.2s						
KNOS				S	Sb	08 19 08.9	+0.2
	7.9nm,0.2s						
PDGK	Podgornoye	2.16	233	⇑Pn	Pb	08 18 47.4	0.0
	5.1nm,0.5s						
PDGK				⇑Sn	Sg	08 19 16.8	0.0
	9.5nm,0.5s						
MAKZ	Makanchi	2.17	2	⇑Pn	Pn	08 18 44.2	-0.6
	2.4nm,0.3s						
MAKZ				⇑Sn	Sn	08 19 11.9	-0.5
	5.0nm,0.3s						
MK31	Makanchi Array	2.17	8	⇑Pn	Pn	08 18 44.8	-0.1
	5.1nm,0.4s,baz=185,slow=15,SNR=285						
MK31				⇑Sn	Sn	08 19 12.1	-0.4
	1.9nm,0.2s,baz=192,slow=26,SNR=17						
SHLS	Shalkode	2.28	230	Pg	Pn	08 18 46.3	-0.2
	21nm,0.2s						
SHLS				Lg	Lg	08 19 12.2	
	28nm,0.4s						
SHLS	Shalkode	2.28	230	*e*P	Pn	08 18 46.3	-0.2
	21nm,0.2s						
SHLS				*e*S	Sn	08 19 12.2	-3.2
	28nm,0.4s						
BLB	Baldybastay	2.49	259	Pg	Pg	08 18 54.6	-0.6
	24nm,0.2s						
BLB				Lg	Lg	08 19 27.2	
	16nm,0.2s						
KPKS	Kokpek	2.58	244	Pg	Pb	08 18 55.2	+0.6
	2.3nm,0.2s						
KPKS				Lg	Lg	08 19 27.9	
	10nm,0.3s						
ARXS	Arharly	2.92	263	Pg	Pb	08 19 00.5	0.0
	4.3nm,0.3s						
ARXS				Lg	Lg	08 19 36.5	
	14nm,0.6s						
KTBS	Karatobe	3.84	258	Pg	Pb	08 19 17.7	+1.6
	2.6nm,0.5s						
KTBS				Lg	Lg	08 20 06.1	
	7.1nm,0.5s						

ASRS ***11*** *08:19:17.0±0.8,54°.34N×86°.88E,h0*^{km}*,M3.0,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 11 08:19:19.7±3.1,**54°.37N**×**86°.85E,h0**^{km}**,mbtmp3.1**/2,**ML2.8**/2,**Error ellipse: s-maj=24.6km s-min=16.6km az=61.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.26	252	I	I	08 27 10.0	
	baz=73,slow=324,SNR=2.3						
ZALV	Zalesovo Beam	1.26	252	Pg	Pg	08 19 43.0	-0.9
	2.1nm,0.3s,baz=70,slow=17,SNR=40						
ZALV				Lg	Lg	08 20 00.5	
	2.4nm,0.3s,baz=72,slow=25,SNR=4.2						
KURBB	Kurchatov Arra	6.31	237	Pn	Pn	08 20 54.0	+0.1
	0.2nm,0.3s,baz=55,slow=13,SNR=7.7						
KURBB				Sn	Sn	08 22 06.4	-0.2
	baz=37,slow=9.3						
KURBB				Lg	Lg	08 22 39.2	
	0.1nm,0.3s,baz=48,slow=30,SNR=4.7						
	1.3nm,0.4s						
MKAR	Makanchi Array	8.11	203	Pn	Pn	08 21 20.2	+1.5
	0.1nm,0.3s,baz=24,slow=12,SNR=3.1						
MKAR				Sn	Sn	08 22 51.9	+0.8
	0.1nm,0.3s,baz=20,slow=26,SNR=2.6						
MKAR				Lg	Lg	08 23 38.0	
	baz=20,slow=25						
	0.3nm,0.4s						

WEL 11 08:23:47.2±1.0,**32°S**±20°×**18°0E**±5°0,**h464**^{km}±26^{km},**M3.6**/5,**mB3.9**/5,**MLv4.0**/3,**Mw(mB)2.9**/5,**Error ellipse: s-maj=70.2km s-min=10.1km az=110.6,confirmed, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	5.96	191	P	P	08 25 20.0	-1.4
MXZ				S	S	08 26 36.6	-1.9
HAZ	Te Kaha	6.24	195	P	P	08 25 23.5	-0.8
HAZ				S	S	08 26 43.6	-0.2
PKGZ	Pakihiroa	6.29	192	P	P	08 25 26.5	+1.7
PUZ	Puketiti	6.46	191	P	P	08 25 26.7	+0.1
PUZ				S	S	08 26 47.4	-0.6
RUGZ	Raukumara Rang	6.47	195	P	P	08 25 25.2	-1.6
RUGZ				S	S	08 26 50.0	+1.7
MWZ	Matawai	6.85	195	P	P	08 25 29.8	-0.8
MWZ				S	S	08 26 56.5	+1.0
URZ	Urewera	6.88	198	P	P	08 25 31.4	+0.5
URZ				S	S	08 26 57.4	+1.5
TKGZ	Te Karaka	6.89	193	P	P	08 25 31.8	+0.9
TKGZ				S	S	08 26 58.1	+2.1
RIGZ	Rimuhau	7.17	193	P	P	08 25 34.2	+0.3
RIGZ				S	S	08 27 03.5	+2.1
MUGZ	Murupara	7.18	199	S	S	08 27 00.9	-0.7
SNGZ	Shannon Statio	7.33	195	P	P	08 25 37.1	+1.7
SNGZ				S	S	08 27 06.3	+1.9
BKZ	Black Stump Fm	7.90	199	P	P	08 25 41.9	+0.3
BKZ				S	S	08 27 17.3	+1.6
OTVZ	Oturere	8.15	203	P	P	08 25 46.3	+2.0
SNVZ	South Ngauruho	8.18	203	P	P	08 25 46.1	+1.4
FWVZ	Far West T-bar	8.27	203	P	P	08 25 45.8	0.0
WNVZ	Wahianoa	8.32	203	P	P	08 25 47.1	+0.9
KAHZ	Kahuranaki	8.40	195	P	P	08 25 48.3	+1.4
PNHZ	Pukenui	8.68	199	P	P	08 25 48.2	-1.7
PNHZ				S	S	08 27 30.3	-0.5
MRZ	Mangatainoka R	9.55	200	P	P	08 26 00.0	+0.8
MRZ				S	S	08 27 47.3	-0.6
OGWZ	Otaki Gorge	9.81	201	P	P	08 26 01.7	-0.4
OGWZ				S	S	08 27 54.2	+1.1

ASRS ***11*** *08:24:32.0±0.9,54°.28N×86°.89E,h0*^{km}*,M2.7,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 11 08:24:35.9±3.0,**54°.28N**×**86°.80E,h0**^{km}**,mbtmp2.9**/2,**ML2.7**/2,**Error ellipse: s-maj=25.7km s-min=15.9km az=57.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.21	255	I	I	08 32 35.8	
	baz=76,slow=326,SNR=4.4						
ZALV	Zalesovo Beam	1.21	255	Pg	Pg	08 24 57.4	-1.7
	2.4nm,0.3s,baz=74,slow=18,SNR=18						
ZALV				Lg	Lg	08 25 15.5	
	1.5nm,0.3s,baz=70,slow=27,SNR=5.6						
KURBB	Kurchatov Arra	6.24	237	Pn	Pn	08 26 09.8	+0.7
	0.1nm,0.3s,baz=54,slow=14,SNR=5.6						
KURBB				Lg	Lg	08 27 55.2	
	baz=58,slow=30,SNR=4.1						
	0.8nm,0.5s						
MKAR	Makanchi Array	8.03	203	Pn	Pn	08 26 35.2	+1.5
	0.2nm,0.3s,baz=25,slow=13,SNR=6.2						
MKAR				Lg	Lg	08 28 52.1	
	baz=21,slow=30,SNR=1.8						
	0.2nm,0.3s						

ASRS ***11*** *08:28:29.0±0.9,54°.14N×87°.15E,h0*^{km}*,M2.7,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 11 08:28:30.5±3.2,**54°.16N**×**87°.40E,h0**^{km}**,mbtmp2.8**/2,**ML2.5**/2,**Error ellipse: s-maj=26.0km s-min=19.8km az=43.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.54	263	I	I	08 37 20.0	
	baz=82,slow=323,SNR=4.2						
ZALV	Zalesovo Beam	1.54	263	Pg	Pn	08 28 57.7	-1.5
	3.1nm,0.3s,baz=81,slow=15,SNR=20						
ZALV				Lg	Lg	08 29 20.3	
	1.6nm,0.3s,baz=82,slow=22,SNR=6.4						
KURBB	Kurchatov Arra	6.48	240	Pn	Pn	08 30 07.8	+0.7
	0.1nm,0.3s,baz=54,slow=13,SNR=5.3						
KURBB				Sn	Sn	08 31 20.4	-1.2
	baz=85,slow=3.3,SNR=2.3						
KURBB				Lg	Lg	08 31 56.2	
	baz=54,slow=32,SNR=4.0						
	0.5nm,0.4s						
MKAR	Makanchi Array	8.06	206	Pn	Pn	08 30 30.0	+1.2
	0.1nm,0.3s,baz=23,slow=13,SNR=2.3						
MKAR				Lg	Lg	08 32 47.8	
	baz=17,slow=30,SNR=2.0						
	0.1nm,0.3s						

IDC ***11*** *08:33:41.9±2.7,29°.33N×130°.69E,h51*^{km}*±26*^{km}*,mb3.3/5, mbtmp3.5/9,ML3.1/4,MS3.6/1,Error ellipse: s-maj=41.2km s-min=17.9km az=84.0*

JMA ***11*** *08:33:41.8±0.1,29°.3N±0°.4×130°.6E±0°.7,h36*^{km}*,MV3.4/20, NEAR AMAMI-OSHIMA ISLAND*

ISC 11 08:33:40.5±0.9,**29°.30N**±0°.04×**130°.62E**±0°.07,**h34**^{km}**,n22,** σ**1**^{s}**.38**/25,**mb3.5**/5,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNN	Nakanoshima	0.84	310	P	Pb	08 33 56.4	-0.4
JNN				*e*S	Sb	08 34 07.3	-0.6
JYAK	Yakushimahirau	0.94	354	P	Pb	08 33 58.5	0.0
JYAK				*e*S	Sb	08 34 11.7	+1.1
JMTN	Minamitane	1.12	13	P	Pb	08 34 01.3	-0.2
JZK	Kikaishima	1.13	210	*e*P	Pb	08 34 02.1	+0.5
JKC	Kuchinoerabu	1.22	343	P	Pb	08 34 02.7	-0.3
JTAJ	Takarajima	1.25	264	P	Pb	08 34 03.0	-0.5
JAM	Amami Oshima	1.25	225	P	Pn	08 34 03.3	+1.7
JAM				*e*S	Sb	08 34 19.5	0.0
JTN	Tanegashima 3	1.39	13	P	Pb	08 34 05.1	-0.8
JAMN	Amaminishikomi	1.65	231	P	Pn	08 34 08.6	+1.6
JTSR	Tashiro 2	1.88	8	*e*P	Pb	08 34 12.2	-2.1
JTK	Tokunoshima	2.10	225	*e*P	Pn	08 34 15.4	+2.0
JYRO	Yoronjima	2.96	221	*e*P	Pn	08 34 26.6	+1.4
JOW	Kunigami	3.21	221	P	Pn	08 34 30.0	+1.4
	3.9nm,0.3s,baz=110,slow=25,SNR=18						
JOW				S	Sb	08 35 12.2	-3.5
	41nm,0.5s,baz=273,slow=29,SNR=3.6						
	14nm,0.4s						
JNU	Nakatsue	3.82	3	P	Pn	08 34 39.0	+2.1
	0.9nm,0.3s,baz=160,slow=11,SNR=2.9						
	11nm,0.8s						
KSRS	Korea Array	8.44	345	P	Pn	08 35 41.6	+1.3
	0.3nm,0.3s,baz=169,slow=16,SNR=1.7						

	0.5nm,0.4s						
KLR	Kul'dur	19.92	2	P	P	08 38 07.6	-1.6
	0.2nm,0.3s,baz=180,slow=10,SNR=3.6						
	0.9nm,0.5s						
SONM	Songino Array	26.30	321	LR	LR	08 51 00.4	
	comp=Z,114nm,19.3s,baz=144,slow=40						
MKAR	Makanchi Array	41.17	309	P	P	08 41 21.2	-0.4
	0.3nm,0.4s,baz=91,slow=8.9,SNR=4.5						
	0.3nm,0.4s						
KURBB	Kurchatov Arra	44.18	314	P	P	08 41 45.8	-0.1
	0.6nm,0.4s,baz=98,slow=8.8,SNR=4.3						
	0.6nm,0.4s						
WRA	Warramunga Arr	49.09	175	P	P	08 42 24.8	+0.2
	0.4nm,0.9s,baz=354,slow=7.9,SNR=2.1						
	0.4nm,0.9s						
BVAR	Borovoye Array	49.46	316	P	P	08 42 26.9	-0.4
	0.9nm,0.6s,baz=92,slow=9.2,SNR=3.7						
	0.9nm,0.6s						
ASAR	Alice Springs	52.76	176	P	P	08 42 52.0	-0.3
	0.3nm,0.8s,baz=1.8,slow=6.7,SNR=4.9						
	0.3nm,0.8s						

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*IDC **11** 08:37:00.6±0.9,42°.37N×138°.51E,h241^{km}±9^{km},mb3.4/11, mbtmp4.0/15,Error ellipse: s-maj=12.2km s-min=11.1km az=149.0*

*MOS **11** 08:37:00.7±1.4,42°.36N×138°.47E,h256^{km},mb4.0/8,Error ellipse: s-maj=8.7km s-min=8.4km az=120.6*

*SKHL **11** 08:37:01.5±0.4,42°.40N×138°.70E,h268^{km}±11^{km},mb4.9/8, msha5.3/5*

*JMA **11** 08:37:01.4±0.2,42°.4N±0°.9×13°9E±°,h249^{km}±1^{km}, MV3.4/26,SW OFF HOKKAIDO*

ISC 11 08:37:01.5±0.6,42°.40N±0°.04×138°.62E±0°.04,h253^{km}±5^{km}, n80,σ1^{s}.54/106,mb3.8/16,9C-8D,Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOSM	Okushiri--Mats	0.71	116	eP	Pn	08 37 34.7	-0.8
JOSM				eS	S	08 38 01.3	-0.8
JHST	Hiyamasetana	0.93	88	eP	Pn	08 37 36.7	+0.3
JHST				eS	S	08 38 03.3	-0.6
JSH	Shimam	1.08	76	P	Pn	08 37 37.3	+0.1
JSH				eS	S	08 38 05.4	0.0
JYM2	Yakumo 2	1.33	101	P	Pn	08 37 39.1	+0.3
JYM2				S	S	08 38 08.5	+0.3
JOMM	Oshimamatsumae	1.35	130	P	Pn	08 37 38.8	-0.2
JOMM				eS	S	08 38 07.8	-0.8
JSR	Shiriuchi	1.59	122	P	Pn	08 37 40.9	0.0
JSR				S	S	08 38 11.5	-0.3
JNB	Noboribetsu	1.79	87	P	Pn	08 37 42.2	-0.2
JNB				eS	S	08 38 14.2	-0.3
JOT	Ohata	2.08	118	P	Pn	08 37 44.6	-0.3
JEW	Eniwo	2.13	77	P	Pn	08 37 46.2	+0.8
JEW				S	S	08 38 20.9	+0.9
JTM	Tenmabayashi	2.44	130	P	Pn	08 37 47.9	-0.5
TEY	Ternei	3.02	332	⇑eP	Pn	08 37 53.6	-0.7
TEY				e		08 38 30.3	
TEY				pmax	pmax		
	comp=N,90nm,0.7s						
TEY				pmax	pmax		
	comp=E,50nm,0.7s						
TEY				pmax	pmax		
	comp=Z,130nm,0.7s						
TEY	Ternei	3.02	332	eP	Pn	08 37 53.6	-0.7
TEY				AMB	AMB	08 37 54.2	
	comp=Z,90nm,0.7s						
TEY				eS	S	08 38 33.9	-2.2
TEY				A	A	08 38 34.8	
	comp=Z,40nm,0.6s						
TEY				A	A	08 38 34.8	
	comp=Z,50nm,0.6s						
JNBK	Urakawa-nobuka	3.07	91	P	Pn	08 37 54.6	-0.3
JNBK				S	S	08 38 36.8	-0.3
JSS	Shosan	3.09	49	P	Pn	08 37 56.1	+1.0
JKK2	Kamakawa 2	3.36	63	i P	Pn	08 37 58.7	+0.6
JKK2				S	S	08 38 42.3	-0.7
ASAJ	Asahikawa	3.38	58	P	Pn	08 37 58.8	+0.5
	comp=Z,18nm,0.5s,baz=241,slow=5.4,SNR=26						
ASAJ				S	S	08 38 42.2	-1.0
	comp=Z,38nm,0.7s,baz=352,slow=30,SNR=23						
ERM	Erimo	3.39	95	P	Pn	08 37 58.4	0.0
ERM	Erimo	3.39	95	S	S	08 38 42.1	-1.4
ERM	Erimo	3.39	95	d iP	Pn	08 37 58.4	0.0
ERM				pmax	pmax		
	comp=Z,136nm,0.6s						
JEM	Erimo	3.39	95	P	Pn	08 37 58.3	-0.1
JEM	Erimo	3.39	95	S	S	08 38 42.1	-1.4
JRBN	Rebuntou	3.50	29	P	Pn	08 37 59.7	+0.1
JCH	Churui	3.51	85	i P	Pn	08 37 59.4	-0.4
JCH				S	S	08 38 43.6	-2.4
JYK	Kaneyama	3.72	159	eP	Pn	08 38 02.3	+0.1
JYK				S	S	08 38 50.5	+0.1
JSD	Sado	4.36	184	P	Pn	08 38 09.8	0.0
AKK	Akkeshi	4.63	80	eP	Pn	08 38 11.3	-1.5
AKK				eS	S	08 39 04.5	-5.1
JMM	Marumori	4.82	159	P	Pn	08 38 13.5	-1.8
JMM	Marumori	4.82	159	S	S	08 39 10.9	-3.1
VLA	Vladivostok	5.01	281	c iP	Pn	08 38 16.4	-1.1
RUSJ	Misakicho	5.13	68	P	Pn	08 38 24.8	+5.9
RUSJ				i S	S	08 39 25.6	+4.9
USA0B	Ussuriysk Arra	5.17	293	d iP	Pn	08 38 17.8	-1.5
USRK	Ussuriysk Ar.	5.17	293	P	Pn	08 38 17.9	-1.5
	comp=Z,45nm,0.8s,baz=104,slow=11,SNR=66						
GLVR	Golovnino	5.23	73	eP	Pn	08 38 21.1	+1.0
GLVR				i S	S	08 39 21.2	-1.6
GLVR				pmax	pmax		
	comp=N,50nm,0.2s						
GLVR				pmax	pmax		
	comp=Z,48nm,0.2s						
GLVR				smax	smax		
	comp=N,81nm,0.2s						
GLVR				smax	smax		
	comp=E,280nm,0.4s						
GLVR	Golovnino	5.23	73	eP	Pn	08 38 21.1	+1.0
GLVR				AMB	AMB	08 38 22.9	
	comp=E,50nm,0.2s						
GLVR				i S	S	08 39 21.2	-1.6
GLVR				A	A	08 39 23.0	
	comp=E,80nm,0.3s						
GLVR				A	A	08 39 23.0	
	comp=E,280nm,0.3s						
NMR	Nemuro--Hokkai	5.31	77	eP	Pn	08 38 19.4	-1.7
NMR				i S	S	08 39 18.4	-6.3
NMR	Nemuro--Hokkai	5.31	77	eP	Pn	08 38 19.4	-1.7
YSS	Yuzhno-Sakhali	5.43	31	⇑eP	Pn	08 38 23.1	+0.6
YSS				eS	S	08 39 25.1	-2.1
YSS				pmax	pmax		
	comp=Z,70nm,0.7s						
YSS				pmax	pmax		
	comp=Z,100nm,3.8s						
YSS				smax	smax		
	comp=N,50nm,0.9s						
YSS				smax	smax		
	comp=E,30nm,1.0s						
YSS	Yuzhno-Sakhali	5.43	31	eP	Pn	08 38 23.0	+0.6
YSS				AMB	AMB	08 38 23.7	
	comp=E,80nm,0.4s						
YSS				eS	S	08 39 25.7	-1.5
YSS				A	A	08 39 27.5	
	comp=E,20nm,0.7s						
YSS				A	A	08 39 27.5	
	comp=E,30nm,0.7s						
MSHR	Mys Shultsa	5.52	274	d iP	Pn	08 38 21.5	-2.2
YUK	Yuzh-Kuril'sk	5.54	70	P	Pn	08 38 27.3	+3.4
YUK				i S	S	08 39 30.7	+1.0
YUK				pmax	pmax		
	comp=N,40nm,0.2s						
YUK				pmax	pmax		
	comp=Z,107nm,0.2s						
YUK				pmax	pmax		
	comp=E,14nm,0.1s						
YUK				smax	smax		
	comp=N,232nm,0.4s						
YUK				smax	smax		
	comp=E,148nm,0.4s						
YUK	Yuzh-Kuril'sk	5.54	70	eP	Pn	08 38 23.8	-0.1
YUK				AMB	AMB	08 38 24.8	
	comp=E,160nm,0.7s						
YUK				eS	S	08 39 28.9	-0.8
YUK				A	A	08 39 34.1	
	comp=E,270nm,0.5s						
YUK				A	A	08 39 34.1	
	comp=E,260nm,0.5s						
PSTR	Posyet	5.78	275	⇑iP	Pn	08 38 26.0	-0.9
MAJO	Matsushiro	5.85	183	P	Pn	08 38 27.9	-0.1
MAJO	Matsushiro	5.85	183	⇓iP	Pn	08 38 27.7	-0.3
MAJO				pmax	pmax		
	comp=Z,24nm,0.9s						
MJAR	Matsushiro Arr	5.86	183	P	Pn	08 38 27.6	-0.4
	comp=Z,12nm,0.5s,baz=356,slow=13,SNR=5.8						
SHO	Shikotan	6.18	73	eP	Pn	08 38 31.8	-0.1
SHO				i S	S	08 39 38.4	-5.9
SHO				pmax	pmax		
	comp=Z,125nm,0.4s						
SHO				pmax	pmax		
	comp=N,20nm,0.2s						
SHO				pmax	pmax		
	comp=E,62nm,0.3s						
SHO				smax	smax		
	comp=N,25nm,0.3s						
SHO				smax	smax		
	comp=E,216nm,0.3s						
SHO	Shikotan	6.18	73	eP	Pn	08 38 31.9	0.0
SHO				AMB	AMB	08 38 32.2	
	comp=E,140nm,0.3s						
SHO				eS	S	08 39 39.9	-4.4
SHO				A	A	08 39 41.2	
	comp=E,90nm,0.3s						
SHO				A	A	08 39 41.2	
	comp=E,230nm,0.3s						
JGF	Kuroka	6.86	189	P	Pn	08 38 40.2	-0.3
UGL	Uglegorsk	7.10	19	eP	Pn	08 38 43.8	+0.4
INU	Inuyama	7.15	191	P	Pn	08 38 43.9	-0.2
KUR	Kuril'sk	7.26	64	eP	Pn	08 38 45.3	-0.1
KUR				AMB	AMB	08 38 47.9	
	comp=E,70nm,0.8s						
JMN	Monobe	9.42	205	P	Pn	08 39 13.9	+1.0
KSRS	Korea Array	9.58	243	P	Pn	08 39 14.1	-0.7
	comp=E,2.2nm,0.8s,baz=61,slow=13,SNR=6.9						
ZEA	Zeya	13.64	330	⇑eP	P	08 40 06.0	0.0
ZEA	Zeya	13.64	330	eP	P	08 40 05.9	0.0
SEY	Seymchan	22.11	17	P	P	08 41 35.3	-0.5
	comp=E,1.8nm,0.6s,baz=342,slow=20,SNR=3.6						
	comp=E,1.8nm,0.6s						
SEY	Seymchan	22.11	17	⇓eP	P	08 41 37.3	+1.4
SEY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ULN	Ulaanbaatar	22.83	295	⇑eP	P	08 41 42.5	-0.4
ULN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ULN	Ulaanbaatar	22.83	295	eP	P	08 41 42.5	-0.4
BILL	Bilibino	29.63	21	⇑iP	P	08 42 43.1	-0.1
BILL				pmax	pmax		
	comp=Z,14nm,3.6s						
BILL	Bilibino	29.63	21	eP	P	08 42 43.1	-0.1
ZALV	Zalesovo Beam	36.83	307	P	P	08 43 44.8	-0.6
	comp=Z,4.6nm,0.6s,baz=84,slow=7.2,SNR=14						
	comp=Z,4.6nm,0.6s						
MK31	Makanchi Array	39.62	296	c iP	P	08 44 08.1	-0.6
MKAR	Makanchi Array	39.62	296	P	P	08 44 08.1	-0.7
	comp=Z,2.7nm,0.6s,baz=84,slow=9.3,SNR=21						
	comp=Z,2.7nm,0.6s						
KURK	Kurchatov	41.06	303	d iP	P	08 44 19.6	-0.7
KURK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KURK	Kurchatov	41.06	303	eP	P	08 44 19.6	-0.7
KURBB	Kurchatov Arra	41.14	303	P	P	08 44 20.2	-0.8
	comp=Z,5.9nm,0.6s,baz=80,slow=8.8,SNR=25						
	comp=Z,5.9nm,0.6s						
BVAR	Borovoye Array	45.47	308	P	P	08 44 55.4	0.0
	comp=Z,2.0nm,0.5s,baz=75,slow=8.6,SNR=9.1						
	comp=Z,2.0nm,0.5s						
BRVK	Borovoye	45.52	308	⇓eP	P	08 44 55.9	+0.1
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRVK	Borovoye	45.52	308	eP	P	08 44 55.9	+0.1
AAK	Ala-Archa	46.22	293	⇓eP	P	08 45 01.5	-0.1
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AAK	Ala-Archa	46.22	293	eP	P	08 45 01.5	-0.1
ILAR	Eielson Array	46.23	35	P	P	08 45 02.5	+1.3
	comp=Z,0.6nm,0.5s,baz=265,slow=6.2,SNR=11						
	comp=Z,0.6nm,0.5s						
ARTI	Arti	51.09	315	c iP	P	08 45 37.7	-0.4
ARTI						08 46 46.6	
ARTI						08 47 33.5	
ARTI				S	S	08 52 36.1	+0.6
ARTI				SS	SS	08 56 12.7	-0.8
ARTI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WRA	Warramunga Arr	62.15	185	P	P	08 46 55.5	-0.6
	comp=Z,1.5nm,0.5s,baz=1.0,slow=7.1,SNR=45						
	comp=Z,1.5nm,0.5s						
FINES	FINESS Array B	63.09	330	P	P	08 47 01.9	+0.2
	comp=Z,1.2nm,0.8s,baz=44,slow=6.5,SNR=1.7						
	comp=Z,1.2nm,0.8s						
ASAR	Alice Springs	65.87	185	P	P	08 47 20.1	-0.2
	comp=Z,0.3nm,0.6s,baz=0.1,slow=5.7,SNR=5.9						
	comp=Z,0.3nm,0.6s						
PDAR	Pinedale Array	75.42	45	P	P	08 48 19.0	+1.2
	comp=Z,0.4nm,0.6s,baz=178,slow=2.6,SNR=5.2						
	comp=Z,0.4nm,0.6s						
TXAR	Lajitas Array	88.47	51	P	P	08 49 27.3	+1.8
	comp=Z,0.2nm,0.6s,baz=294,slow=4.7,SNR=2.3						
	comp=Z,0.2nm,0.6s						
SNAA	Sanae	145.14	200	PKPbc	PKPab	08 56 07.5	-0.7
	comp=Z,0.4nm,0.4s,baz=336,slow=1.8,SNR=10						

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*ASRS **11** 08:37:11.0±1.3,53°.65N×87°.96E,h0^{km},M2.7,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 11 08:37:16.1±3.2,53°.61N×87°.84E,h0^{km},mbtmp2.7/2, ML2.1/2,Error ellipse: s-maj=29.9km s-min=17.2km az=50.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.82	282	I	I	08 48 50.0	
	0.1nm,1.0s,baz=98,slow=322,SNR=54						
ZALV	Zalesovo Beam	1.82	282	Pg	Pn	08 37 48.9	+0.2
	0.8nm,0.3s,baz=96,slow=11,SNR=6.2						
ZALV				Lg	Lg	08 38 14.3	
	2.2nm,0.3s,baz=103,slow=26,SNR=14						
KURBB	Kurchatov Arra	6.46	246	Pn	Pn	08 38 52.5	+0.1
	0.1nm,0.3s,baz=62,slow=14,SNR=2.8						
KURBB				Lg	Lg	08 40 41.7	
	baz=57,slow=32,SNR=5.4						
	0.3nm,0.3s						
MKAR	Makanchi Array	7.69	210	Pn	Pn	08 39 10.7	+1.4
	baz=24,slow=12,SNR=5.9						
	0.1nm,0.3s						

ASRS 11 08:50:23.0±1.3,54°.10N×90°.20E,h0^{km},M2.3,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.,Southwestern Siberia

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*ASRS **11** 08:50:26.0±1.0,54°.13N×87°.21E,h0^{km},M2.7,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 11 08:50:30.2±3.1,54°.12N×87°.26E,h0^{km},mbtmp2.8/2, ML2.4/2,Error ellipse: s-maj=26.8km s-min=18.5km az=57.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.45	264	I	I	08 59 34.6	
	baz=82,slow=324,SNR=6.2						
ZALV	Zalesovo Beam	1.45	264	Pg	Pn	08 50 55.6	-2.1
	4.0nm,0.3s,baz=83,slow=17,SNR=28						
ZALV				Lg	Lg	08 51 16.6	
	5.5nm,0.3s,baz=85,slow=29,SNR=15						
KURBB	Kurchatov Arra	6.39	240	Pn	Pn	08 52 06.4	+0.8
	0.1nm,0.3s,baz=56,slow=14,SNR=4.1						
KURBB				Lg	Lg	08 53 52.9	
	baz=57,slow=31,SNR=1.7						
	0.4nm,0.3s						
MKAR	Makanchi Array	7.99	205	Pn	Pn	08 52 29.1	+1.6
	0.1nm,0.3s,baz=27,slow=15,SNR=2.2						
	0.2nm,0.3s						

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*HEL **11** 08:50:40.3±0.3,59°.76N×27°.45E,h0^{km},ML1.9,Explosion*

*EST **11** 08:50:40.9±0.1,59°.81N×27°.43E,h0^{km},ML1.9(HEL), Explosion*

*IDC **11** 08:50:42.9±2.3,59°.93N×27°.30E,h0^{km},mbtmp3.1/3, ML2.4/3,Error ellipse: s-maj=20.3km s-min=12.4km az=115.0*

ISC 11 08:50:39.1±0.8,59°.83N±0°.02×27°.43E±0°.03,h0^{km},n33, σ1^{s}.21/50,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EE04	Vaivara Sinima	0.51	153	eS	Sg	08 50 56.0	+0.7
VJF	Virojoki	0.72	5	eP	Pb	08 50 54.3	-0.1
VJF				eS	Sb	08 51 04.0	-0.8
PVF	Pernaja	1.06	313	eP	Pb	08 51 00.2	-0.1
PVF				eS	Sb	08 51 14.2	-0.6
EE03	Tooma soojaam,	1.13	212	eP	Pb	08 51 00.9	-0.5
EE03				eS	Sg	08 51 14.9	-0.3
HEL1	Helsinki	1.33	286	eS	Sg	08 51 21.1	-0.5
VSU	Vasula	1.42	195	eP	Pn	08 51 05.3	-0.7
NUR	Nurmijarvi	1.55	297	eP	Pg	08 51 08.5	-0.2
NUR				eS	Sg	08 51 28.9	+0.1
NUR				MSG		08 51 29.3	
	comp=Z,5.1nm,0.1s						
MEF	Metsahovi	1.57	286	eP	Pb	08 51 08.8	-0.2
MEF	Metsahovi	1.57	286	ePG	Pg	08 51 09.1	0.0
MEF				eS	Sn	08 51 29.1	-0.1
MEF				MSG		08 51 35.0	
	comp=Z,7.4nm,0.2s						
EE08	Sarghaua, Vand	1.63	225	eP	Pg	08 51 09.9	-0.3
EE08				eS	Sn	08 51 30.1	-0.4
FIA0	FINESS Array S	1.75	338	eP	Pb	08 51 11.7	-0.3
FIA0				eSN	Sg	08 51 36.0	+0.7
FIA0				MSG		08 51 38.6	
	comp=Z,8.3nm,0.2s						
FINES	FINESS Array B	1.75	338	Pg	Pb	08 51 11.8	-0.3
	comp=Z,0.8nm,0.3s,baz=160,slow=17,SNR=53						
FINES				Lg	Lg	08 51 34.5	
	comp=Z,0.6nm,0.3s,baz=159,slow=30,SNR=4.4						
FIA1	FINESS Array S	1.75	338	eSN	Sg	08 51 36.1	+0.7
FIA1				MSG		08 51 38.4	
	comp=Z,8.8nm,0.2s						
RUF	Ruokolahti	1.77	24	eP	Pb	08 51 11.9	-0.4
RUF				eS	Sg	08 51 35.8	0.0
RUF				MSG		08 51 38.9	
	comp=Z,12nm,0.2s						
EE07	Piusa Caves, O	1.99	179	ePG	Pg	08 51 16.3	-0.9
EE07				eSG	Sg	08 51 42.8	-0.2
TVF	Tvarminne	2.11	272	ePB	Pb	08 51 18.0	-0.1
TVF				eSB	Sb	08 51 44.7	-0.1
TVF				MSG		08 51 46.9	
	comp=Z,6.6nm,0.2s						
MTSE	Matsula	2.17	241	eP	Pg	08 51 21.2	+0.7
MTSE	Matsula	2.17	241	ePB	Pb	08 51 18.7	-0.4
MTSE				eSG	Sb	08 51 47.3	+0.9
KAF	Kangasniemi	2.36	347	eP	Pb	08 51 21.4	-1.0
KAF				eSG	Sg	08 51 53.7	-1.1
EE06	Soera, Palade,	2.50	252	ePB	Pb	08 51 24.7	0.0
EE06				eSB	Sb	08 51 55.9	-0.1
KEF	Keuruu	2.66	333	eP	Pb	08 51 26.2	-1.3
KEF	Keuruu	2.66	333	ePB	Pb	08 51 26.9	-0.6
KEF				eSG	Sg	08 52 02.5	-1.9
SUF	Sumiainen	2.97	349	ePB	Pb	08 51 31.7	-1.1
SUF				eSG	Sg	08 52 12.0	-2.3
RAF	Rauma	3.06	296	eP	Pn	08 51 30.6	+2.0
RAF	Rauma	3.06	296	eP	Pn	08 51 30.9	+2.3
RAF				eSB	Sb	08 52 12.9	+0.9
KPF	Kankaanpaa	3.31	310	eSB	Sb	08 52 20.3	+1.0
SLIT	Slitere, Latvi	3.47	233	eP	Pb	08 51 39.3	-2.0
NIF	Nilsia	3.58	3	eSB	Sb	08 52 29.6	+2.5
AAL	Aland	3.75	279	ePG	Pb	08 51 47.5	+1.4
VAF	Ylistaro	3.95	327	eP	Pn	08 51 44.6	+3.7
HFS	Hagfors	6.90	278	Pn	Pn	08 52 21.2	-0.1
	comp=Z,0.1nm,0.3s,baz=86,slow=26,SNR=2.3						
HFS				Sn	Sn	08 53 37.5	-3.0
	comp=Z,0.1nm,0.3s,baz=88,slow=22,SNR=1.7						
	comp=Z,0.6nm,0.5s						
NOA	NORSAR Array B	8.11	286	Pn	Pn	08 52 37.2	-0.8
	baz=19,slow=17,SNR=3.9						
	comp=Z,0.4nm,0.6s						
ARCES	ARCESS Array B	9.78	356	Pn	Pn	08 52 60.0	-0.8
	comp=Z,0.1nm,0.3s,baz=169,slow=13,SNR=8.2						
	comp=Z,2.0nm,0.8s						

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*ASRS **11** 08:52:49.0±1.3,54°.28N×86°.83E,h0^{km},M2.9,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 11 08:52:49.1±3.1,54°.33N×87°.15E,h0^{km},mbtmp2.8/2, ML2.4/2,Error ellipse: s-maj=27.6km s-min=18.7km az=53.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.42	255	I	I	09 00 49.5	
	baz=74,slow=320,SNR=4.4						
ZALV	Zalesovo Beam	1.42	255	Pg	Pn	08 53 13.6	-2.6
	1.0nm,0.3s,baz=69,slow=16,SNR=8.5						
ZALV				Lg	Lg	08 53 34.5	
	2.4nm,0.3s,baz=77,slow=31,SNR=5.3						
ZALV				Rg	Rg	08 53 41.5	
	5.8nm,0.3s,baz=81,slow=27,SNR=5.3						
KURBB	Kurchatov Arra	6.44	238	Pn	Pn	08 54 26.1	+1.0
	baz=53,slow=13,SNR=2.5						
KURBB				Lg	Lg	08 56 15.0	
	baz=57,slow=32,SNR=1.7						
	0.5nm,0.5s						
MKAR	Makanchi Array	8.15	204	Pn	Pn	08 54 50.1	+1.5
	0.1nm,0.3s,baz=24,slow=14,SNR=5.8						
	0.2nm,0.3s						

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*ASRS **11** 08:57:44.0±1.1,53°.61N×87°.94E,h0^{km},M2.9,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 11 08:57:50.0±3.0,53°.55N×87°.78E,h0^{km},mbtmp2.9/2, ML2.8/1,Error ellipse: s-maj=24.1km s-min=15.1km az=66.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.81	284	I	I	09 09 30.0	
	0.1nm,1.0s,baz=99,slow=324,SNR=3.5						
ZALV	Zalesovo Beam	1.81	284	Pg	Pn	08 58 21.9	-0.4
	1.9nm,0.3s,baz=102,slow=14,SNR=11						
ZALV				Lg	Lg	08 58 47.4	
	6.3nm,0.3s,baz=104,slow=31,SNR=21						
KURBB	Kurchatov Arra	6.41	247	Pn	Pn	08 59 26.8	+1.3
	0.6nm,0.3s,baz=61,slow=14,SNR=7.7						
KURBB				Sn	Sn	09 00 38.1	-1.2
	baz=73,slow=14,SNR=1.4						
KURBB				Lg	Lg	09 01 13.6	
	0.1nm,0.3s,baz=59,slow=34,SNR=4.5						
MKAR	Makanchi Array	7.62	210	Pn	Pn	08 59 42.8	+0.6
	0.1nm,0.3s,baz=27,slow=12,SNR=2.4						
MKAR				Sn	Sn	09 01 09.3	+0.1
	0.1nm,0.3s,baz=29,slow=16,SNR=2.2						
MKAR				Lg	Lg	09 01 50.9	
	0.1nm,0.3s,baz=25,slow=31,SNR=5.3						
	0.2nm,0.4s						

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*IDC **11** 09:02:12.0±1.3,28°.14N×57°.39E,h0^{km},mb3.7/9, mbtmp3.7/9,Error ellipse: s-maj=28.8km s-min=26.2km az=148.0*

*TEH **11** 09:02:13.8,28°.33N×57°.46E,h9^{km}±27^{km}*

*OMAN **11** 09:02:18.8±1.1,27°.98N×57°.65E,h10^{km},ml3.4/14,Error ellipse: s-maj=9.5km s-min=6.7km az=158.0*

ISC 11 09:02:15.0±0.7,28°.28N±0°.04×57°.52E±0°.05,h10^{km},n45, σ1^{s}.27/55,mb3.7/8,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHNJ	Kahnooj	0.36	154	Pg	Pg	09 02 23.9	+1.6
KHNJ				Sg	Sb	09 02 30.7	+1.3
KBAM	BAM	1.18	43	Pg	Pb	09 02 37.5	-0.1
IBND	Bandar-abas	1.20	227	Pg	Pb	09 02 37.3	-0.5
BNDS	Bandar-Abbas	1.48	234	Pg	Pn	09 02 42.3	+0.4
CHMN	Cheshme madani	1.58	1	Pg	Pn	09 02 43.4	0.0
KRBR	Kerman	1.83	339	Pg	Pn	09 02 47.1	+0.3
KHGB	Koh Gabri	2.28	337	Pn	Pn	09 02 53.7	+0.7
SHME	Shamm	2.54	209	P	Pn	09 02 56.8	+0.5
	SNR=16						
SHME				S	Sn	09 03 26.9	-0.3
MASF	Masafi	3.14	203	P	Pn	09 03 06.4	+1.8
MASF				S	Sn	09 03 41.6	-0.6
ZHSF	Zahedan	3.15	64	Pn	Pn	09 03 06.4	+1.6
MDH	Madha	3.16	201	P	Pn	09 03 04.0	-0.8

UOSS	Minazif	3.52	200	Pn	Pn	09 03 09.9	+0.1
UOSS	Minazif	3.52	200	P	Pn	09 03 09.5	-0.3
NAZ	Nazwa, Dubai	3.67	207	P	Pn	09 03 13.7	+1.8
NAZ				S	Sn	09 03 56.6	+1.3
IBAF	Bafgh	3.71	333	Pn	Pn	09 03 13.8	+1.1
ASHO	Ashiyiah	3.81	200	P	Pn	09 03 15.7	+1.8
	SNR=9.0						
ASHO				S	Sn	09 04 00.1	+1.3
BSRN	Basiran	3.93	20	Pn	Pn	09 03 17.4	+1.8
IMEH	Mehriz	4.00	322	Pn	Pn	09 03 17.7	+1.0
ASUD	Al Ashush, Dub	4.13	209	P	Pn	09 03 18.3	+0.1
ASUD				S	Sn	09 04 06.6	0.0
SOHO	SOHO	4.22	192	P	Pn	09 03 17.9	-1.5
SOHO				S	Sn	09 04 07.2	-1.5
IKOO	Kooshah	4.33	17	Pn	Pn	09 03 22.3	+1.1
AJN	Ajban	4.34	212	P	Pn	09 03 21.8	+0.7
AJN				S	Sn	09 04 10.4	-1.4
NGCH	Negor - Chabah	4.34	131	P	Pn	09 03 22.3	+1.2
ALNE	Al Ain	4.49	201	P	Pn	09 03 24.2	+1.0
HOQ	Hoqain	4.68	182	P	Pn	09 03 24.8	-1.0
BIDO	Bidbid	4.76	173	P	Pn	09 03 26.1	-0.9
BIDO				S	Sn	09 04 19.9	-2.4
ARQ	Araqi	5.00	191	P	Pn	09 03 31.7	+1.5
	SNR=34						
SMDO	Samad	5.21	175	P	Pn	09 03 33.2	-0.1
SMDO				S	Sn	09 04 32.1	-1.5
BSY	Bisya	5.51	183	P	Pn	09 03 38.7	+1.4
DSBU	Dashti - Bushe	5.52	272	Pn	Pn	09 03 37.8	+0.4
KLNJ	Kolanjah	5.84	299	Pn	Pn	09 03 43.2	+1.2
ANAR	Anarak	5.89	327	Pn	Pn	09 03 43.7	+1.2
JMDO	Jabal Madar	5.90	175	P	Pn	09 03 43.3	+0.7
JLN	Jalan Bani Buh	6.33	164	P	Pn	09 03 48.0	-0.5
	SNR=16						
JLN				S	Sn	09 04 56.3	-4.6
MHTO	MHTO	7.27	177	P	Pn	09 04 02.5	+1.2
WHFO	Wadi Hawf	10.87	199	P	Pn	09 04 51.0	+0.2
	SNR=6.2						
AKTO	Aktyubinsk	22.14	1	P	P	09 07 12.1	+1.4
	1.9nm,0.4s,baz=157,slow=7.5,SNR=5.9						
	1.9nm,0.4s						
BRTR	Keskin Array B	22.79	306	P	P	09 07 16.8	-1.2
	1.1nm,0.8s,baz=156,slow=9.2,SNR=5.6						
	1.1nm,0.8s						
BVAR	Borovoye Array	26.50	18	P	P	09 07 52.0	-0.5
	1.4nm,0.6s,baz=197,slow=4.6,SNR=5.3						
	1.4nm,0.6s						
MKAR	Makanchi Array	26.79	40	P	P	09 07 54.9	-0.4
	0.3nm,0.7s,baz=219,slow=10,SNR=2.7						
	0.3nm,0.7s						
KURBB	Kurchatov Arra	27.41	30	P	P	09 08 00.7	+0.1
	0.7nm,0.7s,baz=224,slow=8.8,SNR=5.5						
	0.7nm,0.7s						
ZALV	Zalesovo Beam	32.50	30	P	P	09 08 44.7	-1.0
	1.3nm,0.4s,baz=239,slow=8.6,SNR=4.9						
	1.3nm,0.4s						
TORD	Torodi Ar. Bea	53.91	266	P	P	09 11 35.7	-3.4
	0.3nm,0.4s,baz=73,slow=7.2,SNR=2.3						
	0.3nm,0.4s						
WRA	Warramunga Arr	88.31	114	P	P	09 15 06.4	-0.9
	0.4nm,0.9s,baz=318,slow=3.7,SNR=5.7						
	0.4nm,0.9s						
ASAR	Alice Springs	89.87	117	P	P	09 15 14.2	-0.4
	0.2nm,0.5s,baz=316,slow=5.0,SNR=1.5						
	0.2nm,0.5s						

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*ASRS **11** 09:07:30.0±1.4, 53.°67N×86.°79E, h0km, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 11 09:07:29.6±2.8**, 53.°70N×86.°92E, h0km, mbtmp2.6**/2**, ML2.5**/1**, Error ellipse: s-maj=24.7km s-min=14.7km az=70.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.27	282	I	I	09 15 20.0	
	baz=101,slow=318,SNR=1.3						
ZALV	Zalesovo Beam	1.27	282	Pg	Pg	09 07 52.5	-1.4
	0.7nm,0.3s,baz=103,slow=12,SNR=13						
ZALV				Lg	Lg	09 08 11.2	
	0.7nm,0.3s,baz=97,slow=23,SNR=3.6						
KURBB	Kurchatov Arra	6.01	243	Pn	Pn	09 09 00.9	+1.3
	0.4nm,0.6s,baz=56,slow=13,SNR=1.9						
KURBB				Sn	Sn	09 10 08.3	-0.8
	0.1nm,0.3s,baz=348,slow=11,SNR=3.3						
MKAR	Makanchi Array	7.52	205	Pn	Pn	09 09 22.1	+1.6
	0.1nm,0.3s,baz=23,slow=12,SNR=5.5						
MKAR				Sn	Sn	09 10 45.1	-1.2
	0.1nm,0.3s,baz=24,slow=22,SNR=1.6						
	0.1nm,0.2s						

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*AFAD **11** 09:13:34.0, 35.°92N×31.°28E, h43km, ML3.2*
*ISK **11** 09:13:35.6, 36.°04N×31.°03E, h19km, ML3.1/61*
*NIC **11** 09:13:39.0, 36.°33N×31.°72E, h15km±32km, Ml2.8/6*
*HLW **11** 09:13:47.1, 35.°44N×30.°60E, h31km±31km, Md3.8, Ml3.2*

ISC 11 09:13:38.1±1.2**, 36.°05N**±0.°04×**31.°10E**±0.°03**, h32km**±13km**, n87, σ1§20**/107**, 3C, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKUM	Antalya-Kumluc	0.67	294	P	Pn	09 13 51.4	+0.1
AKUM				S	Sn	09 14 03.8	+3.1
AKUM				i IAML		09 14 07.0	
	comp=N,996nm,0.3s						
AKUM				i IAML		09 14 09.0	
	comp=E,791nm,0.3s						
KEMT	Kemer-ANTALYA	0.70	322	Pg	Pn	09 13 50.1	-1.7
KEMT				Sg	Sb	09 13 59.4	-2.0
MNVG	Manavgat-Antal	0.79	19	Pg	Pn	09 13 52.3	-0.7
MNVG				Sg	Sb	09 14 03.4	-0.3
ANTB	Antalya	0.92	337	Pg	Pn	09 13 53.6	-1.2
ANTB				Sg	Sn	09 14 07.0	0.0
DEMR	Demre-Antalya	0.98	281	Pg	Pn	09 13 53.9	-1.7
GAZI	Gazipasa	1.01	79	Pg	Pn	09 13 55.2	-0.8
KORT	Korkueli	1.12	328	Pn	Pn	09 13 56.6	-1.2
KORT	Korkueli	1.12	328	P	Pn	09 13 58.2	+0.4
KORT				S	Sb	09 14 16.4	+2.9
KORT				i IAML		09 14 20.0	
	comp=N,292nm,0.5s						
KORT				i IAML		09 14 20.0	
	comp=E,410nm,0.5s						
ELL	Elmali	1.19	306	Pn	Pn	09 13 56.8	-1.8
AKAS	Kas	1.22	279	Pn	Pn	09 13 57.7	-1.4
AKAS	Kas	1.22	279	P	Pn	09 13 58.5	-0.5
AKAS				S	Sb	09 14 18.2	+2.1
AKAS				i IAML		09 14 24.0	
	comp=E,268nm,0.9s						
AKAS				i IAML		09 14 27.0	
	comp=N,472nm,0.4s						
BUCA	Burdur, Bucak-	1.35	342	P	Pn	09 13 59.4	-1.4
BUCA				S	Sb	09 14 20.6	+0.9
AKMS	Akamas	1.44	135	P	Pn	09 14 02.1	+0.1
AKMS				S	Sb	09 14 23.7	+1.3
AKMS				AML	AML	09 14 32.7	
	0.8nm,0.3s						
AKMS				AML	AML	09 14 33.0	
	1.0nm,0.3s						
HDMB	Hadim	1.45	50	Pn	Pn	09 14 02.1	-0.2
KNIK	Mula-Seydike	1.46	303	P	Pn	09 14 03.2	+0.9
KNIK				S	Sb	09 14 22.4	-0.7
BCK	Bucak	1.47	344	Pn	Pn	09 14 01.7	-0.7
SEYD	Seydisehir-KON	1.48	24	Pn	Pn	09 14 02.2	-0.4
ALFC	Alefka	1.52	126⇑	iP	Pn	09 14 02.5	-0.5
ALFC				S	Sn	09 14 21.6	0.0
ALFC				AML	AML	09 14 33.6	
	0.7nm,0.3s						
ALFC				AML	AML	09 14 33.9	
	0.7nm,0.3s						
BOZY	Bozyazi-Mersin	1.52	87	Pn	Pn	09 14 02.8	-0.3
TEKE	Tekeli-Mersin	1.64	86	Pn	Pn	09 14 04.8	+0.1
AKDN	Akdeniz- Kıbrı	1.70	116	Pn	Pn	09 14 05.8	+0.3
CAME	Cameli-Denizli	1.70	302	Pn	Pn	09 14 04.4	-1.3
GOLH	Golhisar	1.71	314	P	Pn	09 14 06.8	+1.0
GOLH				S	Sb	09 14 34.0	+3.9
FETY	Fethiye	1.73	290	Pn	Pn	09 14 04.8	-1.1
FETY	Fethiye	1.73	290	P	Pn	09 14 06.5	+0.6
FETY				S	Sn	09 14 25.5	-1.4
BERE	Bereket-Mersin	1.75	80	Pn	Pn	09 14 06.6	+0.3
NATA	Nata	1.75	136	P	Pb	09 14 08.0	-1.6
CAEL	Denizli, Camel	1.79	307	P	Pn	09 14 07.2	+0.4
CAEL				S	Sb	09 14 36.9	+4.6
CAEL				i IAML		09 14 44.0	
	comp=N,177nm,1.0s						
CAEL				i IAML		09 14 47.0	
	comp=E,169nm,0.8s						
TROD	Troodos	1.81	127	P	Pn	09 14 07.1	-0.2
TROD				S	Sn	09 14 30.0	+0.7
TROD				AML	AML	09 14 46.0	
	0.3nm,0.3s						
TROD				AML	AML	09 14 48.8	
	0.2nm,0.5s						
ISP	Isparta	1.83	346	Pn	Pn	09 14 07.3	-0.1
BRDR	BURDUR-Merkez	1.84	334	P	Pn	09 14 08.0	+0.4
BRDR				S	Sb	09 14 33.2	-0.6
YORU	Yoruktepe-Mers	1.87	86	Pn	Pn	09 14 08.5	+0.5
SABU	Mula-Dalaman	1.88	295	P	Pn	09 14 08.0	-0.1
SABU				S	Sn	09 14 29.4	-1.3
XYLS	Xyliatos	1.90	122⇑	iP	Pn	09 14 07.7	-0.7
XYLS				S	Sn	09 14 29.6	-1.6
XYLS				AML	AML	09 14 39.6	
	0.5nm,0.3s						
XYLS				AML	AML	09 14 41.9	
	0.3nm,0.3s						
OREN	Orenkoy-Mersin	1.92	85	Pn	Pn	09 14 09.0	+0.5
TEVE	Tevekalti-Mers	1.94	78	Pn	Pn	09 14 09.5	+0.6
AKK1	Akkuyu-Mersin	1.98	87	Pn	Pn	09 14 09.9	+0.5
TEPK	Tepekoy-MERSIN	1.99	84	Pn	Pn	09 14 10.1	+0.5
AKKU	Akkuyu-Mersin	1.99	86	Pn	Pn	09 14 10.2	+0.7
APMY	Acipayam-Deniz	2.02	315	Pn	Pn	09 14 09.2	-0.9
BASM	Basmaki-Afyon	2.05	336	Pn	Pn	09 14 09.9	-0.5
YESI	Yesilovacik-Me	2.07	85	Pn	Pn	09 14 11.1	+0.5
KRMN	Karaman	2.08	57	Pn	Pn	09 14 11.2	+0.4
TISA	Tisan-Mersin	2.10	86	Pn	Pn	09 14 11.5	+0.5
IKL	Isikli	2.10	84	Pn	Pn	09 14 11.5	+0.4
DALY	Dalyan (Mula)	2.11	292	Pn	Pn	09 14 10.3	-0.9
CSS	Mathiatis	2.12	120	Pn	Pn	09 14 10.7	-0.7
CSS	Mathiatis	2.12	120⇑	iP	Pn	09 14 10.6	-0.7
CSS				S	Sn	09 14 35.5	-1.2
CSS				AML	AML	09 14 50.0	
	0.1nm,0.4s						
CSS				AML	AML	09 14 53.1	
	0.2nm,0.6s						
LFK	Lefkose	2.13	110	Pn	Pn	09 14 11.7	+0.2
KONT	Konya--Tatoy	2.15	28	Pn	Pn	09 14 11.8	+0.1
KEBE	Keben-Mersin	2.15	79	Pn	Pn	09 14 12.7	+0.9
ASGA	Asgata	2.16	125	P	Pn	09 14 12.8	+0.9
AKIN	Akıncılar- Kıb	2.19	117	Pn	Pn	09 14 12.7	+0.4
TAVA	DENIZLI_Tavas	2.25	310	P	Pn	09 14 13.3	+0.1
TAVA				S	Sb	09 14 48.6	+2.9
SILI	Silifke-Mersin	2.31	81	Pn	Pn	09 14 14.5	+0.6
MVOU	Mavrovouni	2.31	116	P	Pn	09 14 13.0	-1.0
MVOU				S	Sn	09 14 39.0	-2.3
MVOU				AML	AML	09 14 51.7	
	0.2nm,0.7s						
MVOU				AML	AML	09 14 55.4	
	0.2nm,0.3s						
SLFK	Silifke-Mersin	2.33	81	Pn	Pn	09 14 14.9	+0.7
LADK	Ladik-KONYA	2.38	25	Pn	Pn	09 14 15.1	+0.2
ARG	Arkhangelos	2.41	275	Pn	Pn	09 14 14.4	-0.9
TURN	Turunc	2.41	288	Pn	Pn	09 14 14.5	-0.8
SHUT	Suhut-Afyon	2.54	350	Pn	Pn	09 14 17.1	-0.1
EREN	Erenkoy	2.55	101	Pn	Pn	09 14 18.2	+1.0
YESY	Yesilyurt	2.74	50	Pn	Pn	09 14 20.7	+0.8
DATC	Datca-Mugla	2.86	285	Pn	Pn	09 14 20.7	-0.8
MERS	Mersin	2.88	72	Pn	Pn	09 14 22.7	+0.9
SULT	Sultanhani-AKS	2.89	41	Pn	Pn	09 14 22.4	+0.4
CHBY	Cihanbeyli	2.91	29	Pn	Pn	09 14 22.4	+0.2
DAT	Datca	2.92	285	Pn	Pn	09 14 21.7	-0.7
NAZL	Nazilli-Aydin	2.95	311	Pn	Pn	09 14 22.3	-0.4
KULA	Kula-Manisa	3.13	322	Pn	Pn	09 14 25.3	-0.1
AYDB	Zeytinkoy-Aydi	3.19	307	Pn	Pn	09 14 25.8	-0.3
ODEM	Odemis-Izmir	3.28	314	Pn	Pn	09 14 26.2	-1.1
KULU	Kulu	3.35	26	Pn	Pn	09 14 28.0	-0.3
KARA	Karaisali	3.41	68	Pn	Pn	09 14 30.4	+1.4
CMRD	Camardi-Nigde	3.52	62	Pn	Pn	09 14 31.4	+0.8
GORD	Gordes-Manisa	3.68	322	Pn	Pn	09 14 33.0	+0.2
CEYT	Ceyhan	3.87	74	Pn	Pn	09 14 36.7	+1.4
KOZT	Kozan	4.06	68	Pn	Pn	09 14 39.7	+1.7
TAHT	Tahtakopru-Hat	4.13	84	Pn	Pn	09 14 40.5	+1.6
KMRS	Kahramanmaras	4.88	71	Pn	Pn	09 14 51.2	+1.9
DB3	El Dabaa	5.43	204	P	Pn	09 14 56.7	-0.1
HHAG	Hagoal	6.14	172	P	Pn	09 15 08.4	+1.8
HNAT	Natroun	6.41	184	P	Pn	09 15 11.3	+1.0
SLUM	Salum	6.68	229	P	Pn	09 15 13.7	-0.3
RYAN	Fayoum	6.98	186	P	Pn	09 15 18.5	+0.4
SWA2		8.28	217	P	Pn	09 15 35.4	-0.6
HFRF	Wahat Farafira	9.18	196	P	Pn	09 15 48.0	-0.4

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*ASRS **11** 09:15:39.0±1.4, 53.°65N×86.°86E, h0km, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 11 09:15:37.3±2.8**, 53.°68N×87.°02E, h0km, mbtmp2.6**/2**, ML2.3**/2**, Error ellipse: s-maj=28.0km s-min=16.2km az=67.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.33	283	I	I	09 23 36.4	
	baz=101,slow=323,SNR=6.4						
ZALV	Zalesovo Beam	1.33	283	Pg	Pg	09 16 02.0	-0.8
	0.9nm,0.3s,baz=105,slow=14,SNR=13						
ZALV				Lg	Lg	09 16 19.4	
	1.0nm,0.3s,baz=99,slow=29,SNR=5.5						
KURBB	Kurchatov Arra	6.05	243	Pn	Pn	09 17 10.1	+2.0
	baz=58,slow=13,SNR=1.6						
	0.4nm,0.3s						
MKAR	Makanchi Array	7.53	206	Pn	Pn	09 17 28.9	+0.6
	0.1nm,0.3s,baz=25,slow=14,SNR=6.2						
	0.1nm,0.3s						

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*CNRM **11** 09:27:50.8, 36.°34N×9.°77W, h33km, ML4.2*
*MDD **11** 09:27:51.8±0.4, 36.°33N×9.°62W, h24km±5km, mb_Lg4.1/59, Error ellipse: s-maj=4.9km s-min=2.3km az=65.0*
*SFS **11** 09:27:53.1, 36.°36N×9.°55W, h39km, mb4.7/7, ML4.3/23, ML4.7/28, MLv4.0/28*
*IGIL **11** 09:27:54.2, 36.°37N×9.°51W, h32km, ML3.9*
*INMG **11** 09:27:54.1±1.5, 36.°38N×9.°52W, h31km±7km, ML3.8, Error ellipse: s-maj=4.0km s-min=3.0km az=64.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Cabo S.Vicente*

ISC 11 09:27:51.7±1.3**, 36.°40N**±0.°04×**9.°52W**±0.°05**, h35km, n151, σ1§88**/258**, 13C-7D, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSVI	Cabo S. Vicent	0.75	34⇑	eP	Pn	09 28 07.8	+2.0
PSVI				eS	Sn	09 28 18.0	+2.1
PSVI				i AML	AML	09 28 18.2	
PSVI				i AML	AML	09 28 19.5	
PSVI				i AML	AML	09 28 19.5	
PFVI	Vila Bisbo	0.92	37	Pn	Pn	09 28 09.8	+1.7
PFVI				Sn	Sn	09 28 21.0	+0.9
PFVI	Vila Bisbo	0.92	37⇑	iP	Pn	09 28 09.8	+1.7
PFVI				eS	Sn	09 28 21.2	+1.1
PFVI				i AML	AML	09 28 22.0	
PFVI				i AML	AML	09 28 22.0	
PFVI				i AML	AML	09 28 22.0	
PFVI	Vila Bisbo	0.92	37	P	Pn	09 28 09.8	+1.7
PFVI	Vila Bisbo	0.92	37	S	Sn	09 28 23.3	+3.2
PLAGO	Lagos	0.97	44⇑	eP	Pn	09 28 10.5	+1.8
PLAGO				eS	Sn	09 28 22.5	+1.3
PLAGO				i AML	AML	09 28 23.2	
PLAGO				i AML	AML	09 28 23.3	
PLAGO				i AML	AML	09 28 23.9	
PPOR	Portimao	1.08	47	eS	Sn	09 28 25.0	+1.0
PPOR				i AML	AML	09 28 25.9	
PPOR				i AML	AML	09 28 25.9	
PALJ	Aljezur	1.09	32	eS	Sn	09 28 25.7	+1.6
PALJ				i AML	AML	09 28 26.5	
PALJ				i AML	AML	09 28 26.6	
MORF	Marmelete	1.14	37	eP	Pn	09 28 12.9	+1.7
MORF				eS	Sn	09 28 26.6	+1.0
MORF				IAML		09 28 27.5	
	comp=E,3µm,0.1s						
MORF	Marmelete	1.14	37⇑	iP	Pn	09 28 12.9	+1.7
MORF				eS	Sn	09 28 26.8	+1.2
MORF				i AML	AML	09 28 27.5	
MORF				i AML	AML	09 28 27.6	
MORF				i AML	AML	09 28 28.1	
PALBU	Albufeira	1.24	55	eP	Pn	09 28 14.2	+1.8
PALBU				eS	Sn	09 28 29.0	+1.1
PALBU				i AML	AML	09 28 29.7	
PALBU				i AML	AML	09 28 29.7	
PALBU				i AML	AML	09 28 30.4	
PTEO	Sao Teotonio	1.31	29⇓	eP	Pn	09 28 15.2	+1.8
PTEO				eS	Sn	09 28 31.1	+1.3
PTEO				i AML	AML	09 28 31.8	
PTEO				i AML	AML	09 28 32.0	
PTEO				i AML	AML	09 28 32.0	
PFARO	Faro	1.43	64	eP	Pn	09 28 17.0	+1.9
PFARO				eS	Sn	09 28 34.0	+1.3
PFARO				i AML	AML	09 28 38.4	
PFARO				i AML	AML	09 28 53.2	
PBDV	Barranco-do-Ve	1.53	56⇑	iP	Pn	09 28 18.2	+1.7
PBDV				eS	Sn	09 28 35.5	+0.3
PBDV				i AML	AML	09 28 37.0	
PBDV				i AML	AML	09 28 38.7	
PBDV				i AML	AML	09 28 39.9	
PSINE	Sines	1.64	19	eP	Pn	09 28 19.6	+1.6
PSINE				eS	Sn	09 28 38.8	+0.9
PSINE				i AML	AML	09 28 39.7	
PSINE				i AML	AML	09 28 40.0	
PSINE				i AML	AML	09 28 40.1	
PTAV	Tavira	1.67	64	eP	Pn	09 28 20.1	+1.8
PTAV				eS	Sn	09 28 38.8	+0.4
PCVE	Castro Verde	1.71	44	Pn	Pn	09 28 20.8	+1.9
PCVE				Sn	Sn	09 28 40.4	+0.8
PCVE	Castro Verde	1.71	44⇑	iP	Pn	09 28 20.8	+1.9
PCVE				eS	Sn	09 28 40.8	+1.2
PCVE				i AML	AML	09 28 42.4	
PCVE				i AML	AML	09 28 42.9	
PCVE				i AML	AML	09 28 43.0	
PVAQ	Vaqueiros	1.76	55	Pn	Pn	09 28 21.3	+1.7
PVAQ	Vaqueiros	1.76	55⇑	iP	Pn	09 28 21.3	+1.7
PVAQ				eS	Sn	09 28 41.4	+0.5
PVAQ				i AML	AML	09 28 42.0	
PVAQ				i AML	AML	09 28 42.5	
PVAQ				i AML	AML	09 28 43.0	
PVAQ	Vaqueiros	1.76	55	P	Pn	09 28 21.4	+1.8
PVAQ	Vaqueiros	1.76	55	S	Sn	09 28 45.8	+5.0
MESJ	Messejana	1.77	36	eP	Pn	09 28 21.7	+1.8
MESJ				eS	Sn	09 28 42.1	+0.9
MESJ				IAML		09 28 43.6	
	comp=N,438nm,0.2s						
MESJ	Messejana	1.77	36⇑	eP	Pn	09 28 21.7	+1.8
MESJ				eS	Sn	09 28 42.2	+1.0
MESJ				i AML	AML	09 28 43.4	
MESJ				i AML	AML	09 28 44.1	
MESJ				i AML	AML	09 28 44.7	
EXAYA	Ayamonte	1.89	64	Pn	Pn	09 28 23.2	+1.8
EGRO	El Granado	1.99	55	Sn	Sn	09 28 47.3	+0.9
EGRO				Pn	Pn	09 28 24.3	+1.6
EGRO	El Granado	1.99	55	Pn	Pn	09 28 24.3	+1.6
EGRO				Sn	Sn	09 28 46.9	+0.5
EGRO				i IVmb_Lg		09 28 48.8	
PBEJ	Beja	2.09	39⇑	eP	Pn	09 28 25.7	+1.5
PBEJ				eS	Sn	09 28 49.5	+0.5
PBEJ				i AML	AML	09 28 50.7	
PBEJ				i AML	AML	09 28 51.1	
PBEJ				i AML	AML	09 28 51.7	
PSETU	Setºbal	2.20	14	eP	Pn	09 28 27.7	+2.1
PSETU				eS	Sn	09 28 53.3	+1.8
PSETU				i AML	AML	09 28 55.7	
PSETU				i AML	AML	09 28 56.0	
MOE	Montemor	2.32	23⇓	eP	Pn	09 28 29.0	+1.7
MOE				eS	Sn	09 28 55.0	+0.4
MOE				i AML	AML	09 28 57.0	
MOE				i AML	AML	09 28 57.4	
MOE				i AML	AML	09 28 57.8	
LIS	Lisbon	2.33	7	eP	Pn	09 28 29.4	+1.8
LIS				eS	Sn	09 28 55.3	+0.4
LIS				IAML		09 28 57.2	
	comp=E,930nm,0.4s						
LIS	Lisbon	2.33	7	eP	Pn	09 28 29.5	+2.0
LIS				eS	Sn	09 28 55.5	+0.6
LIS				i AML	AML	09 28 56.8	
LIS				i AML	AML	09 28 58.1	
LIS				i AML	AML	09 28 59.9	
ARNO	Arenosillo	2.35	72	Pn	Pn	09 28 29.5	+1.8
ARNO				Sn	Sn	09 28 56.1	+0.8
INMG	Instituto de M	2.39	7	eS	Sn	09 28 57.6	+1.2
PARRA	Arraiolos	2.44	9⇓	eP	Pn	09 28 33.6	+4.6
PARRA				eS	Sn	09 29 03.0	+5.3
PARRA				i AML	AML	09 29 05.3	
PARRA				i AML	AML	09 29 05.8	
PARRA				i AML	AML	09 29 05.8	
EVO	Evora	2.44	29	Pn	Pn	09 28 30.4	+1.4
EVO				Sn	Sn	09 28 57.7	-0.1
EVO	Evora	2.44	29	eP	Pn	09 28 30.5	+1.4
EVO				eS	Sn	09 28 57.7	-0.1
EVO				i AML	AML	09 28 58.8	
EVO				i AML	AML	09 29 59.0	
EVO				i AML	AML	09 29 59.0	
PMAFR	Mafra	2.56	4	Pn	Pn	09 28 32.1	+1.4
PMAFR				Sn	Sn	09 29 00.9	+0.3
PMAFR	Mafra	2.56	4⇓	eP	Pn	09 28 32.0	+1.4
PMAFR				eS	Sn	09 29 01.0	+0.4
PMAFR				i AML	AML	09 29 03.4	
PMAFR				i AML	AML	09 29 03.4	
PMAFR				i AML	AML	09 29 04.0	
EMIN	Mina Concepcio	2.66	58	Sn	Sn	09 29 03.4	+0.5
EMIN				Pn	Pn	09 28 33.1	+1.1
EMIN	Mina Concepcio	2.66	58	Pn	Pn	09 28 33.1	+1.1
EMIN				Sn	Sn	09 29 02.8	-0.1
EMIN				i IVmb_Lg		09 29 06.9	
PBAR	Barrancos	2.66	47	Sn	Sn	09 29 03.4	+0.4
PBAR				Pn	Pn	09 28 33.3	+1.3
PBAR	Barrancos	2.66	47⇑	eP	Pn	09 28 33.3	+1.3
PBAR				eS	Sn	09 29 02.9	0.0
PBAR				i AML	AML	09 29 04.8	
PBAR				i AML	AML	09 29 05.1	
PBAR				i AML	AML	09 29 06.0	
PMTG	Montargil	2.86	21⇓	eP	Pn	09 28 36.1	+1.4
PMTG				eS	Sn	09 29 07.5	-0.3
PMTG				i AML	AML	09 29 09.3	
PMTG				i AML	AML	09 29 10.0	
PMTG				i AML	AML	09 29 10.3	
PESTR	Estremoz	2.90	31	Sn	Sn	09 29 09.3	+0.3
PESTR				Pn	Pn	09 28 36.5	+1.1
PESTR	Estremoz	2.90	31⇑	eP	Pn	09 28 36.5	+1.1
PESTR				eS	Sn	09 29 09.0	0.0
PESTR				i AML	AML	09 29 10.1	
PESTR				i AML	AML	09 29 10.2	
PESTR				i AML	AML	09 29 10.6	
PESTR	Estremoz	2.90	31	P	Pn	09 28 36.7	+1.4
PESTR	Estremoz	2.90	31	S	Sn	09 29 13.1	+4.1
ESPR	Espera	2.99	80	Pn	Pn	09 28 37.9	+1.4
ESPR				Sn	Sn	09 29 10.8	-0.3
ESPR	Espera	2.99	80	Pn	Pn	09 28 37.9	+1.4
ESPR				Sn	Sn	09 29 10.9	-0.1
ESPR				i IVmb_Lg		09 29 13.1	
EBAD	Badajoz	3.08	40	Pn	Pn	09 28 39.2	+1.4
EBAD				Sn	Sn	09 29 13.5	+0.1
EBAD	Badajoz	3.08	40	Pn	Pn	09 28 39.0	+1.2
EBAD				Sn	Sn	09 29 14.0	+0.5
EBAD				i IVmb_Lg		09 29 14.8	
PSBE	So Bento	3.16	10⇑	eP	Pn	09 28 40.6	+1.6
PSBE				eS	Sn	09 29 15.4	-0.1
PSBE				i AML	AML	09 29 18.3	
PSBE				i AML	AML	09 29 21.8	
PSBE				i AML	AML	09 29 23.8	
TARIF	Tarifa	3.22	95	Pn	Pn	09 28 42.2	+2.5
TARIF				Sn	Sn	09 29 15.0	-1.8
RTC	Rabat Centre	3.25	137	Pn	Pn	09 28 40.3	+0.2
RTC	Rabat Centre	3.25	137	P	Pn	09 28 40.7	+0.6
RTC	Rabat Centre	3.25	137	S	Sn	09 29 19.7	+2.2
EJIF	Jimena Fronter	3.27	88	Pn	Pn	09 28 42.4	+2.0
EJIF				Sn	Sn	09 29 20.1	+2.0
PSARD	Sardoal	3.37	18⇓	eP	Pn	09 28 43.5	+1.6
PSARD				eS	Sn	09 29 20.2	-0.4
PSARD				i AML	AML	09 29 22.1	
PSARD				i AML	AML	09 29 22.7	
PSARD				i AML	AML	09 29 23.2	
RSA	Sarsar	3.37	116	P	Pn	09 28 43.6	+1.7
RSA	Sarsar	3.37	116	S	Sn	09 29 24.2	+3.5
ECEU	Ceuta	3.39	97	Pn	Pn	09 28 42.9	+0.8
SMIR	Smir Dam	3.43	101	P	Pn	09 28 44.3	+1.7
SMIR	Smir Dam	3.43	101	S	Sn	09 29 26.4	+4.3
PMRV	Marv??o	3.46	28	eP	Pn	09 28 44.5	+1.4
PMRV				eS	Sn	09 29 21.8	-1.1
PMRV				i AML	AML	09 29 23.4	

PMRV				*i* AML	AML	09 29 23.5	
PMRV				*i* AML	AML	09 29 24.4	
AVE	**Averroes**	**3.55**	**150**	Pn	**Pn**	**09 28 45.0**	**+0.7**
AVE				Sn	**Sn**	**09 29 23.4**	**-1.5**
AVE	**Averroes**	**3.55**	**150**	P	**Pn**	**09 28 44.1**	**-0.1**
CHEFC	**Chefchaouen**	**3.64**	**110**	P	**Pn**	**09 28 47.4**	**+1.9**
ECAB	**El Cabril**	**3.68**	**62**	Pn	**Pn**	**09 28 47.3**	**+1.3**
ECAB				Sn	**Sn**	**09 29 26.0**	**-2.2**
ECAB	**El Cabril**	**3.68**	**62**	Pn	**Pn**	**09 28 47.3**	**+1.3**
ECAB				Sn	**Sn**	**09 29 26.7**	**-1.5**
ECAB				*i* IVmb_Lg		09 29 29.6	
EXCBR	**El Cabril**	**3.68**	**62**	Pn	**Pn**	**09 28 47.7**	**+1.6**
EXCBR				Sn	**Sn**	**09 29 27.2**	**-1.1**
PCAS	**Casmilo, Conde**	**3.74**	**12**	⇓*e*P	**Pn**	**09 28 48.4**	**+1.6**
PCAS				*e*S	**Sn**	**09 29 28.7**	**-0.8**
PCAS				*i* AML	AML	09 29 31.6	
PCAS				*i* AML	AML	09 29 32.5	
PCAS				*i* AML	AML	09 29 32.8	
ZHG	**ZHG**	**3.78**	**140**	P	**Pn**	**09 28 47.9**	**+0.4**
PCBR	**Castelo Branco**	**3.79**	**25**	*e*P	**Pn**	**09 28 49.1**	**+1.5**
PCBR				*e*S	**Sn**	**09 29 29.9**	**-1.1**
PCBR				*i* AML	AML	09 29 31.8	
PCBR				*i* AML	AML	09 29 31.9	
PCBR				*i* AML	AML	09 29 32.4	
EMIJ	**Mijas**	**3.83**	**86**	Pn	**Pn**	**09 28 49.0**	**+0.8**
EMIJ				Sn	**Sn**	**09 29 30.0**	**-2.0**
EMIJ	**Mijas**	**3.83**	**86**	Pn	**Pn**	**09 28 49.0**	**+0.8**
EMIJ				Sn	**Sn**	**09 29 30.7**	**-1.3**
EMIJ				*i* IVmb_Lg		09 29 34.2	
COI	**Coimbra**	**3.90**	**13**	*e*P	**Pn**	**09 28 50.6**	**+1.5**
COI				*e*S	**Sn**	**09 29 33.1**	**-0.5**
COI				*i* AML	AML	09 29 35.3	
COI				*i* AML	AML	09 29 35.4	
COI				*i* AML	AML	09 29 36.0	
EMAL	**Malaga-Limoner**	**4.12**	**83**	Pn	**Pn**	**09 28 53.8**	**+1.7**
EMAL				Sn	**Sn**	**09 29 38.3**	**-0.6**
SRHM	**Skhour des Reh**	**4.14**	**161**	P	**Pn**	**09 28 52.7**	**+0.2**
MTE	**Manteigas**	**4.29**	**21**	*e*P	**Pn**	**09 28 55.8**	**+1.4**
MTE				*e*S	**Sn**	**09 29 42.5**	**-0.8**
MTE				*i* AML	AML	09 29 44.8	
MTE				*i* AML	AML	09 29 45.0	
MTE				*i* AML	AML	09 29 45.2	
EADA	**Adamuz**	**4.32**	**64**	Sn	**Sn**	**09 29 41.2**	**-2.8**
EADA				Pn	**Pn**	**09 28 55.9**	**+1.1**
EADA	**Adamuz**	**4.32**	**64**	Pn	**Pn**	**09 28 56.2**	**+1.3**
EADA				Sn	**Sn**	**09 29 42.0**	**-2.1**
EADA				*i* IVmb_Lg		09 29 47.1	
EGOR	**Sierra Gorda,**	**4.41**	**79**	Sn	**Sn**	**09 29 44.3**	**-2.0**
EGOR				Pn	**Pn**	**09 28 58.3**	**+2.2**
EGOR	**Sierra Gorda,**	**4.41**	**79**	Pn	**Pn**	**09 28 58.3**	**+2.2**
EGOR				Sn	**Sn**	**09 29 43.5**	**-2.8**
EGOR				*i* IVmb_Lg		09 29 50.9	
PVIS	**Viseu**	**4.50**	**16**	*e*P	**Pn**	**09 28 58.5**	**+1.3**
PVIS				*e*S	**Sn**	**09 29 47.9**	**-0.5**
EPLA	**Plasencia**	**4.55**	**35**	Pn	**Pn**	**09 28 59.6**	**+1.5**
EPLA				Sn	**Sn**	**09 29 48.1**	**-1.7**
EPLA				*i* IVmb_Lg		09 29 50.3	
IFR	**Ifrane**	**4.62**	**127**	Pn	**Pn**	**09 28 58.8**	**-0.3**
IFR				Sn	**Sn**	**09 29 47.6**	**-4.0**
LCRM	**LCR**	**4.69**	**124**	P	**Pn**	**09 29 00.2**	**+0.1**
PALE	**Palemas**	**4.69**	**103**	P	**Pn**	**09 29 02.0**	**+2.0**
EAH	**EAH**	**4.74**	**181**	P	**Pn**	**09 29 00.5**	**-0.1**
PTO	**Porto**	**4.79**	**8**	*e*P	**Pn**	**09 29 01.2**	**0.0**
PTO				*e*S	**Sn**	**09 29 51.7**	**-3.7**
PTO				*i* AML	AML	09 29 54.0	
PTO				*i* AML	AML	09 29 54.7	
PTO				*i* AML	AML	09 29 55.6	
EQTA	**Presa de Quent**	**4.95**	**79**	Sn	**Sn**	**09 29 56.2**	**-3.3**
EQTA				Pn	**Pn**	**09 29 05.7**	**+2.2**
EQUE	**Quentar**	**4.95**	**79**	Pn	**Pn**	**09 29 05.1**	**+1.6**
EQUE				Sn	**Sn**	**09 29 59.9**	**+0.3**
EQUE				*i* IVmb_Lg		09 30 02.7	
AKLM	**AKL**	**4.99**	**111**	P	**Pn**	**09 29 05.5**	**+1.4**
E0803	**Jimena (Jaen)**	**5.04**	**72**	Pn	**Pn**	**09 29 05.8**	**+0.9**
E0803				Sn	**Sn**	**09 30 00.5**	**-1.4**
PVRL	**Vila Real**	**5.07**	**16**	*e*P	**Pn**	**09 29 06.2**	**+1.0**
PVRL				*e*S	**Sn**	**09 30 00.3**	**-2.2**
PVRL				*i* AML	AML	09 30 03.8	
PVRL				*i* AML	AML	09 30 04.0	
PVRL				*i* AML	AML	09 30 04.0	
MVO	**Moncorvo**	**5.14**	**22**	*e*P	**Pn**	**09 29 07.4**	**+1.2**
MVO				*e*S	**Sn**	**09 30 02.3**	**-2.0**
MVO				*i* AML	AML	09 30 04.5	
MVO				*i* AML	AML	09 30 05.4	
MVO				*i* AML	AML	09 30 06.7	
POLO	**Lamas de Olo**	**5.15**	**15**	⇑*e*P	**Pn**	**09 29 07.2**	**+0.9**
POLO				*e*S	**Sn**	**09 30 02.1**	**-2.4**
POLO				*i* AML	AML	09 30 05.6	
POLO				*i* AML	AML	09 30 05.7	
POLO				*i* AML	AML	09 30 05.8	
PAB	**San Pablo**	**5.16**	**51**	Pn	**Pn**	**09 29 07.2**	**+0.8**
PAB				Sn	**Sn**	**09 30 02.3**	**-2.4**
PAB				*i* IVmb_Lg		09 30 04.5	
E0802	**Ubeda,Jaen**	**5.17**	**70**	Pn	**Pn**	**09 29 07.6**	**+1.0**
E0802				Sn	**Sn**	**09 30 03.9**	**-1.1**
PSIM	**Granatula de C**	**5.18**	**60**	Pn	**Pn**	**09 29 08.3**	**+1.6**
PSIM				Sn	**Sn**	**09 30 02.1**	**-3.1**
MD31	**MD31**	**5.28**	**131**	P	**Pn**	**09 29 08.2**	**+0.1**
EQES	**Quesada**	**5.34**	**73**	Pn	**Pn**	**09 29 09.7**	**+0.7**
EQES				Sn	**Sn**	**09 30 08.3**	**-1.1**
EQES				*i* IVmb_Lg		09 30 10.6	
MDT	**Midelt**	**5.41**	**130**	P	**Pn**	**09 29 10.0**	**+0.1**
PCAB	**Cabril**	**5.43**	**12**	*e*P	**Pn**	**09 29 11.2**	**+1.1**
PCAB				*e*S	**Sn**	**09 30 08.5**	**-2.9**
PCAB				*i* AML	AML	09 30 12.4	
PCAB				*i* AML	AML	09 30 13.2	
PCAB				*i* AML	AML	09 30 13.3	
GOG	**Mont Gurugu**	**5.43**	**101**	P	**Pn**	**09 29 11.3**	**+1.1**
ESDC	**Sonseca Array**	**5.47**	**52**	Pn	**Pn**	**09 29 12.0**	**+1.3**
ESDC				Sn	**Sn**	**09 30 09.8**	**-2.6**
ESDC				*i* IVmb_Lg		09 30 12.1	
EJUZ	**Juzbado, Salam**	**5.47**	**30**	Pn	**Pn**	**09 29 11.8**	**+1.0**
EJUZ				Sn	**Sn**	**09 30 11.2**	**-1.3**
ESBB	**Sonseca Array**	**5.47**	**52**	Pn	**Pn**	**09 29 12.1**	**+1.3**
ESBB				Sn	**Sn**	**09 30 10.8**	**-1.7**
ELOB	**Lobios**	**5.58**	**11**	Pn	**Pn**	**09 29 12.9**	**+0.7**
ELOB				Sn	**Sn**	**09 30 11.9**	**-3.1**
ELOB				*i* IVmb_Lg		09 30 16.2	
PGAV	**Gavieira, Arco**	**5.64**	**10**	*e*P	**Pn**	**09 29 13.9**	**+0.9**
PGAV				*e*S	**Sn**	**09 30 13.5**	**-3.2**
PGAV				*i* AML	AML	09 30 16.3	
PGAV				*i* AML	AML	09 30 18.3	
PGAV				*i* AML	AML	09 30 18.6	
CGR	**Cap Guir**	**5.76**	**183**	P	**Pn**	**09 29 13.0**	**-1.7**
TIO	**Tiouine**	**5.78**	**160**	Pn	**Pn**	**09 29 14.9**	**-0.1**
TIO				Sn	**Sn**	**09 30 15.6**	**-4.5**
TIO	**Tiouine**	**5.78**	**160**	P	**Pn**	**09 29 15.2**	**+0.2**
EZAM	**Zamans**	**5.78**	**6**	Pn	**Pn**	**09 29 15.9**	**+1.0**
EZAM				Sn	**Sn**	**09 30 17.9**	**-2.0**
EZAM				*i* IVmb_Lg		09 30 21.4	
PBRG	**Braganca**	**5.81**	**21**	*e*P	**Pn**	**09 29 16.3**	**+0.9**
PBRG				*e*S	**Sn**	**09 30 18.2**	**-2.7**
PBRG				*i* AML	AML	09 30 20.2	
PBRG				*i* AML	AML	09 30 22.2	
PBRG				*i* AML	AML	09 30 22.9	
ENIJ	**Nijar**	**5.91**	**82**	Pn	**Pn**	**09 29 18.4**	**+1.8**
OUZM	**OUZ**	**5.94**	**156**	P	**Pn**	**09 29 17.4**	**+0.2**
ECAL	**Calabor**	**5.94**	**21**	Sn	**Sn**	**09 30 20.8**	**-3.3**
ECAL				Pn	**Pn**	**09 29 18.7**	**+1.5**
ECAL	**Calabor**	**5.94**	**21**	Pn	**Pn**	**09 29 18.8**	**+1.6**
ECAL				Sn	**Sn**	**09 30 22.7**	**-1.3**
ECAL				*i* IVmb_Lg		09 30 25.8	
GUD	**Guadarrama**	**5.97**	**43**	Pn	**Pn**	**09 29 18.6**	**+1.0**
GUD				Sn	**Sn**	**09 30 23.7**	**-1.2**
GUD				*i* IVmb_Lg		09 30 25.2	
GOLM	**Goulmima**	**6.03**	**140**	P	**Pn**	**09 29 19.4**	**+1.0**
JBK	**JBK**	**6.04**	**108**	P	**Pn**	**09 29 18.3**	**-0.5**
UCM	**Universidad Co**	**6.29**	**50**	Pn	**Pn**	**09 29 23.7**	**+1.7**
UCM				Sn	**Sn**	**09 30 29.6**	**-3.0**
EZAR	**Zarzadilla de**	**6.42**	**74**	Pn	**Pn**	**09 29 25.0**	**+1.1**
EZAR				Sn	**Sn**	**09 30 34.5**	**-1.5**
EZAR				*i* IVmb_Lg		09 33 50.2	
EAGO	**Agolada(Pontev**	**6.49**	**9**	Pn	**Pn**	**09 29 25.2**	**+0.6**
EAGO				Sn	**Sn**	**09 30 33.0**	**-4.4**
EAGO				*i* IVmb_Lg		09 30 38.1	
TZRR	**Tazzarine**	**6.50**	**148**	P	**Pn**	**09 29 26.7**	**+1.8**
PMPST	**Porto Santo, M**	**6.51**	**241**	*e*P	**Pn**	**09 29 22.9**	**-2.0**
PMPST				*e*S	Sn	09 30 28.8	-9.2
PMPST				*i* AML	AML	09 30 30.8	
PMPST				*i* AML	AML	09 30 33.0	
PMPST				*i* AML	AML	09 30 36.9	
PMPS	**Porto Santo**	**6.52**	**241**	*e*P	**Pn**	**09 29 23.2**	**-1.9**
EMAZ	**Mazaricos**	**6.55**	**4**	Pn	**Pn**	**09 29 26.1**	**+0.6**
EMAZ				Sn	**Sn**	**09 30 35.9**	**-3.1**
EMAZ				*i* IVmb_Lg		09 30 39.7	
ARF	**Arif**	**6.63**	**137**	P	**Pn**	**09 29 28.2**	**+1.5**
CART	**Cartagena**	**6.92**	**78**	Sn	**Sn**	**09 30 44.1**	**-4.0**
CART				Pn	**Pn**	**09 29 30.1**	**-0.5**
PMAR	**Madeira**	**7.11**	**241**	*e*S	**Sn**	**09 30 46.6**	**-6.5**
EPON	**Pontenova**	**7.16**	**14**	Pn	**Pn**	**09 29 34.9**	**+1.1**
EPON				Sn	**Sn**	**09 30 51.3**	**-2.6**
EPON				*i* IVmb_Lg		09 30 56.1	
EVIV	**Cofrentes, Val**	**7.24**	**64**	Pn	**Pn**	**09 29 35.9**	**+0.9**
EVIV				Sn	**Sn**	**09 30 54.0**	**-2.0**
EVIV				*i* IVmb_Lg		09 31 02.1	
ETOR	**Torete**	**7.32**	**51**	Pn	**Pn**	**09 29 37.6**	**+1.4**
ETOR				Sn	**Sn**	**09 30 55.5**	**-2.6**
ETOR				*i* IVmb_Lg		09 30 58.1	
ECHE	**Chera**	**7.47**	**62**	Pn	**Pn**	**09 29 39.4**	**+1.3**
ECHE	**Chera**	**7.47**	**62**	Pn	**Pn**	**09 29 39.6**	**+1.5**
ECHE				Sn	**Sn**	**09 31 01.1**	**-0.5**
EARI	**Arriondas**	**7.65**	**24**	Pn	**Pn**	**09 29 42.8**	**+2.3**
EARI				Sn	**Sn**	**09 31 04.6**	**-1.4**
EARI				*i* IVmb_Lg		09 31 22.6	
E0901	**Celadas (Terue**	**7.75**	**56**	Pn	**Pn**	**09 29 44.3**	**+2.3**
E0901				Sn	**Sn**	**09 31 08.4**	**0.0**
E0901				*i* IVmb_Lg		09 31 11.2	
EBEN2	**Beniarda presa**	**7.75**	**70**	Pn	**Pn**	**09 29 42.8**	**+0.8**
EBEN2				Sn	**Sn**	**09 31 06.3**	**-2.3**
EBEN2				*i* IVmb_Lg		09 31 08.8	
FIGM	**Figuig**	**8.05**	**120**	P	**Pn**	**09 29 47.0**	**+0.8**
ALT01	**Santillana del**	**8.11**	**29**	Sn	**Sn**	**09 31 15.3**	**-2.0**
EMOS	**Mosqueruela**	**8.13**	**58**	Pn	**Pn**	**09 29 50.0**	**+2.7**
EMOS				Sn	**Sn**	**09 31 16.1**	**-2.1**
EMOS				*i* IVmb_Lg		09 31 27.2	
ELAN	**Lanestosa**	**8.28**	**33**	Pn	**Pn**	**09 29 50.7**	**+1.5**
ELAN				Sn	**Sn**	**09 31 19.6**	**-1.8**
ELAN				*i* IVmb_Lg		09 31 29.2	
ERTA	**Horta de San J**	**8.95**	**56**	Pn	**Pn**	**09 30 00.3**	**+1.9**
ERTA				Sn	**Sn**	**09 31 38.9**	**+1.0**
EIBI	**Ibiza**	**9.00**	**70**	Sn	**Sn**	**09 31 34.0**	**-5.3**
EIBI				Pn	**Pn**	**09 29 58.9**	**-0.2**
EIBI	**Ibiza**	**9.00**	**70**	Pn	**Pn**	**09 29 59.7**	**+0.6**
EIBI				Sn	**Sn**	**09 31 33.9**	**-5.3**
EALK	**Alkurruntz**	**9.19**	**40**	Pn	**Pn**	**09 30 03.2**	**+1.6**
EALK				Sn	**Sn**	**09 31 40.7**	**-3.1**
EPOB	**Poblet**	**9.63**	**56**	Pn	**Pn**	**09 30 09.6**	**+1.9**
EPOB				Sn	**Sn**	**09 31 51.7**	**-3.0**
ECHI	**Chisagues Biel**	**9.77**	**47**	Pn	**Pn**	**09 30 11.0**	**+1.3**
ECHI				Sn	**Sn**	**09 31 53.4**	**-4.8**

BUT ***11*** *09:28:13.2±1.8, 46°.86N±0°.02×112°.42W±0°.02, h12^{km}±6^{km}, Error ellipse: s-maj=3.2km s-min=2.0km az=164.0*

NEIC 11 09:28:12.8±1.8**, 46°.86N**±0°.02×**112°.42W**±0°.02**, h12**^{km}±6^{km}**, ML2.4**/34**, ML2.6**/7(BUT)**, Error ellipse: s-maj=3.5km s-min=2.1km az=171.0, Montana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BEMT	**Mount Belmont**	**0.13**	**151**		Pg	09 28 16.6	+0.3
BEMT					Sg	09 28 19.0	+0.2
LYMT	**Lyon Mountain**	**0.14**	**39**		Pg	09 28 16.9	+0.4
HRY	**Holter Researc**	**0.43**	**110**		Pg	09 28 21.7	+0.3
OVMT	**Ovando**	**0.45**	**298**		Pg	09 28 21.8	+0.1
CHMT	**Chamberlain Mo**	**0.57**	**276**		Pg	09 28 24.3	+0.2
BPMT	**Black Pine Rid**	**0.82**	**240**		Pg	09 28 28.5	-0.3
SLMT	**Seeley Lake**	**0.83**	**298**		Pg	09 28 28.7	-0.2
LRM	**Limekiln Ridge**	**1.04**	**181**		Pg	09 28 32.9	0.0
MSO	**Missoula**	**1.04**	**269**		Pb	09 28 32.7	-0.2
MSO				IAML		09 28 50.2	
	117nm,0.4s						
HBMT	**Mount Humbug**	**1.07**	**187**		Pb	09 28 33.3	-0.2
SXM	**Sixmile**	**1.10**	**130**		Pn	09 28 34.6	+0.4
PCMT	**Pistol Creek**	**1.16**	**288**		Pg	09 28 35.6	+0.5
SWMT	**Swartz Lake**	**1.26**	**302**		Pn	09 28 35.9	-0.4
VCMT	**Victor**	**1.29**	**252**		Pn	09 28 36.5	-0.2
BOZ	**Bozeman (W)**	**1.38**	**156**		Pb	09 28 38.5	-0.1
ALMT	**Alberton, Mont**	**1.40**	**278**		Pb	09 28 38.7	-0.2
FBMT	**Ferry Basin**	**1.47**	**293**		Pn	09 28 39.6	+0.3
YBMT	**Yellow Bay**	**1.48**	**313**		Pb	09 28 39.8	-0.4
DLMT	**Dillon**	**1.50**	**185**		Pb	09 28 40.9	+0.2
JTMT	**Jette**	**1.55**	**306**		Pb	09 28 40.9	-0.6
BGMT	**Barton Gulch**	**1.65**	**171**		Pb	09 28 43.6	+0.3
BZMT	**Bozeman Pass**	**1.65**	**137**		Pg	09 28 44.4	-0.2
NDMT	**Ninemile Divid**	**1.68**	**285**		Pb	09 28 43.9	+0.1
BLMT	**Blacktail Moun**	**1.75**	**312**		Pb	09 28 45.2	+0.2
MKMT	**Mink Peak**	**1.86**	**279**		Pb	09 28 46.8	-0.1
MSMT	**Mission Creek**	**1.89**	**130**		Pb	09 28 47.1	-0.3
BSMT	**Bassoo Peak**	**1.89**	**303**		Pb	09 28 47.6	+0.2
MCMT	**McKenzie Canyo**	**2.05**	**189**		Pn	09 28 46.4	-1.0
EGMT	**Eagleton**	**2.15**	**56**		Pn	09 28 50.0	+1.4
GCMT	**Greycliff**	**2.19**	**118**	Pn	Pn	09 28 48.4	-0.7
YHL	**Hebgen Lake**	**2.19**	**156**	Pn	Pn	09 28 49.3	0.0
YHL				IAML		09 29 23.8	
	comp=E,20nm,0.6s						
YHL				IAML		09 29 24.4	
	comp=N,33nm,0.6s						
YHB	**Horse Butte**	**2.28**	**157**	Pn	Pn	09 28 50.1	-0.3
YHB				IAML		09 29 26.3	
	comp=E,17nm,0.4s						
YHH	**Holmes Hill**	**2.34**	**152**	Pn	Pn	09 28 49.6	-1.8
YNE	**Yellowstone No**	**2.50**	**137**	Pn	Pn	09 28 52.8	-0.8
YNE				IAML		09 29 32.9	
	comp=E,20nm,0.4s						
YNE				IAML		09 29 33.5	
	comp=N,24nm,0.3s						
HSPGA	**Hill Springs,**	**2.63**	**342**		Pb	09 28 59.4	-0.6
YMP	**Mirror Lake Pl**	**2.65**	**142**	Pn	Pn	09 28 55.4	-0.2
YMP				IAML		09 29 38.3	
	comp=N,13nm,1.0s						
YMP				IAML		09 29 40.9	
	comp=E,14nm,0.6s						
RLMT	**Red Lodge**	**2.80**	**127**	Pn	Pn	09 28 57.4	-0.3
RLMT				IAML		09 29 42.1	
	comp=E,14nm,0.2s						
RLMT				IAML		09 29 48.1	
	comp=E,12nm,0.5s						
PLID	**Pearl Lake**	**3.06**	**236**	Pn	Pn	09 29 01.4	+0.2
NEW	**Newport**	**3.48**	**296**	Pn	Pn	09 29 06.3	-0.5
NEW				IAML		09 30 08.7	
	comp=E,9.8nm,0.7s						
NEW				IAML		09 30 09.5	
	comp=E,8.3nm,0.5s						
TPAW	**Teton Pass**	**3.53**	**162**	Pn	Pn	09 29 08.2	+0.6
TPAW				IAML		09 31 04.3	
	comp=E,5.6nm,3.7s						
TPAW				IAML		09 31 20.9	
	comp=E,5.8nm,4.2s						
HLID	**Hailey**	**3.59**	**204**	Pn	Pn	09 29 07.5	-0.8
HLID				IAML		09 30 07.7	
	comp=E,10nm,0.2s						
HLID				IAML		09 30 08.2	
	comp=E,9.2nm,0.3s						
BMO	**Blue Mountains**	**3.96**	**241**	Pn	Pn	09 29 12.8	-0.6
BMO				IAML		09 30 29.5	
	comp=E,4.7nm,4.5s						
LNOR	**Lincton Mounta**	**4.18**	**258**	Pn	Pn	09 29 15.5	-0.9
LNOR				IAML		09 29 54.1	
	comp=N,6.4nm,4.9s						
MFID	**Camas Ranch**	**4.21**	**216**	Pn	Pn	09 29 17.3	+0.5
LAO	**LASA Array**	**4.26**	**90**	Pn	Pn	09 29 18.7	+1.1
MXC	**Moxie City**	**5.42**	**270**	Pn	Pn	09 29 30.6	-2.9

ASRS ***11*** *09:29:52.0±1.0, 54°.26N×87°.09E, h0^{km}, M2.8, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 11 09:29:53.6±3.0**, 54°.30N**×**87°.29E, h0**^{km}**, mbtmp3.0**/2**, ML2.8**/2**, Error ellipse: s-maj=25.8km s-min=19.8km az=40.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.50**	**258**	I	I	09 38 20.0	
	0.1nm,1.0s,baz=77,slow=318,SNR=16						
ZALV	**Zalesovo Beam**	**1.50**	**257**	Pg	Pn	09 30 20.5	-1.2
	2.6nm,0.3s,baz=76,slow=16,SNR=19						
ZALV				Lg	Lg	09 30 41.6	
	2.1nm,0.3s,baz=73,slow=22,SNR=5.8						
KURBB	**Kurchatov Arra**	**6.50**	**239**	Pn	Pn	09 31 31.1	+0.7
	0.2nm,0.3s,baz=55,slow=14,SNR=10.0						
KURBB				Sn	Sn	09 32 43.8	-1.4
	baz=48,slow=31						
KURBB				Lg	Lg	09 33 20.8	
	baz=52,slow=28,SNR=2.1						
	2.0nm,0.7s						
MKAR	**Makanchi Array**	**8.16**	**205**	Pn	Pn	09 31 54.3	+1.0
	0.1nm,0.3s,baz=28,slow=15,SNR=4.4						
	0.2nm,0.3s						

ASRS ***11*** *09:34:35.0±1.1, 53°.55N×87°.66E, h0^{km}, M2.8, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 11 09:34:39.5±2.7**, 53°.50N**×**87°.42E, h0**^{km}**, mbtmp3.1**/2**, ML2.8**/2**, Error ellipse: s-maj=22.9km s-min=13.5km az=63.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.61**	**287**	I	I	09 45 35.6	
	0.4nm,1.0s,baz=102,slow=315,SNR=9.6						
ZALV	**Zalesovo Beam**	**1.61**	**287**	Pg	Pn	09 35 08.4	-0.7
	2.2nm,0.3s,baz=104,slow=12,SNR=13						
ZALV				Lg	Lg	09 35 30.5	
	3.9nm,0.3s,baz=108,slow=23,SNR=12						
ZALV				I	I	09 45 35.8	
	baz=110,slow=30,SNR=10						
KURBB	**Kurchatov Arra**	**6.19**	**246**	Pn	Pn	09 36 12.8	+0.7
	0.1nm,0.3s,baz=62,slow=14,SNR=4.1						
KURBB				Sn	Sn	09 37 22.1	-1.3
	baz=63,slow=30,SNR=1.3						
KURBB				Lg	Lg	09 37 55.8	
	0.1nm,0.3s,baz=62,slow=33,SNR=5.3						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**7.47**	**208**	Pn	Pn	09 36 31.1	+1.4
	0.4nm,0.3s,baz=26,slow=13,SNR=13						
MKAR				Sn	Sn	09 37 55.2	0.0
	0.1nm,0.3s,baz=30,slow=27,SNR=3.9						
MKAR				Lg	Lg	09 38 35.9	
	0.1nm,0.3s,baz=26,slow=31,SNR=2.0						
	0.6nm,0.4s						

IDC 11 09:36:27.8±2.2**, 5°.81S**×**130°.20E, h0**^{km}**, mb4.0**/1**, mbtmp3.5**/4**, ML3.3**/3**, Error ellipse: s-maj=97.8km s-min=27.4km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.99**	**200**	Pn	Pn	09 39 35.6	+1.8
	0.1nm,0.3s,baz=24,slow=9.8,SNR=7.4						
FITZ				Sn	Sn	09 41 49.7	-10
	0.1nm,0.3s,baz=74,slow=21,SNR=2.6						
	2.1nm,0.9s						
WRA	**Warramunga Arr**	**14.61**	**164**	Pn	Pn	09 39 55.2	-0.7
	0.1nm,0.3s,baz=344,slow=14,SNR=9.3						
WRA				Sn	Sn	09 42 20.0	-19
	0.3nm,0.3s,baz=333,slow=22,SNR=9.5						
	0.1nm,0.5s						
ASAR	**Alice Springs**	**18.10**	**169**	P	Pn	09 40 39.9	-1.0
	0.1nm,0.3s,baz=347,slow=10,SNR=10						
ASAR				S	Sn	09 43 50.8	-13
	0.3nm,0.7s,baz=356,slow=28,SNR=1.3						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**67.35**	**326**	P	P	09 47 24.8	0.0
	0.9nm,0.6s,baz=127,slow=7.4,SNR=9.9						
	0.9nm,0.6s						

ASRS ***11*** *09:47:17.0±1.2, 53°.51N×87°.52E, h0^{km}, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 11 09:47:19.2±3.7**, 53°.58N**×**87°.59E, h0**^{km}**, mbtmp2.6**/2**, ML2.1**/2**, Error ellipse: s-maj=35.5km s-min=18.2km az=55.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.68**	**284**	I	I	09 57 20.0	
	baz=102,slow=321,SNR=3.5						
ZALV	**Zalesovo Beam**	**1.68**	**284**	Pg	Pn	09 47 48.2	-1.6
	0.6nm,0.3s,baz=104,slow=17,SNR=12						
ZALV				Lg	Lg	09 48 13.8	
	1.3nm,0.3s,baz=102,slow=27,SNR=2.9						
KURBB	**Kurchatov Arra**	**6.32**	**246**	Pn	Pn	09 48 54.1	+0.5
	baz=63,slow=14,SNR=1.7						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**7.60**	**209**	Pn	Pn	09 49 12.7	+1.6
	baz=26,slow=14,SNR=2.0						
	0.1nm,0.2s						

ASRS ***11*** *09:54:57.0±0.9, 54°.04N×86°.51E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 11 09:54:58.8±2.6**, 54°.17N**×**86°.50E, h0**^{km}**, mbtmp3.2**/2**, ML2.7**/2**, Error ellipse: s-maj=20.6km s-min=13.5km az=53.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.02**	**258**	I	I	10 00 30.0	
	baz=74,slow=325,SNR=3.6						
ZALV	**Zalesovo Beam**	**1.02**	**258**	Pg	Pg	09 55 17.7	-0.5
	1.0nm,0.3s,baz=82,slow=17,SNR=11						
ZALV				Lg	Lg	09 55 32.7	
	2.7nm,0.3s,baz=79,slow=32,SNR=4.5						
KURBB	**Kurchatov Arra**	**6.03**	**237**	Pn	Pn	09 56 30.4	+1.2
	0.1nm,0.3s,baz=55,slow=13,SNR=10						
KURBB				Sn	Sn	09 57 36.6	-2.3
	baz=53,slow=31,SNR=1.3						
KURBB				Lg	Lg	09 58 10.7	
	baz=53,slow=31						
	0.9nm,0.6s						
MKAR	**Makanchi Array**	**7.86**	**202**	Pn	Pn	09 56 54.9	+0.7
	0.2nm,0.3s,baz=26,slow=14,SNR=15						
MKAR				Sn	Sn	09 58 24.3	+0.5
	0.1nm,0.3s,baz=24,slow=33,SNR=4.1						
MKAR				Lg	Lg	09 59 07.8	
	0.1nm,0.3s,baz=23,slow=33,SNR=6.7						
	0.5nm,0.2s						

ASRS 11 09:58:11.0±3.6**, 54°.04N**×**86°.58E, h0**^{km}**, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

NNC ***11*** *09:58:37.4±6.1, 53°.35N×87°.74E, h0^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=47.3km s-min=24.3km az=68.0, Suspected Mining explosion.*

ASRS ***11*** *09:58:38.0±1.3, 53°.56N×87°.65E, h0^{km}, M3.1, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC ***11*** *09:58:40.1±3.1, 53°.57N×87°.84E, h0^{km}, mbtmp3.0/2, ML2.5/2, Error ellipse: s-maj=25.6km s-min=14.9km az=61.0*

ISC 11 09:58:40.4±3.3**, 53°.6N**±0°.1×**87°.6E**±0°.2**, h0**^{km}**, n9, σ2^{s}.95**/13**, 9C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.71**	**285**	I	I	10 09 30.0	
	0.2nm,0.9s,baz=103,slow=328,SNR=7.0						
ZAA0	**Zalesovo Array**	**1.71**	**285**	⇑P	**Pn**	**09 59 10.8**	**-0.6**
	1.2nm,0.6s						
ZAA0				⇑S	**Sg**	**09 59 36.1**	**+1.0**
	8.4nm,0.8s						
ZALV	**Zalesovo Beam**	**1.71**	**285**	Pg	**Pg**	**09 59 13.2**	**+0.2**
	1.8nm,0.3s,baz=103,slow=15,SNR=14						
ZALV				Lg	Lg	09 59 37.1	
	2.4nm,0.3s,baz=105,slow=22,SNR=12						
ZALV				I	I	10 09 34.6	
	baz=82,slow=25,SNR=16						
KURK	**Kurchatov**	**6.22**	**246**	⇑Pn	Pn	10 00 06.3	-7.0
	0.3nm,0.6s						
KURK				⇓Sn	**Sn**	**10 01 22.9**	**-2.2**
	1.0nm,0.7s						
KURK				⇓Lg	Lg	10 01 57.0	
	6.1nm,0.8s						
KURBB	**Kurchatov Arra**	**6.32**	**246**	Pn	**Pn**	**10 00 16.6**	**+1.9**
	0.1nm,0.3s,baz=61,slow=14,SNR=5.5						
KURBB				Sn	**Sn**	**10 01 31.5**	**+4.0**
	baz=66,slow=28,SNR=4.9						

KURBB				Lg	Lg	10 02 00.3	
	0.1nm,0.3s,baz=136,slow=25,SNR=9.2						
	1.0nm,0.6s						
KURBB	**Kurchatov Arra**	**6.32**	**246**	⇓Pn	Pn	10 00 05.2	-9.4
	1.3nm,0.3s						
KURBB				⇓Sn	**Sn**	**10 01 21.3**	**-6.2**
	3.2nm,0.5s						
KURBB				⇑Lg	Lg	10 01 57.8	
	21nm,0.8s						
MK31	**Makanchi Array**	**7.58**	**209**	⇑Pn	**Pn**	**10 00 31.7**	**-0.3**
	0.3nm,0.5s,baz=0.0,slow=0.1,SNR=5.3						
MK31				⇑Sn	**Sn**	**10 01 59.7**	**+1.2**
	1.0nm,0.8s,baz=29,slow=25,SNR=4.0						
MK31				⇑Lg	Lg	10 02 39.7	
	2.5nm,0.8s,baz=26,slow=30,SNR=3.7						
MKAR	**Makanchi Array**	**7.58**	**209**	Pn	**Pn**	**10 00 34.0**	**+1.9**
	0.1nm,0.3s,baz=29,slow=13,SNR=6.5						
MKAR				Sn	**Sn**	**10 02 00.6**	**+2.0**
	0.1nm,0.3s,baz=30,slow=27,SNR=7.7						
MKAR				Lg	Lg	10 02 42.7	
	0.1nm,0.3s,baz=26,slow=30,SNR=7.6						
	0.6nm,0.5s						
MAKZ	**Makanchi**	**7.66**	**210**	⇑Pn	**Pn**	**10 00 30.0**	**-3.1**
	0.7nm,0.5s						
MAKZ				⇓Sn	**Sn**	**10 01 58.5**	**-1.9**
	2.1nm,0.8s						
MAKZ				⇑Lg	Lg	10 02 39.4	
	2.6nm,0.9s						

IDC 11 10:18:17.7±111.0**,14°.12S×166°.63E,h0^{km},mb3.5**/3**,**
mbtmp3.5/3**,Error ellipse: s-maj=1871.0km**
s-min=129.3km az=63.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**28.93**	**228**	P	P	10 24 18.6	-0.1
	0.9nm,0.4s,baz=59,slow=12,SNR=3.6						
	0.9nm,0.4s						
WRA	**Warramunga Arr**	**31.38**	**255**	P	P	10 24 41.2	+0.7
	0.3nm,0.9s,baz=82,slow=6.3,SNR=1.6						
	0.3nm,0.9s						
ASAR	**Alice Springs**	**32.32**	**248**	P	P	10 24 48.3	-0.5
	0.3nm,0.8s,baz=73,slow=9.6,SNR=7.5						
	0.3nm,0.8s						

*NEIC **11** 10:37:31.7±1.3, 17°.65S±0°.08×171°.84W±0°.05, h10^{km}±1^{km},*
mb4.6/13, Error ellipse: s-maj=13.8km s-min=7.7km
az=4.0
*IDC **11** 10:37:43.4±6.9, 17°.74S×172°.43W, h82^{km}±53^{km}, mb3.5/5,*
mbtmp4.0/6, ML5.0/1, MS3.5/14, Error ellipse:
s-maj=100.4km s-min=23.9km az=146.0
ISC 11 10:37:33.5±0.7**, 17°.73S**±0°.09×**171°.99W**±0°.09**, h15^{km}, n37,**
σ1.^{s}81/26**, mb4.6**/12**, MS3.6**/12**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	**Niue**	**2.37**	**125**	Pn	**Pn**	**10 38 10.2**	**-1.7**
AFI	**Afiamalu**	**3.81**	**3**	Pn	**Pn**	**10 38 29.1**	**-2.6**
MSVF	**Nonsavu**	**9.49**	**268**		**Pn**	**10 39 53.3**	**+3.4**
MSVF	**Nonsavu**	**9.49**	**268**	P	**Pn**	**10 39 52.7**	**+2.9**
	0.5nm,0.3s,baz=112,slow=14,SNR=7.8						
MSVF				LR	LR	10 42 39.0	
	comp=Z,181nm,21.7s,baz=65,slow=33						
	23nm,0.9s						
RAR	**Rarotonga**	**12.03**	**109**	LR	LR	10 44 01.9	
	comp=Z,156nm,21.4s,baz=254,slow=30						
PINNC	**Pines Island,**	**19.90**	**252**	P	**P**	**10 42 04.2**	**-0.5**
PINNC				IAmb	IAmb	10 42 30.8	
	comp=Z,58nm,1.3s						
PPT	**Papeete**	**21.36**	**93**	LR	LR	10 48 34.0	
	comp=Z,94nm,19.2s,baz=302,slow=30						
HNR	**Honiara**	**28.47**	**283**	LR	LR	10 52 55.7	
	comp=Z,160nm,19.5s,baz=136,slow=32						
PMG	**Port Moresby**	**40.49**	**276**	LR	LR	10 59 09.0	
	comp=Z,44nm,18.6s,baz=314,slow=32						
STKA	**Stephens Creek**	**44.10**	**242**	P	**P**	**10 45 39.9**	**-1.5**
	comp=Z,4.2nm,1.0s,baz=78,slow=13,SNR=4.0						
	comp=Z,4.2nm,1.0s						
JAY	**Jayapura**	**48.79**	**283**	LR	LR	11 05 14.5	
	comp=Z,44nm,18.2s,baz=169,slow=34						
WR8	**Warramunga Arr**	**50.52**	**258**	P	**P**	**10 46 30.9**	**-0.7**
WR8				IAmb	IAmb	10 46 31.9	
	comp=Z,8.8nm,1.2s						
WB0	**Warramunga Arr**	**50.64**	**259**		**P**	**10 46 31.4**	**-1.1**
WB0				IAmb	IAmb	10 46 31.8	
	comp=Z,9.5nm,0.9s						
WB2	**Warramunga Arr**	**50.66**	**258**	P	**P**	**10 46 31.2**	**-1.4**
WB2				IAmb	IAmb	10 46 33.3	
	comp=Z,8.0nm,0.8s						
WRAB	**Tennant Creek**	**50.66**	**258**	P	**P**	**10 46 31.5**	**-1.2**
WRAB				IAmb	IAmb	10 46 32.8	
	comp=Z,6.4nm,0.8s						
WRA	**Warramunga Arr**	**50.67**	**258**		**P**	**10 46 31.2**	**-1.6**
WRA	**Warramunga Arr**	**50.67**	**258**	P	**P**	**10 46 31.2**	**-1.6**
	comp=Z,5.2nm,0.8s,baz=98,slow=7.0,SNR=47						
WRA				LR	LR	11 06 49.8	
	comp=Z,109nm,19.1s,baz=13,slow=35						
	comp=Z,5.2nm,0.8s						
AS31	**Alice Springs**	**50.72**	**254**		**P**	**10 46 32.6**	**-0.5**
AS31				IAmb	IAmb	10 46 34.0	
	comp=Z,9.2nm,0.9s						
ASAR	**Alice Springs**	**50.72**	**254**		**P**	**10 46 32.8**	**-0.3**
ASAR	**Alice Springs**	**50.72**	**254**	P	**P**	**10 46 32.1**	**-1.0**
	comp=Z,30nm,0.8s,baz=90,slow=8.6,SNR=171						
ASAR				PcP	**PcP**	**10 47 51.4**	**+1.1**
	comp=Z,1.2nm,0.9s,baz=102,slow=4.8,SNR=1.3						
KNRA	**Kununurra**	**56.59**	**263**	P	**P**	**10 47 16.0**	**-0.1**
FITZ	**Fitzroy Crossi**	**59.08**	**259**	P	**P**	**10 47 33.4**	**-0.3**
TOLI2	**Tolitoli**	**68.72**	**278**	P	**P**	**10 48 34.9**	**-2.3**
QSPA	**South Pole Qui**	**72.33**	**180**	P	**P**	**10 48 57.6**	**-0.9**
LPIG	**La Paz**	**73.13**	**57**	LR	LR	11 15 10.4	
	comp=Z,33nm,19.2s,baz=228,slow=31						
TXAR	**Lajitas Array**	**80.80**	**55**	P	**P**	**10 49 50.7**	**+3.6**
	comp=Z,0.5nm,1.0s,baz=213,slow=4.3,SNR=4.1						
	comp=Z,0.5nm,1.0s						
ANMO	**Albuquerque**	**81.28**	**49**	LR	LR	11 19 33.7	
	comp=Z,43nm,19.4s,baz=318,slow=31						
PMSA	**Palmer Station**	**81.51**	**156**	LR	LR	11 20 31.3	
	comp=Z,43nm,18.6s,baz=232,slow=31						
NEW	**Newport**	**81.88**	**34**	LR	LR	11 24 08.2	
	comp=Z,31nm,18.7s,baz=203,slow=34						
PDAR	**Pinedale Array**	**83.11**	**41**	P	**P**	**10 50 01.6**	**+2.6**
	comp=Z,0.2nm,0.5s,baz=275,slow=6.9,SNR=1.7						
	comp=Z,0.2nm,0.5s						
ILAR	**Eielson Array**	**84.47**	**11**	P	**P**	**10 50 06.2**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=223,slow=5.0,SNR=4.3						
	comp=Z,0.4nm,0.8s						
N32M	**Quiet Lake**	**84.55**	**18**	P	**P**	**10 50 04.1**	**-1.7**
J26L	**Joseph Creek**	**84.84**	**12**	P	**P**	**10 50 06.2**	**-1.0**
J26L				IAmb	IAmb	10 50 28.3	
	comp=Z,4.8nm,1.4s						
PLCA	**Paso Flores**	**86.95**	**132**	LR	LR	11 22 16.7	
	comp=Z,20nm,20.5s,baz=246,slow=31						
CMAR	**Chiang Mai Arr**	**94.62**	**288**	LR	LR	11 35 18.9	
	comp=Z,11nm,18.0s,baz=200,slow=37						
TKL	**Tuckaleechee C**	**98.71**	**55**	LR	LR	11 33 27.2	
	comp=Z,31nm,18.8s,baz=170,slow=34						
BRTR	**Keskin Array B**	**148.81**	**320**	PKPbc	**PKiKP**	**10 57 22.3**	**0.0**
	comp=Z,0.3nm,0.4s,baz=64,slow=3.4,SNR=2.1						

*SJA **11** 10:40:20.7±1.4, 27°.31S×68°.92W, h100^{km}, ML3.5, MW3.5*
*GUC **11** 10:40:23.4±0.8, 27°.49S×69°.17W, h114^{km}±4^{km}, ML3.3*
ISC 11 10:40:21.9±1.5**, 27°.45S**±0°.04×**68°.99W**±0°.04**,**
h121^{km}±12^{km}**, n21, σ1.^{s}93**/37**, 6C-1D, Chile-Argentina**
border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AC02	**Maricunga**	**0.63**	**349**	⇓*e*P	**Pn**	**10 40 42.0**	**+0.6**
AC02				*e*S	**Sn**	**10 40 55.9**	**-0.1**
AC02				IAML		10 40 56.8	
	comp=E,979nm,0.4s						
GO03	**Copiapo**	**1.11**	**263**	⇑*e*P	**Pn**	**10 40 44.9**	**-0.3**
GO03				*e*S	**Sn**	**10 41 00.7**	**-2.1**
GO03				IAML		10 41 01.8	
	comp=N,1µm,0.3s						
AC06	**Mina Casimiro**	**1.21**	**274**	⇑*e*P	**Pn**	**10 40 45.9**	**-0.3**
AC06				*e*S	**Sn**	**10 41 02.7**	**-1.9**
AC06				IAML		10 41 04.6	
	comp=N,338nm,0.4s						
VCA	**Vinchina**	**1.46**	**152**	⇑*e*P	**Pn**	**10 40 49.5**	**+0.5**
VCA				*e*S	**Sn**	**10 41 09.2**	**-0.5**
VCA				IAML		10 41 12.2	
	comp=E,527nm,0.3s						
VCA	**Vinchina**	**1.46**	**152**	*e*P	**Pn**	**10 40 49.7**	**+0.7**
VCA				*e*S	**Sn**	**10 41 10.0**	**+0.3**
AC01	**Pan de Azucar**	**1.94**	**312**	⇑*e*P	**Pn**	**10 40 55.3**	**+0.7**
AC01				*e*S	**Sn**	**10 41 19.1**	**-0.5**
AC01				IAML		10 41 24.9	
	comp=E,254nm,0.2s						
AC04	**Llanos de Chal**	**1.99**	**247**	⇑*e*P	**Pn**	**10 40 54.8**	**-0.4**
AC04				*e*S	**Sn**	**10 41 19.0**	**-1.7**
AC04				IAML		10 41 26.4	
	comp=E,384nm,0.2s						
AGUA	**GUANDACOL**	**2.07**	**168**	*e*P	**Pn**	**10 40 57.5**	**+1.1**
AGUA				*e*S	**Sn**	**10 41 25.0**	**+2.2**
AGUA				IAML		10 41 25.0	
	comp=Z,242nm,0.4s						
LCO	**Las Campanas**	**2.16**	**224**	⇑*e*P	**Pn**	**10 40 57.2**	**-0.5**
LCO				*e*S	**Sn**	**10 41 23.4**	**-1.7**
GO02	**Mina Guanaco**	**2.34**	**347**	*e*P	**Pn**	**10 41 01.6**	**+1.6**
GO02				*e*S	**Sn**	**10 41 31.7**	**+2.5**
GO02				IAML		10 41 36.3	
	comp=N,177nm,0.2s						
ACLC	**CERRO LA CRUZ**	**2.66**	**138**	*e*P	**Pn**	**10 41 04.4**	**+0.4**
ACLC				*e*S	**Sn**	**10 41 35.7**	**-0.7**
CO01	**Juntas del Tor**	**2.69**	**201**	*e*P	**Pn**	**10 41 05.3**	**+0.8**
CO01				*e*S	**Sn**	**10 41 37.6**	**+0.5**
CO01				IAML		10 41 43.0	
	comp=E,77nm,0.3s						
ACDV	**Cuesta del Vie**	**2.71**	**182**	*e*P	**Pn**	**10 41 06.0**	**+1.4**
ACDV				*e*S	**Sn**	**10 41 40.4**	**+2.9**
AROD	**Rodeo**	**2.74**	**189**	*e*P	**Pn**	**10 41 06.7**	**+1.6**
AROD				*e*S	**Sn**	**10 41 40.4**	**+2.1**
FSA	**Cafayete**	**3.01**	**64**	*e*P	**Pn**	**10 41 06.7**	**-1.8**
PB14	**IPOC Station P**	**3.09**	**335**	*e*P	**Pn**	**10 41 11.3**	**+1.6**
PB14				IAML		10 42 07.7	
	comp=E,43nm,0.5s						
ACCO	**Cerro Coronel**	**3.12**	**181**	*e*P	Pn	10 41 16.0	+5.8
ACCO				*e*S	**Sn**	**10 41 52.8**	**+5.4**
GO04	**Tololo Observa**	**3.14**	**210**	*e*P	**Pn**	**10 41 09.5**	**-0.7**
CO05	**La Serena**	**3.15**	**218**	*e*P	**Pn**	**10 41 08.6**	**-1.5**
CO05				IAML		10 41 45.6	
	comp=N,207nm,0.2s						
RTLL	**Cerro Villicun**	**3.89**	**173**	*e*P	**Pn**	**10 41 20.6**	**+0.6**
RTLL				*e*S	**Sn**	**10 42 02.6**	**-2.4**
TCA	**Tanti**	**5.45**	**136**	*e*P	**Pn**	**10 41 40.4**	**-0.5**
TCA				*e*S	**Sn**	**10 42 37.3**	**-5.3**

*HEL **11** 11:06:22.2±0.1, 59°.80N×27°.45E, h0^{km}, ML2.0, Explosion*
*EST **11** 11:06:22.8±0.1, 59°.81N×27°.40E, h0^{km}, ML1.9(HEL),*
Explosion
*IDC **11** 11:06:27.3±2.2, 60°.08N×27°.06E, h0^{km}, mbtmp2.9/3,*
ML2.4/3, Error ellipse: s-maj=22.5km s-min=13.6km
az=108.0
ISC 11 11:06:20.7±0.8**, 59°.82N**±0°.02×**27°.43E**±0°.03**, h0^{km}, n28,**
σ0.^{s}69/44**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EE04	**Vaivara Sinima**	**0.50**	**153**	*e*P	**Pb**	**11 06 31.6**	**-0.7**
EE04				*e*S	**Sg**	**11 06 38.3**	**+1.5**
VJF	**Virojoki**	**0.72**	**5**	*e*P	**Pb**	**11 06 36.1**	**0.0**
VJF				*e*S	**Sb**	**11 06 46.0**	**-0.5**
PVF	**Pernaja**	**1.07**	**313**	*e*P	**Pb**	**11 06 42.1**	**+0.1**
PVF				*e*S	**Sb**	**11 06 56.2**	**-0.3**
EE03	**Tooma soojaam,**	**1.12**	**212**	*e*P	**Pb**	**11 06 42.9**	**0.0**
EE03				*e*S	**Sg**	**11 06 56.8**	**+0.1**
HEL1	**Helsinki**	**1.33**	**287**	*e*P	**Pn**	**11 06 46.5**	**+0.1**
HEL1				*e*S	**Sg**	**11 07 02.9**	**-0.4**
VSU	**Vasula**	**1.41**	**195**	*e*P	Pn	11 06 41.6	-6.0
VSU	**Vasula**	**1.41**	**195**	*e*P	**Pn**	**11 06 47.2**	**-0.4**
VSU				*e*S	**Sg**	**11 07 05.3**	**-0.6**
NUR	**Nurmijarvi**	**1.55**	**298**	*e*PG	**Pg**	**11 06 50.5**	**+0.1**
NUR				*e*S	**Sn**	**11 07 09.4**	**-0.9**
NUR				MSG		11 07 13.9	
	comp=Z,9.3nm,0.2s						
MEF	**Metsahovi**	**1.57**	**286**	*e*P	**Pg**	**11 06 50.9**	**+0.1**
MEF	**Metsahovi**	**1.57**	**286**	*e*PG	**Pg**	**11 06 50.8**	**+0.1**
MEF				*e*S	**Sn**	**11 07 10.6**	**-0.3**
MEF				MSG		11 07 16.0	
	comp=Z,9.4nm,0.2s						
EE08	**Sarghaua, Vand**	**1.62**	**225**	*e*P	**Pg**	**11 06 51.7**	**0.0**
EE08				*e*S	**Sn**	**11 07 11.9**	**-0.1**
FIA0	**FINESS Array S**	**1.76**	**338**	*e*P	**Pb**	**11 06 53.5**	**-0.2**
FIA0				*e*SN	**Sg**	**11 07 17.7**	**+0.6**
FIA0				MSG		11 07 21.5	
	comp=Z,9.6nm,0.2s						
FIA1	**FINESS Array S**	**1.76**	**338**	*e*SN	**Sg**	**11 07 17.8**	**+0.7**
FIA1				MSG		11 07 20.5	
	comp=Z,7.4nm,0.2s						
FINES	**FINESS Array B**	**1.76**	**338**	Pg	**Pb**	**11 06 53.6**	**-0.2**
	comp=Z,0.9nm,0.3s,baz=160,slow=18,SNR=46						
FINES				Lg	Lg	11 07 12.9	
	comp=Z,0.4nm,0.3s,baz=157,slow=25,SNR=5.2						
RUF	**Ruokolahti**	**1.77**	**24**	*e*P	**Pb**	**11 06 53.9**	**-0.1**
RUF				*e*SN	**Sg**	**11 07 18.0**	**+0.4**
RUF				MSG		11 07 20.4	
	comp=Z,11nm,0.1s						
EE07	**Piusa Caves, O**	**1.99**	**179**	*e*PG	**Pg**	**11 06 58.5**	**-0.2**
EE07				*e*SG	**Sg**	**11 07 24.7**	**+0.2**
TVF	**Tvarminne**	**2.11**	**272**	*e*PB	**Pb**	**11 06 59.4**	**-0.3**
TVF				*e*SG	**Sb**	**11 07 27.1**	**+0.7**
TVF				MSG		11 07 29.6	
	comp=Z,7.7nm,0.2s						
MTSE	**Matsula**	**2.16**	**241**	*e*P	**Pn**	**11 06 57.1**	**-0.8**
MTSE	**Matsula**	**2.16**	**241**	*e*PG	**Pb**	**11 07 01.0**	**+0.3**
MTSE				*e*SG	**Sb**	**11 07 28.6**	**+0.7**
KAF	**Kangasniemi**	**2.36**	**347**	*e*P	**Pb**	**11 07 03.3**	**-0.8**
KAF				*e*SB	**Sb**	**11 07 34.0**	**+0.3**
KAF				MSG		11 07 38.8	
	comp=Z,6.9nm,0.2s						
EE06	**Soera, Palade,**	**2.50**	**252**	*e*PB	**Pb**	**11 07 06.0**	**-0.2**
EE06				*e*SB	**Sb**	**11 07 36.2**	**-1.2**
KEF	**Keuruu**	**2.66**	**333**	*e*P	**Pn**	**11 07 05.7**	**+0.9**
KEF	**Keuruu**	**2.66**	**333**	*e*PB	**Pb**	**11 07 08.9**	**-0.2**
SUF	**Sumiainen**	**2.97**	**349**	*e*PB	**Pb**	**11 07 14.2**	**-0.2**
SUF				*e*SG	**Sg**	**11 07 54.1**	**-1.9**
VAF	**Ylistaro**	**3.96**	**327**	*e*P	**Pn**	**11 07 23.7**	**+1.2**
HFS	**Hagfors**	**6.90**	**279**	Pn	**Pn**	**11 08 04.6**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=84,slow=15,SNR=1.9						
	comp=Z,0.9nm,0.6s						
NOA	**NORSAR Array B**	**8.11**	**286**	Pn	**Pn**	**11 08 18.7**	**-0.9**
	baz=59,slow=15,SNR=3.8						
	comp=Z,0.1nm,0.3s						
ARCES	**ARCESS Array B**	**9.79**	**356**	Pn	**Pn**	**11 08 42.6**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=171,slow=13,SNR=7.6						
	comp=Z,0.4nm,0.5s						

*NNC **11** 11:37:38.9±2.9, 39°.17N×75°.81E, h0^{km}, mb3.8, mpv3.4,*
Error ellipse: s-maj=20.4km s-min=13.0km az=171.0
*SOME **11** 11:37:39.6, 39°.27N×75°.87E, h10^{km}*
ISC 11 11:37:44.1±2.3**, 39°.5N**±0°.1×**75°.77E**±0°.05**, h10^{km}, n21,**
σ2.^{s}63/30**, 5C-3D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**3.29**	**343**	⇓Pn	**Pn**	**11 38 35.8**	**-0.1**
	0.2nm,0.3s						
AAK				⇑Pg	**Pg**	**11 38 45.6**	**-1.6**
	3.8nm,0.7s						
AAK				⇓Sn	**Sb**	**11 39 24.3**	**+1.4**
	4.4nm,0.7s						
AAK				⇑Lg	Lg	11 39 34.4	
	3.0nm,0.6s						
KST	**Kastek**	**3.56**	**2**	Pg	**Pg**	**11 38 49.8**	**-2.5**
	6.6nm,0.3s						
KST				Lg	Lg	11 39 42.0	
	15nm,0.7s						
KST	**Kastek**	**3.56**	**2**	*e*P	**Pb**	**11 38 48.1**	**+0.9**
	5.1nm,0.4s						
KST				*e*S	**Sg**	**11 39 37.2**	**-1.1**
	15nm,0.6s						
DGS	**Degeres**	**3.75**	**360**	Pg	**Pg**	**11 38 54.1**	**-1.9**
	8.0nm,0.6s						
DGS				Lg	Lg	11 39 48.1	
	12nm,0.7s						
MRKS	**Merke**	**3.78**	**330**	Pg	**Pb**	**11 38 51.2**	**+0.2**
	5.6nm,0.5s						
MRKS				Lg	Lg	11 39 43.3	
	6.9nm,0.7s						
MRKS	**Merke**	**3.78**	**330**	*e*P	**Pg**	**11 38 53.5**	**-3.1**
	2.8nm,0.3s						
MRKS				*e*S	**Sg**	**11 39 46.5**	**+0.9**
	12nm,0.5s						
MDOK	**Medeo**	**3.80**	**14**	Pg	**Pg**	**11 38 53.5**	**-3.3**
	4.1nm,0.4s						
MDOK				Lg	Lg	11 39 46.8	
	14nm,0.5s						
SATY	**Saty**	**4.08**	**28**	Pg	**Pb**	**11 38 57.4**	**+1.3**
	3.3nm,0.3s						
SATY				Lg	Lg	11 39 53.4	
	24nm,0.4s						
KTBS	**Karatobe**	**4.28**	**9**	Pg	**Pg**	**11 39 02.7**	**-3.4**
	6.1nm,0.3s						
KTBS				Lg	Lg	11 40 02.6	
	18nm,0.7s						
KUU	**Kurty**	**4.42**	**5**	Pg	**Pb**	**11 39 04.5**	**+2.7**
	2.9nm,0.2s						
KUU				Lg	Lg	11 40 05.7	
	8.8nm,0.4s						
KUU	**Kurty**	**4.42**	**5**	*e*P	**Pb**	**11 39 04.5**	**+2.7**
	2.9nm,0.2s						
KUU				*e*S	**Sg**	**11 40 05.7**	**-0.4**
	8.8nm,0.4s						
KPKS	**Kokpek**	**4.54**	**28**	Pg	**Pg**	**11 39 06.5**	**-4.5**
	1.4nm,0.7s						
KPKS				Lg	Lg	11 40 09.3	
	13nm,0.8s						
SHLS	**Shalkode**	**4.60**	**36**	Pg	**Pg**	**11 39 12.1**	**-0.1**
	4.4nm,0.4s						
SHLS				Lg	Lg	11 40 18.5	
	24nm,0.8s						
SHLS	**Shalkode**	**4.60**	**36**	*e*P	**Pg**	**11 39 10.8**	**-1.5**
	3.3nm,0.2s						
SHLS				*e*S	**Sg**	**11 40 16.3**	**+4.5**
	5.3nm,0.3s						
PDGK	**Podgornoye**	**4.75**	**35**	⇓Pg	**Pg**	**11 39 13.2**	**-1.8**
	4.9nm,0.7s						
PDGK				⇑Lg	Lg	11 40 16.6	
	16nm,0.6s						
ARXS	**Arharly**	**4.97**	**17**	Pg	**Pg**	**11 39 14.6**	**-4.6**
	3.0nm,0.5s						
ARXS				Lg	Lg	11 40 23.3	
	11nm,0.9s						
KTMS	**Ketmen**	**5.24**	**40**	Pg	**Pb**	**11 39 17.9**	**+2.0**
	0.8nm,0.2s						
KTMS				Lg	Lg	11 40 28.6	
	4.6nm,0.5s						
KTMS	**Ketmen**	**5.24**	**40**	*e*P	**Pg**	**11 39 20.0**	**-4.5**
	0.5nm,0.2s						
KTMS				*e*S	**Sg**	**11 40 32.1**	**-0.2**
	6.1nm,0.2s						
KK31	**Karatay Array**	**5.36**	**314**	Pn	**Pn**	**11 39 04.3**	**+0.1**
	baz=139,slow=14						
KK31				⇑Sn	**Sn**	**11 40 08.2**	**+2.2**
	2.6nm,0.3s,baz=138,slow=25						
KK31				⇑Lg	Lg	11 40 33.2	
	3.5nm,0.5s						
DJR	**Jarkent**	**5.69**	**30**	Pg	**Pb**	**11 39 25.7**	**+2.1**
	0.3nm,0.1s						
DJR				Lg	Lg	11 40 42.3	
	5.8nm,0.6s						
DJR	**Jarkent**	**5.69**	**30**	*e*P	**Pg**	**11 39 28.5**	**-4.6**
	0.3nm,0.1s						
DJR				*e*S	**Sg**	**11 40 46.6**	**-0.3**
	3.6nm,0.4s						

*IDC **11** 12:04:58.0±1.6, 2°.93S×136°.68E, h0^{km}, mb4.1/3,*
mbtmp4.0/6, ML4.0/3, MS3.4/6, Error ellipse: s-maj=36.1km
s-min=20.1km az=100.0
*DJA **11** 12:04:59.1±0.4, 2°S±3°×13°6E±°, h71^{km}±7^{km}, M4.1/9,*
mb4.2/1, MLv4.0/9
ISC 11 12:04:59.4±0.9**, 2°.58S**±0°.07×**136°.46E**±0°.05**, h42^{km}, n19,**
σ1.^{s}60/18**, mb3.8**/3**, MS3.5**/4**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**0.73**	**342**	P	**Pn**	**12 05 12.0**	**-1.4**
SRPI				S	**Sn**	**12 05 24.1**	**+0.7**
BAKI	**Biak**	**1.42**	**345**	P	**Pn**	**12 05 23.3**	**+0.6**
SMPI	**Sarmi**	**2.32**	**76**	P	**Pn**	**12 05 35.3**	**+0.2**
RKPI	**Ransiki, Papua**	**2.52**	**295**	P	**Pn**	**12 05 35.4**	**-2.4**
RKPI				S	**Sn**	**12 06 07.6**	**+0.3**
GENI	**Genyem**	**3.70**	**90**	P	**Pn**	**12 05 53.1**	**-1.0**
FAKI	**Fak Fak**	**4.22**	**265**	P	**Pn**	**12 06 00.1**	**-1.2**
JAY	**Jayapura**	**4.24**	**89**	Pn	**Pn**	**12 06 01.1**	**-0.5**
	2.0nm,0.3s,baz=250,slow=8.3,SNR=10						
JAY				Sn	**Sn**	**12 06 46.9**	**-2.9**
	4.5nm,0.3s,baz=102,slow=18,SNR=7.7						
	6.2nm,0.4s						
JAY	**Jayapura**	**4.24**	**89**	P	**Pn**	**12 06 01.0**	**-0.5**
SWI	**Sorong**	**5.47**	**288**	P	**Pn**	**12 06 16.8**	**-1.6**
DAV	**Davao City (W)**	**14.48**	**311**	LR	LR	12 14 13.1	
	comp=Z,29nm,20.3s,baz=156,slow=37						
BATI	**Baumata**	**14.80**	**239**	Pn	**P**	**12 08 32.8**	**+1.5**
	5.2nm,0.3s,baz=102,slow=6.6,SNR=3.7						
WRA	**Warramunga Arr**	**17.39**	**187**	P	**Pn**	**12 08 57.0**	**-2.1**
	0.9nm,0.3s,baz=9.2,slow=12,SNR=36						
WRA				S	Sn	12 12 01.4	-10
	2.1nm,0.8s,baz=11,slow=22,SNR=4.7						
WRA				LR	LR	12 16 18.3	
	comp=Z,191nm,20.2s,baz=128,slow=40						
	4.5nm,0.5s						
FITZ	**Fitzroy Crossi**	**18.73**	**214**	P	**P**	**12 09 16.4**	**+1.7**
	0.4nm,0.3s,baz=38,slow=12,SNR=6.4						
FITZ				S	Sn	12 12 34.4	-10
	1.5nm,0.7s,baz=5.7,slow=17,SNR=1.9						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**21.11**	**187**	P	**P**	**12 09 40.5**	**-0.1**
	13nm,0.8s,baz=11,slow=11,SNR=109						
ASAR				S	**S**	**12 13 35.7**	**+2.2**
	0.4nm,0.5s,baz=5.3,slow=26,SNR=4.4						
ASAR				LR	LR	12 18 36.6	
	comp=Z,164nm,18.4s,baz=274,slow=39						
	13nm,0.8s						
STKA	**Stephens Creek**	**29.55**	**171**	P	**P**	**12 11 01.1**	**+1.0**
	1.8nm,0.8s,baz=352,slow=9.1,SNR=2.9						
	1.8nm,0.8s						
NWAO	**Narrogin (SRO)**	**35.17**	**209**	LR	LR	12 26 08.2	
	comp=Z,106nm,20.1s,baz=224,slow=36						
JNU	**Nakatsue**	**35.89**	**352**	LR	LR	12 24 17.8	
	comp=Z,30nm,21.8s,baz=170,slow=32						
PSI	**Prapat**	**37.90**	**278**	LR	LR	12 32 43.7	
	comp=Z,153nm,19.2s,baz=182,slow=44						
BVAR	**Borovoye Array**	**77.93**	**326**	P	P	12 17 00.5	+7.6
	0.4nm,0.4s,baz=104,slow=4.6,SNR=2.1						
	0.4nm,0.4s						

*IDC **11** 12:26:04.5±0.5, 12°.71N×126°.28E, h0^{km}, mb4.4/22,*
mbtmp4.4/24, ML4.0/2, MS3.3/10, Error ellipse:
s-maj=22.5km s-min=11.9km az=71.0
*NEIC **11** 12:26:07.3±1.7, 12°.77N±0°.08×126°.3E±0°.1, h10^{km}±1^{km},*
mb4.6/79, Error ellipse: s-maj=18.5km s-min=12.4km
az=76.0
*DJA **11** 12:26:12.6±0.9, 13°N±6°×12°6E±°, h58^{km}±9^{km}, M4.7/21,*
mb4.7/21, mB5.3/6, Mw(mB)4.7/6, MwMwp6.2/1, Mwp6.2/1
ISC 11 12:26:09.6±0.4**, 12°.74N**±0°.05×**126°.20E**±0°.09**, h32^{km}, n131,**
σ1.^{s}13/115**, mb4.5**/63**, MS3.4**/7**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**5.30**	**285**	LR	LR	12 29 47.2	
	comp=Z,357nm,18.0s,baz=125,slow=41						
MYLDM	**Lahad Datu**	**10.69**	**226**	Pn	**Pn**	**12 28 39.8**	**-0.7**
TWG	**Pinlang**	**11.15**	**335**	Pn	**Pn**	**12 28 45.0**	**-1.9**
YULB	**Yu-li**	**11.58**	**337**	Pn	**Pn**	**12 28 51.4**	**-1.3**
TNTI	**Ternate**	**11.94**	**174**	Pn	**Pn**	**12 28 56.9**	**-0.8**
YOJ	**Yonaguni jima**	**12.05**	**346**	Pn	**Pn**	**12 28 56.6**	**-2.5**
MPSI	**Mapaga**	**13.81**	**207**	P	**P**	**12 29 27.9**	**-3.4**
	8.5nm,0.7s						
JOW	**Kunigami**	**14.16**	**8**	Pn	**Pn**	**12 29 26.8**	**-1.2**
	1.2nm,0.3s,baz=200,slow=12,SNR=6.1						
JOW				LR	LR	12 34 06.8	
	comp=Z,53nm,18.6s,baz=70,slow=34						
	5.0nm,0.5s						
SWI	**Sorong**	**14.41**	**159**	P	**Pn**	**12 29 34.1**	**+2.6**
	872nm22nm,1.0s						
MSAI	**Masohi**	**16.20**	**170**	P	**P**	**12 29 59.3**	**+1.4**
FAKI	**Fak Fak**	**16.67**	**158**	Pn	**Pn**	**12 30 00.2**	**-0.8**
FAKI	**Fak Fak**	**16.67**	**158**	P	**P**	**12 30 02.1**	**-1.0**
TTSI	**Tana Toraja**	**16.91**	**202**	P	**P**	**12 30 07.7**	**+2.0**
	1µm34nm,0.9s						
SPSI	**Sidrap Palu**	**17.78**	**201**	P	**P**	**12 30 19.1**	**+3.8**
	1µm39nm,0.9s						
BNSI	**Bone**	**18.07**	**200**	P	**P**	**12 30 22.2**	**+3.7**
	28nm,0.7s						
GUMO	**Guam**	**18.20**	**85**	LR	LR	12 35 44.3	

	comp=Z,55nm,20.9s,baz=272,slow=32						
KAPI	Kappang	18.76	200	P	P	12 30 26.2	0.0
KAPI	Kappang	18.76	200	P	P	12 30 25.0	-1.1
	0.6nm,0.3s,baz=20,slow=12,SNR=9.5						
	12nm,0.7s						
SMPI	Sarmi	19.19	139	P	Pn	12 30 32.3	+0.4
	37nm,1.3s						
JAY	Jayapura	20.90	135	P	P	12 30 48.2	-1.4
	9.1nm,0.9s,baz=303,slow=5.0,SNR=4.0						
JAY				LR	LR	12 36 57.8	
	comp=Z,95nm,21.5s,baz=324,slow=31						
	9.1nm,0.9s						
JAY	Jayapura	20.90	135	P	P	12 30 49.4	-0.2
	13nm,0.9s						
SOEI	Soe	22.43	185	P	P	12 31 07.1	+1.1
SOEI	Soe	22.43	185	P	P	12 31 08.2	+2.2
	35nm,0.7s						
SLVN	Son La	22.95	295	P	P	12 31 11.5	+0.1
ENH	Enshi	23.32	321	P	P	12 31 15.4	+0.4
GMJI	Gumukmas	24.42	212	P	P	12 31 26.7	+1.2
KSAR	Wonju Array Be	24.65	3	P	P	12 31 29.4	+2.0
KSRS	Korea Array	24.66	3	P	P	12 31 27.1	-0.4
	3.5nm,0.8s,baz=181,slow=10,SNR=15						
KSRS				LR	LR	12 42 27.4	
	comp=Z,23µm,18.6s,baz=200,slow=40						
	3.5nm,0.8s						
JGF	Kuroka	24.90	22	P	P	12 31 30.4	+0.7
JGF				IAmb	IAmb	12 31 31.3	
	comp=Z,9.7nm,0.9s						
MTN	Manton Dam	25.88	169		P	12 31 37.6	-1.0
CM31	Chiang Mai Arr	26.85	286	P	P	12 31 47.8	+0.3
CM31				IAmb	IAmb	12 31 50.8	
	comp=Z,12nm,0.8s						
CMAR	Chiang Mai Arr	26.85	286		P	12 31 46.8	-0.7
CMAR	Chiang Mai Arr	26.85	286	P	P	12 31 47.8	+0.3
	comp=Z,6.2nm,0.7s,baz=99,slow=7.5,SNR=27						
CMAR				LR	LR	12 43 12.9	
	comp=Z,33nm,18.2s,baz=190,slow=38						
	comp=Z,6.2nm,0.7s						
CHTO	Chiang Mai	26.90	286	P	P	12 31 48.9	+0.9
KNRA	Kununurra	28.34	175		P	12 32 01.2	+0.4
FITZ	Fitzroy Crossi	30.64	181	P	P	12 32 21.4	+0.2
COEN	Coen	31.40	147	P	P	12 32 26.7	-1.3
USA0B	Ussuriysk Arra	31.75	8	P	P	12 32 28.3	-2.3
USA0B				IAmb	IAmb	12 32 31.7	
	comp=Z,5.3nm,0.8s						
USRK	Ussuriysk Ar.	31.75	8	P	P	12 32 30.4	-0.3
	comp=Z,3.2nm,0.7s,baz=193,slow=8.5,SNR=7.3						
	comp=Z,3.2nm,0.7s						
WB0	Warramunga Arr	33.29	166	P	P	12 32 43.2	-1.3
WB0				IAmb	IAmb	12 33 10.9	
	comp=Z,4.2nm,0.8s						
WRAB	Tennant Creek	33.44	166	P	P	12 32 44.9	-0.8
WRAB				IAmb	IAmb	12 32 49.0	
	comp=Z,9.4nm,1.2s						
WRA	Warramunga Arr	33.45	166	P	P	12 32 44.1	-1.7
	comp=Z,3.0nm,1.0s,baz=345,slow=10,SNR=9.1						
	comp=Z,3.0nm,1.0s						
WR8	Warramunga Arr	33.50	166	P	P	12 32 45.3	-1.0
WR8				IAmb	IAmb	12 32 46.2	
	comp=Z,12nm,1.1s						
AS31	Alice Springs	36.95	168		P	12 33 15.9	-0.1
ASAR	Alice Springs	36.95	168	P	P	12 33 15.6	-0.5
	comp=Z,2.9nm,0.8s,baz=349,slow=6.4,SNR=31						
ASAR				LR	LR	12 53 55.7	
	comp=Z,27nm,18.1s,baz=280,slow=45						
	comp=Z,2.9nm,0.8s						
SONM	Songino Array	38.71	339	P	P	12 33 30.3	-0.4
SONM	Songino Array	38.71	339	P	P	12 33 31.1	+0.4
	comp=Z,3.1nm,0.7s,baz=155,slow=8.6,SNR=12						
	comp=Z,3.1nm,0.7s						
STKA	Stephens Creek	46.75	162	P	P	12 34 36.3	+0.3
STKA	Stephens Creek	46.75	162	P	P	12 34 36.0	+0.1
	comp=Z,4.3nm,0.7s,baz=334,slow=7.3,SNR=6.9						
	comp=Z,4.3nm,0.7s						
PETK	Petropavlovsk-	47.44	25	P	P	12 34 41.3	+0.2
	comp=Z,3.1nm,0.8s,baz=220,slow=3.9,SNR=5.2						
	comp=Z,3.1nm,0.8s						
YAK	Yakutsk	49.28	2	P	P	12 34 55.5	+0.4
MKAR	Makanchi Array	50.05	322	P	P	12 35 02.1	+0.8
	comp=Z,7.2nm,0.7s,baz=113,slow=9.0,SNR=73						
	comp=Z,7.2nm,0.7s						
MAKZ	Makanchi	50.25	321		P	12 35 03.5	+0.7
MAKZ				IAmb	IAmb	12 35 04.6	
	comp=Z,5.6nm,0.8s						
NRN	Naryn	52.12	313		P	12 35 18.6	+1.3
NRN				IAmb	IAmb	12 35 19.2	
	comp=Z,7.2nm,1.0s						
NIL	Nilore	52.32	303		P	12 35 19.3	+0.7
ZAA0	Zalesovo Array	52.45	330		P	12 35 19.2	+0.1
ZAA0				IAmb	IAmb	12 35 20.0	
	comp=Z,7.3nm,0.9s						
ZALV	Zalesovo Beam	52.45	330		P	12 35 19.4	+0.2
ZALV	Zalesovo Beam	52.45	330	P	P	12 35 19.1	0.0
	comp=Z,4.8nm,0.7s,baz=104,slow=6.3,SNR=22						
	comp=Z,4.8nm,0.7s						
KURK	Kurchatov	54.02	325		P	12 35 31.4	+0.7
KURBB	Kurchatov Arra	54.03	324	P	P	12 35 31.4	+0.6
	comp=Z,12nm,0.8s,baz=120,slow=7.7,SNR=62						
	comp=Z,12nm,0.8s						
GAR	Garm	55.69	309	P	P	12 35 43.8	+0.6
KBL	Kabul	55.91	303	P	P	12 35 44.8	-0.2
KBL				IAmb	IAmb	12 35 46.1	
	comp=Z,6.1nm,0.9s						
KK31	Karatay Array	56.50	313		P	12 35 49.5	+0.7
KK31				IAmb	IAmb	12 35 50.1	
	comp=Z,4.5nm,0.9s						
KKAR	Karatay Array	56.50	313		P	12 35 49.5	+0.7
KKAR				IAmb	IAmb	12 35 50.1	
	comp=Z,4.7nm,0.9s						
KKAR	Karatay Array	56.50	313		P	12 35 49.2	+0.4
SIMJ	Simiganj	56.62	308	P	P	12 35 50.4	+0.5
SIMJ				IAmb	IAmb	12 35 52.3	
	comp=Z,5.5nm,1.1s						
TIXI	Tiksi	58.90	1	LR	LR	13 02 08.6	
	comp=Z,29nm,18.2s,baz=200,slow=37						
BVAR	Borovoye Array	59.62	325	P	P	12 36 11.1	+0.6
	comp=Z,5.3nm,0.6s,baz=119,slow=8.6,SNR=28						
	comp=Z,5.3nm,0.6s						
BRVK	Borovoye	59.69	325		P	12 36 11.1	+0.2
AB31	Akbulak array	64.98	319		P	12 36 46.7	+0.3
AB31				IAmb	IAmb	12 36 47.4	
	comp=Z,4.4nm,0.8s						
ABKAR	Akbulak array	64.98	319		P	12 36 46.7	+0.3
ARTI	Arti	67.24	326		P	12 37 00.4	-0.3
ARTI	Arti	67.24	326	P	P	12 37 00.4	-0.3
	comp=Z,3.6nm,0.5s,baz=142,slow=3.9,SNR=6.4						
	comp=Z,3.6nm,0.5s						
H17K	Granite Mounta	71.73	26	P	P	12 37 28.0	-0.3
KIRV	Kirov	72.34	328	LR	LR	13 10 07.2	
	comp=Z,28nm,21.9s,baz=86,slow=36						
C19K	Lookout Ridge	72.56	21	P	P	12 37 34.8	+1.5
D19K	Kuna River	72.99	22	P	P	12 37 37.2	+1.3
D19K				IAmb	IAmb	12 37 37.8	
	comp=Z,6.4nm,1.0s						
H19K	Roundabout Mou	73.25	25		P	12 37 38.6	+1.2
H19K				IAmb	IAmb	12 37 39.4	
	comp=Z,5.3nm,0.9s						
O18K	Koktuh Hills	73.35	31	P	P	12 37 39.1	+1.0
B20K	Meade River	73.55	20	P	P	12 37 40.2	+1.2
D20K	Etivluk River	73.56	22	P	P	12 37 40.6	+1.4
L19K	White Mountain	73.67	29	P	P	12 37 41.0	+1.1
B21K	Ikpikpuk River	74.38	21		P	12 37 45.2	+1.3
B21K				IAmb	IAmb	12 37 46.1	
	comp=Z,6.4nm,0.9s						
IMAR	Indian Mountai	74.40	25	P	P	12 37 45.0	+0.8
E21K	Killik River	74.50	22	P	P	12 37 45.8	+1.1
E21K				IAmb	IAmb	12 37 46.5	
	comp=Z,3.4nm,0.8s						
G21K	Allakaket	74.54	24		P	12 37 45.5	+0.5
G21K				IAmb	IAmb	12 37 47.4	
	comp=Z,4.4nm,0.9s						
H21K	Melozitna Rive	74.77	25	P	P	12 37 47.6	+1.3
B22K	Teshekpuk Lake	74.85	20	P	P	12 37 47.5	+0.8
B22K				IAmb	IAmb	12 37 48.6	
	comp=Z,6.8nm,0.9s						
CAST	Castle Rocks	75.00	27	P	P	12 37 48.4	+0.7
I21K	Tanana	75.10	26	P	P	12 37 49.4	+1.2
I21K				IAmb	IAmb	12 37 50.8	
	comp=Z,5.4nm,1.1s						
BPAW	Bear Paw Mtn.	75.50	27	P	P	12 37 51.4	+0.9
BPAW				IAmb	IAmb	12 37 52.1	
	comp=Z,4.7nm,0.9s						
MLY	Manley	75.62	26		P	12 37 51.8	+0.6
MLY				IAmb	IAmb	12 37 52.8	
	comp=Z,3.8nm,0.7s						
D23K	Nanushuk River	75.73	22		P	12 37 53.3	+1.6
D23K				IAmb	IAmb	12 37 54.2	
	comp=Z,4.5nm,1.0s						
C23K	Itkillik River	75.78	21	P	P	12 37 53.4	+1.4
C23K				IAmb	IAmb	12 37 54.0	
	comp=Z,5.4nm,0.8s						
COLD	Coldfoot	75.87	24	P	P	12 37 53.7	+1.1
COLD				IAmb	IAmb	12 37 54.7	
	comp=Z,3.1nm,0.8s						
E23K	Chandalar	76.10	23	IAmb	IAmb	12 37 58.7	
	comp=Z,3.5nm,0.9s						
H23K	Yukon River	76.12	25	IAmb	IAmb	12 37 56.2	
	comp=Z,3.3nm,0.8s						
I23K	Minto, Yukon-K	76.20	26	IAmb	IAmb	12 37 56.0	
	comp=Z,2.9nm,0.7s						
NEA2	Nenana	76.33	26	IAmb	IAmb	12 37 56.6	
	comp=Z,4.3nm,0.8s						
RAYN	Ar Rayn	76.60	291		P	12 37 57.5	-0.1
RAYN				IAmb	IAmb	12 37 58.5	
	comp=Z,3.5nm,0.7s						
F24K	Squaw Lake	76.76	23	IAmb	IAmb	12 37 60.0	
	comp=Z,4.0nm,0.8s						
PWL	Port Wells	76.77	30	P	P	12 37 58.3	+0.4
PWL				IAmb	IAmb	12 37 58.6	
	comp=Z,5.4nm,0.8s						
H24K	Noodor Dome	76.81	25	P	P	12 37 58.6	+0.6
G24K	Hadweenzic Riv	76.95	24	IAmb	IAmb	12 38 00.8	
	comp=Z,3.1nm,0.9s						
HDA	Harding Lake	77.26	26	IAmb	IAmb	12 38 10.8	
	comp=Z,2.5nm,0.7s						
ILAR	Eielson Array	77.27	26	P	P	12 37 59.5	-1.0
	comp=Z,0.8nm,0.6s,baz=237,slow=5.3,SNR=14						
	comp=Z,0.8nm,0.6s						
D25K	Kavik River	77.27	21	IAmb	IAmb	12 38 02.3	
	comp=Z,3.1nm,0.7s						
E27K	Coleen River	79.10	22	P	P	12 38 10.7	0.0
G29M	Pine Creek	80.64	23	IAmb	IAmb	12 38 20.9	
	comp=Z,5.0nm,0.8s						
L29M	L29M	81.30	27	IAmb	IAmb	12 38 25.2	
	comp=Z,3.2nm,0.8s						
SPB2	Spitsbergen Ar	81.60	349	P	P	12 38 24.0	+0.1
SPITS	Spitsbergen Ar	81.60	349	P	P	12 38 24.2	+0.3
	comp=Z,2.0nm,0.6s,baz=95,slow=9.3,SNR=7.8						
	comp=Z,2.0nm,0.6s						
ARCES	ARCESS Array B	81.87	340	P	P	12 38 25.8	+0.3
	comp=Z,6.7nm,0.9s,baz=73,slow=6.2,SNR=14						
	comp=Z,6.7nm,0.9s						
FINES	FINESS Array B	83.70	332	P	P	12 38 35.6	+0.6
	comp=Z,2.5nm,0.8s,baz=60,slow=11,SNR=5.6						
	comp=Z,2.5nm,0.8s						
MMAI	Mount Meron Ar	83.84	302	P	P	12 38 37.1	+0.6
	comp=Z,0.4nm,0.3s,baz=141,slow=40,SNR=1.1						
	comp=Z,0.4nm,0.3s						
BRTR	Keskin Array B	83.93	309	P	P	12 38 36.6	-0.3
BRTR	Keskin Array B	83.93	309	P	P	12 38 36.2	-0.7
	comp=Z,1.0nm,0.6s,baz=93,slow=3.4,SNR=6.1						
	comp=Z,1.0nm,0.6s						
AKASG	Malin Array Be	84.62	321	P	P	12 38 39.3	-0.7
	comp=Z,1.6nm,0.8s,baz=63,slow=5.0,SNR=5.6						
	comp=Z,1.6nm,0.8s						
AKBB	Malin Array Si	84.62	321	P	P	12 38 39.3	-0.7
KIEV	Kiev	84.64	321	P	P	12 38 39.3	-0.8
KIEV				IAmb	IAmb	12 38 40.4	
	comp=Z,6.2nm,1.2s						
C36M	Paulatuk	84.95	20	P	P	12 38 42.2	+1.0
CSS	Mathiatis	85.14	305	P	P	12 38 43.7	+0.8
WTLY	Watson Lake, Y	86.38	29	P	P	12 38 50.0	+1.4
WTLY				IAmb	IAmb	12 38 50.7	
	comp=Z,4.7nm,0.9s						
BURAR	Bucovina Array	87.97	318	P	P	12 38 56.2	-0.4
BUR08	Bucovina Ar. S	87.97	318	P	P	12 38 55.7	-0.9
BUR08				IAmb	IAmb	12 39 00.5	
	comp=Z,4.8nm,1.3s						
PPT	Papeete	88.40	108	P	P	12 38 58.8	-0.3
	comp=Z,64nm,0.7s,baz=96,slow=19,SNR=3.6						
HFS	Hagfors	89.84	332	P	P	12 39 05.7	+0.6
	comp=Z,1.5nm,0.6s,baz=46,slow=4.2,SNR=2.0						
	comp=Z,1.5nm,0.6s						
NOA	NORSAR Array B	90.53	334	LR	LR	13 23 09.0	
	comp=Z,16nm,19.2s,baz=340,slow=38						
VAE	Valguarnera	98.94	312	LR	LR	13 32 38.0	
	comp=Z,26nm,18.1s,baz=162,slow=40						
TXAR	Lajitas Array	116.25	48	PKP	PKPdf	12 44 50.0	-0.6
	comp=Z,0.1nm,0.3s,baz=10.0,slow=2.1,SNR=2.3						
PLCA	Paso Flores	148.47	155	PKPbc	PKPbc	12 45 52.9	-0.6
	comp=Z,2.1nm,1.0s,baz=191,slow=9.4,SNR=3.1						

STR 11 12:26:39.8±1.4,**45°N**±6°×°±°,**h17**^{km}±7^{km},**MLv1.2**/7,**Error ellipse: s-maj=0.0km s-min=0.0km az=41.5,preliminary, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRN	Grenoble	0.09	222	Pg	Pg	12 26 42.9	-0.4
ORIF	Oris-en-Rattie	0.39	175	Pg	Pg	12 26 48.1	+0.2
ORIF				Sg	Sg	12 26 53.7	+0.3
SSB	Saint Sauveur	0.91	268	Pg	Pb	12 26 57.0	-0.2
SSB				Sg	Sn	12 27 10.2	-0.5

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*VAO **11** 12:27:58.8±6.8,4°.30S×80°.78W,h15^{km}±40^{km},mb4.8*

*RSNC **11** 12:28:08.4±0.5,4°S±3°×8°0W±°,h63^{km}±8^{km},M4.3,mB4.9, mb4.7,ML3.9,Mw(mB)4.2*

*IGQ **11** 12:28:10.2±0.3,4°S±2°×8°0W±°,h43^{km}±4^{km},MLv4.7/36*

ISC 11 12:28:08.6±1.1,**3°.85S**±0°.04×**80°.15W**±0°.06,**h76**^{km}±8^{km}, **n106**,σ1^{s}**25**/121,**27C-7D**,**Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAMO	ALAMOR	0.21	141	P	Pn	12 28 20.6	+0.5
ARNL	Arenillas	0.31	16	⇓P	Pn	12 28 20.8	+0.4
ARNL				S	Sn	12 28 28.4	-0.7
AMCR	Ecuador-Macara	0.56	159	S	Sn	12 28 32.8	0.0
AMCR				⇑P	Pn	12 28 23.0	+0.5
MCRA	Macar, Loja	0.56	159	⇑P	Pn	12 28 23.0	+0.5
MCRA				S	Sn	12 28 32.7	0.0
MCRA	Macar, Loja	0.56	159	P	Pn	12 28 23.0	+0.5
MCRA				S	Sn	12 28 32.8	0.0
ACH2	Ecuador-Machal	0.67	31	⇑P	Pn	12 28 24.1	+0.5
ACH2				S	Sn	12 28 34.2	-0.5
GONZ	Gonzanam	0.85	117	⇓P	Pn	12 28 26.5	+0.5
GONZ				S	Sn	12 28 38.7	-0.2
ISPG	Isla Puna-Puer	0.87	359	P	Pn	12 28 28.1	+2.2
PCRA	Pucara 2	0.91	46	⇑P	Pn	12 28 26.9	+0.2
ALJ1	Ecuador-Loja-U	0.96	99	P	Pn	12 28 28.2	+1.0
MORR	Playas El Morr	1.21	351	S	Sn	12 28 46.5	+0.4
MORR				⇓P	Pn	12 28 31.3	+1.3
AZAM	Ecuador-Zamora	1.22	101	P	Pn	12 28 31.4	+1.2
APLA	Playas - Guaya	1.23	349	⇓P	Pn	12 28 31.4	+1.2
ZUMB	Zumba	1.43	135	⇓P	Pn	12 28 35.0	+2.1
ACUE	Ecuador-Cuenca	1.51	52	P	Pn	12 28 34.9	+0.8
COHC	Cochancay	1.64	33	⇑P	Pn	12 28 36.0	+0.4
COHC	Cochancay	1.64	33	P	Pn	12 28 35.9	+0.4
COHC				S	Sn	12 28 55.5	-0.5
AC07	Ecuador-Guayaq	1.69	6	P	Pn	12 28 36.9	+0.6
AZOG	Ecuador-Azogue	1.69	50	P	Pn	12 28 37.4	+0.8
GYE3	Ecuador-Guayaq	1.70	9	P	Pn	12 28 35.9	-0.4
AGUAY	Guayaquil	1.79	6	P	Pn	12 28 37.6	+0.1
BOSC	San Juan Bosco	1.79	67	⇑P	Pn	12 28 39.0	+1.2
SALI	Salinas	1.85	333	⇓P	Pn	12 28 39.6	+1.3
PPLP	Puerto Lpez	2.37	345	P	Pn	12 28 46.1	+0.7
PPLP	Puerto Lpez	2.37	345	P	Pn	12 28 45.7	+0.3
PPLP				S	Sn	12 29 11.5	-2.0
JSCH	Cashca Tororas	2.42	29	⇑P	Pn	12 28 45.6	-0.7
CHSH	Refugio Sur-Vo	2.67	29	⇑P	Pn	12 28 49.9	0.0
TAMH	Tambohuasha Ch	2.67	31	⇑P	Pn	12 28 50.2	+0.4
ISPT	Isla de la Pla	2.73	340	⇓P	Pn	12 28 50.9	+0.8
PORT	Chimborazo Vol	2.74	30	⇑P	Pn	12 28 51.5	+0.7
IGUA	Igualata	2.79	33	P	Pn	12 28 52.5	+1.0
BMAS	Trigal station	2.87	36	⇑P	Pn	12 28 51.8	-0.6
ARRY	Arrayan	2.88	36	⇑P	Pn	12 28 53.6	+1.0
BPAT	Tungurahua Vol	2.89	36	⇑P	Pn	12 28 54.0	+1.2
BBIL	Ulba Tungurahu	2.90	35	P	Pn	12 28 54.2	+1.4
JUI6	Juive	2.94	35	⇑P	Pn	12 28 54.6	+1.3
POND	Pondoa	2.95	35	⇑P	Pn	12 28 54.6	+1.1
BULB	Ulba Tungurahu	2.96	36	P	Pn	12 28 55.5	+1.8
TAIS	Taisha	3.02	61	⇑P	Pn	12 28 54.4	+0.2
PECV	Mancha de Ca P	3.05	2	P	Pn	12 28 55.7	+1.1
PUYO	Puyo, Santa Ro	3.16	42	P	Pn	12 28 56.9	+0.7
PIS1	Pisayambo	3.28	33	P	Pn	12 28 59.7	+1.5
PIAT	Ana Tenorio	3.40	34	P	Pn	12 29 00.9	+1.2
PIAT	Ana Tenorio	3.40	34	P	Pn	12 29 00.8	+1.1
ILLI	Illinizas Sur	3.42	25	P	Pn	12 29 01.6	+1.5
BRRN	Barrancas-Volc	3.47	29	P	Pn	12 29 02.2	+1.4
FLF1	Flavio Alfaro-	3.48	5	⇑P	Pn	12 29 01.2	+0.8
VCES	Cotopaxi	3.50	30	⇑P	Pn	12 29 02.1	+1.0
SLOR	San Lorenzo -	3.51	28	P	Pn	12 29 02.7	+1.5
BMOR	Cotopaxi Volca	3.53	29	P	Pn	12 29 03.2	+1.6
BREF	Cotopaxi Volca	3.59	29	⇑P	Pn	12 29 03.8	+1.4
SUCR	Mariscal Sucre	3.59	28	⇑P	Pn	12 29 03.9	+1.6
TAMB	Tambo	3.60	30	P	Pn	12 29 04.4	+1.8
BTAM	Cotopaxi Volca	3.60	29	P	Pn	12 29 03.8	+1.1
BVC2	Cotopaxi Volca	3.61	29	P	Pn	12 29 01.2	-1.5
ARDO	Archidona, Ten	3.68	40	⇑P	Pn	12 29 03.4	+0.2
PITA	Cotopaxi Volc	3.69	28	P	Pn	12 29 05.4	+1.7
TOMA	Boca Toma-Volc	3.74	27	P	Pn	12 29 06.1	+1.7
ANTM	Antisana-La Mi	3.81	30	P	Pn	12 29 06.1	+0.7
ANTG	Antisana-Guama	3.82	30	P	Pn	12 29 07.8	+2.2
ANTS	Antisana-Sarah	3.87	31	P	Pn	12 29 07.9	+1.6
ANTI	Antisana	3.92	31	P	Pn	12 29 07.8	+0.9
JUA2	San Juan 2	3.92	23	⇑P	Pn	12 29 08.5	+1.5
GGPC	Guagua Pichinc	3.96	23	⇑P	Pn	12 29 09.0	+1.5
TERV	Terraza Guagua	3.96	23	⇑P	Pn	12 29 09.0	+1.6
YANA	Yana	4.03	23	P	Pn	12 29 07.4	-0.9
BV15	Puerto Quito-O	4.08	13	⇑P	Pn	12 29 08.0	-0.7
PULU	Pululahua	4.18	23	P	Pn	12 29 12.1	+1.8
PAC1	Pacto, Paraso	4.30	18	P	Pn	12 29 12.5	+0.7
PAC1	Pacto, Paraso	4.30	18	P	Pn	12 29 12.0	+0.2
PAC1				S	Sn	12 29 59.4	-1.5
CAYR	Refugio Cayamb	4.39	29	P	Pn	12 29 14.7	+1.3
OTAV	Otavalo	4.40	23	⇑P	Pn	12 29 14.4	+1.1
OTAV	Otavalo	4.40	23	*e*P	Pn	12 29 14.2	+0.9
OTAV	Otavalo	4.40	23	P	Pn	12 29 14.0	+0.7
OTAV				S	Sn	12 30 04.9	+1.3
ANGU	Angureal	4.42	29	⇑P	Pn	12 29 15.0	+1.2
CUSE	Cuicocha Este	4.48	23	P	Pn	12 29 16.4	+1.9
CUSE	Cuicocha Este	4.48	23	P	Pn	12 29 15.7	+1.3
CUSE				S	Sn	12 30 07.1	+1.5
CUIC	Cuicocha-Domo	4.49	24	P	Pn	12 29 16.3	+1.7
LAV4	Lava4-Reventad	4.50	34	P	Pn	12 29 15.7	+1.1
REVN	San Rafael	4.52	34	P	Pn	12 29 16.0	+1.2
COTA	Cotacachi	4.53	24	P	Pn	12 29 17.6	+2.4
IMBA	Imbabura, San	4.54	26	P	Pn	12 29 17.1	+1.8
URCU	Urcuqui	4.66	24	P	Pn	12 29 20.7	+3.8
CASC	Dorado de Casc	4.85	35	P	Pn	12 29 19.6	+0.3
BONI	La Bonita	5.01	32	P	Pn	12 29 22.2	+0.7
BONI	La Bonita	5.01	32	P	Pn	12 29 21.8	+0.3
	926nm114nm,0.9s						
LNGL	El Angel-Carch	5.04	25	P	Pn	12 29 23.0	+0.9
TULM	Tulcn-Chalpat	5.11	28	P	Pn	12 29 24.8	+1.7
TULM	Tulcn-Chalpat	5.11	28	P	Pn	12 29 24.8	+1.7
	1µm140nm,1.1s						
GCUF	Volcan Galeras	5.77	29	P	Pn	12 29 33.0	+0.9
	1µm66nm,0.8s						
TUMC	Tumaco	5.81	14	P	Pn	12 29 32.4	+0.2
TUMC	Tumaco	5.81	14	P	Pn	12 29 33.2	+1.0
	159nm,0.8s						
TUMC				S	Sn	12 30 39.1	+1.6
	159nm,0.8s						
BBAC	Balboa, Cauca	6.51	27	P	Pn	12 29 41.6	-0.4
	649nm37nm,0.6s						
PTLC	Puerto Leguiza	6.67	53	P	Pn	12 29 38.3	-5.8
	765nm61nm,1.2s						
PTLC				S	Sn	12 30 59.6	+0.9
	765nm61nm,1.2s						
FLOC	Florencia	7.02	40	P	Pn	12 29 46.9	-1.9
	643nm40nm,1.2s						
GR1C	Gorgona, Isla	7.09	16	P	Pn	12 29 47.6	-2.1
GR1C				S	Sn	12 31 08.2	-0.6
POPC	Popayan, Colom	7.23	29	P	Pn	12 29 51.2	-0.7
	13nm,0.7s						
GARC	Garzon, Huila	7.59	38	P	Pn	12 29 55.5	-1.3
	906nm64nm,0.6s						
JAMC	Jamundi, Valle	7.83	26	P	Pn	12 29 58.5	-1.5
MALC	Bahia Malaga	8.30	20	P	Pn	12 30 04.4	-1.8
MALC				S	Sn	12 31 37.6	-0.8
CZSB	Cruzeiro do Su	8.35	118	*e*P	Pn	12 30 05.3	-1.7
CZSB	Cruzeiro do Su	8.35	118	P	Pn	12 30 06.7	-0.3
TBTG	Tabatinga, AM	10.22	92	*e*P	Pn	12 30 33.5	+1.0
SDV	Santo Domingo	15.81	37	*e*P	P	12 31 50.5	+1.1
BBSD	Serra de San D	23.31	126	*e*P	P	12 33 08.0	-2.2
PTLB	Pontes e Lacer	23.68	121	*e*P	P	12 33 14.0	+0.4

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*NOU **11** 12:40:01.7,37°.75S×176°.13E,h310^{km},MLv3.6/14,North Island, New Zealand*

*WEL **11** 12:40:07.0±0.8,38°S±4°×17°6E±°,h258^{km}±7^{km},M2.9/64, ML2.4/8,MLv2.9/64,Error ellipse: s-maj=6.1km s-min=5.5km az=59.8,confirmed*

ISC 11 12:40:00.6±2.1,**37°.76S**±0°.08×**176°.07E**±0°.08, **h305**^{km}±12^{km},**n162**,σ1^{s}**84**/169,**North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMRZ	Kaimai	0.13	230	P	Pn	12 40 41.1	+1.8
TGRZ	Tauranga	0.16	78	P	Pn	12 40 40.6	+1.3
KARZ	Kaharoa	0.29	152	P	Pn	12 40 40.5	+1.1
OPRZ	Ohinepanea	0.39	102	P	Pn	12 40 40.8	+1.3
OMRZ	Omania	0.42	145	P	Pn	12 40 41.3	+1.6
TOZ	Tahuroa Road	0.45	274	P	Pn	12 40 41.5	+1.8
MARZ	Manawahe	0.53	115	P	Pn	12 40 41.4	+1.5
HLRZ	Highlands Stat	0.54	155	P	Pn	12 40 42.0	+2.1
HSRZ	Hossack Road	0.57	166	P	Pn	12 40 42.0	+2.0
TARZ	Mount Tarawera	0.58	144	P	Pn	12 40 41.9	+1.8
GRRZ	Galatos Road	0.59	177	P	Pn	12 40 40.1	+0.1
HRRZ	Handcock Road	0.65	165	P	Pn	12 40 42.0	+1.8
RRRZ	Republican Roa	0.68	149	P	Pn	12 40 41.7	+1.4
TLZ	Tolley Road	0.70	216	P	Pn	12 40 42.6	+2.2
KUTZ	Kaahu Road	0.75	195	P	Pn	12 40 42.5	+2.0
WPRZ	Whakapapatarin	0.76	174	P	Pn	12 40 42.5	+1.9
PRRZ	Plateau Road	0.78	161	P	Pn	12 40 42.2	+1.6
ALRZ	Allen Road	0.83	165	P	Pn	12 40 42.7	+1.9
MUGZ	Murupara	0.90	142	P	Pn	12 40 42.3	+1.2
URZ	Urewera	0.96	121	P	Pn	12 40 42.2	+0.8
URZ	Urewera	0.96	121	P	Pn	12 40 42.1	+0.8
URZ				S	S	12 41 10.5	-3.2
MKAZ	Moumakai	0.98	312	P	Pn	12 40 43.3	+1.8
WATZ	Wairara	0.98	196	P	Pn	12 40 43.6	+2.1
KUZ	Kuaotunu	1.05	345	P	Pn	12 40 43.0	+1.1
KUZ	Kuaotunu	1.05	345	P	Pn	12 40 43.0	+1.1
MRHZ	Matea Rd	1.10	166	P	Pn	12 40 43.6	+1.6
MRHZ				S	S	12 41 12.2	-2.8
RTZ	Ruatahuna	1.11	140	P	Pn	12 40 43.6	+1.4
RATZ	Rangitukua	1.13	192	P	Pn	12 40 44.0	+1.8
HIZ	Hauiti	1.22	232	P	Pn	12 40 45.1	+2.5
HIZ	Hauiti	1.22	232	P	Pn	12 40 45.1	+2.5
ETAZ	East Tamaki Re	1.22	311	P	Pn	12 40 44.4	+1.7
WIAZ	Waiheke Island	1.22	322	P	Pn	12 40 44.4	+1.6
RITZ	Rihia Road	1.22	188	P	Pn	12 40 45.0	+2.3
KATZ	Kakaramea	1.25	194	P	Pn	12 40 44.8	+1.9
MTHZ	Maungataniwha	1.25	151	P	Pn	12 40 44.6	+1.8
MWZ	Matawai	1.29	117	P	Pn	12 40 44.3	+1.3
RAGZ	Rawiri	1.29	125	P	Pn	12 40 45.0	+1.9
RAGZ				S	S	12 41 15.6	-1.3
RUGZ	Raukumara Rang	1.29	100	P	Pn	12 40 43.6	+0.4
AWAZ	Awhitu Peninsu	1.33	301	P	Pn	12 40 45.2	+1.9
HAZ	Te Kaha	1.36	90	P	Pn	12 40 44.1	+0.7
HAZ				S	S	12 41 14.1	-3.4
MBAZ	Motutapu North	1.36	316	P	Pn	12 40 45.2	+1.7
NTVZ	North Tongarir	1.37	193	P	Pn	12 40 45.5	+1.9
KRVZ	Karewarewa	1.37	194	P	Pn	12 40 45.5	+1.9
TMVZ	Te Maari	1.38	192	P	Pn	12 40 45.6	+2.0
TWVZ	Taurewa	1.40	201	P	Pn	12 40 45.7	+2.0
ETVZ	East Tongariro	1.40	191	P	Pn	12 40 45.8	+2.0
WTVZ	West Tongariro	1.40	195	P	Pn	12 40 45.7	+1.9
RAHZ	Arahi	1.40	146	P	Pn	12 40 46.1	+2.5
RAHZ				S	S	12 41 17.2	-0.7
NNVZ	North Ngauruho	1.41	194	P	Pn	12 40 45.8	+1.9
SNGZ	Shannon Statio	1.43	136	P	Pn	12 40 46.1	+2.2
SNGZ				S	S	12 41 16.6	-1.7
BKZ	Black Stump Fm	1.44	167	P	Pn	12 40 45.7	+1.8
BKZ	Black Stump Fm	1.44	167	P	Pn	12 40 45.8	+1.8
BKZ				S	S	12 41 16.4	-2.0
WTAZ	Waiatarua	1.45	304	P	Pn	12 40 46.2	+2.2
NMHZ	Naumai	1.45	157	P	Pn	12 40 46.7	+2.6
NGZ	Ngauruhoe	1.46	194	P	Pn	12 40 46.2	+2.0
SNVZ	South Ngauruho	1.46	193	P	Pn	12 40 46.1	+1.9
COVZ	Chateau Observ	1.49	196	P	Pn	12 40 46.2	+1.8
ABAZ	Army Bay	1.52	319	P	Pn	12 40 46.5	+2.0
TUVZ	Tukino	1.54	192	P	Pn	12 40 46.7	+2.0
FWVZ	Far West T-bar	1.54	195	P	Pn	12 40 46.4	+1.6
MAVZ	Matarangi	1.56	195	P	Pn	12 40 46.9	+1.9
TKGZ	Te Karaka	1.56	116	P	Pn	12 40 46.7	+2.1

WHVZ	Whangaehu Hut	1.56	194	P	Pn	12 40 46.7	+1.8
TWGZ	Tauwhareparae	1.57	106	P	Pn	12 40 46.8	+2.1
GRZ	Great Barrier	1.59	342	P	Pn	12 40 46.4	+1.5
TRVZ	Turoa	1.59	195	P	Pn	12 40 47.0	+1.9
PKGZ	Pakihiroa	1.60	94	P	Pn	12 40 46.7	+1.7
WHHZ	Waihua	1.60	145	P	Pn	12 40 47.2	+2.3
WNVZ	Wahianoa	1.60	193	P	Pn	12 40 46.9	+1.8
PKVZ	Pokaka	1.63	200	P	Pn	12 40 47.1	+1.9
RIGZ	Rimuhau	1.63	126	P	Pn	12 40 47.6	+2.4
MOVZ	Moawhango	1.66	188	P	Pn	12 40 47.0	+1.6
ARHZ	Aropaoanui	1.67	154	P	Pn	12 40 47.8	+2.4
KWHZ	Kaweka Forest	1.68	171	P	Pn	12 40 47.9	+2.3
MTVZ	Mangateitei	1.69	196	P	Pn	12 40 47.6	+2.0
VRZ	Vera Road	1.71	217	P	Pn	12 40 48.0	+2.4
MCHZ	McNeill Hill	1.75	164	P	Pn	12 40 48.5	+2.6
PUZ	Puketiti	1.76	101	P	Pn	12 40 47.8	+1.8
KNZ	Kokohu	1.78	135	P	Pn	12 40 48.3	+2.2
MXZ	Matakaoa Point	1.79	84	P	Pn	12 40 47.8	+1.6
MXZ	Matakaoa Point	1.79	84	P	Pn	12 40 47.8	+1.6
CNGZ	Carnagh Statio	1.83	114	P	Pn	12 40 49.2	+2.7
PRGZ	Paritu Road	1.84	130	P	Pn	12 40 48.8	+2.2
WMGZ	Waiomatatini S	1.86	92	P	Pn	12 40 48.8	+2.0
KRHZ	Kereru	1.89	173	P	Pn	12 40 48.9	+1.9
MHGZ	Mahia Peninsul	2.00	134	P	Pn	12 40 50.1	+2.3
CKHZ	Cape Kidnapper	2.05	158	P	Pn	12 40 50.7	+2.5
KAHZ	Kahuranaki	2.12	163	P	Pn	12 40 51.3	+2.5
LREZ	Lake Rotokare	2.14	217	P	Pn	12 40 51.9	+3.1
PNHZ	Pukenui	2.15	177	P	Pn	12 40 50.9	+1.9
NEZ	North Egmont	2.16	225	P	Pn	12 40 52.2	+3.0
WAZ	Wanganui	2.16	203	P	Pn	12 40 51.3	+2.2
PKE	Pukeiti	2.17	228	P	Pn	12 40 52.3	+3.1
PREZ	Palmer Road	2.17	223	P	Pn	12 40 52.2	+2.9
KHEZ	Kahui Hut	2.22	226	P	Pn	12 40 52.4	+2.7
WCZ	Waipu Caves	2.29	322	P	Pn	12 40 52.2	+2.0
TSZ	Takapari Road	2.29	182	P	Pn	12 40 52.1	+1.9
WPHZ	Waipukurau	2.32	173	P	Pn	12 40 52.5	+2.1
PXZ	Pawanui	2.35	165	P	Pn	12 40 53.0	+2.3
OHWZ	Ohakea	2.51	193	P	Pn	12 40 54.6	+2.6
DVHZ	Dannevirke	2.53	178	P	Pn	12 40 54.0	+1.7
PRHZ	Porangahau	2.54	170	P	Pn	12 40 54.6	+2.2
POWZ	Post Office Ro	2.64	185	P	Pn	12 40 55.0	+1.8
ANWZ	Angora Road	2.71	173	P	Pn	12 40 56.2	+2.3
PRWZ	Pori Road	2.79	182	P	Pn	12 40 56.7	+2.1
BFZ	Birch Farm	2.92	177	P	Pn	12 40 57.7	+1.9
BFZ	Birch Farm	2.92	177	P	Pn	12 40 57.7	+1.9
MRZ	Mangatainoka R	2.92	187	P	Pn	12 40 57.4	+1.5
TIWZ	Tintock	3.01	183	P	Pn	12 40 58.7	+1.9
OGWZ	Otaki Gorge	3.13	193	P	Pn	12 40 59.6	+1.7
CPWZ	Castlepoint	3.15	178	P	Pn	12 41 00.6	+2.5
HOWZ	Holdsworth Sta	3.16	188	P	Pn	12 40 59.6	+1.4
KIW	Kapiti Island	3.22	196	P	Pn	12 41 00.4	+1.6
OUZ	Omahuta	3.23	321	P	Pn	12 41 00.8	+1.8
OUZ	Omahuta	3.23	321	P	Pn	12 41 01.0	+2.0
TMWZ	Te Maipa	3.34	182	P	Pn	12 41 01.7	+1.6
MTW	Mount Morrison	3.42	187	P	Pn	12 41 02.1	+1.2
DUWZ	D'Urville Isla	3.46	208	P	Pn	12 41 02.7	+1.3
TRWZ	Traveller	3.64	185	P	Pn	12 41 04.8	+1.7
PAWZ	Paruwai Farm	3.65	188	P	Pn	12 41 04.8	+1.5
WEL	Wellington	3.66	196	P	Pn	12 41 05.0	+1.6
SNZO	South Karori	3.70	196	P	Pn	12 41 05.0	+1.3
MSWZ	Moikau Station	3.70	190	P	Pn	12 41 05.2	+1.4
TCW	Tory Channel	3.71	201	P	Pn	12 41 05.4	+1.5
BHW	Baring Head	3.76	194	P	Pn	12 41 05.6	+1.2
PLWZ	Palliser	3.85	189	P	Pn	12 41 06.7	+1.2
TUWZ	Tuamarina	4.01	203	P	Pn	12 41 09.4	+2.2
NNZ	Nelson	4.03	210	P	Pn	12 41 08.1	+0.8
TKNZ	Takaka Hill	4.06	215	P	Pn	12 41 08.2	+0.6
QRZ	Quartz Range	4.11	221	P	Pn	12 41 08.7	+0.5
QRZ	Quartz Range	4.11	221	P	Pn	12 41 08.7	+0.5
CMWZ	Cape Campbell	4.23	199	P	Pn	12 41 11.7	+2.1
BSWZ	Blackbirch Sta	4.29	202	P	Pn	12 41 12.0	+1.8
MRNZ	Matariki Terra	4.44	214	P	Pn	12 41 12.4	+0.5
THZ	Tophouse	4.68	210	P	Pn	12 41 15.5	+0.8
KHZ	Kahutara	5.04	202	P	Pn	12 41 20.0	+1.4
KHZ	Kahutara	5.04	202	P	Pn	12 41 20.1	+1.5
DSZ	Denniston Nort	5.16	218	P	Pn	12 41 20.6	+0.5
GVZ	Greta Valley S	5.69	203	P	Pn	12 41 27.3	+1.0
LTZ	Lake Taylor	5.79	209	P	Pn	12 41 28.3	+0.8
AMCZ	Amberley	6.00	205	P	Pn	12 41 30.8	+0.9
INZ	Inchbonnie	6.09	214	P	Pn	12 41 31.5	+0.5
OXZ	Oxford	6.35	208	P	Pn	12 41 34.4	+0.3
OKCZ	Okains Bay	6.38	200	P	Pn	12 41 35.9	+1.4
MQZ	McQueen's Vall	6.48	203	P	Pn	12 41 36.0	+0.4
RACZ	Rakaia	6.66	205	P	Pn	12 41 38.8	+0.9
WVZ	Waitaha Valley	6.69	216	P	Pn	12 41 38.9	+0.7
MHCZ	Mount Hutt	6.70	209	P	Pn	12 41 39.1	+0.7
WACZ	Wakanui South	6.96	206	P	Pn	12 41 42.4	+1.0
RPZ	Rata Peaks	7.06	211	P	Pn	12 41 43.8	+1.1
RPZ	Rata Peaks	7.06	211	P	Pn	12 41 43.4	+0.7
GCSZ	Gaunt Creek Bo	7.06	216	P	Pn	12 41 43.9	+1.2
ARCZ	Arundel	7.20	209	P	Pn	12 41 44.9	+0.5
FOZ	Fox Glacier	7.47	218	P	Pn	12 41 47.8	+0.2
TMZ	Timaru	7.64	208	P	Pn	12 41 50.8	+1.1
LBZ	Lake Benmore	7.97	212	P	Pn	12 41 54.8	+1.0
ODZ	Otahua Downs	8.34	208	P	Pn	12 42 00.3	+2.1
ODZ	Otahua Downs	8.34	208	P	Pn	12 42 00.1	+1.9
JCZ	Jackson Bay	8.37	219	P	Pn	12 42 00.5	+1.7
JCZ	Jackson Bay	8.37	219	P	Pn	12 42 00.5	+1.7
WKZ	Wanaka	8.83	215	P	Pn	12 42 04.8	+0.6
WHZ	Wether Hill Ro	10.13	214	P	Pn	12 42 21.2	+1.0

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*THE **11** 12:56:13.2, 40°N±1°×21°.6E±0°.8, h14km±1km, M2.6/7, MLh2.6/7*
*ATH **11** 12:56:13.1, 40°.45N×21°.53E, h14km±1km, ML2.6/7, Manual Solution by S.Koutrakis First location: 2019/06/11 12:57:09, This location: 2019/06/11 13:06:19 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*
*BEO **11** 12:56:14.1±0.4, 40°.52N×21°.68E, h22km±4km, ML2.3/10*
ISC 11 12:56:12.8±0.9**, 40°.47N**±0°.03×**21°.56E**±0°.02**, h14**km±8km**, n33, σ0s.96**/50**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZN	Kozani	0.23	135	P	Pb	12 56 18.3	-0.4
KZN				S	Sg	12 56 22.0	+0.6
KZN	Kozani	0.23	135	P	Pb	12 56 18.3	-0.4
KZN				S	Sg	12 56 22.4	+1.0
NEST	Nestorio	0.39	262	P	Pb	12 56 21.0	-0.5
NEST				S	Sb	12 56 26.7	-0.8
NEST	Nestorio	0.39	262	P	Pb	12 56 20.9	-0.7
NEST				S	Sb	12 56 26.9	-0.6
PENT	Pentalofos	0.42	230	P	Pb	12 56 21.5	-0.5
PENT	Pentalofos	0.42	230	P	Pb	12 56 21.5	-0.5
PENT				S	Sg	12 56 26.6	-0.5
KTI	Kastanea	0.43	100	P	Pb	12 56 21.8	-0.5
KPRO	Kipourio	0.54	196	P	Pg	12 56 22.9	-0.4
KPRO				S	Sb	12 56 31.8	+0.3
KPRO	Kipourio	0.54	196	P	Pg	12 56 23.3	-0.1
KPRO				S	Sg	12 56 30.7	+0.1
OHR	Ohrid	0.86	318	P	Pn	12 56 30.0	-0.5
OHR				S	Sn	12 56 42.7	-0.2
OHR	Ohrid	0.86	318	*e*Pg	Pn	12 56 30.2	-0.3
OHR				*e*Sg	Sn	12 56 43.5	+0.6
TYRN	Tyrnavos	0.92	146	P	Pg	12 56 29.8	-0.7
TYRN				S	Sn	12 56 43.6	-0.5
THL	Klokotos Trika	0.97	159	P	Pg	12 56 30.3	-1.2
THL				S	Sb	12 56 44.8	+0.8
JAN	Janina	0.98	214	P	Pg	12 56 30.6	-1.1
JAN	Janina	0.98	214	P	Pb	12 56 31.7	+0.2
JAN				S	Sg	12 56 43.2	-1.3
TETR	Tetrakomo, Epi	1.15	191	P	Pb	12 56 33.5	-0.9
TETR				S	Sb	12 56 48.8	-0.3
KNT	Kendrikon	1.23	55	P	Pg	12 56 35.9	-0.6
KNT				S	Sn	12 56 52.8	+0.9
KNT	Kendrikon	1.23	55	P	Pg	12 56 36.3	-0.1
IGT	Igoumenitsa	1.33	226	*e*Pg	Pg	12 56 39.8	+1.5
IGT				*e*Sg	Sg	12 57 00.1	+4.5
SOH	Sokhos	1.41	75	P	Pb	12 56 38.5	-0.4
PLG	Polygyros	1.44	93	P	Pb	12 56 39.0	-0.5
MAKR	Makrakomi, Fth	1.52	163	P	Pn	12 56 40.0	+0.5
AGG	Agios Georgios	1.56	157	P	Pn	12 56 40.4	+0.3
SRS	Serrai	1.67	67	*e*Pg	Pb	12 56 42.4	-0.9
SRS				*e*Sg	Sn	12 57 03.4	+0.5
BOSS	Bosilegrad	2.14	19	*e*Pn	Pn	12 56 48.1	+0.1
BARS	Barje	2.35	5	*e*Pn	Pn	12 56 51.6	+0.7
VTS	Vitosha	2.49	30	*e*Pn	Pn	12 56 52.5	-0.4
VTS				*e*Sg	Sb	12 57 29.4	+1.6
SELS	Selova	2.77	353	*e*Pn	Pn	12 56 57.2	+0.5
ZAPS	Zavoj	2.91	16	*e*Pn	Pn	12 56 57.9	-0.8
GOCS	Kraljevo Serbi	3.13	351	*e*Pn	Pn	12 57 00.9	-0.8
GRUS	Gruza	3.47	350	*e*Pn	Pn	12 57 05.6	-0.7
TRUS	Trudelj	3.85	348	*e*Pn	Pn	12 57 11.4	-0.1
TEKS	Tekeris	4.34	340	*e*Pn	Pn	12 57 18.2	-0.1

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*NEIC **11** 13:12:42.0±1.4, 14°.30S±0°.10×167°.55E±0°.05, h152km±9km, mb4.6/23, Error ellipse: s-maj=15.8km s-min=4.4km az=155.0*
*IDC **11** 13:12:47.1±2.0, 14°.45S×167°.38E, h198km±18km, mb3.7/9, mbtmp4.2/12, Error ellipse: s-maj=19.3km s-min=14.6km az=52.0*
ISC 11 13:12:44.1±0.6**, 14°.38S**±0°.07×**167°.43E**±0°.08**, h170**km**, n39, σ1s.30**/40**, mb4.3**/20**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.71	187	Pn	Pn	13 14 33.9	+0.1
DZM	Mont Dzumac	7.71	187	P	Pn	13 14 35.5	+1.8
	8.9nm,0.7s,baz=53,slow=12,SNR=14						
DZM				S	Sn	13 16 01.3	+1.0
	6.9nm,0.4s,baz=305,slow=22,SNR=2.9						
HNR	Honiara	8.82	303	Pn	Pn	13 14 45.4	-3.0
HNR	Honiara	8.82	303	P	Pn	13 14 51.1	+2.7
	54nm,0.8s,baz=207,slow=11,SNR=1.5						
HNR				S	Sn	13 16 30.3	+3.6
	28nm,0.7s,baz=125,slow=17,SNR=1.0						
MSVF	Nonsavu	10.74	110	P	Pn	13 15 17.1	+3.5
	3.5nm,1.0s,baz=307,slow=20,SNR=1.4						
LHI	Lord Howe Isla	18.71	203	P	P	13 16 48.4	-1.3
EIDS	Eidsvold	18.85	232	P	P	13 16 51.4	+0.1
PMG	Port Moresby	20.44	282	P	P	13 17 09.8	+1.3
	17nm,0.7s,baz=107,slow=20,SNR=2.0						
	17nm,0.7s						
PATS	Pohnpei	22.94	336	P	P	13 17 32.6	-1.0
RTZ	Ruatahuna	25.58	162	P	P	13 17 56.8	-0.8
RTZ				IAmb	IAmb	13 18 02.4	
	comp=Z,22nm,1.3s						
BKZ	Black Stump Fm	25.95	164	P	P	13 18 00.2	-0.7
BKZ				IAmb	IAmb	13 18 19.1	
	comp=Z,25nm,1.5s						
MRZ	Mangatainoka R	27.14	166	P	P	13 18 11.4	+0.1
MRZ				IAmb	IAmb	13 18 44.8	
	comp=Z,40nm,1.5s						
LTZ	Lake Taylor	28.61	173	P	P	13 18 24.4	-0.1
STKA	Stephens Creek	29.34	229	P	P	13 18 31.5	+0.4
STKA	Stephens Creek	29.34	229	P	P	13 18 31.4	+0.3
	comp=Z,3.2nm,0.6s,baz=54,slow=8.9,SNR=8.1						
	comp=Z,3.2nm,0.6s						
WR8	Warramunga Arr	31.91	255	P	P	13 18 53.6	-0.3
WR8				IAmb	IAmb	13 18 59.2	
	comp=Z,11nm,1.4s						
WB0	Warramunga Arr	32.00	256	P	P	13 18 54.3	-0.3
WB0				IAmb	IAmb	13 18 55.1	
	comp=Z,5.5nm,0.5s						
WRAB	Tennant Creek	32.05	255	P	P	13 18 54.6	-0.5
WRAB				IAmb	IAmb	13 19 03.9	
	comp=Z,8.9nm,1.3s						
WRA	Warramunga Arr	32.06	255	P	P	13 18 54.5	-0.7
WRA	Warramunga Arr	32.06	255	P	P	13 18 54.3	-0.9
	comp=Z,1.9nm,0.5s,baz=85,slow=9.0,SNR=56						
	comp=Z,1.9nm,0.5s						
AS31	Alice Springs	32.94	249	P	P	13 19 02.4	-0.5
ASAR	Alice Springs	32.95	249	P	P	13 19 02.5	-0.3
ASAR	Alice Springs	32.95	249	P	P	13 19 02.6	-0.2
	comp=Z,1.7nm,0.4s,baz=78,slow=9.7,SNR=122						
	comp=Z,1.7nm,0.4s						
BBOO	Buckleboo	33.92	232	P	P	13 19 10.4	-0.7
BBOO				IAmb	IAmb	13 19 46.8	
	comp=Z,30nm,1.4s						
KNRA	Kununurra	37.34	263	P	P	13 19 40.8	+0.4
KNRA				IAmb	IAmb	13 19 42.6	
	comp=Z,6.4nm,0.9s						
FITZ	Fitzroy Crossi	40.23	259	P	P	13 20 05.2	+0.6
VNDA	Vanda	63.22	181	P	P	13 22 53.6	-0.2
VNDA	Vanda	63.22	181	P	P	13 22 53.5	-0.2
	comp=Z,2.0nm,1.0s,baz=358,slow=7.4,SNR=7.5						
	comp=Z,2.0nm,1.0s						
SBA	Scott Base	63.49	180	P	P	13 22 56.4	+0.9
SBA				IAmb	IAmb	13 23 15.9	
	comp=Z,13nm,1.3s						
CASY	Casey	63.91	202	P	P	13 22 58.2	-0.3
CASY				IAmb	IAmb	13 23 00.1	
	comp=Z,12nm,1.3s						
QSPA	South Pole Qui	75.65	180	P	P	13 24 10.1	-0.3
QSPA				IAmb	IAmb	13 24 11.4	
	comp=Z,9.4nm,1.4s						
OHAK	Old Harbor	78.41	21	P	P	13 24 24.6	-0.9
OHAK				IAmb	IAmb	13 24 40.5	
	comp=Z,27nm,1.4s						
MAW	Mawson	82.27	202	P	P	13 24 46.2	+0.1
	comp=Z,3.1nm,0.9s,baz=117,slow=8.7,SNR=3.4						
	comp=Z,3.1nm,0.9s						
ILAR	Eielson Array	86.14	18	P	P	13 25 05.5	-0.1
	comp=Z,0.3nm,0.6s,baz=229,slow=4.9,SNR=5.5						
	comp=Z,0.3nm,0.6s						
V35K	Ketchikan	86.19	30	P	P	13 25 05.6	-0.4
BELA	Belgrano 2	87.06	175	P	P	13 25 08.3	-1.7
BELA				IAmb	IAmb	13 25 11.1	
	comp=Z,3.7nm,1.4s						
SNAA	Sanae	93.91	183	P	P	13 25 40.7	-1.4
	comp=Z,0.8nm,0.7s,baz=230,slow=7.2,SNR=7.5						
	comp=Z,0.8nm,0.7s						
MKAR	Makanchi Array	97.06	316	P	Pdif	13 25 56.9	+0.1
	comp=Z,0.2nm,0.5s,baz=115,slow=2.8,SNR=2.5						
	comp=Z,0.2nm,0.5s						
ARCES	ARCESS Array B	119.95	346	PKP	PKPdf	13 31 12.7	-1.2
	comp=Z,0.6nm,0.4s,baz=79,slow=2.6,SNR=8.6						

HEL 11 13:14:42.2±0.2**, 60°.22N**×**24°.57E, h0**km**, ML1.2, Explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MEF	Metsahovi	0.09	269	*e*P	Pg	13 14 43.4	-0.5
MEF	Metsahovi	0.09	269	PG	Pg	13 14 43.2	-0.7
HEL1	Helsinki	0.16	105	PG	Pg	13 14 45.0	-0.3
HEL1				SG	Sg	13 14 47.4	+0.1
NUR	Nurmijarvi	0.29	8	PG	Pg	13 14 47.1	-0.7
	baz=191						
NUR				SG	Sg	13 14 50.4	-1.2
PVF	Pernaja	0.72	62	PG	Pg	13 14 55.2	-0.7
PVF				MSG		13 15 04.8	
	comp=Z,2.0nm,0.2s						
FIA0	FINESS Array S	1.43	30	PG	Pn	13 15 07.8	-1.6
	baz=207						
FIA0				MSG		13 15 25.2	
	comp=Z,3.3nm,0.2s						
FIA0				SN	Sn	13 15 29.7	+0.8
MTSE	Matsula	1.56	195	SN	Sg	13 15 33.6	+1.5
RAF	Rauma	1.60	301	*e*P	Pn	13 15 10.2	-1.5
RAF	Rauma	1.60	301	PG	Pn	13 15 11.1	-0.6
RAF				MSG		13 15 30.1	
	comp=Z,1.7nm,0.2s						
RAF				SN	Sn	13 15 32.3	-0.8
KEF	Keuruu	1.96	4	*e*P	Pn	13 15 15.8	-0.9
KEF	Keuruu	1.96	4	PG	Pn	13 15 17.4	+0.8
	baz=182						
KEF				MSG		13 15 40.5	
	comp=Z,0.9nm,0.2s						
KEF				SG	Sb	13 15 43.1	-0.6
KPF	Kankaanpaa	2.03	324	PG	Pb	13 15 19.0	-0.8
	baz=139						
KPF				SG	Sb	13 15 46.3	+0.7
AAL	Aland	2.29	271	SG	Sb	13 15 52.8	-0.2
SUF	Sumiainen	2.62	16	MSG		13 15 59.4	
	comp=Z,0.6nm,0.2s						
SUF				SG	Sb	13 16 02.6	0.0

HEL 11 13:16:16.5±0.1**, 63°.80N**×**23°.24E, h0**km**, ML0.9, Explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OBF8	Ulkokalla	0.54	10	SN	Sg	13 16 34.3	+0.5
OBF8	Ulkokalla	0.54	10	PG	Pg	13 16 26.7	-0.1
OBF8				MSG		13 16 33.9	
	comp=Z,1.2nm,0.2s						
OBF8				SG	Sg	13 16 34.3	+0.5
VAF	Ylistaro	0.80	199	PG	Pg	13 16 30.6	-1.2
VAF				MSG		13 16 41.4	
	comp=Z,0.8nm,0.2s						
OBF0	Syolatti, Pyha	0.82	32	PB	Pg	13 16 31.7	-0.6
OBF0				MSG		13 16 42.2	
	comp=Z,0.6nm,0.2s						
OBF0				SB	Sg	13 16 43.3	+0.3
OUF	Merijarvi	0.87	48	PG	Pg	13 16 31.3	-1.8
OUF				MSG		13 16 43.2	
	comp=Z,0.9nm,0.2s						
UMAU	Umeaa	1.14	275	PG	Pg	13 16 36.7	-1.6
UMAU				SN	Sn	13 16 56.0	+0.1
OBF4	Vikkela, Lumij	1.30	38	PG	Pg	13 16 39.5	-1.9
OBF4				MSG		13 16 55.9	
	comp=Z,1.8nm,0.2s						
OBF4				SB	Sg	13 16 57.5	-0.8
SUF	Sumiainen	1.71	128	PN	Pn	13 16 47.2	-0.2
SUF				MSG		13 17 07.6	
	comp=Z,0.6nm,0.2s						
OUL	Oulu	1.73	41	PN	Pn	13 16 47.7	-0.1
OUL				SN	Sg	13 17 11.8	-0.1
HUSU	Husum	1.86	257	PG	Pn	13 16 49.9	+0.4
KPF	Kankaanpaa	2.05	196	PG	Pb	13 16 53.4	-1.1
KPF				SG	Sb	13 17 19.7	-0.8
KALU	Kalix	2.07	1	SG	Sb	13 17 20.7	-0.3
NIF	Nilsia	2.08	99	PG	Pb	13 16 54.0	-1.1
NIF				SG	Sb	13 17 21.0	-0.5
TOF	Tornio	2.33	11	MSG		13 17 25.4	
	comp=Z,0.5nm,0.2s						
TOF				SG	Sb	13 17 27.5	-1.2
FIA0	FINESS Array S	2.71	150	PG	Pn	13 17 02.3	+1.1
FIA0				MSG		13 17 36.3	
	comp=Z,0.4nm,0.2s						
HEF	Hetta	4.63	2	SN	Sn	13 18 16.7	-5.3

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*IDC **11** 13:52:36.8±1.5, 7°.16S×128°.85E, h0km, mb3.8/2, mbtmp4.3/6, ML4.5/4, Error ellipse: s-maj=45.5km s-min=22.6km az=97.0*
*NEIC **11** 13:52:51.5±1.2, 7°.68S±0°.09×128°.17E±0°.08, h169km±8km, mb4.3/5, Error ellipse: s-maj=13.9km s-min=10.3km az=151.0*
*DJA **11** 13:52:51.6±0.5, 8°S±6°×12°8E±°, h103km±22km, M4.6/7, mB5.3/3, mb4.7/5, MLv4.5/7, Mw(mB)4.7/3*
ISC 11 13:52:49.3±0.7**, 7°.66S**±0°.06×**128°.14E**±0°.05**, h142**km**, n38, σ2s.36**/44**, mb4.0**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.15	96	Pn	Pn	13 53 41.7	+3.4
SAUI	Saumlaki	3.15	96	P	Pn	13 53 41.0	+2.7
SAUI				S	Sn	13 54 17.5	+1.3
SOEI	Soe	4.36	241		Pn	13 53 57.1	+2.9
SOEI	Soe	4.36	241	P	Pn	13 53 57.9	+3.7
SOEI	Soe	4.36	241	S	Sn	13 54 49.2	+4.6
SOEI	Soe	4.36	241	P	Pn	13 53 57.4	+3.2
SOEI				S	Sn	13 54 43.1	-1.5
BATI	Baumata	5.09	240	Pn	Pn	13 54 06.5	+2.6
	30nm,0.3s,baz=30,slow=20,SNR=20						
BATI				Sn	Sn	13 55 04.9	+2.9
	28nm,0.3s,baz=96,slow=22,SNR=18						
	122nm,0.5s						
BATI	Baumata	5.09	240	P	Pn	13 54 07.5	+3.6
	0.7nm2μm169nm,0.6s						
BATI				S	Sn	13 54 58.8	-3.2
	0.7nm2μm169nm,0.6s						
DRS	Darwin Rock St	5.46	150	P	Pn	13 54 12.0	+3.2
DRS	Darwin Rock St	5.46	150	S	Sn	13 55 13.8	+2.9
MTN	Manton Dam	5.93	150		Pn	13 54 17.8	+2.7
MTN	Manton Dam	5.93	150	P	Pn	13 54 18.5	+3.4
SANI	Sanana	5.97	339	P	Pn	13 54 17.5	+1.9
FAKI	Fak Fak	6.24	41	Pn	Pn	13 54 18.8	-0.4
FAKI	Fak Fak	6.24	41	P	Pn	13 54 19.1	-0.1
EDFI	Ende, Flores	6.47	260	P	Pn	13 54 25.2	+2.8
	16nm,0.6s						
KDU	Kakadu	6.57	140	P	Pn	13 54 26.0	+2.4
KNRA	Kununurra	7.99	176		Pn	13 54 44.5	+1.9
WSI	Waingapu	8.00	255	P	Pn	13 54 43.5	+0.7
FITZ	Fitzroy Crossi	10.66	193		Pn	13 55 18.2	0.0
FITZ	Fitzroy Crossi	10.66	193	Pn	Pn	13 55 18.4	+0.1
	1.7nm,0.3s,baz=22,slow=9.9,SNR=85						
FITZ				Sn	Sn	13 57 13.8	-2.2
	2.6nm,0.3s,baz=348,slow=14,SNR=13						
	7.4nm,0.4s						
TOLI2	Tolitoli	11.39	320		Pn	13 55 30.2	+2.2
WB0	Warramunga Arr	13.48	154		Pn	13 55 54.9	-0.1
WRAB	Tennant Creek	13.61	154		Pn	13 55 56.3	-0.3
WRA	Warramunga Arr	13.61	154	Pn	Pn	13 55 55.0	-1.7
WRA	Warramunga Arr	13.61	154	Pn	Pn	13 55 55.1	-1.6
	1.9nm,0.3s,baz=337,slow=13,SNR=96						
WRA				Sn	Sn	13 58 18.5	-8.7
	1.4nm,0.3s,baz=334,slow=22,SNR=8.0						
	4.9nm,0.6s						
WR8	Warramunga Arr	13.69	154		Pn	13 55 57.5	-0.2
COEN	Coen	16.04	114		P	13 56 27.8	+0.1
COEN				IAmb	IAmb	13 57 08.9	
	comp=Z,13nm,1.0s						
AS31	Alice Springs	16.85	161	P	P	13 56 35.9	-0.7
ASAR	Alice Springs	16.85	161	P	P	13 56 35.9	-0.7
ASAR	Alice Springs	16.85	161	P	Pn	13 56 37.7	+0.8
	comp=Z,1.2nm,0.3s,baz=341,slow=11,SNR=135						
ASAR				S	S	13 59 40.9	-4.0
	comp=Z,1.6nm,0.7s,baz=345,slow=23,SNR=6.0						
	comp=Z,11nm,0.7s						
AS01	Alice Springs	16.86	161	P	Pn	13 56 39.4	+2.3
QIS	Mount Isa	16.96	140	P	Pn	13 56 41.4	+3.2
MORW	Morawa	24.15	207	P	P	13 57 51.0	-1.4
KSRS	Korea Array	44.88	360	P	P	14 00 49.2	-0.4
	comp=Z,0.6nm,0.5s,baz=177,slow=9.3,SNR=5.1						
	comp=Z,0.6nm,0.5s						
USRK	Ussuriysk Ar.	51.73	4	P	P	14 01 41.4	-0.6
	comp=Z,0.8nm,0.6s,baz=199,slow=8.1,SNR=4.1						
	comp=Z,0.8nm,0.6s						
EVN	Everest	53.36	313	P	P	14 01 54.1	-1.1
EVN				IAmb	IAmb	14 02 10.8	
	comp=Z,4.6nm,1.2s						
N17K	Nushagak Hills	89.17	28	P	P	14 05 27.4	-1.2
N17K				IAmb	IAmb	14 05 28.6	
	comp=Z,5.5nm,1.1s						

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*IDC **11** 13:56:07.2±0.7, 37°.35N×96°.57E, h0km, mb3.9/16, mbtmp3.9/21, ML3.8/5, MS3.3/24, Error ellipse: s-maj=22.6km s-min=12.8km az=43.0*
*MOS **11** 13:56:07.4±1.1, 37°.38N×96°.44E, h12km, mb4.5/10, Error ellipse: s-maj=9.6km s-min=4.6km az=40.8*
*BJI **11** 13:56:08.6, 37°.33N×96°.55E, h11km, mB4.3/1, mb4.5/24, ML4.1/12, Ms3.9/24, Ms7 3.7/23*
*NEIC **11** 13:56:09.3±1.1, 37°.36N±0°.08×96°.49E±0°.08, h10km±2km, mb4.5/35, Error ellipse: s-maj=16.7km s-min=5.2km az=143.0*
ISC 11 13:56:09.2±0.4**, 37°.39N**±0°.04×**96°.51E**±0°.03**, h11**km**, n161, σ1s.32**/154**, mb4.4**/40**, MS3.3**/20**, 5C-7D, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOMU	GeErMu	1.81	229	Pg	Pb	13 56 41.1	-1.5
GOMU				Sg	Sn	13 57 03.3	-0.5
GTA	Gaotai	3.29	51	Pn	Pn	13 57 02.9	+2.1
GTA				Pg	Pg	13 57 09.9	-2.3
GTA				Sn	Sb	13 57 44.5	-3.2
GTA				Sg	Sg	13 57 53.6	-1.2
GTA				smax	smax		
	comp=N,440nm,0.8s						
GTA				smax	smax		
	comp=E,340nm,1.0s						
GTA				LR	LR		
	comp=N,2μm,10.9s						
GTA				LR	LR		
	comp=E,2μm,11.6s						
GTA				LR	LR		
	comp=Z,1μm,9.8s						
LZH	Lanzhou	6.03	100	Pn	Pn	13 57 39.5	+1.0
LZH				Pg	Pb	13 57 57.7	+3.3
LZH				Sg	Sg	13 59 18.4	-4.5
LZH				smax	smax		
	comp=N,370nm,1.4s						
LZH				smax	smax		
	comp=E,450nm,1.4s						
LZH				LR	LR		
	comp=E,1μm,6.5s						
LZH				LR	LR		
	comp=Z,750nm,6.9s						

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WMQ   Urumqi               9.28 317  P         Pn         13 58 24.8 +1.8
WMQ                                  S         Sn         14 00 09.8 +2.4
WMQ                                  pmax      pmax
      comp=Z,55nm,0.7s
WMQ                                  LR        LR
      comp=N,710nm,9.5s
WMQ                                  LR        LR
      comp=E,570nm,8.1s
ZIRO  ZIRO                10.09 194 eP         Pn         13 59 10.8  +37
ZIRO                                eS         Sn         14 00 57.5  +30
XAN   Xi'an               10.63 105  P         Pn         13 58 30.2  -11
XAN                                  S         Sn         14 00 25.3  -15
XAN                                  LR        LR
      comp=N,530nm,9.3s
XAN                                  LR        LR
      comp=E,700nm,8.6s
XAN                                  LR        LR
      comp=Z,650nm,10.3s
BTO   Baotou              10.99  69 eP         Pn         13 58 46.2 -0.3
BTO                                  pP                   13 58 50.7
BTO                                  sP                   13 58 52.4
BTO                                  S         Sn         14 00 48.5 -1.0
BTO                                  LR        LR
      comp=Z,1µm,13.1s
BTO                                  LR        LR
      comp=Z,1µm,13.9s
PZH   PanZhiHua           11.73 156  P         Pn         13 58 59.8 +3.2
GTK   Tadong              12.06 216 eP         P          13 59 36.7  +23
GTK                                  IAML                 14 01 44.1
      comp=E,59nm,0.4s
GTK                                 eS         Sn         14 01 55.9  +40
HHC   Hu-ho-hao-te        12.19  69 eP         Pn         13 59 05.3 +2.4
HHC                                  pmax      pmax
      comp=E,25nm,0.5s
SHL   Shillong            12.43 200 eP         P          13 59 40.7  +22
SHL                                  IAML                 14 01 58.6
      comp=E,42nm,0.4s
SHL                                 eS         Sn         14 02 05.0  +40
SONM  Songino Array       12.71  32  Pn        Pn         13 59 10.6 +0.6
SONM  Songino Array       12.71  32  Pn        Pn         13 59 08.8 -1.2
      comp=E,1.0nm,0.3s,baz=218,slow=15,SNR=18
SONM                                 Sn        Sn         14 01 29.1 -2.4
      comp=E,0.1nm,0.3s,baz=213,slow=23,SNR=1.7
SONM                                 Lg        Lg         14 02 44.5
      comp=E,0.1nm,0.3s,baz=233,slow=29,SNR=2.5
SONM                                 LR        LR         14 04 32.3
      comp=E,169nm,19.1s,baz=229,slow=40
      comp=E,4.0nm,0.5s
SONM  Songino Array       12.71  32  P         Pn         13 59 10.6 +0.6
ENH   Enshi               12.91 120            Pn         13 59 11.0 -1.7
ULN   Ulaanbaatar         13.02  33⇓eP         Pn         13 59 15.3 +1.1
GYA   Guiyang             13.89 139 ⇑P         Pn         13 59 27.6 +1.5
GYA                                  S         Sn         14 01 59.5 -0.9
GYA                                  pmax      pmax
      comp=E,10.0nm,1.0s
GYA                                  pmax      pmax
      comp=E,42nm,3.1s
GYA                                  LR        LR
      comp=E,290nm,10.1s
GYA                                  LR        LR
      comp=E,190nm,7.7s
WUS   Wushi               13.92 291            Pn         13 59 25.1 -1.4
MK31  Makanchi Array      14.11 316deP         Pn         13 59 27.3 -1.7
MKAR  Makanchi Array      14.11 316  Pn        Pn         13 59 26.7 -2.3
      comp=E,0.8nm,0.3s,baz=125,slow=14,SNR=22
MKAR                                 Sn        Sn         14 02 01.2 -4.4
      comp=E,0.5nm,0.3s,baz=122,slow=23,SNR=5.3
MKAR                                 Lg        Lg         14 03 40.5
      baz=138,slow=28
MKAR                                 LR        LR         14 04 42.6
      comp=E,72nm,19.7s,baz=120,slow=36
      comp=E,2.1nm,0.5s
MKAR  Makanchi Array      14.11 316  P         Pn         13 59 26.8 -2.2
SHLS  Shalkode            14.22 299 eP         Pn         13 59 25.6 -5.1
SHLS  Shalkode            14.22 299 eP         Pn         13 59 25.7 -5.0
PDGK  Podgornoye          14.26 300  P         Pn         13 59 28.9 -2.3
MAKZ  Makanchi            14.29 316            Pn         13 59 29.5 -2.0
MAKZ  Makanchi            14.29 316  P         Pn         13 59 29.5 -2.0
UZB   Uzynbulak           14.53 299 eP         Pn         13 59 34.3 -0.5
UZB   Uzynbulak           14.53 299 eP         Pn         13 59 34.3 -0.5
MOY   Mondy               14.62  11 eP         P          13 59 45.2 +2.8
MOY                                  pmax      pmax
      comp=Z,22nm,1.6s
PRZ   Przheval'sk         14.79 296            Pn         13 59 37.8 -0.6
PRZ   Przheval'sk         14.79 296  P         Pn         13 59 37.8 -0.6
KPKS  Kokpek              14.86 300 eP         Pn         13 59 38.6 -0.7
KPKS  Kokpek              14.86 300 eP         Pn         13 59 38.6 -0.7
SATY  Saty                14.93 298 eP         Pn         13 59 39.5 -0.8
SATY                                 pmax      pmax
      comp=Z,7.0nm,0.6s
SATY  Saty                14.93 298 eP         Pn         13 59 39.6 -0.8
      comp=Z,7.2nm,0.6s
ZHN   Zhinishke           14.94 298 eP         Pn         13 59 39.9 -0.6
ZHN   Zhinishke           14.94 298 eP         Pn         13 59 39.1 -1.4
TARG  Taragay, Kyrgy      15.06 292            Pn         13 59 40.6 -1.7
TARG                                 IAmb      IAmb       13 59 52.0
      comp=Z,14nm,0.6s
TARG  Taragay, Kyrgy      15.06 292  P         Pn         13 59 40.6 -1.7
TARG                                 pmax      pmax
      comp=Z,14nm,0.6s
TDK   Taldyqorghan        15.59 305 eP         Pn         13 59 47.9 -0.9
TDK                                  pmax      pmax
      comp=Z,23nm,1.5s
TDK   Taldyqorghan        15.59 305 eP         Pn         13 59 47.9 -0.9
      comp=Z,24nm,1.5s
KDJ   Kajisay             15.59 294            Pn         13 59 47.6 -1.5
KDJ                                  IAmb      IAmb       13 59 55.9
      comp=Z,19nm,0.6s
KDJ   Kajisay             15.59 294  P         Pn         13 59 47.6 -1.5
KDJ                                  pmax      pmax
      comp=Z,19nm,0.6s
PTH   Pithoragarh         15.67 245 eP         P          14 00 24.4  +30
PTH                                 eS         S          14 03 21.2  +22
PTH                                  IAML                 14 03 39.6
      comp=E,20nm,0.2s
PTH                                  IAML                 14 03 39.6
      comp=N,29nm,0.1s
MDOK  Medeo               15.92 297 eP         Pn         13 59 52.2 -1.1
MDOK  Medeo               15.92 297 eP         Pn         13 59 52.3 -1.1
AAA   Alma-Ata            16.03 297 eP         Pn         13 59 54.0 -0.6
AAA   Alma-Ata            16.03 297 eP         Pn         13 59 54.0 -0.6
KSH   Kashi               16.23 284  P         P          13 59 59.0 -1.4
KSH                                  sP        sP         14 00 11.4 +5.0
KSH                                  pmax      pmax
      comp=N,23nm,0.6s
KSH                                  LR        LR
      comp=N,970nm,21.6s
KSH                                  LR        LR
      comp=N,210nm,12.4s
NRN   Naryn               16.35 291            Pn         13 59 57.6 -1.4
NRN   Naryn               16.35 291  P         Pn         13 59 57.6 -1.4
NRN                                  pmax      pmax
      comp=Z,15nm,0.9s
BOOM  Boomskoye usch      16.57 294  Pn        Pn         13 59 59.4 -2.2
BOOM                                 IAmb      IAmb       14 00 37.0
      comp=Z,38nm,1.2s
BOOM  Boomskoye usch      16.57 294  P         Pn         13 59 59.4 -2.2
BOOM                                 pmax      pmax
      comp=Z,39nm,1.2s
DHRM  DHARAMSHALA         17.36 259 eP         P          14 00 46.2  +33
DHRM                                eS         S          14 03 60.0  +26
AAK   Ala-Archa           17.64 294  Pn        Pn         14 00 14.2 -0.9
AAK   Ala-Archa           17.64 294  P         Pn         14 00 14.2 -0.9
      comp=Z,0.6nm,0.3s,baz=127,slow=10,SNR=7.3
AAK                                  LR        LR         14 07 47.9
      comp=Z,182nm,21.9s,baz=115,slow=40
      comp=Z,3.7nm,0.6s
AAK   Ala-Archa           17.64 294⇑eP         Pn         14 00 14.9 -0.2
ARLS  Aral                17.65 292  P         Pn         14 00 14.1 -1.1
ARLS                                 pmax      pmax
      comp=Z,14nm,0.7s
SGDS  Sogindy             17.70 297 eP         Pn         14 00 15.3 -0.4
ZALV  Zalesovo Beam       18.42 338  P         P          14 00 23.4 -0.9
ZALV  Zalesovo Beam       18.42 338  P         P          14 00 23.6 -0.7
      comp=Z,0.5nm,0.3s,baz=155,slow=12,SNR=6.6
ZALV                                 Lg        Lg         14 05 53.8
      comp=Z,0.1nm,0.3s,baz=86,slow=40,SNR=1.6
ZALV                                 LR        LR         14 07 43.4
      comp=Z,72nm,18.5s,baz=172,slow=38
      comp=Z,0.3nm,0.3s
KURBB Kurchatov Arra      18.43 322  P         P          14 00 23.3 -1.2
      comp=Z,0.2nm,0.3s,baz=132,slow=12,SNR=6.2
KURBB                                Lg        Lg         14 05 57.6
      baz=118,slow=31,SNR=4.6
      comp=Z,1.1nm,0.5s
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KURK  Kurchatov           18.45 322  P         Pn         14 00 24.6 -0.1
KURK  Kurchatov           18.45 322⇓eP         Pn         14 00 25.5 +0.8
BTLS  Baital              18.51 301 eP         P          14 00 24.6 -0.8
BTLS  Baital              18.51 301 eP         P          14 00 24.6 -0.8
CMAR  Chiang Mai Arr      18.98 173  P         Pn         14 00 31.3 -0.2
      comp=Z,0.7nm,0.9s,baz=2.4,slow=10,SNR=2.8
CMAR                                 LR        LR         14 08 18.3
      comp=Z,45nm,20.4s,baz=175,slow=39
NJ2   Nanjing             19.11 100 eP         Pn         14 00 32.3 -0.6
NJ2                                  pmax      pmax
      comp=Z,7.0nm,0.6s
NIL   Nilore              19.29 266  P         P          14 00 32.6 -1.4
NIL   Nilore              19.29 266  P         P          14 00 32.6 -1.4
NIL                                  pmax      pmax
      comp=Z,15nm,1.1s
ARK   Arkit               19.40 291  P         Pn         14 00 37.7 +1.2
DZA   Taraz               19.98 294 eP         P          14 00 41.6  0.0
DZA   Taraz               19.98 294 eP         P          14 00 41.6  0.0
KK31  Karatay Array       20.61 294            P          14 00 48.3 -0.1
KK31  Karatay Array       20.61 294 i P        P          14 00 49.0 +0.6
KKAR  Karatay Array       20.61 294            P          14 00 48.1 -0.3
KKAR  Karatay Array       20.61 294  P         P          14 00 48.1 -0.3
GAR   Garm                20.63 283  P         P          14 00 48.2 -0.6
GAR                                  IAmb      IAmb       14 00 51.6
      comp=Z,21nm,0.9s
BRLS  Borolday            21.09 294 eP         P          14 00 54.5 +0.9
BRLS  Borolday            21.09 294 eP         P          14 00 54.6 +0.9
CHM   Chimkent            21.19 292 eP         P          14 00 54.4 -0.3
CHM                                  pmax      pmax
      comp=Z,5.0nm,0.2s
CHM   Chimkent            21.19 292 eP         P          14 00 54.5 -0.3
      comp=Z,4.5nm,0.2s
BRZS  Berezniki           21.23 314 eP         P          14 00 54.7 -0.3
BRZS  Berezniki           21.23 314 eP         P          14 00 54.7 -0.3
SIMJ  Simiganj            21.68 282            P          14 00 59.7 -0.4
SIMJ                                 IAmb      IAmb       14 01 03.6
      comp=Z,16nm,0.8s
QIZ   Qiongzhong          21.70 144  P         P          14 01 00.0 -0.2
QIZ                                  S         S          14 05 00.0 -0.4
QIZ                                  LR        LR
      comp=Z,240nm,13.3s
QIZ                                  LR        LR
      comp=Z,190nm,16.7s
DZET  Dzherino            21.80 282  P         P          14 01 01.6 +0.2
DZET                                 pmax      pmax
      comp=Z,50nm,0.7s
KBL   Kabul               22.38 271            P          14 01 07.0 -0.8
KBL                                  IAmb      IAmb       14 01 13.3
      comp=Z,12nm,0.8s
KBL   Kabul               22.38 271  P         P          14 01 07.0 -0.8
KBL                                  pmax      pmax
      comp=Z,12nm,0.8s
BVAR  Borovoye Array      23.95 319  P         P          14 01 24.2 +0.9
      comp=Z,2.0nm,0.6s,baz=119,slow=9.9,SNR=11
BVAR                                 LR        LR         14 10 51.7
      comp=Z,113nm,18.1s,baz=113,slow=37
      comp=Z,2.0nm,0.6s
BRVK  Borovoye            24.03 319  P         P          14 01 24.7 +0.7
BRVK  Borovoye            24.03 319⇓eP         P          14 01 25.1 +1.1
BRVK                                 pmax      pmax
      comp=Z,9.0nm,0.8s
BNX   BinXian             24.45  60 ⇑P         P          14 01 29.5 +1.5
BNX                                  pmax      pmax
      comp=Z,2.0nm,0.3s
TJN   Taejon              24.65  83  P         P          14 01 31.9 +2.1
KS19  Wonju Array Si      24.84  80  P         P          14 01 32.5 +0.9
KSAR  Wonju Array Be      24.86  80  P         P          14 01 32.4 +0.6
KSAR  Wonju Array Be      24.86  80  P         P          14 01 32.4 +0.6
KSRS  Korea Array         24.89  80  P         P          14 01 32.4 +0.4
      comp=Z,6.4nm,0.6s,baz=275,slow=9.4,SNR=22
      comp=Z,6.4nm,0.6s
KLR   Kul'dur             27.98  54  LR        LR         14 14 11.7
      comp=Z,77nm,20.5s,baz=221,slow=39
JNU   Nakatsue            28.29  88  LR        LR         14 13 26.6
      comp=Z,35nm,20.4s,baz=310,slow=37
ARTI  Arti                31.68 319  LR        LR         14 15 37.1
      comp=Z,47nm,20.8s,baz=155,slow=37
ARTI  Arti                31.68 319c iP        P          14 02 33.7 +1.2
ARTI                                                      14 03 33.5
ARTI                                 S         S          14 07 43.4 +1.9
ARTI                                 SS        SnSn       14 09 29.2 +1.6
ARTI                                 pmax      pmax
      comp=Z,6.0nm,1.6s
YAK   Yakutsk             32.05  29  LR        LR         14 15 27.2
      comp=Z,28nm,20.6s,baz=216,slow=36
MJAR  Matsushiro Arr      33.13  79  LR        LR         14 16 49.5
      comp=Z,43nm,18.1s,baz=275,slow=38
ASAJ  Asahikawa           35.18  64  LR        LR         14 18 00.2
      comp=Z,73nm,19.8s,baz=166,slow=37
KIRV  Kirov               36.95 320  LR        LR         14 19 36.6
      comp=Z,44nm,18.3s,baz=104,slow=38
BELG  Belogornoye         36.98 310  LR        LR         14 18 57.4
      comp=Z,71nm,18.8s,baz=58,slow=37
BELG  Belogornoye         36.98 310⇑eP         P          14 03 22.1 +3.7
BELG                                 pmax      pmax
      comp=Z,1.0nm,0.7s
TIXI  Tiksi               38.12  16  LR        LR         14 19 47.6
      comp=Z,35nm,19.4s,baz=201,slow=37
GNI   Garni               39.99 290  LR        LR         14 24 31.7
      comp=Z,27nm,19.1s,baz=64,slow=43
KLMR  Klimovskoe          42.30 322 eP         P          14 04 02.5  0.0
KLMR                                 pmax      pmax
      comp=Z,10.0nm,1.0s
OBN   Obninsk             43.60 314 eP         P          14 04 14.0 +0.8
OBN                                  pmax      pmax
      comp=Z,5.0nm,0.9s
PETK  Petropavlovsk-      44.45  49  P         P          14 04 19.6 -0.5
      comp=Z,2.3nm,1.0s,baz=243,slow=9.5,SNR=2.1
      comp=Z,2.3nm,1.0s
BR131 Keskin Array S      48.32 293            P          14 04 51.3 +0.5
BR131                                IAmb      IAmb       14 04 52.3
      comp=Z,2.6nm,0.7s
BR131 Keskin Array S      48.32 293deP         P          14 04 51.7 +0.9
BRTR  Keskin Array B      48.32 293  P         P          14 04 51.0 +0.2
BRTR  Keskin Array B      48.32 293  P         P          14 04 51.0 +0.2
      comp=Z,1.6nm,0.6s,baz=100,slow=6.8,SNR=11
      comp=Z,1.6nm,0.6s
BILL  Bilibino            48.40  28⇓eP         P          14 04 50.8 -0.1
BILL                                 pmax      pmax
      comp=Z,4.0nm,2.0s
AKASG Malin Array Be      48.53 308  P         P          14 04 52.3 +0.2
      comp=Z,0.7nm,0.4s,baz=59,slow=27,SNR=4.1
AKASG                                LR        LR         14 25 30.3
      comp=Z,32nm,20.1s,baz=52,slow=36
      comp=Z,0.7nm,0.4s
AKBB  Malin Array Si      48.53 308⇓eP         P          14 04 55.1 +3.0
AKBB                                 pmax      pmax
      comp=Z,2.0nm,0.5s
FIA1  FINESS Array S      48.81 323  P         P          14 04 54.7 +0.6
FINES FINESS Array B      48.82 323  P         P          14 04 54.5 +0.4
FINES FINESS Array B      48.82 323  P         P          14 04 54.7 +0.6
      comp=Z,1.6nm,0.6s,baz=97,slow=10,SNR=7.0
FINES                                LR        LR         14 26 22.1
      comp=Z,35nm,21.6s,baz=274,slow=37
      comp=Z,1.6nm,0.6s
ARCES ARCESS Array B      48.91 334  P         P          14 04 55.4 +0.6
      comp=Z,2.9nm,0.9s,baz=76,slow=10,SNR=3.7
      comp=Z,2.9nm,0.9s
EIL   Elat                51.10 280  LR        LR         14 32 13.3
      comp=Z,48nm,18.0s,baz=116,slow=42
SPB2  Spitsbergen Ar      51.69 345  P         P          14 05 16.9 +1.1
SPB2                                 IAmb      IAmb       14 05 22.6
      comp=Z,8.5nm,0.9s
SPITS Spitsbergen Ar      51.70 345  P         P          14 05 16.3 +0.6
      comp=Z,2.0nm,0.7s,baz=62,slow=3.9,SNR=1.5
      comp=Z,2.0nm,0.7s
MLR   Muntele Rosu        51.96 303  P         P          14 05 18.3  0.0
MLR   Muntele Rosu        51.96 303  P         P          14 05 18.3  0.0
MLR                                  pmax      pmax
      comp=Z,3.0nm,0.7s
KWP   Kalwaria Pacla      52.85 308  P         P          14 05 26.3 +1.6
KWP                                  pmax      pmax
      comp=Z,15nm,0.7s
OJC   Ojcow               54.48 310  P         P          14 05 37.5 +0.9
OJC   Ojcow               54.48 310  P         P          14 05 37.5 +0.9
HFS   Hagfors             55.02 323  P         P          14 05 39.8 -0.5
      comp=Z,1.5nm,0.7s,baz=107,slow=9.9,SNR=4.0
HFS                                  LR        LR         14 29 28.5
      comp=Z,27nm,21.0s,baz=122,slow=36
      comp=Z,1.5nm,0.7s
NB2   NORSAR Subarra      55.94 324  P         P          14 05 47.0 -0.1
      comp=Z,0.7nm,0.6s,baz=72,slow=7.4
NOA   NORSAR Array B      55.94 324  P         P          14 05 46.9 -0.2
      comp=Z,0.5nm,0.6s,baz=72,slow=7.2,SNR=4.3
NOA                                  LR        LR         14 30 22.9
      comp=Z,28nm,18.7s,baz=60,slow=37
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      comp=Z,0.5nm,0.6s
VRAC  Vranov              56.74 310  LR        LR         14 31 08.3
      comp=Z,40nm,20.4s,baz=65,slow=37
GERES GERESS Array B      58.68 310  P         P          14 06 06.4 -0.3
      comp=Z,0.3nm,0.3s,baz=297,slow=0.7,SNR=1.8
      comp=Z,0.3nm,0.3s
C18K  Utukok River        59.96  24  P         P          14 06 15.5 +0.4
C18K                                 IAmb      IAmb       14 06 22.0
      comp=Z,4.6nm,1.2s
C19K  Lookout Ridge       60.28  24  P         P          14 06 17.6 +0.3
C19K                                 IAmb      IAmb       14 06 43.4
      comp=Z,8.5nm,1.4s
D22K  Ayikyak River       62.55  22  P         P          14 06 32.9 +0.3
D22K                                 IAmb      IAmb       14 06 42.1
      comp=Z,2.5nm,0.8s
TOLK  Toolik Lake Re      63.62  22  P         P          14 06 40.1 +0.4
IMAR  Indian Mountai      63.79  25  P         P          14 06 40.0 -0.9
COLD  Coldfoot            64.25  23  P         P          14 06 44.3 +0.4
COLD                                 IAmb      IAmb       14 06 53.7
      comp=Z,2.4nm,0.8s
E24K  Your Creek          64.28  22  P         P          14 06 44.5 +0.4
E24K                                 IAmb      IAmb       14 06 50.7
      comp=Z,7.1nm,1.4s
C27K  Jago River          64.67  20  P         P          14 06 47.2 +0.7
G24K  Hadweenzic Riv      65.43  23  P         P          14 06 52.1 +0.5
G24K                                 IAmb      IAmb       14 07 01.6
      comp=Z,4.5nm,1.4s
D27M  Malcolm River       65.65  19            P          14 06 53.5 +0.4
D27M                                 IAmb      IAmb       14 07 02.4
      comp=Z,2.7nm,0.8s
BMAR  Burnt Mountain      65.84  22  P         P          14 06 55.0 +0.7
COLA  College             66.44  25 i P        P          14 06 57.8 -0.3
COLA                                 pmax      pmax
      comp=Z,10.0nm,2.0s
ILAR  Eielson Array       66.83  25  P         P          14 06 59.8 -0.9
      comp=Z,0.4nm,0.6s,baz=306,slow=5.6,SNR=6.5
      comp=Z,0.4nm,0.6s
E29M  Blow River          67.05  19  P         P          14 07 02.4 +0.4
E29M                                 IAmb      IAmb       14 07 11.3
      comp=Z,3.6nm,0.8s
WRA   Warramunga Arr      67.25 141  P         P          14 07 02.4 -1.4
      comp=Z,0.9nm,1.0s,baz=335,slow=6.4,SNR=5.9
      comp=Z,0.9nm,1.0s
H27K  Steamboat Moun      67.55  22  P         P          14 07 05.9 +0.7
H27K                                 IAmb      IAmb       14 07 15.0
      comp=Z,3.0nm,0.7s
H29M  Whitestone          68.47  21  P         P          14 07 10.8 -0.1
G31M  Satah River         69.07  19  P         P          14 07 14.3 -0.3
BCAR  Beaver Creek A      69.65  24  P         P          14 07 18.6 +0.2
ASAR  Alice Springs       70.20 144  P         P          14 07 21.4 -0.7
      comp=Z,0.7nm,0.7s,baz=331,slow=6.3,SNR=13
      comp=Z,0.7nm,0.7s
ESDC  Sonseca Array       74.17 308  P         P          14 07 46.2 +0.2
      comp=Z,0.5nm,0.6s,baz=68,slow=5.1,SNR=2.2
ESDC                                 LR        LR         14 42 05.4
      comp=Z,44nm,18.0s,baz=120,slow=37
      comp=Z,0.5nm,0.6s
R32K  Eaglecrest          75.60  25  P         P          14 07 53.9 +0.1
YKA   Yellowknife Ar      77.35  14  P         P          14 08 03.1 -0.5
      comp=Z,0.3nm,0.8s,baz=306,slow=11,SNR=4.4
      comp=Z,0.3nm,0.8s
SCHQ  Schefferville       87.03 350  LR        LR         14 49 24.1
      comp=Z,24nm,19.5s,baz=261,slow=37
```

IDG **11** *14:08:16.0, 59°.82N×27°.07E, h0km, M3.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*
HEL **11** *14:08:17.2±0.1, 59°.79N×27°.45E, h0km, ML1.8, Explosion*
EST **11** *14:08:17.7±0.1, 59°.81N×27°.40E, h0km, ML1.8(HEL), Explosion*
IDC **11** *14:08:21.9±2.1, 59°.98N×26°.91E, h0km, mbtmp3.2/3, ML2.2/3, Error ellipse: s-maj=17.8km s-min=10.1km az=117.0*
ISC 11 14:08:15.4±0.8**, 59°.82N**±0°.02×**27°.43E**±0°.03**, h0km, n28, σ1s.34**/46**, Baltic States-Belarus-Northwestern Russia**

```
Code  Station Name         Δ°   AZ°   Phase ID             Time       Res
                                     Op        ISC        h  m  s    ISC
EE04  Vaivara Sinima       0.51 153 eP         Pb         14 08 26.8 -0.3
EE04                                eS         Sg         14 08 33.2 +1.6
VJF   Virojoki             0.72   5 eP         Pb         14 08 30.9 +0.1
VJF                                 eS         Sb         14 08 40.8 -0.4
PVF   Pernaja              1.06 313 eP         Pb         14 08 37.0 +0.4
PVF                                 eS         Sb         14 08 50.9 -0.2
EE03  Tooma soojaam,       1.12 212 eP         Pb         14 08 37.7 +0.1
EE03                                eS         Sg         14 08 51.6 +0.3
HEL1  Helsinki             1.33 287 eS         Sg         14 08 57.9  0.0
HEL1                                 MSG                  14 09 00.7
      comp=Z,6.3nm,0.2s
VSU   Vasula               1.41 195 eP         Pn         14 08 41.8 -0.5
VSU   Vasula               1.41 195 eP         Pn         14 08 42.1 -0.2
VSU                                 eS         Sg         14 08 60.0 -0.7
NUR   Nurmijarvi           1.55 298 ePG        Pg         14 08 45.4 +0.3
NUR                                 eS         Sn         14 09 04.9  0.0
NUR                                  MSG                  14 09 09.3
      comp=Z,13nm,0.2s
MEF   Metsahovi            1.57 286 eP         Pb         14 08 45.5 +0.3
MEF   Metsahovi            1.57 286 ePG        Pg         14 08 45.7 +0.3
MEF                                 eS         Sg         14 09 06.1 +0.3
MEF                                  MSG                  14 09 11.0
      comp=Z,6.2nm,0.1s
EE08  Sarghaua, Vand       1.62 225 eP         Pb         14 08 46.5 +0.4
EE08                                eS         Sn         14 09 06.5 -0.3
FIA0  FINESS Array S       1.76 338 eP         Pb         14 08 48.5 +0.1
FIA0                                eSN        Sg         14 09 12.7 +1.0
FIA0                                 MSG                  14 09 15.3
      comp=Z,8.0nm,0.2s
FIA1  FINESS Array S       1.76 338 eSN        Sg         14 09 12.7 +0.9
FIA1                                 MSG                  14 09 15.3
      comp=Z,5.9nm,0.2s
FINES FINESS Array B       1.76 338  Pg        Pb         14 08 48.5 +0.1
      comp=Z,0.7nm,0.3s,baz=161,slow=17,SNR=32
FINES                                Lg        Lg         14 09 10.0
      comp=Z,1.8nm,0.3s,baz=162,slow=26,SNR=15
RUF   Ruokolahti           1.77  24 eP         Pb         14 08 48.7 -0.1
RUF                                 eSG        Sg         14 09 12.9 +0.5
RUF                                  MSG                  14 09 16.0
      comp=Z,13nm,0.2s
EE07  Piusa Caves, O       1.99 179 ePG        Pg         14 08 53.4 -0.1
EE07                                eSG        Sg         14 09 19.2  0.0
TVF   Tvarminne            2.11 272 ePG        Pb         14 08 55.0 +0.6
TVF                                 eSB        Sb         14 09 21.6 +0.5
TVF                                  MSG                  14 09 23.9
      comp=Z,4.6nm,0.1s
MTSE  Matsula              2.16 241 eP         Pn         14 08 53.8 +1.2
MTSE  Matsula              2.16 241 ePG        Pb         14 08 55.8 +0.5
MTSE                                eSG        Sg         14 09 24.5 -0.2
KAF   Kangasniemi          2.36 347 eP         Pb         14 08 58.0 -0.8
KAF                                 eSG        Sg         14 09 31.1 -0.1
EE06  Soera, Palade,       2.49 252 ePG        Pb         14 09 01.5 +0.5
EE06                                eSB        Sb         14 09 32.9 +0.7
KEF   Keuruu               2.66 333 eP         Pb         14 09 02.7 -1.1
KEF   Keuruu               2.66 333 ePB        Pb         14 09 03.9  0.0
KEF                                 eSB        Sb         14 09 36.5 -0.5
SUF   Sumiainen            2.97 349 ePB        Pb         14 09 08.9 -0.2
SUF                                 eSB        Sb         14 09 46.1 +0.2
RAF   Rauma                3.05 296 eP         Pn         14 09 07.1 +2.2
HFS   Hagfors              6.90 279  Pn        Pn         14 09 58.3 +0.7
      comp=Z,0.1nm,0.3s,baz=184,slow=36,SNR=1.8
HFS                                  Sn        Sn         14 11 09.1 -7.7
      comp=Z,0.1nm,0.3s,baz=192,slow=40,SNR=2.4
HFS                                  Lg        Lg         14 11 48.0
      comp=Z,0.2nm,0.3s,baz=92,slow=31,SNR=3.5
      comp=Z,2.6nm,1.0s
NOA   NORSAR Array B       8.11 286  Pn        Pn         14 10 14.8 +0.5
      baz=104,slow=0.5,SNR=3.8
      comp=Z,0.9nm,1.1s
ARCES ARCESS Array B       9.79 356  Pn        Pn         14 10 38.1 +0.9
      comp=Z,0.1nm,0.3s,baz=173,slow=14,SNR=9.6
      comp=Z,1.2nm,0.8s
```

IDC **11** *14:26:36.4±1.5, 6°.52S×157°.36E, h0km, mb3.5/4, mbtmp3.6/6, ML3.8/2, Error ellipse: s-maj=35.9km s-min=28.2km az=109.0*
ISC 11 14:26:41.1±1.1**, 6°.6S**±0°.2×**157°.4E**±0°.2**, h35km, n6, σ0s.87**/6**,**
mb3.2/4**, Bougainville-Solomon Islands region**

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Code  Station Name         Δ°   AZ°   Phase ID             Time       Res
                                     Op        ISC        h  m  s    ISC
HNR   Honiara              3.80 138  Pn        Pn         14 27 36.8 -0.4
      4.7nm,0.3s,baz=284,slow=17,SNR=1.7
      33nm,0.7s
```

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAY	Jayapura	17.10	283	P	Pn	14 30 36.6	-1.1
	0.5nm,0.3s,baz=156,slow=20,SNR=6.0						
	3.4nm,0.7s						
WRA	Warramunga Arr	26.00	237	P	P	14 32 11.8	+0.8
	0.3nm,0.6s,baz=62,slow=9.0,SNR=6.0						
	0.3nm,0.6s						
ASAR	Alice Springs	28.23	231	P	P	14 32 31.6	+0.5
	0.5nm,1.0s,baz=62,slow=9.2,SNR=5.9						
	0.5nm,1.0s						
PETK	Petropavlovsk-	59.48	0	P	P	14 36 40.7	+0.3
	0.7nm,0.5s,baz=158,slow=6.1,SNR=5.2						
	0.7nm,0.5s						
MKAR	Makanchi Array	84.67	318	P	P	14 39 11.5	+0.1
	0.1nm,0.5s,baz=93,slow=3.2,SNR=1.9						
	0.1nm,0.5s						

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*PRE **11** 15:09:01.0±0.8,26°.06S×29°.23E,h0^{km},ML2.6,Suspected explosion*

*BGSI **11** 15:09:27.3±3.6,24°.62S×28°.40E,h0^{km}±105^{km},ML2.5*

ISC 11 15:09:01.7±0.9,**26°.08S**±0°.03×**29°.24E**±0°.03,**h0**^{km},**n18**, σ**0^{s}76**/32,**South Africa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CRLN	Carolina, Mapu	0.71	83	*e*P	Pg	15 09 14.9	-0.5
CRLN				*e*S	Sg	15 09 24.6	+0.1
CRLN				IAML		15 09 27.1	
	comp=Z,44nm,0.2s						
HRAO	HartRAO	1.41	277	*e*P	Pn	15 09 28.0	-0.9
HRAO				*e*S	Sg	15 09 46.9	-0.2
HRAO				IAML		15 09 47.8	
	comp=Z,119nm,0.5s						
WDLM	Western Deep L	1.67	258	*e*P	Pn	15 09 32.3	-0.1
WDLM				*e*S	Sn	15 09 54.5	-0.1
WDLM				IAML		15 09 58.2	
	comp=Z,149nm,0.2s						
NWCL	Newcastle	1.75	161	*e*P	Pn	15 09 33.7	+0.2
NWCL				*e*S	Sg	15 09 57.5	-0.4
NWCL				IAML		15 09 59.5	
	comp=Z,126nm,0.4s						
PILG	Pilgrimsrest,	1.75	50	*e*P	Pn	15 09 33.8	+0.1
PILG				*e*S	Sn	15 09 56.8	+0.1
PILG				IAML		15 10 01.7	
	comp=Z,92nm,0.5s						
PRYS	Parys	1.88	243	*e*P	Pn	15 09 35.2	-0.1
PRYS				*e*S	Sn	15 10 00.5	+0.6
PRYS				IAML		15 10 03.5	
	comp=Z,78nm,0.3s						
POGA	Pongola	2.54	120	*e*P	Pn	15 09 44.1	-0.2
POGA				*e*S	Sn	15 10 16.4	+0.4
POGA				IAML		15 10 30.6	
	comp=Z,34nm,0.5s						
SNKL	Senekal, Frees	2.55	211	*e*P	Pn	15 09 44.8	+0.3
SNKL				*e*S	Sn	15 10 16.6	+0.2
SNKL				IAML		15 10 25.9	
	comp=Z,28nm,0.7s						
MOPA	Mopani	3.22	38	*e*P	Pn	15 09 54.2	+0.6
MOPA				*e*S	Sn	15 10 31.9	-0.8
MOPA				IAML		15 10 50.3	
	comp=Z,40nm,0.3s						
LBTB	Lobatse	3.46	287	*e*P	Pn	15 09 57.1	+0.1
LBTB				*e*S	Sn	15 10 38.1	-0.6
LBTB				IAML		15 10 48.8	
	comp=Z,35nm,0.6s						
PMBG	Pietermaritzbu	3.60	162	*e*P	Pn	15 09 60.0	+1.1
PMBG				*e*S	Sn	15 10 42.2	+0.1
PMBG				IAML		15 10 58.1	
	comp=Z,28nm,0.4s						
SWZ	Schweizer	3.67	252	*e*P	Pn	15 09 59.4	-0.4
SWZ				*e*S	Sn	15 10 42.7	-1.2
SWZ				IAML		15 10 58.7	
	comp=Z,39nm,0.5s						
MUSN	Musina, Limpop	3.82	9	*e*P	Pn	15 10 01.2	-0.7
MUSN				*e*S	Sn	15 10 46.2	-1.3
MUSN				IAML		15 11 03.4	
	comp=Z,21nm,0.4s						
MREMI	Moremi	3.86	335	*i* P	Pn	15 10 03.5	+1.0
MREMI				IAML		15 11 07.2	
	comp=E,206nm,0.4s						
LPHEP	Lephephe	4.09	311	*i* P	Pn	15 10 07.7	+2.0
LPHEP				Lg	Lg	15 10 49.7	
LPHEP				IAML		15 11 12.3	
	comp=E,22nm,0.7s						
KSTD	Kokstad	4.52	179	*e*P	Pn	15 10 11.4	-0.2
KSTD				*e*S	Sn	15 11 03.5	-1.5
KSTD				IAML		15 11 34.4	
	comp=Z,6.9nm,0.5s						
SKOMA	Sekoma	5.05	287	*i* P	Pb	15 10 31.8	+0.8
SKOMA				Lg	Lg	15 11 31.9	
BROLN	Tlhalogang	5.26	340	*i* P	Pn	15 10 22.1	+0.4
BROLN				Lg	Lg	15 11 20.4	
BROLN				IAML		15 11 54.3	
	comp=N,19nm,4.5s						

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*NEIC **11** 15:26:55.5±1.0,21°.98S±0°.05×68°.7W±0°.1,h137^{km}±4^{km},mb4.1/8,ML4.1(GUC),Error ellipse: s-maj=14.1km s-min=7.8km az=88.0*

*SJA **11** 15:26:55.0±1.5,22°.00S×68°.63W,h133^{km},ML3.9,MW3.8*

*IDC **11** 15:26:56.9±3.4,22°.01S×68°.13W,h126^{km}±44^{km},mb3.9/3,mbtmp4.1/5,Error ellipse: s-maj=88.3km s-min=22.5km az=103.0*

*GUC **11** 15:26:56.1±0.7,21°.95S×68°.60W,h132^{km}±3^{km},ML4.1*

ISC 11 15:26:55.5±0.6,**21°.99S**±0°.03×**68°.72W**±0°.05,**h139**^{km}±5^{km},**n77**,σ**1^{s}20**/95,**mb4.2**/5,**11C-1D**,**Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.53	291		Pn	15 27 15.7	-0.2
PB09				Sn	Sn	15 27 31.1	-0.3
PB09	IPOC Station P	0.53	291⇑	*e*P	Pn	15 27 15.9	0.0
PB09				*e*S	Sn	15 27 31.5	+0.1
PB09	IPOC Station P	0.53	291	*e*P	Pn	15 27 15.9	0.0
PB09				*e*S	Sn	15 27 32.9	+1.5
PB09				*e*S		15 27 33.0	
PB09				IAML		15 27 33.3	
	comp=Z,2µm,0.2s						
PB03	IPOC Station P	0.96	266		Pn	15 27 19.4	+0.2
PB03	IPOC Station P	0.96	266⇑	*e*P	Pn	15 27 19.6	+0.4
PB03				*e*S	Sn	15 27 37.7	+0.7
PB03				IAML		15 27 38.2	
	comp=E,5µm,0.2s						
PB03	IPOC Station P	0.96	266	*e*P	Pn	15 27 19.5	+0.4
PB03				*e*S	Sn	15 27 38.1	+1.1
PB03				IAML		15 27 38.9	
	comp=Z,3µm,0.2s						
PB06	IPOC Station P	1.07	228		Pn	15 27 20.6	+0.6
PB06	IPOC Station P	1.07	228⇑	*e*P	Pn	15 27 20.6	+0.6
PB06				*e*S	Sn	15 27 39.4	+0.7
PB06	IPOC Station P	1.07	228	*e*P	Pn	15 27 20.0	0.0
PB06				*e*S	Sn	15 27 40.0	+1.3
PB06				IAML		15 27 41.0	
	comp=Z,2µm,0.1s						
AF01	San Pedro de A	1.08	153		Pn	15 27 19.6	-0.6
AF01	San Pedro de A	1.08	153⇓	*e*P	Pn	15 27 19.7	-0.6
AF01				*e*S	Sn	15 27 38.0	-1.2
AF01				IAML		15 27 51.2	
	comp=E,2µm,0.5s						
AF01	San Pedro de A	1.08	153	*e*P	Pn	15 27 15.9	-4.4
AF01				*e*P		15 27 20.0	
AF01				*e*S	Sn	15 27 39.2	0.0
AF01				IAML		15 28 00.7	
	comp=Z,2µm,0.6s						
PB01	IPOC Station P	1.19	323		Pn	15 27 20.7	-0.3
PB01	IPOC Station P	1.19	323⇑	*e*P	Pn	15 27 20.8	-0.3
PB01				*e*S	Sn	15 27 39.8	-0.8
PB01				IAML		15 27 42.1	
	comp=E,5µm,0.2s						
PB01	IPOC Station P	1.19	323	*e*P	Pn	15 27 20.8	-0.3
PB01				*e*S	Sn	15 27 41.4	+0.8
PB01				IAML		15 27 42.1	
	comp=Z,2µm,0.2s						
PB05	IPOC Station P	1.62	238		Pn	15 27 26.5	+0.8
PB05	IPOC Station P	1.62	238⇑	*e*P	Pn	15 27 26.6	+0.9
PB05				*e*S	Sn	15 27 49.6	+0.7
PB05				IAML		15 27 50.7	
	comp=N,1µm,0.5s						
PB05	IPOC Station P	1.62	238	*e*P	Pn	15 27 26.0	+0.3
PB05				*e*S	Sn	15 27 46.7	-2.1
PB05				IAML		15 27 51.2	
	comp=Z,1µm,0.4s						
PX03	IPOC Station P	1.79	331	*e*P	Pn	15 27 26.8	-0.9
PX03				*e*S	Sn	15 27 51.4	-0.9
PB08	IPOC Station P	1.89	347		Pn	15 27 29.0	-0.1
PB08	IPOC Station P	1.89	347	*e*P	Pn	15 27 28.9	-0.1
PB08				*e*S	Sn	15 27 54.1	-0.6
PB08				IAML		15 27 55.3	
	comp=E,1µm,0.4s						
PB08	IPOC Station P	1.89	347	*e*P	Pn	15 27 29.2	+0.1
PB08				*e*S	Sn	15 27 56.0	+1.3
PB08				IAML		15 27 58.0	
	comp=Z,304nm,0.2s						
TA01	Diego Aracena	1.97	316		Pn	15 27 29.1	-0.5
TA01	Diego Aracena	1.97	316	*e*P	Pn	15 27 29.1	-0.5
TA01				*e*S	Sn	15 27 55.3	-0.5
TA01				IAML		15 27 57.6	
	comp=E,2µm,0.4s						
TA01	Diego Aracena	1.97	316	*e*P	Pn	15 27 29.3	-0.3
TA01				*e*S	Sn	15 27 56.7	+1.0
TA01				IAML		15 27 59.7	
	comp=Z,667nm,0.2s						
TA02	Huaiquique	2.16	322		Pn	15 27 31.1	-0.8
TA02	Huaiquique	2.16	322	*e*P	Pn	15 27 31.3	-0.6
TA02				*e*S	Sn	15 27 59.0	-0.9
TA02				IAML		15 28 04.5	
	comp=N,2µm,0.3s						
TA02	Huaiquique	2.16	322	*e*P	Pn	15 27 33.0	+1.0
TA02				*e*S	Sn	15 28 00.5	+0.6
TA02				IAML		15 28 09.0	
	comp=Z,490nm,0.3s						
PB10	IPOC Station P	2.28	228		Pn	15 27 33.9	+0.6
PB10	IPOC Station P	2.28	228	*e*P	Pn	15 27 34.2	+0.9
PB10				IAML		15 28 05.0	
	comp=E,409nm,0.3s						
PB10	IPOC Station P	2.28	228	*e*P	Pn	15 27 34.0	+0.6
PB10				*e*S	Sn	15 27 56.0	-6.5
PB10				*e*S		15 28 02.4	
PB10				IAML		15 28 03.3	
	comp=Z,246nm,0.2s						
GO01	Chusmiza	2.35	349⇑	*e*P	Pn	15 27 34.3	-0.5
GO01				*e*S	Sn	15 28 04.1	-0.8
GO01	Chusmiza	2.35	349	*e*P	Pn	15 27 34.8	0.0
GO01				*e*S	Sn	15 28 05.2	+0.3
GO01				IAML		15 28 06.3	
	comp=Z,320nm,0.3s						
PB11	IPOC Station P	2.39	338		Pn	15 27 33.9	-0.9
PB11	IPOC Station P	2.39	338⇑	*e*P	Pn	15 27 34.0	-0.9
PB11				*e*S	Sn	15 28 03.8	-1.4
PB11				IAML		15 28 05.1	
	comp=E,2µm,0.3s						
PB11	IPOC Station P	2.39	338	*e*P	Pn	15 27 34.2	-0.7
PB11				*e*S	Sn	15 28 05.6	+0.5
PB11				IAML		15 28 07.4	
	comp=Z,460nm,0.3s						
YJA	Yavi	2.98	94	*e*P	Pn	15 27 42.4	-0.1
YJA				*e*S	Sn	15 28 11.5	-7.3
PB14	IPOC Station P	3.05	210	*e*P	Pn	15 27 44.5	+1.1
PB14	IPOC Station P	3.05	210	*e*P	Pn	15 27 44.4	+1.1
PB14				*e*S	Sn	15 28 20.1	-0.2
PB14				IAML		15 28 22.6	
	comp=Z,230nm,0.5s						
SALTA		3.12	136	*e*P	Pn	15 27 54.4	+10
GO02	Mina Guanaco	3.26	194		Pn	15 27 45.8	-0.3
GO02	Mina Guanaco	3.26	194	*e*P	Pn	15 27 26.8	-19
GO02				*e*S	Sn	15 28 27.1	+1.9
GO02				IAML		15 28 28.7	
	comp=Z,226nm,0.4s						
PB16	IPOC Station P	3.71	348	*e*P	Pn	15 27 52.2	-0.1
PB16				*e*S	Sn	15 28 39.2	+3.0
AZAP	Zapla	4.03	124	*e*P	Pn	15 27 55.6	-0.5
AC01	Pan de Azucar	4.48	202		Pn	15 28 01.0	-0.8
AC01	Pan de Azucar	4.48	202	*e*P	Pn	15 28 00.4	-1.4
AC01				*e*S	Sn	15 28 51.4	-2.1
AC01				IAML		15 29 07.9	
	comp=Z,58nm,0.4s						
FSA	Cafayete	4.80	149	*e*P	Pn	15 28 08.9	+2.6
AC02	Maricunga	4.84	184		Pn	15 28 06.6	-0.5
AC02	Maricunga	4.84	184	*e*P	Pn	15 28 06.9	-0.1
LPAZ	La Paz	5.70	6	P	Pn	15 28 19.8	+1.1
	comp=Z,2.1nm,0.3s,baz=188,slow=3.1,SNR=10						
H03N1	Juan Fernandez	14.54	216	T	T	15 45 07.6	
	baz=38						
H03N2	Juan Fernandez	14.55	216	T	T	15 45 05.5	
	baz=38,slow=74						
H03N3	Juan Fernandez	14.55	216	T	T	15 44 58.0	
	baz=38,slow=74						
ITAB	Concordia	15.96	112	P	Pn	15 30 32.3	0.0
PLTB	Pedras Altas	16.61	129		P	15 30 38.9	-1.4
PLTB				IAmb	IAmb	15 30 59.4	
	comp=Z,19nm,1.5s						
TRQA	Tornquist	17.03	162	P	P	15 30 44.9	0.0
TRQA				IAmb	IAmb	15 30 53.6	
	comp=Z,5.6nm,1.1s						
PLCA	Paso Flores	18.75	184	Pn	Pn	15 31 05.7	0.0
PLCA	Paso Flores	18.75	184	P	Pn	15 31 06.5	+0.8
	comp=Z,1.5nm,0.7s,baz=346,slow=8.5,SNR=5.1						
RCBR	Riachuelo	35.55	68	P	P	15 33 38.3	-1.3
ESPZ	Base Esperanza	42.14	172	P	P	15 34 34.9	+1.2
ESPZ				IAmb	IAmb	15 35 08.9	
	comp=Z,6.1nm,1.3s						
VNA3	Neumayer Olymp	59.56	161	⇑P	P	15 36 45.7	+1.8
	comp=Z,2.3nm,0.9s						
VNA2	Neumayer--Watz	60.13	161	⇑P	P	15 36 49.9	+2.0
	comp=Z,1.8nm,0.5s,baz=284,slow=7.5						
SNAA	Sanae	61.76	161	⇑P	P	15 37 00.0	+1.1
	comp=Z,56nm,0.7s						
SNAA	Sanae	61.76	161	P	P	15 36 59.5	+0.5
SNAA				IAmb	IAmb	15 37 01.6	
	comp=Z,1.9nm,0.7s						
SNAA	Sanae	61.76	161	P	P	15 37 00.3	+1.3
	comp=Z,2.2nm,0.8s,baz=299,slow=6.7,SNR=20						
	comp=Z,2.2nm,0.8s						
TROLL	Troll, Antarti	63.48	161	⇑P	P	15 37 12.4	+2.0
	comp=Z,88nm,0.5s						
DBIC	Dimbokro	68.70	73	P	P	15 37 44.1	-0.4
	comp=Z,5.1nm,0.7s,baz=214,slow=6.2,SNR=4.0						
	comp=Z,5.1nm,0.7s						
TORD	Torodi Ar. Bea	77.35	70	P	P	15 38 34.8	-0.5
TORD	Torodi Ar. Bea	77.35	70	P	P	15 38 35.4	0.0
	comp=Z,0.8nm,0.4s,baz=263,slow=5.0,SNR=3.6						
	comp=Z,0.8nm,0.4s						
H11S2	WAKE ISLAND Hy	128.12	277	T	T	18 06 07.7	
	baz=104,slow=75,SNR=13						
H11S1	WAKE ISLAND Hy	128.12	277	T	T	18 06 10.7	
	baz=104,slow=75,SNR=6.4						
H11S3	WAKE ISLAND Hy	128.13	277	T	T	18 06 12.7	
	baz=104,slow=75,SNR=5.9						
H11N3	WAKE ISLAND Hy	128.21	278	T	T	18 06 17.2	
	baz=104,slow=74,SNR=10						
H11N2	WAKE ISLAND Hy	128.22	278	T	T	18 06 18.3	
	baz=104,slow=74,SNR=4.0						
H11N1	WAKE ISLAND Hy	128.22	278	T	T	18 06 18.5	
	baz=104,slow=74,SNR=4.4						
MKAR	Makanchi Array	145.92	36	PKPbc	PKPab	15 46 19.9	+0.5
	comp=Z,0.4nm,0.5s,baz=332,slow=3.4,SNR=6.2						
MKAR				pPKPbc	pPKPdf	15 46 54.9	-1.2
	comp=Z,0.7nm,0.7s,baz=311,slow=4.5,SNR=5.0						
PZH	PanZhiHua	170.20	61	PKP	PKPdf	15 46 46.1	-1.3

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*NEIC **11** 15:36:53.9±0.4,19°.44N±0°.01×155°.34W±0°.01,h7^{km}±3^{km},Error ellipse: s-maj=2.1km s-min=1.1km az=135.0*

HVO 11 15:36:53.8±0.4,**19°.436N**±0°.009×**155°.334W**±0°.009,**h5**^{km}±1^{km},**ML2.5**/38,**ML2.3**/42(NEIC),**Error ellipse: s-maj=1.4km s-min=1.2km az=135.0**,**Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
UWE	Uwekahuna	0.04	110		Pg	15 36 55.7	+0.7
UWE	Uwekahuna	0.04	110		Sg	15 36 56.9	+0.9
UWE	Uwekahuna	0.04	110	IAML		15 36 56.7	
	comp=E,1µm,0.2s						
UWE				IAML		15 36 56.8	
	comp=N,983nm,0.2s						
WRMHI	West Rim	0.04	132		Pg	15 36 55.6	+0.6
WRMHI					Sg	15 36 56.7	+0.7
OBL	Observatory Le	0.05	111		Pg	15 36 55.8	+0.6
OBL					Sg	15 36 56.8	+0.7
UWB	Uwekahuna Bluf	0.05	102		Pg	15 36 55.8	+0.6
UWB					Sg	15 36 56.9	+0.7
RSD	Rainshed	0.06	63		Pg	15 36 55.8	+0.5
RSD					Sg	15 36 57.2	+0.8
SDHHI	Sand Hill	0.06	141		Pg	15 36 55.8	+0.6
SDHHI					Sg	15 36 57.0	+0.7
SBLHI	Steaming Bluff	0.06	98		Pg	15 36 55.9	+0.5
SBLHI					Sg	15 36 57.2	+0.8
RIM	Rim	0.07	125		Pg	15 36 56.0	+0.6
RIM					Sg	15 36 57.6	+1.0
HATHI	Halema‘uma‘u T	0.07	100		Pg	15 36 56.0	+0.6
HATHI					Sg	15 36 57.4	+0.8
HATHI	Halema‘uma‘u T	0.07	100	IAML		15 36 58.0	
	comp=E,3µm,0.3s						
HATHI				IAML		15 36 58.0	
	comp=N,3µm,0.2s						
BYL	Byron's Ledge	0.07	109		Pg	15 36 56.1	+0.6
BYL					Sg	15 36 57.4	+0.7
BYL	Byron's Ledge	0.07	109	IAML		15 36 57.8	
	comp=E,796nm,0.6s						
BYL				IAML		15 36 58.0	
	comp=N,920nm,0.2s						
KKO	Keanakako'i	0.07	120		Pg	15 36 56.1	+0.6
KKO					Sg	15 36 57.8	+1.1
MLH	Mauna Loa	0.08	320		Pg	15 36 56.2	+0.6
MLH					Sg	15 36 57.9	+1.0
MLH	Mauna Loa	0.08	320	IAML		15 36 58.5	
	comp=E,3µm,0.5s						
MLH				IAML		15 36 58.5	
	comp=N,4µm,0.3s						
PUH	Pauahi	0.13	119		Pg	15 36 56.8	+0.4
PUH					Sg	15 36 58.9	+0.7
PUH	Pauahi	0.13	119	IAML		15 36 59.5	
	comp=E,496nm,0.6s						
PUH				IAML		15 36 59.5	
	comp=N,514nm,0.8s						
AIN	Ainahou	0.13	242		Pg	15 36 57.3	+0.7
AIN					Sg	15 36 59.9	+1.5
AIN	Ainahou	0.13	242	IAML		15 37 00.4	
	comp=N,2µm,0.5s						
AIN				IAML		15 37 01.1	
	comp=E,2µm,0.3s						
HLP	Hilina Pali	0.14	170		Pg	15 36 57.2	+0.6
HLP					Sg	15 36 59.5	+0.9
HLP	Hilina Pali	0.14	170	IAML		15 37 00.2	
	comp=N,1µm,0.7s						
HLP				IAML		15 37 00.4	
	comp=E,1µm,0.5s						
KNHH	Kane Nui o Ham	0.17	110		Pg	15 36 57.5	+0.4
STCH	Steam Cracks	0.20	104		Pg	15 36 58.1	+0.3
STCH					Sg	15 37 01.3	+0.8
STCH	Steam Cracks	0.20	104	IAML		15 37 01.5	
	comp=N,460nm,0.6s						
STCH				IAML		15 37 01.5	
	comp=E,575nm,0.4s						
HTC	Hot Caves	0.21	197		Pg	15 36 58.2	+0.4
NPOC	North of Pu‘u	0.22	101		Pg	15 36 58.3	+0.3
NPOC					Sg	15 37 01.6	+0.8
HMH	Humu‘ula Sheep	0.22	320		Pg	15 36 58.6	+0.5
HMH					Sg	15 37 01.9	+0.9
HMH	Humu‘ula Sheep	0.22	320	IAML		15 37 04.9	
	comp=E,658nm,0.3s						
HMH				IAML		15 37 05.2	
	comp=N,768nm,0.6s						
JCUZ	Jacuzzi	0.23	103		Pg	15 36 58.4	+0.2
JCUZ					Sg	15 37 01.8	+0.7
MWH	Mokuaweoweo	0.25	281		Pg	15 36 59.2	+0.3
MWH					Sg	15 37 03.0	+0.8
MWH	Mokuaweoweo	0.25	281	IAML		15 37 06.8	
	comp=E,701nm,0.7s						
MWH				IAML		15 37 07.2	
	comp=N,738nm,0.6s						
ALEP	Alea Permanent	0.31	290		Pg	15 36 59.9	0.0
ALEP					Sg	15 37 04.5	+0.4
JOKA	Jonika Flow	0.31	90		Pg	15 36 59.9	+0.1
JOKA					Sg	15 37 04.5	+0.6
JOKA	Jonika Flow	0.31	90	IAML		15 37 06.2	
	comp=E,168nm,0.3s						
JOKA				IAML		15 37 06.8	
	comp=N,250nm,0.2s						
KHU	Kahuku	0.33	235		Pg	15 37 00.2	+0.1
KHU					Sg	15 37 04.9	+0.4
KHU	Kahuku	0.33	235	IAML		15 37 10.1	
	comp=N,251nm,0.7s						
KHU				IAML		15 37 10.2	
	comp=E,344nm,0.3s						
POHA	Pohakuloa	0.37	330		Pg	15 37 00.8	-0.2
POHA					Sg	15 37 06.3	+0.3
POHA	Pohakuloa	0.37	330	IAML		15 37 11.7	
	comp=E,343nm,0.4s						
POHA				IAML		15 37 14.5	
	comp=E,327nm,0.7s						
HUH	Hualalai	0.53	298		Pg	15 37 04.3	+0.2
HUH					Sg	15 37 12.2	+1.1
KKH	Kailua Kona	0.68	289		Pg	15 37 06.0	-0.9
KKH					Sg	15 37 14.8	-1.0
HPAH	Hawaii Prepara	0.68	330		Pg	15 37 05.9	-1.0
HPAH					Sg	15 37 14.8	-1.0
HPAH	Hawaii Prepara	0.68	330	IAML		15 37 14.9	
	comp=N,116nm,1.9s						
HPAH				IAML		15 37 15.2	
	comp=E,155nm,0.5s						

DJA 11 15:44:41.8±0.3,**2°S**±4°×**10°1E**±°,**h102**^{km}±6^{km},**M4.0**/11,**mB5.5**/1,**mb4.2**/3,**MLv4.0**/11,**Mw(mB)4.9**/1,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PPI	Padang Panjang	1.90	330	P	Pn	15 45 14.0	+0.8
PPI				S	Sn	15 45 38.3	+1.2
KSI	Kapahiang	1.97	141	P	Pn	15 45 13.0	-1.2
KSI				S	Sn	15 45 41.3	+2.4
SISI	Saibi	2.39	289	P	Pn	15 45 20.1	+0.6
BKNI	Bangkinang	2.44	353	P	Pn	15 45 19.2	-1.0
MNAI	Manna	2.75	144	P	Pn	15 45 24.7	+0.4
MNAI				S	Sn	15 45 58.7	+1.7
MDSI	Maura Dua	3.68	130	P	Pn	15 45 36.3	-0.4
GSI	Gunungsitoli	5.07	312	P	Pn	15 45 55.1	-0.5
	0.2nm19nm,0.5s						
CGJI	Cibinong	6.23	136	P	Pn	15 46 11.4	+0.2
	49nm,1.5s						
TPI	Tanjungpandan	6.33	96	P	Pn	15 46 12.0	-0.6

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*IDC **11** 16:01:47.8±1.5,0°.02N×126°.06E,h0^{km},mb3.4/5,mbtmp3.4/5,Error ellipse: s-maj=173.6km s-min=20.8km az=65.0*

*DJA **11** 16:01:51.6±0.4,0°N±4°×12°6E±°,h10^{km},M3.1/7,MLv3.1/7*

ISC 11 16:01:54.0±1.1,**0°.03S**±0°.09×**126°.04E**±0°.09,**h44**^{km},**n8**,σ**0^{s}82**/8,**mb3.4**/5,**Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.55	59	P	Pn	16 02 19.1	0.0
SANI	Sanana	2.01	181	P	Pn	16 02 25.7	+0.2
KMSI	Cibinong	2.14	286	P	Pn	16 02 27.1	-0.2
WRA	Warramunga Arr	21.40	158	P	P	16 06 36.7	-1.5
	0.6nm,0.5s,baz=336,slow=11,SNR=9.0						
	0.6nm,0.5s						
ASAR	Alice Springs	24.71	163	P	P	16 07 12.1	+0.7
	0.8nm,0.9s,baz=344,slow=11,SNR=13						
	0.8nm,0.9s						
MKAR	Makanchi Array	60.26	327	P	P	16 11 58.0	0.0
	0.2nm,0.3s,baz=119,slow=7.2,SNR=6.9						
	0.2nm,0.3s						
KURBB	Kurchatov Arra	64.54	329	P	P	16 12 25.9	-0.5
	0.2nm,0.5s,baz=134,slow=6.2,SNR=4.4						
	0.2nm,0.5s						
BVAR	Borovoye Array	70.09	328	P	P	16 13 02.1	+0.5
	0.3nm,0.5s,baz=128,slow=9.3,SNR=1.9						
	0.3nm,0.5s						

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*IDC **11** 16:17:05.9±1.2,59°.21N×153°.87W,h76^{km}±14^{km},mb3.5/12,mbtmp3.8/14,Error ellipse: s-maj=14.8km s-min=11.4km az=78.0*

*NEIC **11** 16:17:07.6±0.6,59°.09N±0°.04×153°.71W±0°.07,h103^{km}±5^{km},Error ellipse: s-maj=5.7km s-min=5.1km az=124.0*

*AEIC **11** 16:17:09.0±0.9,59°.09N±0°.04×153°.68W±0°.08,h96^{km}±5^{km},ML3.7,ML3.8/156(NEIC),Error ellipse: s-maj=6.3km s-min=4.9km az=117.0*

ISC 11 16:17:07.9±0.6,**59°.13N**±0°.04×**153°.67W**±0°.04,**h102**^{km}±5^{km},**n200**,σ**0^{s}90**/181,**mb3.6**/12,**Southern Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
Q19K	Cape Douglas,	0.20	176		Pn	16 17 21.9	-0.4

Q19K				IAML		16 17 38.3	
	comp=N,5µm,0.8s						
Q19K	Cape Douglas,	0.20	176		Sn	16 17 32.4	-0.7
AUCH	Augustine Cone	0.26	26		Pn	16 17 22.8	+0.2
AUCH					Sn	16 17 33.3	-0.3
AU22	Augustine Moun	0.29	33		Pn	16 17 22.9	+0.3
P19K	Oil Pt	0.57	23		Pn	16 17 24.9	+0.5
P19K	Oil Pt	0.57	23		Sn	16 17 37.3	+0.5
KAHG	Katmai Hook Gl	0.78	216		Pn	16 17 26.0	-0.2
KAHG					Sn	16 17 39.3	-0.8
SYI	Shuyak Island	0.84	127		Pn	16 17 26.5	-0.3
SYI	Shuyak Island	0.84	127		Sn	16 17 40.5	-0.4
KAHC	Katmai Hardscr	0.84	236		Pn	16 17 26.4	-0.5
KAHC	Katmai Hardscr	0.84	236		Pn	16 17 26.4	-0.5
KAHC					Sn	16 17 39.7	-1.5
P18K	Big Mountain,	0.84	289		Pn	16 17 26.1	-0.8
P18K				IAML		16 17 40.1	
	comp=E,2µm,0.6s						
P18K				IAML		16 17 40.7	
	comp=N,1µm,0.5s						
P18K	Big Mountain,	0.84	289		Sn	16 17 39.6	-1.4
ILS	Iliamna Low So	0.89	20		Sn	16 17 42.1	+0.1
ILSW	Iliamna Southw	0.90	17		Pn	16 17 27.6	+0.1
ILSW	Iliamna Southw	0.90	17		Sn	16 17 42.1	-0.1
O18K	Koktuh Hills	1.07	314		Pn	16 17 29.0	-0.2
O18K				IAML		16 17 45.3	
	comp=E,881nm,0.8s						
O18K				IAML		16 17 45.4	
	comp=N,1µm,0.8s						
O18K	Koktuh Hills	1.07	314		Sn	16 17 44.7	-0.6
O19K	Port Alsworth	1.12	343		Pn	16 17 29.7	0.0
HOM	Homer	1.17	62		Pn	16 17 30.5	+0.3
HOM	Homer	1.17	62		Sn	16 17 48.4	+1.3
ACHA	Angle Creek He	1.26	224		Pn	16 17 30.9	-0.5
CNPM	China Poot	1.31	71		Pn	16 17 32.1	+0.1
CNPM				IAML		16 17 50.7	
	comp=N,1µm,0.2s						
CNPM				IAML		16 17 51.7	
	comp=E,1µm,0.3s						
ANCK	Angle Creek	1.33	226		Sn	16 17 50.5	-0.1
RED	Redoubt Volcan	1.37	19		Pn	16 17 33.0	+0.3
RED				IAML		16 17 52.5	
	comp=E,1µm,0.7s						
RED				IAML		16 17 52.7	
	comp=N,538nm,0.6s						
RED	Redoubt Volcan	1.37	19		Sn	16 17 51.9	+0.3
RDSO	Redoubt South	1.41	19		Sn	16 17 52.7	+0.2
P17K	Kvichak River	1.43	274		Pn	16 17 33.1	-0.2
KDAK	Kodiak Island	1.46	157		Pn	16 17 33.2	-0.5
KDAK	Kodiak Island	1.46	157	P	Pn	16 17 33.2	-0.5
	comp=N,395nm,0.3s,baz=31,slow=3.6,SNR=3249						
KDAK				S	Sn	16 17 51.6	-1.7
	comp=N,1µm,0.4s,baz=214,slow=20,SNR=41						
KJL	Kejulik	1.47	224		Pn	16 17 33.8	0.0
NCT	North Crescent	1.49	14		Sn	16 17 54.2	+0.2
DFR	Drift River	1.55	18		Sn	16 17 55.6	+0.2
BRLK	Bradley Lake	1.56	65		Pn	16 17 34.6	-0.4
BRLK				IAML		16 17 58.8	
	comp=N,2µm,0.2s						
BRLK				IAML		16 17 59.4	
	comp=E,1µm,0.3s						
R18K	Karluk	1.62	195		Pn	16 17 34.8	-0.8
N19K	Bonanza Creek	1.74	347		Pn	16 17 37.6	+0.3
N19K				IAML		16 18 00.7	
	comp=E,709nm,0.8s						
O17K	Koliganek Bris	1.86	292		Pn	16 17 38.6	-0.2
N18K	Kilae Creek	1.92	325		Pn	16 17 39.4	-0.1
OHAK	Old Harbor	1.92	174		Pn	16 17 38.7	-0.8
OHAK				IAML		16 18 02.8	
	comp=E,1µm,0.4s						
OHAK	Old Harbor	1.92	174	P	Pn	16 17 38.6	-0.8
PLK1	Peulik 1	2.04	231		Pn	16 17 41.0	+0.1
CAPN	Captain Cook N	2.08	36		Pn	16 17 43.4	+2.0
PLBL	Peulik Blue Cr	2.19	231		Pn	16 17 43.2	+0.2
SPCR	Spurr Chakacha	2.21	19		Pn	16 17 43.7	+0.5
SLKM	Skilak Lake	2.23	50		Pn	16 17 43.5	+0.1
SLKM				IAML		16 18 12.2	
	comp=N,744nm,0.4s						
SLKM				IAML		16 18 12.7	
	comp=E,705nm,0.2s						
P16K	Nushagak River	2.23	269		Pn	16 17 43.5	0.0
P16K				IAML		16 18 12.8	
	comp=E,328nm,1.1s						
P16K				IAML		16 18 13.0	
	comp=N,532nm,0.9s						
N17K	Nushagak Hills	2.26	310		Pn	16 17 43.8	-0.1
O16K	Kokwok River B	2.31	284		Pn	16 17 44.4	-0.1
O16K				IAML		16 18 07.6	
	comp=E,296nm,1.1s						
O16K				IAML		16 18 28.6	
	comp=N,224nm,0.5s						
SEW	Seward	2.36	64		Pn	16 17 44.5	-0.5
SEW				IAML		16 18 18.7	
	comp=N,316nm,0.7s						
SEW				IAML		16 18 23.4	
	comp=E,388nm,0.6s						
O22K	Cooper Landing	2.41	54		Pn	16 17 45.8	0.0
STLK	Strandline Lak	2.55	20		Pn	16 17 48.1	+0.4
SII	Sitkinak Islan	2.59	186		Pn	16 17 47.2	-1.0
SII	Sitkinak Islan	2.59	186	P	Pn	16 17 47.3	-1.0
M18K	Stony River	2.60	337		Pn	16 17 48.6	+0.3
SUA	Susitna One	2.76	31		Pn	16 17 51.0	+0.5
SUA				IAML		16 18 26.2	
	comp=E,604nm,0.8s						
SUA				IAML		16 18 26.3	
	comp=N,552nm,0.5s						
M20K	Styx River	2.78	5		Pn	16 17 51.3	+0.6
RC01	Rabbit Creek A	2.79	43		Pn	16 17 51.0	+0.3
RC01				IAML		16 18 25.3	
	comp=N,502nm,0.4s						
N16K	Nishlik Lake	2.91	300		Pn	16 17 53.0	+0.6
M17K	Holitna River	2.95	322		Pn	16 17 53.3	+0.3
M17K				IAML		16 18 55.6	
	comp=N,299nm,0.7s						
M17K				IAML		16 18 59.0	
	comp=E,221nm,0.7s						
SKT	Skwentna	3.05	19		Pn	16 17 54.5	+0.2
SKT				IAML		16 18 39.5	
	comp=N,117nm,0.5s						
SKT				IAML		16 18 39.6	
	comp=E,140nm,0.3s						
L19K	White Mountain	3.12	350		Pn	16 17 55.5	+0.3
M22K	Willow	3.17	32		Pn	16 17 56.6	+0.8
O15K	Ungalikthiuk R	3.17	274		Pn	16 17 56.0	+0.2
O15K				IAML		16 18 34.9	
	comp=E,110nm,0.8s						
O15K				IAML		16 18 50.0	
	comp=N,109nm,1.1s						
PWL	Port Wells	3.19	55	IAML		16 18 34.4	
	comp=E,480nm,0.3s						
M16K	Timber Creek	3.26	308		Pn	16 17 57.6	+0.5
P23K	Montague Islan	3.31	72	IAML		16 18 37.7	
	comp=E,394nm,0.6s						
P23K				IAML		16 18 38.3	
	comp=N,352nm,0.5s						
PMR	Palmer	3.35	40	IAML		16 18 35.9	
	comp=E,149nm,0.4s						
PMR				IAML		16 18 39.8	
	comp=N,145nm,0.4s						
PMR	Palmer	3.35	40	P	Pn	16 17 58.7	+0.5
N15K	Kwethluk River	3.42	291	IAML		16 18 40.0	
	comp=N,111nm,0.8s						
L18K	Granite Mounta	3.44	336		Pn	16 17 59.5	+0.1
KNK	Knik Glacier	3.46	46	IAML		16 18 40.1	
	comp=E,304nm,0.3s						
KNK				IAML		16 18 40.8	
	comp=N,395nm,0.3s						
CHIR	Chirikof Islan	3.48	198	IAML		16 18 38.0	
	comp=N,296nm,0.4s						
CHIR				IAML		16 18 38.2	
	comp=E,320nm,0.5s						
CHIR	Chirikof Islan	3.48	198	P	Pn	16 17 58.9	-1.1
GHO	Glory Hole Cre	3.54	40	IAML		16 18 41.4	
	comp=E,350nm,0.7s						
GHO				IAML		16 18 42.6	
	comp=N,284nm,0.6s						
GLI	Glacier Island	3.74	59	IAML		16 18 44.9	
	comp=E,329nm,0.2s						
GLI				IAML		16 18 47.4	
	comp=N,308nm,0.5s						
Q23K	Middleton Isla	3.77	82		Pn	16 18 03.6	-0.3
SML	Sawmill	3.77	42	IAML		16 18 46.0	
	comp=E,191nm,0.6s						
SML				IAML		16 18 47.4	
	comp=N,253nm,0.7s						
HIN	Hinchinbrook I	3.84	68		Pn	16 18 04.3	-0.6
HIN				IAML		16 18 48.5	
	comp=E,264nm,0.8s						
PPLA	Purkeypile	3.85	10		Pn	16 18 06.4	+1.3
M15K	Kasigluk River	3.87	297		Pn	16 18 05.4	+0.2
L16K	Owhat River	3.87	314		Pn	16 18 05.4	+0.2
O14K	Tigyukauivet M	3.91	275		Pn	16 18 06.0	+0.3
O14K				IAML		16 19 19.8	
	comp=N,63nm,1.0s						
FID	Port Fidalgo	3.97	63	IAML		16 18 51.9	
	comp=N,275nm,0.3s						
SCM	Sheep Creek Mo	4.15	46	IAML		16 19 00.0	
	comp=E,221nm,0.5s						
SCM				IAML		16 19 14.8	
	comp=N,136nm,0.7s						
N14K	Kuskokwak Cree	4.16	285	IAML		16 19 19.5	
	comp=N,69nm,1.0s						
N14K				IAML		16 19 36.4	
	comp=E,81nm,1.1s						
EYAK	Cordova Ski Ar	4.24	67	IAML		16 18 59.5	
	comp=E,93nm,0.3s						
EYAK				IAML		16 19 00.5	
	comp=N,88nm,0.3s						
EYAK	Cordova Ski Ar	4.24	67	P	Pn	16 18 10.0	-0.2
K20K	Telida	4.25	358		Pn	16 18 10.6	+0.2
K17K	Iditarod	4.25	330		Pn	16 18 11.0	+0.6
K17K	Iditarod	4.25	330	IAML		16 19 37.9	
	comp=N,49nm,0.9s						
K17K				IAML		16 19 47.7	
	comp=E,50nm,1.1s						
CAST	Castle Rocks	4.37	9		Pn	16 18 12.6	+0.5
DIV	Divide	4.43	60		Pn	16 18 12.2	-0.7
DIV				IAML		16 19 05.0	
	comp=N,147nm,0.2s						
DIV				IAML		16 19 05.5	
	comp=E,84nm,0.4s						
M14K	Bethel	4.48	295		Pn	16 18 13.9	+0.5
KLU	Klutina	4.52	55	IAML		16 19 06.8	
	comp=E,132nm,0.4s						
KLU				IAML		16 19 07.1	
	comp=N,173nm,0.4s						
J18K	Innoko River	4.59	343	IAML		16 19 43.1	
	comp=E,46nm,0.8s						
KTH	Kantishna Hill	4.63	15	IAML		16 19 12.2	
	comp=N,57nm,0.7s						
KTH				IAML		16 19 13.5	
	comp=E,54nm,0.6s						
TRF	Thorofare Moun	4.63	19	IAML		16 19 11.8	
	comp=N,73nm,0.7s						
TRF				IAML		16 19 12.3	
	comp=E,58nm,0.5s						
GOAT	Goat Mountain	4.74	68		Pn	16 18 16.6	-0.5
M24K	Tolsona, Glenn	4.75	48		Pn	16 18 17.4	+0.2
M24K	Tolsona, Glenn	4.75	48	IAML		16 19 19.7	
	comp=E,135nm,0.5s						
M24K				IAML		16 19 29.8	
	comp=N,115nm,0.7s						
RND	Reindeer	4.88	26	IAML		16 19 15.9	
	comp=N,46nm,0.5s						
RND				IAML		16 19 19.7	
	comp=E,56nm,0.5s						
BMRM	Bremner River	4.90	64		Pn	16 18 18.4	-0.9
HMT	Hamilton	4.91	72		Pn	16 18 19.4	0.0
K15K	Wolf Creek Mou	5.00	313		Pn	16 18 21.4	+0.9
DHY	Denali Highway	5.00	35	IAML		16 19 17.8	
	comp=N,119nm,0.4s						
J17K	VABM Dome	5.01	331	IAML		16 20 06.2	
	comp=E,32nm,0.9s						
J20K	Nowinta River	5.07	358	IAML		16 20 06.3	
	comp=E,26nm,0.9s						
N25K	Chitina, Valde	5.14	57	IAML		16 19 21.1	
	comp=N,56nm,0.3s						
N25K				IAML		16 19 21.6	
	comp=E,57nm,0.3s						
MCK	McKinley	5.15	24		Pn	16 18 22.7	+0.2
MCK	McKinley	5.15	24	IAML		16 19 22.9	
	comp=E,55nm,0.4s						
MCK				IAML		16 19 24.3	
	comp=N,45nm,0.5s						
BPAW	Bear Paw Mtn.	5.15	13		Pn	16 18 22.3	-0.3
BPAW	Bear Paw Mtn.	5.15	13	IAML		16 19 20.7	
	comp=N,30nm,0.6s						
HARP	HAARP	5.31	48		Pn	16 18 25.2	+0.5
CHNA	Chernabura Isl	5.39	219	P	Pn	16 18 26.1	+0.4
KHIT	Khitrov Hills	5.43	71		Pn	16 18 26.0	-0.4
WACK	Wrangell Chich	5.43	54		Pn	16 18 26.6	+0.1
VRDI	Verde Repeater	5.52	63		Pn	16 18 27.1	-0.6
PAX	Paxson	5.54	42		Pn	16 18 27.8	-0.1
WAX	Waxell Ridge	5.62	72		Pn	16 18 28.8	-0.3
TGL	Tana Glacier	5.69	69		Pn	16 18 29.7	-0.2
I20K	Naaghedeneel	5.70	357		Pn	16 18 30.4	+0.4
MCARA	McCarthy VSAT	5.76	62		Pn	16 18 30.8	-0.1
PTPK	Patty Peak	5.96	65		Pn	16 18 33.6	-0.1
K24K	Donnelly Dome	6.02	36		Pn	16 18 35.0	+0.6
MLY	Manley	6.08	12		Pn	16 18 35.0	-0.2
I21K	Tanana	6.13	7		Pn	16 18 36.2	+0.4
YAH	Yahtse	6.16	73		Pn	16 18 36.8	+0.4
M26K	Nabesna, AK	6.17	53		Pn	16 18 36.8	+0.3
HDA	Harding Lake	6.18	28		Pn	16 18 35.9	-0.7
RIDG	Independent Ri	6.27	39		Pn	16 18 37.8	+0.1
RKAV	Rock Avalanche	6.35	74		Pn	16 18 39.7	+0.8
I23K	Minto, Yukon-K	6.37	17		Pn	16 18 38.7	-0.3
COLA	College	6.38	23	P	Pn	16 18 38.6	-0.6
H18K	Honhosa River	6.43	342		Pn	16 18 40.2	+0.3
CTGM	Chitina Glacie	6.45	68		Pn	16 18 40.4	+0.1
ILAR	Eielson Array	6.50	27	P	Pn	16 18 40.0	-0.8
	comp=N,4.7nm,0.4s,baz=212,slow=14,SNR=62						
ILAR				S	Sn	16 19 49.9	-3.5
	comp=N,5.7nm,0.4s,baz=213,slow=22,SNR=15						
H19K	Roundabout Mou	6.55	350		Pn	16 18 41.7	+0.2
LOGN	Logan Glacier	6.58	70		Pn	16 18 41.7	-0.5
SAMH	Samovar Hills	6.62	76		Pn	16 18 42.5	0.0
M27K	Edge Creek, AK	6.62	56		Pn	16 18 43.0	+0.3
POKR	Poker Plat Res	6.68	23		Pn	16 18 43.1	-0.2
SCRK	Sand Creek	6.71	39		Pn	16 18 42.9	-0.9
H22K	Ishtalitna Cre	6.87	8		Pn	16 18 46.2	+0.3
YUK2	White River	6.88	62		Pn	16 18 46.6	+0.5
L27K	Beaver Creek,	6.96	50		Pn	16 18 47.9	+0.8
O28M	Mount Upton	6.97	71		Pn	16 18 48.2	+0.7
H23K	Yukon River	6.99	14		Pn	16 18 47.2	-0.2
YUK3	Moose Creek	7.05	62		Pn	16 18 48.8	+0.3
J26L	Joseph Creek	7.20	37		Pn	16 18 50.0	-0.4
PNL	Peninsula	7.31	80	P	Pn	16 18 51.7	-0.1
G21K	Allakaket	7.42	1		Pn	16 18 54.2	+0.9
G16K	Koyuk River	7.47	331		Pn	16 18 54.9	+0.9
G15K	Niukluk	7.63	325		Pn	16 18 57.5	+1.4
O29M	Mount Kennedy	7.72	75		Pn	16 18 58.5	+0.9
G23K	Bananza Creek	7.79	11		Pn	16 18 58.0	-0.3
G24K	Hadweenzic Riv	8.11	18		Pn	16 19 01.9	-0.7
M29M	Somme Creek	8.14	59		Pn	16 19 03.5	+0.3
COLD	Coldfoot	8.28	9		Pn	16 19 05.0	+0.1
HYT	Haines Junctio	8.28	71		Pn	16 19 05.5	+0.3
G25K	Bearman Lake	8.40	21		Pn	16 19 05.8	-0.8
AKBBA	Akutan Broad B	8.43	239		Pn	16 19 07.2	+0.2
L29M	L29M	8.51	55		Pn	16 19 08.3	+0.2
I27K	Kandik River	8.57	36		Pn	16 19 08.6	-0.3
F14K	Arctic Creek	8.66	323		Pn	16 19 09.7	-0.5
MTBL	Makushin Table	8.84	240		Pn	16 19 11.7	-1.1
E18K	Tukpahlearik C	8.88	342		Pn	16 19 14.4	+1.2
O30N	Mendenhall	8.97	72		Pn	16 19 13.5	-0.9
I28M	Miner Creek	8.99	39		Pn	16 19 13.7	-1.0
H27K	Steamboat Moun	9.04	33		Pn	16 19 14.9	-0.4
E22K	Anaktuvuk Pass	9.08	4		Pn	16 19 14.7	-1.2
F25K	Christian Rive	9.22	20		Pn	16 19 16.6	-1.2
E24K	Your Creek	9.27	12		Pn	16 19 16.9	-1.6
SKAG	Skagway	9.39	80	P	Pn	16 19 21.5	+1.5
F26K	Sheenjek River	9.59	22		Pn	16 19 20.9	-1.8
E25K	Arctic Village	9.71	18		Pn	16 19 23.2	-1.2
OKTU	Okmok Mt. Tuli	9.84	240		Pn	16 19 24.3	-2.0
SIT	Sitka	9.93	94	P	Pn	16 19 26.7	-0.7
JIS	Juneau Island	10.07	87	P	Pn	16 19 30.8	+1.5
NIKH	Nikolski High	10.48	241	P	Pn	16 19 36.7	+1.8
CRAG	Craig	11.69	99	P	Pn	16 19 51.0	-0.1
DLBC	Dease Lake	12.27	83	P	Pn	16 20 02.1	+3.1
	comp=N,3.7nm,0.3s,baz=235,slow=11,SNR=12						
DLBC				S	Sn	16 22 11.0	-2.6
	comp=N,1.2nm,0.3s,baz=182,slow=27,SNR=1.6						
INK	Inuvik	12.74	35	P	P	16 20 09.8	-2.3
	comp=N,1.0nm,0.3s,baz=236,slow=12,SNR=1.6						
INK				S	S	16 22 41.6	-2.5
	comp=N,1.2nm,0.3s,baz=298,slow=32,SNR=10						
ATKA	Atka Island	13.46	248	P	Pn	16 20 16.2	+1.7
ADK	Adak	14.86	251	P	P	16 20 34.0	-1.7
BBB	Bella Bella	15.94	105	S	Sn	16 23 40.5	-1.7
	comp=N,6.8nm,1.1s,baz=343,slow=12,SNR=3.1						
YKA	Yellowknife Ar	19.14	63	P	P	16 21 23.6	+0.9
	comp=N,0.4nm,0.8s,baz=282,slow=11,SNR=9.5						
PETK	Petropavlovsk-	27.25	279	P	P	16 22 41.8	-0.3
	comp=N,0.9nm,0.4s,baz=68,slow=13,SNR=13						
	comp=N,0.9nm,0.4s						
NVAR	Mina Array Bea	30.61	117	P	P	16 23 14.8	+2.5
	comp=N,0.4nm,0.6s,baz=321,slow=10.0,SNR=2.5						
	comp=N,0.4nm,0.6s						
PDAR	Pinedale Array	31.54	101	P	P	16 23 22.9	+2.4
	comp=N,0.5nm,0.7s,baz=306,slow=3.6,SNR=3.9						
	comp=N,0.5nm,0.7s						
TXAR	Lajitas Array	45.01	109	P	P	16 25 15.0	+1.9
	comp=N,0.3nm,0.5s,baz=330,slow=7.2,SNR=5.3						
	comp=N,0.3nm,0.5s						
USRK	Ussuriysk Ar.	45.94	285	P	P	16 25 19.1	-1.1
	comp=N,0.7nm,0.4s,baz=50,slow=10,SNR=8.3						
	comp=N,0.7nm,0.4s						
KSRS	Korea Array	53.04	283	P	P	16 26 14.6	+0.5
	comp=N,1.5nm,0.7s,baz=41,slow=7.0,SNR=8.6						
	comp=N,1.5nm,0.7s						
SONM	Songino Array	55.03	306	P	P	16 26 29.4	+0.7
	comp=N,4.7nm,0.6s,baz=43,slow=6.3,SNR=17						
	comp=N,4.7nm,0.6s						
ZALV	Zalesovo Beam	57.88	323	P	P	16 26 48.2	-0.3
	comp=N,1.4nm,0.8s,baz=11,slow=9.4,SNR=4.8						
	comp=N,1.4nm,0.8s						
KURBB	Kurchatov Arra	62.67	325	P	P	16 27 20.5	-0.7
	comp=N,0.3nm,0.4s,baz=30,slow=6.7,SNR=3.9						
	comp=N,0.3nm,0.4s						
BVAR	Borovoye Array	62.68	332	P	P	16 27 21.1	-0.2
	comp=N,0.7nm,0.5s,baz=23,slow=8.0,SNR=5.4						
	comp=N,0.7nm,0.5s						
MKAR	Makanchi Array	64.90	321	P	P	16 27 34.6	-1.3
	comp=N,0.3nm,0.5s,baz=37,slow=7.0,SNR=5.5						
	comp=N,0.3nm,0.5s						
CMAR	Chiang Mai Arr	82.91	294	P	P	16 29 22.0	+0.7
	comp=N,0.4nm,0.6s,baz=35,slow=7.0,SNR=2.2						
	comp=N,0.4nm,0.6s						
QSPA	South Pole Qui	148.92	180	PKPbc	PKPbc	16 36 42.3	+0.1
	comp=N,1.0nm,0.7s,baz=329,slow=2.2,SNR=12						
BOSA	Boshof	149.49	2	PKPbc	PKPbc	16 36 43.9	-1.0
	comp=N,3.4nm,0.6s,baz=16,slow=2.3,SNR=11						

IDC 11 16:25:46.5±9.4, 18°.16S×172°.51W, h0^{km}, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=410.0km s-min=41.7km az=141.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	50.10	259	P	P	16 34 45.0	+1.2
	0.2nm,0.3s,baz=90,slow=6.0,SNR=24						
	0.2nm,0.3s						
ASAR	Alice Springs	50.12	254	P	P	16 34 42.4	-1.6
	0.1nm,0.3s,baz=90,slow=7.1,SNR=14						
	0.1nm,0.3s						
ILAR	Eielson Array	84.98	11	P	P	16 38 23.4	+0.1
	0.2nm,0.5s,baz=198,slow=5.7,SNR=1.9						
	0.2nm,0.5s						

IDC 11 16:27:54.2±1.2, 17°.80N×120°.62E, h0^{km}, mb3.3/6, mbtmp3.4/6, Error ellipse: s-maj=42.4km s-min=20.5km az=64.0

ISC 11 16:27:59.2±1.2, 17°.8N±0°.2×120°.7E±0°.2, h35^{km}, n6, σ0^{s}.63/6, mb3.5/4, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	20.55	17	P	P	16 32 34.9	+0.2
	0.6nm,0.7s,baz=195,slow=11,SNR=2.9						
	0.6nm,0.7s						
CMAR	Chiang Mai Arr	20.68	275	P	P	16 32 36.6	+0.3
	0.7nm,0.7s,baz=97,slow=8.9,SNR=5.8						
	0.7nm,0.7s						
WRA	Warramunga Arr	39.87	160	P	P	16 35 30.3	+0.6
	0.2nm,0.7s,baz=330,slow=10.0,SNR=5.2						
	0.2nm,0.7s						
MKAR	Makanchi Array	42.76	321	P	P	16 35 53.0	-0.2
	1.2nm,0.8s,baz=113,slow=9.3,SNR=9.3						
	1.2nm,0.8s						
ASAR	Alice Springs	43.23	162	P	P	16 35 56.5	-0.7
	0.3nm,0.5s,baz=338,slow=7.2,SNR=7.0						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	46.80	324	P	P	16 36 25.0	-0.3
	0.6nm,0.5s,baz=119,slow=7.8,SNR=4.4						
	0.6nm,0.5s						

JMA 11 16:43:39.1±0.1, 28°.1N±0°.2×128°.0E±0°.3, h18^{km}±1^{km}, MV3.0/13, NW OFF OKINAWAJIMA IS

IDC 11 16:43:39.4±1.2, 28°.04N×127°.85E, h0^{km}, mb3.3/4, mbtmp3.4/5, ML2.9/1, MS3.4/1, Error ellipse: s-maj=39.8km s-min=19.2km az=69.0

ISC 11 16:43:39.7±1.8, 28°.06N±0°.05×128°.02E±0°.07, h6^{km}±12^{km}, n17, σ1^{s}.12/22, mb3.1/4, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOKE	Okinoerabujima	0.85	145	*e*P	Pg	16 43 56.7	+0.7
JOKE				*e*S	Sb	16 44 09.0	+0.4
JTK	Tokunoshima	0.87	108	*e*P	Pg	16 43 56.5	0.0
JTK				*e*S	Sg	16 44 08.7	+1.0
JIH	Iheya	1.02	183	*e*P	Pg	16 43 59.2	-0.1
JIH				*e*S	Sb	16 44 14.0	+0.5
JAMN	Amaminishikomi	1.04	79	*e*P	Pg	16 43 58.8	-0.8
JAMN				*e*S	Sg	16 44 12.9	-0.2
JYRO	Yoronjima	1.10	159	*e*P	Pb	16 44 00.7	-0.4
JYRO				*e*S	Sn	16 44 16.4	-0.8
JOW	Kunigami	1.24	169	Pn	Pn	16 44 02.7	-0.9
	55nm,0.3s,baz=347,slow=14,SNR=42						
JOW				Sn	Sb	16 44 19.6	-0.2
	37nm,0.3s,baz=84,slow=18,SNR=7.0						
JOW	Kunigami	1.24	169	*e*P	Pn	16 44 02.7	-0.9
JTAJ	Takarajima	1.51	43	*e*P	Pn	16 44 05.3	-2.0
JNTH	Nagotoyohara	1.53	180	*e*P	Pn	16 44 07.2	-0.4
JAGN	Aguni-jima	1.62	205	*e*P	Pn	16 44 08.0	-0.8
JKE	Kume jima 2	2.04	213	*e*P	Pn	16 44 14.1	-0.6
JNU	Nakatsue	5.62	25	Pn	Pn	16 45 05.9	+2.1
	0.4nm,0.3s,baz=207,slow=18,SNR=5.0						
	5.9nm,1.0s						
SEY	Seymchan	38.34	18	LR	LR	17 07 50.8	
	comp=Z,49nm,18.6s,baz=212,slow=38						
MKAR	Makanchi Array	40.20	310	P	P	16 51 16.2	-0.7
	0.3nm,0.7s,baz=112,slow=9.6,SNR=3.3						
	0.3nm,0.7s						
KURBB	Kurchatov Arra	43.41	315	P	P	16 51 42.2	-0.9
	0.1nm,0.3s,baz=103,slow=8.8,SNR=2.3						
	0.1nm,0.3s						
WRA	Warramunga Arr	48.11	172	P	P	16 52 23.0	+2.5
	0.7nm,0.8s,baz=352,slow=8.2,SNR=5.9						
	0.7nm,0.8s						
ASAR	Alice Springs	51.74	173	P	P	16 52 48.5	+0.5
	0.3nm,0.9s,baz=351,slow=8.7,SNR=4.1						
	0.3nm,0.9s						

IDC 11 16:45:42.9±1.1, 27°.93N×127°.64E, h0^{km}, mb3.5/5, mbtmp3.5/6, ML3.1/1, MS3.3/5, Error ellipse: s-maj=47.9km s-min=15.2km az=64.0

JMA 11 16:45:43.7±0.4, 28°.1N±0°.7×128°.0E±0°.8, h16^{km}±4^{km}, MV3.0/14, NW OFF OKINAWAJIMA IS

ISC 11 16:45:43.8±1.6, 28°.02N±0°.05×127°.94E±0°.05, h11^{km}±11^{km}, n23, σ1^{s}.32/24, mb3.5/5, MS3.3/5, Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOKE	Okinoerabujima	0.87	139	*e*P	Pg	16 46 01.0	+0.4
JOKE				*e*S	Sg	16 46 13.9	+2.0
JTK	Tokunoshima	0.93	105	P	Pg	16 46 01.2	-0.6
JTK				S	Sg	16 46 13.1	-0.8
JIH	Iheya	0.98	178	P	Pn	16 46 03.7	+0.1
JIH				*e*S	Sn	16 46 18.4	+0.9
JYRO	Yoronjima	1.09	155	P	Pg	16 46 05.2	+0.3
JYRO				*e*S	Sg	16 46 20.4	+1.2
JAMN	Amaminishikomi	1.12	78	P	Pn	16 46 03.6	-1.8
JAMN				*e*S	Sb	16 46 17.9	-1.8
JOW	Kunigami	1.22	166	Pn	Pn	16 46 07.2	+0.3
	86nm,0.3s,baz=346,slow=16,SNR=27						
JOW				Sn	Sn	16 46 24.2	+0.7
	35nm,0.3s,baz=283,slow=26,SNR=4.2						
JOW	Kunigami	1.22	166	P	Pn	16 46 07.2	+0.3

JNTH	Nagotoyohara	1.50	177	eP	Pb	16 46 11.6	-0.1
JAM	Amami Oshima	1.52	75	eP	Pn	16 46 10.8	-0.2
JAGN	Aguni-jima	1.56	203	P	Pg	16 46 12.4	-1.3
JJT3	Tamagusuku3	1.88	184	eP	Pb	16 46 18.0	-0.1
JKE	Kume jima 2	1.98	211	eP	Pb	16 46 18.3	-1.5
JNU	Nakatsue	5.68	26	Pn	Pn	16 47 11.9	+3.7
	0.5nm,0.3s,baz=182,slow=7.5,SNR=4.8						
	9.9nm,1.1s						
DAV	Davao City (W)	20.96	187	LR	LR	16 59 24.3	
	comp=Z,44nm,18.3s,baz=356,slow=39						
SONM	Songino Array	25.92	326	P	P	16 51 15.1	-1.0
	0.6nm,0.4s,baz=130,slow=13,SNR=3.8						
	0.6nm,0.4s						
MKAR	Makanchi Array	40.16	310	P	P	16 53 19.2	-0.8
	0.5nm,0.8s,baz=87,slow=8.8,SNR=3.7						
	0.5nm,0.8s						
KURBB	Kurchatov Arra	43.39	315	P	P	16 53 46.8	+0.5
	0.2nm,0.5s,baz=102,slow=8.4,SNR=2.9						
	0.2nm,0.5s						
WRA	Warramunga Arr	48.08	172	P	P	16 54 23.7	+0.1
	0.6nm,0.7s,baz=353,slow=8.2,SNR=6.4						
	0.6nm,0.7s						
ASAR	Alice Springs	51.71	173	P	P	16 54 52.0	+0.8
	0.6nm,0.9s,baz=356,slow=7.9,SNR=4.8						
	0.6nm,0.9s						
STKA	Stephens Creek	60.97	167	LR	LR	17 22 47.3	
	comp=Z,30nm,20.5s,baz=211,slow=36						
KDAK	Kodiak Island	61.24	37	LR	LR	17 22 47.3	
	comp=Z,23nm,20.0s,baz=184,slow=36						
RAO	Raoul Island	76.98	133	LR	LR	17 26 38.0	
	comp=Z,59nm,19.4s,baz=100,slow=32						
NOA	NORSAR Array B	77.59	334	LR	LR	17 36 36.8	
	comp=Z,11nm,18.4s,baz=105,slow=39						

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*KRNET **11** 17:01:49.0±0.1, 41°.74N×77°.64E, h20^{km}, mb3.0*

*SOME **11** 17:01:49.1, 41°.80N×77°.68E, h10^{km}*

*NNC **11** 17:01:50.1±0.7, 41°.81N×77°.66E, h0^{km}, mb3.5, mpv3.4, Error ellipse: s-maj=4.8km s-min=3.2km az=3.0*

ISC 11 17:01:50.2±1.4**, 41°.79N**±0°.05×**77°.61E**±0°.02**, h5**^{km}±10^{km}**, n47,** σ**1^{s}21**/80**, 24C-13D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDJ	Kajisay	0.47	317	⇑iP	Pg	17 01 58.9	-0.3
KDJ				⇑iS	Sg	17 02 06.6	+1.3
PRZ	Przheval'sk	0.91	40	⇑iP	Pg	17 02 06.9	-0.7
PRZ				⇑iS	Sb	17 02 19.6	-1.4
ULHL	Ulahol	1.12	294	⇓iP	Pg	17 02 10.4	-1.2
ULHL				⇓iS	Sg	17 02 26.2	+0.2
NRN	Naryn	1.26	254	⇑iP	Pn	17 02 12.9	-1.9
NRN				⇑iS	Sb	17 02 30.2	-1.1
SATY	Saty	1.40	25	P	Pn	17 02 15.3	-1.2
	5.6nm,0.2s						
SATY				S	Sn	17 02 34.0	-1.4
	101nm,0.2s						
BOOM	Boomskoye usch	1.42	300	⇑iP	Pn	17 02 16.2	-0.7
BOOM				⇑iS	Sn	17 02 35.9	-0.2
MDOK	Medeo	1.43	343	⇑P	Pn	17 02 16.2	-0.8
	4.2nm,0.2s						
MDOK				Pg	Pb	17 02 16.4	-1.0
	24nm,0.2s						
MDOK				⇑S	Sg	17 02 36.0	-0.2
	15nm,0.2s						
MDOK				Lg	Lg	17 02 36.1	
	19nm,0.4s						
KOTS	Kotyrbulak	1.49	346	P	Pn	17 02 17.5	-0.2
	29nm,0.3s						
KOTS				S	Sg	17 02 37.9	0.0
	129nm,0.3s						
KOTS	Kotyrbulak	1.49	346	eP	Pn	17 02 17.5	-0.2
	29nm,0.3s						
KOTS				eS	Sg	17 02 37.9	0.0
	129nm,0.3s						
KNDC	Almaty	1.50	342	⇓P	Pn	17 02 17.7	-0.1
	9.5nm,0.2s						
KNDC				⇓S	Sg	17 02 39.7	+1.3
	116nm,0.3s						
AAA	Alma-Ata	1.51	340	P	Pb	17 02 18.2	-0.4
	59nm,0.1s						
AAA				S	Sg	17 02 38.8	+0.2
AAA	Alma-Ata	1.51	340	eP	Pb	17 02 18.3	-0.4
	59nm,0.1s						
AAA				eS	Sg	17 02 39.1	+0.6
	24nm,0.2s						
MTBS	Maitube	1.60	327	P	Pn	17 02 19.3	+0.1
	8.2nm,0.3s						
MTBS				S	Sg	17 02 41.2	-0.3
	42nm,0.1s						
MTBS	Maitube	1.60	327	eP	Pn	17 02 19.3	+0.1
	8.2nm,0.3s						
MTBS				eS	Sg	17 02 41.2	-0.3
	42nm,0.1s						
UZB	Uzynbulak	1.71	37	P	Pn	17 02 21.0	+0.2
	2.4nm,0.1s						
UZB				S	Sg	17 02 43.8	-1.3
	28nm,0.2s						
UZB	Uzynbulak	1.71	37	eP	Pn	17 02 21.0	+0.2
UZB				eS	Sg	17 02 43.8	-1.3
KST	Kastek	1.75	316	P	Pn	17 02 22.1	+0.8
	5.2nm,0.4s						
KST				S	Sg	17 02 45.7	-0.6
	81nm,0.5s						
KST	Kastek	1.75	316	eP	Pn	17 02 22.1	+0.8
	5.2nm,0.4s						
KST				eS	Sg	17 02 45.7	-0.6
	81nm,0.5s						
KPKS	Kokpek	1.85	25	P	Pn	17 02 23.3	+0.6
	1.6nm,0.3s						
KPKS				S	Sg	17 02 48.0	-1.6
	56nm,0.5s						
TKM2	Tokmak 2	1.87	308	⇑iP	Pn	17 02 23.7	+0.6
TKM2				⇑iS	Sb	17 02 48.9	+0.2
SHLS	Shalkode	1.93	45	Pg	Pg	17 02 29.4	+2.2
	34nm,0.3s						
SHLS				Lg	Lg	17 02 58.1	
	28nm,0.4s						
SHLS	Shalkode	1.93	45	eP	Pg	17 02 29.4	+2.2
	34nm,0.3s						
SHLS				eS	Sg	17 02 58.1	+5.8
	28nm,0.4s						
DGS	Degeres	1.99	317	Pg	Pb	17 02 26.7	-0.2
	6.5nm,0.2s						
DGS				Lg	Lg	17 02 53.6	
	84nm,0.4s						
KTBS	Karatobe	2.04	341	Pg	Pb	17 02 27.3	-0.4
	7.8nm,0.2s						
KTBS				Lg	Lg	17 02 54.9	
	202nm,0.2s						
PDGK	Podgornoye	2.07	42	⇓Pn	Pn	17 02 26.4	+0.7
	6.1nm,0.5s						
PDGK				⇑Lg	Lg	17 02 54.4	
	12nm,0.4s						
KBK	Karagaybulak	2.16	294	⇓iP	Pn	17 02 27.3	+0.3
KBK				⇓iS	Sn	17 02 55.5	+1.3
BLB	Baldybastay	2.39	15	Pg	Pb	17 02 33.3	-0.4
	26nm,0.3s						
BLB				Lg	Lg	17 03 04.9	
	112nm,0.3s						
ARXS	Arharly	2.42	4	Pg	Pb	17 02 33.4	-0.9
	2.7nm,0.2s						
ARXS				Lg	Lg	17 03 05.0	
	58nm,0.2s						
CHMS	Chumysh	2.44	301	⇑iP	Pn	17 02 31.3	+0.6
CHMS				⇑iS	Sn	17 03 02.0	+1.1
ARLS	Aral	2.46	273	⇑eP	Pn	17 02 31.4	+0.3
ARLS				⇑eS	Sn	17 03 02.3	+0.7
AAK	Ala-Archa	2.46	291	⇑Pn	Pn	17 02 33.6	+2.4
	4.8nm,0.3s						
AAK				⇑Lg	Lg	17 03 07.4	
	64nm,0.7s						
AAK	Ala-Archa	2.46	291	⇑iP	Pn	17 02 31.7	+0.5
AAK				⇑iS	Sn	17 03 02.7	+0.9
KTMS	Ketmen	2.61	50	Pg	Pb	17 02 36.2	-1.4
	2.2nm,0.3s						
KTMS				Lg	Lg	17 03 09.6	
	7.0nm,0.4s						
KTMS	Ketmen	2.61	50	eP	Pb	17 02 36.2	-1.4
	2.2nm,0.3s						
KTMS				eS	Sb	17 03 09.6	-0.4
	7.0nm,0.4s						
USP	Ospenovka	2.73	304	⇑iP	Pn	17 02 35.3	+0.6
USP				⇑iS	Sn	17 03 09.1	+0.9
SGDS	Sogindy	2.75	308	Pg	Pb	17 02 39.8	-0.2
SGDS				Lg	Lg	17 03 16.3	
	35nm,0.4s						
KNOS	Konyrlen	2.81	24	Pg	Pb	17 02 40.3	-0.6
	7.6nm,0.4s						
KNOS				Lg	Lg	17 03 16.7	
	9.7nm,0.4s						
AML	Almayashu	2.94	278	⇓eP	Pn	17 02 38.2	+0.3
AML				⇓iS	Sn	17 03 14.2	+0.4
EKS2	Erkin-Say	2.98	288	⇓iP	Pn	17 02 38.6	+0.4
EKS2				⇓iS	Sn	17 03 14.8	+0.5
SALK	Salom-Alik	3.00	254	⇓iP	Pn	17 02 38.5	0.0
SALK				⇓iS	Sn	17 03 14.5	-0.4
DJR	Jarkent	3.00	31	Pg	Pb	17 02 43.1	-1.0
	1.1nm,0.2s						
DJR				Lg	Lg	17 03 21.7	
	9.3nm,0.2s						
DJR	Jarkent	3.00	31	eP	Pb	17 02 43.1	-1.0
	1.1nm,0.2s						
DJR				eS	Sb	17 03 21.7	+0.6
	9.3nm,0.2s						
TDK	Taldyqorghan	3.26	10	Pg	Pb	17 02 48.9	+0.4
	15nm,0.3s						
TDK				Lg	Lg	17 03 31.5	
	55nm,0.5s						
TDK	Taldyqorghan	3.26	10	eP	Pb	17 02 48.9	+0.4
	15nm,0.3s						
TDK				eS	Sg	17 03 31.5	-3.3
	55nm,0.5s						
MRKS	Merke	3.39	288	Pg	Pb	17 02 52.1	+1.3
	1.6nm,0.3s						
MRKS				Lg	Lg	17 03 37.2	
	21nm,0.3s						
MRKS	Merke	3.39	288	eP	Pb	17 02 52.1	+1.3
	1.6nm,0.3s						
MRKS				eS	Sg	17 03 37.2	-1.8
	21nm,0.3s						
KK31	Karatay Array	5.41	286	⇑Lg	Lg	17 04 39.2	
	2.6nm,0.5s,baz=93,slow=27,SNR=4.9						

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*RSNC **11** 17:05:50.6±0.0, 9°N±1°×7°4W±°, h95^{km}±2^{km}, M3.2, mb4.0, ML3.0*

*IDC **11** 17:05:51.1±2.2, 8°.94N×73°.57W, h120^{km}±26^{km}, mb3.0/2, mbtmp3.6/4, MS2.0/1, Error ellipse: s-maj=31.7km s-min=12.6km az=135.0*

ISC 11 17:05:49.2±0.9**, 9°.07N**±0°.03×**73°.71W**±0°.03**, h96**^{km}±7^{km}**, n41,** σ**1^{s}18**/71**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGCC	Aguachica	0.57	167	P	Pn	17 06 04.5	-0.8
AGCC				S	Sn	17 06 15.9	-1.3
ARGC	Ariguani, Magd	0.94	326	P	Pn	17 06 10.3	+1.5
ARGC				S	Sn	17 06 26.4	+2.9
VMM05	San Martn	1.17	172	P	Pn	17 06 11.5	+0.2
VMM05				S	Sn	17 06 28.9	+1.0
EZNC	La Esperanza	1.49	165	P	Pn	17 06 15.1	-0.1
EZNC				S	Sn	17 06 34.5	-0.4
SJCC	San Jacinto, C	1.66	300	P	Pn	17 06 18.1	+0.7
SJCC				S	Sn	17 06 38.9	+0.1
VMM07	Puerto Wilches	1.71	185	P	Pn	17 06 17.8	-0.1
VMM07				S	Sn	17 06 38.7	-1.0
ZARC	Zaragoza, Cauc	1.93	216	P	Pn	17 06 21.2	+0.3
ZARC				S	Sn	17 06 44.1	-0.8
VMM09	Lebrija	1.98	168	P	Pn	17 06 21.4	-0.1
VMM09				S	Sn	17 06 45.3	-0.8
PAMC	Pamplona, Colo	1.99	150	P	Pn	17 06 23.0	+0.9
PAMC				S	Sn	17 06 48.2	+1.2
BRJC	Barrancabermej	2.08	181	P	Pn	17 06 22.2	-0.6
BRJC				S	Sn	17 06 47.8	-0.6
CRJC	Cerrejon, Guaj	2.10	23	P	Pn	17 06 22.9	-0.2
CRJC				S	Sn	17 06 48.1	-0.9
SMRC	Santa Marta, M	2.14	346	P	Pn	17 06 24.0	+0.5
SMRC				S	Sn	17 06 48.9	-0.8
UREC	San Jos de Ur	2.23	234	P	Pn	17 06 23.9	-0.8
UREC				S	Sn	17 06 49.9	-1.9
VMM10	El Carmen	2.29	180	P	Pn	17 06 25.5	0.0
VMM10				S	Sn	17 06 53.2	0.0
BARC	Barichara	2.52	168	P	Pn	17 06 28.5	-0.2
BARC				S	Sn	17 06 59.3	+0.3
PTBC	PUERTO BERRIO,	2.62	196	P	Pn	17 06 29.7	-0.2
PTBC				S	Sn	17 07 01.5	+0.4
LCBC	Los crdobas,	2.63	266	P	Pn	17 06 29.7	-0.3
LCBC				S	Sn	17 07 01.9	+0.6
SDV	Santo Domingo	3.05	93	P	Pn	17 06 36.9	+1.2
	90nm,0.6s,baz=272,slow=5.9,SNR=94						
SDV				S	Sn	17 07 11.4	-0.2
	113nm,0.4s,baz=207,slow=24,SNR=42						
SDV				LR	LR	17 07 28.3	
	comp=Z,26nm,19.7s,baz=242,slow=34						
SDV	Santo Domingo	3.05	93	P	Pn	17 06 36.8	+1.0
SDV				S	Sn	17 07 11.3	-0.3
APAC	Apartado, Choc	3.06	248	P	Pn	17 06 36.0	+0.2
APAC				S	Sn	17 07 10.9	-0.8
URIC	Uribia, Colomb	3.12	33	P	Pn	17 06 36.1	-0.4
URIC				S	Sn	17 07 11.4	-1.5
DBBC	Dabeiba	3.20	231	P	Pn	17 06 37.5	-0.2
RUSC	La Rusia	3.22	169	P	Pn	17 06 37.4	-0.9
RUSC				S	Sn	17 07 16.4	+0.3
TAMC	Tame, Arauca	3.24	144	P	Pn	17 06 38.6	+0.4
TAMC				S	Sn	17 07 16.2	+0.3
SPBC	San Pablo de B	3.42	186	P	Pn	17 06 41.2	+0.6
SPBC				S	Sn	17 07 16.8	-3.5
NORC	Norcasia	3.67	198	P	Pn	17 06 43.7	-0.3
NORC				S	Sn	17 07 25.5	-0.8
CBOC	Ciudad Bolivar	3.92	216	P	Pn	17 06 49.1	+1.7
GUY2C	Guyana, Caldas	4.16	203	P	Pn	17 06 50.7	-0.3
GUY2C				S	Sn	17 07 38.5	-0.3
ROSC	El Rosal	4.25	188	P	Pn	17 06 54.5	+2.4
	10nm,0.4s,baz=83,slow=24,SNR=5.3						
ROSC				S	Sn	17 07 40.5	-0.3
	13nm,0.3s,baz=83,slow=24,SNR=3.7						
ROSC	El Rosal	4.25	188	P	Pn	17 06 54.5	+2.4
ROSC				S	Sn	17 07 42.4	+1.6
CHIC	Chingaza	4.41	180	P	Pn	17 06 55.1	+0.7
CHIC				S	Sn	17 07 46.7	+1.8
PTAC	Punta Ardita,	4.48	245	P	Pn	17 06 54.8	-0.1
VILC	Villavicencio,	4.93	180	P	Pn	17 07 02.2	+1.1
PTGC	Puerto Gaitan,	5.09	162	P	Pn	17 07 03.0	-0.2
	21nm,0.4s						
ORTC	Ortega, Tolima	5.35	197	P	Pn	17 07 08.9	+2.1
PRAC	Prado	5.45	192	P	Pn	17 07 10.4	+2.3
PRAC				S	Sn	17 08 12.1	+2.6
YOTC	Yotoco, Valle	5.69	208	P	Pn	17 07 11.5	0.0
TXAR	Lajitas Array	34.56	310	P	P	17 12 29.6	+0.7
	0.1nm,0.4s,baz=123,slow=6.0,SNR=1.7						
	0.1nm,0.4s						
YKA	Yellowknife Ar	60.96	340	P	P	17 15 52.4	+0.4
	0.4nm,0.6s,baz=131,slow=7.1,SNR=5.0						
	0.4nm,0.6s						
ASAR	Alice Springs	149.87	238	PKPbc	PKiKP	17 25 27.9	-2.1
	0.7nm,0.8s,baz=116,slow=3.2,SNR=13						
WRA	Warramunga Arr	150.82	245	PKPbc	PKiKP	17 25 30.4	-1.6
	0.6nm,1.1s,baz=99,slow=1.9,SNR=6.0						

IDC 11 17:07:06.6±2.4**, 17°.61S**×**177°.89W, h606**^{km}±23^{km}**, mb2.7**/3**, mbtmp3.6**/4**, Error ellipse: s-maj=55.1km s-min=26.5km az=156.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.87	268	P	P	17 08 32.0	+0.2
	7.4nm,0.6s,baz=37,slow=5.1,SNR=10						
HNR	Honiara	23.01	288	P	P	17 11 27.3	+0.3
	50nm,0.3s,baz=335,slow=24,SNR=29						
WRA	Warramunga Arr	45.17	259	P	P	17 14 30.7	-0.5
	0.4nm,0.6s,baz=93,slow=7.2,SNR=22						
	0.4nm,0.6s						
ASAR	Alice Springs	45.35	254	P	P	17 14 32.2	-0.3
	1.2nm,0.6s,baz=90,slow=8.0,SNR=36						
ASAR				PcP	PcP	17 16 00.1	+1.3
	0.3nm,0.9s,baz=96,slow=3.5,SNR=2.2						
	1.2nm,0.6s						
NVAR	Mina Array Bea	78.86	44	P	P	17 18 08.2	-0.4
	0.5nm,0.8s,baz=252,slow=4.4,SNR=2.4						
	0.5nm,0.8s						

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*NOU **11** 17:14:02.0, 10°.83S×161°.98E, h34^{km}, mb4.4/11, Solomon Islands*

*IDC **11** 17:14:04.0±2.6, 11°.07S×161°.75E, h67^{km}±22^{km}, mb3.2/4, mbtmp3.7/6, Error ellipse: s-maj=46.3km s-min=16.5km az=54.0*

ISC 11 17:14:01.2±0.8**, 10°.90S**±0°.06×**162°.03E**±0°.06**, h36**^{km}**, n16,** σ**1^{s}85**/18**, mb3.4**/4**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HURO	Huro Makira	0.45	344	P	Pn	17 14 12.0	+1.1
HURO	Huro Makira	0.45	344	S	Sn	17 14 19.6	+1.7
NGOA	Tingoa Renbel	2.04	251	P	Pn	17 14 33.8	+0.9
NGOA	Tingoa Renbel	2.04	251	S	Sn	17 14 57.1	0.0
ALEG	Aligegeo Malai	2.50	328	P	Pn	17 14 38.7	-0.7
HNR	Honiara	2.51	305	P	Pn	17 14 40.4	+0.9
	92nm,0.3s,baz=128,slow=3.9,SNR=23						
HNR				S	Sn	17 15 10.2	+1.3
	106nm,0.3s,baz=275,slow=21,SNR=6.7						
HNR	Honiara	2.51	305	P	Pn	17 14 40.6	+1.1
SAVO	Savo Central	2.79	308	P	Pn	17 14 44.4	+1.1
TATA	Tatamba Isabel	3.32	319	P	Pn	17 14 50.8	+0.2
LUES	Luesalemba Tem	3.83	87	P	Pn	17 14 57.2	-0.4
VLAKA	Lakatoro	7.37	135	P	Pn	17 15 49.2	+3.0
DZM	Mont Dzumac	11.89	160	P	Pn	17 16 51.9	+3.6
	5.4nm,1.0s,baz=345,slow=19,SNR=1.7						
DZM				S	Sn	17 19 00.0	+0.3
	4.5nm,0.9s,baz=64,slow=18,SNR=1.5						
WRA	Warramunga Arr	28.13	248	P	P	17 19 47.5	-2.5
	0.5nm,0.9s,baz=79,slow=9.3,SNR=4.7						
	0.5nm,0.9s						
ASAR	Alice Springs	29.63	241	P	P	17 20 00.6	-2.8
	0.2nm,0.3s,baz=64,slow=10,SNR=14						
	0.2nm,0.3s						
QSPA	South Pole Qui	79.10	180	P	P	17 25 59.7	-2.1
	1.0nm,1.0s,baz=353,slow=1.5,SNR=7.3						
	1.0nm,1.0s						
MKAR	Makanchi Array	90.93	317	P	P	17 27 01.1	-0.3
	0.1nm,0.5s,baz=101,slow=4.7,SNR=1.4						
	0.1nm,0.5s						

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*NEIC **11** 17:37:42.9±1.5, 18°.8N±0°.3×68°.87W±0°.06, h112^{km}±7^{km}, ML2.5/8, Md2.7/4(RSPR), Error ellipse: s-maj=37.8km s-min=4.5km az=189.0*

*RSPR **11** 17:37:43.3, 18°.33N×68°.93W, h105^{km}±2^{km}, MD2.7/4*

*SDD **11** 17:37:44.0±2.7, 18°.48N×68°.78W, h116^{km}±18^{km}, MD3.1, ML2.6, MW2.9*

ISC 11 17:37:44.3±1.5**, 18°.46N**±0°.10×**68°.86W**±0°.03**, h103**^{km}±11^{km}**, n24,** σ**1^{s}65**/32**, 15C-2D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HIDR	Higuey Centro	0.19	45	⇑ePg	Pn	17 37 58.8	0.0
HIDR				⇑eSg	Sn	17 38 10.1	+0.4
HIDR				IAML		17 38 11.8	
	comp=N,157nm,0.1s						
PCDR	Punta Cana, DR	0.45	83	⇑eSg	Sn	17 38 13.3	+1.4
PCDR				IAML		17 38 19.3	
	comp=N,102nm,2.3s						
MIDR	Miches	0.55	341	⇑ePg	Pn	17 37 59.9	-0.8
MIDR				⇑eSg	Sn	17 38 13.9	+0.7
MIDR				IAML		17 38 15.1	
	comp=N,49nm,0.1s						
DR12	Loma Pena Alta	0.60	303	Pn	Pn	17 37 59.8	-1.3
DR12				Sn	Sn	17 38 13.1	-0.8
HATOM	Hato Mayor del	0.60	303	⇑eSg	Sn	17 38 13.4	-0.4
SMDR	Samana, DR	0.89	339	⇑eP	Pn	17 38 03.3	-0.4
SMDR	Samana, DR	0.89	339	eS	Sn	17 38 19.4	+1.1
SMDR	Samana, DR	0.89	339	⇑ePg	Pn	17 38 03.0	-0.7
SMDR				⇑eSg	Sn	17 38 19.8	+1.4
SMDR				IAML		17 38 22.6	
	comp=N,56nm,1.1s						
DR08	Loma La Naviza	1.21	295	⇑eSg	Sn	17 38 23.5	-1.3
DR08				IAML		17 38 47.2	
	comp=N,832nm,0.1s						
IDE	Isla Desecheo	1.31	93		Pn	17 38 08.1	-0.4
IDE					Sn	17 38 27.0	+0.2
IDE	Isla Desecheo	1.31	93	⇓eP	Pn	17 38 08.1	-0.4
IDE	Isla Desecheo	1.31	93	eS	Sn	17 38 27.0	+0.2
BANI	BANI	1.43	268	Pn	Pn	17 38 11.1	+1.2
BANI				Sn	Sn	17 38 30.0	+0.6
BANI	BANI	1.43	268	⇑ePg	Pn	17 38 11.1	+1.2
BANI				IAML		17 38 35.2	
	comp=N,37nm,0.6s						
ABDR	Alto Bandera	1.72	282	⇑ePg	Pn	17 38 13.0	-0.7
ABDR				⇑eSg	Sn	17 38 36.1	0.0
ABDR				IAML		17 38 53.7	
	comp=N,31nm,2.1s						
AOPR	Arecibo Observ	2.00	93		Pn	17 38 16.1	-0.8
AOPR				IAML		17 38 46.0	
	comp=E,57nm,0.4s						
AOPR				IAML		17 38 47.2	
	comp=N,33nm,0.5s						
AOPR	Arecibo Observ	2.00	93		Sn	17 38 42.8	+0.8
AOPR	Arecibo Observ	2.00	93	⇓eP	Pn	17 38 17.0	+0.1
AOPR	Arecibo Observ	2.00	93	eS	Sn	17 38 42.8	+0.8
UUPR	Utuado, UPR, P	2.04	95		Pn	17 38 17.5	+0.1
CELP	Cerrillos	2.20	100	Pn	Pn	17 38 17.8	-1.7
CELP				IAML		17 39 06.7	
	comp=N,18nm,2.0s						
PODR	Polo	2.32	263	⇑ePg	Pn	17 38 20.3	-1.0
PODR				eSg	Sn	17 38 48.9	-0.8
PODR				IAML		17 39 11.5	
	comp=N,30nm,4.0s						
SDDR	Presa de Saban	2.36	283	Pn	Pn	17 38 18.5	-3.2
SDDR				IAML		17 39 08.2	
	comp=N,16nm,2.6s						
REDR	Restauracion	2.51	287	⇑eSg	Sn	17 39 00.2	+6.6
REDR				IAML		17 39 00.3	
	comp=N,8.8nm,1.2s						

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*IDC **11** 17:39:06.5±5.5, 7°.57S×128°.19E, h172^{km}±53^{km}, mb3.0/2, mbtmp3.8/6, Error ellipse: s-maj=55.7km s-min=22.3km az=44.0*

*NEIC **11** 17:39:07.7±2.4, 7°.70S±0°.10×128°.32E±0°.08, h161^{km}±15^{km}, mb4.2/4, Error ellipse: s-maj=14.7km s-min=10.7km az=152.0*

ISC 11 17:39:07.6±0.8**, 7°.78S**±0°.07×**128°.29E**±0°.07**, h200**^{km}**, n22,** σ**2^{s}49**/25**, mb3.4**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	2.98	94	Pn	Pn	17 39 55.9	-1.1
SOEI	Soe	4.44	243	Pn	Pn	17 40 14.9	-0.1
BATI	Baumata	5.17	242	P	Pn	17 40 24.0	-0.2
	31nm,0.4s,baz=145,slow=3.1,SNR=30						
BATI				S	Sn	17 41 22.6	-2.1
	32nm,0.3s,baz=324,slow=22,SNR=12						
MTN	Manton Dam	5.76	151		Pn	17 40 33.3	+1.6
FAKI	Fak Fak	6.23	39	Pn	Pn	17 40 33.4	-4.5
KNRA	Kununurra	7.86	177		Pn	17 40 59.9	+0.8
FITZ	Fitzroy Crossi	10.58	194	Pn	Pn	17 41 33.1	-1.2
FITZ	Fitzroy Crossi	10.58	194	P	Pn	17 41 34.6	+0.3
	3.2nm,0.5s,baz=13,slow=8.8,SNR=40						
FITZ				S	Sn	17 43 27.7	-4.7
	2.8nm,0.3s,baz=102,slow=22,SNR=8.9						
BKB	Balikpapan	13.07	299	Pn	P	17 42 09.0	-0.2
WB0	Warramunga Arr	13.30	154	Pn	Pn	17 42 09.8	+0.8
WRA	Warramunga Arr	13.44	155	Pn	Pn	17 42 10.7	+0.1
WRA	Warramunga Arr	13.44	155	P	Pn	17 42 13.2	+2.6
	0.6nm,0.5s,baz=331,slow=14,SNR=18						
WRA				S	S	17 44 35.8	-4.7
	2.9nm,0.6s,baz=330,slow=22,SNR=12						
WR8	Warramunga Arr	13.52	154	Pn	Pn	17 42 12.6	+1.0
PSA00	Pilbara Seismi	15.96	210		Pn	17 42 44.1	+2.7
PSA00				IAmb	IAmb	17 42 47.9	
	comp=Z,22nm,1.2s						
AS31	Alice Springs	16.69	162	P	Pn	17 42 53.4	+3.1
AS31				IAmb	IAmb	17 42 55.7	
	comp=Z,1.4nm,0.7s						
ASAR	Alice Springs	16.69	162	P	Pn	17 42 53.0	+2.7
ASAR	Alice Springs	16.69	162	P	Pn	17 42 54.5	+4.2
	comp=Z,2.7nm,0.5s,baz=340,slow=10,SNR=71						
ASAR				S	S	17 45 55.5	+2.0
	comp=Z,0.5nm,0.5s,baz=323,slow=16,SNR=7.9						
JHJ2	Mitsune	42.12	14	P	P	17 46 42.3	+2.1
MAJO	Matsushiro	45.06	11	P	P	17 47 06.5	+2.9
MAJO				IAmb	IAmb	17 47 17.7	
	comp=Z,12nm,1.4s						
MKAR	Makanchi Array	67.96	328	P	P	17 49 44.8	-0.2
	comp=Z,0.1nm,0.5s,baz=134,slow=5.8,SNR=2.1						
	comp=Z,0.1nm,0.5s						
KURBB	Kurchatov Arra	72.30	329	P	P	17 50 12.4	+1.3
	comp=Z,0.4nm,0.5s,baz=133,slow=4.9,SNR=5.3						
	comp=Z,0.4nm,0.5s						
CPUP	Villa Florida	145.66	171	PKPbc	PKPab	17 58 25.1	+1.1
	comp=Z,0.2nm,0.3s,baz=207,slow=4.5,SNR=1.8						

*NEIC **11** 17:42:26.1±2.3, 9°.86N±0°.07×126°.4E±0°.1, h47^{km}±7^{km}, mb4.6/36, Error ellipse: s-maj=15.0km s-min=9.3km az=73.0*

*IDC **11** 17:42:30.6±1.8, 9°.93N×126°.21E, h85^{km}±17^{km}, mb3.8/23, mbtmp4.2/28, MS3.3/19, Error ellipse: s-maj=21.3km s-min=9.6km az=78.0*

*DJA **11** 17:42:39.1±1.8, 9°N±16°×12°6E±°, h235^{km}±10^{km}, M4.5/12, mb4.3/12, mB4.8/4, MLv4.7/6, Mw(mB)4.0/4*

ISC 11 17:42:25.3±0.4**, 9°.97N**±0°.05×**126°.27E**±0°.09**, h42^{km}, n98, σ1^{s}46**/80**, mb4.4**/39**, MS3.2**/15**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	2.96	193		Pn	17 43 07.4	-2.5
DAV	Davao City (W)	2.96	193	P	Pn	17 43 16.4	+6.5
	135nm,0.3s,baz=268,slow=7.4,SNR=4.2						
DAV				S	Sn	17 43 48.9	+4.7
	534nm,0.7s,baz=75,slow=21,SNR=5.8						
SGSI	Sangihe	6.29	187	P	Pn	17 43 57.2	+1.6
TGY	Tagaytay City	6.64	309	P	Pn	17 44 06.1	+5.7
	71nm,0.4s,baz=43,slow=19,SNR=1.1						
TGY				LR	LR	17 47 02.3	
	comp=Z,345nm,18.9s,baz=1.0,slow=41						
MYLDM	Lahad Datu	9.06	239		Pn	17 44 32.0	-1.5
TNTI	Ternate	9.21	173		Pn	17 44 32.3	-3.2
TNTI	Ternate	9.21	173	P	Pn	17 44 39.2	+3.6
KMSI	Cibinong	9.61	194	P	Pn	17 44 41.3	+0.2
	52nm,0.8s						
TOLI2	Tolitoli	10.36	212	Pn	Pn	17 44 51.5	0.0
MRSI	Marisa	10.37	205	P	Pn	17 44 46.5	-5.1
	14nm,1.0s						
KKM	Kota Kinabalu	10.70	249	Pn	Pn	17 44 56.8	+0.7
LUWI	Luwuk	11.48	198	P	Pn	17 45 05.4	-1.4
	34nm,0.7s						
TWG	Pinlang	13.71	339	Pn	Pn	17 45 35.6	-1.6
RKPI	Ransiki, Papua	13.86	145	P	Pn	17 45 39.5	+0.2
FAKI	Fak Fak	14.12	155	Pn	Pn	17 45 39.9	-3.0
KAPI	Kappang	16.24	204	P	P	17 46 14.4	+1.3
	3.2nm,0.3s,baz=61,slow=17,SNR=2.2						
KAPI				LR	LR	17 52 59.0	
	comp=Z,96nm,19.1s,baz=347,slow=39						
JOW	Kunigami	16.88	6	P	P	17 46 22.5	+2.4
	11nm,0.9s,baz=152,slow=18,SNR=7.2						
JOW				LR	LR	17 52 09.0	
	comp=Z,83nm,19.6s,baz=132,slow=34						
GUMO	Guam	18.55	77	LR	LR	17 53 12.2	
	comp=Z,50nm,18.7s,baz=264,slow=34						
JAY	Jayapura	18.99	130	P	Pn	17 46 45.1	+0.6
	14nm,1.0s,baz=90,slow=17,SNR=3.6						
SOEI	Soe	19.70	186	P	P	17 46 47.3	-4.1
SOEI				IAmb	IAmb	17 47 07.1	
	comp=Z,46nm,1.1s						
BATI	Baumata	20.21	187	P	Pn	17 46 57.9	-1.1
	comp=Z,35nm,0.7s,baz=332,slow=3.2,SNR=8.1						
	comp=Z,35nm,0.7s						
MTN	Manton Dam	23.18	168		P	17 47 25.9	-2.5
MTN				IAmb	IAmb	17 47 32.9	
	comp=Z,10nm,0.6s						
JNU	Nakatsue	23.43	10	LR	LR	17 55 43.9	
	comp=Z,33nm,21.9s,baz=193,slow=34						
LEM	Lembang	24.98	229	P	P	17 47 47.3	+1.9
	comp=Z,18nm,0.8s,baz=336,slow=19,SNR=4.4						
	comp=Z,18nm,0.8s						
KNRA	Kununurra	25.60	174		P	17 47 49.6	-1.2
KSRS	Korea Array	27.40	3	P	P	17 48 08.7	+1.8
	comp=Z,1.6nm,0.9s,baz=178,slow=10,SNR=8.0						
	comp=Z,1.6nm,0.9s						
CMAR	Chiang Mai Arr	27.77	291	P	P	17 48 11.3	+0.8
	comp=Z,0.8nm,0.6s,baz=106,slow=6.2,SNR=5.1						
CMAR				LR	LR	17 59 33.8	
	comp=Z,50nm,18.3s,baz=165,slow=37						
	comp=Z,0.8nm,0.6s						
FITZ	Fitzroy Crossi	27.90	181	P	P	17 48 10.3	-1.1
FITZ	Fitzroy Crossi	27.90	181	P	P	17 48 11.0	-0.5
	comp=Z,4.3nm,0.9s,baz=24,slow=16,SNR=5.6						
	comp=Z,4.3nm,0.9s						
MJAR	Matsushiro Arr	28.58	20	LR	LR	18 00 30.7	
	comp=Z,43nm,18.0s,baz=183,slow=38						
COEN	Coen	29.09	145	P	P	17 48 20.0	-2.2
COEN				IAmb	IAmb	17 48 56.8	
	comp=Z,19nm,1.2s						
WB0	Warramunga Arr	30.61	165	P	P	17 48 34.6	-1.0
WB0				IAmb	IAmb	17 49 07.4	
	comp=Z,7.3nm,1.0s						
WRA	Warramunga Arr	30.77	165	P	P	17 48 37.0	0.0
	comp=Z,0.6nm,0.5s,baz=348,slow=9.1,SNR=4.8						
	comp=Z,0.6nm,0.5s						
WR8	Warramunga Arr	30.82	165	P	P	17 48 35.8	-1.7
WR8				IAmb	IAmb	17 48 49.8	
	comp=Z,9.3nm,1.4s						
PSA00	Pilbara Seismi	31.98	191	P	P	17 48 47.1	-0.4
AS31	Alice Springs	34.25	168	P	P	17 49 06.7	-0.8
ASAR	Alice Springs	34.26	168	P	P	17 49 06.4	-1.1
ASAR	Alice Springs	34.26	168	P	P	17 49 07.9	+0.4
	comp=Z,0.6nm,0.3s,baz=346,slow=8.4,SNR=13						
ASAR				PcP	PcP	17 51 43.7	+0.2
	comp=Z,0.6nm,0.6s,baz=338,slow=3.7,SNR=4.2						
	comp=Z,0.6nm,0.3s						
USRK	Ussuriysk Ar.	34.46	7	P	P	17 49 11.9	+3.0
	comp=Z,2.0nm,0.7s,baz=160,slow=6.1,SNR=5.1						
	comp=Z,2.0nm,0.7s						
BRDH	Bariadhala	35.45	295	LR	LR	18 05 21.9	
	comp=Z,78nm,19.0s,baz=144,slow=39						
ASAJ	Asahikawa	36.84	20	LR	LR	18 05 03.6	
	comp=Z,42nm,19.4s,baz=210,slow=37						
HNR	Honiara	38.66	119	LR	LR	18 04 10.9	
	comp=Z,39nm,20.7s,baz=160,slow=34						
KLR	Kul'dur	39.40	6	LR	LR	18 06 06.4	
	comp=Z,27nm,19.9s,baz=188,slow=36						
MORW	Morawa	40.05	194	P	P	17 49 57.0	+0.4
H11N1	WAKE ISLAND Hy	40.35	71	T	T	18 33 12.5	
	baz=264,slow=74						
H11N2	WAKE ISLAND Hy	40.35	71	T	T	18 33 16.8	
	baz=264,slow=74						
H11N3	WAKE ISLAND Hy	40.36	71	T	T	18 33 13.9	
	baz=264,slow=74						
EVN	Everest	41.14	301	P	P	17 50 04.4	-2.1
EVN				IAmb	IAmb	17 50 20.0	
	comp=Z,12nm,1.5s						
SONM	Songino Array	41.30	340	P	P	17 50 06.2	-0.6
	comp=Z,0.6nm,0.4s,baz=163,slow=11,SNR=3.5						
	comp=Z,0.6nm,0.4s						
BBOO	Buckleboo	43.56	168	P	P	17 50 24.1	-1.0
STKA	Stephens Creek	44.12	161	P	P	17 50 29.8	+0.1
	comp=Z,2.8nm,0.7s,baz=343,slow=11,SNR=4.0						
	comp=Z,2.8nm,0.7s						
PALK	Pallekele	45.11	270	LR	LR	18 09 16.4	
	comp=Z,35nm,21.9s,baz=104,slow=36						
PETK	Petropavlovsk-	49.91	24	LR	LR	18 15 13.9	
	comp=Z,21nm,18.1s,baz=218,slow=39						
YAK	Yakutsk	52.02	2		P	17 51 29.6	-0.8
MKAR	Makanchi Array	52.26	323		P	17 51 31.4	-1.0
MKAR	Makanchi Array	52.26	323	P	P	17 51 33.0	+0.6
	comp=Z,1.7nm,0.6s,baz=121,slow=8.8,SNR=17						
	comp=Z,1.7nm,0.6s						
ZALV	Zalesovo Beam	54.89	331	P	P	17 51 51.1	-0.4
ZALV	Zalesovo Beam	54.89	331	P	P	17 51 51.3	-0.2
	comp=Z,0.7nm,0.4s,baz=125,slow=6.7,SNR=3.4						
ZALV				LR	LR	18 15 48.7	
	comp=Z,15nm,18.5s,baz=100,slow=36						
	comp=Z,0.7nm,0.4s						
AAK	Ala-Archa	55.54	315	LR	LR	18 17 36.1	
	comp=Z,52nm,19.6s,baz=111,slow=38						
SEY	Seymchan	56.11	14	LR	LR	18 13 25.2	
	comp=Z,28nm,21.6s,baz=177,slow=33						
KURK	Kurchatov	56.31	326		P	17 52 01.6	-0.2
KURBB	Kurchatov Arra	56.32	325	P	P	17 52 01.9	+0.1
	comp=Z,1.2nm,0.6s,baz=124,slow=7.0,SNR=13						
	comp=Z,1.2nm,0.6s						
GAR	Garm	57.48	310	P	P	17 52 10.4	-0.1
GAR				IAmb	IAmb	17 52 20.4	
	comp=Z,4.2nm,0.7s						
KKAR	Karatay Array	58.46	315	P	P	17 52 16.8	-0.4
TIXI	Tiksi	61.65	1	LR	LR	18 19 11.6	
	comp=Z,22nm,21.5s,baz=198,slow=36						
AB31	Akbulak array	67.10	319	P	P	17 53 13.2	-1.4
ABKAR	Akbulak array	67.10	319	P	P	17 53 13.9	-0.7
BKZ	Black Stump Fm	67.56	140		P	17 53 16.6	-1.0
L14K	Kuka Creek	72.24	29	P	P	17 53 44.6	-1.3
L14K				IAmb	IAmb	17 53 49.9	
	comp=Z,7.1nm,1.1s						
M16K	Timber Creek	73.96	29	P	P	17 53 54.6	-1.5
M16K				IAmb	IAmb	17 53 59.7	
	comp=Z,7.4nm,1.1s						
H17K	Granite Mounta	74.18	25		P	17 53 56.9	-0.5
H17K				IAmb	IAmb	17 54 01.1	
	comp=Z,6.7nm,1.2s						
E18K	Tukpahlearik C	74.39	23	P	P	17 53 58.9	+0.4
E18K				IAmb	IAmb	17 54 02.3	
	comp=Z,5.3nm,1.0s						
C19K	Lookout Ridge	75.10	21	P	P	17 54 03.1	+0.5
D19K	Kuna River	75.51	22	P	P	17 54 05.0	0.0
D19K				IAmb	IAmb	17 54 07.6	
	comp=Z,10nm,1.3s						
O18K	Koktuh Hills	75.67	31		P	17 54 06.6	+0.5
E19K	Redstone River	75.67	23	P	P	17 54 06.8	+0.9
E19K				IAmb	IAmb	17 54 11.9	
	comp=Z,3.9nm,0.9s						
N19K	Bonanza Creek	76.11	30		P	17 54 09.0	+0.3
N19K				IAmb	IAmb	17 54 12.9	
	comp=Z,7.1nm,1.1s						
CAST	Castle Rocks	77.40	27	P	P	17 54 16.8	+1.0
CAST				IAmb	IAmb	17 54 18.9	
	comp=Z,5.6nm,1.0s						
BPAW	Bear Paw Mtn.	77.92	26	P	P	17 54 19.8	+1.1
BPAW				IAmb	IAmb	17 54 22.3	
	comp=Z,11nm,1.4s						
C23K	Itkillik River	78.33	21	P	P	17 54 21.7	+1.0
G23K	Bananza Creek	78.42	24	P	P	17 54 22.8	+1.4
E23K	Chandalar	78.61	22	P	P	17 54 23.4	+0.9
E23K				IAmb	IAmb	17 54 27.0	
	comp=Z,8.6nm,1.1s						
TOLK	Toolik Lake Re	78.65	22	P	P	17 54 23.2	+0.6
E24K	Your Creek	79.04	22	P	P	17 54 25.9	+1.0
F24K	Squaw Lake	79.26	23	P	P	17 54 26.6	+0.5
F24K				IAmb	IAmb	17 54 29.8	
	comp=Z,4.0nm,0.8s						
ILAR	Eielson Array	79.70	26	P	P	17 54 28.5	+0.1
	comp=Z,0.7nm,0.7s,baz=246,slow=5.8,SNR=8.1						
ILAR				LR	LR	18 29 09.1	
	comp=Z,33nm,21.6s,baz=242,slow=35						
	comp=Z,0.7nm,0.7s						
BMAR	Burnt Mountain	80.54	23	P	P	17 54 34.3	+1.3
SPITS	Spitsbergen Ar	84.31	349	P	P	17 54 53.2	+0.8
	comp=Z,1.0nm,0.4s,baz=96,slow=7.6,SNR=9.4						
	comp=Z,1.0nm,0.4s						
ARCES	ARCESS Array B	84.47	340	P	P	17 54 54.0	+0.7
	comp=Z,1.0nm,0.5s,baz=84,slow=2.6,SNR=13						
	comp=Z,1.0nm,0.5s						
BRTR	Keskin Array B	85.72	309	P	P	17 55 00.1	-0.3
	comp=Z,0.5nm,0.8s,baz=73,slow=4.1,SNR=3.9						
	comp=Z,0.5nm,0.8s						
FINES	FINESS Array B	86.15	332	P	P	17 55 01.9	0.0
	comp=Z,1.3nm,0.4s,baz=78,slow=5.2,SNR=17						
	comp=Z,1.3nm,0.4s						
AKASG	Malin Array Be	86.80	321	P	P	17 55 05.2	0.0
	comp=Z,0.4nm,0.5s,baz=77,slow=2.9,SNR=5.4						
	comp=Z,0.4nm,0.5s						
MAW	Mawson	89.42	200	P	P	17 55 17.5	+0.3
	comp=Z,1.7nm,0.9s,baz=0.0,slow=4.0,SNR=2.2						
	comp=Z,1.7nm,0.9s						
VNDA	Vanda	89.64	173	P	P	17 55 20.0	+1.9
	comp=Z,0.7nm,0.7s,baz=311,slow=6.6,SNR=4.2						
	comp=Z,0.7nm,0.7s						
HFS	Hagfors	92.31	332	P	P	17 55 30.8	-0.2
	comp=Z,1.9nm,0.8s,baz=96,slow=3.0,SNR=4.8						
	comp=Z,1.9nm,0.8s						
NOA	NORSAR Array B	93.02	334	LR	LR	18 40 11.9	
	comp=Z,14nm,18.2s,baz=305,slow=37						
YKA	Yellowknife Ar	94.03	24	P	P	17 55 40.1	+1.3
	comp=Z,1.2nm,0.7s,baz=306,slow=5.4,SNR=13						
	comp=Z,1.2nm,0.7s						
PLCA	Paso Flores	145.93	157	PKPbc	PKPbc	18 02 00.8	+0.1
	comp=Z,2.6nm,0.8s,baz=241,slow=7.1,SNR=5.2						

IDC 11 17:53:08.0±6.2**, 6°.71S×150°.28E, h138^{km}**±47^{km}**, mb3.0**/3**, mbtmp3.5**/4**, Error ellipse: s-maj=168.4km s-min=34.5km az=126.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.09	229	P	Pn	17 54 08.6	-0.5
	12nm,0.8s,baz=268,slow=16,SNR=1.4						
PMG				S	Sn	17 54 57.6	+1.0
	9.8nm,0.7s,baz=352,slow=23,SNR=1.3						
WRA	Warramunga Arr	20.31	228	P	P	17 57 33.2	-0.1
	0.8nm,0.7s,baz=52,slow=9.8,SNR=8.8						
	0.8nm,0.7s						
ASAR	Alice Springs	23.06	221	P	P	17 58 01.6	0.0
	1.0nm,0.7s,baz=56,slow=9.6,SNR=25						
	1.0nm,0.7s						
ILAR	Eielson Array	84.87	23	P	P	18 05 27.0	+0.1
	0.2nm,0.5s,baz=252,slow=4.9,SNR=2.3						
	0.2nm,0.5s						

IDC 11 18:03:30.5±2.1**, 9°.57N×125°.50E, h0^{km}, mb3.5**/5**, mbtmp3.5**/5**, Error ellipse: s-maj=216.4km s-min=21.6km az=66.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.59	164	P	P	18 09 46.2	-0.1
	0.4nm,0.9s,baz=344,slow=8.1,SNR=9.7						
	0.4nm,0.9s						
ASAR	Alice Springs	34.04	166	P	P	18 10 16.4	-0.2
	0.2nm,0.3s,baz=349,slow=7.2,SNR=7.7						
	0.2nm,0.3s						
H11N1	WAKE ISLAND Hy	41.19	71	T	T	18 54 22.3	
	baz=265,slow=74						
H11N2	WAKE ISLAND Hy	41.20	71	T	T	18 54 23.0	
	baz=265,slow=74						
H11N3	WAKE ISLAND Hy	41.21	71	T	T	18 54 38.2	
	baz=265,slow=74						
MKAR	Makanchi Array	52.13	323	P	P	18 12 42.4	-0.3
	0.2nm,0.5s,baz=120,slow=7.6,SNR=4.4						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	56.22	326	P	P	18 13 11.4	-1.0
	0.2nm,0.5s,baz=125,slow=7.2,SNR=4.3						
	0.2nm,0.5s						
FINES	FINESS Array B	86.14	332	P	P	18 16 14.9	+1.6
	1.4nm,1.0s,baz=48,slow=6.6,SNR=1.3						
	1.4nm,1.0s						

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*IDC **11** 18:27:38.0±0.8, 21°.98S×169°.29E, h0^{km}, mb4.1/10, mbtmp4.0/11, ML3.6/1, MS3.4/6, Error ellipse: s-maj=24.7km s-min=23.0km az=169.0*

*NOU **11** 18:27:37.7, 21°.93S×169°.34E, h0^{km}, MLv4.4/12, Southeast of Loyalty Islands*

*NEIC **11** 18:27:41.2±2.2, 22°.06S±0°.04×169°.11E±0°.08, h10^{km}±1^{km}, mb4.4/15, Error ellipse: s-maj=12.8km s-min=7.4km az=287.0*

ISC 11 18:27:40.3±0.5**, 21°.93S**±0°.06×**169°.19E**±0°.05**, h10^{km}, n56, σ1^{s}33**/53**, mb4.2**/17**, 4C, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.16	292	P	Pb	18 28 02.5	0.0
MARNC	Mare, Loyalty	1.16	292	S	Sb	18 28 19.1	+1.5
PINNC	Pines Island,	1.75	247		Pn	18 28 10.8	+0.1
PINNC	Pines Island,	1.75	247	P	Pn	18 28 11.3	+0.6
PINNC	Pines Island,	1.75	247	S	Sn	18 28 34.9	+1.8
YATNC	Mamie plateau,	2.14	266	P	Pn	18 28 16.1	+0.1
OUENC	Ouen Island, N	2.23	257	P	Pn	18 28 18.0	+0.7
INH	Isangel	2.37	2	P	Pn	18 28 18.0	-1.2
DZM	Mont Dzumac	2.55	266		Pn	18 28 22.0	+0.2
DZM	Mont Dzumac	2.55	266	Pn	Pn	18 28 22.8	+1.0
	10nm,0.3s,baz=67,slow=15,SNR=110						
DZM				LR	LR	18 28 52.5	
	comp=Z,200nm,20.4s,baz=246,slow=28						
DZM				Sn	Sn	18 28 52.6	-0.4
	28nm,0.3s,baz=23,slow=21,SNR=6.2						
	54nm,0.4s						
DZM	Mont Dzumac	2.55	266	P	Pn	18 28 22.7	+0.9
ONTNC	Ouen Toro	2.56	261		Pn	18 28 21.6	-0.3
ONTNC	Ouen Toro	2.56	261	P	Pn	18 28 21.8	-0.1
KOUNC	Koumac, New Ca	4.77	286	P	Pn	18 28 54.1	+1.8
VLAKA	Lakatoro	6.03	344	P	Pn	18 29 08.3	-1.2
MSVF	Nonsavu	9.32	65	Pn	Pn	18 29 57.7	+2.8
	0.3nm,0.3s,baz=272,slow=12,SNR=6.7						
MSVF				LR	LR	18 33 10.1	
	comp=Z,505nm,18.1s,baz=206,slow=36						
HNR	Honiara	15.27	323	LR	LR	18 35 33.3	
	comp=Z,61nm,18.2s,baz=145,slow=31						
URZ	Urewera	17.65	159	LR	LR	18 36 37.2	
	comp=Z,163nm,18.2s,baz=87,slow=31						
RTZ	Ruatahuna	17.93	160	P	Pn	18 31 50.9	+1.1
RTZ				IAmb	IAmb	18 31 56.4	
	comp=Z,18nm,1.1s						
BKZ	Black Stump Fm	18.29	162	P	Pn	18 31 53.7	-0.5
BKZ				IAmb	IAmb	18 31 58.2	
	comp=Z,14nm,1.1s						
MRZ	Mangatainoka R	19.45	165	P	P	18 32 07.3	+0.3
MRZ				IAmb	IAmb	18 32 10.9	
	comp=Z,44nm,1.3s						
BFZ	Birch Farm	19.63	164	P	P	18 32 08.8	-0.2
BFZ				IAmb	IAmb	18 32 27.3	
	comp=Z,26nm,1.0s						
STKA	Stephens Creek	26.46	242	P	P	18 33 16.5	-1.1
STKA	Stephens Creek	26.46	242	P	P	18 33 16.6	-1.1
	comp=Z,3.8nm,1.1s,baz=79,slow=10,SNR=2.7						
STKA				LR	LR	18 44 16.0	
	comp=Z,95nm,18.1s,baz=74,slow=38						
	comp=Z,3.8nm,1.1s						
RAR	Rarotonga	28.85	94	P	P	18 33 42.6	+3.5
	comp=Z,27nm,0.7s,baz=310,slow=9.3,SNR=2.2						
WR8	Warramunga Arr	32.42	267	P	P	18 34 08.6	-2.0
WR8				IAmb	IAmb	18 34 31.8	
	comp=Z,13nm,1.3s						
AS31	Alice Springs	32.52	260	P	P	18 34 10.1	-1.5
ASAR	Alice Springs	32.53	260	P	P	18 34 09.5	-2.1
ASAR	Alice Springs	32.53	260	P	P	18 34 11.7	+0.1
	comp=Z,1.7nm,0.8s,baz=78,slow=9.1,SNR=20						
	comp=Z,1.7nm,0.8s						
WRA	Warramunga Arr	32.57	267	P	P	18 34 09.7	-2.3
WRA	Warramunga Arr	32.57	267	P	P	18 34 11.3	-0.7
	comp=Z,0.5nm,0.4s,baz=97,slow=8.5,SNR=13						
	comp=Z,0.5nm,0.4s						
KNRA	Kununurra	38.69	272	P	P	18 35 03.1	-1.4
KNRA				IAmb	IAmb	18 35 31.8	
	comp=Z,13nm,1.4s						
SAUI	Saumlaki	39.01	285	P	P	18 35 06.2	-1.1
FITZ	Fitzroy Crossi	41.00	267	P	P	18 35 24.0	+0.2
NWAO	Narrogin (SRO)	46.99	245	LR	LR	18 56 45.7	
	comp=Z,71nm,18.9s,baz=80,slow=37						
VNDA	Vanda	55.76	182	P	P	18 37 17.1	+0.3
VNDA				IAmb	IAmb	18 37 33.7	
	comp=Z,3.6nm,1.4s						
SBA	Scott Base	55.99	181	P	P	18 37 18.4	-0.1
MJAR	Matsushiro Arr	65.10	333	P	P	18 38 20.6	-0.6
	comp=Z,1.0nm,0.9s,baz=158,slow=10,SNR=1.8						
	comp=Z,1.0nm,0.9s						
QSPA	South Pole Qui	68.14	180	P	P	18 38 39.5	-0.9
QSPA				IAmb	IAmb	18 38 41.2	
	comp=Z,10nm,1.0s						
QSPA	South Pole Qui	68.14	180	P	P	18 38 39.9	-0.5
	comp=Z,6.1nm,0.9s,baz=44,slow=1.9,SNR=19						
	comp=Z,6.1nm,0.9s						
KSRS	Korea Array	70.69	326	P	P	18 38 56.4	+0.1
	comp=Z,0.9nm,0.8s,baz=130,slow=6.1,SNR=5.0						
	comp=Z,0.9nm,0.8s						
BELA	Belgrano 2	79.44	175	P	P	18 39 44.5	-1.8
BELA				IAmb	IAmb	18 39 45.6	
	comp=Z,3.1nm,0.8s						
CMAR	Chiang Mai Arr	79.57	295	P	P	18 39 48.7	+0.8
	comp=Z,1.1nm,1.0s,baz=114,slow=4.3,SNR=4.2						
	comp=Z,1.1nm,1.0s						
TROLL	Troll, Antarti	85.86	184	⇑P	P	18 40 19.2	-0.8
	comp=Z,200nm,0.6s						
SNAA	Sanae	86.49	183	⇑P	P	18 40 21.9	-1.1
	comp=Z,56nm,1.0s						
SNAA	Sanae	86.49	183	P	P	18 40 21.6	-1.4
	comp=Z,2.3nm,0.9s,baz=150,slow=3.8,SNR=8.4						
	comp=Z,2.3nm,0.9s						
VNA3	Neumayer Olymp	87.08	180	⇑P	P	18 40 24.4	-1.4
	comp=Z,4.8nm,0.7s						
VNA2	Neumayer--Watz	87.37	181	⇑P	P	18 40 26.0	-1.2
	comp=Z,4.7nm,0.6s,baz=182,slow=5.7						
NVAR	Mina Array Bea	90.61	49	P	P	18 40 42.9	-0.4
	comp=Z,0.7nm,0.8s,baz=244,slow=7.0,SNR=1.9						
	comp=Z,0.7nm,0.8s						
TXAR	Lajitas Array	98.08	62	P	P	18 41 15.7	-1.9
	comp=Z,0.1nm,0.5s,baz=279,slow=3.2,SNR=2.6						
	comp=Z,0.1nm,0.5s						
EKA	Eskdalemuir Ar	146.15	352	PKPbc	PKPdf	18 47 18.8	-0.7
	comp=Z,1.7nm,0.7s,baz=352,slow=3.8,SNR=3.8						
RONA	Rosalia, Austr	146.31	326	*e*PKiKP	PKiKP	18 47 33.9	+10
	comp=Z,2.3nm,0.6s						
GERES	GERESS Array B	146.81	330	PKPbc	PKPdf	18 47 21.9	+1.0
	comp=Z,1.1nm,0.8s,baz=26,slow=6.1,SNR=4.2						
SOKA	Soboth	147.63	326	*e*PKP	PKPbc	18 47 25.8	+0.8
	comp=Z,1.3nm,0.6s						
MYKA	Terra Mystica	148.38	327	*e*PKP	PKiKP	18 47 30.8	+2.1
	comp=Z,2.7nm,0.6s						
MOTA	Moosalm	149.09	330	*e*PKP	PKiKP	18 47 32.7	+2.4
	comp=Z,3.0nm,1.0s						

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*IDC **11** 18:35:13.2±1.1, 54°.30N×169°.15E, h0^{km}, mb3.8/15, mbtmp3.8/17, ML3.8/2, MS3.0/4, Error ellipse: s-maj=34.4km s-min=14.8km az=5.0*

*KRSC **11** 18:35:14.8±1.3, 54°.10N×169°.08E, h62^{km}±29^{km}, Ml4.3*

*MOS **11** 18:35:17.3±0.7, 54°.09N×169°.01E, h55^{km}, mb4.0/1, Error ellipse: s-maj=10.7km s-min=6.6km az=9.4*

ISC 11 18:35:16.6±0.6**, 54°.14N**±0°.07×**169°.09E**±0°.05**, h25^{km}, n83, σ1^{s}24**/83**, mb3.7**/15**, MS3.1**/3**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	2.10	302	PN	Pn	18 35 50.1	0.0
BKI				S	Sn	18 36 14.5	-0.9
BKI	Bering	2.10	302	*e*P	Pn	18 35 50.2	0.0
BKI				*e*S	Sn	18 36 14.6	-0.9
SHEM	Shemya Is, Ala	3.31	113	Pn	Pn	18 36 06.5	-0.3
	18nm,0.3s,baz=32,slow=5.3,SNR=7.0						
SHEM				Sn	Sn	18 36 45.3	0.0
	9.8nm,0.3s,baz=278,slow=21,SNR=6.3						
	65nm,0.5s						
KBTR	Krutoberegovo	4.15	303	PN	Pn	18 36 19.3	+1.0
KBTR				S	Sn	18 37 06.3	+0.4
KBTR	Krutoberegovo	4.15	303	*e*P	Pn	18 36 19.4	+1.0
KBTR				*e*S	Sn	18 37 06.4	+0.4
MKZ	Mys Kozlova	4.33	279	PN	Pn	18 36 20.9	+0.2
MKZ				S	Sn	18 37 07.6	-2.6
MKZ	Mys Kozlova	4.33	279	*e*P	Pn	18 36 21.0	+0.2
MKZ				*e*S	Sn	18 37 07.6	-2.6
SMKR	Semkarok	4.99	303	PN	Pn	18 36 32.1	+2.2
SMKR	Semkarok	4.99	303	*e*P	Pn	18 36 32.2	+2.2
TUMD	Tumrok D	5.16	285	PN	Pn	18 36 33.4	+1.3
TUMD	Tumrok D	5.16	285	*e*P	Pn	18 36 33.5	+1.3
KMNR	Kamenistaya	5.35	291	PN	Pn	18 36 37.6	+2.7
KMNR	Kamenistaya	5.35	291	*e*P	Pn	18 36 37.6	+2.7
SPN	Mys Shipunski	5.50	263	PN	Pn	18 36 36.8	+0.1
SPN	Mys Shipunski	5.50	263	*e*P	Pn	18 36 36.8	+0.1
KOZ	Kozyrevsk	5.63	294	PN	Pn	18 36 41.3	+2.7
KOZ	Kozyrevsk	5.63	294	*e*P	Pn	18 36 41.4	+2.7
KII	Karymskiy	5.67	273	PN	Pn	18 36 40.3	+1.0
KII	Karymskiy	5.67	273	*e*P	Pn	18 36 40.3	+1.0
OSSR	Ossora	6.11	330	PN	Pn	18 36 45.3	+0.2
OSSR	Ossora	6.11	330	*e*P	Pn	18 36 45.4	+0.2
SDLR	Sedlovina	6.12	266	PN	Pn	18 36 46.1	+0.7
SDLR	Sedlovina	6.12	266	*e*P	Pn	18 36 46.1	+0.7
UGLR	Uglovaya	6.17	266	PN	Pn	18 36 47.1	+1.0
UGLR	Uglovaya	6.17	266	*e*P	Pn	18 36 47.2	+1.0
SMAR	Somma	6.17	266	PN	Pn	18 36 46.9	+0.7
SMAR	Somma	6.17	266	*e*P	Pn	18 36 47.0	+0.7
KRER	Koryakskii	6.20	266	PN	Pn	18 36 47.5	+1.0
KRER	Koryakskii	6.20	266	*e*P	Pn	18 36 47.6	+1.0
AVH	Avacha	6.21	266	PN	Pn	18 36 47.6	+1.0
AVH	Avacha	6.21	266	*e*P	Pn	18 36 47.6	+1.0
ESO	Esso	6.24	291	PN	Pn	18 36 48.2	+1.3
ESO	Esso	6.24	291	*e*P	Pn	18 36 48.3	+1.3
KRX	Arik	6.24	267	PN	Pn	18 36 48.0	+0.8
KRX	Arik	6.24	267	*e*P	Pn	18 36 48.0	+0.8
DALK	Dalny	6.25	264	PN	Pn	18 36 47.9	+0.8
DALK	Dalny	6.25	264	*e*P	Pn	18 36 48.0	+0.8
KOK	Koryaka	6.26	266	PN	Pn	18 36 48.2	+0.8
KOK	Koryaka	6.26	266	*e*P	Pn	18 36 48.2	+0.8
PET	Petropavlovsk	6.32	264	*e*PN	Pn	18 36 49.0	+1.0
PET				pmax	pmax		
	comp=Z,25nm,0.5s						
PET	Petropavlovsk	6.32	264	*e*P	Pn	18 36 49.0	+1.0
GNL	Ganaly	6.60	271	PN	Pn	18 36 53.7	+1.7
GNL	Ganaly	6.60	271	*e*P	Pn	18 36 53.8	+1.7
KRMR	Karymshinskiy	6.67	263	PN	Pn	18 36 53.7	+0.9
KRMR	Karymshinskiy	6.67	263	*e*P	Pn	18 36 53.8	+0.9
MTVR	Mutnovka	6.74	260	PN	Pn	18 36 54.7	+0.7
MTVR	Mutnovka	6.74	260	*e*P	Pn	18 36 54.8	+0.7
GRL	Gorelyy	6.78	261	PN	Pn	18 36 56.0	+1.5
GRL	Gorelyy	6.78	261	*e*P	Pn	18 36 56.0	+1.5
PEA0B	Petropavlovsk-	6.85	266	PN	Pn	18 36 57.4	+2.0
PETK	Petropavlovsk-	6.85	266	Pn	Pn	18 36 56.4	+1.0
	comp=Z,5.6nm,0.3s,baz=90,slow=18,SNR=45						

PETK				Sn	**Sn**	**18 38 13.3**	**+0.8**
	comp=Z,3.4nm,0.3s,baz=261,slow=5.4,SNR=8.3						
PETK				LR	LR	18 39 36.6	
	comp=Z,35nm,18.7s,baz=29,slow=38						
	comp=Z,6.6nm,0.3s						
ASAK	**Asacha**	**6.94**	**260**	PN	**Pn**	**18 36 57.9**	**+1.3**
ASAK	**Asacha**	**6.94**	**260**	*e*P	**Pn**	**18 36 57.9**	**+1.3**
APC	**Apacha**	**7.21**	**265**	PN	**Pn**	**18 37 01.9**	**+1.6**
APC	**Apacha**	**7.21**	**265**	*e*P	**Pn**	**18 37 01.9**	**+1.6**
PAU	**Pauzhetka**	**7.91**	**255**	PN	**Pn**	**18 37 11.5**	**+1.7**
PAU	**Pauzhetka**	**7.91**	**255**	*e*P	**Pn**	**18 37 11.6**	**+1.7**
SKR	**Severo-Kuril’s**	**8.65**	**252**	PN	**Pn**	**18 37 20.9**	**+0.9**
SKR	**Severo-Kuril’s**	**8.65**	**252**	*e*P	**Pn**	**18 37 21.0**	**+0.9**
KDAK	**Kodiak Island**	**21.56**	**65**	P	**P**	**18 40 03.0**	**-0.8**
	comp=Z,3.4nm,0.8s,baz=270,slow=8.1,SNR=1.1						
	comp=Z,3.4nm,0.8s						
YAK	**Yakutsk**	**21.97**	**307**	P	**P**	**18 40 09.4**	**+1.2**
	comp=Z,9.4nm,0.7s,baz=84,slow=14,SNR=6.7						
	comp=Z,9.4nm,0.7s						
KLR	**Kul'dur**	**23.47**	**273**	LR	LR	18 50 37.5	
	comp=Z,23nm,18.3s,baz=198,slow=39						
ILAR	**Eielson Array**	**24.24**	**47**	P	**P**	**18 40 30.2**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=254,slow=8.3,SNR=8.5						
	comp=Z,0.6nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**34.38**	**184**	T	T	19 18 32.2	
	baz=2.0,slow=76,SNR=896						
H11N3	**WAKE ISLAND Hy**	**34.40**	**184**	T	T	19 18 34.2	
	baz=2.0,slow=76,SNR=572						
H11N1	**WAKE ISLAND Hy**	**34.40**	**184**	T	T	19 18 34.6	
	baz=2.0,slow=76,SNR=768						
H11S1	**WAKE ISLAND Hy**	**35.61**	**184**	T	T	19 20 01.0	
	baz=2.2,slow=76,SNR=129						
H11S3	**WAKE ISLAND Hy**	**35.62**	**184**	T	T	19 20 02.9	
	baz=2.2,slow=76,SNR=82						
H11S2	**WAKE ISLAND Hy**	**35.62**	**184**	T	T	19 20 03.1	
	baz=2.2,slow=76,SNR=147						
SONM	**Songino Array**	**38.80**	**287**	P	**P**	**18 42 39.9**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=58,slow=8.7,SNR=2.7						
	comp=Z,0.7nm,0.5s						
NVAR	**Mina Array Bea**	**50.31**	**77**	P	**P**	**18 44 10.9**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=337,slow=12,SNR=2.1						
	comp=Z,0.2nm,0.4s						
KURK	**Kurchatov**	**51.61**	**306**	P	**P**	**18 44 20.2**	**-0.2**
KURBB	**Kurchatov Arra**	**51.71**	**306**	P	**P**	**18 44 20.2**	**-1.0**
	comp=Z,0.8nm,0.8s,baz=54,slow=7.7,SNR=12						
	comp=Z,0.8nm,0.8s						
MKAR	**Makanchi Array**	**52.41**	**300**	P	**P**	**18 44 25.6**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=53,slow=6.2,SNR=5.4						
	comp=Z,0.4nm,0.7s						
BVAR	**Borovoye Array**	**53.80**	**312**	P	**P**	**18 44 36.3**	**-0.3**
	comp=Z,1.1nm,0.4s,baz=54,slow=7.5,SNR=12						
	comp=Z,1.1nm,0.4s						
ARCES	**ARCESS Array B**	**53.82**	**345**	P	**P**	**18 44 36.0**	**-0.5**
	comp=Z,2.1nm,0.9s,baz=21,slow=10,SNR=5.5						
ARCES				LR	LR	19 08 38.0	
	comp=Z,16nm,18.5s,baz=287,slow=37						
	comp=Z,2.1nm,0.9s						
ANMO	**Albuquerque**	**59.49**	**72**	LR	LR	19 11 59.1	
	comp=Z,46nm,18.1s,baz=184,slow=37						
CMAR	**Chiang Mai Arr**	**63.63**	**265**	P	**P**	**18 45 46.1**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=41,slow=6.2,SNR=1.8						
	comp=Z,0.3nm,0.4s						
NOA	**NORSAR Array B**	**63.83**	**348**	P	**P**	**18 45 45.7**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=16,slow=6.6,SNR=2.0						
	comp=Z,0.4nm,0.6s						
HFS	**Hagfors**	**64.39**	**347**	P	**P**	**18 45 48.9**	**-1.0**
	comp=Z,1.1nm,0.5s,baz=51,slow=11,SNR=2.3						
	comp=Z,1.1nm,0.5s						
TXAR	**Lajitas Array**	**65.24**	**74**	P	**P**	**18 45 56.4**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=309,slow=5.3,SNR=14						
	comp=Z,0.9nm,0.6s						
AKASG	**Malin Array Be**	**70.25**	**334**	P	**P**	**18 46 26.2**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=33,slow=7.0,SNR=2.4						
	comp=Z,0.3nm,0.5s						
BRTR	**Keskin Array B**	**78.97**	**327**	P	**P**	**18 47 18.9**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=46,slow=6.8,SNR=3.0						
	comp=Z,0.3nm,0.6s						

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*GCG **11** 18:36:05.3±0.3, 13°.15N×90°.31W, h22^{km}±5^{km}, MD3.6*

SNET 11 18:36:03.6±1.0**, 13°.04N×90°.32W, h17**^{km}±5^{km}**, ML3.4, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NUBE	**Las Nubes**	**1.00**	**31**	*e*P	Pb	18 36 22.2	-0.4
CEVE	**Cerro Verde**	**1.03**	**41**	*e*P	Pb	18 36 22.5	-0.7
CEVE				*e*S	Sg	18 36 37.4	+0.1
CEVE				IAML		18 36 38.6	
	comp=Z,1µm,0.3s						
JAYA	**Jayaque - finc**	**1.04**	**54**	*e*P	Pb	18 36 23.0	-0.3
JAYA				*e*S	Sb	18 36 36.8	0.0
JAYA				IAML		18 36 38.2	
	comp=Z,690nm,0.2s						
JAYA	**Jayaque - finc**	**1.04**	**54**	*e*P	Pb	18 36 22.7	-0.5
JAYA				*i* S	Sb	18 36 36.4	-0.3
LOAL	**Lomas de Alarc**	**1.08**	**29**	*e*S	Sn	18 36 38.4	-0.3
BOQS	**Boqueron**	**1.22**	**55**	*e*P	Pn	18 36 25.6	-0.5
LFRS	**El Faro**	**1.35**	**64**	*e*P	Pn	18 36 27.1	-0.6
MTO3	**Montecristo**	**1.64**	**34**	*e*P	Pn	18 36 32.1	+0.2
MTO3				*e*S	Sb	18 36 54.2	+0.3
MTO3	**Montecristo**	**1.64**	**34**	*e*P	Pn	18 36 32.1	+0.3
LLGN	**La Laguna**	**1.74**	**50**	*e*S	Sb	18 36 56.2	-0.6

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*NEIC **11** 18:36:53.8±0.8, 37°.48N±0°.01×116°.69W±0°.01, h16^{km}±8^{km}, Error ellipse: s-maj=2.1km s-min=1.7km az=189.0*

REN 11 18:36:53.9±0.7**, 37°.473N**±0°.006×**116°.70W**±0°.01**, h16**^{km}±7^{km}**, ML2.9**/30**, ML2.7**/96(NEIC)**, Error ellipse: s-maj=1.7km s-min=0.9km az=97.0, Southern Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GMN	**Gold Mountain**	**0.48**	**249**		Pg	18 37 03.4	-0.2
GMN				IAML		18 37 10.2	
	comp=N,796nm,0.5s						
GMN				IAML		18 37 10.9	
	comp=E,620nm,0.3s						
GMN	**Gold Mountain**	**0.48**	**249**		Sg	18 37 09.8	-0.2
SGV	**South Grapevin**	**0.56**	**208**		Pg	18 37 04.9	-0.1
SGV					Sg	18 37 12.6	0.0
MZP	**Montezuma Peak**	**0.59**	**293**		Pg	18 37 05.2	-0.4
MZP					Sg	18 37 13.3	-0.3
MZP	**Montezuma Peak**	**0.59**	**293**	IAML		18 37 13.9	
	comp=E,220nm,0.2s						
MZP				IAML		18 37 21.9	
	comp=N,88nm,0.4s						
TPNV	**Topopah Spring**	**0.64**	**145**		Pg	18 37 06.4	-0.1
TPNV	**Topopah Spring**	**0.64**	**145**	IAML		18 37 21.1	
	comp=N,299nm,0.7s						
TPNV				IAML		18 37 21.8	
	comp=N,409nm,0.2s						
WCT	**Wildcat Mounta**	**0.68**	**175**		Pg	18 37 07.0	-0.3
GRAC	**Grapevine Rang**	**0.71**	**228**		Pg	18 37 07.7	-0.2
GRAC					Sb	18 37 17.6	-0.1
GRAC				IAML		18 37 18.4	
	comp=E,522nm,0.3s						
GRAC				IAML		18 37 27.7	
	comp=N,499nm,0.2s						
TPH	**Tonopah**	**0.73**	**326**		Pg	18 37 08.0	-0.2
TPH				Sg	Sg	18 37 17.7	-0.2
CPY	**CP-1**	**0.74**	**136**		Pg	18 37 08.2	-0.4
S11A	**Rachel**	**0.78**	**77**		Pg	18 37 07.7	-1.5
S11A				Sg	Sg	18 37 18.2	-1.2
LCH	**Last Change Ra**	**0.79**	**253**		Pg	18 37 09.4	0.0
NSP	**Numbskull Pass**	**0.84**	**152**		Pb	18 37 09.9	-0.3
SDH	**Striped Hills**	**0.88**	**161**		Pb	18 37 10.5	-0.4
MCY	**Mercury**	**1.00**	**144**		Pb	18 37 13.1	+0.1
FURC	**Furnace Creek,**	**1.01**	**187**		Pg	18 37 13.9	+0.4
DSP	**Deep Springs**	**1.02**	**265**		Pg	18 37 13.6	0.0
DSP				Sg	Sg	18 37 26.7	-0.2
DSP				IAML		18 37 30.5	
	comp=E,185nm,0.7s						
DSP				IAML		18 37 30.6	
	comp=N,184nm,0.4s						
AMDNV	**Amargosa**	**1.07**	**162**		Pb	18 37 14.2	+0.1
R11B	**Troy Canyon, C**	**1.24**	**45**		Pn	18 37 16.9	0.0
R11B				IAML		18 37 39.6	
	comp=N,81nm,0.3s						
GWY	**Greenwater Val**	**1.28**	**179**		Pb	18 37 18.0	+0.1
GWY				IAML		18 37 40.5	
	comp=N,216nm,0.5s						
TIN	**Tinemaha, Big**	**1.29**	**252**		Pg	18 37 18.8	0.0
MLNR	**Milner Canyon**	**1.31**	**276**		Pb	18 37 18.7	+0.3
Q09A	**Carvers**	**1.41**	**345**		Pb	18 37 20.3	+0.2
BHPR	**Bishop**	**1.43**	**264**		Pg	18 37 21.6	0.0
NV11	**Mina Array Sit**	**1.50**	**310**		Pn	18 37 20.7	+0.3
NV11				IAML		18 37 44.5	
	comp=N,64nm,0.3s						
BENR	**Benton**	**1.51**	**280**		Pb	18 37 21.6	-0.2
SHPR	**Sheep Range**	**1.57**	**128**		Pb	18 37 22.0	-0.7
NV08	**Mina Array Sit**	**1.58**	**307**		Pn	18 37 22.1	+0.5
NVAR	**Mina Array Bea**	**1.59**	**307**		Pn	18 37 21.8	+0.1
NV09	**Mina Array Sit**	**1.61**	**307**		Pb	18 37 22.9	-0.6
LHV	**Little Huntoon**	**1.63**	**299**		Pb	18 37 22.9	-0.7
LHV				IAML		18 37 47.9	
	comp=N,100nm,0.6s						
RYN	**Ryan**	**1.84**	**309**		Pn	18 37 26.1	+0.9
RYN				IAML		18 37 55.9	
	comp=N,63nm,0.3s						
GSC	**Goldstone, Bar**	**2.17**	**182**		Pn	18 37 30.7	+1.1
GSC				IAML		18 38 04.1	
	comp=E,60nm,0.6s						
GSC				IAML		18 38 04.0	
	comp=N,49nm,0.7s						
V12A	**Nelson**	**2.29**	**139**		Pn	18 37 31.9	+0.7
ISA	**Isabella, Lake**	**2.30**	**219**		Pn	18 37 32.2	+0.8
WAKR	**Walker**	**2.40**	**296**		Pn	18 37 32.3	-0.4
SPR3	**Spring Creek 3**	**2.41**	**50**		Pn	18 37 32.8	-0.3
SPR3				IAML		18 38 08.3	
	comp=E,34nm,0.8s						
SPR3				IAML		18 38 18.2	
	comp=N,37nm,0.7s						
PSUT	**Pine Spring**	**2.48**	**64**		Pn	18 37 34.4	+0.4
CCAC	**Calif City Air**	**2.55**	**205**	Pn	Pn	18 37 35.0	+0.3
CCAC				IAML		18 38 24.1	
	comp=E,25nm,1.2s						
PNTR	**Pine Nut**	**2.79**	**306**		Pn	18 37 38.1	-0.2
PNTR				IAML		18 38 27.3	
	comp=N,24nm,1.0s						
PNTR				IAML		18 38 32.7	
	comp=E,25nm,1.3s						
LCMT	**Little Creek M**	**2.80**	**98**		Pn	18 37 39.0	+0.7
LCMT				IAML		18 38 22.5	
	comp=N,18nm,0.8s						
LCMT				IAML		18 38 25.1	
	comp=E,16nm,0.9s						
CMB	**Columbia Colle**	**2.98**	**282**		Pn	18 37 40.3	-0.3
PAHR	**Pah Rah Range**	**3.07**	**318**		Pn	18 37 40.7	-1.2
KNB	**Kanab**	**3.13**	**97**		Pn	18 37 41.5	-1.3
KNB				IAML		18 38 33.7	
	comp=N,14nm,0.8s						
KNB				IAML		18 38 39.7	
	comp=E,17nm,1.1s						
MPK	**Martis Peak**	**3.19**	**306**	Pn	Pn	18 37 42.8	-0.9
MPK				IAML		18 38 57.5	
	comp=N,22nm,1.0s						
MPK				IAML		18 39 04.0	
	comp=E,18nm,0.8s						
W13A	**Hualapai Mount**	**3.28**	**135**		Pn	18 37 44.7	-0.2
BCW	**Bitter Crk WRg**	**3.35**	**222**	Pn	Pn	18 37 45.4	-0.4
BCW				IAML		18 38 21.1	
	comp=E,18nm,3.0s						
BCW				IAML		18 38 22.6	
	comp=N,16nm,4.6s						
ELK	**Elko**	**3.46**	**19**		Pn	18 37 46.9	-0.6
ELK				IAML		18 38 43.4	
	comp=N,14nm,0.4s						
ELK				IAML		18 38 45.8	
	comp=N,9.8nm,0.5s						
PMPB	**Monarch Peak**	**3.52**	**250**	Pn	Pn	18 37 47.1	-1.0
PMPB				IAML		18 39 13.8	
	comp=E,23nm,4.5s						
PMPB				IAML		18 39 16.1	
	comp=N,17nm,4.0s						
AFDM	**Forest Hills D**	**3.67**	**295**	Pn	Pn	18 37 48.6	-1.6
U15A	**North Rim**	**3.68**	**105**		Pn	18 37 50.5	0.0
U15A				IAML		18 38 52.8	
	comp=N,16nm,0.7s						
U15A				IAML		18 38 55.3	
	comp=E,11nm,0.6s						
MVU	**Marysvale**	**3.69**	**72**		Pn	18 37 50.0	-0.6
BEKR	**Beckworth**	**3.73**	**311**		Pn	18 37 51.7	+0.6
SAO	**San Andreas Ge**	**3.86**	**261**		Pn	18 37 51.6	-1.1
DUG	**Dugway, Tooele**	**4.07**	**47**		Pn	18 37 54.0	-1.8
DUG				IAML		18 39 08.5	
	comp=E,6.8nm,0.7s						
DUG				IAML		18 39 18.0	
	comp=E,8.1nm,1.4s						
BGU	**Big Grassy Mou**	**4.47**	**38**		Pn	18 37 60.0	-1.3
BGU				IAML		18 39 19.1	
	comp=N,4.0nm,4.2s						
BGU				IAML		18 40 56.1	
	comp=E,6.2nm,4.7s						
Y14A	**Wickenburg**	**4.63**	**138**		Pn	18 38 01.5	-1.9
HMU	**Henry Mountain**	**4.75**	**83**	Pn	Pn	18 38 05.7	+0.5
SRU	**San Rafael Swe**	**5.13**	**70**		Pn	18 38 08.4	-1.9
SRU				IAML		18 39 37.8	
	comp=N,5.5nm,1.2s						
SRU				IAML		18 39 49.8	
	comp=E,5.9nm,2.3s						
HVU	**Hansel Valley**	**5.26**	**34**	Pn	Pn	18 38 09.4	-2.7
HVU				IAML		18 39 48.6	
	comp=E,5.4nm,0.6s						
HVU				IAML		18 39 59.2	
	comp=N,6.4nm,3.9s						

IDC 11 18:37:03.1±2.5**, 16°.49S×173°.62W, h0**^{km}**, mb3.9**/3**, mbtmp3.9**/3**, MS3.4**/1**, Error ellipse: s-maj=69.0km s-min=48.8km az=26.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**26.68**	**282**	LR	LR	18 51 54.9	
	comp=Z,68nm,18.3s,baz=174,slow=33						
WRA	**Warramunga Arr**	**49.40**	**258**	P	P	18 45 54.7	-0.4
	0.3nm,0.6s,baz=93,slow=6.8,SNR=8.6						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**49.58**	**253**	P	P	18 45 56.6	+0.1
	1.8nm,0.5s,baz=90,slow=7.9,SNR=54						
	1.8nm,0.5s						
QSPA	**South Pole Qui**	**73.56**	**180**	P	P	18 48 38.0	0.0
	2.4nm,1.1s,baz=24,slow=5.3,SNR=4.0						
	2.4nm,1.1s						
BRTR	**Keskin Array B**	**146.85**	**320**	PKPbc	PKPbc	18 56 47.2	-0.7
	0.6nm,0.8s,baz=48,slow=2.1,SNR=3.6						

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*IDC **11** 18:39:00.9±1.8, 17°.75S×178°.72W, h566^{km}±18^{km}, mb3.2/10, mbtmp4.1/12, Error ellipse: s-maj=24.5km s-min=17.9km az=113.0*

*NEIC **11** 18:39:04.4±1.2, 17°.6S±0°.2×179°.3W±0°.2, h561^{km}±10^{km}, mb4.2/13, Error ellipse: s-maj=33.8km s-min=21.3km az=181.0*

ISC 11 18:39:00.3±0.7**, 17°.6S**±0°.1×**178°.8W**±0°.1**, h550**^{km}**, n37, σ1^{s}.51**/37**, mb4.1**/16**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.02**	**267**	P	**P**	**18 40 18.3**	**+2.7**
MSVF	**Nonsavu**	**3.02**	**267**	P	**P**	**18 40 18.5**	**+2.9**
	28nm,0.6s,baz=96,slow=2.7,SNR=34						
NIUE	**Niue**	**8.53**	**101**	P	P	18 41 12.4	+9.1
DZM	**Mont Dzumac**	**14.59**	**250**	P	**P**	**18 42 08.2**	**+2.6**
DZM	**Mont Dzumac**	**14.59**	**250**	P	**P**	**18 42 06.8**	**+1.2**
	4.0nm,0.6s,baz=62,slow=17,SNR=1.7						
URZ	**Urewera**	**20.87**	**189**	P	**P**	**18 43 00.8**	**-3.2**
	4.1nm,0.7s,baz=46,slow=14,SNR=1.8						
	4.1nm,0.7s						
ARMA	**Armidale**	**29.78**	**239**	P	**P**	**18 44 22.4**	**-0.7**
ARMA				IAmb	IAmb	18 44 31.7	
	comp=Z,10.0nm,1.4s						
COEN	**Coen**	**36.75**	**270**	P	**P**	**18 45 21.7**	**-0.1**
TOO	**Toolangi**	**37.08**	**230**	P	**P**	**18 45 24.8**	**+0.5**
STKA	**Stephens Creek**	**38.46**	**241**	P	**P**	**18 45 35.7**	**+0.1**
STKA	**Stephens Creek**	**38.46**	**241**	P	**P**	**18 45 35.6**	**+0.1**
	comp=Z,2.0nm,0.4s,baz=93,slow=8.0,SNR=9.3						
	comp=Z,2.0nm,0.4s						
BBOO	**Buckleboo**	**43.23**	**241**	P	**P**	**18 46 13.1**	**-0.5**
BBOO				IAmb	IAmb	18 46 13.2	
	comp=Z,9.1nm,0.8s						
WR8	**Warramunga Arr**	**44.18**	**259**	P	**P**	**18 46 20.3**	**-0.8**
WR8				IAmb	IAmb	18 46 26.7	
	comp=Z,12nm,1.4s						
WB0	**Warramunga Arr**	**44.30**	**260**	P	**P**	**18 46 20.5**	**-1.5**
WRA	**Warramunga Arr**	**44.34**	**259**	P	**P**	**18 46 21.1**	**-1.1**
	comp=Z,1.1nm,0.6s,baz=96,slow=7.1,SNR=26						
WRA				PcP	**PcP**	**18 47 53.8**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=96,slow=3.3,SNR=1.3						
	comp=Z,1.1nm,0.6s						
AS31	**Alice Springs**	**44.53**	**254**	P	**P**	**18 46 23.1**	**-0.6**
AS31				IAmb	IAmb	18 46 23.8	
	comp=Z,4.0nm,0.7s						
ASAR	**Alice Springs**	**44.53**	**254**	P	**P**	**18 46 22.4**	**-1.3**
ASAR	**Alice Springs**	**44.53**	**254**	P	**P**	**18 46 23.2**	**-0.5**
	comp=Z,14nm,0.6s,baz=90,slow=7.8,SNR=83						
ASAR				PcP	**PcP**	**18 47 53.7**	**-1.3**
	comp=Z,0.4nm,0.4s,baz=106,slow=3.9,SNR=5.1						
	comp=Z,14nm,0.6s						
KNRA	**Kununurra**	**50.17**	**264**	P	**P**	**18 47 05.1**	**-0.9**
KNRA				IAmb	IAmb	18 47 06.1	
	comp=Z,5.3nm,0.8s						
FAKI	**Fak Fak**	**50.18**	**281**	P	**P**	**18 47 05.9**	**-0.2**
FAKI				IAmb	IAmb	18 47 19.4	
	comp=Z,20nm,1.1s						
FITZ	**Fitzroy Crossi**	**52.73**	**260**	P	**P**	**18 47 24.6**	**+0.1**
PSA00	**Pilbara Seismi**	**57.64**	**255**	P	**P**	**18 47 57.6**	**-1.0**
PSA00				IAmb	IAmb	18 48 15.8	
	comp=Z,12nm,1.1s						
MJAR	**Matsushiro Arr**	**67.47**	**324**	P	**P**	**18 49 01.2**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=136,slow=7.0,SNR=4.6						
	comp=Z,1.2nm,0.6s						
QSPA	**South Pole Qui**	**72.43**	**180**	P	**P**	**18 49 30.3**	**-0.6**
	comp=Z,0.8nm,1.0s,baz=12,slow=5.3,SNR=1.1						
	comp=Z,0.8nm,1.0s						
PETK	**Petropavlovsk-**	**73.32**	**345**	P	**P**	**18 49 35.6**	**-0.4**
	comp=Z,2.6nm,0.8s,baz=111,slow=7.1,SNR=4.4						
	comp=Z,2.6nm,0.8s						
PMSA	**Palmer Station**	**84.21**	**157**	P	**P**	**18 50 37.8**	**+4.1**
ILAR	**Eielson Array**	**85.69**	**13**	P	**P**	**18 50 40.0**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=225,slow=5.3,SNR=2.0						
	comp=Z,0.2nm,0.4s						
PDAR	**Pinedale Array**	**87.39**	**44**	P	**P**	**18 50 49.5**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=238,slow=4.4,SNR=2.0						
	comp=Z,0.3nm,0.5s						
SNAA	**Sanae**	**90.89**	**179**	P	**P**	**18 51 03.8**	**-1.4**
	comp=Z,0.9nm,1.1s,baz=146,slow=4.5,SNR=1.4						
	comp=Z,0.9nm,1.1s						
BVAR	**Borovoye Array**	**116.40**	**321**	PKP	**PKPdf**	**18 56 39.7**	**-1.8**
	comp=Z,0.5nm,0.4s,baz=106,slow=2.5,SNR=5.6						
BURAR	**Bucovina Array**	**144.20**	**332**		PKPbc	18 57 33.5	-0.1
BRTR	**Keskin Array B**	**144.33**	**315**	PKP	**PKPdf**	**18 57 33.7**	**-0.8**
	comp=Z,0.8nm,0.8s,baz=90,slow=2.7,SNR=4.6						
TIRR	**Tirgusor**	**144.83**	**325**	PKPdf	**PKPdf**	**18 57 36.1**	**+1.1**
CLL	**Collm**	**145.11**	**347**	PKPdf	**PKPdf**	**18 57 36.1**	**+0.9**
MMAI	**Mount Meron Ar**	**145.69**	**303**	PKPbc	**PKPdf**	**18 57 38.1**	**+1.2**
	comp=Z,1.1nm,0.5s,baz=93,slow=3.2,SNR=3.9						
CSS	**Mathiatis**	**146.63**	**307**	PKPdf	**PKPdf**	**18 57 38.2**	**-0.1**
GERES	**GERESS Array B**	**147.25**	**345**	PKPbc	**PKPdf**	**18 57 41.1**	**+2.1**
	comp=Z,0.8nm,0.5s,baz=352,slow=4.0,SNR=4.3						

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*GCG **11** 18:49:39.6±2.9, 17°.14N×85°.21W, h0^{km}±999^{km}, MD5.2, ML5.0*

*IDC **11** 18:49:44.1±1.1, 17°.02N×85°.44W, h0^{km}, mb4.1/9, mbtmp4.3/14, ML3.8/5, MS3.5/27, Error ellipse: s-maj=29.9km s-min=19.0km az=41.0*

*NEIC **11** 18:49:45.7±1.8, 16°.98N±0°.05×85°.49W±0°.08, h10^{km}±1^{km}, mb4.6/143, Error ellipse: s-maj=12.5km s-min=9.0km az=80.0*

*CATAC **11** 18:49:49.1±0.5, 17°N±4°×8°6W±°, h10^{km}, M4.9/26, mb5.1/2, mB5.3/2, MLv4.8/26, Mw(mB)4.7/2, Error ellipse: s-maj=8.2km s-min=5.0km az=28.7, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.61; M$_{\theta\theta}$-3.80; M$_{\phi\phi}$2.19; M$_{r\theta}$2.53; M$_{\theta\phi}$4.24; M$_{\phi r}$-0.40; Fault plane solution: M$_0$5.95554×10^{15} NP1:ϕ_s343.59051°, δ65.23036°, λ178.73776°. NP2:ϕ_s74.11942°, δ88.85390°, λ24.77493°. Principal axes: T 4.6501, Plg18.0834°, Azm301.6353°; N 2.0625, Plg65.2002°, Azm76.6009°; P -6.7126, Plg16.3864°, Azm206.1254°; Moment Tensor Solution. Moment tensor: Scale 10^{15} Nm; M$_{rr}$1.16; M$_{\theta\theta}$-4.25; M$_{\phi\phi}$3.09; M$_{r\theta}$2.60; M$_{\theta\phi}$4.27; M$_{\phi r}$-0.47; Fault plane solution: M$_0$6.29746×10^{15} NP1:ϕ_s341.28324°, δ69.86008°, λ-175.12099°. NP2:ϕ_s249.59974°, δ85.41997°, λ-20.20724°. Principal axes: T 5.1755, Plg10.7779°, Azm297.1067°; N 1.8359, Plg69.3014°, Azm57.3594°; P -7.0114, Plg17.4534°, Azm203.6755°; Moment Tensor Solution. Moment tensor: Scale 10^{16} Nm; M$_{rr}$0.19; M$_{\theta\theta}$-1.31; M$_{\phi\phi}$1.13; M$_{r\theta}$0.21; M$_{\theta\phi}$0.22; M$_{\phi r}$0.13; Fault plane solution: M$_0$1.27486×10^{16} NP1: ϕ_s320.08386°, δ78.63394°, λ179.01386°. NP2: ϕ_s50.27823°, δ89.03321°, λ11.36770°. Principal axes: T 1.1705, Plg8.7014°, Azm275.7463°; N 0.1878, Plg78.5918°, Azm55.0755°; P -1.3584, Plg7.3207°, Azm184.6196°; Moment Tensor Solution. Moment tensor: Scale 10^{15} Nm; M$_{rr}$1.26; M$_{\theta\theta}$-2.15; M$_{\phi\phi}$0.89; M$_{r\theta}$2.58; M$_{\theta\phi}$3.93; M$_{\phi r}$-0.68; Fault plane solution: M$_0$5.10647×10^{15} NP1:ϕ_s351.09856°, δ58.18526°, λ176.96959°. NP2:ϕ_s82.69719°, δ87.42523°, λ31.85067°. Principal axes: T 3.9870, Plg23.8619°, Azm311.6429°; N 1.7686, Plg58.0563°, Azm86.8331°; P -5.7557, Plg19.9380°, Azm212.4094°; Moment Tensor Solution. Moment tensor: Scale 10^{15} Nm; M$_{rr}$-0.12; M$_{\theta\theta}$-3.99; M$_{\phi\phi}$4.11; M$_{r\theta}$-0.27; M$_{\theta\phi}$3.14; M$_{\phi r}$1.41; Fault plane solution: M$_0$5.32527×10^{15} NP1:ϕ_s333.56215°, δ86.91685°, λ165.09962°. NP2:ϕ_s64.38209°, δ75.12169°, λ3.19021°. Principal axes: T 5.4673, Plg12.6852°, Azm288.0234°; N -0.2963, Plg74.7911°, Azm142.1347°; P -5.1709, Plg8.2522°, Azm19.8941°; Moment Tensor Solution. Moment tensor: Scale 10^{15} Nm; M$_{rr}$-0.08; M$_{\theta\theta}$-4.24; M$_{\phi\phi}$4.32; M$_{r\theta}$-0.26; M$_{\theta\phi}$3.14; M$_{\phi r}$1.38; Fault plane solution: M$_0$5.49216×10^{15} NP1:ϕ_s332.75623°, δ86.64678°, λ165.94244°. NP2:ϕ_s63.59533°, δ75.96700°, λ3.45650°. Principal axes: T 5.6156, Plg12.2876°, Azm287.3449°; N -0.2558, Plg75.5559°, Azm139.6079°; P -5.3598, Plg7.4754°, Azm18.9827°; Moment Tensor Solution. Moment tensor: Scale 10^{15} Nm; M$_{rr}$-0.12; M$_{\theta\theta}$-3.99; M$_{\phi\phi}$4.11; M$_{r\theta}$-0.27; M$_{\theta\phi}$3.14; M$_{\phi r}$1.41; Fault plane solution: M$_0$5.32527×10^{15} NP1:ϕ_s333.56215°, δ86.91685°, λ165.09962°. NP2:ϕ_s64.38209°, δ75.12169°, λ3.19021°. Principal axes: T 5.4673, Plg12.6852°, Azm288.0234°; N -0.2963, Plg74.7911°, Azm142.1347°; P -5.1709, Plg8.2522°, Azm19.8941°; Moment Tensor Solution. Moment tensor: Scale 10^{15} Nm; M$_{rr}$-0.39; M$_{\theta\theta}$-3.79; M$_{\phi\phi}$4.18; M$_{r\theta}$-0.07; M$_{\theta\phi}$2.66; M$_{\phi r}$0.82; Fault plane solution: M$_0$4.87569×10^{15} NP1:ϕ_s331.70807°, δ87.34815°, λ171.35079°. NP2:ϕ_s62.11131°, δ81.36012°, λ2.68231°. Principal axes: T 5.0948, Plg7.9865°, Azm286.6113°; N -0.4726, Plg80.9563°, Azm134.7905°; P -4.6222, Plg4.2155°, Azm17.2039°; Moment Tensor Solution. Moment tensor: Scale 10^{15} Nm; M$_{rr}$-0.64; M$_{\theta\theta}$-5.13; M$_{\phi\phi}$5.77; M$_{r\theta}$0.71; M$_{\theta\phi}$2.66; M$_{\phi r}$-0.11; Fault plane solution: M$_0$6.13524×10^{15} NP1:ϕ_s328.27683°, δ84.16914°, λ-174.77886°. NP2:ϕ_s237.74495°, δ84.80594°, λ-5.85498°. Principal axes: T 6.3875, Plg0.4482°, Azm283.0413°; N -0.5402, Plg82.1792°, Azm16.3063°; P -5.8473, Plg7.8078°, Azm192.9799°; confirmed*

*SSNC **11** 18:49:55.7±3.4, 17°.36N×84°.99W, h46^{km}±167^{km}, MD4.0*

ISC 11 18:49:47.0±0.4**, 16°.99N**±0°.04×**85°.43W**±0°.04**, h28**^{km}**, n460, σ1^{s}.41**/410**, mb4.6**/54**, MS3.5**/23**, 1C-4D, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IZABA	**Izabal, Puerto**	**3.27**	**248**	P	**Pn**	**18 50 38.6**	**+2.2**
TGUH	**Tegucigalpa,Un**	**3.42**	**212**		**Pn**	**18 50 38.2**	**-0.3**
TGUH				Sn	**Sn**	**18 51 15.8**	**-2.4**
TGUH	**Tegucigalpa,Un**	**3.42**	**212**	⇓P	**Pn**	**18 50 38.2**	**-0.3**
TGUH				S	**Sn**	**18 51 15.5**	**-2.7**
RCVN	**Varillal2**	**3.47**	**192**	P	**Pn**	**18 50 39.1**	**-0.1**
RCVN	**Varillal2**	**3.47**	**192**	S	**Sn**	**18 51 16.4**	**-3.1**
RCPN	**Sur Rio San Ju**	**3.50**	**191**	P	**Pn**	**18 50 39.5**	**-0.3**
BILN	**Bilwi Airport**	**3.54**	**146**	P	**Pn**	**18 50 41.0**	**+0.9**
BILN				S	**Sn**	**18 51 20.3**	**-0.7**
CHOHN	**Orocuina**	**3.87**	**206**	⇓P	**Pn**	**18 50 44.2**	**-0.6**
LIMN	**Finca el Limon**	**4.01**	**193**	⇓P	**Pn**	**18 50 46.5**	**-0.2**
MATN	**Matagalpa**	**4.07**	**187**	P	**Pn**	**18 50 46.3**	**-1.2**
MATN	**Matagalpa**	**4.07**	**187**	S	**Sn**	**18 51 31.7**	**-2.6**
TEIG	**Tepich**	**4.20**	**320**		**Pn**	**18 50 49.0**	**-0.1**
TEIG				Sn	**Sn**	**18 51 33.8**	**-3.4**
PETF	**Flores**	**4.24**	**270**	*i* P	**Pn**	**18 50 48.5**	**-1.3**
PETF				*i* S	**Sn**	**18 51 34.3**	**-4.1**
PETF				IAML		18 51 47.5	
	comp=N,2µm,0.7s						

CNCH	Conchagua	4.36	212	P	Pn	18 50 51.1	-0.4
LCND	La Caada	4.36	213	P	Pn	18 50 50.4	-1.1
POTN	Potosi Cosigui	4.45	207	P	Pn	18 50 52.3	-0.2
POTN				S	Sn	18 51 40.4	-3.0
ESQI	Esquipulas	4.47	238	P	Pn	18 50 53.4	+0.3
RANC	El Ranchito	4.48	218	P	Pn	18 50 52.8	-0.4
PQSS	Presa 15 de Se	4.51	222	P	Pn	18 50 53.9	+0.5
BOAB	BOACO BROADBAN	4.52	183		Pn	18 50 53.5	-0.1
BOAB	BOACO BROADBAN	4.52	183	P	Pn	18 50 53.3	-0.4
BOAB	BOACO BROADBAN	4.52	183	S	Sn	18 51 42.9	-2.4
CRIN	San Cristobal	4.54	200	Pn	Pn	18 50 53.9	-0.1
CRIN	San Cristobal	4.54	200	P	Pn	18 50 54.1	0.0
SCLA	Alcaldia de Sa	4.56	225	P	Pn	18 50 53.9	-0.3
HERN	Volcan Telica	4.56	197	Pn	Pn	18 50 54.3	0.0
HERN	Volcan Telica	4.56	197	⇓P	Pn	18 50 54.1	-0.2
MTO3	Montecristo	4.58	236	*i* P	Pn	18 50 54.3	-0.3
MTO3	Montecristo	4.58	236	P	Pn	18 50 54.1	-0.5
CNGN	Cerro Negro	4.63	195		Pn	18 50 54.9	-0.3
CNGN	Cerro Negro	4.63	195	P	Pn	18 50 54.5	-0.7
FSCY	Frank Sound, G	4.65	60	*e*P	Pn	18 50 52.9	-2.5
FSCY				*e*S	Sn	18 51 40.1	-8.5
PAVA	Las Pavas	4.70	226	P	Pn	18 50 57.0	+0.9
TECO	Alcaldia de Te	4.71	224	P	Pn	18 50 56.2	-0.1
COEG	Centro de Oper	4.72	225	P	Pn	18 50 56.5	0.0
ESPN	Las Esperanzas	4.89	167	Pn	Pn	18 50 59.5	+0.8
ESPN	Las Esperanzas	4.89	167	P	Pn	18 50 59.3	+0.5
LOMA	Loma Larga	4.91	228	P	Pn	18 50 59.2	+0.1
UEES	Universidad Ev	4.91	229	P	Pn	18 50 59.0	0.0
UNAN	Cigeo UNAN	4.92	190	P	Pn	18 50 58.3	-0.9
PMON	Piamonte	4.96	229	P	Pn	18 51 00.2	+0.3
ACON	Acoyapa	5.00	177		Pn	18 51 00.7	+0.5
CEVE	Cerro Verde	5.12	233	P	Pn	18 51 02.8	+0.7
SLOZ	Alcaldia de Sa	5.13	235	P	Pn	18 51 02.4	+0.5
NUBE	Las Nubes	5.20	234	P	Pn	18 51 03.9	+0.8
BLUN	Bluefields	5.21	162	P	Pn	18 51 03.4	+0.3
PRVC	Isla de Provid	5.33	132	P	Pn	18 51 06.8	+2.1
SCIG	Sabancuy	5.81	291	*i* P	Pn	18 51 09.2	-2.2
SCIG				*e*S	Sn	18 52 10.9	-6.2
CBCY	The Bluff, Cay	6.04	62	*e*P	Pn	18 51 14.7	+0.2
CBCY				*e*S	Sn	18 52 17.6	-5.2
SOR	Soroa	6.20	21	*e*P	Pn	18 51 18.1	+1.3
CCIG	Comitan	6.46	265		Pn	18 51 19.9	-0.6
CCIG	Comitan	6.46	265	*i* P	Pn	18 51 19.8	-0.6
CCIG				IAML		18 53 09.3	
	comp=N,208nm,0.5s						
CCIG	Comitan	6.46	265	⇑P	Pn	18 51 19.8	-0.6
SOCE	Pocosol	6.62	173	Pn	Pn	18 51 22.9	+0.4
JTS	Las Juntas de	6.68	176	Pn	Pn	18 51 24.3	+1.0
	comp=N,1.2nm,0.3s,baz=288,slow=20,SNR=5.6						
JTS				Sn	Sn	18 52 34.8	-3.7
	comp=N,6.6nm,0.3s,baz=288,slow=20,SNR=6.4						
JTS				Lg	Lg	18 53 02.4	
	comp=N,4.9nm,0.3s,baz=288,slow=20,SNR=5.6						
	comp=N,7.4nm,0.5s						
TGIG		7.36	269	*i* P	Pn	18 51 31.5	-1.2
MTDJ	Mount Denham	7.63	80	Pn	Pn	18 51 37.0	+0.5
MTDJ	Mount Denham	7.63	80	*e*P	Pn	18 51 35.1	-1.4
CAIB	Caibarien	7.84	45	*e*P	Pn	18 51 40.2	+1.0
CAIB				*e*S	Sn	18 53 00.2	-6.8
PILO	Pilon	8.15	68	*e*P	Pn	18 51 44.6	+1.0
CHIV	Chivirico	9.06	69	*e*P	Pn	18 51 56.9	+1.0
YAR	Yar	9.23	67	*e*P	Pn	18 52 00.0	+1.7
MARVS	Santiago de Cu	9.53	70	*e*P	Pn	18 52 01.8	-0.6
RCC	Rio Carpintero	9.71	71	*e*P	Pn	18 52 05.8	+0.9
PINC	Pinares de May	9.77	68	*e*P	Pn	18 52 08.1	+2.4
QMBU	Quimbuelo	10.56	71	*e*P	Pn	18 52 17.5	+0.9
060A	Indiantown	11.04	24	Pn	Pn	18 52 24.1	+1.0
TLIG	Tlapa	12.56	275		Pn	18 52 41.8	-2.2
656A	Willston	12.60	12	Pn	Pn	18 52 43.5	-0.9
553A	Crawfordville	13.17	4	Pn	Pn	18 52 51.2	-1.0
451A	Vernon	13.56	359	Pn	Pn	18 52 58.1	+0.6
SDDR	Presa de Saban	13.60	80		Pn	18 52 59.0	+0.7
456A	Hilliard	14.02	12	Pn	Pn	18 53 03.5	-0.3
352A	Blakely	14.43	2		Pn	18 53 09.4	0.0
TIGA	Tifton	14.48	6	Pn	Pn	18 53 08.8	-1.2
250A	Grady	14.94	357	Pn	Pn	18 53 15.1	-1.2
KVTX	Kingsville	15.58	315	Pn	Pn	18 53 22.9	-1.9
152A	Waverly Hall	15.62	2	Pn	Pn	18 53 23.7	-1.5
HBVL	Hebbronville	15.83	312		Pn	18 53 26.1	-1.8
HBVL				IAmb	IAmb	18 53 31.1	
	comp=Z,33nm,0.8s						
146A	Union	15.92	349	Pn	Pn	18 53 27.5	-1.5
HKT	Hockley	16.03	325	Pn	Pn	18 53 28.9	-1.5
HKT				IAmb	IAmb	18 53 34.4	
	comp=Z,44nm,0.8s						
LRAL	Lakeview Retre	16.04	355		Pn	18 53 30.2	-0.3
ROSC	El Rosal	16.26	137	Pn	Pn	18 53 34.0	0.0
ROSC	El Rosal	16.26	137	Pn	P	18 53 36.0	-0.8
	comp=Z,2.4nm,0.3s,baz=0.0,slow=20,SNR=5.9						
ROSC				LR	LR	19 00 38.9	
	comp=Z,133nm,18.6s,baz=88,slow=40						
	comp=Z,5.8nm,0.4s						
Z47A	Carrollton	16.31	352	Pn	Pn	18 53 33.6	-0.4
Z47A				IAmb	IAmb	18 53 38.4	
	comp=Z,30nm,1.0s						
735A	Kenedy	16.39	318	Pn	Pn	18 53 34.6	-0.6
GOGA	Godfrey	16.44	6		Pn	18 53 35.2	-0.6
HNVL	Huntsville, TX	16.47	328		Pn	18 53 34.7	-1.5
SDV	Santo Domingo	16.51	117		Pn	18 53 37.0	0.0
SDV	Santo Domingo	16.51	117	Pn	Pn	18 53 37.5	+0.6
	comp=Z,1.4nm,0.3s,baz=321,slow=6.8,SNR=10						
SDV				LR	LR	19 01 09.2	
	comp=Z,79nm,20.5s,baz=252,slow=41						
	comp=Z,11nm,0.5s						
NHSC	New Hope	16.73	15		P	18 53 40.1	-1.3
Y49A	Blount Mountai	16.82	357	Pn	P	18 53 40.7	-1.8
Y52A	Lilburn	16.84	4	Pn	Pn	18 53 40.4	-0.4
NATX	Nacogdoches	16.92	332		Pn	18 53 40.8	-1.0
NATX				IAmb	IAmb	18 53 46.1	
	comp=Z,61nm,1.0s						
ZAIG	Zacatecas	17.10	292	Pn	Pn	18 53 43.3	-1.1
HODGE	Hodges	17.40	9		Pn	18 53 47.3	-0.5
FPAL	Fort Paine	17.48	360		P	18 53 49.0	-0.8
X51A	Calhoun	17.51	2		P	18 53 49.1	-0.9
JSC	Jenkinsville	17.62	11		P	18 53 52.5	+1.3
435B	Jarrell	17.64	323		Pn	18 53 49.4	-1.4
237A	Washetta, Mont	17.66	330	Pn	Pn	18 53 50.4	-0.6
HNDO	Hondo	17.80	317	P	Pn	18 53 51.0	-1.7
OTAV	Otavalo	18.02	157	P	Pn	18 53 55.0	-0.9
PAULI	Pauline	18.05	10	P	Pn	18 53 54.4	-1.4
PAULI				IAmb	IAmb	18 53 57.9	
	comp=Z,50nm,1.3s						
BG3	Lake Jocassee	18.07	7	P	P	18 53 55.6	-0.6
PLAL	Pickwick Lake	18.07	353	P	P	18 53 56.2	-0.1
W52A	Murphy	18.08	4	IAmb	IAmb	18 54 00.4	
	comp=Z,41nm,1.0s						
BIRD	Birdtown, Kers	18.13	13	P	P	18 53 56.0	-1.0
W50A	Signal Mountai	18.13	0	P	P	18 53 57.6	+0.6
SWET	Sewanee	18.16	359	P	P	18 53 56.9	-0.3
X58A	Rowland	18.32	16	P	Pn	18 53 59.1	0.0
X58A				IAmb	IAmb	18 54 03.0	
	comp=Z,80nm,1.4s						
CPCT	Cooper Cave	18.40	2	P	Pn	18 53 59.7	-0.4
SJG	San Juan	18.42	84	P	Pn	18 54 02.2	+1.7
	comp=Z,1.5nm,0.3s,baz=325,slow=21,SNR=1.3						
SJG				LR	LR	19 00 29.7	
	comp=Z,195nm,21.7s,baz=279,slow=35						
	comp=Z,3.7nm,0.3s						
KMSC	Kings Mountain	18.44	11		Pn	18 54 00.7	+0.2
WHTX	Lake Whitney,	18.49	326	P	Pn	18 54 00.9	-0.2
DRIO	Del Rio	18.62	314		P	18 54 01.4	-1.1
TKL	Tuckaleechee C	18.65	4	P	P	18 54 01.3	-1.4
TKL	Tuckaleechee C	18.65	4	P	Pn	18 54 03.9	+0.9
	comp=Z,0.6nm,0.3s,baz=177,slow=14,SNR=9.5						
TKL				S	Sn	18 57 16.5	-14
	comp=Z,22nm,0.9s,baz=270,slow=10,SNR=10						
TKL				LR	LR	19 00 49.0	
	comp=Z,104nm,21.4s,baz=186,slow=36						
	comp=Z,8.5nm,0.8s						
V48A	Smith Brothers	18.71	356	P	Pn	18 54 03.1	-0.8
V53A	Saluda	18.75	7	P	Pn	18 54 04.4	+0.1
FW13	Cleburne	18.75	327	P	Pn	18 54 03.9	-0.5
JCT	Junction City	18.77	318	P	P	18 54 03.2	-0.8
JCT				IAmb	IAmb	18 54 16.9	
	comp=Z,36nm,0.7s						
BRDY	Brady	18.83	322		P	18 54 04.1	-0.6
BRDY				IAmb	IAmb	18 54 20.9	
	comp=Z,32nm,0.6s						
CLTN	Cedars of Leba	19.04	358	P	Pn	18 54 07.2	-0.5
WVT	Waverly	19.18	354		Pn	18 54 09.9	+0.5
FW07	Weatherford	19.21	327	P	Pn	18 54 09.8	-0.2
WHAR	Wooly Hollow	19.22	343	P	Pn	18 54 08.7	-1.3
TZTN	Tazewell	19.55	5		Pn	18 54 13.0	-0.9
TZTN				IAmb	IAmb	18 54 21.4	
	comp=Z,23nm,0.9s						
U56A	King	19.79	12	IAmb	IAmb	18 54 31.5	
	comp=Z,41nm,1.4s						
OZNA	Ozona	19.91	317		P	18 54 16.5	-0.1
SAND	Sanderson	19.99	313		Pn	18 54 17.8	-1.4
SAND				IAmb	IAmb	18 54 20.0	
	comp=Z,16nm,0.8s						
ABTX	Abilene, Hawle	20.18	323	IAmb	IAmb	18 54 31.5	
	comp=Z,36nm,0.9s						
SGCY	Sterling City	20.57	319		Pn	18 54 25.1	-1.0
SGCY				IAmb	IAmb	18 54 29.8	
	comp=Z,56nm,1.3s						
T42A	Van Buren	20.58	347		Pn	18 54 25.8	-0.1
BLA	Blacksburg	20.62	11	IAmb	IAmb	18 54 30.3	
	comp=Z,30nm,0.9s						
T57A	Hurt	20.66	14	IAmb	IAmb	18 54 32.0	
	comp=Z,21nm,1.0s						
TXAR	Lajitas Array	20.75	310		Pn	18 54 27.1	-1.1
TXAR	Lajitas Array	20.75	310	P	Pn	18 54 27.4	-0.8
	comp=Z,9.6nm,0.9s,baz=126,slow=11,SNR=61						
TXAR				S	S	18 58 04.1	-12
	comp=Z,0.7nm,0.4s,baz=128,slow=24,SNR=4.9						
TXAR				LR	LR	19 04 04.1	
	comp=Z,16nm,19.6s,baz=125,slow=42						
	comp=Z,9.6nm,0.9s						
SIUC	Southern Illin	20.91	352	IAmb	IAmb	18 54 39.3	
	comp=Z,39nm,0.9s						
APMT	Aspermont	20.96	324		Pn	18 54 28.6	-1.9
APMT				IAmb	IAmb	18 54 51.2	
	comp=Z,26nm,0.7s						
WCI	Wyandotte Cave	21.17	358		P	18 54 31.3	+1.2
WCI				IAmb	IAmb	18 54 45.4	
	comp=Z,30nm,0.8s						
HPIG		21.18	301	IAmb	IAmb	18 54 33.3	
	comp=Z,14nm,0.8s						
SN07	Snyder 07	21.24	322	IAmb	IAmb	18 54 54.8	
	comp=Z,50nm,1.2s						
MNHN	Monahans	21.26	315	IAmb	IAmb	18 54 54.7	
	comp=Z,26nm,0.5s						
ALPN	Alpine	21.30	312		P	18 54 32.2	+0.5
ALPN				IAmb	IAmb	18 54 45.9	
	comp=Z,25nm,0.9s						
PCRV	Puerto La Cruz	21.31	106	LR	LR	19 04 26.1	
	comp=Z,162nm,18.3s,slow=41						
WMOK	Wichita Mounta	21.33	328	P	P	18 54 33.0	+1.2
WMOK				IAmb	IAmb	18 54 57.5	
	comp=Z,14nm,0.7s						
POST	Post	21.59	321	IAmb	IAmb	18 54 51.4	
	comp=Z,29nm,1.0s						
CCM	Cathedral Cave	21.60	347		P	18 54 35.5	+0.9
CCM				IAmb	IAmb	18 54 49.4	
	comp=Z,15nm,0.8s						
DKNS	Dickens	21.67	323	IAmb	IAmb	18 55 10.8	
	comp=Z,24nm,0.6s						
SSFO	Shawnee State	21.71	5	IAmb	IAmb	18 54 39.4	
	comp=Z,34nm,1.1s						
OLIL	Olney	21.79	354	IAmb	IAmb	18 54 40.1	
	comp=Z,32nm,1.0s						
R58B	Mineral	21.92	16	IAmb	IAmb	18 54 44.0	
	comp=Z,23nm,1.2s						
PECS	Pecos	22.03	314	IAmb	IAmb	18 54 41.8	
	comp=Z,24nm,1.3s						
Q54A	Coxs Mills	22.28	9	P	P	18 54 43.2	+1.2
Q56A	Snyder Ridge,	22.64	13	P	P	18 54 47.9	+2.1
O48B	Farmland	23.18	1	P	P	18 54 52.2	+0.8
O48B				IAmb	IAmb	18 54 55.9	
	comp=Z,40nm,1.2s						
ACSO	Alum Creek Sta	23.25	5	IAmb	IAmb	18 54 57.1	
	comp=Z,20nm,0.8s						
MNTX	Cornudas Mount	23.28	313	IAmb	IAmb	18 54 53.8	
	comp=Z,12nm,0.8s						
SLBS	Sierra La Lagu	23.91	290		P	18 55 00.1	+1.4
SLBS				IAmb	IAmb	18 55 02.6	
	comp=Z,27nm,1.2s						
LPIG	La Paz	24.32	291	LR	LR	19 05 19.3	
	comp=Z,136nm,18.5s,baz=72,slow=38						
WUPA	West Chester U	24.40	19	IAmb	IAmb	18 55 07.7	
	comp=Z,8.5nm,0.9s						
SSPA	Standing Stone	24.45	14	P	P	18 55 06.2	+2.8
SSPA				IAmb	IAmb	18 55 08.1	
	comp=Z,32nm,1.4s						
RTBA	Rita Blanca	24.70	325	P	P	18 55 06.5	+0.6
RTBA				IAmb	IAmb	18 55 44.7	
	comp=Z,11nm,0.8s						
ATAH	Atahualpa	24.96	163	LR	LR	19 04 00.3	
	comp=Z,107nm,18.5s,baz=329,slow=34						
ERPA	Erie	25.47	9	P	P	18 55 14.5	+1.8
ANMO	Albuquerque	25.92	318	P	P	18 55 17.8	+0.7
ANMO	Albuquerque	25.92	318		P	18 55 18.1	+1.0
ANMO				IAmb	IAmb	18 55 30.8	
	comp=Z,4.5nm,0.9s						
SADO	Sadowa	28.19	10	LR	LR	19 06 35.6	
	comp=Z,63nm,21.8s,baz=168,slow=36						
PFO	Pinyon Flats O	32.40	307	LR	LR	19 12 13.5	
	comp=Z,104nm,18.0s,baz=142,slow=42						
PDAR	Pinedale Array	32.90	326	P	P	18 56 20.1	+1.0
	comp=Z,0.2nm,0.3s,baz=144,slow=8.8,SNR=2.1						
	comp=Z,0.2nm,0.3s						
EPLO	Experimental L	33.28	350	IAmb	IAmb	18 56 23.6	
	comp=Z,5.1nm,0.8s						
GWY	Greenwater Val	33.63	311	P	P	18 56 27.0	+1.6
GWY				IAmb	IAmb	18 56 40.0	
	comp=Z,4.9nm,0.9s						
MDP	Montagnes des	34.22	106	LR	LR	19 13 21.9	
	comp=Z,76nm,18.7s,baz=309,slow=41						
NVAR	Mina Array Bea	35.80	313	P	P	18 56 44.9	+0.6
	comp=Z,0.8nm,0.8s,baz=99,slow=7.6,SNR=2.4						
NVAR				LR	LR	19 15 51.5	
	comp=Z,81nm,18.5s,baz=198,slow=44						
	comp=Z,0.8nm,0.8s						
EGMT	Eagleton	36.81	333	IAmb	IAmb	18 57 38.1	
	comp=Z,7.5nm,0.9s						
LPAZ	La Paz	37.21	152	LR	LR	19 13 27.4	
	comp=Z,71nm,19.3s,baz=316,slow=38						
SCHQ	Schefferville	40.39	17	P	P	18 57 24.0	+1.5
	comp=Z,8.6nm,1.0s,baz=196,slow=5.4,SNR=6.2						
SCHQ				LR	LR	19 14 09.9	
	comp=Z,65nm,18.0s,baz=153,slow=36						
	comp=Z,8.6nm,1.0s						
SIV	San Ignacio	40.64	142	LR	LR	19 15 36.1	
	comp=Z,57nm,18.8s,baz=120,slow=38						
FCC	Fort Churchill	42.19	353		P	18 57 38.5	+1.4
FCC				IAmb	IAmb	18 57 39.5	
	comp=Z,6.8nm,0.9s						
FRB	Frobisher Bay	48.14	10	LR	LR	19 20 10.2	
	comp=Z,73nm,20.6s,baz=186,slow=38						
BDFB	Brasilia	49.13	129	LR	LR	19 21 12.8	
	comp=Z,66nm,18.3s,baz=164,slow=38						
YKA	Yellowknife Ar	49.82	343	P	P	18 58 38.0	+0.9
	comp=Z,0.5nm,0.6s,baz=139,slow=7.5,SNR=5.1						
	comp=Z,0.5nm,0.6s						
TOAD	Toad River Com	50.93	335	P	P	18 58 47.7	+2.1
	baz=128						
CPUP	Villa Florida	51.00	147	LR	LR	19 22 25.5	
	comp=Z,13nm,18.0s,baz=174,slow=38						
BEAVL	Fort Liard	51.69	336	P	P	18 58 52.7	+1.3
	baz=129						
CRAG	Craig	52.73	328	P	P	18 59 00.5	+1.4
	baz=117						
DLBC	Dease Lake	52.74	332	P	P	18 59 00.5	+1.3
	baz=123						
WRAK	Wrangell Islan	52.79	329	P	P	18 59 00.7	+1.2
	baz=119						
S34M	Telegraph Cree	52.96	331	P	P	18 59 01.4	+0.6
	baz=121						
U33K	Whale Pass	53.03	329	P	P	18 59 02.4	+1.2
	baz=118						
WRGLY	Wrigley	53.11	340	P	P	18 59 03.7	+1.9
	baz=133						
R33M	Jennings River	53.66	333	P	P	18 59 07.2	+1.1
	baz=122						
Q32M	Nakina River	54.01	332	P	P	18 59 09.4	+0.6
	baz=120						
S32K	Killisnoo	54.36	330	P	P	18 59 12.7	+1.7
	baz=117						
R32K	Eaglecrest	54.71	331	P	P	18 59 14.4	+0.8
	baz=118						
SFJD	Kangerlussuaq	54.84	16	LR	LR	19 22 09.7	
	comp=Z,68nm,20.5s,baz=232,slow=36						
P33M	Teslin, Yukon	54.89	333	P	P	18 59 15.5	+0.6
	baz=121						
P32M	Atlin	54.97	332	P	P	18 59 16.1	+0.6
	baz=119						
MMPY	Sheldon Lake,	55.54	336	P	P	18 59 21.1	+1.6
	baz=124,SNR=6.2						
WHY	Whitehorse	56.00	333	P	P	18 59 24.4	+1.4
	baz=119						
PLBC	Pleasant Camp	56.10	331	P	P	18 59 24.8	+1.3
	baz=117						
M31M	Drury Creek, Y	56.55	335	P	P	18 59 28.1	+1.3
	baz=120						
O30N	Mendenhall	56.58	333	P	P	18 59 28.0	+1.0
	baz=118						
P30M	Million Dollar	56.67	332	P	P	18 59 28.3	+0.6
	baz=116						
N31M	Braeburn, Yuko	56.78	334	P	P	18 59 28.9	+0.5
	baz=118						
P29M	Windy Craggy	56.81	331	P	P	18 59 29.6	+1.0
	baz=115						
HYT	Haines Junctio	57.22	333	P	P	18 59 32.1	+0.5
	baz=116						
N30M	Aishikik Lake	57.32	333	P	P	18 59 33.2	+0.9
	baz=117						
O29M	Mount Kennedy	57.47	332	P	P	18 59 34.2	+0.8
	baz=115						
C36M	Paulatuk	57.54	345	P	P	18 59 35.0	+1.4
	baz=135						
PNL	Peninsula	57.59	331	P	P	18 59 35.0	+0.8
	baz=114						
YUK6	Outpost Mounta	57.65	333	P	P	18 59 35.2	+0.4
	baz=116						
RES	Resolute Bay	57.94	357	LR	LR	19 26 00.2	
	comp=Z,63nm,18.8s,baz=289,slow=38						
YUK4	Talbot Arm	57.95	333	P	P	18 59 37.7	+0.9
	baz=116						
PINM	Pinnacle	58.16	331	P	P	18 59 38.8	+0.6
	baz=113						
M29M	Somme Creek	58.35	334	P	P	18 59 40.6	+1.1
	baz=116						
H31M	Peel River	58.41	339	P	P	18 59 41.0	+1.2
	baz=122						
YUK8	Steele Glacier	58.41	333	P	P	18 59 40.3	+0.2
	baz=114						
J30M	Hart River	58.50	337	P	P	18 59 41.6	+1.0
	baz=120						
L29M	L29M	58.51	335		P	18 59 42.0	+1.5
L29M				IAmb	IAmb	18 59 43.5	
	comp=Z,4.6nm,1.0s						
L29M	L29M	58.51	335	P	P	18 59 41.3	+0.7
	baz=117						
K29M	Barlow Dome	58.60	336	P	P	18 59 42.6	+1.3
K29M				IAmb	IAmb	18 59 43.6	
	comp=Z,4.5nm,1.1s						
K29M	Barlow Dome	58.60	336	P	P	18 59 42.2	+0.9
	baz=118						
I30M	Mount Dempster	58.84	338		P	18 59 44.5	+1.6
I30M				IAmb	IAmb	18 59 45.3	
	comp=Z,2.2nm,0.7s						
I30M	Mount Dempster	58.84	338	P	P	18 59 43.5	+0.6
	baz=120						
YUK3	Moose Creek	58.92	333	P	P	18 59 44.6	+1.0
	baz=114						
CTG	Chitna Glacier	58.99	332	P	P	18 59 45.0	+1.0
	baz=112						
G31M	Satah River	58.99	340	P	P	18 59 45.1	+1.4
	baz=123						
BVCY	Beaver Creek	59.35	334	P	P	18 59 47.1	+0.7
	baz=114						
DAWY	Dawson	59.44	336	P	P	18 59 48.2	+1.2
	baz=116						
INK	Inuvik	59.52	341	P	P	18 59 48.9	+1.6
	baz=124						
EPYK	Eagle Plains	59.53	339	P	P	18 59 48.9	+1.3
	baz=120						
BGLC	Bering Glacier	59.58	331	P	P	18 59 49.6	+1.7
	baz=110						
G30M	tAoh Zraii Nji	59.67	339	P	P	18 59 50.5	+1.9
	baz=121						
A36M	Sachs Harbour	59.69	347	P	P	18 59 50.1	+1.7
	baz=135						
CRQE	Cirque	59.71	331	P	P	18 59 49.8	+0.8
	baz=111						
M27K	Edge Creek, AK	59.76	333	P	P	18 59 50.2	+0.9
	baz=113						
F30M	Barrier River	59.85	340	IAmb	IAmb	18 59 52.3	
	comp=Z,4.6nm,0.9s						
F30M	Barrier River	59.85	340	P	P	18 59 51.7	+2.0
	baz=122						
MCARA	McCarthy VSAT	59.90	332	P	P	18 59 51.3	+1.2
	baz=111						
L27K	Beaver Creek,	60.01	334	P	P	18 59 52.1	+1.2
	baz=113						
H29M	Whitestone	60.04	338	P	P	18 59 52.4	+1.3
	baz=118						
KAIM	Kayak Island	60.05	330	P	P	18 59 51.8	+0.6
	baz=109						
G29M	Pine Creek	60.25	339	IAmb	IAmb	18 59 54.9	
	comp=Z,4.5nm,0.8s						
G29M	Pine Creek	60.25	339	P	P	18 59 54.0	+1.5
	baz=119						
M26K	Nabesna, AK	60.26	333	P	P	18 59 54.2	+1.5
	baz=112						
I28M	Miner Creek	60.26	337	P	P	18 59 53.8	+1.2
	baz=116						
BMRM	Bremner River	60.48	331	P	P	18 59 54.7	+0.5
	baz=109						
K27K	Chicken	60.50	335	P	P	18 59 55.8	+1.6
	baz=113						
L26K	Log Cabin Wild	60.64	334	P	P	18 59 56.4	+1.1
	baz=112						
N25K	Chitina, Valde	60.69	332	P	P	18 59 56.3	+0.7
	baz=110						
EYAK	Cordova Ski Ar	60.88	331	P	P	18 59 57.4	+0.6
	baz=108						
E29M	Blow River	60.94	340	IAmb	IAmb	19 00 00.7	
	comp=Z,7.3nm,1.4s						
E29M	Blow River	60.94	340	P	P	18 59 58.5	+1.4
	baz=120						
I27K	Kandik River	60.96	337	P	P	18 59 58.8	+1.4
	baz=115						
H27K	Steamboat Moun	61.19	337	IAmb	IAmb	19 00 01.8	
	comp=Z,2.9nm,0.7s						
H27K	Steamboat Moun	61.19	337	P	P	19 00 00.2	+1.3
	baz=115						
HARP	HAARP	61.20	333	P	P	19 00 00.5	+1.4
	baz=110						
F28M	Old Crow	61.22	339	P	P	19 00 01.2	+2.1
F28M				IAmb	IAmb	19 00 02.4	
	comp=Z,6.2nm,0.8s						
F28M	Old Crow	61.22	339	P	P	19 00 00.8	+1.7
	baz=118						
KLU	Klutina	61.25	332	P	P	19 00 00.7	+1.2
	baz=108						
SCRK	Sand Creek	61.26	335	P	P	19 00 00.5	+1.0
	baz=112						
J26L	Joseph Creek	61.28	335	P	P	19 00 01.4	+1.8
	baz=112						
I26K	Coal Creek Min	61.43	336	P	P	19 00 02.0	+1.6
	baz=113						
G27K	Doyon Strip	61.48	338	P	P	19 00 02.6	+1.7
	baz=115						
P23K	Montague Islan	61.50	330	P	P	19 00 01.4	+0.3
	baz=106						
RIDG	Independent Ri	61.53	334	P	P	19 00 03.0	+1.7
	baz=110,SNR=7.0						
PAX	Paxson	61.53	333	P	P	19 00 03.0	+1.6
	baz=110,SNR=8.0						
M24K	Tolsona, Glenn	61.56	332	P	P	19 00 02.3	+0.8
	baz=108						
E28M	Babbage River	61.57	340	IAmb	IAmb	19 00 03.8	
	comp=Z,3.6nm,0.8s						
E28M	Babbage River	61.57	340	P	P	19 00 02.4	+1.0
	baz=118						
GLI	Glacier Island	61.61	331	P	P	19 00 02.1	+0.3
	baz=107						
D28M	Stokes Point	61.67	341	P	P	19 00 03.5	+1.5
	baz=120						
K24K	Donnelly Dome	61.94	334	P	P	19 00 05.0	+1.0
	baz=110						
SCM	Sheep Creek Mo	61.99	332	P	P	19 00 06.0	+1.5
	baz=107						
J25K	Salcha River,	62.05	335	IAmb	IAmb	19 00 07.2	
	comp=Z,4.6nm,0.7s						
J25K	Salcha River,	62.05	335	P	P	19 00 06.0	+1.2
	baz=110,SNR=8.6						
E27K	Coleen River	62.06	339	IAmb	IAmb	19 00 07.5	
	comp=Z,3.5nm,0.8s						
E27K	Coleen River	62.06	339	P	P	19 00 06.7	+1.9
	baz=116						
M23K	Glacier View	62.16	332	P	P	19 00 06.6	+1.1
	baz=107						
PWL	Port Wells	62.18	330	P	P	19 00 06.0	+0.3
	baz=106						

G26K	**Porcupine Rive** baz=113	**62.31**	**338**	P	**P**	**19 00 07.2**	**+0.8**
D27M	**Malcolm River** baz=117	**62.33**	**341**	P	**P**	**19 00 08.0**	**+1.5**
DHY	**Denali Highway** baz=108	**62.38**	**333**	P	**P**	**19 00 08.2**	**+1.1**
KNK	**Knik Glacier** baz=106	**62.39**	**331**	P	**P**	**19 00 08.9**	**+1.8**
WAT6	**Susitna Watana** baz=107	**62.40**	**332**	P	**P**	**19 00 08.6**	**+1.3**
PRP	**Porcupine Dome** comp=Z,3.1nm,0.8s	**62.43**	**336**	IAmb	IAmb	19 00 09.8	
PRP	**Porcupine Dome** baz=111	**62.43**	**336**	P	**P**	**19 00 08.9**	**+1.5**
SML	**Sawmill** baz=106	**62.44**	**332**	P	**P**	**19 00 09.0**	**+1.6**
HDA	**Harding Lake** comp=Z,4.2nm,0.7s	**62.62**	**335**	IAmb	IAmb	19 00 10.8	
HDA	**Harding Lake** baz=109	**62.62**	**335**	P	**P**	**19 00 09.9**	**+1.3**
ILAR	**Eielson Array**	**62.72**	**335**	P	**P**	**19 00 10.3**	**+1.2**
ILAR	**Eielson Array** comp=Z,4.6nm,0.7s,baz=118,slow=5.1,SNR=39 comp=Z,4.6nm,0.7s	**62.72**	**335**	P	**P**	**19 00 10.6**	**+1.4**
F26K	**Sheenjek River** baz=113	**62.73**	**338**	P	**P**	**19 00 11.5**	**+2.2**
BMAR	**Burnt Mountain**	**62.78**	**338**		**P**	**19 00 11.6**	**+2.0**
H25L	**Birch Creek** baz=111	**62.81**	**337**	P	**P**	**19 00 11.7**	**+2.0**
WAT1	**Susitna Watana** baz=106	**62.83**	**333**	P	**P**	**19 00 11.6**	**+1.6**
RC01	**Rabbit Creek A** baz=104	**62.90**	**331**	P	**P**	**19 00 12.2**	**+1.7**
POKR	**Poker Plat Res** baz=109	**63.05**	**335**	P	**P**	**19 00 13.0**	**+1.7**
CCB	**Clear Creek Bu** comp=Z,4.0nm,0.7s	**63.05**	**335**	IAmb	IAmb	19 00 13.4	
BRSE	**Bradley Lake S** baz=103	**63.07**	**329**	P	**P**	**19 00 13.5**	**+1.9**
G25K	**Bearman Lake** baz=111	**63.09**	**337**	P	**P**	**19 00 13.9**	**+2.3**
F25K	**Christian Rive** comp=Z,3.1nm,0.8s	**63.22**	**338**	IAmb	IAmb	19 00 15.8	
F25K	**Christian Rive** baz=112	**63.22**	**338**	P	**P**	**19 00 14.2**	**+1.6**
MCK	**McKinley** baz=107	**63.25**	**334**	P	**P**	**19 00 14.6**	**+1.9**
C27K	**Jago River** baz=114	**63.37**	**341**	P	**P**	**19 00 15.1**	**+1.6**
E25K	**Arctic Village** baz=112	**63.39**	**339**	P	**P**	**19 00 15.5**	**+1.8**
H24K	**Noodor Dome** baz=109	**63.45**	**336**	P	**P**	**19 00 16.1**	**+2.0**
SUA	**Susitna One** baz=104	**63.47**	**331**	P	**P**	**19 00 16.0**	**+1.6**
CAPN	**Captain Cook N** baz=103	**63.50**	**330**	P	**P**	**19 00 15.8**	**+1.4**
NEA2	**Nenana** baz=107	**63.55**	**334**	P	**P**	**19 00 16.3**	**+1.6**
G24K	**Hadweenzic Riv** comp=Z,4.5nm,0.9s	**63.58**	**337**	IAmb	IAmb	19 00 18.0	
G24K	**Hadweenzic Riv** baz=109	**63.58**	**337**	P	**P**	**19 00 16.8**	**+1.9**
KDAK	**Kodiak Island** baz=100	**63.62**	**327**	P	**P**	**19 00 16.7**	**+1.4**
Q20K	**Shuyak Island** baz=101	**63.67**	**327**	P	**P**	**19 00 16.4**	**+0.9**
TRF	**Thorofare Moun** baz=105,SNR=6.0	**63.76**	**333**	P	**P**	**19 00 17.4**	**+1.1**
BORG	**Borgarnes** comp=Z,18nm,21.3s,baz=227,slow=35	**63.79**	**25**	LR	LR	19 27 07.5	
I23K	**Minto, Yukon-K** baz=107,SNR=8.2	**63.83**	**335**	P	**P**	**19 00 17.7**	**+1.2**
C26K	**Camden Bay** baz=113	**63.87**	**341**	P	**P**	**19 00 17.8**	**+1.2**
SKT	**Skwentna** baz=103	**63.95**	**331**	P	**P**	**19 00 18.3**	**+0.9**
F24K	**Squaw Lake** baz=109	**64.00**	**338**	P	**P**	**19 00 18.9**	**+1.2**
O20K	**Slope Mountain** baz=101	**64.07**	**329**	P	**P**	**19 00 19.6**	**+1.4**
N20K	**Mount Spurr** baz=102	**64.10**	**330**	P	**P**	**19 00 19.6**	**+1.2**
H23K	**Yukon River** baz=107	**64.10**	**336**	P	**P**	**19 00 19.4**	**+1.0**
D25K	**Kavik River** baz=112	**64.11**	**340**	P	**P**	**19 00 19.6**	**+1.2**
BPAW	**Bear Paw Mtn.** baz=105,SNR=8.9	**64.22**	**334**	P	**P**	**19 00 20.6**	**+1.4**
SII	**Sitkinak Islan** baz=98	**64.28**	**325**	P	**P**	**19 00 19.6**	**-0.1**
P19K	**Oil Pt** baz=101	**64.29**	**329**	P	**P**	**19 00 20.2**	**+0.5**
MLY	**Manley** comp=Z,5.1nm,0.7s	**64.36**	**335**	IAmb	IAmb	19 00 22.4	
MLY	**Manley** baz=105,SNR=7.7	**64.36**	**335**	P	**P**	**19 00 21.7**	**+1.6**
Q19K	**Cape Douglas,** baz=100	**64.37**	**328**	P	**P**	**19 00 20.7**	**+0.5**
E24K	**Your Creek** baz=109	**64.40**	**338**	P	**P**	**19 00 22.1**	**+1.7**
PPLA	**Purkeypile** baz=103	**64.46**	**332**	P	**P**	**19 00 21.9**	**+1.0**
CAST	**Castle Rocks** baz=103	**64.53**	**333**	P	**P**	**19 00 22.2**	**+1.0**
G23K	**Bananza Creek** baz=107	**64.55**	**337**	P	**P**	**19 00 22.5**	**+1.3**
R18K	**Karluk** baz=98	**64.58**	**326**	P	**P**	**19 00 23.0**	**+1.6**
COLD	**Coldfoot** baz=107	**64.76**	**337**	P	**P**	**19 00 24.1**	**+1.4**
E23K	**Chandalar** comp=Z,3.9nm,0.8s	**64.80**	**338**	IAmb	IAmb	19 00 26.3	
E23K	**Chandalar** baz=108	**64.80**	**338**	P	**P**	**19 00 24.6**	**+1.7**
H22K	**Ishtalitna Cre** baz=105	**64.85**	**336**	P	**P**	**19 00 24.5**	**+1.3**
D24K	**Happy Valley** baz=109	**64.87**	**339**	P	**P**	**19 00 24.2**	**+0.9**
I21K	**Tanana** baz=104	**64.91**	**335**	P	**P**	**19 00 25.4**	**+1.8**
TOLK	**Toolik Lake Re** baz=108	**64.96**	**339**	P	**P**	**19 00 25.6**	**+1.7**
CHIR	**Chirikof Islan** baz=97	**64.99**	**324**	P	**P**	**19 00 24.9**	**+0.7**
C24K	**Franklin Bluff** baz=110	**65.02**	**340**	P	**P**	**19 00 26.1**	**+1.9**
Q18K	**Katmai Hardscr** baz=98	**65.03**	**327**	P	**P**	**19 00 25.4**	**+0.8**
N19K	**Bonanza Creek** baz=100	**65.11**	**330**	P	**P**	**19 00 25.9**	**+0.8**
L20K	**Farewell, AK** baz=101,SNR=7.0	**65.13**	**332**	P	**P**	**19 00 25.9**	**+0.8**
G22K	**Bettles** baz=106	**65.17**	**337**	P	**P**	**19 00 26.7**	**+1.5**
P18K	**Big Mountain,** baz=99	**65.25**	**328**	P	**P**	**19 00 26.4**	**+0.5**
O18K	**Koktuh Hills** baz=99	**65.31**	**329**	P	**P**	**19 00 26.7**	**+0.4**
H21K	**Melozitna Rive** baz=104	**65.36**	**335**	P	**P**	**19 00 27.2**	**+0.7**
K20K	**Telida** baz=102	**65.39**	**332**	P	**P**	**19 00 27.2**	**+0.5**
Q17K	**Contact Creek** baz=98	**65.43**	**327**	P	**P**	**19 00 27.5**	**+0.2**
D23K	**Nanushuk River** baz=107	**65.45**	**339**	P	**P**	**19 00 28.5**	**+1.5**
L19K	**White Mountain** baz=100	**65.52**	**331**	P	**P**	**19 00 28.8**	**+1.2**
F22K	**John River** baz=105	**65.58**	**337**	P	**P**	**19 00 29.4**	**+1.4**
J20K	**Nowinta River** comp=Z,2.9nm,0.9s	**65.59**	**333**	IAmb	IAmb	19 00 31.7	
J20K	**Nowinta River** baz=102,SNR=5.2	**65.59**	**333**	P	**P**	**19 00 29.2**	**+1.2**
E22K	**Anaktuvuk Pass** baz=106	**65.61**	**338**	P	**P**	**19 00 29.2**	**+1.0**
C23K	**Itkillik River** baz=108	**65.69**	**340**	P	**P**	**19 00 29.8**	**+1.3**
N18K	**Kilae Creek** baz=99	**65.77**	**329**	P	**P**	**19 00 29.9**	**+0.6**
G21K	**Allakaket** baz=104	**65.84**	**336**	P	**P**	**19 00 30.9**	**+1.4**
P17K	**Kvichak River** baz=98	**65.84**	**328**	P	**P**	**19 00 29.9**	**+0.2**
I20K	**Naaghedeneel** baz=102	**65.86**	**334**	P	**P**	**19 00 31.1**	**+1.4**
M18K	**Stony River** baz=99	**65.86**	**330**	P	**P**	**19 00 30.8**	**+1.0**
F21K	**Alatna River** comp=Z,3.2nm,0.6s	**66.00**	**337**	IAmb	IAmb	19 00 33.8	
F21K	**Alatna River** baz=104	**66.00**	**337**	P	**P**	**19 00 32.1**	**+1.5**
D22K	**Ayikyak River** baz=105	**66.12**	**339**	P	**P**	**19 00 33.2**	**+1.8**
H20K	**Anotleneega Mo** baz=102	**66.16**	**335**	P	**P**	**19 00 32.9**	**+1.2**
J19K	**Poorman** baz=100	**66.19**	**333**	P	**P**	**19 00 33.1**	**+1.2**
O17K	**Koliganek Bris** baz=97	**66.24**	**328**	P	**P**	**19 00 33.2**	**+0.9**
L18K	**Granite Mounta** baz=99	**66.38**	**331**	P	**P**	**19 00 34.2**	**+1.1**
N17K	**Nushagak Hills** baz=97	**66.38**	**329**	P	**P**	**19 00 34.0**	**+0.8**
E21K	**Killik River** baz=104	**66.47**	**338**	P	**P**	**19 00 35.4**	**+1.8**
J18K	**Innoko River** baz=99	**66.58**	**332**	P	**P**	**19 00 35.6**	**+1.2**
P16K	**Nushagak River** baz=96	**66.61**	**327**	P	**P**	**19 00 35.6**	**+1.0**
M17K	**Holitna River** baz=98	**66.62**	**330**	P	**P**	**19 00 35.9**	**+1.3**
O16K	**Kokwok River B** baz=96	**66.72**	**328**	P	**P**	**19 00 36.6**	**+1.3**
B22K	**Teshekpuk Lake** baz=105	**66.75**	**340**	P	**P**	**19 00 37.1**	**+1.8**
F20K	**Avaraart Lake** baz=102	**66.81**	**336**	P	**P**	**19 00 37.5**	**+1.8**
H19K	**Roundabout Mou** comp=Z,4.2nm,0.8s	**66.81**	**335**	IAmb	IAmb	19 00 38.1	
H19K	**Roundabout Mou** baz=100	**66.81**	**335**	P	**P**	**19 00 37.6**	**+1.8**
GCSA	**Galena City Sc** baz=100	**66.86**	**334**	P	**P**	**19 00 37.5**	**+1.4**
C21K	**Knifeblade Rid** baz=103	**66.92**	**339**	P	**P**	**19 00 38.5**	**+2.0**
B21K	**Ikpikpuk River** baz=104	**66.97**	**339**	P	**P**	**19 00 38.1**	**+1.4**
L17K	**Donlin** baz=97	**67.11**	**331**	P	**P**	**19 00 38.2**	**+0.4**
N16K	**Nishlik Lake** baz=96	**67.15**	**329**	P	**P**	**19 00 38.6**	**+0.5**
CHNA	**Chernabura Isl** baz=93	**67.17**	**323**	P	**P**	**19 00 39.3**	**+1.1**
G19K	**Purcell Mounta** baz=100	**67.18**	**335**	P	**P**	**19 00 39.2**	**+1.0**
K17K	**Iditarod** baz=97	**67.19**	**331**	P	**P**	**19 00 39.1**	**+0.8**
S14K	**Fog Glacier** baz=94	**67.22**	**324**	P	**P**	**19 00 39.4**	**+0.6**
E20K	**Nigu River** baz=102	**67.23**	**338**	P	**P**	**19 00 38.9**	**+0.4**
M16K	**Timber Creek** baz=96	**67.30**	**330**	P	**P**	**19 00 39.6**	**+0.5**
A22K	**Sinclair Lake** baz=104	**67.42**	**341**	P	**P**	**19 00 40.5**	**+1.0**
E19K	**Redstone River** baz=100	**67.46**	**337**	P	**P**	**19 00 41.2**	**+1.3**
D20K	**Etivluk River** baz=101	**67.47**	**338**	P	**P**	**19 00 41.3**	**+1.3**
H18K	**Honhosa River** baz=98	**67.55**	**334**	P	**P**	**19 00 41.1**	**+0.6**
F19K	**Shaleruckik Mo** baz=100	**67.56**	**336**	P	**P**	**19 00 42.0**	**+1.5**
O15K	**Ungalikthiuk R** baz=94	**67.57**	**328**	P	**P**	**19 00 41.4**	**+0.7**
L16K	**Owhat River** baz=96	**67.62**	**330**	P	**P**	**19 00 42.0**	**+1.0**
J17K	**VABM Dome** baz=97	**67.62**	**332**	P	**P**	**19 00 42.1**	**+1.1**
SDPT	**Sand Point** baz=92	**67.70**	**323**	P	**P**	**19 00 42.3**	**+0.8**
G18K	**Tagagawik** baz=98	**67.77**	**335**	P	**P**	**19 00 42.8**	**+0.9**
N15K	**Kwethluk River** baz=95	**67.78**	**329**	P	**P**	**19 00 42.8**	**+0.7**
B20K	**Meade River** baz=101	**67.92**	**339**	P	**P**	**19 00 43.8**	**+1.1**
D19K	**Kuna River** baz=100	**67.97**	**338**	P	**P**	**19 00 44.3**	**+1.1**
A21K	**Barrow** baz=102	**68.01**	**341**	P	**P**	**19 00 44.2**	**+1.0**
M15K	**Kasigluk River** baz=94	**68.12**	**329**	P	**P**	**19 00 44.4**	**+0.3**
H17K	**Granite Mounta** baz=97	**68.17**	**334**	P	**P**	**19 00 45.4**	**+1.0**
F18K	**Selawik** baz=98	**68.27**	**336**	P	**P**	**19 00 46.5**	**+1.6**
J16K	**Anvik River**	**68.30**	**332**	P	**P**	**19 00 47.2**	**+1.9**
J16K	comp=Z,4.9nm,0.9s			IAmb	IAmb	19 00 47.9	
J16K	**Anvik River** baz=96	**68.30**	**332**	P	**P**	**19 00 46.0**	**+0.7**
O14K	**Tigyukauivet M** baz=93	**68.31**	**328**	P	**P**	**19 00 45.8**	**+0.4**
I17K	**Unalakleet** baz=96	**68.39**	**333**	P	**P**	**19 00 46.4**	**+0.6**
G17K	**Kiwalik Mounta** baz=96	**68.54**	**334**	P	**P**	**19 00 47.9**	**+1.2**
N14K	**Kuskokwak Cree** baz=93	**68.56**	**328**	P	**P**	**19 00 48.2**	**+1.3**
L15K	**Ungalak Mounta** baz=94	**68.57**	**330**	P	**P**	**19 00 47.4**	**+0.4**
C19K	**Lookout Ridge** baz=99	**68.60**	**338**	P	**P**	**19 00 47.9**	**+0.8**
S12K	**Black Hills** baz=91	**68.61**	**324**	P	**P**	**19 00 47.8**	**+0.5**
K15K	**Wolf Creek Mou** baz=94	**68.64**	**331**	P	**P**	**19 00 47.8**	**+0.4**
E18K	**Tukpahlearik C** baz=97	**68.75**	**336**	P	**P**	**19 00 48.8**	**+0.8**
M14K	**Bethel** baz=93	**68.75**	**329**	P	**P**	**19 00 49.2**	**+1.1**
F17K	**Baldwin Pennin** baz=96	**68.89**	**335**	P	**P**	**19 00 49.6**	**+0.8**
C18K	**Utukok River** baz=97	**69.11**	**338**	P	**P**	**19 00 50.7**	**+0.4**
L14K	**Kuka Creek** baz=93	**69.13**	**330**	P	**P**	**19 00 51.0**	**+0.6**
E17K	**Hotham Inlet** baz=96	**69.18**	**336**	P	**P**	**19 00 51.3**	**+0.7**
A19K	**Wainwright** baz=98	**69.27**	**339**	P	**P**	**19 00 52.2**	**+1.0**
M13K	**Dall Lake** baz=92	**69.42**	**329**	P	**P**	**19 00 52.6**	**+0.4**
B18K	**Kokolik River** baz=97	**69.42**	**338**	P	**P**	**19 00 53.4**	**+1.3**
J14K	**Nanvaranak Lak** baz=93	**69.60**	**331**	P	**P**	**19 00 54.1**	**+0.8**
D17K	**Noatak River** baz=95	**69.72**	**337**	P	**P**	**19 00 54.5**	**+0.5**
C17K	**DeLong Mountai** baz=95	**69.82**	**337**	P	**P**	**19 00 55.0**	**+0.3**
G15K	**Niukluk** baz=93	**69.92**	**334**	P	**P**	**19 00 55.9**	**+0.6**
K13K	**Kusilvak Mount** baz=91	**70.09**	**330**	P	**P**	**19 00 57.4**	**+1.1**
F15K	**North Star Dit** baz=93	**70.21**	**334**	P	**P**	**19 00 58.2**	**+1.2**
ANM	**Nome** baz=92	**70.48**	**333**	P	**P**	**19 00 59.6**	**+0.9**
C16K	**Lisburne Hills** baz=93	**70.61**	**337**	P	**P**	**19 01 00.5**	**+1.1**
M11K	**Mekoryuk** baz=89	**70.83**	**329**	P	**P**	**19 01 01.5**	**+0.6**
F14K	**Arctic Creek** baz=91	**70.90**	**334**	P	**P**	**19 01 02.4**	**+1.1**
UNV	**Unalaska Valle** baz=87	**71.22**	**322**	P	**P**	**19 01 04.3**	**+0.9**
TNA	**Tin City** baz=90	**71.57**	**334**	P	**P**	**19 01 05.9**	**+0.6**
EKA	**Eskdalemuir Ar** comp=Z,3.3nm,0.9s,baz=269,slow=8.0,SNR=4.1 comp=Z,3.3nm,0.9s	**71.83**	**37**	P	**P**	**19 01 07.0**	**-0.1**
NIKH	**Nikolski High** baz=85	**72.68**	**321**	P	**P**	**19 01 12.0**	**-0.2**
ESDC	**Sonseca Array**	**72.89**	**53**	P	**P**	**19 01 15.8**	**+2.0**
ESDC	comp=Z,6.3nm,1.2s			IAmb	IAmb	19 01 16.5	
ESDC	**Sonseca Array** comp=Z,3.4nm,0.8s,baz=284,slow=6.2,SNR=14	**72.89**	**53**	P	**P**	**19 01 15.7**	**+1.9**
ESDC	comp=Z,40nm,21.1s,baz=264,slow=32 comp=Z,3.4nm,0.8s			LR	LR	19 28 10.0	
GAMB	**Gambell** baz=86	**73.27**	**332**	P	**P**	**19 01 16.0**	**+0.6**
NOA	**NORSAR Array B** comp=Z,19nm,19.5s,baz=285,slow=34	**78.47**	**30**	LR	LR	19 34 35.8	
HFS	**Hagfors** comp=Z,28nm,19.7s,baz=312,slow=34	**79.89**	**30**	LR	LR	19 34 58.9	
ARCES	**ARCESS Array B** comp=Z,30nm,20.8s,baz=253,slow=35	**81.28**	**19**	LR	LR	19 36 40.2	
FINES	**FINESS Array B** comp=Z,4.2nm,0.9s,baz=358,slow=9.7,SNR=6.6 comp=Z,4.2nm,0.9s	**85.06**	**27**	P	**P**	**19 02 21.2**	**+1.3**
AKASG	**Malin Array Be** comp=Z,19nm,20.1s,baz=332,slow=34	**91.70**	**35**	LR	LR	19 41 49.9	
BELG	**Belogornoye** comp=Z,23nm,19.2s,baz=9.9,slow=36	**99.83**	**27**	LR	LR	19 49 12.1	
HHC	**Hu-ho-hao-te**	**120.33**	**345**	*e*P	**PKPdf**	**19 08 33.4**	**-2.7**
NJ2	**Nanjing**	**125.96**	**334**	*e*P	**PKiKP**	**19 08 48.3**	**+0.9**
NJ2	comp=Z,9.0nm,0.7s			pmax	pmax		
PZH	**PanZhiHua**	**136.21**	**351**	PKP	**PKiKP**	**19 09 07.6**	**-0.8**
WRA	**Warramunga Arr** comp=Z,0.5nm,0.9s,baz=87,slow=3.2,SNR=2.4	**142.22**	**259**	PKhKP	PKPpre	19 09 11.1	
WRA	comp=Z,1.1nm,1.2s,baz=89,slow=2.5,SNR=5.8			PKP	**PKiKP**	**19 09 18.5**	**-2.1**
ASAR	**Alice Springs** comp=Z,0.3nm,0.7s,baz=116,slow=3.1,SNR=4.8	**142.61**	**253**	PKhKP	PKPpre	19 09 12.4	
ASAR	comp=Z,0.4nm,0.8s,baz=107,slow=3.6,SNR=4.2			PKP	**PKPdf**	**19 09 18.8**	**+0.6**
CMAR	**Chiang Mai Arr** comp=Z,0.5nm,0.9s,baz=39,slow=3.0,SNR=2.5	**144.51**	**353**	PKP	**PKPdf**	**19 09 21.6**	**-0.1**

IDC ***11*** *18:58:22.1±1.2, 7°.03N×73°.30W, h149^{km}±17^{km}, mb3.2/1, mbtmp4.0/4, Error ellipse: s-maj=55.5km s-min=7.9km az=131.0*

RSNC ***11*** *18:58:24.5±0.0, 7°N±1°×7°3W±°, h151^{km}±2^{km}, M3.3, mB4.6, mb3.8, ML3.1, Mw(mB)3.8*

ISC 11 18:58:23.0±0.9**, 6°.85N**±0°.03×**73°.12W**±0°.03**, h157**^{km}±6^{km}**, n44, σ1^{s}.34**/80**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**194**	P	**Pn**	**18 58 44.8**	**+0.2**
BARC				S	**Sn**	**18 58 59.8**	**-1.3**
BRJC	**Barrancabermej**	**0.64**	**281**	P	**Pn**	**18 58 46.5**	**+0.6**
BRJC				S	**Sn**	**18 59 03.8**	**+0.5**
PAMC	**Pamplona, Colo**	**0.64**	**41**	P	**Pn**	**18 58 47.6**	**+1.1**
PAMC				S	**Sn**	**18 59 04.6**	**+0.3**
RUSC	**La Rusia**	**0.96**	**178**	P	**Pn**	**18 58 48.5**	**-0.2**
RUSC				S	**Sn**	**18 59 07.6**	**-0.7**
PTBC	**PUERTO BERRIO,**	**1.37**	**257**	P	**Pn**	**18 58 51.3**	**-0.5**
PTBC				S	**Sn**	**18 59 12.6**	**-1.2**
TAMC	**Tame, Arauca**	**1.38**	**107**	P	**Pn**	**18 58 52.9**	**+0.9**
TAMC				S	**Sn**	**18 59 14.6**	**+0.5**
SPBC	**San Pablo de B**	**1.53**	**219**	P	**Pn**	**18 58 53.6**	**+0.1**
SPBC				S	**Sn**	**18 59 16.1**	**-0.8**
ZARC	**Zaragoza, Cauc**	**1.84**	**290**	P	**Pn**	**18 58 57.2**	**+0.4**
ZARC				S	**Sn**	**18 59 23.0**	**+0.3**
NORC	**Norcasia**	**2.16**	**234**	P	**Pn**	**18 59 00.6**	**+0.1**
NORC				S	**Sn**	**18 59 29.2**	**-0.3**
CHIC	**Chingaza**	**2.29**	**196**	P	**Pn**	**18 59 02.8**	**+0.3**
CHIC				S	**Sn**	**18 59 32.6**	**-0.2**
ROSC	**El Rosal** 141nm,0.4s,baz=352,slow=24,SNR=109	**2.33**	**211**	P	**Pn**	**18 59 04.2**	**+1.3**
ROSC	113nm,0.3s,baz=343,slow=20,SNR=8.8			S	**Sn**	**18 59 33.2**	**-0.4**
ROSC	**El Rosal**	**2.33**	**211**	P	**Pn**	**18 59 04.2**	**+1.3**
ROSC				S	**Sn**	**18 59 32.3**	**-1.3**
CVER	**Cruz Verde, Cu**	**2.51**	**202**	P	**Pn**	**18 59 06.0**	**+0.9**
CVER				S	**Sn**	**18 59 38.2**	**+0.7**
UREC	**San Jos de Ur**	**2.56**	**291**	P	**Pn**	**18 59 04.7**	**-0.5**
UREC				S	**Sn**	**18 59 35.8**	**-2.0**
GUY2C	**Guyana, Caldas**	**2.76**	**234**	P	**Pn**	**18 59 09.0**	**+0.8**
GUY2C				S	**Sn**	**18 59 42.7**	**-0.3**
VILC	**Villavicencio,**	**2.78**	**192**	P	**Pn**	**18 59 07.7**	**-0.5**
VILC				S	**Sn**	**18 59 41.7**	**-1.4**
PTGC	**Puerto Gaitan,**	**2.81**	**160**	P	**Pn**	**18 59 07.7**	**-0.7**
PTGC				S	**Sn**	**18 59 40.7**	**-2.8**
CBOC	**Ciudad Bolivar**	**3.04**	**251**	P	**Pn**	**18 59 12.4**	**+1.0**
CBOC				S	**Sn**	**18 59 48.4**	**-0.4**
DBBC	**Dabeiba**	**3.08**	**273**	P	**Pn**	**18 59 12.3**	**+0.6**
DBBC				S	**Sn**	**18 59 48.5**	**-0.9**
SDV	**Santo Domingo** 42nm,0.3s,baz=240,slow=14,SNR=43	**3.18**	**50**	P	**Pn**	**18 59 14.3**	**+1.1**
SDV	38nm,0.4s,baz=252,slow=20,SNR=21			S	**Sn**	**18 59 51.3**	**-0.7**
SDV	**Santo Domingo**	**3.18**	**50**	P	**Pn**	**18 59 14.2**	**+1.1**
SDV				S	**Sn**	**18 59 50.9**	**-1.1**
ARGC	**Ariguani, Magd**	**3.19**	**340**	P	**Pn**	**18 59 15.5**	**+2.4**
ARGC				S	**Sn**	**18 59 54.1**	**+2.2**
ANIL	**Santa Ana**	**3.27**	**224**	P	**Pn**	**18 59 15.9**	**+1.5**
ANIL				S	**Sn**	**18 59 56.5**	**+2.3**
PRAC	**Prado**	**3.58**	**210**	P	**Pn**	**18 59 17.8**	**-0.4**
PRAC				S	**Sn**	**18 59 59.7**	**-1.3**
APAC	**Apartado, Choc**	**3.59**	**287**	P	**Pn**	**18 59 18.8**	**+0.6**
APAC				S	**Sn**	**19 00 01.4**	**+0.4**
ORTC	**Ortega, Tolima**	**3.61**	**216**	P	**Pn**	**18 59 19.0**	**+0.4**
ORTC				S	**Sn**	**19 00 01.6**	**-0.1**
SJCC	**San Jacinto, C**	**3.65**	**326**	P	**Pn**	**18 59 18.7**	**-0.3**
SJCC				S	**Sn**	**19 00 00.3**	**-2.2**
PLMC	**San Jos del P**	**3.70**	**239**	P	**Pn**	**18 59 20.3**	**+0.6**
LCBC	**Los crdobas,**	**3.79**	**302**	P	**Pn**	**18 59 23.9**	**+3.2**
LCBC				S	**Sn**	**19 00 03.5**	**-2.1**
URMC	**La Uribe, Meta**	**3.80**	**199**	P	**Pn**	**18 59 21.7**	**+0.7**
URMC				S	**Sn**	**19 00 05.8**	**-0.2**
CRJC	**Cerrejon, Guaj**	**4.14**	**3**	P	**Pn**	**18 59 25.0**	**-0.5**
CRJC				S	**Sn**	**19 00 12.2**	**-1.9**
YOTC	**Yotoco, Valle**	**4.30**	**229**	P	**Pn**	**18 59 27.5**	**0.0**
SMRC	**Santa Marta, M**	**4.42**	**346**	P	**Pn**	**18 59 29.8**	**+0.8**
SMRC				S	**Sn**	**19 00 18.0**	**-2.4**
CAPC	**Capurgana**	**4.55**	**293**	P	**Pn**	**18 59 29.5**	**-1.2**
CAPC				S	**Sn**	**19 00 19.7**	**-3.8**
URIC	**Uribia, Colomb** 21nm,1.3s	**4.94**	**13**	P	**Pn**	**18 59 34.8**	**-1.0**
URIC	21nm,1.3s			S	**Sn**	**19 00 31.8**	**-0.9**
MALC	**Bahia Malaga**	**5.06**	**236**	P	**Pn**	**18 59 39.3**	**+1.9**
MALC				S	**Sn**	**19 00 36.5**	**+1.0**
JAMC	**Jamundi, Valle** 494nm10nm,0.5s	**5.06**	**225**	P	**Pn**	**18 59 38.2**	**+0.6**
JAMC	494nm10nm,0.5s			S	**Sn**	**19 00 35.3**	**-0.6**
GARC	**Garzon, Huila**	**5.21**	**207**	P	**Pn**	**18 59 37.8**	**-1.8**
POPC	**Popayan, Colom** 3.8nm,0.5s	**5.56**	**220**	P	**Pn**	**18 59 43.8**	**-0.5**
POPC	3.8nm,0.5s			S	**Sn**	**19 00 46.0**	**-1.8**
FLOC	**Florencia**	**5.82**	**206**	P	**Pn**	**18 59 47.5**	**+0.1**
PCRV	**Puerto La Cruz** 6.5nm,0.8s,baz=243,slow=2.3,SNR=1.5	**9.01**	**68**	P	**Pn**	**19 00 30.8**	**+0.8**
YKA	**Yellowknife Ar** 0.4nm,0.6s,baz=138,slow=5.7,SNR=4.1 0.4nm,0.6s	**63.23**	**340**	P	**P**	**19 08 32.6**	**-1.9**
ASAR	**Alice Springs** 0.3nm,0.5s,baz=105,slow=3.5,SNR=2.0	**149.13**	**234**	PKPbc	**PKPdf**	**19 17 53.1**	**+3.6**
WRA	**Warramunga Arr** 0.2nm,0.4s,baz=108,slow=2.5,SNR=12	**150.36**	**241**	PKPbc	**PKPbc**	**19 17 56.4**	**-0.4**

WEL 11 19:09:05.5±0.9**, 35°S**±9°×**17°9E**±1°4**, h281**^{km}±12^{km}**, M3.6**/11**, MLv3.6**/11**, Error ellipse: s-maj=19.4km s-min=9.5km az=116.8, confirmed, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.95**	**194**	P	Pn	19 09 57.6	-1.7
MXZ				S	S	19 10 40.9	-1.4
WMGZ	**Waiomatatini S**	**3.18**	**192**	P	Pn	19 10 00.7	-1.0
WMGZ				S	S	19 10 46.6	0.0
HAZ	**Te Kaha**	**3.26**	**201**	P	Pn	19 10 03.5	+0.9
HAZ				S	S	19 10 49.6	+1.5
PKGZ	**Pakihiroa**	**3.29**	**196**	P	Pn	19 10 01.9	-1.0
PKGZ				S	S	19 10 48.7	0.0
GRZ	**Great Barrier**	**3.44**	**242**	P	Pn	19 10 03.0	-1.5
PUZ	**Puketiti**	**3.45**	**193**	P	Pn	19 10 05.0	+0.4
PUZ				S	S	19 10 50.9	-0.9
RUGZ	**Raukumara Rang**	**3.48**	**201**	P	Pn	19 10 04.7	-0.4
RUGZ				S	S	19 10 51.5	-1.2
TWGZ	**Tauwhareparae**	**3.61**	**196**	P	Pn	19 10 07.4	+1.0
TWGZ				S	S	19 10 55.5	+0.6
CNGZ	**Carnagh Statio**	**3.86**	**192**	P	Pn	19 10 07.5	-1.6
MWZ	**Matawai**	**3.87**	**200**	P	Pn	19 10 08.4	-0.9
MWZ				S	S	19 11 00.4	+0.2
URZ	**Urewera**	**3.93**	**205**	P	Pn	19 10 10.2	+0.3

URZ				S	S	19 11 02.3	+0.9
RAGZ	Rawiri	4.05	201	P	Pn	19 10 11.8	+0.5
RAGZ				S	S	19 11 06.7	+2.7
RIGZ	Rimuhau	4.16	196	P	Pn	19 10 12.8	+0.3
RIGZ				S	S	19 11 06.3	+0.1
MUGZ	Murupara	4.25	207	P	Pn	19 10 13.6	+0.1
MUGZ				S	S	19 11 09.6	+1.6
SNGZ	Shannon Statio	4.34	200	P	Pn	19 10 15.1	+0.6
SNGZ				S	S	19 11 11.1	+1.3
PRGZ	Paritu Road	4.34	194	P	Pn	19 10 14.6	0.0
KNZ	Kokohu	4.48	196	P	Pn	19 10 16.4	+0.3
KNZ				S	S	19 11 13.4	+0.7
MTHZ	Maungataniwha	4.56	204	P	Pn	19 10 17.7	+0.6
MTHZ				S	S	19 11 15.7	+1.2
MHGZ	Mahia Peninsul	4.56	193	P	Pn	19 10 18.9	+1.8
MHGZ				S	S	19 11 17.7	+3.2
BKZ	Black Stump Fm	4.96	205	P	Pn	19 10 21.1	-0.7
BKZ				S	S	19 11 23.3	+0.3
NTVZ	North Tongarir	5.22	212	P	Pn	19 10 26.6	+1.5
TMVZ	Te Maari	5.23	212	P	Pn	19 10 25.5	+0.4
ETVZ	East Tongariro	5.24	211	P	Pn	19 10 25.6	+0.4
OTVZ	Oturere	5.28	212	P	Pn	19 10 25.3	-0.4
OTVZ				S	S	19 11 31.6	+1.4
PXZ	Pawanui	5.64	199	P	Pn	19 10 30.4	+0.6
PXZ				S	S	19 11 37.3	-0.3
BFZ	Birch Farm	6.42	201	P	Pn	19 10 39.8	+0.5
BFZ				S	S	19 11 53.5	-1.3
MRZ	Mangatainoka R	6.61	205	P	Pn	19 10 41.4	-0.2
MRZ				S	S	19 11 54.6	-4.6

IDC 11 19:09:54.2±2.0**, 17°.99S**×**178°.84E, h575**^{km}±14^{km}**, mb2.3**/2**, mbtmp3.3**/2**, Error ellipse: s-maj=68.6km s-min=33.6km az=128.0, Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	0.80	289	P	P	19 11 02.8	+0.1
	1.4nm,0.4s,baz=105,slow=22,SNR=8.8						
WRA	Warramunga Arr	42.04	260	P	P	19 16 56.5	-0.1
	0.1nm,0.3s,baz=96,slow=7.6,SNR=13						
WRA				PcP	pP	19 18 37.0	+0.5
	0.4nm,0.9s,baz=103,slow=3.3,SNR=1.8						
	0.1nm,0.3s						
ASAR	Alice Springs	42.25	254	P	P	19 16 57.9	-0.3
	0.3nm,0.5s,baz=96,slow=7.0,SNR=5.8						
	0.3nm,0.5s						
BRTR	Keskin Array B	142.96	313	PKP	PKPdf	19 28 23.6	+0.2
	0.2nm,0.6s,baz=57,slow=5.3,SNR=2.0						

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*IDC **11** 19:20:24.4±1.9, 7°.45S×128°.41E, h144^{km}±17^{km}, mb4.1/16, mbtmp4.5/21, MS3.5/1, Error ellipse: s-maj=14.5km s-min=10.3km az=77.0*

*NEIC **11** 19:20:24.2±1.7, 7°.55S±0°.02×128°.54E±0°.06, h153^{km}±7^{km}, mb4.6/46, Error ellipse: s-maj=9.1km s-min=2.9km az=79.0*

*DJA **11** 19:20:25.1±0.2, 8°S±2°×12°9E±°, h169^{km}±6^{km}, M4.7/25, mb4.6/25, mB5.2/13, MLv4.8/19, Mw(mB)4.6/13, MwMwp4.7/1, Mwp5.1/1*

ISC 11 19:20:24.3±0.3**, 7°.58S**±0°.04×**128°.45E**±0°.04**, h151**^{km}**, n175, σ1^{s}80**/185**, mb4.5**/43**, 2D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.85	98	P	Pn	19 21 10.3	+0.4
SAUI	Saumlaki	2.85	98	S	Sn	19 21 44.8	-0.2
SAUI	Saumlaki	2.85	98	P	Pn	19 21 12.7	+2.8
SAUI				S	Sn	19 21 46.5	+1.5
BNDI	Bandanaira	3.37	26	P	Pn	19 21 18.4	+2.0
BNDI	Bandanaira	3.37	26	P	Pn	19 21 17.8	+1.4
AAI	Ambon	3.88	356	P	Pn	19 21 24.6	+1.6
MSAI	Masohi	4.23	6	P	Pn	19 21 30.0	+2.3
MSAI				S	Sn	19 22 28.7	+12
NLAI	Namlea	4.52	343	P	Pn	19 21 35.0	+3.6
SOEI	Soe	4.67	242		Pn	19 21 34.7	+1.2
SOEI	Soe	4.67	242	P	Pn	19 21 34.9	+1.4
SOEI	Soe	4.67	242	P	Pn	19 21 35.2	+1.7
DRS	Darwin Rock St	5.39	154	P	Pn	19 21 44.5	+1.6
DRS	Darwin Rock St	5.39	154	S	Sn	19 22 43.6	-0.8
BATI	Baumata	5.40	241	P	Pn	19 21 44.6	+1.5
	1µm,0.5s,baz=120,slow=4.5,SNR=285						
BATI				S	Sn	19 22 44.7	0.0
	384nm,0.5s,baz=73,slow=19,SNR=12						
BATI	Baumata	5.40	241	P	Pn	19 21 44.6	+1.5
MTN	Manton Dam	5.86	153		Pn	19 21 50.0	+0.8
MTN				Sn	Sn	19 22 53.0	-2.5
MTN	Manton Dam	5.86	153	P	Pn	19 21 49.7	+0.5
MTN	Manton Dam	5.86	153	S	Sn	19 22 54.9	-0.7
FAKI	Fak Fak	5.98	39		Pn	19 21 50.0	-0.7
FAKI				Sn	Sn	19 22 54.4	-4.1
FAKI	Fak Fak	5.98	39	P	Pn	19 21 52.4	+1.6
FAKI	Fak Fak	5.98	39	P	Pn	19 21 50.1	-0.7
	0.6nm3µm2µm129nm,0.5s						
SANI	Sanana	6.02	336	P	Pn	19 21 53.6	+2.3
SANI	Sanana	6.02	336	P	Pn	19 21 54.3	+3.0
	25nm,1.0s						
BBSI	Bau Bau	6.20	289	P	Pn	19 21 55.7	+2.0
	0.2nm50nm,1.1s						
MMRI	Maumere	6.24	260		Pn	19 21 55.0	+0.7
MMRI				Sn	Sn	19 23 03.4	-1.2
MMRI	Maumere	6.24	260	P	Pn	19 21 55.7	+1.4
MMRI	Maumere	6.24	260	P	Pn	19 21 55.2	+0.9
	0.6nm2µm166nm,1.2s						
KDU	Kakadu	6.44	142	P	Pn	19 21 58.0	+1.1
KMPI	Kaimana, Papua	6.52	54	P	Pn	19 21 57.9	-0.1
EDFI	Ende, Flores	6.79	260	P	Pn	19 22 02.8	+1.1
	0.2nm52nm,1.4s						
KDI	Kendari	6.83	302	P	Pn	19 22 02.9	+0.8
SWI	Sorong	7.24	23	P	Pn	19 22 07.6	0.0
	0.7nm2µm159nm,0.6s						
BSSI	Bau Bau, Buton	8.03	280	P	Pn	19 22 19.5	+1.3
	49nm,1.3s						
KNRA	Kununurra	8.05	178		Pn	19 22 18.5	+0.1
KNRA				Sn	Sn	19 23 43.4	-4.8
BASI	Baing, Sumba	8.21	251	P	Pn	19 22 19.5	-1.0
	200nm,0.9s						
RKPI	Ransiki, Papua	8.30	44	P	Pn	19 22 21.5	-0.3
WSI	Waingapu	8.32	255	P	Pn	19 22 21.0	-1.1
TNTI	Ternate	8.37	353		Pn	19 22 21.9	-0.8
TNTI	Ternate	8.37	353	P	Pn	19 22 25.4	+2.7
	0.1nm22nm,1.3s						
LUWI	Luwuk	8.62	319	P	Pn	19 22 30.5	+4.5
	42nm,1.4s						
BNSI	Bone	8.88	290	P	Pn	19 22 31.8	+2.3
	17nm,1.1s						
KAPI	Kappang	9.01	286	P	Pn	19 22 31.1	-0.2
	2.9nm,0.3s,baz=97,slow=23,SNR=1.6						
WBSI	Waikabubak, Su	9.19	256	P	Pn	19 22 33.6	0.0
	98nm,0.7s						
SRPI	Serui, Papua	9.61	54	P	Pn	19 22 39.3	0.0
	640nm29nm,0.5s						
BAKI	Biak	9.93	51	P	Pn	19 22 45.0	+1.6
	1µm100nm,0.6s						
MRSI	Marisa	10.31	321	P	Pn	19 22 52.7	+4.3
	15nm,0.7s						
PLAI	Plampang	10.64	263	P	Pn	19 22 54.7	+1.9
FITZ	Fitzroy Crossi	10.81	194	P	Pn	19 22 53.3	-1.6
	32nm,0.3s,baz=22,slow=11,SNR=210						
FITZ				S	Sn	19 24 47.3	-7.3
	34nm,0.4s,baz=79,slow=5.3,SNR=8.6						
FITZ	Fitzroy Crossi	10.81	194	P	Pn	19 22 54.9	-0.1
TOLI2	Tolitoli	11.54	318		Pn	19 23 03.9	-0.7
TOLI2	Tolitoli	11.54	318	P	Pn	19 23 07.5	+2.9
SGSI	Sangihe	11.57	345	P	Pn	19 23 05.8	+0.8
	123nm,0.9s						
JAY	Jayapura	13.20	68	P	Pn	19 23 26.0	-0.2
	5.8nm,0.9s,baz=222,slow=12,SNR=5.7						
WB0	Warramunga Arr	13.41	155		Pn	19 23 26.6	-2.3
WRAB	Tennant Creek	13.55	156		Pn	19 23 27.1	-3.4
WRA	Warramunga Arr	13.55	156		Pn	19 23 27.7	-2.9
WRA	Warramunga Arr	13.55	156	P	Pn	19 23 28.8	-1.8
	9.8nm,0.4s,baz=322,slow=14,SNR=182						
WRA				S	Sn	19 25 51.6	-9.1
	24nm,0.4s,baz=327,slow=23,SNR=14						
WRA				LR	LR	19 29 52.0	
	comp=Z,173nm,18.0s,baz=258,slow=42						
WR8	Warramunga Arr	13.63	155		Pn	19 23 29.1	-2.4
JAGI	Jajag, Banyuwa	14.19	265	P	P	19 23 40.8	-0.7
DAV	Davao City (W)	14.83	349	P	Pn	19 23 45.0	-1.7
	326nm,0.5s,baz=225,slow=2.9,SNR=3.5						
COEN	Coen	15.79	115	P	P	19 23 58.6	-0.7
COEN				IAmb	IAmb	19 24 37.1	
	comp=Z,35nm,1.4s						
COEN	Coen	15.79	115	P	P	19 24 00.6	+1.3
MYLDM	Lahad Datu	16.10	322	P	P	19 24 03.3	+0.6
MYLDM				IAmb	IAmb	19 24 27.3	
	comp=Z,34nm,1.2s						
MYLDM	Lahad Datu	16.10	322	P	P	19 24 05.7	+3.0
PSA00	Pilbara Seismi	16.20	210		Pn	19 24 02.7	-0.8
PSA00	Pilbara Seismi	16.20	210	P	Pn	19 24 03.4	-0.1
PSA00				IAmb	IAmb	19 24 20.0	
	comp=Z,23nm,1.3s						
PSA00	Pilbara Seismi	16.20	210	P	P	19 24 04.9	+1.1
QIS	Mount Isa	16.82	141	P	Pn	19 24 12.8	+1.7
AS31	Alice Springs	16.83	162		P	19 24 10.9	+0.1
AS31				IAmb	IAmb	19 24 17.8	
	comp=Z,8.9nm,0.4s						
ASAR	Alice Springs	16.83	162		Pn	19 24 11.1	-0.1
ASAR	Alice Springs	16.83	162	P	Pn	19 24 12.0	+0.8
	comp=Z,11nm,0.5s,baz=345,slow=12,SNR=127						
ASAR				S	S	19 27 11.8	-6.5
	comp=Z,7.5nm,0.5s,baz=316,slow=16,SNR=6.4						
AS01	Alice Springs	16.84	162	P	Pn	19 24 12.6	+1.3
KKM	Kota Kinabalu	18.23	318		P	19 24 25.3	-0.9
KKM				IAmb	IAmb	19 24 41.2	
	comp=Z,17nm,0.6s						
KKM	Kota Kinabalu	18.23	318	P	Pn	19 24 29.7	+1.7
STKI	Sintang	18.55	293	P	Pn	19 24 39.2	+7.5
PMG	Port Moresby	18.59	97	P	P	19 24 27.6	-2.5
PMG				IAmb	IAmb	19 24 58.9	
	comp=Z,30nm,1.0s						
PMG	Port Moresby	18.59	97	P	Pn	19 24 31.4	-0.8
	comp=Z,15nm,0.9s,baz=270,slow=7.1,SNR=1.8						
PMG				S	S	19 27 53.6	-0.7
	comp=Z,20nm,1.1s,baz=328,slow=19,SNR=1.5						
MTSU	Mount Surprise	18.67	126	P	Pn	19 24 33.8	+0.7
KSM	Kuching	20.21	296		P	19 24 47.2	-0.4
KSM	Kuching	20.21	296	P	Pn	19 24 50.6	-0.6
GIRL	Giralia	20.28	221	P	Pn	19 24 51.2	-0.8
LEM	Lembang	20.68	271	P	P	19 24 53.7	+0.8
	comp=Z,9.3nm,0.5s,baz=127,slow=20,SNR=2.4						
	comp=Z,9.3nm,0.5s						
MEEK	Meekatharra	21.13	205	P	P	19 24 59.8	+2.4
FORT	Forrest	23.08	181	P	P	19 25 19.5	+2.8
QLP	Quilpie	24.13	143	P	P	19 25 29.6	+3.3
MORW	Morawa	24.36	207	P	P	19 25 26.9	-1.5
MORW	Morawa	24.36	207	P	P	19 25 31.5	+3.1
BLDU	Ballidu	25.42	204	P	P	19 25 41.1	+3.1
KLBR	Kellerberrin	25.89	201	P	P	19 25 44.4	+2.2
BBOO	Buckleboo	26.08	165	P	P	19 25 41.2	-2.7
BBOO				IAmb	IAmb	19 26 00.6	
	comp=Z,20nm,1.3s						
BBOO	Buckleboo	26.08	165	P	P	19 25 46.9	+3.0
GUMO	Guam	26.61	38		P	19 25 44.7	-4.1
GUMO	Guam	26.61	38	P	P	19 25 52.2	+3.4
STKA	Stephens Creek	27.10	155	P	P	19 25 55.1	+2.0
	comp=Z,3.4nm,0.4s,baz=317,slow=7.4,SNR=6.6						
	comp=Z,3.4nm,0.4s						
STKA	Stephens Creek	27.10	155	P	P	19 25 55.5	+2.4
HTT	Hallett	27.49	161	P	P	19 25 59.4	+2.8
CMSA	Cobar Meteorol	28.76	148	P	P	19 26 10.8	+3.0
RPSI	Rantau Prapat	31.18	288	P	P	19 26 29.4	0.0
PSI	Prapat	31.21	288	P	P	19 26 29.4	-0.4
	comp=Z,3.6nm,0.3s,baz=65,slow=4.2,SNR=3.6						
	comp=Z,3.6nm,0.3s						
ARPS	Mount Arapiles	31.51	159	P	P	19 26 34.5	+2.5
CAN	Canberra	33.43	149	P	P	19 26 51.7	+2.8
JOW	Kunigami	34.21	360	P	P	19 26 53.1	-2.5
SLVN	Son La	37.50	320	P	P	19 27 22.8	-1.0
CMAR	Chiang Mai Arr	38.95	312		P	19 27 35.1	-0.7
CMAR	Chiang Mai Arr	38.95	312	P	P	19 27 36.1	+0.2
	comp=Z,1.9nm,0.6s,baz=139,slow=6.8,SNR=14						
CMAR				PcP	PcP	19 29 44.4	+0.9
	comp=Z,0.7nm,0.5s,baz=172,slow=2.7,SNR=4.6						
	comp=Z,1.9nm,0.6s						
NJ2	Nanjing	40.46	347	*e*P	P	19 27 49.1	+1.0
NJ2				pmax	pmax		
	comp=Z,13nm,0.8s						
ENH	Enshi	41.81	335		P	19 27 58.2	-1.1
ENH				IAmb	IAmb	19 27 59.9	
	comp=Z,6.9nm,0.7s						
PZH	PanZhiHua	42.66	324	P	P	19 28 08.4	+2.1
PZH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,5.3s						
KSAR	Wonju Array Be	44.79	359		P	19 28 22.4	-0.6
KSRS	Korea Array	44.80	359	P	P	19 28 23.7	+0.6
	comp=Z,2.0nm,0.5s,baz=179,slow=9.2,SNR=16						
	comp=Z,2.0nm,0.5s						
MJAR	Matsushiro Arr	44.84	11	P	P	19 28 21.5	-1.9
	comp=Z,3.1nm,0.9s,baz=198,slow=9.0,SNR=4.5						
	comp=Z,3.1nm,0.9s						
XAN	Xi'an	45.34	337	P	P	19 28 26.9	-0.6
XAN				pmax	pmax		
	comp=Z,26nm,0.8s						
HNS	HongShan	46.56	345	⇓P	P	19 28 36.5	-0.3
HNS				pmax	pmax		
	comp=Z,18nm,1.1s						
SHL	Shillong	48.48	314	P	P	19 28 49.9	-2.3
SHL				IAmb	IAmb	19 28 50.9	
	comp=Z,8.2nm,0.5s						
BJT	Baijiatuau	48.70	347	P	P	19 28 52.2	-1.1
BJI	Beijing	48.72	347	P	P	19 28 54.0	+0.5
BJI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
LZH	Lanzhou	49.21	334	*e*P	P	19 28 58.6	+1.1
LZH				pP	pwP	19 29 36.9	+1.0
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				LR	LR		
	comp=N,250nm,14.1s						
LZH				LR	LR		
	comp=E,140nm,13.7s						
LZH				LR	LR		
	comp=Z,240nm,14.1s						
HHC	Hu-ho-hao-te	50.64	343	*e*P	P	19 29 09.9	+1.8
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
CN2	Changchun	51.21	357	P	P	19 29 13.1	+0.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LSA	Lhasa	51.57	318		P	19 29 15.3	-0.5
LSA				IAmb	IAmb	19 29 18.5	
	comp=Z,6.5nm,0.5s						
USA0B	Ussuriysk Arra	51.64	3	P	P	19 29 13.8	-1.5
USRK	Ussuriysk Ar.	51.64	3	P	P	19 29 13.7	-1.6
USRK	Ussuriysk Ar.	51.64	3	P	P	19 29 14.9	-0.4
	comp=Z,1.2nm,0.5s,baz=184,slow=7.0,SNR=7.4						
	comp=Z,1.2nm,0.5s						
MDJ	Mudanjiang	51.97	1	P	P	19 29 19.0	+1.2
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.4s						
XLT	XiLinHaoTe	52.45	349	*e*P	P	19 29 21.5	0.0
XLT				pmax	pmax		
	comp=Z,11nm,1.4s						
JKA	Kamikawa-asahi	53.02	13	P	P	19 29 25.4	-0.2
EVN	Everest	53.53	313		P	19 29 29.7	-0.8
GTA	Gaotai	53.76	333	P	P	19 29 31.6	+0.4
GTA				pP	pP	19 30 05.3	+0.7
GTA				PcP	PcP	19 30 37.6	+2.3
GTA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ULN	Ulaanbaatar	58.36	343		P	19 30 03.3	-0.5
ULN				IAmb	IAmb	19 30 05.0	
	comp=Z,8.9nm,1.4s						
SONM	Songino Array	58.52	343		P	19 30 04.8	0.0
SONM				IAmb	IAmb	19 30 07.6	
	comp=Z,14nm,1.5s						
SONM	Songino Array	58.52	343	P	P	19 30 05.3	+0.4
	comp=Z,2.3nm,0.7s,baz=173,slow=6.6,SNR=11						
	comp=Z,2.3nm,0.7s						
CASY	Casey	59.90	188	P	P	19 30 14.9	+1.0
PEA0B	Petropavlovsk-	65.36	19	P	P	19 30 50.2	-0.1
PETK	Petropavlovsk-	65.36	19	P	P	19 30 50.2	-0.1
	comp=Z,5.2nm,0.5s,baz=181,slow=3.2,SNR=32						
	comp=Z,5.2nm,0.5s						
NIL	Nilore	66.44	312		P	19 30 56.7	-1.0
KSH	Kashi	67.42	318	P	P	19 31 04.5	+0.7
KSH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MK31	Makanchi Array	67.88	328	P	P	19 31 06.4	-0.1
MK31				IAmb	IAmb	19 31 07.8	
	comp=Z,12nm,1.4s						
MK31				PcP	PcP	19 31 30.4	-1.4
MKAR	Makanchi Array	67.88	328		P	19 31 05.7	-0.7
MKAR				PcP	PcP	19 31 31.5	-0.3
MKAR	Makanchi Array	67.88	328	P	P	19 31 06.4	0.0
	comp=Z,4.8nm,0.4s,baz=118,slow=8.0,SNR=153						
	comp=Z,4.8nm,0.4s						
MAKZ	Makanchi	68.06	328		P	19 31 07.3	-0.2
MAKZ				IAmb	IAmb	19 31 08.7	
	comp=Z,16nm,1.5s						
BOOM	Boomskoye usch	69.02	321	P	P	19 31 14.3	+0.5
BOOM				IAmb	IAmb	19 31 17.7	
	comp=Z,8.1nm,1.2s						
ARSB	Arslanbob	70.30	319		P	19 31 21.4	-0.2
GAR	Garm	70.99	316	P	P	19 31 25.2	-0.7
GAR				IAmb	IAmb	19 31 26.7	
	comp=Z,12nm,1.3s						
ZAA0	Zalesovo Array	71.43	335		P	19 31 27.0	-1.0
ZAA0				IAmb	IAmb	19 31 28.5	
	comp=Z,7.1nm,0.7s						
ZALV	Zalesovo Beam	71.43	335		P	19 31 26.7	-1.2
ZALV	Zalesovo Beam	71.43	335	P	P	19 31 27.2	-0.8
	comp=Z,4.5nm,0.4s,baz=134,slow=4.9,SNR=27						
	comp=Z,4.5nm,0.4s						
VNDA	Vanda	72.06	173	P	P	19 31 32.9	+1.4
VNDA	Vanda	72.06	173	P	P	19 31 33.2	+1.7
	comp=Z,0.9nm,0.4s,baz=311,slow=5.4,SNR=17						
	comp=Z,0.9nm,0.4s						
KURBB	Kurchatov Arra	72.21	329	P	P	19 31 32.6	-0.1
	comp=Z,6.5nm,0.5s,baz=127,slow=5.0,SNR=129						
	comp=Z,6.5nm,0.5s						
KURK	Kurchatov	72.22	329		P	19 31 32.4	-0.3
KK31	Karatay Array	72.77	319		P	19 31 35.9	-0.3
KKAR	Karatay Array	72.77	319		P	19 31 35.7	-0.6
KKAR	Karatay Array	72.77	319		P	19 31 35.5	-0.8
BVAR	Borovoye Array	77.74	328	P	P	19 32 04.2	-0.3
	comp=Z,3.9nm,0.4s,baz=125,slow=10.0,SNR=59						
	comp=Z,3.9nm,0.4s						
BRVK	Borovoye	77.81	328		P	19 32 04.3	-0.5
BRVK				IAmb	IAmb	19 32 06.5	
	comp=Z,14nm,1.3s						
AB31	Akbulak array	82.01	322		P	19 32 26.0	-1.4
ABKAR	Akbulak array	82.01	322		P	19 32 26.2	-1.3
ABKAR	Akbulak array	82.01	322		P	19 32 26.8	-0.7
ABKAR				IAmb	IAmb	19 32 28.2	
	comp=Z,4.8nm,1.1s						
QSPA	South Pole Qui	82.40	180	P	P	19 32 29.1	-0.3
QSPA	South Pole Qui	82.40	180	P	P	19 32 30.4	+1.0
	comp=Z,2.2nm,0.5s,baz=328,slow=0.9,SNR=27						
	comp=Z,2.2nm,0.5s						
SYO	Syowa Base	82.57	201	⇓*e*P	P	19 32 32.3	+2.3
ARTI	Arti	85.47	328		P	19 32 43.6	-1.3
ARTI				IAmb	IAmb	19 32 45.5	
	comp=Z,9.1nm,1.0s						
K13K	Kusilvak Mount	86.07	26		P	19 32 47.0	-0.7
K13K				IAmb	IAmb	19 32 50.5	
	comp=Z,14nm,1.3s						
L14K	Kuka Creek	86.70	27		P	19 32 50.1	-0.7
J18K	Innoko River	90.03	26	P	P	19 33 06.2	-0.4
J18K				IAmb	IAmb	19 33 07.5	
	comp=Z,5.4nm,1.2s						
I23K	Minto, Yukon-K	93.55	25	P	P	19 33 22.2	-0.5
I23K				IAmb	IAmb	19 33 23.7	
	comp=Z,3.5nm,1.0s						
CCB	Clear Creek Bu	94.12	25		P	19 33 23.4	-2.0
CCB				IAmb	IAmb	19 33 25.5	
	comp=Z,5.7nm,1.3s						
ILAR	Eielson Array	94.53	25	P	P	19 33 28.8	+1.6
	comp=Z,0.3nm,0.6s,baz=264,slow=5.1,SNR=2.5						
	comp=Z,0.3nm,0.6s						
ARCES	ARCESS Array B	101.58	340	P	Pdif	19 33 57.5	-1.4
	comp=Z,0.6nm,0.5s,baz=76,slow=4.9,SNR=6.2						
TXAR	Lajitas Array	126.54	59	PKP	PKPdf	19 39 09.3	-1.0
	comp=Z,0.1nm,0.4s,baz=330,slow=7.8,SNR=1.7						
TORD	Torodi Ar. Bea	127.41	281	PKP	PKiKP	19 39 12.5	-0.2
	comp=Z,1.8nm,0.6s,baz=73,slow=3.1,SNR=2.6						
PLCA	Paso Flores	128.84	161	PKP	PKiKP	19 39 15.2	+0.1
	comp=Z,1.1nm,0.9s,baz=220,slow=6.3,SNR=2.9						
SCHQ	Schefferville	131.31	12	PKP	PKiKP	19 39 19.3	-0.2
	comp=Z,1.5nm,0.5s,baz=34,slow=9.5,SNR=2.2						
CPUP	Villa Florida	145.83	171	PKPbc	PKPab	19 39 47.9	+0.7
	comp=Z,0.4nm,0.4s,baz=270,slow=1.0,SNR=4.3						
LPAZ	La Paz	151.16	145	PKPbc	PKiKP	19 40 03.1	+1.2
	comp=Z,3.2nm,0.4s,baz=210,slow=4.8,SNR=16						

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*IPEC **11** 19:35:17.6±0.1, 50°.10N×18°.49E, h1^{km}, ML2.6/5, Error ellipse: s-maj=1.4km s-min=0.9km az=172.0*

*VIE **11** 19:35:17.9±0.5, 49°.81N×18°.63E, h0^{km}, mb2.2/2, ml2.2/3, Error ellipse: s-maj=7.5km s-min=3.3km az=159.0 28 km E of Ostrava Suspected Mining induced.*

*PRU **11** 19:35:20.5, 50°.06N×18°.32E, h0^{km}*

*IDC **11** 19:35:22.5±1.1, 50°.16N×18°.66E, h0^{km}, mbtmp3.1/3, ML2.4/3, Error ellipse: s-maj=26.3km s-min=9.9km az=160.0*

ISC 11 19:35:16.5±0.7**, 50°.06N**±0°.03×**18°.43E**±0°.02**, h0**^{km}**, n32, σ1^{s}29**/58**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.28	219	*e*PG	Pb	19 35 24.4	-0.1
OKC				*e*SG	Sb	19 35 29.1	-0.7
	comp=Z,248nm,0.6s						
STEB	Steborice	0.44	254	*e*PG	Pb	19 35 27.1	0.0
STEB				*e*SG	Sb	19 35 34.0	-0.2
	comp=Z,268nm,0.4s						
MORC	Moravsky Berou	0.64	244	*e*Pg	Pb	19 35 30.7	+0.2
	baz=62						
MORC				*e*Sg	Sb	19 35 39.4	-0.6
	116nm,0.4s,baz=62						
OJC	Ojcow	0.90	79	*e*Pg	Pg	19 35 33.9	+0.2
OJC				*e*Sg	Sg	19 35 47.0	+1.7
KRLC	Kraliky	1.06	272	*e*PG	Pb	19 35 37.8	+0.1
KRLC				*e*SG	Sg	19 35 51.2	+0.7
	comp=Z,67nm,0.4s						
LANS	Liptovska Anna	1.13	143	*e*PG	Pb	19 35 39.2	+0.3
LANS				*e*SG	Sb	19 35 54.4	+0.2
LANS				*e*LG	Lg	19 36 02.0	
JAVC	Velka Javorina	1.30	203	*e*Pg	Pn	19 35 43.3	+1.4
	baz=23						
JAVC				*e*Sg	Sn	19 36 00.2	+0.2
	69nm,1.0s,baz=23						
NIE	Niedzica	1.37	117	*e*Pg	Pb	19 35 43.9	+0.9
NIE				*e*Sg	Sn	19 36 03.5	+1.6
DPC	Dobruska-Polom	1.38	283	*e*PG	Pb	19 35 44.1	+0.9
DPC				*e*SG	Sn	19 36 03.2	+1.1
	comp=Z,115nm,0.6s						
VRAC	Vranov	1.41	239	*e*Pg	Pb	19 35 44.3	+0.7
	baz=56						
VRAC				*e*Sg	Sn	19 36 03.4	+0.8
	45nm,0.6s,baz=56						
OSTC	Ostas	1.50	290	*e*PG	Pb	19 35 46.3	+1.0
OSTC				*e*SG	Sn	19 36 06.6	+1.6
	comp=Z,56nm,0.9s						
KSP	Ksiaz	1.57	301	*e*Pg	Pn	19 35 46.1	+0.5
KSP				*e*Sg	Sg	19 36 08.2	+1.1
VYHS	Vyhne	1.59	170	*e*PG	Pn	19 35 46.2	+0.3
VYHS				*e*SG	Sg	19 36 08.8	+1.4
CHVC	Chvalec	1.61	290	*e*PG	Pg	19 35 47.9	+0.6
KRUC	Moravsky	1.66	234	*e*Pn	Pg	19 35 48.6	+0.4
	baz=52						
KRUC				*e*Sg	Sg	19 36 11.2	+1.6
	47nm,0.6s,baz=52						
STHS	Stebnicka Huta	1.94	108	*e*PG	Pb	19 35 53.3	+0.6
TREC	Trest	2.06	249	*e*SG	Sg	19 36 22.8	+0.3
KECS	Kecovo	2.07	139	*e*PG	Pn	19 35 53.4	+0.9
KECS				*e*SG	Sb	19 36 21.7	+0.4
GOPC	GO Pecny, Ondr	2.35	268	*e*SG	Sg	19 36 31.3	-0.7
	comp=Z,21nm,0.7s						
PRU	Pruhonice	2.51	270	*e*SG	Sg	19 36 36.1	-0.9
	comp=Z,14nm,0.5s						
PVCC	Panska Ves	2.52	282	*e*PG	Pg	19 36 04.8	+0.1
CONA	Conrad Observa	2.72	219	*e*Pn	Pn	19 36 01.5	0.0
	0.3nm,0.2s						
CONA				*e*Sn	Sn	19 36 32.6	-2.5
	3.5nm,0.3s						
RONA	Rosalia, Austr	2.75	212	*e*Pn	Pn	19 36 03.0	+1.2
	2.4nm,0.4s						
RONA				*e*Sn	Sn	19 36 32.3	-3.4
	3.2nm,0.4s						
KOLS	Kolonicke sedl	2.75	113	*e*PG	Pg	19 36 09.5	+0.4
KOLS				*e*SG	Sb	19 36 41.4	+0.7
CKRC	Cesky Krumlov	2.96	247	*e*PG	Pg	19 36 12.9	-0.2
CKRC				*e*SG	Sg	19 36 51.0	-0.5
BRG	Berggiesshubel	2.98	288	Pg	Pg	19 36 12.8	-0.7
BRG				Sg	Sg	19 36 52.4	+0.2
KHC	Kasperske Hory	3.29	255	*e*PN	Pn	19 36 10.2	+1.0
KHC				*e*PG	Pb	19 36 17.5	+1.8

KHC				*e*SG	Sg	19 37 02.9	+0.9
	comp=Z,19nm,0.6s						
GERES	GERESS Array B	3.31	250	Pn	Pg	19 36 18.7	-1.2
	0.1nm,0.3s,baz=65,slow=17,SNR=10						
GERES				Sn	Sb	19 36 58.4	+1.4
	0.3nm,0.3s,baz=71,slow=30,SNR=10						
	2.4nm,0.6s						
ARSA	Arzberg	3.40	216	*e*Pn	Pn	19 36 10.9	+0.1
	0.6nm,0.3s						
ARSA				*e*Sg	Sg	19 37 08.2	+2.4
	3.8nm,0.6s						
CLL	Collm	3.67	292	*e*Pg	Pg	19 36 29.0	+2.2
CLL				*e*Sg	Sg	19 37 14.0	-0.3
	comp=Z,15nm,0.7s						
AKASG	Malin Array Be	6.94	81	Pn	Pn	19 36 59.8	+0.5
	comp=Z,0.3nm,0.3s,baz=274,slow=16,SNR=1.6						
AKASG				Sn	Sn	19 38 14.7	-4.1
	comp=Z,0.6nm,0.3s,baz=268,slow=21,SNR=2.7						
AKASG				Lg	Lg	19 38 50.7	
	comp=Z,0.2nm,0.3s,baz=273,slow=28,SNR=1.6						
	comp=Z,0.1nm,0.3s						
FINES	FINESS Array B	12.19	18	Pn	Pn	19 38 08.4	-2.8
	comp=Z,0.1nm,0.3s,baz=198,slow=12,SNR=4.1						
	comp=Z,1.9nm,0.8s						

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*SJA **11** 19:49:50.4±0.7, 28°.18S×67°.33W, h154^{km}±4^{km}, ML3.8, MW3.9*

*IDC **11** 19:49:50.6±1.8, 28°.18S×67°.33W, h124^{km}±14^{km}, mb4.0/5, mbtmp4.0/10, Error ellipse: s-maj=33.0km s-min=12.7km az=114.0*

*VAO **11** 19:49:51.1±4.1, 28°.47S×67°.84W, h214^{km}±20^{km}, mb4.0*

*NEIC **11** 19:49:52.0±1.1, 28°.22S±0°.03×67°.5W±0°.1, h145^{km}±10^{km}, mb4.5/9, Error ellipse: s-maj=17.2km s-min=2.8km az=80.0*

ISC 11 19:49:50.4±0.5, **28°.14S**±0°.04×**67°.39W**±0°.04, **h135**^{km}, **n92**, σ**1^{s}69**/113, **mb4.4**/7, **La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VCA	Vinchina	0.94	230	*e*P	Pn	19 50 15.9	+2.5
VCA				*e*S	Sn	19 50 34.7	+3.9
VCA				IAML		19 50 35.4	
	comp=Z,3µm,0.9s						
ACLC	CERRO LA CRUZ	1.34	164	*e*P	Pn	19 50 19.0	+1.7
ACLC				*e*S	Sn	19 50 39.0	+1.1
ACLC				IAML		19 50 40.3	
	comp=Z,604nm,0.3s						
CYA	Choya	1.43	103	*e*P	Pn	19 50 20.2	+2.2
CYA				*e*S	Sn	19 50 41.1	+1.9
CYA				IAML		19 50 42.0	
	comp=Z,418nm,0.4s						
AGUA	GUANDACOL	1.66	216	*e*P	Pn	19 50 22.8	+2.1
AC02	Maricunga	2.02	309		Pn	19 50 28.8	+3.4
AC02	Maricunga	2.02	309	*e*P	Pn	19 50 28.3	+3.0
AC02				*e*S	Sn	19 51 06.9	+15
APLL	PUNTA DE LOS L	2.37	162	*e*P	Pn	19 50 21.4	-7.8
FSA	Cafayete	2.37	32	*e*P	Pn	19 50 31.4	+2.0
ACDV	Cuesta del Vie	2.53	216	*e*P	Pn	19 50 33.6	+2.2
ACDV				IAML		19 51 11.8	
	comp=Z,198nm,0.4s						
GO03	Copiapo	2.58	281		Pn	19 50 33.8	+1.9
GO03	Copiapo	2.58	281	*e*P	Pn	19 50 34.0	+2.1
GO03				*e*S	Sn	19 51 04.9	+1.1
AROD	Rodeo	2.73	222	*e*P	Pn	19 50 36.3	+2.3
AC06	Mina Casimiro	2.74	286		Pn	19 50 35.7	+1.8
ACCO	Cerro Coronel	2.85	211	*e*P	Pn	19 50 42.0	+6.5
ACCO				*e*S	Sn	19 51 17.2	+6.8
CO01	Juntas del Tor	3.00	232		Pn	19 50 39.7	+2.4
CO01	Juntas del Tor	3.00	232	*e*P	Pn	19 50 39.4	+2.0
CO01				*e*S	Sn	19 51 17.2	+3.6
CO01				IAML		19 51 17.9	
	comp=Z,215nm,1.4s						
LCO	Las Campanas	3.04	253		Pn	19 50 39.3	+1.3
LCO	Las Campanas	3.04	253	*e*P	Pn	19 50 39.0	+1.0
LCO				*e*S	Sn	19 51 15.9	+1.2
DOCA	Reserva Natura	3.17	207	*e*P	Pn	19 50 40.8	+1.1
DOCA				*e*S	Sn	19 51 18.9	+1.1
DOCA				IAML		19 51 20.6	
	comp=Z,144nm,0.3s						
AC04	Llanos de Chal	3.26	268		Pn	19 50 41.3	+0.8
AC04	Llanos de Chal	3.26	268	*e*P	Pn	19 50 31.9	-8.6
AC04				*e*S	Sn	19 51 17.8	-1.4
AC04				IAML		19 51 19.4	
	comp=Z,208nm,0.8s						
RTLL	Cerro Villicun	3.32	196	*e*P	Pn	19 50 42.5	+1.1
RTLL				*e*S	Sn	19 51 21.3	+0.5
AC01	Pan de Azucar	3.48	304		Pn	19 50 45.1	+1.6
AC01	Pan de Azucar	3.48	304	*e*P	Pn	19 50 45.0	+1.6
AC01				*e*S	Sn	19 51 24.1	-0.4
SJA	San Juan	3.53	197	*e*S	Sn	19 51 26.9	+1.2
CFA	Coronel Fontan	3.54	192	P	Pn	19 50 44.8	+0.6
	comp=Z,32nm,0.3s,baz=338,slow=14,SNR=238						
CFA				S	Sn	19 51 24.4	-1.4
	comp=Z,74nm,0.3s,baz=22,slow=14,SNR=3.5						
CFA	Coronel Fontan	3.54	192	*e*P	Pn	19 50 45.0	+0.8
CFA				*e*S	Sn	19 51 25.8	-0.1
GO02	Mina Guanaco	3.56	326		Pn	19 50 47.4	+2.6
GO02	Mina Guanaco	3.56	326	*e*P	Pn	19 50 47.4	+2.6
GO02				*e*S	Sn	19 51 29.2	+2.5
ZON	Zonda	3.58	198		Pn	19 50 45.4	+0.6
ZON	Zonda	3.58	198	*e*P	Pn	19 50 45.8	+1.0
ZON				*e*S	Sn	19 51 27.4	+0.5
ZON				IAML		19 51 28.6	
	comp=Z,130nm,0.6s						
GO04	Tololo Observa	3.61	235		Pn	19 50 46.1	+0.8
GO04	Tololo Observa	3.61	235	*e*P	Pn	19 50 46.2	+0.9
GO04				*e*S	Sn	19 51 29.6	+1.7
CO05	La Serena	3.81	241		Pn	19 50 47.8	0.0
CO03	El Pedregal	3.94	226		Pn	19 50 50.1	+0.6
CO03	El Pedregal	3.94	226	*e*P	Pn	19 50 50.8	+1.2
CO03				*e*S	Sn	19 51 36.7	+1.2
CO03				IAML		19 51 39.2	
	comp=Z,193nm,0.2s						
CO02	Combarbal	4.39	225		Pn	19 50 55.3	-0.1
CO02	Combarbal	4.39	225	*e*P	Pn	19 50 55.6	+0.1
CO02				*e*S	Sn	19 51 46.6	+0.6
CO02				IAML		19 51 48.1	
	comp=Z,194nm,0.5s						
AZAP	Zapla	4.42	29	*e*P	Pn	19 50 59.0	+3.0
AZAP				IAML		19 52 22.1	
	comp=Z,52nm,1.3s						
PB14	IPOC Station P	4.42	322		Pn	19 50 58.2	+2.0
CO06	Fray Jorge	4.49	235		Pn	19 50 55.7	-1.0
VA03	San Esteban	5.36	210		Pn	19 51 09.0	+0.5
VA03	San Esteban	5.36	210	*e*P	Pn	19 51 08.9	+0.5
VA03				*e*S	Sn	19 52 10.4	+1.1
VA03				IAML		19 52 46.9	
	comp=Z,63nm,0.7s						
MT08	Bocatoma Ro	5.76	203		Pn	19 51 14.5	+0.6
PB05	IPOC Station P	5.84	334		Pn	19 51 15.7	+0.7
MT03	Universidad Ad	5.98	206		Pn	19 51 17.2	+0.5
MT02	Curacav	6.04	211		Pn	19 51 16.3	-1.1
MT13	San Alfonso	6.12	203		Pn	19 51 18.9	+0.3
LMEL	Las Melosas	6.19	202		Pn	19 51 19.8	+0.2
MT09	Talagante	6.42	208		Pn	19 51 21.4	-1.2
PB03	IPOC Station P	6.43	340		Pn	19 51 24.2	+1.3
BO04	La Punta	6.46	205		Pn	19 51 22.5	-0.6
PB09	IPOC Station P	6.53	345		Pn	19 51 25.8	+1.5
MT01	Popeta	6.60	209		Pn	19 51 23.2	-1.8
BO02	Sierra Bellavi	7.24	203		Pn	19 51 32.5	-1.2
GO01	Chusmiza	8.59	349		Pn	19 51 51.4	-0.8
PB11	IPOC Station P	8.59	346		Pn	19 51 51.4	-0.5
BI02	San Fabin de	9.12	200		Pn	19 51 56.6	-2.2
CPUP	Villa Florida	9.13	81	P	Pn	19 52 00.4	+1.5
	comp=Z,0.2nm,0.4s,baz=289,slow=18,SNR=2.1						
LPAZ	La Paz	11.81	356		Pn	19 52 35.9	+0.7
LPAZ	La Paz	11.81	356	P	Pn	19 52 36.4	+1.1
	comp=Z,1.6nm,0.4s,baz=198,slow=8.4,SNR=6.1						
LPAZ	La Paz	11.81	356	*e*P	Pn	19 52 37.0	+1.7
PLTB	Pedras Altas	12.48	110	Pn	Pn	19 52 41.1	-2.3
PLCA	Paso Flores	12.83	191	Pn	Pn	19 52 44.6	-3.3
PLCA	Paso Flores	12.83	191	P	Pn	19 52 46.9	-1.1
	comp=Z,0.7nm,0.7s,baz=26,slow=12,SNR=4.1						
AQDB	Aquidauana	13.10	57	*e*P	P	19 52 56.3	-0.2
SIV	San Ignacio	13.42	27	P	Pn	19 52 55.8	+0.2
	comp=Z,2.6nm,0.7s,baz=228,slow=9.3,SNR=5.3						
PTLB	Pontes e Lacer	14.76	33	P	P	19 53 13.0	-2.0
LL01	San Ignacio de	14.79	195	P	Pn	19 53 12.1	-0.5
LDASE	Londrina, Braz	15.39	76	*e*P	P	19 53 22.6	+0.5
PCMB	Pacaembu	16.00	70	*e*P	P	19 53 29.8	+1.0
ARAG	Araguaiana, MT	18.99	53	*e*P	Pn	19 54 01.9	-1.9
VAO	Valinhos	19.11	79	P	Pn	19 54 02.9	-2.4
VAO				IAmb	IAmb	19 54 04.3	
	comp=Z,26nm,1.1s						
PDRB	Porto dos Gac	19.23	33	*e*P	Pn	19 54 04.4	-2.2
BDFB	Brasilia	21.82	59	P	P	19 54 31.7	-0.4
	comp=Z,2.0nm,0.4s,baz=211,slow=6.9,SNR=4.2						
	comp=Z,2.0nm,0.4s						
SNDB	Serra Nova Dou	22.02	46	*e*P	P	19 54 33.2	-0.9
BOAV	Boa Vista	31.06	13	P	P	19 55 56.6	+0.9
BOAV				IAmb	IAmb	19 55 59.4	
	comp=Z,7.0nm,0.9s						
RUSC	La Rusia	34.27	350	P	P	19 56 24.8	+0.6
ESPZ	Base Esperanza	35.91	172	P	P	19 56 37.0	-0.2
ESPZ				IAmb	IAmb	19 56 59.0	
	comp=Z,19nm,1.5s						
BAUV	El Baul	36.87	359	P	P	19 56 45.4	-0.4
SNAA	Sanae	55.59	160	P	P	19 59 11.5	-0.1
SNAA	Sanae	55.59	160	P	P	19 59 12.4	+0.8
	comp=Z,0.8nm,0.6s,baz=268,slow=11,SNR=8.2						
	comp=Z,0.8nm,0.6s						
QSPA	South Pole Qui	62.09	180	P	P	19 59 57.8	+1.3
QSPA				IAmb	IAmb	19 59 58.5	
	comp=Z,3.5nm,0.7s						
QSPA				PcP	PcP	20 00 33.4	-2.2
QSPA	South Pole Qui	62.09	180	P	P	19 59 58.2	+1.6
	comp=Z,2.8nm,0.6s,baz=172,slow=4.3,SNR=32						
	comp=Z,2.8nm,0.6s						
DBIC	Dimbokro	69.48	70	P	P	20 00 44.8	+0.3
	comp=Z,10nm,1.1s,baz=230,slow=5.0,SNR=4.9						
	comp=Z,10nm,1.1s						
TORD	Torodi Ar. Bea	78.39	68	P	P	20 01 37.5	+1.1
TORD				IAmb	IAmb	20 01 38.6	
	comp=Z,6.2nm,0.7s						
TORD	Torodi Ar. Bea	78.39	68	P	P	20 01 38.0	+1.5
	comp=Z,5.7nm,0.6s,baz=274,slow=5.1,SNR=10						
	comp=Z,5.7nm,0.6s						
ASAR	Alice Springs	124.56	204	PKP	PKiKP	20 08 34.8	+0.2
	comp=Z,0.4nm,0.4s,baz=135,slow=1.9,SNR=7.4						
WRA	Warramunga Arr	127.79	206	PKP	PKiKP	20 08 41.3	+0.1
	comp=Z,0.5nm,0.6s,baz=170,slow=1.8,SNR=12						
WRA				pPKP	pPKPdf	20 09 16.2	-0.9
	comp=Z,0.3nm,0.9s,baz=160,slow=1.4,SNR=1.5						
KURBB	Kurchatov Arra	145.84	39	PKPbc	PKPab	20 09 13.5	-0.6
	comp=Z,0.1nm,0.6s,baz=299,slow=3.6,SNR=2.6						
KURBB				pPKPbc	pPKPab	20 09 52.0	+2.3
	comp=Z,1.0nm,0.7s,baz=299,slow=3.7,SNR=8.7						
ZALV	Zalesovo Beam	147.16	31	PKPbc	PKiKP	20 09 19.4	0.0
	comp=Z,0.4nm,0.3s,baz=333,slow=1.7,SNR=2.3						
ZALV				pPKPbc	pPKPab	20 09 53.4	-1.3
	comp=Z,1.1nm,0.7s,baz=302,slow=8.5,SNR=2.6						
MKAR	Makanchi Array	149.84	44	PKPbc	PKiKP	20 09 26.1	+0.9
	comp=Z,0.4nm,0.8s,baz=316,slow=3.3,SNR=4.0						
MKAR				PKPab	PKPab	20 09 32.4	+2.1
	comp=Z,0.6nm,0.7s,baz=294,slow=3.6,SNR=6.1						
MKAR				pPKPbc	pPKPab	20 10 03.2	-2.4
	comp=Z,0.6nm,0.7s,baz=303,slow=2.1,SNR=3.6						

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*DJA **11** 19:51:25.5±0.3, 8°S±4°×11°6E±°, h10^{km}, M3.7/11, mb4.0/1, MLv3.6/11*

*IDC **11** 19:51:26.1±2.0, 8°.19S×116°.81E, h0^{km}, mb3.1/3, mbtmp3.4/5, ML3.1/2, MS3.6/1, Error ellipse: s-maj=43.0km s-min=25.3km az=65.0*

ISC 11 19:51:25.3±0.8, **8°.21S**±0°.07×**116°.44E**±0°.04, **h10**^{km}, **n15**, σ**1^{s}85**/17, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRBI	Singaraja	1.22	276	P	Pb	19 51 47.5	-1.0
SRBI				S	Sn	19 52 05.5	+0.5
DNP	Denpasar	1.30	249	P	Pn	19 51 47.2	-2.3
PLAI	Plampang	1.46	115	P	Pb	19 51 52.5	0.0
PLAI				S	Sb	19 52 11.7	+0.7
JAGI	Jajag, Banyuwa	2.28	263	P	Pn	19 52 02.0	-1.0
KMMI	Kalianget	2.71	295	P	Pn	19 52 10.8	+1.9
GMJI	Gumukmas	2.97	269	P	Pn	19 52 12.4	-0.1
WBSI	Waikabubak, Su	3.24	116	P	Pn	19 52 16.5	+0.2
BSSI	Bau Bau, Buton	4.51	63	P	Pn	19 52 33.1	-0.6
KAPI	Kappang	4.57	46	Pn	Pn	19 52 33.8	-0.7
	1.2nm,0.3s,baz=221,slow=9.3,SNR=5.4						
KAPI				Sn	Sn	19 53 23.2	-4.5
	0.8nm,0.3s,baz=286,slow=22,SNR=1.6						
	3.2nm,0.2s						
EDFI	Ende, Flores	5.22	96	P	Pn	19 52 45.0	+1.5
FITZ	Fitzroy Crossi	13.29	139	Pn	Pn	19 54 33.6	-0.5
	0.1nm,0.3s,baz=319,slow=11,SNR=2.0						
FITZ				Sn	Sn	19 56 52.2	-10
	baz=20,slow=19,SNR=1.5						
	2.8nm,1.0s						
WRA	Warramunga Arr	20.89	126	P	P	19 56 06.9	-0.9
	0.8nm,0.9s,baz=300,slow=12,SNR=15						
	0.8nm,0.9s						
ASAR	Alice Springs	22.72	135	P	P	19 56 27.2	-0.4
	0.3nm,0.6s,baz=312,slow=8.9,SNR=6.8						
	0.3nm,0.6s						
JNU	Nakatsue	43.34	18	LR	LR	20 18 51.1	
	comp=Z,77nm,19.9s,baz=204,slow=38						
MKAR	Makanchi Array	62.63	334	P	P	20 01 53.3	+3.4
	0.1nm,0.5s,baz=138,slow=7.3,SNR=2.0						
	0.1nm,0.5s						

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*KOLA **11** 19:52:39.4, 67°.65N×34°.13E, h0^{km}, ML2.1, Error ellipse: s-maj=2.5km s-min=0.8km az=140.0, Khibiny, mines Koashva, Nyurkpakh*

*IDC **11** 19:52:43.3±2.8, 67°.62N×33°.32E, h0^{km}, mbtmp2.8/2, ML1.8/2, Error ellipse: s-maj=32.6km s-min=12.3km az=73.0*

*HEL **11** 19:52:52.5±0.2, 67°.53N×33°.96E, h0^{km}, ML2.0, Explosion*

ISC 11 19:52:38.0±1.0, **67°.57N**±0°.03×**34°.32E**±0°.04, **h0**^{km}, **n30**, σ**2^{s}39**/35, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APA	Apatity	0.35	270	S	Sg	19 52 48.5	-0.7
LVZ	Lovozero	0.35	21	P	Pg	19 52 44.5	-0.2
LVZ				S	Sg	19 52 49.4	+0.2
LVZ	Lovozero	0.35	21	PG	Pn	19 53 00.8	+10
APA0	Apatity Array	0.51	274	P	Pg	19 52 46.9	-0.8
APA0				S	Sg	19 52 52.8	-1.5
KVDA	Kovda	1.05	213	P	Pb	19 52 58.8	-0.2
KVDA				S	Sb	19 53 13.5	+0.2
TERR	Teriberka	1.66	10	P	Pn	19 53 07.5	-0.9
TERR				S	Sn	19 53 29.2	-1.2
VRF	Varrio	1.81	278	PG	Pg	19 53 23.0	+10
VRF				MSG		19 53 42.8	
	comp=Z,17nm,0.2s						
VRF				SN	Sg	19 53 45.8	+10
KU6	Riekki	2.34	230	PG	Pg	19 53 32.2	+9.3
	baz=50						
KU6				MSG		19 53 57.8	
	comp=Z,6.2nm,0.2s						
RAJF	Raja-Jooseppi	2.43	295	PB	Pg	19 53 32.4	+7.8
RAJF				SG	Sg	19 54 01.9	+5.8
MSF	Maaselka	2.68	234	PN	Pg	19 53 36.4	+7.2
MSF				SN	Sg	19 54 04.8	+0.9
KU1	Kurvinen	2.77	226	PB	Pg	19 53 39.7	+8.7
KU2	Taivalkoski	3.06	235	PB	Pg	19 53 44.5	+7.9
VADS	Vadso	3.13	327	P	Pn	19 53 26.4	-2.0
RANF	Ranua	3.37	246	PB	Pg	19 53 49.2	+6.8
RANF				SG	Sg	19 54 32.2	+6.3
KEV	Kevo	3.46	313	PN	Pg	19 53 46.1	+2.0
KEV				SN	Sb	19 54 24.0	+1.6
ARA0	ARCESS Array S	3.79	305	PN	Pg	19 53 49.2	-1.3
ARA0				SG	Sg	19 54 44.6	+5.1
ARCES	ARCESS Array B	3.79	305	Pn	Pn	19 53 37.0	-0.6
	comp=Z,0.1nm,0.3s,baz=121,slow=15,SNR=28						
ARCES				Pg	Pb	19 53 44.7	-1.0
	comp=Z,0.1nm,0.3s,baz=120,slow=16,SNR=3.9						
ARCES				Sn	Sn	19 54 20.0	-2.7
	comp=Z,0.3nm,0.3s,baz=112,slow=26,SNR=5.3						
ARCES				Lg	Lg	19 54 31.4	
	comp=Z,0.8nm,0.3s,baz=118,slow=29,SNR=4.1						
	comp=Z,1.3nm,0.7s						
ARCES	ARCESS Array B	3.79	305	P	Pn	19 53 36.7	-0.8
ARCES				S	Sn	19 54 22.1	-0.6
RMF	Romuvaara	3.82	210	PN	Pg	19 53 50.9	-0.2
KLF	Kolari	4.01	270	PN	Pg	19 53 52.3	-2.4
KLF				SB	Sg	19 54 46.9	+0.3
HEF	Hetta	4.10	287	PN	Pg	19 53 53.9	-2.5
OUL	Oulu	4.21	238	PN	Pg	19 53 56.8	-1.9
TOF	Tornio	4.22	254	PN	Pb	19 53 55.2	+2.2
PAJU	Pajala	4.38	268	PN	Pb	19 53 56.9	+1.2
PAJU				SN	Sb	19 54 48.5	-0.5
OBF4	Vikkela, Lumij	4.65	238	PN	Pg	19 54 03.3	-3.6
KALU	Kalix	4.68	254	PG	Pg	19 54 15.4	+7.9
LANU	Lannavaara	4.70	282	PN	Pb	19 54 03.4	+2.3
ERTU	Ertsjaerv	4.85	263	PN	Pb	19 54 04.3	+0.5
ERTU				SN	Sb	19 54 59.7	-2.9
I37NO	I37NO	6.01	292	I	I	20 28 29.3	
	baz=98,slow=329,SNR=6.7						
FINES	FINESS Array B	7.10	214	Pn	Pn	19 54 25.3	+2.4
	baz=8.9,slow=10,SNR=1.9						
FINES				Lg	Lg	19 56 18.2	
	comp=Z,0.2nm,0.3s,baz=29,slow=26,SNR=3.0						
	comp=Z,1.5nm,0.9s						

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*JMA **11** 20:48:06.7±0.3, 26°N±2°×12°4E±°, h167^{km}, MV2.9/26, NW OFF MIYAKOJIMA ISLAND*

ISC 11 20:48:04.3±1.9, **25°.9N**±0°.2×**124°.20E**±0°.09, **h183**^{km}±26^{km}, **n25**, σ**1^{s}53**/35, **Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JISG	Ishigakijimahi	1.33	175	P	Pn	20 48 35.7	+0.6
JISG				S	Sn	20 48 57.5	-1.4
JTJ	Tarama	1.35	160	P	Pn	20 48 36.3	+1.1
JTJ				S	Sn	20 48 58.5	-0.7
JIKM	Ikemajima	1.37	136	*e*P	Pn	20 48 36.9	+1.4
JIRB	Irabujima	1.40	141	P	Pn	20 48 36.7	+1.0
JIRB				S	Sn	20 48 59.4	-0.5
JIJ	Ishigaki jima	1.55	182	P	Pn	20 48 37.1	+0.1
JIJ				S	Sn	20 49 00.1	-2.3
JMJ2	Miyako jima3	1.56	139	P	Pn	20 48 38.8	+1.7
JMJ2				S	Sn	20 49 03.2	+0.6
JOGS	Gusukube	1.59	136	P	Pn	20 48 39.3	+1.8
JOGS				S	Sn	20 49 03.8	+0.7
IRIF	Iriomote-Funau	1.63	195	P	Pn	20 48 38.1	+0.3
JKRS	Kuro-shima	1.68	186	P	Pn	20 48 38.2	-0.1
JKRS				S	Sn	20 49 02.8	-1.9
YOJ	Yonaguni jima	1.80	217	P	Pn	20 48 40.4	+0.8
YOJ	Yonaguni jima	1.80	217	P	Pn	20 48 40.2	+0.6
JYNG	Yonagunijimaku	1.85	218	P	Pn	20 48 40.4	+0.3
HATJ	Hateruma jima	1.89	191	S	Sn	20 49 06.6	-1.9
JKE	Kume jima 2	2.37	80	*e*P	Pn	20 48 47.6	+1.9
JKE				*e*S	Sn	20 49 18.5	+0.7
JAGN	Aguni-jima	2.82	76	*e*S	Sn	20 49 27.2	0.0
YHNB	Yeheng	2.84	245	P	Pn	20 48 53.4	+2.1
NACB	Ninganchiao	2.93	234	P	Pn	20 48 52.8	+0.5
JJT3	Tamagusuku3	3.24	85	S	Sn	20 49 36.2	-0.1
JNTH	Nagotoyohara	3.49	79	S	Sn	20 49 39.7	-2.3
JIH	Iheya	3.56	71	S	Sn	20 49 42.0	-1.5
SSLB	Suanglung	3.63	235	P	Pn	20 49 01.9	+1.0
JOW	Kunigami	3.77	75	S	Sn	20 49 45.6	-2.7
JYRO	Yoronjima	3.97	73	P	Pn	20 49 05.9	+0.7
JYRO				S	Sn	20 49 49.9	-2.9
JOKE	Okinoerabujima	4.17	69	P	Pn	20 49 08.5	+0.8
JOKE				S	Sn	20 49 54.7	-2.7
TWGBT	Beinan	4.20	223	P	Pn	20 49 10.0	+1.9

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*NEIC **11** 20:58:39.4±2.1, 37°.777N±0°.006×121°.62W±0°.01, h5^{km}±1^{km}, Error ellipse: s-maj=1.6km s-min=1.4km az=74.0*

NCEDC 11 20:58:38.6±1.9, **37°.798N**±0°.005×**121°.61W**±0°.01, **h4**^{km}±1^{km}, **ML3.0**/90, **ML2.8**/86(NEIC), **Error ellipse: s-maj=1.2km s-min=0.8km az=108.0**, **Central California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBSNC	Byron Hot Spri	0.04	305		Pg	20 58 40.4	+0.9
CBSNC					Sg	20 58 41.9	+1.7
CBZL	Buffer Zone	0.14	220		Pg	20 58 42.8	+1.5
CBZL	Buffer Zone	0.14	220		Pg	20 58 42.7	+1.5
CSAM	Sandia	0.15	212		Pg	20 58 42.9	+1.5
CMOB	Morgan Territo	0.16	275		Pg	20 58 43.1	+1.4
CSTL	Corral Hollow	0.18	152		Pg	20 58 43.5	+1.5
WENL	Wente Vineyard	0.21	214		Pg	20 58 44.3	+1.6
CVLM	Vallecito	0.25	227		Pb	20 58 45.1	-0.6
BDM	Black Diamond	0.26	307		Pb	20 58 44.9	-0.9
CRPB	Russellman Par	0.27	296		Pg	20 58 44.8	+1.1
CMLM	Mount Lewis	0.32	186		Pb	20 58 45.9	-1.1
CMLM					Sb	20 58 51.7	-0.8
CNIC	Niles Canyon	0.34	236		Pb	20 58 46.8	-0.5
CNIC					Sb	20 58 53.2	+0.1
BGC	Bolinger Road	0.36	273		Pb	20 58 47.0	-0.6
BGC					Sb	20 58 54.0	+0.3
MTOS	Mt Oso, Westle	0.37	143		Pg	20 58 46.4	+0.7
CLCB	Lake Chabot	0.37	261		Pb	20 58 47.4	-0.3
CLCB					Sb	20 58 54.4	+0.5
CALM	Calaveras Res.	0.38	204		Pb	20 58 47.1	-0.8
CALM					Sb	20 58 53.9	-0.2
HMR	Hamilton Ranch	0.39	337		Pb	20 58 48.3	+0.3
HMR					Sb	20 58 56.3	+1.9
CTAM	Taylor	0.40	305		Pb	20 58 47.9	-0.3
SMCB	Saint Mary's C	0.40	276		Pb	20 58 47.7	-0.6
SMCB					Sb	20 58 54.9	+0.1
ARN	Arnold Ranch	0.45	173		Pb	20 58 48.4	-0.8
ARN					Sb	20 58 55.9	-0.4
CMCM	Mills College	0.45	268		Pb	20 58 49.4	+0.3
CYD1	Coyote D'meter	0.46	239		Pb	20 58 48.6	-0.6
CYD1					Sb	20 58 56.0	-0.2
MHC	Mount Hamilton	0.46	184		Pb	20 58 48.5	-0.8
JEPS	Jepson Natural	0.49	339		Pb	20 58 50.1	+0.3
JEPS					Sb	20 58 59.9	+2.5
CMPM	Mikes Peak	0.49	152		Pb	20 58 49.0	-0.9
CVPM	Vollmer Peak	0.50	280		Pb	20 58 49.5	-0.5
BKS	Berkeley--Byer	0.51	279		Pb	20 58 49.4	-0.7
VAK	Adit at Lawren	0.52	279		Pb	20 58 49.5	-0.7
CPIM	Pinole Ridge	0.52	292		Pb	20 58 49.8	-0.5
BL67	Building 67, L	0.52	279		Pb	20 58 49.6	-0.7
BL88	Building 88, L	0.52	279		Pb	20 58 49.6	-0.8
CCOB	Coe Ranch Numb	0.54	186		Pb	20 58 50.1	-0.5
SCCB	Santa Clara Co	0.55	202		Pb	20 58 50.6	-0.2
CSPM	San Pablo Ridg	0.58	286		Pb	20 58 51.0	-0.4
JSFB	Stanford Teles	0.60	229		Pb	20 58 51.4	-0.2
JSJM	St Joseph	0.60	220		Pb	20 58 51.8	+0.1
CADM	Anderson Res.	0.63	181		Pb	20 58 52.3	+0.1
JFP	Foothills Park	0.64	227		Pb	20 58 51.9	-0.4
JFP					Sb	20 59 02.0	+0.4
PINL	Point Pinole R	0.64	290		Pb	20 58 51.9	-0.4
JRSC	Jasper Ridge	0.64	232		Pb	20 58 51.7	-0.6
JSBM	San Bruno Moun	0.64	260		Pb	20 58 51.7	-0.6
JBMM	Black Mountain	0.65	222		Pb	20 58 52.1	-0.4
JLAB	Laurel Hill	0.65	189		Pb	20 58 52.6	+0.1
CPMM	Point Molate	0.65	284		Pg	20 58 51.7	+0.6
JJOM	Saint Joseph's	0.66	207		Pb	20 58 52.7	0.0
JCHM	Cahill Ridge	0.67	246		Pb	20 58 52.5	-0.4
SAC	San Andreas	0.68	252		Pb	20 58 52.4	-0.6
JPRM	Presidio of Sa	0.69	270		Pb	20 58 52.6	-0.5
JMGM	Milagra Ridge	0.71	257		Pg	20 58 52.6	+0.5
GHS	Gilroy Hot Spr	0.71	170		Pb	20 58 53.1	-0.5
NADM	Allendale	0.72	337		Pb	20 58 53.8	0.0
BGH	Bear Gulch	0.74	232		Pb	20 58 53.9	-0.2
SCKWR	San Luis Creek	0.75	145		Pb	20 58 53.5	-0.6
HLPM	Lions Peak	0.76	182		Pb	20 58 54.6	+0.3
RUSS	Russell Ranch	0.77	345		Pb	20 58 54.5	-0.2
HPCM	Pacheco Lake	0.78	160		Pb	20 58 54.7	-0.1
SLD	San Luis Dam	0.78	157		Pb	20 58 54.8	0.0
SLD					Sb	20 59 07.1	+1.3
QRDG	Quail Ridge Na	0.80	328		Pb	20 58 54.6	-0.6
PACP	Pacheco Peak	0.83	162		Pb	20 58 55.6	0.0
HFEM	San Felipe	0.83	169		Pb	20 58 55.5	-0.1
JPSM		0.84	225		Pb	20 58 55.8	0.0
HCBM	Chamberlain	0.87	183		Pb	20 58 56.1	-0.1
CVS	Carmenet Viney	0.87	309		Pg	20 58 55.0	-0.2
CVS	Carmenet Viney	0.87	309	IAML		20 59 10.0	
	comp=E,276nm,0.8s						
OAKV	Oakville Exper	0.90	315		Pg	20 58 55.5	-0.2
HCOM	Corn Cob Canyo	0.91	185		Pg	20 58 56.2	+0.2
WELL	Weller Preserv	0.94	47		Pg	20 58 55.7	-1.0
HTUM	Tustin Road	0.97	182		Pg	20 58 57.3	+0.2
HSFM	Saint Francis	0.99	175		Pb	20 58 58.3	0.0
CMB	Columbia Colle	0.99	76		Pg	20 58 56.3	-1.3
CMB				IAML		20 59 10.8	
	comp=N,299nm,0.7s						
NTYM	Taylor	1.02	306		Pg	20 58 57.7	-0.5
MYLM	Yosemite Lake	1.03	113		Pg	20 58 57.2	-1.1
SAO	San Andreas Ge	1.04	173		Pg	20 58 57.5	-1.0
FRP	Fremont Peak	1.05	175		Pg	20 58 58.1	-0.5
MCCM	Marconi Confer	1.06	289		Pg	20 58 57.5	-1.5
MCCM				IAML		20 59 15.1	
	comp=N,211nm,0.8s						

MCCM				IAML		20 59 15.4	
	comp=E,174nm,0.7s						
FARB	Farallon Islan	1.11	265		Pg	20 58 59.2	-0.7
FARB	Farallon Islan	1.11	265	IAML		20 59 15.3	
	comp=E,164nm,0.4s						
FARB				IAML		20 59 15.5	
	comp=N,200nm,0.4s						
BSRM	Salinas Radio	1.13	176		Pg	20 58 59.3	-1.0
BUCR	Buckhorn Ranch	1.16	96		Pg	20 58 59.0	-1.8
NHSM	Mount Saint He	1.17	317		Pg	20 58 59.6	-1.4
BJOM	Mount Johnson	1.19	169		Pg	20 59 00.7	-0.7
NMTM	Middletown	1.20	327		Pg	20 59 00.6	-1.0
SCZ	Santa Cruz	1.21	172		Pg	20 59 00.1	-1.6
HMOM	Monterey	1.22	192		Pg	20 59 00.8	-1.2
AFDM	Forest Hills D	1.25	23		Pg	20 59 00.0	-2.5
AFDM				IAML		20 59 19.6	
	comp=N,221nm,0.4s						
AFDM				IAML		20 59 20.2	
	comp=E,300nm,0.6s						
BJCM	Johnson Can.	1.26	172		Pg	20 59 00.4	-2.3
MNRC	McLaughlin Min	1.26	329		Pg	20 59 01.8	-1.0
MNRC	McLaughlin Min	1.26	329	IAML		20 59 47.4	
	comp=E,108nm,1.0s						
LEGD	La Grand CA	1.30	116		Pg	20 59 00.7	-2.7
BBGB	Big Mountain B	1.30	159		Pg	20 59 01.8	-1.6
BMSM	Mercy Hot Spri	1.31	150		Pg	20 59 02.0	-1.6
GGPM	Geyser Peak	1.37	315		Pn	20 59 02.0	-2.6
GDXM	Geysers	1.38	318		Pn	20 59 02.2	-2.5
BPRM	Ponciano Ridge	1.39	184		Pn	20 59 03.3	-1.6
BSGM	Shirttail Gulc	1.41	168		Pn	20 59 03.7	-1.3
BSMM	Soledad Missio	1.42	174		Pn	20 59 03.8	-1.5
LRV	Little Rabbit	1.45	161		Pn	20 59 04.7	-1.0
SFRE	Sierra Foothil	1.47	9		Pn	20 59 03.7	-2.2
MHDM	Hidden Dam	1.52	116		Pn	20 59 04.7	-1.9
MMIM	Miami Mountain	1.53	104		Pn	20 59 05.1	-1.7
GHGM	Hogback Ridge	1.64	325		Pn	20 59 06.2	-2.1
HOPS	Hopland Field	1.66	316		Pn	20 59 07.2	-1.3
PMPB	Monarch Peak	1.71	158		Pn	20 59 07.9	-1.3
PMPB				IAML		20 59 42.3	
	comp=E,142nm,0.8s						
PMPB				IAML		20 59 48.0	
	comp=N,137nm,1.4s						
ORV	Oroville	1.76	3		Pn	20 59 08.5	-1.3
ORV				IAML		20 59 47.1	
	comp=E,109nm,0.8s						
WAKR	Walker	1.85	67		Pn	20 59 11.5	+0.2
WAKR				IAML		20 59 37.2	
	comp=N,153nm,0.7s						
MPK	Martis Peak	1.94	39		Pn	20 59 11.2	-1.4
PNTR	Pine Nut	2.04	50		Pn	20 59 11.8	-2.1
BEKR	Beckworth	2.28	25		Pn	20 59 14.9	-2.3
BEKR				IAML		20 59 55.9	
	comp=N,57nm,0.8s						
KCPM	Cahto Peak	2.44	321	Pn	Pn	20 59 17.6	-1.7
LHV	Little Huntoon	2.49	79		Pn	20 59 19.7	-0.2
O02D	Mt. Diablo Mer	2.55	339		Pn	20 59 20.1	-0.7
RYN	Ryan	2.57	70		Pn	20 59 19.7	-1.4
RYN				IAML		21 00 03.0	
	comp=N,55nm,0.4s						
RYN				IAML		21 00 14.7	
	comp=E,60nm,0.6s						
PAHR	Pah Rah Range	2.58	42		Pn	20 59 19.6	-1.7
PAHR				IAML		21 00 03.1	
	comp=E,49nm,0.8s						
PAHR				IAML		21 00 14.4	
	comp=N,35nm,1.1s						
NVAR	Mina Array Bea	2.68	75		Pn	20 59 21.3	-1.5
NV11	Mina Array Sit	2.79	76		Pn	20 59 23.2	-1.1
NV11				IAML		21 00 17.9	
	comp=N,38nm,1.6s						
NV11				IAML		21 00 18.1	
	comp=E,26nm,1.2s						
DSP	Deep Springs	2.92	97		Pn	20 59 24.8	-1.0
DSP				IAML		21 00 16.3	
	comp=E,23nm,0.9s						
DSP				IAML		21 00 20.8	
	comp=N,24nm,0.9s						
KMRM	Mail Ridge	2.92	327	Pn	Pn	20 59 25.8	-0.1
KMRM				IAML		21 01 17.8	
	comp=N,21nm,3.3s						
HATC	Hat Creek Radi	3.02	2		Pn	20 59 24.6	-2.6
MZP	Montezuma Peak	3.35	90		Pn	20 59 29.8	-2.2
BCW	Bitter Crk WRg	3.36	148		Pn	20 59 30.8	-1.1
BCW				IAML		21 00 42.2	
	comp=N,38nm,0.6s						
BCW				IAML		21 00 58.1	
	comp=E,31nm,1.1s						
GRAC	Grapevine Rang	3.47	102		Pn	20 59 30.5	-2.9
GRAC				IAML		21 00 36.1	
	comp=N,36nm,0.9s						
TPH	Tonopah	3.48	84		Pn	20 59 32.5	-1.1
GMN	Gold Mountain	3.49	97		Pn	20 59 32.0	-1.8
GMN				IAML		21 00 41.7	
	comp=N,21nm,0.7s						
GMN				IAML		21 00 50.4	
	comp=E,14nm,1.1s						
KRMB	Red Mountain	4.12	335	Pn	Pn	20 59 40.6	-1.9
KRMB				IAML		21 00 58.3	
	comp=E,14nm,2.5s						
KRMB				IAML		21 02 16.1	
	comp=N,14nm,3.3s						
GWY	Greenwater Val	4.27	111		Pn	20 59 42.2	-2.3
GWY				IAML		21 00 59.3	
	comp=N,13nm,0.6s						
GWY				IAML		21 01 17.3	
	comp=E,12nm,1.0s						
TPNV	Topopah Spring	4.35	100		Pn	20 59 42.9	-2.7
TPNV				IAML		21 01 09.6	
	comp=E,15nm,0.9s						
KSXB	Camp Six Broad	4.39	337	Pn	Pn	20 59 44.5	-1.6
KSXB				IAML		21 01 04.9	
	comp=E,12nm,2.2s						
KSXB				IAML		21 02 06.2	
	comp=N,11nm,3.3s						
R11B	Troy Canyon, C	4.78	82		Pn	20 59 51.1	-0.5
R11B				IAML		21 01 20.5	
	comp=N,6.2nm,1.6s						
WVOR	Wild Horse Val	5.16	25	Pn	Pn	20 59 54.7	-2.0
WVOR				IAML		21 01 52.2	
	comp=N,4.4nm,1.4s						
WVOR				IAML		21 02 01.4	
	comp=N,5.0nm,2.5s						
J05D	Fort Rock, OR	5.49	3		Pn	20 59 58.3	-3.0

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*IDC **11** 21:03:24.8±0.9, 12°.15N×123°.62E, h0^{km}, mb3.7/8, mbtmp3.8/9, MS3.5/20, Error ellipse: s-maj=35.1km s-min=15.7km az=64.0*

*NEIC **11** 21:03:25.3±2.4, 12°.31N±0°.08×123°.91E±0°.04, h10^{km}±2^{km}, mb4.6/9, Error ellipse: s-maj=14.4km s-min=5.8km az=166.0*

ISC 11 21:03:26.0±0.8**, 12°.23N**±0°.10×**123°.8E**±0°.1**, h13**^{km}**, n40, σ1^{s}.34**/23**, mb4.0**/13**, MS3.6**/17**, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	3.35	304	Pn	Pn	21 04 17.4	-0.8
	127nm,0.3s,baz=173,slow=8.1,SNR=0.9						
TGY				Sn	Sn	21 04 59.7	+1.7
	baz=207,slow=8.8						
TGY				LR	LR	21 05 52.3	
	comp=Z,314nm,20.1s,baz=130,slow=45						
MYLDM	Lahad Datu	8.75	217	Pn	Pn	21 05 34.1	+1.7
JOW	Kunigami	15.12	15	LR	LR	21 13 15.1	
	comp=Z,76nm,18.8s,baz=132,slow=39						
KAPI	Kappang	17.60	193	LR	LR	21 15 59.5	
	comp=Z,92nm,18.4s,baz=22,slow=43						
GUMO	Guam	20.58	84	LR	LR	21 14 44.4	
	comp=Z,33nm,21.7s,baz=112,slow=33						
CMAR	Chiang Mai Arr	24.75	288	P	P	21 08 45.4	-2.2
CMAR	Chiang Mai Arr	24.75	288	P	P	21 08 46.3	-1.3
	0.9nm,0.8s,baz=110,slow=7.8,SNR=4.9						
CMAR				LR	LR	21 19 16.4	
	comp=Z,23nm,18.2s,baz=125,slow=39						
	0.9nm,0.8s						
KSRS	Korea Array	25.38	8	P	P	21 08 54.8	+1.7
	0.7nm,0.5s,baz=190,slow=12,SNR=5.0						
	0.7nm,0.5s						
PSI	Prapat	26.36	251	LR	LR	21 20 05.2	
	comp=Z,174nm,18.3s,baz=77,slow=38						
MJAR	Matsushiro Arr	27.46	26	LR	LR	21 20 16.8	
	comp=Z,31nm,18.4s,baz=214,slow=37						
USRK	Ussuriysk Ar.	32.62	11	P	P	21 09 58.8	+1.3
	1.4nm,0.8s,baz=193,slow=9.0,SNR=1.5						
	1.4nm,0.8s						
WB0	Warramunga Arr	33.47	162	P	P	21 10 03.1	-2.0
WB0				IAmb	IAmb	21 10 10.5	
	comp=Z,6.5nm,1.1s						
WRA	Warramunga Arr	33.61	162	P	P	21 10 06.5	+0.1
	comp=Z,0.5nm,0.7s,baz=343,slow=9.4,SNR=6.1						
	comp=Z,0.5nm,0.7s						
AS31	Alice Springs	37.02	165	P	P	21 10 33.9	-1.8
ASAR	Alice Springs	37.02	165	P	P	21 10 33.3	-2.5
ASAR	Alice Springs	37.02	165	P	P	21 10 36.0	+0.3
	comp=Z,1.3nm,0.7s,baz=344,slow=7.5,SNR=14						
	comp=Z,1.3nm,0.7s						
SONM	Songino Array	38.37	341	LR	LR	21 28 24.2	
	comp=Z,93nm,18.3s,baz=112,slow=39						
NWAO	Narrogin (SRO)	45.34	188	P	P	21 11 43.7	-0.3
STKA	Stephens Creek	47.06	159	P	P	21 11 59.0	+1.4
	comp=Z,2.0nm,0.6s,baz=0.0,slow=7.1,SNR=3.4						
	comp=Z,2.0nm,0.6s						
MKAR	Makanchi Array	49.01	323	P	P	21 12 12.5	-0.1
MKAR	Makanchi Array	49.01	323	P	P	21 12 12.9	+0.3
	comp=Z,0.7nm,0.8s,baz=123,slow=8.8,SNR=9.3						
	comp=Z,0.7nm,0.8s						
ZALV	Zalesovo Beam	51.76	332	LR	LR	21 36 43.4	
	comp=Z,37nm,18.6s,baz=98,slow=39						
KURK	Kurchatov	53.09	326	P	P	21 12 42.5	-0.7
KURBB	Kurchatov Arra	53.09	326	P	P	21 12 43.9	+0.7
	comp=Z,0.8nm,0.8s,baz=122,slow=7.6,SNR=7.2						
	comp=Z,0.8nm,0.8s						
GAR	Garm	54.18	309	P	P	21 12 50.6	-1.0
GAR				IAmb	IAmb	21 12 53.8	
	comp=Z,7.6nm,1.0s						
KBL	Kabul	54.24	304	P	P	21 12 51.1	-1.0
KBL				IAmb	IAmb	21 13 02.3	
	comp=Z,2.9nm,0.7s						
HRA	Herat	59.78	303	P	P	21 13 31.4	0.0
AKTO	Aktyubinsk	65.28	320	LR	LR	21 44 08.5	
	comp=Z,60nm,21.1s,baz=242,slow=38						
ARTI	Arti	66.35	326	LR	LR	21 42 55.5	
	comp=Z,34nm,20.9s,baz=85,slow=36						
KIRV	Kirov	71.51	328	LR	LR	21 48 15.5	
	comp=Z,43nm,19.6s,baz=97,slow=38						
BELG	Belogornoye	71.97	321	LR	LR	21 46 44.5	
	comp=Z,25nm,21.4s,baz=64,slow=36						
OBN	Obninsk	78.50	324	LR	LR	21 53 17.9	
	comp=Z,100nm,20.6s,baz=246,slow=38						
AKASG	Malin Array Be	83.52	320	LR	LR	21 56 32.0	
	comp=Z,24nm,19.2s,baz=53,slow=38						
BURAR	Bucovina Array	86.77	318	P	P	21 16 09.8	-0.5
BURAR				IAmb	IAmb	21 16 12.1	
	comp=Z,3.4nm,0.8s						
BUR08	Bucovina Ar. S	86.78	318		P	21 16 10.2	-0.1
BUR08				IAmb	IAmb	21 16 11.8	
	comp=Z,3.4nm,0.8s						
MLR	Muntele Rosu	86.81	316	LR	LR	22 00 26.1	
	comp=Z,46nm,18.2s,baz=74,slow=39						
HFS	Hagfors	89.19	332	LR	LR	21 57 40.4	
	comp=Z,30nm,18.6s,baz=10.0,slow=36						
NOA	NORSAR Array B	89.93	333	LR	LR	21 59 52.6	
	comp=Z,30nm,20.6s,baz=75,slow=38						
VRAC	Vranov	91.73	321	LR	LR	21 58 28.3	
	comp=Z,21nm,19.4s,baz=333,slow=36						
BORG	Borgarnes	98.85	346	LR	LR	22 05 55.4	
	comp=Z,24nm,18.1s,baz=342,slow=38						

AUST 11 21:07:51.5±0.5**, 30°S**±3°×**11°8E**±°**, h10**^{km}**, mb4.4**/1**, ML2.5**/3**, Error ellipse: s-maj=7.3km s-min=5.5km az=52.8, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLDU	Ballidu	0.90	256	P	Pb	21 08 09.1	-0.2
BLDU	Ballidu	0.90	256	S	Sg	21 08 20.6	+0.1
KLBR	Kellerberrin	1.19	179	P	Pb	21 08 14.2	0.0
KLBR	Kellerberrin	1.19	179	S	Sb	21 08 29.3	-0.4
MORW	Morawa	1.97	312	P	Pn	21 08 25.9	+0.9
MORW	Morawa	1.97	312	S	Sn	21 08 50.1	+0.3
MUN	Mundaring	2.04	219	P	Pn	21 08 26.9	+1.0
MUN	Mundaring	2.04	219	S	Sn	21 08 52.1	+0.6
NWAO	Narrogin (SRO)	2.56	189	P	Pn	21 08 33.3	+0.2
NWAO	Narrogin (SRO)	2.56	189	S	Sn	21 09 02.9	-1.3
MEEK	Meekatharra	3.83	12	P	Pn	21 08 51.5	+0.9
MEEK	Meekatharra	3.83	12	S	Sn	21 09 33.5	-2.2
FORT	Forrest	8.92	95	P	Pn	21 09 59.5	-1.1
	comp=Z,45nm,2.3s,comp=Z,0.2nm						
FORT				S	Sn	21 11 34.2	-6.9

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*ISK **11** 21:10:46.1, 39°.93N×33°.04E, h8^{km}, ML2.8/13*

*AFAD **11** 21:10:46.5, 39°.89N×33°.04E, h7^{km}±4^{km}, ML2.6*

ISC 11 21:10:46.5±0.9**, 39°.90N**±0°.02×**33°.05E**±0°.02**, h11**^{km}±7^{km}**, n34, σ0^{s}.47**/57**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANTO	Ankara	0.20	260	Pg	Pg	21 10 50.6	-0.2
ANTO				Sg	Sg	21 10 53.9	+0.1
LOD	Lodumlu	0.22	266	Pg	Pg	21 10 51.1	-0.1
LOD				Sg	Sg	21 10 54.6	+0.2
BBAL	Bala	0.37	171	P	Pg	21 10 54.1	+0.3
BBAL				S	Sg	21 10 58.8	+0.1
GOKD	Ankara-Kalecik	0.37	63	P	Pb	21 10 54.6	-0.4
GOKD				S	Sb	21 10 59.9	-0.9
GOKD				*i* IAML		21 11 01.0	
	comp=N,793nm,0.5s						
GOKD				*i* IAML		21 11 01.0	
	comp=E,1µm,0.2s						
AFSR	Afar-Bala (An	0.46	178	Pg	Pg	21 10 55.8	+0.3
AFSR				Sg	Sb	21 11 03.1	-0.3
BR131	Keskin Array S	0.49	111	Pg	Pg	21 10 56.3	+0.2
BR131				Sg	Sb	21 11 03.8	-0.5
KESK	Krkkale-Ke	0.49	123	P	Pg	21 10 56.6	+0.5
KESK				S	Sg	21 11 03.0	+0.4
KESK				*i* IAML		21 11 04.0	
	comp=N,386nm,0.3s						
ELDT	Eldivan	0.65	26	P	Pb	21 10 59.7	-0.3
ELDT				S	Sg	21 11 08.2	+0.4
ELDT				*i* IAML		21 11 10.0	
	comp=E,471nm,0.4s						
ELDT				*i* IAML		21 11 11.0	
	comp=N,331nm,0.3s						
DELI	KIRIKKALE	0.68	82	P	Pg	21 10 59.9	+0.3
DELI				S	Sg	21 11 07.5	-1.0
CMDR	Camlidere-ANKA	0.74	323	P	Pb	21 11 01.4	0.0
CMDR				S	Sg	21 11 10.7	+0.3
CMDR				*i* IAML		21 11 14.0	
	comp=N,358nm,0.6s						
KAMT	Kaman	0.74	136	Pg	Pg	21 11 00.9	+0.1
CANT	Cankiri	0.82	32	Pg	Pg	21 11 02.5	+0.1
AKPI	Kirsehir/Akpin	0.83	118	P	Pg	21 11 02.7	+0.1
AKPI				S	Sg	21 11 13.3	-0.1
KULU	Kulu	0.86	182	Pg	Pb	21 11 03.4	-0.1
KULU				Sg	Sn	21 11 16.9	-0.3
SUNG	orum-Sungurl	0.96	72	P	Pb	21 11 05.6	+0.4
SUNG				S	Sn	21 11 21.1	+1.4
SUNG				*i* IAML		21 11 23.0	
	comp=N,136nm,0.3s						
SUNG				*i* IAML		21 11 24.0	
	comp=E,202nm,0.4s						
YENC	ankr-Yen	0.98	38	P	Pb	21 11 05.9	+0.3
YENC				S	Sg	21 11 18.5	+0.2
YENC				*i* IAML		21 11 22.0	
	comp=E,303nm,0.4s						
YENC				*i* IAML		21 11 22.0	
	comp=N,217nm,0.5s						
DERS	Karabk-Eskip	1.02	338	P	Pn	21 11 06.7	-0.1
DERS				S	Sn	21 11 21.4	+0.2
DERS				*i* IAML		21 11 25.0	
	comp=N,156nm,0.4s						
DERS				*i* IAML		21 11 25.0	
	comp=E,245nm,0.3s						
KIRS	Kirsehir-Merke	1.02	139	P	Pg	21 11 05.6	-0.5
KIRS				S	Sg	21 11 18.2	-1.2
KIRS				*i* IAML		21 11 20.0	
	comp=N,143nm,0.5s						
KIRS				*i* IAML		21 11 23.0	
	comp=E,159nm,0.4s						
SERE	Sereflikochisa	1.04	157	Pg	Pb	21 11 06.8	+0.3
CDAG	Cicekdag	1.06	105	P	Pg	21 11 06.5	-0.3
CDAG				S	Sg	21 11 20.6	0.0
CDAG				*i* IAML		21 11 27.0	
	comp=E,90nm,0.3s						
YUVA	Yuva-Kibriscik	1.15	295	Pn	Pb	21 11 08.4	-0.1
BCAM	Yenicaga	1.18	321	P	Pn	21 11 09.5	+0.5
BCAM				S	Sn	21 11 25.1	0.0
BCAM				*i* IAML		21 11 29.0	
	comp=E,100nm,0.5s						
BCAM				*i* IAML		21 11 29.0	
	comp=N,96nm,0.3s						
CORM	Corum	1.24	77	Pn	Pg	21 11 10.4	0.0
ILGA	Ilgaz	1.25	24	P	Pg	21 11 10.3	-0.3
ILGA				S	Sg	21 11 26.2	-0.8
SVRH	Sivrihisar-ESK	1.26	249	Pn	Pn	21 11 10.3	+0.2
CHBY	Cihanbeyli	1.33	185	Pn	Pn	21 11 11.3	+0.3
YOZG	Bozok Univ. Me	1.35	95	P	Pb	21 11 12.1	+0.3
YOZG				S	Sb	21 11 28.8	-0.4
YOZG				*i* IAML		21 11 33.0	
	comp=N,70nm,0.7s						
MCUR	KIREHR	1.36	123	P	Pg	21 11 12.4	-0.2
MCUR				S	Sb	21 11 29.1	-0.4
MCUR				*i* IAML		21 11 33.0	
	comp=E,132nm,0.8s						
MCUR				*i* IAML		21 11 34.0	
	comp=N,103nm,0.4s						
COAL	Corum-Alaca	1.53	76	P	Pg	21 11 15.5	-0.3
COAL				S	Sn	21 11 34.4	+0.8
COAL				*i* IAML		21 11 46.0	
	comp=E,47nm,0.6s						
KOZK	Kozakli-Nevseh	1.57	116	Pn	Pb	21 11 15.4	-0.1
AYAZ	Ayas K¶y, M	1.58	60	P	Pb	21 11 16.1	+0.2
AYAZ				S	Sg	21 11 37.0	-0.5
AYAZ				*i* IAML		21 11 40.0	
	comp=N,45nm,0.6s						
AYAZ				*i* IAML		21 11 41.0	
	comp=E,57nm,0.4s						
CIFT	Cifteler, Eski	1.63	251	Pn	Pn	21 11 15.9	+0.8
SULT	Sultanhani-AKS	1.74	168	Pn	Pb	21 11 18.2	-0.3
LADK	Ladik-KONYA	1.78	198	Pn	Pb	21 11 18.7	-0.5

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*IDC **11** 21:25:40.5±2.1, 1°.27S×77°.71W, h174^{km}±20^{km}, mb3.7/10, mbtmp4.3/14, MS2.9/1, Error ellipse: s-maj=22.1km s-min=12.2km az=65.0*

*IGQ **11** 21:25:41.4±0.6, 1°S±3°×7°8W±°, h184^{km}±4^{km}, MLv3.6/34*

*VAO **11** 21:25:41.6±0.6, 1°.29S×77°.58W, h161^{km}±8^{km}, mb4.3*

*NEIC **11** 21:25:41.7±1.7, 1°.36S±0°.06×77°.74W±0°.06, h172^{km}±6^{km}, mb4.4/35, Error ellipse: s-maj=9.7km s-min=6.9km az=142.0*

ISC 11 21:25:41.5±0.6**, 1°.33S**±0°.05×**77°.86W**±0°.05**, h184**^{km}±5^{km}**, n197, σ1^{s}.14**/203**, mb4.2**/25**, 13C-36D, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APUY	Puyo	0.18	228	S	Sn	21 26 25.3	+0.4
APUY				⇓P	Pn	21 26 05.8	-0.3
PUYO	Puyo, Santa Ro	0.23	226	S	Sn	21 26 25.4	+0.4
PUYO				⇓P	Pn	21 26 05.9	-0.2
ARDO	Archidona, Ten	0.34	10	S	Sn	21 26 24.0	-1.6
ARDO				⇓P	Pn	21 26 05.5	-0.8
BULB	Ulba Tungurahu	0.56	259	⇑P	Pn	21 26 07.1	-0.4
PIS1	Pisayambo	0.59	297	P	Pn	21 26 07.7	-0.1
BPAT	Tungurahua Vol	0.60	254	S	Sn	21 26 29.9	+1.9
BPAT				⇑P	Pn	21 26 07.5	-0.3
POND	Pondoa	0.60	262	S	Sn	21 26 28.5	+0.8
POND				⇑P	Pn	21 26 07.3	-0.4
JUI6	Juive	0.62	262	⇑P	Pn	21 26 07.2	-0.4
ARRY	Arrayan	0.62	254	⇑P	Pn	21 26 07.2	-0.5
BBIL	Ulba Tungurahu	0.64	260	⇑P	Pn	21 26 07.5	-0.3
BMAS	Trigal station	0.64	255	⇑P	Pn	21 26 05.4	-2.4
VCES	Cotopaxi	0.75	315	⇓P	Pn	21 26 08.5	-0.1
AAM2	Ambato 2 (Merc	0.76	275	P	Pn	21 26 08.8	+0.4
ASLC	Ecuador-Salced	0.79	292	P	Pn	21 26 08.3	-0.3
IGUA	Igualata	0.80	259	P	Pn	21 26 08.6	-0.4
TAMB	Tambo	0.81	321	P	Pn	21 26 08.7	-0.3
BRRN	Barrancas-Volc	0.82	312	⇓P	Pn	21 26 08.8	-0.3
BMOR	Cotopaxi Volca	0.85	315	⇓P	Pn	21 26 09.1	-0.2
BTAM	Cotopaxi Volca	0.85	321	⇓P	Pn	21 26 09.0	-0.3
BVC2	Cotopaxi Volca	0.87	321	⇓P	Pn	21 26 09.3	-0.2
ANTM	Antisana-La Mi	0.87	335	⇓P	Pn	21 26 09.0	-0.4
SLOR	San Lorenzo -	0.88	313		Pn	21 26 09.2	-0.2
SLOR				Sn	Sn	21 26 29.1	-1.7
SLOR	San Lorenzo -	0.88	313	⇓P	Pn	21 26 09.2	-0.2
VC1	Cotopaxi 1	0.88	322	P	Pn	21 26 09.5	+0.1
BREF	Cotopaxi Volca	0.88	319	⇓P	Pn	21 26 09.6	0.0
ANTS	Antisana-Sarah	0.89	339	⇓P	Pn	21 26 09.3	-0.3
ARIO	Riobamba	0.90	249	P	Pn	21 26 09.0	-0.4
ANTG	Antisana-Guama	0.92	334	⇓P	Pn	21 26 09.4	-0.4
SRAM	San Ramn-Vol	0.92	309	⇓P	Pn	21 26 09.5	0.0
PORT	Chimborazo Vol	0.92	262	⇑P	Pn	21 26 10.0	+0.2
ANTI	Antisana	0.93	341	⇓P	Pn	21 26 09.5	-0.4
SUCR	Mariscal Sucre	0.94	317	P	Pn	21 26 10.1	+0.3
TAMH	Tambohuasha Ch	0.94	257	⇑P	Pn	21 26 09.9	+0.1
PITA	Cotopaxi Volc	0.96	323	⇓P	Pn	21 26 09.7	-0.2
TOMA	Boca Toma-Volc	1.01	325	⇓P	Pn	21 26 10.2	-0.1
CHSH	Refugio Sur-Vo	1.02	261	⇑P	Pn	21 26 10.2	-0.3
ILLI	Illinizas Sur	1.06	305	⇓P	Pn	21 26 10.4	-0.3
TAIS	Taisha	1.10	161	⇑P	Pn	21 26 10.6	+0.1
AGRD	Ecuador-Guaran	1.17	258	P	Pn	21 26 10.8	-0.6
JSCH	Cashca Tororas	1.18	251	⇑P	Pn	21 26 11.3	-0.1
TING	Casa Alexandra	1.20	331	P	Pn	21 26 11.9	+0.4
REVS	Reventador Sur	1.24	11	P	Pn	21 26 11.3	-0.6
LAV4	Lava4-Reventad	1.25	11	P	Pn	21 26 11.4	-0.6
REVN	San Rafael	1.27	11	⇓P	Pn	21 26 11.5	-0.6
CIVI	Edificio de In	1.28	330	P	Pn	21 26 12.5	+0.2
AIMS	Ecuador-Tababe	1.31	337	P	Pn	21 26 12.9	+0.5
FENY	Casa Vinicio C	1.33	332	P	Pn	21 26 13.2	+0.5
GGPT	Toaza - Volcan	1.34	325	⇓P	Pn	21 26 12.1	-0.7
JUA2	San Juan 2	1.34	326	P	Pn	21 26 12.2	-0.7
CAYR	Refugio Cayamb	1.35	354	P	Pn	21 26 12.9	-0.3
HPAL	Hacienda Las P	1.36	324	P	Pn	21 26 12.5	-0.5
GGPC	Guagua Pichinc	1.36	327	⇓P	Pn	21 26 12.7	-0.6
TERV	Terraza Guagua	1.37	327	⇓P	Pn	21 26 12.7	-0.6
ANGU	Angureal	1.38	354	⇓P	Pn	21 26 13.2	-0.3
PINO	Pino	1.39	327	⇓P	Pn	21 26 12.9	-0.6
CAYA	Cayambe	1.40	355	P	Pn	21 26 13.7	+0.2
YANA	Yana	1.40	329	⇓P	Pn	21 26 12.9	-0.6
PULU	Pululahua	1.49	334	P	Pn	21 26 13.3	-0.9
CASC	Dorado de Casc	1.55	20	⇓P	Pn	21 26 13.7	-0.7
IMBA	Imbabura, San	1.64	348	⇓P	Pn	21 26 16.0	+0.4
ASDO	Santo Domingo	1.65	310	P	Pn	21 26 12.1	-3.3
AQUE	Quevedo	1.66	280	P	Pn	21 26 14.7	-0.6
OTAV	Otavalo	1.67	339	Pn	Pn	21 26 15.0	-0.9
OTAV				Sn	Sn	21 26 41.5	-1.3
OTAV	Otavalo	1.67	339	⇓P	Pn	21 26 15.0	-0.9
OTAV	Otavalo	1.67	339	*e*P	Pn	21 26 14.6	-1.4
OTAV	Otavalo	1.67	339	P	Pn	21 26 15.0	-0.9
ACOT	Cotacachi (Cas	1.67	346	P	Pn	21 26 11.3	-4.5
AAT1	Ecuador-Atunta	1.69	348	P	Pn	21 26 16.3	+0.3
CUIC	Cuicocha-Domo	1.70	343	⇓P	Pn	21 26 15.8	-0.4
YAHU	Yahuarcocha	1.71	353	P	Pn	21 26 16.0	-0.2
CUSE	Cuicocha Este	1.72	342	⇓P	Pn	21 26 15.8	-0.6
CUSE	Cuicocha Este	1.72	342	P	Pn	21 26 15.7	-0.7
AZOG	Ecuador-Azogue	1.72	215	P	Pn	21 26 15.6	-0.7
COTA	Cotacachi	1.73	344	P	Pn	21 26 16.4	-0.2
COHC	Cochancay	1.79	231		Pn	21 26 15.3	-1.4
COHC	Cochancay	1.79	231	P	Pn	21 26 15.4	-1.2
COHC	Cochancay	1.79	231	P	Pn	21 26 15.3	-1.4
BONI	La Bonita	1.81	11	P	Pn	21 26 16.3	-0.8
BONI	La Bonita	1.81	11	P	Pn	21 26 16.3	-0.8
URCU	Urcuqui	1.81	347	P	Pn	21 26 16.9	-0.4
PAC1	Pacto, Paraso	1.84	330	P	Pn	21 26 16.5	-0.9
PAC1	Pacto, Paraso	1.84	330	P	Pn	21 26 16.4	-0.9
ACUE	Ecuador-Cuenca	1.91	215	P	Pn	21 26 18.9	+0.6
BOSC	San Juan Bosco	1.91	199	⇑P	Pn	21 26 18.1	0.0
BV15	Puerto Quito-O	2.02	317	⇓P	Pn	21 26 17.5	-1.6
TULM	Tulcn-Chalpat	2.04	2	P	Pn	21 26 19.7	-0.1
TULM	Tulcn-Chalpat	2.04	2	P	Pn	21 26 19.5	-0.3
LNGL	El Angel-Carch	2.06	356	⇓P	Pn	21 26 19.0	-1.1
CHL2	Volc¡n Chiles	2.12	358	P	Pn	21 26 20.8	+0.1
ECEN	Cerro Negro	2.15	357	P	Pn	21 26 20.8	-0.3
LITE1	Lita	2.17	347	P	Pn	21 26 19.5	-1.4
CHMA	Chilma	2.19	355	P	Pn	21 26 20.0	-1.3
AGUAY	Guayaquil	2.21	251	P	Pn	21 26 18.8	-2.4
CMBC	Cumbal	2.26	1	P	Pn	21 26 23.4	+1.2
AC07	Ecuador-Guayaq	2.27	249	P	Pn	21 26 19.6	-2.3
PCRA	Pucara 2	2.48	221	P	Pn	21 26 22.8	-1.9
SNLR	San Lorenzo-Es	2.79	339	P	Pn	21 26 26.8	-1.0
MORR	Playas El Morr	2.80	242	P	Pn	21 26 26.2	-1.7
ISPG	Isla Puna-Puer	2.82	235	P	Pn	21 26 27.3	-1.0
PPLP	Puerto Lpez	2.92	266	P	Pn	21 26 27.3	-2.2
CRUC	La Cruz	3.02	17	P	Pn	21 26 30.8	-0.2
TUMC	Tumaco	3.25	345	Pn	Pn	21 26 32.5	-0.9
BBAC	Balboa, Cauca	3.39	10	P	Pn	21 26 34.1	-1.2
PTLC	Puerto Leguiza	3.41	64	P	Pn	21 26 32.8	-2.5
FLOC	Florencia	3.64	37		Pn	21 26 37.2	-1.1
FLOC	Florencia	3.64	37	P	Pn	21 26 37.3	-1.0

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MCRA  Macar, Loja         3.67 215  P      Pn      21 26 35.7 -3.0
POPC  Popayan, Colom      4.03  17  P      Pn      21 26 42.0 -1.3
GARC  Garzon, Huila       4.22  34  P      Pn      21 26 45.0 -0.8
GR1C  Gorgona, Isla       4.32 356  P      Pn      21 26 43.6 -3.2
JAMC  Jamundi, Valle      4.67  15  P      Pn      21 26 49.0 -2.5
MACC  Macarena, Meta      5.29  49  P      Pn      21 26 58.7 -0.7
      2µm524nm,0.7s
YOTC  Yotoco, Valle       5.49  16  P      Pn      21 26 58.3 -3.8
      563nm120nm,0.5s
ATAH  Atahualpa           5.79 185  P      Pn      21 27 05.8 -0.4
      148nm,0.7s,baz=10,slow=8.8,SNR=121
ATAH                                S      Sn      21 28 00.6  -12
      62nm,0.6s,baz=80,slow=5.8,SNR=3.8
ORTC  Ortega, Tolima      5.83  27  P      Pn      21 27 05.7 -0.6
      2µm299nm,1.1s
PRAC  Prado               5.83  31  P      Pn      21 27 04.5 -1.9
      900nm44nm,1.0s
VILC  Villavicencio,      6.83  38  P      Pn      21 27 20.5 +1.0
      2µm229nm,0.7s
ROSC  El Rosal            7.08  30         Pn      21 27 22.9 -0.2
CZSB  Cruzeiro do Su      8.17 141         Pn      21 27 35.1 -2.0
CZSB  Cruzeiro do Su      8.17 141 eP      Pn      21 27 35.8 -1.2
DBBC  Dabeiba             8.46  11  P      Pn      21 27 42.2 +1.3
RUSC  La Rusia            8.62  34         Pn      21 27 42.0 -1.3
APAC  Apartado, Choc      9.26   8  P      Pn      21 27 53.5 +2.1
      760nm128nm,0.8s
UREC  San Jos de Ur       9.32  14  P      Pn      21 27 52.2 +0.1
      1µm35nm,0.6s
AZU   Azuero              9.38 345  P      Pn      21 27 54.2 +1.3
      908nm69nm,1.2s
PAMC  Pamplona, Colo     10.04  31  P      Pn      21 28 02.3 +0.4
BCIP  Isla Barro Col     10.62 349  Pn     Pn      21 28 08.8 -0.3
NNA   Nana               10.63 175  Pn     Pn      21 28 09.6 +0.3
NNA   Nana               10.63 175  P      Pn      21 28 07.9 -1.3
      8.0nm,0.4s,baz=343,slow=17,SNR=4.6
NNA                                 S      Sn      21 29 57.5  -10
      15nm,0.3s,baz=274,slow=20,SNR=5.0
SJCC  San Jacinto, C     11.47  13  P      Pn      21 28 20.5 +0.4
      62nm,0.9s
SDV   Santo Domingo      12.45  35         Pn      21 28 31.3 -1.5
SDV   Santo Domingo      12.45  35  P      Pn      21 28 30.9 -1.8
      14nm,0.4s,baz=233,slow=8.5,SNR=12
SDV                                 LR     LR      21 34 02.4
      comp=Z,48nm,18.3s,baz=190,slow=41
SDV   Santo Domingo      12.45  35 eP      Pn      21 28 31.2 -1.6
CRJC  Cerrejon, Guaj     13.23  22  P      Pn      21 28 40.7 -1.9
BAUV  El Baul            14.14  44         Pn      21 28 51.8 -2.1
LPAZ  La Paz             17.68 148         P       21 29 36.4 +0.8
LPAZ                                IAmb   IAmb    21 29 39.8
      comp=Z,7.5nm,0.6s
LPAZ  La Paz             17.68 148  P      P       21 29 36.0 +0.3
      comp=Z,6.8nm,0.5s,baz=326,slow=9.3,SNR=28
LPAZ  La Paz             17.68 148 eP      P       21 29 35.5 -0.1
BOAV  Boa Vista          17.72  78  P      P       21 29 34.9 -0.6
PB18  Visviri            18.13 153         P       21 29 40.0 -0.5
PB18                                IAmb   IAmb    21 29 49.9
      comp=Z,13nm,0.7s
PB16  IPOC Station P     18.78 155         Pn      21 29 49.0 -1.1
MTDJ  Mount Denham       19.44   1  P      Pn      21 29 56.6 -0.9
PB11  IPOC Station P     20.00 157         P       21 30 01.1 +1.0
PB11                                IAmb   IAmb    21 30 08.3
      comp=Z,23nm,0.9s
GO01  Chusmiza           20.10 156  P      P       21 30 02.1 +0.5
PB08  IPOC Station P     20.54 156  P      P       21 30 07.4 +1.2
PB08                                IAmb   IAmb    21 30 13.5
      comp=Z,11nm,0.9s
VILB  Vilhena            20.96 124  P      P       21 30 09.3 -1.0
VILB                                IAmb   IAmb    21 30 11.2
      comp=Z,17nm,0.8s
VILB  Vilhena            20.96 124 eP      P       21 30 10.8 +0.4
PB09  IPOC Station P     22.00 158  P      P       21 30 21.1 -0.2
PB09                                IAmb   IAmb    21 30 37.3
      comp=Z,12nm,0.8s
SIV   San Ignacio        22.04 132  P      P       21 30 21.0 -0.6
      comp=Z,6.5nm,0.7s,baz=294,slow=9.3,SNR=34
      comp=Z,6.5nm,0.7s
PB03  IPOC Station P     22.05 160  P      P       21 30 22.6 +0.8
PB03                                IAmb   IAmb    21 30 38.9
      comp=Z,12nm,0.6s
ITTB  Itaituba           22.30  98 eP      P       21 30 22.9 -1.1
PB05  IPOC Station P     22.65 161  P      P       21 30 27.9 +0.7
PB05                                IAmb   IAmb    21 30 49.1
      comp=Z,13nm,0.7s
NPGB  Novo Progresso     23.14 105 eP      P       21 30 30.8 -0.9
BBSD  Serra de San D     23.15 134 eP      P       21 30 32.8 +1.1
PTLB  Pontes e Lacer     23.19 128         P       21 30 32.6 +0.5
PTLB                                IAmb   IAmb    21 30 33.9
      comp=Z,9.7nm,0.8s
PTLB  Pontes e Lacer     23.19 128 eP      P       21 30 32.4 +0.3
BDFB  Brasilia           32.69 117  P      P       21 31 55.9 -0.9
      comp=Z,3.3nm,0.7s,baz=291,slow=9.1,SNR=4.5
      comp=Z,3.3nm,0.7s
MT08  Bocatoma Ro        32.78 168  P      P       21 31 58.5 +1.0
LMEL  Las Melosas        33.13 168  P      P       21 32 02.1 +1.6
LMEL                                IAmb   IAmb    21 32 03.6
      comp=Z,9.9nm,0.9s
ITAB  Concordia          35.67 138  P      P       21 32 21.7 -0.4
DRIO  Del Rio            37.54 326  P      P       21 32 38.8 +0.8
DRIO                                IAmb   IAmb    21 32 40.1
      comp=Z,5.2nm,0.9s
T57A  Hurt               38.16 358  P      P       21 32 43.4 +0.4
T57A                                IAmb   IAmb    21 32 43.9
      comp=Z,6.7nm,0.6s
TXAR  Lajitas Array      39.23 323  P      P       21 32 53.5 +1.3
TXAR  Lajitas Array      39.23 323  P      P       21 32 53.0 +0.9
      comp=Z,0.6nm,0.8s,baz=146,slow=8.0,SNR=6.9
      comp=Z,0.6nm,0.8s
PLCA  Paso Flores        39.77 171  P      P       21 32 57.5 +1.0
PLCA  Paso Flores        39.77 171  P      P       21 32 57.2 +0.7
      comp=Z,3.3nm,0.7s,baz=342,slow=11,SNR=12
      comp=Z,3.3nm,0.7s
SLBS  Sierra La Lagu     39.89 311  P      P       21 33 00.0 +2.3
VHRN  Van Horn           41.07 323  P      P       21 33 08.5 +1.2
SSPA  Standing Stone     41.77 360  P      P       21 33 13.6 +0.9
SSPA                                IAmb   IAmb    21 33 14.2
      comp=Z,6.6nm,0.9s
ANMO  Albuquerque        44.94 326  P      P       21 33 40.1 +1.7
SDCO  Great Sand Dun     46.53 330  P      P       21 33 52.2 +1.3
214A  Organ Pipe Nat     46.82 318  P      P       21 33 54.6 +1.6
214A                                IAmb   IAmb    21 33 55.6
      comp=Z,5.1nm,0.9s
WUAZ  Wupatki            48.20 323         P       21 34 05.3 +1.6
WUAZ                                IAmb   IAmb    21 34 07.0
      comp=Z,6.4nm,0.9s
ESJX  Sierra Juarez      48.98 316  P      P       21 34 11.0 +1.3
TPNV  Topopah Spring     52.13 321         P       21 34 34.7 +1.5
PDAR  Pinedale Array     52.36 331  P      P       21 34 35.0 +0.1
      comp=Z,0.4nm,0.5s,baz=144,slow=7.2,SNR=2.8
      comp=Z,0.4nm,0.5s
NVAR  Mina Array Bea     54.32 321  P      P       21 34 49.1 -0.1
      comp=Z,0.5nm,0.3s,baz=136,slow=6.9,SNR=7.4
      comp=Z,0.5nm,0.3s
MFID  Camas Ranch        56.05 327  P      P       21 35 02.5 +1.1
MFID                                IAmb   IAmb    21 35 04.2
      comp=Z,4.7nm,1.0s
BEKR  Beckworth          56.46 321  P      P       21 35 05.6 +1.2
BEKR                                IAmb   IAmb    21 35 06.8
      comp=Z,3.7nm,0.9s
ORV   Oroville           57.00 320  P      P       21 35 09.6 +1.5
ORV                                 IAmb   IAmb    21 35 10.7
      comp=Z,8.5nm,0.9s
J05D  Fort Rock, OR      59.01 324  P      P       21 35 23.7 +1.6
DBIC  Dimbokro           73.28  83  P      P       21 36 51.8 -1.5
DBIC  Dimbokro           73.28  83  P      P       21 36 51.9 -1.5
      comp=Z,2.7nm,0.6s,baz=286,slow=5.8,SNR=5.7
      comp=Z,2.7nm,0.6s
VNA3  Neumayer Olymp     81.83 162 ⇓P      P       21 37 39.9 +0.3
      comp=Z,5.4nm,0.8s
ILAR  Eielson Array      82.39 336  P      P       21 37 42.6 +0.1
      comp=Z,1.0nm,0.8s,baz=121,slow=4.3,SNR=8.0
      comp=Z,1.0nm,0.8s
VNA2  Neumayer--Watz     82.43 162 ⇓P      P       21 37 43.2 +0.5
      comp=Z,3.8nm,0.7s,baz=293,slow=5.0
SNAA  Sanae              84.05 162 ⇓P      P       21 37 51.4 +0.3
      comp=Z,40nm,0.6s
SNAA  Sanae              84.05 162  P      P       21 37 51.3 +0.3
SNAA  Sanae              84.05 162  P      P       21 37 51.1 +0.1
      comp=Z,1.6nm,0.6s,baz=290,slow=5.7,SNR=15
      comp=Z,1.6nm,0.6s
TROLL Troll, Antarti     85.77 162 ⇓P      P       21 38 00.4 +0.7
      comp=Z,368nm,0.8s
QSPA  South Pole Qui     88.73 180  P      P       21 38 15.0 +1.0
      comp=Z,7.1nm,0.9s,baz=150,slow=1.1,SNR=33
      comp=Z,7.1nm,0.9s
MKAR  Makanchi Array    131.52  18  PKP    PKiKP   21 44 33.4  0.0
      comp=Z,0.1nm,0.4s,baz=296,slow=4.3,SNR=2.1
KSRS  Korea Array       136.92 330  PKP    PKPdf   21 44 42.7  0.0
      comp=Z,0.2nm,0.3s,baz=10,slow=2.7,SNR=2.6
ASAR  Alice Springs     140.37 229  PKP    PKPdf   21 44 49.5  0.0
      comp=Z,0.8nm,0.5s,baz=121,slow=1.8,SNR=4.9
WRA   Warramunga Arr    142.00 235  PKhKP  PKPpre  21 44 49.6
      comp=Z,1.3nm,0.6s,baz=128,slow=1.6,SNR=5.1
FITZ  Fitzroy Crossi    149.87 229  PKPbc  PKPbc   21 45 10.1 -0.7
      comp=Z,7.1nm,0.7s,baz=164,slow=4.1,SNR=6.2
PZH   PanZhiHua         154.97   1  PKPbc  PKPdf   21 45 12.7 -0.6
```

IDC 11 21:37:23.1±5.3,8.°06S×129.°04E,h239km±55km,mb3.1/5, mbtmp3.9/8,MS3.1/1,Error ellipse: s-maj=58.0km s-min=16.8km az=50.0

ISC 11 21:37:16.7±0.9,**7.°69S**±0.°08×**129.°27E**±0.°08,**h150**km,**n15**, σ**2.s96**/18,**mb3.3**/5,**Banda Sea**

```
Code  Station Name        Δ°   AZ°  Phase ID          Time      Res
                                Op     ISC       h  m  s    ISC
SAUI  Saumlaki            2.03  98  P      Pn      21 37 52.9 +0.7
DRS   Darwin Rock St      4.98 161  P      Pn      21 38 33.9 +4.0
MTN   Manton Dam          5.44 160  P      Pn      21 38 39.3 +3.3
BATI  Baumata             6.08 245  P      Pn      21 38 46.6 +2.0
      61nm,0.3s,baz=96,slow=5.2,SNR=23
BATI                                S      Sn      21 39 56.1 +2.8
      20nm,0.3s,baz=108,slow=24,SNR=5.9
FITZ  Fitzroy Crossi     10.93 199  P      Pn      21 39 49.8 +0.7
      5.5nm,0.4s,baz=33,slow=12,SNR=36
FITZ                                S      Sn      21 41 46.2 -3.9
      4.4nm,0.5s,baz=68,slow=18,SNR=4.1
WRA   Warramunga Arr     13.13 159  P      Pn      21 40 17.6 -0.1
      2.1nm,0.6s,baz=334,slow=14,SNR=39
WRA                                 S      Sn      21 42 39.8 -3.3
      2.0nm,0.7s,baz=331,slow=22,SNR=7.4
COEN  Coen               15.00 116  P      P       21 40 46.4 +3.3
ASAR  Alice Springs      16.50 165  P      Pn      21 41 02.6 +3.0
      0.9nm,0.4s,baz=336,slow=9.8,SNR=19
ASAR                                S      S       21 44 01.4 -1.6
      0.6nm,0.5s,baz=323,slow=15,SNR=4.1
AS01  Alice Springs      16.51 165  P      Pn      21 41 03.8 +4.1
STKA  Stephens Creek     26.66 156  P      P       21 42 38.3 -3.4
      2.0nm,0.7s,baz=354,slow=10,SNR=3.2
      2.0nm,0.7s
NWAO  Narrogin (SRO)     27.48 202  LR     LR      21 56 07.4
      comp=Z,44nm,20.5s,baz=318,slow=42
CMAR  Chiang Mai Arr     39.63 311  P      P       21 44 32.6 -1.5
      0.4nm,0.6s,baz=148,slow=9.4,SNR=2.4
      0.4nm,0.6s
MKAR  Makanchi Array     68.41 327  P      P       21 48 00.7 -1.5
      0.3nm,0.6s,baz=128,slow=7.9,SNR=3.6
      0.3nm,0.6s
ZALV  Zalesovo Beam      71.88 334  P      P       21 48 20.8 -2.4
      0.4nm,0.4s,baz=118,slow=5.5,SNR=1.8
      0.4nm,0.4s
KURBB Kurchatov Arra     72.72 329  P      P       21 48 26.4 -1.9
      0.2nm,0.5s,baz=126,slow=4.7,SNR=2.4
      0.2nm,0.5s
```

DJA 11 21:39:02.6±0.3,**8°S**±5°×**11°6E**±°,**h10**km,**M3.8**/9,**mb4.3**/1, **MLv3.6**/9,**Bali region**

```
Code  Station Name        Δ°   AZ°  Phase ID          Time      Res
                                Op     ISC       h  m  s    ISC
SRBI  Singaraja           0.37 285  P      Pg      21 39 09.7 -0.2
SRBI                                S      Sg      21 39 15.4 +0.7
DNP   Denpasar            0.61 216  P      Pg      21 39 14.7 +0.3
JAGI  Jajag, Banyuwa      1.43 258  P      Pn      21 39 27.0 -1.7
KMMI  Kalianget           1.95 305  P      Pb      21 39 38.5 +0.3
GMJI  Gumukmas            2.11 267  P      Pn      21 39 37.9  0.0
PLAI  Plampang            2.27 107  P      Pg      21 39 46.1 -0.2
PLAI  Plampang            2.27 107  P      Pn      21 39 40.7 +0.4
GRJI  Gresik              3.31 292  P      Pn      21 39 53.0 -1.5
BSSI  Bau Bau, Buton      5.29  68  P      Pn      21 40 21.0 -0.7
```

DJA 11 21:55:35.8±0.3,5°S±2°×12°6E±°,h431km±5km,M4.3/24, mB4.9/7,mb4.1/19,MLv4.4/24,Mw(mB)4.2/7

NEIC 11 21:55:36.0±1.4,4.°67S±0.°05×125.°6E±0.°2,h446km±12km, mb4.0/10,Error ellipse: s-maj=21.9km s-min=7.8km az=89.0

IDC 11 21:55:37.1±2.2,4.°83S×125.°39E,h463km±23km,mb3.0/4, mbtmp4.0/7,Error ellipse: s-maj=47.1km s-min=15.2km az=64.0

ISC 11 21:55:35.2±0.6,**4.°66S**±0.°06×**125.°66E**±0.°08,**h441**km,**n63**, σ**1.s06**/69,**mb3.6**/5,**Banda Sea**

```
Code  Station Name        Δ°   AZ°  Phase ID          Time      Res
                                Op     ISC       h  m  s    ISC
NLAI  Namlea              2.02  46  P      P       21 56 35.5 +0.5
NLAI                                S      S       21 57 21.4 -2.0
SANI  Sanana              2.62   7  P      P       21 56 39.8 +1.0
SANI  Sanana              2.62   7  P      P       21 56 39.2 +0.4
SANI                                S      S       21 57 29.1 -1.2
AAI   Ambon               2.71  69  P      P       21 56 39.0 -0.4
KDI   Kendari             3.11 283  P      P       21 56 41.5 -0.9
MSAI  Masohi              3.52  68  P      P       21 56 44.8 -0.8
BNDI  Bandanaira          4.24  88  P      P       21 56 53.4 +1.5
LUWI  Luwuk               4.61 321  P      P       21 56 56.4 +1.0
LUWI  Luwuk               4.61 321  P      P       21 56 56.6 +1.2
MMRI  Maumere             5.21 221  P      P       21 57 03.0 +1.8
MMRI  Maumere             5.21 221  P      P       21 57 02.8 +1.6
      0.2nm35nm,1.3s
SOEI  Soe                 5.25 195  P      P       21 56 60.0 -1.7
SOEI  Soe                 5.25 195  P      P       21 57 02.7 +1.0
SOEI  Soe                 5.25 195  P      P       21 57 02.5 +0.8
      0.3nm58nm,1.9s
BSSI  Bau Bau, Buton      5.35 254  P      P       21 57 03.4 +0.8
KMSI  Cibinong            5.46 342  P      P       21 57 04.4 +0.6
      4µm84nm,0.5s
BNSI  Bone                5.54 272  P      P       21 57 05.4 +0.9
      0.1nm40nm,0.8s
EDFI  Ende, Flores        5.66 224  P      P       21 57 07.3 +1.5
      0.1nm20nm,0.9s
TNTI  Ternate             5.66  18  P      P       21 57 06.1 +0.3
TNTI  Ternate             5.66  18  P      P       21 57 06.6 +0.8
      0.1nm22nm,0.6s
BATI  Baumata             5.85 200  P      P       21 57 08.6 +0.9
      15nm,0.3s,baz=0.0,slow=20,SNR=7.7
BATI                                S      S       21 58 22.6 -0.6
      34nm,0.5s,baz=318,slow=19,SNR=9.3
BATI  Baumata             5.85 200  P      P       21 57 08.3 +0.6
      0.3nm37nm,1.1s
SPSI  Sidrap Palu         5.91 277  P      P       21 57 09.3 +1.0
      0.2nm17nm,0.6s
TTSI  Tana Toraja         6.04 285  P      P       21 57 09.9 +0.3
      0.2nm19nm,1.0s
MRSI  Marisa              6.31 324  P      P       21 57 13.4 +1.0
SWI   Sorong              6.75  56  P      P       21 57 17.8 +0.6
      0.2nm75nm,0.8s
FAKI  Fak Fak             6.80  75  P      P       21 57 18.6 +0.8
FAKI  Fak Fak             6.80  75  P      P       21 57 18.7 +1.0
FAKI  Fak Fak             6.80  75  P      P       21 57 18.2 +0.5
PCI   Palu                6.91 303  P      P       21 57 19.6 +0.7
      0.2nm2µm45nm,1.1s
TOLI2 Tolitoli            7.52 320  P      P       21 57 26.1 +0.7
TOLI2 Tolitoli            7.52 320  P      P       21 57 26.2 +0.7
MPSI  Mapaga              7.60 311  P      P       21 57 27.2 +0.9
WBSI  Waikabubak, Su      7.94 231  P      P       21 57 27.8 -2.2
      38nm,0.9s
PLAI  Plampang            8.85 242  P      P       21 57 39.9 +0.1
PLAI  Plampang            8.85 242  P      P       21 57 39.0 -0.8
      51nm,1.5s
MTN   Manton Dam          9.77 147  P      P       21 57 50.6 +0.8
KDU   Kakadu             10.44 140  P      P       21 57 58.3 +1.2
KNRA  Kununurra          11.36 165  P      P       21 58 08.2 +1.0
FITZ  Fitzroy Crossi     13.35 180  P      P       21 58 29.2 +0.2
FITZ  Fitzroy Crossi     13.35 180  P      P       21 58 29.1 +0.2
      1.3nm,0.3s,baz=0.5,slow=10,SNR=21
FITZ                                S      S       22 00 49.0 -3.4
      6.6nm,0.8s,baz=5.7,slow=10,SNR=7.6
FITZ  Fitzroy Crossi     13.35 180  P      P       21 58 29.1 +0.2
KKM   Kota Kinabalu      14.21 318  P      P       21 58 38.4 +0.1
WB0   Warramunga Arr     17.26 151  P      P       21 59 10.2 -0.4
WB0                                 IAmb   IAmb    21 59 12.7
      comp=Z,5.0nm,0.6s
MBWA  Marble Bar         17.38 199  P      P       21 59 10.5 -1.3
WRA   Warramunga Arr     17.39 152  P      P       21 59 11.1 -0.8
      comp=Z,3.8nm,0.6s,baz=324,slow=11,SNR=87
WRA                                 S      S       22 02 09.2 -1.6
      comp=Z,1.0nm,0.8s,baz=325,slow=18,SNR=4.5
PSA00 Pilbara Seismi     17.73 198  P      P       21 59 15.1 -0.5
PSA00                               IAmb   IAmb    21 59 36.4
      comp=Z,14nm,1.1s
COEN  Coen               19.58 119  P      P       21 59 33.7 +0.2
COEN  Coen               19.58 119  P      P       21 59 34.1 +0.6
AS31  Alice Springs      20.50 158  P      P       21 59 43.1 +1.3
AS31                                IAmb   IAmb    21 59 48.3
      comp=Z,1.0nm,0.6s
ASAR  Alice Springs      20.50 158         P       21 59 43.7 +1.9
ASAR  Alice Springs      20.50 158  P      P       21 59 42.6 +0.8
      comp=Z,2.2nm,0.4s,baz=346,slow=11,SNR=53
ASAR                                S      S       22 03 01.7 -0.9
      comp=Z,1.6nm,1.1s,baz=328,slow=21,SNR=5.7
      comp=Z,2.2nm,0.4s
QIS   Mount Isa          20.82 141  P      P       21 59 45.7 +0.9
MEEK  Meekatharra        22.87 196  P      P       22 00 04.5 +1.3
STKA  Stephens Creek     30.93 153  P      P       22 01 15.2 +1.0
      comp=Z,1.8nm,0.6s,baz=345,slow=9.7,SNR=3.3
      comp=Z,1.8nm,0.6s
MKAR  Makanchi Array     63.95 328  P      P       22 05 23.2 -0.4
      comp=Z,0.2nm,0.5s,baz=117,slow=8.2,SNR=5.1
      comp=Z,0.2nm,0.5s
KURK  Kurchatov          68.31 330  P      P       22 05 50.7 -0.2
VNDA  Vanda              75.30 172  P      P       22 06 31.1 -0.2
VNDA                                IAmb   IAmb    22 06 37.4
      comp=Z,2.1nm,1.1s
ABKAR Akbulak array      78.02 322  P      P       22 06 46.4 -0.5
ABKAR Akbulak array      78.02 322  P      P       22 06 46.9 +0.1
ABKAR                               IAmb   IAmb    22 07 06.3
      comp=Z,0.9nm,1.1s
QSPA  South Pole Qui     85.30 180  P      P       22 07 23.8 -0.3
QSPA                                IAmb   IAmb    22 07 33.5
      comp=Z,2.1nm,1.1s
QSPA  South Pole Qui     85.30 180  P      P       22 07 23.6 -0.6
      comp=Z,0.4nm,0.4s,baz=5.2,slow=0.3,SNR=7.7
      comp=Z,0.4nm,0.4s
SNAA  Sanae              96.88 194  P      P       22 08 18.3 +0.7
SNAA                                IAmb   IAmb    22 08 29.6
      comp=Z,2.1nm,1.1s
```

SNET 11 22:18:51.7±0.7,12.°87N×86.°99W,h8km±999km,ML3.2

CATAC 11 22:18:52.1±0.2,**13°N**±2°×**8°7W**±°,**h6**km±2km,**M3.2**/20, **MLv3.2**/20,**13C-9D,Error ellipse: s-maj=5.7km s-min=2.3km az=31.1,confirmed,Near coast of Nicaragua**

```
Code  Station Name        Δ°   AZ°  Phase ID          Time      Res
                                Op     ISC       h  m  s    ISC
CRIN  San Cristobal       0.20 182  S      Sg      22 19 00.3 +1.6
CRIN  San Cristobal       0.20 182 ⇓P      Pg      22 18 57.5 +1.4
PKGN  Cerro Pekin         0.24 165 ⇓P      Pg      22 18 57.8 +1.0
PKGN                                S      Sg      22 19 01.5 +1.5
POLN  Al Sur del Vol      0.34 138 ⇑P      Pg      22 18 59.5 +0.8
POLN                                S      Sg      22 19 03.9 +0.9
HERN  Volcan Telica       0.36 145  S      Sg      22 19 04.8 +1.1
HERN  Volcan Telica       0.36 145 ⇑P      Pg      22 18 59.7 +0.7
QUEN  Al S del Volca      0.36 149 ⇓P      Pb      22 19 00.1 -0.9
HOYN  Al Sur del Vol      0.37 145 ⇑P      Pg      22 18 59.9 +0.6
HOYN                                S      Sg      22 19 05.1 +1.1
POTN  Potosi Cosigui      0.46 282 ⇑P      Pb      22 19 02.1 -0.5
POTN                                S      Sg      22 19 08.3 +1.2
ILCN  San Idelfonso       0.46 134 ⇑P      Pg      22 19 00.9 -0.2
ILCN                                S      Sg      22 19 07.8 +0.7
CSGN  Cosiguina Volc      0.51 279 ⇑P      Pb      22 19 02.8 -0.8
LIMN  Finca el Limon      0.68  76 ⇑P      Pg      22 19 05.7 +0.5
MOMN  Momotombo           0.69 135 ⇑P      Pg      22 19 05.7 +0.3
MOM2  El Cardon           0.71 130 ⇑P      Pg      22 19 05.9 +0.1
CNCH  Conchagua           0.86 296 i P     Pg      22 19 08.8 +0.2
CNCH                               eS      Sb      22 19 22.4 +1.1
CNCH  Conchagua           0.86 296  S      Sb      22 19 20.8 -0.5
CNCH  Conchagua           0.86 296 ⇑P      Pg      22 19 08.8 +0.2
LCND  La Caada            0.92 296 eP      Pg      22 19 09.7 -0.1
LCND                               eS      Sb      22 19 23.9 +0.9
LCND                                IAML           22 19 25.3
      comp=Z,710nm,0.3s
LCND  La Caada            0.92 296 ⇑P      Pg      22 19 09.7  0.0
SAPS  Ciudad Sandino      0.96 139 ⇓P      Pg      22 19 10.3 -0.2
TISN  Laguna Tiscapa      1.07 135 ⇓P      Pg      22 19 12.1 -0.5
RCVN  Varillal2           1.07  51 ⇓P      Pg      22 19 12.4 -0.3
UNAN  Cigeo UNAN          1.09 136  P      Pg      22 19 12.7 -0.3
RCPN  Sur Rio San Ju      1.11  56  P      Pg      22 19 13.2 -0.2
WILN  Americas 2          1.11 131 ⇓P      Pg      22 19 13.0 -0.5
WILN                                S      Sb      22 19 28.5 -0.1
TGUH  Tegucigalpa,Un      1.17 349 ⇓P      Pg      22 19 14.6  0.0
BLLM  Bellamira           1.28 295 eP      Pn      22 19 16.1 -0.5
NANN  Nandasmo            1.31 137  S      Sg      22 19 34.4 +0.1
NANN  Nandasmo            1.31 137 ⇑P      Pn      22 19 16.7 -0.3
RANC  El Ranchito         1.32 294 ⇓P      Pn      22 19 11.8 -5.5
LCY   Lacayo              1.33 293 eP      Pn      22 19 16.4 -0.9
PACA  Pacayal             1.37 294 eP      Pn      22 19 17.9  0.0
PACA  Pacayal             1.37 294  S      Sg      22 19 36.2  0.0
PACA  Pacayal             1.37 294 ⇑P      Pn      22 19 17.1 -0.9
JAYA  Jayaque - finc      2.46 288  P      Pn      22 19 34.2 +1.3
```

TEH 11 22:26:21.7,32.°34N×47.°37E,h12km±17km

ISN 11 22:26:21.9±0.9,32.°23N×47.°36E,h16km±5km,ML2.8

ISC 11 22:26:25.9±1.4,**32.°32N**±0.°06×**47.°34E**±0.°05,**h23**km,**n30**, σ**0.s69**/33,**Iran-Iraq border region**

```
Code  Station Name        Δ°   AZ°  Phase ID          Time      Res
                                Op     ISC       h  m  s    ISC
IKFM  Kafar-mosalman      1.28  19  Pg     Pn      22 26 46.2 -2.1
IBDR  Badra               1.43 304 ePg     Pn      22 26 49.0 -1.4
IBDR                               eSg     Sn      22 27 09.0 +0.5
IBDR                                AML    AML     22 27 14.8
      comp=N,118nm,0.6s
IBDR                                AML    AML     22 27 26.6
      comp=E,95nm,0.6s
AHWZ  Ahwaz               1.48 131  Pg     Pn      22 26 50.9 -0.2
ILBA  Ilam Banvizeh       1.62 324  Pg     Pn      22 26 52.3 -0.7
IDOB  Doab                1.63  25  Pg     Pn      22 26 53.0 -0.4
KCHF  Cheshme Sefid,      1.97 353  Pn     Pn      22 26 57.8 -0.2
IGHG  Ghaleghazi          2.11 342  Pn     Pn      22 27 00.3 +0.3
GLG1  Gilan-e-Gharb       2.16 327  Pn     Pn      22 27 00.1 -0.4
HSAM  Samen               2.17  29  Pn     Pn      22 27 00.4 -0.5
IDHR  Dehrash             2.51 342  Pn     Pn      22 27 05.1 -0.4
SNQR  Sonqor, Kerman      2.55   5  Pn     Pn      22 27 06.0  0.0
KGS1  Ghasr-e-Shirin      2.63 327  Pn     Pn      22 27 06.7 -0.3
BHD   Baghdad             2.67 292 ePn     Pn      22 27 07.0 -0.4
BHD                                eSn     Sn      22 27 40.0 +0.9
BHD                                 AML    AML     22 27 42.1
      comp=E,151nm,0.5s
JHBN  Jahan bin           2.82  91  Pn     Pn      22 27 09.3 -0.6
HAGD  Aghdareh            2.92  31  Pn     Pn      22 27 10.3 -0.8
ZNGN  Zangian             2.99  93  Pn     Pn      22 27 11.8 -0.4
IPIR  Pirpir              3.02  82  Pn     Pn      22 27 12.6 -0.1
HGHA  Hamedan- Ghaye      3.41  21  Pn     Pn      22 27 18.0 +0.1
QAMS  Qamsar              3.69  66  Pn     Pn      22 27 21.7 -0.1
IKLH  Kolahrood           3.71  73  Pn     Pn      22 27 21.9 -0.1
KLNJ  Kolanjah            3.85 109  Pn     Pn      22 27 23.8 -0.3
QABG  Abgarm-Qazvin       3.86  28  Pn     Pn      22 27 24.1  0.0
IKRK  Kirkuk              3.96 322 ePn     Pn      22 27 25.0 -0.3
IKRK                               eSn     Sn      22 28 12.0 +1.0
IKRK                                AML    AML     22 28 15.5
      comp=E,22nm,0.6s
IKRK                                AML    AML     22 28 35.3
      comp=N,21nm,0.5s
IQOM  Qom                 4.01  50  Pn     Pn      22 27 25.5 -0.6
IZEF  Zefreh              4.25  81  Pn     Pn      22 27 29.2 -0.3
KRSH  Karshahi            4.35  66  Pn     Pn      22 27 30.6 -0.1
IVRN  Varamin             4.53  53  Pn     Pn      22 27 33.4 +0.3
IGZV  Ghazvin             4.71  30  Pn     Pn      22 27 34.9 -0.8
DSBU  Dashti - Bushe      5.20 138  Pn     Pn      22 27 41.7 -0.6
ANAR  Anarak              5.45  79  Pn     Pn      22 27 44.7 -1.1
```

IDC 11 22:33:05.3±4.8,**1.°98S**×**132.°48E**,**h0**km,**mb3.3**/2, **mbtmp3.3**/3,**ML3.0**/1,**Error ellipse: s-maj=292.2km s-min=30.2km az=75.0,Irian Jaya region**

```
Code  Station Name        Δ°   AZ°  Phase ID          Time      Res
                                Op     ISC       h  m  s    ISC
WRA   Warramunga Arr     17.94 174  P      Pn      22 37 16.2 -0.2
      baz=352,slow=12,SNR=5.9
      0.4nm,0.8s
ASAR  Alice Springs      21.60 176  P      P       22 37 56.7 -0.3
      0.8nm,0.8s,baz=4.5,slow=13,SNR=4.8
      0.8nm,0.8s
MKAR  Makanchi Array     65.50 325  P      P       22 43 50.7 +0.2
      0.2nm,0.5s,baz=111,slow=8.2,SNR=2.6
      0.2nm,0.5s
```

SSNC 11 22:55:57.9±1.3,19.°84N×75.°32W,h56km±6km,MD3.0, *ML2.1*

*OSPL **11** 22:55:57.9±0.3, 19°.80N×75°.30W, h58km±6km, ML2.5*

ISC 11 22:55:56.1±1.5, **19°.79N**±0°.08×**75°.32W**±0°.04, **h62**km±10km, **n15**, σ**0^{s}98**/26, **Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTBY	**Guantanamo Bay**	**0.23**	**55**	*e*P	**Pn**	**22 56 06.7**	**+0.7**
GTBY				*e*S	**Sn**	**22 56 12.6**	**-0.6**
GTBY				IAML		22 56 13.3	
	396nm,0.1s						
GTBY				IAML		22 56 13.8	
	comp=Z,237nm,0.1s						
GTBY	**Guantanamo Bay**	**0.23**	**55**	*i* P	**Pn**	**22 56 06.8**	**+0.7**
GTBY				*e*S	**Sn**	**22 56 13.3**	**+0.1**
GTBY				IAML		22 56 13.3	
	comp=Z,144nm,0.2s						
RCC	**Rio Carpintero**	**0.41**	**299**	*e*P	**Pn**	**22 56 07.8**	**+0.5**
RCC				*e*S	**Sn**	**22 56 15.1**	**-0.4**
RCC				IAML		22 56 15.6	
	comp=N,132nm,0.2s						
RCC				IAML		22 56 15.6	
	comp=E,145nm,0.1s						
MARVS	**Santiago de Cu**	**0.59**	**291**	*e*P	**Pn**	**22 56 10.0**	**+0.8**
MARVS				*e*S	**Sn**	**22 56 18.4**	**-0.3**
MARVS				IAML		22 56 19.3	
	comp=E,89nm,0.1s						
MARVS				IAML		22 56 19.3	
	comp=N,152nm,0.1s						
QMBU	**Quimbuelo**	**0.62**	**50**	*e*P	**Pn**	**22 56 09.7**	**0.0**
QMBU				*e*S	**Sn**	**22 56 17.7**	**-1.8**
QMBU				IAML		22 56 18.5	
	comp=E,50nm,0.3s						
QMBU				IAML		22 56 19.2	
	comp=N,47nm,0.2s						
PINC	**Pinares de May**	**0.82**	**327**	*e*P	**Pn**	**22 56 12.7**	**+0.7**
PINC				*e*S	**Sn**	**22 56 22.6**	**-1.0**
PINC				IAML		22 56 24.0	
	comp=E,267nm,0.1s						
PINC				IAML		22 56 24.4	
	comp=N,329nm,0.1s						
NMDO	**Nuevo Mundo**	**0.82**	**22**	*e*P	**Pn**	**22 56 12.3**	**+0.3**
NMDO				IAML		22 56 24.2	
	comp=E,11nm,0.1s						
NMDO				IAML		22 56 24.4	
	comp=N,9.8nm,0.1s						
CHIV	**Chivirico**	**1.05**	**280**	*e*P	**Pn**	**22 56 15.5**	**+0.6**
CHIV				*e*S	**Sn**	**22 56 28.1**	**-0.7**
CHIV				IAML		22 56 31.0	
	comp=N,50nm,0.1s						
CHIV				IAML		22 56 32.2	
	comp=E,40nm,0.1s						
MASC	**Masc**	**1.09**	**69**	*e*P	**Pn**	**22 56 16.0**	**+0.6**
MASC				*e*S	**Sn**	**22 56 29.3**	**-0.5**
MASC				IAML		22 56 31.6	
	comp=E,17nm,0.1s						
MASC				IAML		22 56 31.7	
	comp=N,16nm,0.1s						
MASC	**Masc**	**1.09**	**69**	*i* P	**Pn**	**22 56 16.1**	**+0.7**
MASC				*e*S	**Sn**	**22 56 29.6**	**-0.2**
YAR	**Yar**	**1.14**	**301**	*e*P	**Pn**	**22 56 17.4**	**+1.4**
YAR				IAML		22 56 33.3	
	comp=E,8.9nm,0.1s						
YAR				IAML		22 56 33.7	
	comp=N,9.7nm,0.1s						
HLGC	**Holguin**	**1.29**	**328**	*e*P	**Pn**	**22 56 19.8**	**+1.7**
HLGC				IAML		22 56 41.9	
	comp=E,15nm,0.4s						
HLGC				IAML		22 56 42.9	
	comp=N,18nm,0.2s						
LMGC	**Las Mercedes**	**1.61**	**280**	*e*P	**Pn**	**22 56 23.1**	**+0.7**
LMGC				*e*S	**Sn**	**22 56 40.7**	**-1.5**
LMGC				IAML		22 56 42.1	
	comp=E,51nm,0.1s						
LMGC				IAML		22 56 42.2	
	comp=N,80nm,0.1s						
PILO	**Pilon**	**1.97**	**274**	*e*P	**Pn**	**22 56 27.8**	**+0.6**
PILO				*e*S	**Sn**	**22 56 49.0**	**-2.0**
MTDJ	**Mount Denham**	**2.61**	**234**	*i* P	**Pn**	**22 56 36.9**	**+0.7**
MTDJ				IAML		22 57 08.5	
	comp=Z,32nm,1.6s						

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*IDC **11** 23:02:12.8±0.7, 12°.22N×123°.69E, h0km, mb3.9/14, mbtmp3.8/14, MS3.4/11, Error ellipse: s-maj=30.1km s-min=15.6km az=71.0*

*NEIC **11** 23:02:15.5±1.1, 12°.22N±0°.10×123°.8E±0°.1, h10km±1km, mb4.5/24, Error ellipse: s-maj=22.5km s-min=16.3km az=266.0*

ISC 11 23:02:14.7±0.6, **12°.26N**±0°.08×**123°.8E**±0°.1, **h10**km, **n54**, σ**1^{s}05**/46, **mb4.1**/25, **MS3.3**/9, **Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**5.44**	**161**	LR	LR	23 06 11.6	
	comp=Z,227nm,19.0s,baz=35,slow=44						
MYLDM	**Lahad Datu**	**8.78**	**217**		**Pn**	**23 04 24.2**	**+2.4**
JOW	**Kunigami**	**15.09**	**15**	LR	LR	23 11 56.0	
	comp=Z,68nm,18.5s,baz=180,slow=38						
JNU	**Nakatsue**	**21.75**	**16**	LR	LR	23 15 12.3	
	comp=Z,41nm,19.6s,baz=198,slow=36						
BATI	**Baumata**	**22.32**	**180**	LR	LR	23 16 43.6	
	comp=Z,237nm,18.4s,baz=202,slow=39						
CMAR	**Chiang Mai Arr**	**24.76**	**288**	P	**P**	**23 07 36.7**	**0.0**
	0.6nm,0.3s,baz=94,slow=7.8,SNR=4.1						
	0.6nm,0.3s						
KSRS	**Korea Array**	**25.36**	**8**	P	**P**	**23 07 42.7**	**+0.8**
	0.4nm,0.4s,baz=189,slow=13,SNR=4.9						
	0.4nm,0.4s						
MJAR	**Matsushiro Arr**	**27.43**	**26**	LR	LR	23 19 05.5	
	comp=Z,48nm,18.5s,baz=217,slow=37						
USRK	**Ussuriysk Ar.**	**32.59**	**11**	P	**P**	**23 08 46.5**	**+0.2**
	1.0nm,0.6s,baz=196,slow=11,SNR=1.7						
	1.0nm,0.6s						
WRA	**Warramunga Arr**	**33.63**	**162**	P	**P**	**23 08 54.9**	**-0.7**
	0.9nm,0.7s,baz=342,slow=9.3,SNR=8.7						
	0.9nm,0.7s						
WR8	**Warramunga Arr**	**33.69**	**162**	P	**P**	**23 08 55.6**	**-0.6**
WR8				IAmb	IAmb	23 09 23.8	
	comp=Z,12nm,1.4s						
ASAR	**Alice Springs**	**37.04**	**165**	P	**P**	**23 09 25.5**	**+0.5**
ASAR	**Alice Springs**	**37.04**	**165**	P	**P**	**23 09 25.0**	**0.0**
	comp=Z,2.7nm,0.7s,baz=339,slow=7.0,SNR=19						
ASAR				LR	LR	23 27 56.8	
	comp=Z,61nm,18.7s,baz=281,slow=42						
	comp=Z,2.7nm,0.7s						
SONM	**Songino Array**	**38.35**	**341**	LR	LR	23 26 51.9	
	comp=Z,99nm,18.3s,baz=172,slow=39						
MORW	**Morawa**	**41.77**	**190**	P	**P**	**23 10 04.2**	**-0.1**
MORW				IAmb	IAmb	23 10 11.4	
	comp=Z,17nm,1.2s						
HNR	**Honiara**	**41.87**	**119**	LR	LR	23 27 11.1	
	comp=Z,43nm,19.9s,baz=236,slow=36						
NWAO	**Narrogin (SRO)**	**45.37**	**188**	P	**P**	**23 10 32.7**	**-0.7**
BBOO	**Buckleboo**	**46.31**	**166**	P	**P**	**23 10 40.8**	**0.0**
STKA	**Stephens Creek**	**47.07**	**159**	P	**P**	**23 10 47.2**	**+0.4**
STKA	**Stephens Creek**	**47.07**	**159**	P	**P**	**23 10 46.2**	**-0.5**
	comp=Z,1.9nm,0.5s,baz=323,slow=12,SNR=3.7						
	comp=Z,1.9nm,0.5s						
PETK	**Petropavlovsk-**	**48.88**	**26**	P	**P**	**23 11 01.7**	**+1.1**
	comp=Z,1.3nm,0.8s,baz=212,slow=7.0,SNR=1.6						
	comp=Z,1.3nm,0.8s						
MKAR	**Makanchi Array**	**49.00**	**323**	P	**P**	**23 11 03.2**	**+1.6**
MKAR	**Makanchi Array**	**49.00**	**323**	P	**P**	**23 11 01.9**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=120,slow=8.5,SNR=9.5						
	comp=Z,1.1nm,0.8s						
ZALV	**Zalesovo Beam**	**51.74**	**332**	LR	LR	23 35 41.9	
	comp=Z,29nm,18.9s,baz=107,slow=39						
KURK	**Kurchatov**	**53.08**	**326**	P	**P**	**23 11 33.4**	**+1.3**
KURK				IAmb	IAmb	23 11 59.6	
	comp=Z,6.1nm,1.2s						
KURBB	**Kurchatov Arra**	**53.09**	**326**	P	**P**	**23 11 30.4**	**-1.8**
	comp=Z,1.1nm,0.8s,baz=124,slow=7.5,SNR=8.3						
	comp=Z,1.1nm,0.8s						
KKAR	**Karatay Array**	**55.16**	**314**	P	**P**	**23 11 47.7**	**+0.2**
BVAR	**Borovoye Array**	**58.68**	**325**	P	**P**	**23 12 10.2**	**-2.1**
	comp=Z,0.5nm,0.3s,baz=122,slow=5.4,SNR=6.9						
BVAR				PcP	**PcP**	**23 13 02.0**	**-0.2**
	comp=Z,1.1nm,0.7s,baz=127,slow=2.2,SNR=5.3						
BVAR				LR	LR	23 40 44.9	
	comp=Z,21nm,18.1s,baz=145,slow=39						
	comp=Z,0.5nm,0.3s						
ABKAR	**Akbulak array**	**63.81**	**319**	P	**P**	**23 12 44.9**	**-2.2**
AKTO	**Aktyubinsk**	**65.27**	**320**	LR	LR	23 43 05.8	
	comp=Z,66nm,18.5s,baz=284,slow=38						
D19K	**Kuna River**	**74.30**	**22**	P	**P**	**23 13 52.4**	**+0.4**
D19K				IAmb	IAmb	23 14 11.4	
	comp=Z,6.0nm,1.1s						
H19K	**Roundabout Mou**	**74.67**	**25**	P	**P**	**23 13 55.2**	**+1.1**
H19K				IAmb	IAmb	23 13 56.2	
	comp=Z,3.3nm,0.8s						
D20K	**Etivluk River**	**74.87**	**22**	P	**P**	**23 13 56.2**	**+0.9**
KIV	**Kislovodsk**	**75.25**	**312**	P	**P**	**23 13 58.2**	**+0.2**
J20K	**Nowinta River**	**75.58**	**27**	P	**P**	**23 13 59.8**	**+0.4**
IMAR	**Indian Mountai**	**75.81**	**25**	P	**P**	**23 14 01.8**	**+1.1**
CAST	**Castle Rocks**	**76.48**	**27**	P	**P**	**23 14 05.7**	**+1.0**
D23K	**Nanushuk River**	**77.03**	**22**	P	**P**	**23 14 07.9**	**+0.3**
E23K	**Chandalar**	**77.43**	**23**	P	**P**	**23 14 11.5**	**+1.5**
E23K				IAmb	IAmb	23 14 12.2	
	comp=Z,3.1nm,0.8s						
F24K	**Squaw Lake**	**78.11**	**23**	P	**P**	**23 14 14.8**	**+1.0**
D25K	**Kavik River**	**78.56**	**21**	P	**P**	**23 14 16.9**	**+0.7**
D25K				IAmb	IAmb	23 14 26.1	
	comp=Z,6.1nm,1.2s						
ILAR	**Eielson Array**	**78.71**	**26**	P	**P**	**23 14 16.1**	**-0.9**
	comp=Z,0.4nm,0.8s,baz=275,slow=7.5,SNR=2.5						
	comp=Z,0.4nm,0.8s						
CASY	**Casey**	**78.94**	**185**	P	**P**	**23 14 16.1**	**-1.9**
CASY				IAmb	IAmb	23 14 17.7	
	comp=Z,4.0nm,0.8s						
BMAR	**Burnt Mountain**	**79.39**	**23**	P	**P**	**23 14 21.8**	**+1.0**
I26K	**Coal Creek Min**	**80.22**	**25**	P	**P**	**23 14 24.7**	**-0.6**
I28M	**Miner Creek**	**81.53**	**25**	P	**P**	**23 14 33.8**	**+1.5**
G29M	**Pine Creek**	**82.00**	**23**	P	**P**	**23 14 35.2**	**+0.5**
G29M				IAmb	IAmb	23 14 36.5	
	comp=Z,5.0nm,0.9s						
H29M	**Whitestone**	**82.01**	**24**	P	**P**	**23 14 35.2**	**+0.4**
H29M				IAmb	IAmb	23 14 42.9	
	comp=Z,8.8nm,1.4s						
BRTR	**Keskin Array B**	**82.42**	**309**	P	**P**	**23 14 36.0**	**-1.6**
	comp=Z,0.5nm,0.7s,baz=73,slow=4.3,SNR=4.2						
	comp=Z,0.5nm,0.7s						
BORA	**Eskisehir**	**84.81**	**310**	P	**P**	**23 14 49.2**	**-0.6**
BURAR	**Bucovina Array**	**86.77**	**318**	P	**P**	**23 14 59.0**	**-0.5**
BUR08	**Bucovina Ar. S**	**86.77**	**318**	P	**P**	**23 14 59.3**	**-0.1**
BUR08				IAmb	IAmb	23 15 00.4	
	comp=Z,3.5nm,0.8s						
YKA	**Yellowknife Ar**	**92.91**	**23**	P	**P**	**23 15 28.5**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=308,slow=4.9,SNR=2.9						
	comp=Z,0.6nm,0.8s						
GERES	**GERESS Array B**	**93.66**	**322**	P	**P**	**23 15 31.5**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=344,slow=8.9,SNR=3.5						
	comp=Z,0.4nm,0.6s						

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*MDD **11** 23:04:45.2±0.6, 36°.50N×2°.84W, h19km±5km, mb_Lg2.6/25, Error ellipse: s-maj=3.9km s-min=2.3km az=170.0*

*CNRM **11** 23:04:46.9, 36°.56N×2°.84W, h64km*

*SFS **11** 23:04:46.5, 36°.61N×2°.82W, h27km, ML2.6/7, ML2.3/7, MLv2.2/7*

ISC 11 23:04:44.3±1.1, **36°.56N**±0°.02×**2°.86W**±0°.02, **h13**km±9km, **n41**, σ**1^{s}37**/63, **1D**, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENIJ	**Nijar**	**0.67**	**52**	Pg	**Pb**	**23 04 58.0**	**+0.2**
ENIJ				Sg	**Sg**	**23 05 06.0**	**-0.2**
ENIJ	**Nijar**	**0.67**	**52**	Pg	**Pb**	**23 04 58.0**	**+0.2**
ENIJ				Sg	**Sg**	**23 05 06.4**	**+0.2**
ENIJ				*i* IVmb_Lg		23 05 08.9	
EQUE	**Quentar**	**0.79**	**325**	⇓Pg	**Pb**	**23 05 00.5**	**+0.5**
EQUE				Sg	**Sg**	**23 05 08.8**	**-1.3**
EQUE				*i* IVmb_Lg		23 05 12.2	
EQTA	**Presa de Quent**	**0.80**	**324**	Pg	**Pb**	**23 05 00.5**	**+0.5**
EXCAB	**Granada**	**0.85**	**317**	Pg	**Pn**	**23 05 02.3**	**+0.3**
EXCAB				Sg	**Sb**	**23 05 13.5**	**+1.2**
EXGRA	**Granada**	**0.87**	**317**	Sg	**Sn**	**23 05 15.8**	**+1.0**
EGOR	**Sierra Gorda,**	**1.14**	**299**	Pn	**Pn**	**23 05 06.8**	**+0.7**
EGOR	**Sierra Gorda,**	**1.14**	**299**	Pg	**Pn**	**23 05 07.0**	**+0.9**
EGOR				Sg	**Sb**	**23 05 22.3**	**+1.5**
EGOR				*i* IVmb_Lg		23 05 26.2	
EQES	**Quesada**	**1.25**	**352**	Pg	**Pg**	**23 05 09.0**	**+0.5**
EQES				Sg	**Sn**	**23 05 27.0**	**+2.6**
EQES				*i* IVmb_Lg		23 05 29.6	
EMAL	**Malaga-Limoner**	**1.27**	**280**	Pn	**Pn**	**23 05 08.5**	**+0.7**
EMAL				Sn	**Sb**	**23 05 22.8**	**-1.6**
GOG	**Mont Gurugu**	**1.34**	**185**	P	**Pb**	**23 05 09.5**	**+0.2**
GOG	**Mont Gurugu**	**1.34**	**185**	S	**Sg**	**23 05 27.3**	**-0.2**
E0803	**Jimena (Jaen)**	**1.36**	**339**	Pg	**Pg**	**23 05 11.5**	**+0.9**
E0803				Sg	**Sg**	**23 05 28.4**	**+0.1**
TLOR	**Lorca, Murcia**	**1.44**	**40**	Pg	**Pb**	**23 05 10.9**	**-0.1**
TLOR				Sg	**Sb**	**23 05 29.6**	**+0.3**
E0802	**Ubeda,Jaen**	**1.52**	**345**	Pg	**Pg**	**23 05 14.2**	**+0.6**
E0802				Sg	**Sg**	**23 05 33.9**	**+0.6**
EMIJ	**Mijas**	**1.54**	**271**	Pn	**Pn**	**23 05 10.5**	**-0.9**
EMIJ	**Mijas**	**1.54**	**271**	Pn	**Pn**	**23 05 10.3**	**-1.1**
EMIJ				Sn	**Sn**	**23 05 27.6**	**-3.7**
EMIJ				*i* IVmb_Lg		23 05 31.6	
PALE	**Palemas**	**1.60**	**213**	P	**Pn**	**23 05 13.1**	**+0.9**
PALE	**Palemas**	**1.60**	**213**	S	**Sn**	**23 05 33.4**	**+0.7**
EZAR	**Zarzadilla de**	**1.61**	**35**	Pg	**Pb**	**23 05 14.5**	**+0.6**
EZAR				Sg	**Sg**	**23 05 36.9**	**+0.7**
EZAR				*i* IVmb_Lg		23 05 39.5	
TAF	**Taforalt**	**1.78**	**168**	P	**Pb**	**23 05 16.0**	**-0.8**
CART	**Cartagena**	**1.81**	**55**	Pn	**Pn**	**23 05 14.1**	**-1.0**
CART				Sn	**Sn**	**23 05 34.5**	**-3.4**
CART	**Cartagena**	**1.81**	**55**	P	**Pn**	**23 05 15.6**	**+0.6**
EADA	**Adamuz**	**2.11**	**320**	Pg	**Pg**	**23 05 24.6**	**-0.2**
EADA				Sn	**Sn**	**23 05 44.8**	**-0.5**
EADA				Sg	**Sg**	**23 05 51.2**	**-0.9**
EADA				*i* IVmb_Lg		23 05 55.8	
AKLM	**AKL**	**2.20**	**202**	P	**Pn**	**23 05 21.4**	**+0.9**
AKLM	**AKL**	**2.20**	**202**	S	**Sn**	**23 05 47.2**	**-0.5**
SMIR	**Smir Dam**	**2.22**	**248**	P	**Pn**	**23 05 21.7**	**+1.0**
JBK	**JBK**	**2.23**	**174**	P	**Pn**	**23 05 22.3**	**+1.2**
JBK	**JBK**	**2.23**	**174**	S	**Sn**	**23 05 49.3**	**+0.7**
PSIM	**Granatula de C**	**2.37**	**343**	Pg	**Pb**	**23 05 26.4**	**-0.4**
PSIM				Sg	**Sg**	**23 05 59.1**	**-1.3**
ECAB	**El Cabril**	**2.54**	**307**	Pg	**Pb**	**23 05 31.3**	**+1.6**
ECAB				Sg	**Sb**	**23 06 02.8**	**+2.0**
ECAB				*i* IVmb_Lg		23 06 08.4	
EVIV	**Cofrentes, Val**	**3.04**	**27**	Pg	**Pg**	**23 05 42.9**	**+0.4**
EVIV				Sg	**Sg**	**23 06 19.7**	**-2.1**
EVIV				*i* IVmb_Lg		23 06 33.1	
PAB	**San Pablo**	**3.20**	**339**	Pn	**Pn**	**23 05 36.9**	**+2.5**
PAB				Pg	**Pg**	**23 05 45.2**	**-0.5**
PAB				Sg	**Sg**	**23 06 26.8**	**-0.4**
PAB				*i* IVmb_Lg		23 06 33.6	
ESDC	**Sonseca Array**	**3.23**	**345**	Pg	**Pg**	**23 05 45.9**	**-0.3**
ESDC				Sg	**Sg**	**23 06 27.2**	**-0.8**
ESBB	**Sonseca Array**	**3.23**	**345**	Pg	**Pg**	**23 05 44.4**	**-1.8**
ESBB				Sg	**Sg**	**23 06 26.1**	**-2.0**
PBAR	**Barrancos**	**3.70**	**297**	*e*Sn	**Sn**	**23 06 22.7**	**-1.8**
PVAQ	**Vaqueiros**	**3.98**	**284**	Pn	**Pn**	**23 05 45.7**	**+0.8**
PVAQ	**Vaqueiros**	**3.98**	**284**	*e*Pn	**Pn**	**23 05 46.2**	**+1.3**
PVAQ	**Vaqueiros**	**3.98**	**284**	P	**Pn**	**23 05 45.3**	**+0.3**
ETOR	**Torete**	**4.30**	**8**	Sg	**Sg**	**23 06 59.6**	**-2.7**
ETOR				*i* IVmb_Lg		23 07 00.4	
EPLA	**Plasencia**	**4.32**	**325**	Sg	**Sg**	**23 06 59.3**	**-3.6**
EPLA				*i* IVmb_Lg		23 07 09.4	

IDC 11 23:07:28.6±6.2, **11°.14N**×**95°.63E**, **h0**km, **mb3.8**/9, **mbtmp3.8**/9, **MS3.5**/4, **Error ellipse: s-maj=136.9km s-min=50.1km az=138.0**, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**8.91**	**158**	LR	LR	23 14 11.9	
	comp=Z,196nm,18.1s,baz=30,slow=45						
JOW	**Kunigami**	**34.45**	**58**	LR	LR	23 29 24.6	
	comp=Z,67nm,18.9s,baz=336,slow=38						
MKAR	**Makanchi Array**	**37.29**	**345**	P	P	23 14 42.2	-0.1
	0.7nm,0.8s,baz=164,slow=10,SNR=4.5						
	0.7nm,0.8s						
SONM	**Songino Array**	**37.68**	**12**	P	P	23 14 44.6	-1.1
	0.6nm,0.6s,baz=205,slow=9.5,SNR=4.6						
	0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**41.80**	**344**	P	P	23 15 19.5	-0.3
	1.1nm,0.9s,baz=165,slow=7.6,SNR=9.2						
	1.1nm,0.9s						
ZALV	**Zalesovo Beam**	**43.56**	**351**	P	P	23 15 34.8	+0.7
	0.4nm,0.4s,baz=165,slow=8.5,SNR=3.7						
	0.4nm,0.4s						
BVAR	**Borovoye Array**	**46.43**	**339**	P	P	23 15 57.1	+0.1
	0.5nm,0.5s,baz=139,slow=8.3,SNR=5.0						
	0.5nm,0.5s						
ARTI	**Arti**	**53.55**	**335**	LR	LR	23 41 52.3	
	comp=Z,31nm,18.6s,baz=122,slow=38						
MMAI	**Mount Meron Ar**	**59.10**	**302**	LR	LR	23 45 47.0	
	comp=Z,49nm,18.1s,baz=32,slow=39						
BRTR	**Keskin Array B**	**61.47**	**309**	P	P	23 17 46.2	-1.2
	0.8nm,0.6s,baz=119,slow=8.6,SNR=7.6						
	0.8nm,0.6s						
H04N2	**CROZET ISLANDS**	**69.27**	**211**	T	T	00 34 39.1	
	baz=51,slow=74						
H04N1	**CROZET ISLANDS**	**69.28**	**211**	T	T	00 34 37.9	
	baz=51,slow=74						
H04N3	**CROZET ISLANDS**	**69.29**	**211**	T	T	00 34 45.8	
	baz=51,slow=74						
FINES	**FINESS Array B**	**70.54**	**331**	P	P	23 18 45.8	+0.7
	1.8nm,0.8s,baz=61,slow=8.6,SNR=4.0						
	1.8nm,0.8s						
GERES	**GERESS Array B**	**76.40**	**318**	P	P	23 19 20.6	+0.6
	0.8nm,0.9s,baz=98,slow=8.2,SNR=4.5						
	0.8nm,0.9s						
HFS	**Hagfors**	**76.40**	**329**	P	P	23 19 20.3	+0.6
	5.4nm,1.1s,baz=131,slow=4.4,SNR=2.1						
	5.4nm,1.1s						

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*IDC **11** 23:23:37.9±0.4, 54°.91S×127°.31W, h0km, mb4.4/13, mbtmp4.3/13, MS4.7/38, Error ellipse: s-maj=20.5km s-min=14.7km az=159.0*

*MOS **11** 23:23:40.0±1.7, 55°.27S×126°.92W, h10km, mb5.2/11, Error ellipse: s-maj=24.4km s-min=17.8km az=57.8*

*BJI **11** 23:23:41.0, 55°.10S×127°.00W, h10km, Ms5.2/9, Ms7 5.0/10*

*NEIC **11** 23:23:41.3±1.7, 55°.1S±0°.1×127°.1W±0°.2, h10km±1km, mb5.2/82, Error ellipse: s-maj=21.3km s-min=15.6km az=332.0*

*GCMT **11** 23:23:44.3±0.1, 55°.18S±0°.01×127°.14W±0°.01, h12km, MW5.2/142, Moment Tensor Solution. s94,c147; s142,c242; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.21±.01; $M_{\theta\theta}$0.77±.01; $M_{\phi\phi}$-0.56±.01; $M_{r\theta}$-0.01±.03; $M_{\theta\phi}$0.67±.01; $M_{\phi r}$0.13±.03; Best double couple: $M_0$0.95900×10^{17} NP1:ϕ_s112.00000°, δ81.00000°, λ-6.00000°. NP2:ϕ_s203.00000°, δ84.00000°, λ-171.00000°. Principal axes: T 1.0540, Plg2.0000°, Azm337.0000°; N -0.1880, Plg79.0000°, Azm237.0000°; P -0.8650, Plg11.0000°, Azm68.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 23:23:40.7±0.3, **54°.96S**±0°.07×**127°.16W**±0°.06, **h10**km, **n304**, σ**1^{s}63**/264, **mb5.1**/59, **MS4.8**/45, **9C-12D**, **Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMAI	**San Martin Ant**	**30.08**	**140**	P	**P**	**23 29 48.9**	**-0.7**
SMAI				IAmb	IAmb	23 29 56.9	
	comp=Z,49nm,1.7s						
PMSA	**Palmer Station**	**31.80**	**134**	LR	LR	23 39 28.8	
	comp=Z,1µm,19.3s,baz=254,slow=30						
USHA	**Ushuaia**	**32.91**	**114**	LR	LR	23 40 43.8	
	comp=Z,6.9nm,20.2s,baz=190,slow=31						
VNDA	**Vanda**	**33.04**	**202**	P	**P**	**23 30 17.3**	**+1.7**
VNDA	**Vanda**	**33.04**	**202**	P	**P**	**23 30 15.6**	**0.0**
	comp=Z,3.5nm,0.9s,baz=92,slow=8.7,SNR=12						
VNDA				PcP	**PcP**	**23 32 58.5**	**-0.3**
	comp=Z,2.2nm,0.9s,baz=263,slow=5.8,SNR=4.0						
VNDA				LR	LR	23 40 46.4	
	comp=Z,781nm,18.1s,baz=85,slow=31						
	comp=Z,3.5nm,0.9s						
VNDA	**Vanda**	**33.04**	**202**	P	**P**	**23 30 17.3**	**+1.7**
VNDA				pmax	pmax		
	comp=Z,20nm,1.3s						
ESPZ	**Base Esperanza**	**35.16**	**133**	P	**P**	**23 30 35.4**	**+1.3**
ESPZ				IAmb	IAmb	23 30 40.4	
	comp=Z,74nm,1.9s						
QSPA	**South Pole Qui**	**35.22**	**180**	P	**P**	**23 30 35.2**	**+0.4**
QSPA				IAmb	IAmb	23 30 43.4	
	comp=Z,42nm,1.1s						
QSPA	**South Pole Qui**	**35.22**	**180**	P	**P**	**23 30 35.2**	**+0.4**
	comp=Z,18nm,1.0s,baz=96,slow=7.4,SNR=27						
QSPA				LR	LR	23 43 30.0	
	comp=Z,2µm,18.5s,baz=90,slow=34						
	comp=Z,18nm,1.0s						
COYC	**Coyhaique**	**35.57**	**98**	P	**P**	**23 30 37.4**	**-0.5**
COYC				IAmb	IAmb	23 30 44.8	
	comp=Z,38nm,1.3s						
TBI	**Tubuai**	**35.67**	**323**	*e*P	P	23 30 33.4	-5.5
	comp=Z,459nm,25.0s						
TBI				*e*SS	SS	23 38 48.1	-2.3
	comp=Z,2µm,26.0s						
TBI				*e*LR	LR	23 40 11.9	
	comp=Z,3µm,25.0s						
TBI				*e*LR	LR	23 40 16.2	
	comp=Z,16µm,26.0s						
BELA	**Belgrano 2**	**37.52**	**160**	P	**P**	**23 30 54.3**	**+0.1**
LR03	**Panguipulli**	**39.14**	**90**	P	**P**	**23 31 08.2**	**+0.1**
H03S2	**Juan Fernandez**	**39.42**	**78**	T	T	00 13 02.9	
	baz=220,slow=74,SNR=163						
H03S1	**Juan Fernandez**	**39.42**	**78**	T	T	00 13 03.2	
	baz=220,slow=74,SNR=175						
H03S3	**Juan Fernandez**	**39.44**	**78**	T	T	00 13 07.0	
	baz=220,slow=74,SNR=160						
PLCA	**Paso Flores**	**39.45**	**93**	P	**P**	**23 31 10.5**	**-0.3**
PLCA	**Paso Flores**	**39.45**	**93**	P	**P**	**23 31 08.6**	**-2.2**
	comp=Z,2.0nm,0.8s,baz=186,slow=8.2,SNR=5.0						
PLCA				LR	LR	23 43 48.5	
	comp=Z,1µm,18.4s,baz=229,slow=31						
	comp=Z,2.0nm,0.8s						
PLCA	**Paso Flores**	**39.45**	**93**	P	**P**	**23 31 10.5**	**-0.3**
PLCA				pmax	pmax		
	comp=Z,25nm,1.3s						
PLCA	**Paso Flores**	**39.45**	**93**	*e*P	P	23 31 05.1	-5.7
H03N3	**Juan Fernandez**	**39.70**	**77**	T	T	00 13 10.5	
	baz=224,slow=72,SNR=396						
H03N2	**Juan Fernandez**	**39.71**	**77**	T	T	00 13 08.9	
	baz=224,slow=72,SNR=606						
H03N1	**Juan Fernandez**	**39.72**	**77**	T	T	00 13 19.7	
	baz=224,slow=72,SNR=353						
MRZ	**Mangatainoka R**	**39.87**	**267**	P	**P**	**23 31 15.6**	**+1.4**
RTZ	**Ruatahuna**	**40.42**	**270**	P	**P**	**23 31 21.0**	**+2.1**
RTZ				IAmb	IAmb	23 31 23.5	
	comp=Z,45nm,1.2s						
RPZ	**Rata Peaks**	**40.51**	**260**	LR	LR	23 43 46.0	
	comp=Z,1µm,21.8s,baz=126,slow=30						
URZ	**Urewera**	**40.59**	**271**	LR	LR	23 44 46.6	
	comp=Z,1µm,18.7s,baz=212,slow=31						
PPT2	**Papeete2**	**41.07**	**326**	*e*S	**S**	**23 37 31.4**	**-5.6**
	comp=Z,270nm,30.2s						
PPT2				*e*SS	**SS**	**23 40 41.3**	**+2.0**
	comp=Z,992nm,26.8s						
PPT2				*e*LR	LR	23 42 38.8	
	comp=Z,3µm,28.0s						
PPT2				*e*LR	LR	23 42 46.5	
	comp=Z,4µm,23.8s						
PPT	**Papeete**	**41.09**	**326**	LR	LR	23 44 39.9	
	comp=Z,2µm,18.2s,baz=131,slow=31						
BI02	**San Fabin de**	**41.78**	**88**	P	**P**	**23 31 29.8**	**-0.3**
BO02	**Sierra Bellavi**	**43.38**	**86**	P	**P**	**23 31 43.2**	**0.0**
BO02				IAmb	IAmb	23 31 49.4	
	comp=Z,48nm,1.4s						
RAO	**Raoul Island**	**44.28**	**284**	LR	LR	23 44 17.2	
	comp=Z,256nm,21.8s,baz=134,slow=28						
LMEL	**Las Melosas**	**44.39**	**86**	P	**P**	**23 31 52.1**	**+0.7**
MT13	**San Alfonso**	**44.41**	**86**	P	**P**	**23 31 52.5**	**+1.0**
MT13				IAmb	IAmb	23 31 53.3	
	comp=Z,84nm,1.9s						
PEL	**Peldehue**	**44.62**	**85**	P	**P**	**23 31 53.9**	**+0.8**
PEL				IAmb	IAmb	23 32 00.1	
	comp=Z,32nm,1.1s						
PEL	**Peldehue**	**44.62**	**85**	P	**P**	**23 31 53.9**	**+0.8**
PEL				pmax	pmax		
	comp=Z,32nm,1.1s						
VA03	**San Esteban**	**44.97**	**84**	P	**P**	**23 31 55.6**	**-0.4**
VA03				IAmb	IAmb	23 32 03.2	
	comp=Z,27nm,1.0s						
CO02	**Combarbal**	**45.87**	**83**	P	**P**	**23 32 02.7**	**-0.4**
TRQA	**Tornquist**	**46.16**	**97**	P	**P**	**23 32 04.8**	**-0.4**
TRQA				IAmb	IAmb	23 32 12.2	
	comp=Z,31nm,1.2s						
TRQA	**Tornquist**	**46.16**	**97**	P	**P**	**23 32 04.8**	**-0.4**
TRQA				pmax	pmax		
	comp=Z,31nm,1.2s						
CO03	**El Pedregal**	**46.31**	**83**	P	**P**	**23 32 07.4**	**+0.8**
VNA3	**Neumayer Olymp**	**46.62**	**157**	⇑P	**P**	**23 32 08.0**	**-0.4**
	comp=Z,8.2nm,0.7s						
GO04	**Tololo Observa**	**46.75**	**82**	P	**P**	**23 32 10.0**	**-0.1**
ZON	**Zonda**	**46.94**	**85**	P	**P**	**23 32 10.6**	**-0.9**

ZON				IAmb	IAmb	23 32 17.7	
	comp=Z,18nm,1.1s						
ZON	Zonda	46.94	85	P	P	23 32 10.6	-0.9
ZON				pmax	pmax		
	comp=Z,18nm,1.1s						
TAOE	Nuku Hiva Isla	47.13	342	eS	S	23 39 02.8	-2.6
	comp=Z,355nm,25.1s						
TAOE				eLR	LR	23 45 30.0	
	comp=Z,3µm,25.1s						
VNA2	Neumayer--Watz	47.36	157	⇑P	P	23 32 14.2	+0.1
	comp=Z,8.1nm,0.6s,baz=221,slow=9.0						
VNA1	Neumayer--Stat	47.37	157	⇑P	P	23 32 14.4	+0.2
	comp=Z,30nm,1.2s						
SNAA	Sanae	47.77	159	⇑P	P	23 32 16.8	-0.7
	comp=Z,34nm,0.6s						
SNAA	Sanae	47.77	159	P	P	23 32 16.2	-1.3
SNAA				IAmb	IAmb	23 32 27.9	
	comp=Z,28nm,1.3s						
SNAA	Sanae	47.77	159	P	P	23 32 16.1	-1.3
	comp=Z,4.8nm,1.0s,baz=221,slow=8.3,SNR=11						
SNAA				LR	LR	23 52 28.0	
	comp=Z,2µm,18.2s,baz=239,slow=36						
	comp=Z,4.8nm,1.0s						
SNAA	Sanae	47.77	159	c iP	P	23 32 16.7	-0.7
SNAA				pmax	pmax		
	comp=Z,50nm,2.2s						
TROLL	Troll, Antarti	48.55	161	⇑P	P	23 32 23.5	0.0
	comp=Z,135nm,0.8s						
AC01	Pan de Azucar	49.93	79	P	P	23 32 34.3	-0.2
AC01				IAmb	IAmb	23 32 41.0	
	comp=Z,27nm,1.1s						
AC02	Maricunga	50.23	80	P	P	23 32 37.0	-0.4
PB14	IPOC Station P	51.23	78	P	P	23 32 44.0	-0.7
PB14				IAmb	IAmb	23 32 50.5	
	comp=Z,29nm,1.1s						
GO02	Mina Guanaco	51.27	79	P	P	23 32 44.0	-0.9
CASY	Casey	51.51	206	P	P	23 32 46.6	+0.8
PB05	IPOC Station P	52.73	76	P	P	23 32 54.7	-1.0
PB05				IAmb	IAmb	23 33 02.4	
	comp=Z,34nm,1.0s						
PB06	IPOC Station P	53.20	77	P	P	23 32 58.4	-0.8
PB03	IPOC Station P	53.62	76	P	P	23 33 01.4	-0.8
PB03				IAmb	IAmb	23 33 09.1	
	comp=Z,30nm,0.9s						
AF01	San Pedro de A	53.79	78	P	P	23 33 04.6	+0.9
PB09	IPOC Station P	54.11	76	P	P	23 33 07.4	+1.6
PB09				IAmb	IAmb	23 33 13.0	
	comp=Z,41nm,1.3s						
PB01	IPOC Station P	54.57	76	P	P	23 33 09.5	+0.4
PB01				IAmb	IAmb	23 33 16.4	
	comp=Z,27nm,1.0s						
TA02	Huaiquique	54.83	74	P	P	23 33 11.5	+0.6
TA02				IAmb	IAmb	23 33 13.5	
	comp=Z,25nm,0.8s						
ITQB	Itaqui	55.28	93	P	P	23 33 13.8	-0.2
ITQB	Itaqui	55.28	93	eP	P	23 33 12.5	-1.5
PLTB	Pedras Altas	55.46	97	P	P	23 33 13.9	-1.5
PLTB				IAmb	IAmb	23 33 21.2	
	comp=Z,34nm,1.1s						
PLTB	Pedras Altas	55.46	97	eP	P	23 33 13.6	-1.7
PB11	IPOC Station P	55.50	75	P	P	23 33 16.8	+0.8
MSVF	Nonsavu	55.65	289	LR	LR	23 51 45.6	
	comp=Z,192nm,21.8s,baz=261,slow=30						
GO01	Chusmiza	55.83	75	P	P	23 33 18.7	0.0
GO01				IAmb	IAmb	23 33 25.2	
	comp=Z,20nm,1.1s						
SYO	Syowa Base	55.96	174	⇓epP	P	23 33 18.5	+0.2
SYO	Syowa Base	55.96	174	⇓ePP	PP	23 35 20.2	-2.3
CPSB	Cacapava Do Su	56.56	96	eP	P	23 33 22.7	-0.5
PB16	IPOC Station P	56.73	74	P	P	23 33 24.9	-0.3
PB18	Visviri	57.35	73	P	P	23 33 30.6	+1.0
CPUP	Villa Florida	57.40	90	P	P	23 33 27.9	-1.2
CPUP	Villa Florida	57.40	90	P	P	23 33 28.4	-0.8
	comp=Z,1.7nm,1.0s,baz=166,slow=3.0,SNR=7.7						
CPUP				LR	LR	23 54 45.1	
	comp=Z,733nm,18.5s,baz=86,slow=32						
	comp=Z,1.7nm,1.0s						
MAW	Mawson	57.52	185	LR	LR	23 55 52.9	
	comp=Z,540nm,20.3s,baz=164,slow=34						
NNA	Nana	58.07	63	LR	LR	23 49 55.3	
	comp=Z,41nm,20.7s,baz=211,slow=27						
DZM	Mont Dzumac	58.71	276	eLR	LR	23 50 49.0	
	comp=Z,776nm,24.5s						
CNLB	Canela	58.86	98	eP	P	23 33 39.1	-0.4
SJPY	San Joaquin	59.12	90	eP	P	23 33 39.7	-1.6
LPAZ	La Paz	59.16	74	P	P	23 33 42.4	+0.1
LPAZ	La Paz	59.16	74	P	P	23 33 42.8	+0.5
	comp=Z,14nm,0.8s,baz=200,slow=3.4,SNR=34						
LPAZ				LR	LR	23 52 54.1	
	comp=Z,819nm,22.0s,baz=197,slow=30						
	comp=Z,14nm,0.8s						
LPAZ	La Paz	59.16	74	eP	P	23 33 39.7	-2.6
MURT	Porto Murtinho	60.84	86	eP	P	23 33 51.0	-2.1
ATAH	Atahualpa	61.44	58	LR	LR	23 54 30.3	
	comp=Z,956nm,18.6s,baz=219,slow=30						
PTGB	Pitanga	61.67	93	eP	P	23 33 58.2	-0.6
BBSD	Serra de San D	62.66	81	eP	P	23 34 04.5	-0.9
AQDB	Aquidauana	62.87	87	P	P	23 34 07.7	+0.9
AQDB				IAmb	IAmb	23 34 12.7	
	comp=Z,14nm,1.1s						
LDASE	Londrina, Braz	63.24	93	eP	P	23 34 08.2	-1.0
SIV	San Ignacio	63.35	80	LR	LR	23 58 01.7	
	comp=Z,301nm,18.9s,baz=254,slow=32						
CZSB	Cruzeiro do Su	63.81	64	P	P	23 34 13.0	0.0
RPRD	Ribas do Rio P	64.02	89	eP	P	23 34 13.7	-0.7
PTLB	Pontes e Lacer	64.89	81	P	P	23 34 18.9	-1.1
PTLB				IAmb	IAmb	23 34 26.4	
	comp=Z,16nm,1.1s						
PTLB	Pontes e Lacer	64.89	81	eP	P	23 34 18.5	-1.5
STKA	Stephens Creek	65.25	249	P	P	23 34 22.9	+0.6
STKA	Stephens Creek	65.25	249	P	P	23 34 19.8	-2.5
	comp=Z,4.8nm,0.9s,baz=119,slow=9.6,SNR=5.5						
STKA				LR	LR	23 56 54.2	
	comp=Z,559nm,21.1s,baz=159,slow=31						
	comp=Z,4.8nm,0.9s						
STKA	Stephens Creek	65.25	249	⇓eP	P	23 34 22.4	+0.1
VAO	Valinhos	65.93	96	P	P	23 34 27.0	+0.1
VAO				IAmb	IAmb	23 34 33.5	
	comp=Z,26nm,1.3s						
VILB	Vilhena	66.30	78	P	P	23 34 28.4	-0.9
VILB	Vilhena	66.30	78	eP	P	23 34 28.4	-0.9
SALV	Santo Antonio	66.50	84	eP	P	23 34 29.8	-0.7
ITRB	Iturama	66.56	91	eP	P	23 34 30.3	-0.6
OTAV	Otavalo	67.84	54	P	P	23 34 41.0	+1.5
OTAV	Otavalo	67.84	54	P	P	23 34 41.0	+1.5
OTAV				pmax	pmax		
	comp=Z,60nm,1.9s						
OTAV	Otavalo	67.84	54	eP	P	23 34 37.9	-1.7
ARAG	Araguaiana, MT	68.88	87	eP	P	23 34 44.8	-0.7
IPMB	Ipameri, GO	69.15	92	eP	P	23 34 45.7	-1.6
PDRB	Porto dos Gac	69.35	81	eP	P	23 34 47.2	-1.2
PMNB	Patos De Minas	69.73	94	eP	P	23 34 50.5	-0.5
FLOC	Florencia	70.34	56	P	P	23 34 56.1	+1.5
BDFB	Brasilia	71.12	90	P	P	23 34 58.8	-0.7
	comp=Z,2.3nm,0.6s,baz=214,slow=11,SNR=4.0						
BDFB				LR	LR	00 03 09.9	
	comp=Z,1µm,18.9s,baz=205,slow=33						
	comp=Z,2.3nm,0.6s						
TEFE	Tefe	71.62	69	eP	P	23 35 01.2	-1.1
SNDB	Serra Nova Dou	72.17	85	eP	P	23 35 04.8	-0.8
HNR	Honiara	72.52	279	LR	LR	00 00 12.9	
	comp=Z,135nm,21.1s,baz=102,slow=30						
JANB	Januaria	73.72	93	eP	P	23 35 14.1	-0.8
NPGB	Novo Progresso	73.84	79	eP	P	23 35 14.4	-1.1
MACA	Manacapuru-AM	74.06	72	P	P	23 35 15.2	-1.6
MACA	Manacapuru-AM	74.06	72	eP	P	23 35 15.6	-1.2
SOCE	Pocosol	74.23	44	P	P	23 35 18.7	+1.0
RUSC	La Rusia	75.33	56	P	P	23 35 24.9	+0.2
RUSC				IAmb	IAmb	23 35 32.9	
	comp=Z,15nm,0.8s						
SDBA	SAO DESIDERIO	75.50	91	eP	P	23 35 24.6	-0.6
ITTB	Itaituba	75.82	77	eP	P	23 35 25.6	-1.3
AS31	Alice Springs	75.88	249	P	P	23 35 26.4	-0.9
ASAR	Alice Springs	75.88	249	P	P	23 35 26.2	-1.1
ASAR	Alice Springs	75.88	249	P	P	23 35 25.9	-1.4
	comp=Z,4.1nm,0.7s,baz=143,slow=5.6,SNR=34						
ASAR				LR	LR	00 04 31.4	
	comp=Z,667nm,19.2s,baz=132,slow=32						
	comp=Z,4.1nm,0.7s						
ASAR	Alice Springs	75.88	249	P	P	23 35 26.2	-1.1
ESPN	Las Esperanzas	76.00	43	P	P	23 35 30.6	+2.7
MTO3	Montecristo	76.13	38	P	P	23 35 31.2	+2.4
MTO3				IAmb	IAmb	23 35 40.0	
	comp=Z,21nm,1.2s						
H01W1	Cape Leeuwin H	76.25	228	T	T	00 59 59.1	
	baz=148,slow=75,SNR=87						
H01W2	Cape Leeuwin H	76.25	228	T	T	01 00 03.1	
	baz=148,slow=75,SNR=91						
H01W3	Cape Leeuwin H	76.27	228	T	T	01 00 02.2	
	baz=148,slow=75,SNR=62						
NWAO	Narrogin (SRO)	76.56	231	LR	LR	00 01 06.9	
	comp=Z,282nm,19.2s,baz=97,slow=29						
SMTB	Santa Maria do	76.81	87	eP	P	23 35 32.0	-0.7
MAL2	Monte Alegre,	78.62	77	P	P	23 35 42.4	-0.3
MAL2				IAmb	IAmb	23 35 49.5	
	comp=Z,29nm,1.0s						
WRA	Warramunga Arr	78.65	252	P	P	23 35 42.1	-0.8
	comp=Z,9.0nm,1.0s,baz=144,slow=5.2,SNR=33						
WRA				LR	LR	00 06 30.0	
	comp=Z,265nm,19.4s,baz=158,slow=33						
	comp=Z,9.0nm,1.0s						
WRAB	Tennant Creek	78.65	252	P	P	23 35 42.7	-0.2
WRAB	Tennant Creek	78.65	252	⇓eP	P	23 35 43.0	+0.1
WRAB				pmax	pmax		
	comp=Z,15nm,1.3s						
BOAV	Boa Vista	78.78	69	P	P	23 35 42.9	-0.6
BOAV				IAmb	IAmb	23 35 50.7	
	comp=Z,26nm,1.1s						
BOAV	Boa Vista	78.78	69	eP	P	23 35 43.0	-0.6
SDV	Santo Domingo	79.11	57	P	P	23 35 45.6	+0.1
SDV	Santo Domingo	79.11	57	LR	LR	00 07 15.2	
	comp=Z,305nm,18.2s,baz=232,slow=33						
SDV	Santo Domingo	79.11	57	eP	P	23 35 46.0	+0.5
PMG	Port Moresby	79.89	268	LR	LR	00 07 35.1	
	comp=Z,244nm,18.5s,baz=161,slow=33						
LPIG	La Paz	80.06	16	LR	LR	00 03 18.1	
	comp=Z,456nm,18.1s,baz=190,slow=30						
ZAIG	Zacatecas	80.23	23	P	P	23 35 52.9	+1.4
BAUV	El Baul	80.43	59	P	P	23 35 51.1	-1.3
BAUV				IAmb	IAmb	23 35 58.3	
	comp=Z,26nm,0.9s						
PCRV	Puerto La Cruz	83.19	62	LR	LR	00 09 22.8	
	comp=Z,761nm,18.1s,slow=33						
HPIG		83.63	19	P	P	23 36 10.7	+1.5
HPIG				IAmb	IAmb	23 36 17.3	
	comp=Z,14nm,0.9s						
FITZ	Fitzroy Crossi	84.83	246	P	P	23 36 15.5	0.0
FITZ	Fitzroy Crossi	84.83	246	LR	LR	00 08 28.7	
	comp=Z,444nm,21.6s,baz=150,slow=32						
MDP	Montagnes des	85.34	74	LR	LR	00 09 06.1	
	comp=Z,267nm,20.5s,baz=208,slow=32						
TX31	Lajitas Ar. Si	86.35	20	P	P	23 36 24.4	+1.7
TXAR	Lajitas Array	86.35	20	P	P	23 36 24.3	+1.6
TXAR	Lajitas Array	86.35	20	P	P	23 36 22.2	-0.4
	comp=Z,0.3nm,0.7s,baz=195,slow=5.0,SNR=33						
TXAR				LR	LR	00 06 44.5	
	comp=Z,127nm,21.9s,baz=194,slow=30						
	comp=Z,0.3nm,0.7s						
TXAR	Lajitas Array	86.35	20	P	P	23 36 24.3	+1.6
ESJX	Sierra Juarez	87.15	10	P	P	23 36 27.7	+1.1
ESJX				IAmb	IAmb	23 36 35.4	
	comp=Z,17nm,1.1s						
SAND	Sanderson	87.27	22	P	P	23 36 27.8	+0.7
VHRN	Van Horn	87.50	19	P	P	23 36 29.2	+0.9
VHRN				IAmb	IAmb	23 36 36.1	
	comp=Z,12nm,1.1s						
JCT	Junction City	88.29	23	P	P	23 36 32.2	+0.3
JCT				IAmb	IAmb	23 36 39.9	
	comp=Z,18nm,1.1s						
JCT	Junction City	88.29	23	P	P	23 36 32.2	+0.3
JCT				pmax	pmax		
	comp=Z,18nm,1.1s						
MNTX	Cornudas Mount	88.32	18	P	P	23 36 33.0	+1.0
MNTX				IAmb	IAmb	23 36 39.7	
	comp=Z,14nm,1.2s						
OZNA	Ozona	88.42	22	P	P	23 36 33.4	+0.9
OZNA				IAmb	IAmb	23 36 40.6	
	comp=Z,19nm,1.0s						
MNHN	Monahans	88.48	21	P	P	23 36 34.2	+1.3
MNHN				IAmb	IAmb	23 36 45.2	
	comp=Z,25nm,1.6s						
PFO	Pinyon Flats O	88.69	9	LR	LR	00 06 53.4	
	comp=Z,569nm,20.8s,baz=222,slow=29						
HKT	Hockley	88.75	27	⇑eP	P	23 36 37.9	+3.9
HKT				pmax	pmax		
	comp=Z,30nm,1.6s						
SJG	San Juan	89.23	56	LR	LR	00 11 48.9	
	comp=Z,185nm,21.1s,baz=238,slow=32						
X16A	Lo Mia Camp, P	90.04	13	P	P	23 36 41.2	+1.0
V12A	Nelson	90.94	10	P	P	23 36 45.0	+0.7
APMT	Aspermont	90.95	22	P	P	23 36 45.7	+1.4
APMT				IAmb	IAmb	23 36 52.4	
	comp=Z,17nm,1.2s						
WUAZ	Wupatki	91.13	13	P	P	23 36 46.0	+0.7
WUAZ				IAmb	IAmb	23 36 53.6	
	comp=Z,14nm,1.1s						
ANMO	Albuquerque	91.30	17	P	P	23 36 45.8	-0.3
ANMO				IAmb	IAmb	23 36 54.4	
	comp=Z,9.8nm,0.9s						
ANMO	Albuquerque	91.30	17	LR	LR	00 11 00.8	
	comp=Z,295nm,18.3s,baz=290,slow=31						
ANMO	Albuquerque	91.30	17	⇓eP	P	23 36 48.8	+2.7
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SHPR	Sheep Range	91.68	10	P	P	23 36 49.2	+1.4
U15A	North Rim	91.92	12	P	P	23 36 50.5	+1.5
U15A				IAmb	IAmb	23 37 01.7	
	comp=Z,15nm,1.2s						
H11S2	WAKE ISLAND Hy	92.07	300	T	T	01 19 00.5	
	baz=148,slow=76,SNR=185						
H11S3	WAKE ISLAND Hy	92.08	300	T	T	01 19 00.5	
	baz=148,slow=76,SNR=98						
H11S1	WAKE ISLAND Hy	92.08	300	T	T	01 19 00.5	
	baz=148,slow=76,SNR=72						
BATI	Baumata	92.44	249	LR	LR	00 14 25.0	
	comp=Z,583nm,20.2s,baz=174,slow=33						
PRN	Pahroc Range	92.59	10	P	P	23 36 53.8	+1.8
PRN				IAmb	IAmb	23 37 05.3	
	comp=Z,14nm,1.3s						
H11N3	WAKE ISLAND Hy	93.00	301	T	T	01 20 04.2	
	baz=157,slow=79,SNR=20						
H11N1	WAKE ISLAND Hy	93.01	301	T	T	01 20 18.9	
	baz=157,slow=79,SNR=21						
H11N2	WAKE ISLAND Hy	93.02	301	T	T	01 20 07.0	
	baz=157,slow=79,SNR=24						
NVAR	Mina Array Bea	93.33	7	P	P	23 36 55.1	-0.3
	comp=Z,0.2nm,0.5s,baz=194,slow=8.6,SNR=5.0						
NVAR				LR	LR	00 10 15.6	
	comp=Z,657nm,19.2s,baz=182,slow=30						
	comp=Z,0.2nm,0.5s						
BOSA	Boshof	93.45	156	LR	LR	00 15 04.2	
	comp=Z,642nm,19.9s,baz=200,slow=33						
HMU	Henry Mountain	93.60	13	P	P	23 36 58.5	+1.8
HMU				IAmb	IAmb	23 37 04.4	
	comp=Z,9.1nm,1.1s						
ELK	Elko	95.88	9	LR	LR	00 11 22.1	
	comp=Z,296nm,21.2s,baz=198,slow=30						
LBTB	Lobatse	96.99	155	LR	LR	00 15 58.3	
	comp=Z,514nm,19.6s,baz=194,slow=32						
PDAR	Pinedale Array	98.50	13	P	P	23 37 17.9	-1.1
	comp=Z,0.3nm,0.4s,baz=203,slow=8.1,SNR=1.8						
PDAR				LR	LR	00 13 58.3	
	comp=Z,357nm,19.2s,baz=187,slow=31						
	comp=Z,0.3nm,0.4s						
KAPI	Kappang	98.88	248	LR	LR	00 18 31.4	
	comp=Z,268nm,20.4s,baz=153,slow=33						
GUMO	Guam	99.84	280	LR	LR	00 17 04.4	
	comp=Z,28nm,18.9s,baz=110,slow=32						
CCB	Clear Creek Bu	120.33	350		PKiKP	23 42 31.7	+1.1
IL31		120.36	350	PKPdf	PKPdf	23 42 31.1	+0.6
ILAR	Eielson Array	120.36	350	PKPdf	PKPdf	23 42 31.1	+0.5
ILAR	Eielson Array	120.36	350	PKP	PKPdf	23 42 28.7	-1.9
	comp=Z,3.9nm,1.0s,baz=197,slow=1.8,SNR=14						
ILAR	Eielson Array	120.36	350	PKIKP	PKPdf	23 42 31.1	+0.5
COLA	College	120.56	350	⇑iPKIKP	PKiKP	23 42 32.1	+1.1
TORD	Torodi Ar. Bea	122.49	116	PKP	PKPdf	23 42 34.0	-2.2
	comp=Z,0.8nm,0.9s,baz=308,slow=1.2,SNR=3.7						
PETK	Petropavlovsk-	124.24	315	PKP	PKPdf	23 42 36.4	-2.0
	comp=Z,6.9nm,1.0s,baz=118,slow=5.7,SNR=6.2						
C27K	Jago River	124.86	353	PKPdf	PKiKP	23 42 41.1	+1.7
A36M	Sachs Harbour	126.66	1	PKPdf	PKPdf	23 42 42.6	+0.1
NJ2	Nanjing	129.09	272	ePKP	PKiKP	23 42 50.1	+1.1
BILL	Bilibino	132.12	332	⇓ePKIKP	PKiKP	23 42 56.1	+2.1
SEY	Seymchan	133.06	322	⇓ePKIKP	PKiKP	23 42 58.4	+2.4
KLR	Kul'dur	133.60	297	⇑ePKIKP	PKiKP	23 42 58.7	+1.1
PZH	PanZhiHua	134.61	252	PKP	PKiKP	23 43 00.9	+0.4
BJI	Beijing	136.23	277	PKP	PKPdf	23 43 01.5	0.0
CD2	Chengdu	136.89	258	PKP	PKPdf	23 43 04.0	+0.9
HHC	Hu-ho-hao-te	139.41	275	ePKP	PKPdf	23 43 05.3	-2.2
ESDC	Sonseca Array	139.75	88	PKP	PKPdf	23 43 05.4	-2.7
	comp=Z,2.3nm,1.0s,baz=234,slow=1.7,SNR=6.3						
KEST	Kesra	144.62	105	PKP	PKPab	23 43 13.1	-2.5
	comp=Z,7.1nm,0.9s,baz=130,slow=7.9,SNR=4.7						
CEST	Esterri de Car	144.64	89	PKPdf	PKPdf	23 43 16.6	-0.2
CIT	Chita	144.75	291	ePKIKP	PKPbc	23 43 16.3	+0.7
SCO	Scoresbysund	145.11	35	i P	PKPdf	23 43 18.2	+1.7
GTA	Gaotai	145.23	263	PKPbc	PKPdf	23 43 18.3	+0.3
GTA				PKPab	pPKPab	23 43 20.2	+0.2
GTA				LR	LR		
	comp=Z,170nm,17.8s						
GTA				LR	LR		
	comp=Z,82nm,17.4s						
GTA				LR	LR		
	comp=Z,200nm,19.3s						
GOMU	GeErMu	145.81	254	PKPbc	PKPbc	23 43 20.2	+0.3
GOMU				LR	LR		
	comp=Z,180nm,10.8s						
GOMU				LR	LR		
	comp=Z,89nm,10.3s						
GOMU				LR	LR		
	comp=Z,200nm,10.6s						
ULN	Ulaanbaatar	146.21	281	PKPdf	PKPdf	23 43 20.1	+0.7
ULN	Ulaanbaatar	146.21	281	dePKP2	PKPbc	23 43 20.8	+0.3
DBG	Daneborg	146.29	28	i P	PKPab	23 43 21.9	+1.3
SONM	Songino Array	146.56	280	PKPdf	PKPdf	23 43 20.0	+0.1
SONM	Songino Array	146.56	280	PKPbc	PKPdf	23 43 20.6	+0.6
	comp=Z,7.6nm,0.8s,baz=137,slow=3.0,SNR=23						
DAG	Danmarks Havn	146.84	24	i P	PKPdf	23 43 20.3	+0.9
NOR	Nord	146.90	15	i P	PKPbc	23 43 22.4	+1.0
RAYN	Ar Rayn	148.13	167		PKPbc	23 43 26.6	+0.2
RAYN	Ar Rayn	148.13	167	PKP2	PKPbc	23 43 26.6	+0.2
EKA	Eskdalemuir Ar	148.73	66	PKP	PKPdf	23 43 20.9	-2.2
	comp=Z,0.4nm,0.3s,baz=280,slow=1.4,SNR=1.8						
EKA				PKPbc	PKPbc	23 43 27.1	+0.2
	comp=Z,11nm,0.9s,baz=276,slow=2.7,SNR=5.2						
ZAK	Zakamensk	149.62	283	ePKHKP	PKPpre	23 43 29.0	
ZAK				pmax	pmax		
	comp=Z,14nm,1.8s						
UOSS	Minazif	149.91	186	PKPbc	PKPbc	23 43 29.3	-1.5
IRK	Irkutsk	149.92	286	ePKIKP	PKPbc	23 43 30.7	+0.7
IRK				pmax	pmax		
	comp=Z,51nm,2.0s						
CASP	Castiglione de	150.29	97	PKPbc	PKPbc	23 43 30.4	-0.8
DOU	Dourbes	150.73	79	dPKP	PKPbc	23 43 31.7	-0.3
OSSC	Osservatorio P	150.97	96	PKPbc	PKPbc	23 43 32.5	-0.3
BCLA	Clavier	151.28	79	dPKP	PKPbc	23 43 31.8	-1.4
ZCCA	Zocca	151.31	94	PKPbc	PKPbc	23 43 33.7	+0.1
WLF	Walferdange	151.41	81	dPKP	PKPdf	23 43 30.4	+2.9
MOY	Mondy	151.50	284	ePKIKP	PKiKP	23 43 35.4	+1.1
MOY				pmax	pmax		
	comp=Z,24nm,1.8s						
MEM	Membach	151.77	79	dPKPdf	PKPdf	23 43 29.1	+1.1
DAVA	Damuels	152.34	88	i PKP	PKPbc	23 43 36.3	+0.2
	comp=Z,6.3nm,0.9s						
CTI	Castel Tesino	152.69	92	PKPbc	PKiKP	23 43 37.3	+0.3
CTI	Castel Tesino	152.69	92	PKIKP	PKiKP	23 43 37.3	+0.3
FETA	Feichten	152.69	89	ePKiKP	PKiKP	23 43 39.4	+2.4
	comp=Z,8.4nm,0.9s						
RETA	Reutte	152.96	88	i PKiKP	PKiKP	23 43 40.1	+2.6
	comp=Z,8.4nm,1.2s						
SQTA	Sankt Quirin	153.07	89	i pPKP	PKiKP	23 43 41.5	+3.7
	comp=Z,12nm,1.3s						
MOTA	Moosalm	153.08	89	i PKP	PKiKP	23 43 38.1	+0.3
	comp=Z,5.2nm,0.8s						
WTTA	Wattenberg	153.34	90	i PKiKP	PKiKP	23 43 41.0	+2.6
	comp=Z,3.5nm,0.8s						
WATA	Walderalm	153.35	89	i PKiKP	PKiKP	23 43 40.7	+2.4
	comp=Z,9.8nm,1.6s						
ABTA	Abfaltersbach	153.57	91	i PKiKP	PKiKP	23 43 41.2	+2.4
	comp=Z,2.5nm,0.7s						
LESA	Schwarzleotal	154.03	90	ePKP	PKiKP	23 43 41.2	+1.5
	comp=Z,3.9nm,0.7s						
MYKA	Terra Mystica	154.16	92	ePKiKP	PKiKP	23 43 42.1	+2.2
	comp=Z,5.0nm,0.7s						
OBKA	Obir	154.61	93	epPKP	PKPbc	23 43 38.4	-2.5
	comp=Z,2.8nm,0.9s						
BIOA	Bad Ischl, Aus	154.72	90	i pPKP	pPKPdf	23 43 36.8	+2.0
	comp=Z,4.0nm,0.9s						
MMAI	Mount Meron Ar	154.87	144	PKPbc	PKPbc	23 43 40.3	-1.5
	comp=Z,0.4nm,0.5s,baz=221,slow=15,SNR=3.8						
SOKA	Soboth	154.98	94	i pPKP	pPKPdf	23 43 36.9	+1.7
	comp=Z,3.6nm,1.3s						
WMQ	Urumqi	154.99	258	ePKPbc	PKPdf	23 43 35.4	+2.4
WMQ				PKPab	PKPab	23 43 58.4	+1.0
WMQ				LR	LR		
	comp=Z,250nm,24.1s						
MOA	Molln	155.17	91	epPKP	pPKPdf	23 43 38.6	+3.3
	comp=Z,7.3nm,1.1s						
GERES	GERESS Array B	155.34	88	PKP	PKPdf	23 43 30.4	-2.9
	comp=Z,1.6nm,1.0s,baz=297,slow=5.8,SNR=4.7						
ARSA	Arzberg	155.58	93	epPKP	pPKPdf	23 43 36.3	+0.4
	comp=Z,6.2nm,1.1s						
CLL	Collm	156.06	82	ePKPdf	PKPdf	23 43 37.0	+3.0
	comp=Z,9.0nm,1.5s						
CLL				ePKPab	sPKPab	23 44 05.0	+0.3
CLL				eSKSdf	SKSdf	23 50 45.0	+5.2
CLL				ex	x	23 57 19.0	
CLL				ePSKS		23 58 01.0	
CLL				ex	x	23 59 36.0	
CLL				ePPS	PPS	00 00 55.0	
CLL				eSS	SS	00 07 30.0	+1.5
CLL				AMS	AMS	01 07 00.0	
	comp=Z,200nm,18.9s						
CONA	Conrad Observa	156.13	92	epPKP	pPKPdf	23 43 38.0	+1.3
	comp=Z,5.8nm,1.0s						
RONA	Rosalia, Austr	156.26	93	epPKP	pPKPdf	23 43 37.5	+0.7
	comp=Z,1.9nm,0.7s						
BRG	Berggiesshubel	156.41	84	ePKP	PKPdf	23 43 40.3	+5.8
BRG	Berggiesshubel	156.41	84	P	PKPab	23 44 07.2	+4.0
KRUC	Moravsky	157.00	90	ePKP	PKPdf	23 43 37.0	+1.6
VRAC	Vranov	157.23	89	ePKP	PKPdf	23 43 36.6	+0.9
MORC	Moravsky Berou	158.00	89	ePKP	PKPdf	23 43 39.0	+2.3
KSH	Kashi	158.12	235	PKP	PKPdf	23 43 42.8	+5.5
VYHS	Vyhne	158.13	93	ePKP2	PKPab	23 44 11.6	+0.9
VYHS	Vyhne	158.13	93	ePKP	PKPab	23 44 11.6	+0.9
LANS	Liptovska Anna	158.81	92	ePKIKP	PKPdf	23 43 41.2	+3.5
LANS				e		23 44 11.1	
LANS	Liptovska Anna	158.81	92	ePKP	PKPdf	23 43 41.2	+3.5
LANS				e		23 44 11.1	
MKAR	Makanchi Array	159.82	258		PKPab	23 44 17.3	-0.9
MKAR	Makanchi Array	159.82	258	PKP	PKPdf	23 43 35.8	-3.1
	comp=Z,0.5nm,1.0s,baz=64,slow=3.4,SNR=4.2						
MKAR				PKPab	PKPab	23 44 15.0	-3.1
	comp=Z,4.8nm,0.7s,baz=122,slow=4.7,SNR=36						
MKAR				PP	PP	23 47 57.5	-3.1
	comp=Z,0.7nm,0.8s,baz=114,slow=2.9,SNR=4.2						
STHS	Stebnicka Huta	159.96	93	ePKP2	PKPab	23 44 17.2	-1.5
STHS	Stebnicka Huta	159.96	93	ePKP	PKPab	23 44 17.2	-1.5
MAKZ	Makanchi	160.01	258	PKPab	PKPab	23 44 17.7	-1.2
MAKZ	Makanchi	160.01	258	PKP2	PKPab	23 44 17.7	-1.2
BR131	Keskin Array S	160.06	132	PKPab	PKPab	23 44 18.0	-1.5
BR131	Keskin Array S	160.06	132	PKP2	PKPab	23 44 18.0	-1.5
BRTR	Keskin Array B	160.06	132	PKPdf	PKPdf	23 43 39.1	-0.5
BRTR				PKPab	PKPab	23 44 18.4	-1.0
BRTR	Keskin Array B	160.06	132	PKP	PKPdf	23 43 38.3	-1.2
	comp=Z,0.7nm,0.9s,baz=158,slow=1.3,SNR=3.6						
BRTR				PKPab	PKPab	23 44 17.6	-1.9
	comp=Z,5.2nm,1.0s,baz=176,slow=3.7,SNR=8.2						
BRTR	Keskin Array B	160.06	132	PKIKP	PKPdf	23 43 39.1	-0.5
BRTR						23 44 18.4	
KOLS	Kolonicke sedl	160.32	95	ePKIKP	PKPdf	23 43 43.0	+3.6
KOLS	Kolonicke sedl	160.32	95	ePKP	PKPdf	23 43 43.0	+3.6
MLR	Muntele Rosu	160.47	108	PKPdf	PKPdf	23 43 39.6	-0.2
MLR	Muntele Rosu	160.47	108	PKIKP	PKPdf	23 43 39.6	-0.2
MLR	Muntele Rosu	160.47	108	PKP	PKPdf	23 43 40.4	+0.6
ARCES	ARCESS Array B	160.90	30	PKPab	PKPab	23 44 20.1	-2.0
	comp=Z,4.6nm,0.9s,baz=288,slow=8.4,SNR=6.6						
AAK	Ala-Archa	161.24	238	PKPab	PKPab	23 44 24.2	-0.4
AAK	Ala-Archa	161.24	238	PKPab	PKPab	23 44 23.1	-1.4
	comp=Z,1.1nm,0.3s,baz=163,slow=7.7,SNR=5.8						
AAK	Ala-Archa	161.24	238	PKP2	PKPab	23 44 24.2	-0.4
ZALV	Zalesovo Beam	161.46	280	PKPab	PKPab	23 44 23.2	-1.8
ZALV	Zalesovo Beam	161.46	280	PKPab	PKPab	23 44 23.5	-1.5
	comp=Z,3.9nm,0.9s,baz=104,slow=6.3,SNR=9.2						
KURK	Kurchatov	163.89	265	PKIKP	PKPdf	23 43 40.0	-2.9
KURBB	Kurchatov Arra	163.91	265	PKP	PKPdf	23 43 40.0	-2.9
	comp=Z,0.3nm,0.3s,baz=184,slow=0.4,SNR=6.2						
KURBB				PP	PP	23 48 23.6	+1.4
	comp=Z,0.3nm,0.3s,baz=132,slow=4.6,SNR=4.6						
AKASG	Malin Array Be	165.13	97	PKP	PKPdf	23 43 42.9	-1.0
	comp=Z,0.6nm,0.6s,baz=274,slow=1.2,SNR=6.3						
AKASG				PKPab	PKPab	23 44 41.1	-0.1
	comp=Z,0.4nm,0.5s,baz=254,slow=4.6,SNR=7.4						
KIV	Kislovodsk	167.18	145	ePKIKP	PKPdf	23 43 46.6	+0.6
KIV				pmax	pmax		

	comp=Z,3.0nm,1.0s						
MAK	**Makhachkala**	**167.50**	**162**	*e*PKIKP	**PKPdf**	**23 43 40.9**	**-5.2**
MAK				*e*		23 48 37.4	
MAK				*e*		23 50 40.3	
MAK				pmax	pmax		
	comp=Z,280nm,1.2s						
BVAR	**Borovoye Array**	**169.49**	**267**	PKP	**PKPdf**	**23 43 43.6**	**-3.5**
	comp=Z,0.2nm,0.5s,baz=106,slow=2.1,SNR=1.5						
BVAR				PKPab	**PKPab**	**23 44 57.9**	**-2.6**
	comp=Z,1.7nm,0.9s,baz=130,slow=4.6,SNR=7.9						
BVAR				PP	**PP**	**23 48 50.5**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=119,slow=5.2,SNR=4.5						
OBN	**Obninsk**	**170.66**	**82**	*e*PKIKP	**PKPdf**	**23 43 49.6**	**+2.0**
OBN				*e*		23 48 58.1	
OBN				*e*PPP	PPP	23 53 01.7	
OBN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KLMR	**Klimovskoe**	**170.78**	**45**	*e*PKP2	**PKPab**	**23 45 05.6**	**-0.3**
KLMR				pmax	pmax		
	comp=Z,21nm,1.5s						

SDD 11 23:32:47.2±2.5, 18°.64N×72°.88W, h0^{km}±830^{km}, MD3.5, ML2.1, MW2.4

OSPL 11 23:32:48.4±1.1, 18°.43N×72°.82W, h4^{km}±4^{km}, ML2.3, 8C, Haiti region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAPH	**Port-au-Prince**	**0.51**	**79**	*i* P	Pg	23 32 57.3	-0.8
PAPH				*e*S	Sg	23 33 04.6	-0.1
JIDR	**Jimani**	**0.92**	**86**	⇑*e*Pg	Pg	23 33 05.6	-0.5
JIDR				⇑*e*Sg	Sg	23 33 16.3	-1.9
JIDR				IAML		23 33 18.6	
	comp=N,42nm,0.6s						
LOBH	**Bahia de las A**	**1.26**	**116**	*i* P	Pg	23 33 09.9	-2.6
LOBH				*e*S	Sg	23 33 26.8	-2.1
LOBH				IAML		23 33 27.3	
	comp=Z,48nm,1.3s						
LODU1	**El Espartillar**	**1.28**	**93**	*i* P	Pg	23 33 10.5	-2.5
LODU1				IAML		23 33 32.2	
	comp=Z,51nm,0.9s						
PODR	**Polo**	**1.49**	**100**	⇑*e*Pg	Pn	23 33 15.5	-0.6
PODR				⇑*e*Sg	Sg	23 33 38.0	+1.8
PODR				IAML		23 33 51.3	
	comp=N,27nm,1.4s						
LOVI	**El Cajuil, Ovi**	**1.52**	**114**	*i* P	Pn	23 33 14.5	-1.9
LOVI				*e*S	Sn	23 33 34.3	-2.3
LOVI				IAML		23 33 35.6	
	comp=Z,56nm,2.1s						
SDDR	**Presa de Saban**	**1.56**	**69**	⇑*e*Pg	Pn	23 33 15.2	-1.8
SDDR				⇑*e*Sg	Sn	23 33 36.4	-1.2
SDDR				IAML		23 33 41.5	
	comp=N,14nm,1.4s						
SDDR	**Presa de Saban**	**1.56**	**69**	*i* P	Pn	23 33 15.3	-1.6
SDDR				*e*S	Sn	23 33 34.5	-3.1
SDDR				IAML		23 33 39.3	
	comp=Z,8.7nm,0.3s						
ABDR	**Alto Bandera**	**2.12**	**79**	⇑*e*Pg	Pn	23 33 24.7	-0.3
ABDR				⇑*e*Sg	Sb	23 33 53.5	-0.8
ABDR				IAML		23 34 07.1	
	comp=N,17nm,1.5s						

WEL 12 00:26:25.0±0.5, 42°S±2°×17°4E±°, h8^{km}±3^{km}, M3.0/9, ML3.3/8, MLv3.0/9, Error ellipse: s-maj=4.1km s-min=2.4km az=117.7, confirmed

NOU 12 00:26:28.3, 42°.11S×173°.74E, h21^{km}, MLv3.5/11, South Island, New Zealand

ISC 12 00:26:23.6±0.9, 41°.97S±0°.03×173°.99E±0°.03, h15^{km}±5^{km}, n56, σ0^{s}73/68, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEKS	**Kekerengu Vall**	**0.01**	**326**	P	**Pg**	**00 26 26.2**	**-0.1**
KEKS				S	**Sg**	**00 26 28.0**	**-0.1**
WDFS	**Ward Fire Stat**	**0.18**	**39**	P	**Pb**	**00 26 28.4**	**-0.2**
WDFS				S	**Sb**	**00 26 32.1**	**+0.3**
BSWZ	**Blackbirch Sta**	**0.26**	**341**	P	**Pb**	**00 26 30.2**	**+0.1**
BSWZ				S	**Sb**	**00 26 34.8**	**+0.4**
CMWZ	**Cape Campbell**	**0.27**	**38**	P	**Pb**	**00 26 30.4**	**+0.2**
CMWZ				S	**Sb**	**00 26 36.3**	**+1.7**
SEDS	**Seddon Fire St**	**0.30**	**12**	P	**Pb**	**00 26 30.8**	**+0.1**
SEDS				S	**Sb**	**00 26 36.0**	**+0.6**
KIKS	**Kaikoura**	**0.51**	**206**	P	**Pn**	**00 26 35.7**	**-0.6**
KIKS				S	**Sn**	**00 26 45.2**	**+0.3**
TUWZ	**Tuamarina**	**0.54**	**356**	P	**Pn**	**00 26 36.1**	**-0.6**
TUWZ				S	**Sn**	**00 26 44.1**	**-1.3**
KHZ	**Kahutara**	**0.56**	**216**	P	**Pb**	**00 26 35.9**	**+0.8**
KHZ	**Kahutara**	**0.56**	**216**	S	**Sn**	**00 26 45.0**	**-1.1**
KHZ	**Kahutara**	**0.56**	**216**	P	**Pb**	**00 26 36.0**	**+0.9**
KHZ				S	**Sn**	**00 26 44.9**	**-1.2**
TCW	**Tory Channel**	**0.78**	**16**	P	**Pn**	**00 26 39.3**	**-0.8**
TCW				S	**Sn**	**00 26 51.0**	**-0.6**
THZ	**Tophouse**	**0.83**	**284**	P	**Pn**	**00 26 40.9**	**0.0**
THZ				S	**Sn**	**00 26 52.5**	**-0.5**
BHW	**Baring Head**	**0.86**	**50**	P	**Pn**	**00 26 41.3**	**+0.1**
BHW				S	**Sn**	**00 26 54.1**	**+0.6**
NNZ	**Nelson**	**0.88**	**328**	P	**Pn**	**00 26 41.3**	**-0.1**
WEL	**Wellington**	**0.90**	**41**	P	**Pn**	**00 26 42.0**	**+0.4**
WEL				S	**Sn**	**00 26 55.6**	**+1.3**
PLWZ	**Palliser**	**1.03**	**68**	P	**Pg**	**00 26 43.1**	**-0.3**
MRNZ	**Matariki Terra**	**1.08**	**301**	P	**Pg**	**00 26 45.4**	**+0.9**
MSWZ	**Moikau Station**	**1.09**	**60**	P	**Pb**	**00 26 44.0**	**-0.2**
DUWZ	**D'Urville Isla**	**1.16**	**357**	P	**Pg**	**00 26 46.0**	**0.0**
TKNZ	**Takaka Hill**	**1.21**	**320**	P	**Pg**	**00 26 47.3**	**+0.3**
PAWZ	**Paruwai Farm**	**1.22**	**62**	P	**Pn**	**00 26 45.7**	**-0.5**
GVZ	**Greta Valley S**	**1.23**	**215**	P	**Pb**	**00 26 46.7**	**+0.2**
KIW	**Kapiti Island**	**1.30**	**32**	P	**Pg**	**00 26 48.0**	**-0.7**
MTW	**Mount Morrison**	**1.39**	**55**	P	**Pn**	**00 26 48.0**	**-0.4**
TRWZ	**Traveller**	**1.39**	**67**	P	**Pn**	**00 26 47.7**	**-0.8**
OGWZ	**Otaki Gorge**	**1.45**	**38**	P	**Pn**	**00 26 49.6**	**+0.3**
LTZ	**Lake Taylor**	**1.51**	**237**	P	**Pb**	**00 26 51.2**	**-0.2**
AMCZ	**Amberley**	**1.56**	**219**	P	**Pn**	**00 26 51.3**	**+0.5**
HOWZ	**Holdsworth Sta**	**1.57**	**48**	P	**Pn**	**00 26 50.6**	**-0.3**
QRZ	**Quartz Range**	**1.58**	**316**	P	**Pg**	**00 26 53.7**	**-0.3**
QRZ	**Quartz Range**	**1.58**	**316**	S	**Sg**	**00 27 15.6**	**+1.0**
QRZ	**Quartz Range**	**1.58**	**316**	P	**Pg**	**00 26 53.7**	**-0.3**
DSZ	**Denniston Nort**	**1.65**	**277**	P	**Pg**	**00 26 54.9**	**-0.3**
MRZ	**Mangatainoka R**	**1.77**	**43**	P	**Pn**	**00 26 53.5**	**-0.2**
TIWZ	**Tintock**	**1.86**	**51**	P	**Pn**	**00 26 54.9**	**0.0**
OKCZ	**Okains Bay**	**1.89**	**201**	P	**Pn**	**00 26 54.8**	**-0.5**
CPWZ	**Castlepoint**	**1.97**	**58**	P	**Pn**	**00 26 56.0**	**-0.4**
OXZ	**Oxford**	**1.98**	**226**	P	**Pn**	**00 26 56.3**	**-0.2**
MQZ	**McQueen's Vall**	**2.00**	**209**	P	**Pn**	**00 26 55.0**	**-1.8**
INZ	**Inchbonnie**	**2.03**	**247**	P	**Pb**	**00 26 59.5**	**-0.8**
PRWZ	**Pori Road**	**2.05**	**47**	P	**Pb**	**00 27 00.1**	**-0.4**
AKCZ	**Akaroa Harbour**	**2.06**	**202**	P	**Pn**	**00 26 57.1**	**-0.6**
BFZ	**Birch Farm**	**2.13**	**54**	P	**Pg**	**00 27 05.4**	**+1.0**
BFZ	**Birch Farm**	**2.13**	**54**	P	**Pn**	**00 26 58.2**	**-0.4**
DVHZ	**Dannevirke**	**2.34**	**45**	P	**Pn**	**00 27 00.5**	**-1.0**
MHCZ	**Mount Hutt**	**2.37**	**228**	P	**Pn**	**00 27 01.7**	**-0.3**
WACZ	**Wakanui South**	**2.53**	**218**	P	**Pn**	**00 27 04.0**	**-0.1**
PRHZ	**Porangahau**	**2.62**	**51**	P	**Pn**	**00 27 03.8**	**-1.5**
PNHZ	**Pukenui**	**2.65**	**40**	P	**Pn**	**00 27 05.0**	**-0.7**
KHEZ	**Kahui Hut**	**2.67**	**0**	P	**Pg**	**00 27 12.8**	**-2.0**
RPZ	**Rata Peaks**	**2.78**	**230**	P	**Pn**	**00 27 07.9**	**+0.3**
RPZ	**Rata Peaks**	**2.78**	**230**	S	**Sn**	**00 27 41.3**	**+0.5**
ARCZ	**Arundel**	**2.86**	**225**	P	**Pn**	**00 27 08.6**	**-0.1**
BKZ	**Black Stump Fm**	**3.38**	**35**	P	**Pb**	**00 27 24.4**	**+1.1**
ODZ	**Otahua Downs**	**3.92**	**217**	P	**Pn**	**00 27 22.7**	**-0.6**
JCZ	**Jackson Bay**	**4.36**	**239**	P	**Pn**	**00 27 28.9**	**-0.4**

IDC 12 00:41:15.2±2.3, 13°.29S×166°.71E, h0^{km}, mb3.6/3, mbtmp3.6/3, MS3.9/1, Error ellipse: s-maj=72.1km s-min=49.1km az=176.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**31.68**	**254**	P	P	00 47 40.6	-0.2
	0.4nm,0.7s,baz=85,slow=9.0,SNR=1.9						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**32.71**	**247**	P	P	00 47 49.9	+0.1
	0.3nm,0.6s,baz=72,slow=9.1,SNR=5.5						
	0.3nm,0.6s						
TGY	**Tagaytay City**	**52.88**	**299**	LR	LR	01 11 44.6	
	comp=Z,116nm,20.6s,baz=274,slow=35						
QSPA	**South Pole Qui**	**76.73**	**180**	P	P	00 53 08.3	0.0
	1.5nm,1.0s,baz=71,slow=3.2,SNR=2.3						
	1.5nm,1.0s						
ARCES	**ARCESS Array B**	**118.73**	**345**	PKP	PKPdf	01 00 04.7	-0.1
	1.6nm,0.9s,baz=39,slow=1.8,SNR=1.2						

NAO 12 00:45:50.4, 30°.82N×49°.86E, h33^{km}, mb3.8

IDC 12 00:45:54.4±1.4, 31°.96N×49°.76E, h0^{km}, mb3.9/17, mbtmp3.9/22, ML3.5/5, Error ellipse: s-maj=28.7km s-min=15.4km az=165.0

NEIC 12 00:45:56.8±2.4, 31°.99N±0°.08×49°.73E±0°.09, h10^{km}±1^{km}, mb4.2/31, Error ellipse: s-maj=14.7km s-min=11.1km az=40.0

TEH 12 00:45:57.1, 32°.01N×49°.79E, h8^{km}±29^{km}

ISC 12 00:45:56.5±0.4, 32°.00N±0°.04×49°.73E±0°.03, h10^{km}, n186, σ1^{s}68/178, mb4.3/45, MS3.8/12, 6C-7D, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHBN	**Jahan bin**	**0.82**	**73**	Pg	**Pg**	**00 46 12.3**	**-0.1**
ZNGN	**Zangian**	**0.96**	**83**	Pg	**Pg**	**00 46 14.7**	**-0.3**
AHWZ	**Ahwaz**	**1.15**	**235**	Pg	**Pg**	**00 46 20.4**	**+1.9**
IPIR	**Pirpir**	**1.19**	**55**	Pg	**Pg**	**00 46 19.1**	**-0.4**
IBRJ	**Brojen**	**1.30**	**94**	Pg	**Pg**	**00 46 21.4**	**-0.1**
KLNJ	**Kolanjah**	**1.87**	**121**	Pn	**Pb**	**00 46 31.1**	**+0.1**
IGAR	**Gharneh**	**2.00**	**78**	Pn	**Pb**	**00 46 32.9**	**-0.2**
IKLH	**Kolahrood**	**2.04**	**49**	Pn	**Pb**	**00 46 33.9**	**0.0**
IKFM	**Kafar-mosalman**	**2.20**	**314**	Pn	**Pb**	**00 46 36.5**	**+0.1**
IDOB	**Doab**	**2.21**	**324**	Pn	**Pb**	**00 46 36.5**	**-0.3**
QAMS	**Qamsar**	**2.23**	**38**	Pn	**Pb**	**00 46 36.9**	**-0.1**
IRAM	**Ramesheh**	**2.26**	**94**	Pn	**Pb**	**00 46 36.2**	**-1.3**
IZEF	**Zefreh**	**2.37**	**67**	Pn	**Pb**	**00 46 38.0**	**-1.5**
HSAM	**Samen**	**2.40**	**337**	Pn	**Pb**	**00 46 39.2**	**-0.8**
KRSH	**Karshahi**	**2.82**	**45**	Pn	**Pb**	**00 46 44.5**	**-2.5**
HAGD	**Aghdareh**	**2.86**	**350**	Pn	**Pn**	**00 46 45.5**	**+3.1**
KAZ2	**Kazeron-Fars-I**	**2.90**	**145**	Pn	**Pn**	**00 46 45.5**	**+2.6**
IBZA	**Bozab**	**2.92**	**328**	Pn	**Pn**	**00 46 46.3**	**+3.0**
IQOM	**Qom**	**3.05**	**21**	Pn	**Pn**	**00 46 47.6**	**+2.6**
ISFB	**Sefidab**	**3.15**	**41**	Pn	**Pn**	**00 46 48.7**	**+2.5**
KCHF	**Cheshme Sefid,**	**3.20**	**316**	Pn	**Pn**	**00 46 50.2**	**+3.1**
SNQR	**Sonqor, Kerman**	**3.35**	**329**	Pn	**Pn**	**00 46 51.8**	**+2.6**
ISAD	**Sadrabad**	**3.36**	**90**	Pn	**Pn**	**00 46 50.8**	**+1.5**
ILBA	**Ilam Banvizeh**	**3.38**	**300**	Pn	**Pn**	**00 46 52.3**	**+2.9**
IVRN	**Varamin**	**3.42**	**29**	Pn	**Pn**	**00 46 52.7**	**+2.7**
HGHA	**Hamedan- Ghaye**	**3.56**	**348**	Pn	**Pn**	**00 46 54.9**	**+3.0**
ANAR	**Anarak**	**3.57**	**70**	Pn	**Pn**	**00 46 54.6**	**+2.4**
QABG	**Abgarm-Qazvin**	**3.70**	**358**	Pn	**Pn**	**00 46 57.3**	**+3.3**
TAFT	**Taft - Yazd**	**3.79**	**93**	Pn	**Pn**	**00 46 57.8**	**+2.6**
GLG1	**Gilan-e-Gharb**	**3.84**	**304**	Pn	**Pn**	**00 46 58.6**	**+2.8**
DSBU	**Dashti - Bushe**	**3.86**	**160**	Pn	**Pn**	**00 46 59.1**	**+3.1**
IDHR	**Dehrash**	**3.89**	**315**	Pn	**Pn**	**00 46 59.3**	**+2.8**
ICHK	**Chekchek**	**3.97**	**85**	Pn	**Pn**	**00 47 00.0**	**+2.3**
IDMV	**Damavand**	**4.05**	**28**	Pn	**Pn**	**00 47 01.6**	**+2.7**
IMEH	**Mehriz**	**4.20**	**97**	Pn	**Pn**	**00 47 03.3**	**+2.4**
KGS1	**Ghasr-e-Shirin**	**4.28**	**307**	Pn	**Pn**	**00 47 05.1**	**+3.4**
ILAS	**Lasjerd**	**4.31**	**38**	Pn	**Pn**	**00 47 04.9**	**+2.5**
IGZV	**Ghazvin**	**4.39**	**5**	Pn	**Pn**	**00 47 06.2**	**+2.7**
IFIR	**Firoozkooh**	**4.42**	**34**	Pn	**Pn**	**00 47 06.5**	**+2.7**
QIR1	**Qir**	**4.53**	**140**	Pn	**Pn**	**00 47 07.1**	**+1.8**
JIR1	**Jirandeh**	**4.70**	**1**	Pn	**Pn**	**00 47 10.4**	**+2.8**
IPRN	**Peran**	**4.75**	**26**	Pn	**Pn**	**00 47 11.0**	**+2.6**
IALA	**Alasht**	**4.81**	**31**	Pn	**Pn**	**00 47 12.0**	**+2.7**
LHJ2	**Lahijan - Gila**	**5.16**	**3**	Pn	**Pn**	**00 47 16.9**	**+3.1**
IKIA	**Kiasar**	**5.32**	**37**	Pn	**Pn**	**00 47 19.5**	**+3.2**
IGLO	**Ghaloghah**	**5.63**	**36**	Pn	**Pn**	**00 47 23.3**	**+2.8**
TPRV	**Parvadeh(Tabas**	**5.96**	**78**	Pn	**Pn**	**00 47 27.1**	**+2.2**
TNSJ	**Nastanj**	**6.10**	**69**	Pn	**Pn**	**00 47 29.3**	**+2.4**
TKDS	**Koohdasht(Taba**	**6.42**	**74**	Pn	**Pn**	**00 47 33.2**	**+1.8**
SBZV	**Sabzevar**	**7.86**	**54**	Pn	**Pn**	**00 47 53.0**	**+1.9**
IKOO	**Kooshah**	**7.87**	**84**	Pn	**Pn**	**00 47 53.4**	**+2.1**
AFRZ	**Afriz**	**7.95**	**77**	Pn	**Pn**	**00 47 55.0**	**+2.7**
GEVA	**Gevas**	**8.34**	**321**	Pn	**Pn**	**00 47 57.6**	**0.0**
ISFR	**Sfrayin**	**8.48**	**51**	Pn	**Pn**	**00 48 02.4**	**+2.8**
IAKL	**Akhelmad**	**8.76**	**56**	Pn	**Pn**	**00 48 06.3**	**+2.7**
UOSS	**Minazif**	**9.04**	**139**	Pn	**Pn**	**00 48 07.5**	**+0.3**
MARD	**Mardin**	**9.08**	**308**	Pn	**Pn**	**00 48 08.1**	**+0.3**
RAYN	**Ar Rayn**	**9.24**	**205**	Pn	**Pn**	**00 48 09.4**	**-0.5**
ASF	**Jabal al Asfar**	**10.89**	**274**	Pn	**Pn**	**00 48 31.4**	**-1.2**
	0.8nm,0.3s,baz=113,slow=4.6,SNR=7.5						
ASF				Sn	Sn	00 50 26.4	-8.2
	2.1nm,0.3s,baz=105,slow=22,SNR=9.5						
	2.2nm,0.4s						
MMAI	**Mount Meron Ar**	**12.14**	**279**	Pn	**Pn**	**00 48 48.8**	**-0.9**
	0.2nm,0.3s,baz=99,slow=15,SNR=1.8						
MMAI				Sn	**Sn**	**00 50 59.1**	**-6.1**
	0.6nm,0.3s,baz=102,slow=40,SNR=1.2						
	0.2nm,0.3s						
EIL	**Elat**	**12.91**	**263**	Pn	**Pn**	**00 48 57.6**	**-2.5**
	0.1nm,0.3s,baz=42,slow=20,SNR=1.5						
EIL				Sn	**Sn**	**00 51 18.2**	**-5.7**
	0.4nm,0.3s,baz=63,slow=18,SNR=1.9						
EIL				Lg	Lg	00 52 39.8	
	0.1nm,0.3s,baz=53,slow=17,SNR=1.3						
	1.3nm,0.6s						
KIV	**Kislovodsk**	**13.16**	**337**	Pn	**Pn**	**00 49 04.6**	**+1.1**
	5.4nm,2.1s						
BR131	**Keskin Array S**	**15.14**	**305**	P	**P**	**00 49 36.6**	**+0.8**
BR131				IAmb	IAmb	00 49 38.0	
	comp=Z,3.1nm,0.8s						
BRTR	**Keskin Array B**	**15.14**	**305**		**P**	**00 49 36.8**	**+1.0**
BRTR	**Keskin Array B**	**15.14**	**305**	Pn	**Pn**	**00 49 33.3**	**+2.6**
	comp=Z,0.3nm,0.3s,baz=125,slow=13,SNR=19						
	comp=Z,2.9nm,0.8s						
ANTO	**Ankara**	**15.79**	**305**		**P**	**00 49 44.0**	**+1.1**
ANTO				IAmb	IAmb	00 49 60.0	
	comp=Z,12nm,1.1s						
ELL	**Elmali**	**17.03**	**292**		**P**	**00 49 58.6**	**+1.9**
SIMJ	**Simiganj**	**17.06**	**62**		**P**	**00 49 56.9**	**-0.2**
BORA	**Eskisehir**	**17.46**	**302**		**P**	**00 50 03.4**	**+1.9**
MANT	**Manisa**	**18.45**	**296**	Pn	**Pn**	**00 50 14.2**	**+1.6**
YLV	**Yalova**	**18.48**	**303**	P	**P**	**00 50 13.3**	**+0.7**
	comp=Z,3.8nm,0.7s						
AB31	**Akbulak array**	**18.87**	**21**		**Pn**	**00 50 17.4**	**+0.1**
ABKAR	**Akbulak array**	**18.87**	**21**		**Pn**	**00 50 17.9**	**+0.6**
ABKAR	**Akbulak array**	**18.87**	**21**		**Pn**	**00 50 17.4**	**+0.1**
KARP	**Karpathos**	**19.09**	**287**	P	**P**	**00 50 20.6**	**+1.2**
	comp=Z,26nm,1.1s						
AKTO	**Aktyubinsk**	**19.42**	**16**	P	**P**	**00 50 23.4**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=210,slow=9.3,SNR=6.7						
	comp=Z,1.7nm,0.5s						
KK31	**Karatay Array**	**19.80**	**50**		**P**	**00 50 27.5**	**+0.4**
KKAR	**Karatay Array**	**19.80**	**50**		**P**	**00 50 27.7**	**+0.6**
BELG	**Belogornoye**	**20.44**	**356**	P	**P**	**00 50 33.7**	**-0.2**
	comp=Z,8.3nm,0.3s,baz=159,slow=19,SNR=5.7						
	comp=Z,8.3nm,0.3s						
ARSB	**Arslanbob**	**20.79**	**57**		Pn	00 50 49.2	+8.8
ARSB				IAmb	IAmb	00 50 53.7	
	comp=Z,7.4nm,1.0s						
TIRR	**Tirgusor**	**20.79**	**313**	P	**P**	**00 50 39.1**	**+1.3**
	comp=Z,14nm,1.4s						
IDI	**Anoyia**	**20.93**	**286**	Pn	**P**	**00 50 41.0**	**+1.6**
IDI				IAmb	IAmb	00 51 02.1	
	comp=Z,8.0nm,0.9s						
IDI	**Anoyia**	**20.93**	**286**	P	**P**	**00 50 40.3**	**+0.9**
	comp=Z,1.0nm,0.4s,baz=144,slow=6.5,SNR=6.3						
	comp=Z,1.0nm,0.4s						
ALN	**Alexandroupoli**	**20.97**	**302**	Pn	**P**	**00 50 41.2**	**+1.4**
TPGR	**Topolog**	**20.99**	**314**	⇓P	**P**	**00 50 40.8**	**+0.9**
PURM	**Purcari**	**21.06**	**319**	⇓P	**P**	**00 50 41.4**	**+0.8**
PURM	**Purcari**	**21.06**	**319**	P	**P**	**00 50 41.0**	**+0.4**
	comp=Z,1µmcomp=Z,26nm,1.2s						
CFR	**Carcaliu**	**21.32**	**314**	⇑P	**P**	**00 50 44.6**	**+1.1**
BAL3X	**Bal3x, Balta**	**22.07**	**322**	P	**P**	**00 50 52.7**	**+1.2**
ISR	**Istrita**	**22.28**	**313**	P	**P**	**00 50 54.6**	**+0.8**
	comp=Z,20nm,1.1s						
KSH	**Kashi**	**22.52**	**63**	P	**P**	**00 50 53.9**	**-2.7**
KSH				pP	pP	00 50 58.5	-1.3
KSH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
VRI	**Vrincioaia**	**22.52**	**315**	⇑P	**P**	**00 50 58.4**	**+1.9**
VRI	**Vrincioaia**	**22.52**	**315**	P	**P**	**00 50 57.5**	**+1.1**
	comp=Z,5.6nm,1.6s						
PLOR	**Plostina**	**22.56**	**314**	⇑P	**P**	**00 50 59.2**	**+2.3**
MLR	**Muntele Rosu**	**22.82**	**313**		**P**	**00 51 01.4**	**+1.7**
MLR				IAmb	IAmb	00 51 05.7	
	comp=Z,11nm,1.5s						
MLR	**Muntele Rosu**	**22.82**	**313**	⇑P	**P**	**00 51 02.3**	**+2.6**
MLR	**Muntele Rosu**	**22.82**	**313**	P	**P**	**00 51 01.5**	**+1.7**
	comp=Z,5.1nm,0.8s						
TESR	**Tescani**	**22.90**	**316**	⇓P	**P**	**00 51 02.3**	**+1.9**
TESR	**Tescani**	**22.90**	**316**	P	**P**	**00 51 01.5**	**+1.1**
	comp=Z,9.6nm,0.8s						
NRN	**Naryn**	**22.99**	**58**		**P**	**00 51 02.1**	**+0.4**
NRN				IAmb	IAmb	00 51 05.4	
	comp=Z,4.6nm,0.8s						
VOIR		**23.36**	**312**	⇑P	**P**	**00 51 08.0**	**+2.8**
VOIR		**23.36**	**312**	P	**P**	**00 51 06.8**	**+1.6**
	comp=Z,4.7nm,0.8s						
AK07	**Malin Array Si**	**23.98**	**327**	P	**P**	**00 51 10.7**	**-0.3**
AK07				pP	**pP**	**00 51 14.8**	**+0.5**
AK09	**Malin Array Si**	**23.98**	**327**	P	**P**	**00 51 11.6**	**+0.5**
AK09				pP	**pP**	**00 51 15.0**	**+0.6**
AK10	**Malin Array Si**	**23.99**	**327**	P	**P**	**00 51 11.3**	**+0.2**
AK06	**Malin Array Si**	**24.00**	**327**	P	**P**	**00 51 10.8**	**-0.5**
AK06				pP	**pP**	**00 51 15.1**	**+0.5**
AK08	**Malin Array Si**	**24.01**	**327**	P	**P**	**00 51 10.8**	**-0.5**
AK05	**Malin Array Si**	**24.02**	**327**	P	**P**	**00 51 11.3**	**-0.2**
AK12	**Malin Array Si**	**24.06**	**327**	P	**P**	**00 51 11.4**	**-0.4**
AKASG	**Malin Array Be**	**24.07**	**327**	P	**P**	**00 51 11.3**	**-0.6**
	comp=Z,1.2nm,0.4s,baz=139,slow=9.4,SNR=16						
	comp=Z,1.2nm,0.4s						
AKBB	**Malin Array Si**	**24.07**	**327**		**P**	**00 51 10.7**	**-1.2**
AKBB				IAmb	IAmb	00 51 13.6	
	comp=Z,4.8nm,0.6s						
AKBB	**Malin Array Si**	**24.07**	**327**	P	**P**	**00 51 12.4**	**+0.5**
KIEV	**Kiev**	**24.07**	**327**		**P**	**00 51 10.7**	**-1.2**
KIEV				IAmb	IAmb	00 51 13.6	
	comp=Z,4.2nm,0.6s						
KIEV	**Kiev**	**24.07**	**327**	⇓P	**P**	**00 51 11.7**	**-0.2**
KIEV	**Kiev**	**24.07**	**327**	P	**P**	**00 51 12.4**	**+0.5**
	comp=Z,23nm,0.6s						
LUBAR	**Lubar, Ukraine**	**24.26**	**324**	P	**P**	**00 51 14.3**	**+0.6**
BURAR	**Bucovina Array**	**24.31**	**317**		**P**	**00 51 14.4**	**+0.2**
BURAR	**Bucovina Array**	**24.31**	**317**	⇓P	**P**	**00 51 15.0**	**+0.7**
BUR08	**Bucovina Ar. S**	**24.33**	**317**		**P**	**00 51 14.4**	**-0.1**
BUR08				IAmb	IAmb	00 51 29.9	
	comp=Z,4.7nm,1.4s						
HORU	**Horodok**	**24.52**	**321**	P	**P**	**00 51 17.0**	**+1.0**
MI29	**MI29, Kamyanyy**	**24.54**	**325**	P	**P**	**00 51 16.7**	**+0.5**
	comp=Z,50nm,1.1s						
MI30	**MI30,Zelenitsa**	**24.59**	**326**	P	**P**	**00 51 16.7**	**+0.1**
	comp=Z,35nm,0.7s						
GZR	**Gura Zlata**	**24.79**	**310**	⇓P	**P**	**00 51 19.4**	**+0.8**
OBN	**Obninsk**	**24.91**	**342**	P	**P**	**00 51 19.9**	**+0.4**
	comp=Z,11nm,0.5s						
MI28	**Mi28,Pidlybu**	**24.96**	**326**	P	**P**	**00 51 20.4**	**+0.4**
MARR	**Marisel-Cluj**	**25.11**	**313**	⇓P	**P**	**00 51 22.6**	**+1.0**
STNU	**Starunia**	**25.29**	**319**	P	**P**	**00 51 24.2**	**+1.2**
KEK	**Kerkira**	**25.37**	**296**		**P**	**00 51 25.3**	**+1.5**
KEK				IAmb	IAmb	00 51 39.0	
	comp=Z,5.4nm,0.9s						
DRGR		**25.42**	**313**	⇑P	**P**	**00 51 25.5**	**+1.2**
BVAR	**Borovoye Array**	**25.77**	**29**	P	**P**	**00 51 27.9**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=243,slow=6.5,SNR=6.2						
	comp=Z,0.8nm,0.5s						
RNPP5	**Staryi Chortor**	**26.02**	**325**	P	**P**	**00 51 30.0**	**+0.5**
RNPP8	**Varash**	**26.10**	**325**	P	**P**	**00 51 31.2**	**+0.9**
RNPP9	**Sopachiv**	**26.13**	**325**	P	**P**	**00 51 31.0**	**+0.4**
KOLS	**Kolonicke sedl**	**26.67**	**317**	*e*P	**P**	**00 51 37.7**	**+2.2**
KURBB	**Kurchatov Arra**	**28.26**	**40**	P	**P**	**00 51 49.2**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=242,slow=9.6,SNR=4.9						
	comp=Z,0.8nm,0.7s						
MKAR	**Makanchi Array**	**28.93**	**50**		**P**	**00 51 55.6**	**-0.2**
MKAR	**Makanchi Array**	**28.93**	**50**	P	**P**	**00 51 54.2**	**-1.6**
	comp=Z,0.6nm,0.7s,baz=251,slow=7.6,SNR=6.3						
	comp=Z,0.6nm,0.7s						
KRLC	**Kraliky**	**30.38**	**316**	AMS	AMS	01 13 10.0	
	comp=Z,200nm,18.0s						
DPC	**Dobruska-Polom**	**30.76**	**316**	AMS	AMS	01 14 50.0	
	comp=Z,100nm,20.6s						
TREC	**Trest**	**30.86**	**314**	AMS	AMS	01 09 10.0	
	comp=Z,200nm,16.3s						
OSTC	**Ostas**	**30.91**	**317**	AMS	AMS	01 09 10.0	
	comp=Z,200nm,22.2s						
UPC	**Upice**	**31.01**	**317**	AMS	AMS	01 09 00.0	
	comp=Z,200nm,16.9s						
CHVC	**Chvalec**	**31.02**	**317**	AMS	AMS	01 08 20.0	
	comp=Z,200nm,23.8s						
CKRC	**Cesky Krumlov**	**31.42**	**313**	AMS	AMS	01 05 00.0	
	comp=Z,200nm,21.5s						
GOPC	**GO Pecny, Ondr**	**31.51**	**315**	AMS	AMS	01 09 50.0	
	comp=Z,200nm,21.1s						
PRU	**Pruhonice**	**31.68**	**315**	AMS	AMS	01 09 40.0	
	comp=Z,200nm,22.2s						
ZVC	**Zvikov**	**31.70**	**314**	AMS	AMS	01 09 50.0	
	comp=Z,200nm,20.6s						
PRA	**Prague**	**31.78**	**315**	AMS	AMS	01 09 40.0	
	comp=Z,200nm,19.2s						
GERES	**GERESS Array B**	**31.81**	**313**	P	**P**	**00 52 20.7**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=101,slow=7.6,SNR=2.6						
	comp=Z,0.3nm,0.4s						
WMQ	**Urumqi**	**31.92**	**57**	*e*P	**P**	**00 52 24.8**	**+2.5**
KHC	**Kasperske Hory**	**31.98**	**313**	AMS	AMS	01 02 30.0	
	comp=Z,200nm,20.1s						
ABTA	**Abfaltersbach**	**31.99**	**308**	*e*P	**P**	**00 52 23.5**	**+0.5**
	comp=Z,2.5nm,0.7s						
WTTA	**Wattenberg**	**32.70**	**309**	*e*P	**P**	**00 52 29.3**	**+0.1**
	comp=Z,3.1nm,0.5s						
WATA	**Walderalm**	**32.76**	**309**	*e*P	**P**	**00 52 29.5**	**-0.2**
	comp=Z,2.4nm,0.6s						
SQTA	**Sankt Quirin**	**32.97**	**309**	*e*P	**P**	**00 52 31.7**	**+0.1**
	comp=Z,5.7nm,0.5s						
MOTA	**Moosalm**	**33.07**	**309**	*i* P	**P**	**00 52 32.2**	**-0.3**
	comp=Z,5.4nm,0.9s						
CLL	**Collm**	**33.08**	**317**	*e*P	**P**	**00 52 32.0**	**-0.2**
FINES	**FINESS Array B**	**33.23**	**339**	P	**P**	**00 52 33.4**	**0.0**
	comp=Z,1.5nm,0.7s,baz=146,slow=7.5,SNR=5.3						
	comp=Z,1.5nm,0.7s						
FETA	**Feichten**	**33.24**	**308**	*e*P	**P**	**00 52 34.2**	**+0.2**
	comp=Z,5.3nm,1.2s						
ZAA0	**Zalesovo Array**	**33.24**	**38**		**P**	**00 52 33.2**	**-0.4**
ZAA0				IAmb	IAmb	00 52 35.3	
	comp=Z,2.6nm,0.9s						
ZALV	**Zalesovo Beam**	**33.24**	**38**		**P**	**00 52 33.4**	**-0.3**
ZALV	**Zalesovo Beam**	**33.24**	**38**	P	**P**	**00 52 33.7**	**0.0**
	comp=Z,1.5nm,0.7s,baz=262,slow=10,SNR=7.5						
	comp=Z,1.5nm,0.7s						
RETA	**Reutte**	**33.33**	**309**	*e*P	**P**	**00 52 34.4**	**-0.2**
	comp=Z,2.0nm,0.6s						
DAVA	**Damuels**	**33.87**	**308**	*i* P	**P**	**00 52 39.3**	**-0.1**
	comp=Z,6.3nm,0.5s						
BNI	**Bardonecchia**	**35.70**	**304**		**P**	**00 52 54.9**	**-0.3**
BNI				IAmb	IAmb	00 53 10.9	
	comp=Z,5.1nm,1.1s						
HFS	**Hagfors**	**36.83**	**331**	P	**P**	**00 53 04.5**	**0.0**
	comp=Z,3.3nm,0.5s,baz=119,slow=9.2,SNR=16						
	comp=Z,3.3nm,0.5s						
NC405	**NORSAR Array S**	**38.18**	**331**		**P**	**00 53 15.1**	**-0.9**
NB2	**NORSAR Subarra**	**38.35**	**331**	P	**P**	**00 53 16.8**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=122,slow=8.6						
NOA	**NORSAR Array B**	**38.35**	**331**	P	**P**	**00 53 16.7**	**-0.7**
	comp=Z,1.1nm,0.7s,baz=122,slow=8.4,SNR=5.3						
	comp=Z,1.1nm,0.7s						
ARCES	**ARCESS Array B**	**39.99**	**347**	P	**P**	**00 53 30.4**	**-0.6**
	comp=Z,3.4nm,1.1s,baz=344,slow=3.9,SNR=3.9						
	comp=Z,3.4nm,1.1s						
ESDC	**Sonseca Array**	**43.65**	**296**	P	**P**	**00 54 00.2**	**-1.2**
	comp=Z,2.1nm,1.3s,baz=86,slow=8.3,SNR=1.9						
	comp=Z,2.1nm,1.3s						
PZH	**PanZhiHua**	**45.35**	**83**	P	**P**	**00 54 16.4**	**+1.1**
TORD	**Torodi Ar. Bea**	**47.73**	**258**		**P**	**00 54 34.4**	**+0.5**
TORD				IAmb	IAmb	00 54 41.4	
	comp=Z,2.8nm,1.2s						
TORD	**Torodi Ar. Bea**	**47.73**	**258**	P	**P**	**00 54 34.2**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=47,slow=9.2,SNR=7.1						
	comp=Z,0.7nm,0.6s						
SPB2	**Spitsbergen Ar**	**48.52**	**351**		**P**	**00 54 39.3**	**+0.2**
SPITS	**Spitsbergen Ar**	**48.52**	**351**	P	**P**	**00 54 39.6**	**+0.4**
	comp=Z,3.0nm,0.6s,baz=141,slow=5.4,SNR=13						
	comp=Z,3.0nm,0.6s						
HHC	**Hu-ho-hao-te**	**49.62**	**61**	*e*P	**P**	**00 54 48.7**	**+0.5**
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						
HHC				pmax	pmax		
	comp=Z,63nm,3.7s						
A36M	**Sachs Harbour**	**76.24**	**358**		**P**	**00 57 44.4**	**-0.3**
G27K	**Doyon Strip**	**81.12**	**5**		**P**	**00 58 12.2**	**+0.4**
G27K				IAmb	IAmb	00 58 16.9	
	comp=Z,4.3nm,1.5s						
G30M	**tAoh Zraii Nji**	**81.23**	**2**		**P**	**00 58 12.3**	**0.0**
G30M				IAmb	IAmb	00 58 12.8	
	comp=Z,2.7nm,0.8s						
G31M	**Satah River**	**81.34**	**2**		**P**	**00 58 11.9**	**-0.9**
I28M	**Miner Creek**	**82.58**	**4**		**P**	**00 58 19.0**	**-0.5**
I28M				IAmb	IAmb	00 58 25.2	
	comp=Z,2.8nm,1.3s						
ILAR	**Eielson Array**	**82.67**	**7**	P	**P**	**00 58 18.7**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=331,slow=6.5,SNR=4.7						
	comp=Z,0.3nm,0.7s						
I30M	**Mount Dempster**	**82.98**	**3**		**P**	**00 58 21.0**	**-0.7**
I30M				IAmb	IAmb	00 58 50.6	
	comp=Z,2.6nm,1.3s						
DOT	**Dot Lake**	**84.05**	**6**		**P**	**00 58 25.7**	**-1.3**

WRA	Warramunga Arr	95.95	110	P	P	00 59 23.6	-0.5
	comp=Z,0.2nm,0.8s,baz=299,slow=3.6,SNR=1.5						
	comp=Z,0.2nm,0.8s						

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*IDC **12** 00:54:47.7±0.6, 49°.68N×157°.21E, $h0^{km}$, mb4.3/27, mbtmp4.3/33, ML4.5/5, MS3.4/6, Error ellipse: s-maj=17.5km s-min=12.1km az=153.0*

*NEIC **12** 00:54:49.5±1.9, 49°.63N±0°.09×157°.2E±0°.1, $h10^{km}\pm 1^{km}$, mb4.7/77, Error ellipse: s-maj=17.9km s-min=12.3km az=137.0*

*KRSC **12** 00:54:50.3±1.9, 49°.55N×157°.86E, $h40^{km}\pm 25^{km}$, Ml5.1, Felt [II-III] at Severo-Kurilsk.*

*MOS **12** 00:54:52.8±1.0, 49°.61N×157°.23E, $h53^{km}$, mb5.0/37, Error ellipse: s-maj=7.7km s-min=3.0km az=87.2*

MOS Felt (II) at Severo-Kuril'sk.

ISC 12 00:54:53.8±0.9**, 49°.56N**±0°.06×**157°.29E**±0°.05**, $h51^{km}\pm 8^{km}$, n441, $\sigma 1^{s}17$**/461**, mb4.6**/123**, MS3.6**/5**, 26C-28D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.35	327	⇑ iPN	Pn	00 55 16.2	-0.2
SKR				i S	Sn	00 55 34.3	+1.1
SKR				pmax	pmax		
	comp=Z,2µm,0.4s						
SKR				smax	smax		
	comp=E,13µm,0.2s						
SKR				smax	smax		
	comp=N,38µm,0.6s						
SKR	Severo-Kuril's	1.35	327	eP	Pn	00 55 16.1	-0.2
SKR				eS	Sn	00 55 34.0	+0.8
PAU	Pauzhetka	1.94	351	PN	Pn	00 55 24.3	+0.1
PAU				S	Sn	00 55 48.5	+1.2
PAU	Pauzhetka	1.94	351	eP	Pn	00 55 24.3	+0.1
PAU				eS	Sn	00 55 48.5	+1.2
KDTR	Khodutka, Kamc	2.31	12	PN	Pn	00 55 28.2	-1.1
KDTR				S	Sn	00 55 54.6	-1.9
KDTR	Khodutka, Kamc	2.31	12	eP	Pn	00 55 28.2	-1.1
KDTR				eS	Sn	00 55 54.6	-1.9
MIPR	Malaya Ipel'ka	2.74	353	PN	Pn	00 55 35.8	+0.5
MIPR	Malaya Ipel'ka	2.74	353	eP	Pn	00 55 35.8	+0.5
ASAK	Asacha	2.85	8	PN	Pn	00 55 36.4	-0.5
ASAK	Asacha	2.85	8	eP	Pn	00 55 36.4	-0.5
RUS	Russkaya	2.98	15	PN	Pn	00 55 37.2	-1.3
RUS	Russkaya	2.98	15	eP	Pn	00 55 37.2	-1.3
MTVR	Mutnovka	2.98	11	PN	Pn	00 55 38.1	-0.6
MTVR				S	Sn	00 56 12.0	-1.3
MTVR	Mutnovka	2.98	11	eP	Pn	00 55 38.1	-0.6
MTVR				eS	Sn	00 56 12.0	-1.3
GRL	Gorelyy	3.04	9	PN	Pn	00 55 39.2	-0.2
GRL				S	Sn	00 56 14.1	-0.5
GRL	Gorelyy	3.04	9	eP	Pn	00 55 39.3	-0.2
GRL				eS	Sn	00 56 14.2	-0.5
KRMR	Karymshinskiy	3.32	9	PN	Pn	00 55 43.3	+0.2
KRMR				S	Sn	00 56 24.0	+2.7
KRMR	Karymshinskiy	3.32	9	eP	Pn	00 55 43.3	+0.2
KRMR				eS	Sn	00 56 24.1	+2.7
APC	Apacha	3.37	359	PN	Pn	00 55 44.4	+0.5
APC	Apacha	3.37	359	eP	Pn	00 55 44.5	+0.5
PEA0B	Petropavlovsk-	3.56	4		Pn	00 55 46.5	0.0
PEA0B	Petropavlovsk-	3.56	4	d iPN	Pn	00 55 46.9	+0.3
PEA0B				i S	Sn	00 56 30.8	+3.4
PETK	Petropavlovsk-	3.56	4	Pn	Pn	00 55 45.3	-1.3
PETK	Petropavlovsk-	3.56	4	Pn	Pn	00 55 45.7	-0.9
	comp=N,11nm,0.3s,baz=204,slow=14,SNR=53						
PETK				Sn	Sn	00 56 30.2	+2.8
	comp=N,10nm,0.3s,baz=324,slow=27,SNR=5.0						
PETK				LR	LR	00 57 35.4	
	comp=N,485nm,19.0s,baz=201,slow=49						
PETK	Petropavlovsk-	3.56	4	PN	Pn	00 55 45.3	-1.3
PET	Petropavlovsk	3.57	13	Pn	Pn	00 55 45.6	-1.0
PET	Petropavlovsk	3.57	13	ePN	Pn	00 55 46.1	-0.6
PET				eS	Sn	00 56 27.3	-0.3
PET				smax	smax		
	comp=N,591nm,0.4s						
PET				smax	smax		
	comp=E,554nm,0.5s						
PET				MLR	MLR		
	comp=Z,200nm,15.0s						
PET	Petropavlovsk	3.57	13	eP	Pn	00 55 46.2	-0.4
PET	Petropavlovsk	3.57	13	Pn	Pn	00 55 45.9	-0.8
DALK	Dalny	3.60	14	PN	Pn	00 55 46.4	-0.6
DALK				S	Sn	00 56 27.4	-0.7
DALK	Dalny	3.60	14	eP	Pn	00 55 46.4	-0.6
DALK				eS	Sn	00 56 27.4	-0.7
UGLR	Uglovaya	3.78	14	PN	Pn	00 55 49.5	-0.1
UGLR	Uglovaya	3.78	14	eP	Pn	00 55 49.5	-0.1
AVH	Avacha	3.82	13	PN	Pn	00 55 50.4	+0.3
AVH	Avacha	3.82	13	eP	Pn	00 55 50.4	+0.3
SMAR	Somma	3.83	14	PN	Pn	00 55 50.5	+0.2
SMAR	Somma	3.83	14	eP	Pn	00 55 50.6	+0.2
KOK	Koryaka	3.83	12	PN	Pn	00 55 51.0	+0.7
KOK	Koryaka	3.83	12	eP	Pn	00 55 51.0	+0.7
NLC	Nalytchevo	3.84	19	PN	Pn	00 55 48.3	-2.0
NLC	Nalytchevo	3.84	19	eP	Pn	00 55 48.3	-2.0
SDLR	Sedlovina	3.86	14	PN	Pn	00 55 50.0	-0.6
SDLR	Sedlovina	3.86	14	eP	Pn	00 55 50.1	-0.6
KRER	Koryakskii	3.86	13	PN	Pn	00 55 51.0	+0.2
KRER	Koryakskii	3.86	13	eP	Pn	00 55 51.0	+0.2
KRX	Arik	3.90	12	PN	Pn	00 55 51.8	+0.6
KRX	Arik	3.90	12	eP	Pn	00 55 51.9	+0.6
SPN	Mys Shipunski	3.94	25	PN	Pn	00 55 50.8	-0.8
SPN				S	Sn	00 56 34.4	-2.1
SPN	Mys Shipunski	3.94	25	eP	Pn	00 55 50.8	-0.8
SPN				eS	Sn	00 56 34.4	-2.1
GNL	Ganaly	4.16	5	PN	Pn	00 55 55.6	+0.8
GNL	Ganaly	4.16	5	eP	Pn	00 55 55.7	+0.8
KII	Karymskiy	4.68	16	PN	Pn	00 56 02.6	+0.7
KII	Karymskiy	4.68	16	eP	Pn	00 56 02.6	+0.7
MKZ	Mys Kozlova	5.71	27	PN	Pn	00 56 14.1	-1.7
MKZ	Mys Kozlova	5.71	27	eP	Pn	00 56 14.1	-1.7
TUMD	Tumrok D	5.96	17	PN	Pn	00 56 19.4	0.0
TUMD	Tumrok D	5.96	17	eP	Pn	00 56 19.5	0.0
KMNR	Kamenistaya	6.46	15	PN	Pn	00 56 27.3	+1.0
KMNR	Kamenistaya	6.46	15	eP	Pn	00 56 27.3	+1.0
KPT	Kopyto	6.66	14	PN	Pn	00 56 29.5	+0.5
KPT	Kopyto	6.66	14	eP	Pn	00 56 29.6	+0.5
KIRR	Kirishev	6.67	15	PN	Pn	00 56 29.9	+0.7
KIRR	Kirishev	6.67	15	eP	Pn	00 56 29.9	+0.7
BZMR	Bezymyannaya	6.68	16	PN	Pn	00 56 30.3	+1.0
BZMR	Bezymyannaya	6.68	16	eP	Pn	00 56 30.3	+1.0
KOZ	Kozyrevsk	6.70	13	PN	Pn	00 56 29.9	+0.5
KOZ	Kozyrevsk	6.70	13	eP	Pn	00 56 29.9	+0.5
BZWR	Bezymyannyi-We	6.70	16	PN	Pn	00 56 30.6	+0.9
BZWR	Bezymyannyi-We	6.70	16	eP	Pn	00 56 30.7	+0.9
BZGR	Bezymyannyi-Gr	6.72	17	PN	Pn	00 56 30.4	+0.6
BZGR	Bezymyannyi-Gr	6.72	17	eP	Pn	00 56 30.4	+0.6
KBTR	Krutoberegovo	7.45	25	PN	Pn	00 56 38.7	-1.0
KBTR	Krutoberegovo	7.45	25	eP	Pn	00 56 38.8	-1.0
SMKR	Semkarok	7.47	18	PN	Pn	00 56 40.0	-0.1
SMKR	Semkarok	7.47	18	eP	Pn	00 56 40.1	-0.1
KUR	Kuril'sk	7.72	239	PN	Pn	00 56 42.3	-1.2
KUR				pmax	pmax		
	comp=Z,67nm,0.5s						
TYV	Tymovskoe	9.48	283	ePN	Pn	00 57 10.3	+2.8
TYV				pmax	pmax		
	comp=Z,100nm,3.5s						
TYV				pmax	pmax		
	comp=Z,5.0nm,1.2s						
YSS	Yuzhno-Sakhali	10.04	260	ePN	Pn	00 57 17.9	+2.7
YSS				eS	Sn	00 59 10.9	+4.6
YSS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
SHEM	Shemya Is, Ala	11.03	67	Pn	Pn	00 57 26.5	-2.2
	comp=Z,7.3nm,0.3s,baz=64,slow=21,SNR=1.7						
	comp=Z,28nm,0.4s						
SMY	Shemya	11.03	67	Pn	Pn	00 57 26.6	-2.1
SMY	Shemya	11.03	67	PN	Pn	00 57 26.6	-2.1
JKA	Kamikawa-asahi	11.43	247	Pn	Pn	00 57 33.2	-1.1
ASAJ	Asahikawa	11.43	247	Pn	Pn	00 57 33.2	-1.1
	comp=Z,1.7nm,0.3s,baz=22,slow=10.0,SNR=5.2						
ASAJ				Sn	Sn	00 59 33.7	-6.8
	baz=285,slow=9.8						
ASAJ				LR	LR	01 01 19.1	
	comp=Z,131nm,19.4s,baz=26,slow=34						
	comp=Z,6.4nm,0.4s						
ERM	Erimo	12.40	238	Pn	Pn	00 57 45.0	-2.5
ERM	Erimo	12.40	238	PN	Pn	00 57 45.0	-2.5
SEY	Seymchan	13.68	350	LR	LR	01 04 13.1	
	comp=Z,165nm,19.0s,baz=212,slow=42						
KLR	Kul'dur	16.61	279	Pn	Pn	00 58 42.5	-0.5
	comp=Z,0.4nm,0.3s,baz=72,slow=9.2,SNR=14						
	comp=Z,3.8nm,0.7s						
KLR	Kul'dur	16.61	279	⇑ eP	Pn	00 58 43.9	+0.9
KLR				MLR	MLR		
	comp=Z,135nm,16.0s						
USRK	Ussuriysk Ar.	18.07	262	P	P	00 58 59.6	-1.2
	comp=Z,0.4nm,0.3s,baz=77,slow=12,SNR=5.0						
	comp=Z,2.7nm,0.5s						
MJAR	Matsushiro Arr	19.00	234	P	P	00 59 11.3	+0.1
	comp=Z,0.9nm,0.5s,baz=17,slow=11,SNR=4.0						
ZEA	Zeya	19.02	294	eP	P	00 59 06.1	-5.2
BILL	Bilibino	19.07	10	P	P	00 59 11.8	+0.1
BILL	Bilibino	19.07	10	⇓ iP	P	00 59 11.6	-0.1
BILL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BILL				MLR	MLR		
	comp=Z,112nm,15.0s						
MSHR	Mys Shultsa	19.36	259	⇓ eP	P	00 59 15.4	+0.3
MSHR				pmax	pmax		
	comp=Z,21nm,1.2s						
MDJ	Mudanjiang	19.44	266	P	Pn	00 59 18.9	+1.4
MDJ				pmax	pmax		
	comp=Z,13nm,0.6s						
YAK	Yakutsk	19.72	320	P	P	00 59 16.4	-2.4
YAK				IAmb	IAmb	00 59 22.8	
	comp=Z,37nm,0.6s						
YAK	Yakutsk	19.72	320	P	P	00 59 17.4	-1.4
	comp=Z,5.4nm,0.3s,baz=86,slow=1.5,SNR=6.6						
	comp=Z,32nm,0.5s						
YAK	Yakutsk	19.72	320	eP	P	00 59 16.9	-1.9
YAK				eS	S	01 02 56.2	-1.9
YAK				pmax	pmax		
	comp=Z,32nm,1.0s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.0s						
YAK				smax	smax		
	comp=E,34nm,2.5s						
YAK				smax	smax		
	comp=N,18nm,1.8s						
BNX	BinXian	20.42	271	⇑P	P	00 59 24.8	-1.8
BNX				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KSRS	Korea Array	24.33	251	P	P	01 00 07.6	+1.0
	comp=Z,12nm,0.9s,baz=48,slow=9.6,SNR=40						
	comp=Z,12nm,0.9s						
KS19	Wonju Array Si	24.33	251	P	P	01 00 07.9	+1.3
KS19				IAmb	IAmb	01 00 09.2	
	comp=Z,11nm,0.8s						
KSAR	Wonju Array Be	24.36	251	P	P	01 00 07.2	+0.3
KSAR	Wonju Array Be	24.36	251	P	P	01 00 07.2	+0.3
JNU	Nakatsue	25.55	240	P	P	01 00 19.4	+1.6
	comp=Z,3.7nm,0.7s,baz=95,slow=7.0,SNR=1.6						
	comp=Z,3.7nm,0.7s						
C16K	Lisburne Hills	26.23	31	P	P	01 00 24.1	+0.6
C16K				IAmb	IAmb	01 00 41.4	
	comp=Z,7.0nm,0.9s						
M17K	Holitna River	27.65	47	P	P	01 00 37.3	+0.9
C19K	Lookout Ridge	28.49	31	P	P	01 00 45.5	+1.7
C19K				IAmb	IAmb	01 01 03.7	
	comp=Z,21nm,1.4s						
XLT	XiLinHaoTe	28.53	274	eP	P	01 00 44.6	+0.1
XLT				pP	pP	01 00 49.8	-7.0
XLT				pmax	pmax		
	comp=Z,9.0nm,0.8s						
D20K	Etivluk River	29.38	32	P	P	01 00 51.9	+0.2
D20K				IAmb	IAmb	01 01 10.4	
	comp=Z,5.9nm,0.9s						
H11N2	WAKE ISLAND Hy	30.74	162	T	T	01 35 06.8	
	baz=348,slow=76,SNR=29						
H11N1	WAKE ISLAND Hy	30.75	162	T	T	01 35 08.0	
	baz=348,slow=76,SNR=35						
H11N3	WAKE ISLAND Hy	30.75	162	T	T	01 35 06.6	
	baz=348,slow=76,SNR=60						
E22K	Anaktuvuk Pass	30.96	34	P	P	01 01 06.4	+0.7
C23K	Itkillik River	31.73	31	P	P	01 01 13.2	+0.9
C23K				IAmb	IAmb	01 01 14.9	
	comp=Z,5.6nm,0.9s						
H11S1	WAKE ISLAND Hy	31.89	163	T	T	01 35 44.1	
	baz=347,slow=76,SNR=96						
H11S3	WAKE ISLAND Hy	31.90	163	T	T	01 35 49.4	
	baz=347,slow=76,SNR=99						
H11S2	WAKE ISLAND Hy	31.91	163	T	T	01 35 45.4	
	baz=347,slow=76,SNR=122						
E24K	Your Creek	32.19	35	P	P	01 01 17.6	+1.2
F24K	Squaw Lake	32.35	36	P	P	01 01 18.9	+1.0
ILAR	Eielson Array	32.60	41	P	P	01 01 20.4	+0.4
	comp=Z,0.2nm,0.4s,baz=267,slow=9.6,SNR=4.1						
	comp=Z,0.2nm,0.4s						
ULN	Ulaanbaatar	32.70	287	⇓ eP	P	01 01 19.4	-1.9
ULN				pmax	pmax		
	comp=Z,10.0nm,2.9s						
HHC	Hu-ho-hao-te	32.93	272	eP	P	01 01 25.2	+1.9
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,92nm,4.5s						
D25K	Kavik River	33.11	33	P	P	01 01 25.1	+0.6
D25K				IAmb	IAmb	01 01 26.2	
	comp=Z,7.6nm,0.7s						
SONM	Songino Array	33.12	287	P	P	01 01 24.3	-0.7
	comp=Z,1.0nm,0.5s,baz=76,slow=7.4,SNR=6.8						
	comp=Z,1.0nm,0.5s						
NJ2	Nanjing	33.49	253	eP	P	01 01 28.1	-0.1
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
BMAR	Burnt Mountain	33.61	36	P	P	01 01 30.4	+1.5
C27K	Jago River	34.08	32	P	P	01 01 33.4	+0.6
C27K				IAmb	IAmb	01 01 34.8	
	comp=Z,3.1nm,0.7s						
E27K	Coleen River	34.77	35	P	P	01 01 40.0	+1.1
H27K	Steamboat Moun	34.81	38	P	P	01 01 41.2	+1.8
BCAR	Beaver Creek A	34.94	44	P	P	01 01 42.3	+1.9
D27M	Malcolm River	35.02	33	P	P	01 01 42.7	+1.6
F28M	Old Crow	35.42	36	P	P	01 01 45.8	+1.3
E28M	Babbage River	35.53	34	P	P	01 01 45.6	+0.2
E29M	Blow River	36.14	35	P	P	01 01 51.9	+1.3
L29M	L29M	36.58	44	P	P	01 01 56.0	+1.5
I30M	Mount Dempster	37.02	40	P	P	01 01 58.0	-0.4
INK	Inuvik	37.76	35	P	P	01 02 05.6	+1.2
INK	Inuvik	37.76	35	P	P	01 02 05.6	+1.2
INK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
A36M	Sachs Harbour	40.07	28	P	P	01 02 25.3	+1.7
C36M	Paulatuk	40.97	32	P	P	01 02 31.9	+0.9
GTA	Gaotai	41.31	278	eP	P	01 02 34.4	0.0
GTA				pmax	pmax		
	comp=Z,13nm,0.8s						
ZAA0	Zalesovo Array	43.27	305	P	P	01 02 48.8	-1.2
ZAA0				IAmb	IAmb	01 02 49.4	
	comp=Z,7.4nm,0.4s						
ZALV	Zalesovo Beam	43.27	305	P	P	01 02 48.9	-1.1
ZALV	Zalesovo Beam	43.27	305	P	P	01 02 49.0	-1.0
	comp=Z,6.0nm,0.3s,baz=61,slow=7.2,SNR=33						
	comp=Z,6.0nm,0.3s						
YKA	Yellowknife Ar	46.99	39	P	P	01 03 19.5	+0.2
	comp=Z,0.7nm,0.8s,baz=309,slow=8.9,SNR=3.8						
	comp=Z,0.7nm,0.8s						
RES	Resolute Bay	47.26	20	P	P	01 03 22.8	+1.5
RES				IAmb	IAmb	01 03 48.2	
	comp=Z,3.3nm,1.0s						
RES	Resolute Bay	47.26	20	P	P	01 03 22.8	+1.5
RES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MK31	Makanchi Array	48.15	297	i P	P	01 03 27.8	-0.8
MKAR	Makanchi Array	48.15	297	P	P	01 03 27.9	-0.7
	comp=Z,3.1nm,0.5s,baz=52,slow=6.2,SNR=57						
MKAR				PcP	PcP	01 04 55.9	+0.6
	comp=Z,0.5nm,0.7s,baz=57,slow=5.3,SNR=1.7						
	comp=Z,3.1nm,0.5s						
MKAR	Makanchi Array	48.15	297	i P	P	01 03 27.8	-0.7
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KURK	Kurchatov	48.15	303	P	P	01 03 27.9	-0.7
KURK	Kurchatov	48.15	303	c iP	P	01 03 27.8	-0.7
KURK				pmax	pmax		
	comp=Z,14nm,1.0s						
KURK				MLR	MLR		
	comp=Z,51nm,16.0s						
PZH	PanZhiHua	48.17	263	P	P	01 03 30.7	+1.6
KURBB	Kurchatov Arra	48.25	303	P	P	01 03 28.7	-0.5
	comp=Z,9.4nm,0.8s,baz=64,slow=8.3,SNR=54						
KURBB				PcP	PcP	01 04 56.0	+0.5
	comp=Z,0.7nm,0.7s,baz=64,slow=3.0,SNR=2.4						
	comp=Z,9.4nm,0.8s						
MAKZ	Makanchi	48.32	297	P	P	01 03 29.2	-0.7
MAKZ				IAmb	IAmb	01 03 30.4	
	comp=Z,5.1nm,0.6s						
MAKZ	Makanchi	48.32	297	P	P	01 03 29.2	-0.7
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
NOR	Nord	49.05	359	i P	P	01 03 35.4	+0.4
NOR				IAmb	IAmb	01 03 37.1	
	comp=Z,0.8nm,0.6s						
KBS	Kingsbay	50.13	352	i P	P	01 03 42.3	-0.9
SPITS	Spitsbergen Ar	50.33	350	P	P	01 03 44.9	+0.1
	comp=Z,2.0nm,0.5s,baz=64,slow=9.4,SNR=20						
	comp=Z,2.0nm,0.5s						
SPITS	Spitsbergen Ar	50.33	350	P	P	01 03 44.4	-0.4
SPITS				pmax	pmax		
	comp=Z,21nm,1.4s						
SPB2	Spitsbergen Ar	50.33	350	P	P	01 03 44.3	-0.5
SPB2				IAmb	IAmb	01 03 58.2	
	comp=Z,11nm,1.1s						
BVA0	Borovoye Array	51.24	309	i P	P	01 03 50.9	-1.1
BVAR	Borovoye Array	51.24	309	P	P	01 03 51.4	-0.6
	comp=Z,8.4nm,0.5s,baz=58,slow=8.7,SNR=47						
	comp=Z,8.4nm,0.5s						
BRVK	Borovoye	51.27	309	P	P	01 03 51.5	-0.7
BRVK				IAmb	IAmb	01 03 52.3	
	comp=Z,9.6nm,0.8s						
BRVK	Borovoye	51.27	309	c iP	P	01 03 51.3	-0.9
BRVK				pmax	pmax		
	comp=Z,12nm,0.9s						
OTUK	Ortayu	52.93	303	P	P	01 04 03.9	-0.7
BLKN	Baker Lake	53.02	31	P	P	01 04 05.6	+0.6
BLKN				IAmb	IAmb	01 04 20.9	
	comp=Z,4.0nm,0.7s						
ILON	Igloolik, Nuna	53.76	22	P	P	01 04 10.8	+0.5
ILON				IAmb	IAmb	01 04 11.7	
	comp=Z,4.8nm,0.9s						
DAG	Danmarks Havn	53.92	359	i P	P	01 04 11.0	-0.4
DAG				IAmb	IAmb	01 04 13.1	
	comp=Z,4.9nm,0.8s						
BOOM	Boomskoye usch	54.32	296		P	01 04 14.6	-0.5
BOOM				IAmb	IAmb	01 04 15.9	
	comp=Z,4.4nm,0.6s						
BOOM	Boomskoye usch	54.32	296	P	P	01 04 14.6	-0.5
BOOM				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ARTI	Arti	54.92	318	d iP	P	01 04 18.1	-0.9
ARTI						01 06 18.3	
ARTI				S	S	01 11 53.6	-3.0
ARTI				SS	SS	01 15 35.9	-3.9
ARTI				pmax	pmax		
	comp=Z,10.0nm,1.2s						
AAK	Ala-Archa	55.08	297	P	P	01 04 20.4	-0.1
AAK				IAmb	IAmb	01 04 22.0	
	comp=Z,4.4nm,0.6s						
AAK	Ala-Archa	55.08	297	c eP	P	01 04 20.4	-0.1
AAK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SHL	Shillong	55.21	270	P	P	01 04 22.3	+0.6
SHL	Shillong	55.21	270	P	P	01 04 22.3	+0.6
SHL				pmax	pmax		
	comp=Z,17nm,0.7s						
CHTO	Chiang Mai	55.46	258	P	P	01 04 25.1	+1.8
CHTO				IAmb	IAmb	01 04 26.9	
	comp=Z,8.8nm,0.7s						
CHTO	Chiang Mai	55.46	258	P	P	01 04 25.1	+1.8
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CMAR	Chiang Mai Arr	55.72	258	P	P	01 04 26.6	+1.3
	comp=Z,8.7nm,0.3s,baz=42,slow=7.5,SNR=13						
ARA0	ARCESS Array S	56.09	342	eP	P	01 04 26.6	-0.6
ARCES	ARCESS Array B	56.09	342	P	P	01 04 26.3	-0.9
ARCES	ARCESS Array B	56.09	342	P	P	01 04 26.8	-0.4
	comp=Z,1.7nm,0.4s,baz=39,slow=7.6,SNR=59						
	comp=Z,1.7nm,0.4s						
ARCES	ARCESS Array B	56.09	342	P	P	01 04 26.3	-0.9
ARCES				pmax	pmax		
	comp=Z,23nm,1.5s						
KSH	Kashi	56.15	293	P	P	01 04 32.4	+4.2
KSH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BPMT	Black Pine Rid	56.36	56	P	P	01 04 30.9	+1.1
DBG	Daneborg	56.41	359	i P	P	01 04 27.1	-2.3
LYMT	Lyon Mountain	56.65	55	P	P	01 04 32.4	+0.6
JETT	Jettan, Norway	57.08	343	eP	P	01 04 34.1	-0.1
KK31	Karatay Array	57.08	299	P	P	01 04 34.3	-0.4
KK31				IAmb	IAmb	01 04 35.8	
	comp=Z,4.4nm,0.7s						
KK31	Karatay Array	57.08	299	i P	P	01 04 34.2	-0.4
KKAR	Karatay Array	57.08	299	P	P	01 04 34.5	-0.1
KKAR				IAmb	IAmb	01 04 35.8	
	comp=Z,4.7nm,0.7s						
KKAR	Karatay Array	57.08	299	P	P	01 04 34.0	-0.6
KKAR	Karatay Array	57.08	299	P	P	01 04 34.0	-0.6
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
TRO	Tromso	57.28	344	eP	P	01 04 35.5	0.0
SUMG	Summit	57.67	6	P	P	01 04 39.3	+0.5
SUMG				IAmb	IAmb	01 04 42.9	
	comp=Z,6.5nm,0.8s						
SUMG	Summit	57.67	6	P	P	01 04 39.3	+0.5
SUMG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SUMG	Summit	57.67	6	i P	P	01 04 38.2	-0.6
NVAR	Mina Array Bea	58.70	66	P	P	01 04 47.2	+1.0
	comp=Z,0.8nm,0.7s,baz=292,slow=6.9,SNR=5.5						
	comp=Z,0.8nm,0.7s						
AB31	Akbulak array	58.75	311	P	P	01 04 45.8	-0.4
AB31				IAmb	IAmb	01 04 46.5	
	comp=Z,5.9nm,0.6s						
AB31	Akbulak array	58.75	311	i P	P	01 04 45.5	-0.7
ABKAR	Akbulak array	58.75	311	P	P	01 04 45.8	-0.4
BTK	Batken	58.85	296	P	P	01 04 46.2	-1.0
BTK	Batken	58.85	296	P	P	01 04 46.2	-1.0
BTK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
STEI	Steigen	59.43	344	eP	P	01 04 50.5	-0.1
GAR	Garm	59.84	296	P	P	01 04 54.3	+0.3
FAUS	Fauske	59.91	344	eP	P	01 04 54.1	+0.2
SCO	Scoresbysund	60.27	360	P	P	01 04 57.0	+0.7
SCO				IAmb	IAmb	01 04 57.5	
	comp=Z,12nm,1.4s						
SCO	Scoresbysund	60.27	360	P	P	01 04 57.0	+0.7
SCO				pmax	pmax		
	comp=Z,12nm,1.4s						
SCO	Scoresbysund	60.27	360	i P	P	01 04 55.3	-1.0
SIMJ	Simiganj	60.83	296	P	P	01 05 01.2	+0.4
SIMJ				IAmb	IAmb	01 05 02.7	
	comp=Z,7.7nm,0.9s						
PDAR	Pinedale Array	60.85	57	P	P	01 05 02.3	+1.3
	comp=Z,1.4nm,0.9s,baz=342,slow=3.3,SNR=7.9						
	comp=Z,1.4nm,0.9s						
ICESG	Greenland Ices	61.01	7	i P	P	01 05 01.3	-0.5
NIL	Nilore	61.64	289	P	P	01 05 07.0	+0.7
NIL	Nilore	61.64	289	P	P	01 05 07.0	+0.7
NIL				pmax	pmax		
	comp=Z,17nm,1.2s						
BELG	Belogornoye	62.26	319	d iP	P	01 05 09.6	-0.4
BELG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FIA1	FINESS Array S	62.65	336	P	P	01 05 11.9	-0.5
FINES	FINESS Array B	62.65	336	P	P	01 05 12.2	-0.3
	comp=Z,1.1nm,0.3s,baz=32,slow=6.5,SNR=23						
	comp=Z,1.1nm,0.3s						
FINES	FINESS Array B	62.65	336	i P	P	01 05 12.1	-0.4
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PV18	Skein Mesa, Pa	64.29	61	P	P	01 05 24.6	+0.6
PV18				IAmb	IAmb	01 05 26.3	
	comp=Z,7.5nm,1.1s						
PV05	Paradox Valley	64.30	61	P	P	01 05 25.0	+1.0
PV05				IAmb	IAmb	01 05 43.1	
	comp=Z,3.3nm,0.8s						
PV13	Radium Mtn., P	64.40	61	P	P	01 05 25.9	+1.1
PV13				IAmb	IAmb	01 05 26.6	
	comp=Z,3.6nm,0.9s						
OBN	Obninsk	64.53	327	⇓ eP	P	01 05 24.9	-0.1
OBN				e		01 05 57.2	
OBN				e		01 07 45.8	
OBN				eS	S	01 14 12.9	+13
OBN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,48nm,16.0s						
NC405	NORSAR Array S	66.26	343	P	P	01 05 36.4	+0.2

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NB2   NORSAR Subarra  66.42 343  P      P      01 05 37.3 +0.1
      comp=Z,1.6nm,0.5s,baz=25,slow=6.5
NB2   NORSAR Subarra  66.42 343  P      P      01 05 37.5 +0.3
NB2   NORSAR Subarra  66.42 343  P      P      01 05 37.3 +0.1
      baz=25,slow=6.5
NOA   NORSAR Array B  66.42 343  P      P      01 05 37.3 +0.1
      comp=Z,6.2nm,0.8s,baz=26,slow=6.4,SNR=15
NOA                              LR     LR     01 40 18.1
      comp=Z,16nm,18.4s,baz=45,slow=41
      comp=Z,6.2nm,0.8s
NORES NORESS Array B  66.64 342  P      P      01 05 38.4 -0.1
HFS   Hagfors         66.75 341  P      P      01 05 39.2  0.0
      comp=Z,2.1nm,0.4s,baz=62,slow=6.9,SNR=19
      comp=Z,2.1nm,0.4s
ECSD  EROS Data Cent  66.93  49  P      P      01 05 40.7  0.0
ECSD                             IAmb   IAmb   01 05 60.0
      comp=Z,3.9nm,1.2s
HYA   Hoyanger        67.21 345 eP      P      01 05 42.4 +0.4
NACGM Naroch          67.96 332 eP      P      01 05 46.9  0.0
      comp=Z,5.0nm,0.9s,baz=32
ASK   Askoy           68.02 346 eP      P      01 05 48.2 +1.1
BLS5  Blasjo          68.81 344 eP      P      01 05 53.4 +1.2
KMY   Karmoy          69.21 345 eP      P      01 05 55.7 +1.1
HOMB  Homborsund      69.51 343 eP      P      01 05 57.3 +0.8
SNART Snartemo        69.69 344 eP      P      01 05 58.8 +1.2
SUW   Suwalki         69.81 333  P      P      01 05 58.6 +0.2
SUW   Suwalki         69.81 333  P      P      01 05 58.6 +0.2
AK03  Malin Array Si  70.69 328  P      P      01 06 03.7 -0.2
AK21  Malin Array Si  70.71 328  P      P      01 06 03.7 -0.3
AKASG Malin Array Be  70.71 328  P      P      01 06 03.7 -0.3
      comp=Z,3.2nm,0.3s,baz=32,slow=6.2,SNR=29
AKASG                            LR     LR     01 39 47.0
      comp=Z,29nm,18.2s,baz=49,slow=38
      comp=Z,3.2nm,0.3s
AKBB  Malin Array Si  70.71 328  P      P      01 06 03.1 -0.9
AKBB                             IAmb   IAmb   01 06 04.4
      comp=Z,9.2nm,0.9s
AKBB  Malin Array Si  70.71 328  P      P      01 06 03.1 -0.9
AKBB                             pmax   pmax
      comp=Z,9.0nm,0.9s
AKBB  Malin Array Si  70.71 328  P      P      01 06 03.7 -0.3
AK04  Malin Array Si  70.71 328  P      P      01 06 03.7 -0.3
AK22  Malin Array Si  70.71 328  P      P      01 06 03.8 -0.2
KIEV  Kiev            70.72 328  P      P      01 06 02.9 -1.2
KIEV                             IAmb   IAmb   01 06 04.5
      comp=Z,7.8nm,0.8s
KIEV  Kiev            70.72 328 ⇓P      P      01 06 03.9 -0.1
KIEV  Kiev            70.72 328  P      P      01 06 02.9 -1.2
KIEV                             pmax   pmax
      comp=Z,8.0nm,0.9s
KIEV  Kiev            70.72 328  P      P      01 06 03.7 -0.3
      comp=Z,39nm,1.0s
NCK   Nalchik         70.73 315⇓eP      P      01 06 05.4 +1.1
NCK                              pmax   pmax
      comp=Z,7.0nm,0.6s
KIV   Kislovodsk      70.78 316  P      P      01 06 05.7 +1.0
KIV   Kislovodsk      70.78 316 eP      P      01 06 06.1 +1.4
KIV                              pmax   pmax
      comp=Z,5.0nm,1.1s
KIV   Kislovodsk      70.78 316  P      P      01 06 05.3 +0.6
      comp=Z,4.1nm,1.0s
KBZ   Khabaz          70.86 316  P      P      01 06 05.9 +0.9
      comp=Z,3.9nm,0.7s,baz=33,slow=3.1,SNR=8.0
      comp=Z,3.9nm,0.7s
KBZ   Khabaz          70.86 316⇓iP      P      01 06 06.1 +1.1
KBZ                              pmax   pmax
      comp=Z,11nm,1.3s
SHA1  Shidzhatmaz     70.97 316⇓eP      P      01 06 06.9 +0.9
MI28  Mi28,Pidlybu    71.04 329  P      P      01 06 06.2 +0.2
RNPP9 Sopachiv        71.22 330  P      P      01 06 07.3 +0.2
RNPP8 Varash          71.30 330  P      P      01 06 07.8 +0.3
RNPP5 Staryi Chortor  71.38 330  P      P      01 06 08.2 +0.2
LUBAR Lubar, Ukraine  71.87 328  P      P      01 06 11.1 +0.1
WRA   Warramunga Arr  72.13 203  P      P      01 06 13.3 +0.4
      comp=Z,0.6nm,0.6s,baz=20,slow=6.4,SNR=5.0
      comp=Z,0.6nm,0.6s
SOC   Sochi           72.40 317 eP      P      01 06 11.5 -2.8
SOC                             e              01 08 56.7
SOC                             ePPP    PPP    01 10 35.6
SOC                             eS      S      01 15 30.9 -3.1
SOC                             eSS     SS     01 20 09.3 -2.7
GNI   Garni           72.78 312  P      P      01 06 18.0 +1.1
GNI                              IAmb   IAmb   01 06 26.3
      comp=Z,8.1nm,0.8s
GNI   Garni           72.78 312ceP      P      01 06 17.9 +1.1
GNI                              pmax   pmax
      comp=Z,9.0nm,0.8s
GNI   Garni           72.78 312  P      P      01 06 17.3 +0.4
      comp=Z,12nm,0.9s
HORU  Horodok         72.93 329  P      P      01 06 17.5 +0.1
FITZ  Fitzroy Crossi  72.97 211  P      P      01 06 19.0 +1.2
SORM  Soroca          73.18 327 ⇑P      P      01 06 18.7 -0.2
SORM  Soroca          73.18 327  P      P      01 06 18.6 -0.2
SORM  Soroca          73.18 327  P      P      01 06 18.5 -0.3
      comp=Z,19nm,0.9s
KMPD  K-Podol'skiy    73.47 328  P      P      01 06 20.3 -0.3
TX31  Lajitas Ar. Si  73.71  64  P      P      01 06 22.7 +0.3
TXAR  Lajitas Array   73.71  64  P      P      01 06 22.9 +0.5
TXAR  Lajitas Array   73.71  64  P      P      01 06 23.4 +0.9
      comp=Z,1.9nm,0.8s,baz=298,slow=4.2,SNR=24
      comp=Z,1.9nm,0.8s
TXAR  Lajitas Array   73.71  64  P      P      01 06 22.9 +0.5
SHIU  Shidnytsya      73.93 331  P      P      01 06 24.1 +0.8
STNU  Starunia        74.00 330  P      P      01 06 24.2 +0.5
OJC   Ojcow           74.14 333 eP      P      01 06 25.3 +0.8
OJC   Ojcow           74.14 333  P      P      01 06 24.6 +0.1
OJC   Ojcow           74.14 333  P      P      01 06 24.6 +0.1
OJC   Ojcow           74.14 333  P      P      01 06 25.1 +0.6
      comp=Z,23nm,0.8s
KSV   Kosov           74.16 329  P      P      01 06 25.2 +0.6
EKA   Eskdalemuir Ar  74.20 349  P      P      01 06 24.8 +0.1
      comp=Z,2.6nm,0.7s,baz=14,slow=6.1,SNR=5.1
      comp=Z,2.6nm,0.7s
STHS  Stebnicka Huta  74.42 332 eP      P      01 06 27.2 +1.1
STHS                             pmax   pmax
      comp=Z,12nm,0.7s
STHS  Stebnicka Huta  74.42 332 eP      P      01 06 27.2 +1.1
KOLS  Kolonicke sedl  74.53 331 eP      P      01 06 27.5 +0.8
KOLS                             pmax   pmax
      comp=Z,14nm,0.8s
KOLS  Kolonicke sedl  74.53 331 eP      P      01 06 27.5 +0.8
KSP   Ksiaz           74.57 336 eP      P      01 06 27.7 +0.7
KSP   Ksiaz           74.57 336  P      P      01 06 27.6 +0.7
      comp=Z,12nm,1.0s
BUR08 Bucovina Ar. S  74.69 329  P      P      01 06 28.5 +0.6
NIE   Niedzica        74.71 332 eP      P      01 06 29.1 +1.3
NIE   Niedzica        74.71 332  P      P      01 06 28.3 +0.5
      comp=Z,6.0nm,0.9s
BURAR Bucovina Array  74.72 329  P      P      01 06 28.1 +0.1
BURAR Bucovina Array  74.72 329 ⇓P      P      01 06 28.7 +0.7
BURAR Bucovina Array  74.72 329  P      P      01 06 28.6 +0.7
BRIU  Brid            74.81 330  P      P      01 06 29.0 +0.6
MUKU  Mukachevo       74.82 331  P      P      01 06 29.0 +0.6
HOLU  Holmets         74.85 331  P      P      01 06 29.2 +0.6
OSTC  Ostas           74.85 335 eP      P      01 06 29.6 +1.0
OSTC  Ostas           74.85 335 eP      P      01 06 29.6 +1.0
CHVC  Chvalec         74.86 336 eP      P      01 06 29.5 +0.8
CHVC  Chvalec         74.86 336 eP      P      01 06 29.5 +0.8
KOPT  Kop Dagi        74.89 315  P      P      01 06 29.2 -0.1
UPC   Upice           74.95 336 eP      P      01 06 30.6 +1.4
UPC   Upice           74.95 336 eP      P      01 06 30.6 +1.4
OKC   Ostrava-Krasne  74.96 334 eP      P      01 06 30.1 +0.9
OKC   Ostrava-Krasne  74.96 334 eP      P      01 06 30.1 +0.9
STEB  Steborice       74.98 334 eP      P      01 06 30.4 +1.1
CLL   Collm           75.00 338  P      P      01 06 29.8 +0.4
CLL   Collm           75.00 338  P      P      01 06 29.8 +0.4
CLL                              pmax   pmax
      comp=Z,11nm,0.8s
CLL   Collm           75.00 338  P      P      01 06 29.9 +0.5
      comp=Z,16nm,1.0s
CLL   Collm           75.00 338⇑iP      P      01 06 29.8 +0.4
      comp=Z,11nm,0.7s
DPC   Dobruska-Polom  75.01 335 eP      P      01 06 30.7 +1.2
DPC   Dobruska-Polom  75.01 335 eP      P      01 06 30.7 +1.2
DPC   Dobruska-Polom  75.01 335  P      P      01 06 30.2 +0.7
      comp=Z,8.5nm,1.0s
BERU  Beregovo        75.02 330  P      P      01 06 30.3 +0.7
KRLC  Kraliky         75.13 335 eP      P      01 06 31.2 +0.9
KRLC  Kraliky         75.13 335 eP      P      01 06 31.2 +0.9
TESR  Tescani         75.17 327 ⇑P      P      01 06 30.7 +0.2
TESR  Tescani         75.17 327  P      P      01 06 30.7 +0.2
      comp=Z,682nmcomp=Z,26nm,1.0s
MORC  Moravsky Berou  75.19 334  P      P      01 06 31.3 +0.7
MORC  Moravsky Berou  75.19 334 eP      P      01 06 31.4 +0.8
MORC  Moravsky Berou  75.19 334 ⇑P      P      01 06 32.0 +1.4
MORC  Moravsky Berou  75.19 334  P      P      01 06 31.3 +0.7
MORC                             pmax   pmax
      comp=Z,14nm,0.8s
LANS  Liptovska Anna  75.19 333 eP      P      01 06 32.5 +1.9
LANS                             pmax   pmax
      comp=Z,12nm,0.8s
LANS  Liptovska Anna  75.19 333 eP      P      01 06 32.5 +1.9
GHRR                  75.29 326  P      P      01 06 31.8 +0.7
GURO  Guroymak-BITLI  75.33 313  P      P      01 06 33.1 +1.3
GURO                             IAmb   IAmb   01 06 34.9
      comp=Z,6.9nm,0.8s
ONER  Baraj Valea Uz  75.41 327 ⇓P      P      01 06 33.0 +1.1
RICC  Richard         75.42 337 eP      P      01 06 33.2 +1.4
ARCR  ARCALIA         75.47 329 ⇑P      P      01 06 32.2 +0.1
TLCR                  75.52 325 ⇑P      P      01 06 33.0 +0.5
TLCR                  75.52 325  P      P      01 06 32.9 +0.5
VRI   Vrincioaia      75.70 327 ⇑P      P      01 06 33.8 +0.2
VRI   Vrincioaia      75.70 327  P      P      01 06 33.7 +0.2
VRI   Vrincioaia      75.70 327  P      P      01 06 34.1 +0.6
      comp=Z,7.7nm,1.1s
PLOR  Plostina        75.74 327 ⇑P      P      01 06 34.1 +0.3
PLOR  Plostina        75.74 327  P      P      01 06 34.1 +0.3
CFR   Carcaliu        75.78 326 ⇓P      P      01 06 34.5 +0.6
CFR   Carcaliu        75.78 326  P      P      01 06 34.5 +0.6
TURR  Turia           75.79 327 ⇓P      P      01 06 35.3 +1.2
ASAR  Alice Springs   75.81 202  P      P      01 06 35.2 +0.9
      comp=Z,0.3nm,0.6s,baz=14,slow=6.3,SNR=2.5
      comp=Z,0.3nm,0.6s
PRU   Pruhonice       75.81 336 eP      P      01 06 35.1 +1.0
PRU   Pruhonice       75.81 336 eP      P      01 06 35.1 +1.0
GOPC  GO Pecny, Ondr  75.82 336 eP      P      01 06 35.3 +1.1
GOPC  GO Pecny, Ondr  75.82 336 eP      P      01 06 35.3 +1.1
OZUR                  75.83 327 ⇑P      P      01 06 34.4  0.0
VRAC  Vranov          75.88 335  LR     LR     01 43 10.6
      comp=Z,53nm,18.9s,baz=53,slow=38
VRAC  Vranov          75.88 335 eP      P      01 06 35.7 +1.2
VRAC  Vranov          75.88 335 ⇑P      P      01 06 35.8 +1.2
VRAC  Vranov          75.88 335  P      P      01 06 35.7 +1.2
DIKM  Dikmen          75.90 319 ⇓P      P      01 06 35.1 +0.4
TPGR  Topolog         75.95 325 ⇑P      P      01 06 35.4 +0.4
VYHS  Vyhne           75.97 333 eP      P      01 06 36.2 +1.2
VYHS                             pmax   pmax
      comp=Z,8.0nm,0.8s
VYHS  Vyhne           75.97 333 eP      P      01 06 36.2 +1.2
JAVC  Velka Javorina  75.98 334 eP      P      01 06 36.9 +1.8
DOPR  Dopca           76.08 328 ⇓P      P      01 06 37.1 +1.4
NKC   Novy Kostel     76.12 338 eP      P      01 06 36.3 +0.4
NKC   Novy Kostel     76.12 338 eP      P      01 06 36.3 +0.4
KRUC  Moravsky        76.16 335 eP      P      01 06 37.2 +1.1
PSZ   Piszkesteto     76.16 332  P      P      01 06 37.3 +1.1
PSZ                              IAmb   IAmb   01 06 38.5
      comp=Z,6.2nm,0.9s
PSZ   Piszkesteto     76.16 332 ⇑P      P      01 06 36.6 +0.3
PSZ   Piszkesteto     76.16 332  P      P      01 06 36.5 +0.3
MARR  Marisel-Cluj    76.24 329 ⇓P      P      01 06 37.5 +0.8
DRGR                  76.27 330 ⇓P      P      01 06 37.6 +0.8
DRGR                  76.27 330  P      P      01 06 37.6 +0.8
MLR   Muntele Rosu    76.30 327  P      P      01 06 38.5 +1.4
MLR   Muntele Rosu    76.30 327 ⇑P      P      01 06 38.5 +1.4
MLR   Muntele Rosu    76.30 327  P      P      01 06 38.5 +1.4
MLR   Muntele Rosu    76.30 327  P      P      01 06 37.9 +0.8
      comp=Z,18nm,0.7s
SMOL  Smolenice       76.36 334 eP      P      01 06 38.9 +1.7
SMOL                             pmax   pmax
      comp=Z,6.0nm,0.8s
ZVC   Zvikov          76.41 336 eP      P      01 06 38.7 +1.2
MODS  Modra-Piesok    76.53 334 eP      P      01 06 39.4 +1.2
MODS                             pmax   pmax
      comp=Z,15nm,1.0s
MODS  Modra-Piesok    76.53 334 eP      P      01 06 39.4 +1.2
VOIR                  76.66 328 ⇑P      P      01 06 39.2 +0.1
VOIR                  76.66 328  P      P      01 06 39.2 +0.1
VOIR                  76.66 328  P      P      01 06 39.9 +0.8
      comp=Z,16nm,0.9s
SRO   Srobarova       76.73 333 eP      P      01 06 41.2 +1.9
SRO                              pmax   pmax
      comp=Z,11nm,0.8s
SRO   Srobarova       76.73 333 eP      P      01 06 41.2 +1.9
ICOR  Ion Corvin      76.81 325 ⇑P      P      01 06 40.8 +1.0
KHC   Kasperske Hory  76.85 336 eP      P      01 06 41.2 +1.1
KHC   Kasperske Hory  76.85 336c iP     P      01 06 41.1 +1.0
KHC                              pmax   pmax
      comp=Z,15nm,0.9s
KHC   Kasperske Hory  76.85 336  P      P      01 06 41.0 +1.0
      comp=Z,8.2nm,1.3s
MARD  Mardin          76.92 313  P      P      01 06 42.6 +1.9
GRF   Grafenberg Arr  76.92 338 eP      P      01 06 41.2 +0.8
      comp=Z,6.6nm,0.9s,baz=22,slow=4.9
ILGA  Ilgaz           77.05 320  P      P      01 06 43.2 +1.7
GERES GERESS Array B  77.08 336  P      P      01 06 42.2 +0.7
      comp=Z,1.0nm,0.4s,baz=33,slow=5.7,SNR=12
      comp=Z,1.0nm,0.4s
LOT   Lotru           77.09 328 ⇓P      P      01 06 42.1 +0.5
MEM   Membach         77.23 342 dP      P      01 06 42.2 +0.1
CONA  Conrad Observa  77.33 335 i pP    P      01 06 44.5 +1.6
      comp=Z,5.2nm,1.0s
SURR  Surduc          77.38 330 ⇑P      P      01 06 43.4 +0.4
RONA  Rosalia, Austr  77.42 334 i pP    P      01 06 45.3 +2.0
      comp=Z,4.8nm,1.0s
GZR   Gura Zlata      77.48 329 ⇓P      P      01 06 43.5 -0.2
GZR   Gura Zlata      77.48 329  P      P      01 06 43.4 -0.2
MPLH  Magyarpolny     77.54 333  P      P      01 06 45.0 +1.1
      comp=Z,27nm,1.2s
BZS   Buzias          77.66 330 ⇓P      P      01 06 45.1 +0.4
BZS   Buzias          77.66 330  P      P      01 06 45.0 +0.4
BMRD  Maredsous       77.77 342 dP      P      01 06 45.2 +0.1
MOA   Molln           77.85 336 eP      P      01 06 46.3 +0.7
      comp=Z,4.3nm,1.1s
BNN   Bunyan          77.94 317  P      P      01 06 47.7 +1.2
ARSA  Arzberg         78.05 334 epP     P      01 06 48.3 +1.5
      comp=Z,7.9nm,1.4s
HERR  Herculane       78.05 329 ⇓P      P      01 06 47.1 +0.4
MORH  Mrgy, Hungar    78.07 332 ⇓P      P      01 06 47.2 +0.4
MORH  Mrgy, Hungar    78.07 332  P      P      01 06 47.3 +0.5
      comp=Z,2.4nm,1.8s
BIOA  Bad Ischl, Aus  78.16 336 epP     P      01 06 48.6 +1.2
      comp=Z,5.9nm,1.0s
BR131 Keskin Array S  78.18 319  P      P      01 06 48.1 +0.3
BR131                            IAmb   IAmb   01 06 50.0
      comp=Z,5.9nm,1.0s
BR131 Keskin Array S  78.18 319  P      P      01 06 48.1 +0.3
BR131                            pmax   pmax
      comp=Z,6.0nm,1.0s
BRTR  Keskin Array B  78.18 319  P      P      01 06 48.6 +0.9
      comp=Z,4.3nm,1.0s,baz=46,slow=3.6,SNR=20
      comp=Z,4.3nm,1.0s
BRTR  Keskin Array B  78.18 319ceP      P      01 06 48.7 +0.9
BRTR                             pmax   pmax
      comp=Z,5.0nm,1.0s
BR106 Keskin Array S  78.18 319  P      P      01 06 48.5 +0.7
      comp=Z,39nmcomp=Z,5.0nm,1.0s
BR104 Keskin Array S  78.19 319  P      P      01 06 48.6 +0.8
      comp=Z,45nmcomp=Z,5.3nm,1.0s
BR105 Keskin Array S  78.20 319  P      P      01 06 48.6 +0.7
      comp=Z,61nmcomp=Z,6.8nm,1.1s
MDVR  Moldovita       78.37 329 ⇑P      P      01 06 48.9 +0.3
KIRS  Kirsehir-Merke  78.55 318 ⇓P      P      01 06 51.0 +1.2
LESA  Schwarzleotal   78.66 336 i pP    P      01 06 51.8 +1.6
      comp=Z,0.7nm,0.4s
SOKA  Soboth          78.71 335 i pP    P      01 06 51.6 +1.1
      comp=Z,2.0nm,0.5s
OBKA  Obir            79.00 335 i pP    P      01 06 54.7 +2.6
      comp=Z,14nm,2.0s
WTTA  Wattenberg      79.08 337 i pP    P      01 06 54.3 +1.7
      comp=Z,4.1nm,0.7s
RETA  Reutte          79.09 338 i P     P      01 06 52.6  0.0
      comp=Z,1.4nm,0.6s
MOTA  Moosalm         79.14 337 i P     P      01 06 52.1 -0.8
      comp=Z,3.3nm,0.8s
SQTA  Sankt Quirin    79.22 337 i pP    P      01 06 55.9 +2.6
      comp=Z,2.0nm,0.4s
ABTA  Abfaltersbach   79.33 336 i pP    P      01 06 55.2 +1.3
      comp=Z,2.1nm,0.6s
DAVA  Damuels         79.49 338 i pP    P      01 06 56.2 +1.3
      comp=Z,6.4nm,1.0s
FETA  Feichten        79.53 337 i pP    P      01 06 58.2 +3.2
      comp=Z,5.1nm,1.1s
RDO   Rodhopi         80.21 325  P      P      01 06 59.2 +0.6
PDG   Podgorica       81.28 330 ⇓P      P      01 07 04.5 +0.2
ELL   Elmali          82.27 320  P      P      01 07 10.1 +0.3
ELL   Elmali          82.27 320  P      P      01 07 10.1 +0.3
ELL                              pmax   pmax
      comp=Z,11nm,0.9s
MMAI  Mount Meron Ar  82.96 314  P      P      01 07 14.1 +0.7
      comp=Z,4.2nm,0.6s,baz=35,slow=6.3,SNR=17
      comp=Z,4.2nm,0.6s
ARG   Arkhangelos     83.46 321  P      P      01 07 16.8 +1.0
ARG   Arkhangelos     83.46 321  P      P      01 07 16.8 +1.0
ARG                              pmax   pmax
      comp=Z,7.0nm,0.7s
TIP   Timpagrande     85.02 330  P      P      01 07 24.7 +0.9
      comp=Z,3.0nm,1.1s
ITM   Ithomi          85.03 326  P      P      01 07 22.2 -1.6
ITM                              IAmb   IAmb   01 07 47.6
      comp=Z,3.2nm,0.8s
RAYN  Ar Rayn         85.45 301  P      P      01 07 26.0 -0.1
RAYN                             IAmb   IAmb   01 07 28.6
      comp=Z,5.4nm,1.1s
RAYN  Ar Rayn         85.45 301  P      P      01 07 25.8 -0.3
ESDC  Sonseca Array   89.62 346  P      P      01 07 46.6 +0.7
      comp=Z,0.8nm,0.8s,baz=359,slow=3.2,SNR=4.1
      comp=Z,0.8nm,0.8s
KEST  Kesra           90.45 334  P      P      01 07 50.8 +0.9
      comp=Z,4.3nm,1.1s,baz=65,slow=5.7,SNR=4.5
      comp=Z,4.3nm,1.1s
QSPA  South Pole Qui 139.30 180  PKP    PKiKP  01 14 15.3 -0.8
      comp=Z,1.1nm,0.8s,baz=282,slow=1.5,SNR=5.9
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IDC ***12*** *01:01:46.2±5.4, 34°.63S×178°.63E, h224^{km}±38^{km}, mb3.3/3, mbtmp3.9/4, Error ellipse: s-maj=63.7km s-min=22.4km az=42.0*

WEL ***12*** *01:01:48.8±1.0, 35°S±11°×17°9E±1°3, h254^{km}±16^{km}, M4.0/14, ML4.0/18, MLv4.0/14, Error ellipse: s-maj=17.7km s-min=13.3km az=60.0, confirmed*

ISC 12 01:01:50.2±1.6, **35°.0S**±0°.1×**178°.7E**±0°.1, **h265**^{km}±11^{km}, **n66,** σ**1^{s}.32**/79, **mb3.3**/3, **Off east coast of North Island**

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Code  Station Name     Δ°   AZ°   Phase ID          Time       Res
                                  Op     ISC       h  m  s     ISC
MXZ   Matakaoa Point   2.54 187  P      Pn     01 02 38.1 -0.8
MXZ                              S      S      01 03 17.0 -0.7
WMGZ  Waiomatatini S   2.79 185  P      Pn     01 02 41.1 -0.2
WMGZ                             S      S      01 03 22.7 +0.6
HAZ   Te Kaha          2.82 195  P      Pn     01 02 40.7 -1.0
HAZ                              S      S      01 03 22.2 -0.4
PKGZ  Pakihiroa        2.87 190  S      S      01 03 23.9 +0.2
KUZ   Kuaotunu         2.97 234  P      Pn     01 02 43.7 +0.4
RUGZ  Raukumara Rang   3.04 196  P      Pn     01 02 43.0 -1.1
RUGZ                             S      S      01 03 24.4 -2.7
TWGZ  Tauwhareparae    3.19 190  P      Pn     01 02 46.0 +0.3
TWGZ                             S      S      01 03 30.3 +0.4
OPRZ  Ohinepanea       3.30 211  P      Pn     01 02 47.2 +0.4
CNGZ  Carnagh Statio   3.47 187  P      Pn     01 02 48.2 -0.4
URZ   Urewera          3.47 201  P      Pn     01 02 47.7 -0.9
      12nm,0.3s,baz=4.1,slow=14,SNR=27
URZ                              S      S      01 03 34.2 -1.0
      24nm,0.3s,baz=336,slow=20,SNR=31
URZ   Urewera          3.47 201  P      Pn     01 02 47.7 -0.9
URZ                              S      S      01 03 35.3 +0.1
TKGZ  Te Karaka        3.47 191  P      Pn     01 02 47.9 -0.7
TKGZ                             S      S      01 03 35.3 +0.2
MBAZ  Motutapu North   3.55 240  P      Pn     01 02 49.3 -0.2
RAGZ  Rawiri           3.61 196  P      Pn     01 02 50.0 -0.3
RAGZ                             S      S      01 03 39.6 +1.5
WCZ   Waipu Caves      3.68 255  P      Pn     01 02 49.0 -2.0
RIGZ  Rimuhau          3.74 192  P      Pn     01 02 50.7 -1.0
RIGZ                             S      S      01 03 41.0 +0.2
MUGZ  Murupara         3.77 204  P      Pn     01 02 51.7 -0.4
MUGZ                             S      S      01 03 42.8 +1.4
SNGZ  Shannon Statio   3.90 196  P      Pn     01 02 52.9 -0.6
SNGZ                             S      S      01 03 45.3 +1.3
KNZ   Kokohu           4.07 192  P      Pn     01 02 54.1 -1.3
KNZ                              S      S      01 03 47.6 +0.3
RAHZ  Arahi            4.09 198  P      Pn     01 02 55.0 -0.7
MTHZ  Maungataniwha    4.10 201  P      Pn     01 02 55.3 -0.5
MHGZ  Mahia Peninsul   4.16 189  P      Pn     01 02 56.0 -0.5
TLZ   Tolley Road      4.17 217  P      Pn     01 02 58.1 +1.5
MRHZ  Matea Rd         4.22 205  P      Pn     01 02 56.6 -0.6
NMHZ  Naumai           4.33 200  P      Pn     01 02 57.9 -0.7
ARHZ  Aropaoanui       4.44 198  P      Pn     01 02 58.8 -1.0
BKZ   Black Stump Fm   4.49 203  P      Pn     01 02 59.4 -1.0
MCHZ  McNeill Hill     4.69 200  P      Pn     01 03 01.8 -0.9
NTVZ  North Tongarir   4.73 210  P      Pn     01 03 03.0 -0.3
TMVZ  Te Maari         4.73 210  P      Pn     01 03 03.3  0.0
ETVZ  East Tongariro   4.75 210  P      Pn     01 03 03.4 -0.1
KWHZ  Kaweka Forest    4.75 202  P      Pn     01 03 02.6 -0.8
OTVZ  Oturere          4.79 210  P      Pn     01 03 03.5 -0.5
CKHZ  Cape Kidnapper   4.80 195  P      Pn     01 03 02.7 -1.2
SNVZ  South Ngauruho   4.82 210  P      Pn     01 03 04.0 -0.4
FWVZ  Far West T-bar   4.91 210  P      Pn     01 03 05.1 -0.5
MAVZ  Matarangi        4.92 210  P      Pn     01 03 05.1 -0.7
WHVZ  Whangaehu Hut    4.92 210  P      Pn     01 03 05.5 -0.2
WNVZ  Wahianoa         4.96 209  P      Pn     01 03 05.3 -0.7
MOVZ  Moawhango        4.96 208  P      Pn     01 03 05.1 -0.9
KRHZ  Kereru           4.97 201  P      Pn     01 03 04.4 -1.6
KAHZ  Kahuranaki       4.97 197  P      Pn     01 03 04.8 -1.3
PXZ   Pawanui          5.20 196  P      Pn     01 03 07.0 -1.8
PNHZ  Pukenui          5.27 202  P      Pn     01 03 07.7 -2.0
TSZ   Takapari Road    5.47 203  P      Pn     01 03 10.7 -1.4
PRHZ  Porangahau       5.48 197  P      Pn     01 03 10.3 -1.8
NEZ   North Egmont     5.61 220  P      Pn     01 03 15.6 +1.7
DVHZ  Dannevirke       5.63 200  P      Pn     01 03 12.4 -1.7
ANWZ  Angora Road      5.70 197  P      Pn     01 03 14.1 -0.8
POWZ  Post Office Ro   5.84 203  P      Pn     01 03 15.0 -1.5
PRWZ  Pori Road        5.92 201  P      Pn     01 03 16.1 -1.5
BFZ   Birch Farm       5.97 198  P      Pn     01 03 16.2 -1.9
MRZ   Mangatainoka R   6.14 203  P      Pn     01 03 18.0 -2.2
TIWZ  Tintock          6.15 200  P      Pn     01 03 18.8 -1.7
CPWZ  Castlepoint      6.19 198  P      Pn     01 03 19.2 -1.7
HOWZ  Holdsworth Sta   6.38 202  P      Pn     01 03 20.5 -2.7
OGWZ  Otaki Gorge      6.42 205  P      Pn     01 03 21.1 -2.6
MTW   Mount Morrison   6.62 202  P      Pn     01 03 23.6 -2.6
TRWZ  Traveller        6.79 200  P      Pn     01 03 26.2 -2.0
PAWZ  Paruwai Farm     6.85 201  P      Pn     01 03 26.4 -2.7
ASAR  Alice Springs   40.37 274  P      P      01 09 01.8 -1.0
      1.3nm,0.5s,baz=117,slow=8.5,SNR=18
      1.3nm,0.5s
WRA   Warramunga Arr  41.80 279  P      P      01 09 12.7 -1.6
      0.8nm,0.6s,baz=120,slow=8.2,SNR=12
      0.8nm,0.6s
QSPA  South Pole Qui  55.09 180  P      P      01 10 58.1 +3.4
      0.9nm,0.8s,baz=27,slow=2.3,SNR=5.0
      0.9nm,0.8s
DBIC  Dimbokro       151.58 173  PKPbc  PKiKP  01 21 14.8 +0.9
      5.2nm,0.9s,baz=308,slow=6.2,SNR=3.9
BRTR  Keskin Array B 151.97 290  PKPbc  PKiKP  01 21 13.8 -0.3
      0.1nm,0.3s,baz=94,slow=3.0,SNR=1.6
AKASG Malin Array Be 152.96 315  PKPbc  PKPbc  01 21 14.9 -0.6
      0.2nm,0.3s,baz=51,slow=2.1,SNR=4.1
```

ROM ***12*** *01:10:21.9±0.3, 39°.61N±0°.01×15°.86E±0°.04, h261^{km}±2^{km}, ML3.1/86, Error ellipse: s-maj=3.0km s-min=0.9km az=95.0*

IDC ***12*** *01:10:22.5±3.7, 39°.74N×15°.58E, h245^{km}±43^{km}, mb3.1/7, mbtmp3.5/11, Error ellipse: s-maj=18.0km s-min=16.9km az=151.0*

ISC 12 01:10:22.7±0.7, **39°.62N**±0°.05×**15°.72E**±0°.05, **h253**^{km}±5^{km}, **n85,** σ**1^{s}.17**/105, **mb3.2**/5, **1C-21D, Southern Italy**

```
Code  Station Name     Δ°   AZ°   Phase ID          Time       Res
                                  Op     ISC       h  m  s     ISC
CET2  Cetraro          0.21 117 ⇓P      Pn     01 10 55.9 +0.4
CET2                             S      S      01 11 20.2 -0.8
CET2                             AML    AML
      comp=N,1350µm,0.4s
CET2                             AML    AML
      comp=E,1078µm,0.7s
CET2                             AML    AML
      comp=N,1350µm,0.4s
CET2                             AML    AML
      comp=E,1087µm,0.9s
MMN   Mormanno         0.34  38  P      Pn     01 10 56.9 +1.5
MMN                              AML    AML
      comp=E,222µm,0.2s
MMN                              AML    AML
      comp=N,282µm,1.1s
MMN                              AML    AML
      comp=N,274µm,0.4s
MMN                              AML    AML
      comp=N,282µm,0.9s
CUC   Castrocucco      0.38  12 ⇓P      Pn     01 10 56.2 +0.6
CUC                              S      S      01 11 21.7 +0.1
CUC                              AML    AML
```

```
      comp=N,85µm,1.0s
CUC                                   AML   AML
      comp=E,117µm,0.5s
CUC                                   AML   AML
      comp=N,74µm,0.6s
CUC                                   AML   AML
      comp=E,131µm,0.8s
CUC                                   AML   AML
      comp=N,109µm,0.7s
CUC                                   AML   AML
      comp=E,117µm,0.5s
CUC                                   AML   AML
      comp=N,85µm,1.0s
TDS   Terranova Siba   0.48  86  ⇓P   Pn    01 10 57.5 +1.6
TDS                               S   S     01 11 22.9 +1.0
TDS                                   AML   AML
      comp=N,132µm,0.7s
TDS                                   AML   AML
      comp=E,148µm,1.3s
TDS                                   AML   AML
      comp=E,144µm,0.7s
TDS                                   AML   AML
      comp=N,132µm,0.7s
TDS                                   AML   AML
      comp=E,148µm,0.7s
BULG  Bulgheria - Ca   0.52 330   P   Pn    01 10 57.3 +1.2
BULG                                  AML   AML
      comp=E,65µm,1.3s
BULG                                  AML   AML
      comp=N,146µm,0.7s
BULG                                  AML   AML
      comp=N,140µm,0.7s
BULG                                  AML   AML
      comp=E,64µm,1.3s
BULG                                  AML   AML
      comp=E,63µm,0.5s
BULG                                  AML   AML
      comp=N,141µm,0.7s
BULG                                  AML   AML
      comp=E,58µm,0.9s
BULG                                  AML   AML
      comp=N,146µm,0.7s
BULG                                  AML   AML
      comp=E,64µm,0.7s
MGR   Morigerati       0.53 346  ⇓P   Pn    01 10 57.1 +1.1
MGR                               S   S     01 11 23.1 +0.9
MGR                                   AML   AML
      comp=N,68µm,1.2s
MGR                                   AML   AML
      comp=E,76µm,0.4s
MGR                                   AML   AML
      comp=N,50µm,0.6s
MGR                                   AML   AML
      comp=N,68µm,0.8s
MGR                                   AML   AML
      comp=E,76µm,0.4s
CAR1  CAROLEI          0.53 134  ⇓P   Pn    01 10 56.5 +0.3
CAR1                              S   S     01 11 21.1 -1.3
CAR1                                  AML   AML
      comp=E,1790µm,1.0s
CAR1                                  AML   AML
      comp=N,1575µm,0.5s
CAR1                                  AML   AML
      comp=E,2185µm,0.4s
CAR1                                  AML   AML
      comp=N,1116µm,0.8s
CAR1                                  AML   AML
      comp=E,1723µm,0.4s
CAR1                                  AML   AML
      comp=N,1572µm,0.5s
CAR1                                  AML   AML
      comp=E,2184µm,0.4s
CAR1                                  AML   AML
      comp=N,1094µm,0.4s
CAR1                                  AML   AML
      comp=N,1570µm,0.5s
SALB  San Lorenzo Be   0.55  62  ⇓P   Pn    01 10 57.0 +0.8
SALB                              S   S     01 11 22.2 -0.3
SALB                                  AML   AML
      comp=E,218µm,0.3s
SALB                                  AML   AML
      comp=N,168µm,1.0s
SALB                                  AML   AML
      comp=E,219µm,0.3s
SALB                                  AML   AML
      comp=E,219µm,0.3s
SALB                                  AML   AML
      comp=N,167µm,1.0s
SALB                                  AML   AML
      comp=N,168µm,1.0s
SIRI  Monte Sirino -   0.57  12   P   Pn    01 10 57.5 +1.2
SIRI                                  AML   AML
      comp=E,107µm,0.9s
SIRI                                  AML   AML
      comp=N,136µm,0.3s
SIRI                                  AML   AML
      comp=E,107µm,0.9s
SIRI                                  AML   AML
      comp=E,111µm,0.6s
SIRI                                  AML   AML
      comp=E,107µm,0.9s
SIRI                                  AML   AML
      comp=N,136µm,0.4s
SIRI                                  AML   AML
      comp=E,111µm,1.4s
SIRI                                  AML   AML
      comp=N,136µm,1.7s
SIRI                                  AML   AML
      comp=N,136µm,1.6s
SPS2  Spezzano della   0.58 124  ⇓P   Pn    01 10 56.9 +0.6
SPS2                              S   S     01 11 21.7 -0.9
SPS2                                  AML   AML
      comp=E,218µm,0.8s
SPS2                                  AML   AML
      comp=N,254µm,1.2s
SPS2                                  AML   AML
      comp=E,207µm,0.3s
SPS2                                  AML   AML
      comp=N,216µm,0.4s
SPS2                                  AML   AML
      comp=N,254µm,0.8s
CELI  Celico           0.65 110  ⇓P   Pn    01 10 58.1 +1.5
CELI                              S   S     01 11 24.1 +0.9
CELI                                  AML   AML
      comp=E,476µm,0.4s
CELI                                  AML   AML
      comp=N,438µm,0.5s
CELI                                  AML   AML
      comp=N,437µm,0.5s
CELI                                  AML   AML
      comp=E,1195µm,0.4s
CELI                                  AML   AML
      comp=N,1125µm,0.5s
CELI                                  AML   AML
      comp=E,476µm,0.4s
CELI                                  AML   AML
      comp=E,1197µm,0.4s
CELI                                  AML   AML
      comp=N,1125µm,0.5s
CELI                                  AML   AML
      comp=E,476µm,0.4s
CELI                                  AML   AML
      comp=N,437µm,0.5s
MCEL  Monticello       0.70   5  ⇓P   Pn    01 10 58.3 +1.6
MCEL                              S   S     01 11 25.6 +2.0
MCEL                                  AML   AML
      comp=N,189µm,0.8s
MCEL                                  AML   AML
      comp=N,192µm,1.0s
MCEL                                  AML   AML
      comp=E,104µm,0.4s
MCEL                                  AML   AML
      comp=N,189µm,0.8s
MCEL                                  AML   AML
      comp=E,126µm,1.4s
MCEL                                  AML   AML
      comp=N,189µm,1.2s
ORI   Oriolo Calabro   0.71  52  ⇓P   Pn    01 10 57.7 +1.0
ORI                               S   S     01 11 23.8 +0.4
ORI                                   AML   AML
      comp=E,368µm,0.3s
ORI                                   AML   AML
      comp=N,472µm,0.3s
ORI                                   AML   AML
      comp=E,369µm,0.3s
ORI                                   AML   AML
      comp=N,473µm,0.3s
ORI                                   AML   AML
      comp=N,472µm,1.7s
SLCN  Sala Consilina   0.77 355   P   Pn    01 10 58.9 +2.0
SLCN                                  AML   AML
      comp=N,86µm,0.6s
SLCN                                  AML   AML
      comp=E,101µm,0.8s
SLCN                                  AML   AML
      comp=E,101µm,0.8s
SLCN                                  AML   AML
      comp=N,86µm,0.6s
SLCN                                  AML   AML
      comp=E,122µm,0.7s
SLCN                                  AML   AML
      comp=N,86µm,1.4s
PIPA  Pietrapaola      0.86  99  ⇓P   Pn    01 10 58.3 +0.9
PIPA                                  AML   AML
      comp=E,537µm,1.2s
PIPA                                  AML   AML
      comp=N,350µm,1.3s
PIPA                                  AML   AML
      comp=E,447µm,1.2s
PIPA                                  AML   AML
      comp=N,302µm,1.3s
PIPA                                  AML   AML
      comp=E,536µm,1.3s
PIPA                                  AML   AML
      comp=N,350µm,1.3s
PIPA                                  AML   AML
      comp=E,434µm,0.2s
PIPA                                  AML   AML
      comp=N,319µm,0.5s
PIPA                                  AML   AML
      comp=E,428µm,0.2s
PIPA                                  AML   AML
      comp=N,296µm,0.2s
PIPA                                  AML   AML
      comp=N,350µm,0.7s
PIPA                                  AML   AML
      comp=N,302µm,0.7s
PIPA                                  AML   AML
      comp=E,447µm,0.8s
PIPA                                  AML   AML
      comp=E,536µm,0.7s
CDRU  Civita di Ruta   0.92 340   P   Pn    01 10 58.7 +1.0
CDRU                                  AML   AML
      comp=E,43µm,0.7s
CDRU                                  AML   AML
      comp=E,43µm,0.7s
CDRU                                  AML   AML
      comp=N,26µm,0.6s
CDRU                                  AML   AML
      comp=N,26µm,0.6s
TIP   Timpagrande      0.92 118  ⇓P   Pn    01 10 58.6 +0.8
TIP                               S   S     01 11 25.0 -0.2
TIP                                   AML   AML
      comp=E,150µm,1.5s
TIP                                   AML   AML
      comp=N,158µm,0.5s
TIP                                   AML   AML
      comp=E,117µm,0.5s
TIP                                   AML   AML
      comp=N,158µm,0.5s
TIP                                   AML   AML
      comp=E,136µm,0.3s
TIP                                   AML   AML
      comp=N,158µm,0.5s
CRAC  Craco            0.92  37  ⇓P   Pn    01 10 58.3 +0.7
CRAC                              S   S     01 11 25.6 +0.5
CRAC                                  AML   AML
      comp=E,286µm,0.2s
CRAC                                  AML   AML
      comp=N,197µm,1.2s
CRAC                                  AML   AML
      comp=E,287µm,0.2s
CRAC                                  AML   AML
      comp=N,176µm,0.3s
CRAC                                  AML   AML
      comp=N,197µm,0.8s
PTRP  Pietrapertosa    0.94  16   P   Pn    01 10 58.5 +0.7
GRI   Girifalco        0.97 145   P   Pn    01 10 59.1 +1.1
GRI                               S   S     01 11 25.4 -0.3
GRI                                   AML   AML
      comp=E,370µm,1.3s
GRI                                   AML   AML
      comp=N,505µm,0.4s
GRI                                   AML   AML
      comp=E,328µm,0.3s
GRI                                   AML   AML
      comp=N,505µm,0.4s
JOPP  Joppolo          1.02 173  ⇓P   Pn    01 10 58.7 +0.4
JOPP                              S   S     01 11 24.8 -1.4
JOPP                                  AML   AML
      comp=N,742µm,1.2s
JOPP                                  AML   AML
      comp=E,383µm,0.3s
JOPP                                  AML   AML
      comp=N,585µm,0.2s
JOPP                                  AML   AML
      comp=E,410µm,0.4s
LADO  San Nicola del   1.04 109  ⇓P   Pn    01 10 58.9 +0.7
LADO                                  AML   AML
      comp=E,19µm,0.8s
LADO                                  AML   AML
      comp=N,13µm,0.2s
LADO                                  AML   AML
      comp=E,19µm,1.2s
MIGL  Miglionico       1.13  29  ⇓P   Pn    01 10 58.8 +0.1
MIGL                              S   S     01 11 26.7 -0.5
MIGL                                  AML   AML
      comp=E,322µm,0.5s
MIGL                                  AML   AML
      comp=N,291µm,0.7s
MIGL                                  AML   AML
      comp=E,322µm,0.5s
MIGL                                  AML   AML
      comp=N,285µm,0.5s
MRLC  Muro Lucano      1.15 351   P   Pn    01 10 60.0 +1.1
ACER  Acerenza         1.18   8   P   Pn    01 10 59.3 +0.2
ACER                                  AML   AML
      comp=N,74µm,0.6s
ACER                                  AML   AML
      comp=E,64µm,0.6s
ACER                                  AML   AML
      comp=N,74µm,0.6s
ACER                                  AML   AML
      comp=E,159µm,0.7s
ACER                                  AML   AML
      comp=N,74µm,1.4s
ACER                                  AML   AML
      comp=E,64µm,0.6s
MATE  Matera           1.27  36  ⇓P   Pn    01 10 59.6  0.0
MATE                              S   S     01 11 27.0 -1.7
MATE                                  AML   AML
      comp=E,196µm,0.4s
MATE                                  AML   AML
      comp=N,110µm,0.7s
MATE                                  AML   AML
      comp=E,196µm,0.4s
MATE                                  AML   AML
      comp=N,88µm,0.5s
MATE                                  AML   AML
      comp=N,110µm,1.3s
LTRZ  Laterza          1.29  41  ⇓P   Pn    01 10 59.7 -0.1
LTRZ                              S   S     01 11 27.3 -1.8
LTRZ                                  AML   AML
      comp=E,233µm,0.5s
LTRZ                                  AML   AML
      comp=N,258µm,0.5s
LTRZ                                  AML   AML
      comp=E,210µm,0.6s
PLAC  Placanica        1.30 154  ⇓P   Pn    01 11 00.5 +0.5
PLAC                              S   S     01 11 28.4 -1.0
PLAC                                  AML   AML
      comp=N,441µm,0.8s
PLAC                                  AML   AML
      comp=E,348µm,1.6s
PLAC                                  AML   AML
      comp=N,442µm,0.8s
PLAC                                  AML   AML
      comp=E,466µm,0.3s
PLAC                                  AML   AML
      comp=E,325µm,0.3s
PLAC                                  AML   AML
      comp=N,438µm,0.3s
PLAC                                  AML   AML
      comp=E,467µm,0.3s
PLAC                                  AML   AML
      comp=N,347µm,0.3s
PLAC                                  AML   AML
      comp=N,374µm,1.6s
LLI   Lipari           1.32 207   P   Pn    01 11 02.1 +2.1
PALZ  Palazzo San Ge   1.33   8   P   Pn    01 11 00.4 +0.3
PALZ                                  AML   AML
      comp=E,60µm,1.1s
SNAL  S. Angelo Dei    1.36 344   P   Pn    01 11 01.9 +1.6
SICLA Scilla           1.36 180   P   Pn    01 10 59.8 -0.6
MSRU  Castanea         1.37 187   P   Pn    01 11 00.7 +0.3
VPL   Vulcano Piano    1.37 205   P   Pn    01 11 02.0 +1.6
VPL                                   AML   AML
      comp=E,112µm,0.7s
VPL                                   AML   AML
      comp=N,162µm,0.6s
VPL                                   AML   AML
      comp=N,161µm,0.6s
VPL                                   AML   AML
      comp=N,162µm,1.4s
CEL   Celeste          1.37 174   P   Pn    01 11 00.5  0.0
CEL                               S   S     01 11 28.5 -1.7
CEL                                   AML   AML
      comp=E,240µm,0.3s
CEL                                   AML   AML
      comp=N,322µm,0.3s
CEL                                   AML   AML
      comp=E,240µm,0.3s
CEL                                   AML   AML
      comp=E,242µm,0.3s
CEL                                   AML   AML
      comp=N,342µm,0.3s
CEL                                   AML   AML
      comp=E,240µm,0.3s
CEL                                   AML   AML
      comp=N,322µm,0.3s
CEL                                   AML   AML
      comp=E,242µm,0.3s
CEL                                   AML   AML
      comp=N,342µm,0.3s
IFIL  Filicudi I Eol   1.39 221   P   Pn    01 11 01.8 +1.3
IFIL                                  AML   AML
      comp=N,124µm,0.8s
IFIL                                  AML   AML
      comp=E,350µm,1.4s
IFIL                                  AML   AML
      comp=E,350µm,0.6s
MTMR  Montemarano      1.40 337   P   Pn    01 11 01.7 +1.0
AMUR  Altamura         1.45  28  ⇓P   Pn    01 11 01.2 +0.3
AMUR                              S   S     01 11 29.7 -1.4
AMUR                                  AML   AML
      comp=N,62µm,1.0s
AMUR                                  AML   AML
      comp=E,96µm,0.5s
AMUR                                  AML   AML
      comp=N,59µm,0.5s
AMUR                                  AML   AML
      comp=E,96µm,0.5s
MPNC  Port Mandanici   1.50 191   P   Pn    01 11 02.0 +0.6
MPNC                                  AML   AML
      comp=E,274µm,0.7s
MPNC                                  AML   AML
      comp=N,311µm,1.1s
MPNC                                  AML   AML
      comp=E,241µm,0.3s
MPNC                                  AML   AML
      comp=N,293µm,0.3s
MPNC                                  AML   AML
      comp=N,311µm,0.9s
MPNC                                  AML   AML
      comp=E,274µm,1.3s
IACL  Alicudi          1.52 225   P   Pn    01 11 03.1 +1.7
NOCI  Noci             1.56  41  ⇓P   Pn    01 11 01.7  0.0
NOCI                                  AML   AML
      comp=E,83µm,1.0s
NOCI                                  AML   AML
      comp=N,114µm,0.6s
NOCI                                  AML   AML
      comp=E,82µm,0.4s
NOCI                                  AML   AML
      comp=N,114µm,0.6s
NOCI                                  AML   AML
      comp=N,114µm,1.4s
NOCI                                  AML   AML
      comp=E,83µm,1.0s
SOI   Samo             1.57 170   P   Pn    01 11 02.3 +0.4
SOI                                   AML   AML
      comp=E,105µm,0.9s
SOI                                   AML   AML
      comp=N,118µm,0.6s
SOI                                   AML   AML
      comp=E,99µm,0.4s
SOI                                   AML   AML
      comp=N,118µm,0.6s
SOI                                   AML   AML
      comp=N,118µm,1.4s
MTTG  Motta San Giov   1.62 181   P   Pn    01 11 03.1 +0.8
MTTG                                  AML   AML
      comp=E,106µm,0.4s
MTTG                                  AML   AML
      comp=N,224µm,0.4s
MTTG                                  AML   AML
      comp=E,106µm,0.4s
MTTG                                  AML   AML
      comp=N,224µm,0.4s
MTTG                                  AML   AML
      comp=N,224µm,1.6s
AIO   Antillo          1.69 193   P   Pn    01 11 04.5 +1.6
ECTS  Castiglione      1.80 195   P   Pn    01 11 05.5 +1.7
ECTS                                  AML   AML
      comp=E,94µm,0.4s
ECTS                                  AML   AML
      comp=N,90µm,1.0s
ECTS                                  AML   AML
      comp=E,93µm,0.4s
ECTS                                  AML   AML
      comp=N,88µm,0.8s
ECTS                                  AML   AML
      comp=N,90µm,1.0s
MSFR  San Fratello     1.81 209  ⇑P   Pn    01 11 05.6 +1.7
MSFR                                  AML   AML
      comp=E,36µm,1.6s
MSFR                                  AML   AML
      comp=N,34µm,1.4s
MSFR                                  AML   AML
      comp=N,33µm,1.6s
MSFR                                  AML   AML
      comp=N,34µm,0.6s
MSFR                                  AML   AML
      comp=E,36µm,0.4s
MESG  Mesagne          1.90  59   P   Pn    01 11 04.7 +0.2
HLNI  Lentini          2.37 197   P   Pn    01 11 09.6 +0.7
HLNI                                  AML   AML
      comp=E,38µm,0.6s
HLNI                                  AML   AML
      comp=N,33µm,1.0s
HLNI                                  AML   AML
      comp=E,24µm,0.2s
HLNI                                  AML   AML
      comp=N,30µm,0.5s
HAGA  Augusta          2.38 191   P   Pn    01 11 09.2 +0.2
HAGA                                  AML   AML
      comp=E,49µm,1.5s
HAGA                                  AML   AML
      comp=N,55µm,1.6s
HAGA                                  AML   AML
      comp=E,33µm,0.3s
HAGA                                  AML   AML
      comp=N,43µm,0.2s
HAGA                                  AML   AML
      comp=N,55µm,0.4s
HAGA                                  AML   AML
      comp=E,49µm,0.5s
AGST  Augusta-Monte    2.40 189   P   Pn    01 11 09.3 +0.1
AGST                                  AML   AML
      comp=E,111µm,0.9s
AGST                                  AML   AML
      comp=N,114µm,1.2s
AGST                                  AML   AML
      comp=E,111µm,1.1s
KEK   Kerkira          3.15  87   P   Pn    01 11 19.4 +2.4
KEK   Kerkira          3.15  87   P   Pn    01 11 19.4 +2.4
SRN   Sarande          3.31  84   P   Pn    01 11 18.8  0.0
LFKM  Lefkimmi         3.37  92   P   Pn    01 11 20.2 +0.9
IGT   Igoumenitsa      3.57  90   P   Pn    01 11 22.2 +0.5
DMLN  Damoulianata-K   3.89 109   P   Pn    01 11 26.0 +0.6
TSLK  Tsoukalades, L   3.92 100   P   Pn    01 11 26.4 +0.8
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LKD2	Lefkada island	3.93	101	P	Pn	01 11 26.5	+0.7
FSK	Fiskardo	3.95	106	P	Pn	01 11 26.5	+0.4
NYDR	Nydri-Lefkada	3.98	102	P	Pn	01 11 27.0	+0.6
KPRO	Kipourio	4.36	84	P	Pn	01 11 32.8	+1.8
PDO	Prodromos	4.38	102	P	Pn	01 11 32.1	+1.1
LTHK	Lithakia	4.44	114	P	Pn	01 11 32.2	+0.4
PVO	Paravola	4.63	101	P	Pn	01 11 35.6	+1.5
ANX	Ano Chora	4.94	100	P	Pn	01 11 39.7	+1.8
MAKR	Makrakomi, Fth	5.01	95	P	Pn	01 11 41.5	+2.7
TYRN	Tyrnavos	5.03	87	P	Pn	01 11 40.0	+1.0
KALE	Kalithea	5.15	102	P	Pn	01 11 43.5	+2.9
AGG	Agios Georgios	5.17	95	P	Pn	01 11 42.2	+1.6
KLV	Kalavryta, Ach	5.27	105	P	Pn	01 11 43.5	+1.6
GUR	Goura	5.45	106	P	Pn	01 11 46.5	+2.3
ITM	Ithomi	5.46	115	P	Pn	01 11 45.3	+1.1
PYL	PYLOS	5.47	118	P	Pn	01 11 44.9	+0.5
LKR	Lokris	5.75	97	P	Pn	01 11 48.8	+1.0
BRTR	Keskin Array B	13.81	84	P	P	01 13 29.3	0.0
	comp=E,0.2nm,0.4s,baz=258,slow=12,SNR=1.9						
AKASG	Malin Array Be	14.58	36	P	P	01 13 37.0	-0.6
	comp=E,0.2nm,0.3s,baz=229,slow=10,SNR=4.2						
ESDC	Sonseca Array	15.16	276	P	P	01 13 43.0	-1.2
	comp=E,0.6nm,0.8s,baz=85,slow=11,SNR=5.0						
MMAI	Mount Meron Ar	17.17	106	P	Pn	01 14 08.7	+0.2
	comp=E,0.3nm,0.5s,baz=306,slow=5.0,SNR=1.3						
HFS	Hagfors	20.57	357	P	P	01 14 41.0	-1.3
	comp=E,1.9nm,0.7s,baz=181,slow=9.8,SNR=5.8						
	comp=E,1.9nm,0.7s						
NOA	NORSAR Array B	21.62	354	P	P	01 14 52.4	-0.3
	comp=E,0.2nm,0.4s,baz=168,slow=8.2,SNR=2.4						
	comp=E,0.2nm,0.4s						
FINES	FINESS Array B	22.76	13	P	P	01 15 02.8	-0.2
	comp=E,2.1nm,1.0s,baz=192,slow=10.0,SNR=1.9						
	comp=E,2.1nm,1.0s						
TORD	Torodi Ar. Bea	29.13	209	P	P	01 16 01.3	+0.7
	comp=E,0.4nm,0.3s,baz=20,slow=8.7,SNR=5.7						
	comp=E,0.4nm,0.3s						
KURBB	Kurchatov Arra	44.40	54	P	P	01 18 08.6	+0.3
	comp=E,0.1nm,0.3s,baz=293,slow=8.7,SNR=2.5						
	comp=E,0.1nm,0.3s						
MKAR	Makanchi Array	47.74	58	P	P	01 18 34.8	+0.4
	comp=E,0.5nm,0.3s,baz=284,slow=7.4,SNR=8.9						
	comp=E,0.5nm,0.3s						
SCHQ	Schefferville	54.83	315	P	P	01 19 26.1	-0.5
	comp=E,1.2nm,0.3s,baz=62,slow=11,SNR=8.1						
	comp=E,1.2nm,0.3s						

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*IDC **12** 01:30:32.6±0.9, 0°.55S×121°.91E, h0^{km}, mb3.7/8, mbtmp3.7/9, ML4.0/1, MS2.9/2, Error ellipse: s-maj=58.2km s-min=17.5km az=70.0*

*NEIC **12** 01:30:34.5±2.2, 0°.53S±0°.05×121°.80E±0°.05, h10^{km}±1^{km}, mb4.2/4, Error ellipse: s-maj=10.5km s-min=6.7km az=216.0*

*DJA **12** 01:30:34.1±0.2, 1°S±2°×12°2E±°, h10^{km}, M4.2/11, mB4.9/1, mb4.6/2, MLv4.1/11, Mw(mB)4.2/1*

ISC 12 01:30:33.2±1.5**, 0°.57S**±0°.04×**121°.77E**±0°.04**, h3**^{km}±11^{km}**, n32, σ1^{s}.57**/38**, mb4.0**/11**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	1.05	9	P	Pg	01 30 52.0	-1.4
MRSI				S	Sg	01 31 06.9	-0.1
LUWI	Luwuk	1.11	115		Pb	01 30 55.4	+0.3
LUWI					Sb	01 31 10.1	+0.2
LUWI	Luwuk	1.11	115	P	Pg	01 30 55.5	+1.0
TOLI2	Tolitoli	1.94	329		Pn	01 31 06.8	-0.2
TOLI2				Sn	Sn	01 31 29.4	-2.5
PCI	Palu	1.96	260	P	Pn	01 31 07.9	+0.5
PCI				S	Sn	01 31 34.0	+1.5
MPSI	Mapaga	2.08	296	P	Pb	01 31 11.5	0.0
MPSI				S	Sb	01 31 38.1	+0.4
TTSI	Tana Toraja	3.14	218	P	Pn	01 31 24.3	+0.7
SPSI	Sidrap Palu	3.92	211	P	Pn	01 31 34.5	+0.1
BNSI	Bone	4.16	204	P	Pn	01 31 38.0	+0.4
SANI	Sanana	4.47	109	P	Pn	01 31 40.4	-1.5
KAPI	Kappang	4.86	204	Pn	Pn	01 31 47.3	0.0
KAPI	Kappang	4.86	204	Pn	Pn	01 31 48.2	+1.0
	6.2nm,0.3s,baz=24,slow=10.0,SNR=13						
KAPI				Sn	Sn	01 32 37.1	-6.9
	1.0nm,0.3s,baz=25,slow=14,SNR=1.1						
KAPI				LR	LR	01 34 10.9	
	comp=Z,155nm,18.2s,baz=18,slow=44						
	19nm,0.3s						
BKB	Balikpapan	4.92	262	Pn	Pn	01 31 49.0	+0.9
NLAI	Namlea	5.95	117	P	Pn	01 32 03.4	+1.1
NLAI				S	Sn	01 33 10.8	-0.2
MYLDM	Lahad Datu	6.58	330	Pn	Pn	01 32 11.2	+0.3
DAV	Davao City (W)	8.48	27	LR	LR	01 35 57.8	
	comp=Z,61nm,20.1s,baz=279,slow=39						
FAKI	Fak Fak	10.73	103	Pn	Pn	01 33 06.2	-1.7
WB0	Warramunga Arr	22.74	148		P	01 35 36.3	-0.4
WB0				IAmb	IAmb	01 35 45.3	
	comp=Z,10.0nm,1.1s						
WRA	Warramunga Arr	22.86	148	P	P	01 35 36.5	-1.4
	comp=Z,1.8nm,0.9s,baz=326,slow=9.2,SNR=6.6						
	comp=Z,1.8nm,0.9s						
WR8	Warramunga Arr	22.95	148		P	01 35 37.7	-1.2
WR8				IAmb	IAmb	01 35 50.3	
	comp=Z,11nm,1.3s						
ASAR	Alice Springs	25.81	154	P	P	01 36 06.6	+0.8
	comp=Z,0.4nm,0.8s,baz=335,slow=8.5,SNR=2.1						
	comp=Z,0.4nm,0.8s						
GTA	Gaotai	44.58	336	*e*P	P	01 38 49.4	+2.6
GTA				sP	sP	01 38 57.4	+9.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
SONM	Songino Array	50.03	347	P	P	01 39 29.5	+0.3
	comp=Z,0.6nm,0.5s,baz=152,slow=6.5,SNR=2.9						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	58.45	329	P	P	01 40 31.0	+0.5
MKAR	Makanchi Array	58.45	329	P	P	01 40 31.8	+1.3
	comp=Z,0.4nm,0.5s,baz=133,slow=8.1,SNR=5.2						
	comp=Z,0.4nm,0.5s						
ZALV	Zalesovo Beam	62.32	336	P	P	01 40 56.6	-0.2
	comp=Z,0.5nm,0.4s,baz=123,slow=7.1,SNR=4.1						
	comp=Z,0.5nm,0.4s						
KURBB	Kurchatov Arra	62.84	331	P	P	01 41 00.1	-0.2
	comp=Z,0.6nm,0.6s,baz=137,slow=6.2,SNR=8.9						
	comp=Z,0.6nm,0.6s						
KURK	Kurchatov	62.86	331	P	P	01 41 00.8	+0.5
KKAR	Karatay Array	63.15	320	P	P	01 41 03.7	+1.1
BVAR	Borovoye Array	68.33	329	P	P	01 41 35.9	+0.1
	comp=Z,0.6nm,0.6s,baz=132,slow=8.7,SNR=4.6						
	comp=Z,0.6nm,0.6s						
VNDA	Vanda	79.86	172	P	P	01 42 42.0	-0.7
VNDA	Vanda	79.86	172	P	P	01 42 42.0	-0.7
	comp=Z,0.7nm,0.8s,baz=276,slow=10,SNR=2.6						
	comp=Z,0.7nm,0.8s						

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*CATAC **12** 01:38:32.2±0.4, 13°N±2°×8°1W±°, h12^{km}±2^{km}, M4.9/21, mb5.0/5, mB5.8/5, MLv4.7/21, Mw(mB)5.4/5, Error ellipse: s-maj=4.1km s-min=3.8km az=87.7, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}4.12; $M_{\theta\theta}$-7.40; $M_{\phi\phi}$3.28; $M_{r\theta}$0.07; $M_{\theta\phi}$-0.52; $M_{\phi r}$-0.55; Fault plane solution: $M_0$6.46327×10^{15} NP1:ϕ_s111.51654°, δ51.10887°, λ125.56178°. NP2:ϕ_s242.80609°, δ50.71552°, λ54.20881°. Principal axes: T 4.3986, Plg63.0840°, Azm86.8084°; N 3.0222, Plg26.9150°, Azm267.3432°; P -7.4207, Plg0.2159°, Azm177.2336°; Moment Tensor Solution. Moment tensor: Scale 10^{15} Nm; M_{rr}4.15; $M_{\theta\theta}$-7.43; $M_{\phi\phi}$3.28; $M_{r\theta}$0.05; $M_{\theta\phi}$-0.55; $M_{\phi r}$-0.52; Fault plane solution: $M_0$6.49299×10^{15} NP1:ϕ_s110.43120°, δ50.46983°, λ124.06561°. NP2:ϕ_s243.69925°, δ50.28765°, λ55.83221°. Principal axes: T 4.4009, Plg64.4032°, Azm86.8907°; N 3.0562, Plg25.5966°, Azm267.1453°; P -7.4572, Plg0.0992°, Azm177.0978°; Moment Tensor Solution. Moment tensor: Scale 10^{15} Nm; M_{rr}0.07; $M_{\theta\theta}$-0.24; $M_{\phi\phi}$0.16; $M_{r\theta}$2.95; $M_{\theta\phi}$1.48; $M_{\phi r}$0.51; Fault plane solution: $M_0$3.34976×10^{15} NP1:ϕ_s352.89336°, δ26.50334°, λ179.56745°. NP2:ϕ_s83.28045°, δ89.80698°, λ63.49731°. Principal axes: T 3.4754, Plg39.4332°, Azm329.1676°; N -0.2672, Plg26.5025°, Azm83.3767°; P -3.2081, Plg39.0806°, Azm197.2648°; confirmed*

*IDC **12** 01:38:33.2±1.6, 13°.10N×81°.01W, h0^{km}, mb3.7/5, mbtmp3.7/5, MS3.3/25 Error ellipse: s-maj=48.4km s-min=36.3km az=33.0*

*RSNC **12** 01:38:33.0±0.0, 13°N±1°×8°1W±°, h0^{km}±2^{km}, M3.7, mb4.5, mB5.1, ML3.7, Mw(mB)4.4*

ISC 12 01:38:32.7±0.7**, 13°.09N**±0°.04×**81°.03W**±0°.03**, h10**^{km}**, n81, σ2^{s}.14**/79**, mb3.6**/5**, MS3.4**/23**, 1C-1D, Caribbean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRVC	Isla de Provid	0.43	311	⇑P	Pg	01 38 39.8	-1.5
PRVC				S	Sb	01 38 48.9	-0.2
PRVC	Isla de Provid	0.43	311	P	Pg	01 38 39.7	-1.5
PRVC				S	Sg	01 38 44.0	-3.0
SAIC	Isla e San And	0.87	231	P	Pn	01 38 51.0	0.0
SAIC				S	Sn	01 39 04.7	+1.0
SERC	Banco Serrana,	1.35	28	P	Pn	01 38 55.9	-1.7
SERC				S	Sb	01 39 13.8	-1.7
BILN	Bilwi Airport	2.47	293	P	Pn	01 39 12.4	-0.7
BILN				S	Sb	01 39 48.1	+0.3
BLUN	Bluefields	2.89	248	P	Pn	01 39 19.5	+0.6
BLUN				S	Sn	01 39 54.6	+0.9
BLUN	Bluefields	2.89	248	P	Pn	01 39 19.8	+0.9
BLUN				S	Sn	01 39 56.8	+3.1
ESPN	Las Esperanzas	3.32	255	P	Pn	01 39 25.9	+1.2
ESPN	Las Esperanzas	3.32	255	S	Sn	01 40 05.4	+1.2
ESPN	Las Esperanzas	3.32	255	P	Pb	01 39 30.6	-1.1
ESPN				S	Sb	01 40 09.7	-2.4
TRT2	Tortugero	3.66	227	P	Pn	01 39 29.2	-0.2
TRT2	Tortugero	3.66	227	S	Sn	01 40 11.2	-1.4
SIUN	Universidad Ur	3.70	280	P	Pn	01 39 31.5	+1.6
SIUN				S	Sn	01 40 17.1	+3.5
COVE	Coope Vega, Sa	4.06	235	S	Sn	01 40 21.5	-1.0
COVE	Coope Vega, Sa	4.06	235	P	Pn	01 39 36.1	+1.2
BCIP	Isla Barro Col	4.07	163	P	Pn	01 39 34.8	-0.3
BCIP				S	Sn	01 40 23.3	+0.4
ACON	Acoyapa	4.20	255	P	Pn	01 39 38.1	+1.3
ACON	Acoyapa	4.20	255	S	Sn	01 40 28.1	+2.0
ACON	Acoyapa	4.20	255	P	Pn	01 39 38.8	+1.9
ACON				S	Sn	01 40 31.3	+5.3
DRK0	Durika	4.38	210	S	Sn	01 40 27.8	-3.0
DRK0	Durika	4.38	210	P	Pn	01 39 39.1	-0.5
LCR2	La Lucha 2	4.43	222	S	Sn	01 40 29.9	-2.1
LCR2	La Lucha 2	4.43	222	P	Pn	01 39 39.6	-0.6
SOCE	Pocosol	4.43	233	P	Pn	01 39 40.0	-0.1
SOCE	Pocosol	4.43	233	S	Sn	01 40 30.9	-0.8
BOAB	BOACO BROADBAN	4.57	262	S	Sn	01 40 37.2	+2.0
BOAB	BOACO BROADBAN	4.57	262	⇓P	Pn	01 39 42.3	+0.4
OCHAL	Ojochal	4.73	213	P	Pn	01 39 43.0	-1.1
OCHAL	Ojochal	4.73	213	S	Sn	01 40 36.8	-2.3
QUEP	Quepos	4.76	221	S	Sn	01 40 38.5	-1.5
QUEP	Quepos	4.76	221	P	Pn	01 39 43.5	-1.1
MORN	Al O del Volca	4.77	252	P	Pn	01 39 45.7	+1.0
MORN				S	Sn	01 40 40.5	+0.3
MATN	Matagalpa	4.78	269	P	Pn	01 39 45.9	+1.0
MATN	Matagalpa	4.78	269	S	Sn	01 40 43.1	+2.7
JAPN	Al SSO del Vol	4.80	252	P	Pn	01 39 46.0	+0.8
MGAN	Managua	5.18	260	P	Pg	01 40 13.8	+1.8
MGAN				S	Sg	01 41 21.3	+2.1
PIRO	Carate, Puerto	5.18	206	P	Pn	01 39 50.0	-0.3
CMARA	Lajas Hojancha	5.28	235	P	Pn	01 39 51.7	-0.1
GMAL	Guarumal, Vera	5.30	182	P	Pn	01 39 53.1	+1.1
	2μm44nm,0.8s						
GMAL				S	Sn	01 40 41.9	-11
	2μm44nm,0.8s						
AZU	Azuero	5.32	172	P	Pn	01 39 54.0	+1.7
	35nm,1.2s						
AZU				S	Sn	01 40 54.1	+0.5
	35nm,1.2s						
CNGN	Cerro Negro	5.56	265	P	Pn	01 39 57.5	+1.8
CNGN	Cerro Negro	5.56	265	P	Pb	01 40 04.9	-5.1
CNGN				S	Sg	01 41 24.9	-6.6
CAP2	Capurgana	5.70	140	S	Sn	01 41 01.6	-1.5
CRIN	San Cristobal	5.88	267	P	Pg	01 40 21.1	-4.4
CRIN				S	Sg	01 41 41.9	+0.1
CHOHN	Orocuina	5.98	274	P	Pn	01 40 03.3	+1.8
CHOHN	Orocuina	5.98	274	S	Sn	01 41 12.9	+2.7
TGUH	Tegucigalpa,Un	6.15	280	P	Pn	01 40 06.9	+3.1
TGUH	Tegucigalpa,Un	6.15	280	P	Pn	01 40 01.9	-1.9
	1μm96nm,0.7s						
TGUH				S	Sb	01 41 31.0	-2.8
	1μm96nm,0.7s						
LCBC	Los crdobas,	6.22	132	P	Pn	01 40 08.5	+3.9
LCBC				S	Sn	01 41 15.4	-0.4
SJCC	San Jacinto, C	6.55	118	P	Pn	01 40 07.9	-1.4
SJCC				S	Sn	01 41 23.1	-1.1
APAC	Apartado, Choc	6.76	139	P	Pn	01 40 14.4	+2.3
APAC				S	Sn	01 41 32.7	+3.4
MTO3	Montecristo	8.20	280	S	Sg	01 42 50.1	-5.9
MTO3	Montecristo	8.20	280	P	Pn	01 40 30.4	-1.7
ESQI	Esquipulas	8.21	281	P	Pn	01 40 35.6	+3.6
SDV	Santo Domingo	11.03	111	LR	LR	01 46 01.9	
	comp=Z,136nm,21.6s,baz=266,slow=41						
PCRV	Puerto La Cruz	16.31	99	LR	LR	01 49 43.3	
	comp=Z,48nm,20.3s,slow=41						
TKL	Tuckaleechee C	22.61	354	LR	LR	01 51 53.9	
	comp=Z,54nm,18.5s,baz=317,slow=35						
TXAR	Lajitas Array	26.50	311	P	P	01 44 12.2	+1.6
	2.1nm,0.9s,baz=120,slow=7.9,SNR=15						
TXAR				LR	LR	01 57 12.6	
	comp=Z,59nm,18.5s,baz=66,slow=42						
	2.1nm,0.9s						
MDP	Montagnes des	29.11	103	LR	LR	01 58 25.5	
	comp=Z,60nm,18.7s,baz=281,slow=41						
LPIG	La Paz	29.77	296	LR	LR	01 56 35.5	
	comp=Z,145nm,19.8s,baz=174,slow=36						
SADO	Sadowa	31.61	3	LR	LR	01 56 58.7	
	comp=Z,71nm,20.7s,baz=188,slow=35						
ANMO	Albuquerque	31.66	318	LR	LR	02 01 05.3	
	comp=Z,84nm,18.9s,baz=200,slow=43						
LPAZ	La Paz	31.86	156	LR	LR	01 59 46.7	
	comp=Z,41nm,18.1s,baz=302,slow=40						
SIV	San Ignacio	34.99	145	LR	LR	02 00 20.3	
	comp=Z,62nm,18.7s,baz=324,slow=37						
PDAR	Pinedale Array	38.50	326	P	P	01 45 56.6	+1.2
	0.8nm,0.8s,baz=120,slow=9.3,SNR=3.0						
PDAR				LR	LR	02 03 19.5	
	comp=Z,27nm,20.9s,baz=132,slow=39						
	0.8nm,0.8s						
NVAR	Mina Array Bea	41.56	314	P	P	01 46 24.1	+3.1
	1.2nm,1.0s,baz=123,slow=5.4,SNR=5.4						
NVAR				LR	LR	02 06 10.5	
	comp=Z,79nm,20.6s,baz=202,slow=40						
	1.2nm,1.0s						
SCHQ	Schefferville	43.11	12	LR	LR	02 07 34.6	
	comp=Z,36nm,18.5s,baz=185,slow=40						
YBH	Yreka Blue Hor	46.06	316	LR	LR	02 10 33.2	
	comp=Z,4.9nm,18.9s,baz=112,slow=42						
NEW	Newport	46.09	327	LR	LR	02 07 48.8	
	comp=Z,34nm,18.3s,baz=131,slow=38						
FRB	Frobisher Bay	51.34	7	LR	LR	02 08 51.6	
	comp=Z,33nm,19.4s,baz=122,slow=35						
BORG	Borgarnes	65.53	24	LR	LR	02 15 16.4	
	comp=Z,25nm,19.7s,baz=247,slow=34						
ILAR	Eielson Array	68.03	335	P	P	01 49 34.4	+2.3
	0.3nm,0.8s,baz=94,slow=5.9,SNR=4.5						
ILAR				LR	LR	02 20 59.6	
	comp=Z,40nm,19.0s,baz=205,slow=37						
	0.3nm,0.8s						
MDT	Midelt	71.70	60	LR	LR	02 16 33.7	
	comp=Z,32nm,19.4s,baz=230,slow=32						
ESDC	Sonseca Array	71.85	52	P	P	01 49 58.2	+2.0
	0.5nm,0.7s,baz=266,slow=12,SNR=2.1						
ESDC				LR	LR	02 16 14.0	
	comp=Z,29nm,21.4s,baz=274,slow=32						
	0.5nm,0.7s						
NOA	NORSAR Array B	79.74	30	LR	LR	02 26 19.7	
	comp=Z,6.8nm,18.0s,baz=95,slow=36						
HFS	Hagfors	81.10	30	LR	LR	02 26 17.1	
	comp=Z,18nm,18.6s,baz=155,slow=35						
GERES	GERESS Array B	83.34	42	LR	LR	02 24 16.8	
	comp=Z,32nm,18.3s,baz=243,slow=33						
VRAC	Vranov	85.09	41	LR	LR	02 26 56.8	
	comp=Z,27nm,18.1s,baz=280,slow=34						
FINES	FINESS Array B	86.58	27	LR	LR	02 24 53.6	
	comp=Z,17nm,20.2s,baz=52,slow=32						
ASAR	Alice Springs	145.31	247	PKPbc	PKPdf	01 58 12.6	+0.9
	0.7nm,0.6s,baz=100,slow=2.7,SNR=6.4						
WRA	Warramunga Arr	145.47	254	PKPbc	PKiKP	01 58 13.6	-2.4
	1.4nm,0.8s,baz=95,slow=3.0,SNR=8.0						

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*OSPL **12** 01:52:47.6±1.7, 19°.00N×70°.61W, h80^{km}±9^{km}, ML2.3*

*SDD **12** 01:52:48.0±2.1, 18°.90N×70°.72W, h81^{km}±13^{km}, MD3.0, ML2.8, MW3.6*

ISC 12 01:52:48.0±1.6**, 18°.97N**±0°.04×**70°.67W**±0°.04**, h71**^{km}±11^{km}**, n16, σ0^{s}.87**/26**, 12C-1D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABDR	Alto Bandera	0.17	165	⇓*e*Pg	Pn	01 52 58.3	-0.7
ABDR				⇑*e*Sg	Sn	01 53 07.3	+0.2
ABDR				IAML		01 53 08.0	
	comp=N,329nm,0.3s						
SC01	Santiago de lo	0.46	353	*i* P	Pn	01 52 59.9	-0.6
SC01				*e*S	Sn	01 53 10.1	+0.4
SC01				IAML		01 53 12.2	
	comp=Z,92nm,0.2s						
SDDR	Presa de Saban	0.58	271	⇑*e*Pg	Pn	01 53 01.4	-0.4
SDDR				⇑*e*Sg	Sn	01 53 11.9	0.0
SDDR				IAML		01 53 16.0	
	comp=N,132nm,0.6s						
SDDR	Presa de Saban	0.58	271	*i* P	Pn	01 53 01.4	-0.4
SDDR				*e*S	Sn	01 53 11.8	-0.1
SDDR				IAML		01 53 13.9	
	comp=Z,91nm,0.3s						
BANI	BANI	0.65	153	⇑*e*Pg	Pn	01 53 02.7	+0.1
BANI				⇑*e*Sg	Sn	01 53 13.2	0.0
BANI				IAML		01 53 15.0	
	comp=N,188nm,0.2s						
NADR	Nagua	0.86	64	⇑*e*Pg	Pn	01 53 04.5	-0.3
NADR				⇑*e*Sg	Sn	01 53 19.6	+2.3
NADR				IAML		01 53 20.1	
	comp=N,692nm,0.3s						
SDD	Santo Domingo	0.88	125	*i* P	Pn	01 53 03.8	-1.3
LUDR	Luperon	0.95	344	⇑*e*Pg	Pn	01 53 05.4	-0.5
LUDR				⇑*e*Sg	Sn	01 53 21.2	+1.9
LUDR				IAML		01 53 25.8	
	comp=N,1μm,0.3s						
LODU1	El Espartillar	0.98	231	*i* P	Pn	01 53 05.8	-0.4
LODU1				IAML		01 53 20.6	
	comp=Z,54nm,1.3s						
PODR	Polo	0.99	216	⇑*e*Pg	Pn	01 53 06.2	-0.3
PODR				IAML		01 53 24.9	
	comp=N,61nm,0.3s						
PODR	Polo	0.99	216	*i* P	Pn	01 53 06.3	-0.3
PODR				*e*S	Sn	01 53 21.5	+1.2
HATOM	Hato Mayor del	1.24	98	⇑*e*Pg	Pn	01 53 09.6	0.0
HATOM				⇑*e*Sg	Sn	01 53 25.2	-0.6
HATOM				IAML		01 53 27.8	
	comp=N,73nm,0.5s						
LOVI	El Cajuil, Ovi	1.34	210	*i* P	Pn	01 53 10.6	-0.3
LOVI				*e*S	Sn	01 53 28.5	+0.4
LOVI				IAML		01 53 29.0	
	comp=Z,59nm,0.8s						
LOBH	Bahia de las A	1.44	220	*i* P	Pn	01 53 12.2	0.0
LOBH				IAML		01 53 36.0	
	comp=Z,41nm,1.6s						
PAPH	Port-au-Prince	1.60	254	*i* P	Pn	01 53 14.0	-0.3
GRTK	Grand Turk	2.56	350	*i* P	Pn	01 53 25.9	-1.3
GRTK				IAML		01 53 57.8	
	comp=Z,21nm,2.5s						

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*NEIC **12** 02:49:52.6±0.6, 17°.8S±0°.2×178°.4W±0°.2, h590^{km}±8^{km}, mb4.1/12, Error ellipse: s-maj=29.7km s-min=14.3km az=129.0*

*IDC **12** 02:49:54.3±1.8, 17°.79S×178°.71W, h594^{km}±20^{km}, mb3.1/9, mbtmp4.1/10, Error ellipse: s-maj=34.6km s-min=17.9km az=153.0*

ISC 12 02:49:54.3±0.8**, 17°.7S**±0°.2×**178°.7W**±0°.1**, h600**^{km}**, n27, σ1^{s}.30**/28**, mb3.9**/16**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.09	269	P	P	02 51 12.9	-1.2
MSVF	Nonsavu	3.09	269	P	P	02 51 13.5	-0.6
	37nm,0.8s,baz=124,slow=9.7,SNR=28						
ARMA	Armidale	29.78	239	P	P	02 55 14.7	+0.4
ARMA				IAmb	IAmb	02 55 15.6	
	comp=Z,4.6nm,0.8s						
COEN	Coen	36.82	270	P	P	02 56 14.5	+1.1
COEN				IAmb	IAmb	02 56 26.7	
	comp=Z,13nm,1.1s						
STKA	Stephens Creek	38.46	241	P	P	02 56 27.4	+0.9
STKA	Stephens Creek	38.46	241	P	P	02 56 27.4	+0.9
	comp=Z,2.6nm,0.5s,baz=84,slow=10,SNR=7.4						
	comp=Z,2.6nm,0.5s						
JAY	Jayapura	42.58	286	P	P	02 56 59.8	+0.4
	comp=Z,2.8nm,0.4s,baz=32,slow=13,SNR=4.3						
	comp=Z,2.8nm,0.4s						
BBOO	Buckleboo	43.24	241	P	P	02 57 04.0	-0.2
WRA	Warramunga Arr	44.38	259	P	P	02 57 12.9	-0.3
	comp=Z,1.5nm,0.4s,baz=92,slow=8.2,SNR=41						
	comp=Z,1.5nm,0.4s						
AS31	Alice Springs	44.56	254	P	P	02 57 14.6	0.0
AS31				IAmb	IAmb	02 57 15.4	
	comp=Z,3.6nm,0.8s						
ASAR	Alice Springs	44.56	254	P	P	02 57 13.9	-0.7
ASAR	Alice Springs	44.56	254	P	P	02 57 14.8	+0.2
	comp=Z,12nm,0.6s,baz=92,slow=7.9,SNR=142						
ASAR				PcP	PcP	02 58 44.6	+0.2
	comp=Z,0.4nm,0.4s,baz=85,slow=3.7,SNR=2.7						
	comp=Z,12nm,0.6s						
FORT	Forrest	49.82	244	P	P	02 57 52.8	-1.0
KNRA	Kununurra	50.22	264	P	P	02 57 57.0	+0.1
KNRA				IAmb	IAmb	02 58 01.7	
	comp=Z,3.3nm,0.8s						
FITZ	Fitzroy Crossi	52.77	260	P	P	02 58 15.5	+0.3
FITZ	Fitzroy Crossi	52.77	260	P	P	02 58 16.0	+0.8
	comp=Z,2.3nm,0.9s,baz=103,slow=4.3,SNR=1.7						
	comp=Z,2.3nm,0.9s						
QSPA	South Pole Qui	72.32	180	P	P	03 00 19.2	-0.9
QSPA	South Pole Qui	72.32	180	P	P	03 00 19.5	-0.6
	comp=Z,1.4nm,1.2s,baz=44,slow=3.1,SNR=1.7						
	comp=Z,1.4nm,1.2s						
KSAR	Wonju Array Be	74.40	318	P	P	03 00 29.1	-3.0
KS19	Wonju Array Si	74.44	318	P	P	03 00 30.1	-2.4
KS19				IAmb	IAmb	03 00 42.0	
	comp=Z,7.5nm,0.8s						
NVAR	Mina Array Bea	79.50	44	P	P	03 01 00.8	+0.6
	comp=Z,0.4nm,0.6s,baz=239,slow=4.1,SNR=4.0						
	comp=Z,0.4nm,0.6s						
O18K	Koktuh Hills	79.64	12	P	P	03 00 59.4	-0.7
O18K				IAmb	IAmb	03 01 00.8	
	comp=Z,4.0nm,1.1s						
CCB	Clear Creek Bu	85.48	13	P	P	03 01 28.9	-0.3
ILAR	Eielson Array	85.78	13	P	P	03 01 30.6	-0.1
	comp=Z,0.3nm,0.9s,baz=207,slow=4.4,SNR=1.2						
	comp=Z,0.3nm,0.9s						
XAN	Xi'an	85.92	307	P	P	03 01 35.2	+3.0
XAN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
TXAR	Lajitas Array	86.14	58	P	P	03 01 35.1	+1.6
	comp=Z,0.4nm,0.7s,baz=255,slow=2.2,SNR=6.2						
	comp=Z,0.4nm,0.7s						
TIRR	Tirgusor	144.96	325	PKPdf	PKPdf	03 08 21.7	-2.5

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*DJA **12** 02:55:24.0±2.4, 7°N±20°×12°6E±°, h98^{km}±24^{km}, M4.5/7, mB4.8/3, mb4.5/5, MLv4.6/7, Mw(mB)4.1/3*

*NEIC **12** 02:55:39.7±1.4, 5°.85N±0°.08×126°.1E±0°.1, h108^{km}±7^{km}, mb4.3/9, Error ellipse: s-maj=16.6km s-min=10.1km az=61.0*

*IDC **12** 02:55:41.3±0.9, 5°.76N×125°.89E, h125^{km}±8^{km}, mb3.6/12, mbtmp4.0/12, Error ellipse: s-maj=52.8km s-min=12.1km az=72.0*

ISC 12 02:55:41.0±0.6**, 5°.76N**±0°.04×**126°.02E**±0°.09**, h127**^{km}**, n35, σ1^{s}.20**/40**, mb4.0**/17**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.37	342	Pn	Pn	02 56 04.1	-3.4
DAV	Davao City (W)	1.37	342	P	Pn	02 56 07.0	-0.5
	321nm,0.4s,baz=252,slow=3.2,SNR=2.5						
DAV				S	Sn	02 56 27.0	-0.7
	747nm,0.3s,baz=127,slow=20,SNR=14						
SGSI	Sangihe	2.12	193	P	Pn	02 56 15.7	-0.7
SGSI				S	Sn	02 56 43.5	+0.1
TNTI	Ternate	5.14	165	Pn	Pn	02 56 55.5	-0.5
TNTI	Ternate	5.14	165	P	Pn	02 56 54.5	-1.5
	0.2nm23nm,0.5s						
TNTI				S	Sn	02 57 51.2	-3.1
	0.2nm23nm,0.5s						
MRSI	Marisa	6.64	218	P	Pn	02 57 15.2	-1.0
MRSI				S	Sn	02 58 28.5	-2.1
TOLI2	Tolitoli	6.97	229	Pn	Pn	02 57 19.2	-1.5
MYLDM	Lahad Datu	7.50	266	Pn	Pn	02 57 29.4	+1.5
FAKI	Fak Fak	10.64	144	Pn	Pn	02 58 09.4	-0.7
KNRA	Kununurra	21.47	173	P	P	03 00 20.1	+0.5
KNRA				IAmb	IAmb	03 00 20.8	
	comp=Z,6.1nm,0.6s						
FITZ	Fitzroy Crossi	23.71	181	P	P	03 00 41.6	+0.1
FITZ	Fitzroy Crossi	23.71	181	P	P	03 00 42.1	+0.6

	comp=Z,1.9nm,0.4s,baz=359,slow=6.2,SNR=9.7						
	comp=Z,1.9nm,0.4s						
WB0	Warramunga Arr	26.68	162	P	P	03 01 08.4	0.0
WRA	Warramunga Arr	26.82	162	P	P	03 01 10.0	+0.3
	comp=Z,0.3nm,0.3s,baz=346,slow=9.4,SNR=5.8						
	comp=Z,0.3nm,0.3s						
WR8	Warramunga Arr	26.89	162	P	P	03 01 09.5	-0.8
WR8				IAmb	IAmb	03 01 28.1	
	comp=Z,5.1nm,1.1s						
MBWA	Marble Bar	27.45	193	P	P	03 01 15.1	-0.2
MBWA				IAmb	IAmb	03 01 17.0	
	comp=Z,8.8nm,1.0s						
PSA00	Pilbara Seismi	27.83	192	P	P	03 01 19.0	+0.4
PSA00				IAmb	IAmb	03 01 27.5	
	comp=Z,8.6nm,0.9s						
ASAR	Alice Springs	30.25	166	P	P	03 01 40.4	+0.4
	comp=Z,0.6nm,0.7s,baz=342,slow=8.4,SNR=8.8						
	comp=Z,0.6nm,0.7s						
MORW	Morawa	35.94	195	P	P	03 02 29.7	+0.3
BBOO	Buckleboo	39.53	167	P	P	03 03 00.7	+1.1
BBOO				IAmb	IAmb	03 03 10.5	
	comp=Z,10.0nm,1.0s						
STKA	Stephens Creek	40.27	159	P	P	03 03 07.3	+1.6
	comp=Z,1.4nm,0.5s,baz=330,slow=20,SNR=2.9						
	comp=Z,1.4nm,0.5s						
MKAR	Makanchi Array	55.49	325	P	P	03 05 03.3	+0.5
MKAR	Makanchi Array	55.49	325	P	P	03 05 03.2	+0.4
	comp=Z,0.7nm,0.5s,baz=126,slow=8.3,SNR=11						
MKAR				PcP	PcP	03 06 01.7	+0.3
	comp=Z,0.5nm,0.6s,baz=125,slow=3.1,SNR=5.0						
	comp=Z,0.7nm,0.5s						
KURBB	Kurchatov Arra	59.66	327	P	P	03 05 31.9	+0.1
	comp=Z,0.8nm,0.6s,baz=126,slow=7.3,SNR=11						
	comp=Z,0.8nm,0.6s						
BVAR	Borovoye Array	65.24	327	P	P	03 06 08.5	-0.5
	comp=Z,0.9nm,0.6s,baz=134,slow=8.3,SNR=3.5						
	comp=Z,0.9nm,0.6s						
ABKAR	Akbulak array	70.14	320	P	P	03 06 39.3	-0.5
ILAR	Eielson Array	83.59	26	P	P	03 07 55.4	+0.6
	comp=Z,0.4nm,0.7s,baz=269,slow=6.2,SNR=4.2						
	comp=Z,0.4nm,0.7s						
BMAR	Burnt Mountain	84.49	23	P	P	03 08 01.7	+2.3
BRTR	Keskin Array B	88.19	310	P	P	03 08 16.9	-1.3
	comp=Z,0.2nm,0.4s,baz=99,slow=4.5,SNR=1.9						
	comp=Z,0.2nm,0.4s						
ARCES	ARCESS Array B	88.31	340	P	P	03 08 18.4	+0.4
	comp=Z,3.1nm,1.0s,baz=79,slow=4.8,SNR=1.9						
	comp=Z,3.1nm,1.0s						
SPITS	Spitsbergen Ar	88.36	349	P	P	03 08 18.6	+0.5
	comp=Z,2.0nm,0.8s,baz=98,slow=11,SNR=7.6						
	comp=Z,2.0nm,0.8s						
FINES	FINESS Array B	89.72	332	P	P	03 08 24.4	-0.2
FINES	FINESS Array B	89.72	332	P	P	03 08 24.7	0.0
	comp=Z,4.7nm,1.1s,baz=71,slow=6.4,SNR=4.8						
	comp=Z,4.7nm,1.1s						
TORD	Torodi Ar. Bea	121.60	289	PKPdf	PKPdf	03 14 21.2	+0.4
Q52A	Bidwell	128.37	28	PKPdf	PKPdf	03 14 31.3	-1.8

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*IDC **12** 03:10:22.9±0.4, 34°.80N×72°.77E, h0^{km}, mb4.8/32, mbtmp4.8/36, ML4.3/4, MS3.8/50, Error ellipse: s-maj=9.0km s-min=8.2km az=67.0*

*NEIC **12** 03:10:24.9±1.3, 34°.68N±0°.05×72°.86E±0°.08, h13^{km}±3^{km}, mb5.2/230, Error ellipse: s-maj=9.2km s-min=7.8km az=81.0*

*NDI **12** 03:10:26.0±3.2, 34°.89N×72°.72E, h10^{km}, ML5.2, MW4.9, mb5.2(NEIC)*

*MOS **12** 03:10:27.4±1.1, 34°.76N×72°.84E, h15^{km}, mb5.1/71, Error ellipse: s-maj=4.7km s-min=3.0km az=107.2*

*NNC **12** 03:10:28.6±2.4, 35°.09N×72°.44E, h0^{km}, mb5.2, mpv4.9, Error ellipse: s-maj=19.6km s-min=13.2km az=11.0*

*BJI **12** 03:10:31.0, 34°.87N×73°.26E, h46^{km}, mB4.8/24, mb4.7/63, ML4.9/2, Ms4.4/53, Ms7 4.1/52*

ISC 12 03:10:27.4±0.5**, 34°.76N**±0°.03×**72°.81E**±0°.03**, h30**^{km}±3^{km}**, h30**^{km}**:pP-P, n1028,** σ1^{s}**48**/1010**, mb5.0**/280**, MS3.9**/84**, 93C-18D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIL	Nilore	1.17	162		Pn	03 10 46.5	-1.2
NIL				Sn	Sn	03 11 00.5	-2.2
NIL	Nilore	1.17	162	P	Pn	03 10 47.4	-0.4
NIL	Nilore	1.17	162	P	Pn	03 10 46.8	-0.9
SRNI	Srinagar	1.81	111	*e*P	Pb	03 10 59.3	-0.6
SRNI				*e*S	Sb	03 11 25.6	+3.4
SRNI				IAML		03 11 30.8	
	comp=E,48µm,0.6s						
JMU	Jammu	2.68	139	*e*P	Pn	03 11 11.2	+2.7
JMU				*e*S	Sn	03 11 42.0	+2.1
JMU				IAML		03 11 47.6	
	comp=N,16µm,0.6s						
JMU				IAML		03 11 47.7	
	comp=E,14µm,0.6s						
KBL	Kabul	3.11	267		Pn	03 11 16.3	+1.7
KBL	Kabul	3.11	267	P	Pn	03 11 17.7	+3.1
	SNR=995						
KBL				S	Sb	03 11 56.7	-3.0
KBL	Kabul	3.11	267	P	Pn	03 11 16.3	+1.7
DHRM	DHARAMSHALA	3.84	130	*e*P	Pn	03 11 27.7	+3.0
DHRM				*e*S	Sn	03 12 13.0	+4.0
SIMJ	Simiganj	4.94	323		Pn	03 11 42.0	+2.2
DZET	Dzherino	5.15	323	P	Pn	03 11 45.4	+2.9
DZET				pmax	pmax		
	comp=Z,369nm,0.6s						
KSH	Kashi	5.38	27	P	Pn	03 11 44.8	-0.9
KSH				S	Sn	03 12 41.9	-4.8
KSH				smax	smax		
	comp=Z,2µm,0.5s						
KSH				smax	smax		
	comp=Z,1µm,0.4s						
BTK	Batken	5.52	344	P	Pn	03 11 52.1	+4.5
BTK				pmax	pmax		
	comp=Z,395nm,1.1s						
KLP	Kalpa	5.58	124	*e*P	Pn	03 11 51.8	+3.1
KLP				*e*S	Sn	03 12 51.8	-0.2
KLP				IAML		03 12 56.9	
	comp=E,3µm,0.5s						
OHH	Osh	5.75	360	P	Pn	03 11 55.2	+4.4
OHH				pmax	pmax		
	comp=Z,200nm,0.6s						
DDI	Dehra Dun	6.26	134	*e*P	Pn	03 12 00.9	+3.1
DDI				IAML		03 13 11.1	
	comp=E,3µm,0.6s						
BKNR	BIKANER	6.73	176	*e*P	Pn	03 12 05.0	+0.8
BKNR				*e*S	Sn	03 13 16.5	-3.4
BKNR				IAML		03 13 22.6	
	comp=E,4µm,0.7s						
BKNR				IAML		03 13 31.8	
	comp=N,4µm,0.9s						
ARK	Arkit	7.06	355	P	Pn	03 12 10.9	+2.2
ARK				pmax	pmax		
	comp=Z,86nm,0.6s						
NPLP	NPLP New Delhi	7.14	147	*e*P	Pn	03 12 10.1	+0.2
NPLP				*e*S	Sn	03 13 29.6	-0.4
NPLP				IAML		03 14 15.4	
	comp=N,3µm,0.8s						
KUDL	Kundal	7.31	154	*e*P	Pn	03 12 12.2	+0.1
KUDL				*e*S	Sn	03 13 34.9	+0.9
KUDL				IAML		03 14 21.6	
	comp=E,6µm,1.5s						
AML	Almayashu	7.39	5	P	Pn	03 12 17.0	+3.4
	SNR=111						
SONA	Sohna	7.45	150	*e*P	Pn	03 12 15.3	+1.3
SONA				*e*S	Sn	03 13 36.0	-1.4
SONA				IAML		03 14 31.1	
	comp=E,1µm,1.4s						
UCH	Uchtor	7.57	10	P	Pn	03 12 19.7	+3.6
	SNR=62						
EKS2	Erkin-Say	7.92	5	P	Pn	03 12 24.3	+3.6
	SNR=208						
ULHL	Ulahol	7.94	19	P	Pn	03 12 25.6	+4.6
	SNR=17						
CHM	Chimkent	7.95	343	*e*P	Pn	03 12 22.6	+1.7
CHM	Chimkent	7.95	343	*e*P	Pn	03 12 22.6	+1.7
AAK	Ala-Archa	7.97	9	P	Pn	03 12 24.9	+3.6
	SNR=63						
AAK	Ala-Archa	7.97	9		Pn	03 12 23.3	+2.0
AAK	Ala-Archa	7.97	9	Pn	Pn	03 12 24.6	+3.3
	comp=E,14nm,0.3s,baz=192,slow=9.3,SNR=72						
AAK				Sn	Sn	03 13 53.9	+3.3
	comp=E,7.9nm,0.3s,baz=112,slow=19,SNR=3.7						
AAK				LR	LR	03 15 44.0	
	comp=E,597nm,20.9s,baz=202,slow=40						
	comp=E,96nm,0.6s						
AAK	Ala-Archa	7.97	9	P	Pn	03 12 25.0	+3.6
AAK				S	Sn	03 13 53.5	+2.9
AAK	Ala-Archa	7.97	9	⇑P	Pn	03 12 24.8	+3.4
	comp=E,15nm,0.6s						
AAK				⇓S	Sn	03 13 53.5	+2.9
	comp=E,136nm,1.2s						
AAK	Ala-Archa	7.97	9*c*	*i*P	Pn	03 12 24.8	+3.4
AAK	Ala-Archa	7.97	9	*i* P	Pn	03 12 24.8	+3.4
	SNR=64						
TARG	Taragay, Kyrgy	7.99	28		Pn	03 12 23.7	+1.9
TARG	Taragay, Kyrgy	7.99	28	P	Pn	03 12 23.7	+1.9
KBK	Karagaybulak	8.06	11	P	Pn	03 12 26.2	+3.6
	SNR=30						
FRU1	Bishkek	8.16	9	P	Pn	03 12 29.1	+5.2
FRU1				pmax	pmax		
	comp=Z,211nm,0.8s						
WUS	Wushi	8.18	36	Pn	Pn	03 12 26.2	+2.0
DZA	Taraz	8.20	352	*e*P	Pn	03 12 25.6	+1.3
DZA	Taraz	8.20	352	*e*P	Pn	03 12 25.7	+1.3
LGTI	Lohaghat	8.23	128	*e*P	Pn	03 12 26.9	+2.1
LGTI				*e*S	Sn	03 13 50.8	-6.0
LGTI				IAML		03 15 11.1	
	comp=E,2µm,1.0s						
CHMS	Chumysh	8.36	10	P	Pn	03 12 30.2	+3.6
	SNR=5.8						
CHMS	Chumysh	8.36	10	⇓P	Pn	03 12 29.5	+2.9
	comp=E,51nm,0.9s						
CHMS				⇑S	Sn	03 14 01.4	+1.4
	comp=E,198nm,1.5s						
CHMS	Chumysh	8.36	10	P	Pn	03 12 29.5	+2.9
CHMS				S	Sn	03 14 01.4	+1.4
TKM2	Tokmak 2	8.43	14	P	Pn	03 12 31.5	+3.8
	SNR=18						
TKM2	Tokmak 2	8.43	14	⇓P	Pn	03 12 30.5	+2.8
	comp=E,59nm,0.8s						
TKM2				⇓S	Sn	03 14 02.4	+0.5
	comp=E,106nm,0.8s						
TKM2	Tokmak 2	8.43	14	P	Pn	03 12 30.5	+2.8
TKM2				S	Sn	03 14 02.4	+0.5
KK31	Karatay Array	8.52	349		Pn	03 12 31.4	+2.7
KK31	Karatay Array	8.52	349	⇓P	Pn	03 12 30.9	+2.2
	comp=E,51nm,0.3s,baz=164,slow=12,SNR=1502						
KK31				⇑S	Sn	03 14 04.4	+0.6
	comp=E,58nm,0.4s,baz=168,slow=21,SNR=12						
KK31	Karatay Array	8.52	349	P	Pn	03 12 31.4	+2.7
KKAR	Karatay Array	8.52	349		Pn	03 12 30.7	+2.0
KKAR	Karatay Array	8.52	349	P	Pn	03 12 30.7	+2.0
BRLS	Borolday	8.57	345	*e*P	Pn	03 12 28.0	-1.4
BRLS				*e*S	Sn	03 14 01.5	-3.7
BRLS				pmax	pmax		
	comp=Z,11nm,0.7s						
BRLS	Borolday	8.57	345	*e*P	Pn	03 12 28.1	-1.4
	comp=Z,11nm,0.7s						
BRLS				*e*S	Sn	03 14 01.5	-3.7
USP	Ospenovka	8.60	8	P	Pn	03 12 33.6	+3.9
	SNR=6.5						
SGDS	Sogindy	8.79	9	*e*P	Pn	03 12 33.4	+0.9
	comp=Z,9.9nm,0.9s						
MDOK	Medeo	9.02	20	P	Pn	03 12 38.1	+2.5
	comp=Z,30nm,0.6s						
MDOK				S	Sn	03 14 17.4	+1.2
	comp=Z,33nm,0.8s						
MDOK	Medeo	9.02	20	*e*P	Pn	03 12 36.6	+1.0
MDOK				*e*S	Sn	03 14 16.8	+0.7
MDOK	Medeo	9.02	20	*e*P	Pn	03 12 36.6	+1.0
MDOK				*e*S	Sn	03 14 16.8	+0.7
UZB	Uzynbulak	9.67	28	*e*P	Pn	03 12 45.7	+1.1
UZB				pmax	pmax		
	comp=Z,12nm,0.9s						
UZB	Uzynbulak	9.67	28	*e*P	Pn	03 12 45.7	+1.1
	comp=Z,12nm,0.9s						
KPKS	Kokpek	9.81	26	*e*P	Pn	03 12 47.4	+0.9
KPKS	Kokpek	9.81	26	*e*P	Pn	03 12 47.4	+0.9
SHLS	Shalkode	9.85	30	*e*P	Pn	03 12 50.5	+3.5
SHLS	Shalkode	9.85	30	*e*P	Pn	03 12 50.5	+3.5
PDGK	Podgornoye	10.01	29	⇓P	Pn	03 12 50.6	+1.4
	comp=Z,46nm,0.6s						
PDGK				⇓S	Sn	03 14 42.8	+2.3
	comp=Z,111nm,0.8s						
PDGK	Podgornoye	10.01	29	P	Pn	03 12 50.6	+1.4
PDGK				S	Sn	03 14 42.8	+2.3
ARXS	Arharly	10.20	21	*i* P	Pn	03 12 53.2	+1.4
BTLS	Baital	10.31	5	*e*P	Pn	03 12 54.2	+1.0
BTLS				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BTLS	Baital	10.31	5	*e*P	Pn	03 12 54.2	+1.0
	comp=Z,6.6nm,0.7s						
TDK	Taldyqorghan	11.09	21	*e*P	Pn	03 13 04.7	+0.8
TDK	Taldyqorghan	11.09	21	*e*P	Pn	03 13 04.7	+0.8
ALBI	Allahabad	12.22	138	*e*P	Pn	03 13 18.5	-1.0
ALBI				*e*S	Sn	03 15 28.0	-6.6
OTUK	Ortayu	13.48	359	⇑P	Pn	03 13 35.3	-1.2
	comp=Z,29nm,0.8s						
OTUK				⇑S	Sn	03 16 04.3	-0.9
	comp=Z,28nm,0.9s						
OTUK	Ortayu	13.48	359	P	Pn	03 13 35.3	-1.2
OTUK				S	Sn	03 16 04.3	-0.9
EVN	Everest	13.75	116	Pn	Pn	03 13 37.8	-3.1
MAKZ	Makanchi	13.88	27		Pn	03 13 41.7	-0.3
MAKZ	Makanchi	13.88	27	⇑P	Pn	03 13 42.4	+0.4
	comp=Z,38nm,0.9s						
MAKZ	Makanchi	13.88	27	P	Pn	03 13 42.2	+0.2
MK31	Makanchi Array	13.99	28	⇓P	Pn	03 13 44.8	+1.3
	comp=Z,13nm,0.5s,baz=199,slow=12,SNR=149						
MK31	Makanchi Array	13.99	28*c*	*i*P	Pn	03 13 43.1	-0.4
MKAR	Makanchi Array	13.99	28		Pn	03 13 43.0	-0.5
MKAR	Makanchi Array	13.99	28	Pn	Pn	03 13 43.0	-0.5
	comp=Z,1.0nm,0.3s,baz=204,slow=6.9,SNR=24						
MKAR				Sn	Sn	03 16 16.0	-1.7
	baz=199,slow=22						
MKAR				Lg	Lg	03 17 46.6	
	comp=Z,0.3nm,0.3s,baz=202,slow=26,SNR=1.4						
MKAR				LR	LR	03 18 38.1	
	comp=Z,182nm,19.7s,baz=202,slow=35						
	comp=Z,3.3nm,0.6s						
MKAR	Makanchi Array	13.99	28*c*	*e*P	Pn	03 13 43.2	-0.3
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WMQ	Urumqi	14.63	47	*e*P	Pn	03 13 52.4	0.0
WMQ				pP	P	03 13 58.9	+0.5
WMQ				S	Sn	03 16 29.9	-3.6
WMQ				pmax	pmax		
	comp=Z,48nm,0.7s						
WMQ				LR	LR		
	comp=Z,740nm,15.3s						
WMQ				LR	LR		
	comp=Z,410nm,18.9s						
WMQ				LR	LR		
	comp=Z,380nm,22.3s						
ZSN	Zaisan	15.57	32	*e*P	Pn	03 14 06.0	+1.3
ZSN	Zaisan	15.57	32	*e*P	Pn	03 14 06.0	+1.3
LSA	Lhasa	16.32	103	Pn	Pn	03 14 09.3	-5.5
LSA	Lhasa	16.32	103	Pn	Pn	03 14 09.1	-5.7
LSA				smax	smax		
	comp=N,28nm,0.9s						
LSA	Lhasa	16.32	103	P	Pn	03 14 09.3	-5.5
LSA				pmax	pmax		
	comp=Z,13nm,0.7s						
KURBB	Kurchatov Arra	16.39	13	Pn	Pn	03 14 12.5	-2.6
	comp=Z,0.4nm,0.3s,baz=199,slow=12,SNR=55						
KURBB				Sn	Sn	03 17 08.6	-7.4
	baz=194,slow=26						
KURBB				Lg	Lg	03 19 04.5	
	comp=Z,0.4nm,0.3s,baz=206,slow=33,SNR=4.4						
KURBB				LR	LR	03 20 45.6	
	comp=Z,360nm,18.0s,baz=232,slow=38						
	comp=Z,18nm,0.9s						
KURBB	Kurchatov Arra	16.39	13	⇑P	Pn	03 14 16.2	+1.1
	comp=Z,34nm,0.6s						
KURBB	Kurchatov Arra	16.39	13	P	Pn	03 14 16.2	+1.1
KURK	Kurchatov	16.50	13		Pn	03 14 14.0	-2.5
KURK	Kurchatov	16.50	13	P	Pn	03 14 14.4	-2.1
KURK	Kurchatov	16.50	13	⇑P	Pn	03 14 16.6	+0.2
	comp=Z,16nm,0.8s						
KURK	Kurchatov	16.50	13*c*	*i*P	Pn	03 14 13.9	-2.5
KURK				pmax	pmax		
	comp=Z,53nm,1.3s						
SHME	Shamm	16.78	243	P	P	03 14 22.6	+0.4
SHME	Shamm	16.78	243	*i* P	P	03 14 22.5	+0.4
	SNR=9.6						
WSAR	Wadi Sarin	16.88	231	P	P	03 14 23.4	+0.1
BIDO	Bidbid	17.00	233	P	P	03 14 25.8	+1.2
MDH	Madha	17.11	241	P	P	03 14 26.6	+0.8
WBK	Wadi Bani Khal	17.12	229	P	P	03 14 27.8	+1.8
WBK				P	P	03 14 27.8	+1.8
MASF	Masafi	17.16	241	P	P	03 14 27.8	+1.3
MSFE	Esma-Masafi	17.17	241	*i* P	P	03 14 27.3	+0.8
	SNR=6.0						
JLN	Jalan Bani Buh	17.20	227	P	Pn	03 14 25.6	+0.2
JLN				P	Pn	03 14 25.6	+0.2
AB31	Akbulak array	17.32	331	Pn	Pn	03 14 25.8	-0.9
AB31	Akbulak array	17.32	331	⇑P	Pn	03 14 25.7	-1.1
	comp=Z,54nm,0.6s,baz=141,slow=12,SNR=598						
AB31				⇑S	Sn	03 17 33.7	-4.7
	comp=Z,14nm,0.7s,baz=145,slow=25,SNR=2.6						
AB31	Akbulak array	17.32	331	P	Pn	03 14 25.7	-1.1
AB31				S	Sn	03 17 33.7	-4.7
ABKAR	Akbulak array	17.32	331	Pn	Pn	03 14 25.5	-1.3
SMDO	Samad	17.38	232	P	P	03 14 31.3	+2.3
UOSS	Minazif	17.39	240	Pn	Pn	03 14 26.1	-1.8
UOSS	Minazif	17.39	240	P	P	03 14 29.1	+0.1
UOSS	Minazif	17.39	240	P	P	03 14 29.2	+0.2
HOQ	Hoqain	17.50	235	P	P	03 14 33.7	+3.5
HOQ				P	P	03 14 33.7	+3.5
HATD	Hatta, Dubai	17.51	240	P	P	03 14 32.6	+2.3
ASHO	Ashiyiah	17.66	240	P	P	03 14 33.4	+1.5
	SNR=7.0						
ASHO				P	P	03 14 33.4	+1.5
	SNR=7.0						
ASHO	Ashiyiah	17.66	240	P	P	03 14 32.9	+1.0
SOHO	SOHO	17.67	238	P	P	03 14 32.8	+0.8
SOHO	SOHO	17.67	238	P	P	03 14 32.4	+0.4
NAZ	Nazwa, Dubai	17.75	241	P	P	03 14 34.3	+1.3
JMDO	Jabal Madar	17.84	230	P	P	03 14 36.2	+2.3
GOMU	GeErMu	17.98	79	P	Pn	03 14 34.2	-1.2
GOMU				pP	pP	03 14 43.3	-1.0
GOMU				S	Sn	03 17 53.9	-1.3
GOMU				pmax	pmax		
	comp=Z,19nm,1.2s						
GOMU				pmax	pmax		
	comp=Z,140nm,3.9s						
GOMU				LR	LR		
	comp=Z,650nm,7.5s						
GOMU				LR	LR		
	comp=Z,700nm,11.7s						
GOMU				LR	LR		
	comp=Z,1µm,11.8s						
HYB	Hyderabad	18.02	162	*e*P	Pn	03 14 34.5	-1.1
HYB				*e*pP	P	03 14 38.2	+2.3
HYB				*e*S	S	03 18 16.6	+15
BSY	Bisya	18.16	233	P	P	03 14 38.9	+1.4
ARQ	Araqi	18.20	236	P	P	03 14 40.3	+2.3
	SNR=5.9						
ASUD	Al Ashush, Dub	18.21	241	P	P	03 14 39.2	+1.2
ASUD	Al Ashush, Dub	18.21	241	P	P	03 14 39.9	+1.9
BVA0	Borovoye Array	18.34	355	P	P	03 14 38.0	-1.2
	comp=Z,68nm,0.9s,baz=162,slow=14,SNR=250						
BVA0	Borovoye Array	18.34	355	P	P	03 14 38.0	-1.2
BVAR	Borovoye Array	18.34	355	P	P	03 14 38.1	-1.1
	comp=Z,0.9nm,0.3s,baz=162,slow=12,SNR=81						
BVAR				S	S	03 18 07.6	+0.4
	comp=Z,3.8nm,0.8s,baz=171,slow=20,SNR=1.8						
BVAR				Lg	Lg	03 20 02.3	
	baz=188,slow=19						
BVAR				LR	LR	03 21 57.3	
	comp=Z,613nm,18.6s,baz=190,slow=38						
	comp=Z,64nm,0.8s						
BRVK	Borovoye	18.38	355	P	P	03 14 38.4	-1.2
BRVK	Borovoye	18.38	355	P	P	03 14 38.7	-1.0
BRVK	Borovoye	18.38	355	⇓P	P	03 14 38.1	-1.6
	comp=Z,46nm,0.8s						
BRVK	Borovoye	18.38	355*c*	*i*P	P	03 14 38.4	-1.2
BRVK				pmax	pmax		
	comp=Z,124nm,1.3s						
SHL	Shillong	18.84	114	P	P	03 14 40.6	-4.5
	SNR=19						
SHL	Shillong	18.84	114	P	P	03 14 39.5	-5.6
SHL				pmax	pmax		
	comp=Z,119nm,0.8s						
MHTO	MHTO	18.95	227	P	Pn	03 14 47.9	+1.0
AKTO	Aktyubinsk	19.02	330	P	P	03 14 47.0	+0.3
	comp=Z,348nm,0.7s,baz=138,slow=9.6,SNR=708						
AKTO				S	Sn	03 18 16.7	-2.9
	comp=Z,12nm,0.7s,baz=195,slow=16,SNR=3.2						
AKTO				Lg	Lg	03 20 15.5	
	comp=Z,0.1nm,0.3s,baz=216,slow=19,SNR=6.3						
AKTO				LR	LR	03 21 45.5	
	comp=Z,215nm,19.0s,baz=160,slow=36						
AKTO	Aktyubinsk	19.02	330	⇑P	Pn	03 14 47.3	-0.3
	comp=Z,205nm,0.7s						
AKTO				⇑S	Sn	03 18 16.3	-3.3
	comp=Z,37nm,1.2s						
AKTO	Aktyubinsk	19.02	330	P	Pn	03 14 47.3	-0.3
AKTO				S	Sn	03 18 16.3	-3.3
UMZA	Um Al Zommool	19.55	237	P	Pn	03 14 55.1	+1.0
LKRN	Lenkeran, Azer	19.64	289	P	Pn	03 14 55.8	+0.7
MZWR	Madinat Zayed	19.79	241	P	P	03 14 55.9	+0.6
JRN	Qarnain Island	19.85	246	P	Pn	03 14 57.4	-0.3
	SNR=6.9						
GHWR	Ruwais	20.40	243	P	P	03 15 02.3	+0.4
BRDH	Bariadhala	20.40	121	P	P	03 15 03.0	+1.1
	comp=Z,76nm,0.3s,baz=270,slow=17,SNR=5.8						
BRDH				LR	LR	03 24 48.7	
	comp=Z,351nm,18.6s,baz=304,slow=42						
	comp=Z,76nm,0.3s						
MZR	Muzera	20.54	240	P	P	03 15 04.5	+1.0
	SNR=13						
MZR	Muzera	20.54	240	P	P	03 15 04.5	+1.0
SHMA	Al-Shehemyia	20.81	251	P	P	03 15 06.0	-0.4
ZAA0	Zalesovo Array	20.96	20	P	P	03 15 07.5	-0.3
ZALV	Zalesovo Beam	20.96	20		P	03 15 07.2	-0.6
ZALV	Zalesovo Beam	20.96	20	P	P	03 15 07.5	-0.3
	comp=Z,117nm,0.6s,baz=207,slow=10,SNR=279						
ZALV				S	S	03 18 56.8	-2.8
	comp=Z,7.1nm,0.7s,baz=210,slow=23,SNR=5.1						
ZALV				Lg	Lg	03 21 38.6	
	comp=Z,0.1nm,0.3s,baz=220,slow=43,SNR=1.5						
ZALV				LR	LR	03 23 25.8	
	comp=Z,67nm,18.7s,baz=190,slow=37						
	comp=Z,117nm,0.6s						
SAKB	Bahrain	21.08	252	P	P	03 15 08.8	-0.5
SEKA	Sheki	21.15	295	P	P	03 15 11.6	+1.6
MNGR	Mingechevir, A	21.16	294	P	P	03 15 12.9	+2.8
TRNA	Turayna	21.21	248	P	P	03 15 09.3	-1.4
	SNR=7.5						
MAK	Makhachkala	21.28	300	*e*P	P	03 15 08.4	-2.9
MAK				*e*		03 15 29.1	
MAK				*e*S	S	03 19 01.2	-4.9
MAK				*e*SS	SnSn	03 19 30.3	+1.2
MAK				pmax	pmax		
	comp=Z,196nm,1.2s						
MAK				MLR	MLR		
	comp=Z,464nm,13.0s						
SMRA	Abu-Samra	21.50	248	P	P	03 15 12.2	-1.5
	SNR=5.4						
GANJ	Ganja	21.72	294	P	P	03 15 18.9	+2.8
KBD	Kabd	22.00	262	P	P	03 15 18.4	-0.7
GTA	Gaotai	22.00	70	*e*P	P	03 15 20.9	+1.7
GTA				pP	pP	03 15 30.0	+2.0
GTA				S	S	03 19 17.6	-2.9
GTA				pmax	pmax		
	comp=Z,15nm,1.2s						
GTA				pmax	pmax		
	comp=Z,160nm,4.5s						
GTA				LR	LR		
	comp=Z,210nm,11.6s						
GTA				LR	LR		
	comp=Z,390nm,10.5s						
GTA				LR	LR		
	comp=Z,350nm,9.5s						
NAX	Nakhchivan	22.23	289	P	P	03 15 24.3	+2.7
GNI	Garni	22.87	292	P	P	03 15 30.1	+1.6
GNI	Garni	22.87	292	LR	LR	03 26 15.2	
	comp=Z,166nm,19.2s,baz=74,slow=42						
GNI	Garni	22.87	292	P	P	03 15 31.6	+3.1
GNI				P	P	03 15 31.6	+3.1
GNI	Garni	22.87	292*c*	*i*P	P	03 15 31.2	+2.7
GNI				pmax	pmax		
	comp=Z,179nm,1.0s						
GNI	Garni	22.87	292	P	P	03 15 31.5	+3.0
GNI	Garni	22.87	292	P	P	03 15 31.0	+2.5
	comp=Z,2µmcomp=Z,188nm,1.2s						
DOK	Doka	23.11	231	P	P	03 15 31.6	+0.7
TRLG	Trialeti	23.50	295	P	P	03 15 36.5	+1.7
SVE	Sverdlovsk	23.57	343*d*	*e*P	P	03 15 36.3	+1.1
SVE				pmax	pmax		
	comp=Z,67nm,0.7s						
SVE				MLR	MLR		
	comp=Z,503nm,9.0s						
ARTI	Arti	23.77	340	P	P	03 15 36.7	-0.3

ARTI	**Arti**	**23.77**	**340**	LR	LR	03 25 49.2	
	comp=Z,495nm,19.8s,baz=158,slow=39						
ARTI	**Arti**	**23.77**	**340**	*c i*P	**P**	**03 15 37.5**	**+0.4**
ARTI				PPP	PPP	03 16 14.2	
ARTI				S	**S**	**03 19 52.7**	**+2.2**
ARTI				SS	**SnSn**	**03 20 34.6**	**+4.5**
ARTI				pmax	pmax		
	comp=Z,103nm,1.2s						
ARTI				MLR	MLR		
	comp=Z,466nm,15.0s						
WHFO	**Wadi Hawf**	**23.85**	**230**	P	**P**	**03 15 39.1**	**+0.9**
GEVA	**Gevas**	**24.11**	**287**	P	**P**	**03 15 42.1**	**+1.4**
NCK	**Nalchik**	**24.18**	**300**	*c i*P	**P**	**03 15 42.1**	**+1.0**
NCK				pmax	pmax		
	comp=Z,89nm,0.8s						
TNCH	**TengChong**	**24.25**	**107**	*e*P	**P**	**03 15 42.8**	**+0.7**
TNCH				LR	LR		
	comp=Z,560nm,8.8s						
TNCH				LR	LR		
	comp=Z,410nm,9.9s						
TNCH				LR	LR		
	comp=Z,470nm,12.3s						
ABTO	**Aybut**	**24.57**	**230**	P	**P**	**03 15 45.0**	**+0.1**
KBZ	**Khabaz**	**24.73**	**300**	P	**P**	**03 15 46.3**	**+0.4**
	comp=Z,26nm,0.8s,baz=110,slow=10.0,SNR=37						
KBZ				LR	LR	03 26 59.3	
	comp=Z,176nm,21.7s,baz=94,slow=40						
	comp=Z,26nm,0.8s						
KBZ	**Khabaz**	**24.73**	**300**	*c i*P	**P**	**03 15 47.1**	**+1.1**
KBZ				pmax	pmax		
	comp=Z,36nm,1.0s						
SHA1	**Shidzhatmaz**	**24.90**	**300**	*c i*P	**P**	**03 15 48.8**	**+0.9**
GOF	**Gofitskoye**	**24.91**	**303**	*ce*P	**P**	**03 15 49.0**	**+1.3**
KVAR	**Kislovodsk Arr**	**24.91**	**301**	LR	LR	03 26 23.8	
	comp=Z,338nm,19.9s,baz=139,slow=39						
KIV	**Kislovodsk**	**24.92**	**301**	P	**P**	**03 15 46.8**	**-1.1**
KIV				IAmb	IAmb	03 15 54.1	
	comp=Z,60nm,0.9s						
KIV	**Kislovodsk**	**24.92**	**301**	P	**P**	**03 15 49.1**	**+1.2**
KIV				P	**P**	**03 15 49.1**	**+1.2**
KIV	**Kislovodsk**	**24.92**	**301**	*e*P	**P**	**03 15 48.7**	**+0.8**
KIV				*e*S	**S**	**03 20 10.6**	**+1.2**
KIV				pmax	pmax		
	comp=Z,54nm,1.1s						
KIV				MLR	MLR		
	comp=Z,188nm,15.0s						
KIV	**Kislovodsk**	**24.92**	**301**	*i* P	**P**	**03 15 49.1**	**+1.2**
	SNR=14						
KIV	**Kislovodsk**	**24.92**	**301**	P	**P**	**03 15 49.2**	**+1.3**
	comp=Z,440nmcomp=Z,53nm,1.0s						
BELG	**Belogornoye**	**25.16**	**322**	LR	LR	03 27 37.6	
	comp=Z,90nm,19.5s,baz=125,slow=41						
BELG	**Belogornoye**	**25.16**	**322**	*d i*P	**P**	**03 15 50.4**	**+0.6**
BELG				pmax	pmax		
	comp=Z,21nm,0.9s						
LZH	**Lanzhou**	**25.28**	**78**	*e*P	**P**	**03 15 55.1**	**+3.9**
LZH				pP	sP	03 16 03.3	-0.9
LZH				pmax	pmax		
	comp=Z,22nm,1.2s						
LZH				LR	LR		
	comp=Z,200nm,16.2s						
LZH				LR	LR		
	comp=Z,300nm,18.6s						
LZH				LR	LR		
	comp=Z,270nm,15.1s						
MARD	**Mardin**	**25.96**	**285**	P	**P**	**03 15 58.3**	**+0.8**
KOPT	**Kop Dagi**	**26.12**	**291**	P	**P**	**03 15 58.0**	**-0.9**
KOPT				IAmb	IAmb	03 16 09.0	
	comp=Z,37nm,1.0s						
PZH	**PanZhiHua**	**26.16**	**100**	P	**P**	**03 16 01.6**	**+2.3**
PZH				PcP	**PcP**	**03 19 26.9**	**+0.9**
PZH				S	**S**	**03 20 27.9**	**-1.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.4s						
PZH				pmax	pmax		
	comp=Z,80nm,4.5s						
PZH				LR	LR		
	comp=Z,260nm,13.2s						
PZH				LR	LR		
	comp=Z,200nm,12.3s						
PZH				LR	LR		
	comp=Z,320nm,18.8s						
CD2	**Chengdu**	**26.23**	**90**	P	**P**	**03 16 03.5**	**+3.7**
CD2				pmax	pmax		
	comp=Z,30nm,0.7s						
CD2				LR	LR		
	comp=Z,370nm,9.5s						
CD2				LR	LR		
	comp=Z,400nm,12.1s						
CD2				LR	LR		
	comp=Z,320nm,12.7s						
RAYN	**Ar Rayn**	**26.27**	**252**	P	**P**	**03 15 59.5**	**-0.7**
RAYN	**Ar Rayn**	**26.27**	**252**	P	**P**	**03 15 59.8**	**-0.3**
RAYN	**Ar Rayn**	**26.27**	**252**	P	**P**	**03 15 59.5**	**-0.7**
RAYN				pmax	pmax		
	comp=Z,13nm,0.9s						
RAYN	**Ar Rayn**	**26.27**	**252**	*i* P	**P**	**03 15 59.8**	**-0.3**
	SNR=9.5						
LABN	**Labinsk**	**26.44**	**302**	*e*P	**P**	**03 16 02.5**	**+1.0**
LABN				*e**PP	**pP**	**03 16 10.0**	**-0.8**
LABN				*e*S	**S**	**03 20 34.8**	**+1.6**
LABN				*e*SS	**SnSn**	**03 21 36.4**	**+1.1**
LABN				pmax	pmax		
	comp=Z,51nm,0.6s						
LABN				MLR	MLR		
	comp=Z,1µm,14.0s						
VSLR	**Vesyoloye**	**26.74**	**299**	⇑*e*P	**P**	**03 16 06.5**	**+2.3**
VSLR				pmax	pmax		
	comp=Z,49nm,1.0s						
ERBR	**Yeremizino-Bor**	**26.82**	**304**	*e*P	**P**	**03 16 06.4**	**+1.5**
ERBR				*e**PP	**pP**	**03 16 14.2**	**-0.1**
ERBR				*e*PPP	PPP	03 16 54.9	
ERBR				*e*S	**S**	**03 20 42.9**	**+3.7**
ERBR				pmax	pmax		
	comp=Z,20nm,0.7s						
ERBR				MLR	MLR		
	comp=Z,471nm,15.0s						
SOC	**Sochi**	**26.98**	**299**	*e*P	**P**	**03 16 06.8**	**+0.4**
SOC				*e*PPP	PPP	03 16 58.2	
SOC				*e*S	**S**	**03 20 43.6**	**+1.8**
SOC				*e*SS	**SnSn**	**03 21 48.6**	**0.0**
SOC				*e*SSS	SSS	03 22 06.5	
SOC				MLR	MLR		
	comp=Z,171nm,19.0s						
ZAK	**Zakamensk**	**27.09**	**45**	*e*P	**P**	**03 16 08.3**	**+0.9**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KMI	**Kunming**	**27.57**	**102**	⇑P	**P**	**03 16 14.8**	**+2.7**
KMI				pmax	pmax		
	comp=Z,27nm,0.9s						
KMI				LR	LR		
	comp=Z,310nm,11.5s						
KMI				LR	LR		
	comp=Z,230nm,11.5s						
KMI				LR	LR		
	comp=Z,380nm,15.0s						
VRH	**Novokhopyorsk**	**27.78**	**316**	*e*P	**P**	**03 16 15.9**	**+2.5**
VRH				pmax	pmax		
	comp=Z,20nm,0.6s						
CHTO	**Chiang Mai**	**28.11**	**118**	P	**P**	**03 16 14.6**	**-2.1**
CHTO	**Chiang Mai**	**28.11**	**118**	P	**P**	**03 16 16.9**	**+0.2**
CHTO	**Chiang Mai**	**28.11**	**118**	P	**P**	**03 16 20.0**	**+3.3**
CHTO	**Chiang Mai**	**28.11**	**118**	P	**P**	**03 16 14.6**	**-2.1**
CHTO				pmax	pmax		
	comp=Z,158nm,1.8s						
SONM	**Songino Array**	**28.17**	**52**	P	**P**	**03 16 16.5**	**-0.7**
SONM	**Songino Array**	**28.17**	**52**	P	**P**	**03 16 18.7**	**+1.5**
	comp=Z,1.5nm,0.4s,baz=254,slow=8.3,SNR=13						
SONM				PcP	**PcP**	**03 19 31.0**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=262,slow=2.9,SNR=2.2						
SONM				LR	LR	03 29 16.1	
	comp=Z,520nm,19.4s,baz=254,slow=40						
	comp=Z,1.5nm,0.4s						
SONM	**Songino Array**	**28.17**	**52**	P	**P**	**03 16 16.5**	**-0.7**
SONM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PALK	**Pallekele**	**28.31**	**163**	LR	LR	03 27 48.8	
	comp=Z,542nm,18.8s,baz=354,slow=37						
PALK	**Pallekele**	**28.31**	**163**	P	**P**	**03 16 18.1**	**-0.4**
CM31	**Chiang Mai Arr**	**28.33**	**118**	P	**P**	**03 16 17.4**	**-1.3**
CMAR	**Chiang Mai Arr**	**28.33**	**118**		**P**	**03 16 18.1**	**-0.6**
CMAR				PcP	**PcP**	**03 19 30.5**	**-0.7**
CMAR	**Chiang Mai Arr**	**28.33**	**118**	P	**P**	**03 16 19.3**	**+0.6**
	comp=Z,6.9nm,0.8s,baz=304,slow=9.1,SNR=22						
CMAR				PcP	**PcP**	**03 19 31.4**	**+0.2**
	comp=Z,5.6nm,0.3s,baz=308,slow=1.5,SNR=7.8						
CMAR				ScP	**ScP**	**03 23 11.9**	**+1.9**
	comp=Z,1.7nm,0.3s,baz=286,slow=2.9,SNR=6.0						
CMAR				LR	LR	03 30 28.1	
	comp=Z,150nm,19.8s,baz=315,slow=42						
	comp=Z,6.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**28.33**	**118**	*ce*P	**P**	**03 16 21.6**	**+2.9**
CMAR				pmax	pmax		
	comp=Z,24nm,1.0s						
KIRV	**Kirov**	**28.44**	**334**	LR	LR	03 27 48.2	
	comp=Z,81nm,18.2s,baz=137,slow=37						
KIRV	**Kirov**	**28.44**	**334**	*c i*P	**P**	**03 16 20.0**	**+0.7**
ULN	**Ulaanbaatar**	**28.61**	**52**	P	**P**	**03 16 17.2**	**-3.9**
ULN	**Ulaanbaatar**	**28.61**	**52**	⇑*e*P	**P**	**03 16 22.3**	**+1.2**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ANN	**Anapa**	**28.78**	**301**	*e*P	**P**	**03 16 21.7**	**-0.7**
ANN				*e*S	**S**	**03 21 10.2**	**+0.2**
ANN				*e*SS	**SnSn**	**03 22 37.2**	**+4.8**
ANN				pmax	pmax		
	comp=Z,21nm,0.8s						
ANN				MLR	MLR		
	comp=Z,549nm,15.0s						
VORD	**Divnogorie**	**29.10**	**314**	*e*P	**P**	**03 16 25.5**	**+0.3**
VORD				pmax	pmax		
	comp=Z,10.0nm,1.2s						
TOKA	**Tokat**	**29.20**	**292**	P	**P**	**03 16 27.1**	**+0.8**
VSR	**Storozhevoye**	**29.27**	**315**	*e*P	**P**	**03 16 23.9**	**-2.8**
VSR				pmax	pmax		
	comp=Z,9.0nm,1.2s						
XAN	**Xi'an**	**29.71**	**81**	P	P	03 16 36.2	+5.3
XAN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,130nm,4.5s						
XAN				LR	LR		
	comp=Z,340nm,13.4s						
XAN				LR	LR		
	comp=Z,280nm,14.1s						
XAN				LR	LR		
	comp=Z,550nm,12.5s						
BTO	**Baotou**	**29.87**	**68**	*e*P	**P**	**03 16 31.0**	**-1.3**
BTO				sP	**sP**	**03 16 44.9**	**-0.4**
BTO				S	**S**	**03 21 25.7**	**-1.8**
BTO				pmax	pmax		
	comp=Z,26nm,0.6s						
BTO				pmax	pmax		
	comp=Z,110nm,3.8s						
BTO				LR	LR		
	comp=Z,470nm,6.1s						
BTO				LR	LR		
	comp=Z,290nm,7.7s						
BTO				LR	LR		
	comp=Z,250nm,11.7s						
ASF	**Jabal al Asfar**	**29.97**	**275**	LR	LR	03 29 19.7	
	comp=Z,99nm,19.2s,baz=95,slow=38						
GYA	**Guiyang**	**30.18**	**97**	⇓P	**P**	**03 16 36.9**	**+1.7**
GYA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SLVN	**Son La**	**30.39**	**108**	P	**P**	**03 16 37.6**	**+0.6**
MMAI	**Mount Meron Ar**	**30.99**	**278**	P	**P**	**03 16 42.7**	**+0.5**
	comp=Z,2.6nm,0.5s,baz=74,slow=6.2,SNR=8.3						
MMAI				PcP	**PcP**	**03 19 38.7**	**+0.9**
	comp=Z,5.6nm,0.7s,baz=48,slow=2.1,SNR=8.2						
	comp=Z,2.6nm,0.5s						
HHC	**Hu-ho-hao-te**	**31.03**	**67**	*e*P	**P**	**03 16 43.5**	**+0.9**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,60nm,5.8s						
HHC				LR	LR		
	comp=Z,150nm,9.8s						
HHC				LR	LR		
	comp=Z,260nm,12.3s						
HHC				LR	LR		
	comp=Z,200nm,11.4s						
BZK	**Bozkurt**	**31.06**	**295**	P	**P**	**03 16 44.5**	**+1.8**
	comp=Z,51nm,0.9s						
ENH	**Enshi**	**31.14**	**88**	P	**P**	**03 16 42.9**	**-0.6**
ENH				IAmb	IAmb	03 16 56.2	
	comp=Z,34nm,1.4s						
ENH	**Enshi**	**31.14**	**88**	P	**P**	**03 16 47.4**	**+3.9**
KIRS	**Kirsehir-Merke**	**31.22**	**290**	⇑P	**P**	**03 16 45.3**	**+1.0**
ILGA	**Ilgaz**	**31.28**	**293**	P	**P**	**03 16 46.5**	**+1.6**
ILGA				IAmb	IAmb	03 16 48.1	
	comp=Z,27nm,1.2s						
GHAJ	**Ghor Haditha**	**31.30**	**274**	P	**P**	**03 16 44.4**	**-0.5**
BR104	**Keskin Array S**	**31.40**	**291**	P	**P**	**03 16 47.2**	**+1.4**
	comp=Z,131nmcomp=Z,18nm,1.0s						
BR131	**Keskin Array S**	**31.40**	**291**	P	**P**	**03 16 46.4**	**+0.6**
BR131	**Keskin Array S**	**31.40**	**291**	*c i*P	**P**	**03 16 47.0**	**+1.2**
BRTR	**Keskin Array B**	**31.40**	**291**	P	**P**	**03 16 46.9**	**+1.0**
	comp=Z,9.1nm,0.7s,baz=90,slow=8.5,SNR=78						
BRTR				PcP	**PcP**	**03 19 38.9**	**0.0**
	comp=Z,2.4nm,0.8s,baz=129,slow=4.2,SNR=5.3						
	comp=Z,9.1nm,0.7s						
BRTR	**Keskin Array B**	**31.40**	**291**	*ce*P	**P**	**03 16 47.0**	**+1.2**
BRTR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BR106	**Keskin Array S**	**31.41**	**291**	P	**P**	**03 16 47.3**	**+1.3**
	comp=Z,127nmcomp=Z,18nm,0.8s						
BR105	**Keskin Array S**	**31.41**	**291**	P	**P**	**03 16 47.3**	**+1.3**
	comp=Z,133nmcomp=Z,18nm,0.8s						
BR105				pP	**pP**	**03 16 53.3**	**-2.1**
	comp=Z,133nmcomp=Z,18nm,0.8s						
MOS	**Moscow**	**31.93**	**322**	*e*P	**P**	**03 16 48.2**	**-2.0**
MOS				*e*		03 17 59.9	
MOS				MLR	MLR		
	comp=Z,300nm,17.0s						
TIY	**Taiyuan**	**31.93**	**73**	P	**P**	**03 16 53.8**	**+3.3**
TIY				S	**S**	**03 22 01.5**	**+1.7**
TIY				LR	LR		
	comp=Z,170nm,6.1s						
TIY				LR	LR		
	comp=Z,190nm,11.7s						
TIY				LR	LR		
	comp=Z,190nm,13.1s						
ANTO	**Ankara**	**32.04**	**291**	P	**P**	**03 16 50.2**	**-1.2**
ANTO	**Ankara**	**32.04**	**291**	P	**P**	**03 16 53.5**	**+2.1**
ANTO	**Ankara**	**32.04**	**291**	P	**P**	**03 16 50.2**	**-1.2**
ANTO				pmax	pmax		
	comp=Z,11nm,0.7s						
ANTO	**Ankara**	**32.04**	**291**	P	**P**	**03 16 53.1**	**+1.7**
	comp=Z,8.1nm,0.9s						
ANTO				pP	**pP**	**03 16 58.9**	**-1.9**
	comp=Z,8.1nm,0.9s						
OBN	**Obninsk**	**32.21**	**320**	P	**P**	**03 16 52.2**	**-0.4**
OBN	**Obninsk**	**32.21**	**320**	*ce*P	**P**	**03 16 52.6**	**0.0**
OBN				*e*		03 18 05.7	
OBN				pmax	pmax		
	comp=Z,12nm,0.5s						
OBN				MLR	MLR		
	comp=Z,229nm,17.0s						
EIL	**Elat**	**32.30**	**272**	LR	LR	03 31 26.4	
	comp=Z,93nm,20.3s,baz=69,slow=39						
LYN	**LuoYang**	**32.48**	**79**	*e*P	**P**	**03 16 55.2**	**0.0**
LYN				sP	sP	03 17 12.7	+4.5
LYN				pmax	pmax		
	comp=Z,17nm,0.7s						
LYN				LR	LR		
	comp=Z,290nm,9.7s						
LYN				LR	LR		
	comp=Z,270nm,10.7s						
LYN				LR	LR		
	comp=Z,460nm,12.5s						
SAHE	**Sakarya_HENDEK**	**33.46**	**293**	⇑P	**P**	**03 17 03.8**	**+0.1**
KLMR	**Klimovskoe**	**33.71**	**331**	*e*P	**P**	**03 17 04.0**	**-1.7**
KLMR				*e**PP	**pP**	**03 17 14.0**	**-1.1**
KLMR				*e*		03 18 16.2	
KLMR				pmax	pmax		
	comp=Z,33nm,1.2s						
KLMR				MLR	MLR		
	comp=Z,268nm,14.0s						
HNS	**HongShan**	**33.77**	**73**	⇑P	**P**	**03 17 08.8**	**+2.4**
HNS				pP	**pP**	**03 17 14.6**	**-1.0**
HNS				pmax	pmax		
	comp=Z,16nm,0.7s						
HNS				LR	LR		
	comp=Z,140nm,9.3s						
HNS				LR	LR		
	comp=Z,260nm,11.1s						
HNS				LR	LR		
	comp=Z,160nm,12.0s						
BORA	**Eskisehir**	**33.83**	**291**	P	**P**	**03 17 06.6**	**-0.5**
XLT	**XiLinHaoTe**	**34.36**	**61**	*e*P	**P**	**03 17 09.2**	**-2.4**
XLT				pP	pP	03 17 21.2	+0.3
XLT				sP	sP	03 17 26.0	+1.3
XLT				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BJI	**Beijing**	**34.59**	**68**	P	**P**	**03 17 15.2**	**+1.7**
BJI				sP	**sP**	**03 17 27.5**	**+0.9**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BJI				LR	LR		
	comp=Z,93nm,10.3s						
BJI				LR	LR		
	comp=Z,110nm,10.5s						
BJI				LR	LR		
	comp=Z,130nm,11.6s						
YLV	**Yalova**	**34.60**	**293**	P	**P**	**03 17 14.8**	**+1.1**
	comp=Z,513nmcomp=Z,55nm,0.8s						
MILM	**Milestii Mici**	**34.99**	**304**	⇑*i*P	**P**	**03 17 16.7**	**-0.2**
	comp=Z,34nm,1.0s						
MILM				*e*L	L	03 32 16.0	
MILM				LRM	MLR	03 36 03.0	
	comp=Z,200nm,13.5s						
MILM	**Milestii Mici**	**34.99**	**304**	*c i*P	**P**	**03 17 16.7**	**-0.2**
MILM				pmax	pmax		
	comp=Z,34nm,1.0s						
UBPT	**Khong Chiam**	**35.16**	**115**	P	**P**	**03 17 21.0**	**+2.4**
TPGR	**Topolog**	**35.17**	**300**	⇑P	**P**	**03 17 19.4**	**+0.9**
AK07	**Malin Array Si**	**35.17**	**310**	P	**P**	**03 17 18.4**	**0.0**
AK06	**Malin Array Si**	**35.18**	**310**	P	**P**	**03 17 18.5**	**0.0**
AKASG	**Malin Array Be**	**35.19**	**310**	P	**P**	**03 17 18.1**	**-0.4**
	comp=Z,5.1nm,0.5s,baz=84,slow=8.2,SNR=42						
AKASG				PP	**PnPn**	**03 18 34.0**	**-2.6**
	comp=Z,2.6nm,0.6s,baz=92,slow=11,SNR=5.5						
AKASG				PcP	**PcP**	**03 19 48.7**	**-0.4**
	comp=Z,2.1nm,0.6s,baz=71,slow=4.3,SNR=4.5						
AKASG				LR	LR	03 34 14.4	
	comp=Z,104nm,19.1s,baz=100,slow=41						
	comp=Z,5.1nm,0.5s						
AKASG	**Malin Array Be**	**35.19**	**310**	*ce*P	**P**	**03 17 18.1**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.5s						
AKBB	**Malin Array Si**	**35.19**	**310**	*c i*P	**P**	**03 17 18.0**	**-0.5**
AKBB				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AKBB	**Malin Array Si**	**35.19**	**310**	P	**P**	**03 17 18.4**	**-0.1**
KIEV	**Kiev**	**35.20**	**310**	P	**P**	**03 17 18.3**	**-0.3**
KIEV	**Kiev**	**35.20**	**310**	P	**P**	**03 17 18.3**	**-0.3**
KIEV				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KIEV	**Kiev**	**35.20**	**310**	*i* P	**P**	**03 17 18.3**	**-0.3**
	SNR=9.3						
KIEV	**Kiev**	**35.20**	**310**	P	**P**	**03 17 18.3**	**-0.3**
	comp=Z,57nm,0.6s						
CTYL	**Yalikoy Yolu**	**35.35**	**294**	⇑P	**P**	**03 17 20.8**	**+0.7**
CTYL	**Yalikoy Yolu**	**35.35**	**294**	P	**P**	**03 17 21.6**	**+1.5**
CFR	**Carcaliu**	**35.38**	**301**	⇑P	**P**	**03 17 20.5**	**+0.2**
CFR	**Carcaliu**	**35.38**	**301**	P	**P**	**03 17 20.4**	**+0.2**
BAND	**Balkesir-Ban**	**35.59**	**293**	⇑P	**P**	**03 17 20.7**	**-1.5**
ATD	**Arta Tunnel**	**35.73**	**237**	LR	LR	03 33 53.0	
	comp=Z,4.1nm,18.6s,baz=185,slow=40						
SRIT	**Nakonsritamara**	**35.80**	**130**	P	**P**	**03 17 25.6**	**+1.4**
TIA	**Tai'an**	**35.88**	**75**	P	**P**	**03 17 27.0**	**+2.3**
TIA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
PRD	**Provadia**	**35.92**	**297**	P	**P**	**03 17 24.1**	**-0.8**
LUBAR	**Lubar, Ukraine**	**36.00**	**309**	P	**P**	**03 17 24.9**	**-0.6**
MI29	**MI29, Kamyanyy**	**36.01**	**310**	P	**P**	**03 17 25.7**	**+0.1**
	comp=Z,102nm,1.4s						
NEF	**NEVSHA**	**36.01**	**298**	P	**P**	**03 17 26.8**	**+1.1**
ARG	**Arkhangelos**	**36.17**	**286**	P	**P**	**03 17 27.8**	**+0.6**
MI28	**Mi28,Pidlybu**	**36.20**	**311**	P	**P**	**03 17 26.8**	**-0.4**
QIZ	**Qiongzhong**	**36.32**	**106**	P	**P**	**03 17 26.8**	**-1.8**
QIZ				S	**S**	**03 23 05.1**	**-2.7**
QIZ				LR	LR		
	comp=Z,150nm,12.2s						
QIZ				LR	LR		
	comp=Z,200nm,13.5s						
VRI	**Vrincioaia**	**36.38**	**302**	⇑P	**P**	**03 17 29.8**	**+0.9**
VRI	**Vrincioaia**	**36.38**	**302**	P	**P**	**03 17 29.7**	**+0.9**
VRI	**Vrincioaia**	**36.38**	**302**	P	**P**	**03 17 30.8**	**+1.9**
	comp=Z,11nm,1.2s						
PLOR	**Plostina**	**36.44**	**302**	⇑P	**P**	**03 17 30.5**	**+1.1**
PLOR	**Plostina**	**36.44**	**302**	P	**P**	**03 17 30.5**	**+1.1**
TESR	**Tescani**	**36.45**	**303**	⇑P	**P**	**03 17 30.0**	**+0.5**
TESR	**Tescani**	**36.45**	**303**	P	**P**	**03 17 30.2**	**+0.7**
	comp=Z,15nm,0.7s						
ISR	**Istrita**	**36.51**	**301**	⇑P	**P**	**03 17 29.7**	**-0.3**
ISR	**Istrita**	**36.51**	**301**	P	**P**	**03 17 29.7**	**-0.3**
ISR	**Istrita**	**36.51**	**301**	P	**P**	**03 17 31.9**	**+1.9**
	comp=Z,33nm,1.0s						
KMPD	**K-Podol'skiy**	**36.70**	**306**	P	**P**	**03 17 31.6**	**+0.1**
MNK	**Minsk**	**36.77**	**317**	*i* P	**P**	**03 17 32.2**	**+0.2**
	comp=Z,11nm,0.8s,baz=103						
MNK				*i* PP	**PP**	**03 18 55.1**	**-0.8**
MNK				*i* PP	**PP**	**03 18 56.3**	**+0.4**
MNK				*i* PPP	PPP	03 19 12.5	
MNK				*i* S	**S**	**03 23 15.0**	**+1.0**
MNK				*i* SS	**SS**	**03 25 52.7**	**-2.3**
MNK				*i* SSS	SSS	03 26 10.2	
MNK				*i* LR	LR	03 32 45.2	
MNK				*i* LRM	MLR	03 34 17.9	
	comp=Z,133nm,21.7s						
MNK				*i* LRM	MLR	03 34 18.9	
	comp=N,117nm,15.5s						
MNK	**Minsk**	**36.77**	**317**	*i* P	**P**	**03 17 32.2**	**+0.2**
MNK				*i*		03 18 56.3	
MNK				*i* PPP	PPP	03 19 12.4	
MNK				*i* S	**S**	**03 23 14.9**	**+1.0**
MNK				*i* SSS	SSS	03 26 10.2	
MNK				pmax	pmax		
	comp=Z,11nm,0.8s						
MNK				MLR	MLR		
	comp=Z,133nm,22.0s						
MNK				MLR	MLR		
	comp=N,117nm,15.0s						
HORU	**Horodok**	**36.78**	**308**	P	**P**	**03 17 32.4**	**+0.2**
TURR	**Turia**	**36.88**	**302**	⇓P	**P**	**03 17 33.9**	**+0.7**
MLR	**Muntele Rosu**	**36.93**	**301**	P	**P**	**03 17 34.3**	**+0.6**
MLR				IAmb	IAmb	03 17 36.9	
	comp=Z,44nm,0.9s						
MLR	**Muntele Rosu**	**36.93**	**301**	LR	LR	03 36 25.1	
	comp=Z,180nm,18.8s,baz=68,slow=42						
MLR	**Muntele Rosu**	**36.93**	**301**	⇑P	**P**	**03 17 34.8**	**+1.1**
MLR	**Muntele Rosu**	**36.93**	**301**	P	**P**	**03 17 34.3**	**+0.6**
MLR				pmax	pmax		
	comp=Z,44nm,0.9s						
MLR	**Muntele Rosu**	**36.93**	**301**	P	**P**	**03 17 35.6**	**+1.9**
	comp=Z,544nmcomp=Z,55nm,1.0s						
SZH	**Strazhitsa**	**36.96**	**298**	P	**P**	**03 17 33.8**	**0.0**
EZN	**Ezine**	**37.00**	**292**	⇑P	**P**	**03 17 34.8**	**+0.6**
EZN	**Ezine**	**37.00**	**292**	P	**P**	**03 17 34.7**	**+0.6**
EZN	**Ezine**	**37.00**	**292**	P	**P**	**03 17 35.4**	**+1.2**
KARP	**Karpathos**	**37.07**	**285**	*e*P	**P**	**03 17 35.1**	**+0.2**
KARP	**Karpathos**	**37.07**	**285**	P	**P**	**03 17 35.9**	**+1.0**
	comp=Z,2µmcomp=Z,320nm,0.8s						
ALN	**Alexandroupoli**	**37.09**	**294**	P	**P**	**03 17 36.2**	**+1.3**
DOPR	**Dopca**	**37.32**	**302**	⇑P	**P**	**03 17 37.4**	**+0.5**
RNPP5	**Staryi Chortor**	**37.35**	**311**	P	**P**	**03 17 37.3**	**+0.3**
RNPP9	**Sopachiv**	**37.38**	**311**	P	**P**	**03 17 37.3**	**+0.1**
RNPP8	**Varash**	**37.39**	**311**	P	**P**	**03 17 37.4**	**+0.1**
BURAR	**Bucovina Array**	**37.48**	**305**		**P**	**03 17 38.7**	**+0.4**
BURAR	**Bucovina Array**	**37.48**	**305**	⇓P	**P**	**03 17 38.9**	**+0.7**
BURAR	**Bucovina Array**	**37.48**	**305**	P	**P**	**03 17 38.9**	**+0.7**
NACGM	**Naroch**	**37.49**	**317**	*e*P	**P**	**03 17 37.4**	**-0.7**
	comp=Z,8.0nm,0.8s,baz=103						
VOIR		**37.56**	**301**	⇑P	**P**	**03 17 38.7**	**-0.3**
VOIR		**37.56**	**301**	P	**P**	**03 17 38.6**	**-0.3**
VOIR		**37.56**	**301**	P	**P**	**03 17 40.1**	**+1.1**
	comp=Z,9.3nm,0.6s						
RZN	**Rozhen**	**37.99**	**295**	P	**P**	**03 17 43.5**	**+0.7**
STNU	**Starunia**	**38.01**	**307**	P	**P**	**03 17 43.4**	**+0.8**
APE	**Apeiranthos**	**38.05**	**288**	⇑P	**P**	**03 17 42.4**	**-0.9**
APE	**Apeiranthos**	**38.05**	**288**	P	**P**	**03 17 42.3**	**-0.9**
JOF	**Joensuu**	**38.10**	**331**	*e*P	**P**	**03 17 42.9**	**-0.3**
SANT	**Santorini**	**38.25**	**286**	⇑P	**P**	**03 17 43.9**	**-0.9**
NJ2	**Nanjing**	**38.28**	**81**	*e*P	**P**	**03 17 43.3**	**-1.8**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
VSU	**Vasula**	**38.46**	**323**	*e*P	**P**	**03 17 44.9**	**-1.3**
LOT	**Lotru**	**38.46**	**301**	⇓P	**P**	**03 17 47.2**	**+0.6**
MPEP	**Malo Peshtene**	**38.58**	**298**	P	**P**	**03 17 48.6**	**+1.1**
MMB	**Musomishta**	**38.74**	**295**	P	**P**	**03 17 48.8**	**-0.1**
SHIU	**Shidnytsya**	**38.78**	**307**	P	**P**	**03 17 50.3**	**+1.1**
PLNA	**Plana**	**38.89**	**297**	P	**P**	**03 17 51.0**	**+0.8**
MARR	**Marisel-Cluj**	**38.89**	**303**	⇑P	**P**	**03 17 50.6**	**+0.4**
DL2	**Dalian**	**38.92**	**69**	P	**P**	**03 17 52.1**	**+1.7**

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DL2                                  S      S      03 23 48.6 +1.7
DL2                                  pmax   pmax
      comp=Z,38nm,1.0s
DL2                                  pmax   pmax
      comp=Z,210nm,8.3s
DL2                                  LR     LR
      comp=Z,300nm,24.2s
DL2                                  LR     LR
      comp=Z,280nm,26.9s
DL2                                  LR     LR
      comp=Z,210nm,24.3s
VTS   Vitosha           39.01 297    P      P      03 17 52.1 +0.8
DEV   Deva              39.05 302 ⇑P     P      03 17 52.4 +1.0
DEV   Deva              39.05 302    P      P      03 17 52.4 +1.0
GZR   Gura Zlata        39.16 301 ⇑P     P      03 17 53.0 +0.6
GZR   Gura Zlata        39.16 301    P      P      03 17 53.0 +0.6
DRGR                    39.17 303 ⇑P     P      03 17 53.5 +1.0
DRGR                    39.17 303    P      P      03 17 53.5 +1.0
PABE  Paberze           39.19 317    P      P      03 17 51.5 -0.9
PABE  Paberze           39.19 317  eP     P      03 17 52.5 +0.1
BERU  Beregovo          39.22 306    P      P      03 17 54.4 +1.6
HOLU  Holmets           39.40 306    P      P      03 17 55.4 +1.1
HERR  Herculane         39.44 300 ⇑P     P      03 17 54.6 -0.1
KOLS  Kolonicke sedl    39.49 307  eP     P      03 17 55.9 +0.9
KOLS                                 pmax   pmax
      comp=Z,8.0nm,0.9s
KOLS  Kolonicke sedl    39.49 307  eP     P      03 17 55.9 +0.9
KOLS                               ePP    PP     03 19 26.9 +1.1
LVZ   Lovozero          39.61 338c iP     P      03 17 56.0 +0.1
LVZ                                  pmax   pmax
      comp=Z,37nm,0.8s
LVZ   Lovozero          39.61 338    P      P      03 17 56.6 +0.7
      comp=Z,46nm,0.9s
FINES FINESS Array B    39.74 327    P      P      03 17 56.9 -0.1
      comp=Z,6.3nm,0.5s,baz=111,slow=8.5,SNR=68
FINES                                PP     PP     03 19 27.9 -0.4
      comp=Z,5.7nm,0.8s,baz=109,slow=12,SNR=5.1
FINES                                LR     LR     03 35 07.4
      comp=Z,123nm,18.4s,baz=142,slow=37
      comp=Z,6.3nm,0.5s
FINES FINESS Array B    39.74 327  i P      P      03 17 57.4 +0.4
FINES                                pmax   pmax
      comp=Z,6.0nm,0.4s
APA   Apatity           39.80 338⇓iP     P      03 17 56.7 -0.7
APA                                  pmax   pmax
      comp=Z,5.0nm,0.8s
MDVR  Moldovita         39.94 300 ⇑P     P      03 17 59.1 +0.1
BZS   Buzias            39.96 302 ⇑P     P      03 17 59.5 +0.4
BZS   Buzias            39.96 302    P      P      03 17 59.4 +0.4
MTSE  Matsula           40.00 322  eP     P      03 17 59.1  0.0
PSI   Prapat            40.01 137    LR     LR     03 35 53.8
      comp=Z,202nm,19.1s,baz=298,slow=38
PSI   Prapat            40.01 137    P      P      03 18 01.3 +1.5
BOVS  Bovan             40.04 299 ⇑P     P      03 17 60.0 +0.3
MEF   Metsahovi         40.13 325  eP     P      03 18 01.4 +1.3
STHS  Stebnicka Huta    40.18 308  eP     P      03 18 00.1 -0.7
STHS                                 pmax   pmax
      comp=Z,5.0nm,0.8s
STHS  Stebnicka Huta    40.18 308  eP     P      03 18 00.1 -0.7
KEF   Keuruu            40.53 328  eP     P      03 18 03.9 +0.4
NIE   Niedzica          40.79 308  eP     P      03 18 07.1 +1.3
NIE   Niedzica          40.79 308    P      P      03 18 07.2 +1.3
NIE   Niedzica          40.79 308    P      P      03 18 07.2 +1.3
      comp=Z,8.5nm,1.1s
PSZ   Piszkesteto       41.07 305 ⇑P     P      03 18 08.5 +0.3
PSZ   Piszkesteto       41.07 305    P      P      03 18 08.5 +0.3
PSZ   Piszkesteto       41.07 305  eP     P      03 18 08.7 +0.5
CN2   Changchun         41.13  61  eP     P      03 18 08.1 -0.6
CN2                                epP    sP     03 18 20.3 -1.6
CN2                                eS     S      03 24 16.2 -3.6
CN2                                  pmax   pmax
      comp=Z,10.0nm,0.6s
CN2                                  pmax   pmax
      comp=Z,100nm,3.0s
CN2                                  LR     LR
      comp=Z,100nm,12.0s
CN2                                  LR     LR
      comp=Z,100nm,12.0s
CN2                                  LR     LR
      comp=Z,200nm,13.0s
OJC   Ojcow             41.13 309    P      P      03 18 09.6 +1.0
OJC   Ojcow             41.13 309    P      P      03 18 08.4 -0.2
      comp=Z,8.8nm,1.1s
FRGS  Fruska Gora       41.26 301⇑iP     P      03 18 10.6 +0.8
SJES  Sjenica           41.33 298⇑iP     P      03 18 11.7 +1.2
TEKS  Tekeris           41.52 300⇑iP     P      03 18 12.6 +0.7
BBLS  Lazi&#263i        41.67 299⇑iP     P      03 18 13.2  0.0
RUDO  Rudo              41.73 299⇑iP     P      03 18 13.9 +0.3
VYHS  Vyhne             41.76 306  eP     P      03 18 14.5 +0.7
VYHS                                 pmax   pmax
      comp=Z,8.0nm,1.4s
VYHS  Vyhne             41.76 306  eP     P      03 18 14.5 +0.7
VYHS                               ePP    PnPn   03 19 55.0 -0.6
VAF   Ylistaro          41.78 328  eP     P      03 18 14.3 +0.6
PDG   Podgorica         41.96 297⇑iP     P      03 18 15.4 -0.1
MORH  Mrgy, Hungar      42.00 303 ⇑P     P      03 18 15.4 -0.4
MORH  Mrgy, Hungar      42.00 303    P      P      03 18 16.5 +0.7
      comp=Z,7.6nm,1.3s
DRME  Dracevica, Mon    42.04 297⇑iP     P      03 18 14.6 -1.6
SRO   Srobarova         42.13 305  eP     P      03 18 18.3 +1.5
SRO                                  pmax   pmax
      comp=Z,23nm,0.9s
SRO   Srobarova         42.13 305  eP     P      03 18 18.3 +1.5
HEH   HeiHe             42.16  51  eP     P      03 18 18.3 +1.3
HEH                                  pmax   pmax
      comp=Z,10.0nm,0.9s
HEH                                  LR     LR
      comp=Z,180nm,15.0s
HEH                                  LR     LR
      comp=Z,380nm,13.6s
HEH                                  LR     LR
      comp=Z,490nm,14.5s
ZEA   Zeya              42.18  46  eP     P      03 18 24.6 +7.4
ZEA                                  pmax   pmax
      comp=N,10.0nm,0.5s
ZEA                                  pmax   pmax
      comp=Z,10.0nm,0.5s
ZEA                                  MLR    MLR
      comp=Z,100nm,14.0s
BNX   BinXian           42.34  58 ⇑P     P      03 18 19.9 +1.4
BNX                                  pmax   pmax
      comp=Z,11nm,0.7s
MAUC  Maruska           42.41 307  eP     P      03 18 20.2 +1.1
BRY   Bratogost         42.42 298⇑iP     P      03 18 19.6 +0.2
STEB  Steborice         42.44 308  eP     P      03 18 20.3 +1.0
VADS  Vadso             42.46 340  eP     P      03 18 20.1 +0.9
VADS                                 IAmb   IAmb   03 18 20.5
      comp=Z,44nm,0.6s
HCY   Herceg Novi       42.51 297⇑iP     P      03 18 19.2 -0.8
TREB  Trebinje          42.58 298⇑iP     P      03 18 20.3 -0.3
MORC  Moravsky Berou    42.59 308  eP     P      03 18 20.8 +0.2
MODS  Modra-Piesok      42.80 306  eP     P      03 18 21.1 -1.2
MODS  Modra-Piesok      42.80 306  eP     P      03 18 21.1 -1.2
KEV   Kevo              42.96 339    P      P      03 18 23.2  0.0
KEV                                  IAmb   IAmb   03 18 24.6
      comp=Z,25nm,0.7s
KEV   Kevo              42.96 339    P      P      03 18 23.2  0.0
KEV                                  pmax   pmax
      comp=Z,25nm,0.7s
STON  Ston              43.03 298⇑iP     P      03 18 23.8 -0.4
BLY   Banja Luka        43.16 301⇑iP     P      03 18 24.6 -0.6
VRAC  Vranov            43.22 307    LR     LR     03 40 09.8
      comp=Z,90nm,18.2s,baz=87,slow=41
VRAC  Vranov            43.22 307  eP     P      03 18 26.3 +0.7
VRAC  Vranov            43.22 307 ⇑P     P      03 18 25.1 -0.6
VRAC  Vranov            43.22 307    P      P      03 18 25.0 -0.6
ARA0  ARCESS Array S    43.31 338  eP     P      03 18 27.1 +1.0
ARA0                                 IAmb   IAmb   03 18 27.5
      comp=Z,36nm,0.6s
ARCES ARCESS Array B    43.31 338    P      P      03 18 26.8 +0.7
ARCES                                IAmb   IAmb   03 18 27.7
      comp=Z,34nm,0.8s
ARCES ARCESS Array B    43.31 338    P      P      03 18 26.8 +0.7
      comp=Z,35nm,0.5s,baz=117,slow=7.8,SNR=370
ARCES                                LR     LR     03 37 43.6
      comp=Z,418nm,18.4s,baz=108,slow=38
      comp=Z,35nm,0.5s
A051A Mrakovica         43.33 301⇑iP     P      03 18 26.9 +0.3
KRUC  Moravsky          43.36 307  eP     P      03 18 27.4 +0.6
DPC   Dobruska-Polom    43.36 309  eP     P      03 18 27.6 +0.8
DPC                                  AMS    AMS    03 39 50.0
      comp=Z,100nm,19.4s
DPC   Dobruska-Polom    43.36 309  eP     P      03 18 27.6 +0.8
DPC                                  MLR    MLR
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      comp=Z,100nm,19.4s
OSTC  Ostas             43.43 309    AMS    AMS    03 39 40.0
      comp=Z,200nm,17.4s
RONA  Rosalia, Austr    43.50 305  i P      P      03 18 28.5 +0.5
      comp=Z,6.3nm,0.8s
UPC   Upice             43.56 309  eP     P      03 18 29.2 +0.8
UPC                                  AMS    AMS    03 40 00.0
      comp=Z,100nm,16.9s
UPC   Upice             43.56 309  eP     P      03 18 29.2 +0.8
UPC                                  MLR    MLR
      comp=Z,100nm,16.9s
KOGS  Kog               43.63 303  i P      P      03 18 29.3 +0.3
A050A Klekovaca         43.65 300⇑iP     P      03 18 29.8 +0.5
CONA  Conrad Observa    43.78 305  i P      P      03 18 31.0 +0.8
      comp=Z,13nm,0.8s,SNR=8.5
TREC  Trest             43.94 307  eP     P      03 18 32.0 +0.5
TREC  Trest             43.94 307  eP     P      03 18 32.0 +0.5
KSAR  Wonju Array Be    44.05  70           P      03 18 32.1 -0.4
KSAR  Wonju Array Be    44.05  70    P      P      03 18 32.1 -0.4
ARSA  Arzberg           44.06 304  eP     P      03 18 32.6 +0.2
      comp=Z,5.1nm,1.4s
KSRS  Korea Array       44.08  70    P      P      03 18 33.3 +0.6
      comp=Z,6.0nm,0.8s,baz=282,slow=7.0,SNR=28
KSRS                                 LR     LR     03 38 31.7
      comp=Z,43µm,18.4s,baz=285,slow=38
      comp=Z,6.0nm,0.8s
CRES  Cresnjevec Ost    44.25 302⇑iP     P      03 18 34.1 +0.1
HAMF  Hammerfest        44.38 339  eP     P      03 18 35.7 +1.0
HAMF                                 IAmb   IAmb   03 18 36.2
      comp=Z,71nm,0.6s
PERS  Pernice           44.40 304  i P      P      03 18 35.9 +0.7
PERS                               i PcP    PP     03 20 19.3 +0.5
TIP   Timpagrande       44.40 293 ⇑P     P      03 18 34.1 -1.3
TIP   Timpagrande       44.40 293    P      P      03 18 35.8 +0.5
      comp=Z,14nm,1.2s
BOJS  Bojanci           44.43 302⇑iP     P      03 18 36.0 +0.6
SOKA  Soboth            44.45 304  i P      P      03 18 36.5 +0.8
      comp=Z,16nm,0.8s,SNR=12
PRU   Pruhonice         44.52 308  eP     P      03 18 36.7 +0.6
PRU                                  AMS    AMS    03 42 50.0
      comp=Z,100nm,13.3s
PRU   Pruhonice         44.52 308  eP     P      03 18 36.7 +0.6
PRU                                  MLR    MLR
      comp=Z,100nm,13.3s
YAK   Yakutsk           44.55  34    LR     LR     03 37 13.7
      comp=Z,92nm,20.4s,baz=226,slow=36
YAK   Yakutsk           44.55  34  eP     P      03 18 36.2 +0.1
YAK                                e*PP   sP     03 18 51.8 +2.4
YAK                                e             03 20 19.3
YAK                                e             03 20 21.7
YAK                                eS     S      03 25 07.5 -2.0
YAK                                e             03 28 28.1
YAK                                  pmax   pmax
      comp=Z,15nm,0.9s
YAK                                  pmax   pmax
      comp=E,6.0nm,1.4s
YAK                                  pmax   pmax
      comp=Z,40nm,1.6s
YAK                                  pmax   pmax
      comp=E,22nm,1.6s
YAK                                  smax   smax
      comp=N,49nm,2.5s
YAK                                  smax   smax
      comp=E,42nm,2.8s
CKRC  Cesky Krumlov     44.74 307  eP     P      03 18 38.2 +0.3
CKRC                                 AMS    AMS    03 41 40.0
      comp=E,100nm,13.8s
CKRC  Cesky Krumlov     44.74 307  eP     P      03 18 38.2 +0.3
CKRC                                 MLR    MLR
      comp=Z,100nm,13.8s
ZVC   Zvikov            44.78 308  eP     P      03 18 39.1 +1.0
ZVC                                  AMS    AMS    03 40 50.0
      comp=Z,100nm,11.1s
OBKA  Obir              44.80 304⇑iP     P      03 18 37.4 -1.1
OBKA  Obir              44.80 304  i P      P      03 18 39.2 +0.8
      comp=Z,3.7nm,0.5s
MOA   Molln             44.85 305  i P      P      03 18 39.3 +0.5
      comp=Z,13nm,1.0s,SNR=6.2
BRG   Berggiesshubel    44.86 310  i P      P      03 18 39.2 +0.5
BRG                                  Amp           03 18 39.7
      comp=Z,7.4nm,0.6s
LJU   Ljubljana         44.87 303  i P      P      03 18 39.8 +0.9
LJU                                i PcP    PcP    03 20 20.5 +0.3
JETT  Jettan, Norway    44.94 337  eP     P      03 18 40.0 +0.9
JETT                                 IAmb   IAmb   03 18 41.9
      comp=Z,17nm,0.7s
CEY   Cerknica          44.97 302⇑iP     P      03 18 40.3 +0.5
KLR   Kul'dur           45.00  53    P      P      03 18 41.0 +1.0
      comp=Z,4.1nm,0.5s,baz=277,slow=8.1,SNR=24
KLR                                  LR     LR     03 39 40.3
      comp=Z,281nm,18.1s,baz=256,slow=39
      comp=Z,4.1nm,0.5s
KLR   Kul'dur           45.00  53c iP     P      03 18 41.0 +1.0
KLR                                  pmax   pmax
      comp=Z,4.0nm,0.6s
GEC2  GERESS Array S    45.14 307    P      P      03 18 41.2  0.0
GERES GERESS Array B    45.14 307    P      P      03 18 41.4 +0.2
      comp=Z,1.7nm,0.8s,baz=88,slow=8.6,SNR=11
GERES                                PcP    PcP    03 20 20.4 -0.9
      comp=Z,1.0nm,0.8s,baz=98,slow=2.1,SNR=4.1
      comp=Z,1.7nm,0.8s
KHC   Kasperske Hory    45.20 307  eP     P      03 18 42.4 +0.8
KHC                                  AMS    AMS    03 41 10.0
      comp=Z,200nm,14.1s
KHC   Kasperske Hory    45.20 307c iP     P      03 18 41.6  0.0
KHC                                  pmax   pmax
      comp=Z,18nm,1.7s
KHC   Kasperske Hory    45.20 307    P      P      03 18 42.2 +0.6
      comp=Z,5.7nm,1.2s
CEL   Celeste           45.27 292    P      P      03 18 43.2 +0.9
      comp=Z,11nm,0.8s
BIOA  Bad Ischl, Aus    45.29 305  i P      P      03 18 41.9 -0.3
      comp=Z,1.0nm,0.4s
HFS   Hagfors           45.34 323    P      P      03 18 42.2 -0.3
      comp=Z,13nm,0.5s,baz=97,slow=10,SNR=51
HFS                                  PcP    PcP    03 20 19.6 -2.0
      comp=Z,4.9nm,0.7s,baz=90,slow=4.1,SNR=1.6
HFS                                  LR     LR     03 40 03.4
      comp=Z,134nm,18.4s,baz=100,slow=39
      comp=Z,13nm,0.5s
MYKA  Terra Mystica     45.41 304  eP     P      03 18 42.9 -0.3
      comp=Z,6.8nm,0.9s
CLL   Collm             45.43 310  i P      P      03 18 43.1 -0.2
      comp=Z,6.0nm,0.8s
CLL                                ePP    PP     03 20 26.0 -3.7
CLL                                ex     x      03 20 41.0
CLL                                ePPP   PPP    03 21 09.0
CLL                                eS     S      03 25 24.0 +1.4
CLL                                eSS    ScS    03 28 38.0 +0.6
CLL                                eSSS   SSS    03 29 37.0
TRO   Tromso            45.45 337  eP     P      03 18 43.8 +0.6
TRO                                  IAmb   IAmb   03 18 44.4
      comp=Z,11nm,0.6s
USRK  Ussuriysk Ar.     45.76  60           P      03 18 45.4 -0.5
USRK  Ussuriysk Ar.     45.76  60    P      P      03 18 46.4 +0.4
      comp=Z,2.5nm,0.5s,baz=277,slow=9.5,SNR=11
USRK                                 LR     LR     03 40 12.8
      comp=Z,191nm,18.9s,baz=282,slow=39
      comp=Z,2.5nm,0.5s
USRK  Ussuriysk Ar.     45.76  60    P      P      03 18 45.4 -0.5
LESA  Schwarzleotal     45.97 305  i P      P      03 18 47.1 -0.6
      comp=Z,12nm,0.9s,SNR=7.3
FAUS  Fauske            46.02 333  eP     P      03 18 48.3 +0.6
FAUS                                 IAmb   IAmb   03 18 49.1
      comp=Z,18nm,1.0s
MOR8  Moi Rana          46.05 331  eP     P      03 18 48.0  0.0
MOR8                                 IAmb   IAmb   03 18 48.5
      comp=Z,18nm,0.9s
ABTA  Abfaltersbach     46.16 304  i P      P      03 18 49.2 -0.1
      comp=Z,6.1nm,0.9s
STEI  Steigen           46.18 334  eP     P      03 18 49.5 +0.5
STEI                                 IAmb   IAmb   03 18 50.3
      comp=Z,10nm,0.9s
AQU   L'Aquila          46.24 298    P      P      03 18 51.1 +1.2
      comp=Z,13nm,0.9s
NORES NORESS Array B    46.46 324    P      P      03 18 51.9 +0.6
LEIR  Leirfjorden       46.56 331  eP     P      03 18 52.1 +0.2
VAE   Valguarnera       46.60 291    LR     LR     03 43 01.3
      comp=Z,35nm,20.6s,baz=136,slow=42
KONS  Konsvik           46.64 332  eP     P      03 18 53.2 +0.7
KONS                                 IAmb   IAmb   03 18 53.5
      comp=Z,11nm,1.0s
NB2   NORSAR Subarra    46.65 324    P      P      03 18 52.0 -0.8
      comp=Z,9.3nm,0.7s,baz=97,slow=7.9
NB2   NORSAR Subarra    46.65 324    P      P      03 18 50.0 -2.8
NB2   NORSAR Subarra    46.65 324    P      P      03 18 52.0 -0.8
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      baz=97,slow=7.9
NOA   NORSAR Array B    46.65 324    P      P      03 18 52.3 -0.5
      comp=Z,5.2nm,0.6s,baz=95,slow=7.8,SNR=36
NOA                                  PP     PP     03 20 40.3 -2.3
      comp=Z,5.4nm,0.9s,baz=91,slow=9.7,SNR=3.3
NOA                                  LR     LR     03 41 41.1
      comp=Z,91nm,18.3s,baz=100,slow=40
      comp=Z,5.2nm,0.6s
LODK  Lodwar            46.67 237    P      P      03 18 52.9 -0.6
LODK  Lodwar            46.67 237    P      P      03 18 55.8 +2.3
WTTA  Wattenberg        46.69 305  i P      P      03 18 53.1 -0.4
      comp=Z,12nm,1.0s
WATA  Walderalm         46.72 305  eP     P      03 18 53.4 -0.3
      comp=Z,6.5nm,0.8s
LOF   Lofoten           46.85 334  eP     P      03 18 55.0 +0.8
SQTA  Sankt Quirin      46.98 305  eP     P      03 18 55.2 -0.5
      comp=Z,9.4nm,1.0s
HOPEN Hopen             47.04 346  eP     P      03 18 57.5 +1.9
HOPEN                                IAmb   IAmb   03 18 58.5
      comp=Z,23nm,1.0s
MOTA  Moosalm           47.04 305  i P      P      03 18 55.3 -0.8
      comp=Z,3.7nm,0.6s
RETA  Reutte            47.25 305  i P      P      03 18 57.3 -0.4
      comp=Z,4.4nm,0.9s
FETA  Feichten          47.34 305  i P      P      03 18 57.8 -0.7
      comp=Z,5.5nm,1.0s
KONO  Kongsberg         47.36 322  eP     P      03 18 58.5 +0.2
BJO1  Bjornoya          47.36 343  eP     P      03 18 57.7 -0.4
JOW   Kunigami          47.79  84    P      P      03 19 03.3 +1.2
      comp=Z,6.8nm,0.5s,baz=285,slow=14,SNR=5.5
      comp=Z,6.8nm,0.5s
DAVA  Damuels           47.87 305  eP     P      03 19 02.3 -0.3
      comp=Z,32nm,0.7s,SNR=12
GRNR  Gornyy            47.87  50⇑iP     P      03 19 03.9 +1.5
GRNR                                 pmax   pmax
      comp=Z,9.0nm,1.1s
GRNR                                 MLR    MLR
      comp=E,160nm,11.0s
GRNR                                 MLR    MLR
      comp=N,120nm,12.0s
GRNR                                 MLR    MLR
      comp=Z,240nm,14.0s
HOMB  Homborsund        47.89 320  eP     P      03 19 01.7 -0.7
DAVOX Davos/Dischmat    47.95 304    LR     LR     03 42 32.3
      comp=Z,63nm,20.2s,baz=83,slow=40
KKM   Kota Kinabalu     49.14 115    P      P      03 19 14.2 +1.5
HSPB  Hornsund (broa    49.19 345  eP     P      03 19 13.7 +1.6
KIBK  Kibwezi           49.25 229    P      P      03 19 14.3 +0.8
PGF   Pioggiola         49.39 299  eP     P      03 19 12.7 -1.6
PGF                                  pmax   pmax
      comp=Z,19nm,1.0s
SPA0  Spitsbergen Ar    49.52 347  eP     P      03 19 16.1 +1.4
SPA0                                 IAmb   IAmb   03 19 17.1
      comp=Z,38nm,1.2s
SPITS Spitsbergen Ar    49.52 347    P      P      03 19 15.7 +1.0
      comp=Z,4.9nm,0.4s,baz=112,slow=11,SNR=54
SPITS                                LR     LR     03 43 35.2
      comp=Z,112nm,18.1s,baz=100,slow=40
      comp=Z,4.9nm,0.4s
HINF  Hinteralfeld      49.80 306  eP     P      03 19 16.5 -0.9
HINF                                 pmax   pmax
      comp=Z,5.0nm,0.8s
WLF   Walferdange       49.95 309  dP     P      03 19 18.9 +0.5
HAU   Haudompre         50.11 307  eP     P      03 19 18.9 -0.7
HAU                                  pmax   pmax
      comp=Z,8.0nm,0.9s
LPG   La Plagne         50.32 303  eP     P      03 19 21.4 -0.2
LPG                                  pmax   pmax
      comp=Z,19nm,0.8s
LPL   La Plagne         50.33 303  eP     P      03 19 21.4 -0.2
LPL                                  pmax   pmax
      comp=Z,18nm,0.9s
BNI   Bardonecchia      50.47 303    P      P      03 19 21.4 -1.2
BNI   Bardonecchia      50.47 303    P      P      03 19 21.4 -1.2
BNI                                  pmax   pmax
      comp=Z,16nm,1.1s
MBDF  Montbardon        50.47 302  eP     P      03 19 21.8 -0.8
MBDF                                 pmax   pmax
      comp=Z,12nm,0.8s
CABF  La Chapelle       50.55 305  eP     P      03 19 24.5 +1.4
CABF                                 pmax   pmax
      comp=Z,13nm,1.0s
KBS   Kingsbay          50.63 347    P      P      03 19 23.1  0.0
KBS   Kingsbay          50.63 347    P      P      03 19 23.1  0.0
KBS                                  pmax   pmax
      comp=Z,13nm,0.7s
KBS   Kingsbay          50.63 347  eP     P      03 19 24.2 +1.1
KBS                                  IAmb   IAmb   03 19 24.8
      comp=Z,13nm,0.7s
KBS   Kingsbay          50.63 347  i P      P      03 19 23.4 +0.4
KEST  Kesra             51.00 291    P      P      03 19 27.6 +1.0
      comp=Z,12nm,0.6s,baz=74,slow=4.9,SNR=26
      comp=Z,12nm,0.6s
KEST  Kesra             51.00 291    P      P      03 19 28.3 +1.6
BAIF  Baives            51.13 310  eP     P      03 19 27.2 -0.1
BAIF                                 pmax   pmax
      comp=Z,9.0nm,0.9s
TYV   Tymovskoe         51.77  49  eP     P      03 19 24.6 -7.4
TYV                                  pmax   pmax
      comp=Z,4.0nm,1.4s
SSB   Saint Sauveur     51.89 304    P      P      03 19 33.1  0.0
SSB   Saint Sauveur     51.89 304    P      P      03 19 33.1  0.0
SSB                                  pmax   pmax
      comp=Z,9.0nm,1.0s
VIVF  Saint-Julien-l    51.90 303  eP     P      03 19 32.0 -1.2
VIVF                                 pmax   pmax
      comp=Z,39nm,1.8s
SMF   Signal de Mont    52.05 305  eP     P      03 19 33.5 -0.7
SMF                                  pmax   pmax
      comp=Z,13nm,0.9s
SSF   Saint Saulge      52.18 306  eP     P      03 19 33.5 -1.7
SSF                                  pmax   pmax
      comp=Z,15nm,1.3s
MAJO  Matsushiro        52.23  68    P      P      03 19 35.1 -0.6
MAJO                                 IAmb   IAmb   03 19 36.8
      comp=Z,16nm,0.8s
MAJO  Matsushiro        52.23  68    P      P      03 19 36.3 +0.6
MAJO  Matsushiro        52.23  68ceP     P      03 19 35.9 +0.2
MAJO                                 pmax   pmax
      comp=Z,16nm,0.7s
MJAR  Matsushiro Arr    52.23  68    P      P      03 19 35.8 +0.1
      comp=Z,8.6nm,0.7s,baz=292,slow=9.1,SNR=26
      comp=Z,8.6nm,0.7s
AVF   Avril sur Loir    52.34 306  eP     P      03 19 35.6 -0.8
AVF                                  pmax   pmax
      comp=Z,11nm,0.9s
YSS   Yuzhno-Sakhali    52.64  54    P      P      03 19 38.2 -0.4
YSS                                  IAmb   IAmb   03 19 40.9
      comp=Z,21nm,0.7s
YSS   Yuzhno-Sakhali    52.64  54  eP     P      03 19 38.7 +0.2
YSS                                e             03 21 37.3
YSS                                eS     S      03 27 01.9 -2.0
YSS                                  pmax   pmax
      comp=Z,100nm,5.5s
YSS                                  pmax   pmax
      comp=Z,30nm,0.6s
YSS                                  MLR    MLR
      comp=Z,300nm,13.0s
YSS                                  MLR    MLR
      comp=N,200nm,15.0s
YSS                                  MLR    MLR
      comp=E,200nm,16.0s
MBAR  Mbarara           52.76 237    P      P      03 19 38.7 -1.3
MBAR  Mbarara           52.76 237    P      P      03 19 40.7 +0.8
MBAR  Mbarara           52.76 237    P      P      03 19 38.7 -1.3
MBAR                                 pmax   pmax
      comp=Z,15nm,1.0s
ASAJ  Asahikawa         53.23  58    P      P      03 19 43.3 +0.3
      comp=Z,6.0nm,0.6s,baz=295,slow=11,SNR=11
ASAJ                                 LR     LR     03 44 35.6
      comp=Z,111nm,18.9s,baz=352,slow=39
      comp=Z,6.0nm,0.6s
TCF   Toulx Ste Croi    53.23 305  eP     P      03 19 42.6 -0.4
TCF                                  pmax   pmax
      comp=Z,10.0nm,1.0s
CAF   Calviac           53.68 304  eP     P      03 19 45.4 -0.9
CAF                                  pmax   pmax
      comp=Z,7.0nm,0.9s
LDF   La Druitiere      54.20 309  eP     P      03 19 49.2 -0.8
LDF                                  pmax   pmax
      comp=Z,22nm,1.4s
EKA   Eskdalemuir Ar    54.56 317    P      P      03 19 50.3 -2.2
      comp=Z,6.8nm,1.0s,baz=80,slow=7.2,SNR=4.7
      comp=Z,6.8nm,1.0s
GRR   Gorron            54.73 308  eP     P      03 19 53.4 -0.4
GRR                                  pmax   pmax
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      comp=Z,72nm,1.8s
JMIC  Jan Mayen          54.76 337    LR    LR     03 43 28.5
      comp=Z,64nm,19.8s,baz=74,slow=36
MA2   Magadan            54.83  38c iP      P      03 19 55.3 +0.9
MA2                                   pmax  pmax
      comp=Z,16nm,0.9s
MA2   Magadan            54.83  38    P     P      03 19 55.7 +1.3
      comp=Z,17nm,1.1s
SEY   Seymchan           55.05  33ceP       P      03 19 57.2 +1.3
SEY                                   pmax  pmax
      comp=Z,25nm,0.9s
MPSI  Mapaga             55.68 118    P     P      03 20 02.1 +1.0
      comp=Z,15nm,1.3s
NOR   Nord               55.77 350  i P     P      03 19 58.2 -2.7
NOR                                   IAmb  IAmb   03 20 02.2
      comp=Z,27nm,1.6s
ETSF  Etsaut             56.07 302  eP      P      03 20 03.5 -0.2
ETSF                                  pmax  pmax
      comp=Z,10.0nm,0.6s
ROSF  Rostrenen          56.30 309  eP      P      03 20 04.1 -1.0
ROSF                                  pmax  pmax
      comp=Z,66nm,1.5s
DAG   Danmarks Havn      56.81 344  i P     P      03 20 07.0 -1.3
DAG                                   IAmb  IAmb   03 20 08.9
      comp=Z,8.6nm,0.5s
MRSI  Marisa             57.09 116    P     P      03 20 11.0 -0.1
TAM   Tamanrasset        59.20 278    P     P      03 20 25.3 -0.8
TAM   Tamanrasset        59.20 278    P     P      03 20 25.3 -0.8
TAM                                   pmax  pmax
      comp=Z,17nm,0.6s
SCO   Scoresbysund       59.23 337  i P     P      03 20 25.6 +0.2
KAPI  Kappang            59.29 122    LR    LR     03 51 24.1
      comp=Z,65nm,19.6s,baz=286,slow=42
BILL  Bilibino           59.52  26          P      03 20 28.6 +1.2
BILL                                  IAmb  IAmb   03 20 30.5
      comp=Z,27nm,1.1s
BILL  Bilibino           59.52  26c iP      P      03 20 29.1 +1.7
BILL                                  pmax  pmax
      comp=Z,23nm,0.9s
ESDC  Sonseca Array      59.58 299    P     P      03 20 28.3  0.0
ESDC  Sonseca Array      59.58 299    P     P      03 20 28.1 -0.2
      comp=Z,6.7nm,0.7s,baz=69,slow=7.2,SNR=40
      comp=Z,6.7nm,0.7s
PEA0B Petropavlovsk-     60.20  44⇓eP       P      03 20 31.7 -0.6
PETK  Petropavlovsk-     60.20  44    P     P      03 20 31.8 -0.5
      comp=Z,2.9nm,0.7s,baz=282,slow=7.3,SNR=6.3
PETK                                  LR    LR     03 48 19.6
      comp=Z,91nm,19.1s,baz=286,slow=38
      comp=Z,2.9nm,0.7s
BORG  Borgarnes          60.84 331    LR    LR     03 48 52.9
      comp=Z,68nm,18.6s,baz=98,slow=38
MVO   Moncorvo           61.19 302  eP      P      03 20 40.2 +0.8
MVO                                 i Amb          03 21 12.2
      comp=Z,42nm,1.9s
PGAV  Gavieira, Arco     61.75 303  eP      P      03 20 43.7 +0.6
MTE   Manteigas          61.85 301  eP      P      03 20 44.6 +0.8
MTE                                 i Amb          03 21 26.5
      comp=Z,43nm,2.0s
PVIS  Viseu              61.97 302  eP      P      03 20 45.3 +0.6
PCBR  Castelo Branco     62.02 301  eP      P      03 20 46.0 +1.1
PBAR  Barrancos          62.37 299  eP      P      03 20 47.9 +0.7
PBAR                                i Amb          03 21 26.1
      comp=Z,32nm,1.4s
COI   Coimbra            62.53 301  eP      P      03 20 48.9 +0.6
PSARD Sardoal            62.60 301  eP      P      03 20 49.7 +0.9
PSARD                               i Amb          03 21 10.6
      comp=Z,55nm,1.8s
MDT   Midelt             62.80 292    LR    LR     03 54 12.4
      comp=Z,29nm,18.5s,baz=71,slow=42
EVO   Evora              62.93 300  eP      P      03 20 51.6 +0.7
PBEJ  Beja               63.03 299  eP      P      03 20 52.4 +0.8
NEEM  North Greenlan     63.04 348  i P     P      03 20 50.6 -0.9
NEEM                                  IAmb  IAmb   03 20 52.6
      comp=Z,22nm,0.7s
MOE   Montemor           63.17 300  eP      P      03 20 53.4 +0.8
MOE                                 i Amb          03 20 58.6
      comp=Z,56nm,1.5s
SUMG  Summit             63.18 342  i P     P      03 20 53.0 +0.5
SUMG                                  IAmb  IAmb   03 21 06.4
      comp=Z,32nm,1.3s
LSZ   Lusaka             65.36 228          P      03 21 07.0 -0.1
LSZ                                   IAmb  IAmb   03 21 08.2
      comp=Z,9.7nm,0.8s
LSZ   Lusaka             65.36 228    P     P      03 21 07.5 +0.3
LSZ   Lusaka             65.36 228    P     P      03 21 07.1 -0.1
LSZ                                   pmax  pmax
      comp=Z,10.0nm,0.8s
ICESG Greenland Ices     65.37 339  i P     P      03 21 05.8 -1.1
ICESG                                 IAmb  IAmb   03 21 10.7
      comp=Z,18nm,1.2s
TORD  Torodi Ar. Bea     67.18 270          P      03 21 18.3 -0.6
TORD                                  IAmb  IAmb   03 21 19.3
      comp=Z,9.5nm,0.8s
TORD  Torodi Ar. Bea     67.18 270    P     P      03 21 18.0 -0.9
      comp=Z,13nm,0.6s,baz=56,slow=5.1,SNR=16
      comp=Z,13nm,0.6s
A19K  Wainwright         68.39  17    P     P      03 21 26.6 +1.0
      baz=314
C16K  Lisburne Hills     68.59  20          P      03 21 27.4 +0.5
C16K  Lisburne Hills     68.59  20    P     P      03 21 27.5 +0.6
      baz=311,SNR=9.7
A21K  Barrow             68.61  15    P     P      03 21 27.8 +0.9
      baz=318
B18K  Kokolik River      68.80  18    P     P      03 21 29.7 +1.5
      baz=314
C17K  DeLong Mountai     69.05  19    P     P      03 21 31.0 +1.2
      baz=313,SNR=8.8
A22K  Sinclair Lake      69.20  15    P     P      03 21 31.9 +1.2
      baz=319
GAMB  Gambell            69.45  25    P     P      03 21 33.1 +0.8
      baz=307
C18K  Utukok River       69.46  18          P      03 21 32.9 +0.5
C18K                                  IAmb  IAmb   03 21 34.4
      comp=Z,21nm,0.9s
C18K  Utukok River       69.46  18    P     P      03 21 33.2 +0.8
      baz=315,SNR=7.5
B20K  Meade River        69.46  16          P      03 21 31.8 -0.5
B20K  Meade River        69.46  16    P     P      03 21 33.0 +0.7
      baz=318,SNR=8.7
C19K  Lookout Ridge      69.54  18    P     P      03 21 34.3 +1.4
      baz=316,SNR=8.1
TNA   Tin City           69.59  23    P     P      03 21 34.5 +1.3
      baz=310
D17K  Noatak River       69.61  20    P     P      03 21 34.4 +1.1
      baz=313,SNR=23
SFJD  Kangerlussuaq      69.90 340    LR    LR     03 53 00.4
      comp=Z,68nm,18.2s,baz=62,slow=37
B22K  Teshekpuk Lake     70.04  15          P      03 21 36.3 +0.4
B22K  Teshekpuk Lake     70.04  15    P     P      03 21 36.9 +1.0
      baz=321
F14K  Arctic Creek       70.16  22    P     P      03 21 38.4 +1.8
      baz=311,SNR=7.2
B21K  Ikpikpuk River     70.34  16          P      03 21 37.8 +0.1
B21K  Ikpikpuk River     70.34  16    P     P      03 21 38.7 +1.1
      baz=320,SNR=12
D19K  Kuna River         70.35  18          P      03 21 38.5 +0.7
D19K  Kuna River         70.35  18    P     P      03 21 38.6 +0.7
      baz=317,SNR=27
BROLN Tlhalogang         70.37 225  i P     P      03 21 38.5 -0.2
E17K  Hotham Inlet       70.39  20    P     P      03 21 38.9 +0.8
      baz=314
E18K  Tukpahlearik C     70.49  19          P      03 21 39.1 +0.4
E18K  Tukpahlearik C     70.49  19    P     P      03 21 39.5 +0.8
      baz=315,SNR=17
F15K  North Star Dit     70.52  22    P     P      03 21 40.0 +1.1
F15K  North Star Dit     70.52  22    P     P      03 21 40.1 +1.2
      baz=312,SNR=14
RES   Resolute Bay       70.53 357    LR    LR     03 55 33.5
      comp=Z,38nm,18.4s,baz=40,slow=38
D20K  Etivluk River      70.56  17    P     P      03 21 39.8 +0.6
D20K  Etivluk River      70.56  17    P     P      03 21 40.1 +1.0
      baz=318,SNR=18
SOOWA Sowa               70.61 226  i P     P      03 21 40.3 +0.2
C21K  Knifeblade Rid     70.66  16    P     P      03 21 40.9 +1.2
      baz=320,SNR=11
POIN  Pond Inlet         70.94 351    P     P      03 21 41.5 +0.2
F17K  Baldwin Pennin     71.01  20          P      03 21 42.3 +0.5
F17K  Baldwin Pennin     71.01  20    P     P      03 21 43.2 +1.4
      baz=315,SNR=7.3
E20K  Nigu River         71.01  17    P     P      03 21 42.8 +0.9
      baz=319,SNR=25
C23K  Itkillik River     71.03  15          P      03 21 42.8 +0.8
C23K  Itkillik River     71.03  15    P     P      03 21 43.3 +1.3
      baz=323,SNR=18
ANM   Nome               71.07  23          P      03 21 43.2 +1.0
ANM   Nome               71.07  23    P     P      03 21 43.2 +1.0
ANM                                   pmax  pmax
      comp=Z,29nm,1.0s
ANM   Nome               71.07  23    P     P      03 21 43.9 +1.6
      baz=312,SNR=6.9
G15K  Niukluk            71.19  22    P     P      03 21 44.3 +1.3
      baz=313,SNR=7.7
F18K  Selawik            71.34  20    P     P      03 21 44.7 +0.9
      baz=316,SNR=11
D22K  Ayikyak River      71.35  16          P      03 21 44.1 +0.2
D22K                                  IAmb  IAmb   03 21 46.0
      comp=Z,24nm,0.8s
D22K  Ayikyak River      71.35  16    P     P      03 21 45.0 +1.1
      baz=322,SNR=12
E19K  Redstone River     71.35  18          P      03 21 44.4 +0.5
E19K                                  IAmb  IAmb   03 21 45.6
      comp=Z,14nm,0.9s
E19K  Redstone River     71.35  18    P     P      03 21 44.5 +0.5
      baz=318,SNR=14
E21K  Killik River       71.40  17    P     P      03 21 44.1 -0.1
E21K  Killik River       71.40  17    P     P      03 21 44.8 +0.6
      baz=321
G16K  Koyuk River        71.43  21          P      03 21 44.7 +0.3
G16K                                  IAmb  IAmb   03 21 47.0
      comp=Z,21nm,0.9s
G16K  Koyuk River        71.43  21    P     P      03 21 45.8 +1.4
      baz=314,SNR=10.0
MREMI Moremi             71.45 224  i P     P      03 21 44.9 -0.3
C24K  Franklin Bluff     71.52  14    P     P      03 21 45.2 +0.3
C24K  Franklin Bluff     71.52  14    P     P      03 21 46.1 +1.2
      baz=325,SNR=13
F19K  Shaleruckik Mo     71.67  19          P      03 21 45.5 -0.3
F19K                                  IAmb  IAmb   03 21 47.0
      comp=Z,30nm,1.6s
F19K  Shaleruckik Mo     71.67  19    P     P      03 21 46.0 +0.2
      baz=318,SNR=7.4
D23K  Nanushuk River     71.72  15          P      03 21 46.4 +0.2
D23K                                  IAmb  IAmb   03 21 48.2
      comp=Z,25nm,0.8s
D23K  Nanushuk River     71.72  15    P     P      03 21 47.1 +1.0
      baz=323,SNR=14
G17K  Kiwalik Mounta     71.85  21    P     P      03 21 48.1 +1.1
      baz=316,SNR=19
D24K  Happy Valley       71.96  14          P      03 21 47.8 +0.3
D24K                                  IAmb  IAmb   03 21 49.4
      comp=Z,17nm,0.8s
D24K  Happy Valley       71.96  14    P     P      03 21 48.3 +0.8
      baz=325,SNR=8.4
H16K  Elim               72.00  22    P     P      03 21 49.1 +1.3
      baz=315,SNR=8.6
F20K  Avaraart Lake      72.04  18    P     P      03 21 47.2 -0.8
F20K  Avaraart Lake      72.04  18    P     P      03 21 48.5 +0.5
      baz=320,SNR=14
C26K  Camden Bay         72.08  13    P     P      03 21 49.4 +1.2
      baz=328
G18K  Tagagawik          72.13  20          P      03 21 48.4 -0.3
G18K  Tagagawik          72.13  20    P     P      03 21 49.2 +0.5
      baz=317,SNR=5.5
E22K  Anaktuvuk Pass     72.14  16          P      03 21 48.9 +0.2
E22K                                  IAmb  IAmb   03 21 50.4
      comp=Z,24nm,0.9s
E22K  Anaktuvuk Pass     72.14  16    P     P      03 21 49.5 +0.8
      baz=322,SNR=18
TOLK  Toolik Lake Re     72.22  15    P     P      03 21 49.2  0.0
TOLK  Toolik Lake Re     72.22  15    P     P      03 21 50.1 +0.9
      baz=324,SNR=24
D25K  Kavik River        72.31  14    P     P      03 21 49.9 +0.2
D25K  Kavik River        72.31  14    P     P      03 21 50.8 +1.1
      baz=327,SNR=24
G19K  Purcell Mounta     72.38  19    P     P      03 21 49.9 -0.2
G19K  Purcell Mounta     72.38  19    P     P      03 21 50.9 +0.8
      baz=319,SNR=31
F21K  Alatna River       72.47  17          P      03 21 50.8 +0.2
F21K                                  IAmb  IAmb   03 21 53.5
      comp=Z,24nm,0.8s
F21K  Alatna River       72.47  17    P     P      03 21 51.5 +0.9
      baz=321,SNR=42
H17K  Granite Mounta     72.48  21          P      03 21 51.0 +0.3
H17K                                  IAmb  IAmb   03 21 53.0
      comp=Z,23nm,0.9s
H17K  Granite Mounta     72.48  21    P     P      03 21 52.0 +1.3
      baz=316,SNR=12
C27K  Jago River         72.55  13    P     P      03 21 52.0 +0.9
C27K                                  IAmb  IAmb   03 21 53.6
      comp=Z,24nm,0.8s
C27K  Jago River         72.55  13    P     P      03 21 52.6 +1.5
      baz=329,SNR=24
F22K  John River         72.55  17    P     P      03 21 52.3 +1.1
      baz=322
E23K  Chandalar          72.69  15          P      03 21 52.6 +0.5
E23K                                  IAmb  IAmb   03 21 53.9
      comp=Z,20nm,0.8s
E23K  Chandalar          72.69  15    P     P      03 21 53.0 +0.9
      baz=324,SNR=28
H18K  Honhosa River      72.77  20    P     P      03 21 53.2 +0.8
H18K  Honhosa River      72.77  20    P     P      03 21 53.4 +1.0
      baz=318,SNR=11
A36M  Sachs Harbour      72.79   6          P      03 21 53.1 +0.7
A36M                                  IAmb  IAmb   03 21 54.9
      comp=Z,17nm,0.8s
A36M  Sachs Harbour      72.79   6    P     P      03 21 53.1 +0.7
      baz=344,SNR=11
J14K  Nanvaranak Lak     72.91  24          P      03 21 54.0 +0.8
J14K  Nanvaranak Lak     72.91  24    P     P      03 21 55.0 +1.8
      baz=314,SNR=11
E24K  Your Creek         72.92  15    P     P      03 21 54.0 +0.6
E24K                                  IAmb  IAmb   03 21 55.3
      comp=Z,22nm,0.8s
E24K  Your Creek         72.92  15    P     P      03 21 54.4 +1.1
      baz=325,SNR=24
I17K  Unalakleet         73.01  22    IAmb  IAmb   03 21 56.6
      comp=Z,21nm,0.9s
I17K  Unalakleet         73.01  22    P     P      03 21 55.3 +1.4
      baz=316,SNR=6.2
H19K  Roundabout Mou     73.01  19    IAmb  IAmb   03 21 55.9
      comp=Z,22nm,0.8s
H19K  Roundabout Mou     73.01  19    P     P      03 21 54.9 +1.1
      baz=319,SNR=25
G21K  Allakaket          73.02  18    IAmb  IAmb   03 21 55.1
      comp=Z,21nm,0.8s
G21K  Allakaket          73.02  18    P     P      03 21 54.1 +0.2
      baz=321,SNR=25
KNRA  Kununurra          73.05 123    P     P      03 21 54.5 -0.3
KNRA                                  IAmb  IAmb   03 21 59.7
      comp=Z,33nm,1.4s
KNRA  Kununurra          73.05 123    P     P      03 21 55.1 +0.4
      comp=Z,28nm,1.6s
K13K  Kusilvak Mount     73.10  25    IAmb  IAmb   03 21 57.3
      comp=Z,20nm,0.8s
K13K  Kusilvak Mount     73.10  25    P     P      03 21 55.8 +1.3
      baz=313,SNR=15
G22K  Bettles            73.18  17    P     P      03 21 55.5 +0.7
      baz=323,SNR=38
COLD  Coldfoot           73.24  16    P     P      03 21 56.1 +1.0
      baz=324,SNR=34
D27M  Malcolm River      73.36  12    P     P      03 21 57.3 +1.3
      baz=331,SNR=10
IMAR  Indian Mountai     73.37  18    P     P      03 21 56.5 +0.4
H20K  Anotleneega Mo     73.46  19    P     P      03 21 57.3 +0.8
      baz=320,SNR=54
J16K  Anvik River        73.47  22    P     P      03 21 58.2 +1.6
      baz=316,SNR=26
E25K  Arctic Village     73.48  14    IAmb  IAmb   03 21 58.4
      comp=Z,15nm,0.8s
E25K  Arctic Village     73.48  14    P     P      03 21 57.6 +0.9
      baz=328,SNR=21
GCSA  Galena City Sc     73.49  20    P     P      03 21 57.9 +1.3
      baz=319
F24K  Squaw Lake         73.51  15    P     P      03 21 57.7 +0.9
      baz=326,SNR=12
M11K  Mekoryuk           73.62  26    P     P      03 21 58.9 +1.4
      baz=313
D28M  Stokes Point       73.66  11    P     P      03 21 59.0 +1.4
      baz=333
G23K  Bananza Creek      73.70  16    IAmb  IAmb   03 21 59.9
      comp=Z,20nm,0.9s
G23K  Bananza Creek      73.70  16    P     P      03 21 58.8 +0.8
      baz=324,SNR=22
J17K  VABM Dome          73.86  22    IAmb  IAmb   03 22 01.2
      comp=Z,14nm,0.8s
J17K  VABM Dome          73.86  22    P     P      03 22 00.2 +1.3
      baz=318,SNR=12
H21K  Melozitna Rive     73.87  18    IAmb  IAmb   03 22 00.9
      comp=Z,27nm,1.0s
H21K  Melozitna Rive     73.87  18    P     P      03 21 59.8 +0.8
      baz=322,SNR=29
K15K  Wolf Creek Mou     73.89  23    IAmb  IAmb   03 22 02.4
      comp=Z,16nm,0.8s
K15K  Wolf Creek Mou     73.89  23    P     P      03 22 01.2 +2.1
      baz=316,SNR=9.3
F25K  Christian Rive     73.92  14    IAmb  IAmb   03 22 01.7
      comp=Z,22nm,1.0s
F25K  Christian Rive     73.92  14    P     P      03 22 00.7 +1.4
      baz=328,SNR=31
H22K  Ishtalitna Cre     74.04  17    P     P      03 22 00.9 +1.0
      baz=323,SNR=11
I20K  Naaghedeneel       74.11  19    P     P      03 22 01.7 +1.4
      baz=321
F26K  Sheenjek River     74.13  14    P     P      03 22 01.5 +1.0
      baz=329,SNR=19
SPIA  Saint Paul Isl     74.17  30    P     P      03 22 03.1 +2.4
      baz=310
E28M  Babbage River      74.17  12    IAmb  IAmb   03 22 03.0
      comp=Z,15nm,0.9s
E28M  Babbage River      74.17  12    P     P      03 22 01.9 +1.3
      baz=333,SNR=21
E27K  Coleen River       74.18  13    IAmb  IAmb   03 22 02.9
      comp=Z,22nm,0.9s
E27K  Coleen River       74.18  13    P     P      03 22 01.9 +1.1
      baz=331,SNR=30
L14K  Kuka Creek         74.19  24    P     P      03 22 02.8 +2.0
      baz=315
GRTLG Ghanzi             74.26 229  i P     P      03 22 03.3 +1.4
BMAR  Burnt Mountain     74.27  14          P      03 22 02.3 +1.0
G24K  Hadweenzic Riv     74.28  15    P     P      03 22 02.6 +1.3
      baz=326,SNR=30
L15K  Ungalak Mounta     74.35  24    P     P      03 22 03.5 +1.7
      baz=316,SNR=9.0
LBTB  Lobatse            74.41 224    LR    LR     03 56 01.6
      comp=Z,31nm,18.6s,baz=144,slow=37
J19K  Poorman            74.42  20    P     P      03 22 03.5 +1.4
      baz=320,SNR=62
I21K  Tanana             74.46  18    IAmb  IAmb   03 22 04.4
      comp=Z,20nm,0.8s
I21K  Tanana             74.46  18    P     P      03 22 03.5 +1.2
      baz=323
ILON  Igloolik, Nuna     74.51 351          P      03 22 02.4 -0.1
J18K  Innoko River       74.51  21    IAmb  IAmb   03 22 04.9
      comp=Z,24nm,0.8s
J18K  Innoko River       74.51  21    P     P      03 22 04.0 +1.2
      baz=319,SNR=37
G25K  Bearman Lake       74.53  15    P     P      03 22 04.4 +1.7
      baz=328,SNR=14
H23K  Yukon River        74.54  17    P     P      03 22 04.4 +1.6
      baz=325,SNR=43
K17K  Iditarod           74.60  22    P     P      03 22 04.9 +1.7
      baz=318,SNR=30
M13K  Dall Lake          74.62  25    IAmb  IAmb   03 22 07.2
      comp=Z,27nm,0.8s
M13K  Dall Lake          74.62  25    P     P      03 22 05.8 +2.4
      baz=315,SNR=5.0
E29M  Blow River         74.64  11    IAmb  IAmb   03 22 05.7
      comp=Z,17nm,0.8s
E29M  Blow River         74.64  11    P     P      03 22 04.6 +1.2
      baz=334,SNR=28
J20K  Nowinta River      74.69  19    P     P      03 22 05.1 +1.4
      baz=321,SNR=53
KGCAE Kacgae             74.76 228  i P     P      03 22 05.5 +0.7
P08K  Saint George I     74.83  31    P     P      03 22 06.4 +1.7
      baz=311
G26K  Porcupine Rive     74.85  14    P     P      03 22 05.9 +1.3
      baz=329,SNR=7.3
M14K  Bethel             74.86  25    P     P      03 22 06.8 +2.1
      baz=316,SNR=13
MLY   Manley             74.89  18          P      03 22 05.6 +0.6
MLY                                   IAmb  IAmb   03 22 06.8
      comp=Z,20nm,0.8s
MLY   Manley             74.89  18    P     P      03 22 05.9 +1.0
      baz=324,SNR=17
H24K  Noodor Dome        74.91  16    IAmb  IAmb   03 22 07.3
      comp=Z,21nm,0.8s
H24K  Noodor Dome        74.91  16    P     P      03 22 06.3 +1.3
      baz=326,SNR=36
L16K  Owhat River        74.98  23    P     P      03 22 07.6 +2.1
      baz=318,SNR=36
SKOMA Sekoma             74.99 225  i P     P      03 22 05.7 -0.4
F28M  Old Crow           75.00  12    P     P      03 22 06.5 +1.0
      baz=332,SNR=13
H25L  Birch Creek        75.01  15    P     P      03 22 07.1 +1.6
      baz=328,SNR=6.2
L17K  Donlin             75.04  22    P     P      03 22 07.5 +1.7
      baz=318,SNR=17
I23K  Minto, Yukon-K     75.14  17    IAmb  IAmb   03 22 08.4
      comp=Z,27nm,0.9s
I23K  Minto, Yukon-K     75.14  17    P     P      03 22 07.2 +1.0
      baz=325,SNR=23
M15K  Kasigluk River     75.33  24    P     P      03 22 09.4 +1.9
      baz=317,SNR=17
K20K  Telida             75.35  20    P     P      03 22 09.0 +1.4
      baz=322,SNR=41
INK   Inuvik             75.37  10    IAmb  IAmb   03 22 09.4
      comp=Z,23nm,0.8s
INK   Inuvik             75.37  10    P     P      03 22 08.1 +0.6
      baz=338,SNR=38
G27K  Doyon Strip        75.39  13    IAmb  IAmb   03 22 10.0
      comp=Z,17nm,0.8s
G27K  Doyon Strip        75.39  13    P     P      03 22 08.9 +1.1
      baz=331,SNR=30
CHUM  Lake Minchumin     75.41  19    P     P      03 22 09.1 +1.2
      baz=323
C36M  Paulatuk           75.46   6    P     P      03 22 08.1 +0.1
      baz=346,SNR=21
L18K  Granite Mounta     75.47  22    IAmb  IAmb   03 22 10.7
      comp=Z,15nm,0.8s
L18K  Granite Mounta     75.47  22    P     P      03 22 09.7 +1.4
      baz=320,SNR=16
MORW  Morawa             75.47 142    P     P      03 22 08.2 -0.4
      comp=Z,33nm,3.0s
N14K  Kuskokwak Cree     75.55  25    IAmb  IAmb   03 22 11.8
      comp=Z,24nm,0.8s
N14K  Kuskokwak Cree     75.55  25    P     P      03 22 10.7 +2.0
      baz=316
BPAW  Bear Paw Mtn.      75.59  18    IAmb  IAmb   03 22 10.4
      comp=Z,26nm,0.8s
BPAW  Bear Paw Mtn.      75.59  18    P     P      03 22 09.6 +0.7
      baz=324,SNR=34
POKR  Poker Plat Res     75.62  16    P     P      03 22 10.3 +1.2
      baz=327,SNR=24
M16K  Timber Creek       75.66  23    IAmb  IAmb   03 22 12.6
      comp=Z,26nm,0.8s
M16K  Timber Creek       75.66  23    P     P      03 22 11.3 +1.9
      baz=318,SNR=16
NEA2  Nenana             75.67  17    P     P      03 22 10.0 +0.7
      baz=325,SNR=41
F30M  Barrier River      75.68  11    IAmb  IAmb   03 22 11.3
      comp=Z,19nm,0.8s
F30M  Barrier River      75.68  11    P     P      03 22 10.3 +0.9
      baz=336,SNR=22
PRP   Porcupine Dome     75.71  15          P      03 22 10.7 +0.9
PRP   Porcupine Dome     75.71  15    P     P      03 22 11.0 +1.2
      baz=328,SNR=17
COLA  College            75.72  17    P     P      03 22 10.2 +0.5
COLA  College            75.72  17c iP      P      03 22 10.1 +0.5
COLA                                  pmax  pmax
      comp=Z,60nm,0.9s
COLA  College            75.72  17    P     P      03 22 10.4 +0.8
      baz=326
CAST  Castle Rocks       75.85  19    P     P      03 22 11.5 +1.1
      baz=323
M17K  Holitna River      75.86  22    P     P      03 22 12.7 +2.2
      baz=319,SNR=25
H27K  Steamboat Moun     75.92  14    IAmb  IAmb   03 22 13.0
      comp=Z,20nm,0.8s
H27K  Steamboat Moun     75.92  14    P     P      03 22 11.9 +1.1
      baz=331,SNR=25
N15K  Kwethluk River     75.92  24    IAmb  IAmb   03 22 14.3
      comp=Z,23nm,0.8s
N15K  Kwethluk River     75.92  24    P     P      03 22 13.2 +2.3
      baz=317,SNR=11
G29M  Pine Creek         75.95  12    P     P      03 22 12.0 +1.0
      baz=334,SNR=9.5
WRH   Wood River Hil     76.00  17    IAmb  IAmb   03 22 12.2
      comp=Z,14nm,0.8s
ILAR  Eielson Array      76.04  16    P     P      03 22 11.5 +0.1
ILAR  Eielson Array      76.04  16    P     P      03 22 11.3 -0.2
      comp=Z,14nm,1.0s,baz=324,slow=6.0,SNR=118
ILAR                                  LR    LR     03 58 28.6
      comp=Z,38nm,18.2s,baz=360,slow=38
      comp=Z,14nm,1.0s
L19K  White Mountain     76.05  21    IAmb  IAmb   03 22 14.0
      comp=Z,16nm,1.0s
L19K  White Mountain     76.05  21    P     P      03 22 12.9 +1.3
      baz=321,SNR=17
L20K  Farewell, AK       76.10  20    P     P      03 22 13.0 +1.1
      baz=322,SNR=19
KOOLE Kule               76.10 229  i P     P      03 22 13.3 +0.8
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DBIC	Dimbokro	76.10	268	P	P	03 22 12.0	-0.6
	comp=Z,11nm,0.8s,baz=57,slow=8.3,SNR=16						
DBIC				LR	LR	03 58 35.1	
	comp=Z,125nm,19.7s,baz=50,slow=38						
	comp=Z,11nm,0.8s						
N16K	Nishlik Lake	76.14	24	P	P	03 22 14.3	+2.1
	baz=318,SNR=19						
F31M	Tsiigehtchic	76.15	10	IAmb	IAmb	03 22 13.7	
	comp=Z,24nm,1.0s						
F31M	Tsiigehtchic	76.15	10	P	P	03 22 12.7	+0.8
	baz=338						
G30M	tAoh Zraii Nji	76.19	11	IAmb	IAmb	03 22 14.4	
	comp=Z,19nm,0.8s						
G30M	tAoh Zraii Nji	76.19	11	P	P	03 22 12.8	+0.4
	baz=336,SNR=21						
O14K	Tigyukauivet M	76.19	25	P	P	03 22 13.1	+0.7
	baz=317						
PPLA	Purkeypile	76.24	19	IAmb	IAmb	03 22 14.3	
	comp=Z,11nm,0.7s						
PPLA	Purkeypile	76.24	19	P	P	03 22 13.4	+0.6
	baz=323						
M18K	Stony River	76.30	22	P	P	03 22 14.4	+1.4
	baz=320,SNR=14						
TRF	Thorofare Moun	76.30	18	IAmb	IAmb	03 22 19.9	
	comp=Z,11nm,0.8s						
TRF	Thorofare Moun	76.30	18	P	P	03 22 13.1	-0.1
	baz=325,SNR=9.1						
HDA	Harding Lake	76.33	17	IAmb	IAmb	03 22 14.1	
	comp=Z,12nm,0.8s						
HDA	Harding Lake	76.33	17	P	P	03 22 12.6	-0.6
	baz=327,SNR=12						
I26K	Coal Creek Min	76.40	15	IAmb	IAmb	03 22 15.4	
	comp=Z,16nm,0.8s						
I26K	Coal Creek Min	76.40	15	P	P	03 22 14.6	+1.0
	baz=330,SNR=19						
M19K	Big River Lodg	76.40	21	P	P	03 22 14.6	+1.0
	baz=322						
MCK	McKinley	76.41	18		P	03 22 14.3	+0.6
MCK				IAmb	IAmb	03 22 15.0	
	comp=Z,15nm,0.8s						
MCK	McKinley	76.41	18	P	P	03 22 14.3	+0.6
MCK				pmax	pmax		
	comp=Z,15nm,0.8s						
MCK	McKinley	76.41	18	P	P	03 22 14.1	+0.4
	baz=326,SNR=6.7						
I27K	Kandik River	76.45	14	P	P	03 22 14.9	+1.0
	baz=331,SNR=22						
H29M	Whitestone	76.52	12	P	P	03 22 15.1	+1.0
	baz=334,SNR=34						
J25K	Salcha River,	76.52	16	IAmb	IAmb	03 22 15.3	
	comp=Z,14nm,0.8s						
J25K	Salcha River,	76.52	16	P	P	03 22 14.4	+0.1
	baz=328,SNR=20						
G31M	Satah River	76.55	11	IAmb	IAmb	03 22 15.7	
	comp=Z,16nm,0.8s						
G31M	Satah River	76.55	11	P	P	03 22 14.6	+0.3
	baz=337,SNR=19						
N17K	Nushagak Hills	76.61	23	IAmb	IAmb	03 22 18.1	
	comp=Z,23nm,0.8s						
N17K	Nushagak Hills	76.61	23	P	P	03 22 17.0	+2.3
	baz=320,SNR=18						
EPYK	Eagle Plains	76.67	12	IAmb	IAmb	03 22 16.3	
	comp=Z,20nm,1.2s						
EPYK	Eagle Plains	76.67	12	P	P	03 22 15.4	+0.4
	baz=335,SNR=10						
RND	Reindeer	76.70	18	IAmb	IAmb	03 22 16.1	
	comp=Z,17nm,0.7s						
O15K	Ungalikthiuk R	76.75	25	IAmb	IAmb	03 22 18.4	
	comp=Z,20nm,0.9s						
O15K	Ungalikthiuk R	76.75	25	P	P	03 22 17.2	+1.6
	baz=318,SNR=6.3						
M20K	Styx River	76.79	20	P	P	03 22 16.5	+0.7
	baz=322						
N18K	Kilae Creek	76.90	22	IAmb	IAmb	03 22 19.3	
	comp=Z,12nm,0.8s						
N18K	Kilae Creek	76.90	22	P	P	03 22 18.1	+1.7
	baz=320,SNR=11						
I28M	Miner Creek	76.92	13	IAmb	IAmb	03 22 18.0	
	comp=Z,21nm,0.7s						
I28M	Miner Creek	76.92	13	P	P	03 22 16.9	+0.3
	baz=333,SNR=37						
J26L	Joseph Creek	77.02	15	IAmb	IAmb	03 22 18.6	
	comp=Z,24nm,0.8s						
J26L	Joseph Creek	77.02	15	P	P	03 22 17.6	+0.5
	baz=330,SNR=31						
O16K	Kokwok River B	77.02	24	IAmb	IAmb	03 22 20.3	
	comp=Z,25nm,0.9s						
O16K	Kokwok River B	77.02	24	P	P	03 22 19.1	+2.0
	baz=319,SNR=14						
K24K	Donnelly Dome	77.12	16	P	P	03 22 17.8	+0.2
	baz=328,SNR=20						
FRB	Frobisher Bay	77.15	343	LR	LR	03 59 07.9	
	comp=Z,52nm,20.5s,baz=40,slow=38						
CUT	Chulitna	77.16	19	P	P	03 22 17.7	-0.1
	baz=325						
SKT	Skwentna	77.16	20	P	P	03 22 18.1	+0.2
	baz=324,SNR=20						
O17K	Koliganek Bris	77.22	23	P	P	03 22 20.0	+1.9
	baz=320,SNR=7.1						
N19K	Bonanza Creek	77.23	22	IAmb	IAmb	03 22 22.9	
	comp=Z,20nm,0.8s						
N19K	Bonanza Creek	77.23	22	P	P	03 22 19.8	+1.4
	baz=322,SNR=14						
WAT1	Susitna Watana	77.26	18	P	P	03 22 18.0	-0.4
	baz=326						
I29M	Ogilvie Camp,	77.30	13	IAmb	IAmb	03 22 19.8	
	comp=Z,16nm,0.8s						
I29M	Ogilvie Camp,	77.30	13	P	P	03 22 18.8	+0.2
	baz=334,SNR=21						
DHY	Denali Highway	77.35	18	P	P	03 22 19.4	+0.3
	baz=327,SNR=8.7						
SCRK	Sand Creek	77.38	16	P	P	03 22 19.8	+0.6
	baz=330,SNR=14						
RIDG	Independent Ri	77.39	16	IAmb	IAmb	03 22 20.2	
	comp=Z,34nm,1.3s						
RIDG	Independent Ri	77.39	16	P	P	03 22 19.3	+0.1
	baz=329,SNR=8.8						
BOSA	Boshof	77.40	222	P	P	03 22 19.7	0.0
	comp=Z,13nm,0.8s,baz=39,slow=4.7,SNR=25						
	comp=Z,13nm,0.8s						
P16K	Nushagak River	77.48	24	P	P	03 22 20.5	+0.8
	baz=319						
NIKH	Nikolski High	77.55	33	P	P	03 22 20.5	+0.3
	baz=312						
H31M	Peel River	77.57	11	IAmb	IAmb	03 22 21.5	
	comp=Z,16nm,0.8s						
H31M	Peel River	77.57	11	P	P	03 22 20.4	+0.3
	baz=337,SNR=20						
SPCR	Spurr Chakacha	77.60	21	P	P	03 22 20.6	+0.2
	baz=323						
DOT	Dot Lake	77.64	16	IAmb	IAmb	03 22 21.9	
	comp=Z,12nm,0.8s						
WAT6	Susitna Watana	77.67	18	P	P	03 22 20.9	-0.1
	baz=327,SNR=10						
M22K	Willow	77.73	19	P	P	03 22 21.1	+0.1
	baz=325						
K27K	Chicken	77.75	15	IAmb	IAmb	03 22 23.3	
	comp=Z,19nm,0.9s						
K27K	Chicken	77.75	15	P	P	03 22 22.1	+1.0
	baz=331						
O18K	Koktuh Hills	77.76	23	P	P	03 22 23.0	+1.8
	baz=321,SNR=44						
O19K	Port Alsworth	77.77	22	IAmb	IAmb	03 22 23.7	
	comp=Z,29nm,1.2s						
O19K	Port Alsworth	77.77	22	P	P	03 22 22.2	+0.9
	baz=322						
I30M	Mount Dempster	77.77	12	IAmb	IAmb	03 22 22.8	
	comp=Z,16nm,0.8s						
I30M	Mount Dempster	77.77	12	P	P	03 22 21.9	+0.5
	baz=336,SNR=26						
SUA	Susitna One	77.80	20	IAmb	IAmb	03 22 22.8	
	comp=Z,22nm,1.0s						
SUA	Susitna One	77.80	20	P	P	03 22 21.8	+0.2
	baz=324						
P17K	Kvichak River	77.88	24	P	P	03 22 23.7	+1.9
	baz=320,SNR=5.7						
PAX	Paxson	77.90	17	IAmb	IAmb	03 22 23.5	
	comp=Z,21nm,0.8s						
PAX	Paxson	77.90	17	P	P	03 22 22.5	+0.4
	baz=328,SNR=16						
GHO	Glory Hole Cre	78.04	19	IAmb	IAmb	03 22 24.4	
	comp=Z,23nm,0.8s						
P18K	Big Mountain,	78.11	23	P	P	03 22 24.5	+1.2
	baz=321,SNR=16						
PMR	Palmer	78.14	19	IAmb	IAmb	03 22 24.5	
	comp=Z,16nm,0.9s						
PMR	Palmer	78.14	19	P	P	03 22 23.6	+0.4
	baz=326,SNR=5.8						
J29N	Klondike Camp	78.14	13	IAmb	IAmb	03 22 25.4	
	comp=Z,16nm,0.8s						
J29N	Klondike Camp	78.14	13	P	P	03 22 24.1	+0.7
	baz=334						
SML	Sawmill	78.17	19	P	P	03 22 24.0	+0.4
	baz=326,SNR=22						
Q16K	King Salmon	78.20	24	P	P	03 22 25.0	+1.3
	baz=320						
DAWY	Dawson	78.26	14	IAmb	IAmb	03 22 25.5	
	comp=Z,20nm,0.8s						
DAWY	Dawson	78.26	14	P	P	03 22 24.6	+0.6
	baz=333,SNR=20						
M23K	Glacier View	78.34	18	P	P	03 22 24.7	+0.3
	baz=327,SNR=16						
L26K	Log Cabin Wild	78.35	16	P	P	03 22 24.9	+0.4
	baz=330						
J30M	Hart River	78.37	12	P	P	03 22 25.3	+0.6
	baz=336,SNR=14						
O20K	Slope Mountain	78.38	21	P	P	03 22 25.2	+0.5
	baz=323						
RC01	Rabbit Creek A	78.39	20	P	P	03 22 25.0	+0.3
	baz=325						
SCM	Sheep Creek Mo	78.41	18	P	P	03 22 25.1	+0.2
	baz=327,SNR=9.0						
KNK	Knik Glacier	78.47	19	P	P	03 22 25.6	+0.4
	baz=326,SNR=6.6						
HARP	HAARP	78.47	17	P	P	03 22 26.6	+1.4
	baz=329,SNR=13						
M24K	Tolsona, Glenn	78.47	18	P	P	03 22 26.3	+1.1
	baz=328,SNR=6.0						
S12K	Black Hills	78.48	28	P	P	03 22 26.0	+0.6
	baz=316						
P19K	Oil Pt	78.54	22	P	P	03 22 25.9	+0.3
	baz=323,SNR=7.6						
L27K	Beaver Creek,	78.65	15	IAmb	IAmb	03 22 28.4	
	comp=Z,14nm,0.8s						
L27K	Beaver Creek,	78.65	15	P	P	03 22 27.4	+1.2
	baz=331,SNR=21						
SLKM	Skilak Lake	78.73	20	IAmb	IAmb	03 22 27.5	
	comp=Z,18nm,0.8s						
Q18K	Katmai Hardscr	78.77	23	P	P	03 22 27.1	+0.1
	baz=322,SNR=8.4						
Q17K	Contact Creek	78.78	24	P	P	03 22 27.3	+0.3
	baz=321,SNR=7.7						
K29M	Barlow Dome	78.83	13	IAmb	IAmb	03 22 29.1	
	comp=Z,21nm,0.8s						
K29M	Barlow Dome	78.83	13	P	P	03 22 28.1	+0.8
	baz=335,SNR=30						
PWL	Port Wells	78.96	19	IAmb	IAmb	03 22 29.2	
	comp=Z,17nm,0.7s						
PWL	Port Wells	78.96	19	P	P	03 22 28.4	+0.5
	baz=326,SNR=5.8						
M26K	Nabesna, AK	78.97	16	P	P	03 22 28.7	+0.8
	baz=330,SNR=7.1						
S14K	Fog Glacier	79.00	27	P	P	03 22 29.5	+1.2
	baz=318						
HOM	Homer	79.01	21	P	P	03 22 29.2	+1.1
	baz=324						
KLU	Klutina	79.06	18	IAmb	IAmb	03 22 30.4	
	comp=Z,18nm,0.9s						
KLU	Klutina	79.06	18	P	P	03 22 29.0	+0.6
	baz=328,SNR=7.6						
NWAO	Narrogin (SRO)	79.20	143	LR	LR	03 55 13.1	
	comp=Z,68nm,21.5s,baz=303,slow=34						
BRSE	Bradley Lake S	79.21	21	P	P	03 22 29.1	-0.1
	baz=325						
CNPM	China Poot	79.24	21	IAmb	IAmb	03 22 30.2	
	comp=Z,18nm,0.8s						
M27K	Edge Creek, AK	79.26	16	IAmb	IAmb	03 22 32.0	
	comp=Z,30nm,1.1s						
M27K	Edge Creek, AK	79.26	16	P	P	03 22 30.7	+1.0
	baz=331						
GLI	Glacier Island	79.28	19	IAmb	IAmb	03 22 31.0	
	comp=Z,25nm,0.8s						
GLI	Glacier Island	79.28	19	P	P	03 22 29.7	+0.1
	baz=327,SNR=7.5						
SEW	Seward	79.28	20	P	P	03 22 29.7	+0.1
	baz=326						
N25K	Chitina, Valde	79.29	17	IAmb	IAmb	03 22 31.9	
	comp=Z,49nm,1.7s						
N25K	Chitina, Valde	79.29	17	P	P	03 22 30.7	+1.0
	baz=329,SNR=5.7						
SDPT	Sand Point	79.35	28	P	P	03 22 31.7	+1.7
	baz=318						
L29M	L29M	79.38	14	IAmb	IAmb	03 22 32.2	
	comp=Z,25nm,1.1s						
L29M	L29M	79.38	14	P	P	03 22 30.8	+0.6
	baz=334,SNR=17						
DIV	Divide	79.40	18	IAmb	IAmb	03 22 32.1	
	comp=Z,19nm,0.7s						
BVCY	Beaver Creek	79.44	15	P	P	03 22 31.6	+1.1
	baz=332,SNR=17						
FID	Port Fidalgo	79.55	18	IAmb	IAmb	03 22 32.8	
	comp=Z,16nm,0.7s						
Q20K	Shuyak Island	79.63	22	P	P	03 22 32.1	+0.6
	baz=324						
SYI	Shuyak Island	79.63	22	IAmb	IAmb	03 22 33.3	
	comp=Z,24nm,0.8s						
R18K	Karluk	79.81	24	P	P	03 22 32.7	+0.2
	baz=322						
WRA	Warramunga Arr	79.82	123	P	P	03 22 32.8	-0.3
	comp=Z,3.6nm,0.7s,baz=314,slow=4.9,SNR=40						
WRA				PKKPbc	PKKPbc	03 41 20.0	+1.0
	comp=Z,0.6nm,0.4s,baz=126,slow=2.5,SNR=8.2						
	comp=Z,3.6nm,0.7s						
WRA	Warramunga Arr	79.82	123	*i* P	P	03 22 33.0	-0.1
WRA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WRAB	Tennant Creek	79.82	123	P	P	03 22 33.1	0.0
WRAB	Tennant Creek	79.82	123	⇑*e*P	P	03 22 33.1	0.0
WRAB				pmax	pmax		
	comp=Z,14nm,1.3s						
BMRM	Bremner River	79.84	18	IAmb	IAmb	03 22 34.6	
	comp=Z,24nm,0.9s						
BMRM	Bremner River	79.84	18	P	P	03 22 33.7	+1.0
	baz=329,SNR=8.7						
MCARA	McCarthy VSAT	79.86	17	IAmb	IAmb	03 22 35.8	
	comp=Z,18nm,0.8s						
MCARA	McCarthy VSAT	79.86	17	P	P	03 22 33.3	+0.6
	baz=331						
VRDI	Verde Repeater	79.89	17	IAmb	IAmb	03 22 35.5	
	comp=Z,23nm,1.0s						
EYAK	Cordova Ski Ar	79.91	18	P	P	03 22 34.0	+1.0
	baz=328,SNR=7.5						
M29M	Somme Creek	79.91	14	IAmb	IAmb	03 22 35.5	
	comp=Z,18nm,0.8s						
M29M	Somme Creek	79.91	14	P	P	03 22 34.3	+1.2
	baz=334,SNR=23						
P23K	Montague Islan	79.94	19	P	P	03 22 33.8	+0.6
	baz=327						
CHNA	Chernabura Isl	80.08	28	P	P	03 22 35.4	+1.4
	baz=318						
YUK3	Moose Creek	80.09	15	P	P	03 22 35.1	+0.8
	baz=333,SNR=8.4						
KDAK	Kodiak Island	80.24	23	LR	LR	04 00 50.3	
	comp=Z,59nm,18.5s,baz=213,slow=38						
KDAK	Kodiak Island	80.24	23	P	P	03 22 35.8	+1.0
	baz=323						
CRQM	Cirque	80.38	17	IAmb	IAmb	03 22 41.6	
	comp=Z,43nm,1.3s						
CRQE	Cirque	80.39	17	P	P	03 22 36.4	+0.6
	baz=331						
TGL	Tana Glacier	80.45	17	IAmb	IAmb	03 22 38.4	
	comp=Z,16nm,0.8s						
OHAK	Old Harbor	80.46	23	IAmb	IAmb	03 22 38.1	
	comp=Z,25nm,0.9s						
OHAK	Old Harbor	80.46	23	P	P	03 22 36.7	+0.7
	baz=323,SNR=6.8						
CTG	Chitna Glacier	80.62	16	P	P	03 22 37.6	+0.6
	baz=332,SNR=6.0						
CTGM	Chitina Glacie	80.62	16	IAmb	IAmb	03 22 39.1	
	comp=Z,20nm,0.8s						
YUK8	Steele Glacier	80.68	15	P	P	03 22 38.1	+0.6
	baz=333						
SII	Sitkinak Islan	80.69	24	P	P	03 22 38.4	+1.1
	baz=322						
Q23K	Middleton Isla	80.70	19	P	P	03 22 37.8	+0.6
	baz=328						
GRNC	Granite Creek	80.73	16	IAmb	IAmb	03 22 39.6	
	comp=Z,17nm,1.0s						
KAIM	Kayak Island	80.78	18	P	P	03 22 38.5	+0.7
	baz=330						
LOGN	Logan Glacier	80.82	16	IAmb	IAmb	03 22 41.0	
	comp=Z,16nm,0.8s						
BLKN	Baker Lake	80.86	355		P	03 22 38.1	+0.2
YUK4	Talbot Arm	80.87	15	P	P	03 22 39.0	+0.6
	baz=334,SNR=12						
M31M	Drury Creek, Y	80.91	13	P	P	03 22 38.7	+0.3
	baz=338,SNR=7.2						
MMPY	Sheldon Lake,	81.04	11	P	P	03 22 39.8	+0.7
	baz=340						
O28M	Mount Upton	81.05	16	P	P	03 22 40.3	+0.8
	baz=333						
YAH	Yahtse	81.06	17	IAmb	IAmb	03 22 41.6	
	comp=Z,22nm,0.7s						
FARO	Faro, Yukon	81.06	12	P	P	03 22 39.6	+0.4
	baz=338,SNR=8.5						
N30M	Aishikik Lake	81.08	14	P	P	03 22 40.3	+0.9
	baz=335						
MESA	MESA	81.17	17	P	P	03 22 40.8	+0.7
	baz=332						
YUK6	Outpost Mounta	81.29	15	P	P	03 22 41.3	+0.5
	baz=334						
N31M	Braeburn, Yuko	81.31	13	P	P	03 22 41.2	+0.6
	baz=336						
WRGLY	Wrigley	81.48	7	P	P	03 22 42.2	+0.9
	baz=346						
HYT	Haines Junctio	81.58	14	IAmb	IAmb	03 22 44.8	
	comp=Z,22nm,1.0s						
HYT	Haines Junctio	81.58	14	P	P	03 22 43.0	+0.9
	baz=335,SNR=16						
PINM	Pinnacle	81.64	16	P	P	03 22 43.0	+0.7
	baz=333						
O29M	Mount Kennedy	81.82	15	P	P	03 22 43.9	+0.5
	baz=334						
O30N	Mendenhall	81.91	14	P	P	03 22 44.1	+0.3
	baz=336,SNR=5.8						
AS31	Alice Springs	82.05	126	P	P	03 22 45.1	+0.1
ASAR	Alice Springs	82.05	126	P	P	03 22 44.7	-0.2
	comp=Z,3.2nm,0.7s,baz=313,slow=5.1,SNR=35						
ASAR				PKKPbc	PKKPbc	03 41 14.6	+0.4
	comp=Z,0.5nm,0.6s,baz=125,slow=2.5,SNR=4.4						
	comp=Z,3.2nm,0.7s						
N32M	Quiet Lake	82.12	12	P	P	03 22 45.2	+0.3
	baz=339						
PNL	Peninsula	82.22	16	P	P	03 22 46.2	+0.9
	baz=334						
WHY	Whitehorse	82.25	13	P	P	03 22 45.7	+0.1
	baz=337						
P30M	Million Dollar	82.33	15	P	P	03 22 46.6	+0.6
	baz=336						
P29M	Windy Craggy	82.61	15	P	P	03 22 47.9	+0.5
	baz=335						
YKA	Yellowknife Ar	82.90	3	P	P	03 22 48.7	-0.1
YKA	Yellowknife Ar	82.90	3	P	P	03 22 48.5	-0.3
	comp=Z,2.7nm,0.7s,baz=352,slow=5.6,SNR=26						
YKA				PP	PP	03 25 58.0	-0.5
	comp=Z,1.6nm,0.9s,baz=354,slow=9.2,SNR=6.3						
	comp=Z,2.7nm,0.7s						
P33M	Teslin, Yukon	83.05	13	IAmb	IAmb	03 22 51.1	
	comp=Z,16nm,0.8s						
P33M	Teslin, Yukon	83.05	13	P	P	03 22 50.2	+0.5
	baz=339,SNR=14						
PLBC	Pleasant Camp	83.06	15	P	P	03 22 50.7	+0.9
	baz=336,SNR=6.7						
P32M	Atlin	83.46	13	P	P	03 22 52.3	+0.5
	baz=338						
R33M	Jennings River	84.14	12	IAmb	IAmb	03 22 57.6	
	comp=Z,9.8nm,0.8s						
R33M	Jennings River	84.14	12	P	P	03 22 55.9	+0.5
	baz=340,SNR=8.9						
BEAVL	Fort Liard	84.26	9	P	P	03 22 56.4	+0.5
	baz=345						
SCHQ	Schefferville	84.26	338	P	P	03 22 55.6	-0.4
	comp=Z,14nm,0.7s,baz=27,slow=5.9,SNR=16						
SCHQ				LR	LR	04 00 35.8	
	comp=Z,65nm,18.0s,baz=33,slow=36						
	comp=Z,14nm,0.7s						
Q32M	Nakina River	84.32	13	P	P	03 22 56.5	+0.1
	baz=339						
DLBC	Dease Lake	85.20	12	P	P	03 23 01.2	+0.5
	baz=341						
S32K	Killisnoo	85.26	14	P	P	03 23 02.1	+1.2
	baz=338						
S34M	Telegraph Cree	85.51	13	IAmb	IAmb	03 23 05.0	
	comp=Z,13nm,0.9s						
S34M	Telegraph Cree	85.51	13	P	P	03 23 03.1	+0.9
	baz=340						
TOAD	Toad River Com	85.53	9	P	P	03 23 03.2	+0.9
	baz=345						
U33K	Whale Pass	86.82	14	P	P	03 23 09.7	+1.1
	baz=339						
FFC	Flin Flon	90.76	357		P	03 23 27.5	+0.2
FFC	Flin Flon	90.76	357	P	P	03 23 27.5	+0.2
FFC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ULM	Lac du Bonnet	94.77	353	LR	LR	04 10 52.8	
	comp=Z,55nm,18.6s,baz=134,slow=38						
SADO	Sadowa	96.85	340	LR	LR	04 09 54.2	
	comp=Z,35nm,18.6s,baz=344,slow=37						
NEW	Newport	96.87	7	LR	LR	04 13 03.6	
	comp=Z,59nm,18.4s,baz=344,slow=39						
TXAR	Lajitas Array	116.16	357	PKP	PKiKP	03 29 07.6	-0.5
	comp=Z,0.2nm,0.7s,baz=10,slow=2.1,SNR=3.7						
TXAR				PKKPbc	PKKPbc	03 39 36.5	-0.9
	comp=Z,0.6nm,0.8s,baz=174,slow=4.2,SNR=6.4						
QSPA	South Pole Qui	124.56	180	PKP	PKPdf	03 29 21.5	-1.4
	comp=Z,2.4nm,0.9s,baz=259,slow=1.1,SNR=5.2						
SALV	Santo Antonio	130.37	279	*e*P	PKPdf	03 29 35.3	-0.1
SIV	San Ignacio	134.77	282	PKP	PKPdf	03 29 43.2	-0.5
	comp=Z,1.3nm,0.8s,baz=80,slow=1.4,SNR=5.8						
BBSD	Serra de San D	135.04	281	*e*P	PKPdf	03 29 44.4	+0.2
CPUP	Villa Florida	136.61	267	PKP	PKPdf	03 29 46.3	-0.5
	comp=Z,0.4nm,0.7s,baz=135,slow=1.4,SNR=3.8						
LPAZ	La Paz	140.55	288	PKP	PKPdf	03 29 55.9	+0.8
	comp=Z,0.7nm,0.6s,baz=37,slow=6.1,SNR=4.0						
TBI	Tubuai	141.59	84	*e*LR	LR	04 15 53.6	
	comp=Z,684nm,25.8s						
TRQA	Tornquist	143.73	251		PKPbc	03 29 57.7	+0.6
TRQA	Tornquist	143.73	251	PKIKP	PKPbc	03 29 57.7	+0.7
NNA	Nana	144.32	302	PKP	PKPbc	03 29 60.0	+0.5
	comp=Z,8.3nm,0.6s,baz=302,slow=3.7,SNR=6.3						
NNA	Nana	144.32	302	PKIKP	PKPbc	03 30 00.0	+0.5
CFA	Coronel Fontan	147.38	264	PKPbc	PKPbc	03 30 08.2	-0.2
	comp=Z,7.2nm,0.6s,baz=85,slow=3.5,SNR=25						
PLCA	Paso Flores	150.57	247		PKPbc	03 30 16.2	0.0
PLCA	Paso Flores	150.57	247	PKPbc	PKPbc	03 30 16.6	+0.4
	comp=Z,11nm,1.0s,baz=114,slow=3.0,SNR=17						
PLCA	Paso Flores	150.57	247	PKIKP	PKPbc	03 30 16.2	0.0
PLCA	Paso Flores	150.57	247	*e*P	PKPdf	03 30 11.4	+0.7

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*SJA **12** 03:22:06.7±0.6, 22°.43S×66°.11W, h290^{km}±4^{km}, ML3.7, MW3.9*

*IDC **12** 03:22:08.3±1.5, 22°.52S×66°.07W, h239^{km}±18^{km}, mb3.3/4, mbtmp4.0/9, Error ellipse: s-maj=22.9km s-min=14.2km az=99.0*

*NEIC **12** 03:22:08.9±1.7, 22°.61S±0°.06×66°.0W±0°.1, h217^{km}±10^{km}, mb4.3/12, Error ellipse: s-maj=13.9km s-min=8.9km az=90.0*

*GUC **12** 03:22:09.4±0.4, 22°.51S×66°.27W, h265^{km}±5^{km}, ML4.5*

*VAO **12** 03:22:10.1±1.8, 22°.36S×66°.12W, h249^{km}±19^{km}, mb4.0*

ISC 12 03:22:09.9±0.5**, 22°.52S**±0°.04×**66°.21W**±0°.05**, h251**^{km}**, n96, σ1ˢ.37**/115**, mb4.3**/8**, 2C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YJA	Yavi	0.73	62	*e*P	Pn	03 22 44.9	+0.6
YJA	Yavi	0.73	62	*e*P	Pn	03 22 45.1	+0.7
YJA				*e*S	S	03 23 10.9	-0.4
SALTA		1.70	184	*e*P	Pn	03 22 51.7	+1.3
SALTA		1.70	184	*e*P	Pn	03 22 51.8	+1.3
SALTA				*e*S	S	03 23 25.2	+2.7
PB09	IPOC Station P	2.90	284	*e*P	Pn	03 23 02.4	+0.7
PB09				*e*S	S	03 23 41.7	-0.8
PB09				IAML		03 23 45.3	
	comp=N,149nm,0.3s						
PB09	IPOC Station P	2.90	284	*e*P	Pn	03 23 02.0	+0.4
PB09				*e*S	S	03 23 43.8	+1.3
PB09				IAML		03 23 47.9	
	comp=Z,103nm,0.3s						
PB06	IPOC Station P	3.11	266	Pn	Pn	03 23 04.0	+0.2
PB06	IPOC Station P	3.11	266	*e*P	Pn	03 23 04.1	+0.2
PB06				*e*S	S	03 23 45.4	-1.2
PB06				IAML		03 23 48.5	
	comp=N,361nm,0.2s						
PB06	IPOC Station P	3.11	266	*e*P	Pn	03 23 04.5	+0.6
PB06				*e*S	S	03 23 47.4	+0.9
PB03	IPOC Station P	3.32	277	*e*P	Pn	03 23 06.2	+0.1
PB03				IAML		03 23 49.8	
	comp=N,531nm,0.2s						
PB03	IPOC Station P	3.32	277	*e*P	Pn	03 23 06.3	+0.2
PB03				*e*S	S	03 23 49.3	-1.3

PB01	IPOC Station P	3.38	295	eP	Pn	03 23 06.9	+0.1
PB01	IPOC Station P	3.38	295	eP	Pn	03 23 06.8	-0.1
PB01				eP		03 23 07.0	
PB01				eS	S	03 23 51.1	-0.8
FSA	Cafayete	3.58	177	eP	Pn	03 23 09.7	+0.7
PB08	IPOC Station P	3.63	310	Pn	Pn	03 23 10.4	+0.6
PB08	IPOC Station P	3.63	310⇑	eP	Pn	03 23 10.5	+0.6
PB08				eS	S	03 23 56.6	-0.7
PB08	IPOC Station P	3.63	310	eP	Pn	03 23 10.0	+0.1
PB08				eS	S	03 23 57.5	+0.1
PB05	IPOC Station P	3.70	264	Pn	Pn	03 23 10.6	+0.1
PB05	IPOC Station P	3.70	264⇑	eP	Pn	03 23 10.5	+0.1
PB05				IAML		03 23 59.9	
	comp=N,382nm,0.2s						
PB05	IPOC Station P	3.70	264	eP	Pn	03 23 10.6	+0.1
PB05				eS	S	03 23 57.3	-1.1
GO01	Chusmiza	3.98	315		Pn	03 23 14.1	+0.1
GO01	Chusmiza	3.98	315	eP	Pn	03 23 14.4	+0.3
GO01	Chusmiza	3.98	315	eP	Pn	03 23 13.2	-0.9
GO01				eS	S	03 24 06.7	+1.8
GO02	Mina Guanaco	4.06	229		Pn	03 23 15.4	+0.7
GO02	Mina Guanaco	4.06	229	eP	Pn	03 23 15.3	+0.5
GO02	Mina Guanaco	4.06	229	eP	Pn	03 23 15.5	+0.7
GO02				eS	S	03 24 05.7	-0.6
PB10	IPOC Station P	4.12	255	Pn	Pn	03 23 15.3	+0.1
PB10	IPOC Station P	4.12	255	eP	Pn	03 23 15.3	+0.1
PB10	IPOC Station P	4.12	255	eP	Pn	03 23 15.5	+0.3
PB10				eS	S	03 24 04.6	-2.5
TA01	Diego Aracena	4.18	297		Pn	03 23 15.1	-0.8
TA01	Diego Aracena	4.18	297	eP	Pn	03 23 15.7	-0.2
TA01	Diego Aracena	4.18	297	eP	Pn	03 23 14.4	-1.5
TA01				eS	S	03 24 04.9	-3.4
PB11	IPOC Station P	4.23	310	Pn	Pn	03 23 15.9	-0.8
PB11	IPOC Station P	4.23	310	eP	Pn	03 23 16.0	-0.8
PB11	IPOC Station P	4.23	310	eP	Pn	03 23 15.9	-0.8
PB11				eS	S	03 24 07.0	-2.7
TA02	Huaiquique	4.29	301	eP	Pn	03 23 16.5	-0.7
TA02				eS	S	03 24 07.2	-3.4
PB14	IPOC Station P	4.38	241	Pn	Pn	03 23 18.6	+0.1
PB14	IPOC Station P	4.38	241	eP	Pn	03 23 19.0	+0.4
PB14				eS	S	03 24 02.1	-11
AC02	Maricunga	5.05	211		Pn	03 23 27.1	+0.2
AC02	Maricunga	5.05	211	eP	Pn	03 23 27.2	+0.4
AC02				eS	S	03 24 23.6	-4.4
PB16	IPOC Station P	5.19	323		Pn	03 23 28.9	+0.2
PB16	IPOC Station P	5.19	323	eP	Pn	03 23 23.6	-5.1
PB16				eP		03 23 28.2	
PB16				eS	S	03 24 31.3	-0.1
AC01	Pan de Azucar	5.39	227		Pn	03 23 29.3	-1.2
AC01	Pan de Azucar	5.39	227	eP	Pn	03 23 29.5	-1.0
PB18	Visviri	5.79	327	Pn	Pn	03 23 36.7	+0.7
AC06	Mina Casimiro	6.11	217		Pn	03 23 38.1	-1.4
GO03	Copiapo	6.23	215		Pn	03 23 39.8	-1.2
LPAZ	La Paz	6.46	343		Pn	03 23 43.6	-0.9
LPAZ	La Paz	6.46	343	P	Pn	03 23 43.9	-0.7
	comp=N,2.3nm,0.3s,baz=143,slow=5.4,SNR=40						
LPAZ				S	S	03 24 58.0	-2.2
	comp=N,13nm,0.8s,baz=111,slow=17,SNR=13						
AC04	Llanos de Chal	7.17	217	Pn	Pn	03 23 50.8	-1.9
BBSD	Serra de San D	7.48	46	eP	Pn	03 23 54.3	-2.4
SIV	San Ignacio	8.11	38	P	Pn	03 24 02.1	-2.6
	comp=N,20nm,0.5s,baz=224,slow=12,SNR=107						
CO01	Juntas del Tor	8.20	204		Pn	03 24 06.4	+0.4
GO04	Tololo Observa	8.66	207	Pn	Pn	03 24 10.3	-1.5
CO03	El Pedregal	9.20	205	Pn	Pn	03 24 17.1	-1.3
CFA	Coronel Fontan	9.23	191	P	Pn	03 24 16.8	-2.0
	comp=N,3.3nm,0.3s,baz=16,slow=14,SNR=61						
CFA				S	S	03 25 53.5	-9.4
	comp=N,3.7nm,0.3s,baz=308,slow=19,SNR=13						
CO06	Fray Jorge	9.46	210	Pn	Pn	03 24 20.2	-1.4
CO02	Combarbal	9.65	205	Pn	Pn	03 24 22.7	-1.4
PTLB	Pontes e Lacer	9.71	45		Pn	03 24 22.3	-2.6
PTLB	Pontes e Lacer	9.71	45	eP	Pn	03 24 22.3	-2.6
VA03	San Esteban	10.90	200	Pn	Pn	03 24 40.6	+0.8
VA06	Catapilco	10.97	203	Pn	Pn	03 24 40.5	-0.1
VILB	Vilhena	11.10	32	eP	Pn	03 24 41.1	-1.4
MT05	Renca	11.54	199	Pn	Pn	03 24 48.6	+0.8
MT03	Universidad Ad	11.57	198	Pn	Pn	03 24 48.8	+0.6
MT09	Talagante	11.98	200	Pn	Pn	03 24 52.4	-0.9
BO04	La Punta	12.06	198	Pn	Pn	03 24 54.7	+0.4
BO01	Tunca	12.58	199		Pn	03 25 00.0	-0.5
BO02	Sierra Bellavi	12.87	197		Pn	03 25 04.5	+0.3
CPSB	Cacapava Do Su	13.86	127	eP	P	03 25 16.6	-0.5
PCMB	Pacaembu	13.89	89	eP	P	03 25 16.8	-0.7
LDASE	Londrina, Braz	13.93	96	eP	P	03 25 17.1	-0.8
ML02	Panimavida	13.95	198	Pn	Pn	03 25 16.8	-0.6
PLTB	Pedras Altas	14.50	132	P	P	03 25 23.1	-1.1
BI02	San Fabin de	14.76	196		Pn	03 25 27.2	0.0
TRQA	Tornquist	15.90	168	P	P	03 25 39.2	-0.4
TRQA				IAmb	IAmb	03 25 51.0	
	comp=Z,14nm,1.4s						
IPMB	Ipameri, GO	17.48	78	eP	P	03 25 55.8	-1.2
VAO	Valinhos	17.76	95	P	P	03 25 58.8	-1.2
VAO	Valinhos	17.76	95	eP	P	03 25 58.6	-1.4
LR05	Currie	18.33	194	P	P	03 26 06.5	+0.6
BDFB	Brasilia	18.50	71	P	P	03 26 07.0	-1.1
BDFB	Brasilia	18.50	71	P	P	03 26 07.2	-0.9
	comp=Z,3.2nm,0.6s,baz=234,slow=12,SNR=6.7						
PLCA	Paso Flores	18.52	190	P	P	03 26 08.3	+0.2
PLCA	Paso Flores	18.52	190	P	P	03 26 08.3	+0.2
	comp=Z,1.5nm,0.5s,baz=7.8,slow=11,SNR=10						
COYC	Coyhaique	23.49	190	P	P	03 26 59.3	+2.1
COYC				IAmb	IAmb	03 27 34.0	
	comp=Z,12nm,1.2s						
SDV	Santo Domingo	31.51	352	P	P	03 28 11.1	+2.0
SDV				IAmb	IAmb	03 28 32.5	
	comp=Z,15nm,1.5s						
SMRC	Santa Marta, M	34.39	346	P	P	03 28 37.2	+3.5
CELP	Cerrillos	40.35	359	P	P	03 29 25.8	+2.3
CELP				IAmb	IAmb	03 29 47.1	
	comp=Z,14nm,1.1s						
SNAA	Sanae	60.50	161	P	P	03 31 54.4	+1.1
SNAA				IAmb	IAmb	03 32 02.7	
	comp=Z,6.7nm,1.4s						
HNDO	Hondo	60.76	327	P	P	03 31 59.0	+3.5
HNDO				IAmb	IAmb	03 32 02.0	
	comp=Z,3.7nm,0.5s						
TXAR	Lajitas Array	62.92	323	P	P	03 32 10.9	+0.9
	comp=Z,0.1nm,0.4s,baz=130,slow=6.5,SNR=1.7						
	comp=Z,0.1nm,0.4s						
DBIC	Dimbokro	66.65	72	P	P	03 32 33.0	-1.2
	comp=Z,5.9nm,1.1s,baz=244,slow=8.9,SNR=2.2						
	comp=Z,5.9nm,1.1s						
QSPA	South Pole Qui	67.68	180	P	P	03 32 41.4	+1.4
QSPA	South Pole Qui	67.68	180	P	P	03 32 39.3	-0.7
	comp=Z,0.5nm,0.4s,baz=97,slow=2.8,SNR=5.9						
	comp=Z,0.5nm,0.4s						
TORD	Torodi Ar. Bea	75.36	69	P	P	03 33 24.1	-2.3
	comp=Z,1.0nm,0.4s,baz=246,slow=5.4,SNR=1.7						
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	144.92	39	PKP	PKPdf	03 41 16.6	-0.4
	comp=Z,0.8nm,0.7s,baz=306,slow=4.3,SNR=8.4						

WEL 12 03:24:37.4±1.0, 34°S±6°×18°0E±1°3, h12^{km}, M4.0/13, mB4.5/4, ML4.1/18, MLv4.1/13, Mw(mB)3.7/4, Error ellipse: s-maj=17.3km s-min=7.0km az=100.6, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.81	197	P	Pn	03 25 36.3	+0.4
MXZ				S	Sn	03 26 21.8	+1.1
MXZ				T	T	03 29 24.9	
WMGZ	Waiomatatini S	4.03	194	P	Pn	03 25 39.4	+0.4
WMGZ				S	Sn	03 26 28.2	+2.0
HAZ	Te Kaha	4.14	201	P	Pn	03 25 42.0	+1.6
PKGZ	Pakihiroa	4.16	198	P	Pn	03 25 40.3	-0.5
KUZ	Kuaotunu	4.30	228	P	Pn	03 25 44.7	+2.1
PUZ	Puketiti	4.31	195	P	Pn	03 25 42.3	-0.5
PUZ				S	Sn	03 26 33.2	+0.1
RUGZ	Raukumara Rang	4.36	201	P	Pn	03 25 44.1	+0.5
RUGZ				S	Sn	03 26 34.8	+0.4
TWGZ	Tauwhareparae	4.48	198	P	Pn	03 25 46.5	+1.4
CNGZ	Carnagh Statio	4.72	194	P	Pn	03 25 47.9	-0.5
MWZ	Matawai	4.75	201	P	Pn	03 25 48.8	0.0
MWZ				S	Sn	03 26 44.6	+0.8
TKGZ	Te Karaka	4.76	198	P	Pn	03 25 46.4	-2.5
TKGZ				S	Sn	03 26 45.2	+1.2
URZ	Urewera	4.81	205	P	Pn	03 25 49.2	-0.5
URZ				S	Sn	03 26 43.6	-1.8
RAGZ	Rawiri	4.93	201	P	Pn	03 25 51.5	+0.1
RIGZ	Rimuhau	5.03	197	S	Sn	03 26 49.5	-1.4
MUGZ	Murupara	5.13	207	P	Pn	03 25 54.4	+0.3
MUGZ				S	Sn	03 26 54.1	+0.9
OUZ	Omahuta	5.19	254	P	Pn	03 25 52.9	-2.0
PRGZ	Paritu Road	5.21	196	P	Pn	03 25 52.7	-2.4
PRGZ				S	Sn	03 26 55.6	+0.4
SNGZ	Shannon Statio	5.22	201	P	Pn	03 25 55.8	+0.6
SNGZ				S	Sn	03 26 57.5	+2.1
RAHZ	Arahi	5.42	202	P	Pn	03 25 58.6	+0.6
RAHZ				S	Sn	03 27 02.8	+2.4
MTHZ	Maungataniwha	5.44	204	P	Pn	03 25 59.4	+1.0
MTHZ				S	Sn	03 27 04.7	+3.8
BKZ	Black Stump Fm	5.84	205	P	Pn	03 26 00.9	-3.0
BKZ				S	Sn	03 27 10.6	-0.2
TMVZ	Te Maari	6.10	211	P	Pn	03 26 09.0	+1.5
OTVZ	Oturere	6.16	211	P	Pn	03 26 09.2	+0.9

IDC 12 03:35:48.9±2.1, 8°.66S×128°.15E, h0^{km}, mb3.4/1, mbtmp3.4/4, ML3.2/3, Error ellipse: s-maj=68.4km s-min=25.9km az=75.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	9.69	194	Pn	Pn	03 38 10.1	+0.4
	0.2nm,0.3s,baz=21,slow=14,SNR=1.6						
FITZ				Sn	Sn	03 40 01.0	+1.6
	0.3nm,0.3s,baz=96,slow=14,SNR=1.6						
	3.3nm,1.1s						
WRA	Warramunga Arr	12.71	153	Pn	Pn	03 38 49.7	-1.3
	0.1nm,0.3s,baz=329,slow=13,SNR=8.6						
WRA				Sn	Sn	03 41 17.3	+3.8
	0.3nm,0.3s,baz=330,slow=20,SNR=3.6						
	0.3nm,0.6s						
ASAR	Alice Springs	15.90	160	Pn	Pn	03 39 34.0	-0.2
	0.1nm,0.3s,baz=338,slow=11,SNR=6.0						
	0.6nm,0.7s						
MKAR	Makanchi Array	68.63	328	P	P	03 46 54.1	+0.1
	0.2nm,0.5s,baz=124,slow=7.2,SNR=2.4						
	0.2nm,0.5s						

IDC 12 04:30:08.6±6.0, 8°.04S×155°.52E, h0^{km}, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=101.6km s-min=78.0km az=7.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.68	238	P	P	04 35 21.4	-0.8
	0.7nm,1.0s,baz=65,slow=9.8,SNR=6.7						
	0.7nm,1.0s						
ASAR	Alice Springs	25.90	231	P	P	04 35 43.3	+0.7
	0.7nm,0.8s,baz=51,slow=9.2,SNR=5.2						
	0.7nm,0.8s						
STKA	Stephens Creek	27.03	207	P	P	04 35 52.7	0.0
	2.1nm,0.8s,baz=61,slow=10,SNR=4.5						
	2.1nm,0.8s						

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*IDC **12** 04:39:43.1±0.7, 52°.07N×175°.01E, h0^{km}, mb4.4/29, mbtmp4.4/31, ML4.0/2, MS3.4/8, Error ellipse: s-maj=17.4km s-min=11.1km az=174.0*

*AEIC **12** 04:39:45.5±2.1, 51°.82N±0°.05×174°.65E±0°.03, h47^{km}±6^{km}, Error ellipse: s-maj=7.4km s-min=1.2km az=158.0*

*MOS **12** 04:39:47.2±1.1, 52°.10N×174°.94E, h38^{km}, mb5.0/21, Error ellipse: s-maj=10.9km s-min=6.7km az=105.7*

*NEIC **12** 04:39:49.2±1.3, 52°.10N±0°.04×174°.91E±0°.04, h42^{km}±8^{km}, mb4.3/169, ML4.2(AEIC), Error ellipse: s-maj=6.7km s-min=2.8km az=159.0*

ISC 12 04:39:49.1±0.7, 52°.06N±0°.07×174°.89E±0°.04, h40^{km}±5^{km}, n518, σ1§10/453, mb4.4/120, MS3.5/12, 14C-9D, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHEM	Shemya Is, Ala	0.82	325	Pn	Pn	04 40 03.6	-0.7
	3µm,0.3s,baz=159,slow=3.8,SNR=785						
SHEM				Sn	Sn	04 40 14.4	-0.9
	2µm,0.3s,baz=221,slow=22,SNR=7.7						
SMY	Shemya	0.82	325		Pn	04 40 03.4	-0.9
SMY					Sn	04 40 16.4	+1.1
SMY	Shemya	0.82	325	P	Pn	04 40 03.8	-0.5
SMY	Shemya	0.82	325	P	Pn	04 40 03.4	-0.9
SMY						04 40 16.4	
LSNW	Little Sitkin	2.25	91		Pn	04 40 22.8	-1.0
LSNW					Sn	04 40 52.4	+2.2
LSNW					LR	04 40 52.7	
LSSE	Little Sitkin	2.28	92		Pn	04 40 22.4	-1.9
LSSE					Sn	04 40 52.4	+1.3
LSPA	Little Sitkin	2.28	91		Pn	04 40 23.2	-1.1
LSPA					Sn	04 40 53.6	+2.4
LSPA					LR	04 40 53.7	
AMKA	Amchitka	2.83	102		Pn	04 40 30.4	-1.4
CEPE	Semis' Perret	2.95	90		Pn	04 40 33.1	-0.2
CEPE					Sn	04 41 10.2	+2.7
CEPE					LR	04 41 12.2	
GANO	Gareloi North	3.91	91		Pn	04 40 46.6	-0.1
GANE	Gareloi Northe	3.93	91		Pn	04 40 46.7	-0.2
TANO	Tanaga North	4.33	89		Pn	04 40 52.5	+0.2
TASE	Tanaga Southea	4.38	90		Pn	04 40 53.0	-0.2
TAFP	Tanaga Falls P	4.41	89		Pn	04 40 53.4	-0.1
KICM	Kanaga Island	4.90	89		Pn	04 41 00.1	0.0
KIWB	Kanaga Island	4.93	89		Pn	04 41 01.0	+0.4
ADK	Adak	5.22	89		Pn	04 41 04.5	-0.1
ADK	Adak	5.22	89	P	Pn	04 41 04.4	-0.1
ADK	Adak	5.22	89	P	Pn	04 41 04.5	-0.1
GSSP	Great Sitkin S	5.51	86		Pn	04 41 08.9	+0.2
ATKA	Atka Island	6.73	84		Pn	04 41 25.1	-0.1
ATKA	Atka Island	6.73	84	P	Pn	04 41 26.6	+1.4
PET	Petropavlovsk	9.94	282	P	Pn	04 42 13.7	+4.5
	36nm,1.4s						
NIKH	Nikolski High	9.96	78	P	Pn	04 42 12.2	+2.7
NIKH	Nikolski High	9.96	78	P	Pn	04 42 08.8	-0.7
	baz=270						
SPIA	Saint Paul Isl	10.02	53		Pn	04 42 09.9	-0.5
SPIA	Saint Paul Isl	10.02	53	P	Pn	04 42 12.2	+1.8
	baz=245						
P08K	Saint George I	10.16	57	P	Pn	04 42 13.3	+1.2
	baz=249						
PEA0B	Petropavlovsk-	10.51	282		Pn	04 42 17.6	+0.5
PEA0B	Petropavlovsk-	10.51	282⇑	eP	Pn	04 42 18.6	+1.5
PETK	Petropavlovsk-	10.51	282	Pn	Pn	04 42 18.0	+0.9
	1.0nm,0.3s,baz=96,slow=19,SNR=16						
PETK				Sn	Sn	04 44 10.4	-3.0
	1.4nm,0.3s,baz=200,slow=28,SNR=4.2						
PETK				LR	LR	04 47 17.3	
	comp=Z,56nm,18.6s,baz=83,slow=43						
	13nm,0.8s						
PETK	Petropavlovsk-	10.51	282	P	Pn	04 42 18.0	+0.9
UNV	Unalaska Valle	11.37	74		Pn	04 42 28.4	-0.3
UNV	Unalaska Valle	11.37	74	P	Pn	04 42 31.1	+2.3
	baz=268						
AKUT	Akutan	11.81	72	P	Pn	04 42 36.8	+2.0
M11K	Mekoryuk	13.38	44	P	Pn	04 42 59.5	+3.4
	baz=240						
S12K	Black Hills	14.06	66	P	Pn	04 43 07.4	+2.0
	baz=264						
M13K	Dall Lake	14.65	47		P	04 43 16.6	-2.3
M13K	Dall Lake	14.65	47	P	P	04 43 17.0	-1.9
	baz=244,SNR=9.2						
K13K	Kusilvak Mount	14.83	40		Pn	04 43 18.2	+2.5
K13K	Kusilvak Mount	14.83	40	P	P	04 43 18.8	-2.2
	baz=237,SNR=10.0						
SDPT	Sand Point	14.93	68	P	Pn	04 43 19.4	+2.3
SDPT	Sand Point	14.93	68	P	Pn	04 43 18.1	+0.9
	baz=267						
O14K	Tigyukauivet M	15.20	52	P	Pn	04 43 22.5	+1.9
	baz=252						
N14K	Kuskokwak Cree	15.22	50	P	Pn	04 43 21.6	+0.7
N14K				IAmb	IAmb	04 43 32.9	
	comp=Z,16nm,0.8s						
N14K	Kuskokwak Cree	15.22	50	P	P	04 43 23.4	-1.9
	baz=249						
L14K	Kuka Creek	15.35	44		Pn	04 43 23.2	+0.6
L14K	Kuka Creek	15.35	44	P	P	04 43 26.4	-0.3
	baz=243,SNR=11						
M14K	Bethel	15.41	47		Pn	04 43 23.5	+0.1
M14K				IAmb	IAmb	04 43 30.4	
	comp=Z,27nm,0.8s						
M14K	Bethel	15.41	47	P	P	04 43 25.8	-1.6
	baz=246,SNR=11						
CHNA	Chernabura Isl	15.43	70	P	Pn	04 43 25.2	+1.6
	baz=270						
MA2	Magadan	15.43	309	Pn	Pn	04 43 24.8	+1.1
MA2				IAmb	IAmb	04 43 30.7	
	comp=Z,18nm,0.8s						
MA2	Magadan	15.43	309⇓	eP	P	04 43 27.0	-0.7
MA2				pmax	pmax		
	comp=Z,22nm,0.9s						
MA2	Magadan	15.43	309	P	P	04 43 27.6	-0.1
	comp=Z,27nm,0.9s						
J14K	Nanvaranak Lak	15.71	39	Pn	Pn	04 43 25.9	-1.3
J14K	Nanvaranak Lak	15.71	39	P	P	04 43 31.0	+0.4
	baz=237						
O15K	Ungalikthiuk R	15.89	53	P	P	04 43 33.3	+0.6
	baz=254						
M15K	Kasigluk River	15.97	48	P	P	04 43 34.2	+0.6
	baz=248,SNR=7.8						
L15K	Ungalak Mounta	16.02	44	P	P	04 43 34.5	+0.4
	baz=244,SNR=6.6						
N15K	Kwethluk River	16.06	50	Pn	Pn	04 43 32.1	+0.3
N15K				IAmb	IAmb	04 43 45.8	
	comp=Z,18nm,0.9s						
N15K	Kwethluk River	16.06	50	P	P	04 43 35.1	+0.5
	baz=250,SNR=7.4						
TNA	Tin City	16.11	26	P	P	04 43 36.0	+0.9
	baz=221						
ANM	Nome	16.16	32	Pn	Pn	04 43 31.9	-1.1
ANM	Nome	16.16	32	P	Pn	04 43 32.0	-1.1
ANM				pmax	pmax		
	comp=Z,15nm,0.9s						
ANM	Nome	16.16	32	P	P	04 43 35.9	+0.1
	baz=228						
SEY	Seymchan	16.17	321	Pn	Pn	04 43 33.2	+0.2
	comp=Z,0.3nm,0.3s,baz=136,slow=12,SNR=4.9						
SEY				LR	LR	04 49 52.5	
	comp=Z,219nm,18.1s,baz=120,slow=38						
SEY	Seymchan	16.17	321⇓	eP	Pn	04 43 33.5	+0.4
SEY				pmax	pmax		
	comp=Z,12nm,2.0s						
K15K	Wolf Creek Mou	16.28	42	Pn	Pn	04 43 34.0	-0.5
K15K	Wolf Creek Mou	16.28	42	P	P	04 43 38.1	+1.1
	baz=242,SNR=26						
F14K	Arctic Creek	16.50	28	P	P	04 43 39.1	-0.3
	baz=224						
BILL	Bilibino	16.57	349		Pn	04 43 38.5	+0.4
BILL	Bilibino	16.57	349⇑	eP	P	04 43 39.4	-0.8
BILL				pmax	pmax		
	comp=Z,11nm,1.2s						
N16K	Nishlik Lake	16.78	50	P	P	04 43 43.2	+0.6
	baz=251						
O16K	Kokwok River B	16.86	53	Pn	Pn	04 43 41.3	-0.5
O16K	Kokwok River B	16.86	53	P	P	04 43 43.9	+0.5
	baz=255						
M16K	Timber Creek	16.88	48	Pn	Pn	04 43 41.3	-0.7
M16K	Timber Creek	16.88	48	P	P	04 43 44.2	+0.6
	baz=249						
G15K	Niukluk	16.88	32	P	P	04 43 44.6	+1.0
	baz=230						
L16K	Owhat River	16.90	45		Pn	04 43 41.9	-0.4
L16K	Owhat River	16.90	45	P	P	04 43 44.7	+0.8
	baz=246,SNR=7.7						
J16K	Anvik River	17.14	40		Pn	04 43 44.7	-0.5
J16K	Anvik River	17.14	40	P	P	04 43 47.8	+1.3
	baz=240,SNR=8.6						
F15K	North Star Dit	17.16	29	Pn	Pn	04 43 43.1	-2.4
F15K	North Star Dit	17.16	29	P	P	04 43 48.0	+1.2
	baz=227,SNR=6.0						
H16K	Elim	17.26	34	P	P	04 43 49.0	+1.1
	baz=234,SNR=9.0						
O17K	Koliganek Bris	17.39	53	P	P	04 43 50.7	+1.4
	baz=256						
I17K	Unalakleet	17.41	38		Pn	04 43 47.9	-0.7
I17K	Unalakleet	17.41	38	P	P	04 43 51.2	+1.7
	baz=238,SNR=6.4						
N17K	Nushagak Hills	17.54	50		Pn	04 43 49.7	-0.6
N17K	Nushagak Hills	17.54	50	P	Pn	04 43 50.4	+0.1
	baz=253						
L17K	Donlin	17.58	45	P	P	04 43 52.4	+1.0
	baz=247,SNR=20						
P17K	Kvichak River	17.59	55	P	Pn	04 43 51.0	+0.2
	baz=258						
G16K	Koyuk River	17.68	32		Pn	04 43 51.0	-1.0
G16K				IAmb	IAmb	04 43 55.2	
	comp=Z,12nm,0.7s						
G16K	Koyuk River	17.68	32	P	P	04 43 53.3	+0.8
	baz=232,SNR=9.8						
CHIR	Chirikof Islan	17.70	66	P	Pn	04 43 51.1	-1.1
CHIR	Chirikof Islan	17.70	66	P	P	04 43 52.9	+0.2
	baz=270						
M17K	Holitna River	17.70	47		Pn	04 43 51.5	-0.7
M17K				IAmb	IAmb	04 44 14.1	
	comp=Z,18nm,1.0s						
M17K	Holitna River	17.70	47	P	P	04 43 53.7	+1.0
	baz=250						
Q17K	Contact Creek	17.72	58	P	P	04 43 53.4	+0.3
	baz=262,SNR=17						
J17K	VABM Dome	17.79	40		Pn	04 43 52.9	-0.5
J17K	VABM Dome	17.79	40	P	P	04 43 55.2	+1.5
	baz=242,SNR=13						
K17K	Iditarod	17.81	43		Pn	04 43 53.4	-0.2
K17K				IAmb	IAmb	04 43 56.8	
	comp=Z,15nm,0.7s						
K17K	Iditarod	17.81	43	P	P	04 43 55.5	+1.6
	baz=245,SNR=13						
ACHA	Angle Creek He	18.00	58	P	P	04 43 55.1	-1.1
N18K	Kilae Creek	18.20	50	P	P	04 43 57.5	-0.8
N18K	Kilae Creek	18.20	50	P	Pn	04 43 59.1	+0.7
	baz=254						
Q18K	Katmai Hardscr	18.23	57	P	Pn	04 43 59.2	+0.4
	baz=262,SNR=6.9						
P18K	Big Mountain,	18.24	55		P	04 43 58.2	-0.5
P18K	Big Mountain,	18.24	55	P	Pn	04 43 59.0	+0.2
	baz=259,SNR=6.0						
H17K	Granite Mounta	18.26	35	P	Pn	04 43 59.3	+0.3
H17K	Granite Mounta	18.26	35	P	Pn	04 43 59.5	+0.5
	baz=237,SNR=8.6						
L18K	Granite Mounta	18.31	45		P	04 43 59.2	-0.3
L18K	Granite Mounta	18.31	45	P	Pn	04 44 00.7	+1.0
	baz=249,SNR=6.0						
G17K	Kiwalik Mounta	18.32	33	P	Pn	04 44 00.9	+1.2
	baz=234,SNR=13						
O18K	Koktuh Hills	18.34	53		P	04 43 59.4	-0.4
O18K				IAmb	IAmb	04 44 14.9	
	comp=Z,34nm,1.2s						
O18K	Koktuh Hills	18.34	53	P	Pn	04 44 00.8	+0.7
	baz=258						
M18K	Stony River	18.46	48	P	Pn	04 44 02.2	+0.7
	baz=252						
SII	Sitkinak Islan	18.50	64	P	P	04 44 01.6	-0.1
SII	Sitkinak Islan	18.50	64	P	Pn	04 44 02.0	-0.1
	baz=268						
J18K	Innoko River	18.78	42		P	04 44 04.1	-0.5
J18K	Innoko River	18.78	42	P	Pn	04 44 05.7	+0.3
	baz=246,SNR=9.6						
C16K	Lisburne Hills	18.84	23		P	04 44 04.6	-0.6
C16K				IAmb	IAmb	04 44 09.6	
	comp=Z,14nm,0.7s						
C16K	Lisburne Hills	18.84	23	P	Pn	04 44 06.9	+0.9
	baz=220,SNR=7.7						
N19K	Bonanza Creek	18.90	50		P	04 44 05.3	-0.8
N19K				IAmb	IAmb	04 44 25.7	
	comp=Z,18nm,0.8s						
N19K	Bonanza Creek	18.90	50	P	Pn	04 44 07.1	+0.1
	baz=256						
H18K	Honhosa River	18.93	36	P	P	04 44 06.0	-0.2
H18K				IAmb	IAmb	04 44 09.7	
	comp=Z,14nm,0.8s						
H18K	Honhosa River	18.93	36	P	Pn	04 44 07.3	+0.2
	baz=239,SNR=12						
E17K	Hotham Inlet	18.93	29	P	Pn	04 44 08.3	+1.2
	baz=229,SNR=6.0						
Q19K	Cape Douglas,	18.97	56	P	P	04 44 06.2	-0.5
Q19K	Cape Douglas,	18.97	56	P	Pn	04 44 07.2	-0.5
	baz=262,SNR=7.7						
D17K	Noatak River	19.00	26	P	Pn	04 44 08.6	+0.7
	baz=225,SNR=37						
OHAK	Old Harbor	19.02	62		P	04 44 05.4	-1.8
OHAK				IAmb	IAmb	04 44 14.4	
	comp=Z,16nm,0.6s						
OHAK	Old Harbor	19.02	62	P	P	04 44 05.1	-2.1
OHAK	Old Harbor	19.02	62	P	P	04 44 05.7	-1.5
	baz=267						
L19K	White Mountain	19.11	46		P	04 44 07.9	-0.4
L19K	White Mountain	19.11	46	P	Pn	04 44 09.2	-0.2
	baz=252,SNR=9.5						
G18K	Tagagawik	19.22	34		P	04 44 08.5	-0.9
G18K				IAmb	IAmb	04 44 12.0	
	comp=Z,24nm,0.9s						

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G18K  Tagagawik          19.22  34  P     Pn     04 44 11.1 +0.5
      baz=237,SNR=28
M19K  Big River Lodg     19.23  47  P     P      04 44 08.8 -0.8
M19K  Big River Lodg     19.23  47  P     Pn     04 44 10.7 -0.2
      baz=253
GCSA  Galena City Sc     19.28  38  P     Pn     04 44 11.1 -0.1
      baz=242
P19K  Oil Pt             19.28  54        P      04 44 09.6 -0.6
P19K                                IAmb  IAmb   04 44 25.5
      comp=Z,19nm,0.8s
P19K  Oil Pt             19.28  54  P     Pn     04 44 10.7 -0.7
      baz=261
RDOG  Red Dog Mine       19.30  25  P     Pn     04 44 10.7 -0.8
RDOG  Red Dog Mine       19.30  25  P     Pn     04 44 12.0 +0.5
      baz=225,SNR=6.2
F18K  Selawik            19.30  31  P     Pn     04 44 11.9 +0.4
      baz=233,SNR=9.2
ILSW  Iliamna Southw     19.38  53  P     P      04 44 11.5 +0.1
ILSW                                IAmb  IAmb   04 44 15.2
      comp=Z,12nm,0.9s
KDAK  Kodiak Island      19.42  60        P      04 44 10.0 -1.6
KDAK                                IAmb  IAmb   04 44 25.4
      comp=Z,22nm,0.7s
KDAK  Kodiak Island      19.42  60  P     P      04 44 10.5 -1.2
      comp=Z,2.5nm,0.3s,baz=156,slow=1.6,SNR=69
      comp=Z,11nm,0.4s
KDAK  Kodiak Island      19.42  60  P     P      04 44 10.9 -0.8
      baz=266
J19K  Poorman            19.44  41        P      04 44 11.3 -0.5
J19K                                IAmb  IAmb   04 44 18.5
      comp=Z,12nm,0.7s
J19K  Poorman            19.44  41  P     Pn     04 44 13.2 -0.1
      baz=246,SNR=26
E18K  Tukpahlearik C     19.51  29        P      04 44 12.2 -0.4
E18K  Tukpahlearik C     19.51  29  P     Pn     04 44 14.3 +0.2
      baz=230,SNR=21
C17K  DeLong Mountai     19.53  24  P     Pn     04 44 14.4 +0.1
      baz=224,SNR=18
Q20K  Shuyak Island      19.58  58  P     P      04 44 13.3 -0.1
      baz=264
SYI   Shuyak Island      19.58  58        P      04 44 12.2 -1.2
SYI                                 IAmb  IAmb   04 44 18.1
      comp=Z,18nm,0.9s
L20K  Farewell, AK       19.64  46  P     P      04 44 14.3 +0.3
      baz=252
RED   Redoubt Volcan     19.64  52  P     P      04 44 13.7 -0.4
RED                                 IAmb  IAmb   04 44 24.6
      comp=Z,14nm,0.8s
O20K  Slope Mountain     19.66  53  P     P      04 44 14.4 +0.1
      baz=260
M20K  Styx River         19.80  48  P     P      04 44 15.4 -0.4
M20K                                IAmb  IAmb   04 44 26.6
      comp=Z,13nm,0.9s
M20K  Styx River         19.80  48  P     Pn     04 44 16.7 -0.9
      baz=255
H19K  Roundabout Mou     19.81  36        P      04 44 15.1 -0.7
H19K                                IAmb  IAmb   04 44 18.6
      comp=Z,15nm,0.8s
H19K  Roundabout Mou     19.81  36  P     P      04 44 16.2 +0.4
      baz=241,SNR=21
K20K  Telida             19.84  43  P     P      04 44 15.4 -0.8
K20K  Telida             19.84  43  P     Pn     04 44 16.9 -1.1
      baz=250,SNR=29
G19K  Purcell Mounta     19.90  34  P     P      04 44 15.6 -1.2
G19K                                IAmb  IAmb   04 44 18.5
      comp=Z,9.7nm,0.7s
G19K  Purcell Mounta     19.90  34  P     Pn     04 44 17.5 -1.2
      baz=238,SNR=14
TYV   Tymovskoe          20.03 279 eP     Pn     04 44 20.6 +0.3
TYV                                eS     Sn     04 48 07.4 +2.9
TYV                                 pmax  pmax
      comp=Z,11nm,1.1s
TYV                                 pmax  pmax
      comp=Z,200nm,6.3s
TYV                                 smax  smax
      comp=N,200nm,4.6s
TYV                                 smax  smax
      comp=E,200nm,4.6s
F19K  Shaleruckik Mo     20.04  32        P      04 44 17.7 -0.6
F19K                                IAmb  IAmb   04 44 20.2
      comp=Z,19nm,0.7s
F19K  Shaleruckik Mo     20.04  32  P     Pn     04 44 19.4 -0.9
      baz=236,SNR=29
N20K  Mount Spurr        20.07  50  P     Pn     04 44 19.7 -1.1
      baz=258
SPCR  Spurr Chakacha     20.07  50  P     P      04 44 19.4 +0.6
      baz=258
J20K  Nowinta River      20.11  41        P      04 44 18.0 -1.0
J20K  Nowinta River      20.11  41  P     Pn     04 44 20.3 -0.9
      baz=247,SNR=62
C18K  Utukok River       20.17  26        P      04 44 20.1 +0.4
C18K  Utukok River       20.17  26  P     Pn     04 44 21.4 -0.5
      baz=227,SNR=16
I20K  Naaghedeneel       20.22  39  P     P      04 44 19.6 -0.7
CNPM  China Poot         20.27  55        P      04 44 17.9 -3.0
STLK  Strandline Lak     20.31  49  P     P      04 44 20.0 -1.4
H20K  Anotleneega Mo     20.37  37  P     Pn     04 44 23.0 -1.3
      baz=243,SNR=46
BRLK  Bradley Lake       20.48  54  IAmb  IAmb   04 44 23.7
      comp=Z,15nm,0.7s
PPLA  Purkeypile         20.50  45  IAmb  IAmb   04 44 38.5
      comp=Z,14nm,0.9s
PPLA  Purkeypile         20.50  45  P     P      04 44 24.1 +0.5
      baz=253
B18K  Kokolik River      20.52  24  P     Pn     04 44 24.8 -1.0
      baz=224
BRSE  Bradley Lake S     20.55  55  P     P      04 44 23.8 -0.1
      baz=263
SKT   Skwentna           20.56  48  P     P      04 44 24.9 +0.9
      baz=256,SNR=8.0
E19K  Redstone River     20.57  31  IAmb  IAmb   04 44 26.7
      comp=Z,32nm,1.2s
E19K  Redstone River     20.57  31  P     Pn     04 44 25.1 -1.4
      baz=235,SNR=28
CAST  Castle Rocks       20.70  44  IAmb  IAmb   04 44 28.1
      comp=Z,9.0nm,0.8s
CAST  Castle Rocks       20.70  44  P     Pn     04 44 26.9 -1.3
      baz=252
CHUM  Lake Minchumin     20.76  43  P     Pn     04 44 27.2 -1.5
      baz=250
SUA   Susitna One        20.81  50  IAmb  IAmb   04 44 36.4
      comp=Z,22nm,1.2s
SUA   Susitna One        20.81  50  P     P      04 44 27.3 +0.4
      baz=258
F20K  Avaraart Lake      20.84  33  IAmb  IAmb   04 44 37.0
      comp=Z,12nm,1.1s
F20K  Avaraart Lake      20.84  33  P     Pn     04 44 28.2 -1.4
      baz=238
C19K  Lookout Ridge      20.91  26  IAmb  IAmb   04 44 42.8
      comp=Z,18nm,0.9s
C19K  Lookout Ridge      20.91  26  P     Pn     04 44 29.1 -1.4
      baz=228,SNR=5.4
D19K  Kuna River         20.92  28  P     Pn     04 44 29.1 -1.6
      baz=232,SNR=20
IMAR  Indian Mountai     21.01  36  P     P      04 44 28.7 -0.1
H21K  Melozitna Rive     21.22  38  IAmb  IAmb   04 44 42.7
      comp=Z,11nm,0.8s
H21K  Melozitna Rive     21.22  38  P     P      04 44 32.1 +1.0
      baz=246,SNR=13
RC01  Rabbit Creek A     21.23  51  P     P      04 44 31.7 +0.5
      baz=260
SEW   Seward             21.23  54  P     P      04 44 32.2 +0.9
      baz=263
KTH   Kantishna Hill     21.24  44  IAmb  IAmb   04 44 42.6
      comp=Z,29nm,1.2s
A19K  Wainwright         21.30  22  P     P      04 44 32.8 +0.9
      baz=224
G21K  Allakaket          21.34  35  IAmb  IAmb   04 44 42.9
      comp=Z,14nm,1.1s
G21K  Allakaket          21.34  35  P     P      04 44 33.0 +0.6
      baz=243,SNR=10
I21K  Tanana             21.35  39  IAmb  IAmb   04 44 39.7
      comp=Z,11nm,1.1s
I21K  Tanana             21.35  39  P     P      04 44 33.0 +0.6
      baz=248
E20K  Nigu River         21.35  30  P     P      04 44 33.6 +1.0
      baz=235,SNR=16
YSS   Yuzhno-Sakhali     21.37 269 eP     P      04 44 42.3  +10
YSS                                eS     Sn     04 48 43.0 +6.3
YSS                                 pmax  pmax
      comp=Z,20nm,0.6s
YSS                                 MLR   MLR
      comp=Z,100nm,11.0s
BPAW  Bear Paw Mtn.      21.38  43  IAmb  IAmb   04 44 47.6
      comp=Z,15nm,1.2s
BPAW  Bear Paw Mtn.      21.38  43  P     P      04 44 33.3 +0.5
      baz=252
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TRF   Thorofare Moun     21.49  44  IAmb  IAmb   04 44 49.0
      comp=Z,14nm,0.9s
TRF   Thorofare Moun     21.49  44  P     P      04 44 33.5 -0.6
      baz=254
D20K  Etivluk River      21.49  28  IAmb  IAmb   04 44 53.0
      comp=Z,32nm,1.4s
D20K  Etivluk River      21.49  28  P     P      04 44 34.3 +0.3
      baz=234,SNR=7.0
F21K  Alatna River       21.68  34  IAmb  IAmb   04 44 46.1
      comp=Z,16nm,0.8s
F21K  Alatna River       21.68  34  P     P      04 44 37.0 +1.0
      baz=241,SNR=12
MLY   Manley             21.79  40  IAmb  IAmb   04 44 42.5
      comp=Z,10nm,0.6s
MLY   Manley             21.79  40  P     P      04 44 37.5 +0.3
      baz=250,SNR=27
H22K  Ishtalitna Cre     21.86  38  P     P      04 44 38.5 +0.6
      baz=247,SNR=6.1
PWL   Port Wells         21.87  52  P     P      04 44 37.6 -0.5
      baz=263
KNK   Knik Glacier       21.89  50  P     P      04 44 39.6 +1.3
      baz=261
SML   Sawmill            22.01  49  IAmb  IAmb   04 44 57.4
      comp=Z,21nm,1.2s
SML   Sawmill            22.01  49  P     P      04 44 39.3 -0.4
      baz=260
E21K  Killik River       22.14  30  IAmb  IAmb   04 44 42.9
      comp=Z,8.7nm,0.7s
E21K  Killik River       22.14  30  P     P      04 44 40.4 -0.6
      baz=238
B20K  Meade River        22.15  25  P     P      04 44 41.8 +0.9
      baz=230
MCK   McKinley           22.15  44  IAmb  IAmb   04 44 44.0
      comp=Z,9.9nm,0.9s
MCK   McKinley           22.15  44  P     P      04 44 42.0 +0.9
      baz=255
P23K  Montague Islan     22.25  54  P     P      04 44 42.6 +0.5
      baz=266
F22K  John River         22.26  34  P     P      04 44 42.4 +0.2
      baz=242
C21K  Knifeblade Rid     22.29  28  P     P      04 44 43.3 +0.8
      baz=235
NEA2  Nenana             22.33  42  IAmb  IAmb   04 44 46.4
      comp=Z,18nm,1.1s
NEA2  Nenana             22.33  42  P     P      04 44 44.2 +1.3
      baz=253,SNR=18
I23K  Minto, Yukon-K     22.38  40  P     P      04 44 44.6 +1.1
      baz=251,SNR=9.6
WAT6  Susitna Watana     22.42  47  P     P      04 44 44.3 +0.2
      baz=259
GLI   Glacier Island     22.48  52  P     P      04 44 44.2 -0.4
      baz=264
SCM   Sheep Creek Mo     22.49  49  IAmb  IAmb   04 44 46.4
      comp=Z,14nm,0.8s
SCM   Sheep Creek Mo     22.49  49  P     P      04 44 44.1 -0.6
      baz=261
H23K  Yukon River        22.53  39  P     P      04 44 45.7 +0.5
      baz=250,SNR=5.9
B21K  Ikpikpuk River     22.61  28  P     P      04 44 46.2 +0.3
      baz=235,SNR=8.7
DHY   Denali Highway     22.68  46  P     P      04 44 46.3 -0.5
      baz=258
E22K  Anaktuvuk Pass     22.68  32  P     P      04 44 47.0 +0.2
      baz=242,SNR=19
G23K  Bananza Creek      22.68  36  IAmb  IAmb   04 44 50.3
      comp=Z,9.6nm,0.6s
G23K  Bananza Creek      22.68  36  P     P      04 44 46.9 +0.1
      baz=247,SNR=21
WRH   Wood River Hil     22.70  43  IAmb  IAmb   04 44 51.5
      comp=Z,6.5nm,0.6s
D22K  Ayikyak River      22.77  30        P      04 44 46.5 -1.2
D22K                                IAmb  IAmb   04 44 49.1
      comp=Z,12nm,0.8s
D22K  Ayikyak River      22.77  30  P     P      04 44 48.0 +0.3
      baz=239,SNR=7.4
COLD  Coldfoot           22.83  35  IAmb  IAmb   04 44 51.7
      comp=Z,7.2nm,0.6s
CCB   Clear Creek Bu     22.86  42  IAmb  IAmb   04 44 52.9
      comp=Z,5.6nm,0.5s
COLA  College            22.91  42  P     P      04 44 48.2 -0.8
COLA                                IAmb  IAmb   04 45 00.2
      comp=Z,14nm,0.7s
COLA  College            22.91  42  P     P      04 44 49.6 +0.6
COLA  College            22.91  42d iP    P      04 44 49.4 +0.4
COLA                                pmax  pmax
      comp=Z,11nm,0.8s
COLA  College            22.91  42  P     P      04 44 48.6 -0.4
      baz=254
POKR  Poker Plat Res     23.15  41  IAmb  IAmb   04 44 53.4
      comp=Z,8.1nm,0.7s
POKR  Poker Plat Res     23.15  41  P     P      04 44 52.0 +0.5
      baz=254
HDA   Harding Lake       23.16  43  P     P      04 44 51.7 +0.1
      baz=256
H24K  Noodor Dome        23.18  39  IAmb  IAmb   04 45 05.9
      comp=Z,12nm,0.8s
H24K  Noodor Dome        23.18  39  P     P      04 44 52.0 +0.1
      baz=252,SNR=18
ILAR  Eielson Array      23.28  42  P     P      04 44 51.3 -1.5
      comp=Z,1.9nm,0.5s,baz=251,slow=7.8,SNR=56
ILAR                                LR    LR     04 54 35.2
      comp=Z,87nm,20.2s,baz=200,slow=38
      comp=Z,1.9nm,0.5s
ILAR  Eielson Array      23.28  42 eP     P      04 44 51.3 -1.5
ILAR                                pmax  pmax
      comp=Z,3.0nm,0.5s
A22K  Sinclair Lake      23.35  25  P     P      04 44 52.9 -0.4
      baz=232
B22K  Teshekpuk Lake     23.36  27  P     P      04 44 53.6 +0.1
      baz=235,SNR=5.6
E23K  Chandalar          23.38  33  IAmb  IAmb   04 44 56.1
      comp=Z,13nm,0.8s
E23K  Chandalar          23.38  33  P     P      04 44 53.9 +0.1
      baz=245,SNR=21
D23K  Nanushuk River     23.45  31  P     P      04 44 54.7 +0.3
      baz=241,SNR=16
PAX   Paxson             23.52  47  P     P      04 44 54.7 -0.5
      baz=261,SNR=6.7
K24K  Donnelly Dome      23.53  45  IAmb  IAmb   04 45 17.1
      comp=Z,10nm,0.8s
K24K  Donnelly Dome      23.53  45  P     P      04 44 54.3 -0.9
      baz=258
G24K  Hadweenzic Riv     23.62  37  IAmb  IAmb   04 45 12.4
      comp=Z,13nm,1.2s
G24K  Hadweenzic Riv     23.62  37  P     P      04 44 56.9 +0.8
      baz=250,SNR=7.1
TOLK  Toolik Lake Re     23.65  32  P     P      04 44 56.9 +0.5
      baz=243,SNR=26
F24K  Squaw Lake         23.76  35  IAmb  IAmb   04 45 08.7
      comp=Z,5.7nm,0.7s
F24K  Squaw Lake         23.76  35  P     P      04 44 58.1 +0.6
      baz=248,SNR=9.7
E24K  Your Creek         23.77  34  IAmb  IAmb   04 45 10.6
      comp=Z,7.5nm,0.8s
E24K  Your Creek         23.77  34  P     P      04 44 57.6 +0.1
      baz=246
J25K  Salcha River,      23.87  43  P     P      04 44 57.0 -1.5
      baz=257
C23K  Itkillik River     23.90  29  P     P      04 44 58.5 -0.1
      baz=240,SNR=9.0
RIDG  Independent Ri     23.92  45  P     P      04 44 57.0 -2.0
      baz=260
PRP   Porcupine Dome     24.03  41  IAmb  IAmb   04 45 03.6
      comp=Z,13nm,1.2s
PRP   Porcupine Dome     24.03  41  P     P      04 45 00.2 +0.1
      baz=255,SNR=9.7
GLB   Gilahina Butte     24.11  51  IAmb  IAmb   04 45 03.2
      comp=Z,7.6nm,1.1s
H25L  Birch Creek        24.12  39  P     P      04 45 01.3 +0.7
      baz=253,SNR=16
D24K  Happy Valley       24.12  31  IAmb  IAmb   04 45 03.5
      comp=Z,18nm,1.1s
D24K  Happy Valley       24.12  31  P     P      04 45 00.8 +0.1
      baz=243,SNR=7.1
G25K  Bearman Lake       24.16  38  P     P      04 45 01.0 -0.1
      baz=252
DOT   Dot Lake           24.25  46  IAmb  IAmb   04 45 06.3
      comp=Z,14nm,1.4s
SCRK  Sand Creek         24.34  45  IAmb  IAmb   04 45 15.5
      comp=Z,6.1nm,0.6s
SCRK  Sand Creek         24.34  45  P     P      04 45 01.8 -1.1
      baz=260,SNR=7.9
C24K  Franklin Bluff     24.42  30  P     P      04 45 03.5 +0.1
      baz=242
CRQE  Cirque             24.43  53  P     P      04 45 03.0 -0.7
      baz=268
L26K  Log Cabin Wild     24.48  47  IAmb  IAmb   04 45 18.7
      comp=Z,7.8nm,1.1s
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MCARA McCarthy VSAT      24.49  51  P     P      04 45 03.4 -0.7
      baz=267
F25K  Christian Rive     24.60  36  IAmb  IAmb   04 45 07.9
      comp=Z,16nm,1.2s
F25K  Christian Rive     24.60  36  P     P      04 45 05.7 +0.6
      baz=250,SNR=16
J26L  Joseph Creek       24.61  44  IAmb  IAmb   04 45 06.9
      comp=Z,7.4nm,0.7s
J26L  Joseph Creek       24.61  44  P     P      04 45 04.2 -1.1
      baz=259,SNR=21
E25K  Arctic Village     24.80  35  P     P      04 45 07.6 +0.6
      baz=250,SNR=21
BMAR  Burnt Mountain     24.93  37        P      04 45 07.8 -0.3
I26K  Coal Creek Min     24.94  42  P     P      04 45 08.6 +0.5
      baz=258
D25K  Kavik River        24.99  32  IAmb  IAmb   04 45 10.4
      comp=Z,12nm,0.8s
D25K  Kavik River        24.99  32  P     P      04 45 09.9 +1.3
      baz=246,SNR=9.9
G26K  Porcupine Rive     25.09  38  P     P      04 45 09.1 -0.3
      baz=254,SNR=26
M27K  Edge Creek, AK     25.09  49  IAmb  IAmb   04 45 24.3
      comp=Z,10.0nm,1.1s
M27K  Edge Creek, AK     25.09  49  P     P      04 45 10.2 +0.4
      baz=266
F26K  Sheenjek River     25.17  36  P     P      04 45 09.9 -0.4
F26K  Sheenjek River     25.17  36  P     P      04 45 11.0 +0.7
      baz=252,SNR=25
L27K  Beaver Creek,      25.18  47  P     P      04 45 09.7 -0.7
      baz=264
K27K  Chicken            25.18  45  IAmb  IAmb   04 45 23.5
      comp=Z,9.6nm,1.1s
K27K  Chicken            25.18  45  P     P      04 45 10.2 -0.1
      baz=262
BCAR  Beaver Creek A     25.19  47  P     P      04 45 09.7 -0.9
I27K  Kandik River       25.63  41  P     P      04 45 13.9 -0.6
      baz=259
C26K  Camden Bay         25.70  31  P     P      04 45 15.4 +0.5
      baz=247
YUK3  Moose Creek        25.73  50  P     P      04 45 15.4 -0.2
      baz=268
H27K  Steamboat Moun     25.79  40  P     P      04 45 14.8 -1.1
      baz=258
PINM  Pinnacle           25.84  54  P     P      04 45 15.4 -1.1
      baz=272
O28M  Mount Upton        25.85  53  IAmb  IAmb   04 45 29.1
      comp=Z,7.1nm,0.8s
O28M  Mount Upton        25.85  53  P     P      04 45 16.5 -0.3
      baz=270
G27K  Doyon Strip        25.87  39  IAmb  IAmb   04 45 29.1
      comp=Z,5.0nm,0.7s
G27K  Doyon Strip        25.87  39  P     P      04 45 16.4 -0.2
      baz=257,SNR=13
C27K  Jago River         25.97  32  P     P      04 45 17.4 -0.1
      baz=249,SNR=8.8
YAK   Yakutsk            26.00 310        P      04 45 16.9 -0.9
YAK   Yakutsk            26.00 310  P     P      04 45 17.4 -0.3
      comp=Z,52nm,0.6s,baz=288,slow=2.4,SNR=11
YAK                                 LR    LR     04 55 52.2
      comp=Z,74nm,18.4s,baz=96,slow=37
YAK   Yakutsk            26.00 310 eP     P      04 45 16.8 -0.9
YAK                                e*PP   pP     04 45 25.7 -2.5
YAK                                e             04 48 42.0
YAK                                eS     S      04 49 47.0 +1.7
YAK                                e*SS   sS     04 50 03.3 -0.1
YAK                                eSS    SnSn   04 50 45.6 +1.0
YAK                                e             04 56 10.5
YAK                                 pmax  pmax
      comp=Z,50nm,0.9s
YAK                                 pmax  pmax
      comp=N,3.0nm,1.1s
YAK                                 pmax  pmax
      comp=E,9.0nm,1.0s
YAK                                 smax  smax
      comp=E,34nm,3.1s
YAK                                 smax  smax
      comp=N,29nm,2.4s
YUK8  Steele Glacier     26.05  51  P     P      04 45 17.9 -0.7
      baz=270
E27K  Coleen River       26.24  36  IAmb  IAmb   04 45 23.6
      comp=Z,8.9nm,0.8s
E27K  Coleen River       26.24  36  P     P      04 45 20.2 +0.3
      baz=254,SNR=9.1
PNL   Peninsula          26.29  55  P     P      04 45 21.4 +1.0
I28M  Miner Creek        26.29  42  P     P      04 45 19.9 -0.6
      baz=261
DAWY  Dawson             26.36  45  IAmb  IAmb   04 45 35.7
      comp=Z,8.1nm,0.9s
DAWY  Dawson             26.36  45  P     P      04 45 21.4 +0.3
      baz=264,SNR=8.8
YUK4  Talbot Arm         26.59  51  P     P      04 45 22.8 -0.6
      baz=270
M29M  Somme Creek        26.68  49  P     P      04 45 24.3 +0.2
      baz=269
F28M  Old Crow           26.73  37  IAmb  IAmb   04 45 39.3
      comp=Z,13nm,1.4s
F28M  Old Crow           26.73  37  P     P      04 45 23.5 -0.8
      baz=257
D27M  Malcolm River      26.76  33  IAmb  IAmb   04 45 29.3
      comp=Z,8.7nm,0.7s
D27M  Malcolm River      26.76  33  P     P      04 45 24.8 +0.1
      baz=253,SNR=12
L29M  L29M               26.86  47  P     P      04 45 24.9 -0.7
      baz=268
I29M  Ogilvie Camp,      26.96  42  IAmb  IAmb   04 45 39.4
      comp=Z,4.0nm,0.6s
H29M  Whitestone         27.05  41  P     P      04 45 26.4 -0.8
      baz=261
E28M  Babbage River      27.08  35  P     P      04 45 27.3 -0.2
      baz=256
P29M  Windy Craggy       27.13  55  P     P      04 45 26.8 -1.2
      baz=275
K29M  Barlow Dome        27.16  46  IAmb  IAmb   04 45 41.7
      comp=Z,4.6nm,0.8s
K29M  Barlow Dome        27.16  46  P     P      04 45 28.6 +0.2
      baz=267
HYT   Haines Junctio     27.16  52  P     P      04 45 28.0 -0.5
      baz=273
KLR   Kul'dur            27.20 281  P     P      04 45 28.9 +0.2
      comp=Z,2.1nm,0.6s,baz=46,slow=8.6,SNR=7.6
      comp=Z,2.1nm,0.6s
KLR   Kul'dur            27.20 281d iP    P      04 45 29.4 +0.7
KLR                                 pmax  pmax
      comp=Z,8.0nm,1.4s
G29M  Pine Creek         27.29  39  IAmb  IAmb   04 45 32.6
      comp=Z,7.6nm,0.7s
G29M  Pine Creek         27.29  39  P     P      04 45 29.3 -0.1
      baz=260,SNR=13
N30M  Aishikik Lake      27.34  51  P     P      04 45 29.9  0.0
      baz=272
E29M  Blow River         27.62  36  P     P      04 45 32.8 +0.5
      baz=258
J30M  Hart River         27.73  44  P     P      04 45 32.9 -0.5
      baz=266
EPYK  Eagle Plains       27.73  40  IAmb  IAmb   04 45 35.8
      comp=Z,7.3nm,0.5s
EPYK  Eagle Plains       27.73  40  P     P      04 45 33.1 -0.2
      baz=263,SNR=13
I30M  Mount Dempster     27.75  43  P     P      04 45 33.3 -0.4
      baz=265
N31M  Braeburn, Yuko     27.97  51  P     P      04 45 35.4 -0.2
      baz=273
G30M  tAoh Zraii Nji     28.01  39  P     P      04 45 36.0 +0.2
      baz=262
TIXI  Tiksi              28.12 331  P     P      04 45 36.4 -0.3
      comp=Z,2.4nm,0.5s,baz=124,slow=9.6,SNR=6.8
      comp=Z,2.4nm,0.5s
F30M  Barrier River      28.26  38  IAmb  IAmb   04 45 53.5
      comp=Z,10nm,1.3s
F30M  Barrier River      28.26  38  P     P      04 45 38.5 +0.4
      baz=261
ZEA   Zeya               28.36 292 eP     P      04 45 38.9 -0.2
ZEA                                 pmax  pmax
      comp=Z,10.0nm,1.0s
H31M  Peel River         28.64  42  IAmb  IAmb   04 45 42.5
      comp=Z,4.4nm,0.6s
H31M  Peel River         28.64  42  P     P      04 45 41.4 -0.1
      baz=266,SNR=8.1
G31M  Satah River        28.76  39  P     P      04 45 42.1 -0.3
      baz=264,SNR=26
SIT   Sitka              28.76  60  P     P      04 45 42.0 -0.5
      baz=281
P32M  Atlin              29.17  55  P     P      04 45 46.0 -0.2
      baz=278
INK   Inuvik             29.20  37  P     P      04 45 46.6 +0.2
      baz=262
USA0B Ussuriysk Arra     29.33 272⥣eP     P      04 45 47.6 -0.1
USRK  Ussuriysk Ar.      29.33 272  P     P      04 45 47.9 +0.2
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             comp=Z,4.2nm,0.8s,baz=47,slow=13,SNR=6.2
             comp=Z,4.2nm,0.8s
USRK  Ussuriysk Ar.       29.33 272  eP      P       04 45 48.5 +0.8
USRK                                  pmax    pmax
             comp=Z,4.0nm,0.8s
Q32M  Nakina River        30.00  56   P       P       04 45 52.7 -1.1
             baz=280
MMPY  Sheldon Lake,       30.01  48   P       P       04 45 53.3 -0.3
             baz=274
WRAK  Wrangell Islan      30.50  61   P       P       04 45 57.5 -0.5
             baz=284
R33M  Jennings River      30.58  55   P       P       04 45 58.6 -0.2
             baz=280
S34M  Telegraph Cree      30.80  57   P       P       04 45 59.5 -1.0
             baz=282
DLBC  Dease Lake          31.25  56   P       P       04 46 03.7 -1.0
             baz=282
BNX   BinXian             31.38 278 ⇓P       P       04 46 05.4 -0.4
BNX                                   pmax    pmax
             comp=Z,17nm,0.8s
A36M  Sachs Harbour       32.43  30   P       P       04 46 14.3 -0.4
             baz=265
C36M  Paulatuk            32.70  35   IAmb    IAmb    04 46 48.6
             comp=Z,8.2nm,1.1s
C36M  Paulatuk            32.70  35   P       P       04 46 16.5 -0.5
             baz=270
H11N2 WAKE ISLAND Hy      32.87 194   T       T       05 21 09.0
             baz=10,slow=76
H11N3 WAKE ISLAND Hy      32.88 194   T       T       05 21 06.9
             baz=10,slow=76
H11N1 WAKE ISLAND Hy      32.88 194   T       T       05 21 07.6
             baz=10,slow=76
H11S1 WAKE ISLAND Hy      34.10 194   T       T       05 22 41.1
             baz=10,slow=76
H11S3 WAKE ISLAND Hy      34.11 194   T       T       05 22 32.1
             baz=10,slow=76
H11S2 WAKE ISLAND Hy      34.11 194   T       T       05 22 44.9
             baz=10,slow=76
KSRS  Korea Array         35.74 265   P       P       04 46 45.5 +1.7
             comp=Z,1.3nm,0.6s,baz=53,slow=7.9,SNR=6.9
KSRS                                  LR      LR      05 02 52.2
             comp=Z,14µm,18.5s,baz=95,slow=39
             comp=Z,1.3nm,0.6s
YKAW3 Yellowknife Wh      37.57  46   IAmb    IAmb    04 47 00.0
             comp=Z,2.9nm,0.8s
YKA   Yellowknife Ar      37.59  46   P       P       04 46 59.1 -0.2
             comp=Z,1.6nm,0.8s,baz=293,slow=8.6,SNR=9.6
             comp=Z,1.6nm,0.8s
YKA   Yellowknife Ar      37.59  46  eP       P       04 46 59.1 -0.2
YKA                                   pmax    pmax
             comp=Z,1.0nm,0.6s
XLT   XiLinHaoTe          39.22 282  eP       P       04 47 12.3 -1.0
XLT                                   sP      pP      04 47 26.8 +3.0
XLT                                   pmax    pmax
             comp=Z,9.0nm,0.8s
XLT                                   pmax    pmax
             comp=Z,80nm,4.4s
RES   Resolute Bay        40.73  24   LR      LR      05 06 14.1
             comp=Z,28nm,19.7s,baz=348,slow=39
ULN   Ulaanbaatar         42.40 292⇓iP       P       04 47 40.3 +0.8
ULN                                   pmax    pmax
             comp=Z,4.0nm,0.7s
SONM  Songino Array       42.79 293   P       P       04 47 43.4 +0.7
             comp=Z,3.9nm,0.6s,baz=64,slow=7.9,SNR=27
SONM                                  LR      LR      05 08 00.9
             comp=Z,48nm,18.1s,baz=78,slow=40
             comp=Z,3.9nm,0.6s
TIA   Tai'an              43.19 272   P       P       04 47 46.9 +1.0
TIA                                   pmax    pmax
             comp=Z,5.0nm,0.5s
HHC   Hu-ho-hao-te        43.71 281  eP       P       04 47 42.9 -7.2
HHC                                   pmax    pmax
             comp=Z,5.0nm,0.5s
HHC                                   pmax    pmax
             comp=Z,49nm,5.3s
HNS   HongShan            43.92 275 ⇑P       P       04 47 52.9 +1.2
HNS                                   pmax    pmax
             comp=Z,13nm,1.0s
BLKN  Baker Lake          44.59  38           P       04 47 55.9 -0.8
BLKN                                  IAmb    IAmb    04 47 56.9
             comp=Z,6.9nm,1.1s
GUMO  Guam                45.29 223   LR      LR      05 05 29.6
             comp=Z,46nm,19.7s,baz=101,slow=34
LYMT  Lyon Mountain       45.73  66   P       P       04 48 05.0 -1.3
ILON  Igloolik, Nuna      46.74  28           P       04 48 12.9 -0.7
BOZ   Bozeman (W)         46.89  67   P       P       04 48 14.8 -0.5
BOZ   Bozeman (W)         46.89  67   P       P       04 48 14.8 -0.5
BOZ                                   pmax    pmax
             comp=Z,2.0nm,0.7s
NVAR  Mina Array Bea      47.32  79   P       P       04 48 18.5 -0.4
             comp=Z,0.4nm,0.6s,baz=315,slow=7.9,SNR=2.6
             comp=Z,0.4nm,0.6s
NEEM  North Greenlan      47.65  12  i P      P       04 48 19.7 -1.2
NEEM                                  IAmb    IAmb    04 48 22.6
             comp=Z,24nm,0.6s
FCC   Fort Churchill      48.27  44           P       04 48 25.3 -0.3
FCC   Fort Churchill      48.27  44   P       P       04 48 25.3 -0.3
FCC                                   pmax    pmax
             comp=Z,9.0nm,1.0s
WHN   Wuhan               48.72 268   P       P       04 48 29.9 +0.5
WHN                                   pmax    pmax
             comp=Z,27nm,0.7s
KBS   Kingsbay            48.88 356   P       P       04 48 29.6 -0.4
KBS   Kingsbay            48.88 356   P       P       04 48 29.6 -0.4
KBS                                   pmax    pmax
             comp=Z,9.0nm,0.8s
KBS   Kingsbay            48.88 356  i P      P       04 48 29.7 -0.4
KULLO Kullorsuaq          48.97  16  i P      P       04 48 30.4 -0.4
KULLO                                 IAmb    IAmb    04 48 32.8
             comp=Z,7.9nm,0.7s
SPITS Spitsbergen Ar      49.36 354   P       P       04 48 33.7 -0.1
             comp=Z,14nm,0.4s,baz=44,slow=7.3,SNR=151
             comp=Z,14nm,0.4s
PDAR  Pinedale Array      49.79  69   P       P       04 48 36.9 -0.9
             comp=Z,0.9nm,0.6s,baz=303,slow=3.8,SNR=7.2
             comp=Z,0.9nm,0.6s
ZALV  Zalesovo Beam       50.65 310   P       P       04 48 42.8 -1.0
             comp=Z,2.3nm,0.6s,baz=37,slow=6.5,SNR=7.6
             comp=Z,2.3nm,0.6s
DAG   Danmarks Havn       51.15   4  i P      P       04 48 46.0 -1.3
DAG                                   IAmb    IAmb    04 48 48.9
             comp=Z,3.1nm,0.9s
LZH   Lanzhou             51.41 281  eP       P       04 48 49.9 -0.1
LZH                                   pmax    pmax
             comp=Z,23nm,1.2s
GTA   Gaotai              51.64 287   P       P       04 48 52.2 +0.6
GTA                                   PcP     PcP     04 49 51.0  -14
GTA                                   pmax    pmax
             comp=Z,24nm,0.9s
ULM   Lac du Bonnet       52.53  54   P       P       04 48 56.7 -1.2
             comp=Z,2.6nm,0.5s,baz=312,slow=4.4,SNR=3.7
             comp=Z,2.6nm,0.5s
PV13  Radium Mtn., P      53.18  73   IAmb    IAmb    04 49 31.3
             comp=Z,3.6nm,0.7s
DBG   Daneborg            53.51   5  i P      P       04 49 02.7 -2.0
DBG                                   IAmb    IAmb    04 49 04.6
             comp=Z,7.4nm,1.0s
SUMG  Summit              53.51  12           P       04 49 03.7 -1.6
SUMG  Summit              53.51  12   P       P       04 49 03.7 -1.6
SUMG                                  pmax    pmax
             comp=Z,13nm,1.1s
SUMG  Summit              53.51  12  i P      P       04 49 04.0 -1.3
SUMG                                  IAmb    IAmb    04 49 06.0
             comp=Z,16nm,1.2s
WMQ   Urumqi              55.62 299  eP       P       04 49 19.2 -1.4
WMQ                                   LR      LR
             comp=Z,110nm,23.9s
KURK  Kurchatov           55.64 310           P       04 49 20.1 -0.5
KURK                                  PcP     PcP     04 50 19.5 -0.2
KURK  Kurchatov           55.64 310c iP       P       04 49 20.4 -0.2
KURK                                  pmax    pmax
             comp=Z,44nm,1.0s
KURBB Kurchatov Arra      55.74 310   P       P       04 49 21.3  0.0
             comp=Z,24nm,0.9s,baz=48,slow=6.9,SNR=90
KURBB                                 LR      LR      05 14 32.4
             comp=Z,57nm,18.1s,baz=183,slow=37
             comp=Z,24nm,0.9s
MK31  Makanchi Array      56.47 305c iP       P       04 49 25.8 -0.8
MKAR  Makanchi Array      56.47 305           P       04 49 25.5 -1.1
MKAR                                  PcP     PcP     04 50 24.2 +1.1
MKAR  Makanchi Array      56.47 305   P       P       04 49 25.9 -0.7
             comp=Z,6.7nm,0.5s,baz=51,slow=6.2,SNR=97
             comp=Z,6.7nm,0.5s
ICESG Greenland Ices      56.52  14  i P      P       04 49 25.1 -1.9
ICESG                                 IAmb    IAmb    04 49 27.3
             comp=Z,12nm,1.2s
MAKZ  Makanchi            56.62 305           P       04 49 26.6 -1.1
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MAKZ                                  PcP     PcP     04 50 24.0 +0.4
MAKZ  Makanchi            56.62 305   P       P       04 49 26.6 -1.1
MAKZ                                                  04 50 24.0
MAKZ                                  pmax    pmax
             comp=Z,9.0nm,0.6s
ARCES ARCESS Array B      56.66 348   P       P       04 49 27.2 -0.4
             comp=Z,1.0nm,0.3s,baz=38,slow=7.7,SNR=32
             comp=Z,1.0nm,0.3s
BVAR  Borovoye Array      57.75 316   P       P       04 49 35.5  0.0
             comp=Z,8.6nm,0.6s,baz=49,slow=7.7,SNR=40
             comp=Z,8.6nm,0.6s
BRVK  Borovoye            57.77 316           P       04 49 34.7 -1.0
BRVK  Borovoye            57.77 316c iP       P       04 49 35.7  0.0
BRVK                                  pmax    pmax
             comp=Z,9.0nm,0.8s
MNTX  Cornudas Mount      59.66  76   IAmb    IAmb    04 50 22.1
             comp=Z,3.4nm,1.2s
ARTI  Arti                59.96 325           P       04 49 50.4 -0.4
ARTI  Arti                59.96 325c iP       P       04 49 51.3 +0.5
ARTI                                                  04 50 42.0
ARTI                                                  04 52 00.5
ARTI                                  S       S       04 58 02.5 +2.7
ARTI                                  SS      SS      05 01 54.8 -1.0
ARTI                                  pmax    pmax
             comp=Z,11nm,0.7s
E46A  Sault Ste Mari      60.83  51   P       P       04 49 56.6 -0.3
KIRV  Kirov               61.15 331⇓iP       P       04 50 00.1 +1.3
SCHQ  Schefferville       61.81  35   P       P       04 50 02.8 -0.6
             comp=Z,7.8nm,0.7s,baz=348,slow=7.2,SNR=12
             comp=Z,7.8nm,0.7s
KLMR  Klimovskoe          61.91 337  eP       P       04 50 02.1 -1.8
KLMR                                  pmax    pmax
             comp=Z,16nm,1.1s
TXAR  Lajitas Array       62.38  77           P       04 50 06.0 -1.7
TXAR  Lajitas Array       62.38  77   P       P       04 50 07.5 -0.2
             comp=Z,2.0nm,0.7s,baz=303,slow=4.0,SNR=35
             comp=Z,2.0nm,0.7s
AAK   Ala-Archa           63.34 306c iP       P       04 50 14.3 +0.3
AAK                                   pmax    pmax
             comp=Z,5.0nm,0.6s
FINES FINESS Array B      64.14 344   P       P       04 50 18.6 -0.2
             comp=Z,6.7nm,0.7s,baz=24,slow=7.9,SNR=20
             comp=Z,6.7nm,0.7s
KSH   Kashi               64.88 302   P       P       04 50 27.9 +3.8
KSH                                   pmax    pmax
             comp=Z,12nm,0.7s
NB2   NORSAR Subarra      66.49 351   P       P       04 50 33.6 -0.4
             comp=Z,2.4nm,0.5s,baz=11,slow=6.5
NB2   NORSAR Subarra      66.49 351   P       P       04 50 30.5 -3.5
NB2                                   pmax    pmax
             comp=Z,1.0nm,0.5s
NOA   NORSAR Array B      66.49 351   P       P       04 50 34.0 -0.1
             comp=Z,2.4nm,0.5s,baz=1.1,slow=5.9,SNR=16
             comp=Z,2.4nm,0.5s
NOA   NORSAR Array B      66.49 351   P       P       04 50 34.0 -0.1
NORES NORESS Array B      66.76 351   P       P       04 50 38.5 +2.8
BELG  Belogornoye         66.89 328c iP       P       04 50 37.3 +0.7
BELG                                  pmax    pmax
             comp=Z,7.0nm,0.8s
CMAR  Chiang Mai Arr      67.05 271   P       P       04 50 38.4 +0.3
             comp=Z,1.9nm,0.5s,baz=30,slow=7.0,SNR=7.6
             comp=Z,1.9nm,0.5s
CMAR  Chiang Mai Arr      67.05 271  eP       P       04 50 39.3 +1.1
CMAR                                  pmax    pmax
             comp=Z,1.0nm,0.3s
HFS   Hagfors             67.14 350   P       P       04 50 37.3 -0.7
             comp=Z,3.0nm,0.5s,baz=13,slow=6.8,SNR=13
             comp=Z,3.0nm,0.5s
OBN   Obninsk             67.73 336⇓eP       P       04 50 42.3 +0.4
OBN                                  e                04 51 11.6
OBN                                  e                04 53 10.4
OBN                                  eS       S       04 59 30.5 -5.6
OBN                                  eSS      SS      05 03 54.5 -2.1
OBN                                   pmax    pmax
             comp=Z,22nm,1.6s
OBN                                   MLR     MLR
             comp=Z,113nm,18.0s
MNK   Minsk               70.31 340  i P      P       04 50 57.6 -0.4
             comp=Z,16nm,0.8s,baz=21
MNK                                  i PP     PP      04 53 41.9 +8.8
MNK                                  i PPP    PPP     04 55 31.8
MNK                                  i S      S       05 00 08.3 +1.7
MNK                                  i SS     SS      05 04 41.8 +5.5
MNK                                  i SSS    SSS     05 08 00.8
MNK                                  i LR     LR      05 22 29.0
MNK                                  i LRM    MLR     05 25 07.3
             comp=Z,29nm,19.0s
MNK   Minsk               70.31 340  i P      P       04 50 57.5 -0.4
MNK                                  i                04 53 41.8
MNK                                  i S      S       05 00 08.3 +1.7
MNK                                  i SS     SS      05 04 41.8 +5.5
MNK                                   pmax    pmax
             comp=Z,16nm,0.8s
MNK                                   MLR     MLR
             comp=Z,29nm,19.0s
TAOE  Nuku Hiva Isla      71.86 133  eLR      LR      05 12 56.9
             comp=Z,123nm,24.4s
EKA   Eskdalemuir Ar      72.96 359   P       P       04 51 13.6 -0.3
             comp=Z,2.8nm,0.6s,baz=7.7,slow=5.1,SNR=12
             comp=Z,2.8nm,0.6s
AK21  Malin Array Si      73.54 338   P       P       04 51 16.8 -0.5
AK03  Malin Array Si      73.54 338   P       P       04 51 16.6 -0.7
AK22  Malin Array Si      73.54 338   P       P       04 51 16.6 -0.7
AK04  Malin Array Si      73.56 338   P       P       04 51 16.5 -0.9
AKASG Malin Array Be      73.56 338   P       P       04 51 17.4 -0.1
             comp=Z,2.5nm,0.5s,baz=27,slow=6.0,SNR=15
             comp=Z,2.5nm,0.5s
AKASG Malin Array Be      73.56 338  eP       P       04 51 17.5  0.0
AKASG                                 pmax    pmax
             comp=Z,2.0nm,0.4s
AKBB  Malin Array Si      73.56 338⇓eP       P       04 51 17.1 -0.4
AKBB                                  pmax    pmax
             comp=Z,9.0nm,1.0s
AKBB  Malin Array Si      73.56 338   P       P       04 51 16.9 -0.6
AK20  Malin Array Si      73.58 338   P       P       04 51 17.2 -0.3
KIEV  Kiev                73.58 338   P       P       04 51 16.7 -0.8
             comp=Z,36nm,0.9s
AK01  Malin Array Si      73.58 338   P       P       04 51 16.7 -0.8
AK18  Malin Array Si      73.58 338   P       P       04 51 17.0 -0.6
AK15  Malin Array Si      73.59 338   P       P       04 51 16.9 -0.7
AK19  Malin Array Si      73.59 338   P       P       04 51 17.1 -0.5
AK11  Malin Array Si      73.60 338   P       P       04 51 17.2 -0.5
AK02  Malin Array Si      73.61 338   P       P       04 51 17.3 -0.4
RNPP9 Sopachiv            73.63 340   P       P       04 51 16.8 -1.0
MI28  Mi28,Pidlybu        73.70 339   P       P       04 51 16.3 -2.0
RNPP5 Staryi Chortor      73.80 340   P       P       04 51 19.1 +0.2
DZM   Mont Dzumac         74.18 188  eLR      LR      05 13 53.7
             comp=Z,116nm,27.6s
LUBAR Lubar, Ukraine      74.63 339   P       P       04 51 22.7 -1.0
KIV   Kislovodsk          75.84 327  eP       P       04 51 31.7 +0.8
KIV                                   pmax    pmax
             comp=Z,10.0nm,1.1s
KIV                                   MLR     MLR
             comp=Z,22nm,18.0s
NCK   Nalchik             75.93 326⇑iP       P       04 51 31.7 +0.3
NCK                                   pmax    pmax
             comp=Z,21nm,0.8s
PPT2  Papeete2            75.94 145  eLR      LR      05 14 47.9
             comp=Z,122nm,23.8s
KBZ   Khabaz              75.97 326   P       P       04 51 32.3 +0.8
             comp=Z,9.3nm,0.9s,baz=348,slow=2.8,SNR=19
             comp=Z,9.3nm,0.9s
KBZ   Khabaz              75.97 326c iP       P       04 51 32.8 +1.3
KBZ                                   pmax    pmax
             comp=Z,11nm,0.9s
SHA1  Shidzhatmaz         76.04 326c iP       P       04 51 33.5 +1.3
SORM  Soroca              76.17 338   P       P       04 51 32.0 -0.5
             comp=Z,12nm,0.9s
KMPD  K-Podol'skiy        76.20 339   P       P       04 51 32.2 -0.5
SHIU  Shidnytsya          76.22 341   P       P       04 51 33.3 +0.4
STNU  Starunia            76.48 340   P       P       04 51 34.5 +0.2
KOLS  Kolonicke sedl      76.71 342  eP       P       04 51 37.1 +1.4
KOLS  Kolonicke sedl      76.71 342  eP       P       04 51 37.1 +1.4
KSV   Kosov               76.73 340   P       P       04 51 35.7 -0.1
NSLU  Nyzhne Selyshc      76.97 340   P       P       04 51 39.0 +1.9
LANS  Liptovska Anna      77.01 344  eP       P       04 51 39.5 +2.1
LANS  Liptovska Anna      77.01 344  eP       P       04 51 39.5 +2.1
BRIU  Brid                77.13 341   P       P       04 51 38.5 +0.5
GERES GERESS Array B      78.20 347   P       P       04 51 44.4 +0.3
             comp=Z,0.4nm,0.5s,baz=22,slow=4.8,SNR=4.0
             comp=Z,0.4nm,0.5s
GERES GERESS Array B      78.20 347  eP       P       04 51 44.8 +0.7
GERES                                 pmax    pmax
             comp=Z,1.0nm,0.7s
WRA   Warramunga Arr      79.94 218   P       P       04 51 53.0 -0.7
```

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             comp=Z,0.4nm,0.7s,baz=30,slow=5.7,SNR=5.2
             comp=Z,0.4nm,0.7s
TBI   Tubuai              81.31 147  eLR      LR      05 17 15.2
             comp=Z,982nm,32.8s
BR131 Keskin Array S      82.56 331⇑eP       P       04 52 08.1 +0.4
BRTR  Keskin Array B      82.56 331   P       P       04 52 08.3 +0.6
             comp=Z,7.7nm,0.7s,baz=56,slow=2.8,SNR=59
             comp=Z,7.7nm,0.7s
ASAR  Alice Springs       83.49 217   P       P       04 52 13.2 +0.8
             comp=Z,0.4nm,0.8s,baz=24,slow=5.7,SNR=6.3
             comp=Z,0.4nm,0.8s
H03N2 Juan Fernandez     125.12 101   T       T       07 16 06.3
             baz=314,slow=77,SNR=5.3
H03N1 Juan Fernandez     125.14 101   T       T       07 16 08.0
             baz=314,slow=77,SNR=6.3
H03N3 Juan Fernandez     125.14 101   T       T       07 16 11.4
             baz=314,slow=77,SNR=4.7
PLCA  Paso Flores        134.94 102   PKP     PKPdf   04 59 03.2 +0.1
             comp=Z,0.9nm,0.7s,baz=325,slow=4.4,SNR=4.9
QSPA  South Pole Qui     141.81 180   PKP     PKPdf   04 59 13.4 -1.4
             comp=Z,2.4nm,1.2s,baz=270,slow=0.2,SNR=2.9
BOSA  Boshof             147.47 304   PKPbc   PKPbc   04 59 28.1 -0.5
             comp=Z,4.7nm,0.7s,baz=47,slow=2.1,SNR=9.4
```

IDC ***12*** *04:40:41.6±0.8, 51°.93N×174°.99E, h0km, mb4.2/20, mbtmp4.2/20, Error ellipse: s-maj=22.8km s-min=16.5km az=168.0*

NEIC ***12*** *04:40:48.1±1.6, 52°.06N±0°.07×174°.9E±0°.1, h35km±2km, mb4.4/49, Error ellipse: s-maj=13.8km s-min=11.5km az=232.0*

ISC 12 04:40:47.8±0.6**, 52°.03N**±0°.09×**174°.88E**±0°.06**, h39km, n87,** σ**0s.96**/84**, mb4.4**/37**, Near Islands**

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Code  Station Name         Δ°   AZ°   Phase ID        Time       Res
                                      Op      ISC     h  m  s    ISC
SHEM  Shemya Is, Ala       0.85 326   Pn      Pn      04 41 03.0 -0.2
SHEM                                  Sn      Sn      04 41 15.1 +0.6
SHEM  Shemya Is, Ala       0.85 326   Pn      Pn      04 41 02.9 -0.4
             baz=176,slow=5.8
SHEM                                  Sn      Sn      04 41 13.3 -1.2
             1µm,0.3s,baz=292,slow=21,SNR=7.8
SMY   Shemya               0.85 326   Pn      Pn      04 41 02.9 -0.4
SMY                                   Sn      Sn      04 41 15.7 +1.3
PETK  Petropavlovsk-      10.52 283   Pn      Pn      04 43 18.1 +2.3
             0.5nm,0.3s,baz=98,slow=16,SNR=2.4
PETK                                  Sn      Sn      04 45 08.6 -3.6
             1.8nm,0.3s,baz=0.0,slow=30,SNR=4.7
M13K  Dall Lake           14.67  47   Pn      Pn      04 44 13.1 +0.7
K15K  Wolf Creek Mou      16.30  42   P       P       04 44 36.2 +0.1
K15K                                  IAmb    IAmb    04 44 40.4
             comp=Z,25nm,0.8s
L16K  Owhat River         16.92  45   P       P       04 44 44.3 +1.3
K17K  Iditarod            17.84  43   P       P       04 44 54.8 +1.7
C16K  Lisburne Hills      18.87  23           Pn      04 45 05.6 +0.4
H18K  Honhosa River       18.95  36   Pn      Pn      04 45 07.0 +0.7
G18K  Tagagawik           19.25  34           Pn      04 45 09.5 -0.2
G18K                                  IAmb    IAmb    04 45 11.1
             comp=Z,14nm,0.9s
RDOG  Red Dog Mine        19.32  25   P       P       04 45 09.4  0.0
SYI   Shuyak Island       19.60  58   P       P       04 45 10.7 -1.7
SYI                                   IAmb    IAmb    04 45 13.9
             comp=Z,19nm,0.8s
H19K  Roundabout Mou      19.84  36   Pn      Pn      04 45 16.6 -0.1
H19K                                  IAmb    IAmb    04 45 16.8
             comp=Z,11nm,1.1s
F19K  Shaleruckik Mo      20.07  32   P       P       04 45 17.8 +0.4
F19K                                  IAmb    IAmb    04 45 19.3
             comp=Z,12nm,0.7s
J20K  Nowinta River       20.13  41   P       P       04 45 19.0 +0.9
J20K                                  IAmb    IAmb    04 45 20.6
             comp=Z,19nm,0.8s
C18K  Utukok River        20.20  25   P       Pn      04 45 20.4 -0.6
C18K                                  IAmb    IAmb    04 45 21.0
             comp=Z,17nm,0.7s
CNPM  China Poot          20.29  55   P       P       04 45 20.1 +0.2
CNPM                                  IAmb    IAmb    04 45 22.2
             comp=Z,16nm,0.9s
E19K  Redstone River      20.60  31   P       P       04 45 22.9 -0.3
E19K                                  IAmb    IAmb    04 45 25.7
             comp=Z,17nm,1.2s
D19K  Kuna River          20.95  28   P       P       04 45 27.4 +0.4
D19K                                  IAmb    IAmb    04 45 29.9
             comp=Z,27nm,1.2s
SCM   Sheep Creek Mo      22.51  49   P       P       04 45 43.4 -0.4
SCM                                   IAmb    IAmb    04 45 45.4
             comp=Z,11nm,0.7s
E22K  Anaktuvuk Pass      22.71  32   P       P       04 45 45.1 -0.8
E22K                                  IAmb    IAmb    04 45 47.2
             comp=Z,13nm,0.8s
G23K  Bananza Creek       22.71  36   P       P       04 45 46.2 +0.4
ILAR  Eielson Array       23.30  42   P       P       04 45 51.0 -0.8
             comp=Z,0.8nm,0.5s,baz=248,slow=7.4,SNR=4.6
             comp=Z,0.8nm,0.5s
E23K  Chandalar           23.41  33   P       P       04 45 53.2 +0.3
E23K                                  IAmb    IAmb    04 45 55.2
             comp=Z,13nm,1.2s
D23K  Nanushuk River      23.47  31   P       P       04 45 53.6 +0.2
D23K                                  IAmb    IAmb    04 45 54.5
             comp=Z,12nm,0.7s
ERM   Erimo               23.66 258   P       P       04 45 56.3 +0.9
TOLK  Toolik Lake Re      23.68  32   P       P       04 45 55.1 -0.3
C23K  Itkillik River      23.93  29   P       P       04 45 57.9 +0.2
C23K                                  IAmb    IAmb    04 45 59.5
             comp=Z,18nm,1.2s
SCRK  Sand Creek          24.36  45   P       P       04 46 01.3 -0.6
SCRK                                  IAmb    IAmb    04 46 09.9
             comp=Z,9.1nm,1.4s
C24K  Franklin Bluff      24.45  30   P       P       04 46 03.5 +1.0
C24K                                  IAmb    IAmb    04 46 04.1
             comp=Z,13nm,1.1s
FYU   Fort Yukon          24.45  38   P       P       04 46 03.5 +1.0
FYU                                   IAmb    IAmb    04 46 04.5
             comp=Z,11nm,0.7s
J26L  Joseph Creek        24.64  44   P       P       04 46 03.5 -0.9
E25K  Arctic Village      24.83  35   P       P       04 46 05.9 -0.1
E25K                                  IAmb    IAmb    04 46 09.2
             comp=Z,15nm,1.0s
BMAR  Burnt Mountain      24.96  36   P       P       04 46 07.6 +0.4
I26K  Coal Creek Min      24.97  42   P       P       04 46 08.1 +0.9
G26K  Porcupine Rive      25.11  38   P       P       04 46 09.0 +0.5
F26K  Sheenjek River      25.20  36   P       P       04 46 09.7 +0.3
F26K                                  IAmb    IAmb    04 46 12.2
             comp=Z,6.1nm,0.7s
K27K  Chicken             25.20  45   P       P       04 46 08.0 -1.4
G27K  Doyon Strip         25.89  39   P       P       04 46 15.9 +0.3
C27K  Jago River          26.00  32   P       P       04 46 16.6 +0.1
C27K                                  IAmb    IAmb    04 46 19.6
             comp=Z,7.7nm,0.8s
E27K  Coleen River        26.26  36   P       P       04 46 19.2 +0.2
E27K                                  IAmb    IAmb    04 46 22.7
             comp=Z,5.7nm,0.8s
I28M  Miner Creek         26.32  42   P       P       04 46 18.7 -0.9
DAWY  Dawson              26.38  45   P       P       04 46 20.9 +0.8
G29M  Pine Creek          27.32  39   P       P       04 46 28.5 +0.1
G29M                                  IAmb    IAmb    04 46 32.6
             comp=Z,5.7nm,0.9s
G30M  tAoh Zraii Nji      28.03  39   P       P       04 46 35.6 +0.7
S31K  Pelican             28.14  58   P       P       04 46 37.5 +1.7
H31M  Peel River          28.66  42   P       P       04 46 39.7 -0.8
H31M                                  IAmb    IAmb    04 46 43.8
             comp=Z,6.2nm,1.4s
G31M  Satah River         28.79  39   P       P       04 46 41.4 -0.1
G31M                                  IAmb    IAmb    04 46 42.4
             comp=Z,6.3nm,0.5s
H11N2 WAKE ISLAND Hy      32.84 194   T       T       05 21 50.3
             baz=10
H11N3 WAKE ISLAND Hy      32.85 194   T       T       05 21 53.4
             baz=10
H11N1 WAKE ISLAND Hy      32.85 194   T       T       05 21 53.9
             baz=10
H11S1 WAKE ISLAND Hy      34.07 194   T       T       05 23 30.9
             baz=9.1
H11S3 WAKE ISLAND Hy      34.08 194   T       T       05 23 29.5
             baz=9.1
H11S2 WAKE ISLAND Hy      34.08 194   T       T       05 23 30.0
             baz=9.1
KSRS  Korea Array         35.73 265   P       P       04 47 44.0 +1.4
             comp=Z,2.3nm,1.0s,baz=54,slow=8.7,SNR=2.4
             comp=Z,2.3nm,1.0s
YKA   Yellowknife Ar      37.62  46   P       P       04 47 58.8 +0.5
             comp=Z,0.6nm,0.7s,baz=291,slow=8.7,SNR=2.1
             comp=Z,0.6nm,0.7s
SONM  Songino Array       42.80 293   P       P       04 48 42.3 +0.7
             comp=Z,2.4nm,0.6s,baz=60,slow=7.7,SNR=5.1
```

	comp=Z,2.4nm,0.6s						
SPITS	Spitsbergen Ar	49.39	354	P	P	04 49 32.7	-0.2
	comp=Z,7.3nm,0.5s,baz=50,slow=7.8,SNR=7.1						
	comp=Z,7.3nm,0.5s						
SPB2	Spitsbergen Ar	49.39	354		P	04 49 32.4	-0.4
XAN	Xi'an	49.67	276	P	P	04 49 35.0	-0.6
XAN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PDAR	Pinedale Array	49.80	69	P	P	04 49 35.6	-1.1
	comp=Z,1.5nm,0.9s,baz=323,slow=3.7,SNR=4.7						
	comp=Z,1.5nm,0.9s						
KURBB	Kurchatov Arra	55.76	310	P	P	04 50 20.4	+0.1
	comp=Z,14nm,0.9s,baz=50,slow=7.3,SNR=12						
	comp=Z,14nm,0.9s						
MKAR	Makanchi Array	56.48	305	P	P	04 50 24.9	-0.7
MKAR	Makanchi Array	56.48	305	P	P	04 50 25.0	-0.6
	comp=Z,3.3nm,0.5s,baz=50,slow=6.3,SNR=6.2						
	comp=Z,3.3nm,0.5s						
ARCES	ARCESS Array B	56.69	348	P	P	04 50 23.5	-3.2
	comp=Z,2.1nm,0.7s,baz=46,slow=7.0,SNR=4.4						
BVAR	Borovoye Array	57.77	316	P	P	04 50 34.9	+0.3
	comp=Z,4.7nm,0.6s,baz=52,slow=7.7,SNR=6.9						
	comp=Z,4.7nm,0.6s						
SCHQ	Schefferville	61.84	35	P	P	04 51 01.8	-0.6
	comp=Z,4.6nm,0.7s,baz=360,slow=11,SNR=3.9						
	comp=Z,4.6nm,0.7s						
TXAR	Lajitas Array	62.39	77	P	P	04 51 06.7	0.0
	comp=Z,1.5nm,0.7s,baz=298,slow=3.8,SNR=4.8						
	comp=Z,1.5nm,0.7s						
FINES	FINESS Array B	64.17	344	P	P	04 51 17.6	-0.2
	comp=Z,3.1nm,0.7s,baz=46,slow=5.5,SNR=4.7						
	comp=Z,3.1nm,0.7s						
ABKAR	Akbulak array	64.95	319	P	P	04 51 23.4	+0.3
NOA	NORSAR Array B	66.52	351	P	P	04 51 32.8	-0.3
	comp=Z,1.4nm,0.6s,baz=12,slow=6.4,SNR=3.8						
	comp=Z,1.4nm,0.6s						
CMAR	Chiang Mai Arr	67.05	271	P	P	04 51 37.1	+0.1
	comp=Z,1.2nm,0.3s,baz=44,slow=6.7,SNR=2.1						
	comp=Z,1.2nm,0.3s						
HFS	Hagfors	67.17	350	P	P	04 51 36.3	-0.8
	comp=Z,1.9nm,0.6s,baz=352,slow=6.0,SNR=1.8						
	comp=Z,1.9nm,0.6s						
GAR	Garm	68.17	306	P	P	04 51 44.4	+0.4
AKASG	Malin Array Be	73.59	338	P	P	04 52 16.8	+0.3
	comp=Z,2.6nm,0.7s,baz=27,slow=6.0,SNR=5.5						
	comp=Z,2.6nm,0.7s						
KBZ	Khabaz	75.99	326	P	P	04 52 31.6	+1.2
	comp=Z,4.4nm,0.8s,baz=169,slow=6.2,SNR=4.6						
	comp=Z,4.4nm,0.8s						
BUR08	Bucovina Ar. S	77.37	340	P	P	04 52 39.5	+1.2
BURAR	Bucovina Array	77.39	340		P	04 52 38.7	+0.2
WRA	Warramunga Arr	79.92	218	P	P	04 52 50.8	-1.6
	comp=Z,0.7nm,0.6s,baz=21,slow=5.4,SNR=2.1						
	comp=Z,0.7nm,0.6s						
BR131	Keskin Array S	82.59	331		P	04 53 07.4	+0.7
BRTR	Keskin Array B	82.59	331		P	04 53 07.3	+0.5
BRTR	Keskin Array B	82.59	331	P	P	04 53 07.7	+0.9
	comp=Z,4.0nm,0.7s,baz=63,slow=2.8,SNR=12						
	comp=Z,4.0nm,0.7s						
BNN	Bunyan	82.70	329	P	P	04 53 08.3	+0.9
RDO	Rodhopi	83.45	337	P	P	04 53 11.9	+0.9
ASAR	Alice Springs	83.47	217	P	P	04 53 10.6	-0.5
	comp=Z,0.3nm,0.5s,baz=24,slow=4.5,SNR=1.6						
	comp=Z,0.3nm,0.5s						
BOSA	Boshof	147.49	304	PKPbc	PKPbc	05 00 26.6	-0.9
	comp=Z,3.0nm,0.8s,baz=0.2,slow=5.4,SNR=3.8						

IDC 12 05:09:54.1±5.3, 21°.25S×169°.76E, h0^{km}, mb3.3/2, mbtmp3.4/3, ML3.5/1, MS3.4/1, Error ellipse: s-maj=244.6km s-min=38.1km az=154.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	3.19	255	Pn	Pn	05 10 46.8	+1.2
	4.9nm,0.3s,baz=118,slow=15,SNR=77						
DZM				Sn	Sn	05 11 24.5	+0.1
	5.0nm,0.3s,baz=22,slow=18,SNR=5.2						
	11nm,0.3s						
WRA	Warramunga Arr	33.14	266	P	P	05 16 32.0	-0.4
	0.3nm,0.6s,baz=97,slow=8.3,SNR=5.2						
	0.3nm,0.6s						
ASAR	Alice Springs	33.17	259	P	P	05 16 32.3	-0.4
	0.2nm,0.5s,baz=94,slow=11,SNR=1.8						
ASAR				LR	LR	05 31 29.1	
	comp=Z,64nm,19.2s,baz=246,slow=39						
	0.2nm,0.5s						
GERES	GERESS Array B	146.48	331	PKPbc	PKPbc	05 29 36.7	-0.6
	0.7nm,0.6s,baz=57,slow=3.6,SNR=4.7						

IDC 12 05:29:14.1±8.7, 19°.04S×175°.67W, h306^{km}±68^{km}, mb3.1/4, mbtmp3.8/5, Error ellipse: s-maj=179.4km s-min=21.4km az=152.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	6.10	281	P	Pn	05 30 45.2	+0.3
	6.6nm,0.8s,baz=121,slow=20,SNR=6.0						
WRA	Warramunga Arr	46.99	260	P	P	05 37 15.0	-0.6
	0.3nm,0.3s,baz=97,slow=7.5,SNR=11						
	0.3nm,0.3s						
ASAR	Alice Springs	47.00	255	P	P	05 37 15.7	0.0
	1.1nm,0.4s,baz=91,slow=8.3,SNR=17						
ASAR				PcP	PcP	05 38 43.4	+0.8
	0.5nm,0.6s,baz=95,slow=3.6,SNR=4.4						
	1.1nm,0.4s						
NVAR	Mina Array Bea	78.47	42	P	P	05 40 41.1	-0.8
	0.5nm,0.7s,baz=252,slow=4.4,SNR=4.5						
	0.5nm,0.7s						
TXAR	Lajitas Array	84.42	57	P	P	05 41 13.7	+0.6
	0.8nm,0.9s,baz=252,slow=4.5,SNR=7.3						
	0.8nm,0.9s						

NNC 12 05:41:13.2±4.3, 36°.47N×66°.75E, h0^{km}, mb4.4, mpv3.9, 6C-1D, Error ellipse: s-maj=51.1km s-min=32.0km az=118.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	7.23	22	⇑Pn	Pn	05 43 00.6	+0.4
	9.4nm,0.6s,baz=212,slow=16,SNR=56						
KK31				⇑Sn	Sn	05 44 23.8	+0.9
	2.7nm,0.3s						
KK31				⇑Lg	Lg	05 45 03.1	
	6.3nm,0.6s,baz=206,slow=29,SNR=5.0						
AAK	Ala-Archa	8.58	42	⇑Pn	Pn	05 43 18.8	0.0
	1.5nm,0.5s						
AAK				⇑Sn	Sn	05 44 59.9	+3.5
	5.0nm,1.1s						
TKM2	Tokmak 2	9.38	44	⇓Pn	Pn	05 43 29.2	-0.5
	9.7nm,0.6s						
TKM2				⇑Sn	Sn	05 45 15.1	-0.9
	3.8nm,0.6s						

PRE ***12*** *05:46:34.9±0.9, 26°.49S×27°.43E, h2^{km}, ML3.0*
BUL ***12*** *05:46:35.3±1.8, 26°.46S×27°.83E, h10^{km}, MD3.6*
BGSI ***12*** *05:46:35.8±1.9, 26°.64S×27°.65E, h0^{km}±59^{km}, MD4.5, ML3.3*

ISC 12 05:46:38.0±2.4, 26°.55S±0°.04×27°.43E±0°.05, h25^{km}±21^{km}, n28, σ1^{s}.45/45, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBTB	Lobatse	2.25	312	*e*P	Pn	05 47 14.2	+0.4
LBTB				*e*S	Sn	05 47 41.4	+0.6
LBTB				IAML		05 47 46.8	
	comp=Z,351nm,0.6s						
LBTB	Lobatse	2.25	312	*i* P	Pn	05 47 15.2	+1.5
LBTB				*i* S	Sb	05 47 45.3	-0.2
CRLN	Carolina, Mapu	2.39	77	*e*P	Pn	05 47 15.6	-0.3
CRLN				*e*S	Sn	05 47 45.3	+0.8
CRLN				IAML		05 47 45.5	
	comp=Z,46nm,0.2s						
BOSA	Boshof	2.82	223	*e*P	Pn	05 47 22.6	+1.0
BOSA				*e*S	Sn	05 47 56.4	+1.6
BOSA				IAML		05 48 08.3	
	comp=Z,54nm,0.6s						
BOSA	Boshof	2.82	223	*i* P	Pn	05 47 23.7	+2.1
BOSA				*i* S	Sb	05 48 00.3	-1.6
LPHEP	Lephephe	3.48	336	*i* P	Pn	05 47 31.1	+0.4
LPHEP				*i* S	Sn	05 48 12.3	+1.1
LPHEP				IAML		05 48 27.4	
	comp=E,105nm,0.4s						
SKOMA	Sekoma	3.75	302	*i* P	Pn	05 47 35.1	+0.7
SKOMA				*i* S	Sn	05 48 21.0	+3.1
SKOMA				IAML		05 48 36.1	
	comp=E,80nm,0.5s						
MREMI	Moremi	3.96	0	*i* P	Pn	05 47 36.7	-0.7
MREMI				*i* S	Sn	05 48 23.9	+0.9
MREMI				IAML		05 48 39.7	
	comp=N,158nm,0.2s						
KSTD	Kokstad	4.38	158	*e*P	Pn	05 47 44.9	+1.8
KSTD				*e*S	Sn	05 48 35.2	+1.8
KSTD				IAML		05 48 58.9	
	comp=Z,28nm,0.4s						
HVD	Gariep Dam	4.38	202	*e*P	Pn	05 47 43.6	+0.5
HVD				*e*S	Sn	05 48 34.9	+1.4
MOPA	Mopani	4.70	51	*i* P	Pn	05 47 44.0	-3.4
MOPA				*i* S	Sn	05 48 28.4	-13
MUSN	Musina, Limpop	4.79	28	*i* P	Pn	05 47 44.1	-4.6
MUSN				*i* S	Sn	05 48 33.1	-10
BROLN	Tlhalogang	5.43	359	*i* P	Pn	05 47 56.9	-0.6
BROLN				IAML		05 49 21.6	
	comp=E,47nm,1.3s						
ALKP	Alkanpan, Nort	5.68	232	*e*P	Pn	05 48 01.8	+0.8
ALKP				*e*S	Sn	05 49 05.1	-0.4
ALKP				IAML		05 49 38.4	
	comp=Z,42nm,0.4s						
KGCAE	Kacgae	6.01	307	*i* P	Pn	05 48 07.2	+1.7
KGCAE				IAML		05 49 49.7	
	comp=E,134nm,1.0s						
SOOWA	Sowa	6.06	349	*i* P	Pn	05 48 06.3	+0.1
SOOWA				*i* S	Sn	05 49 12.4	-2.5
SOOWA				IAML		05 49 46.4	
	comp=E,171nm,0.6s						
BFON	Badsfontein, M	6.17	211	*e*P	Pn	05 48 08.8	+1.2
BFON				*e*S	Sn	05 49 17.3	-0.1
BFON				IAML		05 50 10.5	
	comp=Z,20nm,0.6s						
GRAF	Camdeboo Natio	6.26	203	*e*P	Pn	05 48 10.3	+1.5
GRAF				*e*S	Sn	05 49 19.3	-0.3
GRAF				IAML		05 49 38.4	
	comp=Z,8.1nm,0.4s						
BLWY	Bulawayo	6.47	10	*i* P	Pn	05 48 07.6	-4.3
BLWY				*i* S	Sn	05 49 14.9	-10
BRAK	Brakfontein	6.55	216	*e*P	Pn	05 48 14.8	+2.0
BRAK				*e*S	Sn	05 49 26.0	-0.8
BRAK				IAML		05 50 09.2	
	comp=Z,26nm,0.6s						
GRHM	Grahamstown, E	6.76	188	*e*P	Pn	05 48 17.0	+1.2
GRHM				*e*S	Sn	05 49 32.1	0.0
GRHM				IAML		05 50 19.3	
	comp=Z,13nm,0.8s						
GRAN	Grantham	7.34	217	*e*P	Pn	05 48 25.0	+1.3
GRAN				*e*S	Sn	05 49 46.0	-0.2
GRAN				IAML		05 50 32.9	
	comp=Z,20nm,0.5s						
FRAZ	Fraserburg	7.51	223	*e*P	Pn	05 48 27.5	+1.4
FRAZ				*e*S	Sn	05 49 49.4	-1.0
FRAZ				IAML		05 50 39.4	
	comp=Z,14nm,0.6s						
GRTLG	Ghanzi	7.68	311	*i* P	Pn	05 48 29.4	+1.0
GRTLG				IAML		05 50 42.3	
	comp=N,40nm,1.1s						
CHIPN	CHIPINGE	7.91	38	*i* P	Pn	05 48 26.1	-5.5
CHIPN				*i* S	Sn	05 49 47.3	-13
MERW	Merweville	7.98	219	*e*P	Pn	05 48 34.1	+1.6
MERW				*e*S	Sn	05 50 00.3	-1.7
MERW				IAML		05 50 20.2	
	comp=Z,12nm,0.5s						
CVNA	Calvinia	8.32	232	*e*P	Pn	05 48 38.6	+1.5
CVNA				*e*S	Sn	05 50 08.4	-1.9
CVNA				IAML		05 51 14.0	
	comp=Z,21nm,0.4s						
KOMG	Komaggas	9.35	247	*e*P	Pn	05 48 52.0	+0.7
KOMG				*e*S	Sn	05 50 32.1	-3.6
KOMG				IAML		05 50 48.1	
	comp=Z,4.2nm,0.5s						

KRNET ***12*** *05:54:06.5±0.1, 42°.29N×80°.59E, h19^{km}, mb4.0*
SOME ***12*** *05:54:07.7, 42°.32N×80°.53E, h15^{km}*
IDC ***12*** *05:54:09.3±1.7, 42°.49N×80°.32E, h0^{km}, mb3.7/3, mbtmp3.6/8, ML3.1/5, MS2.0/1, Error ellipse: s-maj=23.4km s-min=14.0km az=142.0*
NNC ***12*** *05:54:09.9±1.0, 42°.38N×80°.37E, h0^{km}, mb4.1, mpv3.9, Error ellipse: s-maj=6.5km s-min=5.2km az=132.0*

ISC 12 05:54:10.3±1.2, 42°.39N±0°.04×80°.40E±0°.04, h19^{km}±2^{km}, n63, σ2^{s}.68/91, mb3.6/3, 36C-25D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	Shalkode	1.04	318	P	Pn	05 54 26.2	-3.7
	69nm,0.2s						
SHLS				S	Sb	05 54 40.5	-2.4
	796nm,0.4s						
SHLS	Shalkode	1.04	318	*e*P	Pn	05 54 26.2	-3.7
SHLS				*e*S	Sb	05 54 40.5	-2.4
SHLS	Shalkode	1.04	318	*e*P	Pn	05 54 26.2	-3.7
	69nm,0.2s						
SHLS				*e*S	Sb	05 54 40.5	-2.4
	796nm,0.4s						
KTMS	Ketmen	1.06	358	P	Pg	05 54 28.8	-2.1
	27nm,0.4s						
KTMS				S	Sg	05 54 44.6	-0.3
	93nm,0.4s						
KTMS	Ketmen	1.06	358	*e*P	Pg	05 54 28.8	-2.1
KTMS				*e*S	Sg	05 54 44.6	-0.3
KTMS	Ketmen	1.06	358	*e*P	Pg	05 54 28.8	-2.1
	27nm,0.4s						
KTMS				*e*S	Sg	05 54 44.6	-0.3
	93nm,0.4s						
PDGK	Podgornoye	1.16	325	⇓P	Pb	05 54 30.7	-1.0
	32nm,0.3s						
PDGK				⇑S	Sb	05 54 47.7	+1.2
	139nm,0.4s						
PRZ	Przheval'sk	1.49	274	⇓*i*P	Pb	05 54 37.0	-0.4
PRZ				⇓*i*S	Sg	05 54 59.2	+0.8
SATY	Saty	1.62	295	*e*P	Pg	05 54 40.0	-1.5
SATY				*e*S	Sg	05 55 03.6	+1.0
KURS	Kuram	1.98	305	Pg	Pg	05 54 46.5	-1.7
	122nm,0.5s						
KURS				Lg	Lg	05 55 14.7	
	97nm,0.5s						
DJR	Jarkent	2.00	347	Pg	Pb	05 54 45.9	-0.1
	34nm,0.4s						
DJR				Lg	Lg	05 55 14.1	
	417nm,0.4s						
DJR	Jarkent	2.00	347	*e*P	Pb	05 54 45.9	-0.1
	34nm,0.4s						
DJR				*e*S	Sg	05 55 14.1	-0.5
	417nm,0.4s						
TARG	Taragay, Kyrgy	2.04	252	⇑*i*P	Pb	05 54 45.5	-1.5
TARG				⇑*i*S	Sg	05 55 14.3	-1.9
KNOS	Konyrlen	2.17	336	Pg	Pg	05 54 49.4	-2.4
	59nm,0.3s						
KNOS				Lg	Lg	05 55 19.9	
	451nm,0.5s						
BLB	Baldybastay	2.21	321	Pg	Pb	05 54 50.3	+0.6
	426nm,0.4s						
BLB				Lg	Lg	05 55 21.6	
	497nm,0.4s						
KDJ	Kajisay	2.41	265	⇑*i*P	Pb	05 54 50.7	-2.3
KDJ				⇑*i*S	Sb	05 55 23.1	+0.7
KOTS	Kotyrbulak	2.56	290	Pg	Pg	05 54 56.9	-2.6
	110nm,0.3s						
KOTS				Lg	Lg	05 55 32.7	
	351nm,0.5s						
KOTS	Kotyrbulak	2.56	290	*e*P	Pg	05 54 56.9	-2.6
	110nm,0.3s						
KOTS				*e*S	Sg	05 55 32.7	-0.1
	351nm,0.5s						
MDOK	Medeo	2.59	289	Pg	Pb	05 54 55.1	-1.0
	64nm,0.6s						
MDOK				Pg	Pg	05 54 56.2	-3.7
	69nm,0.5s						
MDOK				Lg	Lg	05 55 31.9	
	64nm,0.5s						
MDOK				Lg	Lg	05 55 32.0	
	70nm,0.6s						
ARXS	Arharly	2.62	315	Pg	Pb	05 54 57.2	+0.5
	42nm,0.3s						
ARXS				Lg	Lg	05 55 33.4	
	140nm,0.4s						
TDK	Taldyqorghan	2.99	332	Pg	Pb	05 55 03.4	+0.5
	76nm,0.3s						
TDK				Lg	Lg	05 55 43.6	
	199nm,0.3s						
TDK	Taldyqorghan	2.99	332	*e*P	Pb	05 55 03.4	+0.5
	76nm,0.3s						
TDK				*e*S	Sg	05 55 43.6	-2.7
	199nm,0.3s						
MTBS	Maitube	3.02	286	Pg	Pb	05 55 03.9	+0.5
	22nm,0.3s						
MTBS				Lg	Lg	05 55 44.5	
	136nm,0.5s						
MTBS	Maitube	3.02	286	*e*P	Pb	05 55 03.9	+0.5
	22nm,0.3s						
MTBS				*e*S	Sb	05 55 44.5	+4.5
	136nm,0.5s						
KTBS	Karatobe	3.03	297	Pg	Pb	05 55 04.5	+0.9
	14nm,0.3s						
KTBS				Lg	Lg	05 55 45.6	
	316nm,0.5s						
ULHL	Ulahol	3.09	269	⇓*i*P	Pb	05 55 00.4	-4.3
ULHL				⇓*i*S	Sb	05 55 39.9	-2.2
BOOM	Boomskoye usch	3.31	273	⇑*i*P	Pb	05 55 03.5	-4.9
BOOM				⇑*i*S	Sb	05 55 45.2	-3.0
KST	Kastek	3.34	283	Pg	Pb	05 55 09.8	+0.9
	33nm,0.6s						
KST				Lg	Lg	05 55 54.7	
	95nm,0.5s						
KST	Kastek	3.34	283	*e*P	Pb	05 55 09.8	+0.9
	33nm,0.6s						
KST				*e*S	Sg	05 55 54.7	-2.8
	95nm,0.5s						
NRN	Naryn	3.42	255	⇑*i*P	Pb	05 55 05.1	-5.3
NRN				⇑*i*S	Sb	05 55 47.8	-3.9
DGS	Degeres	3.51	286	Pg	Pb	05 55 12.9	+1.1
	20nm,0.5s						
DGS				Lg	Lg	05 56 00.2	
	143nm,0.8s						
TKM2	Tokmak 2	3.58	280	⇓Pn	Pb	05 55 09.0	-4.2
	23nm,0.8s						
TKM2				⇑Lg	Lg	05 55 59.6	
	59nm,0.5s						
TKM2	Tokmak 2	3.58	280	⇑*i*P	Pn	05 55 07.6	+2.6
TKM2				⇑*i*S	Sb	05 55 52.1	-4.2
KBK	Karagaybulak	4.04	276	⇓*i*P	Pn	05 55 13.7	+2.5
KBK				⇓*i*S	Sn	05 56 02.9	+4.8
CHMS	Chumysh	4.21	280	⇓Pg	Pg	05 55 28.0	-2.9
	9.6nm,0.7s						
CHMS				⇓Lg	Lg	05 56 20.2	
	21nm,0.6s						
CHMS	Chumysh	4.21	280	⇑*e*P	Pn	05 55 16.2	+2.8
CHMS				⇑*i*S	Sn	05 56 07.0	+4.9
UCH	Uchtor	4.37	270	⇑*i*P	Pn	05 55 18.4	+2.4
UCH				⇑*i*S	Sn	05 56 10.9	+4.3
AAK	Ala-Archa	4.38	275	Pn	Pn	05 55 19.5	+3.6
	2.0nm,0.3s,baz=135,slow=8.6,SNR=8.5						
AAK				Lg	Lg	05 56 23.9	
	3.8nm,0.3s,baz=242,slow=19,SNR=4.6						
	3.8nm,0.3s						
AAK	Ala-Archa	4.38	275	⇓Pn	Pn	05 55 19.7	+3.9
	0.2nm,0.3s						
AAK				⇑Pg	Pg	05 55 31.2	-2.8
	2.5nm,0.5s						
AAK				⇓Lg	Lg	05 56 24.6	
	5.1nm,0.5s						
AAK	Ala-Archa	4.38	275	⇑*i*P	Pn	05 55 18.5	+2.7
AAK				⇑*i*S	Sn	05 56 11.0	+4.7
USP	Ospenovka	4.43	283	⇓*i*P	Pn	05 55 19.2	+2.7
USP				⇓*i*S	Sn	05 56 12.4	+4.9
ARLS	Aral	4.55	265	⇑*e*P	Pn	05 55 20.8	+2.5
ARLS				⇑*e*S	Sn	05 56 14.7	+4.0
MAKZ	Makanchi	4.56	14	⇑Pn	Pn	05 55 20.8	+2.6
	8.8nm,0.5s						
MAKZ				⇑Sn	Sn	05 56 15.4	+4.6
	42nm,0.8s						
MAKZ				⇓Lg	Lg	05 56 34.8	
	70nm,1.2s						
MK31	Makanchi Array	4.61	16	⇓Pn	Pn	05 55 20.9	+2.0
	2.8nm,0.2s,baz=202,slow=13,SNR=359						
MK31				⇓Sn	Sb	05 56 19.8	-5.8
	6.5nm,0.3s,baz=191,slow=20,SNR=17						
MK31				⇑Lg	Lg	05 56 35.1	
	28nm,0.6s,baz=193,slow=27,SNR=5.2						
MKAR	Makanchi Array	4.61	16	Pn	Pn	05 55 20.9	+2.0
	8.0nm,0.3s,baz=199,slow=14,SNR=99						
MKAR				Sn	Sn	05 56 12.9	+1.1
	4.4nm,0.3s,baz=205,slow=26,SNR=5.2						
MKAR				LR	LR	05 56 38.6	
	comp=Z,16nm,18.5s,baz=92,slow=33						
	12nm,0.3s						
EKS2	Erkin-Say	4.90	275	⇓*i*P	Pn	05 55 25.6	+2.5
EKS2				⇓*i*S	Sn	05 56 23.6	+4.3
AML	Almayashu	4.99	269	⇑*e*P	Pn	05 55 26.9	+2.5
AML				⇑*i*S	Sn	05 56 25.7	+4.0
SALK	Salom-Alik	5.16	255	⇑*e*P	Pn	05 55 28.5	+1.9
SALK				⇑*i*S	Sn	05 56 28.5	+2.9
ARSB	Arslanbob	5.64	262	⇑*i*P	Pn	05 55 35.4	+2.2
ARSB				⇑*i*S	Sn	05 56 40.5	+3.0
SFK	Sufi-Kurgan	5.72	248	⇑*i*P	Pn	05 55 36.1	+1.8
SFK				⇑*i*S	Sn	05 56 41.5	+1.9
MNAS	Manas	5.85	274	⇑*e*P	Pn	05 55 38.5	+2.5
MNAS				⇑*i*S	Sn	05 56 45.7	+3.1
KK31	Karatay Array	7.32	279	⇑Pg	Pg	05 56 25.4	-4.9
	2.7nm,0.7s,baz=89,slow=15,SNR=5.9						
KK31				⇑Lg	Lg	05 57 59.2	
	6.6nm,0.6s,baz=89,slow=25,SNR=6.7						
OTUK	Ortayu	8.16	319	⇓Pn	Pn	05 56 09.0	+1.4
	2.2nm,0.7s						
OTUK				⇓Lg	Lg	05 58 25.4	
	30nm,1.3s						
KURBB	Kurchatov Arra	8.34	352	Pn	Pn	05 56 10.3	+0.3
	0.1nm,0.3s,baz=177,slow=11,SNR=5.2						
KURBB				Sn	Sn	05 57 41.6	-2.0
	0.2nm,0.3s,baz=160,slow=14,SNR=4.1						
KURBB				Lg	Lg	05 58 34.0	
	0.3nm,0.3s,baz=176,slow=28,SNR=5.1						
	0.2nm,0.3s						
KURBB	Kurchatov Arra	8.34	352	⇓Pn	Pn	05 56 14.0	+4.0
	2.3nm,0.8s						
KURBB				⇓Lg	Lg	05 58 34.4	
	31nm,0.7s						
KURK	Kurchatov	8.42	352	⇓Pn	Pn	05 56 16.2	+5.0
	2.2nm,0.9s						
KURK				⇓Lg	Lg	05 58 37.1	
	22nm,0.9s						
ZALV	Zalesovo Beam	11.94	13	Pn	Pn	05 56 59.3	0.0
	0.4nm,0.3s,baz=190,slow=13,SNR=4.8						
ZALV				Sn	Sn	05 59 16.1	+4.4
	0.6nm,0.3s,baz=219,slow=24,SNR=4.9						
	1.2nm,0.4s						
BVAR	Borovoye Array	12.59	331	Lg	Lg	06 00 44.4	
	baz=152,slow=31,SNR=5.1						
SONM	Songino Array	19.09	65	P	Pn	05 58 33.7	+1.0
	baz=263,slow=10.0,SNR=4.2						
	0.3nm,0.4s						
HFS	Hagfors	43.27	318	P	P	06 02 11.5	+1.3
	0.8nm,0.3s,baz=98,slow=10,SNR=6.6						
	0.8nm,0.3s						
NB2	NORSAR Subarra	44.37	319	P	P	06 02 20.1	+1.0
	comp=Z,0.4nm,0.4s,baz=87,slow=7.4						
NOA	NORSAR Array B	44.37	319	P	P	06 02 20.6	+1.6
	comp=Z,0.4nm,0.4s,baz=77,slow=7.9,SNR=4.9						
	comp=Z,0.4nm,0.4s						
YKA	Yellowknife Ar	74.78	7	P	P	06 05 49.5	+0.9
	comp=Z,0.5nm,0.9s,baz=3.2,slow=4.0,SNR=4.2						
	comp=Z,0.5nm,0.9s						

GCG 12 06:17:18.3±1.1, 14°.21N×91°.40W, h79^{km}±10^{km}, MD3.5, ML3.4, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG8	El Palmar, Qui	0.24	11	*i* P	Pn	06 17 33.0	+2.5
STG8				*i* S	Sn	06 17 44.6	+5.2
ESSG	Sabana Grande	0.58	72	*i* P	Pn	06 17 33.0	+0.2
ESSG				*i* S	Sn	06 17 44.6	+1.2
SOKI	Kika Raxquin	0.61	360	*e*P	Pn	06 17 34.4	+1.0
SOKI				*e*S	Sn	06 17 46.5	+2.0
FG8	Yepocapa, Chim	0.81	86	*e*P	Pn	06 17 32.5	-2.8
FG8				*i* S	Sn	06 17 43.5	-4.3
FG16	Alotenango, Sa	0.86	86	*i* P	Pn	06 17 33.3	-2.6
FG16				*i* S	Sn	06 17 45.3	-3.7
FG16				IAML		06 17 49.1	
	comp=N,4µm,0.3s						
SMCA	Catarina	0.92	315	*i* P	Pn	06 17 36.6	+0.3
SMCA				*i* S	Sn	06 17 49.8	0.0
NUBE	Las Nubes	1.60	101	*i* P	Pn	06 17 45.5	+0.5
NUBE				*i* S	Sn	06 18 05.2	0.0

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	ISC
JAYA	**Jayaque - finc**	**1.97**	**106**	*i* P	Pn	06 17 50.0	+0.1

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*IDC **12** 06:19:30.0±1.8, 51°.99N×175°.03E, h0^{km}, mb3.4/5, mbtmp3.5/6, ML2.2/1, Error ellipse: s-maj=41.3km s-min=20.8km az=23.0*

*NEIC **12** 06:19:32.0±0.9, 51°.7N±0°.2×174°.3E±0°.3, h35^{km}±17^{km}, mb3.8/4, Error ellipse: s-maj=32.5km s-min=7.7km az=225.0*

ISC 12 06:19:34.0±1.6, **51°.9N**±0°.2×**174°.7E**±0°.1, **h29**^{km}, **n20**, σ**1^{s}34**/13, **mb3.8**/6, **Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHEM	**Shemya Is, Ala**	**0.94**	**336**	LR	LR	06 19 48.8	
	comp=Z,43nm,19.9s,baz=344,slow=20						
SHEM				Pn	**Pb**	**06 19 50.8**	**-0.8**
	138nm,0.3s,baz=173,slow=3.9,SNR=104						
SHEM				Sn	**Sb**	**06 20 05.9**	**+2.1**
	82nm,0.3s,baz=236,slow=18,SNR=6.0						
SMY	**Shemya**	**0.94**	**336**		**Pb**	**06 19 50.9**	**-0.8**
SMY				Sn	**Sb**	**06 20 04.2**	**+0.4**
AMKA	**Amchitka**	**2.90**	**98**	Pn	**Pn**	**06 20 19.7**	**+1.6**
AMKA				Sn	**Sn**	**06 20 51.5**	**-0.4**
PETK	**Petropavlovsk-**	**10.46**	**284**	Pn	Pn	06 22 05.2	+3.5
	0.1nm,0.3s,baz=87,slow=11,SNR=2.2						
	1.6nm,0.9s						
F19K	**Shaleruckik Mo**	**20.26**	**32**	P	Pn	06 24 06.8	-1.9
J20K	**Nowinta River**	**20.32**	**41**	P	Pn	06 24 07.7	-1.8
J20K				IAmb	IAmb	06 24 08.3	
	comp=Z,6.0nm,1.4s						
STLK	**Strandline Lak**	**20.52**	**49**	P	Pn	06 24 10.2	-1.6
IMAR	**Indian Mountai**	**21.23**	**36**	P	**P**	**06 24 17.7**	**+0.6**
ILAR	**Eielson Array**	**23.49**	**42**	P	**P**	**06 24 38.2**	**-2.7**
	comp=Z,0.2nm,0.5s,baz=268,slow=8.8,SNR=2.2						
	comp=Z,0.2nm,0.5s						
G31M	**Satah River**	**28.98**	**39**	P	**P**	**06 25 30.3**	**-0.1**
G31M				IAmb	IAmb	06 25 59.9	
	comp=Z,3.3nm,1.3s						
H11N2	**WAKE ISLAND Hy**	**32.65**	**194**	T	T	07 00 56.0	
	baz=9.3,slow=76						
H11N3	**WAKE ISLAND Hy**	**32.67**	**194**	T	T	07 00 54.1	
	baz=9.3,slow=76						
H11N1	**WAKE ISLAND Hy**	**32.67**	**194**	T	T	07 00 54.7	
	baz=9.3,slow=76						
H11S1	**WAKE ISLAND Hy**	**33.88**	**194**	T	T	07 02 22.9	
	baz=8.6,slow=76,SNR=11						
H11S3	**WAKE ISLAND Hy**	**33.90**	**194**	T	T	07 02 23.6	
	baz=8.6,slow=76,SNR=7.7						
H11S2	**WAKE ISLAND Hy**	**33.90**	**194**	T	T	07 02 24.3	
	baz=8.6,slow=76,SNR=8.3						
SPITS	**Spitsbergen Ar**	**49.54**	**354**	P	**P**	**06 28 20.6**	**-0.8**
	comp=Z,0.8nm,0.5s,baz=23,slow=7.8,SNR=7.5						
	comp=Z,0.8nm,0.5s						
KURBB	**Kurchatov Arra**	**55.79**	**310**	P	**P**	**06 29 08.6**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=45,slow=6.4,SNR=7.0						
	comp=Z,0.5nm,0.3s						
MKAR	**Makanchi Array**	**56.49**	**305**	P	**P**	**06 29 13.3**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=55,slow=6.6,SNR=5.1						
	comp=Z,0.4nm,0.5s						
TXAR	**Lajitas Array**	**62.52**	**77**	P	**P**	**06 29 54.5**	**-0.5**
	comp=Z,0.2nm,0.7s,baz=326,slow=7.0,SNR=2.6						
	comp=Z,0.2nm,0.7s						

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*IDC **12** 06:46:55.3±1.2, 8°.23S×117°.69E, h0^{km}, mb4.0/8, mbtmp4.0/11, ML3.9/3, MS3.1/2, Error ellipse: s-maj=43.1km s-min=18.0km az=56.0*

*NEIC **12** 06:46:57.1±1.2, 8°.18S±0°.06×117°.69E±0°.05, h10^{km}±1^{km}, mb4.2/11, Error ellipse: s-maj=12.5km s-min=5.4km az=39.0*

*DJA **12** 06:46:57.6±0.2, 8°S±2°×11°8E±°, h10^{km}, M4.5/19, mb4.9/2, MLv4.2/19*

ISC 12 06:46:56.8±0.5, **8°.20S**±0°.04×**117°.73E**±0°.04, **h10**^{km}, **n47**, σ**1^{s}20**/56, **mb4.3**/11, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**0.63**	**176**	P	**Pb**	**06 47 11.1**	**+1.2**
PLAI				S	**Sb**	**06 47 20.4**	**+1.6**
WBSI	**Waikabubak, Su**	**2.18**	**131**	P	**Pb**	**06 47 36.0**	**-0.4**
WBSI				S	**Sb**	**06 48 04.3**	**+0.8**
SRBI	**Singaraja**	**2.49**	**272**	P	**Pn**	**06 47 37.6**	**+0.1**
BSSI	**Bau Bau, Buton**	**3.42**	**53**	P	**Pn**	**06 47 50.7**	**+0.5**
BASI	**Baing, Sumba**	**3.46**	**126**	P	**Pn**	**06 47 52.0**	**+1.3**
ABJI	**Asem Bagus**	**3.48**	**276**	P	**Pn**	**06 47 51.7**	**+0.6**
JAGI	**Jajag, Banyuwa**	**3.55**	**265**		**Pn**	**06 47 51.9**	**-0.2**
JAGI	**Jajag, Banyuwa**	**3.55**	**265**	P	**Pn**	**06 47 51.7**	**-0.3**
BKSI	**Bulukumba**	**3.72**	**40**	P	**Pn**	**06 47 54.3**	**0.0**
KAPI	**Kappang**	**3.75**	**33**	Pn	**Pn**	**06 47 54.9**	**+0.2**
	42nm,0.3s,baz=191,slow=4.4,SNR=78						
KAPI				Sn	**Sn**	**06 48 37.7**	**-1.2**
	56nm,0.3s,baz=214,slow=21,SNR=28						
KAPI				LR	LR	06 49 42.5	
	comp=Z,182nm,18.3s,baz=163,slow=44						
	136nm,0.2s						
KMMI	**Kalianget**	**3.90**	**287**	P	**Pn**	**06 47 58.5**	**+1.7**
EDFI	**Ende, Flores**	**3.96**	**98**	P	**Pn**	**06 47 58.9**	**+1.2**
EDFI				S	**Sn**	**06 48 46.4**	**+2.1**
GMJI	**Gumukmas**	**4.24**	**269**	P	**Pn**	**06 48 01.9**	**+0.4**
BNSI	**Bone**	**4.45**	**32**	P	**Pn**	**06 48 06.0**	**+1.6**
BNSI				S	**Sn**	**06 48 59.0**	**+2.7**
MMRI	**Maumere**	**4.48**	**96**	Pn	**Pn**	**06 48 05.9**	**+1.1**
MMRI	**Maumere**	**4.48**	**96**	P	**Pn**	**06 48 05.0**	**+0.1**
MMRI				S	**Sn**	**06 48 57.7**	**+0.6**
SPSI	**Sidrap Palu**	**4.67**	**26**	P	**Pn**	**06 48 07.3**	**-0.1**
SPSI				S	**Sn**	**06 49 01.0**	**-0.7**
GRJI	**Gresik**	**5.36**	**283**	P	**Pn**	**06 48 16.9**	**0.0**
	211nm,0.7s						
TTSI	**Tana Toraja**	**5.53**	**22**	P	**Pn**	**06 48 20.2**	**+1.0**
TTSI				S	**Sn**	**06 49 24.3**	**+1.5**
FITZ	**Fitzroy Crossi**	**12.49**	**143**	Pn	**Pn**	**06 49 54.7**	**-0.1**
FITZ	**Fitzroy Crossi**	**12.49**	**143**	Pn	**Pn**	**06 49 54.9**	**+0.1**
	0.3nm,0.3s,baz=330,slow=14,SNR=6.3						
FITZ				Sn	**Sn**	**06 52 09.2**	**-5.0**
	0.3nm,0.3s,baz=160,slow=14,SNR=1.7						
	1.8nm,0.6s						
MBWA	**Marble Bar**	**13.03**	**172**	Pn	**Pn**	**06 50 02.1**	**-0.1**
MTN	**Manton Dam**	**13.96**	**110**	Pn	**Pn**	**06 50 14.3**	**-0.6**
FAKI	**Fak Fak**	**15.37**	**71**	Pn	**Pn**	**06 50 34.3**	**+0.3**
FAKI				IAmb	IAmb	06 50 56.4	
	comp=Z,29nm,1.3s						
WB0	**Warramunga Arr**	**19.82**	**127**	P	**P**	**06 51 28.1**	**+0.3**
WB0				IAmb	IAmb	06 51 36.8	
	comp=Z,15nm,1.5s						
WRA	**Warramunga Arr**	**19.87**	**128**	P	**P**	**06 51 27.1**	**-1.4**
WRA	**Warramunga Arr**	**19.87**	**128**	P	**P**	**06 51 28.2**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=300,slow=12,SNR=15						
	comp=Z,0.3nm,0.3s						
WRAB	**Tennant Creek**	**19.88**	**128**	P	**P**	**06 51 28.1**	**-0.4**
WRAB				IAmb	IAmb	06 51 32.3	
	comp=Z,16nm,1.4s						
WR8	**Warramunga Arr**	**20.01**	**127**	P	**P**	**06 51 29.7**	**-0.1**
WR8				IAmb	IAmb	06 51 55.8	
	comp=Z,7.6nm,1.1s						
MORW	**Morawa**	**20.82**	**184**	P	**P**	**06 51 39.2**	**+0.6**
AS31	**Alice Springs**	**21.84**	**137**	P	**P**	**06 51 50.5**	**+0.9**
ASAR	**Alice Springs**	**21.84**	**137**	P	**P**	**06 51 49.4**	**-0.3**
ASAR	**Alice Springs**	**21.84**	**137**	P	**P**	**06 51 50.0**	**+0.3**
	comp=Z,2.3nm,0.6s,baz=312,slow=8.8,SNR=39						
	comp=Z,2.3nm,0.6s						
COEN	**Coen**	**25.61**	**105**	P	**P**	**06 52 26.2**	**-0.4**
COEN				IAmb	IAmb	06 53 08.7	
	comp=Z,19nm,1.4s						
CMAR	**Chiang Mai Arr**	**32.33**	**325**	P	**P**	**06 53 28.4**	**+1.9**
	comp=Z,1.0nm,0.4s,baz=124,slow=5.5,SNR=4.5						
	comp=Z,1.0nm,0.4s						
KSRS	**Korea Array**	**46.40**	**11**	P	**P**	**06 55 24.0**	**+0.5**
	comp=Z,1.8nm,0.8s,baz=190,slow=8.9,SNR=9.7						
	comp=Z,1.8nm,0.8s						
XLT	**XiLinHaoTe**	**51.87**	**358**	*e*P	**P**	**06 56 04.6**	**-0.9**
XLT				pP	sP	06 56 14.5	+4.7
XLT				pmax	pmax		
	comp=Z,6.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**53.73**	**13**	P	**P**	**06 56 19.4**	**+0.4**
	comp=Z,2.0nm,0.6s,baz=180,slow=3.9,SNR=3.1						
	comp=Z,2.0nm,0.6s						
SONM	**Songino Array**	**56.68**	**351**	P	**P**	**06 56 41.1**	**+0.6**
SONM				IAmb	IAmb	06 56 41.8	
	comp=Z,3.1nm,0.8s						
SONM	**Songino Array**	**56.68**	**351**	P	**P**	**06 56 41.0**	**+0.4**
	comp=Z,3.8nm,0.9s,baz=171,slow=8.5,SNR=13						
	comp=Z,3.8nm,0.9s						
MKAR	**Makanchi Array**	**63.18**	**333**	P	**P**	**06 57 25.0**	**-0.1**
MKAR	**Makanchi Array**	**63.18**	**333**	P	**P**	**06 57 24.8**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=146,slow=7.8,SNR=19						
MKAR				LR	LR	07 30 05.2	
	comp=Z,21nm,18.4s,baz=128,slow=41						
	comp=Z,1.2nm,0.5s						
KURBB	**Kurchatov Arra**	**67.70**	**334**	P	**P**	**06 57 53.8**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=142,slow=5.7,SNR=2.3						
	comp=Z,0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**67.85**	**340**	P	**P**	**06 57 54.2**	**-1.0**
	comp=Z,1.1nm,0.5s,baz=145,slow=5.4,SNR=4.2						
	comp=Z,1.1nm,0.5s						
AB31	**Akbulak array**	**76.19**	**325**	P	**P**	**06 58 43.2**	**-2.1**
AB31				IAmb	IAmb	06 58 55.3	
	comp=Z,1.7nm,0.8s						
ABKAR	**Akbulak array**	**76.19**	**325**	P	**P**	**06 58 43.0**	**-2.2**
SNAA	**Sanae**	**91.43**	**196**	P	**P**	**07 00 03.2**	**+0.2**

RSNC 12 06:52:36.6±0.0, **8°N**±1°×**7°4W**±°, **h47**^{km}±7^{km}, **M2.6**, **mb3.5**, **mB4.5**, **ML2.3**, **Mw(mB)3.6**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VMM05	**San Martn**	**0.67**	**96**	P	Pn	06 52 49.2	-0.7
VMM07	**Puerto Wilches**	**0.72**	**149**	P	Pn	06 52 49.6	-0.9
VMM07				S	Sn	06 53 00.4	-0.2
ZARC	**Zaragoza, Cauc**	**0.79**	**232**	P	Pn	06 52 50.3	-1.1
ZARC				S	Sn	06 53 02.0	-0.2
AGCC	**Aguachica**	**0.83**	**50**	P	Pn	06 52 50.2	-1.8
AGCC				S	Sn	06 53 02.4	-0.8
EZNC	**La Esperanza**	**0.97**	**111**	P	Pn	06 52 52.8	-1.1
EZNC				S	Sn	06 53 06.7	+0.1
BRJC	**Barrancabermej**	**1.11**	**154**	P	Pn	06 52 54.3	-1.5
BRJC				S	Sn	06 53 09.4	-0.6
VMM09	**Lebrija**	**1.26**	**132**	P	Pn	06 52 56.8	-1.1
VMM09				S	Sn	06 53 12.0	-1.8
VMM10	**El Carmen**	**1.30**	**157**	P	Pn	06 52 56.9	-1.5
VMM10				S	Sn	06 53 14.2	-0.5
UREC	**San Jos de Ur**	**1.31**	**260**	P	Pn	06 52 57.0	-1.5
UREC				S	Sn	06 53 14.7	-0.2
PTBC	**PUERTO BERRIO,**	**1.45**	**189**	P	Pn	06 52 59.2	-1.2
PTBC				S	Sn	06 53 17.9	-0.4
PAMC	**Pamplona, Colo**	**1.65**	**113**	P	Pn	06 53 02.5	-1.0
PAMC				S	Sn	06 53 23.5	-0.2
BARC	**Barichara**	**1.73**	**143**	P	Pn	06 53 03.0	-1.4
ARGC	**Ariguani, Magd**	**1.87**	**360**	P	Pn	06 53 06.4	+0.3
ARGC				S	Sn	06 53 29.7	+1.2
SJCC	**San Jacinto, C**	**2.12**	**334**	P	Pn	06 53 08.1	-1.6
SJCC				S	Sn	06 53 33.3	-1.6
LCBC	**Los crdobas,**	**2.29**	**293**	P	Pn	06 53 10.9	-1.0
LCBC				S	Sn	06 53 37.8	-1.1
SPBC	**San Pablo de B**	**2.32**	**176**	P	Pn	06 53 11.4	-1.0
SPBC				S	Sn	06 53 40.0	+0.2
APAC	**Apartado, Choc**	**2.33**	**268**	P	Pn	06 53 11.6	-0.9
APAC				S	Sn	06 53 41.6	+1.7
RUSC	**La Rusia**	**2.37**	**151**	P	Pn	06 53 12.5	-0.9
RUSC				S	Sn	06 53 41.9	+0.4
NORC	**Norcasia**	**2.48**	**195**	P	Pn	06 53 15.2	+0.6
NORC				S	Sn	06 53 45.0	+1.2
TAMC	**Tame, Arauca**	**2.87**	**122**	P	Pn	06 53 19.2	-0.7
TAMC				S	Sn	06 53 53.7	+0.5
GUY2C	**Guyana, Caldas**	**2.96**	**202**	P	Pn	06 53 24.1	+2.5
SMRC	**Santa Marta, M**	**3.16**	**0**	P	Pn	06 53 25.0	+1.1
SMRC				S	Sn	06 54 02.2	+1.7
CRJC	**Cerrejon, Guaj**	**3.30**	**24**	P	Pn	06 53 25.6	-0.3
CRJC				S	Sn	06 54 04.4	+0.4
SDV	**Santo Domingo**	**3.67**	**76**	P	Pn	06 53 29.8	-1.3
SDV				S	Sn	06 54 10.8	-2.4
ORTC	**Ortega, Tolima**	**4.17**	**194**	P	Pn	06 53 40.0	+2.2
ORTC				S	Sn	06 54 27.5	+2.2
PRAC	**Prado**	**4.29**	**189**	P	Pn	06 53 41.9	+2.5
PRAC				S	Sn	06 54 32.8	+4.6
URIC	**Uribia, Colomb**	**4.30**	**31**	P	Pn	06 53 39.3	-0.3
URIC				S	Sn	06 54 27.1	-1.5
MACC	**Macarena, Meta**	**5.81**	**176**	P	Pn	06 53 59.8	-0.5
MACC				S	Sn	06 55 01.8	-3.9

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*SDD **12** 07:24:24.9±2.3, 19°.48N×69°.81W, h16^{km}±8^{km}, MD3.2, ML2.7, MW3.1*

*OSPL **12** 07:24:25.9±2.7, 19°.58N×69°.84W, h6^{km}±12^{km}, ML2.5*

ISC 12 07:24:24.2±0.9, **19°.48N**±0°.03×**69°.83W**±0°.03, **h14**^{km}±5^{km}, **n22**, σ**1^{s}49**/38, **5C-1D**, **Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LONA1	**Toro Cenizo, N**	**0.11**	**200**	*i* P	**Pg**	**07 24 25.2**	**-2.3**
LONA1				*e*S	**Sg**	**07 24 28.3**	**-1.4**
LONA1				IAML		07 24 28.6	
	comp=Z,2μm,0.1s						
NADR	**Nagua**	**0.13**	**193**	*e*Pg	**Pg**	**07 24 27.9**	**+0.1**
NADR				⇑*e*Sg	**Sg**	**07 24 31.5**	**+1.4**
NADR				IAML		07 24 31.7	
	comp=N,9μm,0.5s						
NAG1	**Nagua**	**0.13**	**196**	⇓*e*Pg	**Pg**	**07 24 27.8**	**0.0**
NAG1				*e*Sg	**Sg**	**07 24 31.4**	**+1.2**
CADR	**Cabrera**	**0.21**	**330**	*e*Pg	**Pg**	**07 24 28.4**	**-0.7**
CADR				IAML		07 24 33.1	
	comp=N,1μm,0.5s						
CADR				⇑*e*Sg	**Sg**	**07 24 33.3**	**+1.0**
DR08	**Loma La Naviza**	**0.55**	**200**	⇑*e*Pg	**Pg**	**07 24 33.9**	**-1.2**
DR08				⇑*e*Sg	**Sg**	**07 24 43.0**	**+0.6**
DR08				IAML		07 24 44.5	
	comp=N,2μm,0.2s						
SC01	**Santiago de lo**	**0.85**	**267**	*e*Pg	**Pg**	**07 24 40.2**	**-0.6**
SC01				*e*Sg	**Sg**	**07 24 52.5**	**+0.6**
SC01				IAML		07 25 01.0	
	comp=N,233nm,0.6s						
SC01	**Santiago de lo**	**0.85**	**267**	*i* P	**Pg**	**07 24 40.2**	**-0.6**
SC01				*e*S	**Sb**	**07 24 53.9**	**+1.8**
SC01				IAML		07 24 56.9	
	comp=Z,131nm,0.3s						
MIDR	**Miches**	**0.89**	**124**	*e*Pg	**Pg**	**07 24 40.5**	**-0.9**
MIDR				*e*Sg	**Sg**	**07 24 53.4**	**+0.4**
MIDR				IAML		07 24 55.0	
	comp=N,40nm,0.4s						
ABDR	**Alto Bandera**	**1.01**	**229**	*e*Pg	**Pg**	**07 24 41.2**	**-2.5**
ABDR				*e*Sg	**Sg**	**07 24 55.5**	**-1.5**
ABDR				IAML		07 24 57.5	
	comp=N,110nm,0.5s						
LUDR	**Luperon**	**1.14**	**291**	*e*Pg	**Pb**	**07 24 45.0**	**-0.7**
LUDR				*e*Sg	**Sb**	**07 25 00.7**	**+0.4**
LUDR				IAML		07 25 05.7	
	comp=N,484nm,0.2s						
BANI	**BANI**	**1.20**	**205**	*e*Pg	**Pn**	**07 24 45.0**	**-1.6**
BANI				⇑*e*Sg	**Sb**	**07 25 01.6**	**-0.5**
BANI				IAML		07 25 04.2	
	comp=N,119nm,0.1s						
MADR	**Mao Valverde**	**1.21**	**274**	*e*Pg	**Pn**	**07 24 46.8**	**+0.1**
MADR				*e*Sg	**Sb**	**07 25 03.6**	**+1.3**
MADR				IAML		07 25 12.5	
	comp=N,154nm,0.5s						
HIDR	**Higuey Centro**	**1.37**	**130**	*e*Pg	**Pn**	**07 24 49.1**	**+0.1**
HIDR				*e*Sg	**Sn**	**07 25 05.3**	**-1.6**
HIDR				IAML		07 25 12.6	
	comp=N,150nm,0.3s						
SDDR	**Presa de Saban**	**1.47**	**250**	*e*Pg	**Pn**	**07 24 50.2**	**-0.1**
SDDR				*e*Sg	**Sn**	**07 25 09.8**	**+0.4**
SDDR				IAML		07 25 10.2	
	comp=N,50nm,0.6s						
SDDR	**Presa de Saban**	**1.47**	**250**	*i* P	**Pn**	**07 24 49.6**	**-0.7**
SDDR				*e*S	**Sn**	**07 25 08.9**	**-0.5**
SDDR				IAML		07 25 12.8	
	comp=Z,40nm,0.3s						
PODR	**Polo**	**1.90**	**227**	*i* P	**Pn**	**07 24 58.0**	**+1.6**
PODR				*e*S	**Sn**	**07 25 23.1**	**+2.8**
LODU1	**El Espartillar**	**1.92**	**235**	*i* P	**Pn**	**07 24 59.0**	**+2.5**
LODU1				IAML		07 25 27.8	
	comp=Z,42nm,2.4s						
LOVI	**El Cajuil, Ovi**	**2.22**	**221**	*i* P	**Pn**	**07 25 02.5**	**+1.8**
LOBH	**Bahia de las A**	**2.36**	**227**	*i* P	**Pn**	**07 25 04.0**	**+1.5**
LOBH				IAML		07 25 50.5	
	comp=Z,50nm,3.8s						
GRTK	**Grand Turk**	**2.36**	**329**	*e*S	**Sn**	**07 25 28.6**	**-2.8**
GRTK				IAML		07 25 32.5	
	comp=Z,22nm,3.1s						
PAPH	**Port-au-Prince**	**2.53**	**248**	*i* P	**Pn**	**07 25 06.6**	**+1.8**
CRPR	**Cabo Rojo, PR**	**2.96**	**119**	*i* P	**Pn**	**07 25 13.3**	**+2.4**
CRPR				IAML		07 25 56.8	
	comp=Z,25nm,1.2s						

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*IDC **12** 07:31:20.8±1.9, 63°.94N×28°.11E, h0^{km}, mbtmp2.6/2, ML1.7/2, Error ellipse: s-maj=45.1km s-min=10.6km az=96.0*

*HEL **12** 07:31:20.1±0.0, 63°.94N×28°.11E, h0^{km}, ML1.4, Explosion*

ISC 12 07:31:18.8±0.8, **63°.96N**±0°.03×**28°.10E**±0°.04, **h0**^{km}, **n17**, σ**0^{s}84**/22, **Finland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIF	**Nilsia**	**0.59**	**193**	*e*P	**Pg**	**07 31 30.4**	**+0.4**
NIF				*e*S	**Sg**	**07 31 37.6**	**0.0**
RMF	**Romuvaara**	**0.84**	**71**	*e*P	**Pb**	**07 31 35.4**	**-0.9**
RMF				*e*S	**Sg**	**07 31 46.2**	**+0.3**
SUF	**Sumiainen**	**1.52**	**216**	*e*P	**Pb**	**07 31 47.4**	**-0.5**
SUF				*e*S	**Sn**	**07 32 07.5**	**-0.2**
OUF	**Merijarvi**	**1.53**	**287**	*e*P	**Pn**	**07 31 47.4**	**0.0**
OBF4	**Vikkela, Lumij**	**1.56**	**305**	*e*P	**Pn**	**07 31 48.0**	**+0.3**
OBF4				*e*S	**Sg**	**07 32 09.1**	**+0.3**
OBF4				MSG		07 32 10.6	
	comp=Z,2.1nm,0.1s						
KU1	**Kurvinen**	**1.73**	**21**	*e*P	**Pb**	**07 31 50.7**	**-0.6**
KU1				*e*S	**Sn**	**07 32 12.8**	**+0.1**
KU1				MSG		07 32 13.7	
	comp=Z,2.4nm,0.1s						
OBF0	**Syolatti, Pyha**	**1.77**	**289**	MSG		07 32 16.9	
	comp=Z,2.4nm,0.1s						
JOF	**Joensuu**	**1.78**	**124**	*e*P	**Pb**	**07 31 51.4**	**-0.8**
JOF				*e*S	**Sn**	**07 32 13.7**	**-0.4**
JOF				MSG		07 32 15.6	
	comp=Z,4.1nm,0.1s						
MSF	**Maaselka**	**2.00**	**11**	MSG		07 32 22.0	
	comp=Z,1.4nm,0.1s						
KAF	**Kangasniemi**	**2.03**	**205**	*e*P	**Pb**	**07 31 55.3**	**-1.1**
KAF				MSG		07 32 24.6	
	comp=Z,1.8nm,0.1s						
RANF	**Ranua**	**2.14**	**345**	*e*P	**Pb**	**07 31 58.1**	**-0.2**
KU6	**Riekki**	**2.21**	**19**	*e*P	**Pb**	**07 31 58.4**	**-1.1**
KU6				MSG		07 32 28.8	
	comp=Z,0.4nm,0.1s						
KEF	**Keuruu**	**2.33**	**221**	*e*P	**Pn**	**07 31 59.4**	**+1.2**
KEF				MSG		07 32 31.7	
	comp=Z,1.4nm,0.1s						
FIA0	**FINESS Array S**	**2.69**	**201**	*e*P	**Pn**	**07 32 04.4**	**+1.1**
FINES	**FINESS Array B**	**2.69**	**201**	Pn	**Pb**	**07 32 06.7**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=20,slow=15,SNR=8.2						
FINES				Sn	**Sb**	**07 32 41.0**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=22,slow=25,SNR=14						
	comp=Z,1.0nm,0.4s						
ARCES	**ARCESS Array B**	**5.69**	**351**	Pn	**Pn**	**07 32 46.0**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=172,slow=13,SNR=1.9						
ARCES				Sn	**Sn**	**07 33 49.0**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=174,slow=22,SNR=1.4						
	comp=Z,1.4nm,0.8s						
I37NO	**I37NO**	**6.38**	**328**	I	I	08 07 50.0	
	baz=140,slow=320,SNR=1.7						

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*SJA **12** 07:34:43.0±0.7, 31°.09S×71°.99W, h13^{km}±4^{km}, ML3.5, MW3.5*

*GUC **12** 07:34:47.8±0.5, 31°.14S×71°.68W, h29^{km}±4^{km}, ML3.3*

ISC 12 07:34:42.7±1.8, **31°.08S**±0°.03×**72°.00W**±0°.08, **h4**^{km}±13^{km}, **n34**, σ**1^{s}70**/38, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.51**	**38**	*e*P	**Pn**	**07 34 57.5**	**+0.8**
CO06				*e*S	**Sn**	**07 35 04.4**	**-1.5**
CO06				IAML		07 35 05.6	
	comp=E,6μm,0.3s						
CO02	**Combarbal**	**0.86**	**99**	*e*P	**Pg**	**07 34 59.7**	**+0.4**
CO02				IAML		07 35 11.4	
	comp=N,4μm,0.3s						
CO02	**Combarbal**	**0.86**	**99**	*e*P	**Pg**	**07 34 59.6**	**+0.3**
CO02				IAML		07 35 14.2	
	comp=Z,1μm,0.4s						
CO03	**El Pedregal**	**1.15**	**78**	*e*P	**Pb**	**07 35 04.4**	**-0.8**
CO03				IAML		07 35 18.7	
	comp=E,885nm,0.4s						
CO05	**La Serena**	**1.33**	**30**	*e*P	**Pg**	**07 35 09.9**	**+1.7**
CO05				IAML		07 35 31.4	
	comp=N,1μm,0.4s						
GO04	**Tololo Observa**	**1.37**	**49**	*e*P	**Pg**	**07 35 09.7**	**+0.7**
GO04				*e*S	**Sb**	**07 35 26.2**	**-0.8**
GO04	**Tololo Observa**	**1.37**	**49**	*e*P	**Pg**	**07 35 09.2**	**+0.2**
VA06	**Catapilco**	**1.60**	**158**	*e*P	**Pb**	**07 35 12.6**	**-0.2**
VA06				IAML		07 35 32.7	
	comp=E,779nm,0.6s						
CO01	**Juntas del Tor**	**1.97**	**57**	*e*P	**Pb**	**07 35 18.6**	**-0.7**
CO01	**Juntas del Tor**	**1.97**	**57**	*e*P	**Pb**	**07 35 18.2**	**-1.1**
CO01				*e*S	**Sn**	**07 35 42.3**	**-0.1**
VA03	**San Esteban**	**2.08**	**144**	*e*P	**Pb**	**07 35 19.6**	**-1.6**
VA03				IAML		07 35 53.8	
	comp=N,766nm,0.5s						
VA03	**San Esteban**	**2.08**	**144**	*e*P	**Pb**	**07 35 19.7**	**-1.4**
VA03				IAML		07 35 49.1	
	comp=Z,359nm,0.7s						
MT02	**Curacav**	**2.29**	**162**	IAML		07 36 04.7	
	comp=E,162nm,0.5s						
MT02	**Curacav**	**2.29**	**162**	*e*P	**Pn**	**07 35 22.1**	**+0.8**
MT02				IAML		07 35 58.5	
	comp=Z,139nm,0.7s						
LCO	**Las Campanas**	**2.34**	**29**	*e*P	**Pb**	**07 35 24.2**	**-1.4**
LCO	**Las Campanas**	**2.34**	**29**	*e*P	**Pb**	**07 35 24.3**	**-1.4**
LCO				*e*S	**Sb**	**07 35 54.3**	**-0.8**
LCO				IAML		07 35 59.9	
	comp=Z,457nm,0.6s						
RTLS	**Leoncito**	**2.42**	**108**	*e*P	**Pb**	**07 35 25.8**	**-1.2**
RTLS				IAML		07 36 06.3	
	comp=Z,408nm,0.6s						
DOCA	**Reserva Natura**	**2.50**	**88**	*e*P	**Pb**	**07 35 26.5**	**-2.0**
DOCA				IAML		07 36 08.4	
	comp=Z,118nm,0.8s						
MT05	**Renca**	**2.54**	**156**	IAML		07 36 00.6	
	comp=E,392nm,0.3s						
MT05	**Renca**	**2.54**	**156**	*e*P	**Pb**	**07 35 26.6**	**-2.3**
MT05				IAML		07 36 11.4	
	comp=Z,207nm,0.6s						
FCH	**Farellones**	**2.67**	**148**	*e*P	**Pb**	**07 35 28.3**	**-2.9**
FCH				IAML		07 36 10.9	
	comp=N,117nm,0.3s						
MT04	**Ro Olivares**	**2.81**	**146**	*e*P	**Pn**	**07 35 29.9**	**+1.4**
MT04				IAML		07 36 15.1	
	comp=E,114nm,0.3s						
MT04	**Ro Olivares**	**2.81**	**146**	*e*P	**Pn**	**07 35 30.3**	**+1.7**
MT04				IAML		07 36 11.2	
	comp=Z,87nm,0.8s						
MT01	**Popeta**	**2.85**	**167**	*e*P	**Pn**	**07 35 30.1**	**+1.1**
MT01				IAML		07 36 13.1	
	comp=E,91nm,0.4s						
MT01	**Popeta**	**2.85**	**167**	*e*P	**Pn**	**07 35 30.4**	**+1.4**
MT01				IAML		07 36 12.4	
	comp=Z,87nm,1.1s						
MT08	**Bocatoma Ro**	**2.90**	**145**	*e*P	**Pb**	**07 35 33.0**	**-2.1**
MT08				IAML		07 36 23.0	
	comp=Z,113nm,0.7s						
AC04	**Llanos de Chal**	**2.97**	**16**	*e*P	**Pn**	**07 35 32.6**	**+2.0**
AC04				*e*S	**Sb**	**07 36 10.0**	**-2.8**
AC04				IAML		07 36 22.1	
	comp=Z,165nm,0.6s						
BO04	**La Punta**	**3.13**	**158**	*e*P	**Pn**	**07 35 34.6**	**+1.7**
LMEL	**Las Melosas**	**3.15**	**152**	*e*P	**Pn**	**07 35 34.9**	**+1.6**
LMEL	**Las Melosas**	**3.15**	**152**	*e*P	**Pn**	**07 35 35.4**	**+2.1**
CFA	**Coronel Fontan**	**3.26**	**100**	*e*P	**Pn**	**07 35 37.1**	**+2.4**
BO01	**Tunca**	**3.39**	**167**	*e*P	**Pn**	**07 35 38.0**	**+1.6**
AGUA	**GUANDACOL**	**3.42**	**63**	*e*P	**Pb**	**07 35 41.5**	**-2.4**
AGUA				*e*S	**Sn**	**07 36 20.4**	**+2.5**
AGUA				IAML		07 36 38.0	
	comp=Z,180nm,0.5s						
BO02	**Sierra Bellavi**	**3.84**	**165**	*e*P	**Pn**	**07 35 44.8**	**+2.1**
BO02				IAML		07 36 45.8	
	comp=Z,105nm,0.6s						

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*NEIC **12** 07:36:17.2±0.9, 37°.24S±0°.06×74°.37W±0°.03, h27^{km}±8^{km}, mb4.3/6, ML3.9(GUC), Error ellipse: s-maj=8.9km s-min=3.0km az=193.0*

*GUC **12** 07:36:17.4±0.6, 37°.38S×74°.19W, h23^{km}±4^{km}, ML4.0*

ISC 12 07:36:13.3±1.8, **37°.33S**±0°.04×**74°.39W**±0°.08, **h7**^{km}±11^{km}, **n38**, σ**1^{s}85**/44, **mb4.2**/3, **1C**, **Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BI05	**Punta Hualpn**	**1.12**	**59**	Pn	**Pg**	**07 36 35.1**	**+0.2**
BI05	**Punta Hualpn**	**1.12**	**59**	*e*P	**Pg**	**07 36 34.8**	**-0.1**

BI05				*e*S	Sg	07 36 48.1	-1.3
BI05				IAML		07 36 49.7	
	comp=E,7µm,0.3s						
BI04	Isla Mocha	1.16	160	*e*P	Pg	07 36 35.5	-0.1
BI04				*e*S	Sg	07 36 48.7	-1.9
BI04				IAML		07 36 49.6	
	comp=N,4µm,0.5s						
LC01	Cunco	2.53	129	*e*P	Pn	07 36 55.7	+0.8
LC01				IAML		07 37 27.8	
	comp=E,474nm,0.1s						
BI02	San Fabin de	2.58	76		Pn	07 36 56.6	+1.0
BI02	San Fabin de	2.58	76⇑	*e*P	Pn	07 36 56.5	+0.8
BI02				*e*S	Sn	07 37 26.3	-1.1
BI02				IAML		07 37 27.4	
	comp=E,899nm,0.4s						
LR02	Universidad Au	2.63	160	*e*P	Pn	07 36 57.2	+1.0
LR02				*e*S	Sn	07 37 25.6	-2.9
LR02				IAML		07 37 26.9	
	comp=N,3µm,0.6s						
LR04	Corral	2.66	164	*e*P	Pn	07 36 55.7	-0.9
LR04				*e*S	Sn	07 37 21.8	-7.3
LR04				IAML		07 37 26.1	
	comp=N,2µm,0.2s						
LR03	Panguipulli	2.81	146	Pn	Pn	07 37 00.8	+2.1
LR03	Panguipulli	2.81	146	*e*P	Pn	07 36 59.7	+1.0
LR03				IAML		07 37 41.8	
	comp=E,626nm,0.4s						
ML02	Panimavida	2.86	58		Pn	07 36 59.3	0.0
ML02	Panimavida	2.86	58	*e*P	Pn	07 37 00.7	+1.3
ML02				IAML		07 37 38.5	
	comp=E,462nm,0.3s						
GO05	Hualane	3.05	42	*e*P	Pn	07 37 02.6	+0.6
GO05				*e*S	Sn	07 37 35.8	-3.0
GO05				IAML		07 37 52.0	
	comp=N,147nm,0.4s						
GO06	Curarrehue	3.22	135	*e*P	Pn	07 37 05.9	+1.5
LR05	Currie	3.45	148		Pn	07 37 09.6	+2.1
LR05	Currie	3.45	148	*e*P	Pn	07 37 09.0	+1.6
LR05				IAML		07 37 52.7	
	comp=N,446nm,0.4s						
BO02	Sierra Bellavi	3.87	50	Pn	Pn	07 37 14.5	+1.2
BO01	Tunca	3.97	44	Pn	Pn	07 37 15.7	+1.0
MT01	Popeta	4.30	37	Pn	Pn	07 37 19.6	+0.5
VA05	Santo Domingo	4.30	33	Pn	Pn	07 37 18.9	-0.3
MT09	Talagante	4.50	39	Pn	Pn	07 37 22.5	+0.4
PLCA	Paso Flores	4.53	140		Pn	07 37 24.9	+2.4
MT02	Curacav	4.85	34	Pn	Pn	07 37 26.8	0.0
LMEL	Las Melosas	4.87	46	Pn	Pn	07 37 28.1	+1.0
MT13	San Alfonso	4.90	44	Pn	Pn	07 37 29.1	+1.6
MT05	Renca	4.93	38	Pn	Pn	07 37 27.9	0.0
VA04	Juan Fernndez	5.16	314	Pn	Pn	07 37 31.7	+0.8
PEL	Peldehue	5.16	37		Pn	07 37 31.3	+0.3
VA03	San Esteban	5.54	36	Pn	Pn	07 37 36.7	+0.5
COYC	Coyhaique	8.42	169	Pn	Pn	07 38 18.4	+2.7
TRQA	Tornquist	9.87	98	Pn	Pn	07 38 37.3	+1.6
AY03	Cochrane	10.01	173	Pn	Pn	07 38 40.4	+2.9
PLTB	Pedras Altas	17.99	78		Pn	07 40 23.3	-0.7
EFI	East Falkland	18.42	146		Pn	07 40 30.5	+1.5
ITAB	Concordia	21.30	68	P	P	07 41 00.6	0.0
ITAB				IAmb	IAmb	07 41 20.3	
	comp=Z,40nm,1.4s						
BELA	Belgrano 2	43.98	169	P	P	07 44 21.9	+1.2
BELA				IAmb	IAmb	07 44 33.1	
	comp=Z,1.8nm,0.8s						
SNAA	Sanae	49.27	157	P	P	07 45 03.9	+1.6
SNAA				IAmb	IAmb	07 45 15.0	
	comp=Z,2.2nm,0.8s						
ESPN	Las Esperanzas	50.13	347	P	P	07 45 08.8	-0.5

SJA ***12*** *08:02:21.9±0.6, 31°.05S×72°.09W, h15^{km}, ML3.7, MW3.7*
GUC ***12*** *08:02:27.2±0.6, 31°.13S×71°.72W, h34^{km}±2^{km}, ML3.6*
ISC 12 08:02:24.1±1.6**, 31°.09S**±0°.02×**71°.91W**±0°.05**, h9**^{km}±11^{km},
n45, σ1^{s}.**70**/71**, 1C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.47	30	*i* P	Pn	08 02 37.4	+0.3
CO06				*e*S	Sb	08 02 44.4	+2.7
CO06				IAML		08 02 45.2	
	comp=E,6µm,0.2s						
CO02	Combarbal	0.79	99	*e*P	Pg	08 02 39.5	+0.3
CO02				IAML		08 02 51.1	
	comp=N,8µm,0.4s						
CO02	Combarbal	0.79	99	*e*P	Pg	08 02 38.7	-0.6
CO02				*e*P	Pn	08 02 46.9	+5.4
CO02				IAML		08 02 54.6	
	comp=Z,2µm,0.5s						
CO03	El Pedregal	1.07	77	*e*P	Pb	08 02 44.2	-0.8
CO03				*e*S	Sg	08 02 57.7	-1.0
CO03				IAML		08 02 58.4	
	comp=N,3µm,0.1s						
CO03	El Pedregal	1.07	77	*e*P	Pb	08 02 44.0	-0.9
CO03				*e*S	Sg	08 02 56.8	-1.9
CO03				IAML		08 02 58.4	
	comp=Z,2µm,0.4s						
CO05	La Serena	1.30	27	*e*P	Pb	08 02 49.5	+0.8
CO05				*e*S	Sg	08 03 06.6	+0.8
CO05				IAML		08 03 12.1	
	comp=E,1µm,0.5s						
GO04	Tololo Observa	1.32	47	*i* P	Pn	08 02 49.4	+0.4
GO04				*e*S	Sb	08 03 06.1	-0.2
GO04	Tololo Observa	1.32	47	*e*P	Pn	08 02 48.8	-0.2
GO04				*e*S	Sn	08 03 06.6	-0.2
VA06	Catapilco	1.56	161	*e*P	Pn	08 02 52.1	0.0
VA06				IAML		08 03 12.4	
	comp=E,1µm,0.6s						
CO01	Juntas del Tor	1.91	55	*e*P	Pn	08 02 58.1	+0.9
CO01				*e*S	Sn	08 03 21.5	0.0
CO01	Juntas del Tor	1.91	55	*e*P	Pn	08 02 58.4	+1.2
CO01				*e*S	Sn	08 03 21.7	+0.2
CO01				IAML		08 03 23.0	
	comp=Z,347nm,0.4s						
VA01	Torpederas	1.94	174	*e*P	Pn	08 02 58.5	+1.1
ROCH	El Roble	2.03	158	IAML		08 03 27.9	
	comp=N,872nm,0.3s						
ROCH				*e*P	Pn	08 02 59.5	+0.8
VA03	San Esteban	2.03	146	*e*P	Pn	08 02 58.9	+0.2
VA03				IAML		08 03 27.9	
	comp=E,1µm,0.2s						
VA03	San Esteban	2.03	146	*e*P	Pn	08 02 59.4	+0.8
VA03				*e*S	Sb	08 03 27.9	+1.2
VA03				IAML		08 03 29.2	
	comp=Z,629nm,0.6s						
MT02	Curacav	2.26	163	*e*P	Pn	08 03 02.4	+0.6
MT02	Curacav	2.26	163	*e*P	Pn	08 03 01.8	+0.1
MT02				*e*S	Sb	08 03 35.3	+2.0
MT02				IAML		08 03 40.0	
	comp=Z,179nm,0.5s						
PEL	Peldehue	2.30	154	*e*P	Pn	08 03 02.9	+0.6
PEL				IAML		08 03 33.9	
	comp=N,415nm,0.6s						
LCO	Las Campanas	2.32	27⇑	*e*P	Pn	08 03 03.9	+1.2
LCO	Las Campanas	2.32	27	*e*P	Pn	08 03 03.9	+1.2
LCO				*e*S	Sn	08 03 28.9	-2.6
LCO				IAML		08 03 41.0	
	comp=Z,497nm,0.3s						
RTLS	Leoncito	2.34	108	*e*P	Pn	08 03 05.5	+2.5
RTLS				*e*S	Sb	08 03 35.8	0.0
RTLS				IAML		08 03 37.4	
	comp=Z,876nm,0.6s						
DOCA	Reserva Natura	2.43	88	*e*P	Pn	08 03 06.2	+1.8
DOCA				*e*S	Sb	08 03 38.7	+0.3
DOCA				IAML		08 03 39.8	
	comp=Z,362nm,0.7s						
MT10	Hacienda Santa	2.47	152	*e*P	Pn	08 03 05.3	+0.6
MT10				IAML		08 03 42.8	
	comp=E,1µm,0.4s						
ACCO	Cerro Coronel	2.49	79	*e*P	Pn	08 03 07.4	+2.2
ACCO				*e*S	Sg	08 03 46.9	+2.7
MT05	Renca	2.50	157	*e*P	Pn	08 03 06.1	+1.0
MT05				*e*S	Sn	08 03 33.4	-2.4
MT05				IAML		08 03 52.7	
	comp=Z,282nm,1.6s						
VA05	Santo Domingo	2.58	175	*e*P	Pn	08 03 07.3	+1.3
VA05				IAML		08 03 49.1	
	comp=E,354nm,0.4s						
FCH	Farellones	2.62	149	*e*P	Pn	08 03 08.0	+1.0
FCH				IAML		08 03 48.4	
	comp=E,191nm,0.3s						
MT03	Universidad Ad	2.68	154	*e*P	Pn	08 03 08.7	+1.2
MT03				*e*S	Sb	08 03 44.0	-1.3
MT03				IAML		08 03 51.1	
	comp=Z,410nm,0.8s						
MT04	Ro Olivares	2.76	148	*e*P	Pn	08 03 09.4	+0.7
MT04				IAML		08 03 51.5	
	comp=E,208nm,0.2s						
MT04	Ro Olivares	2.76	148	*e*P	Pn	08 03 09.9	+1.2
MT04				*e*S	Sn	08 03 34.4	-7.9
MT04				IAML		08 03 52.2	
	comp=Z,190nm,0.8s						
MT09	Talagante	2.79	164	*e*P	Pn	08 03 10.2	+1.1
MT09				IAML		08 03 53.8	
	comp=N,262nm,0.3s						
ZON	Zonda	2.80	100	*e*P	Pn	08 03 12.0	+2.8
ZON				*e*S	Sb	08 03 49.0	+0.2
ZON				IAML		08 03 58.2	
	comp=Z,205nm,0.5s						
MT01	Popeta	2.83	169	*e*P	Pn	08 03 09.9	+0.5
MT01				*e*S	Sn	08 03 44.4	+0.7
MT01				IAML		08 03 54.1	
	comp=Z,185nm,0.6s						
MT08	Bocatoma Ro	2.84	146	*e*P	Pn	08 03 12.1	+2.1
MT08				*e*S	Sb	08 03 51.0	+0.7
MT08				IAML		08 03 56.6	
	comp=Z,164nm,0.6s						
AC04	Llanos de Chal	2.96	14	*e*P	Pn	08 03 12.4	+1.1
AC04				*e*S	Sb	08 03 52.4	-0.9
AC04				IAML		08 04 01.8	
	comp=Z,202nm,0.5s						
MT13	San Alfonso	2.98	153	*e*P	Pn	08 03 13.3	+1.6
MT13				*e*S	Sb	08 03 53.9	-0.2
MT13				IAML		08 03 58.4	
	comp=Z,192nm,0.6s						
BO04	La Punta	3.10	160	*e*P	Pn	08 03 14.2	+1.0
LMEL	Las Melosas	3.11	153	*e*P	Pn	08 03 14.4	+0.9
LMEL	Las Melosas	3.11	153	*e*P	Pn	08 03 14.7	+1.2
LMEL				*e*S	Sb	08 03 55.4	-2.3
CFA	Coronel Fontan	3.18	100	*e*P	Pn	08 03 16.3	+1.9
CFA				*e*S	Sb	08 04 00.2	+0.5
AGUA	GUANDACOL	3.36	63	*e*P	Pb	08 03 21.4	-2.4
BO01	Tunca	3.37	168	*e*P	Pn	08 03 17.8	+0.9
BO01				*e*S	Sn	08 03 59.4	+2.3
BO01				IAML		08 04 14.8	
	comp=Z,74nm,0.5s						
BO02	Sierra Bellavi	3.82	166	*e*P	Pn	08 03 24.6	+1.5
BO02				*e*S	Sn	08 04 10.9	+2.7
BO02				IAML		08 04 22.4	
	comp=Z,114nm,0.2s						
RFA	San Rafael	4.68	143	*e*P	Pn	08 03 37.5	+2.5
AC01	Pan de Azucar	5.05	13	*e*P	Pn	08 03 39.5	-0.6

IDC ***12*** *08:17:50.1±1.7, 2°.26S×119°.85E, h0^{km}, mb3.3/3, mbtmp3.4/4, ML3.6/1, MS2.2/1, Error ellipse: s-maj=63.5km s-min=24.4km az=71.0*
DJA ***12*** *08:17:52.3±0.3, 2°S±2°×11°9E±°, h10^{km}, M3.8/11, MLv3.8/11*
ISC 12 08:17:52.0±1.1**, 2°.34S**±0°.04×**119°.4E**±0°.1**, h10**^{km}**, n13,**
σ**1**^{s}.**20**/17**, mb3.4**/3**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTSI	Tana Toraja	0.81	149	P	Pg	08 18 07.6	-0.1
TTSI				S	Sg	08 18 19.2	+0.8
PCI	Palu	1.49	17	P	Pn	08 18 19.0	+0.1
PCI				S	Sn	08 18 39.0	+0.6
SPSI	Sidrap Palu	1.65	167	P	Pn	08 18 20.4	-0.7
SPSI				S	Sb	08 18 43.3	-0.2
BNSI	Bone	2.16	161	P	Pn	08 18 28.2	+0.1
APSI	Ampana	2.66	58	P	Pn	08 18 35.4	+0.5
KAPI	Kappang	2.68	173	Pn	Pn	08 18 35.3	0.0
	9.9nm,0.3s,baz=327,slow=11,SNR=21						
KAPI				Sn	Sn	08 19 09.4	+1.6
	9.7nm,0.3s,baz=224,slow=23,SNR=7.2						
KAPI				LR	LR	08 19 33.3	
	comp=Z,50nm,21.7s,baz=312,slow=38						
	36nm,0.3s						
MPSI	Mapaga	2.71	11	P	Pn	08 18 36.1	+0.5
BKSI	Bulukumba	3.05	166	P	Pn	08 18 41.8	+1.5
LUWI	Luwuk	3.60	69	P	Pn	08 18 48.9	+0.9
MRSI	Marisa	3.78	42	P	Pn	08 18 49.8	-0.5
WRA	Warramunga Arr	22.78	141	P	P	08 22 51.8	-3.2
	1.2nm,1.0s,baz=316,slow=10.0,SNR=8.2						
	1.2nm,1.0s						
ASAR	Alice Springs	25.43	148	P	P	08 23 18.9	-1.2
	0.5nm,0.8s,baz=343,slow=13,SNR=5.2						
	0.5nm,0.8s						
MKAR	Makanchi Array	58.80	331	P	P	08 27 51.2	+0.6
	0.4nm,0.8s,baz=125,slow=9.3,SNR=2.8						
	0.4nm,0.8s						

AFAD 12 08:43:53.7, 40°.46N×41°.46E, h7^{km}±2^{km}**, ML1.0, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKDA	Akdag	0.36	191	P	Pg	08 44 01.5	+0.7
AKDA				S	Sg	08 44 05.6	0.0
AKDA				*i* IAML		08 44 08.0	
	comp=E,28nm,0.6s						
AKDA				*i* IAML		08 44 09.0	
	comp=N,29nm,0.3s						
KRIK	Erzurum-spir	0.42	254	P	Pg	08 44 02.3	+0.4
KRIK				*i* IAML		08 44 12.0	
	comp=N,2.9nm,0.2s						
KRIK				S	Sb	08 44 12.2	+1.9
ERZM	Erzurum	0.56	187	P	Pb	08 44 06.4	+0.5
ERZM				S	Sg	08 44 13.0	+1.2
EMRE	Erzurum,Aziziy	0.56	221	P	Pg	08 44 04.8	+0.2
EMRE				*i* IAML		08 44 13.0	
	comp=N,13nm,0.3s						
EMRE				S	Sb	08 44 13.8	-0.6
EMRE				*i* IAML		08 44 17.0	
	comp=E,22nm,0.3s						

TIF ***12*** *08:44:32.4, 41°.78N×43°.15E, h11^{km}*
MOS ***12*** *08:44:33.5, 41°.80N×43°.05E, h1^{km}, MPVA4.1*
NORS ***12*** *08:44:33.3, 41°.92N×43°.03E, h3^{km}, MPVA4.1*
ISK ***12*** *08:44:33.3, 41°.91N×43°.12E, h22^{km}, ML3.2/8*
ISC 12 08:44:33.1±0.7**, 41°.76N**±0°.02×**43°.13E**±0°.01**, h10**^{km}**, n99,**
σ**1**^{s}.**66**/172**, 1D, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALIG	Mtskhetisjvari	0.52	48	PG	Pg	08 44 42.4	-0.8
TKB	Tkibuli	0.60	350	P	Pb	08 44 44.3	-1.4
TKB				S	Sb	08 44 53.0	-1.2
TKB	Tkibuli	0.60	350	*e*Pg	Pb	08 44 44.3	-1.4
TKB				*e*Sg	Sb	08 44 53.0	-1.2
TKB	Tkibuli	0.60	350	PG	Pb	08 44 44.3	-1.4
TKB				S	Sb	08 44 53.0	-1.2
BGD	Bogdanovka	0.61	145	PG	Pb	08 44 45.0	-1.0
TRLG	Trialeti	0.76	107	P	Pb	08 44 47.6	-0.9
TRLG	Trialeti	0.76	107	PG	Pb	08 44 47.6	-0.9
GARIG	Gari	0.88	17	P	Pb	08 44 49.3	-1.2
KZRT	Kazreti	1.02	111	P	Pg	08 44 50.7	-2.1
KZRT				S	Sb	08 45 05.5	-1.0
KZRT	Kazreti	1.02	111	PG	Pg	08 44 50.7	-2.1
KZRT				S	Sb	08 45 05.5	-1.0
BATM	Batumi	1.09	262	P	Pb	08 44 52.6	-1.4
BATM				S	Sg	08 45 07.8	-0.3
BATM	Batumi	1.09	262	*e*Pg	Pb	08 44 52.6	-1.4
BATM				*e*Sg	Sg	08 45 07.8	-0.3
BATM	Batumi	1.09	262	PG	Pb	08 44 52.6	-1.4
BATM				S	Sg	08 45 07.8	-0.3
KARS	Kars	1.13	182	Pn	Pn	08 44 56.7	+1.5
KARS				Sn	Sn	08 45 13.8	+2.9
DIGR	Digorskoe uzhe	1.19	16	*e*Pg	Pn	08 44 55.2	-0.7
DIGR				*e*Sg	Sn	08 45 12.3	+0.1
DIGR	Digorskoe uzhe	1.19	16	*e*PG	Pn	08 44 55.3	-0.7
DIGR				*e*S	Sn	08 45 12.3	+0.1
TBLG	Delisi	1.20	91	P	Pb	08 44 55.1	-1.0
TBLG				S	Sn	08 45 12.7	+0.2
TBLG	Delisi	1.20	91	*e*PG	Pb	08 44 55.0	-1.0
GUDG	Gudauri	1.22	55	P	Pn	08 44 55.5	-1.0
GUDG				S	Sn	08 45 12.1	-1.1
GUDG	Gudauri	1.22	55	PG	Pn	08 44 55.5	-1.0
GUDG				S	Sn	08 45 12.1	-1.1
HOPA	Hopa-Artvin	1.32	254	Pn	Pb	08 44 57.6	-0.3
HOPA				Sn	Sg	08 45 15.3	-0.2
SENK	Senkaya-Erzuru	1.34	206	Pn	Pg	08 44 59.2	+0.4
SENK				Sn	Sg	08 45 18.1	+2.0
LACR	Lac	1.37	39	*e*Pg	Pg	08 44 58.4	-1.1
LACR				*e*Sg	Sg	08 45 17.9	+0.6
LACR	Lac	1.37	39	*e*PG	Pg	08 44 59.1	-0.4
LACR				*e*S	Sg	08 45 19.5	+2.2
CHRG	Chargali	1.45	66	P	Pb	08 44 59.2	-1.1
KORR	Kora	1.50	27	*e*PG	Pg	08 45 01.6	-0.2
KORR				*e*S	Sg	08 45 23.0	+1.8
NEUR	Neytrino	1.53	348	*e*PG	Pn	08 44 51.1	-10
LSNR	Lesken	1.60	19	*e*Pg	Pg	08 45 03.5	-0.3
LSNR				*e*Sg	Sg	08 45 26.3	+1.7
LSNR	Lesken	1.60	19	*e*PN	Pg	08 45 03.5	-0.3
LSNR				*e*S	Sg	08 45 26.3	+1.7
DGRG	David-gareji	1.71	100	P	Pb	08 45 04.4	-0.3
DGRG	David-gareji	1.71	100	PN	Pb	08 45 04.4	-0.3
VLKR	Vladikavkaz	1.72	41	*e*Pg	Pg	08 45 06.9	+0.7
VLKR				*e*Sg	Sg	08 45 30.8	+2.3
VLKR	Vladikavkaz	1.72	41	*e*PN	Pg	08 45 06.8	+0.7
VLKR				*e*S	Sg	08 45 31.5	+3.1
STDR	Stavd-Durt	1.75	23	*e*Pg	Pg	08 45 07.1	+0.5
STDR				*e*Sg	Sg	08 45 31.1	+1.8
STDR	Stavd-Durt	1.75	23	*e*PN	Pg	08 45 07.1	+0.5
STDR				*e*S	Sg	08 45 31.1	+1.8
SHTL	Shatili	1.75	59	P	Pb	08 45 04.5	-0.9
SHTL				S	Sg	08 45 28.2	-1.1
SHTL	Shatili	1.75	59	PN	Pb	08 45 04.5	-0.9
NCK	Nalchik	1.77	11	*e*Pg	Pg	08 45 06.4	-0.6
NCK				*e*Sg	Sg	08 45 30.4	+0.5
NCK	Nalchik	1.77	11	*e*PN	Pg	08 45 06.4	-0.6
NCK				*e*S	Sg	08 45 30.4	+0.5
KMGR	Komgaron	1.82	44	*e*Pg	Pg	08 45 07.8	-0.2
KMGR				*e*Sg	Sg	08 45 34.8	+3.0
KMGR	Komgaron	1.82	44	*e*PN	Pg	08 45 08.0	-0.1
KMGR				*e*S	Sg	08 45 35.2	+3.4
DOMR	Dombai	1.89	324	*e*Pg	Pg	08 45 08.6	-0.8
DOMR				*e*Sg	Sg	08 45 32.1	-1.8
DOMR	Dombai	1.89	324	*e*PN	Pg	08 45 08.6	-0.8
CHOM	Cayeli-Rize	1.90	250	Pn	Pn	08 45 06.1	+0.5
BTKR	Batakoyurt	1.92	32	*e*Pg	Pg	08 45 09.7	-0.2
BTKR				*e*Sg	Sg	08 45 38.7	+4.0
BTKR	Batakoyurt	1.92	32	*e*PN	Pg	08 45 09.7	-0.2
BTKR				*e*S	Sg	08 45 38.7	+4.0
TASB	TASBURUN-IGDIR	1.97	154	Pn	Pb	08 45 08.3	-0.7
KBZ	Khabaz	1.97	355	*e*Pg	Pg	08 45 09.8	-1.1
KBZ				*e*Sg	Sg	08 45 34.5	-2.0
KBZ	Khabaz	1.97	355	*i* PN	Pb	08 45 08.5	-0.6
SHA1	Shidzhatmaz	2.00	350	*e*Pg	Pg	08 45 10.1	-1.4
SHA1				*e*Sg	Sg	08 45 37.4	-0.2
SHA1	Shidzhatmaz	2.00	350	*e*PN	Pb	08 45 09.5	-0.3
SHA1				pmax	pmax		
	comp=Z,17nm,0.6s						
KOPR	Koprukoy-ERZUR	2.02	209	Pn	Pb	08 45 08.9	-1.0
GNI	Garni	2.02	142	Pn	Pb	08 45 08.9	-1.1
GNI	Garni	2.02	142	*e*Pg	Pg	08 45 10.4	-1.5
GNI				*e*Sg	Sg	08 45 41.6	+3.5
GNI	Garni	2.02	142	*i* PN	Pb	08 45 08.3	-1.7
KBTC	Kuba-Taba	2.06	6	*e*Pg	Pg	08 45 12.0	-0.7
KBTC				*e*Sg	Sg	08 45 43.1	+3.7
KBTC	Kuba-Taba	2.06	6	*e*PN	Pg	08 45 12.0	-0.7
KBTC				*e*S	Sg	08 45 43.1	+3.7
AGRB	Hanur-Agry	2.19	183	Pn	Pb	08 45 11.5	-1.4
KIV0	Kislovodsk Arr	2.21	352	*e*Pg	Pb	08 45 13.1	-0.2
KIV0				*e*Sg	Sg	08 45 43.6	-0.7
KIV	Kislovodsk	2.22	352	*e*Pg	Pg	08 45 13.7	-1.9
KIV				*e*Sg	Sg	08 45 43.4	-0.9
KIV	Kislovodsk	2.22	352	*e*PN	Pb	08 45 13.1	-0.2
KIV				*e*S	Sg	08 45 43.6	-0.7
ARXR	Arkhyz	2.26	323	*e*Pg	Pg	08 45 15.4	-1.0
ARXR				*e*Sg	Sg	08 45 43.9	-1.8
ARXR	Arkhyz	2.26	323	*e*PN	Pg	08 45 15.4	-1.0
ARXR				*e*S	Sg	08 45 43.9	-1.8
BEYR	Belyy Ugol+	2.26	354	*e*Pg	Pb	08 45 12.8	-1.3
BEYR				*e*Sg	Sg	08 45 45.0	-0.8
BEYR	Belyy Ugol+	2.26	354	*e*PN	Pb	08 45 12.8	-1.3
BEYR				*e*S	Sg	08 45 45.0	-0.8
PYA1	Pyatigorsk	2.30	359	*e*Pn	Pb	08 45 12.6	-2.1
PYA1				*e*Sn	Sb	08 45 43.7	+0.5
PYA1	Pyatigorsk	2.30	359	*e*PN	Pb	08 45 12.6	-2.1
PYA1				*e*S	Sb	08 45 43.7	+0.5
LGD	Lagodekhi	2.33	87	P	Pb	08 45 14.5	-0.7
LGD	Lagodekhi	2.33	87	PN	Pb	08 45 14.5	-0.7
GROC	Groznyy	2.44	53	*e*Pn	Pg	08 45 19.4	-0.6
GROC				*e*Sn	Sg	08 45 52.2	+0.6
GROC	Groznyy	2.44	53	*e*PN	Pg	08 45 19.3	-0.6
GROC				*e*S	Sg	08 45 52.1	+0.6
BTLR	Botlikh	2.47	68	*e*PN	Pb	08 45 17.9	+0.3
BTLR				*e*S	Sg	08 45 49.5	-2.9
VSHL	Vashlovani	2.51	101	P	Pb	08 45 17.4	-0.9
DVE	Vedeno	2.52	61	*e*Pn	Pb	08 45 18.7	+0.2
DVE				*e*Sn	Sg	08 45 51.4	-2.7
DVE	Vedeno	2.52	61	*e*PN	Pb	08 45 18.7	+0.2
DVE				*e*S	Sg	08 45 51.4	-2.7
XNZR	Khunzakh	2.77	72	*e*Pn	Pg	08 45 25.1	-1.2
XNZR				*e*Sn	Sg	08 45 59.5	-2.6
HNZR	Khunzah	2.78	72	*e*PN	Pb	08 45 23.5	+0.5
HNZR				*e*S	Sg	08 45 59.5	-3.0
HNZR				pmax	pmax		
	comp=Z,14nm,0.4s						
GRYR	Gornoye	2.79	328	*e*Pn	Pb	08 45 21.0	-2.0
GRYR				*e*Sn	Sb	08 45 58.8	+1.6
GRYR	Gornoye	2.79	328	*e*PN	Pb	08 45 21.0	-2.0
GRYR				*e*S	Sb	08 45 58.8	+1.6
VSLR	Vesyoloye	2.85	308	*e*PN	Pb	08 45 24.8	+0.8
VSLR				*e*S	Sb	08 45 59.3	+0.4
RPOR	Krasnaya Polya	2.86	314	*e*PN	Pg	08 45 26.0	-2.0
RPOR				*e*S	Sg	08 46 01.8	-3.3
UNCR	Uncukul	2.88	70	*e*Pn	Pb	08 45 24.5	-0.2
UNCR				*e*Sn	Sg	08 46 01.9	-3.8
UNCR	Uncukul	2.88	70	*e*PN	Pb	08 45 24.4	-0.2
UNCR				*e*S	Sg	08 46 01.9	-3.8
DLMR	Dylym	2.90	62	*e*Pn	Pg	08 45 29.1	+0.4
DLMR				*e*Sn	Sg	08 46 02.8	-3.5
DLMR	Dylym	2.90	62	*e*PN	Pb	08 45 25.3	+0.3
DLMR				*e*S	Sg	08 46 02.8	-3.5
GNBR	Gunib	2.92	76	*e*Pn	Pb	08 45 25.0	-0.4
GNBR				*e*Sn	Sg	08 46 02.9	-4.1
GNBR	Gunib	2.92	76	*e*PN	Pb	08 45 24.9	-0.4
GNBR				*e*S	Sg	08 46 02.9	-4.1
KMKR	Kumukh	2.98	82	*e*Pn	Pb	08 45 25.4	-1.1
KMKR				*e*Sn	Sb	08 46 03.0	-0.1
KMKR	Kumukh	2.98	82	*e*PN	Pb	08 45 25.4	-1.1
KMKR				*e*S	Sb	08 46 03.0	-0.1
ARKR	Arakani	2.99	72	*e*PN	Pb	08 45 25.8	-0.7
ARKR				*e*S	Sb	08 46 03.9	+0.7
KRNR	Karanay	3.00	68	*e*Pn	Pb	08 45 27.1	+0.4
KRNR				*e*Sn	Sb	08 46 04.8	+1.5
KRNR	Karanay	3.00	68	*e*PN	Pb	08 45 26.1	-0.5
KRNR				*e*S	Sb	08 46 04.8	+1.5
DBC	Dubki	3.02	64	*e*Pn	Pb	08 45 27.8	+0.9
DBC				*e*Sn	Sb	08 46 05.0	+1.2
DBC	Dubki	3.02	64	*e*PN	Pb	08 45 27.8	+0.9
DBC				*e*S	Sb	08 46 05.1	+1.2
SOC	Sochi	3.10	307	*e*PN	Pb	08 45 29.7	+1.3
SOC				*e*S	Sb	08 46 06.9	+0.6
GUZR	Guzeripl'	3.14	316	*e*Pn	Pn	08 45 24.4	+1.7
GUZR				*e*Sn	Sb	08 46 03.2	-4.3
GUZR	Guzeripl'	3.14	316	*e*PN	Pn	08 45 24.4	+1.7
GUZR				*e*S	Sb	08 46 03.2	-4.3
OBN	Obninsk	14.04	344	*de*P	Pn	08 47 54.1	+2.2
OBN				pmax	pmax		
	comp=Z,10.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,22nm,15.0s						
ARTI	Arti	17.66	29	*i* P	P	08 48 40.9	+1.0
ARTI				pmax	pmax		
	comp=Z,2.0nm,1.1s						

NORS ***12*** *08:45:30.6, 41°.84N×43°.16E, h1^{km}, MPVA3.9*
TIF ***12*** *08:45:31.3, 41°.79N×43°.16E, h8^{km}±1^{km}*
ISC 12 08:45:31.7±1.0**, 41°.78N**±0°.02×**43°.12E**±0°.02**, h17**^{km}±9^{km},
n31, σ**1**^{s}.**99**/56**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TKB	Tkibuli	0.58	351	P	Pb	08 45 43.2	-0.2
TKB				S	Sb	08 45 51.9	+0.6
TKB	Tkibuli	0.58	351	*e*Pg	Pb	08 45 43.2	-0.2
TKB				*e*Sg	Sb	08 45 51.9	+0.6
BGD	Bogdanovka	0.63	145	P	Pg	08 45 43.9	-0.4
BGD				S	Sb	08 45 53.0	0.0
BGD	Bogdanovka	0.63	145	*e*Pg	Pg	08 45 43.9	-0.4
BGD				*e*Sg	Sb	08 45 53.0	0.0

TRLG	Trialeti	0.78	108	P	Pb	08 45 46.5	-0.4
GARIG	Gari	0.86	17	P	Pb	08 45 48.2	-0.1
KZRT	Kazreti	1.04	112	P	Pg	08 45 49.6	-2.3
BATM	Batumi	1.08	261	P	Pg	08 45 51.6	-1.1
BATM				S	Sg	08 46 06.5	-0.4
DIGR	Digorskoe uzhe	1.17	17	*e*Pg	Pn	08 45 54.1	+0.7
DIGR				*e*Sg	Sn	08 46 10.0	+1.0
GUDG	Gudauri	1.22	56	*e*Pg	Pn	08 45 54.4	+0.2
GUDG				*e*Sg	Sn	08 46 11.0	+0.7
LACR	Lac	1.36	40	*e*Pg	Pb	08 45 58.0	+1.2
LACR				*e*Sg	Sn	08 46 18.0	+4.2
KORR	Kora	1.48	28	*e*Pg	Pg	08 46 00.1	-0.2
KORR				*e*Sg	Sg	08 46 20.8	+1.2
NEUR	Neytrino	1.51	348	*e*Pg	Pn	08 45 50.1	-8.1
NEUR				*e*Sg	Sn	08 46 10.0	-7.5
LSNR	Lesken	1.58	19	*e*Pg	Pg	08 46 02.3	+0.1
LSNR				*e*Sg	Sg	08 46 24.8	+2.0
VLKR	Vladikavkaz	1.71	42	*e*Pg	Pg	08 46 04.4	-0.2
VLKR				*e*Sg	Sg	08 46 29.2	+2.3
DGRG	David-gareji	1.72	100	P	Pg	08 46 03.8	-1.1
STDR	Stavd-Durt	1.73	23	*e*Pg	Pg	08 46 05.9	+0.9
STDR				*e*Sg	Sg	08 46 32.0	+4.5
SHTL	Shatili	1.75	59	P	Pg	08 46 03.4	-1.9
SHTL				S	Sg	08 46 27.0	-1.0
DOMR	Dombai	1.87	324	*e*Pg	Pg	08 46 07.8	+0.1
DOMR				*e*Sg	Sg	08 46 32.6	+0.6
KBZ	Khabaz	1.95	355	*e*Pg	Pg	08 46 08.3	-1.0
KBZ				*e*Sg	Sg	08 46 34.9	+0.3
SHA1	Shidzhatmaz	1.98	350	*e*Pg	Pg	08 46 09.9	0.0
SHA1				*e*Sg	Sg	08 46 36.0	+0.4
GNI	Garni	2.04	142	*e*Pg	Pg	08 46 12.2	+1.2
GNI				*e*Sg	Sg	08 46 41.1	+3.6
ARXR	Arkhyz	2.24	323	*e*Pg	Pn	08 46 09.7	+1.6
ARXR				*e*Sg	Sb	08 46 39.9	+0.6
BEYR	Belyy Ugol+	2.24	354	*e*Pg	Pb	08 46 11.9	+0.2
BEYR				*e*Sg	Sg	08 46 41.3	-2.5
DVE	Vedeno	2.52	61	*e*Pn	Pg	08 46 23.3	+3.2
DVE				*e*Sn	Sg	08 46 49.2	-3.5
GRYR	Gornoye	2.77	328	*e*Pn	Pg	08 46 22.7	-2.1
GRYR				*e*Sn	Sb	08 46 54.1	-0.2
VSLR	Vesyoloye	2.83	307	*e*Pn	Pb	08 46 21.0	-0.7
VSLR				*e*Sn	Sb	08 46 56.9	+0.9
UNCR	Uncukul	2.88	70	*e*Pn	Pb	08 46 20.5	-2.2
UNCR				*e*Sn	Sg	08 46 59.9	-4.5
GNBR	Gunib	2.93	77	*e*Pn	Pb	08 46 23.6	+0.2
GNBR				*e*Sn	Sb	08 46 59.1	+0.2
KRNR	Karanay	3.00	68	*e*Pn	Pb	08 46 23.5	-1.2
KRNR				*e*Sn	Sb	08 47 02.7	+1.6
GUZR	Guzeripl'	3.12	316	*e*Pn	Pb	08 46 28.8	+2.0
GUZR				*e*Sn	Sb	08 47 02.2	-2.4

*SOME **12** 08:49:18.6, 44°.67N×82°.43E, h30^{km}*

*NNC **12** 08:49:22.1±1.6, 44°.78N×81°.91E, h0^{km}, mb3.5, mpv3.3, Error ellipse: s-maj=23.1km s-min=4.1km az=118.0, Suspected Mining explosion.*

ISC 12 08:49:17.6±1.6**, 44°.70N**±0°.06×**82°.3E**±0°.1**, h0^{km}, n13, σ0^s.53**/19**, 1C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	Jarkent	1.80	259	*e*P	Pg	08 49 51.7	-0.4
	6.8nm,0.2s						
DJR				*e*S	Sg	08 50 15.5	0.0
	16nm,0.3s						
KTMS	Ketmen	1.86	228	Pg	Pg	08 49 52.9	-0.3
	2.0nm,0.1s						
KTMS				Lg	Lg	08 50 18.1	
	22nm,0.4s						
KTMS	Ketmen	1.86	228	*e*P	Pb	08 49 52.5	+0.1
	2.0nm,0.1s						
KTMS				*e*S	Sg	08 50 17.0	-0.2
	22nm,0.4s						
MK31	Makanchi Array	2.10	1	⇓Pn	Pg	08 49 57.3	-0.4
	14nm,0.3s,baz=182,slow=14,SNR=394						
MK31				Sn	Sg	08 50 25.0	+0.2
	7.5nm,0.3s,baz=186,slow=29,SNR=16						
MAKZ	Makanchi	2.12	355	Pn	Pb	08 49 56.9	0.0
MAKZ				⇓Sn	Sg	08 50 25.1	-0.5
	18nm,0.3s						
PDGK	Podgornoye	2.42	237	⇓Pn	Pb	08 50 00.7	-1.3
	2.1nm,0.4s						
PDGK				⇑Sn	Sb	08 50 33.0	+0.5
	26nm,0.5s						
SHLS	Shalkode	2.54	234	Pg	Pn	08 50 00.9	+0.7
	6.5nm,0.2s						
SHLS				Lg	Lg	08 50 31.3	
	43nm,0.3s						
SHLS	Shalkode	2.54	234	*e*P	Pn	08 50 00.9	+0.7
	6.5nm,0.2s						
SHLS				*e*S	Sn	08 50 31.3	-0.5
	43nm,0.3s						
BLB	Baldybastay	2.77	259	Pg	Pb	08 50 08.1	0.0
	43nm,0.3s						
BLB				Lg	Lg	08 50 43.7	
	24nm,0.3s						
UZB	Uzynbulak	2.81	238	Pg	Pb	08 50 09.0	+0.3
	3.1nm,0.3s						
UZB				Lg	Lg	08 50 45.3	
	9.8nm,0.3s						
KPKS	Kokpek	2.85	246	Pg	Pb	08 50 09.0	-0.5
	2.2nm,0.2s						
KPKS				Lg	Lg	08 50 45.4	
	45nm,0.4s						
ARXS	Arharly	3.21	263	Pg	Pb	08 50 15.7	+0.2
	2.7nm,0.3s						
ARXS				Lg	Lg	08 50 56.7	
	15nm,0.4s						
SATY	Saty	3.23	241	Pg	Pb	08 50 15.8	0.0
	2.4nm,0.2s						
SATY				Lg	Lg	08 50 57.5	
	30nm,0.4s						

AFAD 12 08:49:59.5, 39°.13N×27°.71E, h7^{km}±3^{km}, ML1.6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STEP	BALIKESIR_Sava	0.25	2	P	Pg	08 50 04.0	-0.3
STEP				*i* IAML		08 50 07.0	
	comp=N,172nm,0.4s						
STEP				*i* IAML		08 50 07.0	
	comp=E,469nm,0.3s						
STEP				S	Sg	08 50 08.8	+1.1
MANT	Manisa	0.92	134	P	Pg	08 50 17.5	+0.2
MANT				S	Sb	08 50 30.9	+0.4
MANT				*i* IAML		08 50 31.0	
	comp=E,13nm,0.2s						
MANT				*i* IAML		08 50 35.0	
	comp=N,11nm,0.3s						
KIRA	zmir-Kiraz	1.08	150	P	Pg	08 50 20.2	-0.1
KIRA				S	Sb	08 50 35.6	+0.7
KIRA				*i* IAML		08 50 37.0	
	comp=E,12nm,0.2s						
KIRA				*i* IAML		08 50 39.0	
	comp=N,13nm,0.2s						
USAK	Uak-Merkez	1.11	112	P	Pn	08 50 21.5	0.0
USAK				S	Sb	08 50 35.6	0.0
USAK				*i* IAML		08 50 38.0	
	comp=N,52nm,1.4s						
USAK				*i* IAML		08 51 07.0	
	comp=E,116nm,2.0s						

ISK 12 08:50:25.2, 37°.26N×27°.87E, h26^{km}, ML1.4/7**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLSB	Milas	0.08	294	Pg	Pb	08 50 30.5	+0.5
MLSB				Sg	Sb	08 50 33.9	+0.7
BODT	Bodrum	0.49	246	Pg	Pb	08 50 35.8	+0.5
BODT				Sg	Sn	08 50 43.8	-0.5
TURN	Turunc	0.57	148	Pg	Pn	08 50 37.3	-0.3
DAT	Datca	0.58	204	Pg	Pn	08 50 37.7	-0.2
AYDB	Zeytinkoy-Aydi	0.69	1	Pg	Pn	08 50 39.0	-0.3
NAZL	Nazilli-Aydin	0.78	25	Pg	Pn	08 50 41.0	+0.5
APMY	Acipayam-Deniz	1.16	79	Pn	Pn	08 50 45.9	+0.1

*NOU **12** 08:54:00.9, 36°.97S×179°.92E, h0^{km}, MLv4.2/11, Off E. Coast of N. Island, N.Z.*

*IDC **12** 08:54:06.1±3.4, 36°.64S×179°.14E, h0^{km}, mb3.9/2, mbtmp3.9/3, ML3.9/1, Error ellipse: s-maj=75.4km s-min=43.4km az=122.0*

*NEIC **12** 08:54:07.2±1.2, 37°.0S±0°.1×179°.29E±0°.08, h10^{km}±1^{km}, mb4.2/4, Error ellipse: s-maj=23.8km s-min=8.7km az=17.0*

*WEL **12** 08:54:09.1±0.7, 37°S±4°×17°9E±°, h12^{km}, M3.6/30, ML3.9/31, MLv3.6/30, Error ellipse: s-maj=7.5km s-min=5.2km az=115.7, confirmed*

ISC 12 08:54:06.3±2.1**, 37°.06S**±0°.05×**179°.42E**±0°.08**, h17^{km}**±9^{km}**, n110, σ1^s.68**/150**, mb4.0**/4**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	1.02	240		Pn	08 54 26.7	+0.9
MXZ	Matakaoa Point	1.02	240	P	Pn	08 54 26.0	+0.2
MXZ	Matakaoa Point	1.02	240	P	Pn	08 54 26.5	+0.6
MXZ				S	Sg	08 54 39.1	-0.4
WMGZ	Waiomatatini S	1.10	226	P	Pg	08 54 29.7	+2.0
WMGZ				S	Sn	08 54 45.3	+3.5
PKGZ	Pakihiroa	1.34	233	P	Pg	08 54 32.6	+0.5
PKGZ				S	Sg	08 54 50.7	+1.1
PUZ	Puketiti	1.37	222	P	Pg	08 54 32.9	+0.2
PUZ				S	Sg	08 54 51.4	+0.8
HAZ	Te Kaha	1.48	242	P	Pb	08 54 33.5	+0.2
HAZ				S	Sg	08 54 54.1	+0.1
TWGZ	Tauwhareparae	1.60	225	P	Pg	08 54 36.3	-0.7
TWGZ				S	Sg	08 54 57.5	-0.4
RUGZ	Raukumara Rang	1.66	236	P	Pg	08 54 37.3	-0.9
RUGZ				S	Sg	08 54 58.8	-0.9
CNGZ	Carnagh Statio	1.72	214	P	Pg	08 54 38.4	-0.9
TKGZ	Te Karaka	1.86	222	P	Pb	08 54 39.5	-0.3
TKGZ				S	Sb	08 55 02.3	-0.5
MWZ	Matawai	1.97	229	P	Pb	08 54 41.0	-0.7
MWZ				S	Sb	08 55 05.4	-0.6
RIGZ	Rimuhau	2.10	218	P	Pb	08 54 42.8	-1.2
RIGZ				S	Sn	08 55 08.1	+1.5
WHRZ	Whale Island	2.10	247	P	Pn	08 54 40.2	-0.6
RAGZ	Rawiri	2.14	227	P	Pn	08 54 43.2	+1.8
RAGZ				S	Sn	08 55 09.0	+1.5
URZ	Urewera	2.19	236	Pn	Pb	08 54 44.3	-1.2
	28nm,0.3s,baz=330,slow=2.9,SNR=148						
URZ				Sn	Sn	08 55 09.4	+0.7
	22nm,0.3s,baz=236,slow=11,SNR=5.5 57nm,0.3s						
URZ	Urewera	2.19	236	P	Pb	08 54 44.2	-1.2
URZ	Urewera	2.19	236	P	Pb	08 54 44.2	-1.2
URZ				S	Sn	08 55 10.6	+2.0
PRGZ	Paritu Road	2.22	213	P	Pn	08 54 44.2	+1.8
PRGZ				S	Sn	08 55 09.8	+0.3
MARZ	Manawahe	2.37	246	P	Pb	08 54 46.8	-1.7
MARZ				S	Sn	08 55 14.0	+0.9
EDRZ	Edgecumbe	2.37	243	P	Pb	08 54 47.2	-1.5
SNGZ	Shannon Statio	2.38	223	P	Pn	08 54 46.4	+1.8
SNGZ				S	Sn	08 55 14.7	+1.3
KNZ	Kokohu	2.40	215	P	Pn	08 54 46.0	+1.3
KNZ				S	Sn	08 55 14.6	+0.9
MHGZ	Mahia Peninsul	2.41	209	P	Pn	08 54 46.8	+1.9
MHGZ				S	Sn	08 55 16.0	+2.0
OPRZ	Ohinepanea	2.41	250	P	Pn	08 54 46.4	+1.5
MUGZ	Murupara	2.53	235	P	Pn	08 54 49.1	+2.5
MYRZ	Mayor Island	2.55	264	P	Pn	08 54 48.7	+1.8
MYRZ				S	Sn	08 55 18.4	+0.8
MKRZ	Makatiti	2.58	245	P	Pb	08 54 50.3	-1.9
TARZ	Mount Tarawera	2.60	242	P	Pn	08 54 47.6	0.0
TGRZ	Tauranga	2.61	254	P	Pn	08 54 49.3	+1.7
RAHZ	Arahi	2.62	224	P	Pn	08 54 49.6	+1.8
RAHZ				S	Sn	08 55 20.4	+1.2
OMRZ	Omania	2.64	246	P	Pb	08 54 51.1	-2.1
WHHZ	Waihua	2.65	220	P	Pn	08 54 49.8	+1.5
WHHZ				S	Sn	08 55 21.1	+1.1
KARZ	Kaharoa	2.70	248	P	Pb	08 54 52.7	-1.5
HLRZ	Highlands Stat	2.71	243	P	Pn	08 54 51.6	+2.5
MTHZ	Maungataniwha	2.71	228	P	Pn	08 54 51.3	+2.2
MTHZ				S	Sn	08 55 23.8	+2.1
PRRZ	Plateau Road	2.80	238	P	Pn	08 54 52.3	+2.0
HSRZ	Hossack Road	2.81	243	P	Pb	08 54 55.9	-0.2
ALRZ	Allen Road	2.86	238	P	Pn	08 54 53.3	+2.1
KMRZ	Kaimai	2.88	253	P	Pn	08 54 53.0	+1.6
NMHZ	Naumai	2.90	225	P	Pn	08 54 53.7	+2.0
NMHZ				S	Sn	08 55 27.5	+1.3
ARHZ	Aropaoanui	2.92	220	P	Pn	08 54 53.5	+1.7
ARHZ				S	Sn	08 55 27.3	+0.8
KUZ	Kuaotunu	2.98	275	P	Pn	08 54 53.1	+0.3
KUZ	Kuaotunu	2.98	275	P	Pn	08 54 52.9	+0.1
KUZ				S	Sn	08 55 24.2	-4.0
BKZ	Black Stump Fm	3.12	227		Pn	08 54 56.3	+1.4
BKZ	Black Stump Fm	3.12	227	P	Pn	08 54 56.2	+1.4
BKZ	Black Stump Fm	3.12	227	P	Pn	08 54 56.2	+1.4
BKZ				S	Sn	08 55 31.1	-0.6
CKHZ	Cape Kidnapper	3.18	215	P	Pn	08 54 56.4	+0.9
CKHZ				S	Sn	08 55 32.7	-0.4
TOZ	Tahuroa Road	3.19	257		Pn	08 54 57.2	+1.5
TOZ	Tahuroa Road	3.19	257	P	Pn	08 54 56.9	+1.2
MCHZ	McNeill Hill	3.21	221	P	Pn	08 54 57.5	+1.6
MCHZ				S	Sn	08 55 34.9	+1.2
GRZ	Great Barrier	3.29	283	P	Pn	08 54 58.2	+1.2
TLZ	Tolley Road	3.33	246	P	Pn	08 55 00.3	+2.6
KWHZ	Kaweka Forest	3.34	224	P	Pn	08 54 58.8	+1.1
KWHZ				S	Sn	08 55 38.4	+1.3
KAHZ	Kahuranaki	3.38	215	P	Pn	08 54 59.0	+0.7
KAHZ				S	Sn	08 55 38.9	+0.7
RITZ	Rihia Road	3.40	235	P	Pn	08 55 01.7	+3.1
MKAZ	Moumakai	3.41	268	P	Pn	08 54 59.5	+0.9
WIAZ	Waiheke Island	3.45	273	P	Pn	08 55 00.4	+1.2
KRHZ	Kereru	3.52	222	P	Pn	08 55 01.2	+0.9
TMVZ	Te Maari	3.58	234	P	Pn	08 55 02.5	+1.4
PXZ	Pawanui	3.58	213	P	Pn	08 55 01.3	+0.3
ETVZ	East Tongariro	3.59	234	P	Pn	08 55 02.5	+1.3
NTVZ	North Tongarir	3.59	234	P	Pn	08 55 03.1	+1.8
ETAZ	East Tamaki Re	3.60	270	P	Pn	08 55 03.0	+1.7
MBAZ	Motutapu North	3.64	273	P	Pn	08 55 03.5	+1.7
NNVZ	North Ngauruho	3.65	234	P	Pn	08 55 05.1	+3.0
WTVZ	West Tongariro	3.65	235	P	Pn	08 55 05.6	+3.4
SNVZ	South Ngauruho	3.66	233	P	Pn	08 55 05.7	+3.4
TUVZ	Tukino	3.70	232	P	Pn	08 55 05.0	+2.2
ABAZ	Army Bay	3.71	276	P	Pn	08 55 04.3	+1.5
MOVZ	Moawhango	3.72	230	P	Pn	08 55 04.7	+1.7
COVZ	Chateau Observ	3.73	234	P	Pb	08 55 09.4	-2.4
WHVZ	Whangaehu Hut	3.75	233	P	Pn	08 55 05.2	+1.7
FWVZ	Far West T-bar	3.76	233	P	Pn	08 55 05.2	+1.5
MAVZ	Matarangi	3.76	233	P	Pn	08 55 05.7	+1.9
HBAZ	Herne Bay Bore	3.77	272	P	Pn	08 55 06.3	+2.8
WNVZ	Wahianoa	3.77	232	P	Pn	08 55 04.9	+1.1
WNVZ				S	Sn	08 55 47.2	-0.6
TRVZ	Turoa	3.78	233	P	Pn	08 55 06.2	+2.2
WPHZ	Waipukurau	3.80	217	P	Pn	08 55 04.3	+0.2
WPHZ				S	Sn	08 55 46.1	-2.3
PNHZ	Pukenui	3.81	221	P	Pn	08 55 04.4	+0.2
PNHZ				S	Sn	08 55 47.0	-1.7
AWAZ	Awhitu Peninsu	3.82	269	P	Pn	08 55 05.9	+1.6
AWAZ				S	Sn	08 55 46.3	-2.6
PRHZ	Porangahau	3.87	213	P	Pn	08 55 04.9	-0.2
PRHZ				S	Sn	08 55 47.2	-3.0
MTVZ	Mangateitei	3.88	232	P	Pn	08 55 07.0	+1.8
MTVZ				S	Sn	08 55 47.7	-2.8
WTAZ	Waiatarua	3.88	270	P	Pn	08 55 07.2	+1.9
HIZ	Hauiti	3.90	247	P	Pn	08 55 08.4	+3.0
PKVZ	Pokaka	3.91	234	P	Pn	08 55 08.5	+2.9
TSZ	Takapari Road	4.04	221	P	Pn	08 55 07.2	-0.2
TSZ				S	Sn	08 55 51.2	-3.1
ANWZ	Angora Road	4.10	213	P	Pn	08 55 08.4	+0.2
ANWZ				S	Sn	08 55 52.9	-2.9
DVHZ	Dannevirke	4.12	217	P	Pn	08 55 08.0	-0.4
DVHZ				S	Sn	08 55 53.6	-2.6
WCZ	Waipu Caves	4.24	284	P	Pn	08 55 12.3	+2.2
BFZ	Birch Farm	4.38	213	Pn	Pn	08 55 11.5	-0.5
BFZ	Birch Farm	4.38	213	P	Pn	08 55 11.3	-0.8
BFZ	Birch Farm	4.38	213	P	Pn	08 55 11.0	-1.0
BFZ				S	Sn	08 55 59.7	-3.1
PRWZ	Pori Road	4.41	217	P	Pn	08 55 12.5	+0.1
KHEZ	Kahui Hut	4.81	241	P	Pn	08 55 21.4	+3.4
OUZ	Omahuta	5.06	290	P	Pn	08 55 23.4	+2.0
OUZ	Omahuta	5.06	290	P	Pn	08 55 23.0	+1.6
SNZO	South Karori	5.61	219	P	Pn	08 55 31.1	+2.3
QRZ	Quartz Range	6.56	233	Pn	Pn	08 55 42.8	+0.9
QRZ	Quartz Range	6.56	233	P	Pn	08 55 43.0	+1.1
KHZ	Kahutara	7.01	218	P	Pn	08 55 48.6	+0.5
CTZ	Chatham Island	7.32	157	Pn	Pn	08 55 55.3	+3.0
AS31	Alice Springs	41.11	276	P	P	09 01 50.1	+0.6
ASAR	Alice Springs	41.11	276	P	P	09 01 48.6	-0.9
ASAR	Alice Springs	41.11	276	P	P	09 01 49.8	+0.3
	1.5nm,0.7s,baz=120,slow=7.7,SNR=9.7 1.5nm,0.7s						
WR8	Warramunga Arr	42.58	281	P	P	09 02 02.1	+0.6
WRAB	Tennant Creek	42.71	281	P	P	09 02 02.1	-0.4
WRAB				IAmb	IAmb	09 02 10.8	
	comp=Z,7.2nm,1.3s						
WRA	Warramunga Arr	42.71	281	P	P	09 02 02.4	-0.2
	comp=Z,0.4nm,0.3s,baz=120,slow=7.7,SNR=26 comp=Z,0.4nm,0.3s						
WB0	Warramunga Arr	42.76	281	P	P	09 02 03.1	+0.1
WB0				IAmb	IAmb	09 02 09.3	
	comp=Z,6.8nm,1.2s						
FINES	FINESS Array B	150.44	334	PKPbc	PKiKP	09 13 57.1	+0.4
	comp=Z,3.6nm,1.1s,baz=58,slow=3.4,SNR=2.1						

*IDC **12** 09:13:15.2±1.1, 3°.62S×103°.16W, h0^{km}, mb3.7/8, mbtmp3.7/8, MS3.9/45, Error ellipse: s-maj=51.6km s-min=19.4km az=57.0*

*GCMT **12** 09:13:19.2±0.4, 3°.65S±0°.02×102°.98W±0°.02, h13^{km}±2^{km}, MW4.8/83, Moment Tensor Solution. s15,c18; s83,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.15±.07; $M_{\theta\theta}$0.49±.07; $M_{\phi\phi}$-0.34±.07; $M_{r\theta}$0.54±.20; $M_{\theta\phi}$1.58±.07; $M_{\phi r}$-0.17±.16; Best double couple: $M_0$1.73300×10^{16} NP1:ϕ_s8.00000°, δ71.00000°, λ-175.00000°. NP2: ϕ_s276.00000°, δ85.00000°, λ-19.00000°. Principal axes: T 1.7640, Plg10.0000°, Azm324.0000°; N -0.0620, Plg70.0000°, Azm83.0000°; P -1.7020, Plg17.0000°, Azm231.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **12** 09:13:20.2±1.3, 3°.36S±0°.04×102°.7W±0°.2, h10^{km}±2^{km}, mb4.4/133 Error ellipse: s-maj=25.8km s-min=7.5km az=276.0*

ISC 12 09:13:18.5±0.9**, 3°.4S**±0°.1×**102°.8W**±0°.1**, h10^{km}, n169, σ1^s.01**/90**, mb4.3**/70**, MS3.9**/46**, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUEH	Huehuetenango	21.70	31	P	P	09 18 12.1	+2.0
JTS	Las Juntas de	22.35	52	LR	LR	09 24 46.5	
	comp=Z,764nm,20.2s,baz=281,slow=30						
SOCE	Pocosol	22.67	53	P	P	09 18 19.2	-1.2
HDC	Heredia	22.86	54	P	P	09 18 22.0	-0.5
UNM	Universidad Na	22.88	9	P	P	09 18 22.7	0.0
BOAB	BOACO BROADBAN	23.17	47	P	P	09 18 25.3	-0.2
TGUH	Tegucigalpa,Un	23.18	41	P	P	09 18 25.6	-0.1
ACON	Acoyapa	23.22	49	P	P	09 18 25.9	-0.1
ACON				IAmb	IAmb	09 19 11.5	
	comp=Z,19nm,1.3s						
BRU2	Volcan	23.39	59	P	P	09 18 27.7	-0.3
COHC	Cochancay	23.49	88	P	P	09 18 28.7	0.0
PETF	Flores	23.88	32	P	P	09 18 32.2	-0.3
PETF				IAmb	IAmb	09 19 04.3	
	comp=Z,7.9nm,1.1s						
JRQG	Juriquilla Cam	24.08	5	P	P	09 18 33.8	-0.8
SLOR	San Lorenzo -	24.38	84	P	P	09 18 37.5	-0.4
SLOR				IAmb	IAmb	09 19 06.2	
	comp=Z,9.1nm,1.1s						
ATAH	Atahualpa	24.53	100	LR	LR	09 25 48.7	
	comp=Z,240nm,20.3s,baz=273,slow=30						
OTAV	Otavalo	24.56	82	P	P	09 18 39.2	-0.2
OTAV				IAmb	IAmb	09 18 50.1	
	comp=Z,13nm,1.2s						
ZAIG	Zacatecas	26.03	0	P	P	09 18 51.1	-1.2
NNA	Nana	27.03	110	LR	LR	09 27 00.4	
	comp=Z,278nm,18.2s,baz=283,slow=30						
FLOC	Florencia	27.54	80	P	P	09 19 05.2	-0.6
LPIG	La Paz	28.33	345	LR	LR	09 27 42.3	
	comp=Z,319nm,21.9s,baz=187,slow=30						
ROSC	El Rosal	29.57	74	P	P	09 19 24.0	-0.3
ROSC	El Rosal	29.57	74	LR	LR	09 29 02.0	
	comp=Z,263nm,21.2s,baz=246,slow=32						
CZSB	Cruzeiro do Su	30.20	99	P	P	09 19 30.2	+0.7
HPIG		30.31	355	P	P	09 19 30.4	-0.1
HPIG				IAmb	IAmb	09 19 38.5	
	comp=Z,4.3nm,1.2s						
RUSC	La Rusia	31.04	73	P	P	09 19 37.3	-0.2
KVTX	Kingsville	31.14	8	P	P	09 19 38.4	+0.8
833A	Chaparral WMA,	31.73	6	P	P	09 19 42.9	+0.1
833A				IAmb	IAmb	09 19 56.0	
	comp=Z,4.3nm,0.7s						
TXAR	Lajitas Array	32.58	359	P	P	09 19 50.8	+0.5
TXAR	Lajitas Array	32.58	359	P	P	09 19 50.7	+0.4
	comp=Z,1.0nm,1.1s,baz=174,slow=4.2,SNR=5.9						
TXAR				LR	LR	09 31 20.1	
	comp=Z,262nm,21.6s,baz=179,slow=33 comp=Z,1.0nm,1.1s						
DRIO	Del Rio	32.72	3	P	P	09 19 51.2	-0.3
DRIO				IAmb	IAmb	09 19 57.7	
	comp=Z,4.7nm,1.3s						
TBTG	Tabatinga, AM	32.78	92	P	P	09 19 52.8	+0.6
HNDO	Hondo	32.93	6	P	P	09 19 53.6	+0.3
HNDO				IAmb	IAmb	09 20 23.8	
	comp=Z,6.8nm,1.2s						
SAND	Sanderson	33.19	1		P	09 19 55.4	-0.2
SAND				IAmb	IAmb	09 19 58.3	
	comp=Z,4.9nm,1.3s						
HSIG		33.20	347	P	P	09 19 56.3	+0.7
HSIG				IAmb	IAmb	09 19 57.6	
	comp=Z,8.1nm,1.2s						
ALPN	Alpine	33.61	359		P	09 19 59.4	0.0
ALPN				IAmb	IAmb	09 20 15.6	
	comp=Z,4.8nm,1.1s						
VHRN	Van Horn	34.08	357		P	09 20 03.6	+0.1
VHRN				IAmb	IAmb	09 20 37.1	
	comp=Z,6.2nm,1.4s						
SDV	Santo Domingo	34.27	69	P	P	09 20 06.3	+0.8
SDV	Santo Domingo	34.27	69	LR	LR	09 31 51.7	
	comp=Z,228nm,20.1s,baz=255,slow=32						
MNHN	Monahans	34.57	360	P	P	09 20 08.0	+0.4
MNHN				IAmb	IAmb	09 20 12.3	
	comp=Z,6.9nm,1.5s						
BRDY	Brady	34.70	6	P	P	09 20 09.1	+0.4
BRDY				IAmb	IAmb	09 20 22.4	
	comp=Z,3.8nm,1.2s						
SGCY	Sterling City	35.17	2	P	P	09 20 14.7	+1.8
SGCY				IAmb	IAmb	09 20 16.3	
	comp=Z,8.0nm,1.2s						
HTMS	Hat Mesa	35.70	359	P	P	09 20 18.4	+0.9
PB16	IPOC Station P	35.75	117	P	P	09 20 19.0	+0.3
TA02	Huaiquique	35.93	120	P	P	09 20 20.7	+1.2
FW13	Cleburne	35.93	8	P	P	09 20 20.6	+1.4
ABTX	Abilene, Hawle	35.97	4	P	P	09 20 19.8	+0.2
ABTX				IAmb	IAmb	09 20 24.9	
	comp=Z,9.1nm,1.4s						
FW16	Waxahatchie	36.13	8	P	P	09 20 19.8	-1.2
PB11	IPOC Station P	36.14	119		P	09 20 21.7	+0.2
DUN6	Lazy B Ranch	36.28	351	P	P	09 20 23.3	+0.9
PLPT	Palo Pinto	36.28	6	P	P	09 20 23.4	+1.1
POST	Post	36.31	2	P	P	09 20 23.3	+0.8
POST				IAmb	IAmb	09 20 33.4	
	comp=Z,3.6nm,0.9s						
LPAZ	La Paz	36.35	113		P	09 20 24.0	+0.2
LPAZ	La Paz	36.35	113	P	P	09 20 23.2	-0.5
	comp=Z,0.5nm,0.6s,baz=282,slow=7.0,SNR=6.4						
LPAZ				LR	LR	09 32 44.6	
	comp=Z,187nm,19.1s,baz=282,slow=32 comp=Z,0.5nm,0.6s						
SN07	Snyder 07	36.35	3	P	P	09 20 23.1	+0.2
SN07				IAmb	IAmb	09 20 28.0	
	comp=Z,8.5nm,1.3s						
214A	Organ Pipe Nat	36.46	346	P	P	09 20 24.4	+0.6
BAUV	El Baul	36.72	70	P	P	09 20 26.6	+0.3
PB01	IPOC Station P	36.79	121	P	P	09 20 27.1	+0.2
PB10	IPOC Station P	36.97	126	P	P	09 20 30.1	+1.7
MSTX	Muleshoe	37.19	360	P	P	09 20 30.5	+0.4
MSTX				IAmb	IAmb	09 21 07.1	
	comp=Z,7.0nm,1.2s						
H03N2	Juan Fernandez	37.24	146	T	T	10 00 04.8	
	baz=323,slow=78,SNR=32						
H03N1	Juan Fernandez	37.25	146	T	T	10 00 01.2	
	baz=323,slow=78,SNR=44						
H03N3	Juan Fernandez	37.26	146	T	T	09 59 57.7	
	baz=323,slow=78,SNR=29						
113A	Mohawk Valley,	37.47	345	P	P	09 20 33.2	+0.8
TAOE	Nuku Hiva Isla	37.55	260	*e*LR	LR	09 30 23.2	
	comp=Z,155nm,24.3s						
ANMO	Albuquerque	38.32	355	LR	LR	09 34 23.5	
	comp=Z,118nm,18.1s,baz=270,slow=33						
X18A	Snowflake	38.35	350	P	P	09 20 41.3	+1.3

X18A				IAmb	IAmb	09 20 43.0	
	comp=Z,6.6nm,1.3s						
SMWD	Samnorwood	38.39	3	P	P	09 20 41.1	+0.9
SMWD				IAmb	IAmb	09 20 46.7	
	comp=Z,8.3nm,1.2s						
Y14A	Wickenburg	38.40	346	P	P	09 20 40.7	+0.4
Y14A				IAmb	IAmb	09 20 42.1	
	comp=Z,8.4nm,1.5s						
X16A	Lo Mia Camp, P	38.52	348	P	P	09 20 41.5	+0.1
GO02	Mina Guanaco	38.53	127		P	09 20 41.8	0.0
BLYC	Blythe	38.60	344	P	P	09 20 42.7	+0.8
PFO	Pinyon Flats O	39.04	342	P	P	09 20 46.7	+0.9
PFO				IAmb	IAmb	09 20 49.9	
	comp=Z,8.4nm,1.4s						
PFO	Pinyon Flats O	39.04	342	LR	LR	09 33 07.3	
	comp=Z,267nm,20.7s,baz=152,slow=30						
WUAZ	Wupatki	39.57	349	P	P	09 20 51.1	+0.9
WUAZ				IAmb	IAmb	09 20 56.1	
	comp=Z,11nm,1.4s						
RTBA	Rita Blanca	39.65	0	P	P	09 20 51.5	+0.7
T25A	Trinidad	40.38	358		P	09 20 57.8	+0.9
V12A	Nelson	40.56	345	P	P	09 20 59.0	+0.6
GSC	Goldstone, Bar	40.71	342	P	P	09 20 59.8	+0.2
GSC				IAmb	IAmb	09 21 04.9	
	comp=Z,11nm,1.5s						
MVCO	Mesa Verde	40.77	353	P	P	09 21 00.9	+0.7
MVCO				IAmb	IAmb	09 21 02.8	
	comp=Z,8.4nm,1.3s						
S22A	4UR Ranch, Cre	41.13	355		P	09 21 03.8	+0.5
KNB	Kanab	41.31	348	IAmb	IAmb	09 21 06.8	
	comp=Z,6.2nm,1.2s						
SHPR	Sheep Range	41.37	345		P	09 21 05.8	+0.6
GWY	Greenwater Val	41.49	343		P	09 21 07.0	+0.9
GWY				IAmb	IAmb	09 21 07.7	
	comp=Z,5.4nm,1.2s						
PBMO	Poplar Bluff	41.61	15	P	P	09 21 08.2	+1.4
PBMO				IAmb	IAmb	09 21 21.9	
	comp=Z,6.5nm,0.9s						
T42A	Van Buren	41.68	14		P	09 21 08.5	+1.1
T42A				IAmb	IAmb	09 21 12.9	
	comp=Z,7.3nm,1.2s						
PV13	Radium Mtn., P	41.75	353	IAmb	IAmb	09 21 22.6	
	comp=Z,5.2nm,1.1s						
HMU	Henry Mountain	41.81	351	IAmb	IAmb	09 21 23.8	
	comp=Z,8.6nm,1.2s						
PV18	Skein Mesa, Pa	41.85	353	IAmb	IAmb	09 21 25.2	
	comp=Z,11nm,1.3s						
PV03	Paradox Valley	41.85	353	IAmb	IAmb	09 21 13.2	
	comp=Z,8.4nm,1.4s						
PV16	Nyswonger Mesa	41.91	353	IAmb	IAmb	09 21 13.2	
	comp=Z,7.2nm,1.4s						
SJG	San Juan	41.94	58	LR	LR	09 35 46.4	
	comp=Z,101nm,19.4s,baz=236,slow=32						
TPNV	Topopah Spring	42.09	344		P	09 21 11.9	+1.0
HODGE	Hodges	42.14	26	P	P	09 21 08.8	-2.4
HODGE				IAmb	IAmb	09 21 13.7	
	comp=Z,13nm,1.1s						
PRN	Pahroc Range	42.20	345	IAmb	IAmb	09 21 34.4	
	comp=Z,7.1nm,1.2s						
S11A	Rachel	42.60	345	IAmb	IAmb	09 21 17.8	
	comp=Z,16nm,1.5s						
GMN	Gold Mountain	42.70	343	P	P	09 21 16.8	+0.8
TKL	Tuckaleechee C	42.75	23	LR	LR	09 37 35.8	
	comp=Z,36nm,18.2s,baz=198,slow=34						
SIV	San Ignacio	42.84	110	LR	LR	09 37 07.4	
	comp=Z,354nm,18.6s,baz=293,slow=33						
SRU	San Rafael Swe	42.92	351	IAmb	IAmb	09 21 19.7	
	comp=Z,6.3nm,1.2s						
NVAR	Mina Array Bea	44.06	342	P	P	09 21 24.1	-2.9
	comp=Z,0.1nm,0.3s,baz=167,slow=3.8,SNR=4.3						
NVAR				LR	LR	09 36 06.4	
	comp=Z,179nm,19.5s,baz=170,slow=31						
	comp=Z,0.1nm,0.3s						
RYN	Ryan	44.31	342	IAmb	IAmb	09 21 32.4	
	comp=Z,4.9nm,1.3s						
JLU	Jordanelle	44.53	351	IAmb	IAmb	09 22 06.4	
	comp=Z,6.7nm,1.4s						
PTLB	Pontes e Lacer	44.55	109	P	P	09 21 29.8	-1.3
PTLB				IAmb	IAmb	09 21 37.0	
	comp=Z,6.7nm,0.9s						
PNTR	Pine Nut	45.06	341	IAmb	IAmb	09 21 39.6	
	comp=Z,5.9nm,1.0s						
BGU	Big Grassy Mou	45.12	349	IAmb	IAmb	09 22 13.2	
	comp=Z,3.7nm,1.2s						
ELK	Elko	45.41	347	P	P	09 21 38.2	+0.4
ELK				IAmb	IAmb	09 21 46.7	
	comp=Z,3.7nm,1.4s						
ELK	Elko	45.41	347	LR	LR	09 38 22.2	
	comp=Z,153nm,18.1s,baz=120,slow=33						
PAHR	Pah Rah Range	45.56	342	IAmb	IAmb	09 21 58.6	
	comp=Z,5.2nm,1.0s						
HVU	Hansel Valley	45.90	350	IAmb	IAmb	09 22 06.0	
	comp=Z,5.3nm,1.1s						
BEKR	Beckworth	46.01	341	IAmb	IAmb	09 21 44.9	
	comp=Z,4.2nm,1.3s						
BW06	Boulder Array	46.38	353	IAmb	IAmb	09 21 46.4	
	comp=Z,8.7nm,1.5s						
PDAR	Pinedale Array	46.38	353	P	P	09 21 45.5	0.0
PDAR	Pinedale Array	46.38	353	P	P	09 21 44.9	-0.5
	comp=Z,0.6nm,0.7s,baz=157,slow=8.0,SNR=8.7						
PDAR				LR	LR	09 38 58.0	
	comp=Z,55nm,19.7s,baz=172,slow=33						
	comp=Z,0.6nm,0.7s						
PLCA	Paso Flores	47.12	146	P	P	09 21 48.7	-2.4
	comp=Z,4.2nm,1.2s,baz=315,slow=4.3,SNR=3.9						
PLCA				LR	LR	09 36 44.3	
	comp=Z,256nm,19.4s,baz=258,slow=30						
	comp=Z,4.2nm,1.2s						
SNOW	Snow King Moun	47.22	352	IAmb	IAmb	09 22 22.3	
	comp=Z,6.8nm,1.4s						
TPAW	Teton Pass	47.28	352	IAmb	IAmb	09 22 09.9	
	comp=Z,5.0nm,1.2s						
RSSD	Black Hills	47.34	359	P	P	09 21 52.4	-0.5
RSSD				IAmb	IAmb	09 22 32.0	
	comp=Z,4.8nm,1.2s						
LOHW	Long Hollow	47.35	352	P	P	09 21 53.6	+0.7
LOHW				IAmb	IAmb	09 22 19.3	
	comp=Z,3.9nm,1.1s						
WVOR	Wild Horse Val	47.86	344	IAmb	IAmb	09 22 25.3	
	comp=Z,5.9nm,1.2s						
HLID	Hailey	47.93	349	IAmb	IAmb	09 22 04.8	
	comp=Z,5.3nm,1.2s						
PPT	Papeete	47.98	249	LR	LR	09 36 03.1	
	comp=Z,196nm,20.8s,baz=126,slow=29						
PPT2	Papeete2	47.99	249	*e*LR	LR	09 35 29.9	
	comp=Z,289nm,24.0s						
PPT2				*e*LR	LR	09 35 30.3	
	comp=Z,165nm,22.2s						
MFID	Camas Ranch	48.09	347	P	P	09 21 59.2	+0.6
MFID				IAmb	IAmb	09 21 59.9	
	comp=Z,3.6nm,1.1s						
YBH	Yreka Blue Hor	48.47	340	LR	LR	09 38 10.8	
	comp=Z,12nm,21.7s,baz=162,slow=31						
YHL	Hebgen Lake	48.64	352	IAmb	IAmb	09 22 05.0	
	comp=Z,4.7nm,1.0s						
J08A	Circle Bar Ran	48.67	345	IAmb	IAmb	09 22 04.2	
	comp=Z,7.3nm,1.4s						
CPUP	Villa Florida	49.09	122	LR	LR	09 40 33.7	
	comp=Z,28nm,18.2s,baz=168,slow=33						
TBI	Tubuai	49.27	242	*e*LR	LR	09 36 08.7	
	comp=Z,468nm,23.2s						
DLMT	Dillon	49.35	351	IAmb	IAmb	09 22 38.8	
	comp=Z,8.8nm,1.4s						
J05D	Fort Rock, OR	49.39	342	IAmb	IAmb	09 22 22.7	
	comp=Z,4.4nm,1.0s						
PLID	Pearl Lake	49.72	348	IAmb	IAmb	09 22 28.4	
	comp=Z,4.2nm,1.1s						
SADO	Sadowa	52.41	21	LR	LR	09 44 52.9	
	comp=Z,74nm,18.4s,baz=170,slow=36						
NEW	Newport	52.98	348	IAmb	IAmb	09 22 51.0	
	comp=Z,6.2nm,1.3s						
NEW	Newport	52.98	348	LR	LR	09 42 29.8	
	comp=Z,164nm,18.8s,baz=160,slow=33						
BDFB	Brasilia	55.17	107	P	P	09 22 54.2	+2.2
	comp=Z,2.5nm,0.8s,baz=292,slow=12,SNR=3.9						
BDFB				LR	LR	09 44 39.4	
	comp=Z,94nm,19.8s,baz=266,slow=34						
	comp=Z,2.5nm,0.8s						
BBB	Bella Bella	59.42	342	LR	LR	09 46 23.2	
	comp=Z,64nm,18.1s,baz=198,slow=33						
SCHQ	Schefferville	65.20	22	LR	LR	09 51 02.9	
	comp=Z,126nm,21.6s,baz=204,slow=35						
DLBC	Dease Lake	65.40	345	LR	LR	09 50 01.9	
	comp=Z,96nm,19.2s,baz=145,slow=34						
YKA	Yellowknife Ar	66.35	354	P	P	09 24 06.2	-0.9
	comp=Z,0.4nm,0.9s,baz=169,slow=6.6,SNR=3.7						
YKA				LR	LR	09 52 02.6	
	comp=Z,102nm,18.7s,baz=234,slow=35						
	comp=Z,0.4nm,0.9s						
PMSA	Palmer Station	67.21	163	LR	LR	09 45 17.3	
	comp=Z,201nm,19.9s,baz=291,slow=29						
FRB	Frobisher Bay	71.69	15	LR	LR	09 56 03.0	
	comp=Z,49nm,18.5s,baz=242,slow=36						
KDAK	Kodiak Island	72.85	335	LR	LR	09 48 55.9	
	comp=Z,138nm,19.9s,baz=145,slow=29						
INK	Inuvik	74.70	349	LR	LR	09 56 35.4	
	comp=Z,117nm,18.0s,baz=198,slow=35						
ILAR	Eielson Array	75.31	342	P	P	09 25 00.1	-1.7
	comp=Z,0.5nm,0.8s,baz=126,slow=6.0,SNR=4.6						
	comp=Z,0.5nm,0.8s						
RES	Resolute Bay	78.13	2	LR	LR	09 58 54.0	
	comp=Z,121nm,19.7s,baz=36,slow=35						
SFJD	Kangerlussuaq	79.26	18	LR	LR	10 00 24.4	
	comp=Z,62nm,19.9s,baz=242,slow=36						
URZ	Urewera	80.14	232	LR	LR	09 53 26.0	
	comp=Z,103nm,18.7s,baz=174,slow=30						
RPZ	Rata Peaks	84.90	227	LR	LR	09 58 12.2	
	comp=Z,132nm,18.0s,baz=134,slow=32						
SHEM	Shemya Is, Ala	88.55	323	LR	LR	09 57 14.0	
	comp=Z,111nm,21.0s,baz=36,slow=30						
BORG	Borgarnes	89.41	25	LR	LR	10 05 36.4	
	comp=Z,35nm,18.3s,baz=290,slow=35						
SNAA	Sanae	89.90	162	LR	LR	09 58 23.4	
	comp=Z,55nm,20.6s,baz=348,slow=30						
H11N3	WAKE ISLAND Hy	91.46	290	T	T	11 07 38.5	
	baz=94						
H11N2	WAKE ISLAND Hy	91.47	290	T	T	11 07 30.1	
	baz=94						
H11N1	WAKE ISLAND Hy	91.47	290	T	T	11 07 28.8	
	baz=94						
H11S2	WAKE ISLAND Hy	91.58	288	T	T	11 07 37.9	
	baz=94,slow=75,SNR=26						
H11S1	WAKE ISLAND Hy	91.59	288	T	T	11 07 31.1	
	baz=94,slow=75,SNR=24						
H11S3	WAKE ISLAND Hy	91.60	288	T	T	11 07 31.1	
	baz=94,slow=75,SNR=22						
JMIC	Jan Mayen	94.60	19	LR	LR	10 08 13.3	
	comp=Z,48nm,22.0s,baz=242,slow=35						
HNR	Honiara	96.63	260	LR	LR	10 01 32.7	
	comp=Z,43nm,19.7s,baz=236,slow=30						
DBIC	Dimbokro	98.22	84	LR	LR	10 07 50.8	
	comp=Z,39nm,21.8s,baz=190,slow=33						
PETK	Petropavlovsk-	98.46	323	LR	LR	10 03 28.1	
	comp=Z,80nm,20.4s,baz=121,slow=31						
MDT	Midelt	98.69	57	LR	LR	10 07 42.1	
	comp=Z,29nm,18.7s,baz=268,slow=33						
ESDC	Sonseca Array	98.94	51	LR	LR	10 04 04.8	
	comp=Z,40nm,21.8s,baz=282,slow=31						
SPITS	Spitsbergen Ar	99.10	11	LR	LR	10 12 42.4	
	comp=Z,68nm,18.1s,baz=276,slow=36						
SEY	Seymchan	99.78	333	LR	LR	10 05 55.8	
	comp=Z,34nm,18.4s,baz=128,slow=32						
WRA	Warramunga Arr	119.35	245	PKP	PKPdf	09 32 08.1	-1.1
	comp=Z,0.5nm,0.9s,baz=99,slow=2.4,SNR=4.8						
KURBB	Kurchatov Arra	132.95	359	PKP	PKPdf	09 32 33.7	-0.5
	comp=Z,0.1nm,0.3s,baz=349,slow=1.9,SNR=1.0						
MKAR	Makanchi Array	136.57	355	PKP	PKPdf	09 32 41.8	+0.5
	comp=Z,0.1nm,0.4s,baz=354,slow=1.4,SNR=1.4						
PZH	PanZhiHua	147.17	317	PKPbc	PKPdf	09 33 01.7	+0.9
CMAR	Chiang Mai Arr	154.03	307	PKPbc	PKPdf	09 33 16.1	+4.6
	comp=Z,0.6nm,0.3s,baz=66,slow=2.8,SNR=1.6						

IDC ***12*** *09:13:48.3±1.6, 23°.71N×121°.74E, h0^{km}, mb3.4/3, mbtmp3.5/4, ML3.7/1, Error ellipse: s-maj=74.3km s-min=27.0km az=68.0*

JMA ***12*** *09:13:50.9±0.3, 24°N±1°×122°.5E±0°.5, h18^{km}±4^{km}, MV2.9/14, NW OFF ISHIGAKIJIMA IS*

ASIES ***12*** *09:13:51.5, 24°.03N×122°.51E, h27^{km}, ML3.5, Mw3.4, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M$_{rr}$-0.52; M$_{\theta\theta}$-0.10; M$_{\phi\phi}$0.62; M$_{r\theta}$1.48; M$_{\theta\phi}$0.56; M$_{\phi r}$0.59; Fault plane solution: M$_0$1.78560×10^{21} NP1: φ$_s$355.70000°, δ22.48000°, λ-156.58000°. NP2: φ$_s$243.89000°, δ81.26000°, λ-69.21000°. Principal axes: T Plg33.0870°, Azm316.4540°; N Plg20.5400°, Azm60.5840°; P Plg49.5380°, Azm176.6420°;*

TAP ***12*** *09:13:51.5, 24°.03N×122°.51E, h27^{km}, ML3.5, C*

ISC 12 09:13:51.4±0.9, **23°.99N**±0°.03×**122°.51E**±0°.02, **h29**^{km}±8^{km}, **n113, σ0^s.90**/139, **mb3.3**/3, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS4	EOS4	0.22	307	*i* P	Pb	09 13 57.2	-0.2
EOS3	EOS3	0.35	329	*i* P	Pn	09 13 59.6	-0.8
EOS3				*e*S	Sn	09 14 05.6	-0.7
EOS2	EOS2	0.50	329	*i* P	Pn	09 14 02.3	-0.1
JYNG	Yonagunijimaku	0.61	41	P	Pb	09 14 03.1	-0.5
JYNG				*e*S	Sb	09 14 11.0	-0.9
YOJ	Yonaguni jima	0.66	44	P	Pb	09 14 03.9	-0.5
YOJ	Yonaguni jima	0.66	44	S	Sb	09 14 13.0	-0.3
YOJ	Yonaguni jima	0.66	44	P	Pb	09 14 04.0	-0.5
YOJ				*e*S	Sb	09 14 12.8	-0.5
YOJ	Yonaguni jima	0.66	44	P	Pb	09 14 03.9	-0.5
YOJ				*e*S	Sb	09 14 13.0	-0.3
EAHA	Aohua	0.78	296	*e*P	Pn	09 14 06.5	0.0
EWUT	Wuta	0.81	304	*e*P	Pn	09 14 06.8	-0.1
EWUT				*e*S	Sn	09 14 18.1	+0.2
ENA	Nanau	0.83	302	*i* P	Pb	09 14 06.8	-0.4
ETL	Fush Village	0.83	282	*e*P	Pb	09 14 07.0	-0.3
TWD	Chiawan	0.84	277	*e*P	Pb	09 14 06.5	-1.0
TEYL	Yanliau Villag	0.84	262	*e*P	Pn	09 14 07.1	-0.2
ESAO	Su ao	0.84	314	P	Pb	09 14 07.0	-0.6
ESAO				*e*S	Sn	09 14 19.0	+0.3
NACB	Ninganchiao	0.86	283	P	Pn	09 14 06.9	-0.6
NACB	Ninganchiao	0.86	283	P	Pn	09 14 06.7	-0.8
TWC	Suao	0.86	316	*i* P	Pb	09 14 07.3	-0.6
TWC				*e*S	Sn	09 14 18.8	-0.5
SHUL	Shoufeng	0.89	257	*e*P	Pn	09 14 07.3	-0.6
SHUL				*e*S	Sb	09 14 19.8	-0.1
ETM	Tongmen	0.93	269	*e*P	Pn	09 14 07.7	-0.8
ETLH	Xiulin Townshi	0.96	283	*e*P	Pn	09 14 08.8	-0.3
NDS	Dongshan	0.97	312	*e*P	Pn	09 14 08.9	-0.2
ESL	Shilin	1.00	260	*e*P	Pn	09 14 09.8	+0.3
LATG	Datong	1.05	302	*e*P	Pb	09 14 10.6	-0.5
TWE	Neicheng	1.06	314	*i* P	Pb	09 14 11.3	+0.1
TWE				*e*S	Sb	09 14 25.9	+1.2
WARBT	Fenglin Townsh	1.06	256	P	Pn	09 14 09.1	-1.2
ENTT	Nioudou	1.08	307	*e*P	Pb	09 14 11.4	-0.1
HGSD	Ruisui	1.11	244	*e*P	Pn	09 14 09.9	-1.1
NNSB	Datong	1.12	293	P	Pn	09 14 11.6	+0.4
TWB1	Santiao Chiao	1.12	335	*e*P	Pb	09 14 11.7	-0.5
NNS	Nan Shan	1.13	294	*e*P	Pb	09 14 11.8	-0.6
FUSB	Fushanzhiwuyua	1.14	313	*i* P	Pb	09 14 12.3	-0.3
WHF	Hehuan Shan	1.15	278	*i* P	Pn	09 14 11.7	-0.2
TIPB	Shuangxi	1.16	328	P	Pb	09 14 13.0	+0.1
TIPB				*i* S	Sb	09 14 28.6	+1.0
IRIF	Iriomote-Funau	1.17	72	P	Pb	09 14 13.1	+0.1
IRIF				S	Sb	09 14 28.2	+0.5
EHYH	Wanrong	1.18	246	*e*P	Pn	09 14 11.3	-0.6
ECBN	Changbin	1.18	236	*e*P	Pn	09 14 11.8	-0.1
HATJ	Hateruma jima	1.19	86	*e*P	Pn	09 14 12.4	+0.4
HATJ				*e*S	Sb	09 14 28.1	-0.2
EHY	Hungye	1.19	247	*e*P	Pn	09 14 11.5	-0.6
NWLT	Wulai	1.21	311	*e*P	Pb	09 14 13.5	-0.2
OWD	Renai	1.22	269	*e*P	Pn	09 14 12.8	+0.2
YHNB	Yeheng	1.24	304	P	Pb	09 14 13.5	-0.7
YHNB	Yeheng	1.24	304	P	Pb	09 14 13.6	-0.7
SXI1	Grass Mountain	1.25	332	P	Pb	09 14 13.5	-0.8
TWT	Tachien	1.25	283	*e*P	Pb	09 14 14.1	-0.3
NSK	Sanguang	1.25	303	*e*P	Pb	09 14 13.7	-0.8
YULB	Yu-li	1.26	242	P	Pn	09 14 12.4	-0.6
YULB	Yu-li	1.26	242	S	Sn	09 14 28.5	-0.5
YULB	Yu-li	1.26	242	*e*P	Pn	09 14 12.4	-0.6
TDCB	Techi	1.26	282	*e*P	Pn	09 14 13.9	+0.6
NWF	Wu-fen Shan	1.27	329	*e*P	Pb	09 14 14.2	-0.5
NWF				*e*S	Sb	09 14 32.0	+1.3
WFSB	Wu-fen Shan	1.27	329	*e*P	Pb	09 14 14.3	-0.4
WUSB	Renai	1.27	271	*e*P	Pn	09 14 13.5	+0.2
TWF1	Yuli	1.28	241	*e*P	Pn	09 14 12.8	-0.5
CHKH	Chenggong	1.29	232	*e*P	Pn	09 14 14.1	+0.6
TWA	Mucha	1.30	320	P	Pb	09 14 15.6	+0.3
TWA				*e*S	Sb	09 14 33.2	+1.6
TNOU	National Taiwa	1.34	330	*e*P	Pn	09 14 14.4	+0.3
TATO	Taipei	1.35	317	P	Pb	09 14 16.2	0.0
FULB	Fuli	1.36	235	*e*P	Pn	09 14 14.8	+0.3
CHKT	Chengkung	1.37	230	*e*P	Pn	09 14 14.9	+0.3
JKRS	Kuro-shima	1.39	79	P	Pb	09 14 16.0	-0.7
JKRS				*e*S	Sb	09 14 34.1	-0.1
NFF	Wufeng Townshi	1.42	297	*e*P	Pb	09 14 16.9	-0.4
SSLB	Suanglung	1.44	262	P	Pn	09 14 16.8	+1.2
SSLB	Suanglung	1.44	262	*e*P	Pn	09 14 16.7	+1.2
YM01	YM01	1.44	324	*e*P	Pb	09 14 17.2	-0.4
KSHI	Guanxi Townshi	1.45	303	*e*P	Pb	09 14 17.6	-0.1
EHD	Haiduan	1.46	235	*e*P	Pn	09 14 15.7	-0.1
WHP	Taichung City	1.46	282	*e*P	Pb	09 14 18.4	+0.4
WHP				*e*S	Sb	09 14 37.7	+1.5
YM08	YM08	1.46	325	*e*P	Pb	09 14 17.0	-0.9
WCS	Beigang Elemen	1.46	273	*e*P	Pb	09 14 18.5	+0.5
ZUZH	Zhuzihu	1.46	323	*e*P	Pb	09 14 17.5	-0.5
SMLT	Sun Moon Lake	1.48	266	*e*P	Pn	09 14 16.5	+0.4
EDH	Donghe	1.50	228	*e*P	Pn	09 14 15.6	-0.8
LIOB	Emei	1.51	296	P	Pb	09 14 18.4	-0.5
TYC	Yuchr	1.52	267	*e*P	Pb	09 14 19.5	+0.6
NSTT	Nanjuang	1.52	295	P	Pb	09 14 18.5	-0.4
TWY	Chenhua	1.53	327	*e*P	Pb	09 14 18.4	-0.7
JIJ	Ishigaki jima	1.54	76	*e*P	Pn	09 14 17.2	+0.4
JIJ				S	Sn	09 14 36.5	+0.7
ELDTW	Lidau	1.58	240	*e*P	Pn	09 14 17.0	-0.6
LDUT	Ludao	1.62	216	*i* P	Pn	09 14 16.3	-1.7
TWQ1	Liyutan	1.63	283	*e*P	Pb	09 14 20.2	-0.5
ALS	Alishan	1.63	253	*e*P	Pn	09 14 19.2	+0.8
ALS				*e*S	Sn	09 14 39.2	+0.6
WJS	Zhushan	1.64	265	*e*P	Pb	09 14 21.6	+0.6
WJS				*e*S	Sb	09 14 44.6	+3.3
NSY	Sanyi	1.65	285	*e*P	Pb	09 14 20.7	-0.6
LONT	Longtian	1.66	230	*e*P	Pn	09 14 19.9	+1.3
NMLH	Miaoli	1.66	290	*e*P	Pb	09 14 20.6	-0.8
WNT	Mingjian	1.68	267	*e*P	Pb	09 14 21.3	-0.3
WNT				*e*S	Sb	09 14 42.3	+0.1
PCYT	Pengchaiyu	1.68	346	*e*P	Pn	09 14 19.7	+0.8
TCU	Taichung	1.68	276	*e*P	Pb	09 14 21.1	-0.6
TCU				*e*S	Sb	09 14 42.7	+0.1
JISG	Ishigakijimahi	1.75	70	P	Pn	09 14 20.5	+0.7
JISG				*e*S	Sn	09 14 41.5	+0.5
TWGBT	Beinan	1.75	229	P	Pn	09 14 22.0	+2.1
TWGBT	Beinan	1.75	229	*e*P	Pn	09 14 20.2	+0.4
TWG	Pinlang	1.76	229	*e*P	Pn	09 14 20.1	+0.1
WCHH	Zhanghua	1.79	273	*e*P	Pb	09 14 22.7	-0.8
WCHH				*e*S	Sb	09 14 45.8	+0.3
WCKO	Fanlu	1.83	253	*e*S	Sb	09 14 45.9	-0.9
WDLH	Douliu	1.83	261	*e*S	Sb	09 14 49.0	+2.3
TPUB	Ta-pu	1.85	249	P	Pn	09 14 22.8	+1.5
TPUB	Ta-pu	1.85	249	*e*P	Pb	09 14 23.8	-0.9
WTP	Ta-pu	1.89	247	*e*P	Pn	09 14 23.4	+1.6
WTP				*e*S	Sb	09 14 48.1	-0.4
WTK	Tuku	1.97	262	*e*P	Pb	09 14 25.5	-1.0
CHY	Chiayi	1.97	256	*e*P	Pn	09 14 24.4	+1.6
CHN1	Nanshi	1.99	247	*e*P	Pn	09 14 25.2	+2.2
CHN1				*e*S	Sb	09 14 50.7	-0.5
TWK	Hsinying	1.99	249	*e*P	Pn	09 14 24.6	+1.4
ECL	Taimali	1.99	226	*e*P	Pn	09 14 24.7	+1.6
SNST	Tainan City	2.00	248	*e*P	Pn	09 14 24.9	+1.7
JTJ	Tarama	2.10	72	*e*S	Sn	09 14 52.1	+2.3
WSF	Szhu	2.12	261	*e*S	Sb	09 14 54.4	-0.7
WSL	Shuilin Townsh	2.14	258	*e*P	Pn	09 14 26.8	+1.6
WSL				*e*S	Sb	09 14 54.1	-1.6
MASBT	Mashibuluo	2.20	232	*e*P	Pn	09 14 28.3	+2.3
KSRS	Korea Array	14.20	18	Pn	P	09 17 17.2	-0.4
	0.3nm,0.3s,baz=199,slow=12,SNR=10						
	1.5nm,0.6s						
MKAR	Makanchi Array	39.32	316	P	P	09 21 16.5	-1.4
	0.2nm,0.4s,baz=101,slow=7.3,SNR=4.3						
	0.2nm,0.4s						
WRA	Warramunga Arr	45.16	164	P	P	09 22 05.9	+0.2
	0.4nm,1.0s,baz=345,slow=8.6,SNR=1.9						
	0.4nm,1.0s						
ASAR	Alice Springs	48.64	166	P	P	09 22 33.6	+0.8
	0.2nm,0.4s,baz=348,slow=8.5,SNR=6.5						
	0.2nm,0.4s						

NIC ***12*** *09:21:18.7, 35°.12N×30°.66E, h35^{km}±20^{km}, Ml2.6/7*

GII ***12*** *09:21:19.4±0.0, 35°.21N±0°.03×30°.916E±0°.008, h40^{km}, Mws2.8, confirmed*

ISK ***12*** *09:21:20.4, 35°.19N×31°.21E, h5^{km}, ML2.6/19*

ISC 12 09:21:23.0±1.5, **35°.15N**±0°.05×**31°.13E**±0°.06, **h99**^{km}±14^{km}, **n52, σ1^s.30**/64, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKMS	Akamas	1.00	97	P	Pn	09 21 41.6	-1.8
AKMS				S	Sn	09 21 59.4	+0.8
AKMS				AML	AML	09 22 03.2	
	0.5nm,0.3s						
AKMS				AML	AML	09 22 07.6	
	0.4nm,0.2s						
ALFC	Alefka	1.21	89	P	Pn	09 21 44.4	-1.3
ALFC				S	Sn	09 22 04.9	+2.1
ALFC				AML	AML	09 22 09.2	
	0.2nm,0.4s						
ALFC				AML	AML	09 22 10.9	
	0.3nm,0.2s						
NATA	Nata	1.24	107	P	Pn	09 21 45.3	-0.8
NATA				S	Sn	09 22 05.0	+1.4
NATA				AML	AML	09 22 15.5	
	0.5nm,0.3s						
NATA				AML	AML	09 22 17.9	
	0.6nm,0.3s						
TROD	Troodos	1.44	98	P	Pn	09 21 47.4	-1.3
TROD				S	Sn	09 22 09.2	+1.1
TROD				AML	AML	09 22 17.5	
	0.1nm,0.3s						
TROD				AML	AML	09 22 22.0	
	0.1nm,0.4s						
GAZI	Gazipasa	1.45	42	Pn	Pn	09 21 46.5	-2.1
GAZI				Sn	Sn	09 22 06.2	-1.8
APOL	The Sanctuary	1.50	108	P	Pn	09 21 48.8	-0.5
APOL				S	Sn	09 22 11.4	+2.3
AKDN	Akdeniz- Kıbrı	1.51	84	Pn	Pn	09 21 48.1	-1.2
XYLS	Xyliatos	1.58	94	P	Pn	09 21 49.8	-0.5
XYLS				S	Sn	09 22 14.0	+3.0
XYLS				AML	AML	09 22 18.7	
	0.1nm,0.2s						
XYLS				AML	AML	09 22 19.2	
	0.1nm,0.3s						
AKAS	Kas	1.64	311	Pn	Pn	09 21 51.1	0.0
ASGA	Asgata	1.78	101	P	Pn	09 21 52.5	-0.2
ASGA				S	Sn	09 22 18.1	+2.9
ASGA				AML	AML	09 22 19.4	
	0.1nm,0.2s						
ASGA				AML	AML	09 22 25.4	
	0.1nm,0.3s						
CSS	Mathiatis	1.82	95	Pn	Pn	09 21 51.9	-1.3
CSS				Sn	Sn	09 22 15.4	-0.8
CSS	Mathiatis	1.82	95	P	Pn	09 21 51.1	-2.1
CSS				S	Sn	09 22 14.6	-1.5
CSS	Mathiatis	1.82	95	P	Pn	09 21 52.9	-0.3
CSS				S	Sn	09 22 20.0	+3.9
CSS				AML	AML	09 22 24.4	
	0.1nm,0.5s						
CSS				AML	AML	09 22 27.9	
	0.1nm,0.4s						
TEKE	Tekeli-Mersin	1.90	58	Pn	Pn	09 21 53.4	-0.8
TEKE				Sn	Sn	09 22 17.1	-0.8
KORT	Korkueli	1.95	341	Pn	Pn	09 21 54.7	-0.3
LFK	Lefkose	1.97	86	Pn	Pn	09 21 54.5	-0.7
BERE	Bereket-Mersin	2.08	54	Pn	Pn	09 21 56.1	-0.6
HDMB	Hadim	2.12	31	Pn	Pn	09 21 56.5	-0.7
AKKU	Akkuyu-Mersin	2.21	62	Pn	Pn	09 21 57.9	-0.4
TEVE	Tevekalti-Mers	2.28	55	Pn	Pn	09 21 58.7	-0.5
YESI	Yesilovacik-Me	2.30	62	Pn	Pn	09 21 58.8	-0.6
TISA	Tisan-Mersin	2.31	63	Pn	Pn	09 21 58.7	-0.8
SEYD	Seydisehir-KON	2.32	14	Pn	Pn	09 21 59.5	-0.3
IKL	Isikli	2.35	62	Pn	Pn	09 21 59.6	-0.4
KEBE	Keben-Mersin	2.47	58	Pn	Pn	09 22 01.1	-0.6
EREN	Erenkoy	2.52	81	Pn	Pn	09 22 02.1	-0.1
KRMN	Karaman	2.66	40	Pn	Pn	09 22 03.9	-0.3
KONT	Konya--Tatoy	2.96	19	Pn	Pn	09 22 08.3	+0.1
HNTI	Hanita	3.94	120	P	Pn	09 22 20.7	-0.7
HNTI	Hanita	3.94	120	S	Sn	09 23 07.4	+0.8
MMA0B	Mount Meron ar	4.14	120	P	Pn	09 22 23.0	-1.1
MMA0B	Mount Meron ar	4.14	120	S	Sn	09 23 12.6	+1.1
GEM	Giv'at Ha'Em	4.23	116	P	Pn	09 22 24.7	-0.6
GEM	Giv'at Ha'Em	4.23	116	S	Sn	09 23 14.5	+0.9
NATI	Neve Ativ	4.26	115	P	Pn	09 22 24.9	-0.8
NATI	Neve Ativ	4.26	115	S	Sn	09 23 16.0	+1.7
MMLI	Mount Malkishu	4.49	126	P	Pn	09 22 27.2	-1.6
MMLI	Mount Malkishu	4.49	126	S	Sn	09 23 20.7	+0.9
HMDT	Nahal Hemdat	4.67	127	P	Pn	09 22 30.3	-0.9
HMDT	Nahal Hemdat	4.67	127	S	Sn	09 23 25.5	+1.3
DSI	Dead Sea	5.04	134	P	Pn	09 22 35.1	-1.2

DSI	Dead Sea	5.04	134	S	Sn	09 23 34.3	+1.0
YTIR	Yattir	5.04	137	P	Pn	09 22 35.7	-0.7
YTIR	Yattir	5.04	137	S	Sn	09 23 34.1	+0.6
PRNI	Paran	5.79	145	P	Pn	09 22 45.3	-1.3
PRNI	Paran	5.79	145	S	Sn	09 23 51.2	-0.5
KRMI	Paran Flat	5.87	148	P	Pn	09 22 46.2	-1.3
KRMI	Paran Flat	5.87	148	S	Sn	09 23 54.1	+0.6
MBRI	Mt Berech	6.23	148	P	Pn	09 22 51.8	-0.7
MBRI	Mt Berech	6.23	148	S	Sn	09 24 03.3	+1.0
EIL	Elat	6.35	148	P	Pn	09 22 52.8	-1.3
EIL	Elat	6.35	148	S	Sn	09 24 05.8	+0.6

*HEL **12** 09:29:14.5±0.4, 67°.18N×20°.67E, h0^{km}, ML1.1, Suspected explosion*

UPP 12 09:29:13.8±0.0**, 67°.18N×20°.68E, h0^{km}, ML1.8, Confirmed Induced event, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.08	215	P	Pg	09 29 15.5	+0.3
DUNU				S	Sg	09 29 16.8	+0.6
MASU	Masugnsbyn	0.58	61	P	Pg	09 29 24.8	-0.1
MASU				S	Sg	09 29 32.8	+0.4
RATU	Laukkuluspa	0.77	327	P	Pg	09 29 28.0	-0.5
RATU				S	Sg	09 29 38.4	-0.1
KUA	Kurravaara	0.79	351	P	Pg	09 29 28.8	-0.1
KUA				S	Sg	09 29 39.0	0.0
SALU	Saltoluokta	0.87	284	P	Pg	09 29 29.9	-0.5
ERTU	Ertsjaerv	0.87	136	P	Pg	09 29 29.9	-0.5
ERTU	Ertsjaerv	0.87	136	PB	Pg	09 29 29.8	-0.6
PAJU	Pajala	0.96	98	P	Pg	09 29 31.9	-0.3
PAJU	Pajala	0.96	98	PG	Pg	09 29 32.0	-0.3
	baz=282						
PAJU				SB	Sg	09 29 44.9	+0.2
HARU	Harads	1.03	173	P	Pg	09 29 32.8	-0.7
KOVU	Salmi	1.06	350	P	Pg	09 29 33.6	-0.5
KLF	Kolari	1.28	86	PG	Pg	09 29 37.5	-0.8
KLF				MSG		09 29 53.4	
	comp=Z,0.6nm,0.2s						
KLF				SG	Sg	09 29 54.6	-0.3
HEF	Hetta	1.67	41	PG	Pn	09 29 44.3	0.0
	baz=226						
HEF				MSG		09 30 04.8	
	comp=Z,0.7nm,0.2s						
HEF				SG	Sn	09 30 06.2	-0.2
KALU	Kalix	1.71	140	P	Pn	09 29 44.7	-0.1
KALU	Kalix	1.71	140	PG	Pb	09 29 45.8	-0.2
SJUU	Sjulsmark	1.72	167	P	Pn	09 29 45.0	0.0
TOF	Tornio	1.83	126	PG	Pb	09 29 47.4	-0.6
TOF				MSG		09 30 08.9	
	comp=Z,0.7nm,0.2s						
TOF				SN	Sg	09 30 12.4	-0.1
KIF	Kilpisjarvi	1.83	1	PG	Pb	09 29 48.3	+0.3
KIF				MSG		09 30 10.5	
	comp=Z,1.9nm,0.2s						
KIF				SG	Sg	09 30 12.7	+0.2
RANF	Ranua	2.71	113	SG	Sb	09 30 36.9	+0.2
ARA0	ARCESS Array S	2.96	35	SB	Sb	09 30 43.4	-0.7
OBF4	Vikkela, Lumij	2.99	141	MSG		09 30 42.3	
	comp=Z,0.3nm,0.2s						
OBF0	Syolatti, Pyha	3.07	150	SB	Sb	09 30 44.0	-3.1
OBF0				MSG		09 30 44.4	
	comp=Z,0.7nm,0.2s						
RAJF	Raja-Jooseppi	3.17	62	PB	Pn	09 30 07.5	+2.6
KEV	Kevo	3.48	39	SN	Sn	09 30 51.2	+0.3
VAF	Ylistaro	4.24	168	PB	Pb	09 30 25.2	-4.0

HEL 12 09:29:50.1±0.1**, 61°.74N×22°.40E, h0^{km}, ML1.1, Explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KPF	Kankaanpaa	0.18	300	PG	Pg	09 29 52.9	-0.6
KPF				SG	Sg	09 29 55.4	-0.5
RAF	Rauma	0.79	203	PB	Pg	09 30 04.9	-0.2
	baz=19						
RAF				MSG		09 30 14.5	
	comp=Z,1.4nm,0.2s						
RAF				SB	Sg	09 30 16.2	+0.9
KEF	Keuruu	1.24	69	PG	Pg	09 30 12.5	-1.4
	baz=247						
KEF				MSG		09 30 27.7	
	comp=Z,1.7nm,0.2s						
KEF				SB	Sg	09 30 28.8	-1.2
VAF	Ylistaro	1.31	5	PG	Pg	09 30 13.9	-1.2
VAF				MSG		09 30 29.8	
	comp=Z,0.8nm,0.2s						
VAF				SB	Sg	09 30 31.3	-0.8
FIA0	FINESS Array S	1.79	98	PG	Pn	09 30 21.8	-0.3
	baz=277						
FIA0				MSG		09 30 43.2	
	comp=Z,1.1nm,0.2s						
FIA0				SG	Sb	09 30 46.8	+0.3
KAF	Kangasniemi	1.89	77	MSG		09 30 46.1	
	comp=Z,1.0nm,0.2s						
KAF				SG	Sb	09 30 49.0	-0.4
SUF	Sumiainen	2.01	59	PG	Pn	09 30 25.6	+0.4
SUF				MSG		09 30 49.7	
	comp=Z,0.7nm,0.2s						
SUF				SG	Sn	09 30 51.5	+0.4
HUSU	Husum	2.18	319	SN	Sb	09 30 57.8	0.0
HUSU	Husum	2.18	319	SG	Sb	09 30 57.8	0.0
UMAU	Umeaa	2.29	341	SG	Sb	09 31 00.2	-0.7
OUF	Merijarvi	2.84	21	MSG		09 31 13.8	
	comp=Z,0.4nm,0.2s						
OUF				SB	Sb	09 31 15.3	-1.6
MTSE	Matsula	3.12	166	SG	Sb	09 31 24.8	-0.1
OBF4	Vikkela, Lumij	3.31	20	PB	Pn	09 30 45.0	+1.9
RANF	Ranua	4.71	22	PB	Pb	09 31 08.9	-4.4
RANF				SN	Sn	09 31 55.5	-2.0

*IGQ **12** 09:32:39.5±0.2, 3°S±1°×8°0W±°, h26^{km}±2^{km}, MLv3.6/29*

ISC 12 09:32:39.6±1.3**, 2°.60S**±0°.03×**79°.64W**±0°.03**, h30^{km}**±12^{km}**, n74, σ1^s.12**/85**, 15C-9D, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COHC	Cochancay	0.41	71	S	Sn	09 32 57.6	+1.6
COHC				⇓P	Pb	09 32 49.2	+0.5
COHC	Cochancay	0.41	71	P	Pb	09 32 49.1	+0.5
COHC				S	Sn	09 32 57.1	+1.1
GYE3	Ecuador-Guayaq	0.51	330	⇑P	Pb	09 32 49.6	-0.6
GYE3				S	Sn	09 32 58.5	0.0
AC07	Ecuador-Guayaq	0.56	322	⇑P	Pb	09 32 51.4	+0.3
AGUAY	Guayaquil	0.62	330	P	Pb	09 32 51.7	-0.4
PCRA	Pucara 2	0.62	167	⇓P	Pn	09 32 52.7	-0.1
PCRA				S	Sn	09 33 03.0	+1.1
ISPG	Isla Puna-Puer	0.64	235	⇓P	Pn	09 32 54.5	+1.8
ACH2	Ecuador-Machal	0.68	194	⇓P	Pn	09 32 53.3	0.0
MORR	Playas El Morr	0.70	266	⇑P	Pn	09 32 54.3	+0.9
MORR				S	Sn	09 33 07.2	+4.0
ACUE	Ecuador-Cuenca	0.75	115	P	Pb	09 32 54.3	-0.1
AZOG	Ecuador-Azogue	0.81	101	P	Pb	09 32 54.6	-0.8
ARNL	Arenillas	1.04	204	P	Pn	09 32 57.2	-0.9
JSCH	Cashca Tororas	1.10	37	P	Pn	09 32 57.5	-1.7
AGRD	Ecuador-Guaran	1.20	32	P	Pn	09 32 58.8	-1.9
BOSC	San Juan Bosco	1.27	116	⇑P	Pn	09 33 01.7	+0.2
CHSH	Refugio Sur-Vo	1.34	35	⇑P	Pn	09 33 01.6	-1.2
TAMH	Tambohuasha Ch	1.36	39	P	Pn	09 33 02.4	-0.5
SALI	Salinas	1.41	287	P	Pn	09 33 03.1	-0.1
PORT	Chimborazo Vol	1.42	38	P	Pn	09 33 03.4	-0.5
ALJ1	Ecuador-Loja-U	1.45	162	⇑P	Pn	09 33 03.7	-0.3
LAMO	ALAMOR	1.46	195	P	Pn	09 33 03.6	-0.4
IGUA	Igualata	1.49	42	P	Pn	09 33 04.4	-0.4
PPLP	Puerto Lpez	1.54	313	P	Pn	09 33 04.4	-0.6
PPLP	Puerto Lpez	1.54	313	P	Pn	09 33 04.0	-1.1
PPLP				S	Sn	09 33 23.1	-1.0
BMAS	Trigal station	1.59	47	P	Pn	09 33 03.9	-2.2
ARRY	Arrayan	1.61	48	P	Pn	09 33 06.0	-0.2
BBIL	Ulba Tungurahu	1.62	45	⇓P	Pn	09 33 06.1	-0.4
BPAT	Tungurahua Vol	1.62	48	P	Pn	09 33 06.2	-0.4
GONZ	Gonzanam	1.65	171	P	Pn	09 33 06.2	-0.7
JUI6	Juive	1.65	45	⇑P	Pn	09 33 06.9	+0.1
POND	Pondoa	1.67	46	P	Pn	09 33 07.0	-0.1
BULB	Ulba Tungurahu	1.69	47	P	Pn	09 33 07.8	+0.4
AMCR	Ecuador-Macara	1.79	190	P	Pn	09 33 06.6	-1.9
MCRA	Macar, Loja	1.79	190	P	Pn	09 33 07.3	-1.3
MCRA	Macar, Loja	1.79	190	P	Pn	09 33 07.2	-1.3
MCRA				S	Sn	09 33 28.2	-2.0
PECV	Mancha de Ca P	1.85	347	⇓P	Pn	09 33 09.7	+0.3
ISPT	Isla de la Pla	1.95	313	⇑P	Pn	09 33 10.2	-0.4
PIS1	Pisayambo	1.98	39	P	Pn	09 33 11.7	+0.2
ILLI	Illinizas Sur	2.08	26	P	Pn	09 33 13.2	+0.3
PIAT	Ana Tenorio	2.10	41	P	Pn	09 33 13.7	+0.6
BRRN	Barrancas-Volc	2.15	33	P	Pn	09 33 14.5	+0.7
TAIS	Taisha	2.15	84	P	Pn	09 33 13.1	-0.4
VCES	Cotopaxi	2.18	35	P	Pn	09 33 13.9	-0.4
SLOR	San Lorenzo -	2.18	32	P	Pn	09 33 15.4	+1.2
FLF1	Flavio Alfaro-	2.23	355	P	Pn	09 33 13.6	-1.1
FLF1	Flavio Alfaro-	2.23	355	P	Pn	09 33 13.5	-1.1
FLF1				S	Sn	09 33 40.7	-0.5
SUCR	Mariscal Sucre	2.26	31	P	Pn	09 33 16.3	+0.9
BREF	Cotopaxi Volca	2.26	32	P	Pn	09 33 16.1	+0.6
BTAM	Cotopaxi Volca	2.28	33	P	Pn	09 33 15.6	-0.1
TAMB	Tambo	2.28	34	P	Pn	09 33 16.9	+1.2
BVC2	Cotopaxi Volca	2.29	33	P	Pn	09 33 16.8	+1.0
ZUMB	Zumba	2.31	168	⇑P	Pn	09 33 15.9	+0.3
PITA	Cotopaxi Volc	2.36	31	P	Pn	09 33 18.0	+1.3
HPAL	Hacienda Las P	2.56	23	P	Pn	09 33 20.0	+0.5
GGPT	Toaza - Volcan	2.57	23	⇓P	Pn	09 33 20.1	+0.6
JUA2	San Juan 2	2.58	24	⇑P	Pn	09 33 20.7	+0.9
ANTI	Antisana	2.60	35	P	Pn	09 33 20.4	+0.3
TERV	Terraza Guagua	2.62	23	⇓P	Pn	09 33 21.1	+0.7
PINO	Pino	2.63	23	⇑P	Pn	09 33 21.3	+0.7
YANA	Yana	2.69	24	P	Pn	09 33 21.8	+0.6
PULU	Pululahua	2.84	24	P	Pn	09 33 23.9	+0.6
PAC1	Pacto, Paraso	2.97	17	P	Pn	09 33 23.7	-1.2
PAC1	Pacto, Paraso	2.97	17	P	Pn	09 33 23.6	-1.2
PAC1				S	Sn	09 33 58.6	-0.9
OTAV	Otavalo	3.06	23	⇓P	Pn	09 33 26.4	+0.1
OTAV	Otavalo	3.06	23	P	Pn	09 33 26.3	0.0
OTAV				S	Sn	09 34 03.8	+1.7
CAYR	Refugio Cayamb	3.07	32	⇑P	Pn	09 33 28.1	+1.5
ANGU	Angureal	3.09	32	⇑P	Pn	09 33 27.9	+0.9
CUSE	Cuicocha Este	3.14	23	⇑P	Pn	09 33 28.1	+0.7
CUSE	Cuicocha Este	3.14	23	P	Pn	09 33 28.0	+0.6
CUSE				S	Sn	09 34 06.8	+2.7
CUIC	Cuicocha-Domo	3.15	24	⇑P	Pn	09 33 28.2	+0.6
URCU	Urcuqui	3.32	25	P	Pn	09 33 30.3	+0.4
CHMA	Chilma	3.78	25	P	Pn	09 33 36.3	+0.1
ECEN	Cerro Negro	3.79	26	P	Pn	09 33 35.9	-0.5
CZSB	Cruzeiro do Su	8.59	127	P	Pn	09 34 38.3	-3.6

RSNC 12 09:42:15.4±0.0**, 13°N**±1°×**8°1W**±°**, h1^{km}**±1^{km}**, M2.8, mb3.7, ML2.8, MwMwp4.7, Mwp5.0, Caribbean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRVC	Isla de Provid	0.25	300	P	Pb	09 42 21.6	-1.2
PRVC				S	Sb	09 42 26.5	-1.1
SAIC	Isla e San And	0.90	218	P	Pg	09 42 32.8	+0.1
SAIC				S	Sb	09 42 46.7	+0.3
SERC	Banco Serrana,	1.28	36	P	Pg	09 42 38.6	-1.3
SERC				S	Sg	09 42 56.0	-0.5
ACON	Acoyapa	4.14	253	P	Pn	09 43 20.4	+0.6
ACON				S	Sn	09 44 07.5	-1.4
BCIP	Isla Barro Col	4.25	162	P	Pn	09 43 16.9	-4.5
BCIP				S	Sn	09 44 04.4	-7.3
JTS	Las Juntas de	4.75	232	P	Pn	09 43 28.6	+0.3
JTS				S	Sn	09 44 24.0	-0.1
AZU	Azuero	5.49	171	P	Pn	09 43 35.6	-2.8
	15nm,1.1s						
AZU				S	Sn	09 44 36.4	-5.8
	15nm,1.1s						
LCBC	Los crdobas,	6.40	133	P	Pn	09 43 51.6	+0.7
LCBC				S	Sn	09 45 02.8	-1.9
SJCC	San Jacinto, C	6.72	119	P	Pn	09 43 51.2	-4.2
SJCC				S	Sn	09 45 05.1	-7.6
UREC	San Jos de Ur	7.76	134	P	Pn	09 44 09.5	-0.1
	1.9nm,0.8s						
UREC				S	Sn	09 45 31.5	-6.8
	1.9nm,0.8s						
ZARC	Zaragoza, Cauc	8.42	132	P	Pn	09 44 16.4	-2.3
ZARC				S	Sn	09 45 48.1	-6.4

IDC 12 09:45:05.7±1.2**, 55°.49S×126°.77W, h0^{km}, mb3.8**/4**, mbtmp3.8**/4**, MS3.5**/2**, Error ellipse: s-maj=103.8km s-min=29.1km az=156.0, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMSA	Palmer Station	31.27	133	LR	LR	10 00 33.0	
	comp=Z,62nm,20.1s,baz=305,slow=30						
H03S2	Juan Fernandez	39.31	77	T	T	10 34 25.4	
	baz=220,slow=74,SNR=24						
H03S1	Juan Fernandez	39.32	77	T	T	10 34 26.7	
	baz=220,slow=74,SNR=25						
H03S3	Juan Fernandez	39.33	77	T	T	10 34 25.6	
	baz=220,slow=74,SNR=17						
H03N3	Juan Fernandez	39.60	76	T	T	10 34 49.4	
	baz=224,slow=72,SNR=9.9						
H03N2	Juan Fernandez	39.60	76	T	T	10 34 43.0	
	baz=224,slow=72,SNR=12						
H03N1	Juan Fernandez	39.62	76	T	T	10 34 47.5	
	baz=224,slow=72,SNR=10						
PPT	Papeete	41.65	326	LR	LR	10 04 46.1	
	comp=Z,78nm,20.8s,baz=160,slow=28						
LPAZ	La Paz	59.09	73	P	P	09 55 08.4	0.0
	2.6nm,1.0s,baz=198,slow=3.2,SNR=6.7						
	2.6nm,1.0s						
ASAR	Alice Springs	75.90	249	P	P	09 56 54.0	0.0
	0.4nm,0.8s,baz=159,slow=6.4,SNR=5.4						
	0.4nm,0.8s						
WRA	Warramunga Arr	78.70	251	P	P	09 57 09.5	-0.3
	0.7nm,0.8s,baz=145,slow=5.5,SNR=4.8						
	0.7nm,0.8s						
TXAR	Lajitas Array	86.77	20	P	P	09 57 50.9	-0.4
	0.6nm,1.1s,baz=205,slow=5.3,SNR=5.0						
	0.6nm,1.1s						
H11S2	WAKE ISLAND Hy	92.53	299	T	T	11 40 29.5	
	baz=148,slow=75,SNR=5.9						
H11S3	WAKE ISLAND Hy	92.54	299	T	T	11 40 30.6	
	baz=148,slow=75,SNR=6.0						
H11S1	WAKE ISLAND Hy	92.54	299	T	T	11 40 31.6	
	baz=148,slow=75,SNR=3.7						
SONM	Songino Array	146.88	279	PKPbc	PKPbc	10 04 49.2	+0.1
	0.6nm,0.7s,baz=104,slow=3.1,SNR=4.2						

IDC 12 09:49:07.7±7.3**, 15°.66S×177°.02W, h0^{km}, mb4.1**/3**, mbtmp4.1**/3**, ML4.4**/1**, Error ellipse: s-maj=193.9km s-min=111.0km az=140.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.16	246	Pn	Pn	09 50 26.2	-0.1
	0.5nm,0.3s,baz=198,slow=21,SNR=6.0						
STKA	Stephens Creek	40.90	239	P	P	09 56 52.1	+0.3
	2.0nm,0.8s,baz=78,slow=9.3,SNR=2.1						
	2.0nm,0.8s						
WRA	Warramunga Arr	46.39	257	P	P	09 57 36.2	-0.1
	0.5nm,0.6s,baz=92,slow=7.4,SNR=7.5						
	0.5nm,0.6s						
ASAR	Alice Springs	46.72	252	P	P	09 57 38.5	-0.4
	4.5nm,0.5s,baz=90,slow=7.6,SNR=102						
	4.5nm,0.5s						

*SOME **12** 10:24:30.9, 44°.38N×83°.15E, h10^{km}*

*NNC **12** 10:24:31.2±2.0, 44°.26N×83°.16E, h0^{km}, mb3.6, mpv3.5, Error ellipse: s-maj=16.7km s-min=4.6km az=120.0*

ISC 12 10:24:32.7±1.7**, 44°.38N**±0°.08×**83°.13E**±0°.09**, h17^{km}, n14, σ1^s.62**/20**, 5C, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	2.21	246	eP	Pb	10 25 12.8	+0.5
	12nm,0.2s						
KTMS				eS	Sg	10 25 42.8	-1.0
	61nm,0.2s						
DJR	Jarkent	2.39	270	Pg	Pb	10 25 16.2	+0.9
	7.2nm,0.3s						
DJR				Lg	Lg	10 25 48.9	
	23nm,0.2s						
DJR	Jarkent	2.39	270	eP	Pb	10 25 16.2	+0.9
	7.2nm,0.3s						
DJR				eS	Sg	10 25 49.0	-0.7
	23nm,0.2s						
MK31	Makanchi Array	2.49	347	⇑Pg	Pb	10 25 17.9	+1.0
	2.0nm,0.3s,baz=150,slow=16,SNR=19						
MK31				⇑Sn	Sb	10 25 48.4	+1.1
	1.7nm,0.2s,baz=167,slow=24,SNR=6.9						
MK31				⇑Lg	Lg	10 25 56.0	
	57nm,0.6s,baz=162,slow=27,SNR=17						
MAKZ	Makanchi	2.56	342	⇑Pg	Pb	10 25 18.9	+0.7
	2.1nm,0.3s						
MAKZ				⇑Lg	Lg	10 25 54.9	
	9.0nm,0.4s						
KNOS	Konyrlen	2.83	271	Pg	Pb	10 25 24.0	+1.1
	2.6nm,0.1s						
KNOS				Lg	Lg	10 26 01.9	
	32nm,0.2s						
SHLS	Shalkode	2.92	247	Pg	Pn	10 25 20.1	+1.6
	19nm,0.3s						
SHLS				Lg	Lg	10 25 55.6	
	86nm,0.3s						
SHLS	Shalkode	2.92	247	eP	Pn	10 25 20.1	+1.6
	19nm,0.3s						
SHLS				eS	Sn	10 25 55.6	+2.4
	86nm,0.3s						
UZB	Uzynbulak	3.22	249	Pg	Pb	10 25 29.6	+0.1
	3.4nm,0.2s						
UZB				Lg	Lg	10 26 11.2	
	11nm,0.3s						
ZSN	Zaisan	3.31	21	eP	Pb	10 25 32.1	+1.2
	7.9nm,0.2s						
ZSN				eS	Sg	10 26 15.8	-3.0
	46nm,0.3s						
KPKS	Kokpek	3.34	256	Pg	Pb	10 25 31.9	+0.4
	2.3nm,0.2s						
KPKS				Lg	Lg	10 26 15.0	
	38nm,0.3s						
BLB	Baldybastay	3.35	267	Pg	Pb	10 25 33.1	+1.3
	10nm,0.1s						
BLB				Lg	Lg	10 26 17.4	
	63nm,0.2s						
SATY	Saty	3.67	251	Pg	Pb	10 25 37.6	+0.5
	2.4nm,0.1s						
SATY				Lg	Lg	10 26 24.9	
	21nm,0.2s						
KOTS	Kotyrbulak	4.50	257	eP	Pg	10 25 55.5	-3.4
	7.6nm,0.4s						
KOTS				eS	Sg	10 26 55.6	-1.6
	32nm,0.2s						

STR 12 10:25:47.5±2.5**, 45°N**±4°×°±1°4**, h0^{km}, MLv0.3**/3**, Error ellipse: s-maj=0.0km s-min=0.0km az=94.8, preliminary, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRN	Grenoble	0.08	39	Pg	Pg	10 25 49.0	0.0
GRN				Sg	Sg	10 25 50.2	+0.2

*BJI **12** 10:35:00.7, 37°.89N×142°.26E, h45^{km}, mB4.7/10, mb4.6/36, Ms3.6/2, Ms7 3.6/3*

*IDC **12** 10:35:00.8±0.6, 38°.19N×141°.71E, h0^{km}, mb4.2/22, mbtmp4.1/26, ML3.7/4, MS3.3/15, Error ellipse: s-maj=16.5km s-min=15.2km az=79.0*

*MOS **12** 10:35:05.8±0.9, 38°.27N×141°.70E, h47^{km}, mb4.8/24, Error ellipse: s-maj=9.3km s-min=5.6km az=106.2*

*NEIC **12** 10:35:08.7±1.4, 38°.27N±0°.05×141°.61E±0°.07, h51^{km}±7^{km}, mb4.5/39, Mwr4.2/15, Error ellipse: s-maj=9.0km s-min=7.1km az=126.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.17; $M_{\theta\theta}$0.24; $M_{\phi\phi}$-1.41; $M_{r\theta}$0.56; $M_{\theta\phi}$0.22; $M_{\phi r}$1.71; Fault plane solution: $M_0$2.24000×10^{15} NP1:ϕ_s13.36000°, δ73.18000°, λ105.32000°. NP2:ϕ_s149.93000°, δ22.60000°, λ48.85000°. Principal axes: T 2.2079, Plg59.0000°, Azm305.0000°; N 0.0549, Plg15.0000°, Azm189.0000°; P -2.2627, Plg27.0000°, Azm91.0000°;*

*JMA **12** 10:35:08.0±0.1, 38°.2N±0°.4×141°.7E±0°.6, h50^{km}, MD4.2/40, MV4.3/40, KINKAZAN REGION*

JMA Felt II J1 at KINKAZAN REGION .

*NEIC **12** 10:35:08.8, 38°.26N×141°.60E, h51^{km}*

*NIED **12** 10:35:08.0, 38°.23N×141°.70E, h50^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.13; $M_{\theta\theta}$0.02; $M_{\phi\phi}$-1.15; $M_{r\theta}$0.67; $M_{\theta\phi}$-0.33; $M_{\phi r}$1.68; Fault plane solution: $M_0$2.16000×10^{15} NP1: ϕ_s188.00000°, δ17.00000°, λ77.00000°. NP2:ϕ_s21.00000°, δ74.00000°, λ94.00000°.*

ISC 12 10:35:07.8±0.6**, 38°.25N**±0°.05×**141°.75E**±0°.05**, h51^{km}**±4^{km}**, h51^{km}:pP-P, n220, σ1^s.15**/215**, mb4.5**/72**, MS3.5**/11**, 8C-21D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.23	285	iP	Pn	10 35 16.4	0.0
JIKH				iS	Sn	10 35 22.2	-0.3
JIKH	Ishinomakikobu	0.23	285	A	A	10 35 16.4	
	comp=N,42nm,0.5s,comp=E,112nm,0.4s						
JIO	Ouri	0.38	303	⇓iP	Pn	10 35 17.8	+0.1
JIO				⇓S	Sn	10 35 24.3	-0.5
JIO	Ouri	0.38	303	A	A	10 35 17.8	
	comp=N,25nm,0.6s,comp=E,33nm,0.9s						
JKMT	Kesennumamotoy	0.60	339	⇓iP	Pn	10 35 20.5	+0.2
JKMT				⇓S	Sn	10 35 29.1	-0.2
JKMT	Kesennumamotoy	0.60	339	A	A	10 35 20.5	
	comp=N,10.0nm,0.7s,comp=E,19nm,1.4s						
JOFO	Osakifurukawao	0.75	298	A	A	10 35 22.0	
	comp=N,31nm,1.4s,comp=E,31nm,1.6s						
JMK	Ichinoseki	0.82	329	⇓iP	Pn	10 35 23.4	+0.3
JMK				⇓S	Sn	10 35 34.2	0.0
JMK	Ichinoseki	0.82	329	A	A	10 35 23.4	
	comp=N,12nm,0.5s,comp=E,10.0nm,1.5s						
OFUJ	Ofunato	0.83	356	⇓iP	Pn	10 35 23.5	+0.2
OFUJ				⇓S	Sn	10 35 34.6	-0.1
JMM	Marumori	0.85	243		Pn	10 35 22.6	-0.8
JMM				Sn	Sn	10 35 33.5	-1.4
JMM	Marumori	0.85	243	P	Pn	10 35 22.6	-0.8
JMM	Marumori	0.85	243	⇓iP	Pn	10 35 22.7	-0.8
JMM				⇓S	Sn	10 35 33.4	-1.6
JMM	Marumori	0.85	243	A	A	10 35 22.7	
	comp=N,12nm,0.5s,comp=E,9.0nm,0.7s						
JMST	Minamisoumatoc	0.86	233	A	A	10 35 23.4	
	comp=N,17nm,0.3s,comp=E,15nm,1.6s						
JOU	Okura	0.86	278	⇓iP	Pn	10 35 23.5	-0.2
JOU				⇓S	Sn	10 35 34.9	-0.5
JOU	Okura	0.86	278	A	A	10 35 23.5	
	comp=N,11nm,0.9s,comp=E,15nm,0.8s						
JFK	Kawauchi	1.12	219	⇓iP	Pn	10 35 26.5	-0.7
JFK				⇓S	Sn	10 35 40.3	-1.3
JFK	Kawauchi	1.12	219	A	A	10 35 26.5	
	comp=N,5.0nm,0.3s,comp=E,15nm,0.5s						
JOM	Ohasama	1.27	344	⇓iP	Pn	10 35 29.7	+0.5
JOM	Ohasama	1.27	344	A	A	10 35 29.7	
	comp=N,4.0nm,0.3s,comp=E,8.0nm,1.3s						
JYK	Kaneyama	1.28	302	⇓iP	Pn	10 35 29.3	0.0
JYAR	Yonezawaarcadi	1.31	256	A	A	10 35 29.7	
	comp=N,11nm,0.8s,comp=E,9.0nm,0.8s						
JOTO	OTAMA OYAMA	1.32	239	iP	Pn	10 35 29.6	-0.2
JYS	Shirataka	1.33	269	⇓iP	Pn	10 35 29.9	-0.1
ONAJ	Iwakimizuishiy	1.37	214	A	A	10 35 30.7	
	comp=N,9.0nm,0.3s,comp=E,14nm,0.4s						
JRG	Rokugo	1.44	323	⇓iP	Pn	10 35 32.2	+0.7
JRG	Rokugo	1.44	323	A	A	10 35 32.2	
	comp=N,7.0nm,3.4s,comp=E,8.0nm,3.4s						
JSZI	Iwateshizukuis	1.61	338	A	A	10 35 34.7	
	comp=N,8.0nm,1.7s,comp=E,7.0nm,3.8s						
JYA	Atsumi	1.64	283	A	A	10 35 34.5	
	comp=N,5.0nm,6.1s,comp=E,5.0nm,0.6s						
JYW	Yuwa	1.76	317	A	A	10 35 36.6	
	comp=N,8.0nm,3.1s,comp=E,10.0nm,2.5s						
JKEN	Kujiedanarisaw	1.95	359	A	A	10 35 39.8	
	comp=N,8.0nm,6.1s,comp=E,7.0nm,0.5s						
JYT	Yasato	2.37	212	A	A	10 35 44.9	
	comp=N,4.0nm,1.4s,comp=E,7.0nm,5.2s						
JTM	Tenmabayashi	2.59	348		Pn	10 35 48.5	+1.4
JTM	Tenmabayashi	2.59	348	P	Pn	10 35 47.9	+0.7
JSD	Sado	2.76	267	P	Pn	10 35 49.3	-0.2
MAJO	Matsushiro	3.30	240		Pn	10 35 58.1	+1.2
MAJO	Matsushiro	3.30	240	P	Pn	10 35 58.1	+1.2
MAJO	Matsushiro	3.30	240	d iP	Pn	10 35 57.7	+0.8
MJAR	Matsushiro Arr	3.30	240	Pn	Pn	10 35 57.4	+0.5
	comp=E,1.6nm,0.3s,baz=53,slow=11,SNR=55						
MJAR				Sn	Sn	10 36 39.0	+4.1
	comp=E,1.6nm,0.3s,baz=160,slow=30,SNR=5.7						
MJAR				LR	LR	10 37 29.5	
	comp=E,314nm,20.6s,baz=54,slow=46						
MJB9	Matsu-Tunnel	3.30	240		Pn	10 35 59.2	+2.3
ERM	Erimo	3.91	16	Pn	Pn	10 36 06.4	+1.1
ERM	Erimo	3.91	16	P	Pn	10 36 05.8	+0.5

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ERM   Erimo               3.91  16 i P      Pn      10 36 05.8 +0.5
JEM   Erimo               3.91  16   P      Pn      10 36 06.7 +1.4
JGF   Kuroka              4.40 234          Pn      10 36 11.9 -0.2
JGF   Kuroka              4.40 234   P      Pn      10 36 14.3 +2.2
JSG   Sagara              4.58 220   Pn     Pn      10 36 14.3 -0.2
INU   Inuyama             4.78 234          Pn      10 36 17.5 +0.3
INU   Inuyama             4.78 234   P      Pn      10 36 19.5 +2.3
JHJ2  Mitsune             5.36 198   Pn     Pn      10 36 23.1 -2.2
ASAJ  Asahikawa           5.90   6   Pn     Pn      10 36 32.6 +0.1
      comp=E,2.7nm,0.3s,baz=211,slow=12,SNR=14
ASAJ                                 Sn     Sn      10 37 39.3 +0.6
      comp=E,1.8nm,0.3s,baz=50,slow=30,SNR=6.0
      comp=E,5.2nm,0.3s
ASAJ  Asahikawa           5.90   6   P      Pn      10 36 32.9 +0.4
JKA   Kamikawa-asahi      5.90   6          Pn      10 36 32.9 +0.3
TEY   Ternei              7.80 332⇑eP       Pn      10 37 03.5 +4.9
TEY                                  pmax   pmax
      comp=N,40nm,0.7s
TEY                                  pmax   pmax
      comp=E,30nm,0.7s
TEY                                  pmax   pmax
      comp=Z,40nm,0.7s
JMN   Monobe              7.81 237   Pn     Pn      10 36 59.9 +1.0
JMN   Monobe              7.81 237   P      Pn      10 37 00.0 +1.1
KUR   Kuril'sk            8.34  31   P      Pn      10 37 05.6 -0.4
KUR                                 eS      Sn      10 38 35.0 -3.7
KUR                                  smax   smax
      comp=N,98nm,0.5s
KUR                                  smax   smax
      comp=E,88nm,0.5s
YSS   Yuzhno-Sakhali      8.73   5  eP      Pn      10 37 11.2 -0.1
YSS                                 eS      Sn      10 38 46.9 -1.4
YSS                                  pmax   pmax
      comp=Z,10.0nm,1.0s
VLA   Vladivostok         8.93 306 i P      Pn      10 37 13.6 -0.5
USA0B Ussuriysk Arra      9.45 312          Pn      10 37 19.5 -1.7
USA0B Ussuriysk Arra      9.45 312 i P      Pn      10 37 21.9 +0.7
USRK  Ussuriysk Ar.       9.45 312          Pn      10 37 21.9 +0.8
USRK  Ussuriysk Ar.       9.45 312   Pn     Pn      10 37 20.6 -0.7
      comp=Z,0.7nm,0.3s,baz=127,slow=13,SNR=40
USRK                                 LR     LR      10 40 50.2
      comp=Z,90nm,18.6s,baz=158,slow=37
      comp=Z,2.1nm,0.4s
USRK  Ussuriysk Ar.       9.45 312   P      Pn      10 37 22.0 +0.8
JNU   Nakatsue           10.21 243   LR     LR      10 42 01.1
      comp=Z,129nm,19.1s,baz=54,slow=41
KSRS  Korea Array        10.96 270   Pn     Pn      10 37 41.0 -0.9
      comp=Z,0.4nm,0.3s,baz=79,slow=14,SNR=11
      comp=Z,0.8nm,0.4s
KSRS  Korea Array        10.96 270   P      Pn      10 37 41.0 -0.9
KS19  Wonju Array Si     11.00 270   Pn     Pn      10 37 42.0 -0.5
MDJ   Mudanjiang         11.12 309   P      Pn      10 37 48.6 +4.6
MDJ                                  pmax   pmax
      comp=Z,17nm,1.6s
JCJ   Chichijima         11.13 178   P      Pn      10 37 49.9 +5.7
KLR   Kul'dur            13.13 330   Pn     Pn      10 38 10.4 -1.0
      comp=Z,0.3nm,0.3s,baz=124,slow=13,SNR=5.7
KLR                                  LR     LR      10 43 29.5
      comp=Z,81nm,18.9s,baz=144,slow=39
      comp=Z,0.3nm,0.4s
KLR   Kul'dur            13.13 330 i P      Pn      10 38 11.1 -0.3
KLR                                  pmax   pmax
      comp=Z,6.0nm,1.2s
CN2   Changchun          13.49 299  eP      Pn      10 38 17.2 +0.8
CN2                                  pmax   pmax
      comp=Z,10.0nm,0.7s
HEH   HeiHe              15.76 324  eP      Pn      10 38 45.6 -0.7
SKR   Severo-Kuril's     16.08  35  eP      Pn      10 38 46.8 -3.4
SKR                                 eS      Sn      10 41 40.8 -6.6
SKR                                  pmax   pmax
      comp=Z,49nm,1.1s
SKR                                  MLR    MLR
      comp=Z,200nm,13.0s
ZEA   Zeya               18.42 332  eP      P       10 39 17.8 -0.9
ZEA                                  pmax   pmax
      comp=N,10.0nm,0.4s
ZEA                                  pmax   pmax
      comp=Z,10.0nm,0.7s
PEA0B Petropavlovsk-     18.51  31   P      Pn      10 39 21.0 +0.6
PEA0B Petropavlovsk-     18.51  31 i P      Pn      10 39 20.9 +0.6
PETK  Petropavlovsk-     18.51  31   P      P       10 39 19.1 -0.6
PETK  Petropavlovsk-     18.51  31   LR     LR      10 47 25.7
      comp=Z,32nm,19.2s,baz=170,slow=40
PETK  Petropavlovsk-     18.51  31   P      P       10 39 19.1 -0.6
TIA   Tai'an             19.70 272   P      Pn      10 39 34.0 -0.7
TIA                                  pmax   pmax
      comp=Z,10.0nm,0.7s
XLT   XiLinHaoTe         20.12 294  eP      P       10 39 37.9 +0.4
XLT                                  sP     pP      10 39 52.4 +3.3
XLT                                  PP     sP      10 39 58.0 +2.5
XLT                                  pmax   pmax
      comp=Z,14nm,0.8s
HNS   HongShan           21.36 276 ⇓P       P       10 39 50.4 -0.3
HNS                                  pmax   pmax
      comp=Z,11nm,0.7s
HHC   Hu-ho-hao-te       23.37 286  eP      P       10 40 11.1 -0.8
HHC                                  pmax   pmax
      comp=Z,9.0nm,0.6s
HHC                                  pmax   pmax
      comp=Z,89nm,4.6s
LYN   LuoYang            23.81 270 ⇑P       P       10 40 14.8 -1.2
LYN                                  pmax   pmax
      comp=Z,33nm,0.7s
YAK   Yakutsk            24.95 346   P      P       10 40 26.7 +0.7
YAK   Yakutsk            24.95 346   LR     LR      10 49 43.5
      comp=Z,36nm,20.8s,baz=210,slow=35
YAK   Yakutsk            24.95 346  eP      P       10 40 25.8 -0.2
YAK                                 e*PP    pP      10 40 39.2 +0.3
YAK                                 e               10 43 59.8
YAK                                 eS      S       10 44 46.7 +0.9
YAK                                 e*SS    sS      10 45 09.0 +1.5
YAK                                 eSS     SnSn    10 45 38.1 +0.2
YAK                                 e               10 51 23.7
YAK                                  pmax   pmax
      comp=Z,10.0nm,0.9s
YAK                                  pmax   pmax
      comp=N,6.0nm,1.1s
YAK                                  pmax   pmax
      comp=E,2.0nm,1.0s
YAK                                  smax   smax
      comp=E,40nm,2.8s
YAK                                  smax   smax
      comp=N,17nm,2.4s
SEY   Seymchan           25.55  11 i P      P       10 40 32.8 +1.3
SEY                                  pmax   pmax
      comp=Z,3.0nm,0.8s
XAN   Xi'an              26.76 271   P      P       10 40 41.1 -1.7
XAN                                  pmax   pmax
      comp=Z,8.0nm,0.6s
ULN   Ulaanbaatar        26.91 302   P      P       10 40 44.3 +0.1
ULN   Ulaanbaatar        26.91 302   P      P       10 40 44.3 +0.1
SONM  Songino Array      27.35 302   P      P       10 40 47.3 -0.8
SONM  Songino Array      27.35 302   P      P       10 40 48.3 +0.2
      comp=Z,1.0nm,0.6s,baz=95,slow=7.5,SNR=5.6
SONM                                 LR     LR      10 52 06.1
      comp=Z,55nm,18.7s,baz=283,slow=38
      comp=Z,1.0nm,0.6s
ENH   Enshi              27.72 263          P       10 40 50.4 -1.0
H11N2 WAKE ISLAND Hy     28.56 123   T      T       11 11 06.7
      baz=316,slow=75,SNR=18
H11N1 WAKE ISLAND Hy     28.57 123   T      T       11 11 05.1
      baz=316,slow=75,SNR=12
H11N3 WAKE ISLAND Hy     28.58 123   T      T       11 11 04.3
      baz=316,slow=75,SNR=12
H11S1 WAKE ISLAND Hy     29.32 125   T      T       11 12 08.8
      baz=317,slow=76,SNR=422
H11S3 WAKE ISLAND Hy     29.32 125   T      T       11 12 10.0
      baz=317,slow=76,SNR=542
H11S2 WAKE ISLAND Hy     29.33 125   T      T       11 12 09.5
      baz=317,slow=76,SNR=279
LZH   Lanzhou            30.15 278  eP      P       10 41 11.9 -1.2
LZH                                  pmax   pmax
      comp=Z,26nm,1.3s
PZH   PanZhiHua          35.51 263   P      P       10 42 00.2 +0.3
PZH                                  pmax   pmax
      comp=Z,10.0nm,0.5s
MANU  Manus Island       40.43 171   P      P       10 42 41.7 +0.5
WMQ   Urumqi             40.54 296  eP      P       10 42 41.4 -0.7
WMQ                                  pmax   pmax
      comp=Z,31nm,0.9s
ZAA0  Zalesovo Array     41.30 311   P      P       10 42 47.0 -1.1
ZAA0                                        pP      10 43 00.6 -0.9
ZAA0                                 IAmb   IAmb    10 43 06.4
      comp=Z,7.0nm,0.8s
ZALV  Zalesovo Beam      41.30 311   P      P       10 42 48.0  0.0
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ZALV                                        pP      10 43 00.4 -1.1
ZALV  Zalesovo Beam      41.30 311   P      P       10 42 48.1  0.0
      comp=Z,5.8nm,0.5s,baz=76,slow=6.3,SNR=19
ZALV                                 PcP    PcP     10 44 46.3 +0.6
      comp=Z,0.8nm,0.4s,baz=86,slow=4.0,SNR=2.6
ZALV                                 LR     LR      11 02 11.3
      comp=Z,16nm,18.4s,baz=324,slow=40
      comp=Z,5.8nm,0.5s
FAKI  Fak Fak            41.90 194   P      P       10 42 53.4 +0.1
FAKI                                 IAmb   IAmb    10 43 05.3
      comp=Z,11nm,1.0s
CMAR  Chiang Mai Arr     42.07 254   P      P       10 42 54.8 -0.1
      comp=Z,0.4nm,0.4s,baz=40,slow=7.1,SNR=4.5
      comp=Z,0.4nm,0.4s
E18K  Tukpahlearik C     43.00  29   P      P       10 43 03.5 +1.8
C18K  Utukok River       43.07  27   P      P       10 43 03.7 +1.3
C18K                                 IAmb   IAmb    10 43 14.2
      comp=Z,14nm,1.4s
G18K  Tagagawik          43.47  31   P      P       10 43 06.0 +0.5
MK31  Makanchi Array     43.71 301ceP       P       10 43 07.5 -0.3
MKAR  Makanchi Array     43.71 301          P       10 43 07.5 -0.2
MKAR  Makanchi Array     43.71 301   P      P       10 43 07.7 -0.1
      comp=Z,3.8nm,0.7s,baz=86,slow=10.0,SNR=44
MKAR                                 LR     LR      11 00 54.0
      comp=Z,20nm,18.6s,baz=154,slow=36
      comp=Z,3.8nm,0.7s
MKAR  Makanchi Array     43.71 301 i P      P       10 43 07.6 -0.2
MKAR                                 pmax   pmax
      comp=Z,4.0nm,0.6s
MAKZ  Makanchi           43.92 301          P       10 43 09.3 -0.2
MAKZ                                 IAmb   IAmb    10 43 28.1
      comp=Z,6.9nm,0.8s
MAKZ  Makanchi           43.92 301   P      P       10 43 09.3 -0.2
MAKZ                                 pmax   pmax
      comp=Z,7.0nm,0.9s
D19K  Kuna River         44.14  27   P      P       10 43 11.9 +0.9
KURK  Kurchatov          45.40 307          P       10 43 21.2  0.0
KURK  Kurchatov          45.40 307ceP       P       10 43 20.6 -0.6
KURK                                 pmax   pmax
      comp=Z,18nm,0.8s
IMAR  Indian Mountai     45.47  31   P      P       10 43 22.8 +1.3
KURBB Kurchatov Arra     45.48 307   P      P       10 43 21.4 -0.4
      comp=Z,13nm,0.8s,baz=82,slow=8.2,SNR=83
KURBB                                PcP    PcP     10 44 59.4 -0.5
      comp=Z,0.2nm,0.4s,baz=75,slow=4.9,SNR=0.7
      comp=Z,13nm,0.8s
E23K  Chandalar          47.22  28   P      P       10 43 36.5 +1.2
E23K                                 IAmb   IAmb    10 44 02.4
      comp=Z,7.3nm,1.2s
TARG  Taragay, Kyrgy     48.11 295          P       10 43 42.7 -0.3
TARG  Taragay, Kyrgy     48.11 295   P      P       10 43 42.7 -0.3
TARG                                 pmax   pmax
      comp=Z,12nm,0.8s
ILAR  Eielson Array      48.33  33   P      P       10 43 44.6 +0.8
      comp=Z,0.8nm,0.8s,baz=266,slow=6.7,SNR=10.0
      comp=Z,0.8nm,0.8s
KDJ   Kajisay            48.43 296   P      P       10 43 45.2  0.0
KDJ   Kajisay            48.43 296   P      P       10 43 45.2  0.0
KDJ                                  pmax   pmax
      comp=Z,12nm,1.0s
BMAR  Burnt Mountain     49.14  29   P      P       10 43 51.3 +1.2
BOOM  Boomskoye usch     49.19 297   P      P       10 43 51.4 +0.4
BOOM                                 IAmb   IAmb    10 44 10.3
      comp=Z,6.0nm,0.7s
BOOM  Boomskoye usch     49.19 297   P      P       10 43 51.4 +0.4
BOOM                                 pmax   pmax
      comp=Z,6.0nm,0.7s
F26K  Sheenjek River     49.30  29   P      P       10 43 53.3 +2.0
F26K                                 IAmb   IAmb    10 43 55.0
      comp=Z,3.6nm,0.9s
SCRK  Sand Creek         49.65  34   P      P       10 43 54.1  0.0
BVAR  Borovoye Array     49.96 312   P      P       10 43 56.2 -0.3
      comp=Z,2.1nm,0.5s,baz=66,slow=7.1,SNR=9.4
BVAR                                 PcP    PcP     10 45 16.2 +0.3
      comp=Z,1.7nm,0.6s,baz=32,slow=3.8,SNR=3.2
      comp=Z,2.1nm,0.5s
AAK   Ala-Archa          50.16 298   LR     LR      11 05 19.3
      comp=Z,42nm,18.2s,baz=157,slow=36
KSH   Kashi              50.16 293   P      P       10 44 03.6 +5.2
KSH                                  sP     sP      10 44 19.5 +1.6
KSH                                  pmax   pmax
      comp=Z,3.0nm,0.7s
BCAR  Beaver Creek A     50.74  35   P      P       10 44 04.2 +1.9
I28M  Miner Creek        51.19  32   P      P       10 44 07.4 +1.7
EPYK  Eagle Plains       52.34  30   P      P       10 44 16.1 +1.9
EPYK                                 IAmb   IAmb    10 44 29.9
      comp=Z,13nm,1.5s
I30M  Mount Dempster     52.70  32          P       10 44 18.4 +1.5
I30M                                 IAmb   IAmb    10 44 19.9
      comp=Z,3.9nm,0.9s
INK   Inuvik             53.19  28   P      P       10 44 21.3 +1.1
INK                                  IAmb   IAmb    10 44 42.2
      comp=Z,4.3nm,1.3s
INK   Inuvik             53.19  28   P      P       10 44 21.3 +1.1
INK                                  pmax   pmax
      comp=Z,4.0nm,1.3s
G31M  Satah River        53.19  29   P      P       10 44 21.5 +1.2
G31M                                 IAmb   IAmb    10 44 58.9
      comp=Z,10nm,1.4s
H31M  Peel River         53.40  31   P      P       10 44 23.5 +1.5
H31M                                 IAmb   IAmb    10 44 24.5
      comp=Z,4.0nm,0.8s
NIL   Nilore             54.50 288   P      P       10 44 31.1 +0.7
NIL                                  pmax   pmax
      comp=Z,22nm,0.9s
SIMJ  Simiganj           55.50 295   P      P       10 44 37.1 -0.6
DZET  Dzherino           55.57 295   P      P       10 44 38.1 -0.1
DZET                                 pmax   pmax
      comp=Z,10.0nm,1.2s
ARTI  Arti               55.74 318          P       10 44 38.5 -0.6
ARTI  Arti               55.74 318   LR     LR      11 11 01.2
      comp=Z,42nm,19.1s,baz=42,slow=39
ARTI  Arti               55.74 318d iP      P       10 44 38.4 -0.6
ARTI                                                10 46 40.8
ARTI                                 S      S       10 52 23.0 +1.3
ARTI                                 SS     SS      10 56 08.1 +1.0
ARTI                                 pmax   pmax
      comp=Z,6.0nm,0.5s
KBL   Kabul              57.24 290   P      P       10 44 49.0 -1.3
KBL                                  IAmb   IAmb    10 45 08.8
      comp=Z,9.0nm,0.9s
KBL   Kabul              57.24 290   P      P       10 44 49.0 -1.3
KBL                                  pmax   pmax
      comp=Z,9.0nm,1.0s
AB31  Akbulak array      57.37 310   P      P       10 44 49.8 -0.8
AB31                                 IAmb   IAmb    10 45 11.4
      comp=Z,2.5nm,0.6s
ABKAR Akbulak array      57.37 310   P      P       10 44 49.8 -0.8
ABKAR                                IAmb   IAmb    10 45 11.4
      comp=Z,2.5nm,0.6s
WRA   Warramunga Arr     58.30 188   P      P       10 44 56.7 -0.8
      comp=Z,2.8nm,0.5s,baz=5.0,slow=7.1,SNR=85
      comp=Z,2.8nm,0.5s
SPITS Spitsbergen Ar     59.38 349   P      P       10 45 04.5 +0.2
      comp=Z,2.9nm,0.9s,baz=95,slow=9.6,SNR=2.1
      comp=Z,2.9nm,0.9s
KIRV  Kirov              59.45 323ceP       P       10 45 05.8 +0.9
KBS   Kingsbay           59.51 350   P      P       10 45 02.8 -2.3
KBS                                  pmax   pmax
      comp=Z,16nm,1.7s
RES   Resolute Bay       61.36  15   P      P       10 45 18.1 +0.3
RES                                  IAmb   IAmb    10 45 45.7
      comp=Z,6.9nm,1.4s
RES   Resolute Bay       61.36  15   P      P       10 45 18.1 +0.3
RES                                  pmax   pmax
      comp=Z,7.0nm,1.4s
ASAR  Alice Springs      62.03 188   P      P       10 45 22.8 -0.1
ASAR  Alice Springs      62.03 188   P      P       10 45 22.6 -0.3
      comp=Z,2.0nm,0.7s,baz=7.1,slow=4.7,SNR=28
ASAR                                 LR     LR      11 12 11.4
      comp=Z,69nm,18.9s,baz=250,slow=36
      comp=Z,2.0nm,0.7s
ASAR  Alice Springs      62.03 188   P      P       10 45 22.8 -0.1
YKA   Yellowknife Ar     62.63  31   P      P       10 45 27.2 +0.8
      comp=Z,0.6nm,0.8s,baz=32,slow=4.8,SNR=4.4
      comp=Z,0.6nm,0.8s
ARCES ARCESS Array B     62.96 339   P      P       10 45 28.8 +0.2
ARCES ARCESS Array B     62.96 339   P      P       10 45 28.8 +0.2
      comp=Z,1.8nm,0.6s,baz=62,slow=11,SNR=5.0
      comp=Z,1.8nm,0.6s
DAG   Danmarks Havn      64.59 355   P      P       10 45 38.7 -0.5
DAG                                  pmax   pmax
      comp=Z,5.0nm,2.2s
OBN   Obninsk            67.29 323⇑eP       P       10 45 54.6 -2.2
OBN                                 e               10 48 26.9
OBN                                  pmax   pmax
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      comp=Z,3.0nm,0.5s
OBN                                  MLR    MLR
      comp=Z,17nm,13.0s
FINES FINESS Array B     67.87 332   P      P       10 46 00.6 +0.2
FINES FINESS Array B     67.87 332   P      P       10 46 00.3 -0.1
      comp=Z,3.6nm,0.8s,baz=40,slow=7.3,SNR=7.9
      comp=Z,3.6nm,0.8s
FINES FINESS Array B     67.87 332   P      P       10 46 00.6 +0.2
ILON  Igloolik, Nuna     68.02  15   P      P       10 46 00.9 -0.3
ILON                                 IAmb   IAmb    10 46 04.8
      comp=Z,8.0nm,1.3s
KIV   Kislovodsk         70.32 311  eP      P       10 46 11.5 -4.5
KIV                                  pmax   pmax
      comp=Z,8.0nm,1.1s
KBZ   Khabaz             70.32 310   P      P       10 46 16.3 +0.4
      comp=Z,3.4nm,1.0s,baz=60,slow=3.5,SNR=5.1
      comp=Z,3.4nm,1.0s
NACGM Naroch             71.86 327  eP      P       10 46 24.4 -0.7
      comp=Z,6.0nm,1.0s,baz=49
NC405 NORSAR Array S     72.96 337   P      P       10 46 32.0 +0.5
NC405                                IAmb   IAmb    10 46 54.2
      comp=Z,16nm,1.2s
HFS   Hagfors            73.09 336   P      P       10 46 32.3  0.0
      comp=Z,2.2nm,0.4s,baz=63,slow=7.0,SNR=11
HFS                                  PcP    PcP     10 46 49.5 +0.6
      comp=Z,2.8nm,0.8s,baz=25,slow=4.9,SNR=5.1
HFS                                  LR     LR      11 21 24.5
      comp=Z,43nm,18.3s,baz=104,slow=38
      comp=Z,2.2nm,0.4s
NC204 NORSAR Array S     73.12 338   P      P       10 46 33.4 +0.8
NC204                                IAmb   IAmb    10 46 33.7
      comp=Z,9.7nm,0.9s
NB2   NORSAR Subarra     73.17 337   P      P       10 46 33.0 +0.2
      comp=Z,1.2nm,0.6s,baz=40,slow=6.2
NOA   NORSAR Array B     73.17 337   P      P       10 46 32.7 -0.1
      comp=Z,2.8nm,0.8s,baz=39,slow=5.9,SNR=8.5
NOA                                  LR     LR      11 22 25.4
      comp=Z,16nm,18.6s,baz=120,slow=39
      comp=Z,2.8nm,0.8s
AK03  Malin Array Si     73.49 322   P      P       10 46 34.4 -0.4
AKASG Malin Array Be     73.50 322   P      P       10 46 34.5 -0.4
      comp=Z,1.7nm,0.5s,baz=47,slow=5.8,SNR=17
AKASG                                PcP    PcP     10 46 51.8 +1.1
      comp=Z,1.6nm,0.5s,baz=47,slow=5.8,SNR=11
      comp=Z,1.7nm,0.5s
AKASG Malin Array Be     73.50 322 i P      P       10 46 34.2 -0.7
AKASG                                pmax   pmax
      comp=Z,2.0nm,0.5s
AKBB  Malin Array Si     73.50 322   P      P       10 46 34.7 -0.2
AKBB                                 IAmb   IAmb    10 46 35.2
      comp=Z,4.6nm,0.9s
AKBB  Malin Array Si     73.50 322ceP       P       10 46 34.6 -0.2
AKBB                                 pmax   pmax
      comp=Z,19nm,3.4s
AKBB  Malin Array Si     73.50 322   P      P       10 46 34.3 -0.6
AK01  Malin Array Si     73.51 322   P      P       10 46 34.3 -0.6
KIEV  Kiev               73.51 322   P      P       10 46 34.7 -0.2
KIEV                                 IAmb   IAmb    10 46 35.3
      comp=Z,4.2nm,0.9s
KIEV  Kiev               73.51 322   P      P       10 46 34.7 -0.2
KIEV                                 pmax   pmax
      comp=Z,4.0nm,1.0s
KIEV  Kiev               73.51 322   P      P       10 46 34.2 -0.7
      comp=Z,1µmcomp=Z,19nm,1.2s
AK04  Malin Array Si     73.52 322   P      P       10 46 34.6 -0.3
AK09  Malin Array Si     73.53 322   P      P       10 46 34.6 -0.4
AK22  Malin Array Si     73.54 322   P      P       10 46 34.6 -0.5
AK11  Malin Array Si     73.54 322   P      P       10 46 34.6 -0.5
AK05  Malin Array Si     73.56 322   P      P       10 46 34.9 -0.3
NVAR  Mina Array Bea     74.05  54   P      P       10 46 40.0 +1.4
      comp=Z,0.5nm,0.8s,baz=313,slow=7.6,SNR=3.1
      comp=Z,0.5nm,0.8s
RNPP2 Kostyukhnivka      74.66 324   P      P       10 46 41.1 -0.5
SORM  Soroca             75.62 321   P      P       10 46 46.3 -0.9
      comp=Z,6.8nm,1.1s
BW06  Boulder Array      76.63  46   P      P       10 46 54.4 +1.1
PDAR  Pinedale Array     76.63  46   P      P       10 46 53.8 +0.4
PDAR  Pinedale Array     76.63  46   P      P       10 46 54.2 +0.9
      comp=Z,0.5nm,0.5s,baz=298,slow=3.2,SNR=4.6
      comp=Z,0.5nm,0.5s
BURAR Bucovina Array     77.53 322   P      P       10 46 58.6 +0.5
BURAR Bucovina Array     77.53 322   P      P       10 46 58.7 +0.5
OJC   Ojcow              78.18 326   P      P       10 47 02.2 +0.6
OJC                                  pmax   pmax
      comp=Z,5.0nm,0.7s
BRTR  Keskin Array B     78.25 312   P      P       10 47 01.8 -0.6
      comp=Z,0.5nm,0.5s,baz=64,slow=6.6,SNR=3.0
      comp=Z,0.5nm,0.5s
MLR   Muntele Rosu       78.63 320   LR     LR      11 24 27.0
      comp=Z,30nm,18.6s,baz=60,slow=38
KSP   Ksiaz              79.21 328   P      P       10 47 07.8 +0.6
KSP                                  pmax   pmax
      comp=Z,8.0nm,0.8s
MORC  Moravsky Berou     79.49 327   P      P       10 47 09.2 +0.4
MORC                                 pmax   pmax
      comp=Z,7.0nm,2.5s
DPC   Dobruska-Polom     79.57 328   P      P       10 47 09.7 +0.4
DPC                                  pmax   pmax
      comp=Z,3.0nm,1.2s
PVCC  Panska Ves         80.16 329   P      P       10 47 13.0 +0.6
PVCC                                 pmax   pmax
      comp=Z,7.0nm,0.4s
CLL   Collm              80.18 330   P      P       10 47 12.4  0.0
CLL                                  pmax   pmax
      comp=Z,7.0nm,0.8s
CLL   Collm              80.18 330 i P      P       10 47 12.4  0.0
      comp=Z,5.0nm,0.7s
KHC   Kasperske Hory     81.65 329ceP       P       10 47 20.4  0.0
KHC                                  pmax   pmax
      comp=Z,7.0nm,0.8s
GERES GERESS Array B     81.82 328   P      P       10 47 21.3 -0.1
      comp=Z,0.8nm,0.4s,baz=47,slow=4.5,SNR=3.4
      comp=Z,0.8nm,0.4s
TXAR  Lajitas Array      89.17  53   P      P       10 47 59.2 +0.9
      comp=Z,0.5nm,0.6s,baz=291,slow=3.0,SNR=12
      comp=Z,0.5nm,0.6s
LPAZ  La Paz            145.84  58   PKPbc  PKPab   10 54 42.9 -0.2
      comp=Z,1.5nm,0.6s,baz=317,slow=1.9,SNR=8.5
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AEIC ***12*** *10:47:39.6±1.5, 54.°17N±0.°04×161.°57W±0.°04, h26^{km}±7^{km},*
Error ellipse: s-maj=6.8km s-min=1.7km az=203.0

NEIC 12 10:47:39.5±0.7**, 54.°20N**±0.°04×**161.°54W**±0.°05**,**
h22^{km}±12^{km}**, ML2.6**/18**, ML2.4**(AEIC)**, Error ellipse:**
s-maj=6.1km s-min=4.4km az=188.0, Alaska Peninsula

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Code  Station Name        Δ°   AZ°   Phase ID         Time      Res
                                     Op     ISC      h  m  s    ISC
HAG   Hague Volcano       1.14 349          Pn      10 47 59.6 -0.6
HAG                                         Sn      10 48 15.2  0.0
PS4A  Pavlof South-4      1.17 351          Pn      10 47 59.9 -0.6
PS4A                                        Sb      10 48 15.5 -0.1
PS1A  Pavlof South-1      1.23 355          Pn      10 48 00.8 -0.6
PS1A                                        Sn      10 48 17.4  0.0
FALS  False Pass          1.28 302          Pn      10 48 01.2 -0.9
FALS                                        Sn      10 48 18.3 -0.2
CNBA  Chernabura Isl      1.30  60          Pn      10 48 02.2  0.0
CNBA                                        Sn      10 48 18.5 -0.3
SDPT  Sand Point          1.31  28          Pn      10 48 02.4 -0.1
SDPT                                        Sn      10 48 19.1 -0.1
SDPT                                 IAML           10 48 21.3
      comp=E,109nm,0.3s
SDPT                                 IAML           10 48 21.6
      comp=N,184nm,0.5s
ISLZ  Isanotski Laza      1.38 294          Pn      10 48 02.3 -1.1
ISNN  Isanotski Nort      1.46 297          Pn      10 48 04.3 -0.1
ISNN                                        Sb      10 48 23.9 -0.1
S12K  Black Hills         1.54 349          Pn      10 48 06.2 +0.5
S12K                                 IAML           10 48 30.3
      comp=N,66nm,0.4s
S12K                                 IAML           10 48 30.7
      comp=E,92nm,0.2s
SSBA  Shishaldin          1.62 292          Pn      10 48 06.8 +0.1
WESE  West Dahl East      1.81 280          Pn      10 48 08.3 -1.0
WEBT  Westdahl Beart      1.92 283          Pn      10 48 11.2 +0.3
WECS  Westdahl Cape       1.93 281          Pn      10 48 11.4 +0.5
VNFG  Fog Glacier, M      2.38  28          Pn      10 48 17.0 -0.3
VNFG                                 IAML           10 49 04.7
      comp=N,45nm,0.8s
VNFG                                 IAML           10 49 04.7
      comp=E,46nm,1.1s
AHB   Akutan Harbor       2.52 270          Pn      10 48 19.5 +0.5
AKV   Akutan Volcano      2.60 270          Pn      10 48 21.0 +0.7
UNV   Unalaska Valle      2.95 265          Pn      10 48 24.9 -0.1
MREP  Makushin Rep't      3.10 265          Pn      10 48 27.4 +0.3
```

MAPS	**Pakushin South**	**3.21**	**265**		Pn	10 48 28.5	-0.1
O14K	**Tigyukauivet M**	**5.07**	**2**	Pn	Pn	10 48 54.6	+0.5
O14K				IAML		10 51 15.7	
	comp=E,3.1nm,1.1s						
O14K				IAML		10 51 48.8	
	comp=N,3.9nm,1.2s						
O15K	**Ungalikthiuk R**	**5.08**	**10**	Pn	Pn	10 48 54.8	+0.5
O15K				IAML		10 50 35.7	
	comp=E,2.5nm,1.1s						
O15K				IAML		10 52 15.7	
	comp=N,2.2nm,0.9s						
P16K	**Nushagak River**	**5.23**	**21**	Pn	Pn	10 48 56.2	0.0
N14K	**Kuskokwak Cree**	**5.74**	**359**	Pn	Pn	10 49 03.3	0.0
N15K	**Kwethluk River**	**6.04**	**7**	Pn	Pn	10 49 07.5	+0.1
M14K	**Bethel**	**6.58**	**358**	Pn	Pn	10 49 14.3	-0.4

*JMA **12** 11:10:51.1±0.4, 33.°1N±0.°9×14°2E±°, h71^{km}, MV3.5/30, E OFF HACHIJOJIMA ISLAND*

*IDC **12** 11:10:52.7±1.1, 32.°65N×140.°52E, h0^{km}, mb3.8/9, mbtmp3.7/11, ML2.9/2, MS3.3/4, Error ellipse: s-maj=38.4km s-min=18.2km az=70.0*

ISC 12 11:10:53.7±1.2**, 33.°16N**±0.°07×**141.°9E**±0.°1**, h40^{km}, n27,** σ**1.^{s}10**/29**, mb3.8**/9**, MS3.3**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**1.68**	**332**	*e*P	**Pn**	**11 11 19.4**	**-0.7**
BSO1				*e*S	**Sn**	**11 11 41.1**	**+1.0**
JHJ2	**Mitsune**	**1.76**	**269**	*e*P	**Pn**	**11 11 20.7**	**-1.0**
JHCJ	**Hachijojimakas**	**1.78**	**268**	*e*P	**Pn**	**11 11 20.4**	**-1.6**
BSO3	**Boso 3**	**2.01**	**325**	P	**Pn**	**11 11 24.0**	**-0.8**
BSO3				*e*S	**Sn**	**11 11 48.7**	**0.0**
JMYK	**Miyake Tsubota**	**2.17**	**295**	*e*P	**Pn**	**11 11 26.1**	**-1.2**
JMYK				*e*S	**Sn**	**11 11 52.8**	**-0.2**
BSO4	**Boso 4**	**2.25**	**325**	*e*P	**Pn**	**11 11 28.2**	**-0.1**
JOD2	**Odawara 2**	**3.14**	**313**	*e*P	**Pn**	**11 11 39.4**	**-1.4**
JYT	**Yasato**	**3.37**	**336**	P	**Pn**	**11 11 43.7**	**-0.1**
JHO	**Hitachi**	**3.61**	**342**	*e*P	**Pn**	**11 11 45.4**	**-1.7**
JHO				*e*S	**Sn**	**11 12 26.8**	**-1.8**
JYN	**Shimob**	**3.63**	**311**	*e*P	**Pn**	**11 11 47.0**	**-0.5**
JYN				*e*S	**Sn**	**11 12 29.6**	**+0.4**
JRY	**Ryogami san**	**3.78**	**320**	*e*P	**Pn**	**11 11 48.8**	**-0.7**
JRY				*e*S	**Sn**	**11 12 33.8**	**+1.1**
JAG	**Ashikaga**	**3.83**	**329**	*e*P	**Pn**	**11 11 49.3**	**-0.9**
MJAR	**Matsushiro Arr**	**4.54**	**319**	Pn	**Pn**	**11 11 59.6**	**-0.4**
	0.7nm,0.3s,baz=179,slow=15,SNR=36						
MJAR				Sn	**Sn**	**11 12 50.3**	**-1.3**
	0.4nm,0.3s,baz=150,slow=11,SNR=4.4						
	5.8nm,0.4s						
ASAJ	**Asahikawa**	**10.95**	**3**	Pn	**Pn**	**11 13 25.4**	**-2.3**
	0.5nm,0.3s,baz=202,slow=13,SNR=6.6						
KSRS	**Korea Array**	**12.21**	**294**	Pn	Pn	11 13 35.2	-10
	0.1nm,0.3s,baz=108,slow=14,SNR=2.3						
	0.1nm,0.3s						
KLR	**Kul'dur**	**17.75**	**338**	LR	LR	11 22 24.2	
	comp=Z,45nm,18.9s,baz=149,slow=39						
SHEM	**Shemya Is, Ala**	**30.24**	**40**	LR	LR	11 27 53.1	
	comp=Z,44nm,19.3s,baz=25,slow=32						
SONM	**Songino Array**	**30.43**	**309**	P	**P**	**11 17 02.2**	**-0.1**
	0.8nm,0.6s,baz=120,slow=8.8,SNR=4.6						
SONM				LR	LR	11 30 46.4	
	comp=Z,64nm,18.7s,baz=236,slow=40						
	0.8nm,0.6s						
ZALV	**Zalesovo Beam**	**44.89**	**315**	P	**P**	**11 19 05.6**	**+1.5**
	0.6nm,0.5s,baz=62,slow=19,SNR=1.7						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**46.61**	**305**	P	**P**	**11 19 17.9**	**+0.1**
	0.7nm,0.6s,baz=90,slow=9.3,SNR=6.5						
	0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**48.77**	**311**	P	**P**	**11 19 34.6**	**+0.1**
	1.6nm,0.8s,baz=86,slow=7.9,SNR=14						
	1.6nm,0.8s						
ILAR	**Eielson Array**	**52.57**	**31**	P	P	11 20 15.2	+12
	0.2nm,0.7s,baz=267,slow=6.2,SNR=4.3						
	0.2nm,0.7s						
WRA	**Warramunga Arr**	**53.30**	**189**	P	**P**	**11 20 08.7**	**-0.1**
	0.9nm,0.4s,baz=5.5,slow=7.6,SNR=36						
	0.9nm,0.4s						
BVAR	**Borovoye Array**	**53.53**	**315**	P	**P**	**11 20 11.4**	**+1.2**
	0.8nm,0.5s,baz=104,slow=30,SNR=2.2						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**57.03**	**189**	P	**P**	**11 20 35.2**	**-0.3**
	0.3nm,0.5s,baz=16,slow=17,SNR=4.5						
	0.3nm,0.5s						
AKASG	**Malin Array Be**	**77.62**	**323**	LR	LR	11 58 57.3	
	comp=Z,22nm,18.9s,baz=54,slow=37						
BRTR	**Keskin Array B**	**81.74**	**312**	P	**P**	**11 23 09.8**	**+1.4**
	0.8nm,0.9s,baz=112,slow=5.5,SNR=3.8						
	0.8nm,0.9s						

*KRNET **12** 11:28:13.7±0.1, 39.°56N×79.°01E, mb3.1*

*SOME **12** 11:28:18.6, 41.°00N×80.°07E, h15^{km}*

*NNC **12** 11:28:19.7±1.7, 40.°99N×80.°01E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=14.5km s-min=11.0km az=74.0*

ISC 12 11:28:16.5±2.8**, 40.°9N**±0.°1×**80.°17E**±0.°09**, h10^{km}, n15,** σ**1.^{s}49**/21**, 5C-7D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**1.94**	**295**	⇓*i*P	**Pb**	**11 28 52.1**	**-0.2**
TARG				⇓*i*S	**Sg**	**11 29 19.8**	**+0.7**
PRZ	**Przheval'sk**	**2.03**	**320**	⇓*e*P	**Pg**	**11 29 00.0**	**+4.6**
PRZ				⇓*e*S	Sg	11 29 34.2	+12
SHLS	**Shalkode**	**2.27**	**347**	Pg	**Pg**	**11 29 00.2**	**+0.1**
	15nm,0.2s						
SHLS				Lg	Lg	11 29 30.5	
	14nm,0.3s						
SHLS	**Shalkode**	**2.27**	**347**	*e*P	**Pg**	**11 29 00.2**	**+0.1**
	15nm,0.2s						
SHLS				*e*S	**Sg**	**11 29 29.9**	**+0.3**
	14nm,0.3s						
UZB	**Uzynbulak**	**2.36**	**339**	Pg	**Pg**	**11 29 01.8**	**0.0**
	6.2nm,0.2s						
UZB				Lg	Lg	11 29 32.3	
	2.5nm,0.2s						
PDGK	**Podgornoye**	**2.44**	**348**	⇓Pg	**Pb**	**11 29 02.4**	**+1.9**
	2.5nm,0.5s						
PDGK				⇑Lg	Lg	11 29 35.8	
	9.0nm,0.7s						
SATY	**Saty**	**2.49**	**329**	Pg	**Pg**	**11 29 03.4**	**-0.8**
	1.8nm,0.1s						
SATY				Lg	Lg	11 29 35.0	
	5.0nm,0.1s						
KTMS	**Ketmen**	**2.50**	**3**	Pg	**Pg**	**11 29 04.3**	**-0.2**
	4.5nm,0.2s						
KTMS				Lg	Lg	11 29 37.5	
	5.3nm,0.1s						
KTMS	**Ketmen**	**2.50**	**3**	*e*P	**Pg**	**11 29 04.3**	**-0.2**
	4.5nm,0.2s						
KTMS				*e*S	**Sg**	**11 29 37.4**	**+0.4**
	5.3nm,0.1s						
KDJ	**Kajisay**	**2.54**	**299**	⇑*i*P	**Pn**	**11 28 59.4**	**+1.5**
KDJ				⇑*i*S	**Sb**	**11 29 32.4**	**-1.2**
KPKS	**Kokpek**	**2.75**	**337**	Pg	**Pg**	**11 29 08.5**	**-0.7**
	2.7nm,0.2s						
KPKS				Lg	Lg	11 29 44.4	
	7.6nm,0.2s						
ULHL	**Ulahol**	**3.22**	**295**	⇓*i*P	**Pn**	**11 29 06.2**	**-1.1**
ULHL				⇓*i*S	**Sn**	**11 29 44.2**	**-1.6**
BLB	**Baldybastay**	**3.39**	**339**	Pg	**Pg**	**11 29 20.2**	**-1.2**
	9.1nm,0.1s						
BLB				Lg	Lg	11 30 03.9	
	4.4nm,0.1s						
BOOM	**Boomskoye usch**	**3.52**	**297**	⇑*e*P	**Pn**	**11 29 11.0**	**-0.4**
BOOM				⇑*e*S	**Sn**	**11 29 52.2**	**-1.0**
ARXS	**Arharly**	**3.70**	**333**	Pg	**Pg**	**11 29 25.5**	**-1.8**
	1.6nm,0.2s						
ARXS				Lg	Lg	11 30 13.2	
	3.1nm,0.3s						

*IDC **12** 12:21:37.5±0.9, 58.°47S×24.°66W, h0^{km}, mb4.3/6, mbtmp4.2/7, ML4.1/1, MS3.6/10, Error ellipse: s-maj=33.3km s-min=26.8km az=80.0*

ISC 12 12:21:39.1±0.8**, 58.°64S**±0.°10×**24.°5W**±0.°2**, h10^{km}, n28,** σ**2.^{s}65**/17**, mb4.0**/5**, MS3.8**/9**, 5C-1D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**13.84**	**157**	⇑P	**Pn**	**12 24 57.8**	**+2.8**
	comp=Z,0.9nm,0.2s						
VNA3	**Neumayer Olymp**	**14.05**	**160**	⇑P	**Pn**	**12 24 59.9**	**+1.9**
	comp=Z,0.4nm,0.2s						
VNA3				⇓S	**Sn**	**12 27 29.5**	**-4.3**
VNA2	**Neumayer--Watz**	**14.23**	**157**	⇑P	**Pn**	**12 25 02.4**	**+2.1**
	comp=Z,0.7nm,0.2s,baz=324,slow=14						
SNAA	**Sanae**	**15.77**	**155**	⇑P	**Pn**	**12 25 23.8**	**+2.8**
	comp=Z,22nm,0.2s						
SNAA	**Sanae**	**15.77**	**155**	Pn	**Pn**	**12 25 23.9**	**+2.9**
	comp=Z,0.8nm,0.3s,baz=318,slow=14,SNR=47						
SNAA				Sn	**Sn**	**12 28 09.7**	**-5.9**
	comp=Z,0.1nm,0.3s,baz=339,slow=16,SNR=1.4						
SNAA				LR	LR	12 30 10.9	
	comp=Z,77nm,19.8s,baz=293,slow=32						
	comp=Z,5.1nm,0.8s						
TROLL	**Troll, Antarti**	**17.27**	**152**	⇑P	**P**	**12 25 44.2**	**+2.6**
	comp=Z,30nm,0.2s						
PMSA	**Palmer Station**	**19.45**	**235**	LR	LR	12 31 47.5	
	comp=Z,127nm,21.1s,baz=86,slow=31						
PLCA	**Paso Flores**	**33.92**	**281**	LR	LR	12 41 49.8	
	comp=Z,41nm,18.2s,baz=100,slow=36						
CPUP	**Villa Florida**	**39.61**	**310**	LR	LR	12 44 34.2	
	comp=Z,5.6nm,18.3s,baz=42,slow=35						
VNDA	**Vanda**	**44.04**	**182**	P	**P**	**12 29 47.9**	**+1.7**
	comp=Z,1.0nm,0.7s,baz=175,slow=7.8,SNR=6.5						
VNDA				LR	LR	12 46 58.4	
	comp=Z,48nm,18.2s,baz=18,slow=34						
	comp=Z,1.0nm,0.7s						
H04S2	**CROZET ISLANDS**	**45.22**	**110**	T	T	13 20 19.5	
	baz=225,slow=75,SNR=15						
H04S3	**CROZET ISLANDS**	**45.23**	**110**	T	T	13 20 29.1	
	baz=225,slow=75,SNR=11						
H04S1	**CROZET ISLANDS**	**45.24**	**110**	T	T	13 20 29.9	
	baz=225,slow=75,SNR=10						
BOSA	**Boshof**	**45.32**	**71**	P	**P**	**12 29 57.5**	**+0.4**
	comp=Z,5.9nm,1.0s,baz=227,slow=5.5,SNR=5.0						
BOSA				LR	LR	12 46 51.5	
	comp=Z,100nm,18.4s,baz=203,slow=33						
	comp=Z,5.9nm,1.0s						
LBTB	**Lobatse**	**48.48**	**68**	LR	LR	12 47 00.4	
	comp=Z,99nm,18.7s,baz=178,slow=31						
H10N1	**ASCENSION HYDR**	**51.26**	**13**	T	T	13 26 28.7	
	baz=191,slow=71						
H10N3	**ASCENSION HYDR**	**51.26**	**13**	T	T	13 26 16.5	
	baz=191,slow=71						
H10N2	**ASCENSION HYDR**	**51.27**	**13**	T	T	13 26 29.6	
	baz=191,slow=71						
LPAZ	**La Paz**	**53.05**	**304**	P	**P**	**12 30 56.0**	**-1.0**
	comp=Z,1.3nm,0.7s,baz=144,slow=4.7,SNR=5.3						
	comp=Z,1.3nm,0.7s						
LSZ	**Lusaka**	**58.05**	**65**	LR	LR	12 54 31.5	
	comp=Z,73nm,18.0s,baz=176,slow=34						
DBIC	**Dimbokro**	**66.99**	**21**	LR	LR	12 54 01.6	
	comp=Z,43nm,20.8s,baz=182,slow=29						
TORD	**Torodi Ar. Bea**	**74.66**	**26**	P	**P**	**12 33 18.3**	**-0.2**
	comp=Z,1.3nm,0.3s,baz=204,slow=6.2,SNR=2.3						
	comp=Z,1.3nm,0.3s						
RPZ	**Rata Peaks**	**77.19**	**191**	LR	LR	13 07 01.1	
	comp=Z,58nm,18.4s,baz=121,slow=35						
ASAR	**Alice Springs**	**96.06**	**160**	P	**P**	**12 35 06.4**	**-0.3**
	comp=Z,0.6nm,1.0s,baz=190,slow=3.5,SNR=4.5						
ASAR				LR	LR	13 16 24.2	
	comp=Z,48nm,19.2s,baz=264,slow=34						
	comp=Z,0.6nm,1.0s						
KEST	**Kesra**	**98.17**	**27**	P	**P**	**12 35 14.7**	**-1.1**
	comp=Z,1.2nm,0.5s,baz=35,slow=20,SNR=6.5						
	comp=Z,1.2nm,0.5s						
YKA	**Yellowknife Ar**	**139.06**	**315**	PKP	**PKPdf**	**12 41 03.6**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=137,slow=1.8,SNR=4.9						
SONM	**Songino Array**	**149.37**	**89**	PKPbc	**PKPbc**	**12 41 26.7**	**-0.6**
	comp=Z,1.0nm,0.4s,baz=246,slow=2.8,SNR=5.4						
ILAR	**Eielson Array**	**152.90**	**307**	PKPbc	**PKPbc**	**12 41 34.0**	**-0.9**
	comp=Z,1.0nm,0.6s,baz=148,slow=2.4,SNR=11						

*IDC **12** 12:50:53.3±1.2, 36.°29N×77.°11E, h0^{km}, mb4.0/6, mbtmp3.9/12, ML3.8/5, Error ellipse: s-maj=32.6km s-min=16.7km az=54.0*

*NNC **12** 12:51:06.4±4.0, 37.°01N×77.°46E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=30.5km s-min=23.9km az=176.0*

ISC 12 12:51:03.7±0.7**, 36.°52N**±0.°06×**77.°64E**±0.°09**, h96^{km}, n26,** σ**2.^{s}36**/39**, mb3.9**/6**, 7C-4D, Kashmir-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**6.58**	**339**	Pn	**Pn**	**12 52 39.0**	**+1.1**
	7.4nm,0.3s,baz=149,slow=8.3,SNR=35						
AAK				Sn	**Sn**	**12 53 50.2**	**-1.3**
	4.1nm,0.3s,baz=46,slow=15,SNR=9.1						
	14nm,0.4s						
AAK	**Ala-Archa**	**6.58**	**339**	⇑P	**Pn**	**12 52 38.8**	**+0.9**
	0.9nm,0.3s						
AAK				⇓S	**Sn**	**12 53 49.8**	**-1.6**
	5.7nm,0.6s						
TKM2	**Tokmak 2**	**6.59**	**347**	⇑P	**Pn**	**12 52 39.1**	**+1.0**
	2.5nm,0.3s						
TKM2				⇑S	**Sn**	**12 53 50.4**	**-1.4**
	3.4nm,0.3s						
PDGK	**Podgornoye**	**6.95**	**11**	⇑P	**Pn**	**12 52 44.6**	**+1.6**
	14nm,0.5s						
PDGK				⇑S	**Sn**	**12 54 00.6**	**0.0**
	60nm,0.7s						
KK31	**Karatay Array**	**8.56**	**322**	P	**Pn**	**12 53 03.4**	**-1.4**
	0.7nm,0.2s,baz=120,slow=12,SNR=16						
KK31				⇓S	**Sn**	**12 54 35.2**	**-4.4**
	2.9nm,0.3s,baz=318,slow=26,SNR=4.4						
PYUN	**Piuthan**	**9.53**	**150**	Pn	**Pn**	**12 53 19.3**	**+1.0**
	baz=150,slow=0.0						
PYUN				Sn	**Sn**	**12 55 00.1**	**-3.6**
	73nm,0.3s,baz=150,slow=0.0						
DANN	**Dangsing**	**9.64**	**146**	Pn	**Pn**	**12 53 20.2**	**+0.3**
	baz=146,slow=0.0						
DANN				Sn	**Sn**	**12 55 02.4**	**-4.1**
	66nm,0.4s,baz=146,slow=0.0						
GKN	**Gorkha**	**10.35**	**143**	Pn	**Pn**	**12 53 30.1**	**+0.8**
	baz=143,slow=0.0						
GKN				Sn	**Sn**	**12 55 18.9**	**-4.6**
	40nm,0.2s,baz=143,slow=0.0						
MAKZ	**Makanchi**	**10.78**	**16**	⇓P	**Pn**	**12 53 35.7**	**+0.7**
	2.7nm,0.3s						
MAKZ				⇑S	**Sn**	**12 55 31.2**	**-2.4**
	9.1nm,1.1s						
MK31	**Makanchi Array**	**10.84**	**17**	⇑P	**Pn**	**12 53 35.8**	**0.0**
	0.9nm,0.3s,baz=198,slow=13,SNR=68						
MK31				⇓S	**Sn**	**12 55 32.5**	**-2.5**
	5.6nm,0.6s,baz=202,slow=25,SNR=20						
MKAR	**Makanchi Array**	**10.84**	**17**	Pn	**Pn**	**12 53 36.1**	**+0.4**
	1.3nm,0.3s,baz=199,slow=13,SNR=46						
MKAR				Sn	**Sn**	**12 55 29.8**	**-5.2**
	2.6nm,0.3s,baz=183,slow=26,SNR=6.6						
	2.1nm,0.3s						
DMN	**Daman**	**10.90**	**142**	Pn	**Pn**	**12 53 38.8**	**+1.8**
	baz=143,slow=0.0						
DMN				Sn	**Sn**	**12 55 33.8**	**-3.3**
	36nm,0.4s,baz=143,slow=0.0						
GUN	**Gumba**	**11.05**	**139**	Pn	**Pn**	**12 53 39.5**	**+0.4**
	baz=139,slow=0.0						
PKIN	**Phulchoki**	**11.07**	**141**	Pn	**Pn**	**12 53 40.3**	**+1.0**
	baz=142,slow=0.0						
PKI	**Pulchoki**	**11.09**	**141**	Pn	**Pn**	**12 53 39.9**	**+0.4**
	baz=142,slow=0.0						
RAMN	**Ramite**	**12.21**	**139**	Pn	**Pn**	**12 53 53.9**	**-0.5**
	baz=139,slow=0.0						
RAMN				Sn	**Sn**	**12 56 04.6**	**-4.1**
	25nm,0.4s,baz=139,slow=0.0						
KURBB	**Kurchatov Arra**	**14.12**	**2**	Pn	**Pn**	**12 54 17.9**	**-1.2**
	0.8nm,1.0s,baz=187,slow=12,SNR=4.9						
BVAR	**Borovoye Array**	**17.27**	**345**	P	**Pn**	**12 54 58.1**	**-0.6**
	0.1nm,0.3s,baz=151,slow=12,SNR=8.4						
	1.6nm,0.5s						
ZALV	**Zalesovo Beam**	**18.13**	**14**	P	**Pn**	**12 55 08.5**	**-0.5**
	0.3nm,0.3s,baz=199,slow=8.8,SNR=6.3						
	1.0nm,0.3s						
AKTO	**Aktyubinsk**	**19.82**	**321**	P	**P**	**12 55 25.1**	**-1.5**
	0.4nm,0.3s,baz=114,slow=7.7,SNR=6.2						
	1.2nm,0.3s						
SONM	**Songino Array**	**23.99**	**53**	P	**P**	**12 56 14.0**	**+4.7**
	2.9nm,0.4s,baz=250,slow=9.9,SNR=16						
	2.9nm,0.4s						
CMAR	**Chiang Mai Arr**	**25.99**	**128**	P	**P**	**12 56 30.2**	**+2.6**
	1.0nm,0.6s,baz=310,slow=10,SNR=7.0						
	1.0nm,0.6s						
FINES	**FINESS Array B**	**40.52**	**325**	P	**P**	**12 58 33.1**	**+0.2**
	1.1nm,0.3s,baz=113,slow=9.1,SNR=14						
	1.1nm,0.3s						
ARCES	**ARCESS Array B**	**43.24**	**336**	P	**P**	**12 58 55.3**	**+0.3**
	2.3nm,0.8s,baz=101,slow=8.6,SNR=10						
	2.3nm,0.8s						
HFS	**Hagfors**	**46.37**	**322**	P	**P**	**12 59 19.7**	**-0.2**
	0.6nm,0.4s,baz=60,slow=8.7,SNR=1.1						
	0.6nm,0.4s						
WRA	**Warramunga Arr**	**77.57**	**126**	P	**P**	**13 02 52.5**	**+3.1**
	0.4nm,0.6s,baz=316,slow=6.6,SNR=7.9						
	0.4nm,0.6s						

KRSC 12 13:05:50.9±2.6**, 49.°36N×156.°87E, h15^{km}**±36^{km}**, Ml3.9, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.42**	**340**	*e*P	Pn	13 06 14.7	-1.3
SKR				*e*S	Sn	13 06 32.3	-2.1
PAU	**Pauzhetka**	**2.12**	**359**	*e*P	Pn	13 06 27.0	+1.3
PAU				*e*S	Sb	13 06 53.5	-1.4
KDTR	**Khodutka, Kamc**	**2.57**	**17**	*e*P	Pb	13 06 35.0	-1.7
KDTR				*e*S	Sb	13 07 07.3	-0.8
ASAK	**Asacha**	**3.10**	**12**	*e*P	Pb	13 06 42.7	-3.1
MTVR	**Mutnovka**	**3.24**	**14**	*e*P	Pn	13 06 44.4	+3.2
GRL	**Gorelyy**	**3.29**	**13**	*e*P	Pn	13 06 45.4	+3.5
DALK	**Dalny**	**3.87**	**17**	*e*P	Pn	13 06 53.5	+3.7
UGLR	**Uglovaya**	**4.05**	**17**	*e*P	Pn	13 06 56.6	+4.3
AVH	**Avacha**	**4.09**	**16**	*e*P	Pn	13 06 57.3	+4.5
KOK	**Koryaka**	**4.09**	**15**	*e*P	Pn	13 06 57.6	+4.6
SMAR	**Somma**	**4.10**	**16**	*e*P	Pn	13 06 57.8	+4.7
SDLR	**Sedlovina**	**4.13**	**17**	*e*P	Pn	13 06 56.9	+3.5
KRX	**Arik**	**4.16**	**15**	*e*P	Pn	13 06 58.6	+4.6
SPN	**Mys Shipunski**	**4.24**	**27**	*e*P	Pn	13 06 58.5	+3.6
GNL	**Ganaly**	**4.40**	**8**	*e*P	Pn	13 07 00.2	+3.1
MKZ	**Mys Kozlova**	**6.01**	**28**	*e*P	Pn	13 07 22.1	+3.0

*IDC **12** 13:27:09.2±1.4, 26.°97S×179.°91W, h465^{km}±15^{km}, mb3.4/6, mbtmp4.2/9, Error ellipse: s-maj=22.0km s-min=18.7km az=160.0*

*NEIC **12** 13:27:09.3±1.2, 26.°92S±0.°02×179.°8W±0.°2, h468^{km}±8^{km}, mb4.3/20, Error ellipse: s-maj=21.7km s-min=2.5km az=97.0*

ISC 12 13:27:08.9±0.6**, 27.°02S**±0.°08×**179.°8W**±0.°1**, h468^{km}, n40,** σ**0.^{s}99**/41**, mb4.3**/16**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.79**	**143**	P	**P**	**13 28 16.4**	**+0.5**
RAO	**Raoul Island**	**2.79**	**143**	P	**P**	**13 28 17.0**	**+1.2**
	450nm,0.2s,baz=342,slow=20,SNR=7.4						
MSVF	**Nonsavu**	**9.45**	**348**	P	**P**	**13 29 18.5**	**-1.8**
	5.2nm,1.0s,baz=118,slow=15,SNR=2.2						
URZ	**Urewera**	**11.50**	**192**	P	**P**	**13 29 41.0**	**-1.1**
	4.1nm,0.3s,baz=14,slow=5.1,SNR=1.1						
URZ				S	**S**	**13 31 44.8**	**-3.5**
	11nm,0.6s,baz=178,slow=19,SNR=11						
HIZ	**Hauiti**	**12.30**	**200**	P	**P**	**13 29 52.2**	**+1.5**
DZM	**Mont Dzumac**	**13.42**	**289**	P	**P**	**13 30 03.1**	**0.0**
DZM	**Mont Dzumac**	**13.42**	**289**	P	**P**	**13 30 04.3**	**+1.2**
	12nm,0.6s,baz=117,slow=15,SNR=19						
QRZ	**Quartz Range**	**15.15**	**203**	P	**P**	**13 30 20.6**	**-0.5**
ARMA	**Armidale**	**25.23**	**256**	P	**P**	**13 31 57.7**	**+1.3**
ARMA				IAmb	IAmb	13 32 29.7	
	comp=Z,23nm,1.5s						
EIDS	**Eidsvold**	**26.13**	**267**	P	**P**	**13 32 05.2**	**+0.8**
EIDS				IAmb	IAmb	13 32 19.1	
	comp=Z,17nm,1.4s						
CTAO	**Charters Tower**	**31.77**	**275**	P	**P**	**13 32 54.6**	**+0.8**
CTAO				IAmb	IAmb	13 32 55.6	
	comp=Z,8.3nm,0.6s						
STKA	**Stephens Creek**	**33.81**	**252**	P	**P**	**13 33 11.4**	**+0.4**
STKA	**Stephens Creek**	**33.81**	**252**	P	**P**	**13 33 11.4**	**+0.4**
	comp=Z,1.9nm,0.5s,baz=94,slow=11,SNR=3.4						
	comp=Z,1.9nm,0.5s						
COEN	**Coen**	**36.86**	**283**	P	**P**	**13 33 37.0**	**+0.3**
COEN				IAmb	IAmb	13 33 55.3	
	comp=Z,15nm,1.2s						
BBOO	**Buckleboo**	**38.45**	**250**	P	**P**	**13 33 49.0**	**-0.5**
BBOO				IAmb	IAmb	13 34 08.5	
	comp=Z,29nm,1.4s						
AS31	**Alice Springs**	**41.77**	**264**	P	**P**	**13 34 16.3**	**-0.1**
ASAR	**Alice Springs**	**41.77**	**264**	P	**P**	**13 34 15.9**	**-0.5**
ASAR	**Alice Springs**	**41.77**	**264**	P	**P**	**13 34 16.3**	**-0.1**
	comp=Z,5.8nm,0.8s,baz=91,slow=7.0,SNR=58						
	comp=Z,5.8nm,0.8s						
WRAB	**Tennant Creek**	**42.43**	**269**	P	**P**	**13 34 21.3**	**-0.4**
WRAB				IAmb	IAmb	13 34 22.2	
	comp=Z,7.9nm,0.7s						
WRA	**Warramunga Arr**	**42.44**	**269**	P	**P**	**13 34 21.2**	**-0.5**
	comp=Z,7.5nm,0.6s,baz=111,slow=6.3,SNR=101						
	comp=Z,7.5nm,0.6s						
MTN	**Manton Dam**	**47.92**	**277**	P	**P**	**13 35 03.6**	**-0.3**
MTN				IAmb	IAmb	13 35 15.6	
	comp=Z,23nm,1.4s						
KNRA	**Kununurra**	**48.90**	**272**	P	**P**	**13 35 11.3**	**+0.1**
KNRA				IAmb	IAmb	13 35 52.7	
	comp=Z,10nm,1.1s						
FAKI	**Fak Fak**	**51.69**	**289**	P	**P**	**13 35 31.8**	**0.0**
TOLI2	**Tolitoli**	**63.54**	**286**	P	**P**	**13 36 53.0**	**+0.1**
BELA	**Belgrano 2**	**73.33**	**173**	P	**P**	**13 37 52.1**	**+0.6**
JMM	**Marumori**	**74.36**	**329**	P	**P**	**13 37 56.5**	**-1.3**
MAJO	**Matsushiro**	**74.55**	**326**	P	**P**	**13 37 59.1**	**+0.1**
MAJO				IAmb	IAmb	13 38 19.6	
	comp=Z,3.9nm,0.7s						
JNU	**Nakatsue**	**75.96**	**319**	P	**P**	**13 38 07.1**	**+0.1**
SNAA	**Sanae**	**81.56**	**179**	P	**P**	**13 38 36.8**	**+0.4**
SNAA	**Sanae**	**81.56**	**179**	P	**P**	**13 38 37.0**	**+0.6**
	comp=Z,0.8nm,0.9s,baz=204,slow=10.0,SNR=2.5						
	comp=Z,0.8nm,0.9s						
PEA0B	**Petropavlovsk-**	**82.16**	**347**	P	**P**	**13 38 39.6**	**+0.1**
PEA0B				IAmb	IAmb	13 38 56.2	
	comp=Z,14nm,1.2s						
PETK	**Petropavlovsk-**	**82.16**	**347**	P	**P**	**13 38 39.5**	**0.0**
PETK	**Petropavlovsk-**	**82.16**	**347**	P	**P**	**13 38 39.7**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=155,slow=5.8,SNR=4.7						
	comp=Z,0.5nm,0.6s						
NVAR	**Mina Array Bea**	**86.89**	**44**	P	**P**	**13 39 04.8**	**+1.4**
	comp=Z,0.7nm,0.7s,baz=256,slow=4.3,SNR=4.1						
	comp=Z,0.7nm,0.7s						
E03A	**Lebam**	**89.14**	**35**	P	**P**	**13 39 11.4**	**-2.0**
NC303	**NORSAR Array S**	**144.97**	**351**	PKPdf	**PKPdf**	**13 45 51.8**	**+0.3**
NOA	**NORSAR Array B**	**145.17**	**351**	PKPbc	**PKPdf**	**13 45 51.0**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=17,slow=2.6,SNR=1.5						
HFS	**Hagfors**	**145.62**	**348**	PKPbc	**PKPdf**	**13 45 53.4**	**+0.8**
	comp=Z,1.3nm,0.4s,baz=72,slow=4.7,SNR=9.2						
AKASG	**Malin Array Be**	**147.63**	**325**	PKPbc	**PKPbc**	**13 45 59.7**	**0.0**
	comp=Z,0.6nm,0.5s,baz=48,slow=3.3,SNR=6.1						
TORD	**Torodi Ar. Bea**	**166.12**	**186**	PKPab	**PKPab**	**13 47 24.6**	**+0.8**
	comp=Z,0.7nm,0.3s,baz=160,slow=3.1,SNR=2.4						

IDC 12 13:43:19.9±2.5**, 15.°78S×178.°42W, h465^{km}**±32^{km}**, mb2.9**/3**, mbtmp3.7**/4**, Error ellipse: s-maj=216.2km s-min=29.4km az=159.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.90**	**240**	P	P	13 44 35.3	0.0
	21nm,0.7s,baz=100,slow=14,SNR=19						
WRA	**Warramunga Arr**	**45.04**	**257**	P	P	13 50 52.9	-0.5
	0.5nm,0.6s,baz=94,slow=7.0,SNR=17						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**45.39**	**252**	P	P	13 50 56.2	+0.2
	1.3nm,0.4s,baz=88,slow=7.8,SNR=62						
ASAR				PcP	PcP	13 52 25.8	-0.2
	0.2nm,0.5s,baz=80,slow=3.1,SNR=1.8						
	1.3nm,0.4s						
TXAR	**Lajitas Array**	**84.87**	**58**	P	P	13 55 05.4	+0.1
	0.3nm,0.9s,baz=203,slow=5.1,SNR=2.9						
	0.3nm,0.9s						
BRTR	**Keskin Array B**	**143.25**	**317**	PKP	PKPdf	14 01 60.0	-1.0
	1.0nm,0.7s,baz=48,slow=2.1,SNR=5.1						

*SNET **12** 14:04:11.7±0.9, 13.°06N×89.°47W, h45^{km}±10^{km}, ML3.3*

*CATAC **12** 14:04:11.9±0.6, 13°N±4°×8°9W±°, h28^{km}±3^{km}, M3.5/20, MLv3.5/20, Error ellipse: s-maj=8.0km s-min=3.9km az=18.7, confirmed*

*GCG **12** 14:04:12.3±0.5, 13.°12N×89.°50W, h47^{km}±8^{km}, MD3.6, ML3.7*

ISC 12 14:04:12.6±1.5**, 13.°10N**±0.°07×**89.°40W**±0.°04**, h26^{km}**±12^{km}**, n69,** σ**0.^{s}92**/82**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.40**	**11**	*i* P	**Pn**	**14 04 22.4**	**-0.3**
LALI				*i* S	**Sn**	**14 04 29.6**	**+0.2**
LALI	**Alcalda de L**	**0.40**	**11**	P	**Pn**	**14 04 22.4**	**-0.3**
PANCS	**Alcalda de**	**0.56**	**23**	S	**Sn**	**14 04 33.5**	**+0.1**

PANCS	Alcalda de	0.56	23	P	Pn	14 04 24.9	0.0
JAYA	Jayaque - finc	0.56	355	eP	Pb	14 04 23.9	0.0
JAYA				eS	Sn	14 04 33.5	-0.1
JAYA				IAML		14 04 34.5	
	comp=Z,3μm,0.1s						
JAYA	Jayaque - finc	0.56	355	i P	Pb	14 04 23.9	0.0
JAYA				i S	Sn	14 04 32.8	-0.7
JAYA	Jayaque - finc	0.56	355	P	Pb	14 04 24.0	0.0
ITCA	Escuela Especi	0.58	12	S	Sn	14 04 34.7	+0.5
ITCA	Escuela Especi	0.58	12	P	Pn	14 04 24.9	-0.5
LOMA	Loma Larga	0.59	22	eP	Pn	14 04 24.8	-0.7
LOMA				eS	Sn	14 04 35.6	+1.3
PMON	Piamonte	0.62	8	eP	Pb	14 04 24.9	0.0
PMON	Piamonte	0.62	8	P	Pb	14 04 24.9	0.0
PMON	Piamonte	0.62	8	S	Sn	14 04 35.1	+0.1
LFRS	El Faro	0.62	32	eP	Pn	14 04 25.3	-0.6
SEMO	Seminario San	0.63	16	S	Sn	14 04 35.6	+0.4
UTEC	Universidad Te	0.63	18	S	Sn	14 04 36.2	+0.9
UTEC	Universidad Te	0.63	18	P	Pn	14 04 25.5	-0.5
UEES	Universidad Ev	0.64	14	P	Pn	14 04 25.4	-0.7
UEES	Universidad Ev	0.64	14	S	Sn	14 04 36.0	+0.6
BOQS	Boqueron	0.65	10	eP	Pn	14 04 25.6	-0.7
IGN	Direccin Gen	0.65	20	S	Sn	14 04 36.4	+0.5
IGN	Direccin Gen	0.65	20	P	Pn	14 04 25.8	-0.5
PIC2	El Picacho	0.66	12	eP	Pn	14 04 26.0	-0.6
PIC2				eS	Sn	14 04 37.3	+1.1
UDBS	Universidad Do	0.66	21	S	Sn	14 04 36.1	+0.2
UDBS	Universidad Do	0.66	21	P	Pn	14 04 27.0	+0.6
LFU	La Fuente	0.70	23	eP	Pn	14 04 26.8	-0.2
COEG	Centro de Oper	0.72	44	eP	Pb	14 04 26.3	-0.4
COEG				eS	Sn	14 04 38.1	+0.5
COEG				IAML		14 04 41.3	
	comp=Z,492nm,0.2s						
COEG	Centro de Oper	0.72	44	P	Pb	14 04 26.5	-0.2
COEG	Centro de Oper	0.72	44	S	Sn	14 04 37.9	+0.3
LBRS	Las Brisas	0.73	29	eP	Pn	14 04 27.1	-0.2
TECO	Alcaldia de Te	0.74	54	S	Sn	14 04 38.0	0.0
TECO	Alcaldia de Te	0.74	54	P	Pb	14 04 26.2	-0.8
CEVE	Cerro Verde	0.76	343	eP	Pb	14 04 26.8	-0.6
CEVE				IAML		14 04 43.6	
	comp=Z,896nm,0.2s						
CEVE	Cerro Verde	0.76	343	P	Pb	14 04 26.9	-0.6
CEVE	Cerro Verde	0.76	343	S	Sn	14 04 38.6	-0.1
PAVA	Las Pavas	0.76	36	eP	Pn	14 04 27.3	-0.5
PAVA				eS	Sn	14 04 39.9	+1.4
PAVA	Las Pavas	0.76	36	P	Pb	14 04 27.2	-0.1
UESV	Universidad de	0.80	48	S	Sn	14 04 39.6	+0.2
UESV	Universidad de	0.80	48	P	Pn	14 04 27.5	-0.8
ALJI	Alcalda de J	0.84	74	P	Pb	14 04 29.1	+0.5
ALJI	Alcalda de J	0.84	74	S	Sb	14 04 40.1	+0.6
NUBE	Las Nubes	0.88	335	eP	Pn	14 04 27.9	-1.7
NUBE				eS	Sb	14 04 40.3	-0.5
NUBE	Las Nubes	0.88	335	i P	Pn	14 04 27.9	-1.7
NUBE				i S	Sb	14 04 40.4	-0.5
NUBE	Las Nubes	0.88	335	P	Pn	14 04 27.9	-1.7
SCLA	Alcaldia de Sa	0.89	47	P	Pn	14 04 28.9	-0.6
UNIC	Universidad Ca	0.89	351	S	Sn	14 04 41.1	-0.6
FAME	Alcaldia de Sa	0.95	321	P	Pn	14 04 29.1	-1.3
LOAL	Lomas de Alarc	0.97	338	P	Pb	14 04 30.0	-0.8
SLOZ	Alcaldia de Sa	1.00	338	P	Pb	14 04 30.7	-0.5
PACA	Pacayal	1.11	70	eP	Pn	14 04 32.7	0.0
PACA				eS	Sb	14 04 47.7	+0.3
PACA	Pacayal	1.11	70	P	Pb	14 04 33.2	-0.1
LCY	Lacayo	1.12	73	eP	Pn	14 04 32.6	-0.2
LLGN	La Laguna	1.15	23	eP	Pn	14 04 33.1	-0.1
LLGN	La Laguna	1.15	23	P	Pn	14 04 32.7	-0.5
BLLM	Bellamira	1.18	73	eP	Pn	14 04 33.2	-0.4
MTO3	Montecristo	1.29	2	eP	Pn	14 04 34.6	-0.7
MTO3				eS	Sb	14 04 52.6	-0.2
MTO3	Montecristo	1.29	2	i P	Pn	14 04 34.6	-0.7
MTO3	Montecristo	1.29	2	P	Pn	14 04 34.6	-0.7
ESQI	Esquipulas	1.46	2	P	Pn	14 04 37.1	-0.3
LCND	La Caada	1.48	82	eP	Pn	14 04 37.4	-0.3
LCND	La Caada	1.48	82	P	Pn	14 04 37.1	-0.6
CNCH	Conchagua	1.54	83	eP	Pn	14 04 37.9	-0.6
CNCH				eS	Sb	14 04 58.9	-0.7
CNCH	Conchagua	1.54	83	P	Pn	14 04 38.6	+0.1
CNCH	Conchagua	1.54	83	S	Sn	14 04 58.0	+0.3
FG16	Alotenango, Sa	1.59	317	i P	Pb	14 04 42.5	+1.0
FG16				IAML		14 05 14.9	
	comp=E,618nm,0.2s						
FG8	Yepocapa, Chim	1.61	316	eP	Pb	14 04 43.1	+1.2
FG8				i S	Sb	14 05 07.3	+5.4
MARCA	Marcala la Paz	1.69	51	P	Pn	14 04 39.3	-1.4
CHOHN	Orocuina	2.21	80	P	Pn	14 04 46.8	-1.1
STG8	El Palmar, Qui	2.32	306	eP	Pb	14 04 52.9	-1.1

IDC 12 14:19:30.3±264.0**,34°.92N×121°.09W,h0km,Error ellipse: s-maj=114.7km s-min=87.3km az=107.0,Off coast of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I57US	PINON FLAT INF	4.05	107	I	I	14 43 55.5	
	baz=291,slow=309						
I56US	NEWPORT INFRAS	13.66	11	I	I	15 45 50.0	
	baz=194,slow=320,SNR=2.3						
I53US	FAIRBANKS INFR	34.06	340	I	I	17 45 00.0	
	baz=144,slow=316,SNR=2.1						
I59US	HAWAII INFRASO	34.30	253	I	I	17 50 40.0	
	0.1nm,0.8s,baz=57,slow=323,SNR=3.0						

IDC 12 15:03:22.7±1.8**,6°.67S×155°.36E,h0km,mb3.4**/4**,mbtmp3.4**/4**,MS2.9**/1**,Error ellipse: s-maj=64.9km s-min=32.7km az=128.0,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.31	121	LR	LR	15 07 09.8	
	comp=Z,107nm,18.1s,baz=226,slow=43						
WRA	Warramunga Arr	24.30	235	P	P	15 08 41.9	-0.2
	0.3nm,0.4s,baz=59,slow=9.5,SNR=7.1						
WRA				PcP	PcP	15 12 22.3	-0.1
	0.5nm,0.9s,baz=61,slow=2.4,SNR=6.4						
	0.3nm,0.4s						
ASAR	Alice Springs	26.66	228	P	P	15 09 03.5	0.0
	0.2nm,0.7s,baz=55,slow=8.9,SNR=2.0						
	0.2nm,0.7s						
H11S3	WAKE ISLAND Hy	27.39	24	T	T	15 37 37.0	
	baz=204,slow=74						
H11S2	WAKE ISLAND Hy	27.39	24	T	T	15 37 37.2	
	baz=204,slow=74						
H11S1	WAKE ISLAND Hy	27.40	24	T	T	15 37 38.3	
	baz=204						
CMAR	Chiang Mai Arr	60.97	295	P	P	15 13 39.1	+0.8
	0.9nm,0.6s,baz=113,slow=6.8,SNR=6.6						
	0.9nm,0.6s						
ILAR	Eielson Array	82.94	21	P	P	15 15 49.2	0.0
	0.2nm,0.6s,baz=240,slow=5.5,SNR=2.1						
	0.2nm,0.6s						
TORD	Torodi Ar. Bea	153.29	286	PKPbc	PKPbc	15 23 22.3	-1.6
	0.2nm,0.3s,baz=51,slow=3.3,SNR=1.1						

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*ISK **12** 15:19:47.0,38°.56N×44°.32E,h4km,ML2.9/9*
*AFAD **12** 15:19:47.0,38°.54N×44°.34E,h12km±7km,ML3.0*
*NSSP **12** 15:19:48.4,38°.58N×44°.37E,h10km,Ms3.1*
*AZER **12** 15:19:49.3,38°.49N×44°.26E,h10km,ml3.1*
*TEH **12** 15:19:50.2,38°.60N×44°.54E,h10km±98km*
ISC 12 15:19:48.3±1.0**,38°.53N**±0°.02×**44°.29E**±0°.02**,h9**km±9km**,**
n55,σ**1s.29**/88**,2C-4D,Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.27	299	P	Pg	15 19 54.3	+0.6
CLDR	Caldiran	0.68	334	Pg	Pg	15 20 00.1	-1.3
CLDR				Sg	Sg	15 20 10.2	-0.1
CLDR	Caldiran	0.68	334	P	Pg	15 19 59.6	-1.9
CLDR				S	Sg	15 20 10.0	-0.3
TVAN	Van	0.70	270	P	Pg	15 20 01.8	0.0
VANB	Van	0.71	275	Pg	Pg	15 20 01.7	-0.3
VANB				Sg	Sg	15 20 12.6	+1.3
MAKU	Maku	0.88	20	Pg	Pb	15 20 05.2	-0.6
YOVA	Hakkari_Yksek	0.94	180	P	Pg	15 20 06.2	-0.3
GEVA	Gevas	0.99	258	P	Pg	15 20 05.6	-1.8
GEVA				S	Sg	15 20 21.0	+0.7
GEVA				i IAML		15 20 25.0	
	comp=N,335nm,0.4s						
AKDM	Akdamar-Van	1.05	259	Pg	Pg	15 20 07.7	-0.8
ISHB	Shabestar	1.07	103	Pg	Pg	15 20 08.2	-0.6
HAKT	HAKKARI	1.08	206	P	Pg	15 20 08.6	-0.3
HAKT				S	Sg	15 20 23.0	0.0
HAKT				i IAML		15 20 27.0	
	comp=E,257nm,0.4s						
HAKT				i IAML		15 20 28.0	
	comp=N,353nm,0.4s						
HAKT	HAKKARI	1.08	206	P	Pg	15 20 08.8	-0.2
HAKT				S	Sg	15 20 22.9	0.0
DYDN	Diyadin	1.11	335	P	Pg	15 20 08.9	-0.8
NAX	Nakhchivan	1.14	55	P	Pn	15 20 10.9	+0.5
NAX				S	Sn	15 20 27.3	+1.1
ADCV	BITLIS_Adilcev	1.26	283	P	Pn	15 20 11.9	-0.3
HYR	Heyderabad	1.26	20	P	Pg	15 20 13.5	+0.9
HYR				S	Sn	15 20 31.6	+2.3
SBZ	Shahbuz	1.31	48	P	Pg	15 20 13.9	+0.5
SBZ				S	Sn	15 20 32.8	+2.3
IGDI	IGDIR	1.34	353	P	Pn	15 20 12.5	-0.8
IGDI	IGDIR	1.34	353	P	Pg	15 20 15.1	+1.0
IGDI				S	Sg	15 20 35.3	+3.8
ORD	Ordubad	1.39	73	P	Pg	15 20 15.2	+0.3
ORD				S	Sg	15 20 35.4	+2.5
CUKT	Cukurca	1.39	203	Pn	Pn	15 20 14.7	+0.7
CUKT				Sn	Sg	15 20 34.1	+1.0
CUKT	Cukurca	1.39	203	P	Pn	15 20 13.6	-0.4
CUKT				S	Sg	15 20 35.1	+2.0
CUKT				i IAML		15 20 43.0	
	comp=N,223nm,0.7s						
TASB	TASBURUN-IGDIR	1.45	358	Pn	Pb	15 20 14.9	-0.6
AGRB	Hanur-Agry	1.45	316	Pn	Pn	15 20 14.9	0.0
DORK	Agr/Tutak/Do	1.46	306	P	Pn	15 20 15.3	+0.3
DORK				S	Sn	15 20 34.0	-0.3
VAYK	Vayk	1.46	37	⇓eP	Pg	15 20 16.5	+0.2
VAYK				⇓eS	Sg	15 20 36.6	+1.5
ITBZ	Tabriz	1.49	101	Pg	Pn	15 20 15.3	-0.1
NRKZ	NAREK	1.49	11	eP	Pg	15 20 17.5	+0.6
NRKZ				eS	Sg	15 20 38.4	+2.0
PERV	Siirt/Pervari-	1.50	248	P	Pb	15 20 17.2	+0.8
IAZR	Azarshahr	1.58	122	Pg	Pg	15 20 18.4	-0.2
VNNZ	Vanand	1.61	347	eP	Pg	15 20 19.4	+0.3
VNNZ				eS	Sg	15 20 41.3	+1.2
METS	Metsamor	1.62	354	eP	Pg	15 20 19.9	+0.5
METS				eS	Sg	15 20 42.7	+2.1
GNI	Garni	1.65	12	⇓iP	Pg	15 20 20.2	+0.2
GNI				⇑iS	Sg	15 20 43.2	+1.7
ARUZ	Aruch	1.76	355	eP	Pg	15 20 21.9	-0.1
ARUZ				eS	Sg	15 20 45.7	+0.9
GURO	Guroymak-BITLI	1.77	271	Pn	Pn	15 20 19.9	+0.6
KAPZ	Kaputan	1.81	10	eP	Pg	15 20 22.4	-0.7
KAPZ				eS	Sg	15 20 46.3	-0.3
AMBZ	Amberd	1.85	359	eP	Pg	15 20 22.9	-0.9
AMBZ				eS	Sg	15 20 47.2	-0.7
GRS	Goris	1.86	58	⇑iP	Pg	15 20 23.0	-0.9
GRS				⇓iS	Sg	15 20 48.0	-0.1
EGVZ	Egvard	1.89	68	eP	Pg	15 20 23.6	-0.9
EGVZ				eS	Sg	15 20 49.9	+0.9
EATA	Eleskirt	1.93	314	P	Pn	15 20 22.4	+0.8
SRTM	Siirt_Merkez	1.94	255	P	Pb	15 20 23.5	-0.4
AYRK	Ayrk	1.96	36	eP	Pg	15 20 25.5	-0.4
AYRK				eS	Sg	15 20 51.9	+0.6
DIGO	Kars	2.01	340	P	Pb	15 20 25.4	+0.3
IHRS	Heris	2.17	95	Pn	Pb	15 20 28.2	+0.4
MUSM	Mu-Merkez	2.19	276	P	Pb	15 20 27.1	-1.0
GDB	GEDABAY	2.46	27	P	Pb	15 20 31.2	-1.6
GDB				S	Sb	15 21 03.8	+0.6
SVAN	Silvan-Diyarba	2.46	262	Pn	Pn	15 20 29.7	+1.0
LSVT	Lusahovit	2.48	16	eP	Pg	15 20 35.7	-0.1
LSVT				eS	Sg	15 21 08.9	+0.9
SRTK	Saratovka	2.53	0	eP	Pg	15 20 35.1	-1.6
SRTK				eS	Sg	15 21 08.6	-1.0
QRD	Qoradiz	2.54	68	P	Pb	15 20 31.6	-2.4
QRD				S	Sb	15 21 04.0	-1.2
GANJ	Ganja	2.63	36	P	Pb	15 20 33.5	-2.1
GANJ				S	Sb	15 21 07.5	-0.4
QZX	Qazax, Azerbai	2.66	18	P	Pb	15 20 33.8	-2.3
QZX				S	Sb	15 21 08.3	-0.5
BNGB	Bingl	2.86	280	Pn	Pn	15 20 35.1	+0.9
YRD	Yardimli	3.11	82	P	Pn	15 20 39.4	+1.7
YRD				S	Sb	15 21 17.8	-4.2
LRK	Lerik	3.17	87	P	Pn	15 20 40.6	+2.1
LRK				S	Sb	15 21 20.9	-2.8

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*IDC **12** 16:05:38.0±3.6,5°.10S×153°.12E,h48km±33km,mb3.8/18,mbtmp4.1/19,ML1.7/1,MS3.2/5,Error ellipse: s-maj=23.8km s-min=15.0km az=85.0*
ISC 12 16:05:37.5±0.7**,5°.08S**±0°.10×**153°.2E**±0°.1**,h43**km**,n27,**
σ**0s.85**/22**,mb4.1**/18**,MS3.1**/3**,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.36	234	P	Pn	16 07 24.1	+1.6
	0.8nm,0.3s,baz=42,slow=15,SNR=1.2						
PMG				S	Sn	16 08 44.0	-0.7
	39nm,0.9s,baz=317,slow=19,SNR=3.6						
PMG				LR	LR	16 09 53.6	
	comp=Z,73nm,20.6s,baz=23,slow=35						
	9.1nm,0.8s						
HNR	Honiara	7.98	123	LR	LR	16 10 43.9	
	comp=Z,154nm,18.3s,baz=286,slow=38						
GUMO	Guam	20.30	336	LR	LR	16 19 09.4	
	comp=Z,53nm,18.1s,baz=172,slow=40						
DZM	Mont Dzumac	21.21	144	P	P	16 10 20.2	+0.3
	7.2nm,0.6s,baz=251,slow=9.5,SNR=8.8						
	7.2nm,0.6s						
WRA	Warramunga Arr	23.55	230	P	P	16 10 43.0	-1.2
	2.0nm,0.8s,baz=51,slow=10,SNR=15						
	2.0nm,0.8s						
ASAR	Alice Springs	26.20	223	P	P	16 11 07.4	-1.1
	0.8nm,0.6s,baz=59,slow=8.5,SNR=17						
ASAR				PcP	PcP	16 14 35.5	+0.7
	0.5nm,0.8s,baz=59,slow=2.7,SNR=3.0						
	0.8nm,0.6s						
H11S3	WAKE ISLAND Hy	26.95	29	T	T	16 39 40.2	
	baz=208,slow=74,SNR=4.9						
H11S2	WAKE ISLAND Hy	26.95	29	T	T	16 39 30.2	
	baz=208,slow=74,SNR=5.6						
H11S1	WAKE ISLAND Hy	26.97	29	T	T	16 39 33.4	
	baz=208,slow=74,SNR=3.2						
STKA	Stephens Creek	28.78	201	P	P	16 11 30.7	-0.8
	4.2nm,1.2s,baz=9.2,slow=14,SNR=3.0						
	4.2nm,1.2s						
FITZ	Fitzroy Crossi	29.86	242	P	P	16 11 40.2	-0.9
	7.6nm,0.6s,baz=76,slow=7.4,SNR=19						
	7.6nm,0.6s						
DAV	Davao City (W)	30.08	293	LR	LR	16 23 15.7	
	comp=Z,46nm,18.6s,baz=142,slow=35						
NWAO	Narrogin (SRO)	43.46	226	LR	LR	16 31 39.1	
	comp=Z,78nm,18.3s,baz=276,slow=36						
KSRS	Korea Array	48.42	333	P	P	16 14 15.4	-0.1
	1.2nm,0.8s,baz=153,slow=9.1,SNR=8.3						
	1.2nm,0.8s						
USRK	Ussuriysk Ar.	52.64	341	P	P	16 14 47.2	-0.1
	1.7nm,0.9s,baz=164,slow=6.4,SNR=5.2						
	1.7nm,0.9s						
KLR	Kul'dur	57.22	343	P	P	16 15 19.3	-1.1
	2.3nm,0.9s,baz=166,slow=8.3,SNR=5.5						
	2.3nm,0.9s						
PETK	Petropavlovsk-	58.10	3	P	P	16 15 26.9	+0.5
	1.1nm,0.8s,baz=146,slow=4.8,SNR=5.2						
	1.1nm,0.8s						
CMAR	Chiang Mai Arr	58.34	295	P	P	16 15 29.6	+0.8
	1.6nm,0.6s,baz=114,slow=5.4,SNR=14						
	1.6nm,0.6s						
SONM	Songino Array	66.77	328	P	P	16 16 25.6	+1.0
	0.3nm,0.4s,baz=137,slow=7.5,SNR=1.7						
	0.3nm,0.4s						
VNDA	Vanda	72.54	178	P	P	16 17 00.6	+1.0
	0.5nm,0.7s,baz=342,slow=6.1,SNR=2.0						
	0.5nm,0.7s						
MKAR	Makanchi Array	80.79	319	P	P	16 17 47.0	+0.2
	3.4nm,0.9s,baz=104,slow=5.1,SNR=20						
	3.4nm,0.9s						
ZALV	Zalesovo Beam	81.60	326	P	P	16 17 50.1	-0.7
	3.5nm,0.7s,baz=104,slow=4.7,SNR=14						
	3.5nm,0.7s						
ILAR	Eielson Array	82.28	22	P	P	16 17 53.4	-0.8
	0.3nm,0.7s,baz=224,slow=3.8,SNR=2.7						
	0.3nm,0.7s						
KURBB	Kurchatov Arra	84.25	322	P	P	16 18 04.4	-0.3
	2.3nm,0.9s,baz=106,slow=4.3,SNR=14						
	2.3nm,0.9s						
QSPA	South Pole Qui	84.88	180	P	P	16 18 07.7	-0.1
	2.4nm,0.9s,baz=290,slow=0.9,SNR=15						
	2.4nm,0.9s						
BVAR	Borovoye Array	89.69	323	P	P	16 18 30.5	-0.6
	2.6nm,0.8s,baz=99,slow=7.7,SNR=11						
	2.6nm,0.8s						
TORD	Torodi Ar. Bea	150.75	288	PKPbc	PKPbc	16 25 25.6	-0.7
	3.0nm,0.6s,baz=77,slow=2.2,SNR=2.6						

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*THE **12** 16:22:58.9,40°.5N±0°.9×2°1E±°,h0km±1km,M2.5/9,MLh2.5/9*
*TIR **12** 16:22:59.2,40°.45N×20°.82E,h0km±3km,Ml2.8/5*
*BEO **12** 16:23:00.1±0.5,40°.45N×21°.09E,h4km±4km,ML2.4/9*
*ATH **12** 16:23:00.4,40°.57N×20°.94E,h5km±1km,ML2.6/19, Manual Solution by A.Andreou First location: 2019/06/12 16:24:13, This location: 2020/08/13 14:03:30 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
ISC 12 16:22:59.6±1.0**,40°.47N**±0°.02×**20°.82E**±0°.02**,h4**km±9km**,**
n56,σ**1s.19**/80**,Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.15	351	Pg	Pg	16 23 02.0	-0.6
KBN				Sg	Sg	16 23 04.9	+0.3
KBN				AML	AML	16 23 05.2	
	27nm,0.5s						
KBN	Korca	0.15	351	P	Pg	16 23 02.0	-0.6
KBN				S	Sg	16 23 04.2	-0.4
NEST	Nestorio	0.18	109	Pg	Pg	16 23 03.2	0.0
NEST				S	Sg	16 23 07.0	+1.3
NEST				AML	AML	16 23 08.0	
	8.4nm,0.4s						
NEST	Nestorio	0.18	109	P	Pg	16 23 03.2	0.0
NEST				S	Sg	16 23 06.0	+0.4
NEST	Nestorio	0.18	109	P	Pg	16 23 03.2	0.0
NEST				S	Sg	16 23 07.0	+1.3
PENT	Pentalofos	0.37	139	P	Pg	16 23 06.3	-0.4
PENT	Pentalofos	0.37	139	P	Pg	16 23 06.9	+0.2
PENT				S	Sg	16 23 13.4	+1.8
OHR	Ohrid	0.64	359	ePg	Pb	16 23 12.5	-0.8
OHR				eSg	Sb	16 23 22.4	-0.2
KPRO	Kipourio	0.67	141	P	Pg	16 23 11.5	-0.8
KPRO				S	Sg	16 23 21.9	+1.0
KPRO	Kipourio	0.67	141	P	Pb	16 23 13.0	-0.8
KPRO				S	Sb	16 23 22.8	-0.6
KZN	Kozani	0.75	103	P	Pg	16 23 13.7	-0.1
KZN				S	Sg	16 23 24.0	+0.5
KZN	Kozani	0.75	103	P	Pg	16 23 13.9	+0.1
KZN				S	Sg	16 23 23.2	-0.3
SRN	Sarande	0.86	227	P	Pb	16 23 16.2	-0.9
SRN				Sg	Sn	16 23 30.9	-0.6
SRN				AML	AML	16 23 38.8	
	0.3nm,0.5s						
SRN	Sarande	0.86	227	P	Pb	16 23 15.3	-1.8
IGT	Igoumenitsa	1.01	202	Pg	Pb	16 23 18.6	-1.1
IGT				Sg	Sn	16 23 34.4	-0.9
IGT	Igoumenitsa	1.01	202	P	Pb	16 23 18.4	-1.3
IGT				S	Sn	16 23 34.2	-1.0
IGT	Igoumenitsa	1.01	202	ePg	Pb	16 23 18.4	-1.3
IGT				eSg	Sn	16 23 35.4	+0.1
KEK	Kerkira	1.09	226	P	Pn	16 23 24.0	+2.3
TIR	Tirane	1.13	321	Pg	Pn	16 23 22.2	0.0
TIR				Sg	Sn	16 23 40.0	+1.7
TIR				AML	AML	16 23 45.9	
	0.5nm,0.5s						
TIR	Tirane	1.13	321	P	Pn	16 23 22.1	-0.2
TETR	Tetrakomo, Epi	1.18	163	P	Pn	16 23 24.9	+1.9
THL	Klokotos Trika	1.29	134	P	Pg	16 23 23.4	-0.9
THL				S	Sn	16 23 43.1	+1.0
THL	Klokotos Trika	1.29	134	P	Pb	16 23 24.9	+0.5
THL				S	Sn	16 23 42.9	+0.8
TYRN	Tyrnavos	1.32	125	P	Pn	16 23 23.8	-1.0
TYRN				S	Sn	16 23 44.1	+1.1
TYRN	Tyrnavos	1.32	125	P	Pb	16 23 25.3	+0.3
TYRN				S	Sg	16 23 42.2	0.0
TSLK	Tsoukalades, L	1.65	184	P	Pg	16 23 31.3	+0.1
LKD2	Lefkada island	1.69	184	P	Pg	16 23 32.5	+0.6
PUK	Puka	1.72	336	Pn	Pg	16 23 32.5	+0.1
PUK				Sn	Sg	16 23 59.0	+4.3
PUK				AML	AML	16 24 04.9	
	0.5nm,0.4s						
KNT	Kendrikon	1.72	66	P	Pn	16 23 29.9	-0.4
KNT	Kendrikon	1.72	66	P	Pn	16 23 30.4	+0.1
EVR	Evrytania	1.73	154	P	Pb	16 23 31.5	-0.5
EVR				S	Sg	16 23 55.4	+0.2
HORT	Hortiatis	1.74	85	P	Pn	16 23 31.3	+0.6
NYDR	Nydri-Lefkada	1.76	183	P	Pg	16 23 34.0	+0.7
MAKR	Makrakomi, Fth	1.78	145	P	Pg	16 23 33.1	-0.4
MAKR				S	Sg	16 23 57.2	+0.6
SCTE	Santa Cesarea	1.84	258	P	Pg	16 23 33.0	-1.9
AGG	Agios Georgios	1.86	141	P	Pn	16 23 32.3	0.0
AGG	Agios Georgios	1.86	141	P	Pb	16 23 33.1	-1.0
PVO	Paravola	1.93	163	P	Pb	16 23 34.8	-0.6
SOH	Sokhos	1.96	79	P	Pn	16 23 34.6	+0.9
BCI	Bajram Curri	1.97	344	Pn	Pg	16 23 38.5	+1.1
BCI				Sn	Sg	16 24 06.0	+3.1
ANX	Ano Chora	2.06	155	P	Pb	16 23 36.5	-1.1
DRME	Dracevica, Mon	2.11	325	ePn	Pb	16 23 37.3	-1.1
SERG	Sergoula	2.27	155	P	Pn	16 23 39.0	+1.1
AXS	Araxos	2.32	169	P	Pb	16 23 40.8	-1.1
PSDA	Pessada-Kefalo	2.36	185	P	Pb	16 23 41.6	-1.1
BOSS	Bosilegrad	2.37	31	ePn	Pn	16 23 39.2	-0.1
BARS	Barje	2.46	17	ePn	Pn	16 23 40.1	-0.4
DRO	Drossia	2.61	164	P	Pb	16 23 44.2	-2.8
SELS	Selova	2.75	5	ePn	Pn	16 23 44.5	-0.1
VTS	Vitosha	2.81	39	ePg	Pb	16 23 48.4	-2.0
KAVA	Kavala	2.85	78	P	Pn	16 23 46.0	+0.1
SJES	Sjenica	2.86	347	ePn	Pb	16 23 49.0	-2.2
GOCS	Kraljevo Serbi	3.09	1	ePn	Pn	16 23 51.0	+1.8
ZAPS	Zavoj	3.11	25	ePn	Pn	16 23 48.5	-0.9
IVAS	Ivanjica	3.14	351	ePn	Pn	16 23 51.3	+1.4
ZAGS	Zajecar	3.50	17	ePn	Pn	16 23 53.5	-1.2

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*VIE **12** 16:31:38.5±0.8,51°.55N×16°.32E,h0km,mb2.0/1,ml2.6/1, Error ellipse: s-maj=6.9km s-min=5.6km az=73.0 70 km NW of Wroclaw Suspected Mining induced.*
*PRU **12** 16:31:41.3,51°.50N×16°.10E,h0km*
ISC 12 16:31:39.8±1.4**,51°.53N**±0°.06×**15°.97E**±0°.04**,h0**km**,n21,**
σ**0s.96**/41**,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.72	163	ePg	Pg	16 31 53.4	-0.1
KSP				eSg	Sg	16 32 03.8	+1.0
CHVC	Chvalec	0.94	177	ePG	Pg	16 31 58.4	+0.5
CHVC				eSG	Sg	16 32 11.3	+1.2
	comp=Z,20nm,0.5s						
OSTC	Ostas	0.99	171	ePG	Pg	16 31 58.9	+0.2
OSTC				eSG	Sg	16 32 12.4	+0.9
	comp=Z,31nm,0.3s						
UPC	Upice	1.02	178	ePG	Pg	16 31 59.3	-0.1
UPC				eSG	Sg	16 32 13.3	+0.6
	comp=Z,36nm,0.3s						
DPC	Dobruska-Polom	1.20	169	ePG	Pg	16 32 02.3	-0.5
DPC				eSG	Sg	16 32 17.9	-0.5
	comp=Z,16nm,0.5s						
PVCC	Panska Ves	1.34	222	ePG	Pb	16 32 05.9	+0.2
PVCC				eSG	Sn	16 32 25.1	+0.9
	comp=Z,48nm,0.3s						
BRG	Berggiesshubel	1.43	244	Pg	Pb	16 32 07.5	+0.1
BRG				Sg	Sn	16 32 27.7	+1.2
BRG				Amp		16 32 28.5	
	comp=Z,25nm,0.4s						
KRLC	Kraliky	1.54	160	ePG	Pn	16 32 07.8	-0.8
KRLC				eSG	Sn	16 32 28.0	-1.4
	comp=Z,18nm,0.3s						
PRU	Pruhonice	1.79	211	eSG	Sg	16 32 38.9	+1.7
	comp=Z,16nm,0.7s						
CLL	Collm	1.87	264	ePn	Pn	16 32 12.0	-1.1
CLL				ePg	Pb	16 32 15.0	+0.2
CLL				i x	x	16 32 18.7	
CLL				eSg	Sg	16 32 40.0	+0.2
	comp=Z,11nm,0.4s						
STEB	Steborice	1.97	144	ePG	Pn	16 32 15.3	+0.9
STEB				eSG	Sn	16 32 40.3	+0.6
MORC	Moravsky Berou	2.02	150	ePN	Pn	16 32 13.3	-1.9
MORC				eSG	Sb	16 32 42.6	-0.5
VRAC	Vranov	2.26	170	ePN	Pn	16 32 17.8	-0.6
VRAC				eSG	Sb	16 32 48.8	-1.2
KRUC	Moravsky	2.48	173	ePN	Pn	16 32 20.3	-1.2

KRUC				*e*SG	**Sg**	**16 32 58.5**	**-1.1**
KHC	**Kasperske Hory**	**2.85**	**213**	*e*PN	**Pn**	**16 32 25.5**	**-1.0**
KHC				*e*PG	**Pb**	**16 32 32.4**	**+0.9**
KHC				*e*SN	**Sn**	**16 33 01.3**	**-0.2**
KHC				*e*SG	**Sg**	**16 33 11.2**	**0.0**
	comp=Z,4.9nm,0.3s						
CKRC	**Cesky Krumlov**	**2.91**	**202**	*e*PG	**Pb**	**16 32 33.6**	**+1.0**
CKRC				*e*SG	**Sg**	**16 33 13.7**	**+0.3**
MODS	**Modra-Piesok**	**3.27**	**165**	*e*PN	Pn	16 32 26.6	-5.7
MODS				*e*SG	**Sg**	**16 33 24.8**	**0.0**
LANS	**Liptovska Anna**	**3.27**	**135**	*e*SG	**Sb**	**16 33 21.0**	**+1.9**
VYHS	**Vyhne**	**3.56**	**148**	*e*PN	**Pn**	**16 32 34.6**	**-1.7**
VYHS				*e*SG	**Sg**	**16 33 33.4**	**-0.6**
CONA	**Conrad Observa**	**3.60**	**181**	*e*Pn	**Pn**	**16 32 36.5**	**-0.5**
	comp=Z,0.1nm,0.2s						
CONA				*i* Sn	**Sn**	**16 33 20.2**	**-0.1**
	comp=Z,1.1nm,0.3s						
STHS	**Stebnicka Huta**	**3.98**	**120**	*e*SG	**Sg**	**16 33 49.1**	**+1.5**

*ISN **12** 16:32:52.4±0.6,34°.47N×45°.62E,h10^{km}±5^{km},ML2.7*
*TEH **12** 16:32:52.8,34°.48N×45°.65E,h10^{km}±71^{km}*
ISC 12 16:32:53.2±1.1,**34°.49N**±0°.04×**45°.66E**±0°.04,**h8**^{km}±9^{km},
n11,σ0^{s}.91/15,**Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KGS1	**Ghasr-e-Shirin**	**0.06**	**289**	Pg	**Pg**	**16 32 55.1**	**0.0**
GLG1	**Gilan-e-Gharb**	**0.43**	**151**	Pg	**Pg**	**16 33 01.5**	**0.0**
IDHR	**Dehrash**	**0.64**	**70**	Pg	**Pg**	**16 33 05.7**	**+0.2**
IGHG	**Ghaleghazi**	**0.77**	**102**	Pg	**Pb**	**16 33 08.3**	**-0.7**
ILIN	**Lien**	**1.16**	**68**	Pg	**Pn**	**16 33 15.8**	**-0.2**
IBDR	**Badra**	**1.39**	**171**	*e*Pn	**Pg**	**16 33 19.5**	**-0.4**
IBDR				*e*Sn	**Sg**	**16 33 39.0**	**+1.1**
IBDR				AML	AML	16 33 46.8	
	comp=N,156nm,0.4s						
IBDR				AML	AML	16 33 47.2	
	comp=E,143nm,0.4s						
IKRK	**Kirkuk**	**1.42**	**310**	*e*Pn	**Pg**	**16 33 20.0**	**-0.3**
IKRK				*e*Sn	**Sg**	**16 33 40.0**	**+1.3**
IKRK				AML	AML	16 33 48.3	
	comp=E,137nm,0.3s						
IKRK				AML	AML	16 33 59.1	
	comp=N,88nm,0.3s						
BHD	**Baghdad**	**1.61**	**222**	*e*Pn	**Pb**	**16 33 22.0**	**-1.2**
BHD				*e*Sn	**Sg**	**16 33 44.0**	**-1.0**
SNQR	**Sonqor, Kerman**	**1.67**	**77**	Pg	**Pg**	**16 33 24.8**	**-0.3**
IBZA	**Bozab**	**1.82**	**90**	Pn	**Pg**	**16 33 27.3**	**-0.8**
RAFI	**Al-Rafai**	**2.78**	**172**	*e*Pn	**Pn**	**16 33 39.0**	**+1.0**
RAFI				*e*Sn	**Sn**	**16 34 13.0**	**+1.2**

*DJA **12** 16:41:36.4±0.3,0°S±2°×12°0E±°,h10^{km},M4.2/14,mb4.3/5,MLv4.1/14*
*IDC **12** 16:41:44.0±4.5,0°.27S×120°.05E,h65^{km}±51^{km},mb3.3/7,mbtmp3.6/9,ML3.7/2,MS3.6/2,Error ellipse: s-maj=51.1km s-min=19.1km az=69.0*
ISC 12 16:41:37.3±0.7,**0°.24S**±0°.03×**119°.95E**±0°.08,**h10**^{km}**,n22,**
σ1^{s}.45/24,**mb3.6**/7,**Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPSI	**Mapaga**	**0.58**	**355**	P	**Pg**	**16 41 47.4**	**-1.2**
MPSI				S	**Sg**	**16 41 55.4**	**-0.8**
PCI	**Palu**	**0.67**	**190**	P	**Pg**	**16 41 48.2**	**-2.1**
PCI				S	**Sg**	**16 41 57.3**	**-1.7**
APSI	**Ampana**	**1.82**	**111**	P	**Pn**	**16 42 09.3**	**+0.5**
MRSI	**Marisa**	**2.12**	**70**	P	**Pn**	**16 42 12.6**	**-0.2**
TTSI	**Tana Toraja**	**2.79**	**183**	P	**Pn**	**16 42 22.7**	**+0.7**
LUWI	**Luwuk**	**2.93**	**106**	P	**Pn**	**16 42 24.7**	**+0.7**
SPSI	**Sidrap Palu**	**3.70**	**183**	P	**Pn**	**16 42 33.5**	**-1.1**
KMSI	**Cibinong**	**4.11**	**79**	P	**Pn**	**16 42 41.8**	**+1.5**
BNSI	**Bone**	**4.13**	**178**	P	**Pn**	**16 42 40.6**	**0.0**
KDI	**Kendari**	**4.55**	**144**	P	**Pn**	**16 42 46.3**	**0.0**
KAPI	**Kappang**	**4.74**	**182**	P	**Pn**	**16 42 52.4**	**+3.5**
	6.8nm,0.3s,baz=0.0,slow=8.1,SNR=6.6						
KAPI				S	**Sn**	**16 43 47.1**	**+3.0**
	18nm,0.4s,baz=169,slow=22,SNR=2.0						
	14nm,0.3s						
BSSI	**Bau Bau, Buton**	**5.88**	**175**	P	**Pn**	**16 43 04.7**	**0.0**
	0.2nm47nm,1.4s						
SANI	**Sanana**	**6.30**	**107**	P	**Pn**	**16 43 09.6**	**-0.7**
	0.1nm25nm,0.8s						
FITZ	**Fitzroy Crossi**	**18.61**	**163**	P	**Pn**	**16 45 57.1**	**+1.9**
	0.1nm,0.3s,baz=0.0,slow=11,SNR=2.1						
	2.2nm,0.7s						
WRA	**Warramunga Arr**	**24.12**	**145**	P	**P**	**16 46 51.6**	**-2.0**
	1.0nm,0.9s,baz=327,slow=9.3,SNR=6.5						
	1.0nm,0.9s						
ASAR	**Alice Springs**	**26.94**	**151**	P	**P**	**16 47 19.7**	**+0.6**
	0.3nm,0.6s,baz=339,slow=14,SNR=8.3						
	0.3nm,0.6s						
NWAO	**Narrogin (SRO)**	**32.61**	**184**	LR	LR	17 03 29.8	
	comp=Z,53nm,18.6s,baz=15,slow=40						
KSRS	**Korea Array**	**38.23**	**10**	P	**P**	**16 48 58.2**	**+0.7**
	0.6nm,0.5s,baz=194,slow=9.2,SNR=5.4						
	0.6nm,0.5s						
USRK	**Ussuriysk Ar.**	**45.53**	**12**	P	**P**	**16 49 57.1**	**-0.1**
	0.8nm,0.5s,baz=203,slow=5.7,SNR=5.2						
	0.8nm,0.5s						
SONM	**Songino Array**	**49.32**	**348**	P	**P**	**16 50 26.4**	**-0.4**
	0.5nm,0.3s,baz=176,slow=6.8,SNR=2.4						
SONM				LR	LR	17 13 04.7	
	comp=Z,92nm,19.3s,baz=130,slow=38						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**57.26**	**330**	P	**P**	**16 51 25.1**	**0.0**
	0.2nm,0.5s,baz=129,slow=7.3,SNR=4.1						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**61.68**	**331**	P	**P**	**16 51 55.8**	**+0.3**
	0.5nm,0.8s,baz=144,slow=7.6,SNR=3.1						
	0.5nm,0.8s						

*IDC **12** 16:44:37.8±1.1,8°.65S×124°.10E,h107^{km}±11^{km},mb4.1/16,mbtmp4.5/18,MS3.2/4,Error ellipse: s-maj=20.4km s-min=10.6km az=83.0*
*NEIC **12** 16:44:38.3±2.4,8°.77S±0°.05×124°.19E±0°.06,h114^{km}±6^{km},mb4.6/40,Error ellipse: s-maj=9.7km s-min=7.5km az=115.0*
*DJA **12** 16:44:40.9±1.3,9°S±2°×12°4E±°,h21^{km}±14^{km},M4.7/18,mB5.2/3,mb4.7/8,MLv4.7/18,Mw(mB)4.5/3*
ISC 12 16:44:36.9±0.3,**8°.74S**±0°.04×**124°.19E**±0°.04,**h100**^{km}**,n159,**
σ1^{s}.66/161,**mb4.5**/39,**1C-1D,Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**1.01**	**175**		**Pn**	**16 44 59.9**	**+2.2**
SOEI	**Soe**	**1.01**	**175**	P	**Pn**	**16 45 00.5**	**+2.9**
SOEI	**Soe**	**1.01**	**175**	P	**Pn**	**16 45 00.2**	**+2.6**
SOEI				S	**Sn**	**16 45 15.7**	**+2.5**
BATI	**Baumata**	**1.54**	**200**	P	**Pn**	**16 45 06.2**	**+2.4**
	3µm,0.4s,baz=80,slow=1.8,SNR=1736						
BATI				S	**Sn**	**16 45 27.1**	**+3.0**
	7µm,0.5s,baz=75,slow=20,SNR=15						
BATI				LR	LR	16 45 42.3	
	comp=Z,500nm,18.0s,baz=136,slow=40						
BATI	**Baumata**	**1.54**	**200**	P	**Pn**	**16 45 06.3**	**+2.4**
BATI				S	**Sn**	**16 45 26.7**	**+2.6**
MMRI	**Maumere**	**1.93**	**273**	Pn	**Pn**	**16 45 11.2**	**+2.6**
MMRI	**Maumere**	**1.93**	**273**	P	**Pn**	**16 45 11.8**	**+3.2**
MMRI	**Maumere**	**1.93**	**273**	P	**Pn**	**16 45 11.5**	**+2.9**
MMRI				S	**Sn**	**16 45 36.2**	**+3.4**
EDFI	**Ende, Flores**	**2.47**	**270**	P	**Pn**	**16 45 18.1**	**+2.4**
BBSI	**Bau Bau**	**3.61**	**334**	P	**Pn**	**16 45 34.7**	**+3.8**
BASI	**Baing, Sumba**	**3.85**	**247**	P	**Pn**	**16 45 36.0**	**+1.9**
WSI	**Waingapu**	**3.95**	**256**	P	**Pn**	**16 45 37.0**	**+1.6**
BSSI	**Bau Bau, Buton**	**4.48**	**305**	P	**Pn**	**16 45 45.4**	**+2.7**
WBSI	**Waikabubak, Su**	**4.82**	**259**	P	**Pn**	**16 45 47.7**	**+0.4**
KDI	**Kendari**	**5.00**	**342**	P	**Pn**	**16 45 52.3**	**+2.5**
KAPI	**Kappang**	**5.75**	**310**	Pn	**Pn**	**16 46 03.6**	**+3.7**
KAPI	**Kappang**	**5.75**	**310**	P	**Pn**	**16 46 03.4**	**+3.5**
	19nm,0.6s,baz=145,slow=14,SNR=3.9						
KAPI				LR	LR	16 48 31.5	
	comp=Z,111nm,21.8s,baz=144,slow=42						
BNSI	**Bone**	**5.92**	**317**	P	**Pn**	**16 46 05.6**	**+3.4**
NLAI	**Namlea**	**6.19**	**28**	P	Pn	16 46 12.5	+6.7
	0.1nm44nm,0.7s						
PLAI	**Plampang**	**6.34**	**269**	P	**Pn**	**16 46 10.1**	**+2.2**
PLAI	**Plampang**	**6.34**	**269**	S	**Sn**	**16 47 20.1**	**+1.2**
PLAI	**Plampang**	**6.34**	**269**	P	**Pn**	**16 46 09.4**	**+1.5**
	0.9nm2µm110nm,0.7s						
SPSI	**Sidrap Palu**	**6.47**	**317**	P	**Pn**	**16 46 13.5**	**+3.9**
	0.1nm31nm,0.7s						
TTSI	**Tana Toraja**	**7.13**	**322**	P	Pn	16 46 24.1	+5.4
	0.1nm45nm,0.9s						
TWSI	**Taliwang, Sumb**	**7.22**	**269**	P	**Pn**	**16 46 23.4**	**+3.5**
	2µm43nm,0.6s						
DRS	**Darwin Rock St**	**7.55**	**120**	P	**Pn**	**16 46 24.0**	**-0.3**
LUWI	**Luwuk**	**7.78**	**349**	Pn	Pn	16 46 32.9	+5.4
LUWI	**Luwuk**	**7.78**	**349**	P	Pn	16 46 32.9	+5.4
	0.2nm788nm30nm,0.5s						
MTN	**Manton Dam**	**7.95**	**121**	Pn	**Pn**	**16 46 29.3**	**-0.5**
MTN	**Manton Dam**	**7.95**	**121**	P	**Pn**	**16 46 29.3**	**-0.5**
KNRA	**Kununurra**	**8.21**	**147**	Pn	**Pn**	**16 46 32.3**	**-1.1**
KDU	**Kakadu**	**9.04**	**116**	P	**Pn**	**16 46 43.3**	**-1.3**
FITZ	**Fitzroy Crossi**	**9.41**	**172**	Pn	**Pn**	**16 46 47.3**	**-2.3**
FITZ	**Fitzroy Crossi**	**9.41**	**172**	P	**Pn**	**16 46 46.8**	**-2.8**
	29nm,0.3s,baz=6.2,slow=9.4,SNR=183						
FITZ				S	Sn	16 48 24.5	-9.1
	180nm,0.3s,baz=253,slow=19,SNR=12						
FAKI	**Fak Fak**	**9.89**	**55**	Pn	**Pn**	**16 46 57.0**	**+0.8**
JAGI	**Jajag, Banyuwa**	**9.93**	**271**	Pn	**Pn**	**16 46 56.7**	**0.0**
JAGI	**Jajag, Banyuwa**	**9.93**	**271**	P	**Pn**	**16 46 58.3**	**+1.6**
TNTI	**Ternate**	**9.97**	**19**	Pn	**Pn**	**16 46 59.5**	**+2.2**
MBWA	**Marble Bar**	**13.07**	**199**	Pn	**Pn**	**16 47 35.8**	**-3.1**
MBWA	**Marble Bar**	**13.07**	**199**	P	**Pn**	**16 47 40.3**	**+1.5**
PSA00	**Pilbara Seismi**	**13.42**	**198**	Pn	**Pn**	**16 47 41.1**	**-2.4**
PSA00	**Pilbara Seismi**	**13.42**	**198**	P	**Pn**	**16 47 45.5**	**+2.1**
UGM	**Wanagama**	**13.55**	**272**	Pn	**Pn**	**16 47 43.6**	**-1.5**
UGM	**Wanagama**	**13.55**	**272**	P	**Pn**	**16 47 47.8**	**+2.7**
WB0	**Warramunga Arr**	**14.75**	**139**	Pn	**Pn**	**16 47 57.0**	**-3.6**
WRA	**Warramunga Arr**	**14.85**	**140**	P	Pn	16 47 57.8	-4.1
	22nm,0.6s,baz=314,slow=13,SNR=108						
WRA				S	Sn	16 50 30.7	-15
	44nm,0.8s,baz=311,slow=23,SNR=22						
WRAB	**Tennant Creek**	**14.85**	**140**	Pn	**Pn**	**16 47 58.6**	**-3.3**
WR8	**Warramunga Arr**	**14.96**	**139**	Pn	**Pn**	**16 48 01.4**	**-1.9**
BBJI	**Bungbulang**	**16.42**	**273**	P	**Pn**	**16 48 22.4**	**+0.7**
LEM	**Lembang**	**16.53**	**275**	P	**Pn**	**16 48 23.8**	**+0.8**
	38nm,0.7s,baz=47,slow=13,SNR=11						
KKM	**Kota Kinabalu**	**16.70**	**331**	Pn	**P**	**16 48 27.9**	**+2.1**
KKM				IAmb	IAmb	16 48 31.0	
	comp=Z,38nm,0.9s						
KKM	**Kota Kinabalu**	**16.70**	**331**	P	**P**	**16 48 27.9**	**+2.1**
GIRL	**Giralia**	**16.80**	**214**	P	**Pn**	**16 48 27.5**	**+1.3**
KSM	**Kuching**	**17.16**	**306**	P	**P**	**16 48 32.3**	**+1.6**
KSM	**Kuching**	**17.16**	**306**	P	**P**	**16 48 33.6**	**+2.9**
AS31	**Alice Springs**	**17.51**	**149**	P	**P**	**16 48 33.9**	**-0.7**
ASAR	**Alice Springs**	**17.51**	**149**	P	**P**	**16 48 33.6**	**-1.1**
ASAR	**Alice Springs**	**17.51**	**149**	P	**P**	**16 48 33.9**	**-0.8**
	comp=Z,37nm,0.7s,baz=324,slow=11,SNR=220						
ASAR				S	Sn	16 51 35.4	-15
	comp=Z,13nm,0.7s,baz=327,slow=25,SNR=18						
ASAR				LR	LR	16 55 27.4	
	comp=Z,72nm,19.3s,baz=312,slow=37						
ASAR				ScP	**ScP**	**16 56 34.3**	**-1.8**
	comp=Z,1.3nm,0.6s,baz=313,slow=2.1,SNR=4.7						
AS01	**Alice Springs**	**17.54**	**149**	P	**P**	**16 48 34.7**	**-0.2**
JAY	**Jayapura**	**17.56**	**70**	P	**P**	**16 48 36.4**	**+1.2**
	comp=Z,6.7nm,0.7s,baz=206,slow=11,SNR=6.0						
MEEK	**Meekatharra**	**18.57**	**196**	P	**P**	**16 48 46.4**	**+0.3**
QIS	**Mount Isa**	**18.96**	**130**	P	**P**	**16 48 51.7**	**+1.2**
COEN	**Coen**	**19.32**	**107**	P	**P**	**16 48 55.3**	**+0.9**
COEN				IAmb	IAmb	16 48 56.5	
	comp=Z,26nm,1.1s						
COEN	**Coen**	**19.32**	**107**	P	**P**	**16 48 55.3**	**+0.9**
MORW	**Morawa**	**21.62**	**200**	P	**P**	**16 49 18.1**	**-0.9**
MORW				IAmb	IAmb	16 49 21.2	
	comp=Z,20nm,0.9s						
MORW	**Morawa**	**21.62**	**200**	P	**P**	**16 49 18.7**	**-0.4**
MTSU	**Mount Surprise**	**21.67**	**118**	P	**P**	**16 49 20.2**	**+0.5**
MTSU	**Mount Surprise**	**21.67**	**118**	S	**S**	**16 53 14.0**	**-0.1**
FORT	**Forrest**	**22.22**	**171**	P	**P**	**16 49 24.5**	**-0.9**
FORT				IAmb	IAmb	16 49 33.2	
	comp=Z,45nm,1.1s						
FORT	**Forrest**	**22.22**	**171**	P	**P**	**16 49 25.3**	**-0.1**
KMBL	**Kambalda**	**22.61**	**185**	P	**P**	**16 49 28.9**	**-0.6**
BLDU	**Ballidu**	**22.86**	**197**	P	**P**	**16 49 31.3**	**-0.6**
KLBR	**Kellerberrin**	**23.51**	**194**	P	**P**	**16 49 37.8**	**-0.2**
CTAO	**Charters Tower**	**24.13**	**120**	P	**P**	**16 49 45.5**	**+1.8**
CTAO				IAmb	IAmb	16 49 47.1	
	comp=Z,14nm,0.8s						
TV1H	**Townsville Har**	**24.27**	**118**	P	**P**	**16 49 46.4**	**+1.4**
MUN	**Mundaring**	**24.28**	**197**	P	**P**	**16 49 44.5**	**-0.4**
NWAO	**Narrogin (SRO)**	**24.91**	**194**	P	**P**	**16 49 49.3**	**-1.4**
NWAO	**Narrogin (SRO)**	**24.91**	**194**	P	**P**	**16 49 50.4**	**-0.2**
NWAO	**Narrogin (SRO)**	**24.91**	**194**	P	**P**	**16 49 50.5**	**-0.2**
QLP	**Quilpie**	**26.00**	**136**	P	**P**	**16 50 00.9**	**+0.3**
BBOO	**Buckleboo**	**26.35**	**157**	P	**P**	**16 50 03.8**	**+0.1**
BBOO				IAmb	IAmb	16 50 04.9	
	comp=Z,17nm,0.8s						
BBOO	**Buckleboo**	**26.35**	**157**	P	**P**	**16 50 04.0**	**+0.3**
HTT	**Hallett**	**28.08**	**153**	P	**P**	**16 50 19.7**	**+0.4**
STKA	**Stephens Creek**	**28.13**	**147**	P	**P**	**16 50 20.2**	**+0.6**
STKA	**Stephens Creek**	**28.13**	**147**	P	**P**	**16 50 20.5**	**+0.8**
	comp=Z,4.4nm,0.4s,baz=310,slow=7.1,SNR=11						
STKA				LR	LR	17 03 24.7	
	comp=Z,91nm,21.8s,baz=237,slow=40						
	comp=Z,4.4nm,0.4s						
GSI	**Gunungsitoli**	**28.34**	**289**	P	**P**	**16 50 22.3**	**+0.6**
UBPT	**Khong Chiam**	**30.23**	**322**	P	**P**	**16 50 39.4**	**+1.0**
CMSA	**Cobar Meteorol**	**30.24**	**142**	P	**P**	**16 50 39.1**	**+0.7**
ARPS	**Mount Arapiles**	**32.18**	**153**	P	**P**	**16 50 56.4**	**+1.1**
ARMA	**Armidale**	**33.50**	**134**	P	**P**	**16 51 09.2**	**+2.1**
ARMA				IAmb	IAmb	16 51 10.6	
	comp=Z,7.0nm,0.8s						
TOO	**Toolangi**	**34.57**	**149**	P	**P**	**16 51 18.1**	**+1.9**
TOO				IAmb	IAmb	16 51 50.7	
	comp=Z,13nm,1.4s						
CAN	**Canberra**	**34.85**	**143**	P	**P**	**16 51 19.1**	**+0.5**
CNB	**Canberra Magne**	**35.06**	**143**	P	**P**	**16 51 20.3**	**-0.2**
JOW	**Kunigami**	**35.59**	**6**	P	**P**	**16 51 26.5**	**+1.6**
CM31	**Chiang Mai Arr**	**36.76**	**317**	P	**P**	**16 51 36.3**	**+1.2**
CM31				IAmb	IAmb	16 51 41.1	
	comp=Z,14nm,1.4s						
CMAR	**Chiang Mai Arr**	**36.76**	**317**	P	**P**	**16 51 35.6**	**+0.6**
CMAR	**Chiang Mai Arr**	**36.76**	**317**	P	**P**	**16 51 35.2**	**+0.2**
	comp=Z,3.3nm,0.8s,baz=146,slow=7.0,SNR=21						
CMAR				PcP	**PcP**	**16 53 56.2**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=129,slow=3.1,SNR=4.3						
	comp=Z,3.3nm,0.8s						
CHTO	**Chiang Mai**	**37.01**	**318**	P	**P**	**16 51 36.9**	**-0.3**
CHTO				IAmb	IAmb	16 51 40.3	
	comp=Z,8.6nm,1.2s						
CHTO	**Chiang Mai**	**37.01**	**318**	P	**P**	**16 51 39.1**	**+1.9**
DZM	**Mont Dzumac**	**42.69**	**113**	LR	LR	17 10 08.1	
	comp=Z,49nm,18.2s,baz=236,slow=36						
XAN	**Xi'an**	**44.95**	**342**	P	**P**	**16 52 40.5**	**-1.6**
XAN				pmax	pmax		
	comp=Z,18nm,0.7s						
JGF	**Kuroka**	**45.82**	**15**	P	**P**	**16 52 49.9**	**+0.9**
KSRS	**Korea Array**	**46.09**	**4**	P	**P**	**16 52 51.0**	**0.0**
	comp=Z,1.5nm,0.8s,baz=185,slow=9.8,SNR=7.3						
KSRS				PcP	**PcP**	**16 54 25.4**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=164,slow=1.5,SNR=5.4						
	comp=Z,1.5nm,0.8s						
MJAR	**Matsushiro Arr**	**46.93**	**15**	P	**P**	**16 52 56.8**	**-0.9**
	comp=Z,7.8nm,0.7s,baz=192,slow=9.1,SNR=19						
	comp=Z,7.8nm,0.7s						
MAJO	**Matsushiro**	**46.93**	**15**	P	**P**	**16 52 56.7**	**-0.9**
MAJO				IAmb	IAmb	16 52 57.4	
	comp=Z,9.1nm,0.7s						
MJB9	**Matsu-Tunnel**	**46.94**	**15**	P	**P**	**16 52 58.1**	**+0.5**
MJB9				IAmb	IAmb	16 52 58.8	
	comp=Z,8.9nm,0.7s						
LSA	**Lhasa**	**49.72**	**322**	P	**P**	**16 53 19.8**	**+0.1**
EVN	**Everest**	**51.35**	**317**	P	**P**	**16 53 31.7**	**-0.6**
JTM	**Tenmabayashi**	**51.69**	**16**	P	**P**	**16 53 35.2**	**+1.5**
XLT	**XiLinHaoTe**	**52.91**	**353**	*e*P	**P**	**16 53 41.6**	**-1.2**
XLT				pP	pP	16 54 12.0	+5.2
XLT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,120nm,4.5s						
USA0B	**Ussuriysk Arra**	**53.17**	**7**	P	**P**	**16 53 44.0**	**-0.6**
USA0B				IAmb	IAmb	16 53 45.2	
	comp=Z,10nm,0.9s						
USRK	**Ussuriysk Ar.**	**53.17**	**7**	P	**P**	**16 53 44.1**	**-0.5**
USRK	**Ussuriysk Ar.**	**53.17**	**7**	P	**P**	**16 53 44.4**	**-0.2**
	comp=Z,7.3nm,0.7s,baz=191,slow=7.3,SNR=32						
	comp=Z,7.3nm,0.7s						
MDJ	**Mudanjiang**	**53.33**	**5**	P	**P**	**16 53 44.8**	**-1.0**
MDJ				pmax	pmax		
	comp=Z,37nm,1.0s						
RPZ	**Rata Peaks**	**53.55**	**139**	P	**P**	**16 53 48.8**	**+1.2**
BNX	**BinXian**	**54.31**	**3**	⇓P	**P**	**16 53 52.6**	**-0.3**
BNX				pmax	pmax		
	comp=Z,5.0nm,1.6s						
SONM	**Songino Array**	**58.49**	**346**	P	**P**	**16 54 22.0**	**-0.7**
SONM	**Songino Array**	**58.49**	**346**	P	**P**	**16 54 21.8**	**-0.9**
	comp=Z,2.1nm,0.7s,baz=163,slow=9.0,SNR=6.8						
	comp=Z,2.1nm,0.7s						
HEH	**HeiHe**	**58.82**	**2**	⇑P	**P**	**16 54 24.3**	**-0.4**
HEH				pmax	pmax		
	comp=Z,25nm,0.9s						
NIL	**Nilore**	**64.13**	**314**	P	**P**	**16 54 58.9**	**-2.0**
WUS	**Wushi**	**64.62**	**324**	P	**P**	**16 55 03.5**	**-0.6**
WUS				IAmb	IAmb	16 55 04.7	
	comp=Z,5.1nm,0.8s						
KSH	**Kashi**	**65.55**	**321**	P	**P**	**16 55 09.6**	**-0.6**
KSH				PcP	**pP**	**16 55 37.6**	**+2.4**
KSH				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MKAR	**Makanchi Array**	**66.68**	**330**	P	**P**	**16 55 15.8**	**-1.3**
MKAR	**Makanchi Array**	**66.68**	**330**	P	**P**	**16 55 16.4**	**-0.7**
	comp=Z,5.1nm,0.6s,baz=130,slow=7.9,SNR=59						
	comp=Z,5.1nm,0.6s						
MAKZ	**Makanchi**	**66.85**	**330**	P	**P**	**16 55 17.2**	**-0.9**
KBL	**Kabul**	**67.59**	**313**	P	**P**	**16 55 22.2**	**-1.2**
PETK	**Petropavlovsk-**	**67.89**	**21**	P	**P**	**16 55 24.6**	**0.0**
PETK	**Petropavlovsk-**	**67.89**	**21**	P	**P**	**16 55 24.7**	**+0.1**
	comp=Z,7.7nm,0.8s,baz=208,slow=3.3,SNR=25						
	comp=Z,7.7nm,0.8s						
DRK	**Karamyk**	**68.20**	**319**	P	**P**	**16 55 26.6**	**-0.6**
AAK	**Ala-Archa**	**68.29**	**323**	P	**P**	**16 55 26.6**	**-0.9**
AAK				IAmb	IAmb	16 55 27.8	
	comp=Z,7.1nm,0.6s						
ARSB	**Arslanbob**	**68.46**	**321**	P	**P**	**16 55 27.7**	**-0.9**
SIMJ	**Simiganj**	**69.64**	**317**	P	**P**	**16 55 34.7**	**-1.2**
YAK	**Yakutsk**	**70.69**	**3**	P	**P**	**16 55 40.6**	**-0.9**
ZAA0	**Zalesovo Array**	**70.74**	**337**	P	**P**	**16 55 40.0**	**-2.1**
ZAA0				IAmb	IAmb	16 55 41.0	
	comp=Z,4.7nm,0.7s						
ZALV	**Zalesovo Beam**	**70.74**	**337**	P	**P**	**16 55 39.6**	**-2.4**
ZALV	**Zalesovo Beam**	**70.74**	**337**	P	**P**	**16 55 40.3**	**-1.8**
	comp=Z,3.3nm,0.4s,baz=132,slow=6.2,SNR=17						
	comp=Z,3.3nm,0.4s						
KK31	**Karatay Array**	**70.97**	**321**	P	**P**	**16 55 42.1**	**-1.7**
KKAR	**Karatay Array**	**70.97**	**321**	P	**P**	**16 55 42.4**	**-1.4**
KURBB	**Kurchatov Arra**	**71.11**	**331**	P	**P**	**16 55 43.3**	**-1.1**
	comp=Z,4.4nm,0.8s,baz=142,slow=5.2,SNR=41						
	comp=Z,4.4nm,0.8s						
KURK	**Kurchatov**	**71.13**	**331**	P	**P**	**16 55 43.1**	**-1.4**
KURK				IAmb	IAmb	16 55 44.7	
	comp=Z,9.5nm,0.8s						
MAW	**Mawson**	**71.26**	**201**	P	**P**	**16 55 45.9**	**+0.8**
	comp=Z,1.3nm,0.6s,baz=76,slow=6.5,SNR=6.5						
	comp=Z,1.3nm,0.6s						
MA2	**Magadan**	**71.34**	**14**	P	**P**	**16 55 45.4**	**-0.2**
VNDA	**Vanda**	**71.48**	**172**	P	**P**	**16 55 46.7**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=320,slow=7.8,SNR=11						
	comp=Z,0.9nm,0.6s						
BVAR	**Borovoye Array**	**76.57**	**330**	P	**P**	**16 56 15.2**	**-1.1**
	comp=Z,1.1nm,0.6s,baz=103,slow=6.7,SNR=6.4						
	comp=Z,1.1nm,0.6s						
BRVK	**Borovoye**	**76.64**	**330**	P	**P**	**16 56 15.3**	**-1.3**
AB31	**Akbulak array**	**80.36**	**323**	P	**P**	**16 56 35.2**	**-2.0**
ABKAR	**Akbulak array**	**80.36**	**323**	P	**P**	**16 56 35.0**	**-2.2**
QSPA	**South Pole Qui**	**81.25**	**180**	P	**P**	**16 56 42.8**	**+1.0**
QSPA	**South Pole Qui**	**81.25**	**180**	P	**P**	**16 56 42.5**	**+0.7**
	comp=Z,4.4nm,1.0s,baz=188,slow=0.3,SNR=25						
	comp=Z,4.4nm,1.0s						
RAYN	**Ar Rayn**	**83.22**	**295**	P	**P**	**16 56 52.9**	**+0.1**
RAYN				IAmb	IAmb	16 56 58.2	
	comp=Z,8.6nm,1.2s						
ARTI	**Arti**	**84.27**	**329**	P	**P**	**16 56 56.5**	**-0.9**
ARTI				IAmb	IAmb	16 56 56.9	
	comp=Z,6.1nm,0.6s						
KBZ	**Khabaz**	**89.74**	**314**	P	**P**	**16 57 23.4**	**-0.7**
	comp=Z,1.7nm,0.8s,baz=120,slow=4.7,SNR=4.9						
	comp=Z,1.7nm,0.8s						
SNAA	**Sanae**	**92.58**	**195**	P	**P**	**16 57 37.9**	**+0.9**
	comp=Z,0.9nm,0.4s,baz=208,slow=5.7,SNR=22						
	comp=Z,0.9nm,0.4s						
TORD	**Torodi Ar. Bea**	**123.46**	**280**	PKPdf	**PKPdf**	**17 03 22.8**	**-0.8**
TORD	**Torodi Ar. Bea**	**123.46**	**280**	PKP	**PKPdf**	**17 03 22.6**	**-0.9**
	comp=Z,2.6nm,0.5s,baz=72,slow=2.9,SNR=2.0						
TXAR	**Lajitas Array**	**130.75**	**59**	SKPbc	**SKPbc**	**17 06 50.1**	**-2.3**
	comp=Z,1.3nm,0.9s,baz=274,slow=3.9,SNR=9.6						
T59A	**Double "B" Far**	**145.67**	**32**	PKPdf	**PKPdf**	**17 04 03.0**	**-1.1**
V58A	**Windy Hill, Pi**	**145.69**	**35**	PKPdf	**PKPdf**	**17 04 03.7**	**-0.5**
LPAZ	**La Paz**	**152.30**	**154**	PKPab	**PKPab**	**17 04 34.8**	**+1.8**
	comp=Z,1.0nm,0.5s,baz=243,slow=4.5,SNR=4.7						

*NOU **12** 16:48:03.0,31°.23S×177°.93W,h277^{km},mb4.2/18,Kermadec Islands Region*
*NEIC **12** 16:48:07.9±1.6,30°.8S±0°.1×179°.0W±0°.2,h234^{km}±9^{km},mb4.3/18,Error ellipse: s-maj=23.9km s-min=12.3km az=114.0*
*IDC **12** 16:48:08.5±0.8,30°.66S×179°.06W,h239^{km}±12^{km},mb3.8/8,mbtmp4.4/9,Error ellipse: s-maj=22.4km s-min=16.0km az=50.0*
ISC 12 16:48:09.4±0.7,**31°.12S**±0°.06×**179°.00W**±0°.10,**h250**^{km},
n92,σ2^{s}.58/103,**mb4.1**/19,**5C,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**2.07**	**27**	P	Pn	16 48 47.0	-5.6
GLKZ				S	S	16 49 18.2	-8.5
RAO	**Raoul Island**	**2.08**	**27**		Pn	16 48 47.3	-5.4
RAO	**Raoul Island**	**2.08**	**27**	P	Pn	16 48 47.5	-5.2
	1µm,0.3s,baz=270,slow=20,SNR=16						
RAO				S	S	16 49 18.3	-8.5
	814nm,0.3s,baz=63,slow=22,SNR=5.5						
RAO	**Raoul Island**	**2.08**	**27**	P	Pn	16 48 47.6	-5.1
RIZ	**Raoul Island**	**2.09**	**27**	P	Pn	16 48 47.6	-5.1
MXZ	**Matakaoa Point**	**6.80**	**198**	P	**Pn**	**16 49 44.6**	**-2.9**
MXZ	**Matakaoa Point**	**6.80**	**198**	P	**Pn**	**16 49 44.4**	**-3.0**
MXZ				S	**S**	**16 51 04.1**	**-2.0**
WMGZ	**Waiomatatini S**	**7.01**	**197**	P	**Pn**	**16 49 48.0**	**-2.1**
KUZ	**Kuaotunu**	**7.12**	**217**	P	**Pn**	**16 49 53.4**	**+1.9**
KUZ	**Kuaotunu**	**7.12**	**217**	P	**Pn**	**16 49 53.6**	**+2.1**
HAZ	**Te Kaha**	**7.13**	**201**	P	**Pn**	**16 49 49.6**	**-2.0**
HAZ				S	**S**	**16 51 13.1**	**-0.6**
PKGZ	**Pakihiroa**	**7.15**	**199**	P	**Pn**	**16 49 49.5**	**-2.4**
PKGZ				S	**S**	**16 51 12.8**	**-1.4**
PUZ	**Puketiti**	**7.29**	**197**	P	**Pn**	**16 49 50.7**	**-3.0**
PUZ				S	**S**	**16 51 15.0**	**-2.6**
WCZ	**Waipu Caves**	**7.35**	**227**	P	**Pn**	**16 49 57.1**	**+2.8**
RUGZ	**Raukumara Rang**	**7.36**	**201**	P	**Pn**	**16 49 51.9**	**-2.7**
OUZ	**Omahuta**	**7.43**	**235**	P	**Pn**	**16 49 57.5**	**+2.0**
OUZ	**Omahuta**	**7.43**	**235**	P	**Pn**	**16 49 57.5**	**+2.0**
TWGZ	**Tauwhareparae**	**7.47**	**199**	P	**Pn**	**16 49 53.5**	**-2.4**
TWGZ				S	**S**	**16 51 19.5**	**-2.0**
OPRZ	**Ohinepanea**	**7.64**	**207**	P	**Pn**	**16 49 56.1**	**-2.0**
OPRZ				S	**S**	**16 51 24.3**	**-1.3**
CNGZ	**Carnagh Statio**	**7.70**	**197**	P	**Pn**	**16 49 55.8**	**-2.9**
MWZ	**Matawai**	**7.74**	**201**	P	**Pn**	**16 49 56.1**	**-3.3**
MWZ				S	**S**	**16 51 24.7**	**-3.2**
TKGZ	**Te Karaka**	**7.75**	**199**	P	**Pn**	**16 49 55.8**	**-3.6**
TKGZ				S	**S**	**16 51 26.7**	**-1.2**
URZ	**Urewera**	**7.81**	**203**	P	**Pn**	**16 49 56.7**	**-3.4**
	4.3nm,0.3s,baz=348,slow=4.6,SNR=35						
URZ				S	**S**	**16 51 24.5**	**-4.8**
	72nm,0.3s,baz=12,slow=23,SNR=19						
URZ	**Urewera**	**7.81**	**203**	P	**Pn**	**16 49 57.9**	**-2.3**
URZ	**Urewera**	**7.81**	**203**	P	**Pn**	**16 49 56.9**	**-3.3**
URZ				S	**S**	**16 51 28.2**	**-1.1**
TOZ	**Tahuroa Road**	**8.01**	**213**	Pn	**Pn**	**16 50 03.0**	**+0.3**
RIGZ	**Rimuhau**	**8.02**	**198**	P	**Pn**	**16 49 59.4**	**-3.5**
RIGZ				S	**S**	**16 51 32.0**	**-2.3**
SNGZ	**Shannon Statio**	**8.21**	**200**	P	**Pn**	**16 50 01.8**	**-3.5**
SNGZ				S	**S**	**16 51 37.1**	**-1.6**
KNZ	**Kokohu**	**8.34**	**198**	P	**Pn**	**16 50 03.0**	**-3.8**
RAHZ	**Arahi**	**8.41**	**201**	P	**Pn**	**16 50 04.2**	**-3.6**
RAHZ				S	**S**	**16 51 40.0**	**-3.4**
MTHZ	**Maungataniwha**	**8.43**	**203**	P	**Pn**	**16 50 05.0**	**-3.1**
MTHZ				S	**S**	**16 51 43.4**	**-0.5**
WHHZ	**Waihua**	**8.52**	**200**	P	**Pn**	**16 50 06.5**	**-2.6**
WHHZ				S	**S**	**16 51 44.0**	**-1.7**
NMHZ	**Naumai**	**8.67**	**202**	P	**Pn**	**16 50 07.3**	**-3.8**
NMHZ				S	**S**	**16 51 48.9**	**-0.5**
ARHZ	**Aropaoanui**	**8.76**	**201**	P	**Pn**	**16 50 07.9**	**-4.3**
ARHZ				S	**S**	**16 51 49.5**	**-1.9**
BKZ	**Black Stump Fm**	**8.83**	**203**	P	**Pn**	**16 50 08.9**	**-4.3**
HIZ	**Hauiti**	**8.94**	**213**	P	**Pn**	**16 50 14.2**	**-0.3**
MCHZ	**McNeill Hill**	**9.02**	**202**	P	**Pn**	**16 50 12.4**	**-3.1**
MCHZ				S	**S**	**16 51 55.2**	**-2.2**
KHEZ	**Kahui Hut**	**9.96**	**213**	P	**Pn**	**16 50 26.6**	**-0.8**

BFZ	Birch Farm	10.29	201	P	Pn	16 50 27.5	-4.0
SNZO	South Karori	11.36	205	P	Pn	16 50 41.8	-3.1
QRZ	Quartz Range	11.86	213	Pn	Pn	16 50 46.9	-4.3
QRZ	Quartz Range	11.86	213	P	Pn	16 50 48.5	-2.7
CTZ	Chatham Island	12.73	172	P	Pn	16 50 52.3	-10
CTZ	Chatham Island	12.73	172	P	P	16 51 09.7	+5.7
CTZ				S	S	16 53 24.9	+1.5
KHZ	Kahutara	12.76	206	P	Pn	16 50 58.4	-3.7
MSVF	Nonsavu	13.60	348		Pn	16 51 08.1	-4.7
MSVF	Nonsavu	13.60	348	P	Pn	16 51 08.4	-4.4
	14nm,0.6s,baz=197,slow=7.5,SNR=17						
MSVF	Nonsavu	13.60	348	P	Pn	16 51 09.5	-3.3
RPZ	Rata Peaks	14.83	209	P	P	16 51 21.9	-5.4
	4.9nm,0.3s,baz=38,slow=4.4,SNR=16						
RPZ				S	S	16 53 59.3	-12
	10nm,0.5s,baz=115,slow=20,SNR=9.8						
RPZ	Rata Peaks	14.83	209	P	P	16 51 24.2	-3.1
DZM	Mont Dzumac	15.82	301	P	Pn	16 51 38.2	-1.4
	9.8nm,0.7s,baz=151,slow=16,SNR=8.5						
DZM	Mont Dzumac	15.82	301	P	Pn	16 51 39.0	-0.6
ODZ	Otahua Downs	16.09	207	P	P	16 51 37.7	-3.4
JCZ	Jackson Bay	16.13	213	P	P	16 51 38.0	-3.6
ARMA	Armidale	25.22	264	P	P	16 53 13.4	+0.7
ARMA				IAmb	IAmb	16 53 30.9	
	comp=Z,7.7nm,1.2s						
CAN	Canberra	27.03	252	P	P	16 53 30.9	+2.0
CTAO	Charters Tower	33.08	281	P	P	16 54 21.5	-0.5
CTAO				IAmb	IAmb	16 54 30.0	
	comp=Z,24nm,1.4s						
STKA	Stephens Creek	33.48	258	P	P	16 54 25.9	+0.5
STKA	Stephens Creek	33.48	258	P	P	16 54 26.8	+1.4
	comp=Z,7.6nm,0.5s,baz=93,slow=8.4,SNR=11						
	comp=Z,7.6nm,0.5s						
BBOO	Buckleboo	37.95	255	P	P	16 55 03.5	+0.2
AS31	Alice Springs	42.22	268	P	P	16 55 37.3	-1.1
ASAR	Alice Springs	42.22	268	P	P	16 55 36.7	-1.6
ASAR	Alice Springs	42.22	268	P	P	16 55 37.5	-0.9
	comp=Z,2.4nm,0.9s,baz=105,slow=7.7,SNR=5.0						
ASAR				ScP	ScP	17 00 53.6	-0.4
	comp=Z,0.6nm,0.8s,baz=105,slow=3.7,SNR=3.9						
	comp=Z,2.4nm,0.9s						
WR8	Warramunga Arr	43.13	274	P	P	16 55 42.9	-2.7
WR8				IAmb	IAmb	16 56 10.7	
	comp=Z,11nm,1.2s						
WRAB	Tennant Creek	43.27	273	P	P	16 55 45.0	-1.8
WRAB				IAmb	IAmb	16 55 46.6	
	comp=Z,16nm,1.3s						
WRA	Warramunga Arr	43.27	273	P	P	16 55 45.1	-1.7
WRA	Warramunga Arr	43.27	273	P	P	16 55 45.5	-1.3
	comp=Z,1.8nm,0.3s,baz=111,slow=8.1,SNR=8.2						
	comp=Z,1.8nm,0.3s						
WB0	Warramunga Arr	43.30	274	P	P	16 55 45.7	-1.3
WB0				IAmb	IAmb	16 55 55.8	
	comp=Z,15nm,1.4s						
FORT	Forrest	45.04	256	P	P	16 56 01.2	+0.6
SBA	Scott Base	47.26	184	P	P	16 56 22.8	+5.7
SBA				IAmb	IAmb	16 56 23.9	
	comp=Z,13nm,1.0s						
VNDA	Vanda	47.30	186	P	P	16 56 21.2	+3.7
VNDA	Vanda	47.30	186	P	P	16 56 21.4	+4.0
	comp=Z,0.9nm,0.6s,baz=356,slow=7.3,SNR=7.3						
	comp=Z,0.9nm,0.6s						
FITZ	Fitzroy Crossi	51.51	271	P	P	16 56 48.5	-1.5
FITZ	Fitzroy Crossi	51.51	271	P	P	16 56 48.9	-1.1
	comp=Z,1.3nm,0.5s,baz=140,slow=7.9,SNR=1.3						
	comp=Z,1.3nm,0.5s						
CASY	Casey	54.10	208	P	P	16 57 08.9	+0.7
CASY				IAmb	IAmb	16 57 11.0	
	comp=Z,3.4nm,0.6s						
QSPA	South Pole Qui	58.99	180	P	P	16 57 46.8	+4.1
QSPA				IAmb	IAmb	16 57 48.3	
	comp=Z,15nm,1.1s						
QSPA	South Pole Qui	58.99	180	P	P	16 57 46.8	+4.1
	comp=Z,9.5nm,0.6s,baz=25,slow=1.5,SNR=100						
	comp=Z,9.5nm,0.6s						
BELA	Belgrano 2	69.19	172	P	P	16 58 50.9	+2.4
BELA				IAmb	IAmb	16 58 55.9	
	comp=Z,8.5nm,1.4s						
MAW	Mawson	71.33	201	P	P	16 59 02.9	+1.4
	comp=Z,2.3nm,0.7s,baz=126,slow=8.3,SNR=2.4						
	comp=Z,2.3nm,0.7s						
TROLL	Troll, Antarti	77.15	180	⇑P	P	16 59 37.8	+2.6
	comp=Z,52nm,0.3s						
SNAA	Sanae	77.46	179	⇑P	P	16 59 39.2	+2.4
	comp=Z,16nm,0.3s						
SNAA	Sanae	77.46	179	P	P	16 59 38.9	+2.1
SNAA				IAmb	IAmb	16 59 41.7	
	comp=Z,3.0nm,0.8s						
SNAA	Sanae	77.46	179	P	P	16 59 39.0	+2.2
	comp=Z,1.1nm,0.3s,baz=212,slow=4.9,SNR=18						
	comp=Z,1.1nm,0.3s						
VNA3	Neumayer Olymp	77.64	176	⇑P	P	16 59 40.0	+2.2
	comp=Z,1.2nm,0.3s						
VNA2	Neumayer--Watz	78.07	177	⇑P	P	16 59 42.7	+2.6
	comp=Z,1.0nm,0.3s,baz=198,slow=5.3						
VNA1	Neumayer--Stat	78.30	177	⇑P	P	16 59 44.0	+2.7
	comp=Z,0.6nm,0.4s						
MKAR	Makanchi Array	117.58	310	PKPdf	PKPdf	17 06 24.5	-0.8
FINES	FINESS Array B	145.52	339	PKPdf	PKPdf	17 07 15.8	-1.1
FINES	FINESS Array B	145.52	339	PKPbc	PKPdf	17 07 15.9	-1.0
	comp=Z,2.2nm,0.8s,baz=30,slow=3.9,SNR=7.0						
MMAI	Mount Meron Ar	150.86	283	PKPbc	PKiKP	17 07 33.5	+0.4
	comp=Z,0.5nm,0.4s,baz=91,slow=6.2,SNR=1.9						
BRTR	Keskin Array B	152.17	297	PKPbc	PKiKP	17 07 35.4	-0.3
	comp=Z,0.5nm,0.6s,baz=94,slow=2.9,SNR=2.2						
TORD	Torodi Ar. Bea	162.10	182	PKPab	PKPab	17 08 30.8	+1.6
	comp=Z,2.3nm,0.5s,baz=175,slow=3.9,SNR=1.5						

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*SNET **12** 16:59:53.9±1.1, 12°.75N×90°.22W, h22^{km}±4^{km}, ML3.5*

*CATAC **12** 16:59:54.1±0.7, 13°N±2°×9°0W±°, h11^{km}±5^{km}, M3.8/24, MLv3.8/24, Error ellipse: s-maj=10.2km s-min=4.1km az=80.4, confirmed*

*GCG **12** 16:59:55.2±0.9, 12°.88N×90°.29W, h22^{km}±12^{km}, MD3.9*

ISC 12 16:59:55.8±1.8**, 12°.78N**±0°.07×**90°.08W**±0°.06**, h22**^{km}±7^{km}**, n62, σ0^{s}84**/69**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAME	Alcaldia de Sa	1.06	4	P	Pn	17 00 14.2	-1.3
JAYA	Jayaque - finc	1.07	35	*e*P	Pn	17 00 14.8	-0.8
JAYA				*e*S	Sn	17 00 30.9	+1.0
JAYA				*e*S	Sn	17 00 31.0	+1.0
JAYA				IAML		17 00 31.6	
	comp=Z,836nm,0.2s						
JAYA	Jayaque - finc	1.07	35	*i* P	Pn	17 00 14.9	-0.8
JAYA				*i* S	Sn	17 00 30.5	+0.6
JAYA	Jayaque - finc	1.07	35	P	Pn	17 00 14.9	-0.8
CEVE	Cerro Verde	1.14	23	*e*P	Pb	17 00 16.1	-0.8
CEVE				*e*S	Sn	17 00 33.6	+1.9
CEVE				IAML		17 00 33.9	
	comp=Z,855nm,0.3s						
CEVE	Cerro Verde	1.14	23	P	Pb	17 00 16.3	-0.7
CEVE	Cerro Verde	1.14	23	S	Sb	17 00 31.6	+0.2
SBLS	San Blas	1.15	23	*e*P	Pn	17 00 15.9	-0.9
NUBE	Las Nubes	1.16	15	*e*P	Pn	17 00 15.9	-1.0
NUBE				*e*S	Sb	17 00 32.5	+0.6
NUBE	Las Nubes	1.16	15	*i* P	Pn	17 00 15.9	-1.0
NUBE	Las Nubes	1.16	15	P	Pn	17 00 16.0	-1.0
SNJE	San Jose	1.18	23	*e*P	Pn	17 00 16.8	-0.5
PMON	Piamonte	1.19	39	*e*P	Pn	17 00 16.9	-0.5
PMON	Piamonte	1.19	39	P	Pn	17 00 16.8	-0.6
PMON	Piamonte	1.19	39	S	Sn	17 00 33.3	+0.3
BOQS	Boqueron	1.23	39	*e*P	Pn	17 00 17.6	-0.4
LOMA	Loma Larga	1.24	46	P	Pn	17 00 17.5	-0.5
LOMA	Loma Larga	1.24	46	S	Sn	17 00 34.6	+0.5
LOAL	Lomas de Alarc	1.25	14	*e*S	Sb	17 00 35.1	+0.7
LOAL	Lomas de Alarc	1.25	14	P	Pb	17 00 17.7	-1.1
LOAL	Lomas de Alarc	1.25	14	S	Sb	17 00 35.0	+0.5
SLOZ	Alcaldia de Sa	1.27	13	*e*S	Sb	17 00 35.1	-0.1
LFRS	El Faro	1.30	50	*e*P	Pn	17 00 18.5	-0.4
LFU	La Fuente	1.35	44	*e*P	Pn	17 00 19.4	-0.1
PAVA	Las Pavas	1.45	50	*e*P	Pn	17 00 21.2	+0.2
PAVA				*e*S	Sb	17 00 41.7	+1.3
PAVA	Las Pavas	1.45	50	P	Pn	17 00 21.0	0.0
TECO	Alcaldia de Te	1.48	59	P	Pn	17 00 20.4	-0.7
TECO	Alcaldia de Te	1.48	59	S	Sn	17 00 39.6	-0.2
SCLA	Alcaldia de Sa	1.61	55	*e*P	Pn	17 00 23.1	+0.1
SCLA	Alcaldia de Sa	1.61	55	P	Pn	17 00 23.1	+0.1
TECA	Tecapa	1.70	65	*e*P	Pn	17 00 23.8	-0.6
MTO3	Montecristo	1.76	23	*e*P	Pn	17 00 25.0	-0.2
MTO3				*e*S	Sb	17 00 49.5	+0.2
MTO3	Montecristo	1.76	23	*i* P	Pn	17 00 25.0	-0.2
MTO3	Montecristo	1.76	23	P	Pn	17 00 25.0	-0.2
MTO3	Montecristo	1.76	23	S	Sb	17 00 48.6	-0.7
PACA	Pacayal	1.85	68	*e*P	Pn	17 00 27.2	+0.9
PACA				*e*S	Sn	17 00 51.9	+2.7
PACA	Pacayal	1.85	68	P	Pn	17 00 26.1	-0.2
RANC	El Ranchito	1.87	69	P	Pn	17 00 21.4	-5.2
ESQI	Esquipulas	1.91	22	S	Sb	17 00 52.4	-1.2
ESQI	Esquipulas	1.91	22	P	Pn	17 00 27.3	0.0
BLLM	Bellamira	1.92	70	*e*P	Pn	17 00 27.8	+0.5
STG0	El Palmar, Qui	2.05	323	*i* S	Sb	17 00 59.5	+2.0
STG8	El Palmar, Qui	2.07	324	*e*S	Sb	17 00 59.5	+1.2
LCND	La Caada	2.20	76	P	Pn	17 00 31.0	-0.1
CNCH	Conchagua	2.25	77	*e*P	Pn	17 00 31.4	-0.5
CNCH	Conchagua	2.25	77	P	Pn	17 00 31.4	-0.5
CSGN	Cosiguina Volc	2.47	85	P	Pn	17 00 34.3	-0.6
POTN	Potosi Cosigui	2.52	85	P	Pn	17 00 35.7	+0.1
CRIN	San Cristobal	2.96	91	P	Pn	17 00 41.5	-0.2
PKGN	Cerro Pekin	3.03	92	P	Pn	17 00 41.9	-0.7
QUEN	Al S del Volca	3.16	93	P	Pn	17 00 44.0	-0.3
HERN	Volcan Telica	3.18	93	P	Pn	17 00 43.7	-1.0
HOYN	Al Sur del Vol	3.18	93	P	Pn	17 00 44.0	-0.7
POLN	Al Sur del Vol	3.19	92	P	Pn	17 00 43.8	-1.0
PACN	Al O del Volca	3.22	95	P	Pn	17 00 44.7	-0.5
CNGA	Al SSO del Vol	3.31	94	P	Pn	17 00 45.8	-0.7
CNGN	Cerro Negro	3.31	94	P	Pn	17 00 45.5	-1.0
COPN	Copaltepe	3.46	99	P	Pn	17 00 47.6	-0.9
MOMN	Momotombo	3.48	96	P	Pn	17 00 47.7	-1.1
LIMN	Finca el Limon	3.63	85	P	Pn	17 00 50.3	-0.7
RCVN	Varillal2	3.87	78	P	Pn	17 00 53.7	-0.6
RCPN	Sur Rio San Ju	3.96	79	P	Pn	17 00 55.5	+0.1

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*CRAAG **12** 17:07:52.1, 36°.92N×3°.64E, Ml3.2, Algerie 15km NE Zemmouri-El-Bahri*

*MDD **12** 17:07:56.0±0.7, 36°.86N×3°.61E, h21^{km}±9^{km}, Mb4.1/20, M_mb3.5/20, Error ellipse: s-maj=8.9km s-min=3.3km az=146.0*

ISC 12 17:07:52.2±0.9**, 36°.89N**±0°.04×**3°.65E**±0°.04**, h12**^{km}**, n27, σ2^{s}06**/45**, 9C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATKB	Taksebt	0.44	120	P	Pb	17 08 02.6	+0.7
ABA	Alger-Bouzarea	0.50	260	P	Pb	17 08 03.2	+0.2
ATKJ	Tikjda	0.59	140	P	Pg	17 08 04.4	+0.7
ADOR	Douera	0.63	249	P	Pb	17 08 06.3	+0.9
ADJB	Djebel Djouab	0.75	193	P	Pn	17 08 08.6	-0.2
CTCHA	Tamokra	0.93	120	P	Pn	17 08 11.5	+0.4
ABRIN	Birine	1.33	199	P	Pb	17 08 18.1	+0.9
EIBI	Ibiza	2.80	320	Pn	Pn	17 08 38.3	+1.4
EIBI				Sn	Sn	17 09 08.6	-2.1
EIBI	Ibiza	2.80	320	Pn	Pn	17 08 38.3	+1.4
EIBI				⇑*i*IVmb_VC		17 08 41.3	
	424nm,SNR=1.9						
EIBI				Sn	Sn	17 09 08.9	-1.7
ETOS	Mallorca	2.94	347	Pn	Pn	17 08 40.2	+1.4
ETOS				Sn	Sn	17 09 11.4	-2.8
ETOS	Mallorca	2.94	347	Pn	Pn	17 08 40.2	+1.4
ETOS				⇑*i*IVmb_VC		17 08 43.3	
	588nm,SNR=2.9						
ETOS				Sn	Sn	17 09 12.3	-1.9
MAHO	Mahon	3.04	9	Pn	Pn	17 08 40.9	+0.8
MAHO				Sn	Sn	17 09 13.2	-3.1
EBEN2	Beniarda presa	3.52	301	Pn	Pn	17 08 48.3	+1.5
EBEN2				⇑*i*IVmb_VC		17 08 53.6	
	488nm,SNR=2.2						
EBEN2				Sn	Sn	17 09 26.9	-1.6
AFON	Font Roja	3.76	299	Pn	Pn	17 08 51.3	+1.1
AFON				⇑*i*IVmb_VC		17 08 59.6	
	157nm,SNR=1.2						
AFON				Sn	Sn	17 09 32.8	-1.7
CART	Cartagena	3.78	282	Pn	Pn	17 08 50.5	+0.3
CART				Sn	Sn	17 09 31.2	-3.4
ECOL	Islas Columbre	3.80	323	Pn	Pn	17 08 52.2	+1.7
ECOL				Sn	Sn	17 09 32.8	-2.4
ECHE	Chera	4.52	308	Pn	Pn	17 09 02.6	+2.1
ECHE				Sn	Sn	17 09 51.8	-1.3
ECHE	Chera	4.52	308	Pn	Pn	17 09 01.8	+1.3
ECHE				⇑*i*IVmb_VC		17 09 05.3	
	185nm,SNR=1.5						
ECHE				Sn	Sn	17 09 51.9	-1.3
EMOS	Mosqueruela	4.74	318	Pn	Pn	17 09 05.2	+1.6
EMOS				⇑*i*IVmb_VC		17 09 14.5	
	117nm,SNR=1.3						
EMOS				Sn	Sn	17 09 55.6	-3.0
ERTA	Horta de San J	4.81	328	Pn	Pn	17 09 06.4	+1.9
ERTA				⇑*i*IVmb_VC		17 09 09.6	
	111nm,SNR=1.4						
ERTA				Sn	Sn	17 09 57.7	-2.4
EPOB	Poblet	4.88	337	Pn	Pn	17 09 07.8	+2.3
EPOB				⇑*i*IVmb_VC		17 09 12.9	
	122nm,SNR=1.9						
EPOB				Sn	Sn	17 09 58.7	-3.3
EQES	Quesada	5.43	282	Pn	Pn	17 09 14.8	+1.6
EQES				⇑*i*IVmb_VC		17 09 18.8	
	154nm,SNR=2.1						
EQES				Sn	Sn	17 10 14.0	-1.6
EJON	La Jonquera	5.58	354	Sn	Sn	17 10 14.7	-4.4
EJON	La Jonquera	5.58	354	Pn	Pn	17 09 17.2	+2.2
EJON				Sn	Sn	17 10 16.3	-2.8
EJON	La Jonquera	5.58	354	Pn	Pn	17 09 17.2	+2.2
DGI	Dorgali Grotta	5.78	52	Pn	Pn	17 09 20.1	+2.3
DGI				Sn	Sn	17 10 22.0	-2.0
PSIM	Granatula de C	6.17	290	Pn	Pn	17 09 25.1	+1.9
PSIM				Sn	Sn	17 10 30.8	-2.9

STR 12 17:09:14.6±0.6**, 43°N**±4°×°±°**, h0**^{km}**, MLv1.0**/6**, Error ellipse: s-maj=0.0km s-min=0.0km az=33.9, preliminary, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FILF	Fillols	0.12	259	Pg	Pg	17 09 19.6	+2.6
FILF				Sg	Sg	17 09 22.6	+4.0
SJAF	Saint Jean de	0.15	131	Pg	Pg	17 09 17.6	+0.1
SJAF				Sg	Sg	17 09 20.1	+0.6
CARF	Carcanieres	0.48	286	Pg	Pg	17 09 23.5	-0.2
FNEB	Nbias	0.56	305	Pg	Pg	17 09 25.3	+0.1
FNEB				Sg	Sg	17 09 33.2	+0.7
CLAF	Gruissan	0.61	26	Pg	Pg	17 09 26.0	-0.4
DUNF	Dun	0.80	303	Pg	Pg	17 09 30.1	+0.1
MTLF	Montolieu	0.84	334	Pg	Pg	17 09 30.7	0.0
MTLF				Sg	Sg	17 09 42.8	+1.1

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*ATH **12** 17:13:12.3, 40°.63N×23°.43E, h11^{km}±1^{km}, ML3.2/25, Manual Solution by G.Panopoulou First location: 2019/06/12 17:13:58, This location: 2019/06/12 19:42:00 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

*THE **12** 17:13:12.2, 40°.6N±0°.8×23°.4E±0°.8, h11^{km}±1^{km}, M3.3/16, MLh3.3/16*

*ISK **12** 17:13:12.0, 40°.53N×23°.38E, h5^{km}, ML3.2/16*

*SOF **12** 17:13:12.2, 40°.67N±0°.02×23°.44E±0°.01, h13^{km}±2^{km}, MD3.5/7*

*BEO **12** 17:13:14.2±0.6, 40°.74N×23°.34E, h6^{km}±4^{km}, ML3.1/2*

*AFAD **12** 17:13:14.3, 40°.20N×23°.49E, h15^{km}±2^{km}, MW3.6*

ISC 12 17:13:12.3±0.8**, 40°.62N**±0°.01×**23°.42E**±0°.01**, h15**^{km}±5^{km}**, n135, σ1^{s}00**/186**, 17C-3D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOH	Sokhos	0.21	347	P	Pg	17 13 16.8	-0.3
SOH				S	Sg	17 13 20.0	-0.4
SOH	Sokhos	0.21	347	P	Pg	17 13 16.9	-0.3
SOH				S	Sg	17 13 20.0	-0.4
HORT	Hortiatis	0.24	266	Pg	Pg	17 13 17.3	-0.3
HORT				Sg	Sg	17 13 20.7	-0.6
HORT	Hortiatis	0.24	266	P	Pg	17 13 17.3	-0.3
HORT	Hortiatis	0.24	266	P	Pg	17 13 17.4	-0.3
HORT				S	Sg	17 13 20.9	-0.4
PLG	Polygyros	0.24	175	P	Pg	17 13 17.7	+0.1
PLG				S	Sg	17 13 21.2	0.0
PLG	Polygyros	0.24	175	P	Pg	17 13 17.8	+0.1
PLG				S	Sg	17 13 21.4	+0.1
THE	Thessaloniki	0.34	273	P	Pg	17 13 18.7	-0.7
THE				S	Sg	17 13 22.7	-1.5
THE	Thessaloniki	0.34	273	P	Pg	17 13 18.6	-0.7
THE				S	Sg	17 13 23.2	-1.0
OUR	Ouranopolis	0.52	123	Pg	Pg	17 13 22.4	-0.1
OUR				Sg	Sg	17 13 29.4	0.0
OUR	Ouranopolis	0.52	123	P	Pg	17 13 22.4	-0.1
OUR				S	Sg	17 13 29.9	+0.5
OUR	Ouranopolis	0.52	123	P	Pg	17 13 22.5	0.0
OUR				S	Sg	17 13 29.5	+0.1
SRS	Serrai	0.52	15	P	Pg	17 13 21.7	-1.0
SRS				S	Sg	17 13 28.6	-1.0
SRS	Serrai	0.52	15	*e*Pg	Pg	17 13 21.6	-1.0
SRS				*e*Sg	Sg	17 13 28.7	-0.8
SRS	Serrai	0.52	15	P	Pg	17 13 21.7	-1.0
SRS				S	Sg	17 13 29.0	-0.5
KNT	Kendrikon	0.67	324	P	Pg	17 13 24.6	-0.8
KNT				S	Sg	17 13 33.8	-0.6
KNT	Kendrikon	0.67	324	P	Pg	17 13 24.8	-0.7
KNT				S	Sg	17 13 33.4	-1.0
PAIG	Paliouri	0.72	164	P	Pg	17 13 25.4	-0.9
PAIG				S	Sg	17 13 34.7	-1.0
KVLA	Kavala	0.80	66	P	Pg	17 13 27.4	-0.5
KVLA				S	Sg	17 13 37.8	-0.7
GRG	Griva	0.84	294	Pg	Pg	17 13 28.4	-0.3
KAVA	Kavala	0.92	65	P	Pg	17 13 29.2	-0.9
KAVA				S	Sb	17 13 42.0	0.0
KAVA	Kavala	0.92	65	P	Pg	17 13 29.1	-0.9
KAVA				S	Sg	17 13 41.1	-1.0
MMB	Musomishta	0.96	15	⇑*i*Pg	Pg	17 13 30.0	-1.0
MMB				Sg	Sb	17 13 43.3	-0.1
MMB	Musomishta	0.96	15	P	Pg	17 13 29.8	-1.2
MMB				S	Sb	17 13 43.1	-0.3
THAS	Thassos island	0.99	90	P	Pg	17 13 30.4	-1.1
THAS				S	Sg	17 13 43.8	-0.8
THAS	Thassos island	0.99	90	P	Pg	17 13 30.5	-1.1
THAS				S	Sg	17 13 43.3	-1.2
KTI	Kastanea	1.01	258	P	Pg	17 13 31.1	-0.9
XANC	Avdira	1.22	72	P	Pn	17 13 34.3	-0.6
XANC				S	Sb	17 13 49.9	-0.8
KKB	Krupnik	1.24	350	*i* P	Pb	17 13 35.6	+0.1
KKB				Sg	Sn	17 13 52.3	+0.6
TYRN	Tyrnavos	1.28	225	P	Pn	17 13 35.8	+0.1
TYRN				S	Sb	17 13 53.2	+0.8
TYRN	Tyrnavos	1.28	225	P	Pn	17 13 35.9	+0.2
TYRN				S	Sb	17 13 52.1	-0.3
KZN	Kozani	1.29	257	P	Pn	17 13 36.1	+0.2
KZN				S	Sb	17 13 53.5	+0.7
NEO	Neokhori	1.32	186	P	Pn	17 13 35.9	-0.3
NEO	Neokhori	1.32	186	P	Pn	17 13 36.1	-0.1
NEO				S	Sb	17 13 53.7	+0.2
RZN	Rozhen	1.47	42	*i* P	Pn	17 13 38.7	+0.2
RZN				S	Sb	17 13 58.4	+0.3
THL	Klokotos Trika	1.50	226	P	Pn	17 13 38.8	+0.1
THL				S	Sn	17 13 58.1	0.0
THL	Klokotos Trika	1.50	226	P	Pn	17 13 38.9	+0.1
THL				S	Sn	17 13 58.3	+0.2
LIA	Limnos Island	1.53	117	P	Pn	17 13 38.5	-0.6
LIA	Limnos Island	1.53	117	P	Pn	17 13 38.5	-0.6
RDO	Rodhopi	1.69	71	Pn	Pb	17 13 43.2	0.0
RDO	Rodhopi	1.69	71	P	Pn	17 13 40.7	-0.7
RDO	Rodhopi	1.69	71	P	Pn	17 13 40.7	-0.7
RDO				S	Sn	17 14 01.8	-1.0
KPRO	Kipourio	1.70	248	P	Pn	17 13 42.6	+1.0
KPRO				S	Sn	17 14 03.8	+0.6
KDZ	Kurdzhali	1.77	55	Pn	Pb	17 13 44.7	+0.2
PENT	Pentalofos	1.79	257	P	Pn	17 13 43.5	+0.8
AGG	Agios Georgios	1.80	208	Pn	Pn	17 13 43.2	+0.3
AGG	Agios Georgios	1.80	208	P	Pn	17 13 42.9	+0.1
AGG	Agios Georgios	1.80	208	P	Pn	17 13 42.2	-0.7
AGG	Agios Georgios	1.80	208	P	Pn	17 13 43.1	+0.2
NEST	Nestorio	1.81	264	P	Pn	17 13 44.3	+1.1
PLD	Plovdiv	1.83	33	Pn	Pb	17 13 45.6	+0.1
PLD	Plovdiv	1.83	33	P	Pb	17 13 45.9	+0.4
PLD				S	Sb	17 14 08.0	-0.2
PLD	Plovdiv	1.83	33	*e*Pn	Pn	17 13 43.5	+0.3
PLNA	Plana	1.86	0	P	Pb	17 13 45.0	-1.1
PLNA				S	Sn	17 14 08.0	+0.9
MAKR	Makrakomi, Fth	1.88	212	P	Pn	17 13 44.6	+0.6
MAKR	Makrakomi, Fth	1.88	212	P	Pn	17 13 44.8	+0.8
ALEX	Alexandroupoli	1.90	82	P	Pn	17 13 45.6	+1.4
ALEX				S	Sn	17 14 09.3	+1.3
AXAR	Agios Charalam	1.94	198	P	Pn	17 13 45.6	+0.8
GADA	Gvkgeada	1.94	102	Pn	Pb	17 13 47.1	-0.3
GOAD	anakkale-G¶	1.96	103	P	Pb	17 13 47.9	+0.2
GOAD				S	Sg	17 14 14.4	-1.0
GOAD				*i* IAML		17 14 18.0	
	comp=E,229nm,0.4s						
GOAD				*i* IAML		17 14 19.0	
	comp=N,165nm,0.3s						
PGB	Panagyurishte	1.98	16	P	Pb	17 13 47.1	-1.0
PGB				S	Sg	17 14 15.3	-0.7
LKR	Lokris	1.99	189	P	Pn	17 13 46.4	+1.0
BOSS	Bosilegrad	2.00	340	*e*Pn	Pn	17 13 46.7	+1.0
VTS	Vitosha	2.00	356	P	Pn	17 13 46.6	+0.7
VTS				S	Sn	17 14 11.0	+0.3
VTS	Vitosha	2.00	356	*e*Pn	Pn	17 13 46.5	+0.7
ALN	Alexandroupoli	2.02	81	Pn	Pb	17 13 48.2	-0.5
ALN	Alexandroupoli	2.02	81	P	Pn	17 13 45.4	-0.4
ALN	Alexandroupoli	2.02	81	P	Pb	17 13 47.6	-1.1
ALN				S	Sb	17 14 14.6	+1.0
KYMI	Kymi, Euboea I	2.05	165	P	Pn	17 13 46.1	-0.2
TETR	Tetrakomo, Epi	2.08	233	P	Pn	17 13 47.7	+0.9
ENEZ	Enez	2.09	86	Pn	Pb	17 13 49.9	0.0
CAVK	Edirne/Enez-Ca	2.10	87	P	Pg	17 13 51.7	-0.8
CAVK				S	Sg	17 14 17.6	-2.0
CAVK				*i* IAML		17 14 23.0	
	comp=N,238nm,0.5s						
CAVK	Edirne/Enez-Ca	2.10	87	⇑P	Pg	17 13 51.5	-1.0
CAVK				⇑S	Sg	17 14 19.8	+0.1
EVR	Evrytania	2.10	217	P	Pn	17 13 48.3	+1.2
BOZC	Bozcaada	2.16	110	Pn	Pn	17 13 49.5	+1.7
BOZC	Bozcaada	2.16	110	P	Pb	17 13 50.6	-0.5
DIM	Dimitrovgrad	2.17	48	P	Pb	17 13 51.4	+0.2
DIM				S	Sg	17 14 20.8	-1.2
ANX	Ano Chora	2.33	210	P	Pn	17 13 50.9	+0.7
GELI	Tayfur-Gelibol	2.34	94	Pn	Pb	17 13 52.7	-1.5
SIGR	SIGRI	2.34	126	Pn	Pn	17 13 50.8	+0.5
SIGR	SIGRI	2.34	126	P	Pn	17 13 50.6	+0.4
EZN	Ezine	2.36	109	⇓P	Pb	17 13 53.8	-0.8
EZN				⇑S	Sg	17 14 26.0	-2.3
KOCA	Canakkale, Ayv	2.37	117	P	Pb	17 13 55.0	+0.3
VIL2	Platees	2.40	183	P	Pn	17 13 51.6	+0.4
KALE	Kalithea	2.43	204	P	Pn	17 13 52.5	+1.0
SERG	Sergoula	2.44	206	P	Pn	17 13 52.3	+0.6
PVO	Paravola	2.47	217	P	Pn	17 13 52.9	+0.8
EFP	Efpalio	2.48	209	P	Pn	17 13 53.3	+1.1
KESN	Edirne-Kesan	2.49	84	P	Pn	17 13 52.8	+0.2
BARS	Barje	2.50	332	*e*Pn	Pn	17 13 52.8	+0.3
IGT	Igoumenitsa	2.60	246	*e*Pn	Pb	17 13 57.2	-1.5
IGT				*e*Sn	Sb	17 14 29.3	-1.1
IGT	Igoumenitsa	2.60	246	P	Pn	17 13 55.0	+1.1
LTK	Loutraki	2.61	188	P	Pn	17 13 54.2	+0.1
LOUT	Loutraki	2.65	188	P	Pn	17 13 54.9	+0.4
KARY	Karystos	2.70	163	P	Pn	17 13 55.4	+0.2
KARY	Karystos	2.70	163	P	Pn	17 13 55.4	+0.2
ZAPS	Zavoj	2.72	348	*e*Pn	Pn	17 13 57.1	+1.6
ZAPS				*e*Sn	Sn	17 14 28.4	+0.2
MPEP	Malo Peshtene	2.75	5	*i* P	Pn	17 13 56.6	+0.7
TSLK	Tsoukalades, L	2.78	231	P	Pn	17 13 57.7	+1.3
GUR	Goura	2.80	198	P	Pn	17 13 57.4	+0.6
LKD2	Lefkada island	2.80	230	P	Pn	17 13 58.1	+1.4
NYDR	Nydri-Lefkada	2.83	229	P	Pn	17 13 58.9	+1.9
AXS	Araxos	2.89	214	P	Pn	17 13 59.7	+1.9
KEK	Kerkira	2.91	253	Pn	Pn	17 13 59.9	+1.7
KIRK	Kırklareli	3.01	66	P	Pb	17 14 07.0	+1.3
KIRK				S	Sb	17 14 45.2	+2.9
KIRK				*i* IAML		17 14 52.0	
	comp=N,48nm,0.5s						
CHOS	Chios island	3.02	137	Pn	Pn	17 14 00.2	+0.5
CHOS	Chios island	3.02	137	P	Pn	17 14 00.3	+0.5
SELS	Selova	3.12	327	*e*Pn	Pn	17 14 01.2	+0.2
BOVS	Bovan	3.27	338	⇑P	Pn	17 14 04.0	+0.9
ZAGS	Zajecar	3.31	345	*e*Pn	Pn	17 14 04.4	+0.8
ZAGS				*e*Sn	Sn	17 14 43.5	+0.8
VIZE	Kirklareli, Vi	3.48	73	P	Pb	17 14 16.0	+2.4
GOCS	Kraljevo Serbi	3.50	328	*e*Pn	Pn	17 14 06.7	+0.4
DRME	Dracevica, Mon	3.55	298	*e*Pn	Pn	17 14 09.5	+2.6
BAND	Balkesir-Ban	3.58	93	⇑P	Pn	17 14 11.4	+4.0
ITM	Ithomi	3.62	199	Pn	Pn	17 14 09.6	+1.7
IVAS	Ivanjica	3.83	322	*e*Pn	Pn	17 14 11.1	+0.3
GRUS	Gruza	3.83	329	*e*Pn	Pn	17 14 11.1	+0.3
APE	Apeiranthos	3.91	154	⇑P	Pn	17 14 12.4	+0.5
APE				⇓S	Sn	17 14 58.2	+0.7

DIVS	Divibare	4.31	325	*e*Pn	Pn	17 14 17.5	+0.1
HERR	Herculane	4.33	351	⇑P	Pn	17 14 17.1	-0.4
MDVR	Moldovita	4.35	344	⇑P	Pn	17 14 18.2	+0.3
MDVR	Moldovita	4.35	344	*e*Pn	Pn	17 14 18.0	+0.1
KIRA	zmir-Kiraz	4.55	120	P	Pn	17 14 19.8	-1.0
ESEN	Aydn-Nazilli	4.75	125	P	Pn	17 14 22.5	-0.9
GZR	Gura Zlata	4.80	355	⇓P	Pn	17 14 25.9	+1.8
VOIR		4.96	13	⇑P	Pn	17 14 27.8	+1.4
BZS	Buzias	5.17	346	⇑P	Pn	17 14 29.1	0.0
MLR	Muntele Rosu	5.21	20	⇑P	Pn	17 14 31.9	+2.1
MLR	Muntele Rosu	5.21	20	*e*Pn	Pn	17 14 32.0	+2.1
NEHR	Nehoiu	5.25	23	⇑P	Pn	17 14 32.3	+2.0
TIRR	Tirgusor	5.33	42	⇑P	Pn	17 14 33.4	+2.1
PLOR	Plostina	5.74	23	⇑P	Pn	17 14 39.9	+2.8
VRI	Vrincioaia	5.78	24	⇑P	Pn	17 14 39.7	+2.2
MORH	Mrgy, Hungar	6.59	330	⇑P	Pn	17 14 47.3	-1.3
MORH	Mrgy, Hungar	6.59	330	*e*Pn	Pn	17 14 48.6	0.0

GCG ***12*** *17:25:24.4±1.7, 14°.40N×93°.12W, h60^{km}±57^{km}, MD4.1, ML3.7*

MEX ***12*** *17:25:24.8±0.8, 14°.46N×93°.21W, h7^{km}±29^{km}, MD4.1*

ISC 12 17:25:20.9±1.5**, 14°.30N**±0°.06×**93°.21W**±0°.03**, h33**^{km}±11^{km}**, n24, σ2^{s}.42**/46**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.09	56	*i* P	Pb	17 25 41.6	+0.3
THIG				*e*S	Sn	17 25 53.8	0.0
THIG		1.09	56	*i* P	Pb	17 25 41.4	+0.2
THIG				*i* S	Sb	17 25 55.1	-0.1
THIG				IAML		17 25 58.1	
	comp=E,2μm,0.3s						
SMCA	Catarina	1.22	63	*i* P	Pb	17 25 43.5	0.0
SMCA				*i* S	Sb	17 25 58.9	-0.2
SMCA				IAML		17 26 00.7	
	comp=N,836nm,0.2s						
PATR	El Naranjo	1.24	49	*e*P	Pb	17 25 43.0	-0.9
PATR				*e*S	Sn	17 25 57.9	-0.1
PAVE	Pavencul	1.33	48	*e*P	Pb	17 25 44.5	-0.9
PAVE				*i* S	Sn	17 26 00.0	-0.1
PCIG		1.39	359	*e*P	Pn	17 25 43.9	-0.2
PCIG				*e*S	Sn	17 25 59.6	-1.7
RTAL	Retalhuleu	1.48	81	*e*P	Pb	17 25 48.1	+0.3
RTAL				*e*S	Sb	17 26 05.7	-0.6
STG8	El Palmar, Qui	1.80	85	*i* P	Pn	17 25 49.5	-0.5
STG8				IAML		17 26 14.7	
	comp=N,1μm,0.2s						
STG0	El Palmar, Qui	1.81	86	*i* P	Pn	17 25 49.7	-0.3
STG0				*i* S	Sn	17 26 09.1	-2.8
STG0				IAML		17 26 13.4	
	comp=E,2μm,0.2s						
SOKI	Kika Raxquin	1.82	73	*e*P	Pb	17 25 53.4	-0.5
HUEH	Huehuetenango	1.93	58	*e*P	Pn	17 25 51.6	-0.1
HUEH				*i* S	Sn	17 26 13.6	-1.4
CCIG	Comitan	2.22	28	*e*P	Pb	17 25 59.1	-1.4
CCIG				*e*S	Sn	17 26 22.4	+0.3
CCIG	Comitan	2.22	28	*i* P	Pb	17 25 59.2	-1.4
CCIG				*i* S	Sb	17 26 27.6	-0.1
CCIG				IAML		17 26 28.7	
	comp=N,394nm,0.3s						
TGIG		2.46	2	*e*P	Pn	17 26 01.1	+2.2
TGIG				*e*S	Sn	17 26 27.9	+0.1
TGIG		2.46	2	*i* P	Pn	17 26 01.1	+2.2
TGIG				*i* S	Sn	17 26 29.8	+2.0
TGIG				IAML		17 26 31.2	
	comp=E,261nm,0.4s						
HUIG	Huatulco	3.16	298	*e*P	Pn	17 26 10.8	+2.4
HUIG				*e*S	Sn	17 26 38.4	-6.6
PETF	Flores	4.13	51	*e*P	Pn	17 26 25.7	+3.9
PETF				*e*S	Sn	17 27 10.5	+1.5
YOIG	Yosondua	4.89	302	*e*P	Pn	17 26 36.3	+3.8
YOIG				*e*S	Sn	17 27 29.5	+1.3
PNIG	Pinotepa	5.18	294	*e*P	Pn	17 26 39.2	+3.0
PNIG				*e*S	Sn	17 27 33.1	-1.9
TXIG	Tlaxiaco	5.28	304	*e*P	Pn	17 26 42.2	+4.3
TXIG				*e*S	Sn	17 27 41.7	+3.9
TOIG	Toxpalan	5.29	316	*e*P	Pn	17 26 36.3	-1.5
TOIG				*e*S	Sn	17 27 36.8	-0.9
FTIG	Fresnillo de T	5.94	308	*e*P	Pn	17 26 46.5	-0.2
FTIG				*e*S	Sn	17 27 53.5	-0.3
JAUV	Jalcomulco	6.10	326	*e*P	Pn	17 26 52.5	+3.6
JAUV				*e*S	Sn	17 27 52.2	-5.5
CXUV	Coxquihui	7.18	325	*e*P	Pn	17 27 05.2	+1.4
CXUV				*e*S	Sn	17 28 18.2	-6.1

NEIC ***12*** *17:33:35.1±0.7, 47°.57N±0°.05×92°.73W±0°.06, h0^{km}±2^{km}, mb_Lg2.5/15, Error ellipse: s-maj=7.8km s-min=6.9km az=4.0*

IDC ***12*** *17:33:38.2±4.2, 47°.54N×92°.81W, h0^{km}, mbtmp2.4/1, ML0.9/1, Error ellipse: s-maj=74.1km s-min=27.5km az=55.0*

ISC 12 17:33:35.0±1.1**, 47°.54N**±0°.05×**92°.67W**±0°.05**, h0**^{km}**, n19, σ0^{s}.93**/15**, Minnesota**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EYMN	Ely	0.89	62		Pg	17 33 51.5	-0.6
E38A	The Farm, Brul	1.21	140		Pn	17 33 58.5	-0.7
EPLO	Experimental L	2.25	342		Pn	17 34 12.4	-1.1
AGMN	Agassiz Nation	2.28	291		Pn	17 34 12.5	-1.4
AGMN				IAmb_Lg		17 34 50.7	
	comp=Z,22nm,0.8s						
SPMN	Marine on St.	2.32	182		Pn	17 34 14.6	+0.2
TBO	Thunder Bay	2.45	62	Pn	Pn	17 34 16.6	+0.3
COWI	Conover	2.82	119	Pn	Pn	17 34 21.6	+0.2
COWI				IAmb_Lg		17 35 04.6	
	comp=Z,12nm,0.8s						
G40A	Rib Lake	2.84	142	Pn	Pn	17 34 20.9	-0.7
G40A				IAmb_Lg		17 35 08.7	
	comp=Z,14nm,1.0s						
F33A	5 Mile Ranch,	3.02	237		Pn	17 34 24.2	+0.2
ULM	Lac du Bonnet	3.44	323	Pn	Pn	17 34 28.4	-1.4
ULM	Lac du Bonnet	3.44	323	Pn	Pn	17 34 31.2	+1.3
	comp=Z,0.2nm,0.3s,baz=143,slow=10,SNR=1.2						
ULM				Pg	Pb	17 34 38.1	+1.3
	comp=Z,0.4nm,0.3s,baz=143,slow=18,SNR=2.1						
ULM				Sn	Sn	17 35 11.1	-0.2
	comp=Z,0.5nm,0.3s,baz=155,slow=19,SNR=2.2						
ULM				Lg	Lg	17 35 22.6	
	comp=Z,5.3nm,0.3s,baz=226,slow=15,SNR=22						
	comp=Z,0.8nm,0.4s						
I10CA	LAC DU BONNET	3.46	322	I	I	17 54 15.0	
	comp=Z,0.1nm,1.4s,baz=140,slow=321,SNR=8.3						
I37A	Lemond, Waseca	3.56	188	Pn	Pn	17 34 31.1	-0.5
I37A				IAmb_Lg		17 35 36.6	
	comp=Z,12nm,1.1s						
I40A	Norwalk	3.92	158	Pn	Pn	17 34 36.1	-0.4
I40A				IAmb_Lg		17 35 45.9	
	comp=Z,12nm,1.0s						
H43A	Windswept, Lux	4.59	130	IAmb_Lg		17 36 08.5	
	comp=Z,14nm,0.9s						
ECSD	EROS Data Cent	4.70	217	IAmb_Lg		17 36 05.5	
	comp=Z,5.9nm,0.9s						
JFWS	Jewell Farm	4.93	159	IAmb_Lg		17 36 13.1	
	comp=Z,11nm,0.7s						
L42A	Oliver, Polo	5.93	158	IAmb_Lg		17 36 46.8	
	comp=Z,7.4nm,0.8s						
I56US	NEWPORT INFRAS	16.40	282	I	I	19 14 20.0	
	baz=84,slow=314,SNR=4.5						

IDC ***12*** *17:40:05.1±3.2, 18°.74S×168°.81E, h92^{km}±27^{km}, mb3.9/13, mbtmp4.2/14, MS2.8/3, Error ellipse: s-maj=20.2km s-min=19.7km az=54.0*

NOU ***12*** *17:40:06.9, 18°.81S×168°.79E, h92^{km}, mb4.7/49, Vanuatu Islands*

NEIC ***12*** *17:40:06.5±1.8, 18°.7S±0°.1×168°.8E±0°.1, h98^{km}±7^{km}, mb4.7/55, Error ellipse: s-maj=17.4km s-min=11.5km az=143.0*

ISC 12 17:40:06.3±0.4**, 18°.80S**±0°.04×**168°.84E**±0°.05**, h100**^{km}**, n150, σ1^{s}.02**/138**, mb4.6**/46**, 3D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INH	Isangel	0.85	151	P	Pn	17 40 25.6	+0.4
INH	Isangel	0.85	151	S	Sn	17 40 40.0	+0.6
MARNC	Mare, Loyalty	2.78	196	P	Pn	17 40 48.1	-1.0
VLAKA	Lakatoro	3.00	333	P	Pn	17 40 52.8	+0.3
VLAKA	Lakatoro	3.00	333	S	Sn	17 41 27.7	+0.4
YATNC	Mamie plateau,	3.73	209	P	Pn	17 41 00.9	-0.9
DZM	Mont Dzumac	3.96	214		Pn	17 41 04.9	-0.1
DZM				Sn	Sn	17 41 47.2	-3.3
DZM	Mont Dzumac	3.96	214	P	Pn	17 41 05.0	-0.1
	47nm,0.4s,baz=95,slow=12,SNR=187						
DZM				S	Sn	17 41 49.4	-1.1
	390nm,0.5s,baz=129,slow=17,SNR=13						
DZM	Mont Dzumac	3.96	214	P	Pn	17 41 05.4	+0.4
DZM	Mont Dzumac	3.96	214	S	Sn	17 41 50.0	-0.5
PINNC	Pines Island,	4.02	199	P	Pn	17 41 06.2	+0.5
PINNC	Pines Island,	4.02	199	S	Sn	17 41 51.9	+0.2
OUENC	Ouen Island, N	4.06	207	P	Pn	17 41 07.2	+0.9
OUENC	Ouen Island, N	4.06	207	S	Sn	17 41 53.3	+0.4
ONTNC	Ouen Toro	4.15	212	P	Pn	17 41 07.5	0.0
KOUNC	Koumac, New Ca	4.63	247	P	Pn	17 41 14.0	0.0
KOUNC	Koumac, New Ca	4.63	247	S	Sn	17 42 07.4	+0.7
MSVF	Nonsavu	8.81	85		Pn	17 42 11.9	+0.9
MSVF	Nonsavu	8.81	85	LR	LR	17 45 29.6	
	comp=Z,36nm,19.5s,baz=214,slow=37						
HURO	Huro Makira	10.66	320	P	Pn	17 42 36.5	+0.5
NGOA	Tingoa Renbel	11.11	309	P	Pn	17 42 42.5	+0.3
HNR	Honiara	12.68	316	LR	LR	17 47 56.4	
	comp=Z,26nm,18.2s,baz=355,slow=37						
ALEG	Aligegeo Malai	12.73	321	P	Pn	17 43 05.2	+1.5
SAVO	Savo Central	12.98	316	P	Pn	17 43 08.9	+1.8
OUZ	Omahuta	16.89	166	P	P	17 43 59.2	+2.2
ARMA	Armidale	19.43	230	P	Pn	17 44 27.2	+0.1
ARMA	Armidale	19.43	230	P	Pn	17 44 26.6	-0.6
URZ	Urewera	20.69	161	P	P	17 44 40.1	+1.8
	3.9nm,0.5s,baz=357,slow=3.7,SNR=1.5						
	3.9nm,0.5s						
URZ	Urewera	20.69	161	P	P	17 44 39.7	+1.3
CTAO	Charters Tower	21.34	263	P	P	17 44 46.2	+0.7
BKZ	Black Stump Fm	21.36	163	P	P	17 44 47.2	+1.6
BKZ				IAmb	IAmb	17 45 02.2	
	comp=Z,36nm,1.4s						
BKZ	Black Stump Fm	21.36	163	P	P	17 44 47.0	+1.4
PMG	Port Moresby	22.98	291	P	P	17 45 01.2	-1.4
MSWZ	Moikau Station	23.20	168	P	P	17 45 04.5	+0.1
MTSU	Mount Surprise	23.27	268	P	P	17 45 05.9	+0.6
PLWZ	Palliser	23.35	168	P	P	17 45 06.0	+0.1
CNB	Canberra Magne	23.84	222	P	P	17 45 11.8	+1.4
KHZ	Kahutara	23.88	171	P	P	17 45 10.0	-0.6
KHZ				IAmb	IAmb	17 45 20.0	
	comp=Z,41nm,1.4s						
KHZ	Kahutara	23.88	171	P	P	17 45 12.0	+1.4
QLP	Quilpie	23.96	247	P	P	17 45 12.6	+1.1
CAN	Canberra	24.07	223	P	P	17 45 13.8	+1.3
LTZ	Lake Taylor	24.09	174	P	P	17 45 12.5	0.0
LTZ				IAmb	IAmb	17 45 14.5	
	comp=Z,38nm,1.5s						
GVZ	Greta Valley S	24.36	173	P	P	17 45 15.6	+0.7
CMSA	Cobar Meteorol	24.43	234	P	P	17 45 16.6	+0.9
COEN	Coen	25.08	277	P	P	17 45 23.3	+1.5
COEN	Coen	25.08	277	P	P	17 45 23.9	+2.1
QIS	Mount Isa	27.57	261	P	P	17 45 45.1	+0.9
STKA	Stephens Creek	27.77	237	P	P	17 45 46.3	+0.5
STKA	Stephens Creek	27.77	237	P	P	17 45 46.4	+0.6
	comp=Z,6.8nm,0.5s,baz=69,slow=9.5,SNR=28						
	comp=Z,6.8nm,0.5s						
STKA	Stephens Creek	27.77	237	P	P	17 45 46.8	+1.0
WR8	Warramunga Arr	32.38	262		P	17 46 25.3	-1.4
BBOO	Buckleboo	32.49	238	P	P	17 46 28.5	+0.9
WRAB	Tennant Creek	32.53	262	P	P	17 46 26.3	-1.7
WRA	Warramunga Arr	32.53	262	P	P	17 46 25.1	-3.0
WRA	Warramunga Arr	32.53	262	P	P	17 46 26.8	-1.3
	comp=Z,2.5nm,0.4s,baz=88,slow=8.4,SNR=132						
WRA				PcP	PcP	17 49 11.6	-1.1
	comp=Z,0.6nm,0.6s,baz=87,slow=2.6,SNR=3.7						
	comp=Z,2.5nm,0.4s						
AS01	Alice Springs	32.83	255	P	P	17 46 30.7	+0.1
AS31	Alice Springs	32.87	255		P	17 46 30.1	-0.8
ASAR	Alice Springs	32.87	255		P	17 46 30.1	-0.8
ASAR	Alice Springs	32.87	255	P	P	17 46 30.4	-0.6
	comp=Z,49nm,0.6s,baz=83,slow=8.6,SNR=1380						
ASAR				pP	pP	17 46 52.5	+0.1
	comp=Z,2.0nm,0.6s,baz=82,slow=8.4,SNR=1.3						
ASAR				LR	LR	18 01 00.4	
	comp=Z,35nm,19.1s,baz=98,slow=38						
KDU	Kakadu	35.48	274	P	P	17 46 53.3	-0.2
KNRA	Kununurra	38.35	268	P	P	17 47 17.0	-0.8
FORT	Forrest	38.70	244	P	P	17 47 20.4	-0.2
FORT	Forrest	38.70	244	P	P	17 47 21.8	+1.2
FAKI	Fak Fak	39.12	289	P	P	17 47 22.6	-1.7
FAKI				IAmb	IAmb	17 47 24.4	
	comp=Z,11nm,0.8s						
FAKI	Fak Fak	39.12	289	P	P	17 47 24.0	-0.3
FITZ	Fitzroy Crossi	40.91	264	P	P	17 47 39.4	+0.3
FITZ				IAmb	IAmb	17 47 40.1	
	comp=Z,5.3nm,0.7s						
MBWA	Marble Bar	46.07	258	P	P	17 48 20.4	-0.1
MBWA				IAmb	IAmb	17 48 21.4	
	comp=Z,16nm,1.0s						
MBWA	Marble Bar	46.07	258	P	P	17 48 20.8	+0.3
MEEK	Meekatharra	46.74	251	P	P	17 48 26.3	+0.5
KLBR	Kellerberrin	47.56	244	P	P	17 48 31.9	-0.1
NWAO	Narrogin (SRO)	48.08	242	P	P	17 48 35.4	-0.6
BLDU	Ballidu	48.42	245	P	P	17 48 39.5	+0.8
MORW	Morawa	48.99	248	P	P	17 48 42.5	-0.6
MORW	Morawa	48.99	248	P	P	17 48 43.4	+0.4
TOLI2	Tolitoli	51.18	287	P	P	17 48 58.4	-1.4
TOLI2				IAmb	IAmb	17 49 00.2	
	comp=Z,7.5nm,0.8s						
TOLI2	Tolitoli	51.18	287	P	P	17 49 00.6	+0.9
KHU	Kahuku	51.44	45	P	P	17 49 01.8	-0.1
RSD	Rainshed	51.82	45	P	P	17 49 03.0	-1.5
STCH	Steam Cracks	51.87	45	P	P	17 49 04.9	+0.1
VNDA	Vanda	58.86	182	P	P	17 49 54.1	0.0
	comp=Z,0.3nm,0.5s,baz=356,slow=7.2,SNR=5.6						
	comp=Z,0.3nm,0.5s						
CASY	Casey	60.38	203	P	P	17 50 03.4	-1.3
CASY				IAmb	IAmb	17 50 15.4	
	comp=Z,12nm,1.4s						
KSM	Kuching	60.91	283	P	P	17 50 09.2	0.0
KSM				IAmb	IAmb	17 50 09.6	
	comp=Z,6.4nm,0.7s						
JGF	Kuroka	61.79	331	P	P	17 50 13.4	-1.2
JGF				IAmb	IAmb	17 50 45.7	
	comp=Z,8.2nm,1.2s						
PMBI	Palembang	64.53	276	P	P	17 50 34.8	+1.6
COCO	West Island	69.31	264	P	P	17 51 04.9	+1.5
NJ2	Nanjing	69.63	316	*e*P	P	17 51 06.5	+1.5
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.7s						
QSPA	South Pole Qui	71.25	180	P	P	17 51 14.4	-0.2
QSPA				IAmb	IAmb	17 51 18.2	
	comp=Z,14nm,1.4s						
QSPA	South Pole Qui	71.25	180	P	P	17 51 14.2	-0.4
	comp=Z,3.0nm,0.9s,baz=53,slow=1.2,SNR=8.1						
	comp=Z,3.0nm,0.9s						
CMAR	Chiang Mai Arr	77.98	294	P	P	17 51 54.7	+0.6
CMAR	Chiang Mai Arr	77.98	294	P	P	17 51 54.6	+0.5
	comp=Z,2.7nm,0.8s,baz=135,slow=4.6,SNR=18						
	comp=Z,2.7nm,0.8s						
CHTO	Chiang Mai	78.12	295	P	P	17 51 55.5	+0.6
SDPT	Sand Point	78.32	17	P	P	17 51 54.5	-0.6
MAW	Mawson	78.70	202	P	P	17 51 58.1	+0.9
	comp=Z,3.6nm,0.8s,baz=161,slow=7.1,SNR=3.9						
	comp=Z,3.6nm,0.8s						
XLT	XiLinHaoTe	78.86	324	*e*P	P	17 51 58.7	+0.1
XLT				pP	pP	17 52 24.0	-0.1
XLT				pmax	pmax		
	comp=Z,3.0nm,0.6s						
XLT				pmax	pmax		
	comp=Z,86nm,8.1s						
PZH	PanZhiHua	79.15	303	P	P	17 52 01.2	+0.6
HHC	Hu-ho-hao-te	79.64	320	*e*P	P	17 52 05.4	+2.5
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,35nm,4.6s						
O14K	Tigyukauivet M	81.54	15	P	P	17 52 11.7	-0.7
O14K				IAmb	IAmb	17 52 54.5	
	comp=Z,9.7nm,1.1s						
LZH	Lanzhou	82.15	312	*e*P	P	17 52 17.1	+0.7
LZH				pP	pP	17 52 42.6	+0.3
LZH				sP	sP	17 52 53.9	+0.9
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
ACHA	Angle Creek He	82.25	18	P	P	17 52 15.0	-1.3
N15K	Kwethluk River	82.63	15	P	P	17 52 18.3	+0.2
N15K				IAmb	IAmb	17 52 20.3	
	comp=Z,15nm,1.5s						
Q19K	Cape Douglas,	83.34	19	P	P	17 52 21.5	-0.4
M16K	Timber Creek	83.65	15	P	P	17 52 22.9	-0.4
M16K				IAmb	IAmb	17 52 24.0	
	comp=Z,9.0nm,1.4s						
P19K	Oil Pt	84.06	18	P	P	17 52 24.4	-1.1
ILSW	Iliamna Southw	84.35	18	P	P	17 52 26.5	-0.6
ILSW				IAmb	IAmb	17 52 27.3	
	comp=Z,7.9nm,0.8s						
M17K	Holitna River	84.36	16	P	P	17 52 27.7	+0.8
M17K				IAmb	IAmb	17 52 30.4	
	comp=Z,4.7nm,0.8s						
J16K	Anvik River	85.24	13		P	17 52 32.2	+0.9
J16K				IAmb	IAmb	17 52 33.0	
	comp=Z,4.7nm,0.8s						
KMRM	Mail Ridge	85.86	45	IAmb	IAmb	17 52 36.5	
	comp=Z,7.8nm,0.7s						
KHMM	Horse Mountain	86.16	45	IAmb	IAmb	17 52 38.4	
	comp=Z,7.4nm,0.8s						
O02D	Mt. Diablo Mer	86.46	46	IAmb	IAmb	17 52 40.0	
	comp=Z,7.8nm,0.8s						
GTA	Gaotai	86.55	314	P	P	17 52 39.0	+0.5
GTA				pP	pP	17 53 06.7	+2.3
GTA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
SONM	Songino Array	86.64	323	P	P	17 52 38.1	-0.7
	comp=Z,1.1nm,0.5s,baz=158,slow=4.8,SNR=7.5						
	comp=Z,1.1nm,0.5s						
AFDM	Forest Hills D	87.14	47		P	17 52 41.1	-0.2
AFDM				IAmb	IAmb	17 52 42.4	
	comp=Z,4.7nm,0.7s						
CMB	Columbia Colle	87.14	48	IAmb	IAmb	17 52 42.4	
	comp=Z,5.4nm,0.8s						
YBH	Yreka Blue Hor	87.25	44	P	P	17 52 42.4	+0.6
	comp=Z,0.2nm,0.7s,baz=171,slow=2.0,SNR=6.1						
	comp=Z,0.2nm,0.7s						
CAST	Castle Rocks	87.43	16		P	17 52 40.1	-2.0
NVAR	Mina Array Bea	88.79	49	P	P	17 52 49.4	0.0
	comp=Z,1.5nm,0.8s,baz=222,slow=8.9,SNR=7.5						
	comp=Z,1.5nm,0.8s						
PINE	Pine Mountain	89.35	43		P	17 52 52.1	+0.3
PINE				IAmb	IAmb	17 52 53.0	
	comp=Z,6.0nm,0.7s						
SNAA	Sanae	89.58	183	P	P	17 52 51.6	-0.8
	comp=Z,0.4nm,0.5s,baz=193,slow=14,SNR=5.8						
	comp=Z,0.4nm,0.5s						
ILAR	Eielson Array	89.92	17	P	P	17 52 51.4	-2.4
	comp=Z,1.0nm,0.6s,baz=236,slow=4.9,SNR=12						
ILAR				pP	pP	17 53 18.3	-1.7
	comp=Z,0.4nm,0.7s,baz=222,slow=3.4,SNR=2.4						
	comp=Z,1.0nm,0.6s						
WVOR	Wild Horse Val	90.27	45	IAmb	IAmb	17 52 57.1	
	comp=Z,2.9nm,0.7s						
I07A	Izee	90.41	43	IAmb	IAmb	17 52 58.1	
	comp=Z,5.2nm,0.7s						
PRN	Pahroc Range	90.72	51	P	P	17 52 58.8	+0.5
PRN				IAmb	IAmb	17 52 59.5	
	comp=Z,4.4nm,0.8s						
G08A	Pilot Rock	91.28	42	IAmb	IAmb	17 53 02.0	
	comp=Z,4.5nm,0.7s						
ELK	Elko	91.90	48	P	P	17 53 03.5	-0.3
	comp=Z,1.0nm,0.9s,baz=297,slow=6.8,SNR=2.8						
	comp=Z,1.0nm,0.9s						
X16A	Lo Mia Camp, P	92.32	54	IAmb	IAmb	17 53 07.6	
	comp=Z,1.9nm,0.8s						
U15A	North Rim	92.40	52	IAmb	IAmb	17 53 07.8	
	comp=Z,2.7nm,0.8s						
YKA	Yellowknife Ar	100.45	27	P	Pdif	17 53 42.0	+0.2
	comp=Z,0.5nm,0.7s,baz=264,slow=4.9,SNR=5.1						
MKAR	Makanchi Array	101.16	316	P	Pdif	17 53 45.7	+0.3
	comp=Z,0.4nm,0.6s,baz=93,slow=6.6,SNR=5.2						
ARCES	ARCESS Array B	124.55	345	PKP	PKPdf	17 58 51.9	-1.4
	comp=Z,2.0nm,0.9s,baz=58,slow=7.3,SNR=12						
EKA	Eskdalemuir Ar	143.02	352	PKhKP	PKPpre	17 59 24.4	
	comp=Z,0.7nm,0.5s,baz=3.0,slow=2.6,SNR=3.6						
RONA	Rosalia, Austr	143.51	328	*e*PKP	PKPbc	17 59 27.7	+0.8
	comp=Z,4.3nm,0.9s						
CONA	Conrad Observa	143.57	329	*e*PKP	PKPbc	17 59 27.4	+0.4
	comp=Z,1.4nm,0.6s						
GERES	GERESS Array B	143.92	332	PKP	PKPbc	17 59 27.9	-0.2
	comp=Z,1.0nm,0.6s,baz=34,slow=5.7,SNR=8.5						
ARSA	Arzberg	144.20	328	*e*PKP	PKPbc	17 59 28.7	-0.2
	comp=Z,1.4nm,0.5s						
MOA	Molln	144.39	330	*i* PKP	PKPbc	17 59 29.4	-0.1
	comp=Z,8.4nm,0.9s						
BIOA	Bad Ischl, Aus	144.80	331	*i* PKP	PKPab	17 59 30.1	-0.6
	comp=Z,2.7nm,0.6s						
SOKA	Soboth	144.84	328	*e*PKP	PKPab	17 59 29.4	-1.5
	comp=Z,5.1nm,0.6s						
OBKA	Obir	145.20	328	*e*PKP	PKPbc	17 59 30.5	-1.6
	comp=Z,5.2nm,0.7s						
BTNL	Ternell	145.42	340	*d*PKP	PKPbc	17 59 32.1	-0.5
LESA	Schwarzleotal	145.44	331	*i* PKP	PKPdf	17 59 32.2	-0.5
	comp=Z,5.1nm,0.6s						
MEM	Membach	145.44	341	*d*PKP	PKPdf	17 59 32.4	-0.1
MYKA	Terra Mystica	145.56	329	*i* PKP	PKPbc	17 59 33.2	0.0
	comp=Z,4.2nm,0.6s						
WATA	Walderalm	146.00	332	*i* PKP	PKPbc	17 59 34.3	-0.4
	comp=Z,4.5nm,0.5s						
ABTA	Abfaltersbach	146.01	330	*i* PKP	PKPdf	17 59 32.9	-0.8
	comp=Z,4.5nm,0.8s						
WTTA	Wattenberg	146.03	332	*i* PKP	PKPab	17 59 35.1	-0.4
	comp=Z,6.2nm,0.8s						
BMRD	Maredsous	146.09	342	*d*PKPdf	PKPdf	17 59 32.9	-0.7
MOTA	Moosalm	146.20	332	*i* PKP	PKPdf	17 59 34.2	0.0
	comp=Z,5.7nm,1.0s						
SQTA	Sankt Quirin	146.25	332	*i* PKP	PKPdf	17 59 34.7	+0.5
	comp=Z,6.6nm,0.7s						
FETA	Feichten	146.61	332	*e*PKP	PKPbc	17 59 36.1	-0.4
	comp=Z,3.3nm,0.5s						
DAVA	Damuels	146.77	334	*i* PKP	PKPbc	17 59 36.4	-0.6
	comp=Z,3.4nm,0.5s						

ISN ***12*** *17:44:59.2±0.3, 34°.47N×45°.65E, h6^{km}±2^{km}, ML2.6*

TEH ***12*** *17:45:00.1, 34°.45N×45°.68E, h8^{km}±47^{km}*

ISC 12 17:45:00.3±1.0**, 34°.46N**±0°.04×**45°.69E**±0°.04**, h5**^{km}±10^{km}**, n13, σ0^{s}.85**/18**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KGS1	Ghasr-e-Shirin	0.09	300	Pg	Pg	17 45 02.1	-0.3
KGS1				Sg	Sg	17 45 04.8	+1.1
GLG1	Gilan-e-Gharb	0.39	152	Pg	Pb	17 45 08.3	-1.4
IDHR	Dehrash	0.63	67	Pg	Pg	17 45 12.5	+0.1
IGHG	Ghaleghazi	0.74	100	Pg	Pg	17 45 14.3	-0.2
ILBA	Ilam Banvizeh	0.94	152	Pg	Pg	17 45 18.0	-0.3
ILIN	Lien	1.15	66	Pg	Pn	17 45 23.0	-0.3
IBDR	Badra	1.36	171	*e*Pg	Pb	17 45 25.5	-0.7
IBDR				*e*Sg	Sg	17 45 44.6	+0.6
IBDR				AML	AML	17 45 48.7	
	comp=E,168nm,0.6s						
IBDR				AML	AML	17 45 49.8	
	comp=N,131nm,0.6s						
IKRK	Kirkuk	1.45	311	*e*Pn	Pg	17 45 27.5	-0.7
IKRK				*e*Sn	Sg	17 45 48.0	+1.0
IKRK				AML	AML	17 45 49.7	
	comp=N,87nm,0.6s						
IKRK				AML	AML	17 45 50.7	
	comp=E,92nm,0.4s						
BHD	Baghdad	1.61	223	*e*Pn	Pb	17 45 29.5	-1.0
BHD				*e*Sn	Sg	17 45 52.0	0.0
SNQR	Sonqor, Kerman	1.65	75	Pg	Pg	17 45 32.1	+0.2
IBZA	Bozab	1.80	89	Pg	Pg	17 45 34.5	-0.3
IKFM	Kafar-mosalman	2.02	117	Pn	Pb	17 45 36.7	-0.8
RAFI	Al-Rafai	2.75	172	*e*Pn	Pn	17 45 46.0	+0.9
RAFI				*e*Sn	Sn	17 46 20.0	+1.3

IDC ***12*** *18:02:56.4±2.1, 34°.48N×45°.45E, h0^{km}, mb3.8/7, mbtmp3.8/7, MS2.2/1, Error ellipse: s-maj=45.1km s-min=25.8km az=166.0*

ISN ***12*** *18:02:57.7±0.3, 34°.45N×45°.63E, h14^{km}±3^{km}, ML3.6*

TEH ***12*** *18:02:58.2, 34°.45N×45°.65E, h11^{km}±12^{km}*

ISC 12 18:02:58.5±0.9**, 34°.45N**±0°.03×**45°.59E**±0°.04**, h13**^{km}±7^{km}**, n34, σ1^{s}.26**/37**, mb3.5**/5**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KGS1	Ghasr-e-Shirin	0.06	360	Pg	Pg	18 03 00.8	-0.3
GLG1	Gilan-e-Gharb	0.43	141	Pg	Pg	18 03 06.6	-0.4
IDHR	Dehrash	0.70	69	Pg	Pg	18 03 10.9	-1.3
IGHG	Ghaleghazi	0.82	98	Pg	Pg	18 03 13.8	-0.6
ILBA	Ilam Banvizeh	0.97	148	Pg	Pg	18 03 16.3	-0.9
KCHF	Cheshme Sefid,	1.21	98	Pg	Pn	18 03 20.9	-0.3
ILIN	Lien	1.23	67	Pg	Pn	18 03 21.2	-0.3
IBDR	Badra	1.36	168	*e*Pn	Pb	18 03 24.0	+0.2
IBDR				*e*Sn	Sg	18 03 43.3	+0.9

IBDR				AML	AML	18 03 47.1	
	comp=E,800nm,0.6s						
IBDR				AML	AML	18 03 48.2	
	comp=N,427nm,0.6s						
IKRK	Kirkuk	1.40	313	*e*Pn	Pg	18 03 25.0	-0.4
IKRK				*e*Sn	Sg	18 03 45.0	+1.4
IKRK				AML	AML	18 03 48.0	
	comp=N,2µm,0.2s						
IKRK				AML	AML	18 03 48.3	
	comp=E,2µm,0.5s						
BHD	Baghdad	1.55	221	*e*Pn	Pg	18 03 27.0	-1.2
BHD				*e*Sn	Sg	18 03 48.0	-0.3
BHD				AML	AML	18 03 52.5	
	comp=E,2µm,0.5s						
IBZA	Bozab	1.88	89	Pn	Pn	18 03 32.0	+1.5
IKFM	Kafar-mosalman	2.09	116	Pn	Pn	18 03 34.4	+1.3
IDOB	Doab	2.25	106	Pn	Pn	18 03 36.6	+1.1
MAHB	Mahabad	2.32	2	Pn	Pb	18 03 38.4	-1.8
HSAM	Samen	2.50	95	Pn	Pn	18 03 40.7	+1.6
RAFI	Al-Rafai	2.75	171	*e*Pn	Pn	18 03 43.2	+1.0
RAFI				*e*Sn	Sn	18 04 16.5	+1.2
HGHA	Hamedan- Ghaye	2.88	68	Pn	Pn	18 03 46.3	+2.1
HAGD	Aghdareh	2.95	82	Pn	Pn	18 03 47.2	+2.0
IHSH	Hashtrud	3.16	25	Pn	Pn	18 03 49.6	+1.4
IAZR	Azarshahr	3.24	5	Pn	Pn	18 03 51.5	+2.3
QABG	Abgarm-Qazvin	3.51	68	Pn	Pn	18 03 54.1	+1.3
IHRS	Heris	4.04	16	Pn	Pn	18 04 02.3	+2.2
QAMS	Qamsar	4.87	97	Pn	Pn	18 04 12.8	+1.2
IKLH	Kolahrood	5.11	101	Pn	Pn	18 04 15.9	+1.1
KRSH	Karshahi	5.45	93	Pn	Pn	18 04 20.4	+1.0
ISFB	Sefidab	5.50	89	Pn	Pn	18 04 21.4	+1.3
GNI	Garni	5.73	353	LR	LR	18 06 14.9	
	comp=E,21nm,20.9s,baz=272,slow=35						
AKASG	Malin Array Be	20.15	329	P	P	18 07 31.6	-0.6
	comp=E,0.4nm,0.5s,baz=140,slow=9.4,SNR=6.8						
	comp=E,0.4nm,0.5s						
BVAR	Borovoye Array	25.59	36	P	P	18 08 27.4	+0.3
	comp=E,0.6nm,0.5s,baz=222,slow=7.8,SNR=4.1						
	comp=E,0.6nm,0.5s						
KURBB	Kurchatov Arra	28.86	46	P	P	18 08 57.0	+0.5
	comp=E,0.5nm,0.5s,baz=252,slow=9.1,SNR=4.3						
	comp=E,0.5nm,0.5s						
FINES	FINESS Array B	29.76	341	P	P	18 09 03.3	-1.0
	comp=E,3.5nm,0.9s,baz=154,slow=7.7,SNR=4.7						
	comp=E,3.5nm,0.9s						
MKAR	Makanchi Array	30.19	55	P	P	18 09 09.2	+0.9
	comp=E,0.3nm,0.6s,baz=251,slow=8.4,SNR=3.7						
	comp=E,0.3nm,0.6s						
HFS	Hagfors	33.00	331	P	P	18 09 32.1	-0.8
	comp=E,1.5nm,0.5s,baz=126,slow=9.1,SNR=6.1						
	comp=E,1.5nm,0.5s						
TORD	Torodi Ar. Bea	44.98	253	P	P	18 11 12.7	-0.9
	comp=E,1.7nm,0.3s,baz=49,slow=7.0,SNR=1.9						
	comp=E,1.7nm,0.3s						

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*NEIC **12** 18:11:39.0±0.8, 43°.56N±0°.05×105°.36W±0°.08, h0^{km}±1^{km}, ML3.2/44, Error ellipse: s-maj=13.4km s-min=2.6km az=47.0*

*IDC **12** 18:11:40.2±1.3, 43°.87N×105°.78W, h0^{km}, mb4.2/1, mbtmp3.8/3, ML3.2/2, MS2.6/2, Error ellipse: s-maj=32.6km s-min=9.4km az=147.0*

ISC 12 18:11:39.0±1.0**, 43°.58N**±0°.06×**105°.31W**±0°.06**, h0**^{km}**, n26, **σ1^{s}**33**/17**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	1.07	59		Pb	18 12 00.4	-0.2
K22A	Casper	1.28	224		Pg	18 12 02.6	-1.0
K22A				IAML		18 12 28.1	
	313nm,0.2s						
LAO	LASA Array	3.17	349		Pn	18 12 31.6	+1.3
LAO				IAML		18 13 30.2	
	102nm,1.1s						
BW06	Boulder Array	3.21	257	Pn	Pn	18 12 31.9	+0.9
PD31	Pinedale Array	3.21	257		Pn	18 12 31.6	+0.6
PDAR	Pinedale Array	3.21	257	Pn	Pn	18 12 32.0	+1.0
	3.6nm,0.3s,baz=77,slow=20,SNR=16						
PDAR				Lg	Lg	18 13 13.1	
	5.3nm,0.3s,baz=71,slow=32,SNR=2.3						
PDAR				LR	LR	18 13 36.4	
	comp=Z,16nm,19.7s,baz=220,slow=39						
	2.2nm,0.3s						
RLMT	Red Lodge	3.23	300	Pn	Pn	18 12 32.7	+1.5
RLMT				IAML		18 13 28.9	
	58nm,0.8s						
RLMT				IAML		18 13 36.7	
	42nm,1.4s						
OGNE	Ogallala	3.58	136		Pn	18 12 37.6	+1.7
YNE	Yellowstone No	3.66	295	Pn	Pn	18 12 38.5	+1.3
YNE				IAML		18 13 40.2	
	comp=N,51nm,0.8s						
YNE				IAML		18 13 40.8	
	comp=E,48nm,0.7s						
YMP	Mirror Lake Pl	3.67	290	Pn	Pn	18 12 38.9	+1.5
ISCO	Idaho Springs	3.78	184		Pn	18 12 40.1	+1.2
GCMT	Greycliff	3.81	307	Pn	Pn	18 12 40.2	+1.1
TPAW	Teton Pass	4.10	271		Pn	18 12 44.9	+1.6
TPAW				IAML		18 14 03.6	
	comp=E,35nm,1.2s						
FXWY	Fox Creek	4.15	273		Pn	18 12 45.8	+1.9
YHH	Holmes Hill	4.16	289		Pn	18 12 45.1	+1.0
AHID	Auburn Hatcher	4.31	261	IAML		18 14 00.7	
	comp=E,33nm,0.9s						
AHID				IAML		18 14 13.6	
	comp=E,19nm,0.9s						
YHB	Horse Butte	4.39	288	IAML		18 14 00.5	
	comp=N,24nm,2.1s						
YHB				IAML		18 14 12.9	
	comp=E,22nm,1.2s						
BOZ	Bozeman (W)	4.94	296	IAML		18 14 19.2	
	comp=E,13nm,1.1s						
BOZ				IAML		18 14 20.1	
	comp=E,14nm,2.1s						
HWUT	Hardware Ranch	5.02	249	IAML		18 14 34.1	
	comp=E,22nm,1.5s						
HWUT				IAML		18 14 39.4	
	comp=E,26nm,1.1s						
BSUT	Blindstream Ca	5.07	235	IAML		18 14 52.2	
	comp=E,13nm,1.9s						
P18A	Preston Nutter	5.41	225	IAML		18 14 36.6	
	comp=N,18nm,1.5s						
P18A				IAML		18 15 02.8	
	comp=E,17nm,1.6s						
ULM	Lac du Bonnet	9.28	41	Pn	Pn	18 13 53.6	-0.4
	comp=E,0.5nm,0.3s,baz=221,slow=12,SNR=6.5						
ULM				Lg	Lg	18 16 25.7	
	comp=E,0.3nm,0.3s,baz=325,slow=18,SNR=4.6						
	comp=E,1.3nm,0.2s						
I56US	NEWPORT INFRAS	9.47	304	I	I	19 05 20.0	
	baz=118,slow=314,SNR=3.8						
TXAR	Lajitas Array	14.28	174	Pg	P	18 16 06.1	+56
	baz=356,slow=17,SNR=4.7						
TXAR				Lg	Lg	18 19 16.1	
	baz=10.0,slow=29						
ROSC	El Rosal	47.28	136	LR	LR	18 44 17.4	
	comp=E,36nm,19.0s,baz=359,slow=41						
ARCES	ARCESS Array B	61.58	18	P	P	18 21 56.6	-1.0
	comp=E,2.9nm,1.1s,baz=327,slow=6.5,SNR=1.7						
	comp=E,2.9nm,1.1s						

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*IDC **12** 18:15:23.4±0.9, 60°.82N×143°.09E, h0^{km}, mb3.7/8, mbtmp3.7/12, ML3.7/4, MS2.8/5, Error ellipse: s-maj=20.8km s-min=14.2km az=0.0*

*NERS **12** 18:15:23.8, 60°.71N×143°.32E, h8^{km}*

ISC 12 18:15:24.9±0.7**, 60°.87N**±0°.07×**143°.19E**±0°.04**, h10**^{km}**, n24, **σ1^{s}**55**/32**, mb3.6**/8**, MS3.1**/3**, 1D, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLON	Talon	2.94	110	*e*P	Pn	18 16 09.8	-1.7
TLON				*e*Pg	Pb	18 16 16.9	-0.3
TLON				Pgmax		18 16 22.3	
	300nm,0.3s						
TLON				*e*Sg	Sb	18 16 54.7	+1.6
TLON				Sgmax		18 17 00.7	
	220nm,0.2s						
TLON				Sgmax		18 17 00.7	
	2µm,0.4s						
SUUS	Susuman	3.04	49	*e*P	Pn	18 16 14.5	+1.5
SUUS				*e*Pg	Pb	18 16 21.0	+1.9
SUUS				Pgmax		18 16 25.0	
	370nm,0.6s						
SUUS				*e*Sg	Sg	18 17 01.1	-1.3
SUUS				Sgmax		18 17 05.1	
	410nm,0.7s						
SUUS				Sgmax		18 17 05.1	
	290nm,0.7s						
MGD	Magadan 1	3.82	99	*e*P	Pn	18 16 22.9	-0.8
MGD				*e*Pg	Pb	18 16 32.0	-0.3
MGD				Pgmax		18 16 37.0	
	40nm,0.3s						
MGD				*e*S	Sn	18 17 09.9	+1.3
MGD				*e*Sg	Sb	18 17 21.4	+2.8
MGD				Sgmax		18 17 24.0	
	580nm,0.3s						
MGD				Sgmax		18 17 24.0	
	470nm,0.3s						
MA2	Magadan	3.99	106	*e*P	Pn	18 16 25.0	-1.1
MA2				*e*Pg	Pb	18 16 34.8	-0.5
MA2				Pgmax		18 16 42.7	
	20nm,0.4s						
MA2				*e*Sg	Sb	18 17 25.4	+1.8
MA2				Sgmax		18 17 31.4	
	170nm,0.6s						
MA2				Sgmax		18 17 31.4	
	80nm,0.3s						
GADL	Gadlja	4.22	103	*e*P	Pn	18 16 28.6	-0.6
GADL				*e*Pg	Pb	18 16 40.8	+1.7
GADL				Pgmax		18 16 48.7	
	80nm,0.4s						
GADL				*e*Sg	Sb	18 17 33.7	+3.6
GADL				Sgmax		18 17 43.8	
	2µm,0.6s						
GADL				Sgmax		18 17 43.8	
	780nm,0.6s						
TLAR	Talaya	4.49	83	*e*P	Pg	18 16 47.8	-3.0
TLAR				*e*P	Pb	18 17 02.3	+19
TLAR				Pgmax		18 17 03.0	
	80nm,0.4s						
TLAR				*e*S	Sg	18 17 59.9	+11
TLAR				Sgmax		18 18 03.6	
	960nm,0.3s						
TLAR				Sgmax		18 18 03.6	
	1µm,0.4s						
SEY	Seymchan	4.81	61	Pn	Pn	18 16 38.4	+1.1
	9.0nm,0.3s,baz=226,slow=23,SNR=173						
SEY				Lg	Lg	18 17 56.5	
	20nm,0.3s,baz=41,slow=19,SNR=14						
	22nm,0.3s						
SEY	Seymchan	4.81	61	⇓*i*P	Pn	18 16 38.4	+1.1
SEY				Pmax		18 16 38.9	
	20nm,0.4s						
SEY				*e*Sg	Sg	18 17 56.9	-2.3
SEY				Sgmax		18 18 01.5	
	150nm,0.6s						
YAK	Yakutsk	6.58	286	Pn	Pn	18 17 01.0	-0.6
	1.2nm,0.3s,baz=76,slow=6.3,SNR=6.1						
YAK				Lg	Lg	18 18 45.2	
	13nm,0.3s,baz=229,slow=21,SNR=13						
YAK				LR	LR	18 19 54.6	
	comp=Z,35nm,19.8s,baz=102,slow=41						
	4.6nm,0.4s						
PETK	Petropavlovsk-	11.07	128	Pn	Pn	18 18 05.0	+1.9
	0.6nm,0.3s,baz=329,slow=11,SNR=16						
PETK				LR	LR	18 22 16.9	
	comp=Z,38nm,18.8s,baz=118,slow=37						
	1.2nm,0.4s						
TIXI	Tiksi	12.21	338	Pn	Pn	18 18 17.7	-0.9
	0.3nm,0.3s,baz=153,slow=14,SNR=10						
TIXI				Sn	Sn	18 20 21.4	-13
	baz=111,slow=3.4						
TIXI				Lg	Lg	18 21 44.5	
	0.1nm,0.3s,baz=96,slow=18,SNR=3.1						
	2.0nm,0.5s						
KLR	Kul'dur	13.35	214	Lg	Lg	18 22 18.7	
	0.1nm,0.3s,baz=113,slow=20,SNR=8.1						
SONM	Songino Array	24.71	255	Lg	Lg	18 28 21.4	
	baz=45,slow=29						
ILAR	Eielson Array	30.69	52	P	P	18 21 40.1	+0.9
	0.6nm,0.7s,baz=283,slow=7.2,SNR=5.7						
	0.6nm,0.7s						
KURBB	Kurchatov Arra	36.33	284	P	P	18 22 28.3	-0.1
	1.1nm,0.7s,baz=53,slow=8.9,SNR=16						
	1.1nm,0.7s						
MKAR	Makanchi Array	37.14	276	P	P	18 22 35.7	+0.3
	0.4nm,0.9s,baz=32,slow=7.2,SNR=2.1						
	0.4nm,0.9s						
ARTI	Arti	41.46	303	LR	LR	18 43 01.1	
	comp=Z,28nm,20.1s,baz=51,slow=40						
ARCES	ARCESS Array B	42.57	333	LR	LR	18 44 06.0	
	comp=Z,22nm,18.1s,baz=98,slow=40						
FINES	FINESS Array B	48.88	325	P	P	18 24 10.1	0.0
	1.7nm,0.7s,baz=44,slow=8.1,SNR=5.6						
	1.7nm,0.7s						
NOA	NORSAR Array B	52.95	333	P	P	18 24 40.9	+0.1
	0.6nm,0.7s,baz=28,slow=7.5,SNR=2.1						
NOA				LR	LR	18 51 02.7	
	comp=Z,7.9nm,19.1s,baz=355,slow=40						
	0.6nm,0.7s						
AKASG	Malin Array Be	56.86	316	P	P	18 25 09.3	+0.1
	0.5nm,0.5s,baz=31,slow=7.8,SNR=2.6						
	0.5nm,0.5s						
WRA	Warramunga Arr	80.84	188	P	P	18 27 37.5	-1.0
	0.4nm,0.9s,baz=2.7,slow=5.8,SNR=1.8						
	0.4nm,0.9s						
ASAR	Alice Springs	84.57	189	P	P	18 27 57.9	0.0
	0.4nm,0.9s,baz=7.8,slow=6.0,SNR=2.2						
	0.4nm,0.9s						
QSPA	South Pole Qui	150.63	180	PKPbc	PKPbc	18 35 14.1	-1.2
	0.5nm,0.5s,baz=271,slow=2.0,SNR=5.6						

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*REN **12** 18:16:20.4±1.5, 37°.54N±0°.02×117°.92W±0°.03, h9^{km}±8^{km}, Error ellipse: s-maj=3.7km s-min=2.7km az=70.0*

*NEIC **12** 18:16:20.1±1.9, 37°.56N±0°.04×117°.94W±0°.05, h8^{km}±6^{km}, Error ellipse: s-maj=5.5km s-min=4.9km az=54.0*

*NCEDC **12** 18:16:20.5±2.7, 37°.55N±0°.02×117°.93W±0°.04, h0^{km}±2^{km}, ML3.4/54, ML3.3/88(NEIC), ML3.6/25(REN), Error ellipse: s-maj=4.9km s-min=1.6km az=63.0*

ISC 12 18:16:20.7±1.2**, 37°.53N**±0°.03×**117°.96W**±0°.03**, h14**^{km}±11^{km}**, n51, **σ1^{s}**49**/46**, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DSP	Deep Springs	0.16	182	Pg	Pg	18 16 24.4	-0.1
DSP				IAML		18 16 27.9	
	comp=E,5µm,0.4s						
MZP	Montezuma Peak	0.49	70		Pg	18 16 29.5	-0.9
MZP	Montezuma Peak	0.49	70	IAML		18 16 36.2	
	comp=N,2µm,0.5s						
MZP				IAML		18 16 39.0	
	comp=E,1µm,0.4s						
GMN	Gold Mountain	0.60	112	Pg	Pg	18 16 32.3	-0.3
GMN				IAML		18 16 40.9	
	comp=E,2µm,0.6s						
GMN				IAML		18 16 41.3	
	comp=N,3µm,0.5s						
GRAC	Grapevine Rang	0.71	138	Pg	Pg	18 16 34.4	-0.1
GRAC				IAML		18 16 45.5	
	comp=N,2µm,0.4s						
GRAC				IAML		18 16 52.4	
	comp=E,1µm,0.3s						
TPH	Tonopah	0.80	47	Pg	Pg	18 16 35.1	-1.1
LHV	Little Huntoon	0.84	329	Pg	Pb	18 16 37.1	+0.1
LHV				IAML		18 16 52.0	
	comp=N,1µm,0.5s						
LHV				IAML		18 16 55.8	
	comp=E,1µm,0.5s						
NV11	Mina Array Sit	0.91	350	Pg	Pg	18 16 37.8	-0.6
NV11				IAML		18 16 54.9	
	comp=E,860nm,1.1s						
NVAR	Mina Array Bea	0.94	343		Pg	18 16 38.5	-0.4
TVH1	TV Hill, Hawth	1.12	326		Pn	18 16 43.0	+0.7
RYN	Ryan	1.18	338		Pb	18 16 43.2	+0.2
RYN	Ryan	1.18	338	IAML		18 17 02.7	
	comp=E,1µm,0.6s						
Q09A	Carvers	1.44	25		Pb	18 16 47.0	-0.4
TPNV	Topopah Spring	1.48	113		Pb	18 16 48.0	-0.2
TPNV				IAML		18 17 13.5	
	comp=E,625nm,0.4s						
TPNV				IAML		18 17 23.2	
	comp=E,766nm,0.6s						
WAKR	Walker	1.52	310		Pb	18 16 48.7	-0.1
GWY	Greenwater Val	1.70	142		Pn	18 16 50.8	+0.7
GWY				IAML		18 17 22.0	
	comp=E,247nm,0.8s						
GWY				IAML		18 17 27.0	
	comp=N,200nm,0.6s						
S11A	Rachel	1.76	86		Pn	18 16 51.3	+0.3
QSM	Queen of Sheba	1.79	150		Pb	18 16 52.8	-0.5
ISA	Isabella, Lake	1.91	193		Pn	18 16 54.4	+1.5
CMB	Columbia Colle	1.99	285	Pn	Pn	18 16 54.8	+0.9
PNTR	Pine Nut	2.02	321	Pn	Pn	18 16 55.7	+1.1
PNTR				IAML		18 17 28.9	
	comp=E,267nm,0.8s						
PNTR				IAML		18 17 36.9	
	comp=N,276nm,0.8s						
R11B	Troy Canyon, C	2.05	66	Pn	Pn	18 16 54.8	-0.1
R11B				IAML		18 17 25.8	
	comp=N,165nm,0.3s						
R11B				IAML		18 17 27.6	
	comp=E,226nm,0.5s						
PRN	Pahroc Range	2.32	92	Pn	Pn	18 16 58.9	+0.3
MPK	Martis Peak	2.40	318		Pg	18 17 05.4	-1.3
MPK				IAML		18 17 40.4	
	comp=E,201nm,1.1s						
MPK				IAML		18 17 44.7	
	comp=N,211nm,1.0s						
GSC	Goldstone, Bar	2.41	157	Pn	Pn	18 17 01.0	+1.2
GSC				IAML		18 17 51.7	
	comp=E,96nm,1.2s						
SHPR	Sheep Range	2.46	114		Pn	18 17 02.0	+1.4
SHPR	Sheep Range	2.46	114	IAML		18 17 49.8	
	comp=E,89nm,0.8s						
PEAR	Peavine Mounta	2.60	324		Pn	18 17 04.7	+2.1
PMPB	Monarch Peak	2.63	241	Pn	Pn	18 17 05.1	+2.4
PMPB				IAML		18 17 58.0	
	comp=N,237nm,0.8s						
BBGB	Big Mountain B	2.64	250		Pn	18 17 04.5	+1.6
CRGC	Crocker Grade	2.69	212		Pb	18 17 09.1	+0.4
AFDM	Forest Hills D	2.76	302		Pn	18 17 05.7	+1.1
AFDM				IAML		18 17 51.9	
	comp=E,80nm,0.6s						
SAO	San Andreas Ge	2.89	256		Pb	18 17 10.7	-1.3
PCCM	Crazy Canyon	2.94	242		Pb	18 17 11.5	-1.5
BEKR	Beckworth	2.99	322		Pn	18 17 10.4	+2.5
V12A	Nelson	3.08	125		Pb	18 17 16.9	+1.5
V12A				IAML		18 18 03.3	
	comp=N,68nm,0.6s						
V12A				IAML		18 18 03.5	
	comp=E,108nm,0.5s						
SPR3	Spring Creek 3	3.21	62		Pn	18 17 11.6	+0.5
DPD	Davis Peak	3.23	226		Pn	18 17 08.7	-2.3
PSUT	Pine Spring	3.39	72		Pn	18 17 13.9	+0.4
LCMT	Little Creek M	3.80	96	Pn	Pn	18 17 19.5	+0.6
LCMT				IAML		18 18 06.3	
	comp=N,40nm,0.6s						
ELK	Elko	3.84	33	Pn	Pn	18 17 20.4	+0.8
ELK				IAML		18 18 23.5	
	comp=N,42nm,0.6s						
ELK				IAML		18 18 23.7	
	comp=N,37nm,0.5s						
W13A	Hualapai Mount	4.09	125		Pg	18 17 35.7	-3.4
PFO	Pinyon Flats O	4.10	162	Pn	Pn	18 17 24.3	+1.3
MVU	Marysvale	4.64	76		Pg	18 17 46.5	-3.1
MVU				IAML		18 18 53.1	
	comp=E,53nm,0.5s						
U15A	North Rim	4.67	102	IAML		18 19 02.5	
	comp=N,47nm,0.8s						
WVOR	Wild Horse Val	4.92	354		Pg	18 17 55.0	0.0
WVOR				IAML		18 19 05.2	
	comp=N,14nm,0.7s						
BGU	Big Grassy Mou	5.11	47	IAML		18 19 04.6	
	comp=N,25nm,0.6s						
Y14A	Wickenburg	5.39	130		Pg	18 18 00.8	-3.2
Y14A				IAML		18 19 14.4	
	comp=N,14nm,0.7s						
Y14A				IAML		18 19 31.9	
	comp=E,12nm,1.1s						
Q16A	Castle Valley	5.52	73		Pg	18 18 06.2	-0.2
WUAZ	Wupatki	5.67	109		Pb	18 18 03.2	+3.7
HLID	Hailey	6.60	23		Pn	18 17 56.8	-0.7

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*NOU **12** 18:36:19.2, 38°.41S×175°.90E, h195^{km}, MLv3.5/10, North Island, New Zealand*

*WEL **12** 18:36:21.2±0.4, 38°S±5°×17°6E±°, h170^{km}, M2.4/25, MLv2.4/25, Error ellipse: s-maj=7.0km s-min=5.7km az=163.8, confirmed*

ISC 12 18:36:17.7±2.0**, 38°.27S**±0°.05×**175°.79E**±0°.05**, h199**^{km}±11^{km}**, n79, **σ1^{s}**25**/92**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLZ	Tolley Road	0.21	253	P	Pn	18 36 44.9	+0.9
KUTZ	Kaahu Road	0.22	174	P	Pn	18 36 44.9	+1.0
WPRZ	Whakapapatarin	0.39	131	P	Pn	18 36 45.3	+0.9
KARZ	Kaharoa	0.43	55	P	Pn	18 36 45.1	+0.6
TOZ	Tahuroa Road	0.58	337	P	Pn	18 36 45.8	+0.8
RATZ	Rangitukua	0.60	182	P	Pn	18 36 46.1	+1.0
TGRZ	Tauranga	0.65	35	P	Pn	18 36 45.9	+0.6
OPRZ	Ohinepanea	0.73	55	P	Pn	18 36 46.3	+0.5
MRHZ	Matea Rd	0.75	139	P	Pn	18 36 46.7	+0.9
MRHZ				S	Sn	18 37 07.1	-0.7
HIZ	Hauiti	0.78	251	P	Pn	18 36 46.9	+1.0
MUGZ	Murupara	0.80	106	P	Pn	18 36 46.8	+0.7
NTVZ	North Tongarir	0.84	186	P	Pn	18 36 47.4	+0.9
TWVZ	Taurewa	0.85	199	P	Pn	18 36 47.7	+1.2
TMVZ	Te Maari	0.85	185	P	Pn	18 36 47.9	+1.4
WTVZ	West Tongariro	0.86	191	P	Pn	18 36 47.8	+1.2
ETVZ	East Tongariro	0.87	184	P	Pn	18 36 48.0	+1.3
NNVZ	North Ngauruho	0.88	189	P	Pn	18 36 48.0	+1.3
OTVZ	Oturere	0.90	186	P	Pn	18 36 48.2	+1.3
OTVZ				S	Sn	18 37 09.1	-0.6
NGZ	Ngauruhoe	0.92	189	P	Pn	18 36 48.3	+1.3
SNVZ	South Ngauruho	0.93	187	P	Pn	18 36 48.4	+1.4
SNVZ				S	Sn	18 37 09.7	-0.4
COVZ	Chateau Observ	0.95	192	P	Pn	18 36 48.3	+1.2
FWVZ	Far West T-bar	1.00	191	P	Pn	18 36 48.8	+1.2
TUVZ	Tukino	1.01	186	P	Pn	18 36 48.8	+1.2
TUVZ				S	Sn	18 37 10.3	-0.6
MTHZ	Maungataniwha	1.01	126	P	Pn	18 36 48.5	+1.1
MTHZ				S	Sn	18 37 09.4	-1.2
WHVZ	Whangaehu Hut	1.03	189	P	Pn	18 36 49.0	+1.2
URZ	Urewera	1.04	90	P	Pn	18 36 47.6	0.0
URZ	Urewera	1.04	90	P	Pn	18 36 48.0	+0.4
URZ				S	Sn	18 37 09.0	-1.7
TRVZ	Turoa	1.05	190	P	Pn	18 36 49.1	+1.2
BKZ	Black Stump Fm	1.05	149	P	Pn	18 36 48.3	+0.6
BKZ	Black Stump Fm	1.05	149	S	Sn	18 37 10.2	-1.0
BKZ	Black Stump Fm	1.05	149	P	Pn	18 36 48.7	+0.9
BKZ				S	Sn	18 37 09.4	-1.9
WNVZ	Wahianoa	1.07	188	P	Pn	18 36 49.2	+1.2
WNVZ				S	Sn	18 37 10.7	-1.1
PKVZ	Pokaka	1.08	199	P	Pn	18 36 49.2	+1.2
MOVZ	Moawhango	1.14	182	P	Pn	18 36 49.2	+0.8
MOVZ				S	Sn	18 37 10.2	-2.3
MTVZ	Mangateitei	1.15	193	P	Pn	18 36 49.7	+1.3
VRZ	Vera Road	1.18	223	P	Pn	18 36 50.2	+1.6
RAHZ	Arahi	1.20	123	P	Pn	18 36 50.5	+1.6
RAHZ				S	Sn	18 37 12.8	-0.3
KWHZ	Kaweka Forest	1.26	157	P	Pn	18 36 50.6	+1.3
MKAZ	Moumakai	1.26	336	P	Pn	18 36 50.2	+0.9
RAGZ	Rawiri	1.29	101	P	Pn	18 36 50.7	+1.0
RAGZ				S	Sn	18 37 13.8	-0.6
SNGZ	Shannon Statio	1.32	113	P	Pn	18 36 51.1	+1.4
MWZ	Matawai	1.37	93	P	Pn	18 36 51.0	+0.8
MWZ				S	Sn	18 37 14.0	-1.4
ARHZ	Aropaoanui	1.37	137	P	Pn	18 36 51.8	+1.7
ARHZ				S	Sn	18 37 15.1	-0.3
MCHZ	McNeill Hill	1.37	149	P	Pn	18 36 52.0	+1.9
WHHZ	Waihua	1.39	126	P	Pn	18 36 52.1	+1.8
KRHZ	Kereru	1.45	162	P	Pn	18 36 52.1	+1.3
AWAZ	Awhitu Peninsu	1.51	322	P	Pn	18 36 52.4	+1.0
RUGZ	Raukumara Rang	1.52	79	P	Pn	18 36 51.4	-0.1
KUZ	Kuaotunu	1.52	358	P	Pn	18 36 52.3	+0.8
WIAZ	Waiheke Island	1.56	340	P	Pn	18 36 52.8	+0.9
RIGZ	Rimuhau	1.61	106	P	Pn	18 36 53.7	+1.4
TKGZ	Te Karaka	1.62	97	P	Pn	18 36 53.8	+1.4
KNZ	Kokohu	1.65	118	P	Pn	18 36 54.0	+1.3
MBAZ	Motutapu North	1.66	334	P	Pn	18 36 53.6	+0.9
NEZ	North Egmont	1.66	232	P	Pn	18 36 55.0	+2.2
PNHZ	Pukenui	1.68	169	P	Pn	18 36 54.0	+1.1
PKE	Pukeiti	1.69	236	P	Pn	18 36 54.9	+1.9
CKHZ	Cape Kidnapper	1.71	145	P	Pn	18 36 54.9	+1.7
TWGZ	Tauwhareparae	1.72	88	P	Pn	18 36 54.7	+1.3
KHEZ	Kahui Hut	1.73	233	P	Pn	18 36 55.6	+2.2
KHEZ	Kahui Hut	1.73	233	P	Pn	18 36 55.7	+2.2
KAHZ	Kahuranaki	1.74	151	P	Pn	18 36 55.4	+1.8

TSZ	Takapari Road	1.79	176	P	Pn	18 36 55.1	+1.0
PKGZ	Pakihiroa	1.85	78	P	Pn	18 36 55.3	+0.7
WPHZ	Waipukurau	1.86	165	P	Pn	18 36 55.8	+1.1
MHGZ	Mahia Peninsul	1.88	119	P	Pn	18 36 56.8	+2.0
CNGZ	Carnagh Statio	1.91	97	P	Pn	18 36 57.0	+1.8
PXZ	Pawanui	1.95	155	P	Pn	18 36 56.9	+1.4
DVHZ	Dannevirke	2.05	172	P	Pn	18 36 57.6	+1.0
PRHZ	Porangahau	2.10	162	P	Pn	18 36 58.4	+1.2
MXZ	Matakaoa Point	2.11	71	P	Pn	18 36 58.4	+1.1
MXZ	Matakaoa Point	2.11	71	P	Pn	18 36 58.3	+1.1
WMGZ	Waiomatatini S	2.12	79	P	Pn	18 36 58.2	+0.9
ANWZ	Angora Road	2.25	167	P	Pn	18 36 59.8	+1.1
BFZ	Birch Farm	2.44	172	P	Pn	18 37 01.4	+0.7
BFZ	Birch Farm	2.44	172	S	Sn	18 37 32.7	-1.9
SNZO	South Karori	3.15	195	P	Pn	18 37 08.6	-0.4
QRZ	Quartz Range	3.59	224	P	Pn	18 37 14.7	+0.4
KHZ	Kahutara	4.49	202	P	Pn	18 37 24.7	-0.7

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*DJA **12** 18:47:08.3±0.3, 7°S±3°×13°1E±°, h66km±28km, M4.3/12, mB5.0/4, mb4.1/9, MLv4.3/12, Mw(mB)4.3/4*

*IDC **12** 18:47:13.9±7.8, 7°.30S×131°.15E, h138km±79km, mb3.5/2, mbtmp4.0/6, Error ellipse: s-maj=63.8km s-min=26.7km az=39.0*

ISC 12 18:47:05.6±0.8, **6°.62S**±0°.05×**131°.34E**±0°.07, **h42**km, **n28**, σ**2ˢ82**/30, **Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.35	182	P	Pn	18 47 32.7	+4.7
SAUI	Saumlaki	1.35	182	P	Pn	18 47 32.7	+4.7
BNDI	Bandanaira	2.53	326	P	Pn	18 47 49.5	+5.3
BNDI	Bandanaira	2.53	326	P	Pn	18 47 47.9	+3.7
KMPI	Kaimana, Papua	3.77	39	P	Pn	18 48 03.6	+2.4
KMPI				S	Sn	18 48 43.6	-0.8
FAKI	Fak Fak	3.79	14	P	Pn	18 48 03.6	+2.0
FAKI	Fak Fak	3.79	14	P	Pn	18 48 03.6	+2.0
FAKI				S	Sn	18 48 44.0	-0.9
AAI	Ambon	4.28	313	P	Pn	18 48 10.9	+2.6
SWI	Sorong	5.72	359	P	Pn	18 48 28.8	+0.7
	0.4nm1μm10nm,0.5s						
DRS	Darwin Rock St	5.79	184	P	Pn	18 48 31.0	+2.0
RKPI	Ransiki, Papua	5.81	29	P	Pn	18 48 31.8	+2.4
KDU	Kakadu	6.13	170	P	Pn	18 48 34.8	+1.1
MTN	Manton Dam	6.18	182	P	Pn	18 48 36.5	+2.0
SANI	Sanana	7.01	310	P	Pn	18 48 49.8	+4.0
SANI	Sanana	7.01	310	P	Pn	18 48 49.4	+3.6
	0.1nm14nm,0.8s						
BAKI	Biak	7.19	42	P	Pn	18 48 51.4	+3.1
	0.1nm17nm,0.8s						
SOEI	Soe	7.66	246	P	Pn	18 48 57.2	+2.3
	32nm,2.1s						
BATI	Baumata	8.39	244	P	Pn	18 49 07.5	+2.7
	12nm,0.4s,baz=56,slow=7.3,SNR=2.1						
BATI				S	Sn	18 50 35.5	-2.7
	12nm,0.3s,baz=121,slow=19,SNR=4.7						
BATI	Baumata	8.39	244	P	Pn	18 49 07.2	+2.5
	25nm,0.9s						
EDFI	Ende, Flores	9.79	257	P	Pn	18 49 28.5	+4.4
FITZ	Fitzroy Crossi	12.69	205	P	Pn	18 50 00.4	-3.2
	4.7nm,0.3s,baz=33,slow=13,SNR=107						
FITZ				S	Sn	18 52 12.6	-11
	2.9nm,0.3s,baz=135,slow=20,SNR=6.4						
WRA	Warramunga Arr	13.56	168	P	Pn	18 50 11.6	-3.8
	1.2nm,0.6s,baz=349,slow=13,SNR=33						
WRA				S	Sn	18 52 30.4	-14
	1.7nm,0.5s,baz=348,slow=24,SNR=9.3						
COEN	Coen	13.73	123	P	Pn	18 50 17.3	-0.6
QIS	Mount Isa	16.00	151	P	Pn	18 50 47.0	-0.9
ASAR	Alice Springs	17.12	172	P	Pn	18 50 59.1	-2.9
	0.6nm,0.5s,baz=345,slow=9.0,SNR=33						
ASAR				S	Sn	18 53 57.9	-14
	0.8nm,0.6s,baz=356,slow=26,SNR=8.2						
AS01	Alice Springs	17.13	172	P	Pn	18 51 00.5	-1.6
MKAR	Makanchi Array	68.65	326	P	P	18 58 05.1	+0.5
	0.8nm,0.4s,baz=115,slow=7.6,SNR=30 0.8nm,0.4s						
KURBB	Kurchatov Arra	72.89	328	P	P	18 58 30.2	-0.1
	0.3nm,0.4s,baz=120,slow=4.9,SNR=5.1 0.3nm,0.4s						

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*IDC **12** 19:01:10.8±1.0, 3°.36S×144°.42E, h0km, mb3.7/7, mbtmp3.6/10, ML3.3/2, MS3.4/4, Error ellipse: s-maj=30.4km s-min=18.8km az=76.0*

ISC 12 19:01:14.6±0.9, **3°.4S**±0°.1×**144°.4E**±0°.1, **h26**km, **n19**, σ**1ˢ53**/12, **mb3.7**/7, **MS3.4**/4, **Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	3.79	283	Pn	Pn	19 02 09.2	-2.3
	0.7nm,0.3s,baz=110,slow=15,SNR=7.0						
JAY				Sn	Sn	19 02 57.1	+1.8
	0.4nm,0.3s,baz=338,slow=19,SNR=2.6 6.5nm,0.9s						
PMG	Port Moresby	6.60	156	Pn	Pn	19 02 48.8	-1.2
	7.1nm,0.6s,baz=318,slow=16,SNR=1.9						
PMG				Sn	Sn	19 04 06.7	+2.2
	0.6nm,0.3s,baz=83,slow=10.0,SNR=1.4						
WRA	Warramunga Arr	19.18	210	P	Pn	19 05 37.1	-0.5
	0.1nm,0.3s,baz=31,slow=11,SNR=12 0.7nm,0.6s						
ASAR	Alice Springs	22.59	206	P	P	19 06 13.9	+0.5
	0.8nm,0.5s,baz=26,slow=11,SNR=20 0.8nm,0.5s						
H11S3	WAKE ISLAND Hy	30.88	45	T	T	19 39 50.5	
	baz=228,slow=76						
H11S2	WAKE ISLAND Hy	30.89	45	T	T	19 39 51.5	
	baz=228,slow=76						
H11S1	WAKE ISLAND Hy	30.90	45	T	T	19 39 52.2	
	baz=228,slow=76						
H11N1	WAKE ISLAND Hy	31.85	43	T	T	19 41 03.7	
	baz=226,slow=76						
H11N2	WAKE ISLAND Hy	31.86	43	T	T	19 41 04.4	
	baz=226,slow=76						
H11N3	WAKE ISLAND Hy	31.86	43	T	T	19 41 04.5	
	baz=226,slow=76						
JOW	Kunigami	33.82	334	LR	LR	19 20 10.9	
	comp=Z,38nm,18.2s,baz=181,slow=34						
NWAO	Narrogin (SRO)	38.88	218	LR	LR	19 23 53.3	
	comp=Z,97nm,19.2s,baz=294,slow=35						
ASAJ	Asahikawa	47.29	358	LR	LR	19 30 43.8	
	comp=Z,19nm,18.6s,baz=155,slow=38						
SONM	Songino Array	60.86	332	P	P	19 11 25.5	+0.5
	0.2nm,0.5s,baz=148,slow=6.8,SNR=1.6						
SONM				LR	LR	19 39 18.4	
	comp=Z,38nm,18.5s,baz=186,slow=38 0.2nm,0.5s						
MKAR	Makanchi Array	73.83	321	P	P	19 12 49.0	+1.9
	0.5nm,0.7s,baz=98,slow=7.5,SNR=5.3 0.5nm,0.7s						
KURBB	Kurchatov Arra	77.58	323	P	P	19 13 08.7	+0.3
	0.4nm,0.9s,baz=104,slow=3.9,SNR=2.7 0.4nm,0.9s						
BVAR	Borovoye Array	83.13	324	P	P	19 13 38.9	+0.7
	0.7nm,0.6s,baz=116,slow=6.8,SNR=3.6 0.7nm,0.6s						
ILAR	Eielson Array	84.10	24	P	P	19 13 42.0	-1.0
	0.5nm,0.9s,baz=255,slow=4.8,SNR=2.4 0.5nm,0.9s						
QSPA	South Pole Qui	86.59	180	P	P	19 13 54.9	-0.6
	1.3nm,0.9s,baz=27,slow=2.3,SNR=5.7 1.3nm,0.9s						

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*IDC **12** 19:13:34.1±1.4, 4°.95S×152°.89E, h0km, mb3.8/7, mbtmp3.8/7, MS2.9/2, Error ellipse: s-maj=51.5km s-min=25.2km az=99.0*

ISC 12 19:13:40.4±1.6, **5°.0S**±0°.2×**152°.9E**±0°.4, **h43**km, **n9**, σ**0ˢ99**/9, **mb3.8**/7, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.23	232	LR	LR	19 17 39.6	
	comp=Z,89nm,19.7s,baz=10,slow=34						
HNR	Honiara	8.26	123	LR	LR	19 18 29.9	
	comp=Z,67nm,18.2s,baz=171,slow=36						
WRA	Warramunga Arr	23.43	229	P	P	19 18 44.9	-1.1
	0.6nm,0.6s,baz=52,slow=10,SNR=9.2						
WRA				PcP	PcP	19 22 31.9	+0.4
	0.3nm,0.8s,baz=55,slow=2.6,SNR=1.4 0.6nm,0.6s						
ASAR	Alice Springs	26.12	223	P	P	19 19 10.1	-0.5
	0.5nm,0.7s,baz=56,slow=9.1,SNR=12						
ASAR				PcP	PcP	19 22 37.3	-0.1
	0.2nm,0.7s,baz=30,slow=2.4,SNR=1.3 0.5nm,0.7s						
STKA	Stephens Creek	28.81	200	P	P	19 19 35.9	+1.4
	2.7nm,1.0s,baz=335,slow=18,SNR=3.0 2.7nm,1.0s						
MKAR	Makanchi Array	80.53	319	P	P	19 25 49.0	+0.8
	0.6nm,0.8s,baz=94,slow=5.8,SNR=4.9 0.6nm,0.8s						
ZALV	Zalesovo Beam	81.36	326	P	P	19 25 52.6	+0.2
	0.6nm,0.5s,baz=108,slow=7.0,SNR=2.0 0.6nm,0.5s						
QSPA	South Pole Qui	85.00	180	P	P	19 26 10.1	-1.1
	0.7nm,0.5s,baz=44,slow=18,SNR=9.6 0.7nm,0.5s						
BVAR	Borovoye Array	89.44	323	P	P	19 26 32.2	-0.5
	0.6nm,0.8s,baz=101,slow=6.0,SNR=3.0 0.6nm,0.8s						

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*AEIC **12** 19:14:57.3±0.8, 53°.9N±0°.2×166°.0W±0°.3, h74km±9km, Error ellipse: s-maj=41.3km s-min=4.5km az=149.0*

NEIC 12 19:14:57.8±0.8, **53°.8N**±0°.2×**165°.9W**±0°.2, **h69**km±12km, **ML2.6**/8, **ML2.3**(AEIC), **Error ellipse: s-maj=25.8km s-min=4.7km az=150.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZRO	Akutan Zero	0.32	349		Pn	19 15 09.0	-0.1
ZRO					Sn	19 15 17.9	+0.6
AKBBA	Akutan Broad B	0.33	354		Pn	19 15 09.0	-0.1
AKBBA					Sn	19 15 17.8	+0.5
AKUT	Akutan	0.37	10		Pn	19 15 09.3	0.0
AKUT				IAML		19 15 18.7	
	comp=N,351nm,0.1s						
AKUT	Akutan	0.37	10		Sn	19 15 18.4	+0.7
UNV	Unalaska Valle	0.38	281		Pn	19 15 09.3	-0.1
UNV				IAML		19 15 20.4	
	comp=N,144nm,0.3s						
UNV	Unalaska Valle	0.38	281		Sn	19 15 18.6	+0.7
LVA	Lava Point	0.40	346		Pn	19 15 09.4	-0.2
LVA				IAML		19 15 21.1	
	comp=N,188nm,0.6s						
LVA	Lava Point	0.40	346		Sn	19 15 18.6	+0.3
MTBL	Makushin Table	0.51	293		Pn	19 15 10.9	+0.1
MTBL					Sn	19 15 20.9	+0.7
MREP	Makushin Rep’t	0.52	274		Pn	19 15 10.7	-0.1
MREP					Sn	19 15 21.0	+0.8
MGOD	Makushin Gods	0.59	272		Pn	19 15 11.3	-0.2
MGOD					Sn	19 15 22.1	+0.5
MAPS	Pakushin South	0.63	273		Sn	19 15 22.5	+0.2
WECS	Westdahl Cape	0.99	40		Pn	19 15 16.2	0.0
WECS					Sn	19 15 30.7	+0.8
WEBT	Westdahl Beart	1.05	38		Pn	19 15 16.6	-0.3
WEBT					Sn	19 15 31.6	+0.5
OKFG	Magazine Ridge	1.27	254		Pn	19 15 19.4	-0.3
OKTU	Okmok Mt. Tuli	1.35	254		Pn	19 15 20.6	-0.2
OKTU					Sn	19 15 37.1	-1.0
OKNC	Okmok New Cone	1.38	258		Pn	19 15 20.4	-0.7
OKNC					Sn	19 15 37.8	-0.8
ISLZ	Isanotski Laza	1.59	52		Pn	19 15 24.1	+0.1
ISNN	Isanotski Nort	1.62	48		Pn	19 15 25.1	+0.8
FALS	False Pass	1.80	52		Pn	19 15 27.4	+0.7
FALS	False Pass	1.80	52	IAML		19 15 57.2	
	comp=E,99nm,0.5s						

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*NEIC **12** 20:03:59.3±1.4, 43°.82N±0°.06×105°.23W±0°.07, h0km±1km, ML3.3/46, Error ellipse: s-maj=10.4km s-min=7.1km az=327.0*

*IDC **12** 20:04:02.4±1.0, 44°.21N×105°.88W, h0km, mb3.6/2, mbtmp3.5/5, ML3.5/3, MS3.3/2, Error ellipse: s-maj=27.8km s-min=8.8km az=143.0*

ISC 12 20:04:01.0±0.9, **43°.82N**±0°.07×**105°.29W**±0°.07, **h0**km, **n26**, σ**0ˢ97**/17, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.95	71		Pb	20 04 19.9	-0.7
K22A	Casper	1.47	218		Pn	20 04 26.8	-2.2
K22A				IAML		20 04 52.2	
	302nm,0.3s						
LAO	LASA Array	2.95	347		Pn	20 04 49.8	+0.6
LAO				IAML		20 05 34.3	
	171nm,0.8s						
RLMT	Red Lodge	3.13	296		Pn	20 04 52.1	+0.2
RLMT				IAML		20 05 44.7	
	61nm,0.3s						
RLMT				IAML		20 05 49.6	
	56nm,0.4s						
BW06	Boulder Array	3.29	253		Pn	20 04 54.2	+0.2
BW06				IAML		20 05 43.2	
	52nm,0.3s						
PD31	Pinedale Array	3.29	253		Pn	20 04 54.0	0.0
PDAR	Pinedale Array	3.29	253	Pn	Pn	20 04 54.5	+0.4
	2.9nm,0.3s,baz=62,slow=15,SNR=36						
PDAR				Lg	Lg	20 05 38.8	
	19nm,0.3s,baz=64,slow=28,SNR=3.0 4.3nm,0.3s						
YNE	Yellowstone No	3.59	291		Pn	20 04 58.0	-0.2
YNE				IAML		20 05 58.3	
	comp=N,62nm,0.8s						
YNE				IAML		20 05 58.3	
	comp=E,54nm,0.6s						
YMP	Mirror Lake Pl	3.62	286		Pn	20 04 58.9	+0.2
YMP				IAML		20 05 59.5	
	comp=E,94nm,1.0s						
GCMT	Greycliff	3.69	304		Pn	20 04 59.8	+0.4
OGNE	Ogallala	3.75	139		Pn	20 05 01.0	+0.8
H17A	Grant Village	3.85	280		Pn	20 05 02.5	+0.6
H17A				IAML		20 06 06.7	
	comp=N,30nm,1.2s						
LOHW	Long Hollow	3.86	269		Pn	20 05 03.0	+1.1
TPAW	Teton Pass	4.12	267	IAML		20 06 22.9	
	comp=N,24nm,1.0s						
TPAW				IAML		20 06 30.9	
	comp=N,44nm,1.1s						
YHL	Hebgen Lake	4.36	286	IAML		20 06 23.9	
	comp=N,30nm,1.2s						
YHL				IAML		20 06 44.7	
	comp=E,37nm,1.1s						
AHID	Auburn Hatcher	4.37	258	IAML		20 06 27.1	
	comp=E,32nm,1.4s						
AHID				IAML		20 06 33.8	
	comp=E,28nm,1.2s						
BOZ	Bozeman (W)	4.86	294	IAML		20 06 34.5	
	comp=E,17nm,1.1s						
BOZ				IAML		20 06 34.5	
	comp=E,19nm,1.2s						
HWUT	Hardware Ranch	5.12	247	IAML		20 06 44.1	
	comp=E,27nm,1.1s						
BSUT	Blindstream Ca	5.22	233	IAML		20 07 04.6	
	comp=N,16nm,1.2s						
BSUT				IAML		20 07 04.9	
	comp=E,14nm,1.3s						
ULM	Lac du Bonnet	9.09	42	Pn	Pn	20 06 13.2	-0.3
	comp=E,2.1nm,0.3s,baz=232,slow=12,SNR=14						
ULM				Lg	Lg	20 08 43.6	
	comp=E,0.4nm,0.3s,baz=130,slow=22,SNR=3.6 comp=E,4.1nm,0.3s						
I56US	NEWPORT INFRAS	9.36	303	I	I	21 01 40.0	
	baz=116,slow=319,SNR=3.9						
TXAR	Lajitas Array	14.51	174	Pn	P	20 07 36.5	+1.9
	baz=348,slow=13,SNR=3.1						
TXAR				Lg	Lg	20 11 40.1	
	baz=350,slow=27,SNR=3.5 comp=E,0.2nm,0.5s						
TIXI	Tiksi	58.66	343	LR	LR	20 39 29.1	
	comp=E,22nm,21.8s,baz=188,slow=37						
ARCES	ARCESS Array B	61.35	18	P	P	20 14 17.1	-0.9
	comp=E,0.6nm,0.7s,baz=338,slow=6.8,SNR=0.8 comp=E,0.6nm,0.7s						
BELG	Belogornoye	81.36	16	LR	LR	20 52 52.8	
	comp=E,24nm,18.9s,baz=67,slow=36						
MKAR	Makanchi Array	89.53	355	P	P	20 16 59.4	-0.7
	comp=E,0.2nm,0.6s,baz=19,slow=4.9,SNR=2.6 comp=E,0.2nm,0.6s						

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*IDC **12** 20:28:22.4±1.0, 16°.98N×123°.04E, h0km, mb3.4/8, mbtmp3.4/8, ML4.9/1, MS3.0/2, Error ellipse: s-maj=30.1km s-min=18.0km az=80.0*

ISC 12 20:28:27.6±1.0, **17°.00N**±0°.10×**123°.1E**±0°.2, **h35**km, **n16**, σ**1ˢ30**/10, **mb3.5**/8, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	3.54	216	Pn	Pn	20 29 19.5	-0.6
	114nm,0.3s,baz=6.2,slow=3.7,SNR=6.8						
TGY				Sn	Sn	20 30 02.5	+1.7
	42nm,0.3s,baz=75,slow=12,SNR=4.2						
DAV	Davao City (W)	10.16	166	LR	LR	20 35 15.1	
	comp=Z,59nm,20.8s,baz=314,slow=41						
CMAR	Chiang Mai Arr	23.03	277	P	P	20 33 29.1	-0.8
	0.4nm,0.6s,baz=95,slow=11,SNR=1.7 0.4nm,0.6s						
SONM	Songino Array	33.67	340	P	P	20 35 04.6	-0.7
	0.5nm,0.6s,baz=161,slow=8.4,SNR=4.4						
SONM				LR	LR	20 48 57.2	
	comp=Z,38nm,18.7s,baz=185,slow=37 0.5nm,0.6s						
WRA	Warramunga Arr	38.34	163	P	P	20 35 44.5	-0.8
	0.9nm,1.1s,baz=343,slow=9.1,SNR=4.5 0.9nm,1.1s						
H11S3	WAKE ISLAND Hy	41.49	81	T	T	21 21 03.0	
	baz=275,slow=74						
H11S1	WAKE ISLAND Hy	41.51	81	T	T	21 21 03.8	
	baz=275,slow=74						
H11S2	WAKE ISLAND Hy	41.51	81	T	T	21 21 04.8	
	baz=275,slow=74						
H11N1	WAKE ISLAND Hy	41.60	79	T	T	21 21 10.1	
	baz=274,slow=74						
H11N2	WAKE ISLAND Hy	41.60	79	T	T	21 21 12.9	
	baz=274,slow=74						
H11N3	WAKE ISLAND Hy	41.61	79	T	T	21 21 13.0	
	baz=274,slow=74						
ASAR	Alice Springs	41.78	165	P	P	20 36 13.6	-0.2
	0.4nm,0.6s,baz=350,slow=7.2,SNR=6.3 0.4nm,0.6s						
MKAR	Makanchi Array	44.85	320	P	P	20 36 40.0	+1.5
	0.2nm,0.7s,baz=120,slow=8.5,SNR=1.8 0.2nm,0.7s						
PETK	Petropavlovsk-	45.05	29	P	P	20 36 41.3	+1.3
	1.2nm,0.8s,baz=224,slow=7.5,SNR=3.2 1.2nm,0.8s						
KURBB	Kurchatov Arra	48.82	324	P	P	20 37 08.2	-1.2
	0.2nm,0.5s,baz=118,slow=8.1,SNR=4.2 0.2nm,0.5s						
BVAR	Borovoye Array	54.41	324	P	P	20 37 50.1	-1.1
	0.4nm,0.6s,baz=116,slow=6.6,SNR=2.3 0.4nm,0.6s						

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*SOF **12** 21:02:26.5, 40°.77N±0°.01×25°.26E±0°.01, h5km±2km, MD2.8/5*

*ISK **12** 21:02:26.2, 40°.74N×25°.22E, h10km, ML2.7/18*

*ATH **12** 21:02:26.6, 40°.73N×25°.23E, h13km±1km, ML2.6/12, Manual Solution by A.Papageorgiou First location: 2019/06/12 21:03:34, This location: 2019/06/12 22:48:58 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

*AFAD **12** 21:02:27.3, 40°.68N×25°.27E, h7km±3km, ML2.6*

THE 12 21:02:27.1, 40°.8N±0°.8×**25°.2E**±0°.7, **h6**km±1km, **M2.4**/18, **MLh2.4**/18, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XANC	Avdira	0.31	318	P	Pg	21 02 33.2	0.0
XANC				S	Sg	21 02 37.8	+0.5
THAS	Thassos island	0.41	250	P	Pg	21 02 35.0	0.0
THAS				S	Sg	21 02 40.6	+0.2
THAS	Thassos island	0.41	250	P	Pg	21 02 34.7	-0.3
THAS				S	Sg	21 02 40.5	+0.1
RDO	Rodhopi	0.46	30	Pg	Pg	21 02 35.7	-0.4
RDO				Sg	Sg	21 02 42.7	+0.6
RDO	Rodhopi	0.46	30	P	Pg	21 02 35.8	-0.3
RDO				S	Sg	21 02 42.3	+0.2
RDO	Rodhopi	0.46	30	P	Pg	21 02 35.5	-0.6
RDO				S	Sg	21 02 42.4	+0.3
ALEX	Alexandroupoli	0.52	78	P	Pg	21 02 37.0	-0.2
ALEX				S	Sg	21 02 44.9	+0.9
KAVA	Kavala	0.60	295	P	Pg	21 02 38.6	+0.1
KAVA				S	Sg	21 02 47.0	+0.7
KAVA	Kavala	0.60	295	P	Pg	21 02 38.3	-0.3
KAVA				S	Sg	21 02 46.5	+0.2
ALN	Alexandroupoli	0.64	76	Pg	Pg	21 02 39.1	-0.3
ALN				Sg	Sg	21 02 47.9	+0.2
ALN	Alexandroupoli	0.64	76	P	Pg	21 02 39.1	-0.3
ALN				S	Sg	21 02 47.9	+0.2
KVLA	Kavala	0.67	287	P	Pg	21 02 39.7	-0.2
KVLA				S	Sg	21 02 48.7	+0.1
ENEZ	Enez	0.70	91	Pg	Pg	21 02 40.6	0.0
ENEZ				Sg	Sg	21 02 50.5	+0.7
ENZZ	Sultanice-Enez	0.71	101	Pg	Pg	21 02 40.5	-0.2
ENZZ				Sg	Sb	21 02 51.1	-0.7
CAVK	Edirne/Enez-Ca	0.72	94	P	Pg	21 02 40.8	-0.1
CAVK				S	Sg	21 02 50.0	-0.2
GADA	Gvkgeada	0.76	137	Pg	Pg	21 02 41.7	+0.1
GADA				Sg	Sg	21 02 52.0	+0.6
GADA	Gvkgeada	0.76	137	P	Pg	21 02 41.6	0.0
GADA				S	Sg	21 02 52.0	+0.6
GOAD	anakkale-G¶	0.78	138	P	Pg	21 02 42.6	+0.5
GOAD				S	Sg	21 02 52.1	-0.2
GOAD				*i* IAML		21 02 57.0	
	comp=N,379nm,0.2s						
LIA	Limnos Island	0.85	182	P	Pg	21 02 43.1	-0.3
LIA				S	Sb	21 02 55.2	-0.6
LIA	Limnos Island	0.85	182	P	Pg	21 02 42.9	-0.5
LIA				S	Sb	21 02 55.2	-0.6
KDZ	Kurdzhali	0.89	5	Pg	Pg	21 02 43.9	-0.2
KDZ	Kurdzhali	0.89	5	P	Pg	21 02 43.5	-0.6
KDZ				Sg	Sg	21 02 55.4	-0.3
KDZ	Kurdzhali	0.89	5	P	Pg	21 02 44.0	-0.2
ERIK	Erikli-Kesan	0.98	94	Pg	Pg	21 02 45.3	-0.6
ECEA	Canakkale, Ece	1.01	134	P	Pg	21 02 46.1	-0.3
ECEA				S	Sg	21 02 59.8	+0.3
ECEA				*i* IAML		21 03 02.0	
	comp=N,158nm,0.3s						
GELI	Tayfur-Gelibol	1.01	110	Pg	Pg	21 02 46.2	-0.3
GELI				Sg	Sb	21 03 00.1	-0.4
RZN	Rozhen	1.01	339	*i* P	Pg	21 02 46.2	-0.4
RZN				Sg	Sb	21 03 01.6	+0.7
OUR	Ouranopolis	1.03	247	Pg	Pg	21 02 46.6	-0.3
OUR	Ouranopolis	1.03	247	P	Pg	21 02 46.5	-0.4
OUR				S	Sb	21 03 01.1	-0.1
OUR	Ouranopolis	1.03	247	P	Pg	21 02 46.5	-0.5
OUR				S	Sb	21 03 00.8	-0.4
BOZC	Bozcaada	1.10	145	Pn	Pg	21 02 47.8	-0.4
BOZC				Sn	Sg	21 03 02.7	+0.2
BOZC	Bozcaada	1.10	145	P	Pg	21 02 47.1	-1.2
BOZC				P	Pb	21 02 47.4	-1.2
BOZC				S	Sg	21 03 01.7	-0.8
BOZC				S	Sb	21 03 02.0	-1.2
BOZC				*i* IAML		21 03 06.0	
	comp=E,210nm,0.7s						
KESN	Edirne-Kesan	1.11	85	P	Pg	21 02 47.5	-0.9
KESN				S	Sb	21 03 03.6	0.0
KESN				*i* IAML		21 03 10.0	
	comp=N,199nm,0.4s						
KESN				*i* IAML		21 03 10.0	
	comp=E,333nm,0.3s						
CNKL	anakkale-Mer	1.12	127	P	Pg	21 02 47.2	-1.3
CNKL				P	Pb	21 02 47.6	-1.2
CNKL				S	Sg	21 03 02.0	-1.0
UKOP	Uzunkopru-Edir	1.13	70	Pn	Pg	21 02 48.8	0.0
COMU	Canakkale	1.15	124	Pn	Pg	21 02 48.9	-0.3
EFSA	Agios Efstrati	1.22	189	P	Pg	21 02 49.1	-1.4
EFSA				S	Sg	21 03 05.9	-0.3
LPK	Lapseki	1.23	107	Pn	Pg	21 02 50.1	-0.5
EZN	Ezine	1.25	137	Pn	Pb	21 02 49.8	-1.2
EZN	Ezine	1.25	137	P	Pb	21 02 50.1	-0.9
TRGA	Dikaia	1.25	40	P	Pb	21 02 50.1	-1.0
TRGA				S	Sb	21 03 07.4	0.0
SRS	Serrai	1.29	287	P	Pn	21 02 50.7	-1.0
SRS				S	Sg	21 03 08.5	-0.2
SRS	Serrai	1.29	287	P	Pn	21 02 50.3	-1.4
SRS				S	Sg	21 03 07.9	-0.8
EZNE	Ezine-Canakkal	1.32	138	Pn	Pn	21 02 50.1	-1.9
DIM	Dimitrovgrad	1.32	11	*i* P	Pn	21 02 51.9	-0.2
DIM				S	Sn	21 03 09.9	-0.2
MMB	Musomishta	1.37	306	P	Pn	21 02 52.8	0.0
MMB				Sg	Sn	21 03 11.8	+0.5
MMB	Musomishta	1.37	306	P	Pn	21 02 52.2	-0.6
MMB				S	Sb	21 03 11.1	+0.1
PLG	Polygyros	1.41	255	P	Pn	21 02 52.1	-1.2
PLG				S	Sb	21 03 12.1	+0.1

PLG	Polygyros	1.41	255	P	Pn	21 02 51.7	-1.6
PLG				S	Sb	21 03 11.3	-0.7
SOH	Sokhos	1.42	274	P	Pn	21 02 52.5	-1.0
SOH				S	Sb	21 03 12.4	-0.1
SOH	Sokhos	1.42	274	P	Pn	21 02 52.2	-1.4
SOH				S	Sb	21 03 11.9	-0.6
BAYC	CANAKKALE_Bayr	1.43	134	P	Pn	21 02 52.9	-0.6
BAYC				S	Sb	21 03 09.7	-2.8
BAYC				*i* IAML		21 03 13.0	
	comp=N,88nm,0.4s						
BAYC				*i* IAML		21 03 13.0	
	comp=E,81nm,0.3s						
KOCA	Canakkale, Ayv	1.43	150	P	Pn	21 02 52.4	-1.1
PAIG	Paliouri	1.44	236	Pn	Pn	21 02 52.1	-1.6
PAIG				Sn	Sb	21 03 10.9	-1.9
PAIG	Paliouri	1.44	236	P	Pn	21 02 52.0	-1.7
PLD	Plovdiv	1.44	346	Pn	Pn	21 02 52.9	-0.9
PLD	Plovdiv	1.44	346	P	Pb	21 02 54.2	-0.2
PLD				Sg	Sg	21 03 14.4	+0.9
PLD	Plovdiv	1.44	346	P	Pn	21 02 53.8	0.0
PLD				S	Sb	21 03 12.7	-0.4
SART	Tekirdag	1.48	92	P	Pb	21 02 54.9	-0.3
EDRB	Edirne	1.58	46	Pn	Pn	21 02 55.2	-0.5
SIGR	SIGRI	1.61	162	Pn	Pn	21 02 55.6	-0.4
SIGR	SIGRI	1.61	162	P	Pn	21 02 55.1	-0.9
SIGR				S	Sb	21 03 17.5	-0.2
SIGR	SIGRI	1.61	162	P	Pn	21 02 53.9	-2.1
SIGR				S	Sn	21 03 15.6	-1.4
HORT	Hortiatis	1.62	265	P	Pn	21 02 55.4	-0.9
HORT	Hortiatis	1.62	265	P	Pn	21 02 55.0	-1.3
PRK	Paraskevi	1.70	152	P	Pn	21 02 56.5	-0.8
KNT	Kendrikon	1.81	284	P	Pn	21 02 58.1	-0.7
KNT				S	Sn	21 03 21.2	-0.9
AYVA	Ayvalik	1.82	142	P	Pn	21 02 58.5	-0.5
BUHA	Balikesir, Bur	1.89	131	P	Pn	21 02 59.6	-0.3
PLNA	Plana	2.19	323	P	Pg	21 03 08.6	-0.5
PLNA				Sg	Sg	21 03 39.2	+1.6
MPEP	Malo Peshtene	2.83	337	P	Pn	21 03 14.8	+1.9

CATAC ***12*** *21:12:20.5±0.5, 14°N±4°×9°0W±°, h51^{km}±5^{km}, M3.6/18, MLv3.6/18, Error ellipse: s-maj=10.0km s-min=4.9km az=19.5, confirmed*

SNET ***12*** *21:12:20.4±0.8, 13°.66N×90°.28W, h72^{km}±4^{km}, ML3.4*

GCG ***12*** *21:12:21.9±1.4, 13°.73N×90°.19W, h69^{km}±12^{km}, MD4.1, ML3.7*

ISC 12 21:12:22.0±1.8**, 13°.65N**±0°.08×**90°.24W**±0°.06**, h67**^{km}±12^{km}**, n56, σ0^{s}.74**/63**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAME	Alcaldia de Sa	0.29	48	P	Pn	21 12 32.3	-0.5
NUBE	Las Nubes	0.51	60	*i* P	Pn	21 12 34.4	-0.5
NUBE				*i* S	Sn	21 12 45.2	+0.9
NUBE	Las Nubes	0.51	60	P	Pn	21 12 34.3	-0.6
LOAL	Lomas de Alarc	0.57	52	*e*P	Pn	21 12 34.9	-0.4
LOAL	Lomas de Alarc	0.57	52	P	Pn	21 12 34.7	-0.6
LOAL	Lomas de Alarc	0.57	52	S	Sn	21 12 46.0	+0.9
SLOZ	Alcaldia de Sa	0.58	49	*e*P	Pn	21 12 35.0	-0.4
SLOZ	Alcaldia de Sa	0.58	49	P	Pn	21 12 34.7	-0.8
CEVE	Cerro Verde	0.62	73	*i* P	Pn	21 12 35.8	-0.4
CEVE				*e*S	Sn	21 12 48.0	+1.5
CEVE				IAML		21 12 49.3	
	comp=Z,1µm,0.1s						
CEVE	Cerro Verde	0.62	73	P	Pn	21 12 35.7	-0.4
SNJE	San Jose	0.65	70	*i* P	Pn	21 12 36.0	-0.4
FG16	Alotenango, Sa	0.68	337	*e*P	Pn	21 12 40.3	+3.6
FG16				IAML		21 13 04.4	
	comp=N,13µm,0.2s						
FG8	Yepocapa, Chim	0.69	333	*i* P	Pn	21 12 40.6	+3.8
FG8				*i* S	Sn	21 12 55.5	+7.9
UNIC	Universidad Ca	0.75	63	P	Pn	21 12 36.5	-0.8
JAYA	Jayaque - finc	0.77	89	*e*P	Pn	21 12 37.0	-0.7
JAYA				*e*S	Sn	21 12 49.5	+0.3
JAYA	Jayaque - finc	0.77	89	*i* P	Pn	21 12 36.9	-0.7
JAYA				*e*S	Sn	21 12 49.0	-0.2
JAYA	Jayaque - finc	0.77	89	P	Pn	21 12 37.0	-0.7
CEDA	San Andres	0.83	79	*e*P	Pn	21 12 37.7	-0.7
PMON	Piamonte	0.90	86	P	Pn	21 12 38.5	-0.7
PMON	Piamonte	0.90	86	S	Sn	21 12 52.9	+1.0
LALI	Alcalda de L	0.91	100	*e*P	Pn	21 12 38.5	-0.7
LALI				*e*S	Sn	21 12 52.5	+0.6
LALI				IAML		21 12 55.6	
	comp=Z,375nm,0.3s						
LALI	Alcalda de L	0.91	100	*e*P	Pn	21 12 38.5	-0.7
LALI				*i* S	Sn	21 12 52.1	+0.2
LALI				IAML		21 12 54.5	
	comp=E,256nm,0.4s						
LALI	Alcalda de L	0.91	100	P	Pn	21 12 38.3	-0.9
ESSG	Sabana Grande	0.93	322	*i* P	Pn	21 12 38.9	-0.8
ESSG				*e*S	Sn	21 12 52.2	-0.5
ESSG				IAML		21 12 53.9	
	comp=N,2µm,0.1s						
ITCA	Escuela Especi	0.93	88	P	Pn	21 12 39.0	-0.7
ITCA	Escuela Especi	0.93	88	S	Sn	21 12 52.9	+0.3
BOQS	Boqueron	0.94	84	*e*P	Pn	21 12 39.0	-0.8
UEES	Universidad Ev	0.97	86	P	Pn	21 12 39.7	-0.5
UEES	Universidad Ev	0.97	86	S	Sn	21 12 54.2	+0.6
LOMA	Loma Larga	1.04	90	*e*P	Pn	21 12 40.5	-0.5
LOMA	Loma Larga	1.04	90	P	Pn	21 12 40.5	-0.5
LOMA	Loma Larga	1.04	90	S	Sn	21 12 55.0	0.0
LFU	La Fuente	1.10	84	*e*P	Pn	21 12 41.1	-0.5
MTO3	Montecristo	1.13	49	*i* P	Pn	21 12 41.6	-0.7
MTO3	Montecristo	1.13	49	*i* P	Pn	21 12 41.6	-0.7
MTO3	Montecristo	1.13	49	P	Pn	21 12 41.4	-0.9
MTO3	Montecristo	1.13	49	S	Sn	21 12 57.3	-0.2
LFRS	El Faro	1.14	91	*e*P	Pn	21 12 42.1	-0.2
ESQI	Esquipulas	1.26	44	*i* P	Pn	21 12 43.5	-0.3
ESQI				*e*S	Sn	21 13 00.5	+0.4
ESQI	Esquipulas	1.26	44	P	Pn	21 12 43.4	-0.4
PAVA	Las Pavas	1.27	87	P	Pn	21 12 43.2	-0.7
PAVA	Las Pavas	1.27	87	S	Sn	21 13 00.3	0.0
COEG	Centro de Oper	1.32	91	*e*P	Pn	21 12 44.1	-0.5
COEG				*e*S	Sn	21 13 02.8	+1.3
COEG				IAML		21 13 09.3	
	comp=Z,814nm,0.2s						
COEG	Centro de Oper	1.32	91	P	Pn	21 12 44.3	-0.3
COEG	Centro de Oper	1.32	91	S	Sn	21 13 01.8	+0.3
STG0	El Palmar, Qui	1.32	306	*i* P	Pn	21 12 49.7	+4.9
STG0				*i* S	Sn	21 13 10.7	+8.9
LLGN	La Laguna	1.36	68	P	Pn	21 12 44.3	-0.8
UESV	Universidad de	1.41	90	P	Pn	21 12 45.3	-0.4
TECO	Alcaldia de Te	1.42	94	*e*P	Pn	21 12 44.8	-1.1
TECO	Alcaldia de Te	1.42	94	P	Pn	21 12 45.1	-0.8
SCLA	Alcaldia de Sa	1.47	88	P	Pn	21 12 45.9	-0.6
SCLA	Alcaldia de Sa	1.47	88	S	Sn	21 13 05.9	+0.9
SOKI	Kika Raxquin	1.63	316	*e*S	Sn	21 13 11.3	+2.1
TECA	Tecapa	1.69	95	*e*P	Pn	21 12 49.2	-0.5
TECA				*e*P	Pn	21 12 49.2	-0.5
PACA	Pacayal	1.87	95	S	Sn	21 13 16.3	+1.6
PACA	Pacayal	1.87	95	P	Pn	21 12 51.9	-0.1

IDC ***12*** *21:15:18.5±1.5, 2°.28N×127°.47E, h0^{km}, mb3.6/6, mbtmp3.7/6, Error ellipse: s-maj=107.6km s-min=19.0km az=68.0*

DJA ***12*** *21:15:46.2±1.1, 2°N±8°×12°8E±°, h198^{km}±13^{km}, M3.5/6, MLv3.5/6*

ISC 12 21:15:38.7±1.4**, 2°.5N**±0°.1×**128°.8E**±0°.2**, h200**^{km}**, n8, σ2^{s}.75**/8**, mb3.6**/5**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	3.51	290	P	Pn	21 16 36.3	+1.8
SANI	Sanana	5.30	212	P	Pn	21 16 58.5	+1.4
FITZ	Fitzroy Crossi	20.67	189	P	P	21 19 58.4	-4.9
	2.0nm,1.0s,baz=354,slow=9.2,SNR=1.7						
	2.0nm,1.0s						
WRA	Warramunga Arr	22.91	167	P	P	21 20 26.4	+1.0
	0.5nm,0.3s,baz=338,slow=11,SNR=6.8						
	0.5nm,0.3s						
ASAR	Alice Springs	26.44	169	P	P	21 20 58.4	+1.1
	0.5nm,0.5s,baz=352,slow=7.4,SNR=18						
	0.5nm,0.5s						
STKA	Stephens Creek	36.24	161	P	P	21 22 24.3	+1.6
	1.6nm,0.8s,baz=333,slow=9.0,SNR=5.2						
	1.6nm,0.8s						
MKAR	Makanchi Array	59.79	325	P	P	21 25 21.8	-1.1
	0.3nm,0.5s,baz=120,slow=7.4,SNR=6.6						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	63.93	327	P	P	21 25 48.8	-1.5
	0.6nm,0.5s,baz=130,slow=5.5,SNR=4.5						
	0.6nm,0.5s						

IDC ***12*** *21:18:54.8±1.7, 0°.14N×126°.53E, h0^{km}, mb3.5/4, mbtmp3.5/4, MS3.0/1, Error ellipse: s-maj=182.4km s-min=21.6km az=66.0*

DJA ***12*** *21:18:57.0±0.7, 0°N±3°×12°7E±°, h14^{km}±6^{km}, M3.6/11, mb3.7/1, MLv3.5/11*

ISC 12 21:18:59.8±1.0**, 0°.30N**±0°.07×**126°.98E**±0°.09**, h50**^{km}**, n9, σ1^{s}.64**/9**, mb3.5**/4**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.61	40	P	Pn	21 19 11.1	-1.3
TNTI				S	Sn	21 19 21.1	-0.4
SANI	Sanana	2.54	203	P	Pn	21 19 38.4	-0.2
KMSI	Cibinong	3.01	275	P	Pn	21 19 43.1	-1.9
NLAI	Namlea	3.52	178	P	Pn	21 19 49.8	-2.3
WRA	Warramunga Arr	21.37	161	P	P	21 23 43.4	+0.1
	0.4nm,0.3s,baz=338,slow=11,SNR=9.5						
	0.4nm,0.3s						
ASAR	Alice Springs	24.76	165	P	P	21 24 18.5	+1.5
	0.5nm,0.4s,baz=341,slow=10,SNR=14						
	0.5nm,0.4s						
JNU	Nakatsue	32.85	6	LR	LR	21 44 16.3	
	comp=Z,21nm,18.2s,baz=164,slow=46						
MKAR	Makanchi Array	60.51	326	P	P	21 29 06.1	+1.2
	0.2nm,0.3s,baz=116,slow=7.6,SNR=9.5						
	0.2nm,0.3s						
KURBB	Kurchatov Arra	64.75	328	P	P	21 29 34.3	+1.3
	0.4nm,0.5s,baz=122,slow=6.0,SNR=4.7						
	0.4nm,0.5s						

NEIC ***12*** *21:23:46.8±1.3, 15°.35S±0°.08×174°.3W±0°.1, h10^{km}±1^{km}, mb4.7/28, Error ellipse: s-maj=19.5km s-min=12.2km az=106.0*

GCMT ***12*** *21:23:49.8±0.2, 15°.11S±0°.01×174°.15W±0°.01, h16^{km}±1^{km}, MW5.0/107, Moment Tensor Solution. s36,c41; s107,c152; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.15±.11; $M_{\theta\theta}$-2.58±.10; $M_{\phi\phi}$2.73±.10; $M_{r\theta}$-0.02±.30; $M_{\theta\phi}$2.01±.10; $M_{\phi r}$1.20±.33; Best double couple: $M_0$3.52300×10^{16} NP1:ϕ_s65.00000°, δ73.00000°, λ6.00000°. NP2:ϕ_s333.00000°, δ84.00000°, λ163.00000°. Principal axes: T 3.7360, Plg16.0000°, Azm288.0000°; N -0.4250, Plg72.0000°, Azm134.0000°; P -3.3100, Plg8.0000°, Azm20.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***12*** *21:23:52.6±5.2, 15°.32S×174°.33W, h57^{km}±45^{km}, mb3.6/14, mbtmp3.9/16, ML4.3/2, MS4.1/31 Error ellipse: s-maj=24.7km s-min=18.4km az=115.0*

ISC 12 21:23:46.4±0.5**, 15°.5S**±0°.1×**174°.34W**±0°.08**, h10**^{km}**, n267, σ2^{s}.23**/203**, mb4.5**/27**, MS4.3**/28**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUTU	Fugatoga	3.83	287		Pn	21 24 42.7	-2.8
NIUE	Niue	5.54	131	Pn	Pn	21 25 04.8	-4.2
MSVF	Nonsavu	7.64	252		Pn	21 25 38.3	+0.3
MSVF	Nonsavu	7.64	252	P	Pn	21 25 44.1	+6.1
	0.3nm,0.3s,baz=82,slow=14,SNR=3.7						
MSVF				LR	LR	21 28 07.3	
	comp=Z,2µm,18.2s,baz=76,slow=33						
	7.7nm,0.8s						
RAO	Raoul Island	14.12	193	LR	LR	21 31 35.7	
	comp=Z,471nm,19.7s,baz=330,slow=32						
RAR	Rarotonga	14.96	115	LR	LR	21 31 42.5	
	comp=Z,705nm,18.0s,baz=288,slow=31						
DZM	Mont Dzumac	19.34	247	P	P	21 28 10.9	-1.4
DZM	Mont Dzumac	19.34	247	*e*S	Sn	21 31 48.2	-2.2
	507nm,24.2s						
DZM				*e*LR	LR	21 32 47.2	
	557nm,24.3s						
DZM	Mont Dzumac	19.34	247	P	Pn	21 28 14.4	+1.1
	0.2nm,0.3s,baz=43,slow=15,SNR=4.7						
DZM				LR	LR	21 34 40.7	
	comp=Z,448nm,19.4s,baz=90,slow=33						
	13nm,1.2s						
PPT	Papeete	23.83	99	LR	LR	21 36 23.8	
	comp=Z,289nm,18.3s,baz=279,slow=32						
PPT2	Papeete2	23.83	99	*e*S	S	21 33 09.1	-6.9
	810nm,24.2s						
PPT2				*e*LR	LR	21 34 40.3	
	972nm,24.0s						
PPT2				*e*LR	LR	21 34 47.9	
	848nm,26.2s						
URZ	Urewera	23.94	197	LR	LR	21 37 04.3	
	comp=Z,1µm,20.9s,baz=116,slow=33						
TBI	Tubuai	24.72	112	*e*LR	LR	21 35 13.0	
	5µm,24.0s						
TBI				*e*LR	LR	21 35 14.9	
	1µm,26.8s						
HNR	Honiara	25.80	280	LR	LR	21 38 00.8	
	comp=Z,626nm,19.8s,baz=125,slow=33						
TAOE	Nuku Hiva Isla	34.03	83	*e*LR	LR	21 39 15.5	
	741nm,27.4s						
PMG	Port Moresby	38.04	274	LR	LR	21 45 24.3	
	comp=Z,404nm,18.1s,baz=78,slow=34						
H11S2	WAKE ISLAND Hy	38.55	330	T	T	22 11 48.9	
	baz=149,slow=76						
H11S3	WAKE ISLAND Hy	38.56	330	T	T	22 11 56.0	
	baz=149,slow=76						
H11S1	WAKE ISLAND Hy	38.57	330	T	T	22 11 52.0	
	baz=149,slow=76						
H11N3	WAKE ISLAND Hy	39.52	332	T	T	22 13 08.9	
	baz=148,slow=77						
H11N1	WAKE ISLAND Hy	39.52	332	T	T	22 13 08.9	
	baz=148,slow=77						
H11N2	WAKE ISLAND Hy	39.53	332	T	T	22 13 08.9	
	baz=148,slow=77						
COEN	Coen	41.08	266	P	P	21 31 30.7	0.0
COEN				IAmb	IAmb	21 31 34.5	
	comp=Z,16nm,1.1s						
STKA	Stephens Creek	43.23	240	P	P	21 31 47.7	-0.4
	comp=Z,2.4nm,0.9s,baz=79,slow=10,SNR=3.9						
	comp=Z,2.4nm,0.9s						
JAY	Jayapura	46.11	282	LR	LR	21 50 40.8	
	comp=Z,146nm,21.9s,baz=328,slow=35						
WRAB	Tennant Creek	48.94	257	P	P	21 32 32.8	-0.4
WRAB				IAmb	IAmb	21 32 39.3	
	comp=Z,8.0nm,1.0s						
WRA	Warramunga Arr	48.95	257	P	P	21 32 33.1	-0.2
	comp=Z,1.7nm,0.9s,baz=92,slow=7.1,SNR=16						
WRA				LR	LR	21 51 59.5	
	comp=Z,515nm,18.6s,baz=103,slow=34						
	comp=Z,1.7nm,0.9s						
AS31	Alice Springs	49.23	252	P	P	21 32 35.0	-0.5
ASAR	Alice Springs	49.23	252	P	P	21 32 34.6	-0.9
ASAR	Alice Springs	49.23	252	P	P	21 32 35.9	+0.4
	comp=Z,4.3nm,0.9s,baz=87,slow=7.3,SNR=20						
	comp=Z,4.3nm,0.9s						
FORT	Forrest	54.59	243	P	P	21 33 15.4	+0.1
FITZ	Fitzroy Crossi	57.31	258	P	P	21 33 34.8	-0.2
FITZ	Fitzroy Crossi	57.31	258	LR	LR	21 56 16.4	
	comp=Z,397nm,19.7s,baz=97,slow=34						
TNTI	Ternate	59.79	280	P	P	21 33 52.5	+0.2
TNTI				IAmb	IAmb	21 34 01.0	
	comp=Z,13nm,1.1s						
BATI	Baumata	60.51	267	LR	LR	21 58 29.4	
	comp=Z,371nm,19.9s,baz=63,slow=34						
MBWA	Marble Bar	62.48	254	P	P	21 34 10.3	-0.1
VNDA	Vanda	63.23	186	P	P	21 34 15.5	+0.9
VNDA	Vanda	63.23	186	P	P	21 34 15.7	+1.1
	comp=Z,0.9nm,0.9s,baz=20,slow=5.2,SNR=7.0						
	comp=Z,0.9nm,0.9s						
DAV	Davao City (W)	63.58	286	LR	LR	22 00 39.6	
	comp=Z,114nm,18.2s,baz=100,slow=35						
LUWI	Luwuk	63.63	277	P	P	21 34 18.1	-0.2
KAPI	Kappang	65.47	272	LR	LR	22 01 19.5	
	comp=Z,102nm,18.3s,baz=115,slow=34						
TOLI2	Tolitoli	66.16	278	P	P	21 34 33.6	-1.1
TOLI2				IAmb	IAmb	21 34 39.9	
	comp=Z,5.8nm,1.0s						
MJAR	Matsushiro Arr	68.40	320	P	P	21 34 46.3	-2.2
	comp=Z,0.4nm,0.3s,baz=139,slow=7.0,SNR=4.4						
	comp=Z,0.4nm,0.3s						
SHEM	Shemya Is, Ala	68.63	352	LR	LR	21 57 48.1	
	comp=Z,237nm,22.0s,baz=101,slow=30						
TGY	Tagaytay City	70.41	291	LR	LR	22 01 46.3	
	comp=Z,170nm,20.8s,baz=156,slow=32						
P08K	Saint George I	71.89	3	P	P	21 35 09.4	+0.1
	baz=185						
PEA0B	Petropavlovsk-	72.41	343	P	P	21 35 11.6	-1.0
PETK	Petropavlovsk-	72.41	343	P	P	21 35 11.4	-1.2
PETK	Petropavlovsk-	72.41	343	P	P	21 35 11.7	-0.9
	comp=Z,0.3nm,0.5s,baz=126,slow=7.5,SNR=11						
PETK				LR	LR	22 04 33.2	
	comp=Z,42nm,18.6s,baz=153,slow=34						
	comp=Z,0.3nm,0.5s						
SPIA	Saint Paul Isl	72.44	2	P	P	21 35 13.0	+0.4
	baz=184						
CMB	Columbia Colle	73.40	42	P	P	21 35 17.3	-1.6
SII	Sitkinak Islan	73.70	11	P	P	21 35 14.3	-5.9
	baz=200						
YBH	Yreka Blue Hor	74.19	38	LR	LR	21 59 56.3	
	comp=Z,13nm,21.8s,baz=254,slow=29						
QSPA	South Pole Qui	74.59	180	P	P	21 35 25.5	-0.1
QSPA				IAmb	IAmb	21 35 35.4	
	comp=Z,15nm,1.2s						
QSPA	South Pole Qui	74.59	180	P	P	21 35 26.4	+0.9
	comp=Z,2.5nm,0.8s,baz=58,slow=2.8,SNR=9.2						
	comp=Z,2.5nm,0.8s						
NVAR	Mina Array Bea	74.97	42	P	P	21 35 26.9	-1.4
NVAR	Mina Array Bea	74.97	42	P	P	21 35 27.9	-0.4
	comp=Z,0.9nm,0.8s,baz=254,slow=7.5,SNR=2.8						
	comp=Z,0.9nm,0.8s						
KDAK	Kodiak Island	75.16	12	LR	LR	22 01 03.3	
	comp=Z,213nm,21.6s,baz=206,slow=30						
O15K	Ungalikthiuk R	75.30	8	P	P	21 35 28.7	-0.7
	baz=194						
P16K	Nushagak River	75.41	9	P	P	21 35 28.9	-1.1
	baz=196						
KSRS	Korea Array	75.56	316	P	P	21 35 32.2	+0.8
	comp=Z,0.4nm,0.4s,baz=129,slow=6.3,SNR=5.2						
	comp=Z,0.4nm,0.4s						
KSAR	Wonju Array Be	75.58	316	P	P	21 35 30.6	-0.9
N14K	Kuskokwak Cree	75.81	7	P	P	21 35 31.7	-0.6
	baz=193						
M11K	Mekoryuk	75.86	4	P	P	21 35 34.1	+1.6
	baz=188						
J05D	Fort Rock, OR	76.00	37	P	P	21 35 34.1	+0.1
J05D				IAmb	IAmb	21 35 46.2	
	comp=Z,6.6nm,1.2s						
M13K	Dall Lake	76.12	6	P	P	21 35 34.5	+0.5
	baz=191						
N15K	Kwethluk River	76.23	7	P	P	21 35 34.2	-0.6
	baz=194						
M14K	Bethel	76.59	6	P	P	21 35 37.2	+0.5
	baz=192,SNR=8.5						
M15K	Kasigluk River	76.67	7	P	P	21 35 37.3	+0.1
	baz=194						
LEM	Lembang	76.73	267	LR	LR	22 12 22.5	
	comp=Z,109nm,18.1s,baz=122,slow=38						
P19K	Oil Pt	76.78	11	P	P	21 35 36.2	-1.7
	baz=201						
N17K	Nushagak Hills	76.97	9	P	P	21 35 37.3	-1.6
	baz=197						
L14K	Kuka Creek	77.10	6	P	P	21 35 41.7	+2.1
	baz=192						
M16K	Timber Creek	77.20	8		P	21 35 39.3	-0.9
M16K				IAmb	IAmb	21 35 48.1	
	comp=Z,8.3nm,1.1s						
M16K	Timber Creek	77.20	8	P	P	21 35 40.2	+0.1
	baz=195						
N18K	Kilae Creek	77.31	9	P	P	21 35 39.5	-1.3
	baz=198						
K13K	Kusilvak Mount	77.51	5	P	P	21 35 45.5	+3.6
	baz=190						
L15K	Ungalak Mounta	77.55	6	P	P	21 35 42.8	+0.7
	baz=193,SNR=5.9						
N19K	Bonanza Creek	77.66	10	P	P	21 35 43.1	+0.2
	baz=200						
M17K	Holitna River	77.77	8	P	P	21 35 45.6	+2.2
	baz=197						
L16K	Owhat River	77.81	7	P	P	21 35 45.9	+2.4
	baz=195						
M18K	Stony River	78.09	9	P	P	21 35 46.8	+1.7
	baz=198						
K15K	Wolf Creek Mou	78.15	6	P	P	21 35 48.2	+2.8
	baz=193						
P23K	Montague Islan	78.28	13	P	P	21 35 44.8	-1.4
	baz=206						
BBB	Bella Bella	78.34	27	LR	LR	22 02 31.8	
	comp=Z,160nm,19.6s,baz=222,slow=30						
L17K	Donlin	78.36	8	P	P	21 35 46.7	+0.1
	baz=196,SNR=7.7						
L18K	Granite Mounta	78.66	8	P	P	21 35 50.2	+1.9
	baz=197						
M19K	Big River Lodg	78.70	9	P	P	21 35 49.0	+0.4
	baz=200						
M20K	Styx River	78.89	10	P	P	21 35 51.1	+1.5
	baz=201						
K17K	Iditarod	78.92	7	P	P	21 35 51.8	+2.1
	baz=196						
SUA	Susitna One	78.92	11	P	P	21 35 50.0	+0.1
SUA				IAmb	IAmb	21 35 55.2	
	comp=Z,6.3nm,0.8s						
SUA	Susitna One	78.92	11	P	P	21 35 49.9	0.0
	baz=203						
GLI	Glacier Island	79.14	13	P	P	21 35 50.0	-1.0
	baz=207						
SIT	Sitka	79.19	20	P	P	21 35 45.7	-5.5
	baz=218						
J16K	Anvik River	79.21	6	P	P	21 35 53.6	+2.3
	baz=194,SNR=9.8						
U33K	Whale Pass	79.22	22	P	P	21 35 45.1	-6.4
	baz=220						
SKT	Skwentna	79.26	11	P	P	21 35 51.9	+0.4
	baz=202						
L20K	Farewell, AK	79.33	10	P	P	21 35 53.9	+1.9
	baz=200						
J17K	VABM Dome	79.49	7	P	P	21 35 54.5	+1.8
	baz=195,SNR=7.3						
S31K	Pelican	79.60	20	P	P	21 35 51.7	-1.8
	baz=217						
BMRM	Bremner River	79.79	14		P	21 35 54.1	-0.5
BMRM	Bremner River	79.79	14	P	P	21 35 54.0	-0.5
	baz=209						
J18K	Innoko River	79.85	8	P	P	21 35 56.9	+2.1
	baz=197						
SCM	Sheep Creek Mo	79.94	13	P	P	21 35 56.2	+0.8
	baz=206						
PPLA	Purkeypile	80.00	10	P	P	21 35 56.8	+1.1
	baz=202						
KLR	Kul'dur	80.07	327	LR	LR	22 09 48.8	
	comp=Z,39nm,18.1s,baz=192,slow=34						
K20K	Telida	80.13	9	P	P	21 35 57.9	+1.6
	baz=200						
PINM	Pinnacle	80.15	17	P	P	21 35 56.1	-0.5
	baz=213						
N25K	Chitina, Valde	80.35	14	P	P	21 35 57.0	-0.6
	baz=209						
M24K	Tolsona, Glenn	80.44	13	P	P	21 35 59.6	+1.6
	baz=208						
P29M	Windy Craggy	80.48	18	P	P	21 35 54.5	-3.8
	baz=216						
CAST	Castle Rocks	80.50	10	P	P	21 36 00.9	+2.5
	baz=202						
J19K	Poorman	80.50	8	P	P	21 36 01.0	+2.7
	baz=198						
MCARA	McCarthy VSAT	80.53	15	P	P	21 35 56.5	-2.0
	baz=210						
WAT6	Susitna Watana	80.53	12	P	P	21 35 56.9	-1.8
	baz=206,SNR=5.6						
G15K	Niukluk	80.58	4	P	P	21 36 03.8	+5.1
	baz=190						
CTG	Chitna Glacier	80.59	16	P	P	21 35 56.8	-2.2
	baz=212						
WAT1	Susitna Watana	80.60	12	P	P	21 35 58.8	0.0
	baz=205						
O28M	Mount Upton	80.74	16	P	P	21 35 58.4	-1.5
	baz=213						
TRF	Thorofare Moun	80.84	11		P	21 36 01.6	+1.3
TRF				IAmb	IAmb	21 36 04.7	
	comp=Z,5.7nm,0.8s						
TRF	Thorofare Moun	80.84	11	P	P	21 36 02.7	+2.4
	baz=203						
J20K	Nowinta River	80.89	9		P	21 35 59.7	-0.6
J20K				IAmb	IAmb	21 36 05.3	
	comp=Z,5.9nm,1.0s						
J20K	Nowinta River	80.89	9	P	P	21 36 03.5	+3.2
	baz=200,SNR=5.1						
H17K	Granite Mounta	80.89	6	P	P	21 36 04.6	+4.2
	baz=194						
F14K	Arctic Creek	80.91	3	P	P	21 36 06.0	+5.6
	baz=188						
TNA	Tin City	80.92	3	P	P	21 36 05.2	+4.8
	baz=186						
HARP	HAARP	80.92	13	P	P	21 36 00.3	-0.3
	baz=208						

DHY	**Denali Highway**	**81.05**	**12**	P	**P**	**21 36 02.5**	**+1.0**
	baz=206						
P30M	**Million Dollar**	**81.11**	**18**	P	**P**	**21 35 59.6**	**-2.1**
	baz=216						
F15K	**North Star Dit**	**81.25**	**4**	P	P	21 36 07.3	+5.1
	baz=189						
NEW	**Newport**	**81.26**	**35**	LR	LR	22 05 22.5	
	comp=Z,126nm,19.6s,baz=213,slow=31						
MCK	**McKinley**	**81.35**	**11**		**P**	**21 36 02.8**	**0.0**
MCK				IAmb	IAmb	21 36 09.6	
	comp=Z,12nm,1.0s						
MCK	**McKinley**	**81.35**	**11**	P	**P**	**21 36 05.5**	**+2.7**
	baz=205						
PAX	**Paxson**	**81.36**	**13**	P	**P**	**21 36 02.8**	**-0.2**
	baz=208						
G17K	**Kiwalik Mounta**	**81.37**	**6**	P	**P**	**21 36 06.4**	**+3.6**
	baz=193						
YUK6	**Outpost Mounta**	**81.38**	**17**	P	**P**	**21 36 02.7**	**-0.6**
	baz=215						
TXAR	**Lajitas Array**	**81.39**	**56**	P	**P**	**21 36 03.9**	**-0.1**
TXAR	**Lajitas Array**	**81.39**	**56**	P	**P**	**21 36 02.9**	**-1.0**
	comp=Z,0.6nm,0.9s,baz=244,slow=4.7,SNR=5.2						
	comp=Z,0.6nm,0.9s						
M26K	**Nabesna, AK**	**81.42**	**14**	P	**P**	**21 36 02.3**	**-0.9**
	baz=210,SNR=6.0						
YUK3	**Moose Creek**	**81.51**	**16**	P	**P**	**21 36 03.1**	**-0.8**
	baz=213						
M27K	**Edge Creek, AK**	**81.65**	**15**	P	**P**	**21 36 05.1**	**+0.5**
	baz=212						
P32M	**Atlin**	**81.70**	**20**	P	**P**	**21 36 02.6**	**-2.2**
	baz=219						
H19K	**Roundabout Mou**	**81.86**	**7**	P	**P**	**21 36 09.5**	**+4.0**
	baz=197						
L26K	**Log Cabin Wild**	**81.88**	**14**	P	**P**	**21 36 07.2**	**+1.5**
	baz=210						
O30N	**Mendenhall**	**81.89**	**18**	P	**P**	**21 36 05.4**	**-0.4**
	baz=217						
G18K	**Tagagawik**	**81.96**	**6**	P	**P**	**21 36 10.0**	**+4.0**
	baz=195						
K24K	**Donnelly Dome**	**82.03**	**12**	P	**P**	**21 36 08.2**	**+1.7**
	baz=208						
H20K	**Anotleneega Mo**	**82.03**	**8**	P	**P**	**21 36 10.9**	**+4.5**
	baz=199						
DLBC	**Dease Lake**	**82.08**	**22**	LR	LR	22 04 37.5	
	comp=Z,184nm,20.0s,baz=272,slow=30						
NEA2	**Nenana**	**82.11**	**11**	P	**P**	**21 36 09.7**	**+2.9**
	baz=204						
RIDG	**Independent Ri**	**82.17**	**13**	P	**P**	**21 36 09.6**	**+2.4**
	baz=209						
WRH	**Wood River Hil**	**82.17**	**11**	P	**P**	**21 36 06.6**	**-0.5**
MLY	**Manley**	**82.22**	**10**	P	**P**	**21 36 10.7**	**+3.3**
	baz=203						
L27K	**Beaver Creek,**	**82.26**	**14**	P	**P**	**21 36 09.8**	**+2.1**
	baz=212						
BCAR	**Beaver Creek A**	**82.28**	**14**	P	**P**	**21 36 07.9**	**+0.1**
HDA	**Harding Lake**	**82.34**	**12**	P	**P**	**21 36 10.1**	**+2.1**
	baz=207,SNR=5.8						
SEY	**Seymchan**	**82.34**	**345**	LR	LR	22 09 49.8	
	comp=Z,93nm,18.8s,baz=152,slow=34						
BPMT	**Black Pine Rid**	**82.35**	**38**	P	**P**	**21 36 08.2**	**-0.6**
G19K	**Purcell Mounta**	**82.38**	**7**	P	**P**	**21 36 12.6**	**+4.4**
	baz=197						
FXWY	**Fox Creek**	**82.39**	**41**	P	**P**	**21 36 07.9**	**-1.2**
FXWY				IAmb	IAmb	21 36 14.2	
	comp=Z,5.9nm,1.4s						
R33M	**Jennings River**	**82.46**	**21**	P	**P**	**21 36 06.3**	**-2.6**
	baz=222						
H21K	**Melozitna Rive**	**82.48**	**9**	P	**P**	**21 36 11.1**	**+2.4**
	baz=201						
F18K	**Selawik**	**82.54**	**6**	P	P	21 36 14.4	+5.4
	baz=194						
I23K	**Minto, Yukon-K**	**82.56**	**10**	P	**P**	**21 36 10.2**	**+1.1**
	baz=204						
SCRK	**Sand Creek**	**82.56**	**13**		**P**	**21 36 07.9**	**-1.4**
SCRK				IAmb	IAmb	21 36 15.8	
	comp=Z,5.1nm,0.9s						
SCRK	**Sand Creek**	**82.56**	**13**	P	**P**	**21 36 09.5**	**+0.2**
	baz=209,SNR=5.6						
M29M	**Somme Creek**	**82.59**	**16**	P	**P**	**21 36 08.6**	**-0.9**
	baz=215						
IMAR	**Indian Mountai**	**82.65**	**8**	P	**P**	**21 36 10.2**	**+0.6**
ILAR	**Eielson Array**	**82.67**	**11**	P	**P**	**21 36 09.4**	**-0.3**
ILAR	**Eielson Array**	**82.67**	**11**	P	**P**	**21 36 08.3**	**-1.4**
	comp=Z,0.7nm,1.0s,baz=225,slow=5.8,SNR=12						
ILAR				LR	LR	22 05 45.1	
	comp=Z,117nm,21.9s,baz=198,slow=30						
	comp=Z,0.7nm,1.0s						
E17K	**Hotham Inlet**	**82.82**	**5**	P	P	21 36 16.0	+5.6
	baz=192						
J25K	**Salcha River,**	**82.83**	**12**	P	**P**	**21 36 11.0**	**+0.3**
	baz=208,SNR=5.4						
POKR	**Poker Plat Res**	**82.88**	**11**	P	**P**	**21 36 14.2**	**+3.4**
	baz=206						
PDAR	**Pinedale Array**	**82.91**	**42**	P	**P**	**21 36 10.0**	**-1.8**
	comp=Z,0.9nm,0.9s,baz=191,slow=1.5,SNR=3.8						
	comp=Z,0.9nm,0.9s						
H22K	**Ishtalitna Cre**	**82.92**	**9**	P	**P**	**21 36 14.5**	**+3.5**
	baz=202						
F19K	**Shaleruckik Mo**	**82.96**	**7**	P	**P**	**21 36 15.5**	**+4.3**
	baz=196						
J26L	**Joseph Creek**	**83.11**	**13**		**P**	**21 36 11.9**	**-0.2**
J26L				IAmb	IAmb	21 36 18.0	
	comp=Z,5.1nm,0.9s						
J26L	**Joseph Creek**	**83.11**	**13**	P	**P**	**21 36 15.5**	**+3.4**
	baz=210						
H23K	**Yukon River**	**83.15**	**10**	P	**P**	**21 36 15.7**	**+3.4**
	baz=204						
G21K	**Allakaket**	**83.19**	**8**	P	**P**	**21 36 16.6**	**+4.3**
	baz=200						
L29M	**L29M**	**83.22**	**16**	P	**P**	**21 36 10.7**	**-1.9**
	baz=215,SNR=5.3						
E18K	**Tukpahlearik C**	**83.25**	**5**	P	P	21 36 17.7	+5.0
	baz=193						
D17K	**Noatak River**	**83.33**	**4**	P	P	21 36 19.8	+6.7
	baz=191						
F20K	**Avaraart Lake**	**83.41**	**7**	P	**P**	**21 36 17.9**	**+4.4**
	baz=198						
H24K	**Noodor Dome**	**83.45**	**11**	P	**P**	**21 36 16.4**	**+2.6**
	baz=206						
PRP	**Porcupine Dome**	**83.60**	**12**	P	**P**	**21 36 17.5**	**+2.8**
	baz=208						
E19K	**Redstone River**	**83.62**	**7**	P	P	21 36 19.6	+5.0
	baz=197						
G22K	**Bettles**	**83.86**	**9**	P	P	21 36 20.5	+4.7
	baz=202						
F21K	**Alatna River**	**83.86**	**8**	P	**P**	**21 36 20.1**	**+4.3**
	baz=200						
G23K	**Bananza Creek**	**83.89**	**9**	P	**P**	**21 36 20.0**	**+4.0**
	baz=204						
I26K	**Coal Creek Min**	**83.90**	**13**	P	**P**	**21 36 19.8**	**+3.7**
	baz=210						
K29M	**Barlow Dome**	**83.98**	**15**	P	**P**	**21 36 18.4**	**+1.7**
	baz=216						
C17K	**DeLong Mountai**	**84.08**	**4**	P	P	21 36 23.0	+6.0
	baz=191						
COLD	**Coldfoot**	**84.34**	**9**	P	**P**	**21 36 22.5**	**+4.3**
	baz=203						
C18K	**Utukok River**	**84.40**	**5**	P	P	21 36 23.6	+5.0
	baz=193						
I27K	**Kandik River**	**84.48**	**13**	P	**P**	**21 36 20.9**	**+1.8**
	baz=212						
E20K	**Nigu River**	**84.51**	**7**	P	P	21 36 24.3	+5.1
	baz=198						
D19K	**Kuna River**	**84.53**	**6**	P	**P**	**21 36 23.8**	**+4.6**
	baz=196						
I28M	**Miner Creek**	**84.73**	**14**	P	**P**	**21 36 22.8**	**+2.4**
	baz=213						
MMPY	**Sheldon Lake,**	**84.78**	**18**	P	**P**	**21 36 20.6**	**-0.1**
	baz=221						
BJT	**Baijiatuau**	**84.85**	**314**	P	**P**	**21 36 20.9**	**-0.6**
J30M	**Hart River**	**84.89**	**15**	P	**P**	**21 36 22.4**	**+1.2**
	baz=217						
D20K	**Etivluk River**	**84.90**	**6**	P	P	21 36 26.4	+5.3
	baz=197						
E22K	**Anaktuvuk Pass**	**84.94**	**8**	P	**P**	**21 36 25.9**	**+4.6**
	baz=202						
E21K	**Killik River**	**84.95**	**7**	P	P	21 36 26.3	+4.9
	baz=200						
F24K	**Squaw Lake**	**84.97**	**10**	P	**P**	**21 36 25.3**	**+3.8**
	baz=206						
C19K	**Lookout Ridge**	**84.99**	**5**	P	P	21 36 27.0	+5.5
	baz=194						
I29M	**Ogilvie Camp,**	**85.04**	**14**	P	**P**	**21 36 25.0**	**+3.1**
	baz=215						
H27K	**Steamboat Moun**	**85.04**	**13**	P	**P**	**21 36 25.0**	**+3.1**
	baz=212						
E23K	**Chandalar**	**85.19**	**9**	P	P	21 36 28.2	+5.5
	baz=204						
G26K	**Porcupine Rive**	**85.20**	**12**	P	**P**	**21 36 26.0**	**+3.5**
	baz=209						
E24K	**Your Creek**	**85.38**	**9**	P	**P**	**21 36 26.4**	**+2.9**
	baz=205						
I30M	**Mount Dempster**	**85.39**	**15**	P	**P**	**21 36 26.2**	**+2.4**
	baz=216,SNR=5.6						
F25K	**Christian Rive**	**85.43**	**11**	P	**P**	**21 36 28.4**	**+4.6**
	baz=208						
BMAR	**Burnt Mountain**	**85.47**	**11**		**P**	**21 36 24.9**	**+0.9**
G27K	**Doyon Strip**	**85.51**	**12**	P	**P**	**21 36 28.3**	**+4.1**
	baz=212						
D22K	**Ayikyak River**	**85.52**	**8**	P	P	21 36 29.2	+5.0
	baz=201						
C21K	**Knifeblade Rid**	**85.53**	**7**	P	P	21 36 29.4	+5.2
	baz=199						
H29M	**Whitestone**	**85.73**	**14**	P	**P**	**21 36 29.0**	**+3.7**
	baz=215						
TOLK	**Toolik Lake Re**	**85.73**	**9**	P	**P**	**21 36 29.6**	**+4.3**
	baz=204						
D23K	**Nanushuk River**	**85.87**	**8**	P	P	21 36 31.3	+5.3
	baz=203						
E25K	**Arctic Village**	**85.91**	**10**	P	**P**	**21 36 29.6**	**+3.4**
	baz=208						
H03S2	**Juan Fernandez**	**85.92**	**124**	T	T	23 11 35.2	
	baz=252,slow=75,SNR=6.4						
H03S1	**Juan Fernandez**	**85.94**	**124**	T	T	23 11 36.2	
	baz=252,slow=75,SNR=5.7						
H03S3	**Juan Fernandez**	**85.94**	**124**	T	T	23 11 32.7	
	baz=252,slow=75,SNR=4.9						
B21K	**Ikpikpuk River**	**85.99**	**7**	P	P	21 36 33.0	+6.6
	baz=199						
B20K	**Meade River**	**86.09**	**6**	P	P	21 36 35.3	+8.4
	baz=197						
EPYK	**Eagle Plains**	**86.24**	**14**	P	**P**	**21 36 29.9**	**+2.1**
	baz=216						
H31M	**Peel River**	**86.38**	**15**	P	**P**	**21 36 30.5**	**+2.0**
	baz=218						
G29M	**Pine Creek**	**86.38**	**14**	P	**P**	**21 36 31.5**	**+3.0**
	baz=215						
G30M	**tAoh Zraii Nji**	**86.85**	**14**	P	**P**	**21 36 34.7**	**+3.8**
	baz=217						
G31M	**Satah River**	**87.27**	**15**	P	**P**	**21 36 36.6**	**+3.8**
	baz=218						
MAW	**Mawson**	**87.45**	**199**	LR	LR	22 13 52.3	
	comp=Z,162nm,18.3s,baz=104,slow=34						
PSI	**Prapat**	**87.60**	**274**	LR	LR	22 19 59.8	
	comp=Z,121nm,18.1s,baz=136,slow=38						
INK	**Inuvik**	**88.54**	**14**	LR	LR	22 09 05.5	
	comp=Z,74nm,20.1s,baz=223,slow=31						
YAK	**Yakutsk**	**88.81**	**337**	LR	LR	22 10 33.3	
	comp=Z,30nm,20.8s,baz=120,slow=32						
PLCA	**Paso Flores**	**90.14**	**132**	LR	LR	22 08 36.9	
	comp=Z,99nm,20.0s,baz=248,slow=30						
YKA	**Yellowknife Ar**	**90.51**	**24**	P	**P**	**21 36 46.9**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=245,slow=4.5,SNR=4.2						
YKA				LR	LR	22 12 46.0	
	comp=Z,125nm,18.5s,baz=244,slow=32						
	comp=Z,0.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**91.77**	**289**	P	**P**	**21 36 54.4**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=80,slow=2.4,SNR=5.6						
	comp=Z,0.3nm,0.5s						
JAVC	**Velka Javorina**	**145.26**	**346**	*e*PKP	**PKiKP**	**21 43 29.9**	**+1.5**
KRUC	**Moravsky**	**145.35**	**348**	*e*PKP	**PKiKP**	**21 43 28.8**	**+0.3**
ZVC	**Zvikov**	**145.40**	**350**	*e*PKP	**PKPdf**	**21 43 26.8**	**+2.1**
PSZ	**Piszkesteto**	**145.56**	**343**		**PKPbc**	**21 43 24.1**	**-1.1**
BR131	**Keskin Array S**	**145.62**	**320**		**PKPdf**	**21 43 24.0**	**-1.5**
BRTR	**Keskin Array B**	**145.62**	**320**		**PKPdf**	**21 43 24.5**	**-1.1**
BRTR	**Keskin Array B**	**145.62**	**320**	PKPbc	**PKPbc**	**21 43 25.9**	**+0.1**
	comp=Z,1.5nm,0.9s,baz=87,slow=2.7,SNR=7.5						
KHC	**Kasperske Hory**	**145.79**	**351**	*e*PKP	**PKiKP**	**21 43 29.0**	**-0.5**
CKRC	**Cesky Krumlov**	**145.98**	**350**	*e*PKP	**PKiKP**	**21 43 30.6**	**+0.7**
GERES	**GERESS Array B**	**146.05**	**350**	PKPbc	**PKPdf**	**21 43 25.9**	**0.0**
	comp=Z,2.0nm,0.9s,baz=336,slow=2.9,SNR=9.2						
CONA	**Conrad Observa**	**146.54**	**348**	*i* PKP	**PKiKP**	**21 43 33.3**	**+2.2**
	comp=Z,4.8nm,0.9s						
RONA	**Rosalia, Austr**	**146.66**	**347**	*i* PKP	**PKiKP**	**21 43 34.4**	**+3.1**
	comp=Z,3.1nm,0.8s						
MOA	**Molln**	**146.92**	**349**	*e*PKP	**PKPbc**	**21 43 29.4**	**+0.2**
	comp=Z,4.7nm,1.4s						
BIOA	**Bad Ischl, Aus**	**147.18**	**350**	*i* PKP	**PKiKP**	**21 43 33.1**	**+0.7**
	comp=Z,1.7nm,0.7s						
ARSA	**Arzberg**	**147.25**	**348**	*e*PKP	**PKiKP**	**21 43 34.6**	**+2.0**
	comp=Z,5.3nm,1.3s						
LESA	**Schwarzleotal**	**147.59**	**351**	*e*PKP	**PKPbc**	**21 43 31.6**	**+0.4**
	comp=Z,3.3nm,0.9s						
RETA	**Reutte**	**147.78**	**354**	*i* PKP	**PKPab**	**21 43 36.6**	**+2.6**
	comp=Z,8.8nm,1.5s						
WATA	**Walderalm**	**147.83**	**352**	*i* PKiKP	**PKPab**	**21 43 39.4**	**+5.0**
	comp=Z,14nm,1.5s						
MOTA	**Moosalm**	**147.88**	**353**	*e*PKiKP	**PKPab**	**21 43 40.5**	**+6.0**
	comp=Z,6.5nm,1.5s						
WTTA	**Wattenberg**	**147.90**	**352**	*e*PKP	**PKPab**	**21 43 36.8**	**+2.2**
	comp=Z,4.4nm,0.8s						
SOKA	**Soboth**	**147.90**	**348**	*e*PKP	**PKPbc**	**21 43 31.8**	**-0.2**
	comp=Z,1.5nm,0.6s						
SQTA	**Sankt Quirin**	**147.99**	**353**	*i* PKP	**PKPab**	**21 43 39.2**	**+4.3**
	comp=Z,5.7nm,1.1s						
DAVA	**Damuels**	**148.07**	**355**	*i* PKP	**PKPbc**	**21 43 32.6**	**0.0**
	comp=Z,5.0nm,1.1s						
OBKA	**Obir**	**148.16**	**348**	*e*PKP	**PKPbc**	**21 43 33.5**	**+0.8**
	comp=Z,2.5nm,0.7s						
MYKA	**Terra Mystica**	**148.21**	**350**	*e*PKP	**PKPab**	**21 43 39.3**	**+3.5**
	comp=Z,3.9nm,0.9s						
FETA	**Feichten**	**148.24**	**353**	*e*PKP	**PKPbc**	**21 43 32.7**	**-0.4**
	comp=Z,4.0nm,1.0s						
ABTA	**Abfaltersbach**	**148.28**	**351**	*e*PKP	**PKPbc**	**21 43 33.9**	**+0.9**
	comp=Z,4.6nm,0.9s						
ESDC	**Sonseca Array**	**154.44**	**17**	PKPab	**PKPab**	**21 44 02.4**	**+0.7**
	comp=Z,1.6nm,0.9s,baz=331,slow=3.6,SNR=6.5						

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*SCB **12** 21:38:05.9±1.2, 19°.82S×66°.94W, h249^{km}±16^{km}, ML3.2/2, MW3.1, Error ellipse: s-maj=4.6km s-min=3.5km az=2.0*

*NEIC **12** 21:38:08.6±0.9, 19°.76S±0°.09×67°.0W±0°.2, h231^{km}±11^{km}, mb4.3/5, Error ellipse: s-maj=27.4km s-min=12.1km az=104.0*

*IDC **12** 21:38:09.7±1.6, 19°.29S×67°.53W, h288^{km}±37^{km}, mb3.3/3, mbtmp3.8/5, Error ellipse: s-maj=59.6km s-min=25.5km az=125.0*

ISC 12 21:38:07.7±0.8**, 19°.73S**±0°.06×**66°.98W**±0°.06**, h250**^{km}**, n42,** σ**1^{s}.65**/45**, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEO	**Opoqueri**	**1.44**	**323**	Pg	**Pn**	**21 38 45.7**	**-0.5**
MOCB	**Mochara**	**1.97**	**140**	Pg	**Pn**	**21 38 48.9**	**-1.5**
PB08	**IPOC Station P**	**2.08**	**258**	Pn	**Pn**	**21 38 50.8**	**-0.6**
PB08	**IPOC Station P**	**2.08**	**258**	Pg	**Pn**	**21 38 50.9**	**-0.5**
GO01	**Chusmiza**	**2.09**	**271**	Pn	**Pn**	**21 38 50.7**	**-0.8**
GO01	**Chusmiza**	**2.09**	**271**	Pg	**Pn**	**21 38 50.5**	**-1.0**
AOEA	**Aiquile**	**2.26**	**47**	Pg	**Pn**	**21 38 51.8**	**-1.2**
AOEA	**Aiquile**	**2.26**	**47**	Pg	**Pn**	**21 38 51.9**	**-1.1**
PB11	**IPOC Station P**	**2.52**	**269**	Pg	**Pn**	**21 38 54.2**	**-1.1**
PB11				Sg	**S**	**21 39 30.2**	**-2.7**
PB11				IAML		21 39 30.9	
	56nm,0.3s						
PB01	**IPOC Station P**	**2.69**	**241**	Pn	**Pn**	**21 38 55.9**	**-1.1**
PB01	**IPOC Station P**	**2.69**	**241**	Pg	**Pn**	**21 38 56.2**	**-0.8**
PB01				Sg	**S**	**21 39 32.3**	**-3.6**
PB01				IAML		21 39 33.5	
	53nm,0.3s						
PB16	**IPOC Station P**	**2.77**	**300**	Pn	**Pn**	**21 38 58.2**	**-0.2**
PB16	**IPOC Station P**	**2.77**	**300**	Pg	**Pn**	**21 38 58.4**	**+0.1**
YJA	**Yavi**	**2.79**	**151**	Pg	**Pn**	**21 38 56.1**	**-2.3**
PB09	**IPOC Station P**	**2.95**	**225**	Pg	**Pn**	**21 38 58.2**	**-1.6**
BBOJ	**La Paz, Jacaqu**	**2.97**	**337**	Pg	**Pn**	**21 39 00.7**	**+0.2**
SOEJ	**Jacaque**	**2.97**	**337**	Pg	**Pn**	**21 39 00.3**	**-0.2**
BBOE	**La Paz, Chanca**	**3.06**	**342**	Pg	**Pn**	**21 39 01.6**	**+0.1**
TA01	**Diego Aracena**	**3.12**	**254**	Pn	**Pn**	**21 39 00.2**	**-1.3**
BBOD	**La Paz, Gloria**	**3.44**	**333**	Pg	**Pn**	**21 39 05.5**	**-0.2**
PB03	**IPOC Station P**	**3.47**	**228**		**Pn**	**21 39 04.6**	**-0.9**
LPAZ	**La Paz**	**3.60**	**342**	Pn	**Pn**	**21 39 06.9**	**-0.6**
LPAZ	**La Paz**	**3.60**	**342**	P	**Pn**	**21 39 07.2**	**-0.3**
	2.4nm,0.3s,baz=146,slow=7.3,SNR=20						
LPAZ				S	**S**	**21 39 50.5**	**-4.4**
	7.2nm,0.6s,baz=195,slow=11,SNR=9.4						
LPAZ	**La Paz**	**3.60**	**342**	Pg	**Pn**	**21 39 07.4**	**-0.1**
BBOB	**La Paz, Bander**	**3.74**	**343**	Pg	**Pn**	**21 39 08.9**	**-0.1**
PB06	**IPOC Station P**	**3.82**	**219**		**Pn**	**21 39 09.2**	**-0.4**
PB05	**IPOC Station P**	**4.32**	**223**	Pn	**Pn**	**21 39 14.4**	**-1.0**
PB10	**IPOC Station P**	**5.02**	**221**	Pn	**Pn**	**21 39 21.9**	**-1.8**
GO02	**Mina Guanaco**	**5.92**	**204**	Pn	**Pn**	**21 39 33.9**	**-1.2**
BBSD	**Serra de San D**	**6.55**	**68**	Pg	**Pn**	**21 39 41.3**	**-1.5**
SIV	**San Ignacio**	**6.74**	**57**	Pg	**Pn**	**21 39 43.7**	**-1.6**
AC01	**Pan de Azucar**	**7.20**	**207**	Pn	**Pn**	**21 39 48.7**	**-2.2**
GO03	**Copiapo**	**8.38**	**200**	Pn	**Pn**	**21 40 03.5**	**-2.3**
ITAB	**Concordia**	**15.53**	**122**	P	**Pn**	**21 41 34.9**	**+0.7**
ITAB				IAmb	IAmb	21 42 48.3	
	comp=Z,25nm,1.4s						
BDFB	**Brasilia**	**18.52**	**80**	P	**Pn**	**21 42 07.9**	**-1.8**
BDFB				IAmb	IAmb	21 46 27.4	
	comp=Z,8.8nm,1.3s						
BDFB	**Brasilia**	**18.52**	**80**	P	**Pn**	**21 42 10.2**	**+0.5**
	comp=Z,1.1nm,0.3s,baz=250,slow=12,SNR=2.2						
PLCA	**Paso Flores**	**21.16**	**188**	P	**P**	**21 42 35.6**	**+1.9**
PLCA	**Paso Flores**	**21.16**	**188**	P	**P**	**21 42 36.0**	**+2.2**
	comp=Z,1.3nm,0.6s,baz=9.8,slow=11,SNR=5.8						
	comp=Z,1.3nm,0.6s						
MAL2	**Monte Alegre,**	**21.60**	**37**	P	**P**	**21 42 40.4**	**+2.2**
SNAA	**Sanae**	**63.36**	**161**	P	**P**	**21 48 12.9**	**+2.7**
SNAA				IAmb	IAmb	21 51 54.2	
	comp=Z,8.4nm,1.5s						
SNAA	**Sanae**	**63.36**	**161**	P	**P**	**21 48 12.9**	**+2.7**
	comp=Z,0.6nm,0.8s,baz=321,slow=6.5,SNR=2.0						
	comp=Z,0.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**75.06**	**70**	P	**P**	**21 49 22.6**	**0.0**
	comp=Z,1.5nm,0.3s,baz=251,slow=5.4,SNR=1.2						
	comp=Z,1.5nm,0.3s						

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*IDC **12** 21:41:53.7±0.8, 15°.10S×174°.33W, h0^{km}, mb4.0/11, mbtmp4.0/11, MS4.0/47, Error ellipse: s-maj=30.0km s-min=21.8km az=124.0*

*NEIC **12** 21:41:55.0±1.6, 15°.1S±0°.1×174°.1W±0°.1, h10^{km}±1^{km}, mb4.7/12, Error ellipse: s-maj=21.8km s-min=15.8km az=303.0*

*GCMT **12** 21:42:01.0±0.3, 15°.15S±0°.02×174°.20W±0°.01, h13^{km}±1^{km}, MW4.8/99, Moment Tensor Solution. s12,c14; s99,c137; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.29±.09; M$_{\theta\theta}$-0.97±.09; M$_{\phi\phi}$0.68±.06; M$_{r\theta}$-0.14±.19; M$_{\theta\phi}$2.04±.08; M$_{\phi r}$0.54±.20; Best double couple: M$_0$2.27300×10^{16} NP1:φ$_s$79.00000°, δ75.00000°, λ2.00000°. NP2: φ$_s$349.00000°, δ88.00000°, λ165.00000°. Principal axes: T 2.1320, Plg12.0000°, Azm303.0000°; N 0.2820, Plg75.0000°, Azm162.0000°; P -2.4140, Plg9.0000°, Azm35.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 21:41:54.2±0.5**, 15°.19S**±0°.10×**174°.17W**±0°.08**, h10**^{km}**, n79,** σ**1^{s}.67**/34**, mb4.2**/16**, MS4.1**/44**, 1D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.64**	**61**		**Pn**	**21 42 35.3**	**-1.7**
NIUE	**Niue**	**5.60**	**134**		**Pn**	**21 43 17.1**	**-0.5**
MSVF	**Nonsavu**	**7.88**	**250**	LR	LR	21 46 24.0	
	comp=Z,1μm,19.4s,baz=50,slow=35						
RAO	**Raoul Island**	**14.42**	**193**	LR	LR	21 49 54.9	
	comp=Z,468nm,20.6s,baz=312,slow=33						
RAR	**Rarotonga**	**14.93**	**116**	LR	LR	21 49 55.3	
	comp=Z,353nm,20.5s,baz=278,slow=32						
DZM	**Mont Dzumac**	**19.60**	**247**	P	**P**	**21 46 20.4**	**-2.5**
DZM				IAmb	IAmb	21 46 33.5	
	comp=Z,45nm,1.4s						
DZM	**Mont Dzumac**	**19.60**	**247**	*e*P	**Pn**	**21 46 25.3**	**+1.1**
	comp=Z,88nm,1.6s						
DZM				*e*S	**S**	**21 50 01.4**	**-2.9**
	comp=Z,2μm,24.7s						
DZM				*e*LR	LR	21 51 03.1	
	comp=Z,949nm,27.3s						
DZM	**Mont Dzumac**	**19.60**	**247**	LR	LR	21 52 39.9	
	comp=Z,308nm,20.2s,baz=78,slow=33						
PPT	**Papeete**	**23.71**	**99**	LR	LR	21 54 06.2	
	comp=Z,114nm,20.4s,baz=300,slow=31						
PPT2	**Papeete2**	**23.71**	**99**	*e*S	**S**	**21 51 15.1**	**-6.8**
	comp=Z,2μm,26.2s						
PPT2				*e*LR	LR	21 52 45.1	
	comp=Z,234nm,26.0s						
PPT2				*e*LR	LR	21 52 51.0	
	comp=Z,408nm,26.8s						
URZ	**Urewera**	**24.24**	**197**	LR	LR	21 55 35.1	
	comp=Z,726nm,20.3s,baz=99,slow=34						
TBI	**Tubuai**	**24.66**	**113**	*e*S	**S**	**21 51 38.1**	**+1.0**
	comp=Z,4μm,26.5s						
TBI				*e*LR	LR	21 53 15.0	
	comp=Z,878nm,29.0s						
TBI				*e*LR	LR	21 53 22.0	
	comp=Z,3μm,27.0s						
HNR	**Honiara**	**25.92**	**280**	LR	LR	21 56 18.6	
	comp=Z,233nm,19.6s,baz=128,slow=34						
RPZ	**Rata Peaks**	**31.10**	**201**	LR	LR	22 00 26.7	
	comp=Z,584nm,18.3s,baz=12,slow=36						
TAOE	**Nuku Hiva Isla**	**33.83**	**83**	*e*LR	LR	21 57 23.7	
	comp=Z,130nm,22.2s						
H11S2	**WAKE ISLAND Hy**	**38.41**	**330**	T	T	22 30 05.1	
	baz=149,slow=76,SNR=82						
H11S3	**WAKE ISLAND Hy**	**38.42**	**330**	T	T	22 30 03.3	
	baz=149,slow=76,SNR=33						
H11S1	**WAKE ISLAND Hy**	**38.42**	**330**	T	T	22 30 04.6	
	baz=149,slow=76,SNR=37						
H11N3	**WAKE ISLAND Hy**	**39.37**	**331**	T	T	22 31 30.3	
	baz=151,slow=76,SNR=58						
H11N1	**WAKE ISLAND Hy**	**39.37**	**331**	T	T	22 31 24.5	
	baz=151,slow=76,SNR=54						
H11N2	**WAKE ISLAND Hy**	**39.38**	**331**	T	T	22 31 16.8	
	baz=151,slow=76,SNR=64						
STKA	**Stephens Creek**	**43.50**	**240**	LR	LR	22 07 05.0	
	comp=Z,219nm,18.7s,baz=55,slow=35						
WRA	**Warramunga Arr**	**49.17**	**257**	P	**P**	**21 50 42.5**	**-0.4**
	comp=Z,1.8nm,0.9s,baz=92,slow=6.4,SNR=7.9						
WRA				LR	LR	22 09 58.7	
	comp=Z,327nm,18.9s,baz=55,slow=34						
	comp=Z,1.8nm,0.9s						
AS31	**Alice Springs**	**49.47**	**252**	P	**P**	**21 50 44.2**	**-1.0**
ASAR	**Alice Springs**	**49.47**	**252**	P	**P**	**21 50 44.7**	**-0.5**
ASAR	**Alice Springs**	**49.47**	**252**	P	**P**	**21 50 45.2**	**0.0**
	comp=Z,6.4nm,0.8s,baz=84,slow=8.4,SNR=49						
ASAR				LR	LR	22 09 58.7	
	comp=Z,138nm,21.7s,baz=93,slow=34						
	comp=Z,6.4nm,0.8s						
GUMO	**Guam**	**49.60**	**303**	LR	LR	22 08 26.9	
	comp=Z,97nm,19.8s,baz=109,slow=32						
JCJ	**Chichijima**	**59.68**	**315**	LR	LR	22 13 04.2	
	comp=Z,236nm,20.2s,baz=82,slow=31						
TNTI	**Ternate**	**59.91**	**280**	P	**P**	**21 52 00.2**	**-0.8**
VNDA	**Vanda**	**63.51**	**186**	P	**P**	**21 52 24.7**	**+0.5**
VNDA	**Vanda**	**63.51**	**186**	P	**P**	**21 52 26.1**	**+1.9**
	comp=Z,2.1nm,1.0s,baz=7.6,slow=5.5,SNR=7.4						
VNDA				LR	LR	22 15 00.2	
	comp=Z,56nm,21.2s,baz=20,slow=31						
	comp=Z,2.1nm,1.0s						
DAV	**Davao City (W)**	**63.67**	**286**	LR	LR	22 18 50.3	
	comp=Z,78nm,18.0s,baz=111,slow=35						
NWAO	**Narrogin (SRO)**	**64.08**	**241**	LR	LR	22 19 41.4	
	comp=Z,230nm,18.7s,baz=15,slow=35						
KAPI	**Kappang**	**65.63**	**271**	LR	LR	22 18 46.0	
	comp=Z,69nm,20.7s,baz=136,slow=34						
MJAR	**Matsushiro Arr**	**68.30**	**320**	P	**P**	**21 52 56.2**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=127,slow=9.3,SNR=4.2						
MJAR				LR	LR	22 17 10.4	
	comp=Z,66nm,21.7s,baz=120,slow=31						
	comp=Z,0.6nm,0.5s						
SHEM	**Shemya Is, Ala**	**68.39**	**352**	LR	LR	22 16 43.8	
	comp=Z,66nm,19.8s,baz=299,slow=31						
JOW	**Kunigami**	**69.76**	**307**	LR	LR	22 17 18.2	
	comp=Z,155nm,22.0s,baz=124,slow=30						
ASAJ	**Asahikawa**	**70.97**	**329**	LR	LR	22 18 41.8	
	comp=Z,54nm,20.7s,baz=171,slow=31						
JNU	**Nakatsue**	**71.12**	**313**	LR	LR	22 18 35.1	
	comp=Z,74nm,19.2s,baz=148,slow=31						
PFO	**Pinyon Flats O**	**73.32**	**47**	LR	LR	22 19 05.6	
	comp=Z,189nm,18.1s,baz=224,slow=30						
LPIG	**La Paz**	**73.56**	**59**	LR	LR	22 17 18.0	
	comp=Z,111nm,19.5s,baz=230,slow=29						
YBH	**Yreka Blue Hor**	**73.88**	**38**	LR	LR	22 18 30.3	
	comp=Z,9.7nm,21.6s,baz=253,slow=30						
NVAR	**Mina Array Bea**	**74.67**	**42**	P	**P**	**21 53 36.2**	**+1.8**
	comp=Z,0.3nm,0.6s,baz=211,slow=8.1,SNR=3.5						
NVAR				LR	LR	22 22 44.3	
	comp=Z,114nm,18.2s,baz=208,slow=33						
	comp=Z,0.3nm,0.6s						
QSPA	**South Pole Qui**	**74.85**	**180**	P	**P**	**21 53 36.2**	**+1.2**
QSPA	**South Pole Qui**	**74.85**	**180**	P	**P**	**21 53 36.5**	**+1.5**
	comp=Z,6.5nm,0.9s,baz=304,slow=5.2,SNR=3.2						
QSPA				LR	LR	22 21 24.5	
	comp=Z,97nm,21.3s,baz=40,slow=32						
	comp=Z,6.5nm,0.9s						
KDAK	**Kodiak Island**	**74.86**	**12**	LR	LR	22 22 42.0	
	comp=Z,99nm,18.1s,baz=201,slow=33						
KSRS	**Korea Array**	**75.49**	**316**	P	**P**	**21 53 39.2**	**+0.4**

	comp=Z,0.4nm,0.3s,baz=117,slow=7.2,SNR=4.7						
	comp=Z,0.4nm,0.3s						
USRK	Ussuriysk Ar.	76.77	323	LR	LR	22 20 48.6	
	comp=Z,66nm,20.9s,baz=140,slow=30						
K15K	Wolf Creek Mou	77.87	6	P	P	21 53 52.7	+0.9
K15K				IAmb	IAmb	21 54 01.6	
	comp=Z,9.3nm,1.1s						
BBB	Bella Bella	78.03	27	LR	LR	22 20 42.5	
	comp=Z,135nm,19.3s,baz=206,slow=30						
KLR	Kul'dur	79.94	327	LR	LR	22 23 58.3	
	comp=Z,44nm,22.0s,baz=216,slow=32						
RND	Reindeer	80.77	11	P	P	21 54 08.1	+0.4
RND				IAmb	IAmb	21 54 16.2	
	comp=Z,12nm,1.2s						
NEW	Newport	80.95	35	LR	LR	22 24 11.8	
	comp=Z,98nm,18.9s,baz=213,slow=31						
TXAR	Lajitas Array	81.11	56	LR	LR	22 22 31.4	
	comp=Z,65nm,20.4s,baz=224,slow=30						
M26K	Nabesna, AK	81.12	14	P	P	21 54 10.6	+1.0
M26K				IAmb	IAmb	21 54 19.6	
	comp=Z,12nm,1.2s						
ANMO	Albuquerque	81.23	50	LR	LR	22 22 36.3	
	comp=Z,202nm,20.9s,baz=328,slow=30						
DLBC	Dease Lake	81.78	22	LR	LR	22 22 59.9	
	comp=Z,122nm,19.1s,baz=264,slow=30						
DOT	Dot Lake	81.97	13	P	P	21 54 13.9	0.0
DOT				IAmb	IAmb	21 54 22.5	
	comp=Z,6.4nm,1.1s						
IMAR	Indian Mountai	82.37	8	P	P	21 54 16.7	+0.7
IL31		82.38	11	P	P	21 54 16.5	+0.5
ILAR	Eielson Array	82.38	11	P	P	21 54 16.4	+0.3
ILAR	Eielson Array	82.38	11	P	P	21 54 16.6	+0.5
	comp=Z,0.5nm,0.9s,baz=207,slow=7.3,SNR=4.3						
ILAR				LR	LR	22 23 33.0	
	comp=Z,61nm,21.3s,baz=190,slow=30						
	comp=Z,0.5nm,0.9s						
PDAR	Pinedale Array	82.60	42	P	P	21 54 19.0	+0.9
	comp=Z,0.3nm,0.7s,baz=235,slow=5.2,SNR=4.2						
PDAR				LR	LR	22 24 29.4	
	comp=Z,67nm,20.3s,baz=232,slow=31						
	comp=Z,0.3nm,0.7s						
I30M	Mount Dempster	85.10	15	P	P	21 54 30.9	+0.8
I30M				IAmb	IAmb	21 54 39.0	
	comp=Z,7.6nm,1.3s						
ABTX	Abilene, Hawle	85.54	55	P	P	21 54 33.3	+0.3
MAW	Mawson	87.75	199	LR	LR	22 32 19.2	
	comp=Z,153nm,18.0s,baz=100,slow=34						
INK	Inuvik	88.24	14	LR	LR	22 30 25.9	
	comp=Z,40nm,18.8s,baz=224,slow=33						
PLCA	Paso Flores	90.20	132	LR	LR	22 26 17.1	
	comp=Z,86nm,21.4s,baz=246,slow=30						
YKA	Yellowknife Ar	90.20	24	P	P	21 54 55.0	+0.4
	comp=Z,1.1nm,1.0s,baz=250,slow=4.6,SNR=4.0						
YKA				LR	LR	22 27 19.8	
	comp=Z,91nm,21.9s,baz=262,slow=30						
	comp=Z,1.1nm,1.0s						
CMAR	Chiang Mai Arr	91.85	289	P	P	21 55 02.4	-0.9
	comp=Z,0.5nm,0.7s,baz=109,slow=4.7,SNR=2.3						
CMAR				LR	LR	22 31 02.1	
	comp=Z,41nm,21.5s,baz=85,slow=32						
	comp=Z,0.5nm,0.7s						
JTS	Las Juntas de	91.90	80	LR	LR	22 26 52.5	
	comp=Z,60nm,19.5s,baz=194,slow=29						
SYO	Syowa Base	92.66	192	⇓*e*sP	sP	21 55 11.7	+2.2
SNAA	Sanae	93.15	177	LR	LR	22 31 04.6	
	comp=Z,46nm,20.8s,baz=256,slow=32						
ATAH	Atahualpa	93.68	98	LR	LR	22 28 42.5	
	comp=Z,58nm,19.8s,baz=239,slow=30						
ULM	Lac du Bonnet	94.23	39	LR	LR	22 31 14.9	
	comp=Z,141nm,20.6s,baz=238,slow=31						
TKL	Tuckaleechee C	99.00	56	LR	LR	22 33 33.1	
	comp=Z,68nm,21.0s,baz=264,slow=31						
BRDH	Bariadhala	99.50	291	LR	LR	22 39 03.8	
	comp=Z,118nm,18.4s,baz=160,slow=34						
BRTR	Keskin Array B	145.53	321	PKPbc	PKPdf	22 01 33.8	+0.5
	comp=Z,1.3nm,1.0s,baz=68,slow=3.9,SNR=4.7						
GERES	GERESS Array B	145.82	351	PKPbc	PKPab	22 01 34.7	+0.5
	comp=Z,0.4nm,0.7s,baz=29,slow=2.4,SNR=2.1						

IDC **12** *21:54:29.6±1.0, 38°.67N×22°.91E, h0^{km}, mb3.8/10, mbtmp3.8/19, ML3.0/7, MS3.6/12, Error ellipse: s-maj=15.6km s-min=14.8km az=46.0*

ISK **12** *21:54:29.3, 38°.69N×23°.01E, h2^{km}, ML3.8/20*

NEIC **12** *21:54:30.9±1.8, 38°.63N±0°.07×22°.93E±0°.07, h10^{km}±1^{km}, mb4.0/6, Error ellipse: s-maj=11.5km s-min=9.4km az=202.0*

AFAD **12** *21:54:30.0, 38°.66N×22°.86E, h30^{km}±61^{km}, MW4.0*

ATH **12** *21:54:30.5, 38°.63N×22°.90E, h14^{km}, ML4.1/30, Manual Solution by A.Papageorgiou First location: 2019/06/12 21:55:23, This location: 2019/06/12 22:29:33 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

PDG **12** *21:54:30.7±0.6, 38°.66N×22°.96E, h14^{km}, ML4.0/11, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*

MCSM **12** *21:54:32.4±0.5, 39°N±4°×2°3E±°, h10^{km}, mb4.4, MLv4.2*

BEO **12** *21:54:38.2±0.8, 39°.20N×22°.85E, h0^{km}, ML3.5/5*

ISC 12 21:54:30.9±0.7**, 38°.61N**±0°.02×**22°.92E**±0°.02**, h13**^{km}±5^{km}**, n261,** σ1^{s}**07**/302**, mb4.0**/13**, MS3.7**/9**, 20C-11D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKR	Lokris	0.08	58	P	Pg	21 54 33.5	-0.2
LKR				S	Sg	21 54 35.4	-0.2
AXAR	Agios Charalam	0.26	308	P	Pg	21 54 35.9	-0.5
AXAR				S	Sg	21 54 39.9	-0.2
AIDA	Aidipsos	0.27	23	P	Pg	21 54 36.5	0.0
AIDA				S	Sg	21 54 40.2	-0.1
DLFA	Delphi	0.36	248	P	Pg	21 54 37.6	-0.5
DLFA				S	Sg	21 54 42.6	-0.4
VIL2	Platees	0.48	145	P	Pb	21 54 41.6	+0.4
VIL2				S	Sb	21 54 49.9	+1.6
LTK	Loutraki	0.59	176	P	Pb	21 54 42.3	-0.8
LTK				S	Sb	21 54 51.8	+0.6
KIAA	Kiato	0.61	193	P	Pb	21 54 43.4	0.0
KIAA				S	Sb	21 54 51.7	-0.1
AGG	Agios Georgios	0.62	312	Pg	Pg	21 54 42.5	-0.5
AGG				Sg	Sg	21 54 51.1	-0.1
AGG	Agios Georgios	0.62	312	P	Pg	21 54 42.4	-0.7
AGG				S	Sg	21 54 50.8	-0.4
AGG				*i* IAML		21 54 51.0	
	comp=N,3µm,0.7s						
AGG				*i* IAML		21 54 54.0	
	comp=E,3µm,0.3s						
AGG	Agios Georgios	0.62	312	P	Pg	21 54 42.3	-0.7
AGG				S	Sg	21 54 50.8	-0.4
LOUT	Loutraki	0.62	176	P	Pb	21 54 42.9	-0.7
LOUT				S	Sb	21 54 52.5	+0.2
KALE	Kalithea	0.65	251	P	Pg	21 54 42.6	-1.0
KALE				S	Sg	21 54 52.1	0.0
SERG	Sergoula	0.70	254	P	Pg	21 54 43.5	-1.1
SERG				S	Sg	21 54 54.2	+0.3
MAKR	Makrakomi, Fth	0.73	304	P	Pg	21 54 44.6	-0.6
MAKR				S	Sg	21 54 54.5	-0.3
NEO	Neokhori	0.74	19	P	Pg	21 54 44.7	-0.5
NEO				S	Sg	21 54 54.3	-0.6
ANX	Ano Chora	0.78	269	P	Pg	21 54 45.0	-1.0
ANX				S	Sg	21 54 56.6	+0.2
GUR	Goura	0.81	214	P	Pb	21 54 46.6	-0.3
GUR				S	Sb	21 54 58.1	+0.3
EFP	Efpalio	0.81	257	P	Pg	21 54 45.8	-0.9
EFP				S	Sg	21 54 57.3	-0.1
KLV	Kalavryta, Ach	0.83	227	P	Pn	21 54 47.9	-0.4
KLV				S	Sb	21 54 58.5	+0.3
ACHAR	Athens-Acharne	0.84	129	P	Pb	21 54 47.5	+0.2
ACHAR				S	Sn	21 54 60.0	-0.6
ATH	Athens Observa	0.90	135	P	Pb	21 54 48.4	+0.1
ATH				S	Sb	21 55 00.6	+0.6
NOAC	Athens-Thissio	0.90	135	P	Pn	21 54 48.6	-0.6
NOAC				S	Sb	21 55 00.6	+0.5
ATHP	Athens-Neo Psi	0.91	132	P	Pb	21 54 48.6	+0.1
ATHP				S	Sn	21 55 02.0	-0.2
EVR	Evrytania	0.92	290	P	Pb	21 54 49.5	+0.7
EVR				S	Sg	21 55 00.3	-0.4
KYMI	Kymi, Euboea I	0.93	88	P	Pg	21 54 48.2	-0.7
KYMI				S	Sb	21 55 01.8	+0.8
PTL	Penteli	0.93	127	P	Pb	21 54 48.7	-0.2
PTL				S	Sn	21 55 02.1	-0.9
ATHU	Athens Univers	0.94	133	P	Pb	21 54 48.9	-0.1
ATHU				S	Sn	21 55 02.1	-0.9
SOFA	Sofades	0.97	319	P	Pg	21 54 48.8	-0.9
SOFA				S	Sg	21 55 02.0	-0.2
MET4	Agioi Theodoro	1.06	159	P	Pn	21 54 51.0	-0.3
MET6	Megalochori,Me	1.07	161	P	Pn	21 54 51.3	-0.3
PVO	Paravola	1.09	271	P	Pg	21 54 50.8	-1.2
PVO				S	Sg	21 55 05.6	-0.6
GINA	Giannouli	1.13	339	P	Pg	21 54 51.3	-1.5
LRSO	Larissa Observ	1.14	339	P	Pg	21 54 51.5	-1.3
DRO	Drossia	1.16	236	P	Pg	21 54 52.1	-1.1
THL	Klokotos Trika	1.18	324	P	Pb	21 54 52.5	-0.7
TYRN	Tyrnavos	1.22	334	P	Pn	21 54 52.8	-0.9
RLS	Riolos of Patr	1.27	245	P	Pn	21 54 53.9	-0.4
TRKA	Trikala	1.30	317	P	Pn	21 54 54.1	-0.6
SKY	Skiros Island	1.30	78	P	Pn	21 54 54.4	-0.4
SKY				S	Sg	21 55 12.4	-0.6
VLX	Vlachokerasia	1.31	199	P	Pn	21 54 54.6	-0.3
VLX				S	Sn	21 55 12.8	+0.5
AMT	Artemida-Makis	1.44	222	P	Pn	21 54 56.9	+0.2
ANDM	Andravida	1.44	245	P	Pn	21 54 56.8	+0.2
TETR	Tetrakomo, Epi	1.48	300	P	Pn	21 54 57.8	+0.5
TETR				S	Sn	21 55 16.1	-0.4
ZARO	Zacharo	1.50	222	P	Pn	21 54 58.0	+0.5
KTLO	Katakolo	1.59	233	P	Pb	21 54 59.6	-0.5
ITM	Ithomi	1.63	209	Pn	Pg	21 55 01.9	-0.3
ITM				Sn	Sg	21 55 24.4	+1.1
KPRO	Kipourio	1.81	319	P	Pn	21 55 01.4	-0.4
VLS	Valsamata	1.88	257	P	Pn	21 55 03.3	+0.5
OUR	Ouranopolis	1.91	25	Pn	Pn	21 55 02.5	-0.6
OUR				Sn	Sn	21 55 27.2	+0.2
HORT	Hortiatis	1.99	4	Pn	Pn	21 55 03.9	-0.4
IGT	Igoumenitsa	2.21	295	*e*Pn	Pb	21 55 10.5	-0.3
IGT				*e*Sg	Sg	21 55 42.5	+0.4
SIGR	SIGRI	2.37	74	Pn	Pn	21 55 09.6	+0.2
GRG	Griva	2.38	351	Pn	Pn	21 55 10.1	+0.5
CHOS	Chios island	2.47	94	Pn	Pn	21 55 11.5	+0.6
SRS	Serrai	2.56	12	*e*Pn	Pn	21 55 11.9	-0.2
APE	Apeiranthos	2.58	126	Pn	Pn	21 55 12.8	+0.4
APE	Apeiranthos	2.58	126	P	Pn	21 55 12.4	0.0
APE				S	Sb	21 55 48.6	0.0
APE	Apeiranthos	2.58	126	⇑P	Pn	21 55 12.9	+0.6
KOCA	Canakkale, Ayv	2.66	69	P	Pn	21 55 15.5	+2.0
KEK	Kerkira	2.66	295	Pn	Pn	21 55 15.3	+1.8
BOZC	Bozcaada	2.73	62	Pn	Pn	21 55 13.9	-0.5
BOZC	Bozcaada	2.73	62	P	Pn	21 55 15.9	+1.5
GOAD	anakkale-G¶	2.79	55	P	Pn	21 55 12.8	-2.4
GADA	Gvkgeada	2.80	55	Pn	Pn	21 55 14.7	-0.6
URLA	Izmir	2.90	94	P	Pn	21 55 17.8	+1.0
ECEA	Canakkale, Ece	2.90	59	P	Pb	21 55 22.4	-0.1
EZN	Ezine	2.91	64	Pn	Pn	21 55 17.4	+0.5
EZN	Ezine	2.91	64	⇑P	Pn	21 55 17.7	+0.8
OHR	Ohrid	2.98	328	*e*Pn	Pn	21 55 20.3	+2.3
OHR				*e*Sg	Sn	21 55 55.3	+1.7
SANT	Santorini	3.01	137		Pn	21 55 18.8	+0.5
SANT	Santorini	3.01	137	P	Pn	21 55 20.1	+1.8
SANT	Santorini	3.01	137	⇑P	Pn	21 55 20.8	+2.4
AYVA	Ayvalik	3.02	75	P	Pn	21 55 18.2	-0.3
COMU	Canakkale	3.13	61	Pn	Pn	21 55 19.4	-0.6
DKL	Dikili	3.15	80	Pn	Pn	21 55 20.6	+0.5
DGB	zmir	3.17	99	P	Pn	21 55 21.6	+1.2
RDO	Rodhopi	3.24	38	Pn	Pn	21 55 20.7	-0.7
CAVK	Edirne/Enez-Ca	3.26	49	P	Pn	21 55 14.3	-7.3
CAVK	Edirne/Enez-Ca	3.26	49	⇑P	Pn	21 55 21.4	-0.3
ENEZ	Enez	3.28	49	Pn	Pn	21 55 21.6	-0.3
GELI	Tayfur-Gelibol	3.28	56	Pn	Pn	21 55 22.0	0.0
GELI				Sn	Sn	21 55 59.5	-1.3
ALN	Alexandroupoli	3.32	46	Pn	Pn	21 55 21.9	-0.6
ALN	Alexandroupoli	3.32	46	P	Pn	21 55 22.0	-0.5
KDZ	Kurdzhali	3.54	31	Pn	Pn	21 55 25.0	-0.6
TIR	Tirane	3.60	320	⇑P	Pn	21 55 28.7	+2.3
IDI	Anoyia	3.67	154	Pn	Pn	21 55 28.5	+1.1
IDI	Anoyia	3.67	154	Pn	Pn	21 55 29.1	+1.6
	22nm,0.5s,baz=343,slow=14,SNR=33						
IDI				Sn	Sn	21 56 08.6	-2.1
	9.9nm,0.3s,baz=47,slow=19,SNR=7.2						
SCTE	Santa Cesarea	3.75	294		Pn	21 55 29.0	+0.6
PLD	Plovdiv	3.80	21	Pn	Pn	21 55 27.8	-1.3
PLD	Plovdiv	3.80	21	*e*Pn	Pn	21 55 29.3	+0.2
STEP	BALIKESIR_Sava	3.82	77	P	Pg	21 55 41.3	-2.8
AKHS	Akhisar	3.84	84	P	Pb	21 55 40.9	+2.4
BOSS	Bosilegrad	3.90	355	*e*Pn	Pn	21 55 31.1	+0.6
VTS	Vitosha	4.01	3	*e*Pn	Pn	21 55 32.4	+0.2
BARS	Barje	4.29	349	*e*Pn	Pn	21 55 36.5	+0.7
ULC	Ulcinj	4.37	321	*e*Pn	Pn	21 55 38.0	+1.0
ULC				*i* Sn	Sn	21 56 29.0	+1.2
MANT	Manisa	4.42	90	Pn	Pn	21 55 37.3	-0.6
KARP	Karpathos	4.57	131	Pn	Pn	21 55 40.6	+0.9
KARP	Karpathos	4.57	131	P	Pn	21 55 42.6	+2.9
DRME	Dracevica, Mon	4.57	323	*e*Pn	Pn	21 55 41.7	+2.0
DRME	Dracevica, Mon	4.57	323	*e*Pn	Pn	21 55 41.7	+2.0
DRME	Dracevica, Mon	4.57	323	*e*Pn	Pn	21 55 40.7	+1.0
DRME				*i* Sn	Sn	21 56 32.8	+0.2
ZAPS	Zavoj	4.66	357	*e*Pn	Pn	21 55 41.9	+0.9
PDG	Podgorica	4.73	325		Pn	21 55 43.0	+1.1
PDG	Podgorica	4.73	325	*e*Pn	Pn	21 55 43.3	+1.4
PDG	Podgorica	4.73	325	⇑P	Pn	21 55 43.3	+1.4
PDG				⇓S	Sn	21 56 38.5	+2.1
PDG	Podgorica	4.73	325	*e*Pn	Pn	21 55 44.2	+2.4
PDG	Podgorica	4.73	325	*e*Pn	Pn	21 55 42.8	+1.0
PDG				*i* Sn	Sn	21 56 37.6	+1.1
BUM	Brajici-Budva	4.80	321	*e*Pn	Pn	21 55 44.0	+1.1
BUM				*i* Sn	Sn	21 56 37.9	-0.4
SELS	Selova	4.80	344	*e*Pn	Pn	21 55 43.5	+0.6
IVA	Berane	4.84	333	*e*Pn	Pn	21 55 44.3	+0.8
IVA				*i* Sn	Sn	21 56 39.9	+0.5
TIP	Timpagrande	4.84	279	Pn	Pn	21 55 44.3	+0.8
TIP	Timpagrande	4.84	279	⇑P	Pn	21 55 45.3	+1.8
TIP	Timpagrande	4.84	279	P	Pn	21 55 44.7	+1.2
KOME	Kolasin	4.96	330	*e*Pn	Pn	21 55 46.4	+1.2
KOME	Kolasin	4.96	330	*e*Pn	Pn	21 55 46.2	+1.0
KOME				*i* Sn	Sn	21 56 42.5	+0.1
CEME	Cevo	4.97	324	*e*Pn	Pn	21 55 46.4	+1.1
CEME				*i* Sn	Sn	21 56 43.0	+0.3
HCY	Herceg Novi	5.10	320	*e*Pn	Pn	21 55 47.9	+0.9
HCY	Herceg Novi	5.10	320	*e*Pn	Pn	21 55 48.2	+1.2
HCY				*i* Sn	Sn	21 56 47.1	+1.3
SJES	Sjenica	5.15	335	*e*Pn	Pn	21 55 49.2	+1.4
SJES	Sjenica	5.15	335	*e*Pn	Pn	21 55 49.4	+1.6
MATE	Matera	5.21	295	⇑P	Pn	21 55 49.4	+1.0
ZAGS	Zajecar	5.22	355	*e*Pn	Pn	21 55 49.1	+0.4
TREB	Trebinje	5.37	321	*e*Pn	Pn	21 55 50.8	0.0
IVAS	Ivanjica	5.38	338	*e*Pn	Pn	21 55 51.6	+0.7
PLE	Pljevlja	5.42	332	*e*Pn	Pn	21 55 52.3	+0.8
PLE				*i* Sn	Sn	21 56 53.9	+0.2
BRY	Bratogost	5.42	324	*e*Pn	Pn	21 55 51.4	-0.2
BRY	Bratogost	5.42	324	*e*Pn	Pn	21 55 52.6	+1.0
BRY				*i* Sn	Sn	21 56 54.2	+0.3
UPM	Unac-Piva	5.50	328	*e*Pn	Pn	21 55 55.2	+2.5
UPM	Unac-Piva	5.50	328	*e*Pn	Pn	21 55 53.6	+0.9
UPM				*i* Sn	Sn	21 56 56.2	+0.3
CEL	Celeste	5.53	269		Pn	21 55 54.1	+1.2
CEL	Celeste	5.53	269	P	Pn	21 55 54.1	+1.2
	0.1nm28nm,0.8s						
GRUS	Gruza	5.53	343	*e*Pn	Pn	21 55 53.3	+0.4
RUDO	Rudo	5.67	333	*e*Pn	Pn	21 55 55.3	+0.4
CUC	Castrocucco	5.68	286		Pn	21 55 56.9	+1.9
STON	Ston	5.81	319	*e*Pn	Pn	21 55 57.6	+0.8
STON	Ston	5.81	319	*e*Pn	Pn	21 55 57.0	+0.2
KUBS	Kucevo	5.87	351	*e*Pn	Pn	21 55 56.8	-0.8
BBLS	Lazi&#263i	5.88	334	*e*Pn	Pn	21 55 59.5	+1.7
BBLS	Lazi&#263i	5.88	334	*e*Pn	Pn	21 56 00.0	+2.2
DIVS	Divibare	5.91	339	*e*Pn	Pn	21 56 00.4	+2.2
TRUS	Trudelj	5.92	342	*e*Pn	Pn	21 55 59.0	+0.8
BORA	Eskisehir	5.99	75	Pn	Pn	21 55 59.7	+0.4
HUMR	Humele	6.11	14	⇑P	Pn	21 56 01.2	+0.3
HAPS	Han Pijesak,Bl	6.23	333	*e*Pn	Pn	21 56 04.4	+1.8
MDVR	Moldovita	6.23	352	⇑P	Pn	21 56 03.2	+0.6
SGRT	San Giovanni R	6.33	302	Pn	Pn	21 56 03.9	0.0
TEKS	Tekeris	6.45	338	*e*Pn	Pn	21 56 05.9	+0.3
TEKS	Tekeris	6.45	338	*e*Pn	Pn	21 56 06.7	+1.1
MANR	Mangalia	6.73	38	⇓P	Pn	21 56 10.4	+1.1
VAE	Valguarnera	6.81	263	Pn	Pn	21 56 12.5	+2.0
	3.8nm,0.3s,baz=102,slow=18,SNR=6.3						
VAE				Sn	Sn	21 57 27.9	+0.1
	1.1nm,0.3s,baz=3.9,slow=17,SNR=1.2						
	6.5nm,0.6s						
LOT	Lotru	6.86	5	⇑P	Pn	21 56 11.0	-0.3
PAOL	Paolisi	6.87	293		Pn	21 56 11.9	+0.6
ARR	Arges	6.87	10	⇓P	Pn	21 56 11.5	+0.1
FRGS	Fruska Gora	6.94	341	*e*Pn	Pn	21 56 13.1	+0.8
FRGS	Fruska Gora	6.94	341	*e*Pn	Pn	21 56 13.2	+0.9
VOIR		7.00	12	⇑P	Pn	21 56 14.0	+0.8
VOIR		7.00	12	P	Pn	21 56 13.7	+0.5
	0.1nm19nm,0.7s						
ISR	Istrita	7.04	21	⇓P	Pn	21 56 15.4	+1.7
ISR	Istrita	7.04	21	P	Pn	21 56 15.0	+1.3
	0.2nm20nm,0.6s						
BZS	Buzias	7.07	353	⇓P	Pn	21 56 14.2	+0.2
HARR	Harsova	7.14	30	⇓P	Pn	21 56 14.4	-0.6
TIRR	Tirgusor	7.15	33	Pn	Pn	21 56 14.7	-0.4
TIRR	Tirgusor	7.15	33	⇑P	Pn	21 56 15.1	0.0
MLR	Muntele Rosu	7.24	17		Pn	21 56 16.9	+0.5
MLR	Muntele Rosu	7.24	17	Pn	Pn	21 56 17.5	+1.1
	14nm,0.5s,baz=195,slow=15,SNR=25						
MLR				Sn	Sn	21 57 36.2	-2.3
	baz=60,slow=6.9						
MLR				Lg	Lg	21 58 18.5	
	baz=153,slow=16						
MLR				LR	LR	21 59 30.4	
	comp=Z,179nm,18.4s,baz=212,slow=42						
MLR	Muntele Rosu	7.24	17	⇑P	Pn	21 56 17.2	+0.7
MLR	Muntele Rosu	7.24	17	*e*Pn	Pn	21 56 17.5	+1.1
MLR	Muntele Rosu	7.24	17	P	Pn	21 56 17.1	+0.7
	0.1nm25nm,0.7s						
WDD	Wied Dalam	7.25	250	Pn	Pn	21 56 16.3	-0.2
NEHR	Nehoiu	7.26	19	⇓P	Pn	21 56 17.8	+1.1
BLY	Banja Luka	7.48	327	*e*Pn	Pn	21 56 20.3	+0.6
BLY	Banja Luka	7.48	327	*e*Pn	Pn	21 56 20.5	+0.8
A050A	Klekovaca	7.57	323	*e*Pn	Pn	21 56 21.0	0.0
DOPR	Dopca	7.58	13	⇓P	Pn	21 56 22.1	+1.1
CFR	Carcaliu	7.63	29	⇓P	Pn	21 56 22.1	+0.4
PLOR	Plostina	7.75	20	⇑P	Pn	21 56 24.8	+1.4
OZUR		7.78	15	⇓P	Pn	21 56 24.3	+0.6
VRI	Vrincioaia	7.78	20	⇑P	Pn	21 56 26.0	+2.2
VRI	Vrincioaia	7.78	20	P	Pn	21 56 25.7	+1.9
	0.1nm15nm,0.6s						
TURR	Turia	7.79	16	⇑P	Pn	21 56 25.0	+1.1
A051A	Mrakovica	7.81	327	*e*Pn	Pn	21 56 25.1	+0.8
ONER	Baraj Valea Uz	8.13	17	⇓P	Pn	21 56 30.9	+2.2
CAMP	Campotosto	8.23	301	Pn	Pn	21 56 30.3	+0.3
MORH	Mrgy, Hungar	8.23	339	⇑P	Pn	21 56 31.0	+1.2
MORH	Mrgy, Hungar	8.23	339	*e*Pn	Pn	21 56 31.1	+1.2
MORH	Mrgy, Hungar	8.23	339	P	Pn	21 56 30.9	+1.0
	7.2nm,0.5s						
TESR	Tescani	8.36	18	⇑P	Pn	21 56 33.0	+1.3
TESR	Tescani	8.36	18	P	Pn	21 56 33.9	+2.1
BR131	Keskin Array S	8.40	79	Pn	Pn	21 56 33.5	+1.0
BRTR	Keskin Array B	8.40	79	Pn	Pn	21 56 32.5	0.0
BRTR	Keskin Array B	8.40	79	Pn	Pn	21 56 34.5	+2.0
	0.2nm,0.3s,baz=263,slow=12,SNR=6.4						
	0.6nm,0.4s						
NRCA	Norcia	8.55	303	Pn	Pn	21 56 34.5	0.0
ILGA	Ilgaz	8.66	70	Pn	Pn	21 56 37.5	+1.4
BOJS	Bojanci	8.94	323	*e*Pn	Pn	21 56 37.5	-2.1
BOJS	Bojanci	8.94	323	*e*Pn	Pn	21 56 39.4	-0.2
CRES	Cresnjevec Ost	9.09	325	*e*Pn	Pn	21 56 40.9	-0.8
BURAR	Bucovina Array	9.16	10	Pn	Pn	21 56 42.9	+0.1
BURAR	Bucovina Array	9.16	10	⇑P	Pn	21 56 42.8	+0.1
BUR08	Bucovina Ar. S	9.18	10	Pn	Pn	21 56 42.6	-0.4
CEY	Cerknica	9.51	321	*e*Pn	Pn	21 56 46.6	-0.9
CEY	Cerknica	9.51	321	*e*Pn	Pn	21 56 46.7	-0.8
PSZ	Piszkesteto	9.56	348	Pn	Pn	21 56 48.9	+0.6
SKDS	Skadanscina	9.58	319	*e*Pn	Pn	21 56 46.0	-2.5
NSLU	Nyzhne Selyshc	9.65	6	P	Pn	21 56 49.9	+0.5
HOLU	Holmets	9.92	358	P	Pn	21 56 53.6	+0.5
SOKA	Soboth	9.93	327	*i* Pn	Pn	21 56 52.7	-0.6
	0.7nm,0.3s						
OBKA	Obir	10.02	325	*e*Pn	Pn	21 56 52.7	-1.8
	2.7nm,0.4s						
UZHM	Uzhgorod	10.03	358	P	Pn	21 56 55.7	+1.2
STNU	Starunia	10.16	6	P	Pn	21 56 58.1	+1.7
ARSA	Arzberg	10.19	330	*i* Pn	Pn	21 56 55.1	-1.7
	1.2nm,0.4s						
RONA	Rosalia, Austr	10.29	334	*e*Pn	Pn	21 56 57.2	-1.0
	0.9nm,0.4s						
VYHS	Vyhne	10.31	345	*e*PN	Pn	21 57 01.1	+2.6
VYHS				*e*SN	Sn	21 58 50.5	-3.4
VSL	Villasalto	10.57	279	Pn	Pn	21 57 01.9	-0.2
CONA	Conrad Observa	10.63	333	*e*Pn	Pn	21 57 02.0	-1.0
	0.5nm,0.4s						
MOA	Molln	11.18	328	*i* Pn	Pn	21 57 09.4	-1.0
	1.5nm,0.6s						
KEST	Kesra	11.20	259	Pn	Pn	21 57 11.7	+0.9
	0.1nm,0.3s,baz=82,slow=12,SNR=2.7						
	2.5nm,0.8s						
LESA	Schwarzleotal	11.56	323	*i* Pn	Pn	21 57 15.9	+0.3
	2.0nm,0.6s						
MMAI	Mount Meron Ar	11.57	115	Pn	Pn	21 57 15.6	-0.2
	0.6nm,0.3s,baz=311,slow=11,SNR=1.8						
	0.9nm,0.5s						
VRAC	Vranov	11.62	339	LR	LR	22 01 34.4	
	comp=Z,18nm,18.0s,baz=193,slow=37						
LUBAR	Lubar, Ukraine	11.82	15	P	Pn	21 57 18.9	-0.2
GERES	GERESS Array B	12.20	330	Pn	Pn	21 57 24.9	+0.5
	baz=159,slow=11,SNR=4.6						
GERES				LR	LR	22 03 23.4	
	comp=Z,26nm,21.4s,baz=153,slow=44						
	0.6nm,0.7s						
FETA	Feichten	12.27	317	*i* Pn	Pn	21 57 25.1	-0.2
	0.4nm,0.2s						
MOTA	Moosalm	12.28	319	*i* Pn	Pn	21 57 24.5	-1.0
	0.7nm,0.3s						
DAVOX	Davos/Dischmat	12.58	315	LR	LR	22 04 15.9	
	comp=Z,108nm,18.4s,baz=74,slow=47						
GHAJ	Ghor Haditha	12.67	121	Pn	Pn	21 57 31.9	+1.2
AK12	Malin Array Si	12.82	18	P	Pn	21 57 32.2	-0.5
AKASG	Malin Array Be	12.89	18	Pn	Pn	21 57 32.1	-1.5
	0.6nm,0.3s,baz=207,slow=12,SNR=2.5						
AKASG				LR	LR	22 02 10.7	
	comp=Z,11nm,20.7s,baz=190,slow=36						
	0.2nm,0.3s						
EIL	Elat	13.36	128	Pn	Pn	21 57 39.3	-0.9
	0.3nm,0.3s,baz=5.3,slow=14,SNR=4.3						
	2.6nm,0.6s						
CLL	Collm	14.49	334	*e*sPP		21 58 09.0	
GNI	Garni	16.94	78	LR	LR	22 06 05.5	
	comp=Z,60nm,18.6s,baz=260,slow=41						
ESBB	Sonseca Array	20.85	281	P	P	21 59 10.8	-1.7
ESBB				IAmb	IAmb	21 59 13.8	
	comp=Z,6.7nm,1.0s						
ESDC	Sonseca Array	20.85	281	P	P	21 59 12.8	+0.3
	comp=Z,4.3nm,0.8s,baz=75,slow=10,SNR=24						
	comp=Z,4.3nm,0.8s						
PAB	San Pablo	21.16	281	P	P	21 59 15.0	-0.8
PAB				IAmb	IAmb	21 59 17.4	
	comp=Z,4.9nm,0.8s						
HFS	Hagfors	22.32	348	P	P	21 59 27.6	-0.4
	comp=Z,2.0nm,0.8s,baz=143,slow=12,SNR=1.8						
	comp=Z,2.0nm,0.8s						
FINES	FINESS Array B	22.94	4	P	P	21 59 33.1	-1.4
FINES	FINESS Array B	22.94	4	P	P	21 59 34.3	-0.2
	comp=Z,3.9nm,0.8s,baz=171,slow=13,SNR=5.5						
FINES				LR	LR	22 09 38.5	
	comp=Z,68nm,18.8s,baz=208,slow=40						
	comp=Z,3.9nm,0.8s						
FIA1	FINESS Array S	22.95	4	P	P	21 59 33.8	-0.8
NC602	NORSAR Array S	23.27	346	P	P	21 59 35.2	-2.7
NC602				IAmb	IAmb	22 00 02.9	
	comp=Z,8.7nm,1.1s						
NOA	NORSAR Array B	23.61	346	P	P	21 59 40.2	-1.2
	comp=Z,0.4nm,0.6s,baz=154,slow=10,SNR=2.2						
	comp=Z,0.4nm,0.6s						
EKA	Eskdalemuir Ar	24.20	322	P	P	21 59 46.2	-0.8
	comp=Z,3.2nm,0.7s,baz=111,slow=9.0,SNR=5.1						
	comp=Z,3.2nm,0.7s						
TORD	Torodi Ar. Bea	31.58	222	P	P	22 00 52.6	-0.7
KKAR	Karatay Array	35.90	67	P	P	22 01 31.8	+1.2
KURBB	Kurchatov Arra	40.45	54	P	P	22 02 10.2	+1.4
	comp=Z,0.6nm,0.6s,baz=280,slow=8.8,SNR=4.5						
	comp=Z,0.6nm,0.6s						
BBTS	Babate	42.11	247	LR	LR	22 22 26.6	
	comp=Z,57nm,18.5s,baz=344,slow=40						
MKAR	Makanchi Array	43.47	59	P	P	22 02 33.6	0.0
MKAR	Makanchi Array	43.47	59	P	P	22 02 34.2	+0.6
	comp=Z,0.8nm,0.4s,baz=276,slow=7.2,SNR=21						
	comp=Z,0.8nm,0.4s						
ZAA0	Zalesovo Array	44.00	49	P	P	22 02 37.1	-0.6
ZAA0				IAmb	IAmb	22 02 38.8	
	comp=Z,1.7nm,0.9s						
ZALV	Zalesovo Beam	44.00	49	P	P	22 02 36.8	-1.0
ZALV	Zalesovo Beam	44.00	49	P	P	22 02 37.8	+0.1
	comp=Z,0.9nm,0.5s,baz=286,slow=10,SNR=4.0						
	comp=Z,0.9nm,0.5s						
SFJD	Kangerlussuaq	48.80	330	LR	LR	22 27 00.1	
	comp=Z,116nm,18.5s,baz=280,slow=40						
TIXI	Tiksi	58.58	21	LR	LR	22 34 54.0	
	comp=Z,52nm,18.9s,baz=195,slow=41						
LBTB	Lobatse	63.34	177	LR	LR	22 35 13.2	

	comp=Z,118nm,18.5s,baz=154,slow=38						
HHC	**Hu-ho-hao-te**	65.23	57	*e*P	P	22 05 11.6	-0.6
HHC				pmax	pmax		
	comp=Z,24nm,0.6s						
HHC				pmax	pmax		
	comp=Z,84nm,4.4s						
PZH	**PanZhiHua**	65.68	75	P	P	22 05 16.4	+1.1
RCBR	**Riachuelo**	70.07	245	LR	LR	22 35 03.3	
	comp=Z,24nm,20.6s,baz=250,slow=35						
SADO	**Sadowa**	71.36	313	LR	LR	22 37 30.4	
	comp=Z,122nm,18.6s,baz=246,slow=36						
KSRS	**Korea Array**	77.59	52	P	P	22 06 25.6	-1.1
	comp=Z,0.6nm,0.5s,baz=328,slow=4.4,SNR=4.4						
	comp=Z,0.6nm,0.5s						
MJAR	**Matsushiro Arr**	84.33	47	P	P	22 07 05.1	+2.4
	comp=Z,0.6nm,0.4s,baz=320,slow=7.6,SNR=4.3						
	comp=Z,0.6nm,0.4s						
BDFB	**Brasilia**	85.41	246	LR	LR	22 43 34.0	
	comp=Z,37nm,22.0s,baz=160,slow=34						
JCJ	**Chichijima**	93.43	51	LR	LR	22 55 07.9	
	comp=Z,104nm,18.3s,baz=90,slow=39						

WEL 12 22:44:26.4±1.2,**35°S**±11°×**17°9E**±1°1,**h188**^{km}±24^{km}, **M3.5**/6,**ML3.8**/7,**MLv3.5**/6,**Error ellipse: s-maj=15.4km s-min=13.8km az=141.4,confirmed,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	2.76	196	P	Pn	22 45 12.3	-0.2
MXZ				S	Sn	22 45 47.9	-0.7
WMGZ	**Waiomatatini S**	2.98	193	P	Pn	22 45 15.4	+0.2
WMGZ				S	Sn	22 45 52.7	-0.7
HAZ	**Te Kaha**	3.08	202	P	Pn	22 45 17.2	+0.8
HAZ				S	Sn	22 45 55.9	+0.4
PKGZ	**Pakihiroa**	3.10	197	P	Pn	22 45 16.7	+0.1
PKGZ				S	Sn	22 45 57.5	+1.5
PUZ	**Puketiti**	3.26	194	P	Pn	22 45 18.0	-0.5
PUZ				S	Sn	22 45 59.5	+0.1
RUGZ	**Raukumara Rang**	3.30	202	P	Pn	22 45 19.2	-0.1
RUGZ				S	Sn	22 46 01.6	+1.0
KUZ	**Kuaotunu**	3.41	236	S	Sn	22 46 02.8	+0.2
OPRZ	**Ohinepanea**	3.65	216	P	Pn	22 45 23.8	+0.5
CNGZ	**Carnagh Statio**	3.67	193	P	Pn	22 45 23.8	+0.3
CNGZ				S	Sn	22 46 09.1	+0.7
MWZ	**Matawai**	3.69	202	P	Pn	22 45 23.7	-0.2
MWZ				S	Sn	22 46 09.0	0.0
TKGZ	**Te Karaka**	3.70	197	P	Pn	22 45 23.3	-0.6
TKGZ				S	Sn	22 46 09.4	+0.3
URZ	**Urewera**	3.76	207	P	Pn	22 45 24.1	-0.6
URZ				S	Sn	22 46 10.3	-0.2
RAGZ	**Rawiri**	3.87	202	P	Pn	22 45 26.6	+0.3
RAGZ				S	Sn	22 46 13.6	+0.4
OMRZ	**Omania**	3.95	215	P	Pn	22 45 28.4	+1.3
MUGZ	**Murupara**	4.08	209	P	Pn	22 45 29.3	+0.5
MUGZ				S	Sn	22 46 19.2	+1.4
SNGZ	**Shannon Statio**	4.16	201	P	Pn	22 45 29.3	-0.5
SNGZ				S	Sn	22 46 20.6	+1.0
RAHZ	**Arahi**	4.36	203	P	Pn	22 45 31.5	-0.8
RAHZ				S	Sn	22 46 24.0	-0.1
MTHZ	**Maungataniwha**	4.38	205	P	Pn	22 45 31.9	-0.8
MTHZ				S	Sn	22 46 24.7	-0.1
BKZ	**Black Stump Fm**	4.79	207	P	Pn	22 45 36.6	-1.3
BKZ				S	Sn	22 46 33.1	-1.0
NTVZ	**North Tongarir**	5.07	213	P	Pn	22 45 41.0	-0.5
OTVZ	**Oturere**	5.12	213	P	Pn	22 45 41.2	-1.0
SNVZ	**South Ngauruho**	5.16	213	P	Pn	22 45 41.4	-1.2

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*SOF **12** 22:44:48.1,40°.56N±0°.02×27°.54E±0°.01,h17^{km}±1^{km}, MD3.5/4*

*ISK **12** 22:44:50.4,40°.72N×27°.44E,h14^{km},ML3.6/43*

*AFAD **12** 22:44:50.5,40°.70N×27°.45E,h7^{km}±2^{km},MW3.5*

*THE **12** 22:44:52.3,41°N±4°×2°7E±°,h11^{km}±19^{km},M3.4/12, MLh3.4/12*

*CFUSG **12** 22:44:55.2,40°.77N×27°.65E,h29^{km},mb2.2/2,Sea of Marmara Magtype MSH 3.3 from 2 stations*

ISC 12 22:44:50.6±0.8,**40°.70N**±0°.01×**27°.46E**±0°.01,**h16**^{km}±6^{km}, **n125**,σ**0^{s}79**/165,**15C-11D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRMT	**Marmara Adasi**	0.14	132	Pg	Pb	22 44 54.8	-0.2
MRMT				Sg	Sb	22 44 57.6	-0.3
SART	**Tekirdag**	0.21	267	P	Pg	22 44 55.5	-0.1
SART				S	Sg	22 44 58.8	-0.1
SART				*i* IAML		22 44 59.0	
	comp=N,1μm,0.4s						
RKY	**Sarkoy-Tekirda**	0.21	267	Pg	Pg	22 44 55.7	+0.1
RKY				Sg	Sg	22 44 59.0	0.0
TKR	**Tekirdag**	0.30	12	Pg	Pg	22 44 57.1	+0.1
TKR				Sg	Sg	22 45 01.4	+0.1
KRBG	**Karabiga-Canak**	0.33	201	Pg	Pb	22 44 58.4	+0.3
KRBG				Sg	Sb	22 45 03.6	+0.5
EDC	**Edincik**	0.47	138	Pg	Pb	22 45 00.6	+0.1
EDC				Sg	Sb	22 45 08.1	+0.9
CRLT	**Corlu**	0.48	26	Pg	Pb	22 45 00.6	-0.1
CRLT				Sg	Sb	22 45 07.3	-0.2
BAND	**Balkesir-Ban**	0.60	125	P	Pg	22 45 02.4	-0.1
BAND	**Balkesir-Ban**	0.60	125	⇓P	Pb	22 45 02.7	0.0
BAND				⇓S	Sb	22 45 10.8	-0.1
KESN	**Edirne-Kesan**	0.60	282	P	Pg	22 45 02.5	-0.2
KESN				S	Sg	22 45 09.9	-0.8
KESN				*i* IAML		22 45 11.0	
	comp=E,2μm,0.2s						
KESN				*i* IAML		22 45 12.0	
	comp=N,2μm,0.7s						
LPK	**Lapseki**	0.62	238	Pg	Pb	22 45 02.9	-0.2
LPK				Sg	Sb	22 45 12.5	+0.9
GONE	**Gonen-Balikesi**	0.68	165	Pg	Pn	22 45 04.8	-0.7
ERIK	**Erikli-Kesan**	0.72	268	Pg	Pg	22 45 04.5	-0.1
ERIK				Sg	Sb	22 45 14.6	+0.3
CANM	**Can-anakkale**	0.75	204	Pg	Pb	22 45 05.7	+0.3
UKOP	**Uzunkopru-Edir**	0.76	305	Pg	Pb	22 45 05.5	+0.1
SLVT	**Silivri**	0.78	47	Pg	Pg	22 45 05.6	-0.2
YENI	**Yenice-Canakka**	0.78	192	Pg	Pn	22 45 06.4	-0.6
GELI	**Tayfur-Gelibol**	0.81	248	Pg	Pg	22 45 05.6	-0.7
KCTX	**Karacabey (Bur**	0.81	122	Pg	Pb	22 45 06.9	+0.5
ELBA	**Catalca**	0.86	59	P	Pb	22 45 06.9	-0.3
ELBA				S	Sg	22 45 17.3	-1.5
ELBA				*i* IAML		22 45 20.0	
	comp=N,2μm,0.1s						
ELBA				*i* IAML		22 45 22.0	
	comp=E,2μm,0.1s						
SUSR	**Susurluk-Balik**	0.88	147	Pg	Pg	22 45 07.9	+0.2
BLKS	**Balkesir-Sus**	0.91	154	P	Pg	22 45 08.3	-0.1
BLKS				P	Pn	22 45 09.2	+0.3
BLKS				S	Sg	22 45 20.7	+0.3
BLKS				S	Sn	22 45 21.8	+0.2
BLKS				*i* IAML		22 45 24.0	
	comp=N,810nm,0.9s						
BLKS				*i* IAML		22 45 26.0	
	comp=N,896nm,0.7s						
VIZE	**Kirklareli, Vi**	0.92	18	P	Pb	22 45 07.8	-0.5
PHSR	**Pinarhisar**	0.93	3	Pg	Pb	22 45 08.5	+0.1
PHSR	**Pinarhisar**	0.93	3	⇑P	Pb	22 45 08.4	0.0
PHSR				⇑S	Sg	22 45 21.1	+0.1
COMU	**Canakkale**	0.96	232	Pg	Pb	22 45 08.9	0.0
CTKS	**Kestanelik-??a**	0.96	56	Pg	Pb	22 45 08.2	-0.7
BALY	**Balya**	0.97	172	P	Pb	22 45 08.6	-0.4
BALY				S	Sn	22 45 23.2	+0.2
BALY				*i* IAML		22 45 26.0	
	comp=N,1μm,0.4s						
CAVK	**Edirne/Enez-Ca**	0.98	270	P	Pn	22 45 09.7	0.0
CAVK				S	Sb	22 45 20.7	-1.2
CAVK				*i* IAML		22 45 26.0	
	comp=N,2μm,0.3s						
CAVK	**Edirne/Enez-Ca**	0.98	270	⇓P	Pg	22 45 09.5	0.0
CAVK				⇑S	Sg	22 45 22.5	0.0
ENEZ	**Enez**	0.99	272	Pg	Pg	22 45 09.6	-0.2
CTYL	**Yalikoy Yolu**	1.00	39	Pg	Pb	22 45 09.3	-0.2
ENZZ	**Sultanice-Enez**	1.00	265	Pg	Pn	22 45 10.6	+0.6
AVCI	**Avcilar-stanb**	1.01	73	Pg	Pg	22 45 10.0	-0.1
BKES	**Balkesir-Mer**	1.03	159	P	Pn	22 45 10.8	+0.4
CNKL	**anakkale-Mer**	1.03	232	P	Pb	22 45 09.2	-0.9
CNKL				P	Pg	22 45 10.3	-0.3
ARMT	**Armutlu**	1.08	97	Pn	Pg	22 45 11.3	-0.2
ALN	**Alexandroupoli**	1.09	281	Pg	Pb	22 45 11.0	-0.1
ALN	**Alexandroupoli**	1.09	281	P	Pb	22 45 10.9	-0.1
ALN				S	Sb	22 45 25.2	+0.2
BGKT	**Bogazkoy**	1.11	64	Pn	Pb	22 45 11.2	-0.2
KIRK	**Kırklareli**	1.11	346	P	Pb	22 45 10.8	-0.7
MDNY	**Mudanya-Bursa**	1.14	106	Pn	Pg	22 45 12.3	-0.3
ARMN	**Kirklareli, Me**	1.16	359	P	Pn	22 45 12.2	0.0
ARMN				S	Sb	22 45 24.9	-2.3
ARMN				*i* IAML		22 45 27.0	
	comp=E,730nm,0.5s						
ECEA	**Canakkale, Ece**	1.18	237	P	Pn	22 45 12.0	-0.4
ECEA				S	Sg	22 45 29.9	+1.2
ECEA				*i* IAML		22 45 34.0	
	comp=N,686nm,0.3s						
ECEA				*i* IAML		22 45 34.0	
	comp=E,1μm,0.4s						
BAYC	**CANAKKALE_Bayr**	1.18	216	P	Pb	22 45 12.8	+0.1
BAYC				S	Sn	22 45 28.2	0.0
BAYC				*i* IAML		22 45 31.0	
	comp=N,680nm,0.3s						
EZN	**Ezine**	1.23	225	Pn	Pb	22 45 13.6	+0.2
EZN	**Ezine**	1.23	225	P	Pb	22 45 13.3	-0.2
EZN				S	Sg	22 45 30.1	-0.3
EZN	**Ezine**	1.23	225	⇑P	Pb	22 45 13.7	+0.2
BUHA	**Balikesir, Bur**	1.23	194	P	Pg	22 45 13.9	-0.5
BUHA				S	Sg	22 45 30.2	-0.3
BUHA				*i* IAML		22 45 33.0	
	comp=E,2μm,0.7s						
BUHA				*i* IAML		22 45 34.0	
	comp=N,2μm,0.4s						
EZNE	**Ezine-Canakkal**	1.26	222	Pn	Pg	22 45 14.5	-0.4
EDRB	**Edirne**	1.27	335	Pn	Pn	22 45 13.9	+0.3
ISK	**Istanbul-Kandi**	1.27	73	Pn	Pn	22 45 13.5	-0.2
KAVV	**Kandilli-Istan**	1.27	73	Pn	Pn	22 45 13.2	-0.5
ORLT	**Orhaneli**	1.28	120	Pn	Pg	22 45 14.8	-0.5
GADA	**Gvkgeada**	1.29	247	Pn	Pn	22 45 14.1	+0.1
GADA	**Gvkgeada**	1.29	247	P	Pn	22 45 14.2	+0.1
GADA				S	Sg	22 45 32.4	0.0
GOAD	**anakkale-G¶**	1.30	246	P	Pn	22 45 13.6	-0.4
GOAD				S	Sg	22 45 31.9	-0.6
GOAD				*i* IAML		22 45 37.0	
	comp=N,958nm,0.5s						
GOAD				*i* IAML		22 45 39.0	
	comp=E,1μm,0.4s						
KLYT	**Kilyos**	1.32	65	Pn	Pn	22 45 14.6	+0.2
KLYT	**Kilyos**	1.32	65	⇑P	Pn	22 45 14.6	+0.2
KLYT				⇓S	Sn	22 45 32.4	+0.7
STEP	**BALIKESIR_Sava**	1.34	171	P	Pg	22 45 16.2	-0.2
STEP				S	Sn	22 45 32.5	+0.3
STEP				*i* IAML		22 45 38.0	
	comp=N,1μm,0.4s						
BOZC	**Bozcaada**	1.37	232	Pn	Pb	22 45 15.7	-0.2
BOZC	**Bozcaada**	1.37	232	P	Pn	22 45 15.1	-0.1
DST	**Dursunbey**	1.41	140	Pn	Pb	22 45 16.5	-0.1
YLV	**Yalova**	1.47	95	Pn	Pn	22 45 16.9	+0.4
AYVA	**Ayvalik**	1.51	203	P	Pb	22 45 17.9	-0.4
RDO	**Rodhopi**	1.52	288	Pn	Pb	22 45 17.8	-0.6
RDO	**Rodhopi**	1.52	288	P	Pn	22 45 17.6	+0.5
RDO				S	Sn	22 45 36.5	0.0
SOMA	**Soma-Manisa**	1.54	178	Pn	Pb	22 45 18.4	-0.4
KOCA	**Canakkale, Ayv**	1.57	221	P	Pb	22 45 19.5	+0.3
GPNR	**Gulpinar-Canak**	1.60	220	Pn	Pb	22 45 19.3	-0.5
DKL	**Dikili**	1.68	195	Pn	Pb	22 45 20.6	-0.6
OSMT	**Osmaniye**	1.71	93	Pn	Pn	22 45 20.7	+0.9
PRK	**Paraskevi**	1.71	212	P	Pn	22 45 20.5	+0.7
PRK				S	Sb	22 45 42.8	-0.2
SILT	**Sile**	1.72	74	Pn	Pn	22 45 20.8	+0.9
SILT	**Sile**	1.72	74	⇓P	Pn	22 45 20.8	+0.9
SILT				⇓S	Sb	22 45 43.2	+0.1
ADVT	**Abdulvahap**	1.76	98	Pn	Pn	22 45 21.4	+1.0
KDZ	**Kurdzhali**	1.85	301	*i* P	Pn	22 45 22.1	+0.4
KDZ				S	Sb	22 45 47.8	+0.9
KDZ	**Kurdzhali**	1.85	301	P	Pn	22 45 21.8	+0.2
KDZ				S	Sn	22 45 45.8	+1.2
GORD	**Gordes-Manisa**	1.87	162	Pn	Pb	22 45 23.3	-1.2
CAVI	**Cavuskoy**	1.89	104	Pn	Pn	22 45 23.0	+0.8
LIA	**Limnos Island**	1.91	246	P	Pn	22 45 22.7	+0.2
LIA				S	Sb	22 45 48.1	-0.7
JMB	**Yambol**	1.92	339	P	Pn	22 45 23.8	+1.2
SIGR	**SIGRI**	1.93	220	P	Pn	22 45 23.1	+0.3
DIM	**Dimitrovgrad**	1.95	314	P	Pn	22 45 24.0	+1.0
DIM				S	Sb	22 45 50.9	+1.1
THAS	**Thassos island**	2.08	268	P	Pn	22 45 24.7	-0.2
THAS				S	Sn	22 45 50.7	+0.3
KAVA	**Kavala**	2.25	279	P	Pn	22 45 27.9	+0.7
BLCB	**Balcova**	2.33	188	P	Pn	22 45 29.9	+1.6
PLD	**Plovdiv**	2.50	306	*i* P	Pn	22 45 31.4	+0.8
PLD	**Plovdiv**	2.50	306	P	Pn	22 45 31.3	+0.8
CHOS	**Chios island**	2.55	206	P	Pn	22 45 32.1	+0.7
SAHE	**Sakarya_HENDEK**	2.59	86	⇑P	Pn	22 45 33.0	+1.2
SAHE				⇑S	Sn	22 46 05.6	+2.7
OUR	**Ouranopolis**	2.67	263	P	Pn	22 45 32.9	-0.1
SZH	**Strazhitsa**	2.79	337	P	Pn	22 45 35.8	+1.2
MMB	**Musomishta**	2.92	288	P	Pn	22 45 37.2	+0.7
MMB	**Musomishta**	2.92	288	P	Pn	22 45 37.5	+1.0
SRS	**Serrai**	2.96	279	P	Pn	22 45 36.8	-0.1
PAIG	**Paliouri**	2.99	256	P	Pn	22 45 36.5	-0.9
PLG	**Polygyros**	3.07	265	P	Pn	22 45 38.5	0.0
SOH	**Sokhos**	3.12	274	P	Pn	22 45 39.3	+0.1
AOS	**Alonnisos**	3.14	242	P	Pn	22 45 39.3	-0.2
KYMI	**Kymi, Euboea I**	3.31	233	P	Pn	22 45 41.0	-0.7
HORT	**Hortiatis**	3.31	270	P	Pn	22 45 42.3	+0.4
ICOR	**Ion Corvin**	3.42	4	⇑P	Pn	22 45 44.6	+1.3
KKB	**Krupnik**	3.45	291	*i* P	Pn	22 45 44.8	+1.1
KNT	**Kendrikon**	3.48	279	P	Pn	22 45 44.6	+0.5
NEO	**Neokhori**	3.54	248	P	Pn	22 45 43.7	-1.2
KARY	**Karystos**	3.54	222	P	Pn	22 45 45.0	+0.1
VTS	**Vitosha**	3.70	303	*i* P	Pn	22 45 48.3	+1.1
MPEP	**Malo Peshtene**	3.83	315	*i* P	Pn	22 45 50.0	+1.0
APE	**Apeiranthos**	3.92	203	P	Pn	22 45 49.7	-0.6
APE	**Apeiranthos**	3.92	203	⇓P	Pn	22 45 50.3	+0.1
CIDE	**Kastamonu/Cide**	4.30	72	⇑P	Pn	22 45 56.5	+1.1
CFR	**Carcaliu**	4.50	6	⇑P	Pn	22 45 58.6	+0.4
MLR	**Muntele Rosu**	4.91	348	⇑P	Pn	22 46 05.4	+1.4
VOIR		5.05	340	⇑P	Pn	22 46 07.1	+1.3
PLOR	**Plostina**	5.18	354	⇓P	Pn	22 46 09.5	+2.0
VRI	**Vrincioaia**	5.19	354	⇓P	Pn	22 46 09.6	+2.0
TURR	**Turia**	5.45	349	⇓P	Pn	22 46 12.8	+1.6
DOPR	**Dopca**	5.48	345	⇑P	Pn	22 46 13.1	+1.5
HERR	**Herculane**	5.58	320	⇑P	Pn	22 46 12.5	-0.5
TESR	**Tescani**	5.84	355	⇑P	Pn	22 46 17.6	+1.1
MDVR	**Moldovita**	5.87	316	⇓P	Pn	22 46 17.3	+0.3
TARU	**Tarkhankut**	5.97	37	*e*P	Pn	22 46 19.1	+0.8
TARU				Pm		22 46 24.6	
	comp=Z,1.0nm,0.3s						
TARU				*e*S	Sn	22 47 24.3	-2.0
TARU				Sm		22 47 25.6	
	comp=E,1.0nm,0.2s						
TARU				Sm		22 47 31.0	
	comp=N,1.0nm,0.3s						
SEV	**Sevastopol'**	5.98	48	Pm		22 46 22.2	
	comp=Z,1.0nm,0.1s						
SEV				*e*S	Sn	22 47 22.8	-3.7
SEV				Sm		22 47 32.0	
	comp=N,1.0nm,0.3s						
SEV				Sm		22 47 32.0	
	comp=E,3.0nm,0.3s						
DNZ2	**Donuzlav2**	6.29	40	*e*S	Sn	22 47 33.9	-0.3
DNZ2				Sm		22 47 41.3	
	comp=N,1.0nm,0.2s						
DNZ2				Sm		22 47 41.3	
	comp=E,3.0nm,0.2s						

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*IDC **12** 23:17:17.1±2.3,42°.27N×145°.43E,h0^{km},mb3.3/2, mbtmp3.3/4,ML3.3/2,Error ellipse: s-maj=39.4km s-min=31.6km az=161.0*

*NIED **12** 23:17:22.5,42°.41N×145°.18E,h47^{km},MW3.5,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.06; $M_{\theta\theta}$0.92; $M_{\phi\phi}$-0.86; $M_{r\theta}$0.85; $M_{\theta\phi}$-1.13; $M_{\phi r}$0.41; Fault plane solution: $M_0 1.72000\times10^{14}$ NP1: ϕ_s160.00000°,δ57.00000°,λ-3.00000°. NP2:ϕ_s252.00000°, δ87.00000°,λ-147.00000°.*

*SKHL **12** 23:17:22.9±0.0,42°.30N×145°.20E,h38^{km}±4^{km},mb4.4/3*

*JMA **12** 23:17:22.5±0.1,42°.4N±0°.2×145°.2E±0°.5,h47^{km}±1^{km}, MV3.8/36,OFF NEMURO PENINSULA*

ISC 12 23:17:22.6±2.0,**42°.42N**±0°.09×**145°.18E**±0°.05,**h32**^{km}±12^{km}, **n23**,σ**0^{s}90**/30,**Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKK	**Akkeshi**	0.65	338	*e*P	Pn	23 17 35.6	0.0
AKK				*e*S	Sb	23 17 45.2	+0.9
JKHN	**Kushirohamanak**	0.66	359	*e*P	Pn	23 17 35.8	0.0
JKHN				S	Sn	23 17 46.0	+0.9
JAK	**Akkeshi**	0.68	328	P	Pb	23 17 35.9	-0.2
JAK				S	Sb	23 17 46.0	+0.8
NEM2	**Nemuro 2**	1.03	23	*i* P	Pn	23 17 40.9	0.0
NEM2				S	Sb	23 17 54.6	-0.6
NMR	**Nemuro--Hokkai**	1.03	23	*e*P	Pn	23 17 40.9	0.0
NMR				*e*S	Sb	23 17 54.4	-0.7
JOB	**Onbets**	1.10	296	*e*P	Pn	23 17 42.0	+0.2
JNK	**Nakash**	1.21	344	P	Pn	23 17 43.0	-0.4
JNK				*e*S	Sn	23 17 57.9	-0.8
JCH	**Churui**	1.36	279	*i* P	Pn	23 17 45.8	+0.5
JCH				*e*S	Sn	23 18 02.1	-0.1
JAR	**Ashorobuto**	1.36	311	*i* P	Pn	23 17 45.1	-0.2
JAR				*e*S	Sn	23 18 02.1	-0.2
JRA	**Rausu**	1.52	358	*e*P	Pn	23 17 47.4	-0.2
JRA				*e*S	Sn	23 18 06.2	0.0
YUK	**Yuzh-Kuril'sk**	1.69	17	*e*P	Pn	23 17 50.2	+0.3
YUK				AMB	AMB	23 17 51.9	
	570nm,0.5s						
YUK				*e*S	Sn	23 18 10.3	-0.1
YUK				A	A	23 18 13.0	
	600nm,0.4s						
YUK				A	A	23 18 13.0	
	730nm,0.4s						
SHO	**Shikotan**	1.89	39	*e*P	Pn	23 17 53.3	+0.7
SHO				AMB	AMB	23 17 58.5	
	60nm,0.3s						
SHO				*e*S	Sn	23 18 14.8	-0.5
SHO				A	A	23 18 25.8	
	270nm,0.4s						
SHO				A	A	23 18 25.8	
	310nm,0.4s						
ASAJ	**Asahikawa**	2.54	313	Pn	Pn	23 18 03.3	+1.8
	6.6nm,0.3s,baz=137,slow=15,SNR=24						
ASAJ				Sn	Sb	23 18 36.4	-1.8
	14nm,0.3s,baz=239,slow=32,SNR=14						
	20nm,0.4s						
KUR	**Kuril'sk**	3.42	34	*e*P	Pn	23 18 15.5	+1.8
KUR				AMB	AMB	23 18 17.9	
	30nm,0.4s						
KUR				*e*S	Sn	23 18 52.8	-0.3
KUR				A	A	23 18 59.6	
	40nm,0.6s						
KUR				A	A	23 18 59.6	
	70nm,0.6s						
MJAR	**Matsushiro Arr**	7.97	225	Pn	Pn	23 19 14.3	-1.8
	0.1nm,0.3s,baz=28,slow=15,SNR=4.7						
	0.5nm,0.3s						
H11N2	**WAKE ISLAND Hy**	29.12	134	T	T	23 54 29.5	
	baz=326,slow=75						
H11N1	**WAKE ISLAND Hy**	29.13	134	T	T	23 54 27.0	
	baz=326,slow=75						
H11N3	**WAKE ISLAND Hy**	29.14	134	T	T	23 54 31.7	
	baz=326,slow=75						
H11S1	**WAKE ISLAND Hy**	30.03	136	T	T	23 55 41.9	
	baz=324,slow=76						
H11S3	**WAKE ISLAND Hy**	30.04	136	T	T	23 55 42.3	
	baz=324,slow=76						
H11S2	**WAKE ISLAND Hy**	30.05	136	T	T	23 55 42.9	
	baz=324,slow=76						
ILAR	**Eielson Array**	43.41	35	P	P	23 25 20.8	-1.0
	0.4nm,0.5s,baz=267,slow=7.3,SNR=4.0						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	43.93	298	P	P	23 25 27.7	+1.3
	0.1nm,0.5s,baz=64,slow=6.6,SNR=2.0						
	0.1nm,0.5s						

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*IDC **12** 23:21:52.1±1.7,34°.91N×46°.60E,h0^{km},mb3.7/6, mbtmp3.8/16,ML3.5/9,MS3.2/13,Error ellipse: s-maj=27.6km s-min=15.9km az=150.0*

*ISN **12** 23:21:54.2±0.6,35°.26N×46°.70E,h5^{km}±11^{km},ML3.9*

*TEH **12** 23:21:54.0,35°.26N×46°.63E,h5^{km}*

*MOS **12** 23:21:54.1±1.3,34°.98N×46°.47E,h15^{km},mb4.3/16,Error ellipse: s-maj=8.4km s-min=4.9km az=114.6*

*NEIC **12** 23:21:55.7±1.8,34°.93N±0°.08×46°.48E±0°.10,h10^{km}±2^{km}, mb4.1/24,Error ellipse: s-maj=13.9km s-min=13.3km az=128.0*

*THR **12** 23:21:56.4±0.0,35°.25N×46°.66E,h10^{km}±6^{km},ML4.2*

ISC 12 23:21:54.9±1.1,**35°.15N**±0°.03×**46°.54E**±0°.03,**h2**^{km}±8^{km}, **n267**,σ**1^{s}84**/269,**mb4.1**/32,**MS3.1**/9,**23C-8D,Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILIN	**Lien**	0.41	123	Pg	Pg	23 22 03.6	+0.8
IDHR	**Dehrash**	0.46	196	Pg	Pb	23 22 06.5	+0.6
IDHR				Sg	Sb	23 22 16.0	+2.8
SNGE	**Sanandaj**	0.66	94	*e*Pg	Pg	23 22 06.8	-0.8
SNGE				*e*Sg	Sg	23 22 16.1	-0.1
SNGE				IAML		23 22 18.6	
	comp=Z,37nm,1.0s						
IGHG	**Ghaleghazi**	0.81	179	Pg	Pn	23 22 13.4	-0.2
SNQR	**Sonqor, Kerman**	0.94	108	Pg	Pg	23 22 12.2	-0.7
KCHF	**Cheshme Sefid,**	0.96	155	Pg	Pb	23 22 14.9	+0.6
KGS1	**Ghasr-e-Shirin**	1.01	231	Pg	Pn	23 22 17.5	+1.4
GLG1	**Gilan-e-Gharb**	1.15	207	Pg	Pn	23 22 20.4	+2.3
IBZA	**Bozab**	1.28	121	Pg	Pg	23 22 19.3	-0.1
ILBA	**Ilam Banvizeh**	1.54	190	Pg	Pg	23 22 26.7	+2.2
ILBA	**Ilam Banvizeh**	1.54	190	*e*PnA		23 22 26.7	
ILBA				IAML		23 22 40.0	
	comp=Z,1.3nm,1.0s						
MAHB	**Mahabad**	1.75	337	Pg	Pn	23 22 25.5	-0.9
IKRK	**Kirkuk**	1.82	279	*e*Pn	Pb	23 22 29.2	+0.3
IKRK				*e*Sn	Sg	23 22 55.5	+2.1
IKRK				AML	AML	23 23 03.8	
	comp=N,1μm,0.5s						
IKRK				AML	AML	23 23 03.8	
	comp=N,1μm,0.5s						
IKRK				AML	AML	23 23 09.1	
	comp=E,1μm,0.9s						
IDOB	**Doab**	1.91	135	Pn	Pb	23 22 31.1	+0.5
HGHA	**Hamedan- Ghaye**	1.92	79	Pn	Pn	23 22 28.0	-0.8
HSAM	**Samen**	1.94	118	Pn	Pb	23 22 30.7	-0.3
IKFM	**Kafar-mosalman**	1.94	146	Pn	Pb	23 22 31.7	+0.8
IBDR	**Badra**	2.09	194	*e*Pn	Pb	23 22 34.0	+0.5
IBDR				*e*Sn	Sg	23 23 02.5	+0.4
IBDR				AML	AML	23 23 12.4	
	comp=N,1μm,0.6s						
IBDR				AML	AML	23 23 27.2	
	comp=E,924nm,0.6s						
HAGD	**Aghdareh**	2.16	98	Pn	Pn	23 22 33.1	+1.0
IHSH	**Hashtrud**	2.23	15	Pn	Pn	23 22 32.8	-0.4
ZNJK	**Zanjan**	2.31	48	*e*PnA		23 22 35.1	
ZNJK				IAML		23 23 11.5	
	comp=Z,1.1nm,1.0s						
QABG	**Abgarm-Qazvin**	2.54	76	Pn	Pn	23 22 38.5	+1.1
IAZR	**Azarshahr**	2.57	350	Pn	Pn	23 22 38.7	+0.9
BHD	**Baghdad**	2.59	224	*e*Pn	Pb	23 22 41.0	-1.0
BHD				*e*Sn	Sb	23 23 15.0	+0.7
BHD				AML	AML	23 23 30.5	
	comp=E,855nm,0.7s						
ASAO	**Ashtian**	2.92	101	*e*PnA		23 22 46.1	
ASAO				IAML		23 23 41.6	
	comp=Z,1.6nm,1.0s						
ITBZ	**Tabriz**	3.10	354	Pn	Pn	23 22 44.6	-0.3
KHMZ	**Khomeyn**	3.15	115	*e*PnA		23 22 49.4	
KHMZ				IAML		23 23 46.9	
	comp=Z,1.4nm,1.0s						
CUKT	**Cukurca**	3.17	312	*e*P	Pn	23 22 46.3	+0.4
IHRS	**Heris**	3.19	7	Pn	Pn	23 22 47.0	+0.7
ISHB	**Shabestar**	3.22	347	Pn	Pn	23 22 47.0	+0.4
GTMR	**Gotvand**	3.42	141	*e*PnA		23 22 51.3	
GTMR				IAML		23 23 59.3	
	comp=Z,0.9nm,1.0s						
IQOM	**Qom**	3.73	93	Pn	Pn	23 22 54.7	+1.0
AHWZ	**Ahwaz**	4.19	155	Pn	Pn	23 23 02.6	+2.8
GEVA	**Gevas**	4.22	319		Pn	23 23 01.2	+0.8
QAMS	**Qamsar**	4.25	108	Pn	Pn	23 23 02.9	+2.1
IVRN	**Varamin**	4.25	91	Pn	Pn	23 23 02.0	+1.2
VANB	**Van**	4.27	325	P	Pn	23 23 02.7	+1.7
AKDM	**Akdamar-Van**	4.28	319	P	Pn	23 23 03.7	+2.6
IPIR	**Pirpir**	4.37	123	Pn	Pn	23 23 04.0	+1.5
MAKU	**Maku**	4.46	341	Pn	Pn	23 23 04.3	+0.7
JHBN	**Jahan bin**	4.50	129	Pn	Pn	23 23 06.3	+1.9
IDMV	**Damavand**	4.51	83	Pn	Pn	23 23 05.5	+1.1
CLDR	**Caldiran**	4.51	333	*e*P	Pn	23 23 05.1	+0.7
IKLH	**Kolahrood**	4.55	112	Pn	Pn	23 23 06.4	+1.4
ZNGN	**Zangian**	4.70	129	Pn	Pn	23 23 08.9	+1.8
ISFB	**Sefidab**	4.76	98	Pn	Pn	23 23 08.8	+1.1
GURO	**Guroymak-BITLI**	4.96	315	*e*P	Pn	23 23 09.9	-0.6

GURO	Guroymak-BITLI	4.96	315		Pn	23 23 11.8	+1.2
IBRJ	Brojen	5.09	128	Pn	Pn	23 23 13.6	+1.1
IFIR	Firoozkooh	5.10	83	Pn	Pn	23 23 13.0	+0.5
MLAZ	Malazgirt-MUS	5.11	323	*e*P	Pg	23 23 31.7	-1.1
MARD	Mardin	5.14	297		Pn	23 23 12.8	-0.2
TASB	TASBURUN-IGDIR	5.17	340	*e*P	Pn	23 23 19.0	+5.7
GNI	Garni	5.20	345	*e*P	Pn	23 23 14.1	+0.3
GNI	Garni	5.20	345		Pn	23 23 16.3	+2.5
GNI	Garni	5.20	345	Pn	Pn	23 23 17.8	+4.0
	comp=Z,0.6nm,0.3s,baz=199,slow=22,SNR=5.6						
GNI				Pg	Pb	23 23 30.5	+3.9
	comp=Z,1.0nm,0.3s,baz=221,slow=1.4,SNR=12						
GNI				Sn	Sn	23 24 13.7	-0.6
	comp=Z,1.1nm,0.3s,baz=236,slow=15,SNR=3.7						
GNI				Lg	Lg	23 24 39.3	
	comp=Z,0.5nm,0.3s,baz=185,slow=23,SNR=6.5						
GNI				LR	LR	23 25 24.3	
	comp=Z,213nm,20.5s,baz=148,slow=39						
	comp=Z,4.0nm,0.8s						
GNI	Garni	5.20	345	*i* P	Pn	23 23 13.7	-0.1
GNI	Garni	5.20	345	Pn	Pn	23 23 17.7	+3.9
SVAN	Silvan-Diyarba	5.24	306	*e*P	Pn	23 23 14.1	-0.2
AGRB	Hanur-Agry	5.25	328	*e*P	Pn	23 23 15.3	+0.8
ILAS	Lasjerd	5.25	86	Pn	Pn	23 23 15.3	+0.7
IZEF	Zefreh	5.30	113	Pn	Pn	23 23 17.3	+1.9
IGAR	Gharneh	5.33	119	Pn	Pn	23 23 16.9	+1.2
IRAM	Ramesheh	5.90	123	Pn	Pn	23 23 25.6	+2.1
KLNJ	Kolanjah	5.91	133	Pn	Pn	23 23 26.0	+2.2
KLNJ	Kolanjah	5.91	133	*e*Pn	Pn	23 23 26.7	+2.9
KLNJ				IAML		23 25 36.3	
	comp=Z,0.2nm,1.0s						
KBD	Kabd	6.03	170	P	Pn	23 23 27.9	+2.8
KBD				S	Sn	23 24 37.9	+3.2
BNGB	Bingl	6.06	311	*e*P	Pn	23 23 26.5	+0.9
IGLO	Ghaloghah	6.07	75	Pn	Pn	23 23 26.3	+0.4
KARS	Kars	6.12	334	Pn	Pn	23 23 28.8	+2.4
KARS	Kars	6.12	334	P	Pn	23 23 28.8	+2.4
ANAR	Anarak	6.27	106	Pn	Pn	23 23 30.3	+1.8
KOPT	Kop Dagi	6.83	317		Pn	23 23 37.6	+1.3
GAZ	Gaziantep	7.81	288	Pn	Pn	23 23 50.4	+0.7
KMRS	Kahramanmaras	8.13	290	*e*P	Pn	23 23 53.9	-0.1
ASF	Jabal al Asfar	8.57	252	Pn	Pn	23 23 58.4	-1.6
	comp=Z,1.2nm,0.3s,baz=87,slow=9.1,SNR=17						
ASF				Lg	Lg	23 26 14.9	
	comp=Z,0.6nm,0.3s,baz=286,slow=12,SNR=1.9						
ASF				LR	LR	23 27 57.8	
	comp=Z,62nm,20.6s,baz=123,slow=43						
	comp=Z,4.4nm,0.4s						
KBZ	Khabaz	9.02	343	Pn	Pn	23 24 10.6	+4.5
	comp=Z,0.1nm,0.3s,baz=150,slow=10,SNR=5.5						
KBZ				LR	LR	23 28 15.1	
	comp=Z,40nm,18.9s,baz=134,slow=41						
	comp=Z,2.7nm,0.9s						
KBZ	Khabaz	9.02	343	*i* P	Pn	23 24 10.1	+4.0
KIV	Kislovodsk	9.29	342	*e*P	Pn	23 24 10.5	+0.7
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,25nm,13.0s						
BNN	Bunyan	9.32	297	Pn	Pn	23 24 10.9	+0.5
MMAI	Mount Meron Ar	9.48	260	Pn	Pn	23 24 11.2	-1.3
	comp=Z,0.8nm,0.3s,baz=82,slow=17,SNR=6.8						
MMAI				Lg	Lg	23 26 49.9	
	comp=Z,0.5nm,0.3s,baz=72,slow=24,SNR=2.7						
MMAI				LR	LR	23 28 44.2	
	comp=Z,110nm,18.4s,baz=116,slow=43						
	comp=Z,1.2nm,0.6s						
SAKB	Bahrain	9.76	158	P	Pn	23 24 15.7	-0.6
SAKB				S	Sn	23 26 10.3	+3.8
SOC	Sochi	9.94	330	*e*P	Pn	23 24 18.6	-0.1
SOC				*e*		23 26 11.8	
SOC				MLR	MLR		
	comp=Z,172nm,14.0s						
SMRA	Abu-Samra	11.01	159	P	Pn	23 24 34.0	+0.6
TRNA	Turayna	11.13	157	P	Pn	23 24 36.2	+1.1
EIL	Elat	11.21	244	Pn	Pn	23 24 31.8	-4.3
	comp=Z,0.2nm,0.3s,baz=71,slow=12,SNR=2.2						
EIL				Lg	Lg	23 27 47.5	
	comp=Z,0.2nm,0.3s,baz=23,slow=14,SNR=3.8						
EIL				LR	LR	23 29 50.8	
	comp=Z,57nm,19.4s,baz=62,slow=43						
	comp=Z,0.8nm,0.4s						
BR104	Keskin Array S	11.22	298	P	Pn	23 24 40.2	+3.8
	comp=Z,3.7nm,1.0s						
BR131	Keskin Array S	11.23	298		Pn	23 24 38.1	+1.6
BR131	Keskin Array S	11.23	298	P	Pn	23 24 38.1	+1.6
BRTR	Keskin Array B	11.23	298		Pn	23 24 38.2	+1.7
BRTR	Keskin Array B	11.23	298	Pn	Pn	23 24 40.0	+3.6
	comp=Z,0.1nm,0.3s,baz=117,slow=12,SNR=13						
	comp=Z,2.6nm,0.9s						
BRTR	Keskin Array B	11.23	298	*i* P	Pn	23 24 41.0	+4.5
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BR105	Keskin Array S	11.24	298	P	Pn	23 24 40.6	+3.9
	comp=Z,2.9nm,1.1s						
BR106	Keskin Array S	11.25	298	P	Pn	23 24 40.2	+3.5
	comp=Z,3.1nm,0.9s						
JRN	Qarnain Island	11.54	150	P	Pn	23 24 40.4	-0.2
RAYN	Ar Rayn	11.62	185		Pn	23 24 39.3	-2.5
RAYN	Ar Rayn	11.62	185	P	Pn	23 24 39.3	-2.5
RAYN	Ar Rayn	11.62	185	Pn	Pn	23 24 39.7	-2.1
ANTO	Ankara	11.89	297		Pn	23 24 47.2	+1.7
ANTO	Ankara	11.89	297	P	Pn	23 24 47.2	+1.7
ANTO	Ankara	11.89	297	P	Pn	23 24 50.2	+4.7
	comp=Z,7.6nm,1.2s						
SLWR	Sila	11.91	157	P	Pn	23 24 45.4	-0.3
SHME	Shamm	12.26	135	P	Pn	23 24 47.9	-2.6
SHME	Shamm	12.26	135	Pn	Pn	23 24 47.5	-3.0
MASF	Masafi	12.80	137	P	Pn	23 24 57.8	-0.1
	SNR=9.6						
MSFE	Esma-Masafi	12.81	137	Pn	Pn	23 24 54.8	-3.2
AJN	Ajban	12.83	143	P	Pn	23 24 58.8	+0.4
	SNR=5.5						
AJN	Ajban	12.83	143	Pn	Pn	23 24 57.0	-1.3
MDH	Madha	12.93	137	P	Pn	23 24 60.0	+0.3
	SNR=7.1						
UOSS	Minazif	13.16	138		Pn	23 25 00.7	-2.1
UOSS	Minazif	13.16	138	P	Pn	23 25 01.0	-1.8
UOSS	Minazif	13.16	138	Pn	Pn	23 24 59.3	-3.5
HATD	Hatta, Dubai	13.21	139	P	Pn	23 25 02.9	-0.7
HATD	Hatta, Dubai	13.21	139	Pn	Pn	23 25 00.7	-2.9
ASHO	Ashiyiah	13.29	139	P	Pn	23 25 03.2	-1.4
	SNR=13						
ASHO	Ashiyiah	13.29	139	Pn	Pn	23 25 02.4	-2.2
MZR	Muzera	13.53	152	P	Pn	23 25 08.2	+0.3
	SNR=18						
MZR	Muzera	13.53	152	Pn	Pn	23 25 06.8	-1.0
ALNE	Al Ain	13.64	142	P	Pn	23 25 08.2	-1.1
	SNR=10.0						
ALNE	Al Ain	13.64	142	Pn	Pn	23 25 07.6	-1.7
SOHO	SOHO	13.98	139	P	Pn	23 25 11.6	-2.5
SOHO	SOHO	13.98	139	P	Pn	23 25 09.8	-4.3
UMZA	Um Al Zommool	14.49	146	P	Pn	23 25 20.5	-0.6
ARQ	Araqi	14.63	141	P	Pn	23 25 21.8	-1.1
MANT	Manisa	14.79	288		Pn	23 25 25.4	+0.2
HOQ	Hoqain	14.85	138	P	Pn	23 25 24.4	-1.6
HOQ				S	Sn	23 28 12.6	+1.6
BSY	Bisya	15.47	140	P	Pn	23 25 28.2	-5.9
BSY				S	Sn	23 28 26.7	+0.6
SMDO	Samad	15.67	137	P	Pn	23 25 31.4	-5.5
WSAR	Wadi Sarin	15.86	135	P	Pn	23 25 37.1	-2.2
NGCH	Negor - Chabah	15.93	124	P	Pn	23 25 37.0	-3.0
JMDO	Jabal Madar	16.25	138	P	Pn	23 25 39.0	-5.3
EZN	Ezine	16.71	292	P	P	23 25 52.4	0.0
	comp=Z,4.5nm,0.8s						
VSR	Storozhevoye	16.93	344	*e*P	Pn	23 25 52.6	-0.1
VSR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ALN	Alexandroupoli	17.13	296		Pn	23 25 55.8	+0.5
ALN	Alexandroupoli	17.13	296	P	Pn	23 25 55.8	+0.5
ALN				pmax	pmax		
	comp=Z,3.0nm,1.1s						
JLN	Jalan Bani Buh	17.16	136	P	Pn	23 25 53.9	-1.9
AB31	Akbulak array	17.20	31		P	23 25 57.3	-0.6
ABKAR	Akbulak array	17.20	31		P	23 25 57.8	-0.1
ABKAR	Akbulak array	17.20	31	Pn	P	23 25 58.2	+0.3
CFR	Carcaliu	17.24	311	⇑P	Pn	23 25 57.5	+0.8
CFR	Carcaliu	17.24	311	⇑P	Pn	23 25 57.5	+0.8
BELG	Belogornoye	17.26	2	P	Pn	23 25 57.3	+0.4
	comp=Z,0.4nm,0.3s,baz=273,slow=4.0,SNR=6.9						
BELG				LR	LR	23 34 27.9	
	comp=Z,78nm,19.9s,baz=192,slow=43						
	comp=Z,12nm,0.7s						
MHTO	MHTO	17.32	142	P	Pn	23 25 56.4	-1.4
AKTO	Aktyubinsk	17.41	25	P	P	23 26 00.2	0.0
	comp=Z,0.1nm,0.3s,baz=216,slow=7.9,SNR=10						
	comp=Z,3.4nm,0.8s						
RDO	Rodhopi	17.56	296		Pn	23 26 00.9	+0.3
IDI	Anoyia	17.70	277	P	Pn	23 26 02.2	-0.3
IDI				IAmb	IAmb	23 26 05.0	
	comp=Z,14nm,1.1s						
IDI	Anoyia	17.70	277	P	Pn	23 26 01.9	-0.6
	comp=Z,8.3nm,1.0s,baz=59,slow=14,SNR=6.2						
IDI				LR	LR	23 33 54.9	
	comp=Z,68nm,18.4s,baz=121,slow=41						
DOK	Doka	17.79	156	P	Pn	23 26 01.5	-2.1
WHFO	Wadi Hawf	18.32	158	P	Pn	23 26 09.2	-1.1
PLOR	Plostina	18.48	311	⇑P	Pn	23 26 13.0	+1.0
PLOR	Plostina	18.48	311	⇑P	Pn	23 26 13.0	+1.0
ABTO	Aybut	18.71	160	P	P	23 26 12.9	-1.9
SORM	Soroca	18.73	319	⇓P	P	23 26 13.5	-1.3
SORM	Soroca	18.73	319	⇓P	P	23 26 13.5	-1.3
MLR	Muntele Rosu	18.75	310	P	P	23 26 15.0	-0.1
MLR				IAmb	IAmb	23 26 29.5	
	comp=Z,7.4nm,1.0s						
MLR	Muntele Rosu	18.75	310	P	Pn	23 26 15.5	+0.1
	comp=Z,0.1nm,0.3s,baz=99,slow=6.6,SNR=4.0						
	comp=Z,1.8nm,0.7s						
MLR	Muntele Rosu	18.75	310	⇑P	Pn	23 26 15.5	+0.1
TESR	Tescani	18.80	313	⇑P	P	23 26 15.0	-0.5
RBK	Rabkut	18.85	157	P	P	23 26 15.1	-1.2
ONER	Baraj Valea Uz	18.87	312	⇑P	P	23 26 15.6	-0.6
DMTO	DMTO	18.90	155	P	P	23 26 15.0	-1.8
	SNR=5.8						
TURR	Turia	18.96	311	⇑P	P	23 26 16.9	-0.5
VOIR		19.30	309	⇑P	Pn	23 26 22.3	+0.3
VOIR		19.30	309	⇑P	Pn	23 26 22.3	+0.3
VOIR		19.30	309	P	Pn	23 26 22.0	0.0
	comp=Z,17nm,0.7s						
DOPR	Dopca	19.31	310	⇑P	Pn	23 26 21.7	-0.4
GAR	Garm	19.34	72		Pn	23 26 22.7	0.0
GAR				IAmb	IAmb	23 26 30.0	
	comp=Z,27nm,1.3s						
ARR	Arges	19.54	308	⇑P	Pn	23 26 24.4	-0.5
AK07	Malin Array Si	19.89	326	P	Pn	23 26 29.3	+0.4
AK09	Malin Array Si	19.90	326	P	Pn	23 26 29.3	+0.3
AK06	Malin Array Si	19.92	326	P	Pn	23 26 29.7	+0.4
AKASG	Malin Array Be	19.99	326	P	P	23 26 26.9	-1.5
	comp=Z,3.8nm,1.1s,baz=132,slow=10.0,SNR=5.2						
	comp=Z,3.8nm,1.1s						
AKASG	Malin Array Be	19.99	326	*i* P	P	23 26 26.1	-2.3
AKBB	Malin Array Si	19.99	326	*i* P	Pn	23 26 31.4	+1.3
AKBB				pmax	pmax		
	comp=Z,16nm,1.5s						
AKBB	Malin Array Si	19.99	326	P	Pn	23 26 32.0	+1.9
KIEV	Kiev	19.99	326	P	P	23 26 27.9	-0.5
KIEV	Kiev	19.99	326	P	P	23 26 27.9	-0.5
KIEV				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KIEV	Kiev	19.99	326	P	Pn	23 26 32.0	+1.9
AK14	Malin Array Si	19.99	326	P	Pn	23 26 31.7	+1.6
AK19	Malin Array Si	20.10	326	P	Pn	23 26 33.2	+1.8
LOT	Lotru	20.13	308	⇑P	P	23 26 30.3	+0.1
KK31	Karatay Array	20.18	60		P	23 26 31.4	+0.8
KK31				IAmb	IAmb	23 26 39.0	
	comp=Z,12nm,1.4s						
KK31	Karatay Array	20.18	60	P	Pn	23 26 31.4	-1.0
KK31				pmax	pmax		
	comp=Z,12nm,1.4s						
KKAR	Karatay Array	20.18	60	P	Pn	23 26 31.5	-0.9
KKAR	Karatay Array	20.18	60	P	Pn	23 26 31.5	-0.9
BURAR	Bucovina Array	20.20	315	P	P	23 26 30.0	-0.9
BURAR	Bucovina Array	20.20	315	⇑P	P	23 26 30.9	0.0
BURAR	Bucovina Array	20.20	315	⇑P	P	23 26 30.9	0.0
BUR08	Bucovina Ar. S	20.23	315		P	23 26 30.5	-0.7
BUR08				IAmb	IAmb	23 26 36.2	
	comp=Z,7.2nm,1.1s						
ARCR	ARCALIA	20.46	312	⇓P	P	23 26 33.8	+0.2
DRK	Karamyk	20.52	70	P	P	23 26 34.3	-0.4
DRK				IAmb	IAmb	23 26 43.5	
	comp=Z,14nm,1.1s						
DRK	Karamyk	20.52	70	P	P	23 26 34.3	-0.4
DRK				pmax	pmax		
	comp=Z,14nm,1.1s						
MARR	Marisel-Cluj	21.04	310	⇓P	P	23 26 40.2	+0.2
OBN	Obninsk	21.13	344	⇑*e*P	P	23 26 40.7	-0.1
OBN				*e*		23 27 00.3	
OBN				*e*S	S	23 30 23.6	-13
OBN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,42nm,17.0s						
MDVR	Moldovita	21.26	304	⇑P	P	23 26 42.2	-0.1
SURR	Surduc	21.31	307	⇑P	P	23 26 42.2	-0.6
DRGR		21.34	310	⇓P	P	23 26 43.3	+0.1
DRGR		21.34	310	⇓P	P	23 26 43.3	+0.1
BZS	Buzias	21.60	307	⇑P	P	23 26 45.7	-0.2
BZS	Buzias	21.60	307	⇑P	P	23 26 45.7	-0.2
KEK	Kerkira	21.69	290	P	P	23 26 48.4	+1.5
RNPP5	Staryi Chortor	21.91	324	P	P	23 26 50.4	+1.2
RNPP8	Varash	21.99	324	P	P	23 26 50.9	+0.8
RNPP9	Sopachiv	22.02	324	P	P	23 26 51.6	+1.2
KOLS	Kolonicke sedl	22.56	315	*e*P	P	23 26 58.0	+1.7
KOLS	Kolonicke sedl	22.56	315	*e*P	P	23 26 58.0	+1.7
ARTI	Arti	22.73	17	P	P	23 27 00.5	+2.6
ARTI				IAmb	IAmb	23 27 05.8	
	comp=Z,12nm,1.3s						
ARTI	Arti	22.73	17	*d i*P	P	23 27 01.0	+3.1
ARTI						23 27 26.1	
ARTI				SS	SnSn	23 31 45.3	+8.6
ARTI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
AAK	Ala-Archa	22.93	63	*i* P	P	23 27 01.0	+0.6
AAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MNK	Minsk	23.31	332	*i* P	P	23 27 01.6	-2.4
	comp=E,7.0nm,0.7s						
MNK				*i* P	P	23 27 01.6	-2.4
	comp=N,6.0nm,0.5s						
MNK				*i* P	P	23 27 01.6	-2.4
	comp=Z,11nm,0.7s,baz=138						
MNK				*i* PP	PnPn	23 27 26.3	-3.3
MNK				*i* PPP	PPP	23 27 34.6	
MNK				*i* S	S	23 31 15.3	-1.9
MNK				*i* SS	SnSn	23 31 50.2	-0.7
MNK				*i* SSS	SSS	23 32 07.9	
MNK				*i* LR	LR	23 35 42.3	
MNK				*i* LRM	MLR	23 37 29.5	
	comp=E,29nm,17.3s						
MNK				*i* LRM	MLR	23 37 49.9	
	comp=N,49nm,19.6s						
MNK				*i* LRM	MLR	23 37 51.3	
	comp=Z,51nm,19.0s						
MNK	Minsk	23.31	332	*i* P	P	23 27 01.6	-2.4
MNK				*i* PPP	PPP	23 27 34.5	
MNK				*i* S	S	23 31 15.3	-1.9
MNK				pmax	pmax		
	comp=E,7.0nm,0.7s						
MNK				pmax	pmax		
	comp=Z,11nm,0.7s						
MNK				pmax	pmax		
	comp=N,6.0nm,0.5s						
MNK				MLR	MLR		
	comp=E,29nm,17.0s						
MNK				MLR	MLR		
	comp=N,49nm,20.0s						
MNK				MLR	MLR		
	comp=Z,51nm,19.0s						
STHS	Stebnicka Huta	23.39	315	*e*P	P	23 27 05.3	+0.5
STHS	Stebnicka Huta	23.39	315	*e*P	P	23 27 05.3	+0.5
KIRV	Kirov	23.53	4	LR	LR	23 38 01.4	
	comp=Z,78nm,19.0s,baz=180,slow=41						
PSZ	Piszkesteto	23.55	311	P	P	23 27 06.1	-0.4
PSZ				IAmb	IAmb	23 27 12.2	
	comp=Z,5.0nm,1.0s						
PSZ	Piszkesteto	23.55	311	⇑P	P	23 27 02.7	-3.8
PSZ	Piszkesteto	23.55	311	P	P	23 27 06.1	-0.4
PSZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MORH	Mrgy, Hungar	23.75	306	⇑P	P	23 27 06.3	-2.1
NRN	Naryn	23.89	66	P	P	23 27 11.0	+0.8
NRN				IAmb	IAmb	23 27 15.1	
	comp=Z,4.6nm,1.2s						
NRN	Naryn	23.89	66	P	P	23 27 11.0	+0.8
NRN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TIP	Timpagrande	24.02	288	P	P	23 27 09.9	-1.3
TIP				IAmb	IAmb	23 27 11.0	
	comp=Z,4.4nm,0.9s						
TIP	Timpagrande	24.02	288	⇓P	P	23 27 09.7	-1.5
LANS	Liptovska Anna	24.31	313	*e*P	P	23 27 15.2	+1.5
LANS	Liptovska Anna	24.31	313	*e*P	P	23 27 15.2	+1.5
VYHS	Vyhne	24.42	312	*e*P	P	23 27 15.6	+0.9
VYHS	Vyhne	24.42	312	*e*P	P	23 27 15.6	+0.9
BVAR	Borovoye Array	24.57	36	P	P	23 27 16.5	+0.5
	comp=Z,1.2nm,0.7s,baz=232,slow=7.3,SNR=7.2						
	comp=Z,1.2nm,0.7s						
CEL	Celeste	24.71	286	P	P	23 27 16.6	-0.9
MORC	Moravsky Berou	25.71	314	P	P	23 27 26.6	+0.2
MORC				IAmb	IAmb	23 27 28.2	
	comp=Z,5.3nm,1.4s						
MORC	Moravsky Berou	25.71	314	P	P	23 27 26.6	+0.2
MORC				pmax	pmax		
	comp=Z,5.0nm,1.4s						
RONA	Rosalia, Austr	25.74	308	*e*P	P	23 27 26.2	-0.5
	comp=Z,4.9nm,1.1s						
CONA	Conrad Observa	26.09	309	*i* P	P	23 27 29.6	-0.3
	comp=Z,3.0nm,1.1s						
ARSA	Arzberg	26.11	307	*i* P	P	23 27 31.5	+1.5
	comp=Z,2.3nm,0.8s						
KLMR	Klimovskoe	26.12	352	*e*P	P	23 27 29.4	-0.5
KLMR				*e*		23 28 06.0	
KLMR				pmax	pmax		
	comp=Z,13nm,1.7s						
VSU	Vasula	26.77	337	*i* P	P	23 27 36.8	+1.0
VSU				pmax	pmax		
	comp=Z,17nm,1.0s						
SABO	M.te Sabotino	27.09	304	P	P	23 27 37.9	-0.9
MOA	Molln	27.09	308	*e*P	P	23 27 37.8	-1.1
	comp=Z,1.5nm,0.7s						
BIOA	Bad Ischl, Aus	27.46	307	*e*P	P	23 27 41.9	-0.3
	comp=Z,1.3nm,0.4s						
GERES	GERESS Array B	27.74	310	P	P	23 27 43.3	-1.5
	comp=Z,0.3nm,0.6s,baz=105,slow=11,SNR=2.5						
	comp=Z,0.3nm,0.6s						
ABTA	Abfaltersbach	27.98	305	*e*P	P	23 27 46.3	-0.7
	comp=Z,2.2nm,0.7s						
WATA	Walderalm	28.73	306	*e*P	P	23 27 52.5	-1.2
	comp=Z,4.5nm,1.0s						
SQTA	Sankt Quirin	28.95	305	*e*P	P	23 27 54.1	-1.5
	comp=Z,4.8nm,0.7s						
MOTA	Moosalm	29.05	306	*e*P	P	23 27 54.6	-1.9
	comp=Z,3.0nm,0.7s						
MKAR	Makanchi Array	29.15	55	P	P	23 27 57.2	-0.1
MKAR	Makanchi Array	29.15	55	P	P	23 27 55.2	-2.1
	comp=Z,0.2nm,0.7s,baz=249,slow=6.4,SNR=6.5						
MKAR				LR	LR	23 41 27.2	
	comp=Z,39nm,20.6s,baz=310,slow=40						
	comp=Z,0.2nm,0.7s						
MKAR	Makanchi Array	29.15	55	P	P	23 27 57.2	-0.1
FETA	Feichten	29.23	305	*i* P	P	23 27 56.9	-1.3
	comp=Z,4.1nm,0.7s						
FINES	FINESS Array B	29.37	340	P	P	23 28 00.1	+1.2
FINES	FINESS Array B	29.37	340	P	P	23 27 57.3	-1.6
	comp=Z,1.7nm,0.7s,baz=142,slow=9.6,SNR=7.3						
	comp=Z,1.7nm,0.7s						
FINES	FINESS Array B	29.37	340	*ce*P	P	23 28 01.2	+2.2
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FUORN	Ofenpass-Fuorn	29.48	304	P	P	23 27 59.1	-1.3
FUORN				IAmb	IAmb	23 28 02.9	
	comp=Z,5.5nm,1.3s						
DAVA	Damuels	29.85	305	*i* P	P	23 28 02.0	-1.7
	comp=Z,5.1nm,0.6s						
BNI	Bardonecchia	31.78	300	P	P	23 28 19.7	-0.9
BNI	Bardonecchia	31.78	300	P	P	23 28 19.7	-0.9
BNI				pmax	pmax		
	comp=Z,10.0nm,1.2s						
WMQ	Urumqi	32.64	62	*e*P	P	23 28 30.8	+2.6
HFS	Hagfors	32.78	330	LR	LR	23 43 35.9	
	comp=Z,46nm,21.2s,baz=140,slow=40						
NOA	NORSAR Array B	34.31	330	LR	LR	23 43 51.3	
	comp=Z,36nm,20.7s,baz=105,slow=38						
ESDC	Sonseca Array	39.95	292	P	P	23 29 28.7	-1.9
	comp=Z,1.7nm,0.7s,baz=67,slow=7.9,SNR=17						
	comp=Z,1.7nm,0.7s						
PALK	Pallekele	41.86	123	LR	LR	23 46 58.2	
	comp=Z,69nm,18.1s,baz=222,slow=36						
PZH	PanZhiHua	47.66	85	P	P	23 30 34.4	+1.4
HHC	Hu-ho-hao-te	50.51	63	*e*P	P	23 30 54.7	+0.1
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,78nm,5.6s						
HHC				LR	LR		
	comp=N,360nm,18.5s						
HHC				LR	LR		
	comp=E,320nm,16.8s						
HHC				LR	LR		
	comp=Z,170nm,15.2s						
DBIC	Dimbokro	54.97	251	P	P	23 31 26.0	-1.7
DBIC	Dimbokro	54.97	251	P	P	23 31 26.0	-1.7
DBIC				pmax	pmax		
	comp=Z,11nm,1.3s						
YAK	Yakutsk	56.53	34	*i* P	P	23 31 39.7	+1.5
YAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ZEA	Zeya	57.34	44	*e*P	P	23 31 49.4	+5.2
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.3s						
BILL	Bilibino	67.78	21	*i* P	P	23 32 56.6	+2.9
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
PDAR	Pinedale Array	99.44	342	LR	LR	00 24 59.5	
	comp=Z,20nm,18.1s,baz=46,slow=38						

ATH 12 23:26:14.7, 37°.25N×20°.51E, h10^{km}±3^{km}, ML2.1/6, Manual Solution by S.Koutrakis First location: 2019/06/12 23:27:19, This location: 2019/06/13 06:44:30 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LTHK	Lithakia	0.53	29	P	Pg	23 26 24.6	-0.4
LTHK				S	Sg	23 26 32.6	+0.6
ORTH	Orthonies,Zaky	0.62	13	P	Pg	23 26 26.4	-0.4
ORTH				S	Sg	23 26 35.1	+0.2
CLEM	Kyllini,Ilia,G	0.81	37	P	Pg	23 26 30.0	-0.4
CLEM				S	Sg	23 26 40.4	-0.5
PSDA	Pessada-Kefalo	0.87	4	P	Pb	23 26 32.0	+0.1
PSDA				S	Sg	23 26 42.9	+0.1
VLS	Valsamata	0.93	4	P	Pb	23 26 32.9	-0.1
VLS				S	Sg	23 26 45.0	+0.2
KRES	Krestena	0.95	68	P	Pg	23 26 32.9	-0.1
KRES				S	Sb	23 26 45.9	0.0
AMT	Artemida-Makis	0.99	73	P	Pg	23 26 33.7	-0.2
AMT				S	Sb	23 26 47.2	0.0
DMLN	Damoulianata-K	1.00	354	P	Pb	23 26 34.3	+0.2
PYL2	Kinigos	1.03	109	P	Pb	23 26 34.7	+0.1
PYL2				S	Sg	23 26 47.8	0.0
PYL	PYLOS	1.04	109	P	Pg	23 26 34.8	0.0
PYL				S	Sb	23 26 48.5	-0.1

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*IDC **12** 23:31:55.8±1.8, 8°.27S×129°.08E, h0^{km}, mb3.6/2, mbtmp3.8/5, ML4.0/3, Error ellipse: s-maj=81.0km s-min=26.3km az=76.0*

ISC 12 23:32:01.6±1.1, **8°.49S**±0°.09×**128°.75E**±0°.09, **h10^{km}, n16,** σ**1^{s}.90**/13, **Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRS	Darwin Rock St	4.45	152	P	Pn	23 33 11.6	+2.5
DRS	Darwin Rock St	4.45	152	S	Sn	23 34 01.7	+0.7
SOEI	Soe	4.61	254	P	Pn	23 33 13.7	+2.3
MTN	Manton Dam	4.92	152	P	Pn	23 33 17.9	+2.3
MTN	Manton Dam	4.92	152	S	Sn	23 34 13.1	+0.5
FAKI	Fak Fak	6.54	32	P	Pn	23 33 37.4	-0.5
FITZ	Fitzroy Crossi	10.02	197	Pn	Pn	23 34 24.4	-1.2
	1.3nm,0.3s,baz=15,slow=10.0,SNR=46						
FITZ				Sn	Sn	23 36 03.6	-15
	4.2nm,0.3s,baz=328,slow=20,SNR=7.7						
	2.9nm,0.3s						
FITZ	Fitzroy Crossi	10.02	197	P	Pn	23 34 26.3	+0.7
PLAI	Plampang	10.86	267	P	Pn	23 34 38.3	+1.1
WRA	Warramunga Arr	12.60	155	Pn	Pn	23 34 58.0	-3.1
	1.0nm,0.3s,baz=341,slow=13,SNR=25						
WRA				Sn	Sn	23 37 09.3	-12
	2.1nm,0.3s,baz=330,slow=23,SNR=13						

	1.1nm,0.4s						
COEN	Coen	15.15	112	P	Pn	23 35 34.6	-1.2
ASAR	Alice Springs	15.88	162	Pn	Pn	23 35 42.6	-2.6
	0.4nm,0.3s,baz=338,slow=9.9,SNR=16						
ASAR				Sn	Sn	23 38 26.0	-15
	0.5nm,0.3s,baz=314,slow=19,SNR=6.0						
	0.8nm,0.4s						
AS01	Alice Springs	15.89	162	P	Pn	23 35 43.4	-2.1
QIS	Mount Isa	15.93	140	P	Pn	23 35 44.5	-1.5
MKAR	Makanchi Array	68.81	328	P	P	23 43 02.2	-3.8
	0.2nm,0.4s,baz=117,slow=7.7,SNR=5.1						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	73.14	329	P	P	23 43 27.7	-4.6
	0.4nm,0.5s,baz=125,slow=5.1,SNR=1.9						
	0.4nm,0.5s						

*SNET **12** 23:57:55.5±1.5, 13°.20N×89°.46W, h67km, ML2.9*
*GCG **12** 23:57:55.7±0.3, 13°.17N×89°.49W, h66km±3km, MD3.6*
*CATAC **12** 23:57:56.1±0.7, 13°N±5°×8°9W±°, h35km±5km, M3.2/8, MLv3.2/8, Error ellipse: s-maj=11.0km s-min=5.5km az=21.8, confirmed*
ISC 12 23:57:55.4±2.4, **13°.0N**±0°.1×**89°.47W**±0°.07, **h51**km±24km, **n31**, σ**0s.51**/46, **El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	0.61	2	eP	Pn	23 58 07.9	-0.3
JAYA				eS	Sn	23 58 17.5	+0.1
JAYA	Jayaque - finc	0.61	2	iP	Pn	23 58 07.9	-0.3
JAYA				iS	Sn	23 58 17.6	+0.1
JAYA	Jayaque - finc	0.61	2	P	Pn	23 58 08.0	-0.3
JAYA	Jayaque - finc	0.61	2	S	Sn	23 58 16.7	-0.8
LOMA	Loma Larga	0.67	26	eP	Pn	23 58 08.7	-0.2
LOMA				eS	Sn	23 58 18.9	+0.2
LOMA	Loma Larga	0.67	26	P	Pn	23 58 08.9	-0.1
PMON	Piamonte	0.68	13	eP	Pn	23 58 08.8	-0.3
PMON				eS	Sn	23 58 19.7	+0.6
PMON	Piamonte	0.68	13	P	Pn	23 58 09.7	+0.6
LFRS	El Faro	0.70	35	eP	Pn	23 58 09.0	-0.4
LFRS				eS	Sn	23 58 18.7	-0.8
BOQS	Boqueron	0.71	15	eP	Pn	23 58 09.4	-0.2
BOQS				eS	Sn	23 58 20.2	+0.3
PIC2	El Picacho	0.73	17	eP	Pn	23 58 10.2	+0.3
PIC2				eS	Sn	23 58 21.2	+0.9
CEVE	Cerro Verde	0.79	349	eP	Pn	23 58 10.8	+0.1
CEVE				eS	Sn	23 58 23.1	+1.4
CEVE	Cerro Verde	0.79	349	P	Pn	23 58 10.6	0.0
CEVE	Cerro Verde	0.79	349	S	Sn	23 58 21.9	+0.2
SBLS	San Blas	0.81	350	eP	Pn	23 58 10.9	+0.1
COEG	Centro de Oper	0.81	45	eP	Pn	23 58 09.7	-1.1
COEG				eS	Sn	23 58 21.4	-0.6
SNJE	San Jose	0.83	351	eP	Pn	23 58 11.0	-0.1
SNJE				eS	Sn	23 58 23.7	+1.1
PAVA	Las Pavas	0.85	38	eP	Pn	23 58 11.2	0.0
PAVA				eS	Sn	23 58 23.3	+0.5
PAVA	Las Pavas	0.85	38	P	Pn	23 58 11.2	0.0
PAVA	Las Pavas	0.85	38	S	Sn	23 58 22.7	-0.1
NUBE	Las Nubes	0.91	341	iP	Pn	23 58 11.9	-0.1
NUBE				iS	Sn	23 58 24.5	+0.2
NUBE	Las Nubes	0.91	341	P	Pn	23 58 11.9	-0.1
ALJI	Alcalda de J	0.92	72	eP	Pn	23 58 12.3	+0.2
ALJI				eS	Sn	23 58 24.0	-0.4
ALJI	Alcalda de J	0.92	72	P	Pn	23 58 13.3	+1.2
FAME	Alcaldia de Sa	0.95	327	P	Pn	23 58 12.2	-0.4
FAME	Alcaldia de Sa	0.95	327	S	Sn	23 58 24.7	-0.5
PACA	Pacayal	1.20	69	eP	Pn	23 58 15.8	-0.1
PACA				eS	Sn	23 58 31.2	0.0
PACA	Pacayal	1.20	69	P	Pn	23 58 16.0	+0.1
LCY	Lacayo	1.21	72	eP	Pn	23 58 16.0	-0.1
MTO3	Montecristo	1.35	5	iP	Pn	23 58 17.9	-0.2
MTO3				iS	Sn	23 58 35.0	-0.1
MTO3	Montecristo	1.35	5	P	Pn	23 58 17.8	-0.4

*NEIC **13** 00:07:29.9±1.4, 0°.84N±0°.08×126°.52E±0°.05, h59km±7km, mb4.6/34, Error ellipse: s-maj=11.8km s-min=7.8km az=181.0*
*DJA **13** 00:07:29.1±1.0, 1°N±2°×12°6E±°, h30km±15km, M4.5/18, mB5.1/3, mb4.7/8, MLv4.4/18, Mw(mB)4.5/3*
*IDC **13** 00:07:31.8±2.6, 0°.81N×126°.38E, h85km±22km, mb3.9/21, mbtmp4.3/23, MS3.1/8, Error ellipse: s-maj=22.4km s-min=8.5km az=77.0*
ISC 13 00:07:27.4±0.4, **0°.86N**±0°.05×**126°.46E**±0°.05, **h39**km, **n105**, σ**1s.77**/105, **mb4.5**/40, **MS3.2**/7, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.91	96		Pn	00 07 45.4	+1.9
TNTI				Sn	Sn	00 07 57.7	+2.1
TNTI	Ternate	0.91	96	P	Pn	00 07 45.5	+1.9
TNTI	Ternate	0.91	96	S	Sn	00 07 58.3	+2.8
TNTI	Ternate	0.91	96	P	Pn	00 07 45.3	+1.7
TNTI				S	Sn	00 07 57.6	+2.1
KMSI	Cibinong	2.50	264	P	Pn	00 08 08.0	+2.5
SANI	Sanana	2.93	189	P	Pn	00 08 13.6	+2.2
SANI	Sanana	2.93	189	P	Pn	00 08 13.0	+1.6
SGSI	Sangihe	2.96	342	P	Pn	00 08 12.5	+0.7
NLAI	Namlea	4.12	171	P	Pn	00 08 29.8	+2.0
LUWI	Luwuk	4.15	243		Pn	00 08 31.2	+3.1
LUWI	Luwuk	4.15	243	P	Pn	00 08 33.5	+5.3
LUWI	Luwuk	4.15	243	P	Pn	00 08 32.2	+4.0
MRSI	Marisa	4.54	265	P	Pn	00 08 35.9	+2.3
AAI	Ambon	4.84	159	P	Pn	00 08 46.2	+8.5
MSAI	Masohi	4.85	149	P	Pn	00 08 42.1	+4.2
SWI	Sorong	5.09	110	P	Pn	00 08 43.6	+2.4
	0.3nm49nm,0.5s						
APSI	Ampana	5.13	250	P	Pn	00 08 47.7	+6.1
	0.6nm2μm76nm,0.5s						
TOLI2	Tolitoli	5.69	273		Pn	00 08 52.5	+3.1
TOLI2	Tolitoli	5.69	273	P	Pn	00 08 53.6	+4.2
KDI	Kendari	6.14	219	P	Pn	00 08 57.9	+2.4
MPSI	Mapaga	6.59	266	P	Pn	00 09 05.0	+3.3
	21nm,0.8s						
FAKI	Fak Fak	6.89	123		Pn	00 09 08.9	+2.9
FAKI	Fak Fak	6.89	123	P	Pn	00 09 10.7	+4.7
FAKI	Fak Fak	6.89	123	P	Pn	00 09 09.2	+3.2
	0.3nm733nm68nm,0.7s						
BNSI	Bone	8.22	231	P	Pn	00 09 26.1	+1.9
SPSI	Sidrap Palu	8.23	234	P	Pn	00 09 26.2	+1.9
	2μm46nm,0.5s						
KAPI	Kappang	8.89	229		Pn	00 09 36.5	+3.2
KAPI	Kappang	8.89	229	P	Pn	00 09 37.0	+3.7
	16nm,0.5s,baz=39,slow=6.1,SNR=6.9						
KAPI				S	Sn	00 11 12.3	+0.1
	4.3nm,0.3s,baz=178,slow=20,SNR=1.1						
KAPI				LR	LR	00 12 34.8	
	comp=Z,38nm,21.7s,baz=47,slow=34						
KAPI	Kappang	8.89	229	P	Pn	00 09 37.7	+4.4
MYLDM	Lahad Datu	9.04	299		Pn	00 09 39.6	+4.3
MTN	Manton Dam	14.38	161		Pn	00 10 48.5	0.0
JAY	Jayapura	14.63	103	P	P	00 10 58.8	+1.3
	7.2nm,0.8s,baz=2.2,slow=19,SNR=3.6						
KSM	Kuching	16.16	272		Pn	00 11 12.5	+0.7
KSM				IAmb	IAmb	00 11 17.3	
	comp=Z,21nm,0.8s						
KNRA	Kununurra	16.59	172		Pn	00 11 17.8	+0.6
KNRA				IAmb	IAmb	00 11 20.4	
	comp=Z,19nm,0.8s						
FITZ	Fitzroy Crossi	18.86	182	P	P	00 11 44.3	0.0
FITZ	Fitzroy Crossi	18.86	182	P	P	00 11 44.2	0.0
	comp=Z,4.9nm,0.7s,baz=35,slow=10,SNR=4.7						
WB0	Warramunga Arr	21.93	160		P	00 12 17.2	-0.3
WRAB	Tennant Creek	22.06	160	P	P	00 12 19.1	0.0
WRAB				IAmb	IAmb	00 12 25.2	
	comp=Z,36nm,1.2s						
WRA	Warramunga Arr	22.07	160		P	00 12 18.1	-1.0
WRA	Warramunga Arr	22.07	160	P	P	00 12 19.6	+0.4
	comp=Z,17nm,0.7s,baz=342,slow=11,SNR=116						
WRA				S	S	00 16 16.2	-4.2
	comp=Z,1.9nm,0.8s,baz=327,slow=16,SNR=5.7						
	comp=Z,17nm,0.7s						
WR8	Warramunga Arr	22.14	160		P	00 12 19.6	-0.2
WR8				IAmb	IAmb	00 12 21.2	
	comp=Z,18nm,0.7s						
COEN	Coen	22.15	132	P	P	00 12 19.8	-0.3
COEN				IAmb	IAmb	00 12 48.2	
	comp=Z,13nm,1.0s						
GUMO	Guam	22.18	54	LR	LR	00 19 51.4	
	comp=Z,31nm,20.4s,baz=110,slow=33						
MBWA	Marble Bar	22.85	196	P	P	00 12 27.5	+0.1
MBWA				IAmb	IAmb	00 12 30.8	
	comp=Z,45nm,1.5s						
PMG	Port Moresby	23.00	117	LR	LR	00 25 02.3	
	comp=Z,97nm,18.2s,baz=298,slow=46						
AS31	Alice Springs	25.43	164		P	00 12 51.4	-0.2
ASAR	Alice Springs	25.43	164		P	00 12 50.7	-0.9
ASAR	Alice Springs	25.43	164	P	P	00 12 51.8	+0.1
	comp=Z,6.0nm,0.4s,baz=349,slow=7.4,SNR=39						
ASAR				PcP	PcP	00 16 22.8	-0.5
	comp=Z,0.7nm,0.4s,baz=344,slow=2.3,SNR=5.4						
ASAR				S	S	00 17 14.6	-1.5
	comp=Z,0.7nm,0.8s,baz=344,slow=19,SNR=2.9						
ASAR				LR	LR	00 23 17.3	
	comp=Z,48nm,19.3s,baz=281,slow=37						
	comp=Z,6.0nm,0.4s						
JOW	Kunigami	25.88	4	P	P	00 12 55.7	+0.1
CTAO	Charters Tower	28.45	138	P	P	00 13 18.3	-0.6
CTAO				IAmb	IAmb	00 13 31.2	
	comp=Z,21nm,1.4s						
FORT	Forrest	31.50	177	P	P	00 13 45.8	+0.1
NJ2	Nanjing	31.85	348	eP	P	00 13 50.1	+1.4
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CMAR	Chiang Mai Arr	32.18	305	P	P	00 13 51.2	-0.7
CMAR	Chiang Mai Arr	32.18	305	P	P	00 13 51.6	-0.2
	comp=Z,0.5nm,0.3s,baz=154,slow=4.9,SNR=4.1						
CMAR				LR	LR	00 29 38.3	
	comp=Z,22nm,18.4s,baz=130,slow=41						
	comp=Z,0.5nm,0.3s						
BBOO	Buckleboo	34.69	166	P	P	00 14 13.2	-0.4
PZH	PanZhiHua	34.87	319	P	P	00 14 18.8	+3.5
HNR	Honiara	34.88	108	LR	LR	00 29 00.9	
	comp=Z,53nm,19.0s,baz=348,slow=37						
STKA	Stephens Creek	35.58	158		P	00 14 21.0	-0.1
STKA	Stephens Creek	35.58	158	P	P	00 14 21.1	-0.1
	comp=Z,5.6nm,0.8s,baz=333,slow=11,SNR=10						
STKA				PcP	PcP	00 16 47.9	-1.7
	comp=Z,1.2nm,0.4s,baz=338,slow=5.4,SNR=1.7						
	comp=Z,5.6nm,0.8s						
KSRS	Korea Array	36.44	2	P	P	00 14 28.7	+0.3
	comp=Z,0.9nm,0.5s,baz=182,slow=10,SNR=4.5						
	comp=Z,0.9nm,0.5s						
MJAR	Matsushiro Arr	37.13	16	P	P	00 14 35.2	+0.8
	comp=Z,0.7nm,0.4s,baz=184,slow=8.3,SNR=1.6						
	comp=Z,0.7nm,0.4s						
HHC	Hu-ho-hao-te	42.04	343	eP	P	00 15 17.4	+2.1
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,82nm,5.4s						
USRK	Ussuriysk Ar.	43.43	6	P	P	00 15 26.6	+0.2
	comp=Z,2.1nm,0.6s,baz=180,slow=7.1,SNR=4.2						
	comp=Z,2.1nm,0.6s						
ASAJ	Asahikawa	45.40	16	LR	LR	00 33 33.6	
	comp=Z,32nm,20.1s,baz=33,slow=34						
SONM	Songino Array	49.93	342	P	P	00 16 17.5	+0.1
	comp=Z,1.7nm,0.7s,baz=164,slow=7.6,SNR=5.0						
SONM				PcP	PcP	00 17 36.8	-0.5
	comp=Z,0.7nm,0.5s,baz=141,slow=2.4,SNR=3.0						
SONM				LR	LR	00 38 37.7	
	comp=Z,40nm,19.1s,baz=136,slow=37						
	comp=Z,1.7nm,0.7s						
WMQ	Urumqi	54.93	326	eP	P	00 16 54.4	-0.1
WMQ				sP	sP	00 17 18.8	+9.3
WMQ				pmax	pmax		
	comp=Z,19nm,1.1s						
PETK	Petropavlovsk-	58.17	22	P	P	00 17 17.0	-0.3
	comp=Z,1.0nm,0.6s,baz=192,slow=5.4,SNR=3.6						
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	59.76	326	P	P	00 17 27.5	-1.0
	comp=Z,3.0nm,0.4s,baz=125,slow=8.4,SNR=1.8						
	comp=Z,3.0nm,0.4s						
ZALV	Zalesovo Beam	63.02	334	P	P	00 17 49.4	-0.9
	comp=Z,1.8nm,0.4s,baz=144,slow=5.5,SNR=6.3						
	comp=Z,1.8nm,0.4s						
KURBB	Kurchatov Arra	64.01	328	P	P	00 17 55.9	-1.0
	comp=Z,4.2nm,0.4s,baz=126,slow=6.1,SNR=37						
	comp=Z,4.2nm,0.4s						
KURK	Kurchatov	64.02	328		P	00 17 56.2	-0.7
KK31	Karatay Array	65.16	318		P	00 18 03.5	-1.1
KKAR	Karatay Array	65.16	318	P	P	00 18 03.0	-1.6
BVAR	Borovoye Array	69.58	328	P	P	00 18 31.9	-0.4
	comp=Z,1.7nm,0.5s,baz=140,slow=7.4,SNR=8.9						
	comp=Z,1.7nm,0.5s						
BRVK	Borovoye	69.65	328	P	P	00 18 32.2	-0.6
BRVK				IAmb	IAmb	00 18 53.6	
	comp=Z,4.8nm,1.0s						
ABKAR	Akbulak array	74.20	321	P	P	00 18 59.4	-0.7
ABKAR	Akbulak array	74.20	321	P	P	00 18 59.7	-0.4
ABKAR				IAmb	IAmb	00 19 20.4	
	comp=Z,4.6nm,1.3s						
ARTI	Arti	77.29	328		P	00 19 16.6	-1.0
ARTI				IAmb	IAmb	00 19 17.1	
	comp=Z,5.4nm,0.5s						
VNDA	Vanda	80.63	173	P	P	00 19 35.2	-0.3
VNDA	Vanda	80.63	173	P	P	00 19 35.3	-0.3
	comp=Z,1.8nm,0.8s,baz=322,slow=7.0,SNR=12						
	comp=Z,1.8nm,0.8s						
VOI	Vohitsoka	80.74	248	P	P	00 19 36.4	-1.0
K15K	Wolf Creek Mou	80.94	27	P	P	00 19 37.6	+0.1
K15K				IAmb	IAmb	00 19 39.6	
	comp=Z,3.8nm,0.8s						
RAYN	Ar Rayn	81.37	294		P	00 19 39.4	-1.2
RAYN				IAmb	IAmb	00 19 40.6	
	comp=Z,3.1nm,0.8s						
SBA	Scott Base	81.55	172	P	P	00 19 41.2	+0.7
K17K	Iditarod	82.49	27		P	00 19 46.5	+0.8
K17K				IAmb	IAmb	00 19 47.9	
	comp=Z,9.7nm,0.9s						
L18K	Granite Mounta	83.12	27		P	00 19 49.8	+0.8
L18K				IAmb	IAmb	00 19 51.0	
	comp=Z,5.6nm,0.8s						
H19K	Roundabout Mou	83.88	24		P	00 19 53.3	+0.6
H19K				IAmb	IAmb	00 19 54.7	
	comp=Z,4.4nm,0.8s						
N19K	Bonanza Creek	83.91	29		P	00 19 53.7	+0.5
N19K				IAmb	IAmb	00 19 55.1	
	comp=Z,7.7nm,0.9s						
KDAK	Kodiak Island	84.44	32	P	P	00 19 55.4	-0.4
KBZ	Khabaz	84.75	314	P	P	00 19 55.8	-1.8
	comp=Z,1.3nm,0.7s,baz=108,slow=6.4,SNR=2.7						
	comp=Z,1.3nm,0.7s						
IMAR	Indian Mountai	85.06	24	P	P	00 19 59.0	+0.2
GURO	Guroymak-BITLI	85.11	308	P	P	00 19 60.0	+0.2
GURO				IAmb	IAmb	00 20 01.2	
	comp=Z,8.5nm,1.1s						
SKT	Skwentna	85.48	28	P	P	00 20 00.4	-0.6
SKT				IAmb	IAmb	00 20 25.0	
	comp=Z,4.0nm,1.1s						
C23K	Itkillik River	86.75	20	P	P	00 20 07.3	+0.3
ILAR	Eielson Array	87.79	25	P	P	00 20 10.1	-2.1
	comp=Z,0.2nm,0.4s,baz=259,slow=4.8,SNR=5.1						
	comp=Z,0.2nm,0.4s						
BMAR	Burnt Mountain	88.81	23	P	P	00 20 17.5	+0.5
MMAI	Mount Meron Ar	90.43	303	P	P	00 20 24.7	-0.7
	comp=Z,1.0nm,0.5s,baz=83,slow=4.5,SNR=2.0						
	comp=Z,1.0nm,0.5s						
QSPA	South Pole Qui	90.78	180	P	P	00 20 25.8	-0.5
	comp=Z,0.7nm,0.7s,baz=133,slow=2.4,SNR=7.4						
	comp=Z,0.7nm,0.7s						
BRTR	Keskin Array B	91.63	310	P	P	00 20 29.0	-1.9
	comp=Z,0.8nm,0.8s,baz=114,slow=7.3,SNR=5.8						
	comp=Z,0.8nm,0.8s						
ARCES	ARCESS Array B	93.03	340	P	P	00 20 34.2	-2.3
	comp=Z,2.9nm,1.0s,baz=79,slow=4.9,SNR=4.5						
	comp=Z,2.9nm,1.0s						
FINES	FINESS Array B	94.22	332	P	P	00 20 42.2	+0.1
	comp=Z,2.1nm,0.9s,baz=94,slow=8.4,SNR=1.3						
	comp=Z,2.1nm,0.9s						
BUR08	Bucovina Ar. S	96.95	318		P	00 20 54.1	-1.0
BUR08				IAmb	IAmb	00 20 55.1	
	comp=Z,2.0nm,0.8s						
NOA	NORSAR Array B	101.22	333	P	Pdif	00 21 12.3	-1.5
	comp=Z,0.8nm,0.8s,baz=32,slow=8.4,SNR=1.6						
TORD	Torodi Ar. Bea	123.51	286	PKP	PKPdf	00 26 20.0	-1.6
	comp=Z,1.2nm,0.4s,baz=41,slow=1.8,SNR=1.5						
TXAR	Lajitas Array	123.53	54	PKP	PKPdf	00 26 20.5	-1.0
	comp=Z,0.4nm,0.8s,baz=153,slow=1.5,SNR=4.7						

*NEIC **13** 00:07:31.8±3.2, 34°.00N±0°.02×119°.05W±0°.02, h10km±2km, Error ellipse: s-maj=3.2km s-min=3.0km az=26.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}1.14; $M_{\theta\theta}$-1.97; $M_{\phi\phi}$0.83; $M_{r\theta}$1.38; $M_{\theta\phi}$-1.06; $M_{\phi r}$-1.12; Fault plane solution: $M_0$2.69000×10^{14} NP1: ϕ_s107.80000°, δ72.37000°, λ131.95000°. NP2: ϕ_s216.43000°, δ44.86000°, λ25.43000°. Principal axes: T 2.7603, Plg46.0000°, Azm60.0000°; N -0.1411, Plg40.0000°, Azm273.0000°; P -2.6192, Plg17.0000°, Azm168.0000°;*
*NEIC **13** 00:07:33.7, 34°.08N×119°.04W, h19km*
*PAS **13** 00:07:33.7±2.1, 34°.07N±0°.02×119°.04W±0°.02, h18km±3km, Mwr3.7/3, ML3.4/72(NEIC), Mwr3.6/24(NEIC), Error ellipse: s-maj=3.2km s-min=1.2km az=50.0*
ISC 13 00:07:32.7±1.1, **34°.04N**±0°.03×**119°.06W**±0°.02, **h20**km±4km, **n84**, σ**0s.70**/105, **Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGOC	Agoura	0.27	65		Sg	00 07 42.8	-0.3
BLCC	Black Canyon	0.38	57		Pg	00 07 40.7	-0.1
BLCC					Sg	00 07 46.2	-0.1
OAT	Oat Mountain	0.48	50		Pg	00 07 42.7	+0.2
OAT					Sb	00 07 50.2	+1.0
DJJ	Donna J Jenkin	0.51	82		Pg	00 07 42.5	-0.4
SBI	Santa Barbara	0.56	177		Pn	00 07 45.2	-0.2
SBI					Sn	00 07 54.0	-0.1
PDE	Pardee, Santa	0.57	44		Pb	00 07 44.3	+0.3
PDE					Sb	00 07 52.6	+1.0
LCGC	La Cienega, Cu	0.57	93		Pn	00 07 45.3	-0.4
LCGC					Sn	00 07 54.0	-0.4
HLLC	North Hollywoo	0.60	76		Pg	00 07 44.3	-0.3
HLLC					Sg	00 07 52.6	-0.1
RPV	Rancho Palos V	0.62	118		Sn	00 07 55.3	-0.4
GR2C	Griffith Obs.	0.64	82		Pb	00 07 45.3	+0.2
GR2C					Sn	00 07 56.0	-0.2
DECC	Green Verdugo	0.64	70		Pb	00 07 44.9	-0.3
OSI	Osito Audit: C	0.64	26		Sg	00 07 53.2	-0.9
USC	University of	0.64	91		Pn	00 07 46.8	+0.2
WTT2	Watts, South G	0.67	97		Pn	00 07 47.4	+0.3
WTT2					Sn	00 07 57.0	0.0
SBC	Santa Barbara	0.68	307		Sg	00 07 55.4	+0.2
FMP	Fort Macarthur	0.71	117		Pg	00 07 47.1	+0.3
PASC	Pasadena Art C	0.74	79		Pb	00 07 46.3	-0.6
PASC				Sg	Sb	00 07 55.5	-1.1
PASC				IAML		00 07 59.3	
	comp=E,2μm,0.3s						
PASC				IAML		00 07 59.3	
	comp=N,2μm,0.5s						
GVRC	Garvey Reservo	0.78	89		Sn	00 08 01.0	+1.3
DLAC	Del Amo	0.82	103		Pn	00 07 50.3	+1.1
DLAC					Sn	00 08 02.3	+1.6
CIAC	Catalina I. Ai	0.83	139		Pb	00 07 48.7	+0.2
MWC	Mount Wilson	0.85	77		Pb	00 07 48.4	-0.5
LEOC	Leona Valley	0.86	46		Sb	00 07 59.5	-0.8
RHC	Rose Hills Cem	0.87	92		Pn	00 07 50.2	+0.3
RHC					Sn	00 08 03.4	+1.5
ALPC	Antelope	0.90	44		Pb	00 07 49.0	-0.7
ALPC					Sb	00 07 59.9	-1.5
CJV	Casa Juvan	0.90	57		Pb	00 07 48.9	-0.9
CJV					Sb	00 08 00.7	-0.7
CHFC	Chilao Flat St	0.91	71		Pb	00 07 49.2	-0.6
THC	Tehachapi Micr	0.93	20		Pb	00 07 49.8	-0.5
THC					Sb	00 08 01.7	-0.6
BCW	Bitter Crk WRg	0.95	342		Pb	00 07 50.3	-0.2
BCW				Sg	Sb	00 08 03.2	+0.5
LRRC	Littlerock Res	0.98	60		Pb	00 07 50.4	-0.7
LRRC					Sb	00 08 03.2	-0.4
JNH	Juniper Hills	1.00	66		Pb	00 07 50.8	-0.7
JNH					Sb	00 08 03.9	-0.5
PSRC	Puddingstone R	1.04	87		Pb	00 07 51.6	-0.4
PSRC					Sn	00 08 06.5	+0.4
NJQ	Nojoqui County	1.05	299		Pb	00 07 51.8	-0.5
PKM	Mcpherson Peak	1.05	324		Sb	00 08 05.9	0.0
BSM	San Miguel Isl	1.07	270		Pb	00 07 52.2	-0.4
TPO	Tropico Hills	1.08	39		Pb	00 07 52.0	-0.8
TPO					Sb	00 08 05.5	-1.1
HOLC	Holcomb Ridge	1.09	67		Pb	00 07 52.3	-0.7
SSK	Sunset Peak	1.15	81		Pn	00 07 53.7	-0.1
SBB	Saddle Back Bu	1.21	57		Pn	00 07 54.2	-0.4
EDW2	Edwards Air Fo	1.22	46		Pn	00 07 54.2	-0.5
MLSC	Mira Loma	1.24	91		Pn	00 07 54.6	-0.3
GATR	Gnd/Air Tx Cnt	1.30	294		Pn	00 07 55.6	-0.2
SS2	San Sevaine	1.30	82		Pn	00 07 55.8	0.0
CCAC	Calif City Air	1.41	37		Pn	00 07 57.1	-0.2
CCAC					Sn	00 08 15.3	0.0
ELS	Elsinore Mount	1.41	105		Pn	00 07 56.5	-0.8
ELS					Sn	00 08 15.8	+0.4
ELS				IAML		00 08 19.2	
	comp=N,728nm,0.4s						
ELS				IAML		00 08 19.3	
	comp=E,400nm,0.4s						
CSP	Cedar Springs	1.43	79		Pn	00 07 57.8	+0.1
SMMC	Simmler	1.49	329		Pn	00 07 58.5	+0.1
PEC	Perris	1.58	95		Pn	00 07 59.2	-0.5
DTP	Desert Tortois	1.58	39		Pn	00 07 59.5	-0.3
ISA	Isabella, Lake	1.69	16		Pn	00 08 01.8	+0.6
ISA				IAML		00 08 25.9	
	comp=E,466nm,0.8s						
BACC	Bachelor Mtn.	1.73	104		Pn	00 08 01.3	-0.4
PFO	Pinyon Flats O	2.21	100		Pn	00 08 08.5	+0.2
PFO				IAML		00 08 44.2	
	comp=E,243nm,0.8s						
GSC	Goldstone, Bar	2.25	55		Pn	00 08 09.4	+0.6
GSC				IAML		00 08 50.1	
	comp=N,321nm,0.4s						
TKX	Tecate	2.52	125		Pn	00 08 12.8	+0.2
TKX				IAML		00 08 58.4	
	comp=N,294nm,0.3s						
PMPB	Monarch Peak	2.60	327		Pn	00 08 13.3	-0.4
PMPB				IAML		00 08 60.0	
	comp=E,179nm,0.7s						
PMPB				IAML		00 09 17.7	
	comp=N,183nm,1.0s						
QSM	Queen of Sheba	2.63	42		Pn	00 08 14.3	+0.2
QSM				IAML		00 09 02.4	
	comp=E,186nm,1.2s						
QSM				IAML		00 09 04.0	
	comp=N,158nm,0.9s						
CBX	Cerro Bola	2.64	130		Pn	00 08 13.9	-0.5
GWY	Greenwater Val	2.91	42		Pn	00 08 17.6	-0.4
GWY				IAML		00 09 07.1	
	comp=N,101nm,0.7s						
GWY				IAML		00 09 11.1	
	comp=E,150nm,0.6s						
YUH	Yuha Desert	2.97	117		Pn	00 08 19.6	+0.9
YUH				IAML		00 09 18.6	
	comp=N,105nm,0.9s						
YUH				IAML		00 09 19.5	
	comp=E,110nm,1.4s						
BBGB	Big Mountain B	3.01	328		Pn	00 08 19.4	+0.1
GRAC	Grapevine Rang	3.26	25		Pn	00 08 23.2	+0.4
GRAC				IAML		00 09 20.5	
	comp=E,123nm,0.8s						
ESJX	Sierra Juarez	3.31	127		Pn	00 08 24.3	+0.7
ESJX				IAML		00 09 24.2	
	comp=E,90nm,0.7s						
ESJX				IAML		00 09 24.8	
	comp=N,65nm,0.9s						
SAO	San Andreas Ge	3.35	325		Pn	00 08 23.6	-0.3
DSP	Deep Springs	3.44	15		Pn	00 08 26.8	+1.6
GLA	Glamis	3.67	104		Pn	00 08 28.8	+0.4
GLA				IAML		00 09 54.8	
	comp=N,74nm,0.8s						
TPNV	Topopah Spring	3.70	37		Pn	00 08 29.5	+0.5
TPNV				IAML		00 09 42.8	
	comp=N,57nm,1.1s						
TPNV				IAML		00 09 46.0	
	comp=N,52nm,1.0s						
BLYC	Blythe	3.78	93		Pn	00 08 29.6	-0.3
BLYC				IAML		00 09 38.8	
	comp=N,76nm,1.0s						
BLYC				IAML		00 09 42.7	
	comp=E,69nm,0.9s						
V12A	Nelson	3.85	63		Pn	00 08 30.9	0.0
V12A				IAML		00 09 47.2	
	comp=E,50nm,0.9s						
MZP	Montezuma Peak	3.90	20		Pn	00 08 32.6	+0.8
SHPR	Sheep Range	4.03	51		Pn	00 08 34.8	+1.4
CMB	Columbia Colle	4.13	345		Pn	00 08 35.8	+1.0
LHV	Little Huntoon	4.23	6	Pn	Pn	00 08 37.0	+1.0
LHV				IAML		00 10 02.8	
	comp=N,69nm,0.9s						
W13A	Hualapai Mount	4.40	75		Pn	00 08 39.0	+0.4
W13A				IAML		00 09 58.8	
	comp=N,38nm,1.0s						
W13A				IAML		00 10 00.7	
	comp=E,29nm,0.8s						
NVAR	Mina Array Bea	4.43	8		Pn	00 08 40.1	+1.1

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRN	Pahroc Range	4.68	43		Pn	00 08 43.5	+1.0
PRN				IAML		00 10 10.9	
	comp=E,32nm,1.6s						
PRN				IAML		00 10 11.8	
	comp=N,41nm,0.9s						
Y14A	Wickenburg	5.03	89		Pn	00 08 47.4	+0.2
Y14A				IAML		00 10 23.7	
	comp=N,37nm,0.9s						
Y14A				IAML		00 10 24.1	
	comp=E,18nm,0.8s						
PNTR	Pine Nut	5.06	355		Pn	00 08 48.3	+0.6
PNTR				IAML		00 10 12.2	
	comp=N,36nm,0.9s						
AFDM	Forest Hills D	5.14	343		Pn	00 08 48.5	0.0
AFDM				IAML		00 10 16.2	
	comp=E,17nm,1.0s						
R11B	Troy Canyon, C	5.14	32		Pn	00 08 49.0	+0.3
LCMT	Little Creek M	5.59	56		Pn	00 08 55.1	+0.2
PAHR	Pah Rah Range	5.67	357		Pn	00 08 57.0	+1.1
U15A	North Rim	6.03	65		Pn	00 09 02.7	+1.6
PSUT	Pine Spring	6.15	42		Pn	00 09 04.0	+1.4
X16A	Lo Mia Camp, P	6.32	84		Pn	00 09 05.4	+0.4
WUAZ	Wupatki	6.49	75		Pn	00 09 09.2	+1.9

IDC 13 00:10:08.1±1.6**, 1°.12N×126°.64E, h0^{km}, mb3.8**/5**, mbtmp3.8**/5**, Error ellipse: s-maj=160.0km s-min=21.4km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.25	161	P	P	00 15 06.0	-0.8
	1.6nm,0.3s,baz=339,slow=11,SNR=9.7 1.6nm,0.3s						
ASAR	Alice Springs	25.63	164	P	P	00 15 40.2	+0.7
	0.6nm,0.4s,baz=346,slow=11,SNR=5.0 0.6nm,0.4s						
MKAR	Makanchi Array	59.65	326	P	P	00 20 14.0	-0.2
	0.5nm,0.6s,baz=127,slow=8.3,SNR=4.6 0.5nm,0.6s						
ZALV	Zalesovo Beam	62.87	334	P	P	00 20 36.2	+0.4
	0.4nm,0.3s,baz=119,slow=8.9,SNR=1.4 0.4nm,0.3s						
KURBB	Kurchatov Arra	63.89	328	P	P	00 20 42.3	-0.3
	0.6nm,0.5s,baz=131,slow=6.5,SNR=2.6 0.6nm,0.5s						

*GCG **13** 00:15:21.5±2.2, 14°.20N×93°.12W, h36^{km}±999^{km}, MD4.0, ML3.4*

*MEX **13** 00:15:23.7±0.6, 14°.43N×93°.14W, h11^{km}±37^{km}, MD3.9*

ISC 13 00:15:18.7±2.0**, 14°.32N**±0°.08×**93°.19W**±0°.06**, h32^{km}**±14^{km}**, n12, σ1^{s}.20**/23**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.07	57	*e*P	Pb	00 15 39.6	+0.9
THIG				*e*S	Sb	00 15 52.4	-0.1
PATR	El Naranjo	1.22	49	*e*P	Pb	00 15 41.3	-0.1
PATR				*e*S	Sn	00 15 55.7	+0.4
PAVE	Pavencul	1.31	48	*e*P	Pb	00 15 42.7	-0.2
PAVE				*e*S	Sn	00 15 57.9	+0.4
PCIG		1.38	359	*e*P	Pn	00 15 43.8	+2.1
PCIG				*e*S	Sn	00 15 58.4	-0.4
RTAL	Retalhuleu	1.47	82	*e*P	Pb	00 15 45.4	+0.1
RTAL				*e*S	Sb	00 16 04.4	+0.8
STG8	El Palmar, Qui	1.79	85	*e*P	Pn	00 15 47.1	-0.4
STG8				*i* S	Sn	00 16 08.2	-1.1
STG8				IAML		00 16 10.5	
	comp=N,768nm,0.2s						
STG0	El Palmar, Qui	1.80	86	*e*P	Pn	00 15 47.2	-0.4
STG0				*i* S	Sn	00 16 08.2	-1.1
STG0				IAML		00 16 13.8	
	comp=E,1µm,0.2s						
CCIG	Comitan	2.20	27	*e*P	Pb	00 15 58.6	+0.6
CCIG				*e*S	Sb	00 16 24.1	-0.8
CCIG	Comitan	2.20	27	*i* P	Pb	00 15 58.7	+0.7
CCIG				*i* S	Sb	00 16 26.9	+1.9
CCIG				IAML		00 16 31.8	
	comp=N,117nm,0.5s						
TGIG		2.45	2	*e*P	Pb	00 16 00.9	-1.2
TGIG				*e*S	Sb	00 16 29.7	-2.2
TGIG		2.45	2	*i* P	Pb	00 16 01.2	-0.9
TGIG				*i* S	Sb	00 16 29.7	-2.2
TGIG				IAML		00 16 32.4	
	comp=E,65nm,0.4s						
HUIG	Huatulco	3.17	298	*e*S	Sn	00 16 43.8	+0.9

*IDC **13** 00:30:03.9±4.1, 9°.24N×93°.38E, h60^{km}±36^{km}, mb3.5/13, mbtmp3.8/15, ML3.7/2, MS3.1/1, Error ellipse: s-maj=42.3km s-min=15.1km az=60.0*

ISC 13 00:30:01.2±0.7**, 9°.1N**±0°.1×**93°.0E**±0°.2**, h35^{km}, n21, σ1^{s}.27**/20**, mb3.8**/13**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	8.59	137	P	Pn	00 32 05.3	+2.2
	0.2nm,0.3s,baz=322,slow=17,SNR=1.5						
PSI				LR	LR	00 35 46.5	
	comp=Z,120nm,18.4s,baz=228,slow=40 2.9nm,0.5s						
CMAR	Chiang Mai Arr	10.90	31	P	Pn	00 32 35.5	+0.8
	0.4nm,0.3s,baz=206,slow=12,SNR=1.3 0.7nm,0.4s						
H08S3	Diego Garcia H	26.40	232	T	T	01 02 49.7	
	baz=51,slow=75,SNR=14						
H08S2	Diego Garcia H	26.40	231	T	T	01 02 45.0	
	baz=51,slow=75,SNR=7.8						
H08S1	Diego Carcia H	26.41	232	T	T	01 02 45.8	
	baz=51,slow=75,SNR=8.1						
MKAR	Makanchi Array	38.64	348	P	P	00 37 20.3	-0.9
	0.1nm,0.5s,baz=164,slow=7.9,SNR=5.7 0.1nm,0.5s						
KURBB	Kurchatov Arra	43.08	346	P	P	00 37 57.0	-0.6
	0.2nm,0.4s,baz=158,slow=8.0,SNR=4.1						
KURBB				PcP	PcP	00 39 48.5	+1.3
	0.3nm,0.8s,baz=151,slow=4.2,SNR=1.8 0.2nm,0.4s						
BVAR	Borovoye Array	47.46	342	P	P	00 38 33.0	+0.6
	0.4nm,0.4s,baz=128,slow=11,SNR=2.7 0.4nm,0.4s						
WRA	Warramunga Arr	49.87	126	P	P	00 38 49.4	-2.0
	0.7nm,0.6s,baz=306,slow=8.7,SNR=14						
WRA				PcP	PcP	00 40 11.2	-0.5
	0.3nm,0.6s,baz=299,slow=4.2,SNR=1.9 0.7nm,0.6s						
ASAR	Alice Springs	51.55	130	P	P	00 39 01.5	-2.6
	0.4nm,0.8s,baz=297,slow=7.7,SNR=4.3 0.4nm,0.8s						
BRTR	Keskin Array B	60.79	310	P	P	00 40 11.2	+1.1
	0.4nm,0.6s,baz=122,slow=6.5,SNR=4.9 0.4nm,0.6s						
FINES	FINESS Array B	71.10	332	P	P	00 41 16.3	+0.6
	4.2nm,1.0s,baz=156,slow=10,SNR=2.2 4.2nm,1.0s						
ARCES	ARCESS Array B	73.72	340	P	P	00 41 30.0	-1.3
	2.5nm,1.1s,baz=107,slow=7.9,SNR=6.0 2.5nm,1.1s						
GERES	GERESS Array B	76.17	318	P	P	00 41 46.5	+0.5
	0.3nm,0.5s,baz=97,slow=6.1,SNR=4.5 0.3nm,0.5s						
HFS	Hagfors	76.83	330	P	P	00 41 49.7	+0.4
	1.6nm,0.8s,baz=72,slow=6.2,SNR=4.2 1.6nm,0.8s						
SPITS	Spitsbergen Ar	78.39	348	P	P	00 41 58.4	+0.6
	1.2nm,0.5s,baz=101,slow=7.6,SNR=4.4 1.2nm,0.5s						
EKA	Eskdalemuir Ar	86.08	325	P	P	00 42 37.6	-0.7
	1.8nm,0.8s,baz=90,slow=2.1,SNR=2.3 1.8nm,0.8s						
ILAR	Eielson Array	93.99	22	P	P	00 43 14.6	-0.8
	0.3nm,0.8s,baz=321,slow=5.4,SNR=3.2 0.3nm,0.8s						
PLCA	Paso Flores	145.32	202	PKPbc	PKPdf	00 49 36.1	+0.3
	1.5nm,0.7s,baz=159,slow=6.0,SNR=4.9						
CPUP	Villa Florida	147.13	235	PKPbc	PKPbc	00 49 40.2	-1.1
	0.2nm,0.2s,baz=93,slow=6.9,SNR=1.8						
CFA	Coronel Fontan	151.67	215	PKPbc	PKiKP	00 49 54.1	+1.1
	0.6nm,0.6s,baz=24,slow=10.0,SNR=1.5						

*NEIC **13** 00:30:57.4±1.0, 40°.42N±0°.02×77°.52W±0°.02, h33^{km}±9^{km}, mb_Lg3.4/132, ML3.8/14, Mwr3.4/41, ML3.4/8(LDO), Error ellipse: s-maj=3.2km s-min=2.7km az=187.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}1.45; $M_{\theta\theta}$0.03; $M_{\phi\phi}$-1.48; $M_{r\theta}$0.44; $M_{\theta\phi}$0.30; $M_{\phi r}$-0.10; Fault plane solution: $M_0$1.56000×10^{14} NP1:ϕ_s4.05000°, δ43.67000°, λ112.70000°. NP2:ϕ_s154.01000°, δ50.43000°, λ69.78000°. Principal axes: T 1.5755, Plg74.0000°, Azm1.0000°; N -0.0212, Plg15.0000°, Azm167.0000°; P -1.5543, Plg4.0000°, Azm258.0000°;*

*LDO **13** 00:30:58.0±1.3, 40°.42N±0°.02×77°.51W±0°.03, h27^{km}±8^{km} Error ellipse: s-maj=3.3km s-min=2.8km az=125.0*

*NEIC **13** 00:30:58, 40°.42N×77°.51W, h27^{km}*

ISC 13 00:30:56.9±1.0**, 40°.42N**±0°.03×**77°.49W**±0°.02**, h28^{km}**±11^{km}**, n117, σ0^{s}.60**/92**, Pennsylvania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SSPA	Standing Stone	0.37	305		Pb	00 31 05.4	+0.1
SSPA					Sb	00 31 11.3	+0.3
SSPA				IAML		00 31 11.8	
	6µm,0.3s						
SSPA				IAML		00 31 11.8	
	6µm,0.3s						
N58A	Sunbury	0.72	54		Pb	00 31 10.7	-0.2
N58A					Sb	00 31 21.2	+0.8
N58A				IAML		00 31 23.0	
	4µm,0.3s						
N58A				IAML		00 31 23.1	
	4µm,0.2s						
PABK	Blue Knob Stat	0.85	260		Pb	00 31 12.6	-0.5
PABK					Sb	00 31 23.7	-0.5
M57A	Sunshine Farm,	0.96	16		Pb	00 31 14.2	-0.6
M57A					Sb	00 31 26.8	-0.4
M57A				IAML		00 31 28.5	
	2µm,0.4s						
M57A				IAML		00 31 28.9	
	2µm,0.6s						
MVL	Millersville	0.97	115		Pn	00 31 14.5	0.0
MVL				IAML		00 31 29.8	
	comp=N,2µm,0.1s						
MVL	Millersville	0.97	115		Sn	00 31 27.8	+0.5
P57A	Homestead Farm	1.02	204		Pn	00 31 15.2	0.0
P57A				IAML		00 31 30.7	
	comp=N,3µm,0.1s						
P57A	Homestead Farm	1.02	204		Sb	00 31 29.0	+0.1
SDMD	Soldier's Deli	1.12	154		Pn	00 31 17.3	+0.6
SDMD	Soldier's Deli	1.12	154		Sb	00 31 32.2	+0.3
PSDB	Penn State Uni	1.19	307		Pn	00 31 18.2	+0.6
PSDB					Sn	00 31 33.6	+0.7
PSWB	Penn State Wil	1.42	51		Pn	00 31 21.7	+0.9
PSWB					Sn	00 31 38.9	+0.2
WUPA	West Chester U	1.52	108		Pn	00 31 22.9	+0.7
NED	Newark	1.54	117		Pn	00 31 23.3	+0.9
NED					Sn	00 31 42.4	+0.9
P60A	Greenville	1.54	113		Pn	00 31 23.4	+1.0
LUPA	Lehigh Univers	1.62	83		Pn	00 31 24.1	+0.6
PSUB	Penn St. - Bra	1.64	107		Pb	00 31 25.3	-1.0
L56A	Greenwood	1.72	358		Pn	00 31 25.0	+0.1
L56A				IAmb_Lg		00 31 52.9	
	comp=Z,197nm,0.7s						
KSPA	Keystone Colle	1.73	48		Pn	00 31 24.7	-0.3
TUPA	Temple Univers	1.78	97		Pn	00 31 26.3	+0.6
Q56A	Snyder Ridge,	1.90	224		Pn	00 31 27.9	+0.5
UPAO	U. Pittsburgh	1.94	273		Pn	00 31 28.3	+0.5
MCWV	Mont Chateau	1.96	248		Pn	00 31 28.7	+0.4
PAOC	Oil Creek Stat	1.99	304		Pn	00 31 28.9	+0.2
BINY	Binghamton	2.11	32		Pn	00 31 30.6	+0.3
PANJ	Princeton	2.13	90		Pn	00 31 30.8	+0.4
WVNY	West Valley, N	2.15	337		Pn	00 31 31.3	+0.4
P61A	Hammonton	2.20	109	Pn	Pn	00 31 31.6	+0.1
P61A				IAmb_Lg		00 32 07.3	
	comp=Z,167nm,0.8s						
CBN	Corbin Frederi	2.21	178		Pn	00 31 31.5	-0.1
O54A	Avella	2.22	265		Pn	00 31 32.2	+0.3
BRNJ	Basking Ridge	2.24	82		Pn	00 31 32.2	+0.2
MMNY	Mt. Morris Dam	2.33	352		Pn	00 31 34.7	+1.4
ALLY	Alegheny Colle	2.36	302		Pn	00 31 34.2	+0.6
K57A	Scipio Center	2.42	17		Pn	00 31 35.0	+0.4
K57A				IAmb_Lg		00 32 18.2	
	comp=Z,171nm,0.9s						
R58B	Mineral	2.47	187		Pn	00 31 34.9	-0.3
R58B				IAmb_Lg		00 32 18.8	
	comp=Z,119nm,0.8s						
ERPA	Erie	2.54	313		Pn	00 31 36.2	+0.1
L59A	Walton	2.55	45		Pn	00 31 36.3	-0.1
L59A				IAmb_Lg		00 32 21.7	
	comp=Z,121nm,0.7s						
N53A	Lisbon	2.58	280		Pn	00 31 37.5	+0.8
N53A				IAmb_Lg		00 32 19.8	
	comp=Z,201nm,0.8s						
CPNY	Central Park	2.71	81		Pn	00 31 38.3	-0.2
CPNY				IAmb_Lg		00 32 27.9	
	comp=Z,110nm,0.7s						
PAL	Palisades	2.78	77		Pn	00 31 39.4	-0.1
MEDO	Medina	2.84	346	Pn	Pn	00 31 40.3	+0.1
O53A	New Philadelph	2.85	268		Pn	00 31 40.6	+0.1
J55A	Hilton	2.85	355		Pn	00 31 40.6	+0.1
J55A				IAmb_Lg		00 32 28.3	
	comp=Z,104nm,0.8s						
S57A	Dark Hollow, R	2.89	204		Pn	00 31 41.1	+0.1
S57A				IAmb_Lg		00 32 35.9	
	comp=Z,107nm,0.7s						
Q54A	Coxs Mills	2.95	242		Pn	00 31 42.5	+0.7
R55A	Marlinton	2.95	225		Pn	00 31 42.4	+0.4
R55A				IAmb_Lg		00 32 29.6	
	comp=Z,182nm,0.8s						
M52A	Chesterland	3.14	292		Pn	00 31 44.8	+0.4
P53A	Whipple	3.14	254		Pn	00 31 44.8	+0.4
J57A	Williamstown	3.19	20	Pn	Pn	00 31 44.9	-0.1
KSCT	Kent School, K	3.29	65		Pn	00 31 46.5	0.0
O52A	Adamsville	3.34	266		Pn	00 31 47.5	+0.4
O52A				IAmb_Lg		00 32 44.7	
	comp=Z,128nm,0.8s						
T59A	Double "B" Far	3.44	181	Pn	Pn	00 31 48.1	-0.5
T59A				IAmb_Lg		00 32 44.9	
	comp=Z,88nm,0.7s						
PECO	Prince Edward	3.53	6		Pn	00 31 50.0	+0.3
P52A	Corning	3.65	259		Pn	00 31 51.6	+0.2
T57A	Hurt	3.69	203		Pn	00 31 52.7	+0.8
T57A				IAmb_Lg		00 32 54.0	
	comp=Z,122nm,0.8s						
N51A	Ashland	3.75	279		Pn	00 31 52.6	-0.2
N51A				IAmb_Lg		00 32 52.7	
	comp=Z,118nm,1.0s						
J59A	Piesco	3.77	35		Pn	00 31 52.7	-0.4
J59A				IAmb_Lg		00 33 03.2	
	comp=Z,138nm,0.8s						
S54A	Dingess, Beckl	3.96	230		Pn	00 31 56.1	+0.4
Q52A	Bidwell	3.96	250		Pn	00 31 55.3	-0.5
Q52A				IAmb_Lg		00 33 00.6	
	comp=Z,110nm,0.9s						
DELO	Deloro Mine	4.10	359		Pn	00 31 57.1	-0.4
DELO				IAmb_Lg		00 33 05.7	
	comp=Z,88nm,0.8s						
ACCN	Adirondack Com	4.11	43		Pn	00 31 56.8	-1.0
ACCN				IAmb_Lg		00 33 08.3	
	comp=Z,74nm,0.9s						
L61B	Northampton	4.14	59		Pn	00 31 58.5	+0.3
L61B				IAmb_Lg		00 33 19.1	
	comp=Z,90nm,0.7s						
ACSO	Alum Creek Sta	4.21	269		Pn	00 31 58.3	-0.8
UCCT	U. Connecticut	4.21	69		Pn	00 31 57.9	-1.1
UCCT				IAmb_Lg		00 33 15.0	
	comp=Z,70nm,0.9s						
M63A	Gales Ferry	4.24	75		Pn	00 31 58.2	-1.3
M50A	Fremont	4.32	285		Pn	00 32 00.2	-0.5
P51A	Williamsport	4.38	259		Pn	00 32 00.9	-0.6
K62A	Royalston	4.54	59		Pn	00 32 03.2	-0.3
K62A				IAmb_Lg		00 33 25.5	
	comp=Z,96nm,0.8s						
J61A	Chester	4.70	50		Pn	00 32 06.5	+0.7
J61A				IAmb_Lg		00 33 22.8	
	comp=Z,64nm,0.7s						
LONY	Lake Ozonia	4.71	26		Pn	00 32 05.1	-0.9
LONY				IAmb_Lg		00 33 27.0	
	comp=Z,72nm,0.8s						
Q51A	Peebles	4.73	255		Pn	00 32 06.0	-0.3
V58A	Windy Hill, Pi	4.79	196	Pn	Pn	00 32 08.2	+1.1
V58A				IAmb_Lg		00 33 28.1	
	comp=Z,83nm,0.8s						
WBO	Williamsburg	4.86	19		Pn	00 32 07.7	-0.3
HRV	Adam Dziewonsk	4.92	63		Pn	00 32 08.0	-0.8
HRV				IAmb_Lg		00 33 31.7	
	comp=Z,84nm,0.8s						
WES	Weston	5.03	65		Pn	00 32 08.8	-1.6
HNH	Hanover	5.08	48	IAmb_Lg		00 33 40.5	
	comp=Z,72nm,0.8s						
N49A	Columbus Grove	5.12	278	Pn	Pn	00 32 10.8	-0.8
N49A				IAmb_Lg		00 33 39.1	
	comp=Z,87nm,0.8s						
L64A	Middleborough	5.24	71	IAmb_Lg		00 33 47.9	
	comp=Z,66nm,0.7s						
O49A	Covington	5.24	270		Pn	00 32 12.6	-0.7
O49A				IAmb_Lg		00 33 51.4	
	comp=Z,64nm,0.7s						
FRNY	Flat Rock	5.27	32	Pn	Pn	00 32 12.4	-1.2
W59A	Clinton	5.30	189	IAmb_Lg		00 33 45.9	
	comp=Z,67nm,0.7s						
I49A	Point Hope	5.30	313	IAmb_Lg		00 33 46.5	
	comp=Z,73nm,1.0s						
M65A	Busby, Falmout	5.30	75	IAmb_Lg		00 33 57.9	
	comp=Z,76nm,0.7s						
V55A	Taylorsville	5.42	214		Pn	00 32 16.2	+0.4
V55A				IAmb_Lg		00 34 04.4	
	comp=Z,52nm,0.8s						
S51A	Beattyville	5.51	242	Pn	Pn	00 32 16.0	-0.9
LBNH	Lisbon	5.62	45	Pn	Pn	00 32 18.4	0.0
LBNH				IAmb_Lg		00 33 51.6	
	comp=Z,54nm,0.8s						
W57A	Gilead	5.62	201	Pn	Pn	00 32 18.7	+0.2
W57A				IAmb_Lg		00 33 53.8	
	comp=Z,48nm,0.8s						
R50A	Paris	5.72	250		Pn	00 32 19.7	-0.1
R50A				IAmb_Lg		00 34 01.3	
	comp=Z,70nm,1.0s						
I62A	Tamworth	5.73	51		Pn	00 32 20.2	+0.2
I62A				IAmb_Lg		00 33 58.1	
	comp=Z,57nm,0.8s						
MNTQ	Montreal, Queb	5.81	28	IAmb_Lg		00 34 02.0	
	comp=Z,72nm,1.1s						
O48B	Farmland	5.86	271		Pn	00 32 21.3	-0.5
O48B				IAmb_Lg		00 34 10.2	
	comp=Z,86nm,0.9s						
KMSC	Kings Mountain	6.09	211	IAmb_Lg		00 34 15.4	
	comp=Z,79nm,1.0s						
P48A	Milroy	6.18	264	IAmb_Lg		00 34 08.7	
	comp=Z,56nm,0.8s						
TRQ	Mont Tremblant	6.18	19	IAmb_Lg		00 34 09.0	
	comp=Z,65nm,1.0s						
BIRD	Birdtown, Kers	6.23	203	IAmb_Lg		00 34 18.5	
	comp=Z,78nm,1.0s						
R49A	Shelbyville	6.32	253	IAmb_Lg		00 34 16.4	
	comp=Z,54nm,1.0s						
V53A	Saluda	6.34	223	IAmb_Lg		00 34 14.5	
	comp=Z,52nm,0.8s						
PAULI	Pauline	6.56	213	IAmb_Lg		00 34 24.6	
	comp=Z,61nm,0.8s						
Y57A	Sumter	6.80	201	IAmb_Lg		00 34 46.8	
	comp=Z,56nm,0.7s						
JSC	Jenkinsville	6.82	207	IAmb_Lg		00 34 31.7	
	comp=Z,51nm,0.9s						
BG3	Lake Jocassee	6.92	220	IAmb_Lg		00 34 31.6	
	comp=Z,49nm,0.9s						
G62A	West of Eustis	7.01	45	IAmb_Lg		00 34 35.4	
	comp=Z,35nm,0.7s						
BLO	Bloomington	7.07	263	IAmb_Lg		00 34 47.8	
	comp=Z,55nm,1.0s						
WCI	Wyandotte Cave	7.17	255	IAmb_Lg		00 34 49.6	
	comp=Z,65nm,0.9s						
SFIN	Lafayette	7.34	273	IAmb_Lg		00 34 50.1	
	comp=Z,59nm,0.9s						
W52A	Murphy	7.37	226	IAmb_Lg		00 34 58.6	
	comp=Z,44nm,0.7s						
P46A	Rosedale	7.50	267	IAmb_Lg		00 34 55.5	
	comp=Z,52nm,0.8s						
PKME	Peaks-Kenny Pk	7.72	49	IAmb_Lg		00 35 17.6	
	comp=Z,32nm,0.9s						
W50A	Signal Mountai	8.09	232	IAmb_Lg		00 35 25.5	
	comp=Z,41nm,0.8s						
T47A	Sharon Grove	8.26	249	IAmb_Lg		00 35 17.4	
	comp=Z,30nm,0.8s						
X51A	Calhoun	8.27	227	IAmb_Lg		00 35 20.1	
	comp=Z,43nm,0.7s						
SWET	Sewanee	8.46	235	IAmb_Lg		00 35 29.7	
	comp=Z,31nm,0.7s						
F64A	Sherman	8.61	48	IAmb_Lg		00 35 42.0	
	comp=Z,29nm,0.9s						
LMQ	La Malbaie	8.79	34	IAmb_Lg		00 35 38.3	
	comp=Z,25nm,0.8s						
D62A	Allapoint, All	9.03	40	IAmb_Lg		00 35 49.0	
	comp=Z,28nm,1.2s						
X48A	Hartselle	9.65	235	IAmb_Lg		00 36 05.0	
	comp=Z,22nm,0.8s						
Y49A	Blount Mountai	9.67	230	IAmb_Lg		00 36 08.7	
	comp=Z,30nm,0.8s						

*IDC **13** 00:38:11.6±1.1, 50°.27S×139°.17E, h0^{km}, mb4.0/6, mbtmp4.0/7, ML3.8/1, MS3.9/26, Error ellipse: s-maj=68.8km s-min=17.0km az=87.0*

*NEIC **13** 00:38:12.7±1.0, 50°.3S±0°.1×139°.4E±0°.2, h10^{km}±1^{km}, mb4.3/10, Error ellipse: s-maj=23.8km s-min=15.6km az=293.0*

ISC 13 00:38:12.8±0.6**, 50°.29S**±0°.08×**139°.4E**±0°.1**, h12^{km}, n52, σ0^{s}.50**/23**, mb4.1**/10**, MS3.9**/25**, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAU	Tasmania Unive	9.19	40	Pn	Pn	00 40 25.1	0.0
TOO	Toolangi	13.45	21	Pn	Pn	00 41 23.4	-0.1
STKA	Stephens Creek	18.47	6		Pn	00 42 28.7	+0.1
STKA	Stephens Creek	18.47	6	P	P	00 42 28.5	0.0
	0.2nm,0.3s,baz=222,slow=12,SNR=2.9						
STKA				LR	LR	00 48 40.1	
	comp=Z,424nm,18.7s,baz=195,slow=34 1.7nm,0.6s						
MLZ	Mavora Lakes	19.85	87	P	P	00 42 43.2	-0.4
MLZ				IAmb	IAmb	00 42 47.4	
	comp=Z,17nm,1.0s						
CASY	Casey	21.73	212	P	P	00 43 03.1	-0.5
CASY				IAmb	IAmb	00 43 11.5	
	comp=Z,8.5nm,1.1s						
RPZ	Rata Peaks	22.47	85	LR	LR	00 49 49.0	
	comp=Z,199nm,21.7s,baz=232,slow=31						
NWAO	Narrogin (SRO)	23.83	308	LR	LR	00 50 31.0	
	comp=Z,356nm,21.2s,baz=178,slow=31						
H01W1	Cape Leeuwin H	23.95	300	T	T	01 08 18.7	
	baz=134,slow=74,SNR=58						
H01W2	Cape Leeuwin H	23.96	300	T	T	01 08 17.0	
	baz=134,slow=74,SNR=26						
H01W3	Cape Leeuwin H	23.97	300	T	T	01 08 20.0	
	baz=134,slow=74,SNR=50						
ASAR	Alice Springs	26.92	349	P	P	00 43 54.1	+0.3
ASAR	Alice Springs	26.92	349	P	P	00 43 54.0	+0.1
	comp=Z,1.2nm,0.7s,baz=168,slow=9.7,SNR=7.9						
ASAR				LR	LR	00 53 24.9	
	comp=Z,161nm,19.6s,baz=165,slow=34 comp=Z,1.2nm,0.7s						
VNDA	Vanda	28.63	170	P	P	00 44 07.9	-0.7
VNDA	Vanda	28.63	170	P	P	00 44 09.2	+0.6
	comp=Z,0.8nm,0.8s,baz=319,slow=9.5,SNR=4.7						
VNDA				LR	LR	00 53 51.9	
	comp=Z,116nm,18.1s,baz=337,slow=33 comp=Z,0.8nm,0.8s						
URZ	Urewera	29.26	80	LR	LR	00 55 02.6	
	comp=Z,126nm,19.0s,baz=318,slow=34						
WR8	Warramunga Arr	30.52	351	P	P	00 44 24.9	-0.9
WR8				IAmb	IAmb	00 44 43.7	
	comp=Z,4.0nm,0.9s						
WRA	Warramunga Arr	30.55	351	P	P	00 44 25.7	-0.4
WRA	Warramunga Arr	30.55	351	P	P	00 44 26.5	+0.4
	comp=Z,3.0nm,0.9s,baz=168,slow=8.2,SNR=13 comp=Z,3.0nm,0.9s						
FITZ	Fitzroy Crossi	33.95	336	P	P	00 44 55.3	-0.6
FITZ	Fitzroy Crossi	33.95	336	P	P	00 44 55.2	-0.7
	comp=Z,1.7nm,0.8s,baz=156,slow=8.5,SNR=4.4						
FITZ				LR	LR	00 58 07.6	
	comp=Z,50nm,18.7s,baz=172,slow=35 comp=Z,1.7nm,0.8s						
DZM	Mont Dzumac	35.27	47	LR	LR	00 56 16.0	
	comp=Z,161nm,20.7s,baz=202,slow=31						
QSPA	South Pole Qui	39.83	180	P	P	00 45 46.2	+0.5
QSPA				IAmb	IAmb	00 46 08.1	
	comp=Z,6.9nm,1.1s						
QSPA	South Pole Qui	39.83	180	P	P	00 45 46.4	+0.7
	comp=Z,1.9nm,1.0s,baz=34,slow=1.9,SNR=8.4						
QSPA				LR	LR	01 01 05.5	
	comp=Z,138nm,18.6s,baz=14,slow=34 comp=Z,1.9nm,1.0s						
MAW	Mawson	40.00	215	P	P	00 45 47.0	+0.1
	comp=Z,3.7nm,0.9s,baz=294,slow=9.5,SNR=3.6						
MAW				LR	LR	00 59 50.8	

	comp=Z,366nm,21.6s,baz=84,slow=32						
	comp=Z,3.7nm,0.9s						
PMG	Port Moresby	41.27	12	LR	LR	01 03 20.7	
	comp=Z,195nm,18.1s,baz=187,slow=37						
HNR	Honiara	44.16	30	LR	LR	01 04 22.5	
	comp=Z,94nm,18.2s,baz=192,slow=36						
MSVF	Nonsavu	44.81	58	LR	LR	01 02 00.2	
	comp=Z,177nm,18.2s,baz=339,slow=32						
JAY	Jayapura	47.62	2	LR	LR	01 06 49.0	
	comp=Z,142nm,21.2s,baz=24,slow=36						
KAPI	Kappang	48.05	333	LR	LR	01 09 12.8	
	comp=Z,95nm,19.0s,baz=140,slow=39						
LEM	Lembang	50.79	318	LR	LR	01 08 55.1	
	comp=Z,102nm,18.4s,baz=14,slow=36						
BELA	Belgrano 2	52.05	182		P	00 47 21.7	+0.1
BELA				IAmb	IAmb	00 47 24.8	
	comp=Z,7.9nm,1.3s						
TOLI2	Tolitoli	53.62	337	P	P	00 47 34.6	+0.7
H04S1	CROZET ISLANDS	54.73	237	T	T	01 47 36.3	
	baz=128,slow=76,SNR=48						
H04S2	CROZET ISLANDS	54.73	237	T	T	01 47 35.3	
	baz=128,slow=76,SNR=63						
H04S3	CROZET ISLANDS	54.75	237	T	T	01 47 39.8	
	baz=128,slow=76,SNR=56						
SNAA	Sanae	55.43	194	P	P	00 47 46.1	-0.4
SNAA				IAmb	IAmb	00 48 00.3	
	comp=Z,6.9nm,1.4s						
SNAA	Sanae	55.43	194	LR	LR	01 12 23.1	
	comp=Z,90nm,18.0s,baz=220,slow=37						
PMSA	Palmer Station	63.84	169	LR	LR	01 13 49.7	
	comp=Z,76nm,18.1s,baz=228,slow=34						
H08S2	Diego Garcia H	69.45	283	T	T	02 05 07.9	
	baz=141,slow=76,SNR=15						
H08S1	Diego Carcia H	69.46	283	T	T	02 05 03.7	
	baz=141,slow=76,SNR=14						
H08S3	Diego Garcia H	69.47	283	T	T	02 05 03.9	
	baz=141,slow=76,SNR=16						
PALK	Pallekele	76.44	299	LR	LR	01 17 55.5	
	comp=Z,88nm,18.8s,baz=80,slow=31						
BOSA	Boshof	82.23	234	LR	LR	01 20 30.9	
	comp=Z,63nm,19.6s,baz=189,slow=31						
BRDH	Bariadhala	84.01	317	LR	LR	01 30 55.0	
	comp=Z,176nm,18.1s,baz=208,slow=38						
LBTB	Lobatse	84.95	236	LR	LR	01 23 16.8	
	comp=Z,56nm,20.8s,baz=144,slow=32						
PLCA	Paso Flores	85.63	158	LR	LR	01 23 28.3	
	comp=Z,22nm,19.5s,baz=240,slow=32						
MJAR	Matsushiro Arr	86.47	359	LR	LR	01 28 12.5	
	comp=Z,58nm,20.0s,baz=170,slow=35						
LSZ	Lusaka	91.31	244	LR	LR	01 25 44.3	
	comp=Z,107nm,19.9s,baz=159,slow=31						
TSUM	Tsumeb	93.93	234	LR	LR	01 27 50.4	
	comp=Z,59nm,18.8s,baz=148,slow=32						
SPITS	Spitsbergen Ar	145.36	342	PKPbc	PKPab	00 57 49.3	+0.3
	comp=Z,4.7nm,0.9s,baz=94,slow=6.5,SNR=5.0						
GERES	GERESS Array B	145.39	289	PKPbc	PKPbc	00 57 49.4	-0.4
	comp=Z,0.5nm,0.6s,baz=132,slow=4.4,SNR=4.1						

IDC ***13*** *00:40:10.1±0.7, 3°.39N×128°.79E, h0^{km}, mb4.0/13, mbtmp4.0/13, Error ellipse: s-maj=44.0km s-min=14.0km az=71.0*

DJA ***13*** *00:40:21.2±0.4, 3°N±3°×12°8E±°, h41^{km}±20^{km}, M4.4/13, mB4.9/5, mb4.4/8, MLv4.5/13, Mw(mB)4.2/5*

NEIC ***13*** *00:40:23.1±2.4, 3°.01N±0°.09×127°.9E±0°.1, h96^{km}±7^{km}, mb4.4/14, Error ellipse: s-maj=19.0km s-min=11.8km az=68.0*

ISC 13 00:40:22.8±0.6**, 3°.01N**±0°.07×**127°.90E**±0°.08**, h100**^{km}**, n51,** σ1^{s}**36**/50**, mb4.2**/21**, 1C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.28	193		Pn	00 40 58.0	-1.1
TNTI				Sn	Sn	00 41 28.1	+1.2
TNTI	Ternate	2.28	193	P	Pn	00 40 58.3	-0.8
SGSI	Sangihe	2.46	286	P	Pn	00 40 58.7	-2.7
SGSI				S	Sn	00 41 28.4	-2.6
KMSI	Cibinong	4.60	238	P	Pn	00 41 30.2	+0.1
SWI	Sorong	5.11	139	P	Pn	00 41 35.7	-1.3
	0.3nm1μm62nm,0.5s						
SANI	Sanana	5.38	201	P	Pn	00 41 38.9	-1.8
	0.2nm38nm,0.8s						
NLAI	Namlea	6.26	187	P	Pn	00 41 53.8	+1.2
	0.1nm21nm,0.4s						
MRSI	Marisa	6.46	247	P	Pn	00 41 56.6	+1.2
LUWI	Luwuk	6.51	232	Pn	Pn	00 41 53.3	-2.8
FAKI	Fak Fak	7.32	144	Pn	Pn	00 42 05.5	-1.7
FAKI	Fak Fak	7.32	144	P	Pn	00 42 05.4	-1.7
	0.1nm15nm,1.1s						
TOLI2	Tolitoli	7.36	255		Pn	00 42 05.9	-1.7
APSI	Ampana	7.36	238	P	Pn	00 42 07.2	-0.4
	970nm32nm,0.7s						
MPSI	Mapaga	8.42	252	P	Pn	00 42 22.2	+0.1
	10nm,0.8s						
MYLDM	Lahad Datu	9.62	283	Pn	Pn	00 42 37.6	-0.8
SPSI	Sidrap Palu	10.68	230	P	Pn	00 42 52.3	-0.5
MTN	Manton Dam	16.07	169	Pn	Pn	00 44 02.8	-0.3
MTN				IAmb	IAmb	00 44 04.8	
	comp=Z,34nm,1.4s						
KNRA	Kununurra	18.59	177	P	Pn	00 44 32.9	-0.7
WB0	Warramunga Arr	23.52	165	P	P	00 45 23.2	-0.8
WB0				IAmb	IAmb	00 45 26.1	
	comp=Z,12nm,1.1s						
WRA	Warramunga Arr	23.67	165	P	P	00 45 25.5	+0.1
WRA	Warramunga Arr	23.67	165	P	P	00 45 25.4	-0.1
	comp=Z,6.0nm,0.7s,baz=346,slow=10,SNR=23						
	comp=Z,6.0nm,0.7s						
ASAR	Alice Springs	27.15	168	P	P	00 45 58.4	+1.5
	comp=Z,0.4nm,0.4s,baz=349,slow=10,SNR=7.4						
	comp=Z,0.4nm,0.4s						
CMAR	Chiang Mai Arr	32.24	301	P	P	00 46 45.4	+3.4
	comp=Z,0.6nm,0.3s,baz=88,slow=9.0,SNR=1.6						
	comp=Z,0.6nm,0.3s						
KSRS	Korea Array	34.28	0	P	P	00 46 53.9	-5.5
	comp=Z,0.4nm,0.3s,baz=176,slow=10,SNR=4.9						
	comp=Z,0.4nm,0.3s						
EIDS	Eidsvold	36.07	143	P	P	00 47 14.2	-0.9
EIDS				IAmb	IAmb	00 47 15.3	
	comp=Z,6.5nm,0.9s						
STKA	Stephens Creek	37.06	160	P	P	00 47 23.5	+0.2
STKA	Stephens Creek	37.06	160	P	P	00 47 22.8	-0.5
	comp=Z,4.3nm,0.6s,baz=335,slow=10,SNR=8.7						
	comp=Z,4.3nm,0.6s						
ARMA	Armidale	40.23	147	P	P	00 47 50.1	+0.1
BNX	BinXian	42.56	359	⇑P	P	00 48 15.2	+6.5
BNX				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SONM	Songino Array	48.35	341	P	P	00 48 53.8	-0.7
	comp=Z,0.6nm,0.6s,baz=145,slow=5.9,SNR=3.7						
	comp=Z,0.6nm,0.6s						
PETK	Petropavlovsk-	55.66	21	P	P	00 49 44.2	-4.3
	comp=Z,0.5nm,0.4s,baz=225,slow=7.6,SNR=4.5						
	comp=Z,0.5nm,0.4s						
MKAR	Makanchi Array	58.81	325	P	P	00 50 12.1	+1.3
MKAR	Makanchi Array	58.81	325	P	P	00 50 12.3	+1.5
	comp=Z,1.3nm,0.5s,baz=122,slow=8.0,SNR=22						
	comp=Z,1.3nm,0.5s						
MAKZ	Makanchi	59.00	325	P	P	00 50 13.2	+1.1
MAKZ				IAmb	IAmb	00 50 14.8	
	comp=Z,2.6nm,0.8s						
KDJ	Kajisay	59.66	318	P	P	00 50 18.8	+1.9
ZALV	Zalesovo Beam	61.76	333	P	P	00 50 30.3	-0.3
	comp=Z,0.4nm,0.3s,baz=129,slow=6.5,SNR=1.9						
	comp=Z,0.4nm,0.3s						
KURBB	Kurchatov Arra	62.97	327	P	P	00 50 40.2	+1.4
	comp=Z,1.7nm,0.5s,baz=125,slow=6.2,SNR=16						
	comp=Z,1.7nm,0.5s						
KURK	Kurchatov	62.97	327	P	P	00 50 39.6	+0.8
KURK				IAmb	IAmb	00 50 40.7	
	comp=Z,3.0nm,0.6s						
KKAR	Karatay Array	64.55	317	P	P	00 50 50.2	+0.8
BVAR	Borovoye Array	68.56	327	P	P	00 51 15.9	+1.2
	comp=Z,1.7nm,0.6s,baz=120,slow=8.8,SNR=10						
	comp=Z,1.7nm,0.6s						
BRVK	Borovoye	68.63	327	P	P	00 51 14.9	-0.2
ABKAR	Akbulak array	73.44	321	P	P	00 51 42.1	-2.2
D19K	Kuna River	81.37	21	P	P	00 52 28.8	+0.6
D19K				IAmb	IAmb	00 52 55.3	
	comp=Z,5.4nm,1.2s						
B20K	Meade River	82.06	20	P	P	00 52 32.5	+0.8
B20K				IAmb	IAmb	00 52 34.4	
	comp=Z,14nm,1.4s						
VNDA	Vanda	82.57	173	P	P	00 52 35.5	+1.3
VNDA	Vanda	82.57	173	P	P	00 52 35.5	+1.3
	comp=Z,0.2nm,0.3s,baz=319,slow=6.3,SNR=5.1						
	comp=Z,0.2nm,0.3s						
ARCES	ARCESS Array B	91.52	340	P	P	00 53 16.1	-1.8
	comp=Z,1.3nm,0.8s,baz=100,slow=6.9,SNR=3.7						
	comp=Z,1.3nm,0.8s						
QSPA	South Pole Qui	92.92	180	P	P	00 53 24.1	-0.4
QSPA				IAmb	IAmb	00 53 49.4	
	comp=Z,4.0nm,1.4s						
QSPA	South Pole Qui	92.92	180	P	P	00 53 23.7	-0.8
	comp=Z,1.2nm,1.0s,baz=135,slow=13,SNR=9.8						
TORD	Torodi Ar. Bea	124.25	288	PKP	PKiKP	00 59 11.8	+0.5
	comp=Z,1.5nm,0.7s,baz=97,slow=3.6,SNR=1.1						
CFA	Coronel Fontan	147.75	154	PKPbc	PKPdf	00 59 54.2	+0.4
	comp=Z,0.5nm,0.4s,baz=207,slow=2.3,SNR=1.8						

IDC ***13*** *00:56:10.4±0.4, 41°.04N×144°.16E, h0^{km}, mb4.8/39, mbtmp4.7/46, ML4.2/7, MS4.1/47, Error ellipse: s-maj=11.2km s-min=9.9km az=36.0*

BJI ***13*** *00:56:11.1, 41°.20N×143°.99E, h11^{km}, mB4.9/24, mb4.8/62, Ms4.4/62, Ms7 4.4/62*

NEIC ***13*** *00:56:12.7, 40°.93N×144°.10E, h18^{km}, Moment Tensor Solution. Duration: 1^{s}2 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.02; $M_{\theta\theta}$1.64; $M_{\phi\phi}$0.39; $M_{r\theta}$-0.62; $M_{\theta\phi}$-0.37; $M_{\phi r}$1.00; Fault plane solution: $M_0$2.23000×10^{16} NP1: ϕ_s273.13000°, δ34.00000°, λ-116.09000°. NP2: ϕ_s123.70000°, δ59.86000°, λ-73.48000°. Principal axes: T 1.9424, Plg13.0000°, Azm202.0000°; N 0.4922, Plg14.0000°, Azm295.0000°; P -2.4346, Plg70.0000°, Azm70.0000°;*

MOS ***13*** *00:56:12.2±0.9, 41°.09N×144°.06E, h22^{km}, mb5.2/87, MS4.4/12 Error ellipse: s-maj=5.3km s-min=3.5km az=107.6*

NEIC ***13*** *00:56:12.7, 41°.03N×144°.10E, h18^{km}*

NIED ***13*** *00:56:13.3, 41°.04N×144°.16E, h63^{km}, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.25; $M_{\theta\theta}$1.32; $M_{\phi\phi}$-0.07; $M_{r\theta}$0.01; $M_{\theta\phi}$-0.15; $M_{\phi r}$0.65; Fault plane solution: $M_0$1.44000×10^{16} NP1: ϕ_s254.00000°, δ48.00000°, λ-123.00000°. NP2: ϕ_s118.00000°, δ51.00000°, λ-59.00000°.*

NEIC ***13*** *00:56:13.7±1.1, 41°.04N±0°.04×144°.09E±0°.09, h19^{km}±3^{km}, mb5.1/205, Mww4.8/12 Error ellipse: s-maj=9.6km s-min=6.4km az=95.0*

JMA ***13*** *00:56:13.3±0.2, 41°.0N±0°.7×144°.2E±0°.6, h63^{km}±2^{km}, MD4.7/38, MW4.8/38, SE OFF ERIMOMISAKI*

JMA Felt I J1 at SE OFF ERIMOMISAKI .

GCMT ***13*** *00:56:14.7±0.3, 41°.10N±0°.01×144°.06E±0°.03, h20^{km}, MW4.9/96, Moment Tensor Solution. s51,c59; s96,c134; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.51±.12; $M_{\theta\theta}$2.00±.08; $M_{\phi\phi}$0.50±.07; $M_{r\theta}$0.21±.13; $M_{\theta\phi}$-0.43±.05; $M_{\phi r}$1.07±.17; Best double couple: $M_0$2.49500×10^{16} NP1: ϕ_s268.00000°, δ47.00000°, λ-116.00000°. NP2: ϕ_s123.00000°, δ49.00000°, λ-65.00000°. Principal axes: T 2.1170, Plg1.0000°, Azm196.0000°; N 0.7550, Plg18.0000°, Azm286.0000°; P -2.8740, Plg72.0000°, Azm103.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 00:56:11.8±0.6**, 41°.12N**±0°.03×**144°.13E**±0°.03**, h8**^{km}±3^{km}**, h8**^{km}**:pP-P, n1083,** σ1^{s}**46**/1076**, mb5.0**/238**, MS4.3**/77**, 74C-27D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERM	Erimo	1.16	321		Pg	00 56 34.7	+0.7
ERM				Sn	Sn	00 56 50.4	+0.3
ERM	Erimo	1.16	321	P	Pg	00 56 34.6	+0.7
ERM	Erimo	1.16	321	ceP	Pg	00 56 34.5	+0.5
ERM				pmax	pmax		
	comp=Z,2μm,1.0s						
JEM	Erimo	1.16	321	P	Pg	00 56 34.7	+0.7
JEM	Erimo	1.16	321	i P	Pg	00 56 34.7	+0.7
JEM	Erimo	1.16	321	A	A	00 56 34.7	
	comp=N,15nm,5.5s,comp=E,18nm,6.0s						
JTHR	Tokachihiroo	1.33	332	i P	Pb	00 56 37.1	+0.2
JTHR				S	Sb	00 56 54.0	0.0
JTHR	Tokachihiroo	1.33	332	A	A	00 56 37.1	
	comp=N,10.0nm,1.5s,comp=E,13nm,5.5s						
JNBK	Urakawa-nobuka	1.55	319	i P	Pb	00 56 40.8	+0.1
JNBK				S	Sg	00 57 01.6	0.0
JNBK	Urakawa-nobuka	1.55	319	A	A	00 56 40.8	
	comp=N,16nm,1.7s,comp=E,20nm,1.3s						
JCH	Churui	1.60	339	i P	Pn	00 56 40.6	+0.3
JCH				S	Sn	00 57 00.8	-0.4
JCH	Churui	1.60	339	A	A	00 56 40.6	
	comp=N,10.0nm,2.1s,comp=E,10.0nm,2.7s						
JSHD	Hidakashinhida	1.79	317	P	Pb	00 56 44.4	-0.4
JSHD	Hidakashinhida	1.79	317	A	A	00 56 44.4	
	comp=N,19nm,2.5s,comp=E,16nm,4.0s						
JOB	Onbets	1.80	353	i P	Pn	00 56 43.6	+0.6
JOB				eS	Sn	00 57 06.6	+0.7
JOB	Onbets	1.80	353	A	A	00 56 43.6	
	comp=N,15nm,1.8s,comp=E,15nm,2.4s						
JAK	Akkeshi	1.92	13	i P	Pn	00 56 45.2	+0.5
JAK				S	Sn	00 57 08.5	-0.6
JAK	Akkeshi	1.92	13	A	A	00 56 45.2	
	comp=N,16nm,1.3s,comp=E,16nm,1.7s						
JKEN	Kujiedanarisaw	2.05	244	A	A	00 56 46.1	
	comp=N,14nm,0.7s,comp=E,13nm,1.3s						
JTH	Tanohata	2.09	236	A	A	00 56 46.5	
	comp=N,9.0nm,0.8s,comp=E,6.0nm,1.4s						
JARK	Aomorirokkasho	2.09	268	A	A	00 56 47.1	
	comp=N,8.0nm,1.1s,comp=E,10.0nm,0.4s						
JKHN	Kushirohamanak	2.11	21	i P	Pn	00 56 48.1	+0.8
JKHN				S	Sn	00 57 13.5	-0.1
JKHN	Kushirohamanak	2.11	21	A	A	00 56 48.1	
	comp=N,18nm,1.8s,comp=E,21nm,0.8s						
JAHD	Aomorihigashid	2.11	275	A	A	00 56 47.5	
	comp=N,26nm,1.2s,comp=E,19nm,0.3s						
JBT2	Biratori 2	2.12	322	i P	Pn	00 56 48.4	+1.0
JBT2				eS	Sb	00 57 16.1	-0.6
JBT2	Biratori 2	2.12	322	A	A	00 56 48.4	
	comp=N,6.0nm,3.1s,comp=E,6.0nm,3.2s						
JANG	Nango	2.12	250	i P	Pn	00 56 46.9	-0.6
JANG				S	Sn	00 57 11.3	-2.7
JANG	Nango	2.12	250	A	A	00 56 46.9	
	comp=N,7.0nm,0.6s,comp=E,13nm,0.3s						
JAR	Ashorobuto	2.19	353	i P	Pn	00 56 48.6	+0.2
JAR				S	Sn	00 57 15.0	-0.8
JAR	Ashorobuto	2.19	353	A	A	00 56 48.6	
	comp=N,13nm,0.9s,comp=E,16nm,0.8s						
JIAM	Iburiatsuma	2.23	313	A	A	00 56 49.7	
	comp=N,24nm,4.6s,comp=E,27nm,7.1s						
JOT	Ohata	2.34	277	i P	Pn	00 56 51.0	+0.5
JOT				S	Sn	00 57 17.4	-1.9
JOT	Ohata	2.34	277	A	A	00 56 51.0	
	comp=N,11nm,1.6s,comp=E,12nm,0.7s						
JFR	Furan	2.34	331	eP	Pn	00 56 50.4	-0.1
JFR				eS	Sn	00 57 18.9	-0.6
JTM	Tenmabayashi	2.34	263		Pn	00 56 50.8	+0.3
JTM				Sn	Sn	00 57 17.1	-2.3
JTM	Tenmabayashi	2.34	263	P	Pn	00 56 51.3	+0.8
JTM	Tenmabayashi	2.34	263	i P	Pn	00 56 50.9	+0.3
JTM				S	Sn	00 57 17.3	-2.1
JTM	Tenmabayashi	2.34	263	A	A	00 56 50.9	
	comp=N,8.0nm,1.2s,comp=E,9.0nm,1.3s						
JKZ	Kuzumaki	2.42	243	A	A	00 56 51.2	
	comp=N,9.0nm,1.6s,comp=E,9.0nm,0.6s						
JNK	Nakash	2.50	10	A	A	00 56 53.6	
	comp=N,6.0nm,0.2s,comp=E,7.0nm,0.5s						
NMR	Nemuro--Hokkai	2.54	27	⇑iP	Pn	00 56 53.4	+0.1
NMR				eS	Sn	00 57 21.1	-3.3
NEM2	Nemuro 2	2.54	28	i P	Pn	00 56 53.5	+0.2
NEM2				S	Sn	00 57 22.1	-2.3
NEM2	Nemuro 2	2.54	28	A	A	00 56 53.5	
	comp=N,6.0nm,0.8s,comp=E,7.0nm,1.6s						
JEW	Eniwo	2.64	312	eP	Pn	00 56 55.6	+1.1
JEW				S	Sn	00 57 28.4	+1.7
JEW	Eniwo	2.64	312	A	A	00 56 55.6	
	comp=N,9.0nm,6.3s,comp=E,10.0nm,3.9s						
JOM	Ohasama	2.72	234	P	Pn	00 56 55.6	-0.1
JOM				eS	Sn	00 57 27.0	-1.8
JOM	Ohasama	2.72	234	A	A	00 56 55.6	
	comp=N,7.0nm,0.7s,comp=E,10.0nm,0.8s						
JNSB	Nemuroshibetsu	2.73	13	A	A	00 56 56.7	
	comp=N,18nm,3.3s,comp=E,14nm,0.9s						
JAB	Ashibetsu	2.77	330	A	A	00 56 57.5	
	comp=N,5.0nm,1.6s,comp=E,6.0nm,4.0s						
OFUJ	Ofunato	2.78	224	A	A	00 56 55.9	
	comp=N,4.0nm,1.9s,comp=E,4.0nm,0.8s						
JSZI	Iwateshizukuis	2.79	241	A	A	00 56 56.4	
	comp=N,16nm,2.4s,comp=E,20nm,1.9s						
JSI2	Shiura 2	2.81	270	A	A	00 56 57.3	
	comp=N,13nm,0.9s,comp=E,22nm,0.9s						
GLVR	Golovnino	2.81	21	⇓iP	Pn	00 56 57.5	+0.5
GLVR				eS	Sn	00 57 29.4	-1.6
GLVR				pmax	pmax		
	comp=E,557nm,0.4s						
GLVR				pmax	pmax		
	comp=Z,2μm,0.4s						
GLVR				pmax	pmax		
	comp=N,328nm,0.1s						
GLVR				smax	smax		
	comp=N,10μm,0.3s						
GLVR				smax	smax		
	comp=E,5μm,0.2s						
JAH	Hinai	2.81	252	A	A	00 56 57.0	
	comp=N,10.0nm,0.6s,comp=E,12nm,1.4s						
JSR	Shiriuchi	2.83	280	A	A	00 56 57.6	
	comp=N,5.0nm,0.8s,comp=E,5.0nm,3.2s						
JTKR	Abashiri--Toko	2.85	357	i P	Pn	00 56 58.2	+0.7
JTKR				S	Sn	00 57 32.0	0.0
JTKR	Abashiri--Toko	2.85	357	A	A	00 56 58.2	
	comp=N,4.0nm,3.4s,comp=E,5.0nm,0.9s						
JHHS	Hirosakihyakuz	2.90	262	A	A	00 56 58.3	
	comp=N,14nm,2.6s,comp=E,14nm,2.5s						
JRA	Rausu	2.91	14	P	Pn	00 56 58.5	+0.2
JRA				eS	Sn	00 57 31.1	-2.3
JRA	Rausu	2.91	14	A	A	00 56 58.5	
	comp=N,6.0nm,1.4s,comp=E,5.0nm,1.3s						
JKK2	Kamakawa 2	2.94	340	i P	Pn	00 56 59.3	+0.6
JKK2				eS	Sn	00 57 34.3	+0.2
JMP	Maruseppu	2.94	349	A	A	00 56 59.9	
	comp=N,8.0nm,1.0s,comp=E,5.0nm,0.7s						
JISS	Ishikarishitsu	2.95	318	A	A	00 56 59.8	
	comp=N,10.0nm,2.3s,comp=E,13nm,3.6s						
RUSJ	Misakicho	3.10	15	⇓iP	Pn	00 57 01.8	+0.9
RUSJ				eS	Sn	00 57 36.3	-1.7
JMK	Ichinoseki	3.11	227	i P	Pn	00 57 00.8	-0.3
JMK				S	Sn	00 57 35.0	-3.3
JNTW	Noshirotokiwa	3.13	256	A	A	00 57 01.5	
	comp=N,21nm,3.0s,comp=E,25nm,4.2s						
JRG	Rokugo	3.18	238	A	A	00 57 01.8	
	comp=N,6.0nm,2.7s,comp=E,6.0nm,0.6s						
YUK	Yuzh-Kuril'sk	3.18	23	eP	Pn	00 57 01.9	-0.1
YUK				eS	Sn	00 57 36.8	-3.3
YUK				pmax	pmax		
	comp=N,1μm,0.4s						
YUK				pmax	pmax		
	comp=Z,2μm,0.4s						
YUK				pmax	pmax		
	comp=E,462nm,0.3s						
YUK				smax	smax		
	comp=N,7μm,0.4s						
YUK				smax	smax		
	comp=E,8μm,0.3s						
YUK				MLR	MLR		
	comp=N,4μm,14.0s						
YUK				MLR	MLR		
	comp=Z,3μm,14.0s						
JKA	Kamikawa-asahi	3.20	340		Pn	00 57 02.9	+0.6
ASAJ	Asahikawa	3.20	340	Pn	Pn	00 57 03.3	+1.0
	comp=Z,72nm,0.3s,baz=193,slow=12,SNR=114						
ASAJ				Sn	Sn	00 57 42.1	+1.5
	comp=Z,74nm,0.3s,baz=31,slow=33,SNR=6.4						
	comp=Z,136nm,0.3s						
JYW	Yuwa	3.39	244	A	A	00 57 04.8	
	comp=N,10.0nm,1.1s,comp=E,11nm,3.2s						
SHO	Shikotan	3.40	35	c iP	Pn	00 57 05.8	+0.8
SHO				eS	Sn	00 57 42.6	-2.8
SHO				pmax	pmax		
	comp=N,296nm,0.4s						
SHO				pmax	pmax		
	comp=E,557nm,0.4s						
SHO				pmax	pmax		
	comp=Z,939nm,0.4s						
SHO				smax	smax		
	comp=E,3μm,0.3s						
SHO				smax	smax		
	comp=N,2μm,0.2s						
JOFO	Osakifurukawao	3.53	226	A	A	00 57 06.4	
	comp=N,25nm,3.4s,comp=E,27nm,5.3s						
JOU	Okura	3.83	225	A	A	00 57 10.7	
	comp=N,5.0nm,0.6s,comp=E,5.0nm,2.8s						
JOG3	Oga3	4.03	254	A	A	00 57 06.6	
	comp=N,5.0nm,3.0s,comp=E,5.0nm,4.8s						
JMM	Marumori	4.15	220		Pn	00 57 13.8	-1.5
JYS	Shirataka	4.27	229	A	A	00 57 16.8	
	comp=N,5.0nm,2.9s,comp=E,6.0nm,1.7s						
JYAR	Yonezawaarcadi	4.44	225	A	A	00 57 19.3	
	comp=N,9.0nm,0.9s,comp=E,10.0nm,1.1s						
KUR	Kuril'sk	4.94	32	c iP	Pn	00 57 27.0	+0.9
KUR				eS	Sn	00 58 20.7	-2.7
KUR				pmax	pmax		
	comp=E,1μm,0.4s						
KUR				pmax	pmax		
	comp=Z,3μm,0.4s						
KUR				pmax	pmax		
	comp=N,821nm,0.3s						
KUR				smax	smax		
	comp=N,2μm,0.4s						
KUR				smax	smax		
	comp=E,2μm,0.4s						
JSD	Sado	5.48	238	Pn	Pn	00 57 33.6	-0.1
JSD	Sado	5.48	238	P	Pn	00 57 34.1	+0.5
YSS	Yuzhno-Sakhali	5.92	351		Pn	00 57 40.1	+0.5
YSS	Yuzhno-Sakhali	5.92	351	P	Pn	00 57 41.6	+2.0
YSS	Yuzhno-Sakhali	5.92	351	⇓iP	Pn	00 57 41.1	+1.5
YSS				eS	Sn	00 58 46.9	-0.6
YSS				pmax	pmax		
	comp=Z,70nm,0.3s						
YSS				smax	smax		
	comp=E,170nm,1.2s						
YSS				MLR	MLR		
	comp=Z,2μm,14.0s						
YSS				MLR	MLR		
	comp=N,2μm,13.0s						
MJAR	Matsushiro Arr	6.50	227	Pn	Pn	00 57 48.0	+0.3
	comp=N,2.8nm,0.3s,baz=30,slow=13,SNR=107						
MJAR				Sn	Sn	00 59 03.2	+1.2
	baz=58,slow=27						
MJAR				LR	LR	01 00 52.9	
	comp=N,2μm,18.5s,baz=88,slow=44						
	comp=N,48nm,0.5s						
MJB9	Matsu-Tunnel	6.50	227		Pn	00 57 49.3	+1.6
MAJO	Matsushiro	6.50	227		Pn	00 57 47.9	+0.2
MAJO	Matsushiro	6.50	227	P	Pn	00 57 48.3	+0.6
MAJO	Matsushiro	6.50	227	i P	Pn	00 57 47.0	-0.7
TEY	Ternei	6.76	308	eP	Pn	00 57 52.4	+1.2
JGF	Kuroka	7.66	226		Pn	00 58 03.9	+0.3
JGF	Kuroka	7.66	226	P	Pn	00 58 05.4	+1.8
JSG	Sagara	7.96	218	Pn	Pn	00 58 07.0	-0.8
JSG	Sagara	7.96	218	P	Pn	00 58 09.9	+2.2
INU	Inuyama	8.03	226		Pn	00 58 07.9	-0.7
INU	Inuyama	8.03	226	P	Pn	00 58 10.4	+1.8
JHJ2	Mitsune	8.70	205		Pn	00 58 14.9	-2.9
USA0B	Ussuriysk Arra	9.46	293		Pn	00 58 28.5	+0.3
USA0B	Ussuriysk Arra	9.46	293	i P	Pn	00 58 28.6	+0.3
USRK	Ussuriysk Ar.	9.46	293	Pn	Pn	00 58 30.5	+2.3
	comp=N,1.2nm,0.3s,baz=102,slow=15,SNR=24						
	comp=N,16nm,0.7s						
MSHR	Mys Shultsa	9.79	283	i P	Pn	00 58 33.0	+0.2
TYV	Tymovskoe	9.80	355	eP	Pn	00 58 30.7	-2.1
TYV				eS	Sn	01 00 18.8	-4.1
TYV				pmax	pmax		
	comp=Z,200nm,2.8s						
TYV				pmax	pmax		
	comp=Z,35nm,0.6s						
TYV				smax	smax		
	comp=N,100nm,3.3s						
TYV				smax	smax		
	comp=E,200nm,3.3s						
TYV				MLR	MLR		
	comp=Z,3μm,16.0s						
TYV				MLR	MLR		
	comp=E,1μm,15.0s						
PSTR	Posyet	10.06	283	i P	Pn	00 58 36.6	+0.2
JMN	Monobe	10.99	231		Pn	00 58 47.5	-1.7
JMN	Monobe	10.99	231	P	Pn	00 58 50.1	+0.9
MDJ	Mudanjiang	11.23	293	P	Pn	00 58 53.1	+0.7
MDJ				S	Sn	01 01 04.0	+6.0
MDJ				SS	SnSn	01 01 15.0	+5.4
MDJ				pmax	pmax		
	comp=E,22nm,0.6s						
MDJ				pmax	pmax		
	comp=E,190nm,4.5s						
MDJ				LR	LR		

	comp=E,670nm,15.8s						
MDJ				LR	LR		
	comp=E,1μm,15.1s						
MDJ				LR	LR		
	comp=E,2μm,17.5s						
KLR	**Kul'dur**	**11.91**	**317**	Pn	**Pn**	**00 59 02.6**	**+0.9**
	comp=E,0.3nm,0.3s,baz=122,slow=14,SNR=21						
KLR				LR	LR	01 04 24.3	
	comp=E,1μm,18.0s,baz=130,slow=41						
	comp=E,9.2nm,0.9s						
KLR	**Kul'dur**	**11.91**	**317**	*ce*P	**Pn**	**00 59 02.2**	**+0.5**
KLR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
OKH	**Okha**	**12.46**	**357**	*de*P	**Pn**	**00 59 11.4**	**+2.2**
OKH				pmax	pmax		
	comp=Z,100nm,13.7s						
SKR	**Severo-Kuril's**	**12.68**	**37**	*i* P	**Pn**	**00 59 13.0**	**+0.8**
BNX	**BinXian**	**13.00**	**296**	⇑P	**Pn**	**00 59 16.7**	**+0.1**
BNX				pmax	pmax		
	comp=Z,23nm,1.0s						
KSRS	**Korea Array**	**13.08**	**259**	Pn	**Pn**	**00 59 19.1**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=69,slow=14,SNR=22						
KSRS				Sn	**Sn**	**01 01 45.9**	**+2.6**
	comp=Z,0.5nm,0.3s,baz=70,slow=24,SNR=4.3						
	comp=Z,5.8nm,0.8s						
KS19	**Wonju Array Si**	**13.10**	**259**		**Pn**	**00 59 17.1**	**-0.9**
KSAR	**Wonju Array Be**	**13.11**	**259**		**Pn**	**00 59 16.4**	**-1.8**
KSAR	**Wonju Array Be**	**13.11**	**259**	P	**Pn**	**00 59 16.4**	**-1.8**
JNU	**Nakatsue**	**13.24**	**237**		**Pn**	**00 59 17.9**	**-2.1**
JNU	**Nakatsue**	**13.24**	**237**	Pn	**Pn**	**00 59 18.5**	**-1.5**
	comp=Z,1.5nm,0.3s,baz=45,slow=12,SNR=6.1						
JNU				LR	LR	01 04 16.4	
	comp=Z,558nm,19.7s,baz=33,slow=37						
	comp=Z,11nm,0.6s						
JNU	**Nakatsue**	**13.24**	**237**	P	**Pn**	**00 59 21.9**	**+1.9**
TJN	**Taejon**	**13.91**	**256**		**Pn**	**00 59 28.5**	**-0.6**
TJN	**Taejon**	**13.91**	**256**	P	**Pn**	**00 59 30.8**	**+1.7**
TJN	**Taejon**	**13.91**	**256**	P	**Pn**	**00 59 28.5**	**-0.6**
INCN	**Inchon**	**14.03**	**261**	Pn	**Pn**	**00 59 28.7**	**-2.0**
INCN	**Inchon**	**14.03**	**261**	P	**Pn**	**00 59 28.7**	**-2.0**
CN2	**Changchun**	**14.05**	**287**	P	**Pn**	**00 59 30.9**	**-0.1**
CN2				PP	**P**	**00 59 42.2**	**+3.3**
CN2				S	**Sn**	**01 02 07.2**	**+0.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,100nm,6.0s						
CN2				LR	LR		
	comp=Z,500nm,16.0s						
CN2				LR	LR		
	comp=Z,800nm,16.0s						
CN2				LR	LR		
	comp=Z,900nm,16.0s						
JCJ	**Chichijima**	**14.08**	**187**	Pn	Pn	00 59 25.6	-5.9
JCJ	**Chichijima**	**14.08**	**187**	Pn	Pn	00 59 24.9	-6.6
	comp=Z,26nm,0.3s,baz=254,slow=18,SNR=8.4						
JCJ				Sn	Sn	01 01 50.9	-17
	comp=Z,20nm,0.3s,baz=142,slow=23,SNR=4.8						
HEH	**HeiHe**	**14.80**	**314**	*e*P	**Pn**	**00 59 40.0**	**-1.2**
HEH				pP	**P**	**00 59 44.7**	**-2.5**
HEH				pmax	pmax		
	comp=Z,16nm,0.8s						
HEH				LR	LR		
	comp=Z,950nm,15.2s						
HEH				LR	LR		
	comp=Z,940nm,16.4s						
HEH				LR	LR		
	comp=Z,2μm,16.0s						
PEA0B	**Petropavlovsk-**	**15.11**	**33**		**Pn**	**00 59 41.9**	**-3.3**
PEA0B	**Petropavlovsk-**	**15.11**	**33**	*ce*P	**Pn**	**00 59 42.8**	**-2.5**
PETK	**Petropavlovsk-**	**15.11**	**33**	Pn	**Pn**	**00 59 42.0**	**-3.3**
	comp=Z,0.7nm,0.3s,baz=203,slow=11,SNR=22						
SNY	**Shenyang**	**15.42**	**279**	⇑P	**P**	**00 59 59.7**	**+5.6**
SNY				S	**S**	**01 02 50.1**	**-6.5**
SNY				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SNY				pmax	pmax		
	comp=Z,120nm,5.2s						
SNY				LR	LR		
	comp=N,440nm,15.6s						
SNY				LR	LR		
	comp=E,740nm,14.5s						
SNY				LR	LR		
	comp=Z,850nm,17.5s						
PET	**Petropavlovsk**	**15.45**	**35**		**Pn**	**00 59 49.3**	**-0.5**
PET	**Petropavlovsk**	**15.45**	**35**	*i* P	**Pn**	**00 59 49.7**	**0.0**
PET				pmax	pmax		
	comp=Z,14nm,1.0s						
ZEA	**Zeya**	**16.96**	**324**	*e*P	**Pn**	**01 00 08.6**	**-0.6**
ZEA				pmax	pmax		
	comp=E,20nm,0.4s						
ZEA				pmax	pmax		
	comp=N,20nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,40nm,0.7s						
ZEA				MLR	MLR		
	comp=E,500nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,500nm,12.0s						
DL2	**Dalian**	**17.37**	**270**	P	**P**	**01 00 16.7**	**+0.9**
DL2				S	**Sn**	**01 03 29.1**	**+1.3**
DL2				pmax	pmax		
	comp=Z,64nm,0.9s						
DL2				pmax	pmax		
	comp=Z,310nm,5.0s						
DL2				LR	LR		
	comp=Z,570nm,16.2s						
DL2				LR	LR		
	comp=Z,440nm,15.5s						
DL2				LR	LR		
	comp=Z,550nm,16.0s						
MA2	**Magadan**	**18.94**	**10**		**P**	**01 00 32.6**	**-0.2**
MA2	**Magadan**	**18.94**	**10**	*i* P	**P**	**01 00 32.8**	**-0.1**
MA2				pmax	pmax		
	comp=Z,12nm,0.8s						
HIA	**Hailar**	**18.96**	**304**	P	**P**	**01 00 31.9**	**-1.4**
HIA	**Hailar**	**18.96**	**304**	P	**Pn**	**01 00 33.8**	**-0.1**
HIA	**Hailar**	**18.96**	**304**	*i* P	**Pn**	**01 00 33.7**	**-0.1**
HIA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
JOW	**Kunigami**	**19.34**	**227**	P	**P**	**01 00 34.5**	**-3.1**
JOW	**Kunigami**	**19.34**	**227**	P	**P**	**01 00 36.6**	**-1.0**
	comp=Z,2.2nm,0.3s,baz=4.9,slow=8.5,SNR=12						
JOW				S	**Sn**	**01 04 06.1**	**-10**
	comp=Z,4.2nm,0.2s,baz=170,slow=25,SNR=1.2						
JOW				LR	LR	01 09 08.8	
	comp=Z,243nm,19.6s,baz=190,slow=40						
	comp=Z,44nm,0.8s						
JOW	**Kunigami**	**19.34**	**227**	P	**P**	**01 00 37.9**	**+0.3**
XLT	**XiLinHaoTe**	**20.82**	**287**	*e*P	Pn	01 00 55.0	-1.1
XLT				sP	pwP	01 01 03.9	+4.3
XLT				S	**S**	**01 04 45.4**	**-0.7**
XLT				pmax	pmax		
	comp=Z,10.0nm,0.5s						
XLT				pmax	pmax		
	comp=Z,69nm,4.1s						
XLT				LR	LR		
	comp=Z,440nm,20.4s						
XLT				LR	LR		
	comp=Z,530nm,18.6s						
BJT	**Baijiatuau**	**21.24**	**276**	P	**P**	**01 00 56.7**	**-1.4**
BJT	**Baijiatuau**	**21.24**	**276**	P	**P**	**01 00 56.7**	**-1.4**
BJT				pmax	pmax		
	comp=Z,12nm,0.8s						
TIA	**Tai'an**	**21.61**	**266**	P	**P**	**01 01 00.9**	**-1.2**
TIA				S	S	01 04 49.8	-12
TIA				PcP	**PcP**	**01 05 03.2**	**-0.5**
TIA				pmax	pmax		
	comp=Z,13nm,0.9s						
TIA				LR	LR		
	comp=Z,320nm,14.8s						
TIA				LR	LR		
	comp=Z,600nm,17.7s						
TIA				LR	LR		
	comp=Z,740nm,15.9s						
NJ2	**Nanjing**	**22.16**	**254**	*e*P	**P**	**01 01 09.5**	**+1.5**
NJ2				S	**S**	**01 05 14.5**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,25nm,0.7s						
NJ2				LR	LR		
	comp=Z,650nm,15.7s						
NJ2				LR	LR		
	comp=Z,1μm,17.0s						
NJ2				LR	LR		
	comp=Z,1μm,15.7s						
SEY	**Seymchan**	**22.39**	**10**	*ce*P	**P**	**01 01 09.5**	**-0.7**
SEY				pmax	pmax		
	comp=Z,14nm,1.0s						
YAK	**Yakutsk**	**22.68**	**342**	P	**P**	**01 01 09.6**	**-3.7**
YAK				IAmb	IAmb	01 01 13.4	
	comp=Z,54nm,0.8s						
YAK	**Yakutsk**	**22.68**	**342**	LR	LR	01 11 36.7	
	comp=Z,620nm,18.1s,baz=148,slow=41						
YAK	**Yakutsk**	**22.68**	**342**	*e*P	**P**	**01 01 09.1**	**-4.2**
YAK				*e**PP	**pP**	**01 01 12.5**	**-2.3**
YAK				*e*S	**S**	**01 05 11.0**	**-10**
YAK				*e**SS	**pS**	**01 05 18.1**	**-4.8**
YAK				*e*SSS	SSS	01 05 54.6	
YAK				pmax	pmax		
	comp=E,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,21nm,0.9s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.3s						
YAK				smax	smax		
	comp=E,97nm,1.5s						
YAK				smax	smax		
	comp=N,304nm,1.9s						
YAK				MLR	MLR		
	comp=Z,696nm,17.0s						
YAK				MLR	MLR		
	comp=E,288nm,15.0s						
YAK				MLR	MLR		
	comp=N,273nm,18.0s						
HNS	**HongShan**	**23.03**	**270**	⇓P	**P**	**01 01 18.4**	**+1.2**
HNS				PP	**PnPn**	**01 01 47.7**	**+5.8**
HNS				pmax	pmax		
	comp=N,14nm,0.7s						
HNS				LR	LR		
	comp=N,470nm,15.2s						
HNS				LR	LR		
	comp=N,160nm,13.5s						
HNS				LR	LR		
	comp=N,310nm,15.5s						
SHEM	**Shemya Is, Ala**	**23.35**	**50**	LR	LR	01 09 59.6	
	comp=N,85nm,21.5s,baz=310,slow=36						
YOJ	**Yonaguni jima**	**24.21**	**233**	P	**P**	**01 01 26.4**	**-2.5**
YOJ	**Yonaguni jima**	**24.21**	**233**	P	**P**	**01 01 26.4**	**-2.5**
YOJ				pmax	pmax		
	comp=Z,130nm,1.3s						
HHC	**Hu-ho-hao-te**	**24.51**	**280**	*e*P	**P**	**01 01 30.1**	**-1.5**
HHC				S	**S**	**01 05 46.7**	**-5.5**
HHC				sS	pS	01 05 53.4	-0.4
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC				pmax	pmax		
	comp=Z,75nm,5.3s						
HHC				LR	LR		
	comp=Z,230nm,14.2s						
HHC				LR	LR		
	comp=Z,530nm,14.2s						
HHC				LR	LR		
	comp=Z,840nm,13.4s						
NACB	**Ninganchiao**	**25.29**	**235**	P	**P**	**01 01 36.9**	**-1.7**
BOD	**Bodaibo**	**25.43**	**321**	*e*P	**P**	**01 01 38.0**	**-1.6**
BOD				pmax	pmax		
	comp=Z,40nm,0.8s						
BTO	**Baotou**	**25.71**	**280**	*e*P	**P**	**01 01 40.0**	**-2.5**
BTO				pP	**pP**	**01 01 43.9**	**-0.1**
BTO				sP	**pwP**	**01 01 48.6**	**+0.2**
BTO				PP	**PnPn**	**01 02 17.8**	**-0.8**
BTO				S	**S**	**01 06 07.2**	**-4.1**
BTO				pmax	pmax		
	comp=Z,22nm,0.5s						
BTO				pmax	pmax		
	comp=Z,190nm,5.6s						
BTO				LR	LR		
	comp=Z,650nm,12.3s						
BTO				LR	LR		
	comp=Z,1μm,18.4s						
BTO				LR	LR		
	comp=Z,2μm,17.4s						
LYN	**LuoYang**	**25.76**	**266**	P	**P**	**01 01 43.6**	**+0.8**
LYN				pP	pwP	01 01 48.4	-0.3
LYN				sP	sP	01 01 50.8	+6.0
LYN				S	**S**	**01 06 13.0**	**+1.0**
LYN				pmax	pmax		
	comp=Z,67nm,1.0s						
LYN				pmax	pmax		
	comp=Z,190nm,5.4s						
LYN				LR	LR		
	comp=Z,600nm,16.1s						
LYN				LR	LR		
	comp=Z,530nm,15.5s						
LYN				LR	LR		
	comp=Z,830nm,14.8s						
YULB	**Yu-li**	**26.05**	**234**	P	**P**	**01 01 42.8**	**-2.8**
YULB	**Yu-li**	**26.05**	**234**	P	**P**	**01 01 47.9**	**+2.3**
WHN	**Wuhan**	**26.23**	**256**	⇓P	**P**	**01 01 48.2**	**+1.1**
WHN				S	**S**	**01 06 18.5**	**-1.0**
WHN				pmax	pmax		
	comp=Z,58nm,1.0s						
WHN				LR	LR		
	comp=Z,3μm,15.4s						
WHN				LR	LR		
	comp=Z,3μm,17.6s						
WHN				LR	LR		
	comp=Z,4μm,16.3s						
ULN	**Ulaanbaatar**	**27.10**	**297**	P	**P**	**01 01 54.5**	**-0.5**
ULN	**Ulaanbaatar**	**27.10**	**297**	*i* P	**P**	**01 01 55.1**	**+0.1**
ULN				pmax	pmax		
	comp=Z,22nm,0.8s						
GUMO	**Guam**	**27.43**	**178**	LR	LR	01 13 29.4	
	comp=Z,135nm,18.9s,baz=46,slow=38						
SONM	**Songino Array**	**27.54**	**297**	P	**P**	**01 01 59.1**	**+0.1**
SONM				IAmb	IAmb	01 02 02.8	
	comp=Z,23nm,0.6s						
SONM	**Songino Array**	**27.54**	**297**	P	**P**	**01 01 59.5**	**+0.5**
	comp=Z,23nm,0.5s,baz=97,slow=8.9,SNR=78						
SONM				PcP	**PcP**	**01 05 15.3**	**-1.4**
	comp=Z,1.3nm,0.8s,baz=98,slow=2.0,SNR=3.1						
SONM				LR	LR	01 13 58.6	
	comp=Z,677nm,18.9s,baz=91,slow=39						
	comp=Z,23nm,0.5s						
XAN	**Xi'an**	**28.64**	**267**	P	**P**	**01 02 08.9**	**+0.1**
XAN				S	**S**	**01 06 59.5**	**+1.9**
XAN				pmax	pmax		
	comp=Z,17nm,1.1s						
XAN				pmax	pmax		
	comp=Z,170nm,4.3s						
XAN				LR	LR		
	comp=Z,300nm,12.9s						
XAN				LR	LR		
	comp=Z,540nm,13.7s						
XAN				LR	LR		
	comp=Z,570nm,15.5s						
H11N2	**WAKE ISLAND Hy**	**28.82**	**131**	T	T	01 32 22.0	
	baz=324,slow=75						
H11N1	**WAKE ISLAND Hy**	**28.83**	**131**	T	T	01 32 28.5	
	baz=324,slow=75						
H11N3	**WAKE ISLAND Hy**	**28.84**	**131**	T	T	01 32 27.8	
	baz=324,slow=75						
BILL	**Bilibino**	**29.51**	**17**		**P**	**01 02 16.0**	**-0.1**
BILL	**Bilibino**	**29.51**	**17**	*ce*P	**P**	**01 02 16.9**	**+0.8**
BILL				pmax	pmax		
	comp=Z,15nm,1.0s						
BILL				MLR	MLR		
	comp=Z,361nm,17.0s						
ZAK	**Zakamensk**	**29.64**	**302**	*e*P	**P**	**01 02 17.6**	**0.0**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.4s						
H11S1	**WAKE ISLAND Hy**	**29.69**	**133**	T	T	01 33 35.9	
	baz=324						
H11S3	**WAKE ISLAND Hy**	**29.69**	**133**	T	T	01 33 37.2	
	baz=324						
H11S2	**WAKE ISLAND Hy**	**29.71**	**133**	T	T	01 33 31.7	
	baz=324						
ENH	**Enshi**	**29.96**	**260**	P	**P**	**01 02 19.3**	**-1.2**
ENH				IAmb	IAmb	01 02 37.3	
	comp=Z,14nm,0.7s						
MOY	**Mondy**	**31.14**	**305**	*e*P	**P**	**01 02 31.2**	**+0.4**
MOY				pmax	pmax		
	comp=Z,25nm,1.8s						
TIXI	**Tiksi**	**31.54**	**351**	LR	LR	01 16 44.0	
	comp=Z,288nm,19.3s,baz=177,slow=39						
LZH	**Lanzhou**	**31.68**	**274**	*e*P	**P**	**01 02 40.2**	**+4.4**
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
LZH				LR	LR		
	comp=Z,320nm,18.9s						
LZH				LR	LR		
	comp=Z,370nm,16.2s						
LZH				LR	LR		
	comp=Z,510nm,17.2s						
P08K	**Saint George I**	**33.45**	**47**	P	**P**	**01 02 49.9**	**-0.9**
	baz=262						
NIKH	**Nikolski High**	**33.56**	**53**	P	**P**	**01 02 51.4**	**-0.5**
	baz=268						
GTA	**Gaotai**	**33.59**	**282**	P	**P**	**01 02 53.4**	**+1.0**
GTA				pP	sP	01 02 56.4	+2.0
GTA				PcP	**PcP**	**01 05 34.0**	**+1.3**
GTA				PcS	**PcS**	**01 09 19.2**	**+0.6**
GTA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GTA				LR	LR		
	comp=Z,300nm,16.0s						
GTA				LR	LR		
	comp=Z,710nm,16.7s						
GTA				LR	LR		
	comp=Z,980nm,16.7s						
GYA	**Guiyang**	**34.12**	**256**	P	**P**	**01 02 55.1**	**-2.0**
GYA				LR	LR		
	comp=Z,1μm,15.8s						
GAMB	**Gambell**	**34.14**	**33**	P	**P**	**01 02 57.0**	**+0.3**
	baz=250						
UNV	**Unalaska Valle**	**34.99**	**52**	P	**P**	**01 03 05.3**	**+1.1**
	baz=269						
M11K	**Mekoryuk**	**35.76**	**40**	P	**P**	**01 03 12.1**	**+1.4**
	baz=260						
TNA	**Tin City**	**36.27**	**31**		**P**	**01 03 16.0**	**+0.9**
TNA				IAmb	IAmb	01 03 18.2	
	comp=Z,18nm,1.1s						
TNA	**Tin City**	**36.27**	**31**	P	**P**	**01 03 16.6**	**+1.6**
	baz=251,SNR=11						
QIZ	**Qiongzhong**	**36.59**	**243**	P	**P**	**01 03 18.5**	**+0.1**
QIZ				S	**S**	**01 09 01.1**	**-0.2**
QIZ				LR	LR		
	comp=Z,250nm,13.9s						
QIZ				LR	LR		
	comp=Z,320nm,18.1s						
K13K	**Kusilvak Mount**	**36.77**	**38**		**P**	**01 03 19.6**	**+0.2**
K13K	**Kusilvak Mount**	**36.77**	**38**	P	**P**	**01 03 20.8**	**+1.4**
	baz=260,SNR=9.6						
F14K	**Arctic Creek**	**36.87**	**32**	P	**P**	**01 03 22.2**	**+2.0**
	baz=253,SNR=8.3						
ANM	**Nome**	**37.02**	**34**		**P**	**01 03 22.7**	**+1.2**
ANM				IAmb	IAmb	01 03 25.1	
	comp=Z,21nm,1.1s						
ANM	**Nome**	**37.02**	**34**	P	**P**	**01 03 22.7**	**+1.2**
ANM				pmax	pmax		
	comp=Z,21nm,1.1s						
ANM	**Nome**	**37.02**	**34**	P	**P**	**01 03 23.3**	**+1.8**
	baz=255						
M13K	**Dall Lake**	**37.17**	**41**		**P**	**01 03 23.9**	**+1.1**
M13K				IAmb	IAmb	01 03 26.3	
	comp=Z,45nm,1.4s						
M13K	**Dall Lake**	**37.17**	**41**	P	**P**	**01 03 24.4**	**+1.6**
	baz=263,SNR=6.5						
J14K	**Nanvaranak Lak**	**37.42**	**37**	P	**P**	**01 03 26.5**	**+1.6**
	baz=260						
L14K	**Kuka Creek**	**37.61**	**39**	P	**P**	**01 03 28.6**	**+2.1**
	baz=262,SNR=8.6						
F15K	**North Star Dit**	**37.61**	**32**	P	**P**	**01 03 28.5**	**+2.0**
	baz=255						
G15K	**Niukluk**	**37.68**	**33**	P	**P**	**01 03 28.9**	**+1.8**
	baz=256,SNR=11						
PZH	**PanZhiHua**	**37.74**	**261**	P	**P**	**01 03 27.6**	**-0.6**
PZH				S	**S**	**01 09 13.2**	**-5.6**
PZH				LR	LR		
	comp=Z,210nm,13.7s						
PZH				LR	LR		
	comp=Z,290nm,15.3s						
PZH				LR	LR		
	comp=Z,300nm,16.7s						
KMI	**Kunming**	**37.77**	**258**	P	**P**	**01 03 29.0**	**+0.4**
KMI				pP	sP	01 03 33.2	+2.6
KMI				pmax	pmax		
	comp=Z,12nm,1.0s						
KMI				LR	LR		
	comp=Z,600nm,17.5s						
KMI				LR	LR		
	comp=Z,420nm,18.9s						
KMI				LR	LR		
	comp=Z,680nm,16.8s						
M14K	**Bethel**	**37.89**	**40**		**P**	**01 03 30.0**	**+1.2**
M14K				IAmb	IAmb	01 03 32.1	
	comp=Z,37nm,1.2s						
M14K	**Bethel**	**37.89**	**40**	P	**P**	**01 03 30.7**	**+1.8**
	baz=264,SNR=14						
N14K	**Kuskokwak Cree**	**37.94**	**42**	P	**P**	**01 03 30.9**	**+1.6**
	baz=265						
O14K	**Tigyukauivet M**	**38.11**	**43**	P	**P**	**01 03 32.5**	**+1.8**
	baz=266						
C16K	**Lisburne Hills**	**38.11**	**28**	P	**P**	**01 03 31.1**	**+0.4**
	baz=251,SNR=5.3						
L15K	**Ungalak Mounta**	**38.22**	**39**	P	**P**	**01 03 33.4**	**+1.7**
	baz=263						
K15K	**Wolf Creek Mou**	**38.28**	**38**	P	**P**	**01 03 34.1**	**+1.9**
	baz=262,SNR=9.7						
H16K	**Elim**	**38.35**	**34**	P	**P**	**01 03 34.4**	**+1.7**
	baz=259						
GOMU	**GeErMu**	**38.41**	**279**	P	**P**	**01 03 33.9**	**-0.1**
GOMU				sP	sP	01 03 38.6	+2.6
GOMU				PcP	**PcP**	**01 05 48.5**	**+1.1**
GOMU				S	**S**	**01 09 28.2**	**-1.1**
GOMU				pmax	pmax		
	comp=Z,40nm,0.9s						
GOMU				LR	LR		
	comp=Z,160nm,10.1s						
GOMU				LR	LR		
	comp=Z,320nm,10.7s						
GOMU				LR	LR		
	comp=Z,400nm,14.3s						
G16K	**Koyuk River**	**38.46**	**33**	P	**P**	**01 03 35.3**	**+1.7**
	baz=258						
SDPT	**Sand Point**	**38.48**	**49**	P	**P**	**01 03 34.2**	**+0.3**
	baz=272						
M15K	**Kasigluk River**	**38.50**	**40**	P	**P**	**01 03 35.3**	**+1.2**
	baz=265,SNR=18						
D17K	**Noatak River**	**38.75**	**29**	P	**P**	**01 03 37.5**	**+1.5**
	baz=254,SNR=18						
N15K	**Kwethluk River**	**38.76**	**41**	P	**P**	**01 03 38.0**	**+1.7**
	baz=266,SNR=10						
J16K	**Anvik River**	**38.84**	**36**	P	**P**	**01 03 38.8**	**+1.9**
	baz=262,SNR=8.1						
O15K	**Ungalikthiuk R**	**38.84**	**43**		**P**	**01 03 37.8**	**+0.8**
O15K	**Ungalikthiuk R**	**38.84**	**43**	P	**P**	**01 03 38.5**	**+1.6**
	baz=268,SNR=7.2						
I17K	**Unalakleet**	**38.88**	**35**	P	**P**	**01 03 38.9**	**+1.6**
	baz=261						
C17K	**DeLong Mountai**	**38.94**	**28**	P	**P**	**01 03 38.5**	**+0.9**
	baz=253,SNR=15						
S14K	**Fog Glacier**	**38.97**	**48**	P	**P**	**01 03 39.5**	**+1.3**
	baz=272						
CHNA	**Chernabura Isl**	**39.02**	**50**	P	**P**	**01 03 38.7**	**+0.3**
	baz=273						
E17K	**Hotham Inlet**	**39.06**	**30**	P	**P**	**01 03 40.2**	**+1.6**
	baz=256						
F17K	**Baldwin Pennin**	**39.13**	**31**	P	**P**	**01 03 40.7**	**+1.5**
	baz=257						
L16K	**Owhat River**	**39.18**	**39**	P	**P**	**01 03 41.4**	**+1.7**
	baz=265,SNR=11						
G17K	**Kiwalik Mounta**	**39.18**	**33**	P	**P**	**01 03 41.8**	**+2.1**
	baz=259,SNR=20						
SLVN	**Son La**	**39.22**	**252**		**P**	**01 03 40.3**	**-0.2**
SLVN	**Son La**	**39.22**	**252**	P	**P**	**01 03 41.5**	**+0.9**
M16K	**Timber Creek**	**39.37**	**40**	P	**P**	**01 03 43.1**	**+1.7**
	baz=266						
H17K	**Granite Mounta**	**39.39**	**34**	P	**P**	**01 03 43.4**	**+1.9**
	baz=260						
N16K	**Nishlik Lake**	**39.43**	**41**	P	**P**	**01 03 43.7**	**+1.8**
	baz=267						
J17K	**VABM Dome**	**39.53**	**36**	P	**P**	**01 03 45.1**	**+2.4**
	baz=263,SNR=16						
E18K	**Tukpahlearik C**	**39.60**	**30**	P	**P**	**01 03 44.8**	**+1.7**
	baz=257,SNR=5.8						
B18K	**Kokolik River**	**39.67**	**27**	P	**P**	**01 03 45.3**	**+1.6**
	baz=253						
C18K	**Utukok River**	**39.68**	**28**	P	**P**	**01 03 45.4**	**+1.4**
	baz=255,SNR=18						
O16K	**Kokwok River B**	**39.74**	**42**	P	**P**	**01 03 46.0**	**+1.6**
	baz=269,SNR=11						
L17K	**Donlin**	**39.77**	**38**	P	**P**	**01 03 47.1**	**+2.4**
	baz=265,SNR=11						
P16K	**Nushagak River**	**39.78**	**43**	P	**P**	**01 03 45.1**	**+0.3**
P16K				IAmb	IAmb	01 03 48.0	
	comp=Z,65nm,1.1s						
P16K	**Nushagak River**	**39.78**	**43**	P	**P**	**01 03 46.7**	**+1.9**
	baz=270						

F18K	Selawik	39.79	31	P	P	01 03 46.6	+1.9
	baz=259						
K17K	Iditarod	39.81	37	P	P	01 03 47.0	+2.0
	baz=265,SNR=16						
G18K	Tagagawik	40.06	32	P	P	01 03 49.1	+2.0
	baz=261						
H18K	Honhosa River	40.07	34	P	P	01 03 49.2	+2.1
	baz=262,SNR=11						
M17K	Holitna River	40.13	40	P	P	01 03 49.6	+1.9
	baz=267,SNR=13						
A19K	Wainwright	40.16	26	P	P	01 03 49.6	+1.9
	baz=253						
N17K	Nushagak Hills	40.22	41	P	P	01 03 50.6	+2.2
	baz=268,SNR=8.7						
O17K	Koliganek Bris	40.25	42	P	P	01 03 50.8	+2.1
	baz=269,SNR=14						
C19K	Lookout Ridge	40.36	27	P	P	01 03 50.9	+1.4
	baz=256,SNR=10.0						
L18K	Granite Mounta	40.53	38	P	P	01 03 52.5	+1.6
	baz=267,SNR=12						
F19K	Shaleruckik Mo	40.57	31	P	P	01 03 52.8	+1.6
	baz=260,SNR=17						
P17K	Kvichak River	40.59	43	P	P	01 03 53.2	+1.8
	baz=271						
J18K	Innoko River	40.60	36	P	P	01 03 53.0	+1.5
	baz=265						
GCSA	Galena City Sc	40.65	34	P	P	01 03 52.9	+1.0
	baz=264						
G19K	Purcell Mounta	40.73	32	P	P	01 03 53.7	+1.1
	baz=262						
D19K	Kuna River	40.75	29	P	P	01 03 54.2	+1.5
	baz=258,SNR=10						
ZAA0	Zalesovo Array	40.86	309		P	01 03 54.1	+0.4
ZAA0				IAmb	IAmb	01 04 00.6	
	comp=Z,30nm,0.6s						
ZAA0				PcP	PcP	01 05 54.6	+0.2
ZALV	Zalesovo Beam	40.86	309		P	01 03 54.0	+0.3
ZALV				PcP	PcP	01 05 54.6	+0.3
ZALV	Zalesovo Beam	40.86	309	P	P	01 03 54.8	+1.0
	comp=Z,24nm,0.6s,baz=94,slow=7.5,SNR=38						
ZALV				PcP	PcP	01 05 54.8	+0.4
	comp=Z,12nm,0.8s,baz=90,slow=3.0,SNR=6.5						
ZALV				LR	LR	01 22 20.5	
	comp=Z,614nm,18.3s,baz=102,slow=38						
	comp=Z,24nm,0.6s						
N18K	Kilae Creek	40.86	41	P	P	01 03 55.8	+2.1
	baz=269,SNR=14						
E19K	Redstone River	40.88	30	P	P	01 03 55.7	+1.9
	baz=260,SNR=20						
Q17K	Contact Creek	40.90	44	P	P	01 03 55.8	+1.6
	baz=272						
M18K	Stony River	40.91	39	P	P	01 03 56.1	+2.0
	baz=268,SNR=7.7						
H19K	Roundabout Mou	40.92	33	P	P	01 03 56.3	+2.2
	baz=263,SNR=30						
WMQ	Urumqi	41.03	293	eP	P	01 03 56.3	+0.9
WMQ				sP	pwP	01 04 08.7	+6.5
WMQ				pmax	pmax		
	comp=Z,22nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,100nm,3.7s						
WMQ				LR	LR		
	comp=Z,370nm,13.7s						
WMQ				LR	LR		
	comp=Z,580nm,17.1s						
WMQ				LR	LR		
	comp=Z,330nm,14.9s						
J19K	Poorman	41.12	36	P	P	01 03 57.6	+1.7
	baz=266,SNR=27						
ACHA	Angle Creek He	41.20	44	P	P	01 03 57.2	+0.6
CHIR	Chirikof Islan	41.20	48	P	P	01 03 57.8	+1.2
	baz=275						
P18K	Big Mountain,	41.20	43	P	P	01 03 58.0	+1.5
	baz=271						
O18K	Koktuh Hills	41.20	42	P	P	01 03 58.3	+1.7
	baz=271						
D20K	Etivluk River	41.33	28	P	P	01 03 59.1	+1.6
	baz=259,SNR=16						
Q18K	Katmai Hardscr	41.34	44	P	P	01 03 58.3	+0.4
	baz=272						
L19K	White Mountain	41.38	38	P	P	01 03 59.9	+1.9
	baz=268,SNR=10						
F20K	Avaraart Lake	41.40	31	P	P	01 03 59.5	+1.5
	baz=262						
B20K	Meade River	41.40	26	P	P	01 03 59.2	+1.2
	baz=257,SNR=15						
E20K	Nigu River	41.41	29	P	P	01 03 59.7	+1.5
	baz=260,SNR=21						
N19K	Bonanza Creek	41.55	40	P	P	01 04 01.6	+2.1
	baz=270,SNR=8.2						
H20K	Anotleneega Mo	41.56	33	P	P	01 04 01.4	+2.0
	baz=265,SNR=15						
M19K	Big River Lodg	41.60	39	P	P	01 04 01.6	+1.9
	baz=269						
I20K	Naaghedeneel	41.68	34	P	P	01 04 01.6	+1.3
	baz=266						
R18K	Karluk	41.70	45	P	P	01 04 02.2	+1.6
	baz=274						
K20K	Telida	41.78	37	P	P	01 04 02.9	+1.7
	baz=268,SNR=13						
J20K	Nowinta River	41.78	35	P	P	01 04 02.7	+1.5
	baz=267,SNR=15						
L20K	Farewell, AK	41.84	38	P	P	01 04 03.4	+1.6
	baz=269						
A21K	Barrow	41.87	25	P	P	01 04 03.6	+1.8
	baz=257						
SII	Sitkinak Islan	41.93	47	P	P	01 04 02.9	+0.4
SII				IAmb	IAmb	01 04 22.6	
	comp=Z,75nm,1.4s						
SII	Sitkinak Islan	41.93	47	P	P	01 04 04.3	+1.7
	baz=275						
ZSN	Zaisan	41.99	299	eP	P	01 04 03.5	+0.3
ZSN				pmax	pmax		
	comp=Z,13nm,0.8s						
ZSN	Zaisan	41.99	299	eP	P	01 04 03.5	+0.3
	comp=Z,14nm,0.8s						
Q19K	Cape Douglas,	42.04	43	P	P	01 04 03.9	+0.5
	baz=273,SNR=7.1						
C21K	Knifeblade Rid	42.06	28	P	P	01 04 04.9	+1.5
	baz=261,SNR=7.7						
IMAR	Indian Mountai	42.07	33	P	P	01 04 04.8	+1.3
UBPT	Khong Chiam	42.19	244	P	P	01 04 07.3	+2.3
B21K	Ikpikpuk River	42.19	27	P	P	01 04 06.5	+2.0
	baz=260,SNR=12						
M20K	Styx River	42.19	39	P	P	01 04 06.0	+1.3
	baz=270,SNR=5.9						
P19K	Oil Pt	42.21	42	P	P	01 04 06.4	+1.6
	baz=273						
G21K	Allakaket	42.21	32	P	P	01 04 06.8	+2.1
	baz=265,SNR=26						
E21K	Killik River	42.25	29	P	P	01 04 04.8	-0.2
E21K	Killik River	42.25	29	P	P	01 04 06.4	+1.4
	baz=262						
F21K	Alatna River	42.29	31	P	P	01 04 07.2	+1.8
	baz=264,SNR=10						
A22K	Sinclair Lake	42.33	25	P	P	01 04 06.6	+1.1
	baz=259,SNR=14						
OHAK	Old Harbor	42.36	46	P	P	01 04 06.1	+0.1
OHAK				IAmb	IAmb	01 04 21.8	
	comp=Z,44nm,1.6s						
OHAK	Old Harbor	42.36	46	P	P	01 04 09.0	+3.0
OHAK	Old Harbor	42.36	46	P	P	01 04 06.9	+0.9
	baz=275						
RED	Redoubt Volcan	42.41	41	P	P	01 04 07.3	+0.9
RED				IAmb	IAmb	01 04 08.9	
	comp=Z,39nm,1.2s						
H21K	Melozitna Rive	42.44	33	P	P	01 04 08.6	+2.1
	baz=266,SNR=12						
O20K	Slope Mountain	42.49	42	P	P	01 04 08.3	+1.2
	baz=273						
MYLDM	Lahad Datu	42.51	220	P	P	01 04 07.5	-0.1
MYLDM				IAmb	IAmb	01 04 42.8	
	comp=Z,28nm,1.1s						
MYLDM	Lahad Datu	42.51	220	P	P	01 04 10.3	+2.7
CHUM	Lake Minchumin	42.58	36	P	P	01 04 09.7	+2.0
	baz=269						
PPLA	Purkeypile	42.63	37	P	P	01 04 10.2	+1.9
	baz=270						
SPCR	Spurr Chakacha	42.65	40	P	P	01 04 10.4	+2.0
	baz=272						
N20K	Mount Spurr	42.65	40	P	P	01 04 10.2	+1.7
	baz=272						
CAST	Castle Rocks	42.67	37	P	P	01 04 10.0	+1.4
CAST	Castle Rocks	42.67	37	P	P	01 04 10.2	+1.6
	baz=270						
KDAK	Kodiak Island	42.68	45		P	01 04 09.0	+0.4
KDAK				IAmb	IAmb	01 04 10.2	
	comp=Z,38nm,1.1s						
KDAK	Kodiak Island	42.68	45	P	P	01 04 09.0	+0.4
KDAK				pmax	pmax		
	comp=Z,38nm,1.1s						
KDAK	Kodiak Island	42.68	45	P	P	01 04 09.2	+0.5
	baz=275						
Q20K	Shuyak Island	42.71	44	P	P	01 04 09.3	+0.4
	baz=275						
B22K	Teshekpuk Lake	42.72	26	P	P	01 04 09.4	+0.7
	baz=261						
I21K	Tanana	42.76	34	P	P	01 04 10.9	+1.7
	baz=268						
D22K	Ayikyak River	42.77	28	P	P	01 04 10.7	+1.4
	baz=263,SNR=7.6						
F22K	John River	42.82	30	P	P	01 04 11.8	+2.2
	baz=265						
TNTI	Ternate	42.94	205		P	01 04 10.8	-0.3
TNTI				IAmb	IAmb	01 04 35.1	
	comp=Z,27nm,1.0s						
E22K	Anaktuvuk Pass	43.01	30	P	P	01 04 12.7	+1.5
	baz=265,SNR=25						
H22K	Ishtalitna Cre	43.03	33	P	P	01 04 13.2	+1.8
	baz=268,SNR=9.3						
G22K	Bettles	43.04	31	P	P	01 04 12.6	+1.2
	baz=266						
BPAW	Bear Paw Mtn.	43.16	36		P	01 04 13.3	+0.8
BPAW				IAmb	IAmb	01 04 15.6	
	comp=Z,44nm,2.0s						
BPAW	Bear Paw Mtn.	43.16	36	P	P	01 04 13.9	+1.4
	baz=270,SNR=6.1						
SMPI	Sarmi	43.19	188	P	P	01 04 13.3	+0.2
	comp=Z,29nm,1.2s						
KTH	Kantishna Hill	43.20	36	P	P	01 04 13.4	+0.5
KTH				IAmb	IAmb	01 04 16.0	
	comp=Z,31nm,1.1s						
MLY	Manley	43.28	34	P	P	01 04 15.4	+2.0
	baz=269,SNR=10						
SUA	Susitna One	43.34	39	P	P	01 04 14.9	+0.8
SUA	Susitna One	43.34	39	P	P	01 04 15.0	+0.9
	baz=273						
BRLK	Bradley Lake	43.39	42	P	P	01 04 14.8	+0.4
BRLK				IAmb	IAmb	01 04 17.0	
	comp=Z,14nm,0.7s						
BRSE	Bradley Lake S	43.46	42	P	P	01 04 16.7	+1.8
	baz=275						
TRF	Thorofare Moun	43.48	36	P	P	01 04 16.9	+1.7
	baz=271,SNR=6.5						
D23K	Nanushuk River	43.50	28	P	P	01 04 16.8	+1.6
	baz=265,SNR=5.8						
JAY	Jayapura	43.54	185	LR	LR	01 18 33.6	
	comp=Z,45nm,21.2s,baz=6.5,slow=31						
JAY	Jayapura	43.54	185	P	P	01 04 16.8	+0.8
COLD	Coldfoot	43.56	31	P	P	01 04 15.9	+0.2
COLD	Coldfoot	43.56	31	P	P	01 04 16.7	+1.0
	baz=267,SNR=9.2						
C23K	Itkillik River	43.60	27	P	P	01 04 17.4	+1.4
	baz=264						
G23K	Bananza Creek	43.61	32	P	P	01 04 17.4	+1.3
	baz=268,SNR=16						
H23K	Yukon River	43.79	33	P	P	01 04 19.4	+1.9
	baz=269,SNR=18						
E23K	Chandalar	43.83	30	P	P	01 04 20.0	+2.1
	baz=267,SNR=17						
RC01	Rabbit Creek A	43.85	40		P	01 04 18.6	+0.5
RC01				IAmb	IAmb	01 04 19.9	
	comp=Z,28nm,1.1s						
RC01	Rabbit Creek A	43.85	40	P	P	01 04 20.2	+2.1
	baz=274,SNR=5.1						
I23K	Minto, Yukon-K	43.86	34	P	P	01 04 19.6	+1.6
	baz=270,SNR=8.5						
MK31	Makanchi Array	43.86	299	*ce*P	P	01 04 18.8	+0.4
MKAR	Makanchi Array	43.86	299		P	01 04 18.5	+0.1
MKAR	Makanchi Array	43.86	299	P	P	01 04 18.9	+0.5
	comp=Z,14nm,0.8s,baz=81,slow=10.0,SNR=93						
MKAR				PcP	PcP	01 06 04.9	+0.4
	comp=Z,0.9nm,0.5s,baz=48,slow=2.1,SNR=1.7						
MKAR				S	S	01 10 51.1	+1.5
	comp=Z,0.1nm,0.4s,baz=83,slow=23,SNR=1.3						
MKAR				LR	LR	01 24 13.7	
	comp=Z,417nm,19.2s,baz=76,slow=38						
	comp=Z,14nm,0.8s						
MKAR	Makanchi Array	43.86	299	*ce*P	P	01 04 19.1	+0.7
MKAR				pmax	pmax		
	comp=Z,15nm,0.8s						
TOLK	Toolik Lake Re	43.88	29	P	P	01 04 19.3	+1.1
	baz=266						
O22K	Cooper Landing	43.91	41	P	P	01 04 19.1	+0.6
	baz=275						
NEA2	Nenana	43.99	35	P	P	01 04 20.9	+1.7
	baz=271,SNR=23						
LSA	Lhasa	44.05	272	P	P	01 04 20.4	-0.2
LSA				IAmb	IAmb	01 04 40.9	
	comp=Z,54nm,1.9s						
LSA	Lhasa	44.05	272	P	P	01 04 20.4	-0.2
LSA				pmax	pmax		
	comp=Z,54nm,1.9s						
MAKZ	Makanchi	44.07	299		P	01 04 20.0	0.0
MAKZ				IAmb	IAmb	01 04 22.0	
	comp=Z,30nm,1.1s						
MAKZ	Makanchi	44.07	299	P	P	01 04 20.0	0.0
MAKZ				pmax	pmax		
	comp=Z,30nm,1.1s						
SEW	Seward	44.08	41	P	P	01 04 20.3	+0.5
	baz=275						
MCK	McKinley	44.08	36	P	P	01 04 20.9	+1.0
	baz=272,SNR=5.8						
PMR	Palmer	44.11	39	P	P	01 04 22.1	+2.0
PMR	Palmer	44.11	39	P	P	01 04 20.5	+0.5
	baz=274						
RND	Reindeer	44.13	37		P	01 04 20.6	+0.3
RND				IAmb	IAmb	01 04 22.4	
	comp=Z,35nm,1.3s						
RND	Reindeer	44.13	37	P	P	01 04 20.6	+0.3
RND				pmax	pmax		
	comp=Z,35nm,1.3s						
D24K	Happy Valley	44.18	28	P	P	01 04 22.3	+1.7
	baz=267,SNR=9.1						
E24K	Your Creek	44.25	30	P	P	01 04 23.1	+1.9
	baz=268,SNR=20						
C24K	Franklin Bluff	44.26	27	P	P	01 04 22.3	+1.1
	baz=266						
WAT1	Susitna Watana	44.30	37	P	P	01 04 22.2	+0.5
	baz=273						
CHTO	Chiang Mai	44.41	254		P	01 04 22.4	-0.6
CHTO				IAmb	IAmb	01 04 38.2	
	comp=Z,14nm,0.8s						
CHTO	Chiang Mai	44.41	254	P	P	01 04 25.2	+2.2
CHTO	Chiang Mai	44.41	254	P	P	01 04 22.4	-0.6
CHTO				pmax	pmax		
	comp=Z,14nm,0.8s						
WRH	Wood River Hil	44.42	35	P	P	01 04 23.2	+0.6
KNK	Knik Glacier	44.44	39	P	P	01 04 23.8	+1.0
	baz=275						
F24K	Squaw Lake	44.47	31	P	P	01 04 24.5	+1.5
	baz=269,SNR=8.4						
SML	Sawmill	44.47	39	P	P	01 04 23.3	+0.2
SML				IAmb	IAmb	01 04 25.5	
	comp=Z,34nm,1.1s						
SML	Sawmill	44.47	39	P	P	01 04 23.2	+0.1
SML				pmax	pmax		
	comp=Z,34nm,1.1s						
SML	Sawmill	44.47	39	P	P	01 04 24.1	+1.0
	baz=275,SNR=9.2						
H24K	Noodor Dome	44.47	33	P	P	01 04 24.6	+1.6
	baz=271,SNR=12						
COLA	College	44.51	34	P	P	01 04 23.8	+0.6
COLA				IAmb	IAmb	01 04 32.7	
	comp=Z,22nm,0.8s						
COLA	College	44.51	34	P	P	01 04 24.2	+1.0
COLA	College	44.51	34	P	P	01 04 23.8	+0.6
COLA				pmax	pmax		
	comp=Z,22nm,0.8s						
COLA	College	44.51	34	P	P	01 04 24.6	+1.4
	baz=272						
CCB	Clear Creek Bu	44.54	35	P	P	01 04 24.2	+0.7
PWL	Port Wells	44.55	40	P	P	01 04 24.1	+0.4
	baz=276,SNR=5.4						
G24K	Hadweenzic Riv	44.63	32	P	P	01 04 25.6	+1.4
	baz=270,SNR=14						
CMAR	Chiang Mai Arr	44.63	253	P	P	01 04 23.9	-1.0
CMAR	Chiang Mai Arr	44.63	253	P	P	01 04 25.1	+0.3
	comp=Z,1.4nm,0.4s,baz=46,slow=7.1,SNR=8.1						
CMAR				PcP	PcP	01 06 07.7	+0.1
	comp=Z,1.0nm,0.3s,baz=45,slow=4.4,SNR=1.8						
	comp=Z,1.4nm,0.4s						
CMAR	Chiang Mai Arr	44.63	253	*ce*P	P	01 04 25.2	+0.3
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
POKR	Poker Plat Res	44.68	34	P	P	01 04 26.4	+1.7
	baz=272,SNR=13						
WAT6	Susitna Watana	44.69	38	P	P	01 04 26.0	+1.0
	baz=274						
M23K	Glacier View	44.76	39	P	P	01 04 26.2	+0.8
	baz=275						
DHY	Denali Highway	44.82	37	P	P	01 04 26.6	+0.7
	baz=274,SNR=11						
HDA	Harding Lake	44.92	35	P	P	01 04 26.7	+0.1
HDA				IAmb	IAmb	01 04 28.5	
	comp=Z,19nm,1.1s						
HDA	Harding Lake	44.92	35	P	P	01 04 27.4	+0.8
	baz=273,SNR=10						
IL31		44.93	35	P	P	01 04 26.7	+0.2
IL31				IAmb	IAmb	01 04 28.8	
	comp=Z,32nm,1.4s						
ILAR	Eielson Array	44.93	35	P	P	01 04 26.7	+0.1
ILAR	Eielson Array	44.93	35	P	P	01 04 27.5	+0.9
	comp=Z,8.0nm,1.0s,baz=262,slow=6.0,SNR=49						
ILAR				PcP	PcP	01 06 06.5	-1.3
	comp=Z,0.5nm,0.5s,baz=284,slow=3.6,SNR=0.8						
	comp=Z,8.0nm,1.0s						
SCM	Sheep Creek Mo	44.94	39	P	P	01 04 28.0	+1.1
	baz=275,SNR=7.4						
D25K	Kavik River	45.06	28	P	P	01 04 28.7	+1.1
	baz=269						
TOLI2	Tolitoli	45.08	214	P	P	01 04 27.7	-0.6
TOLI2	Tolitoli	45.08	214	P	P	01 04 30.5	+2.2
P23K	Montague Islan	45.11	41	P	P	01 04 28.6	+0.5
	baz=277						
FAKI	Fak Fak	45.15	197	P	P	01 04 28.4	-0.5
GLI	Glacier Island	45.16	40	P	P	01 04 29.1	+0.6
	baz=277						
G25K	Bearman Lake	45.17	32	P	P	01 04 30.6	+2.1
	baz=272						
MRSI	Marisa	45.17	212	P	P	01 04 29.9	+0.8
KURK	Kurchatov	45.19	305		P	01 04 29.3	+0.5
KURK	Kurchatov	45.19	305	*ce*P	P	01 04 29.3	+0.5
KURK				pmax	pmax		
	comp=Z,53nm,1.3s						
KURBB	Kurchatov Arra	45.26	305	P	P	01 04 29.6	+0.2
	comp=Z,30nm,0.7s,baz=77,slow=8.6,SNR=175						
KURBB				PcP	PcP	01 06 09.3	+0.1
	comp=Z,4.7nm,0.7s,baz=85,slow=3.0,SNR=0.6						
KURBB				S	S	01 11 11.3	+1.7
	comp=Z,1.1nm,0.8s,baz=75,slow=15,SNR=6.4						
KURBB				LR	LR	01 24 46.8	
	comp=Z,250nm,18.7s,baz=176,slow=38						
	comp=Z,30nm,0.7s						
H25L	Birch Creek	45.30	32	P	P	01 04 31.0	+1.4
	baz=272						
F25K	Christian Rive	45.33	30	P	P	01 04 31.8	+1.9
	baz=271						
E25K	Arctic Village	45.35	30	P	P	01 04 31.3	+1.4
	baz=271,SNR=6.5						
M24K	Tolsona, Glenn	45.46	38	P	P	01 04 32.6	+1.7
	baz=276						
PRP	Porcupine Dome	45.46	33	P	P	01 04 32.4	+1.4
	baz=273,SNR=14						
K24K	Donnelly Dome	45.47	36	P	P	01 04 31.6	+0.6
	baz=275,SNR=9.3						
C26K	Camden Bay	45.58	27	P	P	01 04 32.2	+0.5
	baz=270						
J25K	Salcha River,	45.59	35	P	P	01 04 32.5	+0.6
	baz=274						
KLU	Klutina	45.65	39	P	P	01 04 33.9	+1.4
	baz=277,SNR=13						
PAX	Paxson	45.69	37	P	P	01 04 33.9	+1.1
	baz=276,SNR=6.1						
Q23K	Middleton Isla	45.72	42	P	P	01 04 34.3	+1.3
	baz=279						
BMAR	Burnt Mountain	45.74	31		P	01 04 34.6	+1.5
EYAK	Cordova Ski Ar	45.85	40	P	P	01 04 35.4	+1.4
	baz=278						
RIDG	Independent Ri	45.89	36	P	P	01 04 34.8	+0.4
RIDG	Independent Ri	45.89	36	P	P	01 04 35.0	+0.7
	baz=276						
F26K	Sheenjek River	45.90	30	P	P	01 04 36.5	+2.2
	baz=272,SNR=16						
HARP	HAARP	45.90	38	P	P	01 04 34.8	+0.5
	baz=277						
C27K	Jago River	46.00	28	P	P	01 04 36.9	+1.9
	baz=271						
SANI	Sanana	46.03	206	P	P	01 04 36.6	+0.7
G26K	Porcupine Rive	46.08	31	P	P	01 04 38.1	+2.4
	baz=274,SNR=9.7						
MPSI	Mapaga	46.15	215	P	P	01 04 37.4	+0.6
	comp=Z,928nmcomp=Z,10nm,0.7s						
SCRK	Sand Creek	46.25	35		P	01 04 37.4	+0.1
SCRK				IAmb	IAmb	01 04 39.2	
	comp=Z,21nm,1.0s						
SCRK	Sand Creek	46.25	35	P	P	01 04 38.0	+0.8
	baz=276,SNR=20						
N25K	Chitina, Valde	46.26	39	P	P	01 04 38.3	+0.9
	baz=278						
BMRM	Bremner River	46.35	40		P	01 04 39.1	+1.1
BMRM				IAmb	IAmb	01 04 40.8	
	comp=Z,17nm,0.8s						
BMRM	Bremner River	46.35	40	P	P	01 04 39.0	+1.0
	baz=278						
J26L	Joseph Creek	46.37	35	P	P	01 04 38.5	+0.3
	baz=276,SNR=5.4						
I26K	Coal Creek Min	46.47	34	P	P	01 04 38.6	-0.1
	baz=276						
MENT	Mentasta	46.49	37	P	P	01 04 41.1	+2.1
KAIM	Kayak Island	46.61	41	P	P	01 04 41.5	+1.6
	baz=280						
L26K	Log Cabin Wild	46.65	37	P	P	01 04 41.7	+1.5
	baz=278,SNR=14						
E27K	Coleen River	46.83	30	P	P	01 04 43.5	+1.9
	baz=274						
BERG	Berg Lake	46.88	40	P	P	01 04 43.9	+1.8
M26K	Nabesna, AK	46.90	38	P	P	01 04 44.2	+2.0
	baz=278,SNR=14						
SHLS	Shalkode	46.92	295	eP	P	01 04 40.2	-2.5
SHLS				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SHLS	Shalkode	46.92	295	eP	P	01 04 40.2	-2.5
	comp=Z,3.8nm,0.6s						
G27K	Doyon Strip	46.93	31	P	P	01 04 44.5	+2.1
	baz=276						
D27M	Malcolm River	46.98	28	P	P	01 04 44.9	+2.0
	baz=274						
TDK	Taldyqorghan	46.99	298	eP	P	01 04 43.1	-0.1
TDK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
TDK	Taldyqorghan	46.99	298	eP	P	01 04 43.2	-0.1
	comp=Z,3.2nm,0.3s						
H27K	Steamboat Moun	47.04	32	P	P	01 04 45.5	+2.2
	baz=276,SNR=13						
I27K	Kandik River	47.07	33	P	P	01 04 44.6	+1.0
	baz=277						
K27K	Chicken	47.08	35	P	P	01 04 45.3	+1.7
	baz=278,SNR=19						
CRQM	Cirque	47.09	40	P	P	01 04 44.9	+0.9
CRQE	Cirque	47.12	40	P	P	01 04 45.9	+1.9
	baz=280,SNR=8.8						
UZB	Uzynbulak	47.22	295	eP	P	01 04 44.7	-0.4
UZB				pmax	pmax		
	comp=Z,3.0nm,0.9s						
UZB	Uzynbulak	47.22	295	eP	P	01 04 44.8	-0.4
	comp=Z,3.0nm,0.9s						
WAX	Waxell Ridge	47.29	40	P	P	01 04 46.6	+1.2
L27K	Beaver Creek,	47.33	37	P	P	01 04 47.9	+2.3
	baz=279,SNR=23						
KPKS	Kokpek	47.34	296	eP	P	01 04 45.8	-0.2
KPKS	Kokpek	47.34	296	eP	P	01 04 45.8	-0.2
BCAR	Beaver Creek A	47.34	37		P	01 04 47.7	+2.0
M27K	Edge Creek, AK	47.42	38	P	P	01 04 47.8	+1.4
	baz=279,SNR=5.7						
F28M	Old Crow	47.53	30	P	P	01 04 49.1	+2.0
	baz=276,SNR=7.1						
E28M	Babbage River	47.55	29	P	P	01 04 48.8	+1.6
	baz=276,SNR=7.2						
ARXS	Arharly	47.65	297	*i* P	P	01 04 47.9	-0.5
D28M	Stokes Point	47.77	28	P	P	01 04 49.4	+0.6
	baz=276						
MESA	MESA	47.78	40	P	P	01 04 50.6	+1.3
	baz=281						
I28M	Miner Creek	47.79	33	P	P	01 04 51.3	+2.1
	baz=278,SNR=9.5						
WUS	Wushi	47.81	293	P	P	01 04 49.6	-0.1
WUS				IAmb	IAmb	01 04 51.2	
	comp=Z,26nm,1.1s						
CTG	Chitna Glacier	47.92	39	P	P	01 04 52.2	+1.8
	baz=281,SNR=6.5						

E29M	**Blow River**	**48.18**	**29**	P	**P**	**01 04 54.2**	**+2.2**
	baz=277,SNR=12						
YUK3	**Moose Creek**	**48.18**	**38**	P	**P**	**01 04 54.1**	**+1.6**
	baz=281,SNR=7.2						
EVN	**Everest**	**48.21**	**273**		**P**	**01 04 53.3**	**-0.3**
DAWY	**Dawson**	**48.24**	**35**	P	**P**	**01 04 54.1**	**+1.4**
	baz=280						
H29M	**Whitestone**	**48.31**	**32**	P	**P**	**01 04 55.3**	**+2.2**
	baz=279,SNR=5.3						
G29M	**Pine Creek**	**48.34**	**31**	P	**P**	**01 04 56.0**	**+2.7**
	baz=279,SNR=6.7						
I29M	**Ogilvie Camp,**	**48.47**	**33**	P	**P**	**01 04 55.5**	**+1.1**
	baz=280,SNR=21						
O28M	**Mount Upton**	**48.51**	**39**	P	**P**	**01 04 56.3**	**+1.2**
	baz=282						
MDOK	**Medeo**	**48.56**	**296**	*e*P	**P**	**01 04 55.1**	**-0.4**
MDOK	**Medeo**	**48.56**	**296**	*e*P	**P**	**01 04 55.2**	**-0.4**
TARG	**Taragay, Kyrgy**	**48.59**	**294**	P	**P**	**01 04 56.4**	**+0.3**
TARG				IAmb	IAmb	01 05 30.2	
	comp=Z,14nm,0.8s						
TARG	**Taragay, Kyrgy**	**48.59**	**294**	P	**P**	**01 04 56.4**	**+0.3**
TARG				pmax	pmax		
	comp=Z,14nm,0.8s						
YUK8	**Steele Glacier**	**48.60**	**39**	P	**P**	**01 04 57.1**	**+1.3**
	baz=282						
PINM	**Pinnacle**	**48.63**	**40**	P	**P**	**01 04 56.2**	**+0.5**
	baz=283						
AAA	**Alma-Ata**	**48.63**	**296**	*e*P	**P**	**01 04 55.8**	**-0.2**
AAA	**Alma-Ata**	**48.63**	**296**	*e*P	**P**	**01 04 55.8**	**-0.2**
J29N	**Klondike Camp**	**48.67**	**34**	P	**P**	**01 04 57.5**	**+1.5**
	baz=281						
KUU	**Kurty**	**48.77**	**297**	*e*P	**P**	**01 04 56.8**	**-0.2**
KUU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KUU	**Kurty**	**48.77**	**297**	*e*P	**P**	**01 04 56.8**	**-0.2**
	comp=Z,7.4nm,1.0s						
KDJ	**Kajisay**	**48.86**	**295**	P	**P**	**01 04 58.5**	**+0.6**
KDJ				IAmb	IAmb	01 05 14.2	
	comp=Z,7.8nm,0.6s						
KDJ	**Kajisay**	**48.86**	**295**	P	**P**	**01 04 58.5**	**+0.6**
KDJ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
EPYK	**Eagle Plains**	**48.94**	**32**	P	**P**	**01 05 00.2**	**+2.2**
	baz=280,SNR=13						
M29M	**Somme Creek**	**48.96**	**37**	P	**P**	**01 05 00.5**	**+2.2**
	baz=282						
L29M	**L29M**	**48.97**	**36**	P	**P**	**01 05 00.7**	**+2.4**
	baz=282,SNR=10						
G30M	**tAoh Zraii Nji**	**49.03**	**31**	P	**P**	**01 05 00.8**	**+2.1**
	baz=280,SNR=7.3						
BRZS	**Berezniki**	**49.04**	**306**	*e*P	**P**	**01 04 59.0**	**0.0**
BRZS	**Berezniki**	**49.04**	**306**	*e*P	**P**	**01 04 59.1**	**0.0**
F30M	**Barrier River**	**49.08**	**30**	P	**P**	**01 05 01.7**	**+2.7**
	baz=280,SNR=14						
K29M	**Barlow Dome**	**49.09**	**35**	P	**P**	**01 05 01.5**	**+2.2**
	baz=282,SNR=17						
YUK4	**Talbot Arm**	**49.12**	**38**	P	**P**	**01 05 01.4**	**+1.7**
	baz=283						
PNL	**Peninsula**	**49.15**	**41**	P	**P**	**01 05 01.2**	**+1.6**
	baz=284						
I30M	**Mount Dempster**	**49.30**	**33**	P	**P**	**01 05 02.0**	**+1.1**
	baz=282,SNR=32						
YUK6	**Outpost Mounta**	**49.34**	**39**	P	**P**	**01 05 01.8**	**+0.5**
	baz=284						
O29M	**Mount Kennedy**	**49.39**	**40**	P	**P**	**01 05 03.4**	**+1.7**
	baz=284						
J30M	**Hart River**	**49.45**	**34**	P	**P**	**01 05 03.7**	**+1.7**
	baz=282,SNR=6.6						
ULHL	**Ulahol**	**49.46**	**295**	P	**P**	**01 05 03.2**	**+0.6**
	SNR=5.2						
BVAR	**Borovoye Array**	**49.47**	**310**	P	**P**	**01 05 03.1**	**+1.0**
	comp=Z,8.9nm,0.4s,baz=69,slow=8.6,SNR=86						
BVAR				PcP	**PcP**	**01 06 24.6**	**+0.5**
	comp=Z,5.4nm,0.6s,baz=74,slow=5.1,SNR=1.4						
BVAR				S	**S**	**01 12 11.9**	**+2.4**
	comp=Z,2.0nm,0.9s,baz=46,slow=12,SNR=5.2						
BVAR				LR	LR	01 27 38.6	
	comp=Z,421nm,19.1s,baz=74,slow=38						
	comp=Z,8.9nm,0.4s						
BRVK	**Borovoye**	**49.52**	**310**		**P**	**01 05 03.0**	**+0.5**
BRVK	**Borovoye**	**49.52**	**310**	*ce*P	**P**	**01 05 03.5**	**+1.0**
BRVK				pmax	pmax		
	comp=Z,35nm,2.5s						
BOOM	**Boomskoye usch**	**49.57**	**296**	P	**P**	**01 05 03.8**	**+0.5**
BOOM				IAmb	IAmb	01 05 19.0	
	comp=Z,21nm,0.8s						
BOOM	**Boomskoye usch**	**49.57**	**296**	P	**P**	**01 05 03.8**	**+0.5**
BOOM				pmax	pmax		
	comp=Z,21nm,0.8s						
TKM2	**Tokmak 2**	**49.64**	**296**	P	**P**	**01 05 04.9**	**+1.1**
	SNR=25						
HYT	**Haines Junctio**	**49.78**	**39**		**P**	**01 05 06.9**	**+2.3**
HYT	**Haines Junctio**	**49.78**	**39**	P	**P**	**01 05 07.4**	**+2.8**
	baz=284,SNR=42						
G31M	**Satah River**	**49.79**	**31**	P	**P**	**01 05 06.2**	**+1.8**
	baz=282,SNR=5.9						
INK	**Inuvik**	**49.79**	**29**		**P**	**01 05 05.4**	**+1.0**
INK				IAmb	IAmb	01 05 23.2	
	comp=Z,16nm,1.1s						
INK	**Inuvik**	**49.79**	**29**	P	**P**	**01 05 05.4**	**+1.0**
INK				pmax	pmax		
	comp=Z,16nm,1.1s						
INK	**Inuvik**	**49.79**	**29**	P	**P**	**01 05 06.0**	**+1.6**
	baz=281,SNR=7.2						
N30M	**Aishikik Lake**	**49.82**	**38**	P	**P**	**01 05 05.9**	**+1.1**
	baz=284						
MAYO	**Mayo, Yukon**	**49.85**	**35**	P	**P**	**01 05 07.3**	**+2.4**
	baz=283						
F31M	**Tsiigehtchic**	**49.89**	**30**	P	**P**	**01 05 06.6**	**+1.5**
	baz=282						
NRN	**Naryn**	**49.95**	**294**	P	**P**	**01 05 06.4**	**0.0**
NRN	**Naryn**	**49.95**	**294**	P	**P**	**01 05 06.4**	**0.0**
NRN				pmax	pmax		
	comp=Z,15nm,1.3s						
P29M	**Windy Craggy**	**49.97**	**40**	P	**P**	**01 05 08.6**	**+2.6**
	baz=285,SNR=17						
H31M	**Peel River**	**50.00**	**32**	P	**P**	**01 05 08.2**	**+2.1**
	baz=283,SNR=11						
SGDS	**Sogindy**	**50.08**	**297**	*e*P	**P**	**01 05 07.0**	**-0.1**
KBK	**Karagaybulak**	**50.18**	**296**	P	**P**	**01 05 08.7**	**+0.7**
	SNR=15						
P30M	**Million Dollar**	**50.22**	**40**	P	**P**	**01 05 09.3**	**+1.4**
	baz=285						
USP	**Ospenovka**	**50.24**	**297**	P	**P**	**01 05 09.6**	**+1.3**
	SNR=5.2						
PMG	**Port Moresby**	**50.35**	**176**	LR	LR	01 26 59.8	
	comp=Z,48nm,18.5s,baz=329,slow=37						
N31M	**Braeburn, Yuko**	**50.42**	**38**	P	**P**	**01 05 11.2**	**+1.8**
	baz=285,SNR=10						
O30N	**Mendenhall**	**50.46**	**39**	P	**P**	**01 05 11.2**	**+1.6**
	baz=285,SNR=6.3						
AAK	**Ala-Archa**	**50.49**	**296**	P	**P**	**01 05 10.0**	**-0.3**
	SNR=5.2						
AAK	**Ala-Archa**	**50.49**	**296**		**P**	**01 05 09.8**	**-0.6**
AAK				IAmb	IAmb	01 05 24.2	
	comp=Z,19nm,1.5s						
AAK	**Ala-Archa**	**50.49**	**296**	LR	LR	01 29 02.6	
	comp=Z,383nm,18.1s,baz=78,slow=39						
AAK	**Ala-Archa**	**50.49**	**296**	*ce*P	**P**	**01 05 11.2**	**+0.9**
AAK				pmax	pmax		
	comp=Z,10.0nm,1.7s						
PLBC	**Pleasant Camp**	**50.69**	**40**	P	**P**	**01 05 13.3**	**+2.0**
	baz=286						
KSH	**Kashi**	**50.76**	**292**	P	**P**	**01 05 16.8**	**+4.5**
KSH				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KSH				LR	LR		
	comp=Z,400nm,16.1s						
KSH				LR	LR		
	comp=Z,320nm,14.4s						
KSH				LR	LR		
	comp=Z,530nm,16.5s						
M31M	**Drury Creek, Y**	**50.87**	**37**	P	**P**	**01 05 14.6**	**+1.9**
	baz=286,SNR=6.9						
EKS2	**Erkin-Say**	**50.97**	**297**	P	**P**	**01 05 14.0**	**+0.1**
	SNR=5.8						
WHY	**Whitehorse**	**51.07**	**39**	P	**P**	**01 05 16.6**	**+2.3**
	baz=286,SNR=9.4						
SKAG	**Skagway**	**51.20**	**40**	P	**P**	**01 05 16.9**	**+1.7**
	baz=287						
AML	**Almayashu**	**51.24**	**296**	P	**P**	**01 05 17.2**	**+1.0**
	SNR=8.1						
FARO	**Faro, Yukon**	**51.33**	**36**	P	**P**	**01 05 17.5**	**+1.4**
	baz=286,SNR=9.7						
A36M	**Sachs Harbour**	**51.68**	**23**	P	**P**	**01 05 20.5**	**+2.0**
A36M	**Sachs Harbour**	**51.68**	**23**	P	**P**	**01 05 18.9**	**+0.3**
	baz=286						
N32M	**Quiet Lake**	**51.76**	**38**	P	**P**	**01 05 20.6**	**+1.2**
	baz=287						
SIT	**Sitka**	**51.94**	**43**	P	**P**	**01 05 22.2**	**+1.5**
	baz=289						
P32M	**Atlin**	**51.94**	**40**	P	**P**	**01 05 22.5**	**+1.7**
	baz=288						
R32K	**Eaglecrest**	**51.96**	**42**	P	**P**	**01 05 22.7**	**+1.8**
	baz=288						
MMPY	**Sheldon Lake,**	**52.14**	**36**	P	**P**	**01 05 24.6**	**+2.3**
	baz=288,SNR=9.4						
P33M	**Teslin, Yukon**	**52.18**	**39**	P	**P**	**01 05 24.5**	**+1.9**
	baz=288,SNR=18						
HNR	**Honiara**	**52.37**	**160**	LR	LR	01 25 09.8	
	comp=Z,52nm,21.9s,baz=306,slow=33						
DZA	**Taraz**	**52.52**	**298**	*e*P	**P**	**01 05 25.1**	**-0.2**
DZA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
DZA	**Taraz**	**52.52**	**298**	*e*P	**P**	**01 05 25.1**	**-0.2**
	comp=Z,5.5nm,0.6s						
C36M	**Paulatuk**	**52.84**	**26**	P	**P**	**01 05 28.7**	**+1.5**
C36M				IAmb	IAmb	01 05 29.2	
	comp=Z,29nm,1.1s						
C36M	**Paulatuk**	**52.84**	**26**	P	**P**	**01 05 28.3**	**+1.1**
	baz=289						
Q32M	**Nakina River**	**52.85**	**40**	P	**P**	**01 05 29.1**	**+1.4**
	baz=290						
KK31	**Karatay Array**	**52.98**	**298**		**P**	**01 05 28.8**	**+0.1**
KK31	**Karatay Array**	**52.98**	**298**	P	**P**	**01 05 28.8**	**+0.1**
KK31				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KKAR	**Karatay Array**	**52.98**	**298**		**P**	**01 05 28.8**	**+0.1**
KKAR	**Karatay Array**	**52.98**	**298**	P	**P**	**01 05 28.8**	**+0.1**
R33M	**Jennings River**	**53.33**	**39**	P	**P**	**01 05 32.9**	**+1.7**
	baz=290,SNR=6.1						
U33K	**Whale Pass**	**53.41**	**44**	P	**P**	**01 05 33.1**	**+1.6**
	baz=291						
BRLS	**Borolday**	**53.46**	**299**	*e*P	**P**	**01 05 33.4**	**+1.2**
BRLS	**Borolday**	**53.46**	**299**	*e*P	**P**	**01 05 33.5**	**+1.2**
SVE	**Sverdlovsk**	**53.54**	**317**	*e*P	**P**	**01 05 33.2**	**+0.7**
SVE				pmax	pmax		
	comp=Z,32nm,0.8s						
SVE				MLR	MLR		
	comp=Z,975nm,18.0s						
WRAK	**Wrangell Islan**	**53.70**	**43**	P	**P**	**01 05 35.6**	**+1.9**
	baz=291						
IUG	**Iuzhnay**	**53.71**	**297**	*e*P	**P**	**01 05 33.7**	**-0.5**
IUG				pmax	pmax		
	comp=Z,5.0nm,1.1s						
IUG	**Iuzhnay**	**53.71**	**297**	*e*P	**P**	**01 05 33.7**	**-0.5**
	comp=Z,5.0nm,1.1s						
S34M	**Telegraph Cree**	**53.77**	**41**	P	**P**	**01 05 36.2**	**+1.9**
	baz=291						
TGTN	**Hyland Airport**	**53.83**	**36**	P	**P**	**01 05 37.0**	**+2.3**
	baz=291						
CHM	**Chimkent**	**53.92**	**298**	*e*P	**P**	**01 05 35.2**	**-0.4**
CHM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CHM	**Chimkent**	**53.92**	**298**	*e*P	**P**	**01 05 35.3**	**-0.4**
	comp=Z,6.5nm,0.8s						
DLBC	**Dease Lake**	**54.13**	**40**		**P**	**01 05 38.4**	**+1.4**
DLBC	**Dease Lake**	**54.13**	**40**	P	**P**	**01 05 39.6**	**+2.6**
	baz=292,SNR=5.1						
T35M	**Bob Quinn**	**54.56**	**42**	P	**P**	**01 05 43.1**	**+3.0**
	baz=292,SNR=6.7						
KDU	**Kakadu**	**54.61**	**194**	P	**P**	**01 05 41.4**	**+0.7**
COEN	**Coen**	**54.80**	**181**	P	**P**	**01 05 42.0**	**-0.1**
COEN				IAmb	IAmb	01 05 43.6	
	comp=Z,26nm,1.0s						
COEN	**Coen**	**54.80**	**181**	P	**P**	**01 05 45.0**	**+2.8**
ARTI	**Arti**	**54.85**	**317**		**P**	**01 05 42.5**	**+0.3**
ARTI	**Arti**	**54.85**	**317**	P	**P**	**01 05 42.6**	**+0.5**
	comp=Z,13nm,0.5s,baz=62,slow=3.8,SNR=23						
ARTI				LR	LR	01 32 22.0	
	comp=Z,460nm,19.5s,baz=66,slow=40						
	comp=Z,13nm,0.5s						
ARTI	**Arti**	**54.85**	**317**	*d i*P	**P**	**01 05 42.4**	**+0.3**
ARTI						01 06 43.2	
ARTI						01 07 45.3	
ARTI				S	**S**	**01 13 25.0**	**+1.8**
ARTI				SS	**SS**	**01 17 09.7**	**+3.8**
ARTI				pmax	pmax		
	comp=Z,28nm,1.4s						
ARTI				MLR	MLR		
	comp=Z,793nm,16.0s						
GAR	**Garm**	**54.92**	**294**		**P**	**01 05 42.7**	**-0.4**
MTN	**Manton Dam**	**55.02**	**196**	P	**P**	**01 05 45.8**	**+2.1**
WRGLY	**Wrigley**	**55.27**	**33**	P	**P**	**01 05 47.2**	**+2.2**
	baz=293						
NIL	**Nilore**	**55.40**	**287**	P	**P**	**01 05 45.9**	**-0.6**
NIL				IAmb	IAmb	01 06 23.2	
	comp=Z,26nm,1.1s						
NIL	**Nilore**	**55.40**	**287**	P	**P**	**01 05 45.9**	**-0.6**
NIL				pmax	pmax		
	comp=Z,26nm,1.1s						
LIRD	**Liard River Hi**	**55.63**	**38**	P	**P**	**01 05 50.1**	**+2.3**
	baz=294						
PSI	**Prapat**	**55.70**	**239**	LR	LR	01 32 20.3	
	comp=Z,245nm,18.0s,baz=132,slow=39						
BEAVL	**Fort Liard**	**55.80**	**37**	P	**P**	**01 05 50.8**	**+1.8**
	baz=294						
EUNU	**Eureka**	**55.83**	**9**	P	**P**	**01 05 49.8**	**+0.8**
SIMJ	**Simiganj**	**55.98**	**294**		**P**	**01 05 49.6**	**-1.1**
SIMJ				IAmb	IAmb	01 06 18.4	
	comp=Z,9.0nm,0.8s						
DZET	**Dzherino**	**56.04**	**294**	P	**P**	**01 05 51.3**	**+0.2**
DZET				pmax	pmax		
	comp=Z,9.0nm,1.2s						
TOAD	**Toad River Com**	**56.27**	**39**	P	**P**	**01 05 54.8**	**+2.4**
	baz=295,SNR=7.8						
SPITS	**Spitsbergen Ar**	**56.93**	**349**	P	**P**	**01 05 57.6**	**+0.8**
	comp=Z,2.5nm,0.5s,baz=71,slow=8.9,SNR=15						
SPITS				LR	LR	01 33 37.9	
	comp=Z,139nm,18.9s,baz=9.5,slow=39						
	comp=Z,2.5nm,0.5s						
SPB2	**Spitsbergen Ar**	**56.93**	**349**	P	**P**	**01 05 56.8**	**+0.1**
SPB2				IAmb	IAmb	01 06 27.8	
	comp=Z,28nm,1.4s						
ABKAR	**Akbulak array**	**56.97**	**309**		**P**	**01 05 57.5**	**0.0**
ABKAR	**Akbulak array**	**56.97**	**309**	P	**P**	**01 05 57.7**	**+0.3**
ABKAR				IAmb	IAmb	01 06 06.9	
	comp=Z,20nm,0.7s						
KBS	**Kingsbay**	**57.00**	**350**	P	**P**	**01 05 58.5**	**+1.3**
KBS				IAmb	IAmb	01 06 15.3	
	comp=Z,18nm,1.0s						
KBS	**Kingsbay**	**57.00**	**350**	P	**P**	**01 05 58.5**	**+1.3**
KBS				pmax	pmax		
	comp=Z,19nm,1.0s						
AKTO	**Aktyubinsk**	**57.56**	**311**	P	**P**	**01 06 01.9**	**+0.3**
	comp=Z,7.4nm,0.7s,baz=61,slow=9.8,SNR=14						
AKTO				LR	LR	01 32 54.5	
	comp=Z,439nm,18.3s,baz=57,slow=38						
	comp=Z,7.4nm,0.7s						
HSPB	**Hornsund (broa**	**57.90**	**348**	*e*P	**P**	**01 06 04.6**	**+1.1**
RES	**Resolute Bay**	**58.11**	**16**		**P**	**01 06 05.7**	**+0.6**
RES				IAmb	IAmb	01 06 06.8	
	comp=Z,19nm,0.8s						
RES	**Resolute Bay**	**58.11**	**16**	LR	LR	01 34 50.3	
	comp=Z,90nm,18.8s,baz=281,slow=40						
RES	**Resolute Bay**	**58.11**	**16**	P	**P**	**01 06 05.7**	**+0.6**
RES				pmax	pmax		
	comp=Z,19nm,0.9s						
KNRA	**Kununurra**	**58.27**	**197**		**P**	**01 06 06.3**	**-0.5**
KNRA				IAmb	IAmb	01 06 22.2	
	comp=Z,23nm,1.0s						
KIRV	**Kirov**	**58.30**	**322**	P	**P**	**01 06 07.3**	**+0.8**
	comp=Z,26nm,0.8s,baz=21,slow=1.0,SNR=16						
	comp=Z,26nm,0.8s						
KIRV	**Kirov**	**58.30**	**322**	*ce*P	**P**	**01 06 07.2**	**+0.6**
YKAW3	**Yellowknife Wh**	**59.19**	**32**		**P**	**01 06 13.3**	**+0.6**
YKAW3				IAmb	IAmb	01 06 14.9	
	comp=Z,14nm,1.3s						
YKA	**Yellowknife Ar**	**59.22**	**32**	P	**P**	**01 06 14.0**	**+1.0**
YKA	**Yellowknife Ar**	**59.22**	**32**	P	**P**	**01 06 13.5**	**+0.6**
	comp=Z,3.2nm,0.9s,baz=304,slow=7.7,SNR=22						
YKA				PcP	**PcP**	**01 07 01.7**	**+0.4**
	comp=Z,1.9nm,0.9s,baz=311,slow=5.0,SNR=5.7						
	comp=Z,3.2nm,0.9s						
YKA	**Yellowknife Ar**	**59.22**	**32**	*ce*P	**P**	**01 06 13.8**	**+0.8**
YKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LVZ	**Lovozero**	**59.27**	**335**	P	**P**	**01 06 13.4**	**+0.1**
LVZ	**Lovozero**	**59.27**	**335**	P	**P**	**01 06 13.4**	**+0.1**
LVZ				pmax	pmax		
	comp=Z,109nm,1.6s						
YKAW1	**Yellowknife Wh**	**59.28**	**32**		**P**	**01 06 14.1**	**+0.7**
YKAW1				IAmb	IAmb	01 06 15.5	
	comp=Z,17nm,1.4s						
APA	**Apatity**	**59.84**	**335**	⇓*i*P	**P**	**01 06 15.1**	**-2.1**
APA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KEV	**Kevo**	**60.38**	**339**	P	**P**	**01 06 21.2**	**+0.4**
KEV				IAmb	IAmb	01 06 26.3	
	comp=Z,13nm,0.8s						
KEV	**Kevo**	**60.38**	**339**	P	**P**	**01 06 21.2**	**+0.4**
KEV				pmax	pmax		
	comp=Z,13nm,0.8s						
HYB	**Hyderabad**	**60.45**	**268**	*e*P	**P**	**01 06 22.9**	**+0.7**
HYB				*e*sP	**pwP**	**01 06 30.5**	**+1.7**
HYB				*e*PcP	**PcP**	**01 07 07.8**	**+0.8**
ARCES	**ARCESS Array B**	**60.92**	**339**	P	**P**	**01 06 24.8**	**+0.2**
	comp=Z,1.1nm,0.5s,baz=52,slow=6.3,SNR=22						
	comp=Z,1.1nm,0.5s						
CTAO	**Charters Tower**	**60.92**	**178**	P	**P**	**01 06 24.3**	**-0.8**
CTAO	**Charters Tower**	**60.92**	**178**	P	**P**	**01 06 24.3**	**-0.8**
CTAO				pmax	pmax		
	comp=Z,49nm,1.8s						
WB0	**Warramunga Arr**	**61.24**	**190**		**P**	**01 06 26.3**	**-1.0**
NEEM	**North Greenlan**	**61.33**	**4**	*i* P	**P**	**01 06 28.2**	**+0.6**
NEEM				IAmb	IAmb	01 06 30.2	
	comp=Z,18nm,0.8s						
FITZ	**Fitzroy Crossi**	**61.36**	**200**	P	**P**	**01 06 27.5**	**-0.6**
FITZ	**Fitzroy Crossi**	**61.36**	**200**	P	**P**	**01 06 28.8**	**+0.7**
WR8	**Warramunga Arr**	**61.42**	**190**		**P**	**01 06 27.5**	**-0.9**
WRA	**Warramunga Arr**	**61.42**	**190**		**P**	**01 06 27.2**	**-1.3**
WRA	**Warramunga Arr**	**61.42**	**190**	P	**P**	**01 06 27.5**	**-1.0**
	comp=Z,12nm,0.8s,baz=8.2,slow=6.8,SNR=81						
	comp=Z,12nm,0.8s						
KLMR	**Klimovskoe**	**61.45**	**327**	*e*P	**P**	**01 06 26.2**	**-2.0**
KLMR				SS	SS	01 18 49.5	+0.4
KLMR				pmax	pmax		
	comp=Z,29nm,1.4s						
KLMR				MLR	MLR		
	comp=Z,348nm,18.0s						
QIS	**Mount Isa**	**61.50**	**185**	P	**P**	**01 06 31.5**	**+2.5**
BELG	**Belogornoye**	**62.27**	**317**	P	**P**	**01 06 34.2**	**+0.4**
	comp=Z,25nm,0.8s,baz=107,slow=0.4,SNR=5.9						
BELG				LR	LR	01 36 50.5	
	comp=Z,709nm,18.2s,baz=55,slow=39						
	comp=Z,25nm,0.8s						
POIN	**Pond Inlet**	**62.78**	**13**	P	**P**	**01 06 36.7**	**-0.3**
POIN				IAmb	IAmb	01 06 38.0	
	comp=Z,8.8nm,1.0s						
HRA	**Herat**	**62.84**	**293**	P	**P**	**01 06 37.7**	**-0.6**
KULLO	**Kullorsuaq**	**63.71**	**6**	*i* P	P	01 06 48.2	+5.1
KULLO				IAmb	IAmb	01 06 52.3	
	comp=Z,11nm,1.1s						
I02E	**Swisshome, OR**	**64.20**	**53**	P	**P**	**01 06 48.0**	**+1.1**
B08A	**Colville Reser**	**64.48**	**47**		**P**	**01 06 48.7**	**0.0**
I03D	**Drain, OR**	**64.73**	**53**	P	**P**	**01 06 51.7**	**+1.4**
I03D				IAmb	IAmb	01 06 53.3	
	comp=Z,20nm,1.2s						
ILON	**Igloolik, Nuna**	**64.76**	**16**	P	**P**	**01 06 50.1**	**0.0**
ILON				IAmb	IAmb	01 06 51.0	
	comp=Z,14nm,1.0s						
BLKN	**Baker Lake**	**64.81**	**25**		**P**	**01 06 50.9**	**+0.4**
BLKN				IAmb	IAmb	01 06 52.0	
	comp=Z,18nm,0.9s						
MXC	**Moxie City**	**64.94**	**49**	P	**P**	**01 06 52.0**	**+0.4**
MXC				IAmb	IAmb	01 06 54.1	
	comp=Z,12nm,1.1s						
K02D	**Willamette Mer**	**65.09**	**54**	P	**P**	**01 06 53.6**	**+0.8**
K02D				IAmb	IAmb	01 06 55.4	
	comp=Z,9.4nm,1.0s						
AS01	**Alice Springs**	**65.14**	**190**	P	**P**	**01 06 53.8**	**+0.7**
AS31	**Alice Springs**	**65.15**	**190**		**P**	**01 06 52.2**	**-0.9**
ASAR	**Alice Springs**	**65.15**	**190**	P	**P**	**01 06 52.8**	**-0.4**
	comp=Z,9.3nm,0.8s,baz=10,slow=5.9,SNR=54						
ASAR				LR	LR	01 33 46.5	
	comp=Z,58nm,21.9s,baz=47,slow=35						
	comp=Z,9.3nm,0.8s						
E07A	**Sunnyside**	**65.20**	**49**	P	**P**	**01 06 53.8**	**+0.5**
E07A				IAmb	IAmb	01 06 55.8	
	comp=Z,18nm,1.2s						
MOS	**Moscow**	**65.23**	**323**	*e*P	**P**	**01 06 51.6**	**-1.8**
MOS				*e*		01 07 05.4	
PALK	**Pallekele**	**65.31**	**258**	LR	LR	01 38 35.3	
	comp=Z,93nm,18.6s,baz=56,slow=39						
KSXB	**Camp Six Broad**	**65.44**	**55**		**P**	**01 06 55.7**	**+0.6**
KSXB				IAmb	IAmb	01 06 57.9	
	comp=Z,12nm,1.2s						
D08A	**Wollman Farm,**	**65.44**	**48**	P	**P**	**01 06 55.4**	**+0.4**
UPNV	**Upernavik**	**65.52**	**7**	*i* P	**P**	**01 06 58.1**	**+3.1**
UPNV				IAmb	IAmb	01 07 03.9	
	comp=Z,45nm,1.2s						
NEW	**Newport**	**65.76**	**46**		**P**	**01 06 57.6**	**+0.6**
NEW				IAmb	IAmb	01 06 59.0	
	comp=Z,20nm,1.4s						
NEW	**Newport**	**65.76**	**46**	P	**P**	**01 06 57.6**	**+0.6**
NEW				pmax	pmax		
	comp=Z,20nm,1.4s						
VRH	**Novokhopyorsk**	**65.98**	**318**	*e*P	**P**	**01 06 57.0**	**-1.2**
VRH				pmax	pmax		
	comp=Z,12nm,0.6s						
KHMM	**Horse Mountain**	**66.07**	**56**	P	**P**	**01 06 59.7**	**+0.5**
KHMM				IAmb	IAmb	01 07 02.3	
	comp=Z,13nm,1.2s						
OBN	**Obninsk**	**66.09**	**323**	P	**P**	**01 06 59.0**	**0.0**
OBN	**Obninsk**	**66.09**	**323**	P	**P**	**01 06 58.9**	**0.0**
	comp=Z,12nm,0.6s,baz=39,slow=7.9,SNR=4.9						
	comp=Z,12nm,0.6s						
OBN	**Obninsk**	**66.09**	**323**	*e*P	**P**	**01 06 57.6**	**-1.3**
OBN				*i*		01 07 25.0	
OBN				pmax	pmax		
	comp=Z,24nm,1.3s						
OBN				MLR	MLR		
	comp=Z,290nm,18.0s						
FIA1	**FINESS Array S**	**66.18**	**332**		**P**	**01 06 59.7**	**+0.3**
FINES	**FINESS Array B**	**66.18**	**332**		**P**	**01 06 59.5**	**+0.1**
FINES	**FINESS Array B**	**66.18**	**332**	P	**P**	**01 06 59.8**	**+0.4**
	comp=Z,10nm,0.5s,baz=52,slow=6.4,SNR=85						
	comp=Z,10nm,0.5s						
FINES	**FINESS Array B**	**66.18**	**332**	*ce*P	**P**	**01 06 59.7**	**+0.3**
FINES				pmax	pmax		
	comp=Z,10.0nm,0.5s						
DZM	**Mont Dzumac**	**66.20**	**157**	*e*LR	LR	01 26 48.0	
	comp=Z,108nm,23.9s						
DZM	**Mont Dzumac**	**66.20**	**157**	LR	LR	01 34 49.9	
	comp=Z,60nm,19.1s,baz=0.0,slow=35						
YBH	**Yreka Blue Hor**	**66.22**	**55**		**P**	**01 07 01.0**	**+0.9**
YBH	**Yreka Blue Hor**	**66.22**	**55**	P	**P**	**01 07 01.0**	**+0.9**
YBH				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SUMG	**Summit**	**66.59**	**1**		**P**	**01 07 02.8**	**+0.4**
SUMG				IAmb	IAmb	01 07 11.8	
	comp=Z,14nm,0.7s						
SUMG	**Summit**	**66.59**	**1**	P	**P**	**01 07 02.8**	**+0.4**
SUMG				pmax	pmax		
	comp=Z,14nm,0.7s						
SUMG	**Summit**	**66.59**	**1**	*i* P	**P**	**01 07 02.2**	**-0.1**
SUMG				IAmb	IAmb	01 07 04.5	
	comp=Z,13nm,0.8s						
VORR	**Voronezh**	**66.95**	**319**	*e*P	**P**	**01 07 04.1**	**-0.4**
VORR				pmax	pmax		
	comp=Z,23nm,0.4s						
VSR	**Storozhevoye**	**67.25**	**319**	*e*P	**P**	**01 07 04.6**	**-1.8**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
QLP	**Quilpie**	**67.36**	**180**	P	**P**	**01 07 09.3**	**+2.1**
JTMT	**Jette**	**67.61**	**46**	P	**P**	**01 07 09.5**	**+0.6**
MAK	**Makhachkala**	**67.61**	**308**	*e*P	**P**	**01 07 04.2**	**-4.6**
MAK				*e*		01 09 36.2	
MAK				*e*PPP	PPP	01 11 11.0	
MAK				*e*S	**S**	**01 15 59.2**	**-6.6**
MAK				*e*SS	**SS**	**01 20 20.9**	**-4.9**
MAK				pmax	pmax		
	comp=Z,128nm,1.0s						
MAK				MLR	MLR		
	comp=Z,350nm,15.0s						
BMO	**Blue Mountains**	**67.64**	**50**		**P**	**01 07 09.7**	**+0.6**
BMO	**Blue Mountains**	**67.64**	**50**	P	**P**	**01 07 09.7**	**+0.6**
BMO				pmax	pmax		
	comp=Z,7.0nm,1.3s						
VSU	**Vasula**	**68.00**	**330**	*ce*P	**P**	**01 07 11.7**	**+0.7**
VSU				pmax	pmax		
	comp=Z,28nm,1.7s						
PLID	**Pearl Lake**	**68.25**	**49**		**P**	**01 07 13.2**	**+0.1**
SCO	**Scoresbysund**	**68.25**	**355**	P	**P**	**01 07 13.4**	**+1.0**
SCO	**Scoresbysund**	**68.25**	**355**	P	**P**	**01 07 13.4**	**+1.0**
SCO				pmax	pmax		
	comp=Z,11nm,1.4s						
WVOR	**Wild Horse Val**	**68.29**	**52**	P	**P**	**01 07 13.8**	**+0.5**

WVOR				IAmb	IAmb	01 07 15.7	
	comp=Z,19nm,1.4s						
WVOR	**Wild Horse Val**	**68.29**	**52**	P	**P**	**01 07 13.8**	**+0.5**
WVOR				pmax	pmax		
	comp=Z,19nm,1.5s						
SEKA	**Sheki**	**68.83**	**307**	P	**P**	**01 07 15.6**	**-1.0**
FFC	**Flin Flon**	**69.14**	**35**		**P**	**01 07 18.7**	**+0.5**
FFC	**Flin Flon**	**69.14**	**35**	P	**P**	**01 07 18.7**	**+0.5**
FFC				pmax	pmax		
	comp=Z,25nm,1.1s						
LYMT	**Lyon Mountain**	**69.15**	**45**	P	**P**	**01 07 19.5**	**+0.8**
MNGR	**Mingechevir, A**	**69.16**	**306**	P	**P**	**01 07 18.4**	**-0.1**
LKRN	**Lenkeran, Azer**	**69.33**	**304**	P	**P**	**01 07 19.6**	**-0.1**
FCC	**Fort Churchill**	**69.41**	**28**		**P**	**01 07 19.5**	**-0.2**
FCC				IAmb	IAmb	01 07 21.3	
	comp=Z,20nm,1.1s						
FCC	**Fort Churchill**	**69.41**	**28**	P	**P**	**01 07 19.5**	**-0.2**
FCC				pmax	pmax		
	comp=Z,20nm,1.1s						
GANJ	**Ganja**	**69.70**	**307**	P	**P**	**01 07 22.1**	**+0.2**
KVAR	**Kislovodsk Arr**	**69.82**	**311**	P	**P**	**01 07 24.9**	**+2.2**
	comp=Z,9.1nm,0.9s,baz=282,slow=14,SNR=8.9						
KVAR				LR	LR	01 43 46.3	
	comp=Z,148nm,19.8s,baz=270,slow=41						
	comp=Z,9.1nm,0.9s						
KIV	**Kislovodsk**	**69.83**	**311**		**P**	**01 07 23.1**	**+0.3**
KIV	**Kislovodsk**	**69.83**	**311**	⇑P	**P**	**01 07 24.2**	**+1.4**
KIV	**Kislovodsk**	**69.83**	**311**	*e*P	**P**	**01 07 23.0**	**+0.3**
KIV				pmax	pmax		
	comp=Z,37nm,1.0s						
KIV	**Kislovodsk**	**69.83**	**311**	P	**P**	**01 07 23.9**	**+1.1**
	comp=Z,365nmcomp=Z,41nm,1.1s						
KBZ	**Khabaz**	**69.84**	**311**	P	**P**	**01 07 24.1**	**+1.4**
	comp=Z,13nm,0.9s,baz=66,slow=3.1,SNR=24						
KBZ				LR	LR	01 41 14.2	
	comp=Z,122nm,19.5s,baz=26,slow=39						
	comp=Z,13nm,0.9s						
KBZ	**Khabaz**	**69.84**	**311**	*ce*P	**P**	**01 07 23.7**	**+1.0**
KBZ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SHA1	**Shidzhatmaz**	**69.98**	**311**	*i* P	**P**	**01 07 23.9**	**0.0**
ICESG	**Greenland Ices**	**70.07**	**1**	*i* P	**P**	**01 07 25.4**	**+1.2**
ICESG				IAmb	IAmb	01 07 27.1	
	comp=Z,20nm,1.1s						
MNK	**Minsk**	**70.29**	**326**	*i* P	**P**	**01 07 24.4**	**-0.9**
	comp=E,15nm,0.9s						
MNK				*i* P	**P**	**01 07 24.4**	**-0.9**
	comp=N,13nm,0.9s						
MNK				*i* P	**P**	**01 07 24.4**	**-0.9**
	comp=Z,27nm,0.8s,baz=46						
MNK				*i* PP	**PP**	**01 10 06.7**	**+6.4**
MNK				*i* PPP	PPP	01 11 42.4	
MNK				*i* S	**S**	**01 16 38.1**	**+0.9**
MNK				*i* SS	**SS**	**01 21 16.1**	**+10**
MNK				*i* SSS	SSS	01 24 28.5	
MNK				*i* LQ	LQ	01 34 18.4	
MNK				*i* LR	LR	01 38 50.3	
MNK				*i* LRM	MLR	01 41 25.6	
	comp=N,114nm,13.7s						
MNK				*i* LRM	MLR	01 42 07.2	
	comp=E,163nm,14.4s						
MNK				*i* LRM	MLR	01 42 12.6	
	comp=Z,246nm,14.5s						
MNK	**Minsk**	**70.29**	**326**	*i* P	**P**	**01 07 24.3**	**-0.9**
MNK				*i*		01 10 06.6	
MNK				*i* PPP	PPP	01 11 42.4	
MNK				*i* S	**S**	**01 16 38.1**	**+0.9**
MNK				pmax	pmax		
	comp=N,13nm,0.9s						
MNK				pmax	pmax		
	comp=Z,27nm,0.8s						
MNK				pmax	pmax		
	comp=E,15nm,0.9s						
MNK				MLR	MLR		
	comp=N,114nm,14.0s						
MNK				MLR	MLR		
	comp=E,163nm,14.0s						
MNK				MLR	MLR		
	comp=Z,246nm,15.0s						
NACGM	**Naroch**	**70.47**	**327**	⇑*i*P	**P**	**01 07 27.1**	**+0.7**
	comp=Z,19nm,0.9s,baz=46						
TRLG	**Trialeti**	**70.49**	**308**	P	**P**	**01 07 26.2**	**-0.7**
PLTM	**Poltava**	**70.56**	**319**	P	**P**	**01 07 26.9**	**-0.1**
NVAR	**Mina Array Bea**	**70.89**	**55**	P	**P**	**01 07 29.5**	**0.0**
NVAR	**Mina Array Bea**	**70.89**	**55**	P	**P**	**01 07 30.8**	**+1.2**
	comp=Z,2.2nm,0.8s,baz=292,slow=6.3,SNR=16						
	comp=Z,2.2nm,0.8s						
GNI	**Garni**	**70.96**	**307**	P	**P**	**01 07 30.2**	**+0.4**
GNI				IAmb	IAmb	01 07 46.7	
	comp=Z,33nm,1.5s						
GNI	**Garni**	**70.96**	**307**	P	**P**	**01 07 31.2**	**+1.4**
	comp=Z,5.2nm,1.0s,baz=92,slow=11,SNR=4.0						
GNI				LR	LR	01 41 46.3	
	comp=Z,117nm,18.9s,baz=63,slow=38						
	comp=Z,5.2nm,1.0s						
GNI	**Garni**	**70.96**	**307**	P	**P**	**01 07 30.2**	**+0.4**
GNI				pmax	pmax		
	comp=Z,33nm,1.5s						
YHL	**Hebgen Lake**	**71.08**	**47**		**P**	**01 07 31.4**	**+0.7**
YHL				IAmb	IAmb	01 07 33.0	
	comp=Z,15nm,1.3s						
NAX	**Nakhchivan**	**71.10**	**306**	P	**P**	**01 07 30.3**	**-0.3**
NB2	**NORSAR Subarra**	**71.22**	**338**	P	**P**	**01 07 30.7**	**-0.2**
	comp=Z,3.7nm,0.8s,baz=35,slow=6.2						
NOA	**NORSAR Array B**	**71.22**	**338**	P	**P**	**01 07 30.9**	**0.0**
	comp=Z,6.2nm,0.8s,baz=36,slow=6.1,SNR=17						
	comp=Z,6.2nm,0.8s						
HFS	**Hagfors**	**71.22**	**336**	P	**P**	**01 07 31.2**	**+0.3**
	comp=Z,5.2nm,0.5s,baz=40,slow=7.7,SNR=22						
	comp=Z,5.2nm,0.5s						
ELK	**Elko**	**71.34**	**52**		**P**	**01 07 32.7**	**+0.5**
ELK	**Elko**	**71.34**	**52**	P	**P**	**01 07 32.7**	**+0.5**
ELK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
NORES	**NORESS Array B**	**71.38**	**338**	P	**P**	**01 07 30.4**	**-1.4**
SFJD	**Kangerlussuaq**	**71.62**	**6**	LR	LR	01 42 37.6	
	comp=Z,84nm,18.4s,baz=340,slow=39						
HVU	**Hansel Valley**	**72.13**	**50**	P	**P**	**01 07 37.8**	**+0.9**
HVU	**Hansel Valley**	**72.13**	**50**	P	**P**	**01 07 37.8**	**+0.9**
HVU				pmax	pmax		
	comp=Z,8.0nm,1.0s						
FRB	**Frobisher Bay**	**72.31**	**15**	LR	LR	01 43 28.9	
	comp=Z,135nm,18.9s,baz=330,slow=39						
AK03	**Malin Array Si**	**72.33**	**323**	P	**P**	**01 07 37.9**	**+0.2**
AKASG	**Malin Array Be**	**72.35**	**323**	P	**P**	**01 07 37.1**	**-0.6**
AKASG	**Malin Array Be**	**72.35**	**323**	P	**P**	**01 07 37.8**	**0.0**
	comp=Z,7.8nm,0.4s,baz=44,slow=6.3,SNR=114						
	comp=Z,7.8nm,0.4s						
AKBB	**Malin Array Si**	**72.35**	**323**		**P**	**01 07 37.2**	**-0.6**
AKBB	**Malin Array Si**	**72.35**	**323**	*ce*P	**P**	**01 07 37.3**	**-0.5**
AKBB				pmax	pmax		
	comp=Z,25nm,0.8s						
AKBB	**Malin Array Si**	**72.35**	**323**	P	**P**	**01 07 38.0**	**+0.2**
AK04	**Malin Array Si**	**72.36**	**323**	P	**P**	**01 07 38.1**	**+0.3**
AK01	**Malin Array Si**	**72.36**	**323**	P	**P**	**01 07 38.1**	**+0.3**
KIEV	**Kiev**	**72.36**	**323**	⇑P	**P**	**01 07 38.0**	**+0.2**
KIEV	**Kiev**	**72.36**	**323**	P	**P**	**01 07 38.0**	**+0.2**
KIEV	**Kiev**	**72.36**	**323**	P	**P**	**01 07 38.0**	**+0.2**
	comp=Z,116nm,0.8s						
AK22	**Malin Array Si**	**72.37**	**323**	P	**P**	**01 07 38.2**	**+0.3**
AK21	**Malin Array Si**	**72.38**	**323**	P	**P**	**01 07 37.9**	**0.0**
AK09	**Malin Array Si**	**72.38**	**323**	P	**P**	**01 07 38.0**	**0.0**
AK08	**Malin Array Si**	**72.38**	**323**	P	**P**	**01 07 37.9**	**-0.1**
AK02	**Malin Array Si**	**72.39**	**323**	P	**P**	**01 07 38.0**	**0.0**
AK11	**Malin Array Si**	**72.39**	**323**	P	**P**	**01 07 38.4**	**+0.4**
AK15	**Malin Array Si**	**72.40**	**323**	P	**P**	**01 07 38.1**	**0.0**
AK18	**Malin Array Si**	**72.40**	**323**	P	**P**	**01 07 38.0**	**-0.1**
LAO	**LASA Array**	**72.53**	**43**	P	**P**	**01 07 39.8**	**+0.8**
LAO				IAmb	IAmb	01 07 41.3	
	comp=Z,16nm,1.1s						
UOSS	**Minazif**	**72.57**	**288**		**P**	**01 07 39.0**	**-0.6**
R11B	**Troy Canyon, C**	**72.62**	**54**		**P**	**01 07 40.5**	**+0.6**
STKA	**Stephens Creek**	**72.67**	**182**	P	**P**	**01 07 39.7**	**-0.1**
STKA	**Stephens Creek**	**72.67**	**182**	P	**P**	**01 07 39.6**	**-0.1**
	comp=Z,1.0nm,0.3s,baz=343,slow=9.0,SNR=2.9						
STKA				LR	LR	01 39 33.9	
	comp=Z,49nm,20.7s,baz=24,slow=36						
	comp=Z,1.0nm,0.3s						
STRU	**Stroemstad**	**72.87**	**337**	*e*P	**P**	**01 07 40.0**	**-0.8**
MI28	**Mi28,Pidlybu**	**72.89**	**324**	P	**P**	**01 07 41.5**	**+0.5**
FORT	**Forrest**	**73.07**	**194**	P	**P**	**01 07 42.4**	**+0.3**
FORT				IAmb	IAmb	01 09 43.9	
	comp=Z,22nm,0.9s						
BW06	**Boulder Array**	**73.33**	**48**	P	**P**	**01 07 44.1**	**+0.1**
BW06				IAmb	IAmb	01 07 45.8	
	comp=Z,15nm,1.3s						
PDAR	**Pinedale Array**	**73.33**	**48**	P	**P**	**01 07 44.6**	**+0.5**
	comp=Z,2.3nm,0.4s,baz=310,slow=0.4,SNR=31						
	comp=Z,2.3nm,0.4s						
RNPP9	**Sopachiv**	**73.33**	**325**	P	**P**	**01 07 43.6**	**0.0**
RNPP8	**Varash**	**73.40**	**325**	P	**P**	**01 07 44.6**	**+0.6**
RNPP5	**Staryi Chortor**	**73.46**	**325**	P	**P**	**01 07 44.8**	**+0.4**
BORU	**Boraas**	**73.52**	**335**	*e*P	**P**	**01 07 45.1**	**+0.5**
LUBAR	**Lubar, Ukraine**	**73.56**	**323**	P	**P**	**01 07 45.0**	**0.0**
BLEU	**Blekinge**	**73.57**	**333**	*i* P	**P**	**01 07 44.7**	**-0.2**
GURO	**Guroymak-BITLI**	**73.59**	**307**	P	**P**	**01 07 45.9**	**+0.3**
BORG	**Borgarnes**	**73.85**	**354**	LR	LR	01 42 42.6	
	comp=Z,21nm,18.1s,baz=1.1,slow=38						
BBOO	**Buckleboo**	**73.94**	**187**	P	**P**	**01 07 48.3**	**+1.1**
ONAU	**Onsala**	**73.98**	**335**	*i* P	**P**	**01 07 46.1**	**-1.2**
FABU	**Falkenberg**	**74.05**	**335**	*i* P	**P**	**01 07 46.9**	**-0.8**
DEL	**Delary**	**74.10**	**334**	*i* P	**P**	**01 07 49.1**	**+1.1**
MORW	**Morawa**	**74.52**	**205**	P	**P**	**01 07 50.5**	**-0.2**
SORM	**Soroca**	**74.55**	**321**	⇓P	**P**	**01 07 50.9**	**+0.1**
SORM	**Soroca**	**74.55**	**321**	P	**P**	**01 07 50.9**	**+0.1**
SORM	**Soroca**	**74.55**	**321**	P	**P**	**01 07 51.0**	**+0.1**
	comp=Z,27nm,1.3s						
MVU	**Marysvale**	**74.56**	**52**	P	**P**	**01 07 51.9**	**+0.5**
BJUU	**Bjuv**	**74.70**	**334**	*i* P	**P**	**01 07 54.4**	**+2.9**
ULM	**Lac du Bonnet**	**74.94**	**35**	P	**P**	**01 07 52.9**	**-0.2**
	comp=Z,1.8nm,0.4s,baz=326,slow=11,SNR=4.4						
	comp=Z,1.8nm,0.4s						
PURM	**Purcari**	**74.95**	**319**	P	**P**	**01 07 53.4**	**+0.3**
	comp=Z,20nm,1.1s						
PFO	**Pinyon Flats O**	**75.06**	**58**	LR	LR	01 36 53.3	
	comp=Z,61nm,18.6s,baz=236,slow=32						
KMPD	**K-Podol'skiy**	**75.13**	**323**	P	**P**	**01 07 53.3**	**-0.8**
MARD	**Mardin**	**75.15**	**307**		**P**	**01 07 55.1**	**+0.4**
RSSD	**Black Hills**	**75.40**	**44**		**P**	**01 07 56.2**	**+0.1**
RSSD				IAmb	IAmb	01 07 57.5	
	comp=Z,10nm,0.9s						
RSSD	**Black Hills**	**75.40**	**44**	P	**P**	**01 07 56.2**	**+0.1**
RSSD				pmax	pmax		
	comp=Z,11nm,0.9s						
STNU	**Starunia**	**75.91**	**324**	P	**P**	**01 07 59.3**	**+0.6**
KSV	**Kosov**	**75.95**	**323**	P	**P**	**01 07 59.6**	**+0.7**
KWP	**Kalwaria Pacla**	**76.02**	**325**	*e*P	**P**	**01 08 00.1**	**+0.8**
KWP	**Kalwaria Pacla**	**76.02**	**325**	P	**P**	**01 08 00.5**	**+1.2**
KWP	**Kalwaria Pacla**	**76.02**	**325**	P	**P**	**01 08 00.2**	**+0.9**
	comp=Z,41nm,1.1s						
EPLO	**Experimental L**	**76.30**	**34**		**P**	**01 08 00.5**	**-0.4**
EPLO				IAmb	IAmb	01 08 01.8	
	comp=Z,19nm,1.1s						
BUR08	**Bucovina Ar. S**	**76.38**	**322**		**P**	**01 08 01.7**	**+0.2**
BUR08				IAmb	IAmb	01 08 03.2	
	comp=Z,12nm,0.7s						
BURAR	**Bucovina Array**	**76.39**	**322**	P	**P**	**01 08 01.9**	**+0.3**
BURAR				IAmb	IAmb	01 08 03.5	
	comp=Z,15nm,0.7s						
BURAR	**Bucovina Array**	**76.39**	**322**	⇑P	**P**	**01 08 02.5**	**+1.0**
BURAR	**Bucovina Array**	**76.39**	**322**	P	**P**	**01 08 02.5**	**+1.0**
TESR	**Tescani**	**76.53**	**321**	⇑P	**P**	**01 08 02.5**	**+0.3**
TESR	**Tescani**	**76.53**	**321**	P	**P**	**01 08 02.3**	**+0.1**
	comp=Z,26nm,1.1s						
RAKU	**Rahkiv**	**76.57**	**323**	P	**P**	**01 08 02.5**	**+0.1**
KOLS	**Kolonicke sedl**	**76.73**	**325**	*e*P	**P**	**01 08 04.5**	**+1.2**
KOLS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KOLS	**Kolonicke sedl**	**76.73**	**325**	*e*P	**P**	**01 08 04.5**	**+1.2**
ILGA	**Ilgaz**	**76.74**	**313**		**P**	**01 08 04.3**	**+0.5**
CFR	**Carcaliu**	**76.77**	**319**	⇑P	**P**	**01 08 03.3**	**-0.2**
CFR	**Carcaliu**	**76.77**	**319**	P	**P**	**01 08 03.3**	**-0.2**
ONER	**Baraj Valea Uz**	**76.78**	**321**	⇓P	**P**	**01 08 04.9**	**+1.3**
OJC	**Ojcow**	**76.80**	**327**	*e*P	**P**	**01 08 04.4**	**+0.7**
OJC	**Ojcow**	**76.80**	**327**		**P**	**01 08 03.9**	**+0.2**
OJC	**Ojcow**	**76.80**	**327**	P	**P**	**01 08 03.9**	**+0.2**
OJC	**Ojcow**	**76.80**	**327**	P	**P**	**01 08 04.4**	**+0.7**
STHS	**Stebnicka Huta**	**76.81**	**326**	*e*P	**P**	**01 08 04.3**	**+0.5**
STHS	**Stebnicka Huta**	**76.81**	**326**	*e*P	**P**	**01 08 04.3**	**+0.5**
TPGR	**Topolog**	**76.86**	**319**	⇑P	**P**	**01 08 04.6**	**+0.5**
VRI	**Vrincioaia**	**76.96**	**320**	⇑P	**P**	**01 08 05.6**	**+1.0**
VRI	**Vrincioaia**	**76.96**	**320**	P	**P**	**01 08 05.6**	**+1.0**
PLOR	**Plostina**	**77.00**	**320**	⇓P	**P**	**01 08 05.7**	**+0.7**
PLOR	**Plostina**	**77.00**	**320**	P	**P**	**01 08 05.6**	**+0.7**
WUAZ	**Wupatki**	**77.02**	**54**		**P**	**01 08 06.0**	**+0.6**
BNN	**Bunyan**	**77.04**	**310**	P	**P**	**01 08 05.7**	**+0.3**
BNN				IAmb	IAmb	01 08 07.4	
	comp=Z,21nm,0.9s						
BMR	**Baia Mare**	**77.13**	**323**	⇑P	**P**	**01 08 06.0**	**+0.3**
BMR	**Baia Mare**	**77.13**	**323**	P	**P**	**01 08 05.9**	**+0.3**
TURR	**Turia**	**77.16**	**321**	⇑P	**P**	**01 08 04.6**	**-1.3**
ARCR	**ARCALIA**	**77.18**	**323**	⇑P	**P**	**01 08 07.6**	**+1.8**
NIE	**Niedzica**	**77.21**	**326**	*e*P	**P**	**01 08 07.0**	**+1.0**
NIE	**Niedzica**	**77.21**	**326**	P	**P**	**01 08 07.6**	**+1.6**
OZUR		**77.24**	**321**	⇑P	**P**	**01 08 07.2**	**+0.9**
BOSR	**Bodos**	**77.31**	**321**	⇑P	**P**	**01 08 08.5**	**+1.9**
GAZ	**Gaziantep**	**77.38**	**308**	P	**P**	**01 08 07.3**	**+0.1**
ISCO	**Idaho Springs**	**77.52**	**48**		**P**	**01 08 08.7**	**+0.4**
ISCO	**Idaho Springs**	**77.52**	**48**	P	**P**	**01 08 08.7**	**+0.4**
ISCO				pmax	pmax		
	comp=Z,11nm,1.4s						
DOPR	**Dopca**	**77.52**	**321**	⇑P	**P**	**01 08 08.7**	**+0.9**
MLR	**Muntele Rosu**	**77.61**	**321**		**P**	**01 08 09.2**	**+0.7**
MLR				IAmb	IAmb	01 08 11.1	
	comp=Z,18nm,1.4s						
MLR	**Muntele Rosu**	**77.61**	**321**	⇓P	**P**	**01 08 07.6**	**-0.8**
MLR	**Muntele Rosu**	**77.61**	**321**	P	**P**	**01 08 09.2**	**+0.7**
MLR				pmax	pmax		
	comp=Z,18nm,1.4s						
ICOR	**Ion Corvin**	**77.69**	**319**	⇑P	**P**	**01 08 09.9**	**+1.1**
BR131	**Keskin Array S**	**77.70**	**312**		**P**	**01 08 08.5**	**-0.6**
BR131				IAmb	IAmb	01 08 10.9	
	comp=Z,19nm,1.6s						
BR131	**Keskin Array S**	**77.70**	**312**	*i* P	**P**	**01 08 09.2**	**+0.1**
BRTR	**Keskin Array B**	**77.70**	**312**	P	**P**	**01 08 09.4**	**+0.3**
BRTR	**Keskin Array B**	**77.70**	**312**	P	**P**	**01 08 09.9**	**+0.8**
	comp=Z,1.5nm,0.4s,baz=85,slow=3.8,SNR=15						
BRTR				PP	**PP**	**01 11 00.7**	**-3.0**
	comp=Z,1.1nm,0.7s,baz=67,slow=5.4,SNR=3.8						
BRTR				LR	LR	01 48 04.5	
	comp=Z,113nm,18.5s,baz=42,slow=40						
	comp=Z,1.5nm,0.4s						
BRTR	**Keskin Array B**	**77.70**	**312**	*ce*P	**P**	**01 08 09.8**	**+0.7**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KSP	**Ksiaz**	**77.71**	**329**	*e*P	**P**	**01 08 09.5**	**+0.7**
KSP	**Ksiaz**	**77.71**	**329**	P	**P**	**01 08 09.9**	**+1.1**
NWAO	**Narrogin (SRO)**	**77.74**	**203**	P	**P**	**01 08 08.6**	**-0.4**
NWAO	**Narrogin (SRO)**	**77.74**	**203**	P	**P**	**01 08 08.6**	**-0.4**
NWAO				pmax	pmax		
	comp=Z,80nm,1.4s						
LANS	**Liptovska Anna**	**77.76**	**326**	*e*P	**P**	**01 08 11.0**	**+1.9**
LANS				pmax	pmax		
	comp=Z,10.0nm,1.3s						
LANS	**Liptovska Anna**	**77.76**	**326**	*e*P	**P**	**01 08 11.0**	**+1.9**
OKC	**Ostrava-Krasne**	**77.77**	**328**	AMS	AMS	01 47 20.0	
	comp=Z,200nm,15.6s						
MESR	**Meseseni**	**77.77**	**323**	⇑P	**P**	**01 08 10.7**	**+1.5**
CBBR	**Cluj-Babes-Bol**	**77.78**	**323**	⇑P	**P**	**01 08 10.4**	**+1.1**
GORT1	**Trebel**	**77.80**	**333**	*e*P	**P**	**01 08 10.0**	**+0.9**
	comp=Z,28nm,1.3s,baz=34,slow=4.8						
CJR	**Cluj-Napoca**	**77.80**	**323**	⇓P	**P**	**01 08 10.4**	**+0.9**
CJR	**Cluj-Napoca**	**77.80**	**323**	P	**P**	**01 08 10.3**	**+0.9**
STEB	**Steborice**	**77.84**	**328**	*e*P	**P**	**01 08 11.0**	**+1.5**
KIRS	**Kirsehir-Merke**	**77.95**	**312**	⇑P	**P**	**01 08 10.5**	**+0.1**
OSTC	**Ostas**	**77.97**	**329**	AMS	AMS	01 51 20.0	
	comp=Z,200nm,17.1s						
CHVC	**Chvalec**	**78.01**	**329**	*e*P	**P**	**01 08 11.7**	**+1.2**
CHVC	**Chvalec**	**78.01**	**329**	*e*P	**P**	**01 08 11.7**	**+1.2**
MARR	**Marisel-Cluj**	**78.05**	**323**	⇑P	**P**	**01 08 09.6**	**-1.2**
MORC	**Moravsky Berou**	**78.06**	**328**		**P**	**01 08 11.2**	**+0.4**
MORC				IAmb	IAmb	01 08 12.9	
	comp=Z,16nm,1.0s						
MORC	**Moravsky Berou**	**78.06**	**328**	*e*P	**P**	**01 08 11.4**	**+0.6**
MORC	**Moravsky Berou**	**78.06**	**328**	⇑P	**P**	**01 08 12.0**	**+1.2**
MORC	**Moravsky Berou**	**78.06**	**328**	P	**P**	**01 08 11.2**	**+0.4**
MORC				pmax	pmax		
	comp=Z,16nm,1.0s						
ANTO	**Ankara**	**78.07**	**313**	P	**P**	**01 08 11.2**	**+0.1**
ANTO				IAmb	IAmb	01 08 13.0	
	comp=Z,14nm,0.8s						
ANTO	**Ankara**	**78.07**	**313**	⇑P	**P**	**01 08 11.5**	**+0.5**
ANTO	**Ankara**	**78.07**	**313**	P	**P**	**01 08 11.2**	**+0.1**
ANTO				pmax	pmax		
	comp=Z,14nm,0.8s						
VOIR		**78.07**	**321**	⇑P	**P**	**01 08 11.5**	**+0.5**
VOIR		**78.07**	**321**	P	**P**	**01 08 11.5**	**+0.5**
UPC	**Upice**	**78.09**	**329**	*e*P	**P**	**01 08 12.0**	**+1.1**
UPC	**Upice**	**78.09**	**329**	*e*P	**P**	**01 08 12.0**	**+1.1**
DPC	**Dobruska-Polom**	**78.09**	**329**	*e*P	**P**	**01 08 12.2**	**+1.2**
DPC				AMS	AMS	01 51 10.0	
	comp=Z,200nm,16.1s						
DPC	**Dobruska-Polom**	**78.09**	**329**	*e*P	**P**	**01 08 12.2**	**+1.2**
DPC				MLR	MLR		
	comp=Z,200nm,16.1s						
KRLC	**Kraliky**	**78.13**	**328**	AMS	AMS	01 51 20.0	
	comp=Z,200nm,13.1s						
DRGR		**78.15**	**323**	⇑P	**P**	**01 08 12.2**	**+0.8**
DRGR		**78.15**	**323**	P	**P**	**01 08 12.2**	**+0.8**
S22A	**4UR Ranch, Cre**	**78.23**	**50**		**P**	**01 08 13.1**	**+0.8**
MAUC	**Maruska**	**78.27**	**327**	*e*P	**P**	**01 08 13.2**	**+1.3**
FLTG	**Flechtingen**	**78.36**	**333**	*e*P	**P**	**01 08 12.7**	**+0.4**
	baz=34,slow=4.8						
PSZ	**Piszkesteto**	**78.53**	**325**		**P**	**01 08 14.2**	**+0.7**
PSZ				IAmb	IAmb	01 08 15.7	
	comp=Z,17nm,1.1s						
PSZ	**Piszkesteto**	**78.53**	**325**	⇑P	**P**	**01 08 14.7**	**+1.2**
PSZ	**Piszkesteto**	**78.53**	**325**	P	**P**	**01 08 14.2**	**+0.7**
PSZ				pmax	pmax		
	comp=Z,17nm,1.1s						
VYHS	**Vyhne**	**78.53**	**326**	*e*P	**P**	**01 08 14.3**	**+0.9**
VYHS				pmax	pmax		
	comp=Z,12nm,1.2s						
VYHS	**Vyhne**	**78.53**	**326**	*e*P	**P**	**01 08 14.3**	**+0.9**
EYMN	**Ely**	**78.57**	**34**		**P**	**01 08 13.3**	**-0.3**
EYMN				IAmb	IAmb	01 08 14.7	
	comp=Z,19nm,1.1s						
CLL	**Collm**	**78.58**	**331**	P	**P**	**01 08 13.4**	**-0.2**
CLL				IAmb	IAmb	01 08 14.9	
	comp=Z,15nm,0.7s						
CLL	**Collm**	**78.58**	**331**	P	**P**	**01 08 13.4**	**-0.2**
CLL				pmax	pmax		
	comp=Z,15nm,0.7s						
CLL	**Collm**	**78.58**	**331**	*e*P	**P**	**01 08 13.9**	**+0.4**
	comp=Z,16nm,0.8s,baz=34,slow=4.8						
CLL	**Collm**	**78.58**	**331**	⇓*i*P	**P**	**01 08 13.7**	**+0.2**
	comp=Z,18nm,0.8s						
CLL				*i* PcP	**PcP**	**01 08 22.9**	**+0.3**
CLL				*i* x	x	01 08 32.9	
	comp=Z,16nm,1.1s						
CLL				AMS	AMS	01 43 00.0	
	comp=N,200nm,19.7s						
CLL				AMS	AMS	01 43 00.0	
	comp=E,200nm,19.7s						
CLL				AMS	AMS	01 46 00.0	
	comp=Z,200nm,18.8s						
BRG	**Berggiesshubel**	**78.58**	**330**	*e*P	**P**	**01 08 14.3**	**+0.7**
	comp=Z,5.8nm,0.9s,baz=34,slow=4.8						
BRG	**Berggiesshubel**	**78.58**	**330**	*e*P	**P**	**01 08 14.3**	**+0.7**
BRG				Amp		01 08 14.7	
	comp=Z,5.8nm,0.9s						
OGNE	**Ogallala**	**78.67**	**45**		**P**	**01 08 14.7**	**+0.3**
ASSE	**Asse, Remlinge**	**78.72**	**333**	*e*P	**P**	**01 08 15.3**	**+1.0**
	comp=Z,7.0nm,0.9s,baz=34,slow=4.8						
JAVC	**Velka Javorina**	**78.73**	**327**	*e*P	**P**	**01 08 16.4**	**+1.9**
VRAC	**Vranov**	**78.81**	**328**	P	**P**	**01 08 15.4**	**+0.5**
	comp=Z,11nm,1.0s,baz=45,slow=5.6,SNR=15						
VRAC				LR	LR	01 47 04.7	
	comp=Z,119nm,18.5s,baz=30,slow=39						
	comp=Z,11nm,1.0s						
VRAC	**Vranov**	**78.81**	**328**	*e*P	**P**	**01 08 15.8**	**+0.9**
VRAC	**Vranov**	**78.81**	**328**	⇑P	**P**	**01 08 15.2**	**+0.3**
VRAC	**Vranov**	**78.81**	**328**	P	**P**	**01 08 15.2**	**+0.3**
GOPC	**GO Pecny, Ondr**	**79.04**	**329**	*e*P	**P**	**01 08 17.4**	**+1.3**
GOPC	**GO Pecny, Ondr**	**79.04**	**329**	*e*P	**P**	**01 08 17.4**	**+1.3**
PRA	**Prague**	**79.05**	**330**	*e*P	**P**	**01 08 17.7**	**+1.6**
PRA				AMS	AMS	01 49 20.0	
	comp=Z,300nm,17.5s						
PRA	**Prague**	**79.05**	**330**	*e*P	**P**	**01 08 17.7**	**+1.6**
PRA				MLR	MLR		
	comp=Z,300nm,17.5s						
PRU	**Pruhonice**	**79.07**	**330**	*e*P	**P**	**01 08 17.2**	**+0.9**
PRU				AMS	AMS	01 49 10.0	
	comp=Z,300nm,13.4s						
PRU	**Pruhonice**	**79.07**	**330**	*e*P	**P**	**01 08 17.2**	**+0.9**
PRU				MLR	MLR		
	comp=Z,300nm,13.4s						
PRU				MLR	MLR		
	comp=Z,1µm,19.0s						
KRUC	**Moravsky**	**79.09**	**328**	*e*P	**P**	**01 08 17.3**	**+0.9**
NEUB	**Neuenburg**	**79.10**	**332**	*e*P	**P**	**01 08 17.4**	**+1.0**
	comp=Z,18nm,1.0s,baz=34,slow=4.8						
SMOL	**Smolenice**	**79.10**	**327**	*e*P	**P**	**01 08 18.3**	**+1.8**
SMOL				pmax	pmax		
	comp=Z,12nm,1.4s						
GZR	**Gura Zlata**	**79.17**	**322**	⇑P	**P**	**01 08 17.5**	**+0.5**
GZR	**Gura Zlata**	**79.17**	**322**	P	**P**	**01 08 17.5**	**+0.5**
SURR	**Surduc**	**79.20**	**323**	⇓P	**P**	**01 08 17.1**	**0.0**
TREC	**Trest**	**79.26**	**329**	*e*P	**P**	**01 08 18.3**	**+0.9**
TREC	**Trest**	**79.26**	**329**	*e*P	**P**	**01 08 18.3**	**+0.9**
MODS	**Modra-Piesok**	**79.27**	**327**	*e*P	**P**	**01 08 18.7**	**+1.2**
MODS				pmax	pmax		
	comp=Z,40nm,1.3s						
MODS	**Modra-Piesok**	**79.27**	**327**	*e*P	**P**	**01 08 18.7**	**+1.2**
SRO	**Srobarova**	**79.28**	**326**	*e*P	**P**	**01 08 19.0**	**+1.5**
SRO				pmax	pmax		
	comp=Z,31nm,1.5s						
SRO	**Srobarova**	**79.28**	**326**	*e*P	**P**	**01 08 19.0**	**+1.5**
BORA	**Eskisehir**	**79.34**	**314**		**P**	**01 08 18.2**	**+0.2**
ECSD	**EROS Data Cent**	**79.42**	**40**		**P**	**01 08 18.1**	**-0.2**
ECSD				IAmb	IAmb	01 08 19.7	
	comp=Z,17nm,0.9s						
GTTG	**Gottingen**	**79.46**	**333**	*e*P	**P**	**01 08 19.2**	**+0.9**
	comp=Z,11nm,0.7s,baz=34,slow=4.8						
TUC	**Tucson**	**79.52**	**56**		**P**	**01 08 20.0**	**+0.8**
TUC	**Tucson**	**79.52**	**56**	P	**P**	**01 08 20.0**	**+0.8**
TUC				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BZS	**Buzias**	**79.53**	**323**	⇑P	**P**	**01 08 18.1**	**-0.9**
BZS	**Buzias**	**79.53**	**323**	P	**P**	**01 08 18.0**	**-0.9**
IBBN	**Ibbenburen**	**79.55**	**334**	*e*P	**P**	**01 08 19.5**	**+0.7**
	comp=Z,25nm,1.1s,baz=34,slow=4.8						
MOX	**Moxa**	**79.62**	**332**	*e*P	**P**	**01 08 20.2**	**+0.9**
	comp=Z,13nm,1.2s,baz=34,slow=4.8						
ZVC	**Zvikov**	**79.65**	**329**	*e*P	**P**	**01 08 20.4**	**+0.9**
ZVC				AMS	AMS	01 49 40.0	
	comp=Z,200nm,21.6s						
HERR	**Herculane**	**79.73**	**322**	⇑P	**P**	**01 08 20.4**	**+0.4**
EKA	**Eskdalemuir Ar**	**79.96**	**342**	P	**P**	**01 08 21.0**	**0.0**
	comp=Z,2.4nm,0.7s,baz=15,slow=5.8,SNR=7.3						
	comp=Z,2.4nm,0.7s						
MANZ	**Manzenberg**	**79.99**	**331**	*e*P	**P**	**01 08 22.3**	**+1.0**
	comp=Z,1.8nm,1.0s,baz=34,slow=4.8						
T25A	**Trinidad**	**80.04**	**49**	P	**P**	**01 08 22.9**	**+0.8**
CKRC	**Cesky Krumlov**	**80.10**	**329**	*e*P	**P**	**01 08 22.4**	**+0.4**
CKRC				AMS	AMS	01 48 50.0	
	comp=Z,200nm,18.8s						
CKRC	**Cesky Krumlov**	**80.10**	**329**	*e*P	**P**	**01 08 22.4**	**+0.4**
CKRC				MLR	MLR		
	comp=Z,200nm,18.8s						
ROTZ	**Rotzenmuhle**	**80.13**	**331**	*e*P	**P**	**01 08 23.3**	**+1.2**
	comp=Z,2.8nm,1.1s,baz=34,slow=4.8						
KHC	**Kasperske Hory**	**80.13**	**330**	*e*P	**P**	**01 08 23.1**	**+0.9**
KHC				AMS	AMS	01 48 30.0	
	comp=Z,200nm,12.9s						
KHC	**Kasperske Hory**	**80.13**	**330**	*ce*P	**P**	**01 08 22.6**	**+0.4**
KHC				pmax	pmax		
	comp=Z,21nm,0.7s						
CONA	**Conrad Observa**	**80.20**	**328**	*i* pP	pP	01 08 24.3	+0.2
	comp=Z,18nm,1.3s,SNR=10						
RONA	**Rosalia, Austr**	**80.21**	**327**	*i* pP	pP	01 08 24.4	+0.3
	comp=Z,24nm,1.1s,SNR=11						
GEC2	**GERESS Array S**	**80.32**	**329**	P	**P**	**01 08 23.2**	**-0.1**
GEC2	**GERESS Array S**	**80.32**	**329**	*e*P	**P**	**01 08 24.1**	**+0.9**
	comp=Z,12nm,1.3s,baz=34,slow=4.8						
GERES	**GERESS Array B**	**80.32**	**329**	P	**P**	**01 08 23.4**	**+0.2**
GERES	**GERESS Array B**	**80.32**	**329**	P	**P**	**01 08 23.8**	**+0.5**
	comp=Z,1.8nm,0.5s,baz=41,slow=6.0,SNR=21						
GERES				LR	LR	01 47 09.1	
	comp=Z,123nm,19.5s,baz=16,slow=38						
	comp=Z,1.8nm,0.5s						
GERES	**GERESS Array B**	**80.32**	**329**	P	**P**	**01 08 23.4**	**+0.2**
ANMO	**Albuquerque**	**80.37**	**52**		**P**	**01 08 24.3**	**+0.4**
ANMO	**Albuquerque**	**80.37**	**52**	*i* P	**P**	**01 08 23.8**	**-0.1**
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
WET	**Wettzell**	**80.39**	**330**	*e*P	**P**	**01 08 24.8**	**+1.3**
	comp=Z,17nm,1.1s,baz=34,slow=4.8						
MORH	**Mrgy, Hungar**	**80.39**	**325**	⇑P	**P**	**01 08 23.8**	**+0.3**
DUN6	**Lazy B Ranch**	**80.41**	**55**	P	**P**	**01 08 24.1**	**0.0**
DUN6				IAmb	IAmb	01 08 25.9	
	comp=Z,25nm,1.1s						
BUG	**Bochum--Univer**	**80.45**	**334**	*e*P	**P**	**01 08 24.4**	**+0.7**

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       comp=Z,8.7nm,1.0s,baz=34,slow=4.8
GRF    Grafenberg Arr   80.55 331  eP     P       01 08 25.8 +1.4
       comp=Z,22nm,0.9s,baz=34,slow=4.8
GRFO   Grafenberg       80.56 331   P     P       01 08 24.5 +0.2
GRFO                                IAmb  IAmb    01 08 26.4
       comp=Z,20nm,0.9s
GRFO   Grafenberg       80.56 331   P     P       01 08 24.5 +0.2
GRFO                                pmax  pmax
       comp=Z,20nm,0.9s
FRGS   Fruska Gora      80.70 324⇑iP      P       01 08 25.9 +0.6
SCHQ   Schefferville    80.82  18   P     P       01 08 25.5 -0.2
       comp=Z,10nm,0.9s,baz=346,slow=4.2,SNR=6.0
SCHQ                                LR    LR      01 48 03.9
       comp=Z,74nm,18.7s,baz=322,slow=38
       comp=Z,10nm,0.9s
ARSA   Arzberg          80.88 327  eP     P       01 08 27.0 +0.8
       comp=Z,6.8nm,0.8s
MOA    Molln            80.91 328  epP    pP      01 08 27.7 -0.2
       comp=Z,11nm,1.5s
ALN    Alexandroupoli   80.93 317   P     P       01 08 26.7 +0.2
ALN                                 IAmb  IAmb    01 08 28.4
       comp=Z,17nm,1.2s
ALN    Alexandroupoli   80.93 317   P     P       01 08 26.7 +0.2
ALN                                 pmax  pmax
       comp=Z,17nm,1.2s
ASF    Jabal al Asfar   80.95 305   LR    LR      01 49 02.2
       comp=Z,84nm,18.1s,baz=98,slow=39
RDO    Rodhopi          81.00 318   P     P       01 08 27.6 +0.7
RDO                                 IAmb  IAmb    01 08 28.9
       comp=Z,22nm,1.1s
RAYN   Ar Rayn          81.03 293         P       01 08 26.8 -0.6
RAYN   Ar Rayn          81.03 293   P     P       01 08 26.8 -0.6
RAYN                                pmax  pmax
       comp=Z,6.0nm,1.1s
BIOA   Bad Ischl, Aus   81.28 329  i pP   pP      01 08 29.7 -0.1
       comp=Z,19nm,1.1s,SNR=7.3
MMAI   Mount Meron Ar   81.29 306   P     P       01 08 29.8 +1.1
       comp=Z,4.8nm,0.8s,baz=26,slow=4.1,SNR=6.6
MMAI                                LR    LR      01 48 05.7
       comp=Z,122nm,19.6s,baz=34,slow=38
       comp=Z,4.8nm,0.8s
TEKS   Tekeris          81.30 323⇑iP      P       01 08 28.8 +0.3
GROS   Grobnik          81.53 327  i P    P       01 08 30.0 +0.3
SOKA   Soboth           81.55 327  epP    pP      01 08 30.9 -0.4
       comp=Z,21nm,0.7s,SNR=14
EZN    Ezine            81.58 316  ⇑P     P       01 08 30.4 +0.4
EZN    Ezine            81.58 316   P     P       01 08 30.3 +0.4
MEM    Membach          81.58 335  dP     P       01 08 30.2 +0.4
FUR    Furstenfeldbru   81.80 330  eP     P       01 08 31.9 +0.9
       comp=Z,31nm,1.0s,baz=34,slow=4.8
LESA   Schwarzleotal    81.88 329  epP    pP      01 08 32.8 -0.3
       comp=Z,25nm,1.2s,SNR=11
OBKA   Obir             81.88 327⇑iP      P       01 08 31.9 +0.3
OBKA   Obir             81.88 327  eP     P       01 08 32.1 +0.6
       comp=Z,9.8nm,0.6s
BBLS   Lazi&#263i       81.89 323⇑iP      P       01 08 32.6 +1.0
HAPS   Han Pijesak,BI   81.92 323⇑iP      P       01 08 32.9 +1.0
BCLA   Clavier          81.97 335  dP     P       01 08 32.2 +0.3
STU    Stuttgart        82.05 332   P     P       01 08 32.5 +0.2
STU                                 IAmb  IAmb    01 08 33.9
       comp=Z,15nm,0.7s
STU    Stuttgart        82.05 332   P     P       01 08 32.5 +0.2
STU                                 pmax  pmax
       comp=Z,15nm,0.7s
STU    Stuttgart        82.05 332  eP     P       01 08 33.4 +1.1
       comp=Z,36nm,0.8s,baz=34,slow=4.8
CRES   Cresnjevec Ost   82.06 327⇑iP      P       01 08 32.9 +0.5
BGES   Gesves           82.07 335  dP     P       01 08 32.2 -0.1
A051A  Mrakovica        82.09 325⇑iP      P       01 08 32.9 +0.2
RUDO   Rudo             82.10 323⇑iP      P       01 08 31.4 -1.3
SJES   Sjenica          82.10 322⇑iP      P       01 08 33.7 +0.9
BLY    Banja Luka       82.18 325⇑iP      P       01 08 33.1  0.0
BMRD   Maredsous        82.24 335  dP     P       01 08 33.8 +0.6
LJU    Ljubljana        82.26 327  eP     P       01 08 33.4 -0.1
WLF    Walferdange      82.34 334  dP     P       01 08 33.2 -0.6
WATA   Walderalm        82.37 330  epP    P       01 08 35.3 +1.1
       comp=Z,21nm,1.3s,SNR=6.7
BOJS   Bojanci          82.40 326⇑iP      P       01 08 34.6 +0.4
BOJS   Bojanci          82.40 326  i P    P       01 08 34.2 +0.1
WTTA   Wattenberg       82.41 330  epP    pP      01 08 35.6 -0.3
       comp=Z,13nm,0.8s
SCIA   State Center     82.44  39   P     P       01 08 34.9 +0.4
DOU    Dourbes          82.47 335  dP     P       01 08 34.4  0.0
ABTA   Abfaltersbach    82.50 329  eP     P       01 08 34.8  0.0
       comp=Z,7.4nm,1.2s
MOTA   Moosalm          82.55 330  eP     P       01 08 35.7 +0.6
       comp=Z,27nm,0.9s,SNR=12
CEY    Cerknica         82.55 327⇑iP      P       01 08 35.1 +0.1
RETA   Reutte           82.56 330  eP     P       01 08 35.7 +0.6
       comp=Z,20nm,1.0s,SNR=9.3
SQTA   Sankt Quirin     82.61 330  epP    P       01 08 36.5 +1.1
       comp=Z,17nm,0.9s
UPM    Unac-Piva        82.63 323⇑iP      P       01 08 27.1 -8.6
A050A  Klekovaca        82.67 325⇑iP      P       01 08 35.4 -0.4
BFO    Black Forest     82.73 332   P     P       01 08 35.9  0.0
BFO                                 IAmb  IAmb    01 08 37.5
       comp=Z,41nm,1.7s
BFO    Black Forest     82.73 332   P     P       01 08 35.9  0.0
BFO                                 pmax  pmax
       comp=Z,41nm,1.7s
BFO    Black Forest     82.73 332  eP     P       01 08 36.4 +0.5
       comp=Z,30nm,1.6s,baz=34,slow=4.8
STAL   STALIGIAL        82.82 328   P     P       01 08 35.8 -0.6
STAL                                IAmb  IAmb    01 08 36.6
       comp=Z,13nm,0.7s
SKDS   Skadanscina      82.88 327⇑iP      P       01 08 36.6 -0.1
FETA   Feichten         82.96 330  epP    P       01 08 38.2 +0.9
       comp=Z,10nm,0.9s
BRY    Bratogost        83.03 323⇑iP      P       01 08 37.4 -0.3
DAVA   Damuels          83.05 331  i pP   P       01 08 38.7 +1.0
       comp=Z,21nm,1.0s,SNR=5.5
PDG    Podgorica        83.08 322   P     P       01 08 37.8 +0.1
PDG    Podgorica        83.08 322⇑iP      P       01 08 38.2 +0.5
PDG    Podgorica        83.08 322  ⇓P     P       01 08 37.7 -0.1
ECH    Echery           83.24 333   P     P       01 08 38.4 -0.2
ECH                                 IAmb  IAmb    01 08 40.0
       comp=Z,9.3nm,1.0s
ECH    Echery           83.24 333   P     P       01 08 38.4 -0.2
ECH                                 pmax  pmax
       comp=Z,9.0nm,1.0s
TREB   Trebinje         83.27 323⇑iP      P       01 08 38.2 -0.6
DRME   Dracevica, Mon   83.30 322⇑iP      P       01 08 39.6 +0.7
FUORN  Ofenpass-Fuorn   83.47 330   P     P       01 08 40.1 +0.1
DAVOX  Davos/Dischmat   83.48 330   P     P       01 08 40.6 +0.5
       comp=Z,5.1nm,0.5s,baz=339,slow=4.3,SNR=9.3
DAVOX                               LR    LR      01 50 25.4
       comp=Z,226nm,18.3s,baz=76,slow=39
       comp=Z,5.1nm,0.5s
VLDQ   Val d'Or         83.83  27   P     P       01 08 40.5 -1.0
VLDQ                                IAmb  IAmb    01 08 41.6
       comp=Z,18nm,1.0s
EIL    Elat             83.88 304   LR    LR      01 51 03.8
       comp=Z,78nm,19.0s,baz=40,slow=39
KARP   Karpathos        84.27 313   P     P       01 08 44.3 +0.2
DKNS   Dickens          84.51  49   P     P       01 08 45.9 +0.6
DKNS                                IAmb  IAmb    01 08 48.6
       comp=Z,16nm,1.0s
PPT    Papeete          84.65 119   LR    LR      01 43 10.8
       comp=Z,170nm,18.7s,baz=318,slow=33
PPT2   Papeete2         84.67 119  eLR    LR      01 35 22.3
       comp=Z,181nm,23.2s
PPT2                               eLR    LR      01 35 24.4
       comp=Z,190nm,21.8s
SENIN  Lac Senin/Sane   84.78 332   P     P       01 08 46.8 +0.1
SENIN                               IAmb  IAmb    01 08 48.1
       comp=Z,14nm,1.0s
KEK    Kerkira          84.94 320   P     P       01 08 48.2 +0.9
WMOK   Wichita Mounta   84.94  47   P     P       01 08 47.3 -0.1
WMOK                                IAmb  IAmb    01 08 49.1
       comp=Z,13nm,1.1s
WMOK   Wichita Mounta   84.94  47   P     P       01 08 47.3 -0.1
WMOK                                pmax  pmax
       comp=Z,13nm,1.1s
OK052  Battle Ridge R   85.09  45   P     P       01 08 48.6 +0.4
TAOE   Nuku Hiva Isla   85.19 106  eLR    LR      01 35 34.3
       comp=Z,162nm,22.7s
FDMO   Fiordimonte      85.31 326   P     P       01 08 49.2  0.0
HDIL   Hopedale         85.34  38   P     P       01 08 49.6 +0.3
MURB   Monte Urbino     85.36 327   P     P       01 08 50.8 +1.4
NRCA   Norcia           85.47 326   P     P       01 08 50.0  0.0
MATE   Matera           85.66 323  ⇑P     P       01 08 51.1 +0.3
IDI    Anoyia           85.71 314   P     P       01 08 50.8 -0.6
       comp=Z,6.6nm,0.6s,baz=4.6,slow=9.7,SNR=9.0
       comp=Z,6.6nm,0.6s
ITM    Ithomi           85.83 317   P     P       01 08 51.3 -0.6
TX31   Lajitas Ar. Si   85.99  54   P     P       01 08 53.3 +0.4
TX31                                IAmb  IAmb    01 08 54.8
       comp=Z,10nm,0.8s
TXAR   Lajitas Array    85.99  54   P     P       01 08 53.1 +0.3
TXAR   Lajitas Array    85.99  54   P     P       01 08 53.6 +0.7
       comp=Z,4.2nm,0.5s,baz=297,slow=3.8,SNR=72
       comp=Z,4.2nm,0.5s
TXAR   Lajitas Array    85.99  54   P     P       01 08 53.2 +0.3
SADO   Sadowa           86.10  29   LR    LR      01 51 26.2
       comp=Z,54nm,18.1s,baz=347,slow=38
BNI    Bardonecchia     86.12 331   P     P       01 08 53.4 +0.1
BNI                                 IAmb  IAmb    01 08 55.0
       comp=Z,13nm,0.9s
BNI    Bardonecchia     86.12 331   P     P       01 08 53.4 +0.1
BNI                                 pmax  pmax
       comp=Z,13nm,0.9s
MRZ    Mangatainoka R   86.27 157   P     P       01 08 53.5  0.0
CCM    Cathedral Cave   86.37  41   P     P       01 08 54.7 +0.2
CCM    Cathedral Cave   86.37  41   P     P       01 08 54.7 +0.2
CCM                                 pmax  pmax
       comp=Z,24nm,1.0s
HHAR   Hobbs            86.38  43   P     P       01 08 54.1 -0.5
HHAR                                IAmb  IAmb    01 08 55.6
       comp=Z,10.0nm,0.9s
HPIG                    86.43  57   P     P       01 08 55.6 +0.3
HPIG                                IAmb  IAmb    01 08 57.1
       comp=Z,11nm,0.9s
TRQ    Mont Tremblant   86.44  26   P     P       01 08 54.4 -0.4
TRQ                                 IAmb  IAmb    01 08 55.6
       comp=Z,16nm,1.2s
MGMO   Mountain Grove   86.57  42   P     P       01 08 55.2 -0.3
SSB    Saint Sauveur    86.69 333   P     P       01 08 56.4 +0.4
SSB                                 IAmb  IAmb    01 08 57.6
       comp=Z,12nm,0.7s
SSB    Saint Sauveur    86.69 333   P     P       01 08 56.4 +0.4
SSB                                 pmax  pmax
       comp=Z,12nm,0.7s
FCAR   Ozark Folk Cen   87.62  43   P     P       01 09 00.3 -0.3
FCAR                                IAmb  IAmb    01 09 01.5
       comp=Z,13nm,0.9s
MIAR   Mount Ida        87.90  44   P     P       01 09 01.9 -0.1
MIAR   Mount Ida        87.90  44   P     P       01 09 01.9 -0.1
MIAR                                pmax  pmax
       comp=Z,17nm,1.0s
BATG   Bathurst New B   87.99  20   P     P       01 09 02.5 +0.3
TBI    Tubuai           88.87 123  eLR    LR      01 37 20.5
       comp=Z,843nm,29.0s
VAE    Valguarnera      89.26 322   LR    LR      01 54 40.8
       comp=Z,162nm,18.2s,baz=128,slow=39
WVT    Waverly          89.56  40   P     P       01 09 09.4 -0.3
WVT                                 IAmb  IAmb    01 09 11.2
       comp=Z,8.4nm,0.9s
WVT    Waverly          89.56  40   P     P       01 09 09.4 -0.3
WVT                                 pmax  pmax
       comp=Z,8.0nm,0.9s
LMN    Caledonia Moun   89.63  20   P     P       01 09 10.1 +0.1
OXF    Oxford           90.07  42   P     P       01 09 12.1 -0.1
OXF    Oxford           90.07  42   P     P       01 09 12.1 -0.1
OXF                                 pmax  pmax
       comp=Z,54nm,1.2s
TKL    Tuckaleechee C   91.85  37   LR    LR      01 50 57.7
       comp=Z,46nm,21.0s,baz=342,slow=36
KEST   Kesra            92.99 325   P     P       01 09 25.4 -0.3
       comp=Z,4.2nm,0.9s,baz=337,slow=7.0,SNR=4.4
       comp=Z,4.2nm,0.9s
ESDC   Sonseca Array    94.50 336   P     P       01 09 31.8 -0.9
       comp=Z,1.6nm,1.1s,baz=17,slow=1.5,SNR=5.6
ESDC                                LR    LR      01 58 49.2
       comp=Z,218nm,18.4s,baz=25,slow=40
       comp=Z,1.6nm,1.1s
TORD   Torodi Ar. Bea  115.81 319   PKP   PKiKP   01 14 54.9 -0.4
       comp=Z,1.1nm,0.3s,baz=16,slow=2.8,SNR=1.8
VNDA   Vanda           118.87 176   PKP   PKPdf   01 14 57.6 -1.6
       comp=Z,0.6nm,0.6s,baz=316,slow=5.0,SNR=6.0
MAW    Mawson          124.13 207   PKP   PKPdf   01 15 08.8 -0.7
       comp=Z,2.7nm,0.8s,baz=56,slow=6.1,SNR=3.6
DBIC   Dimbokro        124.58 322   PKP   PKPdf   01 15 10.9 -1.3
       comp=Z,3.6nm,0.9s,baz=270,slow=2.0,SNR=2.2
BOSA   Boshof          129.26 264   PKhKP PKPpre  01 15 17.4
       comp=Z,3.5nm,1.0s,baz=208,slow=9.2,SNR=1.9
QSPA   South Pole Qui  130.86 180   PKP   PKPdf   01 15 21.8 -0.7
       comp=Z,1.3nm,0.5s,baz=274,slow=1.0,SNR=19
LPAZ   La Paz          142.77  58   PKhKP PKPpre  01 15 42.3
       comp=Z,1.3nm,0.7s,baz=360,slow=6.9,SNR=5.4
TROLL  Troll, Antarti  143.77 199  ⇓P     PKPab   01 15 42.7 -0.5
       comp=Z,354nm,0.5s
H03N2  Juan Fernandez  145.17  91   T     T       03 59 02.7
       baz=300,slow=77,SNR=4.9
H03N3  Juan Fernandez  145.19  91   T     T       03 59 01.2
       baz=300,slow=77,SNR=7.6
H03N1  Juan Fernandez  145.19  91   T     T       03 58 57.5
       baz=300,slow=77,SNR=5.1
SNAA   Sanae           145.27 198  ⇓P     PKPbc   01 15 47.4 -1.2
       comp=Z,364nm,0.6s
SNAA   Sanae           145.27 198   PKPbc PKPbc   01 15 47.5 -1.1
       comp=Z,19nm,0.8s,baz=179,slow=3.9,SNR=73
VNA2   Neumayer--Watz  146.83 197  ⇓P     PKPdf   01 15 52.1 +0.7
       comp=Z,20nm,0.7s,baz=132,slow=2.7
VNA3   Neumayer Olymp  147.05 195  ⇓P     PKPdf   01 15 52.6 +0.9
       comp=Z,12nm,0.8s
VNA1   Neumayer--Stat  147.23 197  ⇓P     PKPbc   01 15 54.0 -0.3
       comp=Z,19nm,0.9s
PTLB   Pontes e Lacer  147.43  45  eP     PKPbc   01 15 55.5 -1.0
SDBA   SAO DESIDERIO   150.32  18  eP     PKPdf   01 15 59.3 +0.5
BDFB   Brasilia        152.52  26   PKPbc PKPbc   01 16 08.8 -0.3
       comp=Z,8.6nm,0.8s,baz=311,slow=2.9,SNR=10
PLCA   Paso Flores     153.89 101   PKPbc PKPbc   01 16 11.0 -0.4
       comp=Z,3.4nm,1.0s,baz=220,slow=1.1,SNR=5.0
PLCA                                PKPab PKPab   01 16 25.1 +0.4
       comp=Z,2.9nm,0.8s,baz=298,slow=5.1,SNR=6.2
PLCA   Paso Flores     153.89 101  eP     PKPdf   01 16 04.7 +1.3
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ATH 13 01:05:53.6, 37°.59N×20°.32E, h12^{km}±2^{km}, ML1.8/6, Manual Solution by S.Koutrakis First location: 2019/06/13 01:07:00, This location: 2019/06/13 08:34:48 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km, Ionian Sea

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Code   Station Name       Δ°   AZ°    Phase ID          Time     Res
                                    Op     ISC        h  m  s    ISC
ORTH   Orthonies,Zaky    0.40  48   P      Pg       01 06 01.8 +0.3
ORTH                                S      Sg       01 06 07.0 +0.2
LTHK   Lithakia          0.43  73   P      Pg       01 06 02.0  0.0
LTHK                                S      Sg       01 06 07.6 -0.1
PSDA   Pessada-Kefalo    0.57  21   P      Pg       01 06 04.7  0.0
PSDA                                S      Sg       01 06 12.6 +0.4
VLS    Valsamata         0.63  20   P      Pg       01 06 05.6 -0.2
VLS                                 S      Sg       01 06 14.2 +0.1
DMLN   Damoulianata-K    0.65   4   P      Pg       01 06 06.5 +0.1
DMLN                                S      Sg       01 06 15.4 +0.4
CLEM   Kyllini,Ilia,G    0.71  64   P      Pg       01 06 07.5 +0.1
CLEM                                S      Sb       01 06 17.3 -0.5
FSK    Fiskardo          0.89  12   P      Pg       01 06 10.2 -0.7
YRMI   Loutra Irminis    0.96  57   P      Pg       01 06 12.0 -0.1
YRMI                                S      Sg       01 06 24.1 -0.7
RLS    Riolos of Patr    1.02  62   P      Pb       01 06 13.0 -0.3
RLS                                 S      Sg       01 06 25.6 -1.0
AXS    Araxos            1.03  53   P      Pb       01 06 13.4 -0.1
AXS                                 S      Sg       01 06 26.3 -0.7
EVGI   Lefkada island    1.07  14   P      Pb       01 06 13.6 -0.5
AMT    Artemida-Makis    1.10  92   P      Pg       01 06 14.9  0.0
AMT                                 S      Sn       01 06 30.1  0.0
DRO    Drossia           1.16  71   P      Pg       01 06 16.4 +0.4
DRO                                 S      Sg       01 06 30.9 -0.1
NYDR   Nydri-Lefkada     1.17  15   P      Pb       01 06 15.6 -0.1
LKD2   Lefkada island    1.23  12   P      Pn       01 06 16.7  0.0
TSLK   Tsoukalades, L    1.27  12   P      Pb       01 06 17.6 +0.2
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*CATAC **13** 01:08:51.1±0.5, 13°N±4°×8°9W±°, h42^{km}±16^{km}, M3.0/13, MLv3.0/13, Error ellipse: s-maj=9.1km s-min=5.4km az=32.0, confirmed*

*SNET **13** 01:08:55.1±0.8, 13°.15N×89°.48W, h61^{km}, ML2.8*

*GCG **13** 01:08:55.9±0.3, 13°.15N×89°.54W, h51^{km}±7^{km}, MD3.5*

ISC 13 01:08:47.3±2.3**, 12°.6N**±0°.1×**89°.51W**±0°.08**, h47**^{km}**, n34, σ2**^{s}**.04**/39**, Off coast of central America**

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Code   Station Name       Δ°   AZ°    Phase ID          Time     Res
                                    Op     ISC        h  m  s    ISC
LALI   Alcalda de L      0.91  12   P      Pn       01 09 06.2 +2.5
JAYA   Jayaque - finc    1.05   3  eP      Pn       01 09 07.3 +1.4
JAYA                               eS      Sn       01 09 16.6 -3.0
JAYA   Jayaque - finc    1.05   3  i P     Pn       01 09 07.3 +1.4
JAYA                               eS      Sn       01 09 16.0 -3.6
JAYA   Jayaque - finc    1.05   3   P      Pn       01 09 07.3 +1.4
LOMA   Loma Larga        1.09  18   P      Pn       01 09 08.2 +1.8
LOMA   Loma Larga        1.09  18   S      Sn       01 09 19.5 -0.9
LFRS   El Faro           1.11  23  eP      Pn       01 09 08.7 +2.1
LFRS                               eS      Sn       01 09 18.8 -2.0
PMON   Piamonte          1.13  10  eP      Pn       01 09 08.4 +1.6
PMON   Piamonte          1.13  10   P      Pn       01 09 08.2 +1.4
BOQS   Boqueron          1.16  11  eP      Pn       01 09 09.0 +1.7
TECO   Alcaldia de Te    1.18  37   P      Pn       01 09 10.0 +2.6
TECO   Alcaldia de Te    1.18  37   S      Sn       01 09 21.4 -0.8
COEG   Centro de Oper    1.19  31   P      Pn       01 09 10.0 +2.4
COEG   Centro de Oper    1.19  31   S      Sn       01 09 21.4 -1.3
CEVE   Cerro Verde       1.23 355   P      Pn       01 09 10.0 +1.7
CEVE   Cerro Verde       1.23 355   S      Sn       01 09 22.2 -1.7
PAVA   Las Pavas         1.24  27  eP      Pn       01 09 10.8 +2.4
PAVA                               eS      Sn       01 09 23.2 -0.9
PAVA   Las Pavas         1.24  27   P      Pn       01 09 10.8 +2.4
PAVA   Las Pavas         1.24  27   S      Sn       01 09 22.7 -1.3
SNJE   San Jose          1.27 356  eP      Pn       01 09 10.6 +1.7
SNJE                               eS      Sn       01 09 22.7 -2.2
NUBE   Las Nubes         1.33 349  eP      Pn       01 09 11.2 +1.6
NUBE                               eS      Sn       01 09 23.3 -2.8
NUBE   Las Nubes         1.33 349   P      Pn       01 09 11.4 +1.8
FAME   Alcaldia de Sa    1.33 338   P      Pn       01 09 11.7 +2.2
PACA   Pacayal           1.45  53  eP      Pn       01 09 16.3 +5.2
PACA                               eS      Sn       01 09 32.0 +2.9
PACA   Pacayal           1.45  53   P      Pn       01 09 16.3 +5.2
RANC   El Ranchito       1.45  55   P      Pn       01 09 10.4 -0.8
RANC   El Ranchito       1.45  55   S      Sn       01 09 26.2 -3.0
MTO3   Montecristo       1.80   5  i P     Pn       01 09 17.9 +1.8
MTO3   Montecristo       1.80   5   P      Pn       01 09 17.9 +1.8
MTO3   Montecristo       1.80   5   S      Sn       01 09 35.1 -2.7
PKGN   Cerro Pekin       2.47  88   P      Pn       01 09 25.6 +0.5
HERN   Volcan Telica     2.62  89   P      Pn       01 09 28.2 +1.0
TELN   Telica            2.62  90   P      Pn       01 09 27.5 +0.4
HOYN   Al Sur del Vol    2.62  90   P      Pn       01 09 28.3 +1.1
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*CATAC **13** 01:12:37.0±0.4, 13°N±2°×8°9W±°, h24^{km}±2^{km}, M3.7/33, MLv3.7/33, Error ellipse: s-maj=4.9km s-min=2.9km az=35.2, confirmed*

*SNET **13** 01:12:37.1±1.6, 13°.05N×89°.52W, h35^{km}, ML3.7*

*GCG **13** 01:12:38.6±0.9, 13°.14N×89°.58W, h35^{km}±5^{km}, MD3.9, ML3.6*

ISC 13 01:12:37.8±1.3**, 13°.06N**±0°.05×**89°.48W**±0°.03**, h33**^{km}±7^{km}**, n100, σ0**^{s}**.89**/126**, El Salvador**

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Code   Station Name       Δ°   AZ°    Phase ID          Time     Res
                                    Op     ISC        h  m  s    ISC
LALI   Alcalda de L      0.45  20  eP      Pn       01 12 48.2 +0.1
LALI                               eS      Sn       01 12 55.8 +0.7
LALI   Alcalda de L      0.45  20  i P     Pn       01 12 48.2 +0.1
LALI                               eS      Sn       01 12 55.5 +0.5
LALI   Alcalda de L      0.45  20   P      Pn       01 12 48.3 +0.2
LALI   Alcalda de L      0.45  20   S      Sn       01 12 56.1 +1.1
JAYA   Jayaque - finc    0.59   3  i P     Pb       01 12 49.7 -0.3
JAYA                               eS      Sb       01 12 58.5 +0.2
JAYA   Jayaque - finc    0.59   3  i P     Pb       01 12 49.7 -0.3
JAYA                               eS      Sb       01 12 58.4  0.0
JAYA   Jayaque - finc    0.59   3   P      Pb       01 12 50.0  0.0
PANCS  Alcalda de        0.62  28   P      Pb       01 12 50.6 +0.2
PANCS  Alcalda de        0.62  28   S      Sb       01 12 59.5 +0.5
ITCA   Escuela Especi    0.64  18   P      Pb       01 12 50.6 -0.2
ITCA   Escuela Especi    0.64  18   S      Sb       01 13 00.3 +0.7
LOMA   Loma Larga        0.66  27  eP      Pb       01 12 50.8 -0.2
LOMA                               eS      Sb       01 13 00.6 +0.6
LOMA   Loma Larga        0.66  27   P      Pn       01 12 50.6 -0.3
PMON   Piamonte          0.67  14  eP      Pb       01 12 50.8 -0.4
PMON   Piamonte          0.67  14   P      Pb       01 12 50.8 -0.4
SEMO   Seminario San     0.69  21   P      Pn       01 12 50.5 -0.8
SEMO   Seminario San     0.69  21   S      Sb       01 13 01.1 +0.3
LFRS   El Faro           0.69  36  eP      Pb       01 12 51.4 -0.2
UTEC   Universidad Te    0.69  23   P      Pn       01 12 51.0 -0.4
UTEC   Universidad Te    0.69  23   S      Sb       01 13 01.5 +0.5
UEES   Universidad Ev    0.69  20  eP      Pb       01 12 51.2 -0.4
UEES   Universidad Ev    0.69  20   P      Pn       01 12 51.0 -0.4
UEES   Universidad Ev    0.69  20   S      Sn       01 13 00.4 -0.7
BOQS   Boqueron          0.70  16  eP      Pb       01 12 51.5 -0.3
IGN    Direccin Gen      0.72  25   P      Pb       01 12 51.7 -0.3
IGN    Direccin Gen      0.72  25   S      Sb       01 13 02.4 +0.8
CEDA   San Andres        0.74   6   P      Pn       01 12 51.7 -0.4
CEDA   San Andres        0.74   6   S      Sb       01 13 02.7 +0.4
LFU    La Fuente         0.77  27  eP      Pb       01 12 52.8 -0.1
CEVE   Cerro Verde       0.78 350  eP      Pb       01 12 52.5 -0.6
CEVE                               eS      Sb       01 13 05.2 +1.7
CEVE   Cerro Verde       0.78 350   P      Pb       01 12 52.5 -0.6
CEVE   Cerro Verde       0.78 350   S      Sb       01 13 04.6 +1.1
SBLS   San Blas          0.79 350  eP      Pb       01 12 52.5 -0.7
SBLS                               eP      Pb       01 12 52.6 -0.7
SBLS                               eS      Sb       01 13 04.0 +0.2
LBRS   Las Brisas        0.80  32  eP      Pb       01 12 53.3  0.0
COEG   Centro de Oper    0.81  46  eP      Pn       01 12 52.8 -0.2
COEG                               eS      Sb       01 13 04.5 +0.4
COEG   Centro de Oper    0.81  46   P      Pn       01 12 52.9  0.0
SNJE   San Jose          0.81 351  eP      Pn       01 12 52.8 -0.4
SNJE                               eS      Sb       01 13 05.0 +0.5
TECO   Alcaldia de Te    0.83  55  eP      Pn       01 12 52.9 -0.4
TECO                               eS      Sn       01 13 04.9 +0.5
TECO   Alcaldia de Te    0.83  55   P      Pn       01 12 52.8 -0.4
TECO   Alcaldia de Te    0.83  55   S      Sb       01 13 05.1 +0.3
PAVA   Las Pavas         0.84  39  eP      Pb       01 12 53.6 -0.4
PAVA                               eS      Sb       01 13 05.8 +0.8
PAVA   Las Pavas         0.84  39   P      Pb       01 12 53.8 -0.2
PAVA   Las Pavas         0.84  39   S      Sb       01 13 06.1 +1.1
UESV   Universidad de    0.89  49  eP      Pn       01 12 53.9 -0.1
UESV                               eS      Sn       01 13 06.2 +0.5
UESV   Universidad de    0.89  49   P      Pn       01 12 53.7 -0.3
UESV   Universidad de    0.89  49   S      Sn       01 13 05.9 +0.2
NUBE   Las Nubes         0.89 341  i P     Pn       01 12 53.4 -0.7
NUBE                               eS      Sb       01 13 05.5 -1.0
NUBE   Las Nubes         0.89 341  i P     Pn       01 12 53.4 -0.7
NUBE                               eS      Sn       01 13 04.6 -1.4
NUBE   Las Nubes         0.89 341   P      Pn       01 12 53.6 -0.6
UNIC   Universidad Ca    0.92 356   P      Pb       01 12 54.6 -0.7
UNIC   Universidad Ca    0.92 356   S      Sb       01 13 07.2 -0.1
ALJI   Alcalda de J      0.92  73  eP      Pn       01 12 54.6 +0.1
ALJI                               eS      Sn       01 13 07.4 +0.8
ALJI   Alcalda de J      0.92  73   P      Pn       01 12 54.9 +0.4
ALJI   Alcalda de J      0.92  73   S      Sn       01 13 06.9 +0.3
FAME   Alcaldia de Sa    0.94 326   P      Pn       01 12 53.9 -0.8
SCLA   Alcaldia de Sa    0.97  49   P      Pn       01 12 55.4 +0.2
SCLA   Alcaldia de Sa    0.97  49   S      Sb       01 13 09.9 +1.2
LOAL   Lomas de Alarc    0.98 343   S      Sb       01 13 09.3 +0.4
LOAL   Lomas de Alarc    0.98 343   P      Pb       01 12 55.5 -0.9
SLOZ   Alcaldia de Sa    1.01 343  eP      Pb       01 12 55.8 -1.1
SLOZ                               eS      Sb       01 13 09.7  0.0
SLOZ   Alcaldia de Sa    1.01 343   P      Pb       01 12 55.7 -1.1
TECA   Tecapa            1.04  65  eP      Pn       01 12 56.8 +0.4
TECA                               eP      Pn       01 12 56.8 +0.4
TECA                               eS      Sn       01 13 10.8 +0.9
PQSS   Presa 15 de Se    1.06  58   P      Pn       01 12 56.8 +0.5
PQSS   Presa 15 de Se    1.06  58   S      Sn       01 13 10.5 +0.6
PACA   Pacayal           1.20  70  eP      Pn       01 12 59.1 +0.7
PACA                               eS      Sb       01 13 15.0 -0.3
PACA   Pacayal           1.20  70   P      Pn       01 12 59.0 +0.7
LLGN   La Laguna         1.21  25   P      Pn       01 12 58.2 -0.4
LLGN   La Laguna         1.21  25   S      Sb       01 13 15.7 -0.1
RANC   El Ranchito       1.22  72   P      Pn       01 12 54.2 -4.5
RANC   El Ranchito       1.22  72   S      Sn       01 13 10.2 -3.9
MTO3   Montecristo       1.34   5  eP      Pn       01 13 00.3  0.0
MTO3                               eS      Sn       01 13 17.6 +0.4
MTO3   Montecristo       1.34   5  i P     Pn       01 13 00.3  0.0
MTO3   Montecristo       1.34   5   P      Pn       01 13 00.4  0.0
MTO3   Montecristo       1.34   5   S      Sb       01 13 18.0 -1.3
CNRM   Centro Naciona    1.34  72   P      Pn       01 13 00.9 +0.7
CNRM   Centro Naciona    1.34  72   S      Sb       01 13 18.8 -0.4
ESQI   Esquipulas        1.50   5   P      Pn       01 13 02.9 +0.3
ESQI   Esquipulas        1.50   5   S      Sb       01 13 22.4 -1.4
LCND   La Caada          1.57  81  eP      Pn       01 13 03.8 +0.5
LCND   La Caada          1.57  81   P      Pn       01 13 03.8 +0.5
FG16   Alotenango, Sa    1.57 320  i P     Pb       01 13 07.9 +1.6
FG16                                IAML            01 13 39.5
       comp=E,1μm,0.2s
FG8    Yepocapa, Chim    1.59 319  eP      Pb       01 13 07.9 +1.3
CNCH   Conchagua         1.62  82  eP      Pn       01 13 04.4 +0.2
CNCH                               eS      Sn       01 13 22.6 -1.4
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CNCH	**Conchagua**	1.62	82	P	Pn	01 13 04.3	+0.2
CNCH	**Conchagua**	1.62	82	S	Sn	01 13 25.1	+1.2
SARH	**Santa Rosa de**	1.84	22	i P	Pn	01 13 07.9	+0.6
SARH	**Santa Rosa de**	1.84	22	P	Pn	01 13 07.8	+0.6
CSGN	**Cosiguina Volc**	1.87	92	P	Pn	01 13 08.0	+0.4
CSGN				S	Sn	01 13 31.7	+1.5
POTN	**Potosi Cosigui**	1.92	92	P	Pn	01 13 08.6	+0.4
STG0	**El Palmar, Qui**	2.26	307	eP	Pb	01 13 17.6	-0.5
STG0				i S	Sb	01 13 47.7	+1.9
STG0				IAML		01 13 50.2	
	comp=E,520nm,0.2s						
STG8	**El Palmar, Qui**	2.29	307	eP	Pb	01 13 17.9	-0.7
STG8				i S	Sb	01 13 48.4	+1.9
STG8				IAML		01 13 54.0	
	comp=E,257nm,0.2s						
TGUH	**Tegucigalpa,Un**	2.36	65	P	Pn	01 13 14.9	+0.4
CRIN	**San Cristobal**	2.40	98	P	Pn	01 13 15.1	+0.3
PKGN	**Cerro Pekin**	2.47	99	P	Pn	01 13 15.7	-0.1
PKGN				S	Sn	01 13 44.1	-0.8
POLN	**Al Sur del Vol**	2.63	99	P	Pn	01 13 17.6	-0.5
CNGA	**Al SSO del Vol**	2.77	101	P	Pn	01 13 20.5	+0.6
CNGN	**Cerro Negro**	2.77	101	P	Pn	01 13 19.8	-0.2
LIMN	**Finca el Limon**	3.03	90	P	Pn	01 13 24.0	+0.3
RCVN	**Varillal2**	3.24	80	P	Pn	01 13 26.9	+0.4
AERN	**Aeropuerto Man**	3.36	105	P	Pn	01 13 25.8	-2.2

IDC 13 01:19:43.1±1.8, 19°.91S×177°.81W, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=50.6km s-min=41.0km az=160.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	44.83	256	P	P	01 28 00.2	+0.9
	3.1nm,0.5s,baz=88,slow=8.4,SNR=40 3.1nm,0.5s						
WRA	**Warramunga Arr**	44.87	261	P	P	01 27 58.5	-1.1
	0.4nm,0.3s,baz=95,slow=7.3,SNR=12 0.4nm,0.3s						
QSPA	**South Pole Qui**	70.16	180	P	P	01 30 57.1	-0.3
	0.6nm,1.0s,baz=69,slow=8.6,SNR=1.2 0.6nm,1.0s						
ILAR	**Eielson Array**	87.70	13	P	P	01 32 33.5	+0.3
	0.3nm,0.9s,baz=205,slow=4.0,SNR=2.5 0.3nm,0.9s						

ATH 13 01:29:38.5, 37°.75N×21°.19E, h16km, ML3.0/12, Manual Solution by S.Koutrakis First location: 2019/06/13 01:30:32, This location: 2019/06/13 10:29:07 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km

THE 13 01:29:39.7, 37°.8N±0°.9×21°.2E±0°.7, h15km±1km, M2.9/22, MLh2.9/22

ISC 13 01:29:39.3±0.9, 37°.82N±0°.03×21°.19E±0°.02, h15km±5km, n47, σ0s.50/75, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLEM	**Kyllini,Ilia,G**	0.09	328	P	Pg	01 29 42.6	+0.2
CLEM				S	Sg	01 29 45.1	+0.6
LCHA	**Lechaina**	0.13	25	P	Pg	01 29 43.2	+0.2
LCHA				S	Sb	01 29 46.3	0.0
ANDM	**Andravida**	0.18	21	P	Pg	01 29 42.8	-0.8
ANDM				S	Sg	01 29 45.7	-0.7
LTHK	**Lithakia**	0.30	250	P	Pb	01 29 46.4	0.0
LTHK				S	Sb	01 29 52.0	+0.9
YRMI	**Loutra Irminis**	0.31	23	P	Pg	01 29 45.9	+0.1
YRMI				S	Sg	01 29 51.1	+0.9
RLS	**Riolos of Patr**	0.33	42	P	Pg	01 29 45.9	-0.1
RLS				S	Sg	01 29 50.5	-0.1
RLS	**Riolos of Patr**	0.33	42	P	Pg	01 29 46.0	-0.1
RLS				S	Sg	01 29 51.1	+0.5
AXS	**Araxos**	0.41	21	P	Pg	01 29 47.7	+0.3
AXS				S	Sg	01 29 53.4	+0.3
AXS	**Araxos**	0.41	21	P	Pg	01 29 47.7	+0.3
AXS				S	Sb	01 29 54.4	+0.1
RTZL	**Ratzakli, Kefa**	0.42	308	P	Pb	01 29 48.2	-0.2
DRO	**Drossia**	0.43	71	P	Pg	01 29 47.8	-0.1
DRO				S	Sg	01 29 54.1	+0.2
DRO	**Drossia**	0.43	71	P	Pb	01 29 48.3	-0.3
DRO				S	Sb	01 29 54.4	-0.6
PSDA	**Pessada-Kefalo**	0.57	302	P	Pg	01 29 50.3	-0.2
PSDA	**Pessada-Kefalo**	0.57	302	P	Pg	01 29 50.2	-0.2
PSDA				S	Sg	01 29 58.5	+0.6
VLS	**Valsamata**	0.60	307	P	Pg	01 29 50.8	-0.2
VLS	**Valsamata**	0.60	307	P	Pg	01 29 51.1	+0.1
VLS				S	Sb	01 29 59.6	-0.1
SMHA	**Samh**	0.61	315	P	Pg	01 29 50.3	-1.0
SMHA				S	Sg	01 29 59.9	+0.5
UPR	**University Cam**	0.66	45	P	Pn	01 29 53.5	-0.6
UPR				S	Sb	01 30 02.5	+0.9
DMLN	**Damoulianata-K**	0.77	303	P	Pg	01 29 54.0	-0.3
PDO	**Prodromos**	0.78	359	P	Pg	01 29 54.6	+0.1
KLV	**Kalavryta, Ach**	0.79	73	P	Pg	01 29 54.2	-0.4
KLV				S	Sb	01 30 06.0	+0.7
KLV	**Kalavryta, Ach**	0.79	73	P	Pg	01 29 54.2	-0.4
KLV				S	Sb	01 30 06.1	+0.7
FSK	**Fiskardo**	0.81	322	P	Pb	01 29 54.3	-0.8
EFP	**Efpalio**	0.83	42	P	Pb	01 29 55.3	-0.1
EFP	**Efpalio**	0.83	42	P	Pb	01 29 55.4	0.0
EFP				S	Sg	01 30 07.4	+1.1
PVO	**Paravola**	0.84	18	P	Pb	01 29 55.5	-0.1
PVO	**Paravola**	0.84	18	P	Pg	01 29 56.1	+0.5
PVO				S	Sn	01 30 08.6	-0.2
ITM	**Ithomi**	0.86	137	P	Pn	01 29 56.2	-0.7
SERG	**Sergoula**	0.91	49	P	Pb	01 29 56.2	-0.5
EVGI	**Lefkada island**	0.91	332	P	Pb	01 29 56.2	-0.6
EVGI	**Lefkada island**	0.91	332	P	Pb	01 29 56.4	-0.4
EVGI				S	Sn	01 30 10.2	-0.2
GUR	**Goura**	0.92	82	P	Pb	01 29 56.4	-0.5
GUR	**Goura**	0.92	82	P	Pb	01 29 56.4	-0.5
GUR				S	Sg	01 30 09.3	+0.2
KALE	**Kalithea**	0.94	52	P	Pb	01 29 56.9	-0.5
KALE	**Kalithea**	0.94	52	P	Pb	01 29 57.3	0.0
KALE				S	Sg	01 30 10.5	+0.6
ANX	**Ano Chora**	0.97	36	P	Pb	01 29 57.5	-0.3
ANX	**Ano Chora**	0.97	36	P	Pg	01 29 58.0	+0.1
ANX				S	Sn	01 30 12.3	+0.4
NYDR	**Nydri-Lefkada**	0.98	337	P	Pb	01 29 57.2	-0.8
NYDR				S	Sg	01 30 11.2	+0.2
NYDR	**Nydri-Lefkada**	0.98	337	P	Pb	01 29 57.4	-0.5
NYDR				S	Sg	01 30 11.5	+0.5
PYL	**PYLOS**	1.02	154	P	Pn	01 29 58.6	-0.4
PYL				S	Sn	01 30 14.1	+1.1
LKD2	**Lefkada island**	1.06	337	P	Pb	01 29 58.9	-0.5
LKD2				S	Sg	01 30 13.7	+0.1
LKD2	**Lefkada island**	1.06	337	P	Pb	01 29 59.1	-0.2
TSLK	**Tsoukalades, L**	1.09	337	P	Pb	01 29 59.5	-0.4
TSLK	**Tsoukalades, L**	1.09	337	P	Pb	01 29 59.9	0.0
TSLK				S	Sg	01 30 15.9	+1.2
AMPL	**Ampelaki**	1.10	1	P	Pb	01 29 59.8	-0.3
EVR	**Evrytania**	1.20	24	P	Pg	01 30 02.9	+0.5
LTK	**Loutraki**	1.42	81	P	Pn	01 30 04.3	-0.3

NEIC 13 01:32:36.2±1.5, 40°.40N±0°.04×77°.53W±0°.04, h22km±7km, ML1.6/14, ML1.4(LDO), Error ellipse: s-maj=5.3km s-min=4.1km az=184.0

LDO 13 01:32:37±1.1, 40°.43N±0°.03×77°.51W±0°.03, h29km±8km, Error ellipse: s-maj=5.0km s-min=2.0km az=154.0, Pennsylvania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SSPA	**Standing Stone**	0.35	305		Pb	01 32 44.4	-0.7
SSPA					Sb	01 32 50.4	-0.2
SSPA				IAML		01 32 50.9	
	37nm,0.2s						
N58A	**Sunbury**	0.73	56		Pb	01 32 49.6	-1.5
N58A					Sb	01 33 00.4	-0.3
N58A				IAML		01 33 01.9	
	34nm,0.3s						
N58A				IAML		01 33 02.1	
	28nm,0.2s						
M57A	**Sunshine Farm,**	0.95	17		Pn	01 32 53.9	-0.5
M57A					Sn	01 33 05.9	-1.1
M57A				IAML		01 33 07.7	
	11nm,0.1s						
MVL	**Millersville**	0.98	116		Pn	01 32 53.4	-1.5
MVL				IAML		01 33 08.8	
	comp=N,27nm,0.1s						
MVL				IAML		01 33 09.5	
	comp=E,23nm,0.0s						
P57A	**Homestead Farm**	1.02	202	Pn	Pn	01 32 54.7	-0.7
P57A				IAML		01 33 09.5	
	comp=E,26nm,0.1s						
SDMD	**Soldier’s Deli**	1.14	153	Pn	Pn	01 32 56.5	-0.5
SDMD				IAML		01 33 11.4	
	comp=E,8.7nm,0.6s						
WUPA	**West Chester U**	1.54	108	Pn	Pn	01 33 02.6	+0.1
KSPA	**Keystone Colle**	1.73	49	Pn	Pn	01 33 05.4	+0.2
Q56A	**Snyder Ridge,**	1.90	224	Pn	Pn	01 33 07.3	-0.2

IDC 13 01:44:28.0±1.4, 50°.25S×139°.37E, h0km, mb3.7/5, mbtmp3.7/5, MS3.4/2, Error ellipse: s-maj=154.6km s-min=20.3km az=84.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NWAO	**Narrogin (SRO)**	23.80	308	LR	LR	01 57 41.9	
	comp=Z,66nm,18.5s,baz=288,slow=33						
H01W1	**Cape Leeuwin H**	23.93	300	T	T	02 14 32.2	
	baz=135,slow=74,SNR=19						
H01W2	**Cape Leeuwin H**	23.93	300	T	T	02 14 33.7	
	baz=135,slow=74,SNR=6.8						
H01W3	**Cape Leeuwin H**	23.94	300	T	T	02 14 35.7	
	baz=135,slow=74,SNR=14						
ASAR	**Alice Springs**	26.87	349	P	P	01 50 10.4	0.0
	0.4nm,0.6s,baz=153,slow=8.4,SNR=4.9 0.4nm,0.6s						
VNDA	**Vanda**	28.67	170	P	P	01 50 26.0	0.0
	1.0nm,1.1s,baz=328,slow=10.0,SNR=6.6 1.0nm,1.1s						
WRA	**Warramunga Arr**	30.50	351	P	P	01 50 42.7	0.0
	0.8nm,0.8s,baz=174,slow=7.4,SNR=7.4 0.8nm,0.8s						
QSPA	**South Pole Qui**	39.87	180	P	P	01 52 03.2	+0.1
	1.2nm,0.7s,baz=255,slow=1.0,SNR=3.4 1.2nm,0.7s						
MSVF	**Nonsavu**	44.78	58	LR	LR	02 07 49.0	
	comp=Z,58nm,19.0s,baz=24,slow=31						
H04S1	**CROZET ISLANDS**	54.76	237	T	T	02 53 49.1	
	baz=128,slow=75,SNR=12						
H04S2	**CROZET ISLANDS**	54.76	237	T	T	02 53 46.7	
	baz=128,slow=75,SNR=12						
H04S3	**CROZET ISLANDS**	54.77	237	T	T	02 53 51.1	
	baz=128,slow=75,SNR=14						
SNAA	**Sanae**	55.47	194	P	P	01 54 03.6	-0.3
	1.2nm,1.0s,baz=80,slow=11,SNR=2.1 1.2nm,1.0s						
H08S2	**Diego Garcia H**	69.44	283	T	T	03 11 19.0	
	baz=146						
H08S1	**Diego Carcia H**	69.45	283	T	T	03 11 26.5	
	baz=146						
H08S3	**Diego Garcia H**	69.45	283	T	T	03 11 21.6	
	baz=146						

TEH 13 01:48:44.6, 34°.85N×45°.20E, h10km±45km

ISN 13 01:48:45.0±0.5, 34°.86N×45°.21E, h15km±13km, ML2.8

ISC 13 01:48:44.3±1.1, 34°.86N±0°.04×45°.20E±0°.04, h10km, n12, σ0s.39/15, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KGS1	**Ghasr-e-Shirin**	0.47	138	Pg	Pb	01 48 54.4	-0.3
IKRK	**Kirkuk**	0.89	308	ePg	Pb	01 49 02.0	+0.1
IKRK				eSg	Sb	01 49 14.0	+0.1
IKRK				AML	AML	01 49 18.8	
	comp=N,354nm,0.5s						
IKRK				AML	AML	01 49 19.5	
	comp=E,281nm,0.8s						
GLG1	**Gilan-e-Gharb**	0.94	142	Pg	Pg	01 49 02.7	+0.2
IDHR	**Dehrash**	0.99	99	Pg	Pg	01 49 03.5	+0.1
ILIN	**Lien**	1.45	87	Pg	Pg	01 49 12.2	+0.1
ILBA	**Ilam Banvizeh**	1.48	146	Pg	Pg	01 49 12.7	-0.1
KCHF	**Cheshme Sefid,**	1.62	110	Pg	Pg	01 49 15.5	0.0
BHD	**Baghdad**	1.72	204	ePn	Pb	01 49 16.0	-0.1
BHD				eSn	Sg	01 49 39.2	-0.5
IBDR	**Badra**	1.84	161	ePn	Pb	01 49 18.0	-0.1
IBDR				eSn	Sb	01 49 42.0	+0.8
MAHB	**Mahabad**	1.95	12	Pn	Pb	01 49 19.7	-0.4
SNQR	**Sonqor, Kerman**	2.00	89	Pn	Pb	01 49 21.4	+0.5
IBZA	**Bozab**	2.23	99	Pn	Pb	01 49 24.1	-0.6

IDC 13 01:48:50.6±1.9, 4°.97N×94°.54E, h0km, mb3.8/7, mbtmp3.8/8, Error ellipse: s-maj=81.5km s-min=20.6km az=59.0

DJA 13 01:49:00.3±1.4, 5° N±4° ×9° 5E± °, h10km, M3.6/4, MLv3.6/4

ISC 13 01:48:55.7±1.7, 5°.3N±0°.2×94°.48E±0°.10, h10km, n17, σ1s.19/8, mb3.6/7, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	0.84	74	P	Pg	01 49 12.3	+0.3
BSI				S	Sg	01 49 22.1	-0.9
MLSI	**Meulaboh, Aceh**	2.16	117	P	Pn	01 49 32.3	+0.5
LHMI	**Lhok Sumawe**	2.46	91	P	Pn	01 49 35.4	-0.4
CMAR	**Chiang Mai Arr**	13.81	18	Pn	Pn	01 52 13.3	+1.6
	0.7nm,0.3s,baz=192,slow=12,SNR=4.3						
H08S3	**Diego Garcia H**	25.41	240	T	T	02 21 37.9	
	baz=60,slow=75,SNR=15						
H08S2	**Diego Garcia H**	25.41	240	T	T	02 21 29.5	
	baz=60,slow=75,SNR=13						
H08S1	**Diego Carcia H**	25.43	240	T	T	02 21 24.0	
	baz=60,slow=75,SNR=5.7						
MKAR	**Makanchi Array**	42.69	348	P	P	01 56 52.1	-0.6
	0.6nm,0.4s,baz=170,slow=7.6,SNR=10 0.6nm,0.4s						
SONM	**Songino Array**	43.62	12	P	P	01 56 57.5	-3.0
	0.3nm,0.7s,baz=177,slow=8.1,SNR=1.5 0.3nm,0.7s						
WRA	**Warramunga Arr**	46.51	124	P	P	01 57 19.2	-4.4
	0.4nm,0.6s,baz=304,slow=9.1,SNR=7.4 0.4nm,0.6s						
KURBB	**Kurchatov Arra**	47.14	346	P	P	01 57 27.0	-1.0
	0.7nm,0.3s,baz=166,slow=7.2,SNR=13 0.7nm,0.3s						
ASAR	**Alice Springs**	48.02	128	P	P	01 57 29.2	-6.2
	0.3nm,0.6s,baz=306,slow=8.4,SNR=4.7 0.3nm,0.6s						
ZALV	**Zalesovo Beam**	49.17	352	P	P	01 57 42.4	-1.3
	1.1nm,0.3s,baz=174,slow=8.3,SNR=6.1 1.1nm,0.3s						
H04N2	**CROZET ISLANDS**	63.69	212	T	T	03 09 11.5	
	baz=52						
H04N1	**CROZET ISLANDS**	63.70	212	T	T	03 09 09.8	
	baz=52						
H04N3	**CROZET ISLANDS**	63.71	212	T	T	03 09 04.5	
	baz=52						
ARCES	**ARCESS Array B**	77.82	340	P	P	02 00 51.0	-2.0
	3.2nm,1.1s,baz=105,slow=7.6,SNR=4.1 3.2nm,1.1s						

IDC 13 02:06:06.3±1.7, 36°.26N×22°.40E, h0km, mb3.8/3, mbtmp3.5/5, ML3.2/2, Error ellipse: s-maj=69.9km s-min=25.7km az=145.0

ISK 13 02:06:09.9, 34°.38N×24°.05E, h20km, ML2.9/15

THE 13 02:06:11.8, 34° N±5° ×2° 4E± °, h19km±6km, M2.9/8, MLh2.9/8

ATH 13 02:06:12.4, 34°.50N×24°.10E, h20km±1km, ML3.2/7, Manual Solution by K.Orfanogiannaki First location: 2019/06/13 02:07:13, This location: 2019/06/13 09:01:37 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km

AFAD 13 02:06:21.0, 35°.06N×24°.60E, h35km, ML2.8

ISC 13 02:06:11.7±1.5, 34°.46N±0°.08×24°.15E±0°.04, h29km±9km, n54, σ1s.84/70, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	**Gavdhos**	0.39	352	Pg	Pb	02 06 19.9	-0.4
GVD				Sg	Sb	02 06 26.5	+0.3
GVD	**Gavdhos**	0.39	352	P	Pb	02 06 20.0	-0.3
GVD				S	Sb	02 06 26.6	+0.5
GVD	**Gavdhos**	0.39	352	P	Pb	02 06 20.0	-0.3
GVD				S	Sb	02 06 24.8	-1.3
TMBK	**Timbaki Herakl**	0.80	39	P	Pn	02 06 28.5	+1.5
TMBK	**Timbaki Herakl**	0.80	39	P	Pn	02 06 28.2	+1.3
TMBK				S	Sb	02 06 38.1	+0.6
KNDR	**Palaiochora Ch**	0.86	334	Pg	Pb	02 06 28.3	+0.1
KNDR				Sg	Sn	02 06 41.3	+1.7
KNDR	**Palaiochora Ch**	0.86	334	P	Pb	02 06 28.1	0.0
KNDR				S	Sn	02 06 40.8	+1.2
KNDR	**Palaiochora Ch**	0.86	334	P	Pb	02 06 28.2	+0.1
KNDR				S	Sb	02 06 39.1	-0.3
PRNS	**Prines Rethymn**	0.95	18	P	Pb	02 06 29.3	-0.4
PRNS	**Prines Rethymn**	0.95	18	P	Pb	02 06 28.9	-0.7
IMMV	**Iera Moni Meta**	1.01	352	Pg	Pn	02 06 30.3	+0.3
IMMV				Sg	Sn	02 06 45.4	+2.2
IMMV	**Iera Moni Meta**	1.01	352	P	Pn	02 06 30.0	0.0
IDI	**Anoyia**	1.03	36	Pn	Pb	02 06 31.6	+0.6
IDI				Sn	Sn	02 06 46.9	+3.2
IDI	**Anoyia**	1.03	36	P	Pb	02 06 31.7	+0.6
IDI				S	Sn	02 06 47.0	+3.2
IDI	**Anoyia**	1.03	36	P	Pb	02 06 31.6	+0.6
IDI				S	Sb	02 06 44.8	+0.6
CHNB	**Souda**	1.03	356	P	Pn	02 06 31.0	+0.8
CHAN	**Chania**	1.06	355	P	Pn	02 06 31.2	+0.5
CHAN				S	Sn	02 06 46.7	+2.2
CHAN	**Chania**	1.06	355	P	Pn	02 06 31.2	+0.5
CHAN				S	Sb	02 06 44.6	-0.4
ANKY	**Antikythira Is**	1.57	334	P	Pn	02 06 38.2	+0.6
ANKY	**Antikythira Is**	1.57	334	P	Pn	02 06 38.6	+1.0
ZKR	**Zakros**	1.82	68	Pn	Pn	02 06 42.7	+1.6
SANT	**Santorini**	2.19	29	Pn	Pn	02 06 47.7	+1.5
SANT	**Santorini**	2.19	29	P	Pn	02 06 45.9	-0.3
SAP3	**Santorini-Thir**	2.20	26	P	Pn	02 06 47.8	+1.5
VLI	**Veliai**	2.46	337	P	Pn	02 06 51.0	+1.1
VLI	**Veliai**	2.46	337	P	Pn	02 06 50.8	+0.9
KARP	**Karpathos**	2.70	65	Pn	Pn	02 06 56.5	+3.3
KARP	**Karpathos**	2.70	65	P	Pn	02 06 55.2	+2.0
APE	**Apeiranthos**	2.84	23	Pn	Pn	02 06 55.5	+0.4
APE	**Apeiranthos**	2.84	23	P	Pn	02 06 54.7	-0.4
APE	**Apeiranthos**	2.84	23	P	Pn	02 06 55.1	0.0
ITM	**Ithomi**	3.26	327	Pn	Pn	02 07 01.9	+1.0
DAT	**Datca**	3.60	50	Pn	Pn	02 07 07.9	+2.3
ARG	**Arkhangelos**	3.69	60	Pn	Pn	02 07 09.3	+2.5
TURN	**Turunc**	4.06	54	Pn	Pn	02 07 13.8	+2.0
TURN	**Turunc**	4.06	54	P	Pn	02 07 12.3	+0.4
TURN				S	Sn	02 07 52.3	-6.1
DALY	**Dalyan (Mula)**	4.36	56	Pn	Pn	02 07 18.8	+2.9
MULA	**Mugla, Merkez-**	4.39	49	P	Pn	02 07 16.7	+0.2
FETY	**Fethiye**	4.57	60	Pn	Pn	02 07 20.9	+2.0
SABU	**Mula-Dalaman**	4.58	58	P	Pn	02 07 18.9	-0.2
SABU				S	Sn	02 08 08.5	-2.8
SABU				i IAML		02 08 18.0	
	comp=N,9.6nm,0.8s						
IZZE	**Mula-Seydike**	4.59	63	P	Pn	02 07 20.6	+1.5
IZZE				S	Sn	02 08 06.8	-4.8
IZZE				i IAML		02 08 11.0	
	comp=N,49nm,0.3s						
IZZE				i IAML		02 08 13.0	
	comp=E,16nm,0.3s						
ESEN	**Aydn-Nazilli**	4.76	44	P	Pn	02 07 21.9	+0.5
AGG	**Agios Georgios**	4.79	343	Pn	Pn	02 07 22.0	+0.1
AGG	**Agios Georgios**	4.79	343	P	Pn	02 07 20.2	-1.7
AKAS	**Kas**	4.80	67	P	Pn	02 07 23.7	+1.6
AKAS				S	Sn	02 08 12.9	-3.9
AKAS				i IAML		02 08 17.0	
	comp=E,17nm,0.5s						
TAVA	**DENIZLI_Tavas**	4.89	51	P	Pn	02 07 25.5	+2.1
CAEL	**Denizli, Camel**	4.97	56	P	Pn	02 07 27.2	+2.7
KNIK	**Mula-Seydike**	5.02	60	P	Pn	02 07 26.8	+1.6
GOLH	**Golhisar**	5.20	56	P	Pn	02 07 29.0	+1.4
BRTR	**Keskin Array B**	9.22	52	Pn	Pn	02 08 26.0	+3.1
	baz=230,slow=11,SNR=2.3 0.2nm,0.5s						
MMAI	**Mount Meron Ar**	9.48	96	Pn	Pn	02 08 47.7	+21
	1.2nm,0.3s,baz=303,slow=17,SNR=4.1 0.4nm,0.4s						
TORD	**Torodi Ar. Bea**	29.40	229	P	P	02 12 13.1	+0.5
	0.7nm,0.4s,baz=31,slow=9.3,SNR=4.2 0.7nm,0.4s						
MKAR	**Makanchi Array**	44.86	56	P	P	02 14 23.8	+0.5
	0.2nm,0.4s,baz=274,slow=7.0,SNR=4.7 0.2nm,0.4s						
ZALV	**Zalesovo Beam**	46.09	46	P	P	02 14 30.1	-2.8
	0.7nm,0.4s,baz=267,slow=9.8,SNR=3.5 0.7nm,0.4s						

IDC 13 02:11:20.2±3.8, 4°.65S×152°.69E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=130.5km s-min=36.2km az=111.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	23.46	228	P	P	02 16 31.2	-0.4
	0.4nm,0.6s,baz=55,slow=10,SNR=7.7 0.4nm,0.6s						
ASAR	**Alice Springs**	26.19	222	P	P	02 16 57.6	+0.8
	0.2nm,0.5s,baz=49,slow=9.2,SNR=2.0 0.2nm,0.5s						
MKAR	**Makanchi Array**	80.14	319	P	P	02 23 32.5	+0.1
	0.6nm,0.8s,baz=122,slow=5.2,SNR=4.8 0.6nm,0.8s						
TORD	**Torodi Ar. Bea**	150.16	288	PKPbc	PKPbc	02 31 13.4	-0.8
	1.1nm,0.5s,baz=72,slow=2.8,SNR=2.9						

GCG 13 02:23:54.5±2.0, 15°.35N×95°.24W, h35km±999km, MD3.9

MEX 13 02:23:56.2±0.7, 15°.75N×95°.17W, h62km±23km, MD4.1

ISC 13 02:23:54.6±1.4, 15°.58N±0°.07×95°.24W±0°.03, h80km±15km, n29, σ2s.55/49, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	0.86	283	eP	Pn	02 24 11.7	-0.3
HUIG				eS	Sn	02 24 23.6	-1.3
HUIG	**Huatulco**	0.86	283	i P	Pn	02 24 11.7	-0.3
HUIG				i S	Sn	02 24 23.6	-1.3
PANG	**Puerto Angel**	1.19	274	eP	Pn	02 24 18.2	+2.2
PANG				eS	Sn	02 24 35.1	+3.1
PEIG	**Puerto Escondi**	1.88	283	eP	Pn	02 24 25.8	+0.8
PEIG				eS	Sn	02 24 48.5	+0.4
PCIG		1.95	86	eP	Pn	02 24 26.1	+0.3
PCIG				eS	Sn	02 24 39.6	-10
OXLC	**Oaxaca**	2.04	317	eP	Pn	02 24 27.4	+0.2
OXLC				eS	Sn	02 24 50.0	-2.0
OXBJ	**Oaxaca**	2.06	316	eP	Pn	02 24 27.0	-0.4
OXBJ				eS	Sn	02 24 49.1	-3.4
VHO	**Vista Hermosa**	2.06	316	eP	Pn	02 24 26.1	-1.5
VHO				eS	Sn	02 24 50.2	-2.5
TGIG		2.36	59	eP	Pn	02 24 32.4	+1.0
TGIG				eS	Sn	02 24 55.9	-3.6
TGIG		2.36	59	i P	Pn	02 24 34.0	+2.7
TGIG				i S	Sn	02 25 02.5	+3.0
YOIG	**Yosondua**	2.55	300	eP	Pn	02 24 36.8	+2.6
YOIG				eS	Sn	02 25 03.8	-0.7
PNIG	**Pinotepa**	2.89	287	eP	Pn	02 24 38.6	0.0
PATR	**El Naranjo**	2.94	99	eP	Pn	02 24 39.9	+0.6
PATR				eS	Sn	02 25 12.7	-1.0
TXIG	**Tlaxiaco**	2.94	305	eP	Pn	02 24 43.2	+3.8
TXIG				eS	Sn	02 25 16.4	+2.5
PAVE	**Pavencul**	2.98	97	eP	Pn	02 24 41.9	+2.0
PAVE				eS	Sn	02 25 14.9	+0.2
TOIG	**Toxpalan**	3.05	325	eP	Pn	02 24 45.4	+4.6
TOIG				eS	Sn	02 25 19.5	+3.1
CCIG	**Comitan**	3.07	76	eP	Pn	02 24 46.5	+5.5
CCIG				eS	Sn	02 25 13.4	-3.3
CCIG	**Comitan**	3.07	76	i P	Pn	02 24 41.1	+0.1
HLIG	**Huajuapan de L**	3.33	313	eP	Pn	02 24 47.8	+3.2
HLIG				eS	Sn	02 25 26.1	+3.0
TPIG	**Tehuac#an**	3.48	325	eP	Pn	02 24 50.3	+3.7
TPIG				eS	Sn	02 25 27.5	+0.7
FTIG	**Fresnillo de T**	3.61	310	eP	Pn	02 24 50.3	+1.9
FTIG				eS	Sn	02 25 31.7	+1.7
MGIG	**Malinaltepec**	3.65	297	eP	Pn	02 24 54.0	+5.0
MGIG				eS	Sn	02 25 29.8	-1.2
TLIG	**Tlapa**	3.75	302	eP	Pn	02 24 51.2	+0.9
TLIG				eS	Sn	02 25 35.2	+1.8
CRIG	**Cruz Grande**	3.91	288	eP	Pn	02 24 54.0	+1.6
CRIG				eS	Sn	02 25 32.8	-4.3
PPM	**Popocatepetl**	4.74	317	eS	Sn	02 26 00.5	+2.4
MEIG	**Mezcala**	4.80	300	eS	Sn	02 25 53.7	-5.2
YAIG	**Yautepec**	4.90	312	eS	Sn	02 25 57.3	-4.3
CXUV	**Coxquihui**	5.09	334	eP	Pn	02 25 04.7	-3.8
CXUV				eS	Sn	02 26 03.3	-2.6
ARIG	**Puente Sto Nin**	5.58	300	eP	Pn	02 25 12.8	-2.3

IDC ***13*** *02:36:36.0±1.6, 6°.46S×129°.44E, h0^{km}, mb4.0/4, mbtmp4.0/7, ML3.8/3, Error ellipse: s-maj=80.5km s-min=24.1km az=77.0*

ISC 13 02:36:51.1±1.3**, 7°.21S**±0°.09×**129°.6E**±0°.2**, h150^{km}, n7,** σ**2^{s}.60**/10**, mb3.7**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.48**	**199**	Pn	**Pn**	**02 39 32.5**	**+1.9**
	0.8nm,0.3s,baz=42,slow=12,SNR=9.8						
FITZ				Sn	**Sn**	**02 41 35.4**	**-2.3**
	0.5nm,0.3s,baz=340,slow=4.7,SNR=4.2						
	3.0nm,0.5s						
WRA	**Warramunga Arr**	**13.47**	**160**	Pn	**Pn**	**02 39 57.5**	**+1.1**
	0.3nm,0.3s,baz=338,slow=13,SNR=18						
WRA				Sn	**Sn**	**02 42 22.6**	**-2.9**
	1.6nm,0.3s,baz=327,slow=25,SNR=9.3						
	1.9nm,0.8s						
ASAR	**Alice Springs**	**16.88**	**166**	P	**Pn**	**02 40 43.0**	**+4.4**
	0.5nm,0.3s,baz=340,slow=10,SNR=26						
ASAR				S	**Sn**	**02 43 46.2**	**-1.1**
	0.9nm,0.5s,baz=346,slow=26,SNR=6.0						
	4.6nm,1.0s						
MKAR	**Makanchi Array**	**68.18**	**327**	P	**P**	**02 47 34.9**	**-0.3**
	1.2nm,0.5s,baz=115,slow=7.9,SNR=15						
	1.2nm,0.5s						
ZALV	**Zalesovo Beam**	**71.59**	**334**	P	**P**	**02 47 53.5**	**-2.3**
	0.8nm,0.4s,baz=119,slow=8.9,SNR=2.2						
	0.8nm,0.4s						
KURBB	**Kurchatov Arra**	**72.48**	**329**	P	**P**	**02 48 00.1**	**-1.0**
	0.6nm,0.5s,baz=129,slow=5.0,SNR=7.2						
	0.6nm,0.5s						
BVAR	**Borovoye Array**	**78.03**	**328**	P	**P**	**02 48 31.6**	**-1.2**
	0.7nm,0.7s,baz=127,slow=9.3,SNR=3.6						
	0.7nm,0.7s						

IDC ***13*** *02:48:14.3±1.0, 15°.11S×173°.50W, h0^{km}, mb3.8/8, mbtmp3.8/8, MS3.2/2, Error ellipse: s-maj=33.4km s-min=24.7km az=120.0*

NEIC ***13*** *02:48:15.6±0.6, 15°.10S±0°.07×173°.3W±0°.1, h10^{km}±1^{km}, mb4.4/7, Error ellipse: s-maj=20.5km s-min=9.9km az=292.0*

ISC 13 02:48:18.0±0.6**, 15°.09S**±0°.09×**173°.3W**±0°.1**, h30^{km}, n26,** σ**1^{s}.09**/22**, mb4.2**/12**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.87**	**51**		**Pn**	**02 48 47.9**	**-0.2**
AFI	**Afiamalu**	**1.87**	**51**	Sn	**Sn**	**02 49 08.4**	**-2.4**
NIUE	**Niue**	**5.10**	**141**	Pn	**Pn**	**02 49 31.8**	**-0.6**
MSVF	**Nonsavu**	**8.72**	**251**	LR	LR	02 53 25.9	
	comp=Z,70nm,21.2s,baz=100,slow=37						
DZM	**Mont Dzumac**	**20.42**	**247**	P	**P**	**02 52 52.2**	**-0.8**
URZ	**Urewera**	**24.59**	**198**	LR	LR	03 02 30.3	
	comp=Z,101nm,18.9s,baz=317,slow=35						
RTZ	**Ruatahuna**	**24.95**	**198**	P	**P**	**02 53 38.5**	**-0.4**
RTZ				IAmb	IAmb	02 53 48.8	
	comp=Z,11nm,1.2s						
MSWZ	**Moikau Station**	**28.05**	**199**	P	**P**	**02 54 05.7**	**-1.0**
H11S2	**WAKE ISLAND Hy**	**38.76**	**329**	T	T	03 36 32.9	
	baz=147,slow=75,SNR=6.9						
H11S3	**WAKE ISLAND Hy**	**38.77**	**329**	T	T	03 36 33.0	
	baz=147,slow=75,SNR=5.8						
H11S1	**WAKE ISLAND Hy**	**38.78**	**329**	T	T	03 36 30.6	
	baz=147,slow=75,SNR=6.9						
CAN	**Canberra**	**39.31**	**232**	P	**P**	**02 55 44.2**	**-0.3**
STKA	**Stephens Creek**	**44.29**	**240**	P	**P**	**02 56 23.6**	**-1.6**
	comp=Z,1.4nm,0.7s,baz=326,slow=15,SNR=1.7						
	comp=Z,1.4nm,0.7s						
WR8	**Warramunga Arr**	**49.87**	**256**	P	**P**	**02 57 08.8**	**-0.3**
WR8				IAmb	IAmb	02 57 13.3	
	comp=Z,2.9nm,1.1s						
WB0	**Warramunga Arr**	**49.98**	**257**	P	**P**	**02 57 09.4**	**-0.5**
WB0				IAmb	IAmb	02 57 20.6	
	comp=Z,10.0nm,1.4s						
WB0				PcP	**PcP**	**02 58 30.3**	**+0.5**
WRA	**Warramunga Arr**	**50.02**	**256**	P	**P**	**02 57 09.2**	**-1.0**
WRA	**Warramunga Arr**	**50.02**	**256**	P	**P**	**02 57 09.7**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=91,slow=6.8,SNR=20						
	comp=Z,0.5nm,0.5s						
ASAR	**Alice Springs**	**50.31**	**252**	P	**P**	**02 57 11.6**	**-0.8**
	comp=Z,1.3nm,0.5s,baz=89,slow=8.1,SNR=16						
	comp=Z,1.3nm,0.5s						
VNDA	**Vanda**	**63.69**	**186**	P	**P**	**02 58 47.5**	**+1.3**
	comp=Z,0.7nm,0.9s,baz=30,slow=8.7,SNR=3.3						
	comp=Z,0.7nm,0.9s						
MJAR	**Matsushiro Arr**	**68.78**	**320**	P	**P**	**02 59 18.5**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=153,slow=8.2,SNR=4.1						
	comp=Z,0.7nm,0.3s						
CASY	**Casey**	**70.73**	**205**	P	**P**	**02 59 31.3**	**+0.4**
CASY				IAmb	IAmb	02 59 45.0	
	comp=Z,3.8nm,1.1s						
QSPA	**South Pole Qui**	**74.95**	**180**	P	**P**	**02 59 56.9**	**+0.8**
QSPA				IAmb	IAmb	03 00 02.7	
	comp=Z,3.9nm,1.2s						
QSPA	**South Pole Qui**	**74.95**	**180**	P	**P**	**02 59 56.8**	**+0.6**
	comp=Z,1.8nm,0.9s,baz=97,slow=0.7,SNR=7.4						
	comp=Z,1.8nm,0.9s						
PDAR	**Pinedale Array**	**81.96**	**42**	P	**P**	**03 00 36.3**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=289,slow=7.2,SNR=2.0						
	comp=Z,0.2nm,0.4s						
ILAR	**Eielson Array**	**82.12**	**11**	P	**P**	**03 00 37.3**	**+1.9**
	comp=Z,0.2nm,0.7s,baz=232,slow=6.4,SNR=5.5						
	comp=Z,0.2nm,0.7s						
BRTR	**Keskin Array B**	**145.99**	**321**	PKPbc	**PKPab**	**03 07 57.0**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=109,slow=2.0,SNR=6.3						

NNC 13 02:57:49.6±5.9**, 48°.58N×85°.00E, h0^{km}, mb3.0, mpv3.6, 2C-2D, Error ellipse: s-maj=52.9km s-min=42.5km az=141.0, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**2.56**	**227**	⇑Pn	Pn	02 58 33.0	+0.6
	0.1nm,0.2s,baz=38,slow=13,SNR=10						
MK31				⇓Sn	Sn	02 59 05.1	+0.9
	1.6nm,0.5s,baz=47,slow=22						
MAKZ	**Makanchi**	**2.70**	**230**	⇑Pn	Pn	02 58 33.7	-0.6
	1.6nm,0.9s						
MAKZ				⇓Sn	Sn	02 59 08.9	+1.2
	1.6nm,0.3s						

SOME 13 02:58:36.8, 44°.33N×79°.15E, h10^{km}, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLB	**Baldybastay**	**0.54**	**244**	S	Sb	02 58 55.8	-0.5
	50nm,0.3s						
BLB	**Baldybastay**	**0.54**	**244**	P	Pg	02 58 47.7	+0.5
	16nm,0.1s						
KPKS	**Kokpek**	**0.93**	**201**	S	Sb	02 59 07.8	+0.3
KPKS	**Kokpek**	**0.93**	**201**	P	Pg	02 58 54.8	+0.1
UZB	**Uzynbulak**	**1.19**	**185**	S	Sn	02 59 15.6	-0.3
	5.9nm,0.2s						
UZB	**Uzynbulak**	**1.19**	**185**	P	Pb	02 58 59.3	-0.2
	2.4nm,0.1s						
SHLS	**Shalkode**	**1.20**	**169**	S	Sn	02 59 18.2	+2.2
	10nm,0.3s						
SHLS	**Shalkode**	**1.20**	**169**	*e*P	Pg	02 59 01.0	+1.2
	4.0nm,0.2s						
SHLS				*e*S	Sn	02 59 18.2	+2.2
	10nm,0.3s						
SHLS	**Shalkode**	**1.20**	**169**	P	Pg	02 59 01.0	+1.2
	4.0nm,0.2s						
KTBS	**Karatobe**	**1.89**	**252**	S	Sg	02 59 36.6	-0.8
	14nm,0.6s						
KTBS	**Karatobe**	**1.89**	**252**	P	Pb	02 59 11.5	+0.1
	3.0nm,0.4s						

IDC ***13*** *03:00:28.5±0.5, 35°.41S×17°.39W, h0^{km}, mb4.4/18, mbtmp4.4/18, MS5.0/46, Error ellipse: s-maj=16.2km s-min=15.1km az=120.0*

MOS ***13*** *03:00:29.5±1.4, 35°.55S×17°.32W, h10^{km}, mb5.3/22, MS5.0/6, Error ellipse: s-maj=13.7km s-min=10.0km az=136.0*

IPGP ***13*** *03:00:31.0, 35°.70S×17°.21W, h12^{km}, Mw5.8, Fault plane solution: NP1:φ$_s$78.00000°, δ84.00000°, λ3.00000°. NP2:φ$_s$348.00000°, δ87.00000°, λ174.00000°.*

NEIC ***13*** *03:00:31, 35°.86S×17°.07W, h16^{km}, Moment Tensor Solution. Duration: 3^{s}.5 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.97; M$_{θθ}$-1.16; M$_{φφ}$2.12; M$_{rθ}$0.04; M$_{θφ}$4.15; M$_{φr}$1.27; Fault plane solution: M$_0$4.71000×10^{17} NP1:φ$_s$79.32000°, δ73.93000°, λ-1.81000°. NP2:φ$_s$169.82000°, δ88.26000°, λ-163.92000°. Principal axes: T 5.1325, Plg10.0000°, Azm303.0000°; N -1.0047, Plg74.0000°, Azm176.0000°; P -4.1278, Plg13.0000°, Azm36.0000°;*

NEIC ***13*** *03:00:31, 35°.77S×17°.20W, h10^{km}*

NEIC ***13*** *03:00:31, 35°.76S×17°.20W, h16^{km}*

NEIC ***13*** *03:00:31.3±1.9, 35°.73S±0°.03×17°.2W±0°.1, h10^{km}±1^{km}, mb5.2/90, Ms_20 5.2/879, Mwb5.7/28, Mww5.7/42, Error ellipse: s-maj=14.5km s-min=4.5km az=270.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.05; M$_{θθ}$-1.83; M$_{φφ}$1.79; M$_{rθ}$0.31; M$_{θφ}$3.55; M$_{φr}$0.36; Fault plane solution: M$_0$4.01000×10^{17} NP1:φ$_s$76.69000°, δ85.98000°, λ5.61000°. NP2:φ$_s$346.29000°, δ84.40000°, λ175.96000°. Principal axes: T 4.0144, Plg7.0000°, Azm302.0000°; N -0.0092, Plg83.0000°, Azm112.0000°; P -4.0052, Plg1.0000°, Azm211.0000°;*

BJI ***13*** *03:00:32.0, 35°.60S×17°.20W, h10^{km}, mB5.5/3, Ms5.6/20, Ms7 5.4/20*

GCMT ***13*** *03:00:36.3±0.1, 35°.49S±0°.01×17°.19W±0°.01, h18^{km}, MW5.8/168, Moment Tensor Solution. s147,c285; s168,c379; Duration: 1^{s}.9 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.05±.05; M$_{θθ}$-2.34±.06; M$_{φφ}$2.39±.05; M$_{rθ}$-0.94±.12; M$_{θφ}$5.62±.05; M$_{φr}$0.83±.12; Best double couple: M$_0$6.22300×10^{17} NP1:φ$_s$78.00000°, δ81.00000°, λ-7.00000°. NP2:φ$_s$169.00000°, δ83.00000°, λ-171.00000°. Principal axes: T 6.1270, Plg2.0000°, Azm303.0000°; N 0.1940, Plg79.0000°, Azm205.0000°; P -6.3190, Plg11.0000°, Azm34.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 03:00:30.9±0.2**, 35°.69S**±0°.05×**17°.29W**±0°.05**, h10^{km}, n779,** σ**1^{s}.98**/358**, mb5.1**/82**, MS5.2**/486**, 7C-3D, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H09W1	**TRISTAN DA CUN**	**4.24**	**111**	T	T	03 05 57.0	
	SNR=39						
H09N1	**TRISTAN DA CUN**	**4.24**	**110**	T	T	03 05 52.7	
	SNR=21						
TRIS	**Tristan da Cun**	**4.24**	**110**		**Pn**	**03 01 33.2**	**-2.3**
SHEL	**Horse Pasture**	**22.19**	**31**	P	**P**	**03 05 26.0**	**-1.4**
SHEL	**Horse Pasture**	**22.19**	**31**	P	**P**	**03 05 26.0**	**-1.4**
SHEL				pmax	pmax		
	comp=Z,272nm,0.9s						
CAM01	**Campos-RJ**	**25.35**	**296**	*e*P	**P**	**03 05 58.5**	**+0.4**
DUB01	**Friburgo-RJ**	**25.72**	**295**	*e*P	**P**	**03 06 01.9**	**+0.3**
VAS01	**Vassouras-RJ**	**26.40**	**293**	*e*P	**P**	**03 06 06.1**	**-1.5**
H10S2	**ASCENSION HYDR**	**26.72**	**6**	T	T	03 33 54.8	
	baz=36,slow=74,SNR=118						
H10S3	**ASCENSION HYDR**	**26.72**	**6**	T	T	03 33 54.3	
	baz=184,slow=74,SNR=86						
SLP01	**Ubatuba-SP**	**27.10**	**289**	*e*P	**P**	**03 06 14.6**	**+0.4**
PARB	**Paraibuna**	**27.45**	**289**	*e*P	**P**	**03 06 17.4**	**+0.2**
H10N1	**ASCENSION HYDR**	**27.83**	**6**	T	T	03 35 18.0	
	baz=191,slow=79,SNR=18						
H10N3	**ASCENSION HYDR**	**27.84**	**6**	T	T	03 35 17.4	
	baz=191,slow=79,SNR=53						
H10N2	**ASCENSION HYDR**	**27.85**	**6**	T	T	03 35 20.3	
	baz=191,slow=79,SNR=59						
BSCB	**Bom Sucesso**	**28.15**	**294**	*e*P	**P**	**03 06 23.7**	**+0.2**
VAO	**Valinhos**	**28.67**	**288**		**P**	**03 06 29.0**	**+0.9**
VAO				IAmb	IAmb	03 06 34.5	
	comp=Z,90nm,1.9s						
VAO				IAMs_20	IAMs_20	03 14 55.9	
	comp=Z,6μm,22.0s						
VAO	**Valinhos**	**28.67**	**288**	*e*P	**P**	**03 06 28.1**	**0.0**
SPB	**Sao Paulo**	**28.72**	**287**	P	**P**	**03 06 27.4**	**-1.0**
SPB	**Sao Paulo**	**28.72**	**287**	*e*P	**P**	**03 06 29.5**	**+1.0**
DIAM	**Diamantina, MG**	**29.06**	**300**	*e*P	**P**	**03 06 30.7**	**-1.0**
PLTB	**Pedras Altas**	**30.34**	**267**		**P**	**03 06 42.2**	**-0.6**
PLTB	**Pedras Altas**	**30.34**	**267**	*e*P	**P**	**03 06 42.6**	**-0.2**
FRTB	**Fartura**	**30.52**	**285**	*e*P	**P**	**03 06 45.1**	**+0.6**
CPSB	**Cacapava Do Su**	**30.64**	**269**	*e*P	**P**	**03 06 44.3**	**-1.2**
ITAB	**Concordia**	**30.77**	**276**		**P**	**03 06 46.2**	**-0.3**
ITAB				IAmb	IAmb	03 07 20.2	
	comp=Z,61nm,1.6s						
ITAB				IAMs_20	IAMs_20	03 15 54.2	
	comp=Z,5μm,22.0s						
ITAB	**Concordia**	**30.77**	**276**	*e*P	**P**	**03 06 46.7**	**+0.2**
SUR	**Sutherland**	**31.62**	**95**	IAMs_20	IAMs_20	03 15 51.6	
	comp=Z,5μm,21.0s						
LDASE	**Londrina, Braz**	**31.72**	**283**	*e*P	**P**	**03 06 54.8**	**-0.3**
JANB	**Januaria**	**31.73**	**303**	*e*P	**P**	**03 06 54.4**	**-0.8**
PTGB	**Pitanga**	**31.83**	**280**	*e*P	**P**	**03 06 52.6**	**-3.4**
IPMB	**Ipameri, GO**	**32.55**	**295**	*e*P	**P**	**03 07 03.0**	**+0.6**
WIN	**Windhoek**	**32.59**	**76**	P	**P**	**03 07 02.1**	**-0.8**
WIN				IAmb	IAmb	03 07 06.6	
	comp=Z,37nm,1.2s						
WIN	**Windhoek**	**32.59**	**76**	P	**P**	**03 07 02.1**	**-0.8**
WIN				pmax	pmax		
	comp=Z,37nm,1.2s						
PCMB	**Pacaembu**	**32.77**	**286**	*e*P	**P**	**03 07 03.7**	**-0.5**
EFI	**East Falkland**	**33.04**	**228**	IAMs_20	IAMs_20	03 17 38.5	
	comp=Z,4μm,20.0s						
EFI	**East Falkland**	**33.04**	**228**	*i* P	**P**	**03 07 07.5**	**+1.3**
EFI				pmax	pmax		
	comp=Z,15nm,1.1s						
ITRB	**Iturama**	**33.13**	**290**	*e*P	**P**	**03 07 07.9**	**+0.5**
TRCB	**Terra Rica**	**33.23**	**283**	P	**P**	**03 07 09.3**	**+1.0**
ITQB	**Itaqui**	**33.48**	**269**		**P**	**03 07 10.7**	**+0.3**
ITQB				IAmb	IAmb	03 07 38.9	
	comp=Z,43nm,1.0s						
ITQB	**Itaqui**	**33.48**	**269**	*e*P	**P**	**03 07 11.2**	**+0.9**
BDFB	**Brasilia**	**33.92**	**298**		**P**	**03 07 13.2**	**-1.2**
BDFB				IAmb	IAmb	03 08 26.2	
	comp=Z,24nm,1.0s						
BDFB	**Brasilia**	**33.92**	**298**	P	**P**	**03 07 12.0**	**-2.4**
	comp=Z,10nm,1.0s,baz=143,slow=9.0,SNR=8.8						
BDFB				PP	**PnPn**	**03 08 23.5**	**-3.7**
	comp=Z,18nm,0.7s,baz=133,slow=11,SNR=19						
BDFB				LR	LR	03 18 29.3	
	comp=Z,7μm,21.6s,baz=132,slow=32						
	comp=Z,10nm,1.0s						
BDFB	**Brasilia**	**33.92**	**298**	P	**P**	**03 07 13.2**	**-1.2**
BDFB				pmax	pmax		
	comp=Z,24nm,1.0s						
SDBA	**SAO DESIDERIO**	**34.03**	**306**	*e*P	**P**	**03 07 13.4**	**-1.9**
RCBR	**Riachuelo**	**34.30**	**326**	IAMs_20	IAMs_20	03 17 34.2	
	comp=Z,4μm,21.0s						
RCBR	**Riachuelo**	**34.30**	**326**	LR	LR	03 17 55.0	
	comp=Z,2μm,20.9s,baz=144,slow=31						
TSUM	**Tsumeb**	**34.81**	**71**	P	**P**	**03 07 20.9**	**-1.2**
TSUM	**Tsumeb**	**34.81**	**71**	LR	LR	03 18 21.4	
	comp=Z,2μm,20.6s,baz=229,slow=31						
KOOLE	**Kule**	**34.83**	**79**	P	**P**	**03 07 20.8**	**-1.5**
KOOLE	**Kule**	**34.83**	**79**	*i* P	**P**	**03 07 21.8**	**-0.5**
SJPY	**San Joaquin**	**34.95**	**277**	*e*P	**P**	**03 07 24.1**	**+0.9**
LKGWB	**Lokgwabe**	**35.11**	**82**	P	**P**	**03 07 26.6**	**+1.9**
RPRD	**Ribas do Rio P**	**35.29**	**286**	*e*P	**P**	**03 07 26.1**	**0.0**
VNA1	**Neumayer--Stat**	**35.36**	**175**	⇑P	P	03 07 31.9	+5.8
	comp=Z,12nm,0.9s						
CPUP	**Villa Florida**	**35.36**	**274**		**P**	**03 07 25.9**	**-0.7**
CPUP	**Villa Florida**	**35.36**	**274**	P	**P**	**03 07 24.7**	**-1.9**
	comp=Z,3.5nm,1.2s,baz=352,slow=6.7,SNR=7.9						
CPUP				LR	LR	03 19 22.6	
	comp=Z,1μm,20.8s,baz=342,slow=32						
	comp=Z,3.5nm,1.2s						
CPUP	**Villa Florida**	**35.36**	**274**	P	**P**	**03 07 25.9**	**-0.7**
CPUP				pmax	pmax		
	comp=Z,8.0nm,1.4s						
TRQA	**Tornquist**	**35.57**	**253**	P	**P**	**03 07 27.6**	**-0.8**
TRQA				IAmb	IAmb	03 07 40.3	
	comp=Z,44nm,1.4s						
TRQA	**Tornquist**	**35.57**	**253**	P	**P**	**03 07 27.6**	**-0.8**
TRQA				pmax	pmax		
	comp=Z,44nm,1.4s						
C2SB	**Chapadao do Su**	**35.58**	**289**	*e*P	**P**	**03 07 28.6**	**0.0**
VNA2	**Neumayer--Watz**	**35.69**	**174**	⇑P	**P**	**03 07 31.8**	**+2.8**
	comp=Z,11nm,1.0s,baz=345,slow=11						
PHPEN	**Phepeng**	**35.82**	**85**	P	**P**	**03 07 29.9**	**-0.9**
PHPEN				IAmb	IAmb	03 07 32.8	
	comp=Z,67nm,1.4s						
PHPEN	**Phepeng**	**35.82**	**85**	*i* P	**P**	**03 07 30.6**	**-0.1**
VNA3	**Neumayer Olymp**	**35.85**	**176**	⇑P	**P**	**03 07 32.4**	**+2.1**
	comp=Z,23nm,1.0s						
GRHM	**Grahamstown, E**	**35.86**	**99**	P	**P**	**03 07 29.9**	**-1.0**
GRHM				IAMs_20	IAMs_20	03 19 42.8	
	comp=Z,5μm,20.0s						
NBPB	**Pedra_Branca-C**	**36.34**	**320**	*e*P	**P**	**03 07 33.5**	**-1.6**
GRTLG	**Ghanzi**	**36.48**	**77**	P	**P**	**03 07 35.0**	**-1.4**
GRTLG				IAmb	IAmb	03 07 39.9	
	comp=Z,36nm,0.9s						
GRTLG	**Ghanzi**	**36.48**	**77**	*i* P	**P**	**03 07 35.9**	**-0.5**
BOSA	**Boshof**	**36.49**	**91**	P	**P**	**03 07 35.1**	**-1.4**
BOSA	**Boshof**	**36.49**	**91**	P	**P**	**03 07 35.3**	**-1.1**
	comp=Z,12nm,0.8s,baz=254,slow=8.2,SNR=19						
BOSA				PP	**PP**	**03 08 59.8**	**+0.4**
	comp=Z,14nm,1.0s,baz=250,slow=14,SNR=4.1						
BOSA				LR	LR	03 19 13.4	
	comp=Z,2μm,20.9s,baz=249,slow=31						
	comp=Z,12nm,0.8s						
KGCAE	**Kacgae**	**36.51**	**80**	*i* P	**P**	**03 07 36.2**	**-0.5**
ARAG	**Araguaiana, MT**	**36.66**	**294**	*e*P	**P**	**03 07 37.4**	**-0.5**
SNAA	**Sanae**	**36.84**	**172**	⇑P	P	03 07 31.0	-7.9
	comp=Z,20nm,0.7s						
SNAA	**Sanae**	**36.84**	**172**	P	**P**	**03 07 37.8**	**-1.0**
SNAA	**Sanae**	**36.84**	**172**	P	**P**	**03 07 40.1**	**+1.2**
	comp=Z,2.7nm,0.8s,baz=331,slow=17,SNR=6.0						
SNAA				PP	**PP**	**03 09 04.7**	**+2.1**
	comp=Z,2.8nm,0.9s,baz=350,slow=20,SNR=1.4						
SNAA				LR	LR	03 18 40.3	
	comp=Z,1μm,19.0s,baz=336,slow=29						
	comp=Z,2.7nm,0.8s						
SNAA	**Sanae**	**36.84**	**172**	*i* P	**P**	**03 07 40.2**	**+1.3**
SNAA				pmax	pmax		
	comp=Z,23nm,1.4s						
AQDB	**Aquidauana**	**36.87**	**284**	P	**P**	**03 07 39.0**	**-0.6**
AQDB	**Aquidauana**	**36.87**	**284**	*e*P	**P**	**03 07 39.4**	**-0.2**
SKOMA	**Sekoma**	**37.12**	**84**	*i* P	**P**	**03 07 41.6**	**-0.2**
QNGWA	**Qangwa**	**37.42**	**75**	P	**P**	**03 07 42.9**	**-1.6**
MURT	**Porto Murtinho**	**37.77**	**281**	*e*P	**P**	**03 07 46.1**	**-1.1**
TROLL	**Troll, Antarti**	**37.81**	**170**	⇑P	**P**	**03 07 49.4**	**+2.2**
	comp=Z,877nm,0.8s						
XAUDM	**Khaudum**	**38.10**	**74**	P	**P**	**03 07 49.0**	**-1.3**
XAUDM				IAmb	IAmb	03 07 59.2	
	comp=Z,37nm,1.1s						
KDWAN	**Kaudwane**	**38.24**	**83**	P	**P**	**03 07 50.4**	**-0.9**
KDWAN				IAmb	IAmb	03 08 00.7	
	comp=Z,57nm,0.9s						
LBTB	**Lobatse**	**38.24**	**86**	P	**P**	**03 07 50.4**	**-1.0**
LBTB				IAmb	IAmb	03 08 14.2	
	comp=Z,59nm,1.4s						
LBTB	**Lobatse**	**38.24**	**86**	LR	LR	03 21 47.4	
	comp=Z,2μm,18.4s,baz=243,slow=33						
LBTB	**Lobatse**	**38.24**	**86**	P	**P**	**03 07 50.4**	**-1.0**
LBTB				pmax	pmax		
	comp=Z,59nm,1.4s						
LBTB	**Lobatse**	**38.24**	**86**	*i* P	**P**	**03 07 50.2**	**-1.1**
GMARE	**Gumare**	**38.28**	**76**	P	**P**	**03 07 49.7**	**-2.0**
GMARE				IAmb	IAmb	03 08 00.5	
	comp=Z,105nm,1.8s						
SMTB	**Santa Maria do**	**38.42**	**307**	*e*P	**P**	**03 07 51.5**	**-1.3**
SNDB	**Serra Nova Dou**	**38.73**	**299**	*e*P	**P**	**03 07 54.9**	**-0.5**
LPHEP	**Lephephe**	**39.21**	**84**	P	**P**	**03 07 57.7**	**-1.8**
LPHEP				IAmb	IAmb	03 08 01.9	
	comp=Z,54nm,1.1s						
LPHEP	**Lephephe**	**39.21**	**84**	*i* P	**P**	**03 07 59.9**	**+0.3**
SALV	**Santo Antonio**	**39.47**	**290**	*e*P	**P**	**03 08 01.1**	**-0.5**
USHA	**Ushuaia**	**39.72**	**225**	LR	LR	03 22 58.1	
	comp=Z,9.6nm,20.9s,baz=85,slow=34						
PHDHD	**Phuduhudu**	**39.73**	**79**	P	**P**	**03 08 03.3**	**-0.5**
PHDHD				IAmb	IAmb	03 08 07.7	
	comp=Z,62nm,1.3s						
PHDHD	**Phuduhudu**	**39.73**	**79**	*i* P	**P**	**03 08 04.0**	**+0.1**
MG02	**Cerro Sombrero**	**39.98**	**228**	IAMs_20	IAMs_20	03 22 19.2	
	comp=Z,3μm,19.0s						
PMSA	**Palmer Station**	**40.20**	**209**	LR	LR	03 22 33.0	
	comp=Z,562nm,19.1s,baz=48,slow=33						
MG03	**Isla Dawson**	**40.80**	**227**	IAMs_20	IAMs_20	03 22 04.5	
	comp=Z,5μm,22.0s						
MREMI	**Moremi**	**40.88**	**84**	P	**P**	**03 08 12.8**	**-0.5**
MREMI				IAmb	IAmb	03 08 18.1	
	comp=Z,44nm,0.7s						
MREMI	**Moremi**	**40.88**	**84**	*i* P	**P**	**03 08 13.4**	**+0.1**
MG04	**Isla Riesco**	**41.41**	**228**	IAMs_20	IAMs_20	03 22 25.9	
	comp=Z,4μm,22.0s						
BROLN	**Tlhalogang**	**41.51**	**82**	*i* P	**P**	**03 08 18.7**	**+0.1**
KSANE	**Kasane**	**41.52**	**76**	*i* P	**P**	**03 08 19.7**	**+1.0**
PLCA	**Paso Flores**	**41.62**	**246**	P	**P**	**03 08 20.3**	**+1.0**
PLCA	**Paso Flores**	**41.62**	**246**	P	**P**	**03 08 17.7**	**-1.6**
	comp=Z,1.7nm,0.9s,baz=119,slow=9.7,SNR=4.5						
PLCA				LR	LR	03 23 31.0	
	comp=Z,2μm,19.8s,baz=96,slow=33						
	comp=Z,1.7nm,0.9s						
PLCA	**Paso Flores**	**41.62**	**246**	*e*P	**P**	**03 08 22.7**	**+3.5**
PLCA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
PLCA	**Paso Flores**	**41.62**	**246**	*e*P	**P**	**03 08 19.7**	**+0.4**
PRPB	**Parauapebas**	**41.88**	**307**	*e*P	**P**	**03 08 20.2**	**-1.3**
COYC	**Coyhaique**	**42.01**	**239**	P	**P**	**03 08 22.4**	**+0.1**
COYC				IAmb	IAmb	03 08 35.3	
	comp=Z,52nm,1.3s						
LL02	**Futaleuf**	**42.15**	**243**	P	**P**	**03 08 24.5**	**+1.0**
AY03	**Cochrane**	**42.19**	**236**	P	**P**	**03 08 24.4**	**+0.6**
CFA	**Coronel Fontan**	**42.23**	**260**	LR	LR	03 23 36.3	
	comp=Z,1μm,21.1s,baz=129,slow=33						
POGA	**Pongola**	**42.23**	**93**	P	**P**	**03 08 22.3**	**-2.0**
PTLB	**Pontes e Lacer**	**42.39**	**287**	P	**P**	**03 08 25.4**	**-0.3**
PTLB				IAmb	IAmb	03 08 28.4	
	comp=Z,51nm,1.3s						
PTLB	**Pontes e Lacer**	**42.39**	**287**	*e*P	**P**	**03 08 25.4**	**-0.3**
BBSD	**Serra de San D**	**42.55**	**284**	*e*P	**P**	**03 08 26.5**	**-0.4**
ZON	**Zonda**	**42.60**	**260**	P	**P**	**03 08 28.5**	**+1.2**
ZON	**Zonda**	**42.60**	**260**	P	**P**	**03 08 28.5**	**+1.2**
ZON				pmax	pmax		
	comp=Z,52nm,1.6s						
LL01	**San Ignacio de**	**42.70**	**244**	P	**P**	**03 08 28.6**	**+0.7**
MATP	**Matopo**	**42.79**	**82**	LR	LR	03 24 24.9	
	comp=Z,632nm,21.6s,baz=240,slow=34						
LL03	**Petrohue**	**42.92**	**245**	IAMs_20	IAMs_20	03 23 10.7	
	comp=Z,3μm,21.0s						
PDRB	**Porto dos Gac**	**42.93**	**294**	*e*P	**P**	**03 08 29.1**	**-1.0**
BELA	**Belgrano 2**	**42.95**	**185**	P	**P**	**03 08 30.2**	**+0.7**
MUSN	**Musina, Limpop**	**42.97**	**85**	*i* P	**P**	**03 08 29.1**	**-1.3**
BLWY	**Bulawayo**	**43.02**	**81**	*i* P	**P**	**03 08 31.3**	**+0.3**
MT08	**Bocatoma Ro**	**43.05**	**257**	P	**P**	**03 08 32.0**	**+0.8**
MT08				IAmb	IAmb	03 08 42.7	
	comp=Z,47nm,1.1s						
MT08				IAMs_20	IAMs_20	03 24 08.4	
	comp=Z,3μm,19.0s						
LMEL	**Las Melosas**	**43.07**	**256**	P	**P**	**03 08 32.1**	**+0.9**
LMEL				IAmb	IAmb	03 08 43.1	
	comp=Z,60nm,1.3s						
MT13	**San Alfonso**	**43.16**	**257**	P	**P**	**03 08 32.2**	**+0.3**
MT13				IAmb	IAmb	03 08 43.4	
	comp=Z,34nm,1.1s						
MT13				IAMs_20	IAMs_20	03 24 11.6	
	comp=Z,3μm,20.0s						
BO04	**La Punta**	**43.34**	**256**	IAMs_20	IAMs_20	03 22 55.3	
	comp=Z,4μm,22.0s						
MT03	**Universidad Ad**	**43.42**	**257**	P	**P**	**03 08 34.7**	**+0.6**
MT03				IAmb	IAmb	03 08 45.1	
	comp=Z,48nm,0.9s						
MT16	**CCHEN**	**43.45**	**257**	P	**P**	**03 08 34.3**	**+0.1**
SIV	**San Ignacio**	**43.59**	**285**	LR	LR	03 24 26.4	
	comp=Z,5μm,21.5s,baz=132,slow=33						
BO01	**Tunca**	**43.60**	**255**	P	**P**	**03 08 35.2**	**-0.1**
BO01				IAmb	IAmb	03 08 46.3	
	comp=Z,50nm,1.2s						
BO01				IAMs_20	IAMs_20	03 22 50.0	
	comp=Z,3μm,22.0s						
MOPA	**Mopani**	**43.64**	**88**	*i* P	**P**	**03 08 32.6**	**-3.2**
LL05	**Los Muermos**	**43.66**	**245**	IAMs_20	IAMs_20	03 23 54.2	
	comp=Z,3μm,20.0s						
PEL	**Peldehue**	**43.67**	**257**	P	**P**	**03 08 35.2**	**-0.8**
PEL				IAmb	IAmb	03 08 45.5	
	comp=Z,53nm,1.2s						
PEL	**Peldehue**	**43.67**	**257**	P	**P**	**03 08 35.2**	**-0.8**
PEL				pmax	pmax		
	comp=Z,53nm,1.2s						
VA03	**San Esteban**	**43.69**	**258**	IAMs_20	IAMs_20	03 23 08.5	
	comp=Z,3μm,20.0s						
MT09	**Talagante**	**43.71**	**256**	IAMs_20	IAMs_20	03 23 18.0	
	comp=Z,3μm,21.0s						
DBIC	**Dimbokro**	**43.73**	**18**	P	**P**	**03 08 34.7**	**-1.7**
DBIC				IAmb	IAmb	03 08 38.4	
	comp=Z,63nm,1.4s						
DBIC	**Dimbokro**	**43.73**	**18**	P	**P**	**03 08 33.8**	**-2.6**
	comp=Z,17nm,0.8s,baz=185,slow=7.9,SNR=13						
DBIC				LR	LR	03 22 57.6	
	comp=Z,2μm,18.1s,baz=196,slow=31						

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       comp=Z,17nm,0.8s
DBIC   Dimbokro          43.73  18   P        P        03 08 34.7  -1.7
DBIC                                 pmax     pmax
       comp=Z,63nm,1.4s
TMAB   Tom-Au,PA,Br      43.74 312  eP        P        03 08 36.2  -0.3
MT01   Popeta            43.89 256   IAMs_20  IAMs_20  03 23 23.8
       comp=Z,3µm,22.0s
CO01   Juntas del Tor    44.30 262   P        P        03 08 41.3   0.0
CO01                                 IAmb     IAmb     03 08 53.9
       comp=Z,77nm,1.4s
VILB   Vilhena           44.72 289   P        P        03 08 44.0  -0.5
VILB                                 IAmb     IAmb     03 08 58.5
       comp=Z,45nm,1.1s
VILB   Vilhena           44.72 289  eP        P        03 08 43.8  -0.7
AC02   Maricunga         44.75 266   IAMs_20  IAMs_20  03 24 18.8
       comp=Z,3µm,22.0s
NPGB   Novo Progresso    45.02 300  eP        P        03 08 45.3  -1.6
GO03   Copiapo           45.33 265   P        P        03 08 48.6  -0.7
GO03                                 IAmb     IAmb     03 09 00.7
       comp=Z,23nm,1.1s
LSZ    Lusaka            45.34  75   P        P        03 08 48.9  -0.6
LSZ    Lusaka            45.34  75   IAMs_20  IAMs_20  03 27 41.4
       comp=Z,3µm,18.0s
LSZ    Lusaka            45.34  75   LR       LR       03 24 55.7
       comp=Z,2µm,20.3s,baz=242,slow=32
LSZ    Lusaka            45.34  75   P        P        03 08 48.9  -0.6
LSZ                                  pmax     pmax
       comp=Z,19nm,1.0s
LSZ                                  MLR      MLR
       comp=Z,3µm,18.0s
SYO    Syowa Base        45.41 155⇑ eP        P        03 08 46.8  -2.5
SYO    Syowa Base        45.41 155⇓ epP       P        03 08 48.6  -0.7
KRI    Karoi             45.59  78  i P       P        03 08 54.3  +2.7
AF01   San Pedro de A    45.69 272   P        P        03 08 52.0  -0.5
AF01                                 IAmb     IAmb     03 10 18.8
       comp=Z,58nm,1.4s
GO02   Mina Guanaco      45.84 268   P        P        03 08 53.0  -0.6
GO02                                 IAmb     IAmb     03 09 03.3
       comp=Z,41nm,1.1s
CHIPN  CHIPINGE          46.24  84  i P       P        03 08 57.3  +0.7
ITTB   Itaituba          47.18 302  eP        P        03 09 02.7  -1.2
PB05   IPOC Station P    47.38 271   P        P        03 09 05.0  -0.6
PB05                                 IAmb     IAmb     03 09 11.5
       comp=Z,40nm,1.1s
PB03   IPOC Station P    47.40 272   P        P        03 09 05.1  -0.6
PB01   IPOC Station P    47.67 273   P        P        03 09 08.0  +0.2
PB01                                 IAmb     IAmb     03 09 19.0
       comp=Z,43nm,1.3s
PB01                                 IAMs_20  IAMs_20  03 27 23.3
       comp=Z,2µm,20.0s
PB08   IPOC Station P    47.84 275   P        P        03 09 08.7  -0.8
PB08                                 IAMs_20  IAMs_20  03 27 36.0
       comp=Z,3µm,21.0s
MAL2   Monte Alegre,     47.86 306   P        P        03 09 08.6  -0.6
GO01   Chusmiza          48.12 275   P        P        03 09 11.0  -0.7
PB11   IPOC Station P    48.44 275   P        P        03 09 14.4  +0.6
PB11                                 IAMs_20  IAMs_20  03 28 04.9
       comp=Z,3µm,21.0s
TA01   Diego Aracena     48.47 273   P        P        03 09 13.6  -0.2
TA01                                 IAmb     IAmb     03 09 33.6
       comp=Z,28nm,0.9s
LPAZ   La Paz            49.04 280   P        P        03 09 17.3  -1.7
LPAZ                                 IAmb     IAmb     03 09 41.4
       comp=Z,22nm,1.2s
LPAZ   La Paz            49.04 280   P        P        03 09 16.8  -2.2
       comp=Z,4.3nm,0.9s,baz=113,slow=6.4,SNR=18
LPAZ                                 LR       LR       03 29 45.4
       comp=Z,3µm,20.2s,baz=112,slow=36
       comp=Z,4.3nm,0.9s
LPAZ   La Paz            49.04 280  eP        P        03 09 16.8  -2.2
PB16   IPOC Station P    49.05 276            P        03 09 18.4  -0.7
PB16                                 IAMs_20  IAMs_20  03 28 18.1
       comp=Z,3µm,22.0s
PB18   Visviri           49.42 277            P        03 09 21.7  -0.1
PB18                                 IAMs_20  IAMs_20  03 28 26.9
       comp=Z,3µm,22.0s
BBTS   Babate            50.08   1   LR       LR       03 26 11.2
       comp=Z,2µm,18.1s,baz=70,slow=31
MACA   Manacapuru-AM     51.50 299   P        P        03 09 36.3  -0.6
MACA                                 IAmb     IAmb     03 09 43.3
       comp=Z,26nm,0.8s
MACA   Manacapuru-AM     51.50 299  eP        P        03 09 36.6  -0.3
H04S2  CROZET ISLANDS    51.61 125   T        T        04 05 28.8
       baz=257,slow=75,SNR=7.0
H04S3  CROZET ISLANDS    51.61 125   T        T        04 05 38.7
       baz=257,slow=75,SNR=6.0
H04S1  CROZET ISLANDS    51.63 125   T        T        04 05 30.0
       baz=257,slow=75,SNR=5.9
TORD   Torodi Ar. Bea    51.79  24   P        P        03 09 36.8  -2.2
       comp=Z,7.4nm,1.0s,baz=200,slow=5.2,SNR=16
TORD                                 LR       LR       03 27 03.8
       comp=Z,2µm,20.7s,baz=180,slow=31
       comp=Z,7.4nm,1.0s
MDP    Montagnes des     52.41 313   LR       LR       03 30 16.6
       comp=Z,3µm,19.9s,baz=132,slow=34
MAW    Mawson            53.86 152   P        P        03 09 54.6  +0.9
       comp=Z,6.0nm,1.1s
MAW    Mawson            53.86 152   P        P        03 09 54.6  +0.9
       comp=Z,8.8nm,0.8s,baz=280,slow=11,SNR=10
MAW                                  LR       LR       03 27 49.8
       comp=Z,3µm,21.5s,baz=279,slow=30
       comp=Z,8.8nm,0.8s
TEFE   Tefe              54.13 295  eP        P        03 09 55.4  -1.0
QSPA   South Pole Qui    54.56 180            P        03 09 58.8  -0.3
QSPA   South Pole Qui    54.56 180   IAMs_20  IAMs_20  03 30 44.9
       comp=Z,2µm,19.0s
QSPA   South Pole Qui    54.56 180   P        P        03 10 00.8  +1.8
       comp=Z,22nm,0.9s,baz=301,slow=4.7,SNR=3.2
QSPA                                 LR       LR       03 30 56.5
       comp=Z,2µm,18.6s,baz=196,slow=33
       comp=Z,22nm,0.9s
BOAV   Boa Vista         55.35 304   P        P        03 10 05.0  -0.2
BOAV                                 IAmb     IAmb     03 10 10.6
       comp=Z,38nm,1.6s
BOAV                                 IAMs_20  IAMs_20  03 31 09.5
       comp=Z,2µm,20.0s
BOAV   Boa Vista         55.35 304  eP        P        03 10 06.3  +1.1
FOMA   Nahampoana Res    55.62  98   IAMs_20  IAMs_20  03 30 03.5
       comp=Z,2µm,19.0s
MBAR   Mbarara           56.60  63   P        P        03 10 13.8  -0.6
MBAR                                 IAmb     IAmb     03 10 20.0
       comp=Z,18nm,0.8s
MBAR   Mbarara           56.60  63  i P       P        03 10 14.2  -0.2
MBAR                                 pmax     pmax
       comp=Z,17nm,0.9s
CZSB   Cruzeiro do Su    57.62 285   P        P        03 10 19.6  -1.8
CZSB                                 IAmb     IAmb     03 10 34.2
       comp=Z,36nm,1.0s
CZSB                                 IAMs_20  IAMs_20  03 32 35.0
       comp=Z,3µm,22.0s
CZSB   Cruzeiro do Su    57.62 285  eP        P        03 10 19.1  -2.4
CZSB   Cruzeiro do Su    57.62 285   P        P        03 10 20.1  -1.3
       comp=Z,782nmcomp=Z,27nm,1.2s
TBTG   Tabatinga, AM     57.65 290   P        P        03 10 19.8  -1.9
TBTG   Tabatinga, AM     57.65 290  eP        P        03 10 20.3  -1.3
TBTG   Tabatinga, AM     57.65 290   P        P        03 10 20.5  -1.1
       comp=Z,886nmcomp=Z,65nm,1.2s
NNA    Nana              58.43 278   LR       LR       03 34 44.0
       comp=Z,1µm,21.6s,baz=142,slow=35
NNA    Nana              58.43 278  i P       P        03 10 27.5  +0.3
NNA                                  pmax     pmax
       comp=Z,16nm,0.6s
TAM    Tamanrasset       62.05  24   P        P        03 10 50.9  -0.9
TAM                                  IAMs_20  IAMs_20  03 32 12.8
       comp=Z,2µm,22.0s
TAM    Tamanrasset       62.05  24   P        P        03 10 50.9  -0.9
TAM                                  pmax     pmax
       comp=Z,11nm,0.9s
ATAH   Atahualpa         62.48 282   LR       LR       03 38 44.3
       comp=Z,1µm,20.5s,baz=158,slow=37
LODK   Lodwar            62.71  63   P        P        03 10 56.8  +0.5
PCRV   Puerto La Cruz    63.83 306   LR       LR       03 37 36.0
       comp=Z,3µm,18.4s,slow=35
MACC   Macarena, Meta    64.74 293   P        P        03 11 09.4  -0.3
       comp=Z,473nmcomp=Z,35nm,1.1s
BAUV   El Baul           65.22 303   P        P        03 11 12.6  -0.1
FLOC   Florencia         65.74 291   P        P        03 11 14.7  -1.6
COHC   Cochancay         65.98 285   P        P        03 11 19.0  +1.3
       comp=Z,520nmcomp=Z,30nm,1.8s
PIAT   Ana Tenorio       66.11 287   P        P        03 11 19.4  +0.3
       comp=Z,714nmcomp=Z,52nm,1.2s
RUSC   La Rusia          66.67 296            P        03 11 21.4  -1.3
RUSC                                 IAmb     IAmb     03 11 40.3
       comp=Z,25nm,1.0s
ROSC   El Rosal          66.87 295   P        P        03 11 22.4  -1.5
       comp=Z,3.3nm,0.4s,baz=98,slow=20,SNR=1.5
ROSC                                 LR       LR       03 39 05.2
       comp=Z,6µm,19.6s,baz=172,slow=35
       comp=Z,3.3nm,0.4s
SDV    Santo Domingo     66.98 301   P        P        03 11 23.1  -1.2
SDV                                  IAmb     IAmb     03 11 37.7
       comp=Z,24nm,1.1s
SDV    Santo Domingo     66.98 301   LR       LR       03 39 32.6
       comp=Z,2µm,19.0s,baz=126,slow=35
SDV    Santo Domingo     66.98 301  eP        P        03 11 23.6  -0.7
SDV    Santo Domingo     66.98 301   P        P        03 11 24.4  +0.1
       comp=Z,341nmcomp=Z,23nm,1.2s
OTAV   Otavalo           67.03 288   P        P        03 11 24.5  -0.5
OTAV                                 IAmb     IAmb     03 11 44.9
       comp=Z,20nm,1.2s
OTAV   Otavalo           67.03 288   P        P        03 11 24.5  -0.5
OTAV                                 pmax     pmax
       comp=Z,20nm,1.2s
OTAV   Otavalo           67.03 288  eP        P        03 11 24.4  -0.6
OTAV   Otavalo           67.03 288   P        P        03 11 25.6  +0.6
       comp=Z,334nmcomp=Z,14nm,1.4s
VNDA   Vanda             67.06 180   P        P        03 11 25.6  +1.9
       comp=Z,1.1nm,0.7s,baz=225,slow=4.7,SNR=7.3
VNDA                                 LR       LR       03 38 28.4
       comp=Z,969nm,18.6s,baz=180,slow=34
       comp=Z,1.1nm,0.7s
POPC   Popayan, Colom    67.13 291   P        P        03 11 25.4   0.0
       comp=Z,285nmcomp=Z,13nm,1.4s
PMOZ   Porto Moniz, M    68.16   0  eS        S        03 20 20.4   -11
PMOZ                                i AMs_20           03 35 59.2
       comp=Z,292nm,18.0s
FURI   Furi              68.84  61   IAMs_20  IAMs_20  03 45 04.2
       comp=Z,2µm,20.0s
MDT    Midelt            69.17  11   LR       LR       03 37 48.7
       comp=Z,1µm,20.8s,baz=203,slow=32
APAC   Apartado, Choc    70.58 295   P        P        03 11 48.2  +1.7
SJG    San Juan          70.74 311   IAMs_20  IAMs_20  03 41 19.9
       comp=Z,1µm,21.0s
SJG    San Juan          70.74 311   LR       LR       03 41 21.0
       comp=Z,1µm,20.2s,baz=134,slow=35
CASY   Casey             70.78 160   P        P        03 11 46.4  -0.7
CASY                                 IAmb     IAmb     03 12 02.9
       comp=Z,17nm,1.1s
UUPR   Utuado, UPR, P    71.20 310   IAMs_20  IAMs_20  03 41 38.1
       comp=Z,1µm,20.0s
CRPR   Cabo Rojo, PR     71.25 310   IAMs_20  IAMs_20  03 41 39.6
       comp=Z,1µm,20.0s
AGPR   Aguadilla, PR     71.60 310   IAMs_20  IAMs_20  03 41 37.8
       comp=Z,1µm,20.0s
MORF   Marmelete         73.07   7  eS        S        03 21 28.9  +0.6
MORF                                 IAMs_20  IAMs_20  03 39 01.8
       comp=Z,817nm,18.5s
PVAQ   Vaqueiros         73.27   8  eP        P        03 12 05.9  +3.8
ATD    Arta Tunnel       73.63  62   LR       LR       03 40 59.0
       comp=Z,69nm,20.6s,baz=214,slow=33
MESJ   Messejana         73.64   7  eP        P        03 12 04.3   0.0
MESJ                                eS        S        03 21 35.2  +0.6
MESJ                                 IAMs_20  IAMs_20  03 38 20.3
       comp=Z,842nm,15.3s
MESJ   Messejana         73.64   7  eP        P        03 12 04.3   0.0
MESJ                                eS        S        03 21 35.2  +0.6
PBAR   Barrancos         74.11   8  eP        P        03 12 08.0  +0.9
PBAR                                i Amb              03 12 29.2
       comp=Z,48nm,1.6s
MOE    Montemor          74.30   7  eP        P        03 12 05.1  -3.0
CART   Cartagena         74.46  13   IAMs_20  IAMs_20  03 41 31.9
       comp=Z,1µm,18.0s
SDDR   Presa de Saban    74.63 307   IAMs_20  IAMs_20  03 45 29.1
       comp=Z,1µm,20.0s
PMTG   Montargil         74.86   7  eP        P        03 12 16.2  +4.9
PSBE   So Bento          75.24   7  eP        P        03 12 19.6  +5.9
KEST   Kesra             75.27  22   P        P        03 12 13.6  -0.3
KEST                                 IAmb     IAmb     03 12 42.1
       comp=Z,44nm,1.6s
KEST   Kesra             75.27  22   P        P        03 12 10.8  -3.1
       comp=Z,6.8nm,1.0s,baz=304,slow=3.7,SNR=4.8
KEST                                 LR       LR       03 42 23.1
       comp=Z,3µm,19.4s,baz=210,slow=34
       comp=Z,6.8nm,1.0s
PMRV   Marv??o           75.30   8  eS        S        03 21 55.0  +1.7
PMRV                                eLQ       LQ       03 30 39.6
PMRV                                eLR       LR       03 37 07.9
PMRV                                i AMs_20           03 39 04.8
       comp=Z,389nm,20.0s
BRU2   Volcan            75.72 292   IAMs_20  IAMs_20  03 43 02.6
       comp=Z,2µm,22.0s
ESDC   Sonseca Array     75.99  11            P        03 12 17.6  -0.4
ESDC   Sonseca Array     75.99  11   P        P        03 12 15.7  -2.3
       comp=Z,2.4nm,1.0s,baz=199,slow=5.6,SNR=9.3
ESDC                                 LR       LR       03 42 08.4
       comp=Z,627nm,18.7s,baz=177,slow=33
       comp=Z,2.4nm,1.0s
MTE    Manteigas         76.25   8  eS        S        03 22 10.4  +6.7
MTE                                 eSS       SS       03 27 15.9   +18
MTE                                 eLQ       LQ       03 32 21.3
MTE                                 eLR       LR       03 37 28.2
MTE                                 i AMs_20           03 38 51.1
       comp=Z,559nm,20.0s
GRTK   Grand Turk        76.38 309   IAMs_20  IAMs_20  03 43 32.4
       comp=Z,1µm,21.0s
PVIS   Viseu             76.52   7  eP        P        03 12 24.4  +3.5
MVO    Moncorvo          77.06   8  eP        P        03 12 26.2  +2.2
MVO                                 eS        S        03 22 17.6  +5.0
MVO                                 eSS       SS       03 27 28.3   +18
MVO                                 eLQ       LQ       03 32 44.1
MVO                                 eLR       LR       03 37 59.1
MVO                                 i AMs_20           03 39 14.6
       comp=Z,343nm,20.0s
WDD    Wied Dalam        77.08  26   IAMs_20  IAMs_20  03 42 27.9
       comp=Z,1µm,19.0s
LCR2   La Lucha 2        77.31 292   IAMs_20  IAMs_20  03 43 26.8
       comp=Z,1µm,20.0s
PCAB   Cabril            77.49   7  eP        P        03 12 29.8  +3.4
HDC    Heredia           77.56 292   IAMs_20  IAMs_20  03 44 55.4
       comp=Z,2µm,21.0s
PGAV   Gavieira, Arco    77.72   7  eP        P        03 12 31.5  +3.7
PGAV                                eS        S        03 22 20.5  +0.8
PGAV                                eSS       SS       03 27 27.8  +7.1
PGAV                                eLQ       LQ       03 32 17.6
PGAV                                eLR       LR       03 35 08.3
PGAV                                i AMs_20           03 41 32.9
       comp=Z,383nm,20.0s
PBRG   Braganca          77.72   8  eP        P        03 12 33.3  +5.6
PBRG                                i Amb              03 12 39.5
       comp=Z,37nm,2.0s
MAHO   Mahon             77.80  17   IAMs_20  IAMs_20  03 43 25.0
       comp=Z,1µm,19.0s
GTBY   Guantanamo Bay    77.81 305   IAMs_20  IAMs_20  03 45 20.2
       comp=Z,1µm,21.0s
NMDO   Nuevo Mundo       78.17 306   IAMs_20  IAMs_20  03 45 11.1
       comp=Z,1µm,22.0s
MTDJ   Mount Denham      78.26 303   IAMs_20  IAMs_20  03 45 56.1
       comp=Z,1µm,21.0s
JTS    Las Juntas de     78.38 292   IAMs_20  IAMs_20  03 45 30.1
       comp=Z,1µm,22.0s
VAE    Valguarnera       78.52  25   LR       LR       03 44 32.9
       comp=Z,1µm,18.6s,baz=183,slow=34
CHIV   Chivirico         78.72 305   IAMs_20  IAMs_20  03 46 19.2
       comp=Z,959nm,19.0s
VSL    Villasalto        78.76  21   IAMs_20  IAMs_20  03 43 00.4
       comp=Z,1µm,21.0s
ACON   Acoyapa           79.62 293   IAMs_20  IAMs_20  03 45 35.8
       comp=Z,2µm,22.0s
CEST   Esterri de Car    79.74  14   IAMs_20  IAMs_20  03 43 25.5
       comp=Z,1µm,22.0s
TIP    Timpagrande       80.86  26   P        P        03 12 45.8  +0.9
TIP                                  IAmb     IAmb     03 13 03.3
       comp=Z,29nm,1.5s
TIP                                  IAMs_20  IAMs_20  03 44 41.9
       comp=Z,1µm,21.0s
ITM    Ithomi            81.13  31   P        P        03 12 46.4  +0.1
ITM                                  IAmb     IAmb     03 12 51.4
       comp=Z,71nm,1.9s
CRIN   San Cristobal     81.49 292   IAMs_20  IAMs_20  03 48 51.9
       comp=Z,1µm,22.0s
EIL    Elat              81.50  44   LR       LR       03 48 10.2
       comp=Z,1µm,18.1s,baz=212,slow=35
PAOL   Paolisi           81.76  24   IAMs_20  IAMs_20  03 44 20.8
       comp=Z,1µm,22.0s
CASP   Castiglione de    82.23  21   IAMs_20  IAMs_20  03 44 59.3
       comp=Z,1µm,21.0s
INTR   Introdacqua       82.43  23   IAMs_20  IAMs_20  03 48 00.6
       comp=Z,1µm,18.0s
TGUH   Tegucigalpa,Un    82.52 293   IAMs_20  IAMs_20  03 47 42.7
       comp=Z,1µm,22.0s
NRCA   Norcia            82.93  22   IAMs_20  IAMs_20  03 46 30.9
       comp=Z,1µm,22.0s
SSB    Saint Sauveur     82.98  15   P        P        03 12 58.0  +2.1
SSB    Saint Sauveur     82.98  15   P        P        03 12 58.0  +2.1
SSB                                  pmax     pmax
       comp=Z,14nm,1.2s
OSSC   Osservatorio P    83.01  20   IAMs_20  IAMs_20  03 46 13.0
       comp=Z,1µm,19.0s
MSSA   Maissana          83.27  19   IAMs_20  IAMs_20  03 45 40.9
       comp=Z,1µm,22.0s
PRMA   PARMA             83.90  19   IAMs_20  IAMs_20  03 46 55.5
       comp=Z,1µm,20.0s
TIR    Tirane            83.90  27   P        P        03 13 02.6  +2.0
TIR    Tirane            83.90  27   P        P        03 13 02.6  +2.0
TIR                                  pmax     pmax
       comp=Z,49nm,1.2s
MMAI   Mount Meron Ar    84.29  42   P        P        03 13 01.6  -1.4
       comp=Z,0.5nm,0.2s,baz=228,slow=5.6,SNR=1.3
MMAI                                 LR       LR       03 49 35.5
       comp=Z,642nm,18.2s,baz=208,slow=35
       comp=Z,0.5nm,0.2s
MTO3   Montecristo       84.30 292   IAMs_20  IAMs_20  03 49 53.0
       comp=Z,1µm,22.0s
ASF    Jabal al Asfar    84.48  44   LR       LR       03 46 58.7
       comp=Z,1µm,21.4s,baz=238,slow=33
SOR    Soroa             85.11 302   IAMs_20  IAMs_20  03 50 49.6
       comp=Z,962nm,21.0s
MANT   Manisa            85.12  34   P        P        03 13 07.7  +0.5
MANT                                 IAmb     IAmb     03 13 26.8
       comp=Z,26nm,1.2s
CLF    Chambon-Foret     85.16  13   P        P        03 13 08.7  +1.9
FUORN  Ofenpass-Fuorn    85.60  19   P        P        03 13 09.8  +0.4
DAVOX  Davos/Dischmat    85.65  18   LR       LR       03 47 35.7
       comp=Z,2µm,21.8s,baz=195,slow=33
061Z   Ochoppi           85.76 306   IAMs_20  IAMs_20  03 50 05.8
       comp=Z,977nm,22.0s
STAL   STALIGIAL         85.94  20   IAMs_20  IAMs_20  03 48 08.4
       comp=Z,1µm,20.0s
SABO   M.te Sabotino     85.94  21   IAMs_20  IAMs_20  03 48 39.8
       comp=Z,1µm,20.0s
FETA   Feichten          86.10  19  ePcP      PcP      03 13 15.3  +0.9
       comp=Z,1.4nm,0.4s
DAVA   Damuels           86.12  18  ePcP      PcP      03 13 15.5  +1.0
       comp=Z,0.7nm,0.3s
060A   Indiantown        86.20 307   IAMs_20  IAMs_20  03 50 32.5
       comp=Z,1µm,20.0s
PETF   Flores            86.25 294   P        P        03 13 13.7  +0.7
ABTA   Abfaltersbach     86.33  20  ePcP      PcP      03 13 17.2  +1.9
       comp=Z,16nm,1.5s
HUEH   Huehuetenango     86.49 292   IAMs_20  IAMs_20  03 51 56.9
       comp=Z,932nm,20.0s
MYKA   Terra Mystica     86.54  21  eP        P        03 13 16.8  +3.0
       comp=Z,1.6nm,0.3s
WTTA   Wattenberg        86.56  19  ePcP      PcP      03 13 17.7  +1.2
       comp=Z,0.7nm,0.2s
WATA   Walderalm         86.61  19  ePcP      PcP      03 13 18.0  +1.4
       comp=Z,1.3nm,0.2s
BFO    Black Forest      86.72  17   IAMs_20  IAMs_20  03 47 47.1
       comp=Z,840nm,20.0s
SOKA   Soboth            86.99  22  ePcP      PcP      03 13 20.3  +2.0
       comp=Z,0.8nm,0.4s
WLF    Walferdange       87.49  15   IAMs_20  IAMs_20  03 48 13.6
       comp=Z,1µm,20.0s
CCIG   Comitan           87.56 292   IAMs_20  IAMs_20  03 52 52.4
       comp=Z,1µm,18.0s
DWPF   Disney Wildern    87.63 307   IAMs_20  IAMs_20  03 51 03.9
       comp=Z,1µm,21.0s
ARSA   Arzberg           87.66  22   IAMs_20  IAMs_20  03 48 19.8
       comp=Z,1µm,22.0s
RONA   Rosalia, Austr    88.29  22  ePcP      PcP      03 13 26.1  +2.2
       comp=Z,0.9nm,0.4s
BRTR   Keskin Array B    88.51  37   P        P        03 13 24.3  +0.7
BRTR   Keskin Array B    88.51  37   P        P        03 13 23.1  -0.5
       comp=Z,0.7nm,0.8s,baz=198,slow=6.4,SNR=6.4
BRTR                                 LR       LR       03 51 31.0
       comp=Z,309nm,20.8s,baz=184,slow=35
       comp=Z,0.7nm,0.8s
BRTR   Keskin Array B    88.51  37   P        P        03 13 24.3  +0.7
BR131  Keskin Array S    88.51  37   P        P        03 13 24.3  +0.7
BR131  Keskin Array S    88.51  37   P        P        03 13 24.3  +0.7
BR131                                pmax     pmax
       comp=Z,7.0nm,1.2s
GERES  GERESS Array B    88.57  20   P        P        03 13 20.5  -3.1
       comp=Z,0.1nm,0.4s,baz=204,slow=2.9,SNR=5.1
GERES                                PP       PP       03 16 50.0  -2.4
       comp=Z,1.1nm,0.8s,baz=210,slow=5.7,SNR=8.4
GERES                                LR       LR       03 51 51.1
       comp=Z,886nm,18.2s,baz=208,slow=35
       comp=Z,0.1nm,0.4s
GERES  GERESS Array B    88.57  20  eP        P        03 13 26.6  +3.0
GERES                                pmax     pmax
       comp=Z,1.0nm,0.8s
GRFO   Grafenberg        88.69  18   IAMs_20  IAMs_20  03 50 36.2
       comp=Z,841nm,19.0s
GRA1   Grafenberg Arr    88.69  18   IAMs_20  IAMs_20  03 50 36.2
       comp=Z,819nm,19.0s
CKRC   Cesky Krumlov     88.72  20   AMS      AMS      03 50 10.0
       comp=Z,800nm,21.5s
KHC    Kasperske Hory    88.80  20  eP        P        03 13 25.0  +0.4
KHC                                 ePP       PP       03 16 49.0  -5.2
KHC                                 eSKS      SKSac    03 23 58.1  +4.5
KHC                                  AMS      AMS      03 49 10.0
       comp=Z,1µm,19.2s
KHC    Kasperske Hory    88.80  20  i P       P        03 13 24.5  -0.1
KHC                                  pmax     pmax
       comp=Z,9.0nm,1.2s
MODS   Modra-Piesok      89.19  22  eP        P        03 13 31.7  +5.3
MODS   Modra-Piesok      89.19  22  eP        P        03 13 31.7  +5.3
ZVC    Zvikov            89.25  20   AMS      AMS      03 49 40.0
       comp=Z,1µm,19.1s
TREC   Trest             89.48  21   AMS      AMS      03 50 20.0
       comp=Z,1µm,19.6s
KRUC   Moravsky          89.54  21  eP        P        03 13 27.4  -0.6
PSZ    Piszkesteto       89.63  24   IAMs_20  IAMs_20  03 52 22.9
       comp=Z,848nm,18.0s
Y60A   Bolivia           89.70 313   IAMs_20  IAMs_20  03 47 18.9
       comp=Z,894nm,21.0s
MLR    Muntele Rosu      89.75  29   LR       LR       03 51 15.2
       comp=Z,481nm,21.2s,baz=224,slow=34
456A   Hilliard          89.77 309   IAMs_20  IAMs_20  03 48 07.0
       comp=Z,1µm,21.0s
VYHS   Vyhne             89.79  23  eP        P        03 13 35.0  +5.8
VYHS   Vyhne             89.79  23  eP        P        03 13 34.9  +5.7
VRAC   Vranov            89.82  21   LR       LR       03 51 16.7
       comp=Z,1µm,20.0s,baz=212,slow=34
VRAC   Vranov            89.82  21  eP        P        03 13 30.5  +1.2
PRU    Pruhonice         89.84  20  eSKS      SKSac    03 24 03.1  +3.5
PRU                                  AMS      AMS      03 50 00.0
       comp=Z,1µm,19.0s
GOPC   GO Pecny, Ondr    89.84  20   AMS      AMS      03 50 20.0
       comp=Z,1µm,19.4s
PRA    Prague            89.88  20   AMS      AMS      03 50 00.0
       comp=Z,1µm,21.9s
RICC   Richard           90.22  19   AMS      AMS      03 51 00.0
       comp=Z,900nm,20.3s
BRG    Berggiesshubel    90.48  19  eP        P        03 13 28.4  -3.9
BRG                                  Amp               03 13 29.8
       comp=Z,2.4nm,1.0s
BRG    Berggiesshubel    90.48  19   S        S        03 24 35.0  +8.0
BRG    Berggiesshubel    90.48  19   PS       PS       03 25 42.0  +6.5
BRG    Berggiesshubel    90.48  19   SS       SS       03 30 25.0  -3.7
Y58A   Scranton          90.49 313   IAMs_20  IAMs_20  03 47 25.0
       comp=Z,819nm,21.0s
MORC   Moravsky Berou    90.52  22   IAMs_20  IAMs_20  03 52 14.5
       comp=Z,1µm,19.0s
MORC   Moravsky Berou    90.52  22  eP        P        03 13 33.7  +1.1
KRLC   Kraliky           90.56  21  eSKS      SKSac    03 24 01.7  -2.2
KRLC                                 AMS      AMS      03 49 40.0
       comp=Z,1µm,18.9s
LANS   Liptovska Anna    90.56  23  eP        P        03 13 39.3  +6.5
LANS   Liptovska Anna    90.56  23  eP        P        03 13 39.3  +6.5
CLL    Collm             90.63  18  eP        P        03 13 34.0  +1.0
       comp=Z,7.0nm,1.2s
CLL                                 ex        x        03 13 51.0
       comp=Z,12nm,1.1s
CLL                                 ePP       PP       03 17 09.0  +0.3
CLL                                 ePPP      PPP      03 19 06.0
CLL                                 eSKSac    SKSac    03 24 04.0  -0.1
CLL                                 eS        ScS      03 24 38.0  +6.1
CLL                                 ePS       PS       03 25 35.0  -2.1
CLL                                 ePPS      PPS      03 26 10.0
CLL                                 ex        x        03 27 11.0
CLL                                 eSS       SS       03 30 26.0  -4.9
CLL                                 eSSS      SSS      03 33 54.0
CLL                                 ex        x        03 38 48.0
CLL                                  AMS      AMS      03 51 00.0
       comp=N,300nm,20.3s
CLL                                  AMS      AMS      03 51 00.0
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	comp=E,400nm,19.7s						
CLL				AMS	AMS	03 51 00.0	
	comp=Z,500nm,19.4s						
W59A	Clinton	90.64	314	IAMs_20	IAMs_20	03 51 00.0	
	comp=Z,891nm,21.0s						
DPC	Dobruska-Polom	90.67	21	eSKS	SKSac	03 24 08.8	+4.2
DPC				AMS	AMS	03 49 30.0	
	comp=Z,1µm,23.3s						
UPC	Upice	90.72	21	AMS	AMS	03 50 40.0	
	comp=Z,1µm,20.9s						
X58A	Rowland	90.74	313	IAMs_20	IAMs_20	03 47 28.7	
	comp=Z,977nm,22.0s						
OKC	Ostrava-Krasne	90.75	22	AMS	AMS	03 52 40.0	
	comp=Z,900nm,20.8s						
OSTC	Ostas	90.82	21	AMS	AMS	03 50 40.0	
	comp=Z,1µm,21.7s						
553A	Crawfordville	90.96	307	IAMs_20	IAMs_20	03 52 12.5	
	comp=Z,846nm,21.0s						
Y57A	Sumter	91.00	312	IAMs_20	IAMs_20	03 48 03.6	
	comp=Z,838nm,21.0s						
M65A	Busby, Falmout	91.10	323	IAMs_20	IAMs_20	03 46 43.0	
	comp=Z,784nm,21.0s						
R61A	Willards	91.14	318	IAMs_20	IAMs_20	03 46 14.1	
	comp=Z,970nm,22.0s						
BURAR	Bucovina Array	91.24	27	P	P	03 13 36.3	+0.2
BURAR	Bucovina Array	91.24	27	P	P	03 13 36.3	+0.2
TIGA	Tifton	91.25	308	IAMs_20	IAMs_20	03 49 04.1	
	comp=Z,1µm,22.0s						
V58A	Windy Hill, Pi	91.47	314	IAMs_20	IAMs_20	03 47 47.0	
	comp=Z,811nm,20.0s						
BIRD	Birdtown, Kers	91.48	313	IAMs_20	IAMs_20	03 48 05.1	
	comp=Z,975nm,22.0s						
P61A	Hammonton	91.82	319	IAMs_20	IAMs_20	03 50 42.0	
	comp=Z,734nm,19.0s						
UOSS	Minazif	91.93	61	IAMs_20	IAMs_20	03 52 40.9	
	comp=Z,1µm,20.0s						
EMMW	East Machias	92.03	327	IAMs_20	IAMs_20	03 52 16.3	
	comp=Z,741nm,19.0s						
WES	Weston	92.05	323	IAMs_20	IAMs_20	03 47 00.1	
	comp=Z,829nm,21.0s						
352A	Blakely	92.13	308	IAMs_20	IAMs_20	03 51 57.0	
	comp=Z,749nm,20.0s						
CPNY	Central Park	92.20	321	IAMs_20	IAMs_20	03 53 46.0	
	comp=Z,905nm,21.0s						
HRV	Adam Dziewonsk	92.26	323	IAMs_20	IAMs_20	03 47 16.6	
	comp=Z,839nm,21.0s						
KMSC	Kings Mountain	92.34	312	IAMs_20	IAMs_20	03 48 30.9	
	comp=Z,899nm,20.0s						
T57A	Hurt	92.39	315	IAMs_20	IAMs_20	03 47 59.2	
	comp=Z,856nm,21.0s						
PAULI	Pauline	92.41	312	IAMs_20	IAMs_20	03 48 36.8	
	comp=Z,752nm,20.0s						
BRNJ	Basking Ridge	92.43	320	IAMs_20	IAMs_20	03 47 52.3	
	comp=Z,856nm,22.0s						
U56A	King	92.60	314	IAMs_20	IAMs_20	03 48 22.7	
	comp=Z,1µm,21.0s						
WSAR	Wadi Sarin	92.62	63	LR	LR	03 54 02.2	
	comp=Z,7.5nm,18.8s,baz=230,slow=35						
V55A	Taylorsville	92.75	313	IAMs_20	IAMs_20	03 48 51.8	
	comp=Z,859nm,21.0s						
152A	Waverly Hall	92.78	309	IAMs_20	IAMs_20	03 52 57.6	
	comp=Z,832nm,21.0s						
MVL	Millersville	92.89	319	IAMs_20	IAMs_20	03 45 38.2	
	comp=Z,812nm,22.0s						
I62A	Tamworth	93.18	324	IAMs_20	IAMs_20	03 47 35.9	
	comp=Z,754nm,21.0s						
BLA	Blacksburg	93.21	314	IAMs_20	IAMs_20	03 48 37.0	
	comp=Z,954nm,21.0s						
TLIG	Tlapa	93.23	289	IAMs_20	IAMs_20	03 53 00.6	
	comp=Z,1µm,21.0s						
BRAL	Brewton	93.31	306	IAMs_20	IAMs_20	03 53 18.7	
	comp=Z,1µm,20.0s						
250A	Grady	93.32	307	IAMs_20	IAMs_20	03 55 25.0	
	comp=Z,946nm,21.0s						
F64A	Sherman	93.32	327	IAMs_20	IAMs_20	03 52 54.5	
	comp=Z,747nm,20.0s						
J61A	Chester	93.37	323	IAMs_20	IAMs_20	03 48 01.0	
	comp=Z,775nm,21.0s						
U54A	Nelsons Funny	93.56	313	IAMs_20	IAMs_20	03 49 06.3	
	comp=Z,906nm,21.0s						
H62A	Milan	93.62	325	IAMs_20	IAMs_20	03 50 48.5	
	comp=Z,724nm,20.0s						
LBNH	Lisbon	93.74	324	IAMs_20	IAMs_20	03 47 52.6	
	comp=Z,770nm,21.0s						
Q56A	Snyder Ridge,	93.77	316	IAMs_20	IAMs_20	03 50 57.6	
	comp=Z,804nm,22.0s						
L59A	Walton	93.77	321	IAMs_20	IAMs_20	03 50 59.7	
	comp=Z,831nm,20.0s						
G62A	West of Eustis	93.82	325	IAMs_20	IAMs_20	03 50 34.7	
	comp=Z,950nm,21.0s						
W52A	Murphy	93.88	311	IAMs_20	IAMs_20	03 52 56.8	
	comp=Z,1µm,22.0s						
S54A	Dingess, Beckl	94.13	314	IAMs_20	IAMs_20	03 49 05.3	
	comp=Z,885nm,21.0s						
TKL	Tuckaleechee C	94.16	312	LR	LR	03 59 07.1	
	comp=Z,269nm,18.9s,baz=145,slow=38						
SSPA	Standing Stone	94.17	318	IAMs_20	IAMs_20	03 46 39.1	
	comp=Z,761nm,21.0s						
M57A	Sunshine Farm,	94.25	319	IAMs_20	IAMs_20	03 54 13.4	
	comp=Z,718nm,20.0s						
MCWV	Mont Chateau	94.56	317	IAMs_20	IAMs_20	03 52 55.7	
	comp=Z,726nm,20.0s						
D62A	Allapoint, All	94.57	327	P	P	03 13 52.6	+1.3
D62A				IAmb	IAmb	03 14 09.0	
	comp=Z,19nm,1.1s						
D62A				IAMs_20	IAMs_20	03 52 10.5	
	comp=Z,734nm,19.0s						
GNI	Garni	94.61	43	IAMs_20	IAMs_20	03 54 15.3	
	comp=Z,712nm,20.0s						
GNI	Garni	94.61	43	LR	LR	03 56 51.2	
	comp=Z,443nm,18.0s,baz=213,slow=36						
GNI	Garni	94.61	43	i P	P	03 13 52.2	+0.3
GNI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TZTN	Tazewell	94.61	312	IAMs_20	IAMs_20	03 49 53.1	
	comp=Z,713nm,20.0s						
FRNY	Flat Rock	94.98	324	IAMs_20	IAMs_20	03 48 50.4	
	comp=Z,778nm,20.0s						
346A	Big Creek Wild	95.04	305	IAMs_20	IAMs_20	03 55 58.6	
	comp=Z,888nm,20.0s						
Z47A	Carrollton	95.27	307	IAMs_20	IAMs_20	03 56 14.6	
	comp=Z,1µm,22.0s						
AKASG	Malin Array Be	95.28	28	P	P	03 13 53.1	-1.4
	comp=Z,1.1nm,0.7s,baz=218,slow=4.3,SNR=7.6						
AKASG				LR	LR	03 55 57.7	
	comp=Z,326nm,20.1s,baz=210,slow=35						
	comp=Z,1.1nm,0.7s						
AKASG	Malin Array Be	95.28	28	eP	P	03 13 57.7	+3.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKBB	Malin Array Si	95.28	28	i P	P	03 13 54.2	-0.3
AKBB				pmax	pmax		
	comp=Z,5.0nm,1.1s						
P53A	Whipple	95.32	316	IAMs_20	IAMs_20	04 01 37.7	
	comp=Z,749nm,21.0s						
S51A	Beattyville	95.36	313	IAMs_20	IAMs_20	03 50 35.0	
	comp=Z,854nm,20.0s						
X48A	Hartselle	95.41	309	IAMs_20	IAMs_20	03 53 59.3	
	comp=Z,797nm,22.0s						
Q52A	Bidwell	95.47	315	IAMs_20	IAMs_20	03 49 45.7	
	comp=Z,811nm,22.0s						
146A	Union	95.56	306	IAMs_20	IAMs_20	03 54 27.2	
	comp=Z,1µm,22.0s						
WVNY	West Valley, N	95.79	319	IAMs_20	IAMs_20	03 54 18.0	
	comp=Z,753nm,20.0s						
J55A	Hilton	95.97	320	IAMs_20	IAMs_20	03 54 48.9	
	comp=Z,768nm,21.0s						
O52A	Adamsville	96.00	316	IAMs_20	IAMs_20	03 57 21.4	
	comp=Z,735nm,20.0s						
V48A	Smith Brothers	96.09	310	IAMs_20	IAMs_20	03 58 59.4	
	comp=Z,771nm,21.0s						
KBZ	Khabaz	96.12	39	LR	LR	03 58 09.1	
	comp=Z,517nm,18.0s,baz=204,slow=36						
KBZ	Khabaz	96.12	39	i P	P	03 13 59.2	+0.7
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIV	Kislovodsk	96.17	39	eP	P	03 13 58.8	-0.1
KIV				e		03 17 50.8	
KIV				e		03 24 35.2	
KIV				eSS	SS	03 31 51.2	+0.4
KIV				eSSS	SSS	03 35 36.3	
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,407nm,20.0s						
R50A	Paris	96.22	313	IAMs_20	IAMs_20	03 50 48.7	
	comp=Z,926nm,21.0s						
P51A	Williamsport	96.27	315	IAMs_20	IAMs_20	03 50 21.0	
	comp=Z,750nm,22.0s						
PLAL	Pickwick Lake	96.40	309	IAMs_20	IAMs_20	03 54 38.5	
	comp=Z,873nm,22.0s						
H01W2	Cape Leeuwin H	96.43	142	T	T	05 02 08.5	
	baz=219,slow=75,SNR=18						
H01W3	Cape Leeuwin H	96.44	142	T	T	05 02 06.7	
	baz=219,slow=75,SNR=33						
H01W1	Cape Leeuwin H	96.44	142	T	T	05 02 09.7	
	baz=219,slow=75,SNR=30						
TRQ	Mont Tremblant	96.45	324	IAMs_20	IAMs_20	03 49 35.3	
	comp=Z,739nm,21.0s						
MOIG	Morelia	96.48	289	IAMs_20	IAMs_20	03 56 32.0	
	comp=Z,903nm,21.0s						
Y45A	Yeager Farm, C	96.64	307	IAMs_20	IAMs_20	03 57 08.0	
	comp=Z,952nm,21.0s						
ACSO	Alum Creek Sta	96.72	315	IAMs_20	IAMs_20	03 48 11.0	
	comp=Z,723nm,21.0s						
R49A	Shelbyville	96.73	313	IAMs_20	IAMs_20	03 51 07.2	
	comp=Z,904nm,21.0s						
143A	Socs Landing,	97.15	305	IAMs_20	IAMs_20	03 56 23.4	
	comp=Z,1µm,21.0s						
441A	DeRidder	97.17	303	IAMs_20	IAMs_20	03 57 26.9	
	comp=Z,772nm,20.0s						
WCI	Wyandotte Cave	97.36	312	IAMs_20	IAMs_20	03 51 30.0	
	comp=Z,983nm,21.0s						
PABE	Paberze	97.44	22	IAMs_20	IAMs_20	03 54 30.6	
	comp=Z,819nm,21.0s						
O49A	Covington	97.47	315	IAMs_20	IAMs_20	03 50 57.8	
	comp=Z,757nm,22.0s						
P48A	Milroy	97.64	314	IAMs_20	IAMs_20	03 51 40.2	
	comp=Z,734nm,21.0s						
MET	Memphis--Engin	97.68	308	IAMs_20	IAMs_20	03 57 53.3	
	comp=Z,795nm,21.0s						
HALT	Halls	97.79	309	IAMs_20	IAMs_20	03 55 17.2	
	comp=Z,769nm,21.0s						
NACGM	Naroch	97.84	24	eP	P	03 14 04.1	-1.9
	comp=Z,5.0nm,0.9s,baz=215						
N49A	Columbus Grove	97.87	315	IAMs_20	IAMs_20	03 55 37.2	
	comp=Z,871nm,22.0s						
MNK	Minsk	97.88	25	i P	P	03 14 03.8	-2.4
	comp=E,6.0nm,0.8s						
MNK				i P	P	03 14 03.8	-2.4
	comp=N,10.0nm,0.8s						
MNK				i P	P	03 14 03.8	-2.4
	comp=Z,9.0nm,0.8s,baz=216						
MNK				i PP	PP	03 18 02.8	-2.4
MNK				i PPP	PPP	03 20 05.0	
MNK				i SKS		03 23 53.8	
MNK				i S	SKSac	03 24 42.1	-1.3
MNK				i SP	SP	03 27 04.1	+8.6
MNK				i PS	PS	03 27 43.7	+47
MNK				i SS	SS	03 32 16.9	+2.6
MNK				i SSS	SSS	03 36 03.2	
MNK				i LRM	MLR	03 58 02.0	
	comp=N,277nm,17.4s						
MNK				i LRM	MLR	03 58 07.0	
	comp=Z,431nm,15.3s						
MNK	Minsk	97.88	25	i P	P	03 14 03.8	-2.4
MNK				i		03 18 02.8	
MNK				i S	SKSac	03 24 42.0	-1.3
MNK				i SP	SP	03 27 04.0	+8.6
MNK				i PS	PS	03 27 43.7	+47
MNK				i SS	SS	03 32 16.8	+2.6
MNK				i SSS	SSS	03 36 03.2	
MNK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,6.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,10.0nm,0.8s						
MNK				MLR	MLR		
	comp=E,477nm,18.0s						
MNK				MLR	MLR		
	comp=N,277nm,17.0s						
MNK				MLR	MLR		
	comp=Z,431nm,15.0s						
O48B	Farmland	98.00	314	IAMs_20	IAMs_20	03 51 26.7	
	comp=Z,745nm,21.0s						
LNXT	Lenox	98.00	309	IAMs_20	IAMs_20	03 55 24.9	
	comp=Z,727nm,22.0s						
MAK	Makhachkala	98.04	42c	iP	P	03 14 04.2	-3.0
MAK				e		03 18 04.1	
MAK				ePPP	PPP	03 20 10.8	
MAK				e		03 24 39.2	
MAK				eSS	SS	03 32 14.2	-2.8
MAK				eSSS	SSS	03 36 00.9	
BLO	Bloomington	98.11	313	IAMs_20	IAMs_20	03 51 49.6	
	comp=Z,860nm,21.0s						
GNAR	Gosnell	98.25	308	IAMs_20	IAMs_20	03 55 44.5	
	comp=Z,764nm,21.0s						
HBAR	Harrisburg	98.41	308	IAMs_20	IAMs_20	03 58 14.7	
	comp=Z,938nm,21.0s						
Z41A	Richland Creek	98.42	305	IAMs_20	IAMs_20	03 57 13.0	
	comp=Z,1µm,22.0s						
N47A	Urbana	98.71	314	IAMs_20	IAMs_20	03 51 45.6	
	comp=Z,783nm,22.0s						
NATX	Nacogdoches	98.78	303	IAMs_20	IAMs_20	03 58 33.6	
	comp=Z,843nm,22.0s						
OLIL	Olney	98.78	312	IAMs_20	IAMs_20	03 52 37.4	
	comp=Z,781nm,21.0s						
P46A	Rosedale	98.80	313	IAMs_20	IAMs_20	03 52 10.9	
	comp=Z,858nm,21.0s						
SIUC	Southern Illin	98.83	310	IAMs_20	IAMs_20	03 56 51.8	
	comp=Z,710nm,21.0s						
HFS	Hagfors	98.83	15	LR	LR	03 58 55.9	
	comp=Z,342nm,18.6s,baz=213,slow=36						
S44A	Carbondale	98.84	310	IAMs_20	IAMs_20	03 56 52.0	
	comp=Z,689nm,21.0s						
LCAR	Lake Charles	99.04	308	IAMs_20	IAMs_20	03 56 31.5	
	comp=Z,869nm,21.0s						
X40A	Basin Creek Fa	99.18	306	IAMs_20	IAMs_20	03 59 09.1	
	comp=Z,1µm,21.0s						
VLDQ	Val d'Or	99.19	324	IAMs_20	IAMs_20	03 51 14.1	
	comp=Z,913nm,21.0s						
SFIN	Lafayette	99.21	313	IAMs_20	IAMs_20	03 52 17.9	
	comp=Z,648nm,20.0s						
ZAIG	Zacatecas	99.30	291	IAMs_20	IAMs_20	03 58 19.4	
	comp=Z,1µm,21.0s						
Q44A	Meyer Farm, Va	99.44	311	IAMs_20	IAMs_20	03 56 06.0	
	comp=Z,763nm,20.0s						
NWAO	Narrogin (SRO)	99.55	143	LR	LR	03 50 59.4	
	comp=Z,872nm,19.3s,baz=227,slow=30						
SCHQ	Schefferville	99.68	333	LR	LR	03 53 03.0	
	comp=Z,594nm,19.9s,baz=151,slow=32						
J47A	Sunmer	99.73	317	IAMs_20	IAMs_20	03 57 50.5	
	comp=Z,662nm,20.0s						
L46A	Eue Claire	99.78	315	IAMs_20	IAMs_20	03 56 44.9	
	comp=Z,871nm,22.0s						
Z38A	Mt. Pleasant	99.89	304	IAMs_20	IAMs_20	04 00 41.8	
	comp=Z,759nm,20.0s						
SLM	Saint Louis	100.03	311	IAMs_20	IAMs_20	03 57 07.6	
	comp=Z,606nm,19.0s						
P43A	Skaggs, Pawnee	100.21	312	IAMs_20	IAMs_20	03 53 20.2	
	comp=Z,1µm,22.0s						
CCM	Cathedral Cave	100.31	310	IAMs_20	IAMs_20	03 59 20.9	
	comp=Z,758nm,22.0s						
MGMO	Mountain Grove	100.41	308	IAMs_20	IAMs_20	03 59 03.7	
	comp=Z,771nm,20.0s						
HDIL	Hopedale	100.63	312	IAMs_20	IAMs_20	03 53 18.5	
	comp=Z,1µm,22.0s						
GLMI	Grayling	100.65	318	IAMs_20	IAMs_20	03 49 56.6	
	comp=Z,729nm,22.0s						
HHAR	Hobbs	100.97	307	IAMs_20	IAMs_20	04 00 15.5	
	comp=Z,741nm,20.0s						
U38A	Gravette	101.35	307	IAMs_20	IAMs_20	04 00 25.7	
	comp=Z,840nm,21.0s						
K43A	Burlington	101.39	315	IAMs_20	IAMs_20	03 58 06.5	
	comp=Z,756nm,21.0s						
OBN	Obninsk	101.51	28	i P	Pdif	03 14 22.6	+0.3
OBN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,286nm,17.0s						
N41A	Harden Midland	101.67	312	IAMs_20	IAMs_20	03 54 12.9	
	comp=Z,1µm,21.0s						
L42A	Oliver, Polo	101.74	313	IAMs_20	IAMs_20	04 02 43.8	
	comp=Z,623nm,20.0s						
H43A	Windswept, Lux	102.17	316	IAMs_20	IAMs_20	03 51 34.9	
	comp=Z,744nm,22.0s						
MOS	Moscow	102.38	28	eP	Pdif	03 14 19.1	-7.1
I42A	Draeger Farm,	102.46	315	IAMs_20	IAMs_20	03 53 33.6	
	comp=Z,688nm,22.0s						
JFWS	Jewell Farm	102.64	314	IAMs_20	IAMs_20	03 58 21.4	
	comp=Z,693nm,21.0s						
FNO	Franklin	102.67	304	IAMs_20	IAMs_20	04 00 20.6	
	comp=Z,945nm,21.0s						
L40A	Anamosa	102.70	313	IAMs_20	IAMs_20	03 54 29.2	
	comp=Z,755nm,22.0s						
T35A	Sooner Cattle	103.02	306	IAMs_20	IAMs_20	04 01 37.9	
	comp=Z,933nm,22.0s						
F42A	Maple Grove Fa	103.16	317	IAMs_20	IAMs_20	03 51 25.2	
	comp=Z,689nm,22.0s						
N38A	Joes South For	103.17	311	IAMs_20	IAMs_20	03 54 55.7	
	comp=Z,751nm,21.0s						
I40A	Norwalk	103.44	315	IAMs_20	IAMs_20	03 54 17.6	
	comp=Z,650nm,21.0s						
SCIA	State Center	103.81	312	IAMs_20	IAMs_20	03 55 28.6	
	comp=Z,1µm,22.0s						
COWI	Conover	103.93	317	IAMs_20	IAMs_20	03 52 44.4	
	comp=Z,635nm,21.0s						
G40A	Rib Lake	104.02	316	IAMs_20	IAMs_20	03 59 03.0	
	comp=Z,758nm,22.0s						
KSU1	Kansas State U	104.33	308	IAMs_20	IAMs_20	03 59 43.3	
	comp=Z,704nm,22.0s						
HYB	Hyderabad	104.59	79	ePdif	Pdif	03 14 36.6	-0.5
HYB				ePKiKP	PKiKP	03 18 52.7	-0.3
HYB				esPKiKP	PP	03 18 57.4	+0.8
HYB				eSKSac	SKSac	03 25 16.6	-0.9
N35A	Tabor	104.71	310	IAMs_20	IAMs_20	04 01 44.3	
	comp=Z,695nm,22.0s						
R32A	Long Quarter,	105.31	306	IAMs_20	IAMs_20	04 02 30.4	
	comp=Z,770nm,20.0s						
E38A	The Farm, Brul	105.57	316	IAMs_20	IAMs_20	03 53 03.1	
	comp=Z,841nm,22.0s						
TBO	Thunder Bay	105.60	319	IAMs_20	IAMs_20	04 00 00.7	
	comp=Z,913nm,20.0s						
L34A	Svendsen Farm,	105.78	310	IAMs_20	IAMs_20	03 56 58.8	
	comp=Z,920nm,22.0s						
TBI	Tubuai	105.87	225	eS	Sdif	03 26 32.9	-7.7
	comp=Z,2µm,27.8s						
TBI				eSS	SS	03 34 07.4	+3.3
	comp=Z,5µm,29.2s						
TBI	Tubuai	105.87	225	eLQ	LQ	03 44 55.0	
	comp=Z,4µm,38.5s						
TBI				eLR	LR	03 49 24.3	
	comp=Z,1µm,23.8s						
TBI				eLR	LR	03 49 38.9	
	comp=Z,4µm,26.2s						
CBKS	Cedar Bluff	106.20	306	IAMs_20	IAMs_20	04 03 05.9	
	comp=Z,890nm,20.0s						
EYMN	Ely	106.32	318	IAMs_20	IAMs_20	04 03 22.7	
	comp=Z,582nm,20.0s						
BGNE	Belgrade	106.58	309	IAMs_20	IAMs_20	04 00 07.1	
	comp=Z,718nm,20.0s						
ECSD	EROS Data Cent	106.90	312	IAMs_20	IAMs_20	03 57 22.4	
	comp=Z,704nm,22.0s						
ILULI	Ilulissat	107.52	348	IAMs_20	IAMs_20	03 57 04.1	
	comp=Z,600nm,20.0s						
F33A	5 Mile Ranch,	107.86	314	IAMs_20	IAMs_20	03 56 57.7	
	comp=Z,771nm,22.0s						
K30B	Basset	108.18	310	IAMs_20	IAMs_20	03 57 46.3	
	comp=Z,789nm,21.0s						
KSCO	Kaye Shedlock’	108.21	305	IAMs_20	IAMs_20	04 04 55.3	
	comp=Z,924nm,21.0s						
T25A	Trinidad	108.45	303	IAMs_20	IAMs_20	04 01 59.6	
	comp=Z,990nm,22.0s						
Y22D	IRIS PASSCAL I	108.64	299	IAMs_20	IAMs_20	04 04 28.6	
	comp=Z,872nm,22.0s						
SUSD	Miller	108.71	312	IAMs_20	IAMs_20	03 58 39.2	
	comp=Z,605nm,21.0s						
ANMO	Albuquerque	108.75	300	IAMs_20	IAMs_20	04 04 16.6	
	comp=Z,656nm,21.0s						
ANMO	Albuquerque	108.75	300	IAMs_20	IAMs_20	04 04 16.6	
	comp=Z,614nm,20.0s						
ANMO	Albuquerque	108.75	300	IAMs_20	IAMs_20	04 04 16.6	
	comp=Z,620nm,20.0s						
OGNE	Ogallala	108.82	307	IAMs_20	IAMs_20	04 04 18.4	
	comp=Z,969nm,22.0s						
AGMN	Agassiz Nation	108.94	316	IAMs_20	IAMs_20	04 02 19.2	
	comp=Z,757nm,22.0s						
319A	Douglas	108.97	295	IAMs_20	IAMs_20	04 04 07.5	
	comp=Z,891nm,20.0s						
SDCO	Great Sand Dun	109.50	303	IAMs_20	IAMs_20	04 05 08.5	
	comp=Z,657nm,22.0s						
TAOE	Nuku Hiva Isla	110.34	242	ePP	PP	03 19 34.7	-3.6
	comp=Z,39nm,23.8s						
TAOE				eS	SKKSac	03 26 51.3	+8.9
	comp=Z,192nm,29.6s						
TAOE				eSS	SS	03 35 05.2	-0.6
	comp=Z,202nm,28.9s						
TAOE	Nuku Hiva Isla	110.34	242	eLR	LR	03 51 29.7	
	comp=Z,836nm,31.8s						
PPT2	Papeete2	110.36	229	eS	SKKSac	03 26 47.8	+5.5
	comp=Z,727nm,28.5s						
PPT2				eSS	SS	03 35 03.0	-2.3
	comp=Z,1µm,27.8s						
PPT2	Papeete2	110.36	229	eLQ	LQ	03 46 08.2	
	comp=Z,492nm,28.0s						
PPT2				eLR	LR	03 51 36.3	
	comp=Z,3µm,33.8s						
PPT2				eLR	LR	03 51 37.9	
	comp=Z,2µm,35.5s						
S22A	4UR Ranch, Cre	110.42	302	IAMs_20	IAMs_20	04 04 38.7	
	comp=Z,763nm,20.0s						
ISCO	Idaho Springs	110.61	305	IAMs_20	IAMs_20	04 03 41.6	
	comp=Z,902nm,22.0s						
MDND	Maddock	110.85	314	IAMs_20	IAMs_20	03 58 33.7	
	comp=Z,617nm,22.0s						
E28A	Huff	110.85	313	IAMs_20	IAMs_20	03 58 52.9	
	comp=Z,662nm,22.0s						
X18A	Snowflake	111.03	298	IAMs_20	IAMs_20	04 05 22.1	
	comp=Z,655nm,22.0s						
MVCO	Mesa Verde	111.31	301	IAMs_20	IAMs_20	04 04 44.1	
	comp=Z,835nm,22.0s						
RSSD	Black Hills	111.69	309	IAMs_20	IAMs_20	04 01 00.3	
	comp=Z,949nm,22.0s						
ARTI	Arti	111.76	35	IAMs_20	IAMs_20	04 10 21.1	
	comp=Z,720nm,20.0s						
X16A	Lo Mia Camp, P	112.05	297	IAMs_20	IAMs_20	04 06 07.1	
	comp=Z,638nm,20.0s						
O20A	White River Ci	112.54	304	IAMs_20	IAMs_20	04 06 06.7	
	comp=Z,746nm,22.0s						
Y14A	Wickenburg	112.96	296	IAMs_20	IAMs_20	04 05 55.2	
	comp=Z,646nm,22.0s						
HMU	Henry Mountain	113.22	301	IAMs_20	IAMs_20	04 07 53.0	
	comp=Z,685nm,20.0s						
U15A	North Rim	113.62	299	IAMs_20	IAMs_20	04 06 47.5	
	comp=Z,617nm,20.0s						
P18A	Preston Nutter	113.66	303	IAMs_20	IAMs_20	04 02 53.6	
	comp=Z,564nm,21.0s						
PMBI	Palembang	113.71	112	IAMs_20	IAMs_20	03 57 38.8	
	comp=Z,786nm,21.0s						
DGMT	Dagmar	113.84	313	IAMs_20	IAMs_20	03 58 33.0	
	comp=Z,763nm,22.0s						
W13A	Hualapai Mount	114.15	297	IAMs_20	IAMs_20	04 07 55.7	
	comp=Z,618nm,19.0s						
TMUT	Trail Mountain	114.17	302	IAMs_20	IAMs_20	04 08 02.2	
	comp=Z,519nm,20.0s						
AAK	Ala-Archa	114.25	54	IAMs_20	IAMs_20	04 06 27.9	
	comp=Z,809nm,21.0s						
LAO	LASA Array	114.26	311	IAMs_20	IAMs_20	04 04 24.0	
	comp=Z,576nm,21.0s						
KNB	Kanab	114.27	299	IAMs_20	IAMs_20	04 07 56.7	
	comp=Z,600nm,19.0s						
BSUT	Blindstream Ca	114.43	303	IAMs_20	IAMs_20	04 08 04.9	
	comp=Z,856nm,21.0s						
BW06	Boulder Array	114.62	306	IAMs_20	IAMs_20	04 08 26.9	
	comp=Z,648nm,20.0s						
MPU	Maple Canyon	114.79	302	IAMs_20	IAMs_20	04 05 31.5	
	comp=Z,687nm,22.0s						
JLU	Jordanelle	114.93	303	IAMs_20	IAMs_20	04 06 25.1	
	comp=Z,773nm,20.0s						
ASAR	Alice Springs	114.97	151	PKP	PKiKP	03 19 12.3	-0.2
	comp=Z,0.2nm,0.4s,baz=220,slow=2.4,SNR=1.5						
ASAR				PKKPab	PKKPab	03 29 55.3	-1.8
	comp=Z,1.3nm,0.9s,baz=29,slow=2.1,SNR=5.9						
V12A	Nelson	115.14	297	IAMs_20	IAMs_20	04 07 06.8	
	comp=Z,531nm,20.0s						
FFC	Flin Flon	115.43	320	IAMs_20	IAMs_20	04 05 43.5	
	comp=Z,566nm,21.0s						
HWUT	Hardware Ranch	115.45	304	IAMs_20	IAMs_20	04 11 03.8	
	comp=Z,557nm,20.0s						
RLMT	Red Lodge	115.47	308	IAMs_20	IAMs_20	04 02 28.3	
	comp=Z,866nm,22.0s						
AHID	Auburn Hatcher	115.64	305	IAMs_20	IAMs_20	04 09 13.9	
	comp=Z,746nm,20.0s						
DUG	Dugway, Tooele	115.68	302	IAMs_20	IAMs_20	04 08 59.1	
	comp=Z,787nm,20.0s						
LOHW	Long Hollow	115.68	306	IAMs_20	IAMs_20	04 03 25.1	
	comp=Z,768nm,22.0s						
SNOW	Snow King Moun	115.72	306	IAMs_20	IAMs_20	04 03 28.8	
	comp=Z,623nm,22.0s						
TPAW	Teton Pass	115.86	306	IAMs_20	IAMs_20	04 03 31.8	
	comp=Z,552nm,22.0s						
FXWY	Fox Creek	115.97	306	IAMs_20	IAMs_20	04 03 36.6	

	comp=Z,665nm,22.0s						
PRN	Pahroc Range	116.03	299	IAMs_20	IAMs_20	04 05 19.4	
	comp=Z,784nm,22.0s						
BGU	Big Grassy Mou	116.15	303	IAMs_20	IAMs_20	04 10 08.3	
	comp=Z,674nm,20.0s						
HVU	Hansel Valley	116.34	304	IAMs_20	IAMs_20	04 08 40.4	
	comp=Z,515nm,20.0s						
GSC	Goldstone, Bar	116.37	296	IAMs_20	IAMs_20	04 07 55.5	
	comp=Z,586nm,21.0s						
YHB	Horse Butte	116.55	307	IAMs_20	IAMs_20	04 02 40.9	
	comp=Z,574nm,20.0s						
YHL	Hebgen Lake	116.59	307	IAMs_20	IAMs_20	04 03 31.8	
	comp=Z,854nm,22.0s						
TPNV	Topopah Spring	116.69	298	IAMs_20	IAMs_20	04 06 10.0	
	comp=Z,579nm,20.0s						
WUS	Wushi	116.79	57	IAMs_20	IAMs_20	04 08 28.3	
	comp=Z,893nm,22.0s						
BOZ	Bozeman (W)	117.18	308	IAMs_20	IAMs_20	04 07 53.5	
	comp=Z,646nm,21.0s						
CCAC	Calif City Air	117.20	295	IAMs_20	IAMs_20	04 06 45.3	
	comp=Z,539nm,20.0s						
ELK	Elko	117.59	302	IAMs_20	IAMs_20	04 08 23.6	
	comp=Z,540nm,20.0s						
DLMT	Dillon	117.71	308	IAMs_20	IAMs_20	04 12 02.5	
	comp=Z,638nm,21.0s						
ISA	Isabella, Lake	117.75	295	IAMs_20	IAMs_20	04 08 38.1	
	comp=Z,591nm,19.0s						
Q09A	Carvers	118.16	299	IAMs_20	IAMs_20	04 10 06.7	
	comp=Z,617nm,20.0s						
WRA	Warramunga Arr	118.48	149	PKP	PKPdf	03 19 18.4	-1.0
	comp=Z,0.4nm,0.8s,baz=233,slow=1.9,SNR=1.4						
NVAR	Mina Array Bea	118.79	298	PKP	PKPdf	03 19 18.2	-1.3
	comp=Z,0.1nm,0.4s,baz=79,slow=3.0,SNR=1.7						
LHV	Little Huntoon	118.86	298	IAMs_20	IAMs_20	04 10 57.4	
	comp=Z,657nm,21.0s						
MSO	Missoula	119.14	309	IAMs_20	IAMs_20	04 05 10.4	
	comp=Z,488nm,20.0s						
WAKR	Walker	119.64	298	IAMs_20	IAMs_20	04 11 24.9	
	comp=Z,652nm,21.0s						
PLID	Pearl Lake	119.82	306	IAMs_20	IAMs_20	04 04 55.4	
	comp=Z,668nm,22.0s						
PNTR	Pine Nut	119.99	299	IAMs_20	IAMs_20	04 10 13.1	
	comp=Z,648nm,22.0s						
KURBB	Kurchatov Arra	120.02	47	PKP	PKPdf	03 19 20.3	-0.9
	comp=Z,0.6nm,0.3s,baz=246,slow=2.7,SNR=2.9						
PAHR	Pah Rah Range	120.08	299	IAMs_20	IAMs_20	04 12 20.5	
	comp=Z,674nm,20.0s						
KURK	Kurchatov	120.11	47	IAMs_20	IAMs_20	04 13 27.0	
	comp=Z,687nm,21.0s						
KURK	Kurchatov	120.11	47	*i* PKIKP	PKiKP	03 19 21.8	+0.4
CMB	Columbia Colle	120.13	297	IAMs_20	IAMs_20	04 11 58.0	
	comp=Z,562nm,21.0s						
SAO	San Andreas Ge	120.40	295	IAMs_20	IAMs_20	04 09 35.0	
	comp=Z,518nm,20.0s						
WVOR	Wild Horse Val	120.60	303	IAMs_20	IAMs_20	04 09 55.2	
	comp=Z,693nm,21.0s						
MAKZ	Makanchi	120.81	52	IAMs_20	IAMs_20	04 13 02.5	
	comp=Z,490nm,18.0s						
J08A	Circle Bar Ran	120.83	304	IAMs_20	IAMs_20	04 13 08.3	
	comp=Z,584nm,20.0s						
RES	Resolute Bay	120.90	342	IAMs_20	IAMs_20	04 09 34.8	
	comp=Z,589nm,21.0s						
MKAR	Makanchi Array	121.00	52	PKP	PKPdf	03 19 22.3	-1.0
	comp=Z,0.7nm,0.9s,baz=303,slow=2.9,SNR=4.3						
MKAR				PP	PP	03 20 51.9	-1.4
	comp=Z,0.7nm,0.8s,baz=249,slow=6.0,SNR=3.1						
MKAR				PKKPbc	PKKPab	03 29 25.4	-0.2
	comp=Z,0.4nm,0.9s,baz=58,slow=4.1,SNR=1.6						
ORV	Oroville	121.53	298	IAMs_20	IAMs_20	04 10 33.8	
	comp=Z,554nm,22.0s						
NEW	Newport	121.67	309	IAMs_20	IAMs_20	04 10 35.2	
	comp=Z,537nm,22.0s						
E09A	Wood Farm, Sta	121.73	307	IAMs_20	IAMs_20	04 06 19.9	
	comp=Z,523nm,20.0s						
G08A	Pilot Rock	121.84	306	IAMs_20	IAMs_20	04 07 11.0	
	comp=Z,500nm,21.0s						
HATC	Hat Creek Radi	121.97	300	IAMs_20	IAMs_20	04 11 15.5	
	comp=Z,649nm,22.0s						
MCCM	Marconi Confer	121.99	296	IAMs_20	IAMs_20	04 09 42.1	
	comp=Z,550nm,21.0s						
GDXM	Geysers	122.18	297	IAMs_20	IAMs_20	04 13 10.1	
	comp=Z,593nm,20.0s						
E08A	Dider Farm, El	122.32	307	IAMs_20	IAMs_20	04 12 05.6	
	comp=Z,470nm,20.0s						
HOPS	Hopland Field	122.45	297	IAMs_20	IAMs_20	04 12 46.4	
	comp=Z,673nm,20.0s						
DZM	Mont Dzumac	122.45	184	*e*SS	SS	03 37 35.7	-5.9
	comp=Z,223nm,25.4s						
DZM	Mont Dzumac	122.45	184	*e*LR	LR	03 57 06.5	
	comp=Z,1µm,23.3s						
HAWA	Hanford	122.59	307	IAMs_20	IAMs_20	04 06 47.0	
	comp=Z,501nm,22.0s						
PINE	Pine Mountain	122.66	303	IAMs_20	IAMs_20	04 07 59.9	
	comp=Z,709nm,22.0s						
O02D	Mt. Diablo Mer	122.68	299	IAMs_20	IAMs_20	04 11 22.4	
	comp=Z,670nm,22.0s						
F07A	Phinny Hill Vi	122.69	306	IAMs_20	IAMs_20	04 13 19.5	
	comp=Z,519nm,20.0s						
K04D	Chiloquin, OR	122.81	302	IAMs_20	IAMs_20	04 11 39.0	
	comp=Z,558nm,20.0s						
E07A	Sunnyside	122.86	307	IAMs_20	IAMs_20	04 10 56.0	
	comp=Z,610nm,21.0s						
KAPI	Kappang	122.89	126	IAMs_20	IAMs_20	04 01 59.6	
	comp=Z,684nm,20.0s						
L04D	Klamath Falls	123.06	301	IAMs_20	IAMs_20	04 13 19.5	
	comp=Z,729nm,22.0s						
B08A	Colville Reser	123.09	309	IAMs_20	IAMs_20	04 10 21.1	
	comp=Z,528nm,22.0s						
MXC	Moxie City	123.15	307	IAMs_20	IAMs_20	04 11 02.8	
	comp=Z,538nm,21.0s						
J04A	Umpqua Nationa	123.27	302	IAMs_20	IAMs_20	04 14 14.1	
	comp=Z,473nm,19.0s						
G05A	Wamic	123.40	305	IAMs_20	IAMs_20	04 07 03.3	
	comp=Z,536nm,21.0s						
WMQ	Urumqi	123.58	57	*e*PKP	PKPdf	03 19 27.5	-0.9
WMQ				LR	LR		
	comp=Z,530nm,12.5s						
WMQ				LR	LR		
	comp=Z,800nm,22.5s						
HOOD	Mount Hood Mea	123.65	305	IAMs_20	IAMs_20	04 14 04.9	
	comp=Z,576nm,21.0s						
I04A	Tendick Farm,	123.66	303	IAMs_20	IAMs_20	04 14 42.4	
	comp=Z,691nm,20.0s						
KMPM	Mount Pierce	123.71	299	IAMs_20	IAMs_20	04 13 48.9	
	comp=Z,618nm,19.0s						
H04A	Detroit Lake	123.80	304	IAMs_20	IAMs_20	04 14 12.0	
	comp=Z,681nm,20.0s						
L02F	Cave Junction	123.91	301	IAMs_20	IAMs_20	04 14 19.0	
	comp=Z,716nm,21.0s						
KSXB	Camp Six Broad	124.03	300	IAMs_20	IAMs_20	04 12 23.1	
	comp=Z,766nm,22.0s						
H04D	Lebanon	124.12	304	IAMs_20	IAMs_20	04 08 14.5	
	comp=Z,573nm,21.0s						
BUCK	Buck Mountain	124.19	303	IAMs_20	IAMs_20	04 08 31.3	
	comp=Z,611nm,22.0s						
YKA	Yellowknife Ar	124.23	326	PKP	PKPdf	03 19 27.6	-1.3
	comp=Z,1.5nm,0.9s,baz=85,slow=1.4,SNR=7.1						
YKA	Yellowknife Ar	124.23	326	*e*PKIKP	PKiKP	03 19 31.6	+2.4
YKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
I03D	Drain, OR	124.27	302	IAMs_20	IAMs_20	04 08 54.6	
	comp=Z,732nm,21.0s						
KBO	Bosley Butte	124.40	301	IAMs_20	IAMs_20	04 11 18.0	
	comp=Z,750nm,22.0s						
D05A	Enumclaw	124.44	307	IAMs_20	IAMs_20	04 17 37.9	
	comp=Z,545nm,22.0s						
COR	Corvallis	124.53	304	IAMs_20	IAMs_20	04 14 25.2	
	comp=Z,526nm,19.0s						
G03D	McMinnville, O	124.69	304	IAMs_20	IAMs_20	04 14 18.6	
	comp=Z,563nm,21.0s						
I02E	Swisshome, OR	124.75	303	IAMs_20	IAMs_20	04 09 17.1	
	comp=Z,708nm,22.0s						
F04D	Rainier, OR	124.79	305	IAMs_20	IAMs_20	04 14 05.1	
	comp=Z,511nm,18.0s						
HEBO	Mount Hebo	125.02	304	IAMs_20	IAMs_20	04 09 50.4	
	comp=Z,804nm,22.0s						
F03A	Seaside	125.11	305	IAMs_20	IAMs_20	04 14 57.5	
	comp=Z,577nm,21.0s						
E03A	Lebam	125.29	306	IAMs_20	IAMs_20	04 12 34.3	
	comp=Z,523nm,21.0s						
LLLB	Lillooet	125.33	311	IAMs_20	IAMs_20	04 13 01.2	
	comp=Z,660nm,20.0s						
NLWA	Neilton Lookou	125.73	307	IAMs_20	IAMs_20	04 08 42.9	
	comp=Z,736nm,21.0s						
PGC	Sidney	125.80	308	IAMs_20	IAMs_20	04 11 24.8	
	comp=Z,566nm,22.0s						
DLV	Lat	125.82	102	IAMs_20	IAMs_20	04 06 35.4	
	comp=Z,571nm,21.0s						
GOMU	GeErMu	126.11	68	PKP	PKiKP	03 19 34.3	0.0
GOMU				sPKP		03 19 38.3	
GOMU				SKKS		03 28 25.8	
GOMU				SS	SS	03 38 33.8	+2.2
GOMU				LR	LR		
	comp=Z,1µm,20.8s						
GOMU				LR	LR		
	comp=Z,760nm,22.1s						
GOMU				LR	LR		
	comp=Z,2µm,23.0s						
SLVN	Son La	127.10	89	IAMs_20	IAMs_20	04 07 25.2	
	comp=Z,528nm,22.0s						
CBB	Campbell River	127.36	310	IAMs_20	IAMs_20	04 08 52.8	
	comp=Z,635nm,22.0s						
PZH	PanZhiHua	127.72	82	PKP	PKPdf	03 19 36.9	0.0
LUWI	Luwuk	127.85	126	IAMs_20	IAMs_20	04 06 32.0	
	comp=Z,600nm,20.0s						
TOLI2	Tolitoli	128.08	122	IAMs_20	IAMs_20	04 03 56.4	
	comp=Z,760nm,22.0s						
QIZ	Qiongzhong	130.78	95	PKP	PKPdf	03 19 42.8	0.0
QIZ				SS	SS	03 39 30.8	+1.9
QIZ				LR	LR		
	comp=Z,350nm,14.8s						
QIZ				LR	LR		
	comp=Z,440nm,32.7s						
GTA	Gaotai	130.89	66	*e*PKP	PKiKP	03 19 46.8	+3.3
GTA				LR	LR		
	comp=Z,510nm,17.4s						
GTA				LR	LR		
	comp=Z,600nm,22.5s						
GTA				LR	LR		
	comp=Z,910nm,22.9s						
CD2	Chengdu	131.13	78	PKP	PKPdf	03 19 43.0	-0.2
DLBC	Dease Lake	131.26	320	IAMs_20	IAMs_20	04 17 16.4	
	comp=Z,635nm,20.0s						
S34M	Telegraph Cree	131.82	319	IAMs_20	IAMs_20	04 18 39.2	
	comp=Z,683nm,22.0s						
MOY	Mondy	134.00	50	*e*PKIKP	PKiKP	03 19 52.8	+3.5
MOY				pmax	pmax		
	comp=Z,14nm,1.7s						
E28M	Babbage River	134.40	334	IAMs_20	IAMs_20	04 18 20.3	
	comp=Z,535nm,20.0s						
N30M	Aishikik Lake	134.73	324	IAMs_20	IAMs_20	04 16 23.7	
	comp=Z,641nm,20.0s						
E27K	Coleen River	135.25	334	IAMs_20	IAMs_20	04 15 49.8	
	comp=Z,531nm,20.0s						
ENH	Enshi	135.48	81	IAMs_20	IAMs_20	04 13 19.7	
	comp=Z,432nm,22.0s						
G27K	Doyon Strip	135.67	332	IAMs_20	IAMs_20	04 12 19.0	
	comp=Z,657nm,21.0s						
H27K	Steamboat Moun	135.77	331	IAMs_20	IAMs_20	04 26 06.7	
	comp=Z,557nm,21.0s						
XAN	Xi'an	136.30	76	PKP	PKPdf	03 19 50.3	-2.5
XAN				LR	LR		
	comp=Z,670nm,23.0s						
XAN				LR	LR		
	comp=Z,390nm,22.5s						
XAN				LR	LR		
	comp=Z,790nm,22.3s						
G26K	Porcupine Rive	136.43	333	IAMs_20	IAMs_20	04 12 32.9	
	comp=Z,667nm,22.0s						
D25K	Kavik River	136.49	336	IAMs_20	IAMs_20	04 12 54.3	
	comp=Z,642nm,21.0s						
BCAR	Beaver Creek A	136.64	327		PKPdf	03 19 53.0	+0.5
L27K	Beaver Creek,	136.66	327		PKPdf	03 19 52.9	+0.4
M27K	Edge Creek, AK	136.83	326	IAMs_20	IAMs_20	04 24 06.1	
	comp=Z,597nm,20.0s						
F25K	Christian Rive	136.89	334	IAMs_20	IAMs_20	04 17 00.2	
	comp=Z,486nm,20.0s						
FYU	Fort Yukon	137.10	332	IAMs_20	IAMs_20	04 16 58.8	
	comp=Z,686nm,22.0s						
SONM	Songino Array	137.17	56	PKP	PKPdf	03 19 52.6	-1.5
	comp=Z,2.6nm,1.0s,baz=218,slow=3.5,SNR=8.3						
M26K	Nabesna, AK	137.33	326	IAMs_20	IAMs_20	04 15 26.3	
	comp=Z,597nm,22.0s						
SCRK	Sand Creek	137.38	329	IAMs_20	IAMs_20	04 17 00.5	
	comp=Z,604nm,21.0s						
ISLE	Juniper Island	137.38	323	IAMs_20	IAMs_20	04 17 51.0	
	comp=Z,625nm,20.0s						
MCARA	McCarthy VSAT	137.56	325	IAMs_20	IAMs_20	04 20 02.5	
	comp=Z,604nm,21.0s						
E24K	Your Creek	137.70	335	IAMs_20	IAMs_20	04 15 43.8	
	comp=Z,654nm,21.0s						
TOLK	Toolik Lake Re	137.82	336	IAMs_20	IAMs_20	04 13 44.6	
	comp=Z,559nm,21.0s						
GLB	Gilahina Butte	137.91	325	IAMs_20	IAMs_20	04 20 13.0	
	comp=Z,596nm,20.0s						
E23K	Chandalar	138.09	335	IAMs_20	IAMs_20	04 17 50.8	
	comp=Z,458nm,20.0s						
B22K	Teshekpuk Lake	138.17	339	IAMs_20	IAMs_20	04 14 06.6	
	comp=Z,455nm,21.0s						
N25K	Chitina, Valde	138.24	325	IAMs_20	IAMs_20	04 16 21.6	
	comp=Z,547nm,21.0s						
ILAR	Eielson Array	138.34	330	PKhKP	PKPpre	03 19 48.5	
	comp=Z,2.8nm,1.1s,baz=41,slow=2.9,SNR=7.3						
ILAR				PKP	PKPdf	03 19 54.6	-0.9
	comp=Z,1.8nm,0.9s,baz=31,slow=1.8,SNR=14						
H24K	Noodor Dome	138.36	332		PKPdf	03 19 55.4	-0.2
H24K				IAMs_20	IAMs_20	04 18 17.1	
	comp=Z,532nm,21.0s						
BMRM	Bremner River	138.39	324	IAMs_20	IAMs_20	04 15 28.7	
	comp=Z,642nm,21.0s						
POKR	Poker Plat Res	138.44	331	IAMs_20	IAMs_20	04 24 37.4	
	comp=Z,548nm,20.0s						
COLA	College	138.69	331	IAMs_20	IAMs_20	04 24 53.2	
	comp=Z,528nm,20.0s						
G23K	Bananza Creek	138.81	334	IAMs_20	IAMs_20	04 18 07.0	
	comp=Z,471nm,20.0s						
DIV	Divide	138.91	325	IAMs_20	IAMs_20	04 20 55.3	
	comp=Z,651nm,22.0s						
H23K	Yukon River	139.00	332	IAMs_20	IAMs_20	04 14 33.0	
	comp=Z,565nm,20.0s						
I23K	Minto, Yukon-K	139.19	331	IAMs_20	IAMs_20	04 25 12.2	
	comp=Z,562nm,21.0s						
NEA2	Nenana	139.28	330	IAMs_20	IAMs_20	04 14 32.7	
	comp=Z,595nm,22.0s						
FID	Port Fidalgo	139.34	324	IAMs_20	IAMs_20	04 19 45.2	
	comp=Z,564nm,21.0s						
E21K	Killik River	139.34	337	IAMs_20	IAMs_20	04 18 50.6	
	comp=Z,455nm,21.0s						
B20K	Meade River	139.41	340	IAMs_20	IAMs_20	04 22 30.7	
	comp=Z,424nm,19.0s						
SCM	Sheep Creek Mo	139.44	326	IAMs_20	IAMs_20	04 14 59.2	
	comp=Z,663nm,22.0s						
GLI	Glacier Island	139.59	325	IAMs_20	IAMs_20	04 16 59.4	
	comp=Z,558nm,21.0s						
BWN	Browne	139.60	330	IAMs_20	IAMs_20	04 15 55.3	
	comp=Z,528nm,20.0s						
RND	Reindeer	139.62	329	IAMs_20	IAMs_20	04 18 53.7	
	comp=Z,633nm,21.0s						
F21K	Alatna River	139.79	335	IAMs_20	IAMs_20	04 20 35.8	
	comp=Z,524nm,20.0s						
HHC	Hu-ho-hao-te	139.98	67	*e*PKP	PKPdf	03 19 53.9	-5.5
HHC				PP	PP	03 22 53.8	-3.0
D20K	Etivluk River	140.01	338		PKPdf	03 19 58.9	+0.4
D20K				IAMs_20	IAMs_20	04 16 09.1	
	comp=Z,569nm,22.0s						
G21K	Allakaket	140.14	334		PKPdf	03 19 56.2	-2.6
PWL	Port Wells	140.18	325	IAMs_20	IAMs_20	04 17 19.9	
	comp=Z,591nm,22.0s						
BPAW	Bear Paw Mtn.	140.24	330	IAMs_20	IAMs_20	04 17 23.1	
	comp=Z,609nm,22.0s						
KNMB	Chin-men Tao	140.34	94	IAMs_20	IAMs_20	04 26 00.9	
	comp=Z,430nm,19.0s						
D19K	Kuna River	140.59	338	IAMs_20	IAMs_20	04 16 06.5	
	comp=Z,633nm,22.0s						
F20K	Avaraart Lake	140.64	336	IAMs_20	IAMs_20	04 19 18.3	
	comp=Z,660nm,22.0s						
RC01	Rabbit Creek A	140.77	325	IAMs_20	IAMs_20	04 25 24.4	
	comp=Z,457nm,21.0s						
CAST	Castle Rocks	140.96	330	IAMs_20	IAMs_20	04 16 40.5	
	comp=Z,626nm,22.0s						
F19K	Shaleruckik Mo	141.43	336	IAMs_20	IAMs_20	04 19 54.0	
	comp=Z,474nm,21.0s						
J20K	Nowinta River	141.47	331		PKPdf	03 20 01.8	+0.6
G19K	Purcell Mounta	141.58	335	IAMs_20	IAMs_20	04 19 57.0	
	comp=Z,550nm,20.0s						
STLK	Strandline Lak	141.58	327	IAMs_20	IAMs_20	04 17 39.8	
	comp=Z,375nm,19.0s						
TWG	Pinlang	141.75	98	IAMs_20	IAMs_20	04 18 15.0	
	comp=Z,509nm,22.0s						
K20K	Telida	141.80	330	IAMs_20	IAMs_20	04 19 13.3	
	comp=Z,508nm,21.0s						
SSLB	Suanglung	142.11	97	IAMs_20	IAMs_20	04 15 13.6	
	comp=Z,542nm,20.0s						
J19K	Poorman	142.13	331		PKPdf	03 20 01.4	-1.0
J19K				IAMs_20	IAMs_20	04 16 41.8	
	comp=Z,607nm,21.0s						
YULB	Yu-li	142.21	97	IAMs_20	IAMs_20	04 14 09.0	
	comp=Z,383nm,20.0s						
G18K	Tagagawik	142.25	335		PKPdf	03 20 02.3	-0.3
G18K				IAMs_20	IAMs_20	04 20 38.8	
	comp=Z,471nm,21.0s						
RDOG	Red Dog Mine	142.25	340	IAMs_20	IAMs_20	04 17 40.5	
	comp=Z,627nm,22.0s						
H18K	Honhosa River	142.56	334	IAMs_20	IAMs_20	04 18 45.1	
	comp=Z,474nm,22.0s						
L19K	White Mountain	142.63	329	IAMs_20	IAMs_20	04 20 26.4	
	comp=Z,604nm,21.0s						
C16K	Lisburne Hills	142.77	341		PKPdf	03 20 03.6	+0.2
C16K				IAMs_20	IAMs_20	04 23 02.0	
	comp=Z,468nm,20.0s						
F17K	Baldwin Pennin	142.79	337	IAMs_20	IAMs_20	04 25 14.8	
	comp=Z,494nm,20.0s						
J18K	Innoko River	142.81	331		PKPdf	03 20 03.4	-0.3
J18K				IAMs_20	IAMs_20	04 16 41.9	
	comp=Z,610nm,21.0s						
NACB	Ninganchiao	142.81	96	IAMs_20	IAMs_20	04 15 47.1	
	comp=Z,517nm,22.0s						
N19K	Bonanza Creek	143.03	326		PKPdf	03 20 02.9	-1.4
H17K	Granite Mounta	143.23	334	IAMs_20	IAMs_20	04 21 02.7	
	comp=Z,416nm,20.0s						
BJT	Baijiatuau	143.32	69	IAMs_20	IAMs_20	04 28 21.5	
	comp=Z,516nm,21.0s						
L18K	Granite Mounta	143.39	329		PKPdf	03 20 04.6	-0.1
NJ2	Nanjing	143.63	83	*e*PKP	PKPdf	03 20 06.5	+0.4
O18K	Koktuh Hills	143.74	325	IAMs_20	IAMs_20	04 22 06.8	
	comp=Z,521nm,20.0s						
J17K	VABM Dome	143.76	332		PKPdf	03 20 06.2	+0.8
G16K	Koyuk River	143.79	336	IAMs_20	IAMs_20	04 18 22.2	
	comp=Z,466nm,22.0s						
K17K	Iditarod	143.81	331		PKPdf	03 20 06.0	+0.5
P18K	Big Mountain,	143.93	324	IAMs_20	IAMs_20	04 18 23.9	
	comp=Z,528nm,20.0s						
M17K	Holitna River	144.08	328		PKPdf	03 20 05.6	-0.3
M17K				IAMs_20	IAMs_20	04 21 31.5	
	comp=Z,538nm,22.0s						
I17K	Unalakleet	144.10	333		PKPdf	03 20 06.1	+0.2
I17K				IAMs_20	IAMs_20	04 26 27.7	
	comp=Z,534nm,20.0s						
F15K	North Star Dit	144.32	338		PKPbc	03 20 05.0	+0.4
F15K				IAMs_20	IAMs_20	04 24 12.3	
	comp=Z,383nm,20.0s						
N17K	Nushagak Hills	144.36	327		PKPdf	03 20 05.9	-0.5
J16K	Anvik River	144.40	332		PKPbc	03 20 05.3	+0.4
J16K				IAMs_20	IAMs_20	04 19 04.7	
	comp=Z,498nm,21.0s						
ACHA	Angle Creek He	144.41	323	IAMs_20	IAMs_20	04 22 21.8	
	comp=Z,502nm,21.0s						
L16K	Owhat River	144.79	330		PKPbc	03 20 06.3	+0.1
M16K	Timber Creek	144.91	328		PKPab	03 20 06.3	-0.3
M16K				IAMs_20	IAMs_20	04 23 50.6	
	comp=Z,455nm,21.0s						
O16K	Kokwok River B	145.18	326		PKPdf	03 20 08.3	+0.4
O16K				IAMs_20	IAMs_20	04 18 03.8	
	comp=Z,580nm,22.0s						
K15K	Wolf Creek Mou	145.31	331		PKPbc	03 20 07.7	-0.1
ANM	Nome	145.31	336	IAMs_20	IAMs_20	04 25 16.4	
	comp=Z,459nm,20.0s						
TNA	Tin City	145.42	339		PKPbc	03 20 07.6	-0.5
TNA				IAMs_20	IAMs_20	04 22 48.0	
	comp=Z,407nm,21.0s						
N15K	Kwethluk River	145.81	327		PKPbc	03 20 09.2	-0.3
J14K	Nanvaranak Lak	145.81	333		PKPbc	03 20 09.5	+0.1
J14K				IAMs_20	IAMs_20	04 27 07.2	
	comp=Z,399nm,21.0s						
HIA	Hailar	146.00	53	*i* PKP2	PKPbc	03 20 10.2	-0.3
L14K	Kuka Creek	146.29	330		PKPdf	03 20 10.0	+0.4
M14K	Bethel	146.31	329	PKPdf	PKPdf	03 20 10.1	+0.4
YAK	Yakutsk	146.51	28	*e*PKP2	PKPab	03 20 13.0	+0.5
YAK				*e*		03 23 37.8	
YAK				*e*SS	SS	03 42 38.7	+6.4
YAK				pmax	pmax		
	comp=Z,42nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,10.0nm,0.4s						
YAK				MLR	MLR		
	comp=Z,592nm,23.0s						
YAK				MLR	MLR		
	comp=E,281nm,22.0s						
YAK				MLR	MLR		
	comp=N,256nm,17.0s						
K13K	Kusilvak Mount	146.72	332	IAMs_20	IAMs_20	04 20 32.1	
	comp=Z,391nm,21.0s						
O14K	Tigyukauivet M	146.78	327		PKPab	03 20 13.6	-0.1
DL2	Dalian	147.36	72	*e*PKPbc	PKiKP	03 20 17.1	+0.2
DL2				LR	LR		
	comp=Z,610nm,22.8s						
DL2				LR	LR		
	comp=Z,390nm,20.2s						
DL2				LR	LR		
	comp=Z,800nm,26.0s						
BILL	Bilibino	147.54	358		PKPbc	03 20 15.3	+1.0
BILL	Bilibino	147.54	358	*i* PKP2	PKPdf	03 20 12.6	+0.9
BILL				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GAMB	Gambell	147.84	339		PKPab	03 20 18.7	+1.1
GAMB				IAMs_20	IAMs_20	04 20 19.0	
	comp=Z,387nm,21.0s						
ZEA	Zeya	149.44	43	*i* PKP2	PKiKP	03 20 20.8	+0.1
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.6s						
CN2	Changchun	150.43	63	PKPbc	PKiKP	03 20 22.8	-0.3
CN2				LR	LR		
	comp=Z,700nm,22.0s						
CN2				LR	LR		
	comp=Z,400nm,22.0s						
CN2				LR	LR		
	comp=Z,400nm,25.0s						
HEH	HeiHe	150.67	49	PKPbc	PKPbc	03 20 22.6	-0.1
HEH				LR	LR		
	comp=Z,240nm,20.8s						
HEH				LR	LR		
	comp=Z,270nm,22.3s						
HEH				LR	LR		
	comp=Z,760nm,22.9s						
INCN	Inchon	151.08	76	IAMs_20	IAMs_20	04 34 13.8	
	comp=Z,543nm,22.0s						
BNX	BinXian	151.62	58	⇓P	PKiKP	03 20 25.8	+0.3
BNX				pmax	pmax		
	comp=Z,11nm,1.0s						
BNX	BinXian	151.62	58	⇓PKPbc	PKPdf	03 20 17.6	-1.2
BNX				PP	PP	03 24 08.3	+2.9
BNX				AMB	AMB		
	comp=Z,120nm,6.0s						
BNX				LR	LR		
	comp=Z,370nm,18.4s						
BNX				LR	LR		
	comp=Z,350nm,25.6s						
BNX				LR	LR		
	comp=Z,610nm,23.1s						
P08K	Saint George I	151.93	327	IAMs_20	IAMs_20	04 25 11.1	
	comp=Z,563nm,22.0s						
KSAR	Wonju Array Be	152.07	76		PKPbc	03 20 26.2	-0.1
KSAR	Wonju Array Be	152.07	76	PKIKP	PKPbc	03 20 26.2	-0.1
KSRS	Korea Array	152.10	76	PKPbc	PKPbc	03 20 25.3	-1.1
	comp=Z,2.1nm,0.7s,baz=290,slow=2.2,SNR=8.9						
MDJ	Mudanjiang	153.31	60	PKPbc	PKPdf	03 20 20.5	-0.9
USRK	Ussuriysk Ar.	155.07	61	PKPab	PKPab	03 20 48.1	-0.3
	comp=Z,1.7nm,0.9s,baz=275,slow=4.9,SNR=4.6						
JMN	Monobe	156.25	86	IAMs_20	IAMs_20	04 42 47.6	
	comp=Z,485nm,21.0s						
MJAR	Matsushiro Arr	160.20	80	PKPab	PKPab	03 21 10.4	-0.5
	comp=Z,5.1nm,1.0s,baz=273,slow=4.6,SNR=8.1						

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*SNET **13** 03:31:10.3±2.2, 14.°38N×90.°41W, h209^{km}, ML4.1*

*GCG **13** 03:31:10.4±2.0, 14.°49N×90.°40W, h208^{km}±10^{km}, MD4.7, ML4.7, MW4.0*

*IDC **13** 03:31:12.3±0.6, 14.°49N×90.°16W, h217^{km}±4^{km}, mb3.6/19, mbtmp4.2/23, Error ellipse: s-maj=16.7km s-min=7.6km az=52.0*

*NEIC **13** 03:31:12.1±1.4, 14.°46N±0.°09×90.°38W±0.°06, h208^{km}±6^{km}, mb4.7/99, Error ellipse: s-maj=14.3km s-min=6.0km az=208.0*

CATAC ***13*** *03:31:12.9±0.3, 14°N±3°×9°0W±°, h192km±2km, M4.6/39, mb5.1/1, mB5.4/1, MLv4.3/39, Mw(mB)4.8/1, Error ellipse: s-maj=8.1km s-min=2.7km az=28.5, Moment Tensor Solution. Moment tensor: Scale* 10^{15}*Nm;* M_{rr}*3.29;* $M_{\theta\theta}$*-4.93;* $M_{\phi\phi}$*1.63;* $M_{r\theta}$*2.36;* $M_{\theta\phi}$*3.08;* $M_{\phi r}$*-5.21; Fault plane solution:* M_0*7.81849×*10^{15} *NP1:*ϕ_s*145.35896°, δ74.83415°, λ123.21198°. NP2:*ϕ_s*257.14089°, δ36.14650°, λ26.32899°. Principal axes: T 7.7462, Plg49.1116°, Azm91.6356°; N 0.1426, Plg31.9151°, Azm315.6400°; P -7.8888, Plg22.7063°, Azm210.5339°; Moment Tensor Solution. Moment tensor: Scale* 10^{15} *Nm;* M_{rr}*3.25;* $M_{\theta\theta}$*-4.92;* $M_{\phi\phi}$*1.67;* $M_{r\theta}$*2.08;* $M_{\theta\phi}$*3.38;* $M_{\phi r}$*-5.37; Fault plane solution:* M_0*7.96344×*10^{15} *NP1:*ϕ_s*147.56603°, δ75.03150°, λ124.97306°. NP2:*ϕ_s*257.83234°, δ37.66312°, λ25.00629°. Principal axes: T 7.9264, Plg47.9358°, Azm94.7927°; N 0.0736, Plg33.6241°, Azm317.3246°; P -8.0000, Plg22.1554°, Azm211.6139°; confirmed*

ISC 13 03:31:11.5±0.4, **14°.43N**±0°.04×**90°.35W**±0°.04, **h214**km±3km, **n350**, σ**1ˢ26**/348, **mb4.7**/70, **Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FG16	Alotenango, Sa	0.22	225	iP	Pn	03 31 39.1	-0.7
FG16				IAML		03 32 09.4	
	comp=N,23μm,0.3s						
GCG4	OSOP	0.23	312	iP	Pn	03 31 39.1	-0.6
GCG4				iS	S	03 32 00.8	-1.1
GCG4				IAML		03 32 02.2	
	comp=E,12μm,1.2s						
ESSG	Sabana Grande	0.47	265	iP	Pn	03 31 38.5	-1.7
ESSG				IAML		03 32 07.1	
	comp=N,3μm,0.3s						
FAME	Alcaldia de Sa	0.67	151	P	Pn	03 31 39.6	-1.3
SLOZ	Alcaldia de Sa	0.68	126	eP	Pn	03 31 40.0	-1.1
SLOZ				eS	S	03 32 02.8	-1.2
SLOZ	Alcaldia de Sa	0.68	126	P	Pn	03 31 40.5	-0.6
LOAL	Lomas de Alarc	0.70	128	P	Pn	03 31 40.4	-0.7
LOAL	Lomas de Alarc	0.70	128	S	S	03 32 03.0	-1.1
NUBE	Las Nubes	0.76	133	eP	Pn	03 31 40.6	-1.0
NUBE				eS	S	03 32 03.1	-1.8
NUBE	Las Nubes	0.76	133	iP	Pn	03 31 40.6	-1.0
NUBE				iS	S	03 32 02.8	-2.1
NUBE	Las Nubes	0.76	133	P	Pn	03 31 40.9	-0.6
ESSJ	San Jos, E	0.87	189	iP	Pn	03 31 39.8	-2.2
ESSJ				eS	S	03 32 03.6	-2.1
UNIC	Universidad Ca	0.90	120	P	Pn	03 31 41.4	-0.8
UNIC	Universidad Ca	0.90	120	S	S	03 32 03.7	-2.2
SNJE	San Jose	0.91	127	eP	Pn	03 31 41.8	-0.7
SBLS	San Blas	0.92	130	eP	Pn	03 31 41.8	-0.8
SBLS				eS	S	03 32 05.3	-1.2
CEVE	Cerro Verde	0.93	130	eP	Pn	03 31 42.0	-0.5
CEVE				eS	S	03 32 05.2	-1.4
CEVE	Cerro Verde	0.93	130	P	Pn	03 31 42.2	-0.4
CEVE	Cerro Verde	0.93	130	S	S	03 32 02.7	-3.9
STG0	El Palmar, Qui	0.96	270	iP	Pn	03 31 43.1	+0.4
STG0				IAML		03 31 47.5	
	comp=E,17μm,0.3s						
STG0				iS	S	03 32 08.5	+1.8
MTO3	Montecristo	0.96	92		Pn	03 31 42.0	-0.8
MTO3	Montecristo	0.96	92	iP	Pn	03 31 42.0	-0.8
MTO3				eS	S	03 32 05.4	-1.5
MTO3	Montecristo	0.96	92	iP	Pn	03 31 42.0	-0.8
MTO3	Montecristo	0.96	92	P	Pn	03 31 42.0	-0.8
STG8	El Palmar, Qui	0.97	271	iP	Pn	03 31 43.3	+0.5
STG8				IAML		03 31 49.2	
	comp=N,7μm,0.3s						
ESQI	Esquipulas	0.99	82		Pn	03 31 42.3	-0.4
ESQI	Esquipulas	0.99	82	eP	Pn	03 31 42.4	-0.4
ESQI				eS	S	03 32 06.4	-0.6
ESQI	Esquipulas	0.99	82	P	Pn	03 31 42.3	-0.4
SOKI	Kika Raxquin	1.09	291	eP	Pn	03 31 43.2	-0.6
SOKI				IAML		03 31 52.5	
	comp=N,8μm,0.6s						
CEDA	San Andres	1.12	124	eP	Pn	03 31 41.1	-2.5
CEDA				eS	S	03 32 07.2	-1.1
CEDA	San Andres	1.12	124	P	Pn	03 31 41.3	-2.3
JAYA	Jayaque - finc	1.17	131	eP	Pn	03 31 43.2	-0.9
JAYA				eS	S	03 32 07.3	-2.0
JAYA	Jayaque - finc	1.17	131	eP	Pn	03 31 43.2	-0.9
JAYA				iS	S	03 32 07.2	-2.0
JAYA	Jayaque - finc	1.17	131	P	Pn	03 31 43.1	-0.9
PMON	Piamonte	1.23	125	iP	Pn	03 31 44.0	-0.5
PMON	Piamonte	1.23	125	P	Pn	03 31 44.0	-0.5
PMON	Piamonte	1.23	125	S	S	03 32 07.3	-2.6
ITCA	Escuela Especi	1.28	126	P	Pn	03 31 44.5	-0.4
UEES	Universidad Ev	1.29	123	eP	Pn	03 31 44.6	-0.3
UEES	Universidad Ev	1.29	123	P	Pn	03 31 44.5	-0.4
UEES	Universidad Ev	1.29	123	S	S	03 32 09.3	-1.4
RTAL	Retalhuleu	1.30	274		Pn	03 31 43.5	-1.4
RTAL	Retalhuleu	1.30	274	eP	Pn	03 31 43.5	-1.4
RTAL				eS	S	03 32 09.4	-1.2
RTAL	Retalhuleu	1.30	274	P	Pn	03 31 43.7	-1.2
SEMO	Seminario San	1.31	123	P	Pn	03 31 44.5	-0.5
SEMO	Seminario San	1.31	123	S	S	03 32 09.4	-1.5
UTEC	Universidad Te	1.33	123	P	Pn	03 31 44.5	-0.7
UTEC	Universidad Te	1.33	123	S	S	03 32 10.5	-0.7
IGN	Direccin Gen	1.35	122	P	Pn	03 31 44.8	-0.5
IGN	Direccin Gen	1.35	122	S	S	03 32 09.6	-1.8
UDBS	Universidad Do	1.36	121	P	Pn	03 31 45.1	-0.3
UDBS	Universidad Do	1.36	121	S	S	03 32 09.0	-2.6
LALI	Alcalda de L	1.37	133	eP	Pn	03 31 44.9	-0.5
LALI				eS	S	03 32 09.6	-2.0
LALI	Alcalda de L	1.37	133	iP	Pn	03 31 44.9	-0.5
LALI				eS	S	03 32 09.6	-2.0
LALI				IAML		03 32 11.3	
	comp=E,710nm,0.4s						
LALI	Alcalda de L	1.37	133	P	Pn	03 31 45.1	-0.3
LOMA	Loma Larga	1.39	124	eP	Pn	03 31 45.2	-0.5
LOMA	Loma Larga	1.39	124	P	Pn	03 31 45.2	-0.5
LOMA	Loma Larga	1.39	124	S	S	03 32 09.3	-2.8
LLGN	La Laguna	1.39	101	P	Pn	03 31 44.9	-0.7
LLGN	La Laguna	1.39	101	S	S	03 32 11.7	-0.3
PANCS	Alcalda de	1.40	125	P	Pn	03 31 47.0	+1.3
HUEH	Huehuetenango	1.42	309		Pn	03 31 45.5	-0.5
HUEH	Huehuetenango	1.42	309	iP	Pn	03 31 45.6	-0.5
HUEH				eS	S	03 32 12.2	-0.5
HUEH	Huehuetenango	1.42	309	iP	Pn	03 31 45.6	-0.5
HUEH				iS	S	03 32 12.5	-0.2
HUEH				IAML		03 32 15.2	
	comp=E,8μm,1.0s						
HUEH	Huehuetenango	1.42	309	P	Pn	03 31 45.8	-0.3
HUEH	Huehuetenango	1.42	309	S	S	03 32 11.6	-1.1
LFRS	El Faro	1.49	122	eP	Pn	03 31 46.1	-0.4
PAVA	Las Pavas	1.55	117	iP	Pn	03 31 46.6	-0.4
PAVA				eS	S	03 32 14.3	0.0
PAVA	Las Pavas	1.55	117	P	Pn	03 31 46.8	-0.2
PAVA	Las Pavas	1.55	117	S	S	03 32 13.0	-1.4
SARH	Santa Rosa de	1.58	77	iP	Pn	03 31 47.2	0.0
SARH	Santa Rosa de	1.58	77	P	Pn	03 31 47.2	0.0
SARH	Santa Rosa de	1.58	77	S	S	03 32 14.7	-0.1
COEG	Centro de Oper	1.64	119	eP	Pn	03 31 47.5	-0.3
COEG				eS	S	03 32 18.1	+2.4
COEG	Centro de Oper	1.64	119	P	Pn	03 31 47.4	-0.3
COEG	Centro de Oper	1.64	119	S	S	03 32 16.6	+0.9
UESV	Universidad de	1.71	117	P	Pn	03 31 48.1	-0.3
UESV	Universidad de	1.71	117	S	S	03 32 16.3	-0.5
SMCA	Catarina	1.72	285	iP	Pn	03 31 46.9	-1.4
SMCA				eS	S	03 32 14.9	-1.9
SMCA				IAML		03 32 26.3	
	comp=Z,1μm,0.5s						
SCLA	Alcaldia de Sa	1.73	114	eP	Pn	03 31 48.2	-0.3
SCLA				eS	S	03 32 17.4	+0.2
SCLA	Alcaldia de Sa	1.73	114	P	Pn	03 31 48.4	-0.1
SCLA	Alcaldia de Sa	1.73	114	S	S	03 32 15.5	-1.7
TECO	Alcaldia de Te	1.77	120	eP	Pn	03 31 48.4	-0.4
TECO	Alcaldia de Te	1.77	120	P	Pn	03 31 48.4	-0.4
TECO	Alcaldia de Te	1.77	120	S	S	03 32 16.1	-1.5
THIG		1.91	285	iP	Pn	03 31 49.3	-0.9
THIG				eS	S	03 32 19.2	-0.8
THIG				IAML		03 32 20.8	
	comp=N,13μm,0.4s						
PQSS	Presa 15 de Se	1.92	114	P	Pn	03 31 49.9	-0.4
PQSS	Presa 15 de Se	1.92	114	S	S	03 32 19.2	-0.9
TECA	Tecapa	2.02	117	eP	Pn	03 31 51.4	-0.1
TECA				eS	S	03 32 26.8	+4.5
ALJI	Alcalda de J	2.05	122	eP	Pn	03 31 51.9	+0.4
ALJI				eS	S	03 32 21.8	-0.7
ALJI	Alcalda de J	2.05	122	P	Pn	03 31 52.1	+0.6
IZABA	Izabal, Puerto	2.14	53	P	Pn	03 31 52.3	-0.1
INTHN	La Esperanza I	2.18	93	P	Pn	03 31 53.3	+0.1
PACA	Pacayal	2.19	116	P	Pn	03 31 53.3	+0.2
PACA	Pacayal	2.19	116	S	S	03 32 24.8	-0.4
RANC	El Ranchito	2.23	116	P	Pn	03 31 48.5	-5.1
RANC	El Ranchito	2.23	116	S	S	03 32 24.9	-1.2
BLLM	Bellamira	2.28	115	eP	Pn	03 31 54.0	0.0
PETF	Flores	2.52	11		Pn	03 31 56.1	-0.4
PETF	Flores	2.52	11	iP	Pn	03 31 56.1	-0.4
PETF	Flores	2.52	11	P	Pn	03 31 56.0	-0.4
CCIG	Comitan	2.52	317		Pn	03 31 56.5	-0.1
CCIG	Comitan	2.52	317	iP	Pn	03 31 56.6	-0.1
CCIG				iS	S	03 32 30.6	-1.1
CCIG				IAML		03 32 32.3	
	comp=N,866nm,0.8s						
CCIG				IAML		03 32 41.4	
	comp=Z,413nm,0.7s						
CCIG	Comitan	2.52	317	P	Pn	03 31 56.9	+0.2
CCIG	Comitan	2.52	317	S	S	03 32 31.0	-0.7
LCND	La Caada	2.64	115	P	Pn	03 31 58.1	+0.3
CNCH	Conchagua	2.70	115	P	Pn	03 31 58.5	-0.1
TGUH	Tegucigalpa,Un	3.01	97		Pn	03 32 02.3	+0.2
TGUH	Tegucigalpa,Un	3.01	97	P	Pn	03 32 02.4	+0.3
CSGN	Cosiguina Volc	3.08	118	P	Pn	03 32 03.6	+0.8
POTN	Potosi Cosigui	3.11	117	P	Pn	03 32 04.0	+0.8
POTN				S	S	03 32 44.2	+1.0
TGIG		3.55	312	iP	Pn	03 32 07.3	-1.0
TGIG				iS	S	03 32 50.3	-2.4
TGIG				IAML		03 32 51.8	
	comp=N,380nm,0.9s						
CRIN	San Cristobal	3.64	118		Pn	03 32 11.1	+1.5
CRIN	San Cristobal	3.64	118	P	Pn	03 32 11.3	+1.7
CRIN	San Cristobal	3.64	118	S	S	03 32 54.1	-0.7
PKGN	Cerro Pekin	3.72	118	P	Pn	03 32 11.7	+1.3
PKGN				S	S	03 32 55.0	-1.3
QUEN	Al S del Volca	3.86	118	P	Pn	03 32 14.3	+2.1
HERN	Volcan Telica	3.87	117		Pn	03 32 12.8	+0.5
CNGN	Cerro Negro	4.04	118		Pn	03 32 14.6	+0.2
RCVN	Varillal2	4.12	101	P	Pn	03 32 15.7	+0.2
MOMN	Momotombo	4.22	118	P	Pn	03 32 18.1	+1.5
SCIG	Sabancuy	4.58	350	iP	Pn	03 32 20.5	-0.5
SCIG				iS	S	03 33 12.3	-3.3
SCIG				IAML		03 33 15.7	
	comp=E,323nm,1.0s						
BOAB	BOACO BROADBAN	4.97	113		Pn	03 32 27.0	+1.1
ACON	Acoyapa	5.61	115		Pn	03 32 34.5	+0.5
HUIG	Huatulco	5.72	284	iP	Pn	03 32 32.8	-2.5
HUIG				eS	S	03 33 30.0	-12
TEIG	Tepich	6.10	19		Pn	03 32 39.4	-0.9
JTS	Las Juntas de	6.69	127		Pn	03 32 48.5	+0.5
JTS	Las Juntas de	6.69	127	P	Pn	03 32 48.6	+0.6
	comp=E,38nm,0.3s,baz=323,slow=12,SNR=65						
JTS				S	S	03 33 57.9	-6.6
	comp=E,142nm,0.4s,baz=284,slow=20,SNR=11						
SOCE	Pocosol	6.89	125		Pn	03 32 51.3	+0.7
SOCE	Pocosol	6.89	125	P	Pn	03 32 51.5	+0.9
HDC	Heredia	7.52	125		Pn	03 32 59.8	+1.0
HDC	Heredia	7.52	125	eP	Pn	03 32 57.9	-0.9
TRT2	Tortugero	7.52	120	P	Pn	03 32 58.6	0.0
CVIMO	Finca Echandi	7.64	124	eP	Pn	03 33 01.2	+0.8
PAR1A	Puntarenas Pro	7.66	128	eP	Pn	03 33 01.6	+1.2
PICV	PH. Pirrs	7.68	128	eP	Pn	03 33 01.8	+1.0
ABE2	San Pablo	7.75	127	eP	Pn	03 33 03.5	+1.7
LCR2	La Lucha 2	7.76	126		Pn	03 33 03.2	+1.2
LCR2	La Lucha 2	7.76	126	eP	Pn	03 33 02.5	+0.6
VTLA	Turrialba Volc	7.79	124	eP	Pn	03 33 02.5	+0.1
CVTR	Volcan Turrial	7.79	123	eP	Pn	03 33 03.1	+0.6
CVTQ	Turrialba Volc	7.79	124	eP	Pn	03 33 03.0	+0.5
RAZU	San Marcos de	7.80	127	eP	Pn	03 33 05.5	+3.1
CVTV	Tajo	7.81	124	eP	Pn	03 33 03.0	+0.3
REPA	Paraso	7.82	125	eP	Pn	03 33 04.3	+1.7
ABRB	Las Abras (San	7.83	123	eP	Pn	03 33 03.9	+1.0
PIEC	Cerro El Cedra	7.87	127	eP	Pn	03 33 04.3	+0.9
VERH	Veragua Rainfo	8.31	122	eP	Pn	03 33 10.8	+1.9
SAJE	San Jernim	8.39	126	eP	Pn	03 33 11.8	+1.8
OCHAL	Ojochal	8.44	128	P	Pn	03 33 11.7	+1.3
EDPE	Pejibaye, P	8.46	128	eP	Pn	03 33 11.8	+1.1
TLIG	Tlapa	8.49	293		Pn	03 33 11.8	+0.5
TLIG	Tlapa	8.49	293	P	Pn	03 33 12.3	+1.0
BURE	Buenos Aires	8.63	126	eP	Pn	03 33 14.2	+1.2
DRK0	Durika	8.64	126	eP	Pn	03 33 14.3	+0.9
DRK0	Durika	8.64	126	P	Pn	03 33 15.2	+1.9
PANP	Palmar Norte	8.67	128	eP	Pn	03 33 17.0	+3.5
CEUA	Cerro Uatsi, L	8.68	123	eP	Pn	03 33 14.4	+0.7
FIMO	Fila Mora	8.73	128	eP	Pn	03 33 16.1	+1.8
EDP2	Potrero Grande	8.85	127	eP	Pn	03 33 17.9	+2.1
ALCO	Alturas Coton,	9.16	126	eP	Pn	03 33 20.5	+0.5
BRU2	Volcan	9.36	126		Pn	03 33 23.4	+0.8
BRU2	Volcan	9.36	126	eP	Pn	03 33 23.0	+0.4
SCZRO	Santa Cruz, Re	9.40	127	eP	P	03 33 33.6	+2.4
CLLRA	Cordillera,	9.45	126	eP	Pn	03 33 24.6	+0.8
SOR	Soroa	10.84	39		Pn	03 33 43.1	+1.8
MTDJ	Mount Denham	12.87	71	Pn	Pn	03 34 08.3	+1.2
061Z	Ochoppi	14.42	36		P	03 34 26.3	-0.7
GTBY	Guantanamo Bay	15.55	67	P	Pn	03 34 40.2	+0.3
060A	Indiantown	15.63	35	P	Pn	03 34 40.9	+0.2
NMDO	Nuevo Mundo	15.87	65	P	Pn	03 34 44.2	+0.4
HNDO	Hondo	17.14	333	P	P	03 34 57.1	0.0
435B	Jarrell	17.58	339		P	03 35 02.3	+0.4
352A	Blakely	17.68	15	P	Pn	03 35 04.5	-0.6
DRIO	Del Rio	17.68	329		P	03 35 03.0	0.0
VBMS	Vicksburg	17.71	360	P	P	03 35 03.5	+0.3
PAPH	Port-au-Prince	17.78	74	P	Pn	03 35 05.6	-0.8
250A	Grady	17.86	11		P	03 35 05.4	+0.5
TIGA	Tifton	18.03	19	P	P	03 35 06.4	-0.3
146A	Union	18.16	4	P	P	03 35 08.9	+0.7
JCT	Junction City	18.19	333		P	03 35 08.7	+0.2
237A	Washetta, Mont	18.19	345	P	P	03 35 09.1	+0.7
OTAV	Otavalo	18.37	139	P	P	03 35 12.2	+1.2
OTAV	Otavalo	18.37	139	eP	Pn	03 35 13.4	-0.3
ROSC	El Rosal	18.44	120	P	Pn	03 35 13.8	-0.7
ROSC	El Rosal	18.44	120	P	P	03 35 11.1	-0.6
	comp=E,16nm,0.6s,baz=314,slow=20,SNR=8.2						
BRDY	Brady	18.56	336		P	03 35 13.3	+0.8
WHTX	Lake Whitney,	18.65	341		P	03 35 13.9	+0.4
LRAL	Lakeview Retre	18.77	9	P	Pn	03 35 16.2	-1.6
Z47A	Carrollton	18.80	6	P	Pn	03 35 16.6	-1.6
SDDR	Presa de Saban	18.81	73	P	P	03 35 15.7	+0.3
152A	Waverly Hall	18.87	15	P	P	03 35 16.0	+0.2
Z41A	Richland Creek	18.88	354	P	P	03 35 16.2	+0.4
FW14	Alvarado	18.95	342	P	P	03 35 16.2	-0.4
HPIG		18.95	313	P	P	03 35 16.0	-0.9
FW13	Cleburne	18.98	341	P	P	03 35 17.4	+0.4
RUSC	La Rusia	18.98	115	P	P	03 35 17.6	-0.1
OZNA	Ozona	19.17	331	P	P	03 35 18.8	-0.3
154A	Montrose	19.27	19	P	P	03 35 21.0	+0.9
TXAR	Lajitas Array	19.28	322		P	03 35 21.7	+1.4
TXAR	Lajitas Array	19.28	322	P	Pn	03 35 22.7	-1.3
	comp=E,1.1nm,0.4s,baz=143,slow=10,SNR=33						
TXAR				pP	pP	03 36 00.9	+5.3
	comp=E,1.6nm,0.8s,baz=143,slow=15,SNR=3.8						
TXAR				sP	sP	03 36 24.2	+0.9
	comp=E,2.1nm,0.9s,baz=144,slow=9.2,SNR=2.1						
TX31	Lajitas Ar. Si	19.28	322		P	03 35 20.8	+0.4
FLOC	Florencia	19.34	130	P	P	03 35 21.9	+0.8
WLAR	White Oak Lake	19.34	353	P	P	03 35 20.8	0.0
Y45A	Yeager Farm, C	19.37	2	P	P	03 35 21.5	+0.4
FW07	Weatherford	19.41	341	P	P	03 35 21.0	-0.6
SC01	Santiago de lo	19.42	72	P	P	03 35 21.1	-0.7
CCAR	Cane Creek	19.45	356	P	P	03 35 22.5	+0.6
BANI	BANI	19.58	76	P	P	03 35 24.7	+1.0
FW06	Azle	19.59	342	P	P	03 35 23.8	+0.2
Y49A	Blount Mountai	19.67	10	P	P	03 35 25.4	+1.0
PLPT	Palo Pinto	19.69	340	P	P	03 35 24.2	-0.4
FW03	Perrin-Whitt E	19.81	341	P	P	03 35 26.1	+0.2
Z35A	Perchaven, San	19.84	343	P	P	03 35 26.1	-0.1
GOGA	Godfrey	19.91	17	P	P	03 35 27.4	+0.5
ABTX	Abilene, Hawle	20.00	337	P	P	03 35 27.4	-0.5
OXF	Oxford	20.01	2	P	P	03 35 28.4	+0.4
ALPN	Alpine	20.04	325	P	P	03 35 28.0	-0.6
SDV	Santo Domingo	20.08	104	P	P	03 35 28.6	-0.6
	comp=E,59nm,0.6s,baz=287,slow=7.4,SNR=17						
SDV	Santo Domingo	20.08	104	eP	P	03 35 25.7	-3.4
X48A	Hartselle	20.16	8		P	03 35 29.7	+0.1
Y52A	Lilburn	20.17	15	P	P	03 35 30.2	+0.4
MIAR	Mount Ida	20.24	352	P	P	03 35 29.8	-0.7
MNHN	Monahans	20.32	328		P	03 35 31.2	-0.3
UALR	University of	20.34	355		P	03 35 31.6	+0.1
FPAL	Fort Paine	20.48	11	P	P	03 35 33.9	+0.8
PLAL	Pickwick Lake	20.57	5	P	P	03 35 34.1	+0.1
WTFS	Witchita Falls	20.61	340	P	P	03 35 34.1	-0.3
X51A	Calhoun	20.66	13	P	P	03 35 35.6	+0.7
SN05	Snyder 5	20.72	334	P	P	03 35 35.0	-0.7
APMT	Aspermont	20.80	336	P	P	03 35 36.3	-0.2
SN07	Snyder 07	20.91	335	P	P	03 35 36.9	-0.8
HODGE	Hodges	21.03	19	P	P	03 35 38.6	-0.3
SWET	Sewanee	21.08	10	P	P	03 35 39.5	+0.2
POST	Post	21.14	333		P	03 35 39.7	-0.4
W50A	Signal Mountai	21.18	11	P	P	03 35 40.7	+0.3
X34A	Smith Ranch, M	21.19	343	P	P	03 35 40.5	-0.1
WVT	Waverly	21.73	6	P	P	03 35 46.2	+0.4
TKL	Tuckaleechee C	21.95	14	P	P	03 35 49.0	+1.0
	comp=E,46nm,0.8s,baz=184,slow=10,SNR=83						
	comp=E,46nm,0.8s						
BAUV	El Baul	22.51	102		P	03 35 51.7	-1.8
CCM	Cathedral Cave	23.55	358	P	P	03 36 02.1	-0.4
WCI	Wyandotte Cave	23.98	8		P	03 36 07.5	+1.1
T57A	Hurt	24.56	22	IAmb	IAmb	03 36 13.6	
	comp=Z,17nm,0.8s						
P40A	Paris	25.05	357	IAmb	IAmb	03 36 18.1	
	comp=Z,14nm,0.8s						
ANMO	Albuquerque	25.06	327	P	P	03 36 17.2	+0.6
	comp=Z,0.3nm,0.3s,baz=274,slow=14,SNR=1.8						
ANMO				pP	pP	03 37 01.8	+3.2
	comp=Z,1.4nm,0.8s,baz=242,slow=12,SNR=3.2						
ANMO				ScP	ScP	03 43 03.8	-0.3
	comp=Z,0.8nm,0.8s,baz=91,slow=5.6,SNR=3.0						
	comp=Z,0.3nm,0.3s						
P43A	Skaggs, Pawnee	25.13	2	IAmb	IAmb	03 36 21.7	
	comp=Z,12nm,0.8s						
P46A	Rosedale	25.25	6	IAmb	IAmb	03 36 19.4	
	comp=Z,15nm,0.6s						
P38A	Dawn	25.25	354	IAmb	IAmb	03 36 19.6	
	comp=Z,14nm,1.2s						
Q52A	Bidwell	25.46	15	IAmb	IAmb	03 36 21.6	
	comp=Z,21nm,0.7s						
T25A	Trinidad	25.86	334	IAmb	IAmb	03 37 11.0	
	comp=Z,7.5nm,0.8s						
R58B	Mineral	25.92	23	IAmb	IAmb	03 36 25.8	
	comp=Z,24nm,1.2s						
SFIN	Lafayette	26.01	6	IAmb	IAmb	03 36 26.1	
	comp=Z,18nm,0.7s						
O48B	Farmland	26.13	9	IAmb	IAmb	03 36 28.0	
	comp=Z,18nm,0.8s						
P53A	Whipple	26.18	16	IAmb	IAmb	03 36 28.3	
	comp=Z,29nm,1.0s						
O49A	Covington	26.20	10	IAmb	IAmb	03 36 27.3	
	comp=Z,18nm,0.7s						
P57A	Homestead Farm	27.22	21	IAmb	IAmb	03 36 37.8	
	comp=Z,19nm,0.8s						
L42A	Oliver, Polo	27.48	1	IAmb	IAmb	03 37 23.2	
	comp=Z,19nm,1.1s						
L40A	Anamosa	27.55	359	IAmb	IAmb	03 37 22.8	
	comp=Z,19nm,0.9s						
SDMD	Soldier's Deli	27.58	23	IAmb	IAmb	03 36 40.4	
	comp=Z,12nm,0.6s						
CZSB	Cruzeiro do Su	28.13	140	P	P	03 36 46.6	+2.7
CZSB				IAmb	IAmb	03 36 47.5	
	comp=Z,11nm,0.8s						
CZSB	Cruzeiro do Su	28.13	140	eP	P	03 36 46.6	+2.7
SSPA	Standing Stone	28.29	20	P	P	03 36 45.7	+0.6
SSPA				IAmb	IAmb	03 36 46.3	
	comp=Z,7.8nm,0.8s						
PV18	Skein Mesa, Pa	28.86	329	IAmb	IAmb	03 37 36.8	
	comp=Z,9.9nm,1.0s						
PV12	Saucer Basin,	28.86	329	IAmb	IAmb	03 37 37.1	
	comp=Z,11nm,1.0s						
ERPA	Erie	29.01	16	IAmb	IAmb	03 36 52.7	
	comp=Z,16nm,0.6s						
M57A	Sunshine Farm,	29.17	21	IAmb	IAmb	03 36 54.5	
	comp=Z,19nm,0.7s						
WVNY	West Valley, N	29.67	18	IAmb	IAmb	03 36 58.4	
	comp=Z,16nm,0.8s						
L56A	Greenwood	29.75	19	IAmb	IAmb	03 36 59.3	
	comp=Z,17nm,0.9s						
MMNY	Mt. Morris Dam	30.18	18	IAmb	IAmb	03 37 03.0	
	comp=Z,21nm,1.0s						
BINY	Binghamton	30.33	21	IAmb	IAmb	03 37 04.6	
	comp=Z,17nm,0.8s						
PFO	Pinyon Flats O	30.41	313	P	P	03 37 05.6	+1.6
	comp=Z,0.4nm,0.3s,baz=3.0,slow=20,SNR=1.7						
	comp=Z,0.4nm,0.3s						
MEDO	Medina	30.41	17	IAmb	IAmb	03 37 05.0	
	comp=Z,22nm,0.8s						
L59A	Walton	30.67	23	IAmb	IAmb	03 37 07.5	
	comp=Z,22nm,0.8s						
TEFE	Tefe	31.11	123	eP	P	03 37 09.5	-0.7
PECO	Prince Edward	31.55	19	IAmb	IAmb	03 37 14.3	
	comp=Z,12nm,0.8s						
COWI	Conover	31.59	2	IAmb	IAmb	03 37 14.7	
	comp=Z,19nm,0.7s						
SADO	Sadowa	31.71	15	IAmb	IAmb	03 37 15.6	
	comp=Z,16nm,0.6s						
F33A	5 Mile Ranch,	31.71	352	IAmb	IAmb	03 37 15.6	
	comp=Z,20nm,1.3s						
RSSD	Black Hills	31.82	341		P	03 37 17.7	+1.3
DELO	Deloro Mine	31.89	17	IAmb	IAmb	03 37 17.4	
	comp=Z,17nm,0.6s						
E38A	The Farm, Brul	32.09	358	IAmb	IAmb	03 37 19.0	
	comp=Z,17nm,0.7s						
ACCN	Adirondack Com	32.21	23	IAmb	IAmb	03 37 20.6	
	comp=Z,7.7nm,0.7s						
E46A	Sault Ste Mari	32.24	8	IAmb	IAmb	03 37 21.5	
	comp=Z,8.9nm,0.7s						
PDAR	Pinedale Array	32.73	333	P	P	03 37 25.0	+0.7
	comp=Z,0.2nm,0.3s,baz=144,slow=9.3,SNR=1.9						
PDAR				ScP	ScP	03 43 28.4	+0.1
	comp=Z,0.3nm,0.4s,baz=224,slow=4.9,SNR=2.4						
	comp=Z,0.2nm,0.3s						
LONY	Lake Ozonia	32.95	21	IAmb	IAmb	03 37 27.0	
	comp=Z,20nm,0.9s						
WBO	Williamsburg	33.05	20	IAmb	IAmb	03 37 27.7	
	comp=Z,20nm,0.7s						
MNTQ	Montreal, Queb	34.05	21	IAmb	IAmb	03 37 36.6	
	comp=Z,25nm,0.9s						
TBO	Thunder Bay	34.13	1	IAmb	IAmb	03 37 36.5	
	comp=Z,20nm,0.8s						
MACA	Manacapuru-AM	34.21	118		P	03 37 36.5	-0.7
MACA				IAmb	IAmb	03 37 37.4	
	comp=Z,19nm,0.5s						
MACA	Manacapuru-AM	34.21	118	eP	P	03 37 36.3	-0.9
TRQ	Mont Tremblant	34.37	20	IAmb	IAmb	03 37 39.5	
	comp=Z,10nm,1.0s						
NVAR	Mina Array Bea	34.37	319	P	P	03 37 40.0	+1.5
	comp=Z,1.4nm,0.8s,baz=138,slow=8.9,SNR=7.5						
NVAR				pP	pP	03 38 24.4	+1.2
	comp=Z,5.2nm,1.1s,baz=133,slow=8.7,SNR=6.2						
NVAR				sP	sP	03 38 49.1	+1.2
	comp=Z,2.2nm,1.1s,baz=92,slow=7.4,SNR=1.8						
NVAR				ScP	ScP	03 43 35.0	+0.9
	comp=Z,1.0nm,0.7s,baz=137,slow=5.3,SNR=6.0						
	comp=Z,1.4nm,0.8s						
G62A	West of Eustis	34.98	25	IAmb	IAmb	03 37 44.8	
	comp=Z,14nm,0.9s						
VLDQ	Val d'Or	35.25	15	IAmb	IAmb	03 37 46.7	
	comp=Z,17nm,0.9s						
EPLO	Experimental L	35.26	356	IAmb	IAmb	03 37 46.1	
	comp=Z,24nm,1.0s						
ULM	Lac du Bonnet	36.01	354	IAmb	IAmb	03 37 52.2	
	comp=Z,21nm,0.8s						
ULM	Lac du Bonnet	36.01	354	P	P	03 37 51.3	-0.7
	comp=Z,18nm,0.7s,baz=173,slow=8.5,SNR=32						
	comp=Z,18nm,0.7s						
LPAZ	La Paz	37.60	143	P	P	03 38 06.4	-0.1
	comp=Z,4.1nm,0.7s,baz=323,slow=5.9,SNR=19						
LPAZ				PcP	PcP	03 40 20.4	+0.6
	comp=Z,1.4nm,0.9s,baz=275,slow=1.8,SNR=3.1						
	comp=Z,4.1nm,0.7s						
LPAZ	La Paz	37.60	143	eP	P	03 38 07.4	+0.9
PB16	IPOC Station P	38.50	147	P	P	03 38 15.4	+1.4
ITTB	Itaituba	39.08	116	eP	P	03 38 15.7	-2.5
GO01	Chusmiza	39.77	148	P	P	03 38 27.4	+3.0
VILB	Vilhena	40.40	131	P	P	03 38 29.1	0.0
VILB				IAmb	IAmb	03 38 30.5	
	comp=Z,30nm,0.8s						
VILB	Vilhena	40.40	131	eP	P	03 38 28.6	-0.5
NPGB	Novo Progresso	40.75	119	eP	P	03 38 28.2	-3.8
FFC	Flin Flon	41.22	350	P	P	03 38 35.9	+0.6
FFC				IAmb	IAmb	03 38 36.8	
	comp=Z,29nm,1.8s						
PDRB	Porto dos Gac	42.19	126	eP	P	03 38 41.8	-1.9
PTLB	Pontes e Lacer	42.82	133	P	P	03 38 48.5	-0.1
PTLB	Pontes e Lacer	42.82	133	eP	P	03 38 47.7	-1.0
BBSD	Serra de San D	43.00	136	eP	P	03 38 50.3	+0.2
SCHQ	Schefferville	44.28	19	P	P	03 38 59.5	-0.3
	comp=Z,31nm,0.6s,baz=212,slow=6.9,SNR=55						
FCC	Fort Churchill	44.34	357	P	P	03 39 00.1	-0.1
SALV	Santo Antonio	45.62	130	eP	P	03 39 09.9	-1.0

MURT	Porto Murtinho	48.15	138	*e*P	P	03 39 29.7	-0.6
AQDB	Aquidauana	48.61	135	P	P	03 39 33.1	-0.8
RPRD	Ribas do Rio P	50.01	133	*e*P	P	03 39 44.5	-0.1
YKAW1	Yellowknife Wh	50.95	346	IAmb	IAmb	03 39 53.3	
	comp=Z,6.8nm,1.2s						
YKA	Yellowknife Ar	50.99	346	P	P	03 39 51.5	+0.2
	comp=Z,1.9nm,0.8s,baz=151,slow=7.0,SNR=13						
YKA				pP	pP	03 40 37.4	-0.9
	comp=Z,2.0nm,0.8s,baz=146,slow=7.3,SNR=7.1						
YKA				sP	PcP	03 41 03.7	-0.4
	comp=Z,0.5nm,0.8s,baz=145,slow=7.3,SNR=1.7						
	comp=Z,1.9nm,0.8s						
YKAW3	Yellowknife Wh	51.05	346	IAmb	IAmb	03 40 19.5	
	comp=Z,22nm,1.9s						
BDFB	Brasilia	51.42	124	P	P	03 39 54.6	-0.7
	comp=Z,4.1nm,0.5s,baz=268,slow=7.1,SNR=7.2						
	comp=Z,4.1nm,0.5s						
CPUP	Villa Florida	51.70	141	P	P	03 39 56.4	-0.6
	comp=Z,1.1nm,0.9s,baz=154,slow=5.6,SNR=6.4						
CPUP				PcP	sP	03 41 07.2	-0.7
	comp=Z,0.3nm,0.4s,baz=315,slow=12,SNR=3.2						
	comp=Z,1.1nm,0.9s						
ITRB	Iturama	51.95	130	*e*P	P	03 39 58.9	-0.1
IPMB	Ipameri, GO	52.57	126	*e*P	P	03 40 02.9	-0.7
ITQB	Itaqui	54.60	144	IAmb	IAmb	03 40 19.2	
	comp=Z,19nm,1.0s						
FRTB	Fartura	54.78	133	*e*P	P	03 40 19.1	-0.4
ILON	Igloolik, Nuna	55.17	4	P	P	03 40 21.6	0.0
ILON				IAmb	IAmb	03 41 10.6	
	comp=Z,17nm,1.1s						
VAO	Valinhos	56.46	131	*e*P	P	03 40 30.6	-0.9
SPB	Sao Paulo	56.47	131	*e*P	P	03 40 31.2	-0.3
BSCB	Bom Sucesso	56.95	127	*e*P	P	03 40 35.2	+0.2
PLCA	Paso Flores	57.88	162	P	P	03 40 41.4	+0.3
	comp=Z,1.0nm,0.8s,baz=289,slow=7.6,SNR=1.8						
	comp=Z,1.0nm,0.8s						
RES	Resolute Bay	60.31	359	P	P	03 40 56.8	-0.4
ILAR	Eielson Array	63.08	336	P	P	03 41 15.8	-0.2
	comp=Z,0.8nm,0.9s,baz=122,slow=4.0,SNR=6.6						
ILAR				pP	pP	03 42 05.2	-0.3
	comp=Z,1.3nm,1.0s,baz=110,slow=7.3,SNR=7.1						
	comp=Z,0.8nm,0.9s						
SUMG	Summit	65.40	15	P	P	03 41 31.2	-0.1
SUMG				IAmb	IAmb	03 41 31.9	
	comp=Z,18nm,1.6s						
EVO	Evora	75.23	53	*e*S	SKiKP	03 51 29.3	-2.6
EVO				IAML		03 51 29.4	
EVO				IAML		03 51 29.5	
EVO				IAML		03 51 29.9	
EKA	Eskdalemuir Ar	76.69	36	P	P	03 42 37.4	-1.4
	comp=Z,2.3nm,0.7s,baz=267,slow=5.8,SNR=5.0						
	comp=Z,2.3nm,0.7s						
ESDC	Sonseca Array	78.20	52	P	P	03 42 46.4	-1.3
	comp=Z,1.9nm,0.7s,baz=289,slow=4.6,SNR=14						
	comp=Z,1.9nm,0.7s						
SPITS	Spitsbergen Ar	79.35	12	P	P	03 42 53.1	-0.1
	comp=Z,1.8nm,0.6s,baz=294,slow=1.4,SNR=2.0						
	comp=Z,1.8nm,0.6s						
NOA	NORSAR Array B	83.01	29	P	P	03 43 12.9	+0.3
	comp=Z,1.0nm,0.9s,baz=288,slow=5.1,SNR=2.6						
	comp=Z,1.0nm,0.9s						
HFS	Hagfors	84.45	29	P	P	03 43 19.4	-0.5
	comp=Z,3.5nm,0.9s,baz=258,slow=7.0,SNR=2.4						
	comp=Z,3.5nm,0.9s						
ARCES	ARCESS Array B	85.23	19	P	P	03 43 24.0	+0.4
	comp=Z,3.6nm,1.0s,baz=309,slow=2.9,SNR=2.5						
ARCES				pP	pP	03 44 16.2	-0.1
	comp=Z,2.3nm,0.8s,baz=284,slow=4.5,SNR=2.7						
	comp=Z,3.6nm,1.0s						
CLL	Collm	87.00	38	*i* P	P	03 43 32.5	-0.2
GERES	GERESS Array B	88.25	40	P	P	03 43 38.4	-0.4
	comp=Z,0.5nm,0.6s,baz=319,slow=3.9,SNR=3.7						
	comp=Z,0.5nm,0.6s						
TORD	Torodi Ar. Bea	88.72	77	P	P	03 43 38.8	-2.7
	comp=Z,0.2nm,0.5s,baz=288,slow=4.7,SNR=1.3						
CN2	Changchun	113.47	333	Pdif	Pdif	03 45 29.5	-2.8
HHC	Hu-ho-hao-te	121.37	341	*e*P	PKPdf	03 49 36.8	-2.9
NJ2	Nanjing	125.97	329	*e*P	PKPdf	03 49 49.4	+0.8
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WRA	Warramunga Arr	137.05	256	PKhKP	PKPpre	03 50 01.6	
	comp=Z,0.6nm,0.8s,baz=87,slow=3.7,SNR=8.0						
WRA				PKP	PKPdf	03 50 10.9	+1.1
	comp=Z,2.1nm,0.7s,baz=85,slow=1.8,SNR=20						
WRA				SKP		03 53 24.2	
	comp=Z,1.1nm,0.9s,baz=88,slow=2.6,SNR=6.5						
ASAR	Alice Springs	137.31	251	PKhKP	PKPpre	03 50 02.3	
	comp=Z,0.4nm,0.5s,baz=109,slow=3.6,SNR=5.8						
ASAR				PKP	PKPdf	03 50 10.9	+0.6
	comp=Z,1.0nm,0.7s,baz=92,slow=2.0,SNR=11						
ASAR				SKP		03 53 24.6	
	comp=Z,1.6nm,1.0s,baz=100,slow=3.9,SNR=6.9						
PZH	PanZhiHua	137.65	344	PKP	PKPdf	03 50 11.0	0.0
CMAR	Chiang Mai Arr	146.06	344	PKPbc	PKPdf	03 50 26.1	+0.1
	comp=Z,1.3nm,0.3s,baz=360,slow=2.7,SNR=1.2						

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*SDD **13** 04:13:12.7±1.1, 18°.21N×67°.41W, h127^{km}±9^{km}, MD3.2, ML2.3, MW2.9*

*NEIC **13** 04:13:12.5±0.4, 18°.24N±0°.08×67°.46W±0°.02, h116^{km}±5^{km}, ML2.4/24, Md3.0/15(RSPR), Error ellipse: s-maj=11.5km s-min=1.6km az=191.0*

*RSPR **13** 04:13:12.7, 18°.23N×67°.44W, h118^{km}, MD3.0/15*

*OSPL **13** 04:13:12.2±0.3, 18°.23N×67°.57W, h123^{km}±2^{km}, ML2.3*

ISC 13 04:13:13.1±1.9**, 18°.25N**±0°.09×**67°.45W**±0°.05**, h112^{km}**±10^{km}**, n61, σ0^{s}.45**/81**, 14C-11D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDE	Isla Desecheo	0.13	351	⇓*e*P	Pn	04 13 28.7	0.0
IDE	Isla Desecheo	0.13	351	*e*S	Sn	04 13 41.0	+0.6
PRSN	Puerto Rico Se	0.29	97	⇓*e*Pg	Pn	04 13 28.2	-0.9
PRSN				*e*Sg	Sn	04 13 40.6	-0.5
PRSN				IAML		04 13 43.1	
	comp=N,35nm,0.2s						
LSP	Las Mesas	0.36	103	⇑*e*P	Pn	04 13 29.0	-0.4
LSP	Las Mesas	0.36	103	*e*S	Sn	04 13 42.5	+0.8
AGPR	Aguadilla, PR	0.39	57	Pn	Pn	04 13 29.2	-0.4
AGPR				Sn	Sn	04 13 42.2	+0.3
AGPR				IAML		04 13 43.2	
	comp=E,86nm,1.0s						
AGPR				IAML		04 13 52.7	
	comp=N,89nm,2.5s						
AGPR	Aguadilla, PR	0.39	57	⇓*e*P	Pn	04 13 29.5	-0.1
AGPR	Aguadilla, PR	0.39	57	*e*S	Sn	04 13 42.5	+0.5
AGPR	Aguadilla, PR	0.39	57	*e*Pg	Pn	04 13 29.5	-0.1
AGPR				⇓*e*Sg	Sn	04 13 42.6	+0.7
AGPR				IAML		04 13 43.8	
	comp=N,66nm,0.6s						
AGPR	Aguadilla, PR	0.39	57	⇑*e*Pg	Pn	04 13 29.4	-0.1
AGPR				⇑*e*Sg	Sn	04 13 42.4	+0.5
AGPR				IAML		04 13 43.1	
	comp=E,55nm,1.2s						
AGPR				IAML		04 13 43.8	
	comp=N,66nm,0.6s						
AGPR	Aguadilla, PR	0.39	57	*i* P	Pn	04 13 29.4	-0.1
AGPR				*e*S	Sn	04 13 42.2	+0.3
AGPR				IAML		04 13 44.0	
	comp=Z,64nm,1.9s						
CRPR	Cabo Rojo, PR	0.41	127	Pn	Pn	04 13 29.4	-0.3
CRPR				Sn	Sn	04 13 42.2	+0.1
CRPR	Cabo Rojo, PR	0.41	127	⇓*e*P	Pn	04 13 29.4	-0.3
CRPR	Cabo Rojo, PR	0.41	127	*e*S	Sn	04 13 42.3	+0.1
CRPR	Cabo Rojo, PR	0.41	127	*e*Pg	Pn	04 13 29.2	-0.4
CRPR				*e*Sg	Sn	04 13 42.7	+0.6
CRPR				IAML		04 13 43.6	
	comp=N,44nm,1.1s						
CRPR	Cabo Rojo, PR	0.41	127	*e*Pg	Pn	04 13 29.2	-0.4
CRPR				*e*Sg	Sn	04 13 42.3	+0.2
CRPR				IAML		04 13 43.6	
	comp=N,44nm,1.1s						
CRPR				IAML		04 13 44.2	
	comp=E,35nm,0.8s						
CRPR	Cabo Rojo, PR	0.41	127	*i* P	Pn	04 13 29.4	-0.3
CRPR				*e*S	Sn	04 13 42.1	+0.1
CRPR				IAML		04 13 43.0	
	comp=Z,61nm,0.1s						
MLPR	Magueyes Islan	0.48	126	⇑*e*P	Pn	04 13 29.7	-0.4
MLPR	Magueyes Islan	0.48	126	*e*S	Sn	04 13 43.2	+0.3
MLPR	Magueyes Islan	0.48	126	⇓*e*Pg	Pn	04 13 28.5	-1.6
MLPR				*e*Sg	Sn	04 13 43.4	+0.5
MLPR				IAML		04 13 44.0	
	comp=N,14nm,0.2s						
MLPR	Magueyes Islan	0.48	126	⇓*e*Pg	Pn	04 13 29.7	-0.4
MLPR				⇑*e*Sg	Sn	04 13 43.2	+0.3
MLPR				IAML		04 13 43.6	
	comp=E,14nm,0.2s						
MLPR				IAML		04 13 44.0	
	comp=N,14nm,0.2s						
AOPR	Arecibo Observ	0.67	82	Pn	Pn	04 13 30.9	-0.6
AOPR				Sn	Sn	04 13 45.3	0.0
AOPR	Arecibo Observ	0.67	82	⇑*e*P	Pn	04 13 31.1	-0.4
AOPR	Arecibo Observ	0.67	82	*e*S	Sn	04 13 45.4	0.0
AOPR	Arecibo Observ	0.67	82	*e*Pg	Pn	04 13 31.3	-0.2
AOPR				*e*Sg	Sn	04 13 45.8	+0.4
AOPR				IAML		04 13 47.9	
	comp=N,193nm,0.3s						
AOPR	Arecibo Observ	0.67	82	*e*Pg	Pn	04 13 31.0	-0.4
AOPR				⇓*e*Sg	Sn	04 13 45.4	0.0
AOPR				IAML		04 13 46.9	
	comp=E,317nm,0.2s						
AOPR				IAML		04 13 47.9	
	comp=N,193nm,0.3s						
UUPR	Utuado, UPR, P	0.69	90	Pn	Pn	04 13 31.6	0.0
UUPR				Sn	Sn	04 13 45.7	+0.1
UUPR	Utuado, UPR, P	0.69	90	⇑*e*P	Pn	04 13 31.9	+0.2
UUPR	Utuado, UPR, P	0.69	90	*e*S	Sn	04 13 46.0	+0.3
OBIP	Obispado Ponce	0.83	104	Pn	Pn	04 13 32.5	-0.4
OBIP				Sn	Sn	04 13 48.1	+0.4
OBIP	Obispado Ponce	0.83	104	⇓*e*P	Pn	04 13 32.7	-0.1
OBIP	Obispado Ponce	0.83	104	*e*S	Sn	04 13 48.4	+0.7
CELP	Cerrillos	0.85	102	Pn	Pn	04 13 32.6	-0.4
CELP				IAML		04 13 49.1	
	comp=N,34nm,0.2s						
CELP	Cerrillos	0.85	102	⇑*e*P	Pn	04 13 32.8	-0.2
CELP	Cerrillos	0.85	102	*e*S	Sn	04 13 48.3	+0.2
CELP	Cerrillos	0.85	102	*e*Pg	Pn	04 13 33.1	+0.1
CELP				*e*Sg	Sn	04 13 48.4	+0.4
CELP				IAML		04 13 52.1	
	comp=N,30nm,0.2s						
CELP	Cerrillos	0.85	102	⇑*e*Pg	Pn	04 13 32.9	-0.2
CELP				⇓*e*Sg	Sn	04 13 48.3	+0.2
CELP				IAML		04 13 49.7	
	comp=E,34nm,0.2s						
CELP				IAML		04 13 52.1	
	comp=N,30nm,0.2s						
EMPR	Esperanza - Ma	0.90	76	Pn	Pn	04 13 32.9	-0.6
EMPR	Esperanza - Ma	0.90	76	⇑*e*P	Pn	04 13 33.1	-0.4
EMPR	Esperanza - Ma	0.90	76	*e*S	Sn	04 13 48.7	-0.2
ECPR	Experimental S	1.04	86	⇓*e*P	Pn	04 13 34.5	-0.4
ECPR	Experimental S	1.04	86	*e*S	Sn	04 13 51.0	-0.3
SJG	San Juan	1.25	96	Pn	Pn	04 13 36.7	-0.4
SJG				IAML		04 13 56.5	
	comp=N,24nm,0.5s						
SJG				IAML		04 13 57.8	
	comp=N,33nm,0.3s						
SJG	San Juan	1.25	96	*e*S	Sn	04 13 55.8	+0.5
SJG	San Juan	1.25	96	*e*Pg	Pn	04 13 37.5	+0.3
SJG				*e*Sg	Sn	04 13 55.7	+0.4
SJG	San Juan	1.25	96	*i* P	Pn	04 13 37.0	-0.1
SJG				*e*S	Sn	04 13 55.3	0.0
SJG				IAML		04 13 57.7	
	comp=Z,9.4nm,0.4s						
GCPR	Guaynabo City	1.30	87	Pn	Pn	04 13 37.2	-0.5
GCPR				IAML		04 13 56.4	
	comp=N,29nm,0.2s						
GCPR	Guaynabo City	1.30	87	⇑*e*P	Pn	04 13 37.2	-0.5
GCPR	Guaynabo City	1.30	87	*e*S	Sn	04 13 55.7	-0.7
IGPR	InterUniversit	1.31	102	Pn	Pn	04 13 37.3	-0.5
IGPR				IAML		04 13 59.9	
	comp=N,41nm,0.2s						
IGPR				IAML		04 14 00.6	
	comp=E,44nm,0.3s						
IGPR	InterUniversit	1.31	102	⇑*e*P	Pn	04 13 37.5	-0.4
IGPR	InterUniversit	1.31	102	*e*S	Sn	04 13 57.2	+0.6
PDPR	Patillas Dam,	1.38	100	Pn	Pn	04 13 38.5	-0.1
PDPR				IAML		04 13 59.5	
	comp=N,31nm,0.4s						
PDPR				IAML		04 13 59.6	
	comp=E,27nm,0.4s						
PDPR	Patillas Dam,	1.38	100	⇑*e*P	Pn	04 13 39.1	+0.5
PDPR	Patillas Dam,	1.38	100	*e*S	Sn	04 13 58.9	+0.9
HUMP	Col San Antoni	1.53	94	Pn	Pn	04 13 40.4	+0.1
HUMP				IAML		04 14 02.8	
	comp=N,55nm,0.2s						
HUMP				IAML		04 14 03.1	
	comp=E,63nm,0.2s						
HUMP	Col San Antoni	1.53	94	⇑*e*P	Pn	04 13 40.5	+0.1
HUMP	Col San Antoni	1.53	94	*e*S	Sn	04 14 01.5	+0.4
MIDR	Miches	1.68	296	*e*Pg	Pn	04 13 42.3	+0.1
MIDR				IAML		04 14 51.0	
	comp=N,63nm,2.8s						
DR12	Loma Pena Alta	1.91	286	Pn	Pn	04 13 44.4	-0.6
HATOM	Hato Mayor del	1.91	286	*e*Pg	Pn	04 13 44.9	-0.1
HATOM				IAML		04 14 16.7	
	comp=N,17nm,2.5s						

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*IDC **13** 04:21:03.3±0.9, 40°.83S×43°.82E, h0^{km}, mb3.9/8, mbtmp3.9/9, ML3.4/1, MS3.5/4, Error ellipse: s-maj=31.7km s-min=23.9km az=35.0*

*NEIC **13** 04:21:05.5±1.3, 40°.8S±0°.1×43°.5E±0°.1, h10^{km}±1^{km}, mb4.5/12, Error ellipse: s-maj=20.7km s-min=17.7km az=136.0*

ISC 13 04:21:04.4±0.6**, 40°.8S**±0°.1×**43°.6E**±0°.1**, h9^{km}, n29, σ1^{s}.25**/23**, mb4.1**/10**, MS3.7**/3**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRHM	Grahamstown, E	15.62	293	Pn	Pn	04 24 42.2	-2.6
FOMA	Nahampoana Res	15.99	11	Pn	Pn	04 24 47.9	-1.6
FOMA				IAmb	IAmb	04 24 58.7	
	comp=Z,51nm,1.2s						
BOSA	Boshof	19.28	303	P	Pn	04 25 32.4	+1.8
	comp=Z,0.1nm,0.3s,baz=247,slow=14,SNR=1.9						
BOSA				LR	LR	04 32 06.9	
	comp=Z,149nm,18.5s,baz=344,slow=34						
	comp=Z,7.4nm,1.2s						
LBTB	Lobatse	21.71	311	P	P	04 25 55.8	-0.1
LBTB	Lobatse	21.71	311	LR	LR	04 33 49.7	
	comp=Z,42nm,19.4s,baz=196,slow=35						
LPHEP	Lephephe	22.86	314	P	P	04 26 09.4	+1.2
KDWAN	Kaudwane	23.52	312	P	P	04 26 15.8	+0.9
KDWAN				IAmb	IAmb	04 26 40.4	
	comp=Z,21nm,1.4s						
LKGWB	Lokgwabe	25.02	305	P	P	04 26 26.4	-2.5
LSZ	Lusaka	28.70	328	LR	LR	04 37 36.5	
	comp=Z,195nm,19.3s,baz=186,slow=34						
SNAA	Sanae	38.50	202	P	P	04 28 27.2	+0.7
SNAA				IAmb	IAmb	04 28 57.6	
	comp=Z,5.6nm,1.3s						
SNAA	Sanae	38.50	202	P	P	04 28 26.8	+0.3
	comp=Z,1.2nm,0.8s,baz=87,slow=3.5,SNR=4.2						
	comp=Z,1.2nm,0.8s						
KAAM	Kaadhehdhoo	48.99	41	P	P	04 29 52.6	+1.1
QSPA	South Pole Qui	49.45	180	P	P	04 29 54.3	-0.3
QSPA				IAmb	IAmb	04 29 55.4	
	comp=Z,10nm,1.2s						
QSPA	South Pole Qui	49.45	180	P	P	04 29 53.9	-0.7
	comp=Z,4.6nm,1.0s,baz=253,slow=5.0,SNR=6.6						
	comp=Z,4.6nm,1.0s						
H01W2	Cape Leeuwin H	54.68	108	T	T	05 29 25.8	
	baz=241,slow=75,SNR=8.7						
H01W3	Cape Leeuwin H	54.69	108	T	T	05 29 26.4	
	baz=241,slow=75,SNR=9.9						
H01W1	Cape Leeuwin H	54.69	108	T	T	05 29 29.2	
	baz=241,slow=75,SNR=10						
VNDA	Vanda	56.19	167	P	P	04 30 44.6	+0.6
VNDA	Vanda	56.19	167	P	P	04 30 43.7	-0.3
	comp=Z,0.5nm,0.8s,baz=252,slow=7.4,SNR=2.4						
	comp=Z,0.5nm,0.8s						
SBA	Scott Base	56.81	168	P	P	04 30 49.2	+0.9
SBA				IAmb	IAmb	04 30 51.2	
	comp=Z,11nm,1.3s						
DBIC	Dimbokro	64.81	305	LR	LR	04 56 38.1	
	comp=Z,52nm,21.5s,baz=110,slow=33						
TORD	Torodi Ar. Bea	66.17	315	P	P	04 31 52.7	+0.3
TORD				IAmb	IAmb	04 32 07.2	
	comp=Z,2.3nm,1.4s						
TORD	Torodi Ar. Bea	66.17	315	P	P	04 31 53.8	+1.4
	comp=Z,0.5nm,0.8s,baz=147,slow=5.9,SNR=3.2						
	comp=Z,0.5nm,0.8s						
ASAR	Alice Springs	75.19	108	P	P	04 32 45.6	-1.9
	comp=Z,0.4nm,0.8s,baz=217,slow=8.7,SNR=4.6						
	comp=Z,0.4nm,0.8s						
STKA	Stephens Creek	75.43	119	P	P	04 32 48.8	+0.1
	comp=Z,1.6nm,0.6s,baz=219,slow=6.5,SNR=3.0						
	comp=Z,1.6nm,0.6s						
WRA	Warramunga Arr	77.82	106	P	P	04 33 02.3	-0.1
	comp=Z,0.8nm,0.8s,baz=220,slow=4.3,SNR=7.2						
	comp=Z,0.8nm,0.8s						
PLCA	Paso Flores	79.24	225	P	P	04 33 09.3	-0.7
PLCA	Paso Flores	79.24	225	P	P	04 33 10.8	+0.7
	comp=Z,1.5nm,0.8s,baz=106,slow=7.0,SNR=4.9						
	comp=Z,1.5nm,0.8s						
TXAR	Lajitas Array	151.02	257	PKPbc	PKPbc	04 40 58.3	+0.5
	comp=Z,0.9nm,0.8s,baz=83,slow=4.1,SNR=8.3						

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*NOU **13** 04:50:25.4, 37°.00S×179°.05W, h0^{km}, MLv4.3/7, East of North Island, N.Z.*

*WEL **13** 04:50:40.5±0.9, 37°S±6°×18°0E±°, h12^{km}, M3.6/25, ML3.9/28, MLv3.6/25, Error ellipse: s-maj=10.2km s-min=6.7km az=129.5, confirmed*

*IDC **13** 04:50:44.4±2.4, 35°.36S×179°.02E, h0^{km}, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=73.0km s-min=39.8km az=44.0*

ISC 13 04:50:38.6±2.5**, 37°.33S**±0°.07×**179°.86E**±0°.09**, h8^{km}**±13^{km}**, n89, σ0^{s}.79**/96**, mb3.5**/3**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	1.25	247	P	Pg	04 51 02.6	0.0
WMGZ				S	Sn	04 51 19.4	0.0
MXZ	Matakaoa Point	1.26	259	P	Pn	04 51 01.8	-0.7
MXZ	Matakaoa Point	1.26	259	P	Pn	04 51 01.6	-0.8
MXZ				S	Sb	04 51 18.1	-0.8
PUZ	Puketiti	1.47	239	P	Pn	04 51 05.7	+0.3
PUZ				S	Sb	04 51 25.6	+0.5
PKGZ	Pakihiroa	1.51	249	P	Pn	04 51 06.4	+0.4
HAZ	Te Kaha	1.71	255	P	Pn	04 51 09.0	+0.4
TWGZ	Tauwhareparae	1.71	240	P	Pn	04 51 09.3	+0.5
CNGZ	Carnagh Statio	1.74	228	P	Pb	04 51 10.8	0.0
RUGZ	Raukumara Rang	1.85	249	P	Pn	04 51 10.6	0.0
TKGZ	Te Karaka	1.94	235	P	Pn	04 51 12.1	+0.3
TKGZ				S	Sn	04 51 37.2	+0.8
MWZ	Matawai	2.10	241	P	Pn	04 51 14.0	-0.1
MWZ				S	Sn	04 51 40.5	0.0
RIGZ	Rimuhau	2.15	230	P	Pn	04 51 15.6	+0.8
RIGZ				S	Sn	04 51 42.1	+0.4
PRGZ	Paritu Road	2.23	224	P	Pn	04 51 16.5	+0.6
RAGZ	Rawiri	2.26	238	P	Pn	04 51 17.2	+0.9
WHRZ	Whale Island	2.35	256	P	Pn	04 51 18.7	+1.2
URZ	Urewera	2.37	246	P	Pn	04 51 18.1	+0.4
URZ	Urewera	2.37	246	P	Pn	04 51 18.2	+0.4
URZ				S	Sn	04 51 46.6	-0.3
MHGZ	Mahia Peninsul	2.38	220	P	Pn	04 51 18.6	+0.6
KNZ	Kokohu	2.42	225	P	Pn	04 51 18.5	+0.1
SNGZ	Shannon Statio	2.46	233	P	Pn	04 51 19.6	+0.6
SNGZ				S	Sn	04 51 49.4	+0.1
EDRZ	Edgecumbe	2.59	252	P	Pn	04 51 21.3	+0.4
MARZ	Manawahe	2.61	255	P	Pn	04 51 21.4	+0.3
OPRZ	Ohinepanea	2.68	258	P	Pn	04 51 21.7	-0.2
MUGZ	Murupara	2.70	244	P	Pn	04 51 22.5	+0.2
RAHZ	Arahi	2.70	233	P	Pn	04 51 23.0	+0.7
RAHZ				S	Sn	04 51 55.0	-0.2
WHHZ	Waihua	2.71	229	P	Pn	04 51 22.8	+0.4
WHHZ				S	Sn	04 51 55.6	+0.3
TARZ	Mount Tarawera	2.81	250	P	Pn	04 51 24.6	+0.8
MTHZ	Maungataniwha	2.83	237	P	Pn	04 51 24.3	+0.3
MTHZ				S	Sn	04 51 57.2	-1.2
MYRZ	Mayor Island	2.89	270	P	Pn	04 51 24.7	-0.2
KARZ	Kaharoa	2.95	255	P	Pn	04 51 25.5	-0.3
ARHZ	Aropaoanui	2.97	229	P	Pn	04 51 26.6	+0.6
PRRZ	Plateau Road	2.98	246	P	Pn	04 51 26.5	+0.3
NMHZ	Naumai	2.98	233	P	Pn	04 51 26.6	+0.3
CKHZ	Cape Kidnapper	3.19	222	P	Pn	04 51 28.8	-0.2
BKZ	Black Stump Fm	3.23	234	P	Pn	04 51 29.4	-0.1
BKZ	Black Stump Fm	3.23	234	P	Pn	04 51 29.5	-0.1
MCHZ	McNeill Hill	3.26	229	P	Pn	04 51 30.2	+0.2
KUZ	Kuaotunu	3.36	279	P	Pn	04 51 30.7	-0.7
KUZ	Kuaotunu	3.36	279	P	Pn	04 51 30.6	-0.7
KAHZ	Kahuranaki	3.40	223	P	Pn	04 51 31.6	-0.3
KWHZ	Kaweka Forest	3.42	231	P	Pn	04 51 31.7	-0.5
RITZ	Rihia Road	3.56	241	P	Pn	04 51 35.4	+1.3
KATZ	Kakaramea	3.67	242	P	Pn	04 51 36.9	+1.1
GRZ	Great Barrier	3.69	286	P	Pn	04 51 36.0	+0.1
TMVZ	Te Maari	3.73	240	P	Pn	04 51 36.4	-0.1
ETVZ	East Tongariro	3.73	240	P	Pn	04 51 36.4	-0.2
NTVZ	North Tongarir	3.74	241	P	Pn	04 51 36.9	+0.2
MKAZ	Moumakai	3.76	272	P	Pn	04 51 36.9	+0.1
KRVZ	Karewarewa	3.76	241	P	Pn	04 51 37.0	0.0
OTVZ	Oturere	3.78	240	P	Pn	04 51 37.2	-0.1
NNVZ	North Ngauruho	3.80	240	P	Pn	04 51 37.7	+0.1
SNVZ	South Ngauruho	3.81	240	P	Pn	04 51 37.6	-0.1
WTVZ	West Tongariro	3.81	241	P	Pn	04 51 39.4	+1.8
WIAZ	Waiheke Island	3.82	277	P	Pn	04 51 38.1	+0.4
WPHZ	Waipukurau	3.82	223	P	Pn	04 51 37.2	-0.5
NGZ	Ngauruhoe	3.83	240	P	Pn	04 51 37.9	0.0
TUVZ	Tukino	3.83	238	P	Pn	04 51 38.7	+0.7
MOVZ	Moawhango	3.84	236	P	Pn	04 51 38.5	+0.5
PNHZ	Pukenui	3.86	227	P	Pn	04 51 37.2	-1.0
WHVZ	Whangaehu Hut	3.89	239	P	Pn	04 51 39.3	+0.5
TWVZ	Taurewa	3.90	242	P	Pn	04 51 39.1	+0.3
FWVZ	Far West T-bar	3.90	239	P	Pn	04 51 39.5	+0.5
MAVZ	Matarangi	3.90	239	P	Pn	04 51 39.1	+0.1
WNVZ	Wahianoa	3.90	238	P	Pn	04 51 38.5	-0.5
TRVZ	Turoa	3.92	239	P	Pn	04 51 39.4	+0.2
MBAZ	Motutapu North	4.01	277	P	Pn	04 51 41.0	+0.7
ABAZ	Army Bay	4.09	279	P	Pn	04 51 42.0	+0.6
HIZ	Hauiti	4.13	252	P	Pn	04 51 42.4	+0.4
HIZ	Hauiti	4.13	252	P	Pn	04 51 43.0	+1.0
DVHZ	Dannevirke	4.14	223	P	Pn	04 51 40.7	-1.3
AWAZ	Awhitu Peninsu	4.17	272	P	Pn	04 51 43.5	+0.9
BFZ	Birch Farm	4.38	219	P	Pn	04 51 44.1	-1.2
BFZ	Birch Farm	4.38	219	P	Pn	04 51 44.1	-1.2
POWZ	Post Office Ro	4.42	225	P	Pn	04 51 45.5	-0.4
WAZ	Wanganui	4.53	236	P	Pn	04 51 48.0	+0.7
WCZ	Waipu Caves	4.65	286	P	Pn	04 51 49.6	+0.5
MRZ	Mangatainoka R	4.71	224	P	Pn	04 51 48.2	-1.8
HOWZ	Holdsworth Sta	4.91	222	P	Pn	04 51 50.8	-1.9
PKE	Pukeiti	4.99	246	P	Pn	04 51 55.2	+1.5
KHEZ	Kahui Hut	5.00	245	P	Pn	04 51 55.3	+1.3
BSWZ	Blackbirch Sta	6.37	225	P	Pn	04 52 12.9	+0.2
CTZ	Chatham Island	6.94	158	P	Pn	04 52 24.0	+3.5
ASAR	Alice Springs	41.49	276	P	P	04 58 26.1	-0.1
	0.3nm,0.4s,baz=116,slow=7.9,SNR=5.8						
	0.3nm,0.4s						
WRA	Warramunga Arr	43.10	281	P	P	04 58 38.2	-1.2
	0.4nm,0.4s,baz=121,slow=7.7,SNR=5.6						
	0.4nm,0.4s						
QSPA	South Pole Qui	52.80	180	P	P	05 00 15.5	+21
	1.2nm,1.0s,baz=54,slow=3.5,SNR=1.9						
	1.2nm,1.0s						
H03N3	Juan Fernandez	78.36	123	T	T	06 28 59.5	
	baz=235,slow=72,SNR=42						
H03N2	Juan Fernandez	78.37	123	T	T	06 28 55.0	
	baz=235,slow=72,SNR=33						
H03N1	Juan Fernandez	78.38	123	T	T	06 28 53.2	
	baz=235,slow=72,SNR=37						
FINES	FINESS Array B	150.83	334	PKPbc	PKiKP	05 10 32.4	+1.1
	2.0nm,0.8s,baz=148,slow=8.6,SNR=1.8						

IDC 13 05:08:36.7±4.6**, 2°.48S**×**99°.22E, h0^{km}, mb3.6**/4**, mbtmp3.6**/4**, Error ellipse: s-maj=183.0km s-min=32.0km az=54.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S2	Diego Garcia H	27.10	258	T	T	05 43 33.6	
	baz=79						
H08S3	Diego Garcia H	27.11	258	T	T	05 43 37.2	
	baz=79						
H08S1	Diego Carcia H	27.12	258	T	T	05 43 36.9	
	baz=79						
H01W3	Cape Leeuwin H	35.09	158	T	T	05 53 30.2	
	baz=341						
H01W2	Cape Leeuwin H	35.11	158	T	T	05 53 30.3	
	baz=341						
H01W1	Cape Leeuwin H	35.11	158	T	T	05 53 31.1	
	baz=341						
WRA	Warramunga Arr	38.43	119	P	P	05 16 00.8	+0.3
	0.4nm,0.7s,baz=294,slow=8.2,SNR=2.4						
	0.4nm,0.7s						
SONM	Songino Array	50.50	6	P	P	05 17 35.9	-0.8
	0.2nm,0.4s,baz=183,slow=7.9,SNR=1.2						
	0.2nm,0.4s						
MKAR	Makanchi Array	51.29	345	P	P	05 17 42.6	+0.1
	0.4nm,0.7s,baz=163,slow=6.0,SNR=3.7						
	0.4nm,0.7s						

ZALV	Zalesovo Beam	57.50	350	P	P	05 18 28.4	+0.8
	1.3nm,0.5s,baz=165,slow=6.0,SNR=4.6 1.3nm,0.5s						
H04N2	CROZET ISLANDS	59.95	216	T	T	06 24 33.8	
	baz=58						
H04N1	CROZET ISLANDS	59.96	216	T	T	06 24 29.9	
	baz=58						
H04N3	CROZET ISLANDS	59.97	216	T	T	06 24 29.4	
	baz=58						
TXAR	Lajitas Array	145.56	37	PKPbc	PKPdf	05 28 15.9	-2.0
	0.4nm,0.8s,baz=328,slow=4.6,SNR=3.2						

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*IDC **13** 05:15:35.7±2.9, 5°.47N×126°.61E, h132^{km}±21^{km}, mb3.4/6, mbtmp3.8/6, Error ellipse: s-maj=163.5km s-min=15.6km az=67.0*

*NEIC **13** 05:15:37.0±1.6, 5°.6N±0°.1×126°.4E±0°.1, h153^{km}±10^{km}, mb4.1/11, Error ellipse: s-maj=19.5km s-min=14.6km az=73.0*

ISC 13 05:15:36.4±0.7**, 5°.55N**±0°.07×**126°.5E**±0°.1**, h150**^{km}**, n22, σ1^{s}06**/25**, mb4.0**/12**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.77	328	Pn	Pn	05 16 09.2	+0.2
DAV	Davao City (W)	1.77	328	P	Pn	05 16 07.6	-1.3
	295nm,0.3s,baz=149,slow=12,SNR=2.6						
DAV				S	Sn	05 16 34.0	0.0
	496nm,0.4s,baz=193,slow=20,SNR=14						
TOLI2	Tolitoli	7.22	233		Pn	05 17 19.6	+0.1
YULB	Yu-li	18.44	345	P	P	05 19 40.5	0.0
YULB				IAmb	IAmb	05 19 51.7	
	comp=Z,6.6nm,1.0s						
KNRA	Kununurra	21.21	174	P	P	05 20 08.8	-1.6
KNRA				IAmb	IAmb	05 20 11.7	
	comp=Z,9.8nm,0.9s						
FITZ	Fitzroy Crossi	23.51	182	P	P	05 20 32.2	-0.7
WB0	Warramunga Arr	26.32	163	P	P	05 20 58.1	-0.3
WB0				IAmb	IAmb	05 21 13.5	
	comp=Z,3.6nm,1.0s						
WRA	Warramunga Arr	26.48	163	P	P	05 20 58.4	-1.4
WRA	Warramunga Arr	26.48	163	P	P	05 21 00.0	+0.2
	comp=Z,0.4nm,0.4s,baz=340,slow=10,SNR=16						
WRA				PcP	PcP	05 24 21.4	+0.3
	comp=Z,0.3nm,0.6s,baz=336,slow=2.4,SNR=1.6 comp=Z,0.4nm,0.4s						
WR8	Warramunga Arr	26.53	163	P	P	05 20 59.1	-1.3
WR8				IAmb	IAmb	05 21 15.0	
	comp=Z,5.0nm,1.1s						
MBWA	Marble Bar	27.36	194	P	P	05 21 06.2	-1.5
MBWA				IAmb	IAmb	05 21 25.7	
	comp=Z,10nm,1.1s						
ASAR	Alice Springs	29.92	166	P	P	05 21 30.2	-0.2
	comp=Z,0.7nm,0.4s,baz=346,slow=7.0,SNR=8.5						
ASAR				PcP	PcP	05 24 30.5	+0.9
	comp=Z,0.3nm,0.7s,baz=335,slow=2.2,SNR=1.6 comp=Z,0.7nm,0.4s						
MAJO	Matsushiro	32.66	18	P	P	05 21 53.3	-1.0
MAJO				IAmb	IAmb	05 21 59.0	
	comp=Z,5.1nm,1.1s						
BBOO	Buckleboo	39.21	167	P	P	05 22 50.6	+0.5
STKA	Stephens Creek	39.90	160	P	P	05 22 56.1	+0.3
STKA	Stephens Creek	39.90	160	P	P	05 22 56.3	+0.6
	comp=Z,2.0nm,0.6s,baz=352,slow=11,SNR=5.5 comp=Z,2.0nm,0.6s						
EVN	Everest	43.76	305	P	P	05 23 26.6	-1.4
EVN				IAmb	IAmb	05 23 29.5	
	comp=Z,2.4nm,0.5s						
SONM	Songino Array	45.52	341	P	P	05 23 42.9	+1.9
	comp=Z,0.3nm,0.4s,baz=134,slow=6.2,SNR=1.7 comp=Z,0.3nm,0.4s						
MKAR	Makanchi Array	55.95	325	P	P	05 24 58.6	-0.5
MKAR	Makanchi Array	55.95	325	P	P	05 25 01.1	+2.1
	comp=Z,0.2nm,0.4s,baz=120,slow=7.4,SNR=5.9 comp=Z,0.2nm,0.4s						
VNDA	Vanda	85.25	173	P	P	05 27 56.4	+0.8
VNDA	Vanda	85.25	173	P	P	05 27 56.5	+0.8
	comp=Z,0.4nm,0.5s,baz=106,slow=23,SNR=3.1 comp=Z,0.4nm,0.5s						

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*MEX **13** 05:17:22.2±1.0, 17°.12N×95°.09W, h118^{km}±10^{km}, MD4.2*

*GCG **13** 05:17:24.9±3.9, 16°.49N×94°.91W, h119^{km}±76^{km}, MD4.4, ML3.4*

ISC 13 05:17:18.2±1.3**, 17°.15N**±0°.04×**95°.15W**±0°.02**, h147**^{km}±12^{km}**, n45, σ2^{s}67**/83**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUIG	Tuzandepetl	1.12	38	*e*P	Pn	05 17 44.5	+0.8
TUIG				*e*S	Sn	05 18 00.2	-3.1
OXLC	Oaxaca	1.49	267	*e*P	Pn	05 17 49.4	+1.8
OXLC				*e*S	Sn	05 18 10.2	+0.2
OXBJ	Oaxaca	1.51	267	*i* P	Pn	05 17 49.1	+1.3
OXBJ				*e*S	Sn	05 18 10.0	-0.4
VHO	Vista Hermosa	1.52	267	*e*P	Pn	05 17 49.8	+1.9
VHO				*e*S	Sn	05 18 10.9	+0.3
HUIG	Huatulco	1.65	214	*e*P	Pn	05 17 49.5	+0.3
HUIG				*e*S	Sn	05 18 12.2	-0.7
HUIG	Huatulco	1.65	214	*i* P	Pn	05 17 49.5	+0.3
HUIG				*i* S	Sn	05 18 11.8	-1.1
HUIG				IAML		05 18 13.1	
	comp=E,274nm,0.2s						
PANG	Puerto Angel	1.94	221	*e*P	Pn	05 17 52.6	+0.1
PANG				*e*S	Sn	05 18 18.2	-0.6
TGIG		1.98	100	*e*P	Pn	05 17 54.2	+1.4
TGIG				*e*S	Sn	05 18 18.2	-1.4
TGIG		1.98	100	*i* P	Pn	05 17 54.9	+2.0
TGIG				*i* S	Sn	05 18 19.3	-0.3
TGIG				IAML		05 18 21.2	
	comp=N,466nm,0.2s						
TGBT	Tuxtla Gutierr	2.01	100	*e*P	Pn	05 17 55.2	+2.1
TGBT				*e*S	Sn	05 18 16.4	-3.6
TOIG	Toxpalan	2.06	298	*e*P	Pn	05 17 55.9	+2.0
TOIG				*e*S	Sn	05 18 19.0	-2.3
PEIG	Puerto Escondi	2.23	239	*i* P	Pn	05 17 56.0	+0.1
PEIG				*e*S	Sn	05 18 24.6	-0.3
VHSA	Villahermosa	2.27	68	*e*S	Sn	05 18 25.9	+0.3
YOIG	Yosondua	2.31	263	*e*P	Pn	05 17 58.9	+1.7
YOIG				*e*S	Sn	05 18 24.8	-2.2
PCIG		2.34	127	*e*P	Pn	05 17 58.2	+1.0
PCIG				*e*S	Sn	05 18 25.2	-2.1
TPIG	Tehuac#an	2.46	301	*e*P	Pn	05 18 01.3	+2.5
TPIG				*e*S	Sn	05 18 25.2	-4.9
TXIG	Tlaxiaco	2.50	273	*i* P	Pn	05 18 01.9	+2.4
TXIG				*e*S	Sn	05 18 30.6	-0.6
HLIG	Huajuapan de L	2.62	285	*i* P	Pn	05 18 03.5	+2.7
HLIG				*i* S	Sn	05 18 33.2	-0.5
FTIG	Fresnillo de T	2.94	285	*e*P	Pn	05 18 07.8	+3.0
FTIG				*e*S	Sn	05 18 39.9	-1.0
PNIG	Pinotepa	2.95	256	*e*P	Pn	05 18 05.5	+0.7
PNIG				*e*S	Sn	05 18 39.0	-1.9
CCIG	Comitan	3.01	106	*e*P	Pn	05 18 08.7	+2.9
CCIG				*e*S	Sn	05 18 41.5	-1.1
CCIG	Comitan	3.01	106	*i* P	Pn	05 18 09.2	+3.4
CCIG				*e*S	Sn	05 18 38.8	-3.7
CCIG				IAML		05 18 48.0	
	comp=N,138nm,0.5s						
TLIG	Tlapa	3.29	278	*e*P	Pn	05 18 12.0	+2.7
TLIG				*e*S	Sn	05 18 47.3	-1.5
MGIG	Malinaltepec	3.33	272	*e*P	Pn	05 18 12.1	+2.2
MGIG				*e*S	Sn	05 18 45.4	-4.4
PATR	El Naranjo	3.46	125	*e*P	Pn	05 18 14.9	+3.4
PATR				*e*S	Sn	05 18 47.0	-5.8
PAVE	Pavencul	3.46	124	*e*P	Pn	05 18 15.1	+3.6
PAVE				*e*S	Sn	05 18 47.4	-5.4
THIG		3.56	128	*e*S	Sn	05 18 54.3	-0.5
PBCV	Popocatepetl	3.72	300	*e*P	Pn	05 18 20.7	+5.6
PBCV				*e*S	Sn	05 18 55.8	-3.3
CXUV	Coxquihui	3.79	323	*e*P	Pn	05 18 18.0	+2.3
CXUV				*e*S	Sn	05 18 56.0	-4.4
PBXN	Popocatepetl	3.81	300	*e*P	Pn	05 18 17.8	+1.4
PBXN				*e*S	Sn	05 18 59.8	-1.8
PPM	Popocatepetl	3.82	301	*e*P	Pn	05 18 21.2	+4.7
PPM				*e*S	Sn	05 19 03.9	+2.3
CRIG	Cruz Grande	3.83	264	*e*P	Pn	05 18 17.1	+1.0
CRIG				*e*S	Sn	05 18 59.9	-1.2
HUEH	Huehuetenango	3.95	117	*e*P	Pn	05 18 20.7	+2.7
HUEH				*e*S	Sn	05 19 04.9	+0.7
YAIG	Yautepec	4.10	295	*e*P	Pn	05 18 22.8	+3.0
YAIG				*e*S	Sn	05 19 04.5	-3.2
SCIG	Sabancuy	4.18	64	*e*P	Pn	05 18 22.4	+1.7
SCIG				*e*S	Sn	05 19 06.7	-2.7
RTAL	Retalhuleu	4.23	128	*e*P	Pn	05 18 26.6	+5.2
RTAL				*e*S	Sn	05 19 15.7	+5.2
DAIG	Los Arroyos	4.31	269	*e*P	Pn	05 18 21.8	-0.6
DAIG				*e*S	Sn	05 19 10.4	-1.9
PLIG	Platanillo	4.33	287	*e*P	Pn	05 18 26.5	+3.7
PLIG				*e*S	Sn	05 19 08.1	-4.9
MEIG	Mezcala	4.33	281	*e*P	Pn	05 18 25.6	+2.8
MEIG				*e*S	Sn	05 19 11.6	-1.5
CAIG	El Cayaco	4.89	270	*e*P	Pn	05 18 31.9	+1.7
CAIG				*e*S	Sn	05 19 19.9	-6.3
PETF	Flores	5.06	92	*e*P	Pn	05 18 32.5	+0.2
PETF				*e*S	Sn	05 19 27.2	-3.0
ARIG	Puente Sto Nin	5.08	284	*e*P	Pn	05 18 36.6	+3.9
ARIG				*e*S	Sn	05 19 26.9	-3.8
ZIIG	Zihuatanejo	6.05	275	*e*P	Pn	05 18 48.6	+3.1
JRQG	Juriquilla Cam	6.13	306	*e*P	Pn	05 18 48.3	+1.4
IZABA	Izabal, Puerto	6.46	102	*e*P	Pn	05 18 51.9	+0.9

IDC 13 05:44:00.3±2.0**, 0°.55N**×**124°.94E, h0**^{km}**, mb3.2**/3**, mbtmp3.2**/3**, Error ellipse: s-maj=184.6km s-min=28.4km az=64.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.35	156	P	P	05 48 59.0	-1.1
	0.3nm,0.5s,baz=334,slow=10,SNR=4.7 0.3nm,0.5s						
ASAR	Alice Springs	25.59	161	P	P	05 49 32.2	+0.7
	0.4nm,0.6s,baz=340,slow=7.3,SNR=7.0 0.4nm,0.6s						
MKAR	Makanchi Array	59.19	327	P	P	05 54 03.2	-0.1
	0.2nm,0.6s,baz=140,slow=7.0,SNR=2.3 0.2nm,0.6s						

NNC 13 05:44:12.5±9.9**, 37°.36N**×**71°.69E, h0**^{km}**, mb3.7, mpv3.4, 3C-2D, Error ellipse: s-maj=79.6km s-min=66.5km az=151.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.69	21	⇓P	Pn	05 45 39.1	+0.7
	1.2nm,0.7s						
AAK				⇑S	Sn	05 46 46.8	+2.2
	4.0nm,0.8s						
KK31	Karatay Array	5.81	351	⇑P	Pn	05 45 38.8	-1.1
	3.0nm,0.2s,baz=162,slow=11,SNR=39						
KK31				⇓S	Sn	05 46 47.7	+0.5
	5.6nm,0.3s,baz=160,slow=16						
AB31	Akbulak array	14.62	328	⇑P	Pn	05 47 40.1	-0.4
	0.2nm,0.3s,baz=146,slow=12,SNR=17						

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*IDC **13** 05:47:23.9±7.2, 32°.16N×142°.04E, h0^{km}, mb3.2/2, mbtmp3.2/3, ML2.7/1, MS3.7/1, Error ellipse: s-maj=260.1km s-min=27.6km az=68.0*

*JMA **13** 05:47:24.6±0.4, 32°N±2°×14°3E±°, h39^{km}, MV3.9/22, FAR E OFF IZU ISLANDS*

ISC 13 05:47:27.5±1.5**, 32°.48N**±0°.07×**142°.6E**±0°.2**, h52**^{km}**, n15, σ1^{s}69**/22**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	2.38	286	*e*S	Sn	05 48 30.9	-1.2
BSO1	Boso 1	2.53	329	*e*P	Pn	05 48 04.7	-0.9
BSO1				*e*S	Sn	05 48 35.3	+0.4
BSO3	Boso 3	2.87	324	*e*P	Pn	05 48 10.0	-0.5
BSO3				*e*S	Sn	05 48 43.8	+0.1
BSO4	Boso 4	3.10	324	*e*P	Pn	05 48 13.8	0.0
BSO4				*e*S	Sn	05 48 50.5	+0.8
JOD2	Odawara 2	4.00	315	*e*P	Pn	05 48 25.7	-0.5
JOD2				*e*S	Sn	05 49 09.1	-2.7
JHO	Hitachi	4.43	339	*e*P	Pn	05 48 30.5	-1.7
JYN	Shimob	4.48	313	*e*P	Pn	05 48 33.0	+0.1
JYN				*e*S	Sn	05 49 23.7	-0.2
JRY	Ryogami san	4.64	320	*e*S	Sn	05 49 26.6	-1.0
JAG	Ashikaga	4.69	328	*e*P	Pn	05 48 35.6	-0.2
JAG				*e*S	Sn	05 49 27.1	-1.7
CBIJ	Chichi jima	5.38	183	*e*P	Pn	05 48 43.9	-1.3
CBIJ				*e*S	Sn	05 49 42.2	-3.5
JOTO	OTAMA OYAMA	5.38	341	*e*S	Sn	05 49 42.2	-3.7
MJAR	Matsushiro Arr	5.41	320	Pn	Pn	05 48 44.9	-0.7
	0.2nm,0.3s,baz=147,slow=11,SNR=4.9						
MJAR				Sn	Sn	05 49 47.6	+1.2
	0.4nm,0.3s,baz=193,slow=30,SNR=6.0 1.9nm,0.4s						
MKAR	Makanchi Array	47.43	306	P	P	05 55 59.4	+2.6
	0.2nm,0.6s,baz=93,slow=9.4,SNR=1.7 0.2nm,0.6s						
WRA	Warramunga Arr	52.72	190	P	P	05 56 37.3	+0.3
	0.2nm,0.5s,baz=8.5,slow=7.5,SNR=5.4 0.2nm,0.5s						
FITZ	Fitzroy Crossi	52.83	200	LR	LR	06 19 43.3	
	comp=Z,62nm,18.4s,baz=306,slow=37						

IDC 13 05:53:45.9±2.6**, 6°.32S**×**130°.12E, h0**^{km}**, mb3.3**/1**, mbtmp3.1**/3**, ML3.1**/2**, Error ellipse: s-maj=149.0km s-min=34.1km az=70.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.15	164	Pn	Pn	05 57 07.3	-0.4
	0.1nm,0.3s,baz=347,slow=13,SNR=6.0						
WRA				Sn	Sn	05 59 31.6	-14
	0.2nm,0.3s,baz=332,slow=23,SNR=6.2 0.1nm,0.4s						
ASAR	Alice Springs	17.62	168	P	Pn	05 57 53.4	+0.3
	0.1nm,0.3s,baz=344,slow=9.4,SNR=1.4 0.3nm,0.8s						
MKAR	Makanchi Array	67.73	327	P	P	06 04 45.3	0.0
	0.2nm,0.6s,baz=127,slow=6.3,SNR=2.2 0.2nm,0.6s						

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*IDC **13** 05:54:35.0±3.8, 54°.29N×87°.59E, h0^{km}, mbtmp2.6/2, ML2.4/2, Error ellipse: s-maj=31.9km s-min=20.7km az=43.0*

ASRS 13 05:54:38.0±1.2**, 54°.16N**×**87°.23E, h0**^{km}**, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.44	263	I	I	06 03 54.6	
	baz=80,slow=316,SNR=4.0						
ZALV	Zalesovo Beam	1.44	262	Pg	Pn	05 55 03.8	-1.5
	0.9nm,0.3s,baz=76,slow=15,SNR=10						
ZALV				Lg	Lg	05 55 28.5	
	1.4nm,0.3s,baz=76,slow=33,SNR=3.9						
KURBB	Kurchatov Arra	6.39	240	Pn	Pn	05 56 14.6	+1.2
	0.1nm,0.3s,baz=56,slow=13,SNR=2.2 0.2nm,0.3s						
MKAR	Makanchi Array	8.02	205	Pn	Pn	05 56 36.8	+1.1
	0.1nm,0.3s,baz=24,slow=14,SNR=1.4						
MKAR				Lg	Lg	05 58 58.3	
	0.1nm,0.3s,baz=30,slow=32,SNR=2.9 0.1nm,0.3s						

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*TEH **13** 06:02:31.7, 34°.48N×45°.64E, h10^{km}±93^{km}*

*ISN **13** 06:02:37.0±1.6, 34°.51N×45°.43E, h10^{km}, ML2.5*

ISC 13 06:02:32.4±1.2**, 34°.5N**±0°.1×**45°.62E**±0°.08**, h18**^{km}**, n7, σ1^{s}88**/7**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KGS1	Ghasr-e-Shirin	0.05	323	Pg	Pg	06 02 33.9	-1.9
GLG1	Gilan-e-Gharb	0.42	146	Pg	Pg	06 02 40.3	-0.8
IDHR	Dehrash	0.67	70	Pg	Pb	06 02 44.4	-1.3
IGHG	Ghaleghazi	0.79	100	Pg	Pb	06 02 47.2	-0.6
ILIN	Lien	1.19	67	Pg	Pn	06 02 54.9	+0.5
IKRK	Kirkuk	1.41	312	*e*Pg	Pn	06 02 59.0	+1.8
	baz=135						
IKRK				*e*Sg	Sg	06 03 18.0	+0.1
IKRK				AML	AML	06 03 22.7	
	comp=N,13nm,1.0s						
SNQR	Sonqor, Kerman	1.70	76	Pg	Pn	06 03 03.9	+2.4

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*TRN **13** 06:04:51.5, 10°.81N×62°.41W, h29^{km}, MD3.2, North of the Paria peninsula.*

*FUNV **13** 06:04:52.2, 10°.88N×62°.35W, h74^{km}, MW3.3*

ISC 13 06:04:50.4±1.2**, 10°.78N**±0°.07×**62°.41W**±0°.04**, h89**^{km}**, n9, σ1^{s}77**/16**, 1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRN	Trinidad (W)	1.00	98	*e*P	Pn	06 05 10.4	+0.4
TRN				*e*S	Sn	06 05 23.1	-1.6
TBH	Brigand Hill	1.35	103	*e*P	Pn	06 05 15.2	+0.9
TBH				*e*S	Sn	06 05 31.8	-0.5
GRGR	Grenville	1.53	29	*e*P	Pn	06 05 17.0	+0.4
GRGR				*e*S	Sn	06 05 35.8	-0.5
GCMP	Grenada, Carri	1.95	30	*e*P	Pn	06 05 22.1	+0.1
GCMP				*e*S	Sn	06 05 46.1	+0.2
TACV	Tcata	4.59	262	*e*P	Pn	06 05 59.6	+2.1
TACV				*e*S	Sn	06 06 47.4	-2.2
BENV	Beln	5.17	261	*e*P	Pn	06 06 07.1	+1.6
BENV				⇓*e*S	Sn	06 07 00.9	-3.1
CACV	CAICARA DEL OR	5.18	232	*e*P	Pn	06 06 01.1	-4.5
CACV				*e*S	Sn	06 06 53.4	-11
BAUV	El Baul	5.84	252	*e*P	Pn	06 06 15.6	+1.0
BAUV				*e*S	Sn	06 07 17.8	-2.4
BAUV	El Baul	5.84	252	*e*P	Pn	06 06 17.4	+2.8
BAUV				*e*S	Sn	06 07 19.4	-0.8

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*AFAD **13** 06:12:10.4, 35°.97N×36°.05E, h7^{km}±5^{km}, ML2.3*

*ISK **13** 06:12:11.9, 35°.90N×36°.11E, h15^{km}, ML2.1/13*

*GRAL **13** 06:12:13.7±0.4, 35°.78N×36°.24E, h8^{km}±8^{km}, MD3.0*

ISC 13 06:12:09.2±1.2**, 35°.86N**±0°.02×**36°.03E**±0°.03**, h9**^{km}±11^{km}**, n26, σ0^{s}96**/40**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAHT	Tahtakopru-Hat	0.53	13	Pg	Pn	06 12 22.0	-1.1
TAHT				Sg	Sb	06 12 29.3	+0.7
HASA	Hatay-Hassa-Ha	0.97	22	P	Pb	06 12 27.6	-0.6
HASA				S	Sn	06 12 42.3	-0.7
HASA				*i* IAML		06 12 43.0	
	comp=N,181nm,0.5s						
HASA				*i* IAML		06 12 46.0	
	comp=E,185nm,0.3s						
CEYT	Ceyhan	1.18	349	Pn	Pg	06 12 34.0	+2.2
CEYT				Sn	Sn	06 12 50.1	+2.1
KUZU	Kuzuini	1.25	42	P	Pn	06 12 32.5	-0.4
KUZU				S	Sb	06 12 48.8	-0.3
KUZU				*i* IAML		06 12 49.0	
	comp=E,309nm,0.3s						
KUZU				*i* IAML		06 12 52.0	
	comp=N,239nm,0.3s						
BEIL	Beino	1.32	175	*e*P	Pg	06 12 35.2	+0.7
BEIL				*e*S	Sb	06 12 51.0	-0.1
KAMA	Osmaniye	1.42	21	P	Pn	06 12 34.1	-1.3
KAMA				*i* IAML		06 12 51.0	
	comp=N,19nm,0.9s						
KAMA				*i* IAML		06 12 51.0	
	comp=E,27nm,1.3s						
KAMA				S	Sn	06 12 52.9	-1.4
HWQ	Hawqa	1.57	183	*e*P	Pg	06 12 40.1	+0.6
HWQ				*e*S	Sb	06 12 59.4	+0.7
MERS	Mersin	1.58	310	Pn	Pg	06 12 40.7	+1.1
KARA	Karaisali	1.61	331	Pn	Pg	06 12 40.5	+0.4
GAZ	Gaziantep	1.62	36	Pn	Pb	06 12 39.8	+0.4
GAZ				Sn	Sb	06 12 59.9	-0.1
KOZT	Kozan	1.63	354	Pn	Pg	06 12 40.5	0.0
FKH	Fakeheh	1.64	169	*e*P	Pb	06 12 40.1	+0.5
FKH				*e*S	Sn	06 13 00.1	+0.5
ANDN	Andirin	1.74	8	P	Pn	06 12 39.0	-0.7
ANDN				S	Sg	06 13 04.3	-0.9
NZIP	Nizip/Gaziante	1.78	48	P	Pb	06 12 41.5	-0.6
NZIP				S	Sn	06 13 02.7	-0.3
NZIP				*i* IAML		06 13 05.0	
	comp=N,47nm,0.3s						
NZIP				*i* IAML		06 13 09.0	
	comp=E,66nm,0.4s						
KMRS	Kahramanmaras	1.79	23	Pn	Pb	06 12 42.4	+0.2
GZT	Gaziantep	1.94	39	P	Pb	06 12 45.5	+0.7
GZT				S	Sg	06 13 10.9	-0.7
GZT				*i* IAML		06 13 15.0	
	comp=E,34nm,0.7s						
GZT				*i* IAML		06 13 16.0	
	comp=N,30nm,0.3s						
IKL	Isikli	1.94	282	Pn	Pg	06 12 45.9	-0.5
KEBE	Keben-Mersin	1.97	288	Pn	Pg	06 12 46.4	-0.6
BHL	Bhannes	1.97	189	*e*P	Pb	06 12 45.7	+0.4
CMRD	Camardi-Nigde	1.99	335	Pn	Pb	06 12 45.9	+0.2
CMRD				Sn	Sb	06 13 10.5	-0.1
QRWL	Qaraoun	2.32	187	*e*P	Pb	06 12 50.5	-0.8
BERE	Bereket-Mersin	2.33	283	Pn	Pb	06 12 51.2	-0.3
AKCA	Adyaman/G¶l	2.35	34	P	Pg	06 12 53.7	-0.5
AKCA				S	Sb	06 13 22.3	+1.4
RCY	Rachaya	2.36	184	*e*P	Pb	06 12 50.7	-1.3
TEKE	Tekeli-Mersin	2.38	278	Pn	Pb	06 12 52.2	-0.1
DARE	Darende-Malaty	2.95	23	Pn	Pn	06 12 58.9	+2.5

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*NEIC **13** 06:14:24.3±0.8, 20°.3S±0°.1×68°.01E±0°.09, h10^{km}±1^{km}, mb4.7/17, Error ellipse: s-maj=23.0km s-min=4.6km az=217.0*

*IDC **13** 06:14:25.5±0.7, 20°.21S×67°.98E, h0^{km}, mb4.1/14, mbtmp4.1/14, MS3.6/26, Error ellipse: s-maj=26.6km s-min=16.9km az=79.0*

ISC 13 06:14:25.2±0.6**, 20°.2S**±0°.1×**68°.1E**±0°.1**, h10**^{km}**, n62, σ1^{s}91**/36**, mb4.4**/22**, MS3.7**/26**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	13.19	19	T	T	06 31 01.5	
	baz=199,slow=76,SNR=164						
H08S2	Diego Garcia H	13.20	19	T	T	06 31 04.0	
	baz=199,slow=76,SNR=96						
H08S3	Diego Garcia H	13.21	19	T	T	06 30 58.2	
	baz=199,slow=76,SNR=119						
ABPO	Ambohimpanom	19.69	270	P	P	06 18 52.2	-2.7
MSEY	Mahe Island	19.72	320	P	P	06 18 53.5	-1.6
MSEY				IAmb	IAmb	06 19 07.0	
	comp=Z,67nm,1.1s						
H04N2	CROZET ISLANDS	29.14	204	T	T	06 51 06.6	
	baz=33,slow=75,SNR=499						
H04N1	CROZET ISLANDS	29.15	204	T	T	06 50 53.9	
	baz=33,slow=75,SNR=535						
H04N3	CROZET ISLANDS	29.16	204	T	T	06 50 58.2	
	baz=33,slow=75,SNR=463						
PALK	Pallekele	29.99	26	LR	LR	06 30 26.9	
	comp=Z,145nm,20.6s,baz=203,slow=32						
RPSI	Rantau Prapat	37.86	57	P	P	06 21 42.0	-0.5
RPSI				IAmb	IAmb	06 22 10.5	
	comp=Z,12nm,1.6s						
LSZ	Lusaka	38.25	271	LR	LR	06 35 36.2	
	comp=Z,63nm,19.3s,baz=137,slow=33						
LBTB	Lobatse	39.40	255	LR	LR	06 34 44.2	
	comp=Z,98nm,18.2s,baz=82,slow=31						
BOSA	Boshof	39.72	249	P	P	06 21 55.8	-2.5
BOSA				IAmb	IAmb	06 22 24.3	
	comp=Z,25nm,1.6s						
BOSA	Boshof	39.72	249	LR	LR	06 34 01.1	
	comp=Z,51nm,20.9s,baz=114,slow=30						
PBA	Port Blair	39.89	40	P	P	06 21 58.6	-0.8
H01W2	Cape Leeuwin H	43.00	120	T	T	07 08 22.1	
	baz=279,slow=76						
H01W3	Cape Leeuwin H	43.00	120	T	T	07 08 19.7	
	baz=279,slow=76						
H01W1	Cape Leeuwin H	43.01	120	T	T	07 08 22.1	
	baz=279,slow=76						
NWAO	Narrogin (SRO)	45.38	117	LR	LR	06 37 56.4	
	comp=Z,57nm,19.0s,baz=38,slow=31						
MAW	Mawson	47.50	183	LR	LR	06 39 57.1	
	comp=Z,73nm,19.6s,baz=6.5,slow=32						
BRDH	Bariadhala	48.43	30	LR	LR	06 43 28.2	
	comp=Z,108nm,19.1s,baz=150,slow=36						
CMAR	Chiang Mai Arr	48.91	40	P	P	06 23 11.2	-0.4
CMAR	Chiang Mai Arr	48.91	40	P	P	06 23 14.2	+2.6
	comp=Z,3.5nm,0.3s,baz=220,slow=7.5,SNR=13						
CMAR				LR	LR	06 40 20.8	
	comp=Z,72nm,21.1s,baz=225,slow=32 comp=Z,3.5nm,0.3s						
FITZ	Fitzroy Crossi	54.17	98	P	P	06 23 49.2	-1.9
FITZ	Fitzroy Crossi	54.17	98	P	P	06 23 53.8	+2.6
	comp=Z,3.0nm,0.7s,baz=213,slow=7.5,SNR=5.1 comp=Z,3.0nm,0.7s						
SOEI	Soe	55.03	88	P	P	06 23 54.7	-2.9
MYLDM	Lahad Datu	55.57	69	P	P	06 24 00.2	-1.1
SIMJ	Simiganj	58.56	1	P	P	06 24 21.6	-0.5
SIMJ				IAmb	IAmb	06 24 37.6	
	comp=Z,8.0nm,1.6s						

ASAR	Alice Springs	60.67	106	P	P	06 24 35.5	-1.5
ASAR	Alice Springs	60.67	106	P	P	06 24 39.4	+2.4
	comp=Z,2.4nm,0.8s,baz=258,slow=6.2,SNR=14						
ASAR				LR	LR	06 47 35.8	
	comp=Z,76nm,19.9s,baz=272,slow=33						
	comp=Z,2.4nm,0.8s						
WRA	Warramunga Arr	61.82	102	P	P	06 24 43.0	-1.8
WRA	Warramunga Arr	61.82	102	P	P	06 24 47.0	+2.2
	comp=Z,2.5nm,0.8s,baz=258,slow=6.0,SNR=11						
	comp=Z,2.5nm,0.8s						
WRAB	Tennant Creek	61.83	102	P	P	06 24 44.1	-0.9
WRAB				IAmb	IAmb	06 24 49.7	
	comp=Z,9.0nm,1.2s						
WR8	Warramunga Arr	61.96	102	P	P	06 24 44.8	-1.1
WR8				IAmb	IAmb	06 24 52.6	
	comp=Z,18nm,1.6s						
AAK	Ala-Archa	62.81	5	LR	LR	06 50 06.8	
	comp=Z,51nm,18.4s,baz=204,slow=34						
KKAR	Karatay Array	63.03	2	P	P	06 24 51.8	-0.6
GNI	Garni	63.87	340	LR	LR	06 51 20.4	
	comp=Z,34nm,18.9s,baz=160,slow=35						
SNAA	Sanae	64.99	199	P	P	06 25 06.7	+1.6
	comp=Z,1.3nm,0.9s,baz=128,slow=3.6,SNR=3.9						
SNAA				LR	LR	06 50 32.2	
	comp=Z,42nm,18.1s,baz=76,slow=33						
	comp=Z,1.3nm,0.9s						
STKA	Stephens Creek	65.96	117	LR	LR	06 48 58.6	
	comp=Z,74nm,21.7s,baz=214,slow=31						
BRTR	Keskin Array B	67.75	332	P	P	06 25 24.8	+1.7
	comp=Z,1.2nm,1.0s,baz=153,slow=3.6,SNR=4.5						
	comp=Z,1.2nm,1.0s						
MK31	Makanchi Array	67.91	10	P	P	06 25 22.5	-1.4
MK31				IAmb	IAmb	06 25 33.4	
	comp=Z,4.1nm,1.3s						
MKAR	Makanchi Array	67.91	10	P	P	06 25 23.4	-0.5
MKAR	Makanchi Array	67.91	10	P	P	06 25 26.7	+2.8
	comp=Z,0.7nm,0.6s,baz=193,slow=5.0,SNR=7.2						
MKAR				LR	LR	06 55 00.5	
	comp=Z,49nm,18.2s,baz=177,slow=36						
	comp=Z,0.7nm,0.6s						
TOO	Toolangi	68.21	123	P	P	06 25 24.7	-1.5
TOO				IAmb	IAmb	06 25 43.8	
	comp=Z,13nm,1.4s						
QSPA	South Pole Qui	69.90	180	P	P	06 25 38.2	+1.9
	comp=Z,2.7nm,0.8s,baz=148,slow=0.8,SNR=9.4						
QSPA				LR	LR	06 51 12.1	
	comp=Z,68nm,20.9s,baz=244,slow=32						
	comp=Z,2.7nm,0.8s						
KURBB	Kurchatov Arra	71.12	7	P	P	06 25 45.6	+2.1
	comp=Z,1.4nm,0.8s,baz=205,slow=6.6,SNR=9.7						
	comp=Z,1.4nm,0.8s						
VNDA	Vanda	71.23	167	P	P	06 25 46.9	+2.9
	comp=Z,0.9nm,1.0s,baz=274,slow=10,SNR=3.9						
VNDA				LR	LR	06 52 09.8	
	comp=Z,59nm,19.0s,baz=266,slow=32						
	comp=Z,0.9nm,1.0s						
CTAO	Charters Tower	72.64	105	P	P	06 25 50.9	-2.7
BVAR	Borovoye Array	72.95	1	P	P	06 25 56.0	+1.5
	comp=Z,1.3nm,0.8s,baz=178,slow=4.5,SNR=4.5						
BVAR				LR	LR	06 56 49.5	
	comp=Z,71nm,20.5s,baz=182,slow=35						
	comp=Z,1.3nm,0.8s						
BRVK	Borovoye	72.98	1	P	P	06 25 53.9	-0.8
ZAA0	Zalesovo Array	75.24	10	P	P	06 26 07.5	-0.4
ZAA0				IAmb	IAmb	06 26 17.2	
	comp=Z,4.3nm,1.1s						
ZALV	Zalesovo Beam	75.24	10	P	P	06 26 06.8	-1.1
ZALV	Zalesovo Beam	75.24	10	P	P	06 26 09.9	+2.0
	comp=Z,2.2nm,0.5s,baz=202,slow=7.4,SNR=7.8						
ZALV				LR	LR	06 57 22.4	
	comp=Z,30nm,19.4s,baz=84,slow=34						
	comp=Z,2.2nm,0.5s						
SONM	Songino Array	75.95	26	P	P	06 26 14.8	+2.5
	comp=Z,0.4nm,0.4s,baz=197,slow=4.5,SNR=2.9						
SONM				LR	LR	06 58 50.2	
	comp=Z,39nm,20.8s,baz=274,slow=35						
	comp=Z,0.4nm,0.4s						
DBIC	Dimbokro	76.47	282	LR	LR	06 58 17.0	
	comp=Z,30nm,18.3s,baz=164,slow=34						
AKASG	Malin Array Be	78.46	336	P	P	06 26 27.6	+1.5
	comp=Z,0.5nm,0.5s,baz=141,slow=4.8,SNR=4.8						
	comp=Z,0.5nm,0.5s						
MJAR	Matsushiro Arr	86.92	49	LR	LR	07 04 12.7	
	comp=Z,26nm,20.9s,baz=248,slow=34						
MDT	Midelt	87.13	306	LR	LR	07 07 04.6	
	comp=Z,31nm,18.3s,baz=151,slow=36						
PMSA	Palmer Station	87.70	199	LR	LR	06 59 48.0	
	comp=Z,50nm,19.6s,baz=168,slow=31						
KLR	Kul'dur	89.20	36	LR	LR	07 06 41.4	
	comp=Z,34nm,20.1s,baz=201,slow=35						
ASAJ	Asahikawa	93.30	44	LR	LR	07 07 26.5	
	comp=Z,23nm,21.6s,baz=60,slow=34						
ARCES	ARCESS Array B	94.48	346	LR	LR	07 10 41.0	
	comp=Z,21nm,19.0s,baz=106,slow=36						

IDC 13 06:15:18.6±2.9,21°.85S×179°.42E,h0^{km},mb3.9/4, mbtmp3.9/4,Error ellipse: s-maj=275.9km s-min=34.1km az=163.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	41.88	259	P	P	06 23 09.7	-1.2
	0.7nm,0.4s,baz=92,slow=7.4,SNR=8.3						
	0.7nm,0.4s						
WRA	Warramunga Arr	42.05	264	P	P	06 23 13.3	+1.0
	1.0nm,0.5s,baz=99,slow=7.6,SNR=14						
	1.0nm,0.5s						
FITZ	Fitzroy Crossi	50.48	264	P	P	06 24 18.4	-0.3
	2.4nm,0.8s,baz=115,slow=6.6,SNR=7.8						
	2.4nm,0.8s						
TXAR	Lajitas Array	89.81	58	P	P	06 28 19.6	0.0
	0.3nm,0.8s,baz=235,slow=4.1,SNR=3.9						
	0.3nm,0.8s						
HFS	Hagfors	140.44	349	PKhKP	PKPpre	06 34 42.6	
	1.0nm,0.4s,baz=46,slow=3.1,SNR=11						

IDC 13 06:18:38.8±18.0,17°.72S×175°.19W,h0^{km},mb3.9/3, mbtmp3.9/3,Error ellipse: s-maj=442.3km s-min=51.7km az=36.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	47.68	259	P	P	06 27 17.0	-0.5
	0.8nm,0.8s,baz=96,slow=7.5,SNR=6.5						
	0.8nm,0.8s						
ASAR	Alice Springs	47.79	254	P	P	06 27 18.5	+0.2
	4.5nm,0.8s,baz=88,slow=8.2,SNR=33						
	4.5nm,0.8s						
VNDA	Vanda	60.91	186	P	P	06 28 52.9	-0.1
	0.3nm,0.4s,baz=27,slow=9.0,SNR=2.1						
	0.3nm,0.4s						

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*NEIC **13** 06:21:10.0±0.5,20°.2S±0°.2×178°.1W±0°.1,h549^{km}±16^{km}, mb4.1/24,Error ellipse: s-maj=29.8km s-min=13.3km az=204.0*

*IDC **13** 06:21:16.1±4.3,19°.53S×178°.72W,h590^{km}±35^{km},mb3.2/5, mbtmp4.1/6,Error ellipse: s-maj=148.9km s-min=20.6km az=154.0*

ISC 13 06:21:11.6±0.7,20°.2S±0°.1×178°.2W±0°.1,h569^{km},n37, σ1ˢ.08/38,mb4.1/16,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.27	304	P	P	06 22 35.1	-1.9
MSVF	Nonsavu	4.27	304	P	P	06 22 37.8	+0.9
	4.1nm,0.4s,baz=112,slow=23,SNR=7.2						
AFI	Afiamalu	8.74	46	P	P	06 23 14.1	-3.3
DZM	Mont Dzumac	14.44	260	P	P	06 24 14.4	-0.9
TOZ	Tahuroa Road	18.35	196	P	P	06 24 50.5	-1.1
TOZ				IAmb	IAmb	06 25 10.2	
	comp=Z,13nm,1.3s						
EIDS	Eidsvold	28.74	254	P	P	06 26 24.5	+0.3
EIDS				IAmb	IAmb	06 26 39.7	
	comp=Z,8.1nm,1.1s						
CTAO	Charters Tower	33.32	264	P	P	06 27 03.9	+0.5
TOO	Toolangi	35.94	233	P	P	06 27 24.3	-0.7
TOO				IAmb	IAmb	06 27 35.3	
	comp=Z,7.2nm,1.2s						
STKA	Stephens Creek	37.76	244	P	P	06 27 40.6	+0.6
BBOO	Buckleboo	42.52	243	P	P	06 28 17.8	-0.1
BBOO				IAmb	IAmb	06 28 23.8	
	comp=Z,3.3nm,0.9s						
WR0	Warramunga Arr	44.25	262	P	P	06 28 31.6	+0.1
WR0				IAmb	IAmb	06 28 34.2	
	comp=Z,9.0nm,1.3s						
WR8	Warramunga Arr	44.29	262	P	P	06 28 32.0	+0.1
WR8				IAmb	IAmb	06 28 32.9	
	comp=Z,4.1nm,0.7s						
AS31	Alice Springs	44.40	256	P	P	06 28 33.1	+0.4
ASAR	Alice Springs	44.40	256	P	P	06 28 32.7	0.0
ASAR	Alice Springs	44.40	256	P	P	06 28 33.0	+0.3
	comp=Z,6.4nm,0.5s,baz=97,slow=7.6,SNR=48						
ASAR				PcP	PcP	06 30 04.8	+0.8
	comp=Z,0.4nm,0.6s,baz=97,slow=4.1,SNR=2.8						
	comp=Z,6.4nm,0.5s						
WB0	Warramunga Arr	44.42	262	P	P	06 28 33.2	+0.4
WB2	Warramunga Arr	44.43	262	P	P	06 28 32.9	-0.1
WB2				IAmb	IAmb	06 28 33.7	
	comp=Z,5.4nm,0.8s						
WRAB	Tennant Creek	44.43	262	P	P	06 28 33.1	+0.2
WRAB				IAmb	IAmb	06 28 33.6	
	comp=Z,4.5nm,0.8s						
WRA	Warramunga Arr	44.44	262	P	P	06 28 33.0	-0.1
WRA	Warramunga Arr	44.44	262	P	P	06 28 33.0	-0.1
	comp=Z,2.9nm,0.3s,baz=96,slow=7.5,SNR=75						
	comp=Z,2.9nm,0.3s						
MTN	Manton Dam	48.95	270	P	P	06 29 07.5	+0.5
MTN				IAmb	IAmb	06 29 08.9	
	comp=Z,6.2nm,0.6s						
KNRA	Kununurra	50.47	266	P	P	06 29 18.2	0.0
FAKI	Fak Fak	51.22	283	P	P	06 29 24.1	+0.5
FITZ	Fitzroy Crossi	52.87	262	P	P	06 29 35.7	+0.3
FITZ	Fitzroy Crossi	52.87	262	P	P	06 29 37.0	+1.7
	comp=Z,1.1nm,0.5s,baz=113,slow=7.7,SNR=2.2						
	comp=Z,1.1nm,0.5s						
SOEI	Soe	56.28	272	P	P	06 29 58.7	-0.7
PSA00	Pilbara Seismi	57.54	257	P	P	06 30 08.1	+0.3
PSA00				IAmb	IAmb	06 30 16.4	
	comp=Z,7.3nm,0.8s						
MBWA	Marble Bar	57.73	257	P	P	06 30 09.2	+0.1
MBWA				IAmb	IAmb	06 30 09.3	
	comp=Z,28nm,1.4s						
SBA	Scott Base	58.21	184	P	P	06 30 11.8	+0.4
VNDA	Vanda	58.24	185	P	P	06 30 11.5	-0.1
NWAO	Narrogin (SRO)	58.34	243	P	P	06 30 13.2	+0.2
MORW	Morawa	59.77	247	P	P	06 30 22.6	-0.1
CASY	Casey	64.19	205	P	P	06 30 50.1	-0.5
CASY				IAmb	IAmb	06 30 54.4	
	comp=Z,4.7nm,1.1s						
QSPA	South Pole Qui	69.92	180	P	P	06 31 25.7	-0.2
NVAR	Mina Array Bea	80.91	43	P	P	06 32 30.4	+2.9
	comp=Z,0.6nm,0.7s,baz=244,slow=7.0,SNR=3.8						
	comp=Z,0.6nm,0.7s						
TXAR	Lajitas Array	87.04	57	P	P	06 32 59.9	+2.3
	comp=Z,0.5nm,0.8s,baz=282,slow=6.0,SNR=3.8						
	comp=Z,0.5nm,0.8s						
AKASG	Malin Array Be	142.60	331	PKP	PKPdf	06 39 38.5	-1.7
	comp=Z,0.6nm,0.4s,baz=46,slow=4.0,SNR=5.8						

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*IDC **13** 06:32:04.8±1.4,40°.34N×51°.92E,h0^{km},mb3.8/9, mbtmp3.9/17,ML3.9/8,MS2.7/1,Error ellipse: s-maj=26.3km s-min=9.5km az=167.0*

*TEH **13** 06:32:07.1,40°.81N×51°.96E,h10^{km}*

*NEIC **13** 06:32:07.5±1.9,40°.67N±0°.10×52°.03E±0°.02,h10^{km}±2^{km}, mb4.1/18,Error ellipse: s-maj=16.7km s-min=3.4km az=181.0*

*MOS **13** 06:32:09.2±1.3,40°.61N×52°.06E,h37^{km},mb4.2/5,Error ellipse: s-maj=7.4km s-min=6.9km az=96.5*

*AZER **13** 06:32:14.9,40°.49N×51°.83E,h58^{km},ml4.0*

*THR **13** 06:32:15.8±1.4,40°.37N×52°.05E,h5^{km},ML4.0*

*NNC **13** 06:32:20.3±2.8,41°.32N×53°.16E,h0^{km},mb3.9,Error ellipse: s-maj=32.9km s-min=20.9km az=89.0*

ISC 13 06:32:10.6±1.5,40°.70N±0°.04×52°.15E±0°.04,h31^{km}±12^{km}, n176,σ2ˢ.61/210,mb3.9/14,11C-6D,Turkmenistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GALA	Gala	1.54	260	Sn	Sn	06 32 53.4	-1.6
NDR	Nardaran	1.65	267	Sn	Sn	06 32 55.7	-1.9
GOBA	Gobu	1.86	262	Sn	Sn	06 33 02.4	-0.5
ATGJ	Altiaghaj	2.44	275	Pn	Pn	06 32 51.2	+2.8
ATGJ				Sn	Sn	06 33 19.5	+2.2
SIZA	Siyzn	2.49	280	Pn	Pb	06 32 52.9	-1.8
SIZA				Sn	Sn	06 33 20.7	+2.2
ALIB	&Aumlli-Bayram	2.51	254	Pn	Pb	06 32 53.6	-1.4
ALIB				Sn	Sn	06 33 17.7	-1.2
PQL	Pirkuli	2.70	273	Pn	Pn	06 32 55.0	+2.9
PQL				Sn	Sn	06 33 26.6	+2.8
QUBA	Quba, Azerbaij	2.84	285	Pn	Pn	06 32 57.1	+3.2
QUBA				Sn	Sn	06 33 29.2	+2.2
SAAT	Saatly	2.97	255	Pn	Pn	06 32 58.2	+2.6
SAAT				Sn	Sn	06 33 32.8	+2.7
IML	Ismayilli	3.01	273	Pn	Pn	06 32 58.6	+2.4
IML				Sn	Sn	06 33 32.0	+0.7
KDMR	Kurdemir	3.04	265	Pn	Pn	06 32 58.5	+2.0
KDMR				Sn	Sn	06 33 32.3	+0.5
QSAR	Qusar	3.04	287	Pn	Pn	06 32 60.0	+3.3
QSAR				Sn	Sn	06 33 34.1	+2.0
XNQ	Khinaliq	3.07	280	Pn	Pn	06 32 59.7	+2.5
XNQ				Sn	Sn	06 33 33.7	+0.7
GLBA	Clilabad	3.23	244	Pn	Pn	06 33 00.8	+1.6
GLBA				Sn	Sn	06 33 35.4	-1.2
LKRN	Lenkeran, Azer	3.27	234	Pn	Pn	06 33 00.8	+1.1
LKRN				Sn	Sn	06 33 35.7	-1.9
QBL	Gabala	3.28	276	Pn	Pn	06 33 01.9	+2.0
QBL				Sn	Sn	06 33 39.2	+1.3
ASTR	Astara	3.36	232	Pn	Pn	06 33 01.6	+0.7
ASTR				Sn	Sn	06 33 37.2	-2.6
ZRD	Zardab	3.43	264	Pn	Pn	06 33 03.9	+2.0
ZRD				Sn	Sn	06 33 43.5	+2.1
GAS1	Astara - Iran	3.44	229	Pn	Pn	06 33 02.2	+0.1
YRD	Yardimli	3.50	241	Pn	Pn	06 33 03.4	+0.4
YRD				Sn	Sn	06 33 40.1	-3.3
LRK	Lerik	3.58	236	Pn	Pn	06 33 04.7	+0.5
LRK				Sn	Sn	06 33 42.7	-2.9
BLQ	Beylaqan	3.65	256	Pn	Pn	06 33 06.3	+1.4
BLQ				Sn	Sn	06 33 45.1	-1.8
SEKA	Sheki	3.78	279	Pn	Pn	06 33 09.2	+2.4
SEKA				Sn	Sn	06 33 50.8	+0.5
BRDA	Brd	3.81	265	Pn	Pn	06 33 09.6	+2.4
BRDA				Sn	Sn	06 33 53.1	+2.1
MNGR	Mingechevir, A	3.85	273	Pn	Pn	06 33 09.3	+1.7
MNGR				Sn	Sn	06 33 52.9	+1.1
AGDM	Agdam	3.89	263	Pn	Pn	06 33 09.4	+1.1
AGDM				Sn	Sn	06 33 52.0	-1.0
QRD	Qoradiz	3.90	253	Pn	Pn	06 33 09.3	+0.9
QRD				Sn	Sn	06 33 50.8	-2.4
KLST	Kelardasht - M	4.26	192	Pn	Pn	06 33 14.2	+0.5
ZKTA	Zakatala	4.27	284	Pn	Pn	06 33 17.8	+4.2
ZKTA				Sn	Sn	06 34 04.1	+1.7
MZPU	Pul - Mazandar	4.28	186	Pn	Pn	06 33 15.0	+1.2
MRVT	Maraveh tapeh	4.31	133	Pn	Pn	06 33 17.9	+3.7
MRVT	Maraveh tapeh	4.31	133	*e*PnA		06 33 19.2	
MRVT				IAML		06 34 10.9	
	comp=Z,0.1nm,1.0s						
VSHL	Vashlovani	4.38	279	P	Pn	06 33 17.9	+2.8
VSHL				S	Sn	06 34 05.8	+0.7
IGLO	Ghaloghah	4.39	162	Pn	Pn	06 33 17.7	+2.2
GANJ	Ganja	4.43	271	Pn	Pn	06 33 16.3	+0.6
GANJ				Sn	Sn	06 34 03.9	-2.3
IPRN	Peran	4.45	178	Pn	Pn	06 33 17.8	+1.6
IGZV	Ghazvin	4.56	200	Pn	Pn	06 33 18.3	+0.6
IHRS	Heris	4.61	241	Pn	Pn	06 33 19.3	+0.9
IALA	Alasht	4.64	173	Pn	Pn	06 33 21.6	+2.8
IKIA	Kiasar	4.64	164	Pn	Pn	06 33 21.7	+2.8
CHTH	Charan	4.85	190	*e*PnA		06 33 24.4	
CHTH				IAML		06 34 18.4	
	comp=Z,0.2nm,1.0s						
GDB	GEDABAY	4.86	272	Pn	Pn	06 33 22.2	+0.5
GDB				Sn	Sn	06 34 13.0	-4.0
THKV	Tehran--Karaj	4.88	192	*e*PnA		06 33 26.0	
THKV				IAML		06 34 19.3	
	comp=Z,0.8nm,1.0s						
ORD	Ordubad	5.06	252	Pn	Pn	06 33 25.8	+1.4
ORD				Sn	Sn	06 34 18.8	-3.0
DAMV	Damavand	5.06	182	*e*PnA		06 33 28.2	
DAMV				IAML		06 35 28.9	
	comp=Z,0.0nm,1.0s						
BJRD	Bojnurd	5.07	125	*e*PnA		06 33 30.9	
BJRD				IAML		06 34 31.2	
	comp=Z,0.0nm,1.0s						
IFIR	Firoozkooh	5.07	174	Pn	Pn	06 33 28.0	+3.2
IHSH	Hashtrud	5.09	230	Pn	Pn	06 33 25.6	+0.5
IDMV	Damavand	5.12	181	Pn	Pn	06 33 28.7	+3.3
QZX	Qazax, Azerbai	5.15	276	Pn	Pn	06 33 26.7	+1.1
QZX				Sn	Sn	06 34 22.9	-1.1
SBZ	Shahbuz	5.22	258	Pn	Pn	06 33 28.9	+2.2
SBZ				Sn	Sn	06 34 25.6	-0.4
ITBZ	Tabriz	5.25	244	Pn	Pn	06 33 27.3	+0.1
NAX	Nakhchivan	5.33	256	Pn	Pn	06 33 29.8	+1.5
NAX				Sn	Sn	06 34 28.7	0.0
ILAS	Lasjerd	5.35	173	Pn	Pn	06 33 31.9	+3.3
QABG	Abgarm-Qazvin	5.38	203	Pn	Pn	06 33 30.0	+1.1
SHTL	Shatili	5.59	293	P	Pn	06 33 34.6	+2.8
SHTL				S	Sn	06 34 35.4	+0.4
SHTL	Shatili	5.59	293	P	Pn	06 33 34.6	+2.8
SHTL				S	Sn	06 34 35.4	+0.4
ISHB	Shabestar	5.60	247	Pn	Pn	06 33 32.5	+0.5
SHRO	Shahrood	5.60	146	*e*Pn	Pn	06 33 37.8	+5.9
SHRO				IAML		06 34 23.5	
	comp=Z,0.0nm,1.0s						
CHRG	Chargali	5.66	289	P	Pn	06 33 36.5	+3.8
IAZR	Azarshahr	5.66	240	Pn	Pn	06 33 32.9	+0.1
GNI	Garni	5.68	267	Pn	Pn	06 33 31.6	-1.4
	comp=Z,2.3nm,0.3s,baz=325,slow=8.5,SNR=2.6						
GNI				Sn	Sn	06 34 32.9	-4.3
	comp=Z,2.2nm,0.3s,baz=295,slow=22,SNR=4.3						
	comp=Z,6.0nm,0.3s						
GNI	Garni	5.68	267	Pn	Pn	06 33 33.4	+0.4
	comp=Z,0.1nmcomp=Z,13nm,1.0s						
IVRN	Varamin	5.70	183	Pn	Pn	06 33 36.7	+3.4
ISFR	Sfrayin	5.84	127	Pn	Pn	06 33 39.5	+4.2
IQOM	Qom	5.91	189	Pn	Pn	06 33 38.3	+2.0
IEMG	Emamgholi	6.03	121	Pn	Pn	06 33 41.2	+3.2
SBZV	Sabzevar	6.07	133	Pn	Pn	06 33 42.9	+4.4
TRLG	Trialeti	6.13	280	P	Pn	06 33 39.9	+0.7
TRLG	Trialeti	6.13	280	P	Pn	06 33 39.9	+0.7
HAGD	Aghdareh	6.33	203	Pn	Pn	06 33 43.8	+1.8
ISFB	Sefidab	6.34	179	Pn	Pn	06 33 44.5	+2.5
IAKL	Akhelmad	6.59	126	Pn	Pn	06 33 49.4	+3.7
KRSH	Karshahi	6.72	180	Pn	Pn	06 33 49.9	+2.6
NCK	Nalchik	6.95	297	*ce*P	Pn	06 33 51.0	+0.7
HSAM	Samen	7.06	205	Pn	Pn	06 33 54.6	+2.5
GEVA	Gevas	7.42	254	Pn	Pn	06 33 54.0	-3.0
KBZ	Khabaz	7.50	297	Pn	Pn	06 33 56.8	-1.0
	comp=Z,0.3nm,0.3s,baz=107,slow=8.6,SNR=5.7						
KBZ				Sn	Sn	06 35 16.8	-5.0
	comp=Z,1.3nm,0.3s,baz=309,slow=23,SNR=5.8						
	comp=Z,0.8nm,0.3s						
KBZ	Khabaz	7.50	297	*ce*P	Pn	06 33 58.4	+0.6
IMYA	Miami	7.60	122	Pn	Pn	06 34 04.0	+4.5
SHA1	Shidzhatmaz	7.67	296	*ce*P	Pn	06 34 02.0	+1.6
KIV	Kislovodsk	7.73	298	Pn	Pn	06 33 58.4	-2.6
KIV	Kislovodsk	7.73	298	*e*P	Pn	06 34 02.7	+1.7
KIV				*e*S	Sn	06 35 23.8	-3.7
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TKDS	Koohdasht(Taba	8.11	149	Pn	Pn	06 34 10.2	+3.9
TPRV	Parvadeh(Tabas	8.47	153	Pn	Pn	06 34 15.4	+4.0
AB31	Akbulak array	10.18	30		Pn	06 34 35.0	+0.5
AB31	Akbulak array	10.18	30	Pn	Pn	06 34 35.0	+0.5
AB31	Akbulak array	10.18	30	P	Pn	06 34 35.7	+1.2
	comp=Z,0.9nm,0.3s,baz=209,slow=12,SNR=44						
AB31				⇑S	Sn	06 36 22.4	-5.1
	comp=Z,21nm,0.5s,baz=210,slow=15						
AB31	Akbulak array	10.18	30	P	Pn	06 34 35.7	+1.2
ABKAR	Akbulak array	10.18	30		Pn	06 34 34.9	+0.4
AKTO	Aktyubinsk	10.57	21	Pn	Pn	06 34 41.4	+1.6
	comp=Z,3.6nm,0.3s,baz=212,slow=7.5,SNR=17						
AKTO				Sn	Sn	06 36 31.4	-5.6
	comp=Z,9.5nm,0.3s,baz=56,slow=20,SNR=19						
AKTO				LR	LR	06 39 52.8	
	comp=Z,39nm,18.4s,baz=234,slow=43						
	comp=Z,6.8nm,0.3s						
AKTO	Aktyubinsk	10.57	21	⇓P	Pn	06 34 42.1	+2.3
	comp=Z,2.0nm,0.3s						
AKTO				⇑S	Sn	06 36 31.9	-5.1
	comp=Z,27nm,0.6s						
AKTO	Aktyubinsk	10.57	21	P	Pn	06 34 42.1	+2.3
BELG	Belogornoye	12.10	347	Pn	Pn	06 35 01.8	+1.0
	comp=Z,1.0nm,0.3s,baz=262,slow=20,SNR=1.2						
BELG				Sn	Sn	06 37 05.3	-9.2
	comp=Z,4.5nm,0.3s,baz=292,slow=22,SNR=15						
	comp=Z,2.8nm,0.4s						
SIMJ	Simiganj	13.15	93	Pn	Pn	06 35 15.9	+0.5
BZK	Bozkurt	13.70	281	Pn	Pn	06 35 23.6	+1.0
	comp=Z,35nm,0.9s						
KK31	Karatay Array	13.89	74	Pn	Pn	06 35 25.1	-0.2
KK31	Karatay Array	13.89	74	P	Pn	06 35 26.5	+1.2
	comp=Z,1.7nm,0.5s,baz=280,slow=14,SNR=8.5						
KK31				⇑S	Sn	06 37 54.1	-4.3
	comp=Z,4.4nm,0.6s,baz=275,slow=21						
KK31	Karatay Array	13.89	74	*e*P	Pn	06 35 26.5	+1.2
KK31				S	Sn	06 37 55.9	-2.5
KKAR	Karatay Array	13.89	74	Pn	Pn	06 35 24.9	-0.4
KKAR	Karatay Array	13.89	74	P	Pn	06 35 24.9	-0.4
GAR	Garm	14.06	91	Pn	Pn	06 35 27.9	+0.1
BR131	Keskin Array S	14.18	272	Pn	Pn	06 35 26.4	-3.0
BR131	Keskin Array S	14.18	272	P	Pn	06 35 26.4	-3.0
BRTR	Keskin Array B	14.18	272	Pn	Pn	06 35 29.5	+0.1
	comp=Z,0.2nm,0.3s,baz=79,slow=8.5,SNR=3.9						
	comp=Z,0.2nm,0.2s						
ARTI	Arti	16.22	12	Pn	Pn	06 35 55.4	-0.6
ARTI				IAmb	IAmb	06 36 14.8	
	comp=Z,10nm,0.5s						
ARTI	Arti	16.22	12	Pn	Pn	06 35 57.6	+1.6
	comp=Z,0.7nm,0.3s,baz=79,slow=6.2,SNR=3.4						
ARTI				Sn	Sn	06 38 42.7	-12
	comp=Z,2.3nm,0.3s,baz=2.9,slow=23,SNR=9.7						
	comp=Z,1.8nm,0.3s						
ARTI	Arti	16.22	12	P	Pn	06 35 55.1	-1.0
ARTI				S	Sn	06 38 48.0	-6.9
OTUK	Ortayu	16.24	56	P	Pn	06 35 57.8	+1.4
OTUK				S	Sn	06 38 47.4	-8.0
OTUK	Ortayu	16.24	56	P	Pn	06 35 57.7	+1.4
OTUK				S	Sn	06 38 47.4	-8.0
GHAJ	Ghor Haditha	16.34	240	Pn	Pn	06 35 55.5	-2.3
AAK	Ala-Archa	16.81	76	*de*P	P	06 36 11.5	+5.8
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRVK	Borovoye	17.45	39	P	Pn	06 36 11.6	+0.2
BRVK	Borovoye	17.45	39	⇓P	Pn	06 36 12.2	+0.8
	comp=Z,2.0nm,0.6s						
BRVK				⇓S	Sn	06 39 16.5	-8.1
	comp=Z,4.1nm,0.6s						
BRVK	Borovoye	17.45	39	*d i*P	Pn	06 36 12.4	+1.0
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BVA0	Borovoye Array	17.48	39	P	P	06 36 14.9	+2.1
	comp=Z,3.2nm,0.7s,baz=231,slow=13,SNR=16						
BVA0				⇑S	Sn	06 39 17.8	-7.5
	comp=Z,22nm,0.8s						
BVA0	Borovoye Array	17.48	39	*i* P	P	06 36 14.9	+2.1
BVA0				*e*S	Sn	06 39 18.4	-6.9
BVAR	Borovoye Array	17.48	39	P	P	06 36 15.3	+2.5
	comp=Z,0.3nm,0.3s,baz=234,slow=11,SNR=18						
BVAR				S	Sn	06 39 15.3	-10
	comp=Z,12nm,0.7s,baz=235,slow=23,SNR=6.4						
	comp=Z,4.5nm,0.5s						
BOOM	Boomskoye usch	17.88	76		Pn	06 36 16.3	-0.8
BOOM	Boomskoye usch	17.88	76	P	Pn	06 36 16.3	-0.8
BOOM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
RAYN	Ar Rayn	18.02	200	P	Pn	06 36 17.4	-1.4
RAYN	Ar Rayn	18.02	200	P	Pn	06 36 17.4	-1.4
RAYN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	Malin Array Be	18.80	310	P	P	06 36 26.5	-0.9
	comp=Z,2.0nm,0.3s,baz=115,slow=12,SNR=8.7						
	comp=Z,4.3nm,0.6s						
AKASG	Malin Array Be	18.80	310	*e*P	P	06 36 27.3	-0.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKBB	Malin Array Si	18.80	310		P	06 36 25.2	-2.2
AKBB				IAmb	IAmb	06 36 28.2	
	comp=Z,5.0nm,0.6s						
AKBB	Malin Array Si	18.80	310	*de*P	P	06 36 26.8	-0.6
AKBB	Malin Array Si	18.80	310	P	P	06 36 26.9	-0.5
AK01	Malin Array Si	18.81	310	P	P	06 36 27.0	-0.5
KIEV	Kiev	18.81	310		P	06 36 26.2	-1.3
KIEV				IAmb	IAmb	06 36 28.3	
	comp=Z,4.4nm,0.7s						
KIEV	Kiev	18.81	310	P	P	06 36 26.2	-1.3
KIEV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KIEV	Kiev	18.81	310	P	P	06 36 26.9	-0.6
	comp=Z,27nm,0.6s						
AK03	Malin Array Si	18.82	310	P	P	06 36 27.1	-0.5

AK12	Malin Array Si	18.82	310	P	P	06 36 27.2	-0.4
AK11	Malin Array Si	18.83	310	P	P	06 36 27.2	-0.5
AK04	Malin Array Si	18.85	310	P	P	06 36 27.3	-0.6
AK16	Malin Array Si	18.86	310	P	P	06 36 27.3	-0.8
MI28	Mi28,Pidlybu	19.80	309	P	P	06 36 38.0	-0.4
VOIR		20.31	292	P	P	06 36 44.9	+0.9
KURBB	Kurchatov Arra	20.84	53	P	Pn	06 36 52.4	+0.2
	comp=Z,2.8nm,0.9s,baz=254,slow=11,SNR=13						
KURBB				S	S	06 40 35.6	-4.6
	comp=Z,0.3nm,0.7s,baz=194,slow=3.3,SNR=1.6						
	comp=Z,2.8nm,0.9s						
KURBB	Kurchatov Arra	20.84	53	⇑P	Pn	06 36 52.8	+0.6
	comp=Z,5.8nm,1.4s						
KURBB	Kurchatov Arra	20.84	53	P	Pn	06 36 52.8	+0.6
KURK	Kurchatov	20.92	53	P	P	06 36 50.8	+0.3
KURK				IAmb	IAmb	06 36 55.4	
	comp=Z,4.8nm,0.7s						
KURK	Kurchatov	20.92	53	⇑P	Pn	06 36 52.8	-0.4
	comp=Z,1.9nm,0.7s						
KURK	Kurchatov	20.92	53	*ce*P	Pn	06 36 53.6	+0.5
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
IDI	Anoyia	22.11	265	P	P	06 37 01.4	-2.0
IDI				IAmb	IAmb	06 37 10.0	
	comp=Z,14nm,1.3s						
MAKZ	Makanchi	22.31	64	P	P	06 37 05.8	+0.3
MAKZ				IAmb	IAmb	06 37 29.8	
	comp=Z,5.9nm,0.9s						
MAKZ	Makanchi	22.31	64	P	P	06 37 05.8	+0.3
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MK31	Makanchi Array	22.53	64	P	P	06 37 08.0	+0.2
MK31				IAmb	IAmb	06 37 31.4	
	comp=Z,2.3nm,0.8s						
MK31	Makanchi Array	22.53	64	P	P	06 37 10.7	+2.9
	comp=Z,1.8nm,0.6s,baz=272,slow=8.3,SNR=7.1						
MK31	Makanchi Array	22.53	64	*ce*P	P	06 37 11.6	+3.8
MKAR	Makanchi Array	22.53	64	P	P	06 37 07.0	-0.8
MKAR	Makanchi Array	22.53	64	P	P	06 37 10.8	+3.0
	comp=Z,1.6nm,0.9s,baz=281,slow=8.0,SNR=5.5						
MKAR				S	S	06 41 17.6	+4.7
	comp=Z,0.2nm,0.6s,baz=259,slow=28,SNR=2.1						
	comp=Z,1.6nm,0.9s						
MKAR	Makanchi Array	22.53	64	*e*P	P	06 37 11.7	+3.9
VYHS	Vyhne	24.81	299	*e*P	P	06 37 36.8	+6.9
VYHS	Vyhne	24.81	299	*e*P	P	06 37 36.8	+6.9
ZALV	Zalesovo Beam	25.55	48	P	P	06 37 38.6	+2.2
	comp=Z,0.9nm,0.4s,baz=258,slow=9.7,SNR=4.3						
	comp=Z,0.9nm,0.4s						
ZALV	Zalesovo Beam	25.55	48	*e*P	P	06 37 43.0	+6.6
FIA1	FINESS Array S	26.13	331	P	P	06 37 40.0	-1.6
FINES	FINESS Array B	26.13	331	P	P	06 37 40.2	-1.3
FINES	FINESS Array B	26.13	331	P	P	06 37 41.8	+0.2
	comp=Z,1.4nm,0.4s,baz=134,slow=11,SNR=14						
	comp=Z,1.4nm,0.4s						
FINES	FINESS Array B	26.13	331	*e*P	P	06 37 42.8	+1.2
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
HFS	Hagfors	30.64	322	P	P	06 38 21.7	-0.1
	comp=Z,2.0nm,0.9s,baz=111,slow=10,SNR=6.2						
	comp=Z,2.0nm,0.9s						
NC405	NORSAR Array S	31.91	323	P	P	06 38 31.6	-1.5
ARCES	ARCESS Array B	32.10	343	P	P	06 38 35.6	+1.0
	comp=Z,0.4nm,0.6s,baz=147,slow=11,SNR=8.7						
	comp=Z,0.4nm,0.6s						
ARCES	ARCESS Array B	32.10	343	*e*P	P	06 38 36.3	+1.7
EKA	Eskdalemuir Ar	38.71	311	P	P	06 39 31.2	-0.3
	comp=Z,0.5nm,0.3s,baz=88,slow=9.0,SNR=4.9						
	comp=Z,0.5nm,0.3s						
SONM	Songino Array	38.80	61	P	P	06 39 31.8	-0.8
SONM	Songino Array	38.80	61	P	P	06 39 31.8	-0.8
SONM				pmax	pmax		
	comp=Z,1.0nm,1.2s						
SPITS	Spitsbergen Ar	40.29	349	P	P	06 39 46.0	+1.6
	comp=Z,2.5nm,0.7s,baz=133,slow=11,SNR=11						
	comp=Z,2.5nm,0.7s						
SPITS	Spitsbergen Ar	40.29	349	P	P	06 39 46.0	+1.6
SUMG	Summit	51.90	337	P	P	06 41 15.3	-1.0
SUMG				IAmb	IAmb	06 41 36.6	
	comp=Z,3.5nm,0.8s						
SUMG	Summit	51.90	337	P	P	06 41 15.3	-1.0
SUMG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
C18K	Utukok River	68.17	13	P	P	06 43 09.0	+1.6
D22K	Ayikyak River	69.19	9	P	P	06 43 15.8	+2.1
D22K				IAmb	IAmb	06 43 41.7	
	comp=Z,4.1nm,1.2s						
E19K	Redstone River	69.89	12	P	P	06 43 19.9	+1.9
E19K				IAmb	IAmb	06 43 34.8	
	comp=Z,2.3nm,0.9s						
WRA	Warramunga Arr	97.07	110	P	P	06 45 39.6	-0.2
	comp=Z,0.2nm,0.7s,baz=316,slow=6.4,SNR=1.7						
	comp=Z,0.2nm,0.7s						

IDC ***13*** *07:29:41.1±1.7, 38°.71N×23°.31E, h0^{km}, mb3.6/3, mbtmp3.7/3, Error ellipse: s-maj=65.7km s-min=29.4km az=156.0*

THE ***13*** *07:29:42.7, 38°.8N±0°.8×23°.3E±0°.6, h10^{km}±1^{km}, M3.0/24, MLh3.0/24*

ATH ***13*** *07:29:42.4, 38°.80N×23°.32E, h15^{km}±1^{km}, ML3.2/25, Manual Solution by A.Fokaefs First location: 2019/06/13 07:30:39, This location: 2019/06/13 10:39:42 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

ISC 13 07:29:42.4±1.0**, 38°.80N**±0°.02×**23°.32E**±0°.02**, h11**^{km}±8^{km}**, n62,** σ**0^s.52**/81**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKR	Lokris	0.29	240	P	Pg	07 29 48.4	0.0
LKR	Lokris	0.29	240	P	Pg	07 29 48.4	0.0
NEO	Neokhori	0.52	351	P	Pg	07 29 52.7	+0.1
NEO	Neokhori	0.52	351	P	Pg	07 29 52.7	+0.1
NEO				S	Sg	07 30 00.2	+0.8
AXAR	Agios Charalam	0.52	267	P	Pg	07 29 52.7	+0.1
AXAR	Agios Charalam	0.52	267	P	Pg	07 29 52.9	+0.3
AXAR				S	Sg	07 29 60.0	+0.4
AOS	Alonnisos	0.57	49	P	Pg	07 29 53.1	-0.5
VIL2	Platees	0.58	184	P	Pb	07 29 54.4	-0.3
VIL2				S	Sb	07 30 03.3	+0.4
KYMI	Kymi, Euboea I	0.63	105	P	Pg	07 29 54.5	-0.2
KYMI				S	Sb	07 30 04.0	-0.2
KYMI	Kymi, Euboea I	0.63	105	P	Pg	07 29 54.4	-0.2
KYMI				S	Sg	07 30 03.0	+0.1
VILL	Villia	0.63	181	P	Pg	07 29 54.3	-0.4
AGG	Agios Georgios	0.81	287	P	Pg	07 29 57.6	-0.5
AGG				S	Sb	07 30 10.0	+0.6
AGG	Agios Georgios	0.81	287	P	Pg	07 29 57.4	-0.7
AGG				S	Sg	07 30 08.9	+0.3
LTK	Loutraki	0.82	200	P	Pg	07 29 58.0	-0.3
LTK	Loutraki	0.82	200	P	Pg	07 29 57.5	-0.8
LTK				S	Sb	07 30 10.2	+0.5
LOUT	Loutraki	0.85	199	P	Pg	07 29 58.3	-0.6
LOUT				S	Sb	07 30 10.9	+0.3
PTL	Penteli	0.86	150	P	Pg	07 29 59.0	0.0
PTL				S	Sb	07 30 11.4	+0.6
PTL	Penteli	0.86	150	P	Pg	07 29 58.6	-0.4
PTL				S	Sb	07 30 10.7	-0.1
ATHP	Athens-Neo Psi	0.87	156	P	Pb	07 29 59.3	-0.2
NOAC	Athens-Thissio	0.88	159	P	Pg	07 29 59.3	-0.1
ATH	Athens Observa	0.88	159	P	Pg	07 29 59.3	0.0
ATH	Athens Observa	0.88	159	P	Pg	07 29 59.4	0.0
ATH				S	Sb	07 30 11.8	+0.4
DRPA	Athens-Drapets	0.88	164	P	Pb	07 29 59.8	+0.1
ATHU	Athens Univers	0.90	156	P	Pg	07 29 59.6	-0.2
ATHU	Athens Univers	0.90	156	P	Pg	07 29 59.4	-0.4
ATHU				S	Sb	07 30 12.2	+0.1
MAKR	Makrakomi, Fth	0.95	284	P	Pg	07 30 00.6	-0.2
MAKR				S	Sb	07 30 14.0	+0.3
SKY	Skiros Island	0.96	85	P	Pg	07 30 00.8	-0.2
SKY				S	Sb	07 30 14.8	+1.0
SKY	Skiros Island	0.96	85	P	Pg	07 30 00.7	-0.3
SKY				S	Sb	07 30 14.3	+0.5
KALE	Kalithea	1.01	247	S	Sn	07 30 16.2	-0.6
KALE	Kalithea	1.01	247	P	Pg	07 30 00.8	-1.1
ANX	Ano Chora	1.12	260	P	Pb	07 30 02.9	-0.8
ANX	Ano Chora	1.12	260	P	Pb	07 30 03.0	-0.8
GUR	Goura	1.15	222	P	Pb	07 30 04.0	-0.4
GUR				S	Sn	07 30 20.3	0.0
GUR	Goura	1.15	222	P	Pb	07 30 03.4	-1.1
KARY	Karystos	1.16	131	P	Pb	07 30 04.1	-0.4
KARY				S	Sn	07 30 20.7	+0.3
KARY	Karystos	1.16	131	P	Pb	07 30 03.4	-1.1
PAIG	Paliouri	1.16	14	P	Pb	07 30 03.9	-0.6
EFP	Efpalio	1.17	252	P	Pb	07 30 03.7	-0.9
MET4	Agioi Theodoro	1.17	177	P	Pb	07 30 04.5	-0.2
KLV	Kalavryta, Ach	1.19	231	P	Pb	07 30 04.8	-0.2
KLV	Kalavryta, Ach	1.19	231	P	Pn	07 30 05.0	0.0
EVR	Evrytania	1.19	276	P	Pg	07 30 05.8	+0.5
TYRN	Tyrnavos	1.25	318	P	Pn	07 30 05.5	-0.3
THL	Klokotos Trika	1.27	307	P	Pn	07 30 05.6	-0.5
THL				S	Sg	07 30 24.0	+0.4
PLG	Polygyros	1.58	3	P	Pn	07 30 09.8	-0.6
PLG	Polygyros	1.58	3	P	Pn	07 30 09.8	-0.6
OUR	Ouranopolis	1.62	18	P	Pn	07 30 10.4	-0.4
OUR	Ouranopolis	1.62	18	P	Pn	07 30 10.5	-0.4
HORT	Hortiatis	1.81	355	P	Pn	07 30 13.0	-0.5
VLI	Veliai	2.10	189	P	Pn	07 30 17.1	-0.4
CHOS	Chios island	2.18	100	P	Pn	07 30 18.8	+0.2
CHOS	Chios island	2.18	100	P	Pn	07 30 18.8	+0.2
SRS	Serrai	2.33	5	P	Pn	07 30 20.5	-0.2
SRS	Serrai	2.33	5	P	Pn	07 30 20.2	-0.4
KAVA	Kavala	2.38	22	P	Pn	07 30 20.1	-1.3
KNT	Kendrikon	2.39	352	P	Pn	07 30 21.7	+0.2
NEST	Nestorio	2.39	313	P	Pn	07 30 22.1	+0.6
APE	Apeiranthos	2.45	134	P	Pn	07 30 22.5	+0.1
RDO	Rodhopi	2.90	35	P	Pn	07 30 27.2	-1.3
ESDC	Sonseca Array	21.13	281	P	P	07 34 27.5	+0.3
	0.8nm,0.8s,baz=86,slow=11,SNR=4.9						
	0.8nm,0.8s						
TORD	Torodi Ar. Bea	31.93	223	P	P	07 36 08.1	-0.1
	1.7nm,0.3s,baz=29,slow=9.0,SNR=1.4						
	1.7nm,0.3s						
MKAR	Makanchi Array	43.10	60	P	P	07 37 43.2	+0.8
	0.4nm,0.5s,baz=287,slow=6.6,SNR=4.8						
	0.4nm,0.5s						

BJI ***13*** *07:33:57.9, 20°.80S×173°.68W, h7^{km}, mB5.5/15, mb5.3/38, Ms4.9/10, Ms7 4.6/9*

MOS ***13*** *07:33:57.3±0.9, 21°.19S×174°.32W, h10^{km}, mb5.2/34, Error ellipse: s-maj=10.7km s-min=10.5km az=29.0*

NEIC ***13*** *07:33:58.1±1.8, 21°.2S±0°.1×173°.8W±0°.1, h10^{km}±1^{km}, mb5.2/43, Error ellipse: s-maj=21.3km s-min=16.7km az=134.0*

IDC ***13*** *07:33:58.6±0.4, 21°.23S×174°.33W, h0^{km}, mb4.7/21, mbtmp4.7/23, ML4.2/2, MS4.1/40, Error ellipse: s-maj=18.3km s-min=13.7km az=115.0*

NOU ***13*** *07:34:04.5, 20°.84S×173°.56W, h80^{km}, mb4.9/17, Tonga Islands*

GCMT ***13*** *07:34:04.1±0.3, 21°.44S±0°.03×173°.84W±0°.02, h23^{km}, MW5.0/81, Moment Tensor Solution. s35,c40; s81,c110; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.28±.20; $M_{\theta\theta}$-0.25±.13; $M_{\phi\phi}$-3.04±.13; $M_{r\theta}$1.23±.21; $M_{\theta\phi}$-0.73±.06; $M_{\phi r}$1.46±.15; Best double couple: $M_0$3.76400×10^{16} NP1:ϕ_s183.00000°, δ32.00000°, λ70.00000°. NP2: ϕ_s26.00000°, δ60.00000°, λ102.00000°. Principal axes: T 3.8750, Plg72.0000°, Azm325.0000°; N -0.2300, Plg11.0000°, Azm200.0000°; P -3.6530, Plg14.0000°, Azm107.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 07:34:01.3±0.6**, 21°.24S**±0°.05×**173°.72W**±0°.05**, h28**^{km}±3^{km}**, h29**^{km}**:pP-P, n581,** σ**2^s.16**/569**, mb5.1**/80**, MS4.2**/46**, 51C-24D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.16	60		Pn	07 35 02.0	-1.0
NIUE	Niue	4.16	60	P	Pn	07 35 02.0	-1.0
TAVE	Taveuni	7.39	307	P	Pn	07 35 48.2	+0.9
AFI	Afiamalu	7.52	15		Pn	07 35 46.7	-2.5
AFI	Afiamalu	7.52	15	P	Pn	07 35 46.6	-2.6
AFI	Afiamalu	7.52	15	S	Sn	07 37 05.2	-8.5
AFI	Afiamalu	7.52	15	P	Pn	07 35 46.7	-2.5
DGTI	Dogotuki	7.91	307	P	Pn	07 35 55.7	+1.2
MSVF	Nonsavu	8.51	293		Pn	07 36 04.2	+1.4
MSVF	Nonsavu	8.51	293	Pn	Pn	07 36 02.8	+0.1
	2.6nm,0.3s,baz=133,slow=11,SNR=46						
MSVF	Nonsavu	8.51	293	P	Pn	07 36 04.4	+1.6
MSVF	Nonsavu	8.51	293	P	Pn	07 36 04.2	+1.4
RAO	Raoul Island	8.83	205	LR	LR	07 39 10.5	
	comp=Z,322nm,21.0s,baz=15,slow=36						
GLKZ	Green Lake	8.84	205	P	Pn	07 36 05.6	-1.6
GLKZ				S	Sn	07 37 39.6	-6.3
YSA	Yasawairara	9.39	297	P	Pn	07 36 16.3	+1.5
RAR	Rarotonga	13.01	92	Pn	Pn	07 37 03.2	-1.1
	8.5nm,0.3s,baz=264,slow=9.5,SNR=14						
RAR				Sn	Sn	07 39 22.8	-5.3
	3.0nm,0.3s,baz=38,slow=15,SNR=2.0						
RAR				LR	LR	07 43 21.8	
	comp=Z,757nm,18.1s,baz=254,slow=42						
RAR	Rarotonga	13.01	92	P	Pn	07 37 03.2	-1.1
HAZ	Te Kaha	18.03	202	Pn	Pn	07 38 09.5	-0.2
PUZ	Puketiti	18.15	201	P	Pn	07 38 09.4	-1.8
DZM	Mont Dzumac	18.46	264		P	07 38 11.6	-3.4
DZM	Mont Dzumac	18.46	264	*e*P	P	07 38 11.3	-3.7
	169nm,1.6s						
DZM				*e*LR	LR	07 42 24.6	
	579nm,25.8s						
DZM	Mont Dzumac	18.46	264	P	P	07 38 10.9	-4.1
	0.5nm,0.3s,baz=83,slow=17,SNR=14						
	22nm,0.9s						
DZM	Mont Dzumac	18.46	264	P	P	07 38 15.0	0.0
MKAZ	Moumakai	18.52	209	P	Pn	07 38 18.6	+2.8
MWZ	Matawai	18.63	202	P	Pn	07 38 20.5	+3.3
URZ	Urewera	18.72	203	P	P	07 38 16.8	-0.8
	1.2nm,0.3s,baz=353,slow=2.3,SNR=9.8						
URZ				S	Sn	07 41 30.6	-16
	8.5nm,1.0s,baz=227,slow=19,SNR=2.4						
	5.6nm,0.5s						
URZ	Urewera	18.72	203	P	P	07 38 17.9	+0.3
TLZ	Tolley Road	19.39	206	P	Pn	07 38 27.0	+0.7
BKZ	Black Stump Fm	19.74	203		P	07 38 26.4	-2.5
BKZ	Black Stump Fm	19.74	203	P	Pn	07 38 31.8	+1.3
BKZ	Black Stump Fm	19.74	203	P	P	07 38 26.5	-2.5
HIZ	Hauiti	19.83	207	P	Pn	07 38 32.9	+1.4
HIZ	Hauiti	19.83	207	P	Pn	07 38 31.9	+0.5
PXZ	Pawanui	20.38	201	P	P	07 38 37.2	+1.4
VRZ	Vera Road	20.38	206	P	P	07 38 35.5	-0.3
PNHZ	Pukenui	20.51	203	P	P	07 38 39.2	+2.0
NEZ	North Egmont	20.79	207	P	P	07 38 41.6	+1.3
BFZ	Birch Farm	21.17	202	P	P	07 38 48.4	+4.1
BFZ	Birch Farm	21.17	202	P	P	07 38 45.9	+1.6
MRZ	Mangatainoka R	21.39	203	P	P	07 38 47.4	+0.8
OGWZ	Otaki Gorge	21.68	203	P	P	07 38 49.8	+0.1
PAWZ	Paruwai Farm	22.08	202	P	P	07 38 54.3	+0.2
SNZO	South Karori	22.28	203	P	P	07 38 59.3	+3.2
TBI	Tubuai	22.54	100	*e*P	P	07 38 54.3	-4.8
	542nm,40.2s						
TBI				*e*S	S	07 43 02.6	-2.1
	1μm,23.5s						
TBI				*e*LR	LR	07 44 13.9	
	4μm,30.0s						
TBI				*e*LR	LR	07 44 14.3	
	1μm,28.8s						
NNZ	Nelson	22.71	206	P	P	07 38 57.8	-3.0
QRZ	Quartz Range	22.75	208	P	P	07 39 04.1	+2.9
QRZ	Quartz Range	22.75	208	P	P	07 39 01.6	+0.4
PPT2	Papeete2	23.05	85	*e*P	P	07 38 56.0	-8.6
	129nm,27.2s						
PPT2				*e*S	S	07 43 07.8	-6.1
	708nm,25.5s						
PPT2				*e*LR	LR	07 44 23.3	
	985nm,29.5s						
PPT2				*e*LR	LR	07 44 32.5	
	435nm,46.8s						
PPT	Papeete	23.06	85	LR	LR	07 46 49.7	
	comp=Z,342nm,18.2s,baz=271,slow=33						
MRNZ	Matariki Terra	23.12	207	P	P	07 39 08.2	+3.1
THZ	Tophouse	23.37	206	P	P	07 39 08.4	+0.9
KHZ	Kahutara	23.67	204	P	P	07 39 10.2	-0.2
DSZ	Denniston Nort	23.81	208	P	P	07 39 13.7	+1.8
GVZ	Greta Valley S	24.34	204	P	P	07 39 19.3	+2.7
LTZ	Lake Taylor	24.48	205	P	P	07 39 21.6	+3.6
INZ	Inchbonnie	24.77	207	P	P	07 39 22.1	+1.6
OXZ	Oxford	25.03	205	P	P	07 39 26.0	+3.1
MQZ	McQueen’s Vall	25.11	204	P	P	07 39 26.3	+2.7
WVZ	Waitaha Valley	25.35	207	P	P	07 39 27.7	+1.9
RPZ	Rata Peaks	25.75	206	P	P	07 39 32.5	+3.1
RPZ	Rata Peaks	25.75	206	P	P	07 39 34.2	+4.8
FOZ	Fox Glacier	26.12	208	P	P	07 39 35.1	+2.3
TMZ	Timaru	26.32	205	P	P	07 39 35.8	+1.2
LBZ	Lake Benmore	26.65	206	P	P	07 39 40.3	+2.6
JCZ	Jackson Bay	27.00	209	P	P	07 39 42.4	+1.5
JCZ	Jackson Bay	27.00	209	P	P	07 39 42.3	+1.5
ODZ	Otahua Downs	27.01	205	P	P	07 39 43.4	+2.6
ODZ	Otahua Downs	27.01	205	P	P	07 39 43.3	+2.4
HNR	Honiara	27.93	291	LR	LR	07 49 09.9	
	comp=Z,268nm,18.3s,baz=153,slow=33						
TAOE	Nuku Hiva Isla	34.59	74	*e*P	P	07 40 48.8	+0.7
	101nm,39.0s						
TAOE				*e*S	S	07 46 10.2	-5.8
	76nm,26.3s						
TAOE				*e*LR	LR	07 49 39.6	
	573nm,29.5s						
CAN	Canberra	35.48	239	P	P	07 40 52.7	-2.9
CAN				pmax	pmax		
	comp=Z,23nm,1.4s						
CTAO	Charters Tower	37.40	264	P	P	07 41 09.4	-2.6
CTAO				IAmb	IAmb	07 41 11.2	
	comp=Z,40nm,1.6s						
CTAO	Charters Tower	37.40	264	P	P	07 41 09.5	-2.6
CTAO				pmax	pmax		
	comp=Z,40nm,1.7s						
TOO	Toolangi	38.75	236	P	P	07 41 20.9	-2.4
TOO	Toolangi	38.75	236	P	P	07 41 20.9	-2.4
TOO				pmax	pmax		
	comp=Z,22nm,1.7s						
PMG	Port Moresby	39.41	281	LR	LR	07 55 42.8	
	comp=Z,273nm,18.8s,baz=163,slow=34						
PMG	Port Moresby	39.41	281	*ce*P	P	07 41 25.6	-3.4
PMG				pmax	pmax		
	comp=Z,34nm,1.2s						
STKA	Stephens Creek	41.10	246	P	P	07 41 39.8	-3.1
STKA				IAmb	IAmb	07 41 43.2	
	comp=Z,31nm,0.9s						
STKA	Stephens Creek	41.10	246	P	P	07 41 39.8	-3.1
	comp=Z,5.8nm,0.8s,baz=140,slow=18,SNR=6.6						
STKA				LR	LR	07 58 24.3	
	comp=Z,206nm,18.4s,baz=71,slow=36						
	comp=Z,5.8nm,0.8s						
STKA	Stephens Creek	41.10	246	*ce*P	P	07 41 40.2	-2.6
JAY	Jayapura	48.08	286	LR	LR	08 02 37.5	
	comp=Z,220nm,18.2s,baz=30,slow=36						
JAY	Jayapura	48.08	286	P	P	07 42 37.4	-1.4
JAY				pmax	pmax		
	comp=Z,31nm,1.0s						
AS31	Alice Springs	48.24	257		P	07 42 37.6	-2.4
ASAR	Alice Springs	48.25	257		P	07 42 36.4	-3.6
ASAR	Alice Springs	48.25	257	P	P	07 42 36.1	-3.9
	comp=Z,19nm,0.9s,baz=89,slow=8.4,SNR=115						
ASAR				PcP	PcP	07 44 07.0	+0.1
	comp=Z,5.1nm,0.8s,baz=104,slow=4.1,SNR=6.8						
ASAR				LR	LR	08 01 02.8	
	comp=Z,164nm,20.6s,baz=98,slow=34						
	comp=Z,19nm,0.9s						
ASAR	Alice Springs	48.25	257	P	P	07 42 36.4	-3.6
WR8	Warramunga Arr	48.31	262		P	07 42 36.9	-3.6
WR8				IAmb	IAmb	07 42 41.9	
	comp=Z,15nm,1.0s						
WRAB	Tennant Creek	48.45	262	⇑*e*P	P	07 42 41.4	-0.2
WRAB				pmax	pmax		
	comp=Z,11nm,0.9s						
WRA	Warramunga Arr	48.46	262		P	07 42 37.5	-4.2
WRA	Warramunga Arr	48.46	262	P	P	07 42 37.6	-4.0
	comp=Z,7.9nm,0.8s,baz=98,slow=7.4,SNR=39						
WRA				PcP	PcP	07 44 07.9	+0.2
	comp=Z,5.2nm,0.9s,baz=94,slow=3.7,SNR=6.9						
WRA				LR	LR	08 00 59.1	
	comp=Z,214nm,20.4s,baz=90,slow=34						
	comp=Z,7.9nm,0.8s						
GUMO	Guam	53.40	307	LR	LR	08 02 41.1	
	comp=Z,83nm,21.1s,baz=132,slow=32						
KNRA	Kununurra	54.60	265	P	P	07 43 24.6	-3.0
SWI	Sorong	57.31	283	P	P	07 43 44.7	-2.3
SWI				pmax	pmax		
	comp=Z,58nm,0.9s						
SBA	Scott Base	57.44	185	P	P	07 43 51.4	+4.4
SBA				pmax	pmax		
	comp=Z,16nm,1.3s						
VNDA	Vanda	57.57	186		P	07 43 48.4	+0.5
VNDA	Vanda	57.57	186	P	P	07 43 50.1	+2.2
	comp=Z,4.1nm,0.9s,baz=3.5,slow=6.7,SNR=23						
	comp=Z,4.1nm,0.9s						
MBWA	Marble Bar	61.59	257	P	P	07 44 14.0	-2.5
MBWA				IAmb	IAmb	07 44 17.3	
	comp=Z,16nm,0.9s						
MORW	Morawa	63.24	247		P	07 44 25.5	-2.1
CASY	Casey	65.02	206		P	07 44 38.6	+0.1
CASY				IAmb	IAmb	07 44 40.9	
	comp=Z,20nm,1.1s						
DAV	Davao City (W)	65.86	288	LR	LR	08 11 45.6	
	comp=Z,108nm,18.5s,baz=158,slow=35						
QSPA	South Pole Qui	68.83	180	P	P	07 45 05.7	+2.7
	comp=Z,6.6nm,1.1s,baz=57,slow=1.1,SNR=14						
QSPA				LR	LR	08 10 27.9	
	comp=Z,96nm,21.2s,baz=42,slow=32						
	comp=Z,6.6nm,1.1s						
JGF	Kuroka	73.09	320	P	P	07 45 27.6	-1.5
JGF				IAmb	IAmb	07 45 30.2	
	comp=Z,22nm,1.2s						
MJAR	Matsushiro Arr	73.23	321	P	P	07 45 29.4	-0.4
	comp=Z,20nm,1.0s,baz=157,slow=5.8,SNR=24						
MJAR				LR	LR	08 17 22.9	
	comp=Z,73nm,18.1s,baz=130,slow=36						
	comp=Z,20nm,1.0s						
MAJO	Matsushiro	73.23	321		P	07 45 27.5	-2.3
MAJO				IAmb	IAmb	07 45 31.0	
	comp=Z,18nm,0.9s						
MAJO	Matsushiro	73.23	321	*de*P	P	07 45 29.4	-0.5
MAJO				pmax	pmax		
	comp=Z,20nm,1.0s						
MJB9	Matsu-Tunnel	73.24	321	P	P	07 45 28.6	-1.3
MJB9				IAmb	IAmb	07 45 32.4	
	comp=Z,19nm,0.9s						
JOW	Kunigami	73.74	308	LR	LR	08 14 59.4	
	comp=Z,81nm,19.3s,baz=163,slow=34						
NIKH	Nikolski High	74.02	3	P	P	07 45 35.1	+1.0
	baz=185						
SHEM	Shemya Is, Ala	74.42	352	LR	LR	08 14 08.7	
	comp=Z,272nm,19.8s,baz=167,slow=32						
SAO	San Andreas Ge	75.89	41		P	07 45 43.9	-1.4
SAO				IAmb	IAmb	07 45 50.5	
	comp=Z,22nm,1.0s						
SAO	San Andreas Ge	75.89	41	P	P	07 45 43.9	-1.4
SAO				pmax	pmax		
	comp=Z,22nm,1.0s						
BBGB	Big Mountain B	76.02	41	P	P	07 45 45.8	-0.3
FALS	False Pass	76.30	6	P	P	07 45 48.7	+1.6
	baz=190						
ASAJ	Asahikawa	76.35	329	LR	LR	08 15 56.3	
	comp=Z,152nm,19.0s,baz=166,slow=33						
LPIG	La Paz	76.39	57	LR	LR	08 16 44.0	
	comp=Z,151nm,18.1s,baz=196,slow=33						
SKR	Severo-Kuril’s	76.40	341	*e*P	P	07 45 38.9	-8.8
SKR				*e*		07 48 38.4	
SKR				pmax	pmax		
	comp=Z,300nm,4.9s						
SKR				MLR	MLR		
	comp=Z,300nm,15.0s						
ELS	Elsinore Mount	76.51	46	P	P	07 45 48.0	-1.0
CHNA	Chernabura Isl	76.72	8	P	P	07 45 50.9	+1.4
	baz=194						
YUH	Yuha Desert	76.94	47		P	07 45 49.5	-1.8
SDPT	Sand Point	77.11	8	P	P	07 45 53.0	+1.3
	baz=193						
PFO	Pinyon Flats O	77.14	46	P	P	07 45 50.9	-1.7
PFO				IAmb	IAmb	07 46 06.4	
	comp=Z,18nm,1.4s						
PFO	Pinyon Flats O	77.14	46	LR	LR	08 17 23.0	
	comp=Z,98nm,18.3s,baz=241,slow=34						
PFO	Pinyon Flats O	77.14	46	*ce*P	P	07 45 55.3	+2.7
PFO				pmax	pmax		
	comp=Z,16nm,1.1s						
S12K	Black Hills	77.28	7	P	P	07 45 53.5	+0.8
	baz=191						
AFDM	Forest Hills D	77.59	39		P	07 45 53.9	-1.0
AFDM				IAmb	IAmb	07 45 59.6	
	comp=Z,14nm,1.1s						
P08K	Saint George I	77.62	2	P	P	07 45 55.9	+1.5
	baz=184						
ORV	Oroville	77.68	39		P	07 45 55.0	-0.3
ORV	Oroville	77.68	39	P	P	07 45 55.0	-0.3
ORV				pmax	pmax		
	comp=Z,9.0nm,1.0s						

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PEA0B Petropavlovsk-     78.08 343       P       07 45 56.0 -1.2
PEA0B                          IAmb      IAmb    07 46 18.1
      comp=Z,25nm,1.1s
PEA0B Petropavlovsk-     78.08 343ceP    P       07 45 57.2  0.0
PETK  Petropavlovsk-     78.08 343 P     P       07 45 56.8 -0.4
PETK  Petropavlovsk-     78.08 343 P     P       07 45 58.0 +0.8
      comp=Z,7.9nm,0.9s,baz=181,slow=6.5,SNR=16
PETK                           LR        LR      08 18 07.2
      comp=Z,80nm,18.7s,baz=172,slow=34
      comp=Z,7.9nm,0.9s
S14K  Fog Glacier        78.15   8 P     P       07 45 58.8 +1.2
      baz=194
YSS   Yuzhno-Sakhali     78.41 331 eP    P       07 45 58.7 -0.4
YSS                            e                 07 46 10.6
YSS                            e                 07 48 55.1
YSS                            eS        S       07 55 47.9 -5.0
YSS                            ePPS      PPS     07 56 29.4
YSS                            pmax      pmax
      comp=Z,20nm,0.9s
YSS                            pmax      pmax
      comp=Z,200nm,3.6s
YSS                            smax      smax
      comp=E,200nm,5.4s
YSS                            MLR       MLR
      comp=Z,200nm,16.0s
NVAR  Mina Array Bea     78.88  41 P     P       07 46 06.5 +4.2
      comp=Z,15nm,0.7s,baz=224,slow=8.7,SNR=86
      comp=Z,15nm,0.7s
PMSA  Palmer Station     79.00 156 LR    LR      08 15 03.6
      comp=Z,81nm,19.5s,baz=252,slow=31
OHAK  Old Harbor         80.02  11 P     P       07 46 09.3 +1.7
      baz=199
KSRS  Korea Array        80.13 317 P     P       07 46 09.1 +0.4
      comp=Z,14nm,1.1s,baz=138,slow=5.7,SNR=36
KSRS                           LR        LR      08 15 44.7
      comp=Z,30µm,21.3s,baz=65,slow=31
      comp=Z,14nm,1.1s
R18K  Karluk             80.15  10 P     P       07 46 09.9 +1.6
      baz=198
KSAR  Wonju Array Be     80.15 317       P       07 46 07.5 -1.3
KSAR  Wonju Array Be     80.15 317 P     P       07 46 07.6 -1.3
J05D  Fort Rock, OR      80.28  36 P     P       07 46 10.1 +0.4
J05D                           IAmb      IAmb    07 46 14.6
      comp=Z,24nm,0.9s
TUC   Tucson             80.34  50 P     P       07 46 14.5 +4.3
TUC                            pmax      pmax
      comp=Z,8.0nm,1.2s
Q17K  Contact Creek      80.58   9 P     P       07 46 12.3 +1.4
      baz=197
KDAK  Kodiak Island      80.68  11 LR    LR      08 15 18.7
      comp=Z,148nm,21.6s,baz=202,slow=31
KDAK  Kodiak Island      80.68  11 P     P       07 46 12.9 +1.7
      baz=200
O14K  Tigyukauivet M     80.85   6 P     P       07 46 13.6 +1.5
      baz=192
Q16K  King Salmon        80.86   9 P     P       07 46 14.0 +1.9
      baz=196
O15K  Ungalikthiuk R     80.94   7 P     P       07 46 14.2 +1.6
      baz=193
INCN  Inchon             80.98 316 P     P       07 46 14.4 +1.0
INCN                           pmax      pmax
      comp=Z,14nm,0.5s
P16K  Nushagak River     81.02   8 P     P       07 46 13.2 +0.2
P16K  Nushagak River     81.02   8 P     P       07 46 14.4 +1.4
      baz=195,SNR=7.4
Q18K  Katmai Hardscr     81.09  10 P     P       07 46 15.1 +1.5
      baz=198
WVOR  Wild Horse Val     81.19  38 P     P       07 46 18.2 +3.7
WVOR                           pmax      pmax
      comp=Z,18nm,1.3s
P17K  Kvichak River      81.40   9 P     P       07 46 16.7 +1.7
      baz=196,SNR=11
TYV   Tymovskoe          81.41 334 eP    P       07 46 16.5 +1.2
TYV                            pmax      pmax
      comp=Z,11nm,1.0s
TYV                            pmax      pmax
      comp=Z,100nm,2.0s
N14K  Kuskokwak Cree     81.47   6 P     P       07 46 17.4 +2.0
      baz=191,SNR=8.6
Q20K  Shuyak Island      81.49  11 P     P       07 46 17.5 +2.0
      baz=200
O16K  Kokwok River B     81.56   8       P       07 46 16.3 +0.4
O16K                           IAmb      IAmb    07 46 18.2
      comp=Z,23nm,1.1s
O16K  Kokwok River B     81.56   8 P     P       07 46 17.0 +1.1
      baz=195,SNR=9.8
M11K  Mekoryuk           81.56   4 P     P       07 46 18.5 +2.6
      baz=187
Q19K  Cape Douglas,      81.58  10 P     P       07 46 17.9 +1.9
      baz=199
P18K  Big Mountain,      81.77   9       P       07 46 17.0 -0.1
P18K                           IAmb      IAmb    07 46 19.8
      comp=Z,36nm,1.2s
P18K  Big Mountain,      81.77   9 P     P       07 46 18.4 +1.4
      baz=198,SNR=8.0
M13K  Dall Lake          81.80   5 P     P       07 46 19.8 +2.7
      baz=190
O17K  Koliganek Bris     81.86   8 P     P       07 46 19.4 +2.0
      baz=196,SNR=6.9
USA0B Ussuriysk Arra     81.87 324⇑eP    P       07 46 16.5 -1.4
USRK  Ussuriysk Ar.      81.87 324 P     P       07 46 18.4 +0.5
      comp=Z,2.0nm,0.8s,baz=111,slow=7.9,SNR=7.4
USRK                           LR        LR      08 19 43.8
      comp=Z,108nm,19.0s,baz=163,slow=34
      comp=Z,2.0nm,0.8s
N15K  Kwethluk River     81.88   7 P     P       07 46 19.7 +2.1
      baz=193
MAW   Mawson             82.19 199 P     P       07 46 19.4 +0.1
      comp=Z,6.5nm,1.0s,baz=136,slow=5.7,SNR=5.0
MAW                            LR        LR      08 22 07.1
      comp=Z,124nm,18.5s,baz=104,slow=35
      comp=Z,6.5nm,1.0s
O18K  Koktuh Hills       82.21   9       P       07 46 19.5 +0.1
O18K  Koktuh Hills       82.21   9 P     P       07 46 21.2 +1.9
      baz=198,SNR=9.4
M14K  Bethel             82.25   6 P     P       07 46 21.9 +2.4
      baz=191,SNR=12
H03S2 Juan Fernandez     82.26 123 T     T       09 18 34.9
      baz=247,slow=74,SNR=7.2
H03S1 Juan Fernandez     82.27 123 T     T       09 18 17.2
      baz=247,slow=74,SNR=7.2
H03S3 Juan Fernandez     82.27 123 T     T       09 18 42.9
      baz=247,slow=74,SNR=7.0
M15K  Kasigluk River     82.33   6 P     P       07 46 22.3 +2.5
      baz=192,SNR=28
N16K  Nishlik Lake       82.33   7 P     P       07 46 22.3 +2.4
      baz=194,SNR=8.8
P19K  Oil Pt             82.33  10 P     P       07 46 21.6 +1.6
      baz=199
H03N2 Juan Fernandez     82.39 123 T     T       09 18 47.4
      baz=253,slow=74
H03N3 Juan Fernandez     82.39 123 T     T       09 18 44.8
      baz=253,slow=74
H03N1 Juan Fernandez     82.40 123 T     T       09 18 43.2
      baz=253
N17K  Nushagak Hills     82.58   8 P     P       07 46 22.5 +1.3
      baz=196
HOM   Homer              82.61  11 P     P       07 46 23.2 +1.8
      baz=201
O19K  Port Alsworth      82.67  10 P     P       07 46 22.0 +0.3
O19K  Port Alsworth      82.67  10 P     P       07 46 23.4 +1.7
      baz=198
L14K  Kuka Creek         82.77   5 P     P       07 46 24.6 +2.5
      baz=190,SNR=13
M16K  Timber Creek       82.84   7 P     P       07 46 25.3 +2.7
      baz=194,SNR=27
BRSE  Bradley Lake S     82.86  11 P     P       07 46 24.7 +2.0
      baz=202
N18K  Kilae Creek        82.90   9 P     P       07 46 24.5 +1.6
      baz=197
K13K  Kusilvak Mount     83.20   4 P     P       07 46 26.9 +2.5
      baz=189,SNR=5.6
L15K  Ungalak Mounta     83.21   6 P     P       07 46 26.6 +2.2
      baz=192
BBB   Bella Bella        83.22  26 LR    LR      08 19 51.9
      comp=Z,106nm,18.1s,baz=224,slow=33
N19K  Bonanza Creek      83.24   9 P     P       07 46 25.8 +1.0
      baz=198,SNR=10
DUG   Dugway, Tooele     83.34  42 P     P       07 46 29.8 +3.9
DUG                            pmax      pmax
      comp=Z,4.0nm,1.3s
M17K  Holitna River      83.39   8 P     P       07 46 28.1 +2.7
      baz=195,SNR=11
SEW   Seward             83.44  12 P     P       07 46 27.5 +1.9
      baz=203
L16K  Owhat River        83.45   7 P     P       07 46 28.2 +2.5
      baz=193,SNR=23
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NJ2   Nanjing            83.46 308 eP    P       07 46 26.6 +0.1
NJ2                            pmax      pmax
      comp=Z,21nm,0.8s
MDJ   Mudanjiang         83.47 323 P     P       07 46 27.3 +1.1
MDJ                            pmax      pmax
      comp=Z,14nm,1.5s
MDJ                            pmax      pmax
      comp=Z,220nm,8.6s
M18K  Stony River        83.69   9 P     P       07 46 29.2 +2.3
      baz=197,SNR=8.4
P23K  Montague Islan     83.75  13 P     P       07 46 29.5 +2.2
      baz=205
K15K  Wolf Creek Mou     83.81   6 P     P       07 46 30.5 +3.0
      baz=192,SNR=93
CRAG  Craig              83.84  22 P     P       07 46 31.0 +3.2
      baz=218
SPCR  Spurr Chakacha     83.97  10 P     P       07 46 30.1 +1.6
      baz=200
L17K  Donlin             84.00   7 P     P       07 46 31.6 +3.1
      baz=194,SNR=24
J14K  Nanvaranak Lak     84.09   5 P     P       07 46 31.4 +2.5
      baz=190,SNR=5.9
TXAR  Lajitas Array      84.13  56 P     P       07 46 34.2 +4.1
      comp=Z,2.9nm,1.0s,baz=207,slow=7.0,SNR=18
TXAR                           LR        LR      08 17 55.9
      comp=Z,65nm,19.1s,baz=217,slow=31
      comp=Z,2.9nm,1.0s
V35K  Ketchikan          84.26  23 P     P       07 46 32.6 +2.6
      baz=219
L18K  Granite Mounta     84.28   8 P     P       07 46 32.3 +2.3
      baz=196,SNR=18
M19K  Big River Lodg     84.29   9 P     P       07 46 31.8 +1.8
      baz=198,SNR=7.5
RC01  Rabbit Creek A     84.30  11 P     P       07 46 31.8 +1.7
      baz=202
STLK  Strandline Lak     84.31  10 P     P       07 46 29.1 -1.1
STLK                           IAmb      IAmb    07 46 33.0
      comp=Z,20nm,1.1s
PLID  Pearl Lake         84.33  37       P       07 46 31.8 +0.9
KAIM  Kayak Island       84.34  14 P     P       07 46 31.9 +1.6
      baz=207
PWL   Port Wells         84.35  12 P     P       07 46 32.0 +1.6
      baz=204,SNR=5.6
U33K  Whale Pass         84.36  21 P     P       07 46 32.2 +1.8
      baz=218
SIT   Sitka              84.39  20 P     P       07 46 32.1 +1.6
      baz=216
M20K  Styx River         84.46  10 P     P       07 46 32.1 +1.1
      baz=199
SUA   Susitna One        84.46  11 P     P       07 46 32.7 +1.7
      baz=202
L19K  White Mountain     84.49   9 P     P       07 46 33.0 +2.0
      baz=198,SNR=6.0
K17K  Iditarod           84.56   7 P     P       07 46 34.1 +2.8
      baz=194,SNR=15
EYAK  Cordova Ski Ar     84.60  13 P     P       07 46 33.8 +2.2
      baz=206
GLI   Glacier Island     84.62  13 P     P       07 46 33.3 +1.6
      baz=205
GAMB  Gambell            84.75   1 P     P       07 46 31.8 -0.4
GAMB                           IAmb      IAmb    07 46 36.0
      comp=Z,22nm,1.1s
GAMB  Gambell            84.75   1 P     P       07 46 34.3 +2.1
      baz=182,SNR=8.3
ANMO  Albuquerque        84.79  50 LR    LR      08 20 36.4
      comp=Z,177nm,18.0s,baz=343,slow=33
ANMO  Albuquerque        84.79  50 i P   P       07 46 37.0 +3.6
ANMO                           pmax      pmax
      comp=Z,5.0nm,1.0s
SKT   Skwentna           84.81  10 P     P       07 46 34.0 +1.3
      baz=201,SNR=8.0
KNK   Knik Glacier       84.84  12 P     P       07 46 34.9 +2.1
      baz=204
M22K  Willow             84.84  11 P     P       07 46 34.9 +2.2
      baz=202,SNR=9.2
S31K  Pelican            84.85  19 P     P       07 46 35.7 +2.8
      baz=215
WRAK  Wrangell Islan     84.86  22 P     P       07 46 35.7 +2.7
      baz=218
J16K  Anvik River        84.88   6 P     P       07 46 35.3 +2.4
      baz=192,SNR=17
PMR   Palmer             84.88  12 P     P       07 46 34.7 +1.8
      baz=203,SNR=7.7
L20K  Farewell, AK       84.91   9 P     P       07 46 35.0 +1.8
      baz=199,SNR=14
S32K  Killisnoo          84.96  20 P     P       07 46 36.1 +2.7
      baz=216
J17K  VABM Dome          85.14   7       P       07 46 34.6 +0.4
J17K                           IAmb      IAmb    07 46 38.3
      comp=Z,20nm,1.0s
J17K  VABM Dome          85.14   7 P     P       07 46 36.9 +2.6
      baz=194,SNR=19
MESA  MESA               85.16  15 P     P       07 46 36.9 +2.3
      baz=210
SML   Sawmill            85.22  12 P     P       07 46 36.8 +2.1
      baz=204
BMRM  Bremner River      85.23  14 P     P       07 46 37.1 +2.2
      baz=207,SNR=8.0
KLR   Kul'dur            85.25 328 P     P       07 46 35.5 +0.4
      comp=Z,1.9nm,0.9s,baz=109,slow=4.0,SNR=3.3
KLR                            LR        LR      08 21 15.2
      comp=Z,100nm,19.0s,baz=156,slow=33
      comp=Z,1.9nm,0.9s
KLR   Kul'dur            85.25 328⇓eP    P       07 46 35.5 +0.4
KLR                            pmax      pmax
      comp=Z,3.0nm,1.3s
U35K  Hyder              85.29  23 P     P       07 46 37.9 +2.8
      baz=220
M23K  Glacier View       85.33  12 P     P       07 46 37.9 +2.7
      baz=204
CN2   Changchun          85.37 321 P     P       07 46 36.3 +0.5
CN2                            sP        pP      07 46 42.9 +0.2
CN2                            pmax      pmax
      comp=Z,20nm,1.3s
PNL   Peninsula          85.37  17 P     P       07 46 37.9 +2.4
      baz=212,SNR=5.3
BNX   BinXian            85.38 323 ⇑P    P       07 46 35.3 -0.5
BNX                            pmax      pmax
      comp=Z,8.0nm,1.1s
CRQE  Cirque             85.39  15 P     P       07 46 37.8 +2.1
      baz=209,SNR=5.2
KLU   Klutina            85.42  13 P     P       07 46 37.8 +2.0
      baz=206,SNR=5.9
CUT   Chulitna           85.42  11 P     P       07 46 37.5 +1.9
      baz=202
SCM   Sheep Creek Mo     85.44  12 P     P       07 46 38.1 +2.2
      baz=205,SNR=7.1
I17K  Unalakleet         85.46   6 P     P       07 46 38.5 +2.7
      baz=192
J18K  Innoko River       85.48   8 P     P       07 46 38.4 +2.4
      baz=196,SNR=37
PINM  Pinnacle           85.51  16 P     P       07 46 38.4 +2.1
      baz=211
PPLA  Purkeypile         85.57  10 P     P       07 46 38.6 +2.0
      baz=200
MA2   Magadan            85.62 343 LR    LR      08 22 25.1
      comp=Z,88nm,18.9s,baz=169,slow=34
R32K  Eaglecrest         85.63  20 P     P       07 46 39.2 +2.4
      baz=216
NEW   Newport            85.69  34 P     P       07 46 40.2 +2.8
NEW                            pmax      pmax
      comp=Z,5.0nm,1.2s
K20K  Telida             85.72   9 P     P       07 46 37.0 -0.2
K20K                           IAmb      IAmb    07 46 41.2
      comp=Z,32nm,1.2s
K20K  Telida             85.72   9 P     P       07 46 39.1 +1.9
      baz=198,SNR=24
ANM   Nome               85.77   4 P     P       07 46 39.5 +2.1
      baz=188
P29M  Windy Craggy       85.80  17 P     P       07 46 40.7 +3.0
      baz=213
N25K  Chitina, Valde     85.80  13 P     P       07 46 40.1 +2.4
      baz=207,SNR=8.8
PLCA  Paso Flores        85.83 132 LR    LR      08 17 43.0
      comp=Z,68nm,19.2s,baz=244,slow=30
M24K  Tolsona, Glenn     85.92  13 P     P       07 46 41.0 +2.7
      baz=206,SNR=8.2
MCARA McCarthy VSAT      85.96  14 P     P       07 46 41.1 +2.7
      baz=209
CTG   Chitna Glacier     85.99  15 P     P       07 46 41.1 +2.4
      baz=210,SNR=7.6
T35M  Bob Quinn          86.03  22 P     P       07 46 42.0 +3.2
      baz=220
PLBC  Pleasant Camp      86.04  18 P     P       07 46 41.5 +2.7
      baz=215,SNR=5.5
WAT6  Susitna Watana     86.05  12 P     P       07 46 40.9 +1.9
      baz=204,SNR=33
H16K  Elim               86.06   5 P     P       07 46 40.9 +2.1
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      baz=191,SNR=10
CAST  Castle Rocks       86.08  10       P       07 46 38.9 -0.1
CAST                           IAmb      IAmb    07 46 40.9
      comp=Z,17nm,1.0s
CAST  Castle Rocks       86.08  10 P     P       07 46 39.6 +0.6
      baz=200,SNR=20
O28M  Mount Upton        86.11  16 P     P       07 46 41.1 +1.6
      baz=211
J19K  Poorman            86.12   8 P     P       07 46 41.6 +2.4
      baz=197,SNR=21
WAT1  Susitna Watana     86.12  11 P     P       07 46 41.1 +1.9
      baz=204
WHN   Wuhan              86.13 305 ⇓P    P       07 46 40.9 +1.0
O29M  Mount Kennedy      86.13  17 P     P       07 46 42.5 +3.0
      baz=213,SNR=8.4
G15K  Niukluk            86.28   4 P     P       07 46 42.0 +2.1
      baz=189,SNR=16
SKAG  Skagway            86.35  19 P     P       07 46 43.4 +3.1
      baz=216,SNR=7.8
HARP  HAARP              86.39  13 P     P       07 46 43.1 +2.6
      baz=207
TRF   Thorofare Moun     86.39  10 P     P       07 46 42.1 +1.4
      baz=202,SNR=36
P30M  Million Dollar     86.42  17 P     P       07 46 43.9 +3.1
      baz=214
S34M  Telegraph Cree     86.44  21 P     P       07 46 44.2 +3.4
      baz=219,SNR=8.5
CHUM  Lake Minchumin     86.48   9 P     P       07 46 42.4 +1.5
      baz=200,SNR=22
J20K  Nowinta River      86.49   8 P     P       07 46 43.1 +2.2
      baz=198,SNR=29
H17K  Granite Mounta     86.56   6 P     P       07 46 43.2 +1.9
      baz=193,SNR=7.7
DHY   Denali Highway     86.57  12 P     P       07 46 43.2 +1.6
      baz=205,SNR=9.8
F14K  Arctic Creek       86.63   3 P     P       07 46 43.3 +1.8
      baz=187,SNR=6.8
TNA   Tin City           86.64   2 P     P       07 46 43.7 +2.1
      baz=186
YUK8  Steele Glacier     86.66  16 P     P       07 46 44.6 +2.5
      baz=212,SNR=10
GCSA  Galena City Sc     86.69   7 P     P       07 46 44.5 +2.6
      baz=196,SNR=14
YUK6  Outpost Mounta     86.73  16 P     P       07 46 44.5 +2.0
      baz=213
TIA   Tai'an             86.76 311 P     P       07 46 43.5 +0.6
TIA                            pmax      pmax
      comp=Z,22nm,1.2s
G16K  Koyuk River        86.80   5 P     P       07 46 44.5 +2.1
      baz=191,SNR=7.0
PDAR  Pinedale Array     86.81  42 P     P       07 46 46.1 +2.8
      comp=Z,3.2nm,0.8s,baz=219,slow=3.8,SNR=19
PDAR                           LR        LR      08 21 32.7
      comp=Z,79nm,18.4s,baz=238,slow=33
      comp=Z,3.2nm,0.8s
SYO   Syowa Base         86.84 191⇑eP    P       07 46 42.2 -0.6
SYO   Syowa Base         86.84 191⇓epP   P       07 46 46.0 +3.2
PAX   Paxson             86.84  13 P     P       07 46 44.5 +1.7
      baz=206,SNR=10
HYT   Haines Junctio     86.86  17 P     P       07 46 45.7 +2.7
      baz=214,SNR=8.3
M26K  Nabesna, AK        86.86  14 P     P       07 46 45.3 +2.4
      baz=209,SNR=20
BPAW  Bear Paw Mtn.      86.89  10       P       07 46 42.6 -0.3
BPAW                           IAmb      IAmb    07 46 45.1
      comp=Z,15nm,1.2s
BPAW  Bear Paw Mtn.      86.89  10 P     P       07 46 43.8 +0.9
      baz=201,SNR=10
MCK   McKinley           86.89  11 P     P       07 46 44.7 +1.8
      baz=203,SNR=15
Q32M  Nakina River       86.89  20 P     P       07 46 46.6 +3.3
      baz=218,SNR=8.2
YUK3  Moose Creek        86.91  15 P     P       07 46 45.9 +2.6
      baz=211,SNR=28
H18K  Honhosa River      86.92   6 P     P       07 46 45.4 +2.3
      baz=194,SNR=12
P32M  Atlin              86.94  19 P     P       07 46 45.8 +2.5
      baz=217,SNR=5.3
F15K  North Star Dit     86.95   4 P     P       07 46 45.0 +1.8
      baz=189
TROLL Troll, Antarti     86.96 179 ⇓P    P       07 46 45.6 +2.1
      comp=Z,120nm,0.8s
TROLL                          sP        pP      07 46 50.8 +1.0
YUK4  Talbot Arm         87.00  16 P     P       07 46 46.7 +3.0
      baz=213,SNR=6.0
I20K  Naaghedeneel       87.04   8 P     P       07 46 45.9 +2.4
      baz=198,SNR=10
G17K  Kiwalik Mounta     87.05   5 P     P       07 46 45.8 +2.2
      baz=192,SNR=13
M27K  Edge Creek, AK     87.08  14 P     P       07 46 46.4 +2.4
      baz=210,SNR=33
VNA3  Neumayer Olymp     87.10 175 ⇓P    P       07 46 46.1 +2.0
      comp=Z,6.4nm,0.8s
VNA3                           sP        pP      07 46 49.6 -0.7
SNAA  Sanae              87.12 177 ⇓P    P       07 46 46.1 +1.9
      comp=Z,98nm,0.9s
SNAA                           ⇓sP       pP      07 46 50.6 +0.2
SNAA  Sanae              87.12 177 P     P       07 46 45.9 +1.7
      comp=Z,4.5nm,0.9s,baz=200,slow=4.8,SNR=12
SNAA                           LR        LR      08 20 28.7
      comp=Z,94nm,21.9s,baz=115,slow=32
      comp=Z,4.5nm,0.9s
SNAA  Sanae              87.12 177⇑eP    P       07 46 44.7 +0.5
SNAA                           pmax      pmax
      comp=Z,6.0nm,1.0s
O30N  Mendenhall         87.20  17 P     P       07 46 47.2 +2.7
      baz=215,SNR=16
DLBC  Dease Lake         87.22  21 P     P       07 46 48.2 +3.5
      comp=Z,7.5nm,1.0s,baz=213,slow=5.7,SNR=14
      comp=Z,7.5nm,1.0s
DLBC  Dease Lake         87.22  21 P     P       07 46 47.5 +2.8
      baz=220,SNR=8.2
L26K  Log Cabin Wild     87.34  13 P     P       07 46 47.6 +2.5
      baz=208,SNR=14
BVCY  Beaver Creek       87.36  15 P     P       07 46 47.7 +2.4
      baz=210,SNR=6.4
WHY   Whitehorse         87.46  18 P     P       07 46 48.4 +2.6
      baz=216,SNR=5.7
H19K  Roundabout Mou     87.50   7 P     P       07 46 48.3 +2.6
      baz=196,SNR=24
N30M  Aishikik Lake      87.50  17 P     P       07 46 48.7 +2.7
      baz=214
K24K  Donnelly Dome      87.53  12 P     P       07 46 48.1 +2.0
      baz=206,SNR=11
VNA2  Neumayer--Watz     87.58 176 ⇓P    P       07 46 48.8 +2.4
      comp=Z,7.0nm,1.2s,baz=192,slow=3.4
G18K  Tagagawik          87.62   6 P     P       07 46 48.0 +1.6
      baz=194,SNR=19
R33M  Jennings River     87.65  20 P     P       07 46 49.6 +2.8
      baz=219,SNR=9.8
H20K  Anotleneega Mo     87.66   8 P     P       07 46 49.1 +2.5
      baz=198,SNR=23
NEA2  Nenana             87.66  10 P     P       07 46 47.9 +1.3
      baz=203
RIDG  Independent Ri     87.66  12 P     P       07 46 48.8 +2.1
      baz=207,SNR=9.9
L27K  Beaver Creek,      87.70  14 P     P       07 46 49.4 +2.5
      baz=210,SNR=16
P33M  Teslin, Yukon      87.71  19 P     P       07 46 49.6 +2.6
      baz=218,SNR=5.7
VNA1  Neumayer--Stat     87.79 175 ⇑P    P       07 46 50.0 +2.7
MLY   Manley             87.80  10 P     P       07 46 48.6 +1.3
      baz=202,SNR=14
HDA   Harding Lake       87.86  11 P     P       07 46 49.5 +1.9
      baz=205,SNR=13
N31M  Braeburn, Yuko     87.88  17 P     P       07 46 50.6 +2.9
      baz=215,SNR=9.8
F17K  Baldwin Pennin     87.92   5 P     P       07 46 49.9 +2.2
      baz=192
M29M  Somme Creek        87.97  16 P     P       07 46 50.8 +2.5
      baz=213,SNR=14
G19K  Purcell Mounta     88.02   7 P     P       07 46 50.4 +2.1
      baz=196,SNR=26
SCRK  Sand Creek         88.05  13 P     P       07 46 50.9 +2.2
      baz=208,SNR=13
SEY   Seymchan           88.06 345ceP    P       07 46 49.0 +0.5
SEY                            pmax      pmax
      comp=Z,12nm,1.0s
HEH   HeiHe              88.08 327 eP    P       07 46 50.3 +1.4
HEH                            pmax      pmax
      comp=Z,11nm,1.4s
H21K  Melozitna Rive     88.09   9 P     P       07 46 50.9 +2.3
      baz=200,SNR=12
I23K  Minto, Yukon-K     88.13  10 P     P       07 46 50.3 +1.5
      baz=203,SNR=9.7
COLA  College            88.13  11c iP   P       07 46 49.8 +1.0
COLA                           pmax      pmax
      comp=Z,35nm,1.3s
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COLA	College	88.13	11	P	P	07 46 50.7	+1.9
	baz=204						
ILAR	Eielson Array	88.20	11	P	P	07 46 49.2	+0.1
ILAR	Eielson Array	88.20	11	P	P	07 46 51.2	+2.0
	comp=Z,15nm,1.2s,baz=215,slow=4.9,SNR=44						
ILAR				LR	LR	08 23 15.9	
	comp=Z,70nm,18.6s,baz=166,slow=34						
	comp=Z,15nm,1.2s						
ILAR	Eielson Array	88.20	11	P	P	07 46 49.3	+0.1
F18K	Selawik	88.21	6	P	P	07 46 51.0	+1.9
	baz=193						
J25K	Salcha River,	88.34	12	P	P	07 46 52.1	+2.2
	baz=206,SNR=19						
N32M	Quiet Lake	88.38	18	P	P	07 46 53.1	+2.9
	baz=218						
POKR	Poker Plat Res	88.42	11	P	P	07 46 51.8	+1.6
	baz=204						
K27K	Chicken	88.49	13	P	P	07 46 53.5	+2.9
	baz=209						
E17K	Hotham Inlet	88.50	5	P	P	07 46 52.5	+1.9
	baz=191						
H22K	Ishtalitna Cre	88.51	9	P	P	07 46 52.7	+2.1
	baz=201,SNR=14						
PSI	Prapat	88.54	274	P	P	07 46 51.3	-0.9
PSI				pmax	pmax		
	comp=Z,15nm,1.0s						
J26L	Joseph Creek	88.60	13	P	P	07 46 54.1	+2.9
	baz=208,SNR=50						
L29M	L29M	88.62	15	P	P	07 46 54.5	+3.2
	baz=213,SNR=26						
F19K	Shaleruckik Mo	88.62	6	P	P	07 46 53.0	+1.9
	baz=195,SNR=18						
H23K	Yukon River	88.72	10	P	P	07 46 54.5	+2.8
	baz=203						
G21K	Allakaket	88.81	8	P	P	07 46 54.2	+2.1
	baz=199,SNR=11						
M31M	Drury Creek, Y	88.85	17	P	P	07 46 54.7	+2.3
	baz=216						
WTLY	Watson Lake, Y	88.91	21	P	P	07 46 55.3	+2.7
	baz=221						
E18K	Tukpahlearik C	88.94	5	P	P	07 46 54.7	+2.2
	baz=192,SNR=15						
H24K	Noodor Dome	89.01	10	P	P	07 46 55.3	+2.3
	baz=204						
D17K	Noatak River	89.03	4	P	P	07 46 55.3	+2.3
	baz=190,SNR=7.1						
F20K	Avaraart Lake	89.05	7	P	P	07 46 55.3	+2.2
	baz=197						
DAWY	Dawson	89.13	14	P	P	07 46 56.0	+2.4
	baz=212,SNR=20						
PRP	Porcupine Dome	89.13	11	P	P	07 46 56.0	+2.3
	baz=206,SNR=17						
FARO	Faro, Yukon	89.16	18	P	P	07 46 56.2	+2.4
	baz=217						
TOAD	Toad River Com	89.21	23	P	P	07 46 57.3	+3.2
	baz=224,SNR=32						
GSI	Gunungsitoli	89.26	272		P	07 46 53.5	-1.9
GSI	Gunungsitoli	89.26	272	P	P	07 46 56.3	+0.9
E19K	Redstone River	89.28	6	P	P	07 46 53.7	-0.5
E19K				IAmb	IAmb	07 46 58.3	
	comp=Z,22nm,1.0s						
E19K	Redstone River	89.28	6	P	P	07 46 56.4	+2.2
	baz=195,SNR=33						
LIRD	Liard River Hi	89.31	22	P	P	07 46 57.4	+2.8
	baz=224						
LYN	LuoYang	89.35	308	P	P	07 46 56.9	+1.6
LYN				pP	pP	07 47 01.8	-0.4
LYN				pmax	pmax		
	comp=Z,46nm,1.1s						
LYN				pmax	pmax		
	comp=Z,270nm,5.0s						
K29M	Barlow Dome	89.38	15	P	P	07 46 57.9	+3.0
	baz=214,SNR=23						
RDOG	Red Dog Mine	89.39	4	P	P	07 46 57.2	+2.5
	baz=190						
I26K	Coal Creek Min	89.39	12	P	P	07 46 57.3	+2.6
	baz=208,SNR=15						
G22K	Bettles	89.46	9	P	P	07 46 57.4	+2.3
	baz=201						
C16K	Lisburne Hills	89.47	3	P	P	07 46 56.8	+1.8
	baz=188						
G23K	Bananza Creek	89.47	9	P	P	07 46 57.3	+2.1
	baz=202,SNR=6.2						
F21K	Alatna River	89.48	8		P	07 46 54.5	-0.6
F21K	Alatna River	89.48	8	P	P	07 46 57.1	+2.0
	baz=199,SNR=6.7						
MAYO	Mayo, Yukon	89.58	16	P	P	07 46 58.7	+2.9
	baz=215						
J29N	Klondike Camp	89.73	15	P	P	07 46 59.1	+2.7
	baz=213						
C17K	DeLong Mountai	89.79	4	P	P	07 46 58.7	+2.1
	baz=190,SNR=5.3						
F22K	John River	89.92	8	P	P	07 46 59.6	+2.4
	baz=200						
COLD	Coldfoot	89.93	9	P	P	07 46 59.9	+2.6
	baz=202,SNR=7.3						
I27K	Kandik River	89.97	13	P	P	07 47 00.0	+2.5
	baz=210						
MMPY	Sheldon Lake,	90.07	18	P	P	07 47 01.1	+3.0
	baz=219,SNR=12						
C18K	Utukok River	90.09	5	P	P	07 46 59.9	+1.8
	baz=192,SNR=7.7						
TGTN	Hyland Airport	90.14	20	P	P	07 47 01.1	+2.6
	baz=222						
E20K	Nigu River	90.16	6	P	P	07 47 00.7	+2.3
	baz=196,SNR=25						
I28M	Miner Creek	90.19	13	P	P	07 47 01.1	+2.5
	baz=211						
D19K	Kuna River	90.20	6	P	P	07 47 00.4	+1.9
	baz=195,SNR=14						
BEAVL	Fort Liard	90.23	22	P	P	07 47 01.6	+2.8
	baz=224						
BILL	Bilibino	90.23	353	⇓*e*P	P	07 46 59.2	+0.6
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ZEA	Zeya	90.26	329	*e*P	P	07 47 00.7	+1.6
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
J30M	Hart River	90.28	15	P	P	07 47 02.1	+3.0
	baz=215,SNR=6.8						
I29M	Ogilvie Camp,	90.47	14	P	P	07 47 01.1	+1.3
I29M				IAmb	IAmb	07 47 03.5	
	comp=Z,20nm,1.2s						
I29M	Ogilvie Camp,	90.47	14	P	P	07 47 02.1	+2.3
	baz=213						
GYA	Guiyang	90.51	298	⇑P	P	07 47 02.0	+0.9
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
H27K	Steamboat Moun	90.53	12	P	P	07 47 02.8	+2.6
	baz=210,SNR=5.8						
F24K	Squaw Lake	90.55	10	P	P	07 47 02.8	+2.6
	baz=204						
KOTAN	Kotaneelee Air	90.55	22	P	P	07 47 03.0	+2.7
	baz=225						
D20K	Etivluk River	90.56	6	P	P	07 47 02.5	+2.3
	baz=196,SNR=13						
E22K	Anaktuvuk Pass	90.56	8	P	P	07 47 02.5	+2.3
	baz=200,SNR=14						
E21K	Killik River	90.58	7	P	P	07 47 02.2	+1.9
	baz=198						
C19K	Lookout Ridge	90.67	5	P	P	07 47 02.9	+2.2
	baz=193,SNR=16						
G26K	Porcupine Rive	90.73	11	P	P	07 47 03.4	+2.5
	baz=208,SNR=8.3						
B18K	Kokolik River	90.76	4	P	P	07 47 03.4	+2.4
	baz=191						
E23K	Chandalar	90.79	9	P	P	07 47 03.8	+2.4
	baz=202,SNR=7.7						
I30M	Mount Dempster	90.81	15		P	07 47 02.4	+0.9
I30M	Mount Dempster	90.81	15	P	P	07 47 03.9	+2.4
	baz=215,SNR=7.9						
RSSD	Black Hills	90.95	42	P	P	07 47 05.6	+2.7
RSSD				pmax	pmax		
	comp=Z,7.0nm,1.1s						
E24K	Your Creek	90.97	9	P	P	07 47 04.8	+2.7
	baz=204						
F25K	Christian Rive	90.98	10	P	P	07 47 05.2	+2.9
	baz=206						
G27K	Doyon Strip	91.01	12	P	P	07 47 05.0	+2.6
	baz=210,SNR=6.1						
D22K	Ayikyak River	91.15	7	P	P	07 47 05.4	+2.5
	baz=200,SNR=9.9						
C21K	Knifeblade Rid	91.18	7	P	P	07 47 05.5	+2.5
	baz=198,SNR=9.1						
H29M	Whitestone	91.19	14	P	P	07 47 05.6	+2.5
	baz=213,SNR=6.6						
F26K	Sheenjek River	91.33	11	P	P	07 47 07.0	+3.2
	baz=208,SNR=5.4						
TOLK	Toolik Lake Re	91.33	9	P	P	07 47 06.2	+2.4
	baz=202						
E25K	Arctic Village	91.47	10	P	P	07 47 07.3	+2.9
	baz=206						
D23K	Nanushuk River	91.49	8	P	P	07 47 07.0	+2.6
	baz=202						
B21K	Ikpikpuk River	91.64	7	P	P	07 47 07.4	+2.3
	baz=198						
EPYK	Eagle Plains	91.68	14	P	P	07 47 07.9	+2.4
	baz=214,SNR=6.6						
B20K	Meade River	91.76	6	P	P	07 47 07.5	+1.9
	baz=196						
H31M	Peel River	91.78	15	P	P	07 47 07.8	+1.9
	baz=216						
XAN	Xi'an	91.79	306	⇓P	P	07 47 07.8	+1.1
XAN				pmax	pmax		
	comp=Z,42nm,1.2s						
XAN				pmax	pmax		
	comp=Z,160nm,3.8s						
G29M	Pine Creek	91.85	13	P	P	07 47 08.6	+2.4
	baz=213						
D24K	Happy Valley	91.92	9	P	P	07 47 09.1	+2.6
	baz=203						
NNA	Nana	92.00	104	LR	LR	08 21 18.5	
	comp=Z,85nm,18.5s,baz=228,slow=31						
F28M	Old Crow	92.06	12	P	P	07 47 09.8	+2.6
	baz=211						
E27K	Coleen River	92.22	11	P	P	07 47 10.3	+2.4
	baz=210,SNR=6.4						
G30M	tAoh Zraii Nji	92.30	14	P	P	07 47 10.5	+2.2
	baz=215,SNR=10						
C23K	Itkillik River	92.31	8	P	P	07 47 10.7	+2.5
	baz=202						
ATAH	Atahualpa	92.38	99	LR	LR	08 21 22.7	
	comp=Z,103nm,18.8s,baz=236,slow=31						
D25K	Kavik River	92.43	9	P	P	07 47 11.0	+2.2
	baz=206						
B22K	Teshekpuk Lake	92.45	7	P	P	07 47 11.2	+2.3
	baz=199						
C24K	Franklin Bluff	92.46	8	P	P	07 47 11.3	+2.4
	baz=203						
JTS	Las Juntas de	92.53	80	LR	LR	08 22 12.7	
	comp=Z,83nm,18.1s,baz=246,slow=31						
G31M	Satah River	92.70	15		P	07 47 09.3	-0.8
G31M	Satah River	92.70	15	P	P	07 47 12.4	+2.3
	baz=216,SNR=6.8						
HHC	Hu-ho-hao-te	92.76	313	*e*P	P	07 47 11.8	+0.6
HHC				pmax	pmax		
	comp=Z,15nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,4.4s						
HHC				LR	LR		
	comp=Z,130nm,13.8s						
HHC				LR	LR		
	comp=Z,83nm,14.5s						
HHC				LR	LR		
	comp=Z,140nm,13.8s						
BSI	Banda Aceh	92.88	275	P	P	07 47 12.7	+0.5
F30M	Barrier River	92.91	14	P	P	07 47 13.4	+2.3
	baz=215						
A22K	Sinclair Lake	92.93	6	P	P	07 47 13.0	+2.0
	baz=198						
E28M	Babbage River	92.97	12	P	P	07 47 14.0	+2.6
	baz=212						
E29M	Blow River	93.12	13	P	P	07 47 14.1	+2.1
	baz=213						
C27K	Jago River	93.12	10	P	P	07 47 14.4	+2.4
	baz=208						
C26K	Camden Bay	93.19	10	P	P	07 47 14.9	+2.6
	baz=207						
F31M	Tsiigehtchic	93.24	14	P	P	07 47 15.0	+2.5
	baz=217						
D27M	Malcolm River	93.26	11	P	P	07 47 15.6	+2.9
	baz=210						
KMI	Kunming	93.26	296	P	P	07 47 15.3	+1.3
KMI				pmax	pmax		
	comp=Z,24nm,1.1s						
KMI				LR	LR		
	comp=Z,120nm,14.7s						
KMI				LR	LR		
	comp=Z,170nm,15.8s						
KMI				LR	LR		
	comp=Z,200nm,18.3s						
BTO	Baotou	93.72	312	*e*P	P	07 47 17.0	+1.4
BTO				sP	sP	07 47 25.0	-0.1
BTO				PP	PP	07 51 00.5	-0.8
BTO				pmax	pmax		
	comp=Z,22nm,0.6s						
BTO				pmax	pmax		
	comp=Z,83nm,4.1s						
BTO				LR	LR		
	comp=Z,170nm,4.2s						
BTO				LR	LR		
	comp=Z,190nm,5.2s						
BTO				LR	LR		
	comp=Z,210nm,9.8s						
D28M	Stokes Point	93.75	12	P	P	07 47 16.7	+1.8
	baz=212						
INK	Inuvik	93.98	14	P	P	07 47 18.3	+2.4
	comp=Z,5.4nm,0.9s,baz=146,slow=2.8,SNR=5.5						
INK				LR	LR	08 27 13.9	
	comp=Z,120nm,18.4s,baz=218,slow=34						
	comp=Z,5.4nm,0.9s						
INK	Inuvik	93.98	14	P	P	07 47 17.9	+2.0
	baz=217						
CMAR	Chiang Mai Arr	94.14	288	P	P	07 47 17.1	-0.8
CMAR	Chiang Mai Arr	94.14	288	P	P	07 47 18.6	+0.7
	comp=Z,13nm,1.0s,baz=114,slow=3.0,SNR=36						
CMAR				LR	LR	08 26 53.6	
	comp=Z,22nm,20.3s,baz=90,slow=34						
	comp=Z,13nm,1.0s						
CHTO	Chiang Mai	94.27	288	P	P	07 47 18.8	+0.3
CHTO				pmax	pmax		
	comp=Z,17nm,1.0s						
YAK	Yakutsk	94.33	337	LR	LR	08 27 05.0	
	comp=Z,44nm,19.1s,baz=98,slow=34						
YAK	Yakutsk	94.33	337	*de*P	P	07 47 18.5	+0.8
YAK				pmax	pmax		
	comp=Z,11nm,0.7s						
CD2	Chengdu	94.58	301	*e*P	P	07 47 19.0	-0.7
PZH	PanZhiHua	94.61	297	P	P	07 47 20.8	+0.8
PZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YKA	Yellowknife Ar	95.55	24	P	P	07 47 26.0	+2.8
	comp=Z,3.0nm,0.9s,baz=244,slow=4.1,SNR=19						
YKA				LR	LR	08 23 50.4	
	comp=Z,81nm,21.0s,baz=294,slow=31						
	comp=Z,3.0nm,0.9s						
FFC	Flin Flon	97.11	34	*ce*P	P	07 47 28.6	-2.0
LPAZ	La Paz	98.07	111	LR	LR	08 25 23.3	
	comp=Z,133nm,18.2s,baz=236,slow=31						
ULN	Ulaanbaatar	98.56	318	⇓*e*P	Pdif	07 47 37.6	+0.1
ULN				pmax	pmax		
	comp=Z,1.0nm,1.2s						
SONM	Songino Array	98.96	318	P	P	07 47 39.1	-0.1
	comp=Z,0.6nm,0.7s,baz=131,slow=4.5,SNR=3.7						
	comp=Z,0.6nm,0.7s						
GTA	Gaotai	100.56	308	*e*P	Pdif	07 47 54.4	+7.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
WMQ	Urumqi	110.45	310	*e*PKP	PKiKP	07 52 30.3	-0.7
WMQ				LR	LR		
	comp=Z,450nm,21.3s						
WMQ				LR	LR		
	comp=Z,430nm,24.9s						
ZALV	Zalesovo Beam	113.58	321	PKiKP	PKiKP	07 52 36.6	0.0
	comp=Z,0.9nm,0.6s,baz=58,slow=3.6,SNR=3.8						
MK31	Makanchi Array	114.62	313	⇑*i*PKIKP	PKiKP	07 52 39.4	+0.6
MKAR	Makanchi Array	114.62	313	PKP	PKPdf	07 52 39.1	+0.3
	comp=Z,0.5nm,0.6s,baz=101,slow=1.2,SNR=6.1						
KURK	Kurchatov	117.25	317	⇓*i*PKIKP	PKiKP	07 52 44.2	+0.5
KURK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KURBB	Kurchatov Arra	117.31	317	PKP	PKPdf	07 52 43.8	0.0
	comp=Z,1.6nm,0.9s,baz=96,slow=1.7,SNR=9.0						
KURBB				PKKPbc	PKKPbc	08 03 09.5	+0.8
	comp=Z,0.6nm,0.9s,baz=264,slow=4.9,SNR=4.2						
BVAR	Borovoye Array	122.22	320	PKP	PKPdf	07 52 53.5	+0.3
	comp=Z,4.6nm,0.9s,baz=93,slow=3.1,SNR=11						
BRVK	Borovoye	122.28	320	*d i*PKIKP	PKiKP	07 52 54.3	+0.8
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARTI	Arti	128.17	326	*i* PKIKP	PKiKP	07 53 05.8	+0.7
ARTI						07 55 11.3	
ARTI						08 00 16.6	
ARTI				SS	SS	08 12 27.0	+6.1
ARCES	ARCESS Array B	130.31	351	PKP	PKiKP	07 53 09.3	+0.3
	comp=Z,0.6nm,0.5s,baz=54,slow=2.1,SNR=6.0						
OBN	Obninsk	139.25	334	*i* PKIKP	PKPdf	07 53 25.7	+0.4
OBN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HFS	Hagfors	140.79	354	PKhKP	PKPpre	07 53 24.3	
	comp=Z,4.7nm,1.0s,baz=336,slow=3.2,SNR=2.7						
KIV	Kislovodsk	142.31	315	*i* PKIKP	PKPdf	07 53 32.6	+1.3
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ERBR	Yeremizino-Bor	142.90	319	*i* PKIKP	PKPdf	07 53 29.9	-2.3
ERBR				pmax	pmax		
	comp=Z,13nm,0.6s						
MNK	Minsk	142.98	339	*i* PKP	PKPdf	07 53 30.6	-1.4
	comp=E,21nm,0.8s						
MNK				*i* PKP	PKPdf	07 53 30.6	-1.4
	comp=N,15nm,0.9s						
MNK				*i* PKP	PKPdf	07 53 30.6	-1.4
	comp=Z,12nm,0.9s,baz=36						
MNK				*i* PP	PP	07 56 41.3	0.0
MNK				*i* SKP		07 58 32.0	
MNK				*i* PKS		07 59 17.0	
MNK				*i* PPP	PPP	07 59 50.4	
MNK				*i* SKS	SKSdf	08 01 04.1	+24
MNK				*i* SS	SS	08 15 22.1	+4.6
MNK				*i* SSS	SSS	08 22 10.7	
MNK				*i* LQ	LQ	08 48 58.4	
MNK	Minsk	142.98	339	*i* PKIKP	PKPdf	07 53 30.6	-1.4
MNK				*i*		07 56 41.2	
MNK				*i* PPP	PPP	07 59 50.3	
MNK				*i* SS	SS	08 15 22.0	+4.6
MNK				pmax	pmax		
	comp=N,15nm,0.9s						
MNK				pmax	pmax		
	comp=Z,12nm,0.9s						
MNK				pmax	pmax		
	comp=E,21nm,0.8s						
OVD	Ostervraa, Den	143.85	356	*i* P	PKPdf	07 53 32.8	-0.7
BJUU	Bjuv	144.85	353	*i* P	PKPdf	07 53 36.1	+0.9
ANN	Anapa	145.22	320	*i* PKIKP	PKPdf	07 53 36.4	+0.2
ANN				pmax	pmax		
	comp=Z,58nm,1.0s						
EKA	Eskdalemuir Ar	145.23	9	PKPbc	PKPdf	07 53 38.0	+2.1
	comp=Z,11nm,1.0s,baz=4.3,slow=4.4,SNR=7.4						
LUNU	Lund	145.24	353	*i* P	PKPdf	07 53 37.1	+1.2
AKASG	Malin Array Be	145.51	334	PKPbc	PKPbc	07 53 36.9	+0.2
	comp=Z,13nm,0.6s,baz=39,slow=3.8,SNR=88						
KIEV	Kiev	145.53	334	⇑P	PKPbc	07 53 36.2	-0.5
KIEV	Kiev	145.53	334	⇑PKP2	PKPbc	07 53 36.2	-0.5
SSRD	Sdr. Stenderup	145.72	357	*i* P	PKPdf	07 53 36.5	-0.2
SORM	Soroca	147.84	332	⇓P	PKPbc	07 53 43.8	+0.3
SORM	Soroca	147.84	332	⇓PKP2	PKPbc	07 53 43.8	+0.3
OJC	Ojcow	149.17	343	*e*PKP	PKiKP	07 53 48.2	+0.1
KSP	Ksiaz	149.43	347	*e*PKP	PKiKP	07 53 49.6	+0.9
STHS	Stebnicka Huta	149.47	341	*e*PKP2	PKiKP	07 53 49.7	+0.9
STHS	Stebnicka Huta	149.47	341	*e*PKP	PKiKP	07 53 49.7	+0.9
CLL	Collm	149.53	352	*i* PKPbc	PKiKP	07 53 48.9	+0.1
	comp=Z,33nm,1.3s						
CLL				*e*PKPab	pPKPbc	07 53 54.0	-0.2
	comp=Z,16nm,0.9s						
CLL				AMS	AMS	09 03 00.0	
	comp=Z,100nm,18.9s						
BURAR	Bucovina Array	149.57	334	⇓P	PKiKP	07 53 50.0	+0.8
BURAR	Bucovina Array	149.57	334	⇓PKP2	PKiKP	07 53 50.0	+0.8
OSTC	Ostas	149.72	347	⇑*e*PKP	PKiKP	07 53 50.4	+1.1
OSTC	Ostas	149.72	347	*e*PKP2	PKiKP	07 53 50.4	+1.1
NIE	Niedzica	149.75	342	*e*PKP	PKiKP	07 53 50.6	+1.2
BRG	Berggiesshubel	149.82	350	⇓*i*PKP	PKiKP	07 53 50.8	+1.4
BRG				Amp		07 53 52.3	
	comp=Z,11nm,1.1s						
BRG	Berggiesshubel	149.82	350	P	PKPab	07 53 55.9	+2.0
BRG				Amp		07 53 56.6	
	comp=Z,16nm,0.9s						
TESR	Tescani	149.82	331	⇑P	PKiKP	07 53 49.7	+0.1
DPC	Dobruska-Polom	149.89	347	⇑*e*PKP	PKiKP	07 53 51.5	+1.8
DPC				*e*pPKP	sPKPbc	07 53 57.0	-0.4
DPC	Dobruska-Polom	149.89	347	*e*PKP2	PKiKP	07 53 51.5	+1.8
STEB	Steborice	149.95	345	⇑*e*PKP	PKiKP	07 53 50.8	+1.0
KRLC	Kraliky	150.05	346	⇑*e*PKP	PKiKP	07 53 51.8	+1.8
KRLC	Kraliky	150.05	346	*e*PKP2	PKiKP	07 53 51.8	+1.8
ONER	Baraj Valea Uz	150.07	331	⇑P	PKiKP	07 53 50.6	+0.5
MORC	Moravsky Berou	150.16	345	*e*PKP	PKiKP	07 53 51.2	+0.9
MORC	Moravsky Berou	150.16	345	⇑P	PKiKP	07 53 52.3	+2.0
MORC	Moravsky Berou	150.16	345	⇑PKP2	PKiKP	07 53 52.3	+2.0
TPGR	Topolog	150.20	327	⇑P	PKPbc	07 53 50.0	+0.4
BRTR	Keskin Array B	150.26	314	PKPbc	PKiKP	07 53 51.3	+0.4
	comp=Z,8.1nm,0.9s,baz=132,slow=1.8,SNR=32						
VRI	Vrincioaia	150.28	331	⇑P	PKPbc	07 53 50.1	+0.3
VRI	Vrincioaia	150.28	331	⇑PKP2	PKPbc	07 53 50.1	+0.3
PLOR	Plostina	150.32	331	⇓P	PKiKP	07 53 51.1	+0.4
PLOR	Plostina	150.32	331	⇓PKIKP	PKiKP	07 53 51.1	+0.4
KIRS	Kirsehir-Merke	150.36	313	⇑P	PKiKP	07 53 52.0	+1.0
TURR	Turia	150.46	332	⇑P	PKiKP	07 53 50.9	-0.1
OZUR		150.53	332	⇑P	PKPbc	07 53 50.2	-0.2
GOPC	GO Pecny, Ondr	150.60	349	⇑*e*PKP	PKiKP	07 53 52.2	+1.1
GOPC	GO Pecny, Ondr	150.60	349	*e*PKIKP	PKiKP	07 53 52.2	+1.1
ANTO	Ankara	150.74	315	⇑P	PKiKP	07 53 52.6	+0.8
ANTO	Ankara	150.74	315	⇑PKIKP	PKiKP	07 53 52.6	+0.8
DOPR	Dopca	150.80	332	⇑P	PKPbc	07 53 51.5	+0.5
VRAC	Vranov	150.81	346	PKPbc	PKiKP	07 53 51.9	+0.3
	comp=Z,6.8nm,1.0s,baz=101,slow=1.1,SNR=2.1						
VRAC	Vranov	150.81	346	*e*PKP	PKiKP	07 53 52.4	+0.8
MLR	Muntele Rosu	150.92	331	PKPbc	PKiKP	07 53 52.9	+0.9
	comp=Z,10nm,1.0s,baz=82,slow=0.5,SNR=7.0						
MLR	Muntele Rosu	150.92	331	⇑P	PKPbc	07 53 51.4	-0.1
MLR	Muntele Rosu	150.92	331	⇑PKIKP	PKPbc	07 53 51.4	-0.1
JAVC	Velka Javorina	150.98	344	*e*PKP	PKiKP	07 53 53.9	+1.9
VYHS	Vyhne	151.00	343	*e*PKIKP	PKiKP	07 53 54.0	+2.0
VYHS	Vyhne	151.00	343	*e*PKP	PKiKP	07 53 54.0	+2.0
KRUC	Moravsky	151.09	346	*e*PKP	PKiKP	07 53 53.2	+1.1
MARR	Marisel-Cluj	151.16	336	⇑P	PKiKP	07 53 53.3	+0.8
PSZ	Piszkesteto	151.21	341	⇑P	PKiKP	07 53 54.3	+1.8
PSZ	Piszkesteto	151.21	341	⇑PKIKP	PKiKP	07 53 54.3	+1.8
VOIR		151.36	332	⇑P	PKiKP	07 53 53.4	+0.5
VOIR		151.36	332	⇑PKIKP	PKiKP	07 53 53.4	+0.5
SAHE	Sakarya_HENDEK	151.43	319	⇑P	PKiKP	07 53 54.2	+1.1
MODS	Modra-Piesok	151.53	345	*e*PKIKP	PKiKP	07 53 55.1	+2.0
MODS	Modra-Piesok	151.53	345	*e*PKP	PKiKP	07 53 55.1	+2.0
MODS				*e*		08 11 45.0	
MODS				*e*		08 12 07.3	
MODS				*e*		08 12 31.8	
MODS				*e*		08 12 43.4	
MODS				*e*		08 13 21.4	
KHC	Kasperske Hory	151.57	350	⇑*e*PKP	PKiKP	07 53 55.0	+1.8
KHC				*e*pPKP	sPKPbc	07 54 03.6	+2.2
KHC				AMS	AMS	08 58 00.0	
	comp=Z,100nm,21.2s						
KHC	Kasperske Hory	151.57	350	*c i*PKIKP	PKiKP	07 53 55.2	+2.0
KHC				pmax	pmax		
	comp=Z,31nm,1.3s						
ARR	Arges	151.60	332	⇑P	PKiKP	07 53 54.6	+1.2
MMAI	Mount Meron Ar	151.65	301	PKPbc	PKiKP	07 53 55.3	+1.4
	comp=Z,4.7nm,0.7s,baz=55,slow=3.4,SNR=6.5						
CKRC	Cesky Krumlov	151.74	349	⇑*e*PKP	PKiKP	07 53 55.3	+1.8
CKRC	Cesky Krumlov	151.74	349	*e*PKIKP	PKiKP	07 53 55.3	+1.8
GERES	GERESS Array B	151.82	350	PKPbc	PKiKP	07 53 55.1	+1.3
	comp=Z,3.3nm,0.9s,baz=253,slow=1.4,SNR=16						
CONA	Conrad Observa	152.28	346	*e*pPKP	PKiKP	07 53 56.7	+2.0
	comp=Z,13nm,1.2s						
SURR	Surduc	152.31	336	⇓P	PKiKP	07 53 56.4	+1.6
GZR	Gura Zlata	152.36	334	⇓P	PKiKP	07 53 56.4	+1.4
RONA	Rosalia, Austr	152.39	345	*e*pPKP	PKiKP	07 53 56.8	+1.9
	comp=Z,13nm,1.2s						
RONA				*e*pPKP	PKPab	07 54 07.4	+2.6
	comp=Z,22nm,1.2s						
BZS	Buzias	152.62	336	⇑P	PKiKP	07 53 57.4	+2.0
BZS	Buzias	152.62	336	⇑PKIKP	PKiKP	07 53 57.4	+2.0
HERR	Herculane	152.92	334	⇑P	PKiKP	07 53 57.8	+1.7
MORH	Mrgy, Hungar	153.12	341	⇑P	PKiKP	07 53 58.3	+1.9
SOKA	Soboth	153.64	346	*e*pPKP	PKiKP	07 53 58.6	+1.0
	comp=Z,9.0nm,1.1s						
MOTA	Moosalm	153.67	353	*e*pPKP	PKiKP	07 53 59.8	+2.1
	comp=Z,14nm,1.5s						
ABTA	Abfaltersbach	154.06	350	*e*pPKP	PKiKP	07 54 00.1	+1.6
	comp=Z,9.0nm,1.1s						
ESDC	Sonseca Array	159.64	23	PKPab	PKPab	07 54 38.4	+2.3
	comp=Z,2.4nm,1.1s,baz=340,slow=4.7,SNR=6.3						
DBIC	Dimbokro	161.94	142	PKPab	PKPab	07 54 48.5	+1.8
	comp=Z,6.7nm,0.9s,baz=203,slow=4.5,SNR=4.0						
TORD	Torodi Ar. Bea	170.84	151	PKPab	PKPab	07 55 28.7	+2.9
	comp=Z,1.9nm,0.3s,baz=201,slow=1.3,SNR=1.7						

IDC ***13*** *07:49:48.6±4.2, 53°.85N×88°.20E, h0*^{km}*, mbtmp2.6/2,* *ML2.3/2, Error ellipse: s-maj=40.7km s-min=21.0km az=43.0*

ASRS 13 07:49:45.0±0.9**, 53°.79N×88°.23E, h0km, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**2.03**	**276**	I	I	08 02 20.7	
	0.1nm,0.8s,baz=91,slow=318,SNR=4.3						
ZALV	**Zalesovo Beam**	**2.03**	**276**	Pg	Pg	07 50 24.6	+0.8
	0.7nm,0.3s,baz=93,slow=13,SNR=5.8						
ZALV				Lg	Lg	07 50 52.2	
	1.4nm,0.3s,baz=91,slow=23,SNR=7.8						
KURBB	**Kurchatov Arra**	**6.75**	**246**	Pn	Pn	07 51 29.9	+4.7
	baz=65,slow=14,SNR=2.6						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.97**	**211**	Pn	Pn	07 51 47.0	+5.0
	baz=23,slow=14,SNR=1.9						
	0.1nm,0.5s						

IDC 13 07:50:15.2±5.7, 5°.33S×150°.20E, h128km±33km, mb3.6/5, mbtmp4.0/6, MS3.9/3, Error ellipse: s-maj=58.7km s-min=40.9km az=12.0

ISC 13 07:50:16.0±1.8**, 5°.3S**±0°.3×**150°.2E**±0°.3**, h135km, n10, σ0ˢ.39**/8**, mb3.9**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.01**	**216**	P	**Pn**	**07 51 29.3**	**-0.1**
	30nm,0.5s,baz=48,slow=15,SNR=12						
WRA	**Warramunga Arr**	**21.15**	**225**	P	**P**	**07 54 50.1**	**-0.4**
	3.3nm,0.4s,baz=50,slow=11,SNR=61						
WRA				ScP	**ScP**	**08 02 16.0**	**+0.3**
	0.5nm,0.8s,baz=56,slow=3.2,SNR=2.7						
	3.3nm,0.4s						
ASAR	**Alice Springs**	**24.02**	**219**	P	**P**	**07 55 18.7**	**+0.1**
	0.7nm,0.6s,baz=53,slow=9.1,SNR=14						
	0.7nm,0.6s						
FITZ	**Fitzroy Crossi**	**27.09**	**240**	P	**P**	**07 55 46.8**	**+0.5**
	2.8nm,0.4s,baz=55,slow=9.7,SNR=17						
	2.8nm,0.4s						
PSI	**Prapat**	**51.80**	**278**	LR	LR	08 24 05.4	
	comp=Z,122nm,18.8s,baz=155,slow=39						
VNDA	**Vanda**	**72.41**	**177**	P	**P**	**08 01 27.1**	**+0.1**
	0.3nm,0.5s,baz=345,slow=6.6,SNR=2.8						
	0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**80.14**	**327**	LR	LR	08 39 32.7	
	comp=Z,64nm,18.9s,baz=59,slow=37						
QSPA	**South Pole Qui**	**84.63**	**180**	P	**P**	**08 02 34.2**	**-0.1**
	1.1nm,0.7s,baz=342,slow=9.6,SNR=8.8						
	1.1nm,0.7s						
BVAR	**Borovoye Array**	**88.09**	**324**	LR	LR	08 44 22.7	
	comp=Z,40nm,19.4s,baz=75,slow=37						
TORD	**Torodi Ar. Bea**	**147.94**	**286**	PKPbc	**PKPbc**	**08 09 46.0**	**-0.5**
	2.2nm,0.5s,baz=56,slow=2.8,SNR=1.4						

IDC 13 07:52:43.1±5.0**, 19°.88S×168°.42E, h364km**±56km**, mb3.0**/2**, mbtmp3.6**/3**, Error ellipse: s-maj=186.4km s-min=63.3km az=162.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.86**	**220**	P	Pn	07 53 42.4	-0.1
	1.8nm,0.3s,baz=17,slow=20,SNR=9.9						
DZM				S	S	07 54 30.4	+0.2
	2.2nm,0.3s,baz=125,slow=17,SNR=2.0						
WRA	**Warramunga Arr**	**32.01**	**264**	P	P	07 58 36.5	-0.7
	0.3nm,0.7s,baz=94,slow=8.0,SNR=5.2						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**32.23**	**257**	P	P	07 58 39.4	+0.3
	2.5nm,0.6s,baz=88,slow=7.9,SNR=40						
	2.5nm,0.6s						
AKASG	**Malin Array Be**	**135.55**	**324**	PKP	PKPdf	08 11 19.9	-0.3
	0.3nm,0.4s,baz=57,slow=0.5,SNR=1.4						

CATAC 13 08:14:32.1±0.8**, 13°N**±4°×**8°9W**±°**, h28km**±4km**, M2.1**/10**, MLv2.1**/10**, Error ellipse: s-maj=9.5km s-min=4.7km az=13.6, confirmed, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAYA	**Jayaque - finc**	**0.62**	**3**	P	Pn	08 14 45.6	+0.3
JAYA	**Jayaque - finc**	**0.62**	**3**	S	Sn	08 14 54.7	+0.3
LOMA	**Loma Larga**	**0.68**	**26**	P	Pb	08 14 45.3	-0.2
PMON	**Piamonte**	**0.70**	**13**	S	Sn	08 14 57.5	+1.3
UEES	**Universidad Ev**	**0.72**	**19**	P	Pb	08 14 45.4	-0.8
UEES	**Universidad Ev**	**0.72**	**19**	S	Sn	08 14 56.8	0.0
COEG	**Centro de Oper**	**0.83**	**45**	P	Pn	08 14 48.1	+0.1
TECO	**Alcaldia de Te**	**0.85**	**54**	S	Sb	08 14 59.4	+0.1
TECO	**Alcaldia de Te**	**0.85**	**54**	P	Pn	08 14 48.0	-0.3
UESV	**Universidad de**	**0.90**	**48**	S	Sn	08 15 01.5	+0.2
FAME	**Alcaldia de Sa**	**0.96**	**327**	S	Sb	08 15 02.2	-0.3
FAME	**Alcaldia de Sa**	**0.96**	**327**	P	Pb	08 14 50.1	-0.1
SCLA	**Alcaldia de Sa**	**0.99**	**48**	P	Pn	08 14 50.5	+0.2
SCLA	**Alcaldia de Sa**	**0.99**	**48**	S	Sb	08 15 04.0	+0.6
SLOZ	**Alcaldia de Sa**	**1.03**	**343**	S	Sb	08 15 04.7	+0.1
SLOZ	**Alcaldia de Sa**	**1.03**	**343**	P	Pn	08 14 50.9	+0.1
PQSS	**Presa 15 de Se**	**1.07**	**57**	P	Pn	08 14 51.1	-0.3
PQSS	**Presa 15 de Se**	**1.07**	**57**	S	Sb	08 15 05.6	-0.1
PACA	**Pacayal**	**1.21**	**69**	S	Sn	08 15 09.3	+0.3
MTO3	**Montecristo**	**1.36**	**5**	P	Pn	08 14 56.0	+0.4
MTO3	**Montecristo**	**1.36**	**5**	S	Sn	08 15 13.0	+0.1

CATAC 13 08:14:42.6±0.5**, 14°N**±6°×**8°9W**±°**, h13km**±4km**, M2.2**/6**, MLv2.2**/6**, Error ellipse: s-maj=12.3km s-min=4.4km az=11.3, confirmed, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITCA	**Escuela Especi**	**0.24**	**167**	P	Pb	08 15 04.7	+16
JAYA	**Jayaque - finc**	**0.27**	**205**	P	Pg	08 14 46.1	-2.3
JAYA	**Jayaque - finc**	**0.27**	**205**	S	Sb	08 14 54.1	-0.1
LOMA	**Loma Larga**	**0.30**	**149**	P	Pn	08 14 57.1	+4.2
PAVA	**Las Pavas**	**0.43**	**116**	P	Pg	08 14 49.0	-2.1
PAVA	**Las Pavas**	**0.43**	**116**	S	Sn	08 15 01.2	-1.3
PAVA	**Las Pavas**	**0.43**	**116**	P	Pg	08 14 49.1	-2.1
PAVA	**Las Pavas**	**0.43**	**116**	S	Sn	08 15 01.0	-1.5
NUBE	**Las Nubes**	**0.43**	**270**	S	Sn	08 15 01.6	-1.1
NUBE	**Las Nubes**	**0.43**	**270**	P	Pg	08 14 49.4	-2.0
NUBE	**Las Nubes**	**0.43**	**270**	P	Pg	08 14 49.4	-1.9
NUBE	**Las Nubes**	**0.43**	**270**	S	Sn	08 15 02.0	-0.7
COEG	**Centro de Oper**	**0.52**	**123**	S	Sg	08 14 59.6	-0.3
COEG	**Centro de Oper**	**0.52**	**123**	P	Pg	08 14 46.3	-6.6
COEG	**Centro de Oper**	**0.52**	**123**	S	Sg	08 14 59.7	-0.2
ALJI	**Alcalda de J**	**0.94**	**128**	P	Pn	08 15 03.4	+1.8
PACA	**Pacayal**	**1.07**	**114**	P	Pn	08 15 10.1	+6.5
MGAN	**Managua**	**3.48**	**120**	P	Pn	08 15 32.9	-3.6

ASRS 13 08:18:33.0±1.4, 53°.72N×91°.14E, h0km, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.

IDC 13 08:18:37.6±4.0**, 53°.75N×90°.94E, h0km, mbtmp2.9**/2**, ML2.6**/2**, Error ellipse: s-maj=36.1km s-min=26.4km az=28.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.63**	**276**	I	I	08 42 10.0	
	baz=90,slow=308,SNR=4.2						
ZALV	**Zalesovo Beam**	**3.63**	**276**	Pg	Pb	08 19 42.2	-0.4
	0.5nm,0.3s,baz=93,slow=22,SNR=4.4						
ZALV				Lg	Lg	08 20 32.4	
	0.7nm,0.3s,baz=88,slow=29,SNR=5.3						
KURBB	**Kurchatov Arra**	**8.25**	**253**	Pn	Pn	08 20 39.0	+0.7
	0.1nm,0.3s,baz=65,slow=15,SNR=3.2						
KURBB				Sn	Sn	08 22 10.9	-1.2
	baz=63,slow=28						
KURBB				Lg	Lg	08 22 58.9	
	0.1nm,0.3s,baz=60,slow=31,SNR=7.9						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**8.89**	**222**	Pn	Pn	08 20 47.4	+0.1
	0.1nm,0.3s,baz=40,slow=14,SNR=2.6						
MKAR				Lg	Lg	08 23 18.2	
	baz=33,slow=29,SNR=2.5						
	0.2nm,0.4s						

IDC 13 08:36:43.0±3.5**, 13°.28N×144°.11E, h195km**±15km**, mb2.7**/2**, mbtmp3.2**/2**, Error ellipse: s-maj=155.5km s-min=38.3km az=123.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.80**	**68**	P	Pn	08 37 11.7	+0.8
	25nm,0.3s,baz=27,slow=3.4,SNR=9.3						
GUMO				S	Sn	08 37 33.1	+0.5
	43nm,0.3s,baz=155,slow=22,SNR=13						
WRA	**Warramunga Arr**	**34.39**	**196**	P	P	08 43 11.3	-0.5
	0.3nm,0.6s,baz=19,slow=9.6,SNR=4.8						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**38.05**	**195**	P	P	08 43 42.9	+0.1
	0.3nm,0.8s,baz=14,slow=13,SNR=4.5						
	0.3nm,0.8s						
LPAZ	**La Paz**	**148.71**	**100**	PKPbc	PKPbc	08 56 08.0	-0.8
	0.3nm,0.5s,baz=270,slow=3.0,SNR=2.1						

NEIC 13 08:37:41.5±1.0**, 37°.01N**±0°.01×**104°.98W**±0°.02**, h6km**±3km**, mb_Lg2.7**/104**, ML2.8**/59**, Error ellipse: s-maj=2.1km s-min=1.6km az=118.0, Colorado**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T25A	**Trinidad**	**0.47**	**74**	Pg	Pg	08 37 50.9	+0.3
T25A				Sg	Sg	08 37 57.3	+0.6
T25A				IAML		08 37 57.6	
	comp=N,446nm,0.6s						
T25A				IAML		08 37 57.6	
	comp=E,736nm,0.5s						
SDCO	**Great Sand Dun**	**0.84**	**330**	Pg	Pg	08 37 57.2	-0.5
SDCO				Sg	Sg	08 38 08.0	-0.7
SDCO				IAML		08 38 08.6	
	comp=E,144nm,0.2s						
S22A	**4UR Ranch, Cre**	**1.65**	**297**	Pg	Pn	08 38 11.5	+0.2
S22A				IAML		08 38 39.1	
	comp=N,75nm,0.7s						
S22A				IAML		08 38 39.4	
	comp=E,120nm,0.7s						
RTBA	**Rita Blanca**	**1.89**	**107**		Pb	08 38 16.2	-0.3
RTBA					Sb	08 38 41.2	+0.9
RTBA				IAmb_Lg		08 38 45.6	
	comp=Z,51nm,1.0s						
Q24A	**Divide**	**1.95**	**356**		Pb	08 38 17.3	-0.4
Q24A				IAML		08 38 47.4	
	comp=N,34nm,0.3s						
ANMO	**Albuquerque**	**2.39**	**211**		Pn	08 38 23.0	+1.6
ANMO	**Albuquerque**	**2.39**	**211**		Pn	08 38 22.1	+0.7
ANMO				IAML		08 39 00.6	
	comp=N,18nm,0.6s						
ANMO				IAML		08 39 02.3	
	comp=N,14nm,1.3s						
ANMO				IAmb_Lg		08 39 02.9	
	comp=Z,14nm,0.9s						
ANMO	**Albuquerque**	**2.39**	**211**		Pn	08 38 22.9	+1.5
ANMO				IAML		08 39 00.5	
	comp=Z,11nm,0.6s						
ANMO				IAML		08 39 00.8	
	comp=Z,8.9nm,0.6s						
ANMO				IAmb_Lg		08 39 01.6	
	comp=Z,11nm,0.7s						
KSCO	**Kaye Shedlock'**	**2.72**	**42**		Pb	08 38 28.7	-2.0
MVCO	**Mesa Verde**	**2.82**	**275**		Pb	08 38 30.1	-2.4
MVCO				IAML		08 39 13.5	
	comp=Z,90nm,0.7s						
ISCO	**Idaho Springs**	**2.83**	**350**		Pn	08 38 28.8	+1.2
PV01	**Paradox Valley**	**3.07**	**292**		Pn	08 38 33.7	+2.9
PV01				IAML		08 39 21.4	
	comp=E,53nm,0.8s						
PV01				IAML		08 39 23.1	
	comp=N,34nm,1.2s						
PV15	**Paradox Valley**	**3.08**	**297**		Pn	08 38 32.3	+1.3
PV15				IAML		08 39 22.2	
	comp=E,52nm,0.7s						
PV15				IAML		08 39 25.3	
	comp=N,36nm,0.8s						
BNM	**Barren Site**	**3.16**	**206**		Pn	08 38 35.1	+3.1
PV02	**Paradox Valley**	**3.22**	**293**		Pn	08 38 33.8	+0.9
PV02				IAML		08 39 33.1	
	comp=E,60nm,0.9s						
PV07	**Paradox Valley**	**3.24**	**297**		Pn	08 38 33.8	+0.7
PV07				IAML		08 39 26.1	
	comp=E,24nm,0.7s						
PV07				IAML		08 39 31.2	
	comp=N,20nm,0.9s						
PV12	**Saucer Basin,**	**3.30**	**294**		Pn	08 38 35.6	+1.6
CRNM	**Carthage**	**3.38**	**206**		Pn	08 38 36.2	+1.2
AMTX	**Amarillo**	**3.42**	**128**		Pn	08 38 36.4	+1.0
MSTX	**Muleshoe**	**3.53**	**149**		Pn	08 38 37.3	+0.2
MSTX				IAmb_Lg		08 39 38.5	
	comp=Z,20nm,1.1s						
O20A	**White River Ci**	**4.03**	**322**	Pn	Pn	08 38 46.2	+2.2
O20A				IAML		08 39 37.2	
	comp=Z,12nm,0.8s						
O20A				IAML		08 40 08.2	
	comp=Z,14nm,1.9s						
OGNE	**Ogallala**	**4.55**	**29**	IAmb_Lg		08 40 15.3	
	comp=Z,22nm,0.8s						
ELIS	**Ellis County**	**4.57**	**100**	IAmb_Lg		08 40 08.7	
	comp=Z,17nm,0.7s						
DKNS	**Dickens**	**4.70**	**134**	IAmb_Lg		08 40 18.1	
	comp=Z,14nm,0.8s						
POST	**Post**	**4.86**	**143**		Pn	08 38 55.6	+0.3
POST				IAmb_Lg		08 40 21.8	
	comp=Z,9.5nm,0.8s						
SN07	**Snyder 07**	**5.15**	**138**	IAmb_Lg		08 40 27.5	
	comp=Z,15nm,0.8s						
R32A	**Long Quarter,**	**5.16**	**72**	Pn	Pn	08 38 58.7	-0.7
R32A				IAmb_Lg		08 40 34.2	
	comp=Z,18nm,0.9s						
SN05	**Snyder 5**	**5.32**	**140**	IAmb_Lg		08 40 42.6	
	comp=Z,13nm,1.0s						
WUAZ	**Wupatki**	**5.38**	**256**		Pn	08 39 03.3	+0.7
WMOK	**Wichita Mounta**	**5.52**	**112**	IAmb_Lg		08 40 50.6	
	comp=Z,11nm,1.1s						
KAN08	**Anthony NE Sta**	**5.60**	**86**	Pn	Pn	08 39 06.4	+1.0
KAN14	**Manchester OK**	**5.61**	**88**	IAmb_Lg		08 40 46.6	
	comp=Z,8.2nm,1.0s						
CROK	**Carrier**	**5.64**	**93**	IAmb_Lg		08 40 50.9	
	comp=Z,9.1nm,0.7s						
MNHN	**Monahans**	**5.95**	**161**	IAmb_Lg		08 40 58.5	
	comp=Z,12nm,1.1s						
SGCY	**Sterling City**	**6.00**	**147**	IAmb_Lg		08 41 03.1	
	comp=Z,13nm,0.8s						
KAN13	**South Haven SW**	**6.00**	**88**	IAmb_Lg		08 40 58.9	
	comp=Z,12nm,0.9s						
ABTX	**Abilene, Hawle**	**6.20**	**133**	IAmb_Lg		08 41 06.3	
	comp=Z,9.3nm,0.8s						
OKCSW	**OKLAHOMA CITY**	**6.30**	**103**	IAmb_Lg		08 40 57.3	
	comp=Z,14nm,0.7s						
FNO	**Franklin**	**6.38**	**104**	IAmb_Lg		08 41 14.3	
	comp=Z,9.7nm,0.7s						
T35A	**Sooner Cattle**	**6.78**	**88**	IAmb_Lg		08 41 20.3	
	comp=Z,13nm,1.0s						
FW06	**Azle**	**7.30**	**121**	IAmb_Lg		08 41 37.3	
	comp=Z,8.3nm,0.9s						
SAND	**Sanderson**	**7.43**	**160**	IAmb_Lg		08 41 58.1	
	comp=Z,6.1nm,0.8s						
TUL3	**Leonard**	**7.48**	**96**	IAmb_Lg		08 41 41.1	
	comp=Z,8.6nm,0.8s						
BRDY	**Brady**	**7.56**	**137**	IAmb_Lg		08 41 51.2	
	comp=Z,7.9nm,0.8s						
DRIO	**Del Rio**	**8.40**	**153**	IAmb_Lg		08 42 24.6	
	comp=Z,9.6nm,0.9s						

GCG 13 08:41:43.9±0.4, 14°.43N×92°.27W, h51km±9km, MD3.7, ML3.5

MEX 13 08:41:45.4±0.9, 14°.55N×92°.39W, h62km±15km, MD3.9

ISC 13 08:41:41.1±2.3**, 14°.4N**±0°.1×**92°.31W**±0°.09**, h72km**±13km**, n12, σ1ˢ.63**/23**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMCA	**Catarina**	**0.51**	**26**	*i* P	**Pn**	**08 41 54.9**	**+0.6**
SMCA				*e*S	**Sn**	**08 42 03.3**	**-0.7**
SMCA				IAML		08 42 04.5	
	comp=N,554nm,0.2s						
THIG		**0.51**	**5**	*e*P	**Pn**	**08 41 55.1**	**+0.9**
THIG				*e*S	**Sn**	**08 42 03.6**	**-0.3**
RTAL	**Retalhuleu**	**0.61**	**78**	*e*P	**Pn**	**08 41 55.9**	**+0.7**
RTAL				*e*S	**Sn**	**08 42 08.8**	**+3.1**
PATR	**El Naranjo**	**0.72**	**6**	*e*P	**Pn**	**08 41 56.6**	**-0.1**
PATR				*e*S	**Sn**	**08 42 06.4**	**-1.7**
PAVE	**Pavencul**	**0.80**	**9**	*e*P	**Pn**	**08 41 57.7**	**+0.1**
PAVE				*e*S	**Sn**	**08 42 08.2**	**-1.6**
STG8	**El Palmar, Qui**	**0.93**	**87**	*i* P	**Pn**	**08 41 58.7**	**-0.4**
STG8				*i* S	**Sn**	**08 42 10.5**	**-1.9**
STG8				IAML		08 42 11.6	
	comp=N,2μm,0.2s						
STG0	**El Palmar, Qui**	**0.94**	**88**	*i* P	**Pn**	**08 41 58.8**	**-0.3**
STG0				*i* S	**Sn**	**08 42 10.5**	**-2.1**
STG0				IAML		08 42 12.1	
	comp=E,5μm,0.2s						
HUEH	**Huehuetenango**	**1.20**	**40**	*e*P	**Pn**	**08 42 04.3**	**+1.8**
HUEH				*e*S	**Sn**	**08 42 19.6**	**+1.1**
HUEH	**Huehuetenango**	**1.20**	**40**	*i* P	**Pn**	**08 42 04.5**	**+2.0**
PCIG		**1.57**	**326**	*e*P	**Pn**	**08 42 07.6**	**+0.5**
PCIG				*e*S	**Sn**	**08 42 25.5**	**-1.2**
CCIG	**Comitan**	**1.88**	**5**	*e*P	**Pn**	**08 42 10.6**	**-0.9**
CCIG				*e*S	**Sn**	**08 42 31.5**	**-3.0**
TGIG		**2.50**	**342**	*e*P	**Pn**	**08 42 21.7**	**+2.1**
TGIG				*e*S	**Sn**	**08 42 49.8**	**+0.7**

ASRS 13 08:55:10.0±1.3, 53°.64N×87°.93E, h0km, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.

IDC 13 08:55:13.0±3.6**, 53°.57N×87°.77E, h0km, mbtmp2.5**/2**, ML2.3**/2**, Error ellipse: s-maj=33.3km s-min=17.9km az=54.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.79**	**283**	I	I	09 06 52.5	
	baz=99,slow=322,SNR=2.3						
ZALV	**Zalesovo Beam**	**1.79**	**283**	Pg	Pn	08 55 44.8	-0.3
	0.8nm,0.3s,baz=100,slow=15,SNR=6.7						
ZALV				Lg	Lg	08 56 10.3	
	1.1nm,0.3s,baz=106,slow=27,SNR=6.7						
KURBB	**Kurchatov Arra**	**6.41**	**246**	Pn	Pn	08 56 49.3	+0.8
	0.1nm,0.3s,baz=60,slow=14,SNR=2.3						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**7.64**	**210**	Pn	Pn	08 57 06.6	+1.1
	0.1nm,0.3s,baz=22,slow=36,SNR=1.5						
	0.1nm,0.3s						

NEIC 13 08:59:37.9±0.4**, 37°.01N**±0°.01×**104°.98W**±0°.02**, h8km**±8km**, mb_Lg2.1**/17**, ML2.0**/10**, Error ellipse: s-maj=2.0km s-min=1.5km az=69.0, Colorado**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T25A	**Trinidad**	**0.47**	**74**	Pg	Pg	08 59 47.5	+0.4
T25A				Sg	Sg	08 59 53.9	+0.6
T25A				IAML		08 59 54.0	
	comp=E,159nm,0.2s						
T25A				IAML		08 59 54.0	
	comp=N,138nm,0.3s						
SDCO	**Great Sand Dun**	**0.84**	**330**	Pg	Pg	08 59 53.9	-0.3
SDCO				Sg	Sg	09 00 05.0	-0.1
S22A	**4UR Ranch, Cre**	**1.65**	**297**		Pb	09 00 08.4	-0.3
RTBA	**Rita Blanca**	**1.89**	**107**	Pn	Pb	09 00 12.8	+0.1
RTBA				IAmb_Lg		09 00 37.0	
	comp=Z,7.7nm,1.3s						
Q24A	**Divide**	**1.95**	**356**	Pn	Pn	09 00 11.3	-0.4
ANMO	**Albuquerque**	**2.39**	**211**	Pn	Pn	09 00 18.1	+0.6
ANMO	**Albuquerque**	**2.39**	**211**	Pn	Pn	09 00 17.6	+0.1
ANMO				IAmb_Lg		09 00 54.8	
	comp=Z,2.5nm,0.8s						
ANMO	**Albuquerque**	**2.39**	**211**	IAmb_Lg		09 00 52.4	
	comp=Z,2.3nm,0.7s						
ANMO	**Albuquerque**	**2.39**	**211**	IAmb_Lg		09 00 55.4	
	comp=Z,3.8nm,1.1s						
PV15	**Paradox Valley**	**3.08**	**297**	Pn	Pn	09 00 25.6	-1.5
PV02	**Paradox Valley**	**3.22**	**293**	Pn	Pn	09 00 27.6	-1.3
PV03	**Paradox Valley**	**3.31**	**293**	Pn	Pn	09 00 29.8	-0.5
PV04	**Paradox Valley**	**3.41**	**295**	Pn	Pn	09 00 31.7	+0.1
AMTX	**Amarillo**	**3.42**	**128**	IAmb_Lg		09 01 31.8	
	comp=Z,7.7nm,0.9s						
PV20	**West Nyswonger**	**3.43**	**294**	Pn	Pn	09 00 32.7	+0.8
PV23	**Carpenter Ridg**	**3.51**	**295**	Pn	Pn	09 00 33.0	0.0
PV21	**Cone Mtn., Par**	**3.52**	**297**	Pn	Pn	09 00 34.7	+1.5
ELIS	**Ellis County**	**4.57**	**100**	Pn	Pn	09 00 47.8	+0.4

RSNC 13 09:00:41.2±0.0**, 7°N**±1°×**7°3W**±°**, h144km**±2km**, M2.8, mB4.0, mb3.1, ML2.5, Mw(mB)3.1, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.23**	**186**	P	Pn	09 01 00.5	-0.7
BARC				S	Sn	09 01 15.5	-0.8
BRJC	**Barrancabermej**	**0.60**	**285**	P	Pn	09 01 02.2	-0.2
BRJC				S	Sn	09 01 19.2	+0.7
PAMC	**Pamplona, Colo**	**0.69**	**41**	P	Pn	09 01 03.3	-0.3
PAMC				S	Sn	09 01 20.5	-0.1
RUSC	**La Rusia**	**0.93**	**175**	P	Pn	09 01 04.4	-1.0
RUSC				S	Sn	09 01 23.3	-0.4
PTBC	**PUERTO BERRIO,**	**1.32**	**258**	P	Pn	09 01 06.9	-1.5
PTBC				S	Sn	09 01 28.4	-0.8
TAMC	**Tame, Arauca**	**1.41**	**106**	P	Pn	09 01 08.9	-0.5
TAMC				S	Sn	09 01 30.4	-0.6
SPBC	**San Pablo de B**	**1.47**	**218**	P	Pn	09 01 09.3	-0.8
SPBC				S	Sn	09 01 31.2	-1.0
ZARC	**Zaragoza, Cauc**	**1.81**	**292**	P	Pn	09 01 13.0	-0.8
ZARC				S	Sn	09 01 38.5	-0.3
NORC	**Norcasia**	**2.11**	**234**	S		09 01 43.5	
NORC	**Norcasia**	**2.11**	**234**	P		09 01 16.5	
NORC	**Norcasia**	**2.11**	**234**	P	Pn	09 01 16.3	-1.0
NORC				S	Sn	09 01 42.6	-2.5
CHIC	**Chingaza**	**2.25**	**195**	P	Pn	09 01 18.8	-0.6
CHIC				S	Sn	09 01 48.6	-0.1
ROSC	**El Rosal**	**2.28**	**210**	P	Pn	09 01 20.8	+1.0
ROSC				S	Sn	09 01 51.2	+1.9
CVER	**Cruz Verde, Cu**	**2.46**	**202**	P	Pn	09 01 22.1	+0.1
CVER				S	Sn	09 01 54.5	+1.1
UREC	**San Jos de Ur**	**2.53**	**292**	P	Pn	09 01 20.4	-2.0
UREC				S	Sn	09 01 50.8	-3.4
GUY2C	**Guyana, Caldas**	**2.71**	**234**	P	Pn	09 01 25.0	-0.1
GUY2C				S	Sn	09 01 58.0	-0.8
CBOC	**Ciudad Bolivar**	**2.99**	**252**	P	Pn	09 01 28.6	+0.2
CBOC				S	Sn	09 02 04.4	-0.4
DBBC	**Dabeiba**	**3.03**	**274**	P	Pn	09 01 28.5	-0.4
DBBC				S	Sn	09 02 03.7	-2.0
ARGC	**Ariguani, Magd**	**3.20**	**340**	P	Pn	09 01 30.6	-0.4
ARGC				S	Sn	09 02 10.5	+1.0
PRAC	**Prado**	**3.53**	**209**	P	Pn	09 01 34.5	-0.8
PRAC				S	Sn	09 02 16.2	-1.0
APAC	**Apartado, Choc**	**3.56**	**288**	P	Pn	09 01 34.4	-1.1
APAC				S	Sn	09 02 15.7	-1.9
ORTC	**Ortega, Tolima**	**3.56**	**216**	P	Pn	09 01 35.1	-0.5
ORTC				S	Sn	09 02 18.0	+0.2
PLMC	**San Jos del P**	**3.64**	**239**	P	Pn	09 01 36.2	-0.5
PLMC				S	Sn	09 02 19.3	-0.4
SJCC	**San Jacinto, C**	**3.65**	**327**	P	Pn	09 01 34.2	-2.6
SJCC				S	Sn	09 02 16.4	-3.6
CRJC	**Cerrejon, Guaj**	**4.18**	**4**	P	Pn	09 01 40.9	-2.9
CRJC				S	Sn	09 02 28.8	-3.7
URIC	**Uribia, Colomb**	**4.99**	**13**	P	Pn	09 01 51.3	-3.1
URIC				S	Sn	09 02 47.9	-3.5
POPC	**Popayan, Colom**	**5.51**	**220**	P	Pn	09 02 00.0	-1.6
	212nm2.9nm,1.2s						
BBAC	**Balboa, Cauca**	**6.27**	**221**	P	Pn	09 02 11.4	-0.3

RSNC 13 09:00:46.0±0.0**, 4°N**±2°×**7°4W**±°**, h19km**±2km**, M1.4, ML1.4, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URMC	**La Uribe, Meta**	**0.35**	**168**	P	Pg	09 00 53.0	-0.5
URMC				S	Sb	09 00 58.9	0.0
PRAC	**Prado**	**0.45**	**286**	P	Pg	09 00 54.6	-0.7
PRAC				S	Sb	09 01 01.9	0.0
ORTC	**Ortega, Tolima**	**0.85**	**292**	P	Pb	09 01 01.2	-1.1
ORTC				S	Sb	09 01 13.6	+0.2
MACC	**Macarena, Meta**	**1.56**	**157**	P	Pn	09 01 11.7	-1.0
MACC				S	Sn	09 01 31.7	-0.7

RSNC 13 09:17:59.0±0.0, 9°N±1°×7°8W±°, h57km±8km, M2.6, mb4.1, ML2.4

ISC 13 09:17:57.8±1.4**, 9°.06N**±0°.05×**77°.82W**±0°.04**, h71km**±15km**, n14, σ1ˢ.50**/28**, Near north coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPC	**Capurgana**	**0.63**	**132**	P	**Pn**	**09 18 12.2**	**+0.2**

CAPC				S	Sn	09 18 21.6	-0.9
LCBC	Los crdobas,	1.45	98	P	Pn	09 18 24.0	+1.9
LCBC				S	Sn	09 18 40.0	-0.5
APAC	Apartado, Choc	1.68	133	P	Pn	09 18 27.1	+1.8
APAC				S	Sn	09 18 45.8	-0.3
PTAC	Punta Ardita,	1.90	180	P	Pn	09 18 28.4	+0.2
PTAC				S	Sn	09 18 50.6	-0.7
BCIP	Isla Barro Col	2.00	273	P	Pn	09 18 30.2	+0.8
BCIP				S	Sn	09 18 53.1	-0.4
UREC	San Jos de Ur	2.61	120	P	Pn	09 18 38.0	+0.2
UREC				S	Sn	09 19 07.4	-1.0
SJCC	San Jacinto, C	2.73	72	P	Pn	09 18 41.0	+1.5
SJCC				S	Sn	09 19 11.0	-0.5
ZARC	Zaragoza, Cauc	3.32	118	P	Pn	09 18 47.7	+0.3
ZARC				S	Sn	09 19 23.9	-1.9
CBOC	Ciudad Bolivar	3.65	150	P	Pn	09 18 53.5	+1.5
CBOC				S	Sn	09 19 35.1	+1.1
PTBC	PUERTO BERRIO,	4.17	127	P	Pn	09 18 58.7	-0.3
PTBC				S	Sn	09 19 44.8	-1.7
PLMC	San Jos del P	4.40	160	P	Pn	09 19 01.8	-0.5
PLMC				S	Sn	09 19 50.7	-1.6
BRJC	Barrancabermej	4.54	117	P	Pn	09 19 07.1	+3.1
BRJC				S	Sn	09 19 55.9	+0.3
CRJC	Cerrejon, Guaj	5.24	68	P	Pn	09 19 14.4	+0.7
	22nm,0.9s						
CRJC				S	Sn	09 20 08.9	-4.0
	22nm,0.9s						
RUSC	La Rusia	5.65	124	P	Pn	09 19 21.0	+1.3
RUSC				S	Sn	09 20 22.6	-1.0

IDC ***13*** *09:19:49.5±2.4, 30°.95N×141°.12E, h0^{km}, mb3.8/6, mbtmp3.7/8, ML3.4/2, Error ellipse: s-maj=105.8km s-min=17.8km az=71.0*

ISC 13 09:19:54.2±2.3**, 30°.9N**±0°.3×**141°.2E**±0°.7**, h35^{km}, n8,** σ**0^{s}.71**/8**, mb3.8**/6**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	3.90	166	Pn	Pn	09 20 52.1	+0.4
	7.6nm,0.3s,baz=360,slow=21,SNR=8.9						
JCJ				Sn	Sn	09 21 35.1	-1.2
	5.6nm,0.3s,baz=270,slow=22,SNR=1.9 26nm,0.5s						
MJAR	Matsushiro Arr	6.14	337	Pn	Pn	09 21 21.4	-1.0
	0.3nm,0.3s,baz=160,slow=12,SNR=17						
MJAR				Sn	Sn	09 22 25.8	-5.6
	baz=156,slow=27 1.4nm,0.3s						
SONM	Songino Array	31.42	313	P	P	09 26 12.0	-0.2
	0.3nm,0.4s,baz=117,slow=8.3,SNR=2.1 0.3nm,0.4s						
MKAR	Makanchi Array	47.42	307	P	P	09 28 25.1	-0.1
	0.4nm,0.5s,baz=89,slow=9.0,SNR=6.1 0.4nm,0.5s						
KURBB	Kurchatov Arra	49.78	312	P	P	09 28 43.0	-0.3
	0.6nm,0.5s,baz=87,slow=6.9,SNR=5.8 0.6nm,0.5s						
WRA	Warramunga Arr	50.98	188	P	P	09 28 53.0	+0.5
	0.6nm,0.4s,baz=6.0,slow=7.6,SNR=27 0.6nm,0.4s						
ASAR	Alice Springs	54.70	188	P	P	09 29 20.9	+0.8
	0.4nm,0.5s,baz=13,slow=7.3,SNR=13 0.4nm,0.5s						
FINES	FINESS Array B	74.15	333	P	P	09 31 26.6	-0.2
	2.4nm,0.9s,baz=70,slow=9.0,SNR=3.7 2.4nm,0.9s						

GCG ***13*** *09:21:06.9±0.4, 13°.40N×89°.73W, h52^{km}±5^{km}, MD3.3*

SNET ***13*** *09:21:06.6±1.2, 13°.36N×89°.73W, h53^{km}, ML2.5*

CATAC 13 09:21:06.6±0.5**, 13°N**±4°×**9°0W**±°**, h34^{km}**±3^{km}**, M2.5**/18**, MLv2.5**/18**, Error ellipse: s-maj=8.8km s-min=5.0km az=24.1, confirmed, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	0.43	42	eP	Pn	09 21 16.9	+0.4
JAYA				eS	Sn	09 21 25.0	+1.9
JAYA	Jayaque - finc	0.43	42	i P	Pn	09 21 16.9	+0.4
JAYA				i S	Sn	09 21 24.4	+1.3
JAYA	Jayaque - finc	0.43	42	P	Pn	09 21 16.9	+0.4
LALI	Alcalda de L	0.44	70	eP	Pn	09 21 16.8	+0.3
LALI				eS	Sn	09 21 25.0	+1.8
LALI	Alcalda de L	0.44	70	P	Pn	09 21 23.2	+6.6
LALI	Alcalda de L	0.44	70	S	Sn	09 21 24.9	+1.7
CEVE	Cerro Verde	0.50	13	eP	Pn	09 21 18.3	+0.7
CEVE				eS	Sn	09 21 27.9	+2.7
CEVE	Cerro Verde	0.50	13	P	Pn	09 21 18.3	+0.7
CEVE	Cerro Verde	0.50	13	S	Sn	09 21 26.9	+1.7
SBLS	San Blas	0.51	13	eP	Pn	09 21 18.2	+0.5
SBLS				eS	Sn	09 21 27.9	+2.4
SNJE	San Jose	0.55	14	eP	Pb	09 21 18.6	+0.4
PMON	Piamonte	0.56	48	eP	Pb	09 21 18.9	+0.6
PMON	Piamonte	0.56	48	P	Pb	09 21 18.9	+0.6
PMON	Piamonte	0.56	48	S	Sn	09 21 28.6	+2.2
ITCA	Escuela Especi	0.56	53	P	Pb	09 21 19.5	+1.1
NUBE	Las Nubes	0.56	356	eP	Pb	09 21 18.8	+0.4
NUBE				eS	Sn	09 21 28.4	+1.8
NUBE	Las Nubes	0.56	356	i P	Pb	09 21 18.7	+0.3
NUBE				i S	Sn	09 21 28.2	+1.6
NUBE	Las Nubes	0.56	356	P	Pb	09 21 18.8	+0.4
FAME	Alcaldia de Sa	0.57	332	P	Pb	09 21 18.7	+0.3
FAME	Alcaldia de Sa	0.57	332	S	Sb	09 21 27.8	+1.3
UEES	Universidad Ev	0.62	52	P	Pb	09 21 19.2	0.0
UEES	Universidad Ev	0.62	52	S	Sb	09 21 29.1	+1.2
LOMA	Loma Larga	0.64	61	eP	Pn	09 21 19.3	0.0
LOMA				eS	Sb	09 21 29.5	+1.1
LOMA	Loma Larga	0.64	61	P	Pn	09 21 19.2	0.0
UTEC	Universidad Te	0.64	55	P	Pb	09 21 19.6	+0.1
UTEC	Universidad Te	0.64	55	S	Sb	09 21 29.6	+1.1
UNIC	Universidad Ca	0.67	16	P	Pb	09 21 19.9	-0.2
UDBS	Universidad Do	0.69	57	P	Pn	09 21 19.8	-0.1
UDBS	Universidad Do	0.69	57	S	Sb	09 21 30.5	+0.9
SLOZ	Alcaldia de Sa	0.69	357	eP	Pb	09 21 20.7	+0.3
SLOZ				eS	Sb	09 21 32.2	+2.5
SLOZ	Alcaldia de Sa	0.69	357	P	Pb	09 21 20.7	+0.4
PAVA	Las Pavas	0.87	64	P	Pn	09 21 22.8	+0.3
PAVA	Las Pavas	0.87	64	S	Sb	09 21 35.6	+0.7
COEG	Centro de Oper	0.89	71	eP	Pn	09 21 22.6	-0.1
COEG				eS	Sb	09 21 35.1	-0.1
COEG	Centro de Oper	0.89	71	P	Pn	09 21 22.7	0.0
TECO	Alcaldia de Te	0.96	78	P	Pn	09 21 23.0	-0.7
TECO	Alcaldia de Te	0.96	78	S	Sn	09 21 36.5	+0.3
UESV	Universidad de	0.98	72	P	Pn	09 21 23.7	-0.2
UESV	Universidad de	0.98	72	S	Sb	09 21 37.7	-0.1
SCLA	Alcaldia de Sa	1.05	70	P	Pn	09 21 25.6	+0.6
MTO3	Montecristo	1.12	19	i P	Pn	09 21 26.2	+0.1
MTO3	Montecristo	1.12	19	P	Pn	09 21 26.2	+0.1
MTO3	Montecristo	1.12	19	S	Sb	09 21 42.2	+0.1
PQSS	Presa 15 de Se	1.19	76	P	Pn	09 21 26.2	-0.5

NNC 13 09:27:41.7±6.5**, 37°.43N**×**70°.48E, h0^{km}, mb3.9, mpv3.6, 3C-1D, Error ellipse: s-maj=51.6km s-min=38.1km az=166.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	5.67	0	⇑Pn	Pn	09 29 08.0	+0.8
	17nm,0.6s,baz=182,slow=13,SNR=5.2						
KK31				⇓Sn	Sn	09 30 14.8	+1.9
	2.1nm,0.3s,baz=184,slow=26						
AAK	Ala-Archa	6.04	29	⇑Pn	Pn	09 29 11.6	-0.9
	0.5nm,0.4s						
AAK				⇑Sn	Sn	09 30 22.4	-0.1
	1.9nm,0.6s						
AB31	Akbulak array	14.07	330	P	Pn	09 31 03.1	+0.9
	0.6nm,0.4s,baz=133,slow=14,SNR=22						

MEX ***13*** *09:28:45.1±0.9, 14°.62N×94°.28W, h16^{km}±13^{km}, MD4.3*

GCG ***13*** *09:28:47.0±2.3, 14°.63N×94°.12W, h37^{km}±999^{km}, MD4.4, ML3.8*

ISC 13 09:28:42.6±1.4**, 14°.49N**±0°.08×**94°.31W**±0°.03**, h35^{km}, n37,** σ**1^{s}.91**/63**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.60	41	eP	Pn	09 29 07.5	-0.8
PCIG				eS	Sn	09 29 24.6	-3.2
THIG		2.02	78	eP	Pn	09 29 13.3	-0.8
THIG				eS	Sn	09 29 36.7	-1.4
THIG		2.02	78	i P	Pn	09 29 15.7	+1.6
THIG				i S	Sn	09 29 36.9	-1.2
PATR	El Naranjo	2.10	73	eP	Pn	09 29 15.7	+0.2
PATR				eS	Sn	09 29 40.5	0.0
HUIG	Huatulco	2.15	306	eP	Pn	09 29 16.4	+0.4
HUIG				eS	Sn	09 29 40.5	-1.1
PAVE	Pavencul	2.17	71	eP	Pn	09 29 16.0	-0.5
PAVE				eS	Sn	09 29 41.3	-1.0
RTAL	Retalhuleu	2.53	89	eP	Pn	09 29 22.9	+1.7
RTAL				eS	Sn	09 29 51.0	+0.2
TGIG		2.54	26	eP	Pn	09 29 22.3	+0.9
TGIG				eS	Sn	09 29 49.9	-1.3
TGIG		2.54	26	i P	Pn	09 29 23.3	+1.9
TGIG				i S	Sn	09 29 50.0	-1.2
TGIG				IAML		09 29 57.0	
	comp=Z,469nm,0.8s						
CCIG	Comitan	2.75	49	eP	Pn	09 29 25.9	+1.5
CCIG				eS	Sn	09 29 54.4	-2.0
CCIG	Comitan	2.75	49	i P	Pn	09 29 26.7	+2.4
CCIG				i S	Sn	09 29 59.5	+3.1
CCIG				IAML		09 30 04.3	
	comp=N,512nm,0.6s						
HUEH	Huehuetenango	2.83	73	eP	Pn	09 29 27.7	+2.2
HUEH				eS	Sn	09 30 00.9	+2.3
HUEH	Huehuetenango	2.83	73	i P	Pn	09 29 28.8	+3.2
HUEH				i S	Sn	09 29 59.4	+0.8
STG8	El Palmar, Qui	2.86	90	eP	Pn	09 29 24.4	-1.6
STG8				i S	Sn	09 29 54.2	-5.2
STG0	El Palmar, Qui	2.87	91	eP	Pn	09 29 24.7	-1.3
STG0				i S	Sn	09 29 54.9	-4.6
PEIG	Puerto Escondi	3.12	299	eP	Pn	09 29 31.3	+1.9
PEIG				eS	Sn	09 30 03.6	-2.0
VHO	Vista Hermosa	3.47	318	eP	Pn	09 29 34.4	0.0
VHO				eS	Sn	09 30 13.2	-1.2
YOIG	Yosondua	3.91	307	eP	Pn	09 29 43.7	+3.2
YOIG				eS	Sn	09 30 22.5	-2.7
PNIG	Pinotepa	4.14	298	eP	Pn	09 29 46.5	+3.1
PNIG				eS	Sn	09 30 28.6	-2.1
TXIG	Tlaxiaco	4.32	310	eP	Pn	09 29 48.0	+1.9
TXIG				eS	Sn	09 30 35.2	-0.2
TOIG	Toxpalan	4.46	324	eP	Pn	09 29 50.7	+2.8
TOIG				eS	Sn	09 30 36.6	-1.9
HLIG	Huajuapan de L	4.72	315	eP	Pn	09 29 55.3	+3.8
HLIG				eS	Sn	09 30 44.8	-0.4
TPIG	Tehuac#an	4.88	324	eP	Pn	09 29 55.1	+1.4
TPIG				eS	Sn	09 30 47.1	-2.1
PETF	Flores	4.91	60	eP	Pn	09 29 53.1	-0.8
PETF				eS	Sn	09 30 48.8	-0.7
PETF	Flores	4.91	60	eP	Pn	09 29 55.9	+2.0
MGIG	Malinaltepec	4.98	304	eP	Pn	09 29 56.3	+1.3
MGIG				eS	Sn	09 30 51.4	-0.1
FTIG	Fresnillo de T	5.00	313	eP	Pn	09 30 00.5	+5.1
FTIG				eS	Sn	09 30 49.7	-2.4
TLIG	Tlapa	5.11	307	eP	Pn	09 29 57.3	+0.5
TLIG				eS	Sn	09 30 52.3	-2.4
CRIG	Cruz Grande	5.16	296	eP	Pn	09 29 59.0	+1.6
CRIG				eS	Sn	09 30 55.0	-0.6
PBCV	Popocatepetl	6.05	318	eP	Pn	09 30 16.2	+6.4
PBXN	Popocatepetl	6.13	318	eP	Pn	09 30 15.8	+4.7
MEIG	Mezcala	6.14	304	eP	Pn	09 30 12.1	+1.1
PPM	Popocatepetl	6.15	318	eP	Pn	09 30 15.2	+3.8
YAIG	Yautepec	6.30	314	eP	Pn	09 30 12.6	-0.6
YAIG				eS	Sn	09 31 23.8	-0.3
PLIG	Platanillo	6.32	309	eP	Pn	09 30 14.4	+1.1
CXUV	Coxquihui	6.46	331	eP	Pn	09 30 16.5	+1.2
CXUV				eS	Sn	09 31 26.9	-0.9
ARIG	Puente Sto Nin	6.92	304	eP	Pn	09 30 23.1	+1.6
ARIG				eS	Sn	09 31 38.0	-1.1

IDC ***13*** *09:35:10.0±3.2, 53°.64N×87°.96E, h0^{km}, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=29.5km s-min=22.4km az=88.0*

ASRS ***13*** *09:35:10.0±0.9, 53°.61N×87°.96E, h0^{km}, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

ISC 13 09:35:12.9±4.0**, 53°.6N**±0°.2×**87°.7E**±0°.2**, h0^{km}, n4,** σ**1^{s}.20**/5**, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.76	284	I	I	09 46 40.0	
	baz=98,slow=318,SNR=2.1						
ZALV	Zalesovo Beam	1.76	284	Pn	Pn	09 35 44.2	-0.4
	0.7nm,0.3s,baz=94,slow=16,SNR=6.5						
ZALV				Sn	Sb	09 36 09.9	+1.3
	1.5nm,0.3s,baz=97,slow=25,SNR=8.3						
KURBB	Kurchatov Arra	6.38	246	Pn	Pn	09 36 47.7	-0.3
	0.1nm,0.3s,baz=64,slow=14,SNR=4.9						
KURBB				Sn	Sn	09 38 00.5	-1.0
	baz=356,slow=31,SNR=1.2						
KURBB				Lg	Lg	09 38 39.5	
	baz=205,slow=18,SNR=2.5 0.5nm,0.5s						
MKAR	Makanchi Array	7.61	209	Pn	Pn	09 37 05.4	+0.4
	0.1nm,0.3s,baz=23,slow=11,SNR=1.9						
MKAR				Lg	Lg	09 39 19.0	
	0.1nm,0.3s,baz=30,slow=35,SNR=3.6 0.1nm,0.3s						

KRNET ***13*** *09:45:33.7±0.1, 40°.74N×69°.62E, mb2.6*

ISC 13 09:45:32.5±3.1**, 40°.81N**±0°.06×**69°.5E**±0°.1**, h18^{km}**±7^{km}**, n6,** σ**0^{s}.61**/11**, 7C-5D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	1.25	127	⇑eP	Pb	09 45 55.5	0.0
BTK				⇑eS	Sb	09 46 11.1	-0.1
TRKS	Terek-Say	1.42	59	⇑eP	Pb	09 45 59.3	+0.8
TRKS				⇑eS	Sg	09 46 18.8	+0.3
DRK	Karamyk	2.20	126	⇓eP	Pb	09 46 11.9	0.0
DRK				⇓eS	Sb	09 46 39.7	+0.9
KK31	Karatay Array	2.41	18	⇓Pn	Pn	09 46 10.8	-0.1
	0.1nm,0.1s,baz=202,slow=16,SNR=8.9						
KK31				⇑Lg	Lg	09 46 42.8	
	2.0nm,0.3s,baz=202,slow=29						
OHH	Osh	2.50	96	⇑eP	Pb	09 46 16.1	-0.8
OHH				⇑eS	Sb	09 46 47.0	-0.4
MNAS	Manas	2.80	52	⇓eP	Pb	09 46 21.4	-0.6
MNAS				⇓eS	Sb	09 46 56.1	+0.2

STR 13 09:46:37.8±0.7**, 46°N**±3°×°±°**, h0^{km}, MLv2.1**/6**, Error ellipse: s-maj=0.0km s-min=0.0km az=64.7, preliminary, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OG35	Corcelles	0.23	116	Pg	Pg	09 46 42.4	+0.1
OG35				Sg	Sg	09 46 46.9	+1.6
OGMY	Moye	0.51	121	Pg	Pg	09 46 48.3	+0.7
OGMY				Sg	Sg	09 46 55.1	+1.0
OGSM	Saint Maurice	0.62	151	Pg	Pg	09 46 49.7	+0.1
OGSM				Sg	Sg	09 46 57.9	+0.3
RIVEL	MONT RIVEL	0.76	36	Pg	Pg	09 46 52.9	+0.4
RIVEL				Sg	Sb	09 47 05.2	+0.3
PLYF	Puligny Montra	0.89	336	Pg	Pg	09 46 55.3	+0.5
PLYF				Sg	Sg	09 47 07.1	+0.8
GRN	Grenoble	0.96	160	Sg	Sb	09 47 11.8	+1.0
BRANT	Les Verrieres	1.15	46	Pg	Pg	09 46 59.6	-0.3
BRANT				Sg	Sg	09 47 14.8	+0.1

GCG ***13*** *09:56:28.5±0.7, 14°.76N×92°.22W, h71^{km}±8^{km}, MD3.6, ML3.0*

MEX ***13*** *09:56:29.0±0.7, 14°.58N×92°.26W, h82^{km}±9^{km}, MD3.9*

ISC 13 09:56:25.0±2.2**, 14°.6N**±0°.1×**92°.10W**±0°.08**, h96^{km}**±12^{km}**, n14,** σ**2^{s}.10**/22**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMCA	Catarina	0.29	5	eP	Pn	09 56 39.3	+0.2
SMCA				i S	Sn	09 56 47.7	-1.9
SMCA				IAML		09 56 48.9	
	comp=E,510nm,0.2s						
THIG		0.37	335	i P	Pn	09 56 40.8	+1.2
THIG				eS	Sn	09 56 48.7	-1.7
RTAL	Retalhuleu	0.39	96	eP	Pn	09 56 41.4	+1.8
RTAL				eS	Sn	09 56 52.5	+1.9
PATR	El Naranjo	0.56	347	i P	Pn	09 56 41.9	+0.7
PATR				i S	Sn	09 56 52.1	-1.1
PAVE	Pavencul	0.63	353	i P	Pn	09 56 42.9	+1.2
PAVE				i S	Sn	09 56 54.4	+0.3
STG8	El Palmar, Qui	0.73	99	i P	Pn	09 56 43.3	+0.6
STG8				i S	Sn	09 56 55.1	-0.7
STG0	El Palmar, Qui	0.75	101	i P	Pn	09 56 43.4	+0.7
STG0				i S	Sn	09 56 55.2	-0.8
STG0				IAML		09 56 59.1	
	comp=E,572nm,0.2s						
HUEH	Huehuetenango	0.94	38	i P	Pn	09 56 42.5	-2.3
HUEH				i S	Sn	09 56 57.5	-2.1
FG8	Yepocapa, Chim	1.52	101	i P	Pn	09 56 51.0	-0.4
PCIG		1.56	316	eP	Pn	09 56 52.4	+0.5
PCIG				i S	Sn	09 57 07.7	-4.5
FG16	Alotenango, Sa	1.57	101	i P	Pn	09 56 52.3	+0.2
CCIG	Comitan	1.70	359	eP	Pn	09 56 46.1	-7.8
CCIG				eS	Sn	09 57 21.1	+5.4
TGIG		2.41	336	eP	Pn	09 56 57.0	-5.8
TGIG				eS	Sn	09 57 32.4	+0.5
JAYA	Jayaque - finc	2.73	109	eP	Pn	09 57 13.4	+6.2

HEL ***13*** *10:09:53.9±0.1, 64°.33N×28°.12E, h0^{km}, ML1.3, Explosion*

IDC ***13*** *10:09:54.3±1.8, 64°.30N×28°.38E, h0^{km}, mbtmp2.7/2, ML1.8/2, Error ellipse: s-maj=38.9km s-min=8.7km az=98.0*

ISC 13 10:09:51.6±0.9**, 64°.30N**±0°.03×**28°.14E**±0°.04**, h0^{km}, n20,** σ**1^{s}.03**/18**, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RMF	Romuvaara	0.79	95	eP	Pb	10 10 08.3	+0.2
RMF				eS	Sb	10 10 18.6	-0.7
RMF				MSG		10 10 19.0	
	comp=Z,2.7nm,0.2s						
NIF	Nilsia	0.92	189	eP	Pb	10 10 10.8	+0.3
NIF				eS	Sb	10 10 23.0	-0.3
OUL	Oulu	1.25	310	eP	Pg	10 10 15.8	+0.4
KU1	Kurvinen	1.41	25	eP	Pg	10 10 18.5	0.0
KU1				eS	Sg	10 10 36.2	-0.5
OBF4	Vikkela, Lumij	1.41	293	eS	Sg	10 10 35.4	-1.5
KU2	Taivalkoski	1.42	1	eS	Sg	10 10 36.1	-1.0
OUF	Merijarvi	1.49	274	MSG		10 10 36.6	
	comp=Z,1.8nm,0.2s						
MSF	Maaselka	1.66	13	eP	Pb	10 10 22.7	-0.3
OBF0	Syolatti, Pyha	1.71	278	MSG		10 10 42.6	
	comp=Z,0.9nm,0.2s						
RANF	Ranua	1.82	342	eP	Pb	10 10 25.5	-0.2
RANF				eS	Sb	10 10 48.9	0.0
SUF	Sumiainen	1.82	210	eP	Pg	10 10 26.5	+0.1
SUF				MSG		10 10 49.3	
	comp=Z,0.8nm,0.2s						
KU6	Riekki	1.89	22	MSG		10 10 47.0	
	comp=Z,1.3nm,0.2s						
JOF	Joensuu	1.98	133	eP	Pg	10 10 29.2	-0.3
KAF	Kangasniemi	2.35	202	MSG		10 11 04.9	
	comp=Z,1.3nm,0.2s						
KEF	Keuruu	2.60	216	MSG		10 11 11.6	
	comp=Z,1.0nm,0.2s						
VAF	Ylistaro	2.75	245	MSG		10 11 14.2	
	comp=Z,0.7nm,0.2s						
FIA0	FINESS Array S	3.02	199	MSG		10 11 24.3	
	comp=Z,0.8nm,0.2s						
FINES	FINESS Array B	3.02	199	Pn	Pb	10 10 45.4	-0.7
	comp=Z,0.3nm,0.3s,baz=20,slow=14,SNR=9.8						
FINES				Sn	Sb	10 11 23.4	-0.1
	comp=Z,0.6nm,0.3s,baz=22,slow=24,SNR=10						
FINES				Lg	Lg	10 11 29.3	
	comp=Z,0.5nm,0.3s,baz=18,slow=29,SNR=6.3 comp=Z,1.0nm,0.3s						
ARCES	ARCESS Array B	5.36	350	Pn	Pn	10 11 15.4	+2.6
	baz=175,slow=12,SNR=1.4						
ARCES				Sn	Sn	10 12 13.0	-2.1
	comp=Z,0.1nm,0.3s,baz=160,slow=24,SNR=1.5						
ARCES				Lg	Lg	10 12 33.7	
	comp=Z,0.1nm,0.3s,baz=172,slow=25,SNR=3.4 comp=Z,1.5nm,1.0s						
I37NO	I37NO	6.10	326	I	I	10 46 20.0	
	baz=138,slow=317,SNR=1.2						

MOS ***13*** *10:34:29.2±0.9, 11°.19N×142°.94E, h11^{km}, mb5.0/32, Error ellipse: s-maj=10.7km s-min=5.8km az=108.7*

IDC ***13*** *10:34:29.0±0.4, 11°.20N×143°.05E, h0^{km}, mb4.6/25, mbtmp4.6/27, ML4.3/2, MS3.6/19, Error ellipse: s-maj=17.0km s-min=10.4km az=76.0*

DJA ***13*** *10:34:31.4±2.4, 11°N±4°×14°3E±°, h15^{km}±16^{km}, M4.9/18, mb4.9/18, mB5.4/9, Mw(mB)4.9/9*

BJI ***13*** *10:34:31.0, 11°.20N×142°.90E, h10^{km}, mB4.8/4, mb4.6/34, Ms4.3/9, Ms7 4.0/11*

NEIC ***13*** *10:34:31.8±1.6, 11°.21N±0°.03×142°.9E±0°.1, h10^{km}±1^{km}, mb5.0/228, Error ellipse: s-maj=19.6km s-min=3.0km az=284.0*

GCMT ***13*** *10:34:34.8±0.4, 11°.11N±0°.02×142°.98E±0°.05, h21^{km}±1^{km}, MW4.8/64, Moment Tensor Solution. s20,c21; s64,c82; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.57±.16; $M_{\theta\theta}$1.65±.10; $M_{\phi\phi}$-0.08±.09; $M_{r\theta}$0.52±.13; $M_{\theta\phi}$-0.01±.07; $M_{\phi r}$0.07±.24; Best double couple: $M_0$1.69200×10^{16} NP1:ϕ_s93.00000°,δ36.00000°,λ-85.00000°. NP2: ϕ_s268.00000°,δ54.00000°,λ-93.00000°. Principal axes: T 1.7310, Plg9.0000°, Azm0.0000°; N -0.0810, Plg3.0000°, Azm270.0000°; P -1.6540, Plg81.0000°, Azm163.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 10:34:32.6±0.6**, 11°.15N**±0°.04×**143°.02E**±0°.06**, h23^{km}**±3^{km}**, h23^{km}:pP-P, n557,** σ**0^{s}.75**/455**, mb4.9**/176**, MS3.8**/22**, 9C-10D, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	3.02	37	Pn	Pn	10 35 19.3	+0.2
	192nm,0.3s,baz=186,slow=2.7,SNR=130						
GUMO				Sn	Sn	10 35 51.0	-3.6
	139nm,0.3s,baz=349,slow=23,SNR=9.7 987nm,0.5s						
GUMO	Guam	3.02	37	P	Pn	10 35 19.4	+0.3
JAY	Jayapura	13.77	190	Pn	Pn	10 37 47.1	+0.5
	0.3nm,0.3s,baz=121,slow=9.1,SNR=4.0						
JAY				LR	LR	10 41 49.6	
	comp=Z,520nm,19.4s,baz=24,slow=32 13nm,0.9s						
GENI	Genyem	13.95	192	P	Pn	10 37 49.5	+0.5
	3µm42nm,1.0s						
BAKI	Biak	14.06	210	P	Pn	10 37 51.0	+0.5
JCJ	Chichijima	15.88	357	LR	LR	10 44 22.2	
	comp=Z,156nm,18.4s,baz=78,slow=37						
SWI	Sorong	16.70	225	P	Pn	10 38 26.3	+0.9
FAKI	Fak Fak	17.61	218		P	10 38 38.1	+0.5
FAKI	Fak Fak	17.61	218	P	Pn	10 38 36.6	-0.1
	41nm,1.2s						
DAV	Davao City (W)	17.68	258	LR	LR	10 45 37.3	
	comp=Z,123nm,20.1s,baz=112,slow=38						
PMG	Port Moresby	20.84	168		Pn	10 39 15.7	+0.3
PMG				IAmb	IAmb	10 39 17.2	
	comp=Z,65nm,1.3s						
PMG	Port Moresby	20.84	168	P	P	10 39 13.7	+0.8
	comp=Z,25nm,0.9s,baz=312,slow=6.2,SNR=4.6						
PMG				LR	LR	10 46 29.6	
	comp=Z,150nm,19.5s,baz=358,slow=34 comp=Z,25nm,0.9s						
PMG	Port Moresby	20.84	168	P	Pn	10 39 15.7	+0.3
PMG				pmax	pmax		
	comp=Z,65nm,1.3s						
JOW	Kunigami	20.88	320	P	P	10 39 13.8	+0.5
	comp=Z,13nm,0.4s,baz=139,slow=14,SNR=5.0 comp=Z,13nm,0.4s						
KMSI	Cibinong	21.63	242	P	P	10 39 23.2	+1.7
TGY	Tagaytay City	21.74	280	LR	LR	10 48 48.6	
	comp=Z,122nm,18.7s,baz=44,slow=40						
MRSI	Marisa	23.47	245	P	P	10 39 41.5	+0.7
	comp=Z,934nmcomp=Z,48nm,0.8s						
LUWI	Luwuk	23.49	240		P	10 39 39.8	-1.2
LUWI	Luwuk	23.49	240	P	P	10 39 40.3	-0.7
	comp=Z,1µmcomp=Z,129nm,1.0s						
H11S3	WAKE ISLAND Hy	24.00	70	T	T	11 03 45.7	
	baz=252,slow=74						
H11S1	WAKE ISLAND Hy	24.02	69	T	T	11 03 45.4	
	baz=252						
H11S2	WAKE ISLAND Hy	24.02	70	T	T	11 03 43.7	
	baz=252,slow=74						
APSI	Ampana	24.39	242	P	P	10 40 09.7	+20
H11N1	WAKE ISLAND Hy	24.51	67	T	T	11 04 36.2	

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             baz=255,slow=74
H11N2  WAKE ISLAND Hy 24.52  67  T       T       11 04 29.8
             baz=255,slow=74
H11N3  WAKE ISLAND Hy 24.53  67  T       T       11 04 37.3
             baz=255
MYLDM  Lahad Datu     24.97 258          P       10 39 54.6 -0.1
MYLDM                            IAmb    IAmb    10 40 02.8
             comp=Z,34nm,0.9s
MPSI   Mapaga         25.36 246  P       P       10 39 58.0 -0.2
             comp=Z,1µmcomp=Z,21nm,1.1s
MJAR   Matsushiro Arr 25.65 351  P       P       10 39 58.5 -2.2
             comp=Z,4.1nm,0.6s,baz=160,slow=8.7,SNR=8.5
MJAR                             PcP     PcP     10 43 31.4 +0.3
             comp=Z,3.1nm,0.8s,baz=161,slow=2.6,SNR=4.9
MJAR                             LR      LR      10 49 38.8
             comp=Z,117nm,18.3s,baz=170,slow=36
             comp=Z,4.1nm,0.6s
MAJO   Matsushiro     25.65 351          P       10 39 58.9 -1.8
MAJO   Matsushiro     25.65 351⇑eP       P       10 39 59.2 -1.5
MAJO                             pmax    pmax
             comp=Z,9.0nm,1.0s
MJB9   Matsu-Tunnel   25.65 351  P       P       10 40 00.2 -0.5
MTN    Manton Dam     26.60 207          P       10 40 08.4 -1.0
JMM    Marumori       26.68 356  P       P       10 40 08.6 -1.3
JMM                              IAmb    IAmb    10 40 33.9
             comp=Z,60nm,1.3s
KSRS   Korea Array    29.49 335  P       P       10 40 33.3 -1.8
             comp=Z,0.8nm,0.6s,baz=151,slow=8.4,SNR=4.1
KSRS                             PcP     PcP     10 43 41.2 +0.9
             comp=Z,2.4nm,0.8s,baz=154,slow=1.7,SNR=8.3
             comp=Z,0.8nm,0.6s
NJ2    Nanjing        30.48 317  eP      P       10 40 43.6 -0.3
NJ2                              pmax    pmax
             comp=Z,13nm,0.6s
WB0    Warramunga Arr 31.88 196  P       P       10 40 55.9 -0.4
WB0                              IAmb    IAmb    10 41 09.1
             comp=Z,19nm,1.4s
WR8    Warramunga Arr 32.03 195  P       P       10 40 57.2 -0.4
WRAB   Tennant Creek  32.05 195ceP       P       10 40 57.3 -0.5
WRAB                             pmax    pmax
             comp=Z,6.0nm,0.9s
WRA    Warramunga Arr 32.06 196          P       10 40 57.5 -0.4
WRA    Warramunga Arr 32.06 196  P       P       10 40 57.3 -0.6
             comp=Z,3.2nm,0.6s,baz=20,slow=9.7,SNR=52
WRA                              PcP     PcP     10 43 47.3 -0.1
             comp=Z,1.1nm,0.6s,baz=8.5,slow=3.0,SNR=6.1
             comp=Z,3.2nm,0.6s
ASAJ   Asahikawa      32.85 359  LR      LR      10 52 58.0
             comp=Z,42nm,21.0s,baz=180,slow=34
KSM    Kuching        33.86 256  P       P       10 41 12.4 -1.4
KSM                              IAmb    IAmb    10 41 14.3
             comp=Z,17nm,1.0s
USA0B  Ussuriysk Arra 34.28 346⇑eP       P       10 41 15.9 -1.1
USRK   Ussuriysk Ar.  34.28 346  P       P       10 41 16.9 -0.1
             comp=Z,4.7nm,0.7s,baz=187,slow=9.4,SNR=9.2
             comp=Z,4.7nm,0.7s
MDJ    Mudanjiang     35.29 343  P       P       10 41 25.6 -0.2
MDJ                              pmax    pmax
             comp=Z,9.0nm,1.9s
YSS    Yuzhno-Sakhali 35.68 360  eP      P       10 41 30.6 +1.5
YSS                              pmax    pmax
             comp=Z,10.0nm,0.9s
YSS                              MLR     MLR
             comp=Z,200nm,14.0s
ASAR   Alice Springs  35.73 194  P       P       10 41 29.6 -0.2
             comp=Z,1.5nm,0.5s,baz=25,slow=12,SNR=64
ASAR                             PcP     PcP     10 43 58.3 +0.5
             comp=Z,3.3nm,0.7s,baz=40,slow=2.6,SNR=14
             comp=Z,1.5nm,0.5s
LYN    LuoYang        36.28 315  eP      P       10 41 33.4 -1.1
LYN                              pmax    pmax
             comp=Z,15nm,0.6s
HNS    HongShan       36.46 321 ⇑P       P       10 41 40.0 +4.1
HNS                              pmax    pmax
             comp=Z,17nm,0.8s
BNX    BinXian        36.96 342 ⇓P       P       10 41 40.6 +0.6
BNX                              pmax    pmax
             comp=Z,4.0nm,0.5s
BJI    Beijing        37.31 325  P       P       10 41 43.0 -0.1
BJI                              pP      pP      10 41 47.3 -0.4
BJI                              sP      sP      10 41 50.1 +0.6
BJI                              pmax    pmax
             comp=Z,4.0nm,0.6s
BJI                              LR      LR
             comp=Z,110nm,19.3s
BJI                              LR      LR
             comp=Z,83nm,18.4s
BJI                              LR      LR
             comp=Z,140nm,16.2s
XAN    Xi'an          38.56 312  P       P       10 41 53.5 -0.4
XAN                              pmax    pmax
             comp=Z,8.0nm,0.8s
XAN                              LR      LR
             comp=Z,230nm,15.8s
XAN                              LR      LR
             comp=Z,200nm,17.5s
XAN                              LR      LR
             comp=Z,340nm,18.2s
KLR    Kul'dur        39.10 348ceP       P       10 41 57.6 -0.4
KLR                              pmax    pmax
             comp=Z,12nm,1.3s
TYV    Tymovskoe      39.60 360  eP      P       10 41 56.5 -5.6
TYV                              pmax    pmax
             comp=Z,9.0nm,0.7s
TYV                              pmax    pmax
             comp=Z,100nm,3.0s
DZM    Mont Dzumac    40.23 145          P       10 42 08.5 +0.6
DZM                              IAmb    IAmb    10 42 29.1
             comp=Z,18nm,0.7s
DZM    Mont Dzumac    40.23 145  eP      P       10 42 08.2 +0.3
             comp=Z,38nm,0.8s
DZM                              eS      S       10 48 11.6 -2.4
             comp=Z,70nm,26.2s
DZM                              eLR     LR      10 53 13.5
             comp=Z,121nm,29.2s
DZM    Mont Dzumac    40.23 145  P       P       10 42 07.4 -0.5
             comp=Z,4.1nm,0.6s,baz=274,slow=7.1,SNR=14
             comp=Z,4.1nm,0.6s
HHC    Hu-ho-hao-te   40.51 322  eP      P       10 42 11.4 +1.3
HHC                              pmax    pmax
             comp=Z,14nm,0.6s
HHC                              pmax    pmax
             comp=Z,70nm,5.7s
HHC                              LR      LR
             comp=Z,120nm,15.3s
HHC                              LR      LR
             comp=Z,120nm,14.5s
HHC                              LR      LR
             comp=Z,150nm,13.8s
KMI    Kunming        40.55 296  P       P       10 42 12.5 +1.8
KMI                              pmax    pmax
             comp=Z,8.0nm,0.9s
HEH    HeiHe          41.05 345  eP      P       10 42 13.4 -0.8
HEH                              pmax    pmax
             comp=Z,12nm,1.2s
CD2    Chengdu        41.29 304  eP      P       10 42 16.5 -0.1
PZH    PanZhiHua      41.73 297  P       P       10 42 21.4 +1.0
STKA   Stephens Creek 42.81 182  P       P       10 42 27.6 -1.2
             comp=Z,3.3nm,0.9s,baz=5.6,slow=5.0,SNR=3.2
             comp=Z,3.3nm,0.9s
CM31   Chiang Mai Arr 43.14 285  P       P       10 42 30.8 -0.9
CM31                             IAmb    IAmb    10 42 34.4
             comp=Z,18nm,0.8s
CMAR   Chiang Mai Arr 43.14 285  P       P       10 42 31.7  0.0
CMAR   Chiang Mai Arr 43.14 285  P       P       10 42 33.4 +1.7
             comp=Z,15nm,0.8s,baz=87,slow=6.3,SNR=61
CMAR                             LR      LR      11 01 56.4
             comp=Z,41nm,18.4s,baz=140,slow=38
             comp=Z,15nm,0.8s
CMAR   Chiang Mai Arr 43.14 285 i P      P       10 42 33.4 +1.7
CMAR                             pmax    pmax
             comp=Z,16nm,0.8s
CHTO   Chiang Mai     43.16 286  P       P       10 42 31.2 -0.7
CHTO   Chiang Mai     43.16 286  P       P       10 42 31.2 -0.7
CHTO                             pmax    pmax
             comp=Z,23nm,1.7s
LZH    Lanzhou        43.20 312  eP      P       10 42 31.3 -0.9
LZH                              sP      sP      10 42 38.3 -0.3
LZH                              pmax    pmax
             comp=Z,30nm,1.3s
LZH                              LR      LR
             comp=Z,180nm,12.7s
LZH                              LR      LR
             comp=Z,190nm,13.1s
LZH                              LR      LR
             comp=Z,170nm,13.4s
PETK   Petropavlovsk- 43.48  13  P       P       10 42 33.8 -0.2
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             comp=Z,1.2nm,0.6s,baz=180,slow=4.6,SNR=6.7
             comp=Z,1.2nm,0.6s
FORT   Forrest        44.10 199          P       10 42 39.0 -0.2
ZEA    Zeya           44.30 347  eP      P       10 42 40.8 +0.2
ZEA                              pmax    pmax
             comp=Z,10.0nm,1.3s
PSI    Prapat         44.49 263  P       P       10 42 43.0 +0.2
             comp=Z,36nm,0.7s,baz=85,slow=5.0,SNR=26
             comp=Z,36nm,0.7s
RPSI   Rantau Prapat  44.52 262          P       10 42 42.2 -0.6
RPSI   Rantau Prapat  44.52 262  P       P       10 42 43.0 +0.1
MSVF   Nonsavu        44.96 129  P       P       10 42 46.8 +0.4
             comp=Z,16nm,0.7s,baz=283,slow=23,SNR=6.9
MSVF                             LR      LR      11 00 00.5
             comp=Z,125nm,20.1s,baz=333,slow=34
             comp=Z,16nm,0.7s
GSI    Gunungsitoli   46.15 261          P       10 42 55.0 -0.8
ULN    Ulaanbaatar    47.40 328⇑eP       P       10 43 05.8 +0.5
ULN                              pmax    pmax
             comp=Z,1.0nm,0.8s
GTA    Gaotai         47.49 314  P       P       10 43 07.4 +1.2
GTA                              pmax    pmax
             comp=Z,8.0nm,1.2s
GTA                              LR      LR
             comp=Z,110nm,15.6s
GTA                              LR      LR
             comp=Z,130nm,19.3s
GTA                              LR      LR
             comp=Z,130nm,18.5s
MORW   Morawa         47.72 212  P       P       10 43 07.9 +0.1
SONM   Songino Array  47.73 327  P       P       10 43 07.5 -0.3
             comp=Z,1.8nm,0.6s,baz=145,slow=7.6,SNR=7.9
SONM                             PcP     PcP     10 44 36.5 -0.4
             comp=Z,2.1nm,0.8s,baz=138,slow=3.5,SNR=4.7
             comp=Z,1.8nm,0.6s
MA2    Magadan        48.68   5  LR      LR      11 02 52.5
             comp=Z,20nm,19.3s,baz=284,slow=35
MA2    Magadan        48.68   5deP       P       10 43 14.5 -0.3
MA2                              pmax    pmax
             comp=Z,10.0nm,0.9s
MA2    Magadan        48.68   5  P       P       10 43 14.5 -0.3
             comp=Z,17nm,1.0s
ZAK    Zakamensk      50.89 328  eP      P       10 43 31.9 -0.1
ZAK                              pmax    pmax
             comp=Z,5.0nm,1.0s
YAK    Yakutsk        51.71 352  eP      P       10 43 37.4 -0.3
YAK                              e*PP    pP      10 43 41.4 -1.2
YAK                              e               10 45 35.8
YAK                              eS      S       10 50 59.5 +1.7
YAK                              e*SS    sS      10 51 06.7 +1.6
YAK                              pmax    pmax
             comp=N,13nm,1.1s
YAK                              pmax    pmax
             comp=Z,39nm,1.1s
YAK                              pmax    pmax
             comp=E,3.0nm,1.0s
YAK                              pmax    pmax
             comp=Z,11nm,0.6s
YAK                              smax    smax
             comp=E,8.0nm,0.9s
SEY    Seymchan       52.13   5⇓eP       P       10 43 41.3 +0.4
SEY                              pmax    pmax
             comp=Z,9.0nm,1.3s
NIKH   Nikolski High  56.69  33  P       P       10 44 14.3 +0.1
             baz=241
WMQ    Urumqi         57.54 315  eP      P       10 44 20.4 -0.1
SPIA   Saint Paul Isl 58.16  28  P       P       10 44 25.3 +0.8
             baz=237
P08K   Saint George I 58.18  29  P       P       10 44 25.4 +0.8
             baz=238
UNV    Unalaska Valle 58.34  32  P       P       10 44 26.6 +0.8
             baz=243
BILL   Bilibino       58.85  10  P       P       10 44 30.1 +0.9
BILL   Bilibino       58.85  10⇓eP       P       10 44 29.3 +0.1
BILL                             pmax    pmax
             comp=Z,7.0nm,1.0s
FALS   False Pass     60.41  32  P       P       10 44 40.5 +0.5
             baz=245
GAMB   Gambell        61.38  21  P       P       10 44 47.8 +1.3
GAMB                             IAmb    IAmb    10 45 00.2
             comp=Z,9.5nm,1.0s
GAMB   Gambell        61.38  21  P       P       10 44 46.7 +0.2
             baz=233
S12K   Black Hills    61.47  32  P       P       10 44 47.5 +0.2
             baz=246
MK31   Makanchi Array 62.01 317d iP      P       10 44 51.6 +0.4
MKAR   Makanchi Array 62.01 317  P       P       10 44 51.8 +0.6
             comp=Z,4.1nm,0.6s,baz=94,slow=8.6,SNR=24
MKAR                             PcP     PcP     10 45 30.8 -0.8
             comp=Z,2.2nm,0.6s,baz=95,slow=7.4,SNR=3.8
             comp=Z,4.1nm,0.6s
SDPT   Sand Point     62.16  33  P       P       10 44 51.6 -0.4
             baz=248
MAKZ   Makanchi       62.22 317          P       10 44 52.9 +0.3
MAKZ   Makanchi       62.22 317  P       P       10 44 52.9 +0.3
MAKZ                             pmax    pmax
             comp=Z,47nm,1.9s
CHNA   Chernabura Isl 62.44  33  P       P       10 44 54.3 +0.6
             baz=249
HYB    Hyderabad      62.54 284  eP      P       10 44 55.2  0.0
HYB                              epP     pP      10 44 58.3 -1.7
HYB                              ePP     PP      10 47 13.0  0.0
HYB                              eScP    ScP     10 49 36.4 +1.1
HYB                              eS      S       10 53 22.7 +0.6
ZALV   Zalesovo Beam  62.57 326          P       10 44 53.9 -0.8
ZALV   Zalesovo Beam  62.57 326  P       P       10 44 54.4 -0.3
             comp=Z,1.8nm,0.3s,baz=114,slow=6.1,SNR=7.3
             comp=Z,1.8nm,0.3s
M13K   Dall Lake      62.90  27  P       P       10 44 57.3 +0.6
             baz=243
S14K   Fog Glacier    62.99  32  P       P       10 44 58.2 +0.6
             baz=248
K13K   Kusilvak Mount 63.06  25  P       P       10 44 58.6 +0.7
             baz=241
SHLS   Shalkode       63.20 313  eP      P       10 44 57.4 -1.9
SHLS                             pmax    pmax
             comp=Z,6.0nm,1.2s
SHLS   Shalkode       63.20 313  eP      P       10 44 57.4 -1.9
             comp=Z,5.8nm,1.2s
O14K   Tigyukauivet M 63.33  28  P       P       10 45 00.1 +0.5
             baz=245
N14K   Kuskokwak Cree 63.42  28  P       P       10 45 00.8 +0.6
             baz=245
UZB    Uzynbulak      63.52 313  eP      P       10 45 01.3 -0.1
UZB    Uzynbulak      63.52 313  eP      P       10 45 01.4 -0.1
L14K   Kuka Creek     63.61  26  P       P       10 45 02.1 +0.6
             baz=243
M14K   Bethel         63.66  27  P       P       10 45 02.7 +0.9
             baz=244
TNA    Tin City       63.75  21          P       10 45 03.4 +1.0
TNA                              IAmb    IAmb    10 45 07.4
             comp=Z,7.3nm,1.0s
TNA    Tin City       63.75  21  P       P       10 45 03.5 +1.2
             baz=236
KPKS   Kokpek         63.82 313  eP      P       10 45 03.4 +0.1
KPKS   Kokpek         63.82 313  eP      P       10 45 03.5 +0.1
J14K   Nanvaranak Lak 63.91  24          P       10 45 04.4 +1.0
J14K                             IAmb    IAmb    10 45 09.6
             comp=Z,8.4nm,1.0s
J14K   Nanvaranak Lak 63.91  24  P       P       10 45 04.4 +1.0
             baz=242
SATY   Saty           63.95 313  eP      P       10 45 04.2  0.0
SATY   Saty           63.95 313  eP      P       10 45 04.3  0.0
O15K   Ungalikthiuk R 63.97  29  IAmb    IAmb    10 45 09.8
             comp=Z,17nm,1.1s
O15K   Ungalikthiuk R 63.97  29  P       P       10 45 04.6 +0.6
             baz=247
ANM    Nome           64.12  22  P       P       10 45 05.9 +1.1
             baz=239
M15K   Kasigluk River 64.20  27  P       P       10 45 06.1 +0.7
             baz=245
N15K   Kwethluk River 64.25  28  P       P       10 45 06.6 +0.9
             baz=246
F14K   Arctic Creek   64.26  21  P       P       10 45 06.8 +1.1
             baz=238
L15K   Ungalak Mounta 64.28  26  P       P       10 45 07.1 +1.2
             baz=244
K15K   Wolf Creek Mou 64.53  25  P       P       10 45 08.8 +1.2
             baz=244
KDJ    Kajisay        64.70 311  IAmb    IAmb    10 45 11.0
             comp=Z,9.9nm,0.8s
P16K   Nushagak River 64.79  29  P       P       10 45 10.3 +1.0
             baz=248
G15K   Niukluk        64.83  22  P       P       10 45 10.3 +0.9
             baz=240
CHIR   Chirikof Islan 64.91  33  P       P       10 45 10.8 +0.7
             baz=252
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MDOK   Medeo          64.95 312  eP      P       10 45 10.7 -0.1
MDOK   Medeo          64.95 312  eP      P       10 45 10.8 -0.1
O16K   Kokwok River B 64.95  29  IAmb    IAmb    10 45 16.2
             comp=Z,7.2nm,0.8s
O16K   Kokwok River B 64.95  29  P       P       10 45 11.1 +0.8
             baz=248
F15K   North Star Dit 64.97  21  IAmb    IAmb    10 45 15.9
             comp=Z,8.9nm,1.1s
F15K   North Star Dit 64.97  21  P       P       10 45 11.5 +1.1
             baz=239
N16K   Nishlik Lake   64.98  28  P       P       10 45 11.5 +0.9
             baz=247
AAA    Alma-Ata       65.05 313  eP      P       10 45 11.5 +0.1
AAA    Alma-Ata       65.05 313  eP      P       10 45 11.6 +0.1
M16K   Timber Creek   65.11  27  IAmb    IAmb    10 45 16.7
             comp=Z,20nm,1.4s
M16K   Timber Creek   65.11  27  P       P       10 45 12.0 +0.6
             baz=247
L16K   Owhat River    65.16  26  P       P       10 45 12.4 +0.8
             baz=246
KURK   Kurchatov      65.29 321          P       10 45 13.0 +0.3
KURK   Kurchatov      65.29 321d iP      P       10 45 12.6 -0.1
KURK                             pmax    pmax
             comp=Z,14nm,0.8s
KSH    Kashi          65.30 308  P       P       10 45 15.8 +2.7
KSH                              pP      sP      10 45 20.1 +0.4
KSH                              pmax    pmax
             comp=Z,4.0nm,0.5s
H16K   Elim           65.33  23  P       P       10 45 12.3 -0.3
             baz=242
KURBB  Kurchatov Arra 65.33 321  P       P       10 45 13.1 +0.1
             comp=Z,10nm,0.6s,baz=106,slow=6.6,SNR=38
             comp=Z,10nm,0.6s
J16K   Anvik River    65.36  24  IAmb    IAmb    10 45 18.7
             comp=Z,16nm,1.2s
J16K   Anvik River    65.36  24  P       P       10 45 13.1 +0.2
             baz=244
O17K   Koliganek Bris 65.49  29  P       P       10 45 14.3 +0.5
             baz=249
Q17K   Contact Creek  65.55  31  P       P       10 45 14.5 +0.1
             baz=251
I17K   Unalakleet     65.58  24  P       P       10 45 14.7 +0.3
             baz=244
P17K   Kvichak River  65.60  29  P       P       10 45 14.5  0.0
             baz=250
G16K   Koyuk River    65.65  22  P       P       10 45 14.7  0.0
             baz=242
N17K   Nushagak Hills 65.72  28  IAmb    IAmb    10 45 21.2
             comp=Z,15nm,1.3s
N17K   Nushagak Hills 65.72  28  P       P       10 45 15.7 +0.4
             baz=249
L17K   Donlin         65.84  26  P       P       10 45 16.7 +0.6
             baz=247
SII    Sitkinak Islan 65.90  33  P       P       10 45 17.3 +0.8
             baz=253
M17K   Holitna River  65.93  27  P       P       10 45 17.4 +0.7
             baz=248
J17K   VABM Dome      66.03  25  IAmb    IAmb    10 45 36.3
             comp=Z,13nm,1.0s
J17K   VABM Dome      66.03  25  P       P       10 45 17.8 +0.6
             baz=246
R18K   Karluk         66.06  32  P       P       10 45 18.0 +0.5
             baz=252
K17K   Iditarod       66.07  26  P       P       10 45 17.8 +0.3
             baz=247
C16K   Lisburne Hills 66.10  19  P       P       10 45 18.0 +0.5
             baz=237
Q18K   Katmai Hardscr 66.12  30  P       P       10 45 18.5 +0.5
             baz=252
P18K   Big Mountain,  66.25  30  P       P       10 45 19.1 +0.3
             baz=251
G17K   Kiwalik Mounta 66.33  22  P       P       10 45 19.5 +0.4
             baz=243
H17K   Granite Mounta 66.35  23  IAmb    IAmb    10 45 33.0
             comp=Z,4.7nm,0.7s
H17K   Granite Mounta 66.35  23  P       P       10 45 19.6 +0.3
             baz=244
N18K   Kilae Creek    66.38  28  P       P       10 45 19.9 +0.3
             baz=250
O18K   Koktuh Hills   66.41  29  P       P       10 45 20.1 +0.3
             baz=251
D17K   Noatak River   66.53  20  P       P       10 45 20.7 +0.3
             baz=240,SNR=18
F17K   Baldwin Pennin 66.54  21  P       P       10 45 21.0 +0.6
             baz=242
OHAK   Old Harbor     66.56  32  P       P       10 45 21.1 +0.4
             baz=254
L18K   Granite Mounta 66.57  26  IAmb    IAmb    10 45 27.4
             comp=Z,13nm,1.1s
L18K   Granite Mounta 66.57  26  P       P       10 45 21.1 +0.4
             baz=248
E17K   Hotham Inlet   66.65  20  P       P       10 45 21.8 +0.7
             baz=241
M18K   Stony River    66.69  27  P       P       10 45 22.1 +0.6
             baz=250
SGDS   Sogindy        66.74 313  eP      P       10 45 22.1 -0.1
AAK    Ala-Archa      66.74 312  LR      LR      11 17 36.6
             comp=Z,53nm,18.6s,baz=98,slow=39
AAK    Ala-Archa      66.74 312⇓eP       P       10 45 23.5 +1.1
AAK                              pmax    pmax
             comp=Z,4.0nm,0.8s
Q19K   Cape Douglas,  66.88  30  P       P       10 45 22.9 +0.1
             baz=253
C17K   DeLong Mountai 66.89  19  P       P       10 45 23.3 +0.6
             baz=240
O19K   Port Alsworth  66.95  29  P       P       10 45 23.6 +0.5
             baz=252
J18K   Innoko River   67.03  25  P       P       10 45 23.8 +0.1
             baz=248
H18K   Honhosa River  67.04  23  IAmb    IAmb    10 45 37.6
             comp=Z,21nm,1.4s
H18K   Honhosa River  67.04  23  P       P       10 45 23.9 +0.3
             baz=246
N19K   Bonanza Creek  67.07  28  P       P       10 45 24.5 +0.5
             baz=251
KDAK   Kodiak Island  67.08  32  P       P       10 45 25.0 +0.9
             baz=254
NIL    Nilore         67.10 302  P       P       10 45 25.1 +0.4
NIL    Nilore         67.10 302  P       P       10 45 25.1 +0.4
NIL                              pmax    pmax
             comp=Z,29nm,0.9s
F18K   Selawik        67.19  21  P       P       10 45 25.3 +0.8
             baz=244
E18K   Tukpahlearik C 67.23  20  P       P       10 45 25.7 +0.9
             baz=242,SNR=10
G18K   Tagagawik      67.24  22  IAmb    IAmb    10 45 30.2
             comp=Z,10.0nm,0.9s
G18K   Tagagawik      67.24  22  P       P       10 45 25.7 +0.7
             baz=245,SNR=7.1
P19K   Oil Pt         67.30  30  P       P       10 45 25.8 +0.3
             baz=253
BTLS   Baital         67.34 314  eP      P       10 45 26.0  0.0
BTLS                             pmax    pmax
             comp=Z,4.0nm,1.2s
BTLS   Baital         67.34 314  eP      P       10 45 26.0  0.0
             comp=Z,4.2nm,1.2s
L19K   White Mountain 67.36  27  IAmb    IAmb    10 45 40.0
             comp=Z,11nm,0.9s
L19K   White Mountain 67.36  27  P       P       10 45 26.2 +0.4
             baz=250,SNR=7.0
Q20K   Shuyak Island  67.41  31  P       P       10 45 26.8 +0.7
             baz=254
GCSA   Galena City Sc 67.45  24  P       P       10 45 27.4 +1.1
             baz=247
M19K   Big River Lodg 67.47  27  P       P       10 45 26.8 +0.3
             baz=251
C18K   Utukok River   67.61  19  IAmb    IAmb    10 45 33.3
             comp=Z,24nm,1.6s
C18K   Utukok River   67.61  19  P       P       10 45 27.4 +0.1
             baz=242
J19K   Poorman        67.68  25  P       P       10 45 28.3 +0.6
             baz=249
O20K   Slope Mountain 67.72  29  P       P       10 45 28.5 +0.4
             baz=253
ARSB   Arslanbob      67.74 310  IAmb    IAmb    10 45 42.7
             comp=Z,7.8nm,0.8s
B18K   Kokolik River  67.77  18  P       P       10 45 28.7 +0.5
             baz=241
L20K   Farewell, AK   67.89  27  P       P       10 45 29.8 +0.7
             baz=251
H19K   Roundabout Mou 67.93  23  IAmb    IAmb    10 45 48.7
             comp=Z,8.8nm,0.8s
H19K   Roundabout Mou 67.93  23  P       P       10 45 29.8 +0.5
             baz=247,SNR=7.0
G19K   Purcell Mounta 67.93  22  IAmb    IAmb    10 45 48.5
             comp=Z,12nm,0.8s
G19K   Purcell Mounta 67.93  22  P       P       10 45 29.9 +0.7
             baz=246,SNR=18
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F19K  Shaleruckik Mo  67.96  22  P      P      10 45 29.8 +0.4
      baz=246
M20K  Styx River      68.03  27  P      P      10 45 30.4 +0.3
      baz=252
HOM   Homer           68.07  30  P      P      10 45 30.6 +0.3
      baz=254
K20K  Telida          68.10  26  IAmb   IAmb   10 45 35.3
      comp=Z,6.7nm,0.9s
K20K  Telida          68.10  26  P      P      10 45 30.8 +0.3
      baz=250
SPCR  Spurr Chakacha  68.24  28  P      P      10 45 32.0 +0.6
      baz=253
C19K  Lookout Ridge   68.34  19  P      P      10 45 32.3 +0.4
      baz=243
J20K  Nowinta River   68.35  25  IAmb   IAmb   10 45 51.2
      comp=Z,11nm,1.1s
J20K  Nowinta River   68.35  25  P      P      10 45 32.5 +0.6
      baz=250
E19K  Redstone River  68.41  21  IAmb   IAmb   10 45 46.5
      comp=Z,7.5nm,0.8s
E19K  Redstone River  68.41  21  P      P      10 45 32.9 +0.6
      baz=246,SNR=5.5
I20K  Naaghedeneel    68.43  24  P      P      10 45 32.9 +0.5
      baz=250
H20K  Anotleneega Mo  68.52  23  P      P      10 45 33.7 +0.7
      baz=249,SNR=7.5
BRSE  Bradley Lake S  68.54  30  P      P      10 45 34.0 +0.8
      baz=255
D19K  Kuna River      68.55  20  IAmb   IAmb   10 45 47.2
      comp=Z,12nm,0.8s
D19K  Kuna River      68.55  20  P      P      10 45 33.4 +0.2
      baz=245
CAPN  Captain Cook N  68.61  29  P      P      10 45 34.2 +0.6
      baz=254
PPLA  Purkeypile      68.76  26  P      P      10 45 35.1 +0.4
      baz=252
SKT   Skwentna        68.78  27  IAmb   IAmb   10 45 38.4
      comp=Z,6.1nm,0.7s
SKT   Skwentna        68.78  27  P      P      10 45 34.8 +0.1
      baz=253
F20K  Avaraart Lake   68.79  22  P      P      10 45 35.0 +0.4
      baz=248
BRZS  Berezniki       68.90 319 eP      P      10 45 35.7  0.0
BRZS  Berezniki       68.90 319 eP      P      10 45 35.8  0.0
CAST  Castle Rocks    68.97  26  IAmb   IAmb   10 45 40.0
      comp=Z,7.7nm,0.7s
CAST  Castle Rocks    68.97  26  P      P      10 45 35.9 +0.1
      baz=252,SNR=14
SUA   Susitna One     69.00  28  P      P      10 45 36.0 -0.2
      baz=254
CHUM  Lake Minchumin  69.01  25  P      P      10 45 36.3 +0.3
      baz=252
DZA   Taraz           69.09 312 eP      P      10 45 37.0  0.0
DZA                              pmax   pmax
      comp=Z,4.0nm,0.5s
DZA   Taraz           69.09 312 eP      P      10 45 37.0  0.0
      comp=Z,4.3nm,0.5s
E20K  Nigu River      69.10  20  P      P      10 45 36.7 +0.1
      baz=247,SNR=16
IMAR  Indian Mountai  69.13  23  P      P      10 45 39.7 +2.9
D20K  Etivluk River   69.14  20  P      P      10 45 37.1 +0.2
      baz=246
O22K  Cooper Landing  69.22  29  P      P      10 45 37.1 -0.3
      baz=256
SEW   Seward          69.26  30  P      P      10 45 37.1 -0.5
      baz=256
M22K  Willow          69.36  28  P      P      10 45 37.9 -0.3
      baz=255
RC01  Rabbit Creek A  69.37  29  P      P      10 45 37.8 -0.5
      baz=255
H21K  Melozitna Rive  69.39  23  P      P      10 45 38.0 -0.4
      baz=251,SNR=8.0
G21K  Allakaket       69.41  23  P      P      10 45 38.1 -0.5
      baz=250
CUT   Chulitna        69.47  27  P      P      10 45 38.7 -0.2
      baz=254
KTH   Kantishna Hill  69.50  26  IAmb   IAmb   10 45 52.6
      comp=Z,17nm,1.1s
B20K  Meade River     69.51  19  P      P      10 45 38.6 -0.4
      baz=245
BPAW  Bear Paw Mtn.   69.64  25  IAmb   IAmb   10 45 44.6
      comp=Z,15nm,1.3s
BPAW  Bear Paw Mtn.   69.64  25  P      P      10 45 39.0 -1.0
      baz=253,SNR=5.9
GAR   Garm            69.64 307  IAmb   IAmb   10 45 42.0
      comp=Z,13nm,0.8s
F21K  Alatna River    69.67  22  P      P      10 45 40.1  0.0
      baz=250
KKAR  Karatay Array   69.70 312         P      10 45 40.8  0.0
KKAR  Karatay Array   69.70 312  P      P      10 45 40.8  0.0
TRF   Thorofare Moun  69.75  26  IAmb   IAmb   10 45 58.6
      comp=Z,7.6nm,0.9s
TRF   Thorofare Moun  69.75  26  P      P      10 45 40.2 -0.7
      baz=254
PMR   Palmer          69.78  28  IAmb   IAmb   10 45 44.5
      comp=Z,11nm,0.7s
PMR   Palmer          69.78  28  P      P      10 45 40.5 -0.3
      baz=256,SNR=5.2
C21K  Knifeblade Rid  69.92  20  P      P      10 45 41.3 -0.3
      baz=248
E21K  Killik River    69.93  21  P      P      10 45 41.6 -0.1
      baz=249
PWL   Port Wells      69.97  29  P      P      10 45 41.8 -0.3
      baz=257,SNR=19
IUG   Iuzhnay         70.00 311 eP      P      10 45 42.8 +0.1
IUG                              pmax   pmax
      comp=Z,12nm,1.2s
IUG   Iuzhnay         70.00 311 eP      P      10 45 42.8 +0.1
      comp=Z,12nm,1.2s
MLY   Manley          70.01  24  IAmb   IAmb   10 45 56.4
      comp=Z,14nm,1.1s
MLY   Manley          70.01  24  P      P      10 45 42.1 -0.2
      baz=253,SNR=17
H22K  Ishtalitna Cre  70.02  23  P      P      10 45 42.4 +0.1
      baz=252
KNK   Knik Glacier    70.05  28  P      P      10 45 42.8 +0.3
      baz=256
B21K  Ikpikpuk River  70.16  19  IAmb   IAmb   10 45 48.1
      comp=Z,7.1nm,0.8s
B21K  Ikpikpuk River  70.16  19  P      P      10 45 43.6 +0.6
      baz=248
BRLS  Borolday        70.19 312 eP      P      10 45 44.3 +0.5
BRLS  Borolday        70.19 312 eP      P      10 45 44.4 +0.5
SML   Sawmill         70.20  28  P      P      10 45 44.0 +0.5
      baz=256
A21K  Barrow          70.23  17  P      P      10 45 43.9 +0.5
      baz=245
P23K  Montague Islan  70.23  30  P      P      10 45 43.9 +0.2
      baz=258
F22K  John River      70.24  22  P      P      10 45 44.5 +0.9
      baz=251
G22K  Bettles         70.30  22  P      P      10 45 44.2 +0.3
      baz=252
CHM   Chimkent        70.32 311 eP      P      10 45 44.6  0.0
CHM   Chimkent        70.32 311 eP      P      10 45 44.7  0.0
WAT1  Susitna Watana  70.35  27  P      P      10 45 44.2 -0.2
      baz=256
RND   Reindeer        70.36  26  IAmb   IAmb   10 45 48.9
      comp=Z,24nm,1.6s
MCK   McKinley        70.41  26  IAmb   IAmb   10 46 03.2
      comp=Z,7.7nm,0.6s
MCK   McKinley        70.41  26  P      P      10 45 45.1 +0.4
      baz=255
M23K  Glacier View    70.47  28  P      P      10 45 45.4 +0.3
      baz=257
D22K  Ayikyak River   70.53  20  IAmb   IAmb   10 45 60.0
      comp=Z,9.9nm,0.8s
D22K  Ayikyak River   70.53  20  P      P      10 45 45.3  0.0
      baz=250
GLI   Glacier Island  70.57  29  IAmb   IAmb   10 45 50.0
      comp=Z,8.5nm,0.6s
GLI   Glacier Island  70.57  29  P      P      10 45 45.7  0.0
      baz=258
E22K  Anaktuvuk Pass  70.58  21  IAmb   IAmb   10 46 00.2
      comp=Z,10.0nm,0.8s
E22K  Anaktuvuk Pass  70.58  21  P      P      10 45 46.1 +0.4
      baz=251,SNR=14
NEA2  Nenana          70.58  25  P      P      10 45 45.8 +0.1
      baz=255
A22K  Sinclair Lake   70.59  18  P      P      10 45 45.8 +0.2
      baz=247
KBL   Kabul           70.60 303  P      P      10 45 46.2 -0.5
KBL                              IAmb   IAmb   10 45 49.6
      comp=Z,13nm,1.1s
KBL   Kabul           70.60 303  P      P      10 45 46.2 -0.5
KBL                              pmax   pmax
      comp=Z,13nm,1.1s
I23K  Minto, Yukon-K  70.61  24  IAmb   IAmb   10 45 60.0
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      comp=Z,16nm,1.2s
I23K  Minto, Yukon-K  70.61  24  P      P      10 45 46.1 +0.2
      baz=254,SNR=8.7
Q23K  Middleton Isla  70.64  31  P      P      10 45 46.6 +0.5
      baz=259
WAT6  Susitna Watana  70.65  27  P      P      10 45 46.3 -0.1
      baz=257,SNR=6.0
SIMJ  Simiganj        70.66 307         P      10 45 46.8 -0.1
SIMJ                             IAmb   IAmb   10 45 48.2
      comp=Z,10.0nm,0.9s
SCM   Sheep Creek Mo  70.67  28  P      P      10 45 46.5 +0.1
      baz=257
H23K  Yukon River     70.72  24  P      P      10 45 46.8 +0.2
      baz=254,SNR=6.4
BVAR  Borovoye Array  70.72 322  P      P      10 45 47.0 +0.2
      comp=Z,17nm,0.5s,baz=104,slow=8.2,SNR=46
BVAR                             LR     LR     11 19 46.4
      comp=Z,80nm,18.4s,baz=95,slow=38
      comp=Z,17nm,0.5s
BRVK  Borovoye        70.79 322         P      10 45 47.5 +0.3
BRVK  Borovoye        70.79 322deP      P      10 45 47.3 +0.1
BRVK                             pmax   pmax
      comp=Z,17nm,0.8s
G23K  Bananza Creek   70.79  23  IAmb   IAmb   10 46 06.3
      comp=Z,9.7nm,0.9s
G23K  Bananza Creek   70.79  23  P      P      10 45 47.5 +0.5
      baz=253
DZET  Dzherino        70.80 307  P      P      10 45 48.3 +0.6
DZET                             pmax   pmax
      comp=Z,6.0nm,0.6s
B22K  Teshekpuk Lake  70.81  19  IAmb   IAmb   10 46 01.0
      comp=Z,9.3nm,0.7s
B22K  Teshekpuk Lake  70.81  19  P      P      10 45 47.3 +0.3
      baz=249
COLD  Coldfoot        70.88  22  IAmb   IAmb   10 46 02.0
      comp=Z,12nm,0.9s
COLD  Coldfoot        70.88  22  P      P      10 45 47.9 +0.4
      baz=253,SNR=16
DHY   Denali Highway  70.93  27  IAmb   IAmb   10 46 01.8
      comp=Z,16nm,1.4s
DHY   Denali Highway  70.93  27  P      P      10 45 48.1  0.0
      baz=257
EYAK  Cordova Ski Ar  71.15  30  IAmb   IAmb   10 45 53.6
      comp=Z,8.9nm,0.6s
EYAK  Cordova Ski Ar  71.15  30  P      P      10 45 49.5 +0.3
      baz=259
COLA  College         71.15  25⇓eP      P      10 45 50.0 +0.8
COLA                             pmax   pmax
      comp=Z,5.0nm,0.9s
COLA  College         71.15  25  P      P      10 45 49.4 +0.2
      baz=256
D23K  Nanushuk River  71.24  20  IAmb   IAmb   10 46 09.5
      comp=Z,20nm,1.2s
D23K  Nanushuk River  71.24  20  P      P      10 45 50.0 +0.3
      baz=252
KLU   Klutina         71.25  29  P      P      10 45 50.0 +0.1
      baz=259,SNR=5.8
M24K  Tolsona, Glenn  71.26  28  P      P      10 45 51.2 +1.3
M24K  Tolsona, Glenn  71.26  28  P      P      10 45 50.3 +0.3
      baz=258
E23K  Chandalar       71.34  21  P      P      10 45 50.9 +0.5
      baz=253,SNR=15
H24K  Noodor Dome     71.39  24  IAmb   IAmb   10 45 55.8
      comp=Z,13nm,1.1s
H24K  Noodor Dome     71.39  24  P      P      10 45 50.9 +0.2
      baz=256,SNR=6.1
POKR  Poker Plat Res  71.39  25  P      P      10 45 51.0 +0.4
      baz=256
HDA   Harding Lake    71.42  26  P      P      10 45 50.9 +0.1
      baz=257
TOLK  Toolik Lake Re  71.52  21  P      P      10 45 52.2 +0.7
      baz=253
IL31                  71.53  25  IAmb   IAmb   10 45 54.2
      comp=Z,6.2nm,0.6s
ILAR  Eielson Array   71.53  25  P      P      10 45 50.4 -1.1
ILAR  Eielson Array   71.53  25  P      P      10 45 50.2 -1.2
      comp=Z,5.3nm,0.6s,baz=247,slow=5.8,SNR=30
      comp=Z,5.3nm,0.6s
ILAR  Eielson Array   71.53  25  P      P      10 45 50.4 -1.1
C23K  Itkillik River  71.54  20  IAmb   IAmb   10 46 05.9
      comp=Z,11nm,0.8s
C23K  Itkillik River  71.54  20  P      P      10 45 52.2 +0.8
      baz=252
KAIM  Kayak Island    71.69  30  P      P      10 45 52.9 +0.4
      baz=261
E24K  Your Creek      71.75  22  P      P      10 45 53.0 +0.2
      baz=254
PAX   Paxson          71.75  27  IAmb   IAmb   10 46 06.2
      comp=Z,5.7nm,0.6s
PAX   Paxson          71.75  27  P      P      10 45 53.0 +0.1
      baz=259,SNR=10
G24K  Hadweenzic Riv  71.76  23  IAmb   IAmb   10 46 11.4
      comp=Z,15nm,1.5s
G24K  Hadweenzic Riv  71.76  23  P      P      10 45 53.1 +0.3
      baz=256
BMRM  Bremner River   71.78  29  IAmb   IAmb   10 45 58.1
      comp=Z,11nm,0.8s
BMRM  Bremner River   71.78  29  P      P      10 45 53.4 +0.3
      baz=260
HARP  HAARP           71.78  28  P      P      10 45 53.6 +0.5
      baz=259
K24K  Donnelly Dome   71.79  26  P      P      10 45 53.2 +0.1
      baz=258
F24K  Squaw Lake      71.82  22  IAmb   IAmb   10 46 08.0
      comp=Z,8.7nm,0.9s
F24K  Squaw Lake      71.82  22  P      P      10 45 53.6 +0.4
      baz=255
N25K  Chitina, Valde  71.90  29  P      P      10 45 54.2 +0.4
      baz=260
D24K  Happy Valley    71.93  20  P      P      10 45 54.4 +0.6
      baz=254,SNR=5.2
J25K  Salcha River,   72.13  25  P      P      10 45 55.4 +0.2
      baz=258
C24K  Franklin Bluff  72.14  20  P      P      10 45 55.7 +0.7
      baz=253
RIDG  Independent Ri  72.18  26  IAmb   IAmb   10 46 09.2
      comp=Z,10.0nm,0.6s
RIDG  Independent Ri  72.18  26  P      P      10 45 55.6 +0.1
      baz=259,SNR=5.2
GLB   Gilahina Butte  72.24  29  IAmb   IAmb   10 46 01.4
      comp=Z,14nm,1.2s
PRP   Porcupine Dome  72.26  25  P      P      10 45 56.1 +0.1
      baz=258
BGLC  Bering Glacier  72.29  30  P      P      10 45 57.0 +1.0
      baz=262
H25L  Birch Creek     72.31  24  P      P      10 45 56.4 +0.3
      baz=257
G25K  Bearman Lake    72.31  23  P      P      10 45 56.3 +0.2
      baz=257
VRDI  Verde Repeater  72.38  29  IAmb   IAmb   10 46 00.9
      comp=Z,5.9nm,0.6s
PPT2  Papeete2        72.43 113 eLR     LR     11 07 53.5
      comp=Z,75nm,26.8s
CRQE  Cirque          72.47  30  P      P      10 45 57.3 -0.1
      baz=262
DOT   Dot Lake        72.51  27  IAmb   IAmb   10 46 02.8
      comp=Z,10.0nm,0.7s
SCRK  Sand Creek      72.60  26  P      P      10 45 57.7 -0.4
      baz=260
MCARA McCarthy VSAT   72.60  29  P      P      10 45 59.3 +1.3
MCARA                            IAmb   IAmb   10 46 02.9
      comp=Z,12nm,0.9s
MCARA McCarthy VSAT   72.60  29  P      P      10 45 58.6 +0.6
      baz=261
F25K  Christian Rive  72.67  22  P      P      10 45 58.8 +0.4
      baz=257
L26K  Log Cabin Wild  72.72  27  IAmb   IAmb   10 46 03.3
      comp=Z,21nm,1.4s
L26K  Log Cabin Wild  72.72  27  P      P      10 45 59.0 +0.3
      baz=261
M26K  Nabesna, AK     72.78  28  P      P      10 46 00.3 +1.2
M26K  Nabesna, AK     72.78  28  P      P      10 45 59.2 +0.2
      baz=261
E25K  Arctic Village  72.82  22  P      P      10 46 00.2 +1.1
E25K                             IAmb   IAmb   10 46 18.3
      comp=Z,15nm,1.1s
E25K  Arctic Village  72.82  22  P      P      10 45 58.7 -0.4
      baz=257
D25K  Kavik River     72.82  21  P      P      10 45 59.5 +0.3
      baz=256
J26L  Joseph Creek    72.88  26  P      P      10 45 59.7 +0.1
      baz=260,SNR=6.5
MESA  MESA            72.95  30  P      P      10 45 59.7 -0.7
      baz=263
BMAR  Burnt Mountain  73.03  23  P      P      10 46 01.4 +0.9
I26K  Coal Creek Min  73.19  25  P      P      10 46 00.9 -0.5
      baz=260
G26K  Porcupine Rive  73.24  23         P      10 46 01.8 +0.2
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G26K  Porcupine Rive  73.24  23  P      P      10 46 01.2 -0.4
      baz=259
F26K  Sheenjek River  73.25  22  IAmb   IAmb   10 46 21.5
      comp=Z,8.7nm,0.8s
F26K  Sheenjek River  73.25  22  P      P      10 46 01.3 -0.5
      baz=258
M27K  Edge Creek, AK  73.28  28  P      P      10 46 02.1  0.0
      baz=262
CTG   Chitna Glacier  73.35  30  P      P      10 46 01.8 -0.8
      baz=263,SNR=5.9
L27K  Beaver Creek,   73.41  27  P      P      10 46 02.7  0.0
      baz=262
BCAR  Beaver Creek A  73.43  27         P      10 46 03.1 +0.2
K27K  Chicken         73.44  26  P      P      10 46 03.6 +0.7
      baz=261
LOGN  Logan Glacier   73.50  30  P      P      10 46 04.4 +0.9
BVCY  Beaver Creek    73.76  28  P      P      10 46 05.5 +0.6
      baz=263
PINM  Pinnacle        73.79  31  P      P      10 46 05.6 +0.5
      baz=264
C27K  Jago River      73.80  20  P      P      10 46 05.4 +0.5
      baz=258
YUK3  Moose Creek     73.87  29  P      P      10 46 05.7  0.0
      baz=264,SNR=5.4
I27K  Kandik River    73.87  25  P      P      10 46 05.2 -0.3
      baz=261
O28M  Mount Upton     73.89  30  IAmb   IAmb   10 46 12.6
      comp=Z,8.1nm,0.6s
O28M  Mount Upton     73.89  30  P      P      10 46 06.0 +0.1
      baz=264
H27K  Steamboat Moun  74.00  24  IAmb   IAmb   10 46 11.2
      comp=Z,10nm,0.7s
H27K  Steamboat Moun  74.00  24  P      P      10 46 06.5 +0.3
      baz=261
G27K  Doyon Strip     74.05  23  P      P      10 46 06.6 +0.2
      baz=261
YUK8  Steele Glacier  74.15  29  P      P      10 46 07.1 -0.3
      baz=264
PNL   Peninsula       74.18  31  P      P      10 46 07.4 +0.1
      baz=265
E27K  Coleen River    74.29  22  P      P      10 46 07.7 -0.1
      baz=261
TBI   Tubuai          74.39 118 eLR     LR     11 08 55.1
      comp=Z,869nm,27.8s
I28M  Miner Creek     74.54  25  P      P      10 46 09.4  0.0
      baz=263
DAWY  Dawson          74.61  26  P      P      10 46 10.7 +0.9
DAWY                             IAmb   IAmb   10 46 30.0
      comp=Z,15nm,1.2s
DAWY  Dawson          74.61  26  P      P      10 46 10.3 +0.5
      baz=264
O29M  Mount Kennedy   74.64  30  P      P      10 46 11.0 +0.9
O29M  Mount Kennedy   74.64  30  P      P      10 46 10.4 +0.3
      baz=266
D27M  Malcolm River   74.69  21  P      P      10 46 10.3 +0.2
      baz=261
YUK4  Talbot Arm      74.69  29  P      P      10 46 10.9 +0.4
      baz=265
YUK6  Outpost Mounta  74.80  30  P      P      10 46 11.4 +0.3
      baz=266
F28M  Old Crow        74.85  23  P      P      10 46 11.5 +0.4
      baz=262
M29M  Somme Creek     74.87  28  IAmb   IAmb   10 46 16.4
      comp=Z,7.5nm,0.7s
M29M  Somme Creek     74.87  28  P      P      10 46 11.7 +0.3
      baz=265
P29M  Windy Craggy    75.02  31  P      P      10 46 12.7 +0.5
      baz=267
L29M  L29M            75.08  27  IAmb   IAmb   10 46 17.7
      comp=Z,11nm,0.6s
L29M  L29M            75.08  27  P      P      10 46 13.5 +0.9
      baz=265
E28M  Babbage River   75.11  22  IAmb   IAmb   10 46 32.3
      comp=Z,11nm,0.9s
E28M  Babbage River   75.11  22  P      P      10 46 13.6 +1.0
      baz=262
J29N  Klondike Camp   75.16  26  P      P      10 46 13.3 +0.2
      baz=265
HYT   Haines Junctio  75.21  30  P      P      10 46 13.3 -0.1
      baz=266
I29M  Ogilvie Camp,   75.21  25  IAmb   IAmb   10 46 33.0
      comp=Z,17nm,1.4s
I29M  Ogilvie Camp,   75.21  25  P      P      10 46 13.4 +0.2
      baz=264
H29M  Whitestone      75.27  24  P      P      10 46 13.4 -0.1
      baz=264
K29M  Barlow Dome     75.42  27  IAmb   IAmb   10 46 19.5
      comp=Z,8.7nm,0.7s
K29M  Barlow Dome     75.42  27  P      P      10 46 14.6 +0.1
      baz=266
P30M  Million Dollar  75.44  31  P      P      10 46 14.8 +0.1
      baz=267
N30M  Aishikik Lake   75.45  29  P      P      10 46 14.7  0.0
      baz=267
G29M  Pine Creek      75.48  24  IAmb   IAmb   10 46 38.5
      comp=Z,13nm,0.9s
G29M  Pine Creek      75.48  24  P      P      10 46 14.8 +0.1
      baz=264
E29M  Blow River      75.68  22  P      P      10 46 15.9 +0.1
      baz=264
PLBC  Pleasant Camp   75.70  31  P      P      10 46 16.0 -0.1
      baz=268
S31K  Pelican         75.72  33  P      P      10 46 16.8 +0.6
      baz=268
O30N  Mendenhall      75.90  30  P      P      10 46 17.6 +0.4
      baz=268
EPYK  Eagle Plains    75.95  24  IAmb   IAmb   10 46 23.1
      comp=Z,7.7nm,0.7s
EPYK  Eagle Plains    75.95  24  P      P      10 46 17.5 +0.1
      baz=266
J30M  Hart River      75.99  26  IAmb   IAmb   10 46 37.6
      comp=Z,21nm,1.6s
J30M  Hart River      75.99  26  P      P      10 46 17.4 -0.4
      baz=267
R31K  City Hall, Gus  75.99  32  P      P      10 46 18.0 +0.2
      baz=269
I30M  Mount Dempster  76.01  25  P      P      10 46 17.7 -0.2
      baz=266
N31M  Braeburn, Yuko  76.08  29  IAmb   IAmb   10 46 24.6
      comp=Z,9.5nm,1.1s
N31M  Braeburn, Yuko  76.08  29  P      P      10 46 18.3  0.0
      baz=268
MAYO  Mayo, Yukon     76.12  27  IAmb   IAmb   10 46 25.8
      comp=Z,14nm,0.7s
MAYO  Mayo, Yukon     76.12  27  P      P      10 46 18.5 +0.1
      baz=267
SIT   Sitka           76.19  34  P      P      10 46 19.0 +0.1
      baz=269
G30M  tAoh Zraii Nji  76.19  24  IAmb   IAmb   10 46 24.3
      comp=Z,9.4nm,0.9s
G30M  tAoh Zraii Nji  76.19  24  P      P      10 46 19.3 +0.5
      baz=266
HRA   Herat           76.22 303  IAmb   IAmb   10 46 21.3
      comp=Z,13nm,0.8s
SKAG  Skagway         76.23  31  P      P      10 46 19.9 +0.8
      baz=269
F30M  Barrier River   76.41  23  IAmb   IAmb   10 46 40.4
      comp=Z,15nm,1.0s
F30M  Barrier River   76.41  23  P      P      10 46 20.4 +0.4
      baz=266
WHY   Whitehorse      76.49  30  P      P      10 46 21.0 +0.3
      baz=269
S32K  Killisnoo       76.60  33  P      P      10 46 21.7 +0.6
      baz=270
R32K  Eaglecrest      76.64  33  P      P      10 46 21.5 +0.1
      baz=270
M31M  Drury Creek, Y  76.76  29  P      P      10 46 22.1  0.0
      baz=269
H31M  Peel River      76.89  25  P      P      10 46 22.7 -0.1
      baz=268
G31M  Satah River     76.96  24  IAmb   IAmb   10 46 42.1
      comp=Z,13nm,0.9s
G31M  Satah River     76.96  24  P      P      10 46 23.4 +0.4
      baz=268
P32M  Atlin           77.06  31  P      P      10 46 24.3 +0.4
      baz=270
ABKAR Akbulak array   77.13 318         P      10 46 24.2 -0.1
ABKAR Akbulak array   77.13 318  IAmb   IAmb   10 46 25.0
      comp=Z,6.8nm,0.8s
F31M  Tsiigehtchic    77.18  23  P      P      10 46 25.0 +0.7
      baz=268
FARO  Faro, Yukon     77.25  29  IAmb   IAmb   10 46 35.3
      comp=Z,25nm,1.9s
FARO  Faro, Yukon     77.25  29  P      P      10 46 25.8 +0.9
      baz=270
INK   Inuvik          77.29  22  P      P      10 46 25.7 +0.8
      baz=268
N32M  Quiet Lake      77.37  30  IAmb   IAmb   10 46 30.9
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	comp=Z,23nm,1.4s						
N32M	Quiet Lake	77.37	30	P	P	10 46 26.3	+0.7
	baz=270						
U33K	Whale Pass	77.41	35	P	P	10 46 26.7	+0.9
	baz=271						
CRAG	Craig	77.42	35	P	P	10 46 27.1	+1.2
	baz=272						
P33M	Teslin, Yukon	77.51	31	P	P	10 46 26.8	+0.4
	baz=271						
Q32M	Nakina River	77.81	32	P	P	10 46 28.9	+0.7
	baz=271						
ARTI	Arti	77.83	325		P	10 46 27.1	-1.1
ARTI	Arti	77.83	325	c iP	P	10 46 27.4	-0.8
ARTI				S	S	10 56 20.1	+0.5
ARTI				SS	SS	11 01 16.9	-3.0
ARTI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
WRAK	Wrangell Islan	77.83	34	P	P	10 46 29.1	+1.0
	baz=272						
MMPY	Sheldon Lake,	78.22	28	P	P	10 46 31.5	+1.2
	baz=272						
V35K	Ketchikan	78.29	36	P	P	10 46 32.1	+1.4
	baz=273						
AKTO	Aktyubinsk	78.32	319	LR	LR	11 23 58.9	
	comp=Z,65nm,19.2s,baz=98,slow=38						
S34M	Telegraph Cree	78.44	33	P	P	10 46 32.8	+1.3
	baz=273						
R33M	Jennings River	78.46	31	IAmb	IAmb	10 46 37.5	
	comp=Z,20nm,1.8s						
R33M	Jennings River	78.46	31	P	P	10 46 32.7	+0.9
	baz=272						
TAOE	Nuku Hiva Isla	78.96	101	eLR	LR	11 11 16.2	
	comp=Z,47nm,22.0s						
T35M	Bob Quinn	78.97	34	P	P	10 46 35.7	+1.2
	baz=274						
DLBC	Dease Lake	79.00	32	P	P	10 46 35.5	+0.8
	baz=274						
WTLY	Watson Lake, Y	79.52	31	IAmb	IAmb	10 46 43.6	
	comp=Z,22nm,1.4s						
WTLY	Watson Lake, Y	79.52	31	P	P	10 46 38.5	+1.1
	baz=274						
A36M	Sachs Harbour	80.02	18	P	P	10 46 40.6	+0.8
	baz=275						
C36M	Paulatuk	80.68	21	P	P	10 46 44.2	+0.7
	baz=277						
LIRD	Liard River Hi	80.94	31	P	P	10 46 45.6	+0.5
	baz=277						
BEAVL	Fort Liard	81.37	30	P	P	10 46 47.5	+0.2
	baz=277						
TOAD	Toad River Com	81.46	32	P	P	10 46 48.6	+0.7
	baz=277						
WRGLY	Wrigley	81.72	27	P	P	10 46 49.6	+0.6
	baz=278						
KOTAN	Kotaneelee Air	81.88	30	P	P	10 46 50.0	-0.1
	baz=278						
KIRV	Kirov	82.45	328	ceP	P	10 46 53.6	+0.6
YKAW3	Yellowknife Wh	85.82	27	IAmb	IAmb	10 47 14.4	
	comp=Z,4.6nm,0.8s						
YBH	Yreka Blue Hor	85.83	48	IAmb	IAmb	10 47 16.4	
	comp=Z,22nm,1.8s						
YKA	Yellowknife Ar	85.84	27	P	P	10 47 10.3	+0.1
YKA	Yellowknife Ar	85.84	27	P	P	10 47 09.9	-0.3
	comp=Z,3.7nm,1.0s,baz=222,slow=6.3,SNR=23						
	comp=Z,3.7nm,1.0s						
YKA	Yellowknife Ar	85.84	27	P	P	10 47 10.3	+0.1
YKAW1	Yellowknife Wh	85.90	27	IAmb	IAmb	10 47 29.8	
	comp=Z,12nm,1.5s						
J04A	Umpqua Nationa	85.97	47	IAmb	IAmb	10 47 16.4	
	comp=Z,8.8nm,0.7s						
SPITS	Spitsbergen Ar	86.14	350	P	P	10 47 10.8	-0.7
	comp=Z,2.0nm,0.7s,baz=101,slow=7.5,SNR=5.5						
SPITS				LR	LR	11 27 35.5	
	comp=Z,30nm,18.7s,baz=3.5,slow=37						
	comp=Z,2.0nm,0.7s						
PINE	Pine Mountain	86.69	46	IAmb	IAmb	10 47 20.6	
	comp=Z,8.1nm,0.8s						
B08A	Colville Reser	86.79	41	IAmb	IAmb	10 47 20.2	
	comp=Z,10nm,0.8s						
KLMR	Klimovskoe	86.82	332	eP	P	10 47 13.3	-1.8
KLMR				pmax	pmax		
	comp=Z,15nm,1.7s						
RES	Resolute Bay	87.32	13	LR	LR	11 33 09.4	
	comp=Z,12nm,18.1s,baz=358,slow=40						
BEKR	Beckworth	87.96	50	IAmb	IAmb	10 47 26.4	
	comp=Z,6.1nm,0.8s						
NEW	Newport	88.24	41	IAmb	IAmb	10 47 27.3	
	comp=Z,5.0nm,0.8s						
NEW	Newport	88.24	41	LR	LR	11 21 44.1	
	comp=Z,31nm,20.1s,baz=288,slow=32						
NEW	Newport	88.24	41	P	P	10 47 23.0	+0.7
NEW				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MPK	Martis Peak	88.34	50	IAmb	IAmb	10 47 33.2	
	comp=Z,8.4nm,1.2s						
WVOR	Wild Horse Val	88.64	47	IAmb	IAmb	10 47 29.6	
	comp=Z,6.2nm,0.8s						
WVOR	Wild Horse Val	88.64	47	P	P	10 47 25.3	+0.9
WVOR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PNTR	Pine Nut	88.71	51	IAmb	IAmb	10 47 32.7	
	comp=Z,5.9nm,0.8s						
PAHR	Pah Rah Range	88.73	50	IAmb	IAmb	10 49 06.3	
	comp=Z,6.2nm,1.0s						
ARCES	ARCESS Array B	88.83	342	P	P	10 47 24.1	-0.4
	comp=Z,2.0nm,0.5s,baz=72,slow=7.5,SNR=18						
	comp=Z,2.0nm,0.5s						
BMO	Blue Mountains	88.98	45	IAmb	IAmb	10 47 30.5	
	comp=Z,4.8nm,0.7s						
VNDA	Vanda	89.17	176		P	10 47 26.4	+0.6
VNDA	Vanda	89.17	176	P	P	10 47 26.0	+0.2
	comp=Z,2.9nm,1.0s,baz=340,slow=5.6,SNR=13						
VNDA				LR	LR	11 27 29.2	
	comp=Z,59nm,18.4s,baz=336,slow=36						
	comp=Z,2.9nm,1.0s						
VNDA	Vanda	89.17	176	P	P	10 47 26.4	+0.6
VNDA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KBZ	Khabaz	89.58	314	⇑eP	P	10 47 28.1	-0.4
KBZ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
RYN	Ryan	89.64	51	IAmb	IAmb	10 47 34.8	
	comp=Z,6.2nm,0.8s						
LHV	Little Huntoon	89.74	51	IAmb	IAmb	10 47 35.0	
	comp=Z,5.2nm,0.7s						
PLID	Pearl Lake	89.82	44		P	10 47 30.1	+0.1
NVAR	Mina Array Bea	89.85	51	P	P	10 47 31.2	+0.9
	comp=Z,7.4nm,0.6s,baz=265,slow=5.6,SNR=39						
	comp=Z,7.4nm,0.6s						
OBN	Obninsk	90.13	327	i P	P	10 47 31.6	+0.7
OBN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HLID	Hailey	91.33	45	IAmb	IAmb	10 47 42.9	
	comp=Z,9.3nm,1.8s						
ELK	Elko	91.54	48	IAmb	IAmb	10 47 52.6	
	comp=Z,13nm,1.8s						
QSM	Queen of Sheba	91.58	53	IAmb	IAmb	10 47 43.1	
	comp=Z,4.9nm,0.7s						
TPNV	Topopah Spring	91.80	52	IAmb	IAmb	10 47 44.4	
	comp=Z,4.0nm,0.8s						
FINES	FINESS Array B	92.58	335	P	P	10 47 40.9	-1.3
	comp=Z,5.3nm,1.1s,baz=63,slow=5.7,SNR=9.5						
	comp=Z,5.3nm,1.1s						
YHL	Hebgen Lake	93.15	43	IAmb	IAmb	10 47 51.4	
	comp=Z,4.6nm,0.9s						
V12A	Nelson	93.22	53		P	10 47 46.7	+0.9
V12A				IAmb	IAmb	10 47 51.5	
	comp=Z,5.6nm,0.9s						
RLMT	Red Lodge	94.34	43	IAmb	IAmb	10 47 57.7	
	comp=Z,3.3nm,0.7s						
HFS	Hagfors	98.33	337	LR	LR	11 37 04.0	
	comp=Z,30nm,18.4s,baz=54,slow=38						
NOA	NORSAR Array B	98.65	338	LR	LR	11 36 25.2	
	comp=Z,14nm,18.5s,baz=35,slow=38						
QSPA	South Pole Qui	101.01	180	P	Pdif	10 48 20.8	+0.6
	comp=Z,1.1nm,0.9s,baz=296,slow=0.6,SNR=5.4						
SYO	Syowa Base	105.15	201	⇓ePdiff	Pdif	10 48 40.4	+2.0
PLCA	Paso Flores	138.27	141	PKP	PKiKP	10 53 57.5	-1.0
	comp=Z,1.3nm,0.8s,baz=326,slow=4.5,SNR=3.8						
DBIC	Dimbokro	143.45	297	PKhKP	PKPpre	10 54 03.4	
	comp=Z,8.6nm,0.8s,baz=68,slow=3.2,SNR=6.6						
GO02	Mina Guanaco	146.14	119		PKPab	10 54 12.8	0.0
PB16	IPOC Station P	147.79	107		PKPbc	10 54 18.3	+1.0
PB18	Visviri	147.91	105	PKPdf	PKPdf	10 54 14.4	-0.2
PB18				PKPbc	PKPbc	10 54 17.9	+0.3
LPAZ	La Paz	149.34	103	PKPbc	PKiKP	10 54 22.2	-0.4
	comp=Z,7.9nm,0.7s,baz=340,slow=0.8,SNR=28						
CPUP	Villa Florida	155.58	131	PKPab	PKPab	10 54 51.2	0.0
	comp=Z,0.8nm,0.6s,baz=135,slow=3.6,SNR=5.5						

HEL 13 10:57:32.1±0.3, 67°.44N×22°.14E, h0km, ML1.3, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAJU	Pajala	0.57	138	PG	Pg	10 57 42.4	-0.5
PAJU				SG	Sg	10 57 50.3	0.0
LANU	Lannavaara	0.61	355	PG	Pg	10 57 43.3	-0.4
LANU				SG	Sg	10 57 52.5	+0.9
KLF	Kolari	0.74	106	PG	Pg	10 57 45.6	-0.6
KLF				MSG		10 57 55.2	
	comp=Z,2.1nm,0.2s						
KLF				SG	Sg	10 57 55.8	+0.1
ERTU	Ertsjaerv	0.89	179	PG	Pg	10 57 48.0	-1.2
	baz=354						
ERTU				SG	Sg	10 58 01.1	+0.3
HEF	Hetta	1.13	30	eP	Pg	10 57 52.0	-1.6
HEF	Hetta	1.13	30	PG	Pg	10 57 52.2	-1.5
HEF				MSG		10 58 06.3	
	comp=Z,2.2nm,0.2s						
HEF				SB	Sg	10 58 08.1	-0.1
SALU	Saltoluokta	1.41	269	eP	Pn	10 57 55.9	-3.0
TOF	Tornio	1.62	147	PG	Pn	10 58 00.2	-1.6
TOF				MSG		10 58 20.8	
	comp=Z,1.4nm,0.2s						
KTK1	Kautokeino	1.63	14	SN	Sg	10 58 25.5	+1.2
KIF	Kilpisjarvi	1.65	343	PB	Pn	10 58 01.2	-1.0
KIF				MSG		10 58 22.4	
	comp=Z,1.4nm,0.2s						
KIF				SG	Sb	10 58 24.7	+0.2
KALU	Kalix	1.66	162	PG	Pn	10 58 02.3	-0.2
KALU				SN	Sg	10 58 25.2	-0.2
RANF	Ranua	2.34	126	SG	Sb	10 58 43.0	-1.4
ARA0	ARCESS Array S	2.44	29	PB	Pn	10 58 13.1	0.0
ARA0				SG	Sb	10 58 45.6	-1.8
RAJF	Raja-Jooseppi	2.55	63	SG	Sb	10 58 49.9	-0.5
VRF	Varrio	2.88	80	MSG		10 58 56.8	
	comp=Z,0.6nm,0.2s						
VRF				SG	Sb	10 59 01.4	+1.5
KEV	Kevo	2.93	35	MSG		10 58 58.1	
	comp=Z,0.6nm,0.2s						
KEV				SG	Sb	10 58 60.0	-1.4
OBF0	Syolatti, Pyha	3.08	163	MSG		10 59 02.5	
	comp=Z,2.2nm,0.2s						

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*IDC **13** 11:19:31.4±0.9, 62°.11N×123°.80W, h0km, mb3.4/4, mbtmp3.5/7, ML2.7/3, MS3.2/3, Error ellipse: s-maj=21.6km s-min=10.0km az=8.0*

*ANF **13** 11:19:31.9±0.5, 62°.01N×123°.85W, h33km±5km, Error ellipse: s-maj=2.2km s-min=1.1km az=73.0*

ISC 13 11:19:29.0±0.6, **62°.04N**±0°.04×**124°.00W**±0°.04, **h5km, n170,** σ**1s.09**/192, **mb3.5**/4, **Northwest Territories**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRGLY	Wrigley	1.22	12	P	Pn	11 19 53.4	+0.7
	baz=188,SNR=104						
WRGLY				S	Sn	11 20 09.8	+0.3
	baz=188						
KOTAN	Kotaneelee Air	1.92	181	P	Pb	11 20 01.7	-2.7
	baz=3.0						
BEAVL	Fort Liard	1.94	196	P	Pb	11 20 02.4	-2.4
	baz=17,SNR=35						
BEAVL				S	Sn	11 20 26.6	-0.7
	baz=17						
TGTN	Hyland Airport	2.09	258	P	Pb	11 20 05.6	-1.8
	baz=75,SNR=28						
TGTN				S	Sn	11 20 32.1	+0.9
	baz=75						
LIRD	Liard River Hi	2.83	202	P	Pn	11 20 14.6	-0.3
	baz=22						
WTLY	Watson Lake, Y	3.03	232	P	Pn	11 20 17.6	0.0
	baz=50,SNR=15						
TOAD	Toad River Com	3.26	191	P	Pn	11 20 19.9	-0.9
	baz=12,SNR=11						
MMPY	Sheldon Lake,	3.44	283	P	Pn	11 20 24.0	+0.8
	baz=97,SNR=24						
R33M	Jennings River	4.33	235	P	Pn	11 20 36.1	+0.5
	baz=50,SNR=43						
R33M				S	Sn	11 21 27.3	+0.9
	baz=50						
FARO	Faro, Yukon	4.39	277	P	Pn	11 20 37.4	+1.1
	baz=89,SNR=6.0						
YKA	Yellowknife Ar	4.42	80	Pn	Pn	11 20 37.1	+0.6
	0.7nm,0.3s,baz=266,slow=13,SNR=50						
YKA				Pg	Pg	11 20 52.7	-0.8
	5.2nm,0.3s,baz=267,slow=16,SNR=32						
YKA				Lg	Lg	11 21 45.0	
	5.7nm,0.3s,baz=270,slow=28,SNR=8.4						
	4.3nm,0.8s						
N32M	Quiet Lake	4.43	262	P	Pn	11 20 37.5	+0.7
	baz=75						
P33M	Teslin, Yukon	4.65	251	P	Pn	11 20 40.3	+0.4
	baz=64,SNR=99						
P33M				S	Sn	11 21 34.0	-0.2
	baz=64						
DLBC	Dease Lake	4.70	222	LR	LR	11 22 51.7	
	comp=Z,87nm,18.6s,baz=42,slow=42						
DLBC	Dease Lake	4.70	222	P	Pn	11 20 40.8	+0.2
	baz=38,SNR=17						
M31M	Drury Creek, Y	4.88	276	P	Pn	11 20 44.0	+1.0
	baz=88						
Q32M	Nakina River	5.12	237	P	Pn	11 20 46.8	+0.4
	baz=50,SNR=42						
P32M	Atlin	5.35	247	P	Pn	11 20 49.9	+0.4
	baz=59,SNR=104						
P32M				S	Sn	11 21 50.3	-1.2
	baz=59						
WHY	Whitehorse	5.42	260	P	Pn	11 20 50.9	+0.4
	baz=71,SNR=73						
WHY				S	Sn	11 21 51.6	-1.6
	baz=71						
S34M	Telegraph Cree	5.47	224	P	Pn	11 20 51.6	+0.5
	baz=39,SNR=11						
S34M				S	Sn	11 21 54.5	+0.2
	baz=39						
N31M	Braeburn, Yuko	5.62	270	P	Pn	11 20 54.1	+1.0
	baz=80,SNR=49						
N31M				S	Sn	11 21 59.5	+1.4
	baz=80						
H31M	Peel River	5.92	314	P	Pn	11 20 58.5	+1.3
	baz=125,SNR=170						
H31M				S	Sn	11 22 04.6	-0.7
	baz=125						
O30N	Mendenhall	5.94	263	P	Pn	11 20 58.1	+0.5
	baz=73,SNR=54						
O30N				S	Sn	11 22 07.0	+1.0
	baz=73						
T35M	Bob Quinn	5.99	215	P	Pn	11 20 58.5	+0.3
	baz=30						
T35M				S	Sn	11 22 04.5	-2.6
	baz=30						
J30M	Hart River	6.11	300	P	Pn	11 21 00.9	+1.0
	baz=109,SNR=32						
J30M				S	Sn	11 22 11.0	+0.8
	baz=109						
SKAG	Skagway	6.12	250	P	Pn	11 21 00.2	+0.2
	baz=61,SNR=18						
SKAG				S	Sn	11 22 09.4	-1.0
	baz=61						
N30M	Aishikik Lake	6.24	270	P	Pn	11 21 02.4	+0.7
	baz=79,SNR=67						
N30M				S	Sn	11 22 13.4	0.0
	baz=79						
I30M	Mount Dempster	6.37	305	P	Pn	11 21 04.7	+1.2
	baz=114,SNR=86						
I30M				S	Sn	11 22 18.2	+1.7
	baz=114						
K29M	Barlow Dome	6.43	292	P	Pn	11 21 05.3	+1.0
	baz=100,SNR=21						
P30M	Million Dollar	6.57	259	P	Pn	11 21 07.0	+0.8
	baz=68						
P30M				S	Sn	11 22 22.1	+0.5
	baz=68						
PLBC	Pleasant Camp	6.59	252	P	Pn	11 21 06.8	+0.4
	baz=62,SNR=7.0						
PLBC				S	Sn	11 22 22.7	+0.8
	baz=62						
HYT	Haines Junctio	6.59	265	P	Pn	11 21 07.1	+0.5
	baz=74,SNR=69						
HYT				S	Sn	11 22 22.6	+0.5
	baz=74						
G31M	Satah River	6.60	322	P	Pn	11 21 06.8	+0.2
	baz=133,SNR=89						
G31M				S	Sn	11 22 21.6	-0.5
	baz=133						
L29M	L29M	6.62	286	P	Pn	11 21 07.3	+0.5
	baz=93,SNR=11						
M29M	Somme Creek	6.77	280	P	Pn	11 21 09.0	0.0
	baz=87,SNR=19						
F31M	Tsiigehtchic	6.83	327	P	Pn	11 21 09.8	+0.1
	baz=138,SNR=22						
F31M				S	Sn	11 22 25.4	-2.3
	baz=138						
R31K	City Hall, Gus	6.88	243	S	Sn	11 22 28.9	0.0
	baz=54						
YUK6	Outpost Mounta	6.96	267	P	Pn	11 21 11.8	0.0
	baz=75,SNR=18						
YUK4	Talbot Arm	7.00	271	P	Pn	11 21 12.2	0.0
	baz=79						
S32K	Killisnoo	7.03	234	P	Pn	11 21 12.9	+0.5
	baz=46						
EPYK	Eagle Plains	7.04	314	P	Pn	11 21 13.5	+0.9
	baz=122,SNR=11						
EPYK				S	Sn	11 22 32.2	-0.7
	baz=122						
WRAK	Wrangell Islan	7.07	221	S	Sn	11 22 31.1	-2.6
	baz=34						
P29M	Windy Craggy	7.13	256	P	Pn	11 21 14.8	+0.9
	baz=65						
G30M	tAoh Zraii Nji	7.23	319	P	Pn	11 21 16.0	+0.8
	baz=127						
G30M				S	Sn	11 22 36.6	-1.0
	baz=127						
O29M	Mount Kennedy	7.26	263	P	Pn	11 21 15.5	-0.2
	baz=70						
DAWY	Dawson	7.28	293	P	Pn	11 21 16.7	+0.7
	baz=99,SNR=14						
DAWY				S	Sn	11 22 39.2	+0.4
	baz=99						
C36M	Paulatuk	7.34	360	P	Pn	11 21 16.2	-0.5
	baz=179,SNR=28						
C36M				S	Sn	11 22 36.6	-3.5
	baz=179						
S31K	Pelican	7.37	242	P	Pn	11 21 17.2	+0.2
	baz=52						
F30M	Barrier River	7.50	323	P	Pn	11 21 19.0	0.0
	baz=132,SNR=153						
YUK8	Steele Glacier	7.54	271	P	Pn	11 21 19.8	0.0
	baz=78						
H29M	Whitestone	7.54	310	P	Pn	11 21 20.1	+0.6
	baz=117,SNR=30						
SIT	Sitka	7.61	234	P	Pn	11 21 20.3	-0.1
	baz=45						
G29M	Pine Creek	7.77	315	P	Pn	11 21 23.7	+1.1
	baz=122,SNR=28						
YUK3	Moose Creek	7.77	275	P	Pn	11 21 23.1	+0.3
	baz=81,SNR=12						
V35K	Ketchikan	7.81	214	P	Pn	11 21 23.5	+0.4
	baz=28						
I28M	Miner Creek	7.84	303	P	Pn	11 21 24.5	+0.9
	baz=108						
O28M	Mount Upton	7.87	268	P	Pn	11 21 25.4	+1.2
	baz=74						
PNL	Peninsula	7.88	259	P	Pn	11 21 25.5	+1.3
	baz=66,SNR=7.1						
PINM	Pinnacle	8.12	263	P	Pn	11 21 28.0	+0.6
	baz=69						
L27K	Beaver Creek,	8.30	285	P	Pn	11 21 30.7	+0.9
	baz=89						
CTG	Chitna Glacier	8.36	270	P	Pn	11 21 31.3	+0.5
	baz=75						
M27K	Edge Creek, AK	8.36	280	P	Pn	11 21 32.1	+1.3
	baz=84						
K27K	Chicken	8.45	292	P	Pn	11 21 32.4	+0.6
	baz=96						
I27K	Kandik River	8.55	302	P	Pn	11 21 32.7	-0.7
	baz=106						
E29M	Blow River	8.62	324	P	Pn	11 21 34.5	+0.3
	baz=131,SNR=17						
H27K	Steamboat Moun	8.72	306	P	Pn	11 21 36.3	+0.6
	baz=110,SNR=8.2						
F28M	Old Crow	8.75	317	P	Pn	11 21 35.9	-0.2
	baz=122,SNR=38						
G27K	Doyon Strip	8.99	310	P	Pn	11 21 40.1	+0.8
	baz=114,SNR=50						
MCARA	McCarthy VSAT	9.05	274	P	Pn	11 21 40.9	+0.8
	baz=78						
I26K	Coal Creek Min	9.10	299	P	Pn	11 21 41.4	+0.5
	baz=102						
J26L	Joseph Creek	9.14	294	P	Pn	11 21 41.9	+0.4
	baz=97						
E28M	Babbage River	9.22	322	P	Pn	11 21 42.8	+0.3
	baz=128,SNR=24						
CRQE	Cirque	9.24	270	P	Pn	11 21 42.8	-0.1
	baz=74						
SCRK	Sand Creek	9.28	291	P	Pn	11 21 44.1	+0.7
	baz=93						
E27K	Coleen River	9.61	317	P	Pn	11 21 48.0	+0.2
	baz=121						
RIDG	Independent Ri	9.65	289	P	Pn	11 21 49.1	+0.6
	baz=91						
N25K	Chitina, Valde	9.74	277	P	Pn	11 21 49.5	-0.2
	baz=78						
G26K	Porcupine Rive	9.82	309	P	Pn	11 21 50.8	+0.2
	baz=111,SNR=7.5						
J25K	Salcha River,	9.93	294	P	Pn	11 21 52.7	+0.5
	baz=95						
PAX	Paxson	9.96	285	P	Pn	11 21 53.2	+0.6
	baz=86						
A36M	Sachs Harbour	10.00	358	P	Pn	11 21 53.2	0.0
	baz=176,SNR=8.0						
D27M	Malcolm River	10.03	323	P	Pn	11 21 54.3	+0.8
	baz=128,SNR=7.5						
PRP	Porcupine Dome	10.12	300	P	Pn	11 21 54.8	0.0
	baz=100						
F26K	Sheenjek River	10.23	312	P	Pn	11 21 57.0	+0.7
	baz=114,SNR=19						
M24K	Tolsona, Glenn	10.39	280	P	Pn	11 21 57.5	-1.0
	baz=81						
KLU	Klutina	10.39	277	P	Pn	11 21 59.0	+0.5
	baz=78						
H25L	Birch Creek	10.39	304	P	Pn	11 21 59.4	+0.9
	baz=104						
ILAR	Eielson Array	10.59	295	Pn	Pn	11 22 03.2	+2.0
	0.2nm,0.3s,baz=102,slow=11,SNR=35						
ILAR				Lg	Lg	11 25 10.2	
	0.3nm,0.3s,baz=96,slow=26,SNR=7.3						
	1.5nm,0.6s						
HDA	Harding Lake	10.60	293	P	Pn	11 22 02.4	+1.1
	baz=92						
G25K	Bearman Lake	10.63	306	P	Pn	11 22 02.1	+0.4
	baz=106						
F25K	Christian Rive	10.72	311	P	Pn	11 22 03.6	+0.5
	baz=111						
E25K	Arctic Village	10.90	313	P	Pn	11 22 06.3	+0.8
	baz=114						
C27K	Jago River	11.04	322	P	Pn	11 22 08.0	+0.8
	baz=124,SNR=8.9						
H24K	Noodor Dome	11.13	300	P	Pn	11 22 08.8	+0.2
	baz=99						
G24K	Hadweenzic Riv	11.14	305	P	Pn	11 22 08.8	+0.1
	baz=104						
F24K	Squaw Lake	11.52	309	P	Pn	11 22 13.6	-0.3
	baz=107						
D25K	Kavik River	11.69	318	P	Pn	11 22 17.7	+1.5
	baz=118						
H23K	Yukon River	11.81	300	P	Pn	11 22 18.8	+1.0
	baz=97						
PMR	Palmer	11.86	279	P	Pn	11 22 20.6	+2.0
	baz=77						
E24K	Your Creek	11.90	311	P	Pn	11 22 19.4	+0.2
	baz=109						
TRF	Thorofare Moun	12.10	288	P	Pn	11 22 22.4	+0.4
	baz=85						
G23K	Bananza Creek	12.13	304	P	Pn	11 22 22.4	0.0
	baz=100						
MLY	Manley	12.25	296	P	Pn	11 22 25.0	+1.1
	baz=92						
E23K	Chandalar	12.30	310	P	Pn	11 22 24.5	-0.2
	baz=107						
COLD	Coldfoot	12.31	306	P	Pn	11 22 24.7	+0.1
	baz=102						
BPAW	Bear Paw Mtn.	12.36	291	P	Pn	11 22 25.6	+0.2
	baz=87						
TOLK	Toolik Lake Re	12.47	313	P	Pn	11 22 27.3	+0.4
	baz=110						
H22K	Ishtalitna Cre	12.57	300	P	Pn	11 22 29.8	+1.6
	baz=95						
C24K	Franklin Bluff	12.60	318	P	Pn	11 22 29.0	+0.4
	baz=115						
G22K	Bettles	12.75	304	P	Pn	11 22 31.7	+1.0
	baz=100						
D23K	Nanushuk River	12.96	314	P	Pn	11 22 34.3	+0.8

	baz=109						
PPLA	Purkeypile	13.02	286	P	Pn	11 22 33.4	-1.2
	baz=81						
E22K	Anaktuvuk Pass	13.12	310	P	Pn	11 22 36.4	+0.7
	baz=104						
H21K	Melozitna Rive	13.14	299	P	Pn	11 22 37.2	+1.2
	baz=93						
C23K	Itkillik River	13.25	317	P	Pn	11 22 38.4	+0.9
	baz=113						
G21K	Allakaket	13.48	302	P	Pn	11 22 43.0	+2.3
	baz=96						
F21K	Alatna River	13.56	305	P	Pn	11 22 42.4	+0.7
	baz=98						
J20K	Nowinta River	13.74	292	P	Pn	11 22 45.1	+0.9
	baz=85						
E21K	Killik River	13.97	310	P	Pn	11 22 47.2	-0.1
	baz=103						
H20K	Anotleneega Mo	14.00	298	P	Pn	11 22 48.7	+1.0
	baz=90						
B22K	Teshekpuk Lake	14.34	318	P	Pn	11 22 52.4	+0.1
	baz=111						
J19K	Poorman	14.40	292	P	Pn	11 22 54.4	+1.1
	baz=83						
F20K	Avaraart Lake	14.41	304	P	Pn	11 22 53.8	+0.5
	baz=95						
C21K	Knifeblade Rid	14.43	313	P	Pn	11 22 54.0	+0.5
	baz=104						
B21K	Ikpikpuk River	14.49	315	P	Pn	11 22 55.3	+0.8
	baz=106						
N19K	Bonanza Creek	14.57	279	P	Pn	11 22 55.7	+0.1
	baz=72						
H19K	Roundabout Mou	14.65	298	P	Pn	11 22 56.3	-0.3
	baz=89						
E20K	Nigu River	14.74	309	P	Pn	11 22 58.8	+0.9
	baz=99						
GCSA	Galena City Sc	14.87	295	P	Pn	11 22 59.5	-0.1
	baz=85						
G19K	Purcell Mounta	14.91	300	P	Pn	11 22 59.6	-0.5
	baz=90						
J18K	Innoko River	14.96	290	P	Pn	11 23 00.8	0.0
	baz=81						
D20K	Etivluk River	14.98	310	P	Pn	11 23 01.4	+0.4
	baz=100						
M18K	Stony River	14.99	282	P	Pn	11 23 02.5	+1.2
	baz=74						
E19K	Redstone River	15.03	305	P	Pn	11 23 02.5	+0.8
	baz=95						
L18K	Granite Mounta	15.20	285	P	Pn	11 23 04.3	+0.3
	baz=76						
F19K	Shaleruckik Mo	15.20	303	P	Pn	11 23 04.9	+0.9
	baz=92						
O18K	Koktuh Hills	15.24	276	P	Pn	11 23 03.5	-1.1
	baz=68						
P18K	Big Mountain,	15.42	274	P	Pn	11 23 06.6	-0.4
	baz=67						
D19K	Kuna River	15.48	309	P	Pn	11 23 07.1	-0.6
	baz=98						
G18K	Tagagawik	15.55	299	P	Pn	11 23 09.5	+0.8
	baz=88						
Q18K	Katmai Hardscr	15.63	271	P	Pn	11 23 09.1	-0.7
	baz=64						
M17K	Holitna River	15.76	283	P	P	11 23 12.8	-2.6
	baz=73						
K17K	Iditarod	15.81	288	P	P	11 23 13.3	-2.6
	baz=77						
L17K	Donlin	15.95	286	P	Pn	11 23 12.6	-1.2
	baz=75						
J17K	VABM Dome	16.02	290	P	Pn	11 23 14.9	+0.2
	baz=79						
P17K	Kvichak River	16.07	274	P	Pn	11 23 14.8	-0.5
	baz=66						
C19K	Lookout Ridge	16.10	311	P	Pn	11 23 14.5	-1.3
	baz=98						
H17K	Granite Mounta	16.15	296	P	Pn	11 23 15.4	-0.9
	baz=84						
O17K	Koliganek Bris	16.15	277	P	Pn	11 23 15.1	-1.3
	baz=68						
Q17K	Contact Creek	16.21	271	P	Pn	11 23 16.1	-1.2
	baz=63						
G17K	Kiwalik Mounta	16.40	298	P	Pn	11 23 19.2	-0.4
	baz=85						
L16K	Owhat River	16.60	285	P	Pn	11 23 20.8	-1.3
	baz=73						
C18K	Utukok River	16.63	309	P	Pn	11 23 20.8	-1.7
	baz=95						
O16K	Kokwok River B	16.69	277	P	Pn	11 23 21.3	-1.9
	baz=67						
J16K	Anvik River	16.71	290	P	Pn	11 23 21.3	-2.2
	baz=78						
K15K	Wolf Creek Mou	17.37	287	P	P	11 23 32.9	-0.3
	baz=74						
M15K	Kasigluk River	17.48	282	P	P	11 23 33.6	-0.9
	baz=70						
L15K	Ungalak Mounta	17.53	286	P	Pn	11 23 32.6	-1.2
	baz=72						
M14K	Bethel	18.05	283	P	Pn	11 23 39.1	-1.1
	baz=69						
C16K	Lisburne Hills	18.14	308	P	P	11 23 41.1	-0.5
	baz=90						
J14K	Nanvaranak Lak	18.15	290	P	P	11 23 41.4	-0.3
	baz=74						
L14K	Kuka Creek	18.18	285	P	P	11 23 43.1	+1.0
	baz=71						
ULM	Lac du Bonnet	19.43	115	P	Pn	11 23 57.1	+0.1
	0.2nm,0.3s,baz=323,slow=11,SNR=4.6						
ULM				Lg	Lg	11 29 30.1	
	0.1nm,0.3s,baz=36,slow=22,SNR=4.7						
	3.0nm,0.7s						
PDAR	Pinedale Array	21.12	149	P	P	11 24 18.4	+3.8
	0.7nm,0.7s,baz=339,slow=12,SNR=6.5						
	0.7nm,0.7s						
NVAR	Mina Array Bea	23.90	169	P	P	11 24 48.5	+4.9
	0.3nm,0.6s,baz=3.3,slow=15,SNR=1.8						
	0.3nm,0.6s						
LPIG	La Paz	39.05	160	LR	LR	11 43 39.9	
	comp=Z,42nm,19.6s,baz=196,slow=37						
AKASG	Malin Array Be	65.60	18	P	P	11 30 17.6	+4.3
	0.5nm,0.5s,baz=351,slow=6.8,SNR=5.0						
	0.5nm,0.5s						
KURBB	Kurchatov Arra	66.26	345	P	P	11 30 18.9	+1.4
	0.6nm,0.6s,baz=13,slow=6.1,SNR=4.3						
	0.6nm,0.6s						
AKTO	Aktyubinsk	67.86	359	LR	LR	12 02 47.6	
	comp=Z,31nm,19.2s,baz=109,slow=38						
QSPA	South Pole Qui	151.88	180	PKPbc	PKiKP	11 39 25.6	+2.0
	0.6nm,0.7s,baz=57,slow=0.5,SNR=8.3						

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*ISK **13** 11:20:35.9, 38.°03N×42.°59E, h5^{km}, ML2.9/9*
*AFAD **13** 11:20:36.5, 38.°03N×42.°57E, h3^{km}±2^{km}, ML2.8*
ISC 13 11:20:36.6±0.9**, 38.°03N**±0.°03×**42.°58E**±0.°03**, h8**^{km}±7^{km}**,**
n17, σ0.^{s}61/30**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PERV	Siirt/Pervari-	0.09	201	P	Pg	11 20 38.6	-0.2
PERV				S	Sg	11 20 40.7	+0.3
PERV				i IAML		11 20 42.0	
	comp=E,2μm,0.3s						
PERV				i IAML		11 20 43.0	
	comp=N,1μm,0.3s						
AKDM	Akdamar-Van	0.44	46	Pg	Pg	11 20 45.6	+0.5
GEVA	Gevas	0.47	53	P	Pg	11 20 45.6	-0.2
GEVA				S	Sb	11 20 53.4	-1.1
GEVA				i IAML		11 20 54.0	
	comp=E,1μm,0.4s						
GEVA				i IAML		11 20 56.0	
	comp=N,568nm,0.3s						
SRTM	Siirt_Merkez	0.52	266	P	Pb	11 20 47.4	-0.6
SRTM				S	Sb	11 20 54.6	-1.2
SRTM				i IAML		11 20 56.0	
	comp=E,992nm,0.6s						
SRTM				i IAML		11 20 57.0	
	comp=N,960nm,0.7s						
BLIS	Bitlis-Merkez	0.53	317	P	Pg	11 20 46.4	-0.6
BLIS				S	Sb	11 20 54.9	-1.3
BLIS				i IAML		11 20 57.0	
	comp=E,480nm,0.5s						
BLIS				i IAML		11 20 58.0	
	comp=N,420nm,0.4s						
GURO	Guroymak-BITLI	0.68	321	Pg	Pg	11 20 49.5	-0.2
GURO				Sg	Sb	11 21 00.5	+0.1
ADCV	BITLIS_Adilcev	0.79	8	P	Pb	11 20 52.0	-0.7
ADCV				S	Sb	11 21 03.4	-0.2
ADCV				i IAML		11 21 05.0	
	comp=E,223nm,0.2s						
ADCV				i IAML		11 21 05.0	
	comp=N,246nm,0.3s						
VANB	Van	0.85	48	Pg	Pg	11 20 52.7	-0.3
HAKT	HAKKARI	1.01	117	P	Pb	11 20 56.0	-0.4
HAKT				S	Sn	11 21 11.2	-0.5
HAKT				i IAML		11 21 15.0	
	comp=N,272nm,0.5s						
HAKT				i IAML		11 21 17.0	
	comp=E,238nm,0.7s						
BTMN	Batman	1.04	263	P	Pb	11 20 57.2	+0.3
BTMN				S	Sn	11 21 12.3	-0.1
BTMN				i IAML		11 21 14.0	
	comp=N,481nm,0.9s						
BTMN				i IAML		11 21 15.0	
	comp=E,399nm,0.5s						
SVAN	Silvan-Diyarba	1.10	277	Pn	Pn	11 20 58.5	+0.2
SVAN				Sn	Sn	11 21 14.2	+0.5
MLAZ	Malazgirt-MUS	1.11	359	Pn	Pb	11 20 58.1	-0.1
MLAZ				Sn	Sn	11 21 14.4	+0.1
MIDY	Mardin/Midyat-	1.12	237	P	Pn	11 20 59.2	+0.6
MIDY				S	Sb	11 21 12.9	-0.2
MIDY				i IAML		11 21 16.0	
	comp=E,176nm,0.3s						
MIDY				i IAML		11 21 18.0	
	comp=N,193nm,0.4s						
CUKT	Cukurca	1.13	133	Pn	Pb	11 20 58.3	-0.1
CUKT				Sn	Sn	11 21 15.0	+0.5
AGRB	Hanur-Agry	1.58	12	Pn	Pg	11 21 06.4	-0.5
AGRB				Sn	Sg	11 21 28.1	+0.7
BNGB	Bingl	1.77	303	Pn	Pb	11 21 09.4	0.0
YEDI	Yedisu-Bingol	2.13	312	Pn	Pn	11 21 13.8	+1.3

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*ISK **13** 11:28:51.8, 40.°75N×25.°24E, h6^{km}, ML2.8/24*
*SOF **13** 11:28:51.9, 40.°78N±0.°01×25.°23E±0.°01, h5^{km}±1^{km}, MD3.0/8*
*AFAD **13** 11:28:52.6, 40.°70N×25.°27E, h7^{km}±3^{km}, ML2.7*
*ATH **13** 11:28:52.2, 40.°73N×25.°23E, h13^{km}±1^{km}, ML2.8/12, Manual Solution by G.Panopoulou First location: 2019/06/13 11:30:08, This location: 2019/06/13 14:04:44 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
*BEO **13** 11:28:53.8±1.3, 40.°69N×25.°16E, h7^{km}±7^{km}, ML3.0/8*
THE 13 11:28:52.4, 40.°7N±1.°0×**25.°2E**±0.°9**, h6**^{km}±2^{km}**, M2.6**/8**,**
MLh2.6/8**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THAS	Thassos island	0.42	252	P	Pg	11 29 00.4	-0.1
THAS				S	Sg	11 29 06.3	+0.3
THAS	Thassos island	0.42	252	P	Pg	11 29 00.5	0.0
THAS				S	Sg	11 29 06.0	+0.1
RDO	Rodhopi	0.47	29	Pg	Pg	11 29 01.1	-0.3
RDO	Rodhopi	0.47	29	P	Pg	11 29 01.0	-0.4
RDO				S	Sg	11 29 08.1	+0.7
RDO	Rodhopi	0.47	29	P	Pg	11 29 01.1	-0.3
RDO				S	Sg	11 29 07.5	0.0
ALEX	Alexandroupoli	0.52	77	P	Pg	11 29 02.6	+0.3
ALEX				S	Sg	11 29 09.6	+0.5
KAVA	Kavala	0.61	295	P	Pg	11 29 04.0	-0.2
KAVA	Kavala	0.61	295	P	Pg	11 29 04.0	-0.1
KAVA				S	Sg	11 29 11.6	-0.5
ALN	Alexandroupoli	0.63	75	Pg	Pg	11 29 04.4	-0.1
ALN				Sg	Sg	11 29 13.2	+0.5
ALN	Alexandroupoli	0.63	75	P	Pg	11 29 04.4	-0.1
ALN				S	Sg	11 29 13.0	+0.2
KVLA	Kavala	0.68	287	P	Pg	11 29 05.3	-0.2
KVLA				S	Sg	11 29 14.0	-0.3
ENEZ	Enez	0.69	90	Pg	Pg	11 29 05.9	+0.2
ENEZ				Sg	Sb	11 29 16.0	-0.6
ENZZ	Sultanice-Enez	0.70	101	Pg	Pg	11 29 05.9	+0.1
CAVK	Edirne/Enez-Ca	0.71	93	P	Pg	11 29 06.1	+0.2
CAVK				S	Sb	11 29 16.1	-0.9
CAVK				i IAML		11 29 17.0	
	comp=N,192nm,0.1s						
CAVK				i IAML		11 29 18.0	
	comp=E,186nm,0.3s						
GADA	Gvkgeada	0.74	137	Pg	Pg	11 29 07.0	+0.4
GADA				Sg	Sb	11 29 17.7	-0.3
GOAD	anakkale-G¶	0.77	138	P	Pg	11 29 07.4	+0.3
GOAD				S	Sg	11 29 18.0	+0.8
GOAD				i IAML		11 29 22.0	
	comp=E,698nm,0.3s						
GOAD				i IAML		11 29 22.0	
	comp=N,558nm,0.3s						
LIA	Limnos Island	0.84	183	P	Pg	11 29 08.5	0.0
LIA				S	Sb	11 29 20.3	-0.6
LIA	Limnos Island	0.84	183	P	Pg	11 29 08.4	-0.1
LIA				S	Sg	11 29 19.7	+0.3
KDZ	Kurdzhali	0.89	5	Pg	Pg	11 29 08.8	-0.8
KDZ	Kurdzhali	0.89	5	i Pg	Pg	11 29 08.7	-0.9
KDZ				i Sg	Sg	11 29 20.5	-0.7
ERIK	Erikli-Kesan	0.97	94	Pg	Pg	11 29 10.7	-0.3
ERIK				Sg	Sb	11 29 24.6	0.0
ECEA	Canakkale, Ece	0.99	134	P	Pg	11 29 11.2	-0.2
ECEA				S	Sb	11 29 25.2	-0.1
ECEA				i IAML		11 29 27.0	
	comp=E,302nm,0.5s						
ECEA				i IAML		11 29 27.0	
	comp=N,218nm,0.3s						
GELI	Tayfur-Gelibol	1.00	109	Pg	Pg	11 29 11.7	+0.2
GELI				Sg	Sb	11 29 25.7	+0.3
RZN	Rozhen	1.03	339	i Pg	Pg	11 29 11.5	-0.6
RZN				i Sg	Sg	11 29 25.4	-0.1
OUR	Ouranopolis	1.04	248	Pg	Pg	11 29 11.9	-0.5
OUR				Sg	Sb	11 29 27.1	+0.5
OUR	Ouranopolis	1.04	248	P	Pg	11 29 11.9	-0.4
OUR	Ouranopolis	1.04	248	P	Pg	11 29 12.0	-0.4
OUR				S	Sg	11 29 26.0	+0.1
BOZC	Bozcaada	1.09	145	Pn	Pg	11 29 13.1	-0.2
BOZC	Bozcaada	1.09	145	P	Pg	11 29 12.4	-0.8
BOZC				S	Sg	11 29 26.9	-0.5
BOZC				i IAML		11 29 28.0	
	comp=E,182nm,0.3s						
BOZC				i IAML		11 29 31.0	
	comp=N,121nm,0.2s						
KESN	Edirne-Kesan	1.10	85	P	Pb	11 29 13.8	-0.1
KESN				S	Sb	11 29 28.4	-0.2
KESN				i IAML		11 29 35.0	
	comp=E,430nm,0.4s						
KESN				i IAML		11 29 35.0	
	comp=N,310nm,0.6s						
UKOP	Uzunkopru-Edir	1.12	69	Pn	Pn	11 29 14.5	-0.1
COMU	Canakkale	1.14	124	Pn	Pg	11 29 14.3	+0.1
EFSA	Agios Efstrati	1.21	189	P	Pg	11 29 14.5	-1.1
EFSA				S	Sb	11 29 31.5	0.0
LPK	Lapseki	1.21	107	Pn	Pg	11 29 15.4	-0.3
EZN	Ezine	1.23	137	Pn	Pg	11 29 15.3	-0.7
EZN	Ezine	1.23	137	P	Pg	11 29 15.1	-0.9
TRGA	Dikaia	1.25	39	P	Pn	11 29 16.1	-0.3
TRGA				S	Sg	11 29 32.4	-0.2
SRS	Serrai	1.31	287	ePg	Pn	11 29 16.9	-0.2
SRS				eSg	Sb	11 29 33.9	-0.4
SRS	Serrai	1.31	287	P	Pn	11 29 16.4	-0.7
SRS				S	Sb	11 29 33.2	-1.1
DIM	Dimitrovgrad	1.33	11	i P	Pn	11 29 17.0	-0.5
DIM				i S	Sb	11 29 34.3	-0.7
MMB	Musomishta	1.39	306	i P	Pn	11 29 18.2	-0.1
MMB				i S	Sb	11 29 36.1	-0.6
MMB	Musomishta	1.39	306	P	Pn	11 29 17.9	-0.4
MMB				S	Sg	11 29 38.0	+1.0
BAYC	CANAKKALE_Bayr	1.41	134	P	Pn	11 29 18.0	-0.6
BAYC				S	Sb	11 29 36.6	-0.7
BAYC				i IAML		11 29 38.0	
	comp=E,124nm,0.3s						
BAYC				i IAML		11 29 38.0	
	comp=N,138nm,0.4s						
PLG	Polygyros	1.42	256	P	Pn	11 29 17.3	-1.4
PLG				S	Sb	11 29 35.6	-1.9
PLD	Plovdiv	1.46	345	Pn	Pn	11 29 19.2	0.0
PLD	Plovdiv	1.46	345	i P	Pn	11 29 19.4	+0.2
PLD				i S	Sg	11 29 39.1	-0.1
PLD	Plovdiv	1.46	345	ePg	Pn	11 29 19.5	+0.3
PLD				eSg	Sg	11 29 40.2	+1.0
RKY	Sarkoy-Tekirda	1.47	91	Pn	Pn	11 29 19.5	0.0
CANM	Can-anakkale	1.56	117	Pn	Pn	11 29 20.5	-0.1
EDRB	Edirne	1.58	45	Pn	Pn	11 29 21.4	+0.4
EDRB	Edirne	1.58	45	P	Pn	11 29 20.3	-0.6
SIGR	SIGRI	1.60	163	Pn	Pn	11 29 20.4	-0.7
SIGR	SIGRI	1.60	163	P	Pn	11 29 19.9	-1.2
SIGR				S	Sn	11 29 39.9	-2.1
KRBG	Karabiga-Canak	1.60	102	Pn	Pn	11 29 21.0	-0.2
HORT	Hortiatis	1.64	266	P	Pn	11 29 20.5	-1.3
HORT	Hortiatis	1.64	266	P	Pn	11 29 20.6	-1.1
PRK	Paraskevi	1.69	152	P	Pn	11 29 21.1	-1.3
YENI	Yenice-Canakka	1.73	117	Pn	Pn	11 29 23.1	+0.2
THE	Thessaloniki	1.73	267	P	Pn	11 29 22.6	-0.4
TKR	Tekirdag	1.76	81	Pn	Pn	11 29 23.2	-0.1
KNT	Kendrikon	1.82	284	P	Pn	11 29 23.5	-0.7
KNT	Kendrikon	1.82	284	P	Pn	11 29 23.7	-0.6
KNT				S	Sn	11 29 46.7	-1.0
SKY	Skiros Island	1.93	196	P	Pn	11 29 24.2	-1.5
KKB	Krupnik	1.94	305	i P	Pn	11 29 26.0	+0.2
KKB				i S	Sb	11 29 52.2	-0.3
GONE	Gonen-Balikesi	1.99	110	Pn	Pn	11 29 27.3	+0.8
EDC	Edincik	2.04	100	Pn	Pn	11 29 27.6	+0.4
DKL	Dikili	2.10	142	Pn	Pn	11 29 28.8	+0.8
NEO	Neokhori	2.11	228	P	Pn	11 29 26.5	-1.6
PLNA	Plana	2.21	322	i P	Pg	11 29 35.1	+0.4
PLNA				i S	Sg	11 30 04.3	+1.0
SUSR	Susurluk-Balik	2.31	109	Pn	Pn	11 29 31.1	+0.2
VTS	Vitosha	2.41	322	i P	Pb	11 29 35.6	-0.6
VTS				i S	Sb	11 30 07.8	+1.7
VTS	Vitosha	2.41	322	ePg	Pb	11 29 36.4	+0.2
VTS				eSg	Sg	11 30 09.0	-0.7
CHOS	Chios island	2.43	165	P	Pn	11 29 31.5	-1.1
TYRN	Tyrnavos	2.52	247	P	Pn	11 29 32.0	-1.8
BOSS	Bosilegrad	2.71	311	ePn	Pn	11 29 38.0	+1.5
BOSS				eSg	Sg	11 30 20.1	+0.5
MPEP	Malo Peshtene	2.84	337	i P	Pn	11 29 39.4	+1.1
MPEP				i S	Sg	11 30 24.3	+0.5
ZAPS	Zavoj	3.19	323	ePn	Pn	11 29 45.2	+2.1
ZAPS				eSg	Sg	11 30 36.1	+1.2
BARS	Barje	3.30	310	ePn	Pn	11 29 45.0	+0.5
BARS				eSg	Sg	11 30 37.6	-0.7
ZAGS	Zajecar	3.80	325	ePn	Pn	11 29 53.6	+2.2
BOVS	Bovan	3.91	319	ePn	Pn	11 29 53.5	+0.6
GOCS	Kraljevo Serbi	4.30	312	ePn	Pn	11 29 58.4	0.0

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*IPEC **13** 11:42:56.3±0.2, 51.°55N×16.°16E, h1^{km}, ML3.0/7, Error ellipse: s-maj=2.4km s-min=1.2km az=63.0*
*IDC **13** 11:42:58.0±0.8, 51.°43N×16.°05E, h0^{km}, mbtmp3.3/7, ML2.9/7, Error ellipse: s-maj=13.8km s-min=8.0km az=113.0*
*BGR **13** 11:42:58.3±0.4, 51.°48N×16.°13E, h1^{km}, ML3.3/14, Error ellipse: s-maj=5.6km s-min=2.2km az=14.0*
*DNK **13** 11:42:58.0±2.1, 51.°74N×16.°56E, h0^{km}±87^{km}, ML2.5*
*PRU **13** 11:42:59.7, 51.°43N×16.°16E, h0^{km}*
ISC 13 11:42:55.8±0.6**, 51.°58N**±0.°03×**16.°17E**±0.°02**, h0**^{km}**, n71,**
σ1.^{s}34/138**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.74	174	ePg	Pg	11 43 10.3	+0.4
KSP				eSg	Sg	11 43 19.3	-0.3
KSP	Ksiaz	0.74	174	ePg	Pg	11 43 10.3	+0.4
KSP				eSg	Sg	11 43 19.2	-0.4
CHVC	Chvalec	0.99	184	ePG	Pg	11 43 15.1	+0.3
CHVC				eSG	Sg	11 43 27.3	-0.4
OSTC	Ostas	1.02	179	ePG	Pg	11 43 15.7	+0.3
OSTC				eSG	Sg	11 43 28.4	-0.2
	comp=Z,259nm,0.4s						
UPC	Upice	1.08	186	ePG	Pg	11 43 16.6	+0.2
UPC				eSG	Sg	11 43 29.8	-0.6
	comp=Z,487nm,0.3s						
DPC	Dobruska-Polom	1.23	176	ePG	Pg	11 43 19.2	-0.2
DPC				eSG	Sg	11 43 34.2	-1.2
	comp=Z,114nm,0.2s						
DPC	Dobruska-Polom	1.23	176	ePg	Pg	11 43 19.1	-0.2
DPC				eSg	Sg	11 43 34.4	-1.0
PIVO	Bartosovice	1.42	170	ePg	Pg	11 43 22.2	-0.6
	baz=350						
PIVO				eSg	Sg	11 43 39.5	-1.7
	150nm,0.2s,baz=350						
PVCC	Panska Ves	1.46	225	ePG	Pb	11 43 24.0	+0.2
PVCC				eSG	Sn	11 43 43.2	0.0
	comp=Z,465nm,0.2s						
KRLC	Kraliky	1.55	165	ePG	Pb	11 43 25.4	0.0
KRLC				eSG	Sg	11 43 44.9	-0.8
	comp=Z,114nm,0.2s						
BRG	Berggiesshubel	1.57	244	ePg	Pb	11 43 25.6	-0.1
BRG				eSg	Sn	11 43 45.7	-0.3
BRG	Berggiesshubel	1.57	244	Pn	Pn	11 43 25.1	+0.2
BRG				Pg	Pg	11 43 26.0	+0.1
BRG				Sg	Sn	11 43 46.0	0.0
BRG				Amp		11 43 48.9	
	comp=Z,175nm,0.4s						
RICC	Richard	1.67	232	ePG	Pb	11 43 27.2	-0.2
RYBC	Ceska Rybna	1.77	182	ePn	Pn	11 43 27.6	-0.1
	baz=2.0						
RYBC				eSg	Sn	11 43 50.9	-0.1
	comp=Z,103nm,0.1s,baz=2.0						
PRA	Prague	1.87	217	ePN	Pn	11 43 29.0	0.0
PRA				ePG	Pb	11 43 30.9	+0.1
GOPC	GO Pecny, Ondr	1.89	208	ePN	Pn	11 43 28.9	-0.3
GOPC				ePG	Pb	11 43 30.7	-0.4
PRU	Pruhonice	1.90	214	ePG	Pb	11 43 30.8	-0.5
PRU				eSG	Sg	11 43 56.5	-0.3
	comp=Z,108nm,0.4s						
STEB	Steborice	1.94	148	ePG	Pg	11 43 32.9	+0.1
STEB				eSG	Sb	11 43 56.9	+0.3
	comp=Z,386nm,0.8s						
CLL	Collm	2.00	263	ePn	Pn	11 43 30.7	-0.1
CLL				ePg	Pb	11 43 33.5	+0.5
CLL				eSg	Sg	11 44 00.3	+0.2
CLL	Collm	2.00	263	ePn	Pn	11 43 31.0	+0.2
CLL				ePg	Pb	11 43 33.0	0.0
CLL				ex	x	11 43 38.0	
CLL				eSg	Sg	11 44 00.0	-0.1
	comp=Z,65nm,0.4s						
MORC	Moravsky Berou	2.00	154	ePn	Pn	11 43 31.0	+0.1
	baz=334						
MORC				eSg	Sb	11 43 58.1	-0.5
	comp=Z,98nm,0.5s,baz=334						
MORC	Moravsky Berou	2.00	154	ePn	Pn	11 43 31.4	+0.5
MORC				ePg	Pg	11 43 34.9	+0.7
MORC				eSg	Sb	11 43 58.8	+0.2
OKC	Ostrava-Krasne	2.15	144	ePg	Pg	11 43 37.5	+0.6
OKC				eSg	Sg	11 44 03.7	-1.0
VRAC	Vranov	2.29	173	Pn	Pn	11 43 34.3	-0.5
	comp=Z,2.7nm,0.3s,baz=351,slow=16,SNR=8.6						
VRAC				Lg	Lg	11 44 06.0	
	comp=Z,10nm,0.3s,baz=66,slow=19,SNR=4.9						
	comp=Z,5.8nm,0.3s						
VRAC	Vranov	2.29	173	ePn	Pn	11 43 34.8	0.0
	baz=353						
VRAC				eSg	Sb	11 44 07.2	+0.4
	comp=Z,96nm,0.6s,baz=353						
TREC	Trest	2.33	191	eSG	Sb	11 44 08.3	+0.4
ZVC	Zvikov	2.49	211	eSG	Sg	11 44 14.7	-1.0
KRUC	Moravsky	2.52	177	ePn	Pn	11 43 38.0	0.0
	baz=357						
KRUC				eSg	Sb	11 44 14.4	+0.9
	comp=Z,79nm,0.6s,baz=357						
TANN	Tannenbergstha	2.62	245	ePn	Pn	11 43 40.1	+0.7
TANN				ePg	Pg	11 43 45.1	-0.8
TANN				eSg	Sb	11 44 18.0	+1.7
OJC	Ojcow	2.67	119	ePg	Pg	11 43 47.3	+0.5
OJC				eSg	Sg	11 44 22.6	+1.2
OJC	Ojcow	2.67	119	ePg	Pg	11 43 47.3	+0.5
OJC				eSg	Sg	11 44 23.2	+1.7
WERD	Werda	2.69	247	ePn	Pn	11 43 42.2	+1.8
WERD				eSg	Sg	11 44 23.4	+1.1
JAVC	Velka Javorina	2.89	160	ePn	Pn	11 43 42.9	-0.1
	baz=341						
JAVC				eSg	Sb	11 44 25.9	+1.9
	comp=Z,90nm,0.8s,baz=341						
JAVC	Velka Javorina	2.89	160	ePN	Pn	11 43 43.0	-0.1
JAVC				eSG	Sb	11 44 26.0	+1.9
KHC	Kasperske Hory	2.96	215	ePN	Pn	11 43 44.2	+0.1
KHC				ePG	Pb	11 43 50.2	+0.8
KHC				eSN	Sn	11 44 19.0	-1.3
KHC				eSG	Sg	11 44 29.8	-1.1
	comp=Z,40nm,0.4s						
CKRC	Cesky Krumlov	3.01	204	ePN	Pn	11 43 45.3	+0.6
CKRC				ePG	Pb	11 43 51.3	+1.1
CKRC				eSG	Sb	11 44 29.8	+2.3
	comp=Z,68nm,0.6s						
MOX	Moxa	3.02	254	ePn	Pn	11 43 46.0	+1.2
MOX				eSg	Sg	11 44 32.9	+0.1
MANZ	Manzenberg	3.03	240	ePn	Pn	11 43 45.6	+0.5
MANZ				eSg	Sg	11 44 32.9	-0.3

ROTZ	**Rotzenmuhle**	**3.11**	**236**	*e*Pn	**Pn**	**11 43 46.3**	**+0.3**
ROTZ				*e*Sg	**Sg**	**11 44 33.8**	**-1.8**
GEC2	**GERESS Array S**	**3.17**	**211**	*e*Pn	**Pn**	**11 43 48.0**	**+1.1**
GEC2				*e*Sg	**Sg**	**11 44 34.8**	**-2.6**
GERES	**GERESS Array B**	**3.17**	**211**	Pn	**Pn**	**11 43 46.6**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=30,slow=13,SNR=16						
GERES				Pg	**Pb**	**11 43 53.1**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=26,slow=17,SNR=25						
GERES				Lg	Lg	11 44 33.3	
	comp=Z,1.4nm,0.3s,baz=32,slow=27,SNR=9.0						
	comp=Z,2.7nm,0.4s						
LANS	**Liptovska Anna**	**3.22**	**138**	*e*PN	**Pn**	**11 43 48.0**	**+0.4**
LANS				*e*PG	**Pg**	**11 43 58.4**	**+1.0**
LANS				*e*SG	**Sg**	**11 44 38.4**	**-0.7**
WET	**Wettzell**	**3.23**	**222**	*e*Pn	**Pn**	**11 43 48.0**	**+0.4**
MODS	**Modra-Piesok**	**3.29**	**167**	*e*SG	**Sg**	**11 44 41.1**	**-0.2**
NIE	**Niedzica**	**3.41**	**128**	*e*Pg	**Pg**	**11 44 02.7**	**+1.6**
NIE				*e*Sg	**Sg**	**11 44 47.6**	**+2.4**
VYHS	**Vyhne**	**3.53**	**150**	*e*PN	**Pn**	**11 43 52.4**	**+0.5**
VYHS				*e*PG	**Pg**	**11 44 04.7**	**+1.3**
VYHS				*e*SG	**Sg**	**11 44 49.5**	**+0.3**
CONA	**Conrad Observa**	**3.66**	**183**	*e*Pn	**Pn**	**11 43 54.7**	**+1.0**
	comp=Z,1.7nm,0.5s						
CONA				Sg	**Sg**	**11 44 52.6**	**-0.7**
	comp=Z,35nm,0.4s						
GRF	**Grafenberg Arr**	**3.68**	**241**	*e*Sg	**Sg**	**11 44 53.2**	**-0.6**
RONA	**Rosalia, Austr**	**3.88**	**179**	*e*Pn	**Pn**	**11 43 57.9**	**+1.2**
	comp=Z,0.7nm,0.1s						
RONA				*e*Sg	**Sg**	**11 44 57.7**	**-2.8**
	comp=Z,22nm,0.5s						
STHS	**Stebnicka Huta**	**3.89**	**122**	*e*PG	**Pg**	**11 44 13.4**	**+3.1**
STHS				*e*SG	**Sg**	**11 45 01.8**	**+1.0**
MOA	**Molln**	**3.93**	**199**	*e*Pn	**Pn**	**11 43 58.0**	**+0.6**
	comp=Z,2.6nm,0.2s						
MOA				*e*Sg	**Sg**	**11 45 02.0**	**-0.1**
	comp=Z,26nm,0.4s						
BIOA	**Bad Ischl, Aus**	**4.23**	**204**	*e*Pn	**Pn**	**11 44 04.4**	**+3.0**
	comp=Z,6.4nm,0.3s						
BIOA				*e*Sg	**Sg**	**11 45 12.2**	**+0.8**
	comp=Z,55nm,0.4s						
ARSA	**Arzberg**	**4.35**	**186**	*e*Pn	**Pn**	**11 44 01.6**	**-1.6**
	comp=Z,0.7nm,0.2s						
ARSA				Sg	**Sb**	**11 45 08.0**	**+1.8**
	comp=Z,13nm,0.7s						
LUNU	**Lund**	**4.37**	**339**	*i* P	**Pn**	**11 44 05.1**	**+1.7**
LUNU				*i* S	**Sn**	**11 44 54.0**	**-1.0**
KOLS	**Kolonicke sedl**	**4.72**	**122**	*e*PN	**Pn**	**11 44 09.2**	**+1.0**
KOLS				*e*PG	**Pg**	**11 44 26.8**	**+0.5**
KOLS				*e*SN	**Sn**	**11 45 02.2**	**-1.5**
KOLS				*e*SG	**Sg**	**11 45 28.3**	**+0.9**
BLEU	**Blekinge**	**4.74**	**358**	*i* P	**Pn**	**11 44 09.0**	**+0.6**
BLEU				*i* S	**Sn**	**11 45 01.3**	**-2.7**
LESA	**Schwarzleotal**	**4.74**	**210**	*e*Pn	**Pn**	**11 44 10.0**	**+1.5**
	comp=Z,1.2nm,0.2s						
LESA				Sg	**Sg**	**11 45 26.7**	**-1.3**
	comp=Z,17nm,0.5s						
SOKA	**Soboth**	**4.96**	**189**	*e*Sg	**Sg**	**11 45 31.9**	**-3.2**
	comp=Z,3.6nm,0.4s						
DEL	**Delary**	**5.08**	**345**	*i* P	**Pn**	**11 44 13.0**	**-0.1**
DEL				*i* S	**Sn**	**11 45 09.8**	**-2.7**
OBKA	**Obir**	**5.19**	**193**	*e*Sg	**Sg**	**11 45 40.6**	**-1.7**
	comp=Z,15nm,0.6s						
MYKA	**Terra Mystica**	**5.22**	**200**	*e*Sg	**Sg**	**11 45 42.0**	**-1.6**
	comp=Z,3.3nm,0.3s						
WTTA	**Wattenberg**	**5.24**	**216**	*e*Pn	**Pn**	**11 44 19.6**	**+4.2**
	comp=Z,1.3nm,0.2s						
WTTA				Sg	**Sg**	**11 45 42.9**	**-1.0**
	comp=Z,22nm,0.5s						
MOTA	**Moosalm**	**5.37**	**220**	*e*Pn	**Pn**	**11 44 19.4**	**+2.1**
	comp=Z,1.3nm,0.2s						
MOTA				*e*Sg	**Sg**	**11 45 50.6**	**+2.3**
	comp=Z,8.0nm,0.4s						
ABTA	**Abfaltersbach**	**5.40**	**208**	Sg	**Sg**	**11 45 48.4**	**-0.7**
	comp=Z,17nm,0.6s						
FABU	**Falkenberg**	**5.80**	**341**	*i* P	**Pn**	**11 44 25.2**	**+2.3**
FABU				*i* S	**Sn**	**11 45 28.3**	**-1.8**
BORU	**Boraas**	**6.38**	**343**	*i* P	**Pn**	**11 44 33.2**	**+2.3**
AKASG	**Malin Array Be**	**8.26**	**91**	Pn	**Pn**	**11 44 56.6**	**-0.1**
	comp=Z,1.4nm,0.3s,baz=281,slow=12,SNR=7.9						
AKASG				Sn	**Sn**	**11 46 24.5**	**-6.1**
	comp=Z,1.4nm,0.3s,baz=265,slow=39,SNR=2.0						
	comp=Z,0.6nm,0.3s						
HFS	**Hagfors**	**8.69**	**352**	Pn	**Pn**	**11 45 04.9**	**+2.4**
	comp=Z,0.1nm,0.3s,baz=177,slow=14,SNR=0.9						
	comp=Z,0.8nm,0.7s						
FINES	**FINESS Array B**	**11.28**	**25**	Pn	**Pn**	**11 45 37.9**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=215,slow=11,SNR=6.0						
FINES				Sn	Sn	11 47 35.9	-8.8
	comp=Z,0.1nm,0.3s,baz=220,slow=27,SNR=2.1						
	comp=Z,1.0nm,0.4s						
EKA	**Eskdalemuir Ar**	**12.11**	**296**	Pn	**Pn**	**11 45 50.7**	**+1.3**
	baz=100,slow=14						
	comp=Z,1.7nm,0.8s						
ARCES	**ARCESS Array B**	**18.55**	**10**	Pn	**P**	**11 47 11.0**	**-2.6**
	comp=Z,0.1nm,0.3s,baz=201,slow=12,SNR=4.4						
	comp=Z,0.5nm,0.6s						

IDC 13 11:53:34.0±11.0**,25°.14S**×**176°.22W,h0**^{km}**,mb3.7**/4**,mbtmp3.7**/4**,Error ellipse: s-maj=293.1km s-min=35.3km az=39.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**45.24**	**261**	P	P	12 01 53.1	-0.3
	0.4nm,0.5s,baz=102,slow=8.3,SNR=5.4						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**45.76**	**266**	P	P	12 01 57.4	-0.2
	0.5nm,0.6s,baz=109,slow=7.6,SNR=5.1						
	0.5nm,0.6s						
VNDA	**Vanda**	**53.47**	**186**	P	P	12 02 56.3	+0.8
	0.3nm,0.4s,baz=360,slow=8.4,SNR=6.4						
	0.3nm,0.4s						
QSPA	**South Pole Qui**	**64.95**	**180**	P	P	12 04 14.8	-0.6
	2.3nm,1.0s,baz=28,slow=5.2,SNR=6.7						
	2.3nm,1.0s						
H03S2	**Juan Fernandez**	**82.04**	**124**	T	T	13 36 39.4	
	baz=240,slow=75,SNR=10						
H03S1	**Juan Fernandez**	**82.06**	**124**	T	T	13 36 39.6	
	baz=240,slow=75,SNR=12						
H03S3	**Juan Fernandez**	**82.06**	**124**	T	T	13 36 39.4	
	baz=240,slow=75,SNR=14						
H03N2	**Juan Fernandez**	**82.20**	**123**	T	T	13 36 55.0	
	baz=245,slow=72,SNR=5.2						
H03N3	**Juan Fernandez**	**82.20**	**123**	T	T	13 37 01.8	
	baz=245,slow=72,SNR=9.8						
H03N1	**Juan Fernandez**	**82.22**	**123**	T	T	13 36 58.0	
	baz=245,slow=72,SNR=13						
H10S3	**ASCENSION HYDR**	**141.64**	**150**	T	T	14 50 23.0	
	baz=204,slow=74,SNR=7.7						
H10S2	**ASCENSION HYDR**	**141.65**	**150**	T	T	14 50 24.7	
	baz=16,slow=74,SNR=10						
H10N3	**ASCENSION HYDR**	**142.69**	**149**	T	T	14 51 41.3	
	baz=203,slow=75,SNR=16						
H10N1	**ASCENSION HYDR**	**142.70**	**149**	T	T	14 51 45.7	
	baz=203,slow=75,SNR=15						
H10N2	**ASCENSION HYDR**	**142.71**	**149**	T	T	14 51 44.7	
	baz=203,slow=75,SNR=14						

KRSC 13 12:01:12.2±1.2**,55°.15N**×**164°.34E,h42**^{km}±26^{km}**,Ml3.9, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.94**	**86**	*e*P	Pn	12 01 29.7	+0.8
BKI				*e*S	Sn	12 01 41.3	+0.2
KBTR	**Krutoberegovo**	**1.36**	**321**	*e*P	Pn	12 01 34.9	+0.1
KBTR				*e*S	Sn	12 01 51.0	-0.6
KBG	**Krutoberegovo**	**1.44**	**321**	*e*P	Pn	12 01 35.9	+0.1
MKZ	**Mys Kozlova**	**1.62**	**249**	*e*P	Pn	12 01 41.4	+3.1
MKZ				*e*S	Sn	12 02 00.7	+2.7
SMKR	**Semkarok**	**2.16**	**313**	*e*P	Pn	12 01 47.8	+2.0
ZLN	**Zelenaya**	**2.19**	**295**	*e*P	Pn	12 01 48.7	+2.5
BZGR	**Bezymyannyi-Gr**	**2.22**	**292**	*e*P	Pn	12 01 49.7	+3.1
TUMD	**Tumrok D**	**2.26**	**273**	*i* P	Pn	12 01 50.6	+3.5
TUMD				*e*S	Sn	12 02 16.9	+3.2
BZWR	**Bezymyannyi-We**	**2.33**	**292**	*e*P	Pn	12 01 51.6	+3.4
KLY	**Klyuchi**	**2.39**	**301**	*e*P	Pn	12 01 50.7	+1.9
KIRR	**Kirishev**	**2.41**	**291**	*e*P	Pn	12 01 53.2	+3.9
KMNR	**Kamenistaya**	**2.42**	**286**	*e*P	Pn	12 01 52.9	+3.6
KPT	**Kopyto**	**2.48**	**291**	*e*P	Pn	12 01 53.8	+3.6
KOZ	**Kozyrevsk**	**2.69**	**291**	*e*P	Pn	12 01 57.2	+4.2
SRDR	**Sredinnyy**	**2.86**	**296**	*e*P	Pn	12 01 59.3	+3.9
KII	**Karymskiy**	**3.06**	**251**	*e*P	Pn	12 02 03.0	+4.8
SPN	**Mys Shipunski**	**3.27**	**233**	*e*P	Pn	12 02 03.3	+2.3
SPN				*e*S	Sn	12 02 40.0	+1.5
ESO	**Esso**	**3.30**	**286**	*e*P	Pn	12 02 05.1	+3.8
NLC	**Nalytchevo**	**3.55**	**238**	*e*S	Sn	12 02 48.6	+3.3
SDLR	**Sedlovina**	**3.71**	**242**	*e*P	Pn	12 02 11.9	+4.7
SMAR	**Somma**	**3.77**	**242**	*e*P	Pn	12 02 12.6	+4.6
KRER	**Koryakskii**	**3.77**	**243**	*e*P	Pn	12 02 13.1	+5.1
UGLR	**Uglovaya**	**3.78**	**241**	*e*P	Pn	12 02 12.9	+4.8
KRX	**Arik**	**3.79**	**244**	*e*P	Pn	12 02 13.1	+4.8
AVH	**Avacha**	**3.80**	**242**	*e*P	Pn	12 02 13.2	+5.0
KOK	**Koryaka**	**3.83**	**243**	*e*P	Pn	12 02 13.6	+4.8
DALK	**Dalny**	**3.92**	**239**	*e*P	Pn	12 02 14.2	+4.4
PET	**Petropavlovsk**	**3.97**	**240**	*e*P	Pn	12 02 14.5	+4.0
PET				*e*S	Sn	12 02 59.0	+3.2
GNL	**Ganaly**	**4.01**	**251**	*e*P	Pn	12 02 16.2	+4.9
KRMR	**Karymshinskiy**	**4.34**	**240**	*e*P	Pn	12 02 19.5	+3.8
KRMR				*e*S	Sn	12 03 08.7	+3.7
MTVR	**Mutnovka**	**4.53**	**236**	*e*P	Pn	12 02 22.7	+4.4
GRL	**Gorelyy**	**4.54**	**237**	*e*P	Pn	12 02 23.4	+5.0
ASAK	**Asacha**	**4.72**	**237**	*e*P	Pn	12 02 26.2	+5.3
APC	**Apacha**	**4.79**	**245**	*e*P	Pn	12 02 27.3	+5.5
KDTR	**Khodutka, Kamc**	**5.02**	**231**	*e*P	Pn	12 02 28.3	+3.4
KDTR				*e*S	Sn	12 03 22.1	+0.5
MIPR	**Malaya Ipel'ka**	**5.35**	**240**	*e*P	Pn	12 02 35.0	+5.5

WEL 13 12:01:54.8±1.1**,34°S**±6°×**18°0E**±1°4**,h12**^{km}**,M4.0**/12**, mB4.7**/1**,ML4.2**/16**,MLv4.0**/12**,Mw(mB)3.9**/1**,Error ellipse: s-maj=17.7km s-min=7.2km az=97.5,confirmed, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**3.98**	**194**	P	Pn	12 02 55.4	-0.3
WMGZ				S	Sn	12 03 44.0	+1.7
HAZ	**Te Kaha**	**4.08**	**201**	P	Pn	12 02 55.7	-1.3
HAZ				S	Sn	12 03 45.3	+0.7
PKGZ	**Pakihiroa**	**4.10**	**197**	P	Pn	12 03 01.4	+4.1
PKGZ				S	Sn	12 03 45.1	-0.1
PUZ	**Puketiti**	**4.26**	**194**	P	Pn	12 02 58.3	-1.2
PUZ				S	Sn	12 03 48.4	-0.7
RUGZ	**Raukumara Rang**	**4.30**	**201**	P	Pn	12 02 59.8	-0.4
RUGZ				S	Sn	12 03 50.8	+0.4
TWGZ	**Tauwhareparae**	**4.42**	**197**	P	Pn	12 03 01.5	-0.3
TWGZ				S	Sn	12 03 55.4	+2.2
OPRZ	**Ohinepanea**	**4.60**	**211**	P	Pn	12 03 07.2	+3.0
TGRZ	**Tauranga**	**4.64**	**215**	P	Pn	12 03 06.3	+1.5
CNGZ	**Carnagh Statio**	**4.67**	**193**	P	Pn	12 03 03.5	-1.6
MWZ	**Matawai**	**4.69**	**200**	P	Pn	12 03 04.8	-0.6
MWZ				S	Sn	12 04 00.8	+1.1
TKGZ	**Te Karaka**	**4.70**	**197**	P	Pn	12 03 05.0	-0.6
TKGZ				S	Sn	12 03 58.6	-1.4
URZ	**Urewera**	**4.75**	**204**	P	Pn	12 03 05.2	-1.0
URZ				S	Sn	12 04 00.3	-0.9
RAGZ	**Rawiri**	**4.87**	**201**	P	Pn	12 03 08.5	+0.5
RIGZ	**Rimuhau**	**4.97**	**197**	P	Pn	12 03 07.7	-1.6
RIGZ				S	Sn	12 04 11.0	+4.1
TOZ	**Tahuroa Road**	**5.03**	**220**	P	Pn	12 03 10.2	+0.2
MUGZ	**Murupara**	**5.06**	**206**	P	Pn	12 03 10.2	-0.4
MUGZ				S	Sn	12 04 09.7	+0.7
OUZ	**Omahuta**	**5.10**	**254**	P	Pn	12 03 08.8	-2.3
SNGZ	**Shannon Statio**	**5.16**	**200**	P	Pn	12 03 11.7	-0.1
SNGZ				S	Sn	12 04 13.0	+1.7
BKZ	**Black Stump Fm**	**5.78**	**205**	P	Pn	12 03 19.5	-0.9
BKZ				S	Sn	12 04 27.7	+1.2
HIZ	**Hauiti**	**5.95**	**219**	P	Pn	12 03 26.0	+3.3

NOU ***13*** *12:12:26.3, 17°.84S×168°.32E, h93*^{km}*, mb4.9/66, Vanuatu Islands*

IDC ***13*** *12:12:26.6±3.5, 17°.76S×168°.37E, h115*^{km}*±30*^{km}*, mb4.1/14, mbtmp4.5/15, MS3.4/8, Error ellipse: s-maj=20.9km s-min=16.5km az=75.0*

NEIC ***13*** *12:12:30.0±1.4, 17°.86S±0°.09×168°.4E±0°.1, h136*^{km}*±8*^{km}*, mb4.8/37, Error ellipse: s-maj=15.9km s-min=12.0km az=115.0*

ISC 13 12:12:26.5±0.5**,17°.85S**±0°.04×**168°.35E**±0°.05**,h106**^{km}±4km**, h106**^{km}**:pP-P,n156,**σ1^{s}**35**/155**,mb4.8**/42**,6C-2D,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INH	**Isangel**	**1.90**	**153**	P	**Pn**	**12 12 57.6**	**-0.5**
INH	**Isangel**	**1.90**	**153**	S	**Sn**	**12 13 22.8**	**+0.7**
VLAKA	**Lakatoro**	**1.95**	**333**	P	**Pn**	**12 12 56.8**	**-1.9**
VLAKA	**Lakatoro**	**1.95**	**333**	S	**Sn**	**12 13 22.3**	**-0.9**
MARNC	**Mare, Loyalty**	**3.63**	**185**	P	**Pn**	**12 13 18.9**	**-1.8**
DZM	**Mont Dzumac**	**4.57**	**203**	Pn	**Pn**	**12 13 34.6**	**+1.1**
DZM				Sn	**Sn**	**12 14 22.0**	**-3.6**
DZM	**Mont Dzumac**	**4.57**	**203**	*e*Pn	**Pn**	**12 13 33.4**	**-0.1**
	396nm,0.8s						
DZM				*e*Sn	**Sn**	**12 14 23.9**	**-1.7**
	5µm,1.1s						
DZM	**Mont Dzumac**	**4.57**	**203**	P	**Pn**	**12 13 34.1**	**+0.5**
	221nm,0.4s,baz=49,slow=7.8,SNR=657						
DZM				S	**Sn**	**12 14 22.8**	**-2.8**
	198nm,0.4s,baz=55,slow=21,SNR=6.5						
DZM				LR	LR	12 14 29.5	
	comp=Z,107nm,18.9s,baz=48,slow=26						
DZM	**Mont Dzumac**	**4.57**	**203**	P	**Pn**	**12 13 33.6**	**+0.1**
DZM	**Mont Dzumac**	**4.57**	**203**	S	**Sn**	**12 14 24.5**	**-1.1**
KOUNC	**Koumac, New Ca**	**4.69**	**234**	P	**Pn**	**12 13 34.9**	**-0.2**
KOUNC	**Koumac, New Ca**	**4.69**	**234**	S	**Sn**	**12 14 28.5**	**+0.1**
OUENC	**Ouen Island, N**	**4.76**	**197**	P	**Pn**	**12 13 36.5**	**+0.5**
OUENC	**Ouen Island, N**	**4.76**	**197**	S	**Sn**	**12 14 30.1**	**0.0**
ONTNC	**Ouen Toro**	**4.78**	**202**	P	**Pn**	**12 13 35.8**	**-0.5**
PINNC	**Pines Island,**	**4.82**	**190**	P	**Pn**	**12 13 36.2**	**-0.6**
LUES	**Luesalemba Tem**	**7.53**	**341**	P	**Pn**	**12 14 11.9**	**-1.7**
MSVF	**Nonsavu**	**9.24**	**91**	Pn	**Pn**	**12 14 40.1**	**+3.2**
MSVF	**Nonsavu**	**9.24**	**91**	P	**Pn**	**12 14 39.7**	**+2.8**
	34nm,0.9s,baz=253,slow=8.1,SNR=15						
MSVF	**Nonsavu**	**9.24**	**91**	P	**Pn**	**12 14 38.1**	**+1.2**
HURO	**Huro Makira**	**9.64**	**319**	P	**Pn**	**12 14 41.8**	**-0.5**
NGOA	**Tingoa Renbel**	**10.17**	**307**	P	**Pn**	**12 14 50.5**	**+1.0**
DGTI	**Dogotuki**	**10.99**	**84**	P	**Pn**	**12 15 01.4**	**+0.7**
HNR	**Honiara**	**11.69**	**315**	Pn	**Pn**	**12 15 12.4**	**+2.4**
HNR	**Honiara**	**11.69**	**315**	P	**Pn**	**12 15 11.9**	**+1.9**
	403nm,0.7s,baz=171,slow=4.8,SNR=15						
HNR				S	**Sn**	**12 17 15.8**	**-2.8**
	170nm,1.0s,baz=18,slow=22,SNR=1.9						
HNR				LR	LR	12 19 13.9	
	comp=Z,69nm,20.2s,baz=22,slow=35						
HNR	**Honiara**	**11.69**	**315**	P	**Pn**	**12 15 11.5**	**+1.5**
ALEG	**Aligegeo Malai**	**11.71**	**320**	P	**Pn**	**12 15 10.6**	**+0.3**
ALEG	**Aligegeo Malai**	**11.71**	**320**	S	**Sn**	**12 17 19.6**	**+0.5**
SAVO	**Savo Central**	**11.98**	**315**	P	**Pn**	**12 15 15.3**	**+1.4**
TATA	**Tatamba Isabel**	**12.55**	**317**	P	**Pn**	**12 15 21.8**	**+0.4**
RAO	**Raoul Island**	**16.93**	**135**	LR	LR	12 20 27.5	
	comp=Z,162nm,20.9s,baz=214,slow=28						
GC1S	**Gold Coast 1 S**	**17.07**	**230**	P	**Pn**	**12 16 19.1**	**+0.5**
EIDS	**Eidsvold**	**17.71**	**242**		**Pn**	**12 16 28.0**	**+1.7**
OUZ	**Omahuta**	**17.92**	**166**	P	**Pn**	**12 16 29.8**	**+1.0**
ARMA	**Armidale**	**19.70**	**227**		**Pn**	**12 16 49.6**	**-0.4**
ARMA	**Armidale**	**19.70**	**227**	P	**P**	**12 16 48.9**	**+1.3**
KUZ	**Kuaotunu**	**19.92**	**162**	P	**Pn**	**12 16 51.0**	**-1.3**
TV1H	**Townsville Har**	**20.49**	**263**	P	**P**	**12 16 56.7**	**+0.7**
TOZ	**Tahuroa Road**	**20.78**	**164**		**P**	**12 17 00.2**	**+1.3**
CTAO	**Charters Tower**	**21.02**	**260**	P	**P**	**12 17 02.5**	**+0.7**
CTAO	**Charters Tower**	**21.02**	**260**	P	**P**	**12 17 02.1**	**+0.3**
HIZ	**Hauiti**	**21.36**	**166**	P	**P**	**12 17 06.7**	**+1.5**
HIZ	**Hauiti**	**21.36**	**166**	P	**P**	**12 17 06.9**	**+1.7**
MXZ	**Matakaoa Point**	**21.50**	**158**	P	**P**	**12 17 09.2**	**+2.5**
URZ	**Urewera**	**21.73**	**161**	P	**P**	**12 17 10.9**	**+1.7**
	31nm,0.5s,baz=59,slow=1.7,SNR=41						
	31nm,0.5s						
URZ	**Urewera**	**21.73**	**161**	P	**P**	**12 17 10.9**	**+1.7**
RTZ	**Ruatahuna**	**22.02**	**162**		**P**	**12 17 13.8**	**+1.5**
RTZ				IAmb	IAmb	12 17 14.7	
	comp=Z,63nm,0.7s						
PMG	**Port Moresby**	**22.22**	**289**	P	**P**	**12 17 15.4**	**+0.8**
BKZ	**Black Stump Fm**	**22.39**	**163**		**P**	**12 17 16.4**	**+0.2**
BKZ				IAmb	IAmb	12 17 19.0	
	comp=Z,48nm,0.8s						
BKZ	**Black Stump Fm**	**22.39**	**163**	P	**P**	**12 17 17.0**	**+0.9**
MTSU	**Mount Surprise**	**22.86**	**266**	P	**P**	**12 17 21.3**	**+0.2**
QRZ	**Quartz Range**	**23.18**	**172**	P	**P**	**12 17 25.6**	**+1.7**
QRZ	**Quartz Range**	**23.18**	**172**	P	**P**	**12 17 24.8**	**+1.0**
TKNZ	**Takaka Hill**	**23.44**	**171**	P	**P**	**12 17 27.3**	**+1.0**
MRZ	**Mangatainoka R**	**23.57**	**166**		**P**	**12 17 27.3**	**-0.1**
BFZ	**Birch Farm**	**23.75**	**165**	P	**P**	**12 17 27.1**	**-1.9**
BFZ	**Birch Farm**	**23.75**	**165**	P	**P**	**12 17 29.6**	**+0.6**
TCW	**Tory Channel**	**23.83**	**169**		**P**	**12 17 30.2**	**+0.5**
QLP	**Quilpie**	**23.93**	**244**	P	**P**	**12 17 31.2**	**+0.4**
TUWZ	**Tuamarina**	**23.99**	**170**		**P**	**12 17 31.4**	**+0.3**
SNZO	**South Karori**	**24.01**	**168**	P	**P**	**12 17 31.6**	**+0.3**
THZ	**Tophouse**	**24.15**	**172**		**P**	**12 17 32.8**	**+0.1**
MSWZ	**Moikau Station**	**24.22**	**167**	P	**P**	**12 17 32.0**	**-1.3**
CNB	**Canberra Magne**	**24.24**	**220**	P	**P**	**12 17 34.5**	**+0.9**
PLWZ	**Palliser**	**24.37**	**167**		**P**	**12 17 34.4**	**-0.3**
CAN	**Canberra**	**24.47**	**221**	P	**P**	**12 17 37.0**	**+1.3**
CAN				IAmb	IAmb	12 18 11.2	
	comp=Z,18nm,0.6s						
CAN	**Canberra**	**24.47**	**221**	P	**P**	**12 17 38.2**	**+2.6**
CMSA	**Cobar Meteorol**	**24.62**	**232**	P	**P**	**12 17 37.7**	**+0.6**
KHZ	**Kahutara**	**24.88**	**171**	P	**P**	**12 17 38.6**	**-0.6**
INZ	**Inchbonnie**	**24.93**	**175**	IAmb	IAmb	12 17 41.0	
	comp=Z,46nm,0.8s						
LTZ	**Lake Taylor**	**25.08**	**173**		**P**	**12 17 41.8**	**+0.7**
OXZ	**Oxford**	**25.59**	**174**	IAmb	IAmb	12 17 47.0	
	comp=Z,27nm,0.6s						
RPZ	**Rata Peaks**	**25.89**	**176**	P	**P**	**12 17 49.1**	**+0.7**
JCZ	**Jackson Bay**	**26.15**	**179**	P	**P**	**12 17 51.8**	**+1.0**
QIS	**Mount Isa**	**27.27**	**260**	P	**P**	**12 18 02.3**	**+1.2**
STKA	**Stephens Creek**	**27.91**	**235**	P	**P**	**12 18 07.2**	**+0.6**
STKA	**Stephens Creek**	**27.91**	**235**	P	**P**	**12 18 07.2**	**+0.6**
	comp=Z,3.7nm,0.6s,baz=73,slow=9.9,SNR=9.4						
	comp=Z,3.7nm,0.6s						
HTT	**Hallett**	**30.60**	**234**	P	**P**	**12 18 30.8**	**+0.3**
WR8	**Warramunga Arr**	**32.07**	**261**	IAmb	IAmb	12 18 43.4	
	comp=Z,28nm,1.6s						
WB0	**Warramunga Arr**	**32.17**	**261**	P	**P**	**12 18 43.5**	**-1.0**
WB0				IAmb	IAmb	12 18 44.1	
	comp=Z,10nm,0.6s						
WB2	**Warramunga Arr**	**32.21**	**261**	P	**P**	**12 18 43.9**	**-0.8**
WB2				IAmb	IAmb	12 18 47.3	
	comp=Z,7.2nm,0.7s						
WRAB	**Tennant Creek**	**32.21**	**261**	P	**P**	**12 18 43.2**	**-1.6**
WRAB				IAmb	IAmb	12 19 49.8	
	comp=Z,12nm,1.2s						
WRA	**Warramunga Arr**	**32.22**	**261**		**P**	**12 18 43.9**	**-1.0**
WRA	**Warramunga Arr**	**32.22**	**261**	P	**P**	**12 18 43.7**	**-1.2**
	comp=Z,4.7nm,0.7s,baz=81,slow=6.0,SNR=96						
WRA				LR	LR	12 30 28.7	
	comp=Z,119nm,18.7s,baz=127,slow=34						
	comp=Z,4.7nm,0.7s						
BBOO	**Buckleboo**	**32.62**	**237**	P	**P**	**12 18 47.7**	**-0.5**
BBOO	**Buckleboo**	**32.62**	**237**	P	**P**	**12 18 48.6**	**+0.4**
AS01	**Alice Springs**	**32.63**	**254**	P	**P**	**12 18 48.1**	**-0.4**
AS31	**Alice Springs**	**32.67**	**254**	IAmb	IAmb	12 18 49.2	
	comp=Z,8.0nm,0.5s						
ASAR	**Alice Springs**	**32.67**	**254**	P	**P**	**12 18 48.7**	**-0.1**
ASAR	**Alice Springs**	**32.67**	**254**	P	**P**	**12 18 48.2**	**-0.6**
	comp=Z,16nm,0.6s,baz=79,slow=9.0,SNR=160						
ASAR				LR	LR	12 31 09.7	
	comp=Z,106nm,18.8s,baz=90,slow=34						
	comp=Z,16nm,0.6s						
KNRA	**Kununurra**	**37.92**	**267**	P	**P**	**12 19 33.7**	**-0.1**
FAKI	**Fak Fak**	**38.38**	**289**	P	**P**	**12 19 37.4**	**-0.3**
FAKI				IAmb	IAmb	12 20 27.6	
	comp=Z,13nm,1.0s						
FAKI	**Fak Fak**	**38.38**	**289**	P	**P**	**12 19 38.9**	**+1.2**
FORT	**Forrest**	**38.71**	**243**	P	**P**	**12 19 40.2**	**-0.1**
FORT				IAmb	IAmb	12 19 55.9	
	comp=Z,18nm,0.8s						
FORT	**Forrest**	**38.71**	**243**	P	**P**	**12 19 40.0**	**-0.2**
TBI	**Tubuai**	**39.76**	**105**	*e*LR	LR	12 30 46.7	
	comp=Z,706nm,38.0s						
PPT2	**Papeete2**	**40.01**	**96**	*e*LR	LR	12 30 54.3	
	comp=Z,135nm,26.8s						
PPT2				*e*LR	LR	12 30 58.2	
	comp=Z,125nm,36.0s						
FITZ	**Fitzroy Crossi**	**40.56**	**263**	P	**P**	**12 19 56.1**	**+0.4**
FITZ	**Fitzroy Crossi**	**40.56**	**263**	LR	LR	12 37 12.6	
	comp=Z,121nm,18.0s,baz=93,slow=37						
FITZ	**Fitzroy Crossi**	**40.56**	**263**	P	**P**	**12 19 56.2**	**+0.4**
JOHN	**Johnston Islan**	**40.68**	**34**	P	**P**	**12 19 58.3**	**+1.6**
PSA00	**Pilbara Seismi**	**45.67**	**257**	P	**P**	**12 20 36.8**	**-0.2**
MBWA	**Marble Bar**	**45.81**	**258**	P	**P**	**12 20 37.9**	**-0.1**
MBWA				IAmb	IAmb	12 21 30.2	
	comp=Z,70nm,1.9s						
MBWA	**Marble Bar**	**45.81**	**258**	P	**P**	**12 20 38.3**	**+0.3**
MBWA	**Marble Bar**	**45.81**	**258**	P	**P**	**12 20 38.0**	**-0.1**
MEEK	**Meekatharra**	**46.62**	**250**	P	**P**	**12 20 44.3**	**-0.1**
KLBR	**Kellerberrin**	**47.57**	**243**	P	**P**	**12 20 50.8**	**-0.8**
NWAO	**Narrogin (SRO)**	**48.12**	**242**	P	**P**	**12 20 55.4**	**-0.4**
NWAO				IAmb	IAmb	12 21 35.7	
	comp=Z,32nm,1.1s						
NWAO	**Narrogin (SRO)**	**48.12**	**242**	P	**P**	**12 20 55.5**	**-0.3**
NWAO	**Narrogin (SRO)**	**48.12**	**242**	P	**P**	**12 20 55.2**	**-0.6**
MORW	**Morawa**	**48.93**	**247**	P	**P**	**12 21 01.7**	**-0.4**
MORW				IAmb	IAmb	12 22 37.0	
	comp=Z,41nm,1.6s						
MORW	**Morawa**	**48.93**	**247**	P	**P**	**12 21 01.6**	**-0.5**
TAOE	**Nuku Hiva Isla**	**50.76**	**87**	*e*LR	LR	12 35 56.5	
	comp=Z,100nm,30.4s						
DRV	**Dumont d'Urvil**	**52.17**	**194**	P	**P**	**12 21 24.9**	**-0.8**
DRV				pP	**pwP**	**12 21 56.5**	**+2.8**
VNDA	**Vanda**	**59.79**	**182**	P	**P**	**12 22 19.5**	**-0.4**
VNDA				IAmb	IAmb	12 22 20.5	
	comp=Z,18nm,1.8s						
VNDA	**Vanda**	**59.79**	**182**	P	**P**	**12 22 19.6**	**-0.4**
	comp=Z,2.5nm,0.9s,baz=358,slow=7.8,SNR=16						
VNDA				LR	LR	12 44 29.1	
	comp=Z,34nm,18.7s,baz=344,slow=32						
	comp=Z,2.5nm,0.9s						
VNDA	**Vanda**	**59.79**	**182**	P	**P**	**12 22 19.3**	**-0.7**
SBA	**Scott Base**	**60.04**	**180**	P	**P**	**12 22 22.4**	**+0.7**
SBA				IAmb	IAmb	12 22 23.4	
	comp=Z,15nm,0.9s						
SBA	**Scott Base**	**60.04**	**180**	P	**P**	**12 22 22.1**	**+0.5**
SBA				pP	**sP**	**12 22 55.5**	**-3.7**
CASY	**Casey**	**61.06**	**203**	P	**P**	**12 22 28.3**	**-0.4**
CASY				IAmb	IAmb	12 22 28.8	
	comp=Z,5.1nm,0.8s						
CASY	**Casey**	**61.06**	**203**	P	**P**	**12 22 28.1**	**-0.7**
CASY				pP	**pwP**	**12 23 01.9**	**+3.5**
CCD	**Concordia, Ant**	**62.08**	**192**	P	**P**	**12 22 35.2**	**-0.7**
NJ2	**Nanjing**	**68.63**	**316**	*e*P	**P**	**12 23 20.8**	**+2.5**
NJ2				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PETK	**Petropavlovsk-**	**71.26**	**353**	P	**P**	**12 23 32.8**	**-1.1**
	comp=Z,3.5nm,0.6s,baz=133,slow=6.0,SNR=13						
	comp=Z,3.5nm,0.6s						
MDJ	**Mudanjiang**	**71.51**	**332**	P	**P**	**12 23 39.4**	**+3.8**
MDJ				pmax	pmax		
	comp=Z,12nm,1.0s						
QSPA	**South Pole Qui**	**72.20**	**180**	P	**P**	**12 23 39.2**	**-0.5**
	comp=Z,18nm,0.8s,baz=335,slow=0.6,SNR=76						
	comp=Z,18nm,0.8s						
CN2	**Changchun**	**72.84**	**329**	P	**P**	**12 23 47.4**	**+3.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BNX	**BinXian**	**73.36**	**331**	⇑P	**P**	**12 23 45.3**	**-1.3**
BNX				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HEH	**HeiHe**	**76.80**	**334**	*e*P	**P**	**12 24 06.0**	**-0.3**
HEH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**77.17**	**294**	P	**P**	**12 24 09.1**	**0.0**
	comp=Z,0.6nm,0.3s,baz=130,slow=4.2,SNR=5.1						
	comp=Z,0.6nm,0.3s						
PZH	**PanZhiHua**	**78.25**	**303**	P	**P**	**12 24 16.3**	**+1.2**
HHC	**Hu-ho-hao-te**	**78.62**	**320**	*e*P	**P**	**12 24 18.5**	**+1.7**
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,100nm,5.4s						
MAW	**Mawson**	**79.40**	**202**	P	**P**	**12 24 20.8**	**+0.3**
	comp=Z,2.4nm,0.6s,baz=334,slow=6.4,SNR=2.5						
	comp=Z,2.4nm,0.6s						
BELA	**Belgrano 2**	**83.55**	**175**	P	**P**	**12 24 40.7**	**-1.6**
BELA				IAmb	IAmb	12 24 41.6	
	comp=Z,11nm,1.1s						
L18K	**Granite Mounta**	**84.46**	**16**		**P**	**12 24 46.8**	**-0.1**
GTA	**Gaotai**	**85.56**	**314**	*e*P	**P**	**12 24 53.5**	**+0.4**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SONM	**Songino Array**	**85.61**	**323**	P	**P**	**12 24 53.1**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=149,slow=5.8,SNR=2.1						
SONM				pP	**pP**	**12 25 18.3**	**-2.2**
	comp=Z,3.0nm,1.1s,baz=142,slow=4.9,SNR=4.0						
	comp=Z,1.3nm,0.8s						
SYO	**Syowa Base**	**86.03**	**196**	⇓*e*P	**P**	**12 24 54.3**	**-0.4**
SYO	**Syowa Base**	**86.03**	**196**	⇓*e*PcP	**PcP**	**12 24 57.2**	**-0.1**
CAST	**Castle Rocks**	**86.66**	**17**		**P**	**12 24 56.0**	**-1.8**
PFO	**Pinyon Flats O**	**87.97**	**54**	LR	LR	12 59 14.5	
	comp=Z,22nm,18.5s,baz=216,slow=32						

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NVAR  Mina Array Bea    88.52  49   P       P      12 25 06.7 -0.8
      comp=Z,1.0nm,0.8s,baz=238,slow=10,SNR=5.8
      comp=Z,1.0nm,0.8s
ILAR  Eielson Array     89.16  18   P       P      12 25 06.6 -3.0
      comp=Z,0.6nm,0.7s,baz=236,slow=4.3,SNR=8.2
ILAR                                pP      pP     12 25 37.1 -0.3
      comp=Z,0.6nm,0.7s,baz=230,slow=5.6,SNR=3.7
      comp=Z,0.6nm,0.7s
TROLL Troll, Antarti    89.85 184 ⇑P       P      12 25 12.3 -0.9
      comp=Z,463nm,0.6s
I07A  Izee              90.04  43           P      12 25 13.7 -0.7
J08A  Circle Bar Ran    90.42  44           P      12 25 15.8 -0.4
SNAA  Sanae             90.50 183 ⇑P       P      12 25 14.7 -1.3
      comp=Z,80nm,0.7s
SNAA  Sanae             90.50 183   P       P      12 25 14.8 -1.3
      comp=Z,4.0nm,0.8s,baz=208,slow=6.8,SNR=23
      comp=Z,4.0nm,0.8s
VNA3  Neumayer Olymp    91.13 181 ⇑P       P      12 25 17.4 -1.6
      comp=Z,9.9nm,0.6s
VNA2  Neumayer--Watz    91.41 181 ⇑P       P      12 25 18.9 -1.3
      comp=Z,9.3nm,1.0s,baz=170,slow=4.8
VNA1  Neumayer--Stat    91.70 181 ⇑P       P      12 25 19.1 -2.4
      comp=Z,8.1nm,1.1s
U15A  North Rim         92.19  52           P      12 25 24.9 +0.1
WMQ   Urumqi            95.64 314  eP       P      12 25 39.3 -0.9
WMQ                                 pmax    pmax
      comp=Z,22nm,0.8s
YKA   Yellowknife Ar    99.83  27   P       Pdif   12 25 57.5 -0.9
      comp=Z,0.2nm,0.7s,baz=262,slow=5.1,SNR=6.1
      comp=Z,0.2nm,0.7s
MKAR  Makanchi Array   100.16 316   P       Pdif   12 25 60.0 -0.4
      comp=Z,0.2nm,0.5s,baz=98,slow=6.1,SNR=2.2
ARCES ARCESS Array B   123.52 345   PKP     PKPdf  12 31 08.6 -2.1
      comp=Z,0.6nm,0.4s,baz=77,slow=1.1,SNR=11
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*BER **13** 12:13:39.6±2.8, 81°.55N×4°.28W, h10km, Mw3.3, ML2.2(DNK), Confirmed Earthquake*
*FCIAR **13** 12:13:40.0, 81°.72N×1°.95W, h10km, station OMEGA has station magnitude of 3.80 station ZFI2 has station magnitude of 3.70*
*DNK **13** 12:13:41.5±2.0, 81°.58N×3°.78W, h36km±17km, ML2.2*
ISC 13 12:13:35.0±1.0**, 81°.54N**±0°.06×**4°.07W**±0°.05**, h11**km**, n22,** σ**3.s30**/39**, North of Svalbard**

```
Code  Station Name        Δ°  AZ°    Phase ID          Time      Res
                                    Op      ISC      h  m  s     ISC
NOR   Nord               1.86 278  i P      Pn     12 14 09.0 +2.3
NOR                                i S      Sn     12 14 31.6 +1.4
NOR                                  IAML          12 14 38.6
      comp=Z,31nm,0.7s
NOR   Nord               1.86 278  i P      Pn     12 14 09.0 +2.3
NOR                                i S      Sn     12 14 31.6 +1.4
NOR                                  IAML          12 14 38.6
      comp=Z,31nm,0.7s
KBS   Kingsbay           3.77 126  eP       Pn     12 14 35.6 +2.7
KBS                                eS       Sn     12 15 16.5 -0.7
KBS                                  IAML          12 15 23.3
      comp=Z,4.2nm,0.5s
KBS   Kingsbay           3.77 126  i P      Pn     12 14 36.4 +3.4
KBS                                i S      Sn     12 15 15.4 -1.9
BRBA  Barentsburg A      4.75 128  eP       Pn     12 14 50.9 +4.5
BRBA                               eS       Sn     12 15 42.4 +1.2
BRBA                                 IAML          12 15 45.5
      comp=Z,4.0nm,0.4s
SPA0  Spitsbergen Ar     4.91 123  eP       Pn     12 14 51.4 +2.8
SPA0                               eS       Sn     12 15 44.7 -0.6
SPA0  Spitsbergen Ar     4.91 123  eP       Pn     12 14 51.6 +3.0
SPA0                               eS       Sn     12 15 44.6 -0.6
SPA0                                 IAML          12 15 55.7
      comp=Z,2.6nm,0.7s
DAG   Danmarks Havn      5.50 217  i P      Pn     12 15 00.0 +3.3
DAG                                i S      Sn     12 15 57.0 -2.9
DAG                                  IAML          12 16 05.3
      comp=Z,9.5nm,0.6s
DAG   Danmarks Havn      5.50 217  i P      Pn     12 15 00.0 +3.3
DAG                                i P      Pn     12 15 00.0 +3.3
DAG                                i S      Sn     12 15 57.0 -2.9
DAG                                  IAML          12 16 05.3
      comp=Z,9.5nm,0.6s
HSPB  Hornsund (broa     5.80 131  eP       Pn     12 15 04.3 +3.5
HSPB                               eS       Sn     12 16 06.5 -0.6
HSPB  Hornsund (broa     5.80 131  eP       Pn     12 15 04.4 +3.6
HSPB                                 IAML          12 16 10.5
      comp=Z,1.9nm,0.5s
HOPEN Hopen              7.38 117  eP       Pn     12 15 24.2 +1.8
HOPEN                              eS       Sn     12 16 42.2 -3.8
HOPEN Hopen              7.38 117  eP       Pn     12 15 25.0 +2.5
HOPEN                              eS       Sn     12 16 42.9 -3.1
HOPEN                                IAML          12 16 45.5
      comp=Z,4.2nm,0.7s
ZFI2  Zemlya Franca-     7.75  69  eP       Pn     12 15 29.5 +1.9
ZFI2                               eS       Sn     12 16 49.3 -5.9
      comp=Z,25nm,1.8s
OMEGA Omega              7.78  69  eP       Pn     12 15 29.5 +1.6
      comp=Z,27nm,1.6s
OMEGA                              eS       Sn     12 16 49.3 -6.4
      comp=Z,27nm,1.6s
DBG   Daneborg           7.97 213  i P      Pn     12 15 32.2 +1.7
DBG                                i S      Sn     12 16 55.4 -5.0
DBG                                  IAML          12 17 06.5
      comp=Z,4.1nm,1.1s
DBG   Daneborg           7.97 213  i P      Pn     12 15 32.2 +1.7
DBG                                i S      Sn     12 16 55.4 -5.0
DBG                                  IAML          12 17 06.5
      comp=Z,4.1nm,1.1s
NEEM  North Greenlan     9.21 269  i P      Pn     12 15 49.7 +1.9
NEEM                               i S      Sn     12 17 23.8 -7.5
NEEM  North Greenlan     9.21 269  i P      Pn     12 15 49.7 +1.9
NEEM                               i S      Sn     12 17 23.8 -7.5
JNW   Jan Mayen West    10.62 188  eP       Pn     12 16 11.3 +4.5
JNE   Jan Mayen East    10.65 188  eP       Pn     12 16 12.1 +4.8
JMIC  Jan Mayen         10.66 188  eP       Pn     12 16 11.7 +4.3
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*LJU **13** 12:18:11.3, 45°.40N×14°.40E, h16km, ML2.3*
*PRU **13** 12:18:12.5, 45°.40N×14°.38E, h10km, Rijeka*
*RHSSO **13** 12:18:12.7±0.4, 45°.41N×14°.40E, h3km±2km, ML2.3/7*
*VIE **13** 12:18:14.3±1.4, 45°.50N×14°.43E, h10km, mb2.3/12, ml2.5/13, Error ellipse: s-maj=10.8km s-min=5.4km az=165.0   17 km N of Rijeka*
ISC 13 12:18:11.2±0.8**, 45°.38N**±0°.02×**14°.41E**±0°.02**, h16**km±5km**, n56,** σ**0.s70**/101**, 4C-7D, Northwestern Balkan Peninsula**

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Code  Station Name        Δ°  AZ°    Phase ID          Time      Res
                                    Op      ISC      h  m  s     ISC
RIY   Rijeka             0.08 136  i Pg     Pg     12 18 14.5  0.0
RIY                                  Sg     Sg     12 18 16.5  0.0
KNDS  Knezji Dol         0.15 353⇓i Pg     Pg     12 18 15.3 -0.1
KNDS                               i Sg     Sg     12 18 18.0 -0.1
KNDS                                 IAML          12 18 18.3
      comp=Z,276nm,0.1s
GBRS  Gornja Briga       0.32  62⇓i Pg     Pb     12 18 18.5  0.0
GBRS                               eSg      Sb     12 18 23.6 +0.1
GBRS                                 IAML          12 18 24.1
      comp=Z,136nm,0.1s
SKDS  Skadanscina        0.32 301⇑i Pg     Pg     12 18 17.6 -0.4
SKDS                               eSg      Sg     12 18 22.6 -0.1
SKDS  Skadanscina        0.32 301⇑i Pg     Pg     12 18 17.7 -0.4
SKDS                               i Sg     Sg     12 18 22.5 -0.1
SKDS                                 IAML          12 18 23.2
      comp=Z,230nm,0.1s
CEY   Cerknica           0.36   2⇓i Pg     Pg     12 18 18.1 -0.6
CEY                                eSg      Sg     12 18 23.9 +0.2
CEY   Cerknica           0.36   2⇓i Pg     Pg     12 18 18.3 -0.3
CEY                                eSg      Sg     12 18 23.8 +0.1
CEY                                  IAML          12 18 24.7
      comp=Z,201nm,0.1s
VISS  Visnje             0.52  36  i Pg     Pg     12 18 21.5 -0.1
VISS                               i Sg     Sb     12 18 29.9 +0.7
VISS                                 IAML          12 18 32.5
      comp=Z,39nm,0.1s
GBAS  Gorenja Brezov     0.56   3  i Pg     Pg     12 18 22.1 -0.1
GBAS                               eSg      Sg     12 18 29.9 +0.2
GBAS                                 IAML          12 18 30.6
      comp=Z,112nm,0.2s
TRI   Trieste            0.56 306⇑ePg      Pg     12 18 21.9 -0.3
TRI                                eSg      Sg     12 18 30.1 +0.4
JAVS  Javornik           0.57 335  i Pg     Pg     12 18 21.8 -0.6
JAVS                               i Sg     Sg     12 18 30.4 +0.4
JAVS                                 IAML          12 18 32.7
      comp=Z,51nm,0.1s
BOJS  Bojanci            0.61  78⇑i Pg     Pb     12 18 23.5 +0.1
BOJS                               eSg      Sb     12 18 32.0 +0.3
BOJS  Bojanci            0.61  78  i Pg     Pb     12 18 23.5 +0.1
BOJS                               i Sg     Sb     12 18 31.8 +0.1
BOJS                                 IAML          12 18 35.1
      comp=Z,32nm,0.2s
BRJN  Brijuni            0.66 225  ePg      Pb     12 18 24.9 +0.6
BRJN                                 Sg     Sb     12 18 33.9 +0.6
LJU   Ljubljana          0.67   7  ePg      Pg     12 18 24.3  0.0
LJU                                eSg      Sb     12 18 34.4 +0.9
LJU                                  IAML          12 18 36.5
      comp=Z,34nm,0.1s
RABC  Rab                0.68 157  i Pg     Pn     12 18 25.9 -0.2
RABC                                 Sg     Sn     12 18 36.6 +0.2
CRNS  Crni Vrh           0.71 352  ePg      Pg     12 18 24.5 -0.6
CRNS                                 IAML          12 18 38.3
      comp=Z,81nm,0.2s
VOJS  Vojsko             0.75 331  i Pg     Pg     12 18 24.9 -0.9
VOJS                               eSg      Sb     12 18 36.3 +0.4
VOJS                                 IAML          12 18 39.8
      comp=Z,32nm,0.1s
VNDS  Vrh nad Dolski     0.75  16  i Pg     Pb     12 18 26.5 +0.6
VNDS                                 IAML          12 18 41.3
      comp=Z,22nm,0.1s
PDKS  Podkum             0.80  31  i Pg     Pg     12 18 26.6 -0.2
PDKS                               eSg      Sn     12 18 38.5 -0.9
PDKS                                 IAML          12 18 42.5
      comp=Z,36nm,0.1s
SABO  M.te Sabotino      0.82 317  ePg      Pb     12 18 26.6 -0.5
SABO                               eSg      Sb     12 18 38.5 +0.5
LEGS  Legarje            0.85  48  i Pg     Pb     12 18 27.8 +0.1
LEGS                               i Sg     Sg     12 18 39.5 +0.4
CRES  Cresnjevec Ost     0.86  58⇓i Pg     Pb     12 18 27.8  0.0
CRES                               eSg      Sn     12 18 40.4 -0.5
CRES  Cresnjevec Ost     0.86  58  i Pg     Pg     12 18 28.0 +0.1
CRES                               i Sg     Sg     12 18 39.5 +0.2
CRES                                 IAML          12 18 44.6
      comp=Z,45nm,0.3s
NVLJ  Novalja            0.88 158  ePg      Pn     12 18 29.1 +0.3
NVLJ                                 Sg     Sn     12 18 42.1 +0.9
MOZS  Mozjanca           0.91   2  ePg      Pn     12 18 29.4  0.0
MOZS                               i Sg     Sn     12 18 42.2  0.0
MOZS                                 IAML          12 18 43.7
      comp=Z,24nm,0.1s
CESS  Cesta pri Krsk     0.95  51  i Pg     Pn     12 18 30.9 +1.0
CESS                               i Sg     Sn     12 18 42.8 -0.2
DRE   Drenchia           0.96 326  ePg      Pb     12 18 29.0 -0.4
DRE                                eSg      Sg     12 18 43.0 +0.7
CADS  Cadrg              0.97 331  ePg      Pb     12 18 28.8 -0.8
CADS                               i Sg     Sn     12 18 44.5 +0.9
CADS                                 IAML          12 18 50.6
      comp=Z,32nm,0.2s
GORS  Gorjuse            0.98 343  i Pg     Pb     12 18 29.7 -0.1
GORS                               i Sg     Sn     12 18 44.2 +0.3
GORS                                 IAML          12 18 46.4
      comp=Z,87nm,0.2s
GCIS  Gornji Cirnik      0.99  60  i Pg     Pg     12 18 30.3  0.0
GCIS                                 IAML          12 18 46.9
      comp=Z,29nm,0.2s
GOLS  Golise             1.06  53  i Pg     Pg     12 18 31.9 +0.1
GOLS                               eSg      Sn     12 18 46.6 +0.8
GOLS                                 IAML          12 18 52.5
      comp=Z,26nm,0.2s
ROBS  Robic              1.07 324  i Pg     Pg     12 18 32.3 +0.4
ROBS                               i Sg     Sn     12 18 46.4 +0.4
ROBS                                 IAML          12 18 53.2
      comp=Z,22nm,0.1s
DOBS  Dobrina            1.07  44  ePg      Pg     12 18 32.2 +0.3
DOBS                               eSg      Sn     12 18 47.2 +1.2
DOBS                                 IAML          12 18 51.4
      comp=Z,29nm,0.1s
OBKA  Obir               1.13   5⇓i Pg     Pg     12 18 33.2 +0.1
OBKA                               eSg      Sn     12 18 48.3 +0.6
OBKA  Obir               1.13   5  ePg      Pg     12 18 33.5 +0.3
      comp=Z,11nm,0.1s,SNR=8.5
OBKA                               eSg      Sn     12 18 48.9 +1.2
      comp=Z,49nm,0.2s
ZAVS  Zavodnje           1.14  22  i Pg     Pg     12 18 33.3 +0.1
ZAVS                               i Sg     Sg     12 18 49.0 +0.9
ZAVS                                 IAML          12 18 52.3
      comp=Z,53nm,0.1s
PERS  Pernice            1.35  21  i Pg     Pg     12 18 37.0 -0.2
PERS                               i Sg     Sg     12 18 54.6 -0.3
PERS                                 IAML          12 18 57.9
      comp=Z,56nm,0.2s
MYKA  Terra Mystica      1.36 337  ePg      Pg     12 18 38.0 +0.6
      comp=Z,4.9nm,0.2s,SNR=5.6
MYKA                               eSg      Sg     12 18 56.7 +1.6
      comp=Z,45nm,0.4s
SOKA  Soboth             1.37  18  ePg      Pg     12 18 37.3 -0.3
      comp=Z,1.3nm,0.1s,SNR=8.4
SOKA                               eSg      Sg     12 18 54.7 -0.7
      comp=Z,15nm,0.2s
A050A Klekovaca          1.76 120⇓i Pn     Pg     12 18 44.3 -0.7
A050A                              eSn      Sg     12 19 07.0 -0.8
A051A Mrakovica          1.81 101  ePn      Pg     12 18 45.3 -0.6
A051A                              eSn      Sg     12 19 07.9 -1.5
ABTA  Abfaltersbach      1.90 317    Pn     Pb     12 18 46.6 +1.1
      comp=Z,5.7nm,0.2s
ABTA                               eSn      Sg     12 19 12.7 +0.3
      comp=Z,6.7nm,0.2s
BEHE  Becsehely          1.98  56  ePn      Pb     12 18 47.1 +0.3
BEHE                               eSn      Sb     12 19 11.5 +0.3
ARSA  Arzberg            2.02  22  ePn      Pb     12 18 47.3 -0.3
ARSA                               eSn      Sb     12 19 12.5  0.0
ARSA  Arzberg            2.02  22  ePg      Pg     12 18 49.2 -0.8
      comp=Z,3.9nm,0.3s,SNR=4.1
ARSA                               eSg      Sg     12 19 15.4 -0.9
      comp=Z,5.3nm,0.3s
BLY   Banja Luka         2.07 107  eSn      Sb     12 19 14.6 +0.9
LESA  Schwarzleotal      2.37 330  ePn      Pb     12 18 53.1 -0.4
      comp=Z,4.5nm,0.2s
LESA                               eSn      Sg     12 19 25.2 -2.1
      comp=Z,25nm,0.6s
MOA   Molln              2.47 358  eSn      Sb     12 19 24.8 -0.6
      comp=Z,5.1nm,0.4s
RONA  Rosalia, Austr     2.66  29  ePn      Pb     12 18 56.3 -2.2
      comp=Z,2.6nm,0.1s
WTTA  Wattenberg         2.69 315  ePn      Pb     12 18 59.4 +0.4
      comp=Z,9.3nm,0.3s
WTTA                                 Sn     Sg     12 19 36.8 -0.8
      comp=Z,20nm,0.6s
CONA  Conrad Observa     2.74  21  ePn      Pb     12 18 58.0 -1.8
      comp=Z,0.7nm,0.1s
SQTA  Sankt Quirin       2.88 311    Pn     Pg     12 19 05.3 -1.1
      comp=Z,8.7nm,0.3s
MOTA  Moosalm            3.02 312    Pn     Pb     12 19 02.6 -1.9
      comp=Z,0.7nm,0.1s
FETA  Feichten           3.04 304  ePn      Pg     12 19 08.5 -0.8
      comp=Z,4.3nm,0.3s
KHC   Kasperske Hory     3.79 352  eSN      Sn     12 19 54.4 +1.1
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*JMA **13** 12:27:01.8±0.1, 34°.5N±0°.6×136°.2E±0°.5, h387km, MV3.6/36, NORTHERN NARA PREF*
*IDC **13** 12:27:01.1±0.8, 34°.39N×136°.29E, h388km±8km, mb3.4/15, mbtmp4.1/20, Error ellipse: s-maj=15.3km s-min=11.1km az=68.0*
ISC 13 12:27:01.3±0.7**, 34°.44N**±0°.07×**136°.26E**±0°.05**, h388**km±5km**, n41,** σ**0.s85**/55**, mb3.7**/15**, Western Honshu**

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Code  Station Name        Δ°  AZ°    Phase ID          Time      Res
                                    Op      ISC      h  m  s     ISC
JKN2  Miekihoku          0.20 176  i P      Pn     12 27 50.0 +0.5
JKN2                                 S      S      12 28 27.4 -0.7
JIE   Ise                0.38  97    P      Pn     12 27 50.4 +0.8
JIE                                  S      S      12 28 28.4  0.0
JWY   Kouya              0.59 249    P      Pn     12 27 50.7 +0.6
JWY                                eS       S      12 28 28.5 -0.8
JTNC  Tanabenakahech     0.81 221    P      Pn     12 27 50.9 +0.4
JTNC                                 S      S      12 28 29.8 -0.5
TTO1  TONANKAI O.B.S     0.92 151    P      Pn     12 27 51.6 +1.1
JWT   Wachi              1.10 321    P      Pn     12 27 51.8 +0.4
JWT                                  S      S      12 28 30.8 -1.1
JYTA  Yamagatataniai     1.22  19    S      S      12 28 32.5 -0.2
JAI   Aioi               1.63 247    P      Pn     12 27 54.3 +0.3
JAI                                  S      S      12 28 35.4 -1.0
JKG   Kaga               1.84   2    P      Pn     12 27 55.4 +0.5
JKG                                eS       S      12 28 38.0 -0.4
JMN   Monobe             2.10 251    P      Pn     12 27 57.2 +0.4
JMN                                  S      S      12 28 41.1 -0.5
JYN   Shimob             2.16  60    P      Pn     12 27 57.7 +0.5
JOD2  Odawara 2          2.47  70    P      Pn     12 28 00.3 +1.0
JOD2                               eS       S      12 28 47.5 +1.2
MAT   Matsushiro         2.64  37  eP       Pn     12 28 01.0 +0.4
MAT                                  S      S      12 28 48.5  0.0
MJAR  Matsushiro Arr     2.64  37    P      Pn     12 28 01.4 +0.8
      6.2nm,0.6s,baz=214,slow=7.4,SNR=20
MJAR                                 S      S      12 28 48.8 +0.3
      1.9nm,0.6s,baz=216,slow=37,SNR=2.9
JHS   Saijyo             2.65 283    P      Pn     12 28 01.2 +0.5
JHS                                  S      S      12 28 48.4 -0.3
JRY   Ryogami san        2.68  53    P      Pn     12 28 01.7 +0.8
JRY                                eS       S      12 28 49.5 +0.3
JOI   OKI                3.08 308    P      Pn     12 28 04.3 +0.2
JSZ   Suzu               3.14  16  eP       Pn     12 28 05.3 +0.8
JGT2  ShimaneMisato      3.15 283    P      Pn     12 28 04.8 +0.1
JHT   Toyohira           3.17 275    P      Pn     12 28 05.3 +0.3
BSO1  Boso 1             3.90  85    P      Pn     12 28 10.0 -1.0
JNU   Nakatsue           4.67 255    P      Pn     12 28 19.6 +0.4
      8.6nm,0.7s,baz=36,slow=3.9,SNR=9.8
KSRS  Korea Array        7.40 296    P      P      12 28 50.1 +0.4
      4.7nm,0.7s,baz=112,slow=12,SNR=16
KSRS                                 S      S      12 30 17.1  0.0
      3.7nm,1.0s,baz=109,slow=21,SNR=9.0
JCJ   Chichijima         8.92 144    P      Pn     12 28 59.0 -7.7
      60nm,0.9s,baz=314,slow=17,SNR=1.7
JCJ                                  S      S      12 30 36.7  -13
      63nm,0.6s,baz=105,slow=24,SNR=6.6
USRK  Ussuriysk Ar.     10.29 343    P      P      12 29 20.8 -1.5
      2.9nm,0.8s,baz=157,slow=11,SNR=5.2
ASAJ  Asahikawa         10.84  25    P      P      12 29 28.1 -0.2
      2.7nm,0.3s,baz=226,slow=8.7,SNR=13
ASAJ                                 S      S      12 31 25.6 -3.9
      5.9nm,0.8s,baz=17,slow=32,SNR=5.1
SONM  Songino Array     25.99 310    P      P      12 32 01.7 +1.2
      1.9nm,0.7s,baz=118,slow=7.4,SNR=10
      1.9nm,0.7s
ZALV  Zalesovo Beam     40.66 315    P      P      12 34 05.9 +0.6
      1.0nm,0.3s,baz=91,slow=6.2,SNR=3.7
      1.0nm,0.3s
MKAR  Makanchi Array    42.01 304    P      P      12 34 16.7 +0.5
      2.4nm,0.6s,baz=91,slow=10.0,SNR=23
      2.4nm,0.6s
KURBB Kurchatov Arra    44.35 310    P      P      12 34 34.4 -0.2
      1.6nm,0.7s,baz=86,slow=7.7,SNR=17
      1.6nm,0.7s
BVAR  Borovoye Array    49.25 313    P      P      12 35 11.7 -0.4
      1.8nm,0.3s,baz=101,slow=8.2,SNR=13
      1.8nm,0.3s
ILAR  Eielson Array     53.91  31    P      P      12 35 46.3 +0.4
      0.3nm,0.5s,baz=276,slow=7.4,SNR=3.9
      0.3nm,0.5s
WRA   Warramunga Arr    54.11 182    P      P      12 35 47.1 -0.8
      1.4nm,0.3s,baz=359,slow=7.7,SNR=43
      1.4nm,0.3s
ASAR  Alice Springs     57.83 183    P      P      12 36 13.4 -0.4
      0.5nm,0.6s,baz=12,slow=13,SNR=12
      0.5nm,0.6s
ARCES ARCESS Array B    64.92 339    P      P      12 37 00.6 +0.5
      1.1nm,0.5s,baz=58,slow=9.2,SNR=15
      1.1nm,0.5s
FINES FINESS Array B    69.11 331    P      P      12 37 26.0 -0.3
      2.4nm,0.9s,baz=66,slow=6.5,SNR=6.5
      2.4nm,0.9s
KBZ   Khabaz            69.35 309    P      P      12 37 28.9 +0.8
      3.7nm,0.8s,baz=57,slow=3.9,SNR=9.0
      3.7nm,0.8s
AKASG Malin Array Be    73.71 321    P      P      12 37 53.2 -0.5
      1.6nm,0.3s,baz=50,slow=6.9,SNR=4.5
      1.6nm,0.3s
HFS   Hagfors           74.65 334    P      P      12 37 58.7 -0.3
      1.0nm,0.5s,baz=54,slow=7.3,SNR=2.2
      1.0nm,0.5s
BRTR  Keskin Array B    77.34 310    P      P      12 38 15.2 +0.6
      1.4nm,0.8s,baz=116,slow=5.7,SNR=6.7
      1.4nm,0.8s
GERES GERESS Array B    82.60 326    P      P      12 38 42.0 -0.1
      0.6nm,0.4s,baz=46,slow=5.8,SNR=6.3
      0.6nm,0.4s
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*IDC **13** 12:29:29.7±2.1, 17°.34S×179°.03W, h567km±18km, mb3.1/5, mbtmp4.0/7, Error ellipse: s-maj=106.1km s-min=21.1km az=152.0*
ISC 13 12:29:28.6±1.5**, 16°.9S**±0°.9×**179°.2W**±0°.5**, h550**km**, n8,** σ**1.s68**/8**, mb3.4**/5**, Fiji Islands region**

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Code  Station Name        Δ°  AZ°    Phase ID          Time      Res
                                    Op      ISC      h  m  s     ISC
MSVF  Nonsavu            2.79 252    P      P      12 30 45.6 +3.2
      15nm,0.7s,baz=148,slow=22,SNR=16
DZM   Mont Dzumac       14.51 247    P      P      12 32 31.9 -1.2
      4.5nm,0.6s,baz=287,slow=23,SNR=7.6
STKA  Stephens Creek    38.49 240    P      P      12 36 03.5 -0.7
      2.1nm,0.6s,baz=100,slow=6.1,SNR=5.1
      2.1nm,0.6s
WRA   Warramunga Arr    44.11 259    P      P      12 36 48.6 -0.2
      0.8nm,0.6s,baz=94,slow=7.5,SNR=14
      0.8nm,0.6s
ASAR  Alice Springs     44.38 253    P      P      12 36 50.8  0.0
      8.3nm,0.6s,baz=95,slow=7.7,SNR=135
      8.3nm,0.6s
TXAR  Lajitas Array     86.07  58    P      P      12 41 12.1 +0.2
      0.4nm,0.7s,baz=252,slow=4.5,SNR=3.8
      0.4nm,0.7s
PDAR  Pinedale Array    87.12  44    P      P      12 41 16.2 -0.5
      0.2nm,0.4s,baz=268,slow=7.6,SNR=2.0
      0.2nm,0.4s
GERES GERESS Array B   146.45 345    PKPbc  PKiKP  12 48 09.3 -1.3
      0.6nm,0.5s,baz=1.6,slow=3.2,SNR=2.4
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*NIED **13** 12:30:25.6, 38°.28N×141°.63E, h54km, MW4.0, Moment Tensor Solution.   s3   Moment tensor: Scale 10^{15}Nm; M_{rr}0.42; $M_{\theta\theta}$0.06; $M_{\phi\phi}$-0.48; $M_{r\theta}$0.30; $M_{\theta\phi}$-0.10; $M_{\phi r}$0.99; Fault plane solution: $M_0$1.14000×10^{15} NP1: ϕ_s182.00000°, δ12.00000°, λ76.00000°. NP2: ϕ_s17.00000°, δ78.00000°, λ93.00000°.*
*JMA **13** 12:30:25.6±0.1, 38°.3N±0°.3×141°.6E±0°.5, h54km, MD3.7/40, MV3.9/40, KINKAZAN REGION*
JMA Felt I J1 at KINKAZAN REGION .
*IDC **13** 12:30:27.6±1.4, 38°.35N×141°.69E, h77km±7km, mb3.6/7, mbtmp3.8/11, MS4.4/1, Error ellipse: s-maj=33.4km s-min=17.4km az=76.0*
ISC 13 12:30:24.9±1.0**, 38°.28N**±0°.05×**141°.75E**±0°.08**, h48**km±5km**, n39,** σ**1.s28**/44**, mb3.9**/8**, 18D, Near east coast of eastern Honshu**

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Code  Station Name        Δ°  AZ°    Phase ID          Time      Res
                                    Op      ISC      h  m  s     ISC
JIKH  Ishinomakikobu     0.22 279  i P      Pn     12 30 34.0 +0.9
JIKH                                 S      Sn     12 30 39.7 +0.8
JIKH  Ishinomakikobu     0.22 279    A      A      12 30 34.0
      comp=N,25nm,2.0s,comp=E,26nm,0.5s
JIO   Ouri               0.36 300⇓i P      Pn     12 30 35.0 +0.6
JIO                               ⇓ S      Sn     12 30 41.4 +0.2
JIO   Ouri               0.36 300    A      A      12 30 35.0
      comp=N,20nm,0.3s,comp=E,12nm,0.4s
JKMT  Kesennumamotoy     0.58 338⇓i P      Pn     12 30 37.6 +0.7
JKMT                              ⇓i S      Sn     12 30 45.8 +0.2
JMK   Ichinoseki         0.79 329⇓i P      Pn     12 30 40.2 +0.5
JMK                               ⇓ S      Sn     12 30 50.5  0.0
JMK   Ichinoseki         0.79 329    A      A      12 30 40.2
      comp=N,8.0nm,0.5s,comp=E,7.0nm,0.8s
OFUJ  Ofunato            0.81 356⇓i P      Pn     12 30 40.6 +0.7
OFUJ                              ⇓ S      Sn     12 30 51.3 +0.4
JMM   Marumori           0.86 242⇓i P      Pn     12 30 40.1 -0.5
JMM                               ⇓ S      Sn     12 30 50.5 -1.5
JMM   Marumori           0.86 242    A      A      12 30 40.1
      comp=N,11nm,0.4s,comp=E,8.0nm,0.6s
JOU   Okura              0.86 276⇓i P      Pn     12 30 40.3 -0.3
JOU                               ⇓ S      Sn     12 30 51.3 -0.8
JOU   Okura              0.86 276    A      A      12 30 40.3
      comp=N,6.0nm,0.6s,comp=E,4.0nm,2.2s
JMST  Minamisoumatoc     0.87 231    A      A      12 30 41.0
      comp=N,9.0nm,0.4s,comp=E,6.0nm,0.6s
JFK   Kawauchi           1.14 218  i P      Pn     12 30 44.4 -0.1
JFK                                  S      Sn     12 30 58.0 -1.0
JOM   Ohasama            1.25 344  i P      Pn     12 30 46.5 +0.6
JOM                                eS       Sn     12 31 01.9 +0.4
JYK   Kaneyama           1.26 301⇓i P      Pn     12 30 46.0 -0.1
JYS   Shirataka          1.32 268⇓i P      Pn     12 30 46.8 -0.1
JYS                               ⇓ S      Sn     12 31 02.7 -0.7
JOTO  OTAMA OYAMA        1.33 238  i P      Pn     12 30 46.9 -0.1
JOTO                                 S      Sn     12 31 03.0 -0.5
JRG   Rokugo             1.42 322⇓i P      Pn     12 30 48.8 +0.6
JRG                               ⇓eS       Sn     12 31 06.1 +0.4
JYA   Atsumi             1.63 282⇓i P      Pn     12 30 50.9 -0.2
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MJAR	Matsushiro Arr	3.31	240	P	Pn	12 31 15.4	+1.3
	comp=E,4.9nm,0.6s,baz=34,slow=14,SNR=26						
MJAR				S	Sn	12 31 58.5	+6.3
	comp=E,6.7nm,0.5s,baz=115,slow=12,SNR=5.7						
ASAJ	Asahikawa	5.87	6	P	Pn	12 31 49.5	+0.2
	comp=E,5.1nm,0.3s,baz=220,slow=12,SNR=17						
ASAJ				S	Sn	12 32 54.2	-1.0
	comp=E,3.8nm,0.3s,baz=268,slow=25,SNR=1.6						
USRK	Ussuriysk Ar.	9.43	312	P	Pn	12 32 38.2	+0.2
	comp=E,2.5nm,0.4s,baz=118,slow=14,SNR=9.8						
KSRS	Korea Array	10.96	270	P	Pn	12 33 00.5	+1.6
	comp=E,0.9nm,0.6s,baz=78,slow=14,SNR=5.1						
SONM	Songino Array	27.33	302	P	P	12 36 05.8	+0.6
	comp=E,0.5nm,0.4s,baz=97,slow=7.4,SNR=2.7						
SONM				pP	sP	12 36 22.7	-0.7
	comp=E,0.6nm,0.5s,baz=97,slow=10,SNR=2.1						
	comp=E,0.5nm,0.4s						
H11N2	WAKE ISLAND Hy	28.58	123	T	T	13 06 32.3	
	baz=316,slow=75,SNR=108						
H11N1	WAKE ISLAND Hy	28.59	123	T	T	13 06 32.9	
	baz=316,slow=75,SNR=116						
H11N3	WAKE ISLAND Hy	28.60	123	T	T	13 06 33.6	
	baz=316,slow=75,SNR=107						
H11S1	WAKE ISLAND Hy	29.33	125	T	T	13 07 26.8	
	baz=318,slow=76,SNR=24						
H11S3	WAKE ISLAND Hy	29.34	125	T	T	13 07 30.9	
	baz=318,slow=76,SNR=41						
H11S2	WAKE ISLAND Hy	29.35	125	T	T	13 07 34.8	
	baz=318,slow=76,SNR=39						
ZALV	Zalesovo Beam	41.28	311	P	P	12 38 04.6	-0.7
	comp=E,1.7nm,0.4s,baz=87,slow=7.6,SNR=6.9						
ZALV				pP	sP	12 38 23.5	-0.1
	comp=E,3.0nm,0.7s,baz=79,slow=7.7,SNR=6.3						
	comp=E,1.7nm,0.4s						
MKAR	Makanchi Array	43.70	301	P	P	12 38 24.6	-0.4
	comp=E,2.3nm,0.8s,baz=87,slow=9.3,SNR=14						
MKAR				pP	sP	12 38 43.1	-0.4
	comp=E,1.7nm,0.7s,baz=84,slow=9.3,SNR=8.8						
	comp=E,2.3nm,0.8s						
KURBB	Kurchatov Arra	45.46	307	P	P	12 38 37.9	-1.1
	comp=E,4.6nm,0.7s,baz=82,slow=8.2,SNR=40						
KURBB				pP	sP	12 38 57.3	-0.1
	comp=E,6.3nm,0.7s,baz=82,slow=8.4,SNR=15						
	comp=E,4.6nm,0.7s						
ILAR	Eielson Array	48.31	33	pP	pP	12 39 18.9	+4.9
	comp=E,0.3nm,0.6s,baz=278,slow=8.9,SNR=3.1						
BVAR	Borovoye Array	49.94	312	P	P	12 39 11.5	-2.2
	comp=E,0.7nm,0.4s,baz=69,slow=8.1,SNR=4.6						
BVAR				pP	sP	12 39 31.4	-0.8
	comp=E,1.3nm,0.6s,baz=74,slow=11,SNR=4.7						
	comp=E,0.7nm,0.4s						
BATI	Baumata	51.10	203	LR	LR	13 03 26.5	
	comp=E,382nm,19.0s,baz=269,slow=39						
WRA	Warramunga Arr	58.33	188	P	P	12 40 14.3	-0.7
	comp=E,0.4nm,0.5s,baz=5.3,slow=7.2,SNR=12						
	comp=E,0.4nm,0.5s						
ASAR	Alice Springs	62.05	188	P	P	12 40 41.8	+1.3
	comp=E,0.2nm,0.7s,baz=356,slow=5.3,SNR=4.1						
	comp=E,0.2nm,0.7s						

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*NEIC **13** 12:38:29.6±1.2, 33°.92N±0°.03×116°.68W±0°.04, h22^{km}±9^{km}, Error ellipse: s-maj=4.5km s-min=4.2km az=46.0*

PAS 13 12:38:30.6±1.2**, 33°.94N**±0°.02×**116°.67W**±0°.02**, h17**^{km}±5^{km}**, ML3.0**/258**, ML2.9**/38(NEIC)**, Error ellipse: s-maj=2.2km s-min=2.0km az=192.0, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DEVC	Devers	0.08	93		Pg	12 38 34.0	0.0
DEVC					Sg	12 38 36.7	+0.4
EW2	E Wide Canyon	0.22	90		Pg	12 38 35.6	-0.2
EW2					Sg	12 38 39.1	-0.3
BBSC	Beaumont Base	0.26	266		Pg	12 38 36.3	-0.1
BBSC					Sb	12 38 40.9	-0.1
BLAC	Blackrock camp	0.27	61		Pn	12 38 40.6	+0.6
GVDA	Garner Valley	0.27	180		Pg	12 38 36.3	-0.5
GVDA					Sg	12 38 40.7	-0.1
POB	Polly Butte	0.33	219		Pg	12 38 37.3	-0.3
POB					Sg	12 38 42.6	+0.2
HMTC	Hemet	0.36	230		Sg	12 38 43.1	-0.2
PFO	Pinyon Flats O	0.37	151		Pg	12 38 38.1	-0.4
PFO				IAML		12 38 44.0	
	1µm,0.3s						
PFO				IAML		12 38 44.1	
	933nm,0.2s						
PFO	Pinyon Flats O	0.37	151		Sg	12 38 43.6	-0.1
CFT	Crafton Hills	0.38	285		Pg	12 38 38.2	-0.3
XPFO	Pinon Flat	0.38	151		Pg	12 38 38.0	-0.5
XPFO					Sg	12 38 43.4	-0.5
CRY	Cary Ranch	0.38	188		Sg	12 38 43.8	-0.1
PMD	Palm Desert	0.38	140		Sg	12 38 43.3	-0.6
SVD	Seven Oaks Dam	0.39	295		Sg	12 38 43.9	-0.3
SNDA	J Saunders Pla	0.39	172		Sg	12 38 44.2	-0.1
DGR	Domenigoni Val	0.40	224		Sg	12 38 44.2	-0.3
PEC	Perris	0.41	263		Sg	12 38 44.6	-0.1
GTM	Goat Mountain	0.44	37		Pg	12 38 38.8	-0.9
GTM					Sg	12 38 44.8	-1.0
BZNA	Buzz No.'s Pla	0.45	179		Sg	12 38 46.1	+0.2
FRD	Ford Ranch, An	0.45	172		Sg	12 38 45.8	-0.1
FRD	Ford Ranch, An	0.45	172		Sg	12 38 45.7	-0.2
CFSC	Central Fire S	0.53	288		Sb	12 38 48.7	-0.2
RSBC	Riverside Bore	0.54	274		Pg	12 38 41.0	-0.5
RSBC					Sg	12 38 48.1	-0.7
RSBC	Riverside Bore	0.54	274		Pg	12 38 40.8	-0.7
RSBC					Sg	12 38 48.0	-0.8
TPC	Twentynine Pal	0.55	72		Pg	12 38 40.8	-0.8
MURC	Murrieta	0.55	232		Pg	12 38 40.8	-0.9
MURC					Sg	12 38 48.8	-0.3
CLTC	Calectric	0.56	286		Sb	12 38 49.8	+0.3
RVR	Riverside	0.58	275		Sg	12 38 49.3	-0.8
PLM	Palomar	0.60	195		Sg	12 38 50.4	-0.4
CTCC	Cactus City	0.64	116		Pg	12 38 42.5	-0.7
CTCC					Sg	12 38 51.3	-0.4
FON	Fontana	0.65	284		Pg	12 38 42.9	-0.7
FON					Sg	12 38 51.6	-0.7
CSP	Cedar Springs	0.67	302		Sg	12 38 52.2	-0.7
ELS	Elsinore Mount	0.69	245	Pg	Pg	12 38 43.1	-1.1
ELS				IAML		12 38 52.7	
	comp=N,439nm,0.4s						
ELS				IAML		12 38 52.8	
	comp=E,340nm,0.3s						
ELS	Elsinore Mount	0.69	245		Sg	12 38 52.4	-1.0
BORC	Borrego Spring	0.70	162		Pb	12 38 43.8	-0.7
BORC					Sg	12 38 53.3	-0.5
CTW	Cottonwood Mou	0.72	111		Pb	12 38 43.9	-0.8
CTW					Sb	12 38 53.7	-0.5
MATG	Mataguay Scout	0.74	178		Pb	12 38 44.5	-0.6
MATG					Sb	12 38 54.3	-0.7
CRNC	Corona	0.74	265		Pb	12 38 44.2	-0.9
CRNC					Sb	12 38 53.8	-1.0
MLSC	Mira Loma	0.74	275		Pb	12 38 43.9	-1.2
MLSC					Sb	12 38 53.7	-1.2
VTV	Victorville	0.82	319		Sb	12 38 56.4	-1.0
SLH	Sleepy Hollow	0.82	155		Pb	12 38 46.1	-0.3
SLH					Sg	12 38 57.8	+0.2
CHNC	Chino	0.84	274		Pb	12 38 45.9	-0.8
HAY	Hayfield	0.86	105		Pb	12 38 46.6	-0.5
HAY					Sg	12 38 58.6	-0.1
JUEM	Julian Eagle M	0.86	176		Pb	12 38 46.4	-0.8
JUEM					Sb	12 38 57.7	-0.8
BFSC	Mount Baldy Ra	0.87	290		Sb	12 38 57.8	-1.0
SALN	Salton City	0.87	139		Pb	12 38 46.7	-0.6
ADO	Adelanto Recei	0.88	314		Sb	12 38 59.0	+0.1
GORC	Green Oak Ranc	0.91	211		Sb	12 38 58.5	-1.3
HEC	Hector,Ludlow	0.93	17		Pb	12 38 47.6	-0.8
PSRC	Puddingstone R	0.95	279		Pb	12 38 46.9	-1.8
PSRC					Sb	12 39 00.3	-0.8
DPP	Dos Picos Cty	0.96	193		Sb	12 39 00.3	-1.1
RRX	Edison Barstow	0.97	344		Pb	12 38 48.5	-0.5
RRX					Sb	12 39 01.9	+0.3
EML	El Monte Cty P	1.06	188		Pb	12 38 49.3	-1.2
EML					Sb	12 39 03.0	-1.0
MONP2	Monument Peak	1.07	169		Pb	12 38 49.9	-0.9
MONP2					Sb	12 39 03.9	-0.6
CPE	Camp Elliot	1.11	199		Sb	12 39 04.2	-1.2
CPE	Camp Elliot	1.11	199	IAML		12 39 05.1	
	comp=E,932nm,0.3s						
CPE				IAML		12 39 05.3	
	comp=N,737nm,0.2s						
JNH	Juniper Hills	1.18	296		Sb	12 39 07.2	-0.4
MWC	Mount Wilson	1.18	284		Sb	12 39 07.3	-0.5
CHFC	Chilao Flat St	1.19	290		Pn	12 38 51.6	-1.0
CHFC					Sb	12 39 06.9	-1.1
GMRC	Granite Mounta	1.19	45		Pn	12 38 51.1	-1.6
SBB	Saddle Back Bu	1.21	308		Pn	12 38 52.1	-0.8
SBB					Sb	12 39 07.9	-0.6
SDMC	San Diego Miss	1.22	199		Sb	12 39 07.8	-0.8
SDRC	San Diego Road	1.22	191		Pn	12 38 51.7	-1.2
BAR	Barrett	1.26	180		Pn	12 38 52.4	-1.1
BAR					Sb	12 39 09.0	-0.7
PASC	Pasadena Art C	1.27	281		Pn	12 38 52.9	-0.8
PASC				IAML		12 39 11.4	
	comp=E,218nm,0.3s						
PASC				IAML		12 39 11.7	
	comp=N,150nm,0.5s						
GSC	Goldstone, Bar	1.36	355		Pn	12 38 54.0	-0.9
GSC				IAML		12 39 17.8	
	comp=N,157nm,0.5s						
GSC				IAML		12 39 18.0	
	comp=E,241nm,0.6s						
YUH	Yuha Desert	1.43	154		Pn	12 38 54.2	-1.6
CBX	Cerro Bola	1.62	180		Pn	12 38 58.2	-0.3
CCAC	Calif City Air	1.64	318		Pn	12 38 58.3	-0.4
CCAC				IAML		12 39 21.8	
	comp=E,90nm,0.5s						
CCAC				IAML		12 39 22.1	
	comp=N,122nm,0.3s						
ESJX	Sierra Juarez	2.02	162		Pn	12 39 03.7	-0.4
ESJX				IAML		12 39 34.5	
	comp=N,74nm,0.3s						
ESJX				IAML		12 39 34.8	
	comp=E,116nm,0.2s						
QSM	Queen of Sheba	2.03	356		Pn	12 39 03.2	-0.8
QSM				IAML		12 39 36.3	
	comp=E,98nm,0.5s						
QSM				IAML		12 39 39.9	
	comp=N,100nm,0.4s						
GWY	Greenwater Val	2.24	0		Pn	12 39 06.3	-0.8
ISA	Isabella, Lake	2.27	320		Pn	12 39 06.7	-0.7
V12A	Nelson	2.33	40		Pn	12 39 07.5	-0.8
BCW	Bitter Crk WRg	2.47	295		Pn	12 39 10.7	+0.4
BCW				IAML		12 39 52.3	
	comp=E,68nm,0.7s						
BCW				IAML		12 39 53.3	
	comp=N,55nm,0.6s						
SHPR	Sheep Range	2.84	25	Pn	Pn	12 39 15.1	-0.3
TPNV	Topopah Spring	3.02	6		Pn	12 39 17.8	0.0
TPNV				IAML		12 40 07.2	
	comp=N,44nm,0.5s						
TPNV				IAML		12 40 10.2	
	comp=N,29nm,0.5s						
GMN	Gold Mountain	3.39	352		Pn	12 39 23.2	+0.3
DSP	Deep Springs	3.58	343		Pn	12 39 25.6	+0.3
PRN	Pahroc Range	3.70	20		Pn	12 39 27.7	+0.5
LCMT	Little Creek M	4.15	41		Pn	12 39 33.3	0.0
KNB	Kanab	4.39	45		Pn	12 39 36.9	+0.2

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*NOU **13** 12:42:12.8, 36°.17S×178°.15E, h330^{km}, MLv4.0/8, Off E. Coast of N. Island, N.Z.*

*WEL **13** 12:42:23.3±0.9, 37°S±6°×17°7E±°, h261^{km}±8^{km}, M2.9/17, ML3.3/6, MLv2.9/17, Error ellipse: s-maj=9.2km s-min=7.4km az=68.0, confirmed*

ISC 13 12:42:16.7±2.0**, 36°.43S**±0°.09×**177°.56E**±0°.10**, h306**^{km}±11^{km}**, n72,** σ**1^{s}94**/93**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	Te Kaha	1.34	172	P	Pn	12 43 00.8	+1.4
HAZ				S	S	12 43 29.8	-3.5
PKGZ	Pakihiroa	1.50	164	P	Pn	12 43 02.6	+2.2
PKGZ				S	S	12 43 34.4	-0.7
KUZ	Kuaotunu	1.52	257	P	Pn	12 43 01.6	+1.1
KUZ	Kuaotunu	1.52	257	P	Pn	12 43 01.7	+1.2
RUGZ	Raukumara Rang	1.54	177	P	Pn	12 43 01.8	+1.1
RUGZ				S	S	12 43 31.5	-4.4
WMGZ	Waiomatatini S	1.55	154	P	Pn	12 43 02.8	+2.2
WMGZ				S	S	12 43 35.0	-0.7
GRZ	Great Barrier	1.71	275	P	Pn	12 43 03.1	+1.3
PUZ	Puketiti	1.73	162	P	Pn	12 43 03.9	+1.9
PUZ				S	S	12 43 35.9	-2.2
TWGZ	Tauwhareparae	1.78	169	P	Pn	12 43 04.9	+2.5
TWGZ				S	S	12 43 38.4	-0.3
URZ	Urewera	1.86	191	P	Pn	12 43 04.4	+1.5
URZ	Urewera	1.86	191	P	Pn	12 43 04.4	+1.5
URZ				S	S	12 43 37.0	-2.6
MWZ	Matawai	1.90	181	P	Pn	12 43 05.2	+2.0
MWZ				S	S	12 43 39.1	-1.2
WIAZ	Waiheke Island	1.99	259	P	Pn	12 43 05.8	+2.0
TKGZ	Te Karaka	2.02	174	P	Pn	12 43 06.3	+2.2
TKGZ				S	S	12 43 41.6	-0.2
MKAZ	Moumakai	2.04	250	P	Pn	12 43 06.6	+2.3
HLRZ	Highlands Stat	2.06	208	P	Pn	12 43 04.0	-0.5
RAGZ	Rawiri	2.07	183	P	Pn	12 43 06.7	+2.1
RAGZ				S	S	12 43 40.7	-2.0
CNGZ	Carnagh Statio	2.12	166	P	Pn	12 43 07.6	+2.8
MUGZ	Murupara	2.14	197	P	Pn	12 43 06.8	+1.7
MUGZ				S	S	12 43 42.0	-1.6
MBAZ	Motutapu North	2.17	260	P	Pn	12 43 07.6	+2.3
ETAZ	East Tamaki Re	2.18	255	P	Pn	12 43 07.8	+2.4
PRRZ	Plateau Road	2.27	204	P	Pn	12 43 08.1	+2.0
RIGZ	Rimuhau	2.28	176	P	Pn	12 43 08.8	+2.6
RIGZ				S	S	12 43 46.6	+0.9
HBAZ	Herne Bay Bore	2.32	259	P	Pn	12 43 08.4	+1.9
SNGZ	Shannon Statio	2.36	184	P	Pn	12 43 09.2	+2.3
SNGZ				S	S	12 43 46.0	-0.9
AWAZ	Awhitu Peninsu	2.43	254	P	Pn	12 43 09.0	+1.5
MTHZ	Maungataniwha	2.49	193	P	Pn	12 43 10.2	+2.2
MTHZ				S	S	12 43 47.8	-1.2
TLZ	Tolley Road	2.49	220	P	Pn	12 43 11.6	+3.6
RAHZ	Arahi	2.51	188	P	Pn	12 43 10.6	+2.4
RAHZ				S	S	12 43 48.3	-1.1
WCZ	Waipu Caves	2.65	280	P	Pn	12 43 11.4	+1.9
NMHZ	Naumai	2.73	192	P	Pn	12 43 13.1	+2.8
NMHZ				S	S	12 43 53.4	+0.3
BKZ	Black Stump Fm	2.86	197	P	Pn	12 43 13.1	+1.6
BKZ	Black Stump Fm	2.86	197	P	Pn	12 43 13.1	+1.6
BKZ				S	S	12 43 53.2	-2.1
HIZ	Hauiti	3.00	225	P	Pn	12 43 16.9	+4.1
HIZ	Hauiti	3.00	225	P	Pn	12 43 16.8	+4.1
MCHZ	McNeill Hill	3.09	193	P	Pn	12 43 16.1	+2.5
MCHZ				S	S	12 43 59.3	+0.1
SNVZ	South Ngauruho	3.15	208	P	Pn	12 43 16.8	+2.4
TUVZ	Tukino	3.21	207	P	Pn	12 43 17.3	+2.3
TUVZ				S	S	12 44 02.2	+0.5
WNVZ	Wahianoa	3.29	208	P	Pn	12 43 17.9	+2.1
KRHZ	Kereru	3.35	196	P	Pn	12 43 18.2	+1.9
KRHZ				S	S	12 44 02.9	-1.1
PKVZ	Pokaka	3.35	211	P	Pn	12 43 18.6	+2.2
MTVZ	Mangateitei	3.38	209	P	Pn	12 43 17.5	+0.8
KAHZ	Kahuranaki	3.41	189	P	Pn	12 43 19.5	+2.7
OUZ	Omahuta	3.44	289	P	Pn	12 43 19.2	+1.9
VRZ	Vera Road	3.49	219	P	Pn	12 43 21.1	+3.4
PNHZ	Pukenui	3.64	197	P	Pn	12 43 20.9	+1.5
TSZ	Takapari Road	3.84	199	P	Pn	12 43 23.2	+1.8
TSZ				S	S	12 44 12.9	-0.4
MRZ	Mangatainoka R	4.50	200	P	Pn	12 43 30.0	+1.3
HOWZ	Holdsworth Sta	4.74	199	P	Pn	12 43 33.1	+1.7
OGWZ	Otaki Gorge	4.77	202	P	Pn	12 43 32.9	+1.2
KIW	Kapiti Island	4.89	204	P	Pn	12 43 34.3	+1.2
DUWZ	D'Urville Isla	5.22	212	P	Pn	12 43 37.5	+0.6
MSWZ	Moikau Station	5.30	199	P	Pn	12 43 38.6	+0.7
WEL	Wellington	5.32	203	P	Pn	12 43 39.2	+1.2
TCW	Tory Channel	5.42	207	P	Pn	12 43 40.8	+1.6
PLWZ	Palliser	5.44	199	P	Pn	12 43 41.1	+1.6
TUWZ	Tuamarina	5.74	208	P	Pn	12 43 44.3	+1.4
NNZ	Nelson	5.79	213	P	Pn	12 43 44.0	+0.5
TKNZ	Takaka Hill	5.84	217	P	Pn	12 43 44.9	+0.8
QRZ	Quartz Range	5.90	220	P	Pn	12 43 46.8	+1.9
QRZ	Quartz Range	5.90	220	P	Pn	12 43 45.2	+0.3
BSWZ	Blackbirch Sta	6.01	207	P	Pn	12 43 47.8	+1.7
MRNZ	Matariki Terra	6.22	216	P	Pn	12 43 49.2	+0.6
THZ	Tophouse	6.44	213	P	Pn	12 43 52.6	+1.2
KHZ	Kahutara	6.74	206	P	Pn	12 43 56.9	+2.0
KHZ	Kahutara	6.74	206	P	Pn	12 43 56.7	+1.8
DSZ	Denniston Nort	6.95	218	P	Pn	12 43 58.3	+0.9
GVZ	Greta Valley S	7.41	207	P	Pn	12 44 04.5	+1.6
LTZ	Lake Taylor	7.55	211	P	Pn	12 44 05.5	+0.8
INZ	Inchbonnie	7.86	215	P	Pn	12 44 09.6	+1.0
MQZ	McQueen's Vall	8.19	206	P	Pn	12 44 13.3	+0.9
JCZ	Jackson Bay	10.16	219	P	P	12 44 38.5	-1.4

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*IDC **13** 12:43:07.9±0.8, 7°.14S×103°.25E, h0^{km}, mb4.2/16, mbtmp4.2/17, ML4.7/2, MS3.6/5, Error ellipse: s-maj=26.6km s-min=12.9km az=55.0*

*DJA **13** 12:43:08.2±0.4, 7°S±4°×10°3E±°, h10^{km}, M5.3/31, mb5.0/31, mB5.9/6, MLv5.3/20, Mw(mB)5.5/6*

*NEIC **13** 12:43:14.3±1.3, 7°.05S±0°.07×103°.30E±0°.07, h36^{km}±9^{km}, mb4.7/25, Error ellipse: s-maj=11.5km s-min=8.4km az=220.0*

ISC 13 12:43:11.4±0.5**, 7°.14S**±0°.06×**103°.29E**±0°.06**, h20**^{km}**, n148,** σ**1^{s}27**/134**, mb4.5**/35**, MS3.9**/7**, 1C, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LWLI	Liwa	2.24	20	P	Pn	12 43 47.3	-0.2
CGJI	Cibinong	2.44	78	P	Pn	12 43 49.9	-0.2
BLSI	Bandar Lampung	2.62	48	P	Pn	12 43 53.2	+0.6
MDSI	Maura Dua	2.78	19	P	Pn	12 43 55.1	+0.3
MNAI	Manna	2.78	353		Pn	12 43 54.3	-0.5
MNAI	Manna	2.78	353	P	Pn	12 43 54.3	-0.5
MNAI	Manna	2.78	353	P	Pn	12 43 54.1	-0.7
SBJI	Serang	3.00	70	P	Pn	12 43 58.1	+0.3
SKJI	Sukabumi	3.24	88	P	Pn	12 44 01.5	+0.3
TNG	Tangerang	3.47	74	P	Pn	12 44 01.8	-2.5
KSI	Kapahiang	3.53	349	P	Pn	12 44 04.9	-0.4
CNJI	Cibinong	3.81	93	P	Pn	12 44 08.3	-0.7
LEM	Lembang	4.30	86	Pn	Pn	12 44 17.2	+1.2
	167nm,0.3s,baz=306,slow=12,SNR=46						
LEM				Sn	Sn	12 45 05.0	-0.7
	109nm,0.3s,baz=78,slow=21,SNR=8.0						
LEM	Lembang	4.30	86	P	Pn	12 44 18.2	+2.2
BBJI	Bungbulang	4.33	95	P	Pn	12 44 15.9	-0.4
PMBI	Palembang	4.44	19	P	Pn	12 44 18.2	+0.6
CMJI	Cimerak	5.15	97	P	Pn	12 44 27.0	-0.5
PPBI	Pangkal Pinang	5.70	30	P	Pn	12 44 36.2	+1.2
TPI	Tanjungpandan	6.15	45	P	Pn	12 44 42.1	+0.9
	50nm,0.6s						
YOGI	Yogyakarta	6.98	96	P	Pn	12 44 52.6	0.0
	1.2nm110nm,0.8s						
SMRI	Semarang	7.09	90		Pn	12 44 55.5	+1.3
SMRI	Semarang	7.09	90	P	Pn	12 44 56.6	+2.4
UGM	Wanagama	7.21	97		Pn	12 44 56.0	+0.2
UGM	Wanagama	7.21	97	P	Pn	12 44 55.9	+0.1
UGM	Wanagama	7.21	97	P	Pn	12 44 55.5	-0.3
	203nm,2.6s						
PPI	Padang Panjang	7.24	336	P	Pn	12 44 55.5	-0.6
	0.6nm2µm127nm,0.5s						
WOJI	Wonogiri, Jawa	7.60	96	P	Pn	12 45 01.3	+0.2
	102nm,0.9s						
BKNI	Bangkinang	7.75	343	Pn	Pn	12 45 02.4	-0.8
PCJI	Pacitan	7.88	98	P	Pn	12 45 05.2	+0.2
	171nm,1.1s						
COCO	West Island	8.11	231		Pn	12 45 09.1	+1.0
NGJI	Ngawi	8.11	92	P	Pn	12 45 11.6	+3.5
	89nm,1.0s						
MNSI	Mandailing Nat	8.71	335	P	Pn	12 45 14.3	-2.0
	71nm,0.7s						
GMJI	Gumukmas	10.12	97	P	Pn	12 45 35.4	-0.4
	61nm,0.8s						
GSI	Gunungsitoli	10.14	326		Pn	12 45 33.7	-2.3
GSI	Gunungsitoli	10.14	326	P	Pn	12 45 34.1	-1.9
GSI	Gunungsitoli	10.14	326	P	Pn	12 45 34.1	-1.9
	64nm,0.8s						
KMMI	Kalianget	10.59	90	P	Pn	12 45 41.1	-1.1
	72nm,1.7s						
RPSI	Rantau Prapat	10.70	336		Pn	12 45 40.5	-3.1
PSI	Prapat	10.79	336	Pn	Pn	12 45 40.5	-4.5
	1.2nm,0.3s,baz=141,slow=18,SNR=3.7						
	4.1nm,0.4s						
PSI	Prapat	10.79	336	P	Pn	12 45 42.1	-2.9
JAGI	Jajag, Banyuwa	10.84	98	Pn	Pn	12 45 46.9	+1.3
JAGI	Jajag, Banyuwa	10.84	98	P	Pn	12 45 47.3	+1.7
JAGI	Jajag, Banyuwa	10.84	98	P	Pn	12 45 45.2	-0.4
	60nm,0.6s						
STKI	Sintang	10.86	49	P	Pn	12 45 47.0	+1.2
	66nm,0.8s						
MLSI	Meulaboh, Aceh	13.25	329	P	Pn	12 46 16.1	-2.5
	152nm,1.1s						
TWSI	Taliwang, Sumb	13.55	98	P	Pn	12 46 22.3	-0.4
	37nm,0.6s						
PLAI	Plampang	14.44	98	P	Pn	12 46 36.2	+1.3
PLAI	Plampang	14.44	98	P	Pn	12 46 34.4	-0.5
	47nm,0.9s						
BSI	Banda Aceh	14.87	327	P	Pn	12 46 38.2	-2.5
	40nm,1.3s						
KAPI	Kappang	16.50	84	LR	LR	12 54 21.3	
	comp=Z,191nm,20.9s,baz=262,slow=41						
WSI	Waingapu	17.01	100	P	Pn	12 47 09.4	+1.1
	5µm92nm,0.6s						
BSSI	Bau Bau, Buton	17.11	88	P	P	12 47 11.3	+0.1
	47nm,1.6s						
PCI	Palu	17.62	70	P	P	12 47 17.0	+0.2
	95nm,0.9s						
MPSI	Mapaga	18.15	67	P	P	12 47 23.4	+0.7
	66nm,1.0s						
EDFI	Ende, Flores	18.29	96	P	P	12 47 22.3	-2.1
	24nm,0.7s						
KKM	Kota Kinabalu	18.38	45	P	P	12 47 25.0	-0.3
KKM				IAmb	IAmb	12 47 25.5	
	comp=Z,91nm,1.3s						
KKM	Kota Kinabalu	18.38	45	P	P	12 47 24.7	-0.6
GIRL	Giralia	18.67	147	P	P	12 47 28.5	+0.1
MMRI	Maumere	18.82	96	P	P	12 47 30.6	+0.5
TOLI2	Tolitoli	19.28	66	P	P	12 47 35.6	+0.5
TOLI2	Tolitoli	19.28	66	P	Pn	12 47 36.3	+0.1
APSI	Ampana	19.32	72	P	Pn	12 47 38.7	+2.0
MYLDM	Lahad Datu	19.50	52		P	12 47 38.4	+1.0
MYLDM				IAmb	IAmb	12 47 42.6	
	comp=Z,52nm,0.9s						
MYLDM	Lahad Datu	19.50	52	P	Pn	12 47 39.5	+0.7
MRSI	Marisa	20.08	69	P	P	12 47 42.3	-1.6
	comp=Z,18nm,0.7s						
BATI	Baumata	20.37	100	P	P	12 47 46.8	-0.2
	comp=Z,99nm,0.5s,baz=36,slow=1.9,SNR=14						
BATI				S	S	12 51 33.3	-1.3
	comp=Z,27nm,0.4s,baz=270,slow=22,SNR=5.6						
BATI	Baumata	20.37	100	P	Pn	12 47 48.9	-0.2
SOEI	Soe	20.91	99		P	12 47 53.0	0.0
SOEI	Soe	20.91	99	P	P	12 47 53.0	0.0
SOEI	Soe	20.91	99	P	P	12 47 53.4	+0.4
MBWA	Marble Bar	21.14	133	P	P	12 47 55.7	+0.4
MBWA	Marble Bar	21.14	133	P	P	12 47 55.1	-0.2
PSA00	Pilbara Seismi	21.48	134	P	P	12 47 59.9	+0.9
PSA00				IAmb	IAmb	12 48 03.4	
	comp=Z,40nm,1.3s						
PSA00	Pilbara Seismi	21.48	134	P	P	12 47 59.4	+0.4
	comp=Z,25nm,0.8s						
PSA00	Pilbara Seismi	21.48	134	P	P	12 47 58.7	-0.3
FITZ	Fitzroy Crossi	24.34	119	P	P	12 48 28.4	+0.2
CM31	Chiang Mai Arr	25.79	350	P	P	12 48 41.2	-0.1
CMAR	Chiang Mai Arr	25.79	350	P	P	12 48 41.2	0.0
CMAR	Chiang Mai Arr	25.79	350	P	P	12 48 42.0	+0.7
	comp=Z,18nm,0.9s,baz=184,slow=8.8,SNR=76						
CMAR				LR	LR	12 58 28.0	
	comp=Z,75nm,18.4s,baz=170,slow=36						
	comp=Z,18nm,0.9s						
CHTO	Chiang Mai	26.14	351		P	12 48 44.6	+0.2
CHTO				IAmb	IAmb	12 48 47.2	
	comp=Z,19nm,1.1s						
KNRA	Kununurra	26.34	111		P	12 48 48.5	+2.1
KNRA				IAmb	IAmb	12 48 59.3	
	comp=Z,19nm,0.8s						
QIZ	Qiongzhong	26.79	14	P	P	12 48 50.8	+0.5
QIZ				S	S	12 53 24.3	-1.3
QIZ				LR	LR		
	comp=E,260nm,21.2s						
DRS	Darwin Rock St	27.70	103	P	P	12 48 58.6	0.0
MTN	Manton Dam	27.98	104	P	P	12 49 03.2	+2.0
MTN	Manton Dam	27.98	104	P	P	12 49 01.3	+0.2
NWAO	Narrogin (SRO)	28.74	155	LR	LR	12 58 36.8	
	comp=E,75nm,21.4s,baz=106,slow=32						
FAKI	Fak Fak	29.14	83	P	P	12 49 10.6	-0.9
FAKI				IAmb	IAmb	12 49 35.3	
	comp=Z,25nm,1.3s						
H01W3	Cape Leeuwin H	29.36	162	T	T	13 20 13.9	
	baz=340,slow=74						
H01W2	Cape Leeuwin H	29.38	162	T	T	13 20 12.9	
	baz=340						
H01W1	Cape Leeuwin H	29.38	162	T	T	13 20 14.7	
	baz=340,slow=74						
H08S2	Diego Garcia H	30.54	267	T	T	13 21 23.8	
	baz=90						
H08S3	Diego Garcia H	30.55	267	T	T	13 21 26.5	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=90,slow=74						
H08S1	Diego Carcia H	30.56	267	T	T	13 21 39.7	
	baz=90,slow=74						
WB0	Warramunga Arr	32.67	116	P	P	12 49 43.1	+0.5
WB0				IAmb	IAmb	12 49 52.8	
	comp=Z,8.5nm,1.0s						
WRA	Warramunga Arr	32.68	116		P	12 49 42.6	-0.1
WRA	Warramunga Arr	32.68	116	P	P	12 49 42.5	-0.2
	comp=Z,1.4nm,0.6s,baz=287,slow=10,SNR=20						
	comp=Z,1.4nm,0.6s						
WR8	Warramunga Arr	32.83	116	P	P	12 49 44.0	+0.1
WR8				IAmb	IAmb	12 49 54.4	
	comp=Z,8.5nm,1.0s						
FORT	Forrest	33.03	139	P	P	12 49 46.2	+0.6
FORT	Forrest	33.03	139	P	P	12 49 45.3	-0.3
PZH	PanZhiHua	33.48	357	P	P	12 49 53.3	+3.7
AS31	Alice Springs	33.66	123	P	P	12 49 50.2	-1.0
ASAR	Alice Springs	33.66	123	P	P	12 49 50.1	-1.2
ASAR	Alice Springs	33.66	123	P	P	12 49 50.6	-0.6
	comp=Z,2.3nm,0.7s,baz=297,slow=7.9,SNR=29						
	comp=Z,2.3nm,0.7s						
QIS	Mount Isa	37.59	115	P	P	12 50 25.6	+0.6
EVN	Everest	38.35	336		P	12 50 32.3	+0.3
EVN				IAmb	IAmb	12 50 34.0	
	comp=Z,9.2nm,0.8s						
COEN	Coen	39.75	103	P	P	12 50 42.7	-0.4
COEN				IAmb	IAmb	12 51 05.7	
	comp=Z,12nm,1.1s						
COEN	Coen	39.75	103	P	P	12 50 44.1	+0.9
XAN	Xi'an	41.30	7	P	P	12 50 54.0	-1.7
XAN				pmax	pmax		
	comp=Z,12nm,1.0s						
NJ2	Nanjing	41.70	20	*e*P	P	12 51 00.3	+1.3
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HTT	Hallett	42.08	133	P	P	12 51 02.0	-0.2
STKA	Stephens Creek	43.33	130	P	P	12 51 12.5	+0.1
STKA	Stephens Creek	43.33	130	P	P	12 51 12.2	-0.2
	comp=Z,8.9nm,0.6s,baz=305,slow=7.7,SNR=21						
	comp=Z,8.9nm,0.6s						
STKA	Stephens Creek	43.33	130	P	P	12 51 12.2	-0.2
CMSA	Cobar Meteorol	46.37	127	P	P	12 51 37.1	+0.5
GTA	Gaotai	46.42	356	*e*P	P	12 51 46.1	+9.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				LR	LR		
	comp=N,170nm,16.0s						
GTA				LR	LR		
	comp=E,160nm,16.0s						
GTA				LR	LR		
	comp=Z,120nm,12.7s						
JNU	Nakatsue	47.86	32	P	P	12 51 46.5	-1.7
	comp=Z,5.7nm,0.9s,baz=0.5,slow=7.7,SNR=2.7						
	comp=Z,5.7nm,0.9s						
HHC	Hu-ho-hao-te	48.35	8	*e*P	P	12 51 53.5	+1.6
HHC				pmax	pmax		
	comp=Z,17nm,0.6s						
HHC				pmax	pmax		
	comp=Z,63nm,4.3s						
HHC				LR	LR		
	comp=N,140nm,12.7s						
HHC				LR	LR		
	comp=E,94nm,14.5s						
HHC				LR	LR		
	comp=Z,170nm,13.8s						
KSRS	Korea Array	49.98	26	P	P	12 52 03.2	-1.1
	comp=Z,1.6nm,0.6s,baz=220,slow=7.7,SNR=7.3						
	comp=Z,1.6nm,0.6s						
CAN	Canberra	50.38	131	P	P	12 52 08.4	+0.9
KSH	Kashi	52.86	334	P	P	12 52 27.8	+1.8
KSH				PcP	pwP	12 52 38.9	+3.4
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CN2	Changchun	54.53	20	P	P	12 52 34.9	-3.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SONM	Songino Array	54.80	3	P	P	12 52 40.5	+0.5
	comp=Z,2.5nm,0.6s,baz=182,slow=8.5,SNR=14						
	comp=Z,2.5nm,0.6s						
MKAR	Makanchi Array	56.85	343		P	12 52 54.1	-0.5
MKAR	Makanchi Array	56.85	343	P	P	12 52 54.6	0.0
	comp=Z,2.0nm,0.6s,baz=142,slow=7.9,SNR=21						
	comp=Z,2.0nm,0.6s						
BNX	BinXian	56.89	20	⇑P	P	12 52 54.8	-0.1
BNX				sP	pwP	12 53 04.0	-0.4
BNX				pmax	pmax		
	comp=Z,3.0nm,0.9s						
USRK	Ussuriysk Ar.	57.30	24	P	P	12 52 56.1	-1.6
	comp=Z,3.3nm,0.7s,baz=229,slow=5.6,SNR=4.8						
	comp=Z,3.3nm,0.7s						
H04N2	CROZET ISLANDS	58.79	219	T	T	13 57 14.5	
	baz=64,slow=75,SNR=103						
H04N1	CROZET ISLANDS	58.80	219	T	T	13 57 14.5	
	baz=64,slow=75,SNR=90						
H04N3	CROZET ISLANDS	58.81	219	T	T	13 57 22.6	
	baz=64,slow=75,SNR=99						
H04S1	CROZET ISLANDS	59.01	219	T	T	13 57 34.5	
	baz=64,slow=75,SNR=51						
H04S3	CROZET ISLANDS	59.02	219	T	T	13 57 41.4	
	baz=64,slow=75,SNR=59						
H04S2	CROZET ISLANDS	59.02	219	T	T	13 57 36.8	
	baz=64,slow=75,SNR=41						
HEH	HeiHe	60.87	17	*e*P	P	12 53 21.5	-1.0
HEH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KURBB	Kurchatov Arra	61.39	342	P	P	12 53 25.7	-0.3
	comp=Z,1.6nm,0.7s,baz=161,slow=6.3,SNR=9.3						
	comp=Z,1.6nm,0.7s						
KURK	Kurchatov	61.45	342		P	12 53 26.4	+0.1
ZAA0	Zalesovo Array	62.82	348	IAmb	IAmb	12 53 57.1	
	comp=Z,4.0nm,0.7s						
ZALV	Zalesovo Beam	62.82	348	P	P	12 53 35.2	-0.3
ZALV	Zalesovo Beam	62.82	348	P	P	12 53 34.8	-0.7
	comp=Z,1.0nm,0.4s,baz=149,slow=3.1,SNR=8.1						
ZALV				LR	LR	13 23 57.8	
	comp=Z,60nm,20.9s,baz=112,slow=39						
	comp=Z,1.0nm,0.4s						
BVAR	Borovoye Array	66.12	339	P	P	12 53 56.6	-0.5
	comp=Z,1.4nm,0.6s,baz=133,slow=8.3,SNR=7.0						
	comp=Z,1.4nm,0.6s						
AB31	Akbulak array	67.69	331		P	12 54 07.1	-0.1
AB31				IAmb	IAmb	12 54 28.4	
	comp=Z,4.8nm,0.9s						
ABKAR	Akbulak array	67.69	331		P	12 54 07.0	-0.2
ABKAR	Akbulak array	67.69	331	IAmb	IAmb	12 54 28.4	
	comp=Z,4.8nm,0.9s						
KBZ	Khabaz	74.31	319	P	P	12 54 47.2	-0.3
	comp=Z,1.1nm,0.7s,baz=222,slow=14,SNR=2.1						
	comp=Z,1.1nm,0.7s						
VNDA	Vanda	76.52	169	P	P	12 54 59.5	-0.2
	comp=Z,1.0nm,0.9s,baz=296,slow=8.1,SNR=4.4						
	comp=Z,1.0nm,0.9s						
BRTR	Keskin Array B	79.19	313	P	P	12 55 14.4	-1.0
	comp=Z,0.9nm,0.9s,baz=133,slow=6.1,SNR=2.5						
	comp=Z,0.9nm,0.9s						
QSPA	South Pole Qui	82.86	180	P	P	12 55 34.3	-0.1
	comp=Z,1.9nm,1.1s,baz=202,slow=7.4,SNR=2.7						
	comp=Z,1.9nm,1.1s						
ARCES	ARCESS Array B	92.39	340	LR	LR	13 43 43.3	
	comp=Z,55nm,19.5s,baz=64,slow=39						
TXAR	Lajitas Array	146.36	46	PKPbc	PKPbc	13 02 51.8	+0.1
	comp=Z,0.7nm,0.7s,baz=250,slow=1.6,SNR=7.8						

ISN ***13*** *13:00:57.5±0.6, 33°.97N×45°.76E, h14^{km}±10^{km}, ML2.7*
TEH ***13*** *13:01:04.2, 33°.91N×45°.73E, h10^{km}±126^{km}*
ISC 13 13:01:02.1±1.2**, 33°.87N**±0°.06×**45°.58E**±0°.07**, h10**^{km}**, n11,**
σ**0^{s}.57**/11**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLG1	Gilan-e-Gharb	0.37	48	Pg	Pg	13 01 09.6	+0.1
IGHG	Ghaleghazi	0.94	60	Pg	Pb	13 01 20.6	0.0
IDHR	Dehrash	1.07	39	Pg	Pb	13 01 23.4	+0.7
BHD	Baghdad	1.17	240	*e*Pg	Pn	13 01 22.0	-2.4
BHD				*e*Sg	Sb	13 01 40.0	+0.5
ILIN	Lien	1.55	47	Pg	Pg	13 01 32.0	+0.1
IKRK	Kirkuk	1.84	327	*e*Pg	Pn	13 01 31.0	-2.8
IKRK				*e*Sg	Sn	13 01 56.0	-1.1
IKRK				AML	AML	13 02 12.2	
	comp=N,60nm,0.2s						
IKRK				AML	AML	13 02 26.8	
	comp=E,129nm,0.6s						
IKFM	Kafar-mosalman	1.92	100	Pg	Pg	13 01 39.1	+0.2
SNQR	Sonqor, Kerman	1.96	59	Pn	Pb	13 01 38.2	+0.1
IBZA	Bozab	1.98	72	Pn	Pb	13 01 38.8	+0.3
IDOB	Doab	2.16	91	Pn	Pg	13 01 43.2	-0.4
RAFI	Al-Rafai	2.18	168	*e*Pn	Pn	13 01 36.0	-2.4
RAFI				*e*Sn	Sn	13 02 05.0	-0.5

JMA ***13*** *13:40:24.1±0.0, 23°.7N±0°.2×121°.5E±0°.7, h10^{km}±1^{km}, MV3.2/14, TAIWAN REGION*
TAP ***13*** *13:40:24.3, 23°.72N×121°.41E, h16^{km}, ML3.6, B*
ASIES ***13*** *13:40:24.3, 23°.72N×121°.41E, h16^{km}, ML3.6, Mw3.2, Moment Tensor Solution. Moment tensor: Scale 10^{20}Nm; M$_{rr}$6.26; M$_{\theta\theta}$-2.79; M$_{\phi\phi}$-3.47; M$_{r\theta}$2.15; M$_{\theta\phi}$-3.79; M$_{\phi r}$-3.19; Fault plane solution: M$_{0}$7.65990×10^{20} NP1:φ$_{s}$65.84000°, δ46.58000°, λ127.46000°. NP2:φ$_{s}$197.73000°, δ54.79000°, λ57.27000°. Principal axes: T Plg63.3430°, Azm49.2900°; N Plg26.2160°, Azm218.0660°; P Plg4.4930°, Azm310.2840°;*
ISC 13 13:40:24.3±0.8**, 23°.72N**±0°.01×**121°.42E**±0°.01**, h14**^{km}±4^{km}**,**
n152, σ**0^{s}.66**/260**, 15C-19D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WARBT	Fenglin Townsh	0.03	270	⇑*i*P	Pg	13 40 27.1	+0.1
WARBT				*i* S	Sg	13 40 28.7	0.0
EGFH	Guangfu	0.05	176	*e*P	Pg	13 40 27.2	+0.2
EGFH				S	Sg	13 40 29.1	+0.3
ESL	Shilin	0.10	5	⇑*i*P	Pg	13 40 27.8	+0.3
ESL				*i* S	Sg	13 40 30.1	+0.5
TEGC	Jichi Village	0.11	95	⇓*i*P	Pb	13 40 28.7	+0.6
TEGC				S	Sb	13 40 32.4	+1.7
SHUL	Shoufeng	0.14	61	⇓P	Pb	13 40 29.1	+0.3
SHUL				S	Sb	13 40 32.5	+0.7
TEYL	Yanliau Villag	0.22	47	*e*P	Pb	13 40 30.6	+0.6
TEYL				S	Sb	13 40 34.7	+0.8
HGSD	Ruisui	0.23	180	⇑*i*P	Pb	13 40 29.8	-0.4
HGSD				*e*S	Sb	13 40 34.3	+0.3
EHY	Hungye	0.23	204	⇑*i*P	Pg	13 40 29.2	-0.2
EHY				*e*S	Sg	13 40 33.2	+0.4
EHYH	Wanrong	0.23	198	⇑*i*P	Pg	13 40 29.3	-0.2
EHYH				S	Sg	13 40 33.3	+0.4
ETM	Tongmen	0.26	14	⇓P	Pg	13 40 30.3	+0.5
ETM				*e*S	Sg	13 40 33.8	+0.3
VWDT	VWDT	0.26	278	⇑*i*P	Pb	13 40 30.4	-0.3
VWDT				S	Sb	13 40 34.1	-1.0
LXIB	Xiulin Townshi	0.30	358	⇓*i*P	Pg	13 40 30.9	+0.2
LXIB				*e*S	Sg	13 40 35.3	+0.2
HWA	Hwalien	0.31	33	*e*P	Pb	13 40 31.7	+0.1
HWA				*e*S	Sb	13 40 36.7	+0.3
OWD	Renai	0.33	316	⇓*i*P	Pg	13 40 31.4	+0.3
OWD				S	Sg	13 40 35.8	+0.1
YULB	Yu-li	0.34	200	P	Pg	13 40 31.3	0.0
YULB	Yu-li	0.34	200	P	Pn	13 40 35.9	+1.1
YULB	Yu-li	0.34	200	⇓*i*P	Pg	13 40 30.9	-0.4
YULB				S	Sg	13 40 35.7	-0.5
EYUL	Yuli	0.38	195	P	Pg	13 40 32.1	+0.1
EYUL				*e*S	Sg	13 40 37.5	+0.2
TWF1	Yuli	0.38	198	⇓*i*P	Pg	13 40 31.5	-0.5
TWF1				S	Sg	13 40 36.9	-0.4
WUSB	Renai	0.39	314	⇓*i*P	Pb	13 40 32.7	-0.4
WUSB				S	Sg	13 40 37.3	-0.3
TWD	Chiawan	0.39	24	⇓*i*P	Pg	13 40 32.5	+0.3
TWD				S	Sg	13 40 38.4	+0.7
ECBN	Changbin	0.40	176	⇑P	Pb	13 40 33.5	+0.4
ECBN				*e*S	Sb	13 40 40.7	+1.6
SSLB	Suanglung	0.44	279	P	Pg	13 40 33.0	0.0
SSLB	Suanglung	0.44	279	⇓*i*P	Pg	13 40 32.9	0.0
SSLB				S	Sg	13 40 38.4	-0.6
WHF	Hehuan Shan	0.45	341	⇓*i*P	Pg	13 40 33.5	+0.1
WHF				*e*S	Sg	13 40 39.5	-0.1
ETL	Fush Village	0.48	23	*e*P	Pg	13 40 33.7	0.0
ETL				S	Sg	13 40 40.5	+0.3
NACB	Ninganchiao	0.48	19	P	Pg	13 40 33.7	-0.1
NACB	Ninganchiao	0.48	19	⇑*i*P	Pg	13 40 33.6	-0.3
NACB				S	Sg	13 40 40.2	-0.1
ETLH	Xiulin Townshi	0.49	6	⇑P	Pg	13 40 34.1	+0.1
ETLH				*i* S	Sg	13 40 40.9	+0.3
SMLT	Sun Moon Lake	0.51	289	⇓P	Pg	13 40 34.5	+0.1
SMLT				S	Sg	13 40 41.3	+0.1
WHYT	Xinyi Township	0.52	268	*i* P	Pb	13 40 35.0	-0.3
WHYT				*i* S	Sb	13 40 41.8	-0.9
CHKH	Chenggong	0.52	183	*e*P	Pg	13 40 34.7	+0.1
CHKH				*e*S	Sb	13 40 43.1	+0.4
FULB	Fuli	0.53	193	*e*P	Pb	13 40 35.6	+0.3
FULB				*e*S	Sb	13 40 44.1	+1.2
TYC	Yuchr	0.55	290	⇓*i*P	Pg	13 40 35.1	-0.1
TYC				S	Sg	13 40 42.3	-0.2
FUSS	Fushou	0.55	343	⇓P	Pg	13 40 35.5	+0.3
FUSS				*e*S	Sg	13 40 42.9	+0.2
WCS	Beigang Elemen	0.58	306	⇓P	Pb	13 40 36.0	-0.2
WCS				*i* S	Sb	13 40 43.5	-0.7
TWT	Tachien	0.58	337	⇓P	Pb	13 40 36.3	0.0
TWT				*i* S	Sg	13 40 43.6	+0.1
TDCB	Techi	0.58	336	⇓*i*P	Pb	13 40 36.2	-0.2
TDCB				S	Sg	13 40 43.4	-0.3
EHD	Haiduan	0.60	199	⇑P	Pg	13 40 35.6	-0.5
EHD				S	Sg	13 40 43.8	-0.3
ALS	Alishan	0.60	250	⇑*i*P	Pb	13 40 36.6	-0.2
ALS				S	Sb	13 40 44.5	-0.7
CHKT	Chengkung	0.62	185	*e*P	Pg	13 40 36.1	-0.3
CHKT				*e*S	Sb	13 40 45.4	0.0
ELDTW	Lidau	0.65	215	⇑P	Pg	13 40 36.0	-0.9
ELDTW				*e*S	Sg	13 40 45.2	-0.4
WJS	Zhushan	0.65	279	*e*P	Pn	13 40 38.2	-0.8
WJS				*e*S	Sn	13 40 47.5	-1.5
ECS	Chishang	0.65	197	*e*P	Pg	13 40 36.9	-0.1
ECS				*e*S	Sb	13 40 46.3	+0.1
EAHA	Aohua	0.67	25	*e*P	Pg	13 40 37.0	-0.5
EAHA				*e*S	Sg	13 40 46.8	+0.4
CHN5	Tsauling	0.69	260	⇑*e*P	Pb	13 40 38.6	+0.4
CHN5				S	Sb	13 40 47.9	+0.3
WNT	Mingjian	0.70	283	⇓*i*P	Pn	13 40 39.2	-0.5
WNT				*e*S	Sn	13 40 49.8	-0.4
NNSB	Datong	0.71	357	⇑*i*P	Pg	13 40 38.2	0.0
NNSB				*i* S	Sg	13 40 47.2	-0.4
WHP	Taichung City	0.71	322	*e*P	Pb	13 40 38.4	0.0
WHP				*e*S	Sb	13 40 47.9	-0.2
NNS	Nan Shan	0.72	356	⇑P	Pg	13 40 38.5	+0.1
NNS				S	Sg	13 40 48.0	+0.1
EDH	Donghe	0.75	188	*i* P	Pg	13 40 38.2	-0.7
EDH				*e*S	Sb	13 40 49.2	0.0
ENA	Nanau	0.76	22	⇓*i*P	Pg	13 40 38.2	-0.9
ENA				*e*S	Sb	13 40 49.8	+0.2
WGK	Gukeng	0.79	268	*i* P	Pn	13 40 40.8	-0.1
WGK				S	Sn	13 40 52.3	-0.2
EWUT	Wuta	0.79	24	*e*P	Pb	13 40 38.8	-1.1
EWUT				*e*S	Sg	13 40 50.4	+0.2
WCKO	Fanlu	0.80	250	*e*P	Pn	13 40 40.8	-0.3
WCKO				*i* S	Sn	13 40 51.6	-1.2
STYH	Taoyuan	0.81	228	*e*P	Pg	13 40 39.9	0.0
STYH				*e*S	Sn	13 40 51.4	-1.5
TCU	Taichung	0.81	302	*e*P	Pn	13 40 41.3	+0.1
TCU				*e*S	Sn	13 40 52.7	-0.3
WDL	Douliou City	0.81	270	*e*P	Pn	13 40 40.7	-0.6
WDL				*e*S	Sn	13 40 53.5	+0.5
WDLH	Douliu	0.81	268	*i* P	Pn	13 40 41.1	-0.2
WDLH				*i* S	Sn	13 40 52.7	-0.4
LATG	Datong	0.82	7	*e*P	Pb	13 40 39.6	-0.7
LATG				*e*S	Sg	13 40 51.2	+0.2
TPUB	Ta-pu	0.84	240	P	Pn	13 40 41.3	-0.4
TPUB	Ta-pu	0.84	240	*e*P	Pn	13 40 41.0	-0.6
TPUB				*e*S	Sg	13 40 52.0	+0.4
LONT	Longtian	0.85	199	*e*P	Pb	13 40 39.9	-1.0
LONT				*e*S	Sb	13 40 51.2	-0.9
TWQ1	Liyutan	0.86	317	*e*P	Pn	13 40 42.0	0.0
TWQ1				*e*S	Sn	13 40 54.3	-0.2
WCHH	Zhanghua	0.87	295	*e*P	Pn	13 40 42.2	+0.1
WCHH				*e*S	Sn	13 40 54.5	0.0
WCH1	Changhua City	0.88	294	*e*P	Pn	13 40 42.7	+0.6
WCH1				*e*S	Sn	13 40 55.6	+1.0
WTP	Ta-pu	0.88	238	*e*P	Pn	13 40 41.8	-0.5
WTP				S	Sn	13 40 53.5	-1.3
CHN2	Minshiung	0.89	258	*e*P	Pn	13 40 43.0	+0.6
CHN2				*e*S	Sn	13 40 55.4	+0.4
EOS4	EOS4	0.91	64	*i* P	Pb	13 40 41.4	-0.3
EOS4				S	Sg	13 40 54.4	+0.6
ENTT	Nioudou	0.93	8	P	Pb	13 40 41.5	-0.6
ENTT				S	Sb	13 40 54.4	0.0
ESAO	Su ao	0.94	24	*e*P	Pb	13 40 41.9	-0.4
ESAO				*e*S	Sb	13 40 54.3	-0.2
CHY	Chiayi	0.94	257	*e*P	Pn	13 40 43.2	+0.2
CHY				*e*S	Sn	13 40 56.3	0.0
WTK	Tuku	0.95	268	*i* P	Pn	13 40 43.3	+0.1
WTK				S	Sn	13 40 56.4	-0.1
YHNB	Yeheng	0.95	357	P	Pg	13 40 42.7	0.0
YHNB	Yeheng	0.95	357	S	Sg	13 40 55.7	+0.6
YHNB	Yeheng	0.95	357	P	Pb	13 40 42.3	-0.3
YHNB				*e*S	Sb	13 40 54.7	-0.3
NDS	Dongshan	0.95	16	*e*P	Pb	13 40 40.9	-1.7
NDS				*e*S	Sb	13 40 54.2	-0.7
TWG	Pinlang	0.95	200	*e*P	Pb	13 40 42.1	-0.4
TWG				*e*S	Sb	13 40 54.1	-0.8
TWGBT	Beinan	0.95	199	P	Pb	13 40 42.2	-0.4
TWGBT	Beinan	0.95	199	S	Sg	13 40 55.4	+0.3
TWGBT	Beinan	0.95	199	P	Pb	13 40 42.1	-0.4
TWGBT				*e*S	Sb	13 40 54.5	-0.4
NFF	Wufeng Townshi	0.95	343	P	Pn	13 40 43.0	-0.2
NFF				*i* S	Sg	13 40 55.7	+0.4
WDJ	Dajia District	0.95	311	*e*P	Pn	13 40 44.2	+1.0
WDJ				*e*S	Sn	13 40 57.3	+0.8
NSK	Sanguang	0.96	356	*e*P	Pg	13 40 43.0	+0.2
NSK				S	Sb	13 40 55.1	-0.1
TWC	Suao	0.97	24	*e*P	Pb	13 40 41.8	-1.0
TWC				*e*S	Sg	13 40 56.0	+0.2
TWK	Hsinying	0.97	243	*i* P	Pn	13 40 43.6	+0.1
TWK				S	Sn	13 40 57.0	-0.1
CHN1	Nanshi	0.98	237	*e*P	Pn	13 40 43.8	+0.2
CHN1				S	Sn	13 40 57.7	+0.5
SNST	Tainan City	0.98	240	*e*P	Pn	13 40 43.7	+0.1
SNST				S	Sn	13 40 57.0	-0.4
NSTT	Nanjuang	0.99	337	P	Pn	13 40 43.9	+0.1
NSTT				*i* S	Sn	13 40 57.1	-0.3
EOS3	EOS3	0.99	55	*e*P	Pb	13 40 43.0	-0.1
LIOB	Emei	1.00	338	*e*P	Pn	13 40 44.2	+0.3
LIOB				*e*S	Sg	13 40 56.6	0.0
NMLH	Miaoli	1.00	325	*e*P	Pn	13 40 45.0	+1.1
NMLH				*e*S	Sn	13 40 58.6	+0.8
EOS2	EOS2	1.02	46	*e*P	Pg	13 40 44.5	+0.5
TWE	Neicheng	1.02	13	*e*P	Pg	13 40 44.4	+0.3
LDUT	Ludao	1.04	178	*e*P	Pg	13 40 44.5	+0.1
LDUT				*e*S	Sb	13 40 55.2	-2.3
FUSB	Fushanzhiwuyua	1.05	8	*e*P	Pb	13 40 43.8	-0.4
FUSB				*e*S	Sb	13 40 58.0	+0.2
NWLT	Wulai	1.06	4	*e*P	Pn	13 40 44.6	-0.1
NWLT				*e*S	Sb	13 40 58.2	+0.1
KSHI	Guanxi Townshi	1.08	348	*e*P	Pg	13 40 46.1	+0.9
KSHI				*e*S	Sn	13 41 00.5	+0.8
WSF	Szhu	1.10	266	*e*P	Pg	13 40 45.9	+0.3
WSF				*e*S	Sn	13 41 00.6	+0.3
ICHU	Yijhu	1.11	252	*e*P	Pg	13 40 46.1	+0.4
ICHU				S	Sn	13 41 01.8	+1.4
WSL	Shuilin Townsh	1.11	260	P	Pg	13 40 46.2	+0.5
WSL				*e*S	Sn	13 41 01.9	+1.3
SBCB	Hsinchu	1.14	340	*e*P	Pg	13 40 47.4	+1.1
HSN	Hsinchu	1.16	339	*e*P	Pg	13 40 47.4	+0.8
HSN				*e*S	Sg	13 41 03.1	+1.4
CHN3	Shinhua	1.16	237	*e*P	Pg	13 40 48.6	+1.8
CHN3				*e*S	Sg	13 41 04.4	+2.5
CHN8	Yiju	1.17	252	*e*P	Pg	13 40 46.8	-0.1
CHN8				*i* S	Sg	13 41 03.7	+1.5
SCST	Cishan	1.19	226	*e*P	Pg	13 40 48.0	+0.7
SCST				*e*S	Sg	13 41 05.4	+2.7
ECL	Taimali	1.20	201	*e*P	Pn	13 40 46.2	-0.4
SSD	Sandimen	1.21	217	*e*P	Pb	13 40 46.7	-0.3
SSD				*e*S	Sg	13 41 04.4	+1.0
EGS		1.21	22	*e*P	Pn	13 40 46.1	-0.7
TSMG	Majia	1.24	216	*e*P	Pg	13 40 48.9	+0.8
NHDH	Xindian Distri	1.24	4	*e*P	Pg	13 40 48.1	-0.2
TATO	Taipei	1.25	3	P	Pb	13 40 47.7	0.0
TATO	Taipei	1.25	3	S	Sg	13 41 05.7	+0.9
NCUH	Zhongli	1.26	350	*e*P	Pg	13 40 48.7	+0.1
NCUH				S	Sg	13 41 07.2	+2.1
TWA	Mucha	1.27	7	*e*P	Pb	13 40 48.1	+0.2
TWM1	Shoushan	1.28	226	*e*P	Pg	13 40 50.4	+1.4
TIPB	Shuangxi	1.30	16	*e*P	Pn	13 40 48.0	-0.1
TIPB				*e*S	Sb	13 41 03.5	-1.6
MASBT	Mashibuluo	1.32	214	*e*P	Pb	13 40 48.5	-0.4
MASBT				*e*S	Sg	13 41 06.6	-0.3
TSCK	Chigu Township	1.35	245	*e*P	Pb	13 40 49.4	0.0
TWS1	Kuangyinshan	1.38	360	*e*P	Pg	13 40 51.8	+1.0
TWS1				*e*S	Sg	13 41 09.6	+0.8
TWB1	Santiao Chiao	1.38	22	*e*P	Pn	13 40 49.1	0.0
NWF	Wu-fen Shan	1.39	14	*e*P	Pg	13 40 50.9	-0.1
YM01	YM01	1.43	5	*e*P	Pn	13 40 49.9	+0.1
EAST	Anshuo	1.43	202	*e*P	Pb	13 40 50.6	-0.1
SXI1	Grass Mountain	1.43	17	*e*P	Pn	13 40 49.5	-0.3
TAW	Tawu	1.44	200	*e*P	Pb	13 40 51.2	+0.3
NTST	Danshui	1.44	1	*e*P	Pg	13 40 51.6	-0.4
ZUZH	Zhuzihu	1.44	4	*e*P	Pn	13 40 49.5	-0.4
TAWH	Dawu Township	1.46	200	*e*P	Pb	13 40 51.5	+0.3
ANP	Anpu	1.47	3	*e*P	Pb	13 40 51.9	+0.6
YM08	YM08	1.47	6	*e*P	Pn	13 40 49.4	-1.0
SCZT	Fangliau	1.53	209	*e*P	Pb	13 40 52.2	-0.2
JYNG	Yonagunijimaku	1.57	62	*e*P	Pn	13 40 51.5	-0.2
JYNG				*e*S	Sn	13 41 12.0	+0.2
SLIU	Shizi	1.60	201	*e*P	Pb	13 40 53.7	0.0
YOJ	Yonaguni jima	1.63	63	P	Pn	13 40 52.3	-0.2
YOJ	Yonaguni jima	1.63	63	*e*P	Pn	13 40 52.4	-0.1
YOJ				*e*S	Sn	13 41 12.8	-0.5
YOJ	Yonaguni jima	1.63	63	*e*P	Pn	13 40 52.5	0.0
WDGT	Dungji	1.68	255	*e*P	Pn	13 40 53.4	+0.2
WDGT				*e*S	Sb	13 41 15.1	-0.9
PHUB	P'eng-hu	1.71	264	*e*P	Pb	13 40 54.5	-0.9
PHUB				S	Sb	13 41 17.0	+0.1
PNG	Penghu	1.72	265	*e*P	Pn	13 40 53.9	+0.2
PNG				*e*S	Sb	13 41 17.2	+0.1
VCHM	Qimei	1.90	255	*e*P	Pn	13 40 56.8	+0.5
VCHM				*e*S	Sn	13 41 19.8	-0.1
PCYT	Pengchaiyu	1.99	17	*e*P	Pb	13 40 59.0	-1.3
IRIF	Iriomote-Funau	2.20	73	*e*P	Pn	13 41 00.2	-0.1
IRIF				*e*S	Sn	13 41 27.2	0.0
VWUC	VWUC	2.20	306	*e*P	Pn	13 40 60.0	-0.4
HATJ	Hateruma jima	2.21	81	*e*S	Sn	13 41 26.4	-1.1
JKRS	Kuro-shima	2.42	77	*e*P	Pn	13 41 03.9	+0.5
JKRS				*e*S	Sn	13 41 33.4	+0.6
PTMZ	Houxiangcun	2.48	303	*e*P	Pn	13 41 03.9	-0.3
JIJ	Ishigaki jima	2.57	75	*e*P	Pn	13 41 04.8	-0.6
JIJ				*e*S	Sn	13 41 34.9	-1.6
MATB	Ma-tsu	2.77	331	*e*P	Pn	13 41 08.0	-0.2
JISG	Ishigakijimahi	2.78	71	*e*P	Pn	13 41 07.7	-0.6
JISG				*e*S	Sn	13 41 40.1	-1.4
KNMB	Chin-men Tao	2.87	286	*e*P	Pn	13 41 09.5	-0.1
JTJ	Tarama	3.13	72	*e*P	Pn	13 41 13.1	-0.1

IDC ***13*** *13:47:56.2±0.6, 9°.59N×58°.00E, h0^{km}, mb4.3/23, mbtmp4.3/23, MS4.1/57, Error ellipse: s-maj=16.1km s-min=14.5km az=20.0*
MOS ***13*** *13:47:56.0±1.2, 9°.66N×57°.92E, h10^{km}, mb5.0/46, MS4.1/9, Error ellipse: s-maj=9.8km s-min=5.7km az=92.3*
BJI ***13*** *13:47:57.0, 9°.70N×57°.90E, h10^{km}, mB5.1/14, mb4.7/58, Ms4.6/37, Ms7 4.4/39*
NEIC ***13*** *13:47:59.0±2.3, 9°.87N±0°.09×57°.84E±0°.10, h10^{km}±1^{km}, mb5.0/57, Error ellipse: s-maj=16.5km s-min=14.6km az=245.0*
GCMT ***13*** *13:48:01.0±0.2, 9°.79N±0°.01×57°.82E±0°.02, h12^{km}, MW5.0/110, Moment Tensor Solution. s29,c37; s110,c176; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.03±.07; M$_{\theta\theta}$2.27±.06; M$_{\phi\phi}$0.76±.07; M$_{r\theta}$1.63±.21; M$_{\theta\phi}$-1.39±.05; M$_{\phi r}$1.48±.28; Best double couple: M$_{0}$3.67500×10^{16} NP1:φ$_{s}$143.00000°, δ44.00000°, λ-50.00000°. NP2:φ$_{s}$274.00000°, δ58.00000°, λ-122.00000°. Principal axes: T 3.1830, Plg8.0000°, Azm26.0000°; N 0.9890, Plg26.0000°, Azm292.0000°; P -4.1670, Plg62.0000°, Azm131.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 13 13:48:00.0±0.6**, 9°.68N**±0°.06×**57°.91E**±0°.05**, h21**^{km}±6^{km}**,**
h21^{km}**:pP-P, n359,** σ**1^{s}.75**/339**, mb4.8**/114**, MS4.2**/77**,**
22C-18D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABTO	Aybut	8.85	330	P	Pn	13 50 09.4	+2.5
WHFO	Wadi Hawf	9.13	334	P	Pn	13 50 15.6	+5.0
DOK	Doka	9.62	338	P	Pn	13 50 22.8	+5.5
DQM	DQM	10.20	358	P	Pn	13 50 31.6	+6.3
DQM				P	Pn	13 50 31.6	+6.3

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MHTO  MHTO              11.25   0   P       Pn      13 50 41.3 +1.7
        SNR=5.6
MHTO                                P       Pn      13 50 41.3 +1.7
        SNR=5.6
JLN   Jalan Bani Buh    12.49   6   P       Pn      13 50 58.3 +1.7
JLN                                 P       Pn      13 50 58.3 +1.7
JMDO  Jabal Madar       12.62   1   P       Pn      13 51 01.5 +3.0
        SNR=6.9
JMDO                                P       Pn      13 51 01.5 +3.0
        SNR=6.9
BSY   Bisya             13.01 357   P       Pn      13 51 06.1 +2.3
        SNR=6.7
BSY                                 P       Pn      13 51 06.1 +2.3
        SNR=6.7
UMZA  Um Al Zommool     13.23 349   P       Pn      13 51 08.4 +1.7
UMZA                                P       Pn      13 51 08.4 +1.7
SMDO  Samad             13.31   1   P       Pn      13 51 09.9 +2.0
        SNR=10
SMDO                                P       Pn      13 51 09.9 +2.0
        SNR=10
WSAR  Wadi Sarin        13.51   3   Pn      Pn      13 51 13.5 +3.0
        baz=206,slow=24,SNR=9.5
WSAR                                LR      LR      13 55 38.3
        comp=Z,12nm,18.6s,baz=199,slow=34
ARQ   Araqi             13.65 355   P       Pn      13 51 15.8 +3.3
ARQ                                 P       Pn      13 51 15.8 +3.3
HOQ   Hoqain            13.84 358   P       Pn      13 51 16.8 +1.7
        SNR=15
HOQ                                 P       Pn      13 51 16.8 +1.7
        SNR=15
MZR   Muzera            13.92 343   P       Pn      13 51 19.2 +3.1
MZR                                 P       Pn      13 51 19.2 +3.1
MZR   Muzera            13.92 343   Pn      Pn      13 51 16.9 +0.8
SOHO  SOHO              14.44 355   P       Pn      13 51 26.7 +3.5
SOHO                                P       Pn      13 51 26.7 +3.5
SOHO  SOHO              14.44 355 i P       Pn      13 51 26.7 +3.5
        SNR=9.6
ALNE  Al Ain            14.45 352   P       P       13 51 27.9 -2.2
        SNR=6.5
ALNE                                P       P       13 51 27.9 -2.2
        SNR=6.5
ATD   Arta Tunnel       14.92 278           Pn      13 51 25.3 -4.6
ATD   Arta Tunnel       14.92 278   Pn      P       13 51 37.0 +1.6
        baz=111,slow=12,SNR=3.6
ATD                                 LR      LR      13 56 37.3
        comp=Z,12nm,18.1s,baz=71,slow=35
GHWR  Ruwais            15.00 342   P       Pn      13 51 32.5 +1.7
GHWR                                P       Pn      13 51 32.5 +1.7
ASHO  Ashiyiah          15.03 353   P       Pn      13 51 31.8 +0.5
ASHO                                P       Pn      13 51 31.8 +0.5
ASHO  Ashiyiah          15.03 353 i Pn      Pn      13 51 31.0 -0.3
        SNR=9.4
ASUD  Al Ashush, Dub    15.07 351   P       P       13 51 35.2 -1.8
ASUD                                P       P       13 51 35.2 -1.8
FAQ   Al Faqa, Dubai    15.15 352   P       Pn      13 51 35.5 +2.6
        SNR=5.6
FAQ                                 P       Pn      13 51 35.5 +2.6
        SNR=5.6
HATD  Hatta, Dubai      15.16 354   P       Pn      13 51 33.9 +0.9
HATD                                P       Pn      13 51 33.9 +0.9
HATD  Hatta, Dubai      15.16 354 i Pn      Pn      13 51 33.5 +0.4
        SNR=9.0
UOSS  Minazif           15.27 354           Pn      13 51 30.0 -4.4
UOSS  Minazif           15.27 354   P       Pn      13 51 34.8 +0.3
UOSS                                P       Pn      13 51 34.8 +0.3
UOSS  Minazif           15.27 354 i Pn      Pn      13 51 34.2 -0.3
        SNR=10
NAZ   Nazwa, Dubai      15.38 352   P       P       13 51 39.2 -1.2
        SNR=6.8
NAZ                                 P       P       13 51 39.2 -1.2
        SNR=6.8
SLWR  Sila              15.50 338   P       P       13 51 43.0 +1.3
SLWR                                P       P       13 51 43.0 +1.3
MDH   Madha             15.61 355   P       P       13 51 42.7 -0.2
        SNR=6.2
MDH                                 P       P       13 51 42.7 -0.2
        SNR=6.2
MDH   Madha             15.61 355 i Pn      Pn      13 51 40.7 +1.8
        SNR=6.9
MSFE  Esma-Masafi       15.69 354 i Pn      Pn      13 51 40.9 +1.0
        SNR=8.8
MASF  Masafi            15.70 354   P       Pn      13 51 40.9 +0.8
        SNR=13
MASF                                P       Pn      13 51 40.9 +0.8
        SNR=13
BANOM Banah             16.23 355   P       Pn      13 51 47.9 +1.0
BANOM Banah             16.23 355 i Pn      Pn      13 51 46.3 -0.6
        SNR=10
TRNA  Turayna           16.28 338   P       P       13 51 50.7 +0.4
SHME  Shamm             16.37 354   P       Pn      13 51 48.7 +0.1
        SNR=12
SHME                                P       Pn      13 51 48.7 +0.1
        SNR=12
SHME  Shamm             16.37 354 i Pn      Pn      13 51 48.0 -0.7
        SNR=17
SMRA  Abu-Samra         16.44 337   P       P       13 51 53.0 +0.9
SAKB  Bahrain           17.66 338   P       P       13 52 07.7 +2.1
RAYN  Ar Rayn           18.17 321           Pn      13 52 09.8 -1.4
RAYN  Ar Rayn           18.17 321   P       Pn      13 52 10.3 -0.9
RAYN  Ar Rayn           18.17 321   P       Pn      13 52 09.8 -1.4
RAYN                                pmax    pmax
        comp=Z,46nm,1.3s
RAYN  Ar Rayn           18.17 321   Pn      Pn      13 52 09.7 -1.5
HYB   Hyderabad         21.48  67  eP       P       13 52 48.2 +0.7
PALK  Pallekele         22.66  94   LR      LR      13 59 35.1
        comp=Z,484nm,21.4s,baz=284,slow=31
KIBK  Kibwezi           23.11 240   P       P       13 53 01.4 -3.5
KIBK                                IAmb    IAmb    13 53 08.5
        comp=Z,54nm,1.1s
KIBK  Kibwezi           23.11 240   P       P       13 53 05.9 +1.0
        SNR=9.1
LODK  Lodwar            23.24 256           P       13 53 06.3 +0.1
LODK                                IAmb    IAmb    13 53 18.6
        comp=Z,78nm,1.3s
LODK  Lodwar            23.24 256   P       P       13 53 09.6 +3.4
        SNR=32
KBL   Kabul             26.77  21   P       P       13 53 37.0 -1.7
KBL   Kabul             26.77  21   P       P       13 53 37.0 -1.7
KBL                                 pmax    pmax
        comp=Z,23nm,1.2s
MBAR  Mbarara           28.91 251   P       P       13 53 57.9 -0.2
MBAR  Mbarara           28.91 251   P       P       13 53 57.9 -0.2
MBAR                                pmax    pmax
        comp=Z,5.0nm,0.8s
EIL   Elat              29.27 316   LR      LR      14 04 50.7
        comp=Z,198nm,21.2s,baz=68,slow=34
ASF   Jabal al Asfar    29.66 322   LR      LR      14 06 03.7
        comp=Z,330nm,19.4s,baz=166,slow=36
GHAJ  Ghor Haditha      29.90 319   P       P       13 54 03.8 -2.6
GHAJ                                IAmb    IAmb    13 54 17.3
        comp=Z,18nm,1.1s
OPO   Ambohidratompo    30.00 201   LR      LR      14 03 18.5
        comp=Z,653nm,21.4s,baz=178,slow=31
ABPO  Ambohimpanom      30.40 200   P       P       13 54 12.1 +1.0
ABPO  Ambohimpanom      30.40 200   P       P       13 54 12.1 +1.0
ABPO                                pmax    pmax
        comp=Z,36nm,1.1s
SIMJ  Simiganj          30.53  17           P       13 54 09.6 -2.4
DZET  Dzherino          30.61  17   P       P       13 54 16.0 +3.2
DZET                                pmax    pmax
        comp=Z,6.0nm,1.0s
MMAI  Mount Meron Ar    31.15 322   LR      LR      14 07 00.5
        comp=Z,232nm,18.4s,baz=128,slow=37
GAR   Garm              31.24  19           P       13 54 15.5 -2.8
GAR                                 IAmb    IAmb    13 54 42.4
        comp=Z,30nm,1.4s
MARD  Mardin            31.57 333   P       P       13 54 18.6 -2.7
GURO  Guroymak-BITLI    32.09 336   P       P       13 54 25.0 -0.8
GURO                                IAmb    IAmb    13 54 36.0
        comp=Z,20nm,1.4s
BTK   Batken            32.36  19   P       P       13 54 27.9 -0.2
BTK   Batken            32.36  19   P       P       13 54 27.9 -0.2
BTK                                 pmax    pmax
        comp=Z,66nm,1.4s
GNI   Garni             32.53 341   P       P       13 54 27.4 -2.3
GNI                                 IAmb    IAmb    13 54 46.4
        comp=Z,23nm,1.2s
GNI   Garni             32.53 341   LR      LR      14 09 08.6
        comp=Z,828nm,18.2s,baz=153,slow=39
GNI   Garni             32.53 341   P       P       13 54 27.4 -2.3
GNI                                 pmax    pmax
        comp=Z,23nm,1.2s
EVN   Everest           32.71  52           P       13 54 31.6 -0.4
AKT   Akhty             32.93 346  eP       P       13 54 29.9 -3.2
AKT                                e                13 55 39.1
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AKT                                 pmax    pmax
        comp=Z,31nm,1.4s
AKT                                 MLR     MLR
        comp=Z,258nm,15.0s
VOI   Vohitsoka         33.23 199   P       P       13 54 37.8 +1.9
KSH   Kashi             33.81  26   P       P       13 54 37.5 -3.3
KSH                                 sP      pP      13 54 44.3 -1.8
KSH                                 pmax    pmax
        comp=Z,7.0nm,1.3s
KSH                                 LR      LR
        comp=Z,460nm,21.3s
KSH                                 LR      LR
        comp=Z,340nm,19.2s
KSH                                 LR      LR
        comp=Z,780nm,23.4s
MAK   Makhachkala       34.38 346c iP       P       13 54 39.9 -5.7
MAK                                eS       S       14 00 05.5 -6.8
MAK                                 pmax    pmax
        comp=Z,133nm,1.1s
MAK                                 MLR     MLR
        comp=Z,404nm,18.0s
BRDH  Bariadhala        34.78  64   LR      LR      14 10 31.3
        comp=Z,797nm,18.1s,baz=244,slow=39
KK31  Karatay Array     35.07  16           P       13 54 52.1 +0.5
KK31                                IAmb    IAmb    13 55 01.4
        comp=Z,23nm,1.0s
KK31  Karatay Array     35.07  16   P       P       13 54 52.1 +0.5
KK31                                pmax    pmax
        comp=Z,23nm,1.0s
KKAR  Karatay Array     35.07  16   P       P       13 54 52.8 +1.2
KKAR  Karatay Array     35.07  16   P       P       13 54 52.3 +0.7
KKAR                                IAmb    IAmb    13 55 01.4
        comp=Z,24nm,1.0s
KKAR  Karatay Array     35.07  16   P       P       13 54 52.8 +1.2
AAK   Ala-Archa         35.91  21           P       13 54 59.5 +0.6
AAK                                 IAmb    IAmb    13 55 09.3
        comp=Z,22nm,1.3s
AAK   Ala-Archa         35.91  21deP        P       13 55 00.5 +1.6
AAK                                 pmax    pmax
        comp=Z,16nm,1.6s
BOOM  Boomskoye usch    36.31  23   P       P       13 55 02.3 -0.1
BOOM                                IAmb    IAmb    13 55 12.2
        comp=Z,28nm,1.4s
BOOM  Boomskoye usch    36.31  23   P       P       13 55 02.3 -0.1
BOOM                                pmax    pmax
        comp=Z,28nm,1.4s
KIRS  Kirsehir-Merke    36.34 328 ⇑P        P       13 55 04.8 +2.2
KBZ   Khabaz            36.35 342   P       P       13 55 03.2 +0.7
        comp=Z,2.4nm,0.8s,baz=157,slow=6.7,SNR=5.4
KBZ                                 LR      LR      14 12 37.0
        comp=Z,425nm,19.4s,baz=144,slow=41
        comp=Z,2.4nm,0.8s
KBZ   Khabaz            36.35 342deP        P       13 55 03.7 +1.2
KBZ                                 pmax    pmax
        comp=Z,6.0nm,0.9s
TARG  Taragay, Kyrgy    36.42  25   P       P       13 55 03.8 +0.2
TARG  Taragay, Kyrgy    36.42  25   P       P       13 55 03.8 +0.2
TARG                                pmax    pmax
        comp=Z,15nm,1.2s
KDJ   Kajisay           36.49  24   P       P       13 55 01.5 -2.5
KDJ                                 IAmb    IAmb    13 55 16.0
        comp=Z,22nm,1.4s
KDJ   Kajisay           36.49  24   P       P       13 55 01.5 -2.5
KDJ                                 pmax    pmax
        comp=Z,22nm,1.4s
KIV   Kislovodsk        36.62 341   P       P       13 55 02.2 -2.8
KIV                                 IAmb    IAmb    13 55 14.6
        comp=Z,27nm,1.0s
KIV   Kislovodsk        36.62 341  eP       P       13 55 02.8 -2.2
KIV                                e                13 56 25.1
KIV                                eS       S       14 00 46.4 -0.5
KIV                                 pmax    pmax
        comp=Z,9.0nm,1.1s
KIV                                 MLR     MLR
        comp=Z,226nm,16.0s
AKAS  Kas               36.86 320   P       P       13 55 04.3 -2.9
BR104 Keskin Array S    36.91 328   P       P       13 55 08.6 +1.1
        comp=Z,88nmcomp=Z,11nm,1.1s
BRTR  Keskin Array B    36.92 328   P       P       13 55 05.8 -1.8
BRTR  Keskin Array B    36.92 328   P       P       13 55 08.6 +0.9
        comp=Z,2.3nm,0.8s,baz=145,slow=9.8,SNR=12
BRTR                                PcP     PcP     13 57 29.7 +0.8
        comp=Z,0.6nm,0.7s,baz=174,slow=4.3,SNR=3.5
        comp=Z,2.3nm,0.8s
BRTR  Keskin Array B    36.92 328ceP        P       13 55 09.1 +1.5
BRTR                                pmax    pmax
        comp=Z,3.0nm,0.9s
BR131 Keskin Array S    36.92 328⇑eP        P       13 55 06.8 -0.8
SOC   Sochi             37.31 338  eP       P       13 55 07.1 -3.6
SOC                                ePPP     PPP     13 56 51.6
SOC                                eS       S       14 00 54.5 -2.6
SOC                                eSS      SnSn    14 03 32.3 -1.6
SOC                                eSSS     SSS     14 03 53.3
SOC                                 MLR     MLR
        comp=Z,309nm,19.0s
ANTO  Ankara            37.47 328   P       P       13 55 11.8 -0.4
ANTO  Ankara            37.47 328   P       P       13 55 11.8 -0.4
ANTO                                pmax    pmax
        comp=Z,79nm,0.4s
LSZ   Lusaka            38.50 230   LR      LR      14 10 05.6
        comp=Z,426nm,19.6s,baz=57,slow=34
IDI   Anoyia            39.44 315   P       P       13 55 29.6 +0.8
IDI                                 IAmb    IAmb    13 55 39.3
        comp=Z,50nm,1.3s
AB31  Akbulak array     39.49   2   IAmb    IAmb    13 55 38.2
        comp=Z,30nm,1.0s
ABKAR Akbulak array     39.49   2   P       P       13 55 29.7 +0.8
ABKAR Akbulak array     39.49   2   IAmb    IAmb    13 55 38.2
        comp=Z,30nm,1.0s
YLV   Yalova            39.83 325   P       P       13 55 33.2 +1.2
        comp=Z,24nm,1.5s
CM31  Chiang Mai Arr    40.66  73   P       P       13 55 39.6 +0.4
CM31  Chiang Mai Arr    40.66  73   P       P       13 55 41.0 +1.8
        SNR=10
CMAR  Chiang Mai Arr    40.66  73   P       P       13 55 39.7 +0.6
CMAR  Chiang Mai Arr    40.66  73   P       P       13 55 39.0 -0.1
        comp=Z,12nm,1.1s,baz=265,slow=8.0,SNR=31
CMAR                                PcP     PcP     13 57 41.3 +0.5
        comp=Z,0.6nm,0.8s,baz=256,slow=2.0,SNR=2.8
CMAR                                LR      LR      14 12 03.8
        comp=Z,81nm,19.2s,baz=265,slow=36
        comp=Z,12nm,1.1s
CMAR  Chiang Mai Arr    40.66  73ceP        P       13 55 40.2 +1.0
CMAR                                pmax    pmax
        comp=Z,12nm,1.1s
CHTO  Chiang Mai        40.71  72   P       P       13 55 39.1 -0.4
CHTO                                IAmb    IAmb    13 55 48.4
        comp=Z,37nm,1.4s
CHTO  Chiang Mai        40.71  72   P       P       13 55 40.4 +0.9
CHTO  Chiang Mai        40.71  72   P       P       13 55 40.5 +0.9
CHTO  Chiang Mai        40.71  72   P       P       13 55 39.1 -0.4
CHTO                                pmax    pmax
        comp=Z,37nm,1.4s
SRIT  Nakonsritamara    41.16  88   P       P       13 55 44.4 +1.2
PSI   Prapat            41.30  97   LR      LR      14 10 16.3
        comp=Z,261nm,18.4s,baz=341,slow=32
PSI   Prapat            41.30  97   P       P       13 55 46.2 +1.6
ALN   Alexandroupoli    41.96 323   P       P       13 55 51.5 +2.1
ALN                                 pmax    pmax
        comp=Z,30nm,1.2s
MAKZ  Makanchi          42.29  25   P       P       13 55 51.6 -0.5
MAKZ                                IAmb    IAmb    13 56 01.0
        comp=Z,36nm,1.7s
MAKZ  Makanchi          42.29  25   P       P       13 55 51.6 -0.5
MAKZ                                pmax    pmax
        comp=Z,36nm,1.7s
MNSI  Mandailing Nat    42.37  99   P       P       13 55 52.7 -0.5
MK31  Makanchi Array    42.41  25deP        P       13 55 53.2 +0.1
MKAR  Makanchi Array    42.41  25   P       P       13 55 52.2 -0.9
MKAR  Makanchi Array    42.41  25   P       P       13 55 53.1  0.0
        comp=Z,2.6nm,0.7s,baz=207,slow=9.8,SNR=22
MKAR                                PcP     PcP     13 57 45.9 -0.2
        comp=Z,2.0nm,0.9s,baz=231,slow=4.6,SNR=4.8
MKAR                                LR      LR      14 14 59.3
        comp=Z,267nm,19.7s,baz=214,slow=38
        comp=Z,2.6nm,0.7s
MKAR  Makanchi Array    42.41  25ceP        P       13 55 52.7 -0.4
MKAR                                pmax    pmax
        comp=Z,3.0nm,0.7s
GOMU  GeErMu            42.62  46   P       P       13 55 55.9 +0.6
GOMU                                S       S       14 02 19.5 +1.9
GOMU                                LR      LR
        comp=Z,310nm,20.0s
GOMU                                LR      LR
        comp=Z,490nm,20.4s
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GOMU                                LR      LR
        comp=Z,1µm,21.7s
WMQ   Urumqi            42.73  32  eP       P       13 55 57.9 +2.1
WMQ                                 pmax    pmax
        comp=Z,22nm,0.7s
WMQ                                 LR      LR
        comp=Z,450nm,20.7s
WMQ                                 LR      LR
        comp=Z,340nm,18.3s
WMQ                                 LR      LR
        comp=Z,320nm,23.9s
PAIG  Paliouri          42.81 320   P       P       13 55 57.9 +1.5
PAIG                                pmax    pmax
        comp=Z,23nm,1.3s
TIRR  Tirgusor          43.02 329   IAmb    IAmb    13 56 06.6
        comp=Z,41nm,1.2s
TIRR  Tirgusor          43.02 329 ⇓P        P       13 55 59.3 +1.2
TIRR  Tirgusor          43.02 329   P       P       13 55 58.5 +0.5
        comp=Z,30nm,1.1s
TPGR  Topolog           43.30 329 ⇑P        P       13 55 58.8 -1.5
BELG  Belogornoye       43.41 351   LR      LR      14 18 26.7
        comp=Z,104nm,18.4s,baz=172,slow=42
BELG  Belogornoye       43.41 351d iP       P       13 56 01.0  0.0
BELG                                pmax    pmax
        comp=Z,5.0nm,1.1s
PPI   Padang Panjang    43.47 101   P       P       13 56 00.5 -1.6
VRH   Novokhopyorsk     43.49 345  eP       P       13 56 00.8 -0.9
VRH                                 pmax    pmax
        comp=Z,39nm,1.2s
BKNI  Bangkinang        43.90 100   P       P       13 56 08.5 +2.9
BKNI  Bangkinang        43.90 100   P       P       13 56 06.2 +0.6
KURBB Kurchatov Arra    44.23  19   P       P       13 56 08.1 +0.4
        comp=Z,5.6nm,0.9s,baz=216,slow=8.1,SNR=22
KURBB                               PcP     PP      13 57 51.5 +0.5
        comp=Z,0.4nm,0.5s,baz=215,slow=3.8,SNR=4.5
KURBB                               LR      LR      14 15 30.4
        comp=Z,597nm,21.5s,baz=181,slow=37
        comp=Z,5.6nm,0.9s
KURK  Kurchatov         44.34  19   P       P       13 56 08.9 +0.4
KURK  Kurchatov         44.34  19deP        P       13 56 08.8 +0.3
KURK                                pmax    pmax
        comp=Z,6.0nm,0.8s
BVAR  Borovoye Array    44.39  11   P       P       13 56 09.2 +0.3
        comp=Z,5.3nm,0.7s,baz=189,slow=6.7,SNR=22
BVAR                                PcP     PcP     13 57 52.3 -0.3
        comp=Z,2.2nm,0.7s,baz=161,slow=4.1,SNR=4.5
        comp=Z,5.3nm,0.7s
BRVK  Borovoye          44.40  11   P       P       13 56 09.3 +0.2
BRVK  Borovoye          44.40  11deP        P       13 56 09.0  0.0
BRVK                                pmax    pmax
        comp=Z,18nm,2.5s
ISR   Istrita           44.44 328   P       P       13 56 10.8 +1.3
        comp=Z,42nm,1.0s
VORR  Voronezh          44.59 343  eP       P       13 55 55.9  -15
VORR                                pmax    pmax
        comp=Z,45nm,0.3s
PZH   PanZhiHua         44.64  62   P       P       13 56 11.1 -0.4
PZH                                 pmax    pmax
        comp=Z,10.0nm,1.4s
PZH                                 LR      LR
        comp=Z,240nm,17.1s
PZH                                 LR      LR
        comp=Z,260nm,20.8s
PZH                                 LR      LR
        comp=Z,250nm,21.1s
VRI   Vrincioaia        44.86 329 ⇓P        P       13 56 14.8 +2.0
VRI   Vrincioaia        44.86 329   P       P       13 56 13.9 +1.1
        comp=Z,40nm,1.1s
PLOR  Plostina          44.89 329 ⇓P        P       13 56 16.0 +2.9
MLR   Muntele Rosu      45.01 328   P       P       13 56 14.8 +0.7
        comp=Z,15nm,0.9s
KMI   Kunming           45.22  64   P       P       13 56 16.8 +0.5
KMI                                 pmax    pmax
        comp=Z,22nm,1.4s
KMI                                 LR      LR
        comp=Z,180nm,16.7s
KMI                                 LR      LR
        comp=Z,180nm,22.4s
KMI                                 LR      LR
        comp=Z,170nm,18.0s
TESR  Tescani           45.35 330 ⇓P        P       13 56 18.0 +1.3
TESR  Tescani           45.35 330   P       P       13 56 16.9 +0.2
        comp=Z,551nmcomp=Z,52nm,1.2s
TURR  Turia             45.35 329 ⇑P        P       13 56 17.5 +0.8
ONER  Baraj Valea Uz    45.35 329 ⇓P        P       13 56 16.9 +0.2
VOIR                    45.44 328 ⇑P        P       13 56 17.4 -0.1
VOIR                    45.44 328   P       P       13 56 18.0 +0.5
        comp=Z,372nmcomp=Z,20nm,1.1s
DOPR  Dopca             45.61 328 ⇑P        P       13 56 19.7 +0.9
SLVN  Son La            45.65  70   P       P       13 56 18.9 -0.6
SLVN                                IAmb    IAmb    13 56 27.7
        comp=Z,40nm,1.8s
SLVN  Son La            45.65  70   P       P       13 56 20.0 +0.5
SORM  Soroca            45.70 332   P       P       13 56 18.5 -0.9
        comp=Z,12nm,1.2s
ARTI  Arti              46.60   0   P       P       13 56 25.2 -1.2
ARTI  Arti              46.60   0d iP       P       13 56 26.5 +0.1
ARTI                                                13 57 58.9
ARTI                                                13 58 13.9
ARTI                                S       S       14 03 18.3 +4.2
ARTI                                pmax    pmax
        comp=Z,24nm,1.4s
UBPT  Khong Chiam       46.70  78   P       P       13 56 31.1 +3.4
LBTB  Lobatse           46.70 222   LR      LR      14 13 23.7
        comp=Z,341nm,20.4s,baz=51,slow=33
BURAR Bucovina Array    46.82 330   P       P       13 56 25.5 -2.9
BURAR Bucovina Array    46.82 330   P       P       13 56 25.5 -2.9
BURAR                               pmax    pmax
        comp=Z,5.0nm,0.9s
KMPD  K-Podol'skiy      46.88 332   P       P       13 56 27.7 -1.0
SVE   Sverdlovsk        47.09   2  eP       P       13 56 30.9 +0.7
SVE                                 pmax    pmax
        comp=Z,28nm,1.0s
AK07  Malin Array Si    47.14 335   P       P       13 56 30.2 -0.4
AK09  Malin Array Si    47.15 335   P       P       13 56 30.3 -0.5
AK10  Malin Array Si    47.16 335   P       P       13 56 29.9 -0.9
AK06  Malin Array Si    47.17 335   P       P       13 56 30.3 -0.6
AK02  Malin Array Si    47.22 335   P       P       13 56 30.7 -0.6
SURR  Surduc            47.22 326 ⇑P        P       13 56 32.2 +0.8
AK12  Malin Array Si    47.23 335   P       P       13 56 30.7 -0.7
AK14  Malin Array Si    47.24 335   P       P       13 56 30.8 -0.6
AK01  Malin Array Si    47.24 335   P       P       13 56 30.8 -0.7
AKASG Malin Array Be    47.24 335   P       P       13 56 30.8 -0.7
        comp=Z,0.6nm,0.6s,baz=143,slow=7.1,SNR=13
AKASG                               PcP     PcP     13 58 02.6  0.0
        comp=Z,0.1nm,0.3s,baz=132,slow=2.7,SNR=5.1
AKASG                               PP      PP      13 58 22.1 -0.5
        comp=Z,2.1nm,0.8s,baz=142,slow=9.8,SNR=5.4
AKASG                               LR      LR      14 18 55.8
        comp=Z,138nm,18.8s,baz=138,slow=39
        comp=Z,0.6nm,0.6s
AKASG Malin Array Be    47.24 335ceP        P       13 56 31.2 -0.3
AKASG                               pmax    pmax
        comp=Z,1.0nm,0.8s
AKBB  Malin Array Si    47.24 335   P       P       13 56 29.4 -2.1
AKBB                                IAmb    IAmb    13 56 39.5
        comp=Z,16nm,1.2s
AKBB  Malin Array Si    47.24 335deP        P       13 56 30.9 -0.6
AKBB  Malin Array Si    47.24 335   P       P       13 56 30.6 -0.9
KIEV  Kiev              47.24 335   P       P       13 56 29.5 -2.0
KIEV                                IAmb    IAmb    13 56 39.5
        comp=Z,13nm,1.1s
KIEV  Kiev              47.24 335 ⇓P        P       13 56 28.8 -2.7
KIEV  Kiev              47.24 335   P       P       13 56 29.5 -2.0
KIEV                                pmax    pmax
        comp=Z,13nm,1.2s
KIEV  Kiev              47.24 335   P       P       13 56 31.0 -0.5
        comp=Z,51nm,1.4s
AK03  Malin Array Si    47.26 335   P       P       13 56 30.9 -0.7
LUBAR Lubar, Ukraine    47.28 334   P       P       13 56 31.4 -0.4
LUBAR                               pP      pP      13 56 36.4 -0.7
AK15  Malin Array Si    47.28 335   P       P       13 56 30.8 -1.0
AK04  Malin Array Si    47.28 335   P       P       13 56 31.2 -0.6
AK17  Malin Array Si    47.30 335   P       P       13 56 31.8 -0.1
AK19  Malin Array Si    47.35 335   P       P       13 56 31.6 -0.7
GTA   Gaotai            47.62  44   P       P       13 56 35.0 +0.2
GTA                                 sP      pP      13 56 41.5 +1.2
GTA                                 PP      PP      13 58 28.4 +1.9
GTA                                 S       S       14 03 27.0 -2.4
GTA                                 pmax    pmax
        comp=Z,9.0nm,1.5s
GTA                                 LR      LR
        comp=Z,240nm,16.4s
GTA                                 LR      LR
        comp=Z,220nm,17.8s
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GTA                                  LR      LR
       comp=Z,280nm,17.5s
MI28   Mi28,Pidlybu       48.06 335  P       P       13 56 37.5  -0.3
MI28                                 pP      pP      13 56 44.2  +1.0
OBN    Obninsk            48.37 344⇑eP       P       13 56 40.4  +0.3
OBN                                 i                13 58 05.3
OBN                                  pmax    pmax
       comp=Z,11nm,1.0s
OBN                                  MLR     MLR
       comp=Z,147nm,18.0s
MOS    Moscow             48.65 345 eP       P       13 56 41.2  -1.0
MOS                                 e                13 58 35.2
MOS                                  pmax    pmax
       comp=Z,45nm,0.6s
GYA    Guiyang            48.95  63 ⇑P       P       13 56 45.3  +0.1
GYA                                  S       S       14 03 46.3  -2.3
GYA                                  pmax    pmax
       comp=Z,18nm,1.2s
GYA                                  LR      LR
       comp=Z,310nm,23.0s
TSUM   Tsumeb             49.02 234  LR      LR      14 16 16.8
       comp=Z,399nm,21.9s,baz=142,slow=35
RNPP5  Staryi Chortor     49.05 334  P       P       13 56 45.3  -0.1
ZAA0   Zalesovo Array     49.13  21  IAmb    IAmb    13 56 48.8
       comp=Z,10nm,0.8s
ZALV   Zalesovo Beam      49.13  21          P       13 56 45.1  -0.9
ZALV   Zalesovo Beam      49.13  21  P       P       13 56 45.4  -0.5
       comp=Z,14nm,0.8s,baz=226,slow=8.1,SNR=25
ZALV                                 LR      LR      14 18 32.9
       comp=Z,443nm,20.9s,baz=224,slow=37
       comp=Z,14nm,0.8s
ZALV   Zalesovo Beam      49.13  21 i P      P       13 56 45.7  -0.3
ZALV                                 pmax    pmax
       comp=Z,13nm,0.8s
RNPP8  Varash             49.14 334  P       P       13 56 45.5  -0.6
KOLS   Kolonicke sedl     49.16 329 eP       P       13 56 47.6  +1.2
KOLS                                 pmax    pmax
       comp=Z,15nm,1.1s
KOLS   Kolonicke sedl     49.16 329 e        P       13 56 47.6  +1.2
KOLS   Kolonicke sedl     49.16 329 eP       P       13 56 54.9  +8.5
RNPP9  Sopachiv           49.18 334  P       P       13 56 45.2  -1.2
KIRV   Kirov              49.23 354ceP       P       13 56 47.1  +0.4
BOSA   Boshof             49.44 219  P       P       13 56 47.9  -1.0
       comp=Z,1.6nm,0.3s,baz=27,slow=8.1,SNR=4.7
BOSA                                 LR      LR      14 14 59.4
       comp=Z,502nm,21.5s,baz=26,slow=33
       comp=Z,1.6nm,0.3s
MORH   Mrgy, Hungar       49.45 325  P       P       13 56 48.4  -0.1
       comp=Z,7.5nm,1.2s
STHS   Stebnicka Huta     49.99 329 eP       P       13 56 51.1  -1.6
STHS   Stebnicka Huta     49.99 329 e        P       13 56 51.1  -1.6
VYHS   Vyhne              50.67 327 eP       P       13 56 58.2  +0.4
VYHS                                 pmax    pmax
       comp=Z,9.0nm,1.0s
VYHS   Vyhne              50.67 327 e        P       13 56 58.2  +0.4
VYHS   Vyhne              50.67 327 eP       P       13 57 04.5  +6.7
MNK    Minsk              50.69 338 i P      P       13 57 02.5  +4.7
       comp=E,15nm,0.7s
MNK                                 i P      P       13 57 02.5  +4.7
       comp=N,14nm,0.8s
MNK                                 i P      P       13 57 02.5  +4.7
       comp=Z,19nm,0.9s,baz=140
MNK                                 i PcP    PcP     13 58 20.0  +5.0
MNK                                 i PP     PP      13 58 58.5  +4.5
MNK                                 i PPP    PPP     13 59 54.8
MNK                                 i S      S       14 04 23.9   +12
MNK                                 i SS     SS      14 08 01.2   +15
MNK                                 i SSS    SSS     14 10 51.8
MNK                                 i LQ     LQ      14 14 58.4
MNK                                 i LRM    MLR     14 20 53.0
       comp=Z,246nm,17.6s
MNK                                 i LRM    MLR     14 21 11.5
       comp=N,227nm,17.3s
MNK    Minsk              50.69 338 i P      P       13 57 02.5  +4.7
MNK                                 i                13 58 19.9
MNK                                 i                13 58 58.5
MNK                                 i PPP    PPP     13 59 54.7
MNK                                 i S      S       14 04 23.8   +12
MNK                                  pmax    pmax
       comp=N,14nm,0.8s
MNK                                  pmax    pmax
       comp=E,15nm,0.7s
MNK                                  pmax    pmax
       comp=Z,19nm,0.9s
MNK                                  MLR     MLR
       comp=Z,246nm,18.0s
MNK                                  MLR     MLR
       comp=N,227nm,17.0s
MNK                                  MLR     MLR
       comp=E,258nm,18.0s
LANS   Liptovska Anna     50.73 328 eP       P       13 57 05.9  +7.6
LANS                                 pmax    pmax
       comp=Z,8.0nm,1.2s
LANS   Liptovska Anna     50.73 328 eP       P       13 57 05.9  +7.6
KEST   Kesra              51.10 308  LR      LR      14 19 11.6
       comp=Z,96nm,20.3s,baz=340,slow=37
OJC    Ojcow              51.22 329  P       P       13 57 01.3  -0.7
       comp=Z,8.2nm,1.0s
NACGM  Naroch             51.41 338 eP       P       13 57 04.5  +1.3
       comp=Z,21nm,1.1s,baz=139
MODS   Modra-Piesok       51.44 326 eP       P       13 57 10.5  +6.8
MODS   Modra-Piesok       51.44 326 eP       P       13 57 10.5  +6.8
JAVC   Velka Javorina     51.51 327 eP       P       13 57 04.4  +0.2
STEB   Steborice          52.09 328 eP       P       13 57 15.5  +7.1
MORC   Moravsky Berou     52.11 328  P       P       13 57 07.9  -0.8
MORC                                 IAmb    IAmb    13 57 16.8
       comp=Z,20nm,1.2s
MORC   Moravsky Berou     52.11 328 eP       P       13 57 08.4  -0.3
MORC   Moravsky Berou     52.11 328  P       P       13 57 07.9  -0.8
MORC                                 pmax    pmax
       comp=Z,20nm,1.2s
ENH    Enshi              52.13  59  P       P       13 57 12.8  +3.7
LEM    Lembang            52.16 106  LR      LR      14 14 59.6
       comp=Z,127nm,20.6s,baz=354,slow=31
KRUC   Moravsky           52.31 327 eP       P       13 57 10.1   0.0
VRAC   Vranov             52.34 327  LR      LR      14 21 12.6
       comp=Z,65nm,20.7s,baz=86,slow=38
VRAC   Vranov             52.34 327 eP       P       13 57 10.5  +0.1
XAN    Xi'an              52.54  54 ⇑P       P       13 57 11.9  -0.2
XAN                                  S       S       14 04 41.3  +3.2
XAN                                  pmax    pmax
       comp=Z,52nm,1.3s
XAN                                  pmax    pmax
       comp=Z,170nm,5.3s
XAN                                  LR      LR
       comp=Z,290nm,17.3s
XAN                                  LR      LR
       comp=Z,310nm,17.5s
XAN                                  LR      LR
       comp=Z,440nm,20.3s
KRLC   Kraliky            52.69 328 eP       P       13 57 20.0  +7.1
KRLC   Kraliky            52.69 328 eP       P       13 57 20.0  +7.1
KSM    Kuching            52.72  96  P       P       13 57 13.6  -0.1
KSM                                  IAmb    IAmb    13 57 22.3
       comp=Z,25nm,1.2s
KSM    Kuching            52.72  96  P       P       13 57 15.0  +1.3
DPC    Dobruska-Polom     53.09 328  P       P       13 57 15.2  -0.7
       comp=Z,13nm,1.4s
CHVC   Chvalec            53.36 328 eP       P       13 57 18.7  +0.8
CHVC   Chvalec            53.36 328 eP       P       13 57 18.7  +0.8
KSP    Ksiaz              53.38 328  P       P       13 57 17.5  -0.5
       comp=Z,10nm,1.3s
GERES  GERESS Array B     53.69 325  P       P       13 57 20.1  -0.3
       comp=Z,0.2nm,0.3s,baz=116,slow=6.7,SNR=7.5
GERES                                LR      LR      14 20 48.6
       comp=Z,57nm,21.9s,baz=104,slow=37
       comp=Z,0.2nm,0.3s
KHC    Kasperske Hory     53.91 325⇓eP       P       13 57 20.5  -1.4
KHC                                  pmax    pmax
       comp=Z,26nm,2.5s
KHC    Kasperske Hory     53.91 325  P       P       13 57 20.9  -1.0
       comp=Z,8.4nm,1.3s
BRG    Berggiesshubel     54.64 327 eP       P       13 57 27.0  -0.2
BRG                                  Amp             13 57 27.8
       comp=Z,4.4nm,1.1s
BRG    Berggiesshubel     54.64 327  P       P       13 57 33.4  +6.3
BRG                                  Amp             13 57 34.8
       comp=Z,11nm,1.3s
TORD   Torodi Ar. Bea     55.13 279  P       P       13 57 29.6  -1.6
TORD                                 IAmb    IAmb    13 57 41.1
       comp=Z,17nm,1.4s
TORD   Torodi Ar. Bea     55.13 279  P       P       13 57 32.3  +1.0
       comp=Z,3.7nm,1.0s,baz=82,slow=6.3,SNR=13
       comp=Z,3.7nm,1.0s
TUE    Stuetta            55.14 321  P       P       13 57 30.6  -0.5
       comp=Z,25nm,2.1s
BTO    Baotou             55.30  47 eP       P       13 57 32.6  +0.3
BTO                                  pmax    pmax
       comp=Z,18nm,0.5s
CLL    Collm              55.37 327  P       P       13 57 32.7  +0.3
       comp=Z,10nm,1.3s
CLL    Collm              55.37 327 i P      P       13 57 33.2  +0.8
       comp=Z,14nm,1.4s
CLL                                 i x      x       13 57 38.5
       comp=Z,21nm,1.5s
SONM   Songino Array      55.69  38  P       P       13 57 34.1  -0.9
SONM                                 IAmb    IAmb    13 57 43.8
       comp=Z,21nm,1.7s
SONM   Songino Array      55.69  38  P       P       13 57 34.6  -0.3
       comp=Z,1.4nm,0.6s,baz=233,slow=7.8,SNR=9.8
       comp=Z,1.4nm,0.6s
SONM   Songino Array      55.69  38  P       P       13 57 34.1  -0.9
SONM                                 pmax    pmax
       comp=Z,21nm,1.7s
ULN    Ulaanbaatar        56.10  38⇑eP       P       13 57 38.3  +0.4
ULN                                  pmax    pmax
       comp=Z,5.0nm,1.3s
WHN    Wuhan              56.31  60  P       P       13 57 39.5   0.0
WHN                                  sP      pP      13 57 45.9  +0.9
WHN                                  S       S       14 05 31.3  +2.5
HHC    Hu-ho-hao-te       56.49  47 eP       P       13 57 41.9  +1.1
HHC                                  sP      pP      13 57 49.3  +3.0
HHC                                  S       S       14 05 28.6  -2.6
HHC                                  sS      pS      14 05 39.3  +1.5
HHC                                  pmax    pmax
       comp=Z,14nm,0.7s
HHC                                  pmax    pmax
       comp=Z,100nm,3.9s
HHC                                  LR      LR
       comp=Z,160nm,16.8s
HHC                                  LR      LR
       comp=Z,490nm,16.8s
HHC                                  LR      LR
       comp=Z,630nm,16.0s
FINES  FINESS Array B     56.71 342  P       P       13 57 41.2  -0.6
       comp=Z,6.3nm,0.9s,baz=104,slow=8.0,SNR=5.5
       comp=Z,6.3nm,0.9s
FINES  FINESS Array B     56.71 342 i P      P       13 57 41.7  -0.1
FINES                                pmax    pmax
       comp=Z,3.0nm,0.7s
HNS    HongShan           57.93  52 ⇓P       P       13 57 51.0  +0.1
HNS                                  S       S       14 05 53.0  +3.1
HNS                                  pmax    pmax
       comp=Z,20nm,1.0s
HNS                                  LR      LR
       comp=Z,250nm,17.8s
HNS                                  LR      LR
       comp=Z,230nm,19.6s
HNS                                  LR      LR
       comp=Z,380nm,18.9s
BJI    Beijing            59.66  49  P       P       13 58 03.3  +0.5
BJI                                  pP      pP      13 58 07.3  -1.1
BJI                                  sP      sP      13 58 09.9  -0.7
BJI                                  S       S       14 06 10.4  -1.9
BJI                                  pmax    pmax
       comp=Z,7.0nm,1.3s
BJI                                  LR      LR
       comp=Z,160nm,17.4s
BJI                                  LR      LR
       comp=Z,79nm,17.8s
BJI                                  LR      LR
       comp=Z,160nm,17.4s
HFS    Hagfors            60.12 336  P       P       13 58 05.4  -0.2
       comp=Z,2.3nm,0.8s,baz=117,slow=5.2,SNR=4.7
HFS                                  LR      LR      14 26 37.7
       comp=Z,181nm,20.6s,baz=120,slow=38
       comp=Z,2.3nm,0.8s
CLF    Chambon-Foret      60.19 320  P       P       13 58 05.0  -1.3
NJ2    Nanjing            60.34  59 eP       P       13 58 07.3  -0.4
NJ2                                  pmax    pmax
       comp=Z,15nm,1.0s
XLT    XiLinHaoTe         60.57  45 eP       P       13 58 10.3  +1.1
XLT                                  sP      pP      13 58 16.6  +1.8
XLT                                  pmax    pmax
       comp=Z,16nm,1.0s
XLT                                  pmax    pmax
       comp=Z,120nm,3.6s
XLT                                  LR      LR
       comp=Z,270nm,18.8s
XLT                                  LR      LR
       comp=Z,420nm,20.5s
NOA    NORSAR Array B     61.64 336  LR      LR      14 27 34.2
       comp=Z,188nm,20.2s,baz=130,slow=38
TGY    Tagaytay City      61.68  79  LR      LR      14 22 18.1
       comp=Z,124nm,21.8s,baz=0.0,slow=34
MDT    Midelt             61.76 302  LR      LR      14 25 21.2
       comp=Z,87nm,20.8s,baz=60,slow=36
DBIC   Dimbokro           62.13 272  P       P       13 58 20.3  +0.2
       comp=Z,5.2nm,0.8s,baz=93,slow=7.0,SNR=5.4
DBIC                                 LR      LR      14 26 07.8
       comp=Z,84nm,18.2s,baz=68,slow=37
       comp=Z,5.2nm,0.8s
ESDC   Sonseca Array      62.30 310          P       13 58 20.6  -0.3
ESDC                                 IAmb    IAmb    13 58 29.0
       comp=Z,11nm,1.1s
ESDC   Sonseca Array      62.30 310  P       P       13 58 21.6  +0.6
       comp=Z,4.0nm,0.9s,baz=90,slow=5.7,SNR=13
ESDC                                 LR      LR      14 27 22.8
       comp=Z,21nm,18.3s,baz=130,slow=38
       comp=Z,4.0nm,0.9s
ARCES  ARCESS Array B     63.32 348  P       P       13 58 26.7  -0.3
       comp=Z,1.6nm,0.7s,baz=153,slow=6.8,SNR=5.7
       comp=Z,1.6nm,0.7s
KAPI   Kappang            63.32 101  LR      LR      14 22 35.6
       comp=Z,70nm,21.9s,baz=266,slow=33
DAV    Davao City (W)     66.90  86  LR      LR      14 25 36.2
       comp=Z,50nm,22.0s,baz=326,slow=34
CN2    Changchun          67.17  47  P       P       13 58 50.9  -1.6
CN2                                  pmax    pmax
       comp=Z,10.0nm,1.0s
CN2                                  LR      LR
       comp=Z,400nm,18.0s
CN2                                  LR      LR
       comp=Z,400nm,18.0s
CN2                                  LR      LR
       comp=Z,400nm,21.0s
TJN    Taejon             67.80  55⇑iP       P       13 58 55.7  -0.9
MORW   Morawa             67.97 127  P       P       13 59 05.0  +7.2
MBWA   Marble Bar         67.99 117  P       P       13 59 05.7  +7.6
KSAR   Wonju Array Be     68.29  54          P       13 58 58.5  -1.3
KSAR   Wonju Array Be     68.29  54  P       P       13 58 58.5  -1.3
KSRS   Korea Array        68.33  54  P       P       13 58 58.8  -1.1
       comp=Z,4.1nm,0.8s,baz=259,slow=7.0,SNR=14
       comp=Z,4.1nm,0.8s
SANI   Sanana             68.78  96  P       P       13 59 09.3  +6.1
SOEI   Soe                68.80 104  P       P       13 59 10.5  +7.1
BNX    BinXian            68.83  45 ⇑P       P       13 59 02.8  -0.1
BNX                                  PcP     PcP     13 59 28.4  +1.0
BNX                                  pmax    pmax
       comp=Z,9.0nm,1.3s
H01W3  Cape Leeuwin H     69.17 133  T       T       15 14 15.8
       baz=299,slow=75,SNR=4.8
H01W2  Cape Leeuwin H     69.18 133  T       T       15 14 13.2
       baz=299,slow=75,SNR=3.8
H01W1  Cape Leeuwin H     69.19 133  T       T       15 14 18.5
       baz=299,slow=75,SNR=5.8
TNTI   Ternate            69.62  93  P       P       13 59 14.8  +6.4
ZEA    Zeya               70.06  36 eP       P       13 59 11.5  +1.1
ZEA                                  pmax    pmax
       comp=Z,10.0nm,1.1s
MDJ    Mudanjiang         70.23  46  P       P       13 59 12.9  +1.3
MDJ                                  pmax    pmax
       comp=Z,13nm,1.6s
JNU    Nakatsue           70.54  58          P       13 59 12.9  -0.8
JNU    Nakatsue           70.54  58  LR      LR      14 32 26.7
       comp=Z,108nm,18.6s,baz=221,slow=38
JNU    Nakatsue           70.54  58  P       P       13 59 20.7  +6.9
SPITS  Spitsbergen Ar     71.61 352  LR      LR      14 35 54.2
       comp=Z,62nm,19.4s,baz=100,slow=40
USRK   Ussuriysk Ar.      71.91  47  LR      LR      14 31 44.8
       comp=Z,255nm,20.6s,baz=262,slow=37
KLR    Kul'dur            72.18  41  LR      LR      14 32 49.7
       comp=Z,371nm,20.3s,baz=262,slow=37
KLR    Kul'dur            72.18  41⇑eP       P       13 59 23.1  -0.2
KLR                                  pmax    pmax
       comp=Z,6.0nm,1.3s
FITZ   Fitzroy Crossi     72.31 113  LR      LR      14 25 43.1
       comp=Z,71nm,22.0s,baz=327,slow=31
YAK    Yakutsk            72.98  28          P       13 59 26.9  -0.8
YAK    Yakutsk            72.98  28  LR      LR      14 33 06.3
       comp=Z,172nm,20.3s,baz=244,slow=37
YAK    Yakutsk            72.98  28 eP       P       13 59 27.3  -0.5
YAK                                 e*PP     pP      13 59 32.1  -1.4
YAK                                 e                14 02 13.8
YAK                                 eS       S       14 08 55.7  +2.3
YAK                                 eSS      SS      14 13 36.7  +2.8
YAK                                  pmax    pmax
       comp=Z,20nm,1.0s
YAK                                  pmax    pmax
       comp=N,6.0nm,1.5s
YAK                                  pmax    pmax
       comp=E,11nm,1.3s
YAK                                  pmax    pmax
       comp=Z,8.0nm,0.8s
YAK                                  smax    smax
       comp=E,7.0nm,1.4s
YAK                                  smax    smax
       comp=N,70nm,4.4s
YAK                                  MLR     MLR
       comp=Z,155nm,20.0s
YAK                                  MLR     MLR
       comp=N,68nm,17.0s
YAK                                  MLR     MLR
       comp=E,85nm,18.0s
JMN    Monobe             73.05  58  P       P       13 59 35.2  +6.3
JMIC   Jan Mayen          73.32 342  LR      LR      14 35 08.1
       comp=E,49nm,18.7s,baz=208,slow=39
TIXI   Tiksi              74.91  18  LR      LR      14 34 26.2
       comp=E,301nm,21.8s,baz=264,slow=37
MJAR   Matsushiro Arr     76.54  55  P       P       13 59 48.8  -0.2
       comp=E,2.7nm,1.0s,baz=280,slow=7.8,SNR=6.4
MJAR                                 LR      LR      14 34 22.9
       comp=E,168nm,21.6s,baz=260,slow=36
       comp=E,2.7nm,1.0s
BORG   Borgarnes          76.72 334  LR      LR      14 36 01.3
       comp=E,80nm,21.8s,baz=96,slow=38
MAW    Mawson             77.16 178  P       P       13 59 50.5  -1.2
       comp=E,2.2nm,0.6s,baz=29,slow=10,SNR=4.0
MAW                                  LR      LR      14 28 41.0
       comp=E,94nm,18.4s,baz=352,slow=32
       comp=E,2.2nm,0.6s
SCO    Scoresbysund       77.55 340          P       13 59 54.4  +0.5
SCO                                  IAmb    IAmb    14 00 03.7
       comp=Z,16nm,1.3s
SCO    Scoresbysund       77.55 340  P       P       13 59 54.4  +0.5
SCO                                  pmax    pmax
       comp=Z,16nm,1.3s
TYV    Tymovskoe          79.26  40 eP       P       14 00 02.1  -1.7
TYV                                  pmax    pmax
       comp=Z,100nm,2.5s
TYV                                  pmax    pmax
       comp=Z,9.0nm,1.4s
YSS    Yuzhno-Sakhali     79.49  44 eP       P       14 00 02.1  -3.0
YSS                                  pmax    pmax
       comp=Z,20nm,1.0s
YSS                                  MLR     MLR
       comp=Z,200nm,13.0s
ASAJ   Asahikawa          79.54  47  LR      LR      14 36 18.2
       comp=Z,147nm,19.7s,baz=285,slow=36
SYO    Syowa Base         79.54 187⇑esP      sP      14 00 13.0   0.0
WRA    Warramunga Arr     80.73 112          P       14 00 10.9  -1.4
WRA    Warramunga Arr     80.73 112  P       P       14 00 11.2  -1.1
       comp=Z,4.7nm,1.0s,baz=294,slow=4.6,SNR=34
       comp=Z,4.7nm,1.0s
WRA    Warramunga Arr     80.73 112  P       P       14 00 10.9  -1.4
WRA                                  pmax    pmax
       comp=Z,3.0nm,1.4s
WRAB   Tennant Creek      80.74 112deP       P       14 00 12.4   0.0
WRAB                                 pmax    pmax
       comp=Z,11nm,1.0s
ASAR   Alice Springs      81.25 116  P       P       14 00 12.3  -2.8
ASAR   Alice Springs      81.25 116  P       P       14 00 13.8  -1.3
       comp=Z,4.3nm,0.7s,baz=289,slow=5.0,SNR=46
ASAR                                 LR      LR      14 33 46.7
       comp=Z,68nm,20.9s,baz=272,slow=34
       comp=Z,4.3nm,0.7s
ASAR   Alice Springs      81.25 116  P       P       14 00 12.3  -2.8
AS31   Alice Springs      81.25 116          P       14 00 10.9  -4.1
MA2    Magadan            83.18  31  LR      LR      14 40 11.1
       comp=Z,60nm,19.8s,baz=274,slow=38
SEY    Seymchan           83.49  27  LR      LR      14 39 40.5
       comp=Z,218nm,21.1s,baz=278,slow=37
SEY    Seymchan           83.49  27⇑eP       P       14 00 26.8  +0.8
SEY                                  pmax    pmax
       comp=Z,10.0nm,1.3s
GUMO   Guam               84.84  77  LR      LR      14 33 47.6
       comp=Z,46nm,20.7s,baz=284,slow=32
BILL   Bilibino           87.83  21          P       14 00 47.5  +0.1
BILL                                 IAmb    IAmb    14 00 55.9
       comp=Z,8.4nm,1.0s
BILL   Bilibino           87.83  21deP       P       14 00 47.5  +0.1
BILL                                 pmax    pmax
       comp=Z,5.0nm,1.0s
PETK   Petropavlovsk-     88.16  36  P       P       14 00 47.2  -2.1
       comp=Z,1.3nm,0.9s,baz=5.7,slow=2.9,SNR=3.7
PETK                                 LR      LR      14 42 57.6
       comp=Z,111nm,19.1s,baz=281,slow=37
       comp=Z,1.3nm,0.9s
SFJD   Kangerlussuaq      88.26 338  LR      LR      14 42 06.6
       comp=Z,80nm,21.6s,baz=48,slow=37
STKA   Stephens Creek     89.74 122  LR      LR      14 38 00.3
       comp=Z,82nm,18.4s,baz=217,slow=34
SNAA   Sanae              90.34 196  LR      LR      14 35 04.4
       comp=Z,85nm,18.6s,baz=93,slow=31
PMG    Port Moresby       90.82  99  LR      LR      14 42 07.8
       comp=Z,31nm,18.6s,baz=332,slow=36
RES    Resolute Bay       94.14 353  LR      LR      14 47 35.0
       comp=Z,58nm,20.0s,baz=17,slow=38
RCBR   Riachuelo          94.71 265  LR      LR      14 41 32.4
       comp=Z,58nm,19.7s,baz=76,slow=34
FRB    Frobisher Bay      96.37 339  LR      LR      14 47 10.1
       comp=Z,73nm,21.8s,baz=20,slow=37
SHEM   Shemya Is, Ala     97.59  33  LR      LR      14 47 40.4
       comp=Z,150nm,21.7s,baz=304,slow=37
QSPA   South Pole Qui     99.61 180  LR      LR      14 42 15.0
       comp=Z,174nm,18.7s,baz=255,slow=33
ILAR   Eielson Array     103.46  11  PP      PP      14 06 14.2  +0.3
       comp=Z,0.7nm,1.0s,baz=340,slow=6.1,SNR=4.5
DZM    Mont Dzumac       110.67 110 eLR      LR      14 39 11.5
       comp=Z,70nm,22.5s
PTGB   Pitanga           112.07 247 eP       Pdif    14 02 47.2  +9.2
PDAR   Pinedale Array    126.57 349  PKP     PKPdf   14 07 02.4   0.0
       comp=Z,1.2nm,0.6s,baz=45,slow=2.3,SNR=11
NVAR   Mina Array Bea    132.01 356  PKP     PKPdf   14 07 13.2  +0.4
       comp=Z,0.8nm,0.7s,baz=30,slow=2.2,SNR=6.2
TXAR   Lajitas Array     137.34 336  PKP     PKPdf   14 07 23.4  +0.6
       comp=Z,1.4nm,0.9s,baz=54,slow=0.6,SNR=8.5
PPT2   Papeete2          152.18 109 eLR      LR      14 58 28.4
       comp=Z,68nm,25.0s
PPT2                                eLR      LR      14 58 30.2
       comp=Z,112nm,30.2s
TAOE   Nuku Hiva Isla    162.16  89 eLR      LR      15 03 13.1
       comp=Z,79nm,26.7s
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ISN ***13*** *13:56:51.2±1.2, 33.°78N×45.°92E, h19km±999km, ML3.2*
TEH ***13*** *13:56:57.5, 33.°76N×45.°92E, h10km±88km*
ISC 13 13:56:55.1±0.9**, 33.°70N**±0.°04×**45.°76E**±0.°06**, h10km, n11,**
σ**1.s03**/14**, Iran-Iraq border region**

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Code   Station Name        Δ°   AZ°    Phase ID            Time      Res
                                       Op      ISC         h  m  s   ISC
ILBA   Ilam Banvizeh       0.38 101    Pg      Pg       13 57 03.1  +0.4
GLG1   Gilan-e-Gharb       0.43  17    Pg      Pg       13 57 03.8  +0.2
GLG1                                   Sg      Sg       13 57 10.4  +1.0
KGS1   Ghasr-e-Shirin      0.81 350    Pg      Pb       13 57 13.7  +2.3
IGHG   Ghaleghazi          0.92  47    Pg      Pb       13 57 13.3   0.0
IDHR   Dehrash             1.12  27    Pg      Pb       13 57 17.4  +0.6
BHD    Baghdad             1.23 250   ePg      Pn       13 57 17.0  -1.3
BHD                                   eSg      Sb       13 57 34.0  -0.3
ILIN   Lien                1.57  39    Pg      Pg       13 57 25.0  -0.2
IKFM   Kafar-mosalman      1.75  95    Pg      Pg       13 57 29.1  +0.4
SNQR   Sonqor, Kerman      1.93  53    Pg      Pg       13 57 31.7  -0.5
RAFI   Al-Rafai            2.00 171   ePg      Pn       13 57 28.0  -0.8
RAFI                                  eSg      Sn       13 57 54.0  +0.1
IKRK   Kirkuk              2.06 326   ePg      Pn       13 57 28.0  -1.8
IKRK                                  eSg      Sn       13 57 55.0  -0.5
IKRK                                   AML     AML      13 58 07.2
       comp=N,256nm,0.5s
IKRK                                   AML     AML      13 58 11.2
       comp=E,203nm,0.5s
```

IDC ***13*** *14:14:55.4±8.3, 7.°58S×128.°65E, h152km±88km, mb3.3/2, mbtmp3.7/6, Error ellipse: s-maj=81.2km s-min=24.1km az=36.0*
ISC 13 14:14:55.6±1.4**, 7.°79S**±0.°10×**128.°7E**±0.°1**, h150km, n6,**

σ2^{s}.70/10, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	5.55	244	P	Pn	14 16 17.4	+1.1
	32nm,0.3s,baz=70,slow=5.3,SNR=9.7						
BATI				S	Sn	14 17 20.4	+0.9
	36nm,0.4s,baz=64,slow=20,SNR=12						
FITZ	Fitzroy Crossi	10.68	196	P	Pn	14 17 25.6	+1.0
	0.8nm,0.2s,baz=18,slow=11,SNR=17						
FITZ				S	Sn	14 19 17.9	-4.9
	3.6nm,0.3s,baz=130,slow=20,SNR=7.8						
WRA	Warramunga Arr	13.25	156	P	Pn	14 17 59.6	+1.5
	0.2nm,0.4s,baz=335,slow=12,SNR=8.3						
WRA				S	Sn	14 20 24.1	-0.7
	1.2nm,0.4s,baz=338,slow=22,SNR=8.7						
ASAR	Alice Springs	16.55	163	P	Pn	14 18 43.0	+3.9
	0.4nm,0.7s,baz=341,slow=10.0,SNR=14						
ASAR				S	S	14 21 42.4	-0.8
	0.5nm,0.5s,baz=318,slow=20,SNR=6.3						
MKAR	Makanchi Array	68.20	328	P	P	14 25 38.1	-1.7
	0.6nm,0.6s,baz=123,slow=8.1,SNR=7.7						
	0.6nm,0.6s						
KURBB	Kurchatov Arra	72.53	329	P	P	14 26 04.3	-1.7
	0.4nm,0.5s,baz=127,slow=5.0,SNR=6.5						
	0.4nm,0.5s						

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*TEH **13** 14:30:42.4, 34°.52N×45°.48E, h20^{km}±35^{km}*

*ISN **13** 14:30:46.6±1.8, 34°.54N×45°.23E, h38^{km}±38^{km}, ML2.7*

ISC 13 14:30:43.3±1.1, **34°.54N**±0°.07×**45°.55E**±0°.05, **h18**^{km}±5^{km}, **n7**, **σ0^{s}.47**/10, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KGS1	Ghasr-e-Shirin	0.05	132	Pg	Pg	14 30 46.5	-0.1
KGS1				Sg	Sg	14 30 49.2	+0.3
GLG1	Gilan-e-Gharb	0.52	144	Pg	Pg	14 30 53.1	-0.7
IDHR	Dehrash	0.71	77	Pg	Pg	14 30 57.1	-0.3
IGHG	Ghaleghazi	0.87	104	Pg	Pb	14 30 59.8	-0.2
KCHF	Cheshme Sefid,	1.26	102	Pg	Pg	14 31 08.0	+0.2
IKRK	Kirkuk	1.31	311	*e*Pg	Pb	14 31 07.0	-0.4
	baz=140						
IKRK				*e*Sg	Sb	14 31 24.0	+0.1
IKRK				AML	AML	14 31 33.9	
	comp=N,165nm,0.2s						
IKRK				AML	AML	14 31 34.6	
	comp=E,150nm,0.8s						
BHD	Baghdad	1.59	218	*e*Pn	Pn	14 31 11.0	+0.4
BHD				*e*Sn	Sn	14 31 31.0	+0.3

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*IDC **13** 14:39:37.3±1.1, 9°.53N×58°.14E, h0^{km}, mb3.7/9, mbtmp3.7/9, MS3.4/8, Error ellipse: s-maj=31.1km s-min=24.8km az=27.0*

ISC 13 14:39:40.1±1.2, **9°.6N**±0°.3×**58°.2E**±0°.2, **h17**^{km}, **n17**, **σ0^{s}.54**/10, **mb3.7**/8, **MS3.3**/8, **Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GNI	Garni	32.71	341	LR	LR	15 00 50.1	
	comp=Z,53nm,18.3s,baz=124,slow=39						
AAK	Ala-Archa	35.92	21	LR	LR	15 02 37.8	
	comp=Z,50nm,18.1s,baz=201,slow=38						
KBZ	Khabaz	36.53	341	LR	LR	15 04 08.9	
	comp=Z,28nm,19.7s,baz=48,slow=40						
CMAR	Chiang Mai Arr	40.47	73	P	P	14 47 18.2	-0.1
	0.8nm,0.8s,baz=231,slow=8.2,SNR=4.7						
	0.8nm,0.8s						
MKAR	Makanchi Array	42.41	25	P	P	14 47 33.8	0.0
	0.2nm,0.5s,baz=215,slow=8.4,SNR=2.3						
MKAR				LR	LR	15 08 13.2	
	comp=Z,40nm,18.4s,baz=198,slow=40						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	44.26	19	P	P	14 47 49.3	+0.7
	0.5nm,0.8s,baz=214,slow=8.0,SNR=3.5						
	0.5nm,0.8s						
BVAR	Borovoye Array	44.45	11	P	P	14 47 50.2	+0.1
	0.7nm,0.6s,baz=182,slow=8.1,SNR=3.1						
	0.7nm,0.6s						
AKASG	Malin Array Be	47.44	335	LR	LR	15 10 01.6	
	comp=Z,22nm,20.2s,baz=64,slow=38						
ZALV	Zalesovo Beam	49.14	21	P	P	14 48 26.9	+0.1
	0.8nm,0.5s,baz=205,slow=6.1,SNR=3.9						
	0.8nm,0.5s						
BOSA	Boshof	49.50	219	LR	LR	15 06 06.1	
	comp=Z,44nm,21.7s,baz=16,slow=32						
TORD	Torodi Ar. Bea	55.38	279	P	P	14 49 14.5	+0.7
	0.9nm,0.5s,baz=78,slow=8.1,SNR=2.0						
	0.9nm,0.5s						
ESDC	Sonseca Array	62.55	310	P	P	14 50 02.5	-0.8
	0.9nm,0.9s,baz=90,slow=6.2,SNR=5.0						
	0.9nm,0.9s						
MJAR	Matsushiro Arr	76.41	55	LR	LR	15 25 46.3	
	comp=Z,87nm,21.5s,baz=220,slow=36						
ASAJ	Asahikawa	79.44	47	LR	LR	15 29 06.8	
	comp=Z,52nm,19.2s,baz=226,slow=37						
WRA	Warramunga Arr	80.47	112	P	P	14 51 51.9	+0.2
	0.9nm,1.0s,baz=292,slow=4.8,SNR=5.4						
	0.9nm,1.0s						
ASAR	Alice Springs	80.99	116	P	P	14 51 54.4	0.0
	0.7nm,0.7s,baz=294,slow=5.0,SNR=11						
	0.7nm,0.7s						
PDAR	Pinedale Array	126.72	349	PKP	PKiKP	14 58 43.3	-0.6
	0.3nm,0.4s,baz=5.2,slow=4.2,SNR=4.0						

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*ATH **13** 14:41:50.2, 37°.96N×21°.73E, h23^{km}±1^{km}, ML3.5/36, Manual Solution by A.Andreou First location: 2019/06/13 14:42:40, This location: 2019/06/13 18:58:53 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

*THE **13** 14:41:50.9, 38°.0N±0°.9×2°2E±°, h20^{km}, M3.4/42, MLh3.4/42*

ISC 13 14:41:50.6±0.9, **37°.97N**±0°.02×**21°.72E**±0°.02, **h24**^{km}±4^{km}, **n99**, **σ0^{s}.67**/135, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRO	Drossia	0.02	221	P	Pb	14 41 54.3	-0.6
DRO				S	Sb	14 41 57.5	-0.2
DRO	Drossia	0.02	221	P	Pb	14 41 54.2	-0.6
DRO				S	Sb	14 41 57.5	-0.2
RLS	Riolos of Patr	0.22	295	P	Pb	14 41 56.1	-0.5
RLS				S	Sb	14 42 01.1	+0.5
RLS	Riolos of Patr	0.22	295	P	Pb	14 41 56.0	-0.5
RLS				S	Sb	14 42 00.9	+0.3
PATG	Patra B	0.27	0	P	Pb	14 41 57.2	0.0
PATC	Patra C	0.30	5	P	Pb	14 41 57.5	-0.2
PATC				S	Sn	14 42 03.9	-1.4
UPR	University Cam	0.32	9	P	Pb	14 41 57.7	-0.2
UPR	University Cam	0.32	9	P	Pb	14 41 57.5	-0.4
UPR				S	Sb	14 42 03.1	+0.2
YRMI	Loutra Irminis	0.33	295	P	Pb	14 41 57.5	-0.5
YRMI				S	Sb	14 42 02.5	-0.5
ANDM	Andravida	0.36	273	P	Pb	14 41 58.4	0.0
ANDM	Andravida	0.36	273	P	Pb	14 41 58.5	0.0
AXS	Araxos	0.36	310	P	Pb	14 41 57.8	-0.7
AXS				S	Sb	14 42 04.3	+0.5
AXS	Araxos	0.36	310	P	Pb	14 41 57.8	-0.7
AXS				S	Sb	14 42 04.5	+0.6
LCHA	Lechaina	0.36	266	P	Pb	14 41 58.8	+0.2
KRES	Krestena	0.38	192	P	Pb	14 41 58.9	+0.2
KRES				S	Sn	14 42 06.2	-0.9
KRES	Krestena	0.38	192	P	Pb	14 41 59.0	+0.2
AMT	Artemida-Makis	0.43	182	P	Pb	14 41 59.0	-0.7
AMT				S	Sb	14 42 05.5	-0.4
KTLO	Katakolo	0.45	225	P	Pb	14 42 00.0	0.0
KTLO	Katakolo	0.45	225	P	Pb	14 41 59.9	-0.1
CLEM	Kyllini,Ilia,G	0.47	261	P	Pb	14 41 60.0	-0.4
CLEM				S	Sb	14 42 08.0	+1.0
ZARO	Zacharo	0.48	187	P	Pb	14 42 00.0	-0.5
ZARO				S	Sb	14 42 08.3	+1.2
EFP	Efpalio	0.48	17	P	Pb	14 41 59.8	-0.8
EFP	Efpalio	0.48	17	P	Pb	14 41 59.8	-0.8
EFP				S	Sb	14 42 06.8	-0.5
GUR	Goura	0.49	93	P	Pb	14 41 59.4	-1.3
GUR	Goura	0.49	93	P	Pb	14 41 59.4	-1.3
GUR				S	Sb	14 42 06.9	-0.7
SERG	Sergoula	0.52	30	P	Pb	14 42 00.3	-0.9
SERG	Sergoula	0.52	30	P	Pb	14 42 00.5	-0.6
SERG				S	Sb	14 42 08.6	+0.2
KALE	Kalithea	0.54	37	P	Pb	14 42 00.6	-0.9
KALE	Kalithea	0.54	37	P	Pb	14 42 00.8	-0.7
KALE				S	Sb	14 42 08.5	-0.4
ANX	Ano Chora	0.65	14	P	Pb	14 42 02.4	-0.9
ANX				S	Sb	14 42 12.8	+0.8
ANX	Ano Chora	0.65	14	P	Pb	14 42 02.7	-0.7
ANX				S	Sb	14 42 12.8	+0.8
PVO	Paravola	0.67	347	P	Pb	14 42 03.0	-0.7
PVO	Paravola	0.67	347	P	Pb	14 42 03.1	-0.6
PVO				S	Sb	14 42 12.7	+0.1
LTHK	Lithakia	0.75	250	P	Pb	14 42 04.2	-0.7
LTHK	Lithakia	0.75	250	P	Pb	14 42 04.3	-0.7
RTZL	Ratzakli, Kefa	0.76	279	P	Pb	14 42 04.4	-0.8
VLX	Vlachokerasia	0.79	139	P	Pb	14 42 04.7	-1.1
VLX				S	Sb	14 42 16.5	+0.4
DLFA	Delphi	0.80	50	P	Pb	14 42 04.7	-1.1
DLFA				S	Sb	14 42 16.5	+0.3
ITM	Ithomi	0.80	168	P	Pb	14 42 04.8	-1.1
ITM				S	Sn	14 42 17.6	+0.1
ITM	Ithomi	0.80	168	P	Pb	14 42 04.9	-1.0
ITM				S	Sb	14 42 16.9	+0.5
KIAA	Kiato	0.81	86	P	Pb	14 42 05.7	-0.3
SMHA	Samh	0.90	289	P	Pb	14 42 06.0	-1.5
SMHA				S	Sn	14 42 19.5	-0.3
PSDA	Pessada-Kefalo	0.91	280	P	Pb	14 42 06.6	-1.2
PSDA	Pessada-Kefalo	0.91	280	P	Pb	14 42 06.9	-0.9
VLS	Valsamata	0.92	284	P	Pb	14 42 06.6	-1.3
VLS	Valsamata	0.92	284	P	Pb	14 42 06.9	-1.1
VLS				S	Sn	14 42 20.3	-0.2
EVR	Evrytania	0.95	4	P	Pn	14 42 08.6	+0.1
EVR	Evrytania	0.95	4	P	Pn	14 42 08.8	+0.2
EVR				S	Sn	14 42 22.0	+0.5
LTK	Loutraki	0.98	86	P	Pb	14 42 08.1	-0.9
LTK	Loutraki	0.98	86	P	Pb	14 42 08.3	-0.7
LTK				S	Sb	14 42 21.0	-0.6
LOUT	Loutraki	0.99	88	P	Pb	14 42 08.9	-0.2
LOUT				S	Sb	14 42 21.7	0.0
AMPL	Ampelaki	1.04	337	P	Pb	14 42 09.1	-0.8
FSK	Fiskardo	1.04	299	P	Pb	14 42 09.0	-1.0
FSK				S	Sn	14 42 25.4	+2.0
FSK	Fiskardo	1.04	299	P	Pb	14 42 09.1	-0.9
PYL2	Kinigos	1.06	180	P	Pn	14 42 10.0	+0.1
EVGI	Lefkada island	1.07	308	P	Pn	14 42 09.3	-0.7
EVGI	Lefkada island	1.07	308	P	Pn	14 42 09.8	-0.2
EVGI				S	Sn	14 42 25.2	+1.1
PYL	PYLOS	1.07	179	P	Pn	14 42 09.6	-0.4
PYL	PYLOS	1.07	179	P	Pn	14 42 09.6	-0.4
PYL				S	Sn	14 42 24.5	+0.4
AXAR	Agios Charalam	1.09	42	P	Pn	14 42 10.2	-0.2
AXAR				S	Sn	14 42 26.4	+1.8
AXAR	Agios Charalam	1.09	42	P	Pn	14 42 10.6	+0.2
MAKR	Makrakomi, Fth	1.09	17	P	Pn	14 42 10.6	+0.1
MAKR				S	Sn	14 42 25.0	+0.2
MAKR	Makrakomi, Fth	1.09	17	P	Pn	14 42 10.5	+0.1
MAKR				S	Sn	14 42 26.4	+1.6
DMLN	Damoulianata-K	1.10	285	P	Pn	14 42 10.2	-0.3
DMLN	Damoulianata-K	1.10	285	P	Pn	14 42 10.2	-0.3
NYDR	Nydri-Lefkada	1.10	313	P	Pn	14 42 09.7	-0.7
NYDR	Nydri-Lefkada	1.10	313	P	Pn	14 42 09.8	-0.6
MTHA	Methoni	1.14	181	P	Pb	14 42 12.1	+0.4
AGG	Agios Georgios	1.16	24	P	Pn	14 42 11.2	-0.1
AGG				S	Sn	14 42 27.6	+1.2
AGG	Agios Georgios	1.16	24	P	Pb	14 42 12.1	+0.1
LKD2	Lefkada island	1.17	315	P	Pn	14 42 11.3	-0.2
LKD2	Lefkada island	1.17	315	P	Pn	14 42 11.4	-0.2
TSLK	Tsoukalades, L	1.20	316	P	Pn	14 42 11.9	0.0
TSLK	Tsoukalades, L	1.20	316	P	Pb	14 42 12.3	-0.4
LKR	Lokris	1.21	55	P	Pn	14 42 12.1	0.0
LKR	Lokris	1.21	55	P	Pn	14 42 12.0	-0.1
VIL2	Platees	1.24	78	P	Pn	14 42 13.0	+0.5
VILL	Villia	1.27	81	P	Pn	14 42 13.1	+0.2
MET5	Makryloggos,Me	1.34	104	P	Pb	14 42 15.2	+0.1
MET6	Megalochori,Me	1.35	106	P	Pb	14 42 15.4	+0.3
MET4	Agioi Theodoro	1.37	104	P	Pn	14 42 13.9	-0.3
TETR	Tetrakomo, Epi	1.42	346	P	Pn	14 42 14.9	-0.1
VLI	Veliai	1.58	142	P	Pb	14 42 18.9	-0.2
THL	Klokotos Trika	1.61	8	P	Pn	14 42 17.5	0.0
ATHP	Athens-Neo Psi	1.62	88	P	Pn	14 42 17.6	0.0
ATHU	Athens Univers	1.63	89	P	Pn	14 42 18.3	+0.5
ATHU	Athens Univers	1.63	89	P	Pn	14 42 18.2	+0.5
PTL	Penteli	1.69	87	P	Pn	14 42 18.8	+0.1
PTL	Penteli	1.69	87	P	Pn	14 42 18.7	+0.1
NEO	Neokhori	1.78	41	P	Pn	14 42 20.0	+0.1
TYRN	Tyrnavos	1.79	13	P	Pn	14 42 20.1	+0.1
IGT	Igoumenitsa	1.91	326	P	Pn	14 42 21.4	-0.2
KYMI	Kymi, Euboea I	1.98	70	P	Pn	14 42 22.6	-0.1
KYMI	Kymi, Euboea I	1.98	70	P	Pn	14 42 22.5	-0.1
AOS	Alonnisos	2.07	54	P	Pn	14 42 23.2	-0.7
PLG	Polygyros	2.75	29	P	Pn	14 42 32.9	-0.3
HORT	Hortiatis	2.84	22	P	Pn	14 42 34.9	+0.4
CHOS	Chios island	3.44	82	P	Pn	14 42 43.4	+0.6
SIGR	SIGRI	3.47	68	P	Pn	14 42 43.5	+0.4

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*AFAD **13** 14:51:38.7, 38°.02N×42°.60E, h7^{km}±1^{km}, ML2.4*

*ISK **13** 14:51:38.4, 38°.05N×42°.60E, h8^{km}, ML2.6/7*

ISC 13 14:51:38.6±0.9, **38°.04N**±0°.03×**42°.60E**±0°.03, **h9**^{km}±7^{km}, **n17**, **σ0^{s}.43**/28, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PERV	Siirt/Pervari-	0.10	206	P	Pg	14 51 41.0	-0.2
PERV				S	Sg	14 51 43.2	+0.2
AKDM	Akdamar-Van	0.42	46	Pg	Pg	14 51 47.1	+0.2
AKDM				Sg	Sg	14 51 52.9	+0.4
GEVA	Gevas	0.46	53	P	Pg	14 51 48.0	+0.5
GEVA				S	Sg	14 51 53.7	+0.1
GEVA				*i* IAML		14 51 56.0	
	comp=E,640nm,0.5s						
GEVA				*i* IAML		14 52 01.0	
	comp=N,402nm,0.5s						
SRTM	Siirt_Merkez	0.53	265	P	Pb	14 51 49.8	-0.5
SRTM				S	Sb	14 51 57.5	-0.6
SRTM				*i* IAML		14 51 59.0	
	comp=N,439nm,0.9s						
SRTM				*i* IAML		14 52 00.0	
	comp=E,329nm,0.6s						
BLIS	Bitlis-Merkez	0.54	315	P	Pg	14 51 49.1	0.0
BLIS				S	Sb	14 51 57.7	-0.5
BLIS				*i* IAML		14 51 59.0	
	comp=E,178nm,0.3s						
BLIS				*i* IAML		14 52 00.0	
	comp=N,205nm,0.6s						
GURO	Guroymak-BITLI	0.68	319	Pg	Pg	14 51 51.6	-0.2
GURO				Sg	Sb	14 52 01.7	-0.7
ADCV	BITLIS_Adilcev	0.78	7	P	Pb	14 51 54.2	-0.2
ADCV				S	Sb	14 52 05.2	-0.1
ADCV				*i* IAML		14 52 07.0	
	comp=E,125nm,0.2s						
ADCV				*i* IAML		14 52 08.0	
	comp=N,191nm,0.3s						
TVAN	Van	0.81	52	P	Pb	14 51 55.3	+0.4
TVAN				S	Sn	14 52 08.8	+0.1
VANB	Van	0.84	48	Pg	Pg	14 51 53.8	-1.0
HAKT	HAKKARI	1.00	118	P	Pn	14 51 58.8	-0.3
HAKT				S	Sn	14 52 13.8	+0.3
BTMN	Batman	1.06	263	P	Pn	14 52 00.3	+0.5
BTMN				S	Sn	14 52 15.0	+0.3
MUSM	Mu-Merkez	1.09	309	P	Pn	14 52 00.3	0.0
MUSM				S	Sn	14 52 15.8	+0.1
SVAN	Silvan-Diyarba	1.11	276	Pn	Pg	14 52 00.0	+0.1
CUKT	Cukurca	1.12	134	Pn	Pb	14 52 00.3	0.0
MIDY	Mardin/Midyat-	1.14	237	P	Pn	14 52 01.4	+0.5
AGRB	Hanur-Agry	1.57	11	Pn	Pn	14 52 06.9	0.0
BNGB	Bingl	1.78	303	Pn	Pn	14 52 10.5	+0.8

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*NEIC **13** 14:55:14.5±0.9, 19°.65N±0°.03×156°.48W±0°.05, h23^{km}±3^{km}, Error ellipse: s-maj=6.5km s-min=3.8km az=67.0*

HVO 13 14:55:17.7±0.7, **19°.66N**±0°.03×**156°.44W**±0°.05, **h34**^{km}±7^{km}, **ML3.0**/35, **ML2.9**/50(NEIC), **Error ellipse: s-maj=6.9km s-min=4.0km az=65.0**, **Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKH	Kailua Kona	0.40	90		Pb	14 55 26.0	-0.9
KKH					Sb	14 55 31.7	-1.5
CPH	Captain Cook	0.52	109		Pb	14 55 27.1	-1.6
HUH	Hualalai	0.57	87		Pn	14 55 27.8	-1.9
HUH					Sb	14 55 35.7	-2.3
HUH	Hualalai	0.57	87	IAML		14 55 38.9	
	comp=E,824nm,0.3s						
HUH				IAML		14 55 40.1	
	comp=N,918nm,0.2s						
MHA	Mahukona	0.73	44		Pn	14 55 30.2	-1.5
MHA	Mahukona	0.73	44		Sn	14 55 39.2	-2.5
ALEP	Alea Permanent	0.76	99		Pn	14 55 30.6	-1.8
ALEP					Sn	14 55 40.4	-2.5
HPAH	Hawaii Prepara	0.79	62		Pn	14 55 30.5	-2.1
HPAH					Sn	14 55 39.8	-3.6
HPAH	Hawaii Prepara	0.79	62	IAML		14 55 40.4	
	comp=N,404nm,0.2s						
HPAH				IAML		14 55 40.5	
	comp=E,482nm,0.5s						
MWH	Mokuaweoweo	0.82	102		Pn	14 55 31.0	-2.3
MWH					Sn	14 55 41.1	-3.4
POHA	Pohakuloa	0.86	83		Pn	14 55 31.7	-2.0
POHA	Pohakuloa	0.86	83	Pg	Pn	14 55 31.9	-1.8
POHA				IAML		14 55 43.6	
	comp=E,196nm,0.5s						
POHA				IAML		14 55 53.9	
	comp=E,205nm,0.4s						
POHA	Pohakuloa	0.86	83		Sn	14 55 41.7	-3.6
KHU	Kahuku	0.88	118		Pn	14 55 31.6	-2.3
KHU					Sn	14 55 42.5	-3.2
KHU	Kahuku	0.88	118	IAML		14 55 51.7	
	comp=E,352nm,2.7s						
HMH	Humu‘ula Sheep	0.91	93		Pn	14 55 32.6	-1.7
HMH					Sn	14 55 43.2	-3.2
HMH	Humu‘ula Sheep	0.91	93	IAML		14 55 44.9	
	comp=N,346nm,0.2s						
HMH				IAML		14 55 52.2	
	comp=E,276nm,0.9s						
AIN	Ainahou	0.97	107		Pn	14 55 32.9	-2.2
AIN					Sn	14 55 44.3	-3.6
AIN	Ainahou	0.97	107	IAML		14 55 54.6	
	comp=E,264nm,0.4s						
AIN				IAML		14 56 05.6	
	comp=N,358nm,3.9s						
MLH	Mauna Loa	1.01	99		Pn	14 55 33.9	-1.9
MLH	Mauna Loa	1.01	99		Sn	14 55 45.8	-3.1
HTC	Hot Caves	1.07	113		Pn	14 55 34.1	-2.2
WRMHI	West Rim	1.11	103		Pn	14 55 34.6	-2.3
WRMHI					Sn	14 55 47.5	-3.7
HLK	Haleakala	1.11	10		Sn	14 55 47.3	-4.1
HLK	Haleakala	1.11	10		Pn	14 55 35.0	-2.2
HLK	Haleakala	1.11	10	IAML		14 55 43.6	
	comp=N,244nm,3.3s						
HLK				IAML		14 55 44.6	
	comp=E,181nm,4.1s						
UWE	Uwekahuna	1.11	102		Pn	14 55 34.8	-2.2
UWE					Sn	14 55 47.9	-3.3
RSD	Rainshed	1.12	100		Pn	14 55 35.0	-2.1
SDHHI	Sand Hill	1.12	104		Pn	14 55 34.8	-2.3
SDHHI					Sn	14 55 47.5	-3.8
OBL	Observatory Le	1.12	102		Pn	14 55 34.9	-2.2
OBL					Sn	14 55 47.8	-3.6
UWB	Uwekahuna Bluf	1.12	102		Pn	14 55 34.9	-2.3
UWB					Sn	14 55 47.9	-3.7
HLP	Hilina Pali	1.13	108		Pn	14 55 35.1	-2.1
HLP					Sn	14 55 48.2	-3.4
HLP	Hilina Pali	1.13	108	IAML		14 55 55.5	
	comp=N,372nm,1.6s						
SBLHI	Steaming Bluff	1.13	102		Pn	14 55 35.0	-2.3
SBLHI					Sn	14 55 47.9	-3.9
RIM	Rim	1.13	103		Pn	14 55 34.9	-2.4
RIM					Sn	14 55 48.3	-3.5
HATHI	Halema‘uma‘u T	1.14	102		Pn	14 55 34.9	-2.5
HATHI					Sn	14 55 48.1	-3.8
HATHI	Halema‘uma‘u T	1.14	102	IAML		14 56 09.8	
	comp=E,233nm,0.9s						
HATHI				IAML		14 56 21.2	
	comp=N,221nm,1.2s						
KKO	Keanakako'i	1.14	103		Pn	14 55 35.1	-2.3
KKO					Sn	14 55 48.2	-3.8
BYL	Byron's Ledge	1.14	102		Pn	14 55 35.1	-2.3
BYL				IAML		14 55 57.9	
	comp=E,236nm,1.1s						
BYL	Byron's Ledge	1.14	102		Sn	14 55 48.1	-3.9
PUH	Pauahi	1.19	104		Pn	14 55 35.5	-2.6
PUH					Sn	14 55 48.9	-4.3
PUH	Pauahi	1.19	104	IAML		14 56 04.3	
	comp=N,206nm,1.6s						
KHLH	Kahului Airpor	1.23	1		Pn	14 55 36.9	-1.7
KHLH					Sn	14 55 50.7	-3.3
KNHH	Kane Nui o Ham	1.23	103		Pn	14 55 36.4	-2.3
STCH	Steam Cracks	1.27	102		Pn	14 55 36.6	-2.6
STCH					Sn	14 55 51.1	-4.1
STCH	Steam Cracks	1.27	102	IAML		14 55 51.4	
	comp=N,206nm,0.5s						
STCH				IAML		14 55 54.3	
	comp=E,236nm,1.9s						
NPOC	North of Pu‘u	1.29	102		Pn	14 55 36.9	-2.5
NPOC					Sn	14 55 51.3	-4.2
JCUZ	Jacuzzi	1.29	102		Pn	14 55 37.1	-2.4
JCUZ					Sn	14 55 51.5	-4.2
JOKA	Jonika Flow	1.38	99		Pn	14 55 38.0	-2.6
JOKA					Sn	14 55 53.5	-4.2
JOKA	Jonika Flow	1.38	99	IAML		14 55 54.2	
	comp=E,166nm,0.5s						
JOKA				IAML		14 56 07.2	
	comp=N,198nm,1.6s						
WMR	Waimanalo Ridg	2.02	325		Pn	14 55 47.0	-2.4
WMR					Sn	14 56 08.8	-4.7
HON	Honolulu	2.21	319		Pn	14 55 48.7	-3.3
HON					Sn	14 56 13.6	-4.5
KIP	Kipapa	2.29	320		Pn	14 55 50.8	-2.3
KIP					Sn	14 56 15.1	-5.0
KIP	Kipapa	2.29	320	IAML		14 56 39.3	
	comp=N,108nm,4.1s						
KIP				IAML		14 56 44.4	
	comp=N,94nm,3.5s						
OPA	Opana	2.50	324		Pn	14 55 53.7	-2.2
OPA					Sn	14 56 20.2	-5.0
KEKH	Kekaha	3.83	308		Pn	14 56 11.6	-2.7
KEKH					Sn	14 56 50.7	-7.5

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*NEIC **13** 15:08:14.5±2.2, 7°.33N±0°.02×127°.13E±0°.07, h10^{km}±1^{km}, mb4.4/18, Error ellipse: s-maj=11.7km s-min=4.3km az=86.0*

*IDC **13** 15:08:17.6±3.0, 7°.42N×127°.32E, h38^{km}±26^{km}, mb3.6/10, mbtmp3.8/10, MS3.4/7, Error ellipse: s-maj=27.6km s-min=14.6km az=76.0*

ISC 13 15:08:19.0±0.5, **7°.26N**±0°.06×**127°.17E**±0°.07, **h52**^{km}, **n47**, **σ1^{s}.27**/43, **mb4.1**/19, **MS3.5**/6, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.59	263		Pn	15 08 42.2	-2.6
DAV				Sn	Sn	15 09 02.8	-1.5
DAV	Davao City (W)	1.59	263	Pn	Pn	15 08 45.7	+0.9
	199nm,0.3s,baz=349,slow=0.9,SNR=15						
DAV				Sn	Sn	15 09 07.8	+3.5
	134nm,0.3s,baz=253,slow=22,SNR=17						
DAV				LR	LR	15 09 49.8	
	comp=Z,888nm,20.6s,baz=288,slow=52						
DAV	Davao City (W)	1.59	263	P	Pn	15 08 43.0	-1.8
TNTI	Ternate	6.45	178	Pn	Pn	15 09 50.1	-1.3
TNTI				Sn	Sn	15 11 02.1	-1.6
TOLI2	Tolitoli	8.83	226	Pn	Pn	15 10 22.7	-1.3
MYLDM	Lahad Datu	8.87	257		Pn	15 10 28.8	+4.3
FAKI	Fak Fak	11.31	153	Pn	Pn	15 10 58.2	+0.2
GUMO	Guam	18.50	69	LR	LR	15 18 15.9	
	comp=Z,60nm,20.9s,baz=290,slow=33						
MTN	Manton Dam	20.36	169	P	P	15 12 51.0	-0.3
KNRA	Kununurra	22.85	176	P	P	15 13 19.2	+1.2
KNRA				IAmb	IAmb	15 13 24.6	
	comp=Z,12nm,1.0s						
FITZ	Fitzroy Crossi	25.25	183	P	P	15 13 41.0	+0.7
PMG	Port Moresby	25.90	129	LR	LR	15 24 03.5	
	comp=Z,56nm,19.2s,baz=354,slow=36						
JNU	Nakatsue	25.96	7	P	P	15 13 46.6	-0.2
COEN	Coen	26.39	143	P	P	15 13 50.2	-0.6
COEN				IAmb	IAmb	15 14 06.3	
	comp=Z,22nm,1.4s						
WB0	Warramunga Arr	27.78	165	P	P	15 14 03.3	+0.1
WRA	Warramunga Arr	27.94	165	P	P	15 14 05.0	+0.4
	comp=Z,0.6nm,0.6s,baz=348,slow=9.8,SNR=9.3						
	comp=Z,0.6nm,0.6s						
WR8	Warramunga Arr	27.99	165	P	P	15 14 05.3	+0.2
WR8				IAmb	IAmb	15 14 12.9	
	comp=Z,10nm,1.4s						
KSRS	Korea Array	30.06	1	P	P	15 14 21.1	-2.1
	comp=Z,3.0nm,0.9s,baz=176,slow=10,SNR=14						
	comp=Z,3.0nm,0.9s						

AS31	Alice Springs	31.43	168	P	P	15 14 36.8	+1.2
ASAR	Alice Springs	31.43	168	P	P	15 14 37.5	+1.9
ASAR	Alice Springs	31.43	168	P	P	15 14 36.6	+1.1
	comp=Z,0.3nm,0.5s,baz=347,slow=7.3,SNR=13						
ASAR				PcP	PcP	15 17 29.2	+1.1
	comp=Z,0.4nm,0.5s,baz=329,slow=2.6,SNR=5.8						
ASAR				ScP	ScP	15 21 08.5	+1.4
	comp=Z,0.5nm,1.0s,baz=335,slow=3.0,SNR=4.0						
	comp=Z,0.3nm,0.5s						
USA0B	Ussuriysk Arra	37.03	6	P	P	15 15 25.0	+1.2
USRK	Ussuriysk Ar.	37.03	6	P	P	15 15 25.1	+1.4
USRK	Ussuriysk Ar.	37.03	6	P	P	15 15 25.5	+1.8
	comp=Z,10nm,0.9s,baz=194,slow=8.8,SNR=9.9						
BBOO	Buckleboo	40.74	169	P	P	15 15 54.9	+0.1
NWAO	Narrogin (SRO)	41.07	193	P	P	15 15 57.8	+0.1
STKA	Stephens Creek	41.28	161	P	P	15 16 00.1	+0.8
	comp=Z,3.0nm,0.7s,baz=352,slow=8.4,SNR=5.2						
	comp=Z,3.0nm,0.7s						
KLR	Kul'dur	42.00	4	LR	LR	15 35 56.9	
	comp=Z,38nm,18.0s,baz=193,slow=40						
HIA	Hailar	42.33	353	P	P	15 16 07.6	-0.2
HIA				IAmb	IAmb	15 16 40.8	
	comp=Z,9.2nm,1.2s						
SONM	Songino Array	44.13	340	P	P	15 16 22.3	-0.2
	comp=Z,0.3nm,0.5s,baz=149,slow=9.6,SNR=3.6						
	comp=Z,0.3nm,0.5s						
PETK	Petropavlovsk-	52.02	23	P	P	15 17 21.6	-1.6
	comp=Z,0.4nm,0.5s,baz=212,slow=7.8,SNR=3.7						
	comp=Z,0.4nm,0.5s						
YAK	Yakutsk	54.69	1	P	P	15 17 42.7	+0.2
MKAR	Makanchi Array	54.96	324	P	P	15 17 44.5	-0.3
MKAR	Makanchi Array	54.96	324	P	P	15 17 44.8	-0.1
	comp=Z,0.9nm,0.7s,baz=119,slow=8.2,SNR=9.1						
	comp=Z,0.9nm,0.7s						
AAK	Ala-Archa	58.09	316	LR	LR	15 45 02.7	
	comp=Z,31nm,20.8s,baz=54,slow=38						
KURBB	Kurchatov Arra	59.05	326	P	P	15 18 12.8	-0.8
	comp=Z,0.9nm,0.8s,baz=126,slow=5.7,SNR=7.9						
	comp=Z,0.9nm,0.8s						
KK31	Karatay Array	61.00	316	P	P	15 18 26.1	-1.1
KK31				IAmb	IAmb	15 18 27.8	
	comp=Z,2.7nm,0.9s						
KKAR	Karatay Array	61.00	316	P	P	15 18 25.8	-1.4
KKAR				IAmb	IAmb	15 18 27.8	
	comp=Z,2.8nm,0.9s						
KKAR	Karatay Array	61.00	316	P	P	15 18 26.1	-1.1
ARTI	Arti	72.30	327	LR	LR	15 53 41.8	
	comp=Z,39nm,18.9s,baz=158,slow=38						
CASY	Casey	74.35	187	P	P	15 19 51.4	+0.7
CASY				IAmb	IAmb	15 19 53.9	
	comp=Z,3.7nm,0.9s						
KDAK	Kodiak Island	78.69	33	LR	LR	16 01 19.9	
	comp=Z,25nm,18.0s,baz=191,slow=41						
KBZ	Khabaz	80.90	313	LR	LR	16 00 44.4	
	comp=Z,28nm,18.2s,baz=80,slow=39						
ILAR	Eielson Array	81.75	26	P	P	15 20 31.7	-0.2
	comp=Z,0.2nm,0.6s,baz=270,slow=7.2,SNR=2.7						
	comp=Z,0.2nm,0.6s						
I28M	Miner Creek	84.65	25	P	P	15 20 47.8	+0.8
I28M				IAmb	IAmb	15 21 03.8	
	comp=Z,3.2nm,0.8s						
AKASG	Malin Array Be	89.45	321	P	P	15 21 09.8	-0.6
	comp=Z,0.5nm,0.5s,baz=65,slow=3.8,SNR=4.6						
	comp=Z,0.5nm,0.5s						
QSPA	South Pole Qui	97.14	180	P	Pdif	15 21 48.4	+2.8

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*IDC **13** 15:28:51.2±1.0, 33°.03N×141°.67E, h0^{km}, mb3.8/11, mbtmp3.8/14, ML3.6/3, MS3.4/3, Error ellipse: s-maj=32.5km s-min=15.7km az=75.0*

*NIED **13** 15:28:54.4, 33°.06N×141°.58E, h57^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.97; $M_{\theta\theta}$1.09; $M_{\phi\phi}$-4.06; $M_{r\theta}$0.03; $M_{\theta\phi}$-0.11; $M_{\phi r}$3.94; Fault plane solution: $M_0$5.28000×10^{14} NP1: ϕ_s183.00000°, δ21.00000°, λ92.00000°. NP2: ϕ_s0.00000°, δ69.00000°, λ89.00000°.*

*JMA **13** 15:28:54.4±0.3, 33°.1N±0°.9×14°2E±°, h57^{km}, MV3.5/27, E OFF HACHIJOJIMA ISLAND*

ISC 13 15:28:56.0±0.7**, 33°.00N**±0°.05×**141°.67E**±0°.08**, h41**^{km}**, n39, σ2**^{s}**01**/42**, mb3.8**/11**, MS3.5**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.56	275	P	Pn	15 29 19.5	-1.8
JHJ2	Mitsune	1.56	275	P	Pn	15 29 19.3	-2.0
JHCJ	Hachijojimakas	1.58	273	P	Pn	15 29 19.4	-2.1
JHCJ				S	Sn	15 29 37.9	-2.8
BSO1	Boso 1	1.75	341	P	Pn	15 29 22.2	-1.2
BSO1				S	Sn	15 29 40.9	-3.2
BSO3	Boso 3	2.04	332	P	Pn	15 29 26.1	-1.5
JIM2	Oshima 3	2.53	313	P	Pn	15 29 31.7	-2.9
JIM2				S	Sn	15 29 59.2	-5.0
JIZS	Izushimoda	2.89	307	P	Pn	15 29 38.3	-1.2
JOD2	Odawara 2	3.11	317	P	Pn	15 29 40.8	-1.8
JRY	Ryogami san	3.78	324	P	Pn	15 29 50.6	-1.2
JAG	Ashikaga	3.87	332	P	Pn	15 29 52.0	-1.1
JAG				*e*S	Sn	15 30 35.4	-1.9
JIE	Ise	4.37	290	*e*P	Pn	15 29 58.8	-1.0
JGF	Kuroka	4.41	307	P	Pn	15 30 01.4	+0.9
MJAR	Matsushiro Arr	4.54	322	Pn	Pn	15 30 01.5	-0.7
	0.5nm,0.3s,baz=148,slow=11,SNR=25						
MJAR				Sn	Sn	15 30 54.7	+1.0
	0.3nm,0.3s,baz=182,slow=17,SNR=4.3						
	5.3nm,0.5s						
MAJO	Matsushiro	4.54	322	P	Pn	15 30 02.0	-0.2
MAT	Matsushiro	4.54	322	P	Pn	15 30 02.0	-0.2
MAT				S	Sn	15 30 53.5	-0.2
JOTO	OTAMA OYAMA	4.68	347	P	Pn	15 30 02.9	-1.2
JOTO				S	Sn	15 30 53.3	-3.8
JMM	Marumori	4.91	352	P	Pn	15 30 06.1	-1.1
JSD	Sado	5.74	332	P	Pn	15 30 17.7	-1.0
JCJ	Chichijima	5.90	176	Pn	Pn	15 30 20.1	-0.8
	6.6nm,0.3s,baz=269,slow=24,SNR=7.3						
JCJ				Sn	Sn	15 31 21.7	-5.7
	1.3nm,0.3s,baz=231,slow=23,SNR=1.6						
	23nm,0.4s						
JCJ	Chichijima	5.90	176	P	Pn	15 30 22.1	+1.1
JTM	Tenmabayashi	7.79	357	P	Pn	15 30 46.0	-0.7
ERM	Erimo	9.07	7	P	Pn	15 31 01.9	-2.5
ASAJ	Asahikawa	11.12	3	Pn	Pn	15 31 31.2	-1.2
	0.6nm,0.3s,baz=171,slow=4.5,SNR=7.3						
ASAJ				Sn	Sn	15 33 25.3	-10
	0.2nm,0.3s,baz=6.3,slow=8.6,SNR=2.1						
	1.6nm,0.3s						
H11N2	WAKE ISLAND Hy	26.10	114	T	T	16 02 05.0	
	baz=308,slow=74						
H11N1	WAKE ISLAND Hy	26.11	114	T	T	16 01 52.3	
	baz=308						
H11N3	WAKE ISLAND Hy	26.12	114	T	T	16 02 09.5	
	baz=308,slow=74						
DAV	Davao City (W)	29.82	214	LR	LR	15 45 22.9	
	comp=Z,161nm,19.5s,baz=335,slow=33						
SONM	Songino Array	30.37	310	P	P	15 35 05.9	+1.8
	1.0nm,0.8s,baz=124,slow=8.7,SNR=5.7						
	1.0nm,0.8s						
CMAR	Chiang Mai Arr	40.84	260	P	P	15 36 34.7	+0.7
	0.4nm,0.6s,baz=60,slow=9.8,SNR=2.0						
	0.4nm,0.6s						
MKAR	Makanchi Array	46.53	305	P	P	15 37 19.8	+0.3
	1.1nm,0.6s,baz=91,slow=9.5,SNR=15						
	1.1nm,0.6s						
KURBB	Kurchatov Arra	48.72	311	P	P	15 37 36.6	+0.3
	0.6nm,0.4s,baz=86,slow=6.7,SNR=8.9						
	0.6nm,0.4s						
ILAR	Eielson Array	52.81	31	P	P	15 38 08.1	+1.1
	0.3nm,0.6s,baz=275,slow=8.0,SNR=4.5						
	0.3nm,0.6s						
WRA	Warramunga Arr	53.11	189	P	P	15 38 10.9	+1.3
	2.5nm,0.4s,baz=5.8,slow=7.6,SNR=72						
WRA				LR	LR	16 00 04.7	
	comp=Z,46nm,20.5s,baz=12,slow=35						
	2.5nm,0.4s						
BVAR	Borovoye Array	53.49	315	P	P	15 38 12.3	+0.2
	0.8nm,0.7s,baz=81,slow=9.2,SNR=4.7						
	0.8nm,0.7s						
ASAR	Alice Springs	56.84	189	P	P	15 38 37.6	+1.1
	0.5nm,0.6s,baz=18,slow=13,SNR=18						
	0.5nm,0.6s						
KBZ	Khabaz	73.71	312	P	P	15 40 27.1	+1.4
	1.5nm,0.7s,baz=79,slow=5.2,SNR=3.6						
	1.5nm,0.7s						
AKASG	Malin Array Be	77.62	323	P	P	15 40 47.4	-0.5
	0.2nm,0.4s,baz=47,slow=6.0,SNR=2.6						
	0.2nm,0.4s						
PDAR	Pinedale Array	80.35	45	LR	LR	16 17 45.9	
	comp=Z,6.2nm,18.2s,baz=339,slow=36						
BRTR	Keskin Array B	81.69	312	P	P	15 41 12.7	+2.3
	0.5nm,0.5s,baz=66,slow=3.6,SNR=2.6						
	0.5nm,0.5s						

IDC 13 15:40:08.2±2.3**, 5°.70S**×**130°.42E, h0**^{km}**, mb3.6**/1**, mbtmp3.5**/4**, ML3.4**/3**, Error ellipse: s-maj=90.6km s-min=28.8km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.18	200	Pn	Pn	15 43 17.1	+0.3
	0.2nm,0.3s,baz=31,slow=11,SNR=13						
FITZ				Sn	Sn	15 45 29.8	-14
	0.1nm,0.3s,baz=78,slow=21,SNR=1.4						
	0.6nm,0.3s						
WRA	Warramunga Arr	14.66	165	Pn	Pn	15 43 37.9	+0.8
	0.2nm,0.3s,baz=345,slow=9.6,SNR=5.5						
WRA				Sn	Sn	15 46 04.7	-16
	0.2nm,0.3s,baz=341,slow=21,SNR=6.3						
	0.2nm,0.5s						
ASAR	Alice Springs	18.18	170	P	Pn	15 44 21.5	-0.7
	0.2nm,0.3s,baz=351,slow=10,SNR=12						
ASAR				S	Sn	15 47 30.2	-16
	0.3nm,0.8s,baz=355,slow=28,SNR=1.6						
	0.4nm,0.4s						
MKAR	Makanchi Array	67.38	326	P	P	15 51 05.5	+0.1
	0.3nm,0.4s,baz=111,slow=7.9,SNR=5.1						
	0.3nm,0.4s						

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*AFAD **13** 15:41:52.5, 35°.13N×27°.78E, h12^{km}±2^{km}, ML3.1*

*IDC **13** 15:41:54.1±1.4, 35°.40N×27°.85E, h0^{km}, mb3.6/4, mbtmp3.5/8, ML3.3/3, Error ellipse: s-maj=31.8km s-min=16.9km az=173.0*

*ISK **13** 15:41:55.8, 35°.29N×27°.79E, h12^{km}, ML3.3/14*

*THE **13** 15:41:55.9, 35°N±41°×2°8E±4°8, h1^{km}±48^{km}, M3.2/7, MLh3.2/7*

*ATH **13** 15:41:56.1, 35°.31N×27°.84E, h11^{km}±4^{km}, ML3.3/12, Manual Solution by G.Panopoulou First location: 2019/06/13 15:43:31, This location: 2020/10/15 13:27:02 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

ISC 13 15:41:55.4±1.2**, 35°.25N**±0°.03×**27°.82E**±0°.02**, h15**^{km}±8^{km}**, n68, σ1**^{s}**30**/92**, mb3.6**/4**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.61	299	Pg	Pg	15 42 07.4	-0.1
KARP				Sg	Sb	15 42 16.1	-0.3
KARP	Karpathos	0.61	299	P	Pg	15 42 07.2	-0.3
KARP				S	Sb	15 42 16.2	-0.1
KARP	Karpathos	0.61	299	P	Pg	15 42 07.2	-0.3
KARP				S	Sb	15 42 16.1	-0.3
RGE1	Gennadi, Rhode	0.78	7	P	Pg	15 42 10.1	-0.4
RGE1				S	Sg	15 42 20.2	-0.6
ARG	Arkhangelos	0.99	14	Pg	Pb	15 42 14.7	+0.4
ARG				Sg	Sn	15 42 28.8	+0.2
ARG	Arkhangelos	0.99	14	P	Pg	15 42 14.1	-0.6
ARG				S	Sn	15 42 28.8	+0.2
ARG	Arkhangelos	0.99	14	P	Pg	15 42 14.2	-0.5
ARG				S	Sg	15 42 26.3	-1.3
RDI1	Rhodes Town Ha	1.24	15	P	Pn	15 42 18.1	-0.1
ZKR	Zakros	1.32	264	Pn	Pb	15 42 20.5	+0.6
ZKR	Zakros	1.32	264	P	Pb	15 42 20.4	+0.6
ZKR				S	Sb	15 42 37.1	+0.5
SIT2	Siteia	1.40	269	P	Pb	15 42 21.8	+0.5
YAZI	Mula-Dat§a-	1.46	348	P	Pb	15 42 22.1	-0.1
YAZI				S	Sg	15 42 41.5	-0.9
YAZI				*i* IAML		15 42 47.0	
	comp=E,144nm,0.9s						
YAZI				*i* IAML		15 42 49.0	
	comp=N,230nm,0.6s						
DAT	Datca	1.49	352	Pn	Pb	15 42 22.6	-0.2
DAT				Sn	Sg	15 42 42.1	-1.3
TURN	Turunc	1.56	13	Pn	Pb	15 42 23.7	-0.2
TURN				Sn	Sb	15 42 44.0	+0.5
TURN	Turunc	1.56	13	P	Pb	15 42 24.4	+0.5
TURN				S	Sg	15 42 47.2	+1.6
TURN				*i* IAML		15 42 49.0	
	comp=N,202nm,0.7s						
TURN				*i* IAML		15 42 51.0	
	comp=E,354nm,0.6s						
IZZE	Mula-Seydike	1.64	44	P	Pn	15 42 25.0	+1.3
IZZE				*i* IAML		15 42 50.0	
	comp=N,250nm,0.5s						
IZZE				*i* IAML		15 43 03.0	
	comp=E,158nm,0.5s						
DALY	Dalyan (Mula)	1.70	23	Pn	Pb	15 42 25.9	-0.5
FETY	Fethiye	1.72	36	Pn	Pn	15 42 26.2	+1.4
AKAS	Kas	1.75	55	Pn	Pb	15 42 27.2	-0.1
AKAS	Kas	1.75	55	P	Pb	15 42 27.1	-0.2
AKAS				S	Sg	15 42 51.5	-0.3
AKAS				*i* IAML		15 42 53.0	
	comp=N,266nm,0.5s						
AKAS				*i* IAML		15 43 23.0	
	comp=E,166nm,1.1s						
SABU	Mula-Dalaman	1.82	30	P	Pn	15 42 27.5	+1.3
SABU				S	Sg	15 42 58.2	+4.1
SABU				*i* IAML		15 43 04.0	
	comp=E,114nm,0.7s						
SABU				*i* IAML		15 43 07.0	
	comp=N,246nm,0.6s						
BDRM	Kayabasi	1.83	351	P	Pn	15 42 27.6	+1.2
BDRM				S	Sn	15 42 49.3	0.0
BDRM				*i* IAML		15 43 04.0	
	comp=E,134nm,0.5s						
BODT	Bodrum	1.85	347	Pn	Pn	15 42 27.4	+0.8
MLSB	Milas	2.04	359	Pn	Pn	15 42 29.8	+0.6
MULA	Mugla, Merkez-	2.04	11	P	Pg	15 42 34.1	-0.5
MULA				S	Sg	15 43 00.9	-0.1
CAME	Cameli-Denizli	2.07	35	Pn	Pn	15 42 31.5	+1.7
KNIK	Mula-Seydike	2.13	41	P	Pn	15 42 32.7	+2.1
KNIK				S	Sg	15 43 02.2	-1.8
SANT	Santorini	2.22	301	Pn	Pn	15 42 33.1	+1.4
THR8	Santorini-Mono	2.23	302	P	Pn	15 42 33.1	+1.3
CAEL	Denizli, Camel	2.23	33	P	Pn	15 42 33.6	+1.7
DNZT	Denizli-Tavas-	2.24	25	P	Pn	15 42 34.1	+2.0
DNZT				S	Sb	15 43 04.1	+0.8
THR6	Thira Island,	2.26	300	P	Pn	15 42 33.8	+1.6
THR3	Thira Island,	2.28	301	P	Pn	15 42 33.7	+1.2
CMBO	Columbo, Santo	2.31	302	P	Pn	15 42 34.1	+1.2
TAVA	DENIZLI_Tavas	2.38	21	P	Pn	15 42 35.5	+1.5
TAVA				S	Sg	15 43 13.6	+1.8
TAVA				*i* IAML		15 43 20.0	
	comp=N,86nm,1.0s						
TAVA				*i* IAML		15 43 21.0	
	comp=E,92nm,0.6s						
IDI	Anoyia	2.40	272	Pn	Pn	15 42 36.3	+2.1
IDI	Anoyia	2.40	272	P	Pn	15 42 36.4	+2.2
IDI	Anoyia	2.40	272	Pn	Pb	15 42 37.0	-1.4
	25nm,0.4s,baz=86,slow=17,SNR=31						
IDI				Sn	Sb	15 43 07.8	+0.1
	7.1nm,0.3s,baz=37,slow=14,SNR=3.7						
IDI	Anoyia	2.40	272	P	Pn	15 42 35.8	+1.6
AYDN	Tasoluk	2.40	1	P	Pn	15 42 35.3	+1.1
AYDN				*i* IAML		15 43 22.0	
	comp=N,90nm,0.7s						
AYDN				*i* IAML		15 43 31.0	
	comp=E,104nm,0.9s						
GOLH	Golhisar	2.43	35	P	Pb	15 42 37.2	-1.6
GOLH				S	Sb	15 43 10.4	+1.8
GOLH				*i* IAML		15 43 28.0	
	comp=N,83nm,0.7s						
GOLH				*i* IAML		15 43 33.0	
	comp=E,99nm,0.7s						
APE	Apeiranthos	2.59	315	Pn	Pn	15 42 37.8	+1.0
APE	Apeiranthos	2.59	315	P	Pn	15 42 37.5	+0.7
APE	Apeiranthos	2.59	315	P	Pn	15 42 37.5	+0.7
PRNS	Prines Rethymn	2.72	273	P	Pn	15 42 40.7	+2.2
GVD	Gavdhos	3.09	263	P	Pn	15 42 45.5	+1.9
IMMV	Iera Moni Meta	3.15	275	P	Pn	15 42 46.6	+2.2
KNDR	Palaiochora Ch	3.38	271	P	Pn	15 42 50.2	+2.5
CHOS	Chios island	3.43	336	P	Pn	15 42 49.7	+1.3
CHOS	Chios island	3.43	336	P	Pn	15 42 49.5	+1.0
AKMS	Akamas	3.71	92	P	Pn	15 42 53.1	+1.0
ANKY	Antikythira Is	3.74	281	P	Pn	15 42 54.3	+1.9
ANKY	Antikythira Is	3.74	281	P	Pn	15 42 54.4	+1.9
ALFC	Alefka	3.91	90	P	Pn	15 42 56.2	+1.2
NATA	Nata	3.93	96	P	Pn	15 42 56.5	+1.3
TROD	Troodos	4.15	93	P	Pn	15 42 59.0	+0.6
VLI	Veliai	4.22	292	P	Pn	15 43 00.5	+1.3
VLI	Veliai	4.22	292	P	Pn	15 43 00.1	+0.9
ASGA	Asgata	4.48	94	P	Pn	15 43 04.1	+1.4
CSS	Mathiatis	4.53	92	P	Pn	15 43 04.6	+1.2
BRTR	Keskin Array B	6.43	44	Pn	Pn	15 43 31.4	+1.8
	0.1nm,0.3s,baz=224,slow=10.0,SNR=4.8						
BRTR				Sn	Sn	15 44 43.0	+0.3
	0.1nm,0.3s,baz=209,slow=23,SNR=8.3						
	0.4nm,0.4s						
MMAI	Mount Meron Ar	6.67	107	Pn	Pn	15 43 32.7	-0.2
	1.9nm,0.3s,baz=298,slow=12,SNR=5.1						
MMAI				Sn	Sn	15 44 47.8	-0.9
	0.9nm,0.3s,baz=299,slow=7.5,SNR=1.6						
	0.9nm,0.3s						
ASF	Jabal al Asfar	8.16	110	Sn	Sn	15 45 24.9	-0.6
	0.2nm,0.3s,baz=102,slow=20,SNR=1.4						
EIL	Elat	8.20	131	Pn	Pn	15 43 54.9	+1.0
	0.4nm,0.3s,baz=319,slow=20,SNR=2.2						
EIL				Sn	Sn	15 45 23.5	-2.8
	1.2nm,0.3s,baz=49,slow=17,SNR=5.4						
	1.9nm,0.5s						
ESDC	Sonseca Array	25.54	289	P	P	15 47 23.2	-0.3
	1.1nm,0.7s,baz=89,slow=9.2,SNR=8.7						
	1.1nm,0.7s						
ARCES	ARCESS Array B	34.36	359	P	P	15 48 39.2	-2.1
	0.7nm,0.7s,baz=180,slow=9.3,SNR=1.2						
	0.7nm,0.7s						
KURBB	Kurchatov Arra	39.37	51	P	P	15 49 24.8	+0.7
	0.3nm,0.3s,baz=280,slow=9.0,SNR=1.8						
	0.3nm,0.3s						
MKAR	Makanchi Array	41.90	57	P	P	15 49 46.0	+0.9
	0.2nm,0.6s,baz=281,slow=8.1,SNR=4.1						
	0.2nm,0.6s						

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*CATAC **13** 15:48:02.7±0.7, 13°N±4°×9°0W±°, h54^{km}±5^{km}, M3.4/12, MLv3.4/12, Error ellipse: s-maj=9.8km s-min=6.3km az=36.4, confirmed*

*SNET **13** 15:48:03.1±1.0, 13°.54N×89°.67W, h75^{km}±5^{km}, ML3.2*

*GCG **13** 15:48:03.6±0.8, 13°.53N×89°.70W, h70^{km}±6^{km}, MD3.7, ML3.2*

ISC 13 15:48:08.7±1.5**, 13°.64N**±0°.05×**89°.54W**±0°.04**, h48**^{km}±7^{km}**, n46, σ2**^{s}**09**/56**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	0.09	83	*e*P	Pn	15 48 15.0	-1.5
JAYA				*e*S	Sn	15 48 23.8	+1.7
JAYA	Jayaque - finc	0.09	83	*i* P	Pn	15 48 14.6	-2.0
JAYA				*i* S	Sn	15 48 23.7	+1.7
JAYA	Jayaque - finc	0.09	83	S	Sn	15 48 24.4	+2.4
JAYA	Jayaque - finc	0.09	83	P	Pn	15 48 14.7	-1.8
CEVE	Cerro Verde	0.20	336	*e*P	Pn	15 48 15.3	-2.0
CEVE	Cerro Verde	0.20	336	S	Sn	15 48 25.1	+1.9
CEVE	Cerro Verde	0.20	336	P	Pn	15 48 15.2	-2.0
SBLS	San Blas	0.21	338	*e*P	Pn	15 48 15.2	-2.1
SBLS				*e*P		15 48 15.3	
PMON	Piamonte	0.23	73	*e*P	Pn	15 48 16.0	-1.3
PMON				*e*S	Sn	15 48 25.7	+2.4
PMON	Piamonte	0.23	73	P	Pn	15 48 16.0	-1.3
PMON	Piamonte	0.23	73	S	Sn	15 48 26.2	+2.9
SNJE	San Jose	0.23	345	*i* P	Pn	15 48 15.5	-1.9
SNJE				*e*P	Pn	15 48 15.5	-1.9
ITCA	Escuela Especi	0.26	83	S	Sn	15 48 25.9	+2.2
ITCA	Escuela Especi	0.26	83	P	Pn	15 48 15.7	-1.8
LALI	Alcalda de L	0.26	126	*i* P	Pn	15 48 15.2	-2.2
LALI				IAML		15 48 31.7	
	comp=E,196nm,0.3s						
LALI	Alcalda de L	0.26	126	S	Sn	15 48 25.4	+1.9
LALI	Alcalda de L	0.26	126	P	Pn	15 48 15.2	-2.2
BOQS	Boqueron	0.27	70	*e*P	Pn	15 48 16.2	-1.5
UNIC	Universidad Ca	0.34	359	P	Pn	15 48 16.8	-1.4
UNIC	Universidad Ca	0.34	359	S	Sn	15 48 26.8	+2.0
NUBE	Las Nubes	0.35	318	*e*P	Pn	15 48 15.9	-2.4
NUBE	Las Nubes	0.35	318	*i* P	Pn	15 48 15.6	-2.7
NUBE	Las Nubes	0.35	318	P	Pn	15 48 15.7	-2.6
NUBE	Las Nubes	0.35	318	S	Sn	15 48 25.5	+0.3
PANCS	Alcalda de	0.35	95	S	Sn	15 48 26.5	+1.4
PANCS	Alcalda de	0.35	95	P	Pn	15 48 16.6	-1.7
LOMA	Loma Larga	0.36	90	*e*P	Pn	15 48 16.9	-1.5
LOMA				*e*S	Sn	15 48 27.2	+1.9
LOMA				IAML		15 48 29.4	
	comp=Z,2µm,0.3s						
LOMA	Loma Larga	0.36	90	P	Pn	15 48 16.9	-1.5
LOAL	Lomas de Alarc	0.42	327	S	Sn	15 48 27.3	+0.9
LOAL	Lomas de Alarc	0.42	327	P	Pn	15 48 16.6	-2.4
LFRS	El Faro	0.47	92	*e*P	Pn	15 48 17.6	-2.1
LFRS				IAML		15 48 31.8	
	comp=Z,785nm,0.7s						
FAME	Alcaldia de Sa	0.50	293	P	Pn	15 48 15.8	-4.1
PAVA	Las Pavas	0.59	83	P	Pn	15 48 19.8	-1.4
PAVA	Las Pavas	0.59	83	S	Sn	15 48 32.0	+1.9
COEG	Centro de Oper	0.64	92	*e*P	Pn	15 48 19.0	-2.8
COEG				*e*S	Sn	15 48 32.0	+0.9
COEG				IAML		15 48 33.9	
	comp=Z,534nm,0.3s						
MTO3	Montecristo	0.77	13	*i* P	Pn	15 48 21.4	-2.1
MTO3				*e*S	Sn	15 48 35.6	+1.3
MTO3	Montecristo	0.77	13	*i* P	Pn	15 48 21.5	-2.1
MTO3	Montecristo	0.77	13	P	Pn	15 48 21.5	-2.1
MTO3	Montecristo	0.77	13	S	Sn	15 48 36.1	+1.7
ESQI	Esquipulas	0.93	12	*e*P	Pn	15 48 23.7	-1.9
ESQI	Esquipulas	0.93	12	P	Pn	15 48 23.7	-1.9
ESQI	Esquipulas	0.93	12	S	Sn	15 48 39.8	+1.8
TECA	Tecapa	1.02	98	*e*P	Pn	15 48 25.1	-1.8
SARH	Santa Rosa de	1.36	34	*i* P	Pn	15 48 29.8	-1.5
SARH				*i* S	Sn	15 48 49.7	+1.4
STG0	El Palmar, Qui	1.91	294	*e*P	Pn	15 48 38.6	-0.4
STG0				*i* S	Sn	15 49 05.5	+3.4
STG0				IAML		15 49 10.0	
	comp=E,734nm,0.2s						
STG8	El Palmar, Qui	1.93	295	*e*P	Pn	15 48 38.9	-0.4
STG8				*e*S	Sn	15 49 06.1	+3.6
STG8				IAML		15 49 12.0	
	comp=N,292nm,0.2s						

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*TRN **13** 15:53:06.9, 11°.03N×62°.25W, h95^{km}, MD3.9, North of the Paria peninsula. Felt MMI IV, Trinidad.*

*FUNV **13** 15:53:08.4, 11°.10N×62°.29W, h32^{km}, MW4.0*

ISC 13 15:53:05.6±1.5**, 11°.02N**±0°.05×**62°.30W**±0°.06**, h104**^{km}±17^{km}**, n23, σ1**^{s}**48**/42**, 2C, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.95	113	⇑*i*P	Pn	15 53 26.0	+0.2
TRN				*e*S	Sn	15 53 39.4	-1.6
TPP	Pointe-a-Pierr	1.08	130	*e*P	Pn	15 53 28.3	+1.1
TPP				*e*S	Sn	15 53 42.5	-1.1
GRFF	Grenada Fort F	1.16	28	*e*P	Pn	15 53 28.5	+0.4
GRFF				*e*S	Sn	15 53 44.9	-0.1
GRGR	Grenville	1.27	30	*e*P	Pn	15 53 29.9	+0.5
GRGR				*e*S	Sn	15 53 46.5	-0.8
GRW	Mount Saint Ca	1.29	29	*e*P	Pn	15 53 31.1	+1.4
GRW				*e*S	Sn	15 53 47.1	-0.8
TBH	Brigand Hill	1.32	114	*e*P	Pn	15 53 31.1	+1.2
TBH				*e*S	Sn	15 53 48.3	0.0
GRSS	Sisters	1.44	28	⇑*i*P	Pn	15 53 32.0	+0.7
GRSS				*e*S	Sn	15 53 50.3	-0.4
TPR	Prospect	1.50	84	*e*P	Pn	15 53 32.4	+0.3
TPR				*e*S	Sn	15 53 51.2	-1.0
GCMP	Grenada, Carri	1.69	30	*e*P	Pn	15 53 34.5	+0.1
GCMP				*e*S	Sn	15 53 55.1	-1.1
SVOC	Richmond Hill,	2.37	26	*e*P	Pn	15 53 44.1	+1.0
SVOC				*e*S	Sn	15 54 12.1	+0.3
SVT	Saint Vincent	2.37	26	*e*P	Pn	15 53 43.0	-0.2
SVT				*e*S	Sn	15 54 11.6	-0.4
SVB	Belmont	2.46	24	*e*P	Pn	15 53 45.5	+1.2
SVB				*e*S	Sn	15 54 14.0	0.0
SLAC	Saint Lucia, A	3.17	25	*e*P	Pn	15 53 54.3	+0.5
SLAC				*e*S	Sn	15 54 29.3	-1.6
SLBI	Saint Lucia, B	3.25	23	*e*P	Pn	15 53 55.1	+0.3
SLBI				*e*S	Sn	15 54 31.9	-0.9
BBGH	Gun Hill	3.41	51	*e*P	Pn	15 53 57.9	+1.0
BBGH				*e*S	Sn	15 54 34.7	-1.9
BIM	Bigot	3.68	19	*e*P	Pn	15 54 00.6	+0.1
BIM				*e*S	Sn	15 54 41.0	-2.0
DSLB	Salisbury	4.47	11	*e*P	Pn	15 54 13.2	+1.9
TACV	Tcata	4.73	260	*e*P	Pn	15 54 17.3	+2.5
TACV				*e*S	Sn	15 55 07.0	-1.6
BENV	Beln	5.32	259	*e*P	Pn	15 54 24.7	+1.9
BENV				*e*S	Sn	15 55 19.6	-3.3

CACV	CAICARA DEL OR	5.42	231	*e*P	Pn	15 54 21.0	-3.0
CACV				*e*S	Sn	15 55 14.6	-10
ANBD	Bethesda, Anti	6.01	5	*e*P	Pn	15 54 33.6	+1.5
BAUV	El Baul	6.02	250	*e*P	Pn	15 54 34.0	+1.8
BAUV				*e*S	Sn	15 55 35.6	-4.2
BAUV	El Baul	6.02	250	*e*P	Pn	15 54 34.1	+1.8
BAUV				*e*S	Sn	15 55 38.7	-1.2

KOLA ***13*** *15:55:31.8, 67°.64N×34°.04E, h0^{km}, ML2.2, Error ellipse: s-maj=2.4km s-min=1.1km az=130.0, Khibiny, mines Koashva, Nyurkpakh*

HEL ***13*** *15:55:31.7±0.2, 67°.73N×33°.97E, h0^{km}, ML1.8, Suspected explosion*

IDC ***13*** *15:55:34.2±2.8, 67°.57N×33°.48E, h0^{km}, mbtmp2.9/2, ML1.9/2, Error ellipse: s-maj=31.6km s-min=12.2km az=74.0*

ISC 13 15:55:30.8±0.9**, 67°.64N**±0°.04×**34°.14E**±0°.04**, h0^{km}, n28, σ1^{s}12**/46**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APA	Apatity	0.29	257	P	Pg	15 55 36.7	+0.3
APA				S	Sg	15 55 39.7	-0.4
LVZ	Lovozero	0.33	36	P	Pg	15 55 37.6	+0.5
LVZ				S	Sg	15 55 42.9	+1.6
LVZ	Lovozero	0.33	36	PG	Pg	15 55 37.3	+0.2
LVZ				SG	Sg	15 55 38.4	-3.0
APA0	Apatity Array	0.44	267	P	Pg	15 55 38.8	-0.5
APA0				S	Sg	15 55 44.6	-0.3
KVDA	Kovda	1.07	208	P	Pg	15 55 50.7	-0.6
KVDA				S	Sg	15 56 04.7	-0.4
TERR	Teriberka	1.61	12	P	Pn	15 56 00.4	-0.1
TERR				S	Sn	15 56 21.7	-0.3
VRF	Varrio	1.73	276	PG	Pn	15 56 01.4	-0.8
	baz=85						
VRF				MSG		15 56 21.5	
	comp=Z,7.2nm,0.2s						
VRF				SN	Sn	15 56 24.0	-1.0
OLKF	Oulanka, Finla	2.28	237	PG	Pn	15 56 10.9	+1.2
OLKF				MSG		15 56 39.3	
	comp=Z,5.1nm,0.2s						
OLKF				SG	Sb	15 56 41.8	+0.2
KU6	Riekki	2.33	228	PG	Pn	15 56 11.6	+1.3
	baz=43						
KU6				MSG		15 56 41.1	
	comp=Z,3.9nm,0.2s						
KU6				SG	Sb	15 56 42.7	-0.3
RAJF	Raja-Jooseppi	2.35	294	PG	Pn	15 56 10.9	+0.4
RAJF				SG	Sn	15 56 40.7	+0.6
MSF	Maaselka	2.66	232	PG	Pb	15 56 18.3	-1.0
MSF				SG	Sb	15 56 53.4	+0.9
KU1	Kurvinen	2.77	223	PN	Pn	15 56 16.9	+0.6
VADS	Vadso	3.04	327	S	Sn	15 56 56.8	-0.3
KU2	Taivalkoski	3.04	233	PB	Pn	15 56 22.3	+2.1
KU2				SG	Sb	15 57 05.4	+1.9
RANF	Ranua	3.33	244	PB	Pb	15 56 28.7	-2.0
	baz=59						
RANF				SG	Sb	15 57 11.6	-0.1
RNF	Rovaniemi	3.34	256	PN	Pn	15 56 25.0	+0.8
RNF				SB	Sn	15 57 07.3	+2.8
KEV	Kevo	3.36	313	PB	Pn	15 56 25.6	+1.1
KEV				SB	Sn	15 57 05.8	+0.7
ARA0	ARCESS Array S	3.70	305	PN	Pn	15 56 28.4	-0.7
ARCES	ARCESS Array B	3.70	305	Pn	Pn	15 56 28.2	-0.9
	comp=Z,0.1nm,0.3s,baz=121,slow=15,SNR=26						
ARCES				Pg	Pb	15 56 38.0	+1.1
	comp=Z,0.2nm,0.3s,baz=118,slow=14,SNR=12						
ARCES				Sn	Sn	15 57 12.8	-0.6
	comp=Z,0.2nm,0.3s,baz=121,slow=26,SNR=7.9						
ARCES				Lg	Lg	15 57 24.0	
	comp=Z,0.4nm,0.3s,baz=121,slow=26,SNR=5.1						
	comp=Z,0.6nm,0.2s						
ARCES	ARCESS Array B	3.70	305	P	Pn	15 56 28.3	-0.8
ARCES				S	Sn	15 57 11.5	-1.9
RMF	Romuvaara	3.84	209	PN	Pn	15 56 31.5	+0.4
	baz=25						
KLF	Kolari	3.94	269	PG	Pb	15 56 41.7	+0.6
HEF	Hetta	4.02	286	PN	Pn	15 56 34.0	+0.5
TOF	Tornio	4.18	253	PN	Pn	15 56 34.1	-1.6
LANU	Lannavaara	4.62	281	PN	Pn	15 56 42.8	+1.0
ERTU	Ertsjaerv	4.79	262	PN	Pn	15 56 44.1	-0.1
ERTU				SN	Sn	15 57 40.0	-0.4
I37NO	I37NO	5.92	291	I	I	16 29 30.0	
	baz=97,slow=318,SNR=9.0						
FINES	FINESS Array B	7.12	213	Pn	Pn	15 57 15.8	-0.2
	comp=Z,0.1nm,0.3s,baz=32,slow=12,SNR=2.1						
FINES				Lg	Lg	15 59 09.6	
	comp=Z,0.1nm,0.3s,baz=15,slow=28,SNR=1.6						
	comp=Z,1.5nm,0.8s						

NEIC ***13*** *16:05:06.4±1.3, 15°.49S±0°.10×166°.3E±0°.2, h10^{km}±2^{km}, mb4.2/10, Error ellipse: s-maj=28.8km s-min=13.9km az=68.0*

IDC ***13*** *16:05:06.9±13.0, 15°.55S×165°.99E, h0^{km}, mb3.9/3, mbtmp3.9/4, ML3.7/1, Error ellipse: s-maj=226.1km s-min=36.3km az=57.0*

NOU ***13*** *16:05:09.2, 15°.45S×167°.33E, h104^{km}, MLv4.2/8, Vanuatu Islands*

ISC 13 16:05:06.7±1.0**, 15°.36S**±0°.09×**166°.44E**±0°.10**, h29^{km}, n19, σ0^{s}88**/21**, mb3.9**/8**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLAKA	Lakatoro	1.20	128	P	Pn	16 05 27.5	0.0
VLAKA	Lakatoro	1.20	128	S	Sn	16 05 42.2	-0.6
DZM	Mont Dzumac	6.68	180	Pn	Pn	16 06 43.0	+0.1
DZM				Sn	Sn	16 07 56.3	-1.8
DZM	Mont Dzumac	6.68	180	Pn	Pn	16 06 44.5	+1.6
	1.4nm,0.3s,baz=347,slow=15,SNR=18						
DZM				Sn	Sn	16 07 58.3	+0.2
	1.1nm,0.3s,baz=323,slow=20,SNR=8.8						
	3.8nm,0.3s						
HNR	Honiara	8.66	312	Pn	Pn	16 07 08.5	-1.5
INZ	Inchbonnie	27.61	172	P	P	16 10 51.9	+0.4
STKA	Stephens Creek	27.98	230	P	P	16 10 54.4	-0.6
STKA	Stephens Creek	27.98	230	P	P	16 10 55.0	+0.1
	1.4nm,0.8s,baz=61,slow=11,SNR=4.2						
	1.4nm,0.8s						
WB0	Warramunga Arr	30.84	257	P	P	16 11 20.7	+0.2
WB0				IAmb	IAmb	16 11 47.7	
	comp=Z,6.0nm,1.4s						
WRA	Warramunga Arr	30.90	257	P	P	16 11 20.8	-0.2
WRA	Warramunga Arr	30.90	257	P	P	16 11 21.5	+0.5
	comp=Z,0.3nm,0.4s,baz=84,slow=8.8,SNR=6.2						
	comp=Z,0.3nm,0.4s						
AS31	Alice Springs	31.70	250	P	P	16 11 27.4	-0.7
AS31				IAmb	IAmb	16 11 29.5	
	comp=Z,0.7nm,0.5s						
ASAR	Alice Springs	31.70	250	P	P	16 11 28.1	0.0
ASAR	Alice Springs	31.70	250	P	P	16 11 28.6	+0.4
	comp=Z,1.3nm,0.6s,baz=81,slow=8.6,SNR=65						
	comp=Z,1.3nm,0.6s						
BBOO	Buckleboo	32.56	232	P	P	16 11 34.8	-0.7
MTN	Manton Dam	34.31	270	P	P	16 11 50.7	-0.2
MTN				IAmb	IAmb	16 11 55.4	
	comp=Z,10nm,1.1s						
GUMO	Guam	35.82	322	P	P	16 12 05.5	+1.7
KNRA	Kununurra	36.28	264	P	P	16 12 07.9	0.0
KNRA				IAmb	IAmb	16 12 49.1	
	comp=Z,13nm,1.4s						
FITZ	Fitzroy Crossi	39.12	260	P	P	16 12 32.5	+0.6
FITZ				IAmb	IAmb	16 12 54.7	
	comp=Z,1.2nm,1.2s						

SJA ***13*** *16:12:28.8±1.2, 28°.70S×71°.47W, h60^{km}, ML4.6, MW4.4*

NEIC ***13*** *16:12:31.9, 28°.72S×71°.11W, h60^{km}*

GUC ***13*** *16:12:31.6±0.9, 28°.81S×71°.05W, h60^{km}±3^{km}, ML4.8*

IDC ***13*** *16:12:32.7±0.4, 28°.73S×71°.10W, h60^{km}±2^{km}, mb4.1/12, mbtmp4.4/12, MS3.3/5, Error ellipse: s-maj=18.0km s-min=9.1km az=62.0*

NEIC ***13*** *16:12:32.2±2.3, 28°.73S±0°.03×71°.12W±0°.08, h60^{km}±4^{km}, mb4.7/20, Mwr4.3/31, Mwr4.8(GUC), Error ellipse: s-maj=9.6km s-min=4.5km az=95.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-2.14; $M_{\theta\theta}$1.35; $M_{\phi\phi}$0.79; $M_{r\theta}$0.63; $M_{\theta\phi}$-2.53; $M_{\phi r}$1.57; Fault plane solution: $M_0$3.58000×10^{15} NP1:ϕ_s163.70000°, δ61.66000°, λ-45.44000°. NP2:ϕ_s279.44000°, δ51.16000°, λ-142.45000°. Principal axes: T 3.6819, Plg6.0000°, Azm224.0000°; N -0.2156, Plg38.0000°, Azm319.0000°; P -3.4664, Plg51.0000°, Azm126.0000°;*

VAO ***13*** *16:12:35.3±1.4, 28°.17S×70°.49W, h10^{km}, mb4.3*

ISC 13 16:12:31.5±0.3**, 28°.73S**±0°.03×**71°.24W**±0°.04**, h61^{km}**±2^{km}**, h62^{km}:pP-P, n173, σ1^{s}99**/228**, mb4.7**/23**, 10C-7D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AC04	Llanos de Chal	0.55	16		Pn	16 12 45.2	+1.1
AC04				Sn	Sn	16 12 54.4	+1.1
AC04	Llanos de Chal	0.55	16	*e*P	Pn	16 12 45.5	+1.4
AC04				*e*S	Sn	16 12 54.6	+1.3
AC04				IAML		16 12 55.5	
	comp=N,102μm,0.5s						
AC04	Llanos de Chal	0.55	16	*e*P	Pn	16 12 45.3	+1.2
AC04				*e*S	Sn	16 12 55.0	+1.8
LCO	Las Campanas	0.55	121		Pn	16 12 44.0	-0.4
LCO	Las Campanas	0.55	121	*e*P	Pn	16 12 43.5	-0.9
LCO				*e*S	Sn	16 12 52.7	-1.1
CO05	La Serena	1.18	180		Pn	16 12 52.6	+0.5
CO05				Sn	Sn	16 13 07.8	+0.5
CO05	La Serena	1.18	180	⇑*i*P	Pn	16 12 52.5	+0.5
CO05				*e*S	Sn	16 13 08.2	+0.9
CO05				IAML		16 13 12.2	
	comp=E,25μm,0.5s						
GO03	Copiapo	1.44	38		Pn	16 12 55.4	-0.2
GO03				Sn	Sn	16 13 12.8	-0.8
GO03	Copiapo	1.44	38	⇑*i*P	Pn	16 12 55.3	-0.2
GO03				*e*S	Sn	16 13 13.2	-0.4
GO03	Copiapo	1.44	38	*e*P	Pn	16 12 55.4	-0.2
GO03				*e*S	Sn	16 13 14.3	+0.7
GO04	Tololo Observa	1.49	165		Pn	16 12 56.8	+0.4
GO04				Sn	Sn	16 13 14.5	-0.4
GO04	Tololo Observa	1.49	165	⇑*i*P	Pn	16 12 56.6	+0.3
GO04				*e*S	Sn	16 13 15.7	+0.8
GO04	Tololo Observa	1.49	165	*e*P	Pn	16 12 51.4	-4.9
AC06	Mina Casimiro	1.58	30		Pn	16 12 57.9	+0.6
AC06	Mina Casimiro	1.58	30	⇑*i*P	Pn	16 12 58.1	+0.7
CO01	Juntas del Tor	1.60	141		Pn	16 12 58.2	+0.4
CO01				Sn	Sn	16 13 17.6	0.0
CO01	Juntas del Tor	1.60	141	⇓*i*P	Pn	16 12 58.2	+0.4
CO01				*e*S	Sn	16 13 17.6	0.0
CO01				IAML		16 13 18.8	
	comp=N,11μm,0.3s						
CO01	Juntas del Tor	1.60	141	*e*P	Pn	16 12 58.2	+0.4
CO01				*e*S	Sn	16 13 17.9	+0.3
CO01				IAML		16 13 19.0	
	comp=Z,11μm,0.6s						
CO06	Fray Jorge	1.97	190		Pn	16 13 02.6	0.0
CO06	Fray Jorge	1.97	190	⇑*i*P	Pn	16 13 02.6	0.0
AROD	Rodeo	2.11	133	*e*P	Pn	16 13 06.9	+2.1
CO03	El Pedregal	2.16	167		Pn	16 13 05.8	+0.6
CO03	El Pedregal	2.16	167	⇑*i*P	Pn	16 13 05.7	+0.6
CO03				IAML		16 13 32.6	
	comp=N,6μm,0.1s						
CO03	El Pedregal	2.16	167	*e*P	Pn	16 13 05.9	+0.6
CO03				*e*S	Sn	16 13 32.7	+1.8
CO03				IAML		16 13 35.3	
	comp=Z,3μm,0.3s						
ACDV	Cuesta del Vie	2.34	128	*e*P	Pn	16 13 10.5	+2.6
ACDV				*e*S	Sn	16 13 26.1	-10
ACDV				IAML		16 13 28.8	
	comp=Z,2μm,0.5s						
CO02	Combarbal	2.47	175		Pn	16 13 09.9	+0.3
CO02	Combarbal	2.47	175	⇑*i*P	Pn	16 13 09.9	+0.3
CO02				IAML		16 13 54.2	
	comp=E,15μm,0.3s						
CO02	Combarbal	2.47	175	*e*P	Pn	16 13 09.9	+0.3
CO02				*e*S	Sn	16 13 27.3	-11
CO02				IAML		16 13 52.1	
	comp=Z,4μm,0.4s						
AGUA	GUANDACOL	2.52	108	*e*P	Pn	16 13 13.1	+2.9
AGUA				*e*S	Sn	16 13 44.3	+4.4
AGUA				IAML		16 13 45.4	
	comp=Z,4μm,0.9s						
AC01	Pan de Azucar	2.64	13		Pn	16 13 11.2	-0.5
AC01	Pan de Azucar	2.64	13	*e*P	Pn	16 13 11.2	-0.5
AC01				*e*S	Sn	16 13 47.0	+4.5
AC01				IAML		16 14 02.3	
	comp=Z,2μm,0.5s						
ACCO	Cerro Coronel	2.65	135	*e*P	Pn	16 13 19.9	+7.8
ACCO				*e*S	Sn	16 13 53.1	+10
AC02	Maricunga	2.66	45		Pn	16 13 13.4	+0.9
AC02	Maricunga	2.66	45	*e*P	Pn	16 13 13.5	+1.0
AC02				*e*S	Sn	16 13 31.8	-12
AC02				IAML		16 14 01.3	
	comp=Z,2μm,0.2s						
VCA	Vinchina	2.67	91	*e*P	Pn	16 13 15.3	+3.1
VCA				*e*S	Sn	16 13 48.1	+4.6
VCA				IAML		16 13 49.4	
	comp=Z,4μm,0.2s						
DOCA	Reserva Natura	2.90	140	*e*P	Pn	16 13 18.2	+2.6
DOCA				*e*S	Sn	16 13 54.0	+4.5
DOCA				IAML		16 13 57.7	
	comp=Z,1μm,0.8s						
RTLS	Leoncito	3.49	152	*e*P	Pn	16 13 26.0	+2.4
ZON	Zonda	3.58	142		Pn	16 13 25.5	+0.9
ZON	Zonda	3.58	142	*e*P	Pn	16 13 26.2	+1.6
ZON				*e*S	Sn	16 14 23.4	+18
ZON				IAML		16 14 37.1	
	comp=Z,577nm,0.5s						
VA06	Catapilco	3.82	181		Pn	16 13 27.7	-0.2
ACLC	CERRO LA CRUZ	3.82	101	*e*P	Pn	16 13 29.1	+1.1
ACLC				*e*S	Sn	16 14 14.1	+2.3
ACLC				IAML		16 14 14.5	
	comp=Z,631nm,0.2s						
GO02	Mina Guanaco	3.85	23		Pn	16 13 28.2	-0.3
CFA	Coronel Fontan	3.87	138	P	Pn	16 13 30.4	+1.8
	comp=Z,213nm,0.2s,baz=311,slow=13,SNR=616						
CFA				S	Sn	16 14 13.3	+0.5
	comp=Z,160nm,0.3s,baz=233,slow=20,SNR=13						
CFA	Coronel Fontan	3.87	138	*e*P	Pn	16 13 30.1	+1.5
CFA				*e*S	Sn	16 14 14.5	+1.6
VA03	San Esteban	4.06	172		Pn	16 13 32.0	+0.7
VA03	San Esteban	4.06	172	*e*P	Pn	16 13 32.2	+0.9
VA03				*e*S	Sn	16 14 20.4	+2.8
VA03				IAML		16 14 40.8	
	comp=Z,974nm,0.7s						
PB14	IPOC Station P	4.16	11	Pn	Pn	16 13 31.1	-1.7
PB14	IPOC Station P	4.16	11	*e*P	Pn	16 13 31.3	-1.5
PB14				*e*S	Sn	16 14 18.6	-1.7
VA01	Torpederas	4.29	185		Pn	16 13 33.3	-1.0
PEL	Peldehue	4.42	174		Pn	16 13 36.7	+0.5
MT02	Curacav	4.51	179		Pn	16 13 36.8	-0.6
MT02	Curacav	4.51	179	*e*P	Pn	16 13 36.4	-1.0
MT02				*e*S	Sn	16 14 33.4	+4.8
MT02				IAML		16 14 57.5	
	comp=Z,349nm,0.3s						
ARCO	CERRO ARCO	4.55	155	*e*P	Pn	16 13 41.0	+2.9
ARCO				*e*S	Sn	16 14 35.1	+5.3
ARCO				IAML		16 14 57.4	
	comp=Z,638nm,2.0s						
MT05	Renca	4.67	175		Pn	16 13 39.4	-0.1
MT05	Renca	4.67	175	*e*P	Pn	16 13 40.2	+0.7
MT05				*e*S	Sn	16 14 32.5	+0.1
MT05				IAML		16 15 00.8	
	comp=Z,609nm,1.2s						
MT16	CCHEN	4.72	173		Pn	16 13 40.2	-0.1
MT04	Ro Olivares	4.75	169	*e*P	Pn	16 13 38.1	-2.7
MT04				*e*P		16 13 43.0	
MT04				*e*S	Sn	16 14 38.1	+3.3
MT04				IAML		16 15 07.3	
	comp=Z,363nm,1.1s						
MT03	Universidad Ad	4.79	173		Pn	16 13 41.9	+0.6
CYA	Choya	4.79	88	*e*P	Pn	16 13 42.0	+0.8
CYA				*e*S	Sn	16 14 34.3	-1.3
CYA				IAML		16 14 36.3	
	comp=Z,299nm,0.7s						
AAGR	Agrelo	4.81	155	*e*P	Pn	16 13 44.6	+3.1
AAGR				IAML		16 15 09.8	
	comp=Z,479nm,1.9s						
MT08	Bocatoma Ro	4.82	168		Pn	16 13 43.3	+1.6
MT08	Bocatoma Ro	4.82	168	*e*P	Pn	16 13 41.4	-0.3
MT08				*e*S	Sn	16 14 47.1	+11
MT08				IAML		16 14 59.5	
	comp=Z,244nm,0.5s						
VA05	Santo Domingo	4.92	184		Pn	16 13 41.5	-1.4
MT09	Talagante	5.03	178		Pn	16 13 44.6	0.0
MT13	San Alfonso	5.06	171		Pn	16 13 45.7	+0.7
MT13	San Alfonso	5.06	171	*e*S	Sn	16 14 42.1	-0.1
MT13				IAML		16 15 14.6	
	comp=Z,323nm,0.7s						
MT01	Popeta	5.12	180		Pn	16 13 44.6	-1.0
LMEL	Las Melosas	5.18	170		Pn	16 13 46.7	+0.1
PB10	IPOC Station P	5.23	7	Pn	Pn	16 13 45.4	-1.9
BO04	La Punta	5.27	174		Pn	16 13 47.2	-0.6
BO01	Tunca	5.64	179		Pn	16 13 51.9	-0.9
PB05	IPOC Station P	5.93	9	Pn	Pn	16 13 54.1	-2.8
PB06	IPOC Station P	6.19	14		Pn	16 13 57.8	-2.6
AF01	San Pedro de A	6.38	26		Pn	16 14 02.5	-0.7
PB03	IPOC Station P	6.79	12		Pn	16 14 06.0	-2.7
ML02	Panimavida	7.01	181		Pn	16 14 09.8	-1.7
PB01	IPOC Station P	7.82	12		Pn	16 14 19.5	-3.3
BI02	San Fabin de	7.91	180		Pn	16 14 22.2	-1.7
PATCX	Punta Patache	7.94	7	Pn	Pn	16 14 21.1	-3.2
H03N1	Juan Fernandez	8.08	233	P	Pn	16 14 25.5	-0.4
	baz=113,slow=18,SNR=796						
H03N1				S	Sn	16 15 51.5	-4.1
H03N1				T	T	16 22 21.0	
	baz=61,slow=72,SNR=625						
H03N2	Juan Fernandez	8.09	233	P	Pn	16 14 25.7	-0.3
	baz=113,slow=18,SNR=340						
H03N2				S	Sn	16 15 51.5	-4.4
H03N2				T	T	16 22 28.6	
	baz=61,slow=72,SNR=643						
H03N3	Juan Fernandez	8.09	233	P	Pn	16 14 25.7	-0.5
	baz=113,slow=18,SNR=485						
H03N3				S	Sn	16 15 51.2	-4.8
H03N3				T	T	16 22 36.6	
	baz=61,slow=72,SNR=591						
VA04	Juan Fernndez	8.13	231		Pn	16 14 25.9	-1.0
BI05	Punta Hualpn	8.16	191	Pn	Pn	16 14 24.5	-2.7
H03S3	Juan Fernandez	8.29	230	P	Pn	16 14 28.0	-0.9
	baz=32,slow=21,SNR=102						
H03S3				S	Sn	16 15 55.3	-5.6
	baz=158,slow=28,SNR=5.4						
H03S3				T	T	16 22 35.4	
	baz=59						
H03S1	Juan Fernandez	8.30	230	P	Pn	16 14 27.4	-1.6
	baz=32,slow=21,SNR=83						
H03S1				S	Sn	16 15 57.4	-3.7
	baz=158,slow=28,SNR=5.0						
H03S1				T	T	16 22 25.9	
	baz=59						
H03S2	Juan Fernandez	8.31	230	P	Pn	16 14 27.7	-1.4
	baz=32,slow=21,SNR=82						
H03S2				S	Sn	16 15 56.7	-4.6
	baz=158,slow=28,SNR=6.0						
H03S2				T	T	16 22 39.4	
	baz=59						
TA02	Huaiquique	8.48	7	Pn	Pn	16 14 29.2	-2.6
PB16	IPOC Station P	10.47	9		Pn	16 14 55.6	-3.9
PB18	Visviri	11.21	9		Pn	16 15 05.9	-3.6
PLCA	Paso Flores	11.99	177	P	Pn	16 15 18.1	-1.5
	comp=Z,1.0nm,0.6s,baz=334,slow=13,SNR=5.8						
PLCA				S	Sn	16 17 33.8	+2.1
	comp=Z,1.1nm,0.7s,baz=29,slow=18,SNR=1.1						
PLCA				LR	LR	16 20 16.8	
	comp=Z,121nm,18.3s,baz=350,slow=39						
TRQA	Tornquist	12.09	143		Pn	16 15 18.5	-2.6
CPUP	Villa Florida	12.58	82	P	Pn	16 15 24.4	-3.2
	comp=Z,0.3nm,0.5s,baz=270,slow=17,SNR=1.9						
CPUP				S	Sn	16 17 37.6	-8.5
	comp=Z,0.7nm,0.5s,baz=175,slow=15,SNR=1.2						
LPAZ	La Paz	12.71	14		Pn	16 15 26.9	-3.2
LPAZ	La Paz	12.71	14	P	Pn	16 15 27.4	-2.7
	comp=Z,3.1nm,0.5s,baz=202,slow=6.8,SNR=16						
LPAZ				LR	LR	16 20 56.7	
	comp=Z,80nm,18.4s,baz=204,slow=40						
LPAZ	La Paz	12.71	14	*e*P	Pn	16 15 26.9	-3.2
ITQB	Itaqui	12.81	98	Pn	Pn	16 15 28.4	-2.4
ITQB	Itaqui	12.81	98	*e*P	Pn	16 15 29.6	-1.2
ITQB				*e*S	Sn	16 17 47.0	-4.6
BBSD	Serra de San D	15.09	43	*e*P	Pn	16 15 56.4	-4.7
PLTB	Pedras Altas	15.54	106	Pn	Pn	16 16 03.1	-3.8
PLTB	Pedras Altas	15.54	106	*e*P	P	16 16 08.3	-1.8
SIV	San Ignacio	15.78	39	P	Pn	16 16 04.0	-6.0
	comp=Z,2.3nm,0.4s,baz=232,slow=8.9,SNR=13						
ITAB	Concordia	16.95	90	Pn	Pn	16 16 21.1	-3.5
PTLB	Pontes e Lacer	17.32	43		Pn	16 16 27.6	-1.5
PTLB	Pontes e Lacer	17.32	43	*e*P	Pn	16 16 28.2	-1.0
RPRD	Ribas do Rio P	17.93	67	*e*P	Pn	16 16 34.6	-2.0
VILB	Vilhena	18.77	35	P	P	16 16 42.8	-3.0
VILB	Vilhena	18.77	35	*e*P	P	16 16 43.1	-2.7
LDASE	Londrina, Braz	18.84	78	*e*P	P	16 16 46.1	-0.5
SALV	Santo Antonio	19.21	52	*e*P	P	16 16 50.4	-0.2
PCMB	Pacaembu	19.41	73	*e*P	Pn	16 16 53.4	-1.1
PDRB	Porto dos Gac	21.77	41	*e*P	P	16 17 17.6	-0.7
SPB	Sao Paulo	21.96	82	*e*P	P	16 17 21.3	+1.0
GO09	Cerro Castillo	22.53	182	P	P	16 17 24.4	-1.7
GO09				IAmb	IAmb	16 17 28.6	
	comp=Z,20nm,1.2s						
VAO	Valinhos	22.56	81	P	P	16 17 23.5	-3.3
VAO				IAmb	IAmb	16 17 46.9	
	comp=Z,62nm,1.3s						
MG05	Puerto Natales	22.94	182	P	P	16 17 29.6	-0.8
MG02	Cerro Sombrero	24.07	177	P	P	16 17 39.5	-1.4
EFI	East Falkland	24.95	160	P	P	16 17 48.9	-0.1
EFI				IAmb	IAmb	16 17 55.7	
	comp=Z,55nm,1.4s						
BDFB	Brasilia	25.09	64	P	P	16 17 50.6	-0.1
	comp=Z,3.1nm,0.8s,baz=206,slow=10,SNR=4.1						
BDFB				pP	pP	16 18 05.5	-0.2
	comp=Z,2.9nm,0.4s,baz=202,slow=6.8,SNR=3.7						
	comp=Z,3.1nm,0.8s						
MG03	Isla Dawson	25.10	179	P	P	16 17 51.6	+1.3
MG03				IAmb	IAmb	16 18 14.9	
	comp=Z,34nm,1.2s						
PMSA	Palmer Station	36.34	175	LR	LR	16 32 56.6	
	comp=Z,71nm,19.2s,baz=166,slow=34						
MDP	Montagnes des	38.11	31	LR	LR	16 35 03.0	
	comp=Z,40nm,21.8s,baz=230,slow=36						
BELA	Belgrano 2	51.95	171	P	P	16 21 33.9	+0.1
BELA				IAmb	IAmb	16 21 58.9	
	comp=Z,12nm,1.5s						
VNA3	Neumayer Olymp	54.00	159	⇓P	P	16 21 49.7	+0.7
	comp=Z,6.4nm,0.8s						
VNA3				⇑sP	sP	16 22 12.7	+0.2
VNA1	Neumayer--Stat	54.28	159	⇓P	P	16 21 51.8	+0.9
	comp=Z,4.9nm,1.0s						
VNA2	Neumayer--Watz	54.63	159	⇓P	P	16 21 54.1	+0.6
	comp=Z,9.4nm,0.5s,baz=282,slow=8.2						
VNA2				⇑sP	sP	16 22 17.4	+0.4
	baz=282,slow=6.5						
SNAA	Sanae	56.23	159	⇓P	P	16 22 05.6	+0.5
	comp=Z,334nm,0.7s						
SNAA				⇓sP	sP	16 22 28.9	+0.3
SNAA	Sanae	56.23	159	P	P	16 22 05.2	+0.2
SNAA	Sanae	56.23	159	P	P	16 22 05.5	+0.5
	comp=Z,10nm,0.6s,baz=280,slow=7.9,SNR=108						
SNAA				pP	pP	16 22 22.2	+0.7
	comp=Z,1.8nm,0.5s,baz=288,slow=10,SNR=2.1						
SNAA				sP	sP	16 22 28.5	-0.1
	comp=Z,4.6nm,0.5s,baz=290,slow=7.4,SNR=5.9						
	comp=Z,10nm,0.6s						
TROLL	Troll, Antarti	57.94	159	⇓P	P	16 22 17.8	+0.5
	comp=Z,422nm,0.6s						
TROLL				⇑sP	sP	16 22 41.0	+0.2
QSPA	South Pole Qui	61.49	180	P	P	16 22 42.7	+1.0
QSPA				IAmb	IAmb	16 22 43.9	
	comp=Z,10nm,1.2s						
QSPA	South Pole Qui	61.49	180	P	P	16 22 42.8	+1.0
	comp=Z,2.9nm,0.5s,baz=178,slow=3.8,SNR=50						
QSPA				pP	pP	16 22 58.9	+0.5
	comp=Z,1.2nm,0.7s,baz=129,slow=6.2,SNR=2.3						
QSPA				sP	sP	16 23 05.7	+0.3
	comp=Z,2.4nm,0.6s,baz=168,slow=0.5,SNR=4.0						
	comp=Z,2.9nm,0.5s						
GOGA	Godfrey	62.88	349	P	P	16 22 50.3	-0.8
W57A	Gilead	64.08	352	P	P	16 22 59.1	+0.2
SAND	Sanderson	65.38	331	P	P	16 23 09.8	+2.1
SAND				IAmb	IAmb	16 23 27.4	
	comp=Z,3.5nm,0.7s						
TXAR	Lajitas Array	65.53	329	P	P	16 23 11.0	+2.3
TXAR	Lajitas Array	65.53	329	P	P	16 23 11.4	+2.7
	comp=Z,0.9nm,0.5s,baz=152,slow=8.5,SNR=11						
TXAR				pP	pP	16 23 26.5	+1.4
	comp=Z,0.7nm,0.6s,baz=158,slow=7.8,SNR=5.5						
TXAR				sP	sP	16 23 34.7	+2.8
	comp=Z,1.4nm,0.8s,baz=158,slow=8.3,SNR=7.5						
	comp=Z,0.9nm,0.5s						
MNTX	Cornudas Mount	68.31	329	P	P	16 23 27.8	+1.6
VNDA	Vanda	69.39	191	P	P	16 23 34.5	+2.1
	comp=Z,0.9nm,0.8s,baz=155,slow=4.6,SNR=5.1						
	comp=Z,0.9nm,0.8s						

DBIC	Dimbokro	72.89	72	P	P	16 23 54.6	+0.1
	comp=Z,4.8nm,0.6s,baz=253,slow=7.6,SNR=6.2						
	comp=Z,4.8nm,0.6s						
MAW	Mawson	78.03	164	P	P	16 24 24.1	+1.0
	comp=Z,6.6nm,0.5s,baz=210,slow=6.4,SNR=29						
	comp=Z,6.6nm,0.5s						
PDAR	Pinedale Array	79.40	332	P	P	16 24 33.1	+2.0
	comp=Z,0.4nm,0.5s,baz=116,slow=6.8,SNR=5.3						
PDAR				pP	pP	16 24 48.6	+0.7
	comp=Z,0.9nm,0.5s,baz=122,slow=7.3,SNR=5.8						
	comp=Z,0.4nm,0.5s						
NVAR	Mina Array Bea	79.99	324	P	P	16 24 36.7	+2.4
	comp=Z,0.2nm,0.5s,baz=193,slow=6.6,SNR=1.5						
	comp=Z,0.2nm,0.5s						
KOOLE	Kule	80.48	111	P	P	16 24 37.9	+0.4
KOOLE				IAmb	IAmb	16 24 39.1	
	comp=Z,10.0nm,0.6s						
ULM	Lac du Bonnet	81.61	344	P	P	16 24 43.1	+0.7
	comp=Z,2.1nm,0.9s,baz=157,slow=6.9,SNR=2.0						
ULM				pP	pP	16 24 59.8	+0.2
	comp=Z,2.5nm,0.7s,baz=136,slow=5.7,SNR=3.1						
	comp=Z,2.1nm,0.9s						
TORD	Torodi Ar. Bea	81.78	70		P	16 24 44.3	+0.1
TORD				IAmb	IAmb	16 24 45.1	
	comp=Z,4.0nm,0.7s						
TORD	Torodi Ar. Bea	81.78	70	P	P	16 24 44.3	+0.1
	comp=Z,3.4nm,0.5s,baz=263,slow=3.5,SNR=2.0						
	comp=Z,3.4nm,0.5s						
BOSA	Boshof	81.93	118	P	P	16 24 44.7	-0.3
	comp=Z,8.6nm,0.5s,baz=253,slow=3.8,SNR=31						
	comp=Z,8.6nm,0.5s						
LBTB	Lobatse	83.91	115	P	P	16 24 55.3	0.0
FCC	Fort Churchill	89.22	348	P	P	16 25 20.8	+0.8
FCC				IAmb	IAmb	16 25 46.5	
	comp=Z,3.9nm,0.8s						
ESDC	Sonseca Array	92.42	45	LR	LR	17 04 44.9	
	comp=Z,24nm,18.4s,baz=144,slow=34						
MNK	Minsk	118.02	41	*i* PKP	PKPdf	16 31 09.2	-1.7
	comp=E,25nm,0.9s						
MNK				*i* PKP	PKPdf	16 31 09.2	-1.7
	comp=N,13nm,0.9s						
MNK				*i* PKP	PKPdf	16 31 09.2	-1.7
	comp=Z,10.0nm,0.7s,baz=259						
MNK				*i* pPKP	pPKPdf	16 31 29.4	+0.3
MNK				*i* sPKP		16 31 38.9	
MNK				*i* PP	PP	16 32 24.6	-2.0
MNK				*i* PPP	PPP	16 34 58.6	
MNK				*i* SKP		16 35 10.5	
MNK				*i* PKS	PKSdf	16 35 47.8	+61
MNK				*i* SKS	SKSdf	16 38 15.3	-2.0
MNK				*i* SP	SP	16 43 19.2	+74
MNK				*i* PS	PS	16 43 46.8	+94
MNK				*i* SS	SS	16 48 35.5	-0.8
MNK				*i* SSS	SSS	16 53 32.6	
BRTR	Keskin Array B	118.58	58	PKP	PKiKP	16 31 13.4	+0.7
	comp=Z,0.3nm,0.6s,baz=209,slow=9.9,SNR=2.1						
ASAR	Alice Springs	122.55	208	PKP	PKPdf	16 31 20.9	+0.2
	comp=Z,1.3nm,0.4s,baz=128,slow=1.6,SNR=59						
ASAR				pPKP	pPKPdf	16 31 38.4	-0.5
	comp=Z,1.2nm,0.8s,baz=124,slow=1.6,SNR=6.0						
WRA	Warramunga Arr	125.67	210	PKP	PKPdf	16 31 27.5	+0.7
	comp=Z,4.5nm,0.5s,baz=158,slow=1.6,SNR=97						
WRA				pPKP	pPKPdf	16 31 45.0	+0.1
	comp=Z,2.1nm,0.6s,baz=158,slow=1.6,SNR=9.7						
KBZ	Khabaz	126.14	55	PKP	PKPdf	16 31 27.1	+0.3
	comp=Z,2.0nm,0.8s,baz=233,slow=5.1,SNR=2.7						
H11S2	WAKE ISLAND Hy	126.37	273	T	T	18 50 45.1	
	baz=112,slow=75,SNR=29						
H11S1	WAKE ISLAND Hy	126.38	273	T	T	18 50 50.4	
	baz=112,slow=75,SNR=26						
H11S3	WAKE ISLAND Hy	126.39	273	T	T	18 50 52.0	
	baz=112,slow=75,SNR=26						
H11N3	WAKE ISLAND Hy	126.65	274	T	T	18 51 06.1	
	baz=113,slow=74						
H11N1	WAKE ISLAND Hy	126.67	274	T	T	18 50 58.6	
	baz=113						
H11N2	WAKE ISLAND Hy	126.67	274	T	T	18 51 14.9	
	baz=113,slow=74						
PETK	Petropavlovsk-	136.83	318	PKP	PKiKP	16 31 48.7	+0.2
	comp=Z,1.5nm,1.0s,baz=107,slow=4.8,SNR=2.9						
PETK				pPKP	pPKPdf	16 32 06.2	+1.4
	comp=Z,3.0nm,0.9s,baz=63,slow=8.4,SNR=5.4						
BVAR	Borovoye Array	142.85	38	PKP	PKPdf	16 31 58.5	+0.9
	comp=Z,0.4nm,0.4s,baz=4.4,slow=9.1,SNR=2.4						
KURBB	Kurchatov Arra	148.43	38	PKPbc	PKPbc	16 32 12.1	+1.2
	comp=Z,6.0nm,0.6s,baz=303,slow=3.0,SNR=35						
KURBB				pPKPbc	pPKPdf	16 32 27.3	+1.8
	comp=Z,3.4nm,0.8s,baz=302,slow=3.1,SNR=5.8						
AAK	Ala-Archa	149.13	54	PKPbc	PKiKP	16 32 14.6	+0.3
	comp=Z,5.9nm,0.6s,baz=216,slow=2.1,SNR=14						
AAK				pPKPbc	pPKPbc	16 32 32.4	+1.0
	comp=Z,7.4nm,0.7s,baz=214,slow=2.3,SNR=6.7						
ZALV	Zalesovo Beam	149.34	28	PKPbc	PKiKP	16 32 14.2	+0.1
	comp=Z,16nm,0.5s,baz=310,slow=3.3,SNR=57						
ZALV				pPKPbc	pPKPbc	16 32 31.8	+0.8
	comp=Z,11nm,0.7s,baz=316,slow=4.1,SNR=9.9						
KSH	Kashi	150.95	60	PKPbc	PKiKP	16 32 18.8	+0.7
KSH				pPKP	PKPab	16 32 25.3	+0.1
KSH				sPKP		16 32 34.3	
MKAR	Makanchi Array	152.58	42	PKP	PKPdf	16 32 14.2	+0.4
	comp=Z,0.6nm,0.8s,baz=356,slow=3.8,SNR=4.9						
MKAR				PKPbc	PKiKP	16 32 21.7	+0.6
	comp=Z,3.3nm,0.6s,baz=320,slow=2.1,SNR=37						
MKAR				pPKPbc	sPKPdf	16 32 39.3	+0.5
	comp=Z,4.8nm,0.7s,baz=332,slow=2.2,SNR=18						
MJAR	Matsushiro Arr	154.07	295	PKPab	PKPab	16 32 40.7	+2.4
	comp=Z,0.6nm,0.7s,baz=142,slow=6.1,SNR=1.5						
USRK	Ussuriysk Ar.	155.88	316	PKP	PKPdf	16 32 18.8	+0.3
	comp=Z,0.4nm,0.5s,baz=359,slow=9.1,SNR=1.6						
SONM	Songino Array	160.84	5	PKP	PKPdf	16 32 25.9	+1.3
	comp=Z,0.6nm,0.4s,baz=299,slow=1.5,SNR=1.5						
SONM				PKPab	PKPab	16 33 07.2	+0.1
	comp=Z,0.4nm,0.4s,baz=352,slow=2.9,SNR=1.2						
PZH	PanZhiHua	173.40	108	PKP	PKPdf	16 32 35.3	+0.8

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*IDC **13** 16:14:14.2±1.1, 7°.32N×127°.35E, h0^{km}, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=21.7km s-min=15.5km az=3.0*

ISC 13 16:14:19.9±1.0**, 7°.3N**±0°.1×**127°.3E**±0°.2**, h41**^{km}**, n6,** σ1^{s}**43**/7**, mb3.5**/5**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.74	263	Pg	Pn	16 14 48.2	+0.6
	68nm,0.3s,baz=67,slow=15,SNR=4.7						
DAV				LR	LR	16 14 56.3	
	comp=Z,38nm,22.0s,baz=270,slow=24						
DAV				Lg	Lg	16 15 10.1	
	20nm,0.3s,baz=68,slow=19,SNR=3.7						
WRA	Warramunga Arr	27.94	166	P	P	16 20 07.6	+1.0
	0.5nm,1.0s,baz=345,slow=11,SNR=3.1						
	0.5nm,1.0s						
ASAR	Alice Springs	31.44	168	P	P	16 20 38.4	+0.8
	0.3nm,0.7s,baz=345,slow=7.2,SNR=4.4						
ASAR				PcP	PcP	16 23 29.9	-0.6
	0.2nm,0.7s,baz=348,slow=2.6,SNR=4.4						
	0.3nm,0.7s						
USRK	Ussuriysk Ar.	36.98	6	P	P	16 21 26.7	+1.4
	2.4nm,0.8s,baz=198,slow=9.1,SNR=5.8						
	2.4nm,0.8s						
STKA	Stephens Creek	41.27	161	P	P	16 22 00.3	-1.0
	1.7nm,1.0s,baz=340,slow=18,SNR=1.4						
	1.7nm,1.0s						
MKAR	Makanchi Array	55.01	324	P	P	16 23 45.6	-1.7
	0.5nm,0.9s,baz=114,slow=6.2,SNR=4.7						
	0.5nm,0.9s						

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*NNC **13** 16:24:53.4±3.9, 37°.03N×69°.69E, h0^{km}, mb4.5, mpv4.3, Error ellipse: s-maj=30.4km s-min=29.3km az=13.0*

*IDC **13** 16:24:54.2±7.2, 36°.37N×70°.69E, h188^{km}±62^{km}, mb3.2/2, mbtmp3.8/7, Error ellipse: s-maj=59.3km s-min=39.6km az=44.0*

ISC 13 16:24:54.9±1.6**, 36°.5N**±0°.1×**70°.5E**±0°.2**, h200**^{km}**, n23,** σ1^{s}**31**/25**, 5C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.17	22	P	Pn	16 26 25.2	+0.5
	SNR=110						
MRKS	Merke	6.61	17	Pg	Pn	16 26 30.5	+0.4
	18nm,0.3s						
MRKS				Lg	Lg	16 27 42.3	
	31nm,0.4s						
KK31	Karatay Array	6.63	360	⇑P	Pn	16 26 25.6	-4.7
	2.1nm,0.2s,baz=184,slow=14,SNR=41						
KK31				⇓S	Sn	16 27 37.2	-8.8
	22nm,0.8s,baz=189,slow=27						
EKS2	Erkin-Say	6.68	21	P	Pn	16 26 31.9	+0.8
	SNR=15						
AAK	Ala-Archa	6.88	25	P	Pn	16 26 34.9	+1.2
	SNR=10						
AAK	Ala-Archa	6.88	25	P	Pn	16 26 34.4	+0.7
	6.4nm,0.4s,baz=210,slow=7.9,SNR=27						
AAK				S	Sn	16 27 50.1	-2.1
	13nm,0.7s,baz=163,slow=19,SNR=15						
KBK	Karagaybulak	7.06	27	P	Pn	16 26 37.4	+1.3
	SNR=9.1						
ULHL	Ulahol	7.27	36	P	Pn	16 26 41.5	+2.6
	SNR=5.7						
CHMS	Chumysh	7.29	25	P	Pn	16 26 39.8	+0.9
	SNR=7.5						
CHMS	Chumysh	7.29	25	⇑P	Pn	16 26 38.4	-0.4
	11nm,0.8s						
CHMS				⇑S	Sn	16 28 00.5	-1.0
	14nm,0.9s						
USP	Ospenovka	7.45	23	P	Pn	16 26 41.7	+0.8
	SNR=7.8						
TKM2	Tokmak 2	7.54	30	P	Pn	16 26 43.5	+1.3
	SNR=7.8						
TKM2	Tokmak 2	7.54	30	⇑P	Pn	16 26 43.3	+1.0
	18nm,0.5s						
TKM2				⇑S	Sn	16 28 08.8	+1.1
	1.4nm,0.1s						
KST	Kastek	7.79	31	Pg	Pn	16 26 46.3	+0.9
	11nm,0.6s						
KST				Lg	Lg	16 28 11.2	
	8.0nm,0.9s						
MTBS	Maitube	8.06	32	Pg	Pn	16 26 49.9	+1.0
	10nm,0.3s						
MTBS				Lg	Lg	16 28 17.0	
	8.8nm,0.8s						
MDOK	Medeo	8.36	35	P	Pn	16 26 55.0	+2.1
	8.7nm,1.0s						
MK31	Makanchi Array	13.54	37	⇓P	P	16 27 59.6	-1.9
	0.5nm,0.5s,baz=217,slow=16,SNR=7.2						
MKAR	Makanchi Array	13.54	37	P	P	16 27 59.8	-1.7
	0.8nm,0.7s,baz=214,slow=13,SNR=7.7						
KURBB	Kurchatov Arra	15.28	20	P	Pn	16 28 20.1	-0.3
	0.3nm,0.3s,baz=210,slow=11,SNR=2.2						
BVAR	Borovoye Array	16.56	360	P	Pn	16 28 36.5	+0.7
	0.8nm,0.4s,baz=179,slow=11,SNR=4.9						
AKTO	Aktyubinsk	16.63	331	P	P	16 28 36.3	+0.7
	3.4nm,0.7s,baz=142,slow=9.9,SNR=12						
ZALV	Zalesovo Beam	20.11	25	P	P	16 29 14.2	+1.1
	1.5nm,0.3s,baz=215,slow=9.9,SNR=9.0						
	1.5nm,0.3s						
ASAR	Alice Springs	84.54	125	P	P	16 37 05.0	-0.6
	0.4nm,0.7s,baz=313,slow=5.4,SNR=5.7						
	0.4nm,0.7s						

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*NEIC **13** 16:28:31.1±2.5, 36°.06S±0°.09×179°.2W±0°.1, h10^{km}±1^{km}, mb4.4/8, Error ellipse: s-maj=18.5km s-min=10.8km az=138.0*

*WEL **13** 16:28:36.8±0.9, 36°S±8°×17°9W±°, h147^{km}±21^{km}, M4.0/12, ML4.4/10, MLv4.0/12, Error ellipse: s-maj=12.2km s-min=8.3km az=41.4, confirmed*

*IDC **13** 16:28:37.0±6.0, 36°.03S×179°.21W, h65^{km}±47^{km}, mb3.6/3, mbtmp4.0/6, ML3.6/3, Error ellipse: s-maj=43.7km s-min=26.5km az=61.0*

*NOU **13** 16:28:38.3, 36°.33S×179°.45W, h0^{km}, MLv4.2/10, East of North Island, N.Z.*

ISC 13 16:28:34.7±1.8**, 36°.13S**±0°.07×**178°.9W**±0°.1**, h64**^{km}±15^{km}**, n74,** σ1^{s}**69**/94**, mb4.2**/6**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.63	236	Pn	Pn	16 29 11.8	-3.0
MXZ				Sn	Sn	16 29 43.7	-1.9
MXZ	Matakaoa Point	2.63	236	P	Pn	16 29 16.9	+2.1
WMGZ	Waiomatatini S	2.71	231	P	Pn	16 29 16.5	+0.6
WMGZ				S	Sn	16 29 49.7	+2.2
PKGZ	Pakihiroa	2.95	233	P	Pn	16 29 19.6	+0.4
PKGZ				S	Sn	16 29 55.1	+1.6
PUZ	Puketiti	2.96	228	P	Pn	16 29 20.5	+1.1
PUZ				S	Sn	16 29 55.1	+1.3
HAZ	Te Kaha	3.09	237	P	Pn	16 29 22.7	+1.7
HAZ				S	Sn	16 29 59.4	+2.7
TWGZ	Tauwhareparae	3.20	229	P	Pn	16 29 23.9	+1.2
TWGZ				S	Sn	16 30 00.8	+1.3
RUGZ	Raukumara Rang	3.27	235	P	Pn	16 29 24.2	+0.6
RUGZ				S	Sn	16 30 02.7	+1.3
CNGZ	Carnagh Statio	3.27	223	P	Pn	16 29 24.6	+1.0
CNGZ				S	Sn	16 30 02.2	+0.9
TKGZ	Te Karaka	3.45	227	P	Pn	16 29 26.5	+0.6
TKGZ				S	Sn	16 30 06.4	+0.8
MWZ	Matawai	3.58	231	P	Pn	16 29 27.9	+0.1
MWZ				S	Sn	16 30 08.6	-0.2
RAGZ	Rawiri	3.75	230	P	Pn	16 29 31.1	+1.0
RAGZ				S	Sn	16 30 14.1	+1.1
PRGZ	Paritu Road	3.76	221	P	Pn	16 29 30.0	-0.3
PRGZ				S	Sn	16 30 14.1	+0.7
URZ	Urewera	3.80	235	P	Pn	16 29 31.6	+0.8
	4.1nm,0.3s,baz=59,slow=19,SNR=66						
URZ				S	Sn	16 30 14.1	-0.2
	22nm,0.4s,baz=49,slow=19,SNR=4.0						
	9.4nm,0.4s						
URZ	Urewera	3.80	235	P	Pn	16 29 31.4	+0.6
URZ	Urewera	3.80	235	P	Pn	16 29 31.7	+0.8
URZ				S	Sn	16 30 14.1	-0.2
SNGZ	Shannon Statio	3.97	227	P	Pn	16 29 33.4	+0.3
SNGZ				S	Sn	16 30 18.2	-0.3
OPRZ	Ohinepanea	3.99	243	P	Pn	16 29 34.6	+1.2
RTZ	Ruatahuna	4.09	231	Pn	Pn	16 29 32.8	-2.0
RTZ				Sn	Sn	16 30 19.6	-1.9
MUGZ	Murupara	4.15	234	P	Pn	16 29 36.0	+0.5
TGRZ	Tauranga	4.16	246	P	Pn	16 29 37.2	+1.5
RAHZ	Arahi	4.21	227	P	Pn	16 29 37.2	+0.8
RAHZ				S	Sn	16 30 23.1	-1.2
KUZ	Kuaotunu	4.35	260	P	Pn	16 29 39.4	+1.1
KUZ	Kuaotunu	4.35	260	S	Sn	16 30 26.7	-0.9
KUZ	Kuaotunu	4.35	260	P	Pn	16 29 39.7	+1.5
KUZ				S	Sn	16 30 25.9	-1.7
BKZ	Black Stump Fm	4.73	229	Pn	Pn	16 29 42.1	-1.4
BKZ	Black Stump Fm	4.73	229	P	Pn	16 29 44.4	+0.9
BKZ	Black Stump Fm	4.73	229	S	Sn	16 30 35.9	-1.1
TOZ	Tahuroa Road	4.73	249	Pn	Pn	16 29 39.2	-4.3
WIAZ	Waiheke Island	4.82	260	P	Pn	16 29 46.0	+1.3
WIAZ				S	Sn	16 30 38.2	-1.1
MKAZ	Moumakai	4.84	257	P	Pn	16 29 46.0	+1.0
ETAZ	East Tamaki Re	5.00	259	P	Pn	16 29 49.2	+1.9
AWAZ	Awhitu Peninsu	5.25	258	P	Pn	16 29 51.8	+1.2
WCZ	Waipu Caves	5.44	270	P	Pn	16 29 55.5	+2.2
HIZ	Hauiti	5.49	242	Pn	Pn	16 29 51.0	-2.8
HIZ	Hauiti	5.49	242	P	Pn	16 29 54.7	+0.8
BFZ	Birch Farm	5.91	218	Pn	Pn	16 29 57.4	-2.3
WAZ	Wanganui	6.01	231	P	Pn	16 30 00.7	-0.4
WAZ				S	Sn	16 31 06.9	-1.6
OUZ	Omahuta	6.14	276	P	Pn	16 30 05.1	+2.3
OUZ	Omahuta	6.14	276	P	Pn	16 30 04.7	+1.9
MRZ	Mangatainoka R	6.25	222	Pn	Pn	16 30 01.6	-2.6
RAO	Raoul Island	6.91	7	Pn	Pn	16 30 13.9	+0.6
SNZO	South Karori	7.17	222	Pn	Pn	16 30 13.6	-3.3
TCW	Tory Channel	7.34	224	Pn	Pn	16 30 17.2	-2.0
TUWZ	Tuamarina	7.67	224	Pn	Pn	16 30 22.4	-1.3
CTZ	Chatham Island	7.81	167	Pn	Pn	16 30 24.9	-0.7
CTZ	Chatham Island	7.81	167	P	Pn	16 30 24.7	-0.8
NNZ	Nelson	7.87	227	Pn	Pn	16 30 24.8	-1.6
BSWZ	Blackbirch Sta	7.90	223	Pn	Pn	16 30 24.4	-2.5
TKNZ	Takaka Hill	8.01	230	Pn	Pn	16 30 25.6	-2.9
QRZ	Quartz Range	8.17	232	Pn	Pn	16 30 28.9	-1.7
QRZ	Quartz Range	8.17	232	P	Pn	16 30 30.3	-0.2
MRNZ	Matariki Terra	8.35	228	Pn	Pn	16 30 31.3	-1.7
THZ	Tophouse	8.48	226	Pn	Pn	16 30 32.7	-2.2
KHZ	Kahutara	8.57	221	Pn	Pn	16 30 33.2	-2.8
KHZ	Kahutara	8.57	221	P	Pn	16 30 38.5	+2.5
DSZ	Denniston Nort	9.13	229	Pn	Pn	16 30 40.4	-3.3
LTZ	Lake Taylor	9.50	223	Pn	Pn	16 30 45.6	-3.2
RPZ	Rata Peaks	10.79	222	P	Pn	16 31 06.5	+0.3
	0.4nm,0.3s,baz=45,slow=14,SNR=1.3						
RPZ				S	Sn	16 32 56.0	-9.3
	3.7nm,0.4s,baz=352,slow=12,SNR=6.2						
	2.9nm,0.6s						
LBZ	Lake Benmore	11.70	222	Pn	Pn	16 31 15.9	-2.9
DZM	Mont Dzumac	18.92	314	P	Pn	16 32 51.8	+0.1
	0.2nm,0.3s,baz=168,slow=20,SNR=3.6						
	4.9nm,0.7s						
ARMA	Armidale	25.20	275	P	P	16 33 52.5	-2.0
ARMA				IAmb	IAmb	16 34 19.0	
	comp=Z,20nm,1.4s						
BBOO	Buckleboo	37.00	262	P	P	16 35 38.5	+0.4
RABL	Rabaul	41.45	313	P	P	16 36 15.2	-0.1
AS31	Alice Springs	42.34	274	P	P	16 36 22.2	-0.5
ASAR	Alice Springs	42.34	274	P	P	16 36 21.4	-1.3
ASAR	Alice Springs	42.34	274	P	P	16 36 23.0	+0.3
	comp=Z,0.6nm,0.5s,baz=115,slow=7.8,SNR=27						
	comp=Z,0.6nm,0.5s						
WR8	Warramunga Arr	43.71	279	P	P	16 36 32.9	-0.8
WR8				IAmb	IAmb	16 36 35.6	
	comp=Z,7.0nm,1.2s						
WRA	Warramunga Arr	43.85	279	P	P	16 36 34.8	0.0
	comp=Z,1.0nm,0.5s,baz=119,slow=7.6,SNR=18						
	comp=Z,1.0nm,0.5s						
WB0	Warramunga Arr	43.90	279	P	P	16 36 35.0	-0.2
WB0				IAmb	IAmb	16 37 06.1	
	comp=Z,5.9nm,1.4s						
QSPA	South Pole Qui	54.00	180	P	P	16 37 54.7	+2.7
QSPA	South Pole Qui	54.00	180	P	P	16 37 55.2	+3.1
	comp=Z,2.8nm,1.1s,baz=333,slow=4.5,SNR=7.5						
	comp=Z,2.8nm,1.1s						
MBWA	Marble Bar	55.02	268	P	P	16 37 59.6	-0.3
FINES	FINESS Array B	150.14	336	PKPbc	PKPbc	16 48 17.9	+0.5
	comp=Z,1.9nm,0.9s,baz=353,slow=3.2,SNR=3.5						

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*IDC **13** 16:41:44.4±1.5, 33°.21S×72°.36W, h0^{km}, mb4.0/3, mbtmp3.7/7, ML3.7/4, MS3.1/3, Error ellipse: s-maj=32.1km s-min=25.1km az=108.0*

*GUC **13** 16:41:48.6±0.8, 33°.20S×72°.04W, h36^{km}±4^{km}, ML3.9*

ISC 13 16:41:44.9±1.8**, 33°.14S**±0°.04×**72°.11W**±0°.06**, h3**^{km}±10^{km}**, n40,** σ1^{s}**11**/53**, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA01	Torpederas	0.41	73	*e*P	Pn	16 41 56.3	-1.4
VA05	Santo Domingo	0.66	141	*e*P	Pn	16 41 59.9	-1.3
VA05				*i* S	Sb	16 42 08.4	-0.3
VA05				IAML		16 42 09.9	
	comp=N,10μm,0.4s						
MT02	Curacav	0.82	98	*e*P	Pn	16 42 02.5	-1.0
MT02				*i* S	Sb	16 42 13.1	-0.4
VA06	Catapilco	0.90	50	*e*P	Pn	16 42 04.5	+0.1
VA06				*i* S	Sn	16 42 16.6	-1.3
VA06				IAML		16 42 19.0	
	comp=N,7μm,0.4s						
ROCH	El Roble	0.94	80	*e*P	Pn	16 42 04.7	-0.5
ROCH				*i* S	Sn	16 42 17.3	-2.0
MT01	Popeta	1.02	135	*e*P	Pn	16 42 05.5	-0.6
MT01				*i* S	Sg	16 42 18.1	+0.4
MT01				IAML		16 42 18.9	
	comp=E,8μm,0.2s						
MT09	Talagante	1.13	124	*e*P	Pn	16 42 07.5	-0.3
MT09				*i* S	Sg	16 42 21.5	+0.2
MT09				IAML		16 42 23.1	
	comp=N,10μm,0.2s						
MT05	Renca	1.18	103	*e*P	Pg	16 42 08.2	+0.7
MT05				*i* S	Sb	16 42 22.8	-0.9
PEL	Peldehue	1.20	91	*e*P	Pg	16 42 09.1	+1.2
PEL				*i* S	Sg	16 42 23.9	+0.5
PEL				IAML		16 42 28.4	
	comp=N,3μm,0.5s						
MT10	Hacienda Santa	1.33	96	*e*P	Pg	16 42 11.2	+0.8
MT10				*i* S	Sn	16 42 27.9	-0.9
MT10				IAML		16 42 31.8	
	comp=E,7μm,0.3s						
MT14	Cerro Cal¡n	1.34	101	*e*P	Pg	16 42 11.1	+0.4
MT14				*i* S	Sb	16 42 28.0	-0.5
MT14				IAML		16 42 32.0	
	comp=E,4μm,0.5s						
MT16	CCHEN	1.36	103	*e*P	Pg	16 42 11.4	+0.3
MT16				*i* S	Sn	16 42 28.6	-0.9
VA03	San Esteban	1.36	74	*e*P	Pg	16 42 11.6	+0.5
VA03				*i* S	Sg	16 42 29.4	+0.5
VA03				IAML		16 42 34.1	
	comp=N,4μm,0.4s						
MT15	Las Vizcachas	1.42	109	*e*P	Pg	16 42 12.2	0.0
MT15				*i* S	Sn	16 42 30.1	-0.8
MT15				IAML		16 42 37.0	
	comp=N,5μm,0.4s						
MT12	Pirque	1.43	115	*e*P	Pg	16 42 12.3	-0.1
MT12				*i* S	Sb	16 42 30.6	-0.4
MT12				IAML		16 42 34.4	
	comp=N,6μm,0.3s						
BO01	Tunca	1.51	146	*e*P	Pb	16 42 12.8	-0.8
BO01				*i* S	Sn	16 42 31.6	-1.6
BO04	La Punta	1.51	124	*e*P	Pb	16 42 13.4	-0.3
BO04				*i* S	Sn	16 42 32.4	-0.8
BO04				IAML		16 42 34.5	
	comp=N,2μm,0.4s						
FCH	Farellones	1.54	97	*e*P	Pg	16 42 14.5	0.0
FCH				*i* S	Sb	16 42 34.0	-0.3
FCH				IAML		16 42 40.6	
	comp=N,2μm,0.1s						
MT13	San Alfonso	1.64	112	*e*P	Pb	16 42 15.7	-0.2
MT13				*i* S	Sb	16 42 36.2	-0.8
MT13				IAML		16 42 42.5	
	comp=E,3μm,0.4s						
MT04	Ro Olivares	1.68	100	*e*P	Pb	16 42 16.3	-0.2
MT04				*i* P	Pg	16 42 16.5	-0.6
MT04				*i* S	Sn	16 42 37.0	-0.5
MT04				IAML		16 42 41.1	
	comp=N,2μm,0.2s						
LMEL	Las Melosas	1.74	114	*e*P	Pb	16 42 17.5	-0.2
LMEL				*i* S	Sb	16 42 39.5	-0.6
LMEL				IAML		16 42 41.8	
	comp=N,2μm,0.3s						
MT08	Bocatoma Ro	1.78	100	*e*P	Pb	16 42 18.2	-0.1
MT08				*i* S	Sb	16 42 40.5	-0.7
MT08				IAML		16 42 46.1	
	comp=N,2μm,0.7s						
CFA	Coronel Fontan	3.62	66	Pn	Pb	16 42 45.8	-3.8
	comp=N,2.5nm,0.3s,baz=240,slow=14,SNR=32						
CFA				Sn	Sb	16 43 33.2	-0.7
	comp=N,8.7nm,0.3s,baz=248,slow=19,SNR=5.9						
	comp=N,7.3nm,0.3s						
H03S1	Juan Fernandez	5.72	261	T	T	16 49 25.5	
	baz=84,slow=75,SNR=1011						
H03S3	Juan Fernandez	5.72	261	T	T	16 49 26.8	
	baz=84,slow=75,SNR=762						
H03S2	Juan Fernandez	5.74	261	T	T	16 49 22.0	
	baz=84,slow=75,SNR=1052						
PLCA	Paso Flores	7.68	171	Pn	Pn	16 43 37.7	-0.1
	comp=N,0.5nm,0.3s,baz=341,slow=9.7,SNR=10						
PLCA				LR	LR	16 46 24.6	
	comp=N,43nm,19.8s,baz=219,slow=37						
	comp=N,0.9nm,0.3s						
CPUP	Villa Florida	14.52	66	Pn	Pn	16 45 13.1	+1.7
	baz=307,slow=20,SNR=3.1						
CPUP				Sn	Sn	16 47 57.0	+4.1
	baz=279,slow=19,SNR=1.9						
	comp=N,0.3nm,0.6s						
LPAZ	La Paz	17.16	13	P	P	16 45 48.8	+0.6
	comp=N,0.1nm,0.3s,baz=198,slow=9.6,SNR=3.6						
	comp=N,1.2nm,0.7s						
BDFB	Brasilia	27.91	57	LR	LR	16 59 45.1	
	comp=N,78nm,19.4s,baz=193,slow=38						
MDP	Montagnes des	42.28	30	LR	LR	17 09 15.6	
	comp=N,30nm,18.5s,baz=80,slow=39						
SNAA	Sanae	52.40	158	P	P	16 50 58.5	+0.3
	comp=N,1.1nm,0.8s,baz=279,slow=5.6,SNR=4.4						
	comp=N,1.1nm,0.8s						
TXAR	Lajitas Array	68.96	331	P	P	16 52 51.4	-0.1
	comp=N,0.1nm,0.3s,baz=161,slow=2.5,SNR=2.1						
	comp=N,0.1nm,0.3s						
TORD	Torodi Ar. Bea	83.98	70	P	P	16 54 16.6	-0.4
	comp=N,1.9nm,0.3s,baz=216,slow=4.6,SNR=1.4						
	comp=N,1.9nm,0.3s						
H11S2	WAKE ISLAND Hy	125.72	270	T	T	19 19 35.5	
	baz=118,slow=75,SNR=17						
H11S1	WAKE ISLAND Hy	125.73	270	T	T	19 19 30.0	
	baz=118,slow=75,SNR=25						
H11S3	WAKE ISLAND Hy	125.73	270	T	T	19 19 30.4	
	baz=118,slow=75,SNR=18						
H11N3	WAKE ISLAND Hy	126.11	271	T	T	19 20 08.0	
	baz=117						
H11N1	WAKE ISLAND Hy	126.12	271	T	T	19 20 04.6	
	baz=117						
H11N2	WAKE ISLAND Hy	126.13	271	T	T	19 20 04.8	
	baz=117						

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*IDC **13** 16:47:47.4±1.8, 31°.03N×7°.00E, h0^{km}, mb3.6/4,* *mbtmp3.6/8, ML3.5/4, Error ellipse: s-maj=43.4km s-min=23.8km az=110.0*

ISC 13 16:47:49.0±1.2**, 31°.1N**±0°.1×**7°.1E**±0°.2**, h10km, n8,** σ1^s**45**/9**,**
mb3.6/4**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEST	**Kesra**	**5.01**	**22**	Pn	**Pn**	**16 49 04.9**	**+0.5**
	1.3nm,0.3s,baz=188,slow=7.7,SNR=42						
KEST				Sn	**Sn**	**16 50 00.2**	**-2.2**
	3.4nm,0.3s,baz=182,slow=22,SNR=10						
KEST				Lg	Lg	16 50 29.6	
	2.4nm,0.3s,baz=217,slow=20,SNR=1.7						
	5.6nm,0.4s						
ESDC	**Sonseca Array**	**12.42**	**317**	Pn	**Pn**	**16 50 46.3**	**+0.4**
	0.1nm,0.3s,baz=121,slow=16,SNR=1.3						
	0.3nm,0.7s						
GERES	**GERESS Array B**	**18.44**	**14**	P	**Pn**	**16 52 05.1**	**+0.3**
	baz=185,slow=11,SNR=2.8						
	0.3nm,0.3s						
TORD	**Torodi Ar. Bea**	**18.52**	**197**	P	**P**	**16 52 04.2**	**-1.5**
	0.7nm,0.3s,baz=2.9,slow=12,SNR=1.5						
	1.9nm,0.3s						
BRTR	**Keskin Array B**	**23.25**	**61**	P	**P**	**16 52 57.6**	**+0.9**
	0.7nm,0.7s,baz=247,slow=9.4,SNR=3.7						
	0.7nm,0.7s						
AKASG	**Malin Array Be**	**25.61**	**34**	P	**P**	**16 53 17.0**	**-1.3**
	0.3nm,0.3s,baz=234,slow=8.3,SNR=3.1						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**55.27**	**47**	P	**P**	**16 57 23.7**	**+1.3**
	0.7nm,0.6s,baz=272,slow=8.0,SNR=4.0						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**58.43**	**51**	P	**P**	**16 57 45.5**	**+0.6**
	0.6nm,0.6s,baz=274,slow=6.3,SNR=6.2						
	0.6nm,0.6s						

IDC ***13*** *16:59:29.2±5.8, 24°.35S×179°.38E, h627km±48km, mb2.8/4, mbtmp3.8/5, Error ellipse: s-maj=118.3km s-min=38.0km az=141.0*

ISC 13 16:59:25.0±3.4**, 24°.9S**±0°.3×**179°.9E**±0°.5**, h600km, n6,**
σ**0^{s}54**/6**, mb3.6**/4**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.30**	**346**	P	**P**	**17 01 18.1**	**+0.1**
	3.0nm,0.7s,baz=143,slow=20,SNR=1.3						
STKA	**Stephens Creek**	**34.25**	**249**	P	**P**	**17 05 22.7**	**0.0**
	1.8nm,0.9s,baz=68,slow=15,SNR=4.6						
	1.8nm,0.9s						
ASAR	**Alice Springs**	**41.76**	**262**	P	**P**	**17 06 23.4**	**-0.2**
	0.2nm,0.3s,baz=93,slow=6.8,SNR=19						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**42.22**	**267**	P	**P**	**17 06 26.4**	**-0.8**
	0.8nm,0.4s,baz=101,slow=8.1,SNR=18						
	0.8nm,0.4s						
FITZ	**Fitzroy Crossi**	**50.63**	**266**	P	**P**	**17 07 30.9**	**+0.4**
	2.7nm,1.0s,baz=125,slow=16,SNR=1.8						
	2.7nm,1.0s						
HFS	**Hagfors**	**143.47**	**348**	PKP	**PKPdf**	**17 17 51.5**	**-0.2**
	1.6nm,1.0s,baz=35,slow=5.3,SNR=1.1						

IDC 13 17:00:04.1±4.3**, 47°.46N×93°.23W, h0km, mbtmp2.3**/1**,**
ML0.8/1**, Error ellipse: s-maj=72.0km s-min=29.7km**
az=59.0, Minnesota

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULM	**Lac du Bonnet**	**3.30**	**329**	Pn	Pn	17 00 55.8	-1.2
	0.2nm,0.3s,baz=151,slow=9.2,SNR=1.3						
ULM				Pg	Pb	17 01 02.8	-0.7
	0.5nm,0.3s,baz=146,slow=16,SNR=2.5						
ULM				Lg	Lg	17 01 45.9	
	1.8nm,0.3s,baz=62,slow=19,SNR=11						
	0.7nm,0.4s						
I10CA	**LAC DU BONNET**	**3.31**	**327**	I	I	17 20 30.0	
	0.1nm,0.9s,baz=145,slow=314,SNR=28						
I56US	**NEWPORT INFRAS**	**16.05**	**282**	I	I	18 39 30.0	
	baz=84,slow=310,SNR=8.7						

UPP ***13*** *17:01:14.3±0.1, 67°.05N×20°.96E, h0km, ML2.2, Unknown*
IDC ***13*** *17:01:15.6±0.8, 67°.03N×21°.25E, h0km, mbtmp3.1/5, ML2.0/4, Error ellipse: s-maj=14.5km s-min=7.3km az=108.0*

ISC 13 17:01:14.4±1.1**, 67°.05N**±0°.03×**20°.96E**±0°.03**, h5km**±9km**,**
n19, σ**0^{s}95**/27**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.17**	**296**	P	**Pg**	**17 01 17.8**	**0.0**
DUNU				S	**Sg**	**17 01 20.2**	**+0.2**
MASU	**Masugnsbyn**	**0.57**	**44**	P	**Pg**	**17 01 25.2**	**-0.2**
MASU				S	**Sg**	**17 01 33.0**	**+0.1**
ERTU	**Ertsjaerv**	**0.70**	**135**	P	**Pg**	**17 01 27.5**	**-0.2**
ERTU				S	**Sg**	**17 01 37.1**	**+0.3**
PAJU	**Pajala**	**0.84**	**91**	P	**Pg**	**17 01 30.0**	**-0.6**
PAJU				S	**Sb**	**17 01 41.6**	**-1.6**
HARU	**Harads**	**0.89**	**180**	P	**Pg**	**17 01 31.1**	**-0.4**
HARU				S	**Sg**	**17 01 42.9**	**0.0**
KUA	**Kurravaara**	**0.94**	**346**	P	**Pg**	**17 01 31.5**	**-0.9**
RATU	**Laukkuluspa**	**0.94**	**326**	P	**Pg**	**17 01 31.7**	**-0.7**
SALU	**Saltoluokta**	**1.01**	**290**	P	**Pg**	**17 01 33.2**	**-0.6**
SALU	**Saltoluokta**	**1.01**	**290**	*e*P	**Pg**	**17 01 33.5**	**-0.3**
KOVU	**Salmi**	**1.22**	**346**	P	**Pg**	**17 01 36.7**	**-1.1**
KALU	**Kalix**	**1.54**	**140**	P	**Pn**	**17 01 42.6**	**+0.2**
SJUU	**Sjulsmark**	**1.57**	**170**	P	**Pn**	**17 01 43.2**	**+0.3**
HEF	**Hetta**	**1.71**	**36**	*e*P	**Pn**	**17 01 45.1**	**+0.2**
I37NO	**I37NO**	**2.22**	**338**	I	I	17 15 01.1	
	0.1nm,0.4s,baz=155,slow=332,SNR=10						
ARCES	**ARCESS Array B**	**3.02**	**32**	Pn	**Pn**	**17 02 03.7**	**+1.0**
	0.2nm,0.3s,baz=218,slow=14,SNR=35						
ARCES				Sn	**Sn**	**17 02 40.4**	**+1.2**
	0.7nm,0.3s,baz=214,slow=26,SNR=9.7						
	0.6nm,0.3s						
FINES	**FINESS Array B**	**6.05**	**156**	Pn	**Pn**	**17 02 45.9**	**+1.5**
	0.1nm,0.3s,baz=347,slow=13,SNR=7.3						
FINES				Pg	Pb	17 02 54.7	-5.5
	0.1nm,0.3s,baz=343,slow=12,SNR=8.7						
FINES				Sn	**Sn**	**17 03 54.0**	**0.0**
	0.3nm,0.3s,baz=338,slow=22,SNR=7.3						
FINES				Lg	Lg	17 04 24.6	
	0.2nm,0.3s,baz=345,slow=28,SNR=1.6						
	2.1nm,0.9s						
NOA	**NORSAR Array B**	**7.38**	**220**	Pn	**Pn**	**17 03 03.6**	**+0.9**
	baz=53,slow=21,SNR=1.1						
NOA				Sn	**Sn**	**17 04 26.8**	**-0.1**
	baz=57,slow=21,SNR=0.9						
	0.3nm,0.4s						
HFS	**Hagfors**	**7.65**	**208**	Pn	**Pn**	**17 03 07.0**	**+0.7**
	0.2nm,0.3s,baz=28,slow=13,SNR=6.4						
HFS				Sn	**Sn**	**17 04 30.5**	**-2.8**
	0.1nm,0.3s,baz=30,slow=26,SNR=1.7						
HFS				Lg	Lg	17 05 14.4	
	0.1nm,0.3s,baz=32,slow=31,SNR=2.2						
	0.8nm,0.6s						
SPITS	**Spitsbergen Ar**	**11.27**	**355**	Pn	**Pn**	**17 03 56.3**	**+0.6**
	2.8nm,0.8s,baz=163,slow=10,SNR=1.6						

IDC 13 17:02:01.5±4.9**, 16°.93S×173°.05W, h0km, mb3.6**/4**,**
mbtmp3.6/4**, Error ellipse: s-maj=330.8km**
s-min=27.6km az=150.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S2	**WAKE ISLAND Hy**	**40.45**	**330**	T	T	17 52 07.1	
	baz=149						
H11S3	**WAKE ISLAND Hy**	**40.46**	**330**	T	T	17 52 03.3	
	baz=149						
H11S1	**WAKE ISLAND Hy**	**40.46**	**330**	T	T	17 52 02.2	
	baz=149						
H11N3	**WAKE ISLAND Hy**	**41.40**	**331**	T	T	17 52 42.1	
	baz=151						
H11N1	**WAKE ISLAND Hy**	**41.41**	**331**	T	T	17 52 49.1	
	baz=151						
H11N2	**WAKE ISLAND Hy**	**41.42**	**331**	T	T	17 53 01.2	
	baz=151						
WRA	**Warramunga Arr**	**49.84**	**258**	P	P	17 10 56.5	-0.4
	0.3nm,0.8s,baz=97,slow=7.0,SNR=5.7						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**49.98**	**253**	P	P	17 10 57.9	+0.1
	1.5nm,0.6s,baz=101,slow=8.0,SNR=28						
	1.5nm,0.6s						
NVAR	**Mina Array Bea**	**75.24**	**42**	P	P	17 13 47.0	+0.4
	0.1nm,0.3s,baz=232,slow=6.4,SNR=2.3						
	0.1nm,0.3s						
PDAR	**Pinedale Array**	**83.18**	**42**	P	P	17 14 29.4	-0.5
	0.3nm,0.5s,baz=222,slow=4.8,SNR=2.4						
	0.3nm,0.5s						
BRTR	**Keskin Array B**	**147.54**	**320**	PKPbc	PKPbc	17 21 47.4	-0.8
	0.9nm,0.8s,baz=63,slow=0.9,SNR=4.6						
GERES	**GERESS Array B**	**147.70**	**352**	PKPbc	PKPbc	17 21 47.7	-0.5
	0.2nm,0.3s,baz=343,slow=17,SNR=3.0						

IDC ***13*** *17:04:39.8±1.1, 9°.69N×57°.95E, h0km, mb3.8/10, mbtmp3.8/10, MS3.3/12, Error ellipse: s-maj=32.9km s-min=23.3km az=45.0*

ISC 13 17:04:41.5±1.3**, 9°.7N**±0°.2×**58°.0E**±0°.2**, h10km, n19,**
σ**0^{s}89**/10**, mb3.7**/9**, MS3.3**/12**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	**Pallekele**	**22.64**	**94**	LR	LR	17 15 54.9	
	comp=Z,126nm,18.0s,baz=63,slow=30						
GNI	**Garni**	**32.48**	**341**	LR	LR	17 26 02.1	
	comp=Z,56nm,18.2s,baz=129,slow=39						
AAK	**Ala-Archa**	**35.83**	**21**	LR	LR	17 26 36.6	
	comp=Z,65nm,20.5s,baz=212,slow=37						
KBZ	**Khabaz**	**36.30**	**341**	LR	LR	17 29 20.2	
	comp=Z,35nm,18.7s,baz=210,slow=41						
BRTR	**Keskin Array B**	**36.88**	**328**	P	**P**	**17 11 49.1**	**-1.4**
	0.3nm,0.4s,baz=137,slow=7.1,SNR=2.4						
	0.3nm,0.4s						
LSZ	**Lusaka**	**38.57**	**230**	LR	LR	17 25 46.2	
	comp=Z,30nm,19.5s,baz=85,slow=33						
AKTO	**Aktyubinsk**	**40.56**	**0**	LR	LR	17 31 27.2	
	comp=Z,33nm,18.7s,baz=194,slow=40						
MKAR	**Makanchi Array**	**42.33**	**25**	P	**P**	**17 12 37.0**	**+1.3**
	0.2nm,0.7s,baz=216,slow=7.1,SNR=2.0						
MKAR				LR	LR	17 31 55.4	
	comp=Z,30nm,19.6s,baz=176,slow=39						
	0.2nm,0.7s						
KURBB	**Kurchatov Arra**	**44.16**	**19**	P	**P**	**17 12 51.0**	**+0.7**
	0.3nm,0.2s,baz=217,slow=7.2,SNR=1.8						
	0.3nm,0.2s						
BVAR	**Borovoye Array**	**44.32**	**11**	P	**P**	**17 12 51.6**	**0.0**
	0.7nm,0.6s,baz=198,slow=9.1,SNR=3.7						
BVAR				LR	LR	17 33 22.3	
	comp=Z,31nm,18.3s,baz=203,slow=39						
	0.7nm,0.6s						
LBTB	**Lobatse**	**46.78**	**222**	LR	LR	17 31 12.6	
	comp=Z,41nm,19.1s,baz=92,slow=34						
ZALV	**Zalesovo Beam**	**49.05**	**21**	P	**P**	**17 13 28.1**	**-0.6**
	0.6nm,0.3s,baz=235,slow=8.3,SNR=4.8						
ZALV				LR	LR	17 34 44.5	
	comp=Z,48nm,18.2s,baz=179,slow=37						
	0.6nm,0.3s						
BOSA	**Boshof**	**49.51**	**219**	LR	LR	17 32 12.1	
	comp=Z,47nm,18.6s,baz=20,slow=33						
TORD	**Torodi Ar. Bea**	**55.15**	**279**	P	**P**	**17 14 15.2**	**+0.4**
	2.6nm,0.4s,baz=83,slow=7.2,SNR=1.5						
	2.6nm,0.4s						
FINES	**FINESS Array B**	**56.65**	**342**	P	**P**	**17 14 24.9**	**+0.2**
	1.5nm,0.9s,baz=142,slow=8.0,SNR=1.6						
	1.5nm,0.9s						
NOA	**NORSAR Array B**	**61.59**	**336**	LR	LR	17 43 46.6	
	comp=Z,11nm,19.3s,baz=150,slow=38						
ESDC	**Sonseca Array**	**62.28**	**310**	P	**P**	**17 15 04.7**	**+0.6**
	0.6nm,0.8s,baz=90,slow=7.3,SNR=2.7						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**80.72**	**112**	P	**P**	**17 16 55.3**	**-0.3**
	0.8nm,0.9s,baz=294,slow=4.6,SNR=8.3						
	0.8nm,0.9s						
ASAR	**Alice Springs**	**81.25**	**116**	P	**P**	**17 16 58.1**	**-0.3**
	0.5nm,0.8s,baz=288,slow=4.9,SNR=12						
	0.5nm,0.8s						

RSPR ***13*** *17:15:18.5, 18°.55N×68°.94W, h99km±1km, MD3.9/18*
NEIC ***13*** *17:15:18.4±1.6, 18°.5N±0°.1×68°.92W±0°.04, h91km±14km, ML3.9/32, Md3.9/18(RSPR), Error ellipse: s-maj=15.4km s-min=5.0km az=175.0*
SDD ***13*** *17:15:19.3±2.4, 18°.46N×68°.92W, h100km±8km, MD3.9, ML4.0, MW3.9*
OSPL ***13*** *17:15:19.5±1.9, 18°.59N×68°.90W, h97km±21km, ML3.7*

ISC 13 17:15:16.8±1.0**, 18°.59N**±0°.05×**68°.93W**±0°.03**, h111km**±6km**,**
n119, σ**1^{s}19**/140**, 20C-19D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HIDR	**Higuey Centro**	**0.20**	**89**	⇑*i*P	**Pn**	**17 15 32.0**	**-0.4**
HIDR	**Higuey Centro**	**0.20**	**89**	*e*S	**Sn**	**17 15 43.1**	**-0.9**
HIDR	**Higuey Centro**	**0.20**	**89**	⇑*e*Pg	**Pn**	**17 15 32.0**	**-0.4**
HIDR				*e*Sg	**Sn**	**17 15 43.7**	**-0.3**
HIDR				IAML		17 15 44.3	
	comp=N,3µm,0.3s						
SPM1	**San Pedro UASD**	**0.39**	**248**	*e*Pg	**Pn**	**17 15 33.1**	**0.0**
SPM1				⇑*e*Sg	**Sn**	**17 15 44.9**	**-0.5**
SPM1				IAML		17 15 45.4	
	comp=N,3µm,0.5s						
MIDR	**Miches**	**0.41**	**344**	⇑*e*Pg	**Pn**	**17 15 33.5**	**+0.3**
MIDR				⇑*e*Sg	**Sn**	**17 15 45.5**	**-0.1**
MIDR				IAML		17 15 49.6	
	comp=N,2µm,0.4s						
MIDR				IAML		17 15 49.8	
	comp=N,2µm,0.4s						
DR12	**Loma Pena Alta**	**0.47**	**295**		**Pn**	**17 15 33.3**	**-0.4**
HATOM	**Hato Mayor del**	**0.47**	**295**	⇑*e*Pg	**Pn**	**17 15 33.4**	**-0.3**
HATOM				⇑*e*Sg	**Sn**	**17 15 45.8**	**-0.6**
HATOM				IAML		17 15 46.5	
	comp=N,2µm,0.6s						
PCDR	**Punta Cana, DR**	**0.53**	**98**	⇓*e*Pg	**Pn**	**17 15 33.8**	**-0.1**
SMDR	**Samana, DR**	**0.74**	**341**	⇓*e*P	**Pn**	**17 15 36.3**	**+0.7**
SMDR	**Samana, DR**	**0.74**	**341**	*e*S	**Sn**	**17 15 50.2**	**+0.4**
SMDR	**Samana, DR**	**0.74**	**341**	⇓*e*Pg	**Pn**	**17 15 36.4**	**+0.7**
SMDR				*e*Sg	**Sn**	**17 15 52.0**	**+2.1**
SMDR				IAML		17 15 55.9	
	comp=N,5µm,0.5s						
SDD	**Santo Domingo**	**0.94**	**262**		**Pn**	**17 15 37.5**	**-0.1**
SDD					**Sn**	**17 15 52.6**	**-0.5**
SDD	**Santo Domingo**	**0.94**	**262**	⇓*e*P	**Pn**	**17 15 37.5**	**-0.1**
SDD	**Santo Domingo**	**0.94**	**262**	⇑*e*Pg	**Pn**	**17 15 37.7**	**+0.1**
SDD				⇑*e*Sg	**Sn**	**17 15 53.0**	**-0.1**
SDD				IAML		17 15 53.3	
	comp=N,299nm,0.7s						
SDD	**Santo Domingo**	**0.94**	**262**	*i* P	**Pn**	**17 15 37.7**	**+0.1**
SDD				*e*S	**Sn**	**17 15 52.6**	**-0.5**
DR08	**Loma La Naviza**	**1.10**	**290**	⇑*e*Pg	**Pn**	**17 15 39.5**	**+0.3**
DR08				⇑*e*Sg	**Sn**	**17 15 55.6**	**-0.6**
DR08				IAML		17 15 56.2	
	comp=N,84µm,0.2s						
NADR	**Nagua**	**1.16**	**311**	*e*Pg	**Pn**	**17 15 40.9**	**+1.1**
NADR				IAML		17 16 07.1	
	comp=N,8µm,0.3s						
BANI	**BANI**	**1.37**	**262**		**Pn**	**17 15 42.7**	**+0.4**
BANI	**BANI**	**1.37**	**262**	*e*Pg	**Pn**	**17 15 43.1**	**+0.8**
BANI				IAML		17 16 13.1	
	comp=N,2µm,0.3s						
IDE	**Isla Desecheo**	**1.40**	**98**		**Pn**	**17 15 42.0**	**-0.5**
IDE					**Sn**	**17 16 02.1**	**+0.1**
IDE	**Isla Desecheo**	**1.40**	**98**	⇓*e*P	**Pn**	**17 15 42.0**	**-0.5**
IDE	**Isla Desecheo**	**1.40**	**98**	*e*S	**Sn**	**17 16 02.1**	**+0.1**
CADR	**Cabrera**	**1.44**	**318**	⇑*e*Pg	**Pn**	**17 15 43.5**	**+0.6**
CADR				*e*Sg	**Sn**	**17 16 03.7**	**+0.9**
CADR				IAML		17 16 09.8	
	comp=N,3µm,0.4s						
ABDR	**Alto Bandera**	**1.62**	**278**	⇓*e*Pg	**Pn**	**17 15 46.7**	**+1.2**
ABDR				IAML		17 16 13.0	
	comp=N,1µm,0.2s						
AGPR	**Aguadilla, PR**	**1.73**	**94**		**Pn**	**17 15 47.0**	**+0.5**
AGPR					**Sn**	**17 16 09.9**	**+0.8**
AGPR	**Aguadilla, PR**	**1.73**	**94**	IAML		17 16 17.5	
	comp=N,1µm,0.2s						
AGPR	**Aguadilla, PR**	**1.73**	**94**	⇑*e*P	**Pn**	**17 15 47.0**	**+0.5**
AGPR	**Aguadilla, PR**	**1.73**	**94**	*e*S	**Sn**	**17 16 09.9**	**+0.8**
AGPR	**Aguadilla, PR**	**1.73**	**94**	*e*Pg	**Pn**	**17 15 47.4**	**+1.0**
AGPR				IAML		17 16 17.5	
	comp=N,1µm,0.2s						
AGPR	**Aguadilla, PR**	**1.73**	**94**	*i* P	**Pn**	**17 15 47.2**	**+0.7**
AGPR				*e*S	**Sn**	**17 16 07.9**	**-1.2**
AGPR				IAML		17 16 18.0	
	comp=Z,808nm,0.2s						
PRSN	**Puerto Rico Se**	**1.73**	**102**		**Pn**	**17 15 47.9**	**+1.3**
PRSN					**Sn**	**17 16 10.1**	**+0.9**
PRSN	**Puerto Rico Se**	**1.73**	**102**	⇓*e*P	**Pn**	**17 15 47.9**	**+1.3**
PRSN	**Puerto Rico Se**	**1.73**	**102**	*e*S	**Sn**	**17 16 10.1**	**+0.9**
PRSN	**Puerto Rico Se**	**1.73**	**102**	*e*Pg	**Pn**	**17 15 48.4**	**+1.9**
PRSN				IAML		17 16 17.6	
	comp=N,1µm,0.3s						
LSP	**Las Mesas**	**1.80**	**103**		**Pn**	**17 15 47.9**	**+0.6**
LSP					**Sn**	**17 16 11.3**	**+0.6**
LSP	**Las Mesas**	**1.80**	**103**	⇓*e*P	**Pn**	**17 15 47.9**	**+0.6**
LSP	**Las Mesas**	**1.80**	**103**	*e*S	**Sn**	**17 16 11.3**	**+0.6**
CRPR	**Cabo Rojo, PR**	**1.82**	**108**		**Pn**	**17 15 47.9**	**+0.3**
CRPR					**Sn**	**17 16 11.0**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.82**	**108**	⇓*e*P	**Pn**	**17 15 47.9**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.82**	**108**	*e*S	**Sn**	**17 16 11.0**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.82**	**108**	*e*Pg	**Pn**	**17 15 48.0**	**+0.3**
CRPR				IAML		17 16 23.5	
	comp=N,424nm,0.2s						
CRPR	**Cabo Rojo, PR**	**1.82**	**108**	*i* P	**Pn**	**17 15 48.0**	**+0.3**
CRPR				*e*S	**Sn**	**17 16 08.6**	**-2.5**
CRPR				IAML		17 16 21.7	
	comp=Z,660nm,0.3s						
MLPR	**Magueyes Islan**	**1.89**	**109**	⇓*i*P	**Pn**	**17 15 48.4**	**-0.1**
MLPR	**Magueyes Islan**	**1.89**	**109**	*e*S	**Sn**	**17 16 12.3**	**-0.4**
MLPR	**Magueyes Islan**	**1.89**	**109**	*e*Pg	**Pn**	**17 15 48.4**	**-0.1**
MLPR				IAML		17 16 21.7	
	comp=N,153nm,0.6s						
SC01	**Santiago de lo**	**1.90**	**296**		**Pn**	**17 15 50.8**	**+2.2**
SC01					**Sn**	**17 16 15.2**	**+2.4**
SC01	**Santiago de lo**	**1.90**	**296**	⇓*e*P	**Pn**	**17 15 50.8**	**+2.2**
SC01	**Santiago de lo**	**1.90**	**296**	*e*S	**Sn**	**17 16 15.2**	**+2.4**
SC01	**Santiago de lo**	**1.90**	**296**	*e*Pg	**Pn**	**17 15 51.7**	**+3.1**
SC01				IAML		17 16 21.8	
	comp=N,1µm,0.7s						
SC01	**Santiago de lo**	**1.90**	**296**	*i* P	**Pn**	**17 15 50.6**	**+2.0**
SC01				IAML		17 16 28.4	
	comp=Z,520nm,0.7s						
GBPR	**Guanica, Bosqu**	**2.04**	**107**		**Pn**	**17 15 50.7**	**+0.3**
GBPR	**Guanica, Bosqu**	**2.04**	**107**	⇑*e*P	**Pn**	**17 15 50.7**	**+0.3**
AOPR	**Arecibo Observ**	**2.08**	**96**		**Pn**	**17 15 51.4**	**+0.5**
AOPR					**Sn**	**17 16 17.0**	**+0.1**
AOPR	**Arecibo Observ**	**2.08**	**96**	⇑*e*P	**Pn**	**17 15 51.4**	**+0.5**
AOPR	**Arecibo Observ**	**2.08**	**96**	*e*S	**Sn**	**17 16 17.0**	**+0.1**
AOPR	**Arecibo Observ**	**2.08**	**96**	*e*Pg	**Pn**	**17 15 51.4**	**+0.5**
AOPR				IAML		17 16 22.7	
	comp=N,2µm,0.2s						
UUPR	**Utuado, UPR, P**	**2.12**	**99**		**Pn**	**17 15 52.6**	**+1.2**
UUPR					**Sn**	**17 16 17.8**	**-0.1**
UUPR	**Utuado, UPR, P**	**2.12**	**99**	⇓*e*P	**Pn**	**17 15 52.6**	**+1.2**
UUPR	**Utuado, UPR, P**	**2.12**	**99**	*e*S	**Sn**	**17 16 17.8**	**-0.1**
SDDR	**Presa de Saban**	**2.27**	**280**		**Pn**	**17 15 55.6**	**+2.2**
SDDR	**Presa de Saban**	**2.27**	**280**	IAML		17 16 30.5	
	comp=N,684nm,0.7s						
SDDR				IAML		17 16 31.4	
	comp=N,722nm,0.9s						
SDDR	**Presa de Saban**	**2.27**	**280**	*e*P	**Pn**	**17 15 55.2**	**+1.8**
SDDR				*e*S	**Sn**	**17 16 20.2**	**-1.1**
SDDR	**Presa de Saban**	**2.27**	**280**	⇓*i*P	**Pn**	**17 15 55.6**	**+2.2**
SDDR	**Presa de Saban**	**2.27**	**280**	*e*S	**Sn**	**17 16 24.9**	**+3.5**
SDDR	**Presa de Saban**	**2.27**	**280**	⇓*e*Pg	**Pn**	**17 15 55.6**	**+2.2**
SDDR				IAML		17 16 32.7	
	comp=N,612nm,0.6s						
SDDR	**Presa de Saban**	**2.27**	**280**	*i* P	**Pn**	**17 15 55.9**	**+2.6**
SDDR				IAML		17 16 30.3	
	comp=Z,293nm,0.6s						
OBIP	**Obispado Ponce**	**2.27**	**103**		**Pn**	**17 15 53.6**	**+0.3**
OBIP					**Sn**	**17 16 21.3**	**-0.1**
OBIP	**Obispado Ponce**	**2.27**	**103**	IAML		17 16 31.2	
	comp=N,460nm,0.2s						
OBIP	**Obispado Ponce**	**2.27**	**103**	⇓*e*P	**Pn**	**17 15 53.6**	**+0.3**
OBIP	**Obispado Ponce**	**2.27**	**103**	*e*S	**Sn**	**17 16 21.3**	**-0.1**
PODR	**Polo**	**2.27**	**260**	⇓*e*Pg	**Pn**	**17 15 53.8**	**+0.2**
PODR				IAML		17 16 34.2	
	comp=N,321nm,0.4s						
EMPR	**Esperanza - Ma**	**2.28**	**92**		**Pn**	**17 15 53.7**	**+0.3**
EMPR					**Sn**	**17 16 22.2**	**+0.8**
EMPR	**Esperanza - Ma**	**2.28**	**92**	⇑*e*P	**Pn**	**17 15 53.7**	**+0.3**
EMPR	**Esperanza - Ma**	**2.28**	**92**	*e*S	**Sn**	**17 16 22.2**	**+0.8**
CELP	**Cerrillos**	**2.29**	**103**		**Pn**	**17 15 53.8**	**+0.2**
CELP					**Sn**	**17 16 23.0**	**+1.3**
CELP	**Cerrillos**	**2.29**	**103**	IAML		17 16 27.4	
	comp=E,493nm,0.3s						
CELP				IAML		17 16 28.6	
	comp=N,856nm,0.3s						
CELP	**Cerrillos**	**2.29**	**103**	⇓*e*P	**Pn**	**17 15 53.8**	**+0.2**
CELP	**Cerrillos**	**2.29**	**103**	*e*S	**Sn**	**17 16 23.0**	**+1.3**
CELP	**Cerrillos**	**2.29**	**103**	*e*Pg	**Pn**	**17 15 54.1**	**+0.5**
CELP				IAML		17 16 28.5	
	comp=N,853nm,0.3s						
LUDR	**Luperon**	**2.31**	**304**	*e*Pg	**Pn**	**17 15 54.9**	**+1.0**
LUDR				*e*Sg	**Sn**	**17 16 24.8**	**+2.6**
LUDR				IAML		17 16 37.3	
	comp=N,4µm,0.3s						
REDR	**Restauracion**	**2.40**	**284**	*e*Pg	Pn	17 15 59.9	+4.9
REDR				IAML		17 16 40.1	
	comp=N,357nm,0.2s						
LODU1	**El Espartillar**	**2.43**	**265**	*i* P	**Pn**	**17 15 56.5**	**+1.1**
LODU1				IAML		17 16 32.0	
	comp=Z,256nm,0.3s						
ECPR	**Experimental S**	**2.45**	**96**	⇑*e*P	**Pn**	**17 15 55.5**	**-0.2**
ECPR	**Experimental S**	**2.45**	**96**	*e*S	**Sn**	**17 16 24.9**	**-0.6**
SJG	**San Juan**	**2.68**	**100**		**Pn**	**17 15 58.0**	**-0.6**
SJG	**San Juan**	**2.68**	**100**	IAML		17 16 35.9	
	comp=Z,575nm,0.4s						
SJG				IAML		17 16 37.3	
	comp=Z,584nm,0.5s						
SJG	**San Juan**	**2.68**	**100**	⇓*e*P	**Pn**	**17 15 58.0**	**-0.6**
SJG	**San Juan**	**2.68**	**100**	*e*S	**Sn**	**17 16 30.8**	**0.0**
SJG	**San Juan**	**2.68**	**100**	*e*Pg	**Pn**	**17 15 59.4**	**+0.7**
SJG	**San Juan**	**2.68**	**100**	*i* P	**Pn**	**17 15 59.1**	**+0.5**
SJG				IAML		17 16 40.2	
	comp=Z,235nm,0.3s						
GCPR	**Guaynabo City**	**2.71**	**95**		**Pn**	**17 15 59.0**	**-0.1**
GCPR					**Sn**	**17 16 31.5**	**-0.1**
GCPR	**Guaynabo City**	**2.71**	**95**	IAML		17 16 35.2	
	comp=E,351nm,0.5s						
GCPR	**Guaynabo City**	**2.71**	**95**	⇑*e*P	**Pn**	**17 15 59.0**	**-0.1**
GCPR	**Guaynabo City**	**2.71**	**95**	*e*S	**Sn**	**17 16 31.5**	**-0.1**
IGPR	**InterUniversit**	**2.75**	**103**		**Pn**	**17 16 00.7**	**+1.1**
IGPR					**Sn**	**17 16 33.1**	**+0.6**
IGPR	**InterUniversit**	**2.75**	**103**	IAML		17 16 39.7	
	comp=N,567nm,0.2s						
IGPR	**InterUniversit**	**2.75**	**103**	⇑*e*P	**Pn**	**17 16 00.7**	**+1.1**
IGPR	**InterUniversit**	**2.75**	**103**	*e*S	**Sn**	**17 16 33.1**	**+0.6**
PDPR	**Patillas Dam,**	**2.82**	**101**		**Pn**	**17 16 00.5**	**+0.1**
PDPR				IAML		17 16 41.3	
	comp=N,348nm,0.3s						
PDPR				IAML		17 16 41.4	
	comp=E,270nm,0.3s						
PDPR	**Patillas Dam,**	**2.82**	**101**	⇑*e*P	**Pn**	**17 16 00.3**	**-0.2**
PDPR	**Patillas Dam,**	**2.82**	**101**	*e*S	**Sn**	**17 16 35.0**	**+0.9**
HUMP	**Col San Antoni**	**2.96**	**98**		**Pn**	**17 16 02.1**	**-0.2**
HUMP					**Sn**	**17 16 36.5**	**-0.8**
HUMP	**Col San Antoni**	**2.96**	**98**	IAML		17 16 44.8	
	comp=N,402nm,0.2s						
HUMP	**Col San Antoni**	**2.96**	**98**	⇓*e*P	**Pn**	**17 16 02.1**	**-0.2**
HUMP	**Col San Antoni**	**2.96**	**98**	*e*S	**Sn**	**17 16 36.5**	**-0.8**
GRTK	**Grand Turk**	**3.57**	**325**	*e*P	**Pn**	**17 16 09.2**	**-1.2**
GRTK				*e*S	**Sn**	**17 16 49.8**	**-2.1**
GRTK				IAML		17 16 51.0	
	comp=N,340nm,0.2s						
GRTK				IAML		17 16 51.5	
	comp=N,555nm,0.2s						
GRTK	**Grand Turk**	**3.57**	**325**	IAML		17 16 52.0	
	comp=N,459nm,0.2s						
GRTK	**Grand Turk**	**3.57**	**325**	*i* P	**Pn**	**17 16 09.8**	**-0.6**
GRTK				*e*S	**Sn**	**17 16 49.9**	**-2.1**
GRTK				IAML		17 16 52.5	
	comp=Z,132nm,0.2s						
MASC	**Masc**	**5.25**	**288**	*e*P	**Pn**	**17 16 31.9**	**-1.1**
MASC				*e*S	**Sn**	**17 17 28.9**	**-3.5**
MASC				IAML		17 17 31.5	
	comp=E,26nm,0.1s						
MASC				IAML		17 17 31.6	
	comp=N,5.7nm,0.1s						
QMBU	**Quimbuelo**	**5.78**	**287**	*e*P	**Pn**	**17 16 38.1**	**-2.1**
GTBY	**Guantanamo Bay**	**5.99**	**284**	*e*P	**Pn**	**17 16 41.9**	**-1.2**
NMDO	**Nuevo Mundo**	**6.04**	**290**	*e*P	**Pn**	**17 16 41.5**	**-2.1**
MOAC	**Moa**	**6.05**	**291**	⇑*e*P	**Pn**	**17 16 42.7**	**-1.1**
RCC	**Rio Carpintero**	**6.54**	**283**	*e*P	**Pn**	**17 16 47.9**	**-2.6**
PINC	**Pinares de May**	**6.74**	**287**	*e*P	**Pn**	**17 16 49.8**	**-3.5**
YAR	**Yar**	**7.23**	**285**	*e*P	**Pn**	**17 16 58.1**	**-1.8**
BAUV	**El Baul**	**9.63**	**175**		**Pn**	**17 17 32.5**	**+0.1**
SDV	**Santo Domingo**	**9.79**	**190**		**Pn**	**17 17 35.4**	**+0.7**
RUSC	**La Rusia**	**13.25**	**198**	Pn	**Pn**	**17 18 21.7**	**+0.5**

UCR ***13*** *17:34:37.4±1.1, 8°.21N×82°.85W, h23km±4km, MW3.6*
CATAC ***13*** *17:34:37.6±0.8, 8°N±5°×8°3W±°, h13km±2km, M3.7/6, MLv3.7/6, Error ellipse: s-maj=10.2km s-min=7.2km*

az=163.6, confirmed

ISC 13 17:34:37.0±1.4**, 8°.27N**±0°.04×**82°.84W**±0°.03**, h11**km±11km**, n57,** σ**0ˢ.78**/61**, 4C-10D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LMNES	Limones	0.17	187	⇑*e*P	Pb	17 34 43.3	+1.1
CDITO	Canoas	0.30	354	P	Pb	17 34 44.7	+0.3
CDITO	Canoas	0.30	354	S	Sb	17 34 50.7	+1.3
SCZRO	Santa Cruz, Re	0.38	12	⇓*e*P	Pn	17 34 58.1	+10
NELY	Ciudad Neily	0.39	344	*e*P	Pb	17 34 46.1	+0.2
NELY				*e*S	Sb	17 34 53.3	+1.4
MCANO	Manzana, Boque	0.40	42	*e*P	Pb	17 34 46.8	+0.8
CSTBL	De las Acacias	0.42	71	⇓*e*P	Pb	17 34 47.0	+0.6
FITO	Golfito	0.47	318	*e*P	Pg	17 34 46.4	+0.2
FITO				*e*S	Sb	17 34 53.6	-0.6
EDAD	Golfito	0.50	320	⇑*e*P	Pg	17 34 46.9	+0.1
EDAD				*e*S	Sb	17 34 54.9	-0.2
CLLRA	Cordillera,	0.52	25	⇓*e*P	Pb	17 34 48.7	+0.5
PTJ1	Puerto Jimnez	0.53	300	*e*P	Pb	17 34 47.9	-0.3
PTJ1	Puerto Jimnez	0.53	300	P	Pb	17 34 48.0	-0.3
PTJ1	Puerto Jimnez	0.53	300	S	Sb	17 34 56.3	+0.4
BRU2	Volcan	0.54	16	⇓*e*P	Pb	17 34 49.0	+0.4
BRU2	Volcan	0.54	16	P	Pb	17 34 49.2	+0.7
BRU2	Volcan	0.54	16	S	Sn	17 34 59.1	-0.8
JIME	Puerto Jimenez	0.55	299	*e*P	Pg	17 34 47.9	+0.2
TBS2		0.55	19	*e*P	Pn	17 34 50.1	-0.8
VITO	San Vito	0.56	347	*e*P	Pb	17 34 49.5	+0.6
SCLRA	Santa Clara, W	0.56	6	*e*P	Pb	17 34 49.5	+0.7
BQTLY	Boquete Panama	0.61	38	⇓*e*P	Pb	17 34 49.9	+0.1
QLAJS	Quebrada de La	0.63	72	*e*P	Sn	17 35 02.1	+0.3
ALCO	Alturas Coton,	0.67	1	*e*P	Pg	17 34 50.8	+0.7
ALCO				*e*S	Sn	17 35 02.0	-1.2
EDP2	Potrero Grande	0.81	336	*e*P	Pg	17 34 53.0	+0.4
ISECA	Islas Secas	0.85	110	⇓*e*P	Pg	17 34 52.6	-0.7
FIMO	Fila Mora	0.88	325	*e*P	Pg	17 34 53.7	-0.2
PBNVO	Pueblo Nuevo,	0.89	46	⇓*e*P	Pg	17 34 53.7	-0.5
RBALA	Bur	0.91	48	⇓*e*P	Pg	17 34 54.2	-0.3
PANP	Palmar Norte	0.92	318	⇑*e*P	Pg	17 34 54.1	-0.6
DRK0	Durika	1.06	338	⇑*e*P	Pb	17 34 56.5	-1.0
DRK0				*e*S	Sb	17 35 11.4	-0.1
DRK0	Durika	1.06	338	P	Pb	17 34 56.8	-0.7
EDPE	Pejibaye, P	1.14	321	*e*P	Pb	17 34 57.6	-1.1
OCHAL	Ojochal	1.14	316	P	Pb	17 34 57.7	-1.0
OCHAL	Ojochal	1.14	316	S	Sb	17 35 12.9	-0.7
KKNTU	Kakintº	1.17	61	⇓*e*P	Pn	17 34 57.6	-1.6
SAJE	San Jernim	1.26	328	*e*P	Pn	17 34 59.1	-1.5
BRIBI	Bribri	1.34	1	*e*P	Pb	17 35 02.4	+0.3
CEUA	Cerro Uatsi, L	1.34	356	*e*P	Pg	17 35 03.0	+0.1
VERH	Veragua Rainfo	1.68	348	*e*P	Pn	17 35 06.5	+0.2
PIEC	Cerro El Cedra	1.74	321	⇓*e*P	Pn	17 35 06.8	-0.6
LCR2	La Lucha 2	1.86	322	*e*P	Pn	17 35 08.1	-0.9
LCR2	La Lucha 2	1.86	322	P	Pn	17 35 09.0	+0.1
LCR2	La Lucha 2	1.86	322	S	Sn	17 35 31.9	-0.7
ABE2	San Pablo	1.86	320	*e*P	Pn	17 35 10.1	+1.0
PICV	PH. Pirrs	1.90	315	*e*P	Pn	17 35 08.9	-0.4
VTCV	VTCV, Calle Va	1.91	333	*e*P	Pn	17 35 10.4	+0.7
ABRB	Las Abras (San	1.93	333	*e*P	Pn	17 35 10.7	+0.8
CVTV	Tajo	1.94	333	*e*P	Pn	17 35 11.0	+0.8
CVTQ	Turrialba Volc	1.95	332	*e*P	Pn	17 35 10.9	+0.5
VTR0	Volcan Turrial	1.96	332	*e*P	Pn	17 35 11.1	+0.6
CVTR	Volcan Turrial	1.96	332	*e*P	Pn	17 35 11.7	+1.2
VBV1	V. Barva	2.21	326	*e*P	Pn	17 35 14.2	+0.3
SOCE	Pocosol	2.73	320	S	Sn	17 35 54.8	+0.9
SOCE	Pocosol	2.73	320	P	Pn	17 35 21.5	+0.7
ARE1	Arenal 1	2.86	320	*e*P	Pn	17 35 24.4	+1.8
COVE	Coope Vega, Sa	2.88	328	S	Sn	17 35 58.4	+1.0
COVE	Coope Vega, Sa	2.88	328	P	Pn	17 35 22.9	+0.1

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*NEIC **13** 18:27:32.5±1.3, 10°.17S±0°.09×161°.3E±0°.1, h100km±9km, mb4.4/11, Error ellipse: s-maj=15.6km s-min=12.8km az=69.0*

*IDC **13** 18:27:32.0±1.6, 10°.13S×161°.33E, h102km±9km, mb3.4/4, mbtmp3.9/5, MS3.4/1, Error ellipse: s-maj=30.3km s-min=13.5km az=42.0*

ISC 13 18:27:30.8±0.7**, 10°.24S**±0°.08×**161°.33E**±0°.10**, h85**km**, n21,** σ**1ˢ.40**/26**, mb4.2**/10**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.58	300		Pn	18 27 58.1	+0.7
HNR				Sn	Sn	18 28 19.1	+1.5
HNR	Honiara	1.58	300	P	Pn	18 27 58.7	+1.2
	710nm,0.4s,baz=119,slow=4.3,SNR=96						
HNR				S	Sn	18 28 19.3	+1.7
	1µm,0.3s,baz=171,slow=19,SNR=11						
RABL	Rabaul	10.90	303	Pn	Pn	18 30 03.3	-0.6
DZM	Mont Dzumac	12.74	158	Pn	Pn	18 30 31.2	+2.3
DZM	Mont Dzumac	12.74	158	P	Pn	18 30 31.9	+3.0
	3.2nm,0.3s,baz=345,slow=19,SNR=15						
DZM				S	Sn	18 32 47.5	-1.5
	5.7nm,0.9s,baz=244,slow=18,SNR=1.5						
PATS	Pohnpei	17.23	350	P	P	18 31 26.0	-0.5
CAN	Canberra	27.38	202	P	P	18 33 06.5	-1.7
CAN				IAmb	IAmb	18 33 15.4	
	comp=Z,22nm,1.3s						
WR8	Warramunga Arr	27.61	246	P	P	18 33 09.1	-1.3
WR8				IAmb	IAmb	18 33 32.9	
	comp=Z,9.9nm,1.4s						
WB0	Warramunga Arr	27.65	247	P	P	18 33 09.6	-1.2
WB0				IAmb	IAmb	18 33 11.1	
	comp=Z,4.7nm,0.8s						
WRA	Warramunga Arr	27.75	247	P	P	18 33 11.2	-0.6
	comp=Z,1.9nm,0.7s,baz=76,slow=9.2,SNR=12						
WRA				pP	pwP	18 33 35.3	-0.3
	comp=Z,1.3nm,0.7s,baz=76,slow=9.2,SNR=6.0						
	comp=Z,1.9nm,0.7s						
ASAR	Alice Springs	29.36	239	P	P	18 33 24.5	-1.6
	comp=Z,0.4nm,0.6s,baz=60,slow=9.9,SNR=7.6						
ASAR				pP	pwP	18 33 49.1	-0.7
	comp=Z,0.4nm,0.5s,baz=64,slow=10,SNR=3.6						
	comp=Z,0.4nm,0.6s						
KNRA	Kununurra	32.17	257	P	P	18 33 50.4	-0.4
KNRA				IAmb	IAmb	18 33 51.7	
	comp=Z,18nm,1.5s						
BBOO	Buckleboo	32.35	222	P	P	18 33 51.8	-0.4
BBOO				IAmb	IAmb	18 34 02.7	
	comp=Z,28nm,1.4s						
FITZ	Fitzroy Crossi	35.42	253	P	P	18 34 17.6	-1.4
DAV	Davao City (W)	39.54	294	LR	LR	18 50 34.3	
	comp=Z,52nm,18.2s,baz=14,slow=35						
HATHI	Halema'uma'u T	51.94	55	P	P	18 36 31.5	0.0
VNDA	Vanda	67.26	180	P	P	18 38 16.2	+0.4
VNDA				IAmb	IAmb	18 38 38.6	
	comp=Z,2.2nm,1.3s						
VNDA	Vanda	67.26	180	P	P	18 38 17.6	+1.8
	comp=Z,0.4nm,0.7s,baz=331,slow=10,SNR=2.2						
	comp=Z,0.4nm,0.7s						
SONM	Songino Array	75.50	325	P	P	18 39 05.4	-0.6
	comp=Z,0.6nm,0.6s,baz=134,slow=6.2,SNR=3.3						
SONM				pP	pwP	18 39 29.0	+1.1
	comp=Z,0.2nm,0.3s,baz=126,slow=4.1,SNR=1.4						
	comp=Z,0.6nm,0.6s						
L19K	White Mountain	79.79	19	P	P	18 39 29.4	-0.1
L19K				IAmb	IAmb	18 39 37.9	
	comp=Z,7.7nm,1.4s						
CAST	Castle Rocks	81.57	19	P	P	18 39 36.9	-2.1

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*NEIC **13** 18:45:56.4±1.0, 17°.7S±0°.3×178°.39W±0°.08, h582km±15km, mb4.2/14, Error ellipse: s-maj=38.4km s-min=8.6km az=169.0*

*IDC **13** 18:45:59.3±2.0, 17°.43S×178°.89W, h589km±18km, mb3.2/6, mbtmp4.1/8, Error ellipse: s-maj=84.3km s-min=19.3km az=149.0*

ISC 13 18:45:57.4±0.7**, 17°.7S**±0°.1×**178°.5W**±0°.1**, h600**km**, n28,** σ**1ˢ.58**/29**, mb4.1**/14**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.31	269	P	P	18 47 16.4	-2.1
MSVF	Nonsavu	3.31	269	P	P	18 47 17.3	-1.2
	23nm,0.6s,baz=72,slow=20,SNR=20						
FUTU	Fugatoga	3.38	6	P	P	18 47 15.7	-3.3
AFI	Afiamalu	7.46	61	P	P	18 47 49.7	-2.2
NIUE	Niue	8.24	101	P	P	18 47 55.0	-4.0
DZM	Mont Dzumac	14.84	250	P	P	18 49 02.9	-1.3
DZM	Mont Dzumac	14.84	250	P	P	18 49 03.6	-0.7
	3.8nm,0.6s,baz=83,slow=18,SNR=7.5						
ARMA	Armidale	29.99	239	P	P	18 51 19.4	+0.1
ARMA				IAmb	IAmb	18 51 42.2	
	comp=Z,11nm,1.2s						
TOO	Toolangi	37.26	231	P	P	18 52 20.3	+0.5
TOO				IAmb	IAmb	18 52 38.3	
	comp=Z,7.4nm,1.3s						
STKA	Stephens Creek	38.68	241	P	P	18 52 31.5	+0.2
STKA	Stephens Creek	38.68	241	P	P	18 52 31.9	+0.6
	comp=Z,3.8nm,0.5s,baz=92,slow=11,SNR=17						
	comp=Z,3.8nm,0.5s						
BBOO	Buckleboo	43.45	241	P	P	18 53 09.3	+0.2
WR8	Warramunga Arr	44.45	259	P	P	18 53 16.8	-0.1
WR8				IAmb	IAmb	18 53 41.4	
	comp=Z,6.5nm,1.3s						
WRA	Warramunga Arr	44.61	259	P	P	18 53 16.5	-1.6
WRA	Warramunga Arr	44.61	259	P	P	18 53 17.7	-0.4
	comp=Z,1.5nm,0.5s,baz=94,slow=7.0,SNR=32						
WRA				PcP	PcP	18 54 49.3	+1.6
	comp=Z,0.3nm,0.6s,baz=87,slow=4.1,SNR=1.5						
	comp=Z,1.5nm,0.5s						
AS31	Alice Springs	44.78	254	P	P	18 53 19.1	-0.3
AS31				IAmb	IAmb	18 53 20.6	
	comp=Z,4.6nm,0.6s						
ASAR	Alice Springs	44.79	254	P	P	18 53 19.3	-0.2
ASAR	Alice Springs	44.79	254	P	P	18 53 19.7	+0.2
	comp=Z,16nm,0.6s,baz=88,slow=8.4,SNR=332						
ASAR				PcP	PcP	18 54 49.7	+1.4
	comp=Z,0.3nm,0.4s,baz=108,slow=3.7,SNR=2.4						
	comp=Z,16nm,0.6s						
KNRA	Kununurra	50.44	264	P	P	18 54 01.8	+0.2
KNRA				IAmb	IAmb	18 54 39.1	
	comp=Z,16nm,1.5s						
FITZ	Fitzroy Crossi	53.00	260	P	P	18 54 20.8	+0.8
MBWA	Marble Bar	58.06	256	P	P	18 54 53.4	-1.5
MBWA				IAmb	IAmb	18 55 27.7	
	comp=Z,20nm,1.4s						
QSPA	South Pole Qui	72.37	180	P	P	18 56 24.0	+0.5
QSPA				IAmb	IAmb	18 56 45.3	
	comp=Z,4.3nm,1.4s						
BELA	Belgrano 2	82.39	173		P	18 57 17.7	+0.5
PMSA	Palmer Station	84.04	157	P	P	18 57 27.3	+1.7
ILAR	Eielson Array	85.69	13	P	P	18 57 36.0	+2.5
	comp=Z,0.2nm,0.4s,baz=211,slow=5.3,SNR=1.7						
	comp=Z,0.2nm,0.4s						
TXAR	Lajitas Array	85.94	58	P	P	18 57 39.7	+4.2
	comp=Z,0.3nm,0.6s,baz=273,slow=2.4,SNR=4.3						
	comp=Z,0.3nm,0.6s						
PDAR	Pinedale Array	87.24	43	P	P	18 57 43.6	+2.0
	comp=Z,0.2nm,0.4s,baz=238,slow=4.8,SNR=2.0						
	comp=Z,0.2nm,0.4s						
SNAA	Sanae	90.82	179	P	P	18 57 58.1	+0.6
SNAA				IAmb	IAmb	18 58 34.2	
	comp=Z,4.6nm,1.4s						

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*AUST **13** 19:17:17.4±0.3, 32°S±2°×13°9E±°, h10km, mb4.0/1, ML2.0/3, Error ellipse: s-maj=5.4km s-min=4.9km az=109.2*

*IDC **13** 19:17:18.3±5.4, 31°.46S×138°.72E, h0km, mbtmp2.6/3, ML2.3/3, Error ellipse: s-maj=100.3km s-min=18.4km az=29.0*

ISC 13 19:17:16.6±0.8**, 31°.80S**±0°.04×**138°.52E**±0°.04**, h10**km**, n16,** σ**1ˢ.79**/24**, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YAPP	Yappala Statio	0.19	249	P	Pg	19 17 21.9	+1.2
YAPP				S	Sg	19 17 24.8	+1.4
LCRK	Leigh Creek	1.37	349	P	Pg	19 17 43.9	+1.1
LCRK				S	Sg	19 18 03.5	+2.8
WHYH	Whyalla	1.47	213	P	Pn	19 17 43.2	+0.1
WHYH				S	Sn	19 18 01.6	-0.9
HTT	Hallett	1.66	168	P	Pn	19 17 45.7	-0.2
BBOO	Buckleboo	2.32	244	P	Pn	19 17 55.7	+0.8
BBOO	Buckleboo	2.32	244	S	Sn	19 18 24.6	+1.2
STKA	Stephens Creek	2.62	93	P	Pn	19 17 59.2	+0.4
STKA	Stephens Creek	2.62	93	Pn	Pn	19 17 59.3	+0.4
	0.1nm,0.3s,baz=275,slow=11,SNR=2.8						
STKA				Pg	Pb	19 18 04.7	+1.1
	0.8nm,0.3s,baz=279,slow=17,SNR=3.7						
STKA				Sn	Sn	19 18 30.8	+0.1
	0.7nm,0.3s,baz=282,slow=19,SNR=3.4						
STKA				Lg	Lg	19 18 37.8	
	1.5nm,0.3s,baz=324,slow=19,SNR=3.6						
	2.3nm,0.8s						
SDAN	Sedan	2.79	166	P	Pn	19 18 01.1	-0.1
MULG	Mulgathing	4.12	290	P	Pn	19 18 20.9	+1.3
MULG				S	Sn	19 19 08.7	+0.9
INKA	Innaminka	4.48	26	P	Pn	19 18 26.0	+1.5
ARPS	Mount Arapiles	5.67	152	P	Pn	19 18 39.7	-1.2
	comp=Z,15nm,1.1s,comp=Z,0.0nm						
CMSA	Cobar Meteorol	6.12	89	P	Pn	19 18 46.4	-0.6
FORT	Forrest	9.01	274	P	Pn	19 19 25.8	-1.0
ASAR	Alice Springs	9.07	332	Pn	Pn	19 19 27.9	+0.2
	baz=153,slow=14,SNR=4.6						
ASAR				Sn	Sn	19 21 06.2	-3.8
	comp=Z,0.1nm,0.3s,baz=154,slow=23,SNR=4.1						
	comp=Z,0.2nm,0.8s						
WRA	Warramunga Arr	12.39	341	Pn	Pn	19 20 12.3	-0.8
	baz=159,slow=11,SNR=1.1						
WRA				Sn	Sn	19 22 25.9	-5.3
	baz=165,slow=25,SNR=1.1						
	comp=Z,0.2nm,0.7s						

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*IDC **13** 19:35:47.1±4.6, 14°.59S×167°.28E, h182km±38km, mb3.3/6, mbtmp3.8/7, Error ellipse: s-maj=32.9km s-min=26.6km az=27.0*

ISC 13 19:35:45.8±1.2**, 14°.5S**±0°.1×**167°.3E**±0°.2**, h170**km**, n8,** σ**0ˢ.70**/9**, mb3.6**/6**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	7.55	186	P	Pn	19 37 33.9	+0.6
	3.0nm,0.5s,baz=18,slow=19,SNR=7.9						
DZM				S	Sn	19 38 57.9	-0.2
	7.2nm,1.0s,baz=315,slow=23,SNR=1.9						
STKA	Stephens Creek	29.14	229	P	P	19 41 32.0	+1.0
	1.4nm,0.5s,baz=74,slow=10,SNR=6.9						
	1.4nm,0.5s						
WRA	Warramunga Arr	31.89	256	P	P	19 41 54.8	-0.6
	0.2nm,0.4s,baz=84,slow=8.8,SNR=2.1						
	0.2nm,0.4s						
ASAR	Alice Springs	32.76	249	P	P	19 42 02.4	-0.6
	0.5nm,0.4s,baz=80,slow=9.3,SNR=18						
	0.5nm,0.4s						
VNDA	Vanda	63.07	181	P	P	19 45 54.1	-0.4
	0.5nm,0.5s,baz=351,slow=7.5,SNR=5.4						
	0.5nm,0.5s						
QSPA	South Pole Qui	75.51	180	P	P	19 47 10.6	-0.7
	4.0nm,1.2s,baz=7.0,slow=8.6,SNR=6.7						
	4.0nm,1.2s						
ILAR	Eielson Array	86.32	18	P	P	19 48 08.6	+0.4
	0.3nm,0.7s,baz=230,slow=5.6,SNR=2.4						
	0.3nm,0.7s						
ARCES	ARCESS Array B	120.06	345	PKP	PKPdf	19 54 15.7	0.0
	1.5nm,1.0s,baz=66,slow=2.2,SNR=3.8						

IDC 13 20:12:53.5±1.9**, 2°.09S**×**127°.28E, h0**km**, mb3.3**/2**, mbtmp3.2**/3**, ML3.0**/1**, Error ellipse: s-maj=167.6km s-min=28.5km az=72.0, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	19.04	159	P	P	20 17 16.4	-0.9
	0.1nm,0.3s,baz=337,slow=12,SNR=1.7						
	0.1nm,0.3s						
ASAR	Alice Springs	22.39	164	P	P	20 17 54.9	+1.2
	0.3nm,0.4s,baz=349,slow=12,SNR=5.4						
	0.3nm,0.4s						
SONM	Songino Array	52.97	342	P	P	20 22 11.4	-0.6
	0.2nm,0.3s,baz=147,slow=6.8,SNR=1.6						
	0.2nm,0.3s						

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*TIR **13** 20:21:39.8, 40°.69N×21°.26E, h1km±1km, Md3.2/6, Ml2.2/4*

*ATH **13** 20:21:40.9, 40°.48N×21°.55E, h11km±2km, ML1.6/4, Manual Solution by F.Xalaris First location: 2019/06/13 20:22:52, This location: 2021/06/14 07:27:26 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*

ISC 13 20:21:38.1±1.5**, 40°.65N**±0°.06×**21°.55E**±0°.04**, h19**km±3km**, n13,** σ**1ˢ.27**/21**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZN	Kozani	0.38	154	P	Pg	20 21 46.3	+0.1
KZN				S	Sg	20 21 49.8	-1.9
NEST	Nestorio	0.45	238	Pg	Pg	20 21 46.9	-0.5
NEST				Sg	Sg	20 21 52.3	-1.4
NEST				AML	AML	20 22 02.4	
	1.3nm,0.3s						
NEST				AMd		20 22 51.7	
PENT	Pentalofos	0.56	215	P	Pg	20 21 49.4	+0.1
PENT				S	Sb	20 21 55.5	-1.2
KBN	Korca	0.58	267	Pg	Pb	20 21 49.4	-0.2
KBN				Sg	Sb	20 21 55.1	-2.4
KBN				AML	AML	20 22 08.9	
	0.8nm,0.3s						
KPRO	Kipourio	0.71	192	P	Pb	20 21 51.6	-0.2
KPRO				S	Sb	20 21 59.0	-2.3
THE	Thessaloniki	1.07	91	Sn	Sg	20 22 25.2	+12
TYRN	Tyrnavos	1.08	151	P	Pn	20 21 58.9	+0.8
TYRN				S	Sb	20 22 11.2	-0.5
THL	Klokotos Trika	1.14	162	P	Pb	20 21 59.7	+0.5
SRN	Sarande	1.42	237	Pn	Pg	20 22 05.1	-0.3
SRN				Sn	Sg	20 22 24.3	+0.4
SRN				AML	AML	20 22 36.3	
	0.2nm,0.5s						
SRN				AMd		20 23 11.3	
IGT	Igoumenitsa	1.46	220	Pn	Pg	20 22 06.6	+0.4
IGT				Sn	Sg	20 22 26.7	+1.5
IGT				AMd		20 23 28.2	
PUK	Puka	1.87	319	Pn	Pb	20 22 11.6	0.0
PUK				AMd		20 23 31.7	
LKD2	Lefkada island	1.99	201	Pn	Pg	20 22 17.4	+1.1
LKD2				AMd		20 23 42.9	
SCTE	Santa Cesarea	2.43	257	Pn	Pb	20 22 21.5	+0.4
SCTE				Sn	Sb	20 22 52.7	+2.1
SCTE				AML	AML	20 22 59.0	
	0.2nm,1.4s						
SCTE				AMd		20 23 49.5	

IDC 13 20:43:26.1±2.3**, 28°.33S**×**177°.31W, h0**km**, mb3.8**/2**, mbtmp3.8**/2**, MS3.8**/2**, Error ellipse: s-maj=64.6km s-min=45.3km az=59.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	15.96	289	LR	LR	20 52 21.4	
	comp=Z,93nm,19.3s,baz=172,slow=34						
ASAR	Alice Springs	43.86	264	P	P	20 51 34.4	-0.1
	1.2nm,0.7s,baz=94,slow=7.7,SNR=22						
	1.2nm,0.7s						
VNDA	Vanda	50.21	186	P	P	20 52 22.9	-0.3
	0.5nm,0.5s,baz=27,slow=6.8,SNR=6.2						
	0.5nm,0.5s						
JOW	Kunigami	75.73	311	LR	LR	21 24 06.5	
	comp=Z,235nm,21.7s,baz=84,slow=32						
AKASG	Malin Array Be	149.98	325	PKPbc	PKPbc	21 03 17.9	-0.3
	0.6nm,0.5s,baz=45,slow=4.0,SNR=6.3						

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*NEIC **13** 20:52:42.8±2.1, 30°.83N±0°.05×114°.14W±0°.05, h10km±2km, mb4.4/15, Error ellipse: s-maj=9.9km s-min=5.7km az=208.0*

*ECX **13** 20:52:44.6±0.4, 30°.78N×114°.17W, h5km±4km, ML4.3*

*IDC **13** 20:52:44.5±1.1, 30°.80N×113°.82W, h0km, mb3.8/9, mbtmp3.7/16, ML3.7/7, MS3.5/25, Error ellipse: s-maj=18.5km s-min=8.7km az=31.0*

ISC 13 20:52:43.1±0.6**, 30°.76N**±0°.03×**114°.18W**±0°.03**, h10**km**, n100,** σ**1ˢ.74**/83**, mb4.2**/10**, MS3.6**/17**, 7C-3D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFX	San Felipe	0.64	296	Pg	Pb	20 52 55.9	-0.5
SFX				Sg	Sb	20 53 05.8	+0.4
SFX	San Felipe	0.64	296	⇑*e*P	Pb	20 52 56.0	-0.5
SFX				*e*S	Sb	20 53 04.6	-0.9
SFX				IAML		20 53 14.3	
	comp=E,22µm,0.6s						
SFX				⇓*e*		20 53 14.3	
SFX				IAML		20 53 15.3	
	comp=N,17µm,0.6s						
SFX				⇑*e*		20 53 15.3	
PPXB	Puerto Peasco	0.74	39	⇑*e*P	Pb	20 52 57.6	-0.6
PPXB				*e*S	Sb	20 53 07.0	-1.4
PPXB				IAML		20 53 08.3	
	comp=E,15µm,0.6s						
PPXB				IAML		20 53 09.2	
	comp=N,9µm,0.7s						
PPXB				*e*		20 53 09.2	
SLGB	San Luis Gonza	0.94	192	*e*P	Pg	20 53 01.0	-0.3
SLGB				*e*S	Sb	20 53 14.6	+0.4
SLGB				IAML		20 53 25.9	
	comp=E,7µm,1.2s						
SLGB				IAML		20 53 33.2	
	comp=N,5µm,0.9s						
ECBX	El Chinero	1.04	314	*e*P	Pb	20 53 02.3	-0.8
ECBX				⇓*e*		20 53 17.9	
ECBX				IAML		20 53 17.9	
	comp=N,6µm,0.5s						
ECBX				IAML		20 53 26.5	
	comp=E,7µm,0.8s						
ECBX				⇑*e*		20 53 26.5	
SPIG	San Pedro Mart	1.15	285	*e*P	Pn	20 53 05.5	-0.1
SPIG				*e*S	Sn	20 53 21.1	-0.4
SPIG				IAML		20 53 31.1	
	comp=E,3µm,0.7s						
SQX	San Quintin	1.48	263	⇑*e*P	Pn	20 53 09.3	-0.5
SQX				*e*S	Sb	20 53 29.3	-0.2
SQX				IAML		20 53 49.8	
	comp=N,4µm,0.6s						
SQX				⇑*e*		20 53 49.8	
PLIB	Puerto Liberta	1.53	123	*e*P	Pb	20 53 11.0	-0.6
PLIB				IAML		20 53 48.8	
	comp=N,2µm,1.6s						
PLIB				⇑*e*		20 53 48.8	
PLIB				⇓*e*		20 53 57.1	
PLIB				IAML		20 53 57.1	
	comp=E,2µm,0.7s						
214A	Organ Pipe Nat	1.67	44		Pn	20 53 11.1	-1.4
BAHB	Baha de los	1.88	163		Sn	20 53 16.2	-23
CPBX	Cerro Prieto	1.92	330		Pn	20 53 13.5	-2.4
ESJX	Sierra Juarez	1.96	310	Pn	Pn	20 53 15.1	-1.5
113A	Mohawk Valley,	2.04	10	Pn	Pn	20 53 16.1	-1.3
GLA	Glamis	2.35	347	Pn	Pn	20 53 21.4	-0.5
CCX	Cicese	2.40	298	Pn	Pn	20 53 21.5	-0.9
YUH	Yuha Desert	2.40	322	Pn	Pn	20 53 19.2	-3.3
CBX	Cerro Bola	2.63	307	Pn	Pn	20 53 24.7	-1.1
BKIRB	Bahia Kino	2.68	135	*e*P	Pb	20 53 28.5	-2.6
TKX	Tecate	2.75	312	Pn	Pn	20 53 26.7	-0.7
BLYC	Blythe	3.00	354	Pn	Pn	20 53 30.8	+0.1
TJX	Tijuana	3.01	306	Pg	Pg	20 53 39.5	-1.4
TUC	Tucson	3.28	61		Pn	20 53 33.0	-1.8
HSIG		3.29	121		Pn	20 53 33.0	-1.8
HSIG		3.29	121	*e*P	Pn	20 53 35.2	+0.5
Y14A	Wickenburg	3.32	17		Pn	20 53 34.2	-1.1
PFO	Pinyon Flats O	3.44	326		Pn	20 53 34.7	-2.3
PFO	Pinyon Flats O	3.44	326	Pn	Pb	20 53 41.8	-2.5
	comp=E,1.1nm,0.3s,baz=140,slow=12,SNR=8.2						
PFO				Pg	Pg	20 53 48.6	-0.5
	comp=E,1.9nm,0.3s,baz=155,slow=14,SNR=10						
PFO				Lg	Lg	20 54 39.3	
	comp=E,5.5nm,0.3s,baz=82,slow=17,SNR=4.7						
PFO				LR	LR	20 54 51.0	
	comp=E,190nm,21.7s,baz=183,slow=35						
	comp=E,4.9nm,0.5s						
319A	Douglas	4.25	80		Pn	20 53 46.8	-1.2
X16A	Lo Mia Camp, P	4.32	32		Pn	20 53 47.8	-1.3
DUN6	Lazy B Ranch	4.69	66		Pn	20 53 53.6	-0.6
V12A	Nelson	4.99	354		Pn	20 53 59.8	+1.7
X18A	Snowflake	5.18	42		Pn	20 53 58.4	-2.5
WUAZ	Wupatki	5.30	26		Pn	20 53 59.6	-2.8
SHPR	Sheep Range	5.79	352		Pn	20 54 10.8	+1.6
BCW	Bitter Crk WRg	6.07	315		Pn	20 54 16.4	+3.4
LPIG	La Paz	7.47	152	LR	LR	20 57 14.0	
	comp=E,212nm,20.8s,baz=340,slow=37						
MNTX	Cornudas Mount	7.59	81		Pn	20 54 34.5	+0.7
R11B	Troy Canyon, C	7.66	352		Pn	20 54 38.1	+3.2
ANMO	Albuquerque	7.72	55		Pn	20 54 36.0	+0.2
ANMO	Albuquerque	7.72	55	Pn	Pn	20 54 36.7	+0.9
	comp=E,0.6nm,0.3s,baz=285,slow=12,SNR=6.1						
ANMO				Sn	Sn	20 56 02.3	-1.1
	baz=336,slow=9.0						

ANMO				Lg	Lg	20 56 42.6	
	comp=E,0.4nm,0.3s,baz=260,slow=6.1,SNR=1.6						
ANMO				LR	LR	20 57 53.5	
	comp=E,571nm,19.6s,baz=332,slow=42						
	comp=E,1.8nm,0.3s						
VHRN	**Van Horn**	**7.91**	**87**		**Pn**	**20 54 38.5**	**+0.2**
SLBS	**Sierra La Lagu**	**7.99**	**151**		Pn	20 54 46.5	+7.1
NVAR	**Mina Array Bea**	**8.38**	**337**	Pn	Pn	20 54 48.9	+4.1
	comp=E,0.1nm,0.3s,baz=161,slow=15,SNR=5.9						
NVAR				LR	LR	20 58 20.2	
	comp=E,324nm,20.8s,baz=204,slow=40						
	comp=E,0.2nm,0.4s						
TXAR	**Lajitas Array**	**9.22**	**96**		**Pn**	**20 54 57.3**	**+1.0**
TXAR	**Lajitas Array**	**9.22**	**96**	Pn	**Pn**	**20 54 56.5**	**+0.2**
	comp=E,0.7nm,0.3s,baz=267,slow=14,SNR=40						
TXAR				Lg	Lg	20 57 28.8	
	comp=E,0.2nm,0.3s,baz=322,slow=51,SNR=2.0						
TXAR				LR	LR	20 58 40.5	
	comp=E,356nm,20.9s,baz=276,slow=40						
	comp=E,7.4nm,0.7s						
ELK	**Elko**	**10.00**	**355**	Pn	**Pn**	**20 55 10.2**	**+3.0**
	comp=E,0.1nm,0.3s,baz=196,slow=13,SNR=9.2						
ELK				Lg	Lg	20 58 00.3	
	comp=E,0.1nm,0.3s,baz=233,slow=18,SNR=1.1						
ELK				LR	LR	20 58 49.8	
	comp=E,205nm,21.8s,baz=168,slow=37						
	comp=E,1.2nm,0.5s						
SAND	**Sanderson**	**10.44**	**91**		**Pn**	**20 55 14.4**	**+1.4**
HVU	**Hansel Valley**	**11.06**	**5**		**Pn**	**20 55 24.8**	**+3.3**
OZNA	**Ozona**	**11.22**	**86**		**Pn**	**20 55 22.2**	**-1.4**
SN07	**Snyder 07**	**11.53**	**75**		**Pn**	**20 55 28.1**	**+0.2**
DRIO	**Del Rio**	**11.82**	**93**		**Pn**	**20 55 32.3**	**+0.5**
JCT	**Junction City**	**12.39**	**88**		**Pn**	**20 55 37.9**	**-1.7**
ABTX	**Abilene, Hawle**	**12.52**	**78**		**Pn**	**20 55 39.4**	**-2.0**
PDAR	**Pinedale Array**	**12.54**	**16**	Pn	**Pn**	**20 55 44.6**	**+2.8**
	comp=E,0.2nm,0.3s,baz=198,slow=11,SNR=5.7						
PDAR				Lg	Lg	20 59 17.9	
	comp=E,0.1nm,0.3s,baz=160,slow=14,SNR=2.5						
PDAR				LR	LR	21 00 39.4	
	comp=E,276nm,19.0s,baz=193,slow=38						
	comp=E,0.4nm,0.5s						
MFID	**Camas Ranch**	**12.70**	**355**		**Pn**	**20 55 45.1**	**+1.2**
YBH	**Yreka Blue Hor**	**12.93**	**330**	Pn	Pn	20 55 53.1	+6.1
	baz=179,slow=5.9,SNR=3.9						
YBH				LR	LR	21 00 23.0	
	comp=E,6.3nm,19.9s,baz=197,slow=35						
WMOK	**Wichita Mounta**	**13.55**	**69**		**Pn**	**20 55 51.8**	**-3.7**
PLID	**Pearl Lake**	**14.38**	**355**		**Pn**	**20 56 09.0**	**+2.1**
LNOR	**Lincton Mounta**	**15.43**	**349**	IAmb	IAmb	20 56 32.1	
	comp=Z,36nm,1.4s						
RSSD	**Black Hills**	**15.56**	**28**		**Pn**	**20 56 23.2**	**+0.4**
RSSD				IAmb	IAmb	20 56 36.0	
	comp=Z,34nm,1.5s						
HKT	**Hockley**	**15.86**	**88**		**Pn**	**20 56 25.4**	**-1.0**
HKT				IAmb	IAmb	20 56 33.3	
	comp=Z,24nm,1.1s						
MSO	**Missoula**	**16.05**	**1**		**Pn**	**20 56 27.8**	**-1.1**
MSO				IAmb	IAmb	20 56 42.0	
	comp=Z,33nm,1.4s						
MXC	**Moxie City**	**16.49**	**345**		**Pn**	**20 56 32.3**	**-2.3**
JTMT	**Jette**	**16.97**	**360**		**Pn**	**20 56 38.8**	**-1.9**
EGMT	**Eagleton**	**17.57**	**10**		**P**	**20 56 50.0**	**+0.8**
EGMT				IAmb	IAmb	20 56 57.7	
	comp=Z,34nm,1.4s						
NEW	**Newport**	**17.63**	**353**		**P**	**20 56 49.1**	**-0.7**
NEW	**Newport**	**17.63**	**353**	Pn	**P**	**20 56 52.8**	**+3.0**
	comp=Z,0.2nm,0.3s,baz=158,slow=11,SNR=9.3						
NEW				LR	LR	21 03 42.9	
	comp=Z,125nm,19.9s,baz=177,slow=37						
	comp=Z,14nm,1.0s						
B08A	**Colville Reser**	**18.02**	**349**	P	**Pn**	**20 56 52.2**	**-1.4**
DGMT	**Dagmar**	**19.26**	**20**	P	**P**	**20 57 05.3**	**-2.5**
CCM	**Cathedral Cave**	**20.24**	**63**	P	**P**	**20 57 15.9**	**-2.6**
CCM				IAmb	IAmb	20 57 31.1	
	comp=Z,12nm,1.0s						
LLLB	**Lillooet**	**20.65**	**346**	P	**P**	**20 57 20.2**	**-2.7**
LLLB				IAmb	IAmb	20 57 31.8	
	comp=Z,16nm,1.4s						
BBB	**Bella Bella**	**23.74**	**338**	LR	LR	21 07 22.5	
	comp=Z,115nm,21.6s,baz=160,slow=37						
ULM	**Lac du Bonnet**	**23.82**	**30**		**P**	**20 57 55.7**	**-0.4**
ULM				IAmb	IAmb	20 58 03.2	
	comp=Z,20nm,1.4s						
ULM	**Lac du Bonnet**	**23.82**	**30**	P	**P**	**20 57 56.5**	**+0.4**
	comp=Z,2.2nm,0.6s,baz=232,slow=8.9,SNR=5.5						
	comp=Z,2.2nm,0.6s						
EPLO	**Experimental L**	**24.38**	**33**		**P**	**20 58 00.8**	**-0.6**
COWI	**Conover**	**24.75**	**45**	P	**P**	**20 58 03.0**	**-1.8**
COWI				IAmb	IAmb	20 58 11.7	
	comp=Z,12nm,0.9s						
TKL	**Tuckaleechee C**	**25.85**	**71**	LR	LR	21 08 40.3	
	comp=Z,174nm,20.3s,baz=268,slow=37						
SADO	**Sadowa**	**30.77**	**53**	LR	LR	21 11 03.5	
	comp=Z,60nm,18.9s,baz=221,slow=36						
YKA	**Yellowknife Ar**	**31.75**	**360**	P	**P**	**20 59 08.2**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=182,slow=8.1,SNR=3.8						
YKA				LR	LR	21 12 00.9	
	comp=Z,74nm,20.3s,baz=186,slow=36						
	comp=Z,0.1nm,0.3s						
JTS	**Las Juntas de**	**33.94**	**121**	LR	LR	21 13 04.9	
	comp=Z,162nm,21.5s,baz=309,slow=36						
KDAK	**Kodiak Island**	**37.72**	**327**	LR	LR	21 13 08.8	
	comp=Z,72nm,18.9s,baz=123,slow=32						
INK	**Inuvik**	**39.25**	**349**	LR	LR	21 18 36.4	
	comp=Z,209nm,18.5s,baz=212,slow=40						
ILAR	**Eielson Array**	**39.63**	**339**	P	**P**	**21 00 18.4**	**+3.8**
	comp=Z,0.3nm,0.7s,baz=144,slow=6.5,SNR=7.3						
	comp=Z,0.3nm,0.7s						
FRB	**Frobisher Bay**	**43.66**	**27**	LR	LR	21 17 19.1	
	comp=Z,48nm,20.6s,baz=270,slow=34						
RES	**Resolute Bay**	**45.05**	**7**	LR	LR	21 20 27.2	
	comp=Z,118nm,19.5s,baz=27,slow=37						
SJG	**San Juan**	**45.19**	**95**	LR	LR	21 23 38.5	
	comp=Z,34nm,19.8s,baz=93,slow=41						
ROSC	**El Rosal**	**45.48**	**116**	LR	LR	21 21 43.2	
	comp=Z,61nm,18.9s,baz=326,slow=38						
SDV	**Santo Domingo**	**46.00**	**109**	LR	LR	21 23 29.7	
	comp=Z,51nm,18.3s,baz=286,slow=40						
SFJD	**Kangerlussuaq**	**51.79**	**27**	LR	LR	21 22 05.2	
	comp=Z,73nm,18.5s,baz=244,slow=34						
PPT2	**Papeete2**	**58.91**	**220**	*e*LR	LR	21 19 51.2	
	comp=Z,34nm,21.5s						
PPT2				*e*LR	LR	21 19 54.5	
	comp=Z,121nm,33.2s						
MDP	**Montagnes des**	**63.02**	**101**	LR	LR	21 35 13.5	
	comp=Z,13nm,18.1s,baz=279,slow=41						
PETK	**Petropavlovsk-**	**64.98**	**318**	P	**P**	**21 03 25.6**	**+2.5**
	comp=Z,1.2nm,0.9s,baz=91,slow=10,SNR=3.6						
	comp=Z,1.2nm,0.9s						
NOA	**NORSAR Array B**	**78.35**	**24**	P	**P**	**21 04 45.0**	**+1.6**
	comp=Z,0.4nm,0.8s,baz=274,slow=6.2,SNR=2.3						
	comp=Z,0.4nm,0.8s						
FINES	**FINESS Array B**	**82.63**	**18**	P	**P**	**21 05 07.1**	**+0.8**
	comp=Z,2.6nm,1.1s,baz=333,slow=1.9,SNR=1.7						
	comp=Z,2.6nm,1.1s						
USRK	**Ussuriysk Ar.**	**84.07**	**319**	P	P	21 05 18.4	+4.3
	comp=Z,1.5nm,0.8s,baz=74,slow=11,SNR=1.4						
	comp=Z,1.5nm,0.8s						
ESDC	**Sonseca Array**	**84.61**	**47**	P	**P**	**21 05 18.9**	**+1.9**
	comp=Z,0.5nm,0.8s,baz=289,slow=3.9,SNR=2.4						
	comp=Z,0.5nm,0.8s						
MJAR	**Matsushiro Arr**	**84.73**	**310**	P	P	21 05 22.0	+4.3
	comp=Z,0.8nm,0.5s,baz=49,slow=3.8,SNR=4.6						
	comp=Z,0.8nm,0.5s						
GERES	**GERESS Array B**	**88.12**	**31**	LR	LR	21 45 53.3	
	comp=Z,42nm,19.3s,baz=58,slow=36						
GUMO	**Guam**	**92.31**	**287**	LR	LR	21 39 02.5	
	comp=Z,31nm,20.8s,baz=77,slow=30						
ARTI	**Arti**	**92.97**	**4**	LR	LR	21 51 41.7	
	comp=Z,56nm,21.2s,baz=88,slow=38						

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*SJA **13** 21:13:29.4±0.8, 31°.22S×68°.72W, h116^{km}±2^{km}, ML3.9, MW3.9*

*NEIC **13** 21:13:30.0±2.6, 31°.19S±0°.06×68°.72W±0°.10, h113^{km}±8^{km}, mb4.5/8, Error ellipse: s-maj=11.9km s-min=8.2km az=94.0*

ISC 13 21:13:29.6±0.6**, 31°.23S**±0°.03×**68°.73W**±0°.03**, h119**^{km}±5^{km}**, n96, σ1^{s}.57**/133**, mb4.5**/3**, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTLL	**Cerro Villicun**	**0.24**	**116**	*e*P	**Pn**	**21 13 46.4**	**+0.2**
RTLL				*e*S	**Sn**	**21 13 58.6**	**-0.2**
ZON	**Zonda**	**0.32**	**173**	Pn	**Pn**	**21 13 46.8**	**+0.2**
ZON				Sn	**Sn**	**21 13 58.8**	**-0.6**
ZON	**Zonda**	**0.32**	**173**	*e*P	**Pn**	**21 13 46.8**	**+0.2**
ZON				*e*S	**Sn**	**21 13 59.1**	**-0.2**
ZON				IAML		21 13 59.4	
	comp=Z,4μm,0.3s						
SJA	**San Juan**	**0.33**	**155**	*e*P	**Pn**	**21 13 47.3**	**+0.7**
SJA				IAML		21 14 04.9	
	comp=Z,1μm,0.7s						
DOCA	**Reserva Natura**	**0.41**	**312**	*e*P	**Pn**	**21 13 47.5**	**+0.2**
DOCA				*e*S	**Sn**	**21 14 00.7**	**0.0**
DOCA				IAML		21 14 01.4	
	comp=Z,1μm,0.3s						
CFA	**Coronel Fontan**	**0.56**	**132**	*e*P	**Pn**	**21 13 47.3**	**-0.5**
ACCO	**Cerro Coronel**	**0.70**	**335**	*e*P	**Pn**	**21 13 49.4**	**+0.2**
ACCO				*e*S	**Sn**	**21 14 10.1**	**+6.1**
RTLS	**Leoncito**	**0.75**	**220**	*e*P	**Pn**	**21 13 50.2**	**+0.6**
RTLS				*e*S	**Sn**	**21 14 03.3**	**-1.4**
RTLS				IAML		21 14 05.7	
	comp=Z,5μm,0.2s						
ACDV	**Cuesta del Vie**	**1.10**	**342**	*e*P	**Pn**	**21 13 53.9**	**+1.1**
ACDV				*e*S	**Sn**	**21 14 11.8**	**+1.5**
ACDV				IAML		21 14 12.1	
	comp=Z,2μm,0.4s						
AROD	**Rodeo**	**1.24**	**328**	*e*P	**Pn**	**21 13 55.6**	**+1.3**
AROD				*e*S	**Sn**	**21 14 14.4**	**+1.4**
ARCO	**CERRO ARCO**	**1.62**	**186**	*e*P	**Pn**	**21 13 59.5**	**+0.9**
ARCO				*e*P		21 13 59.6	
ARCO				*e*S	**Sn**	**21 14 22.3**	**+1.7**
ARCO				IAML		21 14 23.2	
	comp=Z,1μm,0.4s						
ACAN	**Cantantal**	**1.68**	**129**	*e*P	**Pn**	**21 13 59.6**	**+0.5**
CO03	**El Pedregal**	**1.73**	**282**		**Pn**	**21 14 01.1**	**+1.4**
CO03				Sn	**Sn**	**21 14 23.8**	**+1.1**
CO03	**El Pedregal**	**1.73**	**282**	*e*P	**Pn**	**21 14 00.7**	**+1.0**
CO03				*e*S	**Sn**	**21 14 23.9**	**+1.1**
CO03				IAML		21 14 25.1	
	comp=Z,778nm,0.3s						
AGUA	**GUANDACOL**	**1.74**	**7**	*e*P	**Pn**	**21 14 01.6**	**+1.7**
AGUA				*e*S	**Sn**	**21 14 24.8**	**+1.7**
AGUA				IAML		21 14 26.1	
	comp=Z,2μm,0.5s						
AAGR	**Agrelo**	**1.86**	**183**	*e*P	**Pn**	**21 14 02.4**	**+1.0**
AAGR				*e*S	**Sn**	**21 14 26.6**	**+1.1**
CO02	**Combarbal**	**1.95**	**270**		**Pn**	**21 14 02.8**	**+0.4**
CO02				Sn	**Sn**	**21 14 28.4**	**+0.8**
CO02	**Combarbal**	**1.95**	**270**	*e*P	**Pn**	**21 14 02.8**	**+0.4**
CO02				*e*S	**Sn**	**21 14 28.4**	**+0.8**
CO02				IAML		21 14 33.2	
	comp=Z,554nm,0.7s						
GO04	**Tololo Observa**	**2.07**	**300**		**Pn**	**21 14 05.0**	**+0.9**
GO04	**Tololo Observa**	**2.07**	**300**	*e*P	**Pn**	**21 14 05.0**	**+0.9**
GO04				*e*S	**Sn**	**21 14 25.8**	**-4.7**
VA03	**San Esteban**	**2.18**	**225**		**Pn**	**21 14 06.6**	**+1.2**
VA03	**San Esteban**	**2.18**	**225**	*e*P	**Pn**	**21 14 06.2**	**+0.8**
VA03				*e*S	**Sn**	**21 14 35.1**	**+2.4**
VA03				IAML		21 14 42.3	
	comp=Z,503nm,0.8s						
AVIZ	**Vizcacheras**	**2.25**	**176**	*e*P	**Pn**	**21 14 07.4**	**+1.2**
AVIZ				*e*S	**Sn**	**21 14 36.4**	**+2.1**
ACLC	**CERRO LA CRUZ**	**2.36**	**41**	*e*P	**Pn**	**21 14 09.0**	**+1.3**
ACLC				*e*S	**Sn**	**21 14 32.5**	**-4.4**
ACLC				IAML		21 14 40.5	
	comp=Z,547nm,0.6s						
MT08	**Bocatoma Ro**	**2.47**	**206**		**Pn**	**21 14 10.7**	**+1.5**
MT08	**Bocatoma Ro**	**2.47**	**206**	*e*P	**Pn**	**21 14 10.8**	**+1.7**
MT08				*e*S	**Sn**	**21 14 38.3**	**-1.2**
MT08				IAML		21 14 44.0	
	comp=Z,613nm,0.8s						
MT04	**Ro Olivares**	**2.48**	**208**	*e*P	**Pn**	**21 14 10.9**	**+1.6**
MT04				*e*S	**Sn**	**21 14 38.6**	**-1.1**
VCA	**Vinchina**	**2.52**	**10**	*e*P	**Pn**	**21 14 09.1**	**-0.7**
VCA				*e*S	**Sn**	**21 14 42.8**	**+2.2**
VCA				IAML		21 14 46.0	
	comp=Z,1μm,0.4s						
CO05	**La Serena**	**2.53**	**300**		**Pn**	**21 14 10.1**	**+0.4**
PEL	**Peldehue**	**2.53**	**220**		**Pn**	**21 14 10.4**	**+0.6**
PEL	**Peldehue**	**2.53**	**220**	*e*P	**Pn**	**21 14 10.4**	**+0.6**
PEL				*e*S	**Sn**	**21 14 41.4**	**+0.6**
CO06	**Fray Jorge**	**2.56**	**282**		**Pn**	**21 14 09.5**	**-0.6**
VA06	**Catapilco**	**2.56**	**238**		**Pn**	**21 14 09.9**	**-0.2**
ROC1	**El Roble**	**2.61**	**227**	*e*P	**Pn**	**21 14 11.0**	**0.0**
ROC1				*e*S	**Sn**	**21 14 43.0**	**+0.2**
MT16	**CCHEN**	**2.67**	**214**		**Pn**	**21 14 12.5**	**+0.9**
MT05	**Renca**	**2.75**	**218**		**Pn**	**21 14 13.6**	**+0.9**
MT05	**Renca**	**2.75**	**218**	*e*P	**Pn**	**21 14 13.6**	**+0.9**
MT05				*e*S	**Sn**	**21 14 47.3**	**+1.5**
MT05				IAML		21 14 51.2	
	comp=Z,343nm,0.7s						
LCO	**Las Campanas**	**2.79**	**322**		**Pn**	**21 14 14.3**	**+0.9**
LCO	**Las Campanas**	**2.79**	**322**	*e*P	**Pn**	**21 14 13.7**	**+0.3**
LCO				*e*S	**Sn**	**21 14 47.4**	**+0.4**
LCO				IAML		21 14 52.0	
	comp=Z,465nm,0.5s						
MRA	**San Martin**	**2.82**	**116**	*e*P	**Pn**	**21 14 14.4**	**+0.8**
MRA				*e*S	Sn	21 14 34.1	-13
MRA				IAML		21 14 49.2	
	comp=Z,509nm,0.3s						
MT13	**San Alfonso**	**2.84**	**207**		**Pn**	**21 14 14.9**	**+1.1**
MT13	**San Alfonso**	**2.84**	**207**	*e*P	**Pn**	**21 14 15.1**	**+1.3**
MT13				*e*S	**Sn**	**21 14 47.3**	**-0.6**
MT13				IAML		21 14 56.7	
	comp=Z,206nm,0.9s						
MT02	**Curacav**	**2.88**	**225**		**Pn**	**21 14 14.1**	**-0.2**
MT02	**Curacav**	**2.88**	**225**	*e*P	**Pn**	**21 14 13.8**	**-0.5**
MT02				*e*S	**Sn**	**21 14 47.4**	**-1.2**
MT02				IAML		21 14 52.8	
	comp=Z,149nm,0.5s						
VA01	**Torpederas**	**3.06**	**233**		**Pn**	**21 14 15.6**	**-1.0**
VA01	**Torpederas**	**3.06**	**233**	*e*P	**Pn**	**21 14 16.1**	**-0.5**
VA01				*e*S	**Sn**	**21 14 55.1**	**+2.2**
VA01				IAML		21 14 56.3	
	comp=Z,118nm,0.8s						
BO04	**La Punta**	**3.18**	**209**		**Pn**	**21 14 18.8**	**+0.5**
MT09	**Talagante**	**3.18**	**216**		**Pn**	**21 14 18.1**	**-0.3**
MT01	**Popeta**	**3.39**	**218**		**Pn**	**21 14 19.8**	**-1.1**
MT01	**Popeta**	**3.39**	**218**	*e*P	**Pn**	**21 14 19.9**	**-1.1**
MT01				*e*S	**Sn**	**21 15 00.5**	**-0.2**
MT01				IAML		21 15 00.6	
	comp=Z,98nm,0.5s						
VA05	**Santo Domingo**	**3.44**	**224**		**Pn**	**21 14 20.9**	**-0.7**
TCA	**Tanti**	**3.54**	**93**	*e*P	**Pn**	**21 14 23.7**	**+0.6**
TCA				*e*S	Sn	21 14 53.0	-11
TCA				IAML		21 15 04.5	
	comp=Z,454nm,0.5s						
RFA	**San Rafael**	**3.54**	**177**	*e*P	**Pn**	**21 14 23.0**	**0.0**
RFA				*e*S	**Sn**	**21 15 08.4**	**+4.0**
RFA				IAML		21 15 21.6	
	comp=Z,133nm,0.5s						
AC04	**Llanos de Chal**	**3.64**	**325**		**Pn**	**21 14 24.1**	**-0.2**
BO01	**Tunca**	**3.73**	**212**		**Pn**	**21 14 24.7**	**-0.8**
BO01	**Tunca**	**3.73**	**212**	*e*P	**Pn**	**21 14 24.7**	**-0.8**
BO01				*e*S	**Sn**	**21 15 08.0**	**-0.8**
BO01				IAML		21 15 10.3	
	comp=Z,122nm,0.5s						
CYA	**Choya**	**3.76**	**43**	*e*P	**Pn**	**21 14 26.2**	**+0.2**
CYA				*e*S	**Sn**	**21 15 09.2**	**-0.5**
CYA				IAML		21 15 10.3	
	comp=Z,225nm,0.4s						
GO03	**Copiapo**	**3.85**	**340**		**Pn**	**21 14 27.9**	**+0.7**
GO03	**Copiapo**	**3.85**	**340**	*e*P	**Pn**	**21 14 28.4**	**+1.1**
GO03				*e*S	**Sn**	**21 15 11.5**	**-0.3**
BO02	**Sierra Bellavi**	**3.96**	**205**		**Pn**	**21 14 28.8**	**+0.3**
BO02	**Sierra Bellavi**	**3.96**	**205**	*e*P	**Pn**	**21 14 29.0**	**+0.5**
BO02				*e*S	**Sn**	**21 15 10.9**	**-3.3**
BO02				IAML		21 15 20.9	
	comp=Z,152nm,0.6s						
AC02	**Maricunga**	**4.39**	**355**		**Pn**	**21 14 36.8**	**+2.0**
AC02	**Maricunga**	**4.39**	**355**	*e*P	**Pn**	**21 14 36.9**	**+2.1**
AC02				*e*S	**Sn**	**21 15 24.0**	**-1.3**
AC02				IAML		21 15 30.6	
	comp=Z,52nm,0.3s						
EDS3	**Malargue**	**4.57**	**187**	*e*P	**Pn**	**21 14 37.1**	**+0.3**
EDS3				*e*S	Sn	21 15 15.3	-14
AC01	**Pan de Azucar**	**5.32**	**342**		**Pn**	**21 14 46.7**	**-0.2**
AC01	**Pan de Azucar**	**5.32**	**342**	*e*P	**Pn**	**21 14 47.1**	**+0.2**
AC01				*e*S	**Sn**	**21 15 49.0**	**+1.9**
AC01				IAML		21 15 55.1	
	comp=Z,40nm,0.7s						
BI02	**San Fabin de**	**5.82**	**201**		**Pn**	**21 14 52.8**	**-0.9**
GO02	**Mina Guanaco**	**6.09**	**353**		**Pn**	**21 14 57.5**	**0.0**
BI05	**Punta Hualpn**	**6.64**	**213**	Pn	**Pn**	**21 15 00.5**	**-4.0**
PB10	**IPOC Station P**	**7.85**	**348**	Pn	**Pn**	**21 15 19.6**	**-1.5**
PB05	**IPOC Station P**	**8.44**	**351**		**Pn**	**21 15 31.6**	**+2.4**
TRQA	**Tornquist**	**8.79**	**143**		**Pn**	**21 15 33.5**	**-0.2**
PB09	**IPOC Station P**	**9.40**	**357**		**Pn**	**21 15 41.0**	**-1.2**
PLCA	**Paso Flores**	**9.60**	**188**	Pn	**Pn**	**21 15 44.3**	**-0.4**
PB01	**IPOC Station P**	**10.16**	**356**	Pn	**Pn**	**21 15 49.9**	**-2.5**
PATCX	**Punta Patache**	**10.44**	**353**	Pn	**Pn**	**21 15 53.9**	**-2.3**
ITQB	**Itaqui**	**10.56**	**85**	Pn	**Pn**	**21 15 57.3**	**-0.3**
TA01	**Diego Aracena**	**10.70**	**353**		**Pn**	**21 15 55.1**	**-4.4**
HMBC	**Humberstone**	**10.95**	**354**	Pn	**Pn**	**21 16 02.5**	**-0.5**
PB08	**IPOC Station P**	**11.04**	**358**	Pn	**Pn**	**21 16 01.1**	**-3.4**
CPUP	**Villa Florida**	**11.12**	**67**	Pn	**Pn**	**21 16 05.1**	**-0.1**
PB11	**IPOC Station P**	**11.45**	**356**	Pn	**Pn**	**21 16 05.5**	**-4.3**
GO01	**Chusmiza**	**11.52**	**358**	Pn	**Pn**	**21 16 08.2**	**-2.8**
PB16	**IPOC Station P**	**12.85**	**357**		**Pn**	**21 16 27.4**	**-1.2**
PLTB	**Pedras Altas**	**12.92**	**96**	Pn	**Pn**	**21 16 28.5**	**-0.3**
LPAZ	**La Paz**	**14.88**	**2**		**P**	**21 16 57.2**	**-0.2**
VILB	**Vilhena**	**19.81**	**25**	Pn	**Pn**	**21 17 52.5**	**-1.1**
VILB				IAmb	IAmb	21 17 53.2	
	comp=Z,11nm,0.6s						
MACA	**Manacapuru-AM**	**28.93**	**17**	P	**P**	**21 19 17.7**	**0.0**
MACA				IAmb	IAmb	21 19 20.6	
	comp=Z,9.3nm,0.8s						
SMAI	**San Martin Ant**	**36.95**	**179**	P	**P**	**21 20 28.8**	**+2.0**
SMAI				IAmb	IAmb	21 20 37.0	
	comp=Z,7.0nm,1.1s						
RUSC	**La Rusia**	**37.14**	**353**	P	**P**	**21 20 31.3**	**+1.8**
RUSC				IAmb	IAmb	21 20 32.3	
	comp=Z,8.9nm,0.6s						
PDPR	**Patillas Dam,**	**49.03**	**3**	P	**P**	**21 22 04.2**	**-0.2**
CELP	**Cerrillos**	**49.06**	**3**	P	**P**	**21 22 04.9**	**+0.2**
QSPA	**South Pole Qui**	**59.01**	**180**	P	**P**	**21 23 18.2**	**+1.6**
VNDA	**Vanda**	**67.35**	**190**	P	**P**	**21 24 11.6**	**+0.3**
WR8	**Warramunga Arr**	**124.44**	**207**	PKPdf	**PKPdf**	**21 32 16.0**	**+0.7**
WB2	**Warramunga Arr**	**124.51**	**207**	PKPdf	**PKPdf**	**21 32 15.5**	**0.0**

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*JMA **13** 21:27:06.5±0.1, 24°.1N±0°.7×122°.5E±0°.2, h36^{km}±1^{km}, MV2.1/10, NW OFF ISHIGAKIJIMA IS*

*TAP **13** 21:27:06.9, 24°.28N×122°.48E, h39^{km}, ML2.9, C*

ISC 13 21:27:06.9±1.2**, 24°.21N**±0°.03×**122°.49E**±0°.02**, h43**^{km}±7^{km}**, n55, σ0^{s}.89**/85**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS3	**EOS3**	**0.18**	**296**	P	**Pn**	**21 27 14.1**	**-0.1**
EOS3				S	**Sn**	**21 27 19.3**	**+0.1**
EOS4	**EOS4**	**0.18**	**241**	*i* P	**Pn**	**21 27 13.9**	**0.0**
EOS4				*e*S	**Sn**	**21 27 19.8**	**+0.9**
EOS2	**EOS2**	**0.32**	**312**	*i* P	**Pn**	**21 27 15.6**	**+0.1**
EOS2				*e*S	**Sn**	**21 27 20.9**	**-0.6**
JYNG	**Yonagunijimaku**	**0.48**	**60**	P	**Pn**	**21 27 17.2**	**-0.3**
JYNG				S	**Sn**	**21 27 24.8**	**-0.2**
YOJ	**Yonaguni jima**	**0.54**	**62**	P	**Pn**	**21 27 18.1**	**-0.2**
YOJ				S	**Sn**	**21 27 26.1**	**-0.3**
YOJ	**Yonaguni jima**	**0.54**	**62**	P	**Pn**	**21 27 17.9**	**-0.3**
YOJ				*e*S	**Sn**	**21 27 26.0**	**-0.3**
EWUT	**Wuta**	**0.69**	**290**	*e*P	**Pn**	**21 27 19.8**	**-0.5**
EWUT				*e*S	**Sn**	**21 27 29.5**	**-0.4**
ESAO	**Su ao**	**0.69**	**302**	*e*S	**Sn**	**21 27 29.8**	**-0.2**
EAHA	**Aohua**	**0.70**	**280**	*e*P	**Pn**	**21 27 20.2**	**-0.1**
EAHA				*e*S	**Sn**	**21 27 31.0**	**+1.0**
TWC	**Suao**	**0.71**	**304**	P	**Pn**	**21 27 20.1**	**-0.4**
TWC				S	**Sn**	**21 27 29.4**	**-0.9**
ETL	**Fush Village**	**0.79**	**267**	*e*P	**Pn**	**21 27 21.4**	**-0.3**
NACB	**Ninganchiao**	**0.82**	**268**	P	**Pn**	**21 27 21.6**	**-0.5**
NACB				*e*S	**Sn**	**21 27 32.9**	**-0.2**
TEYL	**Yanliau Villag**	**0.88**	**248**	P	**Pn**	**21 27 22.5**	**-0.4**
TEYL				*e*S	**Sn**	**21 27 35.0**	**+0.4**
TWE	**Neicheng**	**0.91**	**304**	*e*P	**Pn**	**21 27 23.4**	**+0.1**
ETLH	**Xiulin Townshi**	**0.92**	**270**	*e*P	**Pn**	**21 27 22.9**	**-0.6**
LATG	**Datong**	**0.94**	**290**	*i* P	**Pn**	**21 27 23.8**	**0.0**
LATG				*e*S	**Sn**	**21 27 38.2**	**+2.1**
ETM	**Tongmen**	**0.94**	**255**	*e*P	**Pn**	**21 27 23.1**	**-0.7**
ETM				*e*S	**Sn**	**21 27 35.1**	**-1.0**
ENTT	**Nioudou**	**0.95**	**297**	*i* P	**Pn**	**21 27 24.2**	**+0.4**
SHUL	**Shoufeng**	**0.95**	**244**	*e*P	**Pn**	**21 27 23.5**	**-0.3**
SHUL				*e*S	**Sn**	**21 27 36.6**	**+0.5**
TIPB	**Shuangxi**	**0.97**	**322**	*e*P	**Pn**	**21 27 23.8**	**-0.4**
FUSB	**Fushanzhiwuyua**	**0.99**	**304**	P	**Pn**	**21 27 25.0**	**+0.6**
FUSB				*e*S	**Sn**	**21 27 38.6**	**+1.4**
TEGC	**Jichi Village**	**1.00**	**240**	*e*P	**Pn**	**21 27 24.3**	**-0.2**
TEGC				*e*S	**Sn**	**21 27 37.7**	**+0.3**
NNSB	**Datong**	**1.03**	**282**	P	**Pn**	**21 27 24.9**	**-0.1**
ESL	**Shilin**	**1.04**	**248**	*e*P	**Pn**	**21 27 24.2**	**-0.9**
ESL				*e*S	**Sn**	**21 27 38.3**	**-0.2**
SXI1	**Grass Mountain**	**1.04**	**328**	*i* P	**Pn**	**21 27 24.9**	**-0.2**
SXI1				S	**Sn**	**21 27 38.1**	**-0.5**
NNS	**Nan Shan**	**1.04**	**283**	*e*P	**Pn**	**21 27 25.0**	**-0.3**
EGFH	**Guangfu**	**1.11**	**241**	*e*S	**Sn**	**21 27 39.6**	**-0.6**
YHNB	**Yeheng**	**1.11**	**295**	P	**Pn**	**21 27 26.4**	**+0.3**
YHNB				*e*S	**Sn**	**21 27 41.3**	**+0.9**
WHF	**Hehuan Shan**	**1.12**	**267**	*e*P	**Pn**	**21 27 26.4**	**-0.1**
WHF				*e*S	**Sn**	**21 27 41.1**	**+0.1**
WARBT	**Fenglin Townsh**	**1.12**	**244**	P	**Pn**	**21 27 25.4**	**-0.8**
WARBT				*e*S	**Sn**	**21 27 39.5**	**-1.0**
NSK	**Sanguang**	**1.13**	**294**	P	**Pn**	**21 27 26.4**	**+0.1**
IRIF	**Iriomote-Funau**	**1.14**	**83**	*e*P	**Pn**	**21 27 26.6**	**+0.3**
IRIF				*e*S	**Sn**	**21 27 41.4**	**+0.6**
FUSS	**Fushou**	**1.14**	**272**	*e*P	**Pn**	**21 27 26.7**	**+0.1**
FUSS				*e*S	**Sn**	**21 27 41.2**	**0.0**
TNOU	**National Taiwa**	**1.14**	**325**	*e*S	**Sn**	**21 27 40.8**	**-0.2**
HGSD	**Ruisui**	**1.21**	**234**	*e*P	**Pn**	**21 27 27.4**	**0.0**
OWD	**Renai**	**1.23**	**258**	*e*P	**Pn**	**21 27 27.4**	**-0.4**
OWD				*e*S	**Sn**	**21 27 42.0**	**-1.2**
YM01	**YM01**	**1.25**	**318**	*e*S	**Sn**	**21 27 43.8**	**+0.1**
EHYH	**Wanrong**	**1.27**	**236**	*e*P	**Pn**	**21 27 27.4**	**-0.8**
EHYH				*e*S	**Sn**	**21 27 43.7**	**-0.3**
EHY	**Hungye**	**1.28**	**237**	*e*P	**Pn**	**21 27 28.1**	**-0.2**
ZUZH	**Zhuzihu**	**1.28**	**318**	*e*P	**Pn**	**21 27 28.1**	**-0.3**
ZUZH				*e*S	**Sn**	**21 27 43.1**	**-1.3**
ECBN	**Changbin**	**1.30**	**227**	*e*S	**Sn**	**21 27 43.8**	**-1.0**
YULB	**Yu-li**	**1.36**	**234**	*e*P	**Pn**	**21 27 29.3**	**-0.2**
YULB				*e*S	**Sn**	**21 27 45.3**	**-1.0**
PCYT	**Pengchaiyu**	**1.47**	**345**	*e*P	**Pn**	**21 27 30.8**	**0.0**
PCYT				*e*S	**Sn**	**21 27 47.1**	**-1.7**
SMLT	**Sun Moon Lake**	**1.49**	**258**	*e*P	**Pn**	**21 27 31.8**	**+0.5**
JIJ	**Ishigaki jima**	**1.52**	**84**	*e*P	**Pn**	**21 27 32.1**	**+0.6**
JIJ				*e*S	**Sn**	**21 27 50.0**	**-0.1**
ECS	**Chishang**	**1.61**	**227**	*e*S	**Sn**	**21 27 53.4**	**+0.9**
EDH	**Donghe**	**1.64**	**222**	*e*S	**Sn**	**21 27 51.2**	**-2.0**
WNT	**Mingjian**	**1.68**	**259**	*e*S	**Sn**	**21 27 56.7**	**+2.4**
ELDTW	**Lidau**	**1.69**	**233**	*e*S	**Sn**	**21 27 53.6**	**-1.0**
JISG	**Ishigakijimahi**	**1.70**	**77**	*e*P	**Pn**	**21 27 34.6**	**+0.5**
JISG				*e*S	**Sn**	**21 27 54.8**	**+0.2**
LDUT	**Ludao**	**1.79**	**212**	*e*S	**Sn**	**21 27 54.9**	**-2.1**
LONT	**Longtian**	**1.80**	**224**	*e*S	**Sn**	**21 27 56.4**	**-0.7**
TWK	**Hsinying**	**2.06**	**243**	*e*S	**Sn**	**21 28 06.2**	**+2.6**
CHN1	**Nanshi**	**2.07**	**241**	*e*S	**Sn**	**21 28 06.3**	**+2.5**
TSMG	**Majia**	**2.26**	**229**	*e*S	**Sn**	**21 28 10.9**	**+2.4**

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*IDC **13** 21:38:17.2±0.7, 15°.10S×173°.35W, h0^{km}, mb4.0/12, mbtmp4.0/12, MS3.6/16, Error ellipse: s-maj=29.3km s-min=18.0km az=125.0*

*NEIC **13** 21:38:19.4±1.3, 15°.12S±0°.09×173°.1W±0°.1, h10^{km}±1^{km}, mb4.5/28, Error ellipse: s-maj=22.9km s-min=11.8km az=297.0*

ISC 13 21:38:21.6±0.6**, 15°.12S**±0°.09×**173°.2W**±0°.1**, h29**^{km}**, n66, σ1^{s}.13**/45**, mb4.5**/25**, MS3.7**/16**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.85**	**50**	Pn	**Pn**	**21 38 50.0**	**-1.5**
AFI					Pb	21 38 50.1	-4.8
NIUE	**Niue**	**5.04**	**142**		**Pn**	**21 39 33.8**	**-1.5**
DZM	**Mont Dzumac**	**20.45**	**247**	*e*LR	LR	21 48 11.1	
	80nm,26.0s						
PPT	**Papeete**	**22.82**	**99**	LR	LR	21 49 44.9	
	comp=Z,52nm,20.6s,baz=244,slow=30						
PPT2	**Papeete2**	**22.82**	**99**	*e*LR	LR	21 48 38.4	
	160nm,25.8s						
PPT2				*e*LR	LR	21 48 39.8	
	134nm,29.2s						
TBI	**Tubuai**	**23.86**	**114**	*e*LR	LR	21 49 07.5	
	1μm,28.8s						
H11S2	**WAKE ISLAND Hy**	**38.81**	**329**	T	T	22 26 26.9	
	baz=146,slow=76,SNR=8.0						
H11S3	**WAKE ISLAND Hy**	**38.83**	**329**	T	T	22 26 20.5	
	baz=146,slow=76,SNR=8.3						
H11S1	**WAKE ISLAND Hy**	**38.83**	**329**	T	T	22 26 22.4	
	baz=146,slow=76,SNR=6.4						
H11N3	**WAKE ISLAND Hy**	**39.76**	**330**	T	T	22 27 32.2	
	baz=150,slow=76,SNR=6.8						

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H11N1 WAKE ISLAND Hy 39.76 330  T      T      22 27 32.2
      baz=150,slow=76,SNR=7.3
H11N2 WAKE ISLAND Hy 39.77 330  T      T      22 27 32.2
      baz=150,slow=76,SNR=10
STKA  Stephens Creek   44.32 240  P      P      21 46 28.5  -0.7
STKA  Stephens Creek   44.32 240  P      P      21 46 28.0  -1.2
      1.9nm,0.6s,baz=98,slow=12,SNR=6.1
      1.9nm,0.6s
WR8   Warramunga Arr   49.92 257  P      P      21 47 12.2  -0.9
WR8                               IAmb   IAmb   21 47 26.2
      comp=Z,6.6nm,1.3s
WB0   Warramunga Arr   50.03 257  P      P      21 47 13.4  -0.6
WRA   Warramunga Arr   50.07 257  P      P      21 47 13.1  -1.2
      comp=Z,0.7nm,0.4s,baz=92,slow=6.8,SNR=38
WRA                               PcP    PcP    21 48 33.3  -0.6
      comp=Z,0.4nm,0.7s,baz=89,slow=3.4,SNR=1.8
      comp=Z,0.7nm,0.4s
GUMO  Guam             50.33 302  LR     LR     22 06 27.9
      comp=Z,29nm,18.6s,baz=60,slow=34
AS31  Alice Springs    50.35 252  P      P      21 47 15.5  -0.9
ASAR  Alice Springs    50.35 252  P      P      21 47 14.6  -1.8
      comp=Z,2.0nm,0.4s,baz=89,slow=7.5,SNR=53
      comp=Z,2.0nm,0.4s
FORT  Forrest          55.69 243  P      P      21 47 54.2  -1.4
VNDA  Vanda            63.67 186  P      P      21 48 51.8  +2.1
VNDA                              IAmb   IAmb   21 48 53.0
      comp=Z,2.9nm,0.8s
VNDA  Vanda            63.67 186  P      P      21 48 50.1  +0.3
      comp=Z,2.9nm,0.9s,baz=0.4,slow=5.9,SNR=13
      comp=Z,2.9nm,0.9s
SHEM  Shemya Is, Ala   68.45 352  LR     LR     22 13 47.8
      comp=Z,62nm,18.9s,baz=270,slow=31
MJAR  Matsushiro Arr   68.84 320  LR     LR     22 14 00.2
      comp=Z,39nm,20.9s,baz=190,slow=31
PETK  Petropavlovsk-   72.42 342  P      P      21 49 44.2  -0.7
      comp=Z,0.8nm,0.6s,baz=162,slow=6.2,SNR=2.5
      comp=Z,0.8nm,0.6s
PFO   Pinyon Flats O   72.61  47  LR     LR     22 14 21.4
      comp=Z,30nm,20.5s,baz=224,slow=30
NVAR  Mina Array Bea   74.01  42  P      P      21 49 55.3  +0.4
      comp=Z,0.5nm,0.7s,baz=258,slow=5.2,SNR=1.5
      comp=Z,0.5nm,0.7s
KDAK  Kodiak Island    74.62  11  LR     LR     22 14 32.5
      comp=Z,65nm,21.6s,baz=198,slow=29
QSPA  South Pole Qui   74.92 180  P      P      21 50 01.3  +1.6
QSPA  South Pole Qui   74.92 180  P      P      21 50 00.3  +0.5
      comp=Z,6.9nm,0.8s,baz=16,slow=1.0,SNR=30
      comp=Z,6.9nm,0.8s
M14K  Bethel           76.16   6  P      P      21 50 07.3  +0.8
ILSW  Iliamna Southw   76.59  10  P      P      21 50 09.3  +0.1
USRK  Ussuriysk Ar.    77.26 323  LR     LR     22 16 38.2
      comp=Z,36nm,21.1s,baz=162,slow=30
J16K  Anvik River      78.77   6  P      P      21 50 23.5  +2.4
J16K                              IAmb   IAmb   21 50 25.0
      comp=Z,3.6nm,0.8s
J18K  Innoko River     79.38   7  P      P      21 50 26.2  +1.7
J18K                              IAmb   IAmb   21 50 27.8
      comp=Z,5.1nm,1.0s
SCM   Sheep Creek Mo   79.40  12  P      P      21 50 25.5  +0.8
SCM                               IAmb   IAmb   21 50 26.6
      comp=Z,5.7nm,0.8s
VRDI  Verde Repeater   79.71  14  P      P      21 50 27.1  +0.6
TXAR  Lajitas Array    80.32  56  P      P      21 50 29.3  -1.1
      comp=Z,0.2nm,0.6s,baz=281,slow=3.1,SNR=1.6
      comp=Z,0.2nm,0.6s
NEW   Newport          80.39  34  LR     LR     22 18 50.2
      comp=Z,38nm,18.9s,baz=160,slow=30
J20K  Nowinta River    80.41   8         P      21 50 31.5  +1.6
ANMO  Albuquerque      80.50  50  LR     LR     22 19 07.1
      comp=Z,32nm,19.7s,baz=60,slow=30
M26K  Nabesna, AK      80.84  14  P      P      21 50 32.6  +0.2
M27K  Edge Creek, AK   81.06  14  P      P      21 50 34.7  +1.0
M27K                              IAmb   IAmb   21 50 36.9
      comp=Z,5.8nm,1.1s
WRH   Wood River Hil   81.65  11  P      P      21 50 37.3  +0.7
WRH                               IAmb   IAmb   21 50 39.0
      comp=Z,7.7nm,1.1s
MLY   Manley           81.72   9         P      21 50 37.2  +0.2
CCB   Clear Creek Bu   81.86  11         P      21 50 38.1  +0.4
CCB                               IAmb   IAmb   21 50 39.8
      comp=Z,3.6nm,0.9s
PDAR  Pinedale Array   81.95  42  P      P      21 50 38.7  -0.3
      comp=Z,0.3nm,0.3s,baz=218,slow=0.4,SNR=1.8
PDAR                              LR     LR     22 21 11.6
      comp=Z,19nm,18.5s,baz=286,slow=31
      comp=Z,0.3nm,0.3s
I23K  Minto, Yukon-K   82.05  10  P      P      21 50 39.6  +0.9
I23K                              IAmb   IAmb   21 50 41.0
      comp=Z,7.3nm,1.4s
IL31                   82.14  11  P      P      21 50 39.8  +0.6
ILAR  Eielson Array    82.14  11  P      P      21 50 40.2  +1.0
ILAR  Eielson Array    82.14  11  P      P      21 50 39.8  +0.5
      comp=Z,0.9nm,0.9s,baz=205,slow=6.2,SNR=6.1
ILAR                              LR     LR     22 19 51.6
      comp=Z,26nm,21.7s,baz=335,slow=30
      comp=Z,0.9nm,0.9s
J25K  Salcha River,    82.29  12  P      P      21 50 41.9  +1.9
J25K                              IAmb   IAmb   21 50 42.5
      comp=Z,3.8nm,1.0s
L29M  L29M             82.62  15  P      P      21 50 42.5  +0.7
L29M                              IAmb   IAmb   21 50 44.9
      comp=Z,3.4nm,0.8s
PRP   Porcupine Dome   83.07  11         P      21 50 45.0  +0.9
PRP                               IAmb   IAmb   21 50 46.9
      comp=Z,4.2nm,1.2s
E19K  Redstone River   83.18   6  P      P      21 50 46.3  +1.7
E19K                              IAmb   IAmb   21 50 47.8
      comp=Z,8.3nm,1.4s
PMSA  Palmer Station   84.36 156  LR     LR     22 20 05.1
      comp=Z,42nm,21.0s,baz=182,slow=30
G26K  Porcupine Rive   84.67  11  P      P      21 50 53.0  +0.9
I30M  Mount Dempster   84.81  15  P      P      21 50 53.8  +0.8
I30M                              IAmb   IAmb   21 50 55.5
      comp=Z,5.0nm,1.4s
INK   Inuvik           87.96  14  LR     LR     22 24 27.2
      comp=Z,29nm,18.8s,baz=238,slow=32
MAW   Mawson           88.11 199  P      P      21 51 10.2  +1.1
      comp=Z,2.0nm,0.6s,baz=114,slow=12,SNR=4.0
      comp=Z,2.0nm,0.6s
YKA   Yellowknife Ar   89.78  23  P      P      21 51 17.6  +0.7
      comp=Z,0.6nm,0.9s,baz=247,slow=5.8,SNR=3.0
YKA                               LR     LR     22 26 42.2
      comp=Z,44nm,18.2s,baz=336,slow=32
      comp=Z,0.6nm,0.9s
CMAR  Chiang Mai Arr   92.69 288  LR     LR     22 28 31.7
      comp=Z,12nm,21.9s,baz=200,slow=33
SONM  Songino Array    94.75 318  LR     LR     22 30 06.8
      comp=Z,64nm,20.4s,baz=134,slow=33
GERES GERESS Array B  145.89 352  PKPbc  PKPab  21 57 59.8  +1.0
      comp=Z,0.8nm,0.8s,baz=344,slow=4.4,SNR=5.8
BRTR  Keskin Array B  146.05 321  PKPbc  PKPab  21 58 00.5  +0.7
      comp=Z,2.6nm,0.9s,baz=82,slow=2.3,SNR=11
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IDC ***13*** *21:53:35.5±4.5, 36°.25N×71°.73E, h170^{km}±42^{km}, mb3.5/9, mbtmp4.0/15, Error ellipse: s-maj=44.7km s-min=28.9km az=130.0*

NEIC ***13*** *21:53:39.8±2.1, 36°.72N±0°.06×71°.40E±0°.09, h181^{km}±7^{km}, mb4.0/19, Error ellipse: s-maj=10.0km s-min=9.1km az=105.0*

NNC ***13*** *21:53:42.9±2.5, 37°.25N×71°.55E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=20.7km s-min=19.3km az=92.0*

ISC 13 21:53:40.2±0.6**, 36°.76N**±0°.05×**71°.59E**±0°.06**, h200^{km}, n84,** σ**2.^{s}35**/100**, mb3.8**/14**, 4C-4D, Afghanistan-Tajikistan border region**

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Code  Station Name      Δ°   AZ°   Phase ID        Time      Res
                                   Op     ISC     h  m  s    ISC
GAR   Garm              2.46 336          Pn     21 54 21.7  -2.0
GAR                                Sn     Sn     21 54 52.7  -5.1
SIMJ  Simiganj          2.79 314          Pn     21 54 25.0  -2.5
SIMJ                               Sn     Sn     21 54 58.2  -6.3
KBL   Kabul             3.03 224          Pn     21 54 26.1  -4.3
BTK   Batken            3.35 350   Pn     Pn     21 54 33.0  -1.1
NIL   Nilore            3.38 156   Pn     Pn     21 54 33.2  -1.2
SRNI  Srinagar          3.75 134   eP     Pn     21 54 39.4  +0.5
SRNI                               IAML          21 55 25.9
      comp=E,924nm,0.2s
ARSB  Arslanbob         4.69  13          Pn     21 54 49.2  -1.5
JMU   Jammu             4.86 145   eP     Pn     21 54 51.8  -1.0
JMU                                eS     Sn     21 55 46.0  -4.0
JMU                                IAML          21 55 47.5
      comp=N,283nm,0.5s
JMU                                IAML          21 55 47.6
      comp=E,326nm,0.3s
AML   Almayashu         5.61  16   P      Pn     21 55 03.0  +0.3
      SNR=66
NRN   Naryn             5.79  35          Pn     21 55 04.4  -0.7
UCH   Uchtor            5.91  22   P      Sn     21 56 13.0  -2.1
      SNR=10
DHRM  DHARAMSHALA       5.94 138   eP     Pn     21 55 07.7  +0.8
DHRM                               eS     Sn     21 56 12.0  -3.5
EKS2  Erkin-Say         6.13  15   P      Pn     21 55 10.2  +1.0
      SNR=7.7
AAK   Ala-Archa         6.29  20   P      Pn     21 55 12.4  +1.2
      SNR=14
AAK   Ala-Archa         6.29  20   Pn     Pn     21 55 11.8  +0.6
AAK                                Sn     Sn     21 56 23.4  +0.1
AAK   Ala-Archa         6.29  20   P      Pn     21 55 11.9  +0.7
      comp=E,7.1nm,0.3s,baz=200,slow=5.7,SNR=20
AAK                                S      Sn     21 56 20.7  -2.6
      comp=E,9.9nm,0.6s,baz=198,slow=12,SNR=6.4
AAK   Ala-Archa         6.29  20  ⇓P      Pn     21 55 10.8  -0.4
      comp=E,0.2nm,0.4s
AAK                               ⇑S      Sn     21 56 20.5  -2.8
      comp=E,17nm,1.0s
KK31  Karatay Array     6.39 353   Pn     Pn     21 55 12.2  -0.2
KK31  Karatay Array     6.39 353   P      Pn     21 55 13.2  +0.8
      comp=E,8.1nm,0.3s,baz=176,slow=12,SNR=343
KK31                              ⇓S      Sn     21 56 20.2  -5.5
      comp=E,16nm,0.5s,baz=171,slow=15
KKAR  Karatay Array     6.39 353          Pn     21 55 12.2  -0.2
KKAR  Karatay Array     6.39 353          Pn     21 55 12.3  -0.2
BRLS  Borolday          6.41 348   Pg     Pn     21 55 09.3  -3.4
      comp=E,5.5nm,0.2s
BRLS                               Lg     Lg     21 56 15.7
      comp=E,23nm,0.7s
KBK   Karagaybulak      6.44  23   P      Pn     21 55 15.6  +2.4
      SNR=8.1
FRU1  Bishkek           6.48  20   Pn     Pn     21 55 13.9  +0.2
ULHL  Ulahol            6.56  32   P      Pn     21 55 16.1  +1.4
      SNR=8.0
BOOM  Boomskoye usch    6.64  29          Pn     21 55 16.9  +1.2
BHK   Bhakra            6.66 142   eP     Pn     21 55 20.4  +4.3
BHK                                IAML          21 56 30.1
      comp=E,140nm,0.4s
BHK                                IAML          21 56 32.4
      comp=N,131nm,0.3s
BHK                                eS     Sn     21 56 34.6  +2.6
CHMS  Chumysh           6.69  20   P      Pn     21 55 19.4  +3.1
      SNR=7.8
CHMS  Chumysh           6.69  20  ⇓P      Pn     21 55 16.2  -0.1
      comp=N,3.5nm,0.5s
CHMS                              ⇑S      Sn     21 56 30.4  -2.3
      comp=N,15nm,0.7s
USP   Ospenovka         6.88  18   P      Pn     21 55 20.4  +1.7
      SNR=9.6
TKM2  Tokmak 2          6.88  25   P      Pn     21 55 20.9  +1.9
      SNR=9.6
TKM2  Tokmak 2          6.88  25  ⇑P      Pn     21 55 19.8  +0.7
      comp=N,6.0nm,0.6s
TKM2                              ⇑S      Sn     21 56 34.4  -3.1
      comp=N,9.1nm,0.7s
KDJ   Kajisay           6.89  37          Pn     21 55 20.1  +1.0
TARG  Taragay, Kyrgy    6.92  42          Pn     21 55 20.5  +0.8
KST   Kastek            7.12  27   Pg     Pn     21 55 23.2  +1.2
      comp=N,5.3nm,0.3s
SMLA  Simla             7.28 139   eP     Pn     21 55 25.3  +1.3
SMLA                               eS     Sn     21 56 40.8  -5.7
SMLA                               IAML          21 56 43.3
      comp=N,254nm,0.5s
SMLA                               IAML          21 56 43.6
      comp=E,296nm,0.7s
MTBS  Maitube           7.37  29   Pg     Pn     21 55 26.2  +1.0
      comp=E,6.9nm,0.2s
MTBS                               Lg     Lg     21 56 44.4
      comp=E,8.8nm,0.7s
WUS   Wushi             7.41  51          Pn     21 55 27.3  +1.5
KLP   Kalpa             7.59 131   eP     Pn     21 55 29.0  +0.6
KLP                                eS     Sn     21 56 48.1  -6.3
KLP                                IAML          21 56 50.7
      comp=E,231nm,0.7s
KLP                                IAML          21 56 54.8
      comp=N,146nm,0.2s
MDOK  Medeo             7.65  32   P      Pn     21 55 29.2  +0.4
      comp=N,6.7nm,0.5s
PRZ   Przheval'sk       7.77  40          Pn     21 55 32.3  +1.9
DDI   Dehra Dun         8.38 138   eP     Pn     21 55 39.7  +1.2
DDI                                eS     Sn     21 57 07.5  -5.3
DDI                                IAML          21 57 11.8
      comp=E,181nm,0.3s
PDGK  Podgornoye        8.93  40  ⇓P      Pn     21 55 47.7  +2.1
      comp=E,5.7nm,0.7s
JOSI  Joshimath         9.07 131   eP     Pn     21 55 47.4  -0.2
JOSI                               eS     Sn     21 57 22.8  -6.6
JOSI                               IAML          21 57 27.6
      comp=N,106nm,0.5s
JOSI                               IAML          21 57 29.3
      comp=E,136nm,0.4s
MAKZ  Makanchi         12.68  34          Pn     21 56 33.6  +0.2
MKAR  Makanchi Array   12.81  35          Pn     21 56 36.4  +1.3
MKAR  Makanchi Array   12.81  35   P      Pn     21 56 36.2  +1.1
      comp=E,1.1nm,0.7s,baz=207,slow=9.5,SNR=12
KURBB Kurchatov Arra   14.73  18   P      P      21 57 02.2  +2.4
      comp=E,1.3nm,0.6s,baz=206,slow=11,SNR=8.7
KURBB                              S      S      21 59 38.2  -4.2
      comp=E,0.1nm,0.4s,baz=161,slow=36,SNR=2.1
KURK  Kurchatov        14.84  18          Pn     21 57 00.3  +0.1
AB31  Akbulak array    15.10 329          Pn     21 57 01.6  -1.8
ABKAR Akbulak array    15.10 329   P      Pn     21 57 02.1  -1.3
ABKAR Akbulak array    15.10 329   Pn     Pn     21 57 00.3  -3.1
EVN   Everest          15.56 120   P      P      21 57 09.5  -0.4
BVAR  Borovoye Array   16.29 357   P      Pn     21 57 18.6  +0.9
      comp=E,0.9nm,0.4s,baz=160,slow=9.5,SNR=3.9
AKTO  Aktyubinsk       16.80 329   P      Pn     21 57 24.6  +0.7
      comp=E,3.8nm,0.3s,baz=143,slow=6.6,SNR=19
LSA   Lhasa            17.80 108   P      P      21 57 36.2  +1.9
LSA                                IAmb   IAmb   21 57 42.1
      comp=Z,6.3nm,0.6s
ZAA0  Zalesovo Array   19.49  24   P      P      21 57 52.8  +1.0
ZAA0                               IAmb   IAmb   21 57 59.8
      comp=Z,2.7nm,0.5s
ZALV  Zalesovo Beam    19.49  24   P      P      21 57 53.4  +1.7
ZALV  Zalesovo Beam    19.49  24   P      P      21 57 53.7  +1.9
      comp=Z,2.2nm,0.3s,baz=202,slow=9.1,SNR=9.8
ARTI  Arti             21.56 340   P      P      21 58 14.1  +0.4
ARTI                               IAmb   IAmb   21 58 17.6
      comp=Z,3.5nm,0.6s
ARTI  Arti             21.56 340   P      P      21 58 16.3  +2.6
      comp=Z,1.8nm,0.5s,baz=175,slow=7.9,SNR=4.3
      comp=Z,1.8nm,0.5s
BRTR  Keskin Array B   29.81 287   P      P      21 59 30.1  +1.6
      comp=Z,0.5nm,0.6s,baz=100,slow=7.8,SNR=2.6
      comp=Z,0.5nm,0.6s
AKASG Malin Array Be   33.16 308   P      P      21 59 57.8  +0.3
AKASG                              IAmb   IAmb   21 59 59.7
      comp=Z,2.7nm,1.1s
AKASG Malin Array Be   33.16 308   P      P      21 59 58.7  +1.2
      comp=Z,0.5nm,0.4s,baz=82,slow=7.0,SNR=11
      comp=Z,0.5nm,0.4s
AKBB  Malin Array Si   33.16 308   P      P      21 59 58.5  +1.0
AKBB                               IAmb   IAmb   22 00 07.0
      comp=Z,3.5nm,1.2s
KIEV  Kiev             33.17 308   P      P      21 59 58.2  +0.7
KIEV                               IAmb   IAmb   22 00 07.0
      comp=Z,3.1nm,1.2s
MLR   Muntele Rosu     35.07 299   P      P      22 00 15.2  +1.1
MLR                                IAmb   IAmb   22 00 18.2
      comp=Z,3.7nm,0.7s
BURAR Bucovina Array   35.55 303   P      P      22 00 19.7  +1.6
BURAR                              IAmb   IAmb   22 00 20.7
      comp=Z,1.1nm,0.7s
BUR08 Bucovina Ar. S   35.56 303   P      P      22 00 20.4  +2.1
BUR08                              IAmb   IAmb   22 00 20.9
      comp=Z,2.7nm,1.0s
IDI   Anoyia           37.51 282   P      P      22 00 34.8   0.0
FIA1  FINESS Array S   37.54 326   P      P      22 00 36.4  +1.8
FINES FINESS Array B   37.54 326   P      P      22 00 36.2  +1.5
FINES FINESS Array B   37.54 326   P      P      22 00 36.6  +2.0
      comp=Z,1.4nm,0.4s,baz=121,slow=9.6,SNR=29
      comp=Z,1.4nm,0.4s
ARCES ARCESS Array B   41.09 337   P      P      22 01 06.2  +2.3
ARCES ARCESS Array B   41.09 337   P      P      22 01 06.4  +2.5
      comp=Z,0.9nm,0.5s,baz=115,slow=7.8,SNR=16
      comp=Z,0.9nm,0.5s
HFS   Hagfors          43.16 322   P      P      22 01 22.5  +1.8
      comp=Z,5.2nm,0.5s,baz=98,slow=11,SNR=40
      comp=Z,5.2nm,0.5s
NC405 NORSAR Array S   44.23 323   P      P      22 01 30.6  +1.4
NB2   NORSAR Subarra   44.46 323   P      P      22 01 32.5  +1.4
      comp=Z,1.6nm,0.5s,baz=100,slow=7.9
NOA   NORSAR Array B   44.46 323   P      P      22 01 32.8  +1.6
      comp=Z,1.7nm,0.5s,baz=96,slow=7.7,SNR=14
      comp=Z,1.7nm,0.5s
KONO  Kongsberg        45.19 321   P      P      22 01 38.4  +1.6
ESBB  Sonseca Array    57.76 298   P      P      22 03 11.7  +1.3
ESBB                               IAmb   IAmb   22 03 18.1
      comp=Z,4.1nm,1.2s
ESDC  Sonseca Array    57.76 298   P      P      22 03 11.3  +1.0
      comp=Z,0.7nm,0.7s,baz=66,slow=5.9,SNR=6.8
      comp=Z,0.7nm,0.7s
TORD  Torodi Ar. Bea   66.20 269   P      P      22 04 05.6  -1.1
TORD  Torodi Ar. Bea   66.20 269   P      P      22 04 05.5  -1.2
      comp=Z,1.3nm,0.5s,baz=48,slow=5.9,SNR=26
      comp=Z,1.3nm,0.5s
```

NEIC ***13*** *22:12:55.3±1.3, 35°.237N±0°.008×97°.754W±0°.010, h5^{km}±1^{km}, Error ellipse: s-maj=2.0km s-min=1.6km az=258.0*

NEIC 13 22:12:54.0±1.3**, 35°.25N**±0°.01×**97°.754W**±0°.009**, h5^{km}**±1^{km}**, mb_Lg1.8**/3**, ML2.0**/5**, ML1.8**/24**, Error ellipse: s-maj=2.4km s-min=1.9km az=290.0, Oklahoma**

```
Code  Station Name      Δ°   AZ°   Phase ID        Time      Res
                                   Op     ISC     h  m  s    ISC
FNO   Franklin          0.29  87          Pg     22 12 59.7   0.0
FNO                                       Sg     22 13 02.7  -0.8
OK029 Liberty Lake      0.60  24   Pg     Pg     22 13 05.7  +0.1
OK029                              IAML          22 13 14.5
      63nm,0.4s
OK029                              IAML          22 13 24.7
      38nm,0.2s
X34A  Smith Ranch, M    0.65 186   Pg     Pg     22 13 06.7  +0.2
X34A                                      Sb     22 13 17.3  +0.2
X34A                               IAML          22 13 17.5
      comp=N,48nm,0.4s
WMOK  Wichita Mounta    0.98 239   Pg     Pg     22 13 11.8  -1.1
DEOK  Depew             1.19  59          Pg     22 13 16.2  -0.6
OK038 West end E0370    1.47 327          Pn     22 13 21.1  -0.2
T35A  Sooner Cattle     1.95  31   IAmb_Lg       22 13 57.2
      comp=Z,4.5nm,0.9s
SMWD  Samnorwood        2.04 267   IAmb_Lg       22 14 03.9
      comp=Z,3.8nm,0.7s
SN07  Snyder 07         3.37 231   IAmb_Lg       22 14 48.8
      comp=Z,3.7nm,0.9s
```

UPP ***13*** *22:23:56.5±0.0, 67°.19N×20°.67E, h0^{km}, ML2.3, Unknown*

IDC ***13*** *22:23:56.5±1.0, 67°.18N×21°.02E, h0^{km}, mbtmp2.8/4, ML1.9/4, Error ellipse: s-maj=19.8km s-min=7.3km az=116.0*

HEL ***13*** *22:23:56.3±0.3, 67°.15N×20°.47E, h0^{km}, ML1.5, Suspected explosion*

ISC 13 22:23:55.9±0.7**, 67°.17N**±0°.02×**20°.78E**±0°.02**, h0^{km}, n40,** σ**1.^{s}10**/63**, Sweden**

```
Code  Station Name      Δ°   AZ°   Phase ID        Time      Res
                                   Op     ISC     h  m  s    ISC
DUNU  Dundret           0.09 240   P      Pg     22 23 58.3  +0.7
DUNU                               S      Sg     22 23 59.6  +0.7
MASU  Masugnsbyn        0.56  58   P      Pb     22 24 07.7  -0.9
MASU                               S      Sg     22 24 15.6  +1.8
RATU  Laukkuluspa       0.80 326   P      Pg     22 24 10.8  -0.5
RATU                               S      Sg     22 24 21.2  -0.4
KUA   Kurravaara        0.81 348   P      Pg     22 24 11.2  -0.2
ERTU  Ertsjaerv         0.83 137   P      Pb     22 24 12.6  -0.6
ERTU  Ertsjaerv         0.83 137   PG     Pb     22 24 12.4  -0.8
ERTU                               SB     Sb     22 24 25.0  +0.1
SALU  Saltoluokta       0.91 285   P      Pg     22 24 12.6  -0.6
SALU  Saltoluokta       0.91 285   eP     Pg     22 24 12.7  -0.6
PAJU  Pajala            0.93  98   P      Pb     22 24 14.4  -0.4
PAJU                               S      Sb     22 24 27.6  -0.1
PAJU  Pajala            0.93  98   PG     Pb     22 24 14.4  -0.4
PAJU                               SG     Sb     22 24 28.7  +1.0
LANU  Lannavaara        1.00  27   PG     Pb     22 24 16.2  +0.1
LANU                               SN     Sn     22 24 31.8  -0.2
HARU  Harads            1.01 175   P      Pb     22 24 15.5  -0.7
KOVU  Salmi             1.09 348   P      Pg     22 24 16.2  -0.5
KOVU                               S      Sg     22 24 30.7  -0.1
KLF   Kolari            1.25  85   PG     Pb     22 24 20.0  -0.2
KLF                                MSG           22 24 37.5
      comp=Z,2.1nm,0.2s
KLF                                SG     Sn     22 24 37.9   0.0
HEF   Hetta             1.66  40   eP     Pb     22 24 26.7  -0.7
HEF   Hetta             1.66  40   PB     Pb     22 24 26.6  -0.7
      baz=225
HEF                                MSG           22 24 48.4
      comp=Z,4.2nm,0.2s
HEF                                SB     Sb     22 24 48.9  +0.1
KALU  Kalix             1.67 141   P      Pg     22 24 27.7  -0.2
KALU  Kalix             1.67 141   PG     Pg     22 24 27.6  -0.2
      baz=319
KALU                               SG     Sg     22 24 51.9  +2.4
SJUU  Sjulsmark         1.70 168   P      Pg     22 24 27.8  -0.7
TOF   Tornio            1.79 126   PG     Pb     22 24 29.4   0.0
      baz=302
TOF                                MSG           22 24 52.3
      comp=Z,2.3nm,0.2s
TOF                                SG     Sg     22 24 54.9  +1.7
KIF   Kilpisjarvi       1.85   0   PG     Pb     22 24 29.9  -0.5
      baz=183
KIF                                MSG           22 24 53.1
      comp=Z,6.3nm,0.2s
KIF                                SG     Sg     22 24 55.6  +0.4
RNF   Rovaniemi         2.14 103   PB     Pb     22 24 35.0  -0.5
RNF                                SG     Sg     22 25 05.2  +0.6
TRO   Tromso            2.57 345   PG     Pb     22 24 42.6  -0.2
TRO                                SG     Sb     22 25 14.5  -0.3
BURU  Burvik            2.61 174   PB     Pb     22 24 41.0  -2.4
BURU                               SB     Sb     22 25 15.2  -0.7
RANF  Ranua             2.67 113   PB     Pb     22 24 44.4  -0.1
RANF                               SB     Sg     22 25 19.9  -1.5
OUL   Oulu              2.95 133   SG     Sg     22 25 31.4  +0.8
ARA0  ARCESS Array S    2.96  34   PN     Pn     22 24 45.6  +1.6
ARA0                               SN     Sn     22 25 23.1  +2.9
ARCES ARCESS Array B    2.96  34   Pn     Pn     22 24 45.2  +1.1
      comp=Z,0.2nm,0.3s,baz=216,slow=12,SNR=20
ARCES                              Lg     Lg     22 25 26.0
      comp=Z,0.8nm,0.3s,baz=218,slow=30,SNR=17
      comp=Z,0.5nm,0.4s
RAJF  Raja-Jooseppi     3.15  62   PG     Pg     22 24 55.9  -0.2
RAJF                               SB     Sb     22 25 32.8  +1.4
OUF   Merijarvi         3.25 148   SG     Sg     22 25 39.5  -0.7
UMAU  Umeaa             3.30 181   SB     Sn     22 25 31.0  +2.4
KU2   Taivalkoski       3.33 113   PG     Pg     22 24 58.4  -1.3
KU2                                SB     Sb     22 25 37.0  +0.2
VRF   Varrio            3.45  76   PG     Pg     22 25 00.6  -1.4
      baz=268
VRF                                SG     Sg     22 25 43.8  -2.9
KEV   Kevo              3.47  39   PN     Pn     22 24 52.5  +1.5
      baz=222
KEV                                SN     Sn     22 25 33.7  +0.9
OLKF  Oulanka, Finla    3.53 100   SG     Sg     22 25 49.3  +0.3
MSF   Maaselka          3.54 107   SG     Sg     22 25 48.7  -0.8
KU6   Riekki            3.81 103   PG     Pg     22 25 07.3  -1.6
KU6                                SG     Sg     22 25 58.2   0.0
FINES FINESS Array B    6.19 156   Pn     Pn     22 25 30.1  +1.7
      comp=Z,0.1nm,0.3s,baz=335,slow=13,SNR=4.8
FINES                              Lg     Lg     22 27 07.8
      comp=Z,0.2nm,0.3s,baz=347,slow=33,SNR=5.6
      comp=Z,1.2nm,0.8s
NOA   NORSAR Array B    7.43 219   Pn     Pn     22 25 44.5  -0.9
      baz=37,slow=5.7,SNR=2.3
NOA                                Lg     Lg     22 27 49.6
      baz=35,slow=23,SNR=2.1
      comp=Z,0.4nm,0.7s
HFS   Hagfors           7.72 207   Pn     Pn     22 25 48.9  -0.6
      comp=Z,0.1nm,0.3s,baz=19,slow=14,SNR=1.7
HFS                                Lg     Lg     22 28 01.4
      comp=Z,0.2nm,0.3s,baz=21,slow=25,SNR=1.5
      comp=Z,0.9nm,0.8s
```

IDC ***13*** *22:50:03.6±0.4, 30°.39S×71°.28W, h0^{km}, mb4.8/15, mbtmp4.7/18, ML4.3/3, MS4.1/23, Error ellipse: s-maj=16.0km s-min=12.3km az=50.0*

SJA ***13*** *22:50:06.7±0.7, 30°.37S×71°.71W, h22^{km}±4^{km}, ML5.0, MW4.9*

VAO ***13*** *22:50:06.4±0.4, 30°.44S×71°.30W, h10^{km}, mb5.0*

MOS ***13*** *22:50:10.8±1.1, 30°.46S×71°.28W, h40^{km}, mb5.1/29, Error ellipse: s-maj=12.6km s-min=6.6km az=104.1*

NEIC ***13*** *22:50:10.5, 30°.43S×71°.44W, h50^{km}*

NEIC **13** *22:50:10.5, 30°.43S×71°.56W, h50^{km}, Moment Tensor Solution. Duration: $1^{s}7$ Moment tensor: Scale 10^{16}Nm; M_{rr}3.59; $M_{\theta\theta}$-0.18; $M_{\phi\phi}$-3.42; $M_{r\theta}$0.42; $M_{\theta\phi}$0.29; $M_{\phi r}$-0.58; Fault plane solution: $M_0$3.59000×10^{16} NP1:ϕ_s0.31000°, δ40.26000°, λ98.43000°. NP2:ϕ_s169.32000°, δ50.26000°, λ82.92000°. Principal axes: T 3.6833, Plg83.0000°, Azm37.0000°; N -0.1876, Plg5.0000°, Azm174.0000°; P -3.4958, Plg5.0000°, Azm264.0000°;*

GUC **13** *22:50:11.1±0.7, 30°.44S×71°.33W, h55^{km}±1^{km}, ML4.9*

NEIC **13** *22:50:11.1±1.1, 30°.44S±0°.03×71°.38W±0°.06, h48^{km}±4^{km}, mb4.9/268, Mww5.0/27, Mwr5.0(GUC), Error ellipse: s-maj=7.1km s-min=3.9km az=91.0*

BJI **13** *22:50:12.0, 30°.40S×71°.40W, h49^{km}, Ms5.1/4, Ms7 5.0/4*

GCMT **13** *22:50:14.1±0.3, 30°.46S±0°.02×71°.52W±0°.03, h63^{km}±2^{km}, MW5.0/69, Moment Tensor Solution. s59,c74; s69,c89; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.73±.15; $M_{\theta\theta}$0.66±.14; $M_{\phi\phi}$-4.39±.13; $M_{r\theta}$0.69±.09; $M_{\theta\phi}$0.66±.11; $M_{\phi r}$-1.29±.14; Best double couple: $M_0$4.36500×10^{16} NP1:ϕ_s2.00000°, δ37.00000°, λ105.00000°. NP2: ϕ_s164.00000°, δ55.00000°, λ79.00000°. Principal axes: T 4.0330, Plg77.0000°, Azm38.0000°; N 0.6610, Plg9.0000°, Azm170.0000°; P -4.6980, Plg9.0000°, Azm262.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 22:50:10.7±0.4, **30°.41S**±0°.02×**71°.45W**±0°.04, **h49**^{km}±3^{km}, **h49**^{km}**:pP-P, n588,** σ**$1^{s}29$**/610, **mb4.9**/152, **MS4.3**/21, **13C-16D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.30	211		Pn	22 50 20.4	+0.7
CO06	Fray Jorge	0.30	211	⇑iP	Pn	22 50 20.6	+0.9
CO06				eS	Sn	22 50 27.9	+1.7
CO05	La Serena	0.53	21		Pn	22 50 22.9	+0.8
CO05				Sn	Sn	22 50 31.0	+0.7
CO05	La Serena	0.53	21	eP	Pn	22 50 22.9	+0.8
CO05				eS	Sn	22 50 31.5	+1.1
CO05				IAML		22 50 33.4	
	comp=E,80µm,0.4s						
GO04	Tololo Observa	0.61	67		Pn	22 50 23.4	-0.1
GO04				Sn	Sn	22 50 32.1	-0.6
GO04	Tololo Observa	0.61	67	⇓eP	Pn	22 50 23.3	-0.2
GO04				⇓iP		22 50 23.4	
GO04				eS	Sn	22 50 32.3	-0.5
GO04	Tololo Observa	0.61	67	eP	Pn	22 50 23.0	-0.5
CO03	El Pedregal	0.78	123		Pn	22 50 24.7	-0.9
CO03				Sn	Sn	22 50 34.8	-1.6
CO03	El Pedregal	0.78	123	⇓iP	Pn	22 50 24.8	-0.9
CO03				eS	Sn	22 50 34.4	-2.0
CO03				IAML		22 50 36.1	
	comp=E,87µm,0.1s						
CO03	El Pedregal	0.78	123	eP	Pn	22 50 24.6	-0.9
CO03				IAML		22 50 42.1	
	comp=Z,20µm,0.3s						
CO02	Combarbal	0.88	154		Pn	22 50 26.6	-0.3
CO02				Sn	Sn	22 50 37.8	-0.9
CO02	Combarbal	0.88	154	⇑iP	Pn	22 50 26.6	-0.3
CO02				eS	Sn	22 50 37.9	-0.9
CO02	Combarbal	0.88	154	eP	Pn	22 50 26.3	-0.5
CO01	Juntas del Tor	1.25	70		Pn	22 50 32.2	+0.2
LCO	Las Campanas	1.54	25		Pn	22 50 36.6	+0.6
LCO				Sn	Sn	22 50 55.4	+0.4
LCO	Las Campanas	1.54	25	P	Pn	22 50 36.8	+0.8
LCO				S	Sn	22 50 55.4	+0.4
LCO	Las Campanas	1.54	25	⇓iP	Pn	22 50 36.7	+0.7
LCO				eS	Sn	22 50 56.1	+1.1
LCO	Las Campanas	1.54	25	eP	Pn	22 50 36.1	+0.1
LCO				IAML		22 51 02.4	
	comp=Z,31µm,0.3s						
AROD	Rodeo	1.73	82	eP	Pn	22 50 40.6	+2.0
ACDV	Cuesta del Vie	2.03	84	eP	Pn	22 50 45.2	+2.6
ACDV				IAML		22 51 24.1	
	comp=Z,10µm,0.5s						
ACCO	Cerro Coronel	2.07	95	eP	Pn	22 50 51.0	+7.7
ACCO				eS	Sn	22 51 20.9	+13
DOCA	Reserva Natura	2.11	105	eP	Pn	22 50 45.5	+1.6
DOCA				eS	Sn	22 51 13.8	+4.7
DOCA				IAML		22 51 20.8	
	comp=Z,6µm,0.3s						
VA06	Catapilco	2.15	176		Pn	22 50 43.5	-0.5
VA06	Catapilco	2.15	176	⇓iP	Pn	22 50 44.7	+0.7
VA06				eS	Sn	22 51 10.4	+1.0
VA06				IAML		22 51 28.1	
	comp=E,16µm,0.6s						
AC04	Llanos de Chal	2.23	9		Pn	22 50 46.5	+1.4
AC04	Llanos de Chal	2.23	9	⇓eP	Pn	22 50 46.5	+1.4
AC04				eS	Sn	22 51 13.7	+2.3
AC04				IAML		22 51 26.6	
	comp=E,8µm,0.4s						
AC04	Llanos de Chal	2.23	9	eP	Pn	22 50 46.0	+0.9
AC04				IAML		22 51 22.5	
	comp=Z,6µm,1.2s						
RTLS	Leoncito	2.31	127	eP	Pn	22 50 48.7	+2.2
RTLS				IAML		22 51 30.5	
	comp=Z,22µm,0.5s						
VA03	San Esteban	2.47	162		Pn	22 50 48.9	+0.4
VA03	San Esteban	2.47	162	⇓iP	Pn	22 50 49.3	+0.8
VA03				i S	Sn	22 51 17.6	+0.1
VA03				IAML		22 51 24.1	
	comp=E,16µm,0.2s						
VA03	San Esteban	2.47	162	eP	Pn	22 50 48.7	+0.2
VA03				IAML		22 51 31.6	
	comp=Z,6µm,0.8s						
ROCH	El Roble	2.58	172	eP	Pn	22 50 50.8	+0.7
ROCH				eS	Sn	22 51 21.4	+1.0
ROCH				IAML		22 51 33.9	
	comp=E,11µm,0.6s						
VA01	Torpederas	2.61	184		Pn	22 50 50.2	-0.1
VA01	Torpederas	2.61	184	eP	Pn	22 50 51.0	+0.7
VA01				eS	Sn	22 51 22.2	+1.5
VA01				IAML		22 51 32.0	
	comp=E,3µm,0.2s						
VA01	Torpederas	2.61	184	eP	Pn	22 50 50.9	+0.6
ZON	Zonda	2.64	116		Pn	22 50 51.5	+0.7
ZON	Zonda	2.64	116	P	Pn	22 50 51.5	+0.7
ZON	Zonda	2.64	116	eP	Pn	22 50 52.0	+1.2
ZON				IAML		22 51 47.0	
	comp=Z,3µm,0.5s						
RTLL	Cerro Villicun	2.72	110	eP	Pn	22 50 53.5	+1.6
RTLL				eS	Sn	22 51 27.4	+3.8
AGUA	GUANDACOL	2.73	71	eP	Pn	22 50 55.7	+3.6
AGUA				eS	Sn	22 51 36.1	+12
PEL	Peldehue	2.80	167		Pn	22 50 53.0	0.0
PEL	Peldehue	2.80	167	P	Pn	22 50 53.0	0.0
PEL	Peldehue	2.80	167	eP	Pn	22 50 53.5	+0.4
PEL				eS	Sn	22 51 25.7	+0.1
PEL				IAML		22 51 42.4	
	comp=E,5µm,0.4s						
MT02	Curacav	2.85	175		Pn	22 50 53.6	-0.1
MT02	Curacav	2.85	175	eP	Pn	22 50 54.0	+0.4
MT02				eS	Sn	22 51 27.2	+0.4
MT02				IAML		22 51 43.6	
	comp=E,3µm,0.3s						
MT02	Curacav	2.85	175	eP	Pn	22 50 54.2	+0.5
MT02				eS	Sn	22 51 28.2	+1.5
MT02				IAML		22 51 38.0	
	comp=Z,3µm,0.3s						
MT10	Hacienda Santa	2.96	165	⇓iP	Pn	22 50 56.1	+0.8
MT10				eS	Sn	22 51 29.6	+0.1
CFA	Coronel Fontan	3.01	114	Pg	Pn	22 50 56.5	+0.7
	comp=Z,195nm,0.3s,baz=306,slow=16,SNR=809						
CFA				Lg	Lg	22 51 33.3	
	comp=Z,690nm,0.3s,baz=270,slow=20,SNR=13						
CFA				LR	LR	22 52 17.4	
	comp=Z,2µm,20.6s,baz=343,slow=46						
CFA	Coronel Fontan	3.01	114	eP	Pn	22 50 57.5	+1.7
CFA				eS	Sn	22 51 37.6	+6.9
GO03	Copiapo	3.01	21		Pn	22 50 56.9	+1.0
GO03	Copiapo	3.01	21	eP	Pn	22 50 56.8	+1.0
MT05	Renca	3.03	169		Pn	22 50 56.1	-0.1
MT05	Renca	3.03	169	eP	Pn	22 50 57.8	+1.6
MT05				eS	Sn	22 51 42.2	+11
MT05				IAML		22 51 51.0	
	comp=Z,4µm,1.2s						
FCH	Farellones	3.07	161	eP	Pn	22 50 58.3	+1.4
FCH				eS	Sn	22 51 33.1	+0.5
FCH				IAML		22 51 46.0	
	comp=N,4µm,0.7s						
MT16	CCHEN	3.11	165		Pn	22 50 58.0	+0.7
MT03	Universidad Ad	3.17	166		Pn	22 50 58.9	+0.7
MT03	Universidad Ad	3.17	166	eP	Pn	22 51 00.1	+1.9
MT03				eS	Sn	22 51 40.7	+5.8
MT03				IAML		22 51 47.3	
	comp=Z,5µm,1.2s						
MT04	Ro Olivares	3.19	160	eP	Pn	22 51 00.5	+2.0
MT04				eS	Sn	22 51 41.9	+6.6
MT04				IAML		22 51 47.0	
	comp=Z,6µm,1.1s						
AC06	Mina Casimiro	3.19	18		Pn	22 50 59.5	+1.1
VA05	Santo Domingo	3.24	182		Pn	22 50 58.8	-0.2
ARCO	CERRO ARCO	3.24	139	eP	Pn	22 51 02.2	+3.1
ARCO				eS	Sn	22 51 48.4	+12
ARCO				IAML		22 51 50.6	
	comp=Z,4µm,0.6s						
MT08	Bocatoma Ro	3.26	158		Pn	22 51 00.9	+1.3
MT08	Bocatoma Ro	3.26	158	eP	Pn	22 51 02.4	+2.8
MT08				eS	Sn	22 51 44.5	+7.4
MT08				IAML		22 51 53.1	
	comp=Z,5µm,0.9s						
VCA	Vinchina	3.29	60	eP	Pn	22 51 03.7	+3.9
VCA				eS	Sn	22 51 50.6	+13
MT09	Talagante	3.38	173		Pn	22 51 01.7	+0.7
MT01	Popeta	3.44	177		Pn	22 51 02.5	+0.6
MT01	Popeta	3.44	177	eP	Pn	22 51 02.6	+0.7
MT01				eS	Sn	22 51 53.6	+12
MT01				IAML		22 52 06.4	
	comp=Z,2µm,0.8s						
MT13	San Alfonso	3.47	164		Pn	22 51 03.9	+1.7
MT13	San Alfonso	3.47	164	eP	Pn	22 51 04.5	+2.3
MT13				eS	Sn	22 51 51.4	+9.3
MT13				IAML		22 51 56.6	
	comp=Z,4µm,0.5s						
BO04	La Punta	3.64	169		Pn	22 51 05.3	+0.8
BO01	Tunca	3.98	176		Pn	22 51 09.2	+0.1
BO01	Tunca	3.98	176	eP	Pn	22 51 10.0	+0.8
BO01				IAML		22 52 21.3	
	comp=Z,1µm,1.1s						
AC02	Maricunga	4.11	30		Pn	22 51 11.1	-0.3
AC02	Maricunga	4.11	30	eP	Pn	22 51 13.1	+1.7
AC02				eS	Sn	22 52 05.5	+7.0
AC02				IAML		22 52 14.6	
	comp=Z,3µm,0.7s						
AC01	Pan de Azucar	4.32	10		Pn	22 51 13.5	-0.3
AC01	Pan de Azucar	4.32	10	eP	Pn	22 51 13.3	-0.5
AC01				eS	Sn	22 52 20.5	+18
AC01				IAML		22 52 23.2	
	comp=Z,1µm,0.9s						
BO02	Sierra Bellavi	4.40	173		Pn	22 51 15.2	+0.2
BO02	Sierra Bellavi	4.40	173	eP	Pn	22 51 16.1	+1.0
BO02				eS	Sn	22 52 18.6	+13
BO02				IAML		22 52 20.4	
	comp=Z,2µm,0.6s						
RFA	San Rafael	5.02	151	eP	Pn	22 51 24.3	+0.7
ML02	Panimavida	5.33	180		Pn	22 51 27.6	-0.2
GO02	Mina Guanaco	5.49	18		Pn	22 51 29.8	-0.4
PB14	IPOC Station P	5.84	9		Pn	22 51 33.1	-1.9
BI05	Punta Hualpn	6.48	192		Pn	22 51 42.2	-1.3
PB10	IPOC Station P	6.92	7	Pn	Pn	22 51 46.7	-2.8
H03N1	Juan Fernandez	7.02	243	T	T	22 58 54.5	
	baz=72,slow=72,SNR=1445						
H03N2	Juan Fernandez	7.04	243	T	T	22 58 48.1	
	baz=72,slow=72,SNR=1490						
H03N3	Juan Fernandez	7.04	243	Pn	Pn	22 51 51.0	+0.1
	baz=115,slow=19						
H03N3				T	T	22 58 52.7	
	baz=72,slow=72,SNR=1284						
VA04	Juan Fernndez	7.04	241		Pn	22 51 50.9	-0.2
H03S3	Juan Fernandez	7.18	240	T	T	22 59 13.3	
	baz=85,slow=74,SNR=22						
H03S1	Juan Fernandez	7.18	240	Pn	Pn	22 51 52.3	-0.6
H03S1				T	T	22 59 11.9	
	baz=85,slow=74,SNR=22						
H03S2	Juan Fernandez	7.20	240	T	T	22 59 12.6	
	baz=85,slow=74,SNR=28						
PB05	IPOC Station P	7.61	9		Pn	22 51 59.0	-0.1
PB06	IPOC Station P	7.86	13		Pn	22 52 02.8	+0.2
AF01	San Pedro de A	7.99	22	Pn	Pn	22 52 05.6	+1.2
PB03	IPOC Station P	8.47	11		Pn	22 52 12.1	+1.2
PB09	IPOC Station P	8.81	14		Pn	22 52 15.6	0.0
PB01	IPOC Station P	9.50	11		Pn	22 52 22.8	-2.1
LR04	Corral	9.58	189	Pn	Pn	22 52 24.3	-1.6
LR05	Currie	9.80	182	Pn	Pn	22 52 29.0	0.0
PLCA	Paso Flores	10.32	176		Pn	22 52 35.9	-0.3
PLCA	Paso Flores	10.32	176	Pn	Pn	22 52 33.9	-2.3
	comp=Z,0.4nm,0.3s,baz=346,slow=12,SNR=8.2						
PLCA				LR	LR	22 57 04.9	
	comp=Z,978nm,20.8s,baz=343,slow=41						
	comp=Z,1.5nm,0.5s						
PLCA	Paso Flores	10.32	176	P	Pn	22 52 35.9	-0.3
PLCA	Paso Flores	10.32	176	eP	Pn	22 52 34.7	-1.4
PB08	IPOC Station P	10.44	12	Pn	Pn	22 52 38.8	+0.7
PB11	IPOC Station P	10.73	9		Pn	22 52 41.3	-0.6
TRQA	Tornquist	10.93	137		Pn	22 52 43.3	-1.1
TRQA	Tornquist	10.93	137	P	Pn	22 52 43.3	-1.1
LL05	Los Muermos	11.09	188	Pn	Pn	22 52 46.9	+0.4
LL01	San Ignacio de	11.97	183		Pn	22 52 57.0	-1.4
PB16	IPOC Station P	12.15	9		Pn	22 53 01.3	-0.4
ITQB	Itaqui	12.87	90		Pn	22 53 07.8	-3.1
ITQB	Itaqui	12.87	90	eP	Pn	22 53 07.4	-3.5
PB18	Visviri	12.89	8		Pn	22 53 10.2	-1.6
CPUP	Villa Florida	13.08	75		Pn	22 53 11.9	-1.9
CPUP	Villa Florida	13.08	75	Pn	Pn	22 53 09.3	-4.5
	comp=Z,0.4nm,0.3s,baz=338,slow=14,SNR=11						
CPUP				Sn	Sn	22 55 36.0	-2.0
	comp=Z,2.1nm,0.3s,baz=149,slow=18,SNR=4.1						
CPUP				Lg	Lg	22 56 44.6	
	comp=Z,1.8nm,0.3s,baz=190,slow=18,SNR=2.9						
	comp=Z,1.0nm,0.4s						
CPUP	Villa Florida	13.08	75	P	Pn	22 53 11.9	-1.9
CPUP	Villa Florida	13.08	75	eP	Pn	22 53 10.7	-3.1
LPAZ	La Paz	14.39	13	P	Pn	22 53 34.9	+2.8
LPAZ	La Paz	14.39	13	Pn	Pn	22 53 34.2	+2.1
	comp=Z,2.8nm,0.3s,baz=184,slow=7.6,SNR=92						
LPAZ				Lg	Lg	22 57 24.1	
	baz=279,slow=16						
LPAZ	La Paz	14.39	13	P	Pn	22 53 34.9	+2.8
SJPY	San Joaquin	14.62	72	eP	Pn	22 53 33.0	-1.7
COYC	Coyhaique	15.14	182		Pn	22 53 40.7	-0.6
MURT	Porto Murtinho	15.18	58	eP	Pn	22 53 38.1	-3.8
PLTB	Pedras Altas	15.36	100	Pn	Pn	22 53 41.6	-2.6
PLTB	Pedras Altas	15.36	100	eP	Pn	22 53 40.9	-3.3
CPSB	Cacapava Do Su	15.55	95	eP	Pn	22 53 44.2	-2.4
AY03	Cochrane	16.84	183	P	Pn	22 54 01.4	-1.5
SIV	San Ignacio	17.22	36	P	Pn	22 54 05.6	-2.2
	comp=Z,0.1nm,0.3s,baz=212,slow=12,SNR=62						
	comp=Z,46nm,0.9s						
ITAB	Concordia	17.23	84	P	Pn	22 54 07.8	-0.1
ITAB	Concordia	17.23	84	eP	Pn	22 54 06.0	-1.9
AQDB	Aquidauana	17.31	59	Pn	Pn	22 54 06.1	-2.8
AQDB	Aquidauana	17.31	59	eP	Pn	22 54 06.1	-2.8
CNLB	Canela	17.91	92	eP	Pn	22 54 13.8	-2.5
PTGB	Pitanga	18.10	76	eP	P	22 54 17.1	-1.4
TRCB	Terra Rica	18.45	70	P	P	22 54 20.9	-1.4
TRCB				IAmb	IAmb	22 54 45.7	
	comp=Z,44nm,0.7s						
TRCB	Terra Rica	18.45	70	eP	P	22 54 20.8	-1.6
PTLB	Pontes e Lacer	18.70	40		P	22 54 24.6	-0.5
PTLB				IAmb	IAmb	22 54 45.1	
	comp=Z,55nm,0.9s						
PTLB	Pontes e Lacer	18.70	40	eP	P	22 54 25.0	-0.1
RPRD	Ribas do Rio P	18.82	62	eP	P	22 54 26.6	+0.2
NNA	Nana	19.00	344	Lg	Lg	22 59 53.1	
	comp=Z,2.1nm,0.3s,baz=201,slow=14,SNR=1.8						
NNA				LR	LR	23 00 24.2	
	comp=Z,330nm,20.0s,baz=166,slow=33						
LDASE	Londrina, Braz	19.42	74	eP	P	22 54 32.1	-0.9
MAJ01	Sao Joao Batis	19.87	87	eP	P	22 54 37.1	-0.7
PCMB	Pacaembu	20.13	69	eP	P	22 54 40.4	-0.3
VILB	Vilhena	20.25	33		P	22 54 41.6	-0.4
VILB				IAmb	IAmb	22 54 43.2	
	comp=Z,91nm,0.9s						
VILB	Vilhena	20.25	33	eP	P	22 54 42.3	+0.2
SALV	Santo Antonio	20.42	48	eP	P	22 54 43.4	-0.5
C2SB	Chapadao do Su	20.48	60	eP	P	22 54 45.1	+0.5
FRTB	Fartura	20.74	75	eP	P	22 54 46.6	-0.7
GO09	Cerro Castillo	20.85	182	P	P	22 54 48.0	-0.2
GO09				IAmb	IAmb	22 55 14.5	
	comp=Z,43nm,1.2s						
MG05	Puerto Natales	21.26	182	P	P	22 54 53.1	+0.5
ITRB	Iturama	21.85	66	eP	P	22 54 58.2	-1.0
PET01	Itanhaem-SP	22.30	80	eP	P	22 55 02.2	-1.9
MG02	Cerro Sombrero	22.41	176	P	P	22 55 03.1	-1.8
MG02				IAmb	IAmb	22 55 25.3	
	comp=Z,103nm,1.2s						
SPB	Sao Paulo	22.43	78	P	P	22 55 03.0	-2.4
SPB				IAmb	IAmb	22 55 08.8	
	comp=Z,66nm,1.2s						
SPB	Sao Paulo	22.43	78	eP	P	22 55 04.3	-1.1
CZSB	Cruzeiro do Su	22.60	357	P	P	22 55 07.7	+0.4
CZSB				IAmb	IAmb	22 55 11.5	
	comp=Z,56nm,0.8s						
CZSB	Cruzeiro do Su	22.60	357	eP	P	22 55 08.8	+1.6
VAO	Valinhos	23.06	77	P	P	22 55 10.8	-1.3
VAO				IAmb	IAmb	22 55 12.4	
	comp=Z,37nm,0.9s						
VAO	Valinhos	23.06	77	eP	P	22 55 10.0	-2.1
PDRB	Porto dos Gac	23.17	39	eP	P	22 55 11.6	-1.5
ARAG	Araguaiana, MT	23.20	55	eP	P	22 55 11.2	-2.2
MG03	Isla Dawson	23.43	179	P	P	22 55 16.1	+0.8
MG03				IAmb	IAmb	22 55 31.7	
	comp=Z,42nm,1.1s						
EFI	East Falkland	23.45	159	P	P	22 55 15.7	+0.2
EFI				IAmb	IAmb	22 55 31.1	
	comp=Z,47nm,1.2s						
EFI	East Falkland	23.45	159	P	P	22 55 15.7	+0.2
EFI				pmax	pmax		
	comp=Z,47nm,1.2s						
ATAH	Atahualpa	24.06	343	LR	LR	23 03 01.9	
	comp=Z,285nm,21.6s,baz=187,slow=32						
PARB	Paraibuna	24.06	79	eP	P	22 55 20.0	-1.6
SLP01	Ubatuba-SP	24.46	80	eP	P	22 55 24.7	-0.6
IPMB	Ipameri, GO	24.49	65	eP	P	22 55 24.3	-1.2
MG01	Puerto William	24.66	175	P	P	22 55 26.4	-0.2
MG01				IAmb	IAmb	22 55 39.9	
	comp=Z,24nm,0.6s						
PMNB	Patos De Minas	25.59	68	eP	P	22 55 34.4	-1.1
MAN01	Angra dos Reis	25.65	80	eP	P	22 55 34.8	-1.2
BSCB	Bom Sucesso	25.75	75	eP	P	22 55 36.3	-0.7
BDFB	Brasilia	26.03	61	P	P	22 55 38.8	-0.7
BDFB				IAmb	IAmb	22 55 39.8	
	comp=Z,61nm,0.9s						
BDFB	Brasilia	26.03	61	P	P	22 55 37.7	-1.8
	comp=Z,50nm,0.7s,baz=232,slow=8.2,SNR=82						
BDFB				LR	LR	23 07 09.4	
	comp=Z,824nm,19.3s,baz=234,slow=40						
	comp=Z,50nm,0.7s						
BDFB	Brasilia	26.03	61	P	P	22 55 38.8	-0.7
BDFB				pmax	pmax		
	comp=Z,61nm,0.9s						
TBTG	Tabatinga, AM	26.13	4	P	P	22 55 40.2	-0.1
TBTG	Tabatinga, AM	26.13	4	eP	P	22 55 41.7	+1.4
SNDB	Serra Nova Dou	26.19	50	eP	P	22 55 40.2	-0.7
VAS01	Vassouras-RJ	26.33	79	eP	P	22 55 41.8	-0.3
DUB01	Friburgo-RJ	27.31	79	eP	P	22 55 50.6	-0.4
TEFE	Tefe	27.53	15	eP	P	22 55 53.4	+0.6
NPGB	Novo Progresso	27.72	36	eP	P	22 55 53.3	-1.4
DIAM	Diamantina, MG	27.96	71	eP	P	22 55 56.3	-0.6
CAM01	Campos-RJ	28.02	79	eP	P	22 55 56.7	-0.6
MACA	Manacapuru-AM	28.96	23	P	P	22 56 04.9	-0.7
MACA	Manacapuru-AM	28.96	23	eP	P	22 56 05.8	+0.2
JANB	Januaria	29.22	65	eP	P	22 56 07.3	-0.8
SJMB	Sao Joao De Ma	29.80	74	eP	P	22 56 12.3	-0.8
ITTB	Itaituba	29.86	33	eP	P	22 56 12.5	-1.0
RIB01	Linhares ES	30.18	76	eP	P	22 56 15.9	-0.5
SDBA	SAO DESIDERIO	30.40	60	eP	P	22 56 18.0	-0.5
SMTB	Santa Maria do	30.93	51	eP	P	22 56 22.9	-0.2
OTAV	Otavalo	31.20	346	P	P	22 56 26.4	+0.5
OTAV	Otavalo	31.20	346	P	P	22 56 26.4	+0.5
OTAV				pmax	pmax		
	comp=Z,7.0nm,1.2s						
PRPB	Parauapebas	31.55	44	eP	P	22 56 27.8	-0.8
GUA01	Guaratinga, BA	32.00	72	eP	P	22 56 31.9	-0.6
MAL2	Monte Alegre,	32.65	33	P	P	22 56 36.2	-1.9
MAL2				IAmb	IAmb	22 56 37.9	
	comp=Z,15nm,0.8s						
CMC01	Camacan, BA	32.87	70	eP	P	22 56 39.6	-0.6
BOAV	Boa Vista	34.25	20	P	P	22 56 51.5	-0.7
BOAV	Boa Vista	34.25	20	eP	P	22 56 52.5	+0.3
PMSA	Palmer Station	34.69	174	LR	LR	23 11 02.6	
	comp=Z,503nm,18.7s,baz=344,slow=36						
RUSC	La Rusia	36.13	357	P	P	22 57 10.1	+1.3
NBPB	Pedra_Branca-C	38.87	57	eP	P	22 57 31.6	0.0
SDV	Santo Domingo	39.08	1	P	P	22 57 32.4	-1.0
SDV				IAmb	IAmb	22 57 39.0	
	comp=Z,9.4nm,0.7s						
SDV	Santo Domingo	39.08	1	eP	P	22 57 33.9	+0.5
BAUV	El Baul	39.27	5	P	P	22 57 33.7	-1.1
MDP	Montagnes des	39.64	30	LR	LR	23 16 08.3	
	comp=Z,396nm,18.1s,baz=200,slow=40						
MPGF	Montagnes des	39.65	30	P	P	22 57 37.4	-0.5
NBCL	Cascavel-CE	40.70	57	eP	P	22 57 47.4	+0.6
PCRV	Puerto La Cruz	40.88	10	LR	LR	23 16 29.7	
	comp=Z,378nm,19.6s,slow=39						
RCBR	Riachuelo	41.41	61	eP	P	22 57 53.3	+0.8
RCBR	Riachuelo	41.41	61	P	P	22 57 53.1	+0.5
JTS	Las Juntas de	42.50	340	LR	LR	23 12 16.1	
	comp=Z,94nm,20.8s,baz=170,slow=31						
FDF	Fort de France	45.97	14	P	P	22 58 28.1	-1.0
IGPR	InterUniversit	48.37	7	P	P	22 58 45.7	-2.0
OBIP	Obispado Ponce	48.40	6	P	P	22 58 47.4	-0.5
PDPR	Patillas Dam,	48.43	7	P	P	22 58 46.7	-1.5
CELP	Cerrillos	48.44	6	P	P	22 58 47.7	-0.6
SJG	San Juan	48.51	7	P	P	22 58 47.0	-1.8
SJG	San Juan	48.51	7	P	P	22 58 47.0	-1.8
SJG				pmax	pmax		
	comp=Z,47nm,1.0s						
SJG	San Juan	48.51	7	P	P	22 58 48.4	-0.4
BANI	BANI	48.53	1	P	P	22 58 47.0	-2.2
HUMP	Col San Antoni	48.58	7	P	P	22 58 48.0	-1.3
UUPR	Utuado, UPR, P	48.60	6	P	P	22 58 50.0	+0.5
SC01	Santiago de lo	49.56	1	P	P	22 58 57.0	+0.1
CCIG	Comitan	50.52	334	P	P	22 59 02.5	-1.8
CCIG				IAmb	IAmb	22 59 19.7	
	comp=Z,13nm,0.6s						
VNA3	Neumayer Olymp	52.50	159	⇑P	P	22 59 18.5	+0.1
	comp=Z,7.5nm,0.7s						
VNA3				⇓pP	pP	22 59 31.8	-0.1
VNA1	Neumayer--Stat	52.79	158	⇑P	P	22 59 20.6	+0.1
	comp=Z,12nm,1.1s						
VNA1				⇓pP	pP	22 59 33.4	-0.5
VNA2	Neumayer--Watz	53.13	158	⇑P	P	22 59 23.2	+0.1
	comp=Z,13nm,0.6s,baz=283,slow=7.5						
VNA2				⇓pP	pP	22 59 37.9	+1.3
	baz=300,slow=5.8						
SNAA	Sanae	54.73	159	⇑P	P	22 59 34.6	-0.1
	comp=Z,257nm,0.6s						
SNAA	Sanae	54.73	159	P	P	22 59 33.2	-1.5
SNAA	Sanae	54.73	159	P	P	22 59 34.5	-0.3
	comp=Z,14nm,0.8s,baz=280,slow=7.3,SNR=77						
SNAA				LR	LR	23 22 45.6	
	comp=Z,173nm,19.0s,baz=280,slow=36						
	comp=Z,14nm,0.8s						
TROLL	Troll, Antarti	56.44	159	⇑P	P	22 59 47.1	0.0
	comp=Z,353nm,0.7s						
QSPA	South Pole Qui	59.81	180	P	P	23 00 11.3	+0.5
QSPA	South Pole Qui	59.81	180	P	P	23 00 11.2	+0.4
	comp=Z,24nm,0.6s,baz=167,slow=1.0,SNR=318						
	comp=Z,24nm,0.6s						
QSPA	South Pole Qui	59.81	180	P	P	23 00 11.5	+0.7
QSPA				pP	pP	23 00 24.7	+0.2
QSPA				sP	sP	23 00 30.8	+0.8
SHEL	Horse Pasture	61.35	92	P	P	23 00 23.9	+2.0
BBSR	BB Station	62.77	6	P	P	23 00 31.9	+1.1
BBSR				pP	pP	23 00 46.0	+1.5
833A	Chaparral WMA,	64.21	333	P	P	23 00 41.0	+0.5
833A				IAmb	IAmb	23 01 02.9	
	comp=Z,17nm,0.8s						
HKT	Hockley	64.36	337	P	P	23 00 42.1	+0.8
HKT				IAmb	IAmb	23 00 59.1	
	comp=Z,6.2nm,0.6s						
HKT	Hockley	64.36	337	⇓eP	P	23 00 43.5	+2.1
HKT				pmax	pmax		
	comp=Z,11nm,1.8s						
Y60A	Bolivia	64.39	354	P	P	23 00 41.7	+0.2
Y52A	Lilburn	65.03	348	P	P	23 00 46.4	+0.7
Y52A				IAmb	IAmb	23 00 48.2	
	comp=Z,22nm,1.3s						
X58A	Rowland	65.05	353	P	P	23 00 46.6	+0.8
X58A				IAmb	IAmb	23 00 51.5	
	comp=Z,22nm,1.2s						
Z47A	Carrollton	65.19	345	P	P	23 00 47.1	+0.3
Z47A				IAmb	IAmb	23 00 48.3	
	comp=Z,12nm,0.9s						
HNDO	Hondo	65.24	333	P	P	23 00 47.8	+0.5
HNDO				IAmb	IAmb	23 01 09.5	
	comp=Z,15nm,0.8s						

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BIRD  Birdtown, Kers    65.27 352  P       P      23 00 48.3 +1.1
BIRD                               IAmb    IAmb   23 00 50.2
      comp=Z,6.3nm,0.9s
X51A  Calhoun           65.86 348  P       P      23 00 51.7 +0.7
X51A                               IAmb    IAmb   23 00 54.4
      comp=Z,18nm,1.0s
KMSC  Kings Mountain    65.87 351  P       P      23 00 51.4 +0.3
KMSC                               IAmb    IAmb   23 01 11.8
      comp=Z,26nm,1.3s
X48A  Hartselle         66.17 346          P      23 00 53.5 +0.4
X48A                               IAmb    IAmb   23 01 13.9
      comp=Z,11nm,0.8s
Y45A  Yeager Farm, C    66.18 344  P       P      23 00 53.9 +0.8
237A  Washetta, Mont    66.23 337  P       P      23 00 54.1 +0.6
237A                               IAmb    IAmb   23 01 15.8
      comp=Z,19nm,0.9s
JCT   Junction City     66.29 333          P      23 00 54.8 +0.8
JCT                                IAmb    IAmb   23 01 16.1
      comp=Z,11nm,0.8s
JCT   Junction City     66.29 333  P       P      23 00 54.8 +0.8
JCT                                pmax    pmax
      comp=Z,11nm,0.8s
Z41A  Richland Creek    66.47 341  P       P      23 00 55.5 +0.5
V55A  Taylorsville      66.55 351  P       P      23 00 56.1 +0.6
V55A                               IAmb    IAmb   23 00 57.7
      comp=Z,20nm,1.2s
W50A  Signal Mountai    66.56 348  P       P      23 00 56.0 +0.5
W50A                               IAmb    IAmb   23 01 16.4
      comp=Z,11nm,0.9s
V53A  Saluda            66.60 350  P       P      23 00 56.0 +0.2
V53A                               IAmb    IAmb   23 00 57.7
      comp=Z,27nm,1.4s
CPCT  Cooper Cave       66.66 348          P      23 00 56.3 +0.1
CPCT                               IAmb    IAmb   23 00 58.3
      comp=Z,30nm,1.3s
SBA   Scott Base        66.68 191  P       P      23 00 57.2 +1.3
SBA                                IAmb    IAmb   23 00 58.4
      comp=Z,8.5nm,1.2s
SBA   Scott Base        66.68 191  P       P      23 00 57.2 +1.3
SBA                                pmax    pmax
      comp=Z,9.0nm,1.3s
SBA   Scott Base        66.68 191  P       P      23 00 57.5 +1.7
SWET  Sewanee           66.69 347  P       P      23 00 56.6 +0.2
SWET                               IAmb    IAmb   23 00 59.2
      comp=Z,13nm,1.0s
BRDY  Brady             66.71 334          P      23 00 57.4 +0.8
BRDY                               IAmb    IAmb   23 01 18.3
      comp=Z,8.1nm,0.9s
SAND  Sanderson         66.76 331          P      23 00 58.0 +1.0
SAND                               IAmb    IAmb   23 01 19.3
      comp=Z,9.0nm,0.9s
OXF   Oxford            66.76 344  P       P      23 00 57.8 +1.0
OXF                                IAmb    IAmb   23 01 11.7
      comp=Z,18nm,0.8s
OXF   Oxford            66.76 344  P       P      23 00 57.8 +1.0
OXF                                pmax    pmax
      comp=Z,19nm,0.9s
WHTX  Lake Whitney,     66.78 336  P       P      23 00 57.5 +0.5
WHTX                               IAmb    IAmb   23 01 18.8
      comp=Z,12nm,0.7s
TXAR  Lajitas Array     66.88 330  P       P      23 00 58.9 +1.0
TXAR  Lajitas Array     66.88 330  P       P      23 00 59.7 +1.8
      comp=Z,2.4nm,0.7s,baz=152,slow=8.3,SNR=29
TXAR                               LR      LR     23 26 13.3
      comp=Z,68nm,18.2s,baz=134,slow=32
      comp=Z,2.4nm,0.7s
TX31  Lajitas Ar. Si    66.88 330          P      23 00 58.1 +0.3
PLAL  Pickwick Lake     66.91 345  P       P      23 00 58.0 +0.2
PLAL                               IAmb    IAmb   23 01 18.3
      comp=Z,11nm,1.1s
U56A  King              66.94 352  P       P      23 00 58.5 +0.6
U56A                               IAmb    IAmb   23 01 00.3
      comp=Z,9.9nm,0.7s
WLAR  White Oak Lake    66.96 340  P       P      23 00 58.6 +0.5
WLAR                               IAmb    IAmb   23 01 20.4
      comp=Z,11nm,0.9s
OZNA  Ozona             67.20 333  P       P      23 00 59.5  -0.3
OZNA                               IAmb    IAmb   23 01 21.7
      comp=Z,6.6nm,0.8s
T59A  Double "B" Far    67.28 355          P      23 01 00.8 +0.8
U54A  Nelsons Funny     67.29 351  P       P      23 00 59.2  -1.0
U54A                               IAmb    IAmb   23 01 02.1
      comp=Z,18nm,1.1s
V48A  Smith Brothers    67.37 346  P       P      23 01 01.4 +0.7
CLTN  Cedars of Leba    67.61 347  P       P      23 01 02.3 +0.1
CLTN                               IAmb    IAmb   23 01 04.9
      comp=Z,16nm,1.4s
VNDA  Vanda             67.71 191  P       P      23 01 03.8 +1.4
VNDA  Vanda             67.71 191  P       P      23 01 03.7 +1.4
      comp=Z,1.8nm,0.9s,baz=124,slow=5.2,SNR=7.8
      comp=Z,1.8nm,0.9s
VNDA  Vanda             67.71 191  P       P      23 01 03.8 +1.4
VNDA                               pmax    pmax
      comp=Z,3.0nm,1.0s
VNDA  Vanda             67.71 191  P       P      23 01 03.9 +1.4
BLA   Blacksburg        67.79 352  P       P      23 01 04.4 +1.0
BLA                                IAmb    IAmb   23 01 33.0
      comp=Z,23nm,1.4s
BLA   Blacksburg        67.79 352  P       P      23 01 04.4 +1.0
BLA                                pmax    pmax
      comp=Z,23nm,1.5s
PLPT  Palo Pinto        67.83 336  P       P      23 01 04.1 +0.4
PLPT                               IAmb    IAmb   23 01 25.3
      comp=Z,9.6nm,0.7s
U49A  Red Boiling Sp    67.92 348  P       P      23 01 04.8 +0.7
U49A                               IAmb    IAmb   23 01 05.3
      comp=Z,23nm,1.4s
Z35A  Perchaven, San    67.93 337  P       P      23 01 05.1 +0.8
FW03  Perrin-Whitt E    67.95 336  P       P      23 01 05.0 +0.6
FW03                               IAmb    IAmb   23 01 20.4
      comp=Z,10nm,0.8s
WVT   Waverly           67.96 346  P       P      23 01 03.6  -0.8
WVT                                IAmb    IAmb   23 01 21.7
      comp=Z,13nm,0.8s
WVT   Waverly           67.96 346  P       P      23 01 03.6  -0.8
WVT                                pmax    pmax
      comp=Z,13nm,0.8s
WVT   Waverly           67.96 346  P       P      23 01 05.1 +0.7
WVT                                pP      pP     23 01 19.8 +1.6
ABTX  Abilene, Hawle    68.14 335          P      23 01 06.4 +0.7
ABTX                               IAmb    IAmb   23 01 21.7
      comp=Z,9.0nm,0.7s
S57A  Dark Hollow, R    68.18 354  P       P      23 01 06.2 +0.5
MNHN  Monahans          68.23 331          P      23 01 06.9 +0.6
MNHN                               IAmb    IAmb   23 01 23.1
      comp=Z,9.3nm,0.8s
T50A  Nancy             68.24 348  P       P      23 01 06.5 +0.4
T50A                               IAmb    IAmb   23 01 07.9
      comp=Z,19nm,1.5s
R58B  Mineral           68.29 355  P       P      23 01 06.8 +0.4
R58B                               IAmb    IAmb   23 01 09.3
      comp=Z,22nm,1.2s
T47A  Sharon Grove      68.64 347  P       P      23 01 08.9 +0.3
LCAR  Lake Charles      68.67 343  P       P      23 01 09.3 +0.4
LCAR                               IAmb    IAmb   23 01 27.0
      comp=Z,11nm,0.7s
VHRN  Van Horn          68.70 329          P      23 01 10.3 +1.0
WTFS  Witchita Falls    68.75 336  P       P      23 01 09.6 +0.2
WTFS                               IAmb    IAmb   23 01 25.1
      comp=Z,12nm,0.8s
FCAR  Ozark Folk Cen    68.76 342  P       P      23 01 10.3 +1.0
ODSA  Odessa            68.83 332  P       P      23 01 10.4 +0.4
APMT  Aspermont         68.95 335          P      23 01 11.0 +0.3
APMT                               IAmb    IAmb   23 01 26.7
      comp=Z,10nm,0.7s
SYO   Syowa Base        69.02 159⇑ePP      P      23 01 08.5  -2.2
SYO   Syowa Base        69.02 159⇑ePcP     PcP    23 01 32.6  -1.9
BBTS  Babate            69.28  58  LR      LR     23 32 54.3
      comp=Z,74nm,18.1s,baz=128,slow=37
HHAR  Hobbs             69.62 341          P      23 01 15.1 +0.3
HHAR                               IAmb    IAmb   23 01 30.2
      comp=Z,11nm,0.9s
MNTX  Cornudas Mount    69.66 330          P      23 01 15.7 +0.6
TUL3  Leonard           69.83 339  P       P      23 01 15.8  -0.2
TUL3                               IAmb    IAmb   23 01 31.6
      comp=Z,12nm,0.7s
RLO   Rose Lookout      69.83 340  P       P      23 01 16.3 +0.2
RLO                                IAmb    IAmb   23 01 30.9
      comp=Z,13nm,1.0s
U38A  Gravette          69.90 340  P       P      23 01 17.4 +0.9
U38A                               IAmb    IAmb   23 01 33.4
      comp=Z,12nm,1.4s
WUPA  West Chester U    70.09 357  P       P      23 01 19.2 +1.7
CCM   Cathedral Cave    70.58 344  P       P      23 01 21.0 +0.4
CCM                                IAmb    IAmb   23 01 37.6
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      comp=Z,9.8nm,0.8s
CCM   Cathedral Cave    70.58 344  P       P      23 01 21.0 +0.4
CCM                                pmax    pmax
      comp=Z,10.0nm,0.8s
CCM   Cathedral Cave    70.58 344  P       P      23 01 21.4 +0.9
CCM                                pP      pP     23 01 35.7 +1.3
CCM                                PcP     PcP    23 01 41.5 +0.1
SMWD  Samnorwood        70.59 335  P       P      23 01 21.0 +0.3
SMWD                               IAmb    IAmb   23 01 36.5
      comp=Z,15nm,0.7s
OK051 E0350 and S346    70.70 339  P       P      23 01 22.1 +0.8
OK051                              IAmb    IAmb   23 01 47.3
      comp=Z,22nm,0.9s
SSPA  Standing Stone    70.94 355  P       P      23 01 24.1 +1.4
SSPA                               PcP     PcP    23 01 43.2 +0.3
ACSO  Alum Creek Sta    71.10 351  P       P      23 01 23.9 +0.2
ACSO                               IAmb    IAmb   23 01 25.4
      comp=Z,24nm,1.0s
O49A  Covington         71.25 350  P       P      23 01 24.9 +0.3
O49A                               IAmb    IAmb   23 01 26.7
      comp=Z,21nm,1.2s
OK038 West end E0370    71.30 337  P       P      23 01 26.1 +1.1
N49A  Columbus Grove    71.95 350  P       P      23 01 28.9 +0.1
DUN6  Lazy B Ranch      72.06 327  P       P      23 01 29.5  -0.3
DUN6                               IAmb    IAmb   23 01 32.9
      comp=Z,21nm,1.0s
P40A  Paris             72.18 343          P      23 01 30.8 +0.6
L56A  Greenwood         72.41 355          P      23 01 32.6 +1.0
P38A  Dawn              72.64 342  P       P      23 01 33.5 +0.5
P38A                               IAmb    IAmb   23 01 34.2
      comp=Z,8.7nm,1.0s
ANMO  Albuquerque       72.90 330  P       P      23 01 35.4 +0.5
ANMO  Albuquerque       72.90 330          P      23 01 36.1 +1.3
ANMO                               IAmb    IAmb   23 01 38.6
      comp=Z,7.1nm,1.4s
ANMO  Albuquerque       72.90 330          P      23 01 37.1 +2.2
ANMO                               IAmb    IAmb   23 01 38.6
      comp=Z,7.0nm,1.4s
ANMO  Albuquerque       72.90 330⇓eP       P      23 01 36.3 +1.5
ANMO                               pmax    pmax
      comp=Z,3.0nm,1.5s
MMNY  Mt. Morris Dam    73.03 355  P       P      23 01 35.7 +0.6
214A  Organ Pipe Nat    73.39 324  P       P      23 01 38.7 +1.1
K50A  Casco             73.55 351  P       P      23 01 37.8  -0.4
J55A  Hilton            73.55 355  P       P      23 01 38.8 +0.6
DBIC  Dimbokro          73.58  72          P      23 01 38.5  -0.6
DBIC  Dimbokro          73.58  72  P       P      23 01 38.3  -0.8
      comp=Z,26nm,0.8s,baz=230,slow=6.4,SNR=18
DBIC                               LR      LR     23 31 55.8
      comp=Z,209nm,19.6s,baz=231,slow=34
      comp=Z,26nm,0.8s
DBIC  Dimbokro          73.58  72  P       P      23 01 38.5  -0.6
DBIC                               pmax    pmax
      comp=Z,55nm,1.2s
J57A  Williamstown      73.58 357  P       P      23 01 38.8 +0.5
J57A                               IAmb    IAmb   23 01 53.9
      comp=Z,17nm,1.0s
T25A  Trinidad          73.95 333  P       P      23 01 42.6 +1.6
T25A                               IAmb    IAmb   23 02 03.7
      comp=Z,11nm,0.8s
L40A  Anamosa           74.39 345  P       P      23 01 43.6 +0.5
L40A                               IAmb    IAmb   23 01 45.0
      comp=Z,38nm,1.3s
W18A  Petrified Fore    74.49 328  P       P      23 01 45.5 +1.4
W18A                               IAmb    IAmb   23 02 02.4
      comp=Z,9.6nm,1.1s
X16A  Lo Mia Camp, P    74.70 327          P      23 01 46.3 +0.9
SDCO  Great Sand Dun    74.91 333  P       P      23 01 47.7 +1.0
FRNY  Flat Rock         74.91 358  P       P      23 01 47.2 +1.1
FRNY                               IAmb    IAmb   23 01 48.6
      comp=Z,37nm,1.2s
JFWS  Jewell Farm       74.98 346  P       P      23 01 46.8 +0.2
JFWS                               IAmb    IAmb   23 01 48.7
      comp=Z,13nm,1.1s
JFWS  Jewell Farm       74.98 346  P       P      23 01 46.8 +0.2
JFWS                               pmax    pmax
      comp=Z,13nm,1.1s
HAL   Halifax           75.03   6  P       P      23 01 47.9 +1.1
HAL   Halifax           75.03   6  P       P      23 01 47.9 +1.1
HAL                                pmax    pmax
      comp=Z,44nm,1.3s
Y14A  Wickenburg        75.08 325  P       P      23 01 48.2 +0.8
WBO   Williamsburg      75.13 357  P       P      23 01 47.8 +0.5
SADO  Sadowa            75.15 354  P       P      23 01 47.7 +0.2
SADO                               IAmb    IAmb   23 01 48.9
      comp=Z,13nm,0.9s
G62A  West of Eustis    75.28   1          P      23 01 49.2 +1.0
GGN   Saint George      75.29   3  P       P      23 01 49.4 +1.2
GGN                                IAmb    IAmb   23 01 51.4
      comp=Z,30nm,1.3s
WUAZ  Wupatki           75.57 327  P       P      23 01 50.6 +0.3
WUAZ                               IAmb    IAmb   23 02 09.0
      comp=Z,21nm,1.4s
BUKO  Buck Lake         75.84 354  P       P      23 01 52.9 +1.5
TKX   Tecate            75.84 322  P       P      23 01 51.1  -0.7
F64A  Sherman           75.97   2  P       P      23 01 53.9 +1.8
F64A                               IAmb    IAmb   23 01 54.6
      comp=Z,14nm,0.8s
H43A  Windswept, Lux    76.00 348  P       P      23 01 53.3 +1.0
H43A                               IAmb    IAmb   23 01 56.2
      comp=Z,20nm,0.9s
GBN   Guysborough       76.00   7  P       P      23 01 53.5 +1.2
SUR   Sutherland        76.14 119  P       P      23 01 55.2 +1.2
LMN   Caledonia Moun    76.14   5          P      23 01 53.8 +0.6
TRQ   Mont Tremblant    76.33 358          P      23 01 55.3 +1.0
W13A  Hualapai Mount    76.44 325  P       P      23 01 55.6 +0.3
MAW   Mawson            76.47 164  P       P      23 01 55.2 +0.4
      comp=Z,12nm,0.7s,baz=212,slow=6.1,SNR=31
      comp=Z,12nm,0.7s
PV01  Paradox Valley    76.50 331  P       P      23 01 56.3 +0.6
PFO   Pinyon Flats O    76.57 323⇑eP       P      23 01 58.1 +2.0
PFO                                pmax    pmax
      comp=Z,9.0nm,1.0s
PV13  Radium Mtn., P    76.62 331  P       P      23 01 57.6 +1.2
PV13                               IAmb    IAmb   23 01 59.0
      comp=Z,8.4nm,0.9s
PV15  Paradox Valley    76.64 331  P       P      23 01 56.9 +0.4
PV15                               IAmb    IAmb   23 02 01.1
      comp=Z,10nm,1.3s
PV05  Paradox Valley    76.68 330  P       P      23 01 56.7   0.0
PV05                               IAmb    IAmb   23 01 59.1
      comp=Z,7.3nm,0.9s
PV03  Paradox Valley    76.72 331  P       P      23 01 57.2 +0.3
ISCO  Idaho Springs     76.73 334          P      23 01 57.4 +0.4
ISCO  Idaho Springs     76.73 334  P       P      23 01 57.4 +0.4
ISCO                               pmax    pmax
      comp=Z,4.0nm,0.8s
PV18  Skein Mesa, Pa    76.74 331          P      23 01 57.5 +0.5
PV18                               IAmb    IAmb   23 02 16.5
      comp=Z,10nm,0.9s
I37A  Lemond, Waseca    76.74 344          P      23 01 57.2 +0.6
I37A                               IAmb    IAmb   23 01 59.4
      comp=Z,13nm,0.8s
U15A  North Rim         76.74 327          P      23 01 57.5 +0.4
PV12  Saucer Basin,     76.75 331  P       P      23 01 58.3 +1.2
PV12                               IAmb    IAmb   23 01 59.8
      comp=Z,13nm,1.1s
PV11  David Mesa, Pa    76.77 331  P       P      23 01 58.1 +1.0
PV11                               IAmb    IAmb   23 02 14.5
      comp=Z,5.4nm,0.8s
PV07  Paradox Valley    76.79 331  P       P      23 01 58.2 +1.0
PV16  Nyswonger Mesa    76.79 331  P       P      23 01 58.1 +0.8
PV20  West Nyswonger    76.84 331  P       P      23 01 58.1 +0.5
PV20                               IAmb    IAmb   23 01 60.0
      comp=Z,21nm,1.4s
ACRG  Accra             76.87  75  P       P      23 01 57.2  -0.8
PV10  Paradox Valley    76.90 331  P       P      23 01 58.0   0.0
PV10                               IAmb    IAmb   23 02 20.3
      comp=Z,10nm,0.9s
PV22  Blue Mesa, Par    76.93 331  P       P      23 01 58.9 +0.8
ELS   Elsinore Mount    77.11 322  P       P      23 02 00.0 +1.0
D62A  Allapoint, All    77.17   2  P       P      23 01 59.5 +0.6
K30B  Basset            77.20 339  P       P      23 02 00.7 +1.4
HMU   Henry Mountain    77.28 329  P       P      23 02 01.2 +1.1
HMU                                IAmb    IAmb   23 02 04.9
      comp=Z,7.6nm,1.0s
E46A  Sault Ste Mari    77.30 351  P       P      23 02 00.2 +0.6
ECSD  EROS Data Cent    77.30 342          P      23 02 00.7 +0.9
ECSD  EROS Data Cent    77.30 342  P       P      23 02 00.1 +0.3
ECSD                               IAmb    IAmb   23 02 02.1
      comp=Z,29nm,1.2s
F42A  Maple Grove Fa    77.31 348  P       P      23 02 00.7 +1.0
F42A                               IAmb    IAmb   23 02 01.2
      comp=Z,13nm,0.6s
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V12A  Nelson            77.41 325          P      23 02 01.9 +1.2
KNB   Kanab             77.47 327          P      23 02 02.2 +1.1
KNB                                IAmb    IAmb   23 02 19.8
      comp=Z,14nm,1.2s
KNB   Kanab             77.47 327  P       P      23 02 02.2 +1.1
KNB                                pmax    pmax
      comp=Z,14nm,1.2s
BATG  Bathurst New B    77.48   4  P       P      23 02 02.3 +1.6
LMQ   La Malbaie        77.61   1  P       P      23 02 02.1 +0.8
LMQ                                IAmb    IAmb   23 02 03.2
      comp=Z,15nm,0.8s
WIN   Windhoek          77.74 109  P       P      23 02 03.2 +0.1
WIN   Windhoek          77.74 109  P       P      23 02 03.2 +0.1
WIN                                pmax    pmax
      comp=Z,36nm,1.2s
LDAQ  Lac Daran         78.02   0          P      23 02 05.1 +1.4
LDAQ                               IAmb    IAmb   23 02 06.1
      comp=Z,28nm,1.3s
SHPR  Sheep Range       78.18 325          P      23 02 06.7 +1.7
VLDQ  Val d'Or          78.35 356          P      23 02 05.9 +0.5
VLDQ                               IAmb    IAmb   23 02 07.7
      comp=Z,23nm,1.1s
MVU   Marysvale         78.40 328  P       P      23 02 05.6  -0.7
P18A  Preston Nutter    78.46 330  P       P      23 02 07.2 +0.6
P18A                               IAmb    IAmb   23 02 09.5
      comp=Z,11nm,1.0s
CCAC  Calif City Air    78.58 323  P       P      23 02 07.0  -0.1
CCAC                               IAmb    IAmb   23 02 10.0
      comp=Z,8.3nm,0.8s
TMUT  Trail Mountain    78.60 330  P       P      23 02 07.9 +0.4
TMUT                               IAmb    IAmb   23 02 11.0
      comp=Z,13nm,1.5s
QSM   Queen of Sheba    78.61 324          P      23 02 08.5 +1.3
GWY   Greenwater Val    78.68 324          P      23 02 08.4 +0.6
E38A  The Farm, Brul    78.79 346  P       P      23 02 08.2 +0.3
E38A                               IAmb    IAmb   23 02 23.7
      comp=Z,9.2nm,1.1s
PRN   Pahroc Range      78.84 326  P       P      23 02 10.1 +1.4
PRN                                IAmb    IAmb   23 02 27.3
      comp=Z,8.2nm,0.9s
TPNV  Topopah Spring    79.07 325          P      23 02 10.1 +0.2
TPNV  Topopah Spring    79.07 325  P       P      23 02 10.1 +0.2
TPNV                               pmax    pmax
      comp=Z,5.0nm,0.8s
PSUT  Pine Spring       79.17 327          P      23 02 11.9 +1.4
ISA   Isabella, Lake    79.21 323  P       P      23 02 11.5 +0.9
ISA                                IAmb    IAmb   23 02 14.2
      comp=Z,7.6nm,0.7s
ISA   Isabella, Lake    79.21 323  P       P      23 02 11.5 +0.9
ISA                                pmax    pmax
      comp=Z,8.0nm,0.7s
MPU   Maple Canyon      79.38 330  P       P      23 02 11.9 +0.3
BSUT  Blindstream Ca    79.44 331          P      23 02 12.3 +0.3
K22A  Casper            79.54 334          P      23 02 12.9 +0.6
K22A                               IAmb    IAmb   23 02 15.6
      comp=Z,33nm,1.4s
TSUM  Tsumeb            79.72 106          P      23 02 13.9  -0.1
TSUM  Tsumeb            79.72 106  LR      LR     23 34 18.7
      comp=Z,141nm,19.5s,baz=224,slow=33
SPR3  Spring Creek 3    79.77 327  P       P      23 02 14.3 +0.4
JLU   Jordanelle        79.78 330  P       P      23 02 14.5 +0.7
GRHM  Grahamstown, E    79.83 123  P       P      23 02 14.2  -0.1
R11B  Troy Canyon, C    79.85 326          P      23 02 14.6 +0.4
GMN   Gold Mountain     79.85 324  P       P      23 02 14.7 +0.5
RSSD  Black Hills       79.93 337          P      23 02 15.1 +0.6
RSSD  Black Hills       79.93 337  P       P      23 02 15.1 +0.6
RSSD                               pmax    pmax
      comp=Z,5.0nm,0.8s
DUG   Dugway, Tooele    80.05 329  P       P      23 02 15.9 +0.8
DUG   Dugway, Tooele    80.05 329  P       P      23 02 15.9 +0.8
DUG                                pmax    pmax
      comp=Z,5.0nm,0.9s
EYMN  Ely               80.05 346  P       P      23 02 15.0 +0.2
EYMN                               IAmb    IAmb   23 02 16.6
      comp=Z,14nm,1.1s
KOOLE Kule              80.05 111  P       P      23 02 15.5  -0.2
KOOLE Kule              80.05 111 iP       P      23 02 15.8 +0.1
MZP   Montezuma Peak    80.22 325  P       P      23 02 16.6 +0.3
DSP   Deep Springs      80.26 324          P      23 02 17.4 +1.3
TBO   Thunder Bay       80.33 348  P       P      23 02 17.0 +0.8
TBO                                IAmb    IAmb   23 02 18.1
      comp=Z,27nm,1.4s
LKGWB Lokgwabe          80.34 112  P       P      23 02 19.3 +2.1
TPH   Tonopah           80.43 325  P       P      23 02 18.3 +1.0
TPH                                IAmb    IAmb   23 02 20.7
      comp=Z,23nm,1.1s
TPH   Tonopah           80.43 325  P       P      23 02 18.3 +1.0
TPH                                pmax    pmax
      comp=Z,23nm,1.1s
HWUT  Hardware Ranch    80.66 331  P       P      23 02 19.8 +1.4
HWUT                               IAmb    IAmb   23 02 34.2
      comp=Z,7.0nm,0.8s
BGU   Big Grassy Mou    80.74 329  P       P      23 02 20.1 +1.2
BW06  Boulder Array     80.81 333  P       P      23 02 19.7 +0.5
PD31  Pinedale Array    80.81 333  P       P      23 02 19.7 +0.5
PDAR  Pinedale Array    80.81 333  P       P      23 02 18.2  -1.1
      comp=Z,1.0nm,0.5s,baz=148,slow=8.0,SNR=11
      comp=Z,1.0nm,0.5s
PHPEN Phepeng           80.98 114  P       P      23 02 20.0  -0.6
PHPEN                              IAmb    IAmb   23 02 21.5
      comp=Z,21nm,1.1s
PHPEN Phepeng           80.98 114 iP       P      23 02 20.8 +0.2
E28A  Huff              81.06 340          P      23 02 20.5 +0.3
E28A                               IAmb    IAmb   23 02 22.2
      comp=Z,16nm,0.8s
LHV   Little Huntoon    81.21 324  P       P      23 02 21.9 +0.7
NVAR  Mina Array Bea    81.24 325  P       P      23 02 22.2 +0.5
NVAR  Mina Array Bea    81.24 325  P       P      23 02 22.4 +0.7
      comp=Z,2.2nm,0.8s,baz=157,slow=6.9,SNR=9.2
      comp=Z,2.2nm,0.8s
BOSA  Boshof            81.30 118  P       P      23 02 21.6  -0.7
BOSA                               IAmb    IAmb   23 02 23.1
      comp=Z,21nm,0.9s
BOSA  Boshof            81.30 118  P       P      23 02 21.5  -0.7
      comp=Z,19nm,0.8s,baz=260,slow=4.4,SNR=26
BOSA                               LR      LR     23 32 31.2
      comp=Z,122nm,21.3s,baz=232,slow=31
      comp=Z,19nm,0.8s
BOSA  Boshof            81.30 118  P       P      23 02 21.6  -0.7
BOSA                               pmax    pmax
      comp=Z,21nm,0.9s
HVU   Hansel Valley     81.32 330  P       P      23 02 22.6 +0.7
HVU   Hansel Valley     81.32 330  P       P      23 02 22.6 +0.7
HVU                                pmax    pmax
      comp=Z,4.0nm,0.8s
AGMN  Agassiz Nation    81.35 344          P      23 02 21.8 +0.1
AGMN                               IAmb    IAmb   23 02 23.1
      comp=Z,12nm,0.8s
AHID  Auburn Hatcher    81.43 332  P       P      23 02 22.7 +0.2
RYN   Ryan              81.51 325  P       P      23 02 23.4 +0.5
ELK   Elko              81.58 328          P      23 02 24.3 +0.9
ELK   Elko              81.58 328  P       P      23 02 24.3 +0.9
ELK                                pmax    pmax
      comp=Z,4.0nm,0.8s
GRTLG Ghanzi            81.67 110  P       P      23 02 23.8  -0.5
GRTLG Ghanzi            81.67 110 iP       P      23 02 24.5 +0.1
KGCAE Kacgae            81.74 112  P       P      23 02 24.5  -0.3
KGCAE Kacgae            81.74 112 iP       P      23 02 24.4  -0.3
WAKR  Walker            81.87 324  P       P      23 02 25.7 +0.7
WAKR                               IAmb    IAmb   23 02 28.9
      comp=Z,12nm,1.4s
MDND  Maddock           81.91 341          P      23 02 25.9 +1.2
LOHW  Long Hollow       81.93 332  P       P      23 02 25.8 +0.6
TPAW  Teton Pass        81.97 332  P       P      23 02 26.0 +0.6
CMB   Columbia Colle    82.00 323          P      23 02 26.5 +1.0
CMB   Columbia Colle    82.00 323  P       P      23 02 26.5 +1.0
CMB                                pmax    pmax
      comp=Z,2.0nm,0.8s
EPLO  Experimental L    82.16 346          P      23 02 26.1 +0.2
EPLO                               IAmb    IAmb   23 02 27.6
      comp=Z,10nm,1.0s
SKOMA Sekoma            82.30 114 iP       P      23 02 27.7 +0.1
PNTR  Pine Nut          82.40 324          P      23 02 29.0 +1.3
PNTR                               IAmb    IAmb   23 02 31.2
      comp=Z,12nm,0.8s
TORD  Torodi Ar. Bea    82.53  70          P      23 02 27.7  -1.0
TORD  Torodi Ar. Bea    82.53  70  P       P      23 02 28.5  -0.1
      comp=Z,31nm,1.0s,baz=272,slow=4.3,SNR=47
TORD                               LR      LR     23 36 32.3
      comp=Z,258nm,20.9s,baz=168,slow=34
      comp=Z,31nm,1.0s
QNGWA Qangwa            82.53 108  P       P      23 02 28.1  -0.8
QNGWA                              IAmb    IAmb   23 02 30.2
      comp=Z,17nm,0.9s
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PAHR	**Pah Rah Range**	**82.76**	**325**		**P**	**23 02 30.7**	**+1.2**
PAHR				IAmb	IAmb	23 02 32.4	
	comp=Z,6.7nm,0.9s						
YNE	**Yellowstone No**	**82.86**	**334**	P	**P**	**23 02 31.4**	**+1.4**
LAO	**LASA Array**	**82.92**	**337**	P	**P**	**23 02 30.9**	**+0.8**
LAO				IAmb	IAmb	23 02 32.6	
	comp=Z,18nm,1.3s						
AFDM	**Forest Hills D**	**82.99**	**323**	P	**P**	**23 02 30.5**	**-0.1**
YHH	**Holmes Hill**	**83.01**	**333**	P	**P**	**23 02 31.9**	**+1.0**
XAUDM	**Khaudum**	**83.15**	**107**	P	**P**	**23 02 31.8**	**-0.2**
XAUDM				IAmb	IAmb	23 02 34.1	
	comp=Z,20nm,1.1s						
ULM	**Lac du Bonnet**	**83.18**	**344**		**P**	**23 02 31.4**	**+0.2**
ULM				IAmb	IAmb	23 02 32.8	
	comp=Z,16nm,0.9s						
ULM	**Lac du Bonnet**	**83.18**	**344**	P	**P**	**23 02 30.2**	**-1.0**
	comp=Z,8.6nm,0.8s,baz=144,slow=3.9,SNR=14						
	comp=Z,8.6nm,0.8s						
ULM	**Lac du Bonnet**	**83.18**	**344**	*ce*P	**P**	**23 02 31.4**	**+0.2**
LBTB	**Lobatse**	**83.36**	**115**		**P**	**23 02 31.2**	**-1.9**
LBTB	**Lobatse**	**83.36**	**115**	LR	LR	23 34 14.0	
	comp=Z,222nm,20.5s,baz=224,slow=32						
LBTB	**Lobatse**	**83.36**	**115**	P	**P**	**23 02 31.2**	**-1.9**
LBTB				pmax	pmax		
	comp=Z,55nm,1.1s						
BEKR	**Beckworth**	**83.37**	**324**		**P**	**23 02 33.8**	**+1.0**
GMARE	**Gumare**	**83.41**	**108**	P	**P**	**23 02 33.5**	**+0.1**
GMARE				IAmb	IAmb	23 02 34.9	
	comp=Z,18nm,1.1s						
KDWAN	**Kaudwane**	**83.44**	**113**	P	**P**	**23 02 33.0**	**-0.5**
HLID	**Hailey**	**83.47**	**330**		**P**	**23 02 34.1**	**+1.0**
CASY	**Casey**	**83.61**	**181**	P	**P**	**23 02 33.3**	**-0.1**
CASY				IAmb	IAmb	23 02 49.5	
	comp=Z,8.7nm,1.1s						
ORV	**Oroville**	**83.72**	**323**		**P**	**23 02 35.5**	**+1.3**
ORV				IAmb	IAmb	23 02 37.6	
	comp=Z,7.5nm,1.0s						
ORV	**Oroville**	**83.72**	**323**	P	**P**	**23 02 35.5**	**+1.3**
ORV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
DGMT	**Dagmar**	**83.82**	**339**	P	**P**	**23 02 35.6**	**+1.0**
MCMT	**McKenzie Canyo**	**83.84**	**332**	P	**P**	**23 02 36.0**	**+0.9**
MFID	**Camas Ranch**	**83.97**	**329**	P	**P**	**23 02 36.8**	**+1.2**
DLMT	**Dillon**	**84.18**	**332**	P	**P**	**23 02 37.1**	**+0.5**
DLMT				IAmb	IAmb	23 02 40.2	
	comp=Z,20nm,1.5s						
LPHEP	**Lephephe**	**84.40**	**114**		**P**	**23 02 37.9**	**-0.6**
LPHEP	**Lephephe**	**84.40**	**114**	*i* P	**P**	**23 02 38.7**	**+0.3**
WVOR	**Wild Horse Val**	**84.49**	**327**	P	**P**	**23 02 38.4**	**+0.1**
WVOR	**Wild Horse Val**	**84.49**	**327**	P	**P**	**23 02 38.4**	**+0.1**
WVOR				pmax	pmax		
	comp=Z,8.0nm,1.5s						
LRM	**Limekiln Ridge**	**84.50**	**333**	P	**P**	**23 02 39.8**	**+1.4**
HATC	**Hat Creek Radi**	**84.64**	**324**	P	**P**	**23 02 39.5**	**+0.5**
HATC				IAmb	IAmb	23 02 41.2	
	comp=Z,17nm,1.1s						
PHDHD	**Phuduhudu**	**84.94**	**110**	P	**P**	**23 02 41.1**	**-0.1**
SCHQ	**Schefferville**	**84.99**	**3**	P	**P**	**23 02 41.1**	**+0.8**
SCHQ	**Schefferville**	**84.99**	**3**	P	**P**	**23 02 39.8**	**-0.5**
	comp=Z,15nm,1.1s,baz=155,slow=5.5,SNR=6.2						
SCHQ				LR	LR	23 41 27.7	
	comp=Z,23nm,20.6s,baz=148,slow=36						
	comp=Z,15nm,1.1s						
J08A	**Circle Bar Ran**	**85.13**	**328**		**P**	**23 02 42.4**	**+0.9**
J08A				IAmb	IAmb	23 02 44.5	
	comp=Z,17nm,1.2s						
EGMT	**Eagleton**	**85.31**	**335**	P	**P**	**23 02 42.9**	**+0.7**
EGMT				IAmb	IAmb	23 02 44.7	
	comp=Z,13nm,1.4s						
PLID	**Pearl Lake**	**85.38**	**330**		**P**	**23 02 43.6**	**+0.8**
PLID				IAmb	IAmb	23 02 44.7	
	comp=Z,5.1nm,0.8s						
BPMT	**Black Pine Rid**	**85.40**	**332**		**P**	**23 02 44.0**	**+1.1**
MREMI	**Moremi**	**86.06**	**114**	P	**P**	**23 02 45.8**	**-0.9**
MREMI	**Moremi**	**86.06**	**114**	*i* P	**P**	**23 02 47.0**	**+0.3**
I07A	**Izee**	**86.16**	**328**		**P**	**23 02 47.2**	**+0.6**
I07A				IAmb	IAmb	23 02 49.0	
	comp=Z,6.9nm,1.2s						
PINE	**Pine Mountain**	**86.61**	**327**	P	**P**	**23 02 50.1**	**+1.2**
PINE				IAmb	IAmb	23 02 51.6	
	comp=Z,8.8nm,0.9s						
BROLN	**Tlhalogang**	**86.73**	**112**	*i* P	**P**	**23 02 50.2**	**+0.2**
JTMT	**Jette**	**86.80**	**333**	P	**P**	**23 02 50.0**	**+0.4**
G08A	**Pilot Rock**	**86.84**	**329**	P	**P**	**23 02 50.1**	**+0.2**
G08A				IAmb	IAmb	23 02 52.8	
	comp=Z,7.4nm,1.4s						
MATP	**Matopo**	**88.01**	**112**	LR	LR	23 38 58.4	
	comp=Z,104nm,18.6s,baz=240,slow=33						
RAO	**Raoul Island**	**88.23**	**237**	LR	LR	23 35 08.9	
	comp=Z,264nm,18.6s,baz=264,slow=31						
FFC	**Flin Flon**	**88.78**	**343**		**P**	**23 02 59.1**	**+0.4**
FFC				IAmb	IAmb	23 02 59.8	
	comp=Z,13nm,1.2s						
FFC	**Flin Flon**	**88.78**	**343**	P	**P**	**23 02 59.1**	**+0.4**
FFC				pmax	pmax		
	comp=Z,13nm,1.3s						
MDT	**Midelt**	**89.18**	**51**	LR	LR	23 40 29.8	
	comp=Z,88nm,21.7s,baz=222,slow=34						
LSZ	**Lusaka**	**90.44**	**108**		**P**	**23 03 07.2**	**-0.4**
LSZ	**Lusaka**	**90.44**	**108**	LR	LR	23 40 37.1	
	comp=Z,108nm,18.3s,baz=197,slow=34						
LSZ	**Lusaka**	**90.44**	**108**	P	**P**	**23 03 07.3**	**-0.4**
LSZ				pmax	pmax		
	comp=Z,17nm,1.3s						
FCC	**Fort Churchill**	**90.82**	**348**		**P**	**23 03 08.7**	**+0.6**
FCC	**Fort Churchill**	**90.82**	**348**	P	**P**	**23 03 08.7**	**+0.6**
FCC				pmax	pmax		
	comp=Z,27nm,1.3s						
TAM	**Tamanrasset**	**90.82**	**64**		**P**	**23 03 08.8**	**-0.5**
TAM	**Tamanrasset**	**90.82**	**64**	P	**P**	**23 03 08.8**	**-0.5**
TAM				pmax	pmax		
	comp=Z,11nm,0.8s						
ESDC	**Sonseca Array**	**93.73**	**46**	P	**P**	**23 03 22.5**	**+0.3**
ESDC	**Sonseca Array**	**93.73**	**46**	P	**P**	**23 03 22.2**	**+0.1**
	comp=Z,1.7nm,1.0s,baz=264,slow=4.4,SNR=7.1						
ESDC				LR	LR	23 45 03.4	
	comp=Z,105nm,18.3s,baz=235,slow=35						
	comp=Z,1.7nm,1.0s						
YKA	**Yellowknife Ar**	**98.83**	**341**	P	Pdif	23 03 44.9	+0.2
	comp=Z,0.6nm,0.6s,baz=162,slow=11,SNR=6.1						
	comp=Z,0.6nm,0.6s						
M29M	**Somme Creek**	**106.80**	**333**		**Pdif**	**23 04 21.6**	**+1.3**
NACGM	**Naroch**	**118.86**	**41**	*e*PKP	**PKiKP**	**23 08 56.7**	**+3.5**
	comp=Z,3.0nm,0.9s,baz=256						
AKASG	**Malin Array Be**	**119.38**	**46**	PKP	**PKPdf**	**23 08 53.2**	**-1.0**
	comp=Z,1.0nm,0.4s,baz=267,slow=2.5,SNR=9.3						
BRTR	**Keskin Array B**	**119.61**	**59**	PKP	**PKPdf**	**23 08 53.6**	**-1.6**
	comp=Z,0.9nm,0.8s,baz=270,slow=2.5,SNR=4.6						
ARCES	**ARCESS Array B**	**120.55**	**24**	PKP	**PKPdf**	**23 08 55.1**	**-0.9**
	comp=Z,1.1nm,0.7s,baz=243,slow=4.0,SNR=3.8						
ASAR	**Alice Springs**	**120.98**	**207**	PKP	**PKPdf**	**23 08 56.6**	**-1.7**
	comp=Z,0.4nm,0.6s,baz=151,slow=2.4,SNR=4.3						
WRA	**Warramunga Arr**	**124.12**	**210**	PKP	**PKPdf**	**23 09 03.0**	**-1.5**
	comp=Z,1.3nm,0.5s,baz=164,slow=1.6,SNR=24						
WRA	**Warramunga Arr**	**124.12**	**210**	PKIKP	**PKPdf**	**23 09 03.0**	**-1.5**
OBN	**Obninsk**	**124.46**	**42**	*i* PKIKP	**PKPdf**	**23 09 01.6**	**-2.2**
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,72nm,21.0s						
KLMR	**Klimovskoe**	**126.20**	**35**	*e*PKIKP	**PKPdf**	**23 09 06.2**	**-0.8**
KLMR				pmax	pmax		
	comp=Z,19nm,1.3s						
H11S2	**WAKE ISLAND Hy**	**126.25**	**271**	T	T	01 27 58.4	
	baz=115,slow=75,SNR=66						
H11S1	**WAKE ISLAND Hy**	**126.26**	**271**	T	T	01 27 57.1	
	baz=115,slow=75,SNR=88						
H11S3	**WAKE ISLAND Hy**	**126.27**	**271**	T	T	01 27 57.8	
	baz=115,slow=75,SNR=60						
H11N3	**WAKE ISLAND Hy**	**126.57**	**273**	T	T	01 28 29.3	
	baz=116,slow=75,SNR=12						
H11N1	**WAKE ISLAND Hy**	**126.58**	**273**	T	T	01 28 25.0	
	baz=116,slow=75,SNR=5.5						
H11N2	**WAKE ISLAND Hy**	**126.59**	**273**	T	T	01 28 29.6	
	baz=116,slow=75,SNR=32						
BILL	**Bilibino**	**129.81**	**336**	⇓*i*PKIKP	**PKiKP**	**23 09 14.6**	**+0.1**
BILL				pmax	pmax		
	comp=Z,12nm,2.5s						
ARTI	**Arti**	**136.59**	**38**		**PKPdf**	**23 09 27.1**	**+0.4**
ARTI	**Arti**	**136.59**	**38**	*i* PKIKP	**PKPdf**	**23 09 27.2**	**+0.4**
ARTI						23 12 06.2	
SEY	**Seymchan**	**137.14**	**332**	⇓*e*PKIKP	**PKiKP**	**23 09 29.2**	**-0.3**
ABKAR	**Akbulak array**	**139.01**	**49**		PKPpre	23 09 23.4	
ABKAR				PKPdf	**PKPdf**	**23 09 32.3**	**+0.8**
ABKAR	**Akbulak array**	**139.01**	**49**	PKPpre	PKPpre	23 09 22.0	
ABKAR				PKPdf	**PKPdf**	**23 09 31.3**	**-0.2**
BRVK	**Borovoye**	**144.19**	**40**	*c* *i*PKIKP	PKPbc	23 09 39.1	+0.2
BRVK				pmax	pmax		
	comp=Z,13nm,1.0s						
BVAR	**Borovoye Array**	**144.27**	**40**	PKP	**PKPdf**	**23 09 40.2**	**-0.5**
	comp=Z,6.0nm,0.5s,baz=301,slow=2.7,SNR=54						
YAK	**Yakutsk**	**145.50**	**343**	*i* PKP2	**PKPdf**	**23 09 42.6**	**0.0**
YAK				*e*SS	SS	23 31 49.5	-1.7
YAK				pmax	pmax		
	comp=Z,39nm,0.9s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,13nm,1.3s						
BRLS	**Borolday**	**146.80**	**57**	*e*PKP2	**PKPbc**	**23 09 46.4**	**-1.0**
BRLS				pmax	pmax		
	comp=Z,30nm,3.0s						
YSS	**Yuzhno-Sakhali**	**148.91**	**312**	*e*PKP2	**PKPbc**	**23 09 53.2**	**+0.4**
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
BTLS	**Baital**	**149.31**	**52**	*e*PKHKP	PKPpre	23 09 49.8	
EKS2	**Erkin-Say**	**149.72**	**57**	P	**PKiKP**	**23 09 56.1**	**-0.1**
	SNR=15						
AML	**Almayashu**	**149.77**	**58**	P	**PKiKP**	**23 09 56.5**	**-0.1**
	SNR=9.6						
HYB	**Hyderabad**	**149.79**	**108**	*e*PKPbc	**PKPbc**	**23 09 55.1**	**-0.8**
HYB				*e*PKiKP	**PKiKP**	**23 09 56.6**	**-0.2**
HYB				*e*sPKiKP	**sPKPbc**	**23 10 16.8**	**+0.6**
HYB				*e*SKSdf	**SKSdf**	**23 16 54.2**	**-1.2**
KURBB	**Kurchatov Arra**	**149.86**	**39**	PKP	**PKPdf**	**23 09 47.3**	**-2.8**
	comp=Z,0.3nm,0.4s,baz=308,slow=2.8,SNR=7.4						
KURBB				PKPbc	**PKiKP**	**23 09 55.5**	**-0.5**
	comp=Z,6.8nm,0.5s,baz=306,slow=3.1,SNR=16						
KURK	**Kurchatov**	**149.86**	**39**	⇓*e*PKHKP	PKPpre	23 09 51.0	
KURK				pmax	pmax		
	comp=Z,24nm,1.3s						
USP	**Ospenovka**	**150.10**	**55**	P	**PKiKP**	**23 09 56.7**	**-0.1**
	SNR=14						
AAK	**Ala-Archa**	**150.24**	**56**	P	**PKiKP**	**23 09 57.7**	**+0.4**
	SNR=13						
AAK	**Ala-Archa**	**150.24**	**56**	⇑*e*PKIKP	**PKPdf**	**23 09 52.0**	**+0.7**
CHMS	**Chumysh**	**150.34**	**56**	P	**PKiKP**	**23 09 57.4**	**+0.1**
	SNR=7.5						
KBK	**Karagaybulak**	**150.56**	**56**	P	**PKiKP**	**23 09 58.3**	**+0.4**
	SNR=7.1						
ZALV	**Zalesovo Beam**	**150.90**	**29**	PKP	**PKPdf**	**23 09 51.7**	**0.0**
	comp=Z,1.5nm,0.6s,baz=289,slow=4.5,SNR=7.0						
ZALV				PKPbc	**PKiKP**	**23 09 57.9**	**-0.1**
	comp=Z,34nm,0.5s,baz=311,slow=3.2,SNR=115						
TKM2	**Tokmak 2**	**150.96**	**55**	P	**PKiKP**	**23 09 58.8**	**0.0**
	SNR=8.4						
ULHL	**Ulahol**	**151.59**	**57**	P	**PKiKP**	**23 10 00.5**	**+0.4**
	SNR=12						
KSH	**Kashi**	**151.93**	**62**	PKPbc	**PKPbc**	**23 10 00.5**	**0.0**
KSH				pPKP	pPKPdf	23 10 09.3	+0.3
ARXS	**Arharly**	**152.14**	**52**	*e*PKIKP	**PKiKP**	**23 10 01.6**	**+0.6**
SHLS	**Shalkode**	**153.60**	**53**	*e*PKP2	**PKPab**	**23 10 16.2**	**-0.6**
SHLS				pmax	pmax		
	comp=Z,27nm,2.1s						
MKAR	**Makanchi Array**	**153.94**	**44**	PKP	**PKPdf**	**23 09 55.9**	**-0.6**
	comp=Z,1.0nm,0.9s,baz=318,slow=1.6,SNR=5.8						
MKAR				PKPbc	**PKPbc**	**23 10 04.3**	**-0.2**
	comp=Z,4.8nm,0.9s,baz=310,slow=1.9,SNR=21						
MKAR				PKPab	**PKPab**	**23 10 18.0**	**+0.1**
	comp=Z,3.4nm,0.7s,baz=315,slow=2.2,SNR=6.9						
MJAR	**Matsushiro Arr**	**154.57**	**292**	PKP	**PKPdf**	**23 09 56.6**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=107,slow=7.0,SNR=4.0						
MJAR				PKPab	**pPKPbc**	**23 10 22.0**	**+0.9**
	comp=Z,2.1nm,0.6s,baz=98,slow=2.7,SNR=7.0						
WMQ	**Urumqi**	**158.73**	**45**	*e*PKP	**PKPdf**	**23 10 03.8**	**+0.9**
ZAK	**Zakamensk**	**159.66**	**10**	*e*PKP2	**PKPab**	**23 10 42.3**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.5s						
SONM	**Songino Array**	**162.52**	**5**	PKPab	**PKPab**	**23 10 55.9**	**+0.9**
	comp=Z,2.6nm,0.9s,baz=330,slow=3.7,SNR=8.4						
SONM				PP	**PP**	**23 14 40.0**	**+1.1**
	comp=Z,0.5nm,0.4s,baz=320,slow=2.9,SNR=8.9						
GTA	**Gaotai**	**168.52**	**36**	*e*PKP	**PKPdf**	**23 10 12.6**	**+0.4**
GTA				PKPab	**PKPab**	**23 11 21.9**	**+0.1**
GTA				LR	LR		
	comp=Z,98nm,17.1s						
GTA				LR	LR		
	comp=Z,130nm,20.0s						
GTA				LR	LR		
	comp=Z,190nm,20.4s						
HHC	**Hu-ho-hao-te**	**169.30**	**348**	*e*PKP	**PKPdf**	**23 10 12.9**	**+0.3**
NJ2	**Nanjing**	**171.02**	**283**	*e*PKP	**PKPdf**	**23 10 14.5**	**+0.8**
PZH	**PanZhiHua**	**172.86**	**121**	PKP	**PKPdf**	**23 10 16.3**	**+1.4**
LZH	**Lanzhou**	**173.11**	**34**	*e*PKP	**PKPdf**	**23 10 10.5**	**-4.3**
CD2	**Chengdu**	**175.84**	**82**	PKP	**PKPdf**	**23 10 16.0**	**+0.3**

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*NEIC **13** 22:52:11.5±1.3, 18°.1S±0°.2×178°.0W±0°.2, h584^{km}±10^{km}, mb4.3/12, Error ellipse: s-maj=39.5km s-min=10.4km az=129.0*

*IDC **13** 22:52:13.9±1.3, 18°.15S×178°.31W, h589^{km}±10^{km}, mb3.2/8, mbtmp4.2/9, Error ellipse: s-maj=26.9km s-min=15.3km az=138.0*

ISC 13 22:52:12.8±0.7, **18°.1S**±0°.1×**178°.2W**±0°.1, **h590**^{km}, **n30**, σ**1**^{s}**.57**/33, **mb4.0**/13, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.58**	**275**	P	**P**	**22 53 34.2**	**-0.6**
MSVF	**Nonsavu**	**3.58**	**275**	P	**P**	**22 53 33.6**	**-1.2**
	67nm,0.7s,baz=126,slow=6.9,SNR=39						
MSVF				S	**S**	**22 54 42.9**	**+1.3**
	34nm,1.3s,baz=137,slow=23,SNR=7.9						
FUTU	**Fugatoga**	**3.77**	**1**	P	**P**	**22 53 34.0**	**-2.1**
DZM	**Mont Dzumac**	**14.95**	**252**	P	**P**	**22 55 20.9**	**-0.1**
DZM				IAmb	IAmb	22 55 25.6	
	comp=Z,20nm,1.2s						
THZ	**Tophouse**	**24.78**	**196**	P	**P**	**22 56 48.7**	**-0.8**
STKA	**Stephens Creek**	**38.70**	**241**	P	**P**	**22 58 48.3**	**+0.7**
	comp=Z,2.6nm,0.5s,baz=85,slow=9.6,SNR=6.9						
	comp=Z,2.6nm,0.5s						
WRA	**Warramunga Arr**	**44.78**	**260**	P	**P**	**22 59 34.7**	**-0.8**
	comp=Z,0.9nm,0.3s,baz=97,slow=6.8,SNR=23						
WRA				PcP	**PcP**	**23 01 05.4**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=39,slow=20,SNR=1.6						
	comp=Z,0.9nm,0.3s						
AS31	**Alice Springs**	**44.92**	**254**	P	**P**	**22 59 37.2**	**+0.7**
AS31				IAmb	IAmb	22 59 37.9	
	comp=Z,3.0nm,0.5s						
ASAR	**Alice Springs**	**44.92**	**254**	P	**P**	**22 59 37.0**	**+0.4**
	comp=Z,8.3nm,0.7s,baz=88,slow=8.8,SNR=105						
ASAR				S	**S**	**23 05 32.7**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=82,slow=13,SNR=4.3						
	comp=Z,8.3nm,0.7s						
FORT	**Forrest**	**50.10**	**245**	P	**P**	**23 00 14.2**	**-0.8**
FORT				IAmb	IAmb	23 00 36.9	
	comp=Z,14nm,0.9s						
VNDA	**Vanda**	**60.27**	**185**	P	**P**	**23 01 24.9**	**+0.1**
	comp=Z,1.5nm,0.9s,baz=106,slow=6.5,SNR=3.9						
	comp=Z,1.5nm,0.9s						
MJAR	**Matsushiro Arr**	**68.17**	**323**	P	**P**	**23 02 15.9**	**+0.6**
	comp=Z,1.5nm,0.6s,baz=152,slow=7.4,SNR=4.1						
	comp=Z,1.5nm,0.6s						
PETK	**Petropavlovsk-**	**73.91**	**345**	P	**P**	**23 02 49.5**	**+1.1**
	comp=Z,1.6nm,0.6s,baz=121,slow=8.1,SNR=6.1						
	comp=Z,1.6nm,0.6s						
MESA	**MESA**	**83.35**	**17**	P	**P**	**23 03 37.4**	**-1.2**
MESA				IAmb	IAmb	23 04 17.9	
	comp=Z,17nm,0.8s						
K20K	**Telida**	**83.36**	**11**	P	**P**	**23 03 39.1**	**+0.7**
CAST	**Castle Rocks**	**83.78**	**11**	P	**P**	**23 03 40.0**	**-0.5**
VRDI	**Verde Repeater**	**83.81**	**16**	P	**P**	**23 03 40.9**	**0.0**
VRDI				IAmb	IAmb	23 04 21.6	
	comp=Z,4.1nm,1.1s						
BCPM	**Bancas Point**	**83.84**	**18**	P	**P**	**23 03 42.2**	**+1.3**
KTH	**Kantishna Hill**	**84.12**	**12**	P	**P**	**23 03 41.6**	**-0.6**
TRF	**Thorofare Moun**	**84.16**	**12**	P	**P**	**23 03 42.0**	**-0.5**
TRF				IAmb	IAmb	23 03 43.9	
	comp=Z,5.0nm,0.8s						
TXAR	**Lajitas Array**	**85.94**	**58**	P	**P**	**23 03 54.5**	**+2.6**
	comp=Z,0.6nm,0.7s,baz=237,slow=4.7,SNR=3.0						
	comp=Z,0.6nm,0.7s						
ILAR	**Eielson Array**	**86.03**	**13**	P	**P**	**23 03 51.4**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=218,slow=5.2,SNR=14						
	comp=Z,0.5nm,0.4s						
KK31	**Karatay Array**	**117.58**	**310**		**PKPdf**	**23 09 49.1**	**-3.6**
KKAR	**Karatay Array**	**117.58**	**310**		**PKPdf**	**23 09 49.0**	**-3.7**
KKAR	**Karatay Array**	**117.58**	**310**		**PKPdf**	**23 09 48.9**	**-3.7**
GAR	**Garm**	**117.70**	**305**	PKPdf	**PKPdf**	**23 09 50.6**	**-2.6**
BRTR	**Keskin Array B**	**145.05**	**315**	PKPbc	**PKPab**	**23 10 46.3**	**0.0**
	comp=Z,0.6nm,0.5s,baz=96,slow=1.4,SNR=4.5						
CLL	**Collm**	**145.69**	**347**	*i* PKPbc	**PKPbc**	**23 10 47.3**	**+0.9**
	comp=Z,4.0nm,0.8s						
MMAI	**Mount Meron Ar**	**146.40**	**303**	PKPbc	**PKiKP**	**23 10 50.8**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=115,slow=3.8,SNR=2.6						
GERES	**GERESS Array B**	**147.84**	**345**	PKPbc	**PKPbc**	**23 10 53.3**	**+0.9**
	comp=Z,1.1nm,0.7s,baz=31,slow=3.1,SNR=8.0						

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*NOU **13** 23:10:17.7, 31°.98S×176°.92W, h136^{km}, mb5.0/15, Kermadec Islands Region*

*BJI **13** 23:10:18.1, 31°.21S×177°.89W, h11^{km}, mB5.6/11, mb5.5/30, Ms5.0/13, Ms7 4.7/11*

*WEL **13** 23:10:21.5±0.6, 32°S±4°×17°8W±1°1, h10^{km}, M5.2/9, mB5.4/6, ML5.6/11, MLv5.5/9, Mw(mB)4.9/6, Error ellipse: s-maj=15.0km s-min=2.9km az=107.3, confirmed*

*NEIC **13** 23:10:25.0±1.6, 31°.58S±0°.09×178°.6W±0°.1, h35^{km}±1^{km}, mb5.3/249, Error ellipse: s-maj=17.5km s-min=14.5km az=106.0*

*MOS **13** 23:10:25.4±1.0, 31°.54S×178°.69W, h52^{km}, mb5.5/31, Error ellipse: s-maj=10.7km s-min=7.9km az=91.5*

*IDC **13** 23:10:27.7±1.3, 31°.48S×178°.65W, h66^{km}±11^{km}, mb4.7/19, mbtmp4.9/22, MS4.5/39, Error ellipse: s-maj=12.0km s-min=9.9km az=105.0*

*GCMT **13** 23:10:28.0±0.1, 31°.65S±0°.01×178°.41W±0°.01, h57^{km}, MW5.3/137, Moment Tensor Solution. s120,c195; s137,c221; Duration: 1^s.1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.97±.02; M$_{\theta\theta}$0.02±.02; M$_{\phi\phi}$-0.99±.01; M$_{r\theta}$-0.02±.01; M$_{\theta\phi}$-0.31±.01; M$_{\phi r}$0.35±.01; Best double couple: M$_0$1.08900×10^{17} NP1:φ$_s$203.00000°, δ36.00000°, λ102.00000°. NP2:φ$_s$9.00000°, δ54.00000°, λ82.00000°. Principal axes: T 1.0420, Plg79.0000°, Azm247.0000°; N 0.0950, Plg7.0000°, Azm14.0000°; P -1.1360, Plg9.0000°, Azm105.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 23:10:24.6±0.6, **31°.68S**±0°.04×**178°.50W**±0°.05, **h42**^{km}±4^{km}, **n983**, σ**1**^{s}**.53**/966, **mb5.3**/190, **MS4.6**/45, **35C-31D**, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**2.46**	**12**	P	**Pn**	**23 11 02.4**	**+0.1**
GLKZ				S	**Sn**	**23 11 29.5**	**-1.5**
RAO	**Raoul Island**	**2.47**	**12**		**Pn**	**23 11 02.0**	**-0.3**
RAO	**Raoul Island**	**2.47**	**12**	P	**Pn**	**23 11 01.8**	**-0.6**
	2µm,0.3s,baz=107,slow=6.6,SNR=28						
RAO				S	**Sn**	**23 11 31.6**	**+0.3**
	5µm,0.3s,baz=107,slow=19,SNR=7.3						
RAO				LR	LR	23 12 00.6	
	comp=Z,9µm,20.8s,baz=198,slow=40						
RIZ	**Raoul Island**	**2.47**	**12**	P	**Pn**	**23 11 03.1**	**+0.6**
RIZ				S	**Sn**	**23 11 31.7**	**+0.3**
MXZ	**Matakaoa Point**	**6.43**	**203**		**Pn**	**23 11 55.9**	**-0.9**
MXZ	**Matakaoa Point**	**6.43**	**203**	P	**Pn**	**23 11 56.2**	**-0.6**
MXZ	**Matakaoa Point**	**6.43**	**203**	P	**Pn**	**23 11 55.2**	**-1.5**
MXZ				S	**Sn**	**23 13 07.5**	**-1.4**
WMGZ	**Waiomatatini S**	**6.63**	**202**	P	**Pn**	**23 11 58.3**	**-1.2**
WMGZ				S	**Sn**	**23 13 11.9**	**-1.8**
GRZ	**Great Barrier**	**6.78**	**226**	P	**Pn**	**23 12 04.8**	**+3.2**
PKGZ	**Pakihiroa**	**6.78**	**204**	P	**Pn**	**23 12 00.2**	**-1.4**
PKGZ				S	**Sn**	**23 13 15.4**	**-2.2**
HAZ	**Te Kaha**	**6.79**	**206**	P	**Pn**	**23 12 00.7**	**-1.0**
HAZ				S	**Sn**	**23 13 20.2**	**+2.5**
WIZ	**White Island**	**6.83**	**210**	P	**Pn**	**23 12 04.0**	**+1.8**
WIZ				S	**Sn**	**23 13 19.9**	**+1.2**
PUZ	**Puketiti**	**6.91**	**202**	P	**Pn**	**23 12 01.6**	**-1.8**
PUZ				S	**Sn**	**23 13 21.7**	**+1.0**
KUZ	**Kuaotunu**	**6.96**	**222**	P	**Pn**	**23 12 08.7**	**+4.7**
KUZ	**Kuaotunu**	**6.96**	**222**	P	**Pn**	**23 12 08.0**	**+4.0**
RUGZ	**Raukumara Rang**	**7.01**	**206**	P	**Pn**	**23 12 03.5**	**-1.4**
RUGZ				S	**Sn**	**23 13 24.0**	**+0.6**
MYRZ	**Mayor Island**	**7.08**	**216**	P	**Pn**	**23 12 10.0**	**+4.4**
TWGZ	**Tauwhareparae**	**7.10**	**203**	P	**Pn**	**23 12 04.7**	**-1.2**
TWGZ				S	**Sn**	**23 13 26.1**	**+0.8**
WHRZ	**Whale Island**	**7.20**	**210**	P	**Pn**	**23 12 07.7**	**+0.4**
WHRZ				S	**Sn**	**23 13 29.2**	**+1.5**
CNGZ	**Carnagh Statio**	**7.31**	**201**	P	**Pn**	**23 12 07.3**	**-1.4**
CNGZ				S	**Sn**	**23 13 30.6**	**+0.2**
WCZ	**Waipu Caves**	**7.31**	**233**	P	Pn	23 12 14.6	+5.8
WIAZ	**Waiheke Island**	**7.33**	**224**	P	**Pn**	**23 12 12.6**	**+3.5**
OPRZ	**Ohinepanea**	**7.37**	**212**	P	**Pn**	**23 12 11.9**	**+2.2**
OPRZ				S	**Sn**	**23 13 33.3**	**+1.3**
TKGZ	**Te Karaka**	**7.38**	**203**	P	**Pn**	**23 12 07.9**	**-1.9**
TKGZ				S	**Sn**	**23 13 30.8**	**-1.4**
ABAZ	**Army Bay**	**7.39**	**227**	S		23 12 13.5	
MWZ	**Matawai**	**7.40**	**205**	P	**Pn**	**23 12 10.9**	**+0.9**
MWZ				S	**Sn**	**23 13 30.8**	**-1.9**
MARZ	**Manawahe**	**7.44**	**211**	P	**Pn**	**23 12 13.5**	**+2.9**
MBAZ	**Motutapu North**	**7.46**	**225**	P	**Pn**	**23 12 13.9**	**+3.1**
URZ	**Urewera**	**7.49**	**208**	P	**Pn**	**23 12 09.3**	**-1.9**
	128nm,0.3s,baz=93,slow=1.2,SNR=49						
URZ				S	**Sn**	**23 13 34.1**	**-0.7**
	285nm,0.5s,baz=326,slow=5.9,SNR=11						
URZ	**Urewera**	**7.49**	**208**	P	**Pn**	**23 12 09.5**	**-1.7**
URZ	**Urewera**	**7.49**	**208**	P	**Pn**	**23 12 09.6**	**-1.6**
URZ				S	**Sn**	**23 13 33.1**	**-1.7**
OUZ	**Omahuta**	**7.49**	**240**	P	Pn	23 12 17.3	+6.0
OUZ	**Omahuta**	**7.49**	**240**	P	Pn	23 12 17.2	+5.9
EDRZ	**Edgecumbe**	**7.51**	**210**	P	**Pn**	**23 12 14.8**	**+3.1**
MKAZ	**Moumakai**	**7.53**	**222**	P	**Pn**	**23 12 13.9**	**+2.0**
RAGZ	**Rawiri**	**7.58**	**205**	P	**Pn**	**23 12 11.2**	**-1.4**
RAGZ				S	**Sn**	**23 13 35.6**	**-1.6**
RIGZ	**Rimuhau**	**7.65**	**203**	P	**Pn**	**23 12 13.5**	**0.0**
MKRZ	**Makatiti**	**7.66**	**211**	P	Pn	23 12 18.6	+5.0
KARZ	**Kaharoa**	**7.66**	**213**	P	**Pn**	**23 12 16.9**	**+3.3**
KMRZ	**Kaimai**	**7.67**	**215**	P	**Pn**	**23 12 17.9**	**+4.2**
OMRZ	**Omania**	**7.67**	**212**	P	**Pn**	**23 12 17.7**	**+3.9**
TARZ	**Mount Tarawera**	**7.72**	**211**	P	**Pn**	**23 12 16.6**	**+2.1**
TARZ				S	**Sn**	**23 13 40.7**	**0.0**
TOZ	**Tahuroa Road**	**7.80**	**218**		**Pn**	**23 12 14.8**	**-0.7**
HLRZ	**Highlands Stat**	**7.80**	**211**	P	**Pn**	**23 12 19.2**	**+3.6**
RRRZ	**Republican Roa**	**7.80**	**210**	P	**Pn**	**23 12 19.1**	**+3.5**
PRGZ	**Paritu Road**	**7.81**	**201**	P	**Pn**	**23 12 14.3**	**-1.4**
PRGZ				S	**Sn**	**23 13 40.0**	**-2.8**
MUGZ	**Murupara**	**7.81**	**208**	P	**Pn**	**23 12 14.5**	**-1.1**
MUGZ				S	**Sn**	**23 13 42.4**	**-0.4**
RTZ	**Ruatahuna**	**7.85**	**207**		**Pn**	**23 12 15.3**	**-1.0**
RTZ	**Ruatahuna**	**7.85**	**207**	P	**Pn**	**23 12 15.1**	**-1.2**
RTZ				S	**Sn**	**23 13 41.4**	**-2.4**
SNGZ	**Shannon Statio**	**7.86**	**204**	P	**Pn**	**23 12 15.5**	**-0.9**
SNGZ				S	**Sn**	**23 13 43.1**	**-1.0**
HRRZ	**Handcock Road**	**7.94**	**211**	P	**Pn**	**23 12 21.2**	**+3.7**
HRRZ				S	**Sn**	**23 13 49.7**	**+3.6**
KNZ	**Kokohu**	**7.96**	**202**	P	Pn	23 12 13.7	-4.1
KNZ				S	**Sn**	**23 13 40.9**	**-5.6**
PRRZ	**Plateau Road**	**7.99**	**210**	P	**Pn**	**23 12 19.0**	**+0.9**
PRRZ				S	**Sn**	**23 13 45.6**	**-1.6**
MHGZ	**Mahia Peninsul**	**8.01**	**200**	P	**Pn**	**23 12 15.9**	**-2.5**
MHGZ				S	**Sn**	**23 13 40.7**	**-7.1**
ALRZ	**Allen Road**	**8.06**	**210**	P	**Pn**	**23 12 20.2**	**+1.1**
RAHZ	**Arahi**	**8.07**	**205**	P	**Pn**	**23 12 17.8**	**-1.5**
RAHZ				S	**Sn**	**23 13 47.1**	**-2.1**
WPRZ	**Whakapapatarin**	**8.11**	**211**	P	**Pn**	**23 12 22.2**	**+2.5**
MTHZ	**Maungataniwha**	**8.11**	**207**	P	**Pn**	**23 12 18.9**	**-0.9**
MTHZ				S	**Sn**	**23 13 48.6**	**-1.6**
WHHZ	**Waihua**	**8.16**	**204**	P	**Pn**	**23 12 20.8**	**+0.3**
WHHZ				S	**Sn**	**23 13 49.0**	**-2.4**
KUTZ	**Kaahu Road**	**8.23**	**213**	P	**Pn**	**23 12 24.2**	**+2.7**
TLZ	**Tolley Road**	**8.24**	**215**	P	**Pn**	**23 12 24.7**	**+3.0**
MRHZ	**Matea Rd**	**8.26**	**209**	P	**Pn**	**23 12 23.0**	**+1.2**
MRHZ				S	**Sn**	**23 13 53.0**	**-0.8**
WHTZ	**Whakaora**	**8.32**	**212**	P	**Pn**	**23 12 24.3**	**+1.7**
NMHZ	**Naumai**	**8.33**	**206**	P	**Pn**	**23 12 21.9**	**-1.0**
NMHZ				S	**Sn**	**23 13 55.3**	**-0.5**
ARHZ	**Aropaoanui**	**8.41**	**205**	P	**Pn**	**23 12 23.0**	**-0.9**
WATZ	**Wairara**	**8.45**	**212**	P	**Pn**	**23 12 26.9**	**+2.4**
BKZ	**Black Stump Fm**	**8.51**	**207**		**Pn**	**23 12 23.0**	**-2.4**
BKZ	**Black Stump Fm**	**8.51**	**207**	P	**Pn**	**23 12 23.2**	**-2.2**
BKZ	**Black Stump Fm**	**8.51**	**207**	P	**Pn**	**23 12 22.7**	**-2.6**
RATZ	**Rangitukua**	**8.56**	**212**	P	**Pn**	**23 12 27.5**	**+1.5**
RITZ	**Rihia Road**	**8.62**	**211**	P	**Pn**	**23 12 27.9**	**+1.1**
MCHZ	**McNeill Hill**	**8.68**	**205**	P	**Pn**	**23 12 26.2**	**-1.4**
KATZ	**Kakaramea**	**8.69**	**211**	P	**Pn**	**23 12 30.1**	**+2.3**
HIZ	**Hauiti**	**8.72**	**217**		**Pn**	**23 12 30.5**	**+2.3**
HIZ	**Hauiti**	**8.72**	**217**	P	**Pn**	**23 12 30.0**	**+1.8**
HIZ	**Hauiti**	**8.72**	**217**	P	**Pn**	**23 12 31.9**	**+3.7**
CKHZ	**Cape Kidnapper**	**8.74**	**203**	P	**Pn**	**23 12 26.7**	**-1.6**

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KWHZ  Kaweka Forest       8.76 207    P       Pn      23 12 27.0 -1.8
NTVZ  North Tongarir      8.80 211    P       Pn      23 12 29.4 +0.1
TMVZ  Te Maari            8.80 211    P       Pn      23 12 29.4  0.0
KRVZ  Karewarewa          8.81 211    P       Pn      23 12 30.7 +1.3
ETVZ  East Tongariro      8.81 211    P       Pn      23 12 30.0 +0.5
WTVZ  West Tongariro      8.85 211    P       Pn      23 12 30.7 +0.7
NNVZ  North Ngauruho      8.85 211    P       Pn      23 12 30.9 +0.8
OTVZ  Oturere             8.85 211    P       Pn      23 12 29.3 -0.8
TWVZ  Taurewa             8.88 212    P       Pn      23 12 31.1 +0.6
SNVZ  South Ngauruho      8.88 211    P       Pn      23 12 30.6 +0.1
NGZ   Ngauruhoe           8.89 211    P       Pn      23 12 32.0 +1.4
KAHZ  Kahuranaki          8.93 204    P       Pn      23 12 28.4 -2.6
COVZ  Chateau Observ      8.94 211    P       Pn      23 12 33.6 +2.3
TUVZ  Tukino              8.95 211    P       Pn      23 12 30.8 -0.6
KRHZ  Kereru              8.97 206    P       Pn      23 12 29.1 -2.5
FWVZ  Far West T-bar      8.98 211    P       Pn      23 12 32.4 +0.5
MAVZ  Matarangi           8.99 211    P       Pn      23 12 32.6 +0.6
WHVZ  Whangaehu Hut       8.99 211    P       Pn      23 12 32.4 +0.4
TRVZ  Turoa               9.02 211    P       Pn      23 12 32.9 +0.4
MOVZ  Moawhango           9.02 210    P       Pn      23 12 30.3 -2.0
WNVZ  Wahianoa            9.02 211    P       Pn      23 12 32.1 -0.3
PKVZ  Pokaka              9.10 212    P       Pn      23 12 34.1 +0.7
MTVZ  Mangateitei         9.12 211    P       Pn      23 12 33.3 -0.4
PXZ   Pawanui             9.14 203    P       Pn      23 12 31.7 -2.2
VRZ   Vera Road           9.24 215    P       Pn      23 12 38.4 +3.2
PNHZ  Pukenui             9.27 206    P       Pn      23 12 32.2 -3.6
WPHZ  Waipukurau          9.32 205    P       Pn      23 12 35.0 -1.3
PRHZ  Porangahau          9.43 203    P       Pn      23 12 33.7 -4.2
TSZ   Takapari Road       9.49 207    P       Pn      23 12 37.9 -0.8
DVHZ  Dannevirke          9.62 205    P       Pn      23 12 38.0 -2.5
WAZ   Wanganui            9.64 211    P       Pn      23 12 40.9 +0.1
ANWZ  Angora Road         9.66 203    P       Pn      23 12 39.0 -1.9
LREZ  Lake Rotokare       9.68 215    P       Pn      23 12 43.4 +2.2
NEZ   North Egmont        9.68 216    P       Pn      23 12 45.4 +4.0
KHEZ  Kahui Hut           9.74 217    P       Pn      23 12 44.3 +2.1
KHEZ  Kahui Hut           9.74 217    P       Pn      23 12 45.9 +3.7
POWZ  Post Office Ro      9.85 206    P       Pn      23 12 41.8 -1.8
PRWZ  Pori Road           9.92 205    P       Pn      23 12 43.8 -0.8
BFZ   Birch Farm          9.94 204    Pn      Pn      23 12 41.4 -3.3
BFZ   Birch Farm          9.94 204    P       Pn      23 12 40.9 -3.9
BFZ   Birch Farm          9.94 204    P       Pn      23 12 40.7 -4.1
TIWZ  Tintock            10.14 205    P       Pn      23 12 44.7 -3.0
MRZ   Mangatainoka R     10.16 206            Pn      23 12 43.6 -4.2
MRZ   Mangatainoka R     10.16 206    P       Pn      23 12 44.0 -3.8
TMWZ  Te Maipa           10.44 204    P       Pn      23 12 47.7 -3.9
OGWZ  Otaki Gorge        10.45 207    P       Pn      23 12 47.9 -3.9
TRWZ  Traveller          10.77 204    P       Pn      23 12 51.8 -4.4
MSWZ  Moikau Station     10.94 206            Pn      23 12 54.2 -4.3
SNZO  South Karori       11.05 208    Pn      Pn      23 12 56.2 -3.8
SNZO  South Karori       11.05 208    P       Pn      23 12 56.8 -3.2
PLWZ  Palliser           11.07 205    Pn      Pn      23 12 55.1 -5.2
BHW   Baring Head        11.07 207    Pn      Pn      23 12 56.2 -4.1
BHW   Baring Head        11.07 207    P       Pn      23 12 56.5 -3.8
TCW   Tory Channel       11.14 209            Pn      23 12 55.7 -5.6
TUWZ  Tuamarina          11.47 210            Pn      23 13 01.6 -4.1
CMWZ  Cape Campbell      11.62 208    Pn      Pn      23 13 04.5 -3.3
QRZ   Quartz Range       11.64 216    P       Pn      23 13 06.3 -1.8
NFK   Norfolk Island     12.00 279    P       Pn      23 13 19.0 +5.9
      comp=Z,353nm,1.5s
CTZ   Chatham Island     12.13 173    P       Pn      23 13 11.9 -2.9
THZ   Tophouse           12.19 212            Pn      23 13 09.5 -6.2
KHZ   Kahutara           12.45 208            Pn      23 13 12.5 -6.7
KHZ   Kahutara           12.45 208    P       Pn      23 13 15.0 -4.2
LTZ   Lake Taylor        13.29 211            Pn      23 13 24.7 -6.0
INZ   Inchbonnie         13.62 213            Pn      23 13 34.4 -0.6
OXZ   Oxford             13.83 210            Pn      23 13 36.1 -1.9
MSVF  Nonsavu            14.23 347            Pn      23 13 44.9 +1.3
MSVF  Nonsavu            14.23 347    P       Pn      23 13 42.5 -1.1
      comp=Z,28nm,0.8s,baz=160,slow=16,SNR=18
MSVF                                  LR      LR      23 18 18.4
      comp=Z,3µm,20.2s,baz=187,slow=34
MSVF  Nonsavu            14.23 347    P       Pn      23 13 44.9 +1.3
RPZ   Rata Peaks         14.57 212            Pn      23 13 41.3 -6.7
RPZ   Rata Peaks         14.57 212    P       Pn      23 13 40.9 -7.1
      comp=Z,13nm,0.4s,baz=23,slow=9.9,SNR=8.1
RPZ                                   S       Sn      23 16 14.1  -14
      comp=Z,24nm,0.3s,baz=344,slow=22,SNR=9.5
RPZ   Rata Peaks         14.57 212    P       Pn      23 13 43.3 -4.7
NIUE  Niue               14.74  34    P       Pn      23 13 45.0 -5.3
      comp=Z,215nm,1.9s
ODZ   Otahua Downs       15.81 209    Pn      Pn      23 13 58.2 -5.9
ODZ   Otahua Downs       15.81 209    P       Pn      23 13 59.2 -4.9
JCZ   Jackson Bay        15.91 215    P       Pn      23 14 00.8 -4.7
DZM   Mont Dzumac        16.47 302    Pn      Pn      23 14 11.4 -1.5
DZM   Mont Dzumac        16.47 302   eP       Pn      23 14 12.3 -0.5
      comp=Z,182nm,1.1s
DZM                                  eLR      LR      23 17 57.8
      comp=Z,10µm,25.6s
DZM   Mont Dzumac        16.47 302    P       Pn      23 14 12.0 -0.8
      comp=Z,12nm,1.2s,baz=125,slow=14,SNR=13
DZM                                   LR      LR      23 19 30.3
      comp=Z,4µm,18.4s,baz=166,slow=33
SYZ   Scrubby Hill       17.64 209    P       Pn      23 14 18.7 -8.3
RAR   Rarotonga          19.72  63    S       S       23 18 14.2  -16
      comp=Z,26nm,0.9s,baz=254,slow=23,SNR=2.6
RAR                                   LR      LR      23 23 18.5
      comp=Z,430nm,18.1s,baz=263,slow=39
ARMA  Armidale           25.59 265            P       23 15 49.1 -0.9
ARMA                                  IAmb    IAmb    23 16 15.8
      comp=Z,132nm,1.9s
ARMA  Armidale           25.59 265    P       P       23 15 54.4 +4.4
      comp=Z,26nm,0.8s
CNB   Canberra Magne     26.98 254    P       P       23 16 05.8 +3.2
      comp=Z,27nm,1.8s
TBI   Tubuai             27.00  79   eP       P       23 16 04.4 +1.7
      comp=Z,1µm,34.0s
TBI                                  eS       S       23 20 36.8 -0.6
      comp=Z,4µm,34.2s
TBI                                  eLR      LR      23 22 49.9
      comp=Z,13µm,27.2s
TBI                                  eLR      LR      23 22 51.6
      comp=Z,3µm,29.0s
MILA  Mila               27.15 250    P       P       23 16 07.0 +3.0
      comp=Z,20nm,2.2s
CAN   Canberra           27.28 253    P       P       23 16 08.1 +3.0
CAN   Canberra           27.28 253    P       P       23 16 08.1 +3.0
CAN                                   pmax    pmax
      comp=Z,93nm,1.9s
EIDS  Eidsvold           27.40 276            P       23 16 06.2 -0.1
EIDS  Eidsvold           27.40 276    P       P       23 16 07.7 +1.4
      comp=Z,46nm,0.8s
YNG   Young              27.82 256    P       P       23 16 12.5 +2.5
      comp=Z,17nm,1.3s
PPT2  Papeete2           29.69  69   ePKP1    P       23 16 25.0 -1.8
      comp=Z,106nm,26.8s
PPT2                                 eS       S       23 21 23.4 +3.5
      comp=Z,507nm,28.8s
PPT2                                 eLR      LR      23 23 58.0
      comp=Z,2µm,27.0s
PPT2                                 eLR      LR      23 24 00.8
      comp=Z,2µm,27.2s
HNR   Honiara            29.83 313    LR      LR      23 26 54.9
      comp=Z,725nm,20.0s,baz=155,slow=33
TOO   Toolangi           30.08 249            P       23 16 29.0 -1.1
TOO   Toolangi           30.08 249    P       P       23 16 29.0 -1.1
TOO                                   pmax    pmax
      comp=Z,16nm,1.2s
CMSA  Cobar Meteorol     30.41 261    P       P       23 16 34.8 +1.8
      comp=Z,132nm,0.7s
QLP   Quilpie            32.84 269    P       P       23 16 56.2 +1.8
      comp=Z,78nm,1.1s
ARPS  Mount Arapiles     33.02 250    P       P       23 16 57.4 +1.5
      comp=Z,58nm,1.1s
CTAO  Charters Tower     33.60 281    P       P       23 17 03.3 +2.2
STKA  Stephens Creek     33.79 259            P       23 17 05.3 +2.6
STKA  Stephens Creek     33.79 259    P       P       23 17 04.5 +1.9
      comp=Z,49nm,0.7s,baz=96,slow=10,SNR=73
STKA                                  LR      LR      23 28 51.2
      comp=Z,1µm,21.8s,baz=84,slow=33
      comp=Z,49nm,0.7s
STKA  Stephens Creek     33.79 259deP     P       23 17 04.4 +1.8
HTT   Hallett            35.75 256    P       P       23 17 20.7 +1.1
      comp=Z,17nm,0.8s
BBOO  Buckleboo          38.22 256            P       23 17 40.9 +0.3
PMG   Port Moresby       38.78 297    LR      LR      23 31 30.0
      comp=Z,575nm,19.3s,baz=128,slow=33
PMG   Port Moresby       38.78 297⇑eP     P       23 17 45.9 +0.5
PMG                                   pmax    pmax
      comp=Z,28nm,0.9s
COEN  Coen               39.23 288            P       23 17 49.2  0.0
TAOE  Nuku Hiva Isla     42.21  66   eS       S       23 24 25.2 -6.3
      comp=Z,398nm,29.2s
TAOE                                 eSS      SS      23 27 41.8 +1.1
      comp=Z,540nm,25.0s
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TAOE                                 eLR      LR      23 29 44.3
      comp=Z,2µm,30.1s
AS31  Alice Springs      42.63 269            P       23 18 17.2  0.0
AS31                                  IAmb    IAmb    23 18 19.1
      comp=Z,26nm,0.6s
ASAR  Alice Springs      42.63 269            P       23 18 17.0 -0.1
ASAR  Alice Springs      42.63 269    P       P       23 18 17.1  0.0
      comp=Z,70nm,0.6s,baz=105,slow=7.5,SNR=400
ASAR                                  PcP     PcP     23 20 07.3 -1.4
      comp=Z,3.3nm,0.7s,baz=88,slow=4.0,SNR=1.6
ASAR                                  ScP     ScP     23 23 53.4 -2.9
      comp=Z,2.3nm,1.0s,baz=125,slow=4.9,SNR=3.3
ASAR                                  S       S       23 24 34.5 -2.9
      comp=Z,2.0nm,0.9s,baz=108,slow=16,SNR=4.7
ASAR                                  LR      LR      23 35 16.9
      comp=Z,480nm,18.6s,baz=118,slow=35
      comp=Z,70nm,0.6s
DRV   Dumont d'Urvil     42.80 203    P       P       23 18 18.1 +0.3
DRV                                   PcP     PcP     23 20 08.6 +0.1
DRV                                   ScP     ScP     23 23 54.7 -1.3
WRAB  Tennant Creek      43.73 274    P       P       23 18 25.7 -0.3
WRAB  Tennant Creek      43.73 274c iP    P       23 18 25.8 -0.2
WRAB                                  pmax    pmax
      comp=Z,174nm,0.9s
WRA   Warramunga Arr     43.73 274    P       P       23 18 26.0 -0.1
      comp=Z,188nm,0.5s,baz=114,slow=7.7,SNR=437
WRA                                   PcP     PcP     23 20 11.9 -0.5
      comp=Z,5.6nm,0.7s,baz=122,slow=2.7,SNR=1.9
WRA                                   ScP     ScP     23 23 56.0 -4.8
      comp=Z,1.5nm,0.7s,baz=107,slow=3.8,SNR=6.0
WRA                                   S       S       23 24 50.5 -3.1
      comp=Z,8.0nm,1.0s,baz=116,slow=13,SNR=4.6
WRA                                   LR      LR      23 35 13.6
      comp=Z,1µm,20.8s,baz=106,slow=34
FORT  Forrest            45.32 256            P       23 18 38.3 -0.2
SBA   Scott Base         46.73 184    P       P       23 18 51.9 +2.8
SBA                                   IAmb    IAmb    23 18 57.5
      comp=Z,44nm,1.2s
SBA   Scott Base         46.73 184    P       P       23 18 51.9 +2.8
SBA                                   pmax    pmax
      comp=Z,44nm,1.2s
SBA   Scott Base         46.73 184    P       P       23 18 53.0 +3.9
SBA                                   PcP     PcP     23 20 24.2 +2.4
VNDA  Vanda              46.78 186            P       23 18 51.1 +1.6
VNDA  Vanda              46.78 186    P       P       23 18 52.7 +3.3
      comp=Z,3.7nm,0.7s,baz=4.7,slow=7.3,SNR=25
VNDA                                  LR      LR      23 35 11.5
      comp=Z,268nm,20.8s,baz=36,slow=32
      comp=Z,3.7nm,0.7s
VNDA  Vanda              46.78 186    P       P       23 18 52.5 +3.0
VNDA                                  PcP     PcP     23 20 24.1 +2.0
VNDA                                  ScP     ScP     23 24 13.1 +0.7
JAY   Jayapura           48.12 299    LR      LR      23 37 32.9
      comp=Z,401nm,21.5s,baz=162,slow=34
JAY   Jayapura           48.12 299    P       P       23 18 59.4 -1.2
      comp=Z,21nm,1.0s
GENI  Genyem             48.47 298    P       P       23 19 02.1 -1.2
      comp=Z,23nm,0.7s
MTN   Manton Dam         49.77 280            P       23 19 13.0 -0.3
KNRA  Kununurra          50.39 276            P       23 19 18.2 +0.3
CCD   Concordia, Ant     51.61 196    P       P       23 19 27.8 +0.9
CCD                                   PcP     PcP     23 20 40.2 +0.1
CCD                                   ScP     ScP     23 24 32.8 -0.6
FITZ  Fitzroy Crossi     51.94 271            P       23 19 29.5 -0.1
FITZ  Fitzroy Crossi     51.94 271    LR      LR      23 40 22.7
      comp=Z,2µm,20.8s,baz=112,slow=35
NWAO  Narrogin (SRO)     53.55 250    LR      LR      23 40 27.8
      comp=Z,514nm,20.9s,baz=92,slow=34
NWAO  Narrogin (SRO)     53.55 250    P       P       23 19 40.2 -1.2
NWAO                                  pP      pP      23 19 50.9 -1.9
RKPI  Ransiki, Papua     53.74 294    P       P       23 19 40.9 -2.0
      comp=Z,33nm,0.8s
CASY  Casey              53.81 208            P       23 19 42.5 -0.2
CASY                                  IAmb    IAmb    23 19 44.0
      comp=Z,35nm,0.8s
CASY  Casey              53.81 208    P       P       23 19 42.1 -0.6
CASY                                  sP      pwP     23 19 57.2  0.0
CASY                                  PcP     PcP     23 20 48.3 +0.3
CASY                                  ScP     ScP     23 24 40.5 -2.2
FAKI  Fak Fak            54.39 291            P       23 19 46.8 -0.9
FAKI                                  IAmb    IAmb    23 19 48.6
      comp=Z,41nm,1.0s
PSA00 Pilbara Seismi     55.40 264            P       23 19 53.7 -1.3
PSA00                                 IAmb    IAmb    23 19 54.6
      comp=Z,42nm,0.9s
PSA00 Pilbara Seismi     55.40 264    P       P       23 19 52.9 -2.0
PSA00                                 IAmb    IAmb    23 19 54.0
      comp=Z,19nm,1.0s
MBWA  Marble Bar         55.67 265            P       23 19 55.5 -1.4
MBWA  Marble Bar         55.67 265    P       P       23 19 55.5 -1.4
MBWA                                  PcP     PcP     23 20 54.1 -1.9
POHA  Pohakuloa          55.69  26    P       P       23 19 56.4 -0.7
MORW  Morawa             55.76 254    IAmb    IAmb    23 19 57.1
      comp=Z,30nm,0.9s
KIP   Kipapa             56.33  23    P       P       23 20 02.4 +1.0
KIP   Kipapa             56.33  23⇓eP     P       23 20 02.5 +1.1
KIP                                   pmax    pmax
      comp=Z,36nm,0.9s
SWI   Sorong             56.42 293    P       P       23 20 01.1 -1.2
      comp=Z,950nmcomp=Z,57nm,0.8s
GUMO  Guam               57.09 316    LR      LR      23 40 57.4
      comp=Z,281nm,21.7s,baz=128,slow=32
SOEI  Soe                57.12 279    P       P       23 20 06.6 -0.8
      comp=Z,76nm,1.3s
BATI  Baumata            57.40 278    LR      LR      23 44 32.4
      comp=Z,2µm,20.4s,baz=111,slow=36
QSPA  South Pole Qui     58.44 180            P       23 20 17.4 +1.5
QSPA  South Pole Qui     58.44 180    P       P       23 20 18.1 +2.2
      comp=Z,13nm,0.6s,baz=350,slow=0.3,SNR=136
QSPA                                  LR      LR      23 42 50.6
      comp=Z,343nm,19.8s,baz=44,slow=33
      comp=Z,13nm,0.6s
QSPA  South Pole Qui     58.44 180    P       P       23 20 18.3 +2.3
QSPA                                  PcP     PcP     23 21 10.8 +4.5
EDFI  Ende, Flores       59.81 279    P       P       23 20 24.9 -1.3
SANI  Sanana             59.93 288    P       P       23 20 25.3 -1.5
      comp=Z,777nmcomp=Z,48nm,2.2s
LUWI  Luwuk              63.13 287            P       23 20 47.3 -1.1
LUWI  Luwuk              63.13 287    P       P       23 20 47.9 -0.5
      comp=Z,2µmcomp=Z,63nm,0.9s
KAPI  Kappang            63.42 281    LR      LR      23 47 01.5
      comp=Z,657nm,21.6s,baz=124,slow=35
KAPI  Kappang            63.42 281⇑eP     P       23 20 48.4 -2.0
KAPI                                  pmax    pmax
      comp=Z,20nm,0.9s
SPSI  Sidrap Palu        63.98 282    P       P       23 20 52.4 -1.6
      comp=Z,30nm,0.9s
TTSI  Tana Toraja        64.44 283    P       P       23 20 55.7 -1.3
      comp=Z,29nm,0.9s
PCI   Palu               65.61 285    P       P       23 21 04.5 -0.2
      comp=Z,50nm,1.0s
DAV   Davao City (W)     65.78 296    LR      LR      23 49 50.1
      comp=Z,166nm,20.4s,baz=150,slow=36
TOLI2 Tolitoli           65.99 287    IAmb    IAmb    23 21 08.1
      comp=Z,17nm,0.8s
MPSI  Mapaga             66.27 286    P       P       23 21 07.2 -1.7
      comp=Z,47nm,0.9s
SMAI  San Martin Ant     68.41 158    P       P       23 21 23.8 +2.2
SMAI                                  IAmb    IAmb    23 21 25.0
      comp=Z,42nm,1.3s
BELA  Belgrano 2         68.58 172            P       23 21 22.7 +0.1
BELA                                  IAmb    IAmb    23 21 32.4
      comp=Z,23nm,0.9s
JCJ   Chichijima         69.43 323    LR      LR      23 46 50.7
      comp=Z,235nm,21.8s,baz=86,slow=32
MAW   Mawson             70.96 201    P       P       23 21 37.4 +0.1
      comp=Z,21nm,0.9s,baz=142,slow=4.9,SNR=41
MAW                                   LR      LR      23 51 09.1
      comp=Z,550nm,21.3s,baz=127,slow=34
      comp=Z,21nm,0.9s
PMSA  Palmer Station     71.28 156    LR      LR      23 46 55.4
      comp=Z,249nm,18.7s,baz=250,slow=31
LEM   Lembang            72.74 273    LR      LR      23 54 07.6
      comp=Z,477nm,20.2s,baz=183,slow=36
STKI  Sintang            73.10 281    P       P       23 21 50.7 -0.3
      comp=Z,71nm,1.3s
TGY   Tagaytay City      73.74 298    LR      LR      23 53 09.7
      comp=Z,117nm,21.4s,baz=146,slow=35
MG05  Puerto Natales     74.78 142    P       P       23 22 01.3 +1.1
MG05                                  IAmb    IAmb    23 23 13.2
      comp=Z,23nm,0.8s
KSM   Kuching            74.84 281    IAmb    IAmb    23 22 01.4
      comp=Z,37nm,1.1s
GO09  Cerro Castillo     75.08 141    P       P       23 22 03.5 +1.5
GO09                                  IAmb    IAmb    23 23 27.7
      comp=Z,27nm,0.7s
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MG01  Puerto William     75.44 146    P       P       23 22 05.5 +1.6
MG01                                  IAmb    IAmb    23 22 20.1
      comp=Z,51nm,1.3s
SYO   Syowa Base         75.78 193⇑iP     P       23 22 05.7 +0.1
SYO   Syowa Base         75.78 193⇑iPcP   PcP     23 22 19.4 +1.3
TROLL Troll, Antarti     76.60 180 ⇓P     P       23 22 11.4 +0.9
      comp=Z,2µm,0.9s
MDSI  Maura Dua          76.87 273    P       P       23 22 10.0 -2.8
      comp=Z,63nm,0.9s
SNAA  Sanae              76.89 179 ⇓P     P       23 22 12.9 +0.9
      comp=Z,1µm,0.9s
SNAA  Sanae              76.89 179    P       P       23 22 12.9 +0.9
SNAA  Sanae              76.89 179    P       P       23 22 12.7 +0.7
      comp=Z,19nm,1.0s,baz=186,slow=9.3,SNR=26
SNAA                                  LR      LR      23 52 24.7
      comp=Z,203nm,21.8s,baz=218,slow=33
      comp=Z,19nm,1.0s
SNAA  Sanae              76.89 179    P       P       23 22 12.9 +0.9
SNAA                                  pmax    pmax
      comp=Z,51nm,0.9s
VNA3  Neumayer Olymp     77.06 176 ⇓P     P       23 22 13.7 +0.8
      comp=Z,41nm,0.7s
AY03  Cochrane           77.09 138    P       P       23 22 15.3 +1.8
AY03                                  IAmb    IAmb    23 22 17.2
      comp=Z,72nm,1.9s
JOW   Kunigami           77.20 313    LR      LR      23 52 33.0
      comp=Z,164nm,20.8s,baz=191,slow=33
VNA2  Neumayer--Watz     77.49 177 ⇓P     P       23 22 16.5 +1.2
      comp=Z,26nm,0.6s,baz=175,slow=5.6
VNA1  Neumayer--Stat     77.72 177 ⇓P     P       23 22 18.0 +1.4
      comp=Z,47nm,1.0s
COYC  Coyhaique          78.31 137            P       23 22 22.0 +1.7
COYC                                  IAmb    IAmb    23 22 42.4
      comp=Z,24nm,0.9s
JGF   Kuroka             78.71 325            P       23 22 21.7 -0.8
JGF                                   IAmb    IAmb    23 22 22.6
      comp=Z,109nm,2.0s
PAF   Port-aux-Franc     78.87 218    P       P       23 22 25.8 +2.5
PAF   Port-aux-Franc     78.87 218    P       P       23 22 25.8 +2.5
PAF                                   pmax    pmax
      comp=Z,623nm,1.3s
MJAR  Matsushiro Arr     79.05 326    P       P       23 22 23.2 -1.1
      comp=Z,3.9nm,0.7s,baz=166,slow=5.5,SNR=10
MJAR                                  LR      LR      23 52 52.9
      comp=Z,184nm,21.1s,baz=148,slow=32
      comp=Z,3.9nm,0.7s
MAJO  Matsushiro         79.05 326    P       P       23 22 23.5 -0.8
MAJO  Matsushiro         79.05 326ceP     P       23 22 23.0 -1.3
MAJO                                  pmax    pmax
      comp=Z,23nm,1.4s
MJB9  Matsu-Tunnel       79.05 326    P       P       23 22 24.4 +0.1
TWG   Pinlang            79.24 305    P       P       23 22 24.8 -0.9
TWG                                   IAmb    IAmb    23 22 26.4
      comp=Z,59nm,1.1s
LL02  Futaleuf           79.77 135            P       23 22 29.6 +1.2
LL02                                  IAmb    IAmb    23 22 50.2
      comp=Z,26nm,1.0s
LL01  San Ignacio de     79.87 134    P       P       23 22 29.0 +0.1
H03S2 Juan Fernandez     80.12 124    T       T       00 51 01.4
      baz=236,slow=74,SNR=15
H03S1 Juan Fernandez     80.13 124    T       T       00 51 16.6
      baz=236,slow=74,SNR=216
H03S3 Juan Fernandez     80.14 124    T       T       00 51 06.8
      baz=236,slow=74,SNR=24
JNU   Nakatsue           80.23 319    IAmb    IAmb    23 22 31.3
      comp=Z,47nm,1.0s
JNU   Nakatsue           80.23 319    LR      LR      23 53 25.3
      comp=Z,286nm,21.5s,baz=140,slow=32
H03N3 Juan Fernandez     80.32 123    T       T       00 51 25.8
      baz=241,slow=72,SNR=176
H03N2 Juan Fernandez     80.32 123    T       T       00 51 22.0
      baz=241,slow=72,SNR=144
H03N1 Juan Fernandez     80.34 123    T       T       00 51 24.4
      baz=241,slow=72,SNR=334
ERM   Erimo              81.38 332    P       P       23 22 37.9 +1.2
ERM   Erimo              81.38 332    P       P       23 22 37.9 +1.2
ERM                                   pmax    pmax
      comp=Z,108nm,1.7s
LR03  Panguipulli        81.44 131    P       P       23 22 39.0 +1.6
PLCA  Paso Flores        81.95 133            P       23 22 40.8 +0.6
PLCA                                  IAmb    IAmb    23 22 43.6
      comp=Z,26nm,1.2s
PLCA  Paso Flores        81.95 133    P       P       23 22 42.1 +2.0
      comp=Z,11nm,0.9s,baz=229,slow=4.8,SNR=15
      comp=Z,11nm,0.9s
EFI   East Falkland      81.95 147⇑eP     P       23 22 40.8 +1.0
EFI                                   pmax    pmax
      comp=Z,16nm,1.2s
AMKA  Amchitka           82.72 359    P       P       23 22 42.5 -1.0
KIWB  Kanaga Island      83.18   1    P       P       23 22 46.0 +0.2
ADK   Adak               83.22   1    P       P       23 22 45.5 -0.5
ADK                                   IAmb    IAmb    23 22 47.2
      comp=Z,33nm,0.9s
ADK   Adak               83.22   1    P       P       23 22 45.5 -0.5
ADK                                   pmax    pmax
      comp=Z,33nm,0.9s
ASAJ  Asahikawa          83.37 333    LR      LR      23 58 11.2
      comp=Z,127nm,18.1s,baz=168,slow=34
MNSI  Mandailing Nat     83.53 275    P       P       23 22 45.5 -3.1
      comp=Z,20nm,0.8s
ML02  Panimavida         84.24 129    P       P       23 22 52.5 +0.5
SHEM  Shemya Is, Ala     84.30 355    LR      LR      23 54 38.5
      comp=Z,346nm,20.7s,baz=180,slow=32
TJN   Taejon             84.58 319            P       23 22 53.2 -0.2
TJN   Taejon             84.58 319d iP    P       23 22 53.8 +0.4
NIKH  Nikolski High      84.71   6    P       P       23 22 53.2 -0.4
NIKH  Nikolski High      84.71   6    P       P       23 22 54.4 +0.8
      baz=188
KSRS  Korea Array        85.04 320    P       P       23 22 55.0 -0.6
      comp=Z,11nm,0.9s,baz=144,slow=5.5,SNR=32
      comp=Z,11nm,0.9s
KSAR  Wonju Array Be     85.06 320    P       P       23 22 56.4 +0.7
KSAR  Wonju Array Be     85.06 320    P       P       23 22 56.4 +0.7
RPSI  Rantau Prapat      85.09 276    P       P       23 22 54.3 -2.3
KS19  Wonju Array Si     85.11 320    P       P       23 22 56.0  0.0
KS19                                  IAmb    IAmb    23 22 57.4
      comp=Z,17nm,0.9s
PSI   Prapat             85.14 276    LR      LR      00 01 25.1
      comp=Z,596nm,20.8s,baz=115,slow=36
PSI   Prapat             85.14 276    P       P       23 22 54.3 -2.7
PSI                                   pmax    pmax
      comp=Z,16nm,1.1s
QIZ   Qiongzhong         85.15 296    P       P       23 22 57.3 +0.6
QIZ                                   LR      LR
      comp=Z,180nm,27.5s
BO02  Sierra Bellavi     85.22 128            P       23 22 58.2 +1.1
VA05  Santo Domingo      85.31 127    P       P       23 22 58.6 +1.2
MT01  Popeta             85.44 127            P       23 22 58.8 +0.8
GSI   Gunungsitoli       85.50 274    P       P       23 22 57.7 -0.9
GSI   Gunungsitoli       85.50 274    P       P       23 22 57.4 -1.2
VA01  Torpederas         85.66 126    P       P       23 22 59.6 +0.5
MT09  Talagante          85.67 127    P       P       23 23 00.5 +1.2
YSS   Yuzhno-Sakhali     85.71 335    P       P       23 22 59.0 +0.3
YSS                                   IAmb    IAmb    23 23 04.2
      comp=Z,23nm,0.9s
YSS   Yuzhno-Sakhali     85.71 335   eP       P       23 22 59.3 +0.6
YSS                                  eS       S       23 33 31.2 +3.3
YSS                                   pmax    pmax
      comp=Z,20nm,0.9s
UNV   Unalaska Valle     85.80   7    P       P       23 22 59.8 +0.8
      baz=190
MT05  Renca              86.06 127    P       P       23 23 02.8 +1.5
VA06  Catapilco          86.16 126    P       P       23 23 02.2 +0.6
VA06                                  IAmb    IAmb    23 23 05.1
      comp=Z,38nm,1.3s
MT13  San Alfonso        86.17 128    P       P       23 23 03.4 +1.6
MT16  CCHEN              86.19 127    P       P       23 23 03.2 +1.4
MT16                                  IAmb    IAmb    23 23 36.6
      comp=Z,20nm,0.8s
PEL   Peldehue           86.24 127    P       P       23 23 03.3 +1.2
PEL   Peldehue           86.24 127    P       P       23 23 03.3 +1.2
PEL                                   pmax    pmax
      comp=Z,65nm,1.5s
BCW   Bitter Crk WRg     86.45  45    P       P       23 23 03.8 +0.9
BCW                                   IAmb    IAmb    23 23 06.4
      comp=Z,31nm,0.9s
PMPB  Monarch Peak       86.50  43    P       P       23 23 02.1 -1.0
PMPB                                  IAmb    IAmb    23 23 19.8
      comp=Z,28nm,1.2s
SAO   San Andreas Ge     86.51  42            P       23 23 04.3 +1.3
SAO                                   IAmb    IAmb    23 23 19.4
      comp=Z,18nm,1.1s
SAO   San Andreas Ge     86.51  42    P       P       23 23 04.3 +1.3
SAO                                   pmax    pmax
      comp=Z,18nm,1.1s
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BBGB	**Big Mountain B**	86.61	43	P	P	23 23 04.3	+0.7
BBGB				IAmb	IAmb	23 23 07.4	
	comp=Z,21nm,0.9s						
ESJX	**Sierra Juarez**	86.66	49	P	P	23 23 04.6	+0.5
ESJX				IAmb	IAmb	23 25 22.9	
	comp=Z,28nm,1.7s						
MCCM	**Marconi Confer**	86.67	41	P	P	23 23 04.7	+1.0
PET	**Petropavlovsk**	86.67	346	P	P	23 23 04.1	+0.8
PET				IAmb	IAmb	23 23 06.8	
	comp=Z,12nm,0.6s						
PET	**Petropavlovsk**	86.67	346	*e*P	P	23 23 04.6	+1.3
PET				*e*S	S	23 33 42.6	+5.7
PET				pmax	pmax		
	comp=Z,19nm,0.7s						
PET				pmax	pmax		
	comp=Z,100nm,22.6s						
PET	**Petropavlovsk**	86.67	346	P	P	23 23 03.2	-0.1
	comp=Z,22nm,0.7s						
NJ2	**Nanjing**	86.75	311	*e*P	P	23 23 04.4	+0.1
NJ2				pmax	pmax		
	comp=Z,23nm,0.9s						
ELS	**Elsinore Mount**	86.80	47	P	P	23 23 06.3	+1.7
ELS				IAmb	IAmb	23 23 07.1	
	comp=Z,25nm,1.2s						
PEA0B	**Petropavlovsk-**	86.94	346		P	23 23 04.6	-0.1
PEA0B				IAmb	IAmb	23 23 08.6	
	comp=Z,23nm,0.8s						
PEA0B	**Petropavlovsk-**	86.94	346	*ce*P	P	23 23 05.7	+1.0
PETK	**Petropavlovsk-**	86.94	346	P	P	23 23 04.1	-0.6
	comp=Z,15nm,0.7s,baz=145,slow=5.4,SNR=21						
PETK				LR	LR	23 56 06.5	
	comp=Z,240nm,21.5s,baz=164,slow=32						
	comp=Z,15nm,0.7s						
CO02	**Combarbal**	87.15	125	P	P	23 23 06.8	+0.1
CO02				IAmb	IAmb	23 23 09.4	
	comp=Z,26nm,0.9s						
MSHR	**Mys Shultsa**	87.16	325	⇑*e*P	P	23 23 06.1	+0.1
MSHR				pmax	pmax		
	comp=Z,43nm,1.1s						
GDXM	**Geysers**	87.18	40	P	P	23 23 08.4	+2.1
GDXM				IAmb	IAmb	23 23 23.1	
	comp=Z,18nm,1.2s						
KCPM	**Cahto Peak**	87.38	39	P	P	23 23 07.5	+0.1
KCPM				IAmb	IAmb	23 23 11.7	
	comp=Z,31nm,1.1s						
PSTR	**Posyet**	87.38	325	⇓*e*P	P	23 23 07.1	0.0
PFO	**Pinyon Flats O**	87.39	48	P	P	23 23 08.9	+1.4
PFO				IAmb	IAmb	23 23 10.2	
	comp=Z,14nm,1.1s						
PFO	**Pinyon Flats O**	87.39	48	P	P	23 23 07.6	+0.1
	comp=Z,7.1nm,0.8s,baz=322,slow=2.7,SNR=8.1						
PFO				LR	LR	23 57 07.2	
	comp=Z,185nm,18.3s,baz=226,slow=32						
	comp=Z,7.1nm,0.8s						
PFO	**Pinyon Flats O**	87.39	48	*ce*P	P	23 23 09.3	+1.8
PFO				pmax	pmax		
	comp=Z,15nm,1.0s						
CCAC	**Calif City Air**	87.44	46	P	P	23 23 07.4	-0.3
CCAC				IAmb	IAmb	23 23 10.9	
	comp=Z,25nm,1.2s						
ISA	**Isabella, Lake**	87.50	45	P	P	23 23 09.1	+1.1
ISA	**Isabella, Lake**	87.50	45	P	P	23 23 09.1	+1.1
ISA				pmax	pmax		
	comp=Z,31nm,1.0s						
CO03	**El Pedregal**	87.58	125	P	P	23 23 09.5	+0.8
KMPM	**Mount Pierce**	87.62	38	P	P	23 23 09.6	+1.3
CHNA	**Chernabura Isl**	87.68	11	P	P	23 23 09.1	+1.0
	baz=196						
KMRM	**Mail Ridge**	87.69	39	P	P	23 23 08.3	-0.5
KMRM				IAmb	IAmb	23 23 11.9	
	comp=Z,16nm,0.8s						
USA0B	**Ussuriysk Arra**	87.99	327	P	P	23 23 09.3	-0.6
USA0B				IAmb	IAmb	23 23 12.8	
	comp=Z,36nm,1.5s						
USA0B	**Ussuriysk Arra**	87.99	327	*ce*P	P	23 23 09.4	-0.5
USRK	**Ussuriysk Ar.**	87.99	327	P	P	23 23 09.1	-0.9
USRK	**Ussuriysk Ar.**	87.99	327	P	P	23 23 09.7	-0.2
	comp=Z,8.7nm,0.9s,baz=159,slow=5.2,SNR=12						
USRK				LR	LR	23 57 29.9	
	comp=Z,147nm,20.9s,baz=138,slow=32						
	comp=Z,8.7nm,0.9s						
CMB	**Columbia Colle**	88.00	42	P	P	23 23 11.2	+1.0
CMB				IAmb	IAmb	23 23 12.8	
	comp=Z,16nm,0.8s						
CMB	**Columbia Colle**	88.00	42	P	P	23 23 11.2	+1.0
CMB				pmax	pmax		
	comp=Z,16nm,0.9s						
SDPT	**Sand Point**	88.05	10	P	P	23 23 10.5	+0.6
	baz=195						
GLA	**Glamis**	88.06	49	P	P	23 23 11.8	+1.2
GLA				IAmb	IAmb	23 23 14.6	
	comp=Z,28nm,1.1s						
GLA	**Glamis**	88.06	49	P	P	23 23 11.8	+1.2
GLA				pmax	pmax		
	comp=Z,28nm,1.2s						
KHMM	**Horse Mountain**	88.15	38	P	P	23 23 12.4	+1.3
KHMM				IAmb	IAmb	23 23 14.1	
	comp=Z,12nm,0.8s						
S12K	**Black Hills**	88.16	9	P	P	23 23 11.0	+0.5
S12K	**Black Hills**	88.16	9	P	P	23 23 10.9	+0.5
	baz=194						
GSC	**Goldstone, Bar**	88.28	46	P	P	23 23 13.1	+1.4
GSC				IAmb	IAmb	23 23 14.9	
	comp=Z,22nm,1.0s						
GSC	**Goldstone, Bar**	88.28	46	P	P	23 23 13.1	+1.4
GSC				pmax	pmax		
	comp=Z,22nm,1.0s						
ORV	**Oroville**	88.42	40		P	23 23 13.6	+1.4
ORV	**Oroville**	88.42	40	P	P	23 23 13.6	+1.4
ORV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KRMB	**Red Mountain**	88.52	38	P	P	23 23 14.8	+2.1
ZON	**Zonda**	88.56	127	P	P	23 23 13.8	+0.5
ZON				IAmb	IAmb	23 23 16.5	
	comp=Z,20nm,1.3s						
ZON	**Zonda**	88.56	127	P	P	23 23 13.8	+0.5
ZON				pmax	pmax		
	comp=Z,20nm,1.3s						
113A	**Mohawk Valley,**	88.56	50	P	P	23 23 13.4	+0.4
113A				IAmb	IAmb	23 23 15.9	
	comp=Z,12nm,1.1s						
LCO	**Las Campanas**	88.63	123	P	P	23 23 15.0	+1.0
LCO	**Las Campanas**	88.63	123	P	P	23 23 15.0	+1.0
LCO				pmax	pmax		
	comp=Z,75nm,1.9s						
214A	**Organ Pipe Nat**	88.68	51	P	P	23 23 15.9	+2.3
214A				IAmb	IAmb	23 23 17.5	
	comp=Z,46nm,1.9s						
QSM	**Queen of Sheba**	88.68	46	P	P	23 23 14.9	+1.5
QSM				IAmb	IAmb	23 23 16.5	
	comp=Z,19nm,1.1s						
BLYC	**Blythe**	88.70	48	P	P	23 23 15.7	+2.1
BLYC				IAmb	IAmb	23 23 16.6	
	comp=Z,14nm,1.0s						
KSXB	**Camp Six Broad**	88.76	38	P	P	23 23 14.0	+0.2
KSXB				IAmb	IAmb	23 23 20.9	
	comp=Z,19nm,1.0s						
WHN	**Wuhan**	88.77	307	P	P	23 23 14.3	+0.3
SPIA	**Saint Paul Isl**	88.78	4	P	P	23 23 13.5	+0.1
	baz=187						
AC04	**Llanos de Chal**	88.84	123	P	P	23 23 13.8	-0.8
WAKR	**Walker**	88.86	42	P	P	23 23 16.2	+1.7
WAKR				IAmb	IAmb	23 23 17.6	
	comp=Z,20nm,1.1s						
GWY	**Greenwater Val**	88.95	46		P	23 23 16.0	+1.1
GWY				IAmb	IAmb	23 23 17.2	
	comp=Z,14nm,1.1s						
DSP	**Deep Springs**	88.95	44	P	P	23 23 15.4	+0.7
TYV	**Tymovskoe**	89.05	337	*e*P	P	23 23 15.1	+0.3
TYV				*e*S	S	23 34 02.6	+2.8
TYV				pmax	pmax		
	comp=Z,14nm,1.1s						
TYV				pmax	pmax		
	comp=Z,100nm,3.8s						
TYV				smax	smax		
	comp=N,100nm,5.4s						
TYV				smax	smax		
	comp=E,100nm,5.4s						
GRAC	**Grapevine Rang**	89.06	45	P	P	23 23 16.8	+1.5
GRAC				IAmb	IAmb	23 23 18.6	
	comp=Z,21nm,0.9s						
S14K	**Fog Glacier**	89.09	10	P	P	23 23 15.3	+0.3
	baz=196						
L02F	**Cave Junction**	89.13	38	P	P	23 23 14.7	-0.7
L02F				IAmb	IAmb	23 23 32.8	
	comp=Z,32nm,1.6s						
PNTR	**Pine Nut**	89.17	42	P	P	23 23 15.8	-0.1
PNTR				IAmb	IAmb	23 23 18.7	
	comp=Z,24nm,0.9s						
LHV	**Little Huntoon**	89.23	43	P	P	23 23 17.4	+1.5
LHV				IAmb	IAmb	23 23 19.1	
	comp=Z,20nm,0.9s						
KEBM	**Edson Butte**	89.27	37	P	P	23 23 16.1	0.0
YBH	**Yreka Blue Hor**	89.30	38	P	P	23 23 16.3	0.0
	comp=Z,0.3nm,0.7s,baz=205,slow=3.1,SNR=11						
CHIR	**Chirikof Islan**	89.32	13	P	P	23 23 16.5	+0.6
	baz=199						
HATC	**Hat Creek Radi**	89.32	40	P	P	23 23 17.1	+0.7
HATC				IAmb	IAmb	23 23 19.3	
	comp=Z,28nm,1.1s						
MDJ	**Mudanjiang**	89.43	326	P	P	23 23 16.6	-0.1
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NVAR	**Mina Array Bea**	89.47	43	P	P	23 23 18.2	+0.8
NVAR	**Mina Array Bea**	89.47	43	P	P	23 23 18.5	+1.2
	comp=Z,12nm,0.8s,baz=222,slow=8.2,SNR=54						
NVAR				PKKP	PKKPbc	23 40 55.4	+2.3
	comp=Z,0.7nm,0.6s,baz=81,slow=5.3,SNR=3.9						
NVAR				LR	LR	23 58 51.7	
	comp=Z,241nm,18.4s,baz=228,slow=32						
	comp=Z,12nm,0.8s						
NV11	**Mina Array Sit**	89.55	43	IAmb	IAmb	23 23 20.4	
	comp=Z,14nm,1.0s						
TPNV	**Topopah Spring**	89.70	45		P	23 23 18.4	-0.1
TPNV				IAmb	IAmb	23 23 21.6	
	comp=Z,10nm,0.8s						
TPNV	**Topopah Spring**	89.70	45	P	P	23 23 18.4	-0.1
TPNV				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PAHR	**Pah Rah Range**	89.71	41	P	P	23 23 19.2	+0.8
V12A	**Nelson**	89.76	47	P	P	23 23 20.7	+2.0
Y14A	**Wickenburg**	89.80	49	P	P	23 23 20.1	+1.2
Y14A				IAmb	IAmb	23 23 22.2	
	comp=Z,16nm,0.9s						
L04D	**Klamath Falls**	89.86	38		P	23 23 19.8	+0.8
L04D				IAmb	IAmb	23 23 35.7	
	comp=Z,35nm,1.2s						
TPH	**Tonopah**	89.86	44	P	P	23 23 20.1	+0.9
TPH	**Tonopah**	89.86	44	P	P	23 23 20.1	+0.9
TPH				pmax	pmax		
	comp=Z,93nm,0.9s						
W13A	**Hualapai Mount**	89.97	48	P	P	23 23 21.2	+1.4
W13A				IAmb	IAmb	23 23 23.2	
	comp=Z,14nm,0.9s						
SHPR	**Sheep Range**	90.08	46	P	P	23 23 21.2	+1.0
TUC	**Tucson**	90.24	52	P	P	23 23 22.8	+1.8
TUC				IAmb	IAmb	23 23 24.3	
	comp=Z,13nm,1.0s						
TUC	**Tucson**	90.24	52	P	P	23 23 22.8	+1.8
TUC				pmax	pmax		
	comp=Z,13nm,1.0s						
SII	**Sitkinak Islan**	90.29	13	P	P	23 23 21.5	+1.1
	baz=201						
I03D	**Drain, OR**	90.37	37	IAmb	IAmb	23 23 24.0	
	comp=Z,19nm,0.8s						
K04D	**Chiloquin, OR**	90.43	38		P	23 23 22.5	+0.9
S11A	**Rachel**	90.46	45	P	P	23 23 23.2	+1.3
S11A				IAmb	IAmb	23 23 24.9	
	comp=Z,13nm,0.9s						
TIA	**Tai'an**	90.53	313	P	P	23 23 22.8	+0.7
TIA				pmax	pmax		
	comp=Z,29nm,1.0s						
J04A	**Umpqua Nationa**	90.68	37	P	P	23 23 23.9	+1.0
319A	**Douglas**	90.69	53	P	P	23 23 24.4	+1.2
319A				IAmb	IAmb	23 23 26.1	
	comp=Z,11nm,1.1s						
PRN	**Pahroc Range**	90.72	45	P	P	23 23 25.2	+2.0
PRN				IAmb	IAmb	23 23 26.8	
	comp=Z,19nm,1.0s						
TLIG	**Tlapa**	90.84	70	P	P	23 23 24.7	+0.6
TLIG				IAmb	IAmb	23 23 41.8	
	comp=Z,20nm,1.1s						
CN2	**Changchun**	90.90	323	P	P	23 23 23.0	-0.6
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
CN2				LR	LR		
	comp=Z,400nm,23.0s						
CN2				LR	LR		
	comp=Z,400nm,23.0s						
CN2				LR	LR		
	comp=Z,300nm,23.0s						
BUCK	**Buck Mountain**	90.91	36	P	P	23 23 23.3	-0.5
I04A	**Tendick Farm,**	90.91	37	P	P	23 23 24.8	+1.0
R11B	**Troy Canyon, C**	91.01	44	P	P	23 23 25.3	+0.8
AC02	**Maricunga**	91.03	123	P	P	23 23 25.9	+0.4
SLVN	**Son La**	91.04	294	P	P	23 23 24.9	-0.1
OHAK	**Old Harbor**	91.08	13	P	P	23 23 23.9	-0.2
OHAK				IAmb	IAmb	23 23 25.9	
	comp=Z,22nm,1.0s						
OHAK	**Old Harbor**	91.08	13	P	P	23 23 24.9	+0.8
	baz=201						
X16A	**Lo Mia Camp, P**	91.11	50		P	23 23 26.4	+1.3
X16A				IAmb	IAmb	23 23 28.8	
	comp=Z,15nm,0.9s						
J05D	**Fort Rock, OR**	91.17	38	P	P	23 23 26.0	+0.9
J05D				IAmb	IAmb	23 23 27.9	
	comp=Z,14nm,0.8s						
R18K	**Karluk**	91.18	13	P	P	23 23 25.2	+0.7
	baz=200						
H04D	**Lebanon**	91.26	36	P	P	23 23 25.7	+0.4
BNX	**BinXian**	91.31	325	⇑P	P	23 23 25.3	-0.2
BNX				pmax	pmax		
	comp=Z,10.0nm,1.0s						
DUN6	**Lazy B Ranch**	91.53	52	P	P	23 23 28.9	+1.9
Q17K	**Contact Creek**	91.58	12	P	P	23 23 27.0	+0.5
	baz=199,SNR=5.3						
ACHA	**Angle Creek He**	91.63	12		P	23 23 28.0	+1.3
ACHA				IAmb	IAmb	23 23 30.0	
	comp=Z,19nm,1.6s						
H04A	**Detroit Lake**	91.66	36	IAmb	IAmb	23 23 29.3	
	comp=Z,17nm,0.8s						
PINE	**Pine Mountain**	91.67	38		P	23 23 27.7	+0.2
O14K	**Tigyukauivet M**	91.72	9	P	P	23 23 27.4	+0.5
O14K	**Tigyukauivet M**	91.72	9	P	P	23 23 27.7	+0.7
	baz=195						
KDAK	**Kodiak Island**	91.75	14	LR	LR	23 59 37.0	
	comp=Z,113nm,19.9s,baz=200,slow=32						
KDAK	**Kodiak Island**	91.75	14	P	P	23 23 27.8	+0.7
	baz=202						
U15A	**North Rim**	91.81	48		P	23 23 29.6	+1.2
U15A				IAmb	IAmb	23 23 31.9	
	comp=Z,15nm,0.8s						
GYA	**Guiyang**	91.81	300	⇓P	P	23 23 28.9	+0.5
GYA				pmax	pmax		
	comp=Z,24nm,1.1s						
WUAZ	**Wupatki**	91.83	49	IAmb	IAmb	23 23 31.7	
	comp=Z,12nm,0.8s						
O15K	**Ungalikthiuk R**	91.84	9	P	P	23 23 28.1	+0.5
	baz=196						
KNB	**Kanab**	91.85	47	IAmb	IAmb	23 23 31.8	
	comp=Z,12nm,0.9s						
KLR	**Kul'dur**	91.92	330	LR	LR	00 00 01.6	
	comp=Z,183nm,21.3s,baz=156,slow=32						
KLR	**Kul'dur**	91.92	330	*ce*P	P	23 23 28.2	0.0
KLR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
P16K	**Nushagak River**	91.97	10	P	P	23 23 27.9	-0.2
	baz=198						
WVOR	**Wild Horse Val**	91.97	40	IAmb	IAmb	23 23 30.8	
	comp=Z,11nm,1.1s						
WVOR	**Wild Horse Val**	91.97	40	P	P	23 23 30.1	+1.3
Q18K	**Katmai Hardscr**	92.10	12	P	P	23 23 29.0	0.0
	baz=200,SNR=6.8						
X18A	**Snowflake**	92.15	50	P	P	23 23 30.3	+0.4
PSUT	**Pine Spring**	92.17	45		P	23 23 31.1	+1.2
SPR3	**Spring Creek 3**	92.18	45		P	23 23 30.4	+0.3
M11K	**Mekoryuk**	92.28	6	P	P	23 23 30.0	+0.5
	baz=191						
N14K	**Kuskokwak Cree**	92.31	8	P	P	23 23 30.4	+0.7
	baz=194						
P17K	**Kvichak River**	92.37	11	P	P	23 23 30.1	+0.1
	baz=199						
LYN	**LuoYang**	92.47	310	⇓*i*P	P	23 23 32.5	+1.4
LYN				S	S	23 34 31.8	-0.1
LYN				LR	LR		
	comp=Z,200nm,19.6s						
LYN				LR	LR		
	comp=Z,230nm,18.6s						
LYN				LR	LR		
	comp=Z,490nm,22.0s						
O16K	**Kokwok River B**	92.49	10	P	P	23 23 30.2	-0.4
	baz=197						
Q20K	**Shuyak Island**	92.55	13	P	P	23 23 30.6	-0.3
	baz=202						
M13K	**Dall Lake**	92.60	7	P	P	23 23 31.6	+0.6
	baz=193						
Q19K	**Cape Douglas,**	92.61	13	P	P	23 23 31.2	0.0
	baz=201						
I07A	**Izee**	92.62	38	IAmb	IAmb	23 23 34.4	
	comp=Z,11nm,0.8s						
J08A	**Circle Bar Ran**	92.68	39	IAmb	IAmb	23 23 34.6	
	comp=Z,13nm,1.0s						
N15K	**Kwethluk River**	92.76	9		P	23 23 33.1	+1.3
N15K	**Kwethluk River**	92.76	9	P	P	23 23 32.2	+0.4
	baz=196,SNR=9.0						
P18K	**Big Mountain,**	92.76	12	P	P	23 23 32.1	+0.2
	baz=200						
ELK	**Elko**	92.77	43	P	P	23 23 33.4	+0.7
	comp=Z,4.9nm,0.8s,baz=242,slow=4.9,SNR=21						
	comp=Z,4.9nm,0.8s						
HNS	**HongShan**	92.78	313	⇑P	P	23 23 33.3	+0.9
HNS				S	S	23 34 35.4	+0.9
HNS				pmax	pmax		
	comp=Z,22nm,1.0s						
HNS				LR	LR		
	comp=Z,240nm,17.8s						
HNS				LR	LR		
	comp=Z,170nm,11.9s						
HNS				LR	LR		
	comp=Z,270nm,23.3s						
G06A	**Carlson Farm,**	92.83	37	IAmb	IAmb	23 23 34.9	
	comp=Z,13nm,0.7s						
M14K	**Bethel**	93.09	8	P	P	23 23 33.5	+0.2
	baz=194						
M15K	**Kasigluk River**	93.19	9	P	P	23 23 34.1	+0.3
	baz=195,SNR=7.9						
O18K	**Koktuh Hills**	93.20	12	P	P	23 23 33.8	-0.1
	baz=200						
N16K	**Nishlik Lake**	93.24	10	P	P	23 23 34.9	+0.8
	baz=197						
P19K	**Oil Pt**	93.36	13	P	P	23 23 34.4	-0.2
	baz=201						
CMAR	**Chiang Mai Arr**	93.42	289	P	P	23 23 36.3	+0.4
CMAR	**Chiang Mai Arr**	93.42	289	P	P	23 23 35.3	-0.6
	comp=Z,1.5nm,0.3s,baz=153,slow=3.9,SNR=7.2						
CMAR				PP	PP	23 27 17.3	-3.4
	comp=Z,1.8nm,0.3s,baz=136,slow=6.7,SNR=11						
	comp=Z,1.5nm,0.3s						
CMAR	**Chiang Mai Arr**	93.42	289	P	P	23 23 36.3	+0.4
TX31	**Lajitas Ar. Si**	93.44	58	IAmb	IAmb	23 24 39.1	
	comp=Z,13nm,1.5s						
TXAR	**Lajitas Array**	93.44	58	P	P	23 23 37.7	+1.9
TXAR	**Lajitas Array**	93.44	58	P	P	23 23 37.1	+1.2
	comp=Z,1.5nm,1.1s,baz=213,slow=6.7,SNR=8.8						
	comp=Z,1.5nm,1.1s						
TXAR	**Lajitas Array**	93.44	58	P	P	23 23 37.7	+1.9
N17K	**Nushagak Hills**	93.52	10	P	P	23 23 35.3	-0.1
	baz=198						
BJI	**Beijing**	93.53	316	P	P	23 23 36.8	+0.9
BJI				S	S	23 34 42.1	+1.1
BJI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BJI				LR	LR		
	comp=Z,81nm,19.7s						
BJI				LR	LR		
	comp=Z,64nm,22.4s						
L14K	**Kuka Creek**	93.58	8	P	P	23 23 35.6	+0.1
	baz=194						
O19K	**Port Alsworth**	93.68	12	P	P	23 23 35.9	-0.1
	baz=201						
G08A	**Pilot Rock**	93.73	38	IAmb	IAmb	23 23 39.3	
	comp=Z,29nm,1.5s						
M16K	**Timber Creek**	93.74	9	P	P	23 23 37.0	+0.7
	baz=197						
N18K	**Kilae Creek**	93.87	11	P	P	23 23 37.7	+0.7
	baz=199						
O20K	**Slope Mountain**	93.88	13	P	P	23 23 37.2	+0.2
	baz=202						
MXC	**Moxie City**	93.93	36	P	P	23 23 37.6	+0.1
MXC				IAmb	IAmb	23 23 39.4	
	comp=Z,9.6nm,1.0s						
BRSE	**Bradley Lake S**	93.93	14	P	P	23 23 37.7	+0.4
	baz=204						
K13K	**Kusilvak Mount**	93.95	7	P	P	23 23 37.4	+0.2
	baz=192						
KMI	**Kunming**	94.01	297	P	P	23 23 39.3	+0.5
KMI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
L15K	**Ungalak Mounta**	94.04	8	P	P	23 23 37.7	+0.1
	baz=195,SNR=5.6						
E07A	**Sunnyside**	94.14	36	IAmb	IAmb	23 23 40.5	
	comp=Z,13nm,1.0s						
MFID	**Camas Ranch**	94.17	40	IAmb	IAmb	23 23 41.2	
	comp=Z,10nm,0.8s						
BGU	**Big Grassy Mou**	94.18	44	P	P	23 23 39.8	+0.7
HAWA	**Hanford**	94.19	36		P	23 23 39.5	+0.8
N19K	**Bonanza Creek**	94.23	12	P	P	23 23 38.4	-0.3
	baz=200						
TMUT	**Trail Mountain**	94.26	46	P	P	23 23 40.5	+0.8
BMO	**Blue Mountains**	94.31	39		P	23 23 40.1	+0.6
BMO	**Blue Mountains**	94.31	39	P	P	23 23 40.1	+0.6
BMO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
M17K	**Holitna River**	94.32	10	IAmb	IAmb	23 23 40.6	
	comp=Z,10nm,0.9s						
M17K	**Holitna River**	94.32	10	P	P	23 23 39.1	+0.1
	baz=198						
L16K	**Owhat River**	94.33	9	P	P	23 23 39.2	+0.2
	baz=196						
MA2	**Magadan**	94.41	345	LR	LR	00 02 08.3	
	comp=Z,159nm,21.1s,baz=142,slow=33						
MA2	**Magadan**	94.41	345	⇑*e*P	P	23 23 39.9	+0.5
MA2				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SEW	**Seward**	94.53	14	P	P	23 23 40.1	+0.2
	baz=205						
XAN	**Xi'an**	94.54	307	P	P	23 23 39.0	-1.8
XAN				pmax	pmax		
	comp=Z,12nm,1.1s						
Q23K	**Middleton Isla**	94.60	16	P	P	23 23 40.1	-0.2
	baz=207						
K15K	**Wolf Creek Mou**	94.64	8	IAmb	IAmb	23 23 41.8	
	comp=Z,12nm,0.9s						
K15K	**Wolf Creek Mou**	94.64	8	P	P	23 23 40.6	+0.1
	baz=194,SNR=6.5						
M18K	**Stony River**	94.65	11	P	P	23 23 40.6	+0.1
	baz=199						
ANMO	**Albuquerque**	94.71	52	⇓*e*P	P	23 23 43.4	+1.7
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SLKM	**Skilak Lake**	94.74	14	IAmb	IAmb	23 23 42.1	
	comp=Z,18nm,1.0s						
PV05	**Paradox Valley**	94.83	48	P	P	23 23 43.4	+1.2
HVU	**Hansel Valley**	94.86	43	IAmb	IAmb	23 23 44.6	
	comp=Z,10.0nm,0.8s						
J14K	**Nanvaranak Lak**	94.86	7	P	P	23 23 41.4	+0.1
	baz=193						
P23K	**Montague Islan**	94.87	15	P	P	23 23 41.5	0.0
	baz=206						
L17K	**Donlin**	94.90	9	P	P	23 23 41.6	0.0
	baz=197						
D08A	**Wollman Farm,**	94.94	36		P	23 23 43.2	+1.0
D08A				IAmb	IAmb	23 23 45.1	
	comp=Z,13nm,0.8s						
N20K	**Mount Spurr**	95.00	12	P	P	23 23 41.9	-0.3
	baz=202						
SPCR	**Spurr Chakacha**	95.00	12	P	P	23 23 42.0	-0.2
	baz=202						
HLID	**Hailey**	95.05	41	P	P	23 23 43.9	+0.9
P18A	**Preston Nutter**	95.05	46	P	P	23 23 44.0	+0.8
PV18	**Skein Mesa, Pa**	95.05	48	P	P	23 23 44.0	+0.8
PV18				IAmb	IAmb	23 23 47.3	
	comp=Z,29nm,1.7s						
PV20	**West Nyswonger**	95.07	48	P	P	23 23 42.7	-0.6
PV20				IAmb	IAmb	23 23 44.9	
	comp=Z,28nm,1.7s						
PLID	**Pearl Lake**	95.16	39	IAmb	IAmb	23 23 45.5	
	comp=Z,8.3nm,1.0s						
PV01	**Paradox Valley**	95.20	48	P	P	23 23 44.8	+0.9
L18K	**Granite Mounta**	95.21	10		P	23 23 44.0	+1.0
L18K	**Granite Mounta**	95.21	10	P	P	23 23 43.2	+0.1
	baz=199						
M19K	**Big River Lodg**	95.27	11	P	P	23 23 43.9	+0.5
	baz=201						
PWL	**Port Wells**	95.45	14	P	P	23 23 44.2	+0.1
	baz=206						
K17K	**Iditarod**	95.45	9	P	P	23 23 44.2	+0.1
	baz=197						

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L19K  White Mountain   95.46  11   IAmb     IAmb     23 23 45.7
      comp=Z,12nm,1.1s
L19K  White Mountain   95.46  11   P        P        23 23 44.4 +0.2
      baz=200
SUA   Susitna One      95.51  13   P        P        23 23 44.2 -0.4
      baz=204
U33K  Whale Pass       95.59  24   P        P        23 23 44.6 -0.3
      baz=218
SIT   Sitka            95.62  22   P        P        23 23 45.2 +0.2
      baz=216
J16K  Anvik River      95.71   8   IAmb     IAmb     23 23 46.9
      comp=Z,7.2nm,0.8s
J16K  Anvik River      95.71   8   P        P        23 23 45.4 +0.1
      baz=195,SNR=7.1
GLI   Glacier Island   95.73  15   IAmb     IAmb     23 23 47.4
      comp=Z,11nm,0.8s
GLI   Glacier Island   95.73  15   P        P        23 23 45.4 -0.1
      baz=207
EYAK  Cordova Ski Ar   95.74  16   P        P        23 23 45.5 +0.1
      baz=208
SKT   Skwentna         95.84  12   P        P        23 23 45.6 -0.4
      baz=203
L20K  Farewell, AK     95.90  11   P        P        23 23 45.9 -0.3
      baz=201
KNK   Knik Glacier     95.92  14   IAmb     IAmb     23 23 47.6
      comp=Z,7.7nm,0.9s
KNK   Knik Glacier     95.92  14   P        P        23 23 46.4  0.0
      baz=206
PMR   Palmer           95.95  14   P        P        23 23 46.4  0.0
      baz=205
J17K  VABM Dome        96.00   9   P        P        23 23 47.0 +0.3
      baz=197,SNR=5.6
S31K  Pelican          96.08  21   P        P        23 23 47.3 +0.3
      baz=215
GHO   Glory Hole Cre   96.15  14   IAmb     IAmb     23 23 49.1
      comp=Z,8.4nm,0.8s
I17K  Unalakleet       96.28   8   P        P        23 23 48.6 +0.8
      baz=195
MESA  MESA             96.33  17   P        P        23 23 48.7 +0.2
      baz=211
BMRM  Bremner River    96.37  16   P        P        23 23 48.7 +0.3
      baz=209
J18K  Innoko River     96.39  10            P        23 23 49.0 +0.6
J18K  Innoko River     96.39  10   P        P        23 23 49.0 +0.6
      baz=199,SNR=5.9
M23K  Glacier View     96.42  14   P        P        23 23 48.8 +0.2
      baz=206
AHID  Auburn Hatcher   96.45  43   P        P        23 23 49.4  0.0
KLU   Klutina          96.54  15   P        P        23 23 49.8 +0.6
      baz=208
SCM   Sheep Creek Mo   96.54  14   P        P        23 23 48.9 -0.3
SCM                                IAmb     IAmb     23 23 51.1
      comp=Z,10.0nm,0.9s
SCM   Sheep Creek Mo   96.54  14   P        P        23 23 48.9 -0.3
SCM                                pmax     pmax
      comp=Z,10.0nm,0.9s
SCM   Sheep Creek Mo   96.54  14   P        P        23 23 49.7 +0.5
      baz=206,SNR=5.9
COHC  Cochancay        96.58  97   P        P        23 23 52.1 +1.6
NEW   Newport          96.66  36   LR       LR       23 59 10.1
      comp=Z,245nm,22.0s,baz=206,slow=30
MSTX  Muleshoe         96.66  54   P        P        23 23 52.2 +1.7
K20K  Telida           96.69  11   P        P        23 23 46.2 -3.6
K20K  Telida           96.69  11   P        P        23 23 49.8  0.0
      baz=201
MCMT  McKenzie Canyo   96.72  41   P        P        23 23 50.9 +0.2
BCPM  Bancas Point     96.75  19   P        P        23 23 50.9 +0.8
TABL  Table Mountain   96.77  18   P        P        23 23 51.7 +1.3
TABL                               IAmb     IAmb     23 26 13.0
      comp=Z,10nm,0.7s
HHC   Hu-ho-hao-te     96.81 314  eP        P        23 23 53.3 +2.3
HHC                                pmax     pmax
      comp=Z,7.0nm,0.6s
HHC                                pmax     pmax
      comp=Z,86nm,5.3s
HHC                                LR       LR
      comp=Z,110nm,16.8s
HHC                                LR       LR
      comp=Z,120nm,16.8s
HHC                                LR       LR
      comp=Z,360nm,18.3s
H16K  Elim             96.84   7   P        P        23 23 50.6 +0.2
      baz=194
GRNC  Granite Creek    96.86  17   P        P        23 23 48.5 -2.4
GRNC                               IAmb     IAmb     23 23 55.1
      comp=Z,12nm,1.4s
R32K  Eaglecrest       96.86  22   P        P        23 23 50.3 -0.4
      baz=217
N25K  Chitina, Valde   96.94  16   P        P        23 23 50.7 -0.3
      baz=209
GLB   Gilahina Butte   96.97  16   P        P        23 23 50.7 -0.5
TPAW  Teton Pass       96.97  43   P        P        23 23 52.7 +0.8
P29M  Windy Craggy     97.01  20   P        P        23 23 51.4  0.0
      baz=214
G15K  Niukluk          97.01   6   P        P        23 23 50.9 -0.3
      baz=192
FXWY  Fox Creek        97.02  43   P        P        23 23 52.0 -0.1
M24K  Tolsona, Glenn   97.03  15   P        P        23 23 51.3 -0.1
      baz=207
J19K  Poorman          97.05  10   P        Pdif     23 23 51.6 +0.2
      baz=200
CAST  Castle Rocks     97.08  12   P        P        23 23 50.7 -0.9
      baz=203,SNR=5.7
MCARA McCarthy VSAT    97.11  16   P        P        23 23 51.8  0.0
MCARA                              IAmb     IAmb     23 24 09.1
      comp=Z,18nm,1.5s
MCARA McCarthy VSAT    97.11  16   P        P        23 23 51.7  0.0
      baz=210
SEY   Seymchan         97.12 347   LR       LR       00 02 05.1
      comp=Z,334nm,21.9s,baz=165,slow=32
SEY   Seymchan         97.12 347⇓eP        P        23 23 51.0 -0.7
SEY                                pmax     pmax
      comp=Z,5.0nm,0.9s
WAT6  Susitna Watana   97.13  14   P        P        23 23 51.6 -0.3
      baz=206
LOGN  Logan Glacier    97.13  17   P        Pdif     23 23 53.5 +1.4
LOGN                               IAmb     IAmb     23 26 24.4
      comp=Z,4.3nm,0.6s
CTG   Chitna Glacier   97.16  17   P        P        23 23 51.9 -0.2
      baz=211
CTGM  Chitina Glacie   97.17  17   P        Pdif     23 23 54.0 +1.7
CTGM                               IAmb     IAmb     23 27 36.3
      comp=Z,26nm,1.8s
WAT1  Susitna Watana   97.19  13   P        Pdif     23 23 52.3 +0.1
      baz=206
PLBC  Pleasant Camp    97.26  20   P        Pdif     23 23 52.8 +0.3
      baz=215
TNA   Tin City         97.27   4   P        P        23 23 50.8 -1.5
TNA   Tin City         97.27   4   P        P        23 23 52.4 +0.1
      baz=189
F14K  Arctic Creek     97.30   5   P        Pdif     23 23 53.0 +0.5
      baz=190
O29M  Mount Kennedy    97.33  19   P        Pdif     23 23 54.2 +1.2
O29M  Mount Kennedy    97.33  19   P        Pdif     23 23 53.6 +0.6
      baz=214
PDAR  Pinedale Array   97.35  44   P        P        23 23 53.5 -0.1
      comp=Z,1.5nm,0.8s,baz=224,slow=4.1,SNR=11
PDAR                               PKKPbc   PKKPbc   23 40 31.0 -1.5
      comp=Z,0.8nm,0.6s,baz=92,slow=5.0,SNR=6.5
      comp=Z,1.5nm,0.8s
H17K  Granite Mounta   97.39   8   P        Pdif     23 23 53.2 +0.3
      baz=196
KTH   Kantishna Hill   97.41  12   IAmb     IAmb     23 27 15.2
      comp=Z,26nm,1.9s
TRF   Thorofare Moun   97.42  12   IAmb     IAmb     23 23 56.3
      comp=Z,7.8nm,0.8s
TRF   Thorofare Moun   97.42  12   P        P        23 23 53.0 -0.3
      baz=204,SNR=5.4
J20K  Nowinta River    97.45  10   P        Pdif     23 23 53.4 +0.2
      baz=201
G16K  Koyuk River      97.57   7   P        Pdif     23 23 53.9 +0.2
      baz=194
GCSA  Galena City Sc   97.59   9   P        Pdif     23 23 54.4 +0.6
      baz=199
BTO   Baotou           97.62 313  eP        Pdif     23 23 57.1 +2.4
BTO                                PP       PP       23 27 50.8 -2.3
BTO                                S        S        23 35 17.8 +1.1
BTO                                pmax     pmax
      comp=Z,9.0nm,0.5s
BTO                                pmax     pmax
      comp=Z,99nm,4.3s
BTO                                LR       LR
      comp=Z,240nm,14.3s
BTO                                LR       LR
      comp=Z,330nm,13.0s
BTO                                LR       LR
      comp=Z,500nm,16.9s
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DHY   Denali Highway   97.64  14   P        Pdif     23 23 54.4 +0.1
      baz=206
RND   Reindeer         97.65  13   IAmb     IAmb     23 23 57.9
      comp=Z,9.9nm,0.9s
YHL   Hebgen Lake      97.67  41   IAmb     IAmb     23 23 58.5
      comp=Z,23nm,1.9s
H18K  Honhosa River    97.78   8   P        Pdif     23 23 55.2 +0.5
      baz=197
YUK8  Steele Glacier   97.84  18   P        P        23 23 55.3 -0.1
      baz=213
G17K  Kiwalik Mounta   97.85   7   P        Pdif     23 23 55.5 +0.5
      baz=195
YUK6  Outpost Mounta   97.93  19   P        Pdif     23 23 55.9 +0.2
      baz=214
PAX   Paxson           97.95  15   P        Pdif     23 23 56.1 +0.5
      baz=208
M26K  Nabesna, AK      98.00  16   P        Pdif     23 23 56.5 +0.6
      baz=210
LPAZ  La Paz           98.01 115   P        Pdif     23 23 58.3 +0.6
      comp=Z,1.2nm,0.8s,baz=195,slow=5.5,SNR=5.0
      comp=Z,1.2nm,0.8s
HYT   Haines Junctio   98.06  19   P        Pdif     23 23 56.8 +0.6
      baz=214
YUK3  Moose Creek      98.08  17   P        Pdif     23 23 56.9 +0.5
      baz=212
Q32M  Nakina River     98.13  22   P        Pdif     23 23 57.1 +0.5
      baz=218
M27K  Edge Creek, AK   98.23  16   P        Pdif     23 23 57.7 +0.7
      baz=211
H19K  Roundabout Mou   98.39   9   P        Pdif     23 23 58.1 +0.8
      baz=199
YNE   Yellowstone No   98.43  42   IAmb     IAmb     23 24 42.5
      comp=Z,4.2nm,0.6s
G18K  Tagagawik        98.46   8   P        Pdif     23 23 58.1 +0.4
      baz=197
DLBC  Dease Lake       98.46  23   P        Pdif     23 23 58.7 +0.8
      baz=220
BVCY  Beaver Creek     98.52  17   P        Pdif     23 23 58.9 +0.8
      baz=212
H20K  Anotleneega Mo   98.58  10   P        Pdif     23 23 58.9 +0.6
      baz=200
RIDG  Independent Ri   98.76  14   P        Pdif     23 24 00.0 +0.9
      baz=209
L27K  Beaver Creek,    98.85  16   P        Pdif     23 24 00.2 +0.6
      baz=211
G19K  Purcell Mounta   98.89   9   IAmb     IAmb     23 24 20.0
      comp=Z,6.9nm,0.5s
H21K  Melozitna Rive   99.04  10   P        Pdif     23 24 01.2 +0.9
      baz=202
K22A  Casper           99.10  45   P        Pdif     23 24 01.1 -0.2
LZH   Lanzhou          99.14 307  eP        Pdif     23 23 53.3 -8.4
LZH                                pmax     pmax
      comp=Z,16nm,1.3s
LZH                                LR       LR
      comp=N,180nm,16.8s
LZH                                LR       LR
      comp=E,220nm,17.9s
LZH                                LR       LR
      comp=Z,230nm,16.5s
I23K  Minto, Yukon-K   99.14  12   P        Pdif     23 24 01.9 +1.2
      baz=205
M29M  Somme Creek      99.15  18   P        Pdif     23 24 01.9 +0.9
      baz=214
SCRK  Sand Creek       99.16  15   P        Pdif     23 24 01.4 +0.4
      baz=209
COLA  College          99.17  13   P        Pdif     23 24 04.6 +3.8
IMAR  Indian Mountai   99.20  10   P        Pdif     23 23 59.9 -1.1
IL31                   99.26  13   P        Pdif     23 23 59.8 -1.5
IL31                               IAmb     IAmb     23 24 39.8
      comp=Z,18nm,2.0s
ILAR  Eielson Array    99.26  13   P        Pdif     23 23 59.3 -2.0
ILAR  Eielson Array    99.26  13   P        Pdif     23 23 59.0 -2.4
      comp=Z,1.1nm,0.8s,baz=227,slow=5.5,SNR=12
ILAR                               PKiKP    PKiKP    23 28 30.1 -0.8
      comp=Z,1.0nm,0.8s,baz=229,slow=2.3,SNR=6.5
ILAR                               PKKPbc   PKKPbc   23 40 22.6 -5.1
      comp=Z,0.6nm,0.8s,baz=18,slow=2.9,SNR=5.4
      comp=Z,1.1nm,0.8s
ILAR  Eielson Array    99.26  13   P        Pdif     23 23 59.3 -2.0
J25K  Salcha River,    99.42  14   P        Pdif     23 24 01.8 -0.4
J25K  Salcha River,    99.42  14   P        Pdif     23 24 02.3 +0.2
      baz=208
F19K  Shaleruckik Mo   99.47   8   P        Pdif     23 24 01.2 -0.9
F19K  Shaleruckik Mo   99.47   8   P        Pdif     23 24 03.0 +0.9
      baz=198
POKR  Poker Plat Res   99.47  13   P        Pdif     23 24 01.2 -1.0
POKR  Poker Plat Res   99.47  13   P        Pdif     23 24 02.9 +0.7
      baz=207
H22K  Ishtalitna Cre   99.49  11   P        Pdif     23 24 03.1 +0.8
      baz=203
K27K  Chicken          99.62  15   P        Pdif     23 24 03.5 +0.6
      baz=211
J26L  Joseph Creek     99.70  15            Pdif     23 24 04.1 +0.7
J26L                               IAmb     IAmb     23 24 05.3
      comp=Z,7.0nm,0.9s
J26L  Joseph Creek     99.70  15   P        Pdif     23 24 03.6 +0.2
      baz=210
E18K  Tukpahlearik C   99.72   7   Pdif     Pdif     23 24 03.4 +0.2
E18K                               IAmb     IAmb     23 24 04.7
      comp=Z,16nm,1.8s
E18K  Tukpahlearik C   99.72   7   P        Pdif     23 24 03.3 +0.1
      baz=196
H23K  Yukon River      99.73  12   P        Pdif     23 24 04.2 +0.8
      baz=205
G21K  Allakaket        99.74  10   P        Pdif     23 24 03.6 +0.3
      baz=202
D17K  Noatak River     99.75   6   P        Pdif     23 24 04.0 +0.7
      baz=193
L29M  L29M             99.79  17   P        Pdif     23 24 04.4 +0.6
      baz=214
F20K  Avaraart Lake    99.93   9   P        Pdif     23 24 04.7 +0.5
      baz=200
H24K  Noodor Dome     100.03  12   P        Pdif     23 24 05.4 +0.6
      baz=206
E19K  Redstone River  100.13   8   P        Pdif     23 24 05.5 +0.4
      baz=198
F21K  Alatna River    100.40  10   P        Pdif     23 24 06.9 +0.6
      baz=202
G22K  Bettles         100.41  10   P        Pdif     23 24 07.1 +0.8
      baz=203
K29M  Barlow Dome     100.56  17   P        Pdif     23 24 07.7 +0.5
      baz=215
G24K  Hadweenzic Riv  100.88  12   P        Pdif     23 24 08.8 +0.3
      baz=207
COLD  Coldfoot        100.90  11   P        Pdif     23 24 08.8 +0.3
      baz=204
E20K  Nigu River      101.02   8   P        Pdif     23 24 09.7 +0.6
      baz=199
D19K  Kuna River      101.02   8   P        Pdif     23 24 09.4 +0.3
      baz=198
I28M  Miner Creek     101.32  15   P        Pdif     23 24 11.0 +0.4
      baz=213
D20K  Etivluk River   101.40   8   P        Pdif     23 24 10.6 -0.1
      baz=199
BEAVL Fort Liard      101.47  24   P        Pdif     23 24 11.2  0.0
      baz=224
E21K  Killik River    101.47   9   P        Pdif     23 24 11.5 +0.4
      baz=201
B18K  Kokolik River   101.49   6   P        Pdif     23 24 11.7 +0.6
      baz=195
E22K  Anaktuvuk Pass  101.49  10   P        Pdif     23 24 11.5 +0.3
      baz=203
F24K  Squaw Lake      101.55  12   P        Pdif     23 24 12.0 +0.5
      baz=206
I29M  Ogilvie Camp,   101.62  16   P        Pdif     23 24 12.4 +0.6
      baz=214
H27K  Steamboat Moun  101.63  14   P        Pdif     23 24 12.3 +0.4
      baz=212
E24K  Your Creek      101.95  11   P        Pdif     23 24 14.2 +1.0
      baz=206
I30M  Mount Dempster  101.97  17   P        Pdif     23 24 14.0 +0.5
      baz=216
F25K  Christian Rive  102.01  12   P        Pdif     23 24 14.2 +0.6
      baz=208
C21K  Knifeblade Rid  102.04   8   P        Pdif     23 24 13.9 +0.4
      baz=201
D22K  Ayikyak River   102.06   9   P        Pdif     23 24 14.5 +0.8
      baz=202
G27K  Doyon Strip     102.10  14   P        Pdif     23 24 14.8 +0.9
      baz=212
TOLK  Toolik Lake Re  102.29  10   P        Pdif     23 24 15.3 +0.5
      baz=205
H29M  Whitestone      102.32  16   P        Pdif     23 24 16.3 +1.4
      baz=214
F26K  Sheenjek River  102.38  13   P        Pdif     23 24 16.0 +0.9
      baz=210
D23K  Nanushuk River  102.42  10   P        Pdif     23 24 16.1 +0.8
      baz=204
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B21K  Ikpikpuk River  102.50   8   P        Pdif     23 24 16.2 +0.6
      baz=201
G29M  Pine Creek      102.97  15   P        Pdif     23 24 18.9 +1.1
      baz=215
C23K  Itkillik River  103.23  10   P        Pdif     23 24 19.2 +0.4
      baz=204
E27K  Coleen River    103.29  13   P        Pdif     23 24 19.8 +0.6
      baz=212
B22K  Teshekpuk Lake  103.32   8   P        Pdif     23 24 20.1 +1.0
      baz=202
C24K  Franklin Bluff  103.41  10   P        Pdif     23 24 20.1 +0.5
      baz=206
D25K  Kavik River     103.42  11   P        Pdif     23 24 20.0 +0.3
      baz=208
G30M  tAoh Zraii Nji  103.44  16   P        Pdif     23 24 20.2 +0.4
      baz=216
SONM  Songino Array   103.80 318   PKKP              23 40 22.7
      comp=Z,0.8nm,0.6s,baz=300,slow=3.2,SNR=4.7
C26K  Camden Bay      104.19  11   P        Pdif     23 24 23.8 +0.7
      baz=209
F31M  Tsiigehtchic    104.39  16   P        Pdif     23 24 25.0 +1.0
      baz=218
YKA   Yellowknife Ar  106.78  26   PKiKP    PKiKP    23 28 43.6 -1.0
      comp=Z,0.4nm,0.6s,baz=275,slow=10,SNR=6.0
YKA                                PKKPbc   PKKPbc   23 40 03.0 -2.0
      comp=Z,1.6nm,0.7s,baz=34,slow=3.5,SNR=12
YKA                                PKKP     PKKPab   23 40 17.1 +1.0
      comp=Z,1.5nm,0.9s,baz=35,slow=4.9,SNR=6.9
WMQ   Urumqi          113.67 308  ePKP      PKiKP    23 28 59.8 +1.5
BOSA  Boshof          115.92 203   PKP      PKPdf    23 29 03.6 +0.2
      comp=Z,6.9nm,0.8s,baz=138,slow=2.3,SNR=15
MK31  Makanchi Array  118.26 310d iPKIKP    PKPdf    23 29 05.8 -1.2
MKAR  Makanchi Array  118.26 310   PKP      PKPdf    23 29 05.8 -1.2
      comp=Z,3.9nm,0.8s,baz=66,slow=2.2,SNR=30
MKAR                               PKKPbc   PKKPbc   23 39 25.9  0.0
      comp=Z,0.6nm,0.8s,baz=290,slow=3.5,SNR=4.2
MAKZ  Makanchi        118.47 310            PKPdf    23 29 06.1 -1.3
MAKZ  Makanchi        118.47 310   PKIKP    PKPdf    23 29 06.1 -1.3
RES   Resolute Bay    118.59  18            PKPdf    23 29 06.5 -0.3
RES   Resolute Bay    118.59  18   PKIKP    PKPdf    23 29 06.5 -0.3
ZALV  Zalesovo Beam   118.69 318            PKPdf    23 29 06.1 -1.5
ZALV  Zalesovo Beam   118.69 318   PKP      PKPdf    23 29 05.7 -1.9
      comp=Z,2.5nm,0.7s,baz=172,slow=1.0,SNR=9.3
ZALV  Zalesovo Beam   118.69 318   PKIKP    PKPdf    23 29 06.1 -1.5
SHLS  Shalkode        119.09 305  ePKIKP    PKPdf    23 29 06.9 -1.9
SHLS  Shalkode        119.09 305  ePKP      PKPdf    23 29 07.0 -1.9
UZB   Uzynbulak       119.40 305  ePKIKP    PKPdf    23 29 08.0 -1.4
UZB   Uzynbulak       119.40 305  ePKP      PKPdf    23 29 08.1 -1.4
PHPEN Phepeng         119.61 202  i P       PKiKP    23 29 11.4 +0.8
KPKS  Kokpek          119.73 305  ePKIKP    PKPdf    23 29 08.7 -1.3
KPKS                              e                  23 30 30.9
KPKS  Kokpek          119.73 305  ePKP      PKPdf    23 29 08.7 -1.3
KPKS                              ePP       PP       23 30 30.9 -3.2
SATY  Saty            119.81 305  ePKIKP    PKPdf    23 29 08.8 -1.4
SATY  Saty            119.81 305  ePKP      PKPdf    23 29 08.9 -1.4
SKOMA Sekoma          120.15 204  i P       PKiKP    23 29 12.3 +0.7
TDK   Taldyqorghan    120.35 307  ePKIKP    PKPdf    23 29 09.9 -1.2
TDK   Taldyqorghan    120.35 307  ePKP      PKPdf    23 29 09.9 -1.2
LPHEP Lephephe        120.51 206  i P       PKiKP    23 29 13.2 +0.8
KSH   Kashi           120.51 300   PKP      PKiKP    23 29 11.9 +0.1
ARXS  Arharly         120.53 306  i PKIKP   PKPdf    23 29 10.5 -1.1
MREMI Moremi          120.61 208            PKiKP    23 29 13.1 +0.5
MREMI Moremi          120.61 208  i P       PKiKP    23 29 13.7 +1.1
ULHL  Ulahol          121.11 303   P        PKPdf    23 29 12.7 -0.2
      SNR=9.8
LKGWB Lokgwabe        121.40 201            PKiKP    23 29 14.4 +0.2
KURK  Kurchatov       121.61 313            PKPdf    23 29 12.3 -0.9
KURK  Kurchatov       121.61 313c iPKIKP    PKPdf    23 29 11.8 -1.5
KURK                               pmax     pmax
      comp=Z,15nm,0.8s
KURBB Kurchatov Arra  121.65 313   PKP      PKPdf    23 29 10.9 -2.5
      comp=Z,7.7nm,0.7s,baz=106,slow=2.1,SNR=69
KURBB                              PKKPbc   PKKPab   23 39 12.9 +1.2
      comp=Z,0.7nm,0.9s,baz=259,slow=6.9,SNR=4.0
TKM2  Tokmak 2        121.75 304   P        PKPdf    23 29 13.3 -0.8
      SNR=6.1
BROLN Tlhalogang      121.97 209  i P       PKPdf    23 29 15.3 +0.2
KGCAE Kacgae          122.27 203            PKiKP    23 29 16.6 +0.7
KGCAE Kacgae          122.27 203  i P       PKiKP    23 29 16.5 +0.7
CHMS  Chumysh         122.37 304   P        PKPdf    23 29 14.4 -0.7
      SNR=10
AAK   Ala-Archa       122.46 303            PKPdf    23 29 14.9 -0.5
AAK   Ala-Archa       122.46 303d iPKIKP    PKPdf    23 29 14.9 -0.5
AAK                                pmax     pmax
      comp=Z,4.0nm,0.8s
SGDS  Sogindy         122.57 304  ePKP      PKPdf    23 29 14.1 -1.3
USP   Ospenovka       122.61 304   P        PKPdf    23 29 14.6 -1.0
      SNR=5.6
KOOLE Kule            122.77 201  i P       PKiKP    23 29 17.8 +0.9
AML   Almayashu       122.90 302   P        PKPdf    23 29 16.1 -0.5
      SNR=14
SOOWA Sowa            122.91 208  i P       PKiKP    23 29 17.4 +0.3
EKS2  Erkin-Say       122.97 303   P        PKPdf    23 29 15.9 -0.4
      SNR=9.7
BTLS  Baital          123.36 306  ePKIKP    PKPdf    23 29 15.6 -1.2
BTLS  Baital          123.36 306  ePKP      PKPdf    23 29 15.7 -1.2
PHDHD Phuduhudu       123.89 206  i P       PKiKP    23 29 20.0 +0.9
GRTLG Ghanzi          123.98 202  i P       PKiKP    23 29 19.6 +0.3
WIN   Windhoek        124.03 197            PKiKP    23 29 19.9 +0.4
WIN   Windhoek        124.03 197   PKIKP    PKiKP    23 29 19.9 +0.4
KBL   Kabul           124.32 293            PKPdf    23 29 19.1 -0.2
KBL   Kabul           124.32 293   PKIKP    PKPdf    23 29 19.1 -0.2
DZA   Taraz           124.78 303  ePKIKP    PKPdf    23 29 18.3 -1.4
DZA   Taraz           124.78 303  ePKP      PKPdf    23 29 18.4 -1.4
KKAR  Karatay Array   125.41 303            PKPdf    23 29 19.7 -1.2
KKAR  Karatay Array   125.41 303   PKIKP    PKPdf    23 29 19.7 -1.2
SIMJ  Simiganj        125.48 297            PKPdf    23 29 21.5 +0.2
GMARE Gumare          125.49 204  i P       PKiKP    23 29 22.9 +0.6
IUG   Iuzhnay         125.55 302  ePKIKP    PKPdf    23 29 19.8 -1.5
IUG   Iuzhnay         125.55 302  ePKP      PKPdf    23 29 19.8 -1.5
KSANE Kasane          125.82 208  i P       PKiKP    23 29 23.6 +0.7
BRLS  Boroldąy        125.88 303  ePKIKP    PKPdf    23 29 20.5 -1.2
BRLS  Boroldąy        125.88 303  ePKP      PKPdf    23 29 20.6 -1.2
LSZ   Lusaka          126.75 213            PKiKP    23 29 25.3 +0.4
LSZ   Lusaka          126.75 213   PKIKP    PKiKP    23 29 25.3 +0.4
BVAR  Borovoye Array  127.01 315   PKP      PKPdf    23 29 22.4 -1.2
      comp=Z,7.7nm,0.7s,baz=98,slow=3.0,SNR=48
BRVK  Borovoye        127.08 315            PKPdf    23 29 23.1 -0.5
BRVK  Borovoye        127.08 315c iPKIKP    PKPdf    23 29 22.6 -1.1
BRVK                               pmax     pmax
      comp=Z,25nm,1.7s
TSUM  Tsumeb          127.11 199            PKiKP    23 29 25.9 +0.4
SCHQ  Schefferville   127.47  43   PKP      PKPdf    23 29 22.9 -1.5
      comp=Z,9.5nm,0.9s,baz=211,slow=1.8,SNR=8.2
LMN   Caledonia Moun  127.82  54            PKiKP    23 29 25.9  0.0
NEEM  North Greenlan  128.56  13  i P       PKPdf    23 29 26.4 +0.2
NOR   Nord            129.50   3  i P       PKPdf    23 29 26.4 -1.2
ILULI Ilulissat       132.30  23  i P       PKPdf    23 29 32.0 -1.1
KBS   Kingsbay        132.44 357            PKPdf    23 29 33.6 +0.4
KBS   Kingsbay        132.44 357   PKIKP    PKPdf    23 29 33.6 +0.4
KBS   Kingsbay        132.44 357  i P       PKPdf    23 29 31.5 -1.7
SVE   Sverdlovsk      132.61 320  ePKIKP    PKPdf    23 29 31.9 -2.2
SPITS Spitsbergen Ar  132.94 356   PKhKP    PKPpre   23 29 29.1
      comp=Z,4.1nm,0.8s,baz=81,slow=10,SNR=2.6
SPITS                              PKP      PKPdf    23 29 33.6 -0.6
      comp=Z,18nm,0.7s,baz=84,slow=4.5,SNR=12
SPB2  Spitsbergen Ar  132.94 356            PKiKP    23 29 34.9 -0.4
ABKAR Akbulak array   133.40 310            PKPdf    23 29 34.5 -1.3
ARTI  Arti            133.90 320            PKPdf    23 29 36.0 -0.6
ARTI  Arti            133.90 320  i PKIKP   PKPdf    23 29 36.2 -0.3
ARTI                               SS       SS       23 49 50.7 -0.9
SUMG  Summit          134.04  16            PKiKP    23 29 37.7 -0.5
SUMG  Summit          134.04  16   PKIKP    PKiKP    23 29 37.7 -0.5
SUMG  Summit          134.04  16  i P       PKPdf    23 29 37.0 +0.1
ICESG Greenland Ices  135.91  20  i P       PKPdf    23 29 40.4 +0.1
DBG   Daneborg        135.93   8  i P       PKPdf    23 29 37.5 -2.3
KIRV  Kirov           138.11 324dePKIKP     PKPdf    23 29 44.1 -0.1
VADS  Vadso           138.49 346  ePKPdf    PKiKP    23 29 46.4 -0.4
SCO   Scoresbysund    139.03  12  i P       PKPdf    23 29 46.7 +1.1
HAMF  Hammerfest      139.11 349  ePKPdf    PKiKP    23 29 47.4 -0.6
APA   Apatity         139.49 342⇓iPKHKP     PKPpre   23 29 24.2
APA                               i                  23 29 48.0
APA                                pmax     pmax
      comp=Z,4.0nm,1.4s
APA                                pmax     pmax
      comp=Z,5.0nm,0.7s
ARA0  ARCESS Array S  139.74 347  ePKPdf    PKiKP    23 29 48.3 -1.1
ARCES ARCESS Array B  139.74 347            PKPpre   23 29 40.6
ARCES ARCESS Array B  139.74 347   PKhKP    PKPpre   23 29 38.9
      comp=Z,2.2nm,0.5s,baz=20,slow=2.7,SNR=17
ARCES                              PKP      PKPdf    23 29 46.6 -0.4
      comp=Z,2.2nm,0.5s,baz=39,slow=1.8,SNR=5.9
ARCES                              SKPbc    SKPbc    23 33 17.2 -2.0
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	comp=Z,3.8nm,0.9s,baz=64,slow=2.8,SNR=4.5						
JETT	Jettan, Norway	140.59	350	ePKPdf	PKiKP	23 29 50.1	-1.1
KLMR	Klimovskoe	141.67	331	ePKIKP	PKPdf	23 29 48.2	-2.5
KLMR				pmax	pmax		
	comp=Z,20nm,1.1s						
STEI	Steigen	142.83	351	ePKPdf	PKPdf	23 29 54.1	+1.6
LOF	Lofoten	142.84	353	ePKPdf	PKPdf	23 29 54.1	+1.6
VAGH	Vaagaholmen	144.21	352	e	PKPbc	23 29 53.4	+0.2
VAGH				ePKPdf	PKPdf	23 29 56.4	+1.5
KONS	Konsvik	144.45	352	ePKPdf	PKPdf	23 29 57.0	+1.6
MOR8	Moi Rana	144.60	351	e	PKPab	23 29 53.2	-1.1
MOR8				ePKPdf	PKPdf	23 29 56.9	+1.2
STOK	Stokkvaagen	144.62	352	ePKPdf	PKPdf	23 29 57.2	+1.5
VRH	Novokhopyorsk	144.66	315	ePKIKP	PKPab	23 29 53.7	-1.3
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MOS	Moscow	145.13	324	i PKHKP	PKPpre	23 29 52.7	
MOS				pmax	pmax		
	comp=Z,39nm,0.7s						
GOF	Gofitskoye	145.18	305	cePKIKP	PKPbc	23 29 55.8	-1.2
KBZ	Khabaz	145.45	302	PKPbc	PKPdf	23 29 56.1	-1.7
	comp=Z,21nm,0.9s,baz=116,slow=2.1,SNR=35						
KBZ	Khabaz	145.45	302	cePKIKP	PKPdf	23 29 57.1	-0.7
KIV	Kislovodsk	145.57	303		PKPdf	23 29 57.4	-0.8
KIV	Kislovodsk	145.57	303	ePKP2	PKPdf	23 29 57.2	-1.0
KIV				pmax	pmax		
	comp=Z,29nm,1.0s						
OBN	Obninsk	145.96	324		PKPdf	23 29 58.3	0.0
OBN	Obninsk	145.96	324	⇑P	PKPdf	23 29 57.8	-0.5
OBN	Obninsk	145.96	324	⇓iPKP2	PKPdf	23 29 58.5	+0.2
OBN				pmax	pmax		
	comp=Z,119nm,1.3s						
PUL	Pulkovo	145.96	334	dePKP2	PKPdf	23 29 58.4	+0.2
PUL				pmax	pmax		
	comp=Z,190nm,0.8s						
VORR	Voronezh	145.99	317	ePKIKP	PKPdf	23 29 56.9	-1.6
VORR				pmax	pmax		
	comp=Z,60nm,1.0s						
VSR	Storozhevoye	146.18	316	ePKIKP	PKPdf	23 29 56.4	-2.4
VSR				pmax	pmax		
	comp=Z,70nm,1.0s						
FINES	FINESS Array B	146.19	339		PKPdf	23 29 58.0	-0.5
FINES	FINESS Array B	146.19	339	PKPbc	PKPdf	23 29 58.4	-0.1
	comp=Z,62nm,0.7s,baz=54,slow=3.5,SNR=295						
FINES	FINESS Array B	146.19	339	PKIKP	PKPdf	23 29 58.0	-0.5
VORD	Divnogorie	146.19	316	ePKIKP	PKPdf	23 29 56.9	-2.0
VORD				pmax	pmax		
	comp=Z,60nm,1.0s						
SOC	Sochi	147.75	303	ePKIKP	PKPdf	23 30 02.3	+0.6
SOC				e		23 33 36.3	
SOC				eSS	SS	23 52 31.8	-2.4
SOC				eSSS	SSS	23 58 12.3	
VSU	Vasula	148.20	335	c iPKIKP	PKPbc	23 30 03.7	-1.6
VSU				pmax	pmax		
	comp=Z,202nm,1.7s						
NB2	NORSAR Subarra	149.94	351	PKP	PKPbc	23 30 09.0	-0.7
	comp=Z,174nm,1.7s,baz=14,slow=2.6						
NB2	NORSAR Subarra	149.94	351	PKP	PKPbc	23 30 09.0	-0.7
	baz=14,slow=2.6						
NOA	NORSAR Array B	149.94	351	PKPbc	PKPbc	23 30 09.1	-0.7
	comp=Z,11nm,0.7s,baz=14,slow=4.1,SNR=58						
HFS	Hagfors	150.40	348	PKPbc	PKPbc	23 30 10.0	-0.8
	comp=Z,11nm,0.4s,baz=98,slow=3.0,SNR=91						
HFS	Hagfors	150.40	348	PKIKP	PKPbc	23 30 10.0	-0.8
MNK	Minsk	150.45	328	i PKP	PKPbc	23 30 10.9	-0.2
	comp=E,12nm,0.9s						
MNK				i PKP	PKPbc	23 30 10.9	-0.2
	comp=N,12nm,0.9s						
MNK				i PKP	PKPbc	23 30 10.9	-0.2
	comp=Z,52nm,0.9s,baz=51						
MNK				i PKiKP	PKPab	23 30 17.7	0.0
MNK				i SKP		23 33 28.0	
MNK				i PKS	PKSdf	23 33 39.2	-1.0
MNK				i PP	PP	23 33 49.6	+2.4
MNK				i PPP	PPP	23 37 15.1	
MNK				i SKS	SKSdf	23 37 38.1	+28
MNK				i SS	SS	23 53 35.6	+33
MNK				i SSS	SSS	23 58 24.8	
MNK	Minsk	150.45	328	i PKIKP	PKPbc	23 30 10.9	-0.2
MNK				i		23 30 17.7	
MNK				i		23 33 49.5	
MNK				i PPP	PPP	23 37 15.0	
MNK				pmax	pmax		
	comp=N,12nm,0.9s						
MNK				pmax	pmax		
	comp=E,12nm,0.9s						
MNK				pmax	pmax		
	comp=Z,52nm,0.9s						
NACGM	Naroch	150.67	330	LRM	MLR	00 39 53.8	
	comp=Z,544nm,15.0s						
GHAJ	Ghor Haditha	151.01	278		PKPbc	23 30 12.7	-0.4
DIKM	Dikmen	151.31	300	⇑P	PKiKP	23 30 14.2	+0.2
SIM	Simferopol'	151.39	307	ePKIKP	PKPbc	23 30 13.0	-0.6
SIM				pmax	pmax		
	comp=Z,47nm,0.8s						
MMAI	Mount Meron Ar	151.39	282	PKPbc	PKPbc	23 30 14.3	+0.2
	comp=Z,34nm,0.7s,baz=81,slow=5.2,SNR=58						
KONO	Kongsberg	151.50	351		PKPbc	23 30 13.4	+0.1
KONO	Kongsberg	151.50	351	PKIKP	PKPbc	23 30 13.4	+0.1
STRU	Stroemstad	151.87	349	i P	PKPbc	23 30 13.6	-0.6
AKASG	Malin Array Be	152.03	321	PKP	PKPdf	23 30 07.2	-1.0
	comp=Z,1.7nm,0.8s,baz=44,slow=0.6,SNR=8.9						
AKASG				PKPbc	PKPbc	23 30 14.1	-0.8
	comp=Z,19nm,0.8s,baz=57,slow=2.8,SNR=46						
KIEV	Kiev	152.05	321		PKPbc	23 30 13.9	-1.0
KIEV	Kiev	152.05	321	⇓P	PKPbc	23 30 14.7	-0.2
KIEV	Kiev	152.05	321	PKIKP	PKPbc	23 30 13.9	-1.0
KIRS	Kirsehir-Merke	152.65	295	⇑P	PKPbc	23 30 16.6	-0.1
BRTR	Keskin Array B	152.80	296		PKPdf	23 30 08.6	-1.4
BRTR	Keskin Array B	152.80	296	PKP	PKPdf	23 30 08.8	-1.2
	comp=Z,1.4nm,0.9s,baz=27,slow=0.3,SNR=7.0						
BRTR				PKPbc	PKPbc	23 30 16.2	-0.9
	comp=Z,10nm,0.8s,baz=142,slow=3.0,SNR=31						
SUW	Suwalki	152.80	332	ePKP	PKPbc	23 30 16.2	-0.2
BORU	Boraas	152.91	347	i P	PKPbc	23 30 15.7	-0.9
HOMB	Homborsund	152.98	352	i P	PKPbc	23 30 16.1	-0.5
SNART	Snartemo	153.06	353	i P	PKPbc	23 30 16.9	0.0
BLEU	Blekinge	153.42	342	i P	PKPbc	23 30 17.1	-0.6
ANTO	Ankara	153.43	297	⇓P	PKPdf	23 30 09.9	-0.9
FABU	Falkenberg	153.51	346	i P	PKiKP	23 30 18.1	+0.1
DEL	Delary	153.75	344	i P	PKPbc	23 30 17.9	-0.6
SORM	Soroca	153.84	317	⇑P	PKPdf	23 30 09.7	-1.2
MILM	Milestii Mici	154.13	314	⇓P	PKPbc	23 30 18.2	-1.4
DBIC	Dimbokro	154.42	165		PKPdf	23 30 13.9	+1.1
DBIC	Dimbokro	154.42	165	PKP	PKPdf	23 30 13.4	+0.5
	comp=Z,7.2nm,0.9s,baz=221,slow=2.3,SNR=5.5						
DBIC	Dimbokro	154.42	165	PKIKP	PKPdf	23 30 14.0	+1.1
CFR	Carcaliu	155.29	311	⇓P	PKPdf	23 30 15.6	+2.5
TESR	Tescani	155.63	315	⇓P	PKPdf	23 30 22.2	+8.7
VRI	Vrincioaia	155.89	313	⇑P	PKPdf	23 30 21.0	+7.1
BURAR	Bucovina Array	155.91	318		PKPdf	23 30 13.9	-0.1
BURAR	Bucovina Array	155.91	318	⇑P	PKPdf	23 30 23.1	+9.1
BURAR	Bucovina Array	155.91	318	PKIKP	PKPdf	23 30 13.9	-0.1
PLOR	Plostina	155.94	313	⇓P	PKPdf	23 30 18.9	+4.9
EKA	Eskdalemuir Ar	156.12	7	PKP	PKPdf	23 30 13.6	-0.3
	comp=Z,1.7nm,0.8s,baz=289,slow=2.2,SNR=3.0						
EKA				PKPab	PKPab	23 30 40.0	-1.5
	comp=Z,2.1nm,0.6s,baz=338,slow=2.6,SNR=6.8						
NEHR	Nehoiu	156.36	313	⇑P	PKPdf	23 30 17.8	+3.2
MLR	Muntele Rosu	156.55	313		PKPdf	23 30 16.1	+1.1
MLR	Muntele Rosu	156.55	313	⇑P	PKPdf	23 30 15.3	+0.4
MLR	Muntele Rosu	156.55	313	PKIKP	PKPdf	23 30 16.1	+1.1
BSEG	Bad Segeberg	156.87	347	ePKPab	PKPab	23 30 43.7	-1.1
	baz=25,slow=4.4						
MARR	Marisel-Cluj	157.63	318	⇑P	PKPdf	23 30 16.3	+0.1
LOT	Lotru	157.91	315	⇓P	PKPdf	23 30 19.9	+3.2
STEB	Steborice	158.08	331	ePKPAB	PKPab	23 30 50.8	+0.6
FLTG	Flechtingen	158.17	344	ePKPab	PKPab	23 30 49.4	-1.0
	baz=25,slow=4.4						
OSTC	Ostas	158.19	334	ePKPDF	PKPdf	23 30 17.4	+0.7
OSTC	Ostas	158.19	334	ePKIKP	PKPdf	23 30 17.4	+0.7
CHVC	Chvalec	158.23	334	ePKPAB	PKPab	23 30 53.5	+2.6
CHVC	Chvalec	158.23	334	ePKP2	PKPab	23 30 53.5	+2.6
MORC	Moravsky Berou	158.29	331	ePKP	PKPdf	23 30 15.9	-1.0
DPC	Dobruska-Polom	158.32	334	ePKPDF	PKPdf	23 30 17.4	+0.5
DPC				ePKPAB	PKPab	23 30 51.9	+0.6
DPC	Dobruska-Polom	158.32	334	ePKIKP	PKPdf	23 30 17.4	+0.5
DPC				e		23 30 51.9	
KRLC	Kraliky	158.37	333	ePKPAB	PKPab	23 30 52.0	+0.5
KRLC	Kraliky	158.37	333	ePKP2	PKPab	23 30 52.0	+0.5
ASSE	Asse, Remlinge	158.49	344	ePKPab	PKPab	23 30 52.0	+0.2
	baz=25,slow=4.4						
GZR	Gura Zlata	158.53	316	⇑P	PKPdf	23 30 16.7	-0.6
CLL	Collm	158.63	340	ePKPdf	PKPdf	23 30 16.0	-1.2
	comp=Z,10.0nm,1.4s						
CLL				ePKPdif	sPKPdf	23 30 35.0	+1.2
CLL				⇓iPKPab	PKPab	23 30 51.6	-0.9
	comp=Z,10.0nm,0.9s						
CLL				i pPKPab	pPKPab	23 30 55.1	-9.3
	comp=Z,11nm,0.7s						
CLL				ex	x	23 30 58.0	
CLL				ePP	PP	23 34 30.0	-2.6
CLL				AMS	AMS	23 55 00.0	
	comp=Z,100nm,21.0s						
VYHS	Vyhne	158.68	327	ePKP2	PKPab	23 30 52.7	-0.2
VYHS	Vyhne	158.68	327	ePKP	PKPab	23 30 52.7	-0.2
BRG	Berggiesshubel	158.72	338	ePKPab	PKPab	23 30 52.2	-0.8
	baz=25,slow=4.4						
PVCC	Panska Ves	158.81	336	ePKPAB	PKPab	23 30 52.4	-0.9
PVCC	Panska Ves	158.81	336	ePKP2	PKPab	23 30 52.4	-0.9
IBBN	Ibbenburen	158.88	349	ePKPab	PKPab	23 30 54.3	+0.7
	baz=25,slow=4.4						
JAVC	Velka Javorina	158.94	329	ePKP	PKPdf	23 30 17.6	-0.1
RICC	Richard	158.95	337	ePKPAB	PKPab	23 30 55.4	+1.5
VRAC	Vranov	159.05	332	ePKP	PKPdf	23 30 16.6	-1.2
NEUB	Neuenburg	159.06	342	ePKPab	PKPab	23 30 54.1	-0.3
	baz=25,slow=4.4						
BZS	Buzias	159.09	317	⇑P	PKPdf	23 30 17.6	-0.3
GTTG	Gottingen	159.19	345	ePKPab	PKPab	23 30 54.0	-1.0
	baz=25,slow=4.4						
PRU	Pruhonice	159.27	336	ePKPAB	PKPab	23 30 56.0	+0.6
PRU	Pruhonice	159.27	336	ePKP2	PKPab	23 30 56.0	+0.6
KRUC	Moravsky	159.32	331	ePKP	PKPdf	23 30 16.8	-1.3
MODS	Modra-Piesok	159.47	329	ePKIKP	PKPdf	23 30 18.1	-0.2
MODS				e		23 30 55.8	
MODS	Modra-Piesok	159.47	329	ePKP	PKPdf	23 30 18.1	-0.2
MODS				e		23 30 55.8	
MDVR	Moldovita	159.50	315	⇑P	PKPdf	23 30 14.6	-3.9
ZVC	Zvikov	159.85	335	ePKPDF	PKPdf	23 30 18.8	+0.1
ZVC				ePKPAB	PKPab	23 30 57.4	-0.5
UBBA	Unterbreizbach	159.86	344	ePKPab	PKPab	23 30 59.9	+2.1
	baz=25,slow=4.4						
BOVS	Bovan	160.10	313	⇑P	PKPdf	23 30 16.2	-2.9
ROTZ	Rotzenmuhle	160.23	339	ePKPab	PKPab	23 30 59.2	-0.4
	baz=25,slow=4.4						
CKRC	Cesky Krumlov	160.33	334	ePKPDF	PKPdf	23 30 19.1	-0.1
CKRC				ePKPAB	PKPab	23 30 59.4	-0.7
CKRC	Cesky Krumlov	160.33	334	ePKIKP	PKPdf	23 30 19.1	-0.1
CKRC				e		23 30 59.4	
KHC	Kasperske Hory	160.33	336	ePKPDF	PKPdf	23 30 18.7	-0.6
KHC				ePKPAB	PKPab	23 30 58.6	-1.5
KHC	Kasperske Hory	160.33	336	ePKIKP	PKPdf	23 30 18.7	-0.6
KHC				e		23 30 58.6	
MORH	Mrgy, Hungar	160.35	323	⇑P	PKPdf	23 30 18.2	-1.1
RONA	Rosalia, Austr	160.41	329	ePKP	PKPdf	23 30 18.3	-1.1
	comp=Z,5.7nm,1.2s						
RONA				ePKP	PKPab	23 31 00.2	-0.3
	comp=Z,6.9nm,1.1s						
CONA	Conrad Observa	160.43	330	ePKP	PKPdf	23 30 18.6	-0.9
	comp=Z,7.1nm,1.4s						
CONA				ePKP	PKPab	23 30 59.8	-0.8
	comp=Z,3.3nm,0.8s						
GERES	GERESS Array B	160.53	335		PKPdf	23 30 18.9	-0.7
GERES	GERESS Array B	160.53	335	PKP	PKPdf	23 30 18.8	-0.8
	comp=Z,1.3nm,0.9s,baz=304,slow=2.4,SNR=8.6						
GERES				PKPab	PKPab	23 31 00.6	-0.4
	comp=Z,1.2nm,0.7s,baz=18,slow=4.8,SNR=5.7						
GERES	GERESS Array B	160.53	335	PKIKP	PKPdf	23 30 18.9	-0.7
TNS	Taunus Mts	160.76	346	ePKPab	PKPab	23 31 00.9	-1.0
	baz=25,slow=4.4						
UCC	Uccle	160.78	354	dPKP	PKPab	23 31 02.5	+0.7
MEM	Membach	160.79	351	dPKP	PKPab	23 31 00.4	-1.6
ARSA	Arzberg	161.10	329	ePKP	PKPdf	23 30 19.3	-0.9
	comp=Z,6.4nm,1.5s						
MOA	Molln	161.14	333	ePKP	PKPdf	23 30 18.7	-1.5
	comp=Z,11nm,2.0s						
DOU	Dourbes	161.45	354	dPKP	PKPab	23 31 02.7	-2.2
BIOA	Bad Ischl, Aus	161.51	333	ePKP	PKPab	23 31 05.7	+0.4
	comp=Z,5.2nm,0.8s						
TORD	Torodi Ar. Bea	161.56	181		PKPdf	23 30 22.0	+0.5
TORD	Torodi Ar. Bea	161.56	181	PKP	PKPdf	23 30 21.1	-0.4
	comp=Z,5.3nm,0.9s,baz=149,slow=1.7,SNR=14						
TORD				PKPab	PKPab	23 31 06.7	+0.5
	comp=Z,28nm,0.8s,baz=170,slow=2.3,SNR=24						
WLF	Walferdange	161.69	350	dPKP	PKPab	23 31 05.2	-0.7
SOKA	Soboth	161.75	329	i PKP	PKPdf	23 30 19.9	-1.0
	comp=Z,12nm,1.6s,SNR=6.6						
SOKA				ePKP	PKPab	23 31 05.6	-0.8
	comp=Z,5.5nm,1.1s						
RJOB	Jochberg	161.79	335	ePKPab	PKPab	23 31 06.0	-0.5
	baz=25,slow=4.4						
LESA	Schwarzleotal	162.10	335	i PKP	PKPdf	23 30 20.3	-0.9
	comp=Z,16nm,1.2s,SNR=7.3						
WATA	Walderalm	162.56	337	ePKP	PKPdf	23 30 21.5	-0.3
	comp=Z,14nm,1.5s						
BFO	Black Forest	162.58	345	ePKPab	PKPab	23 31 08.6	-1.3
	baz=25,slow=4.4						
WTTA	Wattenberg	162.60	336	ePKP	PKPdf	23 30 21.4	-0.5
	comp=Z,12nm,1.0s						
RETA	Reutte	162.69	338	ePKP	PKPdf	23 30 21.5	-0.4
	comp=Z,3.1nm,1.2s						
RETA				ePKP	PKPab	23 31 10.0	-0.5
	comp=Z,8.1nm,1.0s						
MOTA	Moosalm	162.71	338	ePKP	PKPdf	23 30 21.2	-0.7
	comp=Z,12nm,1.1s						
MOTA				ePKP	PKPab	23 31 10.6	-0.1
	comp=Z,11nm,0.9s						
ABTA	Abfaltersbach	162.73	334	ePKP	PKPdf	23 30 20.8	-1.1
	comp=Z,11nm,1.1s						
ABTA				ePKP	PKPab	23 31 09.3	-1.4
	comp=Z,6.2nm,1.0s						
SQTA	Sankt Quirin	162.78	337	ePKP	PKPdf	23 30 21.6	-0.4
	comp=Z,7.7nm,0.9s						
FETA	Feichten	163.12	338	i PKP	PKPdf	23 30 22.1	-0.3
	comp=Z,14nm,0.9s,SNR=5.3						
FETA				ePKP	PKPab	23 31 12.2	-0.2
	comp=Z,7.8nm,1.2s						
DAVA	Damuels	163.14	340	ePKP	PKPdf	23 30 20.9	-1.4
	comp=Z,8.2nm,1.3s						
DAVA				ePKP	PKPab	23 31 12.4	-0.2
	comp=Z,9.1nm,0.8s						
PMPST	Porto Santo, M	164.87	80	ePKPab	PKPab	23 31 24.2	+3.6
PMPS	Porto Santo	164.87	80	ePKPdf	PKPdf	23 30 25.2	+1.0
TIP	Timpagrande	165.49	305	⇑P	PKPdf	23 30 24.7	+0.1
BNI	Bardonecchia	166.05	345		PKPdf	23 30 25.4	+0.4
BNI	Bardonecchia	166.05	345	PKIKP	PKPdf	23 30 25.4	+0.4
PGAV	Gavieira, Arco	167.10	35	ePKPdf	PKPdf	23 30 27.1	+1.3
PCAB	Cabril	167.41	35	ePKPdf	PKPdf	23 30 27.5	+1.5
PCAB				ePKPab	PKPab	23 31 32.0	+0.6
POLO	Lamas de Olo	167.78	35	ePKPdf	PKPdf	23 30 27.4	+1.0
POLO				ePKPab	PKPab	23 31 33.5	+0.3
PVRL	Vila Real	167.90	35	ePKPdf	PKPdf	23 30 27.6	+1.2
PVRL				ePKPab	PKPab	23 31 34.1	+0.6
PBRG	Braganca	167.93	31	ePKPab	PKPab	23 31 33.8	+0.1
PVIS	Viseu	168.22	37	ePKPdf	PKPdf	23 30 28.2	+1.5
MVO	Moncorvo	168.31	34	ePKPdf	PKPdf	23 30 28.4	+1.7
MVO				ePKPab	PKPab	23 31 36.2	+0.7
PCAS	Casmilo, Conde	168.36	41	ePKPab	PKPab	23 31 37.3	+1.6
MTE	Manteigas	168.63	38	ePKPdf	PKPdf	23 30 28.1	+1.2
PSARD	Sardoal	168.86	42	ePKPdf	PKPdf	23 30 28.2	+1.2
PSARD				ePKPab	PKPab	23 31 38.7	+0.8
PCBR	Castelo Branco	169.07	39	ePKPdf	PKPdf	23 30 28.5	+1.4
PMTG	Montargil	169.17	44	ePKPdf	PKPdf	23 30 28.6	+1.4
PMTG				ePKPab	PKPab	23 31 39.6	+0.3
PMRV	Marv??o	169.41	41	ePKPab	PKPab	23 31 40.6	+0.2
MOE	Montemor	169.44	47	ePKPdf	PKPdf	23 30 29.3	+1.9
EVO	Evora	169.64	46	ePKPdf	PKPdf	23 30 29.1	+1.6
PESTR	Estremoz	169.68	43	ePKPdf	PKPdf	23 30 28.8	+1.3
PTEO	Sao Teotonio	169.75	52	ePKPdf	PKPdf	23 30 28.9	+1.3
MESJ	Messejana	169.92	50	ePKPdf	PKPdf	23 30 29.1	+1.4
MESJ				ePKPab	PKPab	23 31 43.0	+0.3
MORF	Marmelete	169.92	53	ePKPdf	PKPdf	23 30 29.7	+2.0
PCVE	Castro Verde	170.16	50	ePKPdf	PKPdf	23 30 29.4	+1.6
TAM	Tamanrasset	170.45	203		PKPab	23 31 46.9	+1.5
TAM	Tamanrasset	170.45	203	PKP2	PKPab	23 31 46.9	+1.5
PBAR	Barrancos	170.46	45	ePKPdf	PKPdf	23 30 28.5	+0.5
PBAR				ePKPab	PKPab	23 31 45.9	+0.9
PVAQ	Vaqueiros	170.50	51	ePKPdf	PKPdf	23 30 29.4	+1.4
PAB	San Pablo	170.82	30		PKPdf	23 30 29.9	+1.6
PAB	San Pablo	170.82	30	PKIKP	PKPdf	23 30 29.9	+1.6
ESBB	Sonseca Array	170.87	28		PKPdf	23 30 29.6	+1.4
ESDC	Sonseca Array	170.87	28		PKPdf	23 30 29.1	+0.9
ESDC	Sonseca Array	170.87	28	PKP	PKPdf	23 30 27.2	-1.0
	comp=Z,5.4nm,0.9s,baz=344,slow=2.8,SNR=28						
ESDC				PKPab	PKPab	23 31 47.3	+0.5
	comp=Z,2.5nm,0.8s,baz=325,slow=4.0,SNR=13						
KEST	Kesra	172.31	304	PKP	PKPdf	23 30 27.5	-1.6
	comp=Z,6.9nm,0.9s,baz=11,slow=3.2,SNR=7.2						

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*NEIC **13** 23:19:37.7±0.4, 19°.35N±0°.01×155°.116W±0°.009, h8^{km}±1^{km}, Error ellipse: s-maj=1.6km s-min=1.1km az=202.0*

HVO 13 23:19:37.6±0.7**, 19°.36N**±0°.01×**155°.13W**±0°.02**, h7**^{km}±1^{km}**, ML2.8**/41**, ML2.8**/44(NEIC)**, Error ellipse: s-maj=2.6km s-min=1.0km az=122.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
STCH	Steam Cracks	0.03	7		Pg	23 19 39.4	+0.4
STCH					Sg	23 19 40.9	+0.8
JCUZ	Jacuzzi	0.04	42		Pg	23 19 39.4	+0.3
JCUZ					Sg	23 19 40.7	+0.5
NPOC	North of Pu‘u	0.04	26		Pg	23 19 39.5	+0.4
NPOC					Sg	23 19 40.9	+0.7
KNHH	Kane Nui o Ham	0.04	302		Pg	23 19 39.7	+0.5
PUH	Pauahi	0.08	282		Pg	23 19 40.1	+0.4
PUH					Sg	23 19 42.0	+0.8
PUH	Pauahi	0.08	282	IAML		23 19 42.5	
	comp=N,5µm,0.5s						
PUH				IAML		23 19 42.6	
	comp=E,2µm,0.5s						
BYL	Byron's Ledge	0.14	294		Pg	23 19 41.0	+0.4
BYL					Sg	23 19 43.4	+0.8
BYL				IAML		23 19 44.2	
	comp=E,3µm,0.4s						
KKO	Keanakako'i	0.14	288		Pg	23 19 41.0	+0.4
KKO					Sg	23 19 43.3	+0.7
JOKA	Jonika Flow	0.14	57		Pg	23 19 40.6	+0.1
JOKA					Sg	23 19 43.1	+0.5
JOKA	Jonika Flow	0.14	57	IAML		23 19 43.6	
	comp=E,1µm,0.7s						
JOKA				IAML		23 19 45.7	
	comp=N,2µm,0.3s						
HATHI	Halema‘uma‘u T	0.14	298		Pg	23 19 41.0	+0.4
HATHI					Sg	23 19 43.4	+0.7
HATHI	Halema‘uma‘u T	0.14	298	IAML		23 19 45.4	
	comp=E,2µm,0.7s						
HATHI				IAML		23 19 45.9	
	comp=N,1µm,0.3s						
RIM	Rim	0.14	286		Pg	23 19 41.1	+0.4
RIM					Sg	23 19 43.4	+0.7
SBLHI	Steaming Bluff	0.15	298		Pg	23 19 41.1	+0.3
SBLHI					Sg	23 19 43.5	+0.6
UWB	Uwekahuna Bluf	0.16	296		Pg	23 19 41.2	+0.3
UWB					Sg	23 19 43.8	+0.7
OBL	Observatory Le	0.16	293		Pg	23 19 41.3	+0.4
OBL					Sg	23 19 44.0	+0.9
SDHHI	Sand Hill	0.16	282		Pg	23 19 41.2	+0.3
SDHHI					Sg	23 19 43.8	+0.6
UWE	Uwekahuna	0.17	293		Pg	23 19 41.5	+0.4
UWE					Sg	23 19 44.3	+0.8
UWE	Uwekahuna	0.17	293	IAML		23 19 46.4	
	comp=N,1µm,0.5s						
UWE				IAML		23 19 46.5	
	comp=E,1µm,0.3s						
WRMHI	West Rim	0.17	287		Pg	23 19 41.4	+0.3
WRMHI					Sg	23 19 44.2	+0.8
RSD	Rainshed	0.18	307		Sg	23 19 46.6	+2.9
RSD	Rainshed	0.18	307		Pg	23 19 44.1	+2.8
HLP	Hilina Pali	0.18	251		Pg	23 19 41.3	+0.1
HLP				IAML		23 19 45.2	
	comp=E,3µm,0.2s						
HLP				IAML		23 19 45.2	
	comp=N,2µm,0.4s						
HLP	Hilina Pali	0.18	251		Sg	23 19 44.4	+0.7
MLH	Mauna Loa	0.28	300		Pg	23 19 43.5	+0.3
MLH					Sg	23 19 47.6	+0.7
MLH	Mauna Loa	0.28	300	IAML		23 19 49.7	
	comp=N,1µm,0.2s						
MLH				IAML		23 19 50.0	
	comp=E,859nm,0.3s						
HTC	Hot Caves	0.28	245		Pg	23 19 43.5	+0.4
AIN	Ainahou	0.31	273		Pg	23 19 44.0	+0.2
AIN					Sb	23 19 50.5	-0.5
HMH	Humu‘ula Sheep	0.41	306	Pg	Pg	23 19 46.1	+0.3
MWH	Mokuaweoweo	0.46	286	Pg	Pg	23 19 46.7	0.0
MWH				IAML		23 20 00.6	
	comp=N,1µm,0.7s						
KHU	Kahuku	0.47	257		Pg	23 19 46.4	-0.4
KHU				IAML		23 19 59.1	
	comp=N,748nm,0.6s						
KHU				IAML		23 19 59.1	
	comp=E,628nm,0.4s						
HPO	Honuapo	0.48	237		Pg	23 19 47.0	+0.1
POHA	Pohakuloa	0.55	316	Pg	Pg	23 19 48.3	0.0
POHA	Pohakuloa	0.55	316	IAML		23 20 00.4	
	comp=E,926nm,0.4s						
POHA				IAML		23 20 00.5	
	comp=E,829nm,0.3s						
HUH	Hualalai	0.74	296	Pg	Pg	23 19 52.0	+0.1
HPAH	Hawaii Prepara	0.86	321	Pg	Pg	23 19 53.0	-1.1
HPAH				IAML		23 20 06.7	
	comp=E,495nm,0.2s						
HPAH				IAML		23 20 08.3	
	comp=N,268nm,0.2s						
MHA	Mahukona	1.10	319	Pg	Pg	23 19 57.5	-1.2

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*TIF **13** 23:29:00.5, 40°.69N×44°.75E, h10^{km}±1^{km}*
*ISK **13** 23:29:00.6, 40°.67N×44°.70E, h5^{km}, ML2.5/8*
*AZER **13** 23:29:01.2, 40°.61N×44°.98E, h10^{km}, ml2.7*
*AFAD **13** 23:29:01.2, 40°.62N×44°.74E, h7^{km}±1^{km}, ML2.6*
*DRS **13** 23:29:02.1, 40°.63N×44°.81E, h5^{km}*

ISC 13 23:29:00.4±1.0**, 40°.69N**±0°.01×**44°.77E**±0°.02**, h9**^{km}±9^{km}**, n64,** $\sigma 1^{s}.04$**/**123**, 1C, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
QZX	Qazax, Azerbai	0.59	51	P	Pg	23 29 12.5	+0.6
QZX				S	Sb	23 29 20.8	-0.7
GDB	GEDABAY	0.75	87	P	Pg	23 29 14.5	-0.4
GDB				S	Sg	23 29 24.2	-0.6
KZRT	Kazreti	0.75	339	P	Pg	23 29 14.6	-0.4
KZRT				S	Sg	23 29 24.9	+0.1
TASB	TASBURUN-IGDIR	0.81	210	Pg	Pb	23 29 16.5	-0.1
TASB				Sg	Sb	23 29 28.2	+0.5
EAK	Akyaka	0.88	270	P	Pb	23 29 18.1	+0.2
EAK				S	Sn	23 29 30.7	-1.4
EAK				i IAML		23 29 31.0	
	comp=E,208nm,0.5s						
EAK				i IAML		23 29 32.0	
	comp=N,153nm,0.5s						
DGRG	David-gareji	0.89	31	P	Pn	23 29 18.8	-0.3
DGRG				S	Sb	23 29 30.6	+0.5
HYR	Heyderabad	0.97	176	P	Pg	23 29 19.3	+0.3
HYR				S	Sn	23 29 33.9	-0.2
IGDI	IGDIR	0.97	213	P	Pg	23 29 18.8	-0.3
IGDI				S	Sg	23 29 31.9	+0.2
IGDI				i IAML		23 29 32.0	
	comp=N,190nm,0.2s						
IGDI				i IAML		23 29 32.0	
	comp=E,163nm,0.3s						
IGDI	IGDIR	0.97	213	P	Pg	23 29 18.7	-0.3
IGDI				S	Sg	23 29 31.9	+0.2
TRLG	Trialeti	0.99	330	P	Pb	23 29 19.7	-0.1
TRLG				S	Sn	23 29 33.3	-1.5
TBLG	Delisi	1.05	359	P	Pg	23 29 20.6	+0.1
TBLG				S	Sn	23 29 35.1	-0.9
BGD	Bogdanovka	1.06	304	P	Pn	23 29 21.8	+0.2
BGD				S	Sn	23 29 37.3	+0.8
SEAG	Tbilisi Sea	1.08	2	P	Pn	23 29 21.4	-0.3
SEAG				S	Sn	23 29 36.7	-0.2
DIGO	Kars	1.09	256	P	Pn	23 29 21.9	-0.3
DIGO				S	Sn	23 29 37.3	-0.2
GANJ	Ganja	1.19	91	P	Pn	23 29 22.2	-0.9
GANJ				S	Sb	23 29 37.6	-0.9
AKH	Akhalkalaki	1.21	307	P	Pg	23 29 24.3	+0.7
AKH				S	Sn	23 29 40.6	+0.5
AKH	Akhalkalaki	1.21	307	Pn	Pg	23 29 24.3	+0.7
AKH				Sn	Sn	23 29 41.4	+1.3
KARS	Kars	1.28	268	Pn	Pg	23 29 24.9	-0.2
KARS				Sn	Sg	23 29 43.0	+1.3
VSHL	Vashlovani	1.35	66	P	Pg	23 29 26.8	+0.4
VSHL				S	Sg	23 29 47.1	+3.1
BOZK	Kars-Merkez-Bo	1.36	267	P	Pg	23 29 26.3	-0.3
BOZK				S	Sg	23 29 45.0	+0.7
SBZ	Shahbuz	1.42	155	P	Pb	23 29 27.2	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SBZ				S	Sb	23 29 45.9	+0.5
LGD	Lagodekhi	1.60	44	P	Pb	23 29 30.4	+0.2
LGD				S	Sg	23 29 52.4	+0.6
NAX	Nakhchivan	1.61	159	Pn	Pg	23 29 31.1	-0.2
NAX				Sn	Sg	23 29 52.9	+0.7
CHRG	Chargali	1.65	4	P	Pg	23 29 31.6	-0.4
CHRG				S	Sg	23 29 54.1	+0.7
ALIG	Mtskhetisjvari	1.65	330	P	Pb	23 29 31.2	+0.2
ALIG				S	Sg	23 29 53.5	+0.1
CLDR	Caldiran	1.67	203	Pn	Pb	23 29 31.1	-0.4
CLDR				Sn	Sg	23 29 55.4	+1.2
ZKTA	Zakatala	1.69	55	Pn	Pb	23 29 32.2	+0.5
ZKTA				Sn	Sg	23 29 55.2	+0.3
AGRB	Hanur-Agry	1.75	231	Pn	Pb	23 29 32.8	0.0
AGRB				Sn	Sg	23 29 56.7	-0.1
MNGR	Mingechevir, A	1.77	86	Pn	Pb	23 29 33.0	+0.1
MNGR				Sn	Sg	23 29 57.4	+0.2
GUDG	Gudauri	1.79	353	P	Pb	23 29 34.0	+0.4
GUDG				S	Sg	23 29 58.0	0.0
SENK	Senkaya-Erzuru	1.84	267	Pn	Pb	23 29 33.9	-0.5
SENK				Sn	Sg	23 29 58.4	-1.2
AGDM	Agdam	1.88	107	Pn	Pb	23 29 34.8	-0.1
AGDM				Sn	Sg	23 30 00.9	+0.1
BRDA	Brd	1.89	102	Pn	Pb	23 29 35.0	0.0
BRDA				Sn	Sg	23 30 03.1	+2.0
SEKA	Sheki	1.92	73	Pg	Pb	23 29 35.2	-0.3
SEKA				Sg	Sb	23 30 00.3	+0.7
SHTL	Shatili	1.99	8	P	Pb	23 29 37.2	+0.4
SHTL				S	Sg	23 30 03.9	-0.5
ORD	Ordubad	1.99	151	Pn	Pb	23 29 37.0	+0.1
ORD				Sn	Sg	23 30 03.6	-0.8
TKB	Tkibuli	2.13	322	P	Pg	23 29 40.0	-1.2
TKB				S	Sg	23 30 08.6	-0.3
GARIG	Gari	2.15	334	P	Pb	23 29 39.8	+0.2
GARIG				S	Sg	23 30 08.6	-0.9
BTLR	Botlikh	2.26	28	*e*Pn	Pb	23 29 41.4	0.0
	5.0nm,0.6s						
BTLR				*e*Sn	Sg	23 30 11.3	-1.7
	62nm,0.6s						
KMKR	Kumukh	2.27	50	*e*Pn	Pb	23 29 41.4	-0.3
	22nm,0.6s						
KMKR				*e*Sn	Sb	23 30 11.5	+1.5
	156nm,0.5s						
MLAZ	Malazgirt-MUS	2.30	229	Pn	Pb	23 29 40.8	-1.3
KOPR	Koprukoy-ERZUR	2.33	254	Pn	Pb	23 29 40.9	-1.8
BLQ	Beylaqan	2.35	113	Pg	Pg	23 29 45.2	-0.1
BLQ				Sg	Sg	23 30 14.9	-0.9
QBL	Gabala	2.35	83	Pg	Pb	23 29 42.3	-0.5
QBL				Sg	Sg	23 30 14.9	-0.9
GNBR	Gunib	2.37	43	*e*Pn	Pb	23 29 43.0	-0.3
	8.0nm,0.6s						
GNBR				*e*Sn	Sb	23 30 14.2	+1.5
	111nm,0.5s						
AKT	Akhty	2.38	70	*e*Pn	Pb	23 29 42.5	-1.0
	11nm,0.4s						
AKT				*e*Sn	Sb	23 30 13.4	+0.5
	96nm,0.3s						
DVE	Vedeno	2.49	24	*e*Pn	Pb	23 29 44.7	-0.6
	21nm,0.7s						
DVE				*e*Sn	Sb	23 30 17.0	+1.0
	46nm,0.6s						
UNCR	Uncukul	2.53	36	*e*Pn	Pb	23 29 45.0	-1.0
	7.0nm,0.3s						
UNCR				*e*Sn	Sb	23 30 18.1	+0.8
	29nm,0.5s						
ARKR	Arakani	2.54	40	*e*Pn	Pb	23 29 45.8	-0.4
	7.0nm,0.5s						
ARKR				*e*Sn	Sb	23 30 19.2	+1.6
	38nm,0.4s						
IML	Ismayilli	2.60	86	Pg	Pb	23 29 45.5	-1.6
IML				Sg	Sb	23 30 20.2	+1.0
XNQ	Khinaliq	2.60	78	Pg	Pb	23 29 45.9	-1.4
XNQ				Sg	Sb	23 30 20.9	+1.4
URKR	Urkarakh	2.62	55	*e*Pn	Pb	23 29 45.9	-1.6
	6.0nm,0.6s						
URKR				*e*Sn	Sb	23 30 19.4	-0.4
	11nm,0.2s						
GROC	Groznyy	2.63	17	*e*Pn	Pb	23 29 46.9	-0.8
	11nm,0.5s						
GROC				*e*Sn	Sb	23 30 21.2	+1.1
	82nm,0.5s						
KRNR	Karanay	2.67	36	*e*Pn	Pb	23 29 47.1	-1.4
	7.0nm,0.3s						
KRNR				*e*Sn	Sb	23 30 21.4	-0.1
	8.0nm,0.5s						
KSMR	Kasumkent	2.70	69	*e*Pn	Pb	23 29 46.6	-2.3
	10.0nm,0.7s						
KSMR				*e*Sn	Sb	23 30 20.8	-1.4
	75nm,0.5s						
DLMR	Dylym	2.76	30	*e*Pn	Pb	23 29 48.0	-1.9
	20nm,0.2s						
DLMR				*e*Sn	Sb	23 30 23.4	-0.4
	38nm,0.5s						
BUJR	Buynaksk	2.77	39	*e*Pn	Pb	23 29 47.8	-2.2
	13nm,0.6s						
BUJR				*e*Sn	Sb	23 30 23.2	-0.8
	29nm,0.6s						
QUBA	Quba, Azerbaij	2.90	75	Pg	Pn	23 29 46.9	+0.2
QUBA				Sg	Sb	23 30 30.7	+2.8
PQL	Pirkuli	2.91	87	Pg	Pn	23 29 47.7	+0.7
PQL				Sg	Sb	23 30 30.3	+2.1
SIZA	Siyzn	3.16	82	Pg	Pn	23 29 52.8	+2.5
SIZA				Sg	Sb	23 30 37.3	+2.0
GBS	Qobustan	3.18	91	Pg	Pb	23 29 54.8	-2.3
YRD	Yardimli	3.21	122	Pg	Pb	23 29 54.8	-2.8
YRD				Sg	Sb	23 30 37.9	+1.0
HAKT	HAKKARI	3.23	195	Pg	Pb	23 29 57.8	-0.3
KIV	Kislovodsk	3.61	335	⇑P	Pn	23 29 57.9	+1.3

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*IDC **13** 23:30:42.4±15.0, 22°.24S×178°.87E, h350^{km}±140^{km}, mb3.0/4, mbtmp3.7/4, Error ellipse: s-maj=61.7km s-min=29.3km az=54.0*

ISC 13 23:30:41.6±1.0**, 22°.2S**±0°.2×**179°.0E**±0°.3**, h350^{km}, n12, σ1^{s}02**/12**, mb3.2**/4**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	41.39	259	P	P	23 37 54.3	-0.8
	0.7nm,0.4s,baz=92,slow=7.3,SNR=14						
	0.7nm,0.4s						
WRA	Warramunga Arr	41.58	265	P	P	23 37 57.8	+1.1
	0.5nm,0.5s,baz=101,slow=6.7,SNR=6.9						
	0.5nm,0.5s						
VNDA	Vanda	56.01	184	P	P	23 39 44.7	+0.4
	0.6nm,0.6s,baz=33,slow=6.3,SNR=7.3						
	0.6nm,0.6s						
ILAR	Eielson Array	90.60	14	P	P	23 43 04.8	+0.6
	0.2nm,0.7s,baz=197,slow=5.6,SNR=1.8						
	0.2nm,0.7s						
BVAR	Borovoye Array	118.52	319	PKP	PKPdf	23 48 47.1	-0.7
	0.5nm,0.5s,baz=116,slow=3.4,SNR=3.2						
ARCES	ARCESS Array B	130.01	348	PKP	PKiKP	23 49 10.7	+0.5
	1.8nm,0.9s,baz=27,slow=2.0,SNR=1.7						
FINES	FINESS Array B	136.52	341	PKP	PKiKP	23 49 23.7	+0.1
	0.6nm,0.7s,baz=116,slow=3.2,SNR=0.8						
NB2	NORSAR Subarra	140.24	351	PKP	PKPdf	23 49 27.2	-1.5
	comp=Z,0.8nm,0.7s,baz=19,slow=3.3						
NOA	NORSAR Array B	140.24	351	PKP	PKPdf	23 49 26.9	-1.7
	comp=Z,0.9nm,0.7s,baz=22,slow=3.8,SNR=6.0						
HFS	Hagfors	140.68	348	PKP	PKPdf	23 49 28.5	-0.9
	comp=Z,1.1nm,0.3s,baz=64,slow=3.4,SNR=16						
MMAI	Mount Meron Ar	146.09	297	PKPbc	PKPbc	23 49 41.5	+0.1
	comp=Z,0.9nm,0.4s,baz=82,slow=6.3,SNR=6.6						
EKA	Eskdalemuir Ar	146.86	2	PKPbc	PKPbc	23 49 43.5	+0.8
	comp=Z,0.3nm,0.4s,baz=338,slow=2.7,SNR=4.1						

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*IDC **13** 23:43:58.3±1.1, 4°.23N×125°.46E, h0^{km}, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=81.7km s-min=21.8km az=66.0*

ISC 13 23:44:03.5±1.1**, 4°.2N**±0°.2×**125°.3E**±0°.5**, h35^{km}, n6, σ1^{s}22**/6**, mb3.7**/6**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.56	160	P	P	23 49 28.6	-0.7
	0.2nm,0.3s,baz=342,slow=9.4,SNR=5.0						
	0.2nm,0.3s						
ASAR	Alice Springs	28.92	164	P	P	23 49 59.9	+0.4
	0.1nm,0.3s,baz=343,slow=8.6,SNR=1.3						
	0.1nm,0.3s						
MKAR	Makanchi Array	56.38	326	P	P	23 53 42.5	+1.2
	0.4nm,0.4s,baz=123,slow=7.9,SNR=9.9						
	0.4nm,0.4s						
KURBB	Kurchatov Arra	60.60	328	P	P	23 54 11.2	+0.6
	0.9nm,0.6s,baz=126,slow=7.3,SNR=4.5						
	0.9nm,0.6s						
BVAR	Borovoye Array	66.17	327	P	P	23 54 46.1	-1.4
	0.3nm,0.4s,baz=121,slow=6.6,SNR=2.5						
	0.3nm,0.4s						
ILAR	Eielson Array	85.32	25	P	P	23 56 36.9	+0.2
	0.3nm,0.8s,baz=252,slow=4.9,SNR=2.1						
	0.3nm,0.8s						

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*SJA **14** 00:19:09.5±2.2, 30°.09S×72°.34W, h10^{km}, ML5.8, MW6.2*

*IDC **14** 00:19:10.6±0.3, 30°.08S×71°.87W, h0^{km}, mb5.3/30, mbtmp5.2/35, ML4.4/5, MS6.1/41, Error ellipse: s-maj=14.6km s-min=9.1km az=88.0*

*MOS **14** 00:19:10.4±1.0, 30°.04S×71°.99W, h13^{km}, mb5.9/60, MS6.1/28, Error ellipse: s-maj=9.9km s-min=5.4km az=101.0*

*IPGP **14** 00:19:10.0, 30°.04S×72°.16W, h11^{km}, Mw6.4, Fault plane solution: NP1:φ$_{s}$11.00000°, δ23.00000°, λ105.00000°. NP2:φ$_{s}$174.00000°, δ68.00000°, λ84.00000°.*

*OSUNB **14** 00:19:11.5±0.3, 30°.07S×72°.01W, h12^{km}±2^{km}, mb5.6/64, Error ellipse: s-maj=2.2km s-min=2.1km az=0.0*

*BJI **14** 00:19:11.1, 30°.06S×72°.14W, h10^{km}, mB6.4/50, Ms6.4/86, Ms7 6.4/85*

*GUC **14** 00:19:11.7±0.7, 30°.08S×72°.16W, h31^{km}±4^{km}, ML6.3*

*NEIC **14** 00:19:12.1, 30°.04S×72°.12W, h16^{km}, Moment Tensor Solution. Duration: 22^{s}7 Moment tensor: Scale 10^{18}Nm; M$_{rr}$2.68; M$_{θθ}$-0.07; M$_{φφ}$-2.61; M$_{rθ}$-0.16; M$_{θφ}$-0.09; M$_{φr}$-4.25; Fault plane solution: M$_{0}$5.01000×10^{18} NP1: φ$_{s}$1.83000°, δ15.97000°, λ89.77000°. NP2:φ$_{s}$182.07000°, δ74.03000°, λ90.07000°. Principal axes: T 5.0430, Plg61.0000°, Azm92.0000°; N -0.0687, Plg0.0000°, Azm2.0000°; P -4.9743, Plg29.0000°, Azm272.0000°;*

*NEIC **14** 00:19:12.1, 30°.04S×72°.12W, h16^{km}*

*VAO **14** 00:19:12.7±0.2, 29°.98S×71°.86W, h10^{km}, mb5.6*

*NEIC **14** 00:19:12.3, 30°.04S×72°.11W, h10^{km}*

*NEIC **14** 00:19:12.3, 30°.06S×72°.08W, h10^{km}*

*NEIC **14** 00:19:12.4±1.8, 30°.06S±0°.04×72°.08W±0°.04, h11^{km}±1^{km}, mb5.9/679, Ms_20 6.0/891, Mwb6.2/85, Mwr6.2/102, Mww6.4/80, Mww6.3(GUC), Error ellipse: s-maj=6.7km s-min=5.7km az=214.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$1.84; M$_{θθ}$0.01; M$_{φφ}$-1.85; M$_{rθ}$0.24; M$_{θφ}$-0.08; M$_{φr}$-1.79; Fault plane solution: M$_{0}$2.58000×10^{18} NP1:φ$_{s}$9.37000°, δ23.32000°, λ102.78000°. NP2:φ$_{s}$175.50000°, δ67.29000°, λ84.55000°. Principal axes: T 2.5895, Plg67.0000°, Azm75.0000°; N -0.0123, Plg5.0000°, Azm178.0000°; P -2.5772, Plg22.0000°, Azm270.0000°; Moment Tensor Solution. Moment tensor: Scale 10^{18} Nm; M$_{rr}$1.55; M$_{θθ}$0.06; M$_{φφ}$-1.61; M$_{rθ}$0.15; M$_{θφ}$-0.29; M$_{φr}$-1.71; Fault plane solution: M$_{0}$2.35000×10^{18} NP1:φ$_{s}$20.96000°, δ22.81000°, λ110.49000°. NP2:φ$_{s}$178.89000°, δ68.71000°, λ81.63000°. Principal axes: T 2.3222, Plg65.0000°, Azm75.0000°; N 0.0488, Plg8.0000°, Azm182.0000°; P -2.3709, Plg23.0000°, Azm275.0000°;*

*ISC-PP **14** 00:19:12, 30°.06S×72°.08W, h2^{km}, Mwppsm6.5, Moment Tensor Solution. s30 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.58±.14; M$_{θθ}$0.00±.18; M$_{φφ}$-0.76±.21; M$_{rθ}$-0.12±.12; M$_{θφ}$-0.15±.25; M$_{φr}$0.04±.11; Fault plane solution: M$_{0}$8.32000×10^{18} NP1:φ$_{s}$188.10000°, δ52.10000°, λ104.70000°. NP2:φ$_{s}$344.90000°, δ40.20000°, λ71.90000°.*

*GCMT **14** 00:19:17.4±0.0, 30°.12S×72°.16W, h12^{km}, MW6.3/169, Moment Tensor Solution. s167,c395; s169,c709; Duration: 3^{s}5 Moment tensor: Scale 10^{18}Nm; M$_{rr}$2.43±.01; M$_{θθ}$0.06±.01; M$_{φφ}$-2.50±.01; M$_{rθ}$-0.17±.03; M$_{θφ}$-0.11±.01; M$_{φr}$-2.71±.03; Best double couple: M$_{0}$3.66900×10^{18} NP1:φ$_{s}$1.00000°, δ21.00000°, λ88.00000°. NP2:φ$_{s}$183.00000°, δ69.00000°, λ91.00000°. Principal axes: T 3.6320, Plg66.0000°, Azm94.0000°; N 0.0650, Plg1.0000°, Azm3.0000°; P -3.7060, Plg24.0000°, Azm273.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 14 00:19:11.1±0.3**, 30°.08S**±0°.02×**72°.10W**±0°.02**, h10^{km}**±1^{km}**, h10^{km}:pP-P, n2171, σ1^{s}89**/2074**, mb5.9**/433**, MS6.0**/501**, 139C-24D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.72	146		Pb	00 19 25.6	-0.2
CO06				Sg	Sb	00 19 36.5	+0.8
CO06	Fray Jorge	0.72	146	⇓*i*P	Pg	00 19 25.4	+0.4
CO06				*e*S	Sb	00 19 35.8	0.0
CO05	La Serena	0.77	78		Pb	00 19 26.8	+0.3
CO05				Sg	Sb	00 19 38.2	+1.2
CO05	La Serena	0.77	78	⇓*i*P	Pb	00 19 26.8	+0.3
CO05				*e*S	Sn	00 19 38.4	-1.3
GO04	Tololo Observa	1.13	95	Pn	Pn	00 19 33.2	-0.1
GO04				Sn	Sn	00 19 49.7	+0.6
GO04	Tololo Observa	1.13	95	⇓*i*P	Pg	00 19 32.8	-0.1
GO04				*e*S	Sn	00 19 48.9	-0.2
CO03	El Pedregal	1.44	122		Pn	00 19 37.5	+0.1
CO03				Sn	Sg	00 19 57.1	-0.3
CO03	El Pedregal	1.44	122	⇓*i*P	Pn	00 19 37.3	-0.1
CO03				*e*S	Sg	00 19 57.3	-0.1
CO03	El Pedregal	1.44	122	*e*P	Pb	00 19 38.2	+0.1
CO03				*e*S	Sg	00 20 01.1	+3.7
CO03				IAML		00 20 06.4	
	comp=Z,80μm,0.6s						
CO02	Combarbal	1.47	140		Pn	00 19 37.8	-0.1
CO02				Sn	Sg	00 19 58.2	-0.4
CO02	Combarbal	1.47	140	⇓*i*P	Pn	00 19 37.8	-0.1
CO02				*e*S	Sb	00 19 57.7	+0.1
CO02	Combarbal	1.47	140	⇓P	Pn	00 19 37.8	-0.1
CO02	Combarbal	1.47	140	*e*P	Pb	00 19 38.6	-0.1
CO02				*e*S	Sg	00 20 01.2	+2.6
CO02				IAML		00 20 07.1	
	comp=Z,90μm,0.6s						
LCO	Las Campanas	1.62	49		Pn	00 19 39.6	-0.4
LCO	Las Campanas	1.62	49	*e*P	Pn	00 19 39.6	-0.4
LCO	Las Campanas	1.62	49	⇑*i*P	Pn	00 19 40.0	0.0
LCO				*e*S	Sg	00 20 02.6	-0.6
LCO				IAML		00 20 10.1	
	comp=Z,511μm,0.6s						
LCO	Las Campanas	1.62	49	⇑P	Pn	00 19 40.0	0.0
LCO	Las Campanas	1.62	49	*e*P	Pg	00 19 42.6	+0.5
LCO				*e*S	Sg	00 20 08.1	+4.9
LCO				IAML		00 20 15.0	
	comp=Z,235μm,0.7s						
AC04	Llanos de Chal	2.07	26		Pn	00 19 44.5	-1.4
AC04	Llanos de Chal	2.07	26	⇑*i*P	Pn	00 19 44.9	-1.1
AROD	Rodeo	2.28	93	*e*P	Pb	00 19 52.2	-0.4
VA06	Catapilco	2.57	165		Pn	00 19 52.2	-0.6
VA06	Catapilco	2.57	165	⇑*i*P	Pn	00 19 52.4	-0.5
VA06				*e*S	Sn	00 20 24.1	-0.2
ACDV	Cuesta del Vie	2.59	93	*e*P	Pb	00 19 57.3	-0.4
ACDV				IAML		00 20 47.0	
	comp=Z,23μm,0.7s						
RTLS	Leoncito	2.96	126	*e*P	Pb	00 20 02.1	-2.1
RTLS				*e*S	Sb	00 20 42.6	+2.0
RTLS				IAML		00 20 53.7	
	comp=Z,93μm,2.6s						
VA01	Torpederas	2.96	173		Pn	00 19 57.4	-0.9
VA01	Torpederas	2.96	173	*e*P	Pn	00 19 57.3	-0.9
VA01	Torpederas	2.96	173	*e*P	Pn	00 19 58.9	+0.6
VA01				*e*S	Sb	00 20 38.8	-1.6
VA01				IAML		00 20 57.9	
	comp=Z,11μm,1.2s						
GO03	Copiapo	2.97	34		Pn	00 19 57.9	-0.5
GO03	Copiapo	2.97	34	⇑*i*P	Pn	00 19 57.8	-0.5
GO03	Copiapo	2.97	34	⇑P	Pn	00 19 57.8	-0.5
VA03	San Esteban	2.99	154		Pn	00 19 59.5	+0.8
VA03	San Esteban	2.99	154	*e*P	Pn	00 19 59.3	+0.5
VA03				*e*S	Sn	00 20 34.9	+0.2
VA03	San Esteban	2.99	154	*e*P	Pn	00 20 00.0	+1.3
VA03				IAML		00 20 57.6	
	comp=Z,29μm,1.3s						
ROCH	El Roble	3.04	162	*e*P	Pn	00 19 59.5	0.0
AC06	Mina Casimiro	3.11	30		Pn	00 20 00.3	-0.1
AC06	Mina Casimiro	3.11	30	⇑*i*P	Pn	00 20 00.2	-0.2
AGUA	GUANDACOL	3.19	80	*e*P	Pb	00 20 06.0	-2.0
AGUA				IAML		00 21 01.9	
	comp=Z,44μm,1.7s						
MT02	Curacav	3.28	166		Pn	00 20 02.3	-0.3
MT02	Curacav	3.28	166	⇑*i*P	Pn	00 20 01.9	-0.7
PEL	Peldehue	3.29	159		Pn	00 20 03.3	+0.5
PEL	Peldehue	3.29	159	P	Pn	00 20 03.3	+0.5
PEL	Peldehue	3.29	159	⇑*i*P	Pn	00 20 03.2	+0.5
PEL	Peldehue	3.29	159	⇑P	Pn	00 20 03.3	+0.5
ZON	Zonda	3.29	117		Pn	00 20 04.2	+1.4
ZON	Zonda	3.29	117	P	Pn	00 20 04.2	+1.4
ZON	Zonda	3.29	117	⇑P	Pn	00 20 06.1	+3.3
ZON	Zonda	3.29	117	*e*P	Pb	00 20 06.5	-3.2
ZON				*e*S	Sb	00 20 49.8	0.0
ZON				IAML		00 20 59.0	
	comp=Z,19μm,2.0s						
MT10	Hacienda Santa	3.46	158	⇑*i*P	Pn	00 20 05.6	+0.4
MT05	Renca	3.51	161		Pn	00 20 06.5	+0.7
FCH	Farellones	3.59	155	⇑*e*P	Pn	00 20 08.1	+0.9
VA05	Santo Domingo	3.60	173		Pn	00 20 06.1	-0.8
MT16	CCHEN	3.60	158		Pn	00 20 08.3	+1.2
CFA	Coronel Fontan	3.66	116	Pn	Pn	00 20 10.7	+2.8
	comp=Z,66nm,0.3s,baz=300,slow=15,SNR=190						
CFA				Sn	Sn	00 20 52.8	+1.7
	comp=Z,228nm,0.3s,baz=314,slow=16,SNR=4.1						
CFA				LR	LR	00 21 39.9	
	comp=Z,264μm,19.2s,baz=284,slow=43						
MT03	Universidad Ad	3.67	159	Pn	Pn	00 20 08.7	+0.6
MT08	Bocatoma Ro	3.80	153		Pn	00 20 12.5	+2.5
MT09	Talagante	3.81	166		Pn	00 20 09.8	-0.2
MT01	Popeta	3.85	169		Pn	00 20 10.4	0.0
MT13	San Alfonso	3.97	158		Pn	00 20 12.1	-0.1
AAGR	Agrelo	4.10	138	*e*P	Pn	00 20 17.1	+3.1
AAGR				IAML		00 22 58.2	
	comp=Z,3μm,2.9s						
BO04	La Punta	4.10	162		Pn	00 20 14.1	+0.1
AC01	Pan de Azucar	4.13	19		Pn	00 20 12.3	-2.0
AC02	Maricunga	4.16	40		Pn	00 20 15.7	+0.6
BO01	Tunca	4.39	169		Pn	00 20 17.9	0.0
BO02	Sierra Bellavi	4.83	167		Pn	00 20 24.0	-0.1
GO02	Mina Guanaco	5.38	25	⇑P	Pn	00 20 30.2	-1.5
PB14	IPOC Station P	5.63	16	P	Pn	00 20 31.7	-3.6
PB10	IPOC Station P	6.68	12		Pn	00 20 48.2	-1.2
H03N1	Juan Fernandez	6.70	238	Pn	Pn	00 20 47.4	-2.0
	baz=112,slow=19						
H03N1				T	T	00 28 01.2	
	baz=70,slow=72,SNR=434						
H03N2	Juan Fernandez	6.71	238	Pn	Pn	00 20 47.8	-1.8
	baz=112,slow=19						
H03N2				T	T	00 28 06.4	
	baz=70,slow=72,SNR=537						
H03N3	Juan Fernandez	6.71	238	Pn	Pn	00 20 47.3	-2.3
	baz=112,slow=19						
H03N3				T	T	00 28 05.1	
	baz=70,slow=72,SNR=403						
BI05	Punta Hualpn	6.72	187		Pn	00 20 48.3	-1.5
VA04	Juan Fernndez	6.74	236		Pn	00 20 47.6	-2.5
VA04	Juan Fernndez	6.74	236	⇓P	Pn	00 20 46.8	-3.4
PB05	IPOC Station P	7.39	14		Pn	00 20 55.5	-3.7
PB06	IPOC Station P	7.68	18		Pn	00 21 00.4	-2.9
AF01	San Pedro de A	7.92	27		Pn	00 21 05.3	-1.3
PB03	IPOC Station P	8.27	15		Pn	00 21 08.5	-2.8
PB09	IPOC Station P	8.64	18		Pn	00 21 15.0	-1.4
LR03	Panguipulli	9.54	181		Pn	00 21 28.1	-0.5
TA01	Diego Aracena	9.63	11		Pn	00 21 29.3	-0.5
TA02	Huaiquique	9.92	11		Pn	00 21 33.4	-0.5
LR05	Currie	10.13	180		Pn	00 21 35.6	-1.0
PB08	IPOC Station P	10.24	16	P	Pn	00 21 36.2	-2.4
PB11	IPOC Station P	10.51	13		Pn	00 21 39.5	-2.6
PLCA	Paso Flores	10.71	174		Pn	00 21 44.5	-0.1
PLCA	Paso Flores	10.71	174	Pn	Pn	00 21 44.9	+0.2
	comp=Z,2.0nm,0.3s,baz=332,slow=13,SNR=63						
PLCA				Sn	Sn	00 23 51.7	+7.0
	comp=Z,0.7nm,0.3s,baz=279,slow=3.7,SNR=2.1						
PLCA				LR	LR	00 26 22.4	
	comp=Z,122μm,19.3s,baz=350,slow=40						
	comp=Z,13nm,0.3s						
PLCA	Paso Flores	10.71	174	*e*P	Pn	00 21 44.6	-0.1
PLCA	Paso Flores	10.71	174	⇓P	Pn	00 21 44.5	-0.1
LL03	Petrohue	11.04	181	Pn	Pn	00 21 48.8	-0.3
LL05	Los Muermos	11.36	185	Pn	Pn	00 21 53.1	-0.4
TRQA	Tornquist	11.56	136		Pn	00 21 56.2	-0.1
TRQA	Tornquist	11.56	136	P	Pn	00 21 56.2	-0.1
TRQA	Tornquist	11.56	136	P	Pn	00 21 55.6	-0.7
TRQA				S	Sn	00 24 01.4	-4.1
TRQA	Tornquist	11.56	136	*e*P	Pn	00 21 58.3	+2.0
AP01	Chacalluta	11.76	8	Pn	Pn	00 21 59.7	+0.6
PB16	IPOC Station P	11.92	12		Pn	00 22 01.1	-0.7
LL06	Loncomilla	12.18	185		Pn	00 22 04.8	+0.1
LL01	San Ignacio de	12.28	181		Pn	00 22 05.0	-1.1
LL01	San Ignacio de	12.28	181	⇓P	Pn	00 22 08.2	+2.2
PB18	Visviri	12.66	11		Pn	00 22 10.2	-1.6
LL07	Hotel Espejo d	12.78	185	Pn	Pn	00 22 12.3	-0.5
LPA	La Plata	12.89	116	*i* P	Pn	00 22 06.7	-7.8
LPA	La Plata	12.89	116	PN	Pn	00 22 12.5	-2.0
LPA				pP		00 22 18.7	
LPA				sP		00 22 25.6	
LPA				PP	PnPn	00 22 32.5	+10
LPA				pPP		00 22 48.2	
LPA				PPP	PPP	00 23 02.8	
LPA				S	Sn	00 24 32.3	-5.8
LPA	La Plata	12.89	116	SN	Sn	00 24 38.4	+0.3
LPA				sS		00 24 45.4	
LPA				SS	SnSn	00 24 59.0	+8.8
LPA				SSS	SSS	00 26 37.2	
LPA				PCP	PcP	00 27 55.4	+6.3
LPA				SCS	ScS	00 35 02.0	+3.1
LPA				PKIKP	PKiKP	00 35 38.8	-7.5
LPA				SKIKP		00 39 18.7	
LPA				PKIKS		00 39 24.6	
LPA				SKIKS		00 42 46.6	
GO07	Milladeo Hill,	13.07	185		Pn	00 22 15.6	-1.3
LL02	Futaleuf	13.09	179		Pn	00 22 17.9	+0.7
ITQB	Itaqui	13.44	92		Pn	00 22 20.6	-1.3
ITQB	Itaqui	13.44	92	P	Pn	00 22 18.8	-3.1
ITQB	Itaqui	13.44	92	*e*P	Pn	00 22 20.1	-1.9
CPUP	Villa Florida	13.55	78		Pn	00 22 21.2	-2.2
CPUP	Villa Florida	13.55	78	Pn	Pn	00 22 21.7	-1.8
	comp=Z,0.1nm,0.3s,baz=118,slow=11,SNR=12						
CPUP				Sn	Sn	00 24 57.0	+2.8
	comp=Z,0.6nm,0.3s,baz=145,slow=15,SNR=1.3						
CPUP				LR	LR	00 28 00.5	
	comp=Z,58μm,18.7s,baz=113,slow=40						
	comp=Z,7.9nm,1.3s						
CPUP	Villa Florida	13.55	78	P	Pn	00 22 18.7	-4.8
CPUP	Villa Florida	13.55	78	⇑P	Pn	00 22 19.8	-3.7
CPUP	Villa Florida	13.55	78	*e*P	Pn	00 22 20.6	-2.8
LPAZ	La Paz	14.20	16		Pn	00 22 30.8	-2.1
LPAZ	La Paz	14.20	16	Pn	Pn	00 22 32.2	-0.7
	comp=Z,1.4nm,0.3s,baz=212,slow=5.2,SNR=26						
LPAZ				Sn	Sn	00 25 17.5	+6.6
	comp=Z,0.6nm,0.3s,baz=192,slow=16,SNR=1.1						
LPAZ				LR	LR	00 28 48.3	
	comp=Z,86μm,19.4s,baz=190,slow=41						
	comp=Z,88nm,0.7s						
LPAZ	La Paz	14.20	16	*e*P	Pn	00 22 30.8	-2.1
LPAZ	La Paz	14.20	16	P	Pn	00 22 32.0	-0.9
LPAZ				S	Sn	00 25 16.9	+5.9
LPAZ	La Paz	14.20	16	⇑P	Pn	00 22 30.1	-2.8
LPAZ	La Paz	14.20	16	*e*P	Pn	00 22 31.3	-1.7
LPAZ	La Paz	14.20	16	P	Pn	00 22 29.4	-3.5
	comp=Z,43μmcomp=Z,11μmcomp=Z,264nm,1.4s						
SJPY	San Joaquin	15.06	74	*e*P	Pn	00 22 42.3	-1.9
COYC	Coyhaique	15.47	180		Pn	00 22 48.5	-0.9
COYC	Coyhaique	15.47	180	⇑P	Pn	00 22 50.3	+0.9
MURT	Porto Murtinho	15.49	61	*e*P	Pn	00 22 46.8	-3.0
PLTB	Pedras Altas	15.97	101	Pn	Pn	00 22 54.2	-1.8
PLTB	Pedras Altas	15.97	101	P	Pn	00 22 51.6	-4.3
PLTB				S	Sn	00 25 50.3	-2.8
CPSB	Cacapava Do Su	16.14	96	*e*P	Pn	00 22 55.9	-2.2
BBSD	Serra de San D	16.58	42	*e*P	Pn	00 23 01.8	-2.1
AY03	Cochrane	17.16	181		Pn	00 23 10.0	-0.9
SIV	San Ignacio	17.29	38	P	Pn	00 23 12.5	-0.3
	comp=Z,0.1nm,0.3s,baz=218,slow=11,SNR=19						
SIV				S	Sn	00 26 24.5	-0.8
	comp=Z,15nm,0.9s,baz=37,slow=6.4,SNR=1.0						
SIV				LR	LR	00 31 08.3	
	comp=Z,108μm,18.1s,baz=222,slow=42						
	comp=Z,214nm,0.9s						
AQDB	Aquidauana	17.63	61	Pn	Pn	00 23 15.2	-1.8
AQDB	Aquidauana	17.63	61	P	Pn	00 23 13.1	-3.8
AQDB	Aquidauana	17.63	61	*e*P	Pn	00 23 14.2	-2.7
ITAB	Concordia	17.75	86	P	Pn	00 23 17.5	-1.0
ITAB	Concordia	17.75	86	P	Pn	00 23 15.1	-3.4
ITAB				S	Sn	00 26 39.2	+2.7

ITAB	Concordia	17.75	86	eP	Pn	00 23 16.2	-2.3
CNLB	Canela	18.48	93	P	P	00 23 24.8	-2.6
CNLB				S	Sn	00 26 51.6	-2.5
CNLB	Canela	18.48	93	eP	P	00 23 25.4	-2.0
CNLB				eS	Sn	00 26 52.3	-1.8
NNA	Nana	18.53	345	P	P	00 23 26.0	-2.0
NNA	Nana	18.53	345	P	Pn	00 23 29.8	+1.7
	comp=Z,1.9nm,0.3s,baz=196,slow=10,SNR=16						
NNA				LR	LR	00 28 24.8	
	comp=Z,19µm,18.2s,baz=158,slow=30						
	comp=Z,52nm,0.8s						
NNA	Nana	18.53	345	ceP	P	00 23 26.9	-1.1
NNA				pmax	pmax		
	comp=Z,381nm,1.5s						
NNA	Nana	18.53	345	⇑p	Pn	00 23 29.4	+1.3
NNA	Nana	18.53	345	P	P	00 23 25.4	-2.6
	comp=Z,61µmcomp=Z,11µmcomp=Z,182nm,1.3s						
PTGB	Pitanga	18.57	78	P	P	00 23 26.8	-1.6
PTGB				S	Sn	00 26 56.9	+0.6
PTGB	Pitanga	18.57	78	eP	P	00 23 27.6	-0.8
PTGB				eS	Sn	00 26 54.4	-2.0
PTLB	Pontes e Lacer	18.81	42	P	P	00 23 28.5	-2.5
PTLB	Pontes e Lacer	18.81	42	P	P	00 23 27.3	-3.7
PTLB				S	Sn	00 27 01.9	-0.2
PTLB	Pontes e Lacer	18.81	42	eP	P	00 23 30.1	-0.9
TRCB	Terra Rica	18.87	72	P	P	00 23 29.5	-2.2
TRCB				IAmb	IAmb	00 23 39.2	
	comp=Z,1µm,1.6s						
TRCB	Terra Rica	18.87	72	P	P	00 23 29.6	-2.0
TRCB				S	Sn	00 27 03.0	-0.5
TRCB	Terra Rica	18.87	72	eP	P	00 23 30.0	-1.7
RPRD	Ribas do Rio P	19.16	64	eP	Pn	00 23 35.5	-0.3
LDASE	Londrina, Braz	19.87	75	eP	P	00 23 42.0	-0.7
LDASE				eS	S	00 27 23.1	-3.5
VILB	Vilhena	20.29	35	P	P	00 23 45.6	-1.7
VILB				IAmb	IAmb	00 23 58.8	
	comp=Z,456nm,1.1s						
VILB				IAMs_20	IAMs_20	00 31 52.1	
	comp=Z,74µm,20.0s						
VILB	Vilhena	20.29	35	P	P	00 23 46.3	-1.0
VILB				S	S	00 27 33.3	-1.6
VILB	Vilhena	20.29	35	eP	P	00 23 46.6	-0.6
VILB				eS	S	00 27 33.9	-1.0
MAJ01	Sao Joao Batis	20.42	88	P	P	00 23 46.8	-1.8
MAJ01				S	Sn	00 27 39.8	-1.0
MAJ01	Sao Joao Batis	20.42	88	eP	P	00 23 47.9	-0.7
PCMB	Pacaembu	20.54	71	P	P	00 23 49.0	-1.0
PCMB				S	S	00 27 36.7	-3.2
PCMB	Pacaembu	20.54	71	eP	P	00 23 49.5	-0.4
PCMB				eS	S	00 27 37.6	-2.2
SALV	Santo Antonio	20.63	50	P	P	00 23 50.3	-0.6
SALV				S	S	00 27 39.7	-1.9
SALV	Santo Antonio	20.63	50	eP	P	00 23 50.4	-0.6
SALV				eS	S	00 27 40.6	-1.0
C2SB	Chapadao do Su	20.81	62	P	P	00 23 52.9	+0.1
C2SB				S	S	00 27 42.4	-2.7
C2SB	Chapadao do Su	20.81	62	eP	P	00 23 52.9	+0.1
C2SB				eS	S	00 27 43.9	-1.2
TIJ01	Guaruva-PR	20.98	83	P	P	00 23 51.3	-3.5
TIJ01				S	S	00 27 45.2	-3.4
GO09	Cerro Castillo	21.18	180	P	P	00 23 56.4	-0.1
GO09				IAmb	IAmb	00 24 11.5	
	comp=Z,808nm,1.6s						
GO09				IAMs_20	IAMs_20	00 33 02.7	
	comp=Z,84µm,18.0s						
FRTB	Fartura	21.20	77	P	P	00 23 55.9	-1.2
FRTB				S	S	00 27 52.5	-0.5
FRTB	Fartura	21.20	77	eP	P	00 23 56.2	-0.9
FRTB				eS	S	00 27 50.6	-2.4
LABB	L¡brea	21.51	18	P	P	00 24 00.4	0.0
LABB				S	S	00 27 55.6	-3.4
MG05	Puerto Natales	21.59	181	P	P	00 24 00.6	-0.3
MG05				IAmb	IAmb	00 24 15.5	
	comp=Z,977nm,1.8s						
MG05				IAMs_20	IAMs_20	00 32 49.6	
	comp=Z,75µm,19.0s						
ITRB	Iturama	22.23	67	P	P	00 24 06.7	-1.4
ITRB				S	S	00 28 07.0	-6.0
ITRB	Iturama	22.23	67	eP	P	00 24 06.3	-1.8
CZSB	Cruzeiro do Su	22.24	358	P	P	00 24 07.9	-0.3
CZSB	Cruzeiro do Su	22.24	358	P	P	00 24 09.4	+1.2
CZSB				S	S	00 28 13.6	+0.6
CZSB	Cruzeiro do Su	22.24	358	eP	P	00 24 09.0	+0.8
CZSB	Cruzeiro do Su	22.24	358	P	P	00 24 09.0	+0.8
	comp=Z,71µmcomp=Z,23µmcomp=Z,1µm,1.5s						
MG04	Isla Riesco	22.77	179	P	P	00 24 13.2	-0.3
MG02	Cerro Sombrero	22.79	175	P	P	00 24 13.4	-0.3
MG02	Cerro Sombrero	22.79	175	⇑P	P	00 24 14.9	+1.2
PET01	Itanhaem-SP	22.80	81	P	P	00 24 12.5	-1.7
PET01				S	S	00 28 19.4	-4.0
PET01	Itanhaem-SP	22.80	81	eP	P	00 24 12.3	-1.9
PET01				eS	S	00 28 22.5	-1.0
SPB	Sao Paulo	22.92	80	P	P	00 24 13.8	-1.6
SPB				IAmb	IAmb	00 24 30.6	
	comp=Z,538nm,1.3s						
SPB				IAMs_20	IAMs_20	00 33 14.4	
	comp=Z,64µm,21.0s						
SPB	Sao Paulo	22.92	80	eP	P	00 24 14.3	-1.0
PDRB	Porto dos Gac	23.27	41	P	P	00 24 17.9	-1.2
PDRB				S	S	00 28 29.1	-2.5
PDRB	Porto dos Gac	23.27	41	eP	P	00 24 17.9	-1.2
ARAG	Araguaiana, MT	23.48	57	P	P	00 24 19.2	-2.0
ARAG				S	S	00 28 33.2	-1.8
ARAG	Araguaiana, MT	23.48	57	eP	P	00 24 19.4	-1.7
VABB	Valinhos	23.53	79	P	P	00 24 20.3	-1.5
VABB				S	S	00 28 34.6	-1.4
VAO	Valinhos	23.54	79	P	P	00 24 19.2	-2.5
VAO				IAMs_20	IAMs_20	00 35 11.7	
	comp=Z,58µm,18.0s						
VAO	Valinhos	23.54	79	eP	P	00 24 20.3	-1.5
ATAH	Atahualpa	23.57	344	P	P	00 24 24.4	+1.8
	comp=Z,8.8nm,0.7s,baz=166,slow=12,SNR=12						
	comp=Z,8.8nm,0.7s						
MG03	Isla Dawson	23.79	178	P	P	00 24 23.1	-0.7
MG03				IAmb	IAmb	00 24 36.0	
	comp=Z,602nm,1.4s						
EFI	East Falkland	23.97	158	P	P	00 24 24.4	-1.1
EFI				IAmb	IAmb	00 24 37.3	
	comp=Z,429nm,1.5s						
EFI	East Falkland	23.97	158	c iP	P	00 24 24.8	-0.7
EFI				pmax	pmax		
	comp=Z,167nm,1.5s						
EFI				MLR	MLR		
	comp=Z,35µm,14.0s						
EFI	East Falkland	23.97	158	⇑P	P	00 24 25.2	-0.3
CLDB	Colider	24.40	42	P	P	00 24 28.7	-1.2
CLDB				S	S	00 28 52.9	+3.2
CLDB	Colider	24.40	42	eP	P	00 24 28.9	-1.1
PARB	Paraibuna	24.56	80	P	P	00 24 29.7	-1.7
PARB	Paraibuna	24.56	80	eP	P	00 24 29.9	-1.4
IPMB	Ipameri, GO	24.86	66	P	P	00 24 32.5	-1.6
IPMB				S	S	00 28 58.7	+1.4
IPMB	Ipameri, GO	24.86	66	eP	P	00 24 32.9	-1.2
USHA	Ushuaia	24.88	175	P	P	00 24 34.6	+0.7
	comp=Z,55nm,0.8s,baz=346,slow=7.3,SNR=17						
USHA				LR	LR	00 35 25.4	
	comp=Z,437nm,18.1s,baz=0.5,slow=39						
	comp=Z,55nm,0.8s						
SLP01	Ubatuba-SP	24.96	81	P	P	00 24 33.9	-1.1
SLP01	Ubatuba-SP	24.96	81	eP	P	00 24 34.1	-1.0
MG01	Puerto William	25.05	174	P	P	00 24 35.8	+0.5
MG01				IAmb	IAmb	00 25 02.1	
	comp=Z,258nm,1.1s						
MG01				IAMs_20	IAMs_20	00 35 07.3	
	comp=Z,54µm,18.0s						
CANS	Sao Roque de M	25.17	73	P	P	00 24 36.4	-0.6
CANS				S	S	00 29 04.5	+2.2
SFA1	Serra Facao	25.27	67	P	P	00 24 37.0	-0.9
SFA1				S	S	00 29 06.5	+2.6
BAT3	Ipameri	25.72	66	P	P	00 24 41.2	-0.7
BAT3				S	S	00 29 14.5	+3.6
BAT2	UHE Batalha	25.79	66	P	P	00 24 41.3	-1.3
TBTG	Tabatinga, AM	25.83	5	P	P	00 24 42.7	-0.1
TBTG	Tabatinga, AM	25.83	5	P	P	00 24 43.6	+0.8
TBTG				S	S	00 29 10.5	-2.0
TBTG	Tabatinga, AM	25.83	5	eP	P	00 24 43.8	+0.9
TBTG	Tabatinga, AM	25.83	5	P	P	00 24 43.6	+0.8
	comp=Z,39µmcomp=Z,16µmcomp=Z,1µm,1.2s						
PMNB	Patos De Minas	25.99	70	P	P	00 24 44.2	-0.3
PMNB				S	S	00 29 19.4	+4.1
PMNB	Patos De Minas	25.99	70	⇑P	P	00 24 43.8	-0.7
PMNB	Patos De Minas	25.99	70	eP	P	00 24 43.8	-0.7
MAN01	Angra dos Reis	26.15	81	P	P	00 24 43.5	-2.3
MAN01	Angra dos Reis	26.15	81	eP	P	00 24 45.0	-0.8
BSCB	Bom Sucesso	26.21	76	P	P	00 24 45.8	-0.6
BSCB	Bom Sucesso	26.21	76	eP	P	00 24 45.8	-0.6
BDFB	Brasilia	26.36	62	P	P	00 24 46.2	-1.6
BDFB	Brasilia	26.36	62	P	P	00 24 47.5	-0.3
	comp=Z,218nm,1.1s,baz=228,slow=10,SNR=92						
BDFB				LR	LR	00 35 25.3	
	comp=Z,39µm,20.4s,baz=237,slow=37						
	comp=Z,218nm,1.1s						
BDFB	Brasilia	26.36	62	P	P	00 24 47.6	-0.2
BDFB				S	S	00 29 23.1	+1.9
SNDB	Serra Nova Dou	26.41	51	P	P	00 24 47.6	-0.5
SNDB				S	S	00 29 18.5	-3.1
SNDB	Serra Nova Dou	26.41	51	eP	P	00 24 47.9	-0.2
MCRA	Macar, Loja	26.62	342	P	P	00 24 51.0	+0.9
	comp=Z,19µmcomp=Z,4µmcomp=Z,130nm,1.4s						
VAS01	Vassouras-RJ	26.82	80	P	P	00 24 51.4	-0.4
VAS01	Vassouras-RJ	26.82	80	eP	P	00 24 51.7	-0.1
TEFE	Tefe	27.35	16	P	P	00 24 56.4	-0.1
TEFE				S	S	00 29 33.1	-3.4
TEFE	Tefe	27.35	16	eP	P	00 24 57.1	+0.5
SIM2	UHE Simplicio	27.50	80	P	P	00 24 57.7	-0.2
CAN3	Cana Brava	27.75	58	P	P	00 24 59.6	-0.6
NPGB	Novo Progresso	27.79	38	P	P	00 24 59.6	-0.9
NPGB				S	S	00 29 45.2	+1.6
NPGB	Novo Progresso	27.79	38	eP	P	00 24 60.0	-0.6
DUB01	Friburgo-RJ	27.80	80	P	P	00 25 00.4	-0.3
DUB01	Friburgo-RJ	27.80	80	eP	P	00 25 00.4	-0.3
SSV2	Sao Salvador	27.97	57	P	P	00 25 02.2	+0.1
COHC	Cochancay	28.28	345	P	P	00 25 07.8	+2.9
	comp=Z,16µmcomp=Z,3µmcomp=Z,78nm,1.6s						
JQT1	Jequitai-MG	28.36	69	P	P	00 25 05.1	-0.5
DIAM	Diamantina, MG	28.38	72	P	P	00 25 06.0	+0.1
DIAM	Diamantina, MG	28.38	72	eP	P	00 25 05.8	-0.1
CAM01	Campos-RJ	28.52	80	P	P	00 25 06.7	-0.3
CAM01	Campos-RJ	28.52	80	eP	P	00 25 06.6	-0.3
MACA	Manacapuru-AM	28.87	24	P	P	00 25 09.0	-1.1
MACA				IAMs_20	IAMs_20	00 38 00.3	
	comp=Z,53µm,20.0s						
MACA	Manacapuru-AM	28.87	24	P	P	00 25 10.0	-0.1
MACA				S	S	00 29 57.7	-2.7
MACA	Manacapuru-AM	28.87	24	eP	P	00 25 10.4	+0.3
MC01	Montes Claros	28.98	69	P	P	00 25 10.3	-0.9
PIAT	Ana Tenorio	29.50	347	P	P	00 25 20.2	+4.0
	comp=Z,15µmcomp=Z,3µmcomp=Z,49nm,1.5s						
JANB	Januaria	29.59	66	P	P	00 25 16.3	-0.4
JANB	Januaria	29.59	66	eP	P	00 25 16.2	-0.4
ITTB	Itaituba	29.89	34	P	P	00 25 18.6	-0.6
ITTB				S	S	00 30 10.8	-5.6
ITTB	Itaituba	29.89	34	eP	P	00 25 17.9	-1.3
SGC2	Sao Gabriel da	30.16	10	P	P	00 25 21.2	-0.3
SGC2				S	S	00 30 17.7	-2.9
SGC2	Sao Gabriel da	30.16	10	P	P	00 25 19.7	-1.8
	comp=Z,4µmcomp=Z,74nm,1.9s						
PTLC	Puerto Leguiza	30.19	355	P	P	00 25 20.3	-1.5
	comp=Z,21µmcomp=Z,6µmcomp=Z,230nm,1.0s						
SJMB	Sao Joao De Ma	30.25	75	P	P	00 25 22.1	-0.3
SJMB	Sao Joao De Ma	30.25	75	eP	P	00 25 22.5	0.0
RIB01	Linhares ES	30.64	77	P	P	00 25 25.4	-0.4
RIB01				S	S	00 30 28.8	+0.5
RIB01	Linhares ES	30.64	77	eP	P	00 25 25.4	-0.4
SDBA	SAO DESIDERIO	30.72	61	P	P	00 25 26.4	-0.3
SDBA				S	S	00 30 28.3	-1.5
SDBA	SAO DESIDERIO	30.72	61	eP	P	00 25 25.8	-0.8
OTAV	Otavalo	30.75	348	P	P	00 25 27.6	+0.4
OTAV	Otavalo	30.75	348	P	P	00 25 27.6	+0.4
OTAV				pmax	pmax		
	comp=Z,85nm,1.3s						
OTAV	Otavalo	30.75	348	P	P	00 25 29.2	+2.0
OTAV				S	S	00 30 33.0	+2.3
OTAV	Otavalo	30.75	348	⇑P	P	00 25 29.8	+2.6
OTAV	Otavalo	30.75	348	P	P	00 25 30.7	+3.5
	comp=Z,15µmcomp=Z,3µmcomp=Z,61nm,1.3s						
PAC1	Pacto, Paraso	30.84	347	P	P	00 25 28.2	+0.5
	comp=Z,3µmcomp=Z,108nm,0.8s						
SMTB	Santa Maria do	31.16	52	P	P	00 25 30.5	0.0
SMTB				S	S	00 30 32.7	-3.9
SMTB	Santa Maria do	31.16	52	eP	P	00 25 30.8	+0.3
CMBC	Cumbal	31.32	349	P	P	00 25 36.8	+4.5
	comp=Z,8µmcomp=Z,103nm,0.8s						
GCUF	Volcan Galeras	31.52	350	P	P	00 25 35.8	+1.6
	comp=Z,14µmcomp=Z,3µmcomp=Z,73nm,1.6s						
FLOC	Florencia	31.66	353	P	P	00 25 35.4	+0.6
FLOC				IAmb	IAmb	00 25 55.7	
	comp=Z,287nm,1.4s						
FLOC	Florencia	31.66	353	P	P	00 25 35.8	+1.0
	comp=Z,18µmcomp=Z,3µmcomp=Z,124nm,1.3s						
PRPB	Parauapebas	31.71	46	P	P	00 25 34.3	-0.9
PRPB				S	S	00 30 44.2	-0.9
PRPB	Parauapebas	31.71	46	eP	P	00 25 34.1	-1.1
CRUC	La Cruz	31.80	351	P	P	00 25 41.3	+4.9
MACC	Macarena, Meta	32.08	357	P	P	00 25 38.4	-0.1
	comp=Z,19µmcomp=Z,4µmcomp=Z,91nm,1.6s						
GARC	Garzon, Huila	32.24	354	P	P	00 25 43.8	+3.6
	comp=Z,17µmcomp=Z,4µmcomp=Z,64nm,1.3s						
BBAC	Balboa, Cauca	32.29	350	P	P	00 25 42.5	+1.9
	comp=Z,20µmcomp=Z,4µmcomp=Z,166nm,1.6s						
GUA01	Guaratinga, BA	32.43	73	P	P	00 25 41.4	-0.2
GUA01				S	S	00 30 57.7	+1.4
GUA01	Guaratinga, BA	32.43	73	eP	P	00 25 41.6	0.0
ATM1	UHE Belo Monte	32.62	39	P	P	00 25 43.4	+0.2
ATM1				S	S	00 30 56.0	-3.3
MAL2	Monte Alegre,	32.68	35	P	P	00 25 42.8	-0.9
MAL2				IAmb	IAmb	00 25 47.2	
	comp=Z,284nm,1.4s						
MAL2	Monte Alegre,	32.68	35	P	P	00 25 43.3	-0.5
MAL2				S	S	00 30 56.4	-3.8
BMO2	UHE Belo Monte	32.70	39	P	P	00 25 43.5	-0.5
BMO2				S	S	00 30 58.8	-1.7
POPC	Popayan, Colom	32.73	352	P	P	00 25 45.8	+1.4
	comp=Z,14µmcomp=Z,3µmcomp=Z,91nm,1.3s						
RPN	Rapa Nui	32.73	266	IAMs_20	IAMs_20	00 35 05.7	
	comp=Z,39µm,22.0s						
PAL01	Palmeiras do T	32.80	50	P	P	00 25 44.5	-0.3
PAL01				S	S	00 30 58.5	-3.6
VA02	Isla de Pascua	32.81	266	IAMs_20	IAMs_20	00 35 09.4	
	comp=Z,34µm,21.0s						
PAL2	UHE Estreito -	32.88	50	P	P	00 25 45.6	+0.1
BMO1	UHE Belo Monte	32.99	40	P	P	00 25 46.2	-0.3
BMO1				S	S	00 31 02.1	-2.9
URMC	La Uribe, Meta	33.20	356	P	P	00 25 50.7	+2.3
	comp=Z,21µmcomp=Z,6µmcomp=Z,440nm,1.4s						
CMC01	Camacan, BA	33.29	71	P	P	00 25 48.9	-0.2
CMC01	Camacan, BA	33.29	71	eP	P	00 25 48.7	-0.5
TUC4	UHE Tucurui	33.38	44	P	P	00 25 50.1	+0.2
JAMC	Jamundi, Valle	33.39	352	P	P	00 25 51.6	+1.4
	comp=Z,12µmcomp=Z,2µmcomp=Z,82nm,1.5s						
PRAC	Prado	33.70	355	P	P	00 25 54.8	+2.1
	comp=Z,17µmcomp=Z,6µmcomp=Z,301nm,1.6s						
ORTC	Ortega, Tolima	33.92	354	P	P	00 25 57.2	+2.6
	comp=Z,16µmcomp=Z,6µmcomp=Z,458nm,1.5s						
PAYG	Puerto Ayora	33.97	326	IAMs_20	IAMs_20	00 36 19.4	
	comp=Z,28µm,20.0s						
VILC	Villavicencio,	34.03	357	P	P	00 25 58.7	+3.1
	comp=Z,2µmcomp=Z,214nm,0.8s						
PTGC	Puerto Gaitan,	34.08	360	P	P	00 25 55.1	-0.8
	comp=Z,17µmcomp=Z,6µmcomp=Z,246nm,1.2s						
YOTC	Yotoco, Valle	34.11	352	P	P	00 25 56.9	+0.6
	comp=Z,14µmcomp=Z,3µmcomp=Z,63nm,1.6s						
BOAV	Boa Vista	34.13	21	P	P	00 25 56.5	+0.1
BOAV				S	S	00 31 19.9	-2.8
BOAV	Boa Vista	34.13	21	eP	P	00 25 56.6	+0.2
BOAV	Boa Vista	34.13	21	P	P	00 25 55.4	-1.0
	comp=Z,21µmcomp=Z,5µmcomp=Z,161nm,1.5s						
CVER	Cruz Verde, Cu	34.45	357	P	P	00 26 01.3	+1.6
	comp=Z,6µmcomp=Z,199nm,1.7s						
ANIL	Santa Ana	34.51	354	P	P	00 26 07.2	+7.2
	comp=Z,5µmcomp=Z,81nm,0.9s						
CHIC	Chingaza	34.54	357	P	P	00 26 02.5	+2.1
	comp=Z,16µmcomp=Z,5µmcomp=Z,190nm,1.2s						
ESPZ	Base Esperanza	34.72	168	P	P	00 26 02.4	+1.4
ESPZ				IAmb	IAmb	00 26 12.9	
	comp=Z,218nm,1.4s						
ROSC	El Rosal	34.78	356	P	P	00 26 03.6	+1.2
ROSC	El Rosal	34.78	356	P	P	00 26 03.7	+1.2
	comp=Z,5.2nm,0.4s,baz=166,slow=6.2,SNR=14						
ROSC				LR	LR	00 41 09.2	
	comp=Z,30µm,18.3s,baz=202,slow=38						
	comp=Z,5.2nm,0.4s						
ROSC	El Rosal	34.78	356	P	P	00 26 06.0	+3.5
	comp=Z,23µmcomp=Z,6µmcomp=Z,148nm,1.6s						
PLMC	San Jos del P	35.01	353	P	P	00 26 05.4	+1.3
	comp=Z,15µmcomp=Z,4µmcomp=Z,184nm,1.5s						
PMSA	Palmer Station	35.08	174	P	P	00 26 04.4	+0.3
PMSA	Palmer Station	35.08	174	P	P	00 26 04.9	+0.8
	comp=Z,38nm,0.8s,baz=49,slow=3.2,SNR=1.9						
PMSA				LR	LR	00 40 32.4	
	comp=Z,55µm,18.5s,baz=346,slow=37						
	comp=Z,38nm,0.8s						
PMSA	Palmer Station	35.08	174	eP	P	00 26 06.5	+2.4
GUY2C	Guyana, Caldas	35.24	354	P	P	00 26 09.2	+2.7
	comp=Z,21µmcomp=Z,5µmcomp=Z,73nm,1.3s						
NORC	Norcasia	35.53	355	P	P	00 26 09.5	+0.9
	comp=Z,13µmcomp=Z,5µmcomp=Z,88nm,1.2s						
SPBC	San Pablo de B	35.57	357	P	P	00 26 09.8	+0.9
	comp=Z,16µmcomp=Z,4µmcomp=Z,65nm,1.6s						
TMAB	Tom-Au,PA,Br	35.74	44	P	P	00 26 10.3	0.0
TMAB	Tom-Au,PA,Br	35.74	44	eP	P	00 26 11.1	+0.7
RUSC	La Rusia	35.77	358	P	P	00 26 13.0	+1.9
RUSC	La Rusia	35.77	358	P	P	00 26 13.9	+2.8
	comp=Z,18µmcomp=Z,11µmcomp=Z,764nm,1.4s						
CBOC	Ciudad Bolivar	35.93	353	P	P	00 26 14.5	+2.4
	comp=Z,12µmcomp=Z,5µmcomp=Z,189nm,1.2s						
TAMC	Tame, Arauca	36.30	1	P	P	00 26 16.0	+0.9
	comp=Z,17µmcomp=Z,9µmcomp=Z,292nm,1.4s						
BARC	Barichara	36.47	358	P	P	00 26 17.7	+0.9
PTBC	PUERTO BERRIO,	36.47	356	P	P	00 26 16.8	+0.2
	comp=Z,563nmcomp=Z,52nm,1.1s						
BRJC	Barrancabermej	36.87	357	P	P	00 26 19.8	-0.1
	comp=Z,13µmcomp=Z,4µmcomp=Z,264nm,0.9s						
DBBC	Dabeiba	37.09	353	P	P	00 26 24.5	+2.6
PTAC	Punta Ardita,	37.41	351	P	P	00 26 26.8	+2.3
	comp=Z,5µmcomp=Z,100nm,1.5s						
ZARC	Zaragoza, Cauc	37.45	356	P	P	00 26 25.3	+0.5
	comp=Z,25µmcomp=Z,6µmcomp=Z,284nm,1.2s						
UREC	San Jos de Ur	37.75	354	P	P	00 26 28.6	+1.2
	comp=Z,453nmcomp=Z,48nm,1.0s						
APAC	Apartado, Choc	38.00	353	P	P	00 26 31.5	+2.0
	comp=Z,24µmcomp=Z,8µmcomp=Z,173nm,1.4s						
OCAC	Ocana	38.11	358	P	P	00 26 31.5	+0.9
	comp=Z,33µmcomp=Z,3µmcomp=Z,111nm,0.9s						
AZU	Azuero	38.46	347	P	P	00 26 37.0	+3.6
	comp=Z,8µmcomp=Z,4µmcomp=Z,48nm,1.5s						
NBMA	Muriti-CE	38.58	61	P	P	00 26 33.7	-0.8
NBMA				S	S	00 32 30.5	-0.3
NBPS	Pedro II - PI	38.61	55	P	P	00 26 34.3	-0.5
NBPS				S	S	00 32 33.0	+1.6
GMAL	Guarumal, Vera	38.63	345	P	P	00 26 38.8	+4.0
	comp=Z,4µmcomp=Z,103nm,1.2s						
SDV	Santo Domingo	38.76	2	P	P	00 26 37.1	+1.0
SDV				IAMs_20	IAMs_20	00 43 22.4	
	comp=Z,22µm,19.0s						
SDV	Santo Domingo	38.76	2	P	P	00 26 36.4	+0.3
	comp=Z,59nm,0.9s,baz=185,slow=7.3,SNR=32						
	comp=Z,59nm,0.9s						
SDV	Santo Domingo	38.76	2	P	P	00 26 36.4	+0.3
SDV				S	S	00 32 31.2	-2.6
SDV	Santo Domingo	38.76	2	eP	P	00 26 36.7	+0.5
SDV	Santo Domingo	38.76	2	P	P	00 26 37.3	+1.2
	comp=Z,32µmcomp=Z,4µmcomp=Z,137nm,1.2s						
CAPC	Capurgana	38.82	352	P	P	00 26 37.9	+1.5
	comp=Z,15µmcomp=Z,6µmcomp=Z,97nm,1.7s						
BAUV	El Baul	38.99	6	eP	P	00 26 37.5	-0.3
NBAN	Anadia - AL	39.09	66	P	P	00 26 37.5	-1.3
NBAN				S	S	00 32 38.9	+0.4
NBPB	Pedra_Branca-C	39.16	58	P	P	00 26 39.6	+0.3
NBPB				S	S	00 32 37.4	-2.1
NBPB	Pedra_Branca-C	39.16	58	eP	P	00 26 40.2	+0.8
MDP	Montagnes des	39.64	31	P	P	00 26 43.4	+0.1
	comp=Z,153nm,1.1s,baz=200,slow=8.6,SNR=26						
MDP				LR	LR	00 43 54.5	
	comp=Z,41µm,18.6s,baz=201,slow=38						
	comp=Z,153nm,1.1s						
ARGC	Ariguani, Magd	39.76	357	P	P	00 26 47.1	+2.9
	comp=Z,25µmcomp=Z,9µmcomp=Z,187nm,1.4s						
SJCC	San Jacinto, C	39.85	355	P	P	00 26 45.8	+0.7
	comp=Z,16µmcomp=Z,5µmcomp=Z,222nm,1.2s						
SBBR	Sobral	39.89	55	P	P	00 26 44.0	-1.5
SBBR				S	S	00 32 50.0	-0.6
BRU2	Volcan	39.96	344	P	P	00 26 48.1	+1.9
NBCA	Caruaru-PE	40.16	65	P	P	00 26 47.2	-0.6
NBCA				S	S	00 32 57.5	+2.8
NBMO	Morrinhos-CE	40.36	55	P	P	00 26 48.5	-0.8
NBMO				S	S	00 32 55.8	-1.7
PCRV	Puerto La Cruz	40.66	11	P	P	00 26 52.7	+1.0
	comp=Z,86nm,1.1s,baz=240,slow=3.1,SNR=10						
PCRV				LR	LR	00 44 53.6	
	comp=Z,49µm,18.3s,slow=38						
	comp=Z,86nm,1.1s						
PCRV	Puerto La Cruz	40.66	11	eP	P	00 26 49.2	-2.6
CRJC	Cerrejon, Guaj	40.86	359	P	P	00 26 50.0	-3.5
	comp=Z,13µmcomp=Z,3µmcomp=Z,75nm,1.4s						
NBPA	Parau_RN	40.87	61	P	P	00 26 53.6	+0.1
NBPA				S	S	00 33 06.5	+1.4
NBCL	Cascavel-CE	40.99	58	P	P	00 26 54.8	+0.2
NBCL				S	S	00 33 05.6	-1.4
NBCL	Cascavel-CE	40.99	58	eP	P	00 26 54.8	+0.2
SMRC	Santa Marta, M	41.05	357	P	P	00 26 53.1	-1.8
SMRC	Santa Marta, M	41.05	357	P	P	00 26 54.1	-0.8
	comp=Z,13µmcomp=Z,7µmcomp=Z,75nm,1.1s						
LCR2	La Lucha 2	41.21	342	P	P	00 26 58.0	+1.5
HDC	Heredia	41.49	342	P	P	00 26 58.9	+0.2
URIC	Uribia, Colomb	41.53	0	P	P	00 26 57.0	-1.9
	comp=Z,12µmcomp=Z,2µmcomp=Z,64nm,1.3s						
RCBR	Riachuelo	41.74	62	P	P	00 27 01.4	+0.7
RCBR				IAmb	IAmb	00 27 12.1	
	comp=Z,258nm,1.3s						
RCBR	Riachuelo	41.74	62	LR	LR	00 43 40.1	
	comp=Z,12µm,18.3s,baz=222,slow=35						
RCBR	Riachuelo	41.74	62	P	P	00 27 01.4	+0.7
RCBR				pmax	pmax		
	comp=Z,258nm,1.3s						
RCBR				MLR	MLR		
	comp=Z,35µm,21.0s						
RCBR	Riachuelo	41.74	62	P	P	00 27 00.2	-0.6
RCBR				S	S	00 33 23.0	+4.8
RCBR	Riachuelo	41.74	62	⇑P	P	00 27 01.5	+0.7
RCBR	Riachuelo	41.74	62	eP	P	00 27 01.0	+0.3
TRN	Trinidad (W)	41.78	16	eP	P	00 27 00.4	-0.5
NBPV	Pedro Velho	41.84	63	P	P	00 27 02.2	+0.7
NBPV				S	S	00 33 21.9	+2.4
SOCE	Pocosol	41.99	341	P	P	00 27 02.7	0.0
SOCE				IAmb	IAmb	00 27 28.0	
	comp=Z,252nm,1.4s						
JTS	Las Juntas de	41.99	341	P	P	00 27 02.0	-0.7
JTS	Las Juntas de	41.99	341	P	P	00 27 04.3	+1.6
	comp=Z,12nm,0.9s,baz=187,slow=5.5,SNR=7.4						
	comp=Z,12nm,0.9s						
JTS	Las Juntas de	41.99	341	⇑P	P	00 27 05.8	+3.1
JTS	Las Juntas de	41.99	341	P	P	00 27 04.0	+1.3
GRGR	Grenville	43.15	15	P	P	00 27 13.1	+1.0
GRGR				IAMs_20	IAMs_20	00 47 33.9	
	comp=Z,22µm,19.0s						
GRGR	Grenville	43.15	15	eP	P	00 27 09.7	-2.4
GRGR	Grenville	43.15	15	P	P	00 27 08.4	-3.7
	comp=Z,17µmcomp=Z,7µmcomp=Z,352nm,1.5s						
GRW	Mount Saint Ca	43.18	15	eP	P	00 27 12.1	-0.3
GRSS	Sisters	43.32	15	eP	P	00 27 09.7	-3.7
ESPN	Las Esperanzas	43.64	343	P	P	00 27 16.6	+0.6
ACON	Acoyapa	43.65	341	P	P	00 27 15.5	-0.7
ACON	Acoyapa	43.65	341	P	P	00 27 18.5	+2.4
	comp=Z,2µmcomp=Z,39nm,1.2s						
PRVC	Isla de Provid	44.11	347	P	P	00 27 19.2	-0.6
PRVC				IAmb	IAmb	00 27 35.5	
	comp=Z,179nm,1.1s						
SVT	Saint Vincent	44.25	15	eP	P	00 27 23.4	+2.5
BOAB	BOACO BROADBAN	44.25	341	P	P	00 27 22.5	+1.6
BOAB	BOACO BROADBAN	44.25	341	P	P	00 27 21.2	+0.3
BOAB				IAmb	IAmb	00 27 56.5	
	comp=Z,289nm,1.6s						
SVB	Belmont	44.34	15	eP	P	00 27 18.4	-3.3
CNGN	Cerro Negro	44.60	339	P	P	00 27 21.9	-1.9
CRIN	San Cristobal	44.90	339	P	P	00 27 25.6	-0.6
CRIN				IAmb	IAmb	00 29 03.4	
	comp=Z,139nm,1.0s						
SLBI	Saint Lucia, B	45.13	15	eP	P	00 27 24.2	-3.7
MPOM	Morne Pois Mar	45.57	15	P	P	00 27 30.1	-1.3
MPOM				IAMs_20	IAMs_20	00 49 05.0	
	comp=Z,21µm,18.0s						
BIM	Bigot	45.59	15	P	P	00 27 30.5	-1.2
BIM				IAMs_20	IAMs_20	00 49 07.5	
	comp=Z,19µm,19.0s						
BIM	Bigot	45.59	15	eP	P	00 27 28.6	-3.1
FDF	Fort de France	45.78	15	P	P	00 27 32.7	-0.4
FDF	Fort de France	45.78	15	P	P	00 27 32.7	-0.4
FDF				pmax	pmax		
	comp=Z,267nm,1.0s						
FDF				MLR	MLR		

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       comp=Z,29µm,19.0s
FDF   Fort de France   45.78  15 ⇑P       P        00 27 32.2 -1.0
SVN   Savane Anatole   45.88  15 eP       P        00 27 27.8 -6.1
ILAM  Ilet Lapin Mar   45.88  15  IAMs_20 IAMs_20  00 49 24.3
       comp=Z,22µm,18.0s
ILAM  Ilet Lapin Mar   45.88  15 eP       P        00 27 32.2 -1.7
TGUH  Tegucigalpa,Un   46.25 339  P       P        00 27 37.8 +0.9
MDN   Morne-Daniel     46.30  14 eP       P        00 27 27.1  -10
DSLB  Salisbury        46.41  14 eP       P        00 27 31.8 -6.2
DWS   Wesley           46.55  14 eP       P        00 27 38.5 -0.6
TDBA  Terre de Bas,    46.76  14  IAMs_20 IAMs_20  00 49 27.6
       comp=Z,21µm,18.0s
MAGL  Barre de l'ile   46.93  14  IAMs_20 IAMs_20  00 46 59.0
       comp=Z,17µm,20.0s
MAGL  Barre de l'ile   46.93  14 eP       P        00 27 34.3 -7.8
CBE   Ff, Capester     46.98  14  P       P        00 27 39.2 -3.4
CBE                               IAMs_20 IAMs_20  00 47 11.2
       comp=Z,22µm,19.0s
MTO3  Montecristo      47.24 337  P       P        00 27 44.6 -0.2
GDSD  La Dsirade Is    47.33  14  P       P        00 27 42.4 -2.8
GDSD                              IAmb    IAmb     00 27 51.9
       comp=Z,136nm,1.0s
GDSD                              IAMs_20 IAMs_20  00 48 35.6
       comp=Z,18µm,22.0s
ESQI  Esquipulas       47.38 337  P       P        00 27 47.4 +1.6
ESQI                              IAmb    IAmb     00 28 51.0
       comp=Z,289nm,1.6s
ABD   La Joyeuse, An   47.40  14  IAMs_20 IAMs_20  00 47 11.3
       comp=Z,20µm,22.0s
ANBD  Bethesda, Anti   47.90  13 eP       P        00 27 47.7 -1.9
SKI   Saint Kitts      47.99  12 eP       P        00 27 48.4 -2.0
CRPR  Cabo Rojo, PR    48.04   6  P       P        00 27 49.8 -0.9
CRPR                              IAMs_20 IAMs_20  00 51 05.4
       comp=Z,12µm,18.0s
SEUS  St. Eustatius    48.10  12  P       P        00 27 49.1 -2.1
SEUS                              IAMs_20 IAMs_20  00 48 27.0
       comp=Z,20µm,20.0s
IGPR  InterUniversit   48.11   8  P       P        00 27 49.9 -1.3
OBIP  Obispado Ponce   48.13   7  P       P        00 27 51.1 -0.3
OBIP                              IAMs_20 IAMs_20  00 48 58.7
       comp=Z,15µm,18.0s
CELP  Cerrillos        48.16   7  P       P        00 27 50.8 -0.9
CELP                              IAMs_20 IAMs_20  00 49 34.7
       comp=Z,13µm,18.0s
PDPR  Patillas Dam,    48.17   8  P       P        00 27 51.3 -0.4
PDPR                              IAmb    IAmb     00 28 02.3
       comp=Z,228nm,1.2s
SABA  Saba             48.18  11  P       P        00 27 50.8 -1.1
SABA                              IAMs_20 IAMs_20  00 48 41.1
       comp=Z,26µm,21.0s
BANI  BANI             48.22   2  P       P        00 27 51.9 -0.3
PRSN  Puerto Rico Se   48.25   6  P       P        00 27 51.4 -0.9
SJG   San Juan         48.25   8  P       P        00 27 51.7 -0.7
SJG   San Juan         48.25   8  P       P        00 27 52.2 -0.1
       comp=Z,125nm,1.0s,baz=196,slow=3.4,SNR=23
       comp=Z,125nm,1.0s
SJG   San Juan         48.25   8  P       P        00 27 52.8 +0.5
SDD   Santo Domingo    48.30   3  P       P        00 27 53.9 +1.2
MTDJ  Mount Denham     48.30 353  P       P        00 27 51.6 -1.2
MTDJ                              IAmb    IAmb     00 28 06.2
       comp=Z,140nm,1.2s
HUMP  Col San Antoni   48.31   8  P       P        00 27 51.7 -1.1
HUMP                              IAMs_20 IAMs_20  00 49 49.6
       comp=Z,15µm,18.0s
PAPH  Port-au-Prince   48.31 360  P       P        00 27 52.6 -0.3
PAPH                              IAmb    IAmb     00 28 09.6
       comp=Z,236nm,1.3s
UUPR  Utuado, UPR, P   48.33   7  P       P        00 27 53.0 +0.1
UUPR                              IAMs_20 IAMs_20  00 49 47.9
       comp=Z,15µm,18.0s
GCPR  Guaynabo City    48.45   8  P       P        00 27 52.6 -1.2
GCPR                              IAmb    IAmb     00 28 08.5
       comp=Z,90nm,1.0s
ANWB  Willy Bob        48.50  13  P       P        00 27 52.8 -1.5
ANWB                              IAMs_20 IAMs_20  00 52 11.5
       comp=Z,17µm,18.0s
ANWB  Willy Bob        48.50  13 eP       P        00 27 47.7 -6.5
AGPR  Aguadilla, PR    48.50   6  P       P        00 27 52.9 -1.4
AGPR                              IAMs_20 IAMs_20  00 49 45.5
       comp=Z,15µm,18.0s
EMPR  Esperanza - Ma   48.57   7  P       P        00 27 53.6 -1.1
DR12  Loma Pena Alta   48.65   3  P       P        00 27 54.5 -1.0
SDDR  Presa de Saban   48.78   1  P       P        00 27 55.0 -1.5
SDDR                              IAMs_20 IAMs_20  00 52 13.9
       comp=Z,18µm,19.0s
SC01  Santiago de lo   49.23   2  P       P        00 28 00.1 +0.2
PETF  Flores           49.76 338  P       P        00 28 03.8 -0.1
PETF                              IAmb    IAmb     00 28 25.6
       comp=Z,180nm,1.6s
GTBY  Guantanamo Bay   49.80 356  P       P        00 28 03.5 -0.7
GTBY                              IAmb    IAmb     00 28 17.5
       comp=Z,135nm,1.2s
CHIV  Chivirico        49.93 355  P       P        00 28 05.0 -0.2
CHIV                              IAmb    IAmb     00 28 23.1
       comp=Z,101nm,1.3s
CCIG  Comitan          49.97 335  P       P        00 28 05.6 -0.1
NMDO  Nuevo Mundo      50.42 356  IAMs_20 IAMs_20  00 48 51.3
       comp=Z,9µm,20.0s
BELA  Belgrano 2       50.74 170  P       P        00 28 11.2 +0.4
BELA                              IAmb    IAmb     00 28 23.4
       comp=Z,144nm,1.3s
PTCN  Pitcairn Islan   51.19 261  IAMs_20 IAMs_20  00 45 11.7
       comp=Z,14µm,18.0s
GRTK  Grand Turk       51.30   1  P       P        00 28 14.3 -1.2
VNA3  Neumayer Olymp   53.02 159 ⇑P       P        00 28 29.0 +1.2
       comp=Z,70nm,0.8s
VNA3                             ⇑x       x        00 28 29.2
       comp=E,24nm,0.6s
VNA3                             ⇑ScP     ScP      00 33 32.8 -1.2
       comp=Z,5.4nm,0.7s
SOR   Soroa            53.60 347  P       P        00 28 32.1 -0.5
SOR   Soroa            53.60 347  P       P        00 28 32.1 -0.5
SOR                               pmax    pmax
       comp=Z,101nm,1.1s
VNA2  Neumayer--Watz   53.66 158 ⇑P       P        00 28 33.6 +1.1
       comp=Z,84nm,0.7s,baz=288,slow=7.6
VNA2                             ⇑ScP     ScP      00 33 37.1 +0.3
       comp=Z,9.9nm,0.5s,baz=293,slow=3.5
VNA2                             ⇓S       S        00 36 05.4 -0.6
       comp=E,335µm,0.0s,baz=340,slow=2.3
TLIG  Tlapa            53.79 328  P       P        00 28 34.1 -0.1
TLIG                              IAMs_20 IAMs_20  00 45 38.7
       comp=Z,15µm,20.0s
SNAA  Sanae            55.24 159 ⇑P       P        00 28 45.1 +1.0
       comp=Z,3µm,0.9s
SNAA                             ⇑ScP     ScP      00 33 49.0 +5.2
       comp=Z,120nm,0.5s
SNAA                             ⇑S       S        00 36 25.8 -1.6
SNAA  Sanae            55.24 159  P       P        00 28 44.1  0.0
SNAA  Sanae            55.24 159  P       P        00 28 44.6 +0.5
       comp=Z,136nm,1.1s,baz=280,slow=5.2,SNR=91
SNAA                              LR      LR       00 50 27.3
       comp=Z,25µm,20.7s,baz=294,slow=34
       comp=Z,136nm,1.1s
SNAA  Sanae            55.24 159c iP      P        00 28 44.4 +0.2
SNAA                              pmax    pmax
       comp=Z,475nm,1.7s
SNAA                              MLR     MLR
       comp=Z,16µm,17.0s
SNAA  Sanae            55.24 159 ⇑P       P        00 28 44.3 +0.2
061Z  Ochoppi          56.26 350  P       P        00 28 51.8 +0.1
061Z                              IAmb    IAmb     00 29 35.9
       comp=Z,160nm,1.1s
MOIG  Morelia          56.84 327  P       P        00 28 57.3 +0.9
TROLL Troll, Antarti   56.95 159 ⇑P       P        00 28 57.4 +1.0
       comp=Z,2µm,0.8s
TROLL                            ⇑S       S        00 36 50.7 +0.4
060A  Indiantown       57.34 351  P       P        00 28 58.5 -0.9
060A                              IAmb    IAmb     00 29 12.8
       comp=Z,168nm,1.0s
ASCN  Ascension        58.22  80  P       P        00 29 04.8 -1.2
656A  Willston         59.94 349  P       P        00 29 14.7 -2.8
NVL   N'lazarevskaya   59.95 158 eP       P        00 29 25.5 +8.4
NVL                              e                 00 31 34.6
NVL                              ePPP     PPP      00 32 52.5
NVL                              eS       S        00 37 31.9 +2.9
NVL                              eSS      SS       00 41 25.5 +0.7
NVL                               pmax    pmax
       comp=Z,20nm,1.1s
NVL                               smax    smax
       comp=N,9µm,16.5s
ZAIG  Zacatecas        60.15 327  P       P        00 29 20.8 +1.4
ZAIG                              IAMs_20 IAMs_20  00 50 15.3
       comp=Z,16µm,19.0s
QSPA  South Pole Qui   60.15 180  P       P        00 29 18.8  0.0
QSPA  South Pole Qui   60.15 180  P       P        00 29 19.7 +0.9
       comp=Z,35nm,1.0s,baz=151,slow=2.3,SNR=64
QSPA                              LR      LR       00 56 43.6
       comp=Z,8µm,18.5s,baz=170,slow=38
QSPA                              PKPPKP           00 58 42.0
       comp=Z,2.2nm,0.9s,baz=250,slow=1.1,SNR=3.5
QSPA                              PKP2bc           00 58 51.8
       comp=Z,11nm,1.1s,baz=346,slow=0.9,SNR=8.1
       comp=Z,35nm,1.0s
QSPA  South Pole Qui   60.15 180 ⇑P       P        00 29 19.7 +0.9
456A  Hilliard         61.20 350  P       P        00 29 24.5 -1.5
451A  Vernon           61.74 347  P       P        00 29 26.9 -2.8
SHEL  Horse Pasture    61.92  93  P       P        00 29 28.6 -2.9
SHEL  Horse Pasture    61.92  93  IAMs_20 IAMs_20  00 52 30.8
       comp=Z,11µm,20.0s
SHEL  Horse Pasture    61.92  93  P       P        00 29 28.6 -2.9
SHEL                              pmax    pmax
       comp=Z,231nm,1.3s
TIGA  Tifton           62.14 349  P       P        00 29 33.2 +0.7
TIGA                              IAmb    IAmb     00 29 45.2
       comp=Z,134nm,1.1s
HBVL  Hebbronville     62.24 333  P       P        00 29 33.4 +0.2
HBVL                              IAmb    IAmb     00 30 03.5
       comp=Z,212nm,1.7s
257A  Skidaway Islan   62.29 351  P       P        00 29 31.4 -2.0
KVTX  Kingsville       62.38 334  P       P        00 29 35.1 +1.0
352A  Blakely          62.42 348  P       P        00 29 33.9 -0.4
352A                              IAMs_20 IAMs_20  01 01 21.2
       comp=Z,9µm,19.0s
BBSR  BB Station       62.50   7  P       P        00 29 34.4 -0.4
BBSR                              IAmb    IAmb     00 29 48.3
       comp=Z,96nm,1.0s
BRAL  Brewton          62.54 346  P       P        00 29 34.5 -0.6
250A  Grady            63.16 347  P       P        00 29 38.1 -1.1
CSU   Charleston Sou   63.17 352  P       P        00 29 38.5 -0.8
154A  Montrose         63.21 350  P       P        00 29 39.0 -0.6
NHSC  New Hope         63.30 352  P       P        00 29 39.1 -1.0
NHSC                              IAMs_20 IAMs_20  01 01 02.8
       comp=Z,8µm,19.0s
NHSC  New Hope         63.30 352 ⇑P       P        00 29 41.5 +1.4
346A  Big Creek Wild   63.31 343  P       P        00 29 38.4 -1.8
735A  Kenedy           63.53 335  P       P        00 29 42.5 +0.7
152A  Waverly Hall     63.54 348  P       P        00 29 41.1 -0.6
833A  Chaparral WMA,   63.65 333  P       P        00 29 42.8 +0.2
833A                              IAmb    IAmb     00 29 55.8
       comp=Z,172nm,1.2s
441A  DeRidder         63.73 340  P       P        00 29 44.3 +1.3
441A                              IAmb    IAmb     00 29 56.8
       comp=Z,183nm,1.3s
HKT   Hockley          63.83 337          pP       00 29 44.8 -0.8
HKT   Hockley          63.83 337  P       P        00 29 44.3 +0.7
HKT                               IAmb    IAmb     00 30 14.1
       comp=Z,329nm,1.9s
HKT   Hockley          63.83 337c iP      P        00 29 44.5 +0.9
HKT                               pmax    pmax
       comp=Z,138nm,1.7s
HKT                               MLR     MLR
       comp=Z,4µm,17.0s
Y58A  Scranton         64.04 353  P       P        00 29 43.7 -1.2
GOGA  Godfrey          64.05 349  P       P        00 29 45.0 -0.1
GOGA                              IAmb    IAmb     00 29 57.7
       comp=Z,136nm,1.4s
GOGA  Godfrey          64.05 349  P       P        00 29 45.0 -0.1
GOGA                              pmax    pmax
       comp=Z,136nm,1.5s
MLDN  Muldoon          64.10 336  P       P        00 29 46.0 +0.5
MLDN                              IAmb    IAmb     00 29 59.4
       comp=Z,159nm,1.2s
Y57A  Sumter           64.23 352  P       P        00 29 44.0 -2.2
Y57A                              IAmb    IAmb     00 29 59.1
       comp=Z,101nm,1.0s
Y57A                              IAMs_20 IAMs_20  00 55 44.2
       comp=Z,10µm,21.0s
LRAL  Lakeview Retre   64.33 346  P       P        00 29 46.9  0.0
LRAL                              IAmb    IAmb     00 30 00.6
       comp=Z,132nm,1.4s
LRAL  Lakeview Retre   64.33 346 ⇑P       P        00 29 47.6 +0.7
VBMS  Vicksburg        64.37 343  P       P        00 29 47.1 -0.1
146A  Union            64.41 344  P       P        00 29 46.4 -1.1
146A                              IAmb    IAmb     00 30 02.9
       comp=Z,140nm,1.1s
HNVL  Huntsville, TX   64.45 338  P       P        00 29 48.1 +0.3
HNVL                              IAmb    IAmb     00 30 04.1
       comp=Z,98nm,1.0s
Y52A  Lilburn          64.59 349  P       P        00 29 48.8 +0.2
JSC   Jenkinsville     64.59 352  P       P        00 29 49.1 +0.5
JSC                               IAmb    IAmb     00 30 01.5
       comp=Z,74nm,1.0s
JSC   Jenkinsville     64.59 352  P       P        00 29 49.1 +0.5
JSC                               pmax    pmax
       comp=Z,74nm,1.0s
JSC                               MLR     MLR
       comp=Z,7µm,19.0s
SLBS  Sierra La Lagu   64.64 322  P       P        00 29 48.8 -0.4
SLBS                              IAmb    IAmb     00 30 17.3
       comp=Z,208nm,1.9s
SLBS  Sierra La Lagu   64.64 322 ⇑P       P        00 29 53.0 +3.7
X58A  Rowland          64.64 353  P       P        00 29 48.7 -0.2
X58A                              IAmb    IAmb     00 30 02.0
       comp=Z,119nm,0.8s
HODGE Hodges           64.68 351  P       P        00 29 48.6 -0.5
HODGE                             IAmb    IAmb     00 30 02.0
       comp=Z,88nm,1.3s
HNDO  Hondo            64.69 334  P       P        00 29 50.8 +1.5
HNDO                              IAmb    IAmb     00 29 55.6
       comp=Z,78nm,0.7s
SACV  Santiago Islan   64.71  53  P       P        00 29 48.2 -1.6
SACV                              IAmb    IAmb     00 29 51.9
       comp=Z,117nm,1.4s
Z47A  Carrollton       64.72 345  P       P        00 29 50.1 +0.7
Z47A                              IAmb    IAmb     00 30 04.0
       comp=Z,125nm,1.2s
BIRD  Birdtown, Kers   64.86 352  P       P        00 29 49.6 -0.7
BIRD                              IAmb    IAmb     00 30 03.2
       comp=Z,119nm,1.3s
BIRD                              IAMs_20 IAMs_20  01 03 09.9
       comp=Z,9µm,18.0s
Y49A  Blount Mountai   65.01 347  P       P        00 29 51.5 +0.2
143A  Socs Landing,    65.06 342  P       P        00 29 52.6 +0.9
DRIO  Del Rio          65.11 333  P       P        00 29 51.9 -0.2
DRIO                              IAmb    IAmb     00 30 20.4
       comp=Z,185nm,1.9s
NATX  Nacogdoches      65.12 339  P       P        00 29 52.7 +0.6
NATX                              IAmb    IAmb     00 30 08.2
       comp=Z,116nm,1.1s
HPIG                   65.15 327  P       P        00 29 53.6 +0.9
LPIG  La Paz           65.17 321  LR      LR       00 53 10.9
       comp=Z,3µm,18.1s,baz=138,slow=31
W59A  Clinton          65.17 354          P        00 29 53.1 +0.7
W59A                              IAmb    IAmb     00 30 05.8
       comp=Z,141nm,1.2s
W59A                              IAMs_20 IAMs_20  01 02 03.2
       comp=Z,8µm,20.0s
435B  Jarrell          65.20 336  P       P        00 29 53.7 +1.0
PAULI Pauline          65.20 351  P       P        00 29 53.2 +0.7
W57A  Gilead           65.31 353  P       P        00 29 53.5 +0.2
W57A                              IAmb    IAmb     00 30 06.1
       comp=Z,86nm,1.0s
X51A  Calhoun          65.41 348  P       P        00 29 54.6 +0.7
KMSC  Kings Mountain   65.45 352  P       P        00 29 54.1  0.0
KMSC                              IAmb    IAmb     00 30 07.1
       comp=Z,102nm,1.2s
BG3   Lake Jocassee    65.52 350  P       P        00 29 54.9 +0.2
FPAL  Fort Paine       65.52 348  P       P        00 29 54.7  0.0
FPAL                              IAmb    IAmb     00 30 08.1
       comp=Z,115nm,1.5s
V61A  Roper            65.65 356  P       P        00 29 55.0 -0.4
V61A                              IAMs_20 IAMs_20  01 01 33.0
       comp=Z,8µm,19.0s
Y45A  Yeager Farm, C   65.70 344  P       P        00 29 56.5 +0.7
237A  Washetta, Mont   65.71 338  P       P        00 29 56.3 +0.4
237A                              IAmb    IAmb     00 30 08.9
       comp=Z,122nm,0.9s
X48A  Hartselle        65.71 346  P       P        00 29 55.9  0.0
JCT   Junction City    65.74 334  P       P        00 29 56.5 +0.3
JCT   Junction City    65.74 334  P       P        00 29 56.5 +0.3
JCT                               pmax    pmax
       comp=Z,421nm,1.8s
JCT                               MLR     MLR
       comp=Z,4µm,20.0s
JCT   Junction City    65.74 334 ⇑P       P        00 29 58.1 +1.9
W52A  Murphy           65.77 349  P       P        00 29 55.7 -0.6
W52A                              IAmb    IAmb     00 30 09.4
       comp=Z,154nm,1.2s
V58A  Windy Hill, Pi   65.85 354  P       P        00 29 56.8  0.0
V58A                              IAmb    IAmb     00 30 09.6
       comp=Z,96nm,1.0s
Z41A  Richland Creek   65.97 341  P       P        00 29 58.2 +0.7
Z41A                              IAmb    IAmb     00 30 12.3
       comp=Z,198nm,1.3s
W50A  Signal Mountai   66.11 348  P       P        00 29 59.1 +0.6
V55A  Taylorsville     66.14 352  P       P        00 29 58.8 +0.2
V55A                              IAmb    IAmb     00 30 11.7
       comp=Z,152nm,1.1s
V55A                              IAMs_20 IAMs_20  01 03 58.8
       comp=Z,10µm,18.0s
BRDY  Brady            66.16 335  P       P        00 29 59.4 +0.5
BRDY                              IAmb    IAmb     00 30 28.0
       comp=Z,160nm,1.5s
V53A  Saluda           66.17 350  P       P        00 29 59.8 +0.9
V53A                              IAmb    IAmb     00 30 12.5
       comp=Z,156nm,1.2s
SAND  Sanderson        66.19 332  P       P        00 29 59.8 +0.7
SAND                              IAmb    IAmb     00 30 12.2
       comp=Z,79nm,1.0s
CPCT  Cooper Cave      66.22 349  P       P        00 29 58.7 -0.4
CPCT                              IAMs_20 IAMs_20  01 01 54.9
       comp=Z,8µm,19.0s
SWET  Sewanee          66.24 348  P       P        00 29 59.2 -0.1
WHTX  Lake Whitney,    66.25 337  P       P        00 29 59.8 +0.4
WHTX                              IAmb    IAmb     00 30 28.5
       comp=Z,116nm,1.1s
OXF   Oxford           66.28 344  P       P        00 30 00.3 +0.7
OXF   Oxford           66.28 344  P       P        00 30 00.3 +0.7
OXF                               pmax    pmax
       comp=Z,466nm,1.2s
OXF   Oxford           66.28 344 ⇑P       P        00 30 00.1 +0.5
TKL   Tuckaleechee C   66.30 350  P       P        00 30 00.1 +0.4
TKL   Tuckaleechee C   66.30 350  P       P        00 30 00.5 +0.9
       comp=Z,55nm,0.8s,baz=181,slow=6.9,SNR=29
       comp=Z,55nm,0.8s
TKL   Tuckaleechee C   66.30 350 ⇑P       P        00 30 00.0 +0.4
TXAR  Lajitas Array    66.30 330  P       P        00 29 59.9  0.0
TXAR  Lajitas Array    66.30 330  P       P        00 30 01.9 +2.0
       comp=Z,9.5nm,0.6s,baz=151,slow=6.0,SNR=70
TXAR                              LR      LR       00 55 01.4
       comp=Z,7µm,18.0s,baz=139,slow=32
TXAR                              PKP2bc           00 58 35.7
       comp=Z,1.5nm,1.1s,baz=336,slow=2.7,SNR=7.6
       comp=Z,9.5nm,0.6s
TX31  Lajitas Ar. Si   66.30 330  P       P        00 29 59.9  0.0
TX31                              IAmb    IAmb     00 30 29.8
       comp=Z,106nm,1.8s
CCAR  Cane Creek       66.31 342          P        00 29 59.4 -0.3
CCAR                              IAmb    IAmb     00 30 28.8
       comp=Z,72nm,0.9s
PLAL  Pickwick Lake    66.44 346  P       P        00 30 00.8 +0.3
PLAL                              IAmb    IAmb     00 30 14.0
       comp=Z,164nm,1.5s
WLAR  White Oak Lake   66.46 341  P       P        00 30 01.3 +0.7
TREL  Terrell          66.47 338  P       P        00 30 01.4 +0.6
TREL                              IAmb    IAmb     00 30 30.1
       comp=Z,104nm,1.2s
FW16  Waxahatchie      66.51 337  P       P        00 30 01.6 +0.6
FW16                              IAmb    IAmb     00 30 30.4
       comp=Z,141nm,1.4s
U56A  King             66.53 353  P       P        00 30 02.2 +1.1
U56A                              IAmb    IAmb     00 30 14.4
       comp=Z,108nm,1.0s
FW14  Alvarado         66.53 337  P       P        00 30 01.6 +0.3
FW14                              IAmb    IAmb     00 30 31.2
       comp=Z,234nm,1.8s
FW13  Cleburne         66.57 337  P       P        00 30 01.7 +0.2
FW13                              IAmb    IAmb     00 30 30.3
       comp=Z,107nm,1.2s
Z38A  Mt. Pleasant     66.61 339  P       P        00 30 02.5 +0.8
TAOE  Nuku Hiva Isla   66.64 273  IAMs_20 IAMs_20  00 52 51.4
       comp=Z,11µm,18.0s
TAOE  Nuku Hiva Isla   66.64 273 eP       P        00 29 59.6 -2.9
       comp=Z,1µm,25.3s
TAOE  Nuku Hiva Isla   66.64 273 ePP      PP       00 32 25.7 -3.6
       comp=Z,815nm,29.2s
TAOE                             eS       S        00 38 51.8 -2.6
       comp=Z,7µm,24.6s
TAOE                             eSS      SS       00 42 44.4  -27
       comp=Z,5µm,23.9s
TAOE                             eLR      LR       00 50 03.3
       comp=Z,19µm,29.8s
OZNA  Ozona            66.64 333  P       P        00 30 02.2 +0.1
OZNA                              IAmb    IAmb     00 30 31.4
       comp=Z,223nm,1.6s
U54A  Nelsons Funny    66.87 351  P       P        00 30 03.0 -0.4
U54A                              IAmb    IAmb     00 30 08.8
       comp=Z,110nm,0.9s
U54A                              IAMs_20 IAMs_20  01 04 24.2
       comp=Z,8µm,19.0s
T59A  Double "B" Far   66.89 355  P       P        00 30 03.3 -0.1
T59A                              IAMs_20 IAMs_20  01 02 13.8
       comp=Z,10µm,19.0s
SBA   Scott Base       66.90 191  P       P        00 30 04.1 +1.1
SBA   Scott Base       66.90 191  P       P        00 30 04.1 +1.1
SBA                               pmax    pmax
       comp=Z,75nm,1.4s
V48A  Smith Brothers   66.92 347  P       P        00 30 03.7 +0.1
FW07  Weatherford      67.01 337  P       P        00 30 05.0 +0.7
FW07                              IAmb    IAmb     00 30 09.7
       comp=Z,52nm,0.8s
T57A  Hurt             67.06 354  P       P        00 30 04.1 -0.4
T57A                              IAmb    IAmb     00 30 17.6
       comp=Z,110nm,1.3s
X40A  Basin Creek Fa   67.13 341  P       P        00 30 05.0 +0.1
TZTN  Tazewell         67.13 350  P       P        00 30 05.3 +0.3
TZTN  Tazewell         67.13 350 ⇑P       P        00 30 05.5 +0.5
CLTN  Cedars of Leba   67.16 348  P       P        00 30 04.5 -0.6
FW06  Azle             67.18 337  P       P        00 30 05.3  0.0
FW06                              IAmb    IAmb     00 30 34.4
       comp=Z,110nm,1.3s
ALPN  Alpine           67.19 331  P       P        00 30 05.9 +0.3
ALPN                              IAmb    IAmb     00 30 35.3
       comp=Z,155nm,1.8s
PLPT  Palo Pinto       67.30 336  P       P        00 30 07.0 +1.0
PLPT                              IAmb    IAmb     00 30 18.5
       comp=Z,73nm,1.0s
BLA   Blacksburg       67.39 353  P       P        00 30 06.2 -0.4
BLA                               IAmb    IAmb     00 30 19.9
       comp=Z,95nm,1.2s
BLA   Blacksburg       67.39 353  P       P        00 30 06.2 -0.4
BLA                               pmax    pmax
       comp=Z,95nm,1.2s
BLA   Blacksburg       67.39 353 ⇑P       P        00 30 07.7 +1.1
MIAR  Mount Ida        67.39 341  P       P        00 30 06.9 +0.3
MIAR                              IAmb    IAmb     00 30 31.8
       comp=Z,124nm,1.4s
MIAR  Mount Ida        67.39 341  P       P        00 30 06.9 +0.3
MIAR                              pmax    pmax
       comp=Z,124nm,1.4s
MIAR  Mount Ida        67.39 341 ⇑P       P        00 30 08.1 +1.5
Z35A  Perchaven, San   67.41 337  P       P        00 30 08.0 +1.2
FW03  Perrin-Whitt E   67.42 337  P       P        00 30 06.8  0.0
FW03                              IAmb    IAmb     00 30 35.9
       comp=Z,106nm,1.2s
U49A  Red Boiling Sp   67.47 348  P       P        00 30 07.2 +0.1
U49A                              IAmb    IAmb     00 30 19.9
       comp=Z,139nm,1.2s
WVT   Waverly          67.49 346  P       P        00 30 07.6 +0.4
WVT   Waverly          67.49 346  P       P        00 30 07.6 +0.4
WVT                               pmax    pmax
       comp=Z,441nm,1.6s
WVT   Waverly          67.49 346 ⇑P       P        00 30 07.7 +0.4
SGCY  Sterling City    67.53 333  P       P        00 30 08.0 +0.4
SGCY                              IAmb    IAmb     00 30 35.5
       comp=Z,97nm,1.4s
HBAR  Harrisburg       67.58 344  P       P        00 30 09.1 +1.3
ABTX  Abilene, Hawle   67.60 335  P       P        00 30 08.0  0.0
ABTX                              IAmb    IAmb     00 30 20.6
       comp=Z,82nm,1.0s
HALT  Halls            67.61 345  P       P        00 30 09.0 +1.1
MNHN  Monahans         67.67 332  P       P        00 30 08.9 +0.4
MNHN                              IAmb    IAmb     00 30 14.3
       comp=Z,51nm,0.7s
S57A  Dark Hollow, R   67.79 354  P       P        00 30 09.4 +0.4
S57A                              IAmb    IAmb     00 30 22.4
       comp=Z,97nm,1.0s
S57A                              IAMs_20 IAMs_20  01 02 41.5
       comp=Z,8µm,20.0s
T50A  Nancy            67.80 349  P       P        00 30 09.3 +0.1
T50A                              IAMs_20 IAMs_20  01 04 22.9
       comp=Z,8µm,19.0s
GNAR  Gosnell          67.82 344  P       P        00 30 10.3 +1.1
LNXT  Lenox            67.83 345  P       P        00 30 10.4 +1.1
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R58B	Mineral	67.90	355	P	P	00 30 11.1	+1.4
R58B				IAMs_20	IAMs_20	01 02 44.5	
	comp=Z,10µm,19.0s						
PEBM	Pemiscott Bayo	67.92	345	P	P	00 30 11.0	+1.1
VNDA	Vanda	67.93	191	P	P	00 30 10.6	+1.0
VNDA	Vanda	67.93	191	P	P	00 30 11.6	+2.0
	comp=Z,3.9nm,1.0s,baz=135,slow=6.7,SNR=12						
VNDA				PKP2bc		00 58 31.4	
	comp=Z,1.9nm,1.1s,baz=289,slow=5.2,SNR=4.5						
	comp=Z,3.9nm,1.0s						
GLAT	Glass	67.94	345	P	P	00 30 11.4	+1.3
S54A	Dingess, Beckl	68.07	352	P	P	00 30 11.1	+0.2
S54A				IAmb	IAmb	00 30 23.6	
	comp=Z,116nm,1.1s						
CBN	Corbin Frederi	68.10	356	P	P	00 30 11.8	+0.8
CBN				IAmb	IAmb	00 30 24.7	
	comp=Z,108nm,0.9s						
VHRN	Van Horn	68.13	330		pP	00 30 13.0	-0.5
PECS	Pecos	68.15	331	P	P	00 30 13.2	+1.6
HICK	Hickman	68.19	345	P	P	00 30 12.7	+1.1
WTFS	Witchita Falls	68.21	337	P	P	00 30 12.3	+0.5
WTFS				IAmb	IAmb	00 30 41.4	
	comp=Z,112nm,1.2s						
S51A	Beattyville	68.22	350	IAmb	IAmb	00 30 24.5	
	comp=Z,105nm,1.0s						
TBI	Tubuai	68.23	255	*e*P	P	00 30 09.7	-2.6
	comp=Z,11µm,19.5s						
TBI	Tubuai	68.23	255	*e*PP	PP	00 32 38.3	-4.5
	comp=Z,3µm,29.5s						
TBI				*e*S	S	00 39 09.5	-3.7
	comp=Z,27µm,24.0s						
TBI				*e*SS	SS	00 43 35.3	-0.6
	comp=Z,13µm,30.5s						
TBI				*e*LQ	LQ	00 47 15.3	
	comp=Z,32µm,34.8s						
TBI				*e*LR	LR	00 50 42.8	
	comp=Z,24µm,29.8s						
TBI				*e*LR	LR	00 50 46.4	
	comp=Z,111µm,28.8s						
FCAR	Ozark Folk Cen	68.27	343	P	P	00 30 12.1	0.0
ODSA	Odessa	68.27	332	P	P	00 30 13.2	+0.8
SN05	Snyder 5	68.29	334	P	P	00 30 13.1	+0.7
SN05				IAmb	IAmb	00 30 41.6	
	comp=Z,126nm,1.6s						
APMT	Aspermont	68.41	335	P	P	00 30 14.0	+1.0
R55A	Marlinton	68.42	353	P	P	00 30 14.4	+1.3
R55A				IAmb	IAmb	00 30 26.7	
	comp=Z,147nm,1.1s						
PARMO	Parma	68.42	345	P	P	00 30 14.2	+1.1
SN07	Snyder 07	68.48	334	P	P	00 30 14.3	+0.7
T45A	Paducah	68.52	346	P	P	00 30 14.3	+0.6
POST	Post	68.69	334	P	P	00 30 16.1	+1.1
POST				IAmb	IAmb	00 30 44.0	
	comp=Z,195nm,1.9s						
X34A	Smith Ranch, M	68.76	337	P	P	00 30 15.8	+0.5
X34A				IAmb	IAmb	00 30 28.9	
	comp=Z,133nm,1.2s						
SRIG	Santa Rosalia	68.78	322	P	P	00 30 17.1	+1.6
SRIG				IAmb	IAmb	00 30 42.3	
	comp=Z,114nm,1.5s						
CLNB	Carlsbad	68.94	331	P	P	00 30 17.5	+1.0
R50A	Paris	68.95	350	P	P	00 30 16.6	+0.3
R50A				IAmb	IAmb	00 30 30.0	
	comp=Z,288nm,2.0s						
DKNS	Dickens	69.01	334	P	P	00 30 17.9	+1.1
HTMS	Hat Mesa	69.02	332	P	P	00 30 19.0	+2.0
CLN7	Carlsbad 7	69.04	332	P	P	00 30 19.1	+2.0
Q56A	Snyder Ridge,	69.08	354	P	P	00 30 17.6	+0.5
Q56A				IAmb	IAmb	00 30 31.0	
	comp=Z,122nm,1.1s						
Q56A				IAMs_20	IAMs_20	01 03 38.3	
	comp=Z,9µm,20.0s						
MNTX	Cornudas Mount	69.08	330	P	P	00 30 17.7	+0.4
MNTX				IAMs_20	IAMs_20	00 56 21.9	
	comp=Z,12µm,19.0s						
MNTX	Cornudas Mount	69.08	330	⇑P	P	00 30 17.9	+0.5
T42A	Van Buren	69.09	344	P	P	00 30 18.0	+0.8
T42A				IAmb	IAmb	00 30 31.7	
	comp=Z,120nm,1.5s						
MBO	M'Bour	69.09	58	P	P	00 30 18.2	+0.5
MBO				IAMs_20	IAMs_20	00 56 19.7	
	comp=Z,9µm,20.0s						
R49A	Shelbyville	69.10	349	IAmb	IAmb	00 30 34.0	
	comp=Z,102nm,1.0s						
R49A				IAMs_20	IAMs_20	01 05 10.0	
	comp=Z,8µm,19.0s						
HHAR	Hobbs	69.12	341	IAmb	IAmb	00 30 32.4	
	comp=Z,138nm,1.3s						
Q54A	Coxs Mills	69.18	353	IAmb	IAmb	00 30 30.3	
	comp=Z,48nm,0.8s						
Q54A				IAMs_20	IAMs_20	01 05 45.2	
	comp=Z,7µm,18.0s						
SSFO	Shawnee State	69.19	351	IAmb	IAmb	00 30 30.7	
	comp=Z,100nm,1.0s						
WMOK	Wichita Mounta	69.20	337	⇑P	P	00 30 18.9	+0.9
WMOK	Wichita Mounta	69.20	337	⇑P	P	00 30 18.9	+0.9
FNO	Franklin	69.22	338	P	P	00 30 18.3	+0.2
FNO				IAmb	IAmb	00 30 47.4	
	comp=Z,100nm,1.2s						
WCI	Wyandotte Cave	69.23	348	P	P	00 30 18.4	+0.3
WCI	Wyandotte Cave	69.23	348	P	P	00 30 18.4	+0.3
WCI				pmax	pmax		
	comp=Z,363nm,1.8s						
WCI	Wyandotte Cave	69.23	348	⇑P	P	00 30 18.3	+0.3
SDMD	Soldier's Deli	69.27	356	P	P	00 30 19.6	+1.3
SDMD				IAmb	IAmb	00 30 32.1	
	comp=Z,74nm,1.1s						
S44A	Carbondale	69.30	346	pP	P	00 30 16.6	-1.9
TUL3	Leonard	69.31	340	P	P	00 30 20.1	+1.4
TUL3				IAmb	IAmb	00 30 47.0	
	comp=Z,70nm,0.9s						
RLO	Rose Lookout	69.32	340	P	P	00 30 19.4	+0.7
RLO				IAmb	IAmb	00 30 41.0	
	comp=Z,98nm,1.3s						
Q52A	Bidwell	69.33	352	P	P	00 30 19.3	+0.6
Q52A				IAmb	IAmb	00 30 34.5	
	comp=Z,150nm,1.1s						
OKCSW	OKLAHOMA CITY	69.36	338	P	P	00 30 18.9	-0.1
OKCSW				IAmb	IAmb	00 30 30.8	
	comp=Z,136nm,1.1s						
U38A	Gravette	69.39	341	P	P	00 30 20.1	+1.0
U38A				IAmb	IAmb	00 30 34.0	
	comp=Z,118nm,1.4s						
P57A	Homestead Farm	69.42	355	P	P	00 30 20.3	+1.1
P61A	Hammonton	69.44	358	IAMs_20	IAMs_20	01 04 45.9	
	comp=Z,7µm,19.0s						
DEOK	Depew	69.47	339	P	P	00 30 19.6	0.0
HSIG		69.47	324		pP	00 30 21.8	0.0
SYO	Syowa Base	69.53	159	⇑*i*P	P	00 30 19.2	-0.5
SYO	Syowa Base	69.53	159	⇓*i*sP	sP	00 30 23.0	+0.7
SYO	Syowa Base	69.53	159	⇑*i*PcP	PcP	00 30 41.6	-1.2
Q51A	Peebles	69.54	351	IAMs_20	IAMs_20	01 06 00.3	
	comp=Z,7µm,18.0s						
ADOK	Arcadia Dam	69.57	338	P	P	00 30 20.5	+0.2
BBTS	Babate	69.58	58	LR	LR	01 00 47.7	
	comp=Z,8µm,18.1s,baz=109,slow=36						
CPRX	Cap Rock	69.60	332		pP	00 30 22.4	-0.3
EPT	El Paso	69.64	329	P	P	00 30 20.8	-0.2
OK052	Battle Ridge R	69.70	339	P	P	00 30 21.3	+0.2
OK052				IAmb	IAmb	00 30 38.4	
	comp=Z,157nm,1.3s						
WUPA	West Chester U	69.73	357	P	P	00 30 19.5	-1.6
WUPA				IAmb	IAmb	00 30 35.1	
	comp=Z,130nm,1.2s						
OK029	Liberty Lake	69.73	338	P	P	00 30 21.0	-0.3
OK029				IAmb	IAmb	00 30 40.1	
	comp=Z,114nm,1.1s						
P53A	Whipple	69.74	352	P	P	00 30 22.3	+1.1
P53A				IAmb	IAmb	00 30 34.2	
	comp=Z,165nm,1.2s						
MCWV	Mont Chateau	69.75	354	P	P	00 30 21.8	+0.6
MCWV				IAmb	IAmb	00 30 34.6	
	comp=Z,138nm,1.0s						
MCWV				IAMs_20	IAMs_20	01 04 03.2	
	comp=Z,11µm,20.0s						
MCWV	Mont Chateau	69.75	354	⇑P	P	00 30 22.3	+1.1
MVL	Millersville	69.83	357	P	P	00 30 21.9	+0.2
MVL				IAmb	IAmb	00 30 35.8	
	comp=Z,200nm,1.3s						
QUOK	Quay	69.84	339	P	P	00 30 22.1	+0.2
QUOK				IAmb	IAmb	00 30 36.9	
	comp=Z,216nm,1.6s						
P51A	Williamsport	69.95	351	P	P	00 30 23.0	+0.6
P51A				IAmb	IAmb	00 30 35.0	
	comp=Z,132nm,0.9s						
P52A	Corning	69.98	352	P	P	00 30 22.7	+0.1
P52A				IAmb	IAmb	00 30 35.3	
	comp=Z,178nm,1.1s						
MSTX	Muleshoe	69.98	333	P	P	00 30 24.2	+1.3
MSTX				IAmb	IAmb	00 30 35.7	
	comp=Z,128nm,1.2s						
CSTR	Hydro, Custer	70.00	337	P	P	00 30 23.8	+0.9
SMWD	Samnorwood	70.05	336	P	P	00 30 24.9	+1.6
SMWD				IAmb	IAmb	00 30 52.1	
	comp=Z,229nm,1.5s						
CCM	Cathedral Cave	70.10	344	P	P	00 30 23.5	+0.1
CCM	Cathedral Cave	70.10	344	P	P	00 30 23.5	+0.1
CCM				pmax	pmax		
	comp=Z,392nm,1.6s						
CCM	Cathedral Cave	70.10	344	⇑P	P	00 30 24.4	+0.9
OK051	E0350 and S346	70.18	339	P	P	00 30 24.8	+0.8
OK051				IAmb	IAmb	00 30 39.1	
	comp=Z,258nm,1.6s						
P48A	Milroy	70.28	349	P	P	00 30 24.4	-0.1
O54A	Avella	70.32	353	P	P	00 30 24.4	-0.4
O54A				IAMs_20	IAMs_20	01 04 33.3	
	comp=Z,10µm,20.0s						
AMTX	Amarillo	70.37	334	P	P	00 30 26.4	+1.1
AMTX				IAmb	IAmb	00 30 54.4	
	comp=Z,273nm,1.6s						
LUPA	Lehigh Univers	70.38	357	P	P	00 30 25.0	-0.1
LUPA				IAmb	IAmb	00 30 39.1	
	comp=Z,88nm,1.1s						
Q44A	Meyer Farm, Va	70.41	346	P	P	00 30 24.9	-0.4
O52A	Adamsville	70.42	352	P	P	00 30 24.7	-0.6
O52A				IAmb	IAmb	00 30 38.0	
	comp=Z,94nm,0.9s						
O52A				IAMs_20	IAMs_20	01 03 23.9	
	comp=Z,8µm,19.0s						
TVO	Taravao	70.42	260	*e*S	S	00 39 41.8	+2.5
	comp=Z,2µm,23.7s						
TVO				*e*SS	SS	00 43 59.9	-10
	comp=Z,972nm,24.8s						
TVO				*e*LR	LR	00 51 52.2	
	comp=Z,6µm,23.8s						
BRNJ	Basking Ridge	70.44	358	P	P	00 30 25.6	+0.2
BRNJ				IAMs_20	IAMs_20	01 05 50.4	
	comp=Z,9µm,20.0s						
T35A	Sooner Cattle	70.46	339	P	P	00 30 26.7	+1.0
T35A				IAmb	IAmb	00 30 40.8	
	comp=Z,102nm,1.1s						
O53A	New Philadelph	70.48	353	P	P	00 30 26.6	+0.9
O53A				IAmb	IAmb	00 30 38.6	
	comp=Z,178nm,1.2s						
O53A				IAMs_20	IAMs_20	01 06 33.5	
	comp=Z,9µm,18.0s						
PMOR	Pomariorio Ree	70.50	264	*e*S	S	00 39 38.8	-1.2
	comp=Z,11µm,24.5s						
PMOR	Pomariorio Ree	70.50	264	*e*LR	LR	00 51 53.3	
	comp=Z,22µm,23.5s						
CPNY	Central Park	70.53	359	P	P	00 30 25.4	-0.5
CPNY				IAmb	IAmb	00 30 39.0	
	comp=Z,125nm,1.4s						
CROK	Carrier	70.55	338	P	P	00 30 27.0	+0.7
CROK				IAmb	IAmb	00 30 40.4	
	comp=Z,189nm,1.5s						
SSPA	Standing Stone	70.56	355	P	P	00 30 27.8	+1.6
SSPA				IAmb	IAmb	00 30 39.8	
	comp=Z,150nm,1.1s						
SSPA	Standing Stone	70.56	355	IAMs_20	IAMs_20	01 05 58.6	
	comp=Z,8µm,20.0s						
SSPA	Standing Stone	70.56	355	⇑P	P	00 30 27.8	+1.6
319A	Douglas	70.59	327	P	P	00 30 28.2	+1.4
319A				IAmb	IAmb	00 30 39.4	
	comp=Z,90nm,1.2s						
ELIS	Ellis County	70.62	337	P	P	00 30 27.9	+1.2
ELIS				IAmb	IAmb	00 30 41.5	
	comp=Z,151nm,1.4s						
N62A	Caumsett State	70.66	359	P	P	00 30 27.9	+1.2
ACSO	Alum Creek Sta	70.68	351	P	P	00 30 27.1	+0.1
ACSO	Alum Creek Sta	70.68	351	⇑P	P	00 30 28.0	+1.1
N58A	Sunbury	70.69	356	P	P	00 30 27.6	+0.7
N58A				IAmb	IAmb	00 30 40.8	
	comp=Z,181nm,1.2s						
PAL	Palisades	70.74	359	P	P	00 30 27.0	-0.3
PAL				IAmb	IAmb	00 30 30.8	
	comp=Z,260nm,1.9s						
PAL	Palisades	70.74	359	P	P	00 30 27.0	-0.3
PAL				pmax	pmax		
	comp=Z,260nm,2.0s						
PAL				MLR	MLR		
	comp=Z,5µm,18.0s						
P46A	Rosedale	70.75	348	P	P	00 30 27.2	-0.1
PAE	Paea	70.76	260	*e*P	P	00 30 23.3	-4.7
	comp=Z,209nm,22.8s						
PAE				*e*S	S	00 39 46.2	+3.1
	comp=Z,2µm,23.3s						
PAE				*e*SS	SS	00 44 06.8	-8.2
	comp=Z,546nm,22.5s						
PAE				*e*LR	LR	00 51 54.8	
	comp=Z,5µm,23.1s						
OK038	West end E0370	70.77	337	P	P	00 30 27.6	0.0
OK038				IAmb	IAmb	00 30 56.4	
	comp=Z,101nm,1.2s						
PPTF	Pamatai, Papee	70.78	260	P	P	00 30 29.0	+0.7
PPTF				IAmb	IAmb	00 30 41.8	
	comp=Z,205nm,1.2s						
PPTF				IAMs_20	IAMs_20	00 53 09.5	
	comp=Z,13µm,22.0s						
PPT2	Papeete2	70.79	260	*e*P	P	00 30 25.4	-2.9
	comp=Z,3µm,17.0s						
PPT2	Papeete2	70.79	260	*e*PP	PP	00 32 59.8	-5.3
	comp=Z,828nm,24.0s						
PPT2				*e*S	S	00 39 39.1	-4.5
	comp=Z,11µm,24.8s						
PPT2				*e*SS	SS	00 44 10.5	-5.2
	comp=Z,4µm,23.5s						
PPT2				*e*LQ	LQ	00 48 21.0	
	comp=Z,7µm,33.2s						
PPT2				*e*LR	LR	00 51 58.1	
	comp=Z,25µm,24.2s						
PPT2				*e*LR	LR	00 51 58.6	
	comp=Z,32µm,23.8s						
PPT	Papeete	70.80	260	P	P	00 30 31.1	+2.8
	comp=Z,57nm,1.0s,baz=158,slow=6.8,SNR=4.2						
PPT				LR	LR	00 53 30.3	
	comp=Z,11µm,20.5s,baz=106,slow=29						
	comp=Z,57nm,1.0s						
O49A	Covington	70.82	350	IAmb	IAmb	00 30 40.5	
	comp=Z,155nm,1.0s						
O49A				IAMs_20	IAMs_20	01 05 50.6	
	comp=Z,7µm,20.0s						
KAN13	South Haven SW	70.85	339	P	P	00 30 29.6	+1.5
KAN14	Manchester OK	70.95	338	P	P	00 30 29.2	+0.5
KAN14				IAmb	IAmb	00 30 53.9	
	comp=Z,138nm,1.5s						
KAN17	Caldwell West	70.97	338	P	P	00 30 30.0	+1.2
KAN17				IAmb	IAmb	00 30 43.4	
	comp=Z,102nm,1.2s						
N53A	Lisbon	70.99	353	P	P	00 30 29.4	+0.6
N53A				IAmb	IAmb	00 30 41.8	
	comp=Z,165nm,1.4s						
N53A				IAMs_20	IAMs_20	01 04 54.9	
	comp=Z,10µm,20.0s						
O48B	Farmland	71.02	349	IAmb	IAmb	00 30 41.4	
	comp=Z,102nm,0.9s						
KAN01	Argonia South	71.07	339	P	P	00 30 30.6	+1.2
KAN01				IAmb	IAmb	00 30 44.0	
	comp=Z,177nm,1.2s						
KAN08	Anthony NE Sta	71.20	338	P	P	00 30 31.2	+1.0
M57A	Sunshine Farm,	71.21	356	P	P	00 30 31.3	+1.1
M57A				IAmb	IAmb	00 30 44.0	
	comp=Z,156nm,1.1s						
N51A	Ashland	71.27	352	P	P	00 30 30.7	+0.1
N51A				IAmb	IAmb	00 30 43.2	
	comp=Z,180nm,1.1s						
N51A				IAMs_20	IAMs_20	01 03 49.5	
	comp=Z,8µm,20.0s						
KAN12	Harper NE Stat	71.28	338	P	P	00 30 31.6	+1.0
M65A	Busby, Falmout	71.29	1	IAMs_20	IAMs_20	01 07 00.5	
	comp=Z,9µm,18.0s						
KSPA	Keystone Colle	71.36	357	P	P	00 30 31.9	+0.9
KSPA				IAmb	IAmb	00 30 44.8	
	comp=Z,175nm,1.4s						
KSCT	Kent School, K	71.45	359	P	P	00 30 32.5	+0.9
SFIN	Lafayette	71.47	348	P	P	00 30 32.1	+0.4
DUN6	Lazy B Ranch	71.47	328	P	P	00 30 33.6	+1.5
UCCT	U. Connecticut	71.51	360	P	P	00 30 33.1	+1.2
UCCT				IAmb	IAmb	00 30 45.7	
	comp=Z,111nm,1.2s						
N49A	Columbus Grove	71.52	350	IAMs_20	IAMs_20	01 06 19.0	
	comp=Z,8µm,22.0s						
P40A	Paris	71.69	344	P	P	00 30 34.2	+1.1
ALLY	Alegheny Colle	71.75	354	IAmb	IAmb	00 30 46.4	
	comp=Z,131nm,1.1s						
M52A	Chesterland	71.77	353	P	P	00 30 34.2	+0.6
M52A				IAmb	IAmb	00 30 46.5	
	comp=Z,141nm,0.8s						
M52A				IAMs_20	IAMs_20	01 05 19.6	
	comp=Z,9µm,20.0s						
Y22D	IRIS PASSCAL I	71.78	330	P	P	00 30 35.2	+1.2
Y22D				IAmb	IAmb	00 31 54.6	
	comp=Z,190nm,1.6s						
Y22D				IAMs_20	IAMs_20	00 58 18.1	
	comp=Z,11µm,19.0s						
SBM	South Baldy	71.81	330	P	P	00 30 36.6	+2.1
M50A	Fremont	71.84	351	P	P	00 30 34.6	+0.7
M50A				IAMs_20	IAMs_20	01 05 30.4	
	comp=Z,6µm,18.0s						
LENM	Lemitar	71.88	330	P	P	00 30 37.0	+2.4
BINY	Binghamton	72.00	357	P	P	00 30 36.6	+1.6
BINY				IAmb	IAmb	00 30 48.7	
	comp=Z,166nm,1.3s						
BINY				IAMs_20	IAMs_20	01 08 18.9	
	comp=Z,8µm,20.0s						
BINY	Binghamton	72.00	357	⇑P	P	00 30 36.9	+1.9
BCX	Boston College	72.06	1	P	P	00 30 36.4	+1.2
BCX				IAmb	IAmb	00 30 41.8	
	comp=Z,124nm,1.3s						
TUC	Tucson	72.08	326		pP	00 30 37.4	-0.3
TUC	Tucson	72.08	326	P	P	00 30 36.8	+1.1
TUC				XP	pP	00 30 37.4	-0.3
TUC	Tucson	72.08	326	⇑P	P	00 30 37.9	+2.2
WES	Weston	72.11	1	P	P	00 30 35.2	-0.3
WES				IAmb	IAmb	00 30 48.7	
	comp=Z,226nm,1.6s						
WES				IAMs_20	IAMs_20	01 08 12.5	
	comp=Z,8µm,18.0s						
WES	Weston	72.11	1	P	P	00 30 35.2	-0.3
WES				pmax	pmax		
	comp=Z,226nm,1.6s						
RTBA	Rita Blanca	72.15	334	P	P	00 30 37.1	+1.1
P38A	Dawn	72.15	343	P	P	00 30 36.0	+0.1
P38A				IAmb	IAmb	00 30 49.6	
	comp=Z,278nm,1.7s						
L61B	Northampton	72.17	360	P	P	00 30 36.8	+0.9
L61B				IAmb	IAmb	00 30 49.7	
	comp=Z,180nm,1.2s						
ERPA	Erie	72.20	354	P	P	00 30 36.8	+0.7
ERPA				IAmb	IAmb	00 30 49.1	
	comp=Z,68nm,0.8s						
ERPA	Erie	72.20	354	⇑P	P	00 30 37.5	+1.4
HRV	Adam Dziewonsk	72.22	0	P	P	00 30 37.4	+1.2
HRV				IAmb	IAmb	00 30 50.3	
	comp=Z,150nm,1.2s						
HRV	Adam Dziewonsk	72.22	0	P	P	00 30 37.4	+1.2
HRV				pmax	pmax		
	comp=Z,150nm,1.2s						
HRV				MLR	MLR		
	comp=Z,6µm,20.0s						
ANMO	Albuquerque	72.33	331	P	P	00 30 36.3	-1.0
ANMO	Albuquerque	72.33	331	P	P	00 30 38.2	+0.9
ANMO				IAmb	IAmb	00 31 07.5	
	comp=Z,49nm,1.2s						
ANMO	Albuquerque	72.33	331		pP	00 30 39.2	-0.1
ANMO				IAMs_20	IAMs_20	00 58 00.6	
	comp=Z,9µm,21.0s						
ANMO	Albuquerque	72.33	331	IAMs_20	IAMs_20	00 57 59.6	
	comp=Z,9µm,20.0s						
ANMO	Albuquerque	72.33	331	P	P	00 30 39.4	+2.1
	comp=Z,20nm,1.1s,baz=243,slow=7.0,SNR=36						
ANMO				LR	LR	00 58 11.7	
	comp=Z,11µm,20.2s,baz=237,slow=32						
	comp=Z,20nm,1.1s						
ANMO	Albuquerque	72.33	331	*de*P	P	00 30 37.0	-0.3
ANMO				pmax	pmax		
	comp=Z,25nm,1.3s						
ANMO				MLR	MLR		
	comp=Z,3µm,15.0s						
ANMO	Albuquerque	72.33	331	⇑P	P	00 30 39.4	+2.1
WVNY	West Valley, N	72.37	355	P	P	00 30 37.8	+0.6
K62A	Royalston	72.38	360	P	P	00 30 38.8	+1.7
K62A				IAmb	IAmb	00 30 53.7	
	comp=Z,259nm,1.6s						
R32A	Long Quarter,	72.53	338	P	P	00 30 39.4	+1.2
R32A				IAmb	IAmb	00 30 52.8	
	comp=Z,213nm,1.4s						
K57A	Scipio Center	72.56	357	P	P	00 30 39.1	+0.9
K57A				IAmb	IAmb	00 30 55.8	
	comp=Z,159nm,1.4s						
214A	Organ Pipe Nat	72.79	325	P	P	00 30 40.5	+0.6
214A				IAmb	IAmb	00 30 53.4	
	comp=Z,162nm,1.3s						
AAM	Ann Arbor	72.80	351	IAmb	IAmb	00 30 52.5	
	comp=Z,263nm,1.4s						
AAM				IAMs_20	IAMs_20	01 04 53.0	
	comp=Z,7µm,19.0s						
L46A	Eue Claire	72.92	349	IAmb	IAmb	00 30 52.5	
	comp=Z,130nm,1.1s						
HQIL	Hanson Quary C	72.98	348	IAmb	IAmb	00 30 55.5	
	comp=Z,176nm,1.0s						
HQIL				IAMs_20	IAMs_20	01 01 35.8	
	comp=Z,7µm,21.0s						
J61A	Chester	73.06	360	P	P	00 30 42.1	+1.0
J61A				IAmb	IAmb	00 30 57.9	
	comp=Z,168nm,1.3s						
SFX	San Felipe	73.11	322		pP	00 30 43.3	-0.4
ACCN	Adirondack Com	73.11	359	P	P	00 30 42.7	+1.2
ACCN				IAmb	IAmb	00 30 55.4	
	comp=Z,108nm,1.1s						
MEDO	Medina	73.11	355	P	P	00 30 43.2	+1.7
MEDO				IAmb	IAmb	00 30 54.7	
	comp=Z,130nm,1.1s						
K50A	Casco	73.14	352	P	P	00 30 42.1	+0.5
K50A				IAMs_20	IAMs_20	01 06 57.8	
	comp=Z,8µm,19.0s						
J55A	Hilton	73.17	356	P	P	00 30 42.8	+1.0
J55A				IAmb	IAmb	00 30 55.0	
	comp=Z,109nm,1.0s						
N38A	Joes South For	73.18	343	IAmb	IAmb	00 30 56.6	
	comp=Z,119nm,0.9s						
J57A	Williamstown	73.21	357	P	P	00 30 42.8	+0.7
J57A				IAmb	IAmb	00 30 55.3	
	comp=Z,118nm,1.1s						
J59A	Piesco	73.21	358	P	P	00 30 43.5	+1.4
J59A				IAmb	IAmb	00 30 55.6	
	comp=Z,146nm,1.4s						
CBKS	Cedar Bluff	73.22	338		pP	00 30 44.2	0.0
L44A	Lake County Fo	73.36	348	IAMs_20	IAMs_20	01 01 56.7	
	comp=Z,7µm,20.0s						
T25A	Trinidad	73.40	334	IAmb	IAmb	00 31 13.7	
	comp=Z,250nm,1.7s						
HNH	Hanover	73.42	360	IAMs_20	IAMs_20	01 08 40.4	
	comp=Z,6µm,18.0s						
X18A	Snowflake	73.51	328	P	P	00 30 46.0	+1.7
X18A				IAMs_20	IAMs_20	00 58 07.2	
	comp=Z,9µm,21.0s						
L42A	Oliver, Polo	73.53	346	IAmb	IAmb	00 30 58.3	
	comp=Z,105nm,1.0s						
I62A	Tamworth	73.59	1	P	P	00 30 45.0	+0.7
I62A				IAmb	IAmb	00 30 58.5	
	comp=Z,137nm,1.3s						
I62A				IAMs_20	IAMs_20	01 07 09.9	
	comp=Z,7µm,20.0s						
I63A	Otisfield	73.78	1	P	P	00 30 45.9	+0.5
I63A				IAmb	IAmb	00 30 59.9	
	comp=Z,191nm,1.3s						
I63A				IAMs_20	IAMs_20	01 09 35.8	
	comp=Z,7µm,18.0s						
PECO	Prince Edward	73.79	356	P	P	00 30 44.5	-0.9
PECO				IAmb	IAmb	00 30 58.8	
	comp=Z,80nm,0.8s						
N35A	Tabor	73.87	342	IAmb	IAmb	00 31 01.7	
	comp=Z,177nm,1.0s						
W18A	Petrified Fore	73.91	329	P	P	00 30 47.3	+0.7
W18A				IAmb	IAmb	00 31 04.6	
	comp=Z,119nm,1.1s						
113A	Mohawk Valley,	73.92	324		pP	00 30 48.1	-0.4
K43A	Burlington	73.94	348	IAmb	IAmb	00 31 03.5	
	comp=Z,139nm,1.2s						
LBNH	Lisbon	73.96	0	P	P	00 30 48.4	+2.0
LBNH				IAmb	IAmb	00 31 03.7	
	comp=Z,173nm,1.4s						
LBNH				IAMs_20	IAMs_20	01 09 21.5	
	comp=Z,7µm,19.0s						
LBNH	Lisbon	73.96	0	P	P	00 30 48.4	+2.0
LBNH				pmax	pmax		

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      comp=Z,173nm,1.4s
LBNH  Lisbon           73.96   0 ⇑P       P        00 30 48.6 +2.2
DBIC  Dimbokro         74.01  72  P       P        00 30 48.0 +0.5
      comp=Z,100nm,0.8s,baz=247,slow=6.8,SNR=48
DBIC                              LR      LR       01 01 58.6
      comp=Z,34µm,18.4s,baz=236,slow=35
      comp=Z,100nm,0.8s
DBIC  Dimbokro         74.01  72  P       P        00 30 48.0 +0.5
DBIC  Dimbokro         74.01  72  P       P        00 30 47.4  0.0
DBIC  Dimbokro         74.01  72 ⇑P       P        00 30 47.9 +0.5
VT1   Waterbury        74.05 360  P       P        00 30 47.4 +0.4
X16A  Lo Mia Camp, P   74.12 327  IAMs_20 IAMs_20  00 59 14.1
      comp=Z,7µm,20.0s
H62A  Milan            74.30   1  P       P        00 30 50.4 +1.9
H62A                              IAMs_20 IAMs_20  01 05 28.5
      comp=Z,8µm,19.0s
I49A  Point Hope       74.31 352          pP       00 30 50.4 -0.1
I49A                              IAMs_20 IAMs_20  01 07 41.8
      comp=Z,7µm,19.0s
WVL   Waterville       74.31   2  P       P        00 30 48.5  0.0
WVL                               IAmb    IAmb     00 31 02.6
      comp=Z,128nm,1.3s
WVL                               IAMs_20 IAMs_20  01 02 43.0
      comp=Z,8µm,22.0s
SDCO  Great Sand Dun   74.35 333  IAmb    IAmb     00 31 19.3
      comp=Z,150nm,1.8s
SDCO                              IAMs_20 IAMs_20  01 01 12.3
      comp=Z,6µm,18.0s
SDCO  Great Sand Dun   74.35 333 ⇑P       P        00 30 51.4 +2.1
LONY  Lake Ozonia      74.37 358 ⇑P       P        00 30 50.5 +1.7
KSCO  Kaye Shedlock'   74.39 336  P       P        00 30 50.9 +1.6
KSCO                              IAmb    IAmb     00 31 19.0
      comp=Z,312nm,1.5s
DELO  Deloro Mine      74.40 356  IAmb    IAmb     00 31 02.3
      comp=Z,252nm,1.7s
ESJX  Sierra Juarez    74.44 322  P       P        00 30 50.9 +1.1
ESJX                              IAMs_20 IAMs_20  00 56 35.0
      comp=Z,9µm,22.0s
JFWS  Jewell Farm      74.52 346  IAMs_20 IAMs_20  01 08 36.6
      comp=Z,7µm,21.0s
JFWS  Jewell Farm      74.52 346 ⇑P       P        00 30 50.9 +1.1
EMMW  East Machias     74.54   3  P       P        00 30 50.8 +1.0
FRNY  Flat Rock        74.56 359  P       P        00 30 50.2 +0.3
GLA   Glamis           74.68 324  P       P        00 30 52.1 +1.1
GLA   Glamis           74.68 324  P       P        00 30 52.1 +1.1
GLA                               pmax    pmax
      comp=Z,101nm,1.5s
CCX   Cicese           74.72 322  P       P        00 30 52.3 +1.1
HAL   Halifax          74.76   6  P       P        00 30 52.8 +1.8
HAL                               IAmb    IAmb     00 31 05.2
      comp=Z,130nm,1.1s
HAL                               IAMs_20 IAMs_20  01 08 30.8
      comp=Z,7µm,18.0s
HAL   Halifax          74.76   6  P       P        00 30 52.8 +1.8
HAL                               pmax    pmax
      comp=Z,130nm,1.1s
HAL                               MLR     MLR
      comp=Z,7µm,18.0s
SADO  Sadowa           74.76 355  P       P        00 30 51.6 +0.5
SADO                              IAmb    IAmb     00 31 04.1
      comp=Z,162nm,1.0s
SADO  Sadowa           74.76 355  P       P        00 30 52.9 +1.8
      comp=Z,55nm,0.8s,baz=181,slow=5.4,SNR=25
      comp=Z,55nm,0.8s
WBO   Williamsburg     74.77 358  P       P        00 30 51.9 +0.8
WBO                               IAmb    IAmb     00 31 04.6
      comp=Z,110nm,0.9s
I45A  Fountain         74.88 349  P       P        00 30 50.8 -1.0
I45A                              IAmb    IAmb     00 31 04.1
      comp=Z,268nm,1.7s
S22A  4UR Ranch, Cre   74.88 332  P       P        00 30 51.3 -1.1
YUH   Yuha Desert      74.93 323          pP       00 30 54.3 -0.1
YUH                               IAMs_20 IAMs_20  00 57 22.9
      comp=Z,7µm,21.0s
G62A  West of Eustis   74.95   1          pP       00 30 54.1  0.0
G62A                              IAMs_20 IAMs_20  01 10 18.8
      comp=Z,8µm,18.0s
WUAZ  Wupatki          74.98 328  P       P        00 30 54.1 +1.2
WUAZ                              IAmb    IAmb     00 31 06.5
      comp=Z,153nm,1.2s
WUAZ                              IAMs_20 IAMs_20  00 58 19.1
      comp=Z,9µm,21.0s
WUAZ  Wupatki          74.98 328 ⇑P       P        00 30 55.5 +2.6
GGN   Saint George     74.99   4  P       P        00 30 53.8 +1.4
GGN                               IAmb    IAmb     00 31 08.9
      comp=Z,153nm,1.2s
PKME  Peaks-Kenny Pk   75.02   2  P       P        00 30 52.4 -0.2
PKME                              IAMs_20 IAMs_20  01 03 22.8
      comp=Z,8µm,20.0s
G65A  Princeton        75.03   3  P       P        00 30 53.2 +0.6
G65A                              IAmb    IAmb     00 31 06.7
      comp=Z,106nm,1.3s
G65A                              IAMs_20 IAMs_20  01 01 55.9
      comp=Z,8µm,22.0s
CBX   Cerro Bola       75.06 322  IAMs_20 IAMs_20  00 56 35.4
      comp=Z,7µm,22.0s
BLYC  Blythe           75.08 324          pP       00 30 54.9 -0.4
BGNE  Belgrade         75.09 340  P       P        00 30 54.0 +0.8
L34A  Svendsen Farm,   75.10 342  P       P        00 30 52.8 -0.3
MVCO  Mesa Verde       75.12 331  P       P        00 30 55.2 +1.6
MVCO                              IAMs_20 IAMs_20  01 00 19.3
      comp=Z,10µm,18.0s
MVCO  Mesa Verde       75.12 331 ⇑P       P        00 30 55.6 +2.0
OTT   Ottawa           75.18 357  P       P        00 30 53.2 -0.3
I42A  Draeger Farm,    75.20 348  P       P        00 30 53.6  0.0
I42A                              IAmb    IAmb     00 31 06.8
      comp=Z,92nm,1.0s
MNTQ  Montreal, Queb   75.23 359  P       P        00 30 54.7 +0.9
MNTQ                              IAmb    IAmb     00 31 08.0
      comp=Z,124nm,1.2s
TKX   Tecate           75.23 322  P       P        00 30 56.0 +1.8
TKX                               IAmb    IAmb     00 31 06.9
      comp=Z,140nm,1.5s
TKX                               IAMs_20 IAMs_20  00 59 58.8
      comp=Z,7µm,18.0s
Q24A  Divide           75.28 334  P       P        00 30 56.0 +1.4
GLMI  Grayling         75.41 351  P       P        00 30 55.2 +0.4
GLMI                              IAmb    IAmb     00 31 07.6
      comp=Z,90nm,0.8s
BUKO  Buck Lake        75.45 355  P       P        00 30 56.0 +0.9
I40A  Norwalk          75.54 346  P       P        00 30 56.5 +0.9
I40A                              IAMs_20 IAMs_20  01 09 14.4
      comp=Z,7µm,22.0s
H43A  Windswept, Lux   75.55 348  P       P        00 30 55.8 +0.2
H43A                              IAmb    IAmb     00 31 08.7
      comp=Z,122nm,1.0s
H43A                              IAMs_20 IAMs_20  01 08 50.9
      comp=Z,8µm,21.0s
F64A  Sherman          75.66   3          pP       00 30 58.3 +0.1
GBN   Guysborough      75.74   8  P       P        00 30 57.0 +0.3
GBN                               IAmb    IAmb     00 31 13.1
      comp=Z,217nm,1.4s
W13A  Hualapai Mount   75.84 326  P       P        00 30 60.0 +2.1
LMN   Caledonia Moun   75.86   5  P       P        00 30 58.7 +1.3
OGNE  Ogallala         75.90 337  P       P        00 30 59.1 +1.2
OGNE                              IAmb    IAmb     00 31 13.9
      comp=Z,222nm,1.6s
PV01  Paradox Valley   75.93 331  P       P        00 31 00.2 +1.9
PFO   Pinyon Flats O   75.97 323  P       P        00 30 59.8 +1.3
PFO   Pinyon Flats O   75.97 323  LR      LR       00 57 36.1
      comp=Z,5µm,20.4s,baz=137,slow=30
PFO   Pinyon Flats O   75.97 323c iP      P        00 30 59.7 +1.2
PFO                               pmax    pmax
      comp=Z,45nm,1.0s
PFO                               MLR     MLR
      comp=Z,9µm,15.0s
TRQ   Mont Tremblant   75.97 358  P       P        00 30 57.7 -0.4
TRQ                               IAmb    IAmb     00 31 11.3
      comp=Z,129nm,1.0s
PV13  Radium Mtn., P   76.06 331  P       P        00 30 59.7 +0.7
PV13                              IAmb    IAmb     00 31 12.3
      comp=Z,124nm,1.4s
PV02  Paradox Valley   76.06 331  P       P        00 31 00.2 +1.2
PV02                              IAmb    IAmb     00 31 16.2
      comp=Z,152nm,1.2s
PV15  Paradox Valley   76.07 331  P       P        00 31 00.0 +0.9
PV15                              IAmb    IAmb     00 31 12.0
      comp=Z,196nm,1.7s
PV05  Paradox Valley   76.11 331  P       P        00 31 01.0 +1.7
PV03  Paradox Valley   76.15 331  P       P        00 30 60.0 +0.5
U15A  North Rim        76.16 328  P       P        00 31 02.0 +2.3
U15A                              IAMs_20 IAMs_20  00 59 07.2
      comp=Z,7µm,21.0s
PV18  Skein Mesa, Pa   76.17 331  P       P        00 31 00.6 +1.0
PV18                              IAmb    IAmb     00 31 12.1
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      comp=Z,221nm,1.4s
ISCO  Idaho Springs    76.18 334  P       P        00 31 01.1 +1.3
ISCO  Idaho Springs    76.18 334  P       P        00 31 01.1 +1.3
ISCO                              pmax    pmax
      comp=Z,43nm,1.1s
ISCO  Idaho Springs    76.18 334 ⇑P       P        00 31 01.9 +2.2
PV12  Saucer Basin,    76.18 331  P       P        00 31 01.7 +1.9
PV12                              IAmb    IAmb     00 31 20.3
      comp=Z,94nm,1.1s
PV11  David Mesa, Pa   76.20 331  P       P        00 31 00.8 +1.0
PV17  East Wray Mesa   76.22 331  P       P        00 31 00.9 +1.0
PV07  Paradox Valley   76.22 331          pP       00 31 01.6 -0.3
PV16  Nyswonger Mesa   76.22 331  P       P        00 31 00.9 +1.0
PV19  Morning Glory    76.25 331  P       P        00 31 01.6 +1.4
PV19                              IAmb    IAmb     00 31 35.0
      comp=Z,88nm,1.2s
I37A  Lemond, Waseca   76.26 344  P       P        00 31 00.4 +0.6
I37A                              IAmb    IAmb     00 31 12.9
      comp=Z,156nm,0.9s
PV20  West Nyswonger   76.27 331  P       P        00 31 01.4 +1.2
PV20                              IAmb    IAmb     00 31 29.2
      comp=Z,93nm,1.1s
PV04  Paradox Valley   76.29 331  P       P        00 31 02.1 +1.8
PV14  Lion Creek, Pa   76.32 331  P       P        00 31 02.4 +1.9
PV10  Paradox Valley   76.33 331  P       P        00 31 01.1 +0.5
PV10                              IAmb    IAmb     00 31 17.7
      comp=Z,89nm,0.9s
PV22  Blue Mesa, Par   76.36 331          pP       00 31 02.9 +0.2
PV23  Carpenter Ridg   76.38 331  P       P        00 31 01.6 +0.6
PV23                              IAmb    IAmb     00 31 18.0
      comp=Z,184nm,1.5s
ELS   Elsinore Mount   76.50 322          pP       00 31 03.5  0.0
K30B  Basset           76.69 340  P       P        00 31 04.5 +2.2
HMU   Henry Mountain   76.70 330  P       P        00 31 04.3 +1.6
HMU                               IAmb    IAmb     00 31 15.8
      comp=Z,198nm,1.5s
G40A  Rib Lake         76.77 347  P       P        00 31 02.8 +0.2
SUR   Sutherland       76.79 120  P       P        00 31 03.4 -0.1
SUR   Sutherland       76.79 120  S       S        00 40 41.5  -10
ECSD  EROS Data Cent   76.81 342          pP       00 31 04.0 -0.9
ECSD  EROS Data Cent   76.81 342  P       P        00 31 03.8 +0.9
V12A  Nelson           76.82 325  P       P        00 31 06.0 +2.7
D62A  Allapoint, All   76.85   2  P       P        00 31 04.3 +1.3
F42A  Maple Grove Fa   76.87 349  P       P        00 31 03.5 +0.4
F42A                              IAmb    IAmb     00 31 16.3
      comp=Z,67nm,0.7s
E46A  Sault Ste Mari   76.88 351  P       P        00 31 04.1 +0.9
E46A                              IAMs_20 IAMs_20  01 10 33.0
      comp=Z,11µm,20.0s
KNB   Kanab            76.88 328  P       P        00 31 04.4 +0.7
KNB                               IAmb    IAmb     00 31 22.0
      comp=Z,148nm,1.2s
KNB   Kanab            76.88 328  P       P        00 31 04.4 +0.7
KNB                               pmax    pmax
      comp=Z,148nm,1.2s
MAW   Mawson           76.95 164  P       P        00 31 04.5 +1.0
      comp=Z,8.4nm,1.7s
MAW   Mawson           76.95 164  P       P        00 31 04.7 +1.2
      comp=Z,6.8nm,0.8s,baz=200,slow=7.5,SNR=14
MAW                               LR      LR       01 04 06.7
      comp=Z,27µm,20.9s,baz=228,slow=35
      comp=Z,6.8nm,0.8s
LCMT  Little Creek M   77.08 327  P       P        00 31 05.5 +0.8
LCMT                              IAMs_20 IAMs_20  01 00 29.5
      comp=Z,6µm,19.0s
BATG  Bathurst New B   77.19   4  P       P        00 31 06.1 +1.2
SPMN  Marine on St.    77.28 345  P       P        00 31 05.1 -0.3
SPMN                              IAmb    IAmb     00 31 18.2
      comp=Z,95nm,1.1s
LMQ   La Malbaie       77.28   1  P       P        00 31 06.5 +1.1
LMQ                               IAmb    IAmb     00 31 19.0
      comp=Z,99nm,1.1s
PASC  Pasadena Art C   77.31 322          pP       00 31 07.8 -0.1
ACRG  Accra            77.33  76  P       P        00 31 05.6 -0.9
ACRG                              IAmb    IAmb     00 31 10.2
      comp=Z,167nm,1.1s
COWI  Conover          77.38 348  P       P        00 31 06.7 +0.7
COWI                              IAmb    IAmb     00 31 20.0
      comp=Z,253nm,1.6s
COWI  Conover          77.38 348 ⇑P       P        00 31 07.1 +1.1
GSC   Goldstone, Bar   77.46 324  P       P        00 31 08.7 +1.8
GSC                               IAMs_20 IAMs_20  00 58 17.8
      comp=Z,6µm,20.0s
GSC   Goldstone, Bar   77.46 324  P       P        00 31 08.7 +1.8
GSC                               pmax    pmax
      comp=Z,66nm,1.2s
O20A  White River Ci   77.49 332  P       P        00 31 08.3 +1.3
O20A                              IAmb    IAmb     00 31 24.8
      comp=Z,147nm,1.1s
O20A                              IAMs_20 IAMs_20  01 00 58.4
      comp=Z,7µm,21.0s
SRU   San Rafael Swe   77.58 330  P       P        00 31 09.0 +1.5
SRU                               IAMs_20 IAMs_20  01 02 13.7
      comp=Z,9µm,19.0s
SRU   San Rafael Swe   77.58 330  P       P        00 31 09.0 +1.5
SRU                               pmax    pmax
      comp=Z,52nm,1.1s
SHPR  Sheep Range      77.59 326          pP       00 31 09.6 -0.1
LDAQ  Lac Daran        77.68   1  P       P        00 31 08.9 +1.1
LDAQ                              IAmb    IAmb     00 31 21.3
      comp=Z,179nm,1.3s
LDAQ                              IAMs_20 IAMs_20  01 05 05.2
      comp=Z,7µm,21.0s
Q16A  Castle Valley    77.70 330  P       P        00 31 10.2 +2.0
Q16A                              IAmb    IAmb     00 31 20.9
      comp=Z,195nm,1.7s
RAR   Rarotonga        77.75 253  P       P        00 31 09.7 +0.9
RAR                               IAmb    IAmb     00 31 23.0
      comp=Z,101nm,1.2s
RAR   Rarotonga        77.75 253  P       P        00 31 09.9 +1.1
      comp=Z,17nm,0.9s,baz=229,slow=14,SNR=3.2
RAR                               LR      LR       00 57 22.5
      comp=Z,11µm,18.3s,baz=144,slow=29
      comp=Z,17nm,0.9s
MVU   Marysvale        77.82 329  P       P        00 31 11.6 +2.7
MVU                               IAmb    IAmb     00 31 22.6
      comp=Z,105nm,1.3s
MVU                               IAMs_20 IAMs_20  01 01 12.1
      comp=Z,10µm,20.0s
P18A  Preston Nutter   77.89 331  P       P        00 31 11.5 +2.1
P18A                              IAmb    IAmb     00 31 27.3
      comp=Z,73nm,0.9s
CCAC  Calif City Air   77.97 323          P        00 31 12.0 +2.3
VLDQ  Val d'Or         77.98 356  P       P        00 31 10.5 +1.3
VLDQ                              IAmb    IAmb     00 31 22.6
      comp=Z,136nm,1.1s
QSM   Queen of Sheba   78.01 324  P       P        00 31 10.2 +0.5
QSM                               IAMs_20 IAMs_20  01 00 58.3
      comp=Z,6µm,18.0s
TMUT  Trail Mountain   78.03 330  P       P        00 31 10.3 +0.2
TMUT                              IAmb    IAmb     00 31 22.7
      comp=Z,153nm,1.6s
GWY   Greenwater Val   78.08 325  P       P        00 31 11.9 +1.5
GWY                               IAMs_20 IAMs_20  01 01 26.2
      comp=Z,6µm,18.0s
SUSD  Miller           78.11 341  P       P        00 31 11.8 +1.6
PRN   Pahroc Range     78.25 326  P       P        00 31 13.0 +1.8
PRN                               IAmb    IAmb     00 31 29.7
      comp=Z,102nm,1.0s
E38A  The Farm, Brul   78.33 346  P       P        00 31 11.8 +0.6
E38A                              IAmb    IAmb     00 31 24.2
      comp=Z,127nm,1.3s
WIN   Windhoek         78.38 109  P       P        00 31 12.8 +0.2
WIN                               IAmb    IAmb     00 31 32.2
      comp=Z,239nm,1.7s
WIN   Windhoek         78.38 109  P       P        00 31 12.8 +0.2
WIN                               pmax    pmax
      comp=Z,239nm,1.7s
TPNV  Topopah Spring   78.47 325  P       P        00 31 14.6 +2.1
TPNV                              IAmb    IAmb     00 31 25.6
      comp=Z,122nm,1.3s
TPNV  Topopah Spring   78.47 325  P       P        00 31 14.6 +2.1
TPNV                              pmax    pmax
      comp=Z,122nm,1.3s
TPNV  Topopah Spring   78.47 325 ⇑P       P        00 31 15.1 +2.6
BCW   Bitter Crk WRg   78.55 322  P       P        00 31 14.9 +2.0
BCW                               IAmb    IAmb     00 31 26.7
      comp=Z,167nm,1.3s
PSUT  Pine Spring      78.59 328  P       P        00 31 14.8 +1.6
PSUT                              IAMs_20 IAMs_20  01 04 34.6
      comp=Z,7µm,18.0s
ISA   Isabella, Lake   78.60 323  P       P        00 31 15.6 +2.4
ISA   Isabella, Lake   78.60 323  P       P        00 31 15.6 +2.4
ISA                               pmax    pmax
      comp=Z,78nm,1.2s
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MACI  Morro de la Ar   78.62  48  P       P        00 31 13.9 +0.3
F33A  5 Mile Ranch,    78.68 343  P       P        00 31 13.6 +0.4
F33A                              IAmb    IAmb     00 31 26.1
      comp=Z,101nm,1.3s
S11A  Rachel           78.77 326  P       P        00 31 16.1 +1.9
S11A                              IAmb    IAmb     00 31 27.4
      comp=Z,178nm,1.5s
MPU   Maple Canyon     78.81 330  P       P        00 31 15.5 +1.2
MPU                               IAmb    IAmb     00 31 27.5
      comp=Z,136nm,1.4s
BSUT  Blindstream Ca   78.87 331  P       P        00 31 16.4 +1.5
BSUT                              IAmb    IAmb     00 31 28.3
      comp=Z,116nm,1.1s
BSUT                              IAMs_20 IAMs_20  01 02 42.8
      comp=Z,9µm,18.0s
K22A  Casper           78.99 335  P       P        00 31 16.6 +1.3
K22A                              IAmb    IAmb     00 31 28.4
      comp=Z,264nm,1.3s
GRAC  Grapevine Rang   79.06 325  P       P        00 31 17.7 +2.0
GRAC                              IAMs_20 IAMs_20  00 59 11.2
      comp=Z,6µm,21.0s
EOSO  Osorio           79.12  49  P       P        00 31 17.9 +1.7
SPR3  Spring Creek 3   79.19 328  P       P        00 31 18.4 +1.8
JLU   Jordanelle       79.21 331  P       P        00 31 17.2 +0.6
JLU                               IAMs_20 IAMs_20  01 02 52.0
      comp=Z,10µm,19.0s
GMN   Gold Mountain    79.25 325  P       P        00 31 18.4 +1.5
R11B  Troy Canyon, C   79.25 327  P       P        00 31 17.6 +0.8
CTZ   Chatham Island   79.28 226  IAMs_20 IAMs_20  00 57 26.4
      comp=Z,8µm,20.0s
ICQ   Pointe Anglais   79.36   3  P       P        00 31 17.3 +0.5
ICQ                               IAmb    IAmb     00 31 31.0
      comp=Z,224nm,1.1s
ICQ                               IAMs_20 IAMs_20  01 04 27.4
      comp=Z,7µm,22.0s
CALA  Caldeira         79.40  33 eP       P        00 31 17.9 +0.4
CALA                             i IAmb   IAmb     00 31 28.6
      comp=Z,202nm,1.4s
CALA  Caldeira         79.40  33 eP       P        00 31 17.9 +0.4
CALA                             i IAmb   IAmb     00 31 28.6
      comp=Z,202nm,1.4s
RSSD  Black Hills      79.40 337  P       P        00 31 19.1 +1.6
RSSD  Black Hills      79.40 337  P       P        00 31 19.1 +1.6
RSSD                              pmax    pmax
      comp=Z,71nm,1.1s
PCAN  Candelaria       79.41  33 eP       P        00 31 17.5 +0.1
PCAN                             i IAmb   IAmb     00 31 24.6
      comp=Z,203nm,1.9s
PCAN  Candelaria       79.41  33 eP       P        00 31 17.5 +0.1
PCAN                             i IAmb   IAmb     00 31 24.6
      comp=Z,203nm,1.9s
CTU   Camp Tracy       79.42 330  P       P        00 31 17.9 +0.2
PCED  Cedros           79.44  33 eP       P        00 31 18.3 +0.7
PCED                             i IAmb   IAmb     00 31 20.9
      comp=Z,166nm,1.3s
PCED  Cedros           79.44  33 eP       P        00 31 18.3 +0.7
PCED                             i IAmb   IAmb     00 31 20.9
      comp=Z,166nm,1.3s
PICO  Pico             79.47  33 eP       P        00 31 21.4 +3.6
PICO                             i IAmb   IAmb     00 31 27.1
      comp=Z,366nm,1.5s
PICO  Pico             79.47  33 eP       P        00 31 21.4 +3.6
PICO                             i IAmb   IAmb     00 31 27.1
      comp=Z,366nm,1.5s
DUG   Dugway, Tooele   79.47 329  P       P        00 31 18.9 +1.0
DUG                               IAmb    IAmb     00 31 31.3
      comp=Z,123nm,1.4s
DUG                               IAMs_20 IAMs_20  01 01 54.8
      comp=Z,10µm,20.0s
DUG   Dugway, Tooele   79.47 329  P       P        00 31 18.9 +1.0
DUG                               pmax    pmax
      comp=Z,123nm,1.4s
DUG   Dugway, Tooele   79.47 329 ⇑P       P        00 31 20.1 +2.2
PPNO  Prainha do Nor   79.52  34 eP       P        00 31 26.4 +8.3
PPNO                             i IAmb   IAmb     00 31 35.4
      comp=Z,199nm,1.6s
PPNO  Prainha do Nor   79.52  34 eP       P        00 31 26.4 +8.3
PPNO                             i IAmb   IAmb     00 31 35.4
      comp=Z,199nm,1.6s
PID   Ribeirinha       79.57  34 eP       P        00 31 24.5 +6.2
PID                              i IAmb   IAmb     00 31 27.0
      comp=Z,203nm,1.7s
PID   Ribeirinha       79.57  34 eP       P        00 31 24.5 +6.2
PID                              i IAmb   IAmb     00 31 27.0
      comp=Z,203nm,1.7s
EYMN  Ely              79.59 347  IAmb    IAmb     00 31 31.9
      comp=Z,167nm,1.3s
EYMN  Ely              79.59 347 ⇑P       P        00 31 18.8 +0.6
MZP   Montezuma Peak   79.62 325  P       P        00 31 20.6 +1.7
TCUT  Toone Canyon     79.62 331  P       P        00 31 20.6 +1.7
TCUT                              IAmb    IAmb     00 31 31.9
      comp=Z,211nm,1.6s
DSP   Deep Springs     79.66 324  P       P        00 31 19.9 +1.2
DSP                               IAMs_20 IAMs_20  00 59 27.9
      comp=Z,6µm,21.0s
ROSA  Rosais           79.73  33 eP       P        00 31 20.9 +1.7
ROSA                             i IAmb   IAmb     00 31 24.3
      comp=Z,275nm,1.6s
ROSA  Rosais           79.73  33 eP       P        00 31 20.9 +1.7
ROSA                             i IAmb   IAmb     00 31 24.3
      comp=Z,275nm,1.6s
PMAN  Manadas          79.73  34 eP       P        00 31 23.3 +4.2
PMAN                             i IAmb   IAmb     00 31 24.3
      comp=Z,204nm,1.5s
PMAN  Manadas          79.73  34 eP       P        00 31 23.3 +4.2
PMAN                             i IAmb   IAmb     00 31 24.3
      comp=Z,204nm,1.5s
TPH   Tonopah          79.83 325  P       P        00 31 21.3 +1.3
TPH   Tonopah          79.83 325  P       P        00 31 21.3 +1.3
TPH                               pmax    pmax
      comp=Z,307nm,1.1s
TBO   Thunder Bay      79.88 348  P       P        00 31 20.5 +0.8
TBO                               IAmb    IAmb     00 31 32.8
      comp=Z,131nm,1.0s
TBO                               IAMs_20 IAMs_20  01 11 02.4
      comp=Z,9µm,18.0s
PSMN  Pico do Norte,   79.97  37 eP       P        00 31 20.2 -0.3
PSMN                             i IAmb   IAmb     00 31 24.4
      comp=Z,134nm,1.9s
PSMN  Pico do Norte,   79.97  37 eP       P        00 31 20.2 -0.3
PSMN                             i IAmb   IAmb     00 31 24.4
      comp=Z,134nm,1.9s
DRLN  Deer Lake        80.04  10  P       P        00 31 22.1 +1.6
DRLN                              IAmb    IAmb     00 31 37.2
      comp=Z,272nm,1.4s
HWUT  Hardware Ranch   80.09 331  P       P        00 31 22.1 +0.8
HWUT  Hardware Ranch   80.09 331 ⇑P       P        00 31 22.7 +1.4
BGU   Big Grassy Mou   80.16 330  P       P        00 31 22.9 +1.3
PSBA  Serra de Santa   80.21  34 eP       P        00 31 22.9 +1.2
PSBA                             i IAmb   IAmb     00 31 26.8
      comp=Z,231nm,1.2s
PSBA  Serra de Santa   80.21  34 eP       P        00 31 22.9 +1.2
PSBA                             i IAmb   IAmb     00 31 26.8
      comp=Z,231nm,1.2s
BW06  Boulder Array    80.25 333  P       P        00 31 23.4 +1.2
BW06                              IAMs_20 IAMs_20  01 03 41.2
      comp=Z,6µm,19.0s
PDAR  Pinedale Array   80.25 333  P       P        00 31 23.6 +1.5
      comp=Z,6.3nm,0.6s,baz=144,slow=5.3,SNR=56
PDAR                              PKKPbc  PKKPbc   00 50 05.9 -1.2
      comp=Z,0.9nm,0.8s,baz=183,slow=3.0,SNR=8.1
PDAR                              LR      LR       01 03 52.3
      comp=Z,3µm,19.7s,baz=136,slow=33
      comp=Z,6.3nm,0.6s
PMPB  Monarch Peak     80.25 322  P       P        00 31 24.7 +2.6
PMPB                              IAmb    IAmb     00 31 50.4
      comp=Z,257nm,1.6s
PSCM  Serra do Cume    80.26  34 eP       P        00 31 24.1 +2.1
PSCM                             i IAmb   IAmb     00 31 26.8
      comp=Z,137nm,1.2s
PSCM  Serra do Cume    80.26  34 eP       P        00 31 24.1 +2.1
PSCM                             i IAmb   IAmb     00 31 26.8
      comp=Z,137nm,1.2s
PAGU  Agualva, Azore   80.28  34 eP       P        00 31 22.6 +0.5
PAGU                             i IAmb   IAmb     00 31 27.3
      comp=Z,196nm,1.4s
PAGU  Agualva, Azore   80.28  34 eP       P        00 31 22.6 +0.5
PAGU                             i IAmb   IAmb     00 31 27.3
      comp=Z,196nm,1.4s
CMLA  Cha da Macela    80.32  36 eP       P        00 31 23.7 +1.3
CMLA                             i IAmb   IAmb     00 31 30.8
      comp=Z,69nm,0.9s
CMLA  Cha da Macela    80.32  36  P       P        00 31 22.5 +0.1
CMLA  Cha da Macela    80.32  36 eP       P        00 31 23.7 +1.3
CMLA                             i IAmb   IAmb     00 31 30.8
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       comp=Z,69nm,0.9s
CMLA   Cha da Macela    80.32  36    P         P         00 31 22.5 +0.1
CMLA                                 pmax      pmax
       comp=Z,54nm,0.9s
CMLA                                 MLR       MLR
       comp=Z,13µm,18.0s
TSUM   Tsumeb           80.36 107    P         P         00 31 22.8 -0.6
TSUM   Tsumeb           80.36 107    LR        LR        01 03 55.2
       comp=Z,26µm,18.2s,baz=236,slow=34
Q09A   Carvers          80.41 326    P         P         00 31 24.7 +1.7
GRHM   Grahamstown, E   80.49 123    P         P         00 31 23.4 -0.3
GRHM                                 IAmb      IAmb      00 32 34.8
       comp=Z,143nm,1.5s
BART   Pico Bartolome   80.51  36   eP         P         00 31 24.4 +0.9
BART                                i IAmb     IAmb      00 31 38.7
       comp=Z,188nm,1.4s
BART   Pico Bartolome   80.51  36   eP         P         00 31 24.4 +0.9
BART                                i IAmb     IAmb      00 31 38.7
       comp=Z,188nm,1.4s
E28A   Huff             80.56 340    P         P         00 31 24.8 +1.3
NV11   Mina Array Sit   80.57 325    P         P         00 31 24.4 +0.5
NV11                                 IAmb      IAmb      00 31 57.2
       comp=Z,177nm,2.0s
LHV    Little Huntoon   80.61 325    P         P         00 31 25.5 +1.6
NVAR   Mina Array Bea   80.64 325    P         P         00 31 25.5 +1.1
NVAR   Mina Array Bea   80.64 325    P         P         00 31 26.7 +2.3
       comp=Z,6.9nm,0.7s,baz=144,slow=6.0,SNR=36
NVAR                                 PKKPbc    PKKPbc    00 50 06.9 +1.1
       comp=Z,1.1nm,0.8s,baz=318,slow=1.2,SNR=4.7
NVAR                                 LR        LR        01 00 24.3
       comp=Z,3µm,22.0s,baz=130,slow=31
       comp=Z,6.9nm,0.7s
BBGB   Big Mountain B   80.65 322    P         P         00 31 25.4 +1.1
BBGB                                 IAmb      IAmb      00 31 52.9
       comp=Z,128nm,1.0s
BBGB                                 IAMs_20   IAMs_20   01 02 27.2
       comp=Z,5µm,18.0s
KOOLE  Kule             80.70 111    P         P         00 31 25.2 +0.1
KOOLE                                IAmb      IAmb      00 31 44.5
       comp=Z,222nm,1.6s
KOOLE  Kule             80.70 111  i P         P         00 31 26.2 +1.1
HVU    Hansel Valley    80.75 330    P         P         00 31 25.9 +1.1
HVU                                  IAMs_20   IAMs_20   01 03 38.6
       comp=Z,9µm,19.0s
HVU    Hansel Valley    80.75 330    P         P         00 31 25.9 +1.1
HVU                                  pmax      pmax
       comp=Z,57nm,0.9s
AHID   Auburn Hatcher   80.86 332    P         P         00 31 26.4 +1.0
AHID                                 IAMs_20   IAMs_20   01 04 55.7
       comp=Z,6µm,19.0s
AHID   Auburn Hatcher   80.86 332  ⇑P         P         00 31 26.9 +1.5
AGMN   Agassiz Nation   80.87 344    P         P         00 31 25.9 +0.8
AGMN                                 IAmb      IAmb      00 31 38.3
       comp=Z,83nm,0.9s
AGMN                                 IAMs_20   IAMs_20   01 12 38.7
       comp=Z,7µm,21.0s
AGMN   Agassiz Nation   80.87 344  ⇑P         P         00 31 25.4 +0.3
RYN    Ryan             80.91 325              pP        00 31 27.4 -0.4
ELK    Elko             81.00 328    P         P         00 31 26.9 +0.6
ELK                                  IAMs_20   IAMs_20   01 03 21.4
       comp=Z,6µm,19.0s
ELK    Elko             81.00 328    LR        LR        01 03 32.3
       comp=Z,5µm,20.8s,baz=142,slow=33
ELK    Elko             81.00 328    P         P         00 31 26.9 +0.6
ELK                                  pmax      pmax
       comp=Z,81nm,1.3s
ELK    Elko             81.00 328  ⇑P         P         00 31 27.8 +1.6
SAO    San Andreas Ge   81.00 322              pP        00 31 27.6 -0.5
SAO    San Andreas Ge   81.00 322    P         P         00 31 27.9 +1.8
WAKR   Walker           81.27 324              pP        00 31 29.8  0.0
SNOW   Snow King Moun   81.31 333    P         P         00 31 28.6 +0.8
PMOZ   Porto Moniz, M   81.34  44    P         P         00 31 29.9 +1.8
PMOZ   Porto Moniz, M   81.34  44   eP         P         00 31 29.0 +1.0
PMOZ                                i Amb                00 32 01.7
       comp=Z,195nm,1.6s
PMOZ                                ePP        PP        00 34 31.4 -2.8
PMOZ                                eS         SKSac     00 41 46.1 -1.5
PMOZ                                eSS        SS        00 46 57.2 +1.5
PMOZ                                eLR        LR        01 00 28.9
PMOZ                                i AMs_20             01 09 38.2
       comp=Z,17µm,18.0s
LOHW   Long Hollow      81.37 333    P         P         00 31 28.5 +0.4
LOHW                                 IAMs_20   IAMs_20   01 04 16.1
       comp=Z,7µm,19.0s
CMB    Columbia Colle   81.40 323    P         P         00 31 28.8 +0.6
CMB    Columbia Colle   81.40 323    P         P         00 31 28.8 +0.6
CMB                                  pmax      pmax
       comp=Z,46nm,1.3s
FUL    Funchal          81.40  44   eP         P         00 31 30.2 +2.0
FUL                                 i Amb                00 31 43.7
       comp=Z,210nm,1.6s
FUL                                 ePP        PP        00 34 35.0 +0.5
TPAW   Teton Pass       81.41 333    P         P         00 31 28.9 +0.5
MDND   Maddock          81.41 342    P         P         00 31 29.3 +1.3
PMAR   Madeira          81.44  44   eP         P         00 31 29.5 +0.8
PMAR                                i Amb                00 31 36.6
       comp=Z,284nm,1.6s
PMAR                                ePP        PP        00 34 35.7 +0.5
FXWY   Fox Creek        81.56 333    P         P         00 31 30.1 +0.9
PHPEN  Phepeng          81.63 114    P         P         00 31 29.9 -0.1
PHPEN                                IAmb      IAmb      00 31 49.3
       comp=Z,238nm,1.9s
PHPEN  Phepeng          81.63 114  i P         P         00 31 30.5 +0.6
EPLO   Experimental L   81.69 346    P         P         00 31 30.2 +0.8
EPLO                                 IAmb      IAmb      00 31 42.3
       comp=Z,158nm,1.2s
PNTR   Pine Nut         81.80 325    P         P         00 31 31.2 +0.7
PNTR                                 IAmb      IAmb      00 31 44.1
       comp=Z,125nm,1.2s
BOSA   Boshof           81.96 118    P         P         00 31 31.4 -0.2
BOSA   Boshof           81.96 118    P         P         00 31 31.8 +0.1
       comp=Z,17nm,0.9s,baz=248,slow=3.8,SNR=17
BOSA                                 LR        LR        01 03 26.7
       comp=Z,15µm,20.2s,baz=240,slow=32
       comp=Z,17nm,0.9s
BOSA   Boshof           81.96 118    P         P         00 31 31.8 +0.1
BOSA                                 S         S         00 41 44.1 -2.0
H17A   Grant Village    82.02 333    IAMs_20   IAMs_20   01 04 51.9
       comp=Z,9µm,20.0s
PMPS   Porto Santo      82.02  45   eP         P         00 31 34.1 +2.6
PMPS                                i Amb                00 32 05.5
       comp=Z,165nm,1.6s
PMPST  Porto Santo, M   82.04  45   eP         P         00 31 33.3 +1.7
RLMT   Red Lodge        82.13 334    P         P         00 31 33.3 +1.2
YMP    Mirror Lake Pl   82.14 334    P         P         00 31 32.9 +0.6
PAHR   Pah Rah Range    82.16 325    P         P         00 31 33.9 +1.6
PAHR                                 IAmb      IAmb      00 31 45.9
       comp=Z,179nm,1.3s
YFT    Old Faithful     82.17 333    P         P         00 31 33.0 +0.7
MPK    Martis Peak      82.17 324    P         P         00 31 33.8 +1.2
MPK                                  IAmb      IAmb      00 31 49.2
       comp=Z,95nm,1.0s
GRTLG  Ghanzi           82.31 110    IAmb      IAmb      00 31 53.1
       comp=Z,200nm,1.6s
GRTLG  Ghanzi           82.31 110  i P         P         00 31 34.4 +0.8
YNE    Yellowstone No   82.31 334    P         P         00 31 33.0 -0.1
YNR    Norris Junctio   82.33 333    P         P         00 31 34.4 +1.2
YNR                                  IAMs_20   IAMs_20   01 05 02.2
       comp=Z,9µm,19.0s
YNM    Yellowstone No   82.34 333    P         P         00 31 35.1 +1.8
YNM                                  IAMs_20   IAMs_20   01 05 03.7
       comp=Z,9µm,19.0s
KGCAE  Kacgae           82.39 112    P         P         00 31 34.2 +0.1
KGCAE                                IAmb      IAmb      00 31 36.5
       comp=Z,154nm,1.5s
KGCAE  Kacgae           82.39 112  i P         P         00 31 34.8 +0.7
AFDM   Forest Hills D   82.39 324    P         P         00 31 34.8 +1.5
AFDM                                 IAmb      IAmb      00 31 46.3
       comp=Z,105nm,1.4s
LAO    LASA Array       82.39 337    P         P         00 31 34.4 +1.2
LAO                                  IAmb      IAmb      00 31 47.0
       comp=Z,145nm,1.4s
YHH    Holmes Hill      82.45 333    P         P         00 31 35.5 +1.6
YHB    Horse Butte      82.56 333    P         P         00 31 35.7 +1.4
YHL    Hebgen Lake      82.64 333    P         P         00 31 35.8 +1.0
ULM    Lac du Bonnet    82.70 345    P         P         00 31 35.3 +0.6
       comp=Z,43nm,0.8s,baz=163,slow=4.2,SNR=50
       comp=Z,43nm,0.8s
BEKR   Beckworth        82.77 325    P         P         00 31 37.3 +1.8
MCCM   Marconi Confer   82.79 322    P         P         00 31 36.1 +0.7
MCCM                                 IAmb      IAmb      00 31 48.0
       comp=Z,107nm,1.2s
GCMT   Greycliff        82.85 335    P         P         00 31 36.9 +1.2
HLID   Hailey           82.90 330    P         P         00 31 36.8 +0.7
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HLID                                 IAmb      IAmb      00 31 49.4
       comp=Z,86nm,1.2s
HLID                                 IAMs_20   IAMs_20   01 03 46.5
       comp=Z,7µm,21.0s
TORD   Torodi Ar. Bea   82.94  70    P         P         00 31 37.1 +0.4
TORD   Torodi Ar. Bea   82.94  70    P         P         00 31 37.3 +0.6
       comp=Z,136nm,1.1s,baz=268,slow=3.3,SNR=85
TORD                                 LR        LR        01 07 22.5
       comp=Z,28µm,18.1s,baz=185,slow=35
       comp=Z,136nm,1.1s
SKOMA  Sekoma           82.95 114  i P         P         00 31 37.9 +1.0
ORV    Oroville         83.11 324    P         P         00 31 38.8 +1.7
ORV                                  IAmb      IAmb      00 31 50.5
       comp=Z,168nm,1.3s
ORV    Oroville         83.11 324    P         P         00 31 38.8 +1.7
ORV                                  pmax      pmax
       comp=Z,168nm,1.3s
QNGWA  Qangwa           83.17 108    P         P         00 31 38.2 +0.1
QNGWA                                IAmb      IAmb      00 31 40.8
       comp=Z,106nm,1.4s
GDXM   Geysers          83.23 322    P         P         00 31 38.8 +1.0
MCMT   McKenzie Canyo   83.28 332    P         P         00 31 39.5 +1.3
DGMT   Dagmar           83.31 339    P         P         00 31 39.1 +1.2
MFID   Camas Ranch      83.40 330    IAMs_20   IAMs_20   01 04 51.6
       comp=Z,9µm,20.0s
HOPS   Hopland Field    83.52 322              pP        00 31 41.1 -0.1
DLMT   Dillon           83.62 333    P         P         00 31 41.1 +1.3
DLMT                                 IAmb      IAmb      00 31 54.0
       comp=Z,78nm,1.2s
XAUDM  Khaudum          83.79 108    P         P         00 31 42.0 +0.7
XAUDM                                IAmb      IAmb      00 31 44.5
       comp=Z,131nm,1.6s
WVOR   Wild Horse Val   83.90 327    P         P         00 31 41.4 +0.2
WVOR                                 IAMs_20   IAMs_20   01 05 53.0
       comp=Z,6µm,18.0s
WVOR   Wild Horse Val   83.90 327    P         P         00 31 41.4 +0.2
WVOR                                 pmax      pmax
       comp=Z,62nm,1.3s
CASY   Casey            83.93 181    P         P         00 31 41.9 +0.9
CASY                                 IAmb      IAmb      00 31 57.5
       comp=Z,91nm,1.4s
LRM    Limekiln Ridge   83.94 333    P         P         00 31 43.0 +1.5
LBTB   Lobatse          84.01 115    P         P         00 31 42.0 -0.4
LBTB                                 IAmb      IAmb      00 31 44.3
       comp=Z,126nm,1.4s
LBTB   Lobatse          84.01 115    LR        LR        01 05 50.5
       comp=Z,20µm,18.5s,baz=233,slow=33
LBTB   Lobatse          84.01 115    P         P         00 31 42.0 -0.4
LBTB                                 pmax      pmax
       comp=Z,126nm,1.5s
HATC   Hat Creek Radi   84.04 325    P         P         00 31 43.4 +1.5
HATC                                 IAMs_20   IAMs_20   01 08 00.7
       comp=Z,5µm,18.0s
GMARE  Gumare           84.05 109    P         P         00 31 43.0 +0.4
GMARE                                IAmb      IAmb      00 31 44.4
       comp=Z,157nm,1.7s
KDWAN  Kaudwane         84.09 113    P         P         00 31 43.0 +0.2
KDWAN                                IAmb      IAmb      00 31 45.1
       comp=Z,171nm,1.4s
O02D   Mt. Diablo Mer   84.24 323    IAMs_20   IAMs_20   01 02 22.0
       comp=Z,7µm,22.0s
KCPM   Cahto Peak       84.29 323              pP        00 31 45.8 +0.5
HRY    Holter Researc   84.44 334    P         P         00 31 44.6 +0.7
J08A   Circle Bar Ran   84.54 328    P         P         00 31 44.4 -0.1
J08A                                 IAMs_20   IAMs_20   01 04 19.9
       comp=Z,6µm,20.0s
SCHQ   Schefferville    84.68   3    P         P         00 31 45.9 +1.1
       comp=Z,82nm,1.2s,baz=184,slow=3.3,SNR=19
       comp=Z,82nm,1.2s
KMRM   Mail Ridge       84.75 323    P         P         00 31 46.8 +1.3
KMRM                                 IAmb      IAmb      00 32 07.8
       comp=Z,139nm,1.2s
EGMT   Eagleton         84.77 336    P         P         00 31 45.8 +0.3
EGMT                                 IAmb      IAmb      00 31 48.3
       comp=Z,92nm,1.5s
PLID   Pearl Lake       84.81 330    IAmb      IAmb      00 31 51.5
       comp=Z,54nm,0.8s
PLID                                 IAMs_20   IAMs_20   01 06 01.9
       comp=Z,5µm,19.0s
LYMT   Lyon Mountain    84.83 334    P         P         00 31 47.2 +1.3
BPMT   Black Pine Rid   84.84 333    P         P         00 31 47.4 +1.3
LPHEP  Lephephe         85.05 114    P         P         00 31 47.6  0.0
LPHEP                                IAmb      IAmb      00 31 49.9
       comp=Z,98nm,1.4s
LPHEP  Lephephe         85.05 114  i P         P         00 31 48.7 +1.1
KMPM   Mount Pierce     85.11 323    P         P         00 31 47.8 +0.5
KMPM                                 IAmb      IAmb      00 32 01.1
       comp=Z,131nm,1.4s
OVMT   Ovando           85.18 333    P         P         00 31 49.0 +1.5
BMO    Blue Mountains   85.18 330    IAMs_20   IAMs_20   01 06 36.9
       comp=Z,8µm,19.0s
BMO    Blue Mountains   85.18 330  ⇑P         P         00 31 48.9 +1.3
KHMM   Horse Mountain   85.24 323    P         P         00 31 48.1 +0.1
KHMM                                 IAmb      IAmb      00 32 00.9
       comp=Z,159nm,1.5s
KHMM                                 IAMs_20   IAMs_20   01 04 58.5
       comp=Z,5µm,19.0s
YBH    Yreka Blue Hor   85.35 325    LR        LR        01 03 29.8
       comp=Z,221nm,21.0s,baz=123,slow=31
JCC    Jacoby Creek,    85.35 323    P         P         00 31 49.2 +0.8
JCC                                  IAmb      IAmb      00 32 02.0
       comp=Z,130nm,1.4s
MSO    Missoula         85.36 333    P         P         00 31 48.0 -0.5
MSO                                  IAMs_20   IAMs_20   01 07 01.5
       comp=Z,7µm,18.0s
L04D   Klamath Falls    85.51 325    P         P         00 31 50.2 +0.8
L04D                                 IAmb      IAmb      00 32 06.0
       comp=Z,94nm,1.2s
L04D                                 IAMs_20   IAMs_20   01 05 53.5
       comp=Z,5µm,18.0s
K04D   Chiloquin, OR    85.54 326    P         P         00 31 50.6 +1.1
K04D                                 IAmb      IAmb      00 32 06.7
       comp=Z,104nm,1.0s
I07A   Izee             85.58 328    P         P         00 31 51.0 +1.4
I07A                                 IAmb      IAmb      00 32 02.8
       comp=Z,82nm,1.1s
I07A                                 IAMs_20   IAMs_20   01 04 49.3
       comp=Z,5µm,21.0s
PHDHD  Phuduhudu        85.58 111    P         P         00 31 50.6 +0.2
PHDHD                                IAmb      IAmb      00 31 51.9
       comp=Z,135nm,1.6s
KRPM   Rodgers          85.60 323    P         P         00 31 50.4 +0.7
KRPM                                 IAmb      IAmb      00 32 03.4
       comp=Z,143nm,1.2s
KRPM                                 IAMs_20   IAMs_20   01 05 10.0
       comp=Z,5µm,18.0s
MQZ    McQueen’s Vall   85.69 221    IAMs_20   IAMs_20   01 03 01.2
       comp=Z,8µm,19.0s
J05D   Fort Rock, OR    85.78 326    P         P         00 31 51.8 +1.1
J05D                                 IAmb      IAmb      00 32 03.8
       comp=Z,126nm,1.3s
KRMB   Red Mountain     85.80 324    P         P         00 31 51.4 +0.6
MXZ    Matakaoa Point   85.89 229    IAMs_20   IAMs_20   01 02 27.0
       comp=Z,7µm,20.0s
SNZO   South Karori     85.94 224    IAMs_20   IAMs_20   01 03 21.3
       comp=Z,7µm,18.0s
KHZ    Kahutara         85.97 223    P         P         00 31 53.0 +1.3
KHZ                                  IAmb      IAmb      00 32 17.8
       comp=Z,96nm,1.2s
KSXB   Camp Six Broad   86.01 324    P         P         00 31 52.8 +1.0
KSXB                                 IAmb      IAmb      00 32 09.6
       comp=Z,59nm,1.0s
PINE   Pine Mountain    86.03 327    P         P         00 31 53.5 +1.5
PINE                                 IAmb      IAmb      00 32 05.3
       comp=Z,155nm,1.3s
L02F   Cave Junction    86.07 324    P         P         00 31 53.2 +1.2
L02F                                 IAmb      IAmb      00 32 16.7
       comp=Z,62nm,1.0s
BKZ    Black Stump Fm   86.12 227    P         P         00 31 53.5 +0.9
BKZ                                  IAmb      IAmb      00 32 06.6
       comp=Z,104nm,1.6s
BKZ                                  IAMs_20   IAMs_20   01 00 53.0
       comp=Z,8µm,20.0s
RTZ    Ruatahuna        86.13 227    P         P         00 31 54.8 +2.0
J04A   Umpqua Nationa   86.17 326    P         P         00 31 53.3 +0.5
J04A                                 IAmb      IAmb      00 32 05.5
       comp=Z,175nm,1.2s
BBOR   Butler Butte     86.19 325    P         P         00 31 54.1 +1.3
JTMT   Jette            86.24 333    P         P         00 31 54.1 +1.3
URZ    Urewera          86.26 228    P         P         00 31 55.9 +2.6
       comp=Z,6.8nm,0.8s,baz=133,slow=1.9,SNR=3.7
URZ                                  LR        LR        01 02 51.6
       comp=Z,10µm,19.8s,baz=213,slow=30
       comp=Z,6.8nm,0.8s
G08A   Pilot Rock       86.26 329    P         P         00 31 53.9 +1.0
G08A                                 IAMs_20   IAMs_20   01 06 07.4
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       comp=Z,8µm,20.0s
OXZ    Oxford           86.27 221    IAMs_20   IAMs_20   01 03 29.8
       comp=Z,7µm,19.0s
LNOR   Lincton Mounta   86.41 330    P         P         00 31 54.4 +0.8
TIO    Tiouine          86.46  51    P         P         00 31 56.0 +1.6
KBO    Bosley Butte     86.47 324    P         P         00 31 55.4 +1.4
LTZ    Lake Taylor      86.48 222    P         P         00 31 57.0 +2.7
LTZ                                  IAmb      IAmb      00 32 11.6
       comp=Z,189nm,1.4s
LTZ                                  IAMs_20   IAMs_20   01 03 12.2
       comp=Z,6µm,19.0s
RPZ    Rata Peaks       86.59 220    P         P         00 31 55.9 +1.1
RPZ    Rata Peaks       86.59 220    LR        LR        01 02 27.2
       comp=Z,9µm,20.1s,baz=128,slow=30
I05D   Terrebonne, OR   86.63 327    P         P         00 31 56.2 +1.5
I05D                                 IAmb      IAmb      00 32 08.0
       comp=Z,155nm,1.3s
LBZ    Lake Benmore     86.64 219    P         P         00 31 56.8 +1.8
LBZ                                  IAmb      IAmb      00 33 01.2
       comp=Z,137nm,1.8s
MREMI  Moremi           86.71 114    P         P         00 31 56.0 +0.1
MREMI  Moremi           86.71 114  i P         P         00 31 57.2 +1.3
I04A   Tendick Farm,    86.73 326    P         P         00 31 55.0 -0.2
I04A                                 IAmb      IAmb      00 31 58.4
       comp=Z,107nm,1.5s
THZ    Tophouse         86.74 223    P         P         00 31 55.1 -0.5
THZ                                  IAmb      IAmb      00 32 13.2
       comp=Z,232nm,1.7s
THZ                                  IAMs_20   IAMs_20   01 01 55.2
       comp=Z,7µm,20.0s
SOOWA  Sowa             86.76 112⇓i P         P         00 31 57.8 +1.6
NNZ    Nelson           86.79 223    P         P         00 31 56.1 +0.3
NNZ                                  IAMs_20   IAMs_20   01 01 17.7
       comp=Z,5µm,20.0s
YPT    Yellepit         86.85 329    P         P         00 31 56.6 +0.9
E09A   Wood Farm, Sta   86.85 330    P         P         00 31 57.3 +1.6
E09A                                 IAMs_20   IAMs_20   01 08 00.0
       comp=Z,6µm,18.0s
G06A   Carlson Farm,    86.98 328    P         P         00 31 57.7 +1.3
G06A                                 IAmb      IAmb      00 32 00.5
       comp=Z,164nm,1.5s
INZ    Inchbonnie       86.99 221    P         P         00 31 58.4 +1.7
INZ                                  IAmb      IAmb      00 32 13.6
       comp=Z,200nm,1.7s
INZ                                  IAMs_20   IAMs_20   01 03 45.7
       comp=Z,7µm,19.0s
KEBM   Edson Butte      87.00 324    P         P         00 31 57.3 +0.7
KEBM                                 IAmb      IAmb      00 32 14.2
       comp=Z,135nm,1.2s
J01E   Myrtle Point     87.01 325    P         P         00 31 57.1 +0.6
J01E                                 IAmb      IAmb      00 32 09.1
       comp=Z,120nm,1.4s
MRNZ   Matariki Terra   87.05 223    P         P         00 31 58.3 +1.2
I03D   Drain, OR        87.12 326    P         P         00 31 58.6 +1.6
TKNZ   Takaka Hill      87.16 223    P         P         00 31 58.8 +1.2
F07A   Phinny Hill Vi   87.16 329    P         P         00 31 58.8 +1.6
F07A                                 IAMs_20   IAMs_20   01 08 16.2
       comp=Z,8µm,19.0s
E08A   Dider Farm, El   87.23 330    P         P         00 31 58.7 +1.2
H04A   Detroit Lake     87.29 327    P         P         00 31 58.7 +0.8
H04A                                 IAmb      IAmb      00 32 11.2
       comp=Z,60nm,0.9s
G05A   Wamic            87.30 328    P         P         00 31 59.7 +1.8
KSANE  Kasane           87.30 109  i P         P         00 31 59.9 +1.0
BUCK   Buck Mountain    87.31 326    P         P         00 31 59.3 +1.2
PYZ    Puysegur Point   87.35 217    IAMs_20   IAMs_20   01 00 58.9
       comp=Z,7µm,22.0s
HAWA   Hanford          87.36 329    P         P         00 31 58.8 +0.7
HAWA                                 IAmb      IAmb      00 32 01.8
       comp=Z,164nm,1.5s
HAWA                                 IAMs_20   IAMs_20   01 07 04.6
       comp=Z,7µm,20.0s
BROLN  Tlhalogang       87.38 113  i P         P         00 31 59.2  0.0
FOZ    Fox Glacier      87.39 220    P         P         00 31 59.0 +0.4
DSZ    Denniston Nort   87.40 222    P         P         00 32 00.2 +1.4
DSZ                                  IAmb      IAmb      00 32 14.9
       comp=Z,173nm,1.4s
H04D   Lebanon          87.43 326    P         P         00 31 57.7 -0.8
H04D                                 IAmb      IAmb      00 32 33.5
       comp=Z,112nm,1.1s
POGA   Pongola          87.49 120    P         P         00 31 58.4 -1.1
HOOD   Mount Hood Mea   87.51 327    P         P         00 31 59.8 +0.7
HOOD                                 IAmb      IAmb      00 32 16.3
       comp=Z,95nm,1.1s
HOOD                                 IAMs_20   IAMs_20   01 08 11.6
       comp=Z,5µm,18.0s
HIZ    Hauiti           87.53 226    P         P         00 31 59.9 +0.4
HIZ                                  IAMs_20   IAMs_20   01 02 20.4
       comp=Z,6µm,20.0s
QRZ    Quartz Range     87.54 223    IAMs_20   IAMs_20   01 04 28.5
       comp=Z,5µm,18.0s
DCZ    Deep Cove        87.57 217    IAMs_20   IAMs_20   01 03 13.9
       comp=Z,7µm,19.0s
TOZ    Tahuroa Road     87.59 227    P         P         00 32 01.4 +1.7
D08A   Wollman Farm,    87.61 330    P         P         00 32 00.4 +1.1
D08A                                 IAMs_20   IAMs_20   01 07 37.1
       comp=Z,6µm,20.0s
E07A   Sunnyside        87.63 329    P         P         00 32 00.4 +0.9
E07A                                 IAMs_20   IAMs_20   01 07 01.7
       comp=Z,8µm,19.0s
WAH2   Wahluke Slope    87.66 330    P         P         00 32 01.5 +1.9
COR    Corvallis        87.75 326    P         P         00 32 01.7 +1.6
COR    Corvallis        87.75 326    P         P         00 32 01.7 +1.6
COR                                  pmax      pmax
       comp=Z,166nm,1.2s
NEW    Newport          87.80 332    P         P         00 32 00.7 +0.4
NEW    Newport          87.80 332    IAMs_20   IAMs_20   01 08 19.0
       comp=Z,8µm,19.0s
NEW    Newport          87.80 332    LR        LR        01 08 47.7
       comp=Z,8µm,18.1s,baz=137,slow=34
NEW    Newport          87.80 332    P         P         00 32 00.7 +0.4
NEW                                  pmax      pmax
       comp=Z,35nm,1.3s
G04A   Mulino           87.81 327    P         P         00 32 02.2 +1.9
AVE    Averroes         87.83  49    P         P         00 32 02.1 +1.4
AVE    Averroes         87.83  49    P         P         00 32 01.0 +0.2
MXC    Moxie City       87.84 329    P         P         00 32 01.6 +1.1
MXC                                  IAmb      IAmb      00 32 13.5
       comp=Z,52nm,1.1s
KUQ    Kuujjuuaa        87.90   2    P         P         00 32 01.0 +0.6
KUQ                                  IAMs_20   IAMs_20   01 09 19.4
       comp=Z,7µm,22.0s
C09A   Chrisman Ranch   87.91 331    IAMs_20   IAMs_20   01 07 28.5
       comp=Z,5µm,20.0s
RAO    Raoul Island     87.94 237    LR        LR        01 01 43.2
       comp=Z,4µm,21.4s,baz=158,slow=29
G03D   McMinnville, O   88.19 327    P         P         00 32 02.8 +0.7
G03D                                 IAmb      IAmb      00 32 36.3
       comp=Z,88nm,1.0s
FFC    Flin Flon        88.29 343    P         P         00 32 02.4  0.0
FFC    Flin Flon        88.29 343    IAMs_20   IAMs_20   01 18 59.8
       comp=Z,7µm,18.0s
FFC    Flin Flon        88.29 343    P         P         00 32 02.4  0.0
FFC                                  pmax      pmax
       comp=Z,50nm,1.2s
HEBO   Mount Hebo       88.43 326    IAMs_20   IAMs_20   01 08 55.8
       comp=Z,5µm,18.0s
RTC    Rabat Centre     88.62  49    P         P         00 32 05.5 +1.0
MATP   Matopo           88.66 113    LR        LR        01 09 24.6
       comp=Z,6µm,18.6s,baz=238,slow=34
F04D   Rainier, OR      88.71 327    P         P         00 32 05.0 +0.4
F04D                                 IAmb      IAmb      00 32 08.7
       comp=Z,105nm,1.2s
F04D                                 IAMs_20   IAMs_20   01 05 38.4
       comp=Z,5µm,21.0s
B08A   Colville Reser   88.79 331    P         P         00 32 05.3 +0.3
B08A                                 IAMs_20   IAMs_20   01 08 14.2
       comp=Z,5µm,19.0s
F03A   Seaside          88.86 327    P         P         00 32 06.3 +1.0
D05A   Enumclaw         89.07 329    P         P         00 32 07.3 +1.0
D05A                                 IAmb      IAmb      00 32 19.1
       comp=Z,98nm,1.0s
D05A                                 IAMs_20   IAMs_20   01 08 59.7
       comp=Z,6µm,19.0s
E03A   Lebam            89.31 327    P         P         00 32 08.8 +1.4
E03A                                 IAmb      IAmb      00 32 27.6
       comp=Z,123nm,1.1s
E03A                                 IAMs_20   IAMs_20   01 10 47.3
       comp=Z,6µm,18.0s
PFVI   Vila Bisbo       89.32  46    P         P         00 32 08.9 +1.2
PFVI   Vila Bisbo       89.32  46   eP         P         00 32 08.9 +1.2
PFVI                                ePP        PP        00 35 39.2 +0.3
MDT    Midelt           89.40  51    LR        LR        01 13 22.3
       comp=Z,12µm,18.3s,baz=238,slow=36
IFR    Ifrane           89.47  50    P         P         00 32 09.6 +0.9
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MORF	Marmelete	89.54	46	eP	P	00 32 09.7	+0.9
MORF				ePP	PP	00 35 40.8	+0.1
MORF				eSKSac	SKSac	00 42 39.4	+0.2
MORF				IAMs_20	IAMs_20	01 11 57.1	
	comp=Z,24µm,19.5s						
MORF	Marmelete	89.54	46	P	P	00 32 07.8	-1.0
MORF	Marmelete	89.54	46	eP	P	00 32 10.0	+1.2
MORF				ePP	PP	00 35 39.4	-1.3
MORF	Marmelete	89.54	46	P	P	00 32 07.8	-1.0
PTEO	Sao Teotonio	89.65	45	eP	P	00 32 10.3	+1.1
PTEO				i Amb		00 32 36.2	
	comp=Z,86nm,1.4s						
PTEO				ePP	PP	00 35 40.5	-1.0
GNW	Green Mountain	89.73	328	P	P	00 32 10.0	+0.7
WISH	Wishkah	89.83	328	P	P	00 32 11.4	+1.6
PBDV	Barranco-do-Ve	89.95	46	eP	P	00 32 11.6	+1.0
PBDV				ePP	PP	00 35 43.2	-0.7
NLWA	Neilton Lookou	90.08	328	P	P	00 32 12.0	+1.0
NLWA				IAmb	IAmb	00 32 33.8	
	comp=Z,126nm,2.0s						
NLWA				IAMs_20	IAMs_20	01 06 34.4	
	comp=Z,5µm,21.0s						
PCVE	Castro Verde	90.12	46	P	P	00 32 12.8	+1.4
PCVE	Castro Verde	90.12	46	eP	P	00 32 12.8	+1.4
PCVE				i Amb		00 33 10.4	
	comp=Z,53nm,1.8s						
PCVE				ePP	PP	00 35 44.4	-0.9
LIS	Lisbon	90.13	44	eP	P	00 32 12.3	+1.0
LIS				eSKSac	SKSac	00 42 42.7	+0.3
LIS				IAMs_20	IAMs_20	01 15 39.5	
	comp=Z,19µm,16.7s						
LIS	Lisbon	90.13	44	eP	P	00 32 13.1	+1.6
LIS	Lisbon	90.13	44	eP	P	00 32 13.0	+1.6
LIS	Lisbon	90.13	44	eP	P	00 32 12.4	+1.0
LIS				e		00 42 42.7	
MESJ	Messejana	90.14	45	eP	P	00 32 12.5	+1.0
MESJ				ePP	PP	00 35 45.5	0.0
MESJ				eSKSac	SKSac	00 42 42.9	+0.3
MESJ				IAMs_20	IAMs_20	01 13 16.2	
	comp=Z,20µm,15.4s						
MESJ	Messejana	90.14	45		P	00 32 12.0	+0.5
MESJ	Messejana	90.14	45	eP	P	00 32 12.3	+0.8
MESJ				i Amb		00 32 30.8	
	comp=Z,60nm,1.7s						
MESJ				ePP	PP	00 35 44.4	-1.1
MESJ	Messejana	90.14	45	eP	P	00 32 12.5	+1.0
MESJ				e		00 35 45.5	
MESJ				e		00 42 42.9	
PVAQ	Vaqueiros	90.18	46	P	P	00 32 12.8	+1.1
PVAQ	Vaqueiros	90.18	46	P	P	00 32 12.9	+1.2
PVAQ	Vaqueiros	90.18	46	eP	P	00 32 13.2	+1.5
PVAQ				i Amb		00 32 27.2	
	comp=Z,92nm,1.6s						
PVAQ				ePP	PP	00 35 45.2	-0.6
PVAQ				eLR	LR	01 04 27.0	
PVAQ				i AMs_20		01 13 37.5	
	comp=Z,17µm,18.0s						
OUZ	Omahuta	90.33	228	IAMs_20	IAMs_20	01 04 47.7	
	comp=Z,7µm,19.0s						
FCC	Fort Churchill	90.38	349	IAmb	IAmb	00 32 25.6	
	comp=Z,113nm,1.0s						
FCC				IAMs_20	IAMs_20	01 17 48.0	
	comp=Z,7µm,19.0s						
EGRO	El Granado	90.41	46	P	P	00 32 13.9	+1.2
PBEJ	Beja	90.48	45	eP	P	00 32 14.3	+1.2
PBEJ				i Amb		00 32 34.5	
	comp=Z,48nm,1.6s						
PBEJ				ePP	PP	00 35 48.4	+0.3
MOE	Montemor	90.49	45	eP	P	00 32 13.8	+0.7
MOE				i Amb		00 32 28.1	
	comp=Z,59nm,1.6s						
MOE				ePP	PP	00 35 47.8	-0.4
A04D	Lummi Island	90.53	329	P	P	00 32 14.2	+1.2
A04D				IAmb	IAmb	00 32 22.2	
	comp=Z,60nm,0.9s						
EVO	Evora	90.70	45	P	P	00 32 15.0	+0.9
EVO	Evora	90.70	45	eP	P	00 32 15.5	+1.4
EVO				i Amb		00 32 16.8	
	comp=Z,32nm,1.6s						
EVO				ePP	PP	00 35 49.8	-0.1
ECEU	Ceuta	90.74	48	P	P	00 32 15.7	+1.3
CEU	Ceuta	90.75	48	P	P	00 32 16.1	+1.7
C03A	Quillayute Air	90.81	328	P	P	00 32 14.8	+0.5
PGC	Sidney	90.81	329	P	P	00 32 16.0	+1.7
PGC				IAMs_20	IAMs_20	01 10 11.8	
	comp=Z,5µm,19.0s						
PSBE	So Bento	90.85	44	eP	P	00 32 15.9	+1.1
PSBE				ePP	PP	00 35 51.1	0.0
PMTG	Montargil	90.91	44	eP	P	00 32 16.1	+1.0
PMTG				i Amb		00 32 30.9	
	comp=Z,77nm,1.7s						
PMTG				ePP	PP	00 35 51.5	0.0
ESPR	Espera	91.02	47	P	P	00 32 16.8	+1.2
EMIN	Mina Concepcio	91.06	46	P	P	00 32 16.4	+0.6
PBAR	Barrancos	91.08	46	P	P	00 32 16.8	+0.9
PBAR	Barrancos	91.08	46	eP	P	00 32 16.6	+0.7
PBAR				i Amb		00 32 19.3	
	comp=Z,38nm,1.6s						
PBAR				ePP	PP	00 35 52.3	-0.6
LSZ	Lusaka	91.08	108	P	P	00 32 16.5	-0.2
LSZ				IAmb	IAmb	00 32 20.3	
	comp=Z,122nm,1.5s						
LSZ	Lusaka	91.08	108	LR	LR	01 10 07.0	
	comp=Z,13µm,18.1s,baz=229,slow=34						
LSZ	Lusaka	91.08	108	P	P	00 32 13.7	-2.9
LSZ				S	SKSac	00 42 44.4	-5.1
LSZ	Lusaka	91.08	108	P	P	00 32 16.5	-0.2
LSZ				pmax	pmax		
	comp=Z,123nm,1.5s						
PESTR	Estremoz	91.17	45	P	P	00 32 17.4	+1.1
PESTR	Estremoz	91.17	45	P	P	00 32 16.4	+0.1
PESTR				IAmb	IAmb	00 32 18.4	
	comp=Z,101nm,1.7s						
PESTR	Estremoz	91.17	45	eP	P	00 32 17.6	+1.2
PESTR				i Amb		00 32 20.1	
	comp=Z,62nm,1.6s						
PESTR				ePP	PP	00 35 53.5	-0.2
PESTR				eLQ	LQ	01 01 10.7	
PESTR				i AMs_20		01 13 43.1	
	comp=Z,16µm,18.0s						
TAM	Tamanrasset	91.18	64	P	P	00 32 17.1	+0.1
TAM	Tamanrasset	91.18	64	P	P	00 32 17.1	+0.1
TAM				pmax	pmax		
	comp=Z,25nm,1.0s						
TAM				MLR	MLR		
	comp=Z,16µm,20.0s						
AFI	Afiamalu	91.28	253	P	P	00 32 16.3	-1.2
AFI				IAmb	IAmb	00 32 23.1	
	comp=Z,115nm,1.2s						
AFI	Afiamalu	91.28	253	P	P	00 32 16.3	-1.2
AFI				pmax	pmax		
	comp=Z,115nm,1.3s						
PSARD	Sardoal	91.28	44	eP	P	00 32 17.2	+0.4
PSARD				i Amb		00 32 32.2	
	comp=Z,45nm,1.5s						
PSARD				ePP	PP	00 35 54.2	-0.3
PCAS	Casmilo, Conde	91.36	43	eP	P	00 32 18.3	+1.1
PCAS				i Amb		00 32 32.0	
	comp=Z,50nm,1.7s						
EBAD	Badajoz	91.45	45	P	P	00 32 18.2	+0.6
COI	Coimbra	91.51	43	P	P	00 32 18.2	+0.4
COI				IAmb	IAmb	00 32 31.6	
	comp=Z,49nm,1.1s						
COI	Coimbra	91.51	43	eP	P	00 32 18.3	+0.4
COI				i Amb		00 32 32.3	
	comp=Z,83nm,1.9s						
COI				ePP	PP	00 35 55.7	-0.6
COI	Coimbra	91.51	43	P	P	00 32 18.2	+0.4
COI				pmax	pmax		
	comp=Z,49nm,1.2s						
COI				MLR	MLR		
	comp=Z,24µm,21.0s						
EMIJ	Mijas	91.53	48	P	P	00 32 18.2	+0.1
LLLB	Lillooet	91.58	331	P	P	00 32 18.5	+0.5
PMRV	Marv??o	91.64	44	eP	P	00 32 19.3	+0.8
PMRV				i Amb		00 32 32.0	
	comp=Z,35nm,1.5s						
PMRV				ePP	PP	00 35 57.1	-0.3
PMRV				eS	SKSac	00 42 59.2	+8.0
PMRV				eSS	SS	00 49 34.6	+8.1
PMRV				eLQ	LQ	01 01 37.9	
PMRV				eLR	LR	01 03 32.9	
PMRV				i AMs_20		01 17 05.9	
	comp=Z,14µm,18.0s						
PCBR	Castelo Branco	91.84	44	eP	P	00 32 19.7	+0.3
PCBR				i Amb		00 32 22.4	
	comp=Z,38nm,1.6s						
PCBR				ePP	PP	00 35 58.9	0.0
EMAL	Malaga-Limoner	91.87	48	P	P	00 32 20.9	+1.3
ECAB	El Cabril	92.03	46	P	P	00 32 20.8	+0.4
PVIS	Viseu	92.14	43	eP	P	00 32 21.0	+0.2
PVIS				ePP	PP	00 36 00.8	-0.5
MTE	Manteigas	92.15	44	P	P	00 32 20.2	-0.7
MTE				IAmb	IAmb	00 32 35.5	
	comp=Z,95nm,1.9s						
MTE	Manteigas	92.15	44	eP	P	00 32 21.2	+0.3
MTE				i Amb		00 32 35.4	
	comp=Z,43nm,1.7s						
MTE				ePP	PP	00 36 00.9	-0.5
MTE				eS	SKSac	00 42 55.2	+1.1
MTE				eSS	SS	00 49 36.5	+2.7
MTE				eLQ	LQ	01 01 46.2	
MTE				eLR	LR	01 03 19.5	
MTE				i AMs_20		01 12 23.5	
	comp=Z,22µm,20.0s						
EGOR	Sierra Gorda,	92.29	48	P	P	00 32 22.2	+0.5
PVRL	Vila Real	92.59	43	eP	P	00 32 23.4	+0.5
PVRL				i Amb		00 32 43.2	
	comp=Z,41nm,1.6s						
PVRL				ePP	PP	00 36 05.6	+0.8
POLO	Lamas de Olo	92.61	43	eP	P	00 32 23.3	+0.3
POLO				i Amb		00 32 28.1	
	comp=Z,22nm,1.7s						
POLO				ePP	PP	00 36 04.4	-0.7
EADA	Adamuz	92.62	47	P	P	00 32 23.7	+0.6
PGAV	Gavieira, Arco	92.70	42	eP	P	00 32 23.9	+0.5
PGAV				ePP	PP	00 36 06.2	+0.5
PGAV				eS	SKSac	00 42 57.3	+0.1
PGAV				eLQ	LQ	01 02 11.9	
PGAV				eLR	LR	01 05 50.3	
PGAV				i AMs_20		01 15 02.3	
	comp=Z,22µm,18.0s						
EQTA	Presa de Quent	92.77	48	P	P	00 32 24.2	+0.3
MVO	Moncorvo	92.93	43	eP	P	00 32 25.1	+0.6
MVO				i Amb		00 32 45.2	
	comp=Z,38nm,1.7s						
MVO				ePP	PP	00 36 06.9	-0.6
MVO				eS	SKSac	00 42 59.3	+0.8
MVO				eLR	LR	01 03 57.0	
MVO				i AMs_20		01 12 45.2	
	comp=Z,18µm,20.0s						
IVI	Ivigtut	93.02	11	IAMs_20	IAMs_20	01 14 01.9	
	comp=Z,5µm,20.0s						
IVI	Ivigtut	93.02	11	i P	P	00 32 24.1	-0.1
IVI				IAmb	IAmb	00 32 26.8	
	comp=Z,116nm,1.6s						
ENIJ	Nijar	93.44	49	P	P	00 32 27.1	+0.2
NRS	Narsarsuaq	93.47	13	P	P	00 32 27.1	+0.8
NRS				IAmb	IAmb	00 32 42.2	
	comp=Z,96nm,1.3s						
NRS				IAMs_20	IAMs_20	01 12 15.9	
	comp=Z,6µm,22.0s						
NRS	Narsarsuaq	93.47	13	P	P	00 32 27.1	+0.8
NRS				pmax	pmax		
	comp=Z,96nm,1.3s						
NRS	Narsarsuaq	93.47	13	i P	P	00 32 28.8	+2.5
NRS				IAmb	IAmb	00 32 39.9	
	comp=Z,48nm,1.0s						
PBRG	Braganca	93.49	43	eP	P	00 32 27.5	+0.4
PBRG				i Amb		00 32 42.5	
	comp=Z,43nm,1.7s						
PBRG				ePP	PP	00 36 11.3	-0.6
FRB	Frobisher Bay	93.54	2	LR	LR	01 17 52.7	
	comp=Z,5µm,19.9s,baz=168,slow=38						
ECAL	Calabor	93.58	43	P	P	00 32 27.7	+0.3
PAB	San Pablo	93.58	46	P	P	00 32 28.1	+0.6
PAB	San Pablo	93.58	46	P	P	00 32 28.1	+0.6
PAB				pmax	pmax		
	comp=Z,36nm,1.4s						
PAB				MLR	MLR		
	comp=Z,22µm,18.0s						
JOKA	Jonika Flow	93.66	290	IAMs_20	IAMs_20	01 03 38.2	
	comp=Z,7µm,22.0s						
STCH	Steam Cracks	93.73	290	IAMs_20	IAMs_20	01 07 12.2	
	comp=Z,6µm,21.0s						
PUH	Pauahi	93.80	290	P	P	00 32 29.2	+0.2
PUH				IAmb	IAmb	00 32 35.9	
	comp=Z,113nm,1.2s						
PUH				IAMs_20	IAMs_20	01 08 24.0	
	comp=Z,5µm,18.0s						
HLP	Hilina Pali	93.84	290	IAMs_20	IAMs_20	01 08 16.9	
	comp=Z,6µm,18.0s						
BYL	Byron's Ledge	93.86	290	P	P	00 32 29.6	+0.3
UWE	Uwekahuna	93.89	290	IAMs_20	IAMs_20	01 03 26.2	
	comp=Z,5µm,21.0s						
ESDC	Sonseca Array	93.90	46	P	P	00 32 29.5	+0.5
ESDC	Sonseca Array	93.90	46	P	P	00 32 29.8	+0.8
	comp=Z,3.8nm,1.1s,baz=234,slow=4.8,SNR=12						
ESDC				LR	LR	01 15 04.3	
	comp=Z,19µm,18.1s,baz=234,slow=36						
	comp=Z,3.8nm,1.1s						
ESBB	Sonseca Array	93.90	46	P	P	00 32 28.8	-0.1
AIN	Ainahou	94.00	290	IAMs_20	IAMs_20	01 03 27.2	
	comp=Z,5µm,18.0s						
MLH	Mauna Loa	94.00	290	IAMs_20	IAMs_20	01 08 11.3	
	comp=Z,5µm,19.0s						
KHU	Kahuku	94.06	290	IAMs_20	IAMs_20	01 11 13.9	
	comp=Z,5µm,18.0s						
HMH	Humu‘ula Sheep	94.13	290	IAMs_20	IAMs_20	01 08 33.8	
	comp=Z,6µm,18.0s						
MWH	Mokuaweoweo	94.17	290	IAMs_20	IAMs_20	01 10 06.7	
	comp=Z,5µm,18.0s						
POHA	Pohakuloa	94.25	290	IAMs_20	IAMs_20	01 10 26.9	
	comp=Z,6µm,20.0s						
GUD	Guadarrama	94.35	45	P	P	00 32 29.3	-1.8
HOLB	Holberg	94.36	328	IAMs_20	IAMs_20	01 12 24.8	
	comp=Z,5µm,18.0s						
HUH	Hualalai	94.46	290	IAMs_20	IAMs_20	01 10 24.5	
	comp=Z,6µm,19.0s						
HPAH	Hawaii Prepara	94.52	290	P	P	00 32 33.1	+0.8
HPAH				IAMs_20	IAMs_20	01 10 33.1	
	comp=Z,6µm,18.0s						
CART	Cartagena	94.58	49	P	P	00 32 33.3	+1.2
UCM	Universidad Co	94.72	46	P	P	00 32 33.1	+0.5
NUUK	Nuuk	95.30	9	i P	P	00 32 36.4	+1.7
NUUK				IAmb	IAmb	00 32 37.5	
	comp=Z,154nm,1.7s						
HLK	Haleakala	95.33	291	IAMs_20	IAMs_20	01 09 20.6	
	comp=Z,6µm,20.0s						
KHLH	Kahului Airpor	95.55	291	IAMs_20	IAMs_20	01 11 48.2	
	comp=Z,7µm,19.0s						
ECHE	Chera	95.73	47	P	P	00 32 38.5	+1.1
BLKN	Baker Lake	95.94	350	P	P	00 32 36.3	-1.3
FUTU	Fugatoga	96.28	250	IAMs_20	IAMs_20	01 05 29.7	
	comp=Z,6µm,22.0s						
EIBI	Ibiza	96.91	49	P	P	00 32 44.1	+1.5
HON	Honolulu	97.03	290	IAMs_20	IAMs_20	01 06 44.1	
	comp=Z,7µm,20.0s						
KIP	Kipapa	97.09	291	IAMs_20	IAMs_20	01 06 55.7	
	comp=Z,6µm,19.0s						
MSVF	Nonsavu	97.44	245	LR	LR	01 08 19.6	
	comp=Z,3µm,20.2s,baz=107,slow=30						
VAL	Valentia	97.96	33	P	Pdif	00 32 48.9	+1.8
SFJD	Kangerlussuaq	98.13	8	IAMs_20	IAMs_20	01 16 45.7	
	comp=Z,5µm,20.0s						
SFJD	Kangerlussuaq	98.13	8	LR	LR	01 17 06.6	
	comp=Z,5µm,20.4s,baz=194,slow=35						
SFJD	Kangerlussuaq	98.13	8	i P	Pdif	00 32 50.9	+3.4
SFJD				IAmb	IAmb	00 32 51.5	
	comp=Z,14nm,0.9s						
ETOS	Mallorca	98.27	49	P	Pdif	00 32 51.4	+2.5
YKAW1	Yellowknife Wh	98.29	342	P	Pdif	00 32 48.9	+0.6
YKAW1				IAmb	IAmb	00 33 05.2	
	comp=Z,39nm,1.6s						
YKA	Yellowknife Ar	98.33	342	P	Pdif	00 32 48.9	+0.4
YKA	Yellowknife Ar	98.33	342	P	Pdif	00 32 49.3	+0.8
	comp=Z,1.4nm,0.7s,baz=144,slow=3.5,SNR=13						
YKA				PKKPbc	PKKPbc	00 49 21.1	-0.6
	comp=Z,0.4nm,0.7s,baz=324,slow=3.5,SNR=3.5						
	comp=Z,1.4nm,0.7s						
YKAW3	Yellowknife Wh	98.39	342	P	Pdif	00 32 49.6	+0.9
YKAW3				IAmb	IAmb	00 32 59.5	
	comp=Z,52nm,1.7s						
ISOG	Isortoq, Green	98.70	13	i P	Pdif	00 32 52.0	+2.0
ISOG				IAmb	IAmb	00 32 55.7	
	comp=Z,11nm,0.9s						
KEKH	Kekaha	98.74	290	IAMs_20	IAMs_20	01 05 40.5	
	comp=Z,7µm,22.0s						
U35K	Hyder	98.80	331	IAMs_20	IAMs_20	01 12 13.1	
	comp=Z,6µm,22.0s						
CEST	Esterri de Car	98.80	46	P	Pdif	00 32 52.0	+0.7
CEST				IAmb	IAmb	00 33 05.5	
	comp=Z,39nm,1.4s						
TAU	Tasmania Unive	98.84	208	IAMs_20	IAMs_20	01 09 50.3	
	comp=Z,7µm,18.0s						
ANGG	Ammassalik, Gr	99.03	14	IAMs_20	IAMs_20	01 13 47.4	
	comp=Z,5µm,22.0s						
ANGG	Ammassalik, Gr	99.03	14	i P	Pdif	00 32 51.5	+0.1
ANGG				IAmb	IAmb	00 32 55.2	
	comp=Z,9.9nm,0.8s						
V35K	Ketchikan	99.08	330	IAMs_20	IAMs_20	01 26 32.7	
	comp=Z,5µm,18.0s						
MAHO	Mahon	99.29	49	P	Pdif	00 32 54.8	+1.5
ILON	Igloolik, Nuna	99.41	357	P	Pdif	00 32 52.5	-0.6
T35M	Bob Quinn	99.60	332	IAMs_20	IAMs_20	01 23 33.1	
	comp=Z,4µm,18.0s						
EJON	La Jonquera	99.74	46	P	Pdif	00 32 56.5	+1.2
CRAG	Craig	99.83	330	IAMs_20	IAMs_20	01 26 58.5	
	comp=Z,4µm,20.0s						
WRAK	Wrangell Islan	100.11	331	Pdif	Pdif	00 32 55.2	-1.3
ILULI	Ilulissat	100.19	7	IAMs_20	IAMs_20	01 17 29.0	
	comp=Z,7µm,21.0s						
ILULI	Ilulissat	100.19	7	i P	Pdif	00 32 58.9	+2.3
ILULI				IAmb	IAmb	00 33 02.3	
	comp=Z,17nm,0.9s						
U33K	Whale Pass	100.24	330	IAMs_20	IAMs_20	01 27 42.0	
	comp=Z,4µm,18.0s						
S34M	Telegraph Cree	100.58	332	IAMs_20	IAMs_20	01 17 20.1	
	comp=Z,5µm,19.0s						
DSB	Dublin	100.62	34	P	Pdif	00 33 00.5	+1.6
MBAR	Mbarara	100.80	97	P	Pdif	00 33 01.5	+0.6
MBAR				S	SKSac	00 43 36.4	-4.5
WTLY	Watson Lake, Y	101.14	335	IAMs_20	IAMs_20	01 20 43.9	
	comp=Z,4µm,18.0s						
UMMG	Uummannaq	101.48	7	i P	Pdif	00 33 02.9	+0.6
UMMG				IAmb	IAmb	00 33 04.9	
	comp=Z,83nm,1.8s						
R33M	Jennings River	101.48	333	IAMs_20	IAMs_20	01 20 05.0	
	comp=Z,5µm,19.0s						
WRGLY	Wrigley	101.50	339	IAMs_20	IAMs_20	01 26 14.3	
	comp=Z,4µm,18.0s						
ICESG	Greenland Ices	101.70	11	i P	Pdif	00 33 04.7	+0.9
ICESG				IAmb	IAmb	00 33 08.9	
	comp=Z,16nm,1.1s						
Q32M	Nakina River	101.71	333	IAMs_20	IAMs_20	01 16 29.1	
	comp=Z,5µm,20.0s						
S32K	Killisnoo	101.72	331	IAMs_20	IAMs_20	01 25 52.4	
	comp=Z,4µm,19.0s						
R32K	Eaglecrest	102.19	331	IAMs_20	IAMs_20	01 16 01.9	
	comp=Z,4µm,19.0s						
NUUG	Nuugaatsiaq	102.20	6	i P	Pdif	00 33 06.9	+1.4
NUUG				IAmb	IAmb	00 33 10.7	
	comp=Z,35nm,1.4s						
BORG	Borgarnes	102.43	20	IAMs_20	IAMs_20	01 15 33.6	
	comp=Z,7µm,21.0s						
BESE	Bessie Mountai	102.52	332	IAMs_20	IAMs_20	01 17 59.6	
	comp=Z,4µm,19.0s						
SOEG	Soedalen	102.54	14	i P	Pdif	00 33 08.9	+1.8
SOEG				IAmb	IAmb	00 33 13.9	
	comp=Z,4.2nm,0.8s						
P32M	Atlin	102.69	333	IAMs_20	IAMs_20	01 16 56.9	
	comp=Z,5µm,20.0s						
S31K	Pelican	102.72	331	IAMs_20	IAMs_20	01 24 04.9	
	comp=Z,4µm,18.0s						
UPNV	Upernavik	103.17	5	i P	Pdif	00 33 11.4	+1.6
UPNV				IAmb	IAmb	00 33 13.4	
	comp=Z,45nm,1.2s						
SKAG	Skagway	103.25	332	IAMs_20	IAMs_20	01 22 05.9	
	comp=Z,4µm,18.0s						
EKA	Eskdalemuir Ar	103.37	33	Pdiff	Pdif	00 33 12.1	+1.0
	comp=Z,0.2nm,0.3s,baz=77,slow=7.3,SNR=2.7						
N32M	Quiet Lake	103.42	334	IAMs_20	IAMs_20	01 18 19.5	
	comp=Z,6µm,19.0s						
BNI	Bardonecchia	103.42	46	P	Pdif	00 33 10.9	-0.9
DZM	Mont Dzumac	103.49	234	eP	Pdif	00 33 06.6	-6.1
	comp=Z,190nm,28.1s						
DZM	Mont Dzumac	103.49	234	ePP	PP	00 37 18.3	-10
	comp=Z,561nm,26.4s						
DZM				eSKSac	SKSac	00 43 51.6	-1.7
	comp=Z,888nm,25.7s						
DZM				eSS	SS	00 52 15.5	+2.7
	comp=Z,8µm,26.4s						
DZM	Mont Dzumac	103.49	234	eLQ	LQ	01 02 34.5	
	comp=Z,9µm,35.7s						
DZM				eLR	LR	01 07 12.2	
	comp=Z,12µm,24.6s						
MMPY	Sheldon Lake,	103.69	336	IAMs_20	IAMs_20	01 27 07.2	
	comp=Z,5µm,19.0s						
FARO	Faro, Yukon	104.19	335	IAMs_20	IAMs_20	01 28 29.6	
	comp=Z,5µm,19.0s						
CAN	Canberra	104.31	214	IAMs_20	IAMs_20	01 11 48.5	
	comp=Z,5µm,20.0s						
P29M	Windy Craggy	104.34	331	IAMs_20	IAMs_20	01 22 23.8	
	comp=Z,4µm,20.0s						
O30N	Mendenhall	104.35	333	IAMs_20	IAMs_20	01 17 29.8	
	comp=Z,6µm,20.0s						
M31M	Drury Creek, Y	104.56	335	IAMs_20	IAMs_20	01 19 52.4	
	comp=Z,5µm,19.0s						
DOU	Dourbes	104.65	40	dPdif	Pdif	00 33 17.7	+0.8
	comp=Z,5.4nm,1.8s						
N31M	Braeburn, Yuko	104.66	334	IAMs_20	IAMs_20	01 30 41.8	
	comp=Z,5µm,18.0s						
KULLO	Kullorsuaq	104.85	4	i P	Pdif	00 33 20.4	+3.2
HYT	Haines Junctio	104.94	333	IAMs_20	IAMs_20	01 19 22.6	
	comp=Z,4µm,19.0s						
SUMG	Summit	104.95	10	P	Pdif	00 33 19.7	+1.4
SUMG	Summit	104.95	10	IAMs_20	IAMs_20	01 20 17.9	
	comp=Z,5µm,20.0s						
SUMG	Summit	104.95	10	i P	Pdif	00 33 20.3	+2.0
CASP	Castiglione de	105.03	49	IAMs_20	IAMs_20	01 22 58.7	
	comp=Z,5µm,20.0s						
N30M	Aishikik Lake	105.15	333	IAMs_20	IAMs_20	01 18 55.9	
	comp=Z,6µm,20.0s						
BCPM	Bancas Point	105.32	331	IAMs_20	IAMs_20	01 28 11.5	
	comp=Z,4µm,18.0s						
WLF	Walferdange	105.33	41	P	Pdif	00 33 21.3	+1.3
WLF	Walferdange	105.33	41	dPdif	Pdif	00 33 21.7	+1.8
VLC	Villacollemand	105.34	48	P	Pdif	00 33 21.0	+0.8
MAYO	Mayo, Yukon	105.95	335	IAMs_20	IAMs_20	01 31 28.0	
	comp=Z,5µm,18.0s						
O28M	Mount Upton	106.00	332	IAMs_20	IAMs_20	01 16 06.2	
	comp=Z,4µm,22.0s						
C36M	Paulatuk	106.06	343	IAMs_20	IAMs_20	01 24 07.7	
	comp=Z,5µm,20.0s						
TABL	Table Mountain	106.22	331	IAMs_20	IAMs_20	01 23 20.2	
	comp=Z,4µm,19.0s						
M29M	Somme Creek	106.25	334	IAMs_20	IAMs_20	01 22 06.0	
	comp=Z,6µm,18.0s						
LOGN	Logan Glacier	106.36	332	IAMs_20	IAMs_20	01 22 54.5	
	comp=Z,4µm,20.0s						
MESA	MESA	106.42	331	IAMs_20	IAMs_20	01 17 09.6	
	comp=Z,5µm,19.0s						
YAH	Yahtse	106.43	331	IAMs_20	IAMs_20	01 17 24.9	
	comp=Z,4µm,20.0s						
DAVA	Damuels	106.44	45	i pPdiff	pPdif	00 33 27.7	+0.5
	comp=Z,9.2nm,1.2s						
DAVA				ePP	PP	00 37 47.1	-3.3
	comp=Z,22nm,1.7s						
SCO	Scoresbysund	106.44	16	i P	Pdif	00 33 27.9	+3.5
L29M	L29M	106.50	334	IAMs_20	IAMs_20	01 20 57.5	
	comp=Z,5µm,18.0s						
AQU	L'Aquila	106.52	50	P	Pdif	00 33 26.3	+0.8
CTGM	Chitina Glacie	106.58	332	IAMs_20	IAMs_20	01 29 53.9	
	comp=Z,4µm,19.0s						
GRNC	Granite Creek	106.63	331	IAMs_20	IAMs_20	01 17 33.4	
	comp=Z,4µm,19.0s						
K29M	Barlow Dome	106.69	335	IAMs_20	IAMs_20	01 29 11.5	
	comp=Z,5µm,18.0s						
ISLE	Juniper Island	106.80	331	IAMs_20	IAMs_20	01 22 42.9	
	comp=Z,4µm,19.0s						
FETA	Feichten	106.84	45	epPdiff	pPdif	00 33 29.6	+0.6
	comp=Z,5.9nm,1.0s						
FETA				ePP	PP	00 37 49.8	-3.5
	comp=Z,9.7nm,1.7s						
ARMA	Armidale	106.85	219	IAMs_20	IAMs_20	01 13 14.2	
	comp=Z,6µm,20.0s						
WAX	Waxell Ridge	106.94	331	IAMs_20	IAMs_20	01 16 37.5	
	comp=Z,4µm,20.0s						
RETA	Reutte	107.06	45	epPdiff	pPdif	00 33 30.4	+0.6
	comp=Z,5.5nm,1.2s						
RETA				ePP	PP	00 37 54.1	-0.7
	comp=Z,11nm,1.2s						
I30M	Mount Dempster	107.07	337	IAMs_20	IAMs_20	01 31 54.7	
	comp=Z,5µm,21.0s						
TGL	Tana Glacier	107.09	331	IAMs_20	IAMs_20	01 25 20.4	

	comp=Z,4µm,19.0s						
SUCK	**Suckling Hills**	**107.14**	**330**	IAMs_20	IAMs_20	01 24 02.9	
	comp=Z,5µm,19.0s						
MOTA	**Moosalm**	**107.21**	**45**	*e*pPdiff	pPdif	00 33 31.1	+0.5
	comp=Z,8.2nm,1.4s						
SQTA	**Sankt Quirin**	**107.22**	**45**	*e*pPdiff	**pPdif**	**00 33 31.2**	**+0.6**
	comp=Z,2.4nm,0.5s						
SQTA				*e*PP	**PP**	**00 37 51.0**	**-5.0**
	comp=Z,12nm,1.0s						
CRQM	**Cirque**	**107.22**	**331**	IAMs_20	IAMs_20	01 25 13.3	
	comp=Z,4µm,20.0s						
BERG	**Berg Lake**	**107.27**	**330**	IAMs_20	IAMs_20	01 17 11.8	
	comp=Z,4µm,19.0s						
HMT	**Hamilton**	**107.48**	**330**	IAMs_20	IAMs_20	01 29 04.5	
	comp=Z,4µm,18.0s						
WATA	**Walderalm**	**107.49**	**45**	*e*pPdiff	**pPdif**	**00 33 32.1**	**+0.2**
	comp=Z,5.0nm,1.2s						
WATA				*e*PP	**PP**	**00 37 56.7**	**-1.4**
	comp=Z,11nm,1.8s						
WTTA	**Wattenberg**	**107.50**	**45**	*i* pPdiff	pPdif	00 33 31.7	-0.2
	comp=Z,6.4nm,1.0s						
M27K	**Edge Creek, AK**	**107.54**	**333**	IAMs_20	IAMs_20	01 30 42.3	
	comp=Z,5µm,18.0s						
VRDI	**Verde Repeater**	**107.59**	**331**	IAMs_20	IAMs_20	01 32 51.3	
	comp=Z,4µm,20.0s						
RAGM	**Ragged Mountai**	**107.69**	**330**	IAMs_20	IAMs_20	01 15 08.3	
	comp=Z,4µm,21.0s						
I29M	**Ogilvie Camp,**	**107.82**	**336**	IAMs_20	IAMs_20	01 28 18.1	
	comp=Z,5µm,18.0s						
ABTA	**Abfaltersbach**	**107.82**	**46**	*e*Pdiff	**Pdif**	**00 33 29.5**	**-1.7**
	comp=Z,3.3nm,1.3s						
EPYK	**Eagle Plains**	**107.85**	**338**	IAMs_20	IAMs_20	01 21 21.8	
	comp=Z,6µm,20.0s						
GLB	**Gilahina Butte**	**107.85**	**331**	IAMs_20	IAMs_20	01 28 49.1	
	comp=Z,4µm,19.0s						
BCAR	**Beaver Creek A**	**107.87**	**333**		**Pdif**	**00 33 32.5**	**+1.5**
L27K	**Beaver Creek,**	**107.88**	**333**	IAMs_20	IAMs_20	01 19 59.9	
	comp=Z,5µm,18.0s						
BMRM	**Bremner River**	**107.95**	**331**	IAMs_20	IAMs_20	01 32 52.7	
	comp=Z,4µm,18.0s						
INK	**Inuvik**	**107.98**	**340**	IAMs_20	IAMs_20	01 23 23.5	
	comp=Z,6µm,20.0s						
M26K	**Nabesna, AK**	**108.00**	**332**	IAMs_20	IAMs_20	01 31 30.1	
	comp=Z,4µm,19.0s						
NEEM	**North Greenlan**	**108.03**	**5**	*i* P	**Pdif**	**00 33 33.9**	**+2.1**
LESA	**Schwarzleotal**	**108.21**	**45**	*i* PP	**PP**	**00 37 59.7**	**-3.6**
	comp=Z,15nm,1.2s						
EYAK	**Cordova Ski Ar**	**108.23**	**330**	IAMs_20	IAMs_20	01 22 50.2	
	comp=Z,4µm,19.0s						
N25K	**Chitina, Valde**	**108.26**	**331**	IAMs_20	IAMs_20	01 18 19.9	
	comp=Z,4µm,20.0s						
I28M	**Miner Creek**	**108.44**	**336**	IAMs_20	IAMs_20	01 25 33.5	
	comp=Z,4µm,20.0s						
L26K	**Log Cabin Wild**	**108.46**	**333**	IAMs_20	IAMs_20	01 31 24.1	
	comp=Z,6µm,18.0s						
K27K	**Chicken**	**108.48**	**334**	IAMs_20	IAMs_20	01 23 42.3	
	comp=Z,4µm,19.0s						
MYKA	**Terra Mystica**	**108.48**	**46**	*e*Pdiff	**Pdif**	**00 33 33.5**	**-0.6**
	comp=Z,1.0nm,0.4s						
MYKA				*e*PP	**PP**	**00 38 01.9**	**-3.3**
	comp=Z,11nm,1.0s						
HIN	**Hinchinbrook I**	**108.49**	**330**	IAMs_20	IAMs_20	01 18 17.0	
	comp=Z,4µm,20.0s						
DIV	**Divide**	**108.52**	**331**	IAMs_20	IAMs_20	01 29 08.9	
	comp=Z,3µm,19.0s						
MENT	**Mentasta**	**108.56**	**333**	IAMs_20	IAMs_20	01 24 01.9	
	comp=Z,4µm,18.0s						
FID	**Port Fidalgo**	**108.64**	**330**	IAMs_20	IAMs_20	01 30 15.2	
	comp=Z,5µm,19.0s						
P23K	**Montague Islan**	**108.69**	**329**	IAMs_20	IAMs_20	01 29 22.2	
	comp=Z,4µm,20.0s						
KLU	**Klutina**	**108.76**	**331**	IAMs_20	IAMs_20	01 31 59.1	
	comp=Z,3µm,18.0s						
BIOA	**Bad Ischl, Aus**	**108.91**	**45**	*e*PP	**PP**	**00 38 06.0**	**-2.3**
	comp=Z,9.7nm,1.1s						
OBKA	**Obir**	**109.00**	**47**	*e*Pdiff	**Pdif**	**00 33 34.2**	**-2.3**
	comp=Z,2.0nm,0.5s						
OBKA				*i* PP	**PP**	**00 38 05.0**	**-4.0**
	comp=Z,16nm,1.3s						
DOT	**Dot Lake**	**109.05**	**333**	IAMs_20	IAMs_20	01 23 53.8	
	comp=Z,5µm,19.0s						
M24K	**Tolsona, Glenn**	**109.16**	**331**	IAMs_20	IAMs_20	01 29 11.6	
	comp=Z,4µm,18.0s						
SCRK	**Sand Creek**	**109.18**	**334**	IAMs_20	IAMs_20	01 21 59.2	
	comp=Z,4µm,19.0s						
PAX	**Paxson**	**109.28**	**332**	IAMs_20	IAMs_20	01 31 53.8	
	comp=Z,5µm,20.0s						
J26L	**Joseph Creek**	**109.28**	**334**	IAMs_20	IAMs_20	01 21 34.7	
	comp=Z,4µm,20.0s						
E29M	**Blow River**	**109.36**	**339**	IAMs_20	IAMs_20	01 24 25.6	
	comp=Z,6µm,20.0s						
MOA	**Molln**	**109.36**	**45**	*i* Pdiff	**Pdif**	**00 33 37.8**	**-0.2**
	comp=Z,5.0nm,2.0s						
SOKA	**Soboth**	**109.38**	**47**	*e*Pdiff	**Pdif**	**00 33 35.6**	**-2.5**
	comp=Z,3.5nm,1.4s						
SOKA				*e*PP	**PP**	**00 38 05.3**	**-6.4**
	comp=Z,15nm,1.5s						
RIDG	**Independent Ri**	**109.40**	**333**	IAMs_20	IAMs_20	01 22 51.0	
	comp=Z,4µm,19.0s						
H27K	**Steamboat Moun**	**109.41**	**336**	IAMs_20	IAMs_20	01 26 21.1	
	comp=Z,4µm,18.0s						
GERES	**GERESS Array B**	**109.42**	**44**	PKiKP	**PKiKP**	**00 37 43.4**	**+1.8**
	comp=Z,1.7nm,0.8s,baz=225,slow=1.6,SNR=9.3						
KHC	**Kasperske Hory**	**109.46**	**44**	⇑*e*PDIFF	**Pdif**	**00 33 38.9**	**+0.5**
KHC				*e*PP	**PP**	**00 38 09.7**	**-2.5**
KHC				*e*SKS	**SKSac**	**00 44 21.1**	**+3.1**
KHC				AMS	AMS	01 25 20.0	
	comp=Z,6µm,18.8s						
KHC	**Kasperske Hory**	**109.46**	**44**	⇑*e*P	**Pdif**	**00 33 38.9**	**+0.5**
KHC				*e*		00 38 09.7	
KHC				*e*		00 44 21.1	
KHC				MLR	MLR		
	comp=Z,6µm,18.8s						
SCM	**Sheep Creek Mo**	**109.51**	**331**	IAMs_20	IAMs_20	01 33 50.0	
	comp=Z,4µm,20.0s						
DBG	**Daneborg**	**109.52**	**13**	*i* P	**Pdif**	**00 33 41.4**	**+3.3**
I26K	**Coal Creek Min**	**109.53**	**335**	IAMs_20	IAMs_20	01 32 50.3	
	comp=Z,3µm,19.0s						
SEW	**Seward**	**109.66**	**329**	IAMs_20	IAMs_20	01 33 16.1	
	comp=Z,5µm,19.0s						
CKRC	**Cesky Krumlov**	**109.78**	**45**	⇑*e*PDIFF	**Pdif**	**00 33 41.0**	**+1.2**
CKRC				*e*PP	**PP**	**00 38 12.0**	**-2.5**
CKRC				*e*SKS	**SKSac**	**00 44 18.6**	**-0.7**
CKRC				AMS	AMS	01 24 50.0	
	comp=Z,8µm,18.6s						
CKRC	**Cesky Krumlov**	**109.78**	**45**	⇑*e*P	**Pdif**	**00 33 41.0**	**+1.2**
CKRC				*e*		00 38 12.0	
CKRC				*e*		00 44 18.6	
CKRC				MLR	MLR		
	comp=Z,8µm,18.6s						
PSDA	**Pessada-Kefalo**	**109.79**	**57**	P	**PP**	**00 38 14.0**	**-0.8**
K24K	**Donnelly Dome**	**109.80**	**333**	IAMs_20	IAMs_20	01 24 27.0	
	comp=Z,5µm,18.0s						
KNK	**Knik Glacier**	**109.80**	**330**	IAMs_20	IAMs_20	01 34 00.8	
	comp=Z,5µm,18.0s						
SSRD	**Sdr. Stenderup**	**109.81**	**37**	*i* P	**Pdif**	**00 33 41.4**	**+1.7**
VLS	**Valsamata**	**109.82**	**57**	P	**PP**	**00 38 14.3**	**-0.8**
KEK	**Kerkira**	**109.85**	**55**	P	**PP**	**00 38 20.7**	**+5.5**
FSK	**Fiskardo**	**109.91**	**57**	P	**PP**	**00 38 08.3**	**-7.4**
SML	**Sawmill**	**109.93**	**331**	IAMs_20	IAMs_20	01 32 55.0	
	comp=Z,4µm,19.0s						
O22K	**Cooper Landing**	**109.95**	**329**	IAMs_20	IAMs_20	01 31 14.7	
	comp=Z,4µm,21.0s						
ZVC	**Zvikov**	**109.95**	**44**	⇑*e*PDIFF	**Pdif**	**00 33 42.6**	**+2.1**
ZVC				*e*PP	**PP**	**00 38 12.2**	**-3.5**
ZVC				AMS	AMS	01 28 10.0	
	comp=Z,8µm,17.4s						
CLL	**Collm**	**109.98**	**42**	*e*Pdif	**Pdif**	**00 33 40.0**	**-0.6**
CLL				*e*x	x	00 33 53.0	
CLL				*e*PKiKP	**PKiKP**	**00 37 44.0**	**+1.6**
CLL				*i* PP	**PP**	**00 38 12.5**	**-3.4**
	comp=Z,61nm,1.8s						
CLL				*i* x	x	00 38 29.5	
CLL				*e*PPP	PPP	00 40 36.0	
CLL				*e*PPPP		00 42 24.0	
CLL				*e*SKSac	**SKSac**	**00 44 22.0**	**+2.0**
CLL				*e*SKKSac	**SKKSac**	**00 45 18.0**	**-0.5**
CLL				*e*Sdif	**Sdif**	**00 45 55.0**	**+1.1**
CLL				*e*x	x	00 46 39.0	
CLL				*e*PS	PS	00 47 44.0	-0.6
CLL				*e*x	x	00 48 20.0	
CLL				*e*PPS	PPS	00 48 43.0	
CLL				*e*SS	**SS**	**00 53 47.0**	**+5.8**
CLL				*e*SSS	SSS	00 57 37.0	
CLL				AMS	AMS	01 25 00.0	
	comp=Z,14µm,18.3s						
CLL				AMS	AMS	01 25 00.0	
E28M	**Babbage River**	**109.98**	**339**	IAMs_20	IAMs_20	01 23 52.2	
	comp=Z,4µm,20.0s						
J25K	**Salcha River,**	**110.02**	**334**	IAMs_20	IAMs_20	01 21 57.3	
	comp=Z,6µm,20.0s						
EVGI	**Lefkada island**	**110.04**	**56**	P	**PP**	**00 38 16.2**	**-0.4**
DHY	**Denali Highway**	**110.10**	**332**	IAMs_20	IAMs_20	01 32 06.5	
	comp=Z,4µm,19.0s						
LKD2	**Lefkada island**	**110.10**	**56**	P	**PP**	**00 38 17.3**	**+0.1**
IGT	**Igoumenitsa**	**110.16**	**55**	P	**PP**	**00 38 13.4**	**-4.1**
PYL	**PYLOS**	**110.16**	**58**	P	**PP**	**00 38 16.9**	**-0.6**
GHO	**Glory Hole Cre**	**110.16**	**330**	IAMs_20	IAMs_20	01 32 53.3	
	comp=Z,4µm,20.0s						
PMR	**Palmer**	**110.17**	**330**	IAMs_20	IAMs_20	01 30 10.6	
	comp=Z,4µm,20.0s						
SLKM	**Skilak Lake**	**110.18**	**329**	IAMs_20	IAMs_20	01 31 33.0	
	comp=Z,5µm,20.0s						
RC01	**Rabbit Creek A**	**110.22**	**330**	IAMs_20	IAMs_20	01 34 31.8	
	comp=Z,4µm,20.0s						
CNPM	**China Poot**	**110.22**	**328**	IAMs_20	IAMs_20	01 32 49.1	
	comp=Z,3µm,18.0s						
RICC	**Richard**	**110.32**	**43**	⇑AMS	AMS	01 32 50.0	
	comp=Z,7µm,17.1s						
PRA	**Prague**	**110.34**	**43**	⇑*e*PDIFF	**Pdif**	**00 33 45.4**	**+3.2**
PRA				*e*PP	**PP**	**00 38 13.9**	**-4.6**
PRA				*e*SKS	**SKSac**	**00 44 26.1**	**+4.6**
PRA				AMS	AMS	01 33 30.0	
	comp=Z,7µm,16.1s						
PRA	**Prague**	**110.34**	**43**	⇑*e*P	**Pdif**	**00 33 45.4**	**+3.2**
PRA				*e*		00 38 13.9	
PRA				*e*		00 44 26.1	
PRA				MLR	MLR		
	comp=Z,7µm,16.1s						
BRG	**Berggiesshubel**	**110.36**	**42**	⇓*e*Pif	**Pdif**	**00 33 46.0**	**+3.7**
BRG				Amp		00 33 57.2	
	comp=Z,7.1nm,1.4s						
BRG				PP	**PP**	**00 38 15.6**	**-3.0**
BRG				Amp		00 38 17.9	
	comp=Z,51nm,1.9s						
BRG	**Berggiesshubel**	**110.36**	**42**	SP	SP	00 47 53.0	+6.4
BRG				PKKP		00 48 57.2	
BRG				Amp		00 48 58.2	
	comp=Z,5.1nm,1.4s						
BRG	**Berggiesshubel**	**110.36**	**42**	P		00 49 08.6	
BRG				Amp		00 49 12.3	
	comp=Z,4.0nm,1.2s						
BRG	**Berggiesshubel**	**110.36**	**42**	SS	SS	00 53 52.0	+5.7
PRU	**Pruhonice**	**110.37**	**43**	⇑*e*PDIFF	**Pdif**	**00 33 45.1**	**+2.8**
PRU				*e*PP	**PP**	**00 38 13.1**	**-5.7**
PRU				*e*SKS	**SKSac**	**00 44 24.9**	**+3.2**
PRU				AMS	AMS	01 31 20.0	
	comp=Z,8µm,16.3s						
PRU	**Pruhonice**	**110.37**	**43**	⇑*e*P	**Pdif**	**00 33 45.1**	**+2.8**
PRU				*e*		00 44 24.9	
PRU				MLR	MLR		
	comp=Z,8µm,16.3s						
CONA	**Conrad Observa**	**110.38**	**46**	*e*Pdiff	**Pdif**	**00 33 42.1**	**-0.5**
	comp=Z,3.2nm,1.5s						
CONA				*e*PP	**PP**	**00 38 15.9**	**-3.1**
	comp=Z,19nm,1.7s						
AXS	**Araxos**	**110.39**	**57**	P	**PP**	**00 38 19.7**	**+0.5**
BEHE	**Becsehely**	**110.40**	**48**	IAMs_20	IAMs_20	01 27 07.8	
	comp=Z,4µm,18.0s						
ITM	**Ithomi**	**110.41**	**58**	P	**PP**	**00 38 19.5**	**+0.1**
RLS	**Riolos of Patr**	**110.41**	**57**	P	**PP**	**00 38 19.9**	**+0.6**
E27K	**Coleen River**	**110.42**	**338**	IAMs_20	IAMs_20	01 23 12.9	
	comp=Z,6µm,20.0s						
FIS	**Fire Island**	**110.45**	**330**	IAMs_20	IAMs_20	01 26 06.6	
	comp=Z,3µm,20.0s						
GOPC	**GO Pecny, Ondr**	**110.49**	**44**	⇑AMS	AMS	01 28 40.0	
	comp=Z,6µm,17.5s						
PRP	**Porcupine Dome**	**110.50**	**335**	IAMs_20	IAMs_20	01 21 58.0	
	comp=Z,4µm,19.0s						
PDG	**Podgorica**	**110.51**	**52**	*e*P	**PP**	**00 38 18.4**	**-1.5**
TIR	**Tirane**	**110.52**	**53**	*e*P	**PP**	**00 38 18.1**	**-2.0**
HDA	**Harding Lake**	**110.53**	**333**	IAMs_20	IAMs_20	01 31 20.9	
	comp=Z,4µm,19.0s						
DRO	**Drossia**	**110.55**	**57**	P	**PP**	**00 38 20.8**	**+0.5**
G26K	**Porcupine Rive**	**110.55**	**336**	IAMs_20	IAMs_20	01 31 06.3	
	comp=Z,5µm,19.0s						
AMPL	**Ampelaki**	**110.56**	**56**	P	**PP**	**00 38 19.6**	**-0.8**
RONA	**Rosalia, Austr**	**110.57**	**46**	*e*Pdiff	**Pdif**	**00 33 41.6**	**-1.7**
	comp=Z,2.8nm,1.1s						
RONA				*e*PP	**PP**	**00 38 16.4**	**-3.9**
	comp=Z,28nm,1.6s						
PVCC	**Panska Ves**	**110.59**	**43**	⇑*e*PDIFF	**Pdif**	**00 33 45.4**	**+2.1**
PVCC				AMS	AMS	01 31 20.0	
	comp=Z,8µm,17.6s						
PVCC	**Panska Ves**	**110.59**	**43**	⇑*e*P	**Pdif**	**00 33 45.4**	**+2.1**
PVCC				MLR	MLR		
	comp=Z,8µm,17.6s						
PVO	**Paravola**	**110.66**	**57**	P	**PP**	**00 38 21.7**	**+0.6**
M22K	**Willow**	**110.67**	**330**	IAMs_20	IAMs_20	01 30 47.7	
	comp=Z,4µm,22.0s						
ILAR	**Eielson Array**	**110.67**	**334**	Pdiff	**Pdif**	**00 33 45.5**	**+2.1**
	comp=Z,0.6nm,0.9s,baz=126,slow=5.5,SNR=4.1						
ILAR				PKiKP	**PKiKP**	**00 37 45.8**	**+2.4**
	comp=Z,0.8nm,0.9s,baz=127,slow=2.9,SNR=4.2						
TREC	**Trest**	**110.67**	**44**	⇑AMS	AMS	01 33 10.0	
	comp=Z,6µm,15.8s						
CAPN	**Captain Cook N**	**110.71**	**329**	IAMs_20	IAMs_20	01 27 54.8	
	comp=Z,4µm,18.0s						
D27M	**Malcolm River**	**110.76**	**339**	IAMs_20	IAMs_20	01 23 26.6	
	comp=Z,5µm,19.0s						
PUK	**Puka**	**110.80**	**53**	P	**PP**	**00 38 20.6**	**-1.6**
VLX	**Vlachokerasia**	**110.81**	**58**	P	**PP**	**00 38 21.4**	**-1.0**
SUA	**Susitna One**	**110.82**	**330**	IAMs_20	IAMs_20	01 33 31.7	
	comp=Z,4µm,21.0s						
RND	**Reindeer**	**110.84**	**332**	IAMs_20	IAMs_20	01 25 25.3	
	comp=Z,5µm,19.0s						
OVD	**Ostervraa, Den**	**110.85**	**35**	*i* P	**Pdif**	**00 33 46.3**	**+2.1**
EFP	**Efpalio**	**110.87**	**57**	P	**PP**	**00 38 15.4**	**-7.2**
CHIR	**Chirikof Islan**	**110.88**	**323**	IAMs_20	IAMs_20	01 15 15.7	
	comp=Z,5µm,19.0s						
KBN	**Korca**	**110.89**	**54**	P	**PP**	**00 38 21.5**	**-1.3**
KLV	**Kalavryta, Ach**	**110.90**	**57**	P	**PP**	**00 38 22.1**	**-0.9**
ANKY	**Antikythira Is**	**110.93**	**60**	P	**PP**	**00 38 21.5**	**-1.6**
ANX	**Ano Chora**	**110.94**	**57**	P	**PP**	**00 38 21.7**	**-1.6**
CCB	**Clear Creek Bu**	**110.97**	**333**	IAMs_20	IAMs_20	01 31 43.1	
	comp=Z,5µm,18.0s						
SERG	**Sergoula**	**110.97**	**57**	P	**PP**	**00 38 23.3**	**-0.2**
KNDR	**Palaiochora Ch**	**110.97**	**61**	P	**PP**	**00 38 21.6**	**-1.8**
VLI	**Veliai**	**110.98**	**59**	P	**PP**	**00 38 22.8**	**-0.7**
EVR	**Evrytania**	**110.98**	**56**	P	**PP**	**00 38 19.7**	**-3.9**
GUR	**Goura**	**111.00**	**58**	P	**PP**	**00 38 24.1**	**+0.3**
NEST	**Nestorio**	**111.00**	**55**	P	**PP**	**00 38 23.2**	**-0.5**
WRH	**Wood River Hil**	**111.00**	**333**	IAMs_20	IAMs_20	01 23 50.5	
	comp=Z,4µm,19.0s						
CUT	**Chulitna**	**111.01**	**331**	IAMs_20	IAMs_20	01 33 03.5	
	comp=Z,4µm,20.0s						
MCK	**McKinley**	**111.02**	**332**	IAMs_20	IAMs_20	01 31 12.9	
	comp=Z,4µm,19.0s						
KALE	**Kalithea**	**111.02**	**57**	P	**PP**	**00 38 23.3**	**-0.6**
POKR	**Poker Plat Res**	**111.03**	**334**	IAMs_20	IAMs_20	01 27 33.1	
	comp=Z,4µm,20.0s						
KPRO	**Kipourio**	**111.05**	**55**	P	**PP**	**00 38 19.8**	**-4.2**
EIDS	**Eidsvold**	**111.06**	**222**	IAMs_20	IAMs_20	01 13 44.3	
	comp=Z,4µm,22.0s						
COLA	**College**	**111.09**	**334**	IAMs_20	IAMs_20	01 31 45.7	
	comp=Z,5µm,18.0s						
GVD	**Gavdhos**	**111.13**	**61**	P	**PP**	**00 38 19.1**	**-5.5**
KRUC	**Moravsky**	**111.14**	**45**	*e*PKIKP	**PKiKP**	**00 37 45.7**	**+1.0**
KRUC				*e*PP	**PP**	**00 38 20.7**	**-3.6**
KRUC				*e*SP	SP	00 47 52.0	-1.9
MAKR	**Makrakomi, Fth**	**111.25**	**56**	P	**PP**	**00 38 25.5**	**+0.1**
IMMV	**Iera Moni Meta**	**111.28**	**61**	P	**PP**	**00 38 23.6**	**-2.1**
IMMV	**Iera Moni Meta**	**111.28**	**61**	P	**PP**	**00 38 24.6**	**-1.1**
VRAC	**Vranov**	**111.35**	**45**	*e*PKIKP	**PKiKP**	**00 37 45.9**	**+0.8**
VRAC				*e*PP	**PP**	**00 38 22.4**	**-3.5**
VRAC				*e*SP	SP	00 47 54.6	-1.2
CHAN	**Chania**	**111.35**	**61**	P	**PP**	**00 38 22.8**	**-3.4**
COP	**Copenhagen**	**111.36**	**37**	*i* P	**Pdif**	**00 33 50.6**	**+4.1**
SKT	**Skwentna**	**111.37**	**330**	IAMs_20	IAMs_20	01 19 57.3	
	comp=Z,4µm,22.0s						
THL	**Klokotos Trika**	**111.37**	**56**	P	**PP**	**00 38 26.3**	**+0.1**
AGG	**Agios Georgios**	**111.40**	**57**	P	**PP**	**00 38 21.5**	**-5.0**
AGG	**Agios Georgios**	**111.40**	**57**	P	**PP**	**00 38 25.6**	**-0.9**
BWN	**Browne**	**111.42**	**333**	IAMs_20	IAMs_20	01 35 17.6	
	comp=Z,4µm,20.0s						
MODS	**Modra-Piesok**	**111.43**	**46**	*e*PKP	**PKiKP**	**00 37 38.9**	**-6.4**
MODS				*e*PP	**PP**	**00 38 22.2**	**-4.3**
NEA2	**Nenana**	**111.44**	**333**	IAMs_20	IAMs_20	01 24 04.9	
	comp=Z,4µm,19.0s						
UPC	**Upice**	**111.44**	**43**	⇑*e*PDIFF	**Pdif**	**00 33 49.5**	**+2.4**
UPC				*e*PP	**PP**	**00 38 21.8**	**-4.7**
UPC				*e*SKS	**SKSac**	**00 44 29.4**	**+3.3**
UPC				AMS	AMS	01 29 10.0	
	comp=Z,7µm,16.4s						
UPC	**Upice**	**111.44**	**43**	⇑*e*P	**Pdif**	**00 33 49.5**	**+2.4**
UPC				*e*		00 38 21.8	
UPC				*e*		00 44 29.4	
UPC				MLR	MLR		
	comp=Z,7µm,16.4s						
KZN	**Kozani**	**111.47**	**55**	P	**PP**	**00 38 24.8**	**-2.2**
LTK	**Loutraki**	**111.49**	**58**	P	**PP**	**00 38 24.9**	**-2.3**
CHVC	**Chvalec**	**111.50**	**43**	AMS	AMS	01 29 30.0	
	comp=Z,7µm,16.9s						
H24K	**Noodor Dome**	**111.51**	**335**	IAMs_20	IAMs_20	01 31 01.8	
	comp=Z,4µm,18.0s						
DPC	**Dobruska-Polom**	**111.57**	**44**	⇑*e*PDIFF	**Pdif**	**00 33 48.7**	**+1.0**
DPC				*e*PP	**PP**	**00 38 21.7**	**-5.7**
DPC				AMS	AMS	01 29 30.0	
	comp=Z,5µm,17.9s						
DPC	**Dobruska-Polom**	**111.57**	**44**	⇑*e*P	**Pdif**	**00 33 48.7**	**+1.0**
DPC				MLR	MLR		
	comp=Z,5µm,17.9s						
OSTC	**Ostas**	**111.58**	**43**	⇑*e*PDIFF	**Pdif**	**00 33 49.9**	**+2.1**
OSTC				*e*SKS	**SKSac**	**00 44 32.1**	**+5.4**
OSTC				AMS	AMS	01 29 20.0	
	comp=Z,6µm,16.8s						
OSTC	**Ostas**	**111.58**	**43**	⇑*e*P	**Pdif**	**00 33 49.9**	**+2.1**
OSTC				*e*		00 44 32.1	
OSTC				MLR	MLR		
	comp=Z,6µm,16.8s						
TYRN	**Tyrnavos**	**111.58**	**56**	P	**PP**	**00 38 26.5**	**-1.2**
KSP	**Ksiaz**	**111.73**	**43**	*e*Pdif	**Pdif**	**00 33 50.0**	**+1.6**
KSP				*e*PKP	PKiKP	00 37 34.6	-11
KSP				*e*PP	**PP**	**00 38 24.8**	**-3.7**
KSP				*e*SP	SP	00 47 59.0	-0.1
KSP				*e*SP	**SP**	**00 48 05.7**	**+6.5**
KSP				*e*L	L	01 26 44.4	
	comp=Z,8µm,18.8s						
G24K	**Hadweenzic Riv**	**111.74**	**336**	IAMs_20	IAMs_20	01 32 03.7	
	comp=Z,5µm,19.0s						
KRLC	**Kraliky**	**111.74**	**44**	⇑*e*SKS	**SKSac**	**00 44 33.3**	**+5.9**
KRLC				AMS	AMS	01 31 10.0	
	comp=Z,8µm,17.4s						
LKR	**Lokris**	**111.75**	**57**	P	**PP**	**00 38 25.3**	**-3.6**
I23K	**Minto, Yukon-K**	**111.78**	**334**	IAMs_20	IAMs_20	01 34 30.0	
	comp=Z,4µm,18.0s						
C27K	**Jago River**	**111.79**	**339**	IAMs_20	IAMs_20	01 32 16.0	
	comp=Z,5µm,18.0s						
VILL	**Villia**	**111.80**	**58**	P	**PP**	**00 38 27.7**	**-1.7**
JAVC	**Velka Javorina**	**111.85**	**45**	*e*PKIKP	**PKiKP**	**00 37 46.3**	**+0.2**
JAVC				*e*PP	**PP**	**00 38 24.4**	**-5.1**
JAVC				*e*SP	SP	00 48 01.3	+0.8
SRO	**Srobarova**	**111.87**	**47**	*e*PP	**PP**	**00 38 25.8**	**-3.8**
IDI	**Anoyia**	**111.91**	**61**	P	**PP**	**00 38 26.1**	**-4.1**
O19K	**Port Alsworth**	**111.92**	**328**	IAMs_20	IAMs_20	01 34 49.9	
	comp=Z,5µm,20.0s						
BPAW	**Bear Paw Mtn.**	**112.00**	**332**	IAMs_20	IAMs_20	01 35 49.7	
	comp=Z,3µm,19.0s						
BBOO	**Buckleboo**	**112.00**	**205**	IAMs_20	IAMs_20	01 31 19.1	
	comp=Z,4µm,19.0s						
PPLA	**Purkeypile**	**112.02**	**331**	IAMs_20	IAMs_20	01 32 48.3	
	comp=Z,4µm,18.0s						
ATH	**Athens Observa**	**112.02**	**58**	P	**PP**	**00 38 29.7**	**-1.2**
M20K	**Styx River**	**112.03**	**330**	IAMs_20	IAMs_20	01 20 05.7	
	comp=Z,4µm,21.0s						
VLY	**Voula,Athens**	**112.03**	**58**	P	**PP**	**00 38 24.1**	**-7.0**
P18K	**Big Mountain,**	**112.04**	**327**	IAMs_20	IAMs_20	01 32 22.3	
	comp=Z,3µm,18.0s						
ATHU	**Athens Univers**	**112.07**	**58**	P	**PP**	**00 38 29.7**	**-1.6**
MORC	**Moravsky Berou**	**112.10**	**44**	*e*PKIKP	**PKiKP**	**00 37 46.8**	**+0.2**
MORC				*e*PP	**PP**	**00 38 27.4**	**-3.8**
MORC				*e*SP	SP	00 48 01.9	-0.8
H23K	**Yukon River**	**112.13**	**334**	IAMs_20	IAMs_20	01 34 31.2	
	comp=Z,5µm,20.0s						
NEO	**Neokhori**	**112.15**	**57**	P	**PP**	**00 38 30.2**	**-1.6**
GRG	**Griva**	**112.16**	**55**	*e*P	**PP**	**00 38 31.6**	**-0.3**
PTL	**Penteli**	**112.16**	**58**	P	**PP**	**00 38 30.4**	**-1.5**
CAST	**Castle Rocks**	**112.18**	**331**	IAMs_20	IAMs_20	01 32 08.5	
	comp=Z,4µm,20.0s						
N19K	**Bonanza Creek**	**112.23**	**328**	IAMs_20	IAMs_20	01 34 22.0	
	comp=Z,5µm,18.0s						
MLY	**Manley**	**112.27**	**333**	IAMs_20	IAMs_20	01 23 26.9	
	comp=Z,5µm,19.0s						
VAY	**Valandovo**	**112.41**	**54**	P	**PP**	**00 38 30.1**	**-3.5**
VYHS	**Vyhne**	**112.44**	**46**	*e*PKP	**PKiKP**	**00 37 48.3**	**+1.1**
VYHS				*e*PP	**PP**	**00 38 30.1**	**-3.6**
OKC	**Ostrava-Krasne**	**112.48**	**44**	⇑*e*PDIFF	**Pdif**	**00 33 55.2**	**+3.5**
OKC				AMS	AMS	01 35 30.0	
	comp=Z,6µm,16.9s						
OKC	**Ostrava-Krasne**	**112.48**	**44**	⇑*e*P	**Pdif**	**00 33 55.2**	**+3.5**
OKC				MLR	MLR		
	comp=Z,6µm,16.9s						
HORT	**Hortiatis**	**112.52**	**55**	*e*P	**PP**	**00 38 31.4**	**-3.2**
HORT	**Hortiatis**	**112.52**	**55**	P	**PP**	**00 38 31.2**	**-3.3**
R16K	**Pilot Point**	**112.53**	**324**	IAMs_20	IAMs_20	01 16 47.3	
	comp=Z,4µm,19.0s						
KYMI	**Kymi, Euboea I**	**112.54**	**57**	P	**PP**	**00 38 32.8**	**-1.9**
KARY	**Karystos**	**112.57**	**58**	P	**PP**	**00 38 33.4**	**-1.5**
AOS	**Alonnisos**	**112.58**	**57**	P	**PP**	**00 38 33.0**	**-1.9**
KNT	**Kendrikon**	**112.58**	**55**	*e*P	**PP**	**00 38 34.5**	**-0.4**
G23K	**Bananza Creek**	**112.67**	**335**	IAMs_20	IAMs_20	01 24 02.3	
	comp=Z,4µm,20.0s						
PLG	**Polygyros**	**112.69**	**56**	P	**PP**	**00 38 34.4**	**-1.3**
PAIG	**Paliouri**	**112.70**	**56**	P	**PP**	**00 38 33.6**	**-2.1**
N18K	**Kilae Creek**	**112.82**	**328**	IAMs_20	IAMs_20	01 35 13.8	
	comp=Z,3µm,18.0s						
L19K	**White Mountain**	**112.89**	**330**	IAMs_20	IAMs_20	01 23 16.6	
	comp=Z,3µm,19.0s						
COLD	**Coldfoot**	**112.94**	**336**	IAMs_20	IAMs_20	01 31 30.4	
	comp=Z,5µm,18.0s						
SKY	**Skiros Island**	**112.96**	**57**	P	**PP**	**00 38 34.4**	**-3.2**
K20K	**Telida**	**112.98**	**331**	IAMs_20	IAMs_20	01 33 43.8	
	comp=Z,4µm,18.0s						
MDVR	**Moldovita**	**113.02**	**51**	⇑P	**PKiKP**	**00 37 50.3**	**+1.8**
APE	**Apeiranthos**	**113.04**	**59**	*e*P	**PP**	**00 38 36.2**	**-2.1**
APE	**Apeiranthos**	**113.04**	**59**	P	**PP**	**00 38 35.8**	**-2.5**
SRS	**Serrai**	**113.06**	**55**	*e*P	**PP**	**00 38 37.7**	**-0.6**
SRS	**Serrai**	**113.06**	**55**	P	**PP**	**00 38 34.4**	**-3.9**
LANS	**Liptovska Anna**	**113.06**	**46**	*e*PKIKP	**PKiKP**	**00 37 52.1**	**+3.7**
LANS				*e*		00 38 34.9	
LANS	**Liptovska Anna**	**113.06**	**46**	*e*PKP	**PKiKP**	**00 37 52.1**	**+3.7**
LANS				*e*PP	**PP**	**00 38 34.9**	**-3.2**
OUR	**Ouranopolis**	**113.06**	**56**	*e*P	**PP**	**00 38 38.6**	**+0.3**
OUR	**Ouranopolis**	**113.06**	**56**	P	**PP**	**00 38 36.0**	**-2.2**
GKP	**Gorka Klasztor**	**113.12**	**41**	*e*PKP	PKiKP	00 37 40.1	-8.2
GKP				*e*PP	**PP**	**00 38 31.6**	**-6.7**
GKP				*e*SP	SP	00 48 15.2	+3.5
GKP				*e*L	L	01 24 45.9	
	comp=Z,10µm,20.2s						
BZS	**Buzias**	**113.24**	**50**	*e*P	**PP**	**00 38 36.9**	**-2.6**
BZS	**Buzias**	**113.24**	**50**	⇑P	**PKiKP**	**00 37 50.5**	**+1.7**
P16K	**Nushagak River**	**113.24**	**326**	IAMs_20	IAMs_20	01 22 31.6	
	comp=Z,3µm,18.0s						
TOLK	**Toolik Lake Re**	**113.27**	**337**	IAMs_20	IAMs_20	01 32 52.1	
	comp=Z,5µm,20.0s						
SDPT	**Sand Point**	**113.28**	**322**	IAMs_20	IAMs_20	01 17 20.3	
	comp=Z,4µm,20.0s						
H21K	**Melozitna Rive**	**113.31**	**334**	IAMs_20	IAMs_20	01 35 03.3	
	comp=Z,4µm,19.0s						
MMB	**Musomishta**	**113.31**	**54**	P	**PP**	**00 38 39.3**	**-0.8**
N17K	**Nushagak Hills**	**113.37**	**328**	IAMs_20	IAMs_20	01 28 14.2	
	comp=Z,3µm,18.0s						
C24K	**Franklin Bluff**	**113.41**	**338**	IAMs_20	IAMs_20	01 25 07.7	
	comp=Z,4µm,20.0s						
O16K	**Kokwok River B**	**113.48**	**326**	IAMs_20	IAMs_20	01 36 00.3	
	comp=Z,4µm,20.0s						
HERR	**Herculane**	**113.53**	**51**	⇑P	**PKiKP**	**00 37 51.9**	**+2.5**
HFS	**Hagfors**	**113.57**	**33**	PP	**PP**	**00 38 40.0**	**-1.4**
	comp=Z,5.3nm,1.1s,baz=206,slow=6.4,SNR=3.9						
OJC	**Ojcow**	**113.62**	**44**	*e*Pdif	**Pdif**	**00 33 58.3**	**+1.5**
OJC				*e*PP	**PP**	**00 38 36.1**	**-5.9**
OJC				*e*SP	SP	00 48 26.9	+10
OJC				*e*SS	SS	00 54 18.3	-11
OJC				*e*L	L	01 25 02.7	
	comp=Z,5µm,21.4s						
SURR	**Surduc**	**113.62**	**50**	⇑P	**PKiKP**	**00 37 50.6**	**+1.1**
NIE	**Niedzica**	**113.66**	**45**	*e*PP	PP	00 38 33.4	-9.0
NIE				*e*SP	SP	00 48 25.8	+8.8
NIE				*e*SS	SS	00 54 58.2	+28
NIE				*e*L	L	01 23 59.2	
	comp=Z,6µm,21.4s						
I20K	**Naaghedeneel**	**113.66**	**332**	IAMs_20	IAMs_20	01 36 46.7	
	comp=Z,3µm,18.0s						
THAS	**Thassos island**	**113.68**	**56**	P	**PP**	**00 38 38.7**	**-4.0**
L18K	**Granite Mounta**	**113.71**	**329**	IAMs_20	IAMs_20	01 35 53.3	

	comp=Z,4µm,19.0s						
D23K	Nanushuk River	113.77	337	IAMs_20	IAMs_20	01 26 22.2	
	comp=Z,5µm,19.0s						
LIA	Limnos Island	113.77	56	P	PP	00 38 37.9	-5.5
M17K	Holitna River	113.78	328	IAMs_20	IAMs_20	01 33 09.0	
	comp=Z,3µm,19.0s						
J19K	Poorman	113.85	331	IAMs_20	IAMs_20	01 35 58.8	
	comp=Z,4µm,19.0s						
G21K	Allakaket	113.88	334	IAMs_20	IAMs_20	01 25 48.5	
	comp=Z,3µm,20.0s						
SIGR	SIGRI	114.03	57	P	PP	00 38 43.4	-1.8
C23K	Itkillik River	114.07	338	IAMs_20	IAMs_20	01 34 24.1	
	comp=Z,4µm,18.0s						
F21K	Alatna River	114.12	335	IAMs_20	IAMs_20	01 33 47.7	
	comp=Z,6µm,20.0s						
O15K	Ungalikthiuk R	114.19	326	IAMs_20	IAMs_20	01 36 08.9	
	comp=Z,4µm,20.0s						
PLD	Plovdiv	114.22	54	eP	PP	00 38 45.5	-1.0
STHS	Stebnicka Huta	114.25	46	ePP	PP	00 38 43.3	-3.2
S12K	Black Hills	114.25	322	IAMs_20	IAMs_20	01 14 42.9	
	comp=Z,4µm,21.0s						
URLA	Izmir	114.28	58	eP	PP	00 38 42.4	-4.7
PRK	Paraskevi	114.34	57	P	PP	00 38 44.4	-3.0
DRGR		114.35	49	⇑P	PKiKP	00 37 52.6	+1.6
M16K	Timber Creek	114.35	328	IAMs_20	IAMs_20	01 34 29.2	
	comp=Z,4µm,20.0s						
BOZC	Bozcaada	114.38	57	iP	PP	00 38 45.8	-1.9
GADA	Gvkgeada	114.39	56	eP	PP	00 38 44.8	-2.9
D22K	Ayikyak River	114.41	337	IAMs_20	IAMs_20	01 27 09.3	
	comp=Z,6µm,20.0s						
RDO	Rodhopi	114.45	55	eP	PP	00 38 47.5	-0.6
RDO	Rodhopi	114.45	55	P	PP	00 38 45.5	-2.6
KDZ	Kurdzhali	114.47	55	eP	PP	00 38 46.5	-1.8
KDZ	Kurdzhali	114.47	55	P	PP	00 38 44.7	-3.5
ROCAM	Rodrigues Isla	114.49	133	IAMs_20	IAMs_20	01 24 56.6	
	comp=Z,6µm,20.0s						
GCAM	G?zelcaml?	114.53	59	eP	PP	00 38 47.2	-1.6
MARR	Marisel-Cluj	114.58	49	⇑P	PKiKP	00 37 52.0	+0.5
EZN	Ezine	114.58	57	P	PP	00 38 43.2	-5.9
K17K	Iditarod	114.58	330	IAMs_20	IAMs_20	01 20 18.2	
	comp=Z,4µm,21.0s						
LOT	Lotru	114.62	50	eP	PP	00 38 47.2	-2.2
BLCB	Balcova	114.62	59	eP	PP	00 38 48.6	-0.8
H19K	Roundabout Mou	114.69	333	IAMs_20	IAMs_20	01 33 03.9	
	comp=Z,4µm,18.0s						
E21K	Killik River	114.71	336	IAMs_20	IAMs_20	01 28 30.8	
	comp=Z,4µm,19.0s						
BEL	Belsk	114.72	43	ePKP	PKiKP	00 38 06.1	+15
BEL				ePP	PP	00 38 49.1	-0.6
BEL				ePS	PKKPab	00 48 32.5	-0.7
BEL				eL	L	01 23 53.9	
	comp=Z,404nm,22.1s						
ALN	Alexandroupoli	114.73	56	eP	PP	00 38 48.6	-1.5
ALN	Alexandroupoli	114.73	56	P	PP	00 38 45.0	-5.1
DKL	Dikili	114.75	58	eP	PP	00 38 50.7	+0.4
ENEZ	Enez	114.75	56	eP	PP	00 38 46.5	-3.8
GELI	Tayfur-Gelibol	114.87	56	eP	PP	00 38 46.5	-4.7
NOR	Nord	114.89	8	iP	Pdif	00 34 06.0	+4.2
F20K	Avaraart Lake	114.89	335	IAMs_20	IAMs_20	01 37 41.1	
	comp=Z,5µm,18.0s						
O14K	Tigyukauivet M	114.91	325	IAMs_20	IAMs_20	01 37 01.2	
	comp=Z,5µm,20.0s						
ERIK	Erikli-Kesan	114.99	56	eP	PP	00 38 47.2	-4.8
R9F13	Warsaw-Wawer	115.04	43	eSKS	SKSac	00 44 37.3	-2.8
LPK	Lapseki	115.07	56	eP	PP	00 38 51.3	-1.3
J17K	VABM Dome	115.13	330	IAMs_20	IAMs_20	01 19 29.6	
	comp=Z,4µm,21.0s						
G19K	Purcell Mounta	115.13	333	IAMs_20	IAMs_20	01 26 28.5	
	comp=Z,3µm,20.0s						
B22K	Teshekpuk Lake	115.14	338	IAMs_20	IAMs_20	01 27 52.2	
	comp=Z,4µm,20.0s						
KWP	Kalwaria Pacla	115.22	46	ePKP	PKiKP	00 37 53.6	+1.1
KWP				ePP	PP	00 38 52.5	-0.9
KWP				ePS	PS	00 48 38.0	+5.1
KWP				eL	L	01 25 01.7	
	comp=Z,8µm,22.1s						
B21K	Ikpikpuk River	115.31	337	IAMs_20	IAMs_20	01 34 34.9	
	comp=Z,6µm,20.0s						
N14K	Kuskokwak Cree	115.31	326	IAMs_20	IAMs_20	01 34 13.4	
	comp=Z,4µm,22.0s						
H18K	Honhosa River	115.34	332	IAMs_20	IAMs_20	01 34 57.1	
	comp=Z,3µm,18.0s						
RKY	Sarkoy-Tekirda	115.47	56	eP	PP	00 38 53.0	-2.5
EDRB	Edirne	115.53	55	eP	PP	00 38 52.9	-2.9
EDRB	Edirne	115.53	55	P	PP	00 38 51.4	-4.4
E19K	Redstone River	115.57	335	IAMs_20	IAMs_20	01 34 56.1	
	comp=Z,4µm,20.0s						
JMB	Yambol	115.58	54	P	PP	00 38 53.6	-2.5
F19K	Shaleruckik Mo	115.60	334	IAMs_20	IAMs_20	01 26 51.7	
	comp=Z,3µm,20.0s						
G18K	Tagagawik	115.67	333	IAMs_20	IAMs_20	01 33 41.8	
	comp=Z,4µm,18.0s						
M14K	Bethel	115.68	327	IAMs_20	IAMs_20	01 37 02.3	
	comp=Z,3µm,18.0s						
J16K	Anvik River	115.75	330	IAMs_20	IAMs_20	01 35 12.8	
	comp=Z,4µm,21.0s						
AKUT	Akutan	115.83	319	IAMs_20	IAMs_20	01 16 34.0	
	comp=Z,4µm,21.0s						
EDC	Edincik	115.86	57	eP	PP	00 38 55.7	-2.4
KULA	Kula-Manisa	115.86	59	P	PP	00 38 56.8	-1.5
K15K	Wolf Creek Mou	115.90	329	IAMs_20	IAMs_20	01 28 59.0	
	comp=Z,3µm,18.0s						
H17K	Granite Mounta	115.91	332	IAMs_20	IAMs_20	01 33 53.2	
	comp=Z,4µm,18.0s						
LVA	Lava Point	115.99	319	IAMs_20	IAMs_20	01 18 27.1	
	comp=Z,4µm,19.0s						
CRLT	Corlu	116.02	56	eP	PP	00 38 58.1	-1.1
MLR	Muntele Rosu	116.09	51	eP	PP	00 38 58.2	-1.6
MLR	Muntele Rosu	116.09	51	⇑P	PKiKP	00 37 55.6	+1.1
UNV	Unalaska Valle	116.17	319	IAMs_20	IAMs_20	01 16 42.0	
	comp=Z,3µm,21.0s						
L14K	Kuka Creek	116.17	328	IAMs_20	IAMs_20	01 23 03.4	
	comp=Z,3µm,21.0s						
D19K	Kuna River	116.18	336	IAMs_20	IAMs_20	01 29 16.7	
	comp=Z,5µm,19.0s						
BUR08	Bucovina Ar. S	116.22	48		PKiKP	00 37 56.2	+1.6
BURAR	Bucovina Array	116.22	48		PKiKP	00 37 55.9	+1.3
BURAR	Bucovina Array	116.22	48	⇑P	PKiKP	00 37 55.2	+0.5
BURAR	Bucovina Array	116.22	48	PKIKP	PKiKP	00 37 55.9	+1.3
ELL	Elmali	116.23	61	eP	PP	00 38 57.5	-3.4
M13K	Dall Lake	116.25	326	IAMs_20	IAMs_20	01 35 58.0	
	comp=Z,4µm,19.0s						
B20K	Meade River	116.26	338	IAMs_20	IAMs_20	01 38 50.2	
	comp=Z,5µm,18.0s						
NEHR	Nehoiu	116.31	51	⇑P	PKiKP	00 37 56.9	+2.2
SLVT	Silivri	116.39	56	eP	PP	00 38 59.2	-2.6
HNR	Honiara	116.41	240	IAMs_20	IAMs_20	01 19 13.6	
	comp=Z,5µm,18.0s						
FORT	Forrest	116.52	199	IAMs_20	IAMs_20	01 37 53.2	
	comp=Z,4µm,18.0s						
MDNY	Mudanya-Bursa	116.61	57	eP	PP	00 39 02.6	-0.8
KORT	Korkueli	116.64	61	P	PP	00 39 05.7	+1.8
ARMT	Armutlu	116.65	57	eP	PP	00 39 00.5	-3.2
PLOR	Plostina	116.67	51	⇑P	PKiKP	00 37 56.0	+0.6
SUW	Suwalki	116.72	41	ePdif	Pdif	00 34 08.2	-2.2
SUW				ePKP	PKiKP	00 37 55.4	+0.2
SUW				ePP	PP	00 38 52.1	-12
SUW				ePS	PKKPdf	00 48 47.3	-2.9
SUW				eSS	SS	00 55 14.1	+3.9
SUW				eL	L	01 27 19.6	
	comp=Z,8µm,20.3s						
VRI	Vrincioaia	116.72	51	eP	PP	00 38 54.7	-9.3
VRI	Vrincioaia	116.72	51	⇑P	PKPdf	00 37 55.4	-0.1
TVSB	Tavsanli	116.75	58	eP	PP	00 39 03.6	-0.9
BGKT	Bogazkoy	116.78	56	eP	PP	00 39 01.6	-2.9
E18K	Tukpahlearik C	116.82	334	IAMs_20	IAMs_20	01 37 15.6	
	comp=Z,4µm,19.0s						
F17K	Baldwin Pennin	116.83	333	IAMs_20	IAMs_20	01 27 23.0	
	comp=Z,4µm,19.0s						
ISK	Istanbul-Kandi	116.95	56	eP	PP	00 39 01.9	-3.8
ISK	Istanbul-Kandi	116.95	56	P	PP	00 39 02.1	-3.6
KAVV	Kandilli-Istan	116.95	56	eP	PP	00 39 02.9	-2.8
KLYT	Kilyos	116.99	56	eP	PP	00 39 02.6	-3.4
YLV	Yalova	117.03	57	eP	PP	00 39 03.9	-2.5
G16K	Koyuk River	117.03	332	IAMs_20	IAMs_20	01 34 42.2	
	comp=Z,4µm,18.0s						
ADVT	Abdulvahap	117.25	57	P	PP	00 39 07.0	-0.8
CAVI	Cavuskoy	117.26	57	eP	PP	00 39 06.4	-1.5
SHUT	Suhut-Afyon	117.28	59	P	PP	00 39 07.0	-1.3
TIRR	Tirgusor	117.47	53	eP	PP	00 39 04.9	-4.3
CFR	Carcaliu	117.48	52	⇑P	PKiKP	00 37 57.6	+0.7
PABE	Paberze	117.53	40	IAMs_20	IAMs_20	01 24 49.7	
	comp=Z,4µm,20.0s						
M11K	Mekoryuk	117.61	326	IAMs_20	IAMs_20	01 18 51.2	
	comp=Z,3µm,21.0s						
GULT	Gulveren	117.82	57	eP	PP	00 39 10.5	-1.4
EIL	Elat	117.83	70	eP	PP	00 39 06.0	-6.1
GAZI	Gazipasa	117.90	62	eP	PP	00 39 10.5	-2.0
CIFT	Cifteler, Eski	117.91	59	eP	PP	00 39 10.1	-2.4
CTAO	Charters Tower	117.95	221	IAMs_20	IAMs_20	01 21 49.3	
	comp=Z,4µm,19.0s						
ANM	Nome	118.10	331	IAMs_20	IAMs_20	01 37 04.8	
	comp=Z,4µm,20.0s						
HDMB	Hadim	118.26	62	eP	PP	00 39 14.6	-0.6
SVRH	Sivrihisar-ESK	118.27	59	eP	PP	00 39 12.2	-2.9
CSS	Mathiatis	118.29	64	iP	PP	00 39 14.4	-0.8
MDUB	Mudurnu	118.33	58	iP	PP	00 39 14.3	-1.2
MILM	Milestii Mici	118.39	50	eP	Pdif	00 34 14.0	-4.1
MILM	Milestii Mici	118.39	50	ePKP	PKPdf	00 37 56.0	-2.6
MILM	Milestii Mici	118.39	50	ePP	PP	00 39 10.0	-5.6
	comp=Z,2µm,12.4s						
MILM	Milestii Mici	118.39	50	⇑P	PKiKP	00 37 59.9	+1.2
MILM	Milestii Mici	118.39	50	iP	Pdif	00 34 14.0	-4.1
MILM				e		00 37 56.0	
MILM				i		00 44 46.0	
MILM				iPS	PS	00 48 58.0	-3.8
SORM	Soroca	118.40	48	⇑P	PKiKP	00 37 59.3	+0.6
KIS	Kishinev	118.42	50	eP	Pdif	00 34 14.0	-4.2
KIS	Kishinev	118.42	50	ePKP	PKPdf	00 37 58.0	-0.7
KIS	Kishinev	118.42	50	ePP	PP	00 39 11.0	-4.8
	comp=Z,1µm,11.4s						
KIS	Kishinev	118.42	50	ePS	PS	00 48 54.0	-8.1
KIS				eL	L	01 22 19.0	
KIS				LRM	MLR	01 33 53.0	
	comp=Z,2µm,17.0s						
KIS	Kishinev	118.42	50	iP	Pdif	00 34 14.0	-4.2
KIS				e		00 37 58.0	
KIS				iPS	PKKPdf	00 48 54.0	+7.3
KONT	Konya--Tatoy	118.46	61	eP	PP	00 39 15.9	-0.4
TEKE	Tekeli-Mersin	118.49	63	eP	PP	00 39 11.8	-4.7
HSPB	Hornsund (broa	118.53	15	ePdif	Pdif	00 34 25.7	+7.7
HSPB				ePP	PP	00 39 08.8	-6.9
HSPB				eSP	SP	00 49 07.0	+7.3
HSPB				eSS	SS	00 55 36.4	+3.9
HSPB				eL	L	01 23 48.4	
	comp=Z,4µm,21.2s						
LADK	Ladik-KONYA	118.53	60	eP	PP	00 39 14.9	-2.1
LFK	Lefkose	118.54	64	eP	PP	00 39 16.3	-0.7
C16K	Lisburne Hills	118.75	335	IAMs_20	IAMs_20	01 40 06.6	
	comp=Z,4µm,20.0s						
AKKU	Akkuyu-Mersin	118.83	63	eP	PP	00 39 17.3	-1.6
NACGM	Naroch	118.97	41	ePdif	Pdif	00 34 20.0	-0.5
	comp=Z,4.0nm,0.7s,baz=258						
UJAP	Al Uja	119.01	68	eP	PP	00 39 17.7	-2.5
SPIA	Saint Paul Isl	119.02	322	IAMs_20	IAMs_20	01 19 01.6	
	comp=Z,4µm,20.0s						
KEBE	Keben-Mersin	119.04	63	eP	PP	00 39 17.3	-3.2
CHBY	Cihanbeyli	119.04	60	eP	PP	00 39 17.7	-2.8
EREN	Erenkoy	119.12	64	eP	PP	00 39 19.4	-1.5
SILI	Silifke-Mersin	119.18	63	eP	PP	00 39 19.0	-2.3
MMAI	Mount Meron Ar	119.31	67	PKP	PKiKP	00 38 01.8	+0.7
	comp=Z,1.3nm,0.6s,baz=223,slow=8.0,SNR=3.6						
LOD	Lodumlu	119.31	59	P	PP	00 39 20.1	-2.2
ANTO	Ankara	119.33	59	eP	PP	00 39 16.9	-5.5
ANTO	Ankara	119.33	59	⇑P	PKiKP	00 38 02.5	+1.7
TNA	Tin City	119.34	332	IAMs_20	IAMs_20	01 38 21.4	
	comp=Z,3µm,19.0s						
SULT	Sultanhani-AKS	119.40	61	eP	PP	00 39 22.9	0.0
AFSR	Afar-Bala (An	119.42	59	eP	PP	00 39 21.4	-1.6
MNK	Minsk	119.52	41	iPKP	PKPdf	00 37 59.6	-1.0
	comp=E,4.0nm,0.8s						
MNK				iPKP	PKPdf	00 37 59.6	-1.0
	comp=N,8.0nm,1.1s						
MNK				iPKP	PKPdf	00 37 59.6	-1.0
	comp=Z,20nm,0.9s,baz=259						
MNK				iPP	PP	00 39 21.3	-1.8
MNK				iPPP	PPP	00 41 53.0	
MNK				iSKS	SKSac	00 44 59.2	+2.8
MNK				iPS	PS	00 49 10.0	-1.7
MNK				iSS	SS	00 55 45.8	-0.7
MNK				iSSS	SSS	01 00 19.6	
MNK				iLR	LR	01 29 56.1	
MNK	Minsk	119.52	41	iPKIKP	PKPdf	00 37 59.5	-1.0
MNK				i		00 39 21.2	
MNK				iPPP	PPP	00 41 52.9	
MNK				i		00 44 59.2	
MNK				iPS	PS	00 49 10.0	-1.7
MNK				iSS	SS	00 55 45.7	-0.8
MNK				pmax	pmax		
	comp=E,4.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,8.0nm,1.1s						
MNK				pmax	pmax		
	comp=Z,20nm,0.9s						
KIEV	Kiev	119.53	46		PKiKP	00 38 01.0	+0.2
KIEV	Kiev	119.53	46	IAMs_20	IAMs_20	01 28 16.3	
	comp=Z,5µm,20.0s						
KIEV	Kiev	119.53	46	⇑P	PKPdf	00 38 00.3	-0.4
KIEV	Kiev	119.53	46	PKIKP	PKiKP	00 38 01.0	+0.2
KIEV				MLR	MLR		
	comp=Z,4µm,20.0s						
KIEV	Kiev	119.53	46	PKiKP	PKiKP	00 38 02.7	+1.9
AKASG	Malin Array Be	119.54	46		PKPdf	00 38 00.7	0.0
AKASG	Malin Array Be	119.54	46	PKP	PKiKP	00 38 00.8	+0.1
	comp=Z,5.6nm,0.8s,baz=272,slow=2.7,SNR=18						
AKASG				PP	PP	00 39 17.8	-5.6
	comp=Z,0.6nm,0.6s,baz=260,slow=5.4,SNR=6.4						
AKBB	Malin Array Si	119.54	46d	iPKIKP	PKiKP	00 38 01.1	+0.3
FINES	FINESS Array B	119.77	33	PKP	PKiKP	00 38 01.9	+1.0
	comp=Z,1.8nm,0.8s,baz=19,slow=12,SNR=4.5						
FINES				PP	PP	00 39 19.9	-4.8
	comp=Z,9.5nm,1.2s,baz=222,slow=10,SNR=5.2						
MERS	Mersin	119.78	62	eP	PP	00 39 20.4	-5.2
KURC	Kurucasile-Bar	119.82	56	eP	PP	00 39 23.1	-2.5
KAMT	Kaman	119.88	59	eP	PP	00 39 22.8	-3.4
BRTR	Keskin Array B	119.92	59		PKiKP	00 38 02.9	+0.8
BRTR	Keskin Array B	119.92	59	PKP	PKiKP	00 38 02.5	+0.4
	comp=Z,2.7nm,0.8s,baz=192,slow=2.8,SNR=14						
BRTR				PP	PP	00 39 22.0	-4.5
	comp=Z,9.3nm,1.2s,baz=235,slow=4.4,SNR=3.9						
BRTR	Keskin Array B	119.92	59	PKIKP	PKiKP	00 38 02.9	+0.8
KIRS	Kirsehir-Merke	119.96	60	⇑P	PKiKP	00 38 02.7	+0.6
GULA	Gulagac	119.99	61	eP	PP	00 39 25.8	-1.2
CANT	Cankiri	120.14	58	eP	PP	00 39 26.6	-1.3
KARA	Karaisali	120.31	62	eP	PP	00 39 27.9	-1.2
ATKA	Atka Island	120.31	316	IAMs_20	IAMs_20	01 17 56.5	
	comp=Z,4µm,22.0s						
ARCES	ARCESS Array B	120.47	24	PKP	PKPdf	00 38 02.1	0.0
	comp=Z,5.1nm,1.0s,baz=257,slow=2.1,SNR=5.0						
ARCES				PKKPbc	PKKPbc	00 48 10.0	+0.3
	comp=Z,1.9nm,0.9s,baz=46,slow=3.5,SNR=3.6						
GAMB	Gambell	120.73	329	IAMs_20	IAMs_20	01 38 50.2	
	comp=Z,4µm,18.0s						
CEYT	Ceyhan	120.77	62	eP	PP	00 39 30.9	-1.3
CORM	Corum	120.77	59	eP	PP	00 39 31.2	-1.2
TAHT	Tahtakopru-Hat	120.93	63	eP	PP	00 39 30.9	-2.5
KOZT	Kozan	120.96	62	P	PP	00 39 31.7	-1.9
KEV	Kevo	121.01	24	IAMs_20	IAMs_20	01 30 57.7	
	comp=Z,4µm,20.0s						
ASAR	Alice Springs	121.02	208		PKPdf	00 38 03.9	-0.8
ASAR	Alice Springs	121.02	208	PKP	PKiKP	00 38 05.0	+0.2
	comp=Z,1.5nm,0.7s,baz=140,slow=1.4,SNR=12						
ASAR				PKKPab	PKKPbc	00 48 08.3	+1.2
	comp=Z,1.3nm,0.8s,baz=345,slow=3.6,SNR=8.1						
ASAR	Alice Springs	121.02	208	PKIKP	PKiKP	00 38 05.0	+0.2
YOZ	Yozgat	121.15	59	eP	PP	00 39 32.7	-2.3
BNN	Bunyan	121.34	60	eP	PP	00 39 35.2	-1.1
SIM	Simferopol'	121.53	53	ePKIKP	PKiKP	00 38 06.5	+1.6
SIM				e		00 39 42.1	
SIM				pmax	pmax		
	comp=Z,33nm,1.2s						
DIKM	Dikmen	121.60	57	eP	PP	00 39 36.3	-1.5
KMRS	Kahramanmaras	121.79	62	eP	PP	00 39 37.9	-1.3
GAZ	Gaziantep	121.94	63	eP	PP	00 39 39.9	-0.4
KVT	Kavak	122.04	58	eP	PP	00 39 38.5	-2.4
TOKT	Tokat	122.23	59	eP	PP	00 39 37.8	-4.4
SVSK	Karacayir	122.47	59	eP	PP	00 39 41.3	-2.4
DARE	Darende-Malaty	122.50	61	eP	PP	00 39 41.6	-2.6
RSDY	Resadiye-TOKAT	122.83	59	eP	PP	00 39 43.7	-2.5
APA	Apatity	123.32	26	⇓iPKIKP	PKPdf	00 38 06.7	-0.8
APA				i		00 39 49.0	
APA				i		00 45 08.0	
APA				iPS	PS	00 49 39.0	-6.2
APA				iSS	SS	00 56 35.0	+0.7
APA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ILIC	ilic-Erzincan	123.54	60	eP	PP	00 39 50.5	-0.7
ANN	Anapa	123.81	54	iPKIKP	PKPdf	00 38 08.3	-0.8
ANN				e		00 38 11.7	
ANN				e		00 39 50.6	
ANN				e		00 45 07.3	
ANN				ePS	PS	00 49 53.2	+2.9
ANN				eSS	SS	00 56 32.6	-9.3
ANN				pmax	pmax		
	comp=Z,60nm,1.5s						
ESPY	Espiye-Giresun	123.98	59	P	PP	00 39 50.2	-3.8
WRA	Warramunga Arr	124.13	210	PKP	PKiKP	00 38 11.1	+0.1
	comp=Z,5.2nm,0.7s,baz=157,slow=1.6,SNR=29						
WRA				PKKPbc	PKKPab	00 47 56.2	-1.1
	comp=Z,2.2nm,1.0s,baz=344,slow=4.1,SNR=5.9						
RAYN	Ar Rayn	124.51	81		PKiKP	00 38 12.9	+1.4
RAYN	Ar Rayn	124.51	81	PKIKP	PKiKP	00 38 12.9	+1.4
COEN	Coen	124.58	223	IAMs_20	IAMs_20	01 23 19.9	
	comp=Z,5µm,19.0s						
OBN	Obninsk	124.58	41	⇓iPKIKP	PKPdf	00 38 10.3	+0.1
OBN				iPS	PS	00 49 57.6	+0.9
OBN				e		00 51 18.8	
OBN				eSSS	SSS	01 01 29.0	
OBN				pmax	pmax		
	comp=Z,76nm,1.7s						
OBN				MLR	MLR		
	comp=Z,5µm,18.0s						
KTUT	Trabzon	124.77	59	eP	PP	00 39 54.6	-4.6
BNGB	Bingl	125.03	61	eP	PP	00 39 59.1	-2.1
SOC	Sochi	125.22	56	iP	Pdif	00 34 46.9	-1.6
SOC				e		00 38 10.1	
SOC				e		00 39 57.5	
SOC				ePPP	PPP	00 42 43.7	
SOC				eSSS	SSS	01 01 35.9	
MOS	Moscow	125.22	41	iPKIKP	PKPdf	00 38 09.0	-2.5
MOS				e		00 45 08.5	
MOS				eSS	SS	00 56 56.8	-2.1
MOS				pmax	pmax		
	comp=Z,51nm,1.4s						
MOS				MLR	MLR		
	comp=Z,6µm,18.0s						
SVAN	Silvan-Diyarba	125.24	62	eP	PP	00 40 03.2	+0.7
CHOM	Cayeli-Rize	125.52	59	eP	PP	00 40 02.9	-1.4
PMG	Port Moresby	125.54	230	IAMs_20	IAMs_20	01 22 10.2	
	comp=Z,4µm,19.0s						
H11S2	WAKE ISLAND Hy	125.68	272	T	T	02 57 05.7	
	baz=114,slow=74,SNR=103						
H11S1	WAKE ISLAND Hy	125.69	272	T	T	02 57 06.7	
	baz=114,slow=74,SNR=130						
H11S3	WAKE ISLAND Hy	125.69	272	T	T	02 57 07.4	
	baz=114,slow=74,SNR=132						
VSR	Storozhevoye	125.83	46	ePKIKP	PKPdf	00 38 11.2	-1.6
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VORD	Divnogorie	125.89	47	ePKIKP	PKPdf	00 38 11.6	-1.3
VORD				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VORR	Voronezh	125.90	46	ePKIKP	PKiKP	00 38 13.8	+0.5
VORR				pmax	pmax		
	comp=Z,54nm,1.5s						
GURO	Guroymak-BITLI	125.97	62	eP	PP	00 40 06.6	-0.9
GURO	Guroymak-BITLI	125.97	62	IAMs_20	IAMs_20	01 34 06.0	
	comp=Z,4µm,20.0s						
ERBR	Yeremizino-Bor	126.09	53	iPKIKP	PKiKP	00 38 14.1	+0.2
ERBR				e		00 40 06.1	
ERBR				e		00 45 20.0	
ERBR				ePS	PS	00 50 15.6	+5.2
ERBR				eSS	SS	00 57 11.0	+0.5
ERBR				pmax	pmax		
	comp=Z,26nm,1.3s						
LABN	Labinsk	126.10	55	iPKIKP	PKiKP	00 38 14.8	+0.8
LABN				e		00 38 18.2	
LABN				e		00 40 10.6	
LABN				pmax	pmax		
	comp=Z,20nm,0.9s						
KOPR	Koprukoy-ERZUR	126.13	60	iP	PP	00 40 04.2	-4.3
KLMR	Klimovskoe	126.24	34	ePKIKP	PKPdf	00 38 13.0	-0.3
KLMR				e		00 40 08.1	
KLMR				pmax	pmax		
	comp=Z,90nm,1.5s						
MLAZ	Malazgirt-MUS	126.49	62	eP	PP	00 40 10.1	-0.8
SENK	Senkaya-Erzuru	126.61	60	eP	PP	00 40 10.9	-0.9
AKDM	Akdamar-Van	126.65	63	eP	PP	00 40 11.4	-0.7
AGRB	Hanur-Agry	126.91	61	eP	PP	00 40 13.0	-0.8
CUKT	Cukurca	126.91	64	P	PP	00 40 11.3	-2.5
VANB	Van	127.02	62	eP	PP	00 40 13.5	-0.9
KIV	Kislovodsk	127.40	56	eP	PP	00 40 15.5	-1.2
KIV	Kislovodsk	127.40	56		PKiKP	00 38 17.5	+0.7
KIV				IAMs_20	IAMs_20	01 38 49.4	
	comp=Z,4µm,20.0s						
KIV	Kislovodsk	127.40	56	P	PKPdf	00 38 14.4	-1.7
KIV	Kislovodsk	127.40	56	⇓P	PKPdf	00 38 15.9	-0.3
KIV	Kislovodsk	127.40	56	iP	Pdif	00 34 57.4	-1.0
KIV				i		00 38 16.5	
KIV				e		00 40 15.5	
KIV				e		00 45 19.2	
KIV				ePS	PS	00 50 21.6	-0.6
KIV				eSS	SS	00 57 25.5	-1.7
KIV				pmax	pmax		
	comp=Z,14nm,1.1s						
KIV	Kislovodsk	127.40	56	PKiKP	PKiKP	00 38 16.9	+0.2
VRH	Novokhopyorsk	127.43	46	ePKIKP	PKiKP	00 38 16.4	0.0
VRH				pmax	pmax		
	comp=Z,33nm,1.4s						
SMY	Shemya	127.48	315	IAMs_20	IAMs_20	01 21 13.3	
	comp=Z,5µm,21.0s						
KBZ	Khabaz	127.52	56	PKP	PKiKP	00 38 16.9	+0.2
	comp=Z,9.4nm,1.0s,baz=309,slow=3.8,SNR=9.6						
KBZ	Khabaz	127.52	56c	iPKIKP	PKiKP	00 38 17.2	+0.4
CLDR	Caldiran	127.53	62	iP	PP	00 40 17.2	-0.7
AKH	Akhalkalaki	127.61	59	eP	PP	00 40 16.9	-1.4
GOF	Gofitskoye	127.79	54c	ePKIKP	PKPdf	00 38 17.0	+0.2
TASB	TASBURUN-IGDIR	127.93	61	eP	PP	00 40 19.5	-0.8
KBD	Kabd	128.21	75	P	PKPdf	00 38 12.4	-5.6
GNI	Garni	128.34	61	eP	PP	00 40 20.3	-2.8
GNI	Garni	128.34	61	P	PKPdf	00 38 15.9	-2.3
GNI	Garni	128.34	61	PKPdf	PKPdf	00 38 18.4	+0.2
FITZ	Fitzroy Crossi	129.15	202	P	PKiKP	00 38 21.0	+0.1
FITZ				P	PKPdf	00 38 21.2	+1.0
BILL	Bilibino	129.27	336		PKiKP	00 38 20.4	+0.8
BILL	Bilibino	129.27	336	IAMs_20	IAMs_20	01 35 48.1	
	comp=Z,3µm,18.0s						
BILL	Bilibino	129.27	336c	iPKIKP	PKiKP	00 38 19.8	+0.2
BILL				MLR	MLR		
	comp=Z,3µm,17.0s						
SMRA	Abu-Samra	129.49	81	P	PKPdf	00 38 20.1	-0.5
TRNA	Turayna	129.82	82	P	PKPdf	00 38 16.9	-4.3
KNRA	Kununurra	130.27	207	IAMs_20	IAMs_20	01 27 31.0	
	comp=Z,4µm,19.0s						
MAK	Makhachkala	130.77	57	iP	Pdif	00 35 14.2	+1.0
MAK				i		00 38 19.2	
MAK				e		00 40 34.4	
MAK				ePPP	PPP	00 43 23.2	
MAK				ePS	PS	00 50 45.8	-5.4
MAK				eSSS	SSS	01 02 57.8	
MAK				pmax	pmax		
	comp=Z,115nm,1.3s						
AKT	Akhty	130.77	59	eP	Pdif	00 35 11.6	-1.8
AKT				i		00 38 21.9	
AKT				ePPP	PPP	00 43 26.5	
AKT				e		00 45 28.9	
AKT				ePS	PS	00 50 47.8	-3.8
AKT				pmax	pmax		
	comp=Z,50nm,2.1s						
BELG	Belogornoye	131.10	45	PKP	PKPdf	00 38 21.9	-0.9
	comp=Z,18nm,0.9s,baz=187,slow=3.2,SNR=11						
MZR	Muzera	131.18	85	P	PKPdf	00 38 20.4	-3.5
	SNR=6.4						
KIRV	Kirov	131.46	37c	iPKIKP	PKiKP	00 38 24.4	+0.2
MTN	Manton Dam	131.81	211	IAMs_20	IAMs_20	01 30 35.5	
	comp=Z,5µm,20.0s						
AJN	Ajban	133.01	83	P	PKPdf	00 38 27.7	+0.4
ASUD	Al Ashush, Dub	133.32	83	P	PKPdf	00 38 27.3	-0.5
ALNE	Al Ain	133.50	84	P	PKPdf	00 38 27.1	-1.1
	SNR=7.4						
FAQ	Al Faqa, Dubai	133.59	83	P	PKPdf	00 38 28.7	+0.3
FAQ	Al Faqa, Dubai	133.59	83	PKPdf	PKPdf	00 38 27.9	-0.5
NAZ	Nazwa, Dubai	133.73	83	P	PKiKP	00 38 29.6	-0.3
NAZ	Nazwa, Dubai	133.73	83	PKPdf	PKPdf	00 38 28.4	-0.2
UMQ	Umm Al-Quwin	133.89	82	P	PKPdf	00 38 28.2	-0.7
ARQ	Araqi	133.93	86	P	PKiKP	00 38 31.4	+1.0
ASHO	Ashiyiah	133.97	84	P	PKiKP	00 38 30.3	-0.2
	SNR=5.6						
HATD	Hatta, Dubai	134.08	83	P	PKPdf	00 38 27.1	-2.3
	SNR=6.6						

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HATD  Hatta, Dubai      134.08  83    PKPdf    PKPdf    00 38 29.0 -0.3
UOSS  Minazif           134.18  83    P        PKPdf    00 38 30.0 +0.5
UOSS  Minazif           134.18  83    PKPdf    PKPdf    00 38 29.1 -0.4
UOSS  Minazif           134.18  83    PKP      PKPdf    00 38 28.4 -1.1
SOHO  SOHO              134.20  85    P        PKPdf    00 38 27.9 -1.6
SOHO  SOHO              134.20  85    PKPdf    PKPdf    00 38 29.2 -0.3
MSFE  Esma-Masafi       134.27  83    PKPdf    PKPdf    00 38 29.6 -0.1
MASF  Masafi            134.27  83    P        PKPdf    00 38 28.7 -1.0
      SNR=5.8
MDH   Madha             134.37  83    P        PKPdf    00 38 28.4 -1.4
SHME  Shamm             134.47  82    P        PKPdf    00 38 29.7 -0.2
      SNR=7.5
SHME  Shamm             134.47  82    PKPdf    PKPdf    00 38 29.8 -0.2
HOQ   Hoqain            134.69  86    P        PKPdf    00 38 29.9 -0.6
JMDO  Jabal Madar       134.96  88    P        PKPdf    00 38 30.3 -0.8
SMDO  Samad             135.15  87    P        PKPdf    00 38 28.3 -3.2
      SNR=5.4
BIDO  Bidbid            135.38  86    P        PKPdf    00 38 30.7 -1.0
JLN   Jalan Bani Buh    136.02  88    P        PKPdf    00 38 33.8 +0.8
SEY   Seymchan          136.58 332    PKP      PKPdf    00 38 33.6 +0.9
      comp=Z,5.9nm,0.9s,baz=137,slow=6.6,SNR=3.9
SEY   Seymchan          136.58 332c iPKIKP   PKiKP    00 38 34.2 -0.3
ARTI  Arti              136.67  38             PKiKP    00 38 34.8 -0.1
ARTI  Arti              136.67  38  i PKIKP    PKPdf    00 38 33.7 +0.6
ARTI                                                    00 41 13.0
PET   Petropavlovsk     136.77 317    IAMs_20  IAMs_20  01 28 58.9
      comp=Z,4µm,22.0s
PET   Petropavlovsk     136.77 317  eP         Pdif     00 35 43.5 +3.9
PET                                 e                   00 38 30.4
PET                                 e                   00 41 14.6
PET                                 ePS        PS       00 51 42.6 +0.4
PET                                 ePPS       PPS      00 53 26.9
PET                                 eSS        SS       00 59 19.5 -0.8
PET                                   pmax     pmax
      comp=Z,2µm,14.3s
PET                                   pmax     pmax
      comp=Z,2µm,13.0s
PETK  Petropavlovsk-    137.32 317             PKiKP    00 38 36.9 +0.5
PETK  Petropavlovsk-    137.32 317    PKP      PKiKP    00 38 36.7 +0.3
      comp=Z,9.3nm,0.9s,baz=124,slow=3.9,SNR=13
SVE   Sverdlovsk        137.72  37  i PKIKP    PKiKP    00 38 36.9 -0.1
SVE                                   pmax     pmax
      comp=Z,22nm,1.5s
AKTO  Aktyubinsk        137.78  47    PKHKP    PKPpre   00 38 28.3
NGCH  Negor - Chabah    138.56  85    P        PKPdf    00 38 38.3 +0.8
MA2   Magadan           138.81 328    IAMs_20  IAMs_20  01 54 19.6
      comp=Z,4µm,18.0s
MA2   Magadan           138.81 328    PKP      PKiKP    00 38 39.9 +0.7
      comp=Z,2.9nm,0.3s,baz=95,slow=5.2,SNR=4.5
MMRI  Maumere           139.12 202    IAMs_20  IAMs_20  01 37 21.2
      comp=Z,4µm,19.0s
EDFI  Ende, Flores      139.18 201    PKP      PKiKP    00 38 41.6 +0.1
AB31  Akbulak array     139.20  48    PKHKP    PKPpre   00 38 30.4
ABKAR Akbulak array     139.20  48             PKPpre   00 38 29.4
GUMO  Guam              142.17 252    IAMs_20  IAMs_20  01 37 01.0
      comp=Z,3µm,18.0s
KAPI  Kappang           143.31 200    IAMs_20  IAMs_20  01 41 23.1
      comp=Z,4µm,20.0s
KAPI  Kappang           143.31 200    PKhKP    PKPpre   00 38 45.0
      comp=Z,11nm,0.9s,baz=194,slow=4.5,SNR=4.9
KAPI  Kappang           143.31 200    P        PKPdf    00 38 45.1 -1.4
LEM   Lembang           143.31 180    PKP      PKPbc    00 38 44.9 +1.2
SANI  Sanana            143.68 212    PKP      PKPab    00 38 43.2 -0.6
BNSI  Bone              143.78 201    PKP      PKPdf    00 38 46.8 -0.6
BRVK  Borovoye          144.29  39             PKPdf    00 38 47.5 +0.5
BRVK  Borovoye          144.29  39    P        PKPdf    00 38 46.7 -0.3
BRVK  Borovoye          144.29  39cePKIKP      PKPdf    00 38 46.5 -0.5
BRVK                                  pmax     pmax
      comp=Z,68nm,1.7s
BRVK                                  MLR      MLR
      comp=Z,7µm,20.0s
SPSI  Sidrap Palu       144.30 201    PKP      PKPbc    00 38 46.8 +0.4
BVA0  Borovoye Array    144.36  39  i PKIKP    PKPbc    00 38 45.5 -0.1
BVAR  Borovoye Array    144.36  39    PKP      PKPdf    00 38 47.3 +0.1
      comp=Z,14nm,0.6s,baz=270,slow=3.0,SNR=44
YAK   Yakutsk           145.00 342             PKPdf    00 38 48.8 +0.9
YAK   Yakutsk           145.00 342    IAMs_20  IAMs_20  01 46 44.6
      comp=Z,3µm,22.0s
YAK   Yakutsk           145.00 342c iPKIKP   PKPdf    00 38 47.7 -0.2
YAK                                 e                   00 42 06.5
YAK                                   pmax     pmax
      comp=Z,191nm,1.3s
YAK                                   pmax     pmax
      comp=N,43nm,1.5s
YAK                                   pmax     pmax
      comp=E,37nm,1.5s
YAK                                   pmax     pmax
      comp=Z,2µm,5.6s
YAK                                   pmax     pmax
      comp=N,291nm,4.2s
YAK                                   pmax     pmax
      comp=E,259nm,5.1s
TTSI  Tana Toraja       145.15 201    PKP      PKPbc    00 38 48.2 -1.0
KUR   Kuril'sk          145.31 307dePKHKP      PKPpre   00 38 45.6
KUR                                 i                   00 38 52.0
KUR                                 eSS        SS       01 01 06.5 +6.1
KUR                                   pmax     pmax
      comp=Z,483nm,1.3s
KUR                                   pmax     pmax
      comp=Z,5µm,6.3s
KUR                                   MLR      MLR
      comp=Z,4µm,19.0s
MDSI  Maura Dua         145.45 173    PKP      PKPbc    00 38 48.4 -1.8
KOD   Kodaikanal        145.46 118  eP         PKPbc    00 38 50.3 -0.3
TNTI  Ternate           145.47 216    PKP      PKPbc    00 38 49.4 -0.9
PALK  Pallekele         145.85 126             PKPdf    00 38 49.9 -1.1
PALK  Pallekele         145.85 126    PKIKP    PKPdf    00 38 49.9 -1.1
PALK                                  MLR      MLR
      comp=Z,9µm,18.0s
PALK  Pallekele         145.85 126    PKP      PKPdf    00 38 51.2 +0.2
LUWI  Luwuk             145.96 207    PKP      PKPbc    00 38 51.8  0.0
LUWI  Luwuk             145.96 207    IAMs_20  IAMs_20  01 49 37.0
      comp=Z,2µm,19.0s
LUWI  Luwuk             145.96 207    PKP      PKPdf    00 38 51.2 +0.1
KSI   Kapahiang         146.08 170    PKP      PKPdf    00 38 51.6 +0.2
APSI  Ampana            146.51 206    PKP      PKPab    00 38 55.3 +1.0
MALK  Mahakanadarawa    146.52 124    PKP      PKPbc    00 38 53.2 -0.3
KAD   Karad             146.74 105  eP         PKPdf    00 38 51.9 -0.4
NKL   Nikolayevsk       146.82 323  i PKP2     PKPbc    00 38 52.9 -0.2
NKL                                 e                   00 42 15.9
NKL                                 eSS        SS       01 01 18.2 +1.6
TYV   Tymovskoe         146.83 319  ePKP2      PKPab    00 38 54.7 +0.2
TYV                                   pmax     pmax
      comp=Z,44nm,1.1s
TYV                                   pmax     pmax
      comp=Z,3µm,3.6s
KMSI  Cibinong          146.91 210    PKP      PKPdf    00 38 52.6 -0.2
BRZS  Berezniki         146.92  43  ePKIKP     PKPdf    00 38 51.6  0.0
BRZS  Berezniki         146.92  43  ePKP       PKPdf    00 38 51.7  0.0
YUK   Yuzh-Kuril'sk     146.96 306  ePKIKP     PKPdf    00 38 51.4 -0.4
YUK                                 eSS        SS       01 01 14.2 -5.1
SIMJ  Simiganj          146.98  64             PKPbc    00 38 54.3  0.0
KBL   Kabul             147.00  72             PKPbc    00 38 54.9 +0.3
KBL   Kabul             147.00  72    P        PKPbc    00 38 55.1 +0.5
      SNR=24
KBL   Kabul             147.00  72    PKP2     PKPbc    00 38 54.9 +0.3
POO   Poona             147.03 103  eP         PKPdf    00 38 52.5 -0.3
CHM   Chimkent          147.04  58  ePKIKP     PKPdf    00 38 51.9 -0.2
CHM   Chimkent          147.04  58  ePKP       PKPdf    00 38 52.0 -0.2
CHM                                   LR       LR       01 51 19.6
      comp=Z,2µm,19.6s
BRLS  Borolday          147.09  56  ePKIKP     PKPdf    00 38 51.7 -0.5
BRLS                                e                   00 42 19.0
BRLS  Borolday          147.09  56  ePKP       PKPdf    00 38 51.8 -0.5
BRLS                                ePP        PP       00 42 19.0 -0.6
PCI   Palu              147.16 202    PKP      PKPbc    00 38 55.9 +0.6
TPI   Tanjungpandan     147.35 180    PKP      PKPdf    00 38 53.7 +0.2
OTUK  Ortayu            147.38  46    PKIKP    PKPdf    00 38 52.6 +0.1
IUG   Iuzhnay           147.38  58  ePKIKP     PKPdf    00 38 52.5 -0.3
IUG                                 e                   00 42 21.3
IUG   Iuzhnay           147.38  58  ePKP       PKPdf    00 38 52.5 -0.3
IUG                                 ePP        PP       00 42 21.3 -0.1
JASL  Jaisalmer         147.43  86  eP         PKPdf    00 38 53.1 -0.1
KK31  Karatay Array     147.56  56  i PKP2     PKPdf    00 38 53.9 +0.9
KKAR  Karatay Array     147.56  56             PKPdf    00 38 53.9 +0.9
KKAR  Karatay Array     147.56  56    PKP2     PKPdf    00 38 53.9 +0.9
MRSI  Marisa            147.67 207    PKP      PKPbc    00 38 55.6 -1.1
BKB   Balikpapan        147.68 197    PKP      PKPdf    00 38 55.0 +1.0
UGL   Uglegorsk         147.91 316d iPKIKP   PKPdf    00 38 51.9 -1.4
UGL                                   pmax     pmax
      comp=Z,6µm,10.0s
DZA   Taraz             148.19  56  ePKIKP     PKPdf    00 38 53.7 -0.3
DZA   Taraz             148.19  56  ePKP       PKPdf    00 38 53.8 -0.3
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YSS   Yuzhno-Sakhali    148.27 312    IAMs_20  IAMs_20  01 53 59.5
      comp=Z,3µm,20.0s
YSS   Yuzhno-Sakhali    148.27 312  i PKIKP    PKPdf    00 38 53.7 -0.2
YSS                                 e                   00 39 00.0
YSS                                 ePPS       PPS      00 55 12.8
YSS                                 eSS        SS       01 01 39.6 +5.9
YSS                                   pmax     pmax
      comp=Z,1µm,7.4s
YSS                                   pmax     pmax
      comp=Z,40nm,1.1s
MPSI  Mapaga            148.30 203    PKP      PKPdf    00 38 55.4 +0.3
SMKI  Samarinda         148.38 198    PKP      PKPdf    00 38 56.1 +0.9
TOLI2 Tolitoli          148.70 205             PKPdf    00 38 55.5 -0.2
TOLI2                                 IAMs_20  IAMs_20  01 41 59.5
      comp=Z,3µm,22.0s
PPI   Padang Panjang    148.81 165    PKP      PKPdf    00 38 56.8 +0.9
SGSI  Sangihe           148.90 216    PKP      PKPdf    00 38 56.5 +0.5
SGSI                                  PKP      pPKPdf   00 38 57.7 -0.4
ASAJ  Asahikawa         149.23 307    PKPbc    PKPbc    00 38 59.8  0.0
      comp=Z,7.2nm,0.5s,baz=138,slow=6.0,SNR=6.0
LATR  Latur             149.26 105  eP         PKPdf    00 38 56.1 -0.3
ERM   Erimo             149.31 303             PKPdf    00 38 55.8  0.0
ERM   Erimo             149.31 303    PKIKP    PKPdf    00 38 55.8  0.0
MDRS  Chennai           149.34 118  eP         PKPdf    00 38 56.0 -0.7
BTLS  Baital            149.54  51  ePKHKP     PKPpre   00 38 55.8
BTLS  Baital            149.54  51  ePKP       PKPdf    00 38 55.8 -0.3
BKNI  Bangkinang        149.70 166             PKPbc    00 39 01.8 -0.2
BKNI                                  IAMs_20  IAMs_20  01 49 50.0
      comp=Z,3µm,19.0s
BKNI  Bangkinang        149.70 166    PKP      PKPdf    00 38 56.3 -1.0
BKNI                                  PKP      pPKPdf   00 38 58.6 -0.8
BKNR  BIKANER           149.73  85  eP         PKPdf    00 38 56.9  0.0
GSI   Gunungsitoli      149.75 159    PKP      PKPdf    00 38 59.1 +1.7
GSI                                   PKP      PKPbc    00 39 02.2 +0.1
JCJ   Chichijima        149.81 273    IAMs_20  IAMs_20  01 41 55.1
      comp=Z,3µm,19.0s
MNSI  Mandailing Nat    149.83 163    PKP      PKPdf    00 38 57.0 -0.5
MNSI                                  PKP      PKPbc    00 39 02.0 -0.3
KURK  Kurchatov         149.95  38    P        PKPdf    00 38 57.3 +0.8
KURK  Kurchatov         149.95  38cePKHKP      PKPpre   00 38 56.7
KURBB Kurchatov Arra    149.95  39    PKPbc    PKPbc    00 39 01.8 +0.4
      comp=Z,29nm,0.7s,baz=305,slow=3.1,SNR=31
KURBB Kurchatov Arra    149.95  39    PKHKP    PKPpre   00 38 57.1
STKI  Sintang           149.96 187    PKP      PKPdf    00 38 58.6 +0.8
EKS2  Erkin-Say         150.00  56    P        PKPdf    00 38 59.5 +2.5
      SNR=9.8
AML   Almayashu         150.06  57    P        PKPdf    00 38 59.9 +2.4
      SNR=13
GRNR  Gornyy            150.32 322  ePKIKP     PKPdf    00 38 58.0 +0.9
USP   Ospenovka         150.36  54    P        PKPdf    00 38 59.6 +2.1
      SNR=12
SBSI  Sibolga           150.37 162    PKP      PKPbc    00 39 02.0 -1.6
SGDS  Sogindy           150.40  54  ePKP       PKPdf    00 38 57.3 -0.3
SGDS                                ePP        PP       00 42 38.9  0.0
HYB   Hyderabad         150.43 109  ePKiKP     PKiKP    00 39 04.7 +0.3
HYB                                 eSKSdf     SKSdf    00 46 06.0 -0.7
NIL   Nilore            150.44  74    P        PKPdf    00 38 57.5 -0.5
AAK   Ala-Archa         150.52  56    P        PKiKP    00 39 05.5 +1.5
      SNR=34
AAK   Ala-Archa         150.52  56    P        PKPdf    00 38 59.6 +1.7
AAK   Ala-Archa         150.52  56    PKIKP    PKPdf    00 38 58.4 +0.5
AAK   Ala-Archa         150.52  56    PKPdf    PKPdf    00 38 58.6 +0.6
AAK   Ala-Archa         150.52  56    PKP      PKPdf    00 38 59.0 +1.1
SRGN  SRI GANGA NAGA150.60  82  eP         PKPdf    00 38 58.0 -0.3
CHMS  Chumysh           150.61  55    P        PKiKP    00 39 05.1 +1.1
      SNR=26
UCH   Uchtor            150.63  56    P        PKiKP    00 39 06.5 +1.9
      SNR=8.3
KBK   Karagaybulak      150.84  55    P        PKiKP    00 39 05.8 +1.1
      SNR=18
ZALV  Zalesovo Beam     150.87  28             PKPdf    00 38 58.1 +0.2
ZALV  Zalesovo Beam     150.87  28    PKPbc    PKiKP    00 39 04.7 +0.6
      comp=Z,15nm,1.1s,baz=302,slow=2.8,SNR=25
ZALV  Zalesovo Beam     150.87  28    PKIKP    PKPdf    00 38 58.1 +0.2
SEM   Semipalatinsk     150.99  38  ePKIKP     PKPdf    00 38 58.1 -0.4
SEM   Semipalatinsk     150.99  38  ePKP       PKPdf    00 38 58.1 -0.4
SEM                                   LR       LR       01 52 50.2
      comp=Z,2µm,17.9s
TKM2  Tokmak 2          151.23  55    P        PKPdf    00 39 00.9 +1.8
      SNR=10
NRDN  NARMADA NAGAR151.58  98  eP         PKPdf    00 39 00.9 +1.0
DAV   Davao City (W)    151.72 220    P        PKPdf    00 39 03.1 +2.7
DAV   Davao City (W)    151.72 220    P        PKPdf    00 38 59.0 -1.4
ULHL  Ulahol            151.87  56    P        PKiKP    00 39 08.9 +2.0
      SNR=13
BOD   Bodaibo           151.94 353  ePKIKP     PKPdf    00 39 00.2 +0.8
BOD                                   pmax     pmax
      comp=Z,169nm,1.8s
BHPL  Bhopal            151.98  97  eP         PKPdf    00 39 00.3 -0.3
MLSI  Meulaboh, Aceh    152.12 155    PKP      PKPdf    00 39 02.7 +1.7
TSI   Tuntungan         152.13 160    PKP      PKPdf    00 39 01.7 +0.7
TSI                                   PKP      sPKPdf   00 39 04.3 +0.4
MDOK  Medeo             152.18  53  ePKIKP     PKPdf    00 38 59.9 -0.5
MDOK                                e                   00 42 49.0
MDOK  Medeo             152.18  53  ePKP       PKPdf    00 38 60.0 -0.5
MDOK                                ePP        PP       00 42 49.1  0.0
MDOK                                  LR       LR       01 53 15.4
      comp=Z,2µm,18.0s
KSH   Kashi             152.26  62    PKPbc    PKPdf    00 39 01.8 +1.2
KSH                                   SKKS              00 49 38.8
KSH                                   SS       SS       01 02 15.1 -4.1
KSH                                   AMB      AMB
      comp=Z,8µm,13.1s
KSH                                   LR       LR
      comp=Z,4µm,23.7s
KSH                                   LR       LR
      comp=Z,4µm,23.7s
KSH                                   LR       LR
      comp=Z,5µm,22.0s
TDK   Taldyqorghan      152.46  49  ePKIKP     PKPdf    00 39 00.4 -0.2
TDK   Taldyqorghan      152.46  49  ePKP       PKPdf    00 39 00.5 -0.2
TDK                                   LR       LR       01 53 28.8
      comp=Z,4µm,17.9s
ZEA   Zeya              152.49 335  i PKIKP    PKPdf    00 39 00.7 +0.4
ZEA                                 e                   01 02 19.4
ZEA                                   pmax     pmax
      comp=Z,900nm,7.1s
ZEA                                   pmax     pmax
      comp=Z,40nm,1.2s
KUDL  Kundal            152.53  86  eP         PKPdf    00 39 01.2  0.0
BSI   Banda Aceh        152.82 152    PKP      PKPbc    00 39 06.5 -2.7
TEY   Ternei            152.96 311  ePKIKP     PKPdf    00 38 56.2 -5.1
SATY  Saty              153.15  53  ePKIKP     PKPdf    00 39 01.5 -0.3
SATY                                e                   00 42 54.6
SATY  Saty              153.15  53  ePKP       PKPdf    00 39 01.5 -0.3
SATY                                ePP        PP       00 42 54.6  0.0
KPKS  Kokpek            153.21  52  ePKIKP     PKPdf    00 39 01.4 -0.4
KPKS                                e                   00 42 54.9
KPKS  Kokpek            153.21  52  ePKP       PKPdf    00 39 01.5 -0.4
KPKS                                ePP        PP       00 42 54.9 +0.1
LHMI  Lhok Sumawe       153.21 155    PKP      PKPbc    00 39 06.7 -3.4
MYLDM Lahad Datu        153.29 204             PKiKP    00 39 11.3 +0.9
UZB   Uzynbulak         153.55  53  ePKIKP     PKPdf    00 39 01.9 -0.5
UZB   Uzynbulak         153.55  53  ePKP       PKPdf    00 39 01.9 -0.5
SMLA  Simla             153.57  80  eP         PKPdf    00 39 02.5 -0.1
KLR   Kul'dur           153.67 323    PKP      PKPdf    00 39 03.2 +1.0
      comp=Z,5.2nm,1.0s,baz=154,slow=8.6,SNR=5.4
KLR                                   PKPbc    pPKPbc   00 39 11.2 -0.8
      comp=Z,5.4nm,0.7s,baz=332,slow=2.5,SNR=6.9
PDGK  Podgornoye        153.81  52    PKIKP    PKPdf    00 39 01.8 -1.0
SHLS  Shalkode          153.85  52  ePKIKP     PKPdf    00 39 02.7 -0.1
SHLS  Shalkode          153.85  52  ePKP       PKPdf    00 39 02.8 -0.1
MAKZ  Makanchi          153.88  43             PKPdf    00 39 02.1 -0.5
MAKZ  Makanchi          153.88  43    PKIKP    PKPdf    00 39 02.1 -0.5
MAJO  Matsushiro        153.93 292             PKiKP    00 39 11.4 +0.3
MAJO  Matsushiro        153.93 292    IAMs_20  IAMs_20  01 40 56.4
      comp=Z,3µm,19.0s
MAJO  Matsushiro        153.93 292    PKIKP    PKiKP    00 39 11.4 +0.3
MAJO  Matsushiro        153.93 292    PKP      PKPdf    00 39 02.0 -1.0
MK31  Makanchi Array    154.07  43  i PKIKP    PKPdf    00 39 02.6 -0.3
MKAR  Makanchi Array    154.07  43             PKPdf    00 39 03.2 +0.3
MKAR  Makanchi Array    154.07  43    PKP      PKPdf    00 39 03.7 +0.8
      comp=Z,3.6nm,0.8s,baz=336,slow=2.7,SNR=17
MKAR                                  PKPbc    PKiKP    00 39 11.6 +0.6
      comp=Z,8.1nm,0.7s,baz=320,slow=1.2,SNR=24
MKAR                                  PKPab    PKPab    00 39 23.5 -1.1
      comp=Z,9.0nm,0.8s,baz=301,slow=3.5,SNR=11
DDI   Dehra Dun         154.24  82  eP         PKPdf    00 39 03.5 -0.2
KLP   Kalpa             154.53  79  eP         PKPdf    00 39 04.0 -0.4
INU   Inuyama           154.99 290    IAMs_20  IAMs_20  01 36 56.3
      comp=Z,4µm,22.0s
HEH   HeiHe             155.07 329    PKPbc    PKPdf    00 39 03.8 -0.3
HEH                                   PKPab    PKPab    00 39 29.4 +0.8
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HEH                                   PP       PP       00 43 07.3 +2.9
HEH                                   AMB      AMB
      comp=Z,2µm,10.4s
HEH                                   LR       LR
      comp=Z,1µm,22.4s
HEH                                   LR       LR
      comp=Z,3µm,22.9s
HEH                                   LR       LR
      comp=Z,4µm,21.7s
ZSN   Zaisan            155.18  39  ePKIKP     PKPdf    00 39 04.0 -0.4
ZSN   Zaisan            155.18  39  ePKP       PKPdf    00 39 04.1 -0.4
JOSI  Joshimath         155.55  82  eP         PKPdf    00 39 05.4 -0.3
USRK  Ussuriysk Ar.     156.29 313    PKP      PKPdf    00 39 06.7 +0.8
      comp=Z,2.1nm,0.9s,baz=85,slow=2.3,SNR=6.3
USRK                                  PKPab    PKPab    00 39 34.3 +0.3
      comp=Z,2.9nm,0.8s,baz=44,slow=6.6,SNR=4.5
JMN   Monobe            157.66 286    IAMs_20  IAMs_20  01 58 14.7
      comp=Z,3µm,20.0s
IRK   Irkutsk           157.69   6  ePKIKP     PKPdf    00 39 07.4 -0.1
IRK                                   pmax     pmax
      comp=Z,101nm,1.4s
MOY   Mondy             157.83  11  ePKIKP     PKPdf    00 39 09.3 +1.5
MOY                                   pmax     pmax
      comp=Z,99nm,2.3s
BNX   BinXian           158.15 321  ⇓PKP       PKPdf    00 39 07.9 -0.3
BNX                                   PP       PP       00 43 22.8 +1.1
BNX                                   SS       SS       01 03 23.5 +2.2
BNX                                   AMB      AMB
      comp=Z,2µm,10.3s
BNX                                   LR       LR
      comp=Z,3µm,19.6s
BNX                                   LR       LR
      comp=Z,2µm,17.2s
BNX                                   LR       LR
      comp=Z,4µm,19.6s
WMQ   Urumqi            158.89  44  ePKP                00 44 11.6
WMQ   Urumqi            158.89  44    PKP      PKPdf    00 39 10.6 +1.3
WMQ                                   PKPab    sPKPab   00 39 48.0 -0.1
WMQ                                   PP       PP       00 43 33.3 +7.2
WMQ                                   SKKS              00 50 12.8
WMQ                                   SS       SS       01 03 33.4 +3.8
WMQ                                   AMB      AMB
      comp=Z,4µm,11.7s
WMQ                                   LR       LR
      comp=Z,5µm,20.3s
WMQ                                   LR       LR
      comp=Z,6µm,20.3s
WMQ                                   LR       LR
      comp=Z,7µm,20.3s
WMQ   Urumqi            158.89  44    LR       LR
      comp=Z,7µm,18.7s
WMQ   Urumqi            158.89  44    LR       LR
      comp=E,3µm,16.7s
WMQ   Urumqi            158.89  44    LR       LR
      comp=N,4µm,16.7s
ZAK   Zakamensk         159.42   8  ePKIKP     PKPdf    00 39 09.8  0.0
ZAK                                   pmax     pmax
      comp=Z,13nm,1.9s
CN2   Changchun         160.45 319    PKP      PKPdf    00 39 11.5 +0.5
CN2                                   SS       SS       01 03 40.8 -4.9
CN2                                   AMB      AMB
      comp=Z,1µm,15.6s
CN2                                   LR       LR
      comp=Z,4µm,21.0s
CN2                                   LR       LR
      comp=Z,4µm,21.0s
CN2                                   LR       LR
      comp=Z,1µm,18.6s
HHU   Hamhung           161.19 307    PKPbc    PKPdf    00 39 09.5 -2.4
HHU                                   AmB
      comp=Z,6.1nm,1.0s
EVN   Everest           161.44  91    PKPab    PKPab    00 39 57.9 +0.1
KSRS  Korea Array       161.81 299    PKP      PKPdf    00 39 13.3 +0.7
      comp=Z,1.0nm,0.8s,baz=194,slow=2.1,SNR=6.2
KSRS                                  PKPab    sPKPab   00 40 00.9 -0.1
      comp=Z,3.2nm,1.0s,baz=94,slow=4.5,SNR=6.0
KSAR  Wonju Array Be    161.85 299             PKPdf    00 39 12.8 +0.1
KSAR  Wonju Array Be    161.85 299    PKIKP    PKPdf    00 39 12.8 +0.1
ULN   Ulaanbaatar       162.22   2    P        PKPdf    00 39 13.7 +0.8
SONM  Songino Array     162.23   3             PKPdf    00 39 13.2 +0.3
SONM                                  PKPab    sPKPab   00 40 02.5 -0.1
SONM  Songino Array     162.23   3    PKP      PKPdf    00 39 14.0 +1.1
      comp=Z,0.4nm,0.6s,baz=264,slow=3.0,SNR=7.6
SONM                                  PKPab    pPKPab   00 40 01.9 +0.1
      comp=Z,13nm,0.9s,baz=320,slow=1.7,SNR=13
SONM                                  PP       PP       00 43 43.1 -0.1
      comp=Z,6.3nm,1.2s,baz=345,slow=5.0,SNR=5.5
SONM  Songino Array     162.23   3    PKIKP    PKPdf    00 39 14.0 +1.1
SNY   Shenyang          162.75 317  ⇑PKP       PKPdf    00 39 13.4  0.0
SNY                                   SKKS              00 50 32.8
SNY                                   SS       SS       01 04 13.8 +3.9
SNY                                   AMB      AMB
      comp=Z,1µm,11.0s
SNY                                   LR       LR
      comp=Z,1µm,20.8s
SNY                                   LR       LR
      comp=Z,1µm,19.8s
SNY                                   LR       LR
      comp=Z,3µm,20.0s
PYAG  Pyongyang         162.80 306    PKPbc    PKPdf    00 39 13.1 -0.5
PYAG                                  PP       PP       00 43 50.8 +3.5
PYAG                                  AmB
      comp=Z,3.1nm,0.4s
PYAG                                  AMS      AMS
      comp=Z,330nm,7.6s
SUJ   Sinuiju           163.16 311    PKPbc    PKPdf    00 39 13.6 -0.3
SUJ                                   PP       PP       00 43 52.0 +3.0
SUJ                                   AmB
      comp=Z,22nm,1.6s
HJU   Haeju             163.24 303    PKPbc    PKPdf    00 39 13.7 -0.3
HJU                                   AMS      AMS
      comp=Z,1µm,11.0s
XLT   XiLinHaoTe        164.74 337  ePKP       PKPab    00 40 12.0 +1.1
XLT                                   sPKP              00 40 27.5
XLT                                   PKS      PP       00 43 57.5 +0.8
XLT                                   LR       LR
      comp=N,250nm,17.2s
XLT                                   LR       LR
      comp=E,3µm,19.0s
XLT                                   LR       LR
      comp=Z,3µm,20.1s
XLT   XiLinHaoTe        164.74 337  ePKP       PKPdf    00 39 15.1 -0.2
XLT                                   PP       PP       00 43 56.8 +0.1
XLT                                   SS       SS       01 04 30.3 +0.7
XLT                                   AMB      AMB
      comp=Z,2µm,14.5s
XLT                                   LR       LR
      comp=Z,3µm,19.4s
XLT                                   LR       LR
      comp=Z,3µm,20.6s
LSA   Lhasa             165.46  87    PKP      PKPdf    00 39 17.8 +0.9
LSA                                   LR       LR
      comp=Z,3µm,21.9s
LSA                                   LR       LR
      comp=Z,5µm,21.2s
LSA   Lhasa             165.46  87    PKPdf    PKPdf    00 39 18.0 +1.1
DL2   Dalian            165.67 312    PKP      PKPdf    00 39 13.6 -2.5
DL2                                   PP       PP       00 44 02.4 +0.2
DL2                                   SKKS              00 50 50.6
DL2                                   SS       SS       01 04 41.8 +1.6
DL2                                   AMB      AMB
      comp=Z,1µm,7.5s
DL2                                   LR       LR
      comp=Z,4µm,18.5s
DL2                                   LR       LR
      comp=Z,2µm,18.0s
DL2                                   LR       LR
      comp=Z,5µm,18.6s
CMAR  Chiang Mai Arr    165.85 143    PKP      PKPdf    00 39 18.4 +1.4
      comp=Z,1.1nm,0.3s,baz=236,slow=2.4,SNR=7.2
CMAR                                  PKPab    PKPab    00 40 15.6 -0.8
      comp=Z,1.8nm,0.3s,baz=228,slow=3.9,SNR=7.3
CHTO  Chiang Mai        166.15 142    PKPdf    PKPdf    00 39 17.1  0.0
CHTO                                  PKPab    PKPab    00 40 17.4 -0.2
CHTO  Chiang Mai        166.15 142    P        PKPdf    00 39 18.1 +0.9
CHTO  Chiang Mai        166.15 142    PKIKP    PKPdf    00 39 17.1  0.0
CHTO                                                    00 40 17.4
GOMU  GeErMu            167.46  57    PKP      PKPdf    00 39 19.0 +0.9
GOMU                                  sPKP              00 39 23.1
GOMU                                  PP       PP       00 44 11.1 -1.1
GOMU                                  SKKS              00 50 59.0
GOMU                                  AMB      AMB
      comp=Z,4µm,7.7s
GOMU                                  LR       LR
      comp=Z,5µm,17.1s
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GOMU				LR	LR		
	comp=Z,6µm,17.9s						
GOMU				LR	LR		
	comp=Z,7µm,17.4s						
BJI	**Beijing**	**167.97**	**328**	PKP	**PKPdf**	**00 39 18.4**	**+0.6**
BJI				PKS		00 42 50.0	
BJI				PP	**PP**	**00 44 18.5**	**+5.0**
BJI				SKKS		00 51 03.6	
BJI				SS	**SS**	**01 05 06.5**	**+4.0**
BJI				AMB	AMB		
	comp=Z,1µm,11.4s						
BJI				LR	LR		
	comp=Z,2µm,18.2s						
BJI				LR	LR		
	comp=Z,1µm,17.3s						
BJI				LR	LR		
	comp=Z,3µm,19.1s						
SSE	**Sheshan**	**168.50**	**278**	PKP	**PKPdf**	**00 39 17.0**	**-1.5**
SSE				PP	**PP**	**00 44 17.0**	**-0.6**
SSE				SS	SS	01 05 11.0	+0.6
SSE				AMB	AMB		
	comp=Z,710nm,9.4s						
SSE				LR	LR		
	comp=Z,2µm,21.2s						
SSE				LR	LR		
	comp=Z,1µm,21.3s						
GTA	**Gaotai**	**168.56**	**33**	PKP	**PKPdf**	**00 39 19.6**	**+1.1**
GTA				PKPab	**pPKPab**	**00 40 29.1**	**-0.9**
GTA				PP	**PP**	**00 44 16.1**	**-0.6**
GTA				SKKS		00 50 59.0	
GTA				SS	**SS**	**01 05 06.0**	**-2.9**
GTA				AMB	AMB		
	comp=Z,4µm,6.8s						
GTA				LR	LR		
	comp=Z,2µm,23.6s						
GTA				LR	LR		
	comp=Z,4µm,23.6s						
GTA				LR	LR		
	comp=Z,6µm,22.2s						
HHC	**Hu-ho-hao-te**	**168.84**	**345**	*e*P	**PP**	**00 44 17.3**	**-0.3**
HHC	**Hu-ho-hao-te**	**168.84**	**345**	*e*PKP	**PKPdf**	**00 39 15.4**	**-3.2**
HHC				PP	**PP**	**00 44 18.1**	**+0.5**
HHC				SS	SS	01 05 07.5	-3.3
HHC				AMB	AMB		
	comp=Z,1µm,7.1s						
HHC				LR	LR		
	comp=Z,6µm,20.1s						
HHC				LR	LR		
	comp=Z,3µm,20.1s						
HHC				LR	LR		
	comp=Z,6µm,20.2s						
QIZ	**Qiongzhong**	**168.86**	**190**	PKP	**PKPdf**	**00 39 20.1**	**+1.0**
QIZ				PP	**PP**	**00 44 21.8**	**+4.3**
QIZ				SS	SS	01 05 12.4	+1.8
QIZ				AMB	AMB		
	comp=Z,1µm,11.0s						
QIZ				LR	LR		
	comp=Z,2µm,19.4s						
QIZ				LR	LR		
	comp=Z,4µm,18.6s						
QZH	**Quanzhou**	**169.22**	**244**	PKP	**PKPdf**	**00 39 20.3**	**+1.2**
QZH				PP	**PP**	**00 44 22.0**	**+1.1**
QZH				LR	LR		
	comp=Z,2µm,16.5s						
QZH				LR	LR		
	comp=Z,4µm,18.9s						
QZH				LR	LR		
	comp=Z,6µm,16.7s						
BTO	**Baotou**	**169.35**	**351**	*e*PKP	**PKPdf**	**00 39 14.3**	**-4.6**
BTO				AMB	AMB		
	comp=Z,4µm,8.4s						
BTO				LR	LR		
	comp=Z,10µm,18.4s						
BTO				LR	LR		
	comp=Z,4µm,17.8s						
BTO				LR	LR		
	comp=Z,13µm,18.4s						
TIA	**Tai'an**	**170.14**	**311**	PKP	**PKPdf**	**00 39 20.1**	**+0.7**
TIA				PP	**PP**	**00 44 27.0**	**+1.9**
TIA				SKKS		00 51 13.3	
TIA				AMB	AMB		
	comp=Z,2µm,6.9s						
TIA				LR	LR		
	comp=Z,3µm,21.0s						
TIA				LR	LR		
	comp=Z,3µm,18.2s						
TIA				LR	LR		
	comp=Z,2µm,23.9s						
TNCH	**TengChong**	**170.28**	**119**	⇑*i*PKP	**PKPdf**	**00 39 21.3**	**+1.3**
TNCH				PKPab	**pPKPab**	**00 40 37.9**	**-0.3**
TNCH				PP	**PP**	**00 44 27.5**	**+1.1**
TNCH				AMB	AMB		
	comp=Z,4µm,11.1s						
TNCH				LR	LR		
	comp=Z,2µm,21.6s						
TNCH				LR	LR		
	comp=Z,1µm,23.1s						
TNCH				LR	LR		
	comp=Z,8µm,27.3s						
NJ2	**Nanjing**	**170.40**	**285**	*e*P	**PP**	**00 44 21.4**	**-5.7**
NJ2	**Nanjing**	**170.40**	**285**	⇑PKP	**PKPdf**	**00 39 19.0**	**-0.6**
NJ2				PP	**PP**	**00 44 28.8**	**+1.7**
NJ2				SKKS		00 51 14.8	
NJ2				AMB	AMB		
	comp=Z,2µm,8.3s						
NJ2				LR	LR		
	comp=Z,4µm,21.3s						
NJ2				LR	LR		
	comp=Z,3µm,18.7s						
NJ2				LR	LR		
	comp=Z,5µm,18.7s						
HNS	**HongShan**	**170.76**	**324**	⇑PKP	**PKPdf**	**00 39 21.0**	**+1.4**
HNS				PKPab	**sPKPab**	**00 40 42.8**	**+2.5**
HNS				PKS	**PKSdf**	**00 42 51.8**	**-0.2**
HNS				PP	**PP**	**00 44 29.8**	**+2.1**
HNS				SKKS		00 51 12.4	
HNS				SS	**SS**	**01 05 30.0**	**-0.5**
HNS				AMB	AMB		
	comp=Z,2µm,7.9s						
HNS				LR	LR		
	comp=Z,5µm,19.5s						
HNS				LR	LR		
	comp=Z,3µm,19.1s						
HNS				LR	LR		
	comp=Z,5µm,19.0s						
TIY	**Taiyuan**	**171.50**	**335**	*e*PKP	**PKPdf**	**00 39 21.1**	**+1.0**
TIY				PP	**PP**	**00 44 31.1**	**-0.1**
TIY				SS	SS	01 05 38.0	+0.6
TIY				AMB	AMB		
	comp=Z,2µm,9.8s						
TIY				LR	LR		
	comp=Z,3µm,23.4s						
TIY				LR	LR		
	comp=Z,4µm,23.4s						
TIY				LR	LR		
	comp=Z,3µm,22.0s						
GZH	**Guangzhou**	**171.50**	**216**	⇓PKP	**PKPdf**	**00 39 21.1**	**+0.7**
GZH				PP	**PP**	**00 44 37.0**	**+5.6**
GZH				SS	SS	01 05 44.9	+7.0
GZH				LR	LR		
	comp=Z,3µm,16.1s						
GZH				LR	LR		
	comp=Z,4µm,18.9s						
GZH				LR	LR		
	comp=Z,7µm,19.6s						
LZH	**Lanzhou**	**173.11**	**28**	PKP	**PKPdf**	**00 39 22.5**	**+1.5**
LZH				PP	**PP**	**00 44 38.8**	**-0.5**
LZH				SKKS		00 51 29.9	
LZH				SS	**SS**	**01 05 49.4**	**-4.1**
LZH				AMB	AMB		
	comp=Z,3µm,6.7s						
LZH				LR	LR		
	comp=Z,2µm,19.2s						
LZH				LR	LR		
	comp=Z,4µm,18.2s						
LZH				LR	LR		
	comp=Z,8µm,22.2s						
KMI	**Kunming**	**173.27**	**136**	⇑PKP	**PKPdf**	**00 39 22.4**	**+0.9**
PZH	**PanZhiHua**	**173.51**	**122**	PKP		00 44 42.0	
PZH	**PanZhiHua**	**173.51**	**122**	PKP	**PKPdf**	**00 39 22.5**	**+1.1**
PZH				PKPab	**PKPab**	**00 40 48.8**	**-1.6**
PZH				PP	**PP**	**00 44 46.9**	**+4.7**
PZH				SKKS		00 51 29.0	
PZH				SS	**SS**	**01 05 51.8**	**-7.4**
PZH				AMB	AMB		
	comp=Z,4µm,9.4s						
PZH				LR	LR		
	comp=Z,2µm,21.9s						
PZH				LR	LR		
	comp=Z,3µm,20.6s						
PZH				LR	LR		
	comp=Z,3µm,20.7s						
LYN	**LuoYang**	**174.09**	**320**	PKP	**PKPdf**	**00 39 21.8**	**+0.6**
LYN				PKPab	**PKPab**	**00 40 53.3**	**+0.8**
LYN				PP	**PP**	**00 44 45.6**	**+1.3**
LYN				SKKS		00 51 33.8	
LYN				AMB	AMB		
	comp=Z,4µm,10.3s						
LYN				LR	LR		
	comp=Z,7µm,18.9s						
LYN				LR	LR		
	comp=Z,5µm,16.5s						
LYN				LR	LR		
	comp=Z,11µm,19.2s						
WHN	**Wuhan**	**174.40**	**276**	⇑PKP	**PKPdf**	**00 39 22.3**	**+0.9**
WHN				PP	**PP**	**00 44 50.3**	**+3.4**
WHN				SKKS		00 51 35.0	
WHN				LR	LR		
	comp=Z,11µm,16.7s						
WHN				LR	LR		
	comp=Z,10µm,17.1s						
WHN				LR	LR		
	comp=Z,20µm,18.1s						
GULI	**GuiLin**	**174.76**	**205**	⇑PKP	**PKPdf**	**00 39 15.0**	**-6.7**
GULI				PP	**PP**	**00 44 49.3**	**+2.3**
GULI				LR	LR		
	comp=Z,2µm,20.6s						
GULI				LR	LR		
	comp=Z,2µm,22.8s						
GULI				LR	LR		
	comp=Z,6µm,21.2s						
CNSH	**ChangSha**	**175.21**	**248**	PKP	**PKPdf**	**00 39 22.9**	**+1.2**
CNSH				SKKS		00 51 38.5	
CNSH				AMB	AMB		
	comp=Z,4µm,11.0s						
CNSH				LR	LR		
	comp=Z,2µm,18.6s						
CNSH				LR	LR		
	comp=Z,3µm,16.7s						
CNSH				LR	LR		
	comp=Z,4µm,17.6s						
XAN	**Xi'an**	**175.95**	**348**	PKP	**PKPdf**	**00 39 22.3**	**+0.5**
XAN				PKPab	**PKPab**	**00 41 01.5**	**+0.8**
XAN				PP	**PP**	**00 44 53.0**	**+0.5**
XAN				SKKS		00 51 38.8	
XAN				SS	**SS**	**01 06 20.8**	**+0.9**
XAN				AMB	AMB		
	comp=Z,7µm,14.4s						
XAN				LR	LR		
	comp=Z,5µm,16.7s						
XAN				LR	LR		
	comp=Z,6µm,16.3s						
XAN				LR	LR		
	comp=Z,7µm,18.0s						
GYA	**Guiyang**	**176.24**	**163**	⇑PKP	**PKPdf**	**00 39 23.3**	**+1.1**
GYA				PP	**PP**	**00 44 53.8**	**-0.3**
GYA				SKKS		00 51 41.4	
GYA				AMB	AMB		
	comp=Z,5µm,15.0s						
GYA				LR	LR		
	comp=Z,2µm,17.6s						
GYA				LR	LR		
	comp=Z,2µm,15.8s						
GYA				LR	LR		
	comp=Z,5µm,18.8s						
CD2	**Chengdu**	**176.33**	**76**	PKP	**PKPdf**	**00 39 23.4**	**+1.4**
CD2				sPKP		00 39 30.3	
CD2				PP	**PP**	**00 44 54.4**	**-1.8**
CD2				SKKS		00 51 42.1	
CD2				AMB	AMB		
	comp=Z,13µm,10.4s						
CD2				LR	LR		
	comp=Z,6µm,18.6s						
CD2				LR	LR		
	comp=Z,4µm,19.6s						
CD2				LR	LR		
	comp=Z,8µm,23.0s						

ROM 14 00:20:01.8±0.1**, 42°.899N**±0°.003×**13°.162E**±0°.004**,**
h12^{km}, ML0.7/10**, Error ellipse: s-maj=0.3km**
s-min=0.0km az=64.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.03**	**56**	P	Pg	00 20 04.4	+0.2
MC2				S	Sg	00 20 06.2	+0.3
NRCA	**Norcia**	**0.07**	**208**	P	Pg	00 20 04.6	+0.3
NRCA				S	Sg	00 20 06.6	+0.3
NRCA				AML	AML		
	comp=E,471µm,0.9s						
NRCA				AML	AML		
	comp=N,713µm,0.1s						
NRCA				AML	AML		
	comp=E,375µm,0.2s						
NRCA				AML	AML		
	comp=N,652µm,0.1s						
NRCA				AML	AML		
	comp=N,713µm,0.1s						
NRCA				AML	AML		
	comp=E,445µm,0.1s						
FEMA	**Monte Fema**	**0.10**	**308**	P	Pg	00 20 05.3	+0.5
FEMA				S	Sg	00 20 07.5	+0.5
MMO1	**Montemonaco**	**0.12**	**90**	P	Pg	00 20 05.1	+0.1
MMO1				S	Sg	00 20 07.6	+0.3
FDMO	**Fiordimonte**	**0.15**	**338**	P	Pg	00 20 05.5	+0.2
FDMO				S	Sg	00 20 08.4	+0.5
FDMO				AML	AML		
	comp=E,45µm,0.7s						
FDMO				AML	AML		
	comp=N,84µm,0.2s						
FDMO				AML	AML		
	comp=E,44µm,0.1s						
FDMO				AML	AML		
	comp=N,84µm,0.2s						
MTCL	**Monte Cavallo**	**0.15**	**309**	P	Pg	00 20 05.7	+0.3
MTCL				S	Sg	00 20 08.6	+0.6
CSP1	**Cessapalombo**	**0.20**	**9**	P	Pg	00 20 06.3	+0.2
CSP1				S	Sg	00 20 09.8	+0.6
CSP1				AML	AML		
	comp=N,17µm,0.3s						
CSP1				AML	AML		
	comp=E,32µm,0.5s						
GUMA	**Gualdo di Mace**	**0.21**	**38**	P	Pg	00 20 06.7	+0.4
GUMA				S	Sg	00 20 10.7	+1.3
CESI	**CESI - Serrava**	**0.22**	**299**	P	Pg	00 20 06.8	+0.4
CESI				S	Sg	00 20 10.8	+1.1
CESI				AML	AML		
	comp=E,22µm,1.4s						
CESI				AML	AML		
	comp=N,31µm,0.5s						
CESI				AML	AML		
	comp=N,28µm,0.1s						
CESI				AML	AML		
	comp=E,14µm,0.1s						
MTRA	**Matera**	**0.22**	**129**	P	Pg	00 20 06.7	+0.2
MTRA				S	Sg	00 20 10.6	+0.8
MTRA				AML	AML		
	comp=E,52µm,0.2s						
MTRA				AML	AML		
	comp=N,39µm,0.1s						
MTRA				AML	AML		
	comp=N,39µm,0.1s						
MTRA				AML	AML		
	comp=E,52µm,0.2s						
MF5	**Montefalcone A**	**0.24**	**68**	P	Pg	00 20 07.3	+0.5
MF5				S	Sg	00 20 11.5	+1.3
PF6	**Pievefavera**	**0.25**	**5**	P	Pg	00 20 06.9	-0.1
PF6				S	Sg	00 20 11.0	+0.4
MML1	**Montelago di S**	**0.26**	**327**	P	Pg	00 20 07.3	+0.2
MML1				S	Sb	00 20 11.9	-0.9
SAP2	**Sant'Angelo in**	**0.26**	**41**	P	Pb	00 20 08.1	-0.3
SAP2				S	Sb	00 20 12.4	-0.5
GAVE	**Gavelli**	**0.28**	**224**	P	Pb	00 20 08.4	-0.5
GAVE				S	Sb	00 20 12.7	-1.0
SMA1	**SAN MARTINO**	**0.30**	**154**	P	Pg	00 20 08.0	+0.2
SMA1				S	Sg	00 20 12.9	+0.9
SMA1				AML	AML		
	comp=E,20µm,1.1s						
SMA1				AML	AML		
	comp=N,26µm,1.1s						
SMA1				AML	AML		
	comp=E,9µm,0.1s						
SMA1				AML	AML		
	comp=N,16µm,0.2s						
LNSS	**Leonessa**	**0.31**	**197**	P	Pg	00 20 08.3	+0.2
LNSS				S	Sb	00 20 13.9	-0.4
MNTT	**Montottone**	**0.36**	**63**	P	Pb	00 20 09.6	-0.5
RM33	**Pellescritta (**	**0.39**	**174**	P	Pg	00 20 09.7	+0.2
EL6	**Elcito**	**0.43**	**354**	P	Pg	00 20 10.4	0.0

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*TIR **14** 00:20:57.6, 41°.20N×20°.84E, h8^{km}±2^{km}, Ml3.7/3*
*PRU **14** 00:20:57.0, 40°.49N×20°.53E, h10^{km}*
*SKO **14** 00:20:58.8, 41°.15N×20°.71E, h17^{km}, ML3.7*
*MCSM **14** 00:20:59.9±0.4, 41°N±4°×2°1E±°, h5^{km}, mb3.9, mB4.6, MLv4.0, Mw(mB)3.8*
*PDG **14** 00:20:59.4±0.6, 41°.16N×20°.77E, h9^{km}±1^{km}, MD3.9/5, ML3.8/11, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
*ATH **14** 00:20:59.4, 41°.26N×20°.84E, h4^{km}±1^{km}, ML3.8/8, Manual Solution by A.Moschou First location: 2019/06/14 00:22:10, This location: 2020/10/13 04:54:10 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*BEO **14** 00:21:00.5±0.2, 41°.21N×20°.78E, h0^{km}, ML3.6/25*
*THE **14** 00:21:01.1, 41°N±2°×2°1E±°, h0^{km}±1^{km}, M3.5/16, MLh3.5/16*
*IDC **14** 00:21:02.5±1.6, 41°.55N×20°.69E, h0^{km}, mb3.4/6, mbtmp3.5/14, ML3.3/8, Error ellipse: s-maj=20.9km s-min=12.3km az=14.0*
*NAO **14** 00:21:02.1, 41°.13N×20°.80E, h10^{km}, mb2.8*
ISC 14 00:21:00.3±0.8**, 41°.18N**±0°.01×**20°.76E**±0°.02**, h6**^{km}±5^{km}**,**
n248, σ1s.25/334**, mb3.5**/4**, 35C-21D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.08**	**157**	P	**Pg**	**00 21 01.9**	**-0.3**
OHR				S	**Sg**	**00 21 03.3**	**-0.2**
OHR	**Ohrid**	**0.08**	**157**	⇑*i*Pg	**Pg**	**00 21 02.1**	**-0.1**
OHR				*i* Sg	**Sg**	**00 21 03.8**	**+0.3**
OHR				*e*Lg	Lg	00 21 03.9	
	comp=N,80µm,0.3s						
OHR				*e*Lg	Lg	00 21 04.1	
	comp=E,100µm,0.5s						
OHR	**Ohrid**	**0.08**	**157**	*e*Pg	**Pg**	**00 21 01.3**	**-0.9**
OHR				*e*Sg	**Sg**	**00 21 03.7**	**+0.3**
KBN	**Korca**	**0.56**	**178**	⇓*i*Pg	**Pg**	**00 21 09.4**	**-1.7**
KBN				Sg	**Sg**	**00 21 17.2**	**-1.2**
KBN				AML	AML	00 21 25.8	
	comp=E,20nm,0.8s						
TIR	**Tirane**	**0.69**	**284**	P	**Pg**	**00 21 12.2**	**-1.4**
TIR				S	**Sg**	**00 21 23.6**	**+0.9**
TIR				AML	AML	00 21 29.4	
	comp=E,9.6nm,0.5s						
TIR	**Tirane**	**0.69**	**284**	Pn	**Pg**	**00 21 12.0**	**-1.6**
TIR				Sn	**Sg**	**00 21 23.5**	**+0.9**
TIR				AML	AML	00 21 29.4	
	comp=E,9.6nm,0.5s						
TIR	**Tirane**	**0.69**	**284**	⇑P	**Pg**	**00 21 12.2**	**-1.4**
TIR				⇓S	**Sg**	**00 21 20.6**	**-2.0**
TIR	**Tirane**	**0.69**	**284**	⇑*i*Pg	**Pg**	**00 21 12.1**	**-1.6**
TIR				*i* Sg	**Sg**	**00 21 23.5**	**+0.9**
TIR	**Tirane**	**0.69**	**284**	*e*Pg	**Pg**	**00 21 12.0**	**-1.6**
TIR				*e*Sg	**Sg**	**00 21 23.3**	**+0.6**
TIR	**Tirane**	**0.69**	**284**	P	**Pg**	**00 21 11.8**	**-1.8**
TIR	**Tirane**	**0.69**	**284**	P	**Pg**	**00 21 12.7**	**-1.0**
TIR				S	**Sg**	**00 21 23.3**	**+0.6**
NEST	**Nestorio**	**0.80**	**164**	P	**Pg**	**00 21 14.0**	**-1.7**
NEST				S	**Sg**	**00 21 25.4**	**-0.6**
NEST				AML	AML	00 21 31.2	
	comp=E,12nm,0.5s						
NEST	**Nestorio**	**0.80**	**164**	Pn	**Pg**	**00 21 14.0**	**-1.7**
NEST				Sn	**Sg**	**00 21 25.6**	**-0.4**
NEST				AML	AML	00 21 31.2	
	comp=E,12nm,0.5s						
NEST	**Nestorio**	**0.80**	**164**	P	**Pg**	**00 21 13.9**	**-1.7**
NEST				S	**Sg**	**00 21 25.4**	**-0.6**
NEST	**Nestorio**	**0.80**	**164**	P	**Pg**	**00 21 15.0**	**-0.6**
NEST				S	**Sb**	**00 21 27.7**	**0.0**
SKO	**Skopje**	**0.94**	**33**	⇑*i*Pg	**Pg**	**00 21 18.0**	**-0.3**
SKO				*i* Sg	**Sb**	**00 21 31.9**	**+0.1**
PENT	**Pentalofos**	**1.03**	**164**	P	**Pg**	**00 21 18.5**	**-1.5**
PENT				S	**Sb**	**00 21 34.2**	**-0.1**
PENT	**Pentalofos**	**1.03**	**164**	P	**Pg**	**00 21 19.1**	**-0.9**
PENT				S	**Sb**	**00 21 34.7**	**+0.4**
PUK	**Puka**	**1.08**	**323**	P	**Pg**	**00 21 19.4**	**-1.6**
PUK				S	**Sb**	**00 21 35.8**	**0.0**
PUK				AML	AML	00 21 39.1	
	comp=E,18nm,0.4s						
PUK	**Puka**	**1.08**	**323**	Pn	**Pg**	**00 21 19.1**	**-1.9**
PUK				Sn	**Sb**	**00 21 35.6**	**-0.2**
PUK				AML	AML	00 21 41.7	
	comp=E,18nm,0.4s						
NASA	**Naoussa**	**1.13**	**119**	P	**Pg**	**00 21 21.1**	**-0.9**
NASA				S	**Sg**	**00 21 35.7**	**-1.1**
KZN	**Kozani**	**1.17**	**138**	P	**Pg**	**00 21 21.5**	**-1.1**
KZN				S	**Sg**	**00 21 37.6**	**-0.1**
BCI	**Bajram Curri**	**1.29**	**337**	P	**Pn**	**00 21 23.3**	**-1.6**
BCI				S	**Sg**	**00 21 41.7**	**-0.1**
KPRO	**Kipourio**	**1.31**	**159**	P	**Pn**	**00 21 24.0**	**-1.2**
KPRO				S	**Sn**	**00 21 43.6**	**+0.5**
KPRO	**Kipourio**	**1.31**	**159**	P	**Pn**	**00 21 24.1**	**-1.1**
KPRO				S	**Sg**	**00 21 42.5**	**+0.1**
VAY	**Valandovo**	**1.37**	**84**	⇑*i*Pg	**Pn**	**00 21 25.1**	**-0.9**
VAY				*i* Sg	**Sg**	**00 21 45.3**	**+0.9**
VAY				*e*Lg	Lg	00 21 47.3	
	comp=N,1µm,0.9s						
VAY				*e*Lg	Lg	00 21 48.8	
	comp=E,1µm,1.1s						
VAY	**Valandovo**	**1.37**	**84**	*e*Pg	**Pn**	**00 21 25.1**	**-0.9**
VAY				*e*Sg	**Sg**	**00 21 45.0**	**+0.6**
ULC	**Ulcinj**	**1.38**	**305**	P	**Pn**	**00 21 24.6**	**-1.6**
ULC	**Ulcinj**	**1.38**	**305**	Pn	**Pn**	**00 21 24.6**	**-1.6**
ULC	**Ulcinj**	**1.38**	**305**	⇓*i*Pg	**Pn**	**00 21 24.6**	**-1.6**
ULC	**Ulcinj**	**1.38**	**305**	⇓*i*Pg	**Pn**	**00 21 24.5**	**-1.6**
ULC				*i* Sg	**Sn**	**00 21 46.3**	**+1.6**
SRN	**Sarande**	**1.42**	**204**	P	**Pn**	**00 21 25.7**	**-1.0**
SRN				S	**Sg**	**00 21 48.2**	**+2.2**
SRN	**Sarande**	**1.42**	**204**	Pn	**Pn**	**00 21 25.5**	**-1.2**
SRN				Sn	**Sg**	**00 21 47.5**	**+1.5**
SRN				AML	AML	00 21 52.0	
	comp=E,4.0nm,0.8s						
MSVA	**Metsovo**	**1.45**	**167**	P	**Pn**	**00 21 27.1**	**0.0**
MSVA				S	**Sg**	**00 21 47.1**	**+0.3**
JAN	**Janina**	**1.53**	**177**	P	**Pn**	**00 21 26.7**	**-1.4**
JAN				S	**Sg**	**00 21 49.9**	**+0.6**
JAN	**Janina**	**1.53**	**177**	P	**Pb**	**00 21 28.6**	**-0.4**
JAN				S	**Sg**	**00 21 50.2**	**+0.9**
PVY	**Plav**	**1.53**	**337**	*e*Pg	**Pn**	**00 21 28.4**	**+0.1**
PVY				*i* Sg	**Sg**	**00 21 51.7**	**+2.1**
DRME	**Dracevica, Mon**	**1.55**	**311**	Pn	**Pn**	**00 21 28.0**	**-0.5**
DRME	**Dracevica, Mon**	**1.55**	**311**	*e*Pn	**Pn**	**00 21 27.7**	**-0.7**
DRME	**Dracevica, Mon**	**1.55**	**311**	*e*Pg	**Pn**	**00 21 27.9**	**-0.5**
DRME	**Dracevica, Mon**	**1.55**	**311**	⇓*i*Pg	**Pn**	**00 21 27.9**	**-0.5**
DRME				*e*Sg	**Sg**	**00 21 52.1**	**+2.0**
KNT	**Kendrikon**	**1.61**	**90**	P	**Pn**	**00 21 29.0**	**-0.3**
KNT				S	**Sb**	**00 21 51.1**	**0.0**
KNT	**Kendrikon**	**1.61**	**90**	⇑*i*Pg	**Pn**	**00 21 28.8**	**-0.6**
KNT				*i* Sg	**Sg**	**00 21 54.5**	**+2.3**
KNT	**Kendrikon**	**1.61**	**90**	P	**Pn**	**00 21 28.1**	**-1.2**
KNT				S	**Sn**	**00 21 47.5**	**-3.0**
KEK	**Kerkira**	**1.64**	**207**	P	**Pb**	**00 21 30.7**	**-0.2**
PDG	**Podgorica**	**1.68**	**318**	*e*Pn	**Pn**	**00 21 30.0**	**-0.1**
PDG	**Podgorica**	**1.68**	**318**	⇓P	**Pn**	**00 21 30.1**	**-0.1**
PDG				⇑S	**Sn**	**00 21 51.1**	**-1.0**
PDG	**Podgorica**	**1.68**	**318**	*e*Pg	**Pn**	**00 21 30.2**	**0.0**
PDG	**Podgorica**	**1.68**	**318**	⇓*i*Pn	**Pn**	**00 21 30.1**	**-0.1**
PDG				*i* Sn	**Sg**	**00 21 55.6**	**+1.4**
PDG	**Podgorica**	**1.68**	**318**	P	**Pn**	**00 21 28.8**	**-1.4**
PDG				S	**Sn**	**00 21 49.3**	**-2.7**
IGT	**Igoumenitsa**	**1.68**	**191**	P	**Pb**	**00 21 31.4**	**-0.2**
IGT				S	**Sg**	**00 21 56.5**	**+2.2**
IGT	**Igoumenitsa**	**1.68**	**191**	Pn	**Pn**	**00 21 30.4**	**+0.1**
IGT				Sn	**Sg**	**00 21 54.8**	**+0.5**
IGT				AML	AML	00 22 03.7	
	comp=E,2.6nm,0.9s						
IGT	**Igoumenitsa**	**1.68**	**191**	P	**Pn**	**00 21 30.3**	**+0.1**
IGT	**Igoumenitsa**	**1.68**	**191**	⇑*i*Pg	**Pn**	**00 21 30.2**	**0.0**

IGT				*i* Sg	Sg	00 21 57.0	+2.7
IGT	Igoumenitsa	1.68	191	*e*Pn	Pn	00 21 30.4	+0.1
IGT				*e*Sn	Sg	00 21 56.3	+2.0
IGT	Igoumenitsa	1.68	191	P	Pb	00 21 30.9	-0.7
THE	Thessaloniki	1.76	107	P	Pn	00 21 30.6	-0.7
THE				S	Sn	00 21 54.1	+0.1
THE	Thessaloniki	1.76	107	P	Pn	00 21 30.6	-0.7
THE				S	Sn	00 21 54.3	+0.3
THE	Thessaloniki	1.76	107	P	Pn	00 21 30.8	-0.5
THE				S	Sn	00 21 52.8	-1.2
THE	Thessaloniki	1.76	107	⇑*e*Pg	Pn	00 21 30.7	-0.7
THE				*i* Sg	Sn	00 21 54.4	+0.3
THE	Thessaloniki	1.76	107	P	Pn	00 21 30.6	-0.7
THE				S	Sn	00 21 52.4	-1.6
BUM	Brajici-Budva	1.79	309	P	Pn	00 21 32.1	+0.3
BUM	Brajici-Budva	1.79	309	Pn	Pn	00 21 32.1	+0.3
BUM	Brajici-Budva	1.79	309	⇓*i*Pn	Pn	00 21 32.1	+0.3
BUM				*e*Sn	Sg	00 21 58.1	+0.3
BEY	Berane	1.81	339	Pn	Pb	00 21 33.3	-0.5
BEY	Berane	1.81	339	⇑*i*Pn	Pn	00 21 32.8	+0.8
IVA	Berane	1.81	339	⇓*i*Pn	Pn	00 21 32.8	+0.8
BARS	Barje	1.81	25	*i* Pn	Pn	00 21 32.4	+0.4
BARS				*e*Sn	Sg	00 21 58.4	-0.2
BARS	Barje	1.81	25	*e*Pn	Pn	00 21 32.5	+0.4
BARS				*e*Sn	Sb	00 21 56.6	-0.3
BOSS	Bosilegrad	1.84	44	*e*Pn	Pn	00 21 32.7	+0.3
BOSS				*e*Sn	Sn	00 21 56.5	+0.5
TYRN	Tyrnavos	1.85	142	P	Pn	00 21 32.3	-0.3
TYRN				S	Sn	00 21 56.5	+0.3
HORT	Hortiatis	1.87	107	P	Pn	00 21 32.3	-0.6
THL	Klokotos Trika	1.88	149	P	Pn	00 21 32.7	-0.2
THL				S	Sn	00 21 57.2	+0.2
KKB	Krupnik	1.90	69	⇑*i*Pn	Pn	00 21 33.4	+0.2
KKB				*e*Sn	Sb	00 21 59.8	+0.5
KOME	Kolasin	1.91	331	P	Pn	00 21 33.9	+0.4
KOME	Kolasin	1.91	331	Pn	Pn	00 21 34.5	+1.0
KOME	Kolasin	1.91	331	*e*Pn	Pn	00 21 33.9	+0.4
KOME	Kolasin	1.91	331	*e*Pn	Pn	00 21 33.8	+0.4
KOME				*i* Sn	Sg	00 22 00.7	-0.9
CEME	Cevo	1.94	315	P	Pn	00 21 34.4	+0.6
CEME	Cevo	1.94	315	Pn	Pn	00 21 34.5	+0.6
CEME	Cevo	1.94	315	⇑*i*Pn	Pn	00 21 34.2	+0.4
CEME				*e*Sn	Sb	00 22 01.5	+1.0
SELS	Selova	2.05	7	*e*Pn	Pn	00 21 35.8	+0.4
SCTE	Santa Cesarea	2.07	238	P	Pn	00 21 35.0	-0.6
SCTE				S	Sb	00 22 04.0	-0.1
HCY	Herceg Novi	2.11	307	P	Pb	00 21 38.0	-0.9
HCY	Herceg Novi	2.11	307	Pn	Pb	00 21 38.1	-0.9
HCY	Herceg Novi	2.11	307	*e*Pn	Pn	00 21 36.8	+0.6
HCY	Herceg Novi	2.11	307	*e*Pn	Pn	00 21 36.6	+0.4
HCY				*e*Sn	Sb	00 22 06.6	+1.1
SRS	Serrai	2.14	91	P	Pn	00 21 36.0	-0.5
SRS	Serrai	2.14	91	⇑*i*Pn	Pn	00 21 36.1	-0.5
SRS				*e*Sn	Sn	00 22 04.4	+0.9
SRS	Serrai	2.14	91	*e*Pn	Pn	00 21 36.1	-0.5
SJES	Sjenica	2.16	345	*e*Pn	Pn	00 21 37.9	+1.0
SJES	Sjenica	2.16	345	*e*Pn	Pn	00 21 37.9	+1.0
MMB	Musomishta	2.28	80	P	Pn	00 21 38.4	-0.1
MMB	Musomishta	2.28	80	⇑*i*Pn	Pn	00 21 38.4	-0.1
VTS	Vitosha	2.34	51	*e*Pn	Pn	00 21 39.9	+0.5
TREB	Trebinje	2.36	311	*e*Pn	Pn	00 21 40.7	+1.1
PLE	Pljevlja	2.38	335	Pn	Pb	00 21 42.1	-1.5
PLE	Pljevlja	2.38	335	*e*Pn	Pn	00 21 41.6	+1.7
PLE				*i* Sn	Sb	00 22 12.2	-0.9
GOCS	Kraljevo Serbi	2.38	2	*e*Pn	Pn	00 21 40.1	+0.2
BRY	Bratogost	2.38	317	Pn	Pn	00 21 41.8	+1.8
BRY	Bratogost	2.38	317	*e*Pn	Pn	00 21 41.8	+1.8
BRY	Bratogost	2.38	317	⇓*i*Pn	Pn	00 21 41.2	+1.2
BRY				*i* Sn	Sb	00 22 11.9	-1.5
LKD2	Lefkada island	2.39	182	P	Pn	00 21 40.2	+0.2
LKD2				S	Sb	00 22 12.9	-0.7
LKD2	Lefkada island	2.39	182	P	Pn	00 21 40.8	+0.7
MAKR	Makrakomi, Fth	2.41	154	P	Pn	00 21 40.1	-0.2
MAKR				S	Sn	00 22 09.8	-0.3
IVAS	Ivanjica	2.43	350	*e*Pn	Pn	00 21 40.5	-0.2
UPM	Unac-Piva	2.44	326	P	Pb	00 21 43.7	-1.1
UPM	Unac-Piva	2.44	326	Pn	Pb	00 21 43.8	-1.1
UPM	Unac-Piva	2.44	326	*e*Pn	Pb	00 21 43.7	-1.1
UPM	Unac-Piva	2.44	326	⇓*i*Pn	Pb	00 21 43.5	-1.3
UPM				*i* Sn	Sb	00 22 13.8	-1.4
NYDR	Nydri-Lefkada	2.47	181	P	Pn	00 21 41.5	+0.5
AGG	Agios Georgios	2.47	150	P	Pn	00 21 40.5	-0.6
ZAPS	Zavoj	2.51	33	*e*Pn	Pn	00 21 42.4	+0.7
ZAPS				*e*Sg	Sg	00 22 20.2	-0.7
BOVS	Bovan	2.55	16	⇑P	Pn	00 21 42.4	+0.3
BOVS	Bovan	2.55	16	*e*Pn	Pn	00 21 42.5	+0.3
PAIG	Paliouri	2.55	118	P	Pn	00 21 41.5	-0.7
RUDO	Rudo	2.64	338	*e*Pn	Pn	00 21 44.6	+1.1
NEO	Neokhori	2.66	134	P	Pn	00 21 42.8	-0.9
NEO				S	Sn	00 22 15.3	-1.0
GRUS	Gruza	2.70	359	*e*Pn	Pn	00 21 44.5	+0.2
NOCI	Noci	2.83	263	P	Pn	00 21 44.9	-1.1
STON	Ston	2.84	308	*e*Pn	Pn	00 21 45.7	-0.4
STON	Ston	2.84	308	*e*Pn	Pn	00 21 46.3	+0.2
ZAGS	Zajecar	2.84	22	*e*Pn	Pn	00 21 46.8	+0.6
ZAGS				*e*Sg	Sg	00 22 30.8	-0.9
BBLS	Lazi&#263i	2.86	340	*e*Pn	Pn	00 21 47.4	+0.9
BBLS	Lazi&#263i	2.86	340	*e*Pn	Pn	00 21 47.5	+0.9
DIVS	Divibare	2.97	349	*e*Pn	Pn	00 21 48.0	0.0
TRUS	Trudelj	3.05	355	*e*Pn	Pn	00 21 49.3	+0.2
BORS2	Bor- Borsko je	3.05	17	*e*Pn	Pn	00 21 48.0	-1.1
MATE	Matera	3.12	261	⇑P	Pn	00 21 48.3	-1.6
PLD	Plovdiv	3.14	71	*e*Pn	Pn	00 21 50.5	+0.2
HAPS	Han Pijesak,Bl	3.19	336	*e*Pn	Pn	00 21 53.2	+2.1
HAPS	Han Pijesak,Bl	3.19	336	*e*Pn	Pn	00 21 52.6	+1.5
KUBS	Kucevo	3.30	11	*e*Pn	Pn	00 21 51.1	-1.4
KUBS				*e*Sn	Sn	00 22 31.5	-0.5
PUNG	Punghina	3.48	27	⇑P	Pn	00 21 55.3	+0.3
TEKS	Tekeris	3.48	345	*e*Pn	Pn	00 21 54.7	-0.4
TEKS	Tekeris	3.48	345	*e*Pn	Pn	00 21 54.7	-0.4
AVAS	Avala Beograd	3.52	357	*e*Pn	Pn	00 21 55.4	-0.1
TIP	Timpagrande	3.66	238	⇓P	Pn	00 21 56.5	-1.0
TIP	Timpagrande	3.66	238	P	Pn	00 21 55.8	-1.7
MDVR	Moldovita	3.66	11	⇑P	Pn	00 21 57.4	-0.1
MDVR	Moldovita	3.66	11	*e*Pn	Pn	00 21 57.2	-0.4
RMGR	Halanga-Turnu	3.76	22	⇓P	Pn	00 21 58.6	-0.2
SGRT	San Giovanni R	3.81	280	P	Pn	00 21 58.5	-1.2
HERR	Herculane	3.89	18	⇑P	Pn	00 22 00.9	+0.3
VRSS	Vrsac	3.96	6	*e*Pn	Pn	00 22 01.1	-0.5
FRGS	Fruska Gora	4.03	350	*e*Pn	Pn	00 22 02.5	0.0
FRGS	Fruska Gora	4.03	350	*e*Pn	Pn	00 22 02.6	0.0
BLY	Banja Luka	4.42	325	*e*Pn	Pn	00 22 10.4	+2.4
BLY	Banja Luka	4.42	325	*e*Pn	Pn	00 22 10.6	+2.6
SLATY	Slatina	4.44	326	*e*Pn	Pn	00 22 08.2	+0.1
EZN	Ezine	4.45	106	⇑P	Pn	00 22 09.1	+0.7
EZN	Ezine	4.45	106	P	Pn	00 22 08.5	+0.2
GZR	Gura Zlata	4.46	19	⇑P	Pn	00 22 08.9	+0.4
GZR	Gura Zlata	4.46	19	*e*Pn	Pn	00 22 08.8	+0.3
GZR				*e*Sn	Sn	00 22 59.7	-1.0
BZS	Buzias	4.48	8	⇓P	Pn	00 22 08.1	-0.6
BZS	Buzias	4.48	8	*e*Pn	Pn	00 22 08.0	-0.6
A050A	Klekovaca	4.53	318	*e*Pn	Pn	00 22 11.6	+2.1
HUMR	Humele	4.56	41	⇑P	Pn	00 22 10.0	+0.2
SURR	Surduc	4.68	12	⇑P	Pn	00 22 10.8	-0.6
CEL	Celeste	4.75	234	P	Pn	00 22 10.1	-2.4
A051A	Mrakovica	4.75	325	*e*Pn	Pn	00 22 13.5	+1.0
LOT	Lotru	4.79	26	⇑P	Pn	00 22 13.3	+0.1
SGRR	Singureni	4.90	50	⇓P	Pn	00 22 15.4	+1.0
MORH	Mrgy, Hungar	5.26	344	⇓P	Pn	00 22 19.5	+0.1
MORH	Mrgy, Hungar	5.26	344	*e*Pn	Pn	00 22 19.4	+0.1
MORH	Mrgy, Hungar	5.26	344	P	Pn	00 22 19.2	-0.2
	comp=E,0.1nmcomp=E,22nm,0.7s						
VOIR		5.28	35	⇑P	Pn	00 22 21.3	+1.5
VOIR		5.28	35	P	Pn	00 22 21.5	+1.7
	comp=E,0.1nmcomp=E,6.2nm,0.6s						
CICN	Ciocanesti	5.51	55	⇑P	Pn	00 22 24.3	+1.4
AQU	L'Aquila	5.62	284	P	Pn	00 22 23.3	-1.2
	comp=E,0.1nmcomp=E,245nmcomp=E,27nm,0.8s						
MLR	Muntele Rosu	5.73	40	Pn	Pn	00 22 26.5	+0.5
	comp=E,0.8nm,0.3s,baz=129,slow=5.5,SNR=17						
MLR				Sn	Sn	00 23 31.4	-0.7
	comp=E,0.8nm,0.3s,baz=319,slow=15,SNR=3.0						
	comp=E,1.7nm,0.3s						
MLR	Muntele Rosu	5.73	40	⇑P	Pn	00 22 27.3	+1.3
MLR	Muntele Rosu	5.73	40	P	Pn	00 22 27.7	+1.7
	comp=E,0.1nmcomp=E,12nm,0.7s						
MARR	Marisel-Cluj	5.75	16	⇑P	Pn	00 22 27.0	+0.8
ISR	Istrita	5.78	45	⇑P	Pn	00 22 27.5	+0.9
DRGR		5.78	13	⇑P	Pn	00 22 26.4	-0.2
DRGR		5.78	13	*e*Pn	Pn	00 22 26.5	-0.2
BOJS	Bojanci	5.90	319	*e*Pn	Pn	00 22 28.3	+0.1
BOJS	Bojanci	5.90	319	*i* Pn	Pn	00 22 29.1	+0.9
BOJS	Bojanci	5.90	319	*e*Pn	Pn	00 22 29.1	+0.9
CJR	Cluj-Napoca	5.90	19	⇑P	Pn	00 22 29.1	+0.9
ICOR	Ion Corvin	5.96	58	⇓P	Pn	00 22 30.2	+1.1
CRES	Cresnjevec Ost	6.03	322	*e*Pn	Pn	00 22 30.5	+0.5
CRES	Cresnjevec Ost	6.03	322	*e*Pn	Pn	00 22 31.0	+1.0
OZUR		6.12	35	⇑P	Pn	00 22 32.8	+1.6
VISS	Visnje	6.31	319	*i* Pn	Pn	00 22 34.7	+0.8
TLBR	Topalu	6.32	55	⇓P	Pn	00 22 35.7	+1.7
HARR	Harsova	6.32	54	⇑P	Pn	00 22 35.1	+1.1
PLOR	Plostina	6.33	41	⇓P	Pn	00 22 35.9	+1.7
VRI	Vrincioaia	6.38	41	P	Pn	00 22 36.1	+1.3
	comp=E,0.1nmcomp=E,9.7nm,0.7s						
ODBI	Odobesti	6.47	43	P	Pn	00 22 38.7	+2.6
	comp=E,0.1nmcomp=E,756nmcomp=E,9.9nm,0.4s						
CEY	Cerknica	6.48	317	*e*Pn	Pn	00 22 36.6	+0.4
CEY	Cerknica	6.48	317	*e*Pn	Pn	00 22 37.4	+1.2
CEY				*e*Sn	Sn	00 23 49.9	-0.5
SKDS	Skadanscina	6.57	314	*e*Pn	Pn	00 22 36.1	-1.3
SKDS	Skadanscina	6.57	314	*e*Pn	Pn	00 22 37.2	-0.2
TPGR	Topolog	6.71	54	⇑P	Pn	00 22 40.9	+1.6
CFR	Carcaliu	6.71	51	⇓P	Pn	00 22 39.5	+0.2
IDI	Anoyia	6.72	150	Pn	Pn	00 22 41.1	+1.5
	comp=E,0.6nm,0.3s,baz=295,slow=19,SNR=6.1						
IDI				Sn	Sn	00 23 53.4	-3.1
	comp=E,1.4nm,0.3s,baz=282,slow=18,SNR=3.5						
PSZ	Piszkesteto	6.76	355	⇑P	Pn	00 22 39.9	-0.2
TESR	Tescani	6.82	37	P	Pn	00 22 43.5	+2.7
	comp=E,0.0nmcomp=E,5.7nm,1.2s						
SRO	Srobarova	6.86	346	*e*SN	Sn	00 24 03.1	+3.5
SOKA	Soboth	6.87	325	*e*Pn	Pn	00 22 42.7	+1.1
	comp=E,7.4nm,0.7s,SNR=12						
VOJS	Vojsko	6.96	316	*i* Pn	Pn	00 22 43.0	+0.2
OBKA	Obir	6.96	322	*e*Pn	Pn	00 22 43.6	+0.7
OBKA	Obir	6.96	322	*i* Pn	Pn	00 22 43.2	+0.3
	comp=E,5.2nm,0.5s						
OBKA				*i* Sn	Sn	00 24 03.2	+0.8
	comp=E,27nm,0.7s						
ARSA	Arzberg	7.14	330	*i* Pn	Pn	00 22 46.5	+1.3
	comp=E,1.8nm,0.4s						
BURAR	Bucovina Array	7.18	25	⇓P	Pn	00 22 47.4	+1.5
RONA	Rosalia, Austr	7.25	335	*i* Pn	Pn	00 22 48.2	+1.4
	comp=E,0.9nm,0.4s						
KECS	Kecovo	7.30	359	*e*PN	Pn	00 22 50.9	+3.4
KECS				*e*SN	Sn	00 24 11.7	+1.1
BRIU	Brid	7.33	12	P	Pn	00 22 47.8	-0.1
MUKU	Mukachevo	7.40	10	P	Pn	00 22 48.6	-0.1
HOLU	Holmets	7.43	8	P	Pn	00 22 49.4	+0.2
VYHS	Vyhne	7.44	350	*e*PN	Pn	00 22 49.9	+0.6
VYHS				*e*SN	Sn	00 24 13.7	-0.3
MODS	Modra-Piesok	7.60	342	*e*PN	Pn	00 22 53.6	+2.0
MODS				*e*SN	Sn	00 24 21.2	+3.1
KOLS	Kolonicke sedl	7.82	7	*e*PN	Pn	00 22 55.9	+1.3
LANS	Liptovska Anna	8.02	354	*e*PN	Pn	00 23 00.2	+2.9
LANS				*e*SN	Sn	00 24 33.5	+5.2
MOA	Molln	8.12	327	*e*Sn	Sn	00 24 31.1	+0.4
	comp=E,4.9nm,0.6s						
ABTA	Abfaltersbach	8.14	316	*i* Pn	Pn	00 22 59.9	+0.9
	comp=E,8.3nm,0.5s,SNR=8.8						
ABTA				*e*Sn	Sn	00 24 30.1	-1.2
	comp=E,6.0nm,0.6s						
NIE	Niedzica	8.24	358	P	Pn	00 23 01.4	+1.0
	comp=E,4.8nm,0.8s						
BIOA	Bad Ischl, Aus	8.26	324	*i* Pn	Pn	00 23 01.5	+0.9
	comp=E,2.0nm,0.3s						
LESA	Schwarzleotal	8.51	320	*i* Pn	Pn	00 23 06.0	+1.8
	comp=E,2.4nm,0.4s						
LESA				*i* Sn	Sn	00 24 40.9	+0.4
	comp=E,3.5nm,0.7s						
KWP	Kalwaria Pacla	8.56	9	P	Pn	00 23 07.0	+2.3
	comp=E,8.4nm,2.2s						
VRAC	Vranov	8.64	342	Pn	Pn	00 23 02.9	-2.9
	comp=E,0.1nm,0.3s,baz=303,slow=7.8,SNR=1.7						
VRAC				Sn	Sn	00 24 37.5	-6.0
	comp=E,0.3nm,0.3s,baz=266,slow=9.4,SNR=1.4						
	comp=E,0.6nm,0.4s						
CKRC	Cesky Krumlov	8.89	331	*e*PN	Pn	00 23 11.9	+2.6
WTTA	Wattenberg	8.93	316	*i* Pn	Pn	00 23 10.3	+0.3
	comp=E,3.2nm,0.5s						
WATA	Walderalm	9.01	316	*i* Pn	Pn	00 23 12.8	+1.8
	comp=E,14nm,0.5s,SNR=13						
WATA				*i* Sn	Sn	00 24 52.9	+0.1
	comp=E,8.2nm,0.6s						
OJC	Ojcow	9.06	356	P	Pn	00 23 13.6	+2.0
	comp=E,4.6nm,0.9s						
SQTA	Sankt Quirin	9.13	315	*i* Pn	Pn	00 23 13.2	+0.5
	comp=E,3.7nm,0.3s						
GERES	GERESS Array B	9.14	329	Pn	Pn	00 23 12.6	-0.2
	baz=144,slow=15,SNR=8.4						
	comp=E,0.9nm,0.6s						
MOTA	Moosalm	9.27	315	*i* Pn	Pn	00 23 15.3	+0.8
	comp=E,2.9nm,0.4s,SNR=8.3						
MOTA				*i* Sn	Sn	00 24 59.9	+0.8
	comp=E,14nm,0.8s						
KHC	Kasperske Hory	9.42	330	*e*PN	Pn	00 23 17.4	+0.8
KHC				*e*SN	Sn	00 25 04.6	+1.8
KHC	Kasperske Hory	9.42	330	P	Pn	00 23 17.8	+1.2
	comp=E,4.1nm,2.7s						
RETA	Reutte	9.54	315	*i* Pn	Pn	00 23 20.1	+1.9
	comp=E,2.3nm,0.5s						
DAVOX	Davos/Dischmat	9.63	309	Pn	Pn	00 23 19.6	0.0
	comp=E,1.1nm,0.3s,baz=137,slow=15,SNR=6.5						
DAVOX				Sn	Sn	00 25 04.7	-3.4
	comp=E,0.1nm,0.3s,baz=109,slow=19,SNR=3.9						
	comp=E,3.0nm,0.4s						
TUE	Stuetta	9.79	306	P	Pn	00 23 20.5	-1.3
	comp=E,38nm,0.8s						
DAVA	Damuels	9.90	312	*i* Pn	Pn	00 23 23.7	+0.4
	comp=E,3.7nm,0.5s						
BRTR	Keskin Array B	9.93	94	Pn	Pn	00 23 24.6	+1.0
	comp=E,0.1nm,0.3s,baz=260,slow=11,SNR=5.7						
MMAI	Mount Meron Ar	14.23	120	Pn	P	00 24 28.2	-1.8
	comp=E,0.4nm,0.3s,baz=287,slow=10,SNR=1.8						
	comp=E,0.2nm,0.3s						
KBZ	Khabaz	16.53	74	Pn	P	00 24 57.5	+2.2
	comp=E,0.1nm,0.3s,baz=316,slow=5.8,SNR=4.0						
	comp=E,0.6nm,0.4s						
ESDC	Sonseca Array	18.87	274	P	Pn	00 25 24.3	+2.5
	baz=69,slow=11,SNR=4.7						
	comp=E,0.3nm,0.6s						
HFS	Hagfors	19.47	349	P	P	00 25 27.0	-0.6
	comp=E,0.3nm,0.3s,baz=171,slow=13,SNR=7.1						
	comp=E,1.7nm,0.6s						
FINES	FINESS Array B	20.55	7	P	P	00 25 38.2	-1.1
	comp=E,2.1nm,0.8s,baz=153,slow=13,SNR=4.8						
	comp=E,2.1nm,0.8s						
NB2	NORSAR Subarra	20.72	347	P	P	00 25 40.0	-1.3
	comp=Z,0.2nm,0.4s,baz=159,slow=11						
NOA	NORSAR Array B	20.72	347	P	P	00 25 41.5	+0.2
	comp=Z,0.2nm,0.4s,baz=157,slow=11,SNR=6.4						
	comp=Z,0.2nm,0.4s						
EKA	Eskdalemuir Ar	21.16	320	P	P	00 25 46.0	+0.1
	comp=Z,1.9nm,0.8s,baz=120,slow=9.2,SNR=3.6						
	comp=Z,1.9nm,0.8s						
BVAR	Borovoye Array	35.11	53	P	P	00 27 57.0	+2.8
	comp=Z,0.9nm,1.0s,baz=278,slow=3.9,SNR=2.8						
	comp=Z,0.9nm,1.0s						
ZALV	Zalesovo Beam	43.59	50	P	P	00 29 05.2	+0.2
	comp=Z,0.5nm,0.4s,baz=281,slow=8.4,SNR=4.3						
	comp=Z,0.5nm,0.4s						
MKAR	Makanchi Array	43.63	61	P	P	00 29 06.6	+1.2
	comp=Z,0.2nm,0.5s,baz=283,slow=8.6,SNR=2.3						
	comp=Z,0.2nm,0.5s						

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*IDC **14** 00:23:10.8±1.3, 17°.96S×178°.02W, h503^{km}±10^{km}, mb3.7/9, mbtmp4.6/10, Error ellipse: s-maj=19.9km s-min=15.5km az=123.0*

*NEIC **14** 00:23:10.6±1.6, 17°.8S±0°.1×178°.0W±0°.1, h496^{km}±8^{km}, mb4.6/31, Error ellipse: s-maj=21.2km s-min=18.6km az=149.0*

ISC 14 00:23:11.0±0.5**, 17°.64S**±0°.08×**178°.14W**±0°.07**, h500**^{km}**, n87, σ1^{s}.72**/91**, mb4.5**/23**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUTU	Fugatoga	3.31	0	P	P	00 24 25.0	+0.7
MSVF	Nonsavu	3.64	268	P	P	00 24 29.8	+3.2
MSVF	Nonsavu	3.64	268	P	P	00 24 29.2	+2.6
	192nm,0.7s,baz=128,slow=3.6,SNR=130						
MSVF				S	S	00 25 30.4	+2.1
	29nm,0.9s,baz=96,slow=18,SNR=9.6						
NIUE	Niue	7.93	102		P	00 25 06.9	+0.2
NIUE	Niue	7.93	102	P	P	00 25 07.4	+0.7
NIUE				S	S	00 26 44.3	+2.8
GLKZ	Green Lake	11.57	179	P	P	00 25 43.7	-1.2
GLKZ				S	S	00 27 57.2	+5.5
DZM	Mont Dzumac	15.16	251	P	P	00 26 25.1	+2.1
DZM				IAmb	IAmb	00 26 25.8	
	comp=Z,15nm,1.3s						
OUZ	Omahuta	19.00	201	P	P	00 27 01.3	+0.9
GRZ	Great Barrier	19.39	196	P	P	00 27 03.9	-0.1
WCZ	Waipu Caves	19.41	199	P	P	00 27 05.1	+0.9
MBAZ	Motutapu North	20.03	197	P	P	00 27 10.2	+0.4
MKAZ	Moumakai	20.27	196	P	P	00 27 12.0	0.0
WMGZ	Waiomatatini S	20.34	188	P	P	00 27 11.0	-1.5
HAZ	Te Kaha	20.36	189	P	P	00 27 10.3	-2.5
AWAZ	Awhitu Peninsu	20.37	197	P	P	00 27 13.0	+0.1
PKGZ	Pakihiroa	20.43	189	P	P	00 27 12.0	-1.4
RUGZ	Raukumara Rang	20.58	189	P	P	00 27 12.5	-2.4
TWGZ	Tauwhareparae	20.75	189	P	P	00 27 14.8	-1.5
TOZ	Tahuroa Road	20.79	194	P	P	00 27 17.4	+0.8
TOZ				IAmb	IAmb	00 27 17.5	
	comp=Z,27nm,1.3s						
TOZ	Tahuroa Road	20.79	194	P	P	00 27 17.4	+0.8
URZ	Urewera	20.96	191	P	P	00 27 14.1	-4.1
	comp=Z,5.9nm,0.3s,baz=37,slow=2.5,SNR=12						
	comp=Z,5.9nm,0.3s						
URZ	Urewera	20.96	191	P	P	00 27 13.9	-4.3
MWZ	Matawai	20.97	190	P	P	00 27 16.2	-2.1
SNGZ	Shannon Statio	21.44	190	P	P	00 27 22.9	+0.3
BKZ	Black Stump Fm	21.96	191	P	P	00 27 23.3	-4.0
OTVZ	Oturere	22.12	193	P	P	00 27 26.4	-2.4
WNVZ	Wahianoa	22.29	193	P	P	00 27 28.2	-2.2
BFZ	Birch Farm	23.47	191	P	P	00 27 38.7	-2.0
MRZ	Mangatainoka R	23.58	192	P	P	00 27 38.9	-2.8
MRZ				IAmb	IAmb	00 28 16.6	
	comp=Z,26nm,1.3s						
MRZ	Mangatainoka R	23.58	192	P	P	00 27 38.7	-3.0
QRZ	Quartz Range	24.47	197	P	P	00 27 48.3	-1.3
PLWZ	Palliser	24.52	192	P	P	00 27 47.0	-3.1
NNZ	Nelson	24.61	196	P	P	00 27 49.4	-1.4
THZ	Tophouse	25.24	196	P	P	00 27 54.0	-2.6
THZ				IAmb	IAmb	00 28 09.4	
	comp=Z,31nm,1.3s						
THZ	Tophouse	25.24	196	P	P	00 27 54.2	-2.3
DSZ	Denniston Nort	25.53	198	P	P	00 27 57.5	-1.7
DSZ	Denniston Nort	25.53	198	P	P	00 27 57.4	-1.7
LTZ	Lake Taylor	26.36	196	P	P	00 28 05.1	-1.3
LTZ				IAmb	IAmb	00 28 39.2	
	comp=Z,27nm,1.5s						
LTZ	Lake Taylor	26.36	196	P	P	00 28 03.2	-3.2
WVZ	Waitaha Valley	27.06	198	P	P	00 28 10.2	-2.2
FOZ	Fox Glacier	27.76	199	P	P	00 28 16.9	-1.7
FOZ				IAmb	IAmb	00 28 25.3	
	comp=Z,28nm,1.3s						
FOZ	Fox Glacier	27.76	199	P	P	00 28 16.7	-1.8
JCZ	Jackson Bay	28.57	200	P	P	00 28 23.8	-2.0
EIDS	Eidsvold	29.61	250		P	00 28 34.6	-0.4
EIDS				IAmb	IAmb	00 28 34.9	
	comp=Z,7.8nm,0.7s						
MLZ	Mavora Lakes	29.94	200	P	P	00 28 36.7	-1.0
MLZ				IAmb	IAmb	00 28 48.0	
	comp=Z,33nm,1.3s						
MLZ	Mavora Lakes	29.94	200	P	P	00 28 36.3	-1.3
ARMA	Armidale	30.30	240	P	P	00 28 41.1	0.0
ARMA				IAmb	IAmb	00 28 41.4	
	comp=Z,10nm,0.6s						
WHZ	Wether Hill Ro	30.46	199	P	P	00 28 40.7	-1.4
APZ	The Paps	31.29	198	P	P	00 28 47.9	-1.4
CTAO	Charters Tower	33.75	260	P	P	00 29 10.1	-0.5
CAN	Canberra	34.08	232	P	P	00 29 12.8	-0.4
CAN				IAmb	IAmb	00 29 13.5	
	comp=Z,14nm,0.9s						
COEN	Coen	37.36	270	P	P	00 29 39.9	-0.8
COEN				IAmb	IAmb	00 29 42.0	
	comp=Z,10nm,0.9s						
TOO	Toolangi	37.54	231	P	P	00 29 41.8	-0.2
STKA	Stephens Creek	38.99	241	P	P	00 29 53.8	0.0
STKA	Stephens Creek	38.99	241	P	P	00 29 53.6	-0.2
	comp=Z,9.8nm,0.5s,baz=91,slow=11,SNR=30						
	comp=Z,9.8nm,0.5s						
BBOO	Buckleboo	43.77	241	P	P	00 30 31.1	-0.7
WRA	Warramunga Arr	44.94	259	P	P	00 30 39.9	-1.2
	comp=Z,3.1nm,0.5s,baz=94,slow=7.0,SNR=50						
WRA				PcP	PcP	00 32 11.9	-0.1
	comp=Z,1.9nm,0.7s,baz=91,slow=3.4,SNR=7.9						
	comp=Z,3.1nm,0.5s						
AS31	Alice Springs	45.11	254		P	00 30 41.8	-0.6
AS31				IAmb	IAmb	00 30 42.2	
	comp=Z,14nm,0.6s						
ASAR	Alice Springs	45.12	254		P	00 30 41.7	-0.7
ASAR	Alice Springs	45.12	254	P	P	00 30 41.6	-0.8
	comp=Z,48nm,0.6s,baz=89,slow=8.2,SNR=430						
ASAR				PcP	PcP	00 32 12.4	-0.2
	comp=Z,2.2nm,0.7s,baz=101,slow=4.1,SNR=6.9						
ASAR				S	S	00 36 44.6	-0.4
	comp=Z,1.0nm,0.9s,baz=91,slow=13,SNR=5.8						
	comp=Z,48nm,0.6s						
FORT	Forrest	50.36	244	P	P	00 31 20.5	-1.1
KNRA	Kununurra	50.77	264	P	P	00 31 24.4	-0.5
FITZ	Fitzroy Crossi	53.33	260	P	P	00 31 43.0	-0.3
PSA00	Pilbara Seismi	58.23	255	P	P	00 32 16.5	-0.8
PSA00				IAmb	IAmb	00 32 32.5	
	comp=Z,34nm,1.4s						
MBWA	Marble Bar	58.39	256	P	P	00 32 17.2	-1.1
MBWA				IAmb	IAmb	00 32 27.8	
	comp=Z,31nm,1.2s						
NWAO	Narrogin (SRO)	59.57	242	P	P	00 32 25.7	-0.4
NWAO				IAmb	IAmb	00 32 32.7	
	comp=Z,38nm,1.3s						
MORW	Morawa	60.83	246	P	P	00 32 33.4	-1.2
MORW				IAmb	IAmb	00 32 39.9	
	comp=Z,19nm,1.2s						
GIRL	Giralia	63.22	253	P	P	00 32 50.6	+0.3
QSPA	South Pole Qui	72.42	180	P	P	00 33 45.5	-0.4
QSPA	South Pole Qui	72.42	180	P	P	00 33 43.9	-2.0
	comp=Z,4.6nm,0.8s,baz=296,slow=4.5,SNR=2.1						
	comp=Z,4.6nm,0.8s						
PETK	Petropavlovsk-	73.48	345	P	P	00 33 51.7	-0.2
	comp=Z,1.5nm,0.8s,baz=120,slow=8.7,SNR=4.6						
	comp=Z,1.5nm,0.8s						
TRF	Thorofare Moun	83.69	12	P	P	00 34 46.4	0.0
I20K	Naaghedeneel	84.15	10	P	P	00 34 55.7	+7.3
I20K				IAmb	IAmb	00 35 32.3	
	comp=Z,13nm,0.6s						
MAW	Mawson	84.20	200	P	P	00 34 47.7	-1.2
	comp=Z,2.8nm,0.8s,baz=24,slow=8.1,SNR=1.4						
	comp=Z,2.8nm,0.8s						
BWN	Browne	84.50	12	P	P	00 34 50.9	+0.7
G18K	Tagagawik	84.57	8	P	P	00 34 50.5	0.0
ILAR	Eielson Array	85.56	13	P	P	00 34 55.0	-0.4
	comp=Z,0.3nm,0.4s,baz=220,slow=5.8,SNR=7.2						
	comp=Z,0.3nm,0.4s						
CMAR	Chiang Mai Arr	89.04	290	P	P	00 35 14.2	+1.4
	comp=Z,1.3nm,0.3s,baz=107,slow=3.2,SNR=9.8						
	comp=Z,1.3nm,0.3s						
ARCES	ARCESS Array B	126.09	350	PKP	PKPdf	00 41 15.0	-0.5
	comp=Z,2.8nm,1.0s,baz=46,slow=3.5,SNR=3.7						
BUR08	Bucovina Ar. S	144.48	333		PKPab	00 41 51.2	+0.7
BRTR	Keskin Array B	144.77	315	PKPbc	PKPbc	00 41 51.5	+0.2
	comp=Z,1.0nm,0.5s,baz=133,slow=5.8,SNR=8.0						
CLL	Collm	145.25	348	⇓*i*PKPbc	PKPbc	00 41 52.2	+0.1
	comp=Z,4.0nm,0.7s						
MMAI	Mount Meron Ar	146.21	303	PKPbc	PKPbc	00 41 56.2	+0.7
	comp=Z,1.5nm,0.4s,baz=78,slow=5.2,SNR=13						
VYHS	Vyhne	146.26	340	*e*PKP	PKPbc	00 41 55.6	+0.5
MODS	Modra-Piesok	146.86	341	*e*PKP	PKPbc	00 41 57.3	+0.5
GERES	GERESS Array B	147.42	345	PKPbc	PKPbc	00 41 58.7	+0.3
	comp=Z,1.4nm,0.6s,baz=46,slow=3.9,SNR=9.0						
FUORN	Ofenpass-Fuorn	150.27	348		PKiKP	00 42 06.3	+0.1

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*NEIC **14** 00:24:13.8±1.5, 30°.12S±0°.05×72°.32W±0°.06, h10^{km}±2^{km}, mb4.8/4, ML4.0(GUC), Error ellipse: s-maj=9.7km s-min=6.5km az=231.0*

*GUC **14** 00:24:16.6±0.7, 30°.14S×72°.18W, h20^{km}, ML4.0*

ISC 14 00:24:13.7±2.3**, 30°.11S**±0°.03×**72°.28W**±0°.07**, h13**^{km}±15^{km}**, n40, σ1^{s}.01**/48**, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.79	136		Pb	00 24 29.6	+0.3
CO06					Sg	00 24 39.8	+0.3
CO06	Fray Jorge	0.79	136	*e*P	Pb	00 24 29.6	+0.3
CO06				*e*S	Sb	00 24 40.0	+0.1
CO05	La Serena	0.92	79		Pn	00 24 32.0	-0.2
CO05	La Serena	0.92	79	*e*P	Pn	00 24 32.1	-0.2
CO05				*e*S	Sb	00 24 43.6	0.0

CO05				IAML		00 24 47.4	
	comp=E,8μm,0.3s						
GO04	**Tololo Observa**	1.28	93	Pn	Pn	00 24 37.0	-0.5
GO04	**Tololo Observa**	1.28	93	*e*P	Pb	00 24 37.9	+0.1
GO04				*e*S	Sb	00 24 54.5	+0.2
CO02	**Combarbal**	1.55	135	Pn	Pb	00 24 41.7	-0.6
CO02	**Combarbal**	1.55	135	*e*P	Pb	00 24 42.1	-0.3
CO02				*e*S	Sn	00 25 01.2	0.0
CO03	**El Pedregal**	1.55	118	Pn	Pn	00 24 40.9	-0.2
CO03	**El Pedregal**	1.55	118	*e*P	Pb	00 24 41.7	-0.6
CO03				*i* S	Sn	00 25 00.8	-0.3
CO03				IAML		00 25 04.9	
	comp=E,4μm,0.4s						
LCO	**Las Campanas**	1.75	52	Pn	Pn	00 24 44.4	+0.4
LCO	**Las Campanas**	1.75	52	*e*P	Pb	00 24 45.6	-0.3
LCO				*e*S	Sb	00 25 08.1	+0.2
AC04	**Llanos de Chal**	2.17	29	Pn	Pn	00 24 50.3	+0.8
AC04	**Llanos de Chal**	2.17	29	*e*P	Pn	00 24 50.5	+1.1
AC04				IAML		00 25 38.4	
	comp=N,816nm,0.7s						
VA06	**Catapilco**	2.59	161	Pn	Pn	00 24 55.6	+0.4
VA06	**Catapilco**	2.59	161	*e*P	Pn	00 24 56.1	+0.9
VA06				IAML		00 25 41.7	
	comp=N,1μm,0.2s						
VA01	**Torpederas**	2.96	170	Pn	Pn	00 25 00.7	+0.4
VA03	**San Esteban**	3.03	151	Pn	Pn	00 25 02.5	+1.1
GO03	**Copiapo**	3.08	36	Pn	Pn	00 25 03.4	+1.3
GO03	**Copiapo**	3.08	36	*e*P	Pn	00 25 03.7	+1.6
GO03				IAML		00 25 58.1	
	comp=N,347nm,0.4s						
AC06	**Mina Casimiro**	3.22	32	Pn	Pn	00 25 04.5	+0.6
PEL	**Peldehue**	3.32	156	Pn	Pn	00 25 05.8	+0.5
ZON	**Zonda**	3.41	116	Pn	Pn	00 25 07.5	+0.8
MT05	**Renca**	3.53	159	Pn	Pn	00 25 07.8	-0.4
VA05	**Santo Domingo**	3.58	171	Pn	Pn	00 25 08.1	-0.9
MT16	**CCHEN**	3.63	156	Pn	Pn	00 25 10.2	+0.6
MT03	**Universidad Ad**	3.70	156	Pn	Pn	00 25 11.6	+1.0
MT09	**Talagante**	3.82	164	Pn	Pn	00 25 12.8	+0.5
MT08	**Bocatoma Ro**	3.84	151	Pn	Pn	00 25 15.6	+2.8
MT13	**San Alfonso**	4.00	155	Pn	Pn	00 25 15.9	+1.1
AC01	**Pan de Azucar**	4.21	21	Pn	Pn	00 25 18.1	+0.4
AC02	**Maricunga**	4.28	41	Pn	Pn	00 25 22.0	+3.1
BO01	**Tunca**	4.39	167	Pn	Pn	00 25 20.5	+0.5
BO02	**Sierra Bellavi**	4.84	165	Pn	Pn	00 25 27.5	+1.3
BI05	**Punta Hualpn**	6.67	186	Pn	Pn	00 25 50.7	-0.6
LPAZ	**La Paz**	14.27	16	Pn	Pn	00 27 35.4	-0.7
LPAZ				P	P	00 27 41.1	-2.3
VAO	**Valinhos**	23.69	79	P	P	00 29 25.2	-0.1
MG01	**Puerto William**	25.04	174	P	P	00 29 37.2	0.0
RUSC	**La Rusia**	35.80	359	P	P	00 31 14.8	+1.5
RUSC				IAmb	IAmb	00 31 31.4	
	comp=Z,13nm,1.0s						
BAUV	**El Baul**	39.04	7	P	P	00 31 41.6	+1.4
BAUV				IAmb	IAmb	00 31 49.3	
	comp=Z,34nm,1.1s						

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*SJA **14** 00:35:49.9±1.4, 29°.98S×72°.33W, h10^{km}, ML3.7, MW3.5*
*GUC **14** 00:35:55.2±0.7, 30°.05S×72°.09W, h38^{km}±5^{km}, ML3.5*
ISC 14 00:35:52.1±1.6**, 29°.97S**±0°.03×**72°.15W**±0°.07**, h5**^{km}±11^{km}**,**
n31, σ1^s.42/41**, 2C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	**La Serena**	0.79	87	⇓*i*P	Pn	00 36 09.3	-0.6
CO05				*e*S	Sb	00 36 19.4	+0.1
CO05				IAML		00 36 21.1	
	comp=E,4μm,0.3s						
CO06	**Fray Jorge**	0.83	148	*e*P	Pg	00 36 09.0	+0.9
CO06				*e*S	Sg	00 36 19.1	+0.1
GO04	**Tololo Observa**	1.19	100	⇑*i*P	Pn	00 36 15.6	+0.1
GO04	**Tololo Observa**	1.19	100	*i* P	Pn	00 36 15.6	+0.1
GO04				*e*S	Sn	00 36 31.4	-0.8
CO03	**El Pedregal**	1.53	125	*e*P	Pn	00 36 20.4	+0.2
CO03				*e*S	Sn	00 36 39.4	-1.1
CO03				IAML		00 36 42.8	
	comp=E,873nm,0.4s						
CO03	**El Pedregal**	1.53	125	*i* P	Pn	00 36 19.7	-0.5
CO03				*e*S	Sn	00 36 40.7	+0.2
CO03				IAML		00 36 42.0	
	comp=Z,750nm,0.6s						
CO02	**Combarbal**	1.58	141	⇑*i*P	Pn	00 36 21.6	+0.7
CO02				*e*S	Sn	00 36 40.2	-1.5
CO02	**Combarbal**	1.58	141	*i* P	Pn	00 36 21.5	+0.7
CO02				*e*S	Sn	00 36 41.7	0.0
CO02				IAML		00 36 45.7	
	comp=Z,528nm,0.3s						
LCO	**Las Campanas**	1.58	53	*e*P	Pg	00 36 22.6	+0.1
LCO				*e*S	Sg	00 36 43.7	+0.7
LCO	**Las Campanas**	1.58	53	*i* P	Pg	00 36 22.6	+0.1
LCO				IAML		00 36 51.4	
	comp=Z,1μm,0.6s						
AC04	**Llanos de Chal**	1.99	29	*e*P	Pb	00 36 27.7	-1.1
AC04	**Llanos de Chal**	1.99	29	⇓*i*P	Pb	00 36 27.7	-1.1
AC04				IAML		00 37 11.9	
	comp=Z,213nm,2.1s						
AROD	**Rodeo**	2.33	96	*i* P	Pb	00 36 35.2	+0.4
AROD				*e*S	Sg	00 37 04.7	-2.3
ACDV	**Cuesta del Vie**	2.64	95	*i* P	Pb	00 36 40.5	+0.6
ACDV				*e*S	Sb	00 37 13.1	+0.5
ACDV				IAML		00 37 33.3	
	comp=Z,93nm,3.0s						
VA06	**Catapilco**	2.69	164	*e*P	Pn	00 36 36.4	+0.5
VA06				IAML		00 37 22.7	
	comp=N,225nm,0.5s						
DOCA	**Reserva Natura**	2.83	111	*i* P	Pb	00 36 41.5	-1.7
GO03	**Copiapo**	2.90	36	*i* P	Pn	00 36 40.3	+1.4
AC06	**Mina Casimiro**	3.04	32	*e*P	Pn	00 36 43.0	+2.1
AC06				IAML		00 37 45.7	
	comp=E,107nm,0.8s						
RTLS	**Leoncito**	3.06	127	*i* P	Pb	00 36 45.5	-1.6
RTLS				IAML		00 37 34.1	
	comp=Z,267nm,0.8s						
VA03	**San Esteban**	3.11	154	*i* P	Pb	00 36 47.5	-0.4
VA03				IAML		00 37 42.0	
	comp=Z,175nm,0.7s						
AGUA	**GUANDACOL**	3.22	82	*i* P	Pb	00 36 48.7	-1.1
AGUA				IAML		00 37 48.7	
	comp=Z,157nm,4.5s						
MT02	**Curacav**	3.39	165	*i* P	Pn	00 36 45.8	+0.1
VCA	**Vinchina**	3.66	71	*i* P	Pb	00 36 54.6	-2.7
VCA				IAML		00 37 44.6	
	comp=Z,175nm,2.8s						
CFA	**Coronel Fontan**	3.74	117	*e*P	Pn	00 36 54.3	+3.8
MT04	**Ro Olivares**	3.83	154	*i* P	Pn	00 36 54.5	+2.6
MT04				IAML		00 37 43.3	
	comp=Z,122nm,2.9s						
MT01	**Popeta**	3.96	169	*i* P	Pn	00 36 54.0	+0.6
MT01				IAML		00 37 59.9	
	comp=Z,47nm,3.0s						
AC01	**Pan de Azucar**	4.04	20	*i* P	Pn	00 36 55.0	+0.4
AC01				IAML		00 37 45.1	
	comp=Z,228nm,3.5s						
BO01	**Tunca**	4.50	169	*i* P	Pn	00 37 01.2	+0.3
BO01				IAML		00 37 55.7	
	comp=Z,86nm,3.0s						
ACLC	**CERRO LA CRUZ**	4.56	84	*i* P	Pn	00 37 05.1	+3.3
ACLC				IAML		00 38 23.8	
	comp=Z,54nm,4.4s						
ACAN	**Cantantal**	4.84	120	*i* P	Pn	00 37 08.0	+2.4
BO02	**Sierra Bellavi**	4.95	167	*i* P	Pn	00 37 07.6	+0.5

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*IDC **14** 00:42:16.0±3.4, 6°.72N×60°.57E, h0^{km}, mb3.7/9, mbtmp3.7/9, Error ellipse: s-maj=78.1km s-min=29.5km az=3.0*
ISC 14 00:42:17.7±3.4**, 6°.8N**±0°.6×**60°.6E**±0°.2**, h10**^{km}**, n13,**
σ0^s.56/10**, mb3.6**/10**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	39.11	69	P	P	00 49 45.1	-0.5
	0.6nm,0.4s,baz=261,slow=10,SNR=4.9						
	0.6nm,0.4s						
BRTR	**Keskin Array B**	40.77	328	P	P	00 49 58.8	-0.5
	0.7nm,0.8s,baz=138,slow=8.8,SNR=2.1						
	0.7nm,0.8s						
MKAR	**Makanchi Array**	44.03	21	P	P	00 50 26.4	+0.8
	0.7nm,0.8s,baz=212,slow=8.1,SNR=3.5						
	0.7nm,0.8s						
KURBB	**Kurchatov Arra**	46.21	16	P	P	00 50 42.3	-0.6
	0.3nm,0.3s,baz=210,slow=7.2,SNR=1.3						
BVAR	**Borovoye Array**	46.81	8	P	P	00 50 47.5	-0.1
	0.2nm,0.4s,baz=104,slow=6.1,SNR=1.6						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	50.97	18	P	P	00 51 19.4	-0.1
	0.3nm,0.4s,baz=224,slow=4.1,SNR=5.5						
	0.3nm,0.4s						
H04N1	**CROZET ISLANDS**	53.27	188	T	T	01 48 04.0	
	baz=11,slow=76,SNR=32						
H04N2	**CROZET ISLANDS**	53.27	188	T	T	01 47 59.8	
	baz=11,slow=76,SNR=29						
H04N3	**CROZET ISLANDS**	53.29	188	T	T	01 48 03.2	
	baz=11,slow=76,SNR=28						
SONM	**Songino Array**	56.44	35	P	P	00 52 00.5	+0.7
	0.3nm,0.4s,baz=236,slow=7.4,SNR=4.2						
	0.3nm,0.4s						
FINES	**FINESS Array B**	60.27	342	P	P	00 52 26.1	-0.1
	0.8nm,0.8s,baz=150,slow=7.9,SNR=3.7						
	0.8nm,0.8s						
HFS	**Hagfors**	63.83	336	P	P	00 52 50.5	+0.4
	2.4nm,0.9s,baz=101,slow=4.6,SNR=3.0						
	2.4nm,0.9s						
ESDC	**Sonseca Array**	66.17	310	P	P	00 53 06.1	+0.2
	1.2nm,1.0s,baz=101,slow=5.9,SNR=5.1						
	1.2nm,1.0s						

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*SDD **14** 00:47:34.4±2.2, 19°.97N×70°.32W, h18^{km}±90^{km}, MD3.2, ML2.5, MW3.5*
*OSPL **14** 00:47:34.1±2.1, 19°.90N×70°.34W, h0^{km}±33^{km}, ML2.2*
ISC 14 00:47:33.6±1.2**, 19°.95N**±0°.05×**70°.36W**±0°.05**, h19**^{km}**, n12,**
σ0^s.77/16**, 9C, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MADR	**Mao Valverde**	0.80	242	⇑*e*Sg	Sg	00 48 00.7	+0.9
DR08	**Loma La Naviza**	1.03	162	*e*Pg	Pb	00 47 52.4	-0.5
DR08				⇑*e*Sg	Sg	00 48 07.7	+0.6
DR08				IAML		00 48 09.6	
	comp=N,875nm,0.1s						
ABDR	**Alto Bandera**	1.16	193	⇑*e*Pg	Pn	00 47 54.2	-0.9
ABDR				⇑*e*Sg	Sb	00 48 09.4	-0.5
ABDR				IAML		00 48 10.8	
	comp=N,111nm,2.5s						
MCDR	**Montecristi**	1.22	268	*e*Pg	Pb	00 47 56.5	+0.4
MCDR				*e*Sg	Sg	00 48 13.4	+0.1
SDDR	**Presa de Saban**	1.30	223	⇑*e*Sg	Sn	00 48 13.9	+0.3
SDDR				IAML		00 48 26.6	
	comp=N,28nm,2.9s						
SDDR	**Presa de Saban**	1.30	223	*i* P	Pn	00 47 55.8	-1.0
SDDR				IAML		00 48 14.9	
	comp=Z,29nm,1.1s						
HATOM	**Hato Mayor del**	1.48	141	*e*Pg	Pb	00 47 59.8	-0.7
HATOM				IAML		00 48 24.5	
	comp=N,27nm,4.8s						
BANI	**BANI**	1.54	180	⇑*e*Pg	Pb	00 48 02.1	+0.5
BANI				⇑*e*Sg	Sb	00 48 22.5	+1.6
MIDR	**Miches**	1.56	128	⇑*e*Pg	Pn	00 48 00.5	+0.2
GRTK	**Grand Turk**	1.72	335	⇑*e*Sg	Sb	00 48 26.0	+0.2
GRTK	**Grand Turk**	1.72	335	*e*S	Sb	00 48 26.0	+0.2
GRTK				IAML		00 48 30.4	
	comp=Z,22nm,0.8s						
LODU1	**El Espartillar**	1.90	214	*i* P	Pb	00 48 06.8	-0.9
LODU1				IAML		00 48 39.2	
	comp=Z,52nm,2.6s						

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*IDC **14** 00:52:51.8±1.1, 30°.18S×72°.42W, h0^{km}, mb3.7/3, mbtmp3.6/5, ML3.6/2, Error ellipse: s-maj=80.2km s-min=25.4km az=75.0*
*SJA **14** 00:52:51.7±0.8, 30°.11S×72°.23W, h15^{km}, ML3.8, MW3.7*
*GUC **14** 00:52:54.9±0.7, 30°.09S×72°.01W, h50^{km}±6^{km}, ML3.9*
ISC 14 00:52:52.3±1.7**, 30°.13S**±0°.03×**72°.20W**±0°.05**, h9**^{km}±11^{km}**,**
n29, σ1^s.46/44**, mb3.6**/3**, 1C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	0.73	138	*e*P	Pn	00 53 07.4	-1.4
CO06				*e*S	Sn	00 53 18.2	-1.9
CO06				IAML		00 53 22.2	
	comp=E,4μm,0.2s						
CO05	**La Serena**	0.86	76	*e*P	Pn	00 53 09.5	-1.1
CO05				*e*S	Sg	00 53 20.4	+0.4
CO05				IAML		00 53 22.4	
	comp=E,5μm,0.2s						
GO04	**Tololo Observa**	1.21	92	⇑*i*P	Pg	00 53 15.4	-0.3
GO04				*e*S	Sn	00 53 31.2	-1.1
GO04	**Tololo Observa**	1.21	92	*e*P	Pb	00 53 15.0	-0.6
GO04				*e*S	Sg	00 53 32.5	+1.0
CO03	**El Pedregal**	1.48	119	*e*P	Pb	00 53 19.6	-0.5
CO03				*e*S	Sn	00 53 38.2	-0.7
CO03				IAML		00 53 42.8	
	comp=E,3μm,0.3s						
CO03	**El Pedregal**	1.48	119	*e*P	Pb	00 53 19.7	-0.4
CO03				*e*S	Sg	00 53 41.3	+1.3
CO03				IAML		00 53 43.4	
	comp=Z,1μm,0.5s						
CO02	**Combarbal**	1.49	136	*e*P	Pb	00 53 20.2	0.0
CO02				*e*S	Sb	00 53 38.7	-0.6
CO02	**Combarbal**	1.49	136	*e*P	Pb	00 53 19.9	-0.3
CO02				*e*S	Sg	00 53 41.5	+1.3
CO02				IAML		00 53 43.9	
	comp=Z,2μm,0.7s						
LCO	**Las Campanas**	1.71	50	*e*P	Pb	00 53 22.6	-1.6
LCO				*e*S	Sn	00 53 43.9	-0.9
LCO				IAML		00 53 50.8	
	comp=Z,6μm,0.3s						
LCO	**Las Campanas**	1.71	50	*e*P	Pb	00 53 23.2	-1.0
LCO				*e*S	Sg	00 53 47.3	-0.2
LCO				IAML		00 53 52.5	
	comp=Z,1μm,1.1s						
AC04	**Llanos de Chal**	2.15	27	*e*P	Pn	00 53 27.8	-0.7
AROD	**Rodeo**	2.36	92	*e*P	Pb	00 53 33.6	-1.6
AROD				*e*S	Sb	00 54 05.6	+1.0
VA06	**Catapilco**	2.54	163	⇓*i*P	Pn	00 53 34.4	+0.6
VA06				*e*S	Sb	00 54 06.9	-2.7
VA06				IAML		00 54 23.8	
	comp=N,802nm,0.6s						
ACDV	**Cuesta del Vie**	2.67	92	*e*P	Pb	00 53 37.8	-2.5
ACDV				*e*S	Sb	00 54 13.1	-0.1
ACDV				IAML		00 54 18.3	
	comp=Z,291nm,0.4s						
VA03	**San Esteban**	2.98	152	*e*P	Pn	00 53 41.7	+1.8
VA03				*e*S	Sb	00 54 20.1	-2.2
VA03				IAML		00 54 40.9	
	comp=Z,266nm,0.8s						
GO03	**Copiapo**	3.06	35	*e*P	Pn	00 53 41.2	+0.3
GO03				*e*S	Sb	00 54 21.9	-2.6
AC06	**Mina Casimiro**	3.20	31	*e*P	Pn	00 53 43.0	+0.2
AC06				IAML		00 54 39.3	
	comp=E,194nm,0.7s						
H03N1	**Juan Fernandez**	6.60	238	Pn	Pn	00 54 29.6	+0.3
H03N1				T	T	01 01 54.3	
	baz=58,slow=72						
H03N2	**Juan Fernandez**	6.62	238	Pn	Pn	00 54 29.4	-0.1
H03N2				T	T	01 01 47.0	
	baz=58,slow=72						
H03N3	**Juan Fernandez**	6.62	238	Pn	Pn	00 54 28.8	-0.8
H03N3				T	T	01 01 40.6	
	baz=58,slow=72						
H03S3	**Juan Fernandez**	6.79	235	Pn	Pn	00 54 28.4	-3.5
H03S1	**Juan Fernandez**	6.79	235	Pn	Pn	00 54 30.2	-1.8
H03S2	**Juan Fernandez**	6.81	235	Pn	Pn	00 54 29.0	-3.2
PLCA	**Paso Flores**	10.66	173	Pn	Pn	00 55 25.1	-0.2
	comp=E,0.1nm,0.3s,baz=345,slow=12,SNR=5.7						
	comp=E,0.7nm,0.5s						
LPAZ	**La Paz**	14.27	16	Pn	Pn	00 56 17.2	+1.9
	comp=E,0.1nm,0.3s,baz=214,slow=3.6,SNR=5.8						
	comp=E,1.5nm,0.7s						
SNAA	**Sanae**	55.22	159	P	P	01 02 26.4	+1.1
	comp=E,1.5nm,0.7s,baz=278,slow=10.0,SNR=7.2						
	comp=E,1.5nm,0.7s						
TXAR	**Lajitas Array**	66.31	330	P	P	01 03 41.2	-0.1
	comp=E,0.3nm,0.7s,baz=167,slow=9.8,SNR=3.1						
	comp=E,0.3nm,0.7s						
NVAR	**Mina Array Bea**	80.64	325	P	P	01 05 07.1	+1.4
	comp=E,0.2nm,0.3s,baz=96,slow=7.1,SNR=1.8						
	comp=E,0.2nm,0.3s						
ZALV	**Zalesovo Beam**	150.96	28	PKPbc	PKiKP	01 12 45.9	+0.2
	comp=E,1.4nm,0.6s,baz=336,slow=3.3,SNR=5.7						

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*UCR **14** 01:05:40.2±1.2, 10°.11N×86°.12W, h0^{km}±6^{km}, MW3.9*
*CATAC **14** 01:05:52.8±0.4, 11°N±2°×8°5W±°, h25^{km}±3^{km}, M3.3/14, MLv3.3/14, Error ellipse: s-maj=7.6km s-min=3.3km az=52.3, confirmed*
ISC 14 01:05:45.3±1.4**, 10°.19N**±0°.05×**85°.87W**±0°.06**, h20**^{km}±7^{km}**,**
n70, σ1^s.49/78**, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SACU	**Santa Cruz**	0.29	76	*e*P	Pb	01 05 52.9	+1.0
SACU				*e*S	Sn	01 06 01.0	+0.8
NICO	**Nicoya**	0.42	98	*e*P	Pb	01 05 54.6	+0.7
NICO				*e*S	Sn	01 06 03.9	+0.4
CMARA	**Lajas Hojancha**	0.47	111	*e*P	Pb	01 05 55.0	+0.1
CMARA	**Lajas Hojancha**	0.47	111	P	Pn	01 06 04.7	+7.8
ALIBA	**Liberia Airpor**	0.51	39	*e*P	Pn	01 05 56.7	-0.7
ALIBA				*e*S	Sn	01 06 08.8	+3.2
PLVR	**Palo Verde**	0.54	73	*e*P	Pb	01 05 56.8	+0.6
PLVR				*e*S	Sn	01 06 08.5	+2.1
ELI1	**Hacienda Flor**	0.55	35	*e*P	Pn	01 05 57.4	-0.5
ELI1				*e*S	Sn	01 06 10.2	+3.6
ELVJ	**El Viejo (Barb**	0.60	64	*e*P	Pb	01 05 55.4	-1.7
ELVJ				*e*S	Sb	01 06 05.9	+0.7
ERIA	**Liberia**	0.61	44	*e*P	Pb	01 05 58.2	+0.8
ERIA				*e*S	Sn	01 06 11.6	+3.5
BAGA	**Bagaces**	0.69	61	*e*P	Pb	01 05 58.5	-0.1
GPS3	**Bodega del ICE**	0.75	42	*e*P	Pb	01 06 00.3	+0.6
GPS1	**Guardaparques**	0.77	41	*e*P	Pb	01 06 00.3	+0.2
VRLE	**La Escondida,**	0.78	40	*e*P	Pb	01 06 00.2	0.0
CNAS	**Canas**	0.80	73	*e*P	Pn	01 06 01.3	-0.2
COLC	**Colonia**	0.81	54	*e*P	Pb	01 06 01.0	+0.3
VORI	**VORI**	0.81	40	*e*P	Pb	01 06 00.7	-0.1
JCR1	**Jicaral**	0.82	114	*e*P	Pb	01 05 59.8	-1.2
CUI	**Cuipilapa**	0.84	56	*e*P	Pb	01 06 01.5	+0.3
HORNC	**Hornillas**	0.86	53	*e*P	Pb	01 06 01.7	+0.1
PEJA	**Penjamo Buenos**	0.89	38	*e*P	Pb	01 06 02.4	+0.4
JUNT	**Juntas**	0.90	84	*e*P	Pb	01 06 02.0	-0.3
JTS	**Las Juntas de**	0.91	84	*e*P	Pb	01 06 02.2	-0.2
LCRUZ	**La Cruz**	0.91	15	*e*P	Pb	01 06 01.6	-0.9
TIMP	**Tierras Morena**	0.93	65	*e*P	Pb	01 06 02.8	+0.1
MOTZ	**Rio Naranjo**	0.93	58	*e*P	Pn	01 06 03.1	-0.1
TILA	**Tilaran**	0.93	73	*e*P	Pb	01 06 02.8	+0.1
CHIK	**Chiripa**	0.98	75	*e*P	Pn	01 06 03.8	-0.2
TENO	**El Achiote**	1.02	60	*e*P	Pn	01 06 03.2	-1.2
MTEVE	**Monteverde**	1.04	83	*e*P	Pn	01 06 04.5	-0.3
CARN	**Rivas**	1.05	19	P	Pn	01 06 04.9	0.0
CARN				S	Sb	01 06 13.8	-4.2
UPAL	**Upala**	1.10	50	*e*P	Pn	01 06 05.7	+0.1
CASO	**Castillo**	1.15	78	*e*P	Pb	01 06 06.6	+0.1
ARE1	**Arenal 1**	1.17	77	*e*P	Pb	01 06 06.9	+0.1
CEDE	**Laguna Cedeo**	1.19	76	*e*P	Pb	01 06 07.2	+0.1
VACR	**Volcan Arenal**	1.21	76	*e*P	Pb	01 06 08.0	+0.5
SOCE	**Pocosol**	1.25	81	*e*P	Pb	01 06 09.4	+1.2
SOCE	**Pocosol**	1.25	81	P	Pb	01 06 09.6	+1.4
BITO	**Garabito Jaco**	1.36	115	*e*P	Pn	01 06 05.1	-4.0
MORN	**Al O del Volca**	1.36	9	P	Pb	01 06 10.2	+0.1
COVE	**Coope Vega, Sa**	1.54	70	P	Pn	01 06 11.1	-0.5
VPS8	**V Poas**	1.60	90	*e*P	Pn	01 06 13.5	+0.7
ARTO	**Ro Cuarto**	1.64	85	*e*P	Pn	01 06 14.0	+1.0
ACOS	**Acosta**	1.73	103	*e*P	Pb	01 06 16.7	+0.3
HDC	**Heredia**	1.74	96	P	Pb	01 06 17.1	+0.5
HDC				S	Sn	01 06 35.3	-0.9
PICV	**PH. Pirrs**	1.75	109	*e*P	Pn	01 06 14.8	+0.3
NANN	**Nandasmo**	1.75	352	P	Pb	01 06 17.8	+0.9
NANN	**Nandasmo**	1.75	352	S	Sn	01 06 36.7	+0.3
ABE2	**San Pablo**	1.85	105	*e*P	Pn	01 06 17.4	+1.3
LCR2	**La Lucha 2**	1.89	104	*e*P	Pn	01 06 16.8	+0.1
LCR2	**La Lucha 2**	1.89	104	P	Pb	01 06 20.2	+0.9
ACON	**Acoyapa**	1.89	21	*e*P	Pn	01 06 15.5	-1.0
ACON	**Acoyapa**	1.89	21	P	Pn	01 06 15.9	-0.6
ACON	**Acoyapa**	1.89	21	S	Sn	01 06 33.0	-6.8
CVIMO	**Finca Echandi**	1.91	95	*e*P	Pb	01 06 18.7	-0.8
VICA	**Volcano Irazu**	2.01	96	*e*P	Pn	01 06 19.9	+1.5
SAPS	**Ciudad Sandino**	2.03	345	P	Pb	01 06 22.6	+1.0
SAPS	**Ciudad Sandino**	2.03	345	S	Sn	01 06 44.9	+1.7
VTLA	**Turrialba Volc**	2.07	95	*e*P	Pb	01 06 21.9	-0.5
CVTQ	**Turrialba Volc**	2.08	95	*e*P	Pn	01 06 19.8	+0.5
VTR0	**Volcan Turrial**	2.09	95	*e*P	Pb	01 06 23.3	+0.6
CVTR	**Volcan Turrial**	2.09	94	*e*P	Pn	01 06 20.8	+1.2
CVTV	**Tajo**	2.10	95	*e*P	Pb	01 06 21.7	-1.1
VTCV	**VTCV, Calle Va**	2.12	95	*e*P	Pn	01 06 21.2	+1.4
TRT2	**Tortugero**	2.13	80	P	Pn	01 06 20.8	+1.1
BOAB	**BOACO BROADBAN**	2.25	5	P	Pn	01 06 22.2	+0.7
CNGN	**Cerro Negro**	2.43	341	P	Pb	01 06 28.5	+0.1
OCHAL	**Ojochal**	2.45	116	P	Pb	01 06 29.4	+0.7
MATN	**Matagalpa**	2.72	359	P	Pn	01 06 29.7	+1.7
BLUN	**Bluefields**	2.74	49	P	Pn	01 06 26.3	-1.8
DRK0	**Durika**	2.75	109	*e*P	Pn	01 06 28.4	0.0

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*IDC **14** 01:06:59.3±0.8, 6°.08N×60°.77E, h0^{km}, mb4.2/20, mbtmp4.2/21, ML0.9/1, MS5.2/1, Error ellipse: s-maj=20.3km s-min=15.5km az=19.0*
*NEIC **14** 01:07:01.0±2.5, 5°.9N±0°.1×60°.7E±0°.1, h10^{km}±1^{km}, mb4.6/47, Error ellipse: s-maj=23.8km s-min=18.4km az=138.0*
ISC 14 01:07:01.3±0.4**, 5°.89N**±0°.06×**60°.64E**±0°.05**, h15**^{km}**, n137,**
σ1^s.26/142**, mb4.5**/64**, 1D, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSEY	**Mahe Island**	11.69	206	Pn	Pn	01 09 48.1	+0.4
MSEY	**Mahe Island**	11.69	206	P	Pn	01 09 48.5	+0.9
MSEY				S	Sn	01 11 53.3	-4.7
DOK	**Doka**	14.15	334	P	Pn	01 10 23.2	+1.8
MHTO	**MHTO**	15.23	350	P	P	01 10 38.9	-1.9
	SNR=9.8						
MNGI	**Mangalore**	15.65	62	*e*P	Pn	01 10 41.8	+0.4
MNGI				IAmb	IAmb	01 10 53.1	
	comp=Z,10nm,0.7s						
MNGI				*e*S	Sn	01 13 37.6	+3.0
JLN	**Jalan Bani Buh**	16.21	356	P	P	01 10 51.1	-0.7
TRD	**Trivandrum**	16.40	80	*e*P	Pn	01 10 52.0	+0.8
TRD				IAmb	IAmb	01 11 03.4	
	comp=Z,177nm,1.8s						
TRD				*e*S	Sn	01 13 55.1	+2.1
JMDO	**Jabal Madar**	16.57	352	P	P	01 10 55.4	-0.3
BSY	**Bisya**	17.08	349	P	Pn	01 10 58.4	-1.3
	SNR=10						
SMDO	**Samad**	17.25	352	P	P	01 11 03.1	-0.3
	SNR=9.0						
WSAR	**Wadi Sarin**	17.36	354	P	Pn	01 11 01.1	-2.0
	baz=216,slow=24,SNR=4.5						
KAD	**Karad**	17.45	48	*e*P	Pn	01 11 04.8	+0.5
KAD				IAmb	IAmb	01 11 11.7	
	comp=Z,195nm,1.9s						
KAD				*e*S	Sn	01 14 20.0	+1.6
BIDO	**Bidbid**	17.70	352	P	Pn	01 11 06.9	-0.5
	SNR=14						
ARQ	**Araqi**	17.80	348	P	Pn	01 11 08.6	0.0
HOQ	**Hoqain**	17.88	350	P	P	01 11 12.9	+2.7
	SNR=9.2						
POO	**Poona**	18.00	45	*e*P	P	01 11 11.5	-0.1
POO				IAmb	IAmb	01 11 48.4	
	comp=Z,146nm,1.7s						
POO				*e*S	Sn	01 14 32.7	+0.9
MZR	**Muzera**	18.36	339	P	Pn	01 11 15.0	-0.5
	SNR=8.0						
ATD	**Arta Tunnel**	18.45	289	P	Pn	01 11 16.4	-0.3
	comp=Z,0.3nm,0.9s,baz=223,slow=17,SNR=1.7						
SOHO	**SOHO**	18.57	348	P	P	01 11 15.2	-2.5
ALNE	**Al Ain**	18.66	346	P	P	01 11 18.7	-0.1
ASHO	**Ashiyiah**	19.20	347	P	P	01 11 24.3	-0.5
ASUD	**Al Ashush, Dub**	19.32	345	P	P	01 11 26.0	0.0
HATD	**Hatta, Dubai**	19.32	348	P	P	01 11 26.5	+0.4
	SNR=5.5						
BHUJ	**Bhuj**	19.33	26	*e*P	P	01 11 26.6	+0.5
BHUJ				IAmb	IAmb	01 11 29.9	
	comp=Z,1μm,2.2s						
BHUJ				*e*S	S	01 15 05.3	+0.7
AJN	**Ajban**	19.34	344	P	Pn	01 11 26.9	-0.5
UOSS	**Minazif**	19.42	348		P	01 11 25.5	-1.6
UOSS				IAmb	IAmb	01 11 36.8	
	comp=Z,43nm,1.3s						
UOSS	**Minazif**	19.42	348	P	Pn	01 11 28.6	+0.2
NAZ	**Nazwa, Dubai**	19.58	346	P	P	01 11 26.0	-2.9
MASF	**Masafi**	19.84	348	P	P	01 11 31.3	-0.5
	SNR=5.2						
PALK	**Pallekele**	19.98	85	P	P	01 11 31.6	-1.8
	comp=Z,9.0nm,1.0s,baz=74,slow=5.9,SNR=3.6						
MDRS	**Chennai**	20.61	68	*e*P	P	01 11 40.0	-0.1
MDRS				IAmb	IAmb	01 12 04.8	
	comp=Z,42nm,1.0s						
MDRS				*e*S	S	01 15 31.6	+1.4
AKL	**Akola**	21.67	46	*e*P	P	01 11 52.3	+0.8
AKL				IAmb	IAmb	01 12 15.0	

	comp=Z,18nm,0.9s						
AKL				*e*S	S	01 15 53.5	+2.4
RAYN	Ar Rayn	22.80	322		P	01 12 03.0	-0.7
RAYN				IAmb	IAmb	01 12 05.5	
	comp=Z,16nm,0.9s						
KIBK	Kibwezi	23.99	251	P	P	01 12 19.7	+4.0
LODK	Lodwar	25.31	266		P	01 12 31.2	+3.5
LODK				IAmb	IAmb	01 12 42.4	
	comp=Z,21nm,1.1s						
KBL	Kabul	29.55	14		P	01 13 06.6	+0.9
KBL				IAmb	IAmb	01 13 15.3	
	comp=Z,16nm,1.4s						
EVN	Everest	33.15	46		P	01 13 36.6	-1.4
SIMJ	Simiganj	33.49	12	P	P	01 13 38.5	-1.7
BTK	Batken	35.23	14	P	P	01 13 55.9	+0.6
MARD	Mardin	36.15	333	P	P	01 14 04.4	+1.2
MARD				IAmb	IAmb	01 14 29.7	
	comp=Z,8.8nm,1.2s						
KSH	Kashi	36.23	20	P	P	01 14 03.8	-0.1
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
GURO	Guroymak-BITLI	36.63	335	P	P	01 14 07.7	+0.4
GNI	Garni	36.98	340	P	P	01 14 09.1	-1.3
GNI				IAmb	IAmb	01 14 27.7	
	comp=Z,11nm,1.0s						
LSA	Lhasa	37.26	47	P	P	01 14 13.1	-0.2
GAZ	Gaziantep	37.77	329	P	P	01 14 18.9	+1.9
KK31	Karatay Array	38.08	12		P	01 14 19.2	-0.2
KK31				IAmb	IAmb	01 14 27.1	
	comp=Z,12nm,1.3s						
KKAR	Karatay Array	38.08	12		P	01 14 19.7	+0.3
KKAR	Karatay Array	38.08	12	P	P	01 14 20.2	+0.8
KKAR				IAmb	IAmb	01 14 27.2	
	comp=Z,12nm,1.3s						
AAK	Ala-Archa	38.60	16		P	01 14 24.9	+0.9
BOOM	Boomskoye usch	38.90	18	P	P	01 14 26.1	-0.4
BOOM				IAmb	IAmb	01 14 34.8	
	comp=Z,20nm,1.4s						
KDJ	Kajisay	38.97	20	P	P	01 14 26.9	-0.3
CMAR	Chiang Mai Arr	39.37	68	P	P	01 14 30.2	-0.5
CMAR	Chiang Mai Arr	39.37	68	P	P	01 14 30.3	-0.3
	comp=Z,1.6nm,0.3s,baz=259,slow=8.9,SNR=15						
	comp=Z,1.6nm,0.3s						
CHTO	Chiang Mai	39.46	68	P	P	01 14 30.5	-0.8
BNN	Bunyan	39.75	329	IAmb	IAmb	01 14 35.9	
	comp=Z,20nm,1.1s						
TOKA	Tokat	40.57	331	P	P	01 14 40.7	+0.4
KBZ	Khabaz	40.79	340	P	P	01 14 42.4	+0.4
	comp=Z,2.3nm,0.9s,baz=116,slow=4.1,SNR=4.4						
	comp=Z,2.3nm,0.9s						
KIV	Kislovodsk	41.06	340	P	P	01 14 45.1	+0.7
KIV				IAmb	IAmb	01 14 58.3	
	comp=Z,12nm,1.2s						
BRTR	Keskin Array B	41.54	328	P	P	01 14 48.2	-0.2
BRTR	Keskin Array B	41.54	328	P	P	01 14 48.8	+0.3
	comp=Z,2.1nm,0.9s,baz=156,slow=9.5,SNR=14						
BRTR				PcP	PcP	01 16 44.8	-1.0
	comp=Z,0.7nm,1.1s,baz=70,slow=4.7,SNR=4.0						
	comp=Z,2.1nm,0.9s						
AB31	Akbulak array	43.22	359		P	01 15 01.1	-0.6
AB31				IAmb	IAmb	01 15 15.1	
	comp=Z,10nm,1.2s						
ABKAR	Akbulak array	43.22	359	P	P	01 15 01.5	-0.3
ABKAR	Akbulak array	43.22	359	IAmb	IAmb	01 15 15.1	
	comp=Z,10nm,1.2s						
GOMU	GeErMu	43.48	41	P	P	01 15 05.4	+0.8
GOMU				pmax	pmax		
	comp=Z,16nm,1.1s						
PZH	PanZhiHua	44.20	58	P	P	01 15 12.1	+1.9
PZH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,110nm,4.7s						
MAKZ	Makanchi	44.72	21	P	P	01 15 12.9	-1.0
MAKZ				IAmb	IAmb	01 15 20.4	
	comp=Z,9.3nm,1.2s						
MKAR	Makanchi Array	44.82	21		P	01 15 13.3	-1.4
MKAR	Makanchi Array	44.82	21	P	P	01 15 13.7	-1.0
	comp=Z,2.1nm,0.8s,baz=206,slow=7.5,SNR=16						
MKAR				PcP	PcP	01 16 56.7	+0.2
	comp=Z,0.6nm,1.0s,baz=211,slow=1.7,SNR=3.0						
	comp=Z,2.1nm,0.8s						
KURBB	Kurchatov Arra	47.03	16	P	P	01 15 31.1	-0.9
	comp=Z,0.5nm,0.2s,baz=211,slow=8.4,SNR=7.5						
	comp=Z,0.5nm,0.2s						
ITM	Ithomi	47.05	317	P	P	01 15 32.2	-0.2
KURK	Kurchatov	47.14	16	P	P	01 15 31.9	-1.0
KURK				IAmb	IAmb	01 15 39.6	
	comp=Z,9.4nm,1.3s						
BVAR	Borovoye Array	47.67	8	P	P	01 15 36.5	-0.5
	comp=Z,1.0nm,0.8s,baz=180,slow=8.9,SNR=7.6						
BVAR				PcP	PcP	01 17 06.1	-0.2
	comp=Z,2.0nm,1.0s,baz=197,slow=4.6,SNR=4.4						
	comp=Z,1.0nm,0.8s						
BRVK	Borovoye	47.69	8	P	P	01 15 36.1	-1.0
BRVK				IAmb	IAmb	01 15 44.9	
	comp=Z,7.0nm,1.2s						
BOSA	Boshof	48.35	223	P	P	01 15 45.9	+3.1
	comp=Z,3.8nm,1.0s,baz=76,slow=8.3,SNR=2.9						
	comp=Z,3.8nm,1.0s						
GTA	Gaotai	48.56	41	P	P	01 15 43.4	-0.9
GTA				sP	pwP	01 15 51.0	-0.5
GTA				pmax	pmax		
	comp=Z,4.0nm,1.5s						
BURAR	Bucovina Array	51.42	330	P	P	01 16 06.0	+0.1
ZAA0	Zalesovo Array	51.78	18		P	01 16 07.0	-1.3
ZAA0				IAmb	IAmb	01 16 14.8	
	comp=Z,13nm,1.3s						
ZALV	Zalesovo Beam	51.78	18	P	P	01 16 06.9	-1.4
ZALV	Zalesovo Beam	51.78	18	P	P	01 16 07.0	-1.3
	comp=Z,2.6nm,0.8s,baz=224,slow=8.2,SNR=9.9						
	comp=Z,2.6nm,0.8s						
AKASG	Malin Array Be	51.79	335	P	P	01 16 06.9	-1.4
	comp=Z,0.3nm,0.4s,baz=147,slow=6.8,SNR=10						
	comp=Z,0.3nm,0.4s						
AKBB	Malin Array Si	51.79	335	P	P	01 16 06.8	-1.6
AKBB				IAmb	IAmb	01 16 22.1	
	comp=Z,11nm,1.4s						
KIEV	Kiev	51.79	335	P	P	01 16 06.9	-1.5
H04N1	CROZET ISLANDS	52.42	188	T	T	02 12 52.4	
	baz=11,slow=76,SNR=61						
H04N2	CROZET ISLANDS	52.42	188	T	T	02 12 51.5	
	baz=11,slow=76,SNR=62						
H04N3	CROZET ISLANDS	52.43	188	T	T	02 12 51.0	
	baz=11,slow=76,SNR=66						
CUC	Castrocucco	52.60	317	P	P	01 16 15.3	+0.6
XAN	Xi'an	52.67	51	P	P	01 16 13.9	-1.4
XAN				pP	sP	01 16 20.6	-0.3
XAN				pmax	pmax		
	comp=Z,12nm,1.2s						
VYHS	Vyhne	55.29	327	*e*P	P	01 16 34.0	-0.2
TAM	Tamanrasset	55.64	294	P	P	01 16 38.5	+1.2
TAM				IAmb	IAmb	01 16 49.0	
	comp=Z,2.7nm,0.5s						
MODS	Modra-Piesok	56.07	327	*e*P	P	01 16 38.7	-1.1
JAVC	Velka Javorina	56.13	327	*e*P	P	01 16 40.7	+0.4
RONA	Rosalia, Austr	56.24	325	*i* P	P	01 16 41.1	+0.1
	comp=Z,4.0nm,1.0s						
MURB	Monte Urbino	56.30	319	P	P	01 16 42.7	+1.1
SOKA	Soboth	56.42	324	*i* P	P	01 16 42.3	0.0
	comp=Z,4.3nm,1.4s						
ARSA	Arzberg	56.44	325	*i* P	P	01 16 42.5	0.0
	comp=Z,3.9nm,1.0s						
CONA	Conrad Observa	56.61	325	*i* P	P	01 16 43.8	+0.1
	comp=Z,5.2nm,1.2s						
MORC	Moravsky Berou	56.73	328	*e*P	P	01 16 44.0	-0.5
KRUC	Moravsky	56.94	327	*e*P	P	01 16 45.5	-0.4
VRAC	Vranov	56.97	327	*e*P	P	01 16 46.0	-0.2
SONM	Songino Array	57.12	35		P	01 16 46.5	-0.8
SONM				IAmb	IAmb	01 16 54.5	
	comp=Z,8.3nm,1.2s						
SONM	Songino Array	57.12	35	P	P	01 16 46.3	-1.1
	comp=Z,2.7nm,0.9s,baz=233,slow=7.5,SNR=20						
	comp=Z,2.7nm,0.9s						
HHC	Hu-ho-hao-te	57.18	44	*e*P	P	01 16 49.1	+1.2
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,310nm,4.6s						
MYKA	Terra Mystica	57.22	323	*i* P	P	01 16 48.1	+0.1
	comp=Z,4.8nm,1.1s						
MOA	Molln	57.48	325	*i* P	P	01 16 49.8	0.0
	comp=Z,6.4nm,1.1s						
ULN	Ulaanbaatar	57.51	35	P	P	01 16 48.4	-1.8
ULN				IAmb	IAmb	01 16 56.8	
	comp=Z,4.4nm,0.8s						
BIOA	Bad Ischl, Aus	57.76	324	*e*P	P	01 16 51.4	-0.4
	comp=Z,4.7nm,0.9s						
ABTA	Abfaltersbach	57.95	323	*i* P	P	01 16 53.2	-0.1
	comp=Z,5.6nm,1.3s						
PRMA	PARMA	58.40	320	P	P	01 16 57.4	+1.2
TORD	Torodi Ar. Bea	58.47	282		P	01 16 56.8	-0.4
TORD				IAmb	IAmb	01 17 07.3	
	comp=Z,6.3nm,1.4s						
TORD	Torodi Ar. Bea	58.47	282	P	P	01 16 59.3	+2.0
	comp=Z,1.7nm,0.5s,baz=54,slow=7.5,SNR=3.5						
	comp=Z,1.7nm,0.5s						
WTTA	Wattenberg	58.73	323	*i* P	P	01 16 58.0	-0.7
	comp=Z,4.7nm,0.6s						
WATA	Walderalm	58.80	323	*i* P	P	01 16 58.5	-0.7
	comp=Z,3.3nm,0.8s						
SQTA	Sankt Quirin	58.96	323	*i* P	P	01 16 59.2	-1.1
	comp=Z,4.1nm,0.6s						
MOTA	Moosalm	59.08	323	*i* P	P	01 17 00.3	-0.9
	comp=Z,8.0nm,1.1s						
FETA	Feichten	59.16	322	*e*P	P	01 17 01.3	-0.5
	comp=Z,5.7nm,1.5s						
BRG	Berggiesshubel	59.26	328	*e*P	P	01 17 00.8	-1.3
BRG				Amp		01 17 03.5	
	comp=Z,1.3nm,0.8s						
FUORN	Ofenpass-Fuorn	59.26	322	P	P	01 17 03.5	+1.0
FUORN				IAmb	IAmb	01 17 10.6	
	comp=Z,7.9nm,1.4s						
TIA	Tai'an	59.73	51	P	P	01 17 04.6	-1.1
DAVA	Damuels	59.80	322	*i* P	P	01 17 05.9	-0.3
	comp=Z,11nm,1.7s						
TGY	Tagaytay City	59.81	77	LR	LR	01 42 28.6	
	comp=Z,2µm,19.5s,baz=100,slow=36						
NJ2	Nanjing	60.08	56	*e*P	P	01 17 09.3	+1.1
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
SENIN	Lac Senin/Sane	60.99	321	P	P	01 17 14.0	-0.4
FINES	FINESS Array B	61.12	342	P	P	01 17 12.9	-1.7
	comp=Z,2.2nm,0.8s,baz=134,slow=6.0,SNR=4.4						
	comp=Z,2.2nm,0.8s						
HFS	Hagfors	64.65	336	P	P	01 17 36.8	-1.4
	comp=Z,6.6nm,0.9s,baz=141,slow=5.7,SNR=7.3						
	comp=Z,6.6nm,0.9s						
NOA	NORSAR Array B	66.17	336	P	P	01 17 47.5	-0.7
	comp=Z,1.6nm,0.9s,baz=121,slow=6.9,SNR=4.4						
	comp=Z,1.6nm,0.9s						
ESDC	Sonseca Array	66.79	311	P	P	01 17 53.1	+0.6
	comp=Z,1.7nm,0.8s,baz=89,slow=5.6,SNR=12						
	comp=Z,1.7nm,0.8s						
ARCES	ARCESS Array B	67.57	347	P	P	01 17 56.0	-0.8
	comp=Z,1.7nm,0.8s,baz=154,slow=6.5,SNR=5.2						
	comp=Z,1.7nm,0.8s						
CN2	Changchun	67.86	45	*e*P	P	01 18 00.0	+0.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSAR	Wonju Array Be	68.41	52	P	P	01 18 01.1	-1.6
KSRS	Korea Array	68.45	52	P	P	01 18 00.9	-2.0
	comp=Z,1.4nm,0.6s,baz=259,slow=7.8,SNR=7.1						
	comp=Z,1.4nm,0.6s						
BNX	BinXian	69.66	43	⇓P	P	01 18 09.3	-1.0
BNX				pmax	pmax		
	comp=Z,5.0nm,1.3s						
WRA	Warramunga Arr	76.82	112	P	P	01 18 53.6	+0.5
	comp=Z,3.6nm,0.9s,baz=281,slow=5.6,SNR=5.0						
	comp=Z,3.6nm,0.9s						
ASAR	Alice Springs	77.18	116	P	P	01 18 54.8	-0.4
	comp=Z,3.0nm,0.9s,baz=294,slow=5.6,SNR=7.0						
	comp=Z,3.0nm,0.9s						
TIXI	Tiksi	77.67	18	P	P	01 18 55.1	-1.8
	comp=Z,2.0nm,0.3s,baz=302,slow=3.6,SNR=8.7						
	comp=Z,2.0nm,0.3s						
PDAR	Pinedale Array	130.76	350	PKP	PKPdf	01 26 11.7	-0.9
	comp=Z,0.5nm,0.6s,baz=46,slow=4.3,SNR=5.0						
NVAR	Mina Array Bea	135.90	359	PKP	PKPdf	01 26 22.9	+0.5
	comp=Z,1.2nm,1.0s,baz=312,slow=2.5,SNR=4.5						
TXAR	Lajitas Array	141.87	338	PKhKP	PKPpre	01 26 27.4	
	comp=Z,0.6nm,0.8s,baz=84,slow=0.8,SNR=7.7						
TXAR				PKP	PKPdf	01 26 34.5	+1.1
	comp=Z,0.3nm,0.7s,baz=97,slow=3.3,SNR=4.3						

ISC 14 01:10:41.8±1.1,28°.66N±0°.04×112°.87W±0°.04,h8^{km},n6,
σ1^{s}.54/10,2C-2D,Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFQB	San Francisqui	0.25	178	⇓*i*P	Pg	01 10 47.7	+0.9
SFQB				*e*S	Sg	01 10 50.5	+0.4
BAHB	Baha de los	0.67	296	⇑*e*P	Pg	01 10 55.7	+0.9
BAHB				*e*S	Sg	01 11 05.2	+1.6
BAHB				IAML		01 11 06.4	
	comp=E,838nm,0.2s						
BAHB				*e*		01 11 06.4	
BAHB				IAML		01 11 06.9	
	comp=N,722nm,0.3s						
BAHB				⇓*e*		01 11 06.9	
BKIRB	Bahia Kino	0.79	75	⇑*i*P	Pg	01 10 58.2	+1.2
BKIRB				*e*S	Sg	01 11 09.0	+1.8
PLIB	Puerto Liberta	1.27	7	*e*P	Pn	01 11 04.4	-1.4
PLIB				*e*S	Sb	01 11 20.9	-1.5
HSIG		1.72	77	*e*P	Pn	01 11 11.2	-1.0
GUYB	Guaymas	1.92	113	*e*P	Pn	01 11 13.1	-1.6

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*IDC **14** 01:12:03.0±0.5,5°.23S×153°.69E,h0^{km},mb4.5/19,*
mbtmp4.5/22,ML3.1/2,Error ellipse: s-maj=18.7km
s-min=12.6km az=82.0
*BJI **14** 01:12:08.9,4°.61S×153°.92E,h39^{km},mb4.8/36*
*NEIC **14** 01:12:10.8±1.4,5°.24S±0°.07×153°.52E±0°.05,h47^{km}±6^{km},*
mb4.8/47,Error ellipse: s-maj=12.6km s-min=2.4km
az=144.0
*DJA **14** 01:12:12.1±0.6,5°S±5°×15°4E±°,h65^{km}±6^{km},M4.9/19,*
mb4.7/19,mB5.5/4,MLv5.0/2,Mw(mB)5.0/4
ISC 14 01:12:10.4±0.3,5°.28S±0°.05×153°.59E±0°.06,h50^{km},n125,
σ1^{s}.26/117,mb4.8/53,2C,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.78	307		Pn	01 12 38.2	-0.7
MANU	Manus Island	6.99	297		Pn	01 13 56.2	+5.9
HNR	Honiara	7.54	124	Pn	Pn	01 13 53.2	-4.5
	35nm,0.3s,baz=170,slow=15,SNR=1.5						
HNR				Sn	Sn	01 15 18.7	-3.2
	6.3nm,0.3s,baz=253,slow=12,SNR=1.4						
PMG	Port Moresby	7.58	237		Pn	01 13 57.7	-0.7
PMG	Port Moresby	7.58	237	Pn	Pn	01 13 56.9	-1.5
	5.4nm,0.3s,baz=45,slow=12,SNR=6.3						
PMG				Sn	Sn	01 15 21.5	-1.5
	9.5nm,0.3s,baz=101,slow=21,SNR=7.6						
	13nm,0.4s						
PATS	Pohnpei	12.92	21	Pn	Pn	01 15 11.5	0.0
JAY	Jayapura	13.14	282	Pn	Pn	01 15 13.7	-0.9
	0.4nm,0.3s,baz=115,slow=4.4,SNR=2.4						
	3.9nm,0.6s						
JAY	Jayapura	13.14	282	P	Pn	01 15 13.6	-0.9
	16nm,1.3s						
SMPI	Sarmi	15.20	282	P	Pn	01 15 40.8	-1.2
	5µm54nm,1.4s						
BAKI	Biak	17.92	282	P	Pn	01 16 15.2	-1.0
	28nm,0.5s						
RKPI	Ransiki, Papua	19.73	280	P	P	01 16 37.1	+0.9
	8µm62nm,1.0s						
EIDS	Eidsvold	20.12	187		P	01 16 40.5	+0.2
EIDS				IAmb	IAmb	01 16 53.3	
	comp=Z,68nm,2.0s						
DZM	Mont Dzumac	20.82	145		P	01 16 48.5	+0.5
DZM				IAmb	IAmb	01 17 07.8	
	comp=Z,37nm,0.9s						
DZM	Mont Dzumac	20.82	145	P	P	01 16 46.1	-2.0
	comp=Z,29nm,0.8s,baz=298,slow=9.4,SNR=28						
	comp=Z,29nm,0.8s						
MTN	Manton Dam	23.40	250		P	01 17 12.6	-2.5
MTN				IAmb	IAmb	01 17 40.6	
	comp=Z,38nm,1.2s						
WRA	Warramunga Arr	23.73	230	P	P	01 17 16.6	-1.7
	comp=Z,4.5nm,0.8s,baz=55,slow=9.7,SNR=24						
WRA				PcP	PcP	01 21 02.8	+1.5
	comp=Z,2.9nm,0.6s,baz=53,slow=2.6,SNR=8.4						
	comp=Z,4.5nm,0.8s						
ARMA	Armidale	25.08	184	P	P	01 17 31.0	+0.5
ARMA				IAmb	IAmb	01 17 43.6	
	comp=Z,22nm,0.9s						
AS31	Alice Springs	26.34	224	P	P	01 17 43.0	+1.1
ASAR	Alice Springs	26.34	224	P	P	01 17 40.7	-1.3
	comp=Z,2.7nm,0.9s,baz=57,slow=8.7,SNR=20						
ASAR				PcP	PcP	01 21 08.5	+1.4
	comp=Z,2.6nm,0.8s,baz=59,slow=3.3,SNR=6.7						
ASAR				ScP	ScP	01 24 47.9	+4.8
	comp=Z,1.7nm,1.0s,baz=32,slow=3.3,SNR=6.1						
	comp=Z,2.7nm,0.9s						
KNRA	Kununurra	26.48	245		P	01 17 43.3	+0.1
KNRA				IAmb	IAmb	01 18 12.1	
	comp=Z,18nm,0.7s						
STKA	Stephens Creek	28.75	202	P	P	01 18 03.9	+0.5
	comp=Z,2.4nm,0.7s,baz=334,slow=15,SNR=3.5						
	comp=Z,2.4nm,0.7s						
FORT	Forrest	34.93	220	P	P	01 18 55.9	-1.7
RTZ	Ruatahuna	39.40	151	P	P	01 19 36.5	+1.0
BKZ	Black Stump Fm	39.60	152	P	P	01 19 38.0	+0.9
JMN	Monobe	43.05	336	P	P	01 20 04.5	-0.9
JNU	Nakatsue	43.84	332		P	01 20 11.3	-0.6
MJAR	Matsushiro Arr	44.02	342	P	P	01 20 11.4	-1.8
	comp=Z,1.0nm,0.4s,baz=69,slow=8.1,SNR=2.7						
JTM	Tenmabayashi	47.26	347	P	P	01 20 38.2	-0.5
KSRS	Korea Array	48.78	333	P	P	01 20 50.0	-0.5
	comp=Z,5.5nm,0.8s,baz=152,slow=8.8,SNR=20						
	comp=Z,5.5nm,0.8s						
NJ2	Nanjing	49.71	321	*e*P	P	01 21 00.3	+2.6
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
USRK	Ussuriysk Ar.	52.95	341	P	P	01 21 21.7	0.0
	comp=Z,4.8nm,0.9s,baz=142,slow=9.6,SNR=6.3						
	comp=Z,4.8nm,0.9s						
TIA	Tai'an	53.56	323	P	P	01 21 25.3	-1.1
TIA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
CN2	Changchun	55.05	335	*e*P	P	01 21 37.4	+0.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HNS	HongShan	55.80	323	⇑P	P	01 21 42.8	+0.2
HNS				pmax	pmax		
	comp=Z,16nm,1.5s						
BNX	BinXian	55.90	338	⇑P	P	01 21 42.4	-0.8
BNX				pmax	pmax		
	comp=Z,18nm,0.8s						
XAN	Xi'an	57.51	316	P	P	01 22 08.8	+14
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	Xi'an	57.51	316	P	P	01 21 54.3	-0.5
XAN				sP	pwP	01 22 14.4	+1.6
PETK	Petropavlovsk-	58.27	3	P	P	01 21 59.1	-0.6
	comp=Z,1.7nm,0.5s,baz=169,slow=6.8,SNR=7.2						
	comp=Z,1.7nm,0.5s						
CM31	Chiang Mai Arr	58.79	295	P	P	01 22 03.9	-0.2
CM31				IAmb	IAmb	01 22 05.6	
	comp=Z,9.1nm,0.8s						
CMAR	Chiang Mai Arr	58.79	295	P	P	01 22 04.0	-0.1
CMAR	Chiang Mai Arr	58.79	295	P	P	01 22 04.9	+0.8
	comp=Z,5.6nm,0.7s,baz=111,slow=5.3,SNR=23						
	comp=Z,5.6nm,0.7s						
CHTO	Chiang Mai	58.90	296	P	P	01 22 05.3	+0.5
CHTO				sP	sP	01 22 25.8	+2.8
PZH	PanZhiHua	59.29	305	P	P	01 22 09.8	+2.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
XLT	XiLinHaoTe	59.47	329	*e*P	P	01 22 08.3	-0.1
XLT				S	S	01 30 10.0	-4.3
XLT				pmax	pmax		
	comp=Z,18nm,0.7s						
HEH	HeiHe	59.76	341	*e*P	P	01 22 08.1	-2.0
HEH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC	Hu-ho-hao-te	59.89	324	*e*P	P	01 22 14.4	+3.0
HHC				pmax	pmax		
	comp=Z,11nm,0.5s						
DRV	Dumont d'Urvil	62.01	186	P	P	01 22 25.3	+0.2
DRV				pP	pP	01 22 38.6	+0.9
LZH	Lanzhou	62.12	316	*e*P	P	01 22 24.1	-2.6
LZH				pmax	pmax		
	comp=Z,34nm,1.1s						
MA2	Magadan	64.69	358	P	P	01 22 42.6	-0.3
MA2				IAmb	IAmb	01 22 48.1	
	comp=Z,8.1nm,0.7s						
MA2	Magadan	64.69	358	P	P	01 22 42.7	-0.3
GTA	Gaotai	66.54	317	P	P	01 22 56.6	+1.1
GTA				pmax	pmax		
	comp=Z,17nm,1.2s						
ULN	Ulaanbaatar	66.81	328	P	P	01 22 57.1	0.0
ULN	Ulaanbaatar	66.81	328	P	P	01 22 58.1	+0.9
SONM	Songino Array	67.14	328	P	P	01 22 59.3	+0.1
SONM				IAmb	IAmb	01 23 01.4	
	comp=Z,5.0nm,0.6s						
SONM	Songino Array	67.14	328	P	P	01 22 59.6	+0.4
	comp=Z,4.7nm,0.5s,baz=143,slow=5.7,SNR=30						
	comp=Z,4.7nm,0.5s						
CCD	Concordia, Ant	71.90	188	P	P	01 23 29.0	+0.6
EVN	Everest	72.25	301	P	P	01 23 31.9	+0.2
EVN				IAmb	IAmb	01 23 42.4	
	comp=Z,19nm,1.2s						
VNDA	Vanda	72.33	178	P	P	01 23 31.4	+1.0
VNDA	Vanda	72.33	178	P	P	01 23 31.0	+0.6
	comp=Z,3.4nm,1.1s,baz=324,slow=7.2,SNR=11						
	comp=Z,3.4nm,1.1s						
K15K	Wolf Creek Mou	75.58	20	P	P	01 23 49.7	+0.1
K15K				IAmb	IAmb	01 23 55.9	
	comp=Z,6.8nm,0.6s						
Q19K	Cape Douglas,	76.44	25	P	P	01 23 54.0	-0.6
WMQ	Urumqi	76.62	317	*e*P	P	01 23 58.0	+1.9
J17K	VABM Dome	77.16	20	P	P	01 23 59.7	+1.2
L19K	White Mountain	77.89	22	P	P	01 24 03.1	+0.4
SLKM	Skilak Lake	78.77	25	IAmb	IAmb	01 24 13.1	
	comp=Z,8.9nm,0.6s						
SML	Sawmill	80.23	24	IAmb	IAmb	01 24 52.2	
	comp=Z,10nm,0.9s						
E19K	Redstone River	80.40	17	IAmb	IAmb	01 25 09.8	
	comp=Z,7.9nm,1.0s						
MLY	Manley	81.04	21	IAmb	IAmb	01 24 29.6	
	comp=Z,17nm,1.8s						
MKAR	Makanchi Array	81.20	319	P	P	01 24 21.0	0.0
MKAR	Makanchi Array	81.20	319	P	P	01 24 21.2	+0.2
	comp=Z,1.7nm,0.5s,baz=96,slow=7.3,SNR=25						
	comp=Z,1.7nm,0.5s						
ZALV	Zalesovo Beam	81.98	326	P	P	01 24 24.0	-0.9
ZALV	Zalesovo Beam	81.98	326	P	P	01 24 24.2	-0.7
	comp=Z,6.0nm,0.6s,baz=106,slow=5.3,SNR=20						
	comp=Z,6.0nm,0.6s						
ILAR	Eielson Array	82.30	22	P	P	01 24 24.6	-1.8
	comp=Z,1.8nm,1.0s,baz=243,slow=5.4,SNR=8.4						
	comp=Z,1.8nm,1.0s						
J25K	Salcha River,	82.79	22	IAmb	IAmb	01 24 34.4	
	comp=Z,4.5nm,0.6s						
M27K	Edge Creek, AK	83.17	25	IAmb	IAmb	01 25 13.5	
	comp=Z,5.7nm,0.9s						
D23K	Nanushuk River	83.27	17	IAmb	IAmb	01 24 35.5	
	comp=Z,5.5nm,0.8s						
KDJ	Kajisay	83.51	313	IAmb	IAmb	01 24 36.5	
	comp=Z,5.7nm,0.8s						
KSH	Kashi	83.84	311	P	P	01 24 37.3	+2.2
KSH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
G26K	Porcupine Rive	84.47	21	IAmb	IAmb	01 25 16.0	
	comp=Z,12nm,1.4s						
BOOM	Boomskoye usch	84.49	313	IAmb	IAmb	01 24 52.0	
	comp=Z,7.8nm,0.9s						
KURK	Kurchatov	84.62	322	P	P	01 24 38.3	-0.3
KURBB	Kurchatov Arra	84.66	322	P	P	01 24 38.2	-0.5
	comp=Z,4.8nm,0.8s,baz=104,slow=4.0,SNR=24						
	comp=Z,4.8nm,0.8s						
QSPA	South Pole Qui	84.69	180	P	P	01 24 39.5	+0.7
QSPA				IAmb	IAmb	01 24 56.9	
	comp=Z,9.7nm,0.8s						
QSPA	South Pole Qui	84.69	180	P	P	01 24 39.5	+0.7
	comp=Z,7.1nm,0.6s,baz=271,slow=0.3,SNR=51						
	comp=Z,7.1nm,0.6s						
TKM2	Tokmak 2	84.82	314	P	P	01 24 40.5	+0.4
	SNR=9.8						
MAW	Mawson	85.44	203	P	P	01 24 42.2	-0.2
	comp=Z,3.0nm,0.7s,baz=114,slow=4.9,SNR=11						
	comp=Z,3.0nm,0.7s						
CHMS	Chumysh	85.45	314	P	P	01 24 43.4	+0.4
	SNR=5.3						
AAK	Ala-Archa	85.56	313	P	P	01 24 44.3	+0.5
	SNR=5.3						
K29M	Barlow Dome	85.58	25	IAmb	IAmb	01 25 21.5	
	comp=Z,4.7nm,1.0s						
USP	Ospenovka	85.68	314	P	P	01 24 44.6	+0.4
	SNR=6.2						
I29M	Ogilvie Camp,	85.83	23	IAmb	IAmb	01 25 17.6	
	comp=Z,5.4nm,1.1s						
AML	Almayashu	86.05	313	P	P	01 24 47.4	+1.0
	SNR=8.3						
J30M	Hart River	86.33	24	IAmb	IAmb	01 25 29.1	
	comp=Z,8.3nm,1.4s						
KKAR	Karatay Array	88.53	313	P	P	01 24 56.0	-1.9

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BVAR  Borovoye Array    90.09 323  P       P         01 25 04.0 -1.0
      comp=Z,6.3nm,0.7s,baz=104,slow=6.3,SNR=45
      comp=Z,6.3nm,0.7s
BRVK  Borovoye          90.16 323  P       P         01 25 03.9 -1.4
BRVK                               IAmb    IAmb      01 25 05.4
      comp=Z,9.5nm,1.1s
NVAR  Mina Array Bea    91.76  52  P       P         01 25 12.7 -0.7
      comp=Z,0.2nm,0.4s,baz=91,slow=2.0,SNR=1.7
      comp=Z,0.2nm,0.4s
YKA   Yellowknife Ar    95.48  28  P       P         01 25 28.5 -1.1
      comp=Z,0.6nm,0.8s,baz=287,slow=4.8,SNR=5.6
      comp=Z,0.6nm,0.8s
MVU   Marysvale         96.54  52  P       P         01 25 34.7 -0.6
AKASG Malin Array Be   115.34 324  PKP     PKiKP     01 30 46.2 -0.4
      comp=Z,2.1nm,0.5s,baz=50,slow=2.9,SNR=13
BRTR  Keskin Array B   116.20 312  PKP     PKPdf     01 30 47.9 -0.9
      comp=Z,0.6nm,0.7s,baz=90,slow=4.9,SNR=5.5
BOSA  Boshof           119.97 233  PKP     PKPdf     01 30 56.5 +0.1
      comp=Z,3.0nm,0.8s,baz=108,slow=1.7,SNR=5.5
KOLS  Kolonicke sedl   120.15 325 ePKP     PKiKP     01 30 57.0 +1.0
VYHS  Vyhne            122.31 326 ePKP     PKPdf     01 31 00.6 +0.5
MODS  Modra-Piesok     123.24 327 ePKP     PKPdf     01 31 02.1 +0.2
BRG   Berggiesshubel   123.47 331 ePKP     PKPdf     01 31 02.8 +0.5
BRG                                Amp               01 31 04.5
      comp=Z,2.5nm,0.7s
CLL   Collm            123.64 331 ePKPdf   PKPdf     01 31 02.0 -0.5
      comp=Z,3.0nm,0.6s
RONA  Rosalia, Austr   124.17 326 i PKiKP  PKPdf     01 31 04.2 +0.5
      comp=Z,3.0nm,0.9s
CONA  Conrad Observa   124.27 327 i PKiKP  PKPdf     01 31 04.5 +0.5
      comp=Z,1.6nm,0.6s
GERES GERESS Array B   124.87 329  PKP     PKPdf     01 31 05.5 +0.4
      comp=Z,2.4nm,0.6s,baz=85,slow=2.8,SNR=20
SOKA  Soboth           125.47 326 i PKiKP  PKPdf     01 31 06.5 +0.2
      comp=Z,1.3nm,0.6s
OBKA  Obir             125.83 326 i PKP    PKPdf     01 31 06.7 -0.4
      comp=Z,2.0nm,0.5s
LESA  Schwarzleotal    126.29 328 i PKiKP  PKPdf     01 31 08.2 +0.3
      comp=Z,3.3nm,0.5s
EKA   Eskdalemuir Ar   126.71 344  PKP     PKPdf     01 31 08.9 +0.6
      comp=Z,0.8nm,0.7s,baz=45,slow=2.3,SNR=1.4
ABTA  Abfaltersbach    126.80 327 ePKiKP   PKPdf     01 31 09.0 +0.2
      comp=Z,3.2nm,0.6s
WTTA  Wattenberg       126.94 328 i PKiKP  PKPdf     01 31 10.0 +0.7
      comp=Z,7.9nm,1.0s
MOTA  Moosalm          127.17 329 i PKiKP  PKPdf     01 31 10.3 +0.6
      comp=Z,4.3nm,0.6s
SQTA  Sankt Quirin     127.19 329 i PKiKP  PKPdf     01 31 10.4 +0.8
      comp=Z,2.7nm,0.5s
FETA  Feichten         127.57 329 i PKiKP  PKiKP     01 31 11.3 +0.3
      comp=Z,4.6nm,0.8s
DAVA  Damuels          127.83 329 i PKiKP  PKPdf     01 31 11.8 +0.8
      comp=Z,4.0nm,0.7s
KEST  Kesra            135.28 317  PKP     PKPdf     01 31 25.9 +0.7
      comp=Z,2.8nm,0.8s,baz=0.0,slow=3.0,SNR=5.8
TAM   Tamanrasset      144.59 303          PKPbc     01 31 42.4 +1.0
AVE   Averroes         146.98 330  PKPbc   PKPdf     01 31 47.6 +1.5
BDFB  Brasilia         150.18 135  PKPbc   PKPbc     01 31 57.0  0.0
      comp=Z,5.1nm,0.8s,baz=336,slow=3.0,SNR=5.7
TORD  Torodi Ar. Bea   151.20 288  PKPbc   PKPbc     01 31 59.0 -0.3
      comp=Z,11nm,0.5s,baz=18,slow=3.5,SNR=12
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*IDC **14** 01:23:31.0±1.8, 6°.51N×60°.64E, h0km, mb3.8/10, mbtmp3.8/10, MS4.9/1, Error ellipse: s-maj=45.0km s-min=22.9km az=24.0*

ISC 14 01:23:32.6±1.9**, 6°.5N**±0°.3×**60°.7E**±0°.2**, h10km, n15, σ0s.37**/11**, mb3.9**/11**, Carlsberg Ridge**

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Code  Station Name        Δ°  AZ°     Phase ID            Time     Res
                                   Op      ISC         h  m  s    ISC
OPO   Ambohidratompo    28.26 208  LR      LR        01 37 52.9
      comp=Z,3µm,19.8s,baz=134,slow=30
CMAR  Chiang Mai Arr    39.12  69  P       P         01 31 00.5 -0.2
      0.6nm,0.3s,baz=253,slow=8.7,SNR=4.9
      0.6nm,0.3s
BRTR  Keskin Array B    41.01 328  P       P         01 31 15.8 -0.4
      1.1nm,0.9s,baz=158,slow=10.0,SNR=5.8
      1.1nm,0.9s
MKAR  Makanchi Array    44.22  21  P       P         01 31 42.4 +0.4
      1.3nm,0.9s,baz=206,slow=8.1,SNR=7.3
      1.3nm,0.9s
KURBB Kurchatov Arra    46.42  16  P       P         01 31 59.9 +0.5
      0.2nm,0.3s,baz=209,slow=7.4,SNR=2.2
      0.2nm,0.3s
BVAR  Borovoye Array    47.03   8  P       P         01 32 04.3 +0.2
      0.4nm,0.7s,baz=172,slow=3.0,SNR=3.8
      0.4nm,0.7s
LEM   Lembang           48.70 105  P       P         01 32 18.0 +0.1
      182nm,0.5s,baz=266,slow=9.6,SNR=11
ZALV  Zalesovo Beam     51.17  18  P       P         01 32 35.4 -0.4
      0.5nm,0.3s,baz=186,slow=8.9,SNR=3.7
      0.5nm,0.3s
H04N1 CROZET ISLANDS    53.05 188  T       T         02 29 18.7
      baz=11,slow=76,SNR=27
H04N2 CROZET ISLANDS    53.05 188  T       T         02 29 22.3
      baz=11,slow=76,SNR=23
H04N3 CROZET ISLANDS    53.06 188  T       T         02 29 16.5
      baz=11,slow=76,SNR=28
SONM  Songino Array     56.59  35  P       P         01 33 15.5 -0.2
      0.9nm,0.7s,baz=233,slow=7.2,SNR=5.0
      0.9nm,0.7s
FINES FINESS Array B    60.52 342  P       P         01 33 42.9 +0.2
      3.8nm,1.1s,baz=188,slow=9.6,SNR=4.2
      3.8nm,1.1s
HFS   Hagfors           64.08 336  P       P         01 34 07.0 +0.4
      1.7nm,0.8s,baz=107,slow=4.8,SNR=3.2
      1.7nm,0.8s
ESDC  Sonseca Array     66.39 310  P       P         01 34 22.1  0.0
      1.2nm,0.9s,baz=86,slow=5.7,SNR=6.5
      1.2nm,0.9s
```

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*IDC **14** 01:29:19.3±3.1, 8°.04S×124°.26E, h154km±31km, mb3.2/4, mbtmp3.8/8, Error ellipse: s-maj=62.8km s-min=11.9km az=62.0*

ISC 14 01:29:18.6±0.9**, 8°.09S**±0°.08×**124°.5E**±0°.1**, h150km, n8, σ2s.89**/12**, mb3.4**/4**, Timor region**

```
Code  Station Name        Δ°  AZ°     Phase ID            Time     Res
                                   Op      ISC         h  m  s    ISC
BATI  Baumata            2.26 201  P       Pn        01 29 58.0 +1.1
      153nm,0.4s,baz=328,slow=3.6,SNR=12
BATI                               S       Sn        01 30 27.1 +0.7
      78nm,0.4s,baz=98,slow=23,SNR=1.9
FITZ  Fitzroy Crossi    10.01 174  P       Pn        01 31 39.0 +0.1
      3.9nm,0.3s,baz=2.2,slow=8.3,SNR=21
FITZ                               S       Sn        01 33 24.5 -5.3
      16nm,0.3s,baz=95,slow=5.1,SNR=19
WRA   Warramunga Arr    15.16 142  P       Pn        01 32 48.1 +2.9
      3.6nm,0.5s,baz=320,slow=12,SNR=41
WRA                                S       Sn        01 35 29.8 -4.0
      3.1nm,0.8s,baz=318,slow=23,SNR=8.8
ASAR  Alice Springs     17.93 151  P       Pn        01 33 21.1 +2.5
      0.9nm,0.6s,baz=331,slow=12,SNR=9.5
ASAR                               S       S         01 36 39.1 +3.6
      3.2nm,0.8s,baz=321,slow=23,SNR=13
SONM  Songino Array     57.94 346  P       P         01 38 54.9 -0.3
      0.3nm,0.5s,baz=170,slow=8.8,SNR=2.0
      0.3nm,0.5s
MKAR  Makanchi Array    66.27 330  P       P         01 39 50.4 -0.4
      0.6nm,0.6s,baz=147,slow=7.3,SNR=5.4
      0.6nm,0.6s
KURBB Kurchatov Arra    70.69 331  P       P         01 40 16.9 -1.1
      0.3nm,0.6s,baz=147,slow=5.6,SNR=4.2
      0.3nm,0.6s
BVAR  Borovoye Array    76.15 330  P       P         01 40 49.1 -0.9
      0.3nm,0.5s,baz=142,slow=5.4,SNR=1.8
      0.3nm,0.5s
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*IDC **14** 01:35:02.1±1.1, 5°.99N×60°.58E, h0km, mb4.0/17, mbtmp4.0/17, Error ellipse: s-maj=31.7km s-min=17.6km az=35.0*

*NEIC **14** 01:35:05.0±1.7, 5°.9N±0°.1×60°.7E±0°.1, h10km±2km, mb4.3/24, Error ellipse: s-maj=24.6km s-min=18.3km az=167.0*

ISC 14 01:35:04.2±0.8**, 5°.9N**±0°.1×**60°.61E**±0°.07**, h15km, n54, σ1s.05**/54**, mb4.2**/27**, Carlsberg Ridge**

```
Code  Station Name        Δ°  AZ°     Phase ID            Time     Res
                                   Op      ISC         h  m  s    ISC
HMDM  Hanimaadhoo       12.53  85  Pn      Pn        01 38 01.1 -1.0
MNGI  Mangalore         15.68  62 eP       Pn        01 38 45.4 +0.6
MNGI                               IAmb    IAmb      01 38 49.3
      comp=Z,19nm,0.7s
MNGI                              eS       Sn        01 41 39.0 +0.5
TRD   Trivandrum        16.43  80 eP       Pn        01 38 54.7 +0.3
TRD                               eS       Sn        01 41 55.2 -1.6
POO   Poona             18.04  45 eP       P         01 39 15.2 +0.3
POO                                IAmb    IAmb      01 39 17.4
      comp=Z,220nm,2.0s
POO                               eS       Sn        01 42 35.7  0.0
UOSS  Minazif           19.44 348  P       P         01 39 29.4 -0.9
RAYN  Ar Rayn           22.80 322  P       P         01 40 06.5 -0.2
RAYN                               IAmb    IAmb      01 40 07.8
      comp=Z,10nm,0.8s
LODK  Lodwar            25.28 266  P       P         01 40 30.6 +0.3
LODK                               IAmb    IAmb      01 40 39.0
      comp=Z,9.3nm,1.0s
BLSP  Bilaspur          26.35  50 eP       P         01 40 41.3 +1.3
BLSP                               IAmb    IAmb      01 40 42.2
      comp=Z,2.9nm,0.5s
BLSP                              eS       S         01 45 15.6 +2.8
KBL   Kabul             29.59  14  P       P         01 41 07.5 -1.5
KBL                                IAmb    IAmb      01 41 11.9
      comp=Z,7.1nm,1.1s
BTK   Batken            35.27  14  P       P         01 42 00.0 +1.5
BTK                                IAmb    IAmb      01 42 07.6
      comp=Z,5.6nm,0.8s
MARD  Mardin            36.16 333  P       P         01 42 08.2 +1.9
GNI   Garni             37.00 340  P       P         01 42 13.8 +0.3
GNI                                IAmb    IAmb      01 42 46.4
      comp=Z,6.0nm,0.9s
LSA   Lhasa             37.30  47  P       P         01 42 16.2 -0.3
KKAR  Karatay Array     38.11  12  P       P         01 42 23.8 +1.1
KKAR  Karatay Array     38.11  12  P       P         01 42 24.2 +1.5
KKAR                               IAmb    IAmb      01 42 25.3
      comp=Z,7.3nm,1.4s
AAK   Ala-Archa         38.64  16  P       P         01 42 25.3 -2.0
BOOM  Boomskoye usch    38.93  18  P       P         01 42 30.1 +0.4
BOOM                               IAmb    IAmb      01 42 37.8
      comp=Z,7.3nm,1.3s
CMAR  Chiang Mai Arr    39.41  68  P       P         01 42 35.0 +1.2
      comp=Z,2.1nm,0.9s,baz=260,slow=9.4,SNR=9.3
      comp=Z,2.1nm,0.9s
KBZ   Khabaz            40.81 340  P       P         01 42 46.2 +1.2
      comp=Z,2.3nm,0.8s,baz=167,slow=7.7,SNR=4.3
      comp=Z,2.3nm,0.8s
KIV   Kislovodsk        41.09 340  P       P         01 42 48.1 +0.6
BR131 Keskin Array S    41.55 328  P       P         01 42 52.2 +0.7
BRTR  Keskin Array B    41.55 328  P       P         01 42 52.3 +0.8
BRTR  Keskin Array B    41.55 328  P       P         01 42 51.2 -0.2
      comp=Z,1.5nm,0.9s,baz=143,slow=11,SNR=11
      comp=Z,1.5nm,0.9s
AB31  Akbulak array     43.25 359  P       P         01 43 04.8 -0.1
ABKAR Akbulak array     43.25 359  P       P         01 43 04.9  0.0
ABKAR                              IAmb    IAmb      01 43 06.2
      comp=Z,4.2nm,1.1s
MKAR  Makanchi Array    44.86  21  P       P         01 43 17.4 -0.5
MKAR  Makanchi Array    44.86  21  P       P         01 43 17.6 -0.4
      comp=Z,2.0nm,0.9s,baz=204,slow=8.6,SNR=10
      comp=Z,2.0nm,0.9s
KURBB Kurchatov Arra    47.07  16  P       P         01 43 34.4 -0.9
      comp=Z,0.7nm,0.7s,baz=213,slow=8.2,SNR=9.3
      comp=Z,0.7nm,0.7s
BVAR  Borovoye Array    47.70   8  P       P         01 43 38.8 -1.3
      comp=Z,0.7nm,0.6s,baz=198,slow=9.3,SNR=5.2
      comp=Z,0.7nm,0.6s
BURAR Bucovina Array    51.44 330  P       P         01 44 09.8 +0.9
AKASG Malin Array Be    51.81 335  P       P         01 44 09.6 -1.9
      comp=Z,0.7nm,0.8s,baz=149,slow=7.6,SNR=7.2
      comp=Z,0.7nm,0.8s
ZALV  Zalesovo Beam     51.82  18  P       P         01 44 10.2 -1.3
ZALV  Zalesovo Beam     51.82  18  P       P         01 44 10.0 -1.5
      comp=Z,2.6nm,0.9s,baz=232,slow=7.2,SNR=6.8
      comp=Z,2.6nm,0.9s
H04N1 CROZET ISLANDS    52.38 188  T       T         02 40 57.5
      baz=11,slow=76,SNR=27
H04N2 CROZET ISLANDS    52.38 188  T       T         02 40 51.7
      baz=11,slow=76,SNR=26
H04N3 CROZET ISLANDS    52.40 188  T       T         02 40 57.3
      baz=11,slow=76,SNR=24
MORC  Moravsky Berou    56.74 328  IAmb    IAmb      01 44 48.8
      comp=Z,2.5nm,0.8s
SONM  Songino Array     57.16  35  P       P         01 44 50.9 +0.3
SONM                               IAmb    IAmb      01 44 51.9
      comp=Z,5.3nm,1.2s
SONM  Songino Array     57.16  35  P       P         01 44 50.4 -0.2
      comp=Z,1.7nm,0.9s,baz=235,slow=7.7,SNR=9.4
      comp=Z,1.7nm,0.9s
SENIN Lac Senin/Sane    61.00 321  P       P         01 45 18.3 +0.9
FINES FINESS Array B    61.14 342  P       P         01 45 17.6 -0.2
FINES FINESS Array B    61.14 342  P       P         01 45 17.1 -0.6
      comp=Z,1.8nm,0.8s,baz=109,slow=8.4,SNR=4.8
      comp=Z,1.8nm,0.8s
HFS   Hagfors           64.67 336  P       P         01 45 40.7 -0.5
      comp=Z,3.8nm,0.9s,baz=128,slow=9.6,SNR=5.5
      comp=Z,3.8nm,0.9s
NOA   NORSAR Array B    66.19 336  P       P         01 45 49.9 -1.3
      comp=Z,1.1nm,0.9s,baz=116,slow=7.4,SNR=3.3
      comp=Z,1.1nm,0.9s
ESBB  Sonseca Array     66.79 311  P       P         01 45 55.9 +0.5
ESDC  Sonseca Array     66.79 311  P       P         01 45 56.5 +1.1
ESDC                               IAmb    IAmb      01 45 57.0
      comp=Z,3.4nm,1.2s
ESDC  Sonseca Array     66.79 311  P       P         01 45 55.2 -0.2
      comp=Z,1.5nm,0.8s,baz=93,slow=5.1,SNR=11
      comp=Z,1.5nm,0.8s
ARCES ARCESS Array B    67.59 347  P       P         01 45 59.5 -0.5
      comp=Z,1.7nm,0.8s,baz=81,slow=7.5,SNR=5.8
      comp=Z,1.7nm,0.8s
KSRS  Korea Array       68.49  52  P       P         01 46 04.9 -1.2
      comp=Z,1.2nm,0.6s,baz=268,slow=3.8,SNR=4.5
      comp=Z,1.2nm,0.6s
WRA   Warramunga Arr    76.83 112  P       P         01 46 57.0 +0.8
WRA   Warramunga Arr    76.83 112  P       P         01 46 57.2 +1.1
      comp=Z,1.3nm,0.9s,baz=286,slow=5.0,SNR=6.1
      comp=Z,1.3nm,0.9s
ASAR  Alice Springs     77.19 116  P       P         01 46 58.7 +0.6
      comp=Z,1.4nm,0.8s,baz=289,slow=5.9,SNR=11
      comp=Z,1.4nm,0.8s
NVAR  Mina Array Bea   135.93 359  PKP     PKiKP     01 54 26.5 -0.5
      comp=Z,0.3nm,0.5s,baz=337,slow=2.6,SNR=2.3
TXAR  Lajitas Array    141.88 337  PKhKP   PKPpre    01 54 32.4
      comp=Z,0.3nm,0.7s,baz=100,slow=1.7,SNR=4.4
TXAR                               PKP     PKiKP     01 54 38.0 -1.2
      comp=Z,0.1nm,0.4s,baz=319,slow=2.2,SNR=2.7
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*SJA **14** 01:38:20.2±0.7, 30°.11S×72°.44W, h6km±3km, ML4.5, MW4.2*

*IDC **14** 01:38:25.0±0.5, 30°.14S×71°.97W, h0km, mb4.4/13, mbtmp4.3/18, ML4.1/5, Error ellipse: s-maj=18.8km s-min=14.1km az=77.0*

*GUC **14** 01:38:25.9±0.7, 30°.17S×72°.18W, h25km, ML4.4*

*NEIC **14** 01:38:26.0±1.8, 30°.13S±0°.04×72°.13W±0°.06, h10km±1km, mb4.8/22, Mwr4.5/26, ML4.4(GUC), Error ellipse: s-maj=9.2km s-min=6.2km az=235.0*

*VAO **14** 01:38:26.9±0.6, 30°.09S×71°.94W, h10km, mb4.5*

ISC 14 01:38:25.7±0.4**, 30°.16S**±0°.02×**72°.12W**±0°.04**, h10km, n172, σ1s.61**/187**, mb4.7**/24**, 5C, Off coast of central Chile**

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Code  Station Name        Δ°  AZ°     Phase ID            Time     Res
                                   Op      ISC         h  m  s    ISC
CO06  Fray Jorge         0.66 141          Pb        01 38 38.9 -0.4
CO06                                       Sb        01 38 48.2 -0.3
CO06  Fray Jorge         0.66 141 eP       Pb        01 38 38.9 -0.4
CO06                              eS       Sb        01 38 48.8 +0.2
CO05  La Serena          0.80  72          Pb        01 38 41.6 -0.1
CO05  La Serena          0.80  72 eP       Pb        01 38 41.6 -0.1
GO04  Tololo Observa     1.14  91 eP       Pb        01 38 47.1 -0.6
GO04  Tololo Observa     1.14  91 eP       Pg        01 38 47.6 -0.2
CO03  El Pedregal        1.41 119 eP       Pb        01 38 51.1 -1.0
CO03                              eS       Sn        01 39 09.8 -0.4
CO03                               IAML              01 39 14.7
      comp=N,6µm,0.4s
CO03  El Pedregal        1.41 119 eP       Pg        01 38 51.9 -0.8
CO03                              eS       Sg        01 39 11.5 +0.5
CO03                               IAML              01 39 13.4
      comp=Z,5µm,0.5s
CO02  Combarbal          1.42 137 eP       Pb        01 38 51.6 -0.7
CO02                               IAML              01 39 15.6
      comp=N,23µm,0.6s
CO02  Combarbal          1.42 137 eP       Pb        01 38 51.4 -1.0
CO02                               IAML              01 39 18.2
      comp=Z,7µm,0.8s
LCO   Las Campanas       1.69  47          Pn        01 38 55.2 -0.3
LCO   Las Campanas       1.69  47 eP       Pn        01 38 55.2 -0.3
LCO   Las Campanas       1.69  47 eP       Pn        01 38 55.4 -0.1
LCO                               eS       Sg        01 39 19.6 -0.4
LCO                                IAML              01 39 23.4
      comp=Z,12µm,0.7s
AC04  Llanos de Chal     2.16  25          Pn        01 39 00.5 -1.2
AC04  Llanos de Chal     2.16  25⥣eP       Pn        01 39 00.5 -1.2
AC04  Llanos de Chal     2.16  25 eP       Pn        01 38 59.9 -1.8
AC04                              eS       Sn        01 39 24.3 -4.2
AC04                               IAML              01 39 46.3
      comp=Z,1µm,0.7s
AROD  Rodeo              2.29  91 eP       Pb        01 39 06.8 -0.6
AROD                              eS       Sg        01 39 39.3 -0.1
VA06  Catapilco          2.49 164          Pn        01 39 06.0 -0.4
VA06  Catapilco          2.49 164 eP       Pn        01 39 05.9 -0.4
ACDV  Cuesta del Vie     2.60  91 eP       Pb        01 39 11.1 -1.4
ACDV                              eS       Sg        01 39 52.3 +3.0
ACDV                               IAML              01 39 52.4
      comp=Z,988nm,0.6s
ACCO  Cerro Coronel      2.67 100 eP       Pb        01 39 12.8 -1.1
ACCO                              eS       Sg        01 39 51.8 +0.1
DOCA  Reserva Natura     2.73 107 eP       Pb        01 39 12.0 -3.0
DOCA                               IAML              01 39 59.3
      comp=Z,985nm,0.8s
VA01  Torpederas         2.88 172          Pn        01 39 11.0 -0.6
VA01  Torpederas         2.88 172 eP       Pn        01 39 11.3 -0.3
VA01  Torpederas         2.88 172 eP       Pn        01 39 06.8 -4.9
VA01                              eP       Pb        01 39 11.8 -5.4
VA01                              eS       Sb        01 39 52.5  0.0
VA03  San Esteban        2.92 153          Pn        01 39 13.3 +1.0
VA03  San Esteban        2.92 153 eP       Pn        01 39 12.6 +0.3
VA03  San Esteban        2.92 153 eP       Pn        01 39 13.3 +1.0
VA03                              eS       Sn        01 39 47.3 -0.2
VA03                               IAML              01 40 09.1
      comp=Z,2µm,0.6s
RTLS  Leoncito           2.92 125 eP       Pb        01 39 16.5 -1.6
RTLS                              eS       Sb        01 39 54.3 +0.3
RTLS                               IAML              01 40 11.2
      comp=Z,4µm,0.9s
ROCH  El Roble           2.96 162 eP       Pn        01 39 12.8 -0.1
ROC1  El Roble           2.96 162 eS       Sn        01 39 44.8 -3.9
GO03  Copiapo            3.05  33          Pn        01 39 13.9 -0.2
GO03  Copiapo            3.05  33  IAML              01 40 13.2
      comp=E,788nm,0.5s
GO03  Copiapo            3.05  33 eP       Pn        01 39 13.8 -0.2
GO03                              eS       Sb        01 39 54.8 -2.6
AC06  Mina Casimiro      3.20  29          Pn        01 39 15.6 -0.5
AC06  Mina Casimiro      3.20  29 eP       Pn        01 39 15.4 -0.6
MT02  Curacav            3.20 165          Pn        01 39 16.5 +0.5
MT02  Curacav            3.20 165 eP       Pn        01 39 16.1  0.0
MT02                               IAML              01 40 17.9
      comp=E,630nm,0.6s
MT02  Curacav            3.20 165 eP       Pn        01 38 57.2  -19
MT02                              eS       Sn        01 39 48.8 -5.5
MT02                               IAML              01 40 12.1
      comp=Z,649nm,1.1s
PEL   Peldehue           3.21 158          Pn        01 39 16.8 +0.5
PEL   Peldehue           3.21 158 eS       Sb        01 39 58.3 -3.9
ZON   Zonda              3.26 116          Pb        01 39 20.2 -3.6
MT05  Renca              3.43 160          Pn        01 39 19.9 +0.7
MT05  Renca              3.43 160 eP       Pn        01 39 19.2  0.0
MT05                               IAML              01 40 29.1
      comp=Z,1µm,1.2s
VA05  Santo Domingo      3.51 173          Pn        01 39 19.1 -1.2
VA05  Santo Domingo      3.51 173  IAML              01 40 25.0
      comp=E,785nm,0.4s
FCH   Farellones         3.52 154 eP       Pn        01 39 21.4 +0.7
FCH                                IAML              01 40 22.5
      comp=N,405nm,0.2s
MT16  CCHEN              3.53 158          Pn        01 39 21.8 +1.1
MT03  Universidad Ad     3.59 158 eP       Pn        01 39 22.0 +0.5
MT03                              eS       Sn        01 40 05.0 +0.9
MT03                               IAML              01 40 21.4
      comp=Z,1µm,1.5s
CFA   Coronel Fontan     3.63 114  Pn      Pn        01 39 23.1 +1.0
      comp=Z,8.5nm,0.3s,baz=299,slow=14,SNR=22
CFA                                Sn      Sn        01 40 05.1 +0.1
      comp=Z,21nm,0.3s,baz=126,slow=19,SNR=5.8
      comp=Z,22nm,0.4s
MT04  Ro Olivares        3.65 153  IAML              01 40 18.9
      comp=N,662nm,0.8s
MT04  Ro Olivares        3.65 153 eP       Pn        01 39 24.1 +1.6
MT04                              eS       Sn        01 40 08.3 +2.7
MT04                               IAML              01 40 30.1
      comp=Z,672nm,0.8s
VCA   Vinchina           3.70  68 eP       Pb        01 39 27.1 -4.1
VCA                                IAML              01 40 28.7
      comp=Z,875nm,0.7s
MT09  Talagante          3.73 165          Pn        01 39 24.1 +0.7
MT08  Bocatoma Ro        3.73 152 eP       Pn        01 39 25.7 +2.1
MT08                              eS       Sn        01 40 06.8 -0.9
MT08                              eS       Sb        01 40 11.6 -5.6
MT08                              eS       Sb        01 40 12.0 -5.2
MT08                               IAML              01 40 30.6
      comp=Z,670nm,0.7s
MT01  Popeta             3.76 169          Pn        01 39 23.5 -0.3
MT01  Popeta             3.76 169 eP       Pn        01 39 23.3 -0.5
AC01  Pan de Azucar      4.22  19          Pn        01 39 27.9 -2.3
AC01  Pan de Azucar      4.22  19 eP       Pn        01 39 27.2 -2.9
AC01                              eS       Sg        01 40 36.3 -5.0
AC01                              eS       Sb        01 40 37.3 +6.2
AC01                               IAML              01 40 57.8
      comp=Z,239nm,0.6s
AC02  Maricunga          4.23  39          Pn        01 39 31.1 +0.3
AC02  Maricunga          4.23  39 eP       Pn        01 39 31.2 +0.4
AC02                              eS       Sb        01 40 35.3 +3.3
AC02                               IAML              01 40 47.6
      comp=Z,524nm,0.9s
BO01  Tunca              4.31 169          Pn        01 39 30.8 -0.5
BO01  Tunca              4.31 169 eP       Pn        01 39 31.0 -0.3
BO01                              eS       Sn        01 40 20.2 -1.4
BO01                               IAML              01 40 54.4
      comp=Z,321nm,0.7s
ACLC  CERRO LA CRUZ      4.55  82 eP       Pn        01 39 37.3 +2.4
ACLC                              eS       Sb        01 40 40.8  0.0
ACLC                               IAML              01 40 46.1
      comp=Z,312nm,1.0s
BO02  Sierra Bellavi     4.75 167 eP       Pn        01 39 37.2 -0.2
BO02                              eS       Sn        01 40 32.4 -0.3
BO02                               IAML              01 41 13.0
      comp=Z,272nm,0.8s
H03N1 Juan Fernandez     6.64 239  T       T         01 47 13.0
      baz=70,slow=72,SNR=197
H03N2 Juan Fernandez     6.66 239  T       T         01 47 19.4
      baz=70,slow=72,SNR=200
H03N3 Juan Fernandez     6.66 239  T       T         01 47 17.1
      baz=70,slow=72,SNR=171
VA04  Juan Fernndez      6.68 237          Pn        01 40 00.7 -3.1
PLCA  Paso Flores       10.62 174  Pn      Pn        01 40 56.5 -1.6
PLCA  Paso Flores       10.62 174  Pn      Pn        01 40 58.4 +0.4
      comp=Z,0.5nm,0.3s,baz=331,slow=11,SNR=25
PLCA                               Sn      Sn        01 43 01.2 +4.1
      comp=Z,0.1nm,0.3s,baz=36,slow=11,SNR=2.5
      comp=Z,1.8nm,0.4s
PB16  IPOC Station P    12.01  12          Pn        01 41 14.6 -3.0
ITQB  Itaqui            13.45  92          Pn        01 41 34.7 -2.0
ITQB  Itaqui            13.45  92 eP       Pn        01 41 34.9 -1.8
CPUP  Villa Florida     13.58  77  Pn      Pn        01 41 37.4 -1.1
      comp=Z,0.1nm,0.3s,baz=116,slow=11,SNR=7.4
CPUP                               Sn      Sn        01 44 09.2 -0.3
      baz=178,slow=8.8
      comp=Z,0.5nm,0.7s
CPUP  Villa Florida     13.58  77 eP       Pn        01 41 37.2 -1.3
LPAZ  La Paz            14.29  16          Pn        01 41 50.1 +1.4
LPAZ  La Paz            14.29  16  Pn      Pn        01 41 49.0 +0.3
      comp=Z,0.4nm,0.3s,baz=184,slow=6.9,SNR=38
      comp=Z,8.2nm,0.7s
LPAZ  La Paz            14.29  16 eP       Pn        01 41 47.4 -1.4
SJPY  San Joaquin       15.10  74 eP       Pn        01 41 58.5 -0.7
MURT  Porto Murtinho    15.55  60 eP       Pn        01 42 03.8 -1.3
PLTB  Pedras Altas      15.97 100 eP       Pn        01 42 10.7 +0.2
CPSB  Cacapava Do Su    16.14  96 eP       Pn        01 42 12.5 -0.2
BBSD  Serra de San D    16.66  42 eP       Pn        01 42 18.3 -1.0
SIV   San Ignacio       17.37  38  P       Pn        01 42 27.3 -1.0
      comp=Z,0.1nm,0.3s,baz=208,slow=11,SNR=20
      comp=Z,15nm,0.9s
AQDB  Aquidauana        17.68  61 eP       Pn        01 42 31.2 -1.0
ITAB  Concordia         17.78  85 eP       P         01 42 33.2 -0.9
CNLB  Canela            18.49  93 eP       Pn        01 42 41.7 -0.5
PTGB  Pitanga           18.60  78 eP       Pn        01 42 44.0 +0.5
PTLB  Pontes e Lacer    18.89  42          P         01 42 42.7 -3.7
PTLB  Pontes e Lacer    18.89  42 eP       Pn        01 42 45.8 -1.1
RPRD  Ribas do Rio P    19.22  64 eP       Pn        01 42 50.1 -0.8
LDASE Londrina, Braz    19.91  75 eP       P         01 42 57.0 -0.6
VILB  Vilhena           20.37  35          P         01 43 01.8 -0.9
VILB                               IAmb    IAmb      01 43 14.2
      comp=Z,22nm,0.8s
```

VILB	Vilhena	20.37	35	eP	P	01 43 01.8	-0.9
MAJ01	Sao Joao Batis	20.44	88	eP	P	01 43 02.5	-0.7
PCMB	Pacaembu	20.59	70	eP	P	01 43 04.5	-0.4
SALV	Santo Antonio	20.70	50	eP	P	01 43 05.5	-0.7
FRTB	Fartura	21.24	77	eP	P	01 43 11.2	-0.8
ITRB	Iturama	22.27	67	eP	P	01 43 21.8	-1.3
CZSB	Cruzeiro do Su	22.32	358	eP	P	01 43 25.7	+2.0
PET01	Itanhaem-SP	22.83	81	eP	P	01 43 28.2	-0.8
SPB	Sao Paulo	22.95	79	eP	P	01 43 29.4	-0.8
PDRB	Porto dos Gac	23.35	41	eP	P	01 43 32.3	-2.0
ARAG	Araguaiana, MT	23.54	57	eP	P	01 43 36.4	+0.1
VAO	Valinhos	23.57	78		P	01 43 35.1	-1.5
VAO				IAmb	IAmb	01 43 37.0	
	comp=Z,22nm,0.7s						
VAO	Valinhos	23.57	78	eP	P	01 43 34.8	-1.8
PARB	Paraibuna	24.59	80	eP	P	01 43 44.6	-1.6
TBTG	Tabatinga, AM	25.92	5	eP	P	01 43 58.3	+0.1
BSCB	Bom Sucesso	26.25	76	eP	P	01 44 00.6	-0.7
BDFB	Brasilia	26.42	62		P	01 44 02.4	-0.5
BDFB	Brasilia	26.42	62	P	P	01 44 02.2	-0.7
	comp=Z,6.6nm,0.6s,baz=235,slow=8.3,SNR=14						
	comp=Z,6.6nm,0.6s						
SNDB	Serra Nova Dou	26.47	51	eP	P	01 44 02.7	-0.5
VAS01	Vassouras-RJ	26.84	80	eP	P	01 44 06.0	-0.6
TEFE	Tefe	27.44	16	eP	P	01 44 12.1	+0.2
NPGB	Novo Progresso	27.87	38	eP	P	01 44 13.7	-2.1
DIAM	Diamantina, MG	28.42	72	eP	P	01 44 20.6	-0.3
CAM01	Campos-RJ	28.55	80	eP	P	01 44 21.2	-0.5
MACA	Manacapuru-AM	28.96	24	P	P	01 44 24.7	-0.7
MACA				IAmb	IAmb	01 44 35.5	
	comp=Z,8.6nm,0.7s						
MACA	Manacapuru-AM	28.96	24	eP	P	01 44 24.8	-0.7
JANB	Januaria	29.64	66	eP	P	01 44 31.1	-0.5
ITTB	Itaituba	29.97	34	eP	P	01 44 33.6	-0.8
SJMB	Sao Joao De Ma	30.29	75	eP	P	01 44 36.6	-0.7
RIB01	Linhares ES	30.68	77	eP	P	01 44 39.9	-0.7
SDBA	SAO DESIDERIO	30.78	61	eP	P	01 44 40.7	-1.0
OTAV	Otavalo	30.83	348	eP	P	01 44 44.3	+1.8
SMTB	Santa Maria do	31.23	52	eP	P	01 44 45.6	0.0
BOAV	Boa Vista	34.22	21		P	01 45 11.2	-0.5
BOAV				IAmb	IAmb	01 45 22.0	
	comp=Z,19nm,1.3s						
BOAV	Boa Vista	34.22	21	eP	P	01 45 11.5	-0.2
ROSC	El Rosal	34.87	356	P	P	01 45 18.3	+0.5
	comp=Z,3.3nm,0.3s,baz=144,slow=14,SNR=1.6						
	comp=Z,3.3nm,0.3s						
RUSC	La Rusia	35.86	358		P	01 45 28.1	+1.7
CELP	Cerrillos	48.26	7	P	P	01 47 06.8	-0.2
BELA	Belgrano 2	50.66	170		P	01 47 25.6	+0.9
VNA3	Neumayer Olymp	52.94	159	⇑P	P	01 47 41.7	-0.1
	comp=Z,9.4nm,0.7s						
VNA2	Neumayer--Watz	53.58	158	⇑P	P	01 47 47.1	+0.6
	comp=Z,9.4nm,0.5s,baz=285,slow=8.2						
SNAA	Sanae	55.17	159	⇑P	P	01 47 58.5	+0.4
	comp=Z,198nm,0.6s						
SNAA	Sanae	55.17	159		P	01 47 58.5	+0.4
SNAA	Sanae	55.17	159	P	P	01 47 58.6	+0.5
	comp=Z,11nm,0.8s,baz=282,slow=8.0,SNR=77						
	comp=Z,11nm,0.8s						
TROLL	Troll, Antarti	56.88	159	⇑P	P	01 48 10.7	+0.3
	comp=Z,364nm,0.8s						
QSPA	South Pole Qui	60.06	180		P	01 48 33.6	+0.9
QSPA				IAmb	IAmb	01 48 36.4	
	comp=Z,17nm,1.5s						
QSPA	South Pole Qui	60.06	180	P	P	01 48 34.2	+1.5
	comp=Z,4.0nm,0.9s,baz=139,slow=1.4,SNR=8.5						
	comp=Z,4.0nm,0.9s						
W50A	Signal Mountai	66.19	348	IAmb	IAmb	01 49 17.6	
	comp=Z,9.3nm,1.0s						
V53A	Saluda	66.25	350	P	P	01 49 14.3	+0.3
V53A				IAmb	IAmb	01 49 24.5	
	comp=Z,7.9nm,1.2s						
TXAR	Lajitas Array	66.37	330	P	P	01 49 16.4	+1.5
	comp=Z,1.4nm,0.7s,baz=151,slow=8.3,SNR=19						
	comp=Z,1.4nm,0.7s						
TX31	Lajitas Ar. Si	66.37	330		P	01 49 15.5	+0.5
WVT	Waverly	67.58	346	P	P	01 49 22.6	+0.3
WVT				IAmb	IAmb	01 49 31.7	
	comp=Z,8.5nm,1.3s						
MNHN	Monahans	67.74	332	IAmb	IAmb	01 49 27.9	
	comp=Z,7.3nm,0.7s						
VNDA	Vanda	67.84	191	P	P	01 49 25.7	+2.1
	comp=Z,1.0nm,1.0s,baz=174,slow=4.0,SNR=3.9						
	comp=Z,1.0nm,1.0s						
APMT	Aspermont	68.48	335		P	01 49 30.5	+2.4
APMT				IAmb	IAmb	01 49 32.7	
	comp=Z,7.0nm,0.8s						
MNTX	Cornudas Mount	69.15	330		P	01 49 32.8	+0.5
MNTX				IAmb	IAmb	01 49 36.0	
	comp=Z,3.0nm,0.8s						
HHAR	Hobbs	69.20	341		P	01 49 33.6	+1.1
HHAR				IAmb	IAmb	01 49 36.2	
	comp=Z,4.5nm,0.7s						
DBIC	Dimbokro	74.05	72		P	01 50 02.4	+0.1
DBIC	Dimbokro	74.05	72	P	P	01 50 02.5	+0.3
	comp=Z,16nm,0.8s,baz=234,slow=6.0,SNR=15						
	comp=Z,16nm,0.8s						
MAW	Mawson	76.87	164	P	P	01 50 18.3	+0.7
	comp=Z,1.8nm,0.7s,baz=225,slow=8.6,SNR=2.3						
	comp=Z,1.8nm,0.7s						
PDAR	Pinedale Array	80.32	333	P	P	01 50 38.3	+1.2
	comp=Z,0.8nm,0.8s,baz=145,slow=5.4,SNR=5.3						
	comp=Z,0.8nm,0.8s						
NVAR	Mina Array Bea	80.71	325	P	P	01 50 41.0	+1.7
	comp=Z,0.3nm,0.4s,baz=157,slow=5.5,SNR=4.8						
	comp=Z,0.3nm,0.4s						
BOSA	Boshof	81.93	118	P	P	01 50 45.6	-0.4
	comp=Z,2.2nm,0.8s,baz=192,slow=7.0,SNR=3.1						
	comp=Z,2.2nm,0.8s						
ULM	Lac du Bonnet	82.79	345	P	P	01 50 50.5	+0.8
	comp=Z,2.7nm,0.9s,baz=132,slow=3.9,SNR=3.3						
	comp=Z,2.7nm,0.9s						
TORD	Torodi Ar. Bea	82.98	70	P	P	01 50 51.6	+0.1
	comp=Z,8.2nm,0.7s,baz=274,slow=4.0,SNR=10.0						
	comp=Z,8.2nm,0.7s						
BRTR	Keskin Array B	119.98	59	PKP	PKiKP	01 57 18.4	+1.6
	comp=Z,0.3nm,0.5s,baz=41,slow=7.7,SNR=1.9						
ASAR	Alice Springs	120.93	208	PKP	PKiKP	01 57 19.3	+0.1
	comp=Z,0.3nm,0.6s,baz=190,slow=8.3,SNR=4.1						
WRA	Warramunga Arr	124.05	210	PKP	PKiKP	01 57 24.0	-1.3
	comp=Z,0.5nm,0.8s,baz=168,slow=1.7,SNR=5.4						
H11S2	WAKE ISLAND Hy	125.67	272	T	T	04 16 21.5	
	baz=115,slow=74,SNR=9.9						
H11S1	WAKE ISLAND Hy	125.68	272	T	T	04 16 16.3	
	baz=115,slow=74,SNR=8.4						
H11S3	WAKE ISLAND Hy	125.68	272	T	T	04 16 18.0	
	baz=115,slow=74,SNR=7.6						
BVAR	Borovoye Array	144.44	39	PKP	PKPdf	01 58 01.4	-0.5
	comp=Z,0.9nm,0.5s,baz=299,slow=3.1,SNR=4.9						
KURBB	Kurchatov Arra	150.03	39	PKPbc	PKiKP	01 58 16.8	-0.2
	comp=Z,1.9nm,0.7s,baz=302,slow=3.2,SNR=18						
ZALV	Zalesovo Beam	150.96	28	PKPbc	PKiKP	01 58 18.9	+0.1
	comp=Z,7.0nm,0.6s,baz=302,slow=3.3,SNR=33						
MJAR	Matsushiro Arr	153.95	292	PKPbc	PKiKP	01 58 27.4	+1.8
	comp=Z,1.1nm,0.4s,baz=262,slow=17,SNR=2.0						
MKAR	Makanchi Array	154.15	43	PKPbc	PKiKP	01 58 25.5	-0.2
	comp=Z,0.7nm,0.7s,baz=343,slow=3.8,SNR=4.6						
SONM	Songino Array	162.32	3	PKPab	PKPab	01 59 16.0	+1.3
	comp=Z,0.3nm,0.3s,baz=348,slow=6.1,SNR=3.7						
PZH	PanZhiHua	173.48	122	PKP	PKPdf	01 58 35.6	-0.3

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*IDC **14** 01:52:37.9±1.8, 21°.04S×178°.63W, h537^{km}±16^{km}, mb3.0/6, mbtmp4.0/9, Error ellipse: s-maj=27.5km s-min=17.5km az=128.0*

*NEIC **14** 01:52:39.4±2.0, 21°.2S±0°.1×178°.5W±0°.2, h559^{km}±8^{km}, mb4.4/17, Error ellipse: s-maj=25.4km s-min=14.6km az=67.0*

ISC 14 01:52:38.7±0.7**, 21°.1S**±0°.1×**178°.6W**±0°.1**, h550**^{km}**, n40, σ1^{s}.12**/41**, mb4.2**/14**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.57	316	P	P	01 54 06.6	+1.4
MSVF	Nonsavu	4.57	316	P	P	01 54 03.9	-1.3
	16nm,0.6s,baz=141,slow=12,SNR=13						
MSVF				S	S	01 55 12.7	-2.9
	1.5nm,0.5s,baz=95,slow=23,SNR=0.8						
DZM	Mont Dzumac	13.91	263	P	P	01 55 37.8	+0.7
DZM	Mont Dzumac	13.91	263	P	P	01 55 37.4	+0.3
	3.6nm,0.6s,baz=74,slow=19,SNR=7.4						
URZ	Urewera	17.50	191	P	P	01 56 11.2	-0.5
	2.5nm,0.5s,baz=139,slow=6.2,SNR=1.7						
BKZ	Black Stump Fm	18.49	192	P	P	01 56 19.9	-1.0
BKZ				IAmb	IAmb	01 56 56.6	
	comp=Z,26nm,1.5s						
MRZ	Mangatainoka R	20.12	193	P	P	01 56 34.8	-0.9
WHZ	Wether Hill Ro	27.07	201	P	P	01 57 38.1	+0.6
EIDS	Eidsvold	28.11	255	P	P	01 57 46.6	-0.3
EIDS				IAmb	IAmb	01 57 47.8	
	comp=Z,5.7nm,1.1s						
ARMA	Armidale	28.27	245	P	P	01 57 49.1	+0.8
ARMA				IAmb	IAmb	01 57 59.5	
	comp=Z,7.4nm,1.2s						
CTAO	Charters Tower	32.84	265	P	P	01 58 28.4	+0.8
CTAO				IAmb	IAmb	01 58 28.9	
	comp=Z,6.9nm,0.7s						
TOO	Toolangi	35.06	234	P	P	01 58 47.1	+1.0
TOO				IAmb	IAmb	01 58 47.9	
	comp=Z,10nm,1.4s						
STKA	Stephens Creek	36.99	245	P	P	01 59 02.9	+0.9
STKA	Stephens Creek	36.99	245	P	P	01 59 02.2	+0.2
	comp=Z,3.1nm,0.7s,baz=53,slow=5.9,SNR=5.6						
	comp=Z,3.1nm,0.7s						
BBOO	Buckleboo	41.75	244	P	P	01 59 40.4	+0.2
BBOO				IAmb	IAmb	02 00 08.7	
	comp=Z,24nm,1.2s						
AS31	Alice Springs	43.80	257	P	P	01 59 56.7	+0.3
ASAR	Alice Springs	43.80	257	P	P	01 59 56.2	-0.2
ASAR	Alice Springs	43.80	257	P	P	01 59 56.5	+0.1
	comp=Z,3.4nm,0.6s,baz=97,slow=8.0,SNR=43						
ASAR				PcP	PcP	02 01 31.3	+0.5
	comp=Z,0.5nm,0.6s,baz=113,slow=3.9,SNR=1.4						
	comp=Z,3.4nm,0.6s						
WRA	Warramunga Arr	43.93	263	P	P	01 59 57.2	-0.2
	comp=Z,2.9nm,0.8s,baz=96,slow=8.7,SNR=20						
	comp=Z,2.9nm,0.8s						
FORT	Forrest	48.51	247	P	P	02 00 30.5	-1.5
KNRA	Kununurra	50.02	267	P	P	02 00 43.6	+0.3
KNRA				IAmb	IAmb	02 00 56.3	
	comp=Z,17nm,1.4s						
FITZ	Fitzroy Crossi	52.36	263	P	P	02 01 00.9	+0.7
PSA00	Pilbara Seismi	56.95	257	P	P	02 01 31.8	-0.6
PSA00				IAmb	IAmb	02 01 33.0	
	comp=Z,14nm,1.1s						
MBWA	Marble Bar	57.14	258	P	P	02 01 33.0	-0.6
MBWA				IAmb	IAmb	02 02 14.3	
	comp=Z,57nm,1.4s						
QSPA	South Pole Qui	68.98	180	P	P	02 02 50.6	+1.6
QSPA	South Pole Qui	68.98	180	P	P	02 02 50.2	+1.2
	comp=Z,0.5nm,0.8s,baz=140,slow=7.0,SNR=1.3						
	comp=Z,0.5nm,0.8s						
BELA	Belgrano 2	79.05	173	P	P	02 03 41.7	-3.9
TXAR	Lajitas Array	87.88	58	P	P	02 04 31.1	+0.7
	comp=Z,0.3nm,0.8s,baz=197,slow=3.9,SNR=3.5						
	comp=Z,0.3nm,0.8s						
ILAR	Eielson Array	89.02	13	P	P	02 04 34.6	-0.1
	comp=Z,0.3nm,0.6s,baz=219,slow=5.4,SNR=4.3						
	comp=Z,0.3nm,0.6s						
BVAR	Borovoye Array	119.14	320	PKP	PKPdf	02 10 24.6	-0.5
	comp=Z,0.5nm,0.4s,baz=129,slow=2.0,SNR=3.5						
SPITS	Spitsbergen Ar	122.42	356	PKP	PKPdf	02 10 30.6	-0.2
	comp=Z,1.8nm,0.6s,baz=347,slow=3.4,SNR=1.4						
ARCES	ARCESS Array B	129.39	349	PKP	PKPdf	02 10 45.3	+1.0
	comp=Z,1.1nm,0.6s,baz=58,slow=3.0,SNR=5.1						
FINES	FINESS Array B	136.16	343	PKP	PKPdf	02 10 57.1	-0.1
	comp=Z,0.6nm,0.6s,baz=65,slow=5.0,SNR=3.7						
AKASG	Malin Array Be	143.23	330	PKP	PKPab	02 11 08.4	+0.1
	comp=Z,1.3nm,0.4s,baz=46,slow=4.1,SNR=16						
EKA	Eskdalemuir Ar	145.64	5	PKPbc	PKPdf	02 11 14.7	+0.4
	comp=Z,1.4nm,0.8s,baz=336,slow=1.8,SNR=4.3						
BRTR	Keskin Array B	146.78	311	PKPbc	PKPbc	02 11 20.1	+0.4
	comp=Z,0.6nm,0.5s,baz=150,slow=4.8,SNR=6.1						
BURAR	Bucovina Array	147.27	330	PKPbc	PKPbc	02 11 22.1	+1.4
MMAI	Mount Meron Ar	147.58	299	PKPbc	PKPbc	02 11 22.9	+1.1
	comp=Z,1.0nm,0.5s,baz=70,slow=7.3,SNR=4.0						
CLL	Collm	148.49	346	i PKPbc	PKPbc	02 11 24.3	+0.8
GERES	GERESS Array B	150.60	343	PKPbc	PKPbc	02 11 28.9	+0.2
	comp=Z,0.5nm,0.6s,baz=299,slow=2.7,SNR=4.9						

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*SOME **14** 01:55:35.8, 45°.28N×78°.37E, h5^{km}*

*NNC **14** 01:55:36.6±1.5, 45°.26N×78°.31E, h0^{km}, mb3.4, mpv2.9, Error ellipse: s-maj=9.8km s-min=6.2km az=0.0*

ISC 14 01:55:36.3±3.3**, 45°.3N**±0°.1×**78°.34E**±0°.06**, h1**^{km}±18^{km}**, n9, σ0^{s}.48**/15**, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TDK	Taldyqorghan	0.27	169	eP	Pg	01 55 41.0	-0.4
	10nm,0.1s						
TDK				eS	Sg	01 55 44.7	-0.1
	66nm,0.1s						
KNOS	Konyrlen	1.09	146	P	Pg	01 55 57.2	+0.1
	1.0nm,0.1s						
KNOS				S	Sb	01 56 12.6	-0.1
	10nm,0.1s						
ARXS	Arharly	1.11	199	P	Pg	01 55 57.2	-0.4
	1.3nm,0.2s						
ARXS				S	Sb	01 56 12.8	-0.6
	6.0nm,0.3s						
BLB	Baldybastay	1.17	175	P	Pg	01 55 58.9	+0.1
	5.0nm,0.1s						
BLB				S	Sb	01 56 15.5	+0.3
	4.0nm,0.1s						
KTBS	Karatobe	1.95	218	Pg	Pb	01 56 12.6	-0.1
	1.6nm,0.2s						
KTBS				Lg	Lg	01 56 39.0	
	13nm,0.5s						
KUU	Kurty	1.98	227	eP	Pg	01 56 13.8	-0.5
	4.3nm,0.1s						
KUU				eS	Sg	01 56 40.9	+1.0
	12nm,0.2s						
SATY	Saty	2.21	179	Pg	Pb	01 56 16.8	-0.3
	2.3nm,0.1s						
SATY				Lg	Lg	01 56 46.3	
	12nm,0.1s						
KOTS	Kotyrbulak	2.21	204	Pg	Pb	01 56 17.6	+0.4
	2.5nm,0.2s						
KOTS				Lg	Lg	01 56 47.6	
	15nm,0.5s						
KOTS	Kotyrbulak	2.21	204	eP	Pb	01 56 17.6	+0.4
	2.5nm,0.2s						
KOTS				eS	Sg	01 56 47.6	+0.2
	15nm,0.5s						

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*TIR **14** 01:58:58.3, 41°.20N×19°.88E, h9^{km}, Ml2.9/4*

*THE **14** 01:59:01.0, 41°N±19°×2°0E±3°1, h14^{km}±35^{km}, M2.4/8, MLh2.4/8*

*SKO **14** 01:59:00.9, 41°.23N×19°.88E, h0^{km}, ML2.3*

*PDG **14** 01:59:00.4±0.8, 41°.23N×19°.83E, h0^{km}±11^{km}, ML2.9/11, Error ellipse: s-maj=1.8km s-min=2.8km az=0.0*

*BEO **14** 01:59:01.3±0.3, 41°.25N×19°.78E, h0^{km}, ML2.6/8*

ISC 14 01:59:00.6±0.8**, 41°.28N**±0°.02×**19°.89E**±0°.02**, h8**^{km}±5^{km}**, n84, σ1^{s}.48**/114**, 3C-8D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.07	344	⇓iPg	Pg	01 59 02.1	-0.4
TIR				AML	AML	01 59 03.8	
	144nm,0.2s						
TIR				Sg	Sg	01 59 04.6	+0.7
TIR	Tirane	0.07	344	⇓iPg	Pg	01 59 02.5	-0.1
TIR				i Sg	Sg	01 59 04.8	+0.9
TIR	Tirane	0.07	344	ePg	Pg	01 59 02.4	-0.1
TIR				eSg	Sg	01 59 04.5	+0.6
OHR	Ohrid	0.71	104	⇓iPg	Pg	01 59 13.7	-0.6
OHR				i Sg	Sg	01 59 24.6	+1.1
OHR				eLg	Lg	01 59 28.6	
	comp=E,126nm,0.6s						
OHR				eLg	Lg	01 59 33.3	
	comp=N,91nm,0.5s						
OHR	Ohrid	0.71	104	ePg	Pg	01 59 13.6	-0.6
OHR				eSg	Sn	01 59 27.4	-0.8
PUK	Puka	0.76	0	⇓ePn	Pg	01 59 15.0	-0.2
PUK				Sn	Sn	01 59 27.3	-2.3
PUK				AML	AML	01 59 32.0	
	comp=N,1.1nm,0.4s						
PUK	Puka	0.76	0	P	Pg	01 59 15.0	-0.2
ULC	Ulcinj	0.83	325	P	Pg	01 59 15.8	-0.8
ULC	Ulcinj	0.83	325	i Pg	Pg	01 59 15.8	-0.8
ULC	Ulcinj	0.83	325	⇓iPg	Pg	01 59 15.9	-0.8
ULC				i Sg	Sn	01 59 29.5	-1.8
KBN	Korca	0.95	134	P	Pb	01 59 16.5	-2.8
KBN				S	Sb	01 59 28.6	-3.5
KBN				AML	AML	01 59 38.0	
	comp=N,0.4nm,0.8s						
KBN	Korca	0.95	134	P	Pb	01 59 19.4	0.0
KBN				S	Sn	01 59 34.5	+0.4
DRME	Dracevica, Mon	1.05	330	P	Pb	01 59 20.1	-0.9
DRME	Dracevica, Mon	1.05	330	ePn	Pn	01 59 20.9	-0.8
DRME	Dracevica, Mon	1.05	330	ePg	Pn	01 59 20.9	-0.8
DRME	Dracevica, Mon	1.05	330	⇑iPg	Pb	01 59 19.9	-1.1
DRME				i Sg	Sn	01 59 37.2	+0.7
BCI	Bajram Curri	1.09	7	⇓ePn	Pb	01 59 20.9	-0.9
BCI				Sn	Sn	01 59 38.4	+0.8
BCI				AML	AML	01 59 48.9	
	comp=N,1.5nm,0.6s						
BCI	Bajram Curri	1.09	7	P	Pb	01 59 20.7	-1.1
NEST	Nestorio	1.23	134	P	Pn	01 59 23.4	-0.9
PDG	Podgorica	1.24	338	ePn	Pn	01 59 23.2	-1.1
PDG	Podgorica	1.24	338	ePg	Pg	01 59 23.9	-0.5
PDG				eSg	Sg	01 59 41.3	+0.8
PDG	Podgorica	1.24	338	ePg	Pb	01 59 23.5	-0.8
PDG				i Sg	Sg	01 59 44.0	+3.5
BUM	Brajici-Budva	1.26	324	P	Pg	01 59 24.6	-0.3
BUM	Brajici-Budva	1.26	324	ePg	Pb	01 59 24.0	-0.7
BUM				i Sg	Sg	01 59 44.5	+3.3
SKO	Skopje	1.35	59	i Pg	Pg	01 59 26.9	+0.4
SKO				i Sg	Sg	01 59 44.5	+0.4
SRN	Sarande	1.41	177	P	Pg	01 59 28.7	+1.2
SRN				S	Sn	01 59 44.7	-0.6
CEME	Cevo	1.46	330	P	Pg	01 59 27.6	-1.0
CEME	Cevo	1.46	330	⇓iPg	Pb	01 59 27.5	-0.6
CEME				i Sg	Sg	01 59 51.0	+3.5
HCY	Herceg Novi	1.56	319	P	Pg	01 59 29.9	-0.7
HCY	Herceg Novi	1.56	319	ePn	Pb	01 59 29.4	-0.4
HCY	Herceg Novi	1.56	319	ePg	Pb	01 59 29.1	-0.7
HCY				i Sg	Sg	01 59 53.8	+2.9
BEY	Berane	1.59	0	P	Pb	01 59 29.6	-0.8
BEY	Berane	1.59	0	i Pg	Pb	01 59 29.8	-0.6
BEY	Berane	1.59	0	ePg	Pb	01 59 29.9	-0.4
IVA	Berane	1.59	0	⇑iPn	Pb	01 59 29.4	-0.9
IVA				i Sn	Sg	01 59 56.4	+4.7
KOME	Kolasin	1.59	350	ePg	Pb	01 59 29.9	-0.5
KOME	Kolasin	1.59	350	⇑iPn	Pb	01 59 29.8	-0.6
KOME				i Sn	Sg	01 59 56.5	+4.7
KPRO	Kipourio	1.74	139	P	Pb	01 59 34.0	+1.1
IGT	Igoumenitsa	1.78	169	P	Pn	01 59 32.2	+0.4
IGT				S	Sb	01 59 56.2	+0.1
IGT	Igoumenitsa	1.78	169	ePn	Pn	01 59 32.5	+0.7
IGT				eSg	Sb	01 59 57.8	+1.7
TREB	Trebinje	1.84	322	ePn	Pb	01 59 32.8	-1.7
BRY	Bratogost	1.90	329	P	Pb	01 59 35.1	-0.6
BRY	Bratogost	1.90	329	ePn	Pb	01 59 35.2	-0.6
BRY	Bratogost	1.90	329	ePn	Pb	01 59 35.1	-0.6
BRY				eSn	Sg	02 00 02.7	+0.9
SJES	Sjenica	1.98	2	ePn	Pb	01 59 36.9	-0.1
SJES	Sjenica	1.98	2	ePn	Pb	01 59 36.7	-0.3
SJES				eSg	Sg	02 00 05.4	+1.2
VAY	Valandovo	2.02	88	ePn	Pn	01 59 33.4	-1.6
VAY				i Sg	Sg	02 00 05.8	+0.3
VAY				eLg	Lg	02 00 06.4	
	comp=N,36nm,0.9s						
VAY				eLg	Lg	02 00 13.0	
	comp=E,19nm,0.7s						
UPM	Unac-Piva	2.05	339	P	Pb	01 59 37.7	-0.6
UPM	Unac-Piva	2.05	339	ePn	Pb	01 59 38.0	-0.4
UPM	Unac-Piva	2.05	339	⇓iPn	Pb	01 59 37.9	-0.4
UPM				eSn	Sg	02 00 07.2	+0.6
PLE	Pljevlja	2.08	350	P	Pb	01 59 38.8	+0.1
PLE	Pljevlja	2.08	350	ePg	Pb	01 59 38.8	+0.1
PLE	Pljevlja	2.08	350	ePn	Pb	01 59 37.3	-1.4
PLE				i Sn	Sg	02 00 07.7	+0.3
BARS	Barje	2.10	42	i Pn	Pb	01 59 39.4	+0.4
BARS				i Sg	Sg	02 00 10.2	+2.1
BARS	Barje	2.10	42	ePn	Pb	01 59 39.3	+0.3
SELS	Selova	2.14	25	ePn	Pb	01 59 38.6	-1.1
KNT	Kendrikon	2.27	92	ePn	Pn	01 59 40.3	+1.7
KNT				i Sg	Sb	02 00 10.5	+0.3
STON	Ston	2.27	315	ePn	Pn	01 59 37.6	-0.9
STON	Ston	2.27	315	ePn	Pn	01 59 38.7	+0.2
STON				eSg	Sg	02 00 12.4	-1.3
IVAS	Ivanjica	2.30	5	ePn	Pb	01 59 41.0	-1.5
RUDO	Rudo	2.37	351	ePn	Pb	01 59 41.4	-2.1
KKB	Krupnik	2.49	76	i Pn	Pn	01 59 42.6	+1.0
TSLK	Tsoukalades, L	2.52	166	P	Pn	01 59 42.3	+0.3
TSLK				S	Sn	02 00 14.4	+1.5
LKD2	Lefkada island	2.56	166	P	Pn	01 59 42.6	+0.1
BBLS	Lazi&#263i	2.61	352	ePn	Pb	01 59 47.3	-0.4
BBLS	Lazi&#263i	2.61	352	ePn	Pb	01 59 45.8	-1.9
GRUS	Gruza	2.67	13	ePn	Pb	01 59 46.2	-2.6
SRS	Serrai	2.80	92	i Pn	Pn	01 59 48.0	+2.2
DIVS	Divibare	2.81	1	ePn	Pb	01 59 48.7	-2.5
ZAPS	Zavoj	2.85	45	ePn	Pb	01 59 49.7	-2.0
FSK	Fiskardo	2.87	169	P	Pn	01 59 45.8	-0.8
HAPS	Han Pijesak,Bl	2.88	346	ePn	Pn	01 59 48.5	+1.4
HAPS	Han Pijesak,Bl	2.88	346	ePn	Pn	01 59 48.5	+1.4
MMB	Musomishta	2.91	84	i Pn	Pb	01 59 50.5	-2.4
ZAGS	Zajecar	3.06	34	ePn	Pb	01 59 52.2	-3.2
DMLN	Damoulianata-K	3.06	173	P	Pn	01 59 48.5	-0.9
TEKS	Tekeris	3.27	355	ePn	Pn	01 59 53.4	+1.1
KUBS	Kucevo	3.39	22	ePn	Pn	01 59 56.0	+2.1
BLY	Banja Luka	3.99	331	ePn	Pb	02 00 05.8	-5.4
A050A	Klekovaca	4.04	323	ePn	Pn	02 00 05.1	+2.2
A051A	Mrakovica	4.32	331	ePn	Pn	02 00 06.7	0.0
BZS	Buzias	4.51	16	ePn	Pn	02 00 10.8	+1.5
BOJS	Bojanci	5.40	323	ePn	Pn	02 00 21.5	-0.1
CEY	Cerknica	5.97	320	ePn	Pn	02 00 28.7	-0.6

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*IDC **14** 02:05:12.0±0.5, 12°.87S×45°.37E, h0^{km}, mb4.1/23, mbtmp4.2/25, ML5.3/2, Error ellipse: s-maj=17.3km s-min=13.3km az=98.0*

*NEIC **14** 02:05:13.7±1.0, 12°.92S±0°.06×45°.5E±0°.1, h10^{km}±1^{km}, mb4.5/28, Error ellipse: s-maj=18.3km s-min=9.7km az=254.0*

ISC 14 02:05:12.6±0.4**, 12°.98S**±0°.05×**45°.45E**±0°.06**, h10**^{km}**, n95, σ2^{s}.09**/101**, mb4.4**/33**, Northwest of Madagascar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBV	Sambava	4.38	97	P	Pn	02 06 19.0	-0.2
SBV				S	Sn	02 07 04.7	-5.5
OPO	Ambohidratompo	5.81	164	Pn	Pn	02 06 40.7	+1.7
	20nm,0.3s,baz=334,slow=12,SNR=1611						
OPO				Sn	Sn	02 07 41.9	-3.9
	17nm,0.3s,baz=250,slow=20,SNR=11						
OPO	Ambohidratompo	5.81	164	S	Sn	02 07 41.8	-3.9
OPO				P	Pn	02 06 40.9	+1.9
FIRM	Firavahana	5.85	167	P	Pn	02 06 41.7	+2.0
FIRM				S	Sn	02 07 42.8	-4.3
ATG	Ambohiby	5.91	173	P	Pn	02 06 41.9	+1.4
ATG				S	Sn	02 07 43.3	-5.0
ABPO	Ambohimpanom	6.24	164		Pn	02 06 46.5	+1.5
ABPO	Ambohimpanom	6.24	164	P	Pn	02 06 46.4	+1.4
ABPO				S	Sn	02 07 52.4	-4.2
MDSM	Mandiavato	6.26	166	P	Pn	02 06 47.0	+1.7
MDSM				S	Sn	02 07 53.1	-3.9
AVY	Angavokely	6.31	160	P	Pn	02 06 47.3	+1.3
AVY				S	Sn	02 07 53.7	-4.6
DGRM	Ambatolahisoa	6.31	172	P	Pn	02 06 47.8	+1.8
ABM	Ambohimiarambe	7.01	165	P	Pn	02 06 57.2	+1.6
VOI	Vohitsoka	8.97	172		Pn	02 07 23.6	+1.1
FOMA	Nahampoana Res	12.02	173	Pn	Pn	02 08 05.1	+1.0
KIBK	Kibwezi	12.86	325		Pn	02 08 11.4	-4.4
MSEY	Mahe Island	12.89	51	Pn	Pn	02 08 12.5	-3.5
CHIPN	CHIPINGE	14.23	238	i P	Pn	02 08 32.4	-2.0
KRI	Karoi	15.78	254	i P	Pn	02 08 55.0	-0.2
LSZ	Lusaka	16.90	260		Pn	02 09 08.5	-1.1
LSZ				IAmb	IAmb	02 09 14.1	
	comp=Z,33nm,0.9s						
LSZ	Lusaka	16.90	260	Pn	Pn	02 09 08.2	-1.3
	comp=Z,0.9nm,0.3s,baz=70,slow=8.8,SNR=23						
LSZ				Sn	Sn	02 12 06.2	-11
	comp=Z,0.3nm,0.3s,baz=11,slow=18,SNR=3.0						
	comp=Z,20nm,0.8s						
LSZ	Lusaka	16.90	260	i P	Pn	02 09 10.2	+0.6
MOPA	Mopani	16.96	230	i P	Pn	02 09 10.2	+0.1
MUSN	Musina, Limpop	17.50	236	i P	Pn	02 09 17.7	+0.8
BLWY	Bulawayo	17.64	244	i P	P	02 09 20.5	+0.7
MATP	Matopo	17.84	243	P	Pn	02 09 21.6	+0.3
	comp=Z,3.7nm,0.7s,baz=78,slow=12,SNR=14						
MATP				S	Sn	02 12 31.1	-9.3
	comp=Z,0.6nm,0.6s,baz=196,slow=23,SNR=1.1						
MBAR	Mbarara	19.07	309		P	02 09 35.4	-0.2
BROLN	Tlhalogang	19.10	243	i P	P	02 09 36.6	+0.8
LODK	Lodwar	19.13	328	P	Pn	02 09 37.1	+0.2
MREMI	Moremi	19.60	238	P	P	02 09 43.0	+1.7

MREMI				IAmb	IAmb	02 09 49.0	
	comp=Z,28nm,1.0s						
MREMI	Moremi	19.60	238	*i* P	P	02 09 42.7	+1.4
KSANE	Kasane	20.14	254	*i* P	P	02 09 48.1	+0.9
LPHEP	Lephephe	21.26	238	P	P	02 10 00.6	+1.2
LPHEP				IAmb	IAmb	02 10 05.3	
	comp=Z,16nm,0.8s						
LPHEP	Lephephe	21.26	238	*i* P	P	02 10 00.6	+1.2
LBTB	Lobatse	22.23	235	P	P	02 10 10.2	+0.5
LBTB	Lobatse	22.23	235	P	P	02 10 09.6	-0.2
	comp=Z,6.3nm,0.5s,baz=61,slow=11,SNR=14						
	comp=Z,6.3nm,0.5s						
KDWAN	Kaudwane	22.27	239	P	P	02 10 11.2	+1.0
KDWAN				IAmb	IAmb	02 10 17.8	
	comp=Z,32nm,1.1s						
GMARE	Gumare	23.25	251	P	P	02 10 21.7	+1.2
GMARE				IAmb	IAmb	02 10 37.7	
	comp=Z,7.8nm,0.7s						
SKOMA	Sekoma	23.35	237	*i* P	P	02 10 22.4	+0.9
KGCAE	Kacgae	24.17	243	P	P	02 10 30.6	+1.2
KGCAE	Kacgae	24.17	243	*i* P	P	02 10 30.3	+0.9
QNGWA	Qangwa	24.19	251	P	P	02 10 30.1	+0.5
BOSA	Boshof	24.41	227	P	P	02 10 31.3	-0.3
BOSA				IAmb	IAmb	02 10 52.0	
	comp=Z,7.7nm,0.8s						
BOSA	Boshof	24.41	227	P	P	02 10 31.7	+0.2
	comp=Z,6.3nm,0.5s,baz=58,slow=9.3,SNR=39						
	comp=Z,6.3nm,0.5s						
BOSA	Boshof	24.41	227	*i* P	P	02 10 31.9	+0.4
GRTLG	Ghanzi	24.59	247	P	P	02 10 34.4	+1.1
GRTLG				IAmb	IAmb	02 10 59.1	
	comp=Z,11nm,1.1s						
GRTLG	Ghanzi	24.59	247	*i* P	P	02 10 34.6	+1.3
PHPEN	Phepeng	24.64	236	P	P	02 10 34.4	+0.8
PHPEN				IAmb	IAmb	02 10 36.5	
	comp=Z,9.6nm,0.7s						
PHPEN	Phepeng	24.64	236	*i* P	P	02 10 34.5	+0.8
LKGWB	Lokgwabe	25.46	241	P	P	02 10 37.9	-3.2
KOOLE	Kule	25.97	244	P	P	02 10 46.3	+0.5
KOOLE	Kule	25.97	244	*i* P	P	02 10 46.5	+0.7
SUR	Sutherland	29.70	225	P	P	02 11 20.1	+0.9
TORD	Torodi Ar. Bea	50.55	299	P	P	02 14 11.9	+0.1
TORD	Torodi Ar. Bea	50.55	299	P	P	02 14 12.3	+0.6
	comp=Z,0.9nm,0.3s,baz=122,slow=5.8,SNR=1.2						
	comp=Z,0.9nm,0.3s						
BRTR	Keskin Array B	53.57	349	P	P	02 14 34.0	0.0
	comp=Z,0.5nm,0.6s,baz=168,slow=9.6,SNR=5.3						
	comp=Z,0.5nm,0.6s						
DBIC	Dimbokro	53.66	288	P	P	02 14 35.2	+0.3
	comp=Z,4.3nm,0.9s,baz=75,slow=9.1,SNR=3.5						
	comp=Z,4.3nm,0.9s						
ITM	Ithomi	54.58	337	P	P	02 14 41.4	+0.2
ITM				IAmb	IAmb	02 14 49.2	
	comp=Z,3.1nm,0.8s						
MAW	Mawson	55.77	172	P	P	02 14 51.8	+2.5
	comp=Z,1.8nm,0.8s,baz=319,slow=9.1,SNR=1.9						
	comp=Z,1.8nm,0.8s						
KBZ	Khabaz	56.48	358	P	P	02 14 55.5	+0.8
	comp=Z,1.9nm,0.8s,baz=162,slow=7.4,SNR=4.8						
	comp=Z,1.9nm,0.8s						
KKAR	Karatay Array	60.34	21		P	02 15 17.6	-4.2
CMAR	Chiang Mai Arr	61.30	60	P	P	02 15 30.8	+2.1
	comp=Z,1.0nm,0.3s,baz=244,slow=5.4,SNR=1.3						
	comp=Z,1.0nm,0.3s						
AB31	Akbulak array	63.27	11		P	02 15 41.1	-0.2
ABKAR	Akbulak array	63.27	11		P	02 15 41.0	-0.3
ABKAR	Akbulak array	63.27	11	IAmb	IAmb	02 15 43.1	
	comp=Z,5.7nm,0.7s						
SNAA	Sanae	65.36	195	P	P	02 15 57.3	+2.4
SNAA	Sanae	65.36	195	P	P	02 15 57.3	+2.4
	comp=Z,1.1nm,0.8s,baz=350,slow=5.5,SNR=3.6						
	comp=Z,1.1nm,0.8s						
VYHS	Vyhne	65.60	341	*e*P	P	02 15 56.2	-0.5
PRED	Cave del Predi	65.72	336	IAmb	IAmb	02 16 06.7	
	comp=Z,2.8nm,0.9s						
MODS	Modra-Piesok	66.01	340	*e*P	P	02 15 58.9	-0.4
MORC	Moravsky Berou	67.14	341	IAmb	IAmb	02 16 07.8	
	comp=Z,4.1nm,0.9s						
GEC2	GERESS Array S	67.66	338	IAmb	IAmb	02 16 10.7	
	comp=Z,3.0nm,0.8s						
GERES	GERESS Array B	67.66	338	P	P	02 16 09.4	-0.5
	comp=Z,1.5nm,0.8s,baz=134,slow=5.8,SNR=13						
	comp=Z,1.5nm,0.8s						
MKAR	Makanchi Array	68.04	26	P	P	02 16 12.1	-0.2
MKAR	Makanchi Array	68.04	26	P	P	02 16 12.5	+0.2
	comp=Z,0.4nm,0.5s,baz=218,slow=7.5,SNR=4.1						
	comp=Z,0.4nm,0.5s						
BVAR	Borovoye Array	69.14	16	P	P	02 16 17.3	-1.6
	comp=Z,0.9nm,0.9s,baz=146,slow=2.9,SNR=4.4						
KURBB	Kurchatov Arra	69.62	22	P	P	02 16 21.8	-0.2
	comp=Z,0.3nm,0.6s,baz=224,slow=7.0,SNR=4.2						
	comp=Z,0.3nm,0.6s						
ESDC	Sonseca Array	69.66	321		P	02 16 24.0	+1.4
ESDC	Sonseca Array	69.66	321	P	P	02 16 23.8	+1.2
	comp=Z,2.4nm,0.7s,baz=129,slow=5.4,SNR=22						
	comp=Z,2.4nm,0.7s						
PAB	San Pablo	69.82	321	P	P	02 16 25.2	+1.6
PAB				IAmb	IAmb	02 16 26.1	
	comp=Z,4.4nm,0.8s						
ZALV	Zalesovo Beam	74.60	23	P	P	02 16 51.1	-0.6
	comp=Z,0.5nm,0.5s,baz=190,slow=7.5,SNR=4.2						
	comp=Z,0.5nm,0.5s						
FINES	FINESS Array B	75.75	351	P	P	02 16 58.5	+0.3
FINES	FINESS Array B	75.75	351	P	P	02 16 58.3	+0.1
	comp=Z,3.2nm,0.9s,baz=128,slow=5.8,SNR=5.2						
	comp=Z,3.2nm,0.9s						
QSPA	South Pole Qui	77.12	180	P	P	02 17 08.8	+2.6
QSPA	South Pole Qui	77.12	180	P	P	02 17 08.3	+2.1
	comp=Z,3.9nm,0.8s,baz=265,slow=1.9,SNR=16						
	comp=Z,3.9nm,0.8s						
HFS	Hagfors	77.19	344	P	P	02 17 05.9	-0.5
	comp=Z,4.0nm,1.0s,baz=147,slow=3.0,SNR=3.9						
	comp=Z,4.0nm,1.0s						
NOA	NORSAR Array B	78.62	344	P	P	02 17 15.7	+1.2
	comp=Z,1.0nm,0.8s,baz=161,slow=5.4,SNR=3.6						
	comp=Z,1.0nm,0.8s						
EKA	Eskdalemuir Ar	79.33	334	P	P	02 17 18.9	+0.6
	comp=Z,1.8nm,0.7s,baz=146,slow=7.6,SNR=4.9						
	comp=Z,1.8nm,0.7s						
SONM	Songino Array	81.14	37	P	P	02 17 30.2	+1.7
	comp=Z,0.2nm,0.3s,baz=204,slow=6.3,SNR=1.6						
	comp=Z,0.2nm,0.3s						
ARCES	ARCESS Array B	83.49	353	P	P	02 17 41.0	+0.8
	comp=Z,3.2nm,1.1s,baz=35,slow=4.4,SNR=4.9						
	comp=Z,3.2nm,1.1s						
ASAR	Alice Springs	83.50	113	P	P	02 17 42.6	+1.3
	comp=Z,2.4nm,0.6s,baz=264,slow=4.8,SNR=14						
	comp=Z,2.4nm,0.6s						
WRA	Warramunga Arr	84.64	109	P	P	02 17 48.4	+1.2
	comp=Z,1.7nm,0.7s,baz=259,slow=3.2,SNR=23						
	comp=Z,1.7nm,0.7s						
WR8	Warramunga Arr	84.78	109	P	P	02 17 46.5	-1.4
WR8				IAmb	IAmb	02 17 52.1	
	comp=Z,3.7nm,0.9s						
YKA	Yellowknife Ar	128.54	348	PKP	PKPdf	02 24 20.2	+0.7
	comp=Z,0.3nm,0.7s,baz=20,slow=2.7,SNR=2.9						
PDAR	Pinedale Array	143.28	329	PKP	PKPdf	02 24 48.8	+1.0
	comp=Z,0.4nm,0.5s,baz=94,slow=4.5,SNR=5.7						
TXAR	Lajitas Array	147.06	304	PKPbc	PKPdf	02 24 55.9	+1.4
	comp=Z,0.9nm,0.7s,baz=105,slow=4.2,SNR=13						
NVAR	Mina Array Bea	150.83	333	PKP	PKPdf	02 25 02.4	+1.9
	comp=Z,1.2nm,0.7s,baz=23,slow=4.5,SNR=4.5						
NVAR				PKPbc	PKiKP	02 25 07.8	+1.0
	comp=Z,1.0nm,0.7s,baz=24,slow=4.7,SNR=4.8						

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*NEIC **14** 02:16:07.1±0.8, 34.°027N±0.°009×117.°50W±0.°01, h5^{km}±1^{km}, Error ellipse: s-maj=2.2km s-min=1.9km az=20.0*

PAS 14 02:16:07.5±0.8, **34.°034N**±0.°008×**117.°50W**±0.°01, **h3^{km}**±2^{km}, **ML3.0**/196, **ML2.8**/44(NEIC), **Error ellipse: s-maj=1.3km s-min=1.1km az=64.0, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLSC	Mira Loma	0.06	240		Pg	02 16 09.8	+1.1
FON	Fontana	0.08	39		Pg	02 16 11.0	+1.8
RVR	Riverside	0.11	111		Pg	02 16 11.8	+2.1
CHNC	Chino	0.15	257		Pg	02 16 13.4	+2.9
RSBC	Riverside Bore	0.16	113		Pg	02 16 10.8	+0.3
RSBC					Sg	02 16 13.1	+0.4
CLTC	Calectric	0.17	69		Pg	02 16 11.1	+0.4
CLTC					Sg	02 16 13.3	+0.4
CRNC	Corona	0.17	197		Pg	02 16 10.9	+0.2
CRNC					Sg	02 16 13.3	+0.4
SS2	San Sevaine	0.17	1		Pg	02 16 11.1	+0.2
CFSC	Central Fire S	0.20	69		Pg	02 16 11.7	+0.4
CFSC					Sg	02 16 15.3	+1.4
HLNC	Highland	0.25	70		Pg	02 16 12.8	+0.5
HLNC					Sg	02 16 17.0	+1.3
PSRC	Puddingstone R	0.26	283		Sg	02 16 16.6	+0.6
CSP	Cedar Springs	0.29	24		Sg	02 16 17.7	+0.8
CFT	Crafton Hills	0.33	90		Pg	02 16 14.3	+0.5
CFT					Sg	02 16 19.4	+1.3
SVD	Seven Oaks Dam	0.34	78		Pg	02 16 14.4	+0.3
SVD					Sg	02 16 20.2	+1.5
ELS	Elsinore Mount	0.39	171		Pg	02 16 14.9	-0.1
ELS				Sg	Sg	02 16 20.3	+0.2
ELS				IAML		02 16 20.7	
	comp=N,1μm,0.1s						
RHC	Rose Hills Cem	0.43	266		Pg	02 16 16.1	+0.4
RHC					Sb	02 16 23.4	-1.0
BBSC	Beaumont Base	0.45	104		Pg	02 16 16.5	+0.4
BBSC					Sg	02 16 23.4	+1.4
SANC	Santa Ana	0.46	224		Pg	02 16 16.9	+0.6
SANC					Sb	02 16 24.4	-0.9
BREC	Barre Substati	0.46	241		Sb	02 16 24.5	-0.9
MWC	Mount Wilson	0.50	293		Sg	02 16 24.0	+0.4
MURC	Murrieta	0.50	149		Pg	02 16 16.9	-0.2
MURC					Sg	02 16 23.8	+0.2
HOLC	Holcomb Ridge	0.51	326		Pg	02 16 17.1	-0.2
HOLC					Sg	02 16 24.3	+0.3
GVRC	Garvey Reservo	0.51	272		Pg	02 16 17.6	+0.3
GVRC					Sg	02 16 25.3	+1.3
ADO	Adelanto Recei	0.52	6		Pg	02 16 17.6	+0.1
ADO					Sg	02 16 25.3	+1.1
CACC	Caltech Cellar	0.52	281		Pg	02 16 17.5	-0.1
CACC					Sg	02 16 24.8	+0.4
HMTC	Hemet	0.53	128		Pg	02 16 17.3	-0.3
HMTC					Sg	02 16 24.3	-0.1
CHFC	Chilao Flat St	0.53	305		Sg	02 16 24.5	0.0
CRPC	Caltech Rob'n	0.53	281		Pg	02 16 17.6	0.0
CRPC					Sg	02 16 25.1	+0.6
GSA	Caltech--GSA	0.53	281		Pg	02 16 17.6	-0.1
GSA					Sg	02 16 25.1	+0.5
BBRC	Big Bear Solar	0.53	65		Pg	02 16 17.9	+0.2
BBRC					Sg	02 16 25.0	+0.3
VTV	Victorville	0.55	15		Pg	02 16 17.8	-0.2
VTV					Sg	02 16 25.2	+0.2
JNH	Juniper Hills	0.56	318		Pg	02 16 17.8	-0.4
JNH					Sg	02 16 25.2	-0.2
DGR	Domenigoni Val	0.56	133		Sg	02 16 25.4	-0.2
BACC	Bachelor Mtn.	0.57	137		Sg	02 16 25.9	0.0
PASC	Pasadena Art C	0.58	284		Pg	02 16 18.3	-0.4
PASC				Sg	Sg	02 16 26.1	-0.2
PASC				IAML		02 16 26.7	
	comp=N,358nm,0.3s						
POB	Polly Butte	0.59	126		Pg	02 16 18.5	-0.3
POB					Sg	02 16 26.7	+0.1
LRRC	Littlerock Res	0.66	319		Pg	02 16 19.8	-0.3
LRRC					Sg	02 16 28.9	+0.3
GR2C	Griffith Obs.	0.67	277		Pg	02 16 19.8	-0.5
GR2C					Sg	02 16 28.8	-0.2
SBB	Saddle Back Bu	0.70	338		Sg	02 16 29.9	-0.3
DECC	Green Verdugo	0.72	288		Sg	02 16 30.9	+0.1
CJV	Casa Juvan	0.73	313		Pg	02 16 21.1	-0.4
CJV					Sg	02 16 31.0	+0.1
FMP	Fort Macarthur	0.73	244		Pg	02 16 21.1	-0.4
DEVC	Devers	0.77	97		Sg	02 16 33.1	+0.7
GVDA	Garner Valley	0.78	118		Pg	02 16 21.9	-0.6
GVDA					Sg	02 16 32.1	-0.5
CRY	Cary Ranch	0.79	126		Sg	02 16 32.4	-0.5
DJJ	Donna J Jenkin	0.79	275		Pg	02 16 21.8	-0.9
RPV	Rancho Palos V	0.80	249		Pg	02 16 22.4	-0.6
RPV					Sb	02 16 35.0	-0.4
HYS	Haystack Butte	0.83	356		Pg	02 16 23.0	-0.5
HYS					Sg	02 16 34.0	-0.2
PLM	Palomar	0.86	142		Sg	02 16 34.8	-0.5
BZNA	Buzz No.'s Pla	0.88	128		Sg	02 16 35.4	-0.4
SNDA	J Saunders Pla	0.88	123		Sg	02 16 36.1	+0.2
LEOC	Leona Valley	0.89	312		Pg	02 16 23.8	-0.8
GORC	Green Oak Ranc	0.91	165		Pg	02 16 23.8	-1.1
GORC					Sg	02 16 35.8	-0.9
EW2	E Wide Canyon	0.91	96		Pg	02 16 24.8	-0.2
EW2					Sg	02 16 37.6	+0.8
PFO	Pinyon Flats O	0.96	116		Pg	02 16 25.2	-0.7
PFO	Pinyon Flats O	0.96	116		Pg	02 16 25.1	-0.9
PFO				Sg	Sg	02 16 37.9	-0.6
PFO				IAML		02 16 40.7	
	comp=N,98nm,0.6s						
PFO				IAML		02 16 41.2	
	comp=N,61nm,0.6s						
CCAC	Calif City Air	1.19	339		Pg	02 16 30.1	-0.3
GSC	Goldstone, Bar	1.39	24		Pn	02 16 33.3	-0.5
GSC				IAML		02 16 53.1	
	comp=E,244nm,0.6s						
ISA	Isabella, Lake	1.81	334		Pn	02 16 39.8	+0.1
BCW	Bitter Crk WRg	1.82	300		Pn	02 16 40.0	+0.2
CBX	Cerro Bola	1.85	157		Pn	02 16 40.1	-0.1
YUH	Yuha Desert	1.91	136		Pn	02 16 39.9	-1.1
YUH				IAML		02 17 08.4	
	comp=N,60nm,0.3s						
QSM	Queen of Sheba	2.00	15		Pn	02 16 42.1	0.0
QSM				IAML		02 17 14.0	
	comp=E,101nm,0.3s						
QSM				IAML		02 17 14.5	
	comp=N,93nm,0.5s						
GWY	Greenwater Val	2.25	17		Pn	02 16 45.4	-0.4
GWY				IAML		02 17 22.8	
	comp=N,95nm,0.7s						
ESJX	Sierra Juarez	2.41	147		Pn	02 16 47.8	-0.1
ESJX				IAML		02 17 22.3	
	comp=E,74nm,0.2s						
ESJX				IAML		02 17 22.6	
	comp=N,53nm,0.4s						
BLYC	Blythe	2.49	96		Pn	02 16 47.9	-1.0
BLYC				IAML		02 17 27.9	
	comp=E,61nm,0.5s						
BLYC				IAML		02 17 28.2	
	comp=N,61nm,0.9s						
V12A	Nelson	2.76	51		Pn	02 16 52.1	-0.6
V12A				IAML		02 17 36.7	
	comp=E,23nm,0.5s						
V12A				IAML		02 17 38.4	
	comp=N,21nm,0.5s						
GRAC	Grapevine Rang	2.96	2		Pn	02 16 56.3	+0.9
GRAC				IAML		02 17 47.4	
	comp=E,28nm,0.7s						
GRAC				IAML		02 17 50.9	
	comp=N,28nm,0.8s						
TPNV	Topopah Spring	3.08	19		Pn	02 16 57.8	+0.6
TPNV				IAML		02 17 47.9	
	comp=N,44nm,0.7s						
TPNV				IAML		02 17 56.1	
	comp=N,22nm,0.8s						
W13A	Hualapai Mount	3.17	69		Pn	02 16 58.1	-0.3
PRN	Pahroc Range	3.91	30	IAML		02 18 16.5	
	comp=E,14nm,0.5s						
PRN				IAML		02 18 16.7	
	comp=N,18nm,0.5s						
KNB	Kanab	4.84	51		Pn	02 17 22.1	+0.8

IDC 14 02:19:54.9±9.2, **20.°20S**×**177.°34W**, **h0^{km}**, **mb3.7**/2, **mbtmp3.7**/2, **Error ellipse: s-maj=440.1km s-min=70.1km az=148.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	45.19	256	P	P	02 28 13.7	-0.3
	0.9nm,0.7s,baz=90,slow=7.5,SNR=10						
	0.9nm,0.7s						
WRA	Warramunga Arr	45.26	262	P	P	02 28 14.5	0.0
	0.7nm,0.6s,baz=97,slow=8.1,SNR=12						
	0.7nm,0.6s						
BRTR	Keskin Array B	147.10	313	PKPbc	PKPbc	02 39 39.5	-0.8
	0.4nm,0.6s,baz=86,slow=4.5,SNR=2.1						

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*IDC **14** 02:33:44.8±1.9, 12.°55N×87.°43W, h0^{km}, mb3.8/6, mbtmp3.8/7, ML3.5/1, MS4.4/1, Error ellipse: s-maj=61.3km s-min=16.9km az=49.0*

*CATAC **14** 02:33:47.5±0.4, 12°N±2°×8°8W±°, h22^{km}±3^{km}, M3.9/40, MLv3.9/40, Error ellipse: s-maj=4.5km s-min=2.0km az=22.3, confirmed*

*NEIC **14** 02:33:49.7±2.0, 12.°25N±0.°06×87.°61W±0.°03, h35^{km}±2^{km}, mb4.2/17, Error ellipse: s-maj=10.5km s-min=5.7km az=180.0*

*SNET **14** 02:33:50.5±1.2, 12.°34N×87.°92W, h14^{km}±5^{km}, ML3.8*

*GCG **14** 02:33:51.7±1.5, 12.°49N×87.°85W, h86^{km}±86^{km}, MD4.5*

ISC 14 02:33:45.2±1.2, **12.°16N**±0.°04×**87.°74W**±0.°02, **h16^{km}**±8^{km}, **n123**, σ**1.^{s}31**/148, **mb4.2**/15, **25D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSGN	Cosiguina Volc	0.83	12	⇓P	Pn	02 34 03.3	+1.1
CSGN				S	Sn	02 34 14.7	+0.5
CRIN	San Cristobal	0.86	51		Pn	02 34 04.2	+1.5
CRIN				Sn	Sg	02 34 13.1	-0.2
CRIN	San Cristobal	0.86	51	S	Sn	02 34 15.9	+0.9
CRIN	San Cristobal	0.86	51	⇓P	Pn	02 34 04.4	+1.7
POTN	Potosi Cosigui	0.86	15	⇓P	Pn	02 34 03.7	+1.1
POTN				S	Sn	02 34 15.6	+0.6
PKGN	Cerro Pekin	0.90	56	⇓P	Pn	02 34 04.4	+1.2
PKGN				S	Sn	02 34 16.4	+0.5
QUEN	Al S del Volca	0.97	64	⇓P	Pn	02 34 04.2	+0.1
HOYN	Al Sur del Vol	0.99	64	⇓P	Pn	02 34 05.4	+0.9
HOYN				S	Sn	02 34 18.6	+0.3
HERN	Volcan Telica	0.99	63		Pn	02 34 05.0	+0.5
HERN	Volcan Telica	0.99	63	S	Sn	02 34 18.5	+0.2
HERN	Volcan Telica	0.99	63	⇓P	Pn	02 34 05.4	+0.9
POLN	Al Sur del Vol	1.03	62	⇓P	Pn	02 34 05.0	+0.1
POLN				S	Sn	02 34 19.7	+0.7
CNGN	Cerro Negro	1.07	72		Pg	02 34 06.8	+0.9
CNGN	Cerro Negro	1.07	72	S	Sn	02 34 20.8	+0.6
CNGN	Cerro Negro	1.07	72	⇓P	Pg	02 34 06.8	+0.9
CNCH	Conchagua	1.11	355	*e*P	Pg	02 34 07.9	+1.2
CNCH				*e*S	Sb	02 34 20.4	0.0
CNCH	Conchagua	1.11	355	⇓P	Pg	02 34 07.2	+0.5
COPN	Copaltepe	1.12	89	⇓P	Pg	02 34 07.0	+0.1
LCND	La Caada	1.15	353	*e*P	Pg	02 34 08.4	+1.0
LCND				IAML		02 34 28.2	
	comp=Z,3μm,0.3s						
LCND	La Caada	1.15	353	S	Sg	02 34 23.0	+0.6
LCND	La Caada	1.15	353	⇓P	Pg	02 34 07.7	+0.3
MOMN	Momotombo	1.20	78	⇓P	Pg	02 34 08.1	-0.2
MOMN				S	Sg	02 34 24.1	+0.1
MOM2	El Cardon	1.26	77	⇓P	Pg	02 34 09.1	-0.3
MOM2				S	Sg	02 34 25.4	-0.4
SAPS	Ciudad Sandino	1.30	90	S	Sg	02 34 27.1	-0.3
SAPS	Ciudad Sandino	1.30	90	⇓P	Pb	02 34 09.6	+0.3
APQ3	Volcan Apoyequ	1.34	85	⇓P	Pb	02 34 10.2	+0.2
BLLM	Bellamira	1.36	339	*e*P	Pb	02 34 11.0	+0.7
LCY	Lacayo	1.37	337	*e*P	Pb	02 34 11.4	+0.9
CNRM	Centro Naciona	1.37	342	*e*P	Pb	02 34 11.3	+0.9
CNRM				*e*S	Sn	02 34 27.0	-0.5
RANC	El Ranchito	1.37	337	P	Pb	02 34 11.0	+0.4
APQ2	Apoyeque	1.38	88	P	Pg	02 34 11.2	-0.6
ALJI	Alcalda de J	1.41	325	*e*P	Pn	02 34 10.8	+0.6
ALJI				*e*S	Sn	02 34 26.9	-1.7
ALJI	Alcalda de J	1.41	325	P	Pn	02 34 11.1	+0.8
PACA	Pacayal	1.42	336	*e*P	Pb	02 34 11.7	+0.3
PACA				*e*S	Sn	02 34 29.2	+0.3
PACA	Pacayal	1.42	336	P	Pb	02 34 12.0	+0.6
PACA	Pacayal	1.42	336	S	Sb	02 34 30.2	+0.9
TISN	Laguna Tiscapa	1.44	91	P	Pb	02 34 11.6	0.0
UNAN	Cigeo UNAN	1.44	92	P	Pb	02 34 11.9	+0.3
UNAN				S	Sg	02 34 30.5	-1.1
MGAN	Managua	1.46	90		Pb	02 34 12.2	+0.2
MGAN	Managua	1.46	90	P	Pb	02 34 12.1	+0.2
MGAN	Managua	1.46	90	S	Sg	02 34 30.9	-1.4
WILN	Americas 2	1.52	90	⇓P	Pb	02 34 12.8	-0.1
WILN				S	Sb	02 34 32.4	+0.5
TECA	Tecapa	1.52	331	*e*P	Pb	02 34 13.5	+0.4
TECA				*e*P	Pn	02 34 13.6	+1.7
TECA				*e*S	Sn	02 34 31.5	0.0
MAS3	Al N del Volca	1.54	95	⇓P	Pn	02 34 12.6	+0.7
MAS3				S	Sg	02 34 33.3	-1.5
SABN	Sabanita	1.56	97	⇓P	Pn	02 34 12.5	+0.3
NANN	Nandasmo	1.60	98	S	Sb	02 34 34.8	+0.5
NANN	Nandasmo	1.60	98	⇓P	Pb	02 34 14.8	+0.5
LIMN	Finca el Limon	1.61	56	⇓P	Pb	02 34 14.5	-0.1
CAHU	Cacacuatique	1.66	344	*e*P	Pb	02 34 16.1	+0.5
TECO	Alcaldia de Te	1.70	323	P	Pn	02 34 15.4	+1.1
UESV	Universidad de	1.79	325	*e*P	Pn	02 34 16.8	+1.4
UESV				*e*S	Sn	02 34 38.1	+0.2
UESV	Universidad de	1.79	325	P	Pn	02 34 17.0	+1.6
SCLA	Alcaldia de Sa	1.81	328	*e*P	Pb	02 34 17.4	-0.6
SCLA				*e*S	Sn	02 34 39.6	+1.2
SCLA	Alcaldia de Sa	1.81	328	P	Pn	02 34 17.2	+1.4
COEG	Centro de Oper	1.83	323	*e*P	Pn	02 34 17.2	+1.2
COEG				*e*S	Sn	02 34 40.2	+1.4
COEG	Centro de Oper	1.83	323	P	Pn	02 34 17.6	+1.6
MATN	Matagalpa	1.93	66	S	Sb	02 34 42.2	-1.6
MATN	Matagalpa	1.93	66	⇓P	Pn	02 34 17.8	+0.4
PAVA	Las Pavas	1.94	323	*e*P	Pn	02 34 19.0	+1.5
PAVA				*e*S	Sn	02 34 42.4	+0.8
PAVA	Las Pavas	1.94	323	P	Pn	02 34 19.2	+1.7
TGUH	Tegucigalpa,Un	1.94	13		Pb	02 34 19.8	-0.4
TGUH	Tegucigalpa,Un	1.94	13	⇓P	Pb	02 34 19.6	-0.6
TGUH				S	Sb	02 34 42.9	-1.4
LFRS	El Faro	1.94	319	*e*P	Pb	02 34 19.8	-0.5
LALI	Alcalda de L	2.03	311	P	Pn	02 34 20.5	+1.8
LOMA	Loma Larga	2.03	317	S	Sn	02 34 45.6	+1.6
LOMA	Loma Larga	2.03	317	P	Pn	02 34 20.9	+2.0
BOAB	BOACO BROADBAN	2.05	82		Pb	02 34 20.4	-1.6
BOAB	BOACO BROADBAN	2.05	82	P	Pn	02 34 19.9	+1.0
RCVN	Varillal2	2.07	47	S	Sb	02 34 45.9	-2.0
RCVN	Varillal2	2.07	47	P	Pb	02 34 21.4	-1.0
RCPN	Sur Rio San Ju	2.10	50	⇓P	Pn	02 34 20.9	+1.1
UEES	Universidad Ev	2.13	317	P	Pn	02 34 21.7	+1.5
MORN	Al O del Volca	2.14	106	⇓P	Pn	02 34 21.0	+0.8
BOQS	Boqueron	2.17	316	*e*P	Pb	02 34 23.2	-0.9
PMON	Piamonte	2.18	315	P	Pn	02 34 22.8	+1.9
PMON	Piamonte	2.18	315	S	Sn	02 34 49.4	+1.9
JAYA	Jayaque - finc	2.23	312	*e*P	Pn	02 34 23.9	+2.3
JAYA				*e*S	Sn	02 34 48.4	-0.6
JAYA	Jayaque - finc	2.23	312	*e*P	Pn	02 34 23.3	+1.7
JAYA	Jayaque - finc	2.23	312	P	Pn	02 34 23.5	+1.8
CEDA	San Andres	2.29	315	P	Pn	02 34 24.2	+1.8
CARN	Rivas	2.38	114	P	Pn	02 34 25.2	+1.7
CARN				S	Sn	02 34 54.1	+1.8
CEVE	Cerro Verde	2.47	312	*e*P	Pb	02 34 28.1	-1.3
CEVE				IAML		02 35 02.3	
	comp=Z,579nm,0.3s						
CEVE	Cerro Verde	2.47	312	S	Sn	02 34 57.0	+1.9
CEVE	Cerro Verde	2.47	312	P	Pn	02 34 26.7	+1.6
SNJE	San Jose	2.49	313	*e*P	Pn	02 34 28.0	+2.8
ACON	Acoyapa	2.52	94		Pn	02 34 27.0	+1.6
ACON	Acoyapa	2.52	94	P	Pn	02 34 27.0	+1.6
NUBE	Las Nubes	2.64	311	*e*P	Pn	02 34 28.5	+1.3
NUBE				*e*S	Sn	02 34 58.1	-0.9
NUBE	Las Nubes	2.64	311	*e*P	Pn	02 34 28.2	+1.0
NUBE				*i* S	Sn	02 34 59.1	+0.2
NUBE	Las Nubes	2.64	311	P	Pn	02 34 28.6	+1.4
MTO3	Montecristo	2.73	325		Pn	02 34 30.4	+1.9
MTO3	Montecristo	2.73	325	*e*P	Pn	02 34 30.2	+1.7
MTO3	Montecristo	2.73	325	P	Pn	02 34 30.5	+2.0
FAME	Alcaldia de Sa	2.78	307	P	Pn	02 34 31.3	+2.3
ESQI	Esquipulas	2.85	327		Pn	02 34 33.2	+3.2
JTS	Las Juntas de	3.31	124		Pn	02 34 38.0	+1.6
JTS	Las Juntas de	3.31	124	Pn	Pn	02 34 38.1	+1.8
	comp=Z,4.6nm,0.3s,baz=308,slow=11,SNR=16						
JTS				Sn	Sn	02 35 15.4	+0.1
	comp=Z,3.3nm,0.3s,baz=22,slow=22,SNR=4.8						
JTS				Lg	Lg	02 35 29.7	
	comp=Z,4.2nm,0.3s,baz=62,slow=18,SNR=4.4						
	comp=Z,10nm,0.5s						
STG0	El Palmar, Qui	4.17	303	*e*P	Pb	02 34 56.3	-1.9
STG0				*i* S	Sb	02 35 44.4	-4.1
STG8	El Palmar, Qui	4.19	303	*i* S	Sb	02 35 45.4	-3.8
LCR2	La Lucha 2	4.38	123		Pn	02 34 54.7	+3.4
833A	Chaparral WMA,	19.42	328	P	Pn	02 38 12.4	+0.4
GOGA	Godfrey	21.51	10	P	P	02 38 34.5	+1.1
GOGA				IAmb	IAmb	02 38 40.5	
	comp=Z,11nm,1.2s						
Y49A	Blount Mountai	21.63	3	P	P	02 38 33.3	-1.5
Y49A				IAmb	IAmb	02 38 39.4	
	comp=Z,13nm,1.3s						
TX31	Lajitas Ar. Si	22.62	321		P	02 38 47.1	+1.5
TXAR	Lajitas Array	22.62	321	P	P	02 38 47.0	+1.5
	comp=Z,4.0nm,0.9s,baz=136,slow=10,SNR=33						
	comp=Z,4.0nm,0.9s						
MIAR	Mount Ida	22.91	348		P	02 38 49.1	+0.7
TKL	Tuckaleechee C	23.67	8	P	P	02 38 54.2	-1.8
	comp=Z,2.1nm,0.7s,baz=176,slow=15,SNR=2.1						
	comp=Z,2.1nm,0.7s						
V53A	Saluda	23.82	10	P	P	02 38 57.9	+0.3
V53A				IAmb	IAmb	02 39 26.3	

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            comp=Z,6.8nm,1.2s
FCAR   Ozark Folk Cen      23.95 351  P        P          02 38 58.2 -0.6
LCAR   Lake Charles        24.00 353  P        P          02 38 58.1 -1.0
LCAR                                  IAmb     IAmb       02 39 00.1
            comp=Z,9.7nm,1.5s
POST   Post                24.33 331           P          02 39 04.4 +2.0
POST                                  IAmb     IAmb       02 39 07.5
            comp=Z,8.6nm,0.8s
FNO    Franklin            24.61 341  P        P          02 39 04.5 -0.3
V58A   Windy Hill, Pi      24.79  17  P        P          02 39 06.3 -0.1
V58A                                  IAmb     IAmb       02 39 43.5
            comp=Z,18nm,1.3s
T42A   Van Buren           24.95 354  P        P          02 39 06.7 -1.1
T42A                                  IAmb     IAmb       02 39 39.9
            comp=Z,7.2nm,1.4s
SMWD   Samnorwood          25.50 336  IAmb     IAmb       02 39 15.1
            comp=Z,8.2nm,0.8s
PV18   Skein Mesa, Pa      32.11 328           P          02 40 13.2 +1.2
PFO    Pinyon Flats O      33.80 314  LR       LR         02 53 48.0
            comp=Z,663nm,19.9s,baz=329,slow=36
F33A   5 Mile Ranch,       34.34 349  P        P          02 40 30.1 -1.0
PDAR   Pinedale Array      35.89 332  P        P          02 40 45.4 +0.5
            comp=Z,0.8nm,0.6s,baz=136,slow=8.1,SNR=5.1
            comp=Z,0.8nm,0.6s
TPAW   Teton Pass          37.10 332  IAmb     IAmb       02 40 58.3
            comp=Z,3.0nm,0.6s
ULM    Lac du Bonnet       38.56 352  P        P          02 41 04.7 -2.4
            comp=Z,1.4nm,0.7s,baz=151,slow=10,SNR=3.7
            comp=Z,1.4nm,0.7s
SCHQ   Schefferville       45.63  17  P        P          02 42 04.1 -0.7
            comp=Z,3.2nm,1.0s,baz=222,slow=15,SNR=1.9
            comp=Z,3.2nm,1.0s
YKA    Yellowknife Ar      53.81 345  P        P          02 43 06.9  0.0
            comp=Z,0.2nm,0.6s,baz=139,slow=7.2,SNR=4.0
            comp=Z,0.2nm,0.6s
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*NEIC **14** 02:51:58.0±1.7, 9.°02N±0.°09×57.°9E±0.°2, h10^{km}±2^{km}, mb4.1/11, Error ellipse: s-maj=31.5km s-min=14.7km az=89.0*

*IDC **14** 02:51:60.0±0.8, 9.°66N×57.°99E, h0^{km}, mb4.0/15, mbtmp4.0/15, Error ellipse: s-maj=24.9km s-min=18.8km az=23.0*

ISC 14 02:52:02.9±0.9**, 9.°7N**±0.°1×**57.°9E**±0.°1**, h17**^{km}**, n33, σ1.s17**/34**, mb4.1**/20**, Carlsberg Ridge**

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Code   Station Name          Δ°   AZ°    Phase ID             Time      Res
                                      Op       ISC        h  m  s    ISC
UOSS   Minazif             15.28 354  Pn       P          02 55 41.1 -1.6
RAYN   Ar Rayn             18.18 321  P        Pn         02 56 12.8 -1.9
LODK   Lodwar              23.23 256  P        P          02 57 02.6 -7.0
LODK                                  IAmb     IAmb       02 57 17.7
            comp=Z,10nm,1.3s
KBL    Kabul               26.77  21  P        P          02 57 45.8 +3.6
KBL                                   IAmb     IAmb       02 57 48.8
            comp=Z,4.1nm,0.9s
MARD   Mardin              31.58 333  P        P          02 58 25.5 +0.7
KKAR   Karatay Array       35.08  16  P        P          02 58 56.5 +1.4
KKAR   Karatay Array       35.08  16  P        P          02 58 56.1 +0.9
KKAR                                  IAmb     IAmb       02 58 57.3
            comp=Z,3.0nm,0.9s
BRTR   Keskin Array B      36.92 328  P        P          02 59 12.6 +1.4
BRTR   Keskin Array B      36.92 328  P        P          02 59 12.7 +1.6
            comp=Z,1.4nm,0.9s,baz=145,slow=8.5,SNR=11
            comp=Z,1.4nm,0.9s
BR131  Keskin Array S      36.93 328  P        P          02 59 12.5 +1.4
BR131                                 IAmb     IAmb       02 59 13.0
            comp=Z,3.4nm,1.1s
AB31   Akbulak array       39.50   2           P          02 59 33.3 +0.8
AB31                                  IAmb     IAmb       02 59 34.2
            comp=Z,4.9nm,0.8s
ABKAR  Akbulak array       39.50   2           P          02 59 33.2 +0.7
CMAR   Chiang Mai Arr      40.67  73  P        P          02 59 43.6 +0.9
            comp=Z,0.8nm,0.3s,baz=269,slow=8.1,SNR=5.2
            comp=Z,0.8nm,0.3s
RDO    Rodhopi             42.41 323  P        P          02 59 57.0 +0.4
RDO                                   IAmb     IAmb       02 59 59.0
            comp=Z,4.7nm,1.0s
MKAR   Makanchi Array      42.42  25  P        P          02 59 56.5 -0.1
MKAR   Makanchi Array      42.42  25  P        P          02 59 56.6  0.0
            comp=Z,0.6nm,0.8s,baz=236,slow=8.6,SNR=4.4
MKAR                                  PcP      PcP        03 01 49.3 -0.3
            comp=Z,0.3nm,0.7s,baz=238,slow=2.7,SNR=4.1
            comp=Z,0.6nm,0.8s
KURBB  Kurchatov Arra      44.24  19  P        P          03 00 11.2 -0.1
            comp=Z,1.1nm,0.8s,baz=218,slow=8.2,SNR=8.8
            comp=Z,1.1nm,0.8s
BVAR   Borovoye Array      44.40  11  P        P          03 00 12.4 -0.1
            comp=Z,1.3nm,0.6s,baz=152,slow=6.5,SNR=4.6
BVAR                                  PcP      PcP        03 01 55.3 -0.9
            comp=Z,1.3nm,0.7s,baz=197,slow=4.9,SNR=2.9
            comp=Z,1.3nm,0.6s
BURAR  Bucovina Array      46.82 330  P        P          03 00 32.4 +0.5
BURAR                                 IAmb     IAmb       03 00 33.4
            comp=Z,1.0nm,0.7s
AKASG  Malin Array Be      47.25 335  P        P          03 00 33.9 -1.1
            comp=Z,0.2nm,0.4s,baz=145,slow=7.0,SNR=4.8
            comp=Z,0.2nm,0.4s
ZALV   Zalesovo Beam       49.13  21           P          03 00 48.5 -1.1
ZALV   Zalesovo Beam       49.13  21  P        P          03 00 48.8 -0.7
            comp=Z,3.5nm,0.8s,baz=222,slow=6.0,SNR=9.0
            comp=Z,3.5nm,0.8s
TORD   Torodi Ar. Bea      55.12 279  P        P          03 01 35.0 +0.2
            comp=Z,1.8nm,0.4s,baz=73,slow=7.3,SNR=1.2
            comp=Z,1.8nm,0.4s
FINES  FINESS Array B      56.71 342  P        P          03 01 44.4 -0.9
            comp=Z,1.0nm,0.8s,baz=123,slow=7.0,SNR=3.5
            comp=Z,1.0nm,0.8s
HFS    Hagfors             60.12 336  P        P          03 02 08.4 -0.8
            comp=Z,1.3nm,0.8s,baz=157,slow=9.4,SNR=2.0
            comp=Z,1.3nm,0.8s
DBIC   Dimbokro            62.13 272  P        P          03 02 25.1 +1.4
            comp=Z,4.1nm,0.9s,baz=134,slow=1.8,SNR=3.6
            comp=Z,4.1nm,0.9s
ESDC   Sonseca Array       62.30 310  P        P          03 02 24.8 +0.3
            comp=Z,1.2nm,0.8s,baz=87,slow=6.3,SNR=8.9
            comp=Z,1.2nm,0.8s
TIXI   Tiksi               74.92  18  P        P          03 03 41.2 -1.3
            comp=Z,2.1nm,0.3s,baz=319,slow=3.3,SNR=5.9
            comp=Z,2.1nm,0.3s
WRA    Warramunga Arr      80.73 112  P        P          03 04 15.0 -0.9
            comp=Z,1.0nm,0.9s,baz=295,slow=4.4,SNR=7.2
            comp=Z,1.0nm,0.9s
ASAR   Alice Springs       81.25 116  P        P          03 04 17.6 -1.0
            comp=Z,1.4nm,0.8s,baz=292,slow=5.3,SNR=11
            comp=Z,1.4nm,0.8s
PDAR   Pinedale Array     126.58 349  PKP      PKPdf      03 11 05.6 -0.3
            comp=Z,0.4nm,0.5s,baz=72,slow=4.8,SNR=3.8
NVAR   Mina Array Bea     132.02 356  PKP      PKiKP      03 11 17.9 +0.5
            comp=Z,0.2nm,0.4s,baz=333,slow=2.0,SNR=1.9
TXAR   Lajitas Array      137.35 336  PKP      PKPdf      03 11 25.9 -0.5
            comp=Z,0.2nm,0.7s,baz=75,slow=1.4,SNR=3.8
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*NOU **14** 02:59:49.1, 27.°52S×173.°27W, h181^{km}, mb4.6/9, Kermadec Islands Region*

*WEL **14** 03:01:33.4±0.5, 34.°S±6.°×18.°0W±1.°3, h12^{km}, M4.9/19, mB5.5/10, ML4.8/22, MLv4.9/19, Mw(mB)5.0/10, Error ellipse: s-maj=18.0km s-min=3.9km az=111.8, confirmed*

*IDC **14** 03:01:35.9±3.6, 33.°58S×179.°50E, h132^{km}±28^{km}, mb3.5/3, mbtmp4.2/5, Error ellipse: s-maj=35.8km s-min=20.6km az=71.0*

ISC 14 03:01:34.4±0.8**, 33.°68S**±0.°07×**179.°8W**±0.°1**, h150**^{km}**, n67, σ2.s31**/63**, mb3.7**/3**, South of Kermadec Islands**

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Code   Station Name          Δ°   AZ°    Phase ID             Time      Res
                                      Op       ISC        h  m  s    ISC
MXZ    Matakaoa Point       4.18 201  P        Pn         03 02 39.5 +2.6
MXZ    Matakaoa Point       4.18 201  P        Pn         03 02 38.4 +1.5
MXZ                                   S        Sn         03 03 26.8 +1.2
WMGZ   Waiomatatini S       4.39 199  P        Pn         03 02 41.4 +1.8
HAZ    Te Kaha              4.53 205  P        Pn         03 02 44.0 +2.5
PKGZ   Pakihiroa            4.53 202  P        Pn         03 02 42.8 +1.3
WIZ    White Island         4.57 212  P        Pn         03 02 44.6 +2.6
PUZ    Puketiti             4.67 199  P        Pn         03 02 44.2 +0.9
PUZ                                   S        Sn         03 03 36.6 -0.6
GLKZ   Green Lake           4.68  20  P        Pn         03 02 42.6 -1.0
GLKZ                                  S        Sn         03 03 37.1 -0.3
GRZ    Great Barrier        4.68 235  P        Pn         03 02 44.2 +0.7
RAO    Raoul Island         4.69  20  S        Sn         03 03 37.0 -0.7
            215nm,0.3s,baz=32,slow=21,SNR=5.1
RIZ    Raoul Island         4.69  20  S        Sn         03 03 37.1 -0.6
RUGZ   Raukumara Rang       4.75 205  P        Pn         03 02 47.3 +2.7
KUZ    Kuaotunu             4.79 229  P        Pn         03 02 47.0 +2.0
KUZ    Kuaotunu             4.79 229  P        Pn         03 02 46.9 +1.9
TWGZ   Tauwhareparae        4.85 201  P        Pn         03 02 47.2 +1.4
WHRZ   Whale Island         4.94 211  P        Pn         03 02 50.5 +3.6
CNGZ   Carnagh Statio       5.07 198  P        Pn         03 02 49.9 +1.3
OPRZ   Ohinepanea           5.12 215  P        Pn         03 02 51.9 +2.6
TKGZ   Te Karaka            5.13 201  P        Pn         03 02 50.5 +1.1
MWZ    Matawai              5.14 204  P        Pn         03 02 50.5 +1.0
TGRZ   Tauranga             5.17 217  P        Pn         03 02 53.2 +3.2
MARZ   Manawahe             5.18 213  P        Pn         03 02 52.9 +2.8
URZ    Urewera              5.22 208  P        Pn         03 02 50.5 -0.2
            49nm,0.3s,baz=349,slow=6.3,SNR=215
URZ                                   S        Sn         03 03 46.7 -3.6
            122nm,0.4s,baz=239,slow=19,SNR=17
URZ    Urewera              5.22 208  P        Pn         03 02 51.4 +0.7
URZ    Urewera              5.22 208  P        Pn         03 02 50.9 +0.2
EDRZ   Edgecumbe            5.25 212  P        Pn         03 02 53.3 +2.2
RAGZ   Rawiri               5.32 205  P        Pn         03 02 54.1 +2.0
WCZ    Waipu Caves          5.34 243  P        Pn         03 02 52.7 +0.5
RIGZ   Rimuhau              5.40 201  P        Pn         03 02 53.6 +0.6
KARZ   Kaharoa              5.41 216  P        Pn         03 02 55.9 +2.7
KMRZ   Kaimai               5.43 219  P        Pn         03 02 56.6 +3.2
TARZ   Mount Tarawera       5.46 213  P        Pn         03 02 56.8 +2.9
MUGZ   Murupara             5.55 209  P        Pn         03 02 55.9 +0.9
PRGZ   Paritu Road          5.57 199  P        Pn         03 02 56.0 +0.8
TOZ    Tahuroa Road         5.58 222  P        Pn         03 02 59.0 +3.6
RTZ    Ruatahuna            5.58 207  P        Pn         03 02 55.5 -0.1
SNGZ   Shannon Statio       5.60 204  P        Pn         03 02 57.1 +1.3
KNZ    Kokohu               5.72 200  P        Pn         03 02 57.6 +0.3
PRRZ   Plateau Road         5.73 212  P        Pn         03 02 58.7 +1.4
MHGZ   Mahia Peninsul       5.78 198  P        Pn         03 02 58.3 +0.2
ALRZ   Allen Road           5.80 212  P        Pn         03 03 00.3 +1.9
RAHZ   Arahi                5.81 205  P        Pn         03 02 58.5  0.0
MTHZ   Maungataniwha        5.84 207  P        Pn         03 02 58.8 -0.1
WPRZ   Whakapapatarin       5.85 213  P        Pn         03 03 01.2 +2.3
KUTZ   Kaahu Road           5.98 215  P        Pn         03 03 03.5 +2.8
MRHZ   Matea Rd             6.00 210  P        Pn         03 03 01.9 +0.9
TLZ    Tolley Road          6.00 218  P        Pn         03 03 03.7 +2.6
BKZ    Black Stump Fm       6.25 208  P        Pn         03 03 03.6 -0.8
BKZ    Black Stump Fm       6.25 208  P        Pn         03 03 03.8 -0.6
HIZ    Hauiti               6.50 220  P        Pn         03 03 10.6 +3.0
HIZ    Hauiti               6.50 220  P        Pn         03 03 10.8 +3.1
NGZ    Ngauruhoe            6.63 213  P        Pn         03 03 10.2 +0.6
VRZ    Vera Road            7.00 217  P        Pn         03 03 16.6 +2.3
NEZ    North Egmont         7.45 220  P        Pn         03 03 22.7 +2.2
KHEZ   Kahui Hut            7.51 220  P        Pn         03 03 23.1 +1.8
BFZ    Birch Farm           7.68 203  P        Pn         03 03 20.1 -3.3
BFZ    Birch Farm           7.68 203  P        Pn         03 03 20.1 -3.3
BFZ                                   S        Sn         03 04 41.1 -7.9
MRZ    Mangatainoka R       7.89 207  P        Pn         03 03 23.2 -3.1
SNZO   South Karori         8.79 208  P        Pn         03 03 34.2 -4.0
QRZ    Quartz Range         9.41 218  P        Pn         03 03 42.6 -3.8
RPZ    Rata Peaks          12.31 213  P        Pn         03 04 19.0 -5.6
            3.3nm,0.3s,baz=10,slow=4.3,SNR=8.1
RPZ                                   S        Sn         03 06 24.5  -16
            9.6nm,0.6s,baz=99,slow=19,SNR=5.9
MSVF   Nonsavu             16.00 352  P        P          03 05 12.3 +0.5
            14nm,0.7s,baz=162,slow=18,SNR=9.4
ASAR   Alice Springs       41.56 271  P        P          03 09 05.6 -1.8
            0.9nm,0.5s,baz=104,slow=7.6,SNR=10.0
            0.9nm,0.5s
WRA    Warramunga Arr      42.85 277  P        P          03 09 16.2 -1.6
            0.7nm,0.3s,baz=118,slow=7.8,SNR=15
            0.7nm,0.3s
QSPA   South Pole Qui      56.44 180  P        P          03 11 04.8 +4.7
            2.3nm,1.0s,baz=51,slow=6.5,SNR=9.5
            2.3nm,1.0s
FINES  FINESS Array B     147.63 337  PKPbc    PKPbc      03 21 00.5 +0.2
            0.6nm,0.6s,baz=60,slow=4.1,SNR=3.6
TORD   Torodi Ar. Bea     159.52 184  PKPab    PKPab      03 21 57.5 +3.3
            1.6nm,0.3s,baz=158,slow=4.5,SNR=1.1
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*NEIC **14** 03:15:20.9±0.6, 35.°80N±0.°01×96.°66W±0.°03, h5^{km}±1^{km}, mb_Lg3.1/118, ML3.4/30, ML3.5/40, Error ellipse: s-maj=3.8km s-min=2.9km az=116.0*

NEIC 14 03:15:21.2±0.5**, 35.°799N**±0.°008×**96.°66W**±0.°01**, h7**^{km}±5^{km}**, Error ellipse: s-maj=1.8km s-min=1.0km az=64.0, Oklahoma**

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Code   Station Name          Δ°   AZ°    Phase ID             Time      Res
                                      Op       ISC        h  m  s    ISC
DEOK   Depew                0.14  71           Pg         03 15 24.5 +0.5
DEOK                                  Sg       Sg         03 15 26.8 +0.8
DEOK                                  IAML                03 15 26.9
            comp=E,14μm,0.2s
OK052  Battle Ridge R       0.23 328           Pg         03 15 26.1 +0.4
OK052                                 Sg       Sg         03 15 29.6 +0.8
QUOK   Quay                 0.37 353           Pg         03 15 28.8 +0.3
QUOK                                  Sg       Sg         03 15 34.2 +0.7
QUOK                                  IAML                03 15 37.2
            comp=N,3μm,0.3s
ADOK   Arcadia Dam          0.60 256           Pg         03 15 32.7 -0.1
ADOK                                  Sg       Sg         03 15 41.4 +0.8
OK029  Liberty Lake         0.65 270           Pg         03 15 33.6 -0.1
OK029                                          Sg         03 15 42.7 +0.6
OK029                                 IAmb_Lg             03 15 42.0
            comp=Z,254nm,0.9s
OK029                                 IAML                03 15 43.1
            comp=Z,2μm,0.7s
TUL3   Leonard              0.71  81           Pg         03 15 34.9 +0.1
TUL3                                           Sg         03 15 44.4 +0.3
OK051  E0350 and S346       0.72 348           Pg         03 15 35.0  0.0
OK051                                          Sg         03 15 44.9 +0.4
OK004  Okla Sci Mus         0.72 248           Pg         03 15 35.2 +0.2
OKCSW  OKLAHOMA CITY        0.75 239           Pg         03 15 35.3 -0.3
OKCSW                                          Sg         03 15 45.9 +0.6
OKCSW                                 IAML                03 15 49.9
            comp=N,1μm,0.3s
BCOK   Bluff Creek, N       0.79 260           Pg         03 15 36.2 -0.1
BCOK                                           Sg         03 15 47.1 +0.5
FNO    Franklin             0.81 229           Pg         03 15 36.4 -0.4
FNO                                            Sg         03 15 47.9 +0.5
FNO                                   IAML                03 15 48.2
            comp=E,2μm,0.4s
FNO                                   IAML                03 15 50.1
            comp=N,1μm,0.4s
BLOK   Blackwell            1.06 335           Pg         03 15 41.2 -0.3
BLOK                                           Sg         03 15 55.6 +0.3
T35A   Sooner Cattle        1.12   6           Pg         03 15 42.0 -0.7
T35A                                           Sg         03 15 57.4 +0.2
T35A                                  IAML                03 15 57.7
            comp=N,1μm,0.2s
T35A                                  IAML                03 16 00.6
            comp=N,2μm,0.3s
CROK   Carrier              1.28 304           Pn         03 15 45.0 -0.5
CROK                                           Sg         03 16 02.7 +0.2
RLO    Rose Lookout         1.37  74           Pn         03 15 46.3 -0.4
X34A   Smith Ranch, M       1.54 219  IAmb_Lg             03 16 13.2
            comp=Z,89nm,0.7s
KAN09  Caldwell North       1.54 330  IAmb_Lg             03 16 09.5
            comp=Z,139nm,1.1s
CSTR   Hydro, Custer        1.66 265           Pn         03 15 51.3 +0.6
KAN08  Anthony NE Sta       1.78 324  IAmb_Lg             03 16 21.9
            comp=Z,141nm,0.8s
LOOK   Love County          1.85 194           Pb         03 15 54.5 -0.9
U38A   Gravette             1.95  70           Pn         03 15 55.6 +0.9
WMOK   Wichita Mounta       2.04 239           Pn         03 15 56.8 +0.9
WMOK   Wichita Mounta       2.04 239  IAmb_Lg             03 16 28.9
            comp=Z,106nm,0.7s
WMOK   Wichita Mounta       2.04 239  S        Sb         03 16 24.9 +0.8
HHAR   Hobbs                2.25  77           Pn         03 15 59.6 +0.8
Z35A   Perchaven, San       2.51 191           Pn         03 16 03.3 +0.9
Z35A                                  IAmb_Lg             03 16 43.4
            comp=Z,52nm,0.9s
WTFS   Witchita Falls       2.52 217           Pn         03 16 03.6 +1.1
WTFS   Witchita Falls       2.52 217  P        Pn         03 16 03.9 +1.4
MIAR   Mount Ida            2.81 115           Pn         03 16 07.7 +1.2
Z38A   Mt. Pleasant         2.88 151  IAmb_Lg             03 16 57.8
            comp=Z,100nm,0.7s
FW02   City of Haslet       2.90 192  P        Pb         03 16 11.2 -2.0
FW06   Azle                 2.92 195           Pn         03 16 09.0 +1.1
FW03   Perrin-Whitt E       2.99 203  P        Pn         03 16 10.7 +1.8
SMWD   Samnorwood           3.01 258  P        Pn         03 16 10.7 +1.4
TREL   Terrell              3.10 171  IAmb_Lg             03 17 06.7
            comp=Z,44nm,0.8s
FW07   Weatherford          3.23 197           Pn         03 16 13.0 +0.7
FW07   Weatherford          3.23 197  P        Pb         03 16 15.8 -3.0
KSU1   Kansas State U       3.30   1           Pn         03 16 13.3 +0.1
KSU1                                  IAmb_Lg             03 17 13.1
            comp=Z,68nm,0.7s
FW16   Waxahatchie          3.31 184  IAmb_Lg             03 17 14.4
            comp=Z,51nm,0.9s
FW16   Waxahatchie          3.31 184  P        Pb         03 16 20.7 +0.4
X40A   Basin Creek Fa       3.39 112  IAmb_Lg             03 17 14.1
            comp=Z,55nm,0.7s
WHAR   Wooly Hollow         3.60  97  IAmb_Lg             03 17 17.8
            comp=Z,50nm,0.7s
WLAR   White Oak Lake       3.60 125           Pn         03 16 18.0 +0.6
WLAR                                  IAmb_Lg             03 17 19.5
            comp=Z,39nm,0.9s
FCAR   Ozark Folk Cen       3.68  87           Pn         03 16 19.0 +0.5
APMT   Aspermont            3.78 230  IAmb_Lg             03 17 25.4
            comp=Z,41nm,0.8s
APMT   Aspermont            3.78 230  P        Pn         03 16 22.0 +2.2
237A   Washetta, Mont       3.85 169  IAmb_Lg             03 17 21.9
            comp=Z,34nm,0.7s
WHTX   Lake Whitney,        3.86 190  IAmb_Lg             03 17 28.5
            comp=Z,37nm,1.1s
ABTX   Abilene, Hawle       4.02 219  IAmb_Lg             03 17 30.0
            comp=Z,38nm,1.0s
Z41A   Richland Creek       4.07 127           Pn         03 16 23.2 -0.6
DKNS   Dickens              4.11 240  P        Pn         03 16 27.4 +3.0
NATX   Nacogdoches          4.36 157  IAmb_Lg             03 17 51.1
            comp=Z,45nm,0.7s
SN07   Snyder 07            4.42 234  IAmb_Lg             03 17 50.0
            comp=Z,48nm,0.8s
LCAR   Lake Charles         4.47  85  IAmb_Lg             03 17 46.3
            comp=Z,54nm,0.7s
P38A   Dawn                 4.55  32           Pn         03 16 30.3 -0.1
P38A                                  IAmb_Lg             03 17 53.2
            comp=Z,52nm,0.8s
SN05   Snyder 5             4.55 231  IAmb_Lg             03 17 48.0
            comp=Z,41nm,0.9s
T42A   Van Buren            4.65  73           Pn         03 16 32.5 +0.7
T42A                                  IAmb_Lg             03 18 00.1
            comp=Z,34nm,0.7s
POST   Post                 4.84 237  IAmb_Lg             03 18 05.8
            comp=Z,27nm,0.8s
CCM    Cathedral Cave       4.88  61           Pn         03 16 35.4 +0.3
BRDY   Brady                4.91 204           Pn         03 16 34.7 -0.7
BRDY                                  IAmb_Lg             03 18 05.2
            comp=Z,28nm,0.8s
RTBA   Rita Blanca          4.96 279           Pn         03 16 36.7 +0.4
435B   Jarrell              5.06 189  IAmb_Lg             03 18 14.0
            comp=Z,41nm,1.0s
N35A   Tabor                5.12   9           Pn         03 16 38.1 -0.1
143A   Socs Landing,        5.33 124  IAmb_Lg             03 18 10.9
            comp=Z,45nm,1.3s
MSTX   Muleshoe             5.35 252  IAmb_Lg             03 18 13.7
            comp=Z,21nm,0.8s
SGCY   Sterling City        5.37 225  IAmb_Lg             03 18 25.8
            comp=Z,38nm,0.8s
KSCO   Kaye Shedlock'       5.73 306           Pg         03 17 06.6 -4.4
KSCO                                  IAmb_Lg             03 18 38.1
            comp=Z,36nm,0.8s
JCT    Junction City        5.92 207  IAmb_Lg             03 18 38.2
            comp=Z,33nm,0.8s
OXF    Oxford               6.07 100  IAmb_Lg             03 18 42.5
            comp=Z,36nm,0.8s
Y45A   Yeager Farm, C       6.16 106           Pn         03 16 52.5  0.0
Y45A                                  IAmb_Lg             03 18 54.2
            comp=Z,28nm,1.0s
T25A   Trinidad             6.39 284  IAmb_Lg             03 18 47.0
            comp=Z,27nm,0.8s
HNDO   Hondo                6.63 200  IAmb_Lg             03 18 52.7
            comp=Z,33nm,0.9s
OGNE   Ogallala             6.65 322  IAmb_Lg             03 18 53.8
            comp=Z,47nm,0.8s
SCIA   State Center         6.66  23  IAmb_Lg             03 19 06.1
            comp=Z,34nm,0.8s
MNHN   Monahans             6.76 231  IAmb_Lg             03 18 58.4
            comp=Z,17nm,0.7s
PLAL   Pickwick Lake        7.05  94  IAmb_Lg             03 19 13.2
            comp=Z,23nm,0.9s
WVT    Waverly              7.17  85  IAmb_Lg             03 19 06.6
            comp=Z,26nm,0.8s
DRIO   Del Rio              7.18 209  IAmb_Lg             03 19 22.8
            comp=Z,20nm,1.1s
SAND   Sanderson            7.42 220  IAmb_Lg             03 19 17.4
            comp=Z,17nm,0.9s
L40A   Anamosa              7.55  32  IAmb_Lg             03 19 24.7
            comp=Z,25nm,0.8s
X48A   Hartselle            7.99  97  IAmb_Lg             03 19 37.6
            comp=Z,13nm,0.8s
V48A   Smith Brothers       7.99  88  IAmb_Lg             03 19 41.3
            comp=Z,20nm,0.8s
ANMO   Albuquerque          8.05 267  IAmb_Lg             03 19 45.4
            comp=Z,5.3nm,0.8s
ANMO   Albuquerque          8.05 267  IAmb_Lg             03 19 45.1
            comp=Z,6.1nm,1.0s
L42A   Oliver, Polo         8.25  39  IAmb_Lg             03 19 45.8
            comp=Z,27nm,0.7s
LRAL   Lakeview Retre       8.44 106  IAmb_Lg             03 20 07.7
            comp=Z,16nm,1.2s
I37A   Lemond, Waseca       8.58  16  IAmb_Lg             03 20 10.9
            comp=Z,18nm,0.8s
JFWS   Jewell Farm          8.66  33  IAmb_Lg             03 19 55.7
            comp=Z,23nm,0.8s
I40A   Norwalk              9.32  28  IAmb_Lg             03 20 22.1
            comp=Z,14nm,0.8s
SPMN   Marine on St.        9.86  16  IAmb_Lg             03 20 48.5
            comp=Z,13nm,1.1s
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*IDC **14** 03:53:13.6±0.4, 21.°21S×174.°21W, h0^{km}, mb4.9/19, mbtmp5.0/21, ML5.3/2, MS4.9/45, Error ellipse: s-maj=18.0km s-min=13.5km az=106.0*

*NOU **14** 03:53:13.0, 21.°46S×173.°65W, h7^{km}, mb5.2/77, Tonga Islands*

*MOS **14** 03:53:13.9±1.1, 21.°26S×174.°25W, h10^{km}, mb5.3/39, MS5.2/9, Error ellipse: s-maj=9.6km s-min=8.5km az=92.0*

*BJI **14** 03:53:14.3, 20.°76S×173.°78W, h10^{km}, mB5.9/41, mb5.1/52, Ms5.3/54, Ms7 5.0/55*

*NEIC **14** 03:53:15.8, 21.°17S×173.°83W, h16^{km}, Moment Tensor Solution. Duration: 2.s6 Moment tensor: Scale 10^{17}Nm; M_{rr}0.97; $M_{\theta\theta}$-0.04; $M_{\phi\phi}$-0.93; $M_{r\theta}$0.29; $M_{\theta\phi}$-0.12; $M_{\phi r}$-1.12; Fault plane solution: $M_0$1.50000×10^{17} NP1:ϕ_s20.46000°, δ22.01000°, λ117.58000°. NP2:ϕ_s171.07000°, δ70.60000°, λ79.40000°. Principal axes: T 1.5461, Plg63.0000°, Azm64.0000°; N -0.0994, Plg10.0000°, Azm175.0000°; P -1.4467, Plg25.0000°, Azm269.0000°;*

*NEIC **14** 03:53:15.8±2.7, 21.°18S±0.°08×174.°0W±0.°1, h10^{km}±1^{km}, mb5.4/416, Mww5.4/14 Error ellipse: s-maj=16.2km s-min=12.7km az=110.0*

*NEIC **14** 03:53:15.8, 21.°17S×174.°04W, h16^{km}*

*GCMT **14** 03:53:17.8±0.1, 21.°30S±0.°01×173.°67W±0.°01, h12^{km}, MW5.3/143, Moment Tensor Solution. s94,c141; s143,c256; Duration: 1.s2 Moment tensor: Scale 10^{17} Nm; M_{rr}1.03±.01; $M_{\theta\theta}$-0.01±.01; $M_{\phi\phi}$-1.02±.01; $M_{r\theta}$0.34±.05; $M_{\theta\phi}$-0.07±.01; $M_{\phi r}$0.78±.04; Best double couple: $M_0$1.33200×10^{17} NP1:ϕ_s173.00000°, δ27.00000°, λ69.00000°. NP2:ϕ_s16.00000°, δ65.00000°, λ100.00000°. Principal axes: T 1.3570, Plg68.0000°, Azm306.0000°; N -0.0500, Plg9.0000°, Azm192.0000°; P -1.3060, Plg19.0000°, Azm98.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 03:53:15.8±0.5**, 21.°33S**±0.°04×**174.°06W**±0.°05**, h14**^{km}±2^{km}**, h15**^{km}**:pP-P, n1022, σ1.s37**/875**, mb5.3**/293**, MS5.1**/86**, 72C-28D, Tonga Islands**

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Code   Station Name          Δ°   AZ°    Phase ID             Time      Res
                                      Op       ISC        h  m  s    ISC
NIUE   Niue                 4.48  61           Pn         03 54 14.8 -8.4
NIUE   Niue                 4.48  61  P        Pn         03 54 14.8 -8.5
NIUE                                  S        Sn         03 54 59.7  -15
NIUE   Niue                 4.48  61  P        Pn         03 54 15.4 -7.9
LKBA   Tubou, Lakemba       5.43 304  P        Pn         03 54 40.3 +3.9
TAVE   Taveuni              7.19 309  P        Pn         03 55 04.7 +4.1
AFI    Afiamalu             7.69  17           Pn         03 55 01.3 -6.2
AFI    Afiamalu             7.69  17  P        Pn         03 55 02.5 -5.0
AFI    Afiamalu             7.69  17  P        Pn         03 55 02.8 -4.7
AFI                                   pmax     pmax
            comp=Z,311nm,1.1s
DGTI   Dogotuki             7.71 309  P        Pn         03 55 11.9 +4.1
MSVF   Nonsavu              8.26 294           Pn         03 55 21.4 +6.1
MSVF   Nonsavu              8.26 294  Pn       Pn         03 55 20.6 +5.4
            comp=Z,3.4nm,0.3s,baz=127,slow=12,SNR=93
MSVF                                  LR       LR         03 57 05.8
            comp=Z,1μm,21.7s,baz=109,slow=29
MSVF   Nonsavu              8.26 294  P        Pn         03 55 20.2 +4.9
MSVF   Nonsavu              8.26 294deP        Pn         03 55 16.6 +1.3
RIZ    Raoul Island         8.62 203  S        Sn         03 56 54.7 -2.7
RAO    Raoul Island         8.63 203           Pn         03 55 19.7 -0.5
RAO    Raoul Island         8.63 203  Pn       Pn         03 55 19.4 -0.9
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	comp=Z,90nm,0.3s,baz=1.3,slow=9.1,SNR=5.6						
RAO				Sn	Sn	03 56 52.8	-4.6
	comp=Z,69nm,0.3s,baz=285,slow=23,SNR=8.4						
RAO				LR	LR	03 58 14.5	
	comp=Z,4µm,20.9s,baz=38,slow=35						
	comp=Z,690nm,0.7s						
RAO	Raoul Island	8.63	203	P	Pn	03 55 19.8	-0.5
RAO	Raoul Island	8.63	203	P	Pn	03 55 19.7	-0.5
GLKZ	Green Lake	8.64	203	P	Pn	03 55 19.7	-0.7
GLKZ				S	Sn	03 56 54.2	-3.4
YSA	Yasawairara	9.15	299	P	Pn	03 55 32.7	+5.2
RAR	Rarotonga	13.32	92		Pn	03 56 15.1	-9.4
RAR	Rarotonga	13.32	92	Pn	Pn	03 56 15.7	-8.8
	comp=Z,15nm,0.3s,baz=240,slow=5.7,SNR=26						
RAR				Sn	Sn	03 58 30.1	-22
	comp=Z,1.6nm,0.3s,baz=96,slow=21,SNR=1.9						
RAR	Rarotonga	13.32	92	P	Pn	03 56 17.8	-6.7
PINNC	Pines Island,	17.20	262	P	P	03 57 19.7	+2.4
YATNC	Mamie plateau,	17.72	264	P	P	03 57 24.3	+1.2
WCZ	Waipu Caves	17.74	212	P	Pn	03 57 20.1	-2.3
OUENC	Ouen Island, N	17.76	263	P	P	03 57 25.6	+2.1
ONTNC	Ouen Toro	18.12	263	P	P	03 57 30.9	+3.4
DZM	Mont Dzumac	18.14	264		P	03 57 28.9	+1.1
DZM	Mont Dzumac	18.14	264	*e*P	Pn	03 57 26.6	-0.9
	comp=Z,159nm,1.3s						
DZM				*e*S	Sn	04 00 46.5	-3.3
	comp=Z,2µm,23.1s						
DZM				*e*LR	LR	04 01 40.0	
	comp=Z,7µm,23.5s						
DZM	Mont Dzumac	18.14	264	P	P	03 57 28.8	+1.1
	comp=Z,36nm,0.8s,baz=79,slow=17,SNR=28						
DZM				LR	LR	04 03 27.8	
	comp=Z,5µm,20.0s,baz=105,slow=34						
DZM	Mont Dzumac	18.14	264	P	P	03 57 29.3	+1.5
VLAKA	Lakatoro	18.29	283	P	P	03 57 31.5	+2.1
URZ	Urewera	18.52	202	P	P	03 57 33.6	+1.9
	comp=Z,3.2nm,0.3s,baz=117,slow=5.7,SNR=23						
URZ				S	Sn	04 00 42.4	-16
	comp=Z,6.7nm,0.6s,baz=234,slow=22,SNR=5.6						
	comp=Z,98nm,1.0s						
URZ	Urewera	18.52	202	P	Pn	03 57 34.1	+2.2
BKZ	Black Stump Fm	19.54	202	P	P	03 57 41.8	-1.2
BKZ	Black Stump Fm	19.54	202	P	P	03 57 44.2	+1.1
BKZ				S	S	04 01 07.8	-16
HIZ	Hauiti	19.61	207	P	P	03 57 45.2	+1.5
HIZ	Hauiti	19.61	207	P	P	03 57 44.4	+0.7
OTVZ	Oturere	19.84	204	P	P	03 57 47.5	+1.1
PKVZ	Pokaka	20.08	205	P	P	03 57 50.2	+1.3
BFZ	Birch Farm	20.98	201	P	P	03 58 00.6	+2.0
BFZ				S	S	04 01 36.4	-16
MRZ	Mangatainoka R	21.19	202		P	03 58 00.3	-0.6
MRZ	Mangatainoka R	21.19	202	P	P	03 58 02.2	+1.4
MRZ				S	S	04 01 40.8	-15
HOWZ	Holdsworth Sta	21.42	202	P	P	03 58 04.1	+0.7
HOWZ				S	S	04 01 44.4	-16
OGWZ	Otaki Gorge	21.47	203	P	P	03 58 03.7	-0.2
TMWZ	Te Maipa	21.48	201	P	P	03 58 07.5	+3.5
TRWZ	Traveller	21.81	201	P	P	03 58 10.4	+2.9
PAWZ	Paruwai Farm	21.88	202	P	P	03 58 07.7	-0.6
PAWZ				S	S	04 01 54.3	-15
DUWZ	D'Urville Isla	21.93	205	P	P	03 58 07.7	-1.1
DUWZ				S	S	04 02 00.2	-11
MSWZ	Moikau Station	21.97	202	P	P	03 58 10.0	+0.8
PLWZ	Palliser	22.11	202		P	03 58 12.1	+1.3
PLWZ	Palliser	22.11	202	P	P	03 58 12.8	+2.0
PLWZ				S	S	04 02 02.4	-12
TCW	Tory Channel	22.15	204		P	03 58 09.6	-1.6
TCW	Tory Channel	22.15	204	P	P	03 58 10.0	-1.1
TCW				S	S	04 02 01.7	-13
TUWZ	Tuamarina	22.46	204		P	03 58 12.4	-2.1
TUWZ	Tuamarina	22.46	204	P	P	03 58 13.2	-1.3
TUWZ				S	S	04 02 11.2	-9.4
NNZ	Nelson	22.50	205	P	P	03 58 12.4	-2.5
QRZ	Quartz Range	22.53	207	P	P	03 58 15.2	0.0
QRZ	Quartz Range	22.53	207	P	P	03 58 11.4	-3.8
TBI	Tubuai	22.84	100	*e*P	P	03 58 05.0	-14
	comp=Z,2µm,35.5s						
TBI				*e*S	S	04 02 21.0	-6.7
	comp=Z,21µm,25.0s						
TBI				*e*LR	LR	04 03 30.4	
	comp=Z,20µm,32.5s						
TBI				*e*LR	LR	04 03 33.8	
	comp=Z,4µm,22.2s						
THZ	Tophouse	23.15	205	P	P	03 58 21.4	-0.4
THZ	Tophouse	23.15	205	P	P	03 58 20.0	-1.8
PPT2	Papeete2	23.37	85	*e*P	P	03 58 06.9	-17
	comp=Z,426nm,26.0s						
PPT2				*e*S	S	04 02 34.1	-2.9
	comp=Z,2µm,23.5s						
PPT2				*e*LR	LR	04 03 42.0	
	comp=Z,6µm,26.5s						
PPT2				*e*LR	LR	04 03 48.9	
	comp=Z,3µm,37.2s						
PPT	Papeete	23.38	85	LR	LR	04 06 01.9	
	comp=Z,5µm,18.6s,baz=240,slow=33						
KHZ	Kahutara	23.47	204	P	P	03 58 23.2	-1.7
DSZ	Denniston Nort	23.59	207	P	P	03 58 27.1	+0.9
LTZ	Lake Taylor	24.26	205	IAmb	IAmb	03 58 40.5	
	comp=Z,55nm,0.9s						
INZ	Inchbonnie	24.55	206		P	03 58 33.9	-1.2
INZ				IAmb	IAmb	03 58 40.9	
	comp=Z,97nm,0.9s						
OXZ	Oxford	24.82	205		P	03 58 36.4	-1.0
OXZ				IAmb	IAmb	03 58 45.0	
	comp=Z,55nm,0.7s						
RPZ	Rata Peaks	25.53	206		P	03 58 43.1	-0.9
FOZ	Fox Glacier	25.90	208		P	03 58 49.5	+2.3
LHI	Lord Howe Isla	26.06	242	P	P	03 58 49.5	+0.6
	comp=Z,91nm,1.4s						
LBZ	Lake Benmore	26.44	206		P	03 58 53.4	+1.2
JCZ	Jackson Bay	26.78	208	P	P	03 58 55.2	-0.2
ODZ	Otahua Downs	26.80	205	P	P	03 58 57.7	+2.2
WKZ	Wanaka	27.28	207	IAmb	IAmb	03 59 27.9	
	comp=Z,74nm,1.2s						
HNR	Honiara	27.66	291	LR	LR	04 09 27.6	
	comp=Z,2µm,18.5s,baz=138,slow=35						
MLZ	Mavora Lakes	28.09	207		P	03 59 08.5	+1.4
MLZ				IAmb	IAmb	03 59 12.2	
	comp=Z,98nm,1.3s						
WHZ	Wether Hill Ro	28.59	207		P	03 59 14.6	+3.1
WHZ				IAmb	IAmb	03 59 17.0	
	comp=Z,116nm,1.3s						
DCZ	Deep Cove	28.59	208		P	03 59 14.2	+2.8
DCZ				IAmb	IAmb	03 59 20.2	
	comp=Z,115nm,1.4s						
ARMA	Armidale	32.07	247	P	P	03 59 41.8	-0.7
	comp=Z,22nm,1.1s						
ARMA	Armidale	32.07	247	P	P	03 59 43.1	+0.5
EIDS	Eidsvold	32.20	256		P	03 59 42.3	-1.3
EIDS	Eidsvold	32.20	256	P	P	03 59 41.7	-1.9
	comp=Z,16nm,2.5s						
EIDS	Eidsvold	32.20	256	P	P	03 59 42.6	-1.0
CNB	Canberra Magne	34.88	238	P	P	04 00 06.5	-0.4
	comp=Z,33nm,1.7s						
CNB	Canberra Magne	34.88	238	P	P	04 00 07.4	+0.5
TAOE	Nuku Hiva Isla	34.92	74	*e*S	S	04 05 36.7	-2.1
	comp=Z,447nm,23.2s						
TAOE				*e*LR	LR	04 08 59.3	
	comp=Z,5µm,26.7s						
CAN	Canberra	35.17	239		P	04 00 08.1	-1.3
CAN	Canberra	35.17	239	P	P	04 00 11.5	+2.1
CAN	Canberra	35.17	239	P	P	04 00 08.1	-1.3
CAN				pmax	pmax		
	comp=Z,36nm,1.4s						
YNG	Young	35.43	240	P	P	04 00 05.1	-6.5
CTAO	Charters Tower	37.08	265	P	P	04 00 24.9	-1.0
CTAO	Charters Tower	37.08	265	P	P	04 00 25.1	-0.8
CTAO	Charters Tower	37.08	265	P	P	04 00 24.9	-1.0
CTAO				pmax	pmax		
	comp=Z,20nm,0.5s						
CMSA	Cobar Meteorol	37.27	246	P	P	04 00 25.8	-1.6
	comp=Z,43nm,1.5s						
CMSA	Cobar Meteorol	37.27	246	P	P	04 00 26.7	-0.6
QLP	Quilpie	38.35	254	P	P	04 00 35.6	-0.9
	comp=Z,45nm,1.2s						
QLP	Quilpie	38.35	254	P	P	04 00 38.3	+1.8
TOO	Toolangi	38.44	236	P	P	04 00 37.0	-0.2
	comp=Z,5.8nm,1.3s						
MOO	Moorlands	38.62	228	P	P	04 00 38.8	+0.2
	comp=Z,84nm,1.7s						
MOO	Moorlands	38.62	228	P	P	04 00 39.1	+0.5
PMG	Port Moresby	39.12	282	P	P	04 00 41.3	-1.7
PMG	Port Moresby	39.12	282	LR	LR	04 14 39.4	
	comp=Z,1µm,19.6s,baz=182,slow=33						
PMG	Port Moresby	39.12	282	*ce*P	P	04 00 40.9	-2.2
PMG				pmax	pmax		
	comp=Z,29nm,1.0s						
MTSU	Mount Surprise	39.23	267	P	P	04 00 43.0	-1.0
	comp=Z,11nm,0.8s						
MTSU	Mount Surprise	39.23	267	P	P	04 00 43.1	-1.0
STKA	Stephens Creek	40.78	246	P	P	04 00 55.6	-1.1
STKA	Stephens Creek	40.78	246	P	P	04 00 55.5	-1.2
	comp=Z,155nm,2.0s						
STKA	Stephens Creek	40.78	246	P	P	04 00 54.8	-2.0
	comp=Z,15nm,0.9s,baz=84,slow=9.7,SNR=20						
STKA				LR	LR	04 16 40.0	
	comp=Z,2µm,19.8s,baz=85,slow=35						
	comp=Z,15nm,0.9s						
STKA	Stephens Creek	40.78	246	P	P	04 00 55.8	-0.9
STKA	Stephens Creek	40.78	246	⇓*e*P	P	04 00 55.0	-1.7
ARPS	Mount Arapiles	41.14	238	P	P	04 00 59.1	-0.6
	comp=Z,23nm,1.1s						
ARPS	Mount Arapiles	41.14	238	P	P	04 01 00.7	+1.0
COEN	Coen	41.31	273	P	P	04 01 00.3	-1.0
COEN	Coen	41.31	273	P	P	04 01 00.2	-1.1
	comp=Z,31nm,2.5s						
COEN	Coen	41.31	273	P	P	04 01 00.9	-0.4
HTT	Hallett	43.13	243	P	P	04 01 14.6	-1.4
	comp=Z,10nm,1.1s						
HTT	Hallett	43.13	243	P	P	04 01 14.8	-1.2
QIS	Mount Isa	43.16	262	P	P	04 01 14.7	-1.6
	comp=Z,8.8nm,1.6s						
QIS	Mount Isa	43.16	262	P	P	04 01 18.3	+1.9
WHYH	Whyalla	44.23	244	P	P	04 01 24.2	-0.6
KIP	Kipapa	45.29	21	⇑*e*P	P	04 01 31.6	-1.6
KIP				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BBOO	Buckleboo	45.50	245		P	04 01 33.0	-1.9
BBOO	Buckleboo	45.50	245	P	P	04 01 33.2	-1.8
	comp=Z,32nm,1.3s						
BBOO	Buckleboo	45.50	245	P	P	04 01 33.4	-1.6
JAY	Jayapura	47.80	287	LR	LR	04 20 59.5	
	comp=Z,664nm,20.9s,baz=86,slow=35						
JAY	Jayapura	47.80	287	P	P	04 01 51.1	-2.1
	comp=Z,1µmcomp=Z,67nm,1.1s						
AS17	Alice Springs	47.84	257	P	P	04 01 51.9	-1.6
	comp=Z,81nm,1.0s						
AS01	Alice Springs	47.88	257	P	P	04 01 52.6	-1.1
AS31	Alice Springs	47.92	257		P	04 01 53.1	-1.0
AS31	Alice Springs	47.92	257	P	P	04 01 52.1	-2.0
	comp=Z,18nm,1.0s						
ASAR	Alice Springs	47.92	257		P	04 01 52.3	-1.8
ASAR	Alice Springs	47.92	257	P	P	04 01 52.1	-1.9
	comp=Z,46nm,0.9s,baz=89,slow=8.4,SNR=286						
ASAR				PcP	PcP	04 03 22.8	+0.4
	comp=Z,5.3nm,1.0s,baz=83,slow=2.8,SNR=1.9						
ASAR				ScP	ScP	04 07 17.4	+0.8
	comp=Z,0.5nm,0.7s,baz=90,slow=5.0,SNR=2.7						
ASAR				S	S	04 08 44.0	-7.4
	comp=Z,0.9nm,0.9s,baz=94,slow=14,SNR=5.7						
ASAR				LR	LR	04 21 25.4	
	comp=Z,2µm,18.2s,baz=111,slow=35						
	comp=Z,46nm,0.9s						
ASAR	Alice Springs	47.92	257	P	P	04 01 52.3	-1.8
WR8	Warramunga Arr	47.98	262		P	04 01 52.2	-2.4
WR8				IAmb	IAmb	04 01 55.1	
	comp=Z,44nm,1.2s						
WB0	Warramunga Arr	48.12	262		P	04 01 53.4	-2.2
WB0				IAmb	IAmb	04 01 57.8	
	comp=Z,27nm,0.8s						
WRAB	Tennant Creek	48.13	262	P	P	04 01 53.7	-2.0
WRAB				IAmb	IAmb	04 01 54.4	
	comp=Z,34nm,0.9s						
WRAB	Tennant Creek	48.13	262	*d i*P	P	04 01 53.4	-2.3
WRAB				pmax	pmax		
	comp=Z,32nm,1.0s						
WRA	Warramunga Arr	48.13	262		P	04 01 52.2	-3.5
WRA	Warramunga Arr	48.13	262	P	P	04 01 53.1	-2.7
	comp=Z,18nm,0.7s,baz=98,slow=7.1,SNR=87						
WRA				PcP	PcP	04 03 23.5	+0.2
	comp=Z,6.6nm,1.0s,baz=98,slow=3.1,SNR=3.4						
WRA				S	S	04 08 48.4	-6.1
	comp=Z,1.1nm,1.0s,baz=105,slow=15,SNR=4.1						
WRA				LR	LR	04 22 16.7	
	comp=Z,983nm,18.1s,baz=124,slow=36						
	comp=Z,18nm,0.7s						
GENI	Genyem	48.25	286	P	P	04 01 57.0	+0.4
GENI	Genyem	48.25	286	P	P	04 01 55.3	-1.3
	comp=Z,115nm,1.1s						
SMPI	Sarmi	49.82	286	P	P	04 02 06.2	-2.5
	comp=Z,50nm,1.9s						
KDU	Kakadu	51.65	270	P	P	04 02 20.0	-2.4
	comp=Z,34nm,1.2s						
KDU	Kakadu	51.65	270	P	P	04 02 21.7	-0.8
FORT	Forrest	52.36	247		P	04 02 26.1	-1.4
FORT	Forrest	52.36	247	P	P	04 02 26.2	-1.4
	comp=Z,76nm,0.7s						
FORT	Forrest	52.36	247	P	P	04 02 27.2	-0.4
MTN	Manton Dam	52.85	270		P	04 02 29.7	-1.7
MTN	Manton Dam	52.85	270	P	P	04 02 29.1	-2.3
	comp=Z,27nm,1.6s						
MTN	Manton Dam	52.85	270	P	P	04 02 30.7	-0.7
GUMO	Guam	53.20	307	LR	LR	04 22 59.9	
	comp=Z,467nm,20.0s,baz=124,slow=34						
KNRA	Kununurra	54.28	266		P	04 02 40.6	-1.3
KNRA				IAmb	IAmb	04 02 47.0	
	comp=Z,68nm,1.6s						
KNRA	Kununurra	54.28	266	P	P	04 02 40.2	-1.7
	comp=Z,32nm,2.5s						
FAKI	Fak Fak	55.27	282	P	P	04 02 47.6	-1.6
	comp=Z,1µmcomp=Z,43nm,1.5s						
FITZ	Fitzroy Crossi	56.56	262	P	P	04 02 57.0	-1.3
FITZ	Fitzroy Crossi	56.56	262	LR	LR	04 26 36.9	
	comp=Z,2µm,18.6s,baz=102,slow=36						
SWI	Sorong	57.02	283	P	P	04 02 59.9	-1.7
SBA	Scott Base	57.32	185	P	P	04 03 05.1	+2.3
SBA				IAmb	IAmb	04 03 23.4	
	comp=Z,58nm,1.5s						
SBA	Scott Base	57.32	185	P	P	04 03 05.1	+2.3
SBA				pmax	pmax		
	comp=Z,58nm,1.5s						
VNDA	Vanda	57.45	186	P	P	04 03 06.1	+2.4
VNDA	Vanda	57.45	186	P	P	04 03 05.5	+1.8
	comp=Z,5.9nm,1.1s,baz=7.6,slow=6.6,SNR=16						
VNDA				LR	LR	04 23 13.0	
	comp=Z,976nm,20.5s,baz=14,slow=31						
	comp=Z,5.9nm,1.1s						
VNDA	Vanda	57.45	186	P	P	04 03 06.1	+2.4
VNDA				pmax	pmax		
	comp=Z,25nm,1.6s						
KMBL	Kambalda	57.58	246	P	P	04 03 04.0	-1.4
	comp=Z,32nm,1.9s						
KMBL	Kambalda	57.58	246	P	P	04 03 06.3	+0.9
NLAI	Namlea	59.87	279	P	P	04 03 20.5	-1.1
	comp=Z,2µmcomp=Z,67nm,1.0s						
SOEI	Soe	60.20	271	P	P	04 03 23.9	0.0
SOEI	Soe	60.20	271	P	P	04 03 25.7	+1.7
SOEI	Soe	60.20	271	P	P	04 03 24.5	+0.5
BATI	Baumata	60.62	270	LR	LR	04 30 20.6	
	comp=Z,935nm,18.0s,baz=137,slow=37						
PSAC2	Pilbara Seismi	61.02	257	P	P	04 03 27.9	-1.5
	comp=Z,31nm,1.1s						
KLBR	Kellerberrin	61.04	245	P	P	04 03 29.4	0.0
	comp=Z,155nm,0.9s						
KLBR	Kellerberrin	61.04	245	P	P	04 03 29.5	+0.1
PSAB3	Pilbara Seismi	61.05	256	P	P	04 03 28.0	-1.5
	comp=Z,37nm,1.1s						
PSA00	Pilbara Seismi	61.06	256	P	P	04 03 28.1	-1.6
PSA00				IAmb	IAmb	04 03 29.5	
	comp=Z,26nm,1.2s						
PSA00	Pilbara Seismi	61.06	256	IAmb	IAmb	04 03 29.3	
	comp=Z,44nm,1.1s						
PSA00	Pilbara Seismi	61.06	256	P	P	04 03 28.7	-1.0
	comp=Z,56nm,1.7s						
PSA00	Pilbara Seismi	61.06	256	P	P	04 03 31.0	+1.4
PSAD1	Pilbara Seismi	61.10	257	P	P	04 03 28.5	-1.4
	comp=Z,53nm,1.3s						
MEEK	Meekatharra	61.12	251	P	P	04 03 28.4	-1.7
	comp=Z,26nm,1.4s						
MEEK	Meekatharra	61.12	251	P	P	04 03 29.8	-0.2
TNTI	Ternate	61.23	283	P	P	04 03 29.6	-1.3
TNTI	Ternate	61.23	283	P	P	04 03 30.2	-0.7
TNTI	Ternate	61.23	283	P	P	04 03 29.1	-1.8
	comp=Z,1µmcomp=Z,77nm,1.2s						
MBWA	Marble Bar	61.26	257	P	P	04 03 28.9	-2.1
MBWA				IAmb	IAmb	04 03 30.6	
	comp=Z,28nm,0.8s						
MBWA	Marble Bar	61.26	257	P	P	04 03 29.6	-1.4
	comp=Z,53nm,1.9s						
MBWA	Marble Bar	61.26	257	P	P	04 03 30.2	-0.8
NWAO	Narrogin (SRO)	61.29	243	LR	LR	04 29 07.1	
	comp=Z,2µm,19.5s,baz=76,slow=35						
SANI	Sanana	61.35	280	P	P	04 03 31.2	-0.5
SANI	Sanana	61.35	280	P	P	04 03 29.8	-1.9
BLDU	Ballidu	62.08	246	P	P	04 03 35.6	-0.8
	comp=Z,68nm,1.6s						
BLDU	Ballidu	62.08	246	P	P	04 03 36.2	-0.2
MUN	Mundaring	62.29	244	P	P	04 03 37.8	+0.1
	comp=Z,67nm,1.8s						
MUN	Mundaring	62.29	244	P	P	04 03 38.5	+0.7
MORW	Morawa	62.92	247	P	P	04 03 41.0	-1.0
MORW	Morawa	62.92	247	P	P	04 03 41.6	-0.5
	comp=Z,65nm,1.1s						
MORW	Morawa	62.92	247	P	P	04 03 42.1	+0.1
JCJ	Chichijima	64.12	317	LR	LR	04 28 27.2	
	comp=Z,381nm,19.2s,baz=112,slow=33						
CASY	Casey	64.80	206	P	P	04 03 55.1	+1.4
CASY				IAmb	IAmb	04 03 57.8	
	comp=Z,30nm,1.1s						
DAV	Davao City (W)	65.58	289	LR	LR	04 30 49.3	
	comp=Z,318nm,18.3s,baz=164,slow=34						
GIRL	Giralia	65.87	254	P	P	04 04 01.1	-0.3
	comp=Z,144nm,1.7s						
KAPI	Kappang	66.02	274	LR	LR	04 32 17.9	
	comp=Z,447nm,21.4s,baz=106,slow=36						
KAPI	Kappang	66.02	274	⇑*e*P	P	04 04 02.8	+0.3
KAPI				pmax	pmax		
	comp=Z,32nm,1.5s						
TOLI2	Tolitoli	67.38	281	P	P	04 04 09.4	-1.8
TOLI2				IAmb	IAmb	04 04 11.0	
	comp=Z,43nm,1.1s						
TOLI2	Tolitoli	67.38	281	P	P	04 04 10.8	-0.4
QSPA	South Pole Qui	68.75	180	P	P	04 04 19.2	+0.1
QSPA	South Pole Qui	68.75	180	P	P	04 04 19.8	+0.7
	comp=Z,20nm,1.1s,baz=50,slow=2.3,SNR=26						
QSPA				LR	LR	04 29 55.1	
	comp=Z,1µm,20.4s,baz=40,slow=32						
	comp=Z,20nm,1.1s						
MYLDM	Lahad Datu	71.11	284	P	P	04 04 35.8	+1.5
TGY	Tagaytay City	72.86	293	LR	LR	04 33 08.1	
	comp=Z,494nm,21.4s,baz=174,slow=33						
MJAR	Matsushiro Arr	73.10	321	P	P	04 04 44.8	-1.0
	comp=Z,61nm,0.6s,baz=160,slow=3.0,SNR=17						
	comp=Z,61nm,0.6s						
MAJO	Matsushiro	73.10	321	P	P	04 04 45.1	-0.7
MAJO	Matsushiro	73.10	321	P	P	04 04 46.4	+0.6
MAJO	Matsushiro	73.10	321	*c i*P	P	04 04 44.7	-1.1
MAJO				pmax	pmax		
	comp=Z,23nm,1.1s						
MJB9	Matsu-Tunnel	73.11	321	IAmb	IAmb	04 04 47.9	
	comp=Z,31nm,1.2s						
KKM	Kota Kinabalu	73.53	283	P	P	04 04 48.8	-0.1
JOW	Kunigami	73.55	308	LR	LR	04 32 55.2	
	comp=Z,395nm,21.6s,baz=356,slow=32						
JMN	Monobe	73.87	317	P	P	04 04 50.7	+0.4
JMN	Monobe	73.87	317	P	P	04 04 51.1	+0.8
JSD	Sado	74.11	323	P	P	04 04 52.0	+0.4
NIKH	Nikolski High	74.12	3	P	P	04 04 51.3	0.0
	baz=185						
JNU	Nakatsue	75.44	315	P	P	04 05 00.6	+1.1
SAO	San Andreas Ge	76.16	41	P	P	04 05 04.2	+0.7
SAO				IAmb	IAmb	04 05 16.9	
	comp=Z,40nm,1.1s						
SAO	San Andreas Ge	76.16	41	P	P	04 05 04.2	+0.7
SAO				pmax	pmax		
	comp=Z,40nm,1.1s						
PMPB	Monarch Peak	76.21	42	P	P	04 05 06.4	+2.5
BCW	Bitter Crk WRg	76.29	44	IAmb	IAmb	04 05 17.9	
	comp=Z,52nm,1.2s						
SKR	Severo-Kuril's	76.37	341	*e*P	P	04 04 58.3	-6.0
SKR				*e*S	S	04 14 47.6	-1.2
SKR				pmax	pmax		
	comp=Z,200nm,7.5s						
SKR				MLR	MLR		
	comp=Z,800nm,16.0s						
FALS	False Pass	76.42	6	P	P	04 05 04.3	-0.2
	baz=190						
SMAI	San Martin Ant	76.50	158	P	P	04 05 06.2	+1.2
LEM	Lembang	76.70	268	LR	LR	04 37 56.4	
	comp=Z,651nm,21.4s,baz=162,slow=35						
LPIG	La Paz	76.70	57	LR	LR	04 32 10.7	
	comp=Z,2µm,19.4s,baz=201,slow=30						
ELS	Elsinore Mount	76.80	46	P	P	04 05 09.0	+1.7
ELS				IAmb	IAmb	04 05 19.5	
	comp=Z,31nm,1.4s						
CHNA	Chernabura Isl	76.86	9	P	P	04 05 07.4	+0.4
	baz=194						
KSM	Kuching	77.17	277	P	P	04 05 10.5	+0.8
NACB	Ninganchiao	77.21	302	P	P	04 05 09.4	-0.3
SDPT	Sand Point	77.24	8	P	P	04 05 08.8	-0.3
	baz=193						
ISA	Isabella, Lake	77.34	44	P	P	04 05 12.5	+2.3
ISA				IAmb	IAmb	04 05 23.6	
	comp=Z,30nm,1.1s						
ISA	Isabella, Lake	77.34	44	P	P	04 05 12.5	+2.3
ISA				pmax	pmax		
	comp=Z,30nm,1.1s						
S12K	Black Hills	77.40	7	P	P	04 05 09.4	-0.6
	baz=191						
PFO	Pinyon Flats O	77.43	46		P	04 05 11.8	+0.9
PFO	Pinyon Flats O	77.43	46	LR	LR	04 36 48.2	
	comp=Z,407nm,18.1s,baz=232,slow=34						
PFO	Pinyon Flats O	77.43	46	*d i*P	P	04 05 11.2	+0.3
PFO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TPUB	Ta-pu	77.54	301	P	P	04 05 10.4	-1.2
O02D	Mt. Diablo Mer	77.61	38	P	P	04 05 13.2	+1.5
O02D				IAmb	IAmb	04 05 15.1	
	comp=Z,28nm,1.1s						
CMB	Columbia Colle	77.63	41	P	P	04 05 12.0	+0.2
CMB				IAmb	IAmb	04 05 24.8	
	comp=Z,31nm,1.1s						
CMB	Columbia Colle	77.63	41	P	P	04 05 12.0	+0.2
CMB				pmax	pmax		
	comp=Z,31nm,1.2s						
PET	Petropavlovsk	77.74	344	*e*P	P	04 05 08.2	-3.7
PET				*e*S	S	04 14 57.5	-6.1
PET				pmax	pmax		
	comp=Z,200nm,8.6s						
PET				pmax	pmax		
	comp=Z,400nm,11.4s						
PET				MLR	MLR		
	comp=Z,800nm,19.0s						
AFDM	Forest Hills D	77.86	40	P	P	04 05 12.1	-1.0
AFDM				IAmb	IAmb	04 05 25.9	
	comp=Z,27nm,1.1s						
PEA0B	Petropavlovsk-	78.07	343	P	P	04 05 12.6	-1.2
PEA0B	Petropavlovsk-	78.07	343	*c i*P	P	04 05 12.6	-1.2
PETK	Petropavlovsk-	78.07	343	P	P	04 05 12.9	-0.9
PETK	Petropavlovsk-	78.07	343	P	P	04 05 13.4	-0.4
	comp=Z,8.4nm,0.8s,baz=112,slow=7.8,SNR=17						
	comp=Z,8.4nm,0.8s						
BELA	Belgrano 2	78.25	172	P	P	04 05 14.1	-0.6
S14K	Fog Glacier	78.28	8	P	P	04 05 14.9	-0.1
	baz=194						
YSS	Yuzhno-Sakhali	78.33	331	P	P	04 05 16.1	+0.7
YSS	Yuzhno-Sakhali	78.33	331	*e*P	P	04 05 13.5	-1.9
YSS				*e*S	S	04 15 06.5	-3.7
YSS				pmax	pmax		
	comp=Z,200nm,3.5s						
YSS				pmax	pmax		
	comp=Z,40nm,1.4s						
YSS				smax	smax		
	comp=E,300nm,5.7s						
YSS				MLR	MLR		
	comp=N,300nm,14.0s						
YSS				MLR	MLR		
	comp=Z,400nm,14.0s						
WAKR	Walker	78.50	41	P	P	04 05 17.9	+1.1
WAKR				IAmb	IAmb	04 05 30.3	
	comp=Z,56nm,1.1s						
QSM	Queen of Sheba	78.56	44	IAmb	IAmb	04 05 30.0	
	comp=Z,31nm,1.3s						
MPK	Martis Peak	78.65	40	P	P	04 05 19.3	+1.6
YBH	Yreka Blue Hor	78.69	37	LR	LR	04 33 20.1	
	comp=Z,92nm,20.1s,baz=247,slow=31						
DSP	Deep Springs	78.70	42	P	P	04 05 18.8	+1.1
DSP				IAmb	IAmb	04 05 31.3	
	comp=Z,43nm,1.2s						
PNTR	Pine Nut	78.77	40	P	P	04 05 18.6	+0.3
BLYC	Blythe	78.82	47	P	P	04 05 19.5	+1.1
PMSA	Palmer Station	79.05	156	LR	LR	04 35 53.3	
	comp=Z,898nm,18.0s,baz=238,slow=32						
GMN	Gold Mountain	79.11	43	IAmb	IAmb	04 05 33.4	
	comp=Z,32nm,1.1s						
RYN	Ryan	79.14	41	IAmb	IAmb	04 05 33.5	

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       comp=Z,46nm,1.2s
NVAR   Mina Array Bea     79.15  41   P      P       04 05 20.0  -0.4
NVAR   Mina Array Bea     79.15  41   P      P       04 05 20.8  +0.3
       comp=Z,10nm,0.8s,baz=224,slow=8.4,SNR=45
NVAR                                  LR     LR      04 35 02.0
       comp=Z,1µm,18.8s,baz=238,slow=32
       comp=Z,10nm,0.8s
L04D   Klamath Falls      79.24  36   P      P       04 05 21.8  +1.1
L04D                                  IAmb   IAmb    04 05 34.0
       comp=Z,47nm,1.2s
NV11   Mina Array Sit     79.24  41   P      P       04 05 20.6  -0.2
NV11                                  IAmb   IAmb    04 05 34.1
       comp=Z,48nm,1.1s
PAHR   Pah Rah Range      79.29  40   IAmb   IAmb    04 05 34.3
       comp=Z,35nm,1.1s
TPNV   Topopah Spring     79.54  44   P      P       04 05 23.1  +0.5
TPNV   Topopah Spring     79.54  44   P      P       04 05 23.1  +0.5
TPNV                                  pmax   pmax
       comp=Z,25nm,1.1s
TJN    Taejon             79.70 316   P      P       04 05 23.3  +0.1
TJN    Taejon             79.70 316⇓eP     P       04 05 22.2  -1.0
V12A   Nelson             79.74  45   P      P       04 05 24.7  +1.2
TEY    Ternei             79.88 327  eP      P       04 05 22.3  -1.6
TEY                                  e               04 15 28.4
KSRS   Korea Array        79.98 317   P      P       04 05 24.9  +0.2
       comp=Z,20nm,1.2s,baz=141,slow=5.9,SNR=27
       comp=Z,20nm,1.2s
SHPR   Sheep Range        79.99  44   P      P       04 05 26.8  +1.9
KSAR   Wonju Array Be     80.00 317   P      P       04 05 25.1  +0.3
KSAR   Wonju Array Be     80.00 317   P      P       04 05 25.1  +0.3
W13A   Hualapai Mount     80.02  46   P      P       04 05 23.8  -1.5
J04A   Umpqua Nationa     80.03  36   IAmb   IAmb    04 05 38.3
       comp=Z,68nm,1.2s
OHAK   Old Harbor         80.17  11   P      P       04 05 25.4  +0.3
       baz=200
I04A   Tendick Farm,      80.24  35   IAmb   IAmb    04 06 00.3
       comp=Z,50nm,1.6s
S11A   Rachel             80.28  43   IAmb   IAmb    04 05 39.7
       comp=Z,54nm,1.4s
R18K   Karluk             80.29  11   P      P       04 05 25.5  -0.3
       baz=198
MG05   Puerto Natales     80.41 142   P      P       04 05 24.7  -2.1
MG05                                  IAmb   IAmb    04 05 30.3
       comp=Z,50nm,1.3s
J05D   Fort Rock, OR      80.54  36   IAmb   IAmb    04 05 41.1
       comp=Z,42nm,1.0s
PRN    Pahroc Range       80.59  44   IAmb   IAmb    04 05 42.0
       comp=Z,45nm,1.2s
TUC    Tucson             80.64  50   P      P       04 05 28.5  +0.1
TUC    Tucson             80.64  50   P      P       04 05 28.5  +0.1
TUC                                   pmax   pmax
       comp=Z,17nm,1.2s
GO09   Cerro Castillo     80.66 141   P      P       04 05 29.7  +1.4
GO09                                  IAmb   IAmb    04 05 32.0
       comp=Z,48nm,1.5s
Q17K   Contact Creek      80.72  10   P      P       04 05 27.8  -0.5
       baz=197
R11B   Troy Canyon, C     80.80  43   P      P       04 05 29.3   0.0
KDAK   Kodiak Island      80.83  11ceP       P       04 05 27.9  -0.8
KDAK                                  pmax   pmax
       comp=Z,14nm,1.3s
KDAK   Kodiak Island      80.83  11   P      P       04 05 29.2  +0.5
       baz=200
H04A   Detroit Lake       80.95  35   P      P       04 05 29.4  -0.4
O14K   Tigyukauivet M     80.97   7   P      P       04 05 29.4   0.0
       baz=192
Q16K   King Salmon        81.00   9   P      P       04 05 30.4  +0.8
       baz=196
PINE   Pine Mountain      81.03  36   P      P       04 05 30.1  -0.3
PINE                                  IAmb   IAmb    04 05 43.9
       comp=Z,46nm,1.0s
O15K   Ungalikthiuk R     81.06   7   P      P       04 05 29.8  -0.2
       baz=193
G04A   Mulino             81.15  34   IAmb   IAmb    04 05 34.4
       comp=Z,28nm,0.8s
P16K   Nushagak River     81.15   8   P      P       04 05 29.7  -0.7
       baz=195
I05D   Terrebonne, OR     81.18  35   IAmb   IAmb    04 05 44.3
       comp=Z,33nm,1.2s
MSHR   Mys Shultsa        81.18 322ceP       P       04 05 31.0   0.0
MSHR                                  pmax   pmax
       comp=Z,39nm,1.1s
Q18K   Katmai Hardscr     81.22  10   P      P       04 05 31.3  +0.3
       baz=198
TYV    Tymovskoe          81.35 334  eP      P       04 05 31.2  -0.5
TYV                                  eS      S       04 15 40.8  -1.1
TYV                                   pmax   pmax
       comp=Z,17nm,1.1s
TYV                                   pmax   pmax
       comp=Z,100nm,2.0s
TYV                                   smax   smax
       comp=N,100nm,3.8s
TYV                                   smax   smax
       comp=E,200nm,3.8s
PSTR   Posyet             81.43 322⇑eP     P       04 05 32.7  +0.4
WVOR   Wild Horse Val     81.45  38   P      P       04 05 32.5  -0.1
P17K   Kvichak River      81.53   9   P      P       04 05 32.6  +0.2
       baz=197
LCMT   Little Creek M     81.54  45   IAmb   IAmb    04 05 36.4
       comp=Z,47nm,1.9s
N14K   Kuskokwak Cree     81.59   6   P      P       04 05 32.5  -0.1
       baz=192
Q20K   Shuyak Island      81.64  11   P      P       04 05 33.1  +0.1
       baz=200
M11K   Mekoryuk           81.67   4   P      P       04 05 33.7  +0.6
       baz=187
O16K   Kokwok River B     81.68   8   P      P       04 05 31.8  -1.4
O16K   Kokwok River B     81.68   8   P      P       04 05 32.9  -0.3
       baz=195
HHU    Hamhung            81.70 319   P      P       04 05 35.4  +1.7
HHU                                   AmB
       comp=Z,591nm,3.3s
Q19K   Cape Douglas,      81.72  11   P      P       04 05 33.1  -0.4
       baz=199
HJU    Haeju              81.73 316   P      P       04 05 34.7  +0.7
HJU                                   S      SKSac   04 15 51.1  -2.5
HJU                                   AmB
       comp=Z,553nm,3.5s
HJU                                   AMS    AMS
       comp=Z,7.3nm,1.8s
USA0B  Ussuriysk Arra     81.75 324ceP       P       04 05 34.4  +0.4
USRK   Ussuriysk Ar.      81.75 324   P      P       04 05 34.1  +0.2
       comp=Z,2.9nm,0.8s,baz=164,slow=3.4,SNR=6.9
USRK                                  LR     LR      04 38 05.5
       comp=Z,1µm,20.4s,baz=132,slow=33
       comp=Z,2.9nm,0.8s
G05A   Wamic              81.79  35   IAmb   IAmb    04 05 46.7
       comp=Z,41nm,1.2s
KNB    Kanab              81.82  45   P      P       04 05 36.7  +2.0
KNB                                   IAmb   IAmb    04 05 56.1
       comp=Z,55nm,1.5s
KNB    Kanab              81.82  45   P      P       04 05 36.7  +2.0
KNB                                   pmax   pmax
       comp=Z,55nm,1.5s
U15A   North Rim          81.84  46   IAmb   IAmb    04 05 48.9
       comp=Z,29nm,1.2s
P18K   Big Mountain,      81.90  10   P      P       04 05 33.8  -0.6
       baz=198
M13K   Dall Lake          81.91   5   P      P       04 05 34.6  +0.2
       baz=190
WUAZ   Wupatki            81.96  47   P      P       04 05 37.8  +2.3
SPR3   Spring Creek 3     81.97  43   P      P       04 05 36.8  +1.1
O17K   Koliganek Bris     81.99   9   P      P       04 05 34.5  -0.3
       baz=196
N15K   Kwethluk River     82.00   7   P      P       04 05 34.8  -0.1
       baz=193
MAW    Mawson             82.01 199   P      P       04 05 37.6  +2.6
MAW    Mawson             82.01 199   P      P       04 05 36.3  +1.2
       comp=Z,16nm,1.2s,baz=143,slow=4.6,SNR=8.2
       comp=Z,16nm,1.2s
I07A   Izee               82.01  36   P      P       04 05 35.9  +0.4
J08A   Circle Bar Ran     82.13  37   P      P       04 05 37.4  +1.3
J08A                                  IAmb   IAmb    04 05 49.3
       comp=Z,34nm,1.2s
G06A   Carlson Farm,      82.14  35   IAmb   IAmb    04 05 49.1
       comp=Z,63nm,1.5s
PYAG   Pyongyang          82.29 317   P      P       04 05 38.3  +1.3
PYAG                                  S      SKSac   04 15 57.2  -0.1
PYAG                                  AmB
       comp=Z,583nm,3.8s
PYAG                                  AMS    AMS
       comp=Z,24nm,1.9s
O18K   Koktuh Hills       82.35   9   P      P       04 05 36.3  -0.5
       baz=198
M14K   Bethel             82.37   6   P      P       04 05 36.5  -0.2
M14K   Bethel             82.37   6   P      P       04 05 36.8   0.0
       baz=191,SNR=5.9
X18A   Snowflake          82.41  49   IAmb   IAmb    04 05 54.0
       comp=Z,46nm,2.0s
ELK    Elko               82.43  41   P      P       04 05 37.7  -0.3
ELK    Elko               82.43  41   P      P       04 05 37.7  -0.3
ELK                                   pmax   pmax
       comp=Z,15nm,1.3s
M15K   Kasigluk River     82.45   7   P      P       04 05 37.4  +0.2
       baz=192,SNR=10
N16K   Nishlik Lake       82.45   8   P      P       04 05 37.4  +0.1
       baz=194
P19K   Oil Pt             82.47  10   P      P       04 05 37.0  -0.4
       baz=200
H03S2  Juan Fernandez     82.47 123   T      T       05 38 03.1
       baz=247,slow=74,SNR=8.5
H03S1  Juan Fernandez     82.49 123   T      T       05 38 08.9
       baz=247,slow=74,SNR=5.2
H03S3  Juan Fernandez     82.49 123   T      T       05 37 54.9
       baz=247,slow=74,SNR=8.9
N17K   Nushagak Hills     82.71   8   P      P       04 05 37.8  -0.8
       baz=196
D05A   Enumclaw           82.73  33   P      P       04 05 39.9  +0.9
HOM    Homer              82.76  11   P      P       04 05 38.3  -0.6
       baz=201
O19K   Port Alsworth      82.81  10   P      P       04 05 38.4  -0.7
       baz=198
DLV     Lat               82.89 286   P      P       04 05 41.8  +1.0
L14K   Kuka Creek         82.89   5   P      P       04 05 40.2  +0.8
L14K                                  IAmb   IAmb    04 05 42.9
       comp=Z,39nm,1.1s
L14K   Kuka Creek         82.89   5   P      P       04 05 40.0  +0.5
       baz=191,SNR=8.1
M16K   Timber Creek       82.96   7   P      P       04 05 40.5  +0.6
M16K   Timber Creek       82.96   7   P      P       04 05 39.9   0.0
       baz=194,SNR=9.1
O20K   Slope Mountain     82.98  11   P      P       04 05 39.3  -0.8
       baz=200
BRLK   Bradley Lake       83.00  12   IAmb   IAmb    04 05 42.6
       comp=Z,47nm,1.3s
BRSE   Bradley Lake S     83.00  12   P      P       04 05 39.3  -0.9
       baz=202
COYC   Coyhaique          83.02 136   P      P       04 05 41.5  +0.7
COYC                                  IAmb   IAmb    04 05 44.7
       comp=Z,29nm,1.2s
N18K   Kilae Creek        83.03   9   P      P       04 05 39.6  -0.7
       baz=197
MXC    Moxie City         83.20  34   IAmb   IAmb    04 05 54.7
       comp=Z,28nm,1.1s
NJ2    Nanjing            83.27 308⇓iP     P       04 05 43.3  +1.2
NJ2                                   pmax   pmax
       comp=Z,20nm,0.6s
K13K   Kusilvak Mount     83.31   4   P      P       04 05 41.4  -0.3
K13K                                  IAmb   IAmb    04 05 54.8
       comp=Z,38nm,1.4s
K13K   Kusilvak Mount     83.31   4   P      P       04 05 42.2  +0.5
       baz=189
L15K   Ungalak Mounta     83.33   6   P      P       04 05 41.1  -0.7
       baz=192
MDJ    Mudanjiang         83.34 323   P      P       04 05 42.8  +0.5
MDJ                                   pmax   pmax
       comp=Z,29nm,2.4s
MDJ                                   pmax   pmax
       comp=Z,780nm,4.0s
MDJ                                   LR     LR
       comp=Z,710nm,20.1s
MDJ                                   LR     LR
       comp=Z,970nm,20.3s
MDJ                                   LR     LR
       comp=Z,2µm,20.3s
N19K   Bonanza Creek      83.37  10   P      P       04 05 41.3  -0.8
N19K                                  IAmb   IAmb    04 05 53.6
       comp=Z,37nm,1.4s
N19K   Bonanza Creek      83.37  10   P      P       04 05 41.0  -1.2
       baz=198
E07A   Sunnyside          83.42  34   P      P       04 05 42.3  -0.3
BBB    Bella Bella        83.44  26   LR     LR      04 37 17.5
       comp=Z,303nm,19.4s,baz=240,slow=32
HAWA   Hanford            83.48  35   P      P       04 05 43.4  +0.5
M17K   Holitna River      83.52   8   P      P       04 05 42.9  +0.1
M17K   Holitna River      83.52   8   P      P       04 05 42.5  -0.2
       baz=196,SNR=5.7
L16K   Owhat River        83.57   7   P      P       04 05 43.2  +0.2
L16K   Owhat River        83.57   7   P      P       04 05 42.9  -0.1
       baz=194,SNR=8.1
SEW    Seward             83.59  12   P      P       04 05 42.4  -0.7
       baz=203
Q23K   Middleton Isla     83.62  14   P      P       04 05 42.7  -0.6
       baz=206
MFID   Camas Ranch        83.68  39   IAmb   IAmb    04 05 57.2
       comp=Z,37nm,1.1s
SUJ    Sinuiju            83.70 317   P      P       04 05 45.3  +1.1
SUJ                                   S      S       04 16 11.4  +5.0
SUJ                                   AmB
       comp=Z,589nm,3.2s
SUJ                                   AMS    AMS
       comp=Z,717nm,10.9s
BMO    Blue Mountains     83.72  37   IAmb   IAmb    04 05 57.1
       comp=Z,25nm,1.1s
E08A   Dider Farm, El     83.80  35   IAmb   IAmb    04 05 47.2
       comp=Z,33nm,1.2s
SLKM   Skilak Lake        83.81  12   P      P       04 05 44.0  -0.4
M18K   Stony River        83.82   9   P      P       04 05 44.2  -0.1
       baz=197
O22K   Cooper Landing     83.88  12   P      P       04 05 44.4  -0.3
       baz=203
P23K   Montague Islan     83.91  13   P      P       04 05 44.1  -0.6
       baz=205
K15K   Wolf Creek Mou     83.93   6   P      P       04 05 45.5  +0.7
K15K   Wolf Creek Mou     83.93   6   P      P       04 05 45.4  +0.6
       baz=192,SNR=53
GRNR   Gornyy             83.97 331⇑iP     P       04 05 45.3  -0.1
GRNR                                  pmax   pmax
       comp=Z,8.0nm,1.1s
CRAG   Craig              84.04  22   P      P       04 05 45.0  -0.5
       baz=218
N20K   Mount Spurr        84.11  10   P      P       04 05 44.7  -1.2
       baz=200
SPCR   Spurr Chakacha     84.11  10   P      P       04 05 44.3  -1.6
       baz=200
VHRN   Van Horn           84.12  54   P      P       04 05 46.5  -0.3
VHRN                                  IAmb   IAmb    04 05 59.1
       comp=Z,24nm,1.5s
L17K   Donlin             84.12   7   P      P       04 05 45.8   0.0
       baz=195,SNR=8.7
J14K   Nanvaranak Lak     84.20   5   IAmb   IAmb    04 05 59.0
       comp=Z,36nm,1.4s
J14K   Nanvaranak Lak     84.20   5   P      P       04 05 46.4  +0.2
       baz=190
MNTX   Cornudas Mount     84.27  53   P      P       04 05 46.7  -0.6
Y22D   IRIS PASSCAL I     84.32  50   P      P       04 05 46.0  -1.7
       baz=240
L18K   Granite Mounta     84.41   8   P      P       04 05 47.1  -0.2
L18K                                  IAmb   IAmb    04 05 52.0
       comp=Z,17nm,1.1s
L18K   Granite Mounta     84.41   8   P      P       04 05 47.6  +0.3
       baz=196,SNR=12
M19K   Big River Lodg     84.42   9   IAmb   IAmb    04 05 59.9
       comp=Z,33nm,1.7s
M19K   Big River Lodg     84.42   9   P      P       04 05 47.0  -0.4
       baz=198
TXAR   Lajitas Array      84.44  56   P      P       04 05 48.1  -0.3
TXAR   Lajitas Array      84.44  56   P      P       04 05 48.4   0.0
       comp=Z,3.4nm,0.9s,baz=213,slow=8.8,SNR=25
TXAR                                  LR     LR      04 36 55.9
       comp=Z,859nm,19.6s,baz=234,slow=31
       comp=Z,3.4nm,0.9s
RC01   Rabbit Creek A     84.44  12   P      P       04 05 46.3  -1.2
RC01   Rabbit Creek A     84.44  12   P      P       04 05 47.1  -0.4
       baz=203
STLK   Strandline Lak     84.45  11   IAmb   IAmb    04 05 59.3
       comp=Z,20nm,1.1s
V35K   Ketchikan          84.47  23   P      P       04 05 47.4  -0.3
       baz=219
PWL    Port Wells         84.50  12   P      P       04 05 47.1  -0.7
       baz=204
KAIM   Kayak Island       84.51  14   P      P       04 05 47.8   0.0
       baz=208
HVU    Hansel Valley      84.55  41   IAmb   IAmb    04 06 01.6
       comp=Z,21nm,1.1s
U33K   Whale Pass         84.55  22   P      P       04 05 48.8  +0.7
       baz=218
QIZ    Qiongzhong         84.56 293   P      P       04 05 48.8  -0.3
QIZ                                   S      S       04 16 19.1  +3.1
QIZ                                   SS     SS      04 21 51.8  +4.3
QIZ                                   pmax   pmax
       comp=Z,29nm,1.6s
QIZ                                   pmax   pmax
       comp=Z,350nm,3.1s
QIZ                                   LR     LR
       comp=Z,250nm,9.3s
QIZ                                   LR     LR
       comp=Z,320nm,15.2s
CTU    Camp Tracy         84.57  43   IAmb   IAmb    04 06 01.7
       comp=Z,19nm,1.2s
SIT    Sitka              84.58  20   P      P       04 05 48.5  +0.3
       baz=216
PLID   Pearl Lake         84.59  37   P      P       04 05 48.2  -0.8
PLID                                  IAmb   IAmb    04 06 01.6
       comp=Z,34nm,1.1s
HLID   Hailey             84.59  39   IAmb   IAmb    04 06 02.2
       comp=Z,30nm,1.1s
M20K   Styx River         84.60  10   P      P       04 05 47.5  -0.9
M20K   Styx River         84.60  10   P      P       04 05 47.9  -0.5
       baz=200
SUA    Susitna One        84.61  11   IAmb   IAmb    04 06 00.1
       comp=Z,28nm,1.2s
SUA    Susitna One        84.61  11   P      P       04 05 48.5   0.0
       baz=202
L19K   White Mountain     84.62   9   P      P       04 05 47.8  -0.6
L19K                                  IAmb   IAmb    04 06 30.3
       comp=Z,37nm,1.9s
L19K   White Mountain     84.62   9   P      P       04 05 48.4   0.0
       baz=198
K17K   Iditarod           84.69   7   P      P       04 05 47.0  -1.7
K17K   Iditarod           84.69   7   P      P       04 05 48.9  +0.2
       baz=195,SNR=7.7
JLU    Jordanelle         84.71  43   IAmb   IAmb    04 06 02.7
       comp=Z,33nm,1.5s
EYAK   Cordova Ski Ar     84.76  14   P      P       04 05 47.6  -1.5
EYAK                                  IAmb   IAmb    04 06 02.0
       comp=Z,52nm,1.7s
EYAK   Cordova Ski Ar     84.76  14   P      P       04 05 49.2  +0.1
EYAK   Cordova Ski Ar     84.76  14   P      P       04 05 48.5  -0.5
       baz=206
GLI    Glacier Island     84.77  13   P      P       04 05 48.5  -0.7
       baz=205
MVCO   Mesa Verde         84.82  47   P      P       04 05 51.4  +1.1
MVCO                                  IAmb   IAmb    04 06 21.0
       comp=Z,58nm,1.9s
GAMB   Gambell            84.84   1   P      P       04 05 49.6  +0.2
       baz=182
B08A   Colville Reser     84.85  33   IAmb   IAmb    04 06 02.3
       comp=Z,22nm,1.0s
RAGM   Ragged Mountai     84.86  14   IAmb   IAmb    04 05 52.4
       comp=Z,40nm,1.4s
PV05   Paradox Valley     84.87  46   IAmb   IAmb    04 06 04.3
       comp=Z,37nm,1.4s
DL2    Dalian             84.89 315   P      P       04 05 50.1  -0.1
DL2                                   SKS    SKSac   04 16 13.8  -0.5
DL2                                   S      SKKSac  04 16 22.1  +1.8
DL2                                   pmax   pmax
       comp=Z,13nm,0.7s
DL2                                   pmax   pmax
       comp=Z,630nm,5.9s
DL2                                   LR     LR
       comp=Z,350nm,23.7s
DL2                                   LR     LR
       comp=Z,370nm,18.0s
DL2                                   LR     LR
       comp=Z,610nm,22.1s
BGLC   Bering Glacier     84.95  15   P      P       04 05 50.0   0.0
       baz=209
P18A   Preston Nutter     84.95  44   IAmb   IAmb    04 06 04.3
       comp=Z,32nm,1.3s
SKT    Skwentna           84.95  10   IAmb   IAmb    04 06 21.3
       comp=Z,21nm,1.2s
SKT    Skwentna           84.95  10   P      P       04 05 48.3  -1.8
       baz=201
KNK    Knik Glacier       84.99  12   IAmb   IAmb    04 05 52.6
       comp=Z,23nm,1.0s
KNK    Knik Glacier       84.99  12   P      P       04 05 49.5  -0.8
       baz=204
M22K   Willow             84.99  11   P      P       04 05 49.4  -0.8
       baz=202
J16K   Anvik River        84.99   6   IAmb   IAmb    04 06 03.4
       comp=Z,35nm,1.1s
J16K   Anvik River        84.99   6   P      P       04 05 50.3  +0.1
       baz=193,SNR=15
PMR    Palmer             85.02  12   IAmb   IAmb    04 05 52.7
       comp=Z,29nm,1.4s
PMR    Palmer             85.02  12   P      P       04 05 50.1  -0.3
PMR    Palmer             85.02  12   P      P       04 05 49.9  -0.5
       baz=203
S31K   Pelican            85.03  19   P      P       04 05 50.3  -0.1
       baz=215
L20K   Farewell, AK       85.05   9   P      P       04 05 49.6  -1.0
       baz=199,SNR=7.6
WRAK   Wrangell Islan     85.06  22   P      P       04 05 50.7   0.0
       baz=218
PV17   East Wray Mesa     85.07  46   IAmb   IAmb    04 06 04.6
       comp=Z,31nm,1.3s
ANMO   Albuquerque        85.09  50   P      P       04 05 52.3  +0.7
ANMO                                  IAmb   IAmb    04 06 05.0
       comp=Z,26nm,1.1s
ANMO   Albuquerque        85.09  50   IAmb   IAmb    04 06 05.0
       comp=Z,26nm,1.1s
ANMO   Albuquerque        85.09  50   LR     LR      04 37 48.0
       comp=Z,1µm,19.1s,baz=337,slow=31
ANMO   Albuquerque        85.09  50⇓eP     P       04 05 52.5  +0.9
ANMO                                  pmax   pmax
       comp=Z,13nm,1.2s
BERG   Berg Lake          85.09  15   IAmb   IAmb    04 05 53.7
       comp=Z,45nm,1.3s
LLLB   Lillooet           85.09  30   IAmb   IAmb    04 06 03.4
       comp=Z,38nm,1.4s
PV18   Skein Mesa, Pa     85.09  46   IAmb   IAmb    04 06 19.1
       comp=Z,47nm,1.4s
PV13   Radium Mtn., P     85.10  46   IAmb   IAmb    04 06 04.8
       comp=Z,41nm,1.6s
BSUT   Blindstream Ca     85.11  43   IAmb   IAmb    04 06 05.0
       comp=Z,32nm,1.2s
PV16   Nyswonger Mesa     85.12  46   IAmb   IAmb    04 06 07.2
       comp=Z,38nm,1.6s
PV23   Carpenter Ridg     85.13  46   IAmb   IAmb    04 06 05.2
       comp=Z,58nm,1.6s
PV03   Paradox Valley     85.14  46   IAmb   IAmb    04 06 07.1
       comp=Z,35nm,1.6s
PV11   David Mesa, Pa     85.14  46   IAmb   IAmb    04 06 07.3
       comp=Z,45nm,1.5s
S32K   Killisnoo          85.15  20   P      P       04 05 51.7  +0.6
       baz=216
KLR    Kul'dur            85.15 328c iP      P       04 05 50.8  -0.5
KLR                                   pmax   pmax
       comp=Z,8.0nm,1.3s
PV04   Paradox Valley     85.17  46   IAmb   IAmb    04 06 04.5
       comp=Z,52nm,1.7s
GHO    Glory Hole Cre     85.23  12   IAmb   IAmb    04 05 53.9
       comp=Z,21nm,0.9s
CN2    Changchun          85.23 321  eP      P       04 05 51.0  -0.9
CN2                                  eS      SKSac   04 16 17.8  +1.5
CN2                                   pmax   pmax
       comp=Z,10.0nm,0.9s
CN2                                   pmax   pmax
       comp=Z,600nm,3.0s
CN2                                   LR     LR
       comp=Z,700nm,21.0s
CN2                                   LR     LR
       comp=Z,600nm,21.0s
CN2                                   LR     LR
       comp=Z,400nm,21.0s
SNY    Shenyang           85.24 318  ⇑P      P       04 05 51.8  -0.1
SNY                                   SKS    SKSac   04 16 14.5  -1.9
SNY                                   S      SKSac   04 16 17.0  +0.6
SNY                                   pmax   pmax
       comp=Z,450nm,3.5s
SNY                                   LR     LR
       comp=Z,180nm,17.0s
SNY                                   LR     LR
       comp=Z,280nm,21.3s
SNY                                   LR     LR
       comp=Z,380nm,18.4s
BNX    BinXian            85.26 323  ⇑P      P       04 05 51.3  -0.6
BNX                                   pP     sP      04 05 54.5  -1.7
BNX                                   sP     PcP     04 05 55.8  +0.8
BNX                                   PP     PP      04 09 11.9  +1.9
BNX                                   S      S       04 16 21.6  -0.2
BNX                                   sS     sS      04 16 27.3  +0.1
BNX                                   pmax   pmax
       comp=Z,26nm,1.2s
BNX                                   pmax   pmax
       comp=Z,470nm,5.7s
BNX                                   LR     LR
       comp=Z,560nm,18.4s
BNX                                   LR     LR
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	comp=Z,860nm,19.5s						
BNX				LR	LR		
	comp=Z,2µm,18.4s						
J17K	**VABM Dome**	**85.26**	**7**	IAmb	IAmb	04 06 04.6	
	comp=Z,31nm,1.2s						
J17K	**VABM Dome**	**85.26**	**7**	P	**P**	**04 05 51.6**	**+0.1**
	baz=194,SNR=13						
DIV	**Divide**	**85.28**	**13**	IAmb	IAmb	04 05 54.2	
	comp=Z,34nm,1.1s						
MESA	**MESA**	**85.32**	**15**	P	**P**	**04 05 51.3**	**-0.9**
	baz=210,SNR=8.3						
PV22	**Blue Mesa, Par**	**85.32**	**46**	IAmb	IAmb	04 06 08.2	
	comp=Z,41nm,1.7s						
SML	**Sawmill**	**85.37**	**12**	P	**P**	**04 05 51.8**	**-0.4**
	baz=204						
BMRM	**Bremner River**	**85.39**	**14**	P	**P**	**04 05 51.2**	**-1.1**
	baz=207,SNR=7.5						
M23K	**Glacier View**	**85.48**	**12**	P	**P**	**04 05 51.9**	**-0.8**
	baz=204						
U35K	**Hyder**	**85.50**	**23**	P	**P**	**04 05 52.5**	**-0.4**
	baz=220						
CRQM	**Cirque**	**85.54**	**15**	IAmb	IAmb	04 05 55.9	
	comp=Z,37nm,1.2s						
PNL	**Peninsula**	**85.55**	**17**	P	**P**	**04 05 53.0**	**-0.1**
PNL	**Peninsula**	**85.55**	**17**	P	**P**	**04 05 53.0**	**-0.1**
	baz=212						
CRQE	**Cirque**	**85.55**	**15**	P	**P**	**04 05 52.8**	**-0.4**
	baz=209,SNR=6.0						
CUT	**Chulitna**	**85.57**	**11**	P	**P**	**04 05 52.4**	**-0.7**
	baz=202						
I17K	**Unalakleet**	**85.57**	**6**	IAmb	IAmb	04 06 06.2	
	comp=Z,35nm,1.4s						
I17K	**Unalakleet**	**85.57**	**6**	P	**P**	**04 05 53.8**	**+0.7**
	baz=192						
KLU	**Klutina**	**85.57**	**13**	IAmb	IAmb	04 05 55.9	
	comp=Z,30nm,1.4s						
KLU	**Klutina**	**85.57**	**13**	P	**P**	**04 05 52.5**	**-0.8**
	baz=206						
SCM	**Sheep Creek Mo**	**85.59**	**12**	IAmb	IAmb	04 05 57.2	
	comp=Z,20nm,0.9s						
SCM	**Sheep Creek Mo**	**85.59**	**12**	P	**P**	**04 05 52.7**	**-0.7**
	baz=205,SNR=7.1						
J18K	**Innoko River**	**85.60**	**8**	IAmb	IAmb	04 06 06.0	
	comp=Z,48nm,1.4s						
J18K	**Innoko River**	**85.60**	**8**	P	**P**	**04 05 53.2**	**-0.1**
	baz=196,SNR=24						
MA2	**Magadan**	**85.61**	**343**	*de*P	**P**	**04 05 53.0**	**-0.4**
MA2				pmax	pmax		
	comp=Z,25nm,1.7s						
TGL	**Tana Glacier**	**85.61**	**15**	IAmb	IAmb	04 05 56.2	
	comp=Z,47nm,1.3s						
PINM	**Pinnacle**	**85.68**	**16**	P	**P**	**04 05 53.8**	**0.0**
	baz=211						
PPLA	**Purkeypile**	**85.70**	**10**	P	**P**	**04 05 53.7**	**-0.2**
	baz=200						
BCPM	**Bancas Point**	**85.72**	**17**	IAmb	IAmb	04 05 56.8	
	comp=Z,28nm,1.1s						
R32K	**Eaglecrest**	**85.82**	**20**	P	**P**	**04 05 53.8**	**-0.7**
	baz=216						
GRNC	**Granite Creek**	**85.85**	**15**	IAmb	IAmb	04 06 07.9	
	comp=Z,44nm,1.3s						
K20K	**Telida**	**85.86**	**9**	IAmb	IAmb	04 06 07.5	
	comp=Z,33nm,1.3s						
K20K	**Telida**	**85.86**	**9**	P	**P**	**04 05 54.6**	**+0.1**
	baz=199,SNR=9.3						
ANM	**Nome**	**85.88**	**4**	P	**P**	**04 05 54.6**	**0.0**
	baz=188						
VRDI	**Verde Repeater**	**85.88**	**14**	IAmb	IAmb	04 06 12.5	
	comp=Z,32nm,1.2s						
WHN	**Wuhan**	**85.92**	**305**	⇑P	**P**	**04 05 56.5**	**+0.9**
WHN				sP	**pwP**	**04 06 08.3**	**+3.0**
WHN				S	**S**	**04 16 26.5**	**-2.5**
WHN				sS	**ScS**	**04 16 40.8**	**+2.6**
WHN				pmax	pmax		
	comp=Z,110nm,1.1s						
WHN				pmax	pmax		
	comp=Z,2µm,7.2s						
WHN				LR	LR		
	comp=Z,1µm,19.7s						
NEW	**Newport**	**85.94**	**34**	LR	LR	04 39 00.6	
	comp=Z,3µm,19.2s,baz=220,slow=32						
NEW	**Newport**	**85.94**	**34**	P	**P**	**04 05 55.9**	**+0.5**
CNSH	**ChangSha**	**85.95**	**302**	P	**P**	**04 05 56.8**	**+1.0**
CNSH				S	**S**	**04 16 27.9**	**-1.5**
CNSH				pmax	pmax		
	comp=Z,29nm,1.2s						
CNSH				LR	LR		
	comp=Z,310nm,18.0s						
CNSH				LR	LR		
	comp=Z,450nm,18.6s						
CNSH				LR	LR		
	comp=Z,400nm,19.1s						
N25K	**Chitina, Valde**	**85.96**	**14**	IAmb	IAmb	04 05 57.9	
	comp=Z,26nm,1.1s						
N25K	**Chitina, Valde**	**85.96**	**14**	P	**P**	**04 05 55.1**	**-0.1**
	baz=207,SNR=12						
P29M	**Windy Craggy**	**85.97**	**18**	IAmb	IAmb	04 06 08.9	
	comp=Z,32nm,1.4s						
P29M	**Windy Craggy**	**85.97**	**18**	P	**P**	**04 05 54.6**	**-0.6**
	baz=214,SNR=5.9						
GLB	**Gilahina Butte**	**85.99**	**14**	IAmb	IAmb	04 06 07.6	
	comp=Z,31nm,1.3s						
PLCA	**Paso Flores**	**86.01**	**132**	IAmb	IAmb	04 06 00.3	
	comp=Z,36nm,1.6s						
PLCA	**Paso Flores**	**86.01**	**132**	P	**P**	**04 05 57.9**	**+1.7**
	comp=Z,13nm,1.3s,baz=224,slow=3.5,SNR=5.1						
PLCA				LR	LR	04 36 00.3	
	comp=Z,836nm,20.1s,baz=252,slow=30						
	comp=Z,13nm,1.3s						
M24K	**Tolsona, Glenn**	**86.07**	**13**	P	**P**	**04 05 55.2**	**-0.6**
	baz=206						
LOGN	**Logan Glacier**	**86.12**	**16**	IAmb	IAmb	04 06 08.5	
	comp=Z,38nm,1.2s						
MCARA	**McCarthy VSAT**	**86.12**	**14**	IAmb	IAmb	04 06 11.6	
	comp=Z,36nm,1.3s						
MCARA	**McCarthy VSAT**	**86.12**	**14**	P	**P**	**04 05 55.5**	**-0.4**
	baz=209						
AHID	**Auburn Hatcher**	**86.13**	**41**	IAmb	IAmb	04 06 08.8	
	comp=Z,43nm,1.8s						
CTG	**Chitna Glacier**	**86.16**	**15**	P	**P**	**04 05 56.0**	**-0.2**
	baz=210,SNR=7.8						
CTGM	**Chitina Glacie**	**86.16**	**15**	IAmb	IAmb	04 06 09.3	
	comp=Z,31nm,1.1s						
H16K	**Elim**	**86.17**	**5**	P	**P**	**04 05 55.9**	**-0.1**
	baz=191,SNR=6.6						
WAT6	**Susitna Watana**	**86.19**	**12**	P	**P**	**04 05 55.5**	**-0.9**
	baz=204,SNR=14						
CAST	**Castle Rocks**	**86.21**	**10**	IAmb	IAmb	04 06 07.1	
	comp=Z,22nm,1.2s						
CAST	**Castle Rocks**	**86.21**	**10**	P	**P**	**04 05 54.2**	**-2.2**
	baz=200,SNR=15						
PLBC	**Pleasant Camp**	**86.22**	**18**	P	**P**	**04 05 56.0**	**-0.4**
	baz=215,SNR=8.4						
T35M	**Bob Quinn**	**86.23**	**22**	P	**P**	**04 05 56.2**	**-0.3**
	baz=220						
J19K	**Poorman**	**86.25**	**8**	IAmb	IAmb	04 06 09.4	
	comp=Z,36nm,1.3s						
J19K	**Poorman**	**86.25**	**8**	P	**P**	**04 05 56.2**	**-0.3**
	baz=197,SNR=11						
WAT1	**Susitna Watana**	**86.27**	**11**	P	**P**	**04 05 55.5**	**-1.2**
	baz=204						
O28M	**Mount Upton**	**86.28**	**16**	IAmb	IAmb	04 06 09.5	
	comp=Z,24nm,1.1s						
O28M	**Mount Upton**	**86.28**	**16**	P	**P**	**04 05 56.7**	**-0.3**
	baz=211,SNR=10						
O29M	**Mount Kennedy**	**86.30**	**17**	IAmb	IAmb	04 06 14.4	
	comp=Z,28nm,1.2s						
O29M	**Mount Kennedy**	**86.30**	**17**	P	**P**	**04 05 57.3**	**+0.3**
	baz=213,SNR=9.3						
G15K	**Niukluk**	**86.39**	**4**	P	**P**	**04 05 57.0**	**-0.1**
	baz=189,SNR=8.0						
KTH	**Kantishna Hill**	**86.53**	**10**	IAmb	IAmb	04 06 14.5	
	comp=Z,29nm,1.3s						
SKAG	**Skagway**	**86.53**	**19**	IAmb	IAmb	04 06 01.6	
	comp=Z,38nm,1.3s						
SKAG	**Skagway**	**86.53**	**19**	P	**P**	**04 05 57.3**	**-0.6**
SKAG	**Skagway**	**86.53**	**19**	P	**P**	**04 05 57.0**	**-0.9**
	baz=216						
TRF	**Thorofare Moun**	**86.54**	**10**	IAmb	IAmb	04 06 01.3	
	comp=Z,34nm,1.0s						
TRF	**Thorofare Moun**	**86.54**	**10**	P	**P**	**04 05 56.8**	**-1.4**
	baz=202,SNR=24						
HARP	**HAARP**	**86.55**	**13**	P	**P**	**04 05 57.9**	**-0.1**
	baz=207						
TIA	**Tai'an**	**86.57**	**311**	P	**P**	**04 05 59.1**	**+0.4**
TIA				SKS	**SKSac**	**04 16 26.4**	**+1.3**
TIA				S	**S**	**04 16 34.8**	**-0.4**
TIA				pmax	pmax		
	comp=Z,21nm,1.3s						
TIA				pmax	pmax		
	comp=Z,630nm,6.2s						
TIA				LR	LR		
	comp=Z,350nm,21.0s						
TIA				LR	LR		
	comp=Z,360nm,18.4s						
TIA				LR	LR		
	comp=Z,380nm,20.7s						
ODSA	**Odessa**	**86.58**	**54**	IAmb	IAmb	04 06 00.9	
	comp=Z,21nm,1.1s						
P30M	**Million Dollar**	**86.60**	**18**	P	**P**	**04 05 58.6**	**+0.3**
	baz=214						
CHUM	**Lake Minchumin**	**86.61**	**9**	P	**P**	**04 05 57.4**	**-0.8**
	baz=200,SNR=12						
J20K	**Nowinta River**	**86.62**	**9**	IAmb	IAmb	04 06 01.1	
	comp=Z,32nm,1.2s						
J20K	**Nowinta River**	**86.62**	**9**	P	**P**	**04 05 58.3**	**0.0**
	baz=198,SNR=14						
S34M	**Telegraph Cree**	**86.64**	**21**	IAmb	IAmb	04 06 12.3	
	comp=Z,23nm,1.2s						
S34M	**Telegraph Cree**	**86.64**	**21**	P	**P**	**04 05 58.3**	**-0.2**
	baz=220,SNR=6.1						
H17K	**Granite Mounta**	**86.68**	**6**	IAmb	IAmb	04 06 11.8	
	comp=Z,32nm,1.4s						
H17K	**Granite Mounta**	**86.68**	**6**	P	**P**	**04 05 58.0**	**-0.5**
	baz=193,SNR=6.3						
SYO	**Syowa Base**	**86.70**	**192**	⇑*e*P	**P**	**04 05 58.9**	**+0.1**
SYO	**Syowa Base**	**86.70**	**192**	⇑*e*pP	pP	04 06 03.5	+1.7
DLMT	**Dillon**	**86.70**	**38**	IAmb	IAmb	04 06 12.3	
	comp=Z,25nm,1.4s						
DHY	**Denali Highway**	**86.72**	**12**	IAmb	IAmb	04 06 11.0	
	comp=Z,19nm,1.0s						
DHY	**Denali Highway**	**86.72**	**12**	P	**P**	**04 05 58.4**	**-0.5**
	baz=205						
F14K	**Arctic Creek**	**86.73**	**3**	P	**P**	**04 05 58.3**	**-0.5**
	baz=187,SNR=9.2						
TNA	**Tin City**	**86.74**	**3**	IAmb	IAmb	04 06 11.4	
	comp=Z,31nm,1.4s						
TNA	**Tin City**	**86.74**	**3**	P	**P**	**04 05 58.2**	**-0.6**
	baz=186,SNR=11						
GULI	**GuiLin**	**86.75**	**299**	P	**P**	**04 06 01.0**	**+1.1**
GCSA	**Galena City Sc**	**86.82**	**7**	P	**P**	**04 05 59.5**	**+0.3**
	baz=196,SNR=5.5						
YUK8	**Steele Glacier**	**86.83**	**16**	P	**P**	**04 05 58.9**	**-0.8**
	baz=212,SNR=18						
TROLL	**Troll, Antarti**	**86.88**	**179**	⇑P	**P**	**04 05 59.3**	**-0.6**
	comp=Z,798nm,1.4s						
YUK6	**Outpost Mounta**	**86.90**	**17**	P	**P**	**04 05 59.4**	**-0.6**
	baz=213,SNR=7.0						
G16K	**Koyuk River**	**86.91**	**5**	IAmb	IAmb	04 06 12.3	
	comp=Z,26nm,1.2s						
G16K	**Koyuk River**	**86.91**	**5**	P	**P**	**04 05 59.3**	**-0.4**
	baz=191,SNR=8.0						
PAX	**Paxson**	**87.00**	**13**	P	**P**	**04 05 59.5**	**-0.7**
	baz=206,SNR=6.3						
M26K	**Nabesna, AK**	**87.02**	**14**	IAmb	IAmb	04 06 12.9	
	comp=Z,43nm,1.2s						
M26K	**Nabesna, AK**	**87.02**	**14**	P	**P**	**04 06 00.0**	**-0.4**
	baz=209,SNR=21						
BPAW	**Bear Paw Mtn.**	**87.03**	**10**	P	**P**	**04 05 58.9**	**-1.4**
	baz=201						
MCK	**McKinley**	**87.03**	**11**	P	**P**	**04 05 59.0**	**-1.3**
	baz=203,SNR=19						
HYT	**Haines Junctio**	**87.03**	**17**	IAmb	IAmb	04 06 03.8	
	comp=Z,32nm,1.4s						
HYT	**Haines Junctio**	**87.03**	**17**	P	**P**	**04 06 00.2**	**-0.4**
	baz=214,SNR=13						
VNA3	**Neumayer Olymp**	**87.04**	**175**	⇑P	**P**	**04 05 59.5**	**-1.0**
	comp=Z,14nm,0.7s						
H18K	**Honhosa River**	**87.05**	**7**	P	**P**	**04 05 59.7**	**-0.7**
	baz=195,SNR=7.6						
SNAA	**Sanae**	**87.05**	**177**	⇑P	**P**	**04 06 01.3**	**+0.6**
	comp=Z,223nm,0.9s						
SNAA	**Sanae**	**87.05**	**177**	IAmb	IAmb	04 06 03.6	
	comp=Z,38nm,1.3s						
SNAA	**Sanae**	**87.05**	**177**	P	**P**	**04 06 00.9**	**+0.3**
	comp=Z,15nm,1.1s,baz=177,slow=4.9,SNR=12						
SNAA				LR	LR	04 41 48.5	
	comp=Z,1µm,19.8s,baz=202,slow=33						
	comp=Z,15nm,1.1s						
SNAA	**Sanae**	**87.05**	**177**	*d i*P	**P**	**04 06 01.2**	**+0.6**
SNAA				pmax	pmax		
	comp=Z,22nm,1.2s						
F15K	**North Star Dit**	**87.06**	**4**	IAmb	IAmb	04 06 03.3	
	comp=Z,28nm,1.6s						
F15K	**North Star Dit**	**87.06**	**4**	P	**P**	**04 05 59.9**	**-0.5**
	baz=189,SNR=6.4						
YUK3	**Moose Creek**	**87.07**	**15**	P	**P**	**04 06 00.5**	**-0.4**
	baz=211,SNR=30						
Q32M	**Nakina River**	**87.08**	**20**	IAmb	IAmb	04 06 14.5	
	comp=Z,28nm,1.4s						
Q32M	**Nakina River**	**87.08**	**20**	P	**P**	**04 06 00.9**	**0.0**
	baz=218,SNR=7.6						
PDAR	**Pinedale Array**	**87.08**	**42**	P	**P**	**04 06 00.1**	**-1.3**
	comp=Z,2.0nm,0.8s,baz=232,slow=2.7,SNR=13						
PDAR				LR	LR	04 40 13.6	
	comp=Z,402nm,18.6s,baz=231,slow=32						
	comp=Z,2.0nm,0.8s						
P32M	**Atlin**	**87.12**	**19**	P	**P**	**04 06 00.8**	**-0.1**
	baz=217						
G17K	**Kiwalik Mounta**	**87.16**	**6**	P	**P**	**04 06 00.3**	**-0.6**
	baz=192,SNR=17						
YUK4	**Talbot Arm**	**87.17**	**16**	P	**P**	**04 06 01.4**	**+0.1**
	baz=213						
I20K	**Naaghedeneel**	**87.17**	**8**	P	**P**	**04 06 01.1**	**+0.2**
	baz=198						
M27K	**Edge Creek, AK**	**87.24**	**14**	P	**P**	**04 06 01.2**	**-0.4**
	baz=210						
MSTX	**Muleshoe**	**87.28**	**52**	IAmb	IAmb	04 06 15.0	
	comp=Z,31nm,1.3s						
MENT	**Mentasta**	**87.33**	**13**	P	**P**	**04 06 01.9**	**+0.1**
HBVL	**Hebbronville**	**87.36**	**60**	IAmb	IAmb	04 06 15.4	
	comp=Z,50nm,1.6s						
O30N	**Mendenhall**	**87.38**	**18**	P	**P**	**04 06 01.9**	**-0.2**
	baz=215,SNR=9.8						
DLBC	**Dease Lake**	**87.42**	**21**	LR	LR	04 39 22.5	
	comp=Z,608nm,19.3s,baz=252,slow=32						
DLBC	**Dease Lake**	**87.42**	**21**	P	**P**	**04 06 02.3**	**-0.1**
	baz=220,SNR=5.5						
L26K	**Log Cabin Wild**	**87.49**	**13**	IAmb	IAmb	04 06 05.6	
	comp=Z,18nm,1.1s						
L26K	**Log Cabin Wild**	**87.49**	**13**	P	**P**	**04 06 02.3**	**-0.3**
	baz=208,SNR=9.0						
BVCY	**Beaver Creek**	**87.53**	**15**	P	**P**	**04 06 02.6**	**-0.1**
	baz=211,SNR=13						
H19K	**Roundabout Mou**	**87.62**	**7**	P	**P**	**04 06 02.8**	**-0.3**
	baz=196,SNR=14						
WHY	**Whitehorse**	**87.64**	**18**	P	**P**	**04 06 03.4**	**-0.1**
	baz=216,SNR=7.5						
N30M	**Aishikik Lake**	**87.67**	**17**	IAmb	IAmb	04 06 42.0	
	comp=Z,36nm,1.8s						
N30M	**Aishikik Lake**	**87.67**	**17**	P	**P**	**04 06 03.2**	**-0.3**
	baz=214,SNR=6.2						
K24K	**Donnelly Dome**	**87.68**	**12**	P	**P**	**04 06 03.2**	**-0.3**
	baz=206,SNR=12						
VNA1	**Neumayer--Stat**	**87.73**	**175**	⇑P	**P**	**04 06 05.5**	**+1.7**
	comp=Z,24nm,1.0s						
G18K	**Tagagawik**	**87.74**	**6**	IAmb	IAmb	04 06 15.9	
	comp=Z,38nm,1.4s						
G18K	**Tagagawik**	**87.74**	**6**	P	**P**	**04 06 03.8**	**+0.1**
	baz=194,SNR=17						
H20K	**Anotleneega Mo**	**87.78**	**8**	P	**P**	**04 06 04.0**	**+0.1**
	baz=198,SNR=13						
NEA2	**Nenana**	**87.80**	**11**	P	**P**	**04 06 03.2**	**-0.8**
	baz=203,SNR=6.0						
RIDG	**Independent Ri**	**87.81**	**13**	IAmb	IAmb	04 06 16.4	
	comp=Z,32nm,1.2s						
RIDG	**Independent Ri**	**87.81**	**13**	P	**P**	**04 06 03.7**	**-0.5**
	baz=207,SNR=9.0						
R33M	**Jennings River**	**87.84**	**20**	IAmb	IAmb	04 06 18.2	
	comp=Z,25nm,1.3s						
R33M	**Jennings River**	**87.84**	**20**	P	**P**	**04 06 04.8**	**+0.3**
	baz=220,SNR=8.8						
L27K	**Beaver Creek,**	**87.86**	**14**	IAmb	IAmb	04 06 07.5	
	comp=Z,26nm,1.4s						
L27K	**Beaver Creek,**	**87.86**	**14**	P	**P**	**04 06 04.5**	**+0.1**
	baz=210,SNR=15						
DOT	**Dot Lake**	**87.89**	**13**	IAmb	IAmb	04 06 07.2	
	comp=Z,30nm,1.1s						
P33M	**Teslin, Yukon**	**87.89**	**19**	IAmb	IAmb	04 06 08.9	
	comp=Z,58nm,2.0s						
P33M	**Teslin, Yukon**	**87.89**	**19**	P	**P**	**04 06 04.6**	**-0.1**
	baz=218,SNR=6.2						
MLY	**Manley**	**87.94**	**10**	IAmb	IAmb	04 06 08.0	
	comp=Z,47nm,1.9s						
MLY	**Manley**	**87.94**	**10**	P	**P**	**04 06 03.8**	**-0.9**
	baz=202						
HEH	**HeiHe**	**87.98**	**327**	*e*P	**P**	**04 06 04.9**	**-0.3**
HEH				sP	**pwP**	**04 06 13.6**	**-1.3**
HEH				S	**S**	**04 16 48.9**	**+0.8**
HEH				pmax	pmax		
	comp=Z,21nm,1.3s						
HEH				pmax	pmax		
	comp=Z,390nm,5.9s						
HEH				LR	LR		
	comp=Z,600nm,20.2s						
HEH				LR	LR		
	comp=Z,640nm,20.5s						
HEH				LR	LR		
	comp=Z,2µm,21.0s						
HDA	**Harding Lake**	**88.01**	**11**	IAmb	IAmb	04 06 08.7	
	comp=Z,40nm,1.4s						
HDA	**Harding Lake**	**88.01**	**11**	P	**P**	**04 06 04.4**	**-0.6**
	baz=205,SNR=15						
F17K	**Baldwin Pennin**	**88.03**	**5**	IAmb	IAmb	04 06 17.7	
	comp=Z,32nm,1.2s						
F17K	**Baldwin Pennin**	**88.03**	**5**	P	**P**	**04 06 04.8**	**-0.2**
	baz=192						
N31M	**Braeburn, Yuko**	**88.05**	**17**	IAmb	IAmb	04 06 18.1	
	comp=Z,27nm,1.1s						
N31M	**Braeburn, Yuko**	**88.05**	**17**	P	**P**	**04 06 05.0**	**-0.3**
	baz=215,SNR=11						
SEY	**Seymchan**	**88.06**	**345**	*c i*P	**P**	**04 06 04.5**	**-0.7**
SEY				pmax	pmax		
	comp=Z,26nm,1.1s						
M29M	**Somme Creek**	**88.14**	**16**	IAmb	IAmb	04 06 08.8	
	comp=Z,19nm,1.1s						
M29M	**Somme Creek**	**88.14**	**16**	P	**P**	**04 06 05.8**	**0.0**
	baz=213,SNR=16						
G19K	**Purcell Mounta**	**88.14**	**7**	P	**P**	**04 06 05.5**	**-0.1**
	baz=196,SNR=7.0						
SCRK	**Sand Creek**	**88.20**	**13**	IAmb	IAmb	04 06 18.6	
	comp=Z,33nm,1.4s						
SCRK	**Sand Creek**	**88.20**	**13**	P	**P**	**04 06 05.9**	**-0.1**
	baz=208,SNR=16						
H21K	**Melozitna Rive**	**88.22**	**9**	P	**P**	**04 06 06.0**	**0.0**
	baz=200,SNR=10						
PSI	**Prapat**	**88.23**	**274**	LR	LR	04 47 19.6	
	comp=Z,585nm,20.2s,baz=130,slow=37						
PSI	**Prapat**	**88.23**	**274**	P	**P**	**04 06 06.9**	**-0.5**
I23K	**Minto, Yukon-K**	**88.27**	**10**	P	**P**	**04 06 05.2**	**-0.9**
	baz=203,SNR=9.5						
COLA	**College**	**88.27**	**11**	P	**P**	**04 06 06.4**	**+0.2**
COLA	**College**	**88.27**	**11**	*d i*P	**P**	**04 06 05.6**	**-0.6**
COLA				pmax	pmax		
	comp=Z,26nm,1.0s						
COLA	**College**	**88.27**	**11**	P	**P**	**04 06 05.0**	**-1.1**
	baz=204						
F18K	**Selawik**	**88.33**	**6**	P	**P**	**04 06 05.8**	**-0.6**
	baz=193						
IL31		**88.35**	**11**	IAmb	IAmb	04 06 18.5	
	comp=Z,42nm,1.4s						
ILAR	**Eielson Array**	**88.35**	**11**	P	**P**	**04 06 05.7**	**-1.0**
	comp=Z,6.8nm,0.9s,baz=216,slow=3.8,SNR=29						
ILAR				PP	**PP**	**04 09 33.3**	**-1.3**
	comp=Z,0.8nm,1.0s,baz=201,slow=9.4,SNR=3.4						
	comp=Z,6.8nm,0.9s						
MT01	**Popeta**	**88.36**	**126**	IAmb	IAmb	04 06 19.9	
	comp=Z,35nm,1.2s						
EFI	**East Falkland**	**88.37**	**146**	⇑*e*P	**P**	**04 06 07.9**	**+0.7**
EFI				pmax	pmax		
	comp=Z,19nm,1.2s						
J25K	**Salcha River,**	**88.49**	**12**	IAmb	IAmb	04 06 10.0	
	comp=Z,21nm,1.1s						
J25K	**Salcha River,**	**88.49**	**12**	P	**P**	**04 06 07.2**	**-0.2**
	baz=207,SNR=19						
N32M	**Quiet Lake**	**88.56**	**19**	P	**P**	**04 06 07.3**	**-0.5**
	baz=218						
POKR	**Poker Plat Res**	**88.57**	**11**	P	**P**	**04 06 07.0**	**-0.6**
	baz=205						
E17K	**Hotham Inlet**	**88.62**	**5**	P	**P**	**04 06 07.6**	**-0.2**
	baz=191						
H22K	**Ishtalitna Cre**	**88.64**	**9**	P	**P**	**04 06 07.7**	**-0.3**
	baz=201,SNR=7.2						
K27K	**Chicken**	**88.65**	**13**	IAmb	IAmb	04 06 11.5	
	comp=Z,24nm,1.1s						
K27K	**Chicken**	**88.65**	**13**	P	**P**	**04 06 08.3**	**+0.3**
	baz=210						
F19K	**Shaleruckik Mo**	**88.74**	**6**	IAmb	IAmb	04 06 20.7	
	comp=Z,28nm,1.1s						
F19K	**Shaleruckik Mo**	**88.74**	**6**	P	**P**	**04 06 08.2**	**-0.2**
	baz=195,SNR=11						
J26L	**Joseph Creek**	**88.75**	**13**	P	**P**	**04 06 09.2**	**+0.6**
	baz=208,SNR=51						
L29M	**L29M**	**88.78**	**15**	P	**P**	**04 06 09.2**	**+0.4**
	baz=213,SNR=26						
HNS	**HongShan**	**88.84**	**311**	⇑P	**P**	**04 06 10.3**	**+0.8**
HNS				SKS	**SKSac**	**04 16 38.9**	**+0.2**
HNS				S	**S**	**04 16 57.0**	**+0.2**
HNS				pmax	pmax		
	comp=Z,21nm,2.3s						
HNS				LR	LR		
	comp=Z,240nm,16.0s						
HNS				LR	LR		
	comp=Z,340nm,16.1s						
HNS				LR	LR		
	comp=Z,350nm,19.0s						
H23K	**Yukon River**	**88.86**	**10**	IAmb	IAmb	04 06 11.3	
	comp=Z,31nm,1.9s						
H23K	**Yukon River**	**88.86**	**10**	P	**P**	**04 06 08.3**	**-0.8**
	baz=203						
G21K	**Allakaket**	**88.94**	**8**	P	**P**	**04 06 09.3**	**0.0**
	baz=199,SNR=6.6						
GSI	**Gunungsitoli**	**88.94**	**272**	P	**P**	**04 06 12.0**	**+1.4**
M31M	**Drury Creek, Y**	**89.02**	**17**	P	**P**	**04 06 08.9**	**-1.0**
	baz=216						
E18K	**Tukpahlearik C**	**89.05**	**5**	IAmb	IAmb	04 06 22.4	
	comp=Z,22nm,1.1s						
E18K	**Tukpahlearik C**	**89.05**	**5**	P	**P**	**04 06 09.5**	**-0.3**
	baz=192,SNR=12						
BJI	**Beijing**	**89.09**	**314**	P	**P**	**04 06 11.0**	**+0.3**
BJI				PP	**PP**	**04 09 40.6**	**-0.5**
BJI				SKS	**SKSac**	**04 16 39.9**	**-0.2**
BJI				sS	**ScS**	**04 17 07.3**	**+3.3**
BJI				pmax	pmax		
	comp=Z,11nm,2.3s						
BJI				pmax	pmax		
	comp=Z,290nm,5.2s						
BJI				LR	LR		
	comp=Z,100nm,17.7s						
BJI				LR	LR		
	comp=Z,140nm,17.2s						
BJI				LR	LR		
	comp=Z,310nm,16.9s						
PEL	**Peldehue**	**89.09**	**125**	IAmb	IAmb	04 06 13.8	
	comp=Z,30nm,1.3s						
WTLY	**Watson Lake, Y**	**89.10**	**21**	P	**P**	**04 06 10.9**	**+0.6**
	baz=222						
D17K	**Noatak River**	**89.13**	**4**	P	**P**	**04 06 10.1**	**-0.1**
	baz=190,SNR=6.5						
H24K	**Noodor Dome**	**89.15**	**10**	P	**P**	**04 06 10.6**	**+0.2**
	baz=204						
LYN	**LuoYang**	**89.15**	**308**	P	**P**	**04 06 12.3**	**+1.2**
LYN				pP	pwP	04 06 17.8	-3.0
LYN				sP	sP	04 06 19.8	+4.4
LYN				SKS	**SKSac**	**04 16 41.1**	**+0.4**
LYN				S	**S**	**04 16 59.8**	**-0.1**
LYN				sS	ScS	04 17 05.9	+1.1
LYN				pmax	pmax		
	comp=Z,33nm,1.1s						
LYN				pmax	pmax		
	comp=Z,760nm,5.3s						
LYN				LR	LR		
	comp=Z,380nm,15.1s						
LYN				LR	LR		
	comp=Z,410nm,19.6s						
LYN				LR	LR		
	comp=Z,840nm,17.9s						
F20K	**Avaraart Lake**	**89.17**	**7**	P	**P**	**04 06 10.4**	**+0.1**
	baz=197,SNR=12						
PRP	**Porcupine Dome**	**89.28**	**11**	IAmb	IAmb	04 06 13.9	
	comp=Z,27nm,1.1s						
PRP	**Porcupine Dome**	**89.28**	**11**	P	**P**	**04 06 11.0**	**-0.1**
	baz=206,SNR=22						
DAWY	**Dawson**	**89.29**	**14**	IAmb	IAmb	04 06 14.2	
	comp=Z,29nm,1.2s						
DAWY	**Dawson**	**89.29**	**14**	P	**P**	**04 06 11.4**	**+0.3**
	baz=212,SNR=25						
FARO	**Faro, Yukon**	**89.34**	**18**	P	**P**	**04 06 10.9**	**-0.4**
	baz=217						
E19K	**Redstone River**	**89.40**	**6**	IAmb	IAmb	04 06 15.7	
	comp=Z,20nm,0.9s						
E19K	**Redstone River**	**89.40**	**6**	P	**P**	**04 06 11.4**	**-0.1**
	baz=196,SNR=18						

TOAD	**Toad River Com**	**89.42**	**23**	P	**P**	**04 06 11.9**	**+0.1**
	baz=225						
RDOG	**Red Dog Mine**	**89.50**	**4**	P	**P**	**04 06 12.4**	**+0.4**
	baz=190						
LIRD	**Liard River Hi**	**89.51**	**22**	P	**P**	**04 06 12.0**	**-0.2**
	baz=224						
I26K	**Coal Creek Min**	**89.55**	**12**	IAmb	IAmb	04 06 25.0	
	comp=Z,27nm,1.2s						
I26K	**Coal Creek Min**	**89.55**	**12**	P	**P**	**04 06 12.4**	**+0.2**
	baz=209,SNR=15						
K29M	**Barlow Dome**	**89.55**	**15**	IAmb	IAmb	04 06 25.5	
	comp=Z,33nm,1.1s						
K29M	**Barlow Dome**	**89.55**	**15**	P	**P**	**04 06 12.6**	**+0.2**
	baz=214,SNR=27						
ENH	**Enshi**	**89.57**	**303**	P	**P**	**04 06 14.2**	**+1.0**
C16K	**Lisburne Hills**	**89.57**	**3**	IAmb	IAmb	04 06 17.1	
	comp=Z,58nm,2.0s						
C16K	**Lisburne Hills**	**89.57**	**3**	P	**P**	**04 06 11.8**	**-0.4**
	baz=188						
G22K	**Bettles**	**89.59**	**9**	P	**P**	**04 06 12.7**	**+0.3**
	baz=201						
F21K	**Alatna River**	**89.61**	**8**	IAmb	IAmb	04 06 24.8	
	comp=Z,35nm,2.0s						
F21K	**Alatna River**	**89.61**	**8**	P	**P**	**04 06 12.3**	**-0.2**
	baz=199,SNR=5.5						
G23K	**Bananza Creek**	**89.61**	**9**	IAmb	IAmb	04 06 26.0	
	comp=Z,25nm,1.5s						
G23K	**Bananza Creek**	**89.61**	**9**	P	**P**	**04 06 12.6**	**0.0**
	baz=202						
SRIT	**Nakonsritamara**	**89.70**	**279**	P	**P**	**04 06 15.3**	**+1.2**
MAYO	**Mayo, Yukon**	**89.75**	**16**	P	**P**	**04 06 13.0**	**-0.3**
	baz=215						
J29N	**Klondike Camp**	**89.89**	**15**	P	**P**	**04 06 13.6**	**-0.3**
	baz=213						
C17K	**DeLong Mountai**	**89.89**	**4**	P	**P**	**04 06 13.4**	**-0.4**
	baz=190						
H25L	**Birch Creek**	**89.90**	**11**	P	**P**	**04 06 12.6**	**-1.2**
	baz=206						
G24K	**Hadweenzic Riv**	**90.00**	**10**	P	**P**	**04 06 13.4**	**-1.0**
	baz=205						
F22K	**John River**	**90.05**	**8**	P	**P**	**04 06 13.2**	**-1.3**
	baz=200						
COLD	**Coldfoot**	**90.06**	**9**	P	**P**	**04 06 14.8**	**+0.2**
	baz=202,SNR=6.0						
I27K	**Kandik River**	**90.12**	**13**	P	**P**	**04 06 14.6**	**-0.4**
	baz=210,SNR=5.7						
ZEA	**Zeya**	**90.17**	**329**	*e*P	**P**	**04 06 16.0**	**+0.6**
C18K	**Utukok River**	**90.21**	**5**	P	**P**	**04 06 14.9**	**-0.4**
	baz=192						
MMPY	**Sheldon Lake,**	**90.25**	**18**	IAmb	IAmb	04 06 19.0	
	comp=Z,24nm,1.3s						
MMPY	**Sheldon Lake,**	**90.25**	**18**	P	**P**	**04 06 15.8**	**+0.2**
	baz=219,SNR=13						
GYA	**Guiyang**	**90.27**	**298**	⇑P	**P**	**04 06 17.6**	**+0.9**
GYA				S	**S**	**04 17 08.1**	**-2.8**
GYA				pmax	pmax		
	comp=Z,310nm,10.1s						
BILL	**Bilibino**	**90.28**	**353**	*ce*P	**P**	**04 06 15.1**	**-0.5**
BILL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
E20K	**Nigu River**	**90.28**	**7**	P	**P**	**04 06 15.8**	**+0.1**
	baz=197,SNR=12						
G25K	**Bearman Lake**	**90.30**	**11**	P	**P**	**04 06 15.5**	**-0.2**
	baz=206						
D19K	**Kuna River**	**90.32**	**6**	IAmb	IAmb	04 06 28.2	
	comp=Z,19nm,1.1s						
D19K	**Kuna River**	**90.32**	**6**	P	**P**	**04 06 15.6**	**-0.2**
	baz=195,SNR=6.5						
TGTN	**Hyland Airport**	**90.33**	**20**	P	**P**	**04 06 15.9**	**-0.2**
	baz=222						
MTO3	**Montecristo**	**90.34**	**75**	IAmb	IAmb	04 06 19.8	
	comp=Z,28nm,1.4s						
I28M	**Miner Creek**	**90.34**	**14**	P	**P**	**04 06 15.8**	**-0.3**
	baz=212,SNR=12						
BEAVL	**Fort Liard**	**90.42**	**22**	P	**P**	**04 06 16.3**	**-0.2**
	baz=225						
J30M	**Hart River**	**90.45**	**15**	IAmb	IAmb	04 06 19.7	
	comp=Z,18nm,1.2s						
J30M	**Hart River**	**90.45**	**15**	P	**P**	**04 06 16.6**	**0.0**
	baz=215,SNR=14						
TIY	**Taiyuan**	**90.59**	**310**	*e*P	**P**	**04 06 18.1**	**+0.2**
TIY				SKS	**SKSac**	**04 16 49.1**	**-0.1**
TIY				S	**S**	**04 17 13.3**	**0.0**
TIY				pmax	pmax		
	comp=Z,330nm,4.3s						
TIY				LR	LR		
	comp=Z,230nm,16.5s						
TIY				LR	LR		
	comp=Z,190nm,16.5s						
TIY				LR	LR		
	comp=Z,260nm,19.9s						
SLVN	**Son La**	**90.59**	**293**	P	**P**	**04 06 19.8**	**+1.6**
I29M	**Ogilvie Camp,**	**90.63**	**14**	IAmb	IAmb	04 09 13.3	
	comp=Z,13nm,0.5s						
I29M	**Ogilvie Camp,**	**90.63**	**14**	P	**P**	**04 06 16.7**	**-0.6**
	baz=213						
D20K	**Etivluk River**	**90.68**	**6**	IAmb	IAmb	04 06 30.0	
	comp=Z,21nm,1.1s						
D20K	**Etivluk River**	**90.68**	**6**	P	**P**	**04 06 17.5**	**0.0**
	baz=196,SNR=8.0						
H27K	**Steamboat Moun**	**90.68**	**13**	IAmb	IAmb	04 06 31.2	
	comp=Z,21nm,1.1s						
H27K	**Steamboat Moun**	**90.68**	**13**	P	**P**	**04 06 16.9**	**-0.6**
	baz=210,SNR=16						
F24K	**Squaw Lake**	**90.69**	**10**	P	**P**	**04 06 17.5**	**0.0**
	baz=204						
E22K	**Anaktuvuk Pass**	**90.69**	**8**	IAmb	IAmb	04 06 30.1	
	comp=Z,19nm,1.1s						
E22K	**Anaktuvuk Pass**	**90.69**	**8**	P	**P**	**04 06 16.7**	**-0.8**
	baz=201,SNR=11						
KOTAN	**Kotaneelee Air**	**90.75**	**23**	P	**P**	**04 06 18.3**	**+0.3**
	baz=226						
C19K	**Lookout Ridge**	**90.78**	**5**	P	**P**	**04 06 17.8**	**-0.2**
	baz=193						
HKT	**Hockley**	**90.83**	**58**	IAmb	IAmb	04 06 21.5	
	comp=Z,43nm,1.9s						
HKT	**Hockley**	**90.83**	**58**	*de*P	**P**	**04 06 18.3**	**-0.7**
HKT				pmax	pmax		
	comp=Z,19nm,1.8s						
B18K	**Kokolik River**	**90.87**	**4**	P	**P**	**04 06 18.0**	**-0.2**
	baz=191						
G26K	**Porcupine Rive**	**90.88**	**11**	P	**P**	**04 06 18.4**	**0.0**
	baz=208,SNR=12						
E23K	**Chandalar**	**90.92**	**9**	P	**P**	**04 06 18.5**	**-0.2**
	baz=203						
I30M	**Mount Dempster**	**90.97**	**15**	IAmb	IAmb	04 06 22.0	
	comp=Z,32nm,1.1s						
I30M	**Mount Dempster**	**90.97**	**15**	P	**P**	**04 06 19.0**	**-0.1**
	baz=215,SNR=24						
XLT	**XiLinHaoTe**	**91.02**	**317**	*e*P	**P**	**04 06 20.0**	**+0.3**
XLT				SKS	**SKSac**	**04 16 53.6**	**+2.2**
XLT				S	**SKKSac**	**04 17 08.8**	**+2.4**
XLT				SS	**SS**	**04 23 18.4**	**-2.8**
XLT				pmax	pmax		
	comp=Z,11nm,1.1s						
XLT				pmax	pmax		
	comp=Z,300nm,5.5s						
XLT				LR	LR		
	comp=Z,41nm,17.6s						
XLT				LR	LR		
	comp=Z,220nm,14.7s						
XLT				LR	LR		
	comp=Z,420nm,20.0s						
E24K	**Your Creek**	**91.10**	**9**	IAmb	IAmb	04 06 32.4	
	comp=Z,22nm,1.7s						
E24K	**Your Creek**	**91.10**	**9**	P	**P**	**04 06 19.2**	**-0.3**
	baz=204						
F25K	**Christian Rive**	**91.12**	**11**	P	**P**	**04 06 19.3**	**-0.3**
	baz=206						
G27K	**Doyon Strip**	**91.16**	**12**	P	**P**	**04 06 20.1**	**+0.3**
	baz=210,SNR=9.8						
RSSD	**Black Hills**	**91.23**	**43**	IAmb	IAmb	04 06 33.0	
	comp=Z,15nm,1.1s						
D22K	**Ayikyak River**	**91.28**	**8**	IAmb	IAmb	04 06 33.1	
	comp=Z,17nm,1.1s						
D22K	**Ayikyak River**	**91.28**	**8**	P	**P**	**04 06 20.3**	**0.0**
	baz=200						
C21K	**Knifeblade Rid**	**91.30**	**7**	P	**P**	**04 06 20.7**	**+0.4**
	baz=198						
ZON	**Zonda**	**91.31**	**125**	IAmb	IAmb	04 06 50.7	
	comp=Z,43nm,1.7s						
H29M	**Whitestone**	**91.34**	**14**	IAmb	IAmb	04 06 33.3	
	comp=Z,30nm,1.2s						
H29M	**Whitestone**	**91.34**	**14**	P	**P**	**04 06 20.4**	**-0.2**
	baz=213,SNR=12						
TOLK	**Toolik Lake Re**	**91.47**	**9**	IAmb	IAmb	04 06 33.8	
	comp=Z,23nm,1.4s						
TOLK	**Toolik Lake Re**	**91.47**	**9**	P	**P**	**04 06 21.2**	**+0.1**
	baz=203						
F26K	**Sheenjek River**	**91.47**	**11**	IAmb	IAmb	04 06 24.9	
	comp=Z,16nm,1.1s						
F26K	**Sheenjek River**	**91.47**	**11**	P	**P**	**04 06 22.0**	**+0.8**
	baz=208,SNR=12						
HIA	**Hailar**	**91.53**	**323**	*de*P	**P**	**04 06 22.4**	**+0.5**
HIA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
XAN	**Xi'an**	**91.58**	**306**	P	**P**	**04 06 23.3**	**+0.8**
XAN				SKS	**SKSac**	**04 16 54.6**	**-0.3**
XAN				S	**ScS**	**04 17 26.6**	**+1.5**
XAN				pmax	pmax		
	comp=Z,21nm,1.4s						
XAN				pmax	pmax		
	comp=Z,430nm,5.0s						
XAN				LR	LR		
	comp=Z,590nm,20.6s						
XAN				LR	LR		
	comp=Z,320nm,19.9s						
XAN				LR	LR		
	comp=Z,460nm,22.0s						
E25K	**Arctic Village**	**91.61**	**10**	IAmb	IAmb	04 06 34.9	
	comp=Z,19nm,1.2s						
E25K	**Arctic Village**	**91.61**	**10**	P	**P**	**04 06 22.1**	**+0.3**
	baz=206,SNR=6.1						
D23K	**Nanushuk River**	**91.62**	**8**	IAmb	IAmb	04 06 34.7	
	comp=Z,16nm,1.1s						
D23K	**Nanushuk River**	**91.62**	**8**	P	**P**	**04 06 22.3**	**+0.5**
	baz=202						
B21K	**Ikpikpuk River**	**91.76**	**7**	P	**P**	**04 06 22.5**	**+0.1**
	baz=198						
EPYK	**Eagle Plains**	**91.84**	**14**	IAmb	IAmb	04 06 25.8	
	comp=Z,30nm,1.3s						
EPYK	**Eagle Plains**	**91.84**	**14**	P	**P**	**04 06 22.6**	**-0.3**
	baz=214,SNR=6.6						
B20K	**Meade River**	**91.88**	**6**	P	**P**	**04 06 23.2**	**+0.3**
	baz=196						
H31M	**Peel River**	**91.94**	**15**	IAmb	IAmb	04 06 57.4	
	comp=Z,20nm,1.2s						
H31M	**Peel River**	**91.94**	**15**	P	**P**	**04 06 22.7**	**-0.7**
	baz=217						
G29M	**Pine Creek**	**92.00**	**13**	IAmb	IAmb	04 06 36.1	
	comp=Z,26nm,1.3s						
G29M	**Pine Creek**	**92.00**	**13**	P	**P**	**04 06 23.4**	**-0.3**
	baz=213						
D24K	**Happy Valley**	**92.05**	**9**	P	**P**	**04 06 23.3**	**-0.4**
	baz=203						
F28M	**Old Crow**	**92.21**	**12**	P	**P**	**04 06 24.4**	**-0.2**
	baz=212,SNR=7.7						
NNA	**Nana**	**92.29**	**104**	LR	LR	04 38 40.8	
	comp=Z,629nm,19.7s,baz=239,slow=30						
E27K	**Coleen River**	**92.37**	**12**	IAmb	IAmb	04 06 39.1	
	comp=Z,24nm,1.2s						
E27K	**Coleen River**	**92.37**	**12**	P	**P**	**04 06 25.5**	**+0.2**
	baz=210,SNR=6.9						
C23K	**Itkillik River**	**92.44**	**8**	IAmb	IAmb	04 06 38.4	
	comp=Z,25nm,1.3s						
C23K	**Itkillik River**	**92.44**	**8**	P	**P**	**04 06 25.9**	**+0.3**
	baz=202						
G30M	**tAoh Zraii Nji**	**92.46**	**14**	P	**P**	**04 06 25.6**	**-0.2**
	baz=215,SNR=13						
D25K	**Kavik River**	**92.56**	**10**	P	**P**	**04 06 25.6**	**-0.6**
	baz=206						
B22K	**Teshekpuk Lake**	**92.58**	**7**	P	**P**	**04 06 26.1**	**0.0**
	baz=199						
HHC	**Hu-ho-hao-te**	**92.59**	**313**	*e*P	**P**	**04 06 26.9**	**-0.2**
HHC				SKS	**SKSac**	**04 16 59.3**	**-1.1**
HHC				S	**S**	**04 17 28.4**	**-2.9**
HHC				sS	sS	04 17 36.8	0.0
HHC				SS	**SS**	**04 23 45.1**	**+1.2**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,250nm,5.1s						
HHC				LR	LR		
	comp=Z,230nm,18.6s						
HHC				LR	LR		
	comp=Z,350nm,18.6s						
HHC				LR	LR		
	comp=Z,610nm,18.6s						
C24K	**Franklin Bluff**	**92.59**	**9**	P	**P**	**04 06 26.4**	**+0.2**
	baz=204						
ATAH	**Atahualpa**	**92.68**	**99**	LR	LR	04 40 42.1	
	comp=Z,1µm,18.2s,baz=238,slow=31						
JTS	**Las Juntas de**	**92.86**	**80**	LR	LR	04 39 01.5	
	comp=Z,807nm,19.9s,baz=268,slow=30						
G31M	**Satah River**	**92.86**	**15**	IAmb	IAmb	04 06 40.4	
	comp=Z,22nm,1.0s						
G31M	**Satah River**	**92.86**	**15**	P	**P**	**04 06 27.5**	**0.0**
	baz=217,SNR=8.8						
KMI	**Kunming**	**93.02**	**296**	⇑P	**P**	**04 06 30.8**	**+1.2**
KMI				S	**S**	**04 17 38.9**	**+2.9**
KMI				pmax	pmax		
	comp=Z,28nm,1.5s						
KMI				pmax	pmax		
	comp=Z,330nm,3.1s						
KMI				LR	LR		
	comp=Z,270nm,14.4s						
KMI				LR	LR		
	comp=Z,400nm,16.5s						
KMI				LR	LR		
	comp=Z,550nm,17.9s						
A22K	**Sinclair Lake**	**93.04**	**6**	P	**P**	**04 06 27.9**	**-0.4**
	baz=198						
F30M	**Barrier River**	**93.07**	**14**	IAmb	IAmb	04 06 40.3	
	comp=Z,23nm,1.4s						
F30M	**Barrier River**	**93.07**	**14**	P	**P**	**04 06 28.4**	**-0.2**
	baz=215						
WRGLY	**Wrigley**	**93.12**	**21**	P	**P**	**04 06 28.8**	**0.0**
	baz=226						
E28M	**Babbage River**	**93.12**	**12**	IAmb	IAmb	04 06 31.9	
	comp=Z,16nm,1.1s						
E28M	**Babbage River**	**93.12**	**12**	P	**P**	**04 06 28.3**	**-0.5**
	baz=212,SNR=7.0						
C27K	**Jago River**	**93.26**	**10**	IAmb	IAmb	04 06 32.5	
	comp=Z,16nm,1.2s						
C27K	**Jago River**	**93.26**	**10**	P	**P**	**04 06 29.5**	**+0.1**
	baz=208						
E29M	**Blow River**	**93.27**	**13**	IAmb	IAmb	04 06 41.5	
	comp=Z,13nm,1.1s						
E29M	**Blow River**	**93.27**	**13**	P	**P**	**04 06 28.8**	**-0.6**
	baz=213						
C26K	**Camden Bay**	**93.33**	**10**	P	**P**	**04 06 30.0**	**+0.4**
	baz=207						
F31M	**Tsiigehtchic**	**93.40**	**14**	P	**P**	**04 06 29.9**	**-0.1**
	baz=217,SNR=17						
D27M	**Malcolm River**	**93.40**	**11**	IAmb	IAmb	04 06 43.9	
	comp=Z,23nm,1.2s						
D27M	**Malcolm River**	**93.40**	**11**	P	**P**	**04 06 30.6**	**+0.4**
	baz=211						
BTO	**Baotou**	**93.54**	**312**	*e*P	**P**	**04 06 32.8**	**+1.3**
BTO				pP	**pwP**	**04 06 37.6**	**-3.6**
BTO				sP	**sP**	**04 06 39.8**	**+4.1**
BTO				PP	**PP**	**04 10 21.3**	**+4.9**
BTO				SKS	**SKSac**	**04 17 08.5**	**+2.8**
BTO				S	**ScS**	**04 17 42.1**	**+0.8**
BTO				sS	sS	04 17 51.0	+5.8
BTO				pmax	pmax		
	comp=Z,30nm,0.4s						
BTO				pmax	pmax		
	comp=Z,490nm,5.7s						
BTO				LR	LR		
	comp=Z,350nm,14.0s						
BTO				LR	LR		
	comp=Z,750nm,18.4s						
BTO				LR	LR		
	comp=Z,980nm,19.7s						
CMAR	**Chiang Mai Arr**	**93.87**	**288**	P	**P**	**04 06 34.2**	**+0.9**
	comp=Z,13nm,1.0s,baz=116,slow=2.9,SNR=46						
CMAR				LR	LR	04 45 13.0	
	comp=Z,122nm,21.9s,baz=105,slow=33						
	comp=Z,13nm,1.0s						
D28M	**Stokes Point**	**93.89**	**12**	P	**P**	**04 06 32.3**	**0.0**
	baz=213						
CHTO	**Chiang Mai**	**93.99**	**289**	IAmb	IAmb	04 06 36.4	
	comp=Z,17nm,0.8s						
CHTO	**Chiang Mai**	**93.99**	**289**	P	**P**	**04 06 34.8**	**+0.9**
INK	**Inuvik**	**94.14**	**14**	IAmb	IAmb	04 06 45.5	
	comp=Z,14nm,1.1s						
INK	**Inuvik**	**94.14**	**14**	LR	LR	04 42 39.8	
	comp=Z,602nm,21.6s,baz=209,slow=32						
INK	**Inuvik**	**94.14**	**14**	P	**P**	**04 06 33.0**	**-0.4**
	baz=217						
PZH	**PanZhiHua**	**94.36**	**297**	P	**P**	**04 06 36.5**	**+0.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PZH				pmax	pmax		
	comp=Z,170nm,5.3s						
YKA	**Yellowknife Ar**	**95.75**	**24**	P	**P**	**04 06 40.5**	**-0.4**
	comp=Z,2.4nm,0.9s,baz=246,slow=4.2,SNR=21						
YKA				LR	LR	04 43 16.2	
	comp=Z,378nm,21.6s,baz=233,slow=31						
	comp=Z,2.4nm,0.9s						
YKAW1	**Yellowknife Wh**	**95.79**	**24**	IAmb	IAmb	04 06 53.8	
	comp=Z,12nm,1.1s						
YKAW3	**Yellowknife Wh**	**95.79**	**24**	IAmb	IAmb	04 06 53.7	
	comp=Z,7.8nm,1.1s						
LZH	**Lanzhou**	**96.21**	**306**	*e*P	**P**	**04 06 44.4**	**+0.5**
LZH				sP	pwP	04 06 55.4	+1.8
LZH				pmax	pmax		
	comp=Z,170nm,5.3s						
LZH				LR	LR		
	comp=Z,260nm,15.6s						
LZH				LR	LR		
	comp=Z,510nm,16.1s						
LZH				LR	LR		
	comp=Z,550nm,16.3s						
TNCH	**TengChong**	**96.55**	**294**	P	**P**	**04 06 45.5**	**-0.2**
TNCH				pmax	pmax		
	comp=Z,30nm,1.5s						
TNCH				pmax	pmax		
	comp=Z,270nm,3.3s						
TNCH				LR	LR		
	comp=Z,270nm,22.0s						
TNCH				LR	LR		
	comp=Z,490nm,28.8s						
TNCH				LR	LR		
	comp=Z,440nm,17.7s						
C36M	**Paulatuk**	**97.20**	**16**	P	**P**	**04 06 46.6**	**-0.8**
	baz=226						
LPAZ	**La Paz**	**98.33**	**111**	LR	LR	04 42 55.9	
	comp=Z,1µm,19.6s,baz=246,slow=30						
ULN	**Ulaanbaatar**	**98.41**	**318**	⇓*e*P	**P**	**04 06 52.6**	**-1.0**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.4s						
A36M	**Sachs Harbour**	**98.78**	**14**	P	**P**	**04 06 53.7**	**-0.7**
	baz=225						
SONM	**Songino Array**	**98.81**	**318**	P	**P**	**04 06 54.5**	**-0.9**
	comp=Z,2.0nm,1.0s,baz=106,slow=5.3,SNR=6.9						
	comp=Z,2.0nm,1.0s						
ULM	**Lac du Bonnet**	**98.90**	**39**	LR	LR	04 46 56.8	
	comp=Z,1µm,19.5s,baz=256,slow=33						
GTA	**Gaotai**	**100.36**	**308**	P	**Pdif**	**04 07 04.3**	**+1.9**
GTA				pP	pwP	04 07 08.5	-3.7
GTA				PP	**PP**	**04 11 08.1**	**-1.0**
GTA				SKS	**SKSac**	**04 17 44.1**	**+2.9**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.6s						
GTA				LR	LR		
	comp=Z,150nm,19.6s						
GTA				LR	LR		
	comp=Z,300nm,20.4s						
GTA				LR	LR		
	comp=Z,270nm,20.0s						
WMQ	**Urumqi**	**110.26**	**310**	*e*PKP	**PKiKP**	**04 11 47.4**	**-0.1**
WMQ				LR	LR		
	comp=Z,290nm,21.7s						
WMQ				LR	LR		
	comp=Z,230nm,23.7s						
ZALV	**Zalesovo Beam**	**113.45**	**321**	PKiKP	**PKiKP**	**04 11 52.7**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=79,slow=3.1,SNR=2.2						
M65A	**Busby, Falmout**	**113.66**	**53**	P	**PKiKP**	**04 11 52.7**	**-1.2**
	baz=262						
MKAR	**Makanchi Array**	**114.45**	**313**	PKP	PKPdf	04 11 53.9	-1.4
	comp=Z,0.5nm,0.6s,baz=108,slow=1.5,SNR=4.4						
MKAR				PKKPab	**PKKPab**	**04 22 41.4**	**+2.0**
	comp=Z,0.5nm,0.8s,baz=299,slow=3.0,SNR=4.4						
KURK	**Kurchatov**	**117.10**	**317**	⇑*i*PKIKP	**PKPdf**	**04 11 59.3**	**-0.9**
KURBB	**Kurchatov Arra**	**117.16**	**317**	PKP	**PKPdf**	**04 11 59.1**	**-1.2**
	comp=Z,1.7nm,1.0s,baz=93,slow=2.1,SNR=6.8						
KURBB				PP	**PP**	**04 13 07.3**	**-3.5**
	comp=Z,0.3nm,0.4s,baz=94,slow=6.7,SNR=4.7						
KURBB				PKKPbc	**PKKPbc**	**04 22 25.6**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=278,slow=4.7,SNR=6.0						
KSH	**Kashi**	**118.39**	**304**	PKP	**PKiKP**	**04 12 06.3**	**+3.0**
KSH				LR	LR		
	comp=Z,570nm,18.2s						
KSH				LR	LR		
	comp=Z,460nm,24.4s						
KSH				LR	LR		
	comp=Z,520nm,20.3s						
BVAR	**Borovoye Array**	**122.08**	**320**	PKP	**PKPdf**	**04 12 09.4**	**-0.3**
	comp=Z,2.0nm,0.6s,baz=95,slow=3.3,SNR=10.0						
BRVK	**Borovoye**	**122.14**	**320**	*d i*PKIKP	**PKPdf**	**04 12 08.5**	**-1.3**
BOSA	**Boshof**	**126.97**	**201**	PKP	**PKPdf**	**04 12 21.0**	**+0.8**
	comp=Z,5.8nm,1.1s,baz=126,slow=7.0,SNR=4.2						
BOSA	**Boshof**	**126.97**	**201**	PKIKP	**PKPdf**	**04 12 21.0**	**+0.8**
ARTI	**Arti**	**128.06**	**326**	*i* PKIKP	**PKPdf**	**04 12 20.9**	**-0.2**
ARTI						04 14 24.3	
ARTI						04 19 31.8	
ARTI				SP	SP	04 24 29.1	+0.7
ARTI				SS	**SS**	**04 31 36.0**	**-1.6**
ARTI				MLR	MLR		
	comp=Z,880nm,20.0s						
KLMR	**Klimovskoe**	**134.07**	**338**	*e*PKIKP	**PKPdf**	**04 12 30.0**	**-2.3**
KLMR				pmax	pmax		
	comp=Z,16nm,1.4s						
BELG	**Belogornoye**	**135.43**	**324**	*d i*PKIKP	**PKPdf**	**04 12 35.5**	**+0.4**
FINES	**FINESS Array B**	**137.54**	**346**	PKP	**PKPdf**	**04 12 36.9**	**-1.9**
	comp=Z,1.0nm,0.6s,baz=79,slow=3.0,SNR=4.7						
OBN	**Obninsk**	**139.19**	**333**	⇓*e*PKIKP	**PKPdf**	**04 12 42.5**	**+0.6**
OBN				*i*		04 12 44.8	
OBN				PPP	PPP	04 18 45.0	
OBN				*i* SS	SS	04 33 52.0	+0.5
OBN				*e*SSS	SSS	04 39 08.8	
OBN				pmax	pmax		
	comp=Z,30nm,1.9s						
OBN				pmax	pmax		
	comp=Z,9.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,318nm,20.0s						
VRH	**Novokhopyorsk**	**139.19**	**326**	*e*PKIKP	**PKPdf**	**04 12 42.0**	**-0.1**
VRH				pmax	pmax		
	comp=Z,21nm,1.5s						
MAK	**Makhachkala**	**139.26**	**312**	*i* P	**Pdif**	**04 09 45.3**	**-10**
MAK				*e*PPP	PPP	04 18 33.8	
MAK				*e*		04 19 47.7	
MAK				*e*SS	SS	04 33 46.0	-7.7
MAK				pmax	pmax		
	comp=Z,141nm,1.3s						
VORR	**Voronezh**	**140.21**	**328**	*e*PKIKP	**PKPdf**	**04 12 42.0**	**-1.9**
VORR				pmax	pmax		
	comp=Z,21nm,1.5s						
VSR	**Storozhevoye**	**140.50**	**327**	*e*PKIKP	**PKPdf**	**04 12 42.1**	**-2.4**
VSR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HFS	**Hagfors**	**140.84**	**354**	PKhKP	PKPpre	04 12 37.5	
	comp=Z,2.5nm,0.8s,baz=95,slow=3.6,SNR=4.7						
KBZ	**Khabaz**	**142.11**	**315**	⇑*i*PKIKP	**PKPdf**	**04 12 49.6**	**+2.0**
STRU	**Stroemstad**	**142.14**	**356**	*i* P	**PKiKP**	**04 12 53.8**	**+3.7**
KIV	**Kislovodsk**	**142.15**	**315**	*i* PKIKP	**PKPdf**	**04 12 48.8**	**+1.0**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ERBR	**Yeremizino-Bor**	**142.76**	**319**	*i* PKIKP	**PKPdf**	**04 12 45.0**	**-3.7**
ERBR				*e*		04 15 53.8	
ERBR				pmax	pmax		
	comp=Z,31nm,1.1s						
MNK	**Minsk**	**142.95**	**339**	*i* PKiKP	**PKiKP**	**04 12 52.5**	**+0.6**
	comp=Z,4.0nm,0.5s,baz=35						
MNK				*i* PP	**PP**	**04 15 56.5**	**-1.2**
MNK				*i* PPP	PPP	04 18 52.0	
MNK				*i* SKS	sSKSac	04 20 22.9	+12
MNK				*i* SKKS	**SKKSdf**	**04 29 21.0**	**+4.4**
MNK				*i* SS	**SS**	**04 34 39.0**	**+3.9**
MNK				*i* SSS	SSS	04 39 59.8	
MNK				*i* LRM	MLR	05 15 43.7	
	comp=E,467nm,21.3s						
MNK				*i* LRM	MLR	05 15 43.7	
	comp=N,207nm,18.8s						
MNK				*i* LRM	MLR	05 15 46.6	
	comp=Z,815nm,21.2s						
MNK	**Minsk**	**142.95**	**339**	*i* PKIKP	**PKiKP**	**04 12 52.5**	**+0.6**
MNK				*i*		04 15 56.5	
MNK				*i* SS	SS	04 34 39.0	+3.9
MNK				*i* SSS	SSS	04 39 59.8	
MNK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MNK				MLR	MLR		
	comp=N,207nm,19.0s						
MNK				MLR	MLR		
	comp=E,467nm,21.0s						
MNK				MLR	MLR		
	comp=Z,815nm,21.0s						

SNART	Snartemo	143.02	359	*i* P	PKiKP	04 12 54.8	+2.8
LABN	Labinsk	143.12	317	*i* PKHKP	PKPpre	04 12 44.2	
LABN				pmax	pmax		
	comp=Z,24nm,0.7s						
SOC	Sochi	144.25	316	*e*PKIKP	PKPab	04 12 48.2	-1.1
SOC				*e*		04 16 03.1	
BLEU	Blekinge	144.31	351	*i* P	PKPab	04 12 48.0	-1.0
DEL	Delary	144.41	352	*i* P	PKPab	04 12 49.4	0.0
SUW	Suwalki	144.83	342	*e*PKP	PKPab	04 12 50.9	-0.1
BJUU	Bjuv	144.90	353	*i* P	PKPab	04 12 51.0	-0.3
ANN	Anapa	145.08	319	*e*PKIKP	PKPab	04 12 51.7	-0.5
ANN				pmax	pmax		
	comp=Z,111nm,1.8s						
LUNU	Lund	145.29	353	*i* P	PKPbc	04 12 52.0	-0.5
EKA	Eskdalemuir Ar	145.36	9	PKPbc	PKPbc	04 12 52.4	-0.4
	comp=Z,4.5nm,0.8s,baz=313,slow=3.0,SNR=8.2						
AKASG	Malin Array Be	145.45	334	PKPbc	PKPbc	04 12 52.5	-0.8
	comp=Z,16nm,0.9s,baz=37,slow=3.5,SNR=75						
AKBB	Malin Array Si	145.45	334	*c i*PKIKP	PKPbc	04 12 51.8	-1.4
SSRD	Sdr. Stenderup	145.78	356	*i* P	PKPdf	04 12 54.1	+0.5
RGN	Rugen	146.36	352	*e*PKP	PKPdf	04 12 55.4	+0.8
	baz=10,slow=3.9						
SIM	Simferopol'	146.95	322	*e*PKP2	PKPdf	04 12 57.0	+1.0
SIM				pmax	pmax		
	comp=Z,45nm,1.4s						
GKP	Gorka Klasztor	146.95	348	*e*PKP	PKPab	04 12 58.7	-0.3
R9F13	Warsaw-Wawer	146.99	343	*e*PKP	PKiKP	04 13 00.4	+0.1
BSEG	Bad Segeberg	147.27	355	*e*PKP	PKPbc	04 12 58.5	0.0
	baz=10,slow=3.9						
BEL	Belsk	147.43	343	*e*PKP	PKPbc	04 12 59.6	+0.6
SORM	Soroca	147.76	331	⇑P	PKPbc	04 12 59.9	-0.2
SORM	Soroca	147.76	331	⇑PKP2	PKPbc	04 12 59.9	-0.2
GORT1	Trebel	148.12	354	*e*PKP	PKPbc	04 13 00.5	-0.2
	baz=10,slow=3.9						
RUE	Ruedersdorf	148.32	351	*e*PKP	PKPbc	04 13 00.7	-0.6
	baz=10,slow=3.9						
RETH	Rethem/Aller,	148.53	356	*e*PKP	PKPbc	04 13 01.6	-0.2
	baz=10,slow=3.9						
NRDL	Niedersach Rie	148.72	355	*e*PKP	PKPbc	04 13 02.1	-0.2
	baz=10,slow=3.9						
KWP	Kalwaria Pacla	148.78	339	*e*PKP	PKPbc	04 13 02.6	-0.2
FLTG	Flechtingen	148.78	354	*e*PKP	PKPbc	04 13 02.0	-0.6
	baz=10,slow=3.9						
ASSE	Asse, Remlinge	149.03	354	*e*PKP	PKPbc	04 13 03.0	-0.1
	baz=10,slow=3.9						
IBBN	Ibbenburen	149.04	358	*e*PKP	PKPbc	04 13 02.9	-0.3
	baz=10,slow=3.9						
OJC	Ojcow	149.16	343	*e*PKP	PKPbc	04 13 03.6	0.0
KSP	Ksiaz	149.44	347	*e*PKP	PKPbc	04 13 04.5	+0.1
STHS	Stebnicka Huta	149.44	340	*e*PKP	PKPbc	04 13 04.0	-0.4
STHS				*e*		04 13 09.5	
BURAR	Bucovina Array	149.51	334	⇑P	PKiKP	04 13 07.6	+1.8
BURAR	Bucovina Array	149.51	334	⇑PKP2	PKiKP	04 13 07.6	+1.8
KOLS	Kolonicke sedl	149.52	339	*e*PKP2	PKiKP	04 13 06.3	+0.6
KOLS	Kolonicke sedl	149.52	339	*e*PKP	PKiKP	04 13 06.3	+0.6
CLL	Collm	149.57	351	*e*PKP	PKPbc	04 13 04.2	-0.4
	baz=10,slow=3.9						
CLL	Collm	149.57	351	*e*PKPdf	PKPdf	04 13 01.0	+0.9
CLL				*e*PKPbc	PKPbc	04 13 04.0	-0.6
	comp=Z,236nm,2.8s						
CLL				*i* PKPab	PKPab	04 13 08.8	-0.8
CLL				*i* x	x	04 13 10.5	
	comp=Z,46nm,1.3s						
CLL				*i* x	x	04 13 20.3	
	comp=Z,76nm,1.2s						
CLL				*e*PKPlp		04 13 30.0	
	comp=Z,300nm,17.5s						
CLL				*e*SKPdf	SKPdf	04 16 35.0	+1.6
CLL				*e*SSSS		04 45 30.0	
CLL				AMS	AMS	05 19 00.0	
	comp=Z,400nm,21.7s						
GTTG	Gottingen	149.68	355	*e*PKP	PKPbc	04 13 05.0	+0.1
	baz=10,slow=3.9						
OSTC	Ostas	149.73	347	AMS	AMS	05 19 10.0	
	comp=Z,600nm,20.0s						
CHVC	Chvalec	149.73	347	⇑*e*PKP	PKPab	04 13 10.4	+0.1
CHVC				AMS	AMS	05 19 30.0	
	comp=Z,600nm,18.7s						
CHVC	Chvalec	149.73	347	*e*PKP2	PKPab	04 13 10.4	+0.1
CHVC				MLR	MLR		
	comp=Z,600nm,18.7s						
NIE	Niedzica	149.73	341	*e*PKP	PKPbc	04 13 05.5	+0.3
TESR	Tescani	149.75	331	⇑P	PKPbc	04 13 06.1	+0.8
UPC	Upice	149.82	347	AMS	AMS	05 19 20.0	
	comp=Z,700nm,21.2s						
NEUB	Neuenburg	149.83	353	*e*PKP	PKPbc	04 13 05.2	-0.1
	baz=10,slow=3.9						
BRG	Berggiesshubel	149.85	350	*e*PKP	PKPbc	04 13 05.0	-0.3
	baz=10,slow=3.9						
BRG	Berggiesshubel	149.85	350	*e*PKP	PKPbc	04 13 05.3	0.0
BRG				Amp		04 13 06.9	
	comp=Z,30nm,1.6s						
BRG	Berggiesshubel	149.85	350	P	PKPab	04 13 10.3	-0.5
BRG				Amp		04 13 11.4	
	comp=Z,35nm,1.4s						
BRG	Berggiesshubel	149.85	350	P	PKPab	04 13 16.9	+6.1
BRG				Amp		04 13 18.1	
	comp=Z,34nm,1.3s						
DPC	Dobruska-Polom	149.90	347	⇑*e*PKP	PKiKP	04 13 06.5	0.0
DPC				*e*x	x	04 13 12.0	
DPC				AMS	AMS	05 29 40.0	
	comp=Z,700nm,20.4s						
DPC	Dobruska-Polom	149.90	347	*e*PKP2	PKiKP	04 13 06.5	0.0
DPC				MLR	MLR		
	comp=Z,700nm,20.4s						
BUG	Bochum--Univer	149.93	358	*e*PKP	PKPbc	04 13 04.7	-0.7
	baz=10,slow=3.9						
OKC	Ostrava-Krasne	149.95	344	AMS	AMS	05 19 40.0	
	comp=Z,700nm,24.0s						
STEB	Steborice	149.95	345	⇑*e*PKP	PKPbc	04 13 05.0	-0.6
STEB				*e*x	x	04 13 15.0	
ONER	Baraj Valea Uz	150.00	331	⇑P	PKiKP	04 13 07.1	+0.4
CFR	Carcaliu	150.02	328	⇓P	PKPbc	04 13 06.2	+0.3
KRLC	Kraliky	150.06	346	⇑*e*PKP	PKiKP	04 13 07.6	+0.8
KRLC				AMS	AMS	05 18 20.0	
	comp=Z,600nm,20.3s						
KRLC	Kraliky	150.06	346	*e*PKP2	PKiKP	04 13 07.6	+0.8
KRLC				MLR	MLR		
	comp=Z,600nm,20.3s						
PVCC	Panska Ves	150.07	349	AMS	AMS	05 21 30.0	
	comp=Z,600nm,22.8s						
BRTR	Keskin Array B	150.09	314	PKPbc	PKPbc	04 13 05.5	-0.9
	comp=Z,8.3nm,1.1s,baz=128,slow=2.0,SNR=14						
TPGR	Topolog	150.10	327	⇑P	PKPbc	04 13 04.3	-1.8
KASTN	Kahler Asten	150.12	357	*e*PKP	PKPbc	04 13 05.5	-0.5
	baz=10,slow=3.9						
MORC	Moravsky Berou	150.16	345	*e*PKP	PKPbc	04 13 05.7	-0.5
MORC	Moravsky Berou	150.16	345	⇑P	PKiKP	04 13 07.1	+0.1
MORC	Moravsky Berou	150.16	345	⇑PKIKP	PKiKP	04 13 07.1	+0.1
KIRS	Kirsehir-Merke	150.19	313	⇑P	PKPbc	04 13 06.3	-0.4
VRI	Vrincioaia	150.20	330	⇑P	PKPbc	04 13 06.2	-0.2
VRI	Vrincioaia	150.20	330	⇑PKIKP	PKPbc	04 13 06.2	-0.2
LANS	Liptovska Anna	150.22	342	*e*PKP	PKiKP	04 13 08.6	+1.4
PLOR	Plostina	150.24	330	⇑P	PKPbc	04 13 06.0	-0.5
PLOR	Plostina	150.24	330	⇑PKIKP	PKPbc	04 13 06.0	-0.5
TURR	Turia	150.38	331	⇑P	PKiKP	04 13 08.2	+0.6
UBBA	Unterbreizbach	150.39	355	*e*PKP	PKPbc	04 13 06.2	-0.3
	baz=10,slow=3.9						
MOX	Moxa	150.40	353	*e*PKP	PKPbc	04 13 06.4	-0.3
	baz=10,slow=3.9						
OZUR		150.45	331	⇑P	PKiKP	04 13 08.0	+0.3
MAUC	Maruska	150.47	344	⇑*e*PKP	PKPbc	04 13 07.7	+0.8
MAUC				*e*x	x	04 13 16.7	
HARR	Harsova	150.47	327	⇑P	PKiKP	04 13 08.7	+0.9
TANN	Tannenbergstha	150.52	352	*e*PKP	PKPbc	04 13 06.9	-0.1
	baz=10,slow=3.9						
PRA	Prague	150.54	349	AMS	AMS	05 21 30.0	
	comp=Z,600nm,22.4s						
UCC	Uccle	150.56	2	*d*PKP	PKPbc	04 13 06.5	-0.5
ANTO	Ankara	150.58	315	⇑P	PKPbc	04 13 07.7	+0.1
ANTO	Ankara	150.58	315	⇑PKIKP	PKPbc	04 13 07.7	+0.1
PRU	Pruhonice	150.60	349	AMS	AMS	05 21 40.0	
GOPC	GO Pecny, Ondr	150.62	348	AMS	AMS	05 27 30.0	
	comp=Z,500nm,16.3s						
DOPR	Dopca	150.73	332	⇑P	PKiKP	04 13 09.2	+0.9
MEM	Membach	150.78	360	*d*PKP	PKPbc	04 13 06.5	-1.1
BTNL	Ternell	150.80	360	*d*PKP	PKiKP	04 13 08.9	+0.6
BSTI	Sart Tilman	150.80	0	*d*PKP	PKiKP	04 13 09.3	+1.1
VRAC	Vranov	150.82	346	*e*PKP	PKiKP	04 13 08.5	+0.1
MLR	Muntele Rosu	150.84	330	⇑P	PKPbc	04 13 08.6	+0.5
MLR	Muntele Rosu	150.84	330	⇑PKIKP	PKPbc	04 13 08.6	+0.5
BCLA	Clavier	150.96	1	*d*PKP	PKPab	04 13 15.2	-0.1
JAVC	Velka Javorina	150.97	344	*e*PKP	PKiKP	04 13 09.0	+0.2
MANZ	Manzenberg	150.99	352	*e*PKP	PKPbc	04 13 07.9	-0.2
	baz=10,slow=3.9						
VYHS	Vyhne	150.99	342	*e*PKP	PKiKP	04 13 09.3	+0.5
BGES	Gesves	150.99	1	*d*PKP	PKPab	04 13 14.8	-0.7
BMRD	Maredsous	151.07	2	*d*PKP	PKPbc	04 13 08.1	-0.2
KRUC	Moravsky	151.09	346	*e*PKP	PKPbc	04 13 08.2	-0.2
TNS	Taunus Mts	151.10	357	*e*PKP	PKiKP	04 13 09.9	+0.9
	baz=10,slow=3.9						
DRGR		151.17	336	⇓P	PKPbc	04 13 08.8	+0.1
DRGR		151.17	336	⇓PKIKP	PKPbc	04 13 08.9	+0.1
PSZ	Piszkesteto	151.19	340	⇑P	PKiKP	04 13 09.6	+0.4
PSZ	Piszkesteto	151.19	340	⇑PKIKP	PKiKP	04 13 09.6	+0.4
ROTZ	Rotzenmuhle	151.19	352	*e*PKP	PKPbc	04 13 08.3	-0.3
	baz=10,slow=3.9						
ZVC	Zvikov	151.19	349	AMS	AMS	05 23 20.0	
	comp=Z,800nm,19.6s						
DOU	Dourbes	151.27	2	*d*PKP	PKiKP	04 13 10.4	+1.2
VOIR		151.29	331	⇑P	PKPbc	04 13 09.2	+0.1
VOIR		151.29	331	⇑PKIKP	PKPbc	04 13 09.2	+0.1
GRF	Grafenberg Arr	151.39	353	*e*PKP	PKiKP	04 13 11.0	+1.5
	baz=10,slow=3.9						
MMAI	Mount Meron Ar	151.42	300	PKPbc	PKPbc	04 13 10.4	+0.7
	comp=Z,6.9nm,0.7s,baz=69,slow=3.0,SNR=8.5						
MODS	Modra-Piesok	151.52	344	*e*PKP	PKiKP	04 13 10.2	+0.3
ARR	Arges	151.53	332	⇑P	PKiKP	04 13 11.3	+1.2
KHC	Kasperske Hory	151.59	349	⇑*e*PKP	PKiKP	04 13 12.1	+2.1
KHC				*e*x	x	04 13 19.4	
KHC				*e*x	x	04 13 30.0	
KHC				AMS	AMS	05 31 50.0	
	comp=Z,400nm,17.0s						
WET	Wettzell	151.70	350	*e*PKP	PKiKP	04 13 12.1	+1.9
	baz=10,slow=3.9						
WLF	Walferdange	151.72	360	*d*PKP	PKPbc	04 13 09.2	-0.6
WLF	Walferdange	151.72	360	*e*PKP	PKiKP	04 13 11.7	+1.5
	baz=10,slow=3.9						
CKRC	Cesky Krumlov	151.76	348	⇑*e*PKP	PKiKP	04 13 12.1	+1.7
CKRC				AMS	AMS	05 22 00.0	
	comp=Z,700nm,22.9s						
LOT	Lotru	151.84	333	⇑P	PKPbc	04 13 10.6	+0.2
GEC2	GERESS Array S	151.85	349	*e*PKP	PKiKP	04 13 12.4	+1.8
	baz=10,slow=3.9						
GERES	GERESS Array B	151.85	349	PKPbc	PKPbc	04 13 09.7	-0.6
	comp=Z,2.7nm,0.9s,baz=333,slow=1.8,SNR=11						
SURR	Surduc	152.26	335	⇑P	PKPbc	04 13 11.6	+0.4
CONA	Conrad Observa	152.28	346	*i* PKP	PKPbc	04 13 11.1	-0.1
	comp=Z,7.4nm,1.3s						
CONA				*e*pPKP	pPKPab	04 13 22.2	-2.0
	comp=Z,22nm,1.2s						
GZR	Gura Zlata	152.30	334	⇑P	PKiKP	04 13 11.9	+0.3
RONA	Rosalia, Austr	152.39	345	*e*PKP	PKPab	04 13 22.0	+0.6
	comp=Z,19nm,1.1s						
BZS	Buzias	152.57	336	⇑P	PKiKP	04 13 12.9	+0.8
MOA	Molln	152.70	348	*e*PKP	PKPdf	04 13 04.5	-0.5
	comp=Z,3.6nm,1.2s						
MOA				*e*PKP	PKPbc	04 13 11.7	-0.4
	comp=Z,4.6nm,1.1s						
MOA				*i* PKP	PKPab	04 13 22.1	-0.6
	comp=Z,12nm,1.4s						
HERR	Herculane	152.86	334	⇑P	PKPbc	04 13 11.6	-1.0
FUR	Furstenfeldbru	152.88	352	*e*PKP	PKiKP	04 13 17.0	+4.4
	baz=10,slow=3.9						
BIOA	Bad Ischl, Aus	152.97	349	*e*PKP	PKPab	04 13 24.7	+0.8
	comp=Z,36nm,1.4s						
BFO	Black Forest	152.99	356	*e*PKP	PKiKP	04 13 17.3	+4.4
	baz=10,slow=3.9						
ARSA	Arzberg	153.00	346	*e*PKP	PKPdf	04 13 04.6	-0.9
	comp=Z,8.1nm,1.3s						
ARSA				*i* PKP	PKPab	04 13 23.9	-0.1
	comp=Z,12nm,1.2s						
RJOB	Jochberg	153.08	350	*e*PKP	PKiKP	04 13 18.1	+5.0
	baz=10,slow=3.9						
BAND	Balkesir-Ban	153.26	320	⇑P	PKPbc	04 13 13.8	+0.2
LESA	Schwarzleotal	153.40	350	*e*PKP	PKPab	04 13 25.1	-0.6
	comp=Z,18nm,1.2s						
UBR	Ueberruh	153.49	354	*e*PKP	PKiKP	04 13 17.8	+3.8
	baz=10,slow=3.9						
RETA	Reutte	153.61	353	*e*PKiKP	PKPbc	04 13 14.6	+0.4
	comp=Z,2.6nm,0.6s						
RETA				*i* PKP	PKPab	04 13 26.0	-0.6
	comp=Z,11nm,0.9s						
SOKA	Soboth	153.65	346	*i* PKP	PKPdf	04 13 06.6	+0.1
	comp=Z,2.7nm,1.0s						
SOKA				*i* PKP	PKPbc	04 13 14.3	0.0
	comp=Z,9.5nm,1.7s						
SOKA				*e*PKP	PKPab	04 13 26.3	-0.5
	comp=Z,28nm,1.5s						
MOTA	Moosalm	153.71	352	*e*PKP	PKPdf	04 13 05.9	-0.8
	comp=Z,7.1nm,1.9s						
MOTA				*e*PKP	PKPab	04 13 26.3	-0.8
	comp=Z,31nm,1.1s						
SULZ	Cheisacher	153.80	357	*e*PKP	PKPab	04 13 26.0	-1.4
	baz=10,slow=3.9						
MYKA	Terra Mystica	153.99	348	*i* PKP	PKPbc	04 13 15.0	0.0
	comp=Z,1.8nm,0.4s						
BALST	Balsthal	154.01	357	*e*PKP	PKPab	04 13 26.7	-1.6
	baz=10,slow=3.9						
FETA	Feichten	154.07	352	*e*PKP	PKPdf	04 13 06.6	-0.6
	comp=Z,4.6nm,1.1s						
FETA				*e*PKiKP	PKPbc	04 13 15.7	+0.4
	comp=Z,6.9nm,1.4s						
FETA				*e*PKP	PKPab	04 13 27.1	-1.7
	comp=Z,19nm,1.2s						
PLONS	Plons/SG	154.19	355	*e*PKP	PKPab	04 13 27.9	-1.2
	baz=10,slow=3.9						
EZN	Ezine	154.65	321	⇑P	PKPdf	04 13 09.2	+1.2
EZN	Ezine	154.65	321	⇑PKIKP	PKPdf	04 13 09.2	+1.2
PDG	Podgorica	156.17	335	⇑P	PKPab	04 13 36.8	-0.8
PGAV	Gavieira, Arco	156.19	27	*e*PKPdf	PKPdf	04 13 02.2	-8.0
PGAV				*e*PP	PP	04 17 33.2	+19
PGAV				*e*SS	SS	04 37 10.3	+6.9
PGAV				*e*LR	LR	05 10 36.0	
PGAV				*i* AMs_20		05 20 19.6	
	comp=Z,670nm,20.0s						
PMOZ	Porto Moniz, M	156.48	56	*e*PKPdf	PKPdf	04 13 15.4	+4.6
PMOZ				*e*LR	LR	05 16 38.9	
PMOZ				*i* AMs_20		05 19 25.3	
	comp=Z,429nm,18.0s						
PCAB	Cabril	156.51	27	*e*PKPab	PKPab	04 13 38.3	-0.9
POLO	Lamas de Olo	156.88	27	*e*PKPab	PKPab	04 13 42.6	+1.8
PVRL	Vila Real	157.00	27	*e*PKPab	PKPab	04 13 43.0	+1.7
MVO	Moncorvo	157.38	26	*e*PKPab	PKPab	04 13 43.5	+0.5
MVO				*i* tx	tx	04 13 55.3	
MVO				*e*PP	PP	04 17 32.3	+11
MVO				*e*SS	SS	04 37 21.0	+5.0
MVO				*e*LR	LR	05 12 41.3	
MVO				*i* AMs_20		05 21 13.1	
	comp=Z,570nm,20.0s						
MTE	Manteigas	157.79	28	*e*PP	PP	04 17 39.6	+16
MTE				*e*SS	SS	04 37 26.5	+5.9
MTE				*e*LQ	LQ	05 01 51.3	
MTE				*e*LR	LR	05 13 02.5	
MTE				*i* AMs_20		05 22 00.2	
	comp=Z,578nm,20.0s						
PSBE	So Bento	157.92	32	*e*PP	PP	04 17 50.6	+26
PSARD	Sardoal	158.15	30	*e*PKPab	PKPab	04 13 46.6	+0.3
PSARD				*i* tx	tx	04 13 58.3	
PMTG	Montargil	158.54	31	*i* tx	tx	04 13 59.8	
PMTG				*e*PP	PP	04 17 42.3	+15
PMRV	Marv??o	158.65	29	*e*LR	LR	05 10 59.3	
PMRV				*i* AMs_20		05 18 20.6	
	comp=Z,464nm,18.0s						
MORF	Marmelete	159.66	35	*e*PKPdf	PKPdf	04 13 15.4	+0.9
PFVI	Vila Bisbo	159.69	36	*e*PP	PP	04 17 52.7	+19
PCVE	Castro Verde	159.74	34	*e*PKPdf	PKPdf	04 13 15.8	+1.3
PCVE				*e*PP	PP	04 17 50.6	+16
PBAR	Barrancos	159.82	31	*e*PP	PP	04 17 46.5	+12
ESDC	Sonseca Array	159.84	23	PKPab	PKPab	04 13 53.6	-0.1
	comp=Z,1.2nm,0.7s,baz=321,slow=4.0,SNR=10.0						
PVAQ	Vaqueiros	160.08	33	*e*PP	PP	04 17 51.4	+15
PVAQ				*e*LR	LR	05 11 40.8	
PVAQ				*i* AMs_20		05 25 45.6	
	comp=Z,466nm,20.0s						
PBDV	Barranco-do-Ve	160.09	34	*e*PP	PP	04 17 50.6	+14
DBIC	Dimbokro	162.07	143	PKPab	PKPab	04 14 03.2	-0.7
	comp=Z,7.7nm,0.9s,baz=181,slow=5.9,SNR=5.4						
TORD	Torodi Ar. Bea	170.91	153	PKP	PKPdf	04 13 23.6	-1.0
	comp=Z,1.1nm,0.3s,baz=117,slow=0.9,SNR=1.4						
TORD				PKPab	PKPab	04 14 43.0	+0.2
	comp=Z,2.0nm,0.4s,baz=214,slow=2.6,SNR=1.9						

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*BJI **14** 03:59:28.8, 5°.44N×60°.31E, h10^{km}, mB5.0/10, mb4.6/32, Ms4.7/18, Ms7 4.6/19*

*IDC **14** 03:59:34.2±0.8, 6°.07N×60°.82E, h0^{km}, mb4.0/18, mbtmp4.0/18, ML1.4/1, MS4.3/32, Error ellipse: s-maj=21.2km s-min=17.6km az=49.0*

*NEIC **14** 03:59:35.7±2.6, 5°.91N±0°.09×60°.70E±0°.07, h10^{km}±1^{km}, mb4.9/56, Error ellipse: s-maj=18.4km s-min=6.1km az=144.0*

*GCMT **14** 03:59:37.7±0.2, 6°.19N±0°.02×60°.57E±0°.02, h12^{km}, MW5.1/110, Moment Tensor Solution. s30,c33; s110,c153; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.03±.12; $M_{\theta\theta}$2.20±.10; $M_{\phi\phi}$1.83±.13; $M_{r\theta}$2.94±.37; $M_{\theta\phi}$-2.08±.09; $M_{\phi r}$2.20±.43; Best double couple: $M_0$5.19700×10^{16} NP1:ϕ_s156.00000°, δ46.00000°, λ-46.00000°. NP2:ϕ_s282.00000°, δ59.00000°, λ-125.00000°. Principal axes: T 4.1940, Plg7.0000°, Azm36.0000°; N 2.0060, Plg30.0000°, Azm302.0000°; P -6.2000, Plg59.0000°, Azm139.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 03:59:36.4±0.4**, 5°.91N**±0°.06×**60°.67E**±0°.05**, h15^{km}, n202, σ1^s.57**/208**, mb4.8**/77**, MS4.3**/39**, 1C, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSEY	Mahe Island	11.72	206	Pn	Pn	04 02 21.9	-1.5
MSEY	Mahe Island	11.72	206	P	Pn	04 02 22.9	-0.4
MSEY				S	Sn	04 04 33.7	-0.4
MSEY	Mahe Island	11.72	206	P	Pn	04 02 23.8	+0.5
ABTO	Aybut	13.47	328	P	Pn	04 02 51.1	+3.9
ABTO				P	Pn	04 02 51.1	+3.9
WHFO	Wadi Hawf	13.71	331	P	Pn	04 02 53.0	+2.6
WHFO				P	Pn	04 02 53.0	+2.6
DOK	Doka	14.15	334	P	Pn	04 02 58.3	+1.9
DQM	DQM	14.26	348	P	Pn	04 03 00.3	+2.3
MHTO	MHTO	15.21	350	P	P	04 03 15.0	-0.8
	SNR=11						
MHTO				P	P	04 03 15.0	-0.8
	SNR=11						
MNGI	Mangalore	15.60	62	*e*P	Pn	04 03 13.9	-2.1
MNGI				IAmb	IAmb	04 03 22.0	
	comp=Z,89nm,0.2s						
MNGI				*e*S	Sn	04 06 11.0	+2.3
JLN	Jalan Bani Buh	16.19	356	P	Pn	04 03 24.2	+0.7
JLN				P	Pn	04 03 24.2	+0.7
JMDO	Jabal Madar	16.55	352	P	P	04 03 29.8	-0.8
	SNR=6.7						
JMDO				P	P	04 03 29.8	-0.8
	SNR=6.7						
WBK	Wadi Bani Khal	16.68	355	P	Pn	04 03 30.9	+1.1
WBK				P	Pn	04 03 30.9	+1.1
BSY	Bisya	17.07	349	P	P	04 03 37.0	+0.6
	SNR=15						
BSY				P	P	04 03 37.0	+0.6
	SNR=15						
SMDO	Samad	17.23	352	P	Pn	04 03 35.5	-1.4
	SNR=12						
SMDO				P	Pn	04 03 35.5	-1.4
	SNR=12						
WSAR	Wadi Sarin	17.34	354	Pn	Pn	04 03 37.2	-0.8
	baz=197,slow=19,SNR=6.6						
BIDO	Bidbid	17.68	352	P	P	04 03 45.4	+2.3
	SNR=13						
BIDO				P	P	04 03 45.4	+2.3
	SNR=13						
ARQ	Araqi	17.78	347	P	Pn	04 03 42.8	-0.7
	SNR=19						
ARQ				P	Pn	04 03 42.8	-0.7
	SNR=19						
HOQ	Hoqain	17.86	350	P	P	04 03 46.0	+0.8
	SNR=11						
HOQ				P	P	04 03 46.0	+0.8
	SNR=11						
POO	Poona	17.96	45	*e*P	Pn	04 03 45.2	-0.6
POO				IAmb	IAmb	04 04 09.5	
	comp=Z,163nm,1.8s						
POO				*e*S	Sn	04 07 06.4	+0.5
MZR	Muzera	18.35	339	P	Pn	04 03 51.4	+0.8
	SNR=11						
MZR				P	Pn	04 03 51.4	+0.8
	SNR=11						
MZR	Muzera	18.35	339	P	P	04 03 48.5	-2.1
ATD	Arta Tunnel	18.48	289	LR	LR	04 09 33.6	
	comp=Z,23nm,21.6s,baz=111,slow=32						
SOHO	SOHO	18.55	348	P	P	04 03 51.6	-1.1
SOHO				P	P	04 03 51.6	-1.1
SOHO	SOHO	18.55	348	P	P	04 03 50.2	-2.5
ALNE	Al Ain	18.65	346	P	Pn	04 03 54.1	-0.1
ALNE				P	Pn	04 03 54.1	-0.1
ASHO	Ashiyiah	19.18	347	P	P	04 04 00.1	+0.4
	SNR=8.9						
ASHO				P	P	04 04 00.1	+0.4
	SNR=8.9						
ASHO	Ashiyiah	19.18	347	P	P	04 03 59.3	-0.4
BHUJ	Bhuj	19.29	26	*e*P	P	04 04 00.8	0.0
BHUJ				IAmb	IAmb	04 04 24.5	
	comp=Z,135nm,0.8s						
BHUJ				*e*S	S	04 07 39.5	+0.6
ASUD	Al Ashush, Dub	19.30	345	P	P	04 04 01.0	0.0
ASUD				P	P	04 04 01.0	0.0
HATD	Hatta, Dubai	19.30	347	P	P	04 04 01.3	+0.3
HATD				P	P	04 04 01.3	+0.3
HATD	Hatta, Dubai	19.30	347	P	P	04 04 01.2	+0.3
NGCH	Negor - Chabah	19.34	1	P	Pn	04 04 02.5	+0.1
FAQ	Al Faqa, Dubai	19.35	346	P	P	04 04 00.6	-0.9
	SNR=9.8						
FAQ				P	P	04 04 00.6	-0.9
	SNR=9.8						
UOSS	Minazif	19.41	348		P	04 03 59.6	-2.5
UOSS				IAmb	IAmb	04 04 16.1	
	comp=Z,121nm,1.8s						
UOSS	Minazif	19.41	348	P	P	04 04 01.3	-0.8
NAZ	Nazwa, Dubai	19.57	346	P	P	04 04 04.3	+0.5
MSFE	Esma-Masafi	19.82	348	P	P	04 04 05.7	-0.9
PALK	Pallekele	19.94	85	LR	LR	04 10 16.5	
	comp=Z,1µm,19.0s,baz=265,slow=32						
SHME	Shamm	20.49	348	P	P	04 04 15.0	+1.1
	SNR=11						
SHME				P	P	04 04 15.0	+1.1
	SNR=11						
SHME	Shamm	20.49	348	P	P	04 04 13.5	-0.4
MDRS	Chennai	20.56	68	*e*P	P	04 04 13.1	-1.7
MDRS				IAmb	IAmb	04 04 22.4	
	comp=Z,25nm,1.1s						
MDRS				*e*S	S	04 08 03.2	-1.3
SMRA	Abu-Samra	20.98	334	P	P	04 04 23.0	+3.8
	SNR=6.4						
AKL	Akola	21.62	46	*e*P	P	04 04 26.0	-0.2
AKL				IAMb		04 04 35.4	
	comp=Z,54nm,2.0s						
AKL				*e*S	S	04 08 25.3	-0.2
AKL				*e*S	Sn	04 08 32.2	-2.1
RAYN	Ar Rayn	22.80	322		P	04 04 37.9	-1.0
RAYN	Ar Rayn	22.80	322	P	P	04 04 37.7	-1.1
RAYN	Ar Rayn	22.80	322	P	P	04 04 37.7	-1.1
BKNR	BIKANER	25.03	27	*e*P	P	04 05 01.2	+1.1
BKNR				IAmb	IAmb	04 05 06.0	
	comp=Z,16nm,0.3s						
BKNR				*e*S	S	04 09 27.8	+3.9
LODK	Lodwar	25.35	266		P	04 05 06.3	+3.1
LODK				IAmb	IAmb	04 05 27.2	
	comp=Z,39nm,1.3s						
LODK	Lodwar	25.35	266	P	P	04 05 08.2	+5.0
	SNR=8.1						
BLSP	Bilaspur	26.27	50	*e*P	P	04 05 10.6	-0.8
BLSP				IAmb	IAmb	04 05 17.9	
	comp=Z,57nm,2.7s						
BLSP				*e*S	S	04 09 46.0	+2.4
OPO	Ambohidratompo	27.73	208	LR	LR	04 13 47.4	
	comp=Z,460nm,20.6s,baz=192,slow=30						
KBL	Kabul	29.52	14	P	P	04 05 41.4	+0.8
KBL				IAmb	IAmb	04 05 59.9	
	comp=Z,35nm,1.6s						
EVN	Everest	33.11	46		P	04 06 13.1	+0.3
SIMJ	Simiganj	33.46	12		P	04 06 13.4	-1.7
EIL	Elat	33.87	317	LR	LR	04 19 21.7	
	comp=Z,377nm,18.9s,baz=111,slow=35						
GAR	Garm	34.08	13	P	P	04 06 20.4	0.0
BRDH	Bariadhala	34.21	58	LR	LR	04 20 02.8	
	comp=Z,1µm,18.9s,baz=258,slow=36						
ASF	Jabal al Asfar	34.29	323	LR	LR	04 20 00.6	
	comp=Z,405nm,18.2s,baz=165,slow=36						
DRK	Karamyk	34.90	15	P	P	04 06 27.6	-0.2
DRK				IAmb	IAmb	04 06 52.4	
	comp=Z,33nm,1.4s						
BTK	Batken	35.20	14	P	P	04 06 30.2	0.0
BTK				IAmb	IAmb	04 06 38.7	

	comp=Z,17nm,1.1s						
MMAI	Mount Meron Ar	35.78	322	LR	LR	04 20 48.0	
	comp=Z,433nm,19.5s,baz=132,slow=36						
MARD	Mardin	36.14	333	P	P	04 06 39.7	+1.3
KSH	Kashi	36.19	20	P	P	04 06 34.5	-4.2
KSH				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KSH				LR	LR		
	comp=Z,670nm,22.7s						
KSH				LR	LR		
	comp=Z,630nm,16.5s						
KSH				LR	LR		
	comp=Z,860nm,22.0s						
GNI	Garni	36.98	340	P	P	04 06 46.4	+1.0
GNI	Garni	36.98	340	LR	LR	04 22 08.3	
	comp=Z,160nm,20.2s,baz=146,slow=37						
LSA	Lhasa	37.22	47	P	P	04 06 43.8	-4.2
LSA				LR	LR		
	comp=Z,310nm,15.8s						
LSA				LR	LR		
	comp=Z,490nm,16.9s						
LSA	Lhasa	37.22	47	P	P	04 06 48.5	+0.5
KK31	Karatay Array	38.05	12	P	P	04 06 54.3	0.0
KK31				IAmb	IAmb	04 06 56.5	
	comp=Z,28nm,1.8s						
KKAR	Karatay Array	38.05	12		P	04 06 54.3	0.0
KKAR	Karatay Array	38.05	12	P	P	04 06 54.5	+0.2
KKAR				IAmb	IAmb	04 06 56.5	
	comp=Z,30nm,1.8s						
PSI	Prapat	38.26	93	LR	LR	04 20 29.6	
	comp=Z,230nm,19.5s,baz=259,slow=33						
LSZ	Lusaka	38.46	236	LR	LR	04 21 07.5	
	comp=Z,634nm,19.7s,baz=44,slow=33						
KOPT	Kop Dagi	38.50	335	P	P	04 06 58.1	-0.3
AAK	Ala-Archa	38.57	16	P	P	04 06 59.2	+0.4
AAK				IAmb	IAmb	04 07 24.0	
	comp=Z,48nm,1.9s						
AAK	Ala-Archa	38.57	16	LR	LR	04 24 17.0	
	comp=Z,463nm,19.0s,baz=204,slow=39						
AAK	Ala-Archa	38.57	16	P	P	04 06 59.8	+0.9
BOOM	Boomskoye usch	38.86	18	P	P	04 07 02.1	+0.7
KDJ	Kajisay	38.94	20	P	P	04 07 02.7	+0.7
KDJ				IAmb	IAmb	04 07 25.2	
	comp=Z,35nm,1.4s						
CMAR	Chiang Mai Arr	39.33	68	LR	LR	04 21 54.6	
	comp=Z,281nm,21.1s,baz=255,slow=34						
BNN	Bunyan	39.75	329		P	04 07 09.4	+0.7
BNN				IAmb	IAmb	04 07 22.6	
	comp=Z,57nm,1.5s						
TOKA	Tokat	40.56	331	P	P	04 07 15.2	-0.2
TOKA				IAmb	IAmb	04 07 22.6	
	comp=Z,29nm,1.4s						
KBZ	Khabaz	40.78	340	P	P	04 07 17.3	+0.3
	comp=Z,2.5nm,1.0s,baz=118,slow=3.5,SNR=6.6						
KBZ				LR	LR	04 26 24.4	
	comp=Z,261nm,18.0s,baz=149,slow=40						
	comp=Z,2.5nm,1.0s						
TNCH	TengChong	40.92	58	P	P	04 07 19.9	+1.2
TNCH				S	S	04 13 36.9	+6.6
TNCH				pmax	pmax		
	comp=Z,37nm,1.5s						
TNCH				LR	LR		
	comp=Z,510nm,17.8s						
TNCH				LR	LR		
	comp=Z,350nm,17.5s						
TNCH				LR	LR		
	comp=Z,920nm,22.6s						
MATP	Matopo	41.05	230	LR	LR	04 22 43.8	
	comp=Z,506nm,18.5s,baz=58,slow=34						
KIV	Kislovodsk	41.05	340	P	P	04 07 19.3	-0.2
KIV				IAmb	IAmb	04 07 26.8	
	comp=Z,17nm,1.0s						
KIV	Kislovodsk	41.05	340	P	P	04 07 20.2	+0.8
BRTR	Keskin Array B	41.54	328	P	P	04 07 22.7	-0.9
BRTR	Keskin Array B	41.54	328	P	P	04 07 23.4	-0.1
	comp=Z,1.5nm,0.8s,baz=133,slow=8.7,SNR=11						
BRTR				LR	LR	04 25 02.2	
	comp=Z,323nm,19.2s,baz=132,slow=37						
	comp=Z,1.5nm,0.8s						
BR131	Keskin Array S	41.54	328	P	P	04 07 23.5	-0.1
ANTO	Ankara	42.09	328	P	P	04 07 28.0	0.0
ILGA	Ilgaz	42.48	329	P	P	04 07 32.3	+0.9
AB31	Akbulak array	43.20	359		P	04 07 35.9	-0.8
ABKAR	Akbulak array	43.20	359	P	P	04 07 35.7	-1.0
GOMU	GeErMu	43.44	41	P	P	04 07 39.3	-0.1
GOMU				sP	sP	04 07 44.5	-0.2
GOMU				S	S	04 14 09.0	+1.4
GOMU				pmax	pmax		
	comp=Z,16nm,1.0s						
GOMU				pmax	pmax		
	comp=Z,290nm,4.6s						
GOMU				LR	LR		
	comp=Z,510nm,16.9s						
GOMU				LR	LR		
	comp=Z,570nm,14.8s						
GOMU				LR	LR		
	comp=Z,1μm,16.9s						
PZH	PanZhiHua	44.16	58	P	P	04 07 46.3	+1.3
PZH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,110nm,4.8s						
AKTO	Aktyubinsk	44.43	358	LR	LR	04 27 35.5	
	comp=Z,328nm,18.6s,baz=222,slow=38						
WMQ	Urumqi	44.60	28	*e*P	P	04 07 49.4	+1.2
WMQ				LR	LR		
	comp=Z,290nm,15.1s						
WMQ				LR	LR		
	comp=Z,380nm,13.3s						
WMQ				LR	LR		
	comp=Z,300nm,22.7s						
MAKZ	Makanchi	44.69	21	P	P	04 07 47.5	-1.3
MAKZ				IAmb	IAmb	04 08 06.0	
	comp=Z,19nm,1.6s						
MKAR	Makanchi Array	44.79	21	P	P	04 07 47.6	-2.0
MKAR	Makanchi Array	44.79	21	P	P	04 07 48.5	-1.0
	comp=Z,1.6nm,0.9s,baz=210,slow=9.6,SNR=10.0						
MKAR				PcP	PcP	04 09 31.3	-0.2
	comp=Z,0.4nm,0.8s,baz=212,slow=5.3,SNR=1.8						
MKAR				LR	LR	04 27 35.1	
	comp=Z,234nm,20.7s,baz=190,slow=38						
	comp=Z,1.6nm,0.9s						
LBTB	Lobatse	45.93	227	LR	LR	04 24 33.9	
	comp=Z,752nm,21.1s,baz=60,slow=32						
KURBB	Kurchatov Arra	47.00	15	P	P	04 08 05.7	-1.2
	comp=Z,0.8nm,0.8s,baz=211,slow=8.4,SNR=12						
KURBB				LR	LR	04 29 57.9	
	comp=Z,258nm,18.6s,baz=188,slow=39						
	comp=Z,0.8nm,0.8s						
ITM	Ithomi	47.06	317	P	P	04 08 07.0	-0.7
KURK	Kurchatov	47.11	16	P	P	04 08 06.7	-1.1
KURK				IAmb	IAmb	04 08 30.9	
	comp=Z,10nm,1.3s						
BELG	Belogornoye	47.57	349	LR	LR	04 30 22.0	
	comp=Z,156nm,19.4s,baz=163,slow=39						
BVAR	Borovoye Array	47.64	8	P	P	04 08 10.4	-1.4
	comp=Z,0.5nm,0.5s,baz=169,slow=8.9,SNR=6.1						
BVAR				PcP	PcP	04 09 41.5	+0.2
	comp=Z,0.3nm,0.3s,baz=204,slow=3.2,SNR=3.5						
BVAR				LR	LR	04 29 08.9	
	comp=Z,599nm,20.9s,baz=196,slow=37						
	comp=Z,0.5nm,0.5s						
BRVK	Borovoye	47.66	8	P	P	04 08 10.4	-1.6
BRVK				IAmb	IAmb	04 08 13.5	
	comp=Z,27nm,1.8s						
BOSA	Boshof	48.39	223	P	P	04 08 20.7	+2.5
	comp=Z,3.6nm,0.9s,baz=78,slow=8.0,SNR=4.6						
BOSA				LR	LR	04 27 39.0	
	comp=Z,541nm,18.1s,baz=45,slow=35						
	comp=Z,3.6nm,0.9s						
GTA	Gaotai	48.52	41	P	P	04 08 18.0	-1.1
GTA				sP	pwP	04 08 25.3	-1.2
GTA				S	S	04 15 19.4	-0.7
GTA				SS	SS	04 18 45.9	-4.3
GTA				pmax	pmax		
	comp=Z,9.0nm,2.0s						
GTA				pmax	pmax		
	comp=Z,120nm,6.5s						
GTA				LR	LR		
	comp=Z,550nm,17.8s						
GTA				LR	LR		
	comp=Z,490nm,18.5s						
GTA				LR	LR		
	comp=Z,740nm,21.8s						
TSUM	Tsumeb	49.23	238	LR	LR	04 27 38.4	
	comp=Z,388nm,20.8s,baz=17,slow=34						
MLR	Muntele Rosu	49.62	328	IAmb	IAmb	04 08 34.8	
	comp=Z,23nm,1.5s						
ARTI	Arti	50.37	358	P	P	04 08 28.7	-4.1
ARTI	Arti	50.37	358	LR	LR	04 31 29.4	
	comp=Z,286nm,18.1s,baz=189,slow=38						
BURAR	Bucovina Array	51.42	330	P	P	04 08 39.0	-2.0
ZAA0	Zalesovo Array	51.75	18	P	P	04 08 41.4	-1.8
ZALV	Zalesovo Beam	51.75	18	P	P	04 08 41.8	-1.4
ZALV	Zalesovo Beam	51.75	18	P	P	04 08 42.0	-1.2
	comp=Z,1.1nm,0.5s,baz=197,slow=4.0,SNR=5.7						
ZALV				LR	LR	04 31 13.6	
	comp=Z,206nm,20.5s,baz=182,slow=37						
	comp=Z,1.1nm,0.5s						
AKASG	Malin Array Be	51.78	335	P	P	04 08 42.0	-1.4
	comp=Z,0.1nm,0.2s,baz=144,slow=6.9,SNR=18						
AKASG				LR	LR	04 32 37.1	
	comp=Z,145nm,20.1s,baz=166,slow=38						
	comp=Z,0.1nm,0.2s						
AKBB	Malin Array Si	51.78	335	IAmb	IAmb	04 08 55.5	
	comp=Z,29nm,1.6s						
KIEV	Kiev	51.79	335	P	P	04 08 41.4	-2.1
KIEV				IAmb	IAmb	04 08 55.5	
	comp=Z,24nm,1.5s						
KIEV	Kiev	51.79	335	P	P	04 08 41.9	-1.6
H04N1	CROZET ISLANDS	52.45	188	T	T	05 05 33.3	
	baz=11,slow=76,SNR=36						
H04N2	CROZET ISLANDS	52.45	188	T	T	05 05 31.9	
	baz=11,slow=76,SNR=92						
H04N3	CROZET ISLANDS	52.46	188	T	T	05 05 32.5	
	baz=11,slow=76,SNR=50						
CUC	Castrocucco	52.61	317	IAmb	IAmb	04 09 17.8	
	comp=Z,17nm,1.5s						
XAN	Xi'an	52.62	51	P	P	04 08 48.9	-1.2
XAN				pmax	pmax		
	comp=Z,11nm,1.1s						
KIRV	Kirov	53.26	353	LR	LR	04 33 34.4	
	comp=Z,184nm,19.0s,baz=164,slow=38						
KOLS	Kolonicke sedl	53.77	329	*e*P	P	04 08 59.7	+1.4
SRO	Srobarova	55.18	326	*e*P	P	04 09 09.0	+0.5
MNK	Minsk	55.19	337	*i* P	P	04 09 06.6	-1.8
	comp=Z,9.0nm,0.6s,baz=139						
MNK				*i* PP	PP	04 11 10.1	-1.9
MNK				*i* PPP	PPP	04 12 21.4	
MNK				*i* S	S	04 16 49.8	-1.4
MNK				*i* SS	SS	04 20 36.2	+0.8
MNK				*i* SSS	SSS	04 22 42.8	
MNK				*i* LR	LR	04 32 59.2	
MNK				*i* LRM	MLR	04 35 37.6	
	comp=Z,84nm,19.0s						
VYHS	Vyhne	55.29	327	*e*P	P	04 09 08.5	-0.8
LANS	Liptovska Anna	55.35	328	*e*P	P	04 09 08.7	-1.1
TAM	Tamanrasset	55.67	293	P	P	04 09 11.1	-1.5
NACGM	Naroch	55.91	337	*e*P	P	04 09 13.5	-0.1
	comp=Z,8.0nm,1.0s,baz=138						
BTO	Baotou	55.96	44	*e*P	P	04 09 14.8	+0.4
BTO				pP	sP	04 09 19.3	-0.6
BTO				sP	pwP	04 09 21.9	+0.1
BTO				S	S	04 17 03.6	+1.4
BTO				sS	sS	04 17 09.6	+1.2
BTO				SS	SS	04 20 51.8	+3.5
BTO				pmax	pmax		
	comp=Z,30nm,0.9s						
BTO				pmax	pmax		
	comp=Z,230nm,5.8s						
CESX	Cesi	55.98	318	P	P	04 09 13.8	-0.5
CESX				IAmb	IAmb	04 09 16.1	
	comp=Z,9.9nm,1.2s						
MODS	Modra-Piesok	56.07	326	*e*P	P	04 09 13.7	-1.2
JAVC	Velka Javorina	56.13	327	*e*P	P	04 09 15.3	-0.1
RONA	Rosalia, Austr	56.24	325	*e*P	P	04 09 15.8	-0.3
	comp=Z,7.3nm,1.2s						
SOKA	Soboth	56.42	324	*i* P	P	04 09 17.1	-0.5
	comp=Z,4.9nm,1.4s						
CONA	Conrad Observa	56.61	325	*i* P	P	04 09 18.4	-0.5
	comp=Z,16nm,1.6s						
OBKA	Obir	56.62	323	*e*P	P	04 09 19.3	+0.3
	comp=Z,12nm,1.3s						
MORC	Moravsky Berou	56.73	328	*e*P	P	04 09 18.5	-1.2
KRUC	Moravsky	56.94	327	*e*P	P	04 09 20.2	-0.9
VRAC	Vranov	56.97	327	*e*P	P	04 09 20.4	-0.9
SONM	Songino Array	57.08	35	P	P	04 09 21.6	-0.6
SONM				IAmb	IAmb	04 09 22.9	
	comp=Z,12nm,1.4s						
SONM	Songino Array	57.08	35	P	P	04 09 21.7	-0.6
	comp=Z,1.9nm,0.8s,baz=234,slow=5.1,SNR=8.9						
	comp=Z,1.9nm,0.8s						
HHC	Hu-ho-hao-te	57.13	44	*e*P	P	04 09 24.3	+1.5
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,81nm,4.5s						
PRED	Cave del Predi	57.17	323	IAmb	IAmb	04 09 23.4	
	comp=Z,26nm,1.9s						
MYKA	Terra Mystica	57.22	323	*e*P	P	04 09 22.8	-0.5
	comp=Z,9.7nm,1.1s						
MOA	Molln	57.48	325	*i* P	P	04 09 24.3	-0.6
	comp=Z,18nm,1.7s						
STAL	STALIGIAL	57.60	322	IAmb	IAmb	04 09 38.0	
	comp=Z,18nm,1.5s						
BIOA	Bad Ischl, Aus	57.76	324	*e*P	P	04 09 26.3	-0.7
	comp=Z,7.8nm,1.1s						
ABTA	Abfaltersbach	57.95	323	*i* P	P	04 09 27.8	-0.6
	comp=Z,10nm,1.6s						
HNS	HongShan	58.19	49	⇑P	P	04 09 29.5	-0.6
HNS				pmax	pmax		
	comp=Z,6.0nm,0.8s						
LESA	Schwarzleotal	58.19	324	*e*P	P	04 09 28.1	-1.9
	comp=Z,6.8nm,1.5s						
TORD	Torodi Ar. Bea	58.50	282	P	P	04 09 33.7	+1.1
TORD	Torodi Ar. Bea	58.50	282	P	P	04 09 33.8	+1.1
	comp=Z,1.2nm,0.4s,baz=100,slow=5.8,SNR=1.6						
TORD				LR	LR	04 35 34.6	
	comp=Z,267nm,18.1s,baz=128,slow=37						
	comp=Z,1.2nm,0.4s						
WTTA	Wattenberg	58.73	323	*i* P	P	04 09 32.8	-1.2
	comp=Z,14nm,1.8s						
SQTA	Sankt Quirin	58.97	323	*i* P	P	04 09 34.0	-1.5
	comp=Z,4.2nm,0.7s						
MOTA	Moosalm	59.09	323	*i* P	P	04 09 35.1	-1.3
	comp=Z,6.9nm,1.2s						
BRG	Berggiesshubel	59.26	328	*e*P	P	04 09 36.2	-1.1
BRG				Amp		04 09 38.4	
	comp=Z,2.4nm,1.1s						
BRG	Berggiesshubel	59.26	328	P	P	04 09 43.0	+5.7
BRG				Amp		04 09 45.3	
	comp=Z,3.1nm,1.1s						
FUORN	Ofenpass-Fuorn	59.26	322	P	P	04 09 37.7	0.0
FUORN				IAmb	IAmb	04 09 44.1	
	comp=Z,22nm,1.6s						
MPSI	Mapaga	59.37	93	P	P	04 09 41.9	+3.2
	comp=Z,13nm,1.3s						
DAVOX	Davos/Dischmat	59.57	322	LR	LR	04 36 01.3	
	comp=Z,123nm,20.9s,baz=84,slow=37						
DAVA	Damuels	59.80	322	*e*P	P	04 09 40.3	-1.0
	comp=Z,11nm,1.5s						
CLL	Collm	59.99	328	P	P	04 09 40.5	-1.8
CLL				IAmb	IAmb	04 09 52.9	
	comp=Z,12nm,1.4s						
CLL	Collm	59.99	328	*e*P	P	04 09 41.0	-1.3
	comp=Z,21nm,1.8s						
CLL				*e*S	S	04 17 59.0	+4.7
NJ2	Nanjing	60.04	56	*e*P	P	04 09 43.1	+0.1
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SENIN	Lac Senin/Sane	61.00	321	P	P	04 09 48.3	-1.3
FINES	FINESS Array B	61.10	342	P	P	04 09 48.8	-1.0
	comp=Z,3.6nm,1.0s,baz=117,slow=4.8,SNR=4.1						
FINES				LR	LR	04 38 34.3	
	comp=Z,190nm,20.4s,baz=135,slow=38						
	comp=Z,3.6nm,1.0s						
BFO	Black Forest	61.20	323	P	P	04 09 50.2	-0.5
XLT	XiLinHaoTe	61.38	43	*e*P	P	04 09 52.4	+0.3
XLT				S	S	04 18 21.6	+9.0
XLT				pmax	pmax		
	comp=Z,10.0nm,0.9s						
XLT				LR	LR		
	comp=Z,480nm,19.8s						
XLT				LR	LR		
	comp=Z,480nm,19.1s						
HFS	Hagfors	64.64	336	P	P	04 10 12.0	-1.3
	comp=Z,3.1nm,0.8s,baz=170,slow=9.0,SNR=5.2						
	comp=Z,3.1nm,0.8s						
DBIC	Dimbokro	65.09	275	LR	LR	04 39 46.7	
	comp=Z,275nm,18.2s,baz=122,slow=37						
NOA	NORSAR Array B	66.17	336	P	P	04 10 21.7	-1.6
	comp=Z,1.8nm,1.1s,baz=121,slow=7.0,SNR=3.6						
	comp=Z,1.8nm,1.1s						
ESDC	Sonseca Array	66.80	311	P	P	04 10 25.9	-1.8
ESDC				IAmb	IAmb	04 10 35.0	
	comp=Z,12nm,1.4s						
ESDC	Sonseca Array	66.80	311	P	P	04 10 27.4	-0.4
	comp=Z,2.1nm,1.0s,baz=94,slow=5.9,SNR=10						
	comp=Z,2.1nm,1.0s						
ARCES	ARCESS Array B	67.56	347	P	P	04 10 32.0	+0.1
	comp=Z,1.7nm,0.8s,baz=156,slow=4.6,SNR=4.8						
	comp=Z,1.7nm,0.8s						
CN2	Changchun	67.82	45	*e*P	P	04 10 31.8	-2.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KSAR	Wonju Array Be	68.37	52	P	P	04 10 34.7	-2.9
KSRS	Korea Array	68.40	52	P	P	04 10 35.1	-2.6
	comp=Z,1.3nm,0.7s,baz=254,slow=4.6,SNR=6.1						
	comp=Z,1.3nm,0.7s						
MDJ	Mudanjiang	70.90	45	P	P	04 10 52.6	-0.5
MDJ				pmax	pmax		
	comp=Z,11nm,1.9s						
WRA	Warramunga Arr	76.79	112	P	P	04 11 27.5	-0.6
WRA	Warramunga Arr	76.79	112	P	P	04 11 28.0	-0.1
	comp=Z,2.1nm,1.0s,baz=286,slow=5.1,SNR=8.0						
	comp=Z,2.1nm,1.0s						
WB0	Warramunga Arr	76.81	112	P	P	04 11 27.6	-0.6
WB0				IAmb	IAmb	04 11 36.0	
	comp=Z,16nm,1.2s						
ASAR	Alice Springs	77.16	116	P	P	04 11 28.9	-1.3
ASAR	Alice Springs	77.16	116	P	P	04 11 29.7	-0.5
	comp=Z,2.3nm,0.9s,baz=284,slow=5.8,SNR=12						
	comp=Z,2.3nm,0.9s						
TIXI	Tiksi	77.64	18	LR	LR	04 47 13.6	
	comp=Z,613nm,21.0s,baz=173,slow=37						
DAG	Danmarks Havn	81.84	347	*i* P	P	04 11 54.2	-0.4
DAG				IAmb	IAmb	04 12 01.1	
	comp=Z,19nm,1.1s						
DBG	Daneborg	81.88	344	*i* P	P	04 11 54.7	-0.1
DBG				IAmb	IAmb	04 12 01.6	
	comp=Z,12nm,1.4s						
NOR	Nord	82.34	352	*i* P	P	04 11 57.2	0.0
NOR				IAmb	IAmb	04 12 03.6	
	comp=Z,19nm,1.4s						
SUMG	Summit	87.13	343	*i* P	P	04 12 21.9	-0.1
SUMG				IAmb	IAmb	04 12 29.1	
	comp=Z,15nm,1.2s						
NEEM	North Greenlan	88.90	348	*i* P	P	04 12 30.8	+0.6
NEEM				IAmb	IAmb	04 12 36.9	
	comp=Z,22nm,1.3s						
SFJD	Kangerlussuaq	92.75	338	LR	LR	04 58 44.1	
	comp=Z,326nm,19.3s,baz=316,slow=38						
PDAR	Pinedale Array	130.74	351	PKP	PKiKP	04 18 48.5	-0.2
	comp=Z,0.3nm,0.5s,baz=341,slow=4.4,SNR=4.5						
NVAR	Mina Array Bea	135.87	359	PKP	PKiKP	04 18 58.6	-0.5
	comp=Z,0.6nm,0.7s,baz=51,slow=3.1,SNR=4.1						
TXAR	Lajitas Array	141.86	338	PKhKP	PKPpre	04 19 04.8	
	comp=Z,0.5nm,0.8s,baz=44,slow=3.0,SNR=6.4						
TBI	Tubuai	146.20	124	*e*LR	LR	05 07 23.8	
	comp=Z,500nm,23.5s						
PPT2	Papeete2	148.25	114	*e*LR	LR	05 08 21.5	
	comp=Z,101nm,21.5s						
TAOE	Nuku Hiva Isla	159.15	99	*e*LR	LR	05 13 16.9	
	comp=Z,104nm,21.3s						

CATAC 14 04:08:49.2±0.6, 12°N±4°×8°8W±°, h9km±4km, M3.0/23, MLv3.0/23, 8D, Error ellipse: s-maj=9.6km s-min=3.6km az=18.1, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIN	San Cristobal	0.79	52	⇓P	Pb	04 09 05.1	0.0
POTN	Potosi Cosigui	0.80	13	P	Pg	04 09 04.8	+0.1
PKGN	Cerro Pekin	0.83	57	P	Pg	04 09 05.3	+0.1
PKGN				S	Sb	04 09 17.3	+0.2
ALEN	Leon	0.83	73	P	Pg	04 09 05.5	+0.2
QUEN	Al S del Volca	0.90	65	P	Pg	04 09 06.3	-0.3
HOYN	Al Sur del Vol	0.92	65	P	Pg	04 09 07.2	+0.2
HERN	Volcan Telica	0.92	65	P	Pb	04 09 07.4	-0.1
HERN	Volcan Telica	0.92	65	S	Sb	04 09 20.1	+0.2
POLN	Al Sur del Vol	0.96	63	P	Pg	04 09 07.5	-0.2
POLN				S	Sb	04 09 20.8	0.0
CNGA	Al SSO del Vol	1.00	74	P	Pb	04 09 08.8	0.0
CNGN	Cerro Negro	1.01	73	P	Pg	04 09 08.4	-0.2
CNGN	Cerro Negro	1.01	73	S	Sb	04 09 22.4	+0.2
CNCH	Conchagua	1.07	352	P	Pg	04 09 09.4	-0.5
COPN	Copaltepe	1.07	92	⇓P	Pg	04 09 09.1	-0.7
BC86	Nagarote	1.10	87	P	Pg	04 09 10.0	-0.3
LCND	La Caada	1.11	350	⇓P	Pg	04 09 10.1	-0.4
MOMN	Momotombo	1.14	80	⇓P	Pb	04 09 10.1	-0.9
MOMN				S	Sb	04 09 26.3	+0.4
MOM2	El Cardon	1.20	79	⇓P	Pb	04 09 11.2	-0.8
MOM2				S	Sg	04 09 27.7	0.0
AMTN	Mateare	1.23	89	P	Pn	04 09 12.0	-0.5
SAPS	Ciudad Sandino	1.25	92	S	Sb	04 09 29.1	-0.2
SAPS	Ciudad Sandino	1.25	92	⇓P	Pn	04 09 11.6	-1.2
APQ3	Volcan Apoyequ	1.29	87	P	Pn	04 09 13.0	-0.4
APQ3				S	Sb	04 09 30.1	-0.2
AESN	El Sauce Leon	1.30	59	P	Pn	04 09 13.3	-0.3
APQ2	Apoyeque	1.33	90	P	Pn	04 09 13.3	-0.6
CNRM	Centro Naciona	1.34	339	P	Pn	04 09 13.6	-0.5
ABCN	Banco Central	1.35	94	P	Pn	04 09 13.8	-0.4
PACA	Pacayal	1.40	334	⇓P	Pn	04 09 14.1	-0.9
ALJI	Alcalda de J	1.41	322	P	Pn	04 09 14.8	-0.2
WILN	Americas 2	1.47	92	P	Pn	04 09 15.5	-0.3
WILN				S	Sn	04 09 35.0	-0.1
LIMN	Finca el Limon	1.54	57	⇓P	Pn	04 09 16.5	-0.4
SCLA	Alcaldia de Sa	1.80	326	P	Pn	04 09 20.0	-0.5

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*IDC **14** 04:12:43.5±1.6, 27°.95N×93°.25E, h0km, mb3.3/5, mbtmp3.4/6, Error ellipse: s-maj=68.6km s-min=21.0km az=66.0*

*NDI **14** 04:12:49.8±0.4, 27°.88N×93°.26E, h15km, ML3.5, MW3.7*

ISC 14 04:12:46.4±1.0, **28°.02N**±0°.07×**93°.30E**±0°.06, **h10**km, **n11**, $\sigma 1^{s}79$/16, **mb3.5**/4, **Eastern Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIRO	ZIRO	0.69	135	*e*P	Pg	04 13 02.2	+2.3
ZIRO				*e*S	Sb	04 13 11.4	+0.9
ZIRO				IAML		04 13 13.8	
	comp=E,7μm,0.3s						
ZIRO				IAML		04 13 17.6	
	comp=E,10μm,0.6s						
TAWA	Tawang	1.34	252	*e*P	Pn	04 13 13.4	+1.9
TAWA				IAML		04 13 30.0	
	comp=N,1μm,0.1s						
TAWA				IAML		04 13 30.2	
	comp=E,936nm,0.3s						
TAWA				*e*S	Sb	04 13 30.7	+1.5
KOHI	KOHIMA	2.41	162	*e*P	Pn	04 13 27.3	+1.3
KOHI				*e*S	Sn	04 13 54.6	-0.9
KOHI				IAML		04 14 05.0	
	comp=N,226nm,0.3s						
KOHI				IAML		04 14 05.1	
	comp=E,265nm,0.3s						
IMP	Imphal	3.23	170	*e*P	Pn	04 13 38.2	+0.9
IMP				*e*S	Sn	04 14 14.1	-1.8
AZL	Aizawl	4.30	187	*e*P	Pn	04 13 52.6	+0.5
AZL				*e*S	Sn	04 14 38.6	-3.7
AZL				*e*S	Sn	04 14 40.5	-1.8
AZL				IAML		04 14 44.0	
	comp=E,43nm,0.5s						
AZL				IAML		04 14 49.0	
	comp=E,27nm,0.3s						
CMAR	Chiang Mai Arr	10.84	150	Pn	Pn	04 15 21.6	-0.2
	comp=E,0.9nm,0.3s,baz=327,slow=14,SNR=5.8						
MKAR	Makanchi Array	20.64	338	P	P	04 17 24.2	-1.8
	comp=E,0.4nm,0.6s,baz=153,slow=9.7,SNR=4.5						
	comp=E,0.4nm,0.6s						
SONM	Songino Array	22.25	24	P	P	04 17 43.2	-0.4
	comp=E,1.0nm,0.7s,baz=207,slow=13,SNR=3.6						
	comp=E,1.0nm,0.7s						
KURBB	Kurchatov Arra	25.20	338	P	P	04 18 11.9	-0.1
	comp=E,0.8nm,0.7s,baz=148,slow=9.7,SNR=5.2						
	comp=E,0.8nm,0.7s						
WRA	Warramunga Arr	62.04	136	P	P	04 23 05.0	-2.3
	comp=E,0.2nm,0.6s,baz=318,slow=6.9,SNR=1.7						
	comp=E,0.2nm,0.6s						
ASAR	Alice Springs	64.61	139	P	P	04 23 22.8	-1.5
	comp=E,0.3nm,0.7s,baz=318,slow=6.0,SNR=4.1						
	comp=E,0.3nm,0.7s						

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*SJA **14** 04:14:35.2±0.8, 32°.98S×70°.79W, h84km±3km, ML4.2,* *MW4.0*

*IDC **14** 04:14:36.2±0.7, 32°.98S×70°.61W, h84^{km}±5^{km}, mb3.8/9, mbtmp3.9/14, Error ellipse: s-maj=18.3km s-min=9.8km az=140.0*

*NEIC **14** 04:14:36.2±1.4, 33°.00S±0°.03×70°.75W±0°.06, h84^{km}±5^{km}, mb4.5/11, Mwr4.1(GUC), Error ellipse: s-maj=7.2km s-min=3.8km az=75.0*

*GUC **14** 04:14:36.5±0.7, 32°.98S×70°.72W, h85^{km}±2^{km}, ML4.4*

ISC 14 04:14:35.4±0.5, **32°.97S**±0°.03×**70°.71W**±0°.03, **h80**^{km}±3^{km}, **n120**, σ**1^{s}78**/164, **mb4.1**/12, **18C-3D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PEL	Peldehue	0.17	173		Pn	04 14 48.0	+0.8
PEL				Sn	Sn	04 14 57.1	+1.2
PEL	Peldehue	0.17	173	⇑iP	Pn	04 14 47.8	+0.5
PEL				i S	Sn	04 14 57.0	+1.2
PEL				IAML		04 14 58.0	
	comp=E,12μm,0.2s						
PEL	Peldehue	0.17	173	eP	Pn	04 14 47.7	+0.5
PEL				eS	Sn	04 15 00.2	+4.3
VA03	San Esteban	0.25	32		Pn	04 14 48.5	+0.9
VA03				Sn	Sn	04 14 57.8	+1.3
VA03	San Esteban	0.25	32	⇑iP	Pn	04 14 48.5	+0.9
VA03				i S	Sn	04 14 57.9	+1.3
VA03				IAML		04 14 58.6	
	comp=N,64μm,0.4s						
VA03	San Esteban	0.25	32	eP	Pn	04 14 48.4	+0.8
VA03				eS	Sn	04 14 58.2	+1.6
VA03				IAML		04 14 58.8	
	comp=Z,21μm,0.1s						
ROCH	El Roble	0.25	270	⇑iP	Pn	04 14 48.8	+1.1
ROCH				⇑iP	Pn	04 14 48.8	+1.1
ROCH				i S	Sn	04 14 58.2	+1.3
ROCH				i S		04 14 58.3	
ROCH				IAML		04 14 59.8	
	comp=N,14μm,0.3s						
ROCH				IAML		04 15 00.3	
	comp=E,13μm,0.4s						
ROC1	El Roble	0.26	269	eP	Pn	04 14 48.5	+0.7
ROC1				eS	Sn	04 14 58.9	+1.9
MT10	Hacienda Santa	0.33	154	⇑iP	Pn	04 14 49.0	+0.9
MT10				i S	Sn	04 14 58.8	+1.4
MT10				IAML		04 15 00.1	
	comp=E,18μm,0.1s						
MT05	Renca	0.42	183		Pn	04 14 49.7	+1.1
MT05				Sn	Sn	04 14 59.9	+1.6
MT05	Renca	0.42	183	⇑iP	Pn	04 14 49.8	+1.1
MT05				i S	Sn	04 14 59.6	+1.2
MT05	Renca	0.42	183	eP	Pn	04 14 49.7	+1.1
MT05				eS	Sn	04 15 00.6	+2.2
MT05				IAML		04 15 01.8	
	comp=Z,14μm,0.1s						
MT14	Cerro Cal¡n	0.45	161	⇑iP	Pn	04 14 49.8	+1.0
MT14				i S	Sn	04 15 00.3	+1.5
MT14				IAML		04 15 02.6	
	comp=E,12μm,0.2s						
MT02	Curacav	0.46	232		Pn	04 14 50.0	+1.2
MT02				Sn	Sn	04 15 00.1	+1.3
MT02	Curacav	0.46	232	⇑iP	Pn	04 14 50.0	+1.2
MT02				i S	Sn	04 14 60.0	+1.2
MT16	CCHEN	0.48	161		Pn	04 14 50.1	+1.0
MT16				Sn	Sn	04 15 00.5	+1.2
MT16	CCHEN	0.48	161	⇑iP	Pn	04 14 50.1	+1.0
MT16				i S	Sn	04 15 00.7	+1.5
FCH	Farellones	0.50	135	⇑iP	Pn	04 14 50.8	+1.2
FCH				i S	Sn	04 15 01.6	+1.6
FCH				IAML		04 15 03.1	
	comp=E,23μm,0.3s						
MT03	Universidad Ad	0.55	162		Pn	04 14 50.8	+1.1
MT03	Universidad Ad	0.55	162	⇑iP	Pn	04 14 50.7	+1.1
MT03				i S	Sn	04 15 02.0	+1.7
MT03	Universidad Ad	0.55	162	eP	Pn	04 14 50.8	+1.1
MT03				eS	Sn	04 15 02.2	+1.9
MT03				IAML		04 15 04.1	
	comp=Z,16μm,0.1s						
MT04	Ro Olivares	0.64	132	⇑iP	Pn	04 14 52.0	+1.3
MT04				i S	Sn	04 15 03.9	+1.7
VA06	Catapilco	0.64	310		Pn	04 14 51.7	+1.2
VA06	Catapilco	0.64	310	⇑iP	Pn	04 14 51.7	+1.2
VA06				i S	Sn	04 15 03.2	+1.5
MT15	Las Vizcachas	0.65	165	⇑iP	Pn	04 14 51.6	+1.0
MT15				i S	Sn	04 15 03.2	+1.3
MT08	Bocatoma Ro	0.75	129		Pn	04 14 53.3	+1.5
MT08	Bocatoma Ro	0.75	129	⇑iP	Pn	04 14 53.3	+1.5
MT08				i S	Sn	04 15 06.2	+2.2
VA01	Torpederas	0.79	266		Pn	04 14 53.2	+1.2
VA01	Torpederas	0.79	266	⇑iP	Pn	04 14 53.2	+1.2
VA01				i S	Sn	04 15 07.6	+3.2
MT09	Talagante	0.83	196		Pn	04 14 53.6	+1.0
MT09	Talagante	0.83	196	i P	Pn	04 14 53.6	+1.0
MT09				i S	Sn	04 15 07.0	+1.4
MT09				IAML		04 15 07.8	
	comp=N,35μm,0.3s						
MT13	San Alfonso	0.85	155		Pn	04 14 54.3	+1.5
MT13	San Alfonso	0.85	155	⇑iP	Pn	04 14 54.3	+1.5
MT13				i S	Sn	04 15 07.5	+1.7
MT13				IAML		04 15 08.4	
	comp=N,37μm,0.3s						
LMEL	Las Melosas	0.97	154		Pn	04 14 55.8	+1.6
LMEL	Las Melosas	0.97	154	⇑iP	Pn	04 14 55.7	+1.4
LMEL				i S	Sn	04 15 10.9	+2.5
MT01	Popeta	1.00	207		Pn	04 14 55.4	+1.0
MT01	Popeta	1.00	207	⇓iP	Pn	04 14 55.4	+1.0
MT01				i S	Sn	04 15 09.5	+0.9
MT01				IAML		04 15 11.6	
	comp=N,12μm,0.3s						
BO04	La Punta	1.02	175		Pn	04 14 55.6	+0.9
BO04	La Punta	1.02	175	i P	Pn	04 14 55.7	+0.9
BO04				i S	Sn	04 15 10.7	+1.5
BO04				IAML		04 15 11.5	
	comp=E,19μm,0.2s						
VA05	Santo Domingo	1.02	228		Pn	04 14 55.9	+1.2
VA05	Santo Domingo	1.02	228	eP	Pn	04 14 55.9	+1.2
VA05				i S	Sn	04 15 10.7	+1.7
VA05				IAML		04 15 16.6	
	comp=E,23μm,0.3s						
BO01	Tunca	1.45	192		Pn	04 15 01.0	+1.0
BO01	Tunca	1.45	192	i P	Pn	04 15 01.0	+1.0
BO01				i S	Sn	04 15 19.6	+1.0
BO01	Tunca	1.45	192	eP	Pn	04 15 01.1	+1.0
BO01				eS	Sn	04 15 20.2	+1.5
BO01				IAML		04 15 23.2	
	comp=Z,2μm,0.2s						
ARCO	CERRO ARCO	1.50	85	eP	Pn	04 15 03.1	+2.3
ARCO				eS	Sn	04 15 24.5	+4.4
AAGR	Agrelo	1.58	95	eP	Pn	04 15 04.3	+2.4
AAGR				eS	Sn	04 15 26.4	+4.4
RTLS	Leoncito	1.67	46	eP	Pn	04 15 05.5	+2.2
RTLS				eP		04 15 05.8	
RTLS				eS	Sn	04 15 28.6	+4.3
RTLS				IAML		04 15 33.2	
	comp=Z,2μm,0.6s						
CO02	Combarbal	1.78	352		Pn	04 15 05.4	+0.8
CO02	Combarbal	1.78	352	⇓iP	Pn	04 15 05.3	+0.8
CO02				i S	Sn	04 15 28.4	+1.7
CO02	Combarbal	1.78	352	eP	Pn	04 15 05.5	+0.9
CO02				eS	Sn	04 15 30.3	+3.7
CO02				IAML		04 15 35.0	
	comp=Z,1μm,0.2s						
BO02	Sierra Bellavi	1.81	182		Pn	04 15 06.0	+1.1
BO02	Sierra Bellavi	1.81	182	eP	Pn	04 15 06.2	+1.3
BO02				eS	Sn	04 15 31.6	+4.2
BO02				IAML		04 15 32.2	
	comp=Z,3μm,0.1s						
CO03	El Pedregal	2.13	0		Pn	04 15 10.7	+1.6
CO03	El Pedregal	2.13	0	⇓iP	Pn	04 15 10.6	+1.5
CO03				i S	Sn	04 15 36.5	+1.7
CO03	El Pedregal	2.13	0	eP	Pn	04 15 10.7	+1.6
CO03				eS	Sn	04 15 37.8	+3.0
CO03				IAML		04 15 41.1	
	comp=Z,1μm,0.4s						
ZON	Zonda	2.23	51		Pn	04 15 12.4	+2.0
ZON	Zonda	2.23	51	eP	Pn	04 15 12.6	+2.1
ZON				eS	Sn	04 15 40.6	+3.3
SJA	San Juan	2.32	52	eP	Pn	04 15 01.6	-10
SJA				eS	Sn	04 15 44.8	+5.4
CO06	Fray Jorge	2.42	341		Pn	04 15 14.0	+1.0
CFA	Coronel Fontan	2.50	58	P	Pn	04 15 15.6	+1.6
	comp=Z,74nm,0.3s,baz=223,slow=10,SNR=891						
CFA				S	Sn	04 15 43.6	0.0
	comp=Z,118nm,0.3s,baz=99,slow=19,SNR=21						
ACCO	Cerro Coronel	2.76	31	eP	Pn	04 15 24.9	+7.1
ACCO				eS	Sn	04 15 54.8	+4.4
GO04	Tololo Observa	2.79	358		Pn	04 15 18.7	+0.6
ML02	Panimavida	2.84	192		Pn	04 15 19.2	+0.6
ACDV	Cuesta del Vie	3.11	26	eP	Pn	04 15 24.7	+2.3
ACDV				eS	Sn	04 15 59.3	+0.8
ACDV				IAML		04 16 30.3	
	comp=Z,387nm,0.7s						
AVFE	Valle Fertil	3.60	51	eP	Pn	04 15 30.3	+1.3
AVFE				eP		04 15 30.4	
AVFE				eS	Sn	04 16 05.8	-4.7
AVFE				IAML		04 16 11.2	
	comp=Z,443nm,0.8s						
AVFE				eS		04 16 12.2	
ACHE	Chepes	3.88	63	eP	Pn	04 15 33.5	+0.7
ACHE				eS	Sn	04 16 19.4	+2.1
LCO	Las Campanas	3.95	0		Pn	04 15 34.2	+0.3
AGUA	GUANDACOL	3.96	29	eP	Pn	04 15 35.7	+1.8
AGUA				eS	Sn	04 16 01.3	-18
AGUA				IAML		04 16 06.7	
	comp=Z,396nm,0.5s						
BI05	Punta Hualpn	4.28	208		Pn	04 15 36.5	-1.6
AC04	Llanos de Chal	4.76	356		Pn	04 15 44.7	-0.1
ACLC	CERRO LA CRUZ	4.78	43	eP	Pn	04 15 45.2	+0.1
ACLC				eS	Sn	04 16 37.8	-1.6
ACLC				IAML		04 17 08.6	
	comp=Z,106nm,0.6s						
GO03	Copiapo	5.38	4		Pn	04 15 52.8	-0.4
AC02	Maricunga	6.27	13		Pn	04 16 05.1	-0.6
LR03	Panguipulli	6.78	191		Pn	04 16 10.4	-1.7
H03S1	Juan Fernandez	6.91	261	T	T	04 22 43.1	
	baz=86,slow=75,SNR=220						
H03S3	Juan Fernandez	6.91	261	T	T	04 22 38.9	
	baz=86,slow=75,SNR=294						
H03S2	Juan Fernandez	6.92	261	T	T	04 22 40.0	
	baz=86,slow=75,SNR=359						
PLCA	Paso Flores	7.75	179	P	Pn	04 16 25.2	-0.2
	comp=Z,1.1nm,0.4s,baz=358,slow=10,SNR=16						
GO02	Mina Guanaco	7.84	7		Pn	04 16 24.5	-2.6
TRQA	Tornquist	8.74	128		Pn	04 16 38.7	-0.2
LL01	San Ignacio de	9.48	188	Pn	Pn	04 16 47.3	-1.7
ITQB	Itaqui	12.48	78	Pn	Pn	04 17 27.9	-2.0
CPUP	Villa Florida	13.38	64	P	Pn	04 17 40.5	-1.4
	comp=Z,0.3nm,0.5s,baz=91,slow=8.1,SNR=4.1						
CPUP				S	Sn	04 20 00.8	-8.1
	comp=Z,1.0nm,0.8s,baz=138,slow=19,SNR=2.0						
LPAZ	La Paz	16.78	9	P	P	04 18 27.1	+0.2
	comp=Z,1.5nm,0.7s,baz=169,slow=9.7,SNR=7.5						
SIV	San Ignacio	19.03	30	P	P	04 18 49.9	-1.1
	comp=Z,1.9nm,0.7s,baz=192,slow=8.8,SNR=9.6						
EFI	East Falkland	20.84	157	P	P	04 19 09.8	-0.6
EFI				IAmb	IAmb	04 19 40.6	
	comp=Z,30nm,1.2s						
BDFB	Brasilia	26.84	55	P	P	04 20 08.1	-0.5
BDFB				IAmb	IAmb	04 20 10.2	
	comp=Z,9.7nm,1.4s						
BDFB	Brasilia	26.84	55	P	P	04 20 06.7	-1.8
	comp=Z,3.0nm,0.9s,baz=230,slow=9.1,SNR=5.0						
	comp=Z,3.0nm,0.9s						
MAL2	Monte Alegre,	34.48	30	P	P	04 21 14.8	-0.9
RUSC	La Rusia	38.72	356	P	P	04 21 53.9	+1.7
RUSC				IAmb	IAmb	04 22 27.5	
	comp=Z,10nm,1.3s						
SNAA	Sanae	52.12	158	P	P	04 23 37.8	+0.8
SNAA				IAmb	IAmb	04 24 20.3	
	comp=Z,7.3nm,1.5s						
SNAA	Sanae	52.12	158	P	P	04 23 37.4	+0.4
	comp=Z,1.5nm,0.6s,baz=290,slow=8.4,SNR=10.0						
	comp=Z,1.5nm,0.6s						
SOR	Soroa	56.68	346	P	P	04 24 10.6	+0.1
QSPA	South Pole Qui	57.26	180	pP	pP	04 24 35.6	+0.9
	comp=Z,1.8nm,0.9s,baz=208,slow=2.8,SNR=3.8						
TX31	Lajitas Ar. Si	69.40	330	P	P	04 25 35.9	+1.1
TXAR	Lajitas Array	69.40	330	P	P	04 25 35.8	+1.0
TXAR	Lajitas Array	69.40	330	P	P	04 25 35.9	+1.1
	comp=Z,0.7nm,0.5s,baz=156,slow=8.6,SNR=10.0						
	comp=Z,0.7nm,0.5s						
WVT	Waverly	70.59	345	P	P	04 25 41.6	-0.1
WVT				IAmb	IAmb	04 25 42.7	
	comp=Z,6.0nm,0.7s						
LCAR	Lake Charles	71.30	343	P	P	04 25 46.3	+0.3
LCAR				IAmb	IAmb	04 25 47.0	
	comp=Z,3.0nm,0.6s						
MNTX	Cornudas Mount	72.18	329	P	P	04 25 51.3	-0.2
DBIC	Dimbokro	73.80	71	P	P	04 26 01.6	+0.1
DBIC				IAmb	IAmb	04 26 17.0	
	comp=Z,14nm,1.4s						
DBIC	Dimbokro	73.80	71	P	P	04 26 01.1	-0.3
	comp=Z,3.1nm,0.6s,baz=240,slow=9.2,SNR=5.0						
DBIC				pP	pP	04 26 24.4	+1.2
	comp=Z,3.6nm,1.1s,baz=270,slow=4.0,SNR=1.5						
	comp=Z,3.1nm,0.6s						
MAW	Mawson	73.84	163	P	P	04 26 01.4	+0.5
	comp=Z,1.5nm,1.0s,baz=205,slow=14,SNR=1.0						
	comp=Z,1.5nm,1.0s						
BOSA	Boshof	79.56	117	P	P	04 26 33.9	0.0
	comp=Z,1.7nm,0.9s,baz=221,slow=5.5,SNR=5.1						
	comp=Z,1.7nm,0.9s						
TORD	Torodi Ar. Bea	82.81	69	P	P	04 26 51.2	0.0
	comp=Z,3.3nm,0.8s,baz=247,slow=5.7,SNR=2.3						
TORD				pP	pP	04 27 13.4	+0.1
	comp=Z,1.8nm,0.3s,baz=280,slow=4.3,SNR=2.0						
	comp=Z,3.3nm,0.8s						
PDAR	Pinedale Array	83.36	332	P	P	04 26 54.3	+0.7
	comp=Z,0.2nm,0.3s,baz=157,slow=3.3,SNR=2.0						
	comp=Z,0.2nm,0.3s						
NVAR	Mina Array Bea	83.69	324	P	P	04 26 54.9	-0.5
	comp=Z,0.6nm,0.7s,baz=125,slow=3.5,SNR=2.5						
	comp=Z,0.6nm,0.7s						
WRA	Warramunga Arr	122.19	208	PKP	PKPdf	04 33 20.9	-0.5
	comp=Z,0.5nm,0.4s,baz=153,slow=1.8,SNR=18						
WRA				pPKP	pPKPdf	04 33 43.7	-0.6
	comp=Z,0.2nm,0.4s,baz=167,slow=1.2,SNR=2.2						
ARCES	ARCESS Array B	122.62	25	PKP	PKPdf	04 33 20.7	0.0
	comp=Z,2.4nm,1.0s,baz=251,slow=4.4,SNR=1.9						
H11S2	WAKE ISLAND Hy	126.90	269	T	T	06 52 48.9	
	baz=118,slow=74,SNR=41						
H11S1	WAKE ISLAND Hy	126.91	269	T	T	06 52 48.0	
	baz=118,slow=74,SNR=28						
H11S3	WAKE ISLAND Hy	126.91	269	T	T	06 52 48.9	
	baz=118,slow=74,SNR=22						
H11N3	WAKE ISLAND Hy	127.28	271	T	T	06 53 20.5	
	baz=117						
H11N1	WAKE ISLAND Hy	127.30	271	T	T	06 53 20.5	
	baz=117						
H11N2	WAKE ISLAND Hy	127.30	271	T	T	06 53 20.5	
	baz=117						
BVAR	Borovoye Array	145.78	42	PKPbc	PKPab	04 34 05.8	+0.6
	comp=Z,2.6nm,0.6s,baz=287,slow=4.1,SNR=14						
BVAR				pPKPbc	pPKPab	04 34 28.8	+0.9
	comp=Z,1.1nm,0.6s,baz=260,slow=3.0,SNR=3.0						
KURBB	Kurchatov Arra	151.36	43	PKPbc	PKPbc	04 34 19.6	+0.3
	comp=Z,1.9nm,0.8s,baz=299,slow=3.0,SNR=14						
KURBB				pPKPbc	pPKPbc	04 34 42.4	+0.2
	comp=Z,1.0nm,0.6s,baz=297,slow=3.1,SNR=4.6						
ZALV	Zalesovo Beam	152.77	32	PKPbc	PKiKP	04 34 22.9	+0.3
	comp=Z,4.5nm,0.5s,baz=299,slow=3.1,SNR=12						
ZALV				pPKPbc	pPKPbc	04 34 45.6	+0.3
	comp=Z,1.3nm,0.5s,baz=307,slow=5.4,SNR=2.6						
MKAR	Makanchi Array	155.25	48	PKPab	PKPab	04 34 44.5	0.0
	comp=Z,0.9nm,0.6s,baz=304,slow=3.8,SNR=7.3						
PZH	PanZhiHua	170.80	133	PKP	PKPdf	04 34 33.8	-0.8

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*SJA **14** 04:21:17.5±0.7, 29°.94S×72°.68W, h24^{km}±8^{km}, ML4.7, MW4.8*

*IDC **14** 04:21:22.1±0.7, 30°.09S×71°.78W, h0^{km}, mb4.3/8, mbtmp4.2/11, ML4.0/3, MS3.8/5, Error ellipse: s-maj=21.4km s-min=15.8km az=46.0*

*NEIC **14** 04:21:23, 30°.05S×72°.10W, h13^{km}*

*GUC **14** 04:21:23.7±0.7, 30°.05S×72°.10W, h25^{km}, ML4.5*

*NEIC **14** 04:21:23.0±2.0, 30°.05S±0°.03×72°.09W±0°.05, h12^{km}±3^{km}, mb4.7/21, Mwr4.4/75, Mwr4.6(GUC), Error ellipse: s-maj=6.3km s-min=4.3km az=84.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$3.99; M$_{\theta\theta}$0.63; M$_{\phi\phi}$-4.62; M$_{r\theta}$1.09; M$_{\theta\phi}$0.13; M$_{\phi r}$-3.61; Fault plane solution: M$_0$5.76000×10^{15} NP1:φ$_s$11.37000°, δ26.00000°, λ111.43000°. NP2:φ$_s$167.78000°, δ65.92000°, λ79.90000°. Principal axes: T 5.5065, Plg68.0000°, Azm59.0000°; N 0.4698, Plg9.0000°, Azm172.0000°; P -5.9763, Plg20.0000°, Azm265.0000°;*

*VAO **14** 04:21:30.5±1.6, 29°.95S×71°.81W, h60^{km}±10^{km}, mb4.6*

ISC 14 04:21:22.2±0.5, **30°.08S**±0°.02×**72°.17W**±0°.04, **h10**^{km}, **n165**, σ**1^{s}66**/191, **mb4.7**/14, **Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.76	142		Pb	04 21 37.3	-0.1
CO06				Sg	Sb	04 21 47.2	-0.6
CO06	Fray Jorge	0.76	142	eP	Pb	04 21 37.3	-0.1
CO06				IAML		04 21 52.8	
	comp=E,19μm,0.3s						
CO05	La Serena	0.82	79		Pg	04 21 37.9	-0.1
CO05				Sg	Sg	04 21 47.9	-0.9
CO05	La Serena	0.82	79	i P	Pg	04 21 37.9	-0.1
CO05				eS	Sg	04 21 47.8	-0.9
CO05				IAML		04 21 50.1	
	comp=E,52μm,0.3s						
GO04	Tololo Observa	1.19	95		Pb	04 21 43.9	-1.1
GO04				Sn	Sg	04 21 58.9	-1.8
GO04	Tololo Observa	1.19	95	i P	Pb	04 21 43.9	-1.1
GO04	Tololo Observa	1.19	95	eP	Pb	04 21 44.0	-1.0
GO04				eS	Sn	04 22 01.1	-0.4
GO04				eS	Sb	04 22 01.5	+0.9
CO03	El Pedregal	1.49	121		Pn	04 21 48.7	-0.4
CO03				Sn	Sb	04 22 08.0	-1.0
CO03	El Pedregal	1.49	121	eP	Pn	04 21 48.6	-0.4
CO03				eS	Sb	04 22 08.1	-0.9
CO03				IAML		04 22 12.3	
	comp=N,14μm,0.5s						
CO02	Combarbal	1.51	138		Pb	04 21 49.7	-0.7
CO02	Combarbal	1.51	138	eP	Pb	04 21 49.8	-0.6
CO02				eS	Sb	04 22 08.8	-0.9
CO02				IAML		04 22 14.5	
	comp=N,21μm,0.4s						
LCO	Las Campanas	1.66	51		Pn	04 21 51.3	-0.3
LCO	Las Campanas	1.66	51	eP	Pn	04 21 51.3	-0.3
LCO	Las Campanas	1.66	51	eP	Pn	04 21 45.6	-6.0
LCO				eP	Pb	04 21 51.4	-1.6
LCO				eS	Sg	04 22 17.3	+1.6
LCO				IAML		04 22 19.6	
	comp=Z,14μm,0.6s						
CO01	Juntas del Tor	1.80	87		Pn	04 21 53.8	+0.3
AC04	Llanos de Chal	2.10	28		Pn	04 21 56.5	-0.9
AC04	Llanos de Chal	2.10	28	eP	Pn	04 21 56.5	-0.9
AC04	Llanos de Chal	2.10	28	eP	Pn	04 21 55.8	-1.6
AC04				IAML		04 22 47.4	
	comp=Z,2μm,1.6s						
AROD	Rodeo	2.34	93	eP	Pb	04 22 03.5	-1.1
AROD				eS	Sg	04 22 37.5	+0.1
VA06	Catapilco	2.59	163		Pn	04 22 04.5	+0.5
VA06	Catapilco	2.59	163	eP	Pn	04 22 04.6	+0.5
VA06				IAML		04 22 53.6	
	comp=E,2μm,0.5s						
ACDV	Cuesta del Vie	2.65	93	eP	Pb	04 22 07.9	-1.8
ACDV				eS	Sg	04 22 45.7	-1.5
ACDV				IAML		04 22 48.1	
	comp=Z,1μm,0.5s						
ACCO	Cerro Coronel	2.73	102	eP	Pb	04 22 09.1	-2.2
ACCO				eS	Sg	04 22 54.5	+4.5
VA01	Torpederas	2.97	171		Pn	04 22 09.5	+0.1
GO03	Copiapo	3.00	35		Pn	04 22 09.2	-0.6
GO03	Copiapo	3.00	35	eP	Pn	04 22 09.5	-0.3
GO03				IAML		04 23 05.7	
	comp=E,1μm,0.5s						
GO03	Copiapo	3.00	35	eP	Pn	04 22 09.3	-0.6
GO03				eS	Sb	04 22 50.6	-1.9
RTLS	Leoncito	3.01	126	eP	Pb	04 22 13.5	-2.5
RTLS				eS	Sb	04 22 54.6	+1.7
RTLS				IAML		04 23 00.3	
	comp=Z,5μm,0.7s						
VA03	San Esteban	3.02	153		Pn	04 22 11.4	+1.3
VA03	San Esteban	3.02	153	eP	Pn	04 22 11.1	+1.0
VA03				IAML		04 23 06.5	
	comp=N,3μm,0.6s						
VA03	San Esteban	3.02	153	eP	Pn	04 22 07.6	-2.5
VA03				eP	Pb	04 22 11.6	-4.5
VA03				eS	Sn	04 22 45.6	-0.7
VA03				IAML		04 23 09.9	
	comp=Z,2μm,0.7s						
ROCH	El Roble	3.05	161	eP	Pn	04 22 11.7	+1.0
ROCH				IAML		04 23 08.1	
	comp=N,1μm,0.3s						
AC06	Mina Casimiro	3.14	31		Pn	04 22 11.5	-0.2
AC06	Mina Casimiro	3.14	31	eP	Pn	04 22 11.6	-0.2
AC06				IAML		04 23 10.6	
	comp=N,999nm,0.4s						
AGUA	GUANDACOL	3.25	81	eP	Pb	04 22 16.8	-3.2
AGUA				eS	Sb	04 23 01.1	+1.3
AGUA				eS	Sg	04 23 07.6	+0.9
AGUA				IAML		04 23 13.1	
	comp=Z,2μm,0.7s						
MT02	Curacav	3.29	165		Pn	04 22 13.7	-0.1
MT02	Curacav	3.29	165	eP	Pn	04 22 14.4	+0.6
MT02	Curacav	3.29	165	eP	Pn	04 22 14.4	+0.6
MT02				eS	Sb	04 23 01.1	+0.3
MT02				IAML		04 23 17.6	
	comp=Z,587nm,1.1s						
PEL	Peldehue	3.31	158		Pn	04 22 15.4	+1.3
ZON	Zonda	3.34	117		Pn	04 22 16.3	+1.8
ZON	Zonda	3.34	117	eP	Pb	04 22 17.6	-4.0
ZON				eS	Sb	04 23 02.1	-0.2
ZON				IAML		04 23 20.1	
	comp=Z,1μm,1.8s						
MT05	Renca	3.52	160		Pn	04 22 18.4	+1.4
MT05	Renca	3.52	160	eP	Pn	04 22 18.4	+1.4
MT05				eS	Sn	04 23 02.1	+3.3
MT05				IAML		04 23 16.1	
	comp=Z,1μm,0.8s						
VA05	Santo Domingo	3.60	173		Pn	04 22 18.1	+0.1
VA05	Santo Domingo	3.60	173	eP	Pn	04 22 18.2	+0.1
FCH	Farellones	3.62	154	eP	Pn	04 22 20.1	+1.5
FCH				IAML		04 23 27.5	
	comp=N,410nm,0.2s						
MT16	CCHEN	3.62	158		Pn	04 22 20.0	+1.5
MT03	Universidad Ad	3.69	158	eP	Pn	04 22 20.4	+1.0
MT03				IAML		04 23 34.7	
	comp=E,1μm,0.4s						
MT03	Universidad Ad	3.69	158	eP	Pn	04 22 20.5	+1.2
MT03				eP	Pb	04 22 21.0	-6.5
MT03				eS	Sb	04 23 07.6	-4.7
MT03				IAML		04 23 29.9	
	comp=Z,1μm,0.8s						
VCA	Vinchina	3.71	70	eP	Pn	04 22 22.9	+3.3
VCA				eS	Sg	04 23 19.1	-2.2
VCA				IAML		04 23 25.9	
	comp=Z,2μm,1.3s						
CFA	Coronel Fontan	3.71	115	Pg	Pn	04 22 22.2	+2.6
	comp=Z,9.8nm,0.3s,baz=296,slow=13,SNR=122						
CFA				Lg	Lg	04 23 08.6	
	comp=Z,25nm,0.3s,baz=108,slow=20,SNR=4.8						
CFA				LR	LR	04 23 40.0	
	comp=Z,369nm,20.4s,baz=258,slow=40						
CFA	Coronel Fontan	3.71	115	eP	Pn	04 22 22.4	+2.8
MT04	Ro Olivares	3.74	153	eP	Pn	04 22 17.6	-2.6
MT04				eP	Pb	04 22 22.5	-6.0
MT04				eS	Sn	04 23 01.1	-3.4
MT04				eS	Sb	04 23 07.4	-6.7
MT04				IAML		04 23 32.7	
	comp=Z,709nm,0.8s						
MT08	Bocatoma Ro	3.83	152	eP	Pn	04 22 19.1	-2.3
MT08				eP	Pb	04 22 24.3	-5.7
MT08				eS	Sb	04 23 12.0	-4.4
MT08				IAML		04 23 30.2	
	comp=Z,641nm,0.8s						
MT01	Popeta	3.86	169		Pn	04 22 22.1	+0.5
MT01	Popeta	3.86	169	eP	Pn	04 22 22.1	+0.5
MT01				eS	Sn	04 23 08.2	+1.3
MT01				IAML		04 23 39.1	
	comp=Z,468nm,0.7s						
ARCO	CERRO ARCO	3.91	136	eP	Pb	04 22 27.0	-4.2
ARCO				eS	Sb	04 23 20.6	+2.0
ARCO				IAML		04 23 37.6	
	comp=Z,1μm,1.2s						
MT13	San Alfonso	3.99	157		Pn	04 22 25.7	+2.2
MT13	San Alfonso	3.99	157	eP	Pn	04 22 25.1	+1.5
MT13				eS	Sn	04 23 13.1	+2.6
MT13				IAML		04 23 36.2	
	comp=Z,619nm,0.9s						
LMEL	Las Melosas	4.12	157	eS	Sb	04 23 25.1	+0.5
LMEL				eS	Sg	04 23 28.6	-5.7
AC01	Pan de Azucar	4.15	20		Pn	04 22 23.9	-1.8
AC01	Pan de Azucar	4.15	20	eP	Pn	04 22 23.3	-2.4
AC01				eS	Sb	04 23 23.6	-2.0

AC01				IAML		04 23 43.7	
	comp=Z,546nm,0.6s						
AC02	**Maricunga**	**4.20**	**40**		**Pn**	**04 22 27.3**	**+0.6**
AC02	**Maricunga**	**4.20**	**40**	*e*P	**Pn**	**04 22 26.6**	**-0.1**
AC02				*e*S	**Sb**	**04 23 25.1**	**-2.2**
AC02				IAML		04 23 40.8	
	comp=Z,1µm,0.9s						
BO01	**Tunca**	**4.40**	**168**		**Pn**	**04 22 29.5**	**+0.5**
BO01	**Tunca**	**4.40**	**168**	*e*S	**Sn**	**04 23 21.0**	**+0.7**
BO01				IAML		04 23 53.6	
	comp=Z,283nm,0.6s						
BO02	**Sierra Bellavi**	**4.85**	**166**	*e*S	**Sn**	**04 23 33.9**	**+2.4**
BO02				IAML		04 24 05.6	
	comp=Z,388nm,0.8s						
H03N1	**Juan Fernandez**	**6.65**	**238**	T	T	04 30 12.2	
	baz=69,slow=72,SNR=1572						
H03N2	**Juan Fernandez**	**6.66**	**238**	T	T	04 30 12.4	
	baz=69,slow=72,SNR=1695						
H03N3	**Juan Fernandez**	**6.66**	**238**	T	T	04 30 14.0	
	baz=69,slow=72,SNR=1345						
BI05	**Punta Hualpn**	**6.71**	**187**	Pn	**Pn**	**04 22 59.8**	**-1.0**
AF01	**San Pedro de A**	**7.94**	**28**	Pn	**Pn**	**04 23 16.5**	**-1.5**
LR05	**Currie**	**10.13**	**179**	Pn	**Pn**	**04 23 46.9**	**-0.7**
PLCA	**Paso Flores**	**10.71**	**173**	Pn	**Pn**	**04 23 56.2**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=336,slow=11,SNR=13						
	comp=Z,1.5nm,0.4s						
TRQA	**Tornquist**	**11.60**	**136**		**Pn**	**04 24 08.1**	**+0.2**
ITQB	**Itaqui**	**13.50**	**92**		**Pn**	**04 24 30.9**	**-2.9**
CPUP	**Villa Florida**	**13.61**	**78**		**Pn**	**04 24 32.4**	**-2.9**
CPUP	**Villa Florida**	**13.61**	**78**	Pn	**Pn**	**04 24 34.0**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=307,slow=20,SNR=5.6						
CPUP				LR	LR	04 30 08.4	
	comp=Z,180nm,20.6s,baz=98,slow=40						
	comp=Z,0.5nm,0.8s						
LPAZ	**La Paz**	**14.22**	**16**	Pn	**Pn**	**04 24 41.2**	**-3.0**
	comp=Z,0.9nm,0.3s,baz=188,slow=5.8,SNR=44						
LPAZ	**La Paz**	**14.22**	**16**	*e*P	**Pn**	**04 24 45.5**	**+1.3**
SJPY	**San Joaquin**	**15.12**	**74**	*e*P	**Pn**	**04 24 56.7**	**+0.8**
COYC	**Coyhaique**	**15.47**	**180**	Pn	**Pn**	**04 25 00.3**	**-0.1**
MURT	**Porto Murtinho**	**15.54**	**61**	*e*P	**Pn**	**04 25 02.5**	**+1.0**
CPSB	**Cacapava Do Su**	**16.20**	**96**	*e*P	**Pn**	**04 25 09.7**	**-0.2**
BBSD	**Serra de San D**	**16.62**	**42**	*e*P	**P**	**04 25 16.9**	**-0.9**
SIV	**San Ignacio**	**17.33**	**38**	Pn	**Pn**	**04 25 21.1**	**-3.1**
	baz=220,slow=11,SNR=30						
SIV				LR	LR	04 32 48.4	
	comp=Z,299nm,18.3s,baz=238,slow=40						
	comp=Z,9.4nm,0.9s						
AQDB	**Aquidauana**	**17.68**	**61**		**Pn**	**04 25 27.4**	**-1.2**
AQDB	**Aquidauana**	**17.68**	**61**	*e*P	**P**	**04 25 29.3**	**-0.2**
ITAB	**Concordia**	**17.82**	**86**	Pn	**Pn**	**04 25 28.7**	**-1.6**
ITAB	**Concordia**	**17.82**	**86**	*e*P	**P**	**04 25 30.5**	**-0.4**
CNLB	**Canela**	**18.54**	**93**	*e*P	**Pn**	**04 25 39.6**	**+0.4**
PTGB	**Pitanga**	**18.63**	**78**	*e*P	**Pn**	**04 25 41.0**	**+0.7**
PTLB	**Pontes e Lacer**	**18.85**	**42**		**P**	**04 25 40.8**	**-1.7**
PTLB	**Pontes e Lacer**	**18.85**	**42**	*e*P	**P**	**04 25 41.6**	**-0.8**
TRCB	**Terra Rica**	**18.92**	**72**	P	**P**	**04 25 41.8**	**-1.5**
TRCB				IAmb	IAmb	04 26 20.1	
	comp=Z,24nm,0.5s						
TRCB	**Terra Rica**	**18.92**	**72**	*e*P	**Pn**	**04 25 44.1**	**+0.2**
RPRD	**Ribas do Rio P**	**19.22**	**64**	*e*P	**Pn**	**04 25 46.9**	**-0.5**
LDASE	**Londrina, Braz**	**19.93**	**76**	*e*P	**P**	**04 25 53.3**	**-1.0**
VILB	**Vilhena**	**20.33**	**36**	P	**P**	**04 25 57.9**	**-0.7**
VILB				IAmb	IAmb	04 26 20.0	
	comp=Z,25nm,0.9s						
VILB	**Vilhena**	**20.33**	**36**	*e*P	**P**	**04 25 58.5**	**-0.2**
MAJ01	**Sao Joao Batis**	**20.48**	**88**	*e*P	**P**	**04 25 58.1**	**-2.1**
SALV	**Santo Antonio**	**20.68**	**51**	*e*P	**P**	**04 26 01.7**	**-0.7**
C2SB	**Chapadao do Su**	**20.86**	**62**	*e*P	**P**	**04 26 05.2**	**+0.8**
FRTB	**Fartura**	**21.26**	**77**	*e*P	**P**	**04 26 07.4**	**-1.3**
CZSB	**Cruzeiro do Su**	**22.24**	**359**	P	**P**	**04 26 19.8**	**+0.6**
CZSB				IAmb	IAmb	04 26 45.8	
	comp=Z,43nm,1.0s						
CZSB	**Cruzeiro do Su**	**22.24**	**359**	*e*P	**P**	**04 26 21.5**	**+2.3**
ITRB	**Iturama**	**22.28**	**67**	*e*P	**P**	**04 26 18.2**	**-1.5**
PET01	**Itanhaem-SP**	**22.86**	**81**	*e*P	**P**	**04 26 25.9**	**+0.2**
SPB	**Sao Paulo**	**22.98**	**80**	P	**P**	**04 26 25.2**	**-1.7**
SPB				IAmb	IAmb	04 26 28.1	
	comp=Z,19nm,1.0s						
SPB	**Sao Paulo**	**22.98**	**80**	*e*P	**P**	**04 26 26.3**	**-0.7**
PDRB	**Porto dos Gac**	**23.31**	**41**	*e*P	**P**	**04 26 29.0**	**-1.5**
ARAG	**Araguaiana, MT**	**23.53**	**57**	*e*P	**P**	**04 26 32.4**	**-0.3**
VAO	**Valinhos**	**23.59**	**79**	P	**P**	**04 26 31.5**	**-1.8**
VAO				IAmb	IAmb	04 26 33.6	
	comp=Z,22nm,0.9s						
VAO	**Valinhos**	**23.59**	**79**	*e*P	**P**	**04 26 31.4**	**-2.0**
EFI	**East Falkland**	**23.99**	**158**	P	**P**	**04 26 36.4**	**-0.3**
EFI				IAmb	IAmb	04 26 44.9	
	comp=Z,41nm,1.4s						
PARB	**Paraibuna**	**24.61**	**81**	*e*P	**P**	**04 26 42.5**	**-0.4**
IPMB	**Ipameri, GO**	**24.92**	**67**	*e*P	**P**	**04 26 44.1**	**-1.5**
SLP01	**Ubatuba-SP**	**25.02**	**81**	*e*P	**P**	**04 26 46.2**	**-0.3**
TBTG	**Tabatinga, AM**	**25.84**	**5**	P	**P**	**04 26 53.5**	**-0.4**
TBTG	**Tabatinga, AM**	**25.84**	**5**	*e*P	**P**	**04 26 55.4**	**+1.5**
PMNB	**Patos De Minas**	**26.05**	**70**	*e*P	**P**	**04 26 55.5**	**-0.4**
MAN01	**Angra dos Reis**	**26.21**	**81**	*e*P	**P**	**04 26 58.2**	**+0.9**
BSCB	**Bom Sucesso**	**26.27**	**76**	*e*P	**P**	**04 26 57.2**	**-0.7**
BDFB	**Brasilia**	**26.42**	**62**	P	**P**	**04 26 58.1**	**-1.1**
BDFB				IAmb	IAmb	04 26 59.7	
	comp=Z,22nm,1.2s						
BDFB	**Brasilia**	**26.42**	**62**	P	**P**	**04 26 58.4**	**-0.9**
	comp=Z,8.4nm,0.7s,baz=231,slow=8.3,SNR=15						
BDFB				LR	LR	04 38 21.1	
	comp=Z,321nm,18.3s,baz=164,slow=39						
	comp=Z,8.4nm,0.7s						
SNDB	**Serra Nova Dou**	**26.45**	**52**	*e*P	**P**	**04 26 58.9**	**-0.6**
VAS01	**Vassouras-RJ**	**26.87**	**80**	*e*P	**P**	**04 27 03.5**	**+0.2**
TEFE	**Tefe**	**27.37**	**17**	*e*P	**P**	**04 27 08.1**	**+0.4**
NPGB	**Novo Progresso**	**27.83**	**38**	*e*P	**P**	**04 27 11.0**	**-0.9**
DIAM	**Diamantina, MG**	**28.44**	**72**	*e*P	**P**	**04 27 17.0**	**-0.5**
CAM01	**Campos-RJ**	**28.57**	**81**	*e*P	**P**	**04 27 18.0**	**-0.5**
MACA	**Manacapuru-AM**	**28.90**	**24**	P	**P**	**04 27 20.5**	**-0.8**
MACA				IAmb	IAmb	04 27 22.5	
	comp=Z,16nm,1.1s						
MACA	**Manacapuru-AM**	**28.90**	**24**	*e*P	**P**	**04 27 21.7**	**+0.3**
JANB	**Januaria**	**29.65**	**66**	*e*P	**P**	**04 27 27.6**	**-0.5**
ITTB	**Itaituba**	**29.92**	**34**	*e*P	**P**	**04 27 29.7**	**-0.7**
SJMB	**Sao Joao De Ma**	**30.31**	**75**	*e*P	**P**	**04 27 32.9**	**-1.0**
SMTB	**Santa Maria do**	**31.21**	**53**	*e*P	**P**	**04 27 42.1**	**+0.2**
RUSC	**La Rusia**	**35.77**	**358**	P	**P**	**04 28 22.3**	**+0.2**
TMAB	**Tom-Au,PA,Br**	**35.78**	**44**	*e*P	**P**	**04 28 22.2**	**+0.5**
SDV	**Santo Domingo**	**38.77**	**2**	*e*P	**P**	**04 28 48.7**	**+1.6**
BAUV	**El Baul**	**39.00**	**6**	P	**P**	**04 28 48.5**	**-0.4**
BAUV				IAmb	IAmb	04 28 50.7	
	comp=Z,22nm,1.0s						
CELP	**Cerrillos**	**48.17**	**7**	P	**P**	**04 30 02.8**	**0.0**
SJG	**San Juan**	**48.26**	**8**	LR	LR	04 52 18.4	
	comp=Z,407nm,18.7s,baz=256,slow=38						
BELA	**Belgrano 2**	**50.75**	**170**	P	**P**	**04 30 22.9**	**+1.0**
BELA				IAmb	IAmb	04 30 37.0	
	comp=Z,7.1nm,1.2s						
SNAA	**Sanae**	**55.26**	**159**	P	**P**	**04 30 55.9**	**+0.6**
SNAA	**Sanae**	**55.26**	**159**	P	**P**	**04 30 56.1**	**+0.9**
	comp=Z,6.6nm,0.8s,baz=276,slow=7.3,SNR=19						
	comp=Z,6.6nm,0.8s						
QSPA	**South Pole Qui**	**60.15**	**180**	P	**P**	**04 31 30.9**	**+1.1**
QSPA				IAmb	IAmb	04 31 56.1	
	comp=Z,13nm,1.5s						
QSPA	**South Pole Qui**	**60.15**	**180**	P	**P**	**04 31 31.6**	**+1.9**
	comp=Z,2.0nm,0.9s,baz=150,slow=1.7,SNR=5.9						
	comp=Z,2.0nm,0.9s						
TXAR	**Lajitas Array**	**66.28**	**330**	P	**P**	**04 32 12.3**	**+1.6**
TXAR	**Lajitas Array**	**66.28**	**330**	P	**P**	**04 32 13.4**	**+2.7**
	comp=Z,0.5nm,0.7s,baz=154,slow=7.8,SNR=8.0						
	comp=Z,0.5nm,0.7s						
TX31	**Lajitas Ar. Si**	**66.28**	**330**	P	**P**	**04 32 11.8**	**+1.0**
DBIC	**Dimbokro**	**74.07**	**72**	P	**P**	**04 32 58.5**	**-0.3**
DBIC	**Dimbokro**	**74.07**	**72**	P	**P**	**04 32 59.1**	**+0.4**
	comp=Z,13nm,0.8s,baz=237,slow=6.1,SNR=13						
	comp=Z,13nm,0.8s						
PDAR	**Pinedale Array**	**80.22**	**333**	P	**P**	**04 33 34.8**	**+1.8**
	comp=Z,0.2nm,0.4s,baz=154,slow=3.4,SNR=1.6						
	comp=Z,0.2nm,0.4s						
ULM	**Lac du Bonnet**	**82.69**	**345**	P	**P**	**04 33 47.3**	**+1.7**
	comp=Z,2.2nm,0.8s,baz=144,slow=5.4,SNR=3.7						
	comp=Z,2.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**83.00**	**71**	P	**P**	**04 33 48.5**	**+0.5**
	comp=Z,7.4nm,0.7s,baz=263,slow=4.1,SNR=9.6						
	comp=Z,7.4nm,0.7s						
WRA	**Warramunga Arr**	**124.10**	**210**	PKP	**PKiKP**	**04 40 22.0**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=143,slow=1.7,SNR=0.9						
H11S2	**WAKE ISLAND Hy**	**125.62**	**272**	T	T	06 59 16.7	
	baz=115,slow=75,SNR=46						
H11S1	**WAKE ISLAND Hy**	**125.63**	**272**	T	T	06 59 17.2	
	baz=115,slow=75,SNR=33						
H11S3	**WAKE ISLAND Hy**	**125.64**	**272**	T	T	06 59 09.9	
	baz=115,slow=75,SNR=28						
BVAR	**Borovoye Array**	**144.40**	**39**	PKP	**PKPdf**	**04 40 58.6**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=309,slow=3.1,SNR=4.9						
KURBB	**Kurchatov Arra**	**149.99**	**39**	PKPbc	**PKiKP**	**04 41 13.8**	**+0.4**
	comp=Z,2.8nm,0.8s,baz=299,slow=3.4,SNR=16						
ZALV	**Zalesovo Beam**	**150.90**	**28**	PKPbc	**PKiKP**	**04 41 16.1**	**+0.9**
	comp=Z,10nm,0.6s,baz=304,slow=3.4,SNR=41						
MKAR	**Makanchi Array**	**154.12**	**43**	PKPbc	**PKiKP**	**04 41 22.8**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=346,slow=2.5,SNR=6.3						
PZH	**PanZhiHua**	**173.56**	**122**	PKP	**PKPdf**	**04 41 31.8**	**-0.6**

IDC **14** *04:28:27.8±0.6, 18°.83S×168°.75E, h79^{km}±4^{km}, mb4.8/26, mbtmp5.2/28, MS4.1/32, Error ellipse: s-maj=15.0km s-min=9.2km az=86.0*

NEIC **14** *04:28:28.6±2.2, 18°.90S±0°.07×168°.79E±0°.10, h81^{km}±4^{km}, mb5.1/281, Mww5.2/17, Error ellipse: s-maj=13.1km s-min=10.1km az=98.0*

NEIC **14** *04:28:28.1, 18°.89S×168°.80E, h90^{km}*

NEIC **14** *04:28:28.1, 18°.89S×168°.80E, h90^{km}, Moment Tensor Solution. Duration: 1^{s}9 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.24; $M_{\theta\theta}$2.26; $M_{\phi\phi}$-0.02; $M_{r\theta}$-4.05; $M_{\theta\phi}$5.54; $M_{\phi r}$0.48; Fault plane solution: $M_0$7.24000×10^{16} NP1: ϕ_s189.68000°, δ51.00000°, λ-164.08000°. NP2: ϕ_s89.50000°, δ77.69000°, λ-40.10000°. Principal axes: T 7.6516, Plg17.0000°, Azm145.0000°; N -0.9155, Plg48.0000°, Azm255.0000°; P -6.7361, Plg37.0000°, Azm42.0000°;*

NOU **14** *04:28:28.8, 18°.91S×168°.65E, h73^{km}, mb5.4/92, Vanuatu Islands*

MOS **14** *04:28:29.5±1.0, 18°.80S×168°.70E, h84^{km}, mb5.3/26, Error ellipse: s-maj=10.1km s-min=7.4km az=115.4*

GCMT **14** *04:28:30.1±0.2, 18°.88S±0°.01×168°.56E±0°.01, h78^{km}±1^{km}, MW5.3/135, Moment Tensor Solution. s72,c103; s135,c224; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.27±.02; $M_{\theta\theta}$0.25±.02; $M_{\phi\phi}$0.01±.02; $M_{r\theta}$-0.64±.01; $M_{\theta\phi}$0.71±.02; $M_{\phi r}$-0.01±.01; Best double couple: $M_0$0.98300×10^{17} NP1: ϕ_s188.00000°, δ46.00000°, λ-166.00000°. NP2: ϕ_s88.00000°, δ80.00000°, λ-45.00000°. Principal axes: T 1.0540, Plg22.0000°, Azm145.0000°; N -0.1430, Plg44.0000°, Azm258.0000°; P -0.9110, Plg38.0000°, Azm37.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 04:28:28.6±0.3**, 18°.91S**±0°.03×**168°.75E**±0°.04**, h87**^{km}±2^{km}**, h87**^{km}**:pP-P, n1005,** σ**1^{s}25**/861**, mb5.1**/229**, 26C-57D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INH	**Isangel**	**0.81**	**143**	P	**Pn**	**04 28 46.5**	**+0.6**
INH	**Isangel**	**0.81**	**143**	S	**Sn**	**04 28 58.9**	**0.0**
MARNC	**Mare, Loyalty**	**2.65**	**195**	P	**Pn**	**04 29 07.8**	**-1.5**
VLAKA	**Lakatoro**	**3.06**	**335**	P	**Pn**	**04 29 13.8**	**-1.1**
VLAKA	**Lakatoro**	**3.06**	**335**	S	**Sn**	**04 29 49.3**	**-1.2**
YATNC	**Mamie plateau,**	**3.59**	**209**	P	**Pn**	**04 29 20.2**	**-1.8**
YATNC	**Mamie plateau,**	**3.59**	**209**	S	**Sn**	**04 30 03.5**	**+0.1**
DZM	**Mont Dzumac**	**3.82**	**214**		**Pn**	**04 29 24.1**	**-1.2**
DZM				Sn	**Sn**	**04 30 06.4**	**-2.8**
DZM	**Mont Dzumac**	**3.82**	**214**	*e*Pn	**Pn**	**04 29 22.8**	**-2.5**
	7µm,1.2s						
DZM				*e*Sn	**Sn**	**04 30 07.1**	**-2.0**
	13µm,0.8s						
DZM	**Mont Dzumac**	**3.82**	**214**	P	**Pn**	**04 29 24.1**	**-1.2**
	2µm,0.6s,baz=49,slow=17,SNR=1878						
DZM				S	**Sn**	**04 30 05.5**	**-3.6**
	4µm,0.6s,baz=122,slow=21,SNR=16						
DZM	**Mont Dzumac**	**3.82**	**214**	P	**Pn**	**04 29 25.1**	**-0.2**
DZM	**Mont Dzumac**	**3.82**	**214**	S	**Sn**	**04 30 07.2**	**-1.9**
PINNC	**Pines Island,**	**3.89**	**198**	P	**Pn**	**04 29 26.0**	**0.0**
PINNC	**Pines Island,**	**3.89**	**198**	S	**Sn**	**04 30 08.9**	**-1.6**
OUENC	**Ouen Island, N**	**3.93**	**207**	P	**Pn**	**04 29 26.6**	**0.0**
OUENC	**Ouen Island, N**	**3.93**	**207**	S	**Sn**	**04 30 10.1**	**-1.5**
ONTNC	**Ouen Toro**	**4.01**	**212**	P	**Pn**	**04 29 26.6**	**-1.1**
ONTNC	**Ouen Toro**	**4.01**	**212**	S	**Sn**	**04 30 10.6**	**-3.0**
KOUNC	**Koumac, New Ca**	**4.51**	**248**	P	**Pn**	**04 29 34.4**	**-0.2**
KOUNC	**Koumac, New Ca**	**4.51**	**248**	S	**Sn**	**04 30 24.1**	**-1.8**
LUES	**Luesalemba Tem**	**8.64**	**341**	P	**Pn**	**04 30 28.5**	**-2.4**
YSA	**Yasawairara**	**8.69**	**77**	P	**Pn**	**04 30 33.5**	**+2.0**
MSVF	**Nonsavu**	**8.91**	**84**		Pn	04 30 40.5	+6.0
MSVF	**Nonsavu**	**8.91**	**84**	P	Pn	04 30 39.7	+5.1
	15nm,0.7s,baz=271,slow=14,SNR=14						
MSVF	**Nonsavu**	**8.91**	**84**	P	**Pn**	**04 30 37.2**	**+2.6**
MSVF	**Nonsavu**	**8.91**	**84**	P	Pn	04 30 40.5	+5.9
NFK	**Norfolk Island**	**10.12**	**184**	P	**Pn**	**04 30 52.5**	**+1.5**
	comp=Z,593nm,0.6s						
HURO	**Huro Makira**	**10.69**	**321**	P	**Pn**	**04 30 58.4**	**-0.4**
DGTI	**Dogotuki**	**10.79**	**78**	P	**Pn**	**04 31 02.6**	**+2.4**
NGOA	**Tingoa Renbel**	**11.12**	**310**	P	**Pn**	**04 31 05.2**	**+0.6**
LKBA	**Tubou, Lakemba**	**11.81**	**89**	P	**Pn**	**04 31 16.7**	**+2.7**
HNR	**Honiara**	**12.71**	**317**		**Pn**	**04 31 25.5**	**-0.6**
HNR	**Honiara**	**12.71**	**317**	P	**Pn**	**04 31 26.4**	**+0.4**
	comp=Z,1µm,0.7s,baz=228,slow=1.6,SNR=15						
HNR				LR	LR	04 35 51.4	
	comp=Z,672nm,18.1s,baz=139,slow=35						
HNR	**Honiara**	**12.71**	**317**	P	**Pn**	**04 31 26.9**	**+0.9**
ALEG	**Aligegeo Malai**	**12.76**	**321**	P	**Pn**	**04 31 28.8**	**+2.0**
SAVO	**Savo Central**	**13.00**	**317**	P	**Pn**	**04 31 31.1**	**+1.1**
TATA	**Tatamba Isabel**	**13.59**	**319**	P	**Pn**	**04 31 38.0**	**+0.3**
FUNA	**Funafuti**	**14.46**	**46**	P	**Pn**	**04 31 50.5**	**+1.5**
GC1S	**Gold Coast 1 S**	**16.73**	**234**	P	**P**	**04 32 18.9**	**+0.6**
OUZ	**Omahuta**	**16.81**	**166**	P	**P**	**04 32 20.5**	**+1.3**
EIDS	**Eidsvold**	**17.58**	**245**		**Pn**	**04 32 30.6**	**+2.6**
EIDS	**Eidsvold**	**17.58**	**245**	P	**Pn**	**04 32 30.6**	**+2.6**
EIDS	**Eidsvold**	**17.58**	**245**	P	**Pn**	**04 32 28.7**	**+0.7**
WCZ	**Waipu Caves**	**17.67**	**165**	P	**Pn**	**04 32 31.4**	**+2.4**
GRZ	**Great Barrier**	**18.26**	**162**	P	**Pn**	**04 32 38.0**	**+1.9**
ABAZ	**Army Bay**	**18.42**	**164**	P	**Pn**	**04 32 40.2**	**+2.1**
MBAZ	**Motutapu North**	**18.60**	**164**	P	**Pn**	**04 32 41.8**	**+1.7**
WTAZ	**Waiatarua**	**18.67**	**165**	P	**Pn**	**04 32 43.6**	**+2.6**
WIAZ	**Waiheke Island**	**18.68**	**164**	P	**Pn**	**04 32 42.0**	**+0.9**
KUZ	**Kuaotunu**	**18.80**	**162**	P	**Pn**	**04 32 43.6**	**+1.1**
KUZ	**Kuaotunu**	**18.80**	**162**	P	**Pn**	**04 32 43.9**	**+1.4**
AWAZ	**Awhitu Peninsu**	**18.82**	**165**	P	**Pn**	**04 32 45.5**	**+2.8**
MKAZ	**Moumakai**	**18.98**	**164**	P	**Pn**	**04 32 45.3**	**+0.6**
ARMA	**Armidale**	**19.30**	**230**		**Pn**	**04 32 50.0**	**+1.4**
ARMA	**Armidale**	**19.30**	**230**	P	**Pn**	**04 32 49.3**	**+0.7**
	comp=Z,98nm,0.8s						
ARMA	**Armidale**	**19.30**	**230**	P	**Pn**	**04 32 49.1**	**+0.5**
TOZ	**Tahuroa Road**	**19.66**	**164**		**Pn**	**04 32 52.6**	**-0.1**
TOZ	**Tahuroa Road**	**19.66**	**164**	P	**Pn**	**04 32 53.5**	**+0.8**
WIZ	**White Island**	**19.97**	**160**	P	**Pn**	**04 32 57.7**	**+1.5**
TLZ	**Tolley Road**	**20.24**	**164**	P	Pn	04 32 59.5	0.0
HIZ	**Hauiti**	**20.25**	**166**	P	Pn	04 32 59.8	+0.3
HIZ	**Hauiti**	**20.25**	**166**	P	Pn	04 32 59.7	+0.2
OMRZ	**Omania**	**20.25**	**162**	P	Pn	04 32 59.4	-0.2
HAZ	**Te Kaha**	**20.37**	**159**	P	Pn	04 33 00.3	-0.7
MXZ	**Matakaoa Point**	**20.38**	**158**		Pn	04 33 00.4	-0.7
MXZ	**Matakaoa Point**	**20.38**	**158**	P	Pn	04 33 00.0	-1.0
HSRZ	**Hossack Road**	**20.41**	**163**	P	Pn	04 33 01.7	+0.3
RUGZ	**Raukumara Rang**	**20.53**	**160**	P	Pn	04 33 01.5	-1.4
URZ	**Urewera**	**20.61**	**161**	P	Pn	04 33 02.4	-1.4
	comp=Z,140nm,0.8s,baz=74,slow=4.2,SNR=33						
URZ				LR	LR	04 38 59.7	
	comp=Z,1µm,18.5s,baz=62,slow=31						
	comp=Z,140nm,0.8s						
URZ	**Urewera**	**20.61**	**161**	P	Pn	04 33 03.6	-0.2
URZ	**Urewera**	**20.61**	**161**	P	Pn	04 33 02.9	-0.9
VRZ	**Vera Road**	**20.81**	**167**	P	Pn	04 33 05.6	-0.5
MWZ	**Matawai**	**20.81**	**160**	P	Pn	04 33 05.6	-0.6
NEZ	**North Egmont**	**20.82**	**168**	P	Pn	04 33 06.1	-0.2
PUZ	**Puketiti**	**20.82**	**158**	P	**P**	**04 33 04.3**	**+1.3**
KHEZ	**Kahui Hut**	**20.82**	**168**	P	Pn	04 33 05.6	-0.7
RTZ	**Ruatahuna**	**20.90**	**162**		**P**	**04 33 05.5**	**+1.6**
RTZ	**Ruatahuna**	**20.90**	**162**	P	Pn	04 33 06.2	-1.1
NGZ	**Ngauruhoe**	**21.05**	**165**	P	**P**	**04 33 08.0**	**+2.4**
CTAO	**Charters Tower**	**21.24**	**263**	P	**P**	**04 33 09.8**	**+2.1**
CTAO	**Charters Tower**	**21.24**	**263**	P	**P**	**04 33 09.8**	**+2.1**
BKZ	**Black Stump Fm**	**21.27**	**163**		**P**	**04 33 09.3**	**+1.5**
BKZ	**Black Stump Fm**	**21.27**	**163**	P	**P**	**04 33 09.8**	**+1.9**
BKZ	**Black Stump Fm**	**21.27**	**163**	P	**P**	**04 33 09.4**	**+1.5**
KNZ	**Kokohu**	**21.49**	**161**	P	**P**	**04 33 11.3**	**+1.2**
SYDH	**Sydney Hard Ro**	**21.85**	**224**	P	**P**	**04 33 15.4**	**+1.4**
TSZ	**Takapari Road**	**21.98**	**165**	P	**P**	**04 33 17.6**	**+2.3**
QRZ	**Quartz Range**	**22.09**	**172**	P	**P**	**04 33 17.9**	**+1.5**
QRZ	**Quartz Range**	**22.09**	**172**	P	**P**	**04 33 20.0**	**+3.5**
WOLH	**Wollongong Har**	**22.16**	**222**	P	**P**	**04 33 18.2**	**+0.8**
PXZ	**Pawanui**	**22.18**	**163**	P	**P**	**04 33 18.8**	**+1.3**
TKNZ	**Takaka Hill**	**22.35**	**172**	P	**P**	**04 33 21.4**	**+2.1**
MRZ	**Mangatainoka R**	**22.46**	**166**		**P**	**04 33 20.7**	**+0.3**
MRZ	**Mangatainoka R**	**22.46**	**166**	P	**P**	**04 33 20.9**	**+0.5**
NNZ	**Nelson**	**22.59**	**171**	P	**P**	**04 33 23.7**	**+1.9**
NNZ	**Nelson**	**22.59**	**171**	P	**P**	**04 33 24.9**	**+3.2**
BFZ	**Birch Farm**	**22.64**	**165**	P	**P**	**04 33 22.3**	**0.0**
BFZ	**Birch Farm**	**22.64**	**165**	P	**P**	**04 33 22.1**	**-0.2**
MRNZ	**Matariki Terra**	**22.68**	**172**		**P**	**04 33 25.1**	**+2.3**
SNZO	**South Karori**	**22.91**	**168**	P	**P**	**04 33 25.9**	**+0.9**
SNZO	**South Karori**	**22.91**	**168**	P	**P**	**04 33 27.2**	**+2.2**
DSZ	**Denniston Nort**	**22.91**	**174**	P	**P**	**04 33 27.4**	**+2.2**
PMG	**Port Moresby**	**22.94**	**291**		**P**	**04 33 24.5**	**-1.2**
PMG	**Port Moresby**	**22.94**	**291**	P	**P**	**04 33 23.6**	**-2.1**
	comp=Z,31nm,0.9s,baz=141,slow=8.2,SNR=7.0						
	comp=Z,31nm,0.9s						
PMG	**Port Moresby**	**22.94**	**291**	P	**P**	**04 33 27.1**	**+1.4**
PMG	**Port Moresby**	**22.94**	**291**	*d* *i*P	**P**	**04 33 25.4**	**-0.3**
PMG				pmax	pmax		
	comp=Z,36nm,1.0s						
THZ	**Tophouse**	**23.06**	**172**	P	**P**	**04 33 27.7**	**+1.2**
MTSU	**Mount Surprise**	**23.18**	**268**	P	**P**	**04 33 29.6**	**+1.6**
	comp=Z,48nm,1.0s						
MTSU	**Mount Surprise**	**23.18**	**268**	P	**P**	**04 33 28.7**	**+0.7**
CNB	**Canberra Magne**	**23.70**	**222**	P	**P**	**04 33 33.9**	**+1.3**
	comp=Z,197nm,0.7s						
CNB	**Canberra Magne**	**23.70**	**222**	P	**P**	**04 33 33.8**	**+1.3**
YNG	**Young**	**23.73**	**226**	P	**P**	**04 33 34.3**	**+1.5**
	comp=Z,63nm,0.8s						
KHZ	**Kahutara**	**23.79**	**171**	P	**P**	**04 33 33.3**	**+0.2**
KHZ	**Kahutara**	**23.79**	**171**	P	**P**	**04 33 33.1**	**0.0**
QLP	**Quilpie**	**23.84**	**247**	P	**P**	**04 33 34.9**	**+1.1**
	comp=Z,266nm,1.0s						
QLP	**Quilpie**	**23.84**	**247**	P	**P**	**04 33 35.1**	**+1.3**
INZ	**Inchbonnie**	**23.86**	**175**	P	**P**	**04 33 35.1**	**+1.4**
CAN	**Canberra**	**23.94**	**223**		**P**	**04 33 35.9**	**+1.2**
CAN	**Canberra**	**23.94**	**223**	P	**P**	**04 33 36.1**	**+1.4**
	comp=Z,238nm,0.9s						
CAN	**Canberra**	**23.94**	**223**	P	**P**	**04 33 35.8**	**+1.1**
CAN	**Canberra**	**23.94**	**223**	P	**P**	**04 33 35.9**	**+1.2**
CAN				pmax	pmax		
	comp=Z,165nm,0.6s						
LTZ	**Lake Taylor**	**23.99**	**174**	P	**P**	**04 33 36.2**	**+1.2**
WVZ	**Waitaha Valley**	**24.15**	**176**	P	**P**	**04 33 37.2**	**+0.8**
GVZ	**Greta Valley S**	**24.26**	**172**	P	**P**	**04 33 37.9**	**+0.5**
CMSA	**Cobar Meteorol**	**24.30**	**234**	P	**P**	**04 33 38.5**	**+0.6**
	comp=Z,64nm,1.0s						
CMSA	**Cobar Meteorol**	**24.30**	**234**	P	**P**	**04 33 38.8**	**+0.9**
OXZ	**Oxford**	**24.50**	**174**	P	**P**	**04 33 40.0**	**+0.4**
FOZ	**Fox Glacier**	**24.57**	**178**	P	**P**	**04 33 41.8**	**+1.6**
RPZ	**Rata Peaks**	**24.81**	**176**	P	**P**	**04 33 43.6**	**+1.2**
	comp=Z,99nm,0.6s,baz=335,slow=2.2,SNR=51						
RPZ				LR	LR	04 42 55.0	
	comp=Z,1µm,18.8s,baz=344,slow=35						
	comp=Z,99nm,0.6s						
RPZ	**Rata Peaks**	**24.81**	**176**	P	**P**	**04 33 44.0**	**+1.5**
MILA	**Mila**	**24.94**	**220**	P	**P**	**04 33 45.4**	**+1.6**
	comp=Z,18nm,1.9s						
MQZ	**McQueen's Vall**	**24.94**	**173**	IAmb	IAmb	04 33 45.3	
	comp=Z,122nm,0.9s						
MQZ	**McQueen's Vall**	**24.94**	**173**	P	**P**	**04 33 44.1**	**+0.5**
COEN	**Coen**	**25.01**	**277**	P	**P**	**04 33 41.4**	**-3.1**
COEN	**Coen**	**25.01**	**277**	P	**P**	**04 33 46.4**	**+1.9**
JCZ	**Jackson Bay**	**25.09**	**180**	P	**P**	**04 33 47.1**	**+2.0**
JCZ	**Jackson Bay**	**25.09**	**180**	P	**P**	**04 33 47.2**	**+2.1**
LBZ	**Lake Benmore**	**25.43**	**178**	IAmb	IAmb	04 33 50.1	
	comp=Z,53nm,0.7s						
LBZ	**Lake Benmore**	**25.43**	**178**	P	**P**	**04 33 49.4**	**+1.3**
TMZ	**Timaru**	**25.47**	**176**	P	**P**	**04 33 49.5**	**+1.0**
EAZ	**Earnscleugh**	**26.26**	**179**	P	**P**	**04 33 56.7**	**+1.2**
MLZ	**Mavora Lakes**	**26.39**	**181**		**P**	**04 33 56.6**	**-0.2**
MLZ				IAmb	IAmb	04 34 21.3	
	comp=Z,80nm,1.3s						
DCZ	**Deep Cove**	**26.52**	**183**	IAmb	IAmb	04 33 60.0	
	comp=Z,113nm,1.2s						
MANU	**Manus Island**	**26.83**	**306**		**P**	**04 34 00.6**	**-0.4**
TOO	**Toolangi**	**27.55**	**223**	P	**P**	**04 34 07.6**	**+0.4**
TOO	**Toolangi**	**27.55**	**223**	P	**P**	**04 34 08.2**	**+0.9**
	comp=Z,13nm,1.2s						
TOO	**Toolangi**	**27.55**	**223**	P	**P**	**04 34 07.6**	**+0.4**
TOO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
STKA	**Stephens Creek**	**27.64**	**237**		**P**	**04 34 08.6**	**+0.5**
STKA	**Stephens Creek**	**27.64**	**237**	P	**P**	**04 34 09.2**	**+1.1**
	comp=Z,257nm,1.0s						
STKA	**Stephens Creek**	**27.64**	**237**	P	**P**	**04 34 09.1**	**+1.0**
	comp=Z,5.2nm,0.6s,baz=72,slow=10,SNR=16						
STKA				pP	**pP**	**04 34 27.0**	**-0.1**
	comp=Z,19nm,0.8s,baz=68,slow=7.8,SNR=6.1						
STKA				LR	LR	04 44 07.3	
	comp=Z,578nm,18.6s,baz=37,slow=34						
	comp=Z,5.2nm,0.6s						
STKA	**Stephens Creek**	**27.64**	**237**	P	**P**	**04 34 09.1**	**+1.0**
STKA	**Stephens Creek**	**27.64**	**237**	⇑*e*P	**P**	**04 34 08.2**	**+0.1**
ARPS	**Mount Arapiles**	**29.57**	**227**	P	**P**	**04 34 26.1**	**+1.0**
	comp=Z,34nm,1.2s						
RAR	**Rarotonga**	**29.63**	**100**	LR	LR	04 44 16.1	
	comp=Z,224nm,20.6s,baz=259,slow=32						
HTT	**Hallett**	**30.30**	**236**	P	**P**	**04 34 32.7**	**+0.9**
	comp=Z,7.6nm,1.0s						
WHYH	**Whyalla**	**31.23**	**237**	P	**P**	**04 34 40.9**	**+1.1**
JAY	**Jayapura**	**31.92**	**297**	P	**P**	**04 34 43.4**	**-2.8**
	comp=Z,15nm,1.2s						
WR9	**Warramunga Arr**	**32.27**	**262**	P	**P**	**04 34 51.4**	**+2.2**
WR8	**Warramunga Arr**	**32.29**	**262**	P	**P**	**04 34 48.5**	**-0.8**
WR8				IAmb	IAmb	04 35 34.7	
	comp=Z,53nm,1.9s						
GENI	**Genyem**	**32.33**	**297**	P	**P**	**04 34 51.3**	**+1.6**
GENI	**Genyem**	**32.33**	**297**	P	**P**	**04 34 48.3**	**-1.4**
	comp=Z,97nm,1.3s						
BBOO	**Buckleboo**	**32.37**	**238**	P	**P**	**04 34 50.2**	**+0.4**
	comp=Z,38nm,0.9s						
WB0	**Warramunga Arr**	**32.40**	**263**	P	**P**	**04 34 49.5**	**-0.8**
WRAB	**Tennant Creek**	**32.43**	**262**	⇑*e*P	**P**	**04 34 52.0**	**+1.4**
WRAB				pmax	pmax		
	comp=Z,12nm,1.0s						
WRA	**Warramunga Arr**	**32.44**	**262**	P	**P**	**04 34 49.9**	**-0.8**
WRA	**Warramunga Arr**	**32.44**	**262**	P	**P**	**04 34 49.4**	**-1.3**
	comp=Z,0.8nm,0.5s,baz=94,slow=8.4,SNR=9.9						
WRA				PcP	**PcP**	**04 37 35.8**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=96,slow=2.9,SNR=2.5						
WRA				ScP	**ScP**	**04 41 13.5**	**+1.3**
	comp=Z,5.4nm,1.0s,baz=90,slow=3.9,SNR=12						
WRA				PKiKP	**PKiKP**	**04 45 01.9**	**-1.7**
	comp=Z,0.8nm,0.8s,baz=39,slow=0.6,SNR=7.7						
WRA				LR	LR	04 46 58.5	
	comp=Z,271nm,18.6s,baz=69,slow=34						
WRA	**Warramunga Arr**	**32.44**	**262**	P	**P**	**04 34 49.9**	**-0.8**
AS17	**Alice Springs**	**32.68**	**255**	P	**P**	**04 34 52.8**	**+0.1**
	comp=Z,27nm,0.8s						
AS01	**Alice Springs**	**32.72**	**255**	P	**P**	**04 34 53.8**	**+0.7**
ASAR	**Alice Springs**	**32.76**	**255**		**P**	**04 34 53.1**	**-0.3**
ASAR	**Alice Springs**	**32.76**	**255**	P	**P**	**04 34 53.4**	**-0.1**
	comp=Z,5.7nm,0.6s,baz=84,slow=8.7,SNR=59						
ASAR				pP	**pP**	**04 35 11.5**	**-1.2**
	comp=Z,16nm,0.6s,baz=82,slow=9.0,SNR=9.3						
ASAR				ScP	**ScP**	**04 41 14.9**	**+1.6**
	comp=Z,3.2nm,1.0s,baz=87,slow=2.8,SNR=11						
ASAR				PKiKP	**PKiKP**	**04 45 01.9**	**-1.9**
	comp=Z,0.6nm,0.8s,baz=61,slow=2.2,SNR=4.1						
	comp=Z,5.7nm,0.6s						
SMPI	**Sarmi**	**33.88**	**296**	P	**P**	**04 35 03.0**	**-0.2**
	comp=Z,39nm,1.5s						
BAKI	**Biak**	**36.52**	**295**	P	**P**	**04 35 24.7**	**-1.2**
	comp=Z,48nm,1.1s						
MTN	**Manton Dam**	**36.63**	**274**	IAmb	IAmb	04 35 27.6	
	comp=Z,26nm,0.8s						
MTN	**Manton Dam**	**36.63**	**274**	P	**P**	**04 35 26.7**	**-0.1**
	comp=Z,37nm,1.1s						
MTN	**Manton Dam**	**36.63**	**274**	P	**P**	**04 35 27.7**	**+0.9**
DRS	**Darwin Rock St**	**36.96**	**274**	P	**P**	**04 35 30.2**	**+0.6**
KNRA	**Kununurra**	**38.26**	**268**	IAmb	IAmb	04 36 07.1	
	comp=Z,23nm,0.8s						
KNRA	**Kununurra**	**38.26**	**268**	P	**P**	**04 35 40.5**	**-0.2**
	comp=Z,31nm,0.8s						
FORT	**Forrest**	**38.58**	**244**	P	**P**	**04 35 43.4**	**+0.3**
	comp=Z,60nm,0.7s						
TBI	**Tubuai**	**39.13**	**104**	*e*SS	SS	04 44 44.6	+7.3
	comp=Z,5µm,27.8s						
TBI				*e*LR	LR	04 46 36.0	
	comp=Z,1µm,28.0s						
TBI				*e*LR	LR	04 46 41.0	
	comp=Z,3µm,29.8s						
PPT2	**Papeete2**	**39.53**	**95**	*e*SS	SS	04 44 52.9	+7.3
	comp=Z,1µm,29.8s						

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PPT2                           eLR   LR     04 46 46.3
       comp=Z,472nm,34.0s
PPT2                           eLR   LR     04 46 54.6
       comp=Z,811nm,33.2s
PPT   Papeete          39.54  95 LR   LR     04 47 32.7
       comp=Z,298nm,21.7s,baz=260,slow=29
GUMO  Guam             39.96 322 LR   LR     04 50 34.3
       comp=Z,166nm,20.0s,baz=126,slow=33
FITZ  Fitzroy Crossi   40.82 264 P    P      04 36 02.5 +0.6
FITZ  Fitzroy Crossi   40.82 264 P    P      04 36 02.4 +0.6
       comp=Z,13nm,0.8s
FITZ  Fitzroy Crossi   40.82 264 P    P      04 36 03.0 +1.2
PSAB3 Pilbara Seismi   45.81 258 P    P      04 36 43.0 +1.0
       comp=Z,36nm,1.0s
PSAA2 Pilbara Seismi   45.82 258 P    P      04 36 43.5 +1.4
       comp=Z,30nm,1.3s
MBWA  Marble Bar       45.97 259 P    P      04 36 44.6 +1.3
       comp=Z,37nm,1.0s
MBWA  Marble Bar       45.97 259 P    P      04 36 44.2 +1.0
MBWA                             pP   pP     04 37 03.1  -0.3
MEEK  Meekatharra      46.63 251 P    P      04 36 48.8 +0.4
       comp=Z,79nm,0.8s
MEEK  Meekatharra      46.63 251 P    P      04 36 49.7 +1.3
KLBR  Kellerberrin     47.44 244 P    P      04 36 54.4  -0.2
       comp=Z,52nm,1.2s
NWAO  Narrogin (SRO)   47.96 242 P    P      04 36 59.4 +0.8
NWAO                             IAmb IAmb   04 37 27.6
       comp=Z,37nm,1.0s
NWAO  Narrogin (SRO)   47.96 242 LR   LR     04 55 41.6
       comp=Z,356nm,18.2s,baz=102,slow=34
NWAO  Narrogin (SRO)   47.96 242 P    P      04 36 59.4 +0.8
NWAO                             pmax pmax
       comp=Z,37nm,1.0s
NWAO  Narrogin (SRO)   47.96 242 P    P      04 36 58.8 +0.2
NWAO                             pP   pP     04 37 17.5  -1.5
NWAO                             sP   sP     04 37 26.8  -1.8
KAPI  Kappang          49.71 280 P    P      04 37 13.0 +0.8
KAPI  Kappang          49.71 280 P    P      04 37 13.0 +0.8
KAPI                             pmax pmax
       comp=Z,58nm,1.5s
KAPI  Kappang          49.71 280 P    P      04 37 12.8 +0.6
TAOE  Nuku Hiva Isla   50.45  86 eLR  LR     04 51 41.6
       comp=Z,144nm,23.8s
TOLI2 Tolitoli         51.13 287 P    P      04 37 21.9  -1.0
TOLI2                            IAmb IAmb   04 37 23.6
       comp=Z,29nm,0.9s
TOLI2 Tolitoli         51.13 287 P    P      04 37 22.8  -0.1
DRV   Dumont d'Urvil   51.24 194 P    P      04 37 23.2 +0.3
DRV                              pP   pP     04 37 42.1  -1.7
DRV                              sP   sP     04 37 51.2  -2.2
HMH   Humu'ula Sheep   51.92  44 P    P      04 37 28.5  -0.5
JCJ   Chichijima       52.49 330 P    P      04 37 31.9  -0.8
JCJ   Chichijima       52.49 330 P    P      04 37 32.5  -0.2
VNDA  Vanda            58.75 182 P    P      04 38 17.7 +0.8
VNDA  Vanda            58.75 182 P    P      04 38 17.6 +0.7
       comp=Z,4.3nm,0.5s,baz=356,slow=7.2,SNR=34
VNDA                             LR   LR     04 59 33.1
       comp=Z,234nm,22.0s,baz=354,slow=32
       comp=Z,4.3nm,0.5s
VNDA  Vanda            58.75 182 P    P      04 38 17.7 +0.8
VNDA                             pmax pmax
       comp=Z,12nm,1.1s
VNDA  Vanda            58.75 182 P    P      04 38 17.4 +0.5
VNDA                             pP   pP     04 38 36.8  -1.6
VNDA                             sP   sP     04 38 46.1  -2.0
SBA   Scott Base       58.99 180 P    P      04 38 20.5 +1.9
SBA   Scott Base       58.99 180 P    P      04 38 20.5 +1.9
SBA                              pmax pmax
       comp=Z,221nm,1.9s
SBA   Scott Base       58.99 180 P    P      04 38 20.3 +1.7
SBA                              pP   pP     04 38 40.2 +0.1
SBA                              sP   sP     04 38 49.2  -0.5
CASY  Casey            60.25 203      P      04 38 27.8 +0.4
CASY  Casey            60.25 203 P    P      04 38 27.7 +0.4
KSM   Kuching          60.85 283 P    P      04 38 32.3   0.0
KSM   Kuching          60.85 283 P    P      04 38 33.0 +0.7
CCD   Concordia, Ant   61.13 192 P    P      04 38 34.0 +0.3
CCD                              pP   pP     04 38 53.8  -1.4
CCD                              sP   sP     04 39 02.3  -2.5
INU   Inuyama          61.79 331 P    P      04 38 39.9 +1.7
JGF   Kuroka           61.84 331 P    P      04 38 39.5 +0.9
JMN   Monobe           62.01 327 P    P      04 38 41.2 +1.5
MJAR  Matsushiro Arr   62.24 332 P    P      04 38 40.4  -0.8
       comp=Z,86nm,0.8s,baz=174,slow=7.3,SNR=44
       comp=Z,86nm,0.8s
MAJO  Matsushiro       62.24 332 P    P      04 38 40.5  -0.8
MAJO  Matsushiro       62.24 332 P    P      04 38 42.9 +1.7
MAJO  Matsushiro       62.24 332d iP  P      04 38 40.2  -1.0
MAJO                             pmax pmax
       comp=Z,52nm,0.9s
MAJO  Matsushiro       62.24 332 P    P      04 38 40.9  -0.3
JMM   Marumori         62.29 335 P    P      04 38 42.3 +0.8
NACB  Ninganchiao      62.82 311 P    P      04 38 44.4  -0.9
NACB  Ninganchiao      62.82 311 P    P      04 38 46.1 +0.8
TPUB  Ta-pu            62.98 310 P    P      04 38 47.5 +1.1
SSLB  Suanglung        63.04 310 P    P      04 38 46.0  -0.8
SSLB  Suanglung        63.04 310 P    P      04 38 47.8 +1.0
JNU   Nakatsue         63.13 325 P    P      04 38 47.2   0.0
       comp=Z,42nm,0.8s,baz=146,slow=5.1,SNR=22
JNU                              LR   LR     05 05 53.1
       comp=Z,99nm,18.6s,baz=144,slow=36
       comp=Z,42nm,0.8s
JNU   Nakatsue         63.13 325 P    P      04 38 48.2 +1.0
YHNB  Yeheng           63.28 311 P    P      04 38 50.0 +1.6
JSD   Sado             63.48 333 P    P      04 38 50.2 +0.9
ERM   Erimo            65.07 339 P    P      04 39 00.0 +0.4
ERM                              IAmb IAmb   04 39 02.6
       comp=Z,24nm,0.8s
ERM   Erimo            65.07 339deP   P      04 38 59.4  -0.2
ERM                              pmax pmax
       comp=Z,25nm,0.9s
ASAJ  Asahikawa        67.13 340 P    P      04 39 13.4 +0.6
       comp=Z,84nm,0.8s,baz=225,slow=9.7,SNR=36
ASAJ                             LR   LR     05 04 25.0
       comp=Z,282nm,21.1s,baz=154,slow=32
       comp=Z,84nm,0.8s
TJN   Taejon           67.48 325 P    P      04 39 16.0 +0.8
TJN   Taejon           67.48 325c iP  P      04 39 15.7 +0.5
KSRS  Korea Array      67.97 326 P    P      04 39 18.6 +0.4
       comp=Z,8.0nm,0.8s,baz=134,slow=6.2,SNR=28
       comp=Z,8.0nm,0.8s
KSAR  Wonju Array Be   67.98 326 P    P      04 39 17.8  -0.5
KSAR  Wonju Array Be   67.98 326 P    P      04 39 17.8  -0.5
INCN  Inchon           68.69 325 P    P      04 39 23.3 +0.5
INCN  Inchon           68.69 325 P    P      04 39 24.4 +1.6
INCN  Inchon           68.69 325 P    P      04 39 23.3 +0.5
QIZ   Qiongzhong       69.02 300 P    P      04 39 25.6 +0.4
QIZ                              S    S      04 48 26.8 +3.2
QIZ                              pmax pmax
       comp=Z,28nm,1.1s
YSS   Yuzhno-Sakhali   69.62 341 P    P      04 39 29.4 +1.1
YSS   Yuzhno-Sakhali   69.62 341 P    P      04 39 29.7 +1.5
YSS   Yuzhno-Sakhali   69.62 341 eP   P      04 39 29.1 +0.9
YSS                              e           04 39 51.8
YSS                              pmax pmax
       comp=Z,100nm,3.9s
YSS                              pmax pmax
       comp=Z,30nm,1.4s
YSS   Yuzhno-Sakhali   69.62 341 P    P      04 39 29.3 +1.1
YSS                              PcP  PcP    04 39 52.4 +1.7
NJ2   Nanjing          69.65 316 ⇓P   P      04 39 29.3 +0.5
NJ2                              pmax pmax
       comp=Z,30nm,0.8s
SKR   Severo-Kuril's   70.17 351d iP  P      04 39 31.1  -0.4
MSHR  Mys Shultsa      70.31 331⇑iP   P      04 39 32.7 +0.1
MSHR                             pmax pmax
       comp=Z,40nm,1.0s
VLA   Vladivostok      70.41 332⇑eP   P      04 39 34.4 +1.2
VLA                              pmax pmax
       comp=Z,38nm,0.6s
PSTR  Posyet           70.53 331c iP  P      04 39 34.8 +0.9
QSPA  South Pole Qui   71.15 180 P    P      04 39 38.5 +0.9
QSPA  South Pole Qui   71.15 180 P    P      04 39 38.4 +0.7
       comp=Z,71nm,1.0s,baz=11,slow=1.5,SNR=135
QSPA                             LR   LR     05 06 27.9
       comp=Z,163nm,21.2s,baz=20,slow=32
       comp=Z,71nm,1.0s
QSPA  South Pole Qui   71.15 180 P    P      04 39 38.3 +0.7
QSPA                             pP   PcP    04 39 57.9 +0.7
QSPA                             sP   sP     04 40 07.0  -2.3
USA0B Ussuriysk Arra   71.23 333 IAmb IAmb   04 39 40.0
       comp=Z,58nm,1.2s
USA0B Ussuriysk Arra   71.23 333d iP  P      04 39 38.4 +0.2
USRK  Ussuriysk Ar.    71.23 333 P    P      04 39 38.5 +0.3
USRK  Ussuriysk Ar.    71.23 333 P    P      04 39 38.6 +0.5
       comp=Z,28nm,1.0s,baz=147,slow=4.9,SNR=37
USRK                             pP   PcP    04 39 58.0 +0.4
       comp=Z,7.9nm,0.8s,baz=108,slow=4.7,SNR=4.1
USRK                             LR   LR     05 08 31.7
       comp=Z,63nm,21.1s,baz=139,slow=34
       comp=Z,28nm,1.0s
SHEM  Shemya Is, Ala   71.48   3 LR   LR     05 06 57.1
       comp=Z,95nm,19.6s,baz=236,slow=32
WHN   Wuhan            71.78 312 ⇓P   P      04 39 42.1 +0.3
WHN                              pmax pmax
       comp=Z,240nm,1.2s
GULI  GuiLin           71.80 306 P    P      04 39 43.6 +1.6
PEA0B Petropavlovsk-   72.35 353 IAmb IAmb   04 39 46.0
       comp=Z,28nm,1.0s
PEA0B Petropavlovsk-   72.35 353deP   P      04 39 44.6  -0.1
PETK  Petropavlovsk-   72.35 353 P    P      04 39 44.5  -0.1
PETK  Petropavlovsk-   72.35 353 P    P      04 39 45.0 +0.4
       comp=Z,16nm,0.8s,baz=153,slow=7.8,SNR=34
PETK                             LR   LR     05 06 19.4
       comp=Z,233nm,20.7s,baz=168,slow=31
       comp=Z,16nm,0.8s
DL2   Dalian           72.47 323 P    P      04 39 46.3 +0.6
DL2                              pmax pmax
       comp=Z,140nm,1.0s
MDJ   Mudanjiang       72.61 332 P    P      04 39 47.0 +0.6
MDJ                              S    SKiKP  04 49 11.3  -1.3
MDJ                              pmax pmax
       comp=Z,100nm,1.1s
GSI   Gunungsitoli     72.66 278 P    P      04 39 48.3 +0.9
TYV   Tymovskoe        73.16 343 eP   P      04 39 49.2  -0.3
TYV                              eS   S      04 49 07.9  -2.4
TYV                              pmax pmax
       comp=Z,23nm,1.1s
TYV                              pmax pmax
       comp=Z,100nm,2.1s
TYV                              smax smax
       comp=N,200nm,5.8s
TYV                              smax smax
       comp=E,300nm,5.8s
TIA   Tai'an           73.39 319 P    P      04 39 51.3 +0.1
TIA                              PcP  PcP    04 40 07.8 +0.8
TIA                              pmax pmax
       comp=E,58nm,1.0s
CN2   Changchun        73.94 329 eP   P      04 39 54.6 +0.4
CN2                              pmax pmax
       comp=E,70nm,0.8s
NIKH  Nikolski High    74.16  14 P    P      04 39 55.8 +0.5
       baz=202
BNX   BinXian          74.46 331 ⇓P   P      04 39 56.9  -0.4
BNX                              sP   sP     04 40 35.9 +6.9
BNX                              pmax pmax
       comp=E,110nm,0.8s
GRNR  Gornyy           74.98 339⇓iP   P      04 40 01.4 +1.3
GRNR                             pmax pmax
       comp=Z,40nm,1.1s
ENH   Enshi            75.11 310 P    P      04 40 01.8 +0.4
GYA   Guiyang          75.25 305 ⇑P   P      04 40 03.5 +1.1
GYA                              pmax pmax
       comp=Z,47nm,0.9s
KLR   Kul'dur          75.38 336 P    P      04 40 03.2 +0.8
       comp=Z,20nm,1.0s,baz=107,slow=3.1,SNR=26
KLR                              LR   LR     05 07 56.5
       comp=Z,119nm,21.7s,baz=151,slow=31
       comp=Z,20nm,1.0s
KLR   Kul'dur          75.38 336deP   P      04 40 03.0 +0.6
KLR                              pmax pmax
       comp=Z,63nm,1.7s
LYN   LuoYang          75.41 315 P    P      04 40 03.8 +0.8
LYN                              pmax pmax
       comp=Z,160nm,0.9s
UNV   Unalaska Valle   75.52  15 P    P      04 40 03.6 +0.5
       baz=204
HNS   HongShan         75.65 318 ⇓P   P      04 40 05.3 +1.1
HNS                              pmax pmax
       comp=Z,63nm,1.2s
BJT   Baijiatuau       76.38 321 IAmb IAmb   04 40 10.2
       comp=Z,35nm,0.8s
BJT   Baijiatuau       76.38 321 P    P      04 40 10.2 +1.8
BJI   Beijing          76.39 321 P    P      04 40 09.3 +0.9
BJI                              PcP  PcP    04 40 20.5 +0.7
BJI                              S    S      04 49 46.8 +0.2
BJI                              pmax pmax
       comp=Z,22nm,0.9s
BJI                              LR   LR
       comp=Z,110nm,16.7s
BJI                              LR   LR
       comp=Z,100nm,14.5s
BJI                              LR   LR
       comp=Z,160nm,17.7s
FALS  False Pass       77.21  16 P    P      04 40 12.8 +0.1
       baz=207
TIY   Taiyuan          77.28 317 eP   P      04 40 14.8 +1.2
TIY                              pmax pmax
       comp=Z,31nm,1.3s
P08K  Saint George I   77.40  12 P    P      04 40 14.1 +0.4
       baz=201
XAN   Xi'an            77.55 313 ⇓P   P      04 40 15.8 +0.7
XAN                              pmax pmax
       comp=Z,93nm,0.9s
XAN                              pmax pmax
       comp=Z,360nm,3.6s
XAN                              LR   LR
       comp=Z,430nm,16.0s
XAN                              LR   LR
       comp=Z,320nm,16.5s
XAN                              LR   LR
       comp=Z,470nm,21.1s
KMI   Kunming          77.71 302 ⇓P   P      04 40 18.1 +1.7
KMI                              pP   pP     04 40 38.4  -0.6
KMI                              pmax pmax
       comp=Z,84nm,1.0s
SPIA  Saint Paul Isl   77.80  12 P    P      04 40 16.4 +0.5
       baz=200
HEH   HeiHe            77.92 334 eP   P      04 40 16.8 +0.1
HEH                              pmax pmax
       comp=Z,28nm,0.9s
CMAR  Chiang Mai Arr   77.95 294 P    P      04 40 18.3 +0.7
CMAR  Chiang Mai Arr   77.95 294 P    P      04 40 18.6 +1.0
       comp=Z,8.5nm,1.0s,baz=129,slow=4.3,SNR=24
CMAR                             pP   pP     04 40 38.5  -1.7
       comp=Z,6.9nm,1.0s,baz=132,slow=4.2,SNR=2.9
       comp=Z,8.5nm,1.0s
CMAR  Chiang Mai Arr   77.95 294ceP   P      04 40 19.5 +1.9
CMAR                             pmax pmax
       comp=Z,5.0nm,0.6s
CHTO  Chiang Mai       78.09 295 P    P      04 40 18.2  -0.3
CHTO                             IAmb IAmb   04 40 20.9
       comp=Z,71nm,1.7s
CHTO  Chiang Mai       78.09 295 P    P      04 40 20.1 +1.7
CHTO  Chiang Mai       78.09 295 P    P      04 40 18.2  -0.3
CHTO                             pmax pmax
       comp=Z,71nm,1.7s
S12K  Black Hills      78.32  16 P    P      04 40 19.6 +0.7
       baz=208
SDPT  Sand Point       78.45  17 P    P      04 40 19.7 +0.2
       baz=210
MAW   Mawson           78.57 202 P    P      04 40 22.1 +1.9
       comp=Z,29nm,0.8s,baz=108,slow=7.5,SNR=40
       comp=Z,29nm,0.8s
XLT   XiLinHaoTe       78.90 324 eP   P      04 40 23.3 +0.9
XLT                              pmax pmax
       comp=Z,47nm,0.9s
PZH   PanZhiHua        79.14 303 P    P      04 40 26.1 +1.9
PZH                              pmax pmax
       comp=Z,10.0nm,0.7s
PZH                              pmax pmax
       comp=Z,110nm,4.8s
S14K  Fog Glacier      79.52  17 P    P      04 40 26.1 +0.6
       baz=210
MA2   Magadan          79.57 351 P    P      04 40 25.2  -0.4
       comp=Z,19nm,0.7s,baz=106,slow=5.4,SNR=9.4
MA2                              LR   LR     05 10 16.2
       comp=Z,119nm,21.9s,baz=152,slow=32
       comp=Z,19nm,0.7s
MA2   Magadan          79.57 351 P    P      04 40 27.2 +1.6
MA2   Magadan          79.57 351d iP  P      04 40 25.0  -0.6
MA2                              pmax pmax
       comp=Z,24nm,0.9s
CD2   Chengdu          79.67 308 P    P      04 40 27.3 +0.4
CD2                              pmax pmax
       comp=Z,50nm,1.0s
HHC   Hu-ho-hao-te     79.67 320 eP   P      04 40 28.3 +1.6
HHC                              pmax pmax
       comp=Z,49nm,0.6s
HHC                              pmax pmax
       comp=Z,130nm,4.7s
CHIR  Chirikof Islan   80.30  19 P    P      04 40 30.0 +0.4
       baz=214
BTO   Baotou           80.48 319 eP   P      04 40 33.3 +2.2
BTO                              pP   pP     04 40 58.5 +4.6
BTO                              sP   sP     04 41 09.3 +6.1
BTO                              pmax pmax
       comp=Z,35nm,0.9s
BTO                              pmax pmax
       comp=Z,820nm,12.9s
HIA   Hailar           80.59 330 IAmb IAmb   04 40 32.5
       comp=Z,37nm,0.9s
HIA   Hailar           80.59 330 P    P      04 40 32.1 +0.7
HIA   Hailar           80.59 330d iP  P      04 40 31.1  -0.3
HIA                              pmax pmax
       comp=Z,35nm,1.0s
ZEA   Zeya             80.67 336 eP   P      04 40 32.4 +0.8
ZEA                              pmax pmax
       comp=Z,30nm,0.7s
TNCH  TengChong        81.09 300 P    P      04 40 35.9 +1.1
TNCH                             S    S      04 50 39.3 +1.5
TNCH                             pmax pmax
       comp=Z,42nm,0.7s
TNCH                             pmax pmax
       comp=Z,180nm,4.7s
TNCH                             LR   LR
       comp=Z,580nm,10.1s
TNCH                             LR   LR
       comp=Z,450nm,16.6s
TNCH                             LR   LR
       comp=Z,240nm,18.6s
R16K  Pilot Point      81.18  18 P    P      04 40 34.4 +0.1
       baz=212
M11K  Mekoryuk         81.58  12 P    P      04 40 36.5 +0.2
       baz=204
O14K  Tigyukauivet M   81.66  15 P    P      04 40 36.9 +0.2
       baz=208
R18K  Karluk           82.11  19 P    P      04 40 38.9  -0.2
       baz=215
N14K  Kuskokwak Cree   82.15  15 P    P      04 40 38.9  -0.3
       baz=208
LZH   Lanzhou          82.16 312 eP   P      04 40 41.8 +1.6
LZH                              pP   pP     04 41 05.0 +2.0
LZH                              pmax pmax
       comp=Z,57nm,1.1s
OHAK  Old Harbor       82.20  20 IAmb IAmb   04 40 41.4
       comp=Z,33nm,0.8s
OHAK  Old Harbor       82.20  20 P    P      04 40 41.0 +1.4
OHAK  Old Harbor       82.20  20 P    P      04 40 39.5  -0.1
       baz=216,SNR=8.7
M13K  Dall Lake        82.21  14 P    P      04 40 39.8 +0.3
       baz=206
Q17K  Contact Creek    82.26  18 P    P      04 40 39.9  -0.1
       baz=214,SNR=8.1
P16K  Nushagak River   82.31  17 P    P      04 40 40.4 +0.2
       baz=212
Q16K  King Salmon      82.38  17 P    P      04 40 40.7 +0.2
       baz=213
BELA  Belgrano 2       82.47 175 IAmb IAmb   04 40 41.8
       comp=Z,27nm,0.8s
SEY   Seymchan         82.58 353 P    P      04 40 41.5   0.0
       comp=Z,14nm,0.8s,baz=145,slow=5.6,SNR=25
SEY                              LR   LR     05 13 14.2
       comp=Z,265nm,20.8s,baz=153,slow=33
       comp=Z,14nm,0.8s
SEY   Seymchan         82.58 353d iP  P      04 40 41.3  -0.2
SEY                              pmax pmax
       comp=Z,23nm,0.8s
N15K  Kwethluk River   82.75  15 IAmb IAmb   04 40 44.2
       comp=Z,15nm,0.8s
N15K  Kwethluk River   82.75  15 P    P      04 40 42.6 +0.1
       baz=210
O16K  Kokwok River B   82.77  16 P    P      04 40 42.3  -0.2
       baz=211
M14K  Bethel           82.82  14 P    P      04 40 42.8 +0.1
       baz=208
Q18K  Katmai Hardscr   82.84  18 P    P      04 40 42.5  -0.5
       baz=214,SNR=14
KDAK  Kodiak Island    82.87  20 P    P      04 40 43.4 +0.3
KDAK                             IAmb IAmb   04 40 44.5
       comp=Z,23nm,1.0s
KDAK  Kodiak Island    82.87  20deP   P      04 40 43.0  -0.1
KDAK                             pmax pmax
       comp=Z,21nm,1.0s
KDAK  Kodiak Island    82.87  20 P    P      04 40 42.9  -0.1
       baz=216
P17K  Kvichak River    82.88  17 P    P      04 40 42.9  -0.2
       baz=213
M15K  Kasigluk River   83.07  15 P    P      04 40 43.8  -0.2
       baz=209
L14K  Kuka Creek       83.19  13 P    P      04 40 44.7 +0.1
       baz=207
O17K  Koliganek Bris   83.19  17 P    P      04 40 44.8 +0.1
       baz=212
K13K  Kusilvak Mount   83.30  12 P    P      04 40 45.6 +0.4
       baz=205
N16K  Nishlik Lake     83.35  16 P    P      04 40 46.2 +0.6
       baz=211
P18K  Big Mountain,    83.39  18 P    P      04 40 45.1  -0.7
       baz=214
Q19K  Cape Douglas,    83.47  19 P    P      04 40 45.8  -0.5
       baz=216,SNR=8.6
Q20K  Shuyak Island    83.60  19 P    P      04 40 46.8   0.0
       baz=217
L15K  Ungalak Mounta   83.75  14 P    P      04 40 47.4  -0.1
       baz=208
M16K  Timber Creek     83.78  15 IAmb IAmb   04 40 50.1
       comp=Z,16nm,0.8s
M16K  Timber Creek     83.78  15 P    P      04 40 48.4 +0.8
       baz=210,SNR=8.0
O18K  Koktuh Hills     83.78  17 IAmb IAmb   04 40 48.4
       comp=Z,19nm,0.9s
O18K  Koktuh Hills     83.78  17 P    P      04 40 47.4  -0.4
       baz=214
N17K  Nushagak Hills   83.80  16 IAmb IAmb   04 40 49.6
       comp=Z,23nm,1.1s
N17K  Nushagak Hills   83.80  16 P    P      04 40 47.9   0.0
       baz=212
GAMB  Gambell          83.81   9 IAmb IAmb   04 40 50.1
       comp=Z,21nm,0.9s
GAMB  Gambell          83.81   9 P    P      04 40 47.9 +0.2
       baz=198
P19K  Oil Pt           84.19  18 P    P      04 40 49.4  -0.4
       baz=216,SNR=19
L16K  Owhat River      84.25  15 IAmb IAmb   04 40 51.9
       comp=Z,28nm,1.1s
L16K  Owhat River      84.25  15 P    P      04 40 50.1 +0.1
       baz=210,SNR=12
J14K  Nanvaranak Lak   84.26  12 P    P      04 40 50.7 +0.7
       baz=206,SNR=5.8
N18K  Kilae Creek      84.28  17 P    P      04 40 50.3   0.0
       baz=213,SNR=8.7
K15K  Wolf Creek Mou   84.28  13 P    P      04 40 51.0 +0.7
       baz=208,SNR=18
SMAI  San Martin Ant   84.29 162 P    P      04 40 50.9 +0.5
O19K  Port Alsworth    84.31  18 P    P      04 40 50.1  -0.3
       baz=215,SNR=7.2
M17K  Holitna River    84.48  16 P    P      04 40 52.2 +0.9
       baz=212,SNR=13
HOM   Homer            84.67  19 P    P      04 40 52.5 +0.3
       baz=217
CNPM  China Poot       84.69  19 IAmb IAmb   04 40 53.6
       comp=Z,34nm,0.9s
O20K  Slope Mountain   84.72  18 P    P      04 40 49.9  -2.7
       baz=216
N19K  Bonanza Creek    84.78  17 IAmb IAmb   04 40 53.2
       comp=Z,17nm,0.8s
N19K  Bonanza Creek    84.78  17 P    P      04 40 52.4  -0.5
       baz=215,SNR=9.7
L17K  Donlin           84.89  15 P    P      04 40 54.4 +1.1
       baz=211,SNR=16
RED   Redoubt Volcan   84.94  18 IAmb IAmb   04 40 53.9
       comp=Z,27nm,1.1s
M18K  Stony River      84.98  16 P    P      04 40 54.4 +0.7
       baz=213,SNR=36
BRLK  Bradley Lake     84.99  19 IAmb IAmb   04 40 54.8
       comp=Z,19nm,0.8s
BRSE  Bradley Lake S   85.02  19 P    P      04 40 54.2 +0.1
       baz=218
SYO   Syowa Base       85.12 196⇑iP   P      04 40 55.0 +0.5
SYO   Syowa Base       85.12 196⇓ePcP PcP    04 40 57.3  -0.3
SYO   Syowa Base       85.12 196⇑ipP  pP     04 41 16.2  -1.3
J16K  Anvik River      85.36  13 P    P      04 40 56.6 +1.0
       baz=209,SNR=32
L18K  Granite Mounta   85.37  15 IAmb IAmb   04 40 57.6
       comp=Z,15nm,0.8s
L18K  Granite Mounta   85.37  15 P    P      04 40 56.4 +0.8
       baz=213,SNR=8.0
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CIT    Chita              85.37 329 eP     P       04 40 56.0  0.0
CIT                                 pmax   pmax
       comp=Z,85nm,1.3s
K17K   Iditarod           85.39  15 IAmb   IAmb    04 40 57.7
       comp=Z,33nm,1.1s
K17K   Iditarod           85.39  15 P      P       04 40 56.6 +0.8
       baz=211,SNR=13
ANM    Nome               85.56  11 P      P       04 40 57.1 +0.5
       baz=204
M19K   Big River Lodg     85.70  17 P      P       04 40 57.7 +0.3
       baz=215
SEW    Seward             85.71  20 P      P       04 40 57.0 -0.3
       baz=219
N20K   Mount Spurr        85.74  18 P      P       04 40 56.6 -1.1
       baz=217
SLKM   Skilak Lake        85.78  19 IAmb   IAmb    04 40 58.6
       comp=Z,24nm,1.2s
J17K   VABM Dome          85.80  14 IAmb   IAmb    04 40 59.7
       comp=Z,21nm,0.8s
J17K   VABM Dome          85.80  14 P      P       04 40 58.4 +0.6
       baz=210,SNR=15
L19K   White Mountain     85.81  16 IAmb   IAmb    04 41 00.7
       comp=Z,17nm,0.8s
L19K   White Mountain     85.81  16 P      P       04 40 58.4 +0.5
       baz=214,SNR=14
I17K   Unalakleet         85.87  13 IAmb   IAmb    04 41 00.2
       comp=Z,32nm,1.4s
I17K   Unalakleet         85.87  13 P      P       04 40 58.8 +0.7
       baz=209
SAO    San Andreas Ge     85.95  49 P      P       04 40 58.8 -0.4
SAO    San Andreas Ge     85.95  49 P      P       04 40 58.8 -0.4
SAO                                 pmax   pmax
       comp=Z,11nm,1.0s
M20K   Styx River         86.03  17 P      P       04 40 59.9 +0.9
       baz=216
TNA    Tin City           86.05  10 P      P       04 40 59.4 +0.4
       baz=202,SNR=32
PMPB   Monarch Peak       86.17  50 IAmb   IAmb    04 41 10.0
       comp=Z,27nm,1.3s
G15K   Niukluk            86.19  11 P      P       04 41 00.2 +0.5
       baz=206,SNR=15
H16K   Elim               86.22  12 P      P       04 41 00.3 +0.5
       baz=207,SNR=17
F14K   Arctic Creek       86.23  10 P      P       04 41 00.5 +0.7
       baz=204,SNR=17
P23K   Montague Islan     86.29  20 P      P       04 41 00.5 +0.2
       baz=221
KHMM   Horse Mountain     86.30  45 IAmb   IAmb    04 41 03.3
       comp=Z,19nm,0.9s
L20K   Farewell, AK       86.31  16 P      P       04 40 59.9 -0.5
       baz=215,SNR=17
ULN    Ulaanbaatar        86.32 324 P      P       04 41 01.8 +0.8
ULN    Ulaanbaatar        86.32 324diP     P       04 41 01.3 +0.3
ULN                                 pmax   pmax
       comp=Z,107nm,1.0s
SUA    Susitna One        86.38  18 IAmb   IAmb    04 41 03.0
       comp=Z,17nm,0.9s
SUA    Susitna One        86.38  18 P      P       04 41 00.1 -0.7
       baz=218
RC01   Rabbit Creek A     86.39  19 IAmb   IAmb    04 41 04.3
       comp=Z,9.7nm,0.7s
RC01   Rabbit Creek A     86.39  19 P      P       04 40 59.8 -1.0
       baz=219
J18K   Innoko River       86.41  15 P      P       04 41 00.8  0.0
       baz=212,SNR=11
YAK    Yakutsk            86.42 343 P      P       04 40 59.8 -1.0
YAK    Yakutsk            86.42 343 P      P       04 41 00.2 -0.6
       comp=Z,82nm,0.8s,baz=126,slow=2.2,SNR=19
YAK                                 LR     LR      05 15 11.8
       comp=Z,84nm,21.6s,baz=143,slow=32
       comp=Z,82nm,0.8s
YAK    Yakutsk            86.42 343 eP     P       04 40 59.8 -1.0
YAK                                 e              04 44 21.8
YAK                                 eS     SKSac   04 51 17.0 -1.9
YAK                                 eSS    SS      04 57 10.9 -0.8
YAK                                 pmax   pmax
       comp=Z,103nm,0.9s
YAK                                 pmax   pmax
       comp=N,12nm,1.3s
YAK                                 pmax   pmax
       comp=E,14nm,1.3s
YAK                                 pmax   pmax
       comp=Z,151nm,5.4s
YAK                                 pmax   pmax
       comp=N,77nm,5.8s
YAK                                 pmax   pmax
       comp=E,74nm,4.8s
YAK                                 smax   smax
       comp=N,77nm,2.5s
YAK                                 smax   smax
       comp=E,19nm,2.2s
SKT    Skwentna           86.56  18 P      P       04 41 01.6  0.0
       baz=217
GTA    Gaotai             86.56 314 P      P       04 41 03.4 +1.1
GTA                                 pP     pP      04 41 25.6 +0.2
GTA                                 SKS    SKSac   04 51 21.4 +0.1
GTA                                 pmax   pmax
       comp=E,61nm,1.0s
O02D   Mt. Diablo Mer     86.60  46 IAmb   IAmb    04 41 04.9
       comp=Z,25nm,0.9s
BCW    Bitter Crk WRg     86.62  51 IAmb   IAmb    04 41 06.6
       comp=Z,17nm,1.1s
PWL    Port Wells         86.64  20 P      P       04 41 01.7 -0.4
       baz=220
SONM   Songino Array      86.68 323 P      P       04 41 02.9 +0.3
SONM   Songino Array      86.68 323 P      P       04 41 03.0 +0.3
       comp=Z,67nm,0.9s,baz=142,slow=5.3,SNR=218
SONM                                pP     pP      04 41 23.9 -1.8
       comp=Z,6.6nm,0.8s,baz=153,slow=4.8,SNR=2.1
SONM                                LR     LR      05 19 38.1
       comp=Z,69nm,18.4s,baz=102,slow=35
       comp=Z,67nm,0.9s
BILL   Bilibino           86.71 359 P      P       04 41 01.9 -0.2
BILL   Bilibino           86.71 359diP     P       04 41 02.0 -0.2
BILL                                pmax   pmax
       comp=Z,117nm,1.7s
F15K   North Star Dit     86.73  11 P      P       04 41 02.9 +0.5
       baz=205,SNR=9.7
M22K   Willow             86.79  18 IAmb   IAmb    04 41 03.2
       comp=Z,19nm,0.7s
M22K   Willow             86.79  18 P      P       04 41 02.3 -0.4
       baz=218
G16K   Koyuk River        86.87  12 P      P       04 41 03.8 +0.8
G16K                                IAmb   IAmb    04 41 04.8
       comp=Z,22nm,0.9s
G16K   Koyuk River        86.87  12 P      P       04 41 03.6 +0.6
       baz=207,SNR=20
H17K   Granite Mounta     86.96  13 IAmb   IAmb    04 41 05.0
       comp=Z,13nm,0.9s
H17K   Granite Mounta     86.96  13 P      P       04 41 02.6 -0.8
       baz=210,SNR=13
PMR    Palmer             86.96  19 P      P       04 41 05.6 +2.1
PMR    Palmer             86.96  19 P      P       04 41 03.4 -0.1
       baz=219,SNR=5.6
K20K   Telida             86.98  16 P      P       04 41 03.4 -0.2
       baz=215,SNR=7.8
KNK    Knik Glacier       87.03  19 P      P       04 41 03.7 -0.2
       baz=220
GLI    Glacier Island     87.06  20 P      P       04 41 03.9 -0.1
       baz=221
J19K   Poorman            87.12  15 P      P       04 41 03.9 -0.4
       baz=214,SNR=7.8
GHO    Glory Hole Cre     87.16  19 IAmb   IAmb    04 41 05.4
       comp=Z,11nm,0.8s
ORV    Oroville           87.19  47 IAmb   IAmb    04 41 06.8
       comp=Z,11nm,0.9s
KAIM   Kayak Island       87.25  22 P      P       04 41 04.2 -0.7
       baz=224
EYAK   Cordova Ski Ar     87.25  21 P      P       04 41 04.5 -0.4
       baz=222
CUT    Chulitna           87.26  18 P      P       04 41 04.5 -0.4
       baz=218
AFDM   Forest Hills D     87.28  47 IAmb   IAmb    04 41 07.3
       comp=Z,16nm,1.0s
CMB    Columbia Colle     87.28  48 IAmb   IAmb    04 41 07.2
       comp=Z,11nm,0.8s
G17K   Kiwalik Mounta     87.30  12 P      P       04 41 05.2 +0.1
       baz=209,SNR=16
PMSA   Palmer Station     87.38 160 LR     LR      05 15 17.2
       comp=Z,144nm,18.2s,baz=222,slow=32
YBH    Yreka Blue Hor     87.38  44 LR     LR      05 16 15.6
       comp=Z,11nm,18.1s,baz=278,slow=33
GCSA   Galena City Sc     87.46  14 P      P       04 41 06.1 +0.3
       baz=212
H18K   Honhosa River      87.48  13 P      P       04 41 05.7 -0.2
       baz=211
CAST   Castle Rocks       87.56  17 IAmb   IAmb    04 41 05.4
       comp=Z,10nm,0.8s
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CAST   Castle Rocks       87.56  17 P      P       04 41 04.6 -1.8
       baz=217,SNR=19
HMT    Hamilton           87.60  21 IAmb   IAmb    04 41 07.2
       comp=Z,27nm,1.4s
J20K   Nowinta River      87.64  15 P      P       04 41 05.8 -0.9
       baz=215,SNR=13
SCM    Sheep Creek Mo     87.70  19 IAmb   IAmb    04 41 09.7
       comp=Z,11nm,0.9s
SCM    Sheep Creek Mo     87.70  19 P      P       04 41 06.4 -0.8
       baz=221
BERG   Berg Lake          87.83  22 IAmb   IAmb    04 41 08.9
       comp=Z,30nm,1.1s
CHUM   Lake Minchumin     87.87  16 P      P       04 41 06.8 -1.0
       baz=216,SNR=8.5
L04D   Klamath Falls      87.88  44 IAmb   IAmb    04 41 10.3
       comp=Z,14nm,0.8s
KLU    Klutina            87.89  20 P      P       04 41 07.1 -1.0
       baz=222
BMRM   Bremner River      87.94  21 P      P       04 41 07.6 -0.7
       baz=224
F17K   Baldwin Pennin     88.01  12 IAmb   IAmb    04 41 10.8
       comp=Z,12nm,0.8s
F17K   Baldwin Pennin     88.01  12 P      P       04 41 07.6 -0.8
       baz=208
G18K   Tagagawik          88.06  13 P      P       04 41 08.1 -0.6
       baz=211,SNR=8.4
I20K   Naaghedeneel       88.07  15 P      P       04 41 08.3 -0.4
       baz=214
TRF    Thorofare Moun     88.08  17 P      P       04 41 07.5 -1.5
       baz=218,SNR=11
MPK    Martis Peak        88.09  47 IAmb   IAmb    04 41 12.4
       comp=Z,35nm,1.5s
WAT1   Susitna Watana     88.09  18 P      P       04 41 07.3 -1.6
       baz=220
BEKR   Beckworth          88.11  47 IAmb   IAmb    04 41 11.5
       comp=Z,22nm,1.3s
WAT6   Susitna Watana     88.14  19 P      P       04 41 08.7 -0.7
       baz=221,SNR=7.6
WAKR   Walker             88.16  48 IAmb   IAmb    04 41 12.3
       comp=Z,26nm,1.4s
WAX    Waxell Ridge       88.17  22 IAmb   IAmb    04 41 10.0
       comp=Z,36nm,1.6s
H19K   Roundabout Mou     88.22  14 IAmb   IAmb    04 41 12.4
       comp=Z,12nm,1.0s
H19K   Roundabout Mou     88.22  14 P      P       04 41 09.4  0.0
       baz=213,SNR=10
M24K   Tolsona, Glenn     88.27  19 P      P       04 41 09.3 -0.5
       baz=222
PNTR   Pine Nut           88.30  48 IAmb   IAmb    04 41 13.4
       comp=Z,14nm,1.0s
MESA   MESA               88.30  22 P      P       04 41 09.6 -0.7
       baz=226
CRQE   Cirque             88.30  21 P      P       04 41 09.0 -1.1
       baz=225
BPAW   Bear Paw Mtn.      88.40  16 P      P       04 41 10.3  0.0
       baz=218
N25K   Chitina, Valde     88.41  20 P      P       04 41 09.7 -0.8
       baz=224
F18K   Selawik            88.46  12 P      P       04 41 10.2 -0.3
       baz=210
E17K   Hotham Inlet       88.47  11 P      P       04 41 10.5 -0.1
       baz=208
H20K   Anotleneega Mo     88.55  14 P      P       04 41 10.6 -0.4
       baz=214,SNR=7.3
G19K   Purcell Mounta     88.60  13 P      P       04 41 11.1 -0.2
       baz=212,SNR=7.3
DHY    Denali Highway     88.63  18 P      P       04 41 11.1 -0.5
       baz=221
MCK    McKinley           88.68  17 P      P       04 41 11.5 -0.2
       baz=220
LHV    Little Huntoon     88.71  49 P      P       04 41 13.4 +1.0
LHV                                 IAmb   IAmb    04 41 15.3
       comp=Z,13nm,1.1s
GOMU   GeErMu             88.71 309 P      P       04 41 13.8 +0.8
GOMU                                pmax   pmax
       comp=Z,12nm,0.7s
PAHR   Pah Rah Range      88.72  47 IAmb   IAmb    04 41 14.6
       comp=Z,21nm,1.2s
DSP    Deep Springs       88.72  50 IAmb   IAmb    04 41 14.7
       comp=Z,13nm,1.3s
MCARA  McCarthy VSAT      88.78  21 IAmb   IAmb    04 41 17.1
       comp=Z,8.1nm,0.8s
MCARA  McCarthy VSAT      88.78  21 P      P       04 41 12.0 -0.2
       baz=225
D17K   Noatak River       88.80  10 P      P       04 41 13.0 +0.9
       baz=206,SNR=9.0
HARP   HAARP              88.81  20 P      P       04 41 12.5 +0.1
       baz=223
BOD    Bodaibo            88.83 334 eP     P       04 41 11.9 -0.6
BOD                                 pmax   pmax
       comp=Z,53nm,1.3s
TROLL  Troll, Antarti     88.83 184 ⇑P     P       04 41 12.8 +0.1
       comp=Z,1μm,0.8s
TROLL                               ⇓pP    pP      04 41 34.4 -1.3
SIT    Sitka              88.85  27 P      P       04 41 10.3 -2.2
       baz=232
RYN    Ryan               88.86  48 IAmb   IAmb    04 41 15.2
       comp=Z,17nm,1.4s
CRAG   Craig              88.86  29 P      P       04 41 10.8 -1.8
       baz=234
PNL    Peninsula          88.89  24 P      P       04 41 11.2 -1.6
       baz=228
NVAR   Mina Array Bea     88.93  49 P      P       04 41 14.1 +0.4
NVAR   Mina Array Bea     88.93  49 P      P       04 41 14.7 +0.9
       comp=Z,3.4nm,0.8s,baz=228,slow=7.7,SNR=23
NVAR                                LR     LR      05 11 44.1
       comp=Z,114nm,20.7s,baz=210,slow=29
       comp=Z,3.4nm,0.8s
QSM    Queen of Sheba     88.94  51 IAmb   IAmb    04 41 15.3
       comp=Z,17nm,1.4s
C16K   Lisburne Hills     88.96   9 P      P       04 41 12.7 -0.2
       baz=204
E18K   Tukpahlearik C     89.00  11 IAmb   IAmb    04 41 15.2
       comp=Z,12nm,0.8s
E18K   Tukpahlearik C     89.00  11 P      P       04 41 13.3 +0.2
       baz=209,SNR=17
NV11   Mina Array Sit     89.03  49 IAmb   IAmb    04 41 16.0
       comp=Z,18nm,1.4s
S31K   Pelican            89.03  26 P      P       04 41 13.0 -0.4
       baz=231
F19K   Shaleruckik Mo     89.05  13 IAmb   IAmb    04 41 15.9
       comp=Z,9.3nm,0.9s
F19K   Shaleruckik Mo     89.05  13 P      P       04 41 12.7 -0.6
       baz=211,SNR=13
CTG    Chitna Glacier     89.06  22 P      P       04 41 12.8 -1.0
       baz=226
CTGM   Chitina Glacie     89.07  22 IAmb   IAmb    04 41 14.2
       comp=Z,7.8nm,0.8s
PAX    Paxson             89.13  19 P      P       04 41 12.6 -1.3
       baz=223
GWY    Greenwater Val     89.18  51 IAmb   IAmb    04 41 17.0
       comp=Z,9.4nm,1.0s
H21K   Melozitna Rive     89.18  15 P      P       04 41 12.9 -1.1
       baz=216,SNR=11
MLY    Manley             89.20  16 P      P       04 41 13.1 -1.0
       baz=218
IMAR   Indian Mountai     89.22  14 P      P       04 41 13.7 -0.4
U33K   Whale Pass         89.24  28 P      P       04 41 11.8 -2.6
       baz=234
NEA2   Nenana             89.31  17 P      P       04 41 13.0 -1.6
       baz=219,SNR=7.9
O28M   Mount Upton        89.34  22 P      P       04 41 13.7 -1.5
       baz=227,SNR=6.9
S32K   Killisnoo          89.42  27 P      P       04 41 14.4 -0.8
       baz=232
BBB    Bella Bella        89.45  33 LR     LR      05 17 02.3
       comp=Z,82nm,18.2s,baz=258,slow=33
V35K   Ketchikan          89.47  30 IAmb   IAmb    04 41 18.4
       comp=Z,14nm,1.1s
V35K   Ketchikan          89.47  30 P      P       04 41 15.5  0.0
       baz=235
SNAA   Sanae              89.47 183 ⇑P     P       04 41 15.3 -0.3
       comp=Z,120nm,0.6s
SNAA                                ⇑pP    pP      04 41 36.4 -2.2
SNAA   Sanae              89.47 183 P      P       04 41 15.5 -0.1
SNAA   Sanae              89.47 183 P      P       04 41 15.2 -0.3
       comp=Z,4.3nm,0.6s,baz=186,slow=1.9,SNR=27
SNAA                                pP     pP      04 41 38.3 -0.4
       comp=Z,7.2nm,0.7s,baz=214,slow=3.3,SNR=5.7
SNAA                                LR     LR      05 21 16.5
       comp=Z,129nm,18.3s,baz=192,slow=35
       comp=Z,4.3nm,0.6s
SNAA   Sanae              89.47 183⇑eP     P       04 41 15.1 -0.5
SNAA                                pmax   pmax
       comp=Z,23nm,1.4s
I05D   Terrebonne, OR     89.48  42 IAmb   IAmb    04 41 17.8
       comp=Z,9.4nm,0.8s
C17K   DeLong Mountai     89.49  10 P      P       04 41 14.6 -0.7
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       baz=206,SNR=5.5
P29M   Windy Craggy       89.50  24 IAmb   IAmb    04 41 16.0
       comp=Z,7.1nm,0.7s
P29M   Windy Craggy       89.50  24 P      P       04 41 15.6 -0.1
       baz=230,SNR=6.1
M26K   Nabesna, AK        89.51  20 P      P       04 41 14.4 -1.3
       baz=225
O29M   Mount Kennedy      89.62  23 P      P       04 41 15.3 -1.0
       baz=229
K24K   Donnelly Dome      89.65  18 IAmb   IAmb    04 41 16.1
       comp=Z,7.4nm,0.8s
K24K   Donnelly Dome      89.65  18 P      P       04 41 14.7 -1.5
       baz=222
I23K   Minto, Yukon-K     89.66  16 P      P       04 41 14.3 -1.9
       baz=219
F20K   Avaraart Lake      89.66  13 P      P       04 41 15.3 -0.9
       baz=213
LPIG   La Paz             89.69  64 LR     LR      05 12 58.9
       comp=Z,79nm,19.7s,baz=350,slow=30
E19K   Redstone River     89.69  12 IAmb   IAmb    04 41 19.9
       comp=Z,13nm,0.8s
E19K   Redstone River     89.69  12 P      P       04 41 15.6 -0.8
       baz=212,SNR=35
G21K   Allakaket          89.72  14 P      P       04 41 15.4 -1.1
       baz=215,SNR=15
H22K   Ishtalitna Cre     89.72  15 P      P       04 41 15.0 -1.6
       baz=217,SNR=10
ZAK    Zakamensk          89.76 324 eP     P       04 41 16.3 -0.9
ZAK                                 pmax   pmax
       comp=Z,25nm,1.1s
WRAK   Wrangell Islan     89.77  28 IAmb   IAmb    04 41 17.7
       comp=Z,10nm,0.9s
WRAK   Wrangell Islan     89.77  28 P      P       04 41 14.8 -2.1
       baz=234
TPNV   Topopah Spring     89.80  51 IAmb   IAmb    04 41 19.6
       comp=Z,18nm,1.3s
CBB    Campbell River     89.81  36 IAmb   IAmb    04 41 19.4
       comp=Z,20nm,1.1s
BLYC   Blythe             89.83  54 IAmb   IAmb    04 41 20.6
       comp=Z,12nm,1.1s
L26K   Log Cabin Wild     89.84  20 P      P       04 41 15.1 -2.0
       baz=225
YUK8   Steele Glacier     89.84  22 P      P       04 41 15.9 -1.6
       baz=228,SNR=20
M27K   Edge Creek, AK     89.85  21 P      P       04 41 15.3 -2.0
       baz=226
COLA   College            89.86  17 P      P       04 41 16.4 -0.7
COLA   College            89.86  17diP     P       04 41 15.3 -1.8
COLA                                pmax   pmax
       comp=Z,14nm,0.9s
COLA   College            89.86  17 P      P       04 41 15.7 -1.4
       baz=220
RIDG   Independent Ri     89.89  19 P      P       04 41 15.4 -2.0
       baz=223
PLBC   Pleasant Camp      89.93  25 P      P       04 41 16.3 -1.3
       baz=231,SNR=5.6
YUK3   Moose Creek        89.93  22 P      P       04 41 16.0 -1.8
       baz=227,SNR=10.0
R32K   Eaglecrest         89.94  26 P      P       04 41 15.7 -2.0
       baz=232
C18K   Utukok River       89.98  11 IAmb   IAmb    04 41 19.7
       comp=Z,12nm,0.9s
C18K   Utukok River       89.98  11 P      P       04 41 17.4 -0.3
       baz=208,SNR=8.2
BESE   Bessie Mountai     89.99  26 IAmb   IAmb    04 41 19.1
       comp=Z,19nm,0.9s
JIS    Juneau Island      90.00  26 P      P       04 41 19.9 +2.0
113A   Mohawk Valley,     90.03  55 IAmb   IAmb    04 41 20.9
       comp=Z,13nm,1.3s
IL31                      90.05  17 IAmb   IAmb    04 41 19.6
       comp=Z,7.3nm,0.8s
ILAR   Eielson Array      90.05  17 P      P       04 41 15.6 -2.5
ILAR   Eielson Array      90.05  17 P      P       04 41 16.6 -1.5
       comp=Z,6.3nm,0.7s,baz=238,slow=5.0,SNR=45
       comp=Z,6.3nm,0.7s
GNW    Green Mountain     90.07  39 P      P       04 41 19.2 +0.7
GNW                                 IAmb   IAmb    04 41 20.4
       comp=Z,21nm,1.0s
VNA3   Neumayer Olymp     90.08 181 ⇑P     P       04 41 18.5 +0.1
       comp=Z,19nm,0.7s
VNA3                                ⇑pP    pP      04 41 38.2 -3.3
       comp=Z,19nm,0.7s
P30M   Million Dollar     90.12  24 P      P       04 41 17.8 -0.8
       baz=230
YUK6   Outpost Mounta     90.13  23 P      P       04 41 18.3 -0.5
       baz=229
H23K   Yukon River        90.14  16 P      P       04 41 17.7 -0.7
       baz=219
POKR   Poker Plat Res     90.16  17 P      P       04 41 18.0 -0.6
       baz=221
YUK4   Talbot Arm         90.29  23 P      P       04 41 18.7 -0.8
       baz=229,SNR=12
F21K   Alatna River       90.30  14 P      P       04 41 18.1 -1.1
       baz=215,SNR=8.1
SCRK   Sand Creek         90.32  19 P      P       04 41 18.6 -0.9
       baz=224,SNR=11
G06A   Carlson Farm,      90.33  42 IAmb   IAmb    04 41 21.5
       comp=Z,13nm,1.1s
SKAG   Skagway            90.34  25 P      P       04 41 21.8 +2.3
SKAG   Skagway            90.34  25 P      P       04 41 18.7 -0.8
       baz=232
L27K   Beaver Creek,      90.36  20 P      P       04 41 18.9 -0.7
       baz=226,SNR=7.5
HYT    Haines Junctio     90.37  23 P      P       04 41 18.8 -1.0
HYT    Haines Junctio     90.37  23 P      P       04 41 19.4 -0.4
       baz=230,SNR=7.8
J25K   Salcha River,      90.37  18 P      P       04 41 19.3 -0.4
       baz=223
BCAR   Beaver Creek A     90.37  20 P      P       04 41 17.5 -2.2
D19K   Kuna River         90.40  12 IAmb   IAmb    04 41 22.1
       comp=Z,9.6nm,0.8s
D19K   Kuna River         90.40  12 P      P       04 41 19.2 -0.5
       baz=211,SNR=9.4
WVOR   Wild Horse Val     90.40  45 P      P       04 41 21.1 +0.7
WVOR                                IAmb   IAmb    04 41 22.4
       comp=Z,22nm,1.1s
WVOR   Wild Horse Val     90.40  45 P      P       04 41 21.1 +0.7
WVOR                                pmax   pmax
       comp=Z,22nm,1.1s
S11A   Rachel             90.44  50 IAmb   IAmb    04 41 22.4
       comp=Z,15nm,1.2s
B18K   Kokolik River      90.51  10 P      P       04 41 19.2 -0.9
       baz=208
G22K   Bettles            90.52  15 P      P       04 41 19.5 -0.7
       baz=217
I07A   Izee               90.55  43 IAmb   IAmb    04 41 23.0
       comp=Z,19nm,0.9s
E20K   Nigu River         90.58  12 P      P       04 41 20.3 -0.3
       baz=213,SNR=14
VNA1   Neumayer--Stat     90.66 181 ⇑P     P       04 41 19.5 -1.5
       comp=Z,11nm,0.9s
C19K   Lookout Ridge      90.66  11 IAmb   IAmb    04 41 23.6
       comp=Z,14nm,0.8s
C19K   Lookout Ridge      90.66  11 P      P       04 41 20.6 -0.2
       baz=210,SNR=6.4
G23K   Bananza Creek      90.71  15 P      P       04 41 20.1 -1.0
       baz=219,SNR=7.4
J26L   Joseph Creek       90.83  19 P      P       04 41 20.8 -1.0
       baz=224,SNR=7.7
F22K   John River         90.83  14 P      P       04 41 21.1 -0.6
       baz=217
W13A   Hualapai Mount     90.83  53 IAmb   IAmb    04 41 24.7
       comp=Z,13nm,1.2s
PRN    Pahroc Range       90.86  51 IAmb   IAmb    04 41 24.8
       comp=Z,20nm,1.0s
O30N   Mendenhall         90.87  24 P      P       04 41 21.1 -0.9
       baz=231,SNR=8.7
D20K   Etivluk River      90.88  12 P      P       04 41 21.2 -0.7
       baz=212
N30M   Aishikik Lake      90.93  23 P      P       04 41 21.4 -0.9
       baz=230,SNR=6.1
K27K   Chicken            90.95  19 IAmb   IAmb    04 41 23.9
       comp=Z,7.8nm,0.9s
K27K   Chicken            90.95  19 P      P       04 41 21.9 -0.3
       baz=226
PRP    Porcupine Dome     90.99  17 P      P       04 41 21.2 -1.4
       baz=223
T35M   Bob Quinn          91.04  29 IAmb   IAmb    04 41 24.5
       comp=Z,10nm,1.1s
T35M   Bob Quinn          91.04  29 P      P       04 41 21.5 -1.4
       baz=236
Y14A   Wickenburg         91.06  54 IAmb   IAmb    04 41 25.4
       comp=Z,11nm,1.5s
COLD   Coldfoot           91.07  15 IAmb   IAmb    04 41 24.0
       comp=Z,9.5nm,0.9s
COLD   Coldfoot           91.07  15 P      P       04 41 22.1 -0.7
       baz=218,SNR=9.5
P32M   Atlin              91.07  25 IAmb   IAmb    04 41 23.8
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	comp=Z,10nm,0.8s						
P32M	**Atlin**	**91.07**	**25**	P	**P**	**04 41 21.8**	**-1.2**
	baz=233,SNR=6.2						
M29M	**Somme Creek**	**91.08**	**22**	P	**P**	**04 41 21.9**	**-1.1**
	baz=229,SNR=6.2						
MXC	**Moxie City**	**91.15**	**41**	IAmb	IAmb	04 41 25.3	
	comp=Z,12nm,1.1s						
S34M	**Telegraph Cree**	**91.18**	**28**	IAmb	IAmb	04 41 25.0	
	comp=Z,13nm,1.0s						
S34M	**Telegraph Cree**	**91.18**	**28**	P	**P**	**04 41 22.0**	**-1.4**
	baz=235,SNR=7.3						
E21K	**Killik River**	**91.19**	**13**	IAmb	IAmb	04 41 24.4	
	comp=Z,13nm,1.1s						
E21K	**Killik River**	**91.19**	**13**	P	**P**	**04 41 22.3**	**-1.1**
	baz=215						
WHY	**Whitehorse**	**91.26**	**24**	P	**P**	**04 41 22.6**	**-1.3**
	baz=232,SNR=6.6						
Q32M	**Nakina River**	**91.30**	**26**	P	**P**	**04 41 22.9**	**-1.4**
	baz=234,SNR=8.4						
G24K	**Hadweenzic Riv**	**91.35**	**16**	IAmb	IAmb	04 41 23.8	
	comp=Z,18nm,1.9s						
G24K	**Hadweenzic Riv**	**91.35**	**16**	P	**P**	**04 41 23.7**	**-0.4**
	baz=221,SNR=6.2						
A19K	**Wainwright**	**91.37**	**10**	P	**P**	**04 41 23.2**	**-0.9**
	baz=208						
E22K	**Anaktuvuk Pass**	**91.42**	**14**	IAmb	IAmb	04 41 25.5	
	comp=Z,8.6nm,1.1s						
E22K	**Anaktuvuk Pass**	**91.42**	**14**	P	**P**	**04 41 23.5**	**-0.9**
	baz=217,SNR=6.8						
G08A	**Pilot Rock**	**91.42**	**42**	IAmb	IAmb	04 41 26.7	
	comp=Z,16nm,0.9s						
N31M	**Braeburn, Yuko**	**91.44**	**23**	IAmb	IAmb	04 41 24.5	
	comp=Z,7.1nm,1.0s						
N31M	**Braeburn, Yuko**	**91.44**	**23**	P	**P**	**04 41 23.1**	**-1.5**
	baz=231						
H25L	**Birch Creek**	**91.47**	**17**	P	**P**	**04 41 23.3**	**-1.3**
	baz=222						
I26K	**Coal Creek Min**	**91.53**	**18**	P	**P**	**04 41 24.2**	**-0.7**
	baz=225,SNR=7.1						
C21K	**Knifeblade Rid**	**91.62**	**12**	P	**P**	**04 41 25.1**	**-0.2**
	baz=214,SNR=6.7						
L29M	**L29M**	**91.63**	**21**	IAmb	IAmb	04 41 27.8	
	comp=Z,8.1nm,1.0s						
L29M	**L29M**	**91.63**	**21**	P	**P**	**04 41 24.3**	**-1.2**
	baz=229,SNR=8.1						
MOY	**Mondy**	**91.65**	**325**	*e*P	**P**	**04 41 25.9**	**-0.1**
MOY				pmax	pmax		
	comp=Z,25nm,1.3s						
G25K	**Bearman Lake**	**91.76**	**16**	P	**P**	**04 41 24.8**	**-1.1**
	baz=222						
MG05	**Puerto Natales**	**91.80**	**147**	P	**P**	**04 41 27.3**	**+0.6**
P33M	**Teslin, Yukon**	**91.81**	**25**	IAmb	IAmb	04 41 26.7	
	comp=Z,6.6nm,0.9s						
P33M	**Teslin, Yukon**	**91.81**	**25**	P	**P**	**04 41 25.1**	**-1.3**
	baz=234,SNR=9.5						
D22K	**Ayikyak River**	**91.83**	**13**	IAmb	IAmb	04 41 27.9	
	comp=Z,16nm,1.2s						
D22K	**Ayikyak River**	**91.83**	**13**	P	**P**	**04 41 26.0**	**-0.2**
	baz=216,SNR=6.8						
DAWY	**Dawson**	**91.84**	**20**	IAmb	IAmb	04 41 28.5	
	comp=Z,6.7nm,0.9s						
DAWY	**Dawson**	**91.84**	**20**	P	**P**	**04 41 25.1**	**-1.3**
	baz=228,SNR=11						
E23K	**Chandalar**	**91.86**	**14**	IAmb	IAmb	04 41 27.6	
	comp=Z,8.7nm,0.9s						
E23K	**Chandalar**	**91.86**	**14**	P	**P**	**04 41 25.4**	**-1.1**
	baz=219,SNR=8.6						
F24K	**Squaw Lake**	**91.87**	**15**	IAmb	IAmb	04 41 27.6	
	comp=Z,7.8nm,0.8s						
F24K	**Squaw Lake**	**91.87**	**15**	P	**P**	**04 41 25.1**	**-1.4**
	baz=220,SNR=8.6						
EVN	**Everest**	**91.87**	**299**	IAmb	IAmb	04 41 29.6	
	comp=Z,12nm,1.1s						
B20K	**Meade River**	**91.88**	**11**	P	**P**	**04 41 25.5**	**-0.9**
	baz=212						
DLBC	**Dease Lake**	**91.96**	**27**	LR	LR	05 14 38.5	
	comp=Z,221nm,20.6s,baz=274,slow=30						
DLBC	**Dease Lake**	**91.96**	**27**	P	**P**	**04 41 25.6**	**-1.5**
	baz=236,SNR=13						
B21K	**Ikpikpuk River**	**92.04**	**12**	IAmb	IAmb	04 41 28.6	
	comp=Z,12nm,0.9s						
B21K	**Ikpikpuk River**	**92.04**	**12**	P	**P**	**04 41 26.3**	**-0.9**
	baz=214						
LCMT	**Little Creek M**	**92.04**	**52**	IAmb	IAmb	04 41 30.0	
	comp=Z,10nm,1.0s						
LLLB	**Lillooet**	**92.04**	**37**	IAmb	IAmb	04 41 29.3	
	comp=Z,15nm,1.1s						
R33M	**Jennings River**	**92.09**	**26**	IAmb	IAmb	04 41 29.0	
	comp=Z,13nm,1.0s						
R33M	**Jennings River**	**92.09**	**26**	P	**P**	**04 41 27.0**	**-0.8**
	baz=235,SNR=14						
E24K	**Your Creek**	**92.14**	**15**	P	**P**	**04 41 26.8**	**-1.0**
	baz=220						
I27K	**Kandik River**	**92.19**	**18**	P	**P**	**04 41 26.8**	**-1.3**
	baz=226,SNR=5.8						
TUC	**Tucson**	**92.20**	**57**	P	**P**	**04 41 28.6**	**-0.3**
TUC				IAmb	IAmb	04 41 31.9	
	comp=Z,8.3nm,1.1s						
TUC	**Tucson**	**92.20**	**57**	P	**P**	**04 41 28.6**	**-0.3**
TUC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
N32M	**Quiet Lake**	**92.26**	**24**	IAmb	IAmb	04 41 28.9	
	comp=Z,12nm,0.9s						
N32M	**Quiet Lake**	**92.26**	**24**	P	**P**	**04 41 26.6**	**-1.9**
	baz=234,SNR=8.8						
K29M	**Barlow Dome**	**92.32**	**21**	IAmb	IAmb	04 41 30.2	
	comp=Z,19nm,1.6s						
K29M	**Barlow Dome**	**92.32**	**21**	P	**P**	**04 41 27.3**	**-1.5**
	baz=230						
TOLK	**Toolik Lake Re**	**92.33**	**14**	P	**P**	**04 41 27.6**	**-1.1**
	baz=219						
D23K	**Nanushuk River**	**92.33**	**14**	P	**P**	**04 41 27.3**	**-1.3**
	baz=218,SNR=10						
KNB	**Kanab**	**92.35**	**52**	IAmb	IAmb	04 41 31.8	
	comp=Z,12nm,1.2s						
M31M	**Drury Creek, Y**	**92.40**	**23**	P	**P**	**04 41 28.0**	**-1.1**
	baz=232						
X16A	**Lo Mia Camp, P**	**92.45**	**55**	IAmb	IAmb	04 41 32.4	
	comp=Z,9.7nm,1.1s						
F25K	**Christian Rive**	**92.50**	**16**	P	**P**	**04 41 28.3**	**-1.1**
	baz=223						
B08A	**Colville Reser**	**92.52**	**39**	IAmb	IAmb	04 41 31.0	
	comp=Z,7.9nm,1.1s						
G26K	**Porcupine Rive**	**92.52**	**17**	IAmb	IAmb	04 41 30.3	
	comp=Z,6.5nm,0.8s						
G26K	**Porcupine Rive**	**92.52**	**17**	P	**P**	**04 41 28.6**	**-0.9**
	baz=224,SNR=8.9						
U15A	**North Rim**	**92.53**	**52**	IAmb	IAmb	04 41 32.7	
	comp=Z,9.5nm,0.9s						
I28M	**Miner Creek**	**92.60**	**19**	P	**P**	**04 41 28.7**	**-1.3**
	baz=228,SNR=5.5						
BMAR	**Burnt Mountain**	**92.65**	**16**	P	**P**	**04 41 30.4**	**+0.3**
H27K	**Steamboat Moun**	**92.66**	**18**	P	**P**	**04 41 29.3**	**-0.8**
	baz=226						
FARO	**Faro, Yukon**	**92.80**	**23**	P	**P**	**04 41 29.6**	**-1.3**
	baz=233						
B22K	**Teshekpuk Lake**	**92.86**	**12**	P	**P**	**04 41 30.2**	**-0.8**
	baz=216						
WUAZ	**Wupatki**	**92.89**	**54**	IAmb	IAmb	04 41 34.3	
	comp=Z,7.6nm,1.0s						
D24K	**Happy Valley**	**92.90**	**14**	IAmb	IAmb	04 41 32.5	
	comp=Z,6.9nm,0.9s						
D24K	**Happy Valley**	**92.90**	**14**	P	**P**	**04 41 29.7**	**-1.5**
	baz=220						
E25K	**Arctic Village**	**92.90**	**16**	P	**P**	**04 41 30.0**	**-1.3**
	baz=223						
F26K	**Sheenjek River**	**92.96**	**16**	IAmb	IAmb	04 41 39.7	
	comp=Z,14nm,1.9s						
F26K	**Sheenjek River**	**92.96**	**16**	P	**P**	**04 41 30.4**	**-1.1**
	baz=224						
G27K	**Doyon Strip**	**93.02**	**18**	P	**P**	**04 41 30.9**	**-1.0**
	baz=226						
C23K	**Itkillik River**	**93.03**	**13**	IAmb	IAmb	04 41 33.4	
	comp=Z,14nm,1.1s						
C23K	**Itkillik River**	**93.03**	**13**	P	**P**	**04 41 30.9**	**-0.8**
	baz=218,SNR=8.2						
I29M	**Ogilvie Camp,**	**93.05**	**20**	P	**P**	**04 41 31.1**	**-0.9**
	baz=229,SNR=6.7						
A21K	**Barrow**	**93.09**	**11**	P	**P**	**04 41 31.3**	**-0.6**
	baz=213						
A22K	**Sinclair Lake**	**93.12**	**11**	P	**P**	**04 41 30.4**	**-1.7**
	baz=214						
J30M	**Hart River**	**93.19**	**21**	P	**P**	**04 41 30.5**	**-2.2**
	baz=231						
C24K	**Franklin Bluff**	**93.36**	**14**	IAmb	IAmb	04 41 34.2	
	comp=Z,12nm,0.9s						
C24K	**Franklin Bluff**	**93.36**	**14**	P	**P**	**04 41 31.7**	**-1.6**
	baz=220						
I30M	**Mount Dempster**	**93.58**	**20**	IAmb	IAmb	04 41 34.9	
	comp=Z,6.6nm,0.8s						
I30M	**Mount Dempster**	**93.58**	**20**	P	**P**	**04 41 32.5**	**-2.1**
	baz=231,SNR=9.0						
H29M	**Whitestone**	**93.59**	**19**	P	**P**	**04 41 32.7**	**-1.8**
	baz=229						
D25K	**Kavik River**	**93.60**	**15**	P	**P**	**04 41 33.5**	**-1.0**
	baz=222						
NEW	**Newport**	**93.82**	**40**	LR	LR	05 20 25.8	
	comp=Z,112nm,18.3s,baz=321,slow=33						
MMPY	**Sheldon Lake,**	**93.82**	**24**	IAmb	IAmb	04 41 36.1	
	comp=Z,8.5nm,1.0s						
MMPY	**Sheldon Lake,**	**93.82**	**24**	P	**P**	**04 41 33.8**	**-1.8**
	baz=235,SNR=7.7						
E27K	**Coleen River**	**93.99**	**17**	IAmb	IAmb	04 41 38.5	
	comp=Z,9.7nm,1.2s						
E27K	**Coleen River**	**93.99**	**17**	P	**P**	**04 41 35.0**	**-1.3**
	baz=226						
F28M	**Old Crow**	**94.08**	**17**	P	**P**	**04 41 34.5**	**-2.2**
	baz=228						
G29M	**Pine Creek**	**94.15**	**18**	IAmb	IAmb	04 41 40.7	
	comp=Z,5.8nm,0.9s						
G29M	**Pine Creek**	**94.15**	**18**	P	**P**	**04 41 35.2**	**-1.8**
	baz=229						
EPYK	**Eagle Plains**	**94.20**	**19**	P	**P**	**04 41 35.9**	**-1.4**
	baz=231						
LIRD	**Liard River Hi**	**94.20**	**28**	P	**P**	**04 41 35.7**	**-1.7**
	baz=239,SNR=6.6						
TOAD	**Toad River Com**	**94.31**	**28**	P	**P**	**04 41 36.3**	**-1.6**
	baz=240,SNR=22						
TIXI	**Tiksi**	**94.32**	**348**	P	**P**	**04 41 36.1**	**-1.5**
	comp=Z,2.7nm,0.3s,baz=175,slow=3.2,SNR=11						
	comp=Z,2.7nm,0.3s						
C26K	**Camden Bay**	**94.39**	**15**	P	**P**	**04 41 36.2**	**-1.8**
	baz=223						
TGTN	**Hyland Airport**	**94.39**	**25**	P	**P**	**04 41 36.9**	**-1.4**
	baz=238						
C27K	**Jago River**	**94.46**	**15**	IAmb	IAmb	04 41 40.4	
	comp=Z,12nm,1.1s						
C27K	**Jago River**	**94.46**	**15**	P	**P**	**04 41 36.8**	**-1.6**
	baz=224,SNR=6.7						
H31M	**Peel River**	**94.61**	**20**	P	**P**	**04 41 36.8**	**-2.3**
	baz=233						
G30M	**tAoh Zraii Nji**	**94.74**	**19**	P	**P**	**04 41 37.5**	**-2.3**
	baz=231,SNR=9.2						
E28M	**Babbage River**	**94.84**	**17**	P	**P**	**04 41 37.7**	**-2.4**
	baz=228,SNR=6.8						
D27M	**Malcolm River**	**94.89**	**16**	P	**P**	**04 41 38.6**	**-1.8**
	baz=227						
BEAVL	**Fort Liard**	**95.04**	**27**	P	**P**	**04 41 38.7**	**-2.5**
	baz=240						
E29M	**Blow River**	**95.15**	**17**	P	**P**	**04 41 40.1**	**-1.5**
	baz=230						
F30M	**Barrier River**	**95.27**	**18**	IAmb	IAmb	04 41 43.4	
	comp=Z,8.0nm,0.9s						
F30M	**Barrier River**	**95.27**	**18**	P	**P**	**04 41 40.3**	**-1.8**
	baz=232						
G31M	**Satah River**	**95.31**	**19**	P	**P**	**04 41 40.6**	**-1.6**
	baz=233,SNR=8.8						
F31M	**Tsiigehtchic**	**95.79**	**19**	P	**P**	**04 41 42.9**	**-1.5**
	baz=233,SNR=7.2						
INK	**Inuvik**	**96.37**	**18**	IAmb	IAmb	04 41 47.8	
	comp=Z,8.1nm,1.1s						
INK	**Inuvik**	**96.37**	**18**	P	**P**	**04 41 46.0**	**-1.0**
	baz=234						
ANMO	**Albuquerque**	**96.49**	**55**⇑	*e*P	**P**	**04 41 48.7**	**0.0**
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.1s						
WMQ	**Urumqi**	**96.64**	**314**	*e*P	**P**	**04 41 49.9**	**+0.9**
WMQ				pmax	pmax		
	comp=Z,27nm,0.7s						
PDAR	**Pinedale Array**	**96.73**	**47**	P	**P**	**04 41 47.8**	**-1.9**
	comp=Z,0.3nm,0.6s,baz=289,slow=4.5,SNR=4.0						
PDAR				LR	LR	05 18 30.7	
	comp=Z,74nm,21.4s,baz=300,slow=31						
	comp=Z,0.3nm,0.6s						
TXAR	**Lajitas Array**	**97.01**	**62**	P	Pdif	04 41 51.4	+0.2
	comp=Z,0.9nm,0.8s,baz=235,slow=5.7,SNR=6.5						
TXAR				LR	LR	05 18 51.1	
	comp=Z,66nm,18.8s,baz=308,slow=31						
	comp=Z,0.9nm,0.8s						
PLCA	**Paso Flores**	**99.09**	**139**	LR	LR	05 18 53.9	
	comp=Z,92nm,19.5s,baz=234,slow=30						
C36M	**Paulatuk**	**99.84**	**19**	P	**Pdif**	**04 42 01.5**	**-1.1**
	baz=242						
YKA	**Yellowknife Ar**	**100.58**	**27**	P	**Pdif**	**04 42 06.5**	**+0.4**
	comp=Z,3.5nm,0.7s,baz=264,slow=4.9,SNR=63						
MK31	**Makanchi Array**	**101.18**	**316***c*	*e*P	**Pdif**	**04 42 09.7**	**+0.5**
MKAR	**Makanchi Array**	**101.18**	**316**	P	**Pdif**	**04 42 08.8**	**-0.3**
	comp=Z,4.8nm,0.6s,baz=98,slow=6.6,SNR=28						
MKAR				PKiKP	**PKiKP**	**04 46 33.3**	**-0.3**
	comp=Z,1.0nm,0.9s,baz=78,slow=3.4,SNR=3.2						
ZALV	**Zalesovo Beam**	**101.57**	**323**	P	**Pdif**	**04 42 10.1**	**-0.6**
	comp=Z,7.4nm,0.8s,baz=112,slow=1.6,SNR=4.6						
KURBB	**Kurchatov Arra**	**104.51**	**319**	Pdiff	**Pdif**	**04 42 24.8**	**+1.0**
	comp=Z,2.2nm,0.9s,baz=93,slow=4.2,SNR=5.9						
KURBB				PKiKP	**PKiKP**	**04 46 38.0**	**-1.5**
	comp=Z,1.5nm,0.8s,baz=100,slow=1.7,SNR=7.4						
BVAR	**Borovoye Array**	**109.87**	**321**	Pdiff	**Pdif**	**04 42 47.1**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=76,slow=6.3,SNR=5.1						
BVAR				PKiKP	**PKiKP**	**04 46 48.9**	**-0.5**
	comp=Z,1.4nm,0.5s,baz=48,slow=2.2,SNR=6.6						
BVAR				PP	**PP**	**04 47 23.0**	**-0.2**
	comp=Z,11nm,1.3s,baz=89,slow=8.2,SNR=4.2						
AB31	**Akbulak array**	**116.31**	**316**		**PKPdf**	**04 47 00.7**	**-1.1**
ABKAR	**Akbulak array**	**116.31**	**316**		**PKPdf**	**04 47 00.6**	**-1.2**
ABKAR	**Akbulak array**	**116.31**	**316**		**PKPdf**	**04 47 00.7**	**-1.2**
ARTI	**Arti**	**116.80**	**324**		**PKPdf**	**04 47 01.6**	**-1.0**
ARTI	**Arti**	**116.80**	**324**	*i* PKIKP	**PKPdf**	**04 47 02.3**	**-0.2**
ARTI						04 48 14.7	
ARTI						04 54 06.9	
ARTI				SS	SS	05 04 15.4	+3.0
SPITS	**Spitsbergen Ar**	**119.22**	**354**	PKP	**PKPdf**	**04 47 05.8**	**-0.9**
	comp=Z,12nm,0.7s,baz=95,slow=5.1,SNR=22						
BOSA	**Boshof**	**121.04**	**218**	PKP	**PKPdf**	**04 47 11.5**	**-0.3**
	comp=Z,5.9nm,0.9s,baz=23,slow=1.0,SNR=5.4						
KIRV	**Kirov**	**121.15**	**328***c*	*i*PKIKP	**PKPdf**	**04 47 10.5**	**-0.3**
APA	**Apatity**	**123.77**	**341**⇓	*i*PKIKP	**PKPdf**	**04 47 10.2**	**-5.4**
APA				*i*		04 48 56.0	
APA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HAMF	**Hammerfest**	**124.22**	**347**	*e*P	**PKPdf**	**04 47 15.4**	**-1.0**
ARCES	**ARCESS Array B**	**124.63**	**345**		**PKPdf**	**04 47 16.9**	**-0.3**
ARCES	**ARCESS Array B**	**124.63**	**345**	PKP	**PKPdf**	**04 47 16.8**	**-0.4**
	comp=Z,15nm,0.6s,baz=73,slow=1.7,SNR=105						
ARCES	**ARCESS Array B**	**124.63**	**345**	PKIKP	**PKPdf**	**04 47 17.0**	**-0.3**
KLMR	**Klimovskoe**	**125.03**	**332**	*e*PKIKP	**PKPdf**	**04 47 16.2**	**-2.0**
KLMR				pmax	pmax		
	comp=Z,48nm,1.3s						
KDWAN	**Kaudwane**	**125.28**	**221**		**PKiKP**	**04 47 21.4**	**+0.9**
JETT	**Jettan, Norway**	**125.78**	**347**	*e*P	**PKPdf**	**04 47 18.6**	**-0.9**
TRO	**Tromso**	**126.03**	**347**	*e*P	**PKPdf**	**04 47 19.1**	**-0.8**
VRH	**Novokhopyorsk**	**127.52**	**321**	*e*PKIKP	**PKPdf**	**04 47 23.2**	**0.0**
VRH				pmax	pmax		
	comp=Z,27nm,1.1s						
MOS	**Moscow**	**128.15**	**327**	*e*PKIKP	**PKPdf**	**04 47 23.9**	**-0.4**
STEI	**Steigen**	**128.20**	**348**	*e*P	**PKPdf**	**04 47 23.2**	**-0.8**
KBZ	**Khabaz**	**128.60**	**311**	PKP	**PKPdf**	**04 47 24.6**	**-0.9**
	comp=Z,3.0nm,1.0s,baz=124,slow=4.7,SNR=4.9						
KBZ				PP	**PP**	**04 49 33.0**	**+0.8**
	comp=Z,2.3nm,0.9s,baz=69,slow=11,SNR=3.6						
KBZ	**Khabaz**	**128.60**	**311**⇓	*i*PKIKP	**PKPdf**	**04 47 25.1**	**-0.4**
FAUS	**Fauske**	**128.65**	**347**	*e*P	**PKPdf**	**04 47 24.0**	**-0.9**
KIV	**Kislovodsk**	**128.70**	**312**	*i* PKIKP	**PKPdf**	**04 47 26.2**	**+0.3**
KIV						05 11 22.8	
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
KIV				MLR	MLR		
	comp=Z,426nm,23.0s						
VORR	**Voronezh**	**128.85**	**322**	*e*PKIKP	**PKiKP**	**04 47 26.2**	**-0.3**
VORR				pmax	pmax		
	comp=Z,58nm,1.2s						
OBN	**Obninsk**	**128.97**	**327**⇑	*e*PKIKP	**PKPdf**	**04 47 24.5**	**-1.3**
OBN				*e*		04 47 49.7	
OBN				pmax	pmax		
	comp=Z,8.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s						
VSR	**Storozhevoye**	**129.04**	**321**	*e*PKIKP	**PKPdf**	**04 47 23.6**	**-2.5**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VORD	**Divnogorie**	**129.05**	**321**	*e*PKIKP	**PKPdf**	**04 47 24.6**	**-1.6**
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VAGH	**Vaagaholmen**	**129.62**	**348**	*e*P	**PKPdf**	**04 47 25.8**	**-1.0**
KONS	**Konsvik**	**129.86**	**348**	*e*P	**PKPdf**	**04 47 26.4**	**-0.9**
MOR8	**Moi Rana**	**129.86**	**347**	*e*P	**PKPdf**	**04 47 25.8**	**-1.5**
STOK	**Stokkvaagen**	**130.02**	**347**	*e*P	**PKPdf**	**04 47 27.1**	**-0.4**
FINES	**FINESS Array B**	**130.10**	**338**		**PKPdf**	**04 47 27.0**	**-0.8**
FINES	**FINESS Array B**	**130.10**	**338**	PKhKP	PKPpre	04 47 18.2	
	comp=Z,1.8nm,0.8s,baz=104,slow=8.0,SNR=4.0						
FINES				PKP	**PKPdf**	**04 47 26.4**	**-1.5**
	comp=Z,7.0nm,0.8s,baz=16,slow=2.3,SNR=20						
FINES				SKPbc	**SKPbc**	**04 50 42.9**	**-0.1**
	comp=Z,4.1nm,0.6s,baz=70,slow=4.7,SNR=14						
FINES	**FINESS Array B**	**130.10**	**338***c*	*i*PKIKP	**PKPdf**	**04 47 26.8**	**-1.1**
FINES				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BDFB	**Brasilia**	**130.12**	**131**	PKP	**PKPdf**	**04 47 28.4**	**-1.0**
	comp=Z,4.5nm,1.2s,baz=173,slow=8.1,SNR=4.8						
BDFB				SKPbc	**SKPbc**	**04 50 45.0**	**+0.3**
	comp=Z,2.4nm,0.8s,baz=225,slow=3.4,SNR=3.8						
LEIR	**Leirfjorden**	**130.19**	**347**	*e*P	**PKPdf**	**04 47 27.9**	**0.0**
NSS	**Namsos**	**131.81**	**347**	*e*P	**PKPdf**	**04 47 29.0**	**-2.0**
MAL2	**Monte Alegre,**	**132.96**	**112**		**PKPdf**	**04 47 34.7**	**-0.1**
MNK	**Minsk**	**133.62**	**329**	*i* PKiKP	**PKiKP**	**04 47 35.6**	**-0.4**
	comp=Z,34nm,0.8s,baz=56						
MNK				*i* pPKiKP	**pPKPdf**	**04 47 58.4**	**-0.4**
MNK				*i* sPKiKP	**sPKPdf**	**04 48 06.8**	**-0.9**
MNK				*i* PP	**PP**	**04 50 02.4**	**-1.7**
MNK				*i* PPP	PPP	04 53 08.6	
MNK				*i* SKS	**SKSdf**	**04 54 30.0**	**-8.0**
MNK				*i* PS	**PS**	**05 00 22.8**	**-1.5**
MNK				*i* SKKS	**SKKSdf**	**05 04 27.5**	**-2.9**
MNK				*i* SS	**SS**	**05 07 44.5**	**+1.6**
MNK				*i* SSS	SSS	05 12 26.1	
MNK	**Minsk**	**133.62**	**329**	*i* PKIKP	**PKiKP**	**04 47 35.6**	**-0.4**
MNK				*i*		04 48 06.8	
MNK				*i*		04 50 02.4	
MNK				*i* PPP	PPP	04 53 08.6	
MNK				*i*		04 54 30.0	
MNK				*i* PS	**PS**	**05 00 22.7**	**-1.5**
MNK				*i* SS	SS	05 07 44.5	+1.6
MNK				pmax	pmax		
	comp=Z,34nm,0.8s						
NACGM	**Naroch**	**133.91**	**330**	*e*PKiKP	**PKPdf**	**04 47 35.8**	**+0.5**
	comp=Z,31nm,0.9s,baz=54						
AKN	**Aaknes**	**134.93**	**348**	*e*P	**PKiKP**	**04 47 38.6**	**+0.1**
AKASG	**Malin Array Be**	**134.95**	**324**		**PKPdf**	**04 47 36.8**	**-0.6**
AKASG	**Malin Array Be**	**134.95**	**324**	PKhKP	PKPpre	04 47 23.9	
	comp=Z,0.2nm,0.3s,baz=51,slow=3.0,SNR=5.3						
AKASG				PKP	**PKPdf**	**04 47 36.2**	**-1.1**
	comp=Z,8.2nm,0.8s,baz=65,slow=2.1,SNR=7.2						
AKASG				PP	**PP**	**04 50 10.7**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=50,slow=6.1,SNR=4.2						
AKASG				SKPbc	**SKPbc**	**04 51 00.3**	**+0.2**
	comp=Z,9.7nm,0.9s,baz=46,slow=4.0,SNR=23						
AKASG	**Malin Array Be**	**134.95**	**324***c*	*i*PKIKP	**PKPdf**	**04 47 36.7**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
AKBB	**Malin Array Si**	**134.95**	**324**		**PKPdf**	**04 47 37.0**	**-0.4**
AKBB	**Malin Array Si**	**134.95**	**324***c*	*i*PKIKP	**PKPdf**	**04 47 36.9**	**-0.4**
KIEV	**Kiev**	**134.97**	**324**		**PKPdf**	**04 47 36.5**	**-0.8**
KIEV	**Kiev**	**134.97**	**324**	PKIKP	**PKPdf**	**04 47 36.5**	**-0.8**
NB2	**NORSAR Subarra**	**135.00**	**345**	PKPdf	PKPpre	04 47 24.2	
	comp=Z,0.9nm,0.5s,baz=31,slow=1.9						
NB2				pPKP	**SKPdf**	**04 51 04.1**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=38,slow=4.8						
NB2	**NORSAR Subarra**	**135.00**	**345**	PKIKP	**PKPdf**	**04 47 37.2**	**0.0**
NB2	**NORSAR Subarra**	**135.00**	**345**	PKPdf	PKPpre	04 47 24.2	
	baz=31,slow=1.9						
NOA	**NORSAR Array B**	**135.00**	**345**	PKhKP	PKPpre	04 47 26.2	
	comp=Z,0.7nm,0.8s,baz=65,slow=2.4,SNR=7.6						
NOA				PKP	**PKPdf**	**04 47 36.8**	**-0.4**
	comp=Z,3.1nm,0.6s,baz=29,slow=2.0,SNR=12						
NOA				PP	**PP**	**04 50 13.1**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=34,slow=6.1,SNR=3.5						
NOA				SKP		04 51 04.0	
	comp=Z,1.4nm,1.0s,baz=28,slow=3.4,SNR=5.4						
HFS	**Hagfors**	**135.11**	**343**	PKhKP	PKPpre	04 47 23.9	
	comp=Z,1.8nm,0.8s,baz=297,slow=6.5,SNR=3.5						
HFS				PKP	**PKPdf**	**04 47 36.0**	**-1.3**
	comp=Z,4.5nm,0.8s,baz=106,slow=3.2,SNR=6.9						
HFS				SKPbc	**SKPbc**	**04 51 00.4**	**+0.1**
	comp=Z,2.2nm,0.9s,baz=35,slow=3.5,SNR=3.9						
FOO	**Floro**	**135.84**	**349**	*e*P	**PKPdf**	**04 47 38.7**	**+0.1**
MMAI	**Mount Meron Ar**	**136.11**	**298**	PKP	**PKPdf**	**04 47 39.4**	**-0.8**
	comp=Z,0.8nm,0.3s,baz=90,slow=4.7,SNR=1.8						
MMAI				SKP		04 51 06.7	
	comp=Z,5.6nm,0.7s,baz=140,slow=1.1,SNR=9.3						
SUW	**Suwalki**	**136.12**	**331**	*e*PKP	**PKiKP**	**04 47 40.4**	**-0.7**
BRTR	**Keskin Array B**	**136.25**	**308**	PKhKP	PKPpre	04 47 32.5	
	comp=Z,1.3nm,0.7s,baz=128,slow=1.8,SNR=6.9						
BRTR				PP	**PP**	**04 50 17.4**	**-4.2**
	comp=Z,1.7nm,1.0s,baz=106,slow=4.5,SNR=3.9						
BRTR				SKPbc	**SKPbc**	**04 51 04.6**	**-0.1**
	comp=Z,4.0nm,1.0s,baz=149,slow=2.9,SNR=10						
BRTR	**Keskin Array B**	**136.25**	**308***c*	*i*PKIKP	**PKiKP**	**04 47 41.5**	**-0.5**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ASK	**Askoy**	**136.84**	**348**	*e*P	**PKiKP**	**04 47 41.5**	**-0.8**
BEL	**Belsk**	**138.64**	**330**	*e*PKP	**PKPdf**	**04 47 44.9**	**+0.7**
KWP	**Kalwaria Pacla**	**139.05**	**326**	*e*PKP	**PKPdf**	**04 47 45.3**	**+0.3**
KOLS	**Kolonicke sedl**	**139.69**	**326**	*e*PKIKP	**PKPdf**	**04 47 46.8**	**+0.6**
KOLS	**Kolonicke sedl**	**139.69**	**326**	*e*PKP	**PKPdf**	**04 47 46.8**	**+0.6**
STHS	**Stebnicka Huta**	**139.94**	**327**	*e*PKP	**PKiKP**	**04 47 49.1**	**0.0**
OJC	**Ojcow**	**140.16**	**329**	*e*PKP	PKPpre	04 47 41.4	
NIE	**Niedzica**	**140.42**	**328**	*e*PKP	PKPpre	04 47 43.2	
LANS	**Liptovska Anna**	**141.01**	**328**	*e*PKIKP	**PKiKP**	**04 47 52.5**	**+1.2**
LANS	**Liptovska Anna**	**141.01**	**328**	*e*PKP	**PKiKP**	**04 47 52.5**	**+1.2**
STEB	**Steborice**	**141.33**	**330**	*e*PKP	PKPpre	04 47 44.2	
KSP	**Ksiaz**	**141.38**	**332**	*e*PKP	PKPpre	04 47 43.8	
MORC	**Moravsky Berou**	**141.54**	**330**	*e*PKP	PKPpre	04 47 46.3	
MORC				*e*		04 51 20.5	
MAUC	**Maruska**	**141.69**	**329**	*e*PKP	PKPpre	04 47 46.5	
KRLC	**Kraliky**	**141.70**	**331**	*e*PKP	PKPpre	04 47 44.4	
KRLC	**Kraliky**	**141.70**	**331**	*e*PKHKP	PKPpre	04 47 44.4	
DPC	**Dobruska-Polom**	**141.71**	**331**	*e*PKP	PKPpre	04 47 45.0	
DPC	**Dobruska-Polom**	**141.71**	**331**	*e*PKIKP	PKPpre	04 47 45.0	
UPC	**Upice**	**141.74**	**332**	*e*PKP	PKPpre	04 47 45.1	
UPC	**Upice**	**141.74**	**332**	*e*PKIKP	PKPpre	04 47 45.1	
VYHS	**Vyhne**	**141.76**	**327**	*e*PKP	PKPpre	04 47 46.2	
VYHS				*e*		04 47 52.7	
JAVC	**Velka Javorina**	**142.10**	**329**	*e*PKP	**PKPdf**	**04 47 48.1**	**-2.5**
JAVC				*e*		04 51 23.0	
INVG	**Invergeldie, C**	**142.15**	**353**	*e*P	PKPpre	04 47 44.8	
FLTG	**Flechtingen**	**142.29**	**337**	*e*PKPbc	PKPpre	04 47 46.8	
	baz=38,slow=3.0						
VRAC	**Vranov**	**142.32**	**330**	*e*PKP	**PKPdf**	**04 47 47.9**	**-3.0**
VRAC				*e*		04 51 22.6	
BRG	**Berggiesshubel**	**142.37**	**334**	*e*PKPbc	PKPpre	04 47 46.9	
	baz=38,slow=3.0						
BRG	**Berggiesshubel**	**142.37**	**334**	*i* PKP	PKPpre	04 47 46.6	
BRG				Amp		04 47 48.0	
	comp=Z,10nm,0.8s						
BRG	**Berggiesshubel**	**142.37**	**334**	P	**PKiKP**	**04 47 53.7**	**-0.3**
BRG				Amp		04 47 55.1	
	comp=Z,9.1nm,0.8s						
CLL	**Collm**	**142.42**	**335**	*e*PKPbc	PKPpre	04 47 47.4	
	baz=38,slow=3.0						
CLL	**Collm**	**142.42**	**335**	*i* PKPpre	PKPpre	04 47 46.9	
	comp=Z,13nm,0.8s						
CLL				*i* PKPdf	**PKPdf**	**04 47 51.3**	**+0.3**
	comp=Z,9.0nm,0.8s						
CLL				*i* PKiKP	**PKiKP**	**04 47 54.0**	**-0.1**
	comp=Z,16nm,1.0s						
CLL				*e*pPKiKP	pPKiKP	04 48 20.0	+2.0
CLL				*e*PP	**PP**	**04 50 59.0**	**+0.5**
CLL				*e*x	x	04 51 03.0	
CLL				*e*SKPbc	**SKiKP**	**04 51 22.0**	**-0.5**
	comp=Z,7.0nm,0.8s						
CLL				*e*x	x	04 51 39.0	
CLL				AMS	AMS	07 59 00.0	
	comp=Z,100nm,19.7s						
LAWE	**Loch Awe, Argy**	**142.45**	**355**	*e*P	PKPpre	04 47 46.9	
RICC	**Richard**	**142.55**	**333**	*e*PKP	**PKPdf**	**04 47 47.3**	**-3.9**
NRDL	**Niedersach Rie**	**142.56**	**339**	*e*PKPbc	**PKPdf**	**04 47 48.0**	**-3.0**
	baz=38,slow=3.0						
KRUC	**Moravsky**	**142.58**	**330**	*e*PKP	**PKPdf**	**04 47 48.8**	**-2.6**
KRUC				*e*		04 51 23.1	
MODS	**Modra-Piesok**	**142.62**	**328**	*e*PKP	**PKPdf**	**04 47 48.4**	**-3.1**
MODS				*e*		04 47 54.4	
ASSE	**Asse, Remlinge**	**142.65**	**338**	*e*PKPbc	**PKPdf**	**04 47 48.4**	**-2.9**
	baz=38,slow=3.0						
GOPC	**GO Pecny, Ondr**	**142.72**	**332**	*e*PKP	**PKPdf**	**04 47 48.7**	**-2.9**
GOPC	**GO Pecny, Ondr**	**142.72**	**332**	*e*PKIKP	**PKPdf**	**04 47 48.7**	**-2.9**
PRU	**Pruhonice**	**142.77**	**332**	*e*PKP	**PKPdf**	**04 47 48.4**	**-3.3**
PRU	**Pruhonice**	**142.77**	**332**	*e*PKIKP	**PKPdf**	**04 47 48.4**	**-3.3**
NEUB	**Neuenburg**	**142.98**	**336**	*e*PKPbc	**PKPdf**	**04 47 49.4**	**-2.6**
	baz=38,slow=3.0						
EKA	**Eskdalemuir Ar**	**143.12**	**352**	PKhKP	PKPpre	04 47 47.8	

	comp=Z,2.8nm,0.3s,baz=354,slow=2.7,SNR=40						
EKA	**Eskdalemuir Ar**	**143.12**	**352**	PKIKP	PKPbc	04 47 48.6	-0.6
FRGS	**Fruska Gora**	**143.26**	**322**	⇓iP	PKPab	04 47 48.6	-0.1
ZVC	**Zvikov**	**143.33**	**332**	ePKP	PKPbc	04 47 50.0	0.0
TANN	**Tannenbergstha**	**143.33**	**334**	ePKPbc	PKPbc	04 47 50.0	0.0
	baz=38,slow=3.0						
GTTG	**Gottingen**	**143.39**	**338**	ePKPbc	PKPbc	04 47 50.7	+0.7
	baz=38,slow=3.0						
EDMD	**Edmundbyers**	**143.44**	**351**	eP	PKPab	04 47 49.5	+0.5
NEWG	**New Galloway**	**143.46**	**353**	eP	PKPab	04 47 49.1	+0.1
MOX	**Moxa**	**143.49**	**335**	ePKPbc	PKPbc	04 47 50.1	-0.3
	baz=38,slow=3.0						
IBBN	**Ibbenburen**	**143.50**	**340**	ePKPbc	PKPbc	04 47 50.2	-0.1
	baz=38,slow=3.0						
VAY	**Valandovo**	**143.54**	**315**	⇑iP	PKPbc	04 47 50.5	-0.4
RONA	**Rosalia, Austr**	**143.56**	**328**	i PKP	PKPbc	04 47 51.7	+1.0
	comp=Z,44nm,0.9s,SNR=16						
RONA	**Rosalia, Austr**	**143.56**	**328**	eP	PKPbc	04 47 51.7	+1.0
	comp=Z,44nm,0.9s,SNR=16						
CONA	**Conrad Observa**	**143.62**	**329**	i PKP	PKPbc	04 47 51.8	+0.8
	comp=Z,50nm,0.9s,SNR=33						
CKRC	**Cesky Krumlov**	**143.72**	**331**	ePKP	PKPbc	04 47 51.3	+0.1
CKRC	**Cesky Krumlov**	**143.72**	**331**	ePKIKP	PKPbc	04 47 51.3	+0.1
GAL1	**Galloway**	**143.76**	**354**	eP	PKPbc	04 47 50.7	-0.2
TEKS	**Tekeris**	**143.78**	**322**	⇓iP	PKPab	04 47 50.9	+0.2
IDGL	**Inch Island, C**	**143.78**	**356**	PKPdf	PKPbc	04 47 51.6	+0.5
MANZ	**Manzenberg**	**143.81**	**334**	ePKPbc	PKPbc	04 47 51.6	+0.2
	baz=38,slow=3.0						
KHC	**Kasperske Hory**	**143.82**	**332**	ePKP	PKPbc	04 47 51.9	+0.4
KHC				ex	x	04 48 23.5	
KHC	**Kasperske Hory**	**143.82**	**332**	ePKIKP	PKPbc	04 47 51.9	+0.4
KHC				e		04 48 23.5	
ROTZ	**Rotzenmuhle**	**143.93**	**334**	ePKPbc	PKPbc	04 47 52.0	+0.3
	baz=38,slow=3.0						
SKO	**Skopje**	**143.97**	**317**	⇓eP	PKPbc	04 47 52.5	+0.4
GEC2	**GERESS Array S**	**143.98**	**332**	ePKPbc	PKPbc	04 47 52.4	+0.4
	baz=38,slow=3.0						
GERES	**GERESS Array B**	**143.98**	**332**		PKPbc	04 47 52.2	+0.2
GERES	**GERESS Array B**	**143.98**	**332**	PKP	PKPbc	04 47 52.0	-0.1
	comp=Z,24nm,0.7s,baz=42,slow=2.2,SNR=147						
GERES				SKPbc	**SKiKP**	**04 51 25.5**	**-0.4**
	comp=Z,4.3nm,1.0s,baz=48,slow=1.5,SNR=6.2						
GERES	**GERESS Array B**	**143.98**	**332**	PKIKP	PKPbc	04 47 52.0	0.0
WET	**Wettzell**	**144.12**	**333**	ePKPbc	PKPbc	04 47 52.8	+0.4
	baz=38,slow=3.0						
KASTN	**Kahler Asten**	**144.21**	**339**	ePKPbc	PKPbc	04 47 52.8	+0.2
	baz=38,slow=3.0						
SJES	**Sjenica**	**144.23**	**320**	⇓iP	PKPbc	04 47 52.9	-0.1
BBLS	**Lazi&#263i**	**144.24**	**321**	⇓iP	**PKPab**	**04 47 52.7**	**+0.1**
ARSA	**Arzberg**	**144.25**	**328**	i PKP	PKPbc	04 47 53.3	+0.5
	comp=Z,65nm,1.4s,SNR=18						
HAPS	**Han Pijesak,Bl**	**144.38**	**322**	⇓iP	PKPbc	04 47 53.8	+0.3
BUG	**Bochum--Univer**	**144.39**	**340**	ePKPbc	PKPbc	04 47 53.1	+0.1
	baz=38,slow=3.0						
GRF	**Grafenberg Arr**	**144.40**	**335**	ePKPbc	PKPbc	04 47 53.7	+0.5
	baz=38,slow=3.0						
GRFO	**Grafenberg**	**144.40**	**335**		**PKPdf**	**04 47 53.9**	**-0.7**
GRFO	**Grafenberg**	**144.40**	**335**	PKIKP	**PKPdf**	**04 47 53.9**	**-0.7**
RUDO	**Rudo**	**144.40**	**321**	⇓iP	**PKPab**	**04 47 53.2**	**+0.1**
MOA	**Molln**	**144.44**	**330**	i PKP	**PKPdf**	**04 47 54.1**	**-0.6**
	comp=Z,142nm,0.8s,SNR=66						
ILTH	**Belurgan, Co L**	**144.74**	**355**	PKPdf	**PKPab**	**04 47 53.9**	**0.0**
LBWR	**Ladybower, Pea**	**144.79**	**350**	eP	**PKPab**	**04 47 53.0**	**-1.2**
GROS	**Grobnik**	**144.80**	**327**	i PKPbc	**PKPab**	**04 47 54.4**	**-0.2**
OHR	**Ohrid**	**144.81**	**316**	⇓iP	**PKPdf**	**04 47 55.2**	**-0.4**
BIOA	**Bad Ischl, Aus**	**144.85**	**330**	i PKP	**PKPab**	**04 47 54.5**	**-0.2**
	comp=Z,95nm,0.8s,SNR=36						
SOKA	**Soboth**	**144.89**	**328**	i PKP	**PKPab**	**04 47 54.8**	**-0.1**
	comp=Z,98nm,0.7s,SNR=87						
A051A	**Mrakovica**	**144.99**	**324**	⇓iP	PKPbc	04 47 55.1	-0.2
WACR	**West Acre**	**145.00**	**347**	eP	**PKPab**	**04 47 55.0**	**+0.1**
BLY	**Banja Luka**	**145.00**	**324**	⇓iP	**PKPdf**	**04 47 55.7**	**0.0**
TNS	**Taunus Mts**	**145.02**	**338**	ePKPbc	**PKPdf**	**04 47 55.6**	**0.0**
	baz=38,slow=3.0						
PDG	**Podgorica**	**145.12**	**319**		**PKPbc**	**04 47 55.6**	**-0.1**
PDG	**Podgorica**	**145.12**	**319**	⇓iP	**PKPbc**	**04 47 55.7**	**0.0**
WME	**Myndd Eilian**	**145.16**	**353**	eP	**PKPbc**	**04 47 55.3**	**-0.1**
STNC	**Stoke**	**145.16**	**350**	eP	**PKPdf**	**04 47 55.8**	**+0.1**
WPS	**Cemaes, Angles**	**145.18**	**353**	eP	**PKPbc**	**04 47 55.1**	**-0.3**
RJOB	**Jochberg**	**145.21**	**331**	ePKPbc	**PKPdf**	**04 47 56.2**	**+0.2**
	baz=38,slow=3.0						
CRES	**Cresnjevec Ost**	**145.25**	**327**	⇓iP	**PKPab**	**04 47 56.3**	**+0.1**
OBKA	**Obir**	**145.25**	**328**	⇓iP	**PKPbc**	**04 47 55.5**	**-0.6**
OBKA	**Obir**	**145.25**	**328**	i PKP	**PKPbc**	**04 47 55.8**	**-0.2**
	comp=Z,113nm,0.9s,SNR=53						
WLF1	**Llynfaes**	**145.27**	**353**	eP	**PKPbc**	**04 47 55.6**	**-0.1**
DRME	**Dracevica, Mon**	**145.30**	**319**	⇓iP	**PKPab**	**04 47 56.4**	**-0.1**
BRY	**Bratogost**	**145.30**	**320**	⇓iP	**PKPbc**	**04 47 56.1**	**-0.3**
CWF	**Charnwood Fore**	**145.35**	**349**	eP	**PKPbc**	**04 47 55.7**	**-0.3**
YLL	**Llanberis**	**145.39**	**352**	eP	**PKPdf**	**04 47 55.5**	**-0.7**
BEBN	**Eben Emael**	**145.46**	**341**	dPKP	**PKPdf**	**04 47 56.2**	**-0.1**
LESA	**Schwarzleotal**	**145.49**	**331**	i PKP	**PKPdf**	**04 47 56.2**	**-0.4**
	comp=Z,216nm,0.8s,SNR=173						
BTNL	**Ternell**	**145.50**	**340**	dPKP	**PKPdf**	**04 47 56.4**	**0.0**
FOEL	**Foel Wylfa**	**145.51**	**351**	eP	**PKPdf**	**04 47 56.4**	**0.0**
ELMS	**Elmsett, Ipswi**	**145.51**	**347**	eP	**PKPbc**	**04 47 56.6**	**+0.1**
MEM	**Membach**	**145.51**	**340**	dPKP	**PKPdf**	**04 47 56.2**	**-0.3**
DSB	**Dublin**	**145.52**	**355**	PKPdf	**PKPdf**	**04 47 55.9**	**-0.4**
IGLA	**Glengowla, Co**	**145.52**	**358**	eP	**PKPdf**	**04 47 55.8**	**-0.5**
IGLA	**Glengowla, Co**	**145.52**	**358**	PKPdf	**PKPdf**	**04 47 55.6**	**-0.7**
TREB	**Trebinje**	**145.52**	**320**	eP	**PKPdf**	**04 47 56.5**	**-0.2**
A050A	**Klekovaca**	**145.53**	**324**	⇓iP	**PKPbc**	**04 47 56.9**	**-0.1**
FUR	**Furstenfeldbru**	**145.56**	**333**	ePKPbc	**PKPab**	**04 47 57.5**	**+0.2**
	baz=38,slow=3.0						
BOJS	**Bojanci**	**145.57**	**326**	⇓iP	**PKPdf**	**04 47 56.1**	**-0.6**
BOJS	**Bojanci**	**145.57**	**326**	ePKPbc	**PKPab**	**04 47 57.7**	**+0.3**
LJU	**Ljubljana**	**145.58**	**328**	ePKPbc	**PKPab**	**04 47 57.3**	**0.0**
HCY	**Herceg Novi**	**145.59**	**319**	⇓iP	**PKPdf**	**04 47 56.6**	**-0.2**
MYKA	**Terra Mystica**	**145.61**	**329**	i PKP	**PKPdf**	**04 47 56.6**	**-0.2**
	comp=Z,96nm,0.7s,SNR=57						
LLW	**Llanuwychllyn**	**145.61**	**352**	eP	**PKPdf**	**04 47 56.1**	**-0.4**
BSTI	**Sart Tilman**	**145.68**	**341**	dPKP	**PKPbc**	**04 47 57.2**	**+0.1**
CRNS	**Crni Vrh**	**145.69**	**328**	ePKPbc	**PKPdf**	**04 47 57.0**	**+0.1**
HLM1	**Long Mynd**	**145.82**	**351**	eP	**PKPbc**	**04 47 57.4**	**-0.1**
STON	**Ston**	**145.83**	**321**	⇓iP	**PKPdf**	**04 47 57.2**	**0.0**
CEY	**Cerknica**	**145.84**	**327**	⇓iP	**PKPbc**	**04 47 57.7**	**-0.2**
UCC	**Uccle**	**145.85**	**342**	dPKP	**PKPbc**	**04 47 57.7**	**0.0**
BCLA	**Clavier**	**145.90**	**341**	dPKPdf	**PKPbc**	**04 47 57.5**	**-0.3**
STU	**Stuttgart**	**145.93**	**336**	ePKPbc	**PKPab**	**04 47 58.5**	**-0.1**
	baz=38,slow=3.0						
BGES	**Gesves**	**146.00**	**341**	dPKP	**PKPbc**	**04 47 57.9**	**-0.3**
WATA	**Walderalm**	**146.06**	**332**	i PKP	**PKPbc**	**04 47 58.6**	**0.0**
	comp=Z,68nm,0.8s,SNR=28						
ABTA	**Abfaltersbach**	**146.06**	**330**	i PKP	**PKPbc**	**04 47 58.2**	**-0.4**
	comp=Z,158nm,1.3s,SNR=43						
WTTA	**Wattenberg**	**146.08**	**332**	i PKP	**PKPbc**	**04 47 58.3**	**-0.4**
	comp=Z,111nm,0.9s,SNR=47						
BMRD	**Maredsous**	**146.17**	**341**	dPKP	**PKPbc**	**04 47 58.7**	**0.0**
SKDS	**Skadanscina**	**146.18**	**327**	⇓iP	**PKPdf**	**04 47 58.0**	**+0.2**
MOTA	**Moosalm**	**146.26**	**332**	i PKP	**PKPbc**	**04 47 59.3**	**+0.1**
	comp=Z,135nm,0.7s,SNR=82						
WLF	**Walferdange**	**146.29**	**340**	dPKP	**PKPab**	**04 47 59.9**	**0.0**
WLF	**Walferdange**	**146.29**	**340**	ePKPbc	**PKPab**	**04 47 59.9**	**0.0**
	baz=38,slow=3.0						
RETA	**Reutte**	**146.30**	**333**	i PKP	**PKPbc**	**04 47 59.5**	**+0.3**
	comp=Z,58nm,0.7s,SNR=26						
SQTA	**Sankt Quirin**	**146.31**	**332**	i PKP	**PKPbc**	**04 47 59.6**	**+0.2**
	comp=Z,157nm,0.7s,SNR=66						
MCH1	**Michaelchurch**	**146.34**	**351**	eP	**PKPdf**	**04 47 57.1**	**-0.7**
DOU	**Dourbes**	**146.40**	**341**	dPKPdf	**PKPdf**	**04 47 57.9**	**0.0**
DOU				dPKP	**PKPbc**	**04 47 59.4**	**+0.1**
IWEX	**Carrickbyrne,**	**146.42**	**355**	eP	**PKPbc**	**04 47 58.9**	**-0.4**
IWEX	**Carrickbyrne,**	**146.42**	**355**	PKPdf	**PKPbc**	**04 47 58.7**	**-0.6**
STRD	**Stroud**	**146.43**	**350**	eP	**PKPbc**	**04 47 59.2**	**-0.1**
UBR	**Ueberruh**	**146.43**	**334**	ePKPbc	**PKPbc**	**04 47 59.7**	**+0.1**
	baz=38,slow=3.0						
MONM	**Monmouth**	**146.47**	**351**	eP	**PKPdf**	**04 47 58.1**	**+0.1**
SWN1	**Swindon**	**146.62**	**349**	eP	**PKPbc**	**04 47 60.0**	**0.0**
RSBS	**Rosebush, Pemb**	**146.63**	**353**	eP	**PKPbc**	**04 47 59.7**	**-0.2**
BFO	**Black Forest**	**146.63**	**336**		**PKPbc**	**04 48 00.3**	**+0.2**
BFO	**Black Forest**	**146.63**	**336**	PKP2	**PKPbc**	**04 48 00.3**	**+0.2**
BFO	**Black Forest**	**146.63**	**336**	ePKPbc	**PKPbc**	**04 48 00.4**	**+0.3**
	baz=38,slow=3.0						
FETA	**Feichten**	**146.67**	**332**	i PKP	**PKPdf**	**04 47 58.8**	**0.0**
	comp=Z,99nm,0.7s,SNR=84						
WOL	**Wolverton**	**146.70**	**349**	eP	**PKPbc**	**04 47 59.9**	**-0.2**
HMNX	**Herstmonceux**	**146.81**	**347**	eP	**PKPab**	**04 48 01.2**	**-0.6**
DAVA	**Damuels**	**146.83**	**333**	ePKP	**PKPdf**	**04 47 57.4**	**-1.6**
	comp=Z,4.2nm,1.2s						
DAVA				i PKP	**PKPbc**	**04 48 01.1**	**+0.2**
	comp=Z,78nm,0.7s,SNR=37						
VAL	**Valentia**	**147.03**	**359**	PKPdf	**PKPdf**	**04 47 58.1**	**-0.8**
HTL	**Hartland**	**147.53**	**352**	eP	**PKPbc**	**04 48 02.6**	**+0.1**
SBD	**Saint Breward**	**147.98**	**352**	eP	**PKPbc**	**04 48 03.2**	**-0.5**
DYA	**Yadsworthy**	**148.00**	**351**	eP	**PKPbc**	**04 48 03.1**	**-0.7**
CUC	**Castrocucco**	**148.63**	**318**		**PKPbc**	**04 48 04.3**	**-1.5**
JSA	**Saint Aubin**	**148.92**	**348**	eP	**PKPbc**	**04 48 05.4**	**-0.8**
CEL	**Celeste**	**149.52**	**315**		**PKPbc**	**04 48 06.8**	**-1.3**
KEST	**Kesra**	**155.27**	**317**	PKPbc	PKPdf	04 48 21.6	+9.5
	comp=Z,8.8nm,0.9s,baz=4.3,slow=2.8,SNR=8.0						
KEST				PKPab	**PKPab**	**04 48 38.3**	**+0.7**
	comp=Z,22nm,0.9s,baz=336,slow=2.1,SNR=11						
PGAV	**Gavieira, Arco**	**156.87**	**354**	ePKPab	**PKPab**	**04 48 44.5**	**+0.4**
PCAB	**Cabril**	**157.10**	**354**	ePKPab	**PKPab**	**04 48 45.2**	**+0.2**
POLO	**Lamas de Olo**	**157.41**	**353**	ePKPab	**PKPab**	**04 48 46.8**	**+0.3**
PVRL	**Vila Real**	**157.50**	**353**	ePKPab	**PKPab**	**04 48 47.1**	**+0.3**
MVO	**Moncorvo**	**157.52**	**352**	ePKPab	**PKPab**	**04 48 47.1**	**+0.2**
PTO	**Porto**	**157.72**	**355**	ePKPab	**PKPab**	**04 48 46.5**	**-1.2**
PVIS	**Viseu**	**158.07**	**353**	ePKPab	**PKPab**	**04 48 49.4**	**+0.1**
MTE	**Manteigas**	**158.34**	**352**	ePKPab	**PKPab**	**04 48 50.5**	**0.0**
ESDC	**Sonseca Array**	**158.37**	**345**		**PKPab**	**04 48 50.1**	**-0.5**
ESDC	**Sonseca Array**	**158.37**	**345**	PKP	**PKPdf**	**04 48 15.6**	**-0.4**
	comp=Z,0.6nm,1.0s,baz=356,slow=3.9,SNR=4.2						
ESDC				PKPbc	PKPbc	04 48 27.4	
	comp=Z,1.1nm,0.9s,baz=358,slow=4.3,SNR=4.6						
ESDC				PKPab	**PKPab**	**04 48 50.6**	**0.0**
	comp=Z,6.8nm,0.8s,baz=19,slow=3.7,SNR=29						
COI	**Coimbra**	**158.63**	**354**	ePKPab	**PKPab**	**04 48 51.7**	**+0.1**
PCAS	**Casmilo, Conde**	**158.79**	**354**	ePKPab	**PKPab**	**04 48 52.4**	**0.0**
PCBR	**Castelo Branco**	**158.88**	**352**	ePKPab	**PKPab**	**04 48 52.9**	**+0.2**
PSARD	**Sardoal**	**159.20**	**353**	ePKPab	**PKPab**	**04 48 54.4**	**+0.2**
PMRV	**Marv??o**	**159.28**	**352**	ePKPab	**PKPab**	**04 48 54.8**	**+0.3**
PSBE	**So Bento**	**159.35**	**355**	ePKPab	**PKPab**	**04 48 55.4**	**+0.6**
PMTG	**Montargil**	**159.74**	**353**	ePKPab	**PKPab**	**04 48 56.4**	**0.0**
PESTR	**Estremoz**	**159.86**	**352**	ePKPab	**PKPab**	**04 48 57.2**	**+0.2**
EVO	**Evora**	**160.24**	**352**	ePKPab	**PKPab**	**04 48 59.0**	**+0.3**
PBAR	**Barrancos**	**160.45**	**350**	ePKPab	**PKPab**	**04 49 00.0**	**+0.4**
PBEJ	**Beja**	**160.72**	**352**	ePKPab	**PKPab**	**04 49 01.3**	**+0.6**
MESJ	**Messejana**	**160.95**	**353**	ePKPab	**PKPab**	**04 49 02.5**	**+0.7**
PCVE	**Castro Verde**	**161.13**	**352**	ePKPab	**PKPab**	**04 49 03.5**	**+0.9**
PTEO	**Sao Teotonio**	**161.30**	**354**	ePKPab	**PKPab**	**04 49 04.7**	**+1.4**
PVAQ	**Vaqueiros**	**161.31**	**351**	ePKPab	**PKPab**	**04 49 04.1**	**+0.7**
PBDV	**Barranco-do-Ve**	**161.50**	**352**	ePKPab	**PKPab**	**04 49 05.3**	**+1.1**
MORF	**Marmelete**	**161.53**	**353**	ePKPab	**PKPab**	**04 49 05.3**	**+0.9**
TORD	**Torodi Ar. Bea**	**166.31**	**247**		**PKPdf**	**04 48 24.0**	**-0.5**
TORD	**Torodi Ar. Bea**	**166.31**	**247**	PKP	**PKPdf**	**04 48 23.8**	**-0.7**
	comp=Z,6.3nm,0.9s,baz=121,slow=2.4,SNR=8.0						
TORD				PKPab	**PKPab**	**04 49 26.3**	**+0.1**
	comp=Z,1.5nm,0.4s,baz=93,slow=3.4,SNR=1.6						
DBIC	**Dimbokro**	**166.34**	**208**	PKPab	**PKPab**	**04 49 26.0**	**0.0**
	comp=Z,4.9nm,0.8s,baz=165,slow=6.2,SNR=4.1						

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*SJA **14** 04:36:13.8±1.8, 29°.65S×72°.70W, h37^{km}, ML3.9, MW3.9*
*IDC **14** 04:36:16.4±1.2, 30°.15S×72°.13W, h0^{km}, mb3.9/4, mbtmp3.7/6, ML3.5/2, MS4.0/1, Error ellipse: s-maj=48.9km s-min=28.4km az=83.0*
*GUC **14** 04:36:18.5±0.6, 30°.06S×72°.13W, h40^{km}±2^{km}, ML3.9*
ISC 14 04:36:17.8±2.0**, 30°.10S**±0°.04×**72°.11W**±0°.07**, h9**^{km}±11^{km}**, n33,** σ1^{s}.**25**/40**, mb3.9**/3**, 3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.71**	**144**	⇓iP	**Pb**	**04 36 32.1**	**-0.2**
CO06				i S	**Sb**	**04 36 42.7**	**+0.6**
CO05	**La Serena**	**0.78**	**77**	i P	**Pb**	**04 36 33.3**	**-0.2**
CO05				i S	**Sb**	**04 36 44.2**	**-0.1**
CO05				IAML		04 36 45.4	
	comp=E,7µm,0.5s						
GO04	**Tololo Observa**	**1.14**	**94**	i P	**Pg**	**04 36 39.2**	**-0.6**
GO04				i S	**Sb**	**04 36 55.0**	**+0.1**
GO04				IAML		04 36 59.9	
	comp=E,7µm,0.3s						
CO03	**El Pedregal**	**1.43**	**121**	i P	**Pn**	**04 36 44.0**	**-0.1**
CO03				i S	**Sb**	**04 37 02.9**	**-0.2**
CO03				IAML		04 37 05.7	
	comp=E,2µm,0.4s						
CO03	**El Pedregal**	**1.43**	**121**	eP	**Pb**	**04 36 44.7**	**-0.1**
CO03				eS	**Sb**	**04 37 03.1**	**-0.1**
CO03				IAML		04 37 06.4	
	comp=Z,1µm,0.5s						
CO02	**Combarbal**	**1.46**	**139**	i P	**Pn**	**04 36 44.7**	**+0.2**
CO02				i S	**Sn**	**04 37 03.8**	**0.0**
CO02				IAML		04 37 09.0	
	comp=E,4µm,0.2s						
CO02	**Combarbal**	**1.46**	**139**	eP	**Pn**	**04 36 44.7**	**+0.2**
CO02				eS	**Sg**	**04 37 04.8**	**-0.1**
CO02				IAML		04 37 08.9	
	comp=Z,1µm,0.5s						
LCO	**Las Campanas**	**1.64**	**49**	⇓iP	**Pn**	**04 36 46.3**	**-0.8**
LCO				i S	**Sn**	**04 37 07.3**	**-1.2**
AROD	**Rodeo**	**2.29**	**92**	eP	**Pb**	**04 36 59.3**	**-0.1**
VA06	**Catapilco**	**2.55**	**164**	⇓iP	**Pn**	**04 36 59.1**	**-0.3**
ACDV	**Cuesta del Vie**	**2.59**	**92**	eP	**Pb**	**04 37 05.1**	**+0.5**
ACDV				eS	**Sg**	**04 37 39.8**	**-1.4**
ACDV				IAML		04 37 42.1	
	comp=Z,187nm,0.4s						
ACCO	**Cerro Coronel**	**2.68**	**101**	eP	**Pg**	**04 37 10.9**	**+1.7**
ACCO				eS	**Sg**	**04 37 46.2**	**+2.3**
VA03	**San Esteban**	**2.97**	**154**	eP	**Pn**	**04 37 05.5**	**+0.3**
VA03				i P		04 37 06.1	
VA03				IAML		04 37 58.9	
	comp=E,369nm,0.5s						
VA03	**San Esteban**	**2.97**	**154**	eP	**Pn**	**04 37 06.1**	**+0.8**
VA03				eS	**Sg**	**04 37 53.4**	**0.0**
VA03				IAML		04 37 60.0	
	comp=Z,169nm,0.6s						
GO03	**Copiapo**	**2.99**	**34**	eP	**Pn**	**04 37 04.8**	**-0.7**
AUSP	**Uspallata**	**3.15**	**133**	eP	**Pb**	**04 37 13.9**	**-0.3**
AUSP				eS	**Sb**	**04 37 56.1**	**+3.2**
RTLL	**Cerro Villicun**	**3.37**	**112**	eP	**Pb**	**04 37 14.3**	**-3.3**
RTLL				eS	**Sg**	**04 38 04.6**	**-1.3**
ARCO	**CERRO ARCO**	**3.85**	**136**	eP	**Pb**	**04 37 22.8**	**-3.3**
ARCO				eS	**Sg**	**04 38 20.2**	**-1.4**
ARCO				IAML		04 38 35.2	
	comp=Z,61nm,0.9s						
H03N1	**Juan Fernandez**	**6.68**	**238**	T	T	04 45 11.4	
	baz=56,slow=72						
H03N2	**Juan Fernandez**	**6.69**	**238**	T	T	04 45 09.3	
	baz=56,slow=72						
H03N3	**Juan Fernandez**	**6.69**	**238**	T	T	04 45 10.9	
	baz=56,slow=72						
PLCA	**Paso Flores**	**10.69**	**174**	Pn	**Pn**	**04 38 49.9**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=3.8,slow=15,SNR=1.4						
	comp=Z,0.9nm,0.7s						
LPAZ	**La Paz**	**14.22**	**16**	Pn	**Pn**	**04 39 41.8**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=180,slow=7.0,SNR=5.7						
	comp=Z,0.7nm,0.6s						
RCBR	**Riachuelo**	**41.76**	**62**	LR	LR	05 04 24.7	
	comp=Z,216nm,20.0s,baz=228,slow=40						
SNAA	**Sanae**	**55.22**	**159**	P	**P**	**04 45 51.2**	**+0.4**
	comp=Z,1.0nm,0.9s,baz=270,slow=7.1,SNR=1.8						
	comp=Z,1.0nm,0.9s						
TXAR	**Lajitas Array**	**66.32**	**330**	P	**P**	**04 47 07.1**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=145,slow=7.6,SNR=1.7						
	comp=Z,0.2nm,0.6s						
DBIC	**Dimbokro**	**74.03**	**72**	P	**P**	**04 47 54.3**	**-0.1**
	comp=Z,2.2nm,0.7s,baz=256,slow=4.2,SNR=3.7						
	comp=Z,2.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**82.96**	**70**	P	**P**	**04 48 43.5**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=243,slow=6.3,SNR=1.8						
	comp=Z,1.6nm,0.6s						
WRA	**Warramunga Arr**	**124.11**	**210**	PKP	**PKPdf**	**04 55 16.4**	**-1.0**
	comp=Z,1.5nm,1.3s,baz=140,slow=1.9,SNR=2.2						
H11S2	**WAKE ISLAND Hy**	**125.67**	**272**	T	T	07 14 09.6	
	baz=115,slow=75,SNR=4.2						
H11S1	**WAKE ISLAND Hy**	**125.68**	**272**	T	T	07 14 13.8	
	baz=115,slow=75,SNR=5.5						
H11S3	**WAKE ISLAND Hy**	**125.69**	**272**	T	T	07 14 14.8	
	baz=115,slow=75,SNR=6.3						
ZALV	**Zalesovo Beam**	**150.90**	**28**	PKPbc	**PKiKP**	**04 56 10.8**	**-0.2**
	comp=Z,1.7nm,0.6s,baz=321,slow=1.8,SNR=5.4						

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*ISN **14** 04:45:54.0±0.8, 34°.24N×45°.36E, h30^{km}±14^{km}, ML2.9*
*TEH **14** 04:45:54.8, 34°.25N×45°.53E, h10^{km}±27^{km}*
ISC 14 04:45:55.5±1.0**, 34°.26N**±0°.04×**45°.52E**±0°.04**, h18**^{km}**, n13,** σ**0**^{s}.**95**/16**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KGS1	**Ghasr-e-Shirin**	**0.25**	**12**	Pg	**Pg**	**04 46 00.1**	**-1.2**
KGS1				Sg	**Sg**	**04 46 05.0**	**-0.3**
GLG1	**Gilan-e-Gharb**	**0.35**	**114**	Pg	**Pg**	**04 46 01.9**	**-1.1**
IDHR	**Dehrash**	**0.84**	**58**	Pg	**Pb**	**04 46 10.3**	**-1.4**
ILBA	**Ilam Banvizeh**	**0.85**	**138**	Pg	**Pb**	**04 46 11.6**	**-0.2**
IGHG	**Ghaleghazi**	**0.87**	**85**	Pg	**Pb**	**04 46 12.0**	**-0.2**
KCHF	**Cheshme Sefid,**	**1.26**	**89**	Pg	**Pg**	**04 46 19.7**	**-0.1**
ILIN	**Lien**	**1.36**	**61**	Pg	**Pb**	**04 46 20.7**	**+0.1**
BHD	**Baghdad**	**1.37**	**224**	ePg	**Pg**	**04 46 21.0**	**-1.0**
	baz=40						
BHD				eSg	**Sg**	**04 46 40.0**	**+0.1**
IKRK	**Kirkuk**	**1.50**	**320**	ePg	**Pb**	**04 46 23.0**	**+0.2**
IKRK				eSg	**Sg**	**04 46 44.0**	**0.0**
IKRK				AML	AML	04 46 53.2	
	comp=E,107nm,0.4s						
IKRK				AML	AML	04 46 54.3	
	comp=N,139nm,0.5s						
SNQR	**Sonqor, Kerman**	**1.84**	**70**	Pn	**Pb**	**04 46 28.5**	**-0.2**
IBZA	**Bozab**	**1.94**	**83**	Pn	**Pb**	**04 46 30.1**	**-0.5**
IKFM	**Kafar-mosalman**	**2.07**	**110**	Pn	**Pb**	**04 46 31.3**	**-1.2**
HSAM	**Samen**	**2.55**	**90**	Pn	**Pn**	**04 46 38.3**	**+2.0**

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*BJI **14** 04:56:25.3, 4°.47S×131°.70E, h24^{km}, mB5.0/9, mb4.7/40, Ms4.5/2, Ms7 4.2/2*
*IDC **14** 04:56:26.6±0.5, 4°.02S×131°.60E, h0^{km}, mb4.5/14, mbtmp4.5/16, ML4.7/2, MS4.0/10, Error ellipse: s-maj=26.4km s-min=12.7km az=82.0*
*NEIC **14** 04:56:28.4±1.7, 4°.13S±0°.04×131°.55E±0°.07, h10^{km}±1^{km}, mb4.8/41, Error ellipse: s-maj=13.0km s-min=3.0km az=117.0*
*DJA **14** 04:56:31.4±0.2, 4°S±2°×13°2E±°, h42^{km}±3^{km}, M4.7/37, mb4.8/37, mB5.4/7, MLv4.6/15, Mw(mB)4.8/7*
ISC 14 04:56:30.5±0.4**, 4°.12S**±0°.04×**131°.61E**±0°.05**, h29**^{km}**, n157,** σ**1**^{s}.**51**/143**, mb4.7**/54**, MS4.1**/10**, 1C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**1.35**	**28**		**Pb**	**04 56 53.5**	**-1.6**
FAKI	**Fak Fak**	**1.35**	**28**	P	**Pb**	**04 56 53.7**	**-1.5**
FAKI	**Fak Fak**	**1.35**	**28**	P	**Pb**	**04 56 53.4**	**-1.8**
FAKI				S	**Sb**	**04 57 12.6**	**+0.6**
BNDI	**Bandanaira**	**1.75**	**257**	P	**Pn**	**04 56 59.6**	**+0.6**
BNDI	**Bandanaira**	**1.75**	**257**	S	**Sn**	**04 57 21.9**	**+1.6**
BNDI	**Bandanaira**	**1.75**	**257**	P	**Pn**	**04 56 59.2**	**+0.2**
KMPI	**Kaimana, Papua**	**2.13**	**78**	P	**Pb**	**04 57 05.7**	**-2.8**
MSAI	**Masohi**	**2.79**	**286**	P	**Pn**	**04 57 12.5**	**-0.7**
SWI	**Sorong**	**3.25**	**354**	P	**Pn**	**04 57 16.3**	**-3.3**
AAI	**Ambon**	**3.44**	**277**	P	**Pn**	**04 57 22.4**	**+0.2**
RKPI	**Ransiki, Papua**	**3.64**	**45**	P	**Pn**	**04 57 25.5**	**+0.5**
SAUI	**Saumlaki**	**3.85**	**185**	P	**Pn**	**04 57 28.6**	**+0.7**
NLAI	**Namlea**	**4.59**	**281**	P	**Pn**	**04 57 37.0**	**-1.0**
SRPI	**Serui, Papua**	**5.13**	**64**	P	**Pn**	**04 57 46.2**	**+0.7**
	1.2nm4µm116nm,0.4s						
BAKI	**Biak**	**5.35**	**57**	P	**Pn**	**04 57 51.4**	**+3.0**
	1.1nm3µm283nm,0.8s						
SANI	**Sanana**	**5.98**	**290**	P	**Pn**	**04 57 55.2**	**-2.0**
SANI	**Sanana**	**5.98**	**290**	P	**Pn**	**04 57 54.1**	**-3.1**
	0.3nm69nm,0.7s						
TNTI	**Ternate**	**6.45**	**319**	Pn	**Pn**	**04 58 01.7**	**-1.9**
SMPI	**Sarmi**	**7.39**	**74**	P	**Pn**	**04 58 19.3**	**+2.7**
	0.2nm45nm,1.0s						
DRS	**Darwin Rock St**	**8.29**	**185**	P	**Pn**	**04 58 29.5**	**+0.6**
KDU	**Kakadu**	**8.56**	**174**	P	**Pn**	**04 58 32.1**	**-0.5**
GENI	**Genyem**	**8.67**	**80**	P	**Pn**	**04 58 35.0**	**+0.8**
	66nm,0.8s						
MTN	**Manton Dam**	**8.69**	**183**		**Pn**	**04 58 33.0**	**-1.3**
MTN	**Manton Dam**	**8.69**	**183**	P	**Pn**	**04 58 34.5**	**+0.2**
MTN	**Manton Dam**	**8.69**	**183**	S	**Sn**	**05 00 11.6**	**+0.2**
KMSI	**Cibinong**	**8.94**	**301**	P	**Pn**	**04 58 36.4**	**-1.4**
SOEI	**Soe**	**9.20**	**232**		**Pn**	**04 58 40.1**	**-1.4**
SOEI	**Soe**	**9.20**	**232**	P	**Pn**	**04 58 42.1**	**+0.7**
	2µm126nm,1.1s						
JAY	**Jayapura**	**9.21**	**80**	Pn	**Pn**	**04 58 44.2**	**+2.6**
	1.2nm,0.3s,baz=248,slow=12,SNR=4.8						
JAY	**Jayapura**	**9.21**	**80**	P	**Pn**	**04 58 42.5**	**+0.9**
BATI	**Baumata**	**9.94**	**232**	Pn	**Pn**	**04 58 51.5**	**0.0**
	9.4nm,0.3s,baz=73,slow=8.2,SNR=6.3						
BATI				Sn	**Sn**	**05 00 45.8**	**+3.5**
	7.2nm,0.3s,baz=297,slow=18,SNR=1.4						
	58nm,0.6s						
BATI	**Baumata**	**9.94**	**232**	P	**Pn**	**04 58 51.1**	**-0.5**
	106nm,0.9s						
APSI	**Ampana**	**10.45**	**287**	P	**Pn**	**04 58 57.6**	**-0.9**
	1µm45nm,0.8s						
MRSI	**Marisa**	**10.69**	**295**	P	**Pn**	**04 58 59.5**	**-2.3**
	31nm,1.1s						
BSSI	**Bau Bau, Buton**	**11.26**	**259**	P	**Pn**	**04 59 08.0**	**-1.6**
	71nm,1.7s						
BKSI	**Bulukumba**	**11.52**	**264**	P	**Pn**	**04 59 10.9**	**-2.2**
	31nm,1.1s						
SPSI	**Sidrap Palu**	**11.82**	**270**	P	**Pn**	**04 59 17.5**	**+0.3**
	1µm30nm,0.9s						
KNRA	**Kununurra**	**11.83**	**194**		Pn	04 59 14.1	-3.3
KAPI	**Kappang**	**11.86**	**265**	Pn	**Pn**	**04 59 20.3**	**+2.4**
	1.9nm,0.3s,baz=55,slow=6.9,SNR=11						
KAPI				LR	LR	05 04 03.6	
	comp=Z,1µm,19.2s,baz=102,slow=38						
TOLI2	**Tolitoli**	**12.01**	**295**	Pn	**Pn**	**04 59 20.4**	**+0.6**
PLAI	**Plampang**	**14.52**	**251**	P	**Pn**	**04 59 53.6**	**-0.6**
PLAI	**Plampang**	**14.52**	**251**	P	**Pn**	**04 59 52.6**	**-1.6**
	49nm,1.3s						
COEN	**Coen**	**15.02**	**131**		**Pn**	**04 59 59.3**	**-1.7**
COEN	**Coen**	**15.02**	**131**	P	**Pn**	**05 00 01.4**	**+0.4**
FITZ	**Fitzroy Crossi**	**15.08**	**202**		Pn	04 59 55.6	-6.1
FITZ	**Fitzroy Crossi**	**15.08**	**202**	Pn	Pn	04 59 56.5	-5.2
	2.3nm,0.3s,baz=30,slow=9.6,SNR=20						
FITZ				Sn	Sn	05 02 36.0	-12
	0.9nm,0.3s,baz=250,slow=21,SNR=4.3						
TWSI	**Taliwang, Sumb**	**15.34**	**252**	P	**Pn**	**05 00 04.6**	**-0.6**
	24nm,1.0s						
WB0	**Warramunga Arr**	**15.79**	**170**		**Pn**	**05 00 06.4**	**-4.6**
WRA	**Warramunga Arr**	**15.95**	**171**	Pn	**Pn**	**05 00 08.4**	**-4.7**
	0.8nm,0.3s,baz=353,slow=13,SNR=18						
WRA				Sn	Sn	05 02 58.1	-11
	2.9nm,0.3s,baz=348,slow=22,SNR=13						
WR8	**Warramunga Arr**	**15.99**	**170**		**Pn**	**05 00 10.0**	**-3.6**
KMMI	**Kalianget**	**17.80**	**260**	P	**Pn**	**05 00 36.4**	**0.0**
	96nm,0.9s						
JAGI	**Jajag, Banyuwa**	**17.88**	**255**	P	**Pn**	**05 00 37.2**	**-0.2**
JAGI	**Jajag, Banyuwa**	**17.88**	**255**	P	**Pn**	**05 00 35.7**	**-1.7**
	59nm,1.7s						
QIS	**Mount Isa**	**18.10**	**155**	P	**Pn**	**05 00 39.5**	**-0.5**
AS31	**Alice Springs**	**19.56**	**174**	P	**P**	**05 00 56.7**	**+0.5**
ASAR	**Alice Springs**	**19.56**	**174**		**P**	**05 00 57.4**	**+1.1**
ASAR	**Alice Springs**	**19.56**	**174**	P	**P**	**05 00 56.6**	**+0.4**
	1.4nm,0.3s,baz=351,slow=11,SNR=59						
ASAR				S	S	05 04 25.4	-10
	2.5nm,0.6s,baz=359,slow=25,SNR=5.2						
	7.2nm,0.5s						
AS01	**Alice Springs**	**19.57**	**174**	P	**P**	**05 00 56.5**	**+0.2**
MBWA	**Marble Bar**	**20.50**	**213**	P	**P**	**05 01 03.6**	**-2.8**
MBWA	**Marble Bar**	**20.50**	**213**	P	**P**	**05 01 05.8**	**-0.7**
PCJI	**Pacitan**	**20.71**	**258**	P	**P**	**05 01 05.7**	**-3.1**
	87nm,1.4s						
PSA00	**Pilbara Seismi**	**20.78**	**212**	P	**P**	**05 01 07.1**	**-2.3**
PSA00				IAmb	IAmb	05 01 09.2	
	comp=Z,22nm,0.7s						
PSA00	**Pilbara Seismi**	**20.78**	**212**	P	**P**	**05 01 07.5**	**-2.0**
PSA00				IAmb	IAmb	05 01 09.2	
	comp=Z,12nm,0.9s						
PSA00	**Pilbara Seismi**	**20.78**	**212**	P	**P**	**05 01 09.2**	**-0.2**
GUMO	**Guam**	**21.97**	**37**	LR	LR	05 11 07.4	
	comp=Z,80nm,18.9s,baz=43,slow=40						
KSM	**Kuching**	**22.00**	**284**	P	**P**	**05 01 21.7**	**-1.0**
KSM				IAmb	IAmb	05 01 23.2	
	comp=Z,44nm,1.1s						
TPI	**Tanjungpandan**	**23.95**	**272**	P	**P**	**05 01 42.7**	**+0.1**
	comp=Z,22nm,0.9s						
LEM	**Lembang**	**24.04**	**263**	LR	LR	05 12 14.5	
	comp=Z,587nm,18.3s,baz=178,slow=39						
BBJI	**Bungbulang**	**24.07**	**261**	P	**P**	**05 01 42.5**	**-1.3**
GIRL	**Giralia**	**24.95**	**221**	P	**P**	**05 01 51.0**	**-0.6**
GIRL	**Giralia**	**24.95**	**221**	P	**P**	**05 01 51.0**	**-0.6**
MEEK	**Meekatharra**	**25.62**	**208**	P	**P**	**05 01 58.1**	**+0.4**
FORT	**Forrest**	**26.73**	**187**	P	**P**	**05 02 07.1**	**-0.5**
FORT				IAmb	IAmb	05 02 09.6	
	comp=Z,37nm,1.1s						
FORT	**Forrest**	**26.73**	**187**	P	**P**	**05 02 07.3**	**-0.3**
KMBL	**Kambalda**	**28.61**	**198**	P	**P**	**05 02 24.3**	**-0.2**
MORW	**Morawa**	**28.88**	**209**	P	**P**	**05 02 25.2**	**-1.7**
MORW				IAmb	IAmb	05 02 59.5	
	comp=Z,27nm,1.3s						
MORW	**Morawa**	**28.88**	**209**	P	**P**	**05 02 27.5**	**+0.6**
STKA	**Stephens Creek**	**29.16**	**162**	P	**P**	**05 02 30.3**	**+0.9**
	comp=Z,0.7nm,0.3s,baz=344,slow=15,SNR=5.1						
STKA				LR	LR	05 16 15.8	
	comp=Z,573nm,19.5s,baz=339,slow=41						
	comp=Z,0.7nm,0.3s						
BLDU	**Ballidu**	**29.88**	**206**	P	**P**	**05 02 35.1**	**-0.6**

KLBR	Kellerberrin	30.28	204	P	P	05 02 38.7	-0.6
PPI	Padang Panjang	31.40	276	P	P	05 02 48.5	-0.9
	comp=Z,40nm,1.0s						
MNSI	Mandailing Nat	32.38	278	P	P	05 02 56.3	-1.7
RPSI	Rantau Prapat	33.36	281	P	P	05 03 05.0	-1.6
RPSI				IAmb	IAmb	05 03 06.0	
	comp=Z,17nm,0.9s						
GSI	Gunungsitoli	34.44	278	P	P	05 03 14.2	-1.8
GSI	Gunungsitoli	34.44	278	P	P	05 03 13.9	-2.1
MLSI	Meulaboh, Aceh	36.15	283	P	P	05 03 29.0	-1.7
JNU	Nakatsue	37.04	359	LR	LR	05 19 14.9	
	comp=Z,69nm,20.4s,baz=168,slow=37						
NJ2	Nanjing	37.96	342	*e*P	P	05 03 48.3	+2.5
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
CMAR	Chiang Mai Arr	39.24	306	P	P	05 03 56.2	-0.5
CMAR	Chiang Mai Arr	39.24	306	P	P	05 03 57.2	+0.5
	comp=Z,6.7nm,0.9s,baz=135,slow=7.2,SNR=28						
	comp=Z,6.7nm,0.9s						
CHTO	Chiang Mai	39.42	306	P	P	05 03 57.9	-0.4
CHTO				IAmb	IAmb	05 03 59.2	
	comp=Z,19nm,1.1s						
KMI	Kunming	40.39	318	P	P	05 04 07.3	+0.8
KMI				pmax	pmax		
	comp=Z,12nm,1.1s						
MJAR	Matsushiro Arr	40.91	8	P	P	05 04 08.4	-2.0
	comp=Z,1.2nm,0.6s,baz=186,slow=9.3,SNR=4.0						
KSRS	Korea Array	41.50	356	P	P	05 04 14.5	-0.6
	comp=Z,1.0nm,0.7s,baz=185,slow=11,SNR=5.1						
KSRS				LR	LR	05 22 09.8	
	comp=Z,44µm,19.8s,baz=185,slow=37						
	comp=Z,1.0nm,0.7s						
PZH	PanZhiHua	41.98	318	P	P	05 04 21.6	+2.2
PZH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,90nm,4.1s						
TIA	Tai'an	42.35	343	P	P	05 04 21.8	-0.3
TIA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
XAN	Xi'an	43.58	332	P	P	05 04 28.1	-4.1
XAN				pmax	pmax		
	comp=Z,11nm,1.0s						
BJT	Baijiatuau	46.16	344		P	05 04 52.8	+0.2
LZH	Lanzhou	47.69	329	*e*P	P	05 05 04.0	-0.9
LZH				sP	pP	05 05 13.5	+0.1
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
USRK	Ussuriysk Ar.	48.10	0	P	P	05 05 07.9	+0.3
	comp=Z,2.1nm,0.6s,baz=199,slow=9.9,SNR=5.8						
	comp=Z,2.1nm,0.6s						
HHC	Hu-ho-hao-te	48.37	340	*e*P	P	05 05 13.5	+3.6
HHC				pmax	pmax		
	comp=Z,15nm,0.5s						
HHC				pmax	pmax		
	comp=Z,76nm,5.3s						
GTA	Gaotai	52.29	329	P	P	05 05 40.8	+1.1
GTA				sP	sP	05 05 49.9	-1.8
GTA				pmax	pmax		
	comp=Z,9.0nm,1.4s						
SONM	Songino Array	56.27	340	P	P	05 06 08.6	+0.1
	comp=Z,1.3nm,0.6s,baz=168,slow=7.6,SNR=9.1						
	comp=Z,1.3nm,0.6s						
PETK	Petropavlovsk-	61.10	18	P	P	05 06 42.7	+0.8
	comp=Z,3.8nm,0.9s,baz=197,slow=4.6,SNR=6.2						
	comp=Z,3.8nm,0.9s						
SHLS	Shalkode	66.47	321	*e*P	P	05 07 15.4	-2.2
	comp=Z,6.8nm,0.8s						
UZB	Uzynbulak	66.74	321	*e*P	P	05 07 18.9	-0.5
	comp=Z,5.0nm,0.8s						
MKAR	Makanchi Array	66.74	325	P	P	05 07 19.1	-0.1
MKAR	Makanchi Array	66.74	325	P	P	05 07 19.4	+0.2
	comp=Z,14nm,0.7s,baz=119,slow=7.8,SNR=111						
	comp=Z,14nm,0.7s						
TARG	Taragay, Kyrgy	66.82	319	P	P	05 07 20.9	+0.7
TARG				IAmb	IAmb	05 07 32.1	
	comp=Z,9.1nm,1.0s						
KSH	Kashi	67.03	316	P	P	05 07 22.6	+1.3
KSH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SATY	Saty	67.09	320	*e*P	P	05 07 21.2	-0.3
	comp=Z,8.5nm,0.7s						
NRN	Naryn	67.88	318	IAmb	IAmb	05 07 28.5	
	comp=Z,7.8nm,1.0s						
MDOK	Medeo	68.00	320	*e*P	P	05 07 26.8	-0.6
TDK	Taldyqorghan	68.06	322	*e*P	P	05 07 27.2	-0.3
	comp=Z,4.8nm,0.5s						
AAA	Alma-Ata	68.11	320	*e*P	P	05 07 27.4	-0.5
KUU	Kurty	68.81	320	*e*P	P	05 07 31.9	-0.4
SGDS	Sogindy	69.70	319	*e*P	P	05 07 37.3	-0.5
ZALV	Zalesovo Beam	69.75	333	P	P	05 07 37.3	-0.5
ZALV	Zalesovo Beam	69.75	333	P	P	05 07 37.5	-0.2
	comp=Z,12nm,0.9s,baz=102,slow=5.0,SNR=26						
	comp=Z,12nm,0.9s						
BTLS	Baital	70.79	321	*e*P	P	05 07 44.0	-0.4
	comp=Z,6.5nm,1.0s						
KURBB	Kurchatov Arra	70.93	327	P	P	05 07 45.2	+0.1
	comp=Z,21nm,0.8s,baz=127,slow=5.4,SNR=168						
	comp=Z,21nm,0.8s						
KURK	Kurchatov	70.94	328		P	05 07 45.5	+0.3
DZA	Taraz	71.64	318	*e*P	P	05 07 48.9	-0.7
	comp=Z,7.4nm,0.7s						
IUG	Iuzhnay	72.22	317	*e*P	P	05 07 52.5	-0.7
	comp=Z,14nm,0.9s						
KK31	Karatay Array	72.27	318		P	05 07 53.8	+0.4
KK31				IAmb	IAmb	05 07 54.7	
	comp=Z,14nm,0.9s						
KKAR	Karatay Array	72.27	318		P	05 07 53.4	0.0
KKAR	Karatay Array	72.27	318	IAmb	IAmb	05 07 54.7	
	comp=Z,14nm,0.9s						
CHM	Chimkent	72.58	317	*e*P	P	05 07 54.8	-0.5
BRLS	Borolday	72.70	317	*e*P	P	05 07 55.5	-0.5
	comp=Z,6.6nm,0.8s						
BRZS	Berezniki	73.87	325	*e*P	P	05 08 02.5	-0.2
VNDA	Vanda	75.11	173	P	P	05 08 10.9	+1.5
VNDA	Vanda	75.11	173	P	P	05 08 10.7	+1.3
	comp=Z,2.3nm,1.0s,baz=300,slow=6.0,SNR=8.6						
VNDA				LR	LR	05 42 52.0	
	comp=Z,95nm,18.1s,baz=332,slow=37						
	comp=Z,2.3nm,1.0s						
BVAR	Borovoye Array	76.51	327	P	P	05 08 17.9	0.0
	comp=Z,12nm,0.7s,baz=116,slow=6.8,SNR=49						
	comp=Z,12nm,0.7s						
BRVK	Borovoye	76.59	327		P	05 08 18.9	+0.6
MAW	Mawson	78.20	201	P	P	05 08 27.8	+0.7
	comp=Z,2.8nm,0.7s,baz=69,slow=6.7,SNR=12						
MAW				LR	LR	05 41 50.3	
	comp=Z,87nm,18.8s,baz=29,slow=35						
	comp=Z,2.8nm,0.7s						
AB31	Akbulak array	81.28	321		P	05 08 43.7	-0.4
AB31				IAmb	IAmb	05 08 47.1	
	comp=Z,6.2nm,0.8s						
ABKAR	Akbulak array	81.28	321		P	05 08 43.7	-0.3
ABKAR	Akbulak array	81.28	321	IAmb	IAmb	05 08 47.1	
	comp=Z,6.2nm,0.8s						
J17K	VABM Dome	84.55	25	P	P	05 09 02.1	+1.4
J17K				IAmb	IAmb	05 09 03.6	
	comp=Z,6.1nm,1.1s						
K17K	Iditarod	84.65	26	P	P	05 09 04.0	+2.8
K17K				IAmb	IAmb	05 09 05.1	
	comp=Z,5.9nm,0.8s						
H17K	Granite Mounta	84.76	23	IAmb	IAmb	05 10 41.8	
	comp=Z,13nm,1.7s						
QSPA	South Pole Qui	85.84	180	P	P	05 09 07.9	+0.6
	comp=Z,4.6nm,1.1s,baz=294,slow=1.2,SNR=11						
QSPA				LR	LR	05 48 23.0	
	comp=Z,148nm,19.8s,baz=7.5,slow=36						
	comp=Z,4.6nm,1.1s						
KDAK	Kodiak Island	85.94	31	LR	LR	05 45 16.0	
	comp=Z,69nm,18.3s,baz=228,slow=34						
SYO	Syowa Base	86.92	201⇑	*e*P	P	05 09 13.8	+1.4
RAYN	Ar Rayn	88.06	294		P	05 09 19.2	+0.3
RAYN				IAmb	IAmb	05 09 20.6	
	comp=Z,5.4nm,0.9s						
I23K	Minto, Yukon-K	89.10	25	IAmb	IAmb	05 09 25.8	
	comp=Z,3.7nm,1.0s						
ILAR	Eielson Array	90.07	25	P	P	05 09 26.5	-0.9
	comp=Z,0.9nm,0.8s,baz=259,slow=4.5,SNR=6.5						
	comp=Z,0.9nm,0.8s						
J26L	Joseph Creek	91.45	26	IAmb	IAmb	05 09 35.7	
	comp=Z,2.6nm,0.7s						
K27K	Chicken	92.05	26	IAmb	IAmb	05 09 39.1	
	comp=Z,3.3nm,0.9s						
I28M	Miner Creek	93.07	25	P	P	05 09 42.1	+0.7
I28M				IAmb	IAmb	05 09 43.3	
	comp=Z,2.8nm,0.8s						
DAWY	Dawson	93.23	26	IAmb	IAmb	05 09 43.9	
	comp=Z,2.9nm,0.9s						
K29M	Barlow Dome	94.05	26	P	P	05 09 47.1	+1.1
K29M				IAmb	IAmb	05 11 00.0	
	comp=Z,13nm,2.0s						
SNAA	Sanae	98.82	193	LR	LR	05 56 02.2	
	comp=Z,91nm,18.9s,baz=120,slow=36						
TORD	Torodi Ar. Bea	129.76	284	PKP	PKPdf	05 15 38.5	+0.3
	comp=Z,1.5nm,0.4s,baz=70,slow=2.2,SNR=3.2						
PLCA	Paso Flores	130.97	158	PKP	PKiKP	05 15 42.2	+1.4
	comp=Z,1.5nm,0.9s,baz=216,slow=5.3,SNR=4.2						
CPUP	Villa Florida	148.52	165	PKPbc	PKiKP	05 16 16.9	-0.1
	comp=Z,1.3nm,0.7s,baz=29,slow=2.3,SNR=12						
LPAZ	La Paz	151.85	137	PKPbc	PKiKP	05 16 26.5	+1.6
	comp=Z,1.8nm,0.5s,baz=27,slow=2.9,SNR=10						

RSNC 14 04:59:07.6±1.1**,4°N**±4°×**8°3W**±1°0**,h0^{km},M3.7,mB5.4, mb3.9,ML3.0,Mw(mB)4.8,South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AZU	Azuero	4.39	36	P	Pn	05 00 15.4	-0.2
GR1C	Gorgona, Isla	4.82	104	P	Pn	05 00 19.3	-2.2
FLF1	Flavio Alfaro-	5.43	146	P	Pn	05 00 29.7	-0.3
	28nm,0.5s						
MALC	Bahia Malaga	5.50	92	P	Pn	05 00 32.2	+1.3
PAC1	Pacto, Paraso	5.63	134	P	Pn	05 00 32.7	-0.1
BCIP	Isla Barro Col	5.77	31	P	Pn	05 00 34.8	+0.2
	14nm,0.8s						
CUSE	Cuicocha Este	5.89	131	P	Pn	05 00 36.7	0.0
OTAV	Otavalo	5.90	132	P	Pn	05 00 35.9	-0.9
	2.2nm,0.8s						
BBAC	Balboa, Cauca	6.00	111	P	Pn	05 00 38.1	+0.2
PPLP	Puerto Lpez	6.07	160	P	Pn	05 00 38.3	-0.5
	23nm,1.0s						
JAMC	Jamundi, Valle	6.24	99	P	Pn	05 00 41.0	-0.2
	5.1nm,0.5s						
GCUF	Volcan Galeras	6.24	118	P	Pn	05 00 42.8	+1.3
	8.4nm,0.8s						
POPC	Popayan, Colom	6.38	105	P	Pn	05 00 42.0	-1.2
YOTC	Yotoco, Valle	6.49	92	P	Pn	05 00 43.9	-0.7

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*GCG **14** 05:14:03.3±1.8, 14°.06N×93°.30W, h38^{km}±620^{km}, MD4.0, ML3.4*

*MEX **14** 05:14:04.1±0.7, 14°.17N×93°.34W, h11^{km}±46^{km}, MD4.0*

ISC 14 05:13:60.0±1.8**,14°.16N**±0°.08×**93°.32W**±0°.04**,h20**^{km}±5^{km}**, n17,**σ**1^{s}.31**/30**,1C,Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.27	54	*e*P	Pg	05 14 24.6	+0.1
THIG				*e*S	Sg	05 14 40.0	-1.1
THIG		1.27	54	*e*P	Pg	05 14 24.5	+0.1
THIG				*i* S	Sg	05 14 41.8	+0.7
THIG				IAML		05 14 44.7	
	comp=N,688nm,0.3s						
SMCA	Catarina	1.39	60	*e*P	Pg	05 14 26.6	-0.3
PATR	El Naranjo	1.42	48	*e*P	Pb	05 14 26.4	+0.4
PATR				*e*S	Sn	05 14 43.5	+0.3
PAVE	Pavencul	1.51	47	*e*P	Pb	05 14 27.6	0.0
PAVE				*e*S	Sb	05 14 46.4	0.0
PCIG		1.54	4	*e*P	Pb	05 14 27.3	-0.6
PCIG				*e*S	Sn	05 14 46.2	+0.3
RTAL	Retalhuleu	1.62	77	*e*P	Pb	05 14 29.7	+0.6
RTAL				*e*S	Sn	05 14 48.6	+0.9
STG8	El Palmar, Qui	1.93	81	*e*P	Pn	05 14 32.2	+0.2
STG8				*i* S	Sn	05 14 54.3	-1.5
	comp=N,332nm,0.2s						
STG8				IAML		05 15 02.5	
	comp=N,332nm,0.2s						
STG0	El Palmar, Qui	1.94	82	*e*P	Pn	05 14 32.5	+0.5
STG0				IAML		05 15 03.0	
	comp=E,519nm,0.2s						
HUEH	Huehuetenango	2.10	56	*e*P	Pn	05 14 35.3	+1.0
HUEH				*e*S	Sn	05 15 00.7	+0.6
HUEH	Huehuetenango	2.10	56	*i* S	Sg	05 15 07.2	-0.6
HUEH				IAML		05 15 14.9	
	comp=E,355nm,0.3s						
CCIG	Comitan	2.40	28	*e*P	Pb	05 14 43.0	+0.3
CCIG				*e*S	Sb	05 15 12.2	+0.1
CCIG	Comitan	2.40	28	*i* P	Pb	05 14 43.0	+0.3
CCIG				*i* S	Sb	05 15 13.2	+1.2
CCIG				IAML		05 15 17.5	
	comp=N,134nm,0.4s						
TGIG		2.62	4	*e*P	Pb	05 14 44.6	-1.7
TGIG				*e*S	Sn	05 15 13.3	+0.8
TGIG		2.62	4	*i* P	Pb	05 14 44.8	-1.5
TGIG				*i* S	Sb	05 15 15.4	-2.6
TGIG				IAML		05 15 17.1	
	comp=N,68nm,0.4s						
FG8	Yepocapa, Chim	2.68	87⇑	*e*P	Pn	05 14 39.8	-2.3
PNIG	Pinotepa	5.15	296	*e*P	Pn	05 15 19.1	+3.1
PNIG				*e*S	Sn	05 16 12.2	-2.7

IDC 14 05:51:14.7±2.2**,6°.47S**×**129°.23E,h0**^{km}**,mb3.8**/1**, mbtmp3.4**/3**,ML3.5**/2**,MS3.6**/1**,Error ellipse: s-maj=146.7km s-min=31.6km az=68.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.29	160	Pn	Pn	05 54 38.1	-0.4
	0.3nm,0.3s,baz=342,slow=13,SNR=15						
WRA				Sn	Sn	05 57 05.2	-13
	0.4nm,0.3s,baz=330,slow=21,SNR=7.2						
	0.4nm,0.4s						
ASAR	Alice Springs	17.68	166	P	Pn	05 55 23.0	+0.3
	0.1nm,0.3s,baz=353,slow=13,SNR=4.3						
ASAR				S	Sn	05 58 28.3	-12
	0.3nm,0.6s,baz=346,slow=26,SNR=2.2						
	0.2nm,0.6s						
LEM	Lembang	21.47	268	LR	LR	06 06 04.9	
	comp=Z,168nm,18.7s,baz=252,slow=42						
MKAR	Makanchi Array	67.36	327	P	P	06 02 11.8	0.0
	0.5nm,0.5s,baz=119,slow=7.6,SNR=6.8						
	0.5nm,0.5s						

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*IDC **14** 05:55:48.0±1.7, 20°.43S×67°.87E, h0^{km}, mb3.9/9, mbtmp3.9/9, MS3.8/1, Error ellipse: s-maj=56.4km s-min=25.6km az=42.0*

*NEIC **14** 05:55:48.5±0.9, 20°.54S±0°.04×68°.0E±0°.1, h10^{km}±1^{km}, mb4.6/17, Error ellipse: s-maj=17.0km s-min=6.1km az=94.0*

ISC 14 05:55:48.8±0.5**,20°.6S**±0°.1×**67°.92E**±0°.09**,h15**^{km}**,n42,** σ**0^{s}.96**/35**,mb4.2**/17**,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROCAM	Rodrigues Isla	4.35	280	Pn	Pn	05 56 54.8	+0.4
H08S1	Diego Carcia H	13.62	20	T	T	06 12 25.9	
	baz=199,slow=76,SNR=32						
H08S2	Diego Garcia H	13.63	20	T	T	06 12 26.4	
	baz=199,slow=76,SNR=74						
H08S3	Diego Garcia H	13.64	20	T	T	06 12 27.4	
	baz=199,slow=76,SNR=40						
AIS	Amsterdam Isla	19.07	156	P	Pn	06 00 10.2	-1.2
ABPO	Ambohimpanom	19.53	271	P	Pn	06 00 16.2	-1.2
H04N2	CROZET ISLANDS	28.71	204	T	T	06 32 19.7	
	baz=33,slow=75,SNR=179						
H04N1	CROZET ISLANDS	28.71	204	T	T	06 32 20.6	
	baz=33,slow=75,SNR=182						
H04N3	CROZET ISLANDS	28.72	204	T	T	06 32 17.6	
	baz=33,slow=75,SNR=160						
GRHM	Grahamstown, E	38.88	242	P	P	06 03 14.4	+0.6
GRHM				IAmb	IAmb	06 03 47.9	
	comp=Z,47nm,1.3s						
BRDH	Bariadhala	48.86	30	LR	LR	06 27 22.1	
	comp=Z,84nm,18.1s,baz=236,slow=39						
CMAR	Chiang Mai Arr	49.32	40	P	P	06 04 36.9	-0.7
CMAR	Chiang Mai Arr	49.32	40	P	P	06 04 39.2	+1.6
	comp=Z,0.9nm,0.3s,baz=224,slow=6.7,SNR=4.8						
	comp=Z,0.9nm,0.3s						
SOEI	Soe	55.21	88	P	P	06 05 20.0	-1.7
ASAR	Alice Springs	60.71	106	P	P	06 06 01.5	+1.3
ASAR	Alice Springs	60.71	106	P	P	06 06 02.2	+2.0
	comp=Z,1.5nm,0.9s,baz=260,slow=6.4,SNR=8.3						
	comp=Z,1.5nm,0.9s						
WRA	Warramunga Arr	61.89	102	P	P	06 06 08.3	+0.1
WRA	Warramunga Arr	61.89	102	P	P	06 06 10.3	+2.2
	comp=Z,1.6nm,1.0s,baz=258,slow=7.0,SNR=5.9						
	comp=Z,1.6nm,1.0s						
BR131	Keskin Array S	68.02	332	P	P	06 06 47.8	+0.1
BR131				IAmb	IAmb	06 06 55.4	
	comp=Z,2.7nm,1.1s						
BRTR	Keskin Array B	68.02	332	P	P	06 06 47.8	0.0
BRTR	Keskin Array B	68.02	332	P	P	06 06 48.4	+0.7
	comp=Z,0.4nm,0.7s,baz=189,slow=8.3,SNR=4.6						
	comp=Z,0.4nm,0.7s						
MKAR	Makanchi Array	68.33	11	P	P	06 06 49.3	-0.1
MKAR	Makanchi Array	68.33	11	P	P	06 06 49.5	+0.1
	comp=Z,1.2nm,0.9s,baz=189,slow=7.3,SNR=4.3						
	comp=Z,1.2nm,0.9s						
QSPA	South Pole Qui	69.50	180	P	P	06 06 56.0	-0.7
QSPA				IAmb	IAmb	06 07 38.7	
	comp=Z,8.0nm,1.5s						
AB31	Akbulak array	69.91	354	P	P	06 06 58.7	-0.3
AB31				IAmb	IAmb	06 07 00.9	
	comp=Z,3.2nm,1.2s						
ABKAR	Akbulak array	69.91	354	P	P	06 06 58.8	-0.3
ABKAR	Akbulak array	69.91	354	P	P	06 06 58.6	-0.4
ABKAR				IAmb	IAmb	06 07 00.9	
	comp=Z,3.2nm,1.2s						
TRIS	Tristan da Cun	70.30	237	P	P	06 07 02.6	+0.8
VNDA	Vanda	70.88	167	P	P	06 07 05.5	+0.7
KURBB	Kurchatov Arra	71.53	7	P	P	06 07 09.1	+0.2
	comp=Z,1.7nm,1.0s,baz=206,slow=5.8,SNR=4.4						
	comp=Z,1.7nm,1.0s						
KURK	Kurchatov	71.64	7	P	P	06 07 08.8	-0.7
KURK				IAmb	IAmb	06 07 10.9	
	comp=Z,4.0nm,1.1s						
BVAR	Borovoye Array	73.36	2	P	P	06 07 19.9	+0.1
	comp=Z,0.8nm,0.7s,baz=165,slow=6.0,SNR=3.7						
	comp=Z,0.8nm,0.7s						
TIRR	Tirgusor	74.14	332		P	06 07 23.4	-1.1
TIRR				IAmb	IAmb	06 08 00.2	
	comp=Z,22nm,1.2s						
WDD	Wied Dalam	75.53	318	P	P	06 07 32.3	-0.4
ZAA0	Zalesovo Array	75.67	10	P	P	06 07 33.1	0.0
ZAA0				IAmb	IAmb	06 07 34.1	
	comp=Z,2.3nm,0.9s						
ZALV	Zalesovo Beam	75.67	10	P	P	06 07 33.0	-0.1
ZALV	Zalesovo Beam	75.67	10	P	P	06 07 33.4	+0.2
	comp=Z,0.8nm,0.4s,baz=221,slow=6.3,SNR=3.0						
	comp=Z,0.8nm,0.4s						
SONM	Songino Array	76.38	26	P	P	06 07 37.3	-0.2
SONM	Songino Array	76.38	26	P	P	06 07 38.6	+1.0
	comp=Z,0.8nm,0.7s,baz=240,slow=5.0,SNR=4.1						
	comp=Z,0.8nm,0.7s						
ULN	Ulaanbaatar	76.67	26	P	P	06 07 39.1	-0.1
ULN				IAmb	IAmb	06 08 14.0	
	comp=Z,3.0nm,0.5s						
ULM	Lac du Bonnet	147.76	340	PKPbc	PKiKP	06 15 33.2	-1.7
	comp=Z,1.3nm,0.6s,baz=74,slow=3.8,SNR=3.7						
TXAR	Lajitas Array	168.44	320	PKPab	PKPab	06 17 06.0	+1.3
	comp=Z,0.6nm,0.9s,baz=163,slow=1.6,SNR=4.1						

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*AEIC **14** 05:57:25.5±1.1, 54°.13N±0°.07×163°.73W±0°.06, h42^{km}±9^{km}, Error ellipse: s-maj=11.1km s-min=3.3km az=156.0*

NEIC 14 05:57:26.1±1.0**,54°.12N**±0°.02×**163°.71W**±0°.04**,h35**^{km}±2^{km}**, ML2.7**/12**,ML2.4**(AEIC)**,Error ellipse: s-maj=4.9km s-min=3.1km az=51.0,Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISLZ	Isanotski Laza	0.60	360		Pn	05 57 37.6	-0.6
ISLZ					Sn	05 57 47.0	+0.2
SSLS	Shishaldin Sou	0.61	344		Pn	05 57 38.4	-0.1
SSLS					Sn	05 57 48.3	+1.2
WESE	West Dahl East	0.62	304		Pn	05 57 38.2	-0.3
SSBA	Shishaldin	0.69	340		Pn	05 57 39.4	-0.1
SSBA					Sn	05 57 50.5	+1.4
WECS	Westdahl Cape	0.75	303		Pn	05 57 40.6	+0.4
FALS	False Pass	0.75	13		Pn	05 57 39.8	-0.4
FALS					Sn	05 57 51.0	+0.6
FALS	False Pass	0.75	13	IAML		05 57 56.0	
	comp=E,610nm,0.7s						
AKUT	Akutan	1.22	271		Pn	05 57 46.4	-0.2
AKUT					Sn	05 58 01.7	-0.1
AHB	Akutan Harbor	1.24	270		Pn	05 57 47.3	+0.3
AHB					Sn	05 58 03.2	+0.7
LVA	Lava Point	1.37	272	Pn	Pn	05 57 48.6	-0.2
LVA				IAML		05 58 09.6	
	comp=E,87nm,1.2s						
LVA				IAML		05 58 17.0	
	comp=N,138nm,0.8s						
UNV	Unalaska Valle	1.68	262		Pn	05 57 52.5	-0.4
UNV					Sn	05 58 13.0	-0.1
MTBL	Makushin Table	1.76	266		Pn	05 57 55.0	+0.9
MTBL					Sn	05 58 16.6	+1.3
MREP	Makushin Rep't	1.82	261		Pn	05 57 55.2	+0.2
S12K	Black Hills	1.85	30		Pn	05 57 55.3	+0.1
S12K				IAML		05 58 26.1	
	comp=E,39nm,1.2s						
MAPS	Pakushin South	1.94	262		Pn	05 57 56.3	-0.2
MAPS					Sn	05 58 19.5	-0.1
SDPT	Sand Point	2.24	55		Pn	05 58 00.5	-0.1
SDPT	Sand Point	2.24	55	IAML		05 58 37.4	
	comp=N,47nm,0.8s						
SDPT				IAML		05 58 41.3	
	comp=E,66nm,1.5s						
O14K	Tigyukauivet M	5.32	14	Pn	Pn	05 58 44.4	+1.5
O15K	Ungalikthiuk R	5.50	21	Pn	Pn	05 58 44.4	-1.0
P16K	Nushagak River	5.84	30	Pn	Pn	05 58 51.2	+1.1

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*IDC **14** 06:04:38.2±3.6, 54°.29N×87°.34E, h0^{km}, mbtmp2.7/2, ML2.0/2, Error ellipse: s-maj=32.2km s-min=21.1km az=46.0*

ASRS 14 06:04:39.0±0.7**,54°.21N**×**87°.06E,h0**^{km}**,M2.6,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.35	260	I	I	06 13 30.0	
	baz=77,slow=324,SNR=17						
ZALV	Zalesovo Beam	1.35	260	Pn	Pb	06 05 05.4	+0.4
	0.4nm,0.3s,baz=79,slow=15,SNR=6.6						
ZALV				Lg	Lg	06 05 26.7	
	0.8nm,0.3s,baz=76,slow=30,SNR=6.5						
KURBB	Kurchatov Arra	6.33	239	Pn	Pn	06 06 16.2	+2.6
	baz=53,slow=13,SNR=2.9						
	0.5nm,0.6s						
MKAR	Makanchi Array	8.02	204	Pn	Pn	06 06 39.0	+2.3
	baz=23,slow=12,SNR=1.6						
	0.2nm,0.5s						

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*MEX **14** 06:09:45.9±0.6, 13°.81N×93°.08W, h18^{km}±68^{km}, MD3.9*

*GCG **14** 06:09:47.9±1.8, 14°.04N×92°.98W, h35^{km}±999^{km}, MD4.1*

ISC 14 06:09:44.0±3.7**,13°.8N**±0°.2×**93°.1W**±0°.1**,h37**^{km}**,n10,** σ**1^{s}.62**/17**,Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTAL	Retalhuleu	1.52	62	*e*P	Pn	06 10 08.7	0.0
RTAL				*e*S	Sn	06 10 26.0	-1.2
PATR	El Naranjo	1.54	32	*e*P	Pn	06 10 09.2	+0.1
PATR				*e*S	Sn	06 10 27.1	-0.8
PAVE	Pavencul	1.63	32	*i* P	Pn	06 10 11.0	+0.6
PAVE				*i* S	Sn	06 10 30.3	+0.1
STG0	El Palmar, Qui	1.79	70	*e*P	Pn	06 10 12.5	-0.1
STG8	El Palmar, Qui	1.79	69	*e*P	Pn	06 10 13.2	+0.6
STG8				*i* S	Sn	06 10 34.1	-0.2
PCIG		1.89	356	*e*P	Pn	06 10 12.4	-1.4
PCIG				*e*S	Sn	06 10 32.7	-3.6
CCIG	Comitan	2.62	20	*e*P	Pn	06 10 26.7	+2.7
CCIG				*e*S	Sn	06 10 55.1	+0.4
CCIG	Comitan	2.62	20	*e*P	Pn	06 10 26.4	+2.3
TGIG		2.95	359	*e*P	Pn	06 10 29.4	+0.9
TGIG				*e*S	Sn	06 11 00.8	-1.8
TGIG		2.95	359	*i* P	Pn	06 10 29.8	+1.3
TGIG				*i* S	Sn	06 11 01.1	-1.6

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*WEL **14** 06:12:36.5±0.8, 35°S±9°×18°0W±1°4, h259^{km}±14^{km}, M3.9/7, ML4.0/6, MLv3.9/7, Error ellipse: s-maj=20.0km s-min=8.9km az=114.4, confirmed*

*NOU **14** 06:12:57.1, 36°.35S×179°.57E, h189^{km}, MLv4.1/8, Off E. Coast of N. Island, N.Z.*

ISC 14 06:12:37.2±1.8**,34°.8S**±0°.1×**179°.7W**±0°.2**,h250**^{km}**,n33,** σ**1^{s}.67**/37**,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.18	210	P	Pn	06 13 30.3	-1.3

MXZ	**Matakaoa Point**	**3.18**	**210**	P	**Pn**	**06 13 28.6**	**-3.0**
MXZ				S	**S**	**06 14 14.7**	**-0.1**
WMGZ	**Waiomatatini S**	**3.37**	**206**	P	**Pn**	**06 13 31.5**	**-2.1**
WMGZ				S	**S**	**06 14 19.4**	**+0.9**
PKGZ	**Pakihiroa**	**3.54**	**210**	P	**Pn**	**06 13 33.6**	**-2.0**
HAZ	**Te Kaha**	**3.58**	**214**	P	**Pn**	**06 13 34.2**	**-1.8**
HAZ				S	**S**	**06 14 23.8**	**+1.1**
RUGZ	**Raukumara Rang**	**3.79**	**213**	P	**Pn**	**06 13 37.8**	**-0.9**
TWGZ	**Tauwhareparae**	**3.84**	**209**	P	**Pn**	**06 13 37.8**	**-1.4**
CNGZ	**Carnagh Statio**	**4.03**	**204**	P	**Pn**	**06 13 40.9**	**-0.4**
TKGZ	**Te Karaka**	**4.12**	**208**	P	**Pn**	**06 13 42.5**	**+0.1**
TKGZ				S	**S**	**06 14 35.6**	**+1.4**
MWZ	**Matawai**	**4.17**	**212**	P	**Pn**	**06 13 40.5**	**-2.4**
MWZ				S	**S**	**06 14 37.6**	**+2.5**
KUZ	**Kuaotunu**	**4.20**	**241**	P	**Pn**	**06 13 42.2**	**-1.1**
URZ	**Urewera**	**4.29**	**216**	P	**Pn**	**06 13 42.9**	**-1.5**
URZ	**Urewera**	**4.29**	**216**	P	**Pn**	**06 13 42.9**	**-1.5**
RTZ	**Ruatahuna**	**4.64**	**214**	P	**Pn**	**06 13 47.7**	**-0.9**
KNZ	**Kokohu**	**4.70**	**206**	P	**Pn**	**06 13 49.2**	**0.0**
MKAZ	**Moumakai**	**4.76**	**240**	P	**Pn**	**06 13 47.6**	**-2.4**
WCZ	**Waipu Caves**	**5.00**	**255**	P	Pn	06 13 45.7	-7.3
TLZ	**Tolley Road**	**5.20**	**226**	P	**Pn**	**06 13 54.8**	**-0.6**
BKZ	**Black Stump Fm**	**5.31**	**214**	P	**Pn**	**06 13 55.7**	**-1.1**
BKZ	**Black Stump Fm**	**5.31**	**214**	P	**Pn**	**06 13 54.6**	**-2.1**
BKZ				S	**S**	**06 15 02.3**	**+2.0**
OUZ	**Omahuta**	**5.53**	**264**	P	Pn	06 14 11.3	+12
HIZ	**Hauiti**	**5.73**	**228**	P	**Pn**	**06 14 02.6**	**+0.7**
HIZ	**Hauiti**	**5.73**	**228**	P	**Pn**	**06 14 02.5**	**+0.6**
GLKZ	**Green Lake**	**5.74**	**16**	P	**Pn**	**06 14 03.8**	**+1.7**
PXZ	**Pawanui**	**5.88**	**207**	P	**Pn**	**06 14 03.4**	**-0.4**
NEZ	**North Egmont**	**6.67**	**226**	P	**Pn**	**06 14 14.5**	**+0.8**
BFZ	**Birch Farm**	**6.68**	**208**	P	**Pn**	**06 14 13.3**	**-0.5**
BFZ	**Birch Farm**	**6.68**	**208**	P	**Pn**	**06 14 13.5**	**-0.3**
MRZ	**Mangatainoka R**	**6.93**	**211**	P	**Pn**	**06 14 14.5**	**-2.4**
SNZO	**South Karori**	**7.85**	**213**	P	**Pn**	**06 14 26.8**	**-1.6**
NNZ	**Nelson**	**8.41**	**218**	P	**Pn**	**06 14 33.1**	**-2.5**
QRZ	**Quartz Range**	**8.59**	**223**	P	**Pn**	**06 14 34.8**	**-3.1**
KHZ	**Kahutara**	**9.25**	**213**	P	**Pn**	**06 14 44.7**	**-1.5**

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*IDC **14** 06:16:14.7±8.9, 13°.64N×92°.68W, h0^{km}, mb3.6/4, mbtmp3.5/5, ML3.4/1, MS3.3/1, Error ellipse: s-maj=195.4km s-min=83.6km az=14.0*

*MEX **14** 06:16:22.0±0.8, 14°.21N×93°.42W, h5^{km}±42^{km}, MD4.3*

*GCG **14** 06:16:22.5±2.1, 14°.10N×93°.28W, h36^{km}±51^{km}, MD4.4, ML4.1*

*CATAC **14** 06:16:31.7±0.7, 14°N±4°×9°3W±°, h33^{km}±23^{km}, M4.0/17, MLv4.0/17, Error ellipse: s-maj=17.3km s-min=7.9km az=84.6, confirmed*

ISC 14 06:16:20.5±1.7**, 14°.33N**±0°.06×**93°.31W**±0°.03**, h6**^{km}±10^{km}**, n71, σ2^s.89**/92**, mb3.6**/4**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**1.16**	**60**	*e*P	**Pg**	**06 16 43.2**	**+0.4**
THIG				*e*S	**Sn**	**06 16 59.2**	**-0.2**
THIG		**1.16**	**60**	*i* P	**Pg**	**06 16 43.3**	**+0.6**
THIG				*i* S	**Sn**	**06 16 59.2**	**-0.2**
THIG				IAML		06 17 03.2	
	comp=E,4μm,0.3s						
PATR	**El Naranjo**	**1.30**	**53**	*e*P	**Pb**	**06 16 44.8**	**-0.7**
PATR				*e*S	**Sg**	**06 17 02.7**	**+0.4**
SMCA	**Catarina**	**1.30**	**66**	*e*P	**Pn**	**06 16 45.1**	**-0.1**
SMCA				IAML		06 17 09.0	
	comp=E,697nm,0.4s						
PCIG		**1.37**	**4**	*e*P	**Pb**	**06 16 45.9**	**-0.6**
PCIG				*e*S	**Sg**	**06 17 03.8**	**-0.7**
PAVE	**Pavencul**	**1.39**	**52**	*e*P	**Pb**	**06 16 46.4**	**-0.6**
PAVE				*e*S	**Sg**	**06 17 05.4**	**+0.2**
RTAL	**Retalhuleu**	**1.57**	**83**	*e*P	**Pn**	**06 16 48.7**	**-0.3**
RTAL				*e*S	**Sn**	**06 17 08.5**	**-1.2**
RTAL	**Retalhuleu**	**1.57**	**83**	S	**Sn**	**06 17 06.5**	**-3.2**
RTAL	**Retalhuleu**	**1.57**	**83**	P	**Pb**	**06 16 50.9**	**+0.9**
STG8	**El Palmar, Qui**	**1.90**	**86**	*e*P	**Pn**	**06 16 50.7**	**-3.0**
STG8				*i* S	**Sn**	**06 17 12.9**	**-5.1**
STG8				IAML		06 17 23.1	
	comp=E,2μm,0.2s						
SOKI	**Kika Raxquin**	**1.91**	**75**	IAML		06 17 29.3	
	comp=N,1μm,0.6s						
STG0	**El Palmar, Qui**	**1.91**	**87**	*e*P	**Pn**	**06 16 50.6**	**-3.1**
STG0				*e*S	**Sn**	**06 17 12.0**	**-6.1**
STG0				IAML		06 17 21.0	
	comp=E,3μm,0.2s						
HUEH	**Huehuetenango**	**2.00**	**60**	*e*P	**Pn**	**06 16 55.9**	**+0.8**
HUEH				*e*S	**Sg**	**06 17 22.0**	**-2.9**
HUEH	**Huehuetenango**	**2.00**	**60**	*e*P	**Pb**	**06 16 56.9**	**-0.6**
HUEH				*e*S	**Sg**	**06 17 24.9**	**0.0**
HUEH				IAML		06 17 31.2	
	comp=E,2μm,0.7s						
HUEH	**Huehuetenango**	**2.00**	**60**	P	**Pg**	**06 16 58.2**	**-0.7**
HUEH	**Huehuetenango**	**2.00**	**60**	S	**Sb**	**06 17 18.9**	**-3.8**
CCIG	**Comitan**	**2.24**	**30**	*e*P	**Pb**	**06 17 01.5**	**-0.1**
CCIG				*e*S	**Sg**	**06 17 28.1**	**-4.6**
CCIG	**Comitan**	**2.24**	**30**	*i* P	**Pb**	**06 17 00.6**	**-1.0**
CCIG				*i* S	**Sg**	**06 17 31.9**	**-0.8**
CCIG				IAML		06 17 36.3	
	comp=N,753nm,0.4s						
CCIG	**Comitan**	**2.24**	**30**	P	**Pg**	**06 17 04.1**	**+0.5**
TGIG		**2.44**	**4**	*e*P	**Pb**	**06 17 03.4**	**-1.4**
TGIG				*e*S	**Sb**	**06 17 32.6**	**-2.6**
TGIG		**2.44**	**4**	*i* P	**Pb**	**06 17 03.5**	**-1.4**
TGIG				*i* S	**Sb**	**06 17 33.7**	**-1.5**
TGIG				IAML		06 17 35.8	
	comp=N,344nm,0.5s						
FG8	**Yepocapa, Chim**	**2.66**	**91**	*e*P	Pn	06 16 58.4	-5.7
FG8				*i* S	Sn	06 17 25.1	-12
FG16	**Alotenango, Sa**	**2.71**	**91**	*e*P	Pn	06 16 59.5	-5.3
FG16				IAML		06 17 33.8	
	comp=N,2μm,0.3s						
HUIG	**Huatulco**	**3.06**	**298**	*e*P	**Pn**	**06 17 08.1**	**-1.3**
HUIG				*e*S	**Sn**	**06 17 42.0**	**-4.4**
FAME	**Alcaldia de Sa**	**3.23**	**98**	S	**Sn**	**06 17 46.5**	**-4.1**
FAME	**Alcaldia de Sa**	**3.23**	**98**	P	**Pn**	**06 17 13.8**	**+2.0**
SLOZ	**Alcaldia de Sa**	**3.43**	**95**	P	**Pn**	**06 17 16.3**	**+1.8**
SLOZ	**Alcaldia de Sa**	**3.43**	**95**	S	**Sn**	**06 17 52.2**	**-3.4**
NUBE	**Las Nubes**	**3.45**	**97**	*e*P	**Pn**	**06 17 15.0**	**+0.1**
NUBE	**Las Nubes**	**3.45**	**97**	S	**Sn**	**06 17 51.9**	**-4.3**
NUBE	**Las Nubes**	**3.45**	**97**	P	**Pn**	**06 17 16.8**	**+1.9**
CEVE	**Cerro Verde**	**3.61**	**98**	P	**Pn**	**06 17 19.5**	**+2.3**
JAYA	**Jayaque - finc**	**3.81**	**100**	S	**Sn**	**06 18 00.8**	**-4.2**
JAYA	**Jayaque - finc**	**3.81**	**100**	P	**Pn**	**06 17 21.8**	**+2.0**
MTO3	**Montecristo**	**3.83**	**89**	P	**Pn**	**06 17 22.5**	**+2.4**
ESQI	**Esquipulas**	**3.85**	**86**	P	**Pn**	**06 17 22.8**	**+2.4**
ESQI	**Esquipulas**	**3.85**	**86**	S	**Sn**	**06 18 02.3**	**-3.7**
PMON	**Piamonte**	**3.92**	**99**	P	**Pn**	**06 17 23.8**	**+2.4**
PMON	**Piamonte**	**3.92**	**99**	S	**Sn**	**06 18 04.5**	**-3.4**
UEES	**Universidad Ev**	**4.00**	**98**	P	**Pn**	**06 17 24.3**	**+1.9**
PEIG	**Puerto Escondi**	**4.06**	**295**	*e*P	**Pn**	**06 17 22.8**	**-0.4**
PEIG				*e*S	**Sn**	**06 18 05.4**	**-5.8**
PETF	**Flores**	**4.19**	**52**	*e*P	**Pn**	**06 17 26.8**	**+1.8**
PETF				*e*S	**Sn**	**06 18 14.5**	**+0.1**
PETF	**Flores**	**4.19**	**52**	*e*P	**Pn**	**06 17 27.2**	**+2.2**
PETF				IAML		06 18 37.0	
	comp=E,305nm,0.6s						
PETF	**Flores**	**4.19**	**52**	P	**Pn**	**06 17 29.2**	**+4.1**
VHO	**Vista Hermosa**	**4.28**	**310**	*e*P	**Pn**	**06 17 27.2**	**+0.9**
VHO				*e*S	**Sn**	**06 18 16.3**	**-0.4**
PAVA	**Las Pavas**	**4.29**	**98**	P	**Pn**	**06 17 28.4**	**+2.0**
COEG	**Centro de Oper**	**4.36**	**99**	S	**Sn**	**06 18 14.1**	**-4.3**
COEG	**Centro de Oper**	**4.36**	**99**	P	**Pn**	**06 17 29.4**	**+2.1**
YOIG	**Yosondua**	**4.79**	**302**	*e*P	**Pn**	**06 17 36.1**	**+2.6**
YOIG				*e*S	**Sn**	**06 18 24.3**	**-5.2**
PACA	**Pacayal**	**4.92**	**99**	P	**Pn**	**06 17 37.2**	**+2.2**
PACA	**Pacayal**	**4.92**	**99**	S	**Sn**	**06 18 29.0**	**-3.4**
PNIG	**Pinotepa**	**5.08**	**294**	*e*P	**Pn**	**06 17 38.3**	**+1.0**
PNIG				*e*S	**Sn**	**06 18 29.7**	**-6.6**
TXIG	**Tlaxiaco**	**5.18**	**305**	*e*P	**Pn**	**06 17 41.5**	**+2.6**
TXIG				*e*S	**Sn**	**06 18 36.7**	**-2.5**
TOIG	**Toxpalan**	**5.20**	**317**	*e*P	**Pn**	**06 17 41.5**	**+2.5**
TOIG				*e*S	**Sn**	**06 18 35.3**	**-4.0**
LCND	**La Caada**	**5.36**	**100**	P	**Pn**	**06 17 43.2**	**+2.2**
CNCH	**Conchagua**	**5.42**	**101**	P	**Pn**	**06 17 44.3**	**+2.3**
HLIG	**Huajuapan de L**	**5.55**	**309**	*e*P	**Pn**	**06 17 46.2**	**+2.3**
HLIG				*e*S	**Sn**	**06 18 50.2**	**+2.1**
TPIG	**Tehuac#an**	**5.63**	**317**	*e*S	**Sn**	**06 18 48.9**	**-1.1**
FTIG	**Fresnillo de T**	**5.84**	**308**	*e*P	**Pn**	**06 17 47.8**	**0.0**
FTIG				*e*S	**Sn**	**06 18 50.6**	**-4.6**
MGIG	**Malinaltepec**	**5.88**	**300**	*e*P	Pn	06 17 53.6	+5.1
MGIG				*e*S	**Sn**	**06 18 56.8**	**+0.5**
TLIG	**Tlapa**	**5.99**	**303**	*e*P	**Pn**	**06 17 53.3**	**+3.4**
TLIG				*e*S	**Sn**	**06 18 57.7**	**-1.2**
CRIG	**Cruz Grande**	**6.10**	**294**	*e*P	**Pn**	**06 17 53.3**	**+2.0**
PPM	**Popocatepetl**	**6.94**	**313**	*e*P	**Pn**	**06 18 03.2**	**0.0**
PPM				*e*S	**Sn**	**06 19 17.4**	**-5.4**
MEIG	**Mezcala**	**7.04**	**301**	*e*P	Pn	06 18 11.5	+7.3
CXUV	**Coxquihui**	**7.11**	**325**	*e*P	Pn	06 17 56.4	-8.7
CXUV				*e*S	**Sn**	**06 19 17.3**	**-8.9**
TXAR	**Lajitas Array**	**17.74**	**329**	P	**P**	**06 20 34.7**	**+5.5**
	baz=143,slow=13,SNR=5.9						
	comp=E,0.6nm,0.8s						
NVAR	**Mina Array Bea**	**32.62**	**322**	P	**P**	**06 22 56.3**	**+2.9**
	comp=E,0.5nm,0.8s,baz=130,slow=9.7,SNR=2.7						
	comp=E,0.5nm,0.8s						
SCHQ	**Schefferville**	**45.36**	**21**	LR	LR	06 45 17.5	
	comp=E,29nm,18.4s,baz=142,slow=38						
YKA	**Yellowknife Ar**	**50.42**	**347**	P	**P**	**06 25 19.2**	**+0.7**
	comp=E,0.9nm,0.7s,baz=155,slow=7.0,SNR=15						
	comp=E,0.9nm,0.7s						
RES	**Resolute Bay**	**60.35**	**360**	P	**P**	**06 26 30.3**	**+0.4**
	comp=E,1.3nm,0.8s,baz=167,slow=6.2,SNR=2.4						
	comp=E,1.3nm,0.8s						
ILAR	**Eielson Array**	**62.04**	**337**	P	**P**	**06 26 42.9**	**+1.3**
	comp=E,0.2nm,0.6s,baz=112,slow=5.9,SNR=2.6						
	comp=E,0.2nm,0.6s						

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*SSNC **14** 06:20:16.9±2.2, 19°.30N×78°.36W, h1^{km}±38^{km}, MD3.5, ML2.9*

*JSN **14** 06:20:18.4±0.7, 19°.41N×78°.34W, h30^{km}±315^{km}, MD4.6*

*OSPL **14** 06:20:18.3±0.6, 19°.27N×78°.29W, h0^{km}±138^{km}, ML2.9*

ISC 14 06:20:16.4±2.4**, 19°.32N**±0°.05×**78°.2W**±0°.1**, h4**^{km}±16^{km}**, n21, σ1^s.36**/34**, 6C-1D, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PILO	**Pilon**	**0.93**	**51**	*e*P	**Pn**	**06 20 35.5**	**-0.7**
PILO				⇑*e*S	**Sn**	**06 20 49.8**	**-0.2**
PILO				IAML		06 20 51.8	
	comp=E,290nm,0.2s						
PILO				IAML		06 20 51.9	
	comp=N,290nm,0.2s						
MTDJ	**Mount Denham**	**1.25**	**151**	*e*P	**Pb**	**06 20 40.3**	**-0.2**
MTDJ				*e*S	**Sb**	**06 20 55.0**	**-2.0**
MTDJ	**Mount Denham**	**1.25**	**151**	⇑*i*P	**Pg**	**06 20 40.8**	**+0.5**
MTDJ	**Mount Denham**	**1.25**	**151**	*i* P	**Pg**	**06 20 40.8**	**+0.5**
MTDJ				*e*S	**Sn**	**06 20 58.0**	**0.0**
MTDJ				IAML		06 21 01.9	
	comp=Z,198nm,0.4s						
LMGC	**Las Mercedes**	**1.32**	**56**	*e*P	**Pb**	**06 20 41.5**	**-0.2**
LMGC				IAML		06 21 00.7	
	comp=N,186nm,0.2s						
LMGC				IAML		06 21 00.9	
	comp=E,209nm,0.3s						
MCJ	**Malvern**	**1.47**	**162**	⇓*i*P	**Pb**	**06 20 43.8**	**-0.5**
CHIV	**Chivirico**	**1.78**	**68**	*e*P	**Pn**	**06 20 48.0**	**+0.2**
CHIV				*e*S	**Sn**	**06 21 09.8**	**-1.2**
CHIV				IAML		06 21 13.3	
	comp=N,71nm,0.2s						
CHIV				IAML		06 21 13.6	
	comp=E,62nm,0.2s						
STH	**Stony Hill**	**1.79**	**134**	*e*P	**Pb**	**06 20 48.6**	**-1.1**
STH				*e*S	**Sb**	**06 21 11.6**	**-1.0**
STH	**Stony Hill**	**1.79**	**134**	⇑*i*P	**Pb**	**06 20 48.8**	**-1.0**
HOJ	**Hope**	**1.88**	**134**	⇑*i*P	**Pb**	**06 20 50.7**	**-0.6**
YAR	**Yar**	**2.00**	**58**	*e*P	**Pn**	**06 20 51.7**	**+0.8**
YAR				*e*S	**Sb**	**06 21 17.6**	**-1.0**
YAR				IAML		06 21 19.0	
	comp=E,66nm,0.2s						
YAR				IAML		06 21 20.3	
	comp=N,44nm,0.2s						
MARVS	**Santiago de Cu**	**2.24**	**72**	⇑*e*P	**Pn**	**06 20 54.9**	**+0.6**
RCC	**Rio Carpintero**	**2.43**	**74**	*e*P	**Pn**	**06 20 57.9**	**+1.1**
RCC				*e*S	**Sn**	**06 21 27.1**	**+0.1**
RCC				*e*Sg	**Sb**	**06 21 28.9**	**-2.0**
RCC				IAML		06 21 29.8	
	comp=E,24nm,0.1s						
RCC				IAML		06 21 30.7	
	comp=N,27nm,0.2s						
PINC	**Pinares de May**	**2.52**	**62**	⇑*e*P	**Pn**	**06 20 59.6**	**+1.5**
PINC				*e*S	**Sb**	**06 21 31.2**	**-2.4**
PINC				IAML		06 21 34.0	
	comp=N,40nm,0.1s						
PINC				IAML		06 21 35.0	
	comp=E,31nm,0.2s						
GTBY	**Guantanamo Bay**	**2.95**	**78**	*e*P	**Pn**	**06 21 05.8**	**+1.8**
GTBY	**Guantanamo Bay**	**2.95**	**78**	*i* P	**Pn**	**06 21 06.1**	**+2.2**
GTBY				*e*S	**Sn**	**06 21 41.5**	**+1.7**
GTBY				IAML		06 21 51.5	
	comp=Z,27nm,1.6s						
NMDO	**Nuevo Mundo**	**3.24**	**67**	*e*P	**Pn**	**06 21 09.8**	**+1.8**
NMDO				*e*S	**Sn**	**06 21 48.5**	**+1.4**
NMDO				IAML		06 21 49.9	
	comp=N,5.3nm,0.1s						
NMDO				IAML		06 21 50.1	
	comp=E,8.2nm,0.2s						
QMBU	**Quimbuelo**	**3.28**	**74**	*e*P	**Pn**	**06 21 09.4**	**+0.8**
QMBU				*e*S	**Sn**	**06 21 49.6**	**+1.4**
QMBU				IAML		06 21 53.4	
	comp=E,30nm,0.2s						
QMBU				IAML		06 21 53.6	
	comp=N,39nm,0.2s						
MOAC	**Moa**	**3.30**	**66**	*e*P	**Pn**	**06 21 08.5**	**-0.3**
MASC	**Masc**	**3.81**	**77**	*e*P	**Pn**	**06 21 17.1**	**+1.3**
MASC				*e*S	**Sn**	**06 22 02.4**	**+1.3**
MASC				IAML		06 22 10.2	
	comp=E,30nm,0.4s						
MASC				IAML		06 22 10.5	
	comp=N,21nm,0.3s						
MASC	**Masc**	**3.81**	**77**	*i* P	**Pn**	**06 21 18.5**	**+2.7**
MASC				IAML		06 22 10.1	
	comp=Z,30nm,0.9s						

IDC 14 06:32:42.1±3.8**, 2°.30N**×**128°.17E, h234**^{km}±33^{km}**, mb3.4**/5**, mbtmp4.0**/5**, Error ellipse: s-maj=129.4km s-min=14.2km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.92**	**165**	P	P	06 37 25.8	-0.2
	1.4nm,0.4s,baz=345,slow=10.0,SNR=32						
WRA				ScP	ScP	06 44 23.9	-0.6
	0.2nm,0.8s,baz=347,slow=3.3,SNR=1.6						
	1.4nm,0.4s						
ASAR	**Alice Springs**	**26.41**	**168**	P	P	06 37 57.5	+0.1
	0.8nm,0.5s,baz=354,slow=7.7,SNR=25						
	0.8nm,0.5s						
STKA	**Stephens Creek**	**36.30**	**161**	P	P	06 39 23.6	0.0
	1.1nm,0.4s,baz=338,slow=8.8,SNR=4.4						
	1.1nm,0.4s						
MKAR	**Makanchi Array**	**59.54**	**325**	P	P	06 42 21.3	+0.1
	0.6nm,0.4s,baz=114,slow=8.2,SNR=8.1						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**63.71**	**327**	P	P	06 42 48.6	-0.2
	1.5nm,0.6s,baz=125,slow=5.9,SNR=11						
	1.5nm,0.6s						

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*IDC **14** 06:37:32.6±3.6, 29°.47N×81°.50E, h0^{km}, mb3.4/3, mbtmp3.5/5, ML4.0/2, Error ellipse: s-maj=141.0km s-min=26.1km az=68.0*

*DMN **14** 06:37:33.4±0.0, 29°.44N×80°.55E, h60^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

*NDI **14** 06:37:44.2±1.6, 29°.27N×80°.52E, h10^{km}, ML3.1, MW3.1*

ISC 14 06:37:33.9±2.0**, 29°.46N**±0°.09×**81°.05E**±0°.05**, h10**^{km}±15^{km}**, n19, σ1^s.56**/30**, mb3.6**/3**, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LGTI	**Lohaghat**	**0.70**	**269**	*e*P	**Pn**	**06 37 52.2**	**+2.4**
LGTI				*e*S	**Sb**	**06 37 58.1**	**+0.3**
LGTI				IAML		06 38 03.9	
	comp=E,235nm,0.1s						
LGTI				IAML		06 38 07.4	
	comp=E,484nm,0.4s						
PTH	**Pithoragarh**	**0.73**	**277**	*e*P	**Pn**	**06 37 51.7**	**+1.3**
PTH				*e*S	**Sg**	**06 37 57.8**	**+0.1**
PTH				IAML		06 37 59.3	
	comp=N,552nm,0.2s						
PTH				IAML		06 38 00.5	
	comp=Z,610nm,0.3s						
PYUN	**Piuthan**	**2.18**	**128**	Pg	**Pn**	**06 38 12.3**	**+1.9**
	baz=121,slow=0.0						
PYUN				Sn	**Sb**	**06 38 40.4**	**-0.3**
	comp=Z,513nm,0.7s,baz=121,slow=0.0						
DANN	**Dangsing**	**2.62**	**114**	Pg	**Pn**	**06 38 18.6**	**+2.0**
	baz=110,slow=0.0						
DANN				Sn	**Sb**	**06 38 53.2**	**-0.4**
	comp=Z,250nm,0.6s,baz=110,slow=0.0						
DDI	**Dehra Dun**	**2.74**	**289**	*e*P	**Pb**	**06 38 23.5**	**+0.5**
DDI				*e*S	**Sn**	**06 38 52.2**	**+1.1**
DDI				IAML		06 38 56.6	
	comp=N,388nm,0.4s						
DDI				IAML		06 39 04.7	
	comp=E,535nm,0.2s						
KLP	**Kalpa**	**3.18**	**311**	*e*P	**Pb**	**06 38 31.5**	**+0.9**
KLP				*e*S	**Sb**	**06 39 08.7**	**-0.8**
KLP				IAML		06 39 21.6	
	comp=E,103nm,0.7s						
KLP				IAML		06 39 21.6	
	comp=E,140nm,0.5s						
GKN	**Gorkha**	**3.47**	**114**	Pn	**Pn**	**06 38 29.8**	**+1.7**
	baz=111,slow=0.0						
SMLA	**Simla**	**3.75**	**297**	*e*P	**Pb**	**06 38 37.7**	**-2.4**
SMLA				*e*S	**Sn**	**06 39 16.9**	**+1.0**
SMLA				IAML		06 39 18.5	
	comp=N,58nm,0.1s						
SMLA				IAML		06 39 18.9	
	comp=E,83nm,0.4s						
DMN	**Daman**	**4.02**	**116**	Sn	**Sn**	**06 39 24.4**	**+1.4**
	baz=113,slow=0.0						
KKN	**Kakani**	**4.08**	**113**	Pn	**Pn**	**06 38 36.4**	**-0.1**
	baz=110,slow=0.0						
KKN				Sn	**Sn**	**06 39 26.4**	**+2.0**
	baz=110,slow=0.0						
PKI	**Pulchoki**	**4.28**	**115**	Pn	**Pn**	**06 38 40.6**	**+1.2**
	baz=112,slow=0.0						
PKI				Sn	**Sn**	**06 39 31.7**	**+2.2**
	comp=E,38nm,0.4s,baz=112,slow=0.0						
GUN	**Gumba**	**4.52**	**109**	Pn	**Pn**	**06 38 44.6**	**+1.9**
	baz=107,slow=0.0						
GUN				Sn	**Sn**	**06 39 37.2**	**+1.7**
	comp=E,54nm,0.4s,baz=107,slow=0.0						
DHRM	**DHARAMSHALA**	**4.94**	**305**	*e*P	Pb	06 38 55.6	-5.1
DHRM				*e*S	**Sn**	**06 39 46.2**	**+0.6**
DHRM				IAML		06 39 48.2	
	comp=N,74nm,0.4s						
DHRM				IAML		06 39 51.2	
	comp=E,93nm,0.4s						
RAMN	**Ramite**	**5.50**	**116**	Pn	**Pn**	**06 38 57.1**	**+1.0**
	baz=113,slow=0.0						
RAMN				Sn	**Sn**	**06 39 59.6**	**0.0**
	comp=E,35nm,0.2s,baz=113,slow=0.0						
MKAR	**Makanchi Array**	**17.33**	**3**	P	**Pn**	**06 41 36.2**	**+0.4**
	comp=E,0.1nm,0.3s,baz=189,slow=13,SNR=4.8						
	comp=E,0.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**19.66**	**120**	P	**P**	**06 41 59.7**	**-3.3**
	comp=E,0.7nm,0.3s,baz=315,slow=9.1,SNR=2.6						
	comp=E,1.0nm,0.2s						
KURBB	**Kurchatov Arra**	**21.22**	**356**	P	**P**	**06 42 20.1**	**+0.3**
	comp=E,0.8nm,0.8s,baz=181,slow=11,SNR=8.7						
	comp=E,0.8nm,0.8s						
WRA	**Warramunga Arr**	**71.06**	**127**	P	**P**	**06 48 51.4**	**-1.0**
	comp=E,0.3nm,0.6s,baz=313,slow=6.4,SNR=5.3						
	comp=E,0.3nm,0.6s						
ASAR	**Alice Springs**	**73.29**	**130**	P	**P**	**06 49 04.0**	**-1.7**
	comp=E,0.2nm,0.3s,baz=314,slow=6.3,SNR=6.7						
	comp=E,0.2nm,0.3s						

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*ASRS **14** 06:49:08.0±1.0, 53°.82N×88°.20E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*NNC **14** 06:49:11.0±4.4, 53°.74N×88°.23E, h0^{km}, mb2.9, mpv2.5, Error ellipse: s-maj=31.5km s-min=20.2km az=95.0, Suspected Mining explosion.*

*IDC **14** 06:49:12.1±3.1, 53°.79N×88°.05E, h0^{km}, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=27.8km s-min=19.3km az=54.0*

ISC 14 06:49:12.1±3.8**, 53°.9N**±0°.2×**88°.1E**±0°.2**, h0**^{km}**, n7, σ0^s.31**/7**, 4C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.92**	**273**	I	I	07 01 47.7	
	0.1nm,1.2s,baz=92,slow=322,SNR=10						
ZAA0	**Zalesovo Array**	**1.92**	**273**	⇑Pn	**Pn**	**06 49 46.1**	**+0.1**
	0.9nm,1.1s,baz=88,slow=15						
ZAA0				⇑Sn	**Sg**	**06 50 13.6**	**-0.2**
	1.4nm,0.5s,baz=96,slow=26						
ZALV	**Zalesovo Beam**	**1.92**	**273**	Pn	**Pn**	**06 49 45.9**	**-0.1**
	1.2nm,0.3s,baz=96,slow=12,SNR=11						
ZALV				Lg	Lg	06 50 13.1	
	2.4nm,0.3s,baz=93,slow=26,SNR=13						
ZALV				I	I	07 01 49.5	
	baz=113,slow=25,SNR=20						
KURK	**Kurchatov**	**6.60**	**245**	⇓Lg	Lg	06 52 40.6	
	1.2nm,0.9s						
KURBB	**Kurchatov Arra**	**6.70**	**245**	Pn	**Pn**	**06 50 51.6**	**0.0**
	0.1nm,0.3s,baz=61,slow=14,SNR=8.2						
KURBB				Lg	Lg	06 52 42.3	
	baz=59,slow=35,SNR=2.4						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**6.70**	**245**	⇑Pn	**Pn**	**06 50 52.2**	**+0.6**
	0.5nm,0.3s						
KURBB				⇑Sn	**Sn**	**06 52 08.6**	**0.0**
	2.4nm,0.7s						
KURBB				⇓Lg	Lg	06 52 43.4	
	2.4nm,0.8s						
MKAR	**Makanchi Array**	**7.99**	**210**	Pn	**Pn**	**06 51 09.3**	**-0.1**
	0.1nm,0.3s,baz=28,slow=14,SNR=1.7						
MKAR				Lg	Lg	06 53 22.9	
	baz=20,slow=35,SNR=2.4						
	0.2nm,0.5s						

GCG 14 06:54:38.6±2.0**, 14°.31N**×**93°.11W, h35**^{km}±999^{km}**, MD3.9, ML2.7, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG8	**El Palmar, Qui**	**1.71**	**85**	*i* P	Pn	06 55 03.9	-2.3
STG8				IAML		06 55 33.9	
	comp=N,118nm,0.3s						
CCIG	**Comitan**	**2.18**	**25**	*i* P	Pn	06 55 14.6	+2.1
CCIG				IAML		06 55 48.3	
	comp=E,43nm,0.3s						
TGIG		**2.46**	**360**	*e*P	Pn	06 55 16.1	-0.2
TGIG				*e*S	Sn	06 55 45.7	+0.5
TGIG				IAML		06 55 49.8	
	comp=E,26nm,0.3s						

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*IDC **14** 06:54:55.2±0.4, 11°.06S×118°.50E, h0^{km}, mb4.8/23, mbtmp4.8/25, ML5.1/2, MS4.0/44, Error ellipse: s-maj=20.4km s-min=10.8km az=78.0*

*MOS **14** 06:54:55.0±1.0, 10°.98S×118°.58E, h10^{km}, mb5.2/47, Error ellipse: s-maj=11.8km s-min=5.3km az=116.9*

*NEIC **14** 06:54:57.0±1.5, 11°.17S±0°.07×118°.46E±0°.06, h10^{km}±1^{km}, mb5.2/60, Mww5.1/22, Error ellipse: s-maj=13.0km s-min=7.9km az=220.0*

*DJA **14** 06:54:56.7±0.1, 11°S±1°×11°8E±°, h10^{km}, M5.1/68, mb5.3/68, mB5.6/37, MLv5.6/21, Mw(mB)5.1/37, MwMwp4.8/7, Mwp5.2/7*

*NEIC **14** 06:54:57, 11°.38S×118°.26E, h26^{km}, Moment Tensor Solution. Duration: 2^s.1 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-5.51; M$_{\theta\theta}$5.96; M$_{\phi\phi}$-0.45; M$_{r\theta}$2.37; M$_{\theta\phi}$1.19; M$_{\phi r}$1.95; Fault plane solution: M$_0$6.62000×10^{16} NP1:ϕ_s94.37000°, δ34.43000°, λ-66.03000°. NP2:ϕ_s246.05000°, δ58.89000°, λ-105.56000°. Principal axes: T 6.7683, Plg13.0000°, Azm347.0000°; N -0.3045, Plg13.0000°, Azm254.0000°; P -6.4638, Plg72.0000°, Azm119.0000°;*

*NEIC **14** 06:54:57, 11°.18S×118°.46E, h26^{km}*

*GCMT **14** 06:55:00.0±0.2, 11°.24S±0°.01×118°.55E±0°.02, h14^{km}, MW5.0/118, Moment Tensor Solution. s68,c91; s118,c183; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.17±.14; M$_{\theta\theta}$4.29±.10; M$_{\phi\phi}$-0.11±.10; M$_{r\theta}$1.47±.19; M$_{\theta\phi}$0.79±.07; M$_{\phi r}$-1.12±.25; Best double couple: M$_0$4.68400×10^{16} NP1:ϕ_s64.00000°, δ39.00000°, λ-116.00000°. NP2:ϕ_s276.00000°, δ55.00000°, λ-70.00000°. Principal axes: T 4.6160, Plg8.0000°, Azm352.0000°; N 0.1370, Plg16.0000°, Azm85.0000°; P -4.7510, Plg72.0000°, Azm236.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 06:54:57.9±0.5**, 11°.23S**±0°.03×**118°.51E**±0°.04**, h19**^{km}±1^{km}**,**

h20^{km}:pP-P,n448,σ1^{s}64/464,mb5.1/122,MS4.2/51,
14C-2D,South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WBSI	Waikabubak, Su	1.81	29	P	Pn	06 55 27.6	-0.5
WBSI				S	Sn	06 55 47.8	-2.7
BASI	Baing, Sumba	2.27	64	P	Pn	06 55 34.4	0.0
WSI	Waingapu	2.35	49	P	Pn	06 55 35.2	-0.3
PLAI	Plampang	2.50	343	P	Pn	06 55 35.9	-1.6
PLAI	Plampang	2.50	343	P	Pn	06 55 35.8	-1.7
TWSI	Taliwang, Sumb	2.95	327	P	Pn	06 55 42.1	-1.7
EDFI	Ende, Flores	3.99	52	P	Pn	06 55 56.8	-1.4
DNP	Denpasar	4.12	308	P	Pn	06 55 59.6	-0.3
MMRI	Maumere	4.49	55		Pn	06 56 04.9	-0.1
MMRI	Maumere	4.49	55	P	Pn	06 56 04.9	-0.1
MMRI	Maumere	4.49	55	P	Pn	06 56 04.8	-0.2
SRBI	Singaraja	4.51	314	P	Pn	06 56 04.5	-0.7
JAGI	Jajag, Banyuwa	5.09	302		Pn	06 56 10.7	-2.6
JAGI	Jajag, Banyuwa	5.09	302	P	Pn	06 56 11.1	-2.2
JAGI	Jajag, Banyuwa	5.09	302	P	Pn	06 56 10.7	-2.6
	7.0nm17µm401nm,0.6s						
BATI	Baumata	5.17	79	Pn	Pn	06 56 15.1	+0.7
	92nm,0.3s,baz=239,slow=1.0,SNR=26						
BATI				Sn	Sn	06 57 11.2	-2.4
	215nm,0.3s,baz=216,slow=23,SNR=13						
BATI				LR	LR	06 58 02.9	
	comp=Z,548nm,21.4s,baz=80,slow=36						
	347nm,0.5s						
BATI	Baumata	5.17	79	P	Pn	06 56 14.8	+0.4
	4.4nm7µm414nm,0.8s						
BSSI	Bau Bau, Buton	5.42	21	P	Pn	06 56 18.7	+0.9
GMJI	Gumukmas	5.79	300	P	Pn	06 56 19.4	-3.4
SOEI	Soe	5.85	76		Pn	06 56 24.8	+1.0
SOEI	Soe	5.85	76	P	Pn	06 56 24.8	+1.0
SOEI	Soe	5.85	76	S	Sn	06 57 30.7	+0.2
SOEI	Soe	5.85	76	P	Pn	06 56 24.7	+0.9
BKSI	Bulukumba	6.09	15	P	Pn	06 56 28.0	+1.1
KMMI	Kalianget	6.11	312	P	Pn	06 56 27.8	+0.5
	172nm,0.9s						
KAPI	Kappang	6.30	11		Pn	06 56 30.1	+0.2
KAPI	Kappang	6.30	11	Pn	Pn	06 56 31.1	+1.2
	33nm,0.3s,baz=182,slow=8.3,SNR=85						
KAPI				Sn	Sn	06 57 36.7	-4.6
	64nm,0.3s,baz=13,slow=23,SNR=17						
KAPI				LR	LR	06 59 22.8	
	comp=Z,2µm,19.5s,baz=186,slow=44						
KAPI	Kappang	6.30	11	P	Pn	06 56 31.2	+1.3
KAPI	Kappang	6.30	11	P	Pn	06 56 30.1	+0.2
BNSI	Bone	6.97	13	P	Pn	06 56 42.0	+2.9
	4µm1.4nm5µm288nm,0.9s						
SPSI	Sidrap Palu	7.33	10	P	Pn	06 56 44.1	+0.1
	0.6nm2µm160nm,1.2s						
PCJI	Pacitan	7.83	292	P	Pn	06 56 50.0	-0.8
NGJI	Ngawi	7.94	298	P	Pn	06 56 52.5	+0.1
	2.2nm477nm,1.0s						
WOJI	Wonogiri, Jawa	8.20	294	P	Pn	06 56 55.7	-0.3
	253nm,0.8s						
TTSI	Tana Toraja	8.24	9	P	Pn	06 56 58.1	+1.6
	229nm,0.8s						
UGM	Wanagama	8.53	292		Pn	06 56 59.7	-0.8
UGM	Wanagama	8.53	292	P	Pn	06 57 00.1	-0.5
UGM	Wanagama	8.53	292	P	Pn	06 56 59.4	-1.2
YOGI	Yogyakarta	8.78	292	P	Pn	06 57 03.7	-0.2
	210nm,0.9s						
SMRI	Semarang	8.98	297		Pn	06 57 05.9	-0.8
SMRI	Semarang	8.98	297	P	Pn	06 57 08.1	+1.4
SMRI	Semarang	8.98	297	P	Pn	06 57 05.7	-1.0
	184nm,0.7s						
FITZ	Fitzroy Crossi	9.71	136	Pn	Pn	06 57 15.4	-1.2
FITZ	Fitzroy Crossi	9.71	136	P	Pn	06 57 15.6	-1.0
FITZ	Fitzroy Crossi	9.71	136	Pn	Pn	06 57 14.1	-2.5
	12nm,0.3s,baz=330,slow=8.2,SNR=177						
FITZ				Sn	Sn	06 58 57.6	-7.6
	14nm,0.3s,baz=0.0,slow=20,SNR=12						
FITZ				LR	LR	07 01 34.2	
	comp=Z,2µm,18.0s,baz=320,slow=41						
MBWA	Marble Bar	9.94	173	P	Pn	06 57 17.8	-2.0
	comp=Z,0.0nmcomp=Z,390nm,0.8s						
MBWA	Marble Bar	9.94	173	P	Pn	06 57 17.6	-2.2
BKB	Balikpapan	10.04	351	P	Pn	06 57 24.1	+3.0
PSAD1	Pilbara Seismi	10.24	173	P	Pn	06 57 21.6	-2.4
	comp=Z,310nm,0.8s						
PCI	Palu	10.35	7	P	Pn	06 57 29.0	+3.6
	comp=Z,4µmcomp=Z,195nm,1.1s						
PSA00	Pilbara Seismi	10.36	173	P	Pn	06 57 23.0	-2.6
	comp=Z,327nm,0.8s						
PSA00	Pilbara Seismi	10.36	173	P	Pn	06 57 24.1	-1.5
CMJI	Cimerak	10.49	288	P	Pn	06 57 26.6	-0.8
	comp=Z,208nm,1.4s						
APSI	Ampana	10.72	17	P	Pn	06 57 33.2	+2.7
	comp=Z,1µmcomp=Z,85nm,1.1s						
KNRA	Kununurra	10.91	115	Pn	Pn	06 57 31.2	-2.0
KNRA	Kununurra	10.91	115	P	Pn	06 57 31.1	-2.0
	comp=Z,87nm,0.9s						
LUWI	Luwuk	10.98	23	P	Pn	06 57 35.1	+1.1
	comp=Z,104nm,0.9s						
BBJI	Bungbulang	11.35	288	P	Pn	06 57 39.3	+0.1
MPSI	Mapaga	11.58	7	P	Pn	06 57 44.0	+1.7
LEM	Lembang	11.61	291	Pn	Pn	06 57 44.7	+1.9
	comp=Z,0.9nm,0.3s,baz=69,slow=17,SNR=5.2						
LEM	Lembang	11.61	291	P	Pn	06 57 44.0	+1.2
	comp=Z,95nm,0.8s						
CNJI	Cibinong	11.88	288	P	Pn	06 57 45.1	-1.4
	comp=Z,81nm,1.0s						
GIRL	Giralia	12.06	199	Pn	Pn	06 57 47.0	-1.8
GIRL	Giralia	12.06	199	P	Pn	06 57 47.3	-1.5
	comp=Z,616nm,1.0s						
GIRL	Giralia	12.06	199	P	Pn	06 57 46.7	-2.1
MRSI	Marisa	12.12	17	P	Pn	06 57 50.7	+0.9
	comp=Z,94nm,0.9s						
DRS	Darwin Rock St	12.19	97	P	Pn	06 57 49.7	-1.0
MTN	Manton Dam	12.46	99		Pn	06 57 52.6	-1.6
MTN	Manton Dam	12.46	99	P	Pn	06 57 52.9	-1.4
	comp=Z,85nm,0.5s						
MTN	Manton Dam	12.46	99	P	Pn	06 57 54.4	+0.1
TOLI2	Tolitoli	12.47	11		Pn	06 57 55.8	+1.3
TOLI2	Tolitoli	12.47	11	P	Pn	06 57 56.0	+1.5
SKJI	Sukabumi	12.52	289	P	Pn	06 57 56.2	+1.0
	comp=Z,165nm,0.5s						
STKI	Sintang	13.22	328	P	Pn	06 58 05.9	+1.2
	comp=Z,87nm,1.4s						
CGJI	Cibinong	13.46	289	P	Pn	06 58 06.4	-1.6
	comp=Z,150nm,0.7s						
TPI	Tanjungpandan	13.66	307	P	Pn	06 58 09.4	-1.4
KDU	Kakadu	13.74	97	P	Pn	06 58 10.1	-1.7
	comp=Z,41nm,0.9s						
KDU	Kakadu	13.74	97	P	Pn	06 58 10.3	-1.6
TNTI	Ternate	14.83	37	Pn	Pn	06 58 25.0	-1.7
TNTI	Ternate	14.83	37	P	Pn	06 58 27.4	+0.7
KSM	Kuching	15.03	327	Pn	Pn	06 58 29.0	-0.4
KSM	Kuching	15.03	327	P	Pn	06 58 29.4	0.0
MEEK	Meekatharra	15.32	180	P	Pn	06 58 29.5	-3.8
MEEK	Meekatharra	15.32	180	P	Pn	06 58 29.9	-3.4
LWLI	Liwa	15.57	292	P	Pn	06 58 35.7	-1.0
	comp=Z,274nm,0.8s						
MDSI	Maura Dua	15.69	294	P	Pn	06 58 36.3	-1.8
	comp=Z,85nm,1.1s						
FAKI	Fak Fak	15.94	60		Pn	06 58 37.0	-4.3
FAKI	Fak Fak	15.94	60	P	Pn	06 58 40.0	-1.3
FAKI	Fak Fak	15.94	60	P	Pn	06 58 39.3	-2.0
	comp=Z,116nm,0.9s						
MYLDM	Lahad Datu	16.31	360	Pn	Pn	06 58 45.5	-0.5
MYLDM	Lahad Datu	16.31	360	P	P	06 58 48.2	-0.6
SWI	Sorong	16.33	52	P	Pn	06 58 47.5	+1.2
	comp=Z,2µmcomp=Z,131nm,1.1s						
KKM	Kota Kinabalu	17.32	352	P	P	06 59 01.1	+1.0
WB0	Warramunga Arr	17.49	121		Pn	06 58 58.1	-2.8
WB9	Warramunga Arr	17.50	121	P	Pn	06 58 58.0	-3.0
WB8	Warramunga Arr	17.50	121	P	Pn	06 58 57.8	-3.2
WRA	Warramunga Arr	17.53	122		Pn	06 58 57.9	-3.5
WRA	Warramunga Arr	17.53	122	P	Pn	06 58 57.4	-4.0
	comp=Z,15nm,0.8s,baz=290,slow=13,SNR=55						
WRA				S	Sn	07 02 00.2	-16
	comp=Z,19nm,0.8s,baz=295,slow=24,SNR=5.8						
WRA				LR	LR	07 06 51.5	
	comp=Z,905nm,18.1s,baz=296,slow=41						
WRA	Warramunga Arr	17.53	122	P	Pn	06 58 57.9	-3.5
WRA				pmax	pmax		
	comp=Z,7.0nm,1.5s						
WRAB	Tennant Creek	17.53	121	*i* P	Pn	06 59 01.9	+0.5
WRAB				pmax	pmax		
	comp=Z,48nm,1.2s						
MORW	Morawa	17.89	187	P	Pn	06 59 02.9	-2.9
MORW				IAmb	IAmb	06 59 06.2	
	comp=Z,163nm,0.8s						
MORW	Morawa	17.89	187	P	Pn	06 59 02.7	-3.1
	comp=Z,256nm,1.1s						
MORW	Morawa	17.89	187	P	Pn	06 59 03.1	-2.7
AS13	Alice Springs	19.16	132	P	Pn	06 59 21.3	0.0
	comp=Z,137nm,1.0s						
AS31	Alice Springs	19.18	132	P	Pn	06 59 21.9	+0.4
AS31	Alice Springs	19.18	132	P	Pn	06 59 21.6	+0.1
	comp=Z,35nm,0.9s						
ASAR	Alice Springs	19.18	132		P	06 59 20.4	-0.1
ASAR	Alice Springs	19.18	132	P	Pn	06 59 21.9	+0.3
	comp=Z,4.5nm,0.3s,baz=305,slow=11,SNR=459						
ASAR				S	Sn	07 02 42.5	-14
	comp=Z,25nm,0.8s,baz=310,slow=24,SNR=7.0						
ASAR				LR	LR	07 06 59.4	
	comp=Z,871nm,18.4s,baz=306,slow=38						
	comp=Z,95nm,0.9s						
AS01	Alice Springs	19.21	132	P	Pn	06 59 22.4	+0.5
BLDU	Ballidu	19.36	185	P	P	06 59 21.8	-0.6
	comp=Z,197nm,0.9s						
BLDU	Ballidu	19.36	185	P	P	06 59 22.0	-0.5
DAV	Davao City (W)	19.50	21	LR	LR	07 06 56.6	
	comp=Z,383nm,21.8s,baz=186,slow=37						
KLBR	Kellerberrin	20.27	182	P	P	06 59 33.2	+0.8
	comp=Z,200nm,0.9s						
KLBR	Kellerberrin	20.27	182	P	Pn	06 59 33.5	-0.9
KMBL	Kambalda	20.28	172	P	P	06 59 33.0	+0.5
	comp=Z,111nm,0.9s						
KMBL	Kambalda	20.28	172	P	Pn	06 59 33.8	-0.7
MTKN	Mount Kenneth	20.75	187	P	Pn	06 59 38.9	-1.2
MUN	Mundaring	20.75	186	P	Pn	06 59 39.8	-0.2
	comp=Z,0.0nmcomp=Z,89nm,1.0s						
MUN	Mundaring	20.75	186	P	P	06 59 38.1	+0.5
BKNI	Bangkinang	20.81	302	P	P	06 59 37.4	-1.0
BKNI	Bangkinang	20.81	302	P	Pn	06 59 40.9	0.0
FORT	Forrest	21.37	157		P	06 59 45.4	+1.1
FORT	Forrest	21.37	157	P	P	06 59 45.0	+0.7
	comp=Z,288nm,1.0s						
FORT	Forrest	21.37	157	P	P	06 59 45.5	+1.1
NWAO	Narrogin (SRO)	21.62	183	P	P	06 59 47.6	+0.7
	comp=Z,317nm,0.9s						
NWAO	Narrogin (SRO)	21.62	183	P	P	06 59 47.7	+0.7
	comp=Z,70nm,1.0s,baz=13,slow=7.6,SNR=15						
NWAO				S	S	07 03 31.6	-14
	comp=Z,24nm,0.3s,baz=98,slow=23,SNR=3.6						
NWAO				LR	LR	07 09 09.5	
	comp=Z,582nm,19.2s,baz=343,slow=39						
	comp=Z,70nm,1.0s						
NWAO	Narrogin (SRO)	21.62	183	P	P	06 59 48.0	+1.1
NWAO	Narrogin (SRO)	21.62	183	P	P	06 59 48.1	+1.1
QIS	Mount Isa	22.29	117	P	P	06 59 54.9	+0.6
	comp=Z,227nm,1.0s						
QIS	Mount Isa	22.29	117	P	P	06 59 55.2	+0.9
GENI	Genyem	23.14	70	P	P	07 00 04.0	+0.8
RKGY	Rocky Gully	23.31	183	P	P	07 00 04.3	-0.5
	comp=Z,82nm,1.2s						
JAY	Jayapura	23.66	70	P	P	07 00 09.4	+0.9
	comp=Z,915nmcomp=Z,57nm,1.1s						
RPSI	Rantau Prapat	23.89	304		P	07 00 10.7	+0.1
RPSI				IAmb	IAmb	07 00 23.2	
	comp=Z,126nm,1.1s						
PSI	Prapat	23.95	304	P	P	07 00 10.7	-0.7
PSI	Prapat	23.95	304	P	P	07 00 10.7	-0.7
PSI				pmax	pmax		
	comp=Z,125nm,1.1s						
COEN	Coen	24.22	99	P	P	07 00 13.4	-0.4
COEN	Coen	24.22	99	P	P	07 00 14.0	+0.2
	comp=Z,97nm,1.2s						
COEN	Coen	24.22	99	P	P	07 00 14.7	+0.9
GSI	Gunungsitoli	24.25	300	P	P	07 00 16.5	+2.5
GSI	Gunungsitoli	24.25	300	P	P	07 00 14.3	+0.3
	comp=Z,61nm,1.7s						
TGY	Tagaytay City	25.29	6	LR	LR	07 10 47.5	
	comp=Z,299nm,21.9s,baz=54,slow=38						
MTSU	Mount Surprise	25.87	108	P	P	07 00 29.8	+1.1
	comp=Z,48nm,1.1s						
MTSU	Mount Surprise	25.87	108	P	P	07 00 30.5	+1.8
SNSI	Sinabang, Aceh	25.89	300	P	P	07 00 29.9	+1.0
	comp=Z,242nm,1.1s						
MLSI	Meulaboh, Aceh	26.85	304	P	P	07 00 37.3	-0.2
BBOO	Buckleboo	26.86	146	P	P	07 00 37.9	+0.4
BBOO				IAmb	IAmb	07 00 52.4	
	comp=Z,45nm,0.8s						
BBOO	Buckleboo	26.86	146	P	P	07 00 38.2	+0.7
	comp=Z,61nm,1.1s						
BBOO	Buckleboo	26.86	146	P	P	07 00 39.2	+1.7
LHMI	Lhok Sumawe	26.98	306	P	P	07 00 36.6	-2.1
LHMI	Lhok Sumawe	26.98	306	P	P	07 00 41.4	+2.7
LHMI	Lhok Sumawe	26.98	306	P	P	07 00 38.8	+0.1
WHYH	Whyalla	27.88	144	P	P	07 00 48.1	+1.5
CTAO	Charters Tower	28.09	112	P	P	07 00 48.8	+0.1
CTAO				IAmb	IAmb	07 00 51.8	
	comp=Z,81nm,1.9s						
CTAO	Charters Tower	28.09	112	P	P	07 00 49.7	+1.0
CTAO	Charters Tower	28.09	112	P	P	07 00 48.8	+0.1
CTAO				pmax	pmax		
	comp=Z,81nm,1.9s						
PMG	Port Moresby	28.24	89	LR	LR	07 13 46.8	
	comp=Z,505nm,18.9s,baz=251,slow=40						
TV1H	Townsville Har	28.41	110	P	P	07 00 53.5	+2.1
BSI	Banda Aceh	28.45	305	P	P	07 00 51.8	-0.1
	comp=Z,59nm,0.9s						
QLP	Quilpie	28.65	126	P	P	07 00 54.4	+0.9
	comp=Z,46nm,1.3s						
QLP	Quilpie	28.65	126	P	P	07 00 54.9	+1.4
HTT	Hallett	28.95	143	P	P	07 00 56.0	-0.2
	comp=Z,7.0nm,1.4s						
HTT	Hallett	28.95	143	P	P	07 00 57.9	+1.7
STKA	Stephens Creek	29.60	138	P	P	07 01 02.8	+0.9
STKA	Stephens Creek	29.60	138	P	P	07 01 02.5	+0.6
	comp=Z,87nm,1.2s						
STKA	Stephens Creek	29.60	138	P	P	07 01 02.8	+0.9
	comp=Z,4.4nm,0.6s,baz=303,slow=9.4,SNR=8.0						
STKA				LR	LR	07 14 02.4	
	comp=Z,479nm,18.2s,baz=313,slow=39						
	comp=Z,4.4nm,0.6s						
STKA	Stephens Creek	29.60	138	P	P	07 01 03.8	+1.9
QIZ	Qiongzhong	31.26	344	P	P	07 01 18.0	+1.3
QIZ				S	S	07 06 25.1	+2.6
QIZ				LR	LR		
	comp=Z,300nm,21.2s						
QIZ				LR	LR		
	comp=Z,390nm,19.4s						
CMSA	Cobar Meteorol	32.23	133	P	P	07 01 25.0	-0.1
	comp=Z,42nm,1.3s						
CMSA	Cobar Meteorol	32.23	133	P	P	07 01 26.8	+1.6
ARPS	Mount Arapiles	32.99	144	P	P	07 01 33.0	+1.2
	comp=Z,82nm,0.9s						
ARPS	Mount Arapiles	32.99	144	P	P	07 01 33.8	+2.0
EIDS	Eidsvold	33.86	119	P	P	07 01 41.0	+1.5
EIDS	Eidsvold	33.86	119	P	P	07 01 40.1	+0.6
	comp=Z,15nm,1.8s						
EIDS	Eidsvold	33.86	119	P	P	07 01 41.0	+1.5
CMAR	Chiang Mai Arr	35.26	327	P	P	07 01 50.5	-1.1
CMAR	Chiang Mai Arr	35.26	327	P	P	07 01 51.3	-0.3
	comp=Z,5.6nm,0.4s,baz=151,slow=6.8,SNR=21						
CMAR				PcP	PcP	07 04 24.4	+2.1
	comp=Z,4.8nm,0.5s,baz=140,slow=3.5,SNR=4.8						
CMAR				LR	LR	07 18 59.7	
	comp=Z,424nm,18.0s,baz=145,slow=41						
	comp=Z,5.6nm,0.4s						
SLVN	Son La	35.40	336	P	P	07 01 53.8	+1.0
CHTO	Chiang Mai	35.55	327	P	P	07 01 54.0	-0.1
CHTO	Chiang Mai	35.55	327	P	P	07 01 54.5	+0.4
CHTO	Chiang Mai	35.55	327	P	P	07 01 54.0	-0.1
CHTO				pmax	pmax		
	comp=Z,24nm,1.3s						
YNG	Young	35.64	135	P	P	07 01 55.9	+1.1
	comp=Z,65nm,1.3s						
TOO	Toolangi	35.69	142	P	P	07 01 55.9	+0.7
	comp=Z,16nm,1.8s						
ARMA	Armidale	36.17	127		P	07 01 58.9	-0.6
ARMA				IAmb	IAmb	07 02 17.3	
	comp=Z,52nm,1.6s						
ARMA	Armidale	36.17	127	P	P	07 01 59.9	+0.4
	comp=Z,20nm,1.5s						
ARMA	Armidale	36.17	127	P	P	07 02 01.5	+2.0
CAN	Canberra	36.61	136		P	07 02 05.1	+2.0
CAN				IAmb	IAmb	07 02 21.6	
	comp=Z,83nm,1.5s						
CAN	Canberra	36.61	136	P	P	07 02 04.2	+1.1
	comp=Z,38nm,1.7s						
CAN	Canberra	36.61	136	P	P	07 02 04.4	+1.3
CAN	Canberra	36.61	136	P	P	07 02 05.1	+2.0
CAN				pmax	pmax		
	comp=Z,83nm,1.5s						
CNB	Canberra Magne	36.85	136	P	P	07 02 05.5	+0.2
	comp=Z,37nm,1.3s						
CNB	Canberra Magne	36.85	136	P	P	07 02 07.6	+2.4
RIV	Riverview	37.36	132	P	P	07 02 11.2	+1.8
WOLH	Wollongong Har	37.44	133	P	P	07 02 11.2	+1.1
JOW	Kunigami	39.01	14	LR	LR	07 17 59.2	
	comp=Z,387nm,21.7s,baz=127,slow=36						
KMI	Kunming	39.27	337	P	P	07 02 27.3	+1.5
KMI				pmax	pmax		
	comp=Z,16nm,1.0s						
KMI				pmax	pmax		
	comp=Z,160nm,5.6s						
KMI				LR	LR		
	comp=Z,240nm,20.0s						
KMI				LR	LR		
	comp=Z,190nm,16.8s						
KMI				LR	LR		
	comp=Z,290nm,21.9s						
HNR	Honiara	40.79	91	LR	LR	07 21 17.6	
	comp=Z,270nm,18.1s,baz=218,slow=39						
PZH	PanZhiHua	40.90	337	P	P	07 02 38.9	-0.3
PZH				S	S	07 08 54.8	+4.8
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,170nm,5.2s						
PZH				LR	LR		
	comp=Z,220nm,17.5s						
PZH				LR	LR		
	comp=Z,240nm,18.0s						
PZH				LR	LR		
	comp=Z,220nm,16.7s						
WHN	Wuhan	41.73	355	P	P	07 02 55.8	+10
PALK	Pallekele	41.87	294	LR	LR	07 20 07.9	
	comp=Z,173nm,19.7s,baz=116,slow=36						
ENH	Enshi	42.17	348	P	P	07 02 49.2	-0.3
ENH	Enshi	42.17	348	P	P	07 02 50.3	+0.9
NJ2	Nanjing	43.04	0	*e*P	P	07 02 57.8	+1.4
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
CD2	Chengdu	44.23	342	P	P	07 03 08.9	+2.7
CD2				S	S	07 09 45.3	+6.4
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
CD2				LR	LR		
	comp=Z,350nm,13.3s						
JCJ	Chichijima	44.50	31	LR	LR	07 19 37.0	
	comp=Z,60nm,20.8s,baz=102,slow=33						
H08S2	Diego Garcia H	45.49	270	T	T	07 53 10.1	
	baz=95,slow=75,SNR=24						
H08S3	Diego Garcia H	45.51	270	T	T	07 53 11.2	
	baz=95,slow=75,SNR=19						
H08S1	Diego Carcia H	45.51	270	T	T	07 53 05.0	
	baz=95,slow=75,SNR=22						
JNU	Nakatsue	45.66	15	LR	LR	07 21 59.7	
	comp=Z,153nm,22.0s,baz=182,slow=36						
XAN	Xi'an	45.94	349	P	P	07 03 18.0	-1.6
XAN				S	S	07 10 01.1	-2.4
XAN				pmax	pmax		
	comp=Z,24nm,0.7s						
XAN				pmax	pmax		
	comp=Z,140nm,4.8s						
XAN				LR	LR		
	comp=Z,570nm,18.6s						
XAN				LR	LR		
	comp=Z,230nm,17.3s						
XAN				LR	LR		
	comp=Z,770nm,21.8s						
DZM	Mont Dzumac	47.00	110	P	P	07 03 28.5	+0.1
DZM				IAmb	IAmb	07 03 35.1	
	comp=Z,40nm,1.3s						
DZM	Mont Dzumac	47.00	110	*e*P	P	07 03 26.5	-1.9
	comp=Z,66nm,21.0s						
DZM				*e*S	S	07 10 18.3	-1.1
	comp=Z,172nm,29.4s						
DZM				*e*SS	SS	07 13 51.4	+5.0
	comp=Z,340nm,28.9s						
DZM				*e*LR	LR	07 16 46.3	
	comp=Z,427nm,21.9s						
DZM	Mont Dzumac	47.00	110	LR	LR	07 23 46.3	
	comp=Z,427nm,18.6s,baz=260,slow=37						
DZM	Mont Dzumac	47.00	110	P	P	07 03 30.5	+2.1
ONTNC	Ouen Toro	47.03	110	P	P	07 03 30.4	+1.9
TIA	Tai'an	47.21	358	P	P	07 03 29.9	+0.4
TIA				PcP	PcP	07 05 02.9	+2.1
TIA				S	S	07 10 14.3	-7.2
TIA				SS	SS	07 13 45.6	-3.6
TIA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TIA				LR	LR		
	comp=Z,240nm,20.4s						
TIA				LR	LR		
	comp=Z,190nm,21.7s						
TIA				LR	LR		
	comp=Z,230nm,22.6s						
OUENC	Ouen Island, N	47.40	110	P	P	07 03 33.8	+2.4
YATNC	Mamie plateau,	47.41	110	P	P	07 03 34.0	+2.5
LSA	Lhasa	48.49	328	P	P	07 03 38.5	-1.7
LSA				pmax	pmax		
	comp=Z,5.0nm,0.5s						
HYB	Hyderabad	48.66	305	*e*P	P	07 03 40.5	-0.7
HYB				*e*pP	pP	07 03 43.6	-1.6
HYB				*e*PP	PP	07 05 33.9	-0.5
HYB				*e*S	S	07 10 43.0	+0.2
HYB				*e*ScS	ScS	07 13 33.5	0.0
LZH	Lanzhou	49.06	344	*e*P	P	07 03 46.6	+2.6
LZH				sP	pwP	07 03 54.5	-1.8
LZH				S	S	07 10 42.8	-5.3
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
KSAR	Wonju Array Be	49.21	10	P	P	07 03 44.7	-0.3
KSAR	Wonju Array Be	49.21	10	P	P	07 03 44.7	-0.3
KSRS	Korea Array	49.23	10	P	P	07 03 43.8	-1.3
	comp=Z,5.9nm,1.0s,baz=184,slow=8.6,SNR=16						
KSRS				PcP	PcP	07 05 09.3	+1.2
	comp=Z,1.7nm,0.8s,baz=195,slow=2.5,SNR=4.2						
KSRS				LR	LR	07 23 18.0	
	comp=Z,68µm,21.9s,baz=190,slow=35						
	comp=Z,5.9nm,1.0s						
EVN	Everest	49.59	322	P	P	07 03 47.0	-1.8
MAJO	Matsushiro	51.02	20	P	P	07 03 58.1	-0.6
MAJO	Matsushiro	51.02	20	*i* P	P	07 03 57.2	-1.5
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MJAR	Matsushiro Arr	51.02	20	P	P	07 03 56.3	-2.5
	comp=Z,0.8nm,0.3s,baz=194,slow=41,SNR=6.5						
MJAR				PcP	PcP	07 05 15.7	+1.0
	comp=Z,5.7nm,0.9s,baz=193,slow=5.5,SNR=2.4						
MJAR				LR	LR	07 24 36.0	
	comp=Z,68nm,21.3s,baz=226,slow=35						
BTO	Baotou	52.17	352	*e*P	P	07 04 09.3	+1.9
BTO				pP	sP	07 04 13.8	+0.3
BTO				sP	pwP	07 04 16.1	-3.6
BTO				PP	PP	07 06 09.3	+3.3
BTO				S	S	07 11 35.5	+4.5
BTO				sS	sS	07 11 41.4	+2.8
BTO				SS	SS	07 15 10.5	+1.6
BTO				pmax	pmax		
	comp=Z,26nm,0.8s						
BTO				pmax	pmax		
	comp=Z,240nm,5.7s						
BTO				LR	LR		
	comp=Z,280nm,22.2s						
BTO				LR	LR		
	comp=Z,260nm,17.9s						
BTO				LR	LR		
	comp=Z,410nm,18.4s						
GOMU	GeErMu	52.20	336	P	P	07 04 09.1	+1.1
GOMU				pP	sP	07 04 13.3	-0.8
GOMU				PcP	PcP	07 05 20.0	+0.4
GOMU				S	S	07 11 36.5	+4.3
GOMU				pmax	pmax		
	comp=Z,12nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,200nm,5.6s						
GOMU				LR	LR		
	comp=Z,300nm,20.6s						
GOMU				LR	LR		
	comp=Z,310nm,19.4s						
GOMU				LR	LR		
	comp=Z,450nm,19.0s						
HHC	Hu-ho-hao-te	52.22	353	*e*P	P	07 04 09.8	+2.1
HHC				S	S	07 11 32.1	+0.4
HHC				sS	sS	07 11 39.3	+0.1
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						

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HHC                                 pmax   pmax
      comp=Z,66nm,3.9s
HHC                                 LR     LR
      comp=Z,140nm,15.7s
HHC                                 LR     LR
      comp=Z,110nm,15.5s
HHC                                 LR     LR
      comp=Z,150nm,15.7s
JSD   Sado             52.39  20    P      P      07 04 07.7 -1.2
GTA   Gaotai           53.30 342    P      P      07 04 16.0 +0.2
GTA                                 pP     sP     07 04 19.8 -2.1
GTA                                 PcP    PcP    07 05 25.5 +2.2
GTA                                 S      S      07 11 44.3 -2.3
GTA                                 pmax   pmax
      comp=Z,7.0nm,1.1s
GTA                                 LR     LR
      comp=Z,210nm,18.2s
GTA                                 LR     LR
      comp=Z,180nm,18.9s
GTA                                 LR     LR
      comp=Z,240nm,18.9s
XLT   XiLinHaoTe       54.91 358   eP      P      07 04 33.1 +5.7
XLT                                 S      S      07 12 05.8 -2.3
XLT                                 pmax   pmax
      comp=Z,11nm,0.9s
CASY  Casey            55.24 184    P      P      07 04 30.1 +0.6
CASY                                IAmb   IAmb   07 04 36.1
      comp=Z,20nm,1.1s
VLA   Vladivostok      55.45  12  i P      P      07 04 30.9 -0.3
VLA                                 pmax   pmax
      comp=Z,16nm,1.0s
MDJ   Mudanjiang       56.49   9    P      P      07 04 37.8 -0.8
MDJ                                 pmax   pmax
      comp=Z,24nm,0.8s
USA0B Ussuriysk Arra   56.51  12    P      P      07 04 37.6 -1.1
USA0B                               IAmb   IAmb   07 04 49.1
      comp=Z,12nm,0.8s
USA0B Ussuriysk Arra   56.51  12  i P      P      07 04 37.7 -1.1
USRK  Ussuriysk Ar.    56.51  12    P      P      07 04 37.1 -1.7
USRK  Ussuriysk Ar.    56.51  12    P      P      07 04 37.4 -1.4
      comp=Z,5.2nm,0.5s,baz=196,slow=7.9,SNR=11
USRK                                LR     LR     07 27 36.9
      comp=Z,75nm,21.8s,baz=203,slow=35
      comp=Z,5.2nm,0.5s
BNX   BinXian          57.27   7   ⇓P      P      07 04 42.5 -1.7
BNX                                 pmax   pmax
      comp=Z,9.0nm,1.1s
MSVF  Nonsavu          57.82 104    LR     LR     07 30 14.9
      comp=Z,160nm,18.8s,baz=209,slow=37
BKZ   Black Stump Fm   58.26 129    P      P      07 04 50.4 -1.1
BKZ   Black Stump Fm   58.26 129    P      P      07 04 53.3 +1.8
URZ   Urewera          58.55 128    LR     LR     07 30 51.4
      comp=Z,367nm,18.6s,baz=19,slow=37
ASAJ  Asahikawa        59.28  20    LR     LR     07 30 57.8
      comp=Z,36nm,20.4s,baz=154,slow=37
ULN   Ulaanbaatar      59.71 351  i P      P      07 04 59.5 -1.9
ULN                                 pmax   pmax
      comp=Z,21nm,1.1s
SONM  Songino Array    59.78 351    P      P      07 05 01.0 -0.8
SONM                                IAmb   IAmb   07 05 08.8
      comp=Z,27nm,0.9s
SONM  Songino Array    59.78 351    P      P      07 05 00.7 -1.1
      comp=Z,3.7nm,0.5s,baz=169,slow=8.5,SNR=9.4
SONM                                LR     LR     07 34 22.6
      comp=Z,213nm,19.3s,baz=115,slow=40
      comp=Z,3.7nm,0.5s
SONM  Songino Array    59.78 351    P      P      07 05 01.0 -0.8
SONM                                pmax   pmax
      comp=Z,27nm,0.9s
KLR   Kul'dur          61.32  10    LR     LR     07 31 11.8
      comp=Z,53nm,20.9s,baz=206,slow=36
KLR   Kul'dur          61.32  10  i P      P      07 05 12.3 +0.2
KLR                                 pmax   pmax
      comp=Z,4.0nm,1.1s
WMQ   Urumqi           61.55 335   eP      P      07 05 16.3 +2.4
WMQ                                 LR     LR
      comp=Z,310nm,23.9s
HEH   HeiHe            61.72   6   eP      P      07 05 13.4 -1.4
HEH                                 pmax   pmax
      comp=Z,29nm,1.1s
NIL   Nilore           62.01 318           P      07 05 15.9 -1.3
NIL                                 IAmb   IAmb   07 05 20.0
      comp=Z,19nm,0.8s
NIL   Nilore           62.01 318    P      P      07 05 15.9 -1.3
NIL                                 pmax   pmax
      comp=Z,19nm,0.8s
ZAK   Zakamensk        62.78 349   eP      P      07 05 20.2 -1.9
ZAK                                e              07 06 00.3
ZAK                                 pmax   pmax
      comp=Z,7.0nm,1.1s
ZAK                                 pmax   pmax
      comp=Z,6.0nm,1.1s
WUS   Wushi            63.51 328    P      P      07 05 26.0 -1.1
WUS                                 IAmb   IAmb   07 05 41.4
      comp=Z,15nm,0.8s
KSH   Kashi            64.11 324    P      P      07 05 30.3 -0.8
KSH                                 sP     pwP    07 05 41.8 -2.5
KSH                                 pmax   pmax
      comp=Z,29nm,0.8s
MOY   Mondy            64.45 348   eP      P      07 05 38.9 +5.8
MOY                                 pmax   pmax
      comp=Z,15nm,1.3s
SHLS  Shalkode         64.81 329   eP      P      07 05 33.7 -1.9
SHLS                                pmax   pmax
      comp=Z,8.0nm,0.8s
SHLS  Shalkode         64.81 329   eP      P      07 05 33.8 -1.9
      comp=Z,7.9nm,0.8s
PRZ   Przheval'sk      64.86 328    P      P      07 05 35.5 -0.5
PRZ                                 IAmb   IAmb   07 05 51.5
      comp=Z,20nm,0.8s
PRZ   Przheval'sk      64.86 328    P      P      07 05 35.5 -0.5
PRZ                                 pmax   pmax
      comp=Z,20nm,0.8s
UZB   Uzynbulak        65.02 329   eP      P      07 05 36.4 -0.6
UZB                                 pmax   pmax
      comp=Z,12nm,1.0s
UZB   Uzynbulak        65.02 329   eP      P      07 05 36.5 -0.6
      comp=Z,12nm,1.0s
ZEA   Zeya             65.14   6  i P      P      07 05 35.8 -1.6
KDJ   Kajisay          65.25 327           P      07 05 38.1 -0.4
KDJ                                 IAmb   IAmb   07 05 45.5
      comp=Z,16nm,0.9s
KDJ   Kajisay          65.25 327    P      P      07 05 38.2 -0.4
KDJ                                 pmax   pmax
      comp=Z,16nm,0.9s
SATY  Saty             65.27 329   eP      P      07 05 38.2 -0.4
SATY                                pmax   pmax
      comp=Z,8.0nm,0.7s
SATY  Saty             65.27 329   eP      P      07 05 38.3 -0.4
      comp=Z,7.8nm,0.7s
KBL   Kabul            65.34 316    P      P      07 05 38.4 -1.0
KBL   Kabul            65.34 316    P      P      07 05 38.4 -1.0
KBL                                 pmax   pmax
      comp=Z,33nm,0.8s
KPKS  Kokpek           65.42 329   eP      P      07 05 39.0 -0.5
KPKS  Kokpek           65.42 329   eP      P      07 05 39.0 -0.5
ZSN   Zaisan           65.66 336   eP      P      07 05 40.3 -0.5
ZSN                                 pmax   pmax
      comp=Z,7.0nm,1.1s
ZSN   Zaisan           65.66 336   eP      P      07 05 40.4 -0.5
      comp=Z,7.0nm,1.1s
MDOK  Medeo            66.04 328   eP      P      07 05 43.1 -0.5
MDOK  Medeo            66.04 328   eP      P      07 05 43.1 -0.5
AAA   Alma-Ata         66.14 328   eP      P      07 05 43.8 -0.3
AAA   Alma-Ata         66.14 328   eP      P      07 05 43.9 -0.3
BOOM  Boomskoye usch   66.16 327           P      07 05 44.1 -0.3
BOOM                                IAmb   IAmb   07 06 00.3
      comp=Z,30nm,0.9s
BOOM  Boomskoye usch   66.16 327    P      P      07 05 44.1 -0.3
BOOM                                pmax   pmax
      comp=Z,30nm,0.9s
MK31  Makanchi Array   66.22 334  i P      P      07 05 43.3 -1.2
MKAR  Makanchi Array   66.22 334    P      P      07 05 43.9 -0.6
      comp=Z,16nm,0.7s,baz=148,slow=7.5,SNR=46
MKAR                                LR     LR     07 36 59.6
      comp=Z,78nm,19.4s,baz=139,slow=38
      comp=Z,16nm,0.7s
MAKZ  Makanchi         66.37 333    P      P      07 05 44.6 -0.9
MAKZ  Makanchi         66.37 333    P      P      07 05 44.6 -0.9
MAKZ                                pmax   pmax
      comp=Z,8.0nm,1.0s
ARXS  Arharly          66.39 329   eP      P      07 05 44.2 -1.5
TKM2  Tokmak 2         66.64 327    P      P      07 05 46.7 -0.8
      SNR=11
KBK   Karagaybulak     66.81 326    P      P      07 05 48.8 +0.3
      SNR=9.2
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MAW   Mawson           66.98 200    P      P      07 05 50.1 +1.1
      comp=Z,12nm,1.0s,baz=96,slow=5.8,SNR=9.3
MAW                                 LR     LR     07 32 15.6
      comp=Z,254nm,18.6s,baz=38,slow=33
      comp=Z,12nm,1.0s
ARSB  Arslanbob        67.02 324    P      P      07 05 49.6 -0.3
ARSB  Arslanbob        67.02 324    P      P      07 05 49.6 -0.3
ARSB                                pmax   pmax
      comp=Z,68nm,1.0s
AAK   Ala-Archa        67.04 326    P      P      07 05 49.8 -0.3
      SNR=13
AAK   Ala-Archa        67.04 326    P      P      07 05 49.9 -0.1
      comp=Z,19nm,0.9s,baz=143,slow=4.4,SNR=19
AAK                                 LR     LR     07 38 33.3
      comp=Z,168nm,21.8s,baz=141,slow=39
      comp=Z,19nm,0.9s
AAK   Ala-Archa        67.04 326ceP        P      07 05 50.1 +0.1
AAK                                 pmax   pmax
      comp=Z,24nm,1.0s
AAK   Ala-Archa        67.04 326    P      P      07 05 50.0 -0.1
AML   Almayashu        67.15 325    P      P      07 05 50.7 -0.3
      SNR=27
GAR   Garm             67.15 321           P      07 05 50.1 -0.6
EKS2  Erkin-Say        67.45 326    P      P      07 05 52.9 +0.3
      SNR=17
USP   Ospenovka        67.46 327    P      P      07 05 52.2 -0.3
      SNR=8.6
BTK   Batken           67.49 322           P      07 05 52.3 -0.6
BTK   Batken           67.49 322    P      P      07 05 52.3 -0.6
BTK                                 pmax   pmax
      comp=Z,58nm,1.5s
SIMJ  Simiganj         67.76 320    P      P      07 05 53.6 -1.1
ABPO  Ambohimpanom     68.86 254    P      P      07 06 03.9 +1.9
ABPO                                pmax   pmax
      comp=Z,29nm,1.0s
BTLS  Baital           68.90 328   eP      P      07 05 59.5 -2.0
DZA   Taraz            68.97 325   eP      P      07 06 01.6 -0.4
DZA   Taraz            68.97 325   eP      P      07 06 01.6 -0.4
VOI   Vohitsoka        69.04 251    P      P      07 06 02.5 -0.5
VOI                                 IAmb   IAmb   07 06 05.5
      comp=Z,31nm,1.0s
IUG   Iuzhnay          69.25 323   eP      P      07 06 03.3 -0.5
IUG                                 pmax   pmax
      comp=Z,11nm,0.8s
IUG   Iuzhnay          69.25 323   eP      P      07 06 03.4 -0.5
      comp=Z,11nm,0.8s
KK31  Karatay Array    69.57 324    P      P      07 06 02.9 -2.8
KKAR  Karatay Array    69.57 324           P      07 06 03.5 -2.2
KKAR  Karatay Array    69.57 324           P      07 06 04.8 -0.9
KKAR  Karatay Array    69.57 324    P      P      07 06 04.8 -0.9
CHM   Chimkent         69.61 323   eP      P      07 06 05.7 -0.2
CHM   Chimkent         69.61 323   eP      P      07 06 05.8 -0.2
VNDA  Vanda            69.87 171    P      P      07 06 07.6 +0.6
VNDA                                IAmb   IAmb   07 06 24.7
      comp=Z,21nm,1.2s
VNDA  Vanda            69.87 171    P      P      07 06 08.3 +1.3
      comp=Z,11nm,0.9s,baz=310,slow=5.2,SNR=47
VNDA                                LR     LR     07 35 40.0
      comp=Z,165nm,19.2s,baz=329,slow=35
      comp=Z,11nm,0.9s
BRLS  Borolday         69.91 324   eP      P      07 06 05.1 -2.7
SOHO  SOHO             69.97 301    P      P      07 06 08.0 -0.6
HATD  Hatta, Dubai     70.58 301    P      P      07 06 10.6 -1.7
ASHO  Ashiyiah         70.58 301    P      P      07 06 11.8 -0.5
KURBB Kurchatov Arra   70.75 334    P      P      07 06 11.7 -1.0
      comp=Z,6.0nm,0.7s,baz=143,slow=5.4,SNR=27
KURBB                               LR     LR     07 40 37.7
      comp=Z,98nm,19.2s,baz=174,slow=39
      comp=Z,6.0nm,0.7s
KURBB Kurchatov Arra   70.75 334    P      P      07 06 09.9 -2.8
MSFE  Esma-Masafi      70.76 302    P      P      07 06 14.4 +1.0
KURK  Kurchatov        70.78 334           P      07 06 11.8 -1.1
KURK                                IAmb   IAmb   07 06 25.7
      comp=Z,12nm,0.8s
KURK  Kurchatov        70.78 334ceP        P      07 06 12.0 -0.9
KURK                                pmax   pmax
      comp=Z,13nm,0.9s
SBA   Scott Base       70.88 170    P      P      07 06 15.8 +2.6
SBA                                 pmax   pmax
      comp=Z,21nm,0.9s
ZALV  Zalesovo Beam    70.95 340    P      P      07 06 12.4 -1.4
      comp=Z,8.4nm,0.5s,baz=148,slow=2.9,SNR=24
ZALV                                LR     LR     07 39 53.3
      comp=Z,105nm,19.7s,baz=180,slow=38
      comp=Z,8.4nm,0.5s
FAQ   Al Faqa, Dubai   71.00 301    P      P      07 06 14.6 -0.2
NAZ   Nazwa, Dubai     71.03 301    P      P      07 06 14.8 -0.2
SHME  Shamm            71.04 303    P      P      07 06 15.0 -0.1
ASUD  Al Ashush, Dub   71.17 301    P      P      07 06 15.2 -0.7
MZR   Muzera           72.15 299    P      P      07 06 21.8  0.0
PEA0B Petropavlovsk-   72.30  24ceP        P      07 06 23.3 +1.3
PETK  Petropavlovsk-   72.30  24           P      07 06 22.2 +0.2
PETK  Petropavlovsk-   72.30  24    P      P      07 06 21.8 -0.3
      comp=Z,10nm,0.8s,baz=202,slow=5.9,SNR=29
PETK                                LR     LR     07 40 22.6
      comp=Z,26nm,19.4s,baz=196,slow=38
      comp=Z,10nm,0.8s
PETK  Petropavlovsk-   72.30  24    P      P      07 06 22.2 +0.2
PET   Petropavlovsk    72.62  24    P      P      07 06 24.8 +0.9
      comp=Z,34nm,1.1s
BRZS  Berezniki        72.93 331   eP      P      07 06 25.4 -0.5
BRZS  Berezniki        72.93 331   eP      P      07 06 25.5 -0.5
YAK   Yakutsk          73.56   5    LR     LR     07 40 29.7
      comp=Z,73nm,21.2s,baz=188,slow=37
YAK   Yakutsk          73.56   5   eP      P      07 06 28.7 -0.5
YAK                                e*PP    sP     07 06 36.9 +1.4
YAK                                e              07 06 43.0
YAK                                e              07 09 12.7
YAK                                ePPP    PPP    07 10 57.4
YAK                                eS      S      07 15 56.9 -1.1
YAK                                e              07 16 30.4
YAK                                eSS     SS     07 20 41.1 -0.3
YAK                                 pmax   pmax
      comp=Z,19nm,1.0s
YAK                                 pmax   pmax
      comp=N,9.0nm,1.3s
YAK                                 pmax   pmax
      comp=E,3.0nm,1.1s
YAK                                 pmax   pmax
      comp=Z,102nm,4.2s
YAK                                 pmax   pmax
      comp=N,48nm,3.8s
YAK                                 pmax   pmax
      comp=E,53nm,4.2s
YAK                                 smax   smax
      comp=N,89nm,5.2s
YAK                                 smax   smax
      comp=E,76nm,4.4s
MA2   Magadan          75.19  16    LR     LR     07 38 15.5
      comp=E,27nm,21.8s,baz=199,slow=35
MA2   Magadan          75.19  16    P      P      07 06 38.5 -0.3
      comp=E,17nm,0.9s
SYO   Syowa Base       75.61 201⇑eP        P      07 06 42.5 +1.3
SYO   Syowa Base       75.61 201⇓esP       sP     07 06 47.2 +0.1
BVA0  Borovoye Array   76.03 332  i P      P      07 06 42.7 -1.1
BVAR  Borovoye Array   76.03 332    P      P      07 06 42.7 -1.1
      comp=E,7.5nm,0.7s,baz=139,slow=7.5,SNR=28
BVAR                                LR     LR     07 43 44.9
      comp=E,78nm,20.2s,baz=131,slow=39
      comp=E,7.5nm,0.7s
BRVK  Borovoye         76.10 332    P      P      07 06 43.7 -0.5
BRVK                                IAmb   IAmb   07 06 58.8
      comp=Z,21nm,1.4s
BRVK  Borovoye         76.10 332ceP        P      07 06 43.0 -1.2
BRVK                                pmax   pmax
      comp=Z,12nm,1.3s
SEY   Seymchan         78.43  15    LR     LR     07 41 55.9
      comp=Z,48nm,21.2s,baz=152,slow=36
SEY   Seymchan         78.43  15ceP        P      07 06 57.8 +0.7
SEY                                 pmax   pmax
      comp=Z,21nm,0.9s
QSPA  South Pole Qui   78.78 180    P      P      07 06 59.9 +0.7
      comp=Z,11nm,1.0s,baz=286,slow=1.1,SNR=15
QSPA                                LR     LR     07 43 06.4
      comp=Z,286nm,18.1s,baz=354,slow=37
      comp=Z,11nm,1.0s
AB31  Akbulak array    79.10 325           P      07 07 00.1 -1.0
AB31  Akbulak array    79.10 325  i P      P      07 07 00.2 -0.8
ABKAR Akbulak array    79.10 325    P      P      07 06 59.8 -1.2
ABKAR                               IAmb   IAmb   07 07 01.7
      comp=Z,15nm,1.0s
RAYN  Ar Rayn          79.25 297    P      P      07 07 02.0 -0.5
RAYN                                pmax   pmax
      comp=Z,12nm,0.9s
RAYN  Ar Rayn          79.25 297    P      P      07 07 02.8 +0.3
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AKTO  Aktyubinsk       80.78 326    P      P      07 07 09.8 -0.4
      comp=Z,13nm,0.8s,baz=114,slow=4.0,SNR=31
AKTO                                LR     LR     07 46 33.3
      comp=Z,73nm,21.4s,baz=86,slow=38
      comp=Z,13nm,0.8s
TIXI  Tiksi            82.99   3    LR     LR     07 47 15.7
      comp=Z,74nm,20.1s,baz=204,slow=38
AKT   Akhty            83.39 314   eP      P      07 07 25.1 +0.9
AKT                                e              07 07 28.7
AKT                                 pmax   pmax
      comp=Z,24nm,1.0s
ARTI  Arti             83.63 331    P      P      07 07 23.8 -1.1
      comp=Z,8.0nm,0.9s,baz=124,slow=4.1,SNR=7.1
ARTI                                LR     LR     07 48 37.6
      comp=Z,102nm,20.9s,baz=74,slow=39
      comp=Z,8.0nm,0.9s
ARTI  Arti             83.63 331c iP       P      07 07 24.3 -0.6
ARTI                                              07 10 33.5
ARTI                                S      S      07 17 46.0 -0.1
ARTI                                SS     SS     07 23 10.2 -2.9
ARTI                                pmax   pmax
      comp=Z,9.0nm,0.9s
GNI   Garni            85.07 312  i P      P      07 07 34.0 +1.2
GNI                                 pmax   pmax
      comp=Z,15nm,1.2s
GNI   Garni            85.07 312    P      P      07 07 31.4 -1.4
      comp=Z,20nm,0.9s
GEVA  Gevas            85.73 310           P      07 07 35.5 -0.6
GEVA                                IAmb   IAmb   07 07 38.6
      comp=Z,28nm,0.9s
BILL  Bilibino         86.06  16ceP        P      07 07 36.7 -0.2
BILL                                pmax   pmax
      comp=Z,10.0nm,1.6s
GURO  Guroymak-BITLI   86.57 310    P      P      07 07 40.9 +0.6
NCK   Nalchik          86.95 315  i P      P      07 07 42.7 +0.8
NCK                                 pmax   pmax
      comp=Z,19nm,1.0s
TROLL Troll, Antarti   87.11 196   ⇑P      P      07 07 44.1 +1.8
      comp=Z,402nm,0.8s
MARD  Mardin           87.17 309           P      07 07 42.9 -0.3
LSZ   Lusaka           87.39 255    P      P      07 07 45.6 +0.8
LSZ                                 IAmb   IAmb   07 07 47.0
      comp=Z,13nm,0.8s
LSZ   Lusaka           87.39 255    P      P      07 07 45.6 +0.8
LSZ                                 pmax   pmax
      comp=Z,13nm,0.9s
TBI   Tubuai           87.46 113   eLR     LR     07 35 24.6
      comp=Z,594nm,26.5s
BELG  Belogornoye      87.48 325    LR     LR     07 51 50.8
      comp=Z,98nm,21.3s,baz=105,slow=39
BELG  Belogornoye      87.48 325  i P      P      07 07 44.3 +0.2
BELG                                pmax   pmax
      comp=Z,16nm,0.9s
KBZ   Khabaz           87.51 315    P      P      07 07 43.6 -0.9
      comp=Z,4.5nm,0.9s,baz=55,slow=0.3,SNR=5.8
      comp=Z,4.5nm,0.9s
KBZ   Khabaz           87.51 315ceP        P      07 07 44.9 +0.4
KBZ                                 pmax   pmax
      comp=Z,5.0nm,0.9s
BOSA  Boshof           87.52 241    P      P      07 07 46.1 +0.9
      comp=Z,2.8nm,0.6s,baz=84,slow=3.9,SNR=4.5
      comp=Z,2.8nm,0.6s
SHA1  Shidzhatmaz      87.68 315  i P      P      07 07 45.2 -0.4
MBAR  Mbarara          87.69 270    P      P      07 07 44.9 -1.4
MBAR                                IAmb   IAmb   07 07 48.7
      comp=Z,11nm,0.9s
MBAR  Mbarara          87.69 270  i P      P      07 07 47.1 +0.8
MBAR                                pmax   pmax
      comp=Z,12nm,1.0s
KIV   Kislovodsk       87.72 316   eP      P      07 07 46.6 +0.9
KIV                                 pmax   pmax
      comp=Z,6.0nm,1.1s
KIV   Kislovodsk       87.72 316    P      P      07 07 44.3 -1.4
      comp=Z,10nm,0.5s
PPT2  Papeete2         88.46 108   eLR     LR     07 35 48.1
      comp=Z,96nm,23.8s
SNAA  Sanae            88.73 196   ⇑P      P      07 07 51.8 +1.8
      comp=Z,136nm,1.0s
SNAA  Sanae            88.73 196    P      P      07 07 50.1 +0.1
SNAA                                IAmb   IAmb   07 07 52.8
      comp=Z,23nm,1.3s
SNAA  Sanae            88.73 196    P      P      07 07 51.5 +1.5
      comp=Z,8.4nm,1.1s,baz=104,slow=5.4,SNR=13
SNAA                                LR     LR     07 46 10.8
      comp=Z,590nm,18.4s,baz=78,slow=35
      comp=Z,8.4nm,1.1s
SNAA  Sanae            88.73 196ceP        P      07 07 52.0 +2.0
SNAA                                pmax   pmax
      comp=Z,20nm,1.3s
KIRV  Kirov            88.94 331    LR     LR     07 51 56.8
      comp=Z,84nm,21.8s,baz=119,slow=38
KIRV  Kirov            88.94 331ceP        P      07 07 50.8 -0.1
VSLR  Vesyoloye        89.42 314  i P      P      07 07 53.5 -0.1
VSLR                                pmax   pmax
      comp=Z,21nm,0.8s
SOC   Sochi            89.68 315   eP      P      07 07 52.9 -1.9
SOC                                e              07 11 33.6
SOC                                ePPP    PPP    07 13 21.7
SOC                                eS      SKSac  07 18 22.9 -1.5
SOC                                eSSS    SSS    07 28 20.0
BELA  Belgrano 2       89.76 185    P      P      07 07 55.4 +0.7
BELA                                IAmb   IAmb   07 08 08.8
      comp=Z,13nm,0.9s
MMAI  Mount Meron Ar   90.34 303    P      P      07 08 00.1 +1.9
      comp=Z,1.3nm,0.4s,baz=94,slow=8.6,SNR=4.8
      comp=Z,1.3nm,0.4s
DIKM  Dikmen           92.39 312    P      P      07 08 07.1 -0.3
      comp=Z,29nm,1.8s
CSS   Mathiatis        92.44 305    P      P      07 08 07.4 -0.5
      comp=Z,8.2nm,1.2s
BR104 Keskin Array S   93.18 310    P      P      07 08 10.6 -0.7
      comp=Z,39nmcomp=Z,4.1nm,1.1s
BR131 Keskin Array S   93.18 310    P      P      07 08 10.8 -0.6
BR131 Keskin Array S   93.18 310  i P      P      07 08 10.4 -0.9
BRTR  Keskin Array B   93.18 310    P      P      07 08 10.9 -0.4
BRTR  Keskin Array B   93.18 310    P      P      07 08 11.2 -0.1
      comp=Z,2.3nm,0.8s,baz=122,slow=6.0,SNR=11
      comp=Z,2.3nm,0.8s
BR105 Keskin Array S   93.20 310    P      P      07 08 10.8 -0.6
      comp=Z,4.2nm,1.1s
BZK   Bozkurt          93.37 312    P      P      07 08 11.6 -0.3
      comp=Z,41nm,1.4s
KLMR  Klimovskoe       94.42 331   eP      P      07 08 13.6 -2.7
KLMR                                pmax   pmax
      comp=Z,21nm,1.4s
OBN   Obninsk          94.55 325⇑eP        P      07 08 16.9 -0.1
OBN                                e*PP    pP     07 08 18.9 -2.3
OBN                                e*SP    sP     07 08 23.3  0.0
OBN                               i SS     SS     07 25 50.3 -1.4
OBN                                 SSS    SSS    07 29 34.0
OBN                                 pmax   pmax
      comp=Z,6.0nm,0.4s
OBN                                 MLR    MLR
      comp=Z,68nm,24.0s
F15K  North Star Dit   94.81  24    P      P      07 08 17.9 -0.1
G16K  Koyuk River      95.65  24    P      P      07 08 22.4 +0.6
G16K                                IAmb   IAmb   07 08 23.3
      comp=Z,8.4nm,0.8s
E18K  Tukpahlearik C   96.81  23    P      P      07 08 27.7 +0.6
E18K                                IAmb   IAmb   07 08 32.2
      comp=Z,5.4nm,0.9s
G19K  Purcell Mounta   97.93  24           P      07 08 31.8 -0.3
G19K                                IAmb   IAmb   07 08 33.9
      comp=Z,6.6nm,0.8s
E19K  Redstone River   98.09  23    P      Pdif   07 08 33.1 +0.2
E19K                                IAmb   IAmb   07 08 38.5
      comp=Z,5.1nm,0.9s
AK07  Malin Array Si   98.13 320    P      P      07 08 32.0 -1.4
AKASG Malin Array Be   98.14 320    P      P      07 08 31.9 -1.5
      comp=Z,1.3nm,0.8s,baz=89,slow=3.7,SNR=4.8
AKASG                               PP     PP     07 12 32.0 -1.0
      comp=Z,1.1nm,0.8s,baz=86,slow=6.5,SNR=4.1
AKASG                               LR     LR     08 02 14.8
      comp=Z,46nm,18.3s,baz=18,slow=41
      comp=Z,1.3nm,0.8s
AKASG Malin Array Be   98.14 320  i P      P      07 08 32.2 -1.2
AKASG                               pmax   pmax
      comp=Z,1.0nm,0.6s
AK06  Malin Array Si   98.14 320    P      P      07 08 32.4 -1.0
LUBAR Lubar, Ukraine   98.97 319    P      P      07 08 36.4 -0.8
TAOE  Nuku Hiva Isla   99.27 101   eLR     LR     07 40 56.1
      comp=Z,63nm,25.3s
MNK   Minsk            99.41 324  i P      Pdif   07 08 37.6 -1.5
      comp=E,7.0nm,0.6s,baz=324
MNK                               i P      Pdif   07 08 37.6 -1.5
      comp=N,11nm,0.6s,baz=324
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MNK				*i* P	Pdif	07 08 37.6	-1.5
	comp=Z,6.0nm,0.6s,baz=324						
MNK				*i* PP	PP	07 12 41.3	-1.2
	baz=324						
MNK				*i* PPP	PPP	07 14 47.8	
	baz=324						
MNK				*i* S	SKSac	07 19 15.7	-0.8
	baz=324						
MNK				*i* PS	PS	07 21 46.2	+6.3
	baz=324						
MNK				*i* SS	SS	07 27 02.6	+2.3
	baz=324						
MNK				*i* SSS	SSS	07 30 39.9	
	baz=324						
MNK	Minsk	99.41	324	*i* P	Pdif	07 08 37.5	-1.5
MNK				*i*		07 12 41.2	
MNK				*i* PPP	PPP	07 14 47.7	
MNK				*i* S	SKSac	07 19 15.6	-0.8
MNK				*i* PS	PS	07 21 46.1	+6.3
MNK				*i* SS	SS	07 27 02.6	+2.3
MNK				pmax	pmax		
	comp=E,7.0nm,0.6s						
MNK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MNK				pmax	pmax		
	comp=N,11nm,0.6s						
KMPD	K-Podol'skiy	99.67	318	P	Pdif	07 08 38.4	-1.9
MLR	Muntele Rosu	99.69	315	LR	LR	08 01 29.5	
	comp=N,66nm,18.3s,baz=218,slow=40						
FINES	FINESS Array B	100.94	331	P	Pdif	07 08 45.1	-0.5
	comp=N,4.5nm,0.7s,baz=88,slow=6.3,SNR=12						
FINES	FINESS Array B	100.94	331	*i* P	Pdif	07 08 45.7	0.0
FINES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ARCES	ARCESS Array B	101.49	339	P	Pdif	07 08 47.6	-0.4
	comp=Z,8.7nm,1.0s,baz=116,slow=4.1,SNR=6.7						
ILAR	Eielson Array	102.04	26	P	Pdif	07 08 50.5	-0.1
	comp=Z,0.1nm,0.5s,baz=304,slow=6.1,SNR=2.0						
ILAR				PP	PP	07 13 02.1	-0.1
	comp=Z,0.9nm,1.2s,baz=270,slow=5.7,SNR=4.1						
YKA	Yellowknife Ar	116.42	24	PKP	PKiKP	07 13 39.9	-0.1
	comp=Z,0.9nm,0.9s,baz=306,slow=2.6,SNR=10						
YKA				PKKPbc	PKKPbc	07 24 07.7	-3.0
	comp=Z,0.5nm,0.9s,baz=104,slow=4.6,SNR=5.8						
TORD	Torodi Ar. Bea	118.35	279	PKP	PKiKP	07 13 45.4	+0.2
	comp=Z,2.0nm,0.8s,baz=45,slow=2.2,SNR=11						
ESDC	Sonseca Array	121.98	310	PKP	PKiKP	07 13 52.2	+0.5
	comp=Z,0.5nm,0.7s,baz=72,slow=4.3,SNR=4.1						
ESDC				PKKPab	PKKPbc	07 23 50.6	+0.8
	comp=Z,0.2nm,0.3s,baz=262,slow=4.8,SNR=4.2						
DBIC	Dimbokro	123.94	271	PKP	PKiKP	07 13 56.6	+0.5
	comp=Z,3.5nm,0.6s,baz=155,slow=2.0,SNR=4.8						
PLCA	Paso Flores	127.62	171	PKP	PKiKP	07 14 02.9	-0.1
	comp=Z,2.0nm,1.1s,baz=243,slow=9.0,SNR=3.1						
PDAR	Pinedale Array	127.86	44	PKP	PKiKP	07 14 04.4	+0.9
	comp=Z,0.3nm,0.4s,baz=264,slow=3.2,SNR=1.4						
TXAR	Lajitas Array	136.82	59	PKhKP	PKPpre	07 14 15.2	
	comp=Z,0.7nm,0.8s,baz=312,slow=1.8,SNR=3.9						
CFA	Coronel Fontan	136.92	172	PKP	PKPdf	07 14 20.1	-0.1
	comp=Z,2.0nm,0.7s,baz=298,slow=22,SNR=7.8						
CPUP	Villa Florida	142.44	186	PKhKP	PKPpre	07 14 28.0	
	comp=Z,0.7nm,0.8s,baz=108,slow=3.5,SNR=4.1						
O48B	Farmland	144.32	32		PKPdf	07 14 32.2	-0.9
P48A	Milroy	144.76	33	PKPdf	PKPbc	07 14 33.0	+0.2
LONY	Lake Ozonia	144.88	16		PKPab	07 14 32.2	-0.8
L56A	Greenwood	146.16	22		PKPdf	07 14 35.2	-1.0
Y49A	Blount Mountai	147.97	41	PKPbc	PKPbc	07 14 42.5	0.0
AQDB	Aquidauana	147.98	190		PKPbc	07 14 41.4	-1.5
PB11	IPOC Station P	148.17	165	PKPab	PKiKP	07 14 45.6	+0.1
BDFB	Brasilia	150.15	207	PKP	PKPdf	07 14 44.6	+1.0
	comp=Z,26nm,1.0s,baz=147,slow=7.5,SNR=4.5						
BDFB				PKPbc	PKiKP	07 14 50.0	+0.5
	comp=Z,28nm,1.0s,baz=151,slow=1.7,SNR=22						
PB18	Visviri	150.29	164		PKPab	07 14 53.3	-2.2
LPAZ	La Paz	151.88	166	PKPbc	PKiKP	07 14 54.9	+1.1
	comp=Z,9.1nm,0.9s,baz=122,slow=2.1,SNR=29						
SIV	San Ignacio	152.95	181	PKPbc	PKiKP	07 14 56.6	+1.4
	comp=Z,7.1nm,1.0s,baz=170,slow=1.1,SNR=12						

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*ASRS **14** 06:59:25.0±1.1, 53°.96N×86°.56E, h0^{km}, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 14 06:59:27.2±2.9**, 53°.98N×86°.58E, h0**^{km}**, mbtmp2.7**/2**, ML2.5**/2**, Error ellipse: s-maj=24.8km s-min=14.4km az=52.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.04	269	I	I	07 06 40.0	
	baz=88,slow=324,SNR=1.1						
ZALV	Zalesovo Beam	1.04	269	Pg	Pg	06 59 46.2	-0.9
	0.7nm,0.3s,baz=90,slow=20,SNR=7.5						
ZALV				Lg	Lg	07 00 01.5	
	1.6nm,0.3s,baz=97,slow=29,SNR=9.7						
KURBB	Kurchatov Arra	5.97	239	Pn	Pn	07 00 58.0	+1.3
	0.1nm,0.3s,baz=57,slow=14,SNR=6.6						
	0.5nm,0.4s						
MKAR	Makanchi Array	7.69	203	Pn	Pn	07 01 21.2	+0.8
	0.1nm,0.3s,baz=25,slow=14,SNR=6.8						
MKAR				Lg	Lg	07 03 32.7	
	baz=22,slow=28,SNR=6.2						
	0.1nm,0.3s						

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*NEIC **14** 07:06:24.3±1.8, 14°.28N±0°.06×93°.17W±0°.05, h10^{km}±1^{km}, mb4.4/51, Md4.7/91(MEX), Error ellipse: s-maj=9.9km s-min=7.5km az=155.0*

*MEX **14** 07:06:24.9±0.9, 14°.15N×93°.40W, h13^{km}±31^{km}, MD4.7*

*GCG **14** 07:06:26.4±2.0, 14°.22N×93°.18W, h50^{km}±67^{km}, MD4.7, ML3.9, MW4.1*

*CATAC **14** 07:06:29.1±0.5, 14°N±3°×9°3W±°, h7^{km}±3^{km}, M4.6/24, mb4.7/7, mB5.2/6, MLv4.6/24, Mw(mB)4.5/6, Error ellipse: s-maj=6.7km s-min=6.4km az=87.5, confirmed*

*IDC **14** 07:06:33.4±3.4, 14°.56N×92°.71W, h93^{km}±30^{km}, mb3.8/13, mbtmp4.1/15, MS3.7/24, Error ellipse: s-maj=32.3km s-min=12.9km az=55.0*

ISC 14 07:06:23.1±1.5**, 14°.22N**±0°.04×**93°.23W**±0°.03**, h13**^{km}±9^{km}**, n441**, σ1^{s}**77**/483**, mb4.4**/25**, MS3.6**/22**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.16	54		Pg	07 06 45.0	-0.4
THIG					Sn	07 07 00.7	0.0
THIG		1.16	54	*e*P	Pg	07 06 45.0	-0.4
THIG				*e*S	Sn	07 07 00.7	0.0
THIG		1.16	54	*i* P	Pg	07 06 45.1	-0.4
THIG				*i* S	Sn	07 07 00.6	0.0
SMCA	Catarina	1.29	60	*i* P	Pb	07 06 46.9	-0.2
SMCA				*i* S	Sn	07 07 03.1	-0.7
PATR	El Naranjo	1.31	47	*e*P	Pn	07 06 47.0	-0.4
PATR				*e*S	Sg	07 07 05.4	-0.1
PAVE	Pavencul	1.41	46	*e*P	Pn	07 06 48.3	-0.3
PAVE				*e*S	Sg	07 07 07.7	-0.7
PCIG		1.48	0		Sn	07 07 07.0	-1.5
PCIG		1.48	0	*e*P	Pn	07 06 47.9	-1.5
PCIG				*e*S	Sn	07 07 07.0	-1.5
RTAL	Retalhuleu	1.52	78		Pb	07 06 50.8	-0.3
RTAL	Retalhuleu	1.52	78	*e*P	Pb	07 06 50.6	-0.5
RTAL				*e*S	Sb	07 07 10.2	-0.2
RTAL	Retalhuleu	1.52	78	P	Pb	07 06 50.8	-0.3
RTAL	Retalhuleu	1.52	78	S	Sn	07 07 08.1	-1.6
STG8	El Palmar, Qui	1.84	83	*i* P	Pn	07 06 52.4	-2.1
STG8				*i* S	Sn	07 07 14.7	-3.1
STG0	El Palmar, Qui	1.84	83	*i* P	Pn	07 06 52.4	-2.1
STG0				*i* S	Sn	07 07 14.5	-3.3
SOKI	Kika Raxquin	1.87	71	*i* P	Pb	07 06 56.4	-0.9
HUEH	Huehuetenango	2.00	57		Pb	07 06 58.5	-0.9
HUEH	Huehuetenango	2.00	57	*e*P	Pb	07 06 58.5	-0.9
HUEH				*e*S	Sg	07 07 24.9	-2.5
HUEH	Huehuetenango	2.00	57	*i* P	Pb	07 06 58.5	-0.9
HUEH				*i* S	Sn	07 07 21.6	-0.2
HUEH				IAML		07 07 36.3	
	comp=Z,4μm,0.6s						
HUEH	Huehuetenango	2.00	57	P	Pb	07 06 58.5	-0.9
CCIG	Comitan	2.31	27		Pb	07 07 03.4	-1.3
CCIG	Comitan	2.31	27	*e*P	Pb	07 07 03.3	-1.4
CCIG				*e*S	Sb	07 07 33.2	0.0
CCIG	Comitan	2.31	27	*i* P	Pb	07 07 03.2	-1.4
CCIG				*i* S	Sb	07 07 33.6	+0.4
CCIG				IAML		07 07 41.7	
	comp=N,4μm,0.5s						
CCIG	Comitan	2.31	27	P	Pb	07 07 03.5	-1.1
CCIG	Comitan	2.31	27	S	Sb	07 07 30.9	-2.3
ESSG	Sabana Grande	2.33	86	*i* P	Pb	07 07 03.2	-1.9
ESSG				IAML		07 07 48.1	
	comp=Z,821nm,0.7s						
TGBT	Tuxtla Gutierr	2.55	3		Pn	07 07 05.4	+1.3
TGBT					Sn	07 07 35.2	+0.3
TGBT	Tuxtla Gutierr	2.55	3	*e*P	Pn	07 07 05.3	+1.3
TGBT				*e*S	Sn	07 07 35.2	+0.3
TGIG		2.55	2		Pn	07 07 05.3	+1.1
TGIG					Sn	07 07 35.4	+0.3
TGIG		2.55	2	*e*P	Pn	07 07 05.3	+1.1
TGIG				*i* S	Sn	07 07 35.4	+0.3
TGIG		2.55	2	*i* P	Pn	07 07 05.2	+1.0
TGIG				*i* S	Sn	07 07 35.2	+0.1
TGIG				IAML		07 07 51.4	
	comp=Z,2μm,0.6s						
FG8	Yepocapa, Chim	2.59	89	*i* P	Pn	07 07 00.4	-4.4
FG8				*i* S	Sn	07 07 27.4	-8.8
FG16	Alotenango, Sa	2.64	89	*i* P	Pn	07 07 01.7	-3.9
FG16				IAML		07 07 44.2	
	comp=Z,2μm,0.6s						
GCG4	OSOP	2.64	82	*i* P	Pn	07 07 07.3	+1.8
GCG4				*i* S	Sn	07 07 38.7	+1.2
FAME	Alcaldia de Sa	3.14	96	P	Pn	07 07 15.1	+2.8
FAME	Alcaldia de Sa	3.14	96	S	Sn	07 07 50.7	+0.9
HUIG	Huatulco	3.18	299	*e*P	Pn	07 07 10.5	-2.3
HUIG				*e*S	Sn	07 07 43.7	-6.9
HUIG	Huatulco	3.18	299	*i* P	Pn	07 07 11.8	-1.0
SLOZ	Alcaldia de Sa	3.35	93	S	Sn	07 07 55.7	+0.8
SLOZ	Alcaldia de Sa	3.35	93	P	Pn	07 07 18.1	+2.9
NUBE	Las Nubes	3.36	95	*i* P	Pn	07 07 16.8	+1.4
NUBE	Las Nubes	3.36	95	P	Pn	07 07 18.9	+3.4
CEVE	Cerro Verde	3.52	96	P	Pn	07 07 21.1	+3.3
CEVE	Cerro Verde	3.52	96	S	Sn	07 08 00.3	+0.8
UNIC	Universidad Ca	3.58	93	P	Pn	07 07 21.4	+3.0
JAYA	Jayaque - finc	3.71	98	*i* P	Pn	07 07 21.4	+1.0
JAYA				*i* S	Sn	07 08 03.1	-1.0
JAYA	Jayaque - finc	3.71	98	S	Sn	07 08 05.0	+0.9
JAYA	Jayaque - finc	3.71	98	P	Pn	07 07 23.2	+2.9
VHSA	Villahermosa	3.75	4	*e*P	Pn	07 07 22.7	+2.1
VHSA				*e*S	Sn	07 08 06.8	+2.0
MTO3	Montecristo	3.76	87		Pn	07 07 21.7	+0.8
MTO3	Montecristo	3.76	87	*i* P	Pn	07 07 21.7	+0.8
MTO3	Montecristo	3.76	87	P	Pn	07 07 23.9	+2.9
ESQI	Esquipulas	3.78	84		Pn	07 07 22.0	+0.7
ESQI	Esquipulas	3.78	84	P	Pn	07 07 22.9	+1.7
PMON	Piamonte	3.83	97	P	Pn	07 07 25.0	+3.1
PMON	Piamonte	3.83	97	S	Sn	07 08 08.3	+1.3
TUIG	Tuzandepetl	3.96	343	*e*P	Pn	07 07 23.6	0.0
TUIG				*e*S	Sn	07 08 11.3	+1.4
LOMA	Loma Larga	3.98	98	P	Pn	07 07 27.0	+3.0
LOMA	Loma Larga	3.98	98	S	Sn	07 08 11.7	+1.1
PEIG	Puerto Escondi	4.17	296	*e*P	Pn	07 07 25.4	-1.1
PEIG				*e*S	Sn	07 08 07.9	-7.4
PAVA	Las Pavas	4.20	96	S	Sn	07 08 16.7	+0.7
PAVA	Las Pavas	4.20	96	P	Pn	07 07 29.3	+2.4
PETF	Flores	4.21	50		Pn	07 07 27.9	+0.9
PETF	Flores	4.21	50	*e*P	Pn	07 07 28.8	+1.9
PETF				*e*S	Sn	07 08 13.5	-2.5
PETF	Flores	4.21	50	IAML		07 07 12.4	
	comp=Z,6.6nm,0.2s						
PETF				*i* P	Pn	07 07 29.2	+2.2
PETF				*i* S	Sn	07 08 13.2	-2.8
COEG	Centro de Oper	4.27	98	S	Sn	07 08 19.2	+1.6
COEG	Centro de Oper	4.27	98	P	Pn	07 07 31.1	+3.3
TECO	Alcaldia de Te	4.38	98	P	Pn	07 07 32.6	+3.3
OXLC	Oaxaca	4.38	311	*e*S	Sn	07 08 17.1	-3.5
SCLA	Alcaldia de Sa	4.40	96	P	Pn	07 07 32.2	+2.5
OXIG	Oaxaca	4.41	311		Pn	07 07 31.0	+1.1
VHO	Vista Hermosa	4.41	311	*e*P	Pn	07 07 31.0	+1.1
VHO				*e*S	Sn	07 08 18.1	-3.1
ALJI	Alcalda de J	4.61	101	P	Pn	07 07 36.0	+3.5
IZABA	Izabal, Puerto	4.74	71	*e*S	Sn	07 08 35.0	+5.9
YOIG	Yosondua	4.92	303		Pn	07 07 39.3	+2.3
YOIG	Yosondua	4.92	303	*e*P	Pn	07 07 39.3	+2.3
YOIG				*e*S	Sn	07 08 32.1	-1.8
PNIG	Pinotepa	5.20	295		Pn	07 07 40.5	0.0
PNIG	Pinotepa	5.20	295	*e*P	Pn	07 07 40.5	0.0
PNIG				*e*S	Sn	07 08 30.8	-10
TXIG	Tlaxiaco	5.31	305		Pn	07 07 44.8	+2.4
TXIG					Sn	07 08 45.7	+2.1
TXIG	Tlaxiaco	5.31	305	*e*P	Pn	07 07 44.8	+2.4
TXIG				*e*S	Sn	07 08 45.7	+2.1
CNCH	Conchagua	5.33	99	S	Sn	07 08 45.4	+1.6
CNCH	Conchagua	5.33	99	P	Pn	07 07 45.3	+2.8
TOIG	Toxpalan	5.33	317		Pn	07 07 44.8	+2.3
TOIG	Toxpalan	5.33	317	*e*P	Pn	07 07 44.8	+2.3
TOIG				*e*S	Sn	07 08 40.5	-3.4
HLIG	Huajuapan de L	5.68	310		Pn	07 07 49.7	+2.4
HLIG					Sn	07 08 53.7	+1.2
HLIG	Huajuapan de L	5.68	310	*e*P	Pn	07 07 49.7	+2.4
HLIG				*e*S	Sn	07 08 53.7	+1.2
POTN	Potosi Cosigui	5.70	102	P	Pn	07 07 50.0	+2.6
POTN				S	Sn	07 08 54.8	+2.0
TPIG	Tehuac#an	5.76	317		Pn	07 07 50.9	+2.4
TPIG					Sn	07 08 55.7	+1.1
TPIG	Tehuac#an	5.76	317	*e*P	Pn	07 07 50.9	+2.4
TPIG				*e*S	Sn	07 08 55.7	+1.1
TGUH	Tegucigalpa,Un	5.78	91	Pn	Pn	07 07 48.4	-0.4
TGUH	Tegucigalpa,Un	5.78	91	P	Pn	07 07 51.2	+2.5
FTIG	Fresnillo de T	5.97	309		Pn	07 07 53.2	+1.9
FTIG	Fresnillo de T	5.97	309	*e*P	Pn	07 07 53.2	+1.9
FTIG				*e*S	Sn	07 08 57.8	-1.9
MGIG	Malinaltepec	6.00	301		Pn	07 07 54.4	+2.5
MGIG					Sn	07 09 02.3	+1.7
MGIG	Malinaltepec	6.00	301	*e*P	Pn	07 07 54.4	+2.5
MGIG				*e*S	Sn	07 09 02.3	+1.7
TLIG	Tlapa	6.12	304		Pn	07 07 55.6	+2.3
TLIG	Tlapa	6.12	304	*e*P	Pn	07 07 55.4	+2.0
TLIG				*e*S	Sn	07 09 00.2	-3.0
CRIN	San Cristobal	6.20	103	Pn	Pn	07 07 56.8	+2.4
CRIG	Cruz Grande	6.21	295		Pn	07 07 55.5	+1.0
CRIG	Cruz Grande	6.21	295	*e*P	Pn	07 07 55.5	+1.0
CRIG				*e*S	Sn	07 08 55.4	-10
HERN	Volcan Telica	6.43	104	Pn	Pn	07 08 01.3	+3.7
HERN	Volcan Telica	6.43	104	P	Pn	07 08 00.8	+3.2
CNGN	Cerro Negro	6.58	104		Pn	07 08 00.5	+0.8
LIMN	Finca el Limon	6.77	99	P	Pn	07 08 05.2	+2.8
DAIG	Los Arroyos	6.78	295		Pn	07 08 04.0	+1.6
DAIG					Sn	07 09 20.9	+1.3
DAIG	Los Arroyos	6.78	295	*e*P	Pn	07 08 04.0	+1.6
DAIG				*e*S	Sn	07 09 20.9	+1.3
PBCV	Popocatepetl	6.97	314	*e*P	Pn	07 08 06.6	+1.4
PBCV				*e*S	Sn	07 09 26.1	+1.5
PBXN	Popocatepetl	7.05	313	*e*P	Pn	07 08 09.9	+3.4
PBXN				*e*S	Sn	07 09 21.9	-5.0
PPM	Popocatepetl	7.07	314	*e*P	Pn	07 08 10.3	+3.6
PPM				*e*S	Sn	07 09 30.4	+3.1
PPIG	Popocatepetl	7.07	314		Pn	07 08 10.3	+3.5
PPIG					Sn	07 09 30.4	+3.1
MGAN	Managua	7.11	106		Pn	07 08 07.4	+0.6
MEIG	Mezcala	7.16	302		Pn	07 08 10.0	+2.4
MEIG	Mezcala	7.16	302	*e*P	Pn	07 08 10.0	+2.4
MEIG				*e*S	Sn	07 09 24.9	-4.1
MATN	Matagalpa	7.22	99	P	Pn	07 08 11.8	+3.3
AMVM	AMECAMECA	7.22	313	*e*P	Pn	07 08 10.7	+2.0
AMVM				*e*S	Sn	07 09 35.4	+4.5
CXUV	Coxquihui	7.24	325	*e*P	Pn	07 08 09.0	+0.3
CXUV				*e*S	Sn	07 09 29.8	-1.0
YAIG	Yautepec	7.25	310		Pn	07 08 11.3	+2.4
YAIG	Yautepec	7.25	310	*e*P	Pn	07 08 11.3	+2.4
YAIG				*e*S	Sn	07 09 27.6	-3.8
PLIG	Platanillo	7.31	305		Pn	07 08 11.4	+1.7
PLIG					Sn	07 09 36.1	+3.4
PLIG	Platanillo	7.31	305	*e*P	Pn	07 08 11.4	+1.7
PLIG				*e*S	Sn	07 09 36.1	+3.4
CAIG	El Cayaco	7.34	293	*e*P	Pn	07 08 05.4	-4.6
CAIG				*e*S	Sn	07 09 36.5	+3.3
MPVM	San Francisco	7.43	313	*e*P	Pn	07 08 14.4	+2.9
MPVM				*e*S	Sn	07 09 42.8	+7.0
MYIG	Merida	7.48	26	*e*P	Pn	07 08 11.3	-0.6
MYIG				*e*S	Sn	07 09 37.2	+0.5
TLVM	San Miguel Top	7.54	312	*e*P	Pn	07 08 06.3	-6.8
BOAB	BOACO BROADBAN	7.57	103		Pn	07 08 12.0	-1.2
BOAB	BOACO BROADBAN	7.57	103	P	Pn	07 08 16.5	+3.3
UNM	Universidad Na	7.63	313	*e*S	Sn	07 09 31.1	-10
AOVM	Tlapan	7.70	312	*e*P	Pn	07 08 10.0	-5.4
AOVM				*e*S	Sn	07 09 34.9	-7.8
INVM	La Marquesa	7.75	311	*e*P	Pn	07 08 08.8	-7.2
INVM				*e*S	Sn	07 09 43.3	-0.8
AZVM	Cuida Lopez Ma	7.87	313	*e*S	Sn	07 09 37.2	-10
ARIG	Puente Sto Nin	7.94	302		Pn	07 08 20.7	+2.5
ARIG					Sn	07 09 51.5	+3.4
ARIG	Puente Sto Nin	7.94	302	*e*P	Pn	07 08 20.7	+2.5
ARIG				*e*S	Sn	07 09 51.5	+3.4
ACON	Acoyapa	8.16	105		Pn	07 08 22.1	+0.8
DHIG	Demacu	8.20	318		Pn	07 08 25.3	+3.2
DHIG					Sn	07 09 57.3	+2.5
DEIG	Demacu	8.20	318	*e*P	Pn	07 08 25.3	+3.2
DEIG				*e*S	Sn	07 09 57.3	+2.5
ZIIG	Zihuatanejo	8.61	294		Pn	07 08 27.4	0.0
ZIIG					Sn	07 10 08.8	+4.3
ZIIG	Zihuatanejo	8.61	294	*e*P	Pn	07 08 27.4	0.0
ZIIG				*e*S	Sn	07 09 57.1	-7.4
CTUV	Llano Grande	8.71	327	*e*P	Pn	07 08 31.6	+2.9
CTUV				*e*S	Sn	07 10 07.8	+0.9
JTS	Las Juntas de	8.98	115		Pn	07 08 34.8	+2.2
JTS	Las Juntas de	8.98	115	P	Pn	07 08 36.4	+3.7
	comp=Z,1.7nm,0.5s,baz=299,slow=20,SNR=5.5						
MOIG	Morelia	9.35	307	Pn	Pn	07 08 39.1	+1.3
MOIG	Morelia	9.35	307	*e*P	Pn	07 08 41.3	+3.5
MOIG				*e*S	Sn	07 10 23.1	0.0
JRQG	Juriquilla Cam	9.43	314	*e*P	Pn	07 08 43.7	+4.8
JRQG				*e*S	Sn	07 10 26.3	+1.2
RPIG	Rio Verde	9.96	321	*e*P	Pn	07 08 52.8	+6.7
RPIG				*e*S	Sn	07 10 37.7	-0.3
LCR2	La Lucha 2	10.06	115	Pn	Pn	07 08 48.8	+1.2
GTIG	Gomez Farias	10.44	328	*e*P	Pn	07 08 51.1	-1.5
GTIG				*e*S	Sn	07 10 45.4	-4.2
MMIG	Aquila	10.52	294	*e*P	Pn	07 08 59.3	+5.6
SOR	Soroa	12.90	47	Pn	Pn	07 09 25.7	-0.6
833A	Chaparral WMA,	15.16	339		Pn	07 09 57.6	+0.6
HNDO	Hondo	16.23	341	Pn	Pn	07 10 11.6	+0.6
DRIO	Del Rio	16.60	337	Pn	Pn	07 10 15.6	-0.1
435B	Jarrell	16.96	347		Pn	07 10 20.0	-0.2
435B				IAmb	IAmb	07 10 33.7	
	comp=Z,23nm,0.8s						
HPIG		17.17	319	Pn	Pn	07 10 23.4	+0.4
JCT	Junction City	17.28	341		Pn	07 10 24.6	+0.4
JCT				IAmb	IAmb	07 10 32.2	
	comp=Z,27nm,1.1s						
SAND	Sanderson	17.68	334		P	07 10 30.6	+0.5
SAND				IAmb	IAmb	07 10 38.4	
	comp=Z,44nm,1.1s						
BRDY	Brady	17.79	344	Pn	Pn	07 10 30.0	-0.6
TXAR	Lajitas Array	17.87	329	P	P	07 10 34.4	+2.1
	comp=Z,4.6nm,0.9s,baz=150,slow=15,SNR=28						
TXAR				LR	LR	07 17 35.9	
	comp=Z,69nm,19.3s,baz=128,slow=37						
TX31	Lajitas Ar. Si	17.88	329		P	07 10 33.5	+1.3
FW14	Alvarado	18.45	349	P	P	07 10 37.1	-1.4
FW14				IAmb	IAmb	07 10 45.2	
	comp=Z,20nm,0.9s						
143A	Socs Landing,	18.48	5		P	07 10 37.9	-0.8
143A				IAmb	IAmb	07 10 57.9	
	comp=Z,23nm,0.9s						
FW07	Weatherford	18.86	348	P	P	07 10 43.3	+0.3
FW07				IAmb	IAmb	07 10 52.4	
	comp=Z,14nm,0.7s						
LPIG	La Paz	18.87	304	LR	LR	07 17 05.7	
	comp=Z,98nm,19.2s,baz=170,slow=33						
SGCY	Sterling City	19.04	339	P	Pn	07 10 45.7	-0.1
SGCY				IAmb	IAmb	07 10 58.7	
	comp=Z,31nm,1.0s						
MNHN	Monahans	19.15	334		Pn	07 10 47.2	0.0
MNHN				IAmb	IAmb	07 10 55.8	
	comp=Z,49nm,1.3s						
Y45A	Yeager Farm, C	19.84	9	P	P	07 10 53.9	+0.1
Y45A				IAmb	IAmb	07 11 01.3	
	comp=Z,27nm,0.9s						
POST	Post	20.22	340		P	07 10 58.8	+0.9
POST				IAmb	IAmb	07 11 11.9	
	comp=Z,20nm,1.0s						
DKNS	Dickens	20.58	341	P	P	07 11 02.5	+0.6
DKNS				IAmb	IAmb	07 11 05.0	
	comp=Z,12nm,0.8s						
MNTX	Cornudas Mount	20.65	329		Pn	07 11 04.2	-0.7
MNTX				IAmb	IAmb	07 11 08.2	
	comp=Z,12nm,0.8s						
SLOR	San Lorenzo -	20.82	134		P	07 11 05.7	+0.7
ROSC	El Rosal	20.83	115	P	Pn	07 11 09.2	+1.7
ROSC				IAmb	IAmb	07 11 17.5	
	comp=Z,24nm,1.1s						
ROSC	El Rosal	20.83	115	P	P	07 11 04.9	-0.2
	comp=Z,4.3nm,0.4s,baz=299,slow=13,SNR=7.5						
	comp=Z,4.3nm,0.4s						
FLOC	Florencia	21.44	124		P	07 11 14.3	+3.0
FLOC				IAmb	IAmb	07 11 26.1	
	comp=Z,29nm,1.3s						
RUSC	La Rusia	21.48	111		P	07 11 15.0	+2.8
RUSC				IAmb	IAmb	07 11 19.7	
	comp=Z,19nm,1.0s						
LCAR	Lake Charles	21.84	5	P	P	07 11 14.1	-1.2
AMTX	Amarillo	21.94	341		P	07 11 16.5	0.0
U38A	Gravette	22.15	358	P	P	07 11 18.3	-0.4
HODGE	Hodges	22.26	25	P	P	07 11 19.5	-0.4
HODGE				IAmb	IAmb	07 11 38.6	
	comp=Z,15nm,1.0s						
SDV	Santo Domingo	22.76	101	LR	LR	07 22 10.5	
	comp=Z,134nm,18.7s,baz=260,slow=42						
T42A	Van Buren	22.80	4		P	07 11 25.0	-0.6
TKL	Tuckaleechee C	22.98	20	P	P	07 11 26.8	-0.7
TKL				IAmb	IAmb	07 11 43.7	
	comp=Z,21nm,1.1s						
TKL	Tuckaleechee C	22.98	20	LR	LR	07 22 14.1	
	comp=Z,206nm,18.5s,baz=198,slow=42						
BNM	Barren Site	23.26	331		P	07 11 31.3	+0.7
CCM	Cathedral Cave	23.81	4	P	P	07 11 33.8	-1.9
CCM				IAmb	IAmb	07 11 36.1	
	comp=Z,14nm,1.0s						
ANMO	Albuquerque	23.84	332		P	07 11 37.7	+1.5
ANMO	Albuquerque	23.84	332	LR	LR	07 23 02.2	
	comp=Z,94nm,18.7s,baz=234,slow=42						
ATAH	Atahualpa	25.82	144	LR	LR	07 20 35.4	
	comp=Z,112nm,18.8s,baz=311,slow=33						
X16A	Lo Mia Camp, P	25.99	324		P	07 11 57.5	+1.6
SJG	San Juan	26.29	78	LR	LR	07 22 18.0	
	comp=Z,116nm,21.1s,baz=262,slow=37						
ISCO	Idaho Springs	27.71	339		P	07 12 12.1	+0.7
ISCO				IAmb	IAmb	07 12 24.6	
	comp=Z,6.5nm,1.2s						
PCRV	Puerto La Cruz	28.23	95	LR	LR	07 25 19.9	
	comp=Z,124nm,18.8s,slow=40						
PFO	Pinyon Flats O	28.58	317	LR	LR	07 25 53.0	
	comp=Z,114nm,18.0s,baz=192,slow=40						
SPR3	Spring Creek 3	30.91	327		P	07 12 41.4	+1.5
SPR3				IAmb	IAmb	07 12 42.8	
	comp=Z,4.5nm,1.1s						
PDAR	Pinedale Array	31.74	337	P	P	07 12 47.9	+0.8
	comp=Z,1.0nm,0.7s,baz=141,slow=7.6,SNR=6.9						
PDAR				LR	LR	07 28 49.9	
	comp=Z,56nm,19.1s,baz=141,slow=42						
	comp=Z,1.0nm,0.7s						
NV11	Mina Array Sit	32.67	322	P	P	07 12 57.1	+1.9
NV11				IAmb	IAmb	07 12 59.1	
	comp=Z,6.2nm,0.9s						
SADO	Sadowa	32.72	19	LR	LR	07 27 56.9	
	comp=Z,201nm,18.1s,baz=133,slow=40						
NVAR	Mina Array Bea	32.76	322	P	P	07 12 59.0	+2.9
	comp=Z,4.7nm,0.8s,baz=140,slow=8.7,SNR=31						
NVAR				PcP	PcP	07 15 42.3	+0.9
	comp=Z,0.7nm,0.7s,baz=72,slow=2.2,SNR=3.2						
	comp=Z,4.7nm,0.8s						
LOHW	Long Hollow	32.86	336	P	P	07 12 57.8	+0.9
LOHW				IAmb	IAmb	07 12 59.0	
	comp=Z,5.8nm,0.9s						
H17A	Grant Village	33.51	337	P	P	07 13 02.9	+0.3
H17A				IAmb	IAmb	07 13 10.4	
	comp=Z,6.5nm,1.2s						
MCMT	McKenzie Canyo	34.76	335	P	P	07 13 15.2	+1.8
ULM	Lac du Bonnet	36.00	357	P	P	07 13 21.6	-2.1
	comp=Z,3.1nm,0.8s,baz=185,slow=7.3,SNR=6.5						
ULM				LR	LR	07 30 03.8	
	comp=Z,99nm,20.6s,baz=188,slow=40						
	comp=Z,3.1nm,0.8s						
J08A	Circle Bar Ran	36.22	328		P	07 13 27.0	+1.1
LPAZ	La Paz	39.16	140	LR	LR	07 28 32.8	
	comp=Z,88nm,20.1s,baz=283,slow=34						
NEW	Newport	39.28	335	LR	LR	07 33 02.2	
	comp=Z,146nm,18.0s,baz=139,slow=40						
MDP	Montagnes des	40.97	99	LR	LR	07 32 53.5	
	comp=Z,84nm,19.9s,baz=284,slow=39						
SIV	San Ignacio	43.72	132	P	P	07 14 28.9	+0.6
	comp=Z,1.2nm,0.8s,baz=307,slow=11,SNR=7.2						

	comp=Z,1.2nm,0.8s						
FCC	Fort Churchill	44.47	359	P	P	07 14 32.8	-0.9
FCC				IAmb	IAmb	07 14 34.7	
	comp=Z,4.9nm,0.8s						
SCHQ	Schefferville	45.44	21	LR	LR	07 35 55.8	
	comp=Z,271nm,18.0s,baz=194,slow=39						
BBB	Bella Bella	46.99	331	LR	LR	07 37 48.6	
	comp=Z,60nm,18.5s,baz=181,slow=40						
TOAD	Toad River Com	50.51	339	P	P	07 15 22.1	+1.3
	baz=138						
YKA	Yellowknife Ar	50.55	347	P	P	07 15 21.1	+0.2
	comp=Z,9.0nm,0.8s,baz=155,slow=6.9,SNR=105						
YKA				PcP	PcP	07 16 38.5	-0.2
	comp=Z,0.7nm,0.8s,baz=154,slow=2.9,SNR=5.1						
	comp=Z,9.0nm,0.8s						
V35K	Ketchikan	50.60	333	P	P	07 15 22.3	+0.9
	baz=129						
YKAW3	Yellowknife Wh	50.61	347		P	07 15 21.8	+0.4
YKAW3				IAmb	IAmb	07 15 22.8	
	comp=Z,15nm,0.8s						
CRAG	Craig	51.37	332	P	P	07 15 28.1	+0.9
	baz=127						
BEAVL	Fort Liard	51.45	340	P	P	07 15 28.5	+0.7
	baz=139						
DLBC	Dease Lake	51.97	336	P	P	07 15 33.0	+1.2
	baz=132						
S34M	Telegraph Cree	52.06	335	P	P	07 15 33.8	+1.4
	baz=131						
FRB	Frobisher Bay	52.37	14	LR	LR	07 39 52.7	
	comp=Z,120nm,18.2s,baz=132,slow=38						
WTLY	Watson Lake, Y	52.67	339	P	P	07 15 38.4	+1.4
	baz=135						
R33M	Jennings River	52.98	337	P	P	07 15 40.4	+1.1
	baz=132						
Q32M	Nakina River	53.20	336	P	P	07 15 41.4	+0.3
	baz=130						
S32K	Killisnoo	53.22	334	P	P	07 15 41.7	+0.8
	baz=127						
CPUP	Villa Florida	53.33	139	P	P	07 15 42.8	+0.6
	comp=Z,0.9nm,0.9s,baz=338,slow=11,SNR=2.4						
	comp=Z,0.9nm,0.9s						
P32M	Atlin	54.17	336	P	P	07 15 48.8	+0.7
	baz=129						
P33M	Teslin, Yukon	54.22	337	P	P	07 15 49.1	+0.7
	baz=130						
S31K	Pelican	54.23	333	P	P	07 15 49.5	+1.2
	baz=125						
N32M	Quiet Lake	54.93	338	P	P	07 15 54.9	+1.4
N32M	Quiet Lake	54.93	338	P	P	07 15 53.5	-0.1
	baz=130						
MMPY	Sheldon Lake,	55.28	340	P	P	07 15 56.5	+0.5
	baz=133						
WHY	Whitehorse	55.30	337	P	P	07 15 57.0	+0.7
	baz=128						
ILON	Igloolik, Nuna	55.59	5		P	07 15 58.0	0.0
FARO	Faro, Yukon	55.73	339	P	P	07 16 00.2	+0.9
	baz=131						
P30M	Million Dollar	55.80	335	P	P	07 16 00.6	+0.8
	baz=126						
P29M	Windy Craggy	55.83	335	P	P	07 16 00.8	+0.8
	baz=125						
O30N	Mendenhall	55.84	336	P	P	07 16 00.7	+0.6
	baz=127						
M31M	Drury Creek, Y	56.09	338	P	P	07 16 02.2	+0.4
	baz=130						
N31M	Braeburn, Yuko	56.15	337	P	P	07 16 03.5	+1.2
N31M	Braeburn, Yuko	56.15	337	P	P	07 16 02.9	+0.6
	baz=128						
HYT	Haines Junctio	56.43	336	P	P	07 16 04.6	+0.2
	baz=126						
PNL	Peninsula	56.55	334	P	P	07 16 05.1	-0.1
	baz=123						
O29M	Mount Kennedy	56.56	335	P	P	07 16 05.3	-0.1
	baz=124						
N30M	Aishikik Lake	56.64	337	P	P	07 16 06.7	+0.9
	baz=126						
YUK6	Outpost Mounta	56.84	336	P	P	07 16 08.1	+0.7
	baz=125						
PINM	Pinnacle	57.15	334	P	P	07 16 09.9	+0.5
	baz=122						
YUK4	Talbot Arm	57.18	336	P	P	07 16 10.6	+0.8
	baz=125						
O28M	Mount Upton	57.49	335	P	P	07 16 12.5	+0.4
	baz=123						
MAYO	Mayo, Yukon	57.51	339	P	P	07 16 12.6	+0.7
	baz=129						
YUK8	Steele Glacier	57.59	335	P	P	07 16 13.3	+0.5
	baz=123						
M29M	Somme Creek	57.74	337	P	P	07 16 14.2	+0.5
	baz=125						
MESA	MESA	57.91	334	P	P	07 16 15.4	+0.4
	baz=120						
L29M	L29M	58.01	338	P	P	07 16 15.9	+0.5
	baz=126						
CTG	Chitna Glacier	58.06	335	P	P	07 16 15.9	0.0
	baz=122						
YUK3	Moose Creek	58.14	336	P	P	07 16 16.7	+0.1
	baz=123						
K29M	Barlow Dome	58.23	339		P	07 16 17.6	+0.5
K29M				IAmb	IAmb	07 16 36.6	
	comp=Z,5.3nm,1.4s						
K29M	Barlow Dome	58.23	339	P	P	07 16 18.2	+1.2
	baz=127						
J30M	Hart River	58.27	340		P	07 16 18.4	+1.0
J30M				IAmb	IAmb	07 16 49.5	
	comp=Z,4.3nm,1.4s						
J30M	Hart River	58.27	340	P	P	07 16 18.7	+1.4
	baz=129						
C36M	Paulatuk	58.42	348	P	P	07 16 19.0	+0.9
	baz=144						
H31M	Peel River	58.43	341	P	P	07 16 19.2	+0.9
	baz=131						
PLCA	Paso Flores	58.58	160	P	P	07 16 20.8	+1.1
	comp=Z,1.8nm,0.9s,baz=0.0,slow=7.1,SNR=3.6						
	comp=Z,1.8nm,0.9s						
BVCY	Beaver Creek	58.65	336	P	P	07 16 20.4	+0.5
	baz=123						
CRQE	Cirque	58.69	334	P	P	07 16 20.7	+0.4
	baz=120						
I30M	Mount Dempster	58.70	340	P	P	07 16 21.2	+0.9
	baz=129						
MCARA	McCarthy VSAT	58.98	335	P	P	07 16 22.4	+0.2
	baz=120						
M27K	Edge Creek, AK	59.02	336	P	P	07 16 22.8	+0.2
	baz=122						
DAWY	Dawson	59.03	338	P	P	07 16 22.9	+0.4
	baz=125						
G31M	Satah River	59.16	342	P	P	07 16 23.9	+0.6
	baz=132						
F31M	Tsiigehtchic	59.36	343	P	P	07 16 24.5	-0.1
	baz=133						
BCAR	Beaver Creek A	59.36	337		P	07 16 25.9	+1.0
L27K	Beaver Creek,	59.38	337	P	P	07 16 25.4	+0.4
	baz=122,SNR=6.4						
I29M	Ogilvie Camp,	59.42	340	P	P	07 16 26.0	+0.8
	baz=127						
BMRM	Bremner River	59.45	334	P	P	07 16 25.6	+0.2
	baz=118						
M26K	Nabesna, AK	59.49	336	P	P	07 16 25.8	0.0
	baz=121						
EPYK	Eagle Plains	59.54	341	P	P	07 16 26.3	+0.3
	baz=129						
EYAK	Cordova Ski Ar	59.75	333	P	P	07 16 27.6	+0.2
	baz=117						
N25K	Chitina, Valde	59.75	334	P	P	07 16 27.6	+0.1
	baz=118						
INK	Inuvik	59.89	344		P	07 16 28.4	+0.1
INK	Inuvik	59.89	344	LR	LR	07 46 16.2	
	comp=Z,73nm,20.0s,baz=246,slow=40						
INK	Inuvik	59.89	344	P	P	07 16 29.1	+0.8
	baz=133,SNR=6.8						
L26K	Log Cabin Wild	59.95	336	P	P	07 16 28.9	+0.1
	baz=120						
H29M	Whitestone	59.97	341	P	P	07 16 29.2	+0.3
	baz=127						
K27K	Chicken	59.99	337	P	P	07 16 29.2	+0.1
	baz=122						
I28M	Miner Creek	60.02	339	P	P	07 16 29.5	+0.1
	baz=125						
F30M	Barrier River	60.06	343	P	P	07 16 30.2	+0.7
	baz=131						
P23K	Montague Islan	60.24	332	P	P	07 16 31.6	+0.8
	baz=115						
RCBR	Riachuelo	60.25	105	LR	LR	07 47 08.1	
	comp=Z,25nm,18.6s,baz=154,slow=41						
KLU	Klutina	60.25	334	P	P	07 16 31.7	+0.6
	baz=117						
G29M	Pine Creek	60.28	341	P	P	07 16 31.7	+0.6
	baz=128						
HARP	HAARP	60.36	335	P	P	07 16 32.6	+0.9
	baz=118						
M24K	Tolsona, Glenn	60.64	334	P	P	07 16 34.4	+0.8
	baz=117						
SCRK	Sand Creek	60.68	337	P	P	07 16 34.3	+0.3
	baz=120						
I27K	Kandik River	60.69	339	P	P	07 16 34.6	+0.7
	baz=124						
PAX	Paxson	60.76	336	P	P	07 16 34.7	+0.2
	baz=118,SNR=5.7						
J26L	Joseph Creek	60.79	338	P	P	07 16 35.4	+0.7
	baz=121,SNR=7.0						
A36M	Sachs Harbour	60.80	349	P	P	07 16 34.8	+0.4
	baz=144						
RIDG	Independent Ri	60.89	336	P	P	07 16 35.8	+0.4
	baz=119						
SCM	Sheep Creek Mo	61.01	334	P	P	07 16 36.3	+0.1
	baz=116						
H27K	Steamboat Moun	61.01	340	P	P	07 16 36.3	+0.2
	baz=124,SNR=5.7						
I26K	Coal Creek Min	61.07	338	P	P	07 16 36.7	+0.3
	baz=122						
M23K	Glacier View	61.16	334	P	P	07 16 37.4	+0.3
	baz=116						
E29M	Blow River	61.17	343	P	P	07 16 37.7	+0.6
	baz=129						
SEW	Seward	61.23	332	P	P	07 16 37.4	-0.1
	baz=113						
F28M	Old Crow	61.28	341	P	P	07 16 37.9	0.0
	baz=126,SNR=7.7						
K24K	Donnelly Dome	61.28	336	P	P	07 16 37.9	-0.1
	baz=118						
KNK	Knik Glacier	61.31	333	P	P	07 16 38.2	0.0
	baz=115						
G27K	Doyon Strip	61.38	340	P	P	07 16 39.2	+0.6
	baz=124						
SML	Sawmill	61.42	334	P	P	07 16 39.0	0.0
	baz=115						
WAT6	Susitna Watana	61.51	335	P	P	07 16 40.0	+0.3
	baz=116,SNR=7.0						
J25K	Salcha River,	61.52	337	P	P	07 16 40.0	+0.4
	baz=119						
DHY	Denali Highway	61.58	335	P	P	07 16 40.1	0.0
	baz=116						
PMR	Palmer	61.68	333	P	P	07 16 40.5	-0.1
	baz=114						
RC01	Rabbit Creek A	61.74	333	P	P	07 16 41.3	+0.2
	baz=113						
E28M	Babbage River	61.78	342	P	P	07 16 42.1	+0.9
	baz=127						
KDAK	Kodiak Island	61.91	329	P	P	07 16 42.3	+0.1
	baz=109						
WAT1	Susitna Watana	61.95	335	P	P	07 16 42.6	+0.1
	baz=115						
HDA	Harding Lake	62.02	337	P	P	07 16 43.5	+0.6
	baz=118						
PRP	Porcupine Dome	62.03	338	P	P	07 16 43.2	+0.1
	baz=120						
HOM	Homer	62.08	331	P	P	07 16 43.2	-0.1
	baz=111						
Q20K	Shuyak Island	62.08	329	P	P	07 16 43.8	+0.4
	baz=109						
OHAK	Old Harbor	62.09	328	P	P	07 16 44.1	+0.7
	baz=108						
E27K	Coleen River	62.15	342	P	P	07 16 44.3	+0.6
	baz=125,SNR=5.6						
G26K	Porcupine Rive	62.16	340	P	P	07 16 43.9	+0.2
	baz=122						
ILAR	Eielson Array	62.17	337	P	P	07 16 44.2	+0.3
	comp=Z,3.1nm,1.0s,baz=143,slow=4.6,SNR=28						
	comp=Z,3.1nm,1.0s						
CAPN	Captain Cook N	62.26	332	P	P	07 16 44.2	-0.3
	baz=112						
SUA	Susitna One	62.34	333	P	P	07 16 45.0	-0.3
	baz=112						
SII	Sitkinak Islan	62.36	327	P	P	07 16 45.6	+0.3
	baz=107						
MCK	McKinley	62.50	336	P	P	07 16 46.4	+0.3
	baz=115						
H25L	Birch Creek	62.51	339	P	P	07 16 46.6	+0.6
	baz=120						
POKR	Poker Plat Res	62.54	337	P	P	07 16 47.1	+0.8
	baz=117						
D27M	Malcolm River	62.58	343	P	P	07 16 46.8	+0.2
	baz=126						
F26K	Sheenjek River	62.68	341	P	P	07 16 47.8	+0.5
	baz=122						
Q19K	Cape Douglas,	62.80	330	P	P	07 16 48.0	-0.3
	baz=108						
P19K	Oil Pt	62.84	330	P	P	07 16 48.2	-0.3
	baz=109						
G25K	Bearman Lake	62.85	339	P	P	07 16 48.9	+0.5
	baz=120						
SKT	Skwentna	62.88	333	P	P	07 16 49.2	+0.5
	baz=112						
CHIR	Chirikof Islan	62.93	326	P	P	07 16 49.1	+0.1
	baz=105						
NEA2	Nenana	62.93	336	P	P	07 16 49.3	+0.3
	baz=116						
TRF	Thorofare Moun	62.93	335	P	P	07 16 49.3	+0.1
	baz=114,SNR=7.3						
H24K	Noodor Dome	63.04	338	P	P	07 16 50.2	+0.5
	baz=117,SNR=8.2						
F25K	Christian Rive	63.11	340	P	P	07 16 51.0	+0.8
	baz=120						
I23K	Minto, Yukon-K	63.28	337	P	P	07 16 52.1	+0.9
	baz=116,SNR=8.7						
G24K	Hadweenzic Riv	63.30	339	P	P	07 16 51.6	+0.2
	baz=118						
E25K	Arctic Village	63.36	341	P	P	07 16 52.3	+0.6
	baz=121						
Q18K	Katmai Hardscr	63.40	329	P	P	07 16 52.2	-0.1
	baz=107						
BPAW	Bear Paw Mtn.	63.48	335	P	P	07 16 53.0	+0.3
	baz=113						
PPLA	Purkeypile	63.51	334	P	P	07 16 52.3	-0.7
	baz=112						
M20K	Styx River	63.55	333	P	P	07 16 52.7	-0.5
	baz=110						
C27K	Jago River	63.59	342	P	P	07 16 53.3	0.0
	baz=123,SNR=5.0						
H23K	Yukon River	63.64	338	P	P	07 16 53.8	+0.1
	baz=116						
CAST	Castle Rocks	63.66	335	P	P	07 16 53.8	-0.1
	baz=112,SNR=6.5						
P18K	Big Mountain,	63.72	330	P	P	07 16 54.1	-0.3
	baz=107						
Q17K	Contact Creek	63.73	328	P	P	07 16 53.2	-1.2
	baz=106						
MLY	Manley	63.76	336	P	P	07 16 54.2	-0.4
	baz=114,SNR=7.4						
N19K	Bonanza Creek	63.81	331	P	P	07 16 54.7	-0.2
	baz=108						
F24K	Squaw Lake	63.83	340	P	P	07 16 54.5	-0.4
	baz=118						
O18K	Koktuh Hills	63.85	330	P	P	07 16 55.1	0.0
	baz=107						
CHUM	Lake Minchumin	63.93	335	P	P	07 16 55.4	-0.2
	baz=112						
L20K	Farewell, AK	64.09	333	P	P	07 16 57.0	+0.3
	baz=110						
M19K	Big River Lodg	64.12	333	P	P	07 16 57.4	+0.5
	baz=109						
G23K	Bananza Creek	64.21	338	P	P	07 16 57.0	-0.4
	baz=116						
D25K	Kavik River	64.23	342	P	P	07 16 57.3	-0.3
	baz=120						
E24K	Your Creek	64.29	340	P	P	07 16 58.4	+0.4
	baz=118						
H22K	Ishtalitna Cre	64.36	337	P	P	07 16 58.3	-0.1
	baz=114						
L19K	White Mountain	64.42	333	P	P	07 16 58.9	0.0
	baz=109						
N18K	Kilae Creek	64.42	331	P	P	07 16 59.3	+0.4
	baz=107						
K20K	Telida	64.47	334	P	P	07 16 59.1	-0.1
	baz=110,SNR=5.1						
COLD	Coldfoot	64.49	339	P	P	07 16 59.8	+0.6
	baz=116						
M18K	Stony River	64.64	332	P	P	07 17 00.1	-0.2
	baz=108						
E23K	Chandalar	64.66	340	P	P	07 17 00.3	-0.1
	baz=116,SNR=6.2						
J20K	Nowinta River	64.79	335	P	P	07 17 01.2	0.0
	baz=110						
H21K	Melozitna Rive	64.81	337	P	P	07 17 01.5	+0.2
	baz=112						
G22K	Bettles	64.83	338	P	P	07 17 01.9	+0.6
	baz=114						
CHNA	Chernabura Isl	64.91	324	P	P	07 17 02.1	0.0
	baz=101						
TOLK	Toolik Lake Re	64.91	340	P	P	07 17 02.4	+0.4
	baz=117						
N17K	Nushagak Hills	64.99	331	P	P	07 17 02.1	-0.5
	baz=106						
C24K	Franklin Bluff	65.14	342	P	P	07 17 03.7	+0.4
	baz=118						
I20K	Naaghedeneel	65.14	336	P	P	07 17 03.9	+0.4
	baz=110						
L18K	Granite Mounta	65.25	333	P	P	07 17 04.5	+0.3
	baz=107						
F22K	John River	65.31	339	P	P	07 17 05.1	+0.6
	baz=114						
J19K	Poorman	65.34	335	P	P	07 17 05.1	+0.3
	baz=109,SNR=6.2						
G21K	Allakaket	65.40	337	P	P	07 17 05.3	+0.1
	baz=112						
D23K	Nanushuk River	65.42	340	P	P	07 17 05.2	0.0
	baz=116						
E22K	Anaktuvuk Pass	65.44	339	P	P	07 17 05.1	-0.3
	baz=114						
H20K	Anotleneega Mo	65.55	336	P	P	07 17 06.3	+0.1
	baz=110						
J18K	Innoko River	65.64	334	P	P	07 17 06.9	+0.1
	baz=108						
F21K	Alatna River	65.66	338	P	P	07 17 06.2	-0.6
	baz=112,SNR=10						
N16K	Nishlik Lake	65.73	330	P	P	07 17 07.7	+0.2
	baz=104						
C23K	Itkillik River	65.78	341	P	P	07 17 08.0	+0.5
	baz=116						
L17K	Donlin	65.95	332	P	P	07 17 09.2	+0.5
	baz=105						
M16K	Timber Creek	65.96	331	P	P	07 17 09.1	+0.2
	baz=104						
D22K	Ayikyak River	66.04	340	P	P	07 17 09.1	-0.1
	baz=114						
K17K	Iditarod	66.11	333	P	P	07 17 10.2	+0.4
	baz=106						
H19K	Roundabout Mou	66.18	336	P	P	07 17 10.7	+0.6
	baz=109						
E21K	Killik River	66.30	339	P	P	07 17 10.9	0.0
	baz=112						
L16K	Owhat River	66.38	332	P	P	07 17 11.7	+0.2
	baz=104						
F20K	Avaraart Lake	66.41	338	P	P	07 17 11.9	+0.3
	baz=110						
G19K	Purcell Mounta	66.62	337	P	P	07 17 13.8	+0.8
	baz=108						
J17K	VABM Dome	66.63	333	P	P	07 17 12.9	-0.2
	baz=105						
H18K	Honhosa River	66.83	335	P	P	07 17 14.2	-0.1
	baz=107						
C21K	Knifeblade Rid	66.84	340	P	P	07 17 15.2	+0.9
	baz=112						
B22K	Teshekpuk Lake	66.87	341	P	P	07 17 15.6	+1.1
	baz=114						
B21K	Ikpikpuk River	66.96	340	P	P	07 17 15.8	+0.7
	baz=112						
E20K	Nigu River	67.00	339	P	P	07 17 16.4	+1.0
	baz=110						
E19K	Redstone River	67.10	338	P	P	07 17 17.4	+1.4
	baz=109						
F19K	Shaleruckik Mo	67.10	337	P	P	07 17 17.0	+1.0
	baz=108						
G18K	Tagagawik	67.16	336	P	P	07 17 17.5	+1.1
	baz=107						
J16K	Anvik River	67.27	333	P	P	07 17 18.0	+0.8
	baz=104						
D20K	Etivluk River	67.30	339	P	P	07 17 18.2	+0.9
	baz=110						
L15K	Ungalak Mounta	67.30	331	P	P	07 17 17.9	+0.5
	baz=102						
M14K	Bethel	67.33	330	P	P	07 17 17.6	+0.1
	baz=102						
H17K	Granite Mounta	67.40	335	P	P	07 17 18.3	+0.4
	baz=105						
I17K	Unalakleet	67.46	334	P	P	07 17 18.8	+0.5
	baz=104						
K15K	Wolf Creek Mou	67.46	332	P	P	07 17 18.7	+0.3
	baz=102						
F18K	Selawik	67.75	337	P	P	07 17 20.9	+0.9
	baz=106						
D19K	Kuna River	67.75	339	P	P	07 17 21.1	+0.9
	baz=108						
G17K	Kiwalik Mounta	67.84	335	P	P	07 17 21.6	+0.8
	baz=105						
B20K	Meade River	67.93	341	P	P	07 17 21.7	+0.5
	baz=110						
M13K	Dall Lake	67.94	330	P	P	07 17 21.8	+0.4
	baz=100						
H16K	Elim	68.29	334	P	P	07 17 24.2	+0.6
	baz=103						
F17K	Baldwin Pennin	68.32	336	P	P	07 17 24.4	+0.7
	baz=104						
E18K	Tukpahlearik C	68.33	337	P	P	07 17 24.4	+0.6
	baz=105						
J14K	Nanvaranak Lak	68.47	332	P	P	07 17 25.1	+0.5
	baz=101						
G16K	Koyuk River	68.51	335	P	P	07 17 25.5	+0.6
	baz=103						
E17K	Hotham Inlet	68.70	337	P	P	07 17 26.2	+0.1
	baz=104						
UNV	Unalaska Valle	68.78	322	P	P	07 17 26.6	-0.2
	baz=95						
K13K	Kusilvak Mount	68.83	331	P	P	07 17 27.1	+0.2
	baz=100						
C18K	Utukok River	68.88	339	P	P	07 17 27.4	+0.1
	baz=105						
G15K	Niukluk	69.12	335	P	P	07 17 28.8	+0.1
	baz=101						
D17K	Noatak River	69.32	337	P	P	07 17 30.2	+0.2
	baz=103						
F15K	North Star Dit	69.51	335	P	P	07 17 31.9	+0.8
	baz=101						
BORG	Borgarnes	69.53	26	LR	LR	07 47 55.2	
	comp=Z,59nm,18.2s,baz=338,slow=36						
F14K	Arctic Creek	70.15	335	P	P	07 17 35.5	+0.4
	baz=99						
P08K	Saint George I	70.72	325	P	P	07 17 38.6	-0.1
	baz=93						
TNA	Tin City	70.82	335	P	P	07 17 39.4	+0.2
	baz=98						
EKA	Eskdalemuir Ar	78.48	36	P	P	07 18 21.4	-2.4
	comp=Z,1.5nm,0.7s,baz=266,slow=9.2,SNR=4.1						
	comp=Z,1.5nm,0.7s						
SPITS	Spitsbergen Ar	80.11	11	P	P	07 18 28.6	-3.7
	comp=Z,1.0nm,0.4s,baz=269,slow=8.3,SNR=42						
	comp=Z,1.0nm,0.4s						
ESDC	Sonseca Array	80.52	51	P	P	07 18 33.2	-2.2
	comp=Z,1.4nm,0.8s,baz=287,slow=5.9,SNR=11						
	comp=Z,1.4nm,0.8s						
NOA	NORSAR Array B	84.52	28	P	P	07 18 54.3	-1.4
	comp=Z,0.6nm,0.7s,baz=289,slow=5.2,SNR=3.4						
NOA				LR	LR	07 54 52.5	
	comp=Z,55nm,21.5s,baz=75,slow=34						
	comp=Z,0.6nm,0.7s						
ARCES	ARCESS Array B	86.30	18	LR	LR	07 58 29.6	
	comp=Z,109nm,19.4s,baz=122,slow=36						
FINES	FINESS Array B	90.80	25	LR	LR	08 01 01.2	
	comp=Z,34nm,20.0s,baz=58,slow=36						
WRA	Warramunga Arr	134.29	256	PKP	PKPdf	07 25 41.3	-0.3
	comp=Z,0.5nm,0.8s,baz=80,slow=2.2,SNR=5.1						
ASAR	Alice Springs	134.61	251	PKP	PKPdf	07 25 42.0	-0.2
	comp=Z,0.4nm,1.0s,baz=82,slow=2.0,SNR=2.1						
CMAR	Chiang Mai Arr	145.38	339	PKPbc	PKPbc	07 25 59.0	-2.6
	comp=Z,7.9nm,0.2s,baz=8.2,slow=1.9,SNR=8.5						

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*IDC **14** 07:09:49.9±4.3, 11.°88S×166.°59E, h177km±38km, mb3.7/11, mbtmp4.1/12, Error ellipse: s-maj=23.1km s-min=20.0km az=76.0*

ISC 14 07:09:46.8±0.8**, 11.°77S**±0.°09×**166.°8E**±0.°2**, h150**km**, n15,** σ1.°99/17**, mb3.8**/11**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.25	182	P	Pn	07 12 12.9	+2.7
	4.0nm,0.9s,baz=356,slow=15,SNR=12						
DZM				S	Sn	07 14 02.1	-1.7
	4.7nm,0.9s,baz=267,slow=18,SNR=2.1						
STKA	Stephens Creek	30.62	225	P	P	07 15 45.5	-1.4
	2.0nm,0.7s,baz=38,slow=14,SNR=3.5						
	2.0nm,0.7s						
WRA	Warramunga Arr	32.18	251	P	P	07 15 59.8	-1.0
	0.8nm,0.7s,baz=83,slow=8.8,SNR=9.8						
	0.8nm,0.7s						

ASAR	Alice Springs	33.37	245	P	P	07 16 10.0	-1.1
	1.6nm,0.8s,baz=68,slow=10,SNR=14						
ASAR				pP	pP	07 16 46.5	+5.7
	0.7nm,0.8s,baz=74,slow=8.5,SNR=3.6						
	1.6nm,0.8s						
VNDA	Vanda	65.80	181	P	P	07 20 13.1	-2.3
	0.5nm,0.5s,baz=358,slow=7.6,SNR=5.2						
	0.5nm,0.5s						
CMAR	Chiang Mai Arr	73.31	293	P	P	07 21 00.9	-1.6
	2.3nm,0.8s,baz=113,slow=5.9,SNR=5.6						
	2.3nm,0.8s						
QSPA	South Pole Qui	78.24	180	P	P	07 21 29.9	+0.1
	4.5nm,0.9s,baz=6.5,slow=3.8,SNR=23						
	4.5nm,0.9s						
SONM	Songino Array	79.83	323	P	P	07 21 38.2	-0.4
	0.6nm,0.4s,baz=146,slow=7.5,SNR=3.3						
	0.6nm,0.4s						
ILAR	Eielson Array	83.88	18	P	P	07 22 00.1	+0.8
	0.9nm,0.7s,baz=245,slow=5.0,SNR=11						
	0.9nm,0.7s						
MAW	Mawson	84.43	202	P	P	07 22 02.1	0.0
	1.4nm,0.7s,baz=270,slow=3.0,SNR=2.1						
	1.4nm,0.7s						
MKAR	Makanchi Array	94.72	317	P	P	07 22 51.9	+0.7
	1.8nm,0.5s,baz=90,slow=6.2,SNR=19						
	1.8nm,0.5s						
YKA	Yellowknife Ar	95.16	27	P	P	07 22 52.5	-0.2
	0.2nm,0.6s,baz=264,slow=5.3,SNR=7.8						
	0.2nm,0.6s						
ARCES	ARCESS Array B	117.28	346	PKP	PKPdf	07 28 13.7	-0.1
	0.5nm,0.4s,baz=92,slow=2.4,SNR=14						
FINES	FINESS Array B	122.80	339	PKP	PKPdf	07 28 24.6	0.0
	0.7nm,0.5s,baz=108,slow=4.5,SNR=5.2						
ESDC	Sonseca Array	151.01	345	PKPbc	PKPbc	07 29 22.7	+0.3
	0.2nm,0.4s,baz=352,slow=3.9,SNR=4.4						

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*IDC **14** 07:13:42.7±3.0, 5.°99S×147.°57E, h95^{km}±25^{km}, mb3.8/4, mbtmp4.2/7, MS2.9/1, Error ellipse: s-maj=38.0km s-min=20.2km az=84.0*

*NEIC **14** 07:13:43.6±1.7, 6.°03S±0.°03×147.°6E±0.°1, h95^{km}±8^{km}, mb4.3/17, Error ellipse: s-maj=20.6km s-min=3.5km az=94.0*

ISC 14 07:13:43.9±0.7**, 6.°03S**±0.°06×**147.°4E**±0.°1**, h100^{km}, n30, σ1.^{s}02**/31**, mb4.2**/9**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.37	184		Pn	07 14 34.0	-0.6
PMG	Port Moresby	3.37	184	P	Pn	07 14 34.5	-0.1
	56nm,0.4s,baz=19,slow=5.9,SNR=24						
PMG				S	Sn	07 15 14.0	+0.3
	81nm,0.4s,baz=356,slow=5.9,SNR=7.9						
MANU	Manus Island	3.96	359	Pn	Pn	07 14 42.6	0.0
JAY	Jayapura	7.55	297	P	Pn	07 15 32.3	+0.9
	11nm,0.9s,baz=70,slow=6.3,SNR=1.6						
JAY				LR	LR	07 19 25.5	
	comp=Z,79nm,20.0s,baz=239,slow=45						
COEN	Coen	8.92	208	Pn	Pn	07 15 49.1	-0.9
SAUI	Saumlaki	16.12	262	Pn	P	07 17 25.4	-0.7
WB0	Warramunga Arr	18.63	222	P	Pn	07 17 54.2	-1.1
WB0				IAmb	IAmb	07 17 57.5	
	comp=Z,13nm,0.7s						
WRA	Warramunga Arr	18.79	221	P	P	07 17 54.3	-1.2
WRA	Warramunga Arr	18.79	221	P	Pn	07 17 55.9	-1.3
	comp=Z,9.4nm,0.6s,baz=41,slow=12,SNR=69						
KNRA	Kununurra	20.66	241	P	P	07 18 13.6	-2.3
KNRA				IAmb	IAmb	07 18 28.4	
	comp=Z,8.3nm,1.0s						
AS31	Alice Springs	21.83	215	P	P	07 18 29.4	+1.0
AS31				IAmb	IAmb	07 18 30.9	
	comp=Z,4.0nm,0.3s						
ASAR	Alice Springs	21.83	215	P	P	07 18 27.8	-0.6
ASAR	Alice Springs	21.83	215	P	P	07 18 29.1	+0.8
	comp=Z,4.1nm,0.4s,baz=50,slow=9.4,SNR=76						
	comp=Z,4.1nm,0.4s						
FITZ	Fitzroy Crossi	24.41	239	P	P	07 18 53.9	+0.7
ARMA	Armidale	24.58	171	P	P	07 18 55.8	+1.1
ARMA				IAmb	IAmb	07 19 19.6	
	comp=Z,11nm,1.1s						
LUWI	Luwuk	25.09	280	P	P	07 19 00.5	+1.0
STKA	Stephens Creek	26.29	191	P	P	07 19 10.8	+0.7
STKA				IAmb	IAmb	07 19 37.5	
	comp=Z,32nm,1.5s						
STKA	Stephens Creek	26.29	191	P	P	07 19 09.8	-0.3
	comp=Z,1.4nm,0.6s,baz=13,slow=7.3,SNR=4.0						
	comp=Z,1.4nm,0.6s						
BBOO	Buckleboo	28.67	200	P	P	07 19 33.5	+2.1
BBOO				IAmb	IAmb	07 19 34.4	
	comp=Z,26nm,1.4s						
SHEM	Shemya Is, Ala	62.77	18	P	P	07 23 58.3	-0.1
SMY	Shemya	62.77	18	P	P	07 23 59.0	+0.5
VNDA	Vanda	71.86	177	P	P	07 24 54.6	-0.9
SBA	Scott Base	72.50	176	P	P	07 24 58.8	-0.5
L14K	Kuka Creek	77.44	22	P	P	07 25 27.6	-0.2
L14K				IAmb	IAmb	07 26 08.0	
	comp=Z,4.1nm,0.9s						
G18K	Tagagawik	81.64	20	P	P	07 25 50.0	-0.6
E19K	Redstone River	83.01	19	P	P	07 25 57.3	-0.4
E19K				IAmb	IAmb	07 26 01.8	
	comp=Z,5.7nm,1.4s						
QSPA	South Pole Qui	83.94	180	P	P	07 26 03.3	+0.6
QSPA				IAmb	IAmb	07 26 26.0	
	comp=Z,4.8nm,1.3s						
QSPA	South Pole Qui	83.94	180	P	P	07 26 03.7	+1.0
	comp=Z,1.5nm,0.9s,baz=14,slow=7.3,SNR=3.2						
	comp=Z,1.5nm,0.9s						
ILAR	Eielson Array	85.34	23	P	P	07 26 08.3	-1.2
	comp=Z,0.9nm,0.7s,baz=256,slow=4.9,SNR=11						
	comp=Z,0.9nm,0.7s						
TORD	Torodi Ar. Bea	145.51	284	PKPbc	PKPdf	07 33 09.6	-1.8
	comp=Z,0.3nm,0.4s,baz=90,slow=3.5,SNR=3.1						

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*IDC **14** 07:24:45.6±10.0, 15.°23S×165.°79E, h0^{km}, mb3.9/4, mbtmp3.9/5, ML3.8/1, Error ellipse: s-maj=179.8km s-min=34.6km az=57.0*

*NOU **14** 07:24:47.2, 15.°07S×167.°07E, h88^{km}, MLv4.4/8, Vanuatu Islands*

ISC 14 07:24:44.3±2.1**, 14.°9S**±0.°2×**166.°5E**±0.°2**, h36^{km}, n9, σ0.^{s}76**/9**, mb3.9**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLAKA	Lakatoro	1.51	145	P	Pn	07 25 08.8	0.0
LUES	Luesalemba Tem	4.22	352	P	Pn	07 25 53.8	+7.7
YATNC	Mamie plateau,	7.16	177	P	Pn	07 26 25.1	-1.4
DZM	Mont Dzumac	7.17	181	Pn	Pn	07 26 26.9	+0.2
	2.0nm,0.3s,baz=324,slow=12,SNR=30						
DZM				Sn	Sn	07 27 47.1	+0.2
	1.2nm,0.3s,baz=349,slow=21,SNR=8.3						
	4.1nm,0.3s						
OUENC	Ouen Island, N	7.52	178	P	Pn	07 26 32.2	+0.8
STKA	Stephens Creek	28.35	229	P	P	07 30 35.0	0.0
	1.3nm,0.4s,baz=53,slow=11,SNR=4.8						
	1.3nm,0.4s						
WRA	Warramunga Arr	31.08	256	P	P	07 30 58.9	-0.5
	0.2nm,0.4s,baz=84,slow=8.5,SNR=6.2						
	0.2nm,0.4s						
ASAR	Alice Springs	31.94	249	P	P	07 31 06.5	-0.4
	1.1nm,0.6s,baz=81,slow=9.0,SNR=19						
	1.1nm,0.6s						
FITZ	Fitzroy Crossi	39.27	260	P	P	07 32 10.3	+0.5
	1.6nm,0.8s,baz=91,slow=9.3,SNR=2.0						
	1.6nm,0.8s						

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*ASRS **14** 07:30:07.0±1.9, 54.°14N×86.°42E, h0^{km}, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 14 07:30:09.2±3.1**, 54.°15N×86.°50E, h0^{km}, mbtmp3.0**/2**, ML2.8**/2**, Error ellipse: s-maj=24.7km s-min=15.1km az=55.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.01	259	I	I	07 37 00.0	
	baz=79,slow=318,SNR=1.9						
ZALV	Zalesovo Beam	1.01	259	Pg	Pg	07 30 28.6	0.0
	0.7nm,0.3s,baz=78,slow=16,SNR=7.2						
ZALV				Lg	Lg	07 30 42.4	
	1.5nm,0.3s,baz=75,slow=28,SNR=7.9						
KURBB	Kurchatov Arra	6.02	237	Pn	Pn	07 31 39.9	+0.4
	0.2nm,0.3s,baz=56,slow=14,SNR=4.7						
	0.9nm,0.2s						
MKAR	Makanchi Array	7.84	202	Pn	Pn	07 32 05.6	+1.1
	0.1nm,0.3s,baz=25,slow=14,SNR=3.1						
	0.2nm,0.4s						

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*DJA **14** 07:30:34.3±0.9, 2°N±6°×12°8E±°, h220^{km}±11^{km}, M4.0/11, mb4.0/3, MLv4.0/11*

*IDC **14** 07:30:58.7±4.2, 1.°27N×127.°16E, h519^{km}±63^{km}, mb2.8/4, mbtmp3.7/5, Error ellipse: s-maj=65.2km s-min=17.6km az=77.0*

ISC 14 07:30:31.7±1.3**, 2.°0N**±0.°1×**128.°0E**±0.°2**, h200^{km}, n10, σ2.^{s}29**/10**, mb3.6**/4**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.40	207	P	Pn	07 31 09.1	+4.6
SGSI	Sangihe	2.96	304	P	Pn	07 31 23.2	+2.3
SANI	Sanana	4.52	206	P	Pn	07 31 41.0	+0.9
NLAI	Namlea	5.31	190	P	Pn	07 31 52.1	+2.0
	0.6nm35nm,0.7s						
APSI	Ampana	6.98	245	P	Pn	07 32 12.5	+0.8
FITZ	Fitzroy Crossi	20.14	187	P	P	07 34 49.7	-0.9
	1.6nm,0.4s,baz=10,slow=9.8,SNR=8.4						
FITZ				S	S	07 37 58.8	-27
	1.4nm,0.7s,baz=14,slow=17,SNR=2.1						
WRA	Warramunga Arr	22.71	164	P	P	07 35 16.4	-0.1
	0.9nm,0.5s,baz=343,slow=10,SNR=15						
	0.9nm,0.5s						
ASAR	Alice Springs	26.18	168	P	P	07 35 47.1	-0.9
	0.2nm,0.4s,baz=340,slow=8.7,SNR=6.4						
	0.2nm,0.4s						
STKA	Stephens Creek	36.11	160	P	P	07 37 13.4	-1.2
	1.5nm,0.6s,baz=347,slow=14,SNR=3.0						
	1.5nm,0.6s						
MKAR	Makanchi Array	59.66	325	P	P	07 40 13.7	-1.3
	0.4nm,0.4s,baz=117,slow=10,SNR=4.4						
	0.4nm,0.4s						

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*STR **14** 07:30:43.5±0.3, 43°N±2°×°±°, h2^{km}, MLv1.9/6, Error ellipse: s-maj=0.0km s-min=0.0km az=15.1, preliminary*

*MDD **14** 07:30:44.1±0.3, 42.°99N×0.°22E, h0^{km}, mb_Lg2.3/15, Error ellipse: s-maj=3.3km s-min=1.8km az=14.0*

*LDG **14** 07:30:44.0±0.1, 42.°95N×0.°20E, h2^{km}, Md2.4/1, Ml2.7/8, Error ellipse: s-maj=2.5km s-min=1.6km az=174.0*

*MRB **14** 07:30:44.0±0.5, 42.°96N×0.°26E, ML1.8/16, Error ellipse: s-maj=4.1km s-min=2.1km az=134.0*

ISC 14 07:30:42.6±0.8**, 42.°97N**±0.°02×**0.°22E**±0.°01**, h14^{km}**±5^{km}**, n53, σ0.^{s}82**/99**, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LABF	Labassere	0.13	307	Pg	Pg	07 30 46.2	0.0
LABF				Sg	Sg	07 30 48.3	-0.3
VIEF	Viey	0.17	239	Pg	Pg	07 30 47.0	+0.3
VIEF				Sg	Sg	07 30 49.7	+0.2
RESF	Ens	0.19	151	P	Pg	07 30 47.4	+0.4
RESF				S	Sg	07 30 50.5	+0.5
	159nm,0.4s						
PYLO	Lourdes	0.23	304	Pg	Pg	07 30 47.6	-0.1
PYLO				Sg	Sg	07 30 51.0	-0.2
ECHI	Chisagues Biel	0.31	183	Pg	Pb	07 30 49.5	-0.4
ECHI				Sg	Sg	07 30 53.8	+0.4
ECHI				*i* IVmb_Lg		07 30 54.3	
ECHI	Chisagues Biel	0.31	183	P	Pb	07 30 49.6	-0.4
ECHI				S	Sg	07 30 53.8	+0.4
	206nm,0.1s						
ECHI	Chisagues Biel	0.31	183	Pg	Pb	07 30 49.5	-0.4
ECHI				Sg	Sg	07 30 53.8	+0.4
MELF	Melles	0.41	104	Pg	Pg	07 30 50.9	0.0
MELF				Sg	Sg	07 30 56.4	-0.1
REYF	Montagne du Re	0.46	283	Pg	Pg	07 30 51.8	+0.1
REYF				Sg	Sg	07 30 58.5	+0.6
VIER	Vielha - Casau	0.50	122	P	Pb	07 30 52.9	-0.3
VIER				S	Sg	07 30 59.5	+0.4
	69nm,0.1s						
CARA	Val d'Aran	0.52	120	P	Pb	07 30 53.2	-0.3
CARA				S	Sg	07 30 60.0	+0.3
	43nm,0.3s						
ETSF	Etsaut	0.57	263	*e*Pg	Pg	07 30 54.0	+0.1
ETSF				*e*Sg	Sg	07 31 01.7	+0.2
	116nm,0.3s						
CANF	Canfranc	0.58	249	Pg	Pg	07 30 54.1	+0.1
CANF				Sg	Sb	07 31 02.2	-0.5
ATE	Arette	0.68	280	Pg	Pb	07 30 56.2	-0.1
ATE				Sg	Sb	07 31 05.9	+0.4
SALF	Salau	0.75	106	Pg	Pb	07 30 57.5	+0.1
SALF				Sg	Sg	07 31 07.1	+0.1
CTRE	Tremp	0.77	147	P	Pb	07 30 58.0	+0.2
CTRE				S	Sb	07 31 09.1	+1.0
CRAS	Crastes	0.84	26	Pg	Pb	07 30 59.5	+0.5
CRAS				Sg	Sn	07 31 11.4	-0.8
CEST	Esterri de Car	0.85	116	P	Pg	07 30 59.0	-0.1
CEST				S	Sg	07 31 10.2	-0.1
	15nm,0.2s						
ORDF	Ordiarp	0.88	286	Pg	Pn	07 31 00.1	-0.5
ORDF				Sg	Sn	07 31 12.3	-0.8
CSOR	Sort	0.90	131	P	Pn	07 31 00.5	-0.4
CSOR				S	Sb	07 31 12.4	+0.4
	11nm,0.3s						
SJPF	Ste Jean	1.07	278	*e*Pn	Pg	07 31 03.2	0.0
SJPF				*e*Sg	Sn	07 31 18.0	+0.2
	7.1nm,0.3s						
PAND	Andorre	1.08	114	Pg	Pn	07 31 03.8	+0.4
PAND				Sg	Sn	07 31 18.2	-0.1
CORG	Organya	1.10	132	P	Pg	07 31 03.7	-0.1
CORG				S	Sn	07 31 19.3	+0.6
	5.8nm,0.3s						
ARBS	La Rabassa	1.11	118	P	Pg	07 31 04.1	0.0
ARBS				S	Sb	07 31 18.4	+0.2
	14nm,0.3s						
OSSF	Osses	1.12	285	Pg	Pg	07 31 04.9	+0.7
OSSF				Sg	Sn	07 31 19.9	+0.9
DUNF	Dun	1.17	87	Pg	Pg	07 31 05.8	+0.6
DUNF				Sg	Sg	07 31 21.7	+1.3
EALK	Alkurruntz	1.29	282	Pn	Pg	07 31 08.1	+0.7
EALK				Sn	Sg	07 31 24.7	+0.6
EALK				*i* IVmb_Lg		07 31 29.9	
ESAC	San Caprasio	1.35	202	Pg	Pg	07 31 09.7	+1.2
ESAC				Sg	Sg	07 31 28.7	+2.7
ESAC				*i* IVmb_Lg		07 31 30.3	
ESAC	San Caprasio	1.35	202	P	Pg	07 31 09.3	+0.7
ESAC				S	Sg	07 31 26.4	+0.4
CLLI	Llivia	1.39	110	P	Pg	07 31 09.3	0.0
CLLI				S	Sg	07 31 27.3	0.0
	5.2nm,0.3s						
MTLF	Montolieu	1.51	75	*e*Pn	Pg	07 31 11.4	-0.2
MTLF				*e*Sg	Sg	07 31 30.8	-0.5
	18nm,0.2s						
CBRU	Bruguera	1.60	115	P	Pg	07 31 13.1	-0.3
CBRU				S	Sg	07 31 34.3	+0.1
	7.9nm,0.3s						
CORI	Orista	1.68	126	P	Pb	07 31 13.8	+0.4
CORI				S	Sb	07 31 35.1	+0.8
	16nm,0.2s						
EPOB	Poblet	1.74	158	Pn	Pg	07 31 15.9	-0.1
EPOB				Sn	Sg	07 31 37.6	-0.9
EPOB				*i* IVmb_Lg		07 31 40.5	
EPOB	Poblet	1.74	158	P	Pb	07 31 14.1	-0.3
EPOB				S	Sg	07 31 37.6	-0.9
	9.8nm,0.4s						
CBEU	Beuda	1.95	111	P	Pb	07 31 17.5	-0.5
CBEU				S	Sb	07 31 42.2	+0.1
	9.4nm,0.3s						
LFF	La Frestale	2.00	11	*e*Pn	Pb	07 31 18.4	-0.4
LFF	La Frestale	2.00	11	*e*Pg	Pg	07 31 22.0	+0.9
LFF				*e*Sg	Sg	07 31 47.6	+0.5
	32nm,0.3s						
ERTA	Horta de San J	2.01	177	P	Pb	07 31 18.5	-0.5
ERTA				S	Sb	07 31 44.2	+0.2
	5.6nm,0.3s						
CFON	Fontmartina	2.04	126	P	Pb	07 31 19.2	-0.3
CFON				S	Sb	07 31 44.4	-0.3
CLAF	Gruissan	2.11	85	P	Pb	07 31 19.8	-0.8
CLAF				S	Sb	07 31 46.4	-0.4
	2.9nm,0.2s						
CMAS	Mas de Barbera	2.24	178	P	Pb	07 31 21.4	-1.5
CMAS				S	Sb	07 31 49.4	-1.2
	7.6nm,0.2s						
CAF	Calviac	2.37	34	*e*Pn	Pb	07 31 23.7	-1.3
CAF	Calviac	2.37	34	*e*Pg	Pg	07 31 29.4	+1.4
CAF				*e*Sg	Sg	07 31 58.1	-0.6
	6.5nm,0.2s						
ALCN	Alcanar	2.43	175	S	Sb	07 31 54.0	-1.7
RJF	Les Rejaudoux	2.51	21	*e*Pn	Pb	07 31 25.4	-2.1
RJF	Les Rejaudoux	2.51	21	*e*Pg	Pg	07 31 32.0	+1.2
EMOS	Mosqueruela	2.66	191	P	Pb	07 31 27.9	-2.1
EMOS				S	Sb	07 32 00.4	-2.1
LASF	Ste Croix	2.87	66	*e*Pn	Pn	07 31 29.6	+1.7
LASF	Ste Croix	2.87	66	*e*Pg	Pg	07 31 38.3	+0.7
LASF				*e*Sg	Sg	07 32 14.4	-0.4
	7.3nm,0.3s						
MFF	Saint Martin d	3.64	356	*e*Pn	Pn	07 31 40.6	+2.1
MFF	Saint Martin d	3.64	356	*e*Pg	Pg	07 31 52.0	-0.3
MFF				*e*Sg	Sg	07 32 37.8	-1.7
	2.5nm,0.3s						
VIVF	Saint-Julien-l	3.73	58	*e*Pg	Pg	07 31 53.4	-0.7
VIVF				*e*Sg	Sg	07 32 41.1	-1.3
	1.4nm,0.2s						

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*IDC **14** 07:34:13.7±3.0, 54.°23N×87.°21E, h0^{km}, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=25.5km s-min=16.5km az=64.0*

ASRS 14 07:34:12.0±0.9**, 54.°17N×87.°08E, h0^{km}, M2.8, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.35	261	I	I	07 43 11.4	
	baz=78,slow=326,SNR=8.6						
ZALV	Zalesovo Beam	1.35	261	Pg	Pb	07 34 39.9	+1.7
	1.6nm,0.3s,baz=81,slow=17,SNR=15						
ZALV				Lg	Lg	07 34 59.5	
	1.8nm,0.3s,baz=75,slow=27,SNR=5.2						
KURBB	Kurchatov Arra	6.32	239	Pn	Pn	07 35 49.5	+3.1
	0.1nm,0.3s,baz=53,slow=14,SNR=1.8						
KURBB				Lg	Lg	07 37 37.4	
	0.1nm,0.3s,baz=48,slow=29,SNR=1.6						
	0.5nm,0.3s						
MKAR	Makanchi Array	7.99	204	Pn	Pn	07 36 13.8	+4.5
	0.2nm,0.3s,baz=26,slow=14,SNR=6.6						
MKAR				Sn	Sn	07 37 43.4	+3.1
	0.1nm,0.3s,baz=26,slow=26,SNR=8.7						
MKAR				Lg	Lg	07 38 29.3	
	0.1nm,0.3s,baz=27,slow=29,SNR=1.9						
	0.3nm,0.4s						

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*IDC **14** 07:36:39.6±4.0, 36.°48N×71.°03E, h187^{km}±34^{km}, mb3.3/11, mbtmp4.0/17, Error ellipse: s-maj=29.8km s-min=19.0km az=29.0*

*NEIC **14** 07:36:43.5±1.4, 36.°65N±0.°03×71.°0E±0.°1, h216^{km}±9^{km}, mb4.2/13, Error ellipse: s-maj=12.9km s-min=3.1km az=75.0*

*NNC **14** 07:36:47.2±2.6, 37.°03N×70.°99E, h220^{km}±27^{km}, mb2.9, mpv3.6, Error ellipse: s-maj=24.2km s-min=15.5km az=9.0*

ISC 14 07:36:41.1±0.6**, 36.°57N**±0.°05×**71.°08E**±0.°07**, h200^{km}, n69, σ1.^{s}73**/78**, mb4.0**/15**, 4C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	2.50	346		Pn	07 37 27.3	+2.2
KBL	Kabul	2.61	220		Pn	07 37 30.0	+3.5
SIMJ	Simiganj	2.66	322		Pn	07 37 28.9	+2.0
DRK	Karamyk	2.96	11		Pn	07 37 33.4	+2.8
NIL	Nilore	3.41	148		Pn	07 37 40.4	+4.6
BTK	Batken	3.49	357		Pn	07 37 39.6	+2.9
SRNI	Srinagar	3.95	127	*e*P	Pn	07 37 45.2	+3.0
SRNI				*e*S	Sn	07 38 28.9	-1.3
SRNI				IAML		07 38 36.5	
	comp=E,2µm,0.2s						
JMU	Jammu	4.97	140	*e*P	Pn	07 37 57.3	+2.2
JMU				*e*S	Sn	07 38 52.5	-0.9
JMU				IAML		07 39 06.0	
	comp=E,270nm,0.9s						
ARSB	Arslanbob	4.98	17		Pn	07 37 56.8	+1.5
DHRM	DHARAMSHALA	6.10	133	*e*P	Pn	07 38 11.5	+1.6
DHRM				*e*S	Sn	07 39 18.2	-1.8
DHRM				IAML		07 39 23.3	
	comp=E,498nm,0.3s						
DHRM				IAML		07 39 23.8	
	comp=N,433nm,0.5s						
NRN	Naryn	6.19	37		Pn	07 38 11.8	+0.7
KK31	Karatay Array	6.54	356		Pn	07 38 16.1	+0.8
KK31	Karatay Array	6.54	356	⇑P	Pn	07 38 16.7	+1.4
	comp=N,3.2nm,0.3s						
KK31				⇑S	Sn	07 39 25.8	-4.3
	comp=N,18nm,0.3s						
KKAR	Karatay Array	6.54	356		Pn	07 38 16.1	+0.8
KKAR	Karatay Array	6.54	356		Pn	07 38 16.4	+1.1
AAK	Ala-Archa	6.61	22		Pn	07 38 18.2	+1.8
AAK	Ala-Archa	6.61	22	P	Pn	07 38 17.7	+1.4
	comp=N,4.1nm,0.3s,baz=163,slow=5.7,SNR=7.3						
AAK				S	Sn	07 39 29.0	-2.9
	comp=N,13nm,0.5s,baz=153,slow=22,SNR=9.7						
AAK	Ala-Archa	6.61	22	⇓P	Pn	07 38 16.7	+0.4
	comp=N,1.3nm,0.7s						
AAK				⇓S	Sn	07 39 30.7	-1.2
	comp=N,6.1nm,0.7s						
BOOM	Boomskoye usch	7.01	31		Pn	07 38 23.2	+1.7
TKM2	Tokmak 2	7.24	27	⇓P	Pn	07 38 25.9	+1.4
	comp=N,6.2nm,0.8s						
TKM2				⇓S	Sn	07 39 45.1	-1.6
	comp=N,20nm,0.9s						
KDJ	Kajisay	7.29	39	Pn	Pn	07 38 26.5	+1.2
TARG	Taragay, Kyrgy	7.34	43	Pn	Pn	07 38 28.1	+2.0
SMLA	Simla	7.42	135	*e*P	Pn	07 38 29.9	+3.0
SMLA				*e*S	Sn	07 39 46.8	-4.1
SMLA				IAML		07 39 53.8	
	comp=E,129nm,0.3s						
HNLY	HANLEY	7.52	118	*e*P	Pn	07 38 30.5	+1.8
KLP	Kalpa	7.79	128	*e*P	Pn	07 38 33.9	+2.0
KLP				*e*S	Sn	07 39 55.1	-4.9
KLP				*e*S		07 39 55.8	
KLP				IAML		07 40 06.3	
	comp=N,95nm,0.8s						
KUDL	Kundal	9.56	150	*e*P	Pn	07 38 58.0	+3.2
KUDL				*e*S	Sn	07 40 37.3	-4.4
KUDL				IAML		07 40 40.0	
	comp=E,31nm,0.4s						
MAKZ	Makanchi	13.06	35		Pn	07 39 39.4	+0.1
MK31	Makanchi Array	13.20	36	⇑P	Pn	07 39 41.6	+0.6
	comp=E,2.8nm,0.8s,baz=221,slow=16,SNR=14						
MKAR	Makanchi Array	13.20	36		Pn	07 39 41.6	+0.6
MKAR	Makanchi Array	13.20	36	P	Pn	07 39 42.0	+1.0
	comp=E,2.0nm,0.6s,baz=222,slow=16,SNR=14						
KURBB	Kurchatov Arra	15.04	19	P	Pn	07 40 03.2	-0.4
	comp=E,1.6nm,0.5s,baz=209,slow=11,SNR=13						
AB31	Akbulak array	15.05	331		Pn	07 40 02.6	-1.2
AB31	Akbulak array	15.05	331	P	Pn	07 40 03.1	-0.7
	comp=E,2.2nm,0.6s,baz=145,slow=12,SNR=42						
ABKAR	Akbulak array	15.05	331	P	Pn	07 40 02.7	-1.1
ABKAR	Akbulak array	15.05	331		Pn	07 40 02.4	-1.4
KURK	Kurchatov	15.15	19		P	07 40 05.7	+0.3
KURK	Kurchatov	15.15	19	⇓P	Pn	07 40 04.3	-0.6
	comp=E,3.7nm,1.5s						
EVN	Everest	15.83	118		Pn	07 40 15.6	+1.6
BVA0	Borovoye Array	16.46	359	P	Pn	07 40 21.0	+0.2
	comp=E,2.7nm,0.6s,baz=186,slow=6.9,SNR=17						
BVAR	Borovoye Array	16.46	359	P	Pn	07 40 21.6	+0.9
	comp=E,3.1nm,0.4s,baz=163,slow=12,SNR=14						
BRVK	Borovoye	16.50	358	P	Pn	07 40 20.9	-0.3
BRVK				IAmb	IAmb	07 40 22.3	
	comp=Z,5.8nm,1.0s						
AKTO	Aktyubinsk	16.75	330	P	Pn	07 40 24.1	-0.2
	comp=Z,8.6nm,0.6s,baz=141,slow=9.3,SNR=21						
AKTO	Aktyubinsk	16.75	330	⇑P	Pn	07 40 23.7	-0.5
	comp=Z,4.9nm,0.7s						
ZALV	Zalesovo Beam	19.83	24	P	P	07 40 57.5	+1.1
ZALV	Zalesovo Beam	19.83	24	P	P	07 40 57.2	+0.8
	comp=Z,4.9nm,0.4s,baz=222,slow=10,SNR=1.7						
ARTI	Arti	21.60	341	P	P	07 41 15.4	+0.4
	comp=Z,2.2nm,0.4s,baz=154,slow=11,SNR=3.3						
	comp=Z,2.2nm,0.4s						
FIA1	FINESS Array S	37.46	326	P	P	07 43 35.1	+0.2
FINES	FINESS Array B	37.46	326	P	P	07 43 34.5	-0.5
FINES	FINESS Array B	37.46	326	P	P	07 43 35.1	+0.1
	comp=Z,2.2nm,0.5s,baz=124,slow=9.6,SNR=6.1						
	comp=Z,2.2nm,0.5s						
ARCES	ARCESS Array B	41.10	338	P	P	07 44 05.8	+0.8
ARCES				IAmb	IAmb	07 44 09.3	
	comp=Z,20nm,1.4s						
ARCES	ARCESS Array B	41.10	338	P	P	07 44 05.0	0.0
	comp=Z,1.4nm,0.5s,baz=108,slow=7.1,SNR=16						
	comp=Z,1.4nm,0.5s						

HFS	Hagfors	43.05	322	P	P	07 44 21.0	+0.2
	comp=Z,1.9nm,0.5s,baz=96,slow=11,SNR=8.6						
	comp=Z,1.9nm,0.5s						
NC303	NORSAR Array S	44.31	323	P	P	07 44 31.1	+0.3
NB2	NORSAR Subarra	44.36	323	P	P	07 44 30.9	-0.4
	comp=Z,0.7nm,0.5s,baz=94,slow=7.9						
NOA	NORSAR Array B	44.36	323	P	P	07 44 31.2	-0.1
	comp=Z,1.1nm,0.6s,baz=96,slow=7.7,SNR=6.9						
	comp=Z,1.1nm,0.6s						
SPITS	Spitsbergen Ar	47.44	347	P	P	07 44 56.2	+1.2
	comp=Z,6.4nm,0.9s,baz=96,slow=6.4,SNR=4.3						
	comp=Z,6.4nm,0.9s						
TORD	Torodi Ar. Bea	65.78	269	P	P	07 47 03.4	-1.6
	comp=Z,0.5nm,0.7s,baz=44,slow=5.6,SNR=5.2						
	comp=Z,0.5nm,0.7s						
C16K	Lisburne Hills	67.37	20	P	P	07 47 14.9	+0.6
C16K				IAmb	IAmb	07 47 27.7	
	comp=Z,6.4nm,1.4s						
C19K	Lookout Ridge	68.25	17	P	P	07 47 20.7	+0.9
D19K	Kuna River	69.06	17	P	P	07 47 24.6	-0.2
D19K				IAmb	IAmb	07 47 47.0	
	comp=Z,6.8nm,1.4s						
F15K	North Star Dit	69.36	21	P	P	07 47 26.9	+0.3
C23K	Itkillik River	69.64	14	P	P	07 47 29.1	+0.8
C23K				IAmb	IAmb	07 47 49.9	
	comp=Z,10.0nm,1.5s						
C27K	Jago River	71.09	12	P	P	07 47 38.2	+1.2
C27K				IAmb	IAmb	07 47 53.2	
	comp=Z,8.5nm,1.5s						
F21K	Alatna River	71.16	17	P	P	07 47 37.9	+0.4
F21K				IAmb	IAmb	07 47 57.2	
	comp=Z,2.8nm,1.4s						
IMAR	Indian Mountai	72.09	18	P	P	07 47 42.6	-0.5
ILAR	Eielson Array	74.70	16	P	P	07 47 57.8	-0.6
	comp=Z,0.2nm,0.5s,baz=298,slow=4.0,SNR=2.9						
	comp=Z,0.2nm,0.5s						
YKA	Yellowknife Ar	81.17	3	P	P	07 48 34.0	0.0
	comp=Z,0.2nm,0.7s,baz=320,slow=8.5,SNR=5.6						
	comp=Z,0.2nm,0.7s						
WRA	Warramunga Arr	81.97	122	P	P	07 48 38.1	-0.7
	comp=Z,0.4nm,0.9s,baz=318,slow=5.5,SNR=1.7						
	comp=Z,0.4nm,0.9s						
ASAR	Alice Springs	84.24	125	P	P	07 48 51.4	+1.0
	comp=Z,0.2nm,0.6s,baz=302,slow=5.3,SNR=1.9						
	comp=Z,0.2nm,0.6s						

SNET ***14*** *07:40:22.9±1.0, 13°.10N×89°.53W, h56^{km}±10^{km}, ML3.3*
GCG ***14*** *07:40:23.6±0.7, 13°.14N×89°.53W, h54^{km}±9^{km}, MD3.9, ML3.4*
CATAC ***14*** *07:40:23.7±0.4, 13°N±2°×8°9W±°, h31^{km}±3^{km}, M3.6/36, MLv3.6/36, Error ellipse: s-maj=5.8km s-min=3.6km az=36.2, confirmed*
ISC 14 07:40:23.5±1.4**, 13°.09N**±0°.05×**89°.48W**±0°.04**, h31**^{km}±11^{km}**, n83, σ0^{s}53**/89**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.43	21	*e*P	Pn	07 40 33.9	+0.3
LALI				IAML		07 40 42.3	
	comp=Z,673nm,0.2s						
LALI				*e*S	Sn	07 40 42.3	+1.9
LALI	Alcalda de L	0.43	21	*i* P	Pn	07 40 33.9	+0.3
LALI				IAML		07 40 43.3	
	comp=E,647nm,0.2s						
LALI	Alcalda de L	0.43	21	P	Pn	07 40 34.0	+0.4
LALI	Alcalda de L	0.43	21	S	Sn	07 40 41.2	+0.7
JAYA	Jayaque - finc	0.57	3	*i* P	Pb	07 40 35.4	+0.2
JAYA				*i* S	Sn	07 40 44.1	+0.1
JAYA	Jayaque - finc	0.57	3	P	Pb	07 40 35.5	+0.2
PANCS	Alcalda de	0.60	29	P	Pn	07 40 36.2	+0.2
PANCS	Alcalda de	0.60	29	S	Sn	07 40 45.1	+0.4
ITCA	Escuela Especi	0.62	19	S	Sn	07 40 45.6	+0.4
ITCA	Escuela Especi	0.62	19	P	Pb	07 40 36.0	0.0
LOMA	Loma Larga	0.63	29	P	Pb	07 40 36.4	+0.1
LOMA	Loma Larga	0.63	29	S	Sn	07 40 45.8	+0.2
PMON	Piamonte	0.64	15	S	Sn	07 40 46.1	+0.2
PMON	Piamonte	0.64	15	P	Pb	07 40 36.5	0.0
SEMO	Seminario San	0.66	22	P	Pb	07 40 36.8	0.0
SEMO	Seminario San	0.66	22	S	Sn	07 40 46.5	+0.1
UEES	Universidad Ev	0.67	21	P	Pb	07 40 36.9	+0.1
UEES	Universidad Ev	0.67	21	S	Sn	07 40 46.7	+0.2
UTEC	Universidad Te	0.67	24	S	Sn	07 40 46.6	+0.2
UTEC	Universidad Te	0.67	24	P	Pb	07 40 36.9	+0.1
LFRS	El Faro	0.67	37	*i* P	Pn	07 40 37.1	0.0
LFRS				IAML		07 40 50.9	
	comp=Z,986nm,0.5s						
BOQS	Boqueron	0.68	17	*e*P	Pn	07 40 37.2	0.0
BOQS				IAML		07 40 49.7	
	comp=Z,985nm,0.1s						
IGN	Direccin Gen	0.69	26	S	Sn	07 40 47.3	+0.2
IGN	Direccin Gen	0.69	26	P	Pb	07 40 37.2	0.0
UDBS	Universidad Do	0.70	27	P	Pb	07 40 37.4	0.0
UDBS	Universidad Do	0.70	27	S	Sn	07 40 47.5	+0.2
AEIL	Aeropuerto Ilo	0.70	30	*e*P	Pn	07 40 38.3	+0.9
CEDA	San Andres	0.72	7	S	Sn	07 40 47.8	+0.2
CEDA	San Andres	0.72	7	P	Pb	07 40 37.5	-0.2
CEVE	Cerro Verde	0.75	349	*e*P	Pb	07 40 37.6	-0.7
CEVE				*e*S	Sn	07 40 50.3	+1.6
CEVE				IAML		07 40 50.4	
	comp=Z,2μm,0.2s						
CEVE	Cerro Verde	0.75	349	P	Pb	07 40 38.0	-0.3
CEVE	Cerro Verde	0.75	349	S	Sn	07 40 48.7	0.0
COEG	Centro de Oper	0.79	48	P	Pn	07 40 38.1	-0.5
COEG	Centro de Oper	0.79	48	S	Sn	07 40 49.5	+0.1
TECO	Alcaldia de Te	0.82	57	P	Pn	07 40 38.2	-0.7
PAVA	Las Pavas	0.82	40	S	Sn	07 40 50.2	-0.1
PAVA	Las Pavas	0.82	40	P	Pn	07 40 39.1	0.0
NUBE	Las Nubes	0.86	340	*i* P	Pn	07 40 39.0	-0.7
NUBE				*i* S	Sn	07 40 51.1	-0.3
NUBE	Las Nubes	0.86	340	P	Pn	07 40 39.2	-0.5
UESV	Universidad de	0.87	51	P	Pn	07 40 39.4	-0.3
UESV	Universidad de	0.87	51	S	Sb	07 40 51.3	-0.2
UNIC	Universidad Ca	0.89	356	P	Pn	07 40 39.9	-0.2
UNIC	Universidad Ca	0.89	356	S	Sb	07 40 51.8	-0.4
FAME	Alcaldia de Sa	0.91	326	P	Pn	07 40 39.5	-0.8
ALJI	Alcalda de J	0.92	75	S	Sb	07 40 52.8	-0.1
ALJI	Alcalda de J	0.92	75	P	Pn	07 40 40.4	0.0
LOAL	Lomas de Alarc	0.95	342	P	Pn	07 40 40.9	0.0
SCLA	Alcaldia de Sa	0.96	50	P	Pn	07 40 40.9	0.0
SLOZ	Alcaldia de Sa	0.98	343	P	Pn	07 41 41.0	-0.2
SLOZ	Alcaldia de Sa	0.98	343	S	Sn	07 40 54.0	-0.1
PQSS	Presa 15 de Se	1.04	59	S	Sn	07 40 55.4	-0.3
PQSS	Presa 15 de Se	1.04	59	P	Pn	07 40 41.7	-0.4
LLGN	La Laguna	1.19	26	*e*P	Pn	07 40 43.7	-0.5
LLGN				*e*P		07 40 43.9	
LLGN				*e*S	Sb	07 41 00.4	-0.3
LLGN	La Laguna	1.19	26	P	Pn	07 40 43.8	-0.5
PACA	Pacayal	1.19	71	*e*P	Pn	07 40 44.6	+0.4
PACA				*e*S	Sb	07 41 00.7	-0.1
PACA	Pacayal	1.19	71	P	Pn	07 40 44.3	+0.1
PACA	Pacayal	1.19	71	S	Sn	07 40 59.1	-0.3
MTO3	Montecristo	1.31	5	*i* P	Pn	07 40 45.5	-0.5
MTO3	Montecristo	1.31	5	P	Pn	07 40 45.4	-0.5
CNRM	Centro Naciona	1.33	73	P	Pn	07 40 45.9	-0.1
ESQI	Esquipulas	1.47	5	P	Pn	07 40 47.8	-0.3
ESQI	Esquipulas	1.47	5	S	Sn	07 41 05.7	-0.6
FG16	Alotenango, Sa	1.55	320	IAML		07 41 23.5	
	comp=N,1μm,0.3s						
LCND	La Caada	1.57	82	*e*P	Pn	07 40 49.3	0.0
LCND				IAML		07 41 11.5	
	comp=Z,373nm,0.3s						
LCND	La Caada	1.57	82	P	Pn	07 40 49.0	-0.3
CNCH	Conchagua	1.62	83	P	Pn	07 40 49.8	-0.3
CNCH	Conchagua	1.62	83	S	Sn	07 41 10.1	+0.1
CSGN	Cosiguina Volc	1.88	93	P	Pn	07 40 53.4	-0.2
POTN	Potosi Cosigui	1.93	92	P	Pn	07 40 54.5	+0.3
STG0	El Palmar, Qui	2.25	307	*i* P	Pb	07 41 02.8	-0.7
STG0				*i* S	Sb	07 41 33.4	+2.4
STG0				IAML		07 41 35.7	
	comp=E,674nm,0.2s						
STG8	El Palmar, Qui	2.27	307	*i* P	Pb	07 41 03.4	-0.5
PKGN	Cerro Pekin	2.48	99	P	Pn	07 41 01.7	-0.1
POLN	Al Sur del Vol	2.64	99	P	Pn	07 41 03.6	-0.5
CNGA	Al SSO del Vol	2.78	102	P	Pn	07 41 05.8	-0.2
CNGN	Cerro Negro	2.78	102	P	Pn	07 41 05.8	-0.1
CNGN	Cerro Negro	2.78	102	S	Sn	07 41 38.7	+0.2
MOMN	Momotombo	2.95	103	P	Pn	07 41 09.3	+1.0
COPN	Copaltepe	2.96	107	P	Pn	07 41 08.7	+0.3
LIMN	Finca el Limon	3.04	90	P	Pn	07 41 08.9	-0.7
RCVN	Varillal2	3.24	81	P	Pn	07 41 11.9	-0.5
MAS3	Al N del Volca	3.40	108	P	Pn	07 41 14.9	+0.4
MATN	Matagalpa	3.47	92	P	Pn	07 41 15.3	-0.2
BOAB	BOACO BROADBAN	3.78	99	P	Pn	07 41 19.1	-0.6

BJI ***14*** *07:50:52.3, 13°.42N×145°.64E, h65^{km}, mB5.3/54, mb5.3/84, Ms4.8/85, Ms7 4.7/82*
DJA ***14*** *07:50:53.0±0.6, 14°N±5°×14°6E±°, h67^{km}±5^{km}, M5.5/59, mb5.8/59, mB6.0/41, MLv5.6/1, Mw(mB)5.5/41, MwMwp5.1/12, Mwp5.3/12*
IDC ***14*** *07:50:55.9±0.8, 13°.57N×145°.32E, h60^{km}±6^{km}, mb5.2/43, mbtmp5.5/45, MS4.4/69, Error ellipse: s-maj=12.2km s-min=8.3km az=81.0*
MOS ***14*** *07:50:55.3±0.9, 13°.58N×145°.18E, h67^{km}, mb5.7/80, MS4.8/9, Error ellipse: s-maj=7.3km s-min=4.0km az=112.2*
GCMT ***14*** *07:50:56.5±0.1, 13°.36N±0°.01×145°.47E±0°.01, h49^{km}±1^{km}, MW5.3/139, Moment Tensor Solution. s103,c173; s139,c248; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.59±.02; $M_{\theta\theta}$0.18±.01; $M_{\phi\phi}$-0.77±.01; $M_{r\theta}$0.36±.01; $M_{\theta\phi}$-0.02±.01; $M_{\phi r}$0.78±.02; Best double couple: $M_0$1.10300×10^{17} NP1:ϕ_s158.00000°,δ24.00000°, λ50.00000°. NP2:ϕ_s21.00000°,δ72.00000°,λ106.00000°. Principal axes: T 1.0590, Plg60.0000°, Azm313.0000°; N 0.0890, Plg15.0000°, Azm195.0000°; P -1.1480, Plg25.0000°, Azm98.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***14*** *07:50:56.5±1.0, 13°.54N±0°.07×145°.34E±0°.08, h60^{km}±4^{km}, mb5.7/148, Mww5.2/24 Error ellipse: s-maj=11.7km s-min=10.4km az=68.0*
PMR ***14*** *07:50:56.0, 13°.55N×145°.19E, h60^{km}*
NEIC ***14*** *07:50:56.6, 13°.54N×145°.33E, h70^{km}*
NEIC ***14*** *07:50:56.6, 13°.44N×145°.43E, h70^{km}, Moment Tensor Solution. Duration: 2^{s}1 Moment tensor: Scale 10^{16}Nm; M_{rr}2.18; $M_{\theta\theta}$3.73; $M_{\phi\phi}$-5.91; $M_{r\theta}$2.78; $M_{\theta\phi}$2.11; $M_{\phi r}$4.75; Fault plane solution: $M_0$7.85000×10^{16} NP1: ϕ_s127.71000°,δ41.62000°,λ15.73000°. NP2:ϕ_s25.82000°, δ79.63000°,λ130.54000°. Principal axes: T 7.4919, Plg41.0000°, Azm333.0000°; N 0.6683, Plg40.0000°, Azm197.0000°; P -8.1602, Plg24.0000°, Azm86.0000°;*
ISC 14 07:50:56.2±0.3**, 13°.53N**±0°.03×**145°.38E**±0°.04**, h65**^{km}±2^{km}**, h65**^{km}**:pP-P, n1156, σ1^{s}28**/1265**, mb5.5**/250**, 47C-20D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.50	277		Pn	07 51 08.0	-0.6
GUMO				Sn	Sn	07 51 16.7	-0.9
GUMO	Guam	0.50	277	P	Pn	07 51 08.2	-0.4
	6μm,0.3s,baz=90,slow=2.5,SNR=913						
GUMO	Guam	0.50	277	S	Sn	07 51 17.6	0.0
JCJ	Chichijima	13.82	348	P	Pn	07 54 09.7	+0.5
	53nm,0.9s,baz=102,slow=23,SNR=6.3						
JCJ				S	Sn	07 56 43.7	+2.7
	49nm,0.6s,baz=151,slow=20,SNR=1.5						
PATS	Pohnpei	14.36	116		Pn	07 54 10.5	-5.8
PATS	Pohnpei	14.36	116	P	Pn	07 54 10.4	-6.0
MANU	Manus Island	15.60	173	Pn	Pn	07 54 32.6	+0.3
JAY	Jayapura	16.60	197	P	Pn	07 54 45.0	+0.1
	65nm,0.8s,baz=2.7,slow=6.0,SNR=14						
JAY				LR	LR	07 59 45.0	
	comp=Z,1μm,21.5s,baz=13,slow=32						
JAY	Jayapura	16.60	197	P	P	07 54 46.3	-0.1
SMPI	Sarmi	16.78	204	P	P	07 54 48.0	-0.3
GENI	Genyem	16.83	198	P	Pn	07 54 47.9	+0.1
GENI	Genyem	16.83	198	P	P	07 54 50.6	+1.7
BAKI	Biak	17.28	213	P	P	07 54 53.9	0.0
JMZ	Minamidaito 2	18.06	315	P	P	07 55 01.1	-1.4
JMZ				IAmb	IAmb	07 55 01.9	
	comp=Z,758nm,1.3s						
RKPI	Ransiki, Papua	18.62	217	P	P	07 55 08.8	+0.1
RABL	Rabaul	18.85	159		P	07 55 11.7	+0.4
SWI	Sorong	20.01	225	P	Pn	07 55 25.6	-0.5
	comp=Z,3μmcomp=Z,4μmcomp=Z,531nm,1.0s						
SWI	Sorong	20.01	225	P	Pn	07 55 25.3	-0.8
SWI				pmax	pmax		
	comp=Z,531nm,1.0s						
JHJ2	Mitsune	20.14	346	P	P	07 55 25.5	+0.5
JHJ2				IAmb	IAmb	07 55 30.2	
	comp=Z,476nm,0.9s						
DAV	Davao City (W)	20.50	254	P	P	07 55 29.2	+0.1
	comp=Z,163nm,0.4s,baz=66,slow=12,SNR=1.5						
DAV				LR	LR	08 02 10.4	
	comp=Z,2μm,21.1s,baz=76,slow=33						
	comp=Z,163nm,0.4s						
DAV	Davao City (W)	20.50	254	P	P	07 55 30.2	+1.0
DAV				S	Sn	07 59 19.3	-3.4
JOW	Kunigami	20.77	312	P	P	07 55 33.3	+1.4
	comp=Z,203nm,0.7s,baz=126,slow=8.5,SNR=18						
JOW				LR	LR	08 02 02.2	
	comp=Z,2μm,20.6s,baz=137,slow=32						
	comp=Z,203nm,0.7s						
JOW	Kunigami	20.77	312	P	Pn	07 55 33.6	-1.4
JOW	Kunigami	20.77	312	S	S	07 59 20.7	+0.4
FAKI	Fak Fak	20.90	219		P	07 55 33.2	-0.3
FAKI				IAmb	IAmb	07 55 38.0	
	comp=Z,600nm,0.8s						
FAKI	Fak Fak	20.90	219	P	P	07 55 34.9	+1.4
FAKI	Fak Fak	20.90	219	P	P	07 55 34.6	+1.1
	comp=Z,3μmcomp=Z,7μmcomp=Z,886nm,0.9s						
H11S3	WAKE ISLAND Hy	21.06	74	T	T	08 17 36.1	
	baz=261,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	21.08	74	T	T	08 17 45.8	
	baz=261,slow=75,SNR=15						
H11S2	WAKE ISLAND Hy	21.08	74	T	T	08 17 45.1	
	baz=261,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	21.50	71	T	T	08 18 39.3	
	baz=257,slow=75,SNR=29						
H11N2	WAKE ISLAND Hy	21.51	70	T	T	08 18 42.9	
	baz=257,slow=75,SNR=22						
H11N3	WAKE ISLAND Hy	21.52	71	T	T	08 18 41.7	
	baz=257,slow=75,SNR=35						
TNTI	Ternate	21.88	236		P	07 55 42.6	-1.4
TNTI	Ternate	21.88	236	P	P	07 55 44.4	+0.4
TNTI	Ternate	21.88	236	P	P	07 55 44.2	+0.2
SGSI	Sangihe	21.91	245	P	P	07 55 43.3	-0.9
	comp=Z,3μmcomp=Z,475nm,0.9s						
JSG	Sagara	22.03	344	P	P	07 55 45.1	-0.3
JSG	Sagara	22.03	344	P	P	07 55 47.7	+2.3
JMN	Monobe	22.66	334	P	P	07 55 53.8	+1.6
JMN				IAmb	IAmb	07 55 55.5	
	comp=Z,137nm,0.7s						
JMN	Monobe	22.66	334	P	P	07 55 53.4	+1.2
PMG	Port Moresby	22.86	175	P	P	07 55 53.9	-0.4
PMG	Port Moresby	22.86	175	LR	LR	08 04 56.6	
	comp=Z,476nm,19.5s,baz=334,slow=37						
PMG	Port Moresby	22.86	175	P	P	07 55 54.3	0.0
PMG	Port Moresby	22.86	175	P	P	07 55 53.9	-0.4
PMG				pmax	pmax		
	comp=Z,56nm,0.8s						
INU	Inuyama	23.00	342	P	P	07 55 55.5	-0.1
JGF	Kuroka	23.13	343		P	07 55 56.6	-0.5
JGF				IAmb	IAmb	07 55 58.3	
	comp=Z,484nm,1.0s						
JGF	Kuroka	23.13	343	P	P	07 55 56.5	-0.5
JNU	Nakatsue	23.56	328		P	07 56 01.0	0.0
JNU				IAmb	IAmb	07 56 18.6	
	comp=Z,492nm,1.1s						
JNU	Nakatsue	23.56	328	P	P	07 56 01.7	+0.7
TGY	Tagaytay City	23.74	274	LR	LR	08 03 38.0	
	comp=Z,999nm,21.2s,baz=84,slow=32						
MJAR	Matsushiro Arr	23.80	346	P	P	07 56 01.1	-2.0
	comp=Z,71nm,0.7s,baz=173,slow=9.9,SNR=101						
MJAR				PcP	PcP	07 59 45.8	+0.7
	comp=Z,19nm,0.9s,baz=162,slow=2.7,SNR=12						
MJAR				LR	LR	08 04 34.2	
	comp=Z,2μm,21.9s,baz=168,slow=34						
	comp=Z,71nm,0.7s						
MAJO	Matsushiro	23.80	346		P	07 56 01.9	-1.2
MAJO				IAmb	IAmb	07 56 04.9	
	comp=Z,188nm,0.7s						
MAJO	Matsushiro	23.80	346	P	P	07 56 02.7	-0.4
MAJO	Matsushiro	23.80	346	*i* P	P	07 56 01.6	-1.5
AAI	Ambon	24.16	226	P	P	07 56 06.3	-0.2
	comp=Z,6μmcomp=Z,543nm,1.3s						
JMM	Marumori	24.58	351	P	P	07 56 10.0	-0.1
JMM				IAmb	IAmb	07 56 40.0	
	comp=Z,183nm,1.1s						
JMM	Marumori	24.58	351	P	P	07 56 11.2	+1.1
SANI	Sanana	24.69	233	P	P	07 56 10.3	-1.1
SANI	Sanana	24.69	233	P	P	07 56 09.6	-1.8
	comp=Z,2μmcomp=Z,83nm,0.6s						
KMSI	Cibinong	24.79	240	P	P	07 56 11.5	-0.8
YULB	Yu-li	24.82	297	P	P	07 56 12.2	-0.3
YULB	Yu-li	24.82	297	P	P	07 56 12.2	-0.3
NACB	Ninganchiao	24.83	299	P	P	07 56 12.3	-0.4
TWGBT	Beinan	24.83	295	P	P	07 56 13.0	+0.4
YHNB	Yeheng	25.20	300	P	P	07 56 17.1	+1.1
JSD	Sado	25.21	347	P	P	07 56 15.5	-0.4
SSLB	Suanglung	25.25	297	P	P	07 56 15.5	-1.0
SSLB				IAmb	IAmb	07 56 38.9	
	comp=Z,262nm,1.1s						
SSLB	Suanglung	25.25	297	P	P	07 56 16.5	0.0
TPUB	Ta-pu	25.37	296	P	P	07 56 16.3	-1.3
TPUB	Ta-pu	25.37	296	P	P	07 56 17.6	0.0
TATA	Tatamba Isabel	26.07	146	P	P	07 56 24.9	+1.1
MRSI	Marisa	26.59	243	P	P	07 56 28.1	-0.5
LUWI	Luwuk	26.68	239	P	P	07 56 29.1	-0.3
LUWI	Luwuk	26.68	239	P	P	07 56 27.8	-1.6
SAVO	Savo Central	26.70	147	P	P	07 56 30.8	+1.2
ALEG	Aligegeo Malai	26.86	145	P	P	07 56 32.0	+1.0
HNR	Honiara	27.01	147	LR	LR	08 06 22.0	
	comp=Z,2μm,21.7s,baz=320,slow=34						
TOLI2	Tolitoli	27.29	245	P	P	07 56 34.8	-0.2
COEN	Coen	27.40	185	P	P	07 56 36.0	+0.2
COEN	Coen	27.40	185	P	P	07 56 35.8	-0.1
	comp=Z,57nm,0.9s						
COEN	Coen	27.40	185	P	P	07 56 35.8	-0.1
JTM	Tenmabayashi	27.41	353	P	P	07 56 35.6	-0.1
APSI	Ampana	27.55	240	P	P	07 56 36.6	-0.7
	comp=Z,2μmcomp=Z,172nm,0.8s						
MYLDM	Lahad Datu	27.76	255		P	07 56 39.6	+0.5
MYLDM				IAmb	IAmb	07 57 02.1	
	comp=Z,224nm,1.1s						
MYLDM	Lahad Datu	27.76	255	P	P	07 56 39.4	+0.3
TJN	Taejon	27.90	328	P	P	07 56 39.3	-0.9
TJN				IAmb	IAmb	07 56 60.0	
	comp=Z,146nm,1.1s						
TJN	Taejon	27.90	328	P	P	07 56 41.4	+1.2
TJN	Taejon	27.90	328	*i* P	P	07 56 40.7	+0.5
SSE	Sheshan	28.29	312	P	P	07 56 43.6	-0.1
SSE				S	S	08 01 25.3	-0.1
SSE				pmax	pmax		
	comp=Z,28nm,0.8s						
SSE				pmax	pmax		
	comp=Z,210nm,3.5s						
SSE				LR	LR		
	comp=Z,440nm,29.5s						
SSE				LR	LR		
	comp=Z,360nm,29.0s						
MPSI	Mapaga	28.44	245	P	P	07 56 43.7	-1.4
	comp=Z,1μmcomp=Z,128nm,1.3s						
KSRS	Korea Array	28.46	330	P	P	07 56 44.6	-0.4
	comp=Z,20nm,0.8s,baz=147,slow=9.8,SNR=46						
KSRS				PcP	PcP	07 59 57.6	+1.8
	comp=Z,41nm,1.0s,baz=161,slow=2.4,SNR=32						
KSRS				ScP	ScP	08 03 33.0	+1.5
	comp=Z,2.1nm,0.8s,baz=144,slow=2.8,SNR=4.5						
KSRS				PKiKP	PKiKP	08 07 31.2	+0.2
	comp=Z,0.5nm,0.3s,baz=108,slow=0.4,SNR=4.1						
	comp=Z,20nm,0.8s						
KSAR	Wonju Array Be	28.47	330	P	P	07 56 45.2	0.0
KSAR	Wonju Array Be	28.47	330	P	P	07 56 45.2	0.0
KS19	Wonju Array Si	28.52	330	P	P	07 56 44.5	-1.2
KDU	Kakadu	29.02	207	P	P	07 56 49.3	-0.9
	comp=Z,57nm,0.7s						
KDU	Kakadu	29.02	207	P	P	07 56 49.7	-0.6
BBSI	Bau Bau	29.49	232	P	P	07 57 02.2	+7.7
DRS	Darwin Rock St	29.52	210	P	P	07 56 54.7	0.0
KKM	Kota Kinabalu	29.66	258	P	P	07 56 55.9	-0.3
KKM	Kota Kinabalu	29.66	258	P	P	07 56 56.2	0.0
MTN	Manton Dam	29.77	209	P	P	07 56 55.9	-1.0
MTN	Manton Dam	29.77	209	P	P	07 56 56.0	-0.9
	comp=Z,90nm,0.9s						
MTN	Manton Dam	29.77	209	P	P	07 56 56.1	-0.8
TTSI	Tana Toraja	30.24	239	P	P	07 57 00.9	-0.2
	comp=Z,3μmcomp=Z,76nm,0.8s						
NJ2	Nanjing	30.48	312	*e*P	P	07 57 04.3	+1.2
NJ2				pmax	pmax		
	comp=Z,12nm,0.7s						
NJ2				LR	LR		
	comp=Z,790nm,23.8s						
NJ2				LR	LR		
	comp=Z,650nm,23.8s						
NJ2				LR	LR		
	comp=Z,830nm,24.7s						
ASAJ	Asahikawa	30.57	356	P	P	07 57 02.8	-1.0
	comp=Z,32nm,1.0s,baz=199,slow=10.0,SNR=12						
ASAJ				PcP	PcP	08 00 02.9	+1.8
	comp=Z,49nm,0.8s,baz=238,slow=7.0,SNR=13						
	comp=Z,32nm,1.0s						
ASAJ	Asahikawa	30.57	356	P	P	07 57 03.9	+0.2
ASAJ				pmax	pmax		
	comp=Z,69nm,1.2s						
JKA	Kamikawa-asahi	30.57	356	P	P	07 57 03.9	+0.2
BNSI	Bone	30.77	236	P	P	07 57 05.0	-0.8
	comp=Z,2μmcomp=Z,229nm,1.1s						
SPSI	Sidrap Palu	30.79	237	P	P	07 57 04.3	-1.7
	comp=Z,4μmcomp=Z,120nm,0.9s						
SOEI	Soe	31.21	223	P	P	07 57 09.9	+0.1
SOEI	Soe	31.21	223	P	P	07 57 07.4	-2.4
	comp=Z,3μmcomp=Z,341nm,0.9s						
KAPI	Kappang	31.41	236	P	P	07 57 11.5	0.0
KAPI				IAmb	IAmb	07 57 12.3	
	comp=Z,109nm,0.7s						
KAPI	Kappang	31.41	236	LR	LR	08 09 45.7	
	comp=Z,334nm,20.0s,baz=36,slow=36						
KAPI	Kappang	31.41	236	P	P	07 57 10.6	-0.8
KAPI				P	P	07 57 10.6	-0.8
KAPI				S	S	08 02 19.1	+4.4
KAPI				S	S	08 02 19.1	+4.4
KAPI	Kappang	31.41	236	P	P	07 57 09.7	-1.8
KAPI	Kappang	31.41	236	P	P	07 57 11.5	0.0
KAPI				pmax	pmax		
	comp=Z,109nm,0.7s						
KAPI	Kappang	31.41	236	P	P	07 57 11.2	-0.3
MSHR	Mys Shultsa	31.45	340	*i* P	P	07 57 11.1	-0.4
MSHR				pmax	pmax		
	comp=Z,71nm,0.8s						
MTSU	Mount Surprise	31.48	182	P	P	07 57 12.3	+0.3
	comp=Z,24nm,1.0s						
MTSU	Mount Surprise	31.48	182	P	P	07 57 12.8	+0.8
BSSI	Bau Bau, Buton	31.51	233	P	P	07 57 13.6	+1.3
	comp=Z,3μmcomp=Z,213nm,0.9s						
LUES	Luesalemba Tem	31.51	139	P	P	07 57 13.2	+0.9
PSTR	Posyet	31.63	339	*i* P	P	07 57 13.6	+0.5
VLA	Vladivostok	31.70	341	*i* P	P	07 57 14.3	+0.7
VLA				pmax	pmax		
	comp=Z,166nm,1.1s						
MMRI	Maumere	31.82	227	P	P	07 57 14.6	-0.5
MMRI				IAmb	IAmb	07 57 16.0	
	comp=Z,136nm,0.8s						
MMRI	Maumere	31.82	227	P	P	07 57 15.2	+0.1
MMRI	Maumere	31.82	227	P	P	07 57 15.2	+0.1
	comp=Z,3μmcomp=Z,213nm,1.0s						
BATI	Baumata	31.95	223	P	P	07 57 15.5	-0.7
	comp=Z,2μmcomp=Z,220nm,0.9s						
EDFI	Ende, Flores	32.30	228	P	P	07 57 18.4	-0.9
	comp=Z,1μmcomp=Z,96nm,0.9s						
TV1H	Townsville Har	32.62	178	P	P	07 57 22.6	+0.7
USRK	Ussuriysk Ar.	32.64	342		P	07 57 22.1	+0.2
USRK	Ussuriysk Ar.	32.64	342	P	P	07 57 22.5	+0.6
	comp=Z,44nm,0.8s,baz=159,slow=8.8,SNR=68						
USRK				PcP	PcP	08 00 07.1	+0.4
	comp=Z,6.6nm,0.6s,baz=186,slow=3.6,SNR=5.6						
USRK				LR	LR	08 09 55.2	
	comp=Z,780nm,20.4s,baz=153,slow=35						
	comp=Z,44nm,0.8s						
USA0B	Ussuriysk Arra	32.64	342	P	P	07 57 22.0	+0.1
USA0B	Ussuriysk Arra	32.64	342	*c i*P	P	07 57 22.0	+0.1
DL2	Dalian	32.86	325	P	P	07 57 24.3	+0.4
DL2				pP	pP	07 57 35.3	-4.0
DL2				S	S	08 02 37.9	+1.2
DL2				pmax	pmax		
	comp=Z,67nm,0.8s						
DL2				pmax	pmax		
	comp=Z,120nm,3.6s						
DL2				LR	LR		
	comp=Z,760nm,20.8s						
DL2				LR	LR		
	comp=Z,750nm,20.0s						
DL2				LR	LR		
	comp=Z,1μm,27.5s						
WHN	Wuhan	33.22	306	⇓P	P	07 57 27.8	+0.7
WHN				LR	LR		

	comp=Z,2µm,14.4s					
WHN			LR	LR		
	comp=Z,2µm,15.0s					
WHN			LR	LR		
	comp=Z,4µm,22.4s					
KNRA	**Kununurra**	**33.35 210**	P	**P**	**07 57 27.9**	**-0.5**
KNRA			IAmb	IAmb	07 57 46.0	
	comp=Z,72nm,0.8s					
KNRA	**Kununurra**	**33.35 210**	P	**P**	**07 57 28.1**	**-0.3**
	comp=Z,100nm,0.9s					
YSS	**Yuzhno-Sakhali**	**33.39 357**		**P**	**07 57 27.7**	**-0.7**
YSS			IAmb	IAmb	07 57 29.0	
	comp=Z,73nm,1.2s					
YSS	**Yuzhno-Sakhali**	**33.39 357**	P	**P**	**07 57 28.0**	**-0.4**
YSS	**Yuzhno-Sakhali**	**33.39 357**	*e*P	**P**	**07 57 27.7**	**-0.7**
YSS			*e*		08 00 09.6	
YSS			pmax	pmax		
	comp=Z,200nm,3.0s					
YSS			pmax	pmax		
	comp=Z,20nm,1.2s					
YSS	**Yuzhno-Sakhali**	**33.39 357**	P	**P**	**07 57 27.5**	**-0.9**
YSS			PcP	**PcP**	**08 00 09.7**	**+1.0**
CTAO	**Charters Tower**	**33.42 179**		**P**	**07 57 29.5**	**+0.5**
CTAO	**Charters Tower**	**33.42 179**	P	**P**	**07 57 29.4**	**+0.5**
CTAO	**Charters Tower**	**33.42 179**	P	**P**	**07 57 29.5**	**+0.5**
CTAO			pmax	pmax		
	comp=Z,39nm,1.1s					
MDJ	**Mudanjiang**	**33.78 340**	P	**P**	**07 57 32.5**	**+0.6**
MDJ			pP	pwP	07 57 48.4	-1.0
MDJ			PcP	**PcP**	**08 00 10.8**	**+0.9**
MDJ			S	**S**	**08 02 51.3**	**+0.3**
MDJ			pmax	pmax		
	comp=Z,55nm,1.0s					
MDJ			pmax	pmax		
	comp=Z,310nm,3.8s					
MDJ			LR	LR		
	comp=Z,560nm,19.7s					
MDJ			LR	LR		
	comp=Z,510nm,22.9s					
MDJ			LR	LR		
	comp=Z,1µm,24.4s					
TIA	**Tai'an**	**33.94 317**	P	**P**	**07 57 34.3**	**+0.9**
TIA			pP	**pP**	**07 57 49.3**	**+0.5**
TIA			sP	**sP**	**07 57 55.9**	**-0.3**
TIA			PcP	**PcP**	**08 00 11.8**	**+1.3**
TIA			pmax	pmax		
	comp=Z,17nm,0.7s					
TIA			pmax	pmax		
	comp=Z,210nm,4.8s					
TIA			LR	LR		
	comp=Z,920nm,17.5s					
TIA			LR	LR		
	comp=Z,1µm,19.8s					
TIA			LR	LR		
	comp=Z,2µm,23.1s					
SNY	**Shenyang**	**33.96 330**	⇑P	**P**	**07 57 35.6**	**+2.1**
SNY			S	**S**	**08 02 58.8**	**+5.0**
SNY			pmax	pmax		
	comp=Z,16nm,0.8s					
SNY			pmax	pmax		
	comp=Z,120nm,3.6s					
SNY			LR	LR		
	comp=Z,210nm,14.9s					
SNY			LR	LR		
	comp=Z,270nm,17.5s					
SNY			LR	LR		
	comp=Z,440nm,17.7s					
BASI	**Baing, Sumba**	**34.10 227**	P	**P**	**07 57 31.8**	**-3.1**
QIS	**Mount Isa**	**34.35 190**	P	**P**	**07 57 36.8**	**-0.2**
	comp=Z,46nm,1.1s					
QIS	**Mount Isa**	**34.35 190**	P	**P**	**07 57 37.4**	**+0.4**
QIZ	**Qiongzhong**	**34.50 284**	P	**P**	**07 57 38.1**	**-0.3**
QIZ			PP	**PnPn**	**07 58 55.3**	**-0.2**
QIZ			S	**S**	**08 03 04.1**	**+1.4**
QIZ			pmax	pmax		
	comp=Z,250nm,4.0s					
QIZ			LR	LR		
	comp=Z,860nm,17.5s					
QIZ			LR	LR		
	comp=Z,1µm,27.7s					
WBSI	**Waikabubak, Su**	**34.57 230**	P	**P**	**07 57 38.0**	**-1.1**
CN2	**Changchun**	**34.67 334**	*e*P	**P**	**07 57 40.5**	**+0.9**
CN2			PP	**PP**	**07 59 00.3**	**+1.1**
CN2			*e*S	**S**	**08 03 07.3**	**+2.6**
CN2			pmax	pmax		
	comp=Z,10.0nm,0.7s					
CN2			pmax	pmax		
	comp=Z,100nm,4.0s					
CN2			LR	LR		
	comp=Z,500nm,17.0s					
CN2			LR	LR		
	comp=Z,800nm,17.0s					
CN2			LR	LR		
	comp=Z,600nm,19.6s					
WB0	**Warramunga Arr**	**34.81 198**	P	**P**	**07 57 40.2**	**-0.8**
WB0			IAmb	IAmb	07 57 41.5	
	comp=Z,42nm,0.7s					
WB9	**Warramunga Arr**	**34.84 198**	P	**P**	**07 57 40.6**	**-0.6**
GULI	**GuiLin**	**34.92 295**	P	**P**	**07 57 42.8**	**+0.8**
GULI			pmax	pmax		
	comp=Z,50nm,0.7s					
GULI			LR	LR		
	comp=Z,710nm,19.5s					
GULI			LR	LR		
	comp=Z,1µm,18.4s					
GULI			LR	LR		
	comp=Z,2µm,19.5s					
WR8	**Warramunga Arr**	**34.96 198**	P	**P**	**07 57 41.5**	**-0.8**
WR8			IAmb	IAmb	07 58 02.6	
	comp=Z,61nm,1.1s					
WRAB	**Tennant Creek**	**34.98 198**	P	**P**	**07 57 42.4**	**-0.1**
WRAB			IAmb	IAmb	07 57 43.1	
	comp=Z,53nm,0.7s					
WRAB	**Tennant Creek**	**34.98 198**	P	**P**	**07 57 42.4**	**-0.1**
WRAB			pmax	pmax		
	comp=Z,53nm,0.7s					
WRA	**Warramunga Arr**	**34.99 198**	P	**P**	**07 57 41.0**	**-1.6**
WRA	**Warramunga Arr**	**34.99 198**	P	**P**	**07 57 41.3**	**-1.3**
	comp=Z,40nm,0.7s,baz=22,slow=9.6,SNR=250					
WRA			PcP	**PcP**	**08 00 14.7**	**+1.0**
	comp=Z,9.4nm,0.6s,baz=11,slow=3.3,SNR=7.3					
WRA			ScP	**ScP**	**08 03 54.6**	**+0.8**
	comp=Z,3.4nm,0.6s,baz=2.2,slow=4.1,SNR=2.6					
WRA			LR	LR	08 11 04.7	
	comp=Z,623nm,21.8s,baz=8.0,slow=34					
	comp=Z,40nm,0.7s					
WRA	**Warramunga Arr**	**34.99 198**	*i* P	**P**	**07 57 41.2**	**-1.3**
WRA			pmax	pmax		
	comp=Z,45nm,0.6s					
PLAI	**Plampang**	**35.27 232**	P	**P**	**07 57 45.2**	**+0.1**
PLAI	**Plampang**	**35.27 232**	P	**P**	**07 57 43.8**	**-1.3**
	comp=Z,84nm,0.8s					
BNX	**BinXian**	**35.52 338**	⇓P	**P**	**07 57 47.4**	**+0.5**
BNX			pP	**pP**	**07 58 02.8**	**+0.5**
BNX			sP	**sP**	**07 58 09.4**	**-0.3**
BNX			S	**S**	**08 03 18.3**	**+0.5**
BNX			sS	**sS**	**08 03 44.6**	**+0.9**
BNX			pmax	pmax		
	comp=Z,120nm,0.8s					
BNX			pmax	pmax		
	comp=Z,120nm,4.1s					
BNX			LR	LR		
	comp=Z,260nm,14.6s					
BNX			LR	LR		
	comp=Z,250nm,14.1s					
BNX			LR	LR		
	comp=Z,810nm,18.4s					
TWSI	**Taliwang, Sumb**	**35.91 234**	P	**P**	**07 57 48.1**	**-2.5**
	comp=Z,86nm,0.8s					
DLV	**Lat**	**36.00 272**	P	**P**	**07 57 50.9**	**-0.6**
DLV			IAmb	IAmb	07 58 08.2	
	comp=Z,136nm,1.1s					
DLV	**Lat**	**36.00 272**	P	**P**	**07 57 51.4**	**-0.1**
HNS	**HongShan**	**36.21 317**	⇑P	**P**	**07 57 53.3**	**+0.4**
HNS			pP	**pP**	**07 58 09.3**	**+0.9**
HNS			PcP	**PcP**	**08 00 18.6**	**+1.5**
HNS			sS	**sS**	**08 03 53.9**	**-0.6**
HNS			pmax	pmax		
	comp=Z,100nm,0.9s					
HNS			LR	LR		
	comp=Z,710nm,18.4s					
HNS			LR	LR		
	comp=Z,1µm,17.9s					
HNS			LR	LR		
	comp=Z,1µm,21.8s					
LYN	**LuoYang**	**36.37 311**	P	**P**	**07 57 54.6**	**+0.3**
LYN			pP	pP	07 58 10.5	+0.5
LYN			sP	sP	07 58 14.1	-3.4
LYN			PcP	**PcP**	**08 00 18.8**	**+1.2**
LYN			sS	sS	08 03 59.8	+2.8
LYN			pmax	pmax		
	comp=Z,200nm,0.7s					
LYN			pmax	pmax		
	comp=Z,630nm,3.5s					
LYN			LR	LR		
	comp=Z,620nm,12.0s					
LYN			LR	LR		
	comp=Z,440nm,13.7s					
LYN			LR	LR		
	comp=Z,1µm,15.8s					
KSM	**Kuching**	**36.71 254**		**P**	**07 57 56.5**	**-0.8**
KSM			IAmb	IAmb	07 57 57.7	
	comp=Z,114nm,1.0s					
KSM	**Kuching**	**36.71 254**	P	**P**	**07 57 56.7**	**-0.7**
BJT	**Baijiatuau**	**36.79 321**	P	**P**	**07 57 58.5**	**+0.7**
BJT	**Baijiatuau**	**36.79 321**	P	**P**	**07 57 57.8**	**+0.1**
BJT			pmax	pmax		
	comp=Z,113nm,1.2s					
BJT	**Baijiatuau**	**36.79 321**	P	**P**	**07 57 57.8**	**+0.1**
BJT			pP	**pP**	**07 58 12.9**	**-0.4**
BJT			sP	**sP**	**07 58 20.1**	**-0.6**
BJT			PcP	**PcP**	**08 00 19.7**	**+0.9**
BJI	**Beijing**	**36.80 321**	P	**P**	**07 57 57.6**	**-0.2**
BJI			pP	**pP**	**07 58 12.8**	**-0.6**
BJI			sP	**sP**	**07 58 20.3**	**-0.5**
BJI			PP	**PnPn**	**07 59 24.1**	**+0.7**
BJI			PcP	**PcP**	**08 00 20.0**	**+1.2**
BJI			S	**S**	**08 03 36.5**	**-0.8**
BJI			pmax	pmax		
	comp=Z,27nm,0.8s					
BJI			pmax	pmax		
	comp=Z,110nm,3.1s					
BJI			LR	LR		
	comp=Z,300nm,23.3s					
BJI			LR	LR		
	comp=Z,220nm,20.8s					
BJI			LR	LR		
	comp=Z,560nm,24.5s					
SRBI	**Singaraja**	**36.85 236**	P	**P**	**07 57 57.4**	**-1.2**
	comp=Z,195nm,1.1s					
FITZ	**Fitzroy Crossi**	**36.97 212**	P	**P**	**07 57 59.4**	**0.0**
FITZ	**Fitzroy Crossi**	**36.97 212**	P	**P**	**07 57 59.5**	**0.0**
FITZ	**Fitzroy Crossi**	**36.97 212**	LR	LR	08 15 16.1	
	comp=Z,190nm,18.2s,baz=34,slow=40					
FITZ	**Fitzroy Crossi**	**36.97 212**	P	**P**	**07 57 59.6**	**+0.1**
ENH	**Enshi**	**37.03 303**	P	**P**	**07 57 60.0**	**-0.1**
ENH			IAmb	IAmb	07 58 17.2	
	comp=Z,67nm,0.9s					
ENH	**Enshi**	**37.03 303**	P	**P**	**07 58 00.6**	**+0.6**
ENH	**Enshi**	**37.03 303**	P	**P**	**07 57 60.0**	**-0.1**
ENH			pP	**pP**	**07 58 15.0**	**-0.8**
ENH			PcP	**PcP**	**08 00 20.8**	**+1.0**
KLR	**Kul'dur**	**37.33 345**	P	**P**	**07 58 01.5**	**-0.7**
	comp=Z,40nm,0.6s,baz=158,slow=8.2,SNR=89					
KLR			PcP	**PcP**	**08 00 21.2**	**+1.0**
	comp=Z,56nm,0.7s,baz=161,slow=2.8,SNR=15					
KLR			ScP	**ScP**	**08 04 00.9**	**-1.0**
	comp=Z,2.9nm,0.8s,baz=198,slow=3.2,SNR=4.3					
KLR			LR	LR	08 12 07.4	
	comp=Z,1µm,22.0s,baz=160,slow=34					
	comp=Z,40nm,0.6s					
KLR	**Kul'dur**	**37.33 345**	*ce*P	**P**	**07 58 01.9**	**-0.3**
KLR			pmax	pmax		
	comp=Z,63nm,1.0s					
GRNR	**Gornyy**	**37.84 351**	⇓*i*P	**P**	**07 58 06.2**	**-0.4**
GRNR			pmax	pmax		
	comp=Z,30nm,1.1s					
TIY	**Taiyuan**	**37.91 315**	*e*P	**P**	**07 58 08.4**	**+1.0**
TIY			pP	**pP**	**07 58 23.6**	**+0.6**
TIY			S	**S**	**08 04 01.3**	**+6.7**
TIY			pmax	pmax		
	comp=Z,49nm,0.6s					
TIY			pmax	pmax		
	comp=Z,300nm,3.6s					
TIY			LR	LR		
	comp=Z,580nm,19.9s					
TIY			LR	LR		
	comp=Z,830nm,19.9s					
TIY			LR	LR		
	comp=Z,1µm,20.6s					
JAGI	**Jajag, Banyuwa**	**37.93 237**	P	**P**	**07 58 07.6**	**-0.1**
JAGI	**Jajag, Banyuwa**	**37.93 237**	P	**P**	**07 58 03.4**	**-4.3**
	comp=Z,214nm,0.7s					
SKR	**Severo-Kuril's**	**38.07 11**	*i* P	**P**	**07 58 07.9**	**-0.5**
GYA	**Guiyang**	**38.43 296**	⇑P	**P**	**07 58 12.8**	**+0.8**
GYA			pP	pP	07 58 29.5	+1.7
GYA			PcP	**PcP**	**08 00 26.3**	**+2.0**
GYA			S	**S**	**08 03 57.5**	**-5.3**
GYA			sS	sS	08 04 28.8	-0.1
GYA			pmax	pmax		
	comp=Z,33nm,0.9s					
GYA			LR	LR		
	comp=Z,900nm,15.4s					
GYA			LR	LR		
	comp=Z,1µm,20.1s					
GYA			LR	LR		
	comp=Z,1µm,20.0s					
GRJI	**Gresik**	**38.47 240**	P	**P**	**07 58 12.1**	**-0.1**
	comp=Z,3µmcomp=Z,381nm,0.9s					
AS06	**Alice Springs**	**38.60 197**	P	**P**	**07 58 13.0**	**-0.2**
	comp=Z,43nm,0.8s					
AS16	**Alice Springs**	**38.60 197**	P	**P**	**07 58 13.1**	**-0.2**
	comp=Z,43nm,0.7s					
AS01	**Alice Springs**	**38.62 197**	P	**P**	**07 58 13.6**	**+0.2**
AS31	**Alice Springs**	**38.63 197**	P	**P**	**07 58 13.0**	**-0.5**
ASAR	**Alice Springs**	**38.64 197**	P	**P**	**07 58 13.2**	**-0.3**
	comp=Z,29nm,1.0s,baz=19,slow=14,SNR=126					
ASAR			LR	LR	08 13 41.8	
	comp=Z,473nm,21.5s,baz=8.5,slow=35					
	comp=Z,29nm,1.0s					
UBPT	**Khong Chiam**	**38.66 278**	P	**P**	**07 58 13.9**	**+0.1**
XAN	**Xi'an**	**38.82 308**	⇑P	**P**	**07 58 14.9**	**-0.1**
XAN			pP	pP	07 58 27.9	-3.0
XAN			PcP	**PcP**	**08 00 26.4**	**+1.1**
XAN			S	**S**	**08 04 10.3**	**+2.0**
XAN			pmax	pmax		
	comp=Z,58nm,0.7s					
XAN			pmax	pmax		
	comp=Z,370nm,4.3s					
XAN			LR	LR		
	comp=Z,770nm,17.5s					
XAN			LR	LR		
	comp=Z,1µm,17.5s					
XAN			LR	LR		
	comp=Z,2µm,19.4s					
XAN	**Xi'an**	**38.82 308**	P	**P**	**07 58 14.7**	**-0.4**
XAN			sP	**sP**	**07 58 37.0**	**-1.4**
XAN			PcP	**PcP**	**08 00 26.1**	**+0.9**
EIDS	**Eidsvold**	**39.06 172**	P	**P**	**07 58 16.3**	**-0.7**
	comp=Z,16nm,0.7s					
EIDS	**Eidsvold**	**39.06 172**	P	**P**	**07 58 17.2**	**+0.2**
XLT	**XiLinHaoTe**	**39.30 326**	*e*P	**P**	**07 58 19.3**	**+0.3**
XLT			pP	pP	07 58 34.9	+0.1
XLT			sP	sP	07 58 41.8	-0.4
XLT			PcP	**PcP**	**08 00 27.5**	**+0.9**
XLT			SS	SS	08 07 07.8	-3.3
XLT			pmax	pmax		
	comp=Z,21nm,0.7s					
XLT			LR	LR		
	comp=Z,560nm,17.1s					
XLT			LR	LR		
	comp=Z,770nm,20.1s					
HEH	**HeiHe**	**39.45 342**	*e*P	**P**	**07 58 19.4**	**-0.6**
HEH			S	**S**	**08 04 13.3**	**-3.9**
HEH			pmax	pmax		
	comp=Z,240nm,1.0s					
HEH			pmax	pmax		
	comp=Z,510nm,6.7s					
HEH			LR	LR		
	comp=Z,760nm,21.4s					
HEH			LR	LR		
	comp=Z,640nm,19.8s					
HEH			LR	LR		
	comp=Z,1µm,22.7s					
NGJI	**Ngawi**	**39.56 240**	P	**P**	**07 58 19.4**	**-2.0**
	comp=Z,148nm,0.9s					
QLP	**Quilpie**	**39.89 182**	P	**P**	**07 58 22.9**	**-1.0**
	comp=Z,101nm,0.9s					
QLP	**Quilpie**	**39.89 182**	P	**P**	**07 58 23.6**	**-0.3**
HHC	**Hu-ho-hao-te**	**40.14 319**	*e*P	**P**	**07 58 27.8**	**+1.8**
HHC			pP	pP	07 58 42.8	+1.0
HHC			PP	**PnPn**	**08 00 04.8**	**+1.4**
HHC			S	**S**	**08 04 29.8**	**+1.8**
HHC			sS	sS	08 04 53.4	-0.8
HHC			pmax	pmax		
	comp=Z,45nm,1.0s					
HHC			pmax	pmax		
	comp=Z,110nm,3.8s					
HHC			LR	LR		
	comp=Z,470nm,18.0s					
HHC			LR	LR		
	comp=Z,880nm,18.0s					
HHC			LR	LR		
	comp=Z,1µm,21.0s					
SLVN	**Son La**	**40.23 287**		**P**	**07 58 26.9**	**0.0**
SLVN	**Son La**	**40.23 287**	P	**P**	**07 58 26.8**	**-0.1**
PCJI	**Pacitan**	**40.24 239**	P	**P**	**07 58 25.9**	**-1.1**
	comp=Z,391nm,1.1s					
SMRI	**Semarang**	**40.27 242**	P	**P**	**07 58 26.9**	**-0.4**
SMRI			IAmb	IAmb	07 58 30.1	
	comp=Z,80nm,0.7s					
SMRI	**Semarang**	**40.27 242**	P	**P**	**07 58 27.4**	**+0.1**
SMRI	**Semarang**	**40.27 242**	P	**P**	**07 58 26.5**	**-0.8**
	comp=Z,3µmcomp=Z,110nm,1.0s					
UGM	**Wanagama**	**40.64 240**	P	**P**	**07 58 30.3**	**-0.1**
UGM	**Wanagama**	**40.64 240**	P	**P**	**07 58 29.9**	**-0.5**
	comp=Z,285nm,1.0s					
PEA0B	**Petropavlovsk-**	**40.68 11**	P	**P**	**07 58 30.2**	**+0.1**
PEA0B			IAmb	IAmb	07 58 31.3	
	comp=Z,56nm,0.8s					
PEA0B	**Petropavlovsk-**	**40.68 11**	*ce*P	**P**	**07 58 30.5**	**+0.3**
PETK	**Petropavlovsk-**	**40.68 11**	P	**P**	**07 58 30.0**	**-0.2**
PETK	**Petropavlovsk-**	**40.68 11**	P	**P**	**07 58 29.6**	**-0.6**
	comp=Z,39nm,0.6s,baz=176,slow=6.7,SNR=96					
PETK			PcP	**PcP**	**08 00 31.3**	**+0.6**
	comp=Z,39nm,0.8s,baz=189,slow=4.3,SNR=11					
PETK			ScP	**ScP**	**08 04 14.5**	**-0.2**
	comp=Z,4.9nm,1.0s,baz=220,slow=7.3,SNR=3.9					
PETK			LR	LR	08 14 25.3	
	comp=Z,365nm,20.8s,baz=192,slow=35					
	comp=Z,39nm,0.6s					
PETK	**Petropavlovsk-**	**40.68 11**	P	**P**	**07 58 30.0**	**-0.2**
TPI	**Tanjungpandan**	**40.77 249**	P	**P**	**07 58 30.4**	**-1.0**
	comp=Z,2µmcomp=Z,186nm,1.1s					
PET	**Petropavlovsk**	**40.79 12**		**P**	**07 58 31.4**	**+0.4**
PET			IAmb	IAmb	07 58 32.0	
	comp=Z,66nm,0.6s					
PET	**Petropavlovsk**	**40.79 12**	P	**P**	**07 58 31.4**	**+0.4**
PET	**Petropavlovsk**	**40.79 12**	*e*P	**P**	**07 58 30.9**	**-0.2**
PET			*e*S	**S**	**08 04 37.3**	**+0.2**
PET					08 07 35.4	
PET			pmax	pmax		
	comp=Z,300nm,2.5s					
PET			pmax	pmax		
	comp=Z,101nm,0.6s					
PET			pmax	pmax		
	comp=Z,100nm,10.0s					
PET	**Petropavlovsk**	**40.79 12**	P	**P**	**07 58 30.8**	**-0.2**
PET			pP	**pP**	**07 58 45.4**	**-1.1**
PET			PcP	**PcP**	**08 00 31.2**	**+0.2**
DZM	**Mont Dzumac**	**40.97 149**	*e*S	**S**	**08 04 33.6**	**-7.1**
	comp=Z,208nm,27.2s					
DZM			*e*SS	**SS**	**08 07 46.6**	**+1.6**
	comp=Z,754nm,29.8s					
DZM			*e*LR	LR	08 09 52.3	
	comp=Z,2µm,25.9s					
DZM	**Mont Dzumac**	**40.97 149**	P	**P**	**07 58 32.7**	**-0.3**
	comp=Z,16nm,0.6s,baz=0.0,slow=12,SNR=4.1					
DZM			LR	LR	08 14 17.7	
	comp=Z,425nm,21.9s,baz=351,slow=34					
	comp=Z,16nm,0.6s					
BTO	**Baotou**	**41.00 318**	*e*P	**P**	**07 58 35.3**	**+2.2**
BTO			pP	**pP**	**07 58 50.8**	**+1.9**
BTO			sP	**sP**	**07 58 57.8**	**+1.5**
BTO			PP	**PnPn**	**08 00 14.8**	**+1.2**
BTO			S	**S**	**08 04 43.8**	**+2.9**
BTO			sS	**sS**	**08 05 11.0**	**+3.8**
BTO			SS	**SS**	**08 07 45.8**	**+0.7**
BTO			pmax	pmax		
	comp=Z,94nm,0.7s					
BTO			pmax	pmax		
	comp=Z,590nm,7.6s					
BTO			LR	LR		
	comp=Z,2µm,19.0s					
BTO			LR	LR		
	comp=Z,1µm,24.7s					
BTO			LR	LR		
	comp=Z,3µm,24.1s					
HIA	**Hailar**	**41.40 335**	P	**P**	**07 58 36.3**	**+0.1**
HIA	**Hailar**	**41.40 335**	P	**P**	**07 58 37.4**	**+1.2**
HIA	**Hailar**	**41.40 335**	P	**P**	**07 58 36.3**	**+0.1**
HIA			pmax	pmax		
	comp=Z,43nm,0.7s					
KMI	**Kunming**	**41.69 293**	P	**P**	**07 58 38.6**	**-0.5**
KMI			pP	pP	07 58 55.9	+0.8
KMI			PcP	**PcP**	**08 00 36.6**	**+1.7**
KMI			pmax	pmax		
	comp=Z,24nm,0.9s					
KMI			pmax	pmax		
	comp=Z,180nm,5.8s					
KMI			LR	LR		
	comp=Z,420nm,20.8s					
KMI			LR	LR		
	comp=Z,640nm,20.9s					
KMI			LR	LR		
	comp=Z,970nm,26.3s					
CD2	**Chengdu**	**41.95 301**	P	**P**	**07 58 40.3**	**-0.6**
CD2			PP	**PP**	**08 00 17.0**	**-2.1**
CD2			S	**S**	**08 04 56.1**	**+1.1**
CD2			pmax	pmax		
	comp=Z,60nm,0.6s					
CD2			pmax	pmax		
	comp=Z,460nm,9.3s					
CD2			LR	LR		
	comp=Z,2µm,22.0s					
CD2			LR	LR		
	comp=Z,1µm,22.0s					
ZEA	**Zeya**	**42.60 344**	*e*P	**P**	**07 58 45.7**	**-0.1**
ZEA			*e*		08 00 38.6	
ZEA			pmax	pmax		
	comp=E,20nm,0.8s					
ZEA			pmax	pmax		
	comp=N,50nm,0.9s					
ZEA			pmax	pmax		
	comp=Z,80nm,1.0s					
LEM	**Lembang**	**42.60 244**	LR	LR	08 18 01.4	
	comp=Z,392nm,21.7s,baz=38,slow=38					
LEM	**Lembang**	**42.60 244**	P	**P**	**07 58 44.7**	**-1.9**
	comp=Z,139nm,0.9s					
MBWA	**Marble Bar**	**42.70 217**	P	**P**	**07 58 46.8**	**-0.2**
MBWA			IAmb	IAmb	07 58 48.1	
	comp=Z,94nm,0.8s					
MBWA	**Marble Bar**	**42.70 217**	P	**P**	**07 58 47.0**	**-0.1**
	comp=Z,163nm,1.0s					
MBWA	**Marble Bar**	**42.70 217**	P	**P**	**07 58 46.9**	**-0.1**
MBWA	**Marble Bar**	**42.70 217**	P	**P**	**07 58 46.8**	**-0.2**
MBWA			pP	**pP**	**07 59 02.3**	**-0.2**
MBWA			PcP	**PcP**	**08 00 38.8**	**+0.9**
PZH	**PanZhiHua**	**42.78 294**	P	**P**	**07 58 47.1**	**-0.8**
PZH			S	**S**	**08 05 12.8**	**+5.3**
PZH			pmax	pmax		
	comp=Z,30nm,0.7s					
PZH			pmax	pmax		
	comp=Z,150nm,5.2s					
PZH			LR	LR		
	comp=Z,510nm,20.4s					
PZH			LR	LR		
	comp=Z,570nm,19.2s					
PZH			LR	LR		
	comp=Z,730nm,20.7s					
PSAD1	**Pilbara Seismi**	**42.87 216**	P	**P**	**07 58 48.4**	**0.0**
	comp=Z,201nm,1.3s					
BBJI	**Bungbulang**	**42.88 243**	P	**P**	**07 58 46.4**	**-2.3**
PSA00	**Pilbara Seismi**	**42.95 216**		**P**	**07 58 49.4**	**+0.3**
PSA00			IAmb	IAmb	07 58 50.4	
	comp=Z,92nm,1.1s					
PSA00	**Pilbara Seismi**	**42.95 216**	P	**P**	**07 58 49.5**	**+0.4**
LZH	**Lanzhou**	**43.44 309**	⇑*i*P	**P**	**07 58 53.9**	**+0.8**
LZH			pP	pP	07 59 05.1	-3.9
LZH			PP	**PP**	**08 00 33.8**	**-1.4**
LZH			PcP	**PcP**	**08 00 42.3**	**+1.8**
LZH			S	**S**	**08 05 19.8**	**+2.7**
LZH			SS	**SS**	**08 08 28.0**	**-5.2**
LZH			pmax	pmax		
	comp=Z,70nm,1.2s					
LZH			pmax	pmax		

	comp=Z,280nm,4.6s						
LZH				LR	LR		
	comp=Z,300nm,15.3s						
LZH				LR	LR		
	comp=Z,700nm,15.1s						
LZH				LR	LR		
	comp=Z,920nm,17.5s						
ARMA	**Armidale**	44.11	172	P	P	07 58 58.2	-0.1
ARMA				IAmb	IAmb	07 59 52.7	
	comp=Z,113nm,0.7s						
ARMA	**Armidale**	44.11	172	P	P	07 58 58.4	0.0
ARMA	**Armidale**	44.11	172	P	P	07 58 59.0	+0.6
CGJI	**Cibinong**	44.20	246	P	P	07 58 56.8	-2.4
MDSI	**Maura Dua**	44.64	249	P	P	07 59 01.5	-1.3
	comp=Z,2µmcomp=Z,274nm,1.0s						
MSVF	**Nonsavu**	44.77	133	LR	LR	08 15 54.8	
	comp=Z,477nm,21.3s,baz=302,slow=33						
KASI	**Kota Agung**	44.78	248	P	P	07 59 01.8	-2.1
	comp=Z,1µmcomp=Z,138nm,0.8s						
CHTO	**Chiang Mai**	44.81	283	P	P	07 59 04.2	+0.1
CHTO				P	P	07 59 04.2	+0.1
CHTO	**Chiang Mai**	44.81	283	P	P	07 59 03.9	-0.2
CHTO	**Chiang Mai**	44.81	283	P	P	07 59 03.3	-0.8
CHTO				pmax	pmax		
	comp=Z,21nm,0.8s						
CHTO	**Chiang Mai**	44.81	283	P	P	07 59 03.6	-0.5
CHTO				pP	pP	07 59 19.3	-0.9
CHTO				PcP	PcP	08 00 46.4	+1.2
CM31	**Chiang Mai Arr**	44.81	283	P	P	07 59 03.7	-0.4
CM31				IAmb	IAmb	08 00 48.1	
	comp=Z,67nm,0.8s						
CM31	**Chiang Mai Arr**	44.81	283	P	P	07 59 03.8	-0.4
	SNR=5.9						
CMAR	**Chiang Mai Arr**	44.81	283	P	P	07 59 04.2	+0.1
	comp=Z,35nm,0.7s,baz=85,slow=6.2,SNR=138						
CMAR				PcP	PcP	08 00 46.8	+1.6
	comp=Z,47nm,0.8s,baz=92,slow=3.4,SNR=26						
CMAR				ScP	ScP	08 04 33.8	+1.7
	comp=Z,1.0nm,0.3s,baz=98,slow=3.8,SNR=5.7						
	comp=Z,35nm,0.7s						
CMAR	**Chiang Mai Arr**	44.81	283	*ce*P	P	07 59 04.3	+0.1
CMAR				pmax	pmax		
	comp=Z,39nm,0.7s						
CMSA	**Cobar Meteorol**	44.81	180	P	P	07 59 03.1	-0.7
	comp=Z,35nm,0.9s						
CMSA	**Cobar Meteorol**	44.81	180	P	P	07 59 03.9	+0.1
LWLI	**Liwa**	44.97	249	P	P	07 59 03.2	-2.3
SRIT	**Nakonsritamara**	45.14	269	P	P	07 59 07.4	+0.7
SRIT				IAmb	IAmb	07 59 23.9	
	comp=Z,72nm,1.0s						
SRIT	**Nakonsritamara**	45.14	269	P	P	07 59 06.9	+0.1
STKA	**Stephens Creek**	45.30	185		P	07 59 07.0	-0.6
STKA				IAmb	IAmb	07 59 27.0	
	comp=Z,220nm,1.2s						
STKA	**Stephens Creek**	45.30	185	P	P	07 59 06.9	-0.7
	comp=Z,145nm,1.1s						
STKA	**Stephens Creek**	45.30	185	P	P	07 59 06.9	-0.7
	comp=Z,16nm,0.8s,baz=346,slow=8.9,SNR=24						
STKA				LR	LR	08 19 56.6	
	comp=Z,571nm,18.0s,baz=4.2,slow=38						
	comp=Z,16nm,0.8s						
STKA	**Stephens Creek**	45.30	185	P	P	07 59 07.1	-0.6
STKA	**Stephens Creek**	45.30	185	*i* P	P	07 59 06.3	-1.3
SHEM	**Shemya Is, Ala**	45.31	24	P	P	07 59 09.1	+1.6
	comp=Z,286nm,0.6s,baz=4.4,slow=1.3,SNR=66						
	comp=Z,286nm,0.6s						
SMY	**Shemya**	45.31	24	P	P	07 59 09.0	+1.5
SMY	**Shemya**	45.31	24	P	P	07 59 09.6	+2.1
SMY	**Shemya**	45.31	24	P	P	07 59 09.0	+1.5
SMY				pmax	pmax		
	comp=Z,1µm,1.6s						
MNAI	**Manna**	45.70	250	P	P	07 59 09.9	-1.3
MNAI	**Manna**	45.70	250	P	P	07 59 11.2	0.0
KSI	**Kapahiang**	45.76	251	P	P	07 59 09.6	-2.1
XMI	**Christmas Isla**	46.03	241	P	P	07 59 12.9	-0.9
CIT	**Chita**	46.10	333	*e*P	P	07 59 16.0	+2.2
CIT				*e*		07 59 43.6	
CIT				*e*		08 00 50.0	
CIT				*e*		08 01 03.6	
CIT				pmax	pmax		
	comp=Z,83nm,2.5s						
MA2	**Magadan**	46.14	4	P	P	07 59 14.0	0.0
MA2	**Magadan**	46.14	4	P	P	07 59 13.6	-0.3
	comp=Z,138nm,0.7s,baz=180,slow=7.0,SNR=72						
MA2				PcP	PcP	08 00 47.5	-1.5
	comp=Z,28nm,0.8s,baz=214,slow=3.6,SNR=3.5						
	comp=Z,138nm,0.7s						
MA2	**Magadan**	46.14	4	P	P	07 59 14.2	+0.2
MA2	**Magadan**	46.14	4	*i* P	P	07 59 12.9	-1.1
MA2				pmax	pmax		
	comp=Z,165nm,0.8s						
MA2	**Magadan**	46.14	4	P	P	07 59 13.4	-0.6
MA2				PcP	PcP	08 00 49.0	-0.1
AMKA	**Amchitka**	46.61	29	P	P	07 59 18.2	+0.5
ULN	**Ulaanbaatar**	46.71	325	P	P	07 59 19.1	+0.2
ULN				IAmb	IAmb	08 00 53.6	
	comp=Z,74nm,1.1s						
ULN	**Ulaanbaatar**	46.71	325	P	P	07 59 18.9	0.0
ULN				P	P	07 59 18.9	0.0
ULN	**Ulaanbaatar**	46.71	325	*i* P	P	07 59 19.0	+0.2
ULN				pmax	pmax		
	comp=Z,17nm,1.0s						
WHYH	**Whyalla**	46.90	189	P	P	07 59 20.2	0.0
BBOO	**Buckleboo**	46.93	191		P	07 59 20.5	0.0
BBOO				IAmb	IAmb	07 59 39.0	
	comp=Z,79nm,0.8s						
BBOO	**Buckleboo**	46.93	191	P	P	07 59 20.3	-0.2
	comp=Z,109nm,0.7s						
BBOO	**Buckleboo**	46.93	191	P	P	07 59 20.8	+0.3
SONM	**Songino Array**	47.06	325		P	07 59 21.8	+0.3
SONM	**Songino Array**	47.06	325	P	P	07 59 22.1	+0.5
	comp=Z,27nm,0.7s,baz=137,slow=8.9,SNR=68						
SONM				PcP	PcP	08 00 53.8	+1.1
	comp=Z,20nm,0.6s,baz=152,slow=3.0,SNR=14						
SONM				ScP	ScP	08 04 42.8	+1.7
	comp=Z,4.5nm,1.0s,baz=135,slow=4.5,SNR=5.1						
SONM				LR	LR	08 19 11.9	
	comp=Z,849nm,20.0s,baz=110,slow=36						
	comp=Z,27nm,0.7s						
FORT	**Forrest**	47.10	200	P	P	07 59 21.8	0.0
FORT				IAmb	IAmb	07 59 23.1	
	comp=Z,87nm,0.8s						
FORT	**Forrest**	47.10	200	P	P	07 59 22.0	+0.2
	comp=Z,119nm,0.9s						
FORT	**Forrest**	47.10	200	P	P	07 59 22.5	+0.7
HTT	**Hallett**	47.10	187	P	P	07 59 21.9	0.0
	comp=Z,9.2nm,0.9s						
HTT	**Hallett**	47.10	187	P	P	07 59 22.4	+0.5
PSI	**Prapat**	47.11	261	LR	LR	08 18 44.7	
	comp=Z,307nm,21.2s,baz=80,slow=35						
PSI	**Prapat**	47.11	261	P	P	07 59 22.8	+0.4
PSI	**Prapat**	47.11	261	P	P	07 59 21.8	-0.6
PSI				pmax	pmax		
	comp=Z,51nm,0.9s						
GIRL	**Giralia**	47.16	221	P	P	07 59 23.5	+1.1
GIRL	**Giralia**	47.16	221	P	P	07 59 23.6	+1.2
	comp=Z,371nm,1.1s						
GIRL	**Giralia**	47.16	221	P	P	07 59 23.0	+0.6
GTA	**Gaotai**	47.58	311	P	P	07 59 26.6	+0.8
GTA				pP	pP	07 59 42.8	+0.9
GTA				PcP	PcP	08 00 56.3	+1.5
GTA				PP	PP	08 01 17.6	-0.2
GTA				PcS	PcS	08 04 49.4	-0.9
GTA				S	S	08 06 18.3	+1.8
GTA				ScS	ScS	08 09 14.5	+0.8
GTA				pmax	pmax		
	comp=Z,56nm,1.2s						
GTA				pmax	pmax		
	comp=Z,260nm,8.6s						
GTA				LR	LR		
	comp=Z,350nm,18.5s						
GTA				LR	LR		
	comp=Z,470nm,19.3s						
GTA				LR	LR		
	comp=Z,740nm,22.5s						
YNG	**Young**	47.65	177	P	P	07 59 26.4	+0.3
	comp=Z,16nm,1.8s						
MEEK	**Meekatharra**	47.66	213	P	P	07 59 25.8	-0.5
	comp=Z,34nm,1.6s						
MEEK	**Meekatharra**	47.66	213	P	P	07 59 26.1	-0.2
KIWB	**Kanaga Island**	48.61	30	P	P	07 59 34.3	+1.0
CAN	**Canberra**	48.71	176	P	P	07 59 34.7	+0.5
	comp=Z,23nm,1.2s						
CNB	**Canberra Magne**	48.73	176	P	P	07 59 34.7	+0.2
	comp=Z,21nm,1.0s						
CNB	**Canberra Magne**	48.73	176	P	P	07 59 34.9	+0.5
GSI	**Gunungsitoli**	48.82	260	P	P	07 59 35.5	0.0
GSI	**Gunungsitoli**	48.82	260	P	P	07 59 32.8	-2.7
	comp=Z,106nm,1.0s						
ADK	**Adak**	48.86	30		P	07 59 36.6	+1.4
ADK	**Adak**	48.86	30	P	P	07 59 36.8	+1.6
ADK	**Adak**	48.86	30	P	P	07 59 36.6	+1.4
ADK				pmax	pmax		
	comp=Z,1µm,1.9s						
ADK	**Adak**	48.86	30	P	P	07 59 36.4	+1.2
ADK				pP	pP	07 59 52.6	+1.7
ADK				sP	sP	07 59 59.8	+1.8
GSTR	**Great Sitkin T**	49.30	30	P	P	07 59 39.5	+1.0
SEY	**Seymchan**	49.58	4	P	P	07 59 40.3	-0.3
	comp=Z,50nm,0.9s,baz=179,slow=6.6,SNR=76						
SEY				PcP	PcP	08 01 01.4	+0.1
	comp=Z,16nm,0.9s,baz=200,slow=5.6,SNR=4.1						
	comp=Z,50nm,0.9s						
SEY	**Seymchan**	49.58	4	*ce*P	P	07 59 40.5	0.0
SEY				pmax	pmax		
	comp=Z,67nm,1.0s						
YAK	**Yakutsk**	49.72	350		P	07 59 41.0	-0.6
YAK	**Yakutsk**	49.72	350	P	P	07 59 41.0	-0.6
	comp=Z,367nm,0.8s,baz=116,slow=0.7,SNR=41						
YAK				S	S	08 06 39.0	-6.7
	comp=Z,20nm,0.4s,baz=74,slow=15,SNR=1.9						
YAK				LR	LR	08 19 20.6	
	comp=Z,368nm,21.7s,baz=154,slow=34						
	comp=Z,367nm,0.8s						
YAK	**Yakutsk**	49.72	350	*e*P	P	07 59 37.3	-4.3
YAK				*e**PP	pP	07 59 54.3	-3.3
YAK				*e*		08 01 00.7	
YAK				*e*		08 01 32.7	
YAK				*e*PPP	PPP	08 02 28.7	
YAK				*e*S	S	08 06 39.9	-5.7
YAK				*e*		08 09 19.7	
YAK				*e*SS	SS	08 10 14.7	-4.0
YAK				*e*SSS	SSS	08 11 44.5	
YAK				pmax	pmax		
	comp=Z,271nm,0.9s						
YAK				pmax	pmax		
	comp=N,41nm,0.9s						
YAK				pmax	pmax		
	comp=E,11nm,0.9s						
YAK				pmax	pmax		
	comp=Z,298nm,6.9s						
YAK				pmax	pmax		
	comp=N,112nm,5.3s						
YAK				pmax	pmax		
	comp=E,60nm,4.3s						
YAK				smax	smax		
	comp=E,79nm,2.8s						
YAK				smax	smax		
	comp=N,39nm,2.5s						
YAK	**Yakutsk**	49.72	350	P	P	07 59 40.7	-0.9
KMBL	**Kambalda**	50.02	206	P	P	07 59 43.6	-0.7
	comp=Z,37nm,0.9s						
KMBL	**Kambalda**	50.02	206	P	P	07 59 43.9	-0.4
ARPS	**Mount Arapiles**	50.14	184	P	P	07 59 45.7	+0.7
	comp=Z,90nm,1.0s						
ARPS	**Mount Arapiles**	50.14	184	P	P	07 59 46.6	+1.5
BOD	**Bodaibo**	50.15	339	*e*P	P	07 59 45.1	+0.2
BOD				pmax	pmax		
	comp=Z,58nm,1.6s						
ZAK	**Zakamensk**	50.16	326	*e*P	P	07 59 43.4	-1.9
ZAK				pmax	pmax		
	comp=Z,26nm,1.2s						
ATKA	**Atka Island**	50.29	31	P	P	07 59 47.6	+1.5
GOMU	**GeErMu**	50.47	306	P	P	07 59 49.0	+0.8
GOMU				pP	pP	08 00 02.0	-2.5
GOMU				PcP	PcP	08 01 06.9	+1.3
GOMU				S	S	08 06 59.1	+1.4
GOMU				pmax	pmax		
	comp=Z,39nm,0.9s						
GOMU				LR	LR		
	comp=Z,480nm,16.5s						
GOMU				LR	LR		
	comp=Z,340nm,19.4s						
GOMU				LR	LR		
	comp=Z,810nm,19.1s						
IRK	**Irkutsk**	50.66	328	*e*P	P	07 59 49.5	+0.6
IRK				pmax	pmax		
	comp=Z,59nm,1.4s						
TOO	**Toolangi**	50.83	180	P	P	07 59 51.9	+1.6
TOO				IAmb	IAmb	08 00 53.3	
	comp=Z,64nm,0.7s						
TOO	**Toolangi**	50.83	180	P	P	07 59 51.0	+0.7
	comp=Z,18nm,1.2s						
TOO	**Toolangi**	50.83	180	P	P	07 59 51.9	+1.6
TOO				pmax	pmax		
	comp=Z,64nm,0.7s						
MORW	**Morawa**	50.96	214	P	P	07 59 51.3	-0.2
MORW				IAmb	IAmb	07 59 52.3	
	comp=Z,118nm,1.1s						
MORW	**Morawa**	50.96	214	P	P	07 59 51.1	-0.4
	comp=Z,126nm,1.1s						
MORW	**Morawa**	50.96	214	P	P	07 59 51.2	-0.2
BRDH	**Bariadhala**	51.65	288	LR	LR	08 22 40.5	
	comp=Z,589nm,19.2s,baz=117,slow=37						
BLDU	**Ballidu**	51.84	212	P	P	07 59 57.7	-0.3
	comp=Z,122nm,0.9s						
BLDU	**Ballidu**	51.84	212	P	P	07 59 57.8	-0.2
MOY	**Mondy**	52.06	326	*e*P	P	07 59 59.4	-0.1
MOY				pmax	pmax		
	comp=Z,42nm,1.9s						
KLBR	**Kellerberrin**	52.11	210	P	P	07 59 59.2	-0.8
	comp=Z,104nm,1.0s						
KLBR	**Kellerberrin**	52.11	210	P	P	07 59 59.9	-0.1
LSA	**Lhasa**	52.46	297	P	P	08 00 03.1	-0.2
LSA				IAmb	IAmb	08 01 15.7	
	comp=Z,51nm,0.7s						
LSA	**Lhasa**	52.46	297	P	P	08 00 03.8	+0.5
LSA				S	S	08 07 22.3	-3.2
LSA				pmax	pmax		
	comp=Z,27nm,0.6s						
LSA				LR	LR		
	comp=Z,160nm,20.8s						
LSA				LR	LR		
	comp=Z,720nm,26.9s						
LSA	**Lhasa**	52.46	297	P	P	08 00 04.4	+1.1
LSA	**Lhasa**	52.46	297	P	P	08 00 03.1	-0.2
LSA				pmax	pmax		
	comp=Z,51nm,0.7s						
LSA	**Lhasa**	52.46	297	P	P	08 00 04.2	+0.9
LSA	**Lhasa**	52.46	297	P	P	08 00 03.6	+0.3
LSA				pP	pP	08 00 19.6	0.0
LSA				PcP	PcP	08 01 14.8	+1.5
MUN	**Mundaring**	53.19	211	P	P	08 00 07.6	-0.3
	comp=Z,64nm,1.1s						
MUN	**Mundaring**	53.19	211	P	P	08 00 08.2	+0.3
NIKH	**Nikolski High**	53.45	33	P	P	08 00 11.1	+1.5
NIKH	**Nikolski High**	53.45	33	P	P	08 00 10.7	+1.1
	baz=240,SNR=7.0						
NWAO	**Narrogin (SRO)**	53.45	210		P	08 00 10.1	+0.2
NWAO				IAmb	IAmb	08 00 10.6	
	comp=Z,92nm,1.3s						
NWAO	**Narrogin (SRO)**	53.45	210	P	P	08 00 09.4	-0.5
	comp=Z,97nm,1.2s						
NWAO	**Narrogin (SRO)**	53.45	210	LR	LR	08 25 09.3	
	comp=Z,152nm,18.1s,baz=312,slow=38						
NWAO	**Narrogin (SRO)**	53.45	210	P	P	08 00 10.1	+0.2
NWAO				pmax	pmax		
	comp=Z,92nm,1.3s						
KIP	**Kipapa**	54.33	73	P	P	08 00 18.2	+1.7
RKGY	**Rocky Gully**	54.95	209	P	P	08 00 21.1	+0.4
	comp=Z,53nm,1.1s						
SPIA	**Saint Paul Isl**	55.00	28	P	P	08 00 22.1	+1.4
	baz=236,SNR=11						
P08K	**Saint George I**	55.00	29	P	P	08 00 22.3	+1.5
	baz=237						
UNV	**Unalaska Valle**	55.11	33	P	P	08 00 22.1	+0.5
UNV				IAmb	IAmb	08 00 24.4	
	comp=Z,97nm,0.6s						
UNV	**Unalaska Valle**	55.11	33	P	P	08 00 22.0	+0.5
	baz=242,SNR=11						
RAO	**Raoul Island**	55.36	141	LR	LR	08 21 60.0	
	comp=Z,230nm,21.9s,baz=316,slow=34						
LVA	**Lava Point**	55.50	32	P	P	08 00 25.2	+0.7
AKUT	**Akutan**	55.63	32	P	P	08 00 26.6	+1.3
MOO	**Moorlands**	55.72	178	P	P	08 00 27.0	+0.9
	comp=Z,41nm,1.8s						
BILL	**Bilibino**	56.14	9	P	P	08 00 28.6	-0.1
BILL				IAmb	IAmb	08 00 29.4	
	comp=Z,126nm,0.9s						
BILL	**Bilibino**	56.14	9	*ce*P	P	08 00 28.3	-0.5
BILL				pmax	pmax		
	comp=Z,162nm,1.0s						
BILL	**Bilibino**	56.14	9	P	P	08 00 28.3	-0.5
RSD	**Rainshed**	56.98	75	P	P	08 00 35.7	-0.1
KNHH	**Kane Nui o Ham**	57.09	76	P	P	08 00 36.6	+0.2
FALS	**False Pass**	57.18	32	P	P	08 00 37.5	+1.2
FALS	**False Pass**	57.18	32	P	P	08 00 37.0	+0.7
	baz=245						
WMQ	**Urumqi**	57.53	314	*e*P	P	08 00 40.5	+1.3
WMQ				PcP	PcP	08 01 33.4	+1.3
WMQ				pmax	pmax		
	comp=Z,72nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,250nm,4.1s						
WMQ				LR	LR		
	comp=Z,460nm,16.7s						
WMQ				LR	LR		
	comp=Z,730nm,19.7s						
WMQ				LR	LR		
	comp=Z,730nm,24.2s						
S12K	**Black Hills**	58.24	32	P	P	08 00 44.3	+0.4
	baz=245,SNR=18						
GAMB	**Gambell**	58.35	21	P	P	08 00 44.9	+0.5
	baz=231,SNR=12						
M11K	**Mekoryuk**	58.51	26	P	P	08 00 46.8	+1.3
	baz=239,SNR=12						
SDPT	**Sand Point**	58.92	33	P	P	08 00 49.1	+0.5
SDPT	**Sand Point**	58.92	33	P	P	08 00 50.6	+2.1
SDPT	**Sand Point**	58.92	33	P	P	08 00 49.3	+0.8
	baz=247,SNR=7.4						
TIXI	**Tiksi**	58.94	354	P	P	08 00 46.9	-1.5
	comp=Z,14nm,0.5s,baz=165,slow=5.0,SNR=23						
TIXI				LR	LR	08 27 19.1	
	comp=Z,205nm,21.4s,baz=182,slow=37						
	comp=Z,14nm,0.5s						
CHNA	**Chernabura Isl**	59.19	34	P	P	08 00 51.3	+0.9
	baz=248						
URZ	**Urewera**	59.48	151	P	P	08 00 51.9	-0.6
	comp=Z,17nm,0.7s,baz=337,slow=5.6,SNR=3.9						
	comp=Z,17nm,0.7s						
QRZ	**Quartz Range**	59.65	156	P	P	08 00 54.9	+1.2
QRZ				IAmb	IAmb	08 00 55.9	
	comp=Z,93nm,1.1s						
M13K	**Dall Lake**	59.75	27	P	P	08 00 55.3	+1.2
M13K	**Dall Lake**	59.75	27	P	P	08 00 56.0	+1.9
	baz=242,SNR=56						
S14K	**Fog Glacier**	59.77	32	P	P	08 00 55.7	+1.2
	baz=248,SNR=16						
BKZ	**Black Stump Fm**	59.93	152	P	P	08 00 54.8	-1.0
BKZ				IAmb	IAmb	08 01 09.2	
	comp=Z,40nm,1.0s						
BKZ	**Black Stump Fm**	59.93	152	P	P	08 00 57.4	+1.7
K13K	**Kusilvak Mount**	59.95	25	P	P	08 00 56.4	+0.9
K13K	**Kusilvak Mount**	59.95	25	P	P	08 00 57.0	+1.5
	baz=240,SNR=109						
O14K	**Tigyukauivet M**	60.15	28	P	P	08 00 58.2	+1.2
	baz=244,SNR=29						
MRNZ	**Matariki Terra**	60.23	157	P	P	08 00 57.5	-0.1
N14K	**Kuskokwak Cree**	60.26	28	P	P	08 00 59.0	+1.4
	baz=244,SNR=59						
ZSN	**Zaisan**	60.28	317	*e*P	P	08 00 58.2	+0.1
ZSN	**Zaisan**	60.28	317	*e*P	P	08 00 58.2	+0.1
L14K	**Kuka Creek**	60.48	26	P	P	08 01 00.5	+1.4
	baz=242,SNR=112						
M14K	**Bethel**	60.51	27	P	P	08 01 00.9	+1.6
	baz=243,SNR=78						
TCW	**Tory Channel**	60.67	155	P	P	08 01 01.1	+0.4
TNA	**Tin City**	60.73	20	P	P	08 01 01.1	+0.4
TNA				IAmb	IAmb	08 01 02.1	
	comp=Z,47nm,0.7s						
TNA	**Tin City**	60.73	20	P	P	08 01 00.9	+0.2
	baz=234,SNR=35						
O15K	**Ungalikthiuk R**	60.79	29	P	P	08 01 02.8	+1.5
	baz=246,SNR=62						
J14K	**Nanvaranak Lak**	60.81	24	P	P	08 01 02.6	+1.3
	baz=240,SNR=34						
M15K	**Kasigluk River**	61.05	27	P	P	08 01 04.1	+1.1
	baz=244,SNR=55						
ANM	**Nome**	61.06	22	P	P	08 01 03.9	+0.8
	baz=238,SNR=14						
N15K	**Kwethluk River**	61.08	28	P	P	08 01 04.8	+1.5
	baz=245,SNR=70						
L15K	**Ungalak Mounta**	61.14	26	P	P	08 01 04.5	+0.8
	baz=243						
F14K	**Arctic Creek**	61.22	21	P	P	08 01 05.0	+0.9
	baz=236						
R16K	**Pilot Point**	61.25	31	P	P	08 01 04.8	+0.4
	baz=249						
K15K	**Wolf Creek Mou**	61.41	25	P	P	08 01 06.7	+1.2
	baz=242,SNR=87						
P16K	**Nushagak River**	61.60	29	P	P	08 01 08.3	+1.5
	baz=248,SNR=16						
RPZ	**Rata Peaks**	61.61	159	P	P	08 01 06.7	-0.3
RPZ	**Rata Peaks**	61.61	159	LR	LR	08 23 48.6	
	comp=Z,457nm,21.9s,baz=330,slow=32						
CHIR	**Chirikof Islan**	61.66	33	P	P	08 01 08.6	+1.4
CHIR	**Chirikof Islan**	61.66	33	P	P	08 01 08.8	+1.5
	baz=251						
O16K	**Kokwok River B**	61.77	29	P	P	08 01 08.5	+0.6
O16K	**Kokwok River B**	61.77	29	P	P	08 01 09.2	+1.3
	baz=247,SNR=53						
G15K	**Niukluk**	61.77	22	P	P	08 01 08.3	+0.5
	baz=239						
N16K	**Nishlik Lake**	61.81	28	P	P	08 01 09.7	+1.5
	baz=246,SNR=58						
MK31	**Makanchi Array**	61.87	316	*e*P	P	08 01 08.9	0.0
MKAR	**Makanchi Array**	61.87	316	P	P	08 01 09.1	+0.1
MKAR	**Makanchi Array**	61.87	316	P	P	08 01 09.0	+0.1
	comp=Z,29nm,0.6s,baz=92,slow=9.0,SNR=156						
MKAR				PcP	PcP	08 01 49.9	+0.6
	comp=Z,27nm,0.8s,baz=97,slow=5.8,SNR=8.5						
MKAR				S	S	08 09 27.3	-0.5
	comp=Z,0.9nm,1.0s,baz=90,slow=16,SNR=2.0						
MKAR				LR	LR	08 29 36.4	
	comp=Z,435nm,18.9s,baz=87,slow=38						
MKAR				PKP2bc		08 30 25.4	
	comp=Z,2.0nm,1.0s,baz=252,slow=3.7,SNR=11						
	comp=Z,29nm,0.6s						
MKAR	**Makanchi Array**	61.87	316	*ce*P	P	08 01 09.0	+0.1
MKAR				pmax	pmax		
	comp=Z,29nm,0.6s						
F15K	**North Star Dit**	61.94	21	P	P	08 01 09.6	+0.7
	baz=238,SNR=49						
M16K	**Timber Creek**	61.95	27	P	P	08 01 10.4	+1.3
	baz=246,SNR=65						
ZALV	**Zalesovo Beam**	61.96	324	P	P	08 01 08.8	-0.4
ZALV	**Zalesovo Beam**	61.96	324	P	P	08 01 08.2	-1.1
	comp=Z,20nm,0.6s,baz=111,slow=6.8,SNR=24						
ZALV				PcP	PcP	08 01 48.9	-0.5
	comp=Z,28nm,0.4s,baz=120,slow=4.7,SNR=15						
ZALV				LR	LR	08 28 44.6	
	comp=Z,420nm,19.8s,baz=96,slow=37						
ZALV				PKPPKP	P'P'df	08 30 17.9	-2.1
	comp=Z,0.6nm,0.4s,baz=204,slow=3.2,SNR=3.6						
	comp=Z,20nm,0.6s						
L16K	**Owhat River**	62.02	26	P	P	08 01 10.3	+0.8
	baz=245,SNR=59						
MAKZ	**Makanchi**	62.09	316	P	P	08 01 10.4	+0.1
MAKZ				IAmb	IAmb	08 01 13.2	
	comp=Z,44nm,0.7s						
MAKZ	**Makanchi**	62.09	316	P	P	08 01 10.4	+0.1
MAKZ				pmax	pmax		
	comp=Z,44nm,0.7s						
MAKZ	**Makanchi**	62.09	316	P	P	08 01 10.6	+0.2
MAKZ				PcP	PcP	08 01 49.6	-0.5
Q16K	**King Salmon**	62.11	30	P	P	08 01 10.0	-0.1
	baz=249						
J16K	**Anvik River**	62.25	24	P	P	08 01 12.5	+1.5
	baz=243,SNR=65						
H16K	**Elim**	62.26	23	P	P	08 01 11.6	+0.5
	baz=241,SNR=11						
O17K	**Koliganek Bris**	62.31	29	P	P	08 01 13.0	+1.5
	baz=248,SNR=73						
Q17K	**Contact Creek**	62.34	31	P	P	08 01 11.8	-0.1
	baz=250						
P17K	**Kvichak River**	62.40	30	P	P	08 01 12.4	+0.3
	baz=249,SNR=6.3						
I17K	**Unalakleet**	62.49	24	P	P	08 01 14.1	+1.4
	baz=243,SNR=39						
N17K	**Nushagak Hills**	62.55	28	P	P	08 01 14.8	+1.7
	baz=248,SNR=103						
G16K	**Koyuk River**	62.59	22	P	P	08 01 12.8	-0.4
G16K				IAmb	IAmb	08 01 54.1	
	comp=Z,62nm,0.8s						
G16K	**Koyuk River**	62.59	22	P	P	08 01 13.5	+0.2
	baz=240						
SII	**Sitkinak Islan**	62.66	33	P	P	08 01 16.2	+2.2

SII	Sitkinak Islan	62.66	33	P	P	08 01 15.4	+1.5
	baz=252,SNR=10						
L17K	Donlin	62.70	26	P	P	08 01 15.7	+1.6
	baz=246,SNR=78						
M17K	Holitna River	62.78	27	P	P	08 01 15.9	+1.3
M17K	Holitna River	62.78	27	P	P	08 01 16.4	+1.8
	baz=247,SNR=91						
R18K	Karluk	62.83	32	P	P	08 01 15.4	+0.4
	baz=252						
Q18K	Katmai Hardscr	62.91	30	P	P	08 01 15.7	0.0
	baz=251,SNR=26						
J17K	VABM Dome	62.91	25	P	P	08 01 16.8	+1.3
	baz=244,SNR=96						
K17K	Iditarod	62.94	26	P	P	08 01 16.9	+1.2
K17K	Iditarod	62.94	26	P	P	08 01 17.3	+1.6
	baz=246,SNR=225						
P18K	Big Mountain,	63.05	30	P	P	08 01 16.5	0.0
	baz=250,SNR=7.4						
C16K	Lisburne Hills	63.13	18	P	P	08 01 17.0	+0.2
	baz=236,SNR=97						
N18K	Kilae Creek	63.20	28	P	P	08 01 19.1	+1.7
	baz=249,SNR=58						
O18K	Koktuh Hills	63.23	29	P	P	08 01 18.2	+0.5
O18K	Koktuh Hills	63.23	29	P	P	08 01 18.7	+1.0
	baz=250,SNR=31						
G17K	Kiwalik Mounta	63.27	22	P	P	08 01 18.5	+0.7
	baz=242,SNR=64						
H17K	Granite Mounta	63.28	23	P	P	08 01 18.9	+1.0
	baz=243,SNR=69						
SHLS	Shalkode	63.33	312	*e*P	P	08 01 16.6	-2.1
SHLS	Shalkode	63.33	312	*e*P	P	08 01 16.7	-2.1
OHAK	Old Harbor	63.33	32	P	P	08 01 19.4	+1.1
OHAK	Old Harbor	63.33	32	P	P	08 01 19.9	+1.6
OHAK	Old Harbor	63.33	32	P	P	08 01 19.6	+1.3
	baz=253,SNR=23						
L18K	Granite Mounta	63.43	26	P	P	08 01 20.6	+1.7
	baz=247						
F17K	Baldwin Pennin	63.51	21	P	P	08 01 20.1	+0.8
	baz=241						
D17K	Noatak River	63.53	20	P	P	08 01 20.2	+0.8
	baz=238,SNR=138						
M18K	Stony River	63.53	27	P	P	08 01 21.2	+1.7
	baz=248,SNR=66						
E17K	Hotham Inlet	63.62	20	P	P	08 01 21.0	+0.9
	baz=240,SNR=26						
UZB	Uzynbulak	63.65	312	*e*P	P	08 01 20.9	0.0
UZB	Uzynbulak	63.65	312	*e*P	P	08 01 20.9	0.0
Q19K	Cape Douglas,	63.67	30	P	P	08 01 20.3	-0.3
Q19K	Cape Douglas,	63.67	30	P	P	08 01 20.6	0.0
	baz=252,SNR=28						
O19K	Port Alsworth	63.76	29	P	P	08 01 21.9	+0.8
	baz=250,SNR=16						
RDOG	Red Dog Mine	63.77	19	P	P	08 01 21.6	+0.5
	baz=238,SNR=66						
KDAK	Kodiak Island	63.86	32	P	P	08 01 22.9	+1.1
KDAK	Kodiak Island	63.86	32	LR	LR	08 26 45.2	
	comp=Z,93nm,20.6s,baz=241,slow=34						
KDAK	Kodiak Island	63.86	32	*i* P	P	08 01 22.7	+1.0
KDAK				pmax	pmax		
	comp=Z,166nm,0.9s						
KDAK	Kodiak Island	63.86	32	P	P	08 01 22.8	+1.0
	baz=253						
KDAK	Kodiak Island	63.86	32	P	P	08 01 22.8	+1.0
N19K	Bonanza Creek	63.90	28	P	P	08 01 23.9	+1.7
	baz=250,SNR=52						
J18K	Innoko River	63.91	25	P	P	08 01 22.4	+0.3
J18K				IAmb	IAmb	08 01 24.1	
	comp=Z,76nm,1.2s						
J18K	Innoko River	63.91	25	P	P	08 01 22.8	+0.7
	baz=247,SNR=40						
C17K	DeLong Mountai	63.91	19	P	P	08 01 22.4	+0.4
	baz=238,SNR=19						
KPKS	Kokpek	63.92	312	*e*P	P	08 01 22.6	0.0
KPKS	Kokpek	63.92	312	*e*P	P	08 01 22.7	0.0
H18K	Honhosa River	63.96	23	P	P	08 01 22.8	+0.4
	baz=244,SNR=90						
RAR	Rarotonga	63.97	122	LR	LR	08 25 51.9	
	comp=Z,223nm,20.1s,baz=302,slow=33						
PRZ	Przheval'sk	64.03	311	P	P	08 01 23.8	+0.3
PRZ				IAmb	IAmb	08 01 43.5	
	comp=Z,70nm,0.9s						
PRZ	Przheval'sk	64.03	311	P	P	08 01 23.8	+0.3
PRZ				pmax	pmax		
	comp=Z,70nm,0.9s						
SATY	Saty	64.08	311	*e*P	P	08 01 23.8	0.0
SATY	Saty	64.08	311	*e*P	P	08 01 23.8	0.0
P19K	Oil Pt	64.10	30	P	P	08 01 24.1	+0.7
	baz=252,SNR=52						
F18K	Selawik	64.14	21	P	P	08 01 23.8	+0.3
	baz=242,SNR=14						
G18K	Tagagawik	64.18	22	P	P	08 01 24.3	+0.5
	baz=244,SNR=66						
Q20K	Shuyak Island	64.19	31	P	P	08 01 24.9	+0.9
	baz=253,SNR=39						
E18K	Tukpahlearik C	64.21	20	P	P	08 01 24.8	+0.8
	baz=241,SNR=110						
L19K	White Mountain	64.21	27	P	P	08 01 25.5	+1.4
	baz=249,SNR=119						
HYB	Hyderabad	64.24	283	*e*P	P	08 01 25.1	0.0
HYB				*e*pP	pP	08 01 41.1	-0.8
HYB				*e*sP	sP	08 01 49.0	-0.1
HYB				*e*PcP	PcP	08 01 59.2	-0.3
HYB				*e*S	S	08 10 00.8	+2.5
TDK	Taldyqorghan	64.29	314	*e*P	P	08 01 25.2	+0.3
TDK				pmax	pmax		
	comp=Z,60nm,1.0s						
TDK	Taldyqorghan	64.29	314	*e*P	P	08 01 25.2	+0.3
	comp=Z,60nm,1.0s						
M19K	Big River Lodg	64.32	27	P	P	08 01 26.3	+1.5
	baz=250						
GCSA	Galena City Sc	64.36	24	P	P	08 01 25.5	+0.5
	baz=246,SNR=38						
TARG	Taragay, Kyrgy	64.41	310	P	P	08 01 26.7	+0.4
TARG				pmax	pmax		
	comp=Z,13nm,0.9s						
O20K	Slope Mountain	64.53	29	P	P	08 01 26.5	+0.2
	baz=252,SNR=13						
J19K	Poorman	64.56	25	P	P	08 01 27.4	+1.0
	baz=248,SNR=102						
ARXS	Arharly	64.62	313	*e*P	P	08 01 26.8	-0.4
C18K	Utukok River	64.62	19	P	P	08 01 27.0	+0.3
	baz=240,SNR=26						
L20K	Farewell, AK	64.74	27	P	P	08 01 28.9	+1.4
	baz=250,SNR=59						
B18K	Kokolik River	64.80	18	P	P	08 01 28.5	+0.7
	baz=239,SNR=8.5						
H19K	Roundabout Mou	64.85	23	P	P	08 01 29.0	+0.9
	baz=246,SNR=114						
G19K	Purcell Mounta	64.87	22	P	P	08 01 28.9	+0.6
	baz=245,SNR=77						
M20K	Styx River	64.87	27	P	P	08 01 30.1	+1.6
	baz=251						
HOM	Homer	64.87	30	P	P	08 01 28.9	+0.5
	baz=253,SNR=14						
KDJ	Kajisay	64.91	310	P	P	08 01 29.7	+0.5
KDJ				pmax	pmax		
	comp=Z,41nm,0.8s						
F19K	Shaleruckik Mo	64.92	21	P	P	08 01 28.6	0.0
	baz=244						
KURK	Kurchatov	64.94	320	P	P	08 01 28.4	-0.6
KURK				IAmb	IAmb	08 01 30.7	
	comp=Z,104nm,0.7s						
KURK	Kurchatov	64.94	320	P	P	08 01 30.4	+1.3
KURK				P	P	08 01 30.4	+1.3
KURK	Kurchatov	64.94	320	*ce*P	P	08 01 28.8	-0.3
KURK				pmax	pmax		
	comp=Z,130nm,0.8s						
KURK	Kurchatov	64.94	320	P	P	08 01 28.6	-0.4
KURK				pP	pP	08 01 45.3	-0.5
K20K	Telida	64.97	26	P	P	08 01 30.5	+1.5
	baz=249,SNR=121						
KURBB	Kurchatov Arra	64.99	320	P	P	08 01 28.9	-0.4
	comp=Z,126nm,0.6s,baz=102,slow=6.6,SNR=334						
KURBB				S	S	08 10 05.5	-0.9
	comp=Z,0.4nm,0.3s,baz=95,slow=10,SNR=8.6						
KURBB				LR	LR	08 30 04.9	
	comp=Z,934nm,21.2s,baz=126,slow=36						
KURBB				PKP2bc		08 30 17.6	
	comp=Z,2.6nm,1.0s,baz=272,slow=4.1,SNR=8.9						
	comp=Z,126nm,0.6s						
KURBB	Kurchatov Arra	64.99	320	P	P	08 01 28.8	-0.5
N20K	Mount Spurr	65.07	28	P	P	08 01 30.1	+0.4
	baz=252						
SPCR	Spurr Chakacha	65.07	28	P	P	08 01 30.1	+0.3
	baz=252,SNR=11						
MDOK	Medeo	65.08	311	*e*P	P	08 01 30.4	+0.1
MDOK	Medeo	65.08	311	*e*P	P	08 01 30.4	+0.1
AAA	Alma-Ata	65.19	311	*e*P	P	08 01 31.0	+0.1
AAA				pmax	pmax		
	comp=Z,24nm,0.5s						
AAA	Alma-Ata	65.19	311	*e*P	P	08 01 31.0	+0.1
	comp=Z,24nm,0.5s						
J20K	Nowinta River	65.23	25	P	P	08 01 32.2	+1.5
	baz=249,SNR=137						
I20K	Naaghedeneel	65.33	24	P	P	08 01 32.6	+1.3
	baz=248,SNR=105						
STLK	Strandline Lak	65.33	28	P	P	08 01 32.0	+0.5
STLK				IAmb	IAmb	08 01 33.4	
	comp=Z,79nm,1.0s						
BRSE	Bradley Lake S	65.33	30	P	P	08 01 31.8	+0.4
	baz=254,SNR=27						
C19K	Lookout Ridge	65.36	19	P	P	08 01 32.1	+0.6
C19K				IAmb	IAmb	08 01 33.4	
	comp=Z,91nm,0.9s						
C19K	Lookout Ridge	65.36	19	P	P	08 01 32.3	+0.8
	baz=241,SNR=34						
E19K	Redstone River	65.38	21	P	P	08 01 32.2	+0.6
	baz=244,SNR=63						
CAPN	Captain Cook N	65.43	29	P	P	08 01 32.9	+0.9
	baz=253						
H20K	Anotleneega Mo	65.43	23	P	P	08 01 32.9	+0.9
	baz=248,SNR=111						
A19K	Wainwright	65.45	18	P	P	08 01 32.9	+0.9
	baz=240,SNR=5.6						
D19K	Kuna River	65.54	20	P	P	08 01 33.1	+0.5
	baz=243,SNR=57						
PPLA	Purkeypile	65.62	26	P	P	08 01 34.5	+1.1
	baz=251,SNR=113						
SKT	Skwentna	65.62	28	P	P	08 01 33.0	-0.3
SKT	Skwentna	65.62	28	P	P	08 01 33.4	+0.1
	baz=252,SNR=126						
KSH	Kashi	65.67	307	P	P	08 01 36.9	+2.8
KSH				pmax	pmax		
	comp=Z,25nm,0.9s						
KSH				pmax	pmax		
	comp=Z,310nm,5.4s						
KSH				LR	LR		
	comp=Z,310nm,15.1s						
KSH				LR	LR		
	comp=Z,620nm,18.9s						
KSH				LR	LR		
	comp=Z,760nm,19.2s						
F20K	Avaraart Lake	65.74	22	P	P	08 01 34.0	+0.1
F20K	Avaraart Lake	65.74	22	P	P	08 01 34.7	+0.9
	baz=246						
SLKM	Skilak Lake	65.80	29	P	P	08 01 34.4	0.0
SUA	Susitna One	65.82	28	P	P	08 01 34.6	-0.1
SUA				IAmb	IAmb	08 01 35.9	
	comp=Z,122nm,0.9s						
SUA	Susitna One	65.82	28	P	P	08 01 34.7	-0.1
	baz=253						
CAST	Castle Rocks	65.83	26	P	P	08 01 34.9	+0.3
CAST	Castle Rocks	65.83	26	P	P	08 01 35.6	+1.0
	baz=251,SNR=274						
BOOM	Boomskoye usch	65.85	311	P	P	08 01 35.4	+0.1
BOOM				pmax	pmax		
	comp=Z,18nm,0.6s						
CHUM	Lake Minchumin	65.89	25	P	P	08 01 36.1	+1.2
	baz=251,SNR=87						
FIS	Fire Island	65.97	29	P	P	08 01 36.1	+0.6
O22K	Cooper Landing	66.03	29	P	P	08 01 36.5	+0.6
O22K	Cooper Landing	66.03	29	P	P	08 01 36.6	+0.7
	baz=255,SNR=46						
IMAR	Indian Mountai	66.05	23	P	P	08 01 36.5	+0.6
SEW	Seward	66.06	30	P	P	08 01 36.6	+0.6
SEW	Seward	66.06	30	P	P	08 01 36.9	+0.9
	baz=255,SNR=36						
E20K	Nigu River	66.08	20	P	P	08 01 36.8	+0.6
	baz=245,SNR=120						
D20K	Etivluk River	66.13	20	P	P	08 01 36.5	+0.1
D20K				IAmb	IAmb	08 01 38.0	
	comp=Z,89nm,0.7s						
D20K	Etivluk River	66.13	20	P	P	08 01 36.8	+0.4
	baz=245,SNR=76						
RC01	Rabbit Creek A	66.18	29	P	P	08 01 37.3	+0.4
	baz=254,SNR=95						
M22K	Willow	66.19	28	P	P	08 01 37.0	+0.1
	baz=254,SNR=89						
H21K	Melozitna Rive	66.30	24	P	P	08 01 37.9	+0.3
H21K				IAmb	IAmb	08 01 39.8	
	comp=Z,175nm,1.5s						
H21K	Melozitna Rive	66.30	24	P	P	08 01 38.5	+1.0
	baz=250,SNR=87						
CUT	Chulitna	66.31	27	P	P	08 01 37.6	-0.1
	baz=253,SNR=34						
G21K	Allakaket	66.34	23	P	P	08 01 38.5	+0.8
	baz=249,SNR=29						
BPAW	Bear Paw Mtn.	66.51	25	P	P	08 01 39.7	+0.8
	baz=252,SNR=141						
B20K	Meade River	66.53	18	P	P	08 01 39.5	+0.6
	baz=244						
PMR	Palmer	66.60	28	P	P	08 01 40.1	+0.6
PMR	Palmer	66.60	28	P	P	08 01 39.8	+0.3
	baz=255,SNR=170						
TRF	Thorofare Moun	66.61	26	P	P	08 01 39.9	+0.1
	baz=253,SNR=118						
F21K	Alatna River	66.61	22	P	P	08 01 40.0	+0.5
	baz=248,SNR=54						
PWL	Port Wells	66.78	29	P	P	08 01 41.6	+0.8
	baz=256,SNR=145						
KNK	Knik Glacier	66.87	29	P	P	08 01 42.1	+0.9
	baz=256,SNR=82						
MLY	Manley	66.91	24	P	P	08 01 42.3	+0.9
	baz=252,SNR=250						
E21K	Killik River	66.91	21	P	P	08 01 41.8	+0.4
	baz=247						
C21K	Knifeblade Rid	66.92	20	P	P	08 01 42.2	+0.8
	baz=246,SNR=47						
AAK	Ala-Archa	66.92	311	P	P	08 01 42.0	-0.2
AAK	Ala-Archa	66.92	311	P	P	08 01 42.0	-0.2
	comp=Z,6.5nm,0.6s,baz=74,slow=7.4,SNR=6.9						
AAK				LR	LR	08 32 45.1	
	comp=Z,510nm,20.1s,baz=86,slow=38						
	comp=Z,6.5nm,0.6s						
AAK	Ala-Archa	66.92	311	*ce*P	P	08 01 42.4	+0.2
AAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
AAK	Ala-Archa	66.92	311	P	P	08 01 42.4	+0.2
H22K	Ishtalitna Cre	66.93	23	P	P	08 01 42.5	+0.9
	baz=251,SNR=50						
SML	Sawmill	67.03	28	P	P	08 01 43.1	+0.8
	baz=255,SNR=265						
P23K	Montague Islan	67.03	30	P	P	08 01 43.6	+1.3
	baz=257,SNR=47						
B21K	Ikpikpuk River	67.17	19	P	P	08 01 43.5	+0.5
	baz=246						
F22K	John River	67.19	22	P	P	08 01 44.3	+1.1
	baz=250						
WAT1	Susitna Watana	67.19	27	P	P	08 01 43.6	+0.3
	baz=255						
G22K	Bettles	67.23	22	P	P	08 01 43.9	+0.5
	baz=250						
MCK	McKinley	67.27	26	P	P	08 01 43.7	-0.1
	baz=254,SNR=28						
A21K	Barrow	67.29	17	P	P	08 01 44.2	+0.6
	baz=244						
M23K	Glacier View	67.30	28	P	P	08 01 44.6	+0.7
	baz=256,SNR=89						
BTLS	Baital	67.38	313	*e*P	P	08 01 44.6	-0.1
BTLS	Baital	67.38	313	*e*P	P	08 01 44.7	-0.1
GLI	Glacier Island	67.38	29	P	P	08 01 45.3	+0.8
	baz=257,SNR=25						
Q23K	Middleton Isla	67.43	31	P	P	08 01 46.2	+1.4
	baz=258,SNR=8.7						
NEA2	Nenana	67.46	25	P	P	08 01 44.8	-0.1
	baz=254,SNR=67						
WAT6	Susitna Watana	67.49	27	P	P	08 01 45.8	+0.5
	baz=256,SNR=232						
SCM	Sheep Creek Mo	67.49	28	P	P	08 01 46.3	+1.0
	baz=256,SNR=220						
I23K	Minto, Yukon-K	67.50	25	P	P	08 01 46.1	+1.0
	baz=253,SNR=140						
D22K	Ayikyak River	67.51	20	P	P	08 01 46.1	+0.9
D22K				IAmb	IAmb	08 01 47.2	
	comp=Z,86nm,0.6s						
D22K	Ayikyak River	67.51	20	P	P	08 01 46.2	+1.0
	baz=248,SNR=92						
E22K	Anaktuvuk Pass	67.54	21	P	P	08 01 46.2	+0.8
	baz=250,SNR=168						
H23K	Yukon River	67.63	24	P	P	08 01 46.8	+0.8
	baz=253,SNR=54						
A22K	Sinclair Lake	67.63	18	P	P	08 01 46.5	+0.7
	baz=245						
FID	Port Fidalgo	67.64	30	P	P	08 01 46.8	+0.6
G23K	Bananza Creek	67.72	23	P	P	08 01 47.6	+1.0
	baz=252,SNR=105						
DHY	Denali Highway	67.77	27	P	P	08 01 47.1	0.0
DHY				IAmb	IAmb	08 01 49.5	
	comp=Z,90nm,0.7s						
DHY	Denali Highway	67.77	27	P	P	08 01 47.4	+0.3
	baz=256,SNR=110						
COLD	Coldfoot	67.81	22	P	P	08 01 48.0	+0.9
COLD				IAmb	IAmb	08 01 49.1	
	comp=Z,54nm,0.6s						
COLD	Coldfoot	67.81	22	P	P	08 01 48.3	+1.2
	baz=252,SNR=110						
B22K	Teshekpuk Lake	67.83	19	P	P	08 01 47.6	+0.5
	baz=247,SNR=30						
NIL	Nilore	67.84	301	P	P	08 01 47.6	-0.3
NIL				IAmb	IAmb	08 02 06.6	
	comp=Z,64nm,0.9s						
NIL	Nilore	67.84	301	P	P	08 01 49.0	+1.0
NIL				P	P	08 01 49.0	+1.0
NIL	Nilore	67.84	301	P	P	08 01 47.6	-0.3
NIL				pmax	pmax		
	comp=Z,64nm,0.9s						
NIL	Nilore	67.84	301	P	P	08 01 48.0	+0.1
NIL				pP	pP	08 02 04.1	-0.8
NIL				PcP	PcP	08 02 13.7	-0.5
EYAK	Cordova Ski Ar	67.95	30	P	P	08 01 49.5	+1.4
EYAK	Cordova Ski Ar	67.95	30	P	P	08 01 49.4	+1.3
	baz=258,SNR=58						
COLA	College	68.04	25	P	P	08 01 48.4	-0.2
COLA				IAmb	IAmb	08 01 51.9	
	comp=Z,54nm,0.8s						
COLA	College	68.04	25	P	P	08 01 48.6	+0.1
COLA	College	68.04	25*c*	*i*P	P	08 01 48.2	-0.3
COLA				pmax	pmax		
	comp=Z,60nm,1.0s						
COLA	College	68.04	25	P	P	08 01 48.2	-0.3
	baz=255						
COLA	College	68.04	25	P	P	08 01 48.3	-0.2
COLA				PcP	sP	08 02 12.7	+0.6
KLU	Klutina	68.07	29	P	P	08 01 50.1	+1.2
	baz=258,SNR=145						
M24K	Tolsona, Glenn	68.09	28	P	P	08 01 50.5	+1.5
	baz=257,SNR=81						
OHH	Osh	68.14	308	P	P	08 01 50.1	+0.3
OHH				pmax	pmax		
	comp=Z,50nm,0.7s						
D23K	Nanushuk River	68.22	20	P	P	08 01 50.9	+1.3
	baz=250,SNR=65						
POKR	Poker Plat Res	68.27	25	P	P	08 01 49.7	-0.3
	baz=255,SNR=18						
H24K	Noodor Dome	68.29	24	P	P	08 01 51.1	+0.9
	baz=254,SNR=116						
E23K	Chandalar	68.29	22	P	P	08 01 51.6	+1.4
	baz=252,SNR=138						
HDA	Harding Lake	68.29	26	P	P	08 01 49.6	-0.5
	baz=256,SNR=105						
ILAR	Eielson Array	68.41	25	P	P	08 01 50.2	-0.7
ILAR	Eielson Array	68.41	25	P	P	08 01 49.9	-1.0
	comp=Z,65nm,0.7s,baz=251,slow=5.6,SNR=450						
ILAR				S	S	08 10 44.9	-2.3
	comp=Z,0.4nm,1.0s,baz=243,slow=11,SNR=2.0						
ILAR				LR	LR	08 30 04.8	
	comp=Z,343nm,21.1s,baz=244,slow=34						
	comp=Z,65nm,0.7s						
ILAR	Eielson Array	68.41	25	P	P	08 01 50.2	-0.7
KAIM	Kayak Island	68.48	31	P	P	08 01 53.4	+2.0
	baz=260,SNR=72						
TOLK	Toolik Lake Re	68.49	21	P	P	08 01 52.5	+1.1
	baz=252,SNR=75						
C23K	Itkillik River	68.54	20	P	P	08 01 52.4	+0.9
	baz=250,SNR=113						
BMRM	Bremner River	68.59	30	P	P	08 01 53.3	+1.1
	baz=259,SNR=112						
PAX	Paxson	68.59	27	P	P	08 01 52.9	+0.7
	baz=258,SNR=261						
HARP	HAARP	68.61	28	P	P	08 01 53.5	+1.3
	baz=258,SNR=122						
BRZS	Berezniki	68.64	319	*e*P	P	08 01 53.0	+0.4
BRZS	Berezniki	68.64	319	*e*P	P	08 01 53.0	+0.4
K24K	Donnelly Dome	68.64	26	P	P	08 01 52.9	+0.5
	baz=257,SNR=115						
G24K	Hadweenzic Riv	68.68	23	P	P	08 01 53.6	+1.0
	baz=254,SNR=104						
E24K	Your Creek	68.70	22	P	P	08 01 53.7	+1.0
	baz=253						
N25K	Chitina, Valde	68.71	29	P	P	08 01 54.3	+1.3
	baz=259,SNR=104						
F24K	Squaw Lake	68.75	22	P	P	08 01 54.3	+1.2
	baz=254,SNR=75						
DRK	Karamyk	68.90	307	P	P	08 01 54.7	-0.1
DRK	Karamyk	68.90	307	P	P	08 01 54.7	-0.1
DRK				pmax	pmax		
	comp=Z,38nm,1.1s						
D24K	Happy Valley	68.91	20	P	P	08 01 55.4	+1.4
	baz=252,SNR=135						
BERG	Berg Lake	68.92	30	P	P	08 01 55.1	+1.0
J25K	Salcha River,	69.00	26	P	P	08 01 54.1	-0.6
	baz=257,SNR=70						
RIDG	Independent Ri	69.03	27	P	P	08 01 55.3	+0.5
	baz=258,SNR=146						
BGLC	Bering Glacier	69.08	31	P	P	08 01 57.3	+2.2
	baz=261						
C24K	Franklin Bluff	69.13	20	P	P	08 01 55.8	+0.6
C24K	Franklin Bluff	69.13	20	P	P	08 01 56.0	+0.8
	baz=252						
PRP	Porcupine Dome	69.15	25	P	P	08 01 54.1	-1.5
	baz=257,SNR=16						
H25L	Birch Creek	69.21	24	P	P	08 01 56.7	+0.9
	baz=256,SNR=112						
G25K	Bearman Lake	69.22	23	P	P	08 01 57.0	+1.2
	baz=256,SNR=51						
DZA	Taraz	69.26	311	*e*P	P	08 01 56.8	+0.2
DZA	Taraz	69.26	311	*e*P	P	08 01 56.8	+0.2
CRQE	Cirque	69.28	30	P	P	08 01 57.7	+1.2
	baz=261,SNR=133						
MENT	Mentasta	69.37	28	P	P	08 01 58.2	+1.3
TRKS	Terek-Say	69.39	309	P	P	08 01 57.4	-0.3
TRKS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MCARA	McCarthy VSAT	69.42	29	P	P	08 01 58.4	+1.3
	baz=260,SNR=92						
SCRK	Sand Creek	69.46	26	P	P	08 01 57.8	+0.3
	baz=259,SNR=133						
L26K	Log Cabin Wild	69.56	27	P	P	08 01 59.1	+1.0
	baz=260,SNR=178						
M26K	Nabesna, AK	69.60	28	P	P	08 01 59.1	+0.7
	baz=260,SNR=71						
F25K	Christian Rive	69.61	22	P	P	08 01 59.8	+1.4
	baz=256,SNR=74						
ISLE	Juniper Island	69.62	30	P	P	08 01 59.4	+0.8
BTK	Batken	69.65	308	P	P	08 01 58.8	-0.4
BTK				pmax	pmax		
	comp=Z,22nm,0.8s						
J26L	Joseph Creek	69.74	26	P	P	08 01 59.4	+0.1
J26L				IAmb	IAmb	08 02 00.8	
	comp=Z,97nm,0.8s						
J26L	Joseph Creek	69.74	26	P	P	08 01 59.6	+0.4
	baz=259,SNR=145						
MESA	MESA	69.75	31	P	P	08 02 01.3	+1.8
	baz=262,SNR=82						
E25K	Arctic Village	69.77	22	P	P	08 02 00.4	+1.2
	baz=256,SNR=45						
D25K	Kavik River	69.80	21	P	P	08 02 00.4	+1.0
	baz=254						
KK31	Karatay Array	69.86	311	P	P	08 01 59.7	-0.6
BMAR	Burnt Mountain	69.96	23	P	P	08 02 01.5	+1.0
I26K	Coal Creek Min	70.07	25	P	P	08 02 00.7	-0.4
I26K	Coal Creek Min	70.07	25	P	P	08 02 00.7	-0.4
	baz=259,SNR=45						
M27K	Edge Creek, AK	70.11	28	P	P	08 02 02.8	+1.2
	baz=261,SNR=211						
CTG	Chitna Glacier	70.16	30	P	P	08 02 03.6	+1.6
	baz=262,SNR=179						
G26K	Porcupine Rive	70.16	23	P	P	08 02 03.0	+1.4
	baz=258,SNR=113						
F26K	Sheenjek River	70.19	22	P	P	08 02 03.3	+1.4
	baz=257,SNR=98						
IUG	Iuzhnay	70.22	310	*e*P	P	08 02 02.7	+0.1
IUG	Iuzhnay	70.22	310	*e*P	P	08 02 02.7	+0.1
L27K	Beaver Creek,	70.24	28	P	P	08 02 03.4	+1.1
	baz=261,SNR=144						
BCAR	Beaver Creek A	70.26	28	P	P	08 02 03.4	+0.9
BVA0	Borovoye Array	70.28	322	*i* P	P	08 02 02.2	-0.4
BVAR	Borovoye Array	70.28	322	P	P	08 02 02.6	0.0
	comp=Z,173nm,0.6s,baz=104,slow=7.7,SNR=328						

BVAR				LR	LR	08 33 38.5	
	comp=Z,613nm,20.9s,baz=93,slow=36						
	comp=Z,173nm,0.6s						
K27K	Chicken	70.29	26	P	P	08 02 04.0	+1.5
	baz=260						
LOGN	Logan Glacier	70.30	30	P	P	08 02 03.5	+0.7
BRVK	Borovoye	70.34	322	P	P	08 02 03.0	0.0
BRVK				IAmb	IAmb	08 02 04.7	
	comp=Z,87nm,0.7s						
BRVK	Borovoye	70.34	322	P	P	08 02 03.1	0.0
BRVK				P	P	08 02 03.1	0.0
BRVK	Borovoye	70.34	322	ceP	P	08 02 03.0	0.0
BRVK				pmax	pmax		
	comp=Z,73nm,0.6s						
BRVK	Borovoye	70.34	322	P	P	08 02 02.7	-0.4
BRVK				pP	pP	08 02 19.2	-0.8
BRVK				PcP	PcP	08 02 24.4	+0.1
BRLS	Borolday	70.36	311	eP	P	08 02 04.2	+0.9
BRLS	Borolday	70.36	311	eP	P	08 02 04.2	+0.9
C26K	Camden Bay	70.45	20	P	P	08 02 05.0	+1.7
	baz=256,SNR=14						
CHM	Chimkent	70.53	310	eP	P	08 02 04.5	+0.1
CHM				pmax	pmax		
	comp=Z,14nm,0.4s						
CHM	Chimkent	70.53	310	eP	P	08 02 04.6	+0.1
	comp=Z,14nm,0.4s						
PINM	Pinnacle	70.58	31	P	P	08 02 05.9	+1.5
	baz=263,SNR=31						
BVCY	Beaver Creek	70.59	28	P	P	08 02 05.7	+1.3
	baz=262,SNR=180						
YUK3	Moose Creek	70.69	29	P	P	08 02 06.6	+1.3
	baz=263,SNR=247						
O28M	Mount Upton	70.69	30	P	P	08 02 06.6	+1.2
O28M	Mount Upton	70.69	30	P	P	08 02 07.1	+1.7
	baz=263,SNR=265						
I27K	Kandik River	70.76	25	P	P	08 02 05.9	+0.5
	baz=260,SNR=66						
C27K	Jago River	70.78	21	P	P	08 02 06.5	+1.1
	baz=257,SNR=70						
H27K	Steamboat Moun	70.90	24	P	P	08 02 06.5	+0.2
H27K	Steamboat Moun	70.90	24	P	P	08 02 07.4	+1.2
	baz=260,SNR=231						
G27K	Doyon Strip	70.95	24	P	P	08 02 07.1	+0.5
G27K	Doyon Strip	70.95	24	P	P	08 02 07.7	+1.1
	baz=260,SNR=37						
YUK8	Steele Glacier	70.96	30	P	P	08 02 08.8	+1.8
	baz=264,SNR=214						
PNL	Peninsula	70.96	31	P	P	08 02 08.5	+1.8
PNL	Peninsula	70.96	31	P	P	08 02 08.3	+1.6
	baz=264,SNR=33						
SIMJ	Simiganj	71.09	306	P	P	08 02 08.0	-0.1
SIMJ	Simiganj	71.09	306	P	P	08 02 07.7	-0.3
SIMJ				PcP	pwP	08 02 27.7	+0.2
SIMJ				sP	sP	08 02 32.5	+0.6
DZET	Dzherino	71.22	307	P	P	08 02 08.8	0.0
DZET				pmax	pmax		
	comp=Z,61nm,0.6s						
E27K	Coleen River	71.23	22	P	P	08 02 09.3	+1.1
	baz=259,SNR=42						
PPT	Papeete	71.24	114	LR	LR	08 26 34.2	
	comp=Z,562nm,20.8s,baz=266,slow=30						
PPT2	Papeete2	71.24	114	eS	S	08 11 17.9	-4.1
	comp=Z,263nm,29.8s						
PPT2	Papeete2	71.24	114	eLR	LR	08 23 42.8	
	comp=Z,1µm,27.2s						
PPT2				eLR	LR	08 23 50.0	
	comp=Z,2µm,25.8s						
KBL	Kabul	71.28	302	P	P	08 02 08.7	-0.7
KBL	Kabul	71.28	302	P	P	08 02 10.1	+0.7
	SNR=11						
KBL				P	P	08 02 10.1	+0.7
	SNR=11						
KBL	Kabul	71.28	302	P	P	08 02 08.7	-0.7
KBL				pmax	pmax		
	comp=Z,34nm,0.8s						
I28M	Miner Creek	71.42	25	P	P	08 02 10.4	+1.0
	baz=262,SNR=72						
O29M	Mount Kennedy	71.43	31	P	P	08 02 11.8	+2.1
	baz=265,SNR=139						
DAWY	Dawson	71.47	27	P	P	08 02 10.6	+0.9
DAWY				IAmb	IAmb	08 02 12.1	
	comp=Z,120nm,0.9s						
DAWY	Dawson	71.47	27	P	P	08 02 11.0	+1.3
	baz=263,SNR=167						
YUK4	Talbot Arm	71.50	30	P	P	08 02 12.4	+2.2
	baz=264,SNR=373						
YUK6	Outpost Mounta	71.60	30	P	P	08 02 12.7	+1.9
	baz=265,SNR=110						
D27M	Malcolm River	71.65	21	P	P	08 02 12.0	+1.2
	baz=260						
M29M	Somme Creek	71.70	28	P	P	08 02 13.1	+1.8
	baz=264,SNR=374						
F28M	Old Crow	71.78	23	P	P	08 02 12.5	+1.0
	baz=261,SNR=51						
P29M	Windy Craggy	71.80	31	P	P	08 02 13.1	+1.4
P29M	Windy Craggy	71.80	31	P	P	08 02 13.8	+2.1
	baz=266,SNR=103						
L29M	L29M	71.92	28	P	P	08 02 14.3	+1.9
	baz=264,SNR=420						
HYT	Haines Junctio	72.01	30	P	P	08 02 15.1	+2.0
	baz=266,SNR=353						
J29N	Klondike Camp	72.02	26	P	P	08 02 14.6	+1.5
	baz=264,SNR=10						
E28M	Babbage River	72.05	22	P	P	08 02 14.3	+1.2
	baz=261,SNR=26						
I29M	Ogilvie Camp,	72.09	25	P	P	08 02 14.3	+0.9
	baz=263,SNR=68						
H29M	Whitestone	72.17	24	P	P	08 02 14.9	+1.1
	baz=263,SNR=54						
P30M	Million Dollar	72.22	31	P	P	08 02 16.4	+2.0
	baz=266						
N30M	Aishikik Lake	72.26	29	P	P	08 02 16.3	+1.8
	baz=266,SNR=232						
K29M	Barlow Dome	72.26	27	P	P	08 02 15.5	+0.9
K29M	Barlow Dome	72.26	27	P	P	08 02 16.2	+1.6
	baz=265,SNR=258						
G29M	Pine Creek	72.39	24	P	P	08 02 16.5	+1.4
	baz=263,SNR=52						
D28M	Stokes Point	72.45	21	P	P	08 02 16.3	+1.0
	baz=262						
S31K	Pelican	72.48	33	P	P	08 02 17.4	+1.6
	baz=268,SNR=16						
PLBC	Pleasant Camp	72.48	32	P	P	08 02 17.7	+1.9
	baz=267,SNR=194						
E29M	Blow River	72.62	22	P	P	08 02 16.8	+0.3
E29M	Blow River	72.62	22	P	P	08 02 17.2	+0.7
	baz=263,SNR=14						
O30N	Mendenhall	72.69	30	P	P	08 02 18.5	+1.3
	baz=267,SNR=61						
R31K	City Hall, Gus	72.76	33	P	P	08 02 19.0	+1.6
	baz=268						
EPYK	Eagle Plains	72.85	24	P	P	08 02 18.9	+1.0
	baz=265,SNR=52						
J30M	Hart River	72.85	26	P	P	08 02 19.2	+1.2
J30M				IAmb	IAmb	08 02 20.5	
	comp=Z,88nm,0.9s						
J30M	Hart River	72.85	26	P	P	08 02 19.3	+1.2
	baz=266,SNR=118						
I30M	Mount Dempster	72.88	26	P	P	08 02 19.0	+0.8
	baz=265,SNR=83						
N31M	Braeburn, Yuko	72.89	30	P	P	08 02 20.0	+1.8
	baz=267,SNR=162						
SIT	Sitka	72.94	34	P	P	08 02 20.1	+1.6
SIT	Sitka	72.94	34	P	P	08 02 20.3	+1.8
	baz=269,SNR=9.2						
MAYO	Mayo, Yukon	72.97	27	P	P	08 02 20.3	+1.7
	baz=266,SNR=114						
SKAG	Skagway	73.01	32	P	P	08 02 20.5	+1.6
SKAG	Skagway	73.01	32	P	P	08 02 20.9	+2.0
	baz=268,SNR=35						
G30M	tAoh Zraii Nji	73.10	24	P	P	08 02 19.9	+0.5
G30M				IAmb	IAmb	08 02 21.9	
	comp=Z,136nm,1.2s						
G30M	tAoh Zraii Nji	73.10	24	P	P	08 02 19.8	+0.4
	baz=265,SNR=70						
BESE	Bessie Mountai	73.23	33	P	P	08 02 21.0	+0.6
BESE				IAmb	IAmb	08 02 23.3	
	comp=Z,190nm,1.2s						
WHY	Whitehorse	73.28	30	P	P	08 02 22.4	+1.7
	baz=268,SNR=157						
F30M	Barrier River	73.33	23	P	P	08 02 21.7	+1.0
	baz=265,SNR=54						
S32K	Killisnoo	73.35	34	P	P	08 02 22.7	+1.8
	baz=269,SNR=21						
R32K	Eaglecrest	73.40	33	P	P	08 02 23.1	+1.8
	baz=269,SNR=80						
JIS	Juneau Island	73.47	33	P	P	08 02 23.2	+1.6
TBI	Tubuai	73.51	120	eS	S	08 11 48.7	+1.1
	comp=Z,987nm,31.2s						
TBI	Tubuai	73.51	120	eLR	LR	08 24 27.5	
	comp=Z,5µm,31.2s						
TBI				eLR	LR	08 24 49.5	
	comp=Z,1µm,26.2s						
M31M	Drury Creek, Y	73.58	29	P	P	08 02 23.5	+1.3
	baz=268,SNR=119						
H31M	Peel River	73.77	25	P	P	08 02 24.3	+0.9
	baz=267,SNR=111						
P32M	Atlin	73.84	32	P	P	08 02 25.6	+1.8
	baz=269,SNR=107						
G31M	Satah River	73.86	24	P	P	08 02 24.6	+0.9
	baz=267,SNR=98						
FARO	Faro, Yukon	74.07	29	P	P	08 02 26.2	+1.1
	baz=269,SNR=79						
F31M	Tsiigehtchic	74.10	23	P	P	08 02 25.5	+0.4
	baz=267,SNR=33						
U33K	Whale Pass	74.15	35	P	P	08 02 27.5	+1.9
	baz=271,SNR=23						
CRAG	Craig	74.16	36	P	P	08 02 27.9	+2.2
CRAG	Craig	74.16	36	P	P	08 02 27.6	+1.9
	baz=271,SNR=9.3						
N32M	Quiet Lake	74.17	30	P	P	08 02 27.4	+1.6
	baz=269						
INK	Inuvik	74.23	22	P	P	08 02 26.1	+0.3
INK				pmax	pmax		
	comp=Z,47nm,0.6s						
INK	Inuvik	74.23	22	P	P	08 02 26.1	+0.3
	baz=267,SNR=51						
T33K	Petersburg	74.24	34	P	P	08 02 28.1	+2.0
	baz=271,SNR=7.1						
P33M	Teslin, Yukon	74.30	31	P	P	08 02 28.0	+1.5
	baz=270,SNR=161						
WRAK	Wrangell Islan	74.58	35	P	P	08 02 30.1	+2.0
	baz=271,SNR=12						
Q32M	Nakina River	74.58	32	P	P	08 02 30.5	+2.1
	baz=271,SNR=62						
V35K	Ketchikan	75.02	36	P	P	08 02 32.4	+1.7
	baz=272,SNR=11						
MMPY	Sheldon Lake,	75.04	28	P	P	08 02 32.5	+1.7
	baz=271,SNR=121						
S34M	Telegraph Cree	75.20	33	P	P	08 02 33.9	+2.2
	baz=272,SNR=61						
R33M	Jennings River	75.24	32	P	P	08 02 34.2	+2.1
	baz=272,SNR=181						
T35M	Bob Quinn	75.71	34	P	P	08 02 36.9	+2.2
	baz=273,SNR=72						
DLBC	Dease Lake	75.76	33	P	P	08 02 36.8	+1.7
DLBC	Dease Lake	75.76	33	LR	LR	08 30 15.7	
	comp=Z,150nm,21.9s,baz=288,slow=31						
DLBC	Dease Lake	75.76	33	P	P	08 02 37.1	+2.0
	baz=273,SNR=192						
U35K	Hyder	75.89	35	P	P	08 02 37.5	+1.8
	baz=273						
SVE	Sverdlovsk	75.92	326	ceP	P	08 02 36.9	+1.0
SVE				pmax	pmax		
	comp=Z,60nm,0.9s						
WTLY	Watson Lake, Y	76.31	31	P	P	08 02 40.0	+1.9
	baz=273,SNR=254						
TGTN	Hyland Airport	76.48	29	P	P	08 02 40.9	+1.9
	baz=274,SNR=52						
HRA	Herat	76.89	303	P	P	08 02 41.8	-0.3
HRA				IAmb	IAmb	08 02 44.3	
	comp=Z,37nm,0.8s						
AB31	Akbulak array	76.92	318	P	P	08 02 40.9	-0.7
AB31	Akbulak array	76.92	318	i P	P	08 02 41.4	-0.2
ABKAR	Akbulak array	76.92	318	P	P	08 02 41.3	-0.4
ABKAR	Akbulak array	76.92	318	P	P	08 02 40.6	-1.0
ABKAR				IAmb	IAmb	08 02 42.7	
	comp=Z,28nm,0.7s						
A36M	Sachs Harbour	77.04	19	P	P	08 02 42.1	+0.2
	baz=274,SNR=11						
TAOE	Nuku Hiva Isla	77.19	102	eLR	LR	08 26 25.1	
	comp=Z,964nm,23.8s						
ARTI	Arti	77.20	325	P	P	08 02 43.4	+0.3
ARTI				IAmb	IAmb	08 02 44.0	
	comp=Z,70nm,0.8s						
ARTI	Arti	77.20	325	P	P	08 02 42.7	-0.4
	comp=Z,30nm,0.4s,baz=109,slow=3.2,SNR=60						
ARTI				LR	LR	08 38 44.5	
	comp=Z,230nm,18.1s,baz=56,slow=37						
	comp=Z,30nm,0.4s						
ARTI	Arti	77.20	325	c iP	P	08 02 42.9	-0.2
ARTI						08 05 33.8	
ARTI				S	S	08 12 31.1	+3.7
ARTI				SS	SS	08 17 24.8	-1.1
ARTI				pmax	pmax		
	comp=Z,61nm,0.9s						
ARTI				MLR	MLR		
	comp=Z,435nm,18.0s						
BBB	Bella Bella	77.31	39	LR	LR	08 30 48.7	
	comp=Z,257nm,21.9s,baz=251,slow=31						
C36M	Paulatuk	77.64	21	P	P	08 02 45.4	+0.1
	baz=276,SNR=30						
LIRD	Liard River Hi	77.72	32	P	P	08 02 47.5	+1.6
	baz=276,SNR=16						
AKTO	Aktyubinsk	78.03	319	P	P	08 02 47.6	-0.3
	comp=Z,33nm,0.7s,baz=86,slow=6.0,SNR=47						
AKTO				LR	LR	08 38 10.0	
	comp=Z,701nm,20.2s,baz=82,slow=36						
	comp=Z,33nm,0.7s						
BEAVL	Fort Liard	78.16	31	P	P	08 02 50.0	+1.6
	baz=277,SNR=68						
TOAD	Toad River Com	78.23	32	P	P	08 02 49.9	+1.0
	baz=277,SNR=80						
WRGLY	Wrigley	78.56	28	P	P	08 02 51.3	+0.8
WRGLY	Wrigley	78.56	28	P	P	08 02 51.9	+1.4
	baz=277,SNR=12						
KOTAN	Kotaneelee Air	78.67	31	P	P	08 02 52.7	+1.5
	baz=278,SNR=45						
NGCH	Negor - Chabah	79.20	294	P	P	08 02 56.3	+1.6
JLN	Jalan Bani Buh	81.34	291	P	P	08 03 07.1	+0.8
COR	Corvallis	81.57	46	P	P	08 03 09.8	+2.7
COR				pmax	pmax		
	comp=Z,88nm,0.9s						
KIRV	Kirov	81.65	328	P	P	08 03 07.6	+0.4
	comp=Z,112nm,0.4s,baz=307,slow=1.0,SNR=20						
KIRV				LR	LR	08 42 01.3	
	comp=Z,490nm,18.9s,baz=85,slow=38						
	comp=Z,112nm,0.4s						
KIRV	Kirov	81.65	328	ceP	P	08 03 07.8	+0.6
BIDO	Bidbid	82.23	292	P	P	08 03 11.5	+0.5
	SNR=11						
YBH	Yreka Blue Hor	82.54	49	LR	LR	08 32 22.5	
	comp=Z,28nm,22.0s,baz=278,slow=30						
YKAW3	Yellowknife Wh	82.66	27	P	P	08 03 12.7	+0.3
YKAW3				IAmb	IAmb	08 03 14.2	
	comp=Z,119nm,0.9s						
YKA	Yellowknife Ar	82.68	27	P	P	08 03 13.3	+0.7
YKA	Yellowknife Ar	82.68	27	P	P	08 03 13.1	+0.5
	comp=Z,63nm,0.8s,baz=293,slow=5.9,SNR=466						
YKA				PKKPbc	PKKPdf	08 21 33.6	+4.9
	comp=Z,0.2nm,0.6s,baz=92,slow=2.2,SNR=4.2						
YKA				PKPPKP	P'P'df	08 29 36.9	-6.6
	comp=Z,0.5nm,1.0s,baz=41,slow=2.0,SNR=4.1						
YKA				LR	LR	08 39 26.8	
	comp=Z,239nm,20.9s,baz=286,slow=35						
	comp=Z,63nm,0.8s						
YKA	Yellowknife Ar	82.68	27	ceP	P	08 03 13.1	+0.5
YKA				pmax	pmax		
	comp=Z,68nm,0.8s						
MHTO	MHTO	82.88	290	P	P	08 03 14.7	+0.3
	SNR=7.6						
HOQ	Hoqain	82.96	292	P	P	08 03 15.5	+0.7
	SNR=19						
I05D	Terrebonne, OR	83.00	46	P	P	08 03 16.2	+1.6
BSY	Bisya	83.23	292	P	P	08 03 17.3	+1.1
DQM	DQM	83.49	289	P	P	08 03 18.7	+1.1
SHME	Shamm	83.50	295	P	P	08 03 17.6	+0.1
	SNR=5.8						
SHME	Shamm	83.50	295	i P	P	08 03 19.0	+1.5
	SNR=5.8						
MDH	Madha	83.51	294	P	P	08 03 19.7	+2.1
SOHO	SOHO	83.54	293	P	P	08 03 18.5	+0.8
SOHO	SOHO	83.54	293	i P	P	08 03 18.4	+0.7
	SNR=24						
MASF	Masafi	83.62	294	P	P	08 03 20.3	+2.1
	SNR=10						
MSFE	Esma-Masafi	83.62	294	i P	P	08 03 19.5	+1.3
	SNR=7.9						
UOSS	Minazif	83.67	294	P	P	08 03 18.2	-0.2
UOSS	Minazif	83.67	294	P	P	08 03 19.9	+1.5
UOSS	Minazif	83.67	294	i P	P	08 03 19.2	+0.7
	SNR=13						
ARQ	Araqi	83.72	292	P	P	08 03 19.7	+1.0
	SNR=5.3						
HATD	Hatta, Dubai	83.76	294	P	P	08 03 20.2	+1.2
	SNR=7.0						
HATD	Hatta, Dubai	83.76	294	i P	P	08 03 20.0	+1.1
	SNR=15						
ASHO	Ashiyiah	83.85	294	P	P	08 03 20.4	+1.0
	SNR=6.3						
ASHO	Ashiyiah	83.85	294	i P	P	08 03 20.7	+1.3
	SNR=11						
ORV	Oroville	83.89	51	P	P	08 03 20.2	+0.9
ORV	Oroville	83.89	51	P	P	08 03 20.2	+0.9
ORV				pmax	pmax		
	comp=Z,45nm,1.3s						
BELG	Belogornoye	84.07	322	LR	LR	08 42 20.3	
	comp=Z,349nm,19.3s,baz=112,slow=37						
BELG	Belogornoye	84.07	322	c iP	P	08 03 18.8	-1.1
BELG				pmax	pmax		
	comp=Z,22nm,0.9s						
NAZ	Nazwa, Dubai	84.14	294	P	P	08 03 21.5	+0.7
NAZ	Nazwa, Dubai	84.14	294	P	P	08 03 21.9	+1.1
SPITS	Spitsbergen Ar	84.19	351	P	P	08 03 19.8	-0.3
	comp=Z,9.3nm,0.5s,baz=83,slow=6.8,SNR=35						
SPITS				LR	LR	08 43 29.0	
	comp=Z,152nm,20.1s,baz=16,slow=38						
	comp=Z,9.3nm,0.5s						
FAQ	Al Faqa, Dubai	84.25	294	P	P	08 03 22.3	+0.9
FAQ	Al Faqa, Dubai	84.25	294	P	P	08 03 22.3	+0.9
ALNE	Al Ain	84.26	293	P	P	08 03 21.3	-0.2
	SNR=11						
ALNE	Al Ain	84.26	293	i P	P	08 03 22.4	+1.0
	SNR=17						
KBS	Kingsbay	84.33	352	P	P	08 03 20.8	0.0
KBS	Kingsbay	84.33	352	P	P	08 03 20.8	0.0
KBS				pmax	pmax		
	comp=Z,21nm,0.7s						
KBS	Kingsbay	84.33	352	eP	P	08 03 21.1	+0.3
KBS	Kingsbay	84.33	352	i P	P	08 03 20.7	0.0
RES	Resolute Bay	84.49	13	LR	LR	08 41 13.1	
	comp=Z,96nm,21.2s,baz=290,slow=36						
RES	Resolute Bay	84.49	13	P	P	08 03 22.0	+0.4
RES				pmax	pmax		
	comp=Z,35nm,0.9s						
ASUD	Al Ashush, Dub	84.51	294	P	P	08 03 23.6	+0.9
ASUD	Al Ashush, Dub	84.51	294	i P	P	08 03 23.9	+1.2
	SNR=6.5						
NOR	Nord	84.61	357	P	P	08 03 21.6	-0.5
NOR				pmax	pmax		
	comp=Z,18nm,1.1s						
E09A	Wood Farm, Sta	84.70	44	P	P	08 03 24.0	+0.8
E09A				IAmb	IAmb	08 03 26.8	
	comp=Z,42nm,0.7s						
AJN	Ajban	84.83	294	P	P	08 03 25.1	+0.8
AJN	Ajban	84.83	294	P	P	08 03 24.9	+0.6
NEW	Newport	84.94	42	LR	LR	08 34 00.0	
	comp=Z,122nm,20.5s,baz=295,slow=30						
NEW	Newport	84.94	42	P	P	08 03 26.0	+1.5
NEW				pmax	pmax		
	comp=Z,69nm,1.1s						
CMB	Columbia Colle	85.07	52	P	P	08 03 25.3	0.0
CMB				IAmb	IAmb	08 03 40.5	
	comp=Z,51nm,1.2s						
CMB	Columbia Colle	85.07	52	P	P	08 03 25.3	0.0
CMB				pmax	pmax		
	comp=Z,51nm,1.3s						
UMZA	Um Al Zommool	85.07	292	P	P	08 03 26.0	+0.4
WVOR	Wild Horse Val	85.34	48	P	P	08 03 28.5	+1.8
WVOR				pmax	pmax		
	comp=Z,31nm,0.9s						
APA	Apatity	85.70	339	⇓iP	P	08 03 25.7	-2.0
APA				i		08 06 46.0	
APA				i SS	SS	08 19 28.0	-3.6
APA				pmax	pmax		
	comp=Z,20nm,0.8s						
KLMR	Klimovskoe	85.83	332	eP	P	08 03 26.8	-1.8
KLMR				e		08 06 46.5	
KLMR				pmax	pmax		
	comp=Z,34nm,0.8s						
KLMR				MLR	MLR		
	comp=Z,338nm,17.0s						
VADS	Vadso	85.84	342	eP	P	08 03 28.0	-0.4
MZWR	Madinat Zayed	85.99	293	P	P	08 03 31.8	+1.7
DMTO	DMTO	86.37	287	P	P	08 03 32.7	+0.7
MZR	Muzera	86.52	293	P	P	08 03 33.1	+0.3
	SNR=13						
MZR				P	P	08 03 33.1	+0.3
	SNR=13						
MZR	Muzera	86.52	293	i P	P	08 03 33.1	+0.3
	SNR=38						
NVAR	Mina Array Bea	86.57	51	P	P	08 03 34.4	+1.4
	comp=Z,21nm,0.6s,baz=269,slow=5.4,SNR=132						
NVAR				PKKPbc	PKKPbc	08 21 30.0	+0.7
	comp=Z,1.1nm,0.7s,baz=60,slow=1.3,SNR=8.1						
NVAR				LR	LR	08 38 04.0	
	comp=Z,56nm,19.3s,baz=240,slow=33						
	comp=Z,21nm,0.6s						
KEV	Kevo	86.73	342	P	P	08 03 32.5	-0.3
AKT	Akhty	86.78	312	eP	P	08 03 33.2	-0.6
AKT				pmax	pmax		
	comp=Z,44nm,0.8s						
AKT				MLR	MLR		
	comp=Z,408nm,19.0s						
GHWR	Ruwais	86.84	294	P	P	08 03 36.0	+1.7
DOK	Doka	86.92	288	P	P	08 03 35.0	+0.3
RBK	Rabkut	87.11	287	P	P	08 03 36.2	+0.5
HAMF	Hammerfest	87.20	343	eP	P	08 03 34.1	-1.0
SEKA	Sheki	87.24	312	P	P	08 03 35.1	-0.9
ARA0	ARCESS Array S	87.29	342	eP	P	08 03 35.0	-0.5
ARCES	ARCESS Array B	87.29	342	P	P	08 03 34.9	-0.6
	comp=Z,12nm,0.6s,baz=86,slow=6.2,SNR=51						
ARCES				LR	LR	08 45 38.9	
	comp=Z,184nm,20.4s,baz=72,slow=38						
	comp=Z,12nm,0.6s						
WHFO	Wadi Hawf	87.41	288	P	P	08 03 38.8	+1.6
VRH	Novokhopyorsk	87.92	322	eP	P	08 03 37.5	-1.4
VRH				pmax	pmax		
	comp=Z,84nm,1.1s						
ABTO	Aybut	87.98	287	P	P	08 03 40.6	+0.6
ABTO				P	P	08 03 40.6	+0.6
MSF	Maaselka	88.00	338	P	P	08 03 38.7	-0.3
MSF				pmax	pmax		
	comp=Z,22nm,1.1s						
GANJ	Ganja	88.03	311	P	P	08 03 39.5	-0.2
SGF	Sodankyl	88.08	340	P	P	08 03 39.3	0.0
SGF				pmax	pmax		
	comp=Z,28nm,1.3s						
SHMA	Al-Shehemyia	88.08	296	P	P	08 03 40.2	0.0
TRNA	Turayna	88.14	295	P	P	08 03 41.2	+0.7
ELK	Elko	88.24	49	LR	LR	08 36 52.0	
	comp=Z,331nm,21.7s,baz=288,slow=31						
SAKB	Bahrain	88.43	296	P	P	08 03 43.0	+1.1
SMRA	Abu-Samra	88.48	295	P	P	08 03 41.4	-0.6
MOS	Moscow	88.62	327	eP	P	08 03 40.3	-1.8
MOS				pmax	pmax		
	comp=Z,66nm,0.8s						
LRM	Limekiln Ridge	88.69	43	P	P	08 03 43.7	+0.7
NEEM	North Greenlan	88.69	4	i P	P	08 03 41.7	-0.8
NEEM				IAmb	IAmb	08 03 42.9	
	comp=Z,28nm,0.8s						
DLMT	Dillon	88.74	44	P	P	08 03 44.2	+1.1
DLMT				IAmb	IAmb	08 04 08.1	
	comp=Z,33nm,1.1s						
JETT	Jettan, Norway	88.75	343	eP	P	08 03 41.7	-0.9
TRO	Tromso	89.11	344	eP	P	08 03 43.5	-0.6
VORR	Voronezh	89.24	323	eP	P	08 03 44.0	-1.1
VORR				pmax	pmax		
	comp=Z,90nm,1.0s						
PFO	Pinyon Flats O	89.26	56	LR	LR	08 35 56.3	
	comp=Z,242nm,21.7s,baz=282,slow=30						
PFO	Pinyon Flats O	89.26	56	P	P	08 03 47.6	+1.8
PFO				pmax	pmax		
	comp=Z,31nm,1.2s						
GNI	Garni	89.33	311	LR	LR	08 47 44.5	
	comp=Z,252nm,19.4s,baz=68,slow=38						
GNI	Garni	89.33	311	P	P	08 03 46.0	0.0
GNI				P	P	08 03 46.0	0.0
GNI	Garni	89.33	311	i P	P	08 03 45.3	-0.7
GNI				pmax	pmax		
	comp=Z,20nm,1.0s						
DAG	Danmarks Havn	89.38	356	P	P	08 03 44.0	-1.3
DAG				pmax	pmax		
	comp=Z,22nm,0.8s						
DAG	Danmarks Havn	89.38	356	i P	P	08 03 44.2	-1.0
DAG				IAmb	IAmb	08 03 45.7	
	comp=Z,16nm,0.8s						
OBN	Obninsk	89.42	327	LR	LR	08 46 38.1	
	comp=Z,276nm,19.5s,baz=38,slow=37						

OBN	**Obninsk**	**89.42**	**327**	*de*P	**P**	**08 03 44.6**	**-1.2**
OBN				*e*		08 04 07.8	
OBN				*e*S	**S**	**08 14 25.5**	**-5.3**
OBN				*e*PS	**PnS**	**08 15 35.5**	**-8.1**
OBN				SSS	SSS	08 24 07.6	
OBN				pmax	pmax		
	comp=Z,45nm,0.9s						
OBN				MLR	MLR		
	comp=Z,358nm,19.0s						
VSR	**Storozhevoye**	**89.43**	**323**	*e*P	**P**	**08 03 42.5**	**-3.5**
VSR				pmax	pmax		
	comp=Z,80nm,0.8s						
VORD	**Divnogorie**	**89.44**	**323**	*e*P	**P**	**08 03 42.9**	**-3.2**
VORD				pmax	pmax		
	comp=Z,80nm,0.8s						
OUL	**Oulu**	**89.55**	**338**	P	**P**	**08 03 46.0**	**-0.3**
OUL				pmax	pmax		
	comp=Z,32nm,1.1s						
KBZ	**Khabaz**	**89.55**	**315**	P	**P**	**08 03 46.0**	**-0.7**
	comp=Z,22nm,1.0s,baz=340,slow=7.4,SNR=31						
KBZ				LR	LR	08 45 25.8	
	comp=Z,242nm,21.9s,baz=60,slow=36						
	comp=Z,22nm,1.0s						
KBZ	**Khabaz**	**89.55**	**315**	*ce*P	**P**	**08 03 45.6**	**-1.1**
KBZ				pmax	pmax		
	comp=Z,31nm,1.0s						
KVAR	**Kislovodsk Arr**	**89.62**	**315**	LR	LR	08 47 05.4	
	comp=Z,270nm,20.1s,baz=276,slow=38						
KIV	**Kislovodsk**	**89.63**	**315**		**P**	**08 03 47.1**	**-0.2**
KIV				IAmb	IAmb	08 03 48.4	
	comp=Z,60nm,0.9s						
KIV	**Kislovodsk**	**89.63**	**315**	P	**P**	**08 03 48.3**	**+1.1**
KIV				P	**P**	**08 03 48.3**	**+1.1**
KIV	**Kislovodsk**	**89.63**	**315**	⇓P	**P**	**08 03 46.9**	**-0.4**
KIV	**Kislovodsk**	**89.63**	**315**	*e*P	**P**	**08 03 46.4**	**-0.8**
KIV				pmax	pmax		
	comp=Z,54nm,1.1s						
KIV	**Kislovodsk**	**89.63**	**315**	*i* P	**P**	**08 03 46.7**	**-0.6**
	SNR=8.3						
SHA1	**Shidzhatmaz**	**89.72**	**315**	*i* P	**P**	**08 03 46.9**	**-0.9**
KBD	**Kabd**	**90.06**	**300**	P	**P**	**08 03 48.7**	**-0.8**
DUG	**Dugway, Tooele**	**90.17**	**49**	P	**P**	**08 03 51.8**	**+1.8**
DUG				pmax	pmax		
	comp=Z,54nm,1.0s						
ERBR	**Yeremizino-Bor**	**90.53**	**317**	*e*P	**P**	**08 03 50.1**	**-1.2**
ERBR				*e*		08 14 31.1	
ERBR				pmax	pmax		
	comp=Z,255nm,0.7s						
ERBR				MLR	MLR		
	comp=Z,670nm,15.0s						
GCMT	**Greycliff**	**90.55**	**43**	P	**P**	**08 03 51.7**	**+0.1**
LABN	**Labinsk**	**90.73**	**316**	*e*P	**P**	**08 03 50.0**	**-2.3**
KULLO	**Kullorsuaq**	**90.93**	**6**	*i* P	**P**	**08 03 51.5**	**-1.0**
KULLO				IAmb	IAmb	08 03 52.7	
	comp=Z,26nm,1.2s						
STEI	**Steigen**	**91.24**	**343**	*e*P	**P**	**08 03 53.4**	**-0.7**
VNDA	**Vanda**	**91.38**	**176**	PKKPbc	PKKPbc	08 21 17.1	-2.1
	comp=Z,1.8nm,0.8s,baz=250,slow=3.9,SNR=9.5						
FINES	**FINESS Array B**	**91.42**	**335**	P	**P**	**08 03 53.7**	**-1.4**
	comp=Z,17nm,0.5s,baz=74,slow=4.6,SNR=110						
FINES				LR	LR	08 48 04.4	
	comp=Z,171nm,18.7s,baz=52,slow=38						
	comp=Z,17nm,0.5s						
FAUS	**Fauske**	**91.60**	**343**	*e*P	**P**	**08 03 55.1**	**-0.6**
PDAR	**Pinedale Array**	**91.65**	**45**	P	**P**	**08 03 57.9**	**+1.0**
	comp=Z,7.4nm,0.8s,baz=281,slow=2.3,SNR=31						
PDAR				LR	LR	08 38 03.8	
	comp=Z,147nm,22.0s,baz=290,slow=31						
	comp=Z,7.4nm,0.8s						
SOC	**Sochi**	**91.78**	**316**	*e*P	**P**	**08 03 54.5**	**-2.6**
SOC				*e*		08 07 35.8	
SOC				*e*S	**SKSac**	**08 14 24.2**	**-0.3**
SOC				*e*SS	**SS**	**08 21 03.4**	**+2.2**
SOC				pmax	pmax		
	comp=Z,14nm,0.5s						
SOC				MLR	MLR		
	comp=Z,215nm,18.0s						
DBG	**Daneborg**	**91.87**	**356**	*i* P	**P**	**08 03 55.8**	**-1.2**
DBG				IAmb	IAmb	08 04 01.6	
	comp=Z,49nm,2.2s						
MOR8	**Moi Rana**	**92.66**	**342**	*e*P	**P**	**08 03 58.9**	**-1.9**
VSU	**Vasula**	**92.71**	**332**	*ce*P	**P**	**08 03 59.4**	**-1.6**
VSU				pmax	pmax		
	comp=Z,41nm,0.7s						
ANN	**Anapa**	**92.87**	**317**	*e*P	**P**	**08 04 00.6**	**-1.5**
ANN				*e*		08 07 46.2	
ANN				pmax	pmax		
	comp=Z,65nm,0.9s						
ANN				MLR	MLR		
	comp=Z,543nm,21.0s						
LEIR	**Leirfjorden**	**93.10**	**342**	*e*P	**P**	**08 04 02.8**	**+0.1**
RAYN	**Ar Rayn**	**93.49**	**295**	P	**P**	**08 04 05.3**	**-0.2**
RAYN				IAmb	IAmb	08 04 06.1	
	comp=Z,27nm,1.0s						
RAYN	**Ar Rayn**	**93.49**	**295**	P	**P**	**08 04 06.5**	**+1.0**
RAYN	**Ar Rayn**	**93.49**	**295**	P	**P**	**08 04 05.3**	**-0.2**
RAYN				pmax	pmax		
	comp=Z,27nm,1.0s						
RAYN	**Ar Rayn**	**93.49**	**295**	*i* P	**P**	**08 04 04.9**	**-0.6**
	SNR=21						
JMIC	**Jan Mayen**	**93.82**	**352**	LR	LR	08 48 25.0	
	comp=Z,33nm,20.8s,baz=36,slow=37						
SUMG	**Summit**	**94.05**	**1**	P	**P**	**08 04 06.7**	**-0.8**
SUMG				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SUMG	**Summit**	**94.05**	**1**	*i* P	**P**	**08 04 07.3**	**-0.2**
SUMG				IAmb	IAmb	08 04 08.2	
	comp=Z,6.8nm,0.8s						
MNK	**Minsk**	**94.19**	**329**	*i* P	**P**	**08 04 07.0**	**-0.9**
	comp=Z,15nm,0.6s,baz=60						
MNK				*i* PP	**PP**	**08 07 56.8**	**+2.1**
MNK				*i* PPP	PPP	08 09 52.7	
MNK				*i* SKS	S	08 14 24.6	-49
MNK				*i* S	**SKSac**	**08 14 38.4**	**+1.0**
MNK				*i* PS	**PS**	**08 16 36.7**	**-0.1**
MNK				*i* SS	**SS**	**08 21 40.0**	**+5.1**
MNK				*i* SSS	SSS	08 25 22.1	
MNK				*i* LQ	LQ	08 40 48.8	
MNK				*i* LRM	MLR	08 47 31.4	
	comp=E,211nm,20.1s						
MNK				*i* LRM	MLR	08 47 31.4	
	comp=N,210nm,18.1s						
MNK				*i* LRM	MLR	08 47 31.4	
	comp=Z,299nm,18.9s						
MNK	**Minsk**	**94.19**	**329**	*i* P	**P**	**08 04 07.0**	**-0.9**
MNK				*i*		08 07 56.8	
MNK				*i* S	**SKSac**	**08 14 38.3**	**+1.0**
MNK				*i* PS	**PS**	**08 16 36.6**	**-0.1**
MNK				*i* SS	**SS**	**08 21 40.0**	**+5.1**
MNK				*i* SSS	SSS	08 25 22.1	
MNK				pmax	pmax		
	comp=Z,15nm,0.6s						
MNK				MLR	MLR		
	comp=Z,299nm,19.0s						
MNK				MLR	MLR		
	comp=N,210nm,18.0s						
MNK				MLR	MLR		
	comp=E,211nm,20.0s						
TUC	**Tucson**	**94.20**	**56**	P	**P**	**08 04 11.0**	**+2.3**
TUC				pmax	pmax		
	comp=Z,13nm,1.3s						
MVCO	**Mesa Verde**	**94.34**	**50**	P	**P**	**08 04 09.6**	**+0.2**
NACGM	**Naroch**	**94.53**	**329**	*e*P	**P**	**08 04 12.8**	**+3.2**
	comp=Z,9.0nm,0.8s,baz=59						
NSS	**Namsos**	**94.55**	**342**	*e*P	**P**	**08 04 08.3**	**-1.1**
RSSD	**Black Hills**	**94.88**	**43**		**P**	**08 04 12.6**	**+0.9**
RSSD				IAmb	IAmb	08 04 14.7	
	comp=Z,72nm,1.6s						
RSSD	**Black Hills**	**94.88**	**43**	P	**P**	**08 04 12.6**	**+0.9**
RSSD				pmax	pmax		
	comp=Z,72nm,1.6s						
AKASG	**Malin Array Be**	**95.35**	**325**	P	**P**	**08 04 11.9**	**-1.4**
	comp=Z,6.4nm,0.7s,baz=53,slow=5.1,SNR=27						
AKASG				LR	LR	08 49 13.2	
	comp=Z,672nm,20.9s,baz=68,slow=37						
	comp=Z,6.4nm,0.7s						
AKASG	**Malin Array Be**	**95.35**	**325**	*ce*P	**P**	**08 04 11.8**	**-1.5**
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AKBB	**Malin Array Si**	**95.35**	**325**	*ce*P	**P**	**08 04 12.3**	**-1.0**
AKBB				pmax	pmax		
	comp=Z,25nm,1.6s						
KIEV	**Kiev**	**95.36**	**325**		**P**	**08 04 12.0**	**-1.4**
KIEV	**Kiev**	**95.36**	**325**	⇓P	**P**	**08 04 11.7**	**-1.7**
KIEV	**Kiev**	**95.36**	**325**	P	**P**	**08 04 12.0**	**-1.4**
KIEV				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KIEV	**Kiev**	**95.36**	**325**	*i* P	**P**	**08 04 11.4**	**-2.0**
	SNR=7.0						
ISCO	**Idaho Springs**	**95.50**	**47**	P	**P**	**08 04 16.1**	**+1.4**
ISCO				pmax	pmax		
	comp=Z,8.0nm,1.2s						
SCO	**Scoresbysund**	**95.73**	**356**	*i* P	**P**	**08 04 14.3**	**-0.4**
SCO				IAmb	IAmb	08 04 15.2	
	comp=Z,8.3nm,1.0s						
ANMO	**Albuquerque**	**96.69**	**52**	LR	LR	08 43 50.2	
	comp=Z,95nm,19.3s,baz=14,slow=33						
ANMO	**Albuquerque**	**96.69**	**52**	*i* P	**P**	**08 04 21.5**	**+1.4**
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ULM	**Lac du Bonnet**	**97.01**	**35**	P	**P**	**08 04 20.5**	**-0.4**
	comp=Z,17nm,0.8s,baz=305,slow=5.4,SNR=32						
ULM				LR	LR	08 42 19.6	
	comp=Z,148nm,21.7s,baz=302,slow=32						
	comp=Z,17nm,0.8s						
HFS	**Hagfors**	**97.03**	**338**	P	**P**	**08 04 19.3**	**-1.6**
	comp=Z,7.9nm,0.6s,baz=101,slow=3.0,SNR=27						
HFS				PP	**PP**	**08 08 12.9**	**-3.6**
	comp=Z,4.4nm,0.7s,baz=60,slow=8.5,SNR=6.6						
HFS				LR	LR	08 50 24.4	
	comp=Z,201nm,21.1s,baz=60,slow=37						
	comp=Z,7.9nm,0.6s						
SORM	**Soroca**	**97.09**	**323**	⇑P	**P**	**08 04 19.7**	**-1.6**
SORM	**Soroca**	**97.09**	**323**	⇑P	**P**	**08 04 19.7**	**-1.6**
LPIG	**La Paz**	**97.20**	**63**	LR	LR	08 40 41.4	
	comp=Z,144nm,21.2s,baz=256,slow=31						
DOMB	**Dombas**	**97.26**	**341**	*e*P	**P**	**08 04 21.5**	**-0.4**
NB2	**NORSAR Subarra**	**97.28**	**339**	P	**P**	**08 04 20.6**	**-1.4**
	comp=Z,7.1nm,0.7s,baz=45,slow=5.1						
NB2				PP	PP	08 08 06.3	-12
	comp=Z,0.9nm,0.6s,baz=37,slow=7.9						
NB2	**NORSAR Subarra**	**97.28**	**339**	P	**P**	**08 04 18.2**	**-3.8**
NB2	**NORSAR Subarra**	**97.28**	**339**	P	**P**	**08 04 20.6**	**-1.4**
	baz=45,slow=5.1						
NOA	**NORSAR Array B**	**97.28**	**339**	P	**P**	**08 04 20.9**	**-1.0**
	comp=Z,8.3nm,0.7s,baz=52,slow=4.3,SNR=39						
NOA				PP	**PP**	**08 08 15.2**	**-3.3**
	comp=Z,0.6nm,0.6s,baz=51,slow=7.9,SNR=4.9						
NOA				LR	LR	08 51 21.0	
	comp=Z,165nm,20.1s,baz=45,slow=37						
	comp=Z,8.3nm,0.7s						
NOA	**NORSAR Array B**	**97.28**	**339**	P	**P**	**08 04 21.0**	**-1.0**
BRTR	**Keskin Array B**	**97.46**	**314**	P	**P**	**08 04 22.3**	**-1.1**
BRTR	**Keskin Array B**	**97.46**	**314**	P	**P**	**08 04 22.2**	**-1.2**
	comp=Z,14nm,0.8s,baz=72,slow=4.0,SNR=58						
BRTR				LR	LR	08 52 53.5	
	comp=Z,166nm,20.5s,baz=43,slow=38						
	comp=Z,14nm,0.8s						
BRTR	**Keskin Array B**	**97.46**	**314**	*ce*P	**P**	**08 04 22.8**	**-0.6**
BRTR				pmax	pmax		
	comp=Z,14nm,0.8s						
KIRS	**Kirsehir-Merke**	**97.50**	**313**	⇓P	**P**	**08 04 22.0**	**-1.5**
ICESG	**Greenland Ices**	**97.52**	**2**	*i* P	**P**	**08 04 22.4**	**-0.9**
ICESG				IAmb	IAmb	08 04 22.9	
	comp=Z,5.0nm,0.7s						
AKN	**Aaknes**	**97.81**	**342**	*e*P	**P**	**08 04 23.3**	**-1.0**
ASF	**Jabal al Asfar**	**97.94**	**306**	LR	LR	08 53 13.4	
	comp=Z,117nm,21.1s,baz=118,slow=38						
ANTO	**Ankara**	**97.99**	**314**	P	**P**	**08 04 24.8**	**-0.9**
ANTO				P	**P**	**08 04 24.8**	**-0.9**
ANTO	**Ankara**	**97.99**	**314**	⇑P	**P**	**08 04 22.8**	**-2.9**
ANTO	**Ankara**	**97.99**	**314**	⇑P	**P**	**08 04 22.8**	**-2.9**
TPGR	**Topolog**	**98.64**	**320**	⇓P	**P**	**08 04 27.4**	**-1.0**
FRB	**Frobisher Bay**	**98.67**	**15**	LR	LR	08 51 34.1	
	comp=Z,71nm,20.0s,baz=324,slow=37						
MMAI	**Mount Meron Ar**	**98.80**	**307**	P	**P**	**08 04 29.0**	**-0.5**
	comp=Z,1.6nm,0.3s,baz=56,slow=5.1,SNR=14						
MMAI				LR	LR	08 53 06.0	
	comp=Z,197nm,21.9s,baz=57,slow=38						
	comp=Z,1.6nm,0.3s						
TESR	**Tescani**	**98.90**	**322**	⇓P	**P**	**08 04 28.3**	**-1.2**
ONER	**Baraj Valea Uz**	**99.14**	**322**	⇑P	**Pdif**	**08 04 30.3**	**-0.3**
BURAR	**Bucovina Array**	**99.17**	**324**		**Pdif**	**08 04 30.5**	**-0.3**
BURAR				IAmb	IAmb	08 04 31.6	
	comp=Z,17nm,0.8s						
BURAR	**Bucovina Array**	**99.17**	**324**	⇑P	**Pdif**	**08 04 30.3**	**-0.5**
BURAR	**Bucovina Array**	**99.17**	**324**	⇑P	**Pdif**	**08 04 30.3**	**-0.5**
VRI	**Vrincioaia**	**99.18**	**322**	⇑P	**Pdif**	**08 04 31.0**	**+0.2**
VRI	**Vrincioaia**	**99.18**	**322**	⇑P	**Pdif**	**08 04 31.0**	**+0.2**
PLOR	**Plostina**	**99.23**	**322**	⇑P	**Pdif**	**08 04 30.1**	**-1.0**
PLOR	**Plostina**	**99.23**	**322**	⇑P	**Pdif**	**08 04 30.1**	**-1.0**
TURR	**Turia**	**99.51**	**322**	⇓P	**Pdif**	**08 04 32.7**	**+0.4**
MAW	**Mawson**	**99.56**	**203**	P	**Pdif**	**08 04 31.2**	**-0.6**
	comp=Z,4.9nm,0.9s,baz=47,slow=11,SNR=4.4						
MAW				LR	LR	08 45 50.8	
	comp=Z,134nm,21.3s,baz=84,slow=33						
	comp=Z,4.9nm,0.9s						
OZUR		**99.63**	**322**	⇓P	**Pdif**	**08 04 33.4**	**+0.5**
MLR	**Muntele Rosu**	**99.84**	**322**	LR	LR	08 51 41.6	
	comp=Z,190nm,20.8s,baz=74,slow=36						
MLR	**Muntele Rosu**	**99.84**	**322**	⇑P	**Pdif**	**08 04 34.2**	**+0.3**
MLR	**Muntele Rosu**	**99.84**	**322**	⇑P	**Pdif**	**08 04 34.2**	**+0.3**
DOPR	**Dopca**	**99.93**	**322**	⇑P	**Pdif**	**08 04 33.4**	**-0.8**
KOLS	**Kolonicke sedl**	**100.11**	**326**	*i* P	**Pdif**	**08 04 35.5**	**+0.6**
KOLS	**Kolonicke sedl**	**100.11**	**326**	*e*PDIFF	**Pdif**	**08 04 35.5**	**+0.6**
VOIR		**100.41**	**322**	⇑P	**Pdif**	**08 04 35.5**	**-0.9**
VOIR		**100.41**	**322**	⇑P	**Pdif**	**08 04 35.5**	**-0.9**
ARR	**Arges**	**100.69**	**322**	⇑P	**Pdif**	**08 04 37.6**	**-0.1**
TNR	**Turnu Rosu**	**100.76**	**322**	⇓P	**Pdif**	**08 04 38.3**	**+0.4**
TNR	**Turnu Rosu**	**100.76**	**322**	⇓P	**Pdif**	**08 04 38.3**	**+0.4**
MARR	**Marisel-Cluj**	**100.88**	**324**	⇓P	**Pdif**	**08 04 37.7**	**-0.7**
TXAR	**Lajitas Array**	**100.98**	**56**	P	**Pdif**	**08 04 40.9**	**+1.6**
	comp=Z,0.9nm,0.7s,baz=287,slow=4.2,SNR=10						
TXAR				PKKPbc	**PKKPbc**	**08 20 50.3**	**-0.9**
	comp=Z,2.3nm,0.9s,baz=110,slow=4.3,SNR=13						
DRGR		**101.06**	**324**	⇑P	**Pdif**	**08 04 39.1**	**-0.1**
DRGR		**101.06**	**324**	P	**Pdif**	**08 04 39.2**	**-0.1**
DRGR				pmax	pmax		
	comp=Z,26nm,0.8s						
LOT	**Lotru**	**101.17**	**322**	⇓P	**Pdif**	**08 04 39.1**	**-0.7**
LANS	**Liptovska Anna**	**101.49**	**327**	*i* P	**Pdif**	**08 04 44.0**	**+3.0**
SURR	**Surduc**	**101.97**	**323**	⇑P	**Pdif**	**08 04 42.3**	**-0.9**
BZS	**Buzias**	**102.34**	**323**	⇓P	**Pdif**	**08 04 43.3**	**-1.5**
BZS	**Buzias**	**102.34**	**323**	⇓P	**Pdif**	**08 04 43.3**	**-1.5**
EZN	**Ezine**	**102.44**	**316**	⇑P	**Pdif**	**08 04 44.0**	**-1.4**
EZN	**Ezine**	**102.44**	**316**	⇑P	**Pdif**	**08 04 44.0**	**-1.4**
MDVR	**Moldovita**	**102.75**	**323**	⇓P	**Pdif**	**08 04 45.7**	**-1.1**
BRG	**Berggiesshubel**	**103.17**	**331**	*e*PKP	**PP**	**08 09 05.3**	**+2.0**
BRG				Amp		08 09 10.6	
	comp=Z,3.7nm,0.7s						
CLL	**Collm**	**103.32**	**332**	*e*Pdif	**Pdif**	**08 04 52.0**	**+2.9**
	comp=Z,23nm,2.0s						
CLL				*i* x	x	08 04 59.5	
CLL				*e*sSKSac	sSKSac	08 15 54.0	-0.5
CLL				*e*Sdif	**Sdif**	**08 16 30.0**	**-1.5**
CLL				*e*PS	**PS**	**08 18 12.0**	**-3.1**
CLL				*e*PPS	PPS	08 19 06.0	
CLL				*e*SS	SS	08 24 00.0	+17
CLL				*e*SSS	SSS	08 27 18.0	
CLL				AMS	AMS	08 54 00.0	
	comp=N,200nm,21.7s						
CLL				AMS	AMS	08 54 00.0	
	comp=E,300nm,20.0s						
CLL				AMS	AMS	08 54 00.0	
	comp=Z,400nm,20.4s						
QSPA	**South Pole Qui**	**103.37**	**180**	Pdiff	**Pdif**	**08 04 50.5**	**+1.6**
	comp=Z,24nm,0.8s,baz=344,slow=7.4,SNR=96						
QSPA				PKKPbc	**PKKPbc**	**08 20 41.6**	**-4.6**
	comp=Z,2.0nm,1.0s,baz=159,slow=2.2,SNR=6.4						
MORH	**Mrgy, Hungar**	**103.69**	**325**	⇓P	**Pdif**	**08 04 50.3**	**-0.5**
PAIG	**Paliouri**	**104.14**	**318**	P	**Pdif**	**08 04 51.9**	**-1.1**
PAIG				pmax	pmax		
	comp=Z,6.0nm,0.5s						
GERES	**GERESS Array B**	**104.63**	**329**	Pdiff	**Pdif**	**08 04 53.5**	**-1.7**
	comp=Z,1.1nm,0.7s,baz=64,slow=5.1,SNR=4.8						
GERES				PKiKP	**PKiKP**	**08 09 10.2**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=78,slow=9.5,SNR=3.8						
EKA	**Eskdalemuir Ar**	**106.45**	**342**	Pdiff	**Pdif**	**08 05 03.6**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=32,slow=5.1,SNR=2.2						
EKA				PP	**PP**	**08 09 24.7**	**-2.6**
	comp=Z,3.9nm,0.8s,baz=28,slow=6.7,SNR=8.1						
SCHQ	**Schefferville**	**106.65**	**19**	PKiKP	**PKiKP**	**08 09 14.6**	**+0.6**
	comp=Z,3.3nm,0.7s,baz=305,slow=6.3,SNR=4.7						
KEST	**Kesra**	**115.74**	**321**	PKP	**PKPdf**	**08 09 32.1**	**+0.2**
	comp=Z,2.9nm,0.6s,baz=262,slow=4.1,SNR=3.6						
M65A	**Busby, Falmout**	**115.89**	**29**	P	**PKiKP**	**08 09 31.2**	**-0.7**
	baz=321						
SNAA	**Sanae**	**118.83**	**191**	PKP	**PKiKP**	**08 09 36.8**	**0.0**
	comp=Z,5.3nm,0.6s,baz=157,slow=3.3,SNR=12						
PGAV	**Gavieira, Arco**	**119.67**	**338**	*e*PKP	**PKiKP**	**08 09 40.2**	**+0.8**
PGAV				*e*tx	tx	08 09 56.3	
PGAV				*e*LR	LR	08 49 18.9	
PGAV				*i* AMs_20		09 09 06.4	
	comp=Z,198nm,18.0s						
PCAB	**Cabril**	**119.80**	**337**	*e*PKP	**PKPdf**	**08 09 39.3**	**-0.2**
ESDC	**Sonseca Array**	**119.86**	**333**	PKP	**PKiKP**	**08 09 40.1**	**+0.3**
	comp=Z,1.8nm,0.8s,baz=14,slow=2.9,SNR=9.7						
ESDC				PP	**PP**	**08 11 01.1**	**-1.8**
	comp=Z,4.6nm,0.9s,baz=29,slow=5.8,SNR=11						
MVO	**Moncorvo**	**119.89**	**336**	*e*PKP	**PKiKP**	**08 09 40.9**	**+1.1**
MVO				*e*LR	LR	08 49 31.3	
MVO				*i* AMs_20		09 08 25.6	
	comp=Z,194nm,18.0s						
POLO	**Lamas de Olo**	**120.01**	**337**	*e*PKP	**PKiKP**	**08 09 40.6**	**+0.5**
POLO				*e*tx	tx	08 09 56.6	
PVRL	**Vila Real**	**120.06**	**337**	*e*PKP	**PKiKP**	**08 09 41.2**	**+1.1**
PVIS	**Viseu**	**120.61**	**337**	*e*PKP	**PKiKP**	**08 09 42.0**	**+0.8**
MTE	**Manteigas**	**120.75**	**336**	*e*PKP	**PKiKP**	**08 09 42.5**	**+1.0**
MTE				*e*LR	LR	08 49 25.1	
MTE				*i* AMs_20		09 06 47.8	
	comp=Z,242nm,22.0s						
PCBR	**Castelo Branco**	**121.20**	**336**	*e*PKP	**PKiKP**	**08 09 43.2**	**+0.9**
PCAS	**Casmilo, Conde**	**121.42**	**337**	*e*PKP	**PKPdf**	**08 09 42.5**	**-0.1**
PMRV	**Marv??o**	**121.52**	**335**	*e*PKP	**PKiKP**	**08 09 43.6**	**+0.7**
PMRV				*e*LR	LR	08 53 27.2	
PMRV				*i* AMs_20		09 06 17.5	
	comp=Z,293nm,22.0s						
PSARD	**Sardoal**	**121.67**	**336**	*e*PKP	**PKiKP**	**08 09 44.1**	**+0.8**
PESTR	**Estremoz**	**122.07**	**335**	*e*PKP	**PKPdf**	**08 09 43.9**	**0.0**
PMTG	**Montargil**	**122.16**	**336**	*e*PKP	**PKiKP**	**08 09 44.9**	**+0.7**
PBAR	**Barrancos**	**122.43**	**334**	*e*PKP	**PKiKP**	**08 09 45.5**	**+0.7**
EVO	**Evora**	**122.53**	**335**	*e*PKP	**PKiKP**	**08 09 45.9**	**+1.0**
BOSA	**Boshof**	**122.68**	**245**	PKP	**PKPdf**	**08 09 45.4**	**0.0**
	comp=Z,17nm,0.7s,baz=112,slow=1.6,SNR=33						
PBEJ	**Beja**	**122.90**	**335**	*e*PKP	**PKiKP**	**08 09 46.8**	**+1.1**
PBEJ				*e*tx	tx	08 10 03.6	
MESJ	**Messejana**	**123.21**	**335**	*e*PKP	**PKiKP**	**08 09 46.6**	**+0.3**
MESJ				IAMs_20	IAMs_20	08 58 13.6	
	comp=Z,329nm,31.7s						
MESJ	**Messejana**	**123.21**	**335**	*e*PKP	**PKiKP**	**08 09 46.7**	**+0.4**
MESJ	**Messejana**	**123.21**	**335**	*e*PKIKP	**PKiKP**	**08 09 46.6**	**+0.3**
PCVE	**Castro Verde**	**123.31**	**335**	*e*PKP	**PKiKP**	**08 09 47.2**	**+0.7**
PVAQ	**Vaqueiros**	**123.37**	**334**	*e*PKP	**PKiKP**	**08 09 48.3**	**+1.6**
PVAQ				*e*LR	LR	08 52 43.7	
PVAQ				*i* AMs_20		09 10 15.2	
	comp=Z,206nm,18.0s						
PBDV	**Barranco-do-Ve**	**123.60**	**335**	*e*PKP	**PKiKP**	**08 09 49.6**	**+2.4**
MORF	**Marmelete**	**123.84**	**335**	*e*PKP	**PKiKP**	**08 09 47.8**	**+0.1**
MORF	**Marmelete**	**123.84**	**335**	*e*PKP	**PKiKP**	**08 09 48.7**	**+1.1**
MORF	**Marmelete**	**123.84**	**335**	*e*PKIKP	**PKiKP**	**08 09 47.8**	**+0.1**
PFVI	**Vila Bisbo**	**124.06**	**335**	*e*PKP	**PKPdf**	**08 09 47.7**	**0.0**
PMSA	**Palmer Station**	**124.97**	**165**	*e*P	**PKPdf**	**08 09 48.6**	**+0.1**
HDC	**Heredia**	**125.60**	**67**	*e*P	**PKiKP**	**08 09 51.8**	**0.0**
PMPST	**Porto Santo, M**	**130.47**	**340**	*e*PKP	**PKiKP**	**08 10 03.0**	**+2.1**
OTAV	**Otavalo**	**134.48**	**76**	*e*P	**PKPdf**	**08 10 08.4**	**-0.3**
TORD	**Torodi Ar. Bea**	**135.30**	**305**	PKP	**PKPdf**	**08 10 08.1**	**-1.6**
	comp=Z,15nm,0.7s,baz=21,slow=3.0,SNR=11						
ROSC	**El Rosal**	**136.57**	**68**	PKP	**PKiKP**	**08 10 13.6**	**-0.7**
	comp=Z,5.3nm,0.5s,baz=16,slow=12,SNR=4.4						
SDV	**Santo Domingo**	**137.88**	**60**	*e*P	**PKPdf**	**08 10 15.1**	**+0.4**
PLCA	**Paso Flores**	**138.56**	**138**	PKhKP	PKPpre	08 10 10.8	
	comp=Z,0.9nm,0.7s,baz=260,slow=4.5,SNR=3.7						
PLCA				PKP	**PKiKP**	**08 10 16.9**	**-0.2**
	comp=Z,15nm,1.2s,baz=221,slow=3.6,SNR=8.9						
PLCA	**Paso Flores**	**138.56**	**138**	PKIKP	**PKiKP**	**08 10 17.0**	**-0.2**
PLCA	**Paso Flores**	**138.56**	**138**	*e*P	**PKPdf**	**08 10 14.3**	**-0.7**
CZSB	**Cruzeiro do Su**	**142.16**	**85**	*e*P	**PKPdf**	**08 10 22.0**	**-0.2**
AUSP	**Uspallata**	**143.19**	**126**	*e*P	**PKPdf**	**08 10 25.1**	**+1.2**
AAGR	**Agrelo**	**143.28**	**128**	*e*P	PKPbc	08 10 22.4	+1.3
ARCO	**CERRO ARCO**	**143.30**	**127**	*e*P	**PKPdf**	**08 10 23.0**	**-0.9**
RTLS	**Leoncito**	**143.42**	**126**	*e*P	**PKPdf**	**08 10 25.1**	**+0.8**
AROD	**Rodeo**	**143.85**	**123**	*e*P	**PKPdf**	**08 10 25.1**	**-0.1**
TBTG	**Tabatinga, AM**	**143.97**	**78**	*e*P	PKPbc	08 10 24.1	+0.7
ZON	**Zonda**	**144.00**	**126**	PKPdf	PKPbc	08 10 23.3	+0.3
ZON	**Zonda**	**144.00**	**126**	PKIKP	PKPbc	08 10 23.3	+0.2
ACCO	**Cerro Coronel**	**144.04**	**124**	*e*P	**PKiKP**	**08 10 28.9**	**-0.2**
ACDV	**Cuesta del Vie**	**144.14**	**123**	*e*P	**PKPdf**	**08 10 25.4**	**0.0**
DBIC	**Dimbokro**	**144.27**	**302**	PKPdf	PKPbc	08 10 24.4	+0.1
DBIC	**Dimbokro**	**144.27**	**302**	PKP	PKPbc	08 10 24.7	+0.4
	comp=Z,320nm,0.7s,baz=62,slow=3.6,SNR=322						
CFA	**Coronel Fontan**	**144.33**	**126**	PKP	PKPbc	08 10 24.7	+0.7
	comp=Z,14nm,0.9s,baz=237,slow=3.6,SNR=33						
AGUA	**GUANDACOL**	**144.88**	**122**	*e*P	**PKPdf**	**08 10 27.8**	**+1.1**
AVFE	**Valle Fertil**	**145.31**	**125**	*e*P	**PKPbc**	**08 10 27.1**	**-0.1**
VCA	**Vinchina**	**145.36**	**121**	*e*P	**PKiKP**	**08 10 29.9**	**-1.7**
TRQA	**Tornquist**	**145.55**	**140**		**PKPbc**	**08 10 27.6**	**-0.1**
TRQA	**Tornquist**	**145.55**	**140**	PKP2	**PKPbc**	**08 10 27.6**	**-0.1**
TRQA	**Tornquist**	**145.55**	**140**	*e*P	**PKPdf**	**08 10 26.6**	**-0.9**
ACHE	**Chepes**	**145.74**	**126**	*e*P	**PKPab**	**08 10 29.5**	**+0.4**
ACLC	**CERRO LA CRUZ**	**146.16**	**123**	*e*P	**PKPbc**	**08 10 29.9**	**-0.2**
BBTS	**Babate**	**146.75**	**327**	PKPbc	**PKPbc**	**08 10 32.4**	**+0.6**
	comp=Z,418nm,0.8s,baz=282,slow=1.0,SNR=82						
CYA	**Choya**	**147.45**	**122**	*e*P	**PKPbc**	**08 10 33.3**	**-0.3**
CYA				*e*P	**PKPab**	**08 10 34.3**	**-1.4**
LPAZ	**La Paz**	**147.53**	**99**	PKPbc	**PKPbc**	**08 10 33.9**	**-0.9**
	comp=Z,9.6nm,0.8s,baz=298,slow=1.1,SNR=27						
LPAZ	**La Paz**	**147.53**	**99**	*e*P	**PKPdf**	**08 10 31.2**	**-1.0**
FSA	**Cafayete**	**148.05**	**118**	*e*P	**PKiKP**	**08 10 37.4**	**+0.2**
TEFE	**Tefe**	**148.74**	**74**	*e*P	**PKPdf**	**08 10 33.5**	**0.0**
SLA	**San Lorenzo**	**148.85**	**116**	*e*P	**PKiKP**	**08 10 39.1**	**+0.2**
BOAV	**Boa Vista**	**149.83**	**60**	PKPbc	**PKPdf**	**08 10 37.3**	**+2.1**
BOAV	**Boa Vista**	**149.83**	**60**	*e*P	**PKPdf**	**08 10 35.1**	**-0.1**
MACA	**Manacapuru-AM**	**152.27**	**71**	*e*P	**PKPdf**	**08 10 38.7**	**-0.3**
ITQB	**Itaqui**	**154.07**	**132**	*e*P	**PKPdf**	**08 10 41.0**	**-0.1**
SIV	**San Ignacio**	**154.31**	**99**	PKP	**PKPdf**	**08 10 42.9**	**+1.0**
	comp=Z,1.4nm,0.6s,baz=279,slow=1.7,SNR=10						
SIV				PKPbc	**PKiKP**	**08 10 50.8**	**+0.6**
	comp=Z,6.1nm,0.8s,baz=228,slow=2.0,SNR=25						
BBSD	**Serra de San D**	**154.69**	**102**	*e*P	**PKPdf**	**08 10 41.8**	**-0.5**
PLTB	**Pedras Altas**	**154.85**	**139**	*e*P	**PKPdf**	**08 10 43.7**	**+1.5**
VILB	**Vilhena**	**155.10**	**92**	*e*P	**PKPdf**	**08 10 42.8**	**-0.1**
CPUP	**Villa Florida**	**155.20**	**124**	PKP	**PKPdf**	**08 10 42.5**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=4.6,slow=2.7,SNR=4.0						
MURT	**Porto Murtinho**	**156.67**	**113**	*e*P	**PKPdf**	**08 10 46.2**	**+1.3**
ITTB	**Itaituba**	**157.27**	**68**	*e*P	**PKPdf**	**08 10 45.3**	**-0.5**
NPGB	**Novo Progresso**	**158.62**	**75**	*e*P	**PKPdf**	**08 10 47.0**	**-0.5**
AQDB	**Aquidauana**	**158.71**	**112**	*e*P	**PKPdf**	**08 10 47.8**	**+0.4**
CLDB	**Colider**	**159.14**	**85**	*e*P	**PKPdf**	**08 10 48.3**	**+0.2**
SALV	**Santo Antonio**	**159.49**	**99**	*e*P	**PKPdf**	**08 10 48.3**	**-0.1**
TMAB	**Tom-Au,PA,Br**	**162.67**	**51**	*e*P	**PKPdf**	**08 10 52.0**	**+0.1**
FRTB	**Fartura**	**162.81**	**127**	*e*P	**PKPdf**	**08 10 51.6**	**-0.2**
PRPB	**Parauapebas**	**163.35**	**65**	*e*P	**PKPdf**	**08 10 52.8**	**+0.2**
SNDB	**Serra Nova Dou**	**163.66**	**86**	*e*P	**PKPdf**	**08 10 52.8**	**0.0**
ITRB	**Iturama**	**163.72**	**114**	*e*P	**PKPdf**	**08 10 52.4**	**-0.4**
PET01	**Itanhaem-SP**	**163.96**	**134**	*e*P	**PKPdf**	**08 10 55.3**	**+2.5**
VAO	**Valinhos**	**164.97**	**131**	*e*P	**PKPdf**	**08 10 54.1**	**+0.2**
SMTB	**Santa Maria do**	**166.46**	**71**	*e*P	**PKPdf**	**08 10 56.6**	**+1.3**
BDFB	**Brasilia**	**166.87**	**101**	PKP	**PKPdf**	**08 10 56.7**	**+1.1**
	comp=Z,9.2nm,0.9s,baz=56,slow=3.3,SNR=11						
PMNB	**Patos De Minas**	**167.60**	**115**	*e*P	**PKPdf**	**08 10 55.8**	**-0.3**
BSCB	**Bom Sucesso**	**167.79**	**129**	*e*P	**PKPdf**	**08 10 55.8**	**-0.4**
SDBA	**SAO DESIDERIO**	**169.92**	**85**	*e*P	**PKPdf**	**08 10 58.3**	**+0.7**
JANB	**Januaria**	**170.49**	**100**	*e*P	**PKPdf**	**08 10 58.3**	**+0.4**

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*IDC **14** 07:51:47.7±4.7, 6°.96N×60°.38E, h0^{km}, mb3.8/8, mbtmp3.8/8, MS3.8/9, Error ellipse: s-maj=106.3km s-min=33.3km az=147.0*

*NEIC **14** 07:51:48.8±1.9, 6°.4N±0°.2×59°.86E±0°.08, h10^{km}±1^{km}, mb4.4/15, Error ellipse: s-maj=27.0km s-min=9.2km az=199.0*

ISC 14 07:51:50.5±0.9**, 6°.6N**±0°.1×**60°.0E**±0°.1**, h23^{km}, n40,** σ**1^{s}.80**/28**, mb4.2**/16**, MS3.7**/9**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAAM	**Kaadhehdhoo**	**14.28**	**114**	Pn	**Pn**	**07 55 11.7**	**+0.3**
UOSS	**Minazif**	**18.66**	**349**	P	**Pn**	**07 56 08.2**	**+0.8**
PALK	**Pallekele**	**20.55**	**87**	LR	LR	08 01 54.3	
	comp=Z,191nm,21.9s,baz=264,slow=30						
RAYN	**Ar Rayn**	**21.90**	**322**	P	**P**	**07 56 41.6**	**-0.7**
RAYN				IAmb	IAmb	07 56 54.1	
	comp=Z,14nm,0.8s						
LODK	**Lodwar**	**24.76**	**264**	P	**P**	**07 57 07.4**	**-3.4**
LODK				IAmb	IAmb	07 57 18.7	
	comp=Z,14nm,1.0s						
EIL	**Elat**	**32.96**	**317**	LR	LR	08 10 31.4	
	comp=Z,73nm,18.3s,baz=226,slow=34						
SIMJ	**Simiganj**	**32.99**	**13**	P	**P**	**07 58 25.8**	**+1.8**
ASF	**Jabal al Asfar**	**33.39**	**323**	LR	LR	08 11 58.7	
	comp=Z,69nm,19.6s,baz=182,slow=36						
DRK	**Karamyk**	**34.46**	**16**	P	**P**	**07 58 38.1**	**+1.2**

BTK	Batken	34.75	15	P	P	07 58 40.8	+1.6
BTK				IAmb	IAmb	07 58 48.0	
	comp=Z,5.1nm,0.9s						
KK31	Karatay Array	37.57	13	P	P	07 59 04.5	+1.4
KK31				IAmb	IAmb	07 59 11.7	
	comp=Z,6.1nm,1.5s						
KKAR	Karatay Array	37.57	13	P	P	07 59 04.1	+1.0
KKAR				IAmb	IAmb	07 59 11.7	
	comp=Z,6.4nm,1.5s						
AAK	Ala-Archa	38.16	17	P	P	07 59 09.2	+0.8
LSZ	Lusaka	38.27	235	LR	LR	08 12 55.2	
	comp=Z,127nm,20.5s,baz=140,slow=33						
BRTR	Keskin Array B	40.66	328	P	P	07 59 27.9	-1.3
	comp=Z,1.2nm,0.9s,baz=156,slow=7.7,SNR=6.6						
	comp=Z,1.2nm,0.9s						
MATP	Matopo	40.97	228	LR	LR	08 15 10.5	
	comp=Z,117nm,19.5s,baz=60,slow=34						
AB31	Akbulak array	42.56	360	P	P	07 59 45.0	+0.6
AB31				IAmb	IAmb	07 59 53.0	
	comp=Z,5.0nm,1.1s						
ABKAR	Akbulak array	42.56	360	P	P	07 59 44.6	+0.2
AKTO	Aktyubinsk	43.77	358	P	P	07 59 51.1	-3.1
	comp=Z,0.7nm,0.5s,baz=169,slow=5.2,SNR=5.6						
	comp=Z,0.7nm,0.5s						
MAKZ	Makanchi	44.34	22	P	P	07 59 57.5	-1.4
MAKZ				IAmb	IAmb	07 59 59.3	
	comp=Z,4.8nm,1.3s						
MKAR	Makanchi Array	44.44	22	P	P	07 59 57.8	-1.9
MKAR	Makanchi Array	44.44	22	P	P	07 59 56.2	-3.5
	comp=Z,1.5nm,0.9s,baz=201,slow=7.7,SNR=6.8						
	comp=Z,1.5nm,0.9s						
SLVN	Son La	44.88	66	P	P	08 00 02.7	-1.0
SLVN				IAmb	IAmb	08 00 32.9	
	comp=Z,23nm,0.9s						
LBTB	Lobatse	45.90	226	LR	LR	08 16 30.5	
	comp=Z,177nm,19.8s,baz=20,slow=32						
BVAR	Borovoye Array	47.11	9	P	P	08 00 17.5	-3.2
	comp=Z,0.6nm,0.7s,baz=127,slow=9.6,SNR=4.6						
	comp=Z,0.6nm,0.7s						
BOSA	Boshof	48.42	222	LR	LR	08 19 47.7	
	comp=Z,89nm,18.1s,baz=28,slow=34						
MLR	Muntele Rosu	48.75	328	LR	LR	08 21 50.5	
	comp=Z,68nm,19.0s,baz=296,slow=37						
AKASG	Malin Array Be	50.94	335	P	P	08 00 50.1	0.0
	comp=Z,0.1nm,0.3s,baz=150,slow=7.5,SNR=1.1						
	comp=Z,0.1nm,0.3s						
H04N1	CROZET ISLANDS	52.98	187	T	T	08 57 35.7	
	baz=11,slow=75,SNR=25						
H04N2	CROZET ISLANDS	52.99	187	T	T	08 57 34.5	
	baz=11,slow=75,SNR=25						
H04N3	CROZET ISLANDS	53.00	187	T	T	08 57 40.9	
	baz=11,slow=75,SNR=22						
OJC	Ojcow	54.96	330	P	P	08 01 20.4	+0.6
TORD	Torodi Ar. Bea	57.73	281	P	P	08 01 42.6	+2.5
	comp=Z,1.3nm,0.9s,baz=71,slow=8.5,SNR=6.4						
	comp=Z,1.3nm,0.9s						
FINES	FINESS Array B	60.30	342	P	P	08 01 58.8	+1.7
HFS	Hagfors	63.80	336	P	P	08 02 20.7	0.0
	comp=Z,3.4nm,0.9s,baz=167,slow=2.6,SNR=4.8						
	comp=Z,3.4nm,0.9s						
MBWA	Marble Bar	64.72	117	P	P	08 02 27.1	-0.2
ESDC	Sonseca Array	65.90	311	P	P	08 02 35.8	+0.9
	comp=Z,1.0nm,0.8s,baz=100,slow=5.9,SNR=6.4						
	comp=Z,1.0nm,0.8s						
ARCES	ARCESS Array B	66.80	347	P	P	08 02 41.3	+1.4
MJB9	Matsu-Tunnel	76.65	54	P	P	08 03 41.8	+1.9
MJB9				IAmb	IAmb	08 04 06.5	
	comp=Z,4.4nm,0.8s						
SFJD	Kangerlussuaq	91.92	338	LR	LR	08 49 36.3	
	comp=Z,162nm,20.7s,baz=342,slow=38						

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*NEIC **14** 07:54:22.2±1.9, 17°.90S±0°.09×178°.10W±0°.08, h505^{km}±7^{km}, mb4.9/100, Error ellipse: s-maj=14.7km s-min=8.0km az=139.0*

*BJI **14** 07:54:22.0, 17°.59S×177°.76W, h513^{km}, mB4.9/8, mb4.8/38*

*IDC **14** 07:54:22.9±0.5, 17°.88S×178°.20W, h508^{km}±5^{km}, mb4.3/22, mbtmp5.2/26, Error ellipse: s-maj=9.6km s-min=8.1km az=160.0*

*NOU **14** 07:54:22.9, 17°.92S×178°.11W, h511^{km}, mb5.3/89, Fiji Islands Region*

*BGR **14** 07:54:25.6, 17°.11S×177°.86W, h504^{km}*

*GCMT **14** 07:54:26.2±0.6, 18°.04S±0°.06×178°.20W±0°.05, h528^{km}±3^{km}, MW5.6/54, Moment Tensor Solution. s54,c59; Duration: 1^{s}.4 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.68±.12; M$_{\theta\theta}$1.03±.18; M$_{\phi\phi}$-0.34±.16; M$_{r\theta}$-0.92±.20; M$_{\theta\phi}$1.04±.18; M$_{\phi r}$-2.60±.14; Best double couple: M$_{0}$3.08300×10^{17} NP1:φ$_{s}$278.00000°, δ24.00000°, λ-17.00000°. NP2:φ$_{s}$23.00000°, δ83.00000°, λ-113.00000°. Principal axes: T 3.0440, Plg34.0000°, Azm133.0000°; N 0.0770, Plg23.0000°, Azm26.0000°; P -3.1210, Plg47.0000°, Azm269.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 14 07:54:22.7±0.3**, 17°.89S**±0°.05×**178°.11W**±0°.04**, h513**^{km}±3^{km}**, h514**^{km}**:pP-P, n789, σ1^{s}.13**/818**, mb4.9**/101**, 25C-32D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKBA	Tubou, Lakemba	0.75	243	P	P	07 55 25.9	+1.2
TAVE	Taveuni	2.08	304	P	P	07 55 30.8	+1.3
DGTI	Dogotuki	2.60	307	P	P	07 55 32.9	+0.6
FUTU	Fugatoga	3.56	360		P	07 55 38.6	-0.2
FUTU	Fugatoga	3.56	360	P	P	07 55 39.3	+0.5
MSVF	Nonsavu	3.66	272		P	07 55 40.7	+1.1
MSVF	Nonsavu	3.66	272	P	P	07 55 39.6	+0.1
	5μm,0.8s,baz=117,slow=7.2,SNR=1860						
MSVF				S	S	07 56 44.4	+2.4
	459nm,1.1s,baz=335,slow=23,SNR=1.0						
MSVF	Nonsavu	3.66	272	P	P	07 55 41.3	+1.8
YSA	Yasawairara	4.29	285	P	P	07 55 45.1	+0.7
AFI	Afiamalu	7.26	58	P	P	07 56 08.4	-3.7
AFI	Afiamalu	7.26	58	P	P	07 56 09.3	-2.8
NIUE	Niue	7.85	100		P	07 56 17.7	-0.2
NIUE	Niue	7.85	100	P	P	07 56 17.9	0.0
NIUE	Niue	7.85	100	P	P	07 56 18.0	+0.1
NIUE				S	S	07 57 56.2	+3.7
FUNA	Funafuti	9.67	344		P	07 56 36.0	-0.9
FUNA	Funafuti	9.67	344	P	P	07 56 36.4	-0.5
RAO	Raoul Island	11.31	179	P	P	07 56 54.0	+0.1
	212nm,0.3s,baz=87,slow=23,SNR=2.4						
RAO				S	S	07 58 49.6	-8.7
	144nm,0.3s,baz=122,slow=22,SNR=1.8						
GLKZ	Green Lake	11.32	179	P	P	07 56 54.0	0.0
GLKZ				S	S	07 59 00.5	+1.9
INH	Isangel	12.07	260	P	P	07 57 02.1	+0.1
VLAKA	Lakatoro	13.96	275	P	P	07 57 21.6	-0.3
PINNC	Pines Island,	14.35	248	P	P	07 57 25.1	-0.8
YATNC	Mamie plateau,	14.70	251	P	P	07 57 28.7	-0.9
OUENC	Ouen Island, N	14.83	250	P	P	07 57 29.8	-1.2
DZM	Mont Dzumac	15.10	251		P	07 57 32.0	-2.0
DZM	Mont Dzumac	15.10	251	*e*P	P	07 57 30.1	-3.9
	166nm,1.2s						
DZM				*e*S	S	08 00 06.5	-5.2
	1μm,24.4s						
DZM	Mont Dzumac	15.10	251	P	P	07 57 32.4	-1.6
	40nm,0.7s,baz=80,slow=13,SNR=30						
DZM	Mont Dzumac	15.10	251	P	P	07 57 32.4	-1.6
ONTNC	Ouen Toro	15.15	251	P	P	07 57 32.4	-1.9
KOUNC	Koumac, New Ca	16.84	258	P	P	07 57 52.0	+0.3
RAR	Rarotonga	17.59	104		P	07 57 58.9	+0.1
RAR	Rarotonga	17.59	104	P	P	07 57 59.1	+0.3
	82nm,0.6s,baz=251,slow=7.2,SNR=24						
RAR	Rarotonga	17.59	104	P	P	07 57 59.2	+0.4
OUZ	Omahuta	18.77	202	P	P	07 58 11.5	+2.2
GRZ	Great Barrier	19.16	196	P	P	07 58 14.3	+1.4
WCZ	Waipu Caves	19.18	199	P	P	07 58 15.2	+2.1
KUZ	Kuaotunu	19.56	195	P	P	07 58 17.9	+1.4
KUZ	Kuaotunu	19.56	195	P	P	07 58 17.7	+1.3
MXZ	Matakaoa Point	19.85	188	P	P	07 58 17.3	-1.9
WMGZ	Waiomatatini S	20.09	188	P	P	07 58 21.2	-0.1
HAZ	Te Kaha	20.12	190	P	P	07 58 20.4	-1.2
PKGZ	Pakihiroa	20.18	189	P	P	07 58 22.3	+0.1
RUGZ	Raukumara Rang	20.34	190	P	P	07 58 23.9	+0.2
PUZ	Puketiti	20.36	188	P	P	07 58 24.0	+0.2
TGRZ	Tauranga	20.37	193	P	P	07 58 25.4	+1.5
OPRZ	Ohinepanea	20.42	192	P	P	07 58 25.2	+0.9
TWGZ	Tauwhareparae	20.50	189	P	P	07 58 24.7	-0.4
TOZ	Tahuroa Road	20.55	195		P	07 58 25.8	+0.3
TOZ	Tahuroa Road	20.55	195	P	P	07 58 26.7	+1.2
KMRZ	Kaimai	20.55	194	P	P	07 58 27.4	+1.8
URZ	Urewera	20.72	191	P	P	07 58 24.3	-2.8
	46nm,0.8s,baz=114,slow=1.1,SNR=25						
URZ				S	S	08 01 37.6	-7.6
	20nm,1.0s,baz=298,slow=21,SNR=1.3						
URZ	Urewera	20.72	191	P	P	07 58 24.9	-2.1
MWZ	Matawai	20.72	190	P	P	07 58 25.1	-2.1
MUGZ	Murupara	21.00	191	P	P	07 58 28.6	-1.0
RTZ	Ruatahuna	21.09	191	P	P	07 58 29.1	-1.4
TLZ	Tolley Road	21.11	194	P	P	07 58 32.1	+1.5
HIZ	Hauiti	21.45	195	P	P	07 58 35.4	+1.8
BKZ	Black Stump Fm	21.71	191	P	P	07 58 33.7	-2.4
NGZ	Ngauruhoe	21.91	193	P	P	07 58 36.5	-1.5
VRZ	Vera Road	22.05	195	P	P	07 58 40.7	+1.7
NEZ	North Egmont	22.36	196	P	P	07 58 44.2	+2.3
PXZ	Pawanui	22.49	190	P	P	07 58 41.6	-1.3
TSZ	Takapari Road	22.68	192	P	P	07 58 44.0	-0.7
BFZ	Birch Farm	23.23	191	P	P	07 58 47.9	-1.7
MRZ	Mangatainoka R	23.34	192	P	P	07 58 48.3	-2.3
MSWZ	Moikau Station	24.13	192	P	P	07 58 55.0	-2.6
SNZO	South Karori	24.14	193	P	P	07 58 55.4	-2.2
BHW	Baring Head	24.20	193	P	P	07 58 56.6	-1.6
QRZ	Quartz Range	24.24	198	P	P	07 58 58.7	+0.2
QRZ	Quartz Range	24.24	198	P	P	07 58 58.8	+0.2
NNZ	Nelson	24.37	196	P	P	07 58 58.0	-1.7
NNZ	Nelson	24.37	196	P	P	07 58 58.1	-1.6
THZ	Tophouse	25.01	196		P	07 59 03.8	-1.7
THZ	Tophouse	25.01	196	P	P	07 59 04.2	-1.3
DSZ	Denniston Nort	25.30	198	P	P	07 59 07.3	-0.7
KHZ	Kahutara	25.46	194		P	07 59 07.8	-1.6
KHZ	Kahutara	25.46	194	P	P	07 59 07.6	-1.7
GVZ	Greta Valley S	26.11	195	P	P	07 59 13.4	-1.6
GVZ	Greta Valley S	26.11	195	P	P	07 59 13.2	-1.8
LTZ	Lake Taylor	26.13	196	P	P	07 59 13.3	-2.0
LTZ	Lake Taylor	26.13	196	P	P	07 59 13.2	-2.1
INZ	Inchbonnie	26.30	198	P	P	07 59 15.6	-1.2
INZ	Inchbonnie	26.30	198	P	P	07 59 15.4	-1.4
OXZ	Oxford	26.70	196	P	P	07 59 19.2	-1.1
OXZ	Oxford	26.70	196	P	P	07 59 19.0	-1.2
WVZ	Waitaha Valley	26.83	198	P	P	07 59 20.7	-0.7
MQZ	McQueen's Vall	26.89	195	P	P	07 59 20.3	-1.7
PAE	Paea	27.16	94	*e*P	P	07 59 24.7	0.0
	51nm,1.1s						
PPT2	Papeete2	27.17	94	*e*sS	sS	08 05 58.7	-7.4
	475nm,39.2s						
PPT2				*e*sS	SS	08 06 05.5	-24
	853nm,26.5s						
PPT	Papeete	27.17	94	P	P	07 59 25.4	+0.6
	162nm,0.8s,baz=49,slow=2.3,SNR=19						
	162nm,0.8s						
PPTF	Pamatai, Papee	27.18	94	P	P	07 59 24.4	-0.6
PPTF	Pamatai, Papee	27.18	94	P	P	07 59 25.9	+1.0
RPZ	Rata Peaks	27.32	197	P	P	07 59 23.9	-1.9
RPZ	Rata Peaks	27.32	197	P	P	07 59 25.8	0.0
TBI	Tubuai	27.33	106	*e*P	P	07 59 27.5	+1.4
	195nm,0.9s						
TBI				*e*sS	sS	08 06 10.5	+2.0
	2μm,30.8s						
TVO	Taravao	27.46	94	*e*P	P	07 59 27.9	+0.5
	43nm,0.8s						
FOZ	Fox Glacier	27.53	199	P	P	07 59 26.7	-0.8
FOZ	Fox Glacier	27.53	199	P	P	07 59 26.7	-0.8
TMZ	Timaru	27.95	197	P	P	07 59 30.0	-1.3
LBZ	Lake Benmore	28.19	198	P	P	07 59 31.7	-1.7
LBZ	Lake Benmore	28.19	198	P	P	07 59 31.7	-1.7
JCZ	Jackson Bay	28.34	200	P	P	07 59 34.4	-0.4
JCZ	Jackson Bay	28.34	200	P	P	07 59 34.5	-0.4
ODZ	Otahua Downs	28.66	197	P	P	07 59 36.7	-0.8
ODZ	Otahua Downs	28.66	197	P	P	07 59 36.5	-1.0
WKZ	Wanaka	28.94	199	P	P	07 59 38.9	-1.1
PMOR	Pomariorio Ree	29.10	89	*e*P	P	07 59 42.1	+0.4
	262nm,1.3s						
MSZ	Milford Sound	29.16	201	P	P	07 59 41.8	0.0
EAZ	Earnscleugh	29.22	198	P	P	07 59 41.4	-0.9
GD1S	Gladstone Soft	29.27	253	P	P	07 59 43.2	+0.1
EIDS	Eidsvold	29.54	250	P	P	07 59 45.2	-0.2
MLZ	Mavora Lakes	29.71	200	P	P	07 59 46.6	-0.1
TUZ	Tuapeka	29.78	197	P	P	07 59 47.2	+0.1
DCZ	Deep Cove	30.12	201	P	P	07 59 50.3	+0.2
ARMA	Armidale	30.20	240	P	P	07 59 51.3	+0.1
WHZ	Wether Hill Ro	30.23	200	P	P	07 59 51.0	-0.1
SYZ	Scrubby Hill	30.45	197	P	P	07 59 53.1	+0.1
PYZ	Puysegur Point	30.89	201	P	P	07 59 57.8	+1.1
NTLH	Newcastle Hard	30.96	235	P	P	07 59 58.0	+0.4
APZ	The Paps	31.06	199	P	P	07 59 58.3	+0.1
RIV	Riverview	31.73	234	P	P	08 00 05.5	+1.4
RMQ	Roma	31.78	248	P	P	08 00 05.3	+0.6
SYDH	Sydney Hard Ro	32.03	234	P	P	08 00 07.6	+0.9
WOLH	Wollongong Har	32.17	233	P	P	08 00 08.5	+0.6
TV1H	Townsville Har	33.26	262	P	P	08 00 16.9	-0.5
CTAO	Charters Tower	33.73	260	P	P	08 00 20.5	-0.9
CTAO	Charters Tower	33.73	260	P	P	08 00 21.1	-0.3
CTAO	Charters Tower	33.73	260	P	P	08 00 20.7	-0.7
CTAO				PcP	PcP	08 02 46.9	+0.5
CTAO				ScP	ScP	08 05 45.6	+3.3
CAN	Canberra	33.94	233	P	P	08 00 22.6	-0.4
CAN	Canberra	33.94	233	P	P	08 00 23.4	+0.4
PMG	Port Moresby	34.74	279	P	P	08 00 30.5	+0.6
PMG	Port Moresby	34.74	279	P	P	08 00 30.4	+0.6
PMG	Port Moresby	34.74	279	P	P	08 00 30.0	+0.1
MTSU	Mount Surprise	35.69	264	P	P	08 00 37.1	-0.7
QLP	Quilpie	35.81	249	P	P	08 00 38.5	-0.2
MANU	Manus Island	37.36	291	P	P	08 00 52.3	+0.7
COEN	Coen	37.39	270	P	P	08 00 51.0	-0.8
COEN	Coen	37.39	270	P	P	08 00 51.9	0.0
CORO	Coronation Par	37.86	224	P	P	08 00 55.9	+0.6
MLBS	Spotswood, Mel	37.94	231	P	P	08 00 56.1	+0.1
TAOE	Nuku Hiva Isla	37.94	81	P	P	08 00 56.5	0.0
TAOE	Nuku Hiva Isla	37.94	81	*e*P	P	08 00 56.1	-0.4
	165nm,0.8s						
TAU	Tasmania Unive	38.45	222	P	P	08 00 59.7	-0.4
STKA	Stephens Creek	38.89	241	P	P	08 01 03.7	-0.2
STKA	Stephens Creek	38.89	241	P	P	08 01 04.5	+0.6
	117nm,0.6s,baz=91,slow=10,SNR=44						
	117nm,0.6s						
STKA	Stephens Creek	38.89	241	P	P	08 01 04.3	+0.4
ARPS	Mount Arapiles	39.89	234	P	P	08 01 12.1	+0.2
QIS	Mount Isa	39.94	259	P	P	08 01 11.6	-0.9
MGBR	Mount Gambier	41.14	233	P	P	08 01 21.6	-0.2
HTT	Hallett	41.40	240	P	P	08 01 24.3	+0.2
PTPS	Port Pirie	42.12	240	P	P	08 01 30.1	+0.5
WHYH	Whyalla	42.44	240	P	P	08 01 32.4	+0.2
JAY	Jayapura	43.18	286	P	P	08 01 38.5	+0.3
	59nm,0.5s,baz=128,slow=5.0,SNR=52						
	59nm,0.5s						
JAY	Jayapura	43.18	286	P	P	08 01 37.3	-1.0
	1μm94nm,1.1s						
GENI	Genyem	43.64	286	P	P	08 01 43.0	+1.2
GENI	Genyem	43.64	286	P	P	08 01 42.0	+0.2
BBOO	Buckleboo	43.66	241	P	P	08 01 41.3	-0.5
BBOO	Buckleboo	43.66	241	P	P	08 01 41.9	+0.1
DHH	Diamond Head	43.70	28	P	P	08 01 42.0	-0.1
WRAB	Tennant Creek	44.91	259	P	P	08 01 50.1	-1.5
WRA	Warramunga Arr	44.92	259	P	P	08 01 50.3	-1.4
	66nm,0.6s,baz=97,slow=7.1,SNR=160						
WRA				PcP	PcP	08 03 22.7	+0.3
	10nm,0.6s,baz=93,slow=3.4,SNR=4.9						
WRA				ScP	ScP	08 06 28.9	+3.1
	12nm,1.1s,baz=84,slow=3.8,SNR=12						
WRA				S	S	08 07 47.2	-5.0
	1.7nm,1.0s,baz=96,slow=14,SNR=3.1						
	66nm,0.6s						
AS01	Alice Springs	45.03	254	P	P	08 01 52.1	-0.4
ASAR	Alice Springs	45.07	254	P	P	08 01 52.4	-0.4
ASAR	Alice Springs	45.07	254	P	P	08 01 52.6	-0.2
	811nm,0.5s,baz=89,slow=8.2,SNR=1786						
ASAR				PcP	PcP	08 03 22.6	-0.3
	19nm,0.7s,baz=94,slow=3.5,SNR=4.8						
ASAR				ScP	ScP	08 06 29.6	+3.1
	7.4nm,1.0s,baz=102,slow=3.8,SNR=6.9						
ASAR				S	S	08 07 51.7	-2.7
	7.8nm,0.9s,baz=93,slow=14,SNR=14						
SMPI	Sarmi	45.21	286	P	P	08 01 53.1	-0.9
	113nm,1.0s						
KDU	Kakadu	47.84	269	P	P	08 02 13.4	-0.5
BAKI	Biak	47.92	285	P	P	08 02 14.8	+0.3
	156nm,0.7s						
GUMO	Guam	48.09	308		P	08 02 15.8	+0.1
GUMO	Guam	48.09	308	P	P	08 02 15.8	+0.1
MTN	Manton Dam	49.09	268	P	P	08 02 21.7	-1.5
MTN				IAmb	IAmb	08 02 23.2	
	comp=Z,100nm,1.1s						
MTN	Manton Dam	49.09	268	P	P	08 02 22.5	-0.7
DRS	Darwin Rock St	49.40	269	P	P	08 02 25.0	-0.5
FORT	Forrest	50.27	245	P	P	08 02 30.6	-1.2
FORT	Forrest	50.27	245	P	P	08 02 31.0	-0.7
KNRA	Kununurra	50.77	264	P	P	08 02 34.4	-1.2
FAKI	Fak Fak	50.85	281	P	P	08 02 35.6	-0.6
SWI	Sorong	52.52	283	P	P	08 02 48.2	0.0
	comp=Z,256nm,0.9s						
FITZ	Fitzroy Crossi	53.31	260	P	P	08 02 53.4	-0.4
FITZ	Fitzroy Crossi	53.31	260	P	P	08 02 53.8	-0.1
KMBL	Kambalda	55.58	244	P	P	08 03 08.8	-0.8
SOEI	Soe	56.36	270	P	P	08 03 16.0	+0.6
SOEI	Soe	56.36	270	P	P	08 03 16.7	+1.3
TNTI	Ternate	56.74	283	P	P	08 03 18.4	+0.5
TNTI	Ternate	56.74	283	P	P	08 03 18.2	+0.3
	comp=Z,88nm,1.3s						
SANI	Sanana	57.02	279	P	P	08 03 19.6	-0.2
PSA00	Pilbara Seismi	58.19	255	P	P	08 03 26.9	-0.9
PSA00	Pilbara Seismi	58.19	255	P	P	08 03 27.2	-0.5
MBWA	Marble Bar	58.36	256	P	P	08 03 28.0	-0.9
MBWA				IAmb	IAmb	08 03 28.7	
	comp=Z,49nm,0.7s						
MBWA	Marble Bar	58.36	256	P	P	08 03 28.2	-0.6
MBWA	Marble Bar	58.36	256	P	P	08 03 28.0	-0.9
MEEK	Meekatharra	58.71	249	P	P	08 03 30.6	-0.6
EDFI	Ende, Flores	59.07	270	P	P	08 03 33.0	-0.9
	comp=Z,67nm,1.0s						
KLBR	Kellerberrin	59.09	244	P	P	08 03 33.2	-0.5
NWAO	Narrogin (SRO)	59.47	242	P	P	08 03 35.9	-0.3
NWAO	Narrogin (SRO)	59.47	242	P	P	08 03 36.1	-0.1
NWAO	Narrogin (SRO)	59.47	242	P	P	08 03 36.0	-0.1
NWAO	Narrogin (SRO)	59.47	242	P	P	08 03 35.4	-0.8
BLDU	Ballidu	60.05	245	P	P	08 03 39.4	-0.7
LUWI	Luwuk	60.38	279	P	P	08 03 42.3	-0.2
MUN	Mundaring	60.39	243	P	P	08 03 42.2	-0.1
SBA	Scott Base	60.45	184	P	P	08 03 44.0	+2.1
SBA	Scott Base	60.45	184	P	P	08 03 44.6	+2.8
VNDA	Vanda	60.49	185	P	P	08 03 43.6	+1.5
VNDA	Vanda	60.49	185	P	P	08 03 44.1	+2.0
	comp=Z,3.8nm,0.6s,baz=357,slow=5.2,SNR=41						
	comp=Z,3.8nm,0.6s						
VNDA	Vanda	60.49	185	P	P	08 03 43.7	+1.5
MORW	Morawa	60.75	246	P	P	08 03 43.7	-1.1
MORW				IAmb	IAmb	08 03 44.6	
	comp=Z,38nm,0.7s						
MORW	Morawa	60.75	246	P	P	08 03 44.3	-0.4
APSI	Ampana	61.48	279	P	P	08 03 53.5	+3.7
	comp=Z,1μmcomp=Z,98nm,1.4s						
MRSI	Marisa	61.69	281	P	P	08 03 51.2	+0.1
	comp=Z,2μmcomp=Z,52nm,0.6s						
BNSI	Bone	61.83	275	P	P	08 03 52.3	+0.3
	comp=Z,64nm,1.3s						
SPSI	Sidrap Palu	62.28	275	P	P	08 03 54.0	-0.9
TOLI2	Tolitoli	62.99	281	P	P	08 03 59.0	-0.6
TOLI2				IAmb	IAmb	08 04 00.5	
	comp=Z,73nm,1.5s						
TOLI2	Tolitoli	62.99	281	P	P	08 04 01.3	+1.7
GIRL	Giralia	63.17	253	P	P	08 04 01.4	+0.8
MPSI	Mapaga	63.55	280	P	P	08 04 02.7	-0.5
CASY	Casey	66.27	205	P	P	08 04 19.2	-0.1
CASY	Casey	66.27	205	P	P	08 04 19.8	+0.5
JAGI	Jajag, Banyuwa	66.33	268	P	P	08 04 19.2	-1.5
MYLDM	Lahad Datu	66.58	284	P	P	08 04 24.0	+1.8
MYLDM				IAmb	IAmb	08 04 26.2	
	comp=Z,65nm,1.1s						
MYLDM	Lahad Datu	66.58	284	P	P	08 04 24.4	+2.1
MJAR	Matsushiro Arr	68.06	323	P	P	08 04 30.4	-0.5
	comp=Z,126nm,1.0s,baz=156,slow=5.6,SNR=25						
	comp=Z,126nm,1.0s						
MAJO	Matsushiro	68.06	323	P	P	08 04 30.1	-0.9
MAJO				IAmb	IAmb	08 04 32.0	
	comp=Z,20nm,0.7s						
MAJO	Matsushiro	68.06	323	P	P	08 04 30.0	-0.9
MJB9	Matsu-Tunnel	68.07	323	P	P	08 04 30.6	-0.3
MJB9				IAmb	IAmb	08 04 33.4	
	comp=Z,20nm,0.7s						
KKM	Kota Kinabalu	69.02	284	P	P	08 04 36.4	-0.8
KKM				IAmb	IAmb	08 04 39.4	
	comp=Z,36nm,0.7s						
KKM	Kota Kinabalu	69.02	284	P	P	08 04 37.6	+0.3
JSD	Sado	69.09	324	P	P	08 04 37.4	+0.4
ADK	Adak	69.48	1	P	P	08 04 38.4	-0.7
UGM	Wanagama	69.93	268	P	P	08 04 42.1	-0.6
SMRI	Semarang	70.25	269	P	P	08 04 44.5	-0.1
SMRI				IAmb	IAmb	08 04 45.7	
	comp=Z,54nm,0.7s						
SMRI	Semarang	70.25	269	P	P	08 04 45.0	+0.4
NIKH	Nikolski High	71.02	6	P	P	08 04 47.9	-0.2
	baz=189						
ASAJ	Asahikawa	71.40	331	P	P	08 04 51.3	+0.7
	comp=Z,12nm,0.6s,baz=208,slow=3.0,SNR=13						
	comp=Z,12nm,0.6s						
TWGBT	Beinan	71.89	302	P	P	08 04 54.6	+0.6
TWG	Pinlang	71.90	302	P	P	08 04 52.5	-1.6
TWG				IAmb	IAmb	08 04 53.3	
	comp=Z,52nm,0.8s						
YULB	Yu-li	72.00	303	P	P	08 04 53.1	-1.5
YULB	Yu-li	72.00	303	P	P	08 04 54.3	-0.3
UNV	Unalaska Valle	72.14	7	P	P	08 04 54.3	-0.3
	baz=192						
NACB	Ninganchiao	72.14	304	P	P	08 04 54.4	-1.0
NACB				IAmb	IAmb	08 04 56.0	
	comp=Z,83nm,1.1s						
NACB	Ninganchiao	72.14	304	P	P	08 04 56.8	+1.4
QSPA	South Pole Qui	72.16	180	P	P	08 04 56.1	+1.1
	comp=Z,24nm,0.8s,baz=354,slow=12,SNR=49						
	comp=Z,24nm,0.8s						
SSLB	Suanglung	72.47	303	P	P	08 04 56.5	-0.8
SSLB	Suanglung	72.47	303	P	P	08 04 57.1	-0.2
TPUB	Ta-pu	72.49	302	P	P	08 04 56.3	-1.2
TPUB	Ta-pu	72.49	302	P	P	08 04 57.1	-0.4
BBJI	Bungbulang	72.79	268	P	P	08 04 58.8	-0.7
KSM	Kuching	72.97	277	P	P	08 04 59.8	-0.6
KSM	Kuching	72.97	277	P	P	08 05 01.1	+0.7
FALS	False Pass	73.53	9	P	P	08 05 02.1	-0.5
	baz=194						
PEA0B	Petropavlovsk-	73.73	345	P	P	08 05 03.5	-0.4
PETK	Petropavlovsk-	73.73	345	P	P	08 05 03.3	-0.6
PETK	Petropavlovsk-	73.73	345	P	P	08 05 04.2	+0.2
	comp=Z,10nm,0.8s,baz=132,slow=7.5,SNR=13						
PETK				pP	pP	08 06 50.4	-1.3
	comp=Z,5.3nm,1.1s,baz=166,slow=4.8,SNR=3.7						
PETK				PKKPbc	PKKPbc	08 24 37.3	+2.1
	comp=Z,1.1nm,0.5s,baz=302,slow=6.6,SNR=4.9						
	comp=Z,10nm,0.8s						
CHNA	Chernabura Isl	74.13	11	P	P	08 05 05.8	-0.3
	baz=198						
SDPT	Sand Point	74.47	10	P	P	08 05 07.6	-0.4
	baz=197						
P08K	Saint George I	74.55	5	P	P	08 05 07.4	-1.0
	baz=188						
S12K	Black Hills	74.55	9	P	P	08 05 09.4	+0.9
S12K				IAmb	IAmb	08 05 21.8	
	comp=Z,28nm,0.8s						
S12K	Black Hills	74.55	9	P	P	08 05 08.0	-0.5
	baz=196						
KNMB	Chin-men Tao	74.85	302	P	P	08 05 10.9	+0.1
KNMB				IAmb	IAmb	08 05 13.3	
	comp=Z,58nm,0.8s						
KSRS	Korea Array	74.88	318	P	P	08 05 11.8	+1.1
	comp=Z,4.5nm,0.6s,baz=129,slow=6.4,SNR=16						
	comp=Z,4.5nm,0.6s						
KSAR	Wonju Array Be	74.89	318	P	P	08 05 10.8	-0.1
SPIA	Saint Paul Isl	75.07	4	P	P	08 05 10.5	-0.8
	baz=188						
CHIR	Chirikof Islan	75.85	13	P	P	08 05 15.1	-0.6
	baz=202						
SAO	San Andreas Ge	76.21	44	P	P	08 05 18.0	-0.2
SAO				IAmb	IAmb	08 05 20.2	
	comp=Z,34nm,0.8s						
HOPS	Hopland Field	76.47	41	P	P	08 05 19.5	0.0
HOPS				IAmb	IAmb	08 07 43.9	
	comp=Z,58nm,1.5s						
USRK	Ussuriysk Ar.	76.76	326	P	P	08 05 22.4	+1.4
	comp=Z,3.5nm,0.6s,baz=153,slow=3.6,SNR=6.3						
	comp=Z,3.5nm,0.6s						
KMRM	Mail Ridge	76.82	40	P	P	08 05 23.0	+1.5
KMRM				IAmb	IAmb	08 05 24.0	
	comp=Z,68nm,0.8s						
SII	Sitkinak Islan	76.84	13	P	P	08 05 20.5	-0.6
	baz=203						
ELS	Elsinore Mount	77.26	48	P	P	08 05 24.3	+0.2
O02D	Mt. Diablo Mer	77.35	40	P	P	08 05 25.6	+1.1
ESJX	Sierra Juarez	77.48	50	P	P	08 05 25.9	+0.4
CMB	Columbia Colle	77.63	43	P	P	08 05 26.4	+0.4

OHAK	Old Harbor	77.65	14	P	P	08 05 25.3	-0.2
	baz=204						
R18K	Karluk	77.71	13	P	P	08 05 25.2	-0.7
	baz=203						
AFDM	Forest Hills D	77.77	42	P	P	08 05 27.6	+0.9
YUH	Yuha Desert	77.82	50	P	P	08 05 27.8	+0.7
Q17K	Contact Creek	78.07	12	P	P	08 05 27.3	-0.6
	baz=202						
O14K	Tigyukauivet M	78.09	9	P	P	08 05 27.3	-0.6
	baz=196						
NJ2	Nanjing	78.15	309	*e*P	P	08 05 30.3	+1.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
O15K	Ungalikthiuk R	78.24	9	P	P	08 05 28.4	-0.3
	baz=198						
KDAK	Kodiak Island	78.32	14	P	P	08 05 28.7	-0.4
	baz=205						
MDJ	Mudanjiang	78.34	325	P	P	08 05 31.4	+1.9
MDJ				S	S	08 14 48.8	+6.0
MDJ				pmax	pmax		
	comp=Z,37nm,1.2s						
P16K	Nushagak River	78.40	10	P	P	08 05 29.0	-0.5
	baz=200						
WAKR	Walker	78.51	43	P	P	08 05 31.7	+0.8
WAKR				IAmb	IAmb	08 05 33.1	
	comp=Z,32nm,0.8s						
MPK	Martis Peak	78.57	42	P	P	08 05 31.5	+0.1
MPK				IAmb	IAmb	08 05 33.2	
	comp=Z,42nm,0.8s						
M11K	Mekoryuk	78.59	6	P	P	08 05 30.4	-0.1
	baz=192						
Q18K	Katmai Hardscr	78.60	12	P	P	08 05 30.1	-0.7
	baz=202						
N14K	Kuskokwak Cree	78.68	8	P	P	08 05 30.0	-1.0
	baz=196						
P17K	Kvichak River	78.83	11	P	P	08 05 30.9	-0.9
	baz=201						
O16K	Kokwok River B	78.92	10	P	P	08 05 31.3	-1.0
	baz=199						
M13K	Dall Lake	78.94	7	P	P	08 05 32.1	-0.2
	baz=194						
Q20K	Shuyak Island	79.11	13	P	P	08 05 33.2	-0.1
	baz=205						
Q19K	Cape Douglas,	79.14	13	P	P	08 05 33.0	-0.6
	baz=204						
N15K	Kwethluk River	79.14	9	P	P	08 05 33.5	-0.1
	baz=197						
NVAR	Mina Array Bea	79.21	44	P	P	08 05 35.5	+0.8
	comp=Z,20nm,0.7s,baz=225,slow=8.9,SNR=20						
	comp=Z,20nm,0.7s						
P18K	Big Mountain,	79.25	12	P	P	08 05 33.3	-0.8
P18K				IAmb	IAmb	08 05 34.4	
	comp=Z,34nm,0.8s						
P18K	Big Mountain,	79.25	12	P	P	08 05 33.4	-0.8
	baz=202						
O17K	Koliganek Bris	79.26	11	P	P	08 05 34.0	-0.1
	baz=200						
M14K	Bethel	79.44	8	P	P	08 05 35.5	+0.5
M14K	Bethel	79.44	8	P	P	08 05 34.8	-0.2
	baz=196						
M15K	Kasigluk River	79.56	9	P	P	08 05 35.2	-0.4
	baz=197						
J04A	Umpqua Nationa	79.59	38	P	P	08 05 37.1	+0.6
J04A				IAmb	IAmb	08 05 38.4	
	comp=Z,65nm,0.7s						
N16K	Nishlik Lake	79.64	10	P	P	08 05 36.2	+0.1
	baz=199						
O18K	Koktuh Hills	79.68	12	P	P	08 05 36.0	-0.4
O18K				IAmb	IAmb	08 05 37.4	
	comp=Z,45nm,0.8s						
O18K	Koktuh Hills	79.68	12	P	P	08 05 35.9	-0.4
	baz=202						
TPH	Tonopah	79.74	44	P	P	08 05 38.0	+0.5
TPH				IAmb	IAmb	08 05 39.3	
	comp=Z,73nm,0.8s						
P19K	Oil Pt	79.89	13	P	P	08 05 36.7	-0.7
	baz=204						
L14K	Kuka Creek	79.92	7	P	P	08 05 36.9	-0.6
	baz=195						
N17K	Nushagak Hills	79.95	10	P	P	08 05 37.5	-0.2
	baz=200						
J05D	Fort Rock, OR	80.13	38	P	P	08 05 40.1	+0.8
J05D				IAmb	IAmb	08 05 41.4	
	comp=Z,50nm,0.7s						
M16K	Timber Creek	80.13	9	P	P	08 05 39.5	+0.8
M16K				IAmb	IAmb	08 05 41.1	
	comp=Z,31nm,1.0s						
M16K	Timber Creek	80.13	9	P	P	08 05 38.9	+0.2
	baz=198,SNR=7.6						
O19K	Port Alsworth	80.17	12	P	P	08 05 38.1	-0.7
	baz=203						
CN2	Changchun	80.18	322	*e*P	P	08 05 40.3	+1.0
CN2				pmax	pmax		
	comp=Z,30nm,1.3s						
CNPM	China Poot	80.20	14	P	P	08 05 39.2	+0.1
CNPM				IAmb	IAmb	08 05 39.8	
	comp=Z,29nm,1.0s						
ILSW	Iliamna Southw	80.21	12	P	P	08 05 38.5	-0.8
ILSW				IAmb	IAmb	08 05 39.8	
	comp=Z,34nm,0.9s						
HOM	Homer	80.23	13	P	P	08 05 38.9	-0.3
	baz=205						
KLR	Kul'dur	80.24	329	P	P	08 05 40.0	+0.5
	comp=Z,2.1nm,0.6s,baz=140,slow=8.6,SNR=5.1						
	comp=Z,2.1nm,0.6s						
BNX	BinXian	80.25	325	⇓P	P	08 05 39.9	+0.3
BNX				pmax	pmax		
	comp=Z,32nm,0.7s						
K13K	Kusilvak Mount	80.27	6	P	P	08 05 39.3	-0.1
	baz=193						
N18K	Kilae Creek	80.32	11	P	P	08 05 38.9	-0.9
	baz=201						
L15K	Ungalak Mounta	80.40	8	P	P	08 05 39.5	-0.5
	baz=196						
O20K	Slope Mountain	80.40	13	P	P	08 05 39.7	-0.6
	baz=204						
H04A	Detroit Lake	80.41	37	P	P	08 05 40.7	+0.2
BRSE	Bradley Lake S	80.50	14	P	P	08 05 40.3	-0.4
	baz=206						
N19K	Bonanza Creek	80.71	11	P	P	08 05 41.1	-0.7
	baz=203						
L16K	Owhat River	80.71	9	P	P	08 05 41.6	-0.1
L16K	Owhat River	80.71	9	P	P	08 05 41.6	-0.1
	baz=198,SNR=8.3						
M17K	Holitna River	80.73	10	P	P	08 05 42.6	+0.8
M17K				IAmb	IAmb	08 05 43.7	
	comp=Z,30nm,0.8s						
M17K	Holitna River	80.73	10	P	P	08 05 42.3	+0.5
	baz=200,SNR=10						
WHN	Wuhan	80.83	306	⇓P	P	08 05 43.8	+0.8
K15K	Wolf Creek Mou	80.99	8	P	P	08 05 43.5	+0.4
	baz=196,SNR=16						
M18K	Stony River	81.09	11	P	P	08 05 43.5	-0.1
	baz=201						
SEW	Seward	81.12	14	P	P	08 05 43.3	-0.5
	baz=207						
J14K	Nanvaranak Lak	81.19	7	P	P	08 05 44.5	+0.4
	baz=194						
L17K	Donlin	81.29	9	P	P	08 05 44.7	+0.1
	baz=199,SNR=9.9						
Q23K	Middleton Isla	81.29	16	P	P	08 05 44.7	0.0
	baz=210						
O22K	Cooper Landing	81.39	14	P	P	08 05 45.2	0.0
	baz=207						
TUC	Tucson	81.46	52	P	P	08 05 47.6	+1.2
TUC				IAmb	IAmb	08 05 49.3	
	comp=Z,31nm,0.9s						
N20K	Mount Spurr	81.51	12	P	P	08 05 45.3	-0.7
	baz=205						
SPCR	Spurr Chakacha	81.51	12	P	P	08 05 45.0	-0.9
	baz=205						
P23K	Montague Islan	81.52	15	P	P	08 05 45.2	-0.7
	baz=209						
GAMB	Gambell	81.55	3	P	P	08 05 45.9	0.0
	baz=186						
L18K	Granite Mounta	81.63	10	P	P	08 05 46.5	+0.1
	baz=200						
M19K	Big River Lodg	81.73	11	P	P	08 05 46.7	-0.3
	baz=203						
K17K	Iditarod	81.84	9	P	P	08 05 47.4	-0.1
	baz=199						
L19K	White Mountain	81.91	11	P	P	08 05 47.4	-0.4
	baz=202						
RC01	Rabbit Creek A	81.94	13	P	P	08 05 47.1	-0.9
	baz=207						
M20K	Styx River	81.95	12	P	P	08 05 47.3	-0.9
	baz=204						
CBB	Campbell River	82.04	31	P	P	08 05 48.3	-0.5
CBB				IAmb	IAmb	08 05 50.4	
	comp=Z,27nm,1.1s						
PWL	Port Wells	82.05	14	P	P	08 05 48.0	-0.7
	baz=208						
SUA	Susitna One	82.05	13	P	P	08 05 48.0	-0.8
	baz=206						
J16K	Anvik River	82.06	8	P	P	08 05 49.4	+0.8
J16K				IAmb	IAmb	08 05 50.2	
	comp=Z,21nm,0.8s						
J16K	Anvik River	82.06	8	P	P	08 05 48.6	0.0
	baz=197,SNR=9.1						
BELA	Belgrano 2	82.15	173		P	08 05 49.1	+0.1
319A	Douglas	82.19	54		P	08 05 51.3	+1.2
319A				IAmb	IAmb	08 05 53.1	
	comp=Z,50nm,0.9s						
KAIM	Kayak Island	82.23	16	P	P	08 05 49.1	-0.4
	baz=212						
SKT	Skwentna	82.36	12	P	P	08 05 49.3	-0.9
	baz=205						
L20K	Farewell, AK	82.36	11	P	P	08 05 49.7	-0.5
	baz=203,SNR=6.8						
GLI	Glacier Island	82.36	15	P	P	08 05 49.6	-0.5
	baz=210						
J17K	VABM Dome	82.38	9	P	P	08 05 50.7	+0.5
J17K	VABM Dome	82.38	9	P	P	08 05 50.6	+0.5
	baz=198,SNR=6.1						
CRAG	Craig	82.38	24	P	P	08 05 50.2	-0.1
	baz=223						
EYAK	Cordova Ski Ar	82.41	15	P	P	08 05 49.7	-0.7
	baz=211						
M22K	Willow	82.44	13	P	P	08 05 49.8	-0.7
	baz=207,SNR=8.5						
KNK	Knik Glacier	82.51	14	P	P	08 05 50.2	-0.8
	baz=208						
PMR	Palmer	82.52	14	P	P	08 05 50.3	-0.6
	baz=208						
G08A	Pilot Rock	82.62	38	P	P	08 05 52.7	+0.7
G08A				IAmb	IAmb	08 05 53.8	
	comp=Z,26nm,1.1s						
I17K	Unalakleet	82.63	8	P	P	08 05 51.4	0.0
	baz=197						
GHO	Glory Hole Cre	82.72	14	P	P	08 05 51.6	-0.4
GHO				IAmb	IAmb	08 05 52.5	
	comp=Z,25nm,0.8s						
ANM	Nome	82.78	6	P	P	08 05 52.0	-0.2
	baz=192						
J18K	Innoko River	82.79	10	P	P	08 05 52.5	+0.2
J18K	Innoko River	82.79	10	P	P	08 05 52.3	0.0
	baz=200,SNR=11						
U33K	Whale Pass	82.86	24	P	P	08 05 53.1	+0.4
	baz=223						
SML	Sawmill	82.89	14	P	P	08 05 52.6	-0.2
	baz=208						
HAWA	Hanford	82.92	37	P	P	08 05 53.1	-0.3
HAWA				IAmb	IAmb	08 05 55.1	
	comp=Z,28nm,0.9s						
CUT	Chulitna	83.00	13	P	P	08 05 53.3	0.0
	baz=207						
M23K	Glacier View	83.01	14	P	P	08 05 53.5	0.0
	baz=209						
HEH	HeiHe	83.05	328	*e*P	P	08 05 54.6	+0.7
HEH				pmax	pmax		
	comp=Z,11nm,0.7s						
PPLA	Purkeypile	83.06	12	P	P	08 05 54.0	+0.2
	baz=205						
BMRM	Bremner River	83.06	16	P	P	08 05 53.5	-0.3
	baz=212,SNR=5.1						
MESA	MESA	83.12	17	P	P	08 05 54.1	-0.2
	baz=214,SNR=6.1						
S31K	Pelican	83.13	21	P	P	08 05 54.0	0.0
	baz=220						
K20K	Telida	83.13	11	P	P	08 05 54.0	-0.1
	baz=203,SNR=12						
SCM	Sheep Creek Mo	83.14	14	P	P	08 05 53.6	-0.6
SCM				IAmb	IAmb	08 05 55.1	
	comp=Z,28nm,0.8s						
SCM	Sheep Creek Mo	83.14	14	P	P	08 05 53.6	-0.6
	baz=209,SNR=8.4						
H16K	Elim	83.17	7	P	P	08 05 54.5	+0.4
	baz=195						
KLU	Klutina	83.18	15	P	P	08 05 54.6	+0.2
	baz=211						
CRQE	Cirque	83.28	16	P	P	08 05 54.9	-0.1
	baz=213,SNR=5.8						
G15K	Niukluk	83.33	6	P	P	08 05 54.9	0.0
	baz=193						
S32K	Killisnoo	83.33	22	P	P	08 05 54.4	-0.7
	baz=221						
WRAK	Wrangell Islan	83.38	24	P	P	08 05 55.4	+0.1
	baz=223						
PNL	Peninsula	83.45	19	P	P	08 05 55.5	-0.2
	baz=217						
J19K	Poorman	83.46	10	P	P	08 05 55.6	0.0
	baz=201						
PINM	Pinnacle	83.54	18	P	P	08 05 55.8	-0.4
	baz=216						
TNA	Tin City	83.55	4	P	P	08 05 55.5	-0.5
	baz=190,SNR=9.2						
CAST	Castle Rocks	83.55	11	P	P	08 05 54.5	-1.7
CAST				IAmb	IAmb	08 05 55.9	
	comp=Z,27nm,0.8s						
CAST	Castle Rocks	83.55	11	P	P	08 05 54.9	-1.3
	baz=205,SNR=20						
F14K	Arctic Creek	83.59	5	P	P	08 05 55.9	-0.4
	baz=191						
N25K	Chitina, Valde	83.61	15	P	P	08 05 56.0	-0.5
	baz=212,SNR=10						
GRNC	Granite Creek	83.63	17	P	P	08 05 56.5	-0.4
R31K	City Hall, Gus	83.64	21	P	P	08 05 56.3	-0.3
	baz=220						
M24K	Tolsona, Glenn	83.65	14	P	P	08 05 57.1	+0.4
M24K				IAmb	IAmb	08 05 57.9	
	comp=Z,27nm,0.8s						
M24K	Tolsona, Glenn	83.65	14	P	P	08 05 56.2	-0.5
	baz=210						
GLB	Gilahina Butte	83.67	16	P	P	08 05 56.4	-0.4
WAT6	Susitna Watana	83.70	14	P	P	08 05 56.6	-0.5
	baz=209,SNR=9.4						
HNS	HongShan	83.72	312	⇑P	P	08 05 58.9	+1.4
HNS				pmax	pmax		
	comp=Z,21nm,1.7s						
H17K	Granite Mounta	83.74	8	P	P	08 05 56.5	-0.5
	baz=197						
WAT1	Susitna Watana	83.74	13	P	P	08 05 56.2	-0.9
	baz=208						
MCARA	McCarthy VSAT	83.83	16	P	P	08 05 57.3	-0.3
	baz=213						
J20K	Nowinta River	83.88	10	P	P	08 05 57.3	-0.4
	baz=203,SNR=7.3						
G16K	Koyuk River	83.89	7	P	P	08 05 57.3	-0.4
	baz=195						
TRF	Thorofare Moun	83.93	12	P	P	08 05 57.1	-1.1
TRF				IAmb	IAmb	08 05 58.5	
	comp=Z,31nm,0.8s						
TRF	Thorofare Moun	83.93	12	P	P	08 05 57.4	-0.8
	baz=206,SNR=21						
CHUM	Lake Minchumin	83.93	11	P	P	08 05 56.5	-1.4
	baz=205,SNR=6.7						
P29M	Windy Craggy	83.94	19	P	P	08 05 57.7	-0.4
	baz=218						
CTG	Chitna Glacier	83.94	17	P	P	08 05 57.8	-0.5
	baz=215,SNR=7.0						
R32K	Eaglecrest	83.96	21	P	P	08 05 57.2	-1.0
	baz=221						
F15K	North Star Dit	83.97	6	P	P	08 05 57.7	-0.4
	baz=193						
BJT	Baijiatuau	83.97	315	P	P	08 05 59.6	+0.9
BJI	Beijing	83.97	315	P	P	08 06 00.3	+1.6
BJI				pP	pP	08 07 53.3	+2.6
BJI				SKS	SKSac	08 15 31.8	-0.9
BJI				pmax	pmax		
	comp=Z,10.0nm,1.7s						
MAW	Mawson	83.97	200	P	P	08 05 59.0	+0.7
	comp=Z,5.2nm,0.4s,baz=144,slow=4.6,SNR=33						
	comp=Z,5.2nm,0.4s						
GCSA	Galena City Sc	83.97	9	P	P	08 05 57.8	-0.3
	baz=200,SNR=6.1						
O28M	Mount Upton	84.11	18	P	P	08 05 58.8	-0.5
	baz=216,SNR=10						
HARP	HAARP	84.15	15	P	P	08 05 58.8	-0.3
	baz=211						
H18K	Honhosa River	84.15	8	P	P	08 05 58.4	-0.6
	baz=199						
PSI	Prapat	84.17	275	P	P	08 06 00.2	-0.3
G17K	Kiwalik Mounta	84.19	7	P	P	08 05 58.9	-0.3
	baz=197						
RND	Reindeer	84.19	13	P	P	08 05 58.9	-0.4
RND				IAmb	IAmb	08 06 00.3	
	comp=Z,34nm,0.9s						
O29M	Mount Kennedy	84.21	19	P	P	08 05 58.9	-0.7
	baz=217						
DHY	Denali Highway	84.22	14	P	P	08 05 58.9	-0.7
	baz=209						
PLBC	Pleasant Camp	84.24	20	P	P	08 05 59.6	0.0
	baz=220,SNR=5.8						
BPAW	Bear Paw Mtn.	84.38	12	P	P	08 05 59.0	-1.2
	baz=206						
I20K	Naaghedeneel	84.40	10	P	P	08 05 59.9	-0.3
	baz=202						
MCK	McKinley	84.46	13	P	P	08 05 59.3	-1.3
	baz=208						
ENH	Enshi	84.50	304	P	P	08 06 02.4	+0.8
PAX	Paxson	84.56	14	P	P	08 06 00.1	-1.1
	baz=211,SNR=5.6						
P30M	Million Dollar	84.56	19	P	P	08 06 00.0	-1.2
	baz=219						
SKAG	Skagway	84.58	20	P	P	08 06 00.7	-0.5
	baz=220						
T35M	Bob Quinn	84.59	24	P	P	08 06 00.2	-1.2
	baz=225						
YUK8	Steele Glacier	84.64	18	P	P	08 06 01.7	-0.2
	baz=216,SNR=7.1						
M26K	Nabesna, AK	84.69	16	P	P	08 06 01.7	-0.2
M26K				IAmb	IAmb	08 06 03.3	
	comp=Z,28nm,1.1s						
M26K	Nabesna, AK	84.69	16	P	P	08 06 01.6	-0.2
	baz=213,SNR=8.9						
H19K	Roundabout Mou	84.77	9	P	P	08 06 02.1	+0.1
	baz=201						
YUK6	Outpost Mounta	84.78	18	P	P	08 06 02.3	-0.2
	baz=218						
SRU	San Rafael Swe	84.80	46	P	P	08 06 03.3	+0.3
G18K	Tagagawik	84.81	8	P	P	08 06 02.2	-0.1
	baz=198						
YUK3	Moose Creek	84.85	17	P	P	08 06 01.8	-1.0
	baz=216,SNR=10						
S34M	Telegraph Cree	84.92	23	P	P	08 06 02.7	-0.2
	baz=224,SNR=10						
M27K	Edge Creek, AK	84.94	16	P	P	08 06 03.4	+0.3
	baz=214,SNR=9.4						
HYT	Haines Junctio	84.95	19	P	P	08 06 03.6	+0.4
	baz=218						
H20K	Anotleneega Mo	84.98	10	P	P	08 06 02.9	-0.2
	baz=202						
GSI	Gunungsitoli	84.99	273	P	P	08 06 05.8	+1.5
YUK4	Talbot Arm	85.02	18	P	P	08 06 03.8	+0.1
	baz=217						
L26K	Log Cabin Wild	85.12	15	P	P	08 06 03.9	0.0
	baz=213						
LENM	Lemitar	85.14	52	P	P	08 06 05.3	+0.4
NEA2	Nenana	85.20	12	P	P	08 06 03.8	-0.4
	baz=208						
K24K	Donnelly Dome	85.21	14	P	P	08 06 03.8	-0.5
	baz=211,SNR=8.5						
P32M	Atlin	85.22	21	P	P	08 06 03.4	-1.0
	baz=222						
BVCY	Beaver Creek	85.26	16	P	P	08 06 04.4	-0.2
	baz=215,SNR=7.6						
Q32M	Nakina River	85.26	22	P	P	08 06 04.0	-0.9
	baz=223						
G19K	Purcell Mounta	85.26	8	P	P	08 06 03.7	-0.7
	baz=200						
MLY	Manley	85.27	11	P	P	08 06 03.6	-0.9
	baz=206,SNR=5.3						
GYA	Guiyang	85.28	300	⇓P	P	08 06 06.8	+1.2
GYA				pmax	pmax		
	comp=Z,23nm,0.7s						
O30N	Mendenhall	85.34	19	P	P	08 06 03.8	-1.2
	baz=220						
SRIT	Nakonsritamara	85.35	281	P	P	08 06 07.2	+1.1
RIDG	Independent Ri	85.37	14	P	P	08 06 04.4	-0.7
	baz=212						
MG05	Puerto Natales	85.44	143	P	P	08 06 06.3	+0.5
MG05				IAmb	IAmb	08 06 08.6	
	comp=Z,59nm,1.4s						
H21K	Melozitna Rive	85.47	10	P	P	08 06 05.7	+0.2
	baz=204						
HDA	Harding Lake	85.48	13	P	P	08 06 04.5	-1.0
	baz=210,SNR=9.2						
L27K	Beaver Creek,	85.54	16	P	P	08 06 05.2	-0.7
	baz=214						
N30M	Aishikik Lake	85.57	18	P	P	08 06 05.5	-0.6
	baz=219						
E17K	Hotham Inlet	85.58	6	P	P	08 06 05.4	-0.5
	baz=196						
PV21	Cone Mtn., Par	85.62	47	P	P	08 06 07.2	0.0
I23K	Minto, Yukon-K	85.64	12	P	P	08 06 06.2	0.0
	baz=207						
WHY	Whitehorse	85.64	20	P	P	08 06 06.4	-0.2
	baz=221						
COLA	College	85.69	12	P	P	08 06 06.0	-0.5
	baz=209						
DLBC	Dease Lake	85.70	23	P	P	08 06 06.2	-0.6
	baz=225						
SLVN	Son La	85.74	294	P	P	08 06 09.0	+1.2
TXAR	Lajitas Array	85.74	58	P	P	08 06 09.6	+1.8
	comp=Z,22nm,0.8s,baz=224,slow=5.2,SNR=57						
	comp=Z,22nm,0.8s						
SCRK	Sand Creek	85.77	14	P	P	08 06 06.3	-0.8
	baz=212						
IL31		85.81	13	P	P	08 06 06.4	-0.7
ILAR	Eielson Array	85.81	13	P	P	08 06 05.7	-1.4
ILAR	Eielson Array	85.81	13	P	P	08 06 06.2	-0.9
	comp=Z,8.2nm,1.0s,baz=232,slow=5.7,SNR=7.2						
ILAR				S	SKSac	08 15 45.0	+2.0
	comp=Z,0.6nm,0.9s,baz=219,slow=9.2,SNR=6.1						
ILAR				PKKPbc	PKKPdf	08 24 04.5	+3.5
	comp=Z,0.6nm,0.6s,baz=350,slow=3.0,SNR=7.6						
	comp=Z,8.2nm,1.0s						
F19K	Shaleruckik Mo	85.82	8	P	P	08 06 06.8	-0.3
	baz=199						
XLT	XiLinHaoTe	85.92	319	*e*P	P	08 06 09.1	+0.8
XLT				pmax	pmax		
	comp=Z,20nm,1.3s						
H22K	Ishtalitna Cre	85.93	11	P	P	08 06 07.4	-0.3
	baz=205						
M29M	Somme Creek	85.94	17	P	P	08 06 07.8	-0.1
	baz=217,SNR=5.7						
P33M	Teslin, Yukon	85.99	21	P	P	08 06 08.0	-0.1
	baz=223						
N31M	Braeburn, Yuko	85.99	19	P	P	08 06 08.1	0.0
	baz=220						
POKR	Poker Plat Res	85.99	12	P	P	08 06 07.6	-0.4
	baz=209						
J25K	Salcha River,	86.00	14	P	P	08 06 08.0	-0.1
	baz=211						
R33M	Jennings River	86.04	22	P	P	08 06 07.9	-0.6
	baz=224						
E18K	Tukpahlearik C	86.04	7	P	P	08 06 07.7	-0.4
	baz=197						
D17K	Noatak River	86.06	6	P	P	08 06 07.7	-0.5
	baz=194						
G21K	Allakaket	86.14	10	P	P	08 06 08.4	-0.2
	baz=203,SNR=5.8						
K27K	Chicken	86.28	15	P	P	08 06 09.9	+0.6
	baz=214						
F20K	Avaraart Lake	86.31	9	P	P	08 06 09.5	+0.1
	baz=201						
J26L	Joseph Creek	86.31	14	P	P	08 06 09.5	-0.1
	baz=213,SNR=6.2						
RDOG	Red Dog Mine	86.42	6	P	P	08 06 10.1	+0.1
	baz=194						
C16K	Lisburne Hills	86.42	5	P	P	08 06 09.9	0.0
	baz=192						
XAN	Xi'an	86.48	307	P	P	08 06 11.6	+0.5
XAN				pP	pP	08 08 06.4	+2.4
XAN				pmax	pmax		
	comp=Z,64nm,1.2s						
E19K	Redstone River	86.48	8	P	P	08 06 10.5	+0.2
	baz=200,SNR=6.5						
H24K	Noodor Dome	86.54	12	P	P	08 06 10.4	-0.2
	baz=209						
L29M	L29M	86.57	17	P	P	08 06 10.8	0.0
	baz=218						
N32M	Quiet Lake	86.59	20	P	P	08 06 10.9	-0.1
	baz=222						
PRP	Porcupine Dome	86.74	13	P	P	08 06 12.4	+0.6
	baz=211						
F21K	Alatna River	86.80	9	P	P	08 06 11.7	-0.1
	baz=203						
C17K	DeLong Mountai	86.80	5	P	P	08 06 11.6	-0.1
	baz=194						
G22K	Bettles	86.84	10	P	P	08 06 11.6	-0.4
	baz=205						

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G23K  Bananza Creek     86.91  11  P         P         08 06 11.9 -0.5
      baz=207
M31M  Drury Creek, Y    86.96  19  P         P         08 06 12.5 -0.1
      baz=221
DAWY  Dawson            86.99  16  P         P         08 06 12.8  0.0
      baz=216
PDAR  Pinedale Array    87.14  43  P         P         08 06 14.4 +0.2
      comp=Z,6.4nm,0.7s,baz=221,slow=3.0,SNR=12
PDAR                               pP        pP        08 08 06.2 -0.5
      comp=Z,2.9nm,1.0s,baz=297,slow=5.6,SNR=2.7
      comp=Z,6.4nm,0.7s
C18K  Utukok River      87.16   6  P         P         08 06 13.7 +0.1
      baz=196
F22K  John River        87.27  10  P         P         08 06 13.7 -0.3
      baz=205
FARO  Faro, Yukon       87.31  19  P         P         08 06 14.0 -0.3
      baz=222
K29M  Barlow Dome       87.32  17  P         P         08 06 14.3 -0.1
      baz=218
WTLY  Watson Lake, Y    87.33  22  P         P         08 06 13.9 -0.6
      baz=226
COLD  Coldfoot          87.34  11  P         P         08 06 14.1 -0.2
      baz=206,SNR=8.4
D19K  Kuna River        87.36   7  P         P         08 06 13.8 -0.6
      baz=199
E20K  Nigu River        87.38   8  P         P         08 06 14.5  0.0
      baz=201,SNR=6.7
G24K  Hadweenzic Riv    87.38  12  P         P         08 06 14.8 +0.3
      baz=209
HHC   Hu-ho-hao-te      87.46 314 eP         P         08 06 16.9 +1.3
HHC                                pmax      pmax
      comp=Z,21nm,0.9s
HHC                                pmax      pmax
      comp=Z,110nm,6.5s
MAYO  Mayo, Yukon       87.58  17  P         P         08 06 16.0 +0.5
      baz=220
G25K  Bearman Lake      87.70  12  P         P         08 06 16.0 +0.1
      baz=210
D20K  Etivluk River     87.75   8  P         P         08 06 15.9 -0.4
      baz=200
C19K  Lookout Ridge     87.77   7  P         P         08 06 16.4  0.0
      baz=198
B18K  Kokolik River     87.79   6  P         P         08 06 16.2 -0.2
      baz=196
TOAD  Toad River Com    87.83  25  P         P         08 06 16.2 -0.6
      baz=229
E21K  Killik River      87.85   9  P         P         08 06 16.3 -0.4
      baz=203
LIRD  Liard River Hi    87.86  24  P         P         08 06 16.7 -0.1
      baz=229
E22K  Anaktuvuk Pass    87.90  10  P         P         08 06 16.8 -0.2
      baz=205,SNR=7.5
I28M  Miner Creek       87.97  15  P         P         08 06 16.9 -0.5
      baz=216
F24K  Squaw Lake        88.02  11  P         P         08 06 17.8 +0.3
      baz=209,SNR=6.2
KMI   Kunming           88.08 297 ⇓P         P         08 06 20.8 +1.8
KMI                                pmax      pmax
      comp=Z,29nm,0.8s
COYC  Coyhaique         88.13 138  P         P         08 06 19.7 +1.1
E23K  Chandalar         88.19  10  P         P         08 06 18.6 +0.2
E23K  Chandalar         88.19  10  P         P         08 06 18.3 -0.1
      baz=207
J30M  Hart River        88.22  17  P         P         08 06 18.4 -0.3
      baz=219
H27K  Steamboat Moun    88.23  14  P         P         08 06 18.7 +0.1
      baz=214
MMPY  Sheldon Lake,     88.26  20  P         P         08 06 19.3 +0.5
      baz=224,SNR=5.5
I29M  Ogilvie Camp,     88.31  16  P         P         08 06 19.0 +0.1
      baz=218
G26K  Porcupine Rive    88.34  13  P         P         08 06 18.9 -0.1
      baz=212
E24K  Your Creek        88.40  11  P         P         08 06 19.2 -0.1
      baz=208
C21K  Knifeblade Rid    88.40   8  P         P         08 06 19.2  0.0
      baz=202,SNR=5.7
BTO   Baotou            88.42 314 eP         P         08 06 22.3 +2.2
BTO                                pP        pP        08 08 15.6 +2.0
BTO                                sP        sP        08 09 06.3 +0.8
BTO                                pmax      pmax
      comp=Z,26nm,1.3s
BTO                                pmax      pmax
      comp=Z,340nm,7.1s
D22K  Ayikyak River     88.44   9  P         P         08 06 19.8 +0.3
D22K                               IAmb      IAmb      08 06 20.5
      comp=Z,12nm,0.8s
D22K  Ayikyak River     88.44   9  P         P         08 06 19.6 +0.1
      baz=204,SNR=5.7
TGTN  Hyland Airport    88.49  21  P         P         08 06 19.7 -0.2
      baz=227
F25K  Christian Rive    88.51  12  P         P         08 06 19.9  0.0
      baz=211
BMAR  Burnt Mountain    88.58  12  P         P         08 06 20.4 +0.3
G27K  Doyon Strip       88.68  14  P         P         08 06 20.3 -0.3
      baz=214
I30M  Mount Dempster    88.71  16  P         P         08 06 21.0 +0.1
      baz=219
TOLK  Toolik Lake Re    88.72  10  P         P         08 06 20.7  0.0
      baz=207
BEAVL Fort Liard        88.76  24  P         P         08 06 20.6 -0.5
      baz=230
D23K  Nanushuk River    88.83  10  P         P         08 06 21.3 +0.1
      baz=206,SNR=5.1
B21K  Ikpikpuk River    88.86   8  P         P         08 06 21.6 +0.3
      baz=202
F26K  Sheenjek River    88.89  12  P         P         08 06 21.8 +0.2
      baz=212
B20K  Meade River       88.90   7  P         P         08 06 21.9 +0.4
      baz=200
H29M  Whitestone        88.98  15  P         P         08 06 21.8 -0.2
      baz=217
E25K  Arctic Village    88.98  12  P         P         08 06 21.8 -0.2
      baz=211
KOTAN Kotaneelee Air    89.11  24  P         P         08 06 22.2 -0.5
      baz=230
CMAR  Chiang Mai Arr    89.15 290  P         P         08 06 24.9 +1.0
      comp=Z,15nm,0.8s,baz=114,slow=2.6,SNR=34
CMAR                               pP        pP        08 08 16.2 -0.7
      comp=Z,1.3nm,0.3s,baz=107,slow=4.1,SNR=1.8
      comp=Z,15nm,0.8s
SYO   Syowa Base        89.24 193⇓eP         P         08 06 23.0 -0.3
CHTO  Chiang Mai        89.26 290  P         P         08 06 25.0 +0.6
CHTO                               IAmb      IAmb      08 06 26.4
      comp=Z,22nm,0.7s
CHTO  Chiang Mai        89.26 290  P         P         08 06 25.5 +1.1
D24K  Happy Valley      89.30  10  P         P         08 06 23.5 +0.1
      baz=208
PZH   PanZhiHua         89.40 298  P         P         08 06 25.6 +0.6
PZH                                pmax      pmax
      comp=Z,7.0nm,0.8s
PZH                                pmax      pmax
      comp=Z,100nm,4.7s
EPYK  Eagle Plains      89.51  15  P         P         08 06 24.3 -0.1
      baz=219
G29M  Pine Creek        89.61  15  P         P         08 06 24.3 -0.7
      baz=218
C23K  Itkillik River    89.63   9  P         P         08 06 24.7 -0.1
C23K                               IAmb      IAmb      08 06 25.9
      comp=Z,9.0nm,0.8s
C23K  Itkillik River    89.63   9  P         P         08 06 24.8 -0.1
      baz=206
B22K  Teshekpuk Lake    89.68   8  P         P         08 06 25.1  0.0
      baz=203
H31M  Peel River        89.70  17  P         P         08 06 25.0 -0.4
      baz=221
F28M  Old Crow          89.74  14  P         P         08 06 25.0 -0.6
      baz=216
C24K  Franklin Bluff    89.82  10  P         P         08 06 25.6 -0.2
      baz=208
E27K  Coleen River      89.84  13  P         P         08 06 25.5 -0.5
      baz=214
D25K  Kavik River       89.87  11  P         P         08 06 25.6 -0.6
      baz=210
APMT  Aspermont         90.06  55  P         P         08 06 27.9  0.0
APMT                               IAmb      IAmb      08 06 29.1
      comp=Z,19nm,0.8s
A22K  Sinclair Lake     90.10   7  P         P         08 06 26.6 -0.4
      baz=202
G30M  tAoh Zraii Nji    90.11  15  P         P         08 06 26.6 -0.7
G30M                               IAmb      IAmb      08 06 28.4
      comp=Z,20nm,1.0s
G30M  tAoh Zraii Nji    90.11  15  P         P         08 06 27.1 -0.1
      baz=219,SNR=7.4
TROLL Troll, Antarti    90.33 180 ⇑P         P         08 06 29.1 +0.6
      comp=Z,1µm,0.5s
G31M  Satah River       90.56  16  P         P         08 06 29.5 +0.2
G31M                               IAmb      IAmb      08 06 30.4
      comp=Z,23nm,0.9s
G31M  Satah River       90.56  16  P         P         08 06 29.3  0.0
      baz=221,SNR=7.8
SNAA  Sanae             90.61 179 ⇑P         P         08 06 29.9 +0.2
      comp=Z,319nm,0.6s
SNAA  Sanae             90.61 179  P         P         08 06 30.0 +0.3
SNAA                               IAmb      IAmb      08 06 30.9
      comp=Z,14nm,0.7s
SNAA  Sanae             90.61 179  P         P         08 06 29.8 +0.2
      comp=Z,12nm,0.6s,baz=205,slow=7.4,SNR=102
      comp=Z,12nm,0.6s
C27K  Jago River        90.62  11  P         P         08 06 29.5  0.0
      baz=212
E28M  Babbage River     90.62  13  P         P         08 06 29.3 -0.2
      baz=216
C26K  Camden Bay        90.65  11  P         P         08 06 30.2 +0.6
      baz=211
F30M  Barrier River     90.70  15  P         P         08 06 30.6 +0.7
      baz=220
VNA3  Neumayer Olymp    90.74 176 ⇑P         P         08 06 31.2 +1.0
      comp=Z,69nm,0.6s
E29M  Blow River        90.81  14  P         P         08 06 30.6 +0.2
      baz=218
D27M  Malcolm River     90.84  12  P         P         08 06 31.1 +0.5
      baz=215
F31M  Tsiigehtchic      91.09  16  P         P         08 06 31.8 +0.1
      baz=222,SNR=8.2
LZH   Lanzhou           91.11 308 eP         P         08 06 34.5 +1.7
LZH                                pP        pP        08 08 30.3 +3.5
LZH                                pmax      pmax
      comp=Z,28nm,1.1s
PLCA  Paso Flores       91.14 134  P         P         08 06 33.3 +0.5
      comp=Z,2.8nm,0.7s,baz=210,slow=2.9,SNR=12
      comp=Z,2.8nm,0.7s
RSSD  Black Hills       91.35  44  P         P         08 06 33.5 -0.2
RSSD                               IAmb      IAmb      08 06 34.9
      comp=Z,14nm,0.9s
D28M  Stokes Point      91.38  13  P         P         08 06 33.3 +0.3
      baz=217
VNA1  Neumayer--Stat    91.41 177 ⇑P         P         08 06 34.7 +1.5
      comp=Z,48nm,0.9s
INK   Inuvik            91.79  15  P         P         08 06 34.9  0.0
      baz=222
R32A  Long Quarter,     92.94  51  P         P         08 06 40.9 -0.1
SONM  Songino Array     93.72 319  P         P         08 06 44.2 -0.2
      comp=Z,1.8nm,0.7s,baz=138,slow=6.7,SNR=4.1
      comp=Z,1.8nm,0.7s
YKA   Yellowknife Ar    94.20  25  P         P         08 06 45.9 -0.2
      comp=Z,3.7nm,0.8s,baz=254,slow=4.3,SNR=6.3
YKA                                PKKPbc    PKKPdf    08 23 44.5 -1.3
      comp=Z,0.6nm,0.6s,baz=32,slow=2.5,SNR=7.9
      comp=Z,3.7nm,0.8s
C36M  Paulatuk          95.00  17  P         P         08 06 49.9 +0.4
      baz=231
A36M  Sachs Harbour     96.39  14  P         P         08 06 55.8  0.0
      baz=230
LPAZ  La Paz           103.14 112  Pdiff     Pdif      08 07 30.6 +2.7
      comp=Z,0.5nm,0.7s,baz=186,slow=3.2,SNR=4.7
ZALV  Zalesovo Beam    108.40 322  Pdiff     Pdif      08 07 45.2 -4.4
      comp=Z,0.6nm,0.4s,baz=127,slow=5.7,SNR=4.2
MKAR  Makanchi Array   109.33 314  PKiKP     PKiKP     08 11 54.0 -0.4
      comp=Z,1.7nm,0.5s,baz=163,slow=0.5,SNR=30
MKAR                               PKKPbc    PKKPbc    08 23 01.9 -0.7
      comp=Z,1.2nm,0.9s,baz=232,slow=1.6,SNR=6.3
KURBB Kurchatov Arra   112.06 318  PKiKP     PKiKP     08 11 59.0 -0.4
      comp=Z,1.6nm,0.5s,baz=92,slow=1.6,SNR=13
KURBB                              PP        PP        08 12 51.9 -1.5
      comp=Z,0.7nm,0.6s,baz=95,slow=7.2,SNR=5.7
KURBB                              PKKPbc    PKKPbc    08 22 50.9 -3.0
      comp=Z,0.2nm,0.3s,baz=278,slow=4.2,SNR=4.4
BVAR  Borovoye Array   117.01 321  PKP       PKPdf     08 12 08.5 -0.4
      comp=Z,4.3nm,0.5s,baz=118,slow=0.7,SNR=22
SPITS Spitsbergen Ar   119.27 357  PKP       PKPdf     08 12 11.3 -1.3
      comp=Z,2.7nm,0.8s,baz=38,slow=7.3,SNR=4.3
BDFB  Brasilia         120.60 121  PKhKP     PKPpre    08 12 12.3
      comp=Z,8.2nm,0.9s,baz=307,slow=2.1,SNR=4.5
ARTI  Arti             123.10 326  PKP       PKPdf     08 12 20.6 +0.2
      comp=Z,6.5nm,0.6s,baz=150,slow=3.5,SNR=4.4
ARCES ARCESS Array B   126.35 350  PKP       PKPdf     08 12 26.1 -0.3
      comp=Z,1.9nm,0.6s,baz=39,slow=1.8,SNR=8.9
KIRV  Kirov            126.65 331  PKP       PKPdf     08 12 27.6 +0.4
      comp=Z,15nm,0.4s,baz=117,slow=2.3,SNR=3.8
BOSA  Boshof           128.54 206  PKP       PKPdf     08 12 32.2 +0.3
      comp=Z,6.8nm,0.7s,baz=157,slow=1.8,SNR=7.7
BOSA                               SKPbc     SKiKP     08 15 07.3  -13
      comp=Z,5.1nm,1.0s,baz=158,slow=4.6,SNR=3.9
LBTB  Lobatse          131.50 209  PKP       PKPdf     08 12 37.9 +0.2
      comp=Z,6.0nm,0.6s,baz=183,slow=3.8,SNR=7.8
FINES FINESS Array B   133.25 344  PKP       PKPdf     08 12 38.2 -1.3
      comp=Z,1.6nm,0.7s,baz=48,slow=5.7,SNR=4.3
FINES                              SKPbc     SKPab     08 15 21.9 -0.4
      comp=Z,3.4nm,0.8s,baz=174,slow=2.8,SNR=7.5
NB2   NORSAR Subarra136.39 353     PKP       PKPdf     08 12 39.1 -6.4
      comp=Z,0.7nm,0.7s,baz=16,slow=3.2
NB2                                pPKP      PP        08 15 31.6 -1.6
      comp=Z,1.2nm,1.0s,baz=8.0,slow=3.1
NOA   NORSAR Array B 136.39 353    PKhKP     PKPpre    08 12 34.0
      comp=Z,0.6nm,0.7s,baz=20,slow=3.8,SNR=6.0
NOA                                SKPbc     SKPbc     08 15 30.4 +0.8
      comp=Z,1.3nm,0.9s,baz=16,slow=2.9,SNR=4.2
HFS   Hagfors          136.96 351  PKhKP     PKPpre    08 12 35.3
      comp=Z,1.6nm,0.5s,baz=343,slow=1.5,SNR=8.5
HFS                                PKP       PKPdf     08 12 47.0 +0.5
      comp=Z,1.9nm,0.6s,baz=15,slow=6.0,SNR=4.0
MNK   Minsk            138.35 337 i PKiKP    PKPdf     08 12 47.3 -2.0
      comp=E,19nm,0.9s
MNK                               i PKiKP    PKPdf     08 12 47.3 -2.0
      comp=N,15nm,0.7s
MNK                               i PKiKP    PKPdf     08 12 47.3 -2.0
      comp=Z,24nm,0.6s,baz=38
MNK                               i pPKiKP   pPKPdf    08 14 47.5 -2.4
MNK                               i sPKiKP   sPKPdf    08 15 36.1 -3.7
MNK                               i PP       PP        08 15 44.6 -0.8
MNK                               i PPP      PPP       08 18 48.8
MNK                               i SKS      SKSdf     08 19 06.3 -4.6
MNK                               i SKKS     SKKSdf    08 28 38.8 -7.3
MNK                               i SS       SS        08 32 44.6  -32
MNK                               i SSS      SSS       08 38 33.9
AKASG Malin Array Be   140.68 333  PKhKP     PKPpre    08 12 46.8
      comp=Z,1.6nm,0.5s,baz=44,slow=4.1,SNR=14
AKASG                              PKP       PKPdf     08 12 53.2 -0.4
      comp=Z,3.0nm,0.6s,baz=47,slow=3.8,SNR=6.7
AKASG                              SKPbc     SKiKP     08 15 43.4 -0.3
      comp=Z,1.4nm,0.7s,baz=41,slow=3.6,SNR=5.2
AKASG                              PP        PP        08 15 57.8 -1.9
      comp=Z,0.2nm,0.4s,baz=45,slow=4.1,SNR=4.1
EKA   Eskdalemuir Ar   142.43   5  PKhKP     PKPpre    08 12 52.7
      comp=Z,3.6nm,0.8s,baz=3.7,slow=3.1,SNR=6.6
BSEG  Bad Segeberg     143.44 352 ePKPbc     PKPab     08 12 56.7 +0.2
      baz=15,slow=2.8
KWP   Kalwaria Pacla   144.17 337 ePKP       PKPbc     08 12 59.8 +0.5
WME   Myndd Eilian     144.24   6 eP         PKPbc     08 12 59.0 -0.3
RUE   Ruedersdorf      144.24 348 ePKPbc     PKPbc     08 12 59.8 +0.5
      baz=15,slow=2.8
VASR  Vaslui           144.24 329 ⇓P         PKPbc     08 12 59.9 +0.2
WLF1  Llynfaes         144.33   6 eP         PKPbc     08 12 59.1 -0.6
LBWR  Ladybower, Pea   144.45   4 eP         PKPbc     08 12 59.8 -0.2
YLL   Llanberis        144.50   6 eP         PKPbc     08 13 00.2  0.0
OJC   Ojcow            144.69 340 ePKP       PKPab     08 13 01.8 +0.3
TLCR                   144.72 326 ⇓P         PKPab     08 13 02.7 +1.0
BURAR Bucovina Array   144.73 332 ⇑P         PKPab     08 13 02.4 +0.5
RETH  Rethem/Aller,    144.74 352 ePKPbc     PKPbc     08 13 01.3 +0.4
      baz=15,slow=2.8
GHRR                   144.84 329 ⇓P         PKPab     08 13 02.7 +0.6
LLW   Llanuwychllyn    144.84   6 eP         PKPdf     08 13 00.6 -0.2
FOEL  Foel Wylfa       144.85   5 eP         PKPdf     08 13 01.2 +0.3
FLTG  Flechtingen      144.85 350 ePKPbc     PKPdf     08 13 01.4 +0.5
      baz=15,slow=2.8
NRDL  Niedersach Rie   144.87 351 ePKPbc     PKPbc     08 13 01.8 +0.5
      baz=15,slow=2.8
STHS  Stebnicka Huta   144.88 338 ePKP       PKPdf     08 13 01.4 +0.3
TESR  Tescani          144.89 330 ⇓P         PKPab     08 13 02.6 +0.2
KOLS  Kolonicke sedl   144.90 336 ePKP       PKPab     08 13 02.7 +0.4
IWEX  Carrickbyrne,    144.92   9 eP         PKPdf     08 13 00.5 -0.5
BRTR  Keskin Array B   144.97 315  PKP       PKPbc     08 13 02.6 +0.3
      comp=Z,9.6nm,0.5s,baz=118,slow=3.8,SNR=44
BRTR                               pPKP      pPKPdf    08 15 01.4 -1.7
      comp=Z,1.5nm,0.9s,baz=124,slow=1.1,SNR=3.2
KIRS  Kirsehir-Merke   145.07 314 ⇑P         PKPbc     08 13 03.1 +0.5
CFR   Carcaliu         145.08 327 ⇑P         PKPab     08 13 03.4 +0.3
ONER  Baraj Valea Uz   145.14 330 ⇓P         PKPab     08 13 03.4 +0.1
ASSE  Asse, Remlinge   145.14 351 ePKPbc     PKPbc     08 13 02.4 +0.3
      baz=15,slow=2.8
TPGR  Topolog          145.15 326 ⇑P         PKPbc     08 13 02.9 +0.4
KSP   Ksiaz            145.17 344 ePKP       PKPab     08 13 03.5 +0.2
NIE   Niedzica         145.21 339 ePKP       PKPbc     08 13 03.4 +0.8
HLM1  Long Mynd        145.24   5 eP         PKPdf     08 13 02.3 +0.7
VRI   Vrincioaia       145.31 329 ⇓P         PKPbc     08 13 03.2 +0.3
IBBN  Ibbenburen       145.35 354 ePKPbc     PKPbc     08 13 03.2 +0.4
      baz=15,slow=2.8
PLOR  Plostina         145.36 329 ⇑P         PKPbc     08 13 03.8 +0.7
TIRR  Tirgusor         145.41 326 ⇑P         PKPbc     08 13 03.9 +0.6
BMR   Baia Mare        145.43 334 ⇓P         PKPbc     08 13 03.7 +0.5
OSTC  Ostas            145.45 344 ePKP       PKPab     08 13 04.5 +0.1
ANTO  Ankara           145.47 316 ⇑P         PKPbc     08 13 04.6 +0.9
CHVC  Chvalec          145.47 344 ePKP       PKPab     08 13 04.8 +0.3
CLL   Collm            145.51 348 ePKPbc     PKPbc     08 13 03.8 +0.5
      baz=15,slow=2.8
CLL                               epPKPbc    pPKPab    08 15 01.3 +0.4
CLL   Collm            145.51 348 i PKPbc    PKPbc     08 13 03.6 +0.3
      comp=Z,34nm,0.7s
ARCR  ARCALIA          145.51 333 ⇑P         PKPab     08 13 04.8  0.0
HARR  Harsova          145.51 326 ⇓P         PKPbc     08 13 04.4 +0.9
TURR  Turia            145.52 330 ⇑P         PKPbc     08 13 04.2 +0.7
UPC   Upice            145.55 344 ePKP       PKPbc     08 13 04.3 +0.8
STEB  Steborice        145.57 342 ePKP       PKPbc     08 13 04.2 +0.6
OZUR                   145.60 330 ⇑P         PKPbc     08 13 03.9 +0.1
RSBS  Rosebush, Pemb   145.61   7 eP         PKPdf     08 13 02.9 +0.7
DPC   Dobruska-Polom   145.61 344 ePKP       PKPbc     08 13 04.6 +0.9
BRG   Berggiesshubel   145.72 346 ePKPbc     PKPbc     08 13 04.4 +0.5
      baz=15,slow=2.8
BRG   Berggiesshubel   145.72 346⇓iPKP       PKPbc     08 13 04.5 +0.5
BRG                                Amp                 08 13 05.2
      comp=Z,14nm,0.8s
LANS  Liptovska Anna   145.72 339 ePKP       PKPab     08 13 05.7 +0.1
KRLC  Kraliky          145.74 343 ePKP       PKPbc     08 13 04.9 +0.8
MCH1  Michaelchurch    145.75   5 eP         PKPdf     08 13 03.5 +1.0
MORC  Moravsky Berou   145.78 342 ePKP       PKPbc     08 13 04.9 +0.7
MORC  Moravsky Berou   145.78 342 ⇑P         PKPbc     08 13 04.9 +0.7
GTTG  Gottingen        145.81 351 ePKPbc     PKPbc     08 13 04.9 +0.7
      baz=15,slow=2.8
NEUB  Neuenburg        145.84 349 ePKPbc     PKPbc     08 13 05.0 +0.7
      baz=15,slow=2.8
DOPR  Dopca            145.88 330 ⇑P         PKPab     08 13 05.9 -0.3
PVCC  Panska Ves       145.89 346 ePKP       PKPbc     08 13 05.5 +1.1
MONM  Monmouth         145.92   5 eP         PKPbc     08 13 04.0 -0.4
ISR   Istrita          145.93 328 ⇓P         PKPbc     08 13 05.3 +0.4
MLR   Muntele Rosu     145.96 329  PKPbc     PKPbc     08 13 05.8 +0.8
      comp=Z,8.8nm,0.8s,baz=25,slow=4.4,SNR=13
MLR   Muntele Rosu     145.96 329 ⇓P         PKPab     08 13 06.4 -0.3
MAUC  Maruska          146.06 341 ePKP       PKPbc     08 13 06.0 +1.0
BUG   Bochum--Univer   146.25 354 ePKPbc     PKPbc     08 13 06.5 +1.1
      baz=15,slow=2.8
KASTN Kahler Asten     146.36 353 ePKPbc     PKPbc     08 13 06.2 +0.4
      baz=15,slow=2.8
MARR  Marisel-Cluj     146.37 333 ⇓P         PKPbc     08 13 06.6 +0.6
MMAI  Mount Meron Ar   146.37 303  PKPbc     PKPbc     08 13 07.3 +0.9
      comp=Z,27nm,0.6s,baz=69,slow=4.6,SNR=28
MMAI                               pPKP      pPKPbc    08 15 06.0 +0.3
      comp=Z,1.1nm,0.3s,baz=107,slow=1.5,SNR=2.9
PRU   Pruhonice        146.40 345 ePKP       PKPbc     08 13 06.8 +0.9
MOX   Moxa             146.41 349 ePKPbc     PKPbc     08 13 06.2 +0.3
      baz=15,slow=2.8
GOPC  GO Pecny, Ondr   146.41 345 ePKP       PKPbc     08 13 06.7 +0.8
VOIR                   146.43 330 ⇓P         PKPbc     08 13 06.6 +0.4
DRGR                   146.45 334 ⇑P         PKPbc     08 13 07.0 +0.7
TANN  Tannenbergstha   146.46 348 ePKPbc     PKPbc     08 13 06.7 +0.6
      baz=15,slow=2.8
VRAC  Vranov           146.48 342  PKPbc     PKPbc     08 13 05.9 -0.3
      comp=Z,8.7nm,1.0s,baz=355,slow=1.7,SNR=10
VRAC                               pPKP      pPKPbc    08 15 06.2 +1.2
      comp=Z,2.1nm,0.4s,baz=39,slow=2.8,SNR=2.0
VRAC  Vranov           146.48 342 ePKP       PKPbc     08 13 06.8 +0.7
VYHS  Vyhne            146.50 339 ePKP       PKPbc     08 13 07.4 +1.2
UBBA  Unterbreizbach   146.51 351 ePKPbc     PKPbc     08 13 06.3 +0.3
      baz=15,slow=2.8
JAVC  Velka Javorina   146.56 341 ePKP       PKiKP     08 13 08.2 -0.4
PSZ   Piszkesteto      146.63 338 ⇓P         PKPbc     08 13 07.1 +0.4
ARR   Arges            146.68 330 ⇑P         PKPdf     08 13 05.4 +1.1
KRUC  Moravsky         146.76 343 ePKP       PKPbc     08 13 07.6 +0.7
MANZ  Manzenberg       146.94 348 ePKPbc     PKPbc     08 13 08.0 +0.6
      baz=15,slow=2.8
ZVC   Zvikov           147.00 345 ePKP       PKPbc     08 13 08.6 +1.1
HMNX  Herstmonceux     147.07   2 eP         PKPdf     08 13 00.2 -4.5
UCC   Uccle            147.11 357 dPKiKP     PKPbc     08 13 08.3 +0.5
MODS  Modra-Piesok     147.11 341 ePKP       PKPbc     08 13 09.0 +1.1
ROTZ  Rotzenmuhle      147.13 348 ePKPbc     PKPbc     08 13 08.6 +0.8
      baz=15,slow=2.8
MEM   Membach          147.19 355 dPKiKP     PKPbc     08 13 08.4 +0.4
BTNL  Ternell          147.20 355 dPKiKP     PKPbc     08 13 08.6 +0.5
BSTI  Sart Tilman      147.25 356 dPKiKP     PKPbc     08 13 08.8 +0.7
TNS   Taunus Mts       147.32 352 ePKPbc     PKPbc     08 13 08.7 +0.3
      baz=15,slow=2.8
GRF   Grafenberg Arr   147.40 349 ePKPbc     PKPbc     08 13 09.6 +1.0
      baz=15,slow=2.8
KHC   Kasperske Hory   147.43 346 ePKP       PKPbc     08 13 09.3 +0.6
BCLA  Clavier          147.43 356 dPKP       PKPbc     08 13 09.6 +1.0
BGES  Gesves           147.48 356 dPKiKP     PKPbc     08 13 08.9 +0.1
SURR  Surduc           147.52 333 ⇑P         PKPbc     08 13 09.2 +0.2
WET   Wettzell         147.58 347 ePKPbc     PKPbc     08 13 09.6 +0.5
      baz=15,slow=2.8
BMRD  Maredsous        147.58 357 dPKiKP     PKPbc     08 13 09.2 +0.2
GEC2  GERESS Array S   147.67 345 ePKPbc     PKPbc     08 13 09.8 +0.4
      baz=15,slow=2.8
GERES GERESS Array B   147.67 345  PKPbc     PKPbc     08 13 09.4  0.0
      comp=Z,11nm,0.8s,baz=16,slow=1.9,SNR=29
DOU   Dourbes          147.80 357 dPKiKP     PKPbc     08 13 10.1 +0.6
BZS   Buzias           147.84 334 ⇓P         PKPbc     08 13 10.3 +0.5
CONA  Conrad Observa   147.93 342 i PKiKP    PKPbc     08 13 11.2 +1.1
      comp=Z,20nm,1.0s,SNR=12
RONA  Rosalia, Austr   148.01 342 i PKiKP    PKPbc     08 13 11.2 +1.0
      comp=Z,21nm,1.0s,SNR=7.6
HERR  Herculane        148.07 332 ⇓P         PKPbc     08 13 10.5 +0.1
WLF   Walferdange      148.12 355 dPKiKP     PKiKP     08 13 11.5 -0.2
WLF   Walferdange      148.12 355 ePKPbc     PKiKP     08 13 11.6 -0.2
      baz=15,slow=2.8
BAND  Balkesir-Ban     148.19 320 ⇑P         PKPbc     08 13 11.2 +0.3
DJES  Djerdap          148.19 332 ⇓P         PKPbc     08 13 10.5 -0.3
MOA   Molln            148.45 344 i PKiKP    PKPbc     08 13 12.1 +0.8
      comp=Z,11nm,0.9s
MORH  Mrgy, Hungar     148.53 337 ⇑P         PKPbc     08 13 11.9 +0.3
JSA   Saint Aubin      148.61   5 eP         PKPbc     08 13 11.6  0.0
ARSA  Arzberg          148.65 342 i PKiKP    PKPbc     08 13 12.3 +0.4
      comp=Z,8.2nm,1.0s
BIOA  Bad Ischl, Aus   148.76 345 i PKiKP    PKPbc     08 13 12.5 +0.4
      comp=Z,12nm,1.0s
FUR   Furstenfeldbru   148.84 348 ePKPbc     PKPbc     08 13 13.1 +0.8
      baz=15,slow=2.8
RJOB  Jochberg         148.92 346 ePKPbc     PKPbc     08 13 12.5  0.0
      baz=15,slow=2.8
FRGS  Fruska Gora      148.96 335 eP         PKPbc     08 13 12.9 +0.2
CAVK  Edirne/Enez-Ca   149.13 322 ⇑P         PKPbc     08 13 12.7 -0.5
BFO   Black Forest     149.19 352 ePKPbc     PKPbc     08 13 13.3 +0.1
      baz=15,slow=2.8
LESA  Schwarzleotal    149.24 346 i PKiKP    PKPbc     08 13 13.8 +0.4
      comp=Z,6.1nm,0.6s,SNR=5.0
SOKA  Soboth           149.31 342 i PKP      PKPbc     08 13 13.6  0.0
      comp=Z,14nm,1.0s,SNR=6.8
BOVS  Bovan            149.36 331 ⇑P         PKPbc     08 13 13.5 -0.1
UBR   Ueberruh         149.53 349 ePKPbc     PKPbc     08 13 14.5 +0.5
      baz=15,slow=2.8
WATA  Walderalm        149.57 347 i PKiKP    PKPbc     08 13 14.3 +0.1
      comp=Z,26nm,1.2s
TEKS  Tekeris          149.58 335 eP         PKPbc     08 13 14.2  0.0
EZN   Ezine            149.59 321 ⇑P         PKPbc     08 13 14.6 +0.3
OBKA  Obir             149.60 343 i PKP      PKPbc     08 13 13.7 -0.5
      comp=Z,9.2nm,1.2s
WTTA  Wattenberg       149.63 347 i PKiKP    PKPbc     08 13 14.9 +0.5
      comp=Z,24nm,0.7s,SNR=8.5
MOTA  Moosalm          149.66 348 i PKiKP    PKPbc     08 13 14.7 +0.2
      comp=Z,19nm,0.9s,SNR=5.1
MYKA  Terra Mystica    149.74 344 i PKP      PKPbc     08 13 14.0 -0.5
      comp=Z,14nm,1.0s
SQTA  Sankt Quirin     149.76 347 i PKiKP    PKPbc     08 13 15.1 +0.5
      comp=Z,24nm,1.0s,SNR=5.4
ABTA  Abfaltersbach    149.91 345 i PKP      PKPbc     08 13 14.9 -0.1
      comp=Z,27nm,0.9s,SNR=7.2
CRES  Cresnjevec Ost   149.95 341 eP         PKPbc     08 13 15.0  0.0
DAVA  Damuels          149.96 349 i PKiKP    PKPbc     08 13 15.4 +0.2
      comp=Z,19nm,1.0s,SNR=5.5
FETA  Feichten         150.05 348 i PKiKP    PKPbc     08 13 15.6 +0.2
      comp=Z,17nm,0.9s,SNR=5.4
CRNS  Crni Vrh         150.07 343 i PKPbc    PKPbc     08 13 15.3 -0.1
A051A Mrakovica        150.18 338 eP         PKPbc     08 13 16.1 +0.5
BBLS  Lazi&#263i       150.19 334 eP         PKPbc     08 13 16.1 +0.4
HAPS  Han Pijesak,Bl   150.19 335 eP         PKPbc     08 13 16.2 +0.4
VOJS  Vojsko           150.22 343 i PKPbc    PKPbc     08 13 15.5 -0.3
BOJS  Bojanci          150.30 341 eP         PKPbc     08 13 16.1 +0.3
BOJS  Bojanci          150.30 341 i PKPbc    PKiKP     08 13 16.5 +0.2
BLY   Banja Luka       150.31 338 eP         PKPbc     08 13 16.4 +0.5
CEY   Cerknica         150.34 342 eP         PKPbc     08 13 15.2 -0.7
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RUDO	Rudo	150.41	334	*e*P	PKPbc	08 13 15.9	-0.2
SJES	Sjenica	150.43	333	*e*P	PKPbc	08 13 16.4	0.0
DAVOX	Davos/Dischmat	150.44	349	PKPbc	PKPbc	08 13 16.6	+0.2
	comp=Z,16nm,0.5s,baz=346,slow=4.2,SNR=3.0						
SKDS	Skadanscina	150.63	342	*e*P	PKPbc	08 13 16.2	-0.4
VAY	Valandovo	150.68	327	*i* P	PKPbc	08 13 16.6	-0.2
SKO	Skopje	150.76	329	*i* P	PKiKP	08 13 17.7	+0.2
A050A	Klekovaca	150.78	338	*e*P	PKPbc	08 13 16.6	-0.5
UPM	Unac-Piva	150.94	334	*e*P	PKPbc	08 13 17.0	-0.6
BRY	Bratogost	151.34	334	*e*P	PKPbc	08 13 17.1	-1.4
PDG	Podgorica	151.42	332	*e*P	PKPbc	08 13 18.5	+0.1
PDG	Podgorica	151.42	332	⇓P	PKPbc	08 13 18.6	+0.2
TREB	Trebinje	151.57	334	*e*P	PKPbc	08 13 18.1	-0.7
DRME	Dracevica, Mon	151.64	332	*e*P	PKPbc	08 13 19.4	+0.4
STON	Ston	151.71	335	*e*P	PKPbc	08 13 16.6	-2.5
OHR	Ohrid	151.73	329	*i* P	PKiKP	08 13 20.4	+0.9
HCY	Herceg Novi	151.73	333	*e*P	PKPbc	08 13 18.4	-0.8
ESDC	Sonseca Array	157.71	12	PKPab	PKPab	08 13 55.5	-0.6
	comp=Z,2.9nm,1.0s,baz=348,slow=3.6,SNR=7.1						
MDT	Midelt	164.03	20	PKPab	PKPab	08 14 24.8	+0.8
	comp=Z,1.4nm,0.5s,baz=318,slow=7.5,SNR=4.3						
TORD	Torodi Ar. Bea	175.28	178	PKP	PKPdf	08 13 33.1	-1.3
	comp=Z,6.1nm,1.0s,baz=277,slow=1.0,SNR=8.0						
TORD				PKPab	PKPab	08 15 13.8	-0.3
	comp=Z,3.1nm,0.8s,baz=209,slow=2.8,SNR=5.4						
TORD				PP	PP	08 19 03.8	-1.7
	comp=Z,1.4nm,0.9s,baz=200,slow=5.1,SNR=4.2						

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*ASRS **14** 07:55:09.0±1.1, 53°.72N×88°.19E, h0km, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 14 07:55:12.0±2.9**, 53°.62N×88°.04E, h0km, mbtmp3.1**/3**, ML2.6**/3**, Error ellipse: s-maj=27.6km s-min=15.2km az=70.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.94	281	I	I	08 07 41.1	
	0.1nm,1.1s,baz=95,slow=336,SNR=10.0						
ZALV	Zalesovo Beam	1.94	281	Pn	Pn	07 55 45.5	-0.7
	2.3nm,0.3s,baz=94,slow=15,SNR=30						
ZALV				Lg	Lg	07 56 12.6	
	3.8nm,0.3s,baz=103,slow=26,SNR=18						
KURBB	Kurchatov Arra	6.58	247	Pn	Pn	07 56 50.2	+0.3
	0.1nm,0.3s,baz=60,slow=14,SNR=4.7 0.9nm,0.4s						
MKAR	Makanchi Array	7.76	211	Pn	Pn	07 57 06.8	+0.7
	0.1nm,0.3s,baz=26,slow=14,SNR=6.0						
MKAR				Sn	Sn	07 58 35.0	+0.3
	0.1nm,0.3s,baz=30,slow=27,SNR=5.1						
MKAR				Lg	Lg	07 59 17.0	
	0.1nm,0.3s,baz=28,slow=25,SNR=2.9 0.3nm,0.5s						
BVAR	Borovoye Array	10.58	274	Pn	Pn	07 57 44.6	-0.1
	baz=76,slow=14,SNR=3.2 0.6nm,0.5s						

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*NEIC **14** 08:00:00.4±0.8, 58°.43N±0°.03×153°.59W±0°.05, h63km±10km, Error ellipse: s-maj=4.2km s-min=4.1km az=170.0*

AEIC 14 08:00:00.9±0.6**, 58°.42N**±0°.03×**153°.60W**±0°.06**, h66**km±7km**, ML2.5, ML2.4**/24(NEIC)**, Error ellipse: s-maj=4.4km s-min=4.2km az=163.0, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAHG	Katmai Hook Gl	0.50	279		Pn	08 00 13.0	-0.5
KAHG					Sn	08 00 22.8	+0.1
Q19K	Cape Douglas,	0.51	358		Pn	08 00 12.6	-0.9
Q19K				IAML		08 00 28.3	
	comp=E,130nm,0.8s						
SYI	Shuyak Island	0.66	73		Pn	08 00 14.7	-0.5
SYI				IAML		08 00 26.2	
	comp=N,155nm,0.6s						
SYI				IAML		08 00 26.3	
	comp=E,159nm,0.5s						
SYI	Shuyak Island	0.66	73		Sn	08 00 25.1	-0.4
KAHC	Katmai Hardscr	0.77	288		Pn	08 00 15.6	-0.9
KAHC					Sn	08 00 27.1	-0.8
KDAK	Kodiak Island	0.84	139		Pn	08 00 16.6	-0.6
KDAK				IAML		08 00 31.0	
	comp=E,95nm,0.5s						
KDAK				IAML		08 00 31.1	
	comp=E,112nm,0.4s						
KDAK	Kodiak Island	0.84	139		Sn	08 00 28.7	-0.5
ACHA	Angle Creek He	0.93	258	Pn	Pn	08 00 17.7	-0.7
ACHA	Angle Creek He	0.93	258		Sn	08 00 31.7	+0.3
AUCH	Augustine Cone	0.95	5		Pn	08 00 18.2	-0.4
R18K	Karluk	0.97	208		Pn	08 00 18.2	-0.6
R18K	Karluk	0.97	208	IAML		08 00 33.1	
	comp=E,107nm,0.4s						
OHAK	Old Harbor	1.22	172	Pn	Pn	08 00 21.3	-0.7
P19K	Oil Pt	1.25	9	Pn	Pn	08 00 21.9	-0.6
P19K				IAML		08 00 45.3	
	comp=E,48nm,0.5s						
P18K	Big Mountain,	1.29	320	Pn	Pn	08 00 21.8	-1.2
P18K				IAML		08 00 38.2	
	comp=E,51nm,1.0s						
P18K				IAML		08 00 38.2	
	comp=N,51nm,0.3s						
ILS	Iliamna Low So	1.56	10		Pn	08 00 25.9	-0.8
ILSW	Iliamna Southw	1.58	8		Pn	08 00 25.8	-1.2
ILSW				IAML		08 01 25.7	
	comp=E,55nm,1.5s						
HOM	Homer	1.60	38	Pn	Pn	08 00 26.5	-0.6
CNPM	China Poot	1.65	47	Pn	Pn	08 00 26.9	-0.9
O18K	Koktuh Hills	1.66	331	Pn	Pn	08 00 26.4	-1.4
O18K				IAML		08 01 20.9	
	comp=E,45nm,0.6s						
O18K				IAML		08 01 21.9	
	comp=N,40nm,1.0s						
P17K	Kvichak River	1.67	299		Pn	08 00 27.4	-0.6
O20K	Slope Mountain	1.74	16		Pn	08 00 28.6	-0.4
O19K	Port Alsworth	1.82	349	Pn	Pn	08 00 29.1	-0.9
SII	Sitkinak Islan	1.89	190	Pn	Pn	08 00 29.6	-1.4
BRSE	Bradley Lake S	1.98	47		Pn	08 00 31.2	-1.0
RED	Redoubt Volcan	2.05	12		Pn	08 00 32.3	-0.9
RDSO	Redoubt South	2.09	12		Pn	08 00 32.9	-0.8
RDWB	Redoubt West	2.11	10		Pn	08 00 33.6	-0.5
NCT	North Crescent	2.17	9		Pn	08 00 34.4	-0.5
RDT	Redoubt	2.24	15		Pn	08 00 35.2	-0.6
P16K	Nushagak River	2.37	287	Pn	Pn	08 00 36.6	-0.8
N19K	Bonanza Creek	2.44	350	Pn	Pn	08 00 37.8	-0.7
N18K	Kilae Creek	2.55	334	Pn	Pn	08 00 38.8	-1.0
O16K	Kokwok River B	2.60	299	Pn	Pn	08 00 39.8	-0.8
SLKM	Skilak Lake	2.71	38	Pn	Pn	08 00 40.0	-2.2
SEW	Seward	2.72	50	Pn	Pn	08 00 40.3	-1.9
STLK	Strandline Lak	3.21	15	Pn	Pn	08 00 47.7	-1.3
O15K	Ungalikthiuk R	3.33	286	Pn	Pn	08 00 50.0	-0.4
SUA	Susitna One	3.37	24	Pn	Pn	08 00 50.3	-0.9
M20K	Styx River	3.48	4	Pn	Pn	08 00 52.5	-0.2
M19K	Big River Lodg	3.52	354	Pn	Pn	08 00 52.3	-0.8
M17K	Holitna River	3.56	329	Pn	Pn	08 00 53.0	-0.6
PWL	Port Wells	3.62	45	Pn	Pn	08 00 52.6	-1.9
N15K	Kwethluk River	3.76	301		Pn	08 00 56.5	+0.2
M16K	Timber Creek	3.76	316	Pn	Pn	08 00 55.9	-0.5
GHO	Glory Hole Cre	4.10	33	Pn	Pn	08 00 59.6	-1.4
L18K	Granite Mounta	4.11	339	Pn	Pn	08 01 00.1	-1.0

NOU 14 08:04:00.9, 10°.40S×161°.10E, h3km, MLv3.5/8**, Solomon Islands, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HURO	Huro Makira	0.79	95	P	Pg	08 04 15.8	-0.3
HURO	Huro Makira	0.79	95	S	Sb	08 04 27.5	-1.0
NGOA	Tingoa Renbel	1.54	222	P	Pn	08 04 28.6	-0.6
NGOA	Tingoa Renbel	1.54	222	S	Sn	08 04 49.0	-0.7
ALEG	Aligegeo Malai	1.68	346	P	Pn	08 04 30.4	-0.9
ALEG	Aligegeo Malai	1.68	346	S	Sn	08 04 52.7	-0.7
TATA	Tatamba Isabel	2.37	327	P	Pn	08 04 41.5	+0.7
TATA	Tatamba Isabel	2.37	327	P	Sn	08 05 11.5	+1.1

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*DJA **14** 08:08:39.1±1.9, 3°N±6°×12°7E±°, h22km±19km, M3.1/5, MLv3.1/5*

IDC 14 08:08:26.7±1.9**, 2°.85N×126°.97E, h0km, mb3.4**/4**, mbtmp3.5**/4**, MS3.5**/1**, Error ellipse: s-maj=153.8km s-min=23.2km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.10	169	P	Pg	08 09 09.4	+2.3
WRA	Warramunga Arr	23.78	163	P	P	08 13 40.8	-0.4
	0.3nm,0.4s,baz=342,slow=10,SNR=9.6 0.3nm,0.4s						
ASAR	Alice Springs	27.21	166	P	P	08 14 12.5	0.0
	0.2nm,0.3s,baz=346,slow=11,SNR=5.2 0.2nm,0.3s						
KLR	Kul'dur	46.38	4	LR	LR	08 36 13.5	
	comp=Z,66nm,21.8s,baz=243,slow=36						
MKAR	Makanchi Array	58.41	325	P	P	08 18 23.2	-1.0
	0.2nm,0.4s,baz=121,slow=6.8,SNR=2.4 0.2nm,0.4s						
KURBB	Kurchatov Arra	62.60	328	P	P	08 18 53.9	+1.2
	0.3nm,0.3s,baz=129,slow=5.9,SNR=2.3 0.3nm,0.3s						

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*IDC **14** 08:12:03.2±1.5, 1°.91N×127°.44E, h0km, mb3.9/5, mbtmp3.8/6, ML3.8/1, Error ellipse: s-maj=109.1km s-min=18.7km az=68.0*

*DJA **14** 08:12:17.8±0.7, 2°N±4°×12°7E±°, h127km±10km, M3.8/7, MLv3.8/7*

ISC 14 08:12:19.3±1.1**, 1°.6N**±0°.1×**127°.1E**±0°.2**, h150km, n10, σ1s.90**/10**, mb3.9**/5**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.90	162	P	Pn	08 12 41.2	-2.1
SGSI	Sangihe	2.57	322	P	Pn	08 12 58.7	-2.6
SANI	Sanana	3.83	197	P	Pn	08 13 16.4	-0.9
NLAI	Namlea	4.84	180	P	Pn	08 13 28.5	-2.2
FITZ	Fitzroy Crossi	19.66	184	P	P	08 16 36.5	-0.2
	0.2nm,0.3s,baz=14,slow=12,SNR=1.6 1.0nm,0.5s						
WRA	Warramunga Arr	22.59	162	P	P	08 17 07.3	-0.1
	2.3nm,0.4s,baz=341,slow=9.9,SNR=42 2.3nm,0.4s						
ASAR	Alice Springs	26.01	166	P	P	08 17 39.3	+0.8
	0.4nm,0.3s,baz=346,slow=11,SNR=10 0.4nm,0.3s						
STKA	Stephens Creek	36.06	159	P	P	08 19 06.9	+0.4
	0.6nm,0.3s,baz=348,slow=10,SNR=5.8 0.6nm,0.3s						
MKAR	Makanchi Array	59.48	326	P	P	08 22 08.9	+2.3
	0.8nm,0.5s,baz=126,slow=8.6,SNR=8.0 0.8nm,0.5s						
KURBB	Kurchatov Arra	63.69	328	P	P	08 22 36.1	+1.4
	0.5nm,0.5s,baz=123,slow=5.5,SNR=4.1 0.5nm,0.5s						

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*ASRS **14** 08:24:24.0±1.1, 54°.69N×83°.59E, h0km, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 14 08:24:25.1±1.7**, 54°.71N×83°.83E, h0km, mbtmp2.9**/3**, ML2.5**/3**, Error ellipse: s-maj=15.8km s-min=10.1km az=15.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.96	142	I	I	08 29 40.0	
	baz=320,slow=310,SNR=1.1						
ZALV	Zalesovo Beam	0.96	142	Pg	Pg	08 24 43.1	-0.3
	3.3nm,0.3s,baz=322,slow=13,SNR=18						
ZALV				Lg	Lg	08 24 57.5	
	11nm,0.3s,baz=327,slow=29,SNR=30						
KURBB	Kurchatov Arra	5.21	220	Pn	Pn	08 25 44.5	+0.3
	0.1nm,0.3s,baz=39,slow=14,SNR=4.6						
KURBB				Lg	Lg	08 27 11.3	
	0.1nm,0.3s,baz=40,slow=31,SNR=4.9 0.4nm,0.3s						
MKAR	Makanchi Array	7.98	188	Pn	Pn	08 26 22.0	-0.3
	0.1nm,0.3s,baz=10,slow=12,SNR=4.6						
MKAR				Lg	Lg	08 28 36.9	
	0.1nm,0.3s,baz=1.4,slow=31,SNR=3.2 0.2nm,0.4s						
BVAR	Borovoye Array	8.12	264	Pn	Pn	08 26 23.2	-0.9
	0.1nm,0.3s,baz=74,slow=17,SNR=5.6 0.9nm,0.4s						

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*IDC **14** 08:27:59.6±1.4, 29°.74S×179°.15W, h330km±15km, mb2.8/3, mbtmp3.6/4, Error ellipse: s-maj=32.0km s-min=24.4km az=92.0*

ISC 14 08:28:00.2±1.3**, 29°.8S**±0°.1×**179°.0W**±0°.2**, h350km, n6, σ2s.83**/6**, mb3.0**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.12	58	P	Pn	08 28 44.2	-2.3
	292nm,0.3s,baz=188,slow=22,SNR=6.8						
URZ	Urewera	8.99	200	P	Pn	08 30 06.5	+0.5
	6.7nm,0.8s,baz=355,slow=4.4,SNR=7.3						
URZ				S	S	08 31 45.9	-2.9
	6.2nm,0.3s,baz=169,slow=22,SNR=10						
ASAR	Alice Springs	42.27	267	P	P	08 35 20.9	+0.1
	0.2nm,0.4s,baz=103,slow=7.8,SNR=6.6 0.2nm,0.4s						
WRA	Warramunga Arr	43.20	272	P	P	08 35 28.4	+0.2
	0.3nm,0.3s,baz=110,slow=8.0,SNR=14 0.3nm,0.3s						
QSPA	South Pole Qui	60.26	180	P	P	08 37 35.7	+3.2
	0.9nm,1.0s,baz=201,slow=4.4,SNR=1.6 0.9nm,1.0s						
FINES	FINESS Array B	144.32	340	PKP	PKPbc	08 46 52.5	-1.1
	0.7nm,0.4s,baz=59,slow=4.9,SNR=5.7						

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*GCG **14** 08:41:13.4±1.9, 14°.10N×93°.27W, h36km±999km, MD4.4, ML4.2, MW3.9*

*IDC **14** 08:41:17.8±2.5, 15°.59N×92°.35W, h0km, mb3.5/4, mbtmp3.6/7, ML4.5/2, MS3.8/3, Error ellipse: s-maj=85.9km s-min=30.9km az=39.0*

*CATAC **14** 08:41:17.8±0.5, 14°N±2°×9°3W±°, h8km±3km, M4.4/30, mb4.4/4, mB6.0/3, MLv4.2/30, Mw(mB)5.7/3, Error ellipse: s-maj=6.5km s-min=5.1km az=86.0, confirmed*

ISC 14 08:41:16.8±1.0**, 14°.25N**±0°.06×**93°.11W**±0°.07**, h35km, n78, σ1s.92**/77**, mb3.5**/4**, MS3.8**/3**, 22C-8D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.05	51	*i* P	Pn	08 41 33.8	-1.3
THIG				*i* S	Sn	08 41 49.8	+1.2
THIG				IAML		08 41 51.7	
	comp=N,2μm,0.5s						
SMCA	Catarina	1.17	59	*e*P	Pn	08 41 35.6	-1.1
SMCA				IAML		08 42 05.3	
	comp=N,979nm,0.7s						
RTAL	Retalhuleu	1.40	78	S	Sn	08 41 56.8	-0.4
RTAL	Retalhuleu	1.40	78	⇓P	Pn	08 41 40.1	+0.2
STG8	El Palmar, Qui	1.72	83	*e*P	Pn	08 41 41.5	-3.0
STG8				IAML		08 42 10.1	
	comp=N,2μm,0.3s						
STG0	El Palmar, Qui	1.73	84	IAML		08 42 08.8	
	comp=E,2μm,0.3s						
HUEH	Huehuetenango	1.89	55	*i* P	Pn	08 41 47.2	+0.4
HUEH				IAML		08 42 24.4	
	comp=E,3μm,0.6s						
HUEH	Huehuetenango	1.89	55	S	Sn	08 42 10.2	+0.7
HUEH	Huehuetenango	1.89	55	⇑P	Pn	08 41 47.3	+0.6
CCIG	Comitan	2.23	25	*i* P	Pn	08 41 52.0	+0.5
CCIG				*i* S	Sn	08 42 22.7	+4.7
CCIG				IAML		08 42 28.1	
	comp=N,821nm,0.4s						
CCIG	Comitan	2.23	25	S	Sn	08 42 20.9	+3.0
CCIG	Comitan	2.23	25	⇓P	Pn	08 41 52.8	+1.3
FG8	Yepocapa, Chim	2.47	89	*i* P	Pn	08 41 48.3	-6.4
FG8				*i* S	Sn	08 42 16.7	-7.1
TGIG		2.52	360	*i* P	Pn	08 41 54.3	-1.0
TGIG				*i* S	Sn	08 42 24.9	0.0
TGIG				IAML		08 42 28.5	
	comp=E,401nm,0.8s						
FG16	Alotenango, Sa	2.52	89	*i* P	Pn	08 41 49.7	-5.8
FG16				*i* S	Sn	08 42 18.8	-6.3
FG16				IAML		08 42 23.9	
	comp=N,3μm,0.4s						
FAME	Alcaldia de Sa	3.03	97	S	Sn	08 42 39.2	+1.7
FAME	Alcaldia de Sa	3.03	97	⇑P	Pn	08 42 03.0	+0.6
SLOZ	Alcaldia de Sa	3.24	93	S	Sn	08 42 43.9	+1.4
SLOZ	Alcaldia de Sa	3.24	93	⇓P	Pn	08 42 05.4	+0.3
LOAL	Lomas de Alarc	3.24	94	S	Sn	08 42 44.0	+1.3
LOAL	Lomas de Alarc	3.24	94	⇑P	Pn	08 42 06.2	+1.0
NUBE	Las Nubes	3.25	96	*i* P	Pn	08 42 05.6	+0.1
NUBE	Las Nubes	3.25	96	S	Sn	08 42 44.3	+1.2
NUBE	Las Nubes	3.25	96	⇓P	Pn	08 42 05.7	+0.2
CEVE	Cerro Verde	3.41	97	S	Sn	08 42 48.2	+1.1
CEVE	Cerro Verde	3.41	97	⇑P	Pn	08 42 08.3	+0.6
UNIC	Universidad Ca	3.47	94	S	Sn	08 42 49.6	+1.3
UNIC	Universidad Ca	3.47	94	⇑P	Pn	08 42 09.9	+1.5
JAYA	Jayaque - finc	3.60	99	S	Sn	08 42 53.0	+1.2
JAYA	Jayaque - finc	3.60	99	⇑P	Pn	08 42 11.5	+1.2
MTO3	Montecristo	3.64	87	S	Sn	08 42 53.5	+0.7
MTO3	Montecristo	3.64	87	P	Pn	08 42 11.9	+1.0
ESQI	Esquipulas	3.67	85	⇑P	Pn	08 42 12.1	+0.9
PMON	Piamonte	3.72	98	S	Sn	08 42 56.5	+1.8
PMON	Piamonte	3.72	98	⇑P	Pn	08 42 13.0	+1.0
LALI	Alcalda de L	3.76	101	P	Pn	08 42 13.5	+1.2
LALI	Alcalda de L	3.76	101	S	Sn	08 42 57.0	+1.6
UEES	Universidad Ev	3.80	97	S	Sn	08 42 57.7	+1.3
UEES	Universidad Ev	3.80	97	⇑P	Pn	08 42 14.1	+1.2
SEMO	Seminario San	3.81	98	S	Sn	08 42 58.3	+1.5
SEMO	Seminario San	3.81	98	⇑P	Pn	08 42 14.5	+1.3
UTEC	Universidad Te	3.83	98	S	Sn	08 42 58.6	+1.2
UTEC	Universidad Te	3.83	98	⇑P	Pn	08 42 14.7	+1.2
IGN	Direccin Gen	3.86	97	S	Sn	08 42 59.5	+1.5
IGN	Direccin Gen	3.86	97	⇑P	Pn	08 42 14.7	+0.9
LOMA	Loma Larga	3.87	98	S	Sn	08 42 59.9	+1.5
LOMA	Loma Larga	3.87	98	⇓P	Pn	08 42 15.4	+1.4
PAVA	Las Pavas	4.09	97	⇓P	Pn	08 42 18.3	+1.3
PETF	Flores	4.10	49	*i* P	Pn	08 42 17.6	+0.6
PETF	Flores	4.10	49	S	Sn	08 43 05.9	+2.0
PETF	Flores	4.10	49	⇑P	Pn	08 42 18.8	+1.7
COEG	Centro de Oper	4.16	98	S	Sn	08 43 06.5	+1.2
COEG	Centro de Oper	4.16	98	⇑P	Pn	08 42 19.0	+1.1
SCLA	Alcaldia de Sa	4.29	97	S	Sn	08 43 10.0	+1.5
SCLA	Alcaldia de Sa	4.29	97	⇓P	Pn	08 42 21.3	+1.7
PQSS	Presa 15 de Se	4.46	97	⇑P	Pn	08 42 23.0	+1.0
ALJI	Alcalda de J	4.51	101	⇑P	Pn	08 42 23.7	+1.1
PACA	Pacayal	4.71	99	S	Sn	08 43 20.5	+1.4
PACA	Pacayal	4.71	99	⇑P	Pn	08 42 26.5	+0.9
RANC	El Ranchito	4.75	99	S	Sn	08 43 20.8	+0.7
RANC	El Ranchito	4.75	99	⇑P	Pn	08 42 27.7	+1.6
CNRM	Centro Naciona	4.86	98	⇑P	Pn	08 42 29.1	+1.6
LCND	La Caada	5.16	100	⇑P	Pn	08 42 33.0	+1.4
CNCH	Conchagua	5.22	100	S	Sn	08 43 33.2	+1.6
CNCH	Conchagua	5.22	100	⇑P	Pn	08 42 33.6	+1.1
POTN	Potosi Cosigui	5.59	102	⇓P	Pn	08 42 38.8	+1.3
POTN				S	Sn	08 43 42.0	+1.5
TGUH	Tegucigalpa,Un	5.67	91	P	Pn	08 42 39.7	+1.1
LIMN	Finca el Limon	6.66	99	⇑P	Pn	08 42 53.9	+1.6
JTS	Las Juntas de	8.89	115	Pn	Pn	08 43 28.5	+5.7
	comp=N,0.8nm,0.3s,baz=133,slow=22,SNR=2.1 comp=N,1.6nm,0.5s						
TXAR	Lajitas Array	17.91	329	P	Pn	08 45 21.7	-1.6
	comp=N,0.6nm,0.9s,baz=147,slow=13,SNR=6.8						
LPIG	La Paz	18.95	304	P	Pn	08 45 41.4	+5.5
	comp=N,10.0nm,0.3s,baz=152,slow=1.9,SNR=6.9 comp=N,4.7nm,0.3s						
ANMO	Albuquerque	23.87	332	P	P	08 46 24.1	-3.2
	comp=N,0.7nm,0.6s,baz=223,slow=9.0,SNR=3.5 comp=N,0.7nm,0.6s						
NVAR	Mina Array Bea	32.81	322	P	P	08 47 47.5	+0.2
	comp=N,0.4nm,0.6s,baz=124,slow=5.4,SNR=4.7 comp=N,0.4nm,0.6s						
SIV	San Ignacio	43.65	132	LR	LR	09 05 45.2	
	comp=N,120nm,21.8s,baz=296,slow=33						
YKA	Yellowknife Ar	50.55	347	P	P	08 50 09.9	-1.6
	comp=N,1.4nm,0.8s,baz=155,slow=6.8,SNR=17 comp=N,1.4nm,0.8s						
BDFB	Brasilia	53.56	122	LR	LR	09 15 58.8	
	comp=N,190nm,21.1s,baz=299,slow=39						
SFJD	Kangerlussuaq	59.61	18	LR	LR	09 18 15.0	
	comp=N,35nm,18.3s,baz=52,slow=38						
ILAR	Eielson Array	62.19	337	P	P	08 51 33.3	-1.2
	comp=N,0.4nm,0.9s,baz=120,slow=3.2,SNR=2.6 comp=N,0.4nm,0.9s						

IDC 14 08:48:48.1±7.0**, 18°.76S×176°.62W, h0km, mb3.9**/2**, mbtmp3.9**/2**, MS3.6**/3**, Error ellipse: s-maj=298.6km s-min=68.7km az=144.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.15	260	P	P	08 57 14.7	-0.1
	0.5nm,0.3s,baz=97,slow=7.5,SNR=31						
WRA				LR	LR	09 14 54.4	
	comp=Z,79nm,18.6s,baz=166,slow=34 0.5nm,0.3s						
ASAR	Alice Springs	46.20	255	P	P	08 57 15.2	-0.1
	1.3nm,0.8s,baz=93,slow=7.9,SNR=15 1.3nm,0.8s						
KDAK	Kodiak Island	78.84	13	LR	LR	09 29 11.3	
	comp=Z,25nm,19.4s,baz=219,slow=31						
ILAR	Eielson Array	86.35	12	LR	LR	09 35 04.1	
	comp=Z,38nm,19.2s,baz=218,slow=32						
BRTR	Keskin Array B	146.58	315	PKPbc	PKPdf	09 08 31.2	+0.6
	0.3nm,0.3s,baz=48,slow=1.8,SNR=2.1						

IDC 14 08:52:00.4±1.9**, 51°.46N×81°.96E, h0km, mbtmp2.2**/2**, ML1.8**/2**, Error ellipse: s-maj=17.9km s-min=15.9km az=162.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	2.32	250	Pg	Pb	08 52 42.1	-1.0
	0.1nm,0.3s,baz=71,slow=18,SNR=4.1						
KURBB				Lg	Lg	08 53 12.8	
	0.1nm,0.3s,baz=72,slow=32,SNR=4.5						
I46RU	ZALESOVO INFRA	3.04	34	I	I	09 08 45.0	
	baz=213,slow=320,SNR=14						
ZALV	Zalesovo Beam	3.04	34	Pn	Pn	08 52 48.6	-1.1
	0.2nm,0.3s,baz=216,slow=11,SNR=2.1						
ZALV				Sn	Sn	08 53 25.9	-0.8
	0.2nm,0.3s,baz=227,slow=23,SNR=2.7 0.6nm,0.4s						
MKAR	Makanchi Array	4.68	177	Pn	Pn	08 53 14.2	+2.0
	0.1nm,0.3s,baz=2.7,slow=11,SNR=2.3						
MKAR				Lg	Lg	08 54 27.9	
	0.1nm,0.3s,baz=6.1,slow=28,SNR=5.6 0.1nm,0.3s						

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*ASRS **14** 09:05:02.0±1.1, 53°.60N×87°.84E, h0km, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 14 09:05:01.1±3.5**, 53°.62N×88°.12E, h0km, mbtmp2.7**/2**, ML2.5**/2**, Error ellipse: s-maj=29.1km s-min=16.9km az=61.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.99	281	I	I	09 16 50.0	
	0.1nm,1.0s,baz=98,slow=327,SNR=44						
ZALV	Zalesovo Beam	1.99	281	Pg	Pn	09 05 36.7	+0.7
	1.3nm,0.3s,baz=97,slow=16,SNR=14						
ZALV				Lg	Lg	09 06 03.3	
	2.8nm,0.3s,baz=98,slow=29,SNR=9.0						
ZALV				I	I	09 16 51.3	
	baz=104,slow=24,SNR=4.4						
KURBB	Kurchatov Arra	6.62	247	Pn	Pn	09 06 41.3	+1.6
	0.1nm,0.3s,baz=64,slow=14,SNR=4.5						
KURBB				Lg	Lg	09 08 31.5	
	0.1nm,0.3s,baz=64,slow=32,SNR=4.6 0.4nm,0.3s						
MKAR	Makanchi Array	7.79	211	Pn	Pn	09 06 55.8	+0.1
	0.1nm,0.3s,baz=27,slow=13,SNR=2.0						
MKAR				Sn	Sn	09 08 24.5	0.0
	0.1nm,0.3s,baz=28,slow=25,SNR=2.1						
MKAR				Lg	Lg	09 09 08.5	
	0.1nm,0.3s,baz=32,slow=34,SNR=6.9 0.1nm,0.3s						
KK31	Karatay Array	15.69	235	Pn	Pn	09 08 42.6	-0.8
	0.3nm,0.1s,baz=204,slow=16,SNR=12						
KK31				Lg	Lg	09 09 15.0	
	0.6nm,0.2s,baz=196,slow=37,SNR=9.0						

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*IDC **14** 09:09:29.0±3.1, 54°.46N×87°.15E, h0km, mbtmp3.1/2, ML2.7/2, Error ellipse: s-maj=26.9km s-min=19.2km az=53.0*

ASRS 14 09:09:29.0±0.7**, 54°.43N×86°.84E, h0km, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.28	249	I	I	09 17 58.2	
	baz=68,slow=324,SNR=12						
ZALV	Zalesovo Beam	1.28	249	Pg	Pn	09 09 54.3	+0.1
	1.5nm,0.3s,baz=68,slow=17,SNR=15						
ZALV				Lg	Lg	09 10 15.7	
	1.8nm,0.3s,baz=71,slow=28,SNR=5.9						
KURBB	Kurchatov Arra	6.34	236	Pn	Pn	09 11 06.8	+3.2
	0.1nm,0.3s,baz=53,slow=14,SNR=12						
KURBB				Lg	Lg	09 12 57.4	
	0.1nm,0.3s,baz=60,slow=33,SNR=2.5						
	1.7nm,0.6s						
MKAR	Makanchi Array	8.17	203	Pn	Pn	09 11 31.5	+2.6
	0.1nm,0.3s,baz=24,slow=13,SNR=4.7						
MKAR				Lg	Lg	09 13 51.0	
	0.1nm,0.3s,baz=17,slow=36,SNR=3.5						
	0.2nm,0.3s						

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*IDC **14** 09:21:56.2±2.5, 5°.82S×147°.30E, h73km±24km, mb3.7/7, mbtmp4.2/9, MS3.5/2, Error ellipse: s-maj=38.6km s-min=12.8km az=108.0*

*NEIC **14** 09:21:59.5±1.9, 5°.87S±0°.10×147°.2E±0°.2, h85km±8km, mb4.2/27, Error ellipse: s-maj=27.7km s-min=14.4km az=91.0*

ISC 14 09:21:57.8±0.7**, 5°.85S**±0°.07×**147°.2E**±0°.1**, h78km, n43, σ1ˢ.27**/46**, mb4.2**/17**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.53	180		Pn	09 22 50.4	0.0
PMG	Port Moresby	3.53	180	P	Pn	09 22 50.0	-0.4
	75nm,0.4s,baz=7.6,slow=15,SNR=66						
PMG				S	Sn	09 23 29.8	-1.3
	146nm,0.6s,baz=14,slow=12,SNR=3.6						
COEN	Coen	8.96	206		Pn	09 24 05.8	+1.2
CTAO	Charters Tower	14.18	184	Pn	Pn	09 25 15.7	+0.7
WB0	Warramunga Arr	18.59	221	P	P	09 26 09.9	+0.9
WB0				IAmb	IAmb	09 26 12.9	
	comp=Z,19nm,0.7s						
WR8	Warramunga Arr	18.66	220	P	Pn	09 26 11.0	+0.1
WR8				IAmb	IAmb	09 26 13.2	
	comp=Z,18nm,1.1s						
WRAB	Tennant Creek	18.74	221	P	Pn	09 26 11.9	0.0
WRA	Warramunga Arr	18.76	221	P	P	09 26 11.1	+0.3
WRA	Warramunga Arr	18.76	221	P	P	09 26 11.6	+0.8
	comp=Z,15nm,0.6s,baz=44,slow=11,SNR=84						
WRA				S	S	09 29 35.5	-4.6
	comp=Z,0.3nm,0.5s,baz=47,slow=22,SNR=2.2						
WRA				PcP	PcP	09 30 35.5	-0.1
	comp=Z,0.8nm,0.7s,baz=34,slow=2.0,SNR=5.0						
EIDS	Eidsvold	19.77	169		Pn	09 26 23.0	-0.9
EIDS				IAmb	IAmb	09 26 23.4	
	comp=Z,10nm,0.9s						
KNRA	Kununurra	20.53	240	P	P	09 26 30.4	+0.4
KNRA				IAmb	IAmb	09 27 00.6	
	comp=Z,15nm,1.2s						
AS31	Alice Springs	21.84	214		P	09 26 45.3	+1.3
AS31				IAmb	IAmb	09 26 46.8	
	comp=Z,4.1nm,0.4s						
ASAR	Alice Springs	21.84	214	P	P	09 26 45.0	+0.9
	comp=Z,4.7nm,0.4s,baz=41,slow=10,SNR=140						
ASAR				S	S	09 30 42.2	+0.9
	comp=Z,0.8nm,0.7s,baz=35,slow=18,SNR=6.9						
ASAR				LR	LR	09 35 00.0	
	comp=Z,66nm,21.0s,baz=77,slow=36						
	comp=Z,4.7nm,0.4s						
FITZ	Fitzroy Crossi	24.29	238	P	P	09 27 10.5	+2.4
ARMA	Armidale	24.80	171	P	P	09 27 13.6	+0.9
ARMA				IAmb	IAmb	09 27 14.1	
	comp=Z,9.1nm,1.1s						
STKA	Stephens Creek	26.41	191	P	P	09 27 28.3	+1.0
STKA	Stephens Creek	26.41	191	P	P	09 27 26.5	-0.8
	comp=Z,2.4nm,0.7s,baz=10.0,slow=11,SNR=5.8						
	comp=Z,2.4nm,0.7s						
BBOO	Buckleboo	28.75	200	P	P	09 27 47.3	-0.9
FORT	Forrest	30.62	214	P	P	09 28 03.7	-1.0
KSRS	Korea Array	46.67	339	P	P	09 30 18.5	-0.2
	comp=Z,0.3nm,0.3s,baz=145,slow=8.7,SNR=2.0						
	comp=Z,0.3nm,0.3s						
PETK	Petropavlovsk-	59.41	7	P	P	09 31 49.5	-2.5
	comp=Z,1.0nm,0.7s,baz=187,slow=6.6,SNR=2.4						
	comp=Z,1.0nm,0.7s						
VNDA	Vanda	72.05	177	P	P	09 33 14.8	+1.7
SBA	Scott Base	72.69	176	P	P	09 33 17.4	+0.6
ZAA0	Zalesovo Array	78.97	328	P	P	09 33 53.1	+0.1
ZAA0				IAmb	IAmb	09 34 13.8	
	comp=Z,4.3nm,1.4s						
ZALV	Zalesovo Beam	78.97	328	P	P	09 33 53.4	+0.4
ZALV	Zalesovo Beam	78.97	328	P	P	09 33 50.8	-2.2
	comp=Z,1.1nm,0.6s,baz=96,slow=2.9,SNR=3.9						
	comp=Z,1.1nm,0.6s						
G18K	Tagagawik	81.56	20	P	P	09 34 07.5	+0.9
E19K	Redstone River	82.92	19	P	P	09 34 14.6	+0.9
C19K	Lookout Ridge	83.16	17	P	P	09 34 15.9	+0.9
IMAR	Indian Mountai	83.29	21	P	P	09 34 16.7	+1.1
QSPA	South Pole Qui	84.12	180	P	P	09 34 20.0	-0.1
QSPA				IAmb	IAmb	09 34 21.7	
	comp=Z,6.6nm,1.5s						
QSPA	South Pole Qui	84.12	180	P	P	09 34 19.9	-0.3
	comp=Z,1.2nm,0.7s,baz=350,slow=1.5,SNR=13						
	comp=Z,1.2nm,0.7s						
I23K	Minto, Yukon-K	84.49	22	P	P	09 34 23.1	+1.4
I23K				IAmb	IAmb	09 35 06.0	
	comp=Z,3.9nm,1.4s						
CCB	Clear Creek Bu	84.87	23	P	P	09 34 23.7	0.0
CCB				IAmb	IAmb	09 34 58.6	
	comp=Z,4.1nm,1.4s						
ILAR	Eielson Array	85.28	23	P	P	09 34 25.9	+0.2
ILAR	Eielson Array	85.28	23	P	P	09 34 24.2	-1.6
	comp=Z,1.2nm,0.7s,baz=257,slow=5.1,SNR=12						
	comp=Z,1.2nm,0.7s						
D23K	Nanushuk River	85.79	19	P	P	09 34 29.6	+1.4
D23K				IAmb	IAmb	09 34 36.0	
	comp=Z,3.4nm,1.1s						
J25K	Salcha River,	85.81	24	P	P	09 34 28.6	+0.1
J25K				IAmb	IAmb	09 34 29.9	
	comp=Z,2.2nm,0.8s						
C23K	Itkillik River	86.22	18	P	P	09 34 31.6	+1.2
C23K				IAmb	IAmb	09 34 35.9	
	comp=Z,4.9nm,1.2s						
H27K	Steamboat Moun	87.90	23	P	P	09 34 38.8	+0.3
H27K				IAmb	IAmb	09 34 46.9	
	comp=Z,3.5nm,1.4s						
E27K	Coleen River	88.53	21	P	P	09 34 42.3	+0.8
E27K				IAmb	IAmb	09 35 24.8	
	comp=Z,5.2nm,1.5s						
AKTO	Aktyubinsk	93.92	320	LR	LR	10 18 33.8	
	comp=Z,34nm,19.8s,baz=118,slow=36						
BELA	Belgrano 2	96.39	180	P	P	09 35 19.1	+1.5

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*ASRS **14** 09:24:42.0±0.9, 53°.60N×87°.67E, h0km, M3.1, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*IDC **14** 09:24:47.7±3.0, 53°.49N×87°.57E, h0km, mbtmp3.1/2, ML2.8/2, Error ellipse: s-maj=26.9km s-min=14.2km az=61.0*

*NNC **14** 09:24:51.3±1.4, 53°.35N×87°.23E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=13.1km s-min=10.0km az=99.0, Suspected Mining explosion.*

ISC 14 09:24:48.9±4.8**, 53°.5N**±0°.1×**87°.4E**±0°.3**, h0km, n8, σ0ˢ.74**/9**, 6C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.57	288	I	I	09 35 50.0	
	0.3nm,1.1s,baz=101,slow=324,SNR=24						
ZALV	Zalesovo Beam	1.57	288	Pg	Pb	09 25 18.3	-0.6
	1.8nm,0.3s,baz=98,slow=20,SNR=4.9						
ZALV				Lg	Lg	09 25 41.5	
	3.8nm,0.3s,baz=106,slow=26,SNR=10						
KURK	Kurchatov	6.06	246	⇑Lg	Lg	09 28 00.8	
	8.0nm,0.8s						
KURBB	Kurchatov Arra	6.16	246	Pn	Pn	09 26 22.5	+1.4
	0.1nm,0.3s,baz=63,slow=14,SNR=5.4						
KURBB				Lg	Lg	09 28 03.8	
	0.1nm,0.3s,baz=64,slow=33,SNR=5.3						
	0.8nm,0.4s						
KURBB	Kurchatov Arra	6.16	246	⇓Pn	Pn	09 26 21.3	+0.2
	1.8nm,0.5s						
KURBB				⇑Lg	Lg	09 28 02.7	
	18nm,0.9s						
MK31	Makanchi Array	7.46	208	⇑Pn	Pn	09 26 39.0	+0.1
	0.5nm,0.6s,baz=31,slow=13,SNR=8.3						
MK31				⇑Sn	Sn	09 28 03.8	-0.5
	1.5nm,0.8s,baz=32,slow=21,SNR=4.2						
MK31				⇑Lg	Lg	09 28 42.9	
	2.2nm,0.7s,baz=41,slow=33,SNR=5.2						
MKAR	Makanchi Array	7.46	208	Pn	Pn	09 26 39.5	+0.5
	0.2nm,0.3s,baz=29,slow=12,SNR=8.9						
MKAR				Sn	Sn	09 28 04.4	+0.2
	0.2nm,0.3s,baz=26,slow=27,SNR=8.3						
MKAR				Lg	Lg	09 28 43.8	
	0.1nm,0.3s,baz=23,slow=30,SNR=8.2						
	0.5nm,0.4s						
MAKZ	Makanchi	7.54	209	⇓Pn	Pn	09 26 40.5	+0.4
	0.6nm,0.5s						
MAKZ				⇑Sn	Sn	09 28 05.6	-0.5
	2.4nm,0.8s						
MAKZ				⇓Lg	Lg	09 28 43.7	
	5.6nm,1.3s						

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*IDC **14** 09:31:10.1±1.1, 27°.79S×176°.48W, h0km, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=34.3km s-min=23.6km az=129.0*

ISC 14 09:31:15.6±1.1**, 27°.8S**±0°.2×**176°.5W**±0°.2**, h37km, n7, σ1ˢ.37**/8**, mb3.7**/4**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.94	220	Pn	Pn	09 31 44.4	-1.6
	96nm,0.3s,baz=49,slow=19,SNR=5.2						
RAO				Sn	Sn	09 32 11.4	+2.3
	170nm,0.3s,baz=90,slow=20,SNR=5.2						
ASAR	Alice Springs	44.64	264	P	P	09 39 24.5	-0.3
	0.5nm,0.7s,baz=104,slow=7.8,SNR=15						
	0.5nm,0.7s						
WRA	Warramunga Arr	45.40	269	P	P	09 39 30.7	-0.1
	1.1nm,0.8s,baz=107,slow=7.9,SNR=9.3						
	1.1nm,0.8s						
QSPA	South Pole Qui	62.34	180	P	P	09 41 33.7	-0.4
	4.4nm,0.9s,baz=30,slow=2.1,SNR=22						
	4.4nm,0.9s						
NVAR	Mina Array Bea	85.41	42	P	P	09 43 50.4	+1.0
	0.3nm,0.7s,baz=236,slow=6.1,SNR=2.5						
	0.3nm,0.7s						
HFS	Hagfors	146.90	351	PKPbc	PKPbc	09 50 53.8	+0.4
	1.7nm,0.8s,baz=11,slow=1.5,SNR=3.8						
AKASG	Malin Array Be	149.92	327	PKPbc	PKPbc	09 51 01.1	-0.5
	0.4nm,0.4s,baz=45,slow=3.0,SNR=8.7						

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*ASRS **14** 09:35:07.0±0.9, 53°.63N×87°.86E, h0km, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 14 09:35:09.4±3.2**, 53°.59N×87°.92E, h0km, mbtmp3.0**/2**, ML2.5**/2**, Error ellipse: s-maj=27.2km s-min=15.7km az=61.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.87	282	I	I	09 46 45.9	
	0.1nm,1.0s,baz=98,slow=325,SNR=15						
ZALV	Zalesovo Beam	1.87	282	Pg	Pn	09 35 42.9	+0.2
	1.0nm,0.3s,baz=99,slow=14,SNR=7.0						
ZALV				Lg	Lg	09 36 08.6	
	2.0nm,0.3s,baz=104,slow=22,SNR=9.6						
KURBB	Kurchatov Arra	6.50	247	Pn	Pn	09 36 47.3	+1.1
	0.1nm,0.3s,baz=61,slow=14,SNR=5.0						
KURBB				Lg	Lg	09 38 35.3	
	baz=63,slow=32,SNR=6.8						
	0.5nm,0.3s						
MKAR	Makanchi Array	7.70	210	Pn	Pn	09 37 03.5	+0.8
	0.1nm,0.3s,baz=28,slow=14,SNR=5.7						
MKAR				Sn	Sn	09 38 31.1	+0.6
	0.1nm,0.3s,baz=23,slow=19,SNR=3.3						
MKAR				Lg	Lg	09 39 11.0	
	baz=31,slow=31,SNR=4.2						
	0.2nm,0.3s						

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*IDC **14** 09:35:06.4±0.9, 5°.29S×153°.55E, h0km, mb3.9/14, mbtmp3.9/15, ML2.1/1, MS3.4/11, Error ellipse: s-maj=30.9km s-min=17.4km az=109.0*

*NEIC **14** 09:35:11.9±2.0, 5°.54S±0°.07×153°.59E±0°.05, h35km±2km, mb4.4/23, Error ellipse: s-maj=13.0km s-min=6.0km az=148.0*

ISC 14 09:35:12.5±0.6**, 5°.46S**±0°.07×**153°.58E**±0°.09**, h43km, n60, σ1ˢ.25**/53**, mb4.2**/26**, MS3.2**/9**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.89	312	Pn	Pn	09 35 42.2	-0.2
RABL				Sn	Sn	09 36 06.5	+1.5
MANU	Manus Island	7.07	298	Pn	Pn	09 36 53.5	0.0
HNR	Honiara	7.45	122	LR	LR	09 40 11.2	
	comp=Z,281nm,18.3s,baz=275,slow=40						
PMG	Port Moresby	7.47	238	Pn	Pn	09 36 57.1	-2.0
PMG	Port Moresby	7.47	238	Pn	Pn	09 36 59.3	+0.2
	1.7nm,0.3s,baz=63,slow=18,SNR=2.4						
PMG				Sn	Sn	09 38 24.7	+2.1
	1.9nm,0.3s,baz=90,slow=20,SNR=4.4						
PMG				LR	LR	09 39 46.0	
	comp=Z,204nm,21.2s,baz=60,slow=37						
	14nm,0.7s						
PATS	Pohnpei	13.10	21	Pn	Pn	09 38 15.8	-0.3
DZM	Mont Dzumac	20.68	144	LR	LR	09 47 16.7	
	comp=Z,148nm,19.3s,baz=252,slow=35						
GUMO	Guam	20.81	336	LR	LR	09 48 55.5	
	comp=Z,52nm,18.2s,baz=160,slow=40						
MTN	Manton Dam	23.33	250	P	P	09 40 15.2	-1.9
MTN				IAmb	IAmb	09 40 37.6	
	comp=Z,22nm,1.4s						
WB0	Warramunga Arr	23.47	231	P	P	09 40 18.0	-0.4
WB0				IAmb	IAmb	09 40 51.1	
	comp=Z,12nm,1.2s						
WR8	Warramunga Arr	23.49	230	P	P	09 40 16.8	-1.9
WRAB	Tennant Creek	23.59	231	P	P	09 40 19.1	-0.5
WRAB				IAmb	IAmb	09 40 41.1	
	comp=Z,8.5nm,1.1s						
WB2	Warramunga Arr	23.60	231	P	P	09 40 18.3	-1.4
WRA	Warramunga Arr	23.61	231	P	P	09 40 16.5	-3.3
WRA	Warramunga Arr	23.61	231	P	P	09 40 20.2	+0.4
	comp=Z,0.9nm,0.7s,baz=53,slow=9.8,SNR=7.8						
WRA				PcP	PcP	09 44 05.7	+1.7
	comp=Z,0.4nm,0.6s,baz=57,slow=3.0,SNR=5.5						
WRA				LR	LR	09 49 42.6	
	comp=Z,95nm,20.1s,baz=124,slow=37						
	comp=Z,0.9nm,0.7s						
AS31	Alice Springs	26.20	224	P	P	09 40 41.1	-2.4
ASAR	Alice Springs	26.20	224	P	P	09 40 43.5	0.0
	comp=Z,0.3nm,0.6s,baz=47,slow=9.4,SNR=5.1						
ASAR				PcP	PcP	09 44 10.4	+0.6
	comp=Z,0.4nm,0.8s,baz=42,slow=3.8,SNR=3.2						
ASAR				LR	LR	09 50 06.7	
	comp=Z,72nm,21.8s,baz=87,slow=34						
	comp=Z,0.3nm,0.6s						
KNRA	Kununurra	26.39	245	P	P	09 40 43.1	-2.0
KNRA				IAmb	IAmb	09 41 01.2	
	comp=Z,6.1nm,0.8s						
MSVF	Nonsavu	26.85	119	LR	LR	09 52 12.0	
	comp=Z,62nm,18.0s,baz=175,slow=38						
H11S3	WAKE ISLAND Hy	27.09	28	T	T	10 09 13.2	
	baz=208,slow=75,SNR=4.2						
H11S2	WAKE ISLAND Hy	27.09	28	T	T	10 09 13.3	
	baz=208,slow=75,SNR=5.4						
H11S1	WAKE ISLAND Hy	27.11	28	T	T	10 09 15.4	
	baz=208,slow=75,SNR=6.4						
STKA	Stephens Creek	28.57	202	P	P	09 41 05.0	+0.4
STKA	Stephens Creek	28.57	202	P	P	09 41 04.2	-0.4
	comp=Z,2.2nm,1.1s,baz=20,slow=12,SNR=1.8						
	comp=Z,2.2nm,1.1s						
FITZ	Fitzroy Crossi	30.04	243	P	P	09 41 17.4	-0.3
DAV	Davao City (W)	30.59	294	LR	LR	09 53 01.3	
	comp=Z,57nm,19.1s,baz=118,slow=35						
JNU	Nakatsue	44.00	332	P	P	09 43 14.9	-1.1
MJAR	Matsushiro Arr	44.19	342	LR	LR	10 01 47.3	
	comp=Z,49nm,18.1s,baz=196,slow=36						
KSRS	Korea Array	48.94	333	P	P	09 43 53.5	-1.0
	comp=Z,0.6nm,0.4s,baz=142,slow=9.4,SNR=2.5						
	comp=Z,0.6nm,0.4s						
KSAR	Wonju Array Be	48.95	333	P	P	09 43 54.9	+0.3
KS19	Wonju Array Si	49.00	333	P	P	09 43 54.5	-0.5
ASAJ	Asahikawa	50.34	350	LR	LR	10 03 42.6	
	comp=Z,27nm,19.5s,baz=172,slow=34						
USRK	Ussuriysk Ar.	53.12	341	P	P	09 44 25.9	+0.1
PETK	Petropavlovsk-	58.45	3	P	P	09 45 04.9	+1.0
PETK	Petropavlovsk-	58.45	3	P	P	09 45 00.9	-3.1
	comp=Z,0.5nm,0.6s,baz=184,slow=6.9,SNR=1.9						
	comp=Z,0.5nm,0.6s						
CMAR	Chiang Mai Arr	58.86	295	P	P	09 45 08.1	+0.7
CMAR	Chiang Mai Arr	58.86	295	P	P	09 45 07.6	+0.2
	comp=Z,0.9nm,0.5s,baz=109,slow=5.9,SNR=6.0						
	comp=Z,0.9nm,0.5s						
SONM	Songino Array	67.30	328	P	P	09 46 03.3	+0.3
	comp=Z,1.1nm,0.6s,baz=123,slow=11,SNR=3.8						
	comp=Z,1.1nm,0.6s						
KDAK	Kodiak Island	76.42	26	LR	LR	10 14 22.4	
	comp=Z,43nm,21.2s,baz=218,slow=31						
J16K	Anvik River	76.75	19	P	P	09 46 58.9	-0.3
J17K	VABM Dome	77.33	20	P	P	09 47 03.3	+0.9
J17K				IAmb	IAmb	09 47 20.8	
	comp=Z,10nm,1.4s						
L19K	White Mountain	78.07	22	P	P	09 47 07.0	+0.4
L19K				IAmb	IAmb	09 47 45.6	
	comp=Z,3.7nm,1.1s						
H17K	Granite Mounta	78.09	18	P	P	09 47 07.0	+0.4
H17K				IAmb	IAmb	09 47 32.0	
	comp=Z,4.4nm,1.4s						
CAST	Castle Rocks	79.83	22	P	P	09 47 15.8	-0.3
CAST				IAmb	IAmb	09 47 34.1	
	comp=Z,3.6nm,1.3s						
MKAR	Makanchi Array	81.33	319	P	P	09 47 24.6	0.0
MKAR	Makanchi Array	81.33	319	P	P	09 47 24.1	-0.6
	comp=Z,0.5nm,0.6s,baz=110,slow=6.4,SNR=5.0						
	comp=Z,0.5nm,0.6s						
ZALV	Zalesovo Beam	82.13	326	P	P	09 47 26.8	-1.8
	comp=Z,0.7nm,0.3s,baz=119,slow=7.2,SNR=1.8						
	comp=Z,0.7nm,0.3s						
B20K	Meade River	82.26	15	P	P	09 47 30.3	+1.4
ILAR	Eielson Array	82.48	22	P	P	09 47 30.6	+0.3
	comp=Z,0.5nm,1.0s,baz=256,slow=6.0,SNR=2.4						
	comp=Z,0.5nm,1.0s						
TABL	Table Mountain	82.86	27	P	P	09 47 32.1	-0.4
TABL				IAmb	IAmb	09 48 10.5	
	comp=Z,9.1nm,1.4s						
D23K	Nanushuk River	83.45	17	P	P	09 47 36.9	+1.8
D23K				IAmb	IAmb	09 47 37.9	
	comp=Z,3.6nm,1.2s						
QSPA	South Pole Qui	84.50	180	P	P	09 47 42.2	+1.4
QSPA				IAmb	IAmb	09 47 44.9	
	comp=Z,4.5nm,1.1s						
QSPA	South Pole Qui	84.50	180	P	P	09 47 42.8	+2.0
	comp=Z,1.6nm,0.7s,baz=330,slow=0.3,SNR=14						
	comp=Z,1.6nm,0.7s						
BMAR	Burnt Mountain	84.60	20	P	P	09 47 42.3	+1.2
HYT	Haines Junctio	84.66	27	P	P	09 47 42.5	+0.8
HYT				IAmb	IAmb	09 48 12.2	
	comp=Z,5.7nm,1.5s						
KURK	Kurchatov	84.76	322	P	P	09 47 42.5	+0.3
KURK				IAmb	IAmb	09 48 21.0	
	comp=Z,6.0nm,1.3s						
KURBB	Kurchatov Arra	84.80	322	P	P	09 47 42.3	-0.1
	comp=Z,1.2nm,0.9s,baz=116,slow=4.2,SNR=5.8						
	comp=Z,1.2nm,0.9s						
BVAR	Borovoye Array	90.23	323	P	P	09 48 07.6	-1.0
	comp=Z,1.5nm,0.7s,baz=106,slow=5.1,SNR=5.9						
	comp=Z,1.5nm,0.7s						
NVAR	Mina Array Bea	91.88	52	P	P	09 48 17.2	+0.3
	comp=Z,0.1nm,0.4s,baz=288,slow=1.9,SNR=1.4						
	comp=Z,0.1nm,0.4s						
TORD	Torodi Ar. Bea	151.25	287	PKPbc	PKPbc	09 55 02.0	-0.4
	comp=Z,1.8nm,0.4s,baz=76,slow=2.3,SNR=9.9						

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*NNC **14** 09:40:00.7±2.7, 54°.81N×87°.19E, h0km, mb3.1, mpv2.9, Error ellipse: s-maj=62.8km s-min=17.4km az=155.0, Suspected Mining explosion.*

*ASRS **14** 09:40:03.0±0.7, 54°.25N×87°.12E, h0km, M2.9, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*IDC **14** 09:40:04.7±2.7, 54°.32N×87°.34E, h0km, mbtmp3.2/3, ML2.7/2, Error ellipse: s-maj=22.9km s-min=15.9km az=66.0*

ISC 14 09:40:04.1±3.4**, 54°.5N**±0°.2×**87°.2E**±0°.2**, h0km, n9, σ1ˢ.50**/10**, 1C-4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.46	251	I	I	09 49 01.8	
	0.1nm,0.9s,baz=76,slow=321,SNR=12						
ZAA0	Zalesovo Array	1.46	251	⇓P	Pg	09 40 30.0	-2.0
	0.4nm,0.3s						
ZAA0				⇓S	Sn	09 40 52.7	+1.2
	3.8nm,1.0s						
ZALV	Zalesovo Beam	1.46	251	Pg	Pb	09 40 31.5	-0.6
	3.0nm,0.3s,baz=75,slow=17,SNR=16						
ZALV				Lg	Lg	09 40 52.8	
	2.0nm,0.3s,baz=78,slow=28,SNR=7.4						
KURK	Kurchatov	6.40	238	⇓Lg	Lg	09 43 28.8	
	3.9nm,1.4s						
KURBB	Kurchatov Arra	6.50	237	Pn	Pn	09 41 42.9	+1.9
	0.2nm,0.3s,baz=53,slow=13,SNR=6.8						
KURBB				Sn	Sn	09 42 57.3	+1.5
	baz=56,slow=20,SNR=2.0						
KURBB				Lg	Lg	09 43 30.7	
	baz=47,slow=31,SNR=5.9						
	1.7nm,0.5s						
KURBB	Kurchatov Arra	6.50	237	⇑Pn	Pn	09 41 42.2	+1.2
	1.5nm,0.5s						
KURBB				⇓Lg	Lg	09 43 33.4	
	6.2nm,0.9s						
MK31	Makanchi Array	8.26	204	Pn	Pn	09 42 06.4	+1.3
	0.8nm,0.8s,baz=28,slow=15,SNR=5.3						
MKAR	Makanchi Array	8.26	204	Pn	Pn	09 42 05.2	+0.1
	0.1nm,0.3s,baz=25,slow=13,SNR=4.5						
MKAR				Sn	Sn	09 43 39.0	-0.1
	0.1nm,0.3s,baz=26,slow=22,SNR=5.2						
MKAR				Lg	Lg	09 44 23.2	
	0.1nm,0.3s,baz=24,slow=29,SNR=5.8						
	0.2nm,0.4s						
BVAR	Borovoye Array	10.04	269	Pn	Pn	09 42 30.4	+1.0
	0.8nm,0.4s,baz=68,slow=19,SNR=1.7						

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*NNC **14** 09:44:19.5±3.3, 54°.83N×87°.06E, h0km, mb2.9, mpv2.7, Error ellipse: s-maj=68.7km s-min=21.8km az=151.0, Suspected Mining explosion.*

*ASRS **14** 09:44:24.0±1.2, 54°.32N×86°.87E, h0km, M2.9, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*IDC **14** 09:44:24.2±2.9, 54°.35N×87°.00E, h0km, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=25.3km s-min=16.1km az=63.0*

ISC 14 09:44:13.1±6.0**, 53°.5N**±0°.1×**87°.8E**±0°.3**, h0km, n8, σ0ˢ.34**/6**, 4C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.85	286	I	I	09 52 49.2	
	baz=72,slow=322,SNR=8.9						
ZAA0	Zalesovo Array	1.85	286	⇓P	Pg	09 44 48.7	+0.2
	0.9nm,0.7s						
ZAA0				⇑S	Sn	09 45 09.7	-0.3
	13nm,2.0s						
ZALV	Zalesovo Beam	1.85	286	Pg	Pb	09 44 47.7	-0.1
	1.2nm,0.3s,baz=73,slow=17,SNR=12						
ZALV				Lg	Lg	09 45 06.8	
	1.3nm,0.3s,baz=74,slow=29,SNR=5.2						
KURK	Kurchatov	6.31	248	⇑Lg	Lg	09 47 50.9	
	2.1nm,1.0s						
KURBB	Kurchatov Arra	6.41	247	Pn	Pb	09 46 00.2	-5.1
	0.1nm,0.3s,baz=52,slow=13,SNR=7.5						
KURBB				Lg	Lg	09 47 47.0	
	baz=53,slow=32,SNR=4.5						
	0.9nm,0.4s						
KURBB	Kurchatov Arra	6.41	247	⇓Pn	Pn	09 45 56.1	+7.5
	2.9nm,1.1s						
KURBB				⇓Lg	Lg	09 47 50.9	
	6.3nm,0.9s						
MK31	Makanchi Array	7.58	210	⇑Pn	Pb	09 46 25.5	+0.2
	0.1nm,0.2s						
MK31				⇑Lg	Lg	09 48 52.0	
	1.9nm,0.8s,baz=28,slow=32,SNR=4.3						
MKAR	Makanchi Array	7.58	210	Pn	Pb	09 46 24.9	-0.4
	0.1nm,0.3s,baz=25,slow=14,SNR=8.1						
MKAR				Sn	Sb	09 47 56.2	+0.1
	baz=27,slow=32						
MKAR				Lg	Lg	09 48 41.9	
	0.1nm,0.3s,baz=25,slow=35,SNR=5.4						
	0.2nm,0.3s						

*NOU **14** 09:46:19.0, 38°.16S×178°.70E, h10km, MLv3.9/11, Off E. Coast of N. Island, N.Z.*

*WEL **14** 09:46:23.0±0.7, 38°S±3°×17°8E±°, h11km±4km, M3.6/12, ML4.0/12, MLv3.6/12, Error ellipse: s-maj=4.6km s-min=3.4km az=111.4, confirmed*

ISC 14 09:46:20.1±1.8**, 38°.12S**±0°.03×**178°.52E**±0°.07**, h4**km±12km**, n56, σ0.69**/64**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUZ	Puketiti	0.21	283	P	Pg	09 46 25.0	+0.7
PUZ				S	Sg	09 46 27.3	+0.2
TBAS	Tolaga Bay Are	0.31	215	P	Pn	09 46 30.6	-0.7
WMGZ	Waiomatatini S	0.31	344	P	Pb	09 46 28.8	+0.6
WMGZ				S	Sb	09 46 34.0	+0.4
TWGZ	Tauwhareparae	0.43	262	P	Pg	09 46 29.5	+1.1
PKGZ	Pakihiroa	0.43	306	P	Pg	09 46 28.7	+0.3
PKGZ				S	Sg	09 46 33.5	-0.5
CNGZ	Carnagh Statio	0.44	214	P	Pn	09 46 33.0	-0.1
TDHS	Te Araroa Dist	0.50	346	P	Pb	09 46 31.2	-0.3
MXZ	Matakaoa Point	0.58	343	P	Pb	09 46 33.0	+0.2
MXZ	Matakaoa Point	0.58	343	S	Sb	09 46 42.1	+0.7
MXZ	Matakaoa Point	0.58	343	P	Pb	09 46 33.3	+0.5
TKGZ	Te Karaka	0.62	239	P	Pb	09 46 33.9	+0.5
GKBS	Kaiti Beach	0.68	214	P	Pn	09 46 36.9	+0.4
RUGZ	Raukumara Rang	0.68	283	P	Pg	09 46 33.2	-0.1
RUGZ				S	Sg	09 46 41.1	-1.0
HAZ	Te Kaha	0.69	302	P	Pg	09 46 33.3	0.0
HAZ				S	Sg	09 46 41.2	-1.0
MWZ	Matawai	0.81	254	P	Pg	09 46 36.3	+0.7
MWZ				S	Sg	09 46 46.5	+0.3
RIGZ	Rimuhau	0.83	225	P	Pn	09 46 38.8	+0.1
PRGZ	Paritu Road	0.94	212	P	Pn	09 46 40.3	+0.1
RAGZ	Rawiri	0.95	246	P	Pb	09 46 39.5	+0.4
RAGZ				S	Sb	09 46 52.0	-0.1
OPCS	Opotiki Colleg	0.98	276	P	Pg	09 46 37.3	-1.6
OPCS				S	Sg	09 46 50.3	-1.2
KNZ	Kokohu	1.12	216	P	Pb	09 46 42.0	0.0
URZ	Urewera	1.12	262	P	Pb	09 46 41.1	-0.9
URZ	Urewera	1.12	262	S	Sn	09 46 58.9	+0.5
URZ	Urewera	1.12	262	P	Pb	09 46 41.4	-0.6
MHGZ	Mahia Peninsul	1.14	205	P	Pn	09 46 43.1	+0.3
SNGZ	Shannon Statio	1.14	234	P	Pb	09 46 42.6	+0.3
WIZ	White Island	1.21	299	P	Pb	09 46 43.1	-0.4
RTZ	Ruatahuna	1.31	247	P	Pb	09 46 45.5	+0.3
RAHZ	Arahi	1.38	234	P	Pn	09 46 45.8	-0.4
WHHZ	Waihua	1.39	226	P	Pn	09 46 46.0	-0.2
EDRZ	Edgecumbe	1.41	270	P	Pn	09 46 46.5	0.0
MUGZ	Murupara	1.42	255	P	Pn	09 46 46.9	+0.2
MTHZ	Maungataniwha	1.51	240	P	Pn	09 46 47.7	-0.2
TARZ	Mount Tarawera	1.59	265	P	Pn	09 46 49.1	0.0
RRRZ	Republican Roa	1.59	262	P	Pn	09 46 49.1	0.0
ARHZ	Aropaoanui	1.65	226	P	Pn	09 46 50.0	+0.1
NMHZ	Naumai	1.66	234	P	Pn	09 46 49.9	-0.1
OMRZ	Omania	1.70	270	P	Pn	09 46 50.4	-0.1
HLRZ	Highlands Stat	1.71	265	P	Pg	09 46 53.6	+0.7
PRRZ	Plateau Road	1.72	257	P	Pn	09 46 51.1	+0.3
ALRZ	Allen Road	1.77	255	P	Pn	09 46 52.0	+0.5
HRRZ	Handcock Road	1.78	261	P	Pn	09 46 52.2	+0.5
MRHZ	Matea Rd	1.80	246	P	Pn	09 46 52.3	+0.3
HSRZ	Hossack Road	1.80	263	P	Pn	09 46 52.8	+0.8
TGRZ	Tauranga	1.83	282	P	Pn	09 46 51.4	-0.9
BKZ	Black Stump Fm	1.90	236	P	Pn	09 46 52.8	-0.5
BKZ	Black Stump Fm	1.90	236	P	Pn	09 46 53.1	-0.3
MCHZ	McNeill Hill	1.94	227	P	Pn	09 46 53.7	-0.1
KWHZ	Kaweka Forest	2.09	231	P	Pn	09 46 55.3	-0.7
KAHZ	Kahuranaki	2.11	217	P	Pn	09 46 55.0	-1.1
KUTZ	Kaahu Road	2.15	259	P	Pn	09 46 57.3	+0.5
KUZ	Kuaotunu	2.62	301	P	Pn	09 47 01.7	-1.4
HIZ	Hauiti	2.91	261	P	Pn	09 47 07.6	+0.4
BFZ	Birch Farm	3.11	214	P	Pn	09 47 07.6	-2.3
KHEZ	Kahui Hut	3.71	250	P	Pn	09 47 19.5	+1.2
SNZO	South Karori	4.34	222	P	Pn	09 47 25.7	-1.0
OUZ	Omahuta	4.90	305	P	Pn	09 47 35.2	+0.6

CATAC 14 09:47:02.3±0.8**, 11°N**±4°×**8°7W**±°**, h13**km±5km**, M2.6**/12**, MLv2.6**/12**, Error ellipse: s-maj=8.5km s-min=7.7km az=46.7, confirmed, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NADN	Granada	0.93	52	P	Pb	09 47 20.3	0.0
NADN				S	Sb	09 47 33.3	+0.7
NANN	Nandasmo	1.00	40	P	Pn	09 47 21.9	-0.1
NANN	Nandasmo	1.00	40	S	Sn	09 47 36.0	0.0
COPN	Copaltepe	1.02	11	P	Pb	09 47 21.4	-0.4
UNAN	Cigeo UNAN	1.06	28	S	Sb	09 47 35.9	-0.3
APQ2	Apoyeque	1.11	24	P	Pb	09 47 23.1	-0.3
APQ2				S	Sb	09 47 36.8	-0.9
MOMN	Momotombo	1.25	11	P	Pn	09 47 25.2	-0.3
MOM2	El Cardon	1.29	13	P	Pn	09 47 25.4	-0.6
MOM2				S	Sb	09 47 42.3	-0.6
CNGA	Al SSO del Vol	1.31	4	P	Pn	09 47 25.7	-0.7
CNGA				S	Sn	09 47 43.9	+0.1
CNGN	Cerro Negro	1.32	4	P	Pn	09 47 25.9	-0.6
POLN	Al Sur del Vol	1.47	359	P	Pn	09 47 28.9	+0.4
POLN				S	Sb	09 47 47.9	-0.1
BOAB	BOACO BROADBAN	1.68	41	P	Pn	09 47 31.0	-0.3
BOAB	BOACO BROADBAN	1.68	41	S	Sb	09 47 53.9	-0.1
ACON	Acoyapa	1.77	63	P	Pn	09 47 32.6	0.0
LIMN	Finca el Limon	1.92	12	P	Pn	09 47 34.7	0.0
RCPN	Sur Rio San Ju	2.43	16	P	Pn	09 47 41.2	-0.7

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*SNET **14** 09:48:57.4±1.3, 14°.59N×89°.11W, h11km±15km, ML2.4*

*CATAC **14** 09:48:57.8±0.4, 15°N±2°×8°9W±°, h3km±1km, M2.7/24, MLv2.7/24, Error ellipse: s-maj=5.4km s-min=2.8km az=24.3, confirmed*

*GCG **14** 09:48:58.8±0.5, 14°.47N×89°.20W, h0km±3km, MD3.4, ML2.0*

ISC 14 09:48:58.0±1.2**, 14°.52N**±0°.05×**89°.09W**±0°.03**, h10**km±10km**, n51, σ0.31**/56**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESQI	Esquipulas	0.24	279	*e*P	Pg	09 49 02.9	-0.2
ESQI				*e*S	Sg	09 49 06.9	+0.4
ESQI	Esquipulas	0.24	279	P	Pg	09 49 02.8	-0.2
MTO3	Montecristo	0.29	245	*e*P	Pb	09 49 05.1	-0.3
MTO3	Montecristo	0.29	245	*i* P	Pg	09 49 03.8	-0.1
MTO3	Montecristo	0.29	245	S	Sg	09 49 07.8	-0.1
MTO3	Montecristo	0.29	245	P	Pg	09 49 03.7	-0.2
LLGN	La Laguna	0.39	158	P	Pg	09 49 05.7	0.0
LLGN	La Laguna	0.39	158	S	Sg	09 49 11.0	+0.2
UNIC	Universidad Ca	0.70	219	P	Pg	09 49 11.4	-0.1
UNIC	Universidad Ca	0.70	219	S	Sg	09 49 20.8	+0.2
CEDA	San Andres	0.77	202	P	Pg	09 49 12.9	0.0
CEDA	San Andres	0.77	202	S	Sb	09 49 23.9	-0.3
IGN	Direccin Gen	0.81	185	S	Sg	09 49 24.7	+0.5
IGN	Direccin Gen	0.81	185	P	Pg	09 49 13.7	0.0
UEES	Universidad Ev	0.81	190	S	Sb	09 49 25.2	-0.2
UEES	Universidad Ev	0.81	190	P	Pg	09 49 13.5	-0.2
PAVA	Las Pavas	0.82	169	P	Pg	09 49 13.7	-0.1
PAVA	Las Pavas	0.82	169	S	Sb	09 49 25.3	-0.3
SLOZ	Alcaldia de Sa	0.83	234	S	Sb	09 49 25.7	-0.2
SLOZ	Alcaldia de Sa	0.83	234	P	Pg	09 49 14.0	-0.1
PMON	Piamonte	0.83	195	P	Pg	09 49 14.2	0.0
PMON	Piamonte	0.83	195	S	Sb	09 49 26.0	0.0
LOAL	Lomas de Alarc	0.85	232	S	Sb	09 49 26.1	-0.1
LOAL	Lomas de Alarc	0.85	232	P	Pg	09 49 14.2	-0.1
CEVE	Cerro Verde	0.86	217	*e*P	Pg	09 49 13.9	-0.8
CEVE				*e*S	Sb	09 49 27.9	+0.9
CEVE				IAML		09 49 30.5	
	comp=Z,125nm,0.2s						
CEVE	Cerro Verde	0.86	217	S	Sb	09 49 26.7	-0.2
CEVE	Cerro Verde	0.86	217	P	Pg	09 49 14.5	-0.2
LOMA	Loma Larga	0.88	185	P	Pg	09 49 15.1	+0.2
LOMA	Loma Larga	0.88	185	S	Sb	09 49 27.6	+0.3
SCLA	Alcaldia de Sa	0.89	157	P	Pg	09 49 15.1	0.0
SCLA	Alcaldia de Sa	0.89	157	S	Sb	09 49 27.5	0.0
NUBE	Las Nubes	0.91	227	*i* P	Pg	09 49 15.4	-0.1
NUBE				*i* S	Sb	09 49 27.9	-0.3
NUBE	Las Nubes	0.91	227	S	Sb	09 49 28.1	-0.1
NUBE	Las Nubes	0.91	227	P	Pg	09 49 15.4	-0.1
COEG	Centro de Oper	0.92	167	*e*P	Pg	09 49 15.5	-0.3
COEG	Centro de Oper	0.92	167	P	Pg	09 49 15.4	-0.3
JAYA	Jayaque - finc	0.93	202	*e*P	Pg	09 49 15.8	-0.1
JAYA				IAML		09 49 32.5	
	comp=Z,120nm,0.2s						
JAYA	Jayaque - finc	0.93	202	*i* P	Pg	09 49 15.7	-0.3
JAYA				*i* S	Sb	09 49 28.7	-0.1
JAYA	Jayaque - finc	0.93	202	P	Pg	09 49 15.9	-0.1
UESV	Universidad de	0.93	161	P	Pg	09 49 15.7	-0.2
TECO	Alcaldia de Te	1.03	163	P	Pg	09 49 17.3	-0.4
PQSS	Presa 15 de Se	1.03	150	S	Sb	09 49 31.9	+0.3
PQSS	Presa 15 de Se	1.03	150	P	Pg	09 49 17.4	-0.5
LALI	Alcalda de L	1.05	192	P	Pg	09 49 17.9	-0.4
FAME	Alcaldia de Sa	1.12	233	P	Pb	09 49 19.3	-0.2
PACA	Pacayal	1.29	144	P	Pb	09 49 22.3	-0.1
PACA	Pacayal	1.29	144	S	Sb	09 49 39.0	0.0
ALJI	Alcalda de J	1.29	157	P	Pn	09 49 22.2	+0.1
LCND	La Caada	1.68	136	P	Pb	09 49 28.2	-0.8
CNCH	Conchagua	1.74	135	P	Pn	09 49 29.0	+0.6
TGUH	Tegucigalpa,Un	1.82	104	P	Pn	09 49 30.0	+0.5
TGUH				S	Sb	09 49 54.4	-0.1

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*ASRS **14** 09:50:50.0±0.9, 54°.05N×86°.48E, h0km, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*IDC **14** 09:50:52.6±2.8, 54°.07N×86°.50E, h0km, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=22.0km s-min=13.3km az=56.0*

NNC 14 09:50:49.2±3.4**, 54°.02N**×**86°.75E, h0**km**, mb2.3, mpv2.2, 4D, Error ellipse: s-maj=21.0km s-min=16.5km az=70.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.14	267	I	I	09 57 50.0	
	baz=83,slow=323,SNR=13						
ZAA0	Zalesovo Array	1.14	267	⇓P	Pg	09 51 10.5	-0.7
	0.1nm,0.3s,baz=86,slow=17						
ZAA0				⇓S	Sb	09 51 26.9	-0.4
	0.8nm,0.4s,baz=86,slow=26						
ZALV	Zalesovo Beam	1.14	267	Pg	Pg	09 51 10.5	-0.6
	0.8nm,0.3s,baz=85,slow=16,SNR=7.1						
ZALV				Lg	Lg	09 51 26.1	
	2.1nm,0.3s,baz=85,slow=32,SNR=10.0						
KURBB	Kurchatov Arra	6.08	239	Pn	Pn	09 52 23.4	+3.0
	0.1nm,0.3s,baz=56,slow=13,SNR=4.3						
KURBB				Lg	Lg	09 54 02.4	
	baz=63,slow=31,SNR=1.4						
	0.5nm,0.3s						
KURBB	Kurchatov Arra	6.08	239	⇓Pn	Pn	09 52 21.4	+1.1
	0.8nm,0.3s						
MK31	Makanchi Array	7.78	203	⇓Pn	Pn	09 52 45.9	+2.3
MKAR	Makanchi Array	7.78	203	Pn	Pn	09 52 47.8	+4.1
	0.1nm,0.3s,baz=25,slow=14,SNR=6.5						
MKAR				Sn	Sn	09 54 15.6	+3.2
	0.1nm,0.3s,baz=20,slow=26,SNR=2.0						
MKAR				Lg	Lg	09 54 58.0	
	baz=20,slow=25,SNR=2.7						
	0.2nm,0.3s						

IDC 14 09:51:28.7±1.1**, 9°.69N**×**58°.05E, h0**km**, mb3.6**/6**, mbtmp3.6**/6**, MS3.5**/22**, Error ellipse: s-maj=46.1km s-min=25.5km az=29.0, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALK	Pallekele	22.53	94	LR	LR	10 03 08.7	
	comp=Z,76nm,20.5s,baz=267,slow=31						
ASF	Jabal al Asfar	29.73	322	LR	LR	10 09 36.5	
	comp=Z,70nm,18.7s,baz=200,slow=37						
OPO	Ambohidratompo	30.06	201	LR	LR	10 07 01.4	
	comp=Z,143nm,20.2s,baz=163,slow=31						
GNI	Garni	32.56	341	LR	LR	10 12 51.2	
	comp=Z,104nm,18.3s,baz=162,slow=39						
AAK	Ala-Archa	35.84	21	LR	LR	10 13 58.8	
	comp=Z,92nm,20.3s,baz=220,slow=38						
KBZ	Khabaz	36.38	341	LR	LR	10 15 10.6	
	comp=Z,62nm,18.6s,baz=144,slow=39						
BRTR	Keskin Array B	36.98	328	P	P	09 58 38.6	-1.5
	0.6nm,0.8s,baz=131,slow=4.2,SNR=3.1						
	0.6nm,0.8s						
LSZ	Lusaka	38.61	230	LR	LR	10 13 37.3	
	comp=Z,89nm,19.2s,baz=300,slow=34						
CMAR	Chiang Mai Arr	40.53	73	LR	LR	10 14 06.3	
	comp=Z,29nm,21.0s,baz=240,slow=34						
MKAR	Makanchi Array	42.34	25	P	P	09 59 25.3	+0.8
	0.2nm,0.4s,baz=201,slow=7.3,SNR=2.4						
MKAR				LR	LR	10 19 21.8	
	comp=Z,47nm,18.3s,baz=187,slow=40						
	0.2nm,0.4s						
BVAR	Borovoye Array	44.35	11	LR	LR	10 20 01.3	
	comp=Z,32nm,18.1s,baz=194,slow=39						
LBTB	Lobatse	46.81	222	LR	LR	10 17 06.2	
	comp=Z,97nm,19.0s,baz=52,slow=33						
AKASG	Malin Array Be	47.29	335	LR	LR	10 22 27.8	
	comp=Z,28nm,18.6s,baz=224,slow=39						
TSUM	Tsumeb	49.15	234	LR	LR	10 20 53.3	
	comp=Z,61nm,20.9s,baz=145,slow=36						
KIRV	Kirov	49.23	354	LR	LR	10 23 55.5	
	comp=Z,43nm,21.5s,baz=221,slow=40						
BOSA	Boshof	49.54	219	LR	LR	10 20 44.4	
	comp=Z,71nm,18.3s,baz=28,slow=35						
TORD	Torodi Ar. Bea	55.26	279	P	P	10 01 04.7	+0.3
	1.4nm,0.9s,baz=84,slow=5.8,SNR=5.5						
	1.4nm,0.9s						
FINES	FINESS Array B	56.73	342	LR	LR	10 27 19.4	
	comp=Z,32nm,20.3s,baz=180,slow=38						
NOA	NORSAR Array B	61.68	336	LR	LR	10 31 07.4	
	comp=Z,30nm,19.7s,baz=315,slow=39						
ESDC	Sonseca Array	62.39	310	P	P	10 01 54.1	+0.4
	0.5nm,0.8s,baz=92,slow=6.4,SNR=2.2						
	0.5nm,0.8s						
USRK	Ussuriysk Ar.	71.80	47	LR	LR	10 34 44.7	
	comp=Z,54nm,19.2s,baz=220,slow=36						
KLR	Kul'dur	72.08	41	LR	LR	10 36 44.8	
	comp=Z,72nm,18.6s,baz=260,slow=38						
MJAR	Matsushiro Arr	76.41	55	LR	LR	10 38 08.0	
	comp=Z,33nm,18.8s,baz=262,slow=37						
ASAJ	Asahikawa	79.42	47	LR	LR	10 40 30.4	
	comp=Z,34nm,18.4s,baz=4.0,slow=37						
WRA	Warramunga Arr	80.61	112	P	P	10 03 43.3	-0.6
	0.7nm,0.9s,baz=282,slow=5.4,SNR=5.0						
	0.7nm,0.9s						
ASAR	Alice Springs	81.13	116	P	P	10 03 47.0	+0.3
	0.3nm,0.6s,baz=287,slow=5.2,SNR=6.5						
	0.3nm,0.6s						
STKA	Stephens Creek	89.63	122	LR	LR	10 36 41.8	
	comp=Z,32nm,21.5s,baz=204,slow=30						

ASRS 14 09:59:14.0±0.8**, 54°.14N**×**87°.20E, h0**km**, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

ASRS 14 09:59:21.0±1.3**, 53°.51N**×**87°.67E, h0**km**, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

STR 14 10:02:35.0±0.4**, 45°N**±3°×°±°**, h0**km**, MLv1.9**/8**, Error ellipse: s-maj=0.0km s-min=0.0km az=169.5, preliminary, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SSB	Saint Sauveur	0.05	198	Pg	Pg	10 02 35.4	-0.5
SSB				Sg	Sg	10 02 36.3	-0.1
COLF	Collangettes	0.64	288	Pg	Pg	10 02 46.7	-0.5
COLF				Sg	Sg	10 02 55.9	+0.4
GRN	Grenoble	0.84	95	Pg	Pg	10 02 51.3	+0.3
GRN				Sn	Sb	10 03 03.8	-0.5
OGSM	Saint Maurice	0.85	70	Pg	Pg	10 02 50.9	-0.3
OGSM				Sg	Sb	10 03 03.4	-1.1
PLDF	La Plantade	0.92	315	Pg	Pg	10 02 52.3	-0.3
PLDF				Sg	Sg	10 03 04.3	-0.3
LBL	Lubilhac	0.93	265	Pg	Pg	10 02 53.1	+0.3
LBL				Sg	Sg	10 03 05.5	+0.5
OG35	Corcelles	1.01	44	Pg	Pg	10 02 53.8	-0.5
OG35				Sg	Sg	10 03 07.2	-0.3
OGMY	Moye	1.09	59	Pg	Pg	10 02 55.2	-0.6
OGMY				Sg	Sg	10 03 09.5	-0.3
AGO	Saint Agoulin	1.24	307	Sg	Sg	10 03 14.7	-0.1

WEL 14 10:24:54.1±1.2**, 46°S**±5°×**16°6E**±°**, h12**km**, M3.6**/9**, ML3.8**/9**, MLv3.6**/9**, Error ellipse: s-maj=9.2km s-min=6.1km az=96.5, confirmed, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYZ	Puysegur Point	0.80	139	P	Pg	10 25 09.1	-0.3
PYZ				S	Sg	10 25 19.7	-0.1
DCZ	Deep Cove	0.87	83	P	Pb	10 25 11.0	-0.1
DCZ				S	Sb	10 25 23.3	+0.6
WHZ	Wether Hill Ro	1.45	103	P	Pb	10 25 20.9	-0.2
WHZ				S	Sg	10 25 40.4	-0.4
MLZ	Mavora Lakes	1.56	83	P	Pn	10 25 22.2	+0.6
MLZ				S	Sg	10 25 43.6	-0.6
MSZ	Milford Sound	1.68	58	P	Pn	10 25 22.6	-0.6
MSZ				S	Sn	10 25 43.2	-1.4
APZ	The Paps	1.91	132	P	Pn	10 25 25.6	-0.8
APZ				S	Sn	10 25 49.0	-1.4
WKZ	Wanaka	2.31	72	P	Pn	10 25 33.6	+1.7
WKZ				S	Sb	10 26 03.4	-0.7
EAZ	Earnscleugh	2.41	83	P	Pn	10 25 34.4	+1.1
EAZ				S	Sn	10 26 04.4	+1.7
SYZ	Scrubby Hill	2.44	114	P	Pn	10 25 33.5	-0.2
SYZ				S	Sn	10 26 03.0	-0.3
JCZ	Jackson Bay	2.53	55	P	Pn	10 25 34.0	-1.1
JCZ				S	Sn	10 26 04.6	-1.1
TUZ	Tuapeka	2.62	100	P	Pn	10 25 37.1	+0.9
TUZ				S	Sn	10 26 08.1	+0.2
LBZ	Lake Benmore	3.25	70	P	Pn	10 25 44.9	+0.1
LBZ				S	Sn	10 26 23.9	+0.5
HHSZ	Highcliff Hill	3.29	97	P	Pn	10 25 45.6	+0.2
HHSZ				S	Sn	10 26 24.3	-0.1
ODZ	Otahua Downs	3.37	83	P	Pn	10 25 46.3	-0.2
ODZ				S	Sn	10 26 24.9	-1.6
FOZ	Fox Glacier	3.45	55	P	Pn	10 25 46.2	-1.4
FOZ				S	Sn	10 26 24.9	-3.5
TMZ	Timaru	3.80	74	P	Pn	10 25 51.9	-0.5
TMZ				S	Sn	10 26 35.9	-1.1
GCSZ	Gaunt Creek Bo	3.88	56	P	Pn	10 25 52.1	-1.3
GCSZ				S	Sn	10 26 33.9	-4.9
ARCZ	Arundel	4.08	68	P	Pn	10 25 55.3	-0.9
ARCZ				S	Sn	10 26 42.7	-1.2
WVZ	Waitaha Valley	4.26	56	P	Pn	10 25 57.5	-1.3
WACZ	Wakanui South	4.52	71	P	Pn	10 26 01.3	-0.9
WACZ				S	Sn	10 26 52.5	-2.1
INZ	Inchbonnie	4.89	56	P	Pn	10 26 06.3	-1.0
INZ				S	Sn	10 26 59.6	-4.2
MQZ	McQueen's Vall	5.15	71	P	Pn	10 26 09.6	-1.3
MQZ				S	Sn	10 27 06.0	-4.3

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*NOU **14** 10:26:31.1, 15°.35S×167°.68E, h141km, MLv4.7/12, Vanuatu Islands*

*IDC **14** 10:26:32.5±5.1, 15°.48S×167°.65E, h149km±38km, mb3.8/6, mbtmp4.3/7, Error ellipse: s-maj=39.0km s-min=23.5km az=43.0*

ISC 14 10:26:32.5±1.3**, 15°.5S**±0°.1×**167°.7E**±0°.2**, h150**km**, n14, σ0.73**/17**, mb4.1**/6**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLAKA	Lakatoro	0.69	200	P	Pn	10 26 53.8	-1.1
VLAKA	Lakatoro	0.69	200	P	Sn	10 27 11.9	-0.2
YATNC	Mamie plateau,	6.61	186	P	Pn	10 28 06.4	-1.0
DZM	Mont Dzumac	6.68	190	P	Pn	10 28 08.1	-0.3
	21nm,0.3s,baz=18,slow=16,SNR=59						
DZM				S	Sn	10 29 23.3	-0.3
	4.7nm,0.4s,baz=54,slow=14,SNR=0.9						
DZM	Mont Dzumac	6.68	190	P	Pn	10 28 08.5	+0.1
ONTNC	Ouen Toro	6.91	189	P	Pn	10 28 10.8	-0.6
OUENC	Ouen Island, N	6.97	186	P	Pn	10 28 13.1	+0.9
STKA	Stephens Creek	28.83	231	P	P	10 32 17.9	+1.2
	3.9nm,0.6s,baz=65,slow=14,SNR=7.2						
	3.9nm,0.6s						
WRA	Warramunga Arr	32.03	257	P	P	10 32 44.2	-0.9
	1.7nm,0.5s,baz=84,slow=8.5,SNR=37						
WRA				PcP	PcP	10 35 31.4	0.0
	0.8nm,0.8s,baz=84,slow=1.9,SNR=6.9						
	1.7nm,0.5s						
ASAR	Alice Springs	32.78	250	P	P	10 32 51.3	-0.4
	3.8nm,0.6s,baz=82,slow=8.5,SNR=79						
ASAR				PcP	PcP	10 35 33.2	-0.2
	0.7nm,0.7s,baz=77,slow=2.8,SNR=7.5						
	3.8nm,0.6s						
VNDA	Vanda	62.15	181	P	P	10 36 37.7	+0.5
	0.7nm,0.6s,baz=0.0,slow=2.0,SNR=5.0						
	0.7nm,0.6s						
QSPA	South Pole Qui	74.58	180	P	P	10 37 54.4	-0.5
	3.4nm,0.9s,baz=55,slow=3.8,SNR=17						
	3.4nm,0.9s						
SONM	Songino Array	83.31	323	P	P	10 38 43.5	+0.9
	0.9nm,0.6s,baz=132,slow=2.1,SNR=3.9						
	0.9nm,0.6s						
ARCES	ARCESS Array B	121.05	345	PKP	PKPdf	10 45 06.3	-0.4
	4.3nm,1.0s,baz=39,slow=2.2,SNR=4.5						

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*NEIC **14** 10:34:16.9±1.1, 17°.8S±0°.1×178°.1W±0°.2, h524km±12km, mb4.1/18, Error ellipse: s-maj=23.9km s-min=15.7km az=71.0*

*IDC **14** 10:34:18.4±2.6, 17°.90S×178°.44W, h526km±20km, mb3.5/4, mbtmp4.4/5, Error ellipse: s-maj=51.7km s-min=32.0km az=22.0*

ISC 14 10:34:19.1±1.1**, 17°.7S**±0°.2×**178°.4W**±0°.2**, h550**km**, n25, σ1.15**/27**, mb4.0**/14**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.39	270	P	P	10 35 34.1	-2.6
MSVF	Nonsavu	3.39	270	P	P	10 35 34.0	-2.8
	77nm,0.7s,baz=114,slow=20,SNR=53						
EIDS	Eidsvold	29.34	250	P	P	10 39 37.6	-0.3
EIDS				IAmb	IAmb	10 39 38.6	
	comp=Z,3.3nm,0.8s						
ARMA	Armidale	30.04	240	P	P	10 39 43.9	-0.1
ARMA				IAmb	IAmb	10 39 50.4	
	comp=Z,14nm,1.5s						
CTAO	Charters Tower	33.49	260	P	P	10 40 13.7	+0.2
PATS	Pohnpei	33.55	315	P	P	10 40 14.8	+0.9
CAN	Canberra	33.82	232	P	P	10 40 16.6	+0.5
CAN				IAmb	IAmb	10 40 21.2	
	comp=Z,17nm,1.4s						
COEN	Coen	37.12	270	P	P	10 40 44.7	+1.0
COEN				IAmb	IAmb	10 41 11.7	
	comp=Z,18nm,1.2s						
STKA	Stephens Creek	38.73	241	P	P	10 40 57.2	+0.7
STKA	Stephens Creek	38.73	241	P	P	10 40 56.9	+0.4
	comp=Z,2.1nm,0.5s,baz=95,slow=8.8,SNR=7.9						
	comp=Z,2.1nm,0.5s						
BBOO	Buckleboo	43.50	241	P	P	10 41 34.6	+0.2
WR8	Warramunga Arr	44.53	259	P	P	10 41 42.2	-0.2
WR8				IAmb	IAmb	10 41 43.2	
	comp=Z,5.0nm,1.2s						
WB0	Warramunga Arr	44.65	260	P	P	10 41 43.4	0.0
WB0				IAmb	IAmb	10 42 23.1	
	comp=Z,6.9nm,1.3s						
WRA	Warramunga Arr	44.68	259	P	P	10 41 43.7	+0.1
WRA	Warramunga Arr	44.68	259	P	P	10 41 43.4	-0.3
	comp=Z,1.5nm,0.5s,baz=95,slow=7.7,SNR=68						
WRA				PcP	PcP	10 43 15.6	+1.3
	comp=Z,0.2nm,0.4s,baz=93,slow=3.3,SNR=2.4						
	comp=Z,1.5nm,0.5s						
AS31	Alice Springs	44.85	254	P	P	10 41 45.4	+0.4
AS31				IAmb	IAmb	10 41 45.9	
	comp=Z,5.8nm,0.7s						
ASAR	Alice Springs	44.85	254	P	P	10 41 45.3	+0.4
	comp=Z,20nm,0.5s,baz=94,slow=7.8,SNR=515						
ASAR				PcP	PcP	10 43 15.9	+0.9
	comp=Z,0.3nm,0.5s,baz=88,slow=3.5,SNR=2.9						
	comp=Z,20nm,0.5s						
KNRA	Kununurra	50.52	264	P	P	10 42 28.4	+1.0
FITZ	Fitzroy Crossi	53.07	260	P	P	10 42 47.2	+1.5
QSPA	South Pole Qui	72.32	180	P	P	10 44 49.4	+0.4
QSPA	South Pole Qui	72.32	180	P	P	10 44 49.4	+0.4
	comp=Z,1.4nm,0.9s,baz=55,slow=1.5,SNR=6.8						
	comp=Z,1.4nm,0.9s						
J17K	VABM Dome	82.27	9	P	P	10 45 44.1	+1.4
J17K				IAmb	IAmb	10 45 52.7	
	comp=Z,5.8nm,1.2s						
CRQM	Cirque	83.20	17	P	P	10 45 47.6	-0.1
CRQM				IAmb	IAmb	10 45 48.1	
	comp=Z,2.7nm,0.6s						
LOGN	Logan Glacier	83.85	17	P	P	10 45 50.0	-0.8
LOGN				IAmb	IAmb	10 46 24.0	
	comp=Z,4.0nm,1.2s						

BRTR	Keskin Array B	144.67	315	PKP	PKiKP	10 52 55.5	-2.2
	comp=Z,0.3nm,0.5s,baz=80,slow=2.3,SNR=2.5						

NEIC ***14*** *10:36:11.4±0.9, 19.°66N±0.°07×145.°4E±0.°2, h122km±8km, mb4.4/41, Error ellipse: s-maj=22.3km s-min=10.4km az=82.0*

IDC ***14*** *10:36:14.5±2.6, 19.°68N×145.°45E, h165km±26km, mb3.5/15, mbtmp4.0/16, Error ellipse: s-maj=22.3km s-min=12.5km az=73.0*

ISC 14 10:36:13.2±0.5**, 19.°70N**±0.°06×**145.°3E**±0.°1**, h147**km**, n74, σ1ˢ.13**/69**, mb4.2**/31**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	6.09	184	Pn	Pn	10 37 37.9	-3.3
GUMO	Guam	6.09	184	P	Pn	10 37 42.4	+1.2
	19nm,0.3s,baz=349,slow=5.2,SNR=6.3						
GUMO				S	Sn	10 38 52.5	+2.5
	21nm,0.3s,baz=13,slow=22,SNR=1.6						
JCJ	Chichijima	7.90	339	Pn	Pn	10 38 03.1	-2.1
JCJ	Chichijima	7.90	339	P	Pn	10 38 01.6	-3.6
	73nm,0.7s,baz=157,slow=13,SNR=10						
JCJ				S	Sn	10 39 25.8	-7.5
	67nm,0.5s,baz=279,slow=23,SNR=7.7						
JMN	Monobe	17.29	326	P	P	10 40 05.3	+0.5
JGF	Kuroka	17.32	338	P	P	10 40 06.6	+1.4
JGF				IAmb	IAmb	10 40 08.0	
	comp=Z,12nm,0.7s						
MJAR	Matsushiro Arr	17.90	341	P	P	10 40 11.8	+0.3
	comp=Z,3.0nm,0.5s,baz=157,slow=9.4,SNR=4.2						
MAJO	Matsushiro	17.90	341	P	P	10 40 12.7	+1.2
MJB9	Matsu-Tunnel	17.90	341	P	P	10 40 12.2	+0.6
JMM	Marumori	18.52	349	P	P	10 40 19.5	+1.3
JMM				IAmb	IAmb	10 40 42.4	
	comp=Z,41nm,1.2s						
JNU	Nakatsue	18.57	319	P	P	10 40 20.0	+1.1
JNU				IAmb	IAmb	10 40 53.5	
	comp=Z,23nm,1.3s						
H11S3	WAKE ISLAND Hy	20.23	90	T	T	11 01 39.1	
	baz=277						
H11S1	WAKE ISLAND Hy	20.24	90	T	T	11 01 41.2	
	baz=277,slow=74						
H11S2	WAKE ISLAND Hy	20.25	90	T	T	11 01 40.1	
	baz=277,slow=74						
H11N1	WAKE ISLAND Hy	20.31	86	T	T	11 01 53.9	
	baz=275,slow=74						
H11N2	WAKE ISLAND Hy	20.32	86	T	T	11 01 49.5	
	baz=275						
H11N3	WAKE ISLAND Hy	20.33	86	T	T	11 01 50.6	
	baz=275,slow=74						
JTM	Tenmabayashi	21.33	351	P	P	10 40 49.4	+1.0
MANU	Manus Island	21.70	174	P	P	10 40 51.8	-0.9
ERM	Erimo	22.32	356	P	P	10 40 59.5	+0.9
YULB	Yu-li	22.63	284	P	P	10 41 01.4	-0.4
KSRS	Korea Array	23.30	323	P	P	10 41 08.2	+0.4
	comp=Z,6.1nm,0.7s,baz=150,slow=8.9,SNR=37						
	comp=Z,6.1nm,0.7s						
KSAR	Wonju Array Be	23.31	323	P	P	10 41 08.9	+0.9
KS19	Wonju Array Si	23.36	323	P	P	10 41 09.3	+0.8
KS19				IAmb	IAmb	10 41 10.1	
	comp=Z,8.0nm,0.6s						
JKA	Kamikawa-asahi	24.45	355	P	P	10 41 20.1	+1.9
JKA				IAmb	IAmb	10 41 35.9	
	comp=Z,30nm,1.3s						
WB0	Warramunga Arr	40.66	196	P	P	10 43 38.6	-0.6
WB0				IAmb	IAmb	10 44 02.0	
	comp=Z,11nm,1.4s						
WR8	Warramunga Arr	40.81	196	P	P	10 43 41.0	+0.6
WR8				IAmb	IAmb	10 44 04.7	
	comp=Z,7.5nm,1.4s						
WRA	Warramunga Arr	40.84	196	P	P	10 43 38.9	-1.8
WRA	Warramunga Arr	40.84	196	P	P	10 43 40.5	-0.2
	comp=Z,2.3nm,0.8s,baz=14,slow=8.1,SNR=17						
	comp=Z,2.3nm,0.8s						
SONM	Songino Array	42.14	321	P	P	10 43 51.0	-0.1
	comp=Z,0.7nm,0.3s,baz=131,slow=6.5,SNR=1.3						
	comp=Z,0.7nm,0.3s						
FITZ	Fitzroy Crossi	42.24	208	P	P	10 43 52.8	+0.8
ASAR	Alice Springs	44.52	195	P	P	10 44 09.6	-0.7
	comp=Z,0.7nm,0.6s,baz=15,slow=7.7,SNR=8.9						
	comp=Z,0.7nm,0.6s						
DZM	Mont Dzumac	46.37	152	P	P	10 44 24.0	-0.9
DZM				IAmb	IAmb	10 44 24.6	
	comp=Z,7.6nm,1.0s						
DZM	Mont Dzumac	46.37	152	P	P	10 44 23.8	-1.1
	comp=Z,3.7nm,0.6s,baz=330,slow=16,SNR=2.4						
	comp=Z,3.7nm,0.6s						
O15K	Ungalikthiuk R	55.49	31	P	P	10 45 33.0	+0.5
N15K	Kwethluk River	55.72	30	P	P	10 45 35.0	+0.8
M16K	Timber Creek	56.56	29	P	P	10 45 40.0	-0.1
M16K				IAmb	IAmb	10 46 19.2	
	comp=Z,12nm,1.3s						
L16K	Owhat River	56.58	28	P	P	10 45 40.7	+0.5
L16K				IAmb	IAmb	10 45 57.5	
	comp=Z,4.7nm,1.2s						
J16K	Anvik River	56.72	26	P	P	10 45 42.1	+0.9
J16K				IAmb	IAmb	10 45 42.8	
	comp=Z,2.8nm,1.0s						
ZALV	Zalesovo Beam	57.00	322	P	P	10 45 45.2	+1.9
ZALV	Zalesovo Beam	57.00	322	P	P	10 45 44.0	+0.7
	comp=Z,1.3nm,0.6s,baz=99,slow=7.4,SNR=4.6						
	comp=Z,1.3nm,0.6s						
C16K	Lisburne Hills	57.34	20	P	P	10 45 46.0	+0.5
C16K				IAmb	IAmb	10 46 25.7	
	comp=Z,6.4nm,1.4s						
K17K	Iditarod	57.47	27	P	P	10 45 47.6	+1.2
K17K				IAmb	IAmb	10 46 30.2	
	comp=Z,7.2nm,1.3s						
MKAR	Makanchi Array	57.51	313	P	P	10 45 47.6	+0.5
	comp=Z,0.4nm,0.5s,baz=92,slow=6.5,SNR=6.3						
	comp=Z,0.4nm,0.5s						
O18K	Koktuh Hills	57.94	31	P	P	10 45 50.7	+0.9
E18K	Tukpahlearik C	58.49	22	P	P	10 45 54.6	+1.1
E18K				IAmb	IAmb	10 46 14.2	
	comp=Z,3.6nm,1.4s						
G18K	Tagagawik	58.55	24	P	P	10 45 54.6	+0.7
CNPM	China Poot	59.80	32	P	P	10 46 02.4	-0.3
KURBB	Kurchatov Arra	60.34	318	P	P	10 46 06.9	+0.4
	comp=Z,0.6nm,0.4s,baz=94,slow=7.0,SNR=4.4						
	comp=Z,0.6nm,0.4s						
CAST	Castle Rocks	60.37	27	P	P	10 46 06.9	+0.4
CAST				IAmb	IAmb	10 46 10.0	
	comp=Z,3.8nm,1.3s						
D20K	Etivluk River	60.40	21	P	P	10 46 07.2	+0.6
D20K				IAmb	IAmb	10 46 07.8	
	comp=Z,5.7nm,1.1s						
B20K	Meade River	60.75	19	P	P	10 46 09.6	+0.8
I23K	Minto, Yukon-K	61.97	26	P	P	10 46 18.2	+1.0
I23K				IAmb	IAmb	10 46 42.2	
	comp=Z,4.2nm,1.5s						
B22K	Teshekpuk Lake	62.05	20	P	P	10 46 18.3	+0.6
B22K				IAmb	IAmb	10 46 26.0	
	comp=Z,9.0nm,1.2s						
H24K	Noodor Dome	62.73	25	P	P	10 46 23.1	+0.8
ILAR	Eielson Array	62.91	26	P	P	10 46 21.9	-1.5
	comp=Z,0.5nm,0.8s,baz=257,slow=5.9,SNR=5.4						
	comp=Z,0.5nm,0.8s						
DOT	Dot Lake	63.93	28	P	P	10 46 30.9	+0.6
DOT				IAmb	IAmb	10 46 35.0	
	comp=Z,4.1nm,1.4s						
BMAR	Burnt Mountain	64.35	24	P	P	10 46 34.1	+1.2
BCAR	Beaver Creek A	64.88	29	P	P	10 46 37.0	+0.5
BVAR	Borovoye Array	65.48	320	P	P	10 46 40.5	+0.1
	comp=Z,1.5nm,0.7s,baz=96,slow=8.9,SNR=3.9						
	comp=Z,1.5nm,0.7s						
M29M	Somme Creek	66.36	30	P	P	10 46 47.0	+1.0
L29M	L29M	66.54	29	P	P	10 46 48.0	+0.9
L29M				IAmb	IAmb	10 47 21.1	
	comp=Z,4.6nm,1.4s						
G31M	Satah River	68.29	25	P	P	10 46 58.5	+0.6
AB31	Akbulak array	72.36	317	P	P	10 47 23.4	+0.4
ABKAR	Akbulak array	72.36	317	P	P	10 47 23.8	+0.8
YKA	Yellowknife Ar	77.28	28	P	P	10 47 50.5	-0.4
	comp=Z,0.5nm,0.8s,baz=292,slow=5.4,SNR=3.1						
	comp=Z,0.5nm,0.8s						
YKAW1	Yellowknife Wh	77.33	28	P	P	10 47 51.4	+0.2
YKAW1				IAmb	IAmb	10 48 26.8	
	comp=Z,1.8nm,0.9s						
ARCES	ARCESS Array B	81.43	342	P	P	10 48 14.2	+0.8
ARCES				IAmb	IAmb	10 48 50.4	
	comp=Z,21nm,1.4s						
ARCES	ARCESS Array B	81.43	342	P	P	10 48 13.3	-0.1
	comp=Z,2.4nm,0.8s,baz=57,slow=5.9,SNR=9.4						
	comp=Z,2.4nm,0.8s						
NVAR	Mina Array Bea	82.81	52	P	P	10 48 22.6	+1.1
NVAR	Mina Array Bea	82.81	52	P	P	10 48 21.2	-0.3
	comp=Z,1.7nm,0.7s,baz=289,slow=6.8,SNR=14						
	comp=Z,1.7nm,0.7s						
FINES	FINESS Array B	85.83	335	P	P	10 48 35.1	-0.8
	comp=Z,0.8nm,0.3s,baz=66,slow=5.6,SNR=7.9						
	comp=Z,0.8nm,0.3s						
PDAR	Pinedale Array	87.38	45	P	P	10 48 43.1	-1.1
	comp=Z,0.3nm,0.5s,baz=279,slow=4.2,SNR=2.6						
	comp=Z,0.3nm,0.5s						
LPAZ	La Paz	148.04	89	PKPbc	PKPdf	10 55 40.2	+0.5
	comp=Z,1.0nm,0.6s,baz=273,slow=3.0,SNR=5.2						

JMA ***14*** *11:05:16.8±1.3, 46°N±6°×15°2E±1°0, h30km, MV4.7/13, KURILE ISLANDS REGION*

SKHL ***14*** *11:05:19.7±0.5, 46.°00N×151.°50E, h115km±7km, mb5.1/6, msha5.9/5*

MOS ***14*** *11:05:20.7±1.5, 46.°33N×151.°17E, h110km, mb3.9/2, Error ellipse: s-maj=13.3km s-min=8.6km az=138.8*

IDC ***14*** *11:05:24.1±2.6, 46.°49N×151.°16E, h126km±22km, mb3.3/5, mbtmp3.9/9, Error ellipse: s-maj=24.1km s-min=19.1km az=122.0*

NEIC ***14*** *11:05:24.2±1.6, 46.°5N±0.°1×151.°0E±0.°2, h115km±9km, mb4.2/13, Error ellipse: s-maj=20.4km s-min=12.6km az=144.0*

ISC 14 11:05:20.7±0.7**, 46.°16N**±0.°08×**151.°31E**±0.°08**, h100**km**, n83, σ1ˢ.64**/94**, mb4.0**/12**, 1C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.58	250	ePN	Pn	11 06 01.6	+0.8
KUR				i S	Sn	11 06 33.1	+1.4
KUR				pmax	pmax		
	comp=Z,430nm,0.4s						
KUR				pmax	pmax		
	comp=N,145nm,0.3s						
KUR				pmax	pmax		
	comp=E,108nm,0.3s						
KUR				smax	smax		
	comp=E,663nm,0.6s						
KUR				smax	smax		
	comp=N,410nm,0.4s						
KUR	Kuril'sk	2.58	250	eP	Pn	11 06 02.6	+1.8
KUR				AMB	AMB	11 06 03.6	
	comp=N,410nm,0.3s						
KUR				eS	Sn	11 06 34.4	+2.7
KUR				A	A	11 06 39.7	
	comp=N,730nm,0.6s						
KUR				A	A	11 06 39.7	
	comp=N,900nm,0.6s						
SHO	Shikotan	3.91	236	ePN	Pn	11 06 19.0	+0.3
SHO				eS	Sn	11 07 04.1	+0.5
SHO				pmax	pmax		
	comp=N,39nm,0.2s						
SHO				pmax	pmax		
	comp=E,49nm,0.2s						
SHO				pmax	pmax		
	comp=Z,59nm,0.2s						
SHO				smax	smax		
	comp=N,539nm,0.3s						
SHO				smax	smax		
	comp=E,489nm,0.3s						
SHO	Shikotan	3.91	236	eP	Pn	11 06 19.2	+0.5
SHO				AMB	AMB	11 06 23.0	
	comp=E,60nm,0.3s						
SHO				eS	Sn	11 07 03.3	-0.3
SHO				A	A	11 07 19.1	
	comp=E,530nm,0.4s						
SHO				A	A	11 07 19.1	
	comp=E,600nm,0.4s						
YUK	Yuzh-Kuril'sk	4.40	243	d iPN	Pn	11 06 26.6	+1.3
YUK				S	Sn	11 07 18.1	+2.7
YUK				pmax	pmax		
	comp=N,49nm,0.1s						
YUK				pmax	pmax		
	comp=Z,183nm,0.1s						
YUK				smax	smax		
	comp=E,604nm,0.5s						
YUK				smax	smax		
	comp=N,516nm,0.6s						
YUK	Yuzh-Kuril'sk	4.40	243	i P	Pn	11 06 26.5	+1.3
YUK				AMB	AMB	11 06 30.2	
	comp=N,200nm,0.4s						
YUK				eS	Sn	11 07 16.1	+0.7
YUK				A	A	11 07 28.6	
	comp=N,630nm,0.5s						
YUK				A	A	11 07 28.6	
	comp=N,750nm,0.5s						
RUSJ	Misakicho	4.75	247	ePN	Pn	11 06 32.9	+2.9
RUSJ				eS	Sn	11 07 26.7	+2.8
NEM2	Nemuro 2	4.85	237	P	Pn	11 06 30.7	-0.6
NEM2				eS	Sn	11 07 24.2	-2.0
NMR	Nemuro--Hokkai	4.85	237	⇑iPN	Pn	11 06 30.6	-0.8
NMR				S	Sn	11 07 24.7	-1.6
NMR	Nemuro--Hokkai	4.85	237	i P	Pn	11 06 30.9	-0.5
NMR				eS	Sn	11 07 25.7	-0.6
JRA	Rausu	4.91	245	P	Pn	11 06 33.7	+1.5
JNK	Nakash	5.34	244	P	Pn	11 06 39.0	+1.0
SKR	Severo-Kuril’s	5.54	34	ePN	Pn	11 06 40.7	+0.1
SKR				eS	Sn	11 07 42.1	-0.9
SKR				pmax	pmax		
	comp=Z,54nm,0.5s						
SKR				smax	smax		
	comp=N,52nm,0.6s						
SKR				smax	smax		
	comp=E,68nm,0.4s						
SKR	Severo-Kuril’s	5.54	34	eP	Pn	11 06 40.9	+0.3
SKR				AMB	AMB	11 06 42.2	
	comp=E,50nm,0.3s						
SKR				eS	Sn	11 07 41.2	-1.8
SKR				A	A	11 07 48.0	
	comp=E,60nm,0.3s						
SKR				A	A	11 07 48.0	
	comp=E,50nm,0.3s						
JTKR	Abashiri--Toko	5.68	250	eP	Pn	11 06 44.2	+1.7
JAK	Akkeshi	5.68	239	P	Pn	11 06 41.5	-1.1
JAK				eS	Sn	11 07 45.5	-1.0
YSS	Yuzhno-Sakhali	5.95	281	Pn	Pn	11 06 47.0	+0.7
YSS	Yuzhno-Sakhali	5.95	281	ePN	Pn	11 06 44.9	-1.3
YSS				eS	Sn	11 07 50.1	-2.9
YSS				pmax	pmax		
	comp=Z,40nm,1.5s						
YSS				smax	smax		
	comp=N,10.0nm,0.8s						
YSS				smax	smax		
	comp=E,10.0nm,0.8s						
YSS	Yuzhno-Sakhali	5.95	281	eP	Pn	11 06 47.7	+1.5
YSS				AMB	AMB	11 06 48.6	
	comp=E,40nm,0.9s						
JAR	Ashorobuto	6.08	245	P	Pn	11 06 49.4	+1.3
JAR				eS	Sn	11 07 57.7	+1.4
JOB	Onbets	6.25	241	eP	Pn	11 06 50.5	+0.2
JOB				eS	Sn	11 07 58.5	-1.8
PAU	Pauzhetka	6.43	32	eP	Pn	11 06 53.3	+0.6
PAU				AMB	AMB	11 06 54.5	
	comp=E,60nm,0.3s						
PAU				eS	Sn	11 08 02.5	-2.1
PAU				A	A	11 08 04.4	
	comp=E,60nm,0.2s						
PAU				A	A	11 08 04.4	
	comp=E,50nm,0.2s						
JKK2	Kamakawa 2	6.48	252	P	Pn	11 06 57.0	+3.5
JKA	Kamikawa-asahi	6.49	255		Pn	11 06 56.0	+2.4
ASAJ	Asahikawa	6.49	255	P	Pn	11 06 56.4	+2.8
	comp=E,25nm,1.0s,baz=68,slow=17,SNR=18						
ASAJ				S	Sn	11 08 10.5	+4.4
	comp=E,4.8nm,0.5s,baz=111,slow=33,SNR=1.4						
JCH	Churui	6.70	241	P	Pn	11 06 55.8	-0.7
JCH				eS	Sn	11 08 08.9	-2.5
ERM	Erimo	7.18	238		Pn	11 07 04.3	+1.3
ERM	Erimo	7.18	238	i PN	Pn	11 07 02.8	-0.2
JNBK	Urakawa-nobuka	7.27	241	P	Pn	11 07 03.2	-0.9
JNBK				eS	Sn	11 08 24.2	-0.8
TYV	Tymovskoe	7.42	312	eP	Pn	11 07 08.5	+2.3
PEA0B	Petropavlovsk-	8.10	28		Pn	11 07 16.1	+0.7
PEA0B	Petropavlovsk-	8.10	28	PN	Pn	11 07 16.1	+0.7
PETK	Petropavlovsk-	8.10	28		Pn	11 07 16.0	+0.7
PETK	Petropavlovsk-	8.10	28	P	Pn	11 07 15.8	+0.5
	comp=E,14nm,0.5s,baz=193,slow=14,SNR=53						
PETK	Petropavlovsk-	8.10	28	PN	Pn	11 07 16.0	+0.7
PET	Petropavlovsk	8.36	32	Pn	Pn	11 07 18.9	0.0
JANG	Nango	9.19	234	P	Pn	11 07 27.1	-3.1
JANG				eS	Sn	11 09 02.5	-9.4
JMM	Marumori	11.39	227	Pn	Pn	11 08 01.5	+1.4
KLR	Kul'dur	13.52	290	i PN	Pn	11 08 26.8	-1.4
KLR	Kul'dur	13.52	290	eP	Pn	11 08 26.8	-1.4
USA0B	Ussuriysk Arra	13.77	269	Pn	Pn	11 08 32.4	+0.9
USA0B	Ussuriysk Arra	13.77	269	P	Pn	11 08 32.4	+0.9
USRK	Ussuriysk Ar.	13.77	269	Pn	Pn	11 08 30.8	-0.7
USRK	Ussuriysk Ar.	13.77	269	P	Pn	11 08 32.1	+0.6
	comp=E,4.1nm,0.5s,baz=74,slow=12,SNR=10						
USRK	Ussuriysk Ar.	13.77	269	eP	Pn	11 08 33.2	+1.7
USRK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ZEA	Zeya	17.18	305	i P	Pn	11 09 12.9	-1.3
ZEA	Zeya	17.18	305	eP	Pn	11 09 12.9	-1.3
KSRS	Korea Array	19.43	252	P	Pn	11 09 42.0	+0.8
	comp=Z,3.6nm,0.6s,baz=54,slow=11,SNR=18						
KSRS	Korea Array	19.43	252	P	Pn	11 09 42.0	+0.8
H11N2	WAKE ISLAND Hy	29.32	149	T	T	11 42 56.3	
	baz=339,slow=76,SNR=439						
H11N1	WAKE ISLAND Hy	29.33	149	T	T	11 42 54.8	
	baz=339,slow=76,SNR=221						
H11N3	WAKE ISLAND Hy	29.33	149	T	T	11 42 52.2	
	baz=339,slow=76,SNR=226						
H11S1	WAKE ISLAND Hy	30.37	150	T	T	11 44 18.7	
	baz=340,slow=76,SNR=435						
H11S3	WAKE ISLAND Hy	30.38	150	T	T	11 44 19.7	
	baz=340,slow=76,SNR=286						
H11S2	WAKE ISLAND Hy	30.39	150	T	T	11 44 17.1	
	baz=340,slow=76,SNR=255						
G18K	Tagagawik	32.98	35	P	P	11 11 47.0	+1.4
G18K				IAmb	IAmb	11 11 47.9	
	comp=Z,4.1nm,1.4s						
D19K	Kuna River	33.79	31	P	P	11 11 52.6	-0.1
D19K				IAmb	IAmb	11 12 02.1	
	comp=Z,6.1nm,1.3s						
E19K	Redstone River	33.87	33	P	P	11 11 54.1	+0.9
E19K				IAmb	IAmb	11 11 57.0	
	comp=Z,2.5nm,1.1s						
B20K	Meade River	34.53	28	P	P	11 11 58.6	-0.3
IMAR	Indian Mountai	34.98	36	P	P	11 12 03.4	+0.6
B21K	Ikpikpuk River	35.29	29	P	P	11 12 06.1	+0.7
E22K	Anaktuvuk Pass	36.02	32	P	P	11 12 12.3	+0.5
E22K				IAmb	IAmb	11 12 18.4	
	comp=Z,3.7nm,1.4s						
L27K	Beaver Creek,	40.14	41	P	P	11 12 48.7	+2.3
BCAR	Beaver Creek A	40.16	41	P	P	11 12 47.9	+1.3
I30M	Mount Dempster	42.19	37	P	P	11 13 04.7	+1.5
C36M	Paulatuk	45.95	29	P	P	11 13 34.0	+1.0
C36M				IAmb	IAmb	11 14 13.5	
	comp=Z,4.6nm,1.0s						
MK31	Makanchi Array	46.10	297	i P	P	11 13 32.2	-2.4
MKAR	Makanchi Array	46.10	297	P	P	11 13 33.7	-0.9
MKAR	Makanchi Array	46.10	297	P	P	11 13 33.4	-1.2
	comp=Z,0.7nm,0.6s,baz=71,slow=7.0,SNR=10						
	comp=Z,0.7nm,0.6s						
KURK	Kurchatov	46.65	303	P	P	11 13 36.0	-2.7
KURK	Kurchatov	46.65	303	P	P	11 13 37.5	-1.2
KURBB	Kurchatov Arra	46.74	303	P	P	11 13 37.5	-2.0
	comp=Z,0.6nm,0.5s,baz=72,slow=9.1,SNR=5.8						
	comp=Z,0.6nm,0.5s						
BVAR	Borovoye Array	50.27	309	P	P	11 14 05.0	-1.5
	comp=Z,0.7nm,0.5s,baz=59,slow=9.3,SNR=3.7						
	comp=Z,0.7nm,0.5s						
AB31	Akbulak array	57.84	309	P	P	11 15 00.5	-1.1
AB31				IAmb	IAmb	11 15 00.9	
	comp=Z,1.6nm,0.5s						
ABKAR	Akbulak array	57.84	309	P	P	11 15 00.5	-1.0
ABKAR				IAmb	IAmb	11 15 00.9	
	comp=Z,1.6nm,0.5s						
WRA	Warramunga Arr	67.56	197	P	P	11 16 07.8	+1.5
	comp=Z,0.6nm,0.8s,baz=15,slow=6.8,SNR=7.1						
	comp=Z,0.6nm,0.8s						
WRA	Warramunga Arr	67.56	197	i P	P	11 16 08.5	+2.2
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NB201	NORSAR Array S	68.35	340	P	P	11 16 08.5	-2.3
ASAR	Alice Springs	71.27	197	P	P	11 16 32.3	+3.2
ASAR	Alice Springs	71.27	197	P	P	11 16 32.0	+2.9
	comp=Z,0.4nm,0.6s,baz=12,slow=7.0,SNR=8.2						
	comp=Z,0.4nm,0.6s						
H03N2	Juan Fernandez	140.00	90	T	T	14 00 33.3	
	baz=308,slow=78,SNR=17						
H03N1	Juan Fernandez	140.01	90	T	T	14 00 35.2	
	baz=308,slow=78,SNR=22						
H03N3	Juan Fernandez	140.01	90	T	T	14 00 31.2	
	baz=308,slow=78,SNR=15						

HEL ***14*** *11:18:14.4±0.2, 64.°69N×30.°72E, h0km, ML2.0, Suspected explosion*

IDC ***14*** *11:18:16.1±2.6, 64.°68N×30.°48E, h0km, mbtmp2.9/3, ML1.9/3, Error ellipse: s-maj=38.1km s-min=8.9km az=100.0*

UPP ***14*** *11:18:16.5±2.4, 64.°50N×30.°65E, h0km, ML1.7*

KOLA ***14*** *11:18:17.8, 64.°68N×30.°79E, h0km, ML2.1, Error ellipse: s-maj=24.9km s-min=14.0km az=170.0, Kostomuksha, Karelia*

MOS ***14*** *11:18:18.0±0.8, 64.°62N±0.°04×30.°7E±0.°4, h0km, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

ISC 14 11:18:14.6±0.9**, 64.°76N**±0.°03×**30.°80E**±0.°04**, h0**km**, n52, σ1ˢ.96**/72**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RMF	Romuvaara	0.66	215	PG	Pg	11 18 24.8	-2.4
	baz=37						
RMF				MSG		11 18 33.1	
	comp=Z,30nm,0.2s						
RMF				SG	Sg	11 18 35.9	+0.1
KU1	Kurvinen	0.97	328	PG	Pg	11 18 32.5	-0.6
	baz=152						
KU1				SB	Sb	11 18 47.7	+0.2
KU6	Riekki	1.33	344	PG	Pg	11 18 39.4	-0.7
	baz=166						
KU6				MSG		11 18 56.1	
	comp=Z,10nm,0.2s						
KU6				SN	Sn	11 18 59.0	+0.2
MSF	Maaselka	1.37	328	PG	Pg	11 18 39.8	-1.1
	baz=149						
MSF				SN	Sn	11 18 60.0	0.0
KU2	Taivalkoski	1.45	313	PG	Pn	11 18 40.7	-1.3
OLKF	Oulanka, Finla	1.68	340	PG	Pn	11 18 45.7	+0.5
OLKF				MSG		11 19 06.0	
	comp=Z,12nm,0.2s						
JOF	Joensuu	1.86	173	eP	Pn	11 18 49.7	+2.0
JOF	Joensuu	1.86	173	PG	Pn	11 18 46.6	-1.1
	baz=350						
NIF	Nilsia	1.90	225	PG	Pn	11 18 47.9	-0.3
	baz=41						
RANF	Ranua	2.10	309	PG	Pn	11 18 51.6	+0.6
	baz=128						
RANF				SG	Sn	11 19 19.0	+1.2
OUL	Oulu	2.12	281	PG	Pn	11 18 51.4	+0.2
OUL				SG	Sn	11 19 19.9	+1.8
KVDA	Kovda	2.12	23	P	Pb	11 18 54.0	+0.1
KVDA				S	Sg	11 19 22.3	-0.5
OBF4	Vikkela, Lumij	2.44	274	PG	Pn	11 18 57.3	+1.6
OBF4				MSG		11 19 25.7	
	comp=Z,9.9nm,0.2s						
OBF4				SG	Sb	11 19 29.5	-0.4
OUF	Merijarvi	2.65	264	PG	Pn	11 18 59.2	+0.7
OUF				MSG		11 19 31.4	
	comp=Z,13nm,0.2s						
OUF				SG	Sn	11 19 32.8	+1.6
RNF	Rovaniemi	2.72	315	PG	Pb	11 19 04.1	+0.1
RNF				SG	Sb	11 19 39.0	+1.2
OBF0	Syolatti, Pyha	2.84	268	PG	Pn	11 19 03.4	+2.3
OBF0				MSG		11 19 36.8	
	comp=Z,4.2nm,0.2s						
SUF	Sumiainen	2.91	227	PG	Pn	11 19 05.0	+2.9
SUF				MSG		11 19 37.8	
	comp=Z,2.4nm,0.2s						
APA0	Apatity Array	3.00	16	P	Pb	11 19 08.1	-0.7
APA0				S	Sb	11 19 43.6	-2.2
TOF	Tornio	3.02	299	PG	Pb	11 19 09.0	-0.1
TOF				MSG		11 19 43.0	
	comp=Z,2.3nm,0.2s						
TOF				SG	Sb	11 19 45.5	-0.9
VRF	Varrio	3.04	351	PB	Pn	11 19 06.9	+2.9
	baz=175						
VRF				MSG		11 19 45.6	
	comp=Z,2.4nm,0.2s						
VRF				SB	Sb	11 19 46.1	-1.1

OBF8	Ulkokalla	3.21	266	PB	Pn	11 19 07.7	+1.6
KALU	Kalix	3.31	293	P	Pn	11 19 10.3	+2.7
KALU	Kalix	3.31	293	PB	Pn	11 19 10.5	+2.8
KALU				SG	Sb	11 19 56.3	+1.3
KAF	Kangasniemi	3.33	219	PG	Pn	11 19 11.8	+3.8
KAF				SB	Sn	11 19 50.2	+2.0
RUF	Ruokolahti	3.45	195	PB	Pn	11 19 11.7	+2.2
LVZ	Lovozero	3.52	24	S	Sn	11 19 55.2	+2.5
KEF	Keuruu	3.72	228	*e*P	Pn	11 19 00.5	-13
KEF	Keuruu	3.72	228	PB	Pn	11 19 16.6	+3.3
KLF	Kolari	3.74	315	PB	Pn	11 19 16.2	+2.7
RAJF	Raja-Jooseppi	3.86	346	PG	Pb	11 19 22.4	-1.1
PAJU	Pajala	3.89	309	P	Pn	11 19 18.2	+2.6
PAJU				S	Sn	11 20 05.4	+3.5
PAJU	Pajala	3.89	309	PB	Pn	11 19 18.4	+2.8
PAJU				SG	Sb	11 20 14.5	+3.0
SJUU	Sjulsmark	3.96	285	P	Pn	11 19 18.1	+1.7
SJUU				S	Sn	11 20 04.6	+1.1
FIA0	FINESS Array S	3.96	215	PB	Pn	11 19 18.3	+1.8
	baz=32						
FINES	FINESS Array B	3.96	215	Pn	Pn	11 19 15.3	-1.2
	comp=Z,0.1nm,0.3s,baz=32,slow=13,SNR=5.3						
FINES				Lg	Lg	11 20 15.5	
	comp=Z,1.1nm,0.3s,baz=28,slow=30,SNR=12						
	comp=Z,1.4nm,0.8s						
VAF	Ylistaro	3.98	248	*e*P	Pn	11 19 19.3	+2.5
VAF	Ylistaro	3.98	248	PB	Pn	11 19 19.4	+2.6
	baz=63						
ERTU	Ertsjaerv	4.00	301	P	Pn	11 19 19.5	+2.5
ERTU	Ertsjaerv	4.00	301	PB	Pn	11 19 20.6	+3.5
BURU	Burvik	4.05	272	P	Pn	11 19 18.4	+0.6
BURU				S	Sn	11 20 05.6	-0.3
ODEU	Stanfors	4.36	270	P	Pn	11 19 22.3	+0.2
ODEU				S	Sn	11 20 12.7	-0.8
MASU	Masugnsbyn	4.49	311	P	Pn	11 19 27.1	+3.2
UMAU	Umeaa	4.49	263	P	Pn	11 19 24.0	+0.2
HEF	Hetta	4.64	325	SG	Sg	11 20 38.4	-5.1
TERR	Teriberka	4.77	19	S	Sn	11 20 25.8	+2.3
SVAU	Svanoeiden	4.84	272	P	Pn	11 19 29.3	+0.7
ARCES	ARCESS Array B	5.22	339	Pn	Pn	11 19 33.7	-0.2
	comp=Z,0.2nm,0.3s,baz=152,slow=14,SNR=11						
ARCES				Sn	Sn	11 20 33.6	-1.1
	comp=Z,0.1nm,0.3s,baz=158,slow=20,SNR=1.3						
ARCES				Lg	Lg	11 20 58.1	
	comp=Z,0.5nm,0.3s,baz=154,slow=33,SNR=6.0						
	comp=Z,2.1nm,0.8s						
ARCES	ARCESS Array B	5.22	339	P	Pn	11 19 35.8	+1.9
ARCES				S	Sn	11 20 34.7	0.0
VADS	Vadso	5.42	355	S	Sn	11 20 41.4	+2.0
I37NO	I37NO	6.46	318	I	I	11 56 20.0	
	baz=130,slow=320,SNR=5.4						
FAUS	Fauske	6.83	300	S	Sn	11 21 14.4	+0.2
HFS	Hagfors	9.17	248	Pn	Pn	11 20 24.9	-3.1
	comp=Z,0.1nm,0.3s,baz=51,slow=11,SNR=2.5						
	comp=Z,0.4nm,0.4s						

NOU ***14*** *11:20:01.8, 18°.82S×169°.00E, h104^{km}, mb5.1/44, Vanuatu Islands*

BJI ***14*** *11:20:02.0, 18°.80S×168°.90E, h116^{km}, mB5.2/2, mb4.9/25*

IDC ***14*** *11:20:02.4±0.6, 18°.88S×168°.83E, h108^{km}±5^{km}, mb4.4/21, mbtmp4.8/23, MS3.2/7, Error ellipse: s-maj=13.1km s-min=9.1km az=113.0*

NEIC ***14*** *11:20:03.5±1.6, 18°.89S±0°.09×168°.89E±0°.08, h115^{km}±3^{km}, mb4.8/81, Error ellipse: s-maj=13.5km s-min=11.2km az=155.0*

ISC 14 11:20:02.7±0.4**, 18°.82S**±0°.04×**168°.90E**±0°.06**, h114^{km}**±3^{km}**, h114^{km}:pP-P, n241,** σ1^{s}01/227**, mb4.8**/66**, 12C-14D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INH	Isangel	0.80	154	P	Pn	11 20 22.4	+0.1
MARNC	Mare, Loyalty	2.77	197	P	Pn	11 20 43.9	-1.9
VLAKA	Lakatoro	3.05	332	P	Pn	11 20 47.1	-2.3
YATNC	Mamie plateau,	3.73	210	P	Pn	11 20 57.8	-0.7
DZM	Mont Dzumac	3.97	215		Pn	11 21 01.1	-0.7
DZM				Sn	Sn	11 21 44.9	-2.8
DZM	Mont Dzumac	3.97	215	*e*Pn	Pn	11 21 00.7	-1.1
	387nm,1.1s						
DZM				*e*Sn	Sn	11 21 44.7	-2.9
	2μm,0.8s						
DZM	Mont Dzumac	3.97	215	P	Pn	11 21 01.1	-0.7
	113nm,0.2s,baz=68,slow=11,SNR=1351						
DZM				S	Sn	11 21 42.8	-4.8
	709nm,0.2s,baz=135,slow=20,SNR=12						
DZM	Mont Dzumac	3.97	215	P	Pn	11 21 01.2	-0.7
PINNC	Pines Island,	4.01	200	P	Pn	11 21 01.5	-0.8
OUENC	Ouen Island, N	4.07	208	P	Pn	11 21 03.4	+0.4
ONTNC	Ouen Toro	4.16	213	P	Pn	11 21 02.9	-1.3
KOUNC	Koumac, New Ca	4.68	248	P	Pn	11 21 11.1	-0.1
MSVF	Nonsavu	8.76	84	Pn	Pn	11 22 07.3	+0.7
HNR	Honiara	12.74	316		Pn	11 23 01.2	+1.4
HNR	Honiara	12.74	316	P	Pn	11 23 00.5	+0.7
	203nm,0.5s,baz=138,slow=3.8,SNR=11						
ALEG	Aligegeo Malai	12.79	320	P	Pn	11 23 01.3	+0.9
SAVO	Savo Central	13.04	316	P	Pn	11 23 05.6	+1.8
EIDS	Eidsvold	17.74	245		P	11 24 01.1	-0.7
EIDS	Eidsvold	17.74	245	P	Pn	11 24 04.0	+1.4
ARMA	Armidale	19.46	230		P	11 24 20.8	+0.2
ARMA	Armidale	19.46	230	P	Pn	11 24 23.1	+0.1
URZ	Urewera	20.65	161	P	Pn	11 24 34.6	-1.9
	11nm,0.7s,baz=145,slow=4.5,SNR=7.6						
	11nm,0.7s						
CTAO	Charters Tower	21.39	263		P	11 24 41.1	-0.3
CTAO	Charters Tower	21.39	263	P	P	11 24 43.4	+2.0
PMG	Port Moresby	23.04	291	P	P	11 24 58.8	+0.5
	36nm,1.0s,baz=128,slow=7.9,SNR=4.5						
	36nm,1.0s						
THZ	Tophouse	23.12	172		P	11 25 00.3	+1.4
MTSU	Mount Surprise	23.32	268	P	P	11 25 01.1	+0.2
CNB	Canberra Magne	23.86	223	P	P	11 25 07.0	+1.4
QLP	Quilpie	24.00	247	P	P	11 25 07.7	+0.7
CAN	Canberra	24.09	223		P	11 25 08.7	+1.0
CAN	Canberra	24.09	223	P	P	11 25 09.4	+1.6
CMSA	Cobar Meteorol	24.46	234	P	P	11 25 11.6	+0.5
RPZ	Rata Peaks	24.89	176	LR	LR	11 34 21.6	
	comp=Z,132nm,19.7s,baz=96,slow=35						
COEN	Coen	25.14	277	P	P	11 25 18.1	+0.7
COEN	Coen	25.14	277	P	P	11 25 19.5	+2.1
QIS	Mount Isa	27.62	261	P	P	11 25 40.8	+1.1
STKA	Stephens Creek	27.80	237		P	11 25 42.0	+0.9
STKA	Stephens Creek	27.80	237	P	P	11 25 41.8	+0.7
	12nm,0.5s,baz=66,slow=8.8,SNR=38						
STKA				PcP	PcP	11 28 55.1	+0.4
	4.4nm,0.6s,baz=360,slow=0.8,SNR=5.2						
	12nm,0.5s						
STKA	Stephens Creek	27.80	237	P	P	11 25 42.4	+1.2
RAR	Rarotonga	29.51	100	LR	LR	11 35 20.0	
	comp=Z,27nm,21.7s,baz=257,slow=31						
WHYH	Whyalla	31.39	237	P	P	11 26 13.5	+0.7
GENI	Genyem	32.42	296	P	P	11 26 23.1	+1.0
BBOO	Buckleboo	32.53	238		P	11 26 22.9	0.0
WB0	Warramunga Arr	32.55	263		P	11 26 21.9	-1.3
WB0				IAmb	IAmb	11 26 22.6	
	comp=Z,14nm,0.6s						
WRAB	Tennant Creek	32.58	262		P	11 26 22.1	-1.3
WRAB				IAmb	IAmb	11 26 22.9	
	comp=Z,9.6nm,0.5s						
WRA	Warramunga Arr	32.59	262		P	11 26 20.6	-2.9
WRA	Warramunga Arr	32.59	262	P	P	11 26 22.0	-1.5
	comp=Z,5.7nm,0.4s,baz=89,slow=8.5,SNR=209						
WRA				PcP	PcP	11 29 06.9	-0.5
	comp=Z,2.8nm,0.6s,baz=94,slow=2.6,SNR=10						
WRA				LR	LR	11 37 36.2	
	comp=Z,54nm,19.4s,baz=138,slow=32						
	comp=Z,5.7nm,0.4s						
AS01	Alice Springs	32.88	255	P	P	11 26 25.6	-0.5
AS31	Alice Springs	32.92	255		P	11 26 26.1	-0.4
ASAR	Alice Springs	32.92	255		P	11 26 26.1	-0.3
ASAR	Alice Springs	32.92	255	P	P	11 26 25.6	-0.8
	comp=Z,87nm,0.5s,baz=84,slow=8.7,SNR=1669						
ASAR				PcP	PcP	11 29 07.9	-0.5
	comp=Z,2.0nm,0.7s,baz=95,slow=3.6,SNR=5.5						
BAKI	Biak	36.61	295	P	P	11 27 00.0	+1.8
	comp=Z,69nm,0.9s						
MTN	Manton Dam	36.77	274		P	11 26 59.2	-0.4
MTN	Manton Dam	36.77	274	P	P	11 26 59.5	0.0
KNRA	Kununurra	38.41	268		P	11 27 12.5	-0.8
FORT	Forrest	38.74	244	P	P	11 27 16.5	+0.5
FAKI	Fak Fak	39.18	289	P	P	11 27 18.8	-1.0
	comp=Z,45nm,0.9s						
PPT2	Papeete2	39.40	95	*e*SS	SS	11 36 08.1	-5.6
	comp=Z,145nm,23.5s						
PPT2				*e*LR	LR	11 38 15.4	
	comp=Z,143nm,34.2s						
FITZ	Fitzroy Crossi	40.97	264		P	11 27 34.5	0.0
FITZ				IAmb	IAmb	11 27 35.4	
	comp=Z,14nm,0.7s						
FITZ	Fitzroy Crossi	40.97	264	P	P	11 27 34.5	0.0
	comp=Z,66nm,0.7s,baz=103,slow=7.0,SNR=218						
	comp=Z,66nm,0.7s						
FITZ	Fitzroy Crossi	40.97	264	P	P	11 27 34.2	-0.3
SWI	Sorong	41.00	291	P	P	11 27 34.0	-0.8
	comp=Z,60nm,0.7s						
BATI	Baumata	44.52	275	P	P	11 28 04.1	+0.8
	comp=Z,30nm,0.5s,baz=252,slow=6.3,SNR=4.2						
	comp=Z,30nm,0.5s						
PSA00	Pilbara Seismi	45.97	258	P	P	11 28 14.7	0.0
MBWA	Marble Bar	46.12	258		P	11 28 15.7	-0.2
MBWA	Marble Bar	46.12	258	P	P	11 28 16.3	+0.4
MBWA	Marble Bar	46.12	258	P	P	11 28 15.5	-0.4
MEEK	Meekatharra	46.79	251	P	P	11 28 21.3	+0.2
KLBR	Kellerberrin	47.60	244	P	P	11 28 26.6	-0.7
NWAO	Narrogin (SRO)	48.12	242	P	P	11 28 31.1	-0.2
NWAO	Narrogin (SRO)	48.12	242	P	P	11 28 30.8	-0.5
	comp=Z,23nm,0.7s,baz=88,slow=5.0,SNR=13						
	comp=Z,23nm,0.7s						
NWAO	Narrogin (SRO)	48.12	242	P	P	11 28 30.7	-0.6
MORW	Morawa	49.03	248		P	11 28 37.8	-0.5
MORW	Morawa	49.03	248	P	P	11 28 38.0	-0.3
KAPI	Kappang	49.83	280	P	P	11 28 44.2	-0.4
DRV	Dumont d'Urvil	51.36	194	P	P	11 28 54.8	-0.4
DRV				pP	pP	11 29 21.9	+0.4
DRV				sP	sP	11 29 35.1	+1.1
VNDA	Vanda	58.84	182	P	P	11 29 49.6	+0.8
	comp=Z,0.7nm,0.5s,baz=358,slow=8.6,SNR=8.4						
	comp=Z,0.7nm,0.5s						
VNDA	Vanda	58.84	182	P	P	11 29 49.3	+0.5
VNDA				pP	pP	11 30 17.8	+1.7
VNDA				PcP	PcP	11 30 36.6	-0.4
SBA	Scott Base	59.08	181	P	P	11 29 52.4	+1.9
SBA				pP	pP	11 30 19.7	+2.0
SBA				sP	PcP	11 30 34.0	-4.0
SBA				PcP	sP	11 30 41.9	+12
CASY	Casey	60.38	203	P	P	11 29 59.8	+0.3
CASY				pP	pP	11 30 27.5	+0.5
CASY				PcP	PcP	11 30 43.4	0.0
LEM	Lembang	60.67	273	P	P	11 30 02.7	+0.1
	comp=Z,47nm,0.6s,baz=114,slow=20,SNR=11						
	comp=Z,47nm,0.6s						
KSM	Kuching	60.97	283		P	11 30 04.1	-0.3
KSM	Kuching	60.97	283	P	P	11 30 04.6	+0.2
CCD	Concordia, Ant	61.24	192	P	P	11 30 06.0	+0.3
CCD				pP	pP	11 30 33.8	+0.7
CCD				sP	PcP	11 30 46.2	-1.0
MJAR	Matsushiro Arr	62.23	332	P	P	11 30 12.1	-0.4
	comp=Z,5.0nm,0.8s,baz=164,slow=7.3,SNR=9.2						
MJAR				LR	LR	11 54 18.1	
	comp=Z,14nm,21.9s,baz=165,slow=33						
	comp=Z,5.0nm,0.8s						
MAJO	Matsushiro	62.24	332	P	P	11 30 12.5	0.0
MAJO	Matsushiro	62.24	332	P	P	11 30 11.7	-0.7
MJB9	Matsu-Tunnel	62.24	332	IAmb	IAmb	11 30 15.3	
	comp=Z,8.6nm,0.9s						
JNU	Nakatsue	63.14	325	LR	LR	11 53 17.0	
	comp=Z,19nm,21.7s,baz=120,slow=32						
YHNB	Yeheng	63.33	311	P	P	11 30 21.1	+1.1
ASAJ	Asahikawa	67.10	340	LR	LR	11 55 00.4	
	comp=Z,14nm,21.6s,baz=180,slow=31						
KSRS	Korea Array	67.98	326	P	P	11 30 50.1	+0.7
	comp=Z,1.3nm,0.7s,baz=131,slow=6.1,SNR=8.4						
	comp=Z,1.3nm,0.7s						
USRK	Ussuriysk Ar.	71.22	333	P	P	11 31 09.8	+0.5
	comp=Z,2.7nm,0.7s,baz=102,slow=7.1,SNR=4.9						
	comp=Z,2.7nm,0.7s						
QSPA	South Pole Qui	71.23	180	P	P	11 31 09.8	+0.6
	comp=Z,13nm,0.9s,baz=8.7,slow=2.4,SNR=60						
	comp=Z,13nm,0.9s						
QSPA	South Pole Qui	71.23	180	P	P	11 31 09.9	+0.6
QSPA				PcP	PcP	11 31 31.0	+2.4
QSPA				pP	pP	11 31 38.2	+0.7
QSPA				sP	sP	11 31 50.6	+0.9
PETK	Petropavlovsk-	72.28	353	P	P	11 31 15.7	+0.2
	comp=Z,2.9nm,0.6s,baz=131,slow=8.2,SNR=11						
PETK				LR	LR	12 00 34.9	
	comp=Z,9.0nm,20.2s,baz=185,slow=34						
	comp=Z,2.9nm,0.6s						
DL2	Dalian	72.49	323	P	P	11 31 17.5	+0.5
DL2				pmax	pmax		
	comp=Z,39nm,1.0s						
BNX	BinXian	74.46	331	⇑P	P	11 31 28.1	-0.3
BNX				pmax	pmax		
	comp=Z,18nm,0.8s						
SLVN	Son La	75.09	299		P	11 31 32.4	-0.2
SLVN				IAmb	IAmb	11 31 44.3	
	comp=Z,30nm,1.9s						
SLVN	Son La	75.09	299	P	P	11 31 33.6	+1.0
XAN	Xi'an	77.59	313	P	P	11 31 46.8	+0.3
XAN				pmax	pmax		
	comp=Z,27nm,0.9s						
KMI	Kunming	77.78	302	⇓P	P	11 31 49.0	+1.0
KMI				pP	pP	11 32 18.9	+2.2
KMI				pmax	pmax		
	comp=Z,34nm,0.7s						
CM31	Chiang Mai Arr	78.04	294	IAmb	IAmb	11 31 51.3	
	comp=Z,17nm,0.9s						
CMAR	Chiang Mai Arr	78.04	294	P	P	11 31 49.3	+0.1
CMAR	Chiang Mai Arr	78.04	294	P	P	11 31 50.4	+1.1
	comp=Z,11nm,0.8s,baz=133,slow=4.4,SNR=50						
CMAR				pP	pP	11 32 18.4	+0.4
	comp=Z,4.0nm,0.8s,baz=131,slow=4.6,SNR=4.1						
	comp=Z,11nm,0.8s						
CHTO	Chiang Mai	78.19	295		P	11 31 51.0	+0.9
CHTO				IAmb	IAmb	11 31 51.8	
	comp=Z,16nm,0.8s						
CHTO	Chiang Mai	78.19	295	P	P	11 31 50.8	+0.7
MAW	Mawson	78.70	202	P	P	11 31 53.5	+1.6
	comp=Z,20nm,0.7s,baz=114,slow=6.3,SNR=31						
	comp=Z,20nm,0.7s						
LZH	Lanzhou	82.21	312	*e*P	P	11 32 12.8	+1.3
LZH				pP	pP	11 32 42.3	+1.9
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH				LR	LR		
	comp=Z,400nm,11.0s						
LZH				LR	LR		
	comp=Z,240nm,10.0s						
LZH				LR	LR		
	comp=Z,190nm,13.1s						
BELA	Belgrano 2	82.54	175		P	11 32 11.7	-0.7
L16K	Owhat River	84.13	15	IAmb	IAmb	11 32 23.7	
	comp=Z,21nm,1.6s						
M17K	Holitna River	84.36	16	IAmb	IAmb	11 32 25.0	
	comp=Z,14nm,0.9s						
N19K	Bonanza Creek	84.66	17	P	P	11 32 23.1	-0.2
N19K				IAmb	IAmb	11 34 16.0	
	comp=Z,14nm,1.3s						
SYO	Syowa Base	85.24	196	⇑*e*P	P	11 32 26.6	+0.4
J16K	Anvik River	85.25	13	IAmb	IAmb	11 32 28.9	
	comp=Z,13nm,1.1s						
K17K	Iditarod	85.28	15	IAmb	IAmb	11 32 29.0	
	comp=Z,27nm,1.5s						
J17K	VABM Dome	85.69	14	IAmb	IAmb	11 32 31.0	
	comp=Z,14nm,1.4s						
TNA	Tin City	85.95	9	P	P	11 32 28.6	-0.9
TNA				IAmb	IAmb	11 32 31.1	
	comp=Z,16nm,1.4s						
J18K	Innoko River	86.30	15	IAmb	IAmb	11 32 34.2	
	comp=Z,16nm,1.6s						
ULN	Ulaanbaatar	86.34	323	P	P	11 32 32.4	+0.3
O02D	Mt. Diablo Mer	86.44	46		P	11 32 33.8	+1.2
O02D				IAmb	IAmb	11 32 35.2	
	comp=Z,12nm,1.1s						
GTA	Gaotai	86.61	314	*e*P	P	11 32 34.3	+0.7
GTA				pP	pP	11 33 03.8	+1.0
GTA				pmax	pmax		
	comp=Z,19nm,1.0s						
BILL	Bilibino	86.63	359		P	11 32 32.6	-0.2
BILL				IAmb	IAmb	11 32 33.6	
	comp=Z,9.5nm,0.9s						
SONM	Songino Array	86.69	323		P	11 32 33.6	-0.2
SONM				IAmb	IAmb	11 32 34.8	
	comp=Z,12nm,0.8s						
SONM	Songino Array	86.69	323	P	P	11 32 34.0	+0.3
	comp=Z,14nm,0.8s,baz=143,slow=5.5,SNR=46						
SONM				pP	pP	11 33 03.5	+0.6
	comp=Z,2.9nm,0.7s,baz=138,slow=6.1,SNR=3.9						
	comp=Z,14nm,0.8s						
AFDM	Forest Hills D	87.12	47		P	11 32 36.5	+0.5
AFDM				IAmb	IAmb	11 32 38.1	
	comp=Z,8.0nm,1.0s						
CMB	Columbia Colle	87.12	48		P	11 32 37.1	+1.1
PNTR	Pine Nut	88.14	48	IAmb	IAmb	11 32 43.7	
	comp=Z,9.0nm,1.2s						
RND	Reindeer	88.33	18		P	11 32 41.1	0.0
LHV	Little Huntoon	88.55	49	IAmb	IAmb	11 32 45.6	
	comp=Z,8.4nm,1.3s						
PAHR	Pah Rah Range	88.56	47	IAmb	IAmb	11 32 44.8	
	comp=Z,7.9nm,1.2s						
NVAR	Mina Array Bea	88.77	49	P	P	11 32 44.2	+0.2
NVAR	Mina Array Bea	88.77	49	P	P	11 32 44.8	+0.8
	comp=Z,1.2nm,0.8s,baz=226,slow=7.6,SNR=13						
NVAR				pP	pP	11 33 12.4	-1.2
	comp=Z,1.6nm,0.9s,baz=229,slow=6.9,SNR=4.0						
	comp=Z,1.2nm,0.8s						
TROLL	Troll, Antarti	88.93	184	⇑P	P	11 32 44.1	0.0
	comp=Z,251nm,0.7s						
PINE	Pine Mountain	89.33	43	IAmb	IAmb	11 32 48.7	
	comp=Z,13nm,1.2s						
SNAA	Sanae	89.56	183	⇑P	P	11 32 45.4	-1.6
	comp=Z,44nm,0.6s						
SNAA	Sanae	89.56	183	P	P	11 32 46.3	-0.7
	comp=Z,2.9nm,0.8s,baz=200,slow=8.1,SNR=9.5						
SNAA				pP	pP	11 33 14.5	-1.9
	comp=Z,2.6nm,0.7s,baz=195,slow=4.0,SNR=5.4						
	comp=Z,2.9nm,0.8s						
GNW	Green Mountain	89.91	39	P	P	11 32 49.8	+0.9
IL31		89.93	17	IAmb	IAmb	11 32 50.5	
	comp=Z,14nm,1.9s						
ILAR	Eielson Array	89.93	17	P	P	11 32 46.5	-2.0
	comp=Z,1.7nm,0.7s,baz=235,slow=4.9,SNR=30						
ILAR				pP	pP	11 33 15.4	-2.4
	comp=Z,0.9nm,0.7s,baz=235,slow=5.1,SNR=3.6						
SKAG	Skagway	90.21	25	IAmb	IAmb	11 32 51.8	
	comp=Z,8.1nm,1.3s						
SKAG	Skagway	90.21	25	P	P	11 32 50.1	+0.2
WVOR	Wild Horse Val	90.25	45	IAmb	IAmb	11 32 53.3	
	comp=Z,11nm,1.1s						
I07A	Izee	90.39	43	IAmb	IAmb	11 32 53.3	
	comp=Z,11nm,1.2s						
W13A	Hualapai Mount	90.67	53	IAmb	IAmb	11 32 55.0	
	comp=Z,5.8nm,1.2s						
PRN	Pahroc Range	90.69	51	IAmb	IAmb	11 32 55.7	
	comp=Z,8.7nm,1.0s						
J08A	Circle Bar Ran	90.75	44	IAmb	IAmb	11 32 54.8	
	comp=Z,9.5nm,1.1s						
G08A	Pilot Rock	91.27	42	IAmb	IAmb	11 32 57.1	
	comp=Z,7.9nm,1.0s						
LCMT	Little Creek M	91.87	52	IAmb	IAmb	11 33 00.4	
	comp=Z,4.8nm,1.1s						
R33M	Jennings River	91.96	26	IAmb	IAmb	11 33 00.2	
	comp=Z,6.1nm,1.2s						
X16A	Lo Mia Camp, P	92.28	54	IAmb	IAmb	11 33 02.8	
	comp=Z,4.3nm,1.1s						
U15A	North Rim	92.37	52	IAmb	IAmb	11 33 03.1	
	comp=Z,7.9nm,1.2s						
I30M	Mount Dempster	93.45	20	IAmb	IAmb	11 34 25.7	
	comp=Z,12nm,1.9s						
E28M	Babbage River	94.72	17	IAmb	IAmb	11 33 12.5	
	comp=Z,3.2nm,0.8s						
PDAR	Pinedale Array	96.57	47	P	P	11 33 19.1	-0.8
	comp=Z,0.4nm,0.8s,baz=256,slow=3.7,SNR=2.0						
	comp=Z,0.4nm,0.8s						
TXAR	Lajitas Array	96.85	61	P	P	11 33 21.8	+0.4
	comp=Z,0.7nm,1.0s,baz=256,slow=5.0,SNR=4.3						
TXAR				pP	pP	11 33 50.5	-0.4
	comp=Z,0.2nm,0.4s,baz=245,slow=5.4,SNR=3.1						
	comp=Z,0.7nm,1.0s						
YKA	Yellowknife Ar	100.44	27	P	Pdif	11 33 36.3	-0.2
	comp=Z,0.9nm,0.7s,baz=262,slow=4.8,SNR=10						
YKA				pP	pPdif	11 34 04.4	-1.6
	comp=Z,0.5nm,0.7s,baz=267,slow=4.7,SNR=3.4						
MKAR	Makanchi Array	101.22	316	P	Pdif	11 33 40.2	-0.1
	comp=Z,1.7nm,0.6s,baz=90,slow=6.6,SNR=18						
ZALV	Zalesovo Beam	101.59	323	P	Pdif	11 33 43.6	+1.9
	comp=Z,1.1nm,0.6s,baz=128,slow=2.4,SNR=4.2						
ARTI	Arti	116.81	324	PKP	PKPdf	11 38 32.7	-0.7
	comp=Z,4.5nm,0.6s,baz=77,slow=1.2,SNR=6.9						
AKTO	Aktyubinsk	117.55	318	PKP	PKPdf	11 38 34.4	-0.6
	comp=Z,2.0nm,0.6s,baz=87,slow=1.4,SNR=4.9						
SPITS	Spitsbergen Ar	119.15	354	PKP	PKPdf	11 38 36.7	-0.7
	comp=Z,3.6nm,0.8s,baz=10,slow=10,SNR=4.2						
BOSA	Boshof	121.19	218	PKP	PKiKP	11 38 42.7	-0.4
	comp=Z,1.7nm,0.4s,baz=166,slow=1.9,SNR=9.8						
BELG	Belogornoye	123.69	321	PKP	PKPdf	11 38 46.1	-0.6
	comp=Z,16nm,0.8s,baz=169,slow=3.4,SNR=5.9						
ARCES	ARCESS Array B	124.58	345	PKP	PKPdf	11 38 47.5	-0.5
	comp=Z,0.9nm,0.3s,baz=82,slow=2.1,SNR=12						
SVN	Savane Anatole	132.03	87	PKPdf	PKPdf	11 39 01.5	-2.3
AKASG	Malin Array Be	134.97	324	PKP	PKPdf	11 39 07.6	-0.6
	comp=Z,1.1nm,0.6s,baz=66,slow=1.9,SNR=5.7						
BURAR	Bucovina Array	138.81	323	PKPdf	PKPdf	11 39 16.1	+0.6
KOLS	Kolonicke sedl	139.70	326	*e*PKP	PKiKP	11 39 19.3	-0.2
CLL	Collm	142.41	335	*e*PKPdf	PKPdf	11 39 22.0	+0.2
EKA	Eskdalemuir Ar	143.05	352	PKhKP	PKPpre	11 39 19.9	
	comp=Z,0.6nm,0.3s,baz=355,slow=2.5,SNR=8.9						
ZVC	Zvikov	143.32	332	*e*PKP	PKPbc	11 39 21.7	+0.8
VAY	Valandovo	143.58	315	*i* P	PKPbc	11 39 21.0	-0.9
CONA	Conrad Observa	143.62	329	*i* PKP	PKPdf	11 39 22.7	-1.5
	comp=Z,10.0nm,0.7s,SNR=7.6						
CKRC	Cesky Krumlov	143.72	331	*e*PKP	PKPdf	11 39 22.8	-1.5
TEKS	Tekeris	143.80	322	*e*P	PKPab	11 39 21.1	-0.6
KHC	Kasperske Hory	143.82	332	*e*PKP	PKPdf	11 39 23.3	-1.1
GEC2	GERESS Array S	143.97	332	PKPdf	PKPbc	11 39 23.1	+0.1
GERES	GERESS Array B	143.97	332	PKP	PKPbc	11 39 22.8	-0.2
	comp=Z,4.5nm,0.7s,baz=47,slow=2.7,SNR=30						
SKO	Skopje	144.01	317	⇓*i*P	PKPbc	11 39 23.3	+0.2
BEHE	Becsehely	144.14	327	PKPdf	PKPdf	11 39 23.9	-1.2
ARSA	Arzberg	144.25	328	*i* PKP	PKPdf	11 39 24.2	-1.1
	comp=Z,11nm,1.0s,SNR=5.9						
SJES	Sjenica	144.26	320	⇑*i*P	PKPbc	11 39 24.3	+0.3
BBLS	Lazi&#263i	144.26	321	⇑*i*P	PKPdf	11 39 24.3	-1.1
HAPS	Han Pijesak,Bl	144.41	322	*e*P	PKPbc	11 39 24.2	-0.2
RUDO	Rudo	144.42	321	*e*P	PKPbc	11 39 23.9	-0.5
MOA	Molln	144.44	330	*e*PKP	PKPdf	11 39 24.9	-0.6
	comp=Z,18nm,0.6s,SNR=15						
BIOA	Bad Ischl, Aus	144.85	331	*e*PKP	PKPdf	11 39 25.6	-0.7
	comp=Z,20nm,0.8s,SNR=7.1						
OHR	Ohrid	144.85	316	⇓*i*P	PKPdf	11 39 26.1	-0.4
SOKA	Soboth	144.89	328	*e*PKP	PKPdf	11 39 25.7	-0.7
	comp=Z,21nm,0.6s,SNR=19						
A051A	Mrakovica	145.01	324	*e*P	PKPdf	11 39 26.6	-0.1
BLY	Banja Luka	145.02	324	⇑*i*P	PKPdf	11 39 26.7	+0.1
PDG	Podgorica	145.15	319	PKPbc	PKPab	11 39 26.4	-0.4
PDG	Podgorica	145.15	319	⇑*i*P	PKPdf	11 39 26.6	-0.3
LEGS	Legarje	145.24	327	*i* PKPbc	PKPab	11 39 26.8	-0.3
OBKA	Obir	145.25	328	*e*P	PKPbc	11 39 26.5	-0.5
OBKA	Obir	145.25	328	*i* PKP	PKPab	11 39 27.0	-0.2
	comp=Z,22nm,0.9s,SNR=7.0						
CRES	Cresnjevec Ost	145.25	327	*e*P	PKPab	11 39 26.9	-0.2
BRY	Bratogost	145.33	320	*e*P	PKPbc	11 39 27.1	-0.3
DRME	Dracevica, Mon	145.33	319	⇑*i*P	PKPdf	11 39 26.4	-0.8
BTNL	Ternell	145.46	341	*d*PKPdf	PKPab	11 39 27.2	-0.5
MEM	Membach	145.48	341	*d*PKPdf	PKPab	11 39 27.6	-0.2
MEM				*d*pPKP	pPKPab	11 39 57.1	-0.4
LESA	Schwarzleotal	145.49	331	*e*PKP	PKPab	11 39 27.6	-0.5
	comp=Z,34nm,0.6s,SNR=17						
A050A	Klekovaca	145.55	324	*e*P	PKPbc	11 39 27.7	-0.3
BOJS	Bojanci	145.57	326	⇑*i*P	PKPbc	11 39 27.3	-0.6
LJU	Ljubljana	145.58	328	*e*PKPbc	PKPab	11 39 27.8	-0.6
LJU				*i* pPKPbc	pPKPbc	11 39 57.8	-0.4
VISS	Visnje	145.59	327	*i* PKPbc	PKPab	11 39 27.9	-0.5
MYKA	Terra Mystica	145.61	329	*e*PKP	PKPbc	11 39 27.7	-0.4
	comp=Z,15nm,0.6s,SNR=8.0						
HCY	Herceg Novi	145.61	320	⇑*i*P	PKPdf	11 39 27.1	-0.6
BSTI	Sart Tilman	145.64	341	*d*PKPdf	PKPab	11 39 27.7	-0.6
UCC	Uccle	145.81	342	*d*PKPdf	PKPbc	11 39 28.2	-0.3
CEY	Cerknica	145.84	327	⇑*i*P	PKPab	11 39 28.9	-0.5
STON	Ston	145.85	321	*e*P	PKPbc	11 39 28.2	-0.6
BCLA	Clavier	145.87	341	*d*PKPdf	PKPbc	11 39 28.4	-0.2
VOJS	Vojsko	145.91	328	*i* PKPbc	PKPbc	11 39 28.3	-0.7
BGES	Gesves	145.96	341	*d*PKPdf	PKPbc	11 39 28.6	-0.3
BGES				*d*PKiKP	PKiKP	11 39 32.5	+0.2
WATA	Walderalm	146.05	332	*i* PKP	PKPab	11 39 29.5	-0.8
	comp=Z,10nm,0.7s						
ABTA	Abfaltersbach	146.06	330	*e*PKP	PKPbc	11 39 28.8	-0.7
	comp=Z,11nm,0.6s,SNR=6.4						
WTTA	Wattenberg	146.08	332	*e*PKP	PKPbc	11 39 29.6	-0.1
	comp=Z,16nm,0.8s,SNR=6.7						
BMRD	Maredsous	146.13	342	*d*PKP	PKPbc	11 39 29.2	-0.2
SKDS	Skadanscina	146.18	328	*e*P	PKPbc	11 39 29.4	-0.4
MOTA	Moosalm	146.25	332	*e*PKP	PKPbc	11 39 29.9	-0.2
	comp=Z,28nm,0.8s,SNR=13						
WLF	Walferdange	146.26	340	*d*PKP	PKPab	11 39 29.9	-0.8

RETA	Reutte	146.29	333	iPKP	PKPbc	11 39 30.0	-0.2
	comp=Z,7.5nm,0.5s						
SQTA	Sankt Quirin	146.30	332	iPKP	PKPbc	11 39 30.2	-0.1
	comp=Z,30nm,0.6s,SNR=12						
DOU	Dourbes	146.37	342	dPKP	PKPbc	11 39 29.6	-0.5
FETA	Feichten	146.66	332	ePKP	PKPbc	11 39 31.4	+0.1
	comp=Z,18nm,0.6s,SNR=11						
DAVOX	Davos/Dischmat	147.22	333	PKPbc	PKPbc	11 39 33.1	+0.2
	comp=Z,44nm,0.6s,baz=191,slow=0.1,SNR=43						
KEST	Kesra	155.30	317	PKPab	PKPab	11 40 09.1	+0.5
	comp=Z,5.3nm,0.7s,baz=45,slow=1.4,SNR=5.1						
POLO	Lamas de Olo	157.34	354	ePKPab	PKPab	11 40 17.1	-0.1
PVRL	Vila Real	157.43	353	ePKPab	PKPab	11 40 17.8	+0.3
MVO	Moncorvo	157.46	352	ePKPab	PKPab	11 40 17.2	-0.4
PVIS	Viseu	158.00	353	ePKPab	PKPab	11 40 20.2	+0.2
MTE	Manteigas	158.28	353	ePKPab	PKPab	11 40 21.4	+0.2
ESDC	Sonseca Array	158.32	345	PKPab	PKPab	11 40 21.4	0.0
	comp=Z,0.8nm,0.8s,baz=9.2,slow=3.5,SNR=5.9						
COI	Coimbra	158.56	354	ePKPab	PKPab	11 40 24.4	+2.1
PCAS	Casmilo, Conde	158.72	354	ePKPab	PKPab	11 40 23.3	+0.2
PCBR	Castelo Branco	158.82	352	ePKPab	PKPab	11 40 23.3	-0.1
PESTR	Estremoz	159.79	352	ePKPab	PKPab	11 40 27.8	+0.1
PMOZ	Porto Moniz, M	165.02	20	PKPdf	PKPdf	11 39 52.7	-1.2
TORD	Torodi Ar. Bea	166.47	247	PKP	PKPdf	11 39 55.0	-0.4
	comp=Z,2.2nm,0.9s,baz=25,slow=2.4,SNR=8.5						
TORD				PKPab	PKPab	11 40 57.3	-0.6
	comp=Z,2.0nm,1.0s,baz=84,slow=5.0,SNR=6.6						

SJA **14** *11:24:23.9±0.7, 22.°40S×68.°59W, h121^{km}±6^{km}, ML4.0, MW3.9*

NEIC **14** *11:24:25.3±1.9, 22.°39S±0.°04×68.°61W±0.°05, h118^{km}±5^{km}, mb4.3/18, ML4.1(GUC), Error ellipse: s-maj=7.4km s-min=5.4km az=54.0*

GUC **14** *11:24:25.5±0.5, 22.°34S×68.°74W, h131^{km}±3^{km}, ML4.1*

IDC **14** *11:24:26.0±3.9, 22.°46S×68.°02W, h101^{km}±43^{km}, mb3.8/6, mbtmp4.1/8, Error ellipse: s-maj=68.3km s-min=21.0km az=110.0*

VAO **14** *11:24:27.3±1.1, 22.°08S×68.°17W, h92^{km}±14^{km}, mb4.6*

ISC 14 11:24:24.9±0.6**, 22.°40S**±0.°03×**68.°62W**±0.°04**, h115**^{km}±6^{km}**, n105, σ1^{s}50**/127**, mb4.1**/6**, 4C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AF01	San Pedro de A	0.68	144		Pn	11 24 44.6	+0.5
AF01				Sn	Sn	11 24 59.1	+0.8
AF01	San Pedro de A	0.68	144	⇓iP	Pn	11 24 44.5	+0.5
AF01	San Pedro de A	0.68	144	eP	Pn	11 24 56.6	+13
AF01				IAML		11 25 26.3	
	comp=Z,3µm,1.0s						
PB09	IPOC Station P	0.83	316		Pn	11 24 45.9	+0.7
PB09				Sn	Sn	11 25 01.3	+1.0
PB09	IPOC Station P	0.83	316	⇑iP	Pn	11 24 45.9	+0.7
PB09				iS	Sn	11 25 01.4	+1.1
PB09				IAML		11 25 03.0	
	comp=E,3µm,0.3s						
PB09	IPOC Station P	0.83	316	eP	Pn	11 24 45.1	0.0
PB09				IAML		11 25 04.3	
	comp=Z,2µm,0.2s						
PB06	IPOC Station P	0.93	251		Pn	11 24 46.9	+0.9
PB06				Sn	Sn	11 25 02.9	+0.9
PB06	IPOC Station P	0.93	251	⇑iP	Pn	11 24 46.9	+0.9
PB06				iS	Sn	11 25 03.1	+1.2
PB06				IAML		11 25 05.3	
	comp=N,5µm,0.2s						
PB06	IPOC Station P	0.93	251	eP	Pn	11 24 46.2	+0.2
PB06				eS	Sn	11 25 03.5	+1.6
PB06				IAML		11 25 07.2	
	comp=Z,4µm,0.3s						
PB03	IPOC Station P	1.11	288		Pn	11 24 48.4	+0.6
PB03				Sn	Sn	11 25 05.3	+0.2
PB03	IPOC Station P	1.11	288	⇑iP	Pn	11 24 48.4	+0.6
PB03				eS	Sn	11 25 05.7	+0.6
PB03				IAML		11 25 07.1	
	comp=N,9µm,0.1s						
PB03	IPOC Station P	1.11	288	eP	Pn	11 24 47.6	-0.2
PB03				eS	Sn	11 25 06.0	+0.9
PB03				IAML		11 25 06.7	
	comp=Z,6µm,0.2s						
PB05	IPOC Station P	1.53	253		Pn	11 24 53.3	+0.8
PB05				Sn	Sn	11 25 13.6	+0.1
PB05	IPOC Station P	1.53	253	eP	Pn	11 24 53.2	+0.8
PB05				eS	Sn	11 25 13.8	+0.3
PB05				IAML		11 25 20.6	
	comp=E,1µm,0.4s						
PB05	IPOC Station P	1.53	253	eP	Pn	11 24 53.1	+0.6
PB05				eS	Sn	11 25 14.6	+1.1
PB05				IAML		11 25 18.0	
	comp=Z,1µm,0.4s						
PB01	IPOC Station P	1.57	329		Pn	11 24 53.2	+0.2
PB01				Sn	Sn	11 25 14.5	+0.1
PB01	IPOC Station P	1.57	329	⇑eP	Pn	11 24 53.2	+0.2
PB01				iS	Sn	11 25 14.0	-0.3
PB01				IAML		11 25 15.6	
	comp=E,3µm,0.2s						
PB01	IPOC Station P	1.57	329	eP	Pn	11 24 53.2	+0.2
PB01				eS	Sn	11 25 15.2	+0.9
PB01				IAML		11 25 17.9	
	comp=Z,2µm,0.2s						
PB10	IPOC Station P	2.10	238		Pn	11 24 59.9	+0.5
PB10	IPOC Station P	2.10	238	iS	Sn	11 25 24.0	-1.7
PB10	IPOC Station P	2.10	238	eP	Pn	11 24 59.8	+0.5
PB10				eS	Sn	11 25 26.7	+0.9
PB10				IAML		11 25 42.7	
	comp=Z,386nm,0.4s						
PATCX	Punta Patache	2.12	317		Pn	11 24 59.3	-0.5
PB08	IPOC Station P	2.30	347		Pn	11 25 02.9	+0.5
PB08	IPOC Station P	2.30	347	eP	Pn	11 25 03.2	+0.8
PB08	IPOC Station P	2.30	347	eP	Pn	11 25 02.5	+0.1
PB08				eS	Sn	11 25 32.9	+1.9
PB08				IAML		11 25 36.5	
	comp=Z,306nm,0.2s						
TA01	Diego Aracena	2.33	321	Pn	Pn	11 25 01.8	-0.6
TA01	Diego Aracena	2.33	321	eP	Pn	11 25 01.8	-0.6
TA01				iS	Sn	11 25 31.3	+0.2
TA01				IAML		11 25 32.5	
	comp=N,2µm,0.3s						
TA01	Diego Aracena	2.33	321	eP	Pn	11 25 01.9	-0.5
TA01				eS	Sn	11 25 31.8	+0.8
TA01				IAML		11 25 32.8	
	comp=Z,662nm,0.8s						
HMBC	Humberstone	2.42	331		Pn	11 25 03.0	-0.7
TA02	Huaiquique	2.54	326	Pn	Pn	11 25 04.3	-0.8
PB14	IPOC Station P	2.76	216		Pn	11 25 08.4	+0.3
PB14	IPOC Station P	2.76	216	eP	Pn	11 25 09.2	+1.0
PB14				IAML		11 25 42.4	
	comp=E,180nm,0.2s						
PB14	IPOC Station P	2.76	216	eP	Pn	11 25 08.5	+0.3
PB14				eS	Sn	11 25 27.6	-14
PB14				IAML		11 25 39.0	
	comp=Z,468nm,0.5s						
PB14				eS		11 25 41.8	
GO01	Chusmiza	2.77	349		Pn	11 25 08.9	+0.4
GO01	Chusmiza	2.77	349	eP	Pn	11 25 08.9	+0.4
GO01				IAML		11 25 44.7	
	comp=N,1µm,0.1s						
GO01	Chusmiza	2.77	349	eP	Pn	11 25 08.9	+0.4
GO01				eS	Sn	11 25 43.9	+1.9
PB11	IPOC Station P	2.80	340		Pn	11 25 08.0	-0.6
PB11	IPOC Station P	2.80	340	IAML		11 25 43.1	
	comp=N,737nm,0.2s						
PB11	IPOC Station P	2.80	340	eP	Pn	11 25 07.9	-0.7
PB11				eS	Sn	11 25 43.5	+1.3
PB11				IAML		11 25 46.0	
	comp=Z,585nm,0.2s						
YJA	Yavi	2.88	86	eP	Pn	11 25 12.6	+2.7
YJA				eS	Sn	11 25 41.6	-3.0
GO02	Mina Guanaco	2.89	198		Pn	11 25 10.6	+0.7
GO02	Mina Guanaco	2.89	198	eP	Pn	11 25 10.6	+0.7
GO02				eS	Sn	11 25 46.6	+2.1
SLA	San Lorenzo	3.68	130	eP	Pn	11 25 22.9	+2.7
PB16	IPOC Station P	4.13	348		Pn	11 25 26.9	+0.3
PB16	IPOC Station P	4.13	348	eP	Pn	11 25 26.8	+0.2
PB16				eS	Sn	11 26 19.2	+4.8
AC01	Pan de Azucar	4.15	205		Pn	11 25 25.5	-0.9
AC01	Pan de Azucar	4.15	205	eP	Pn	11 25 25.4	-0.9
AC01				eS	Sn	11 26 12.7	-1.2
AC01				IAML		11 26 28.9	
	comp=Z,116nm,0.7s						
AP01	Chacalluta	4.32	338	Pn	Pn	11 25 27.7	-1.0
FSA	Cafayete	4.41	147	eP	Pn	11 25 32.4	+2.3
AC02	Maricunga	4.44	186		Pn	11 25 31.5	+0.7
AC02	Maricunga	4.44	186	eP	Pn	11 25 31.4	+0.7
AC02				eS	Sn	11 26 27.6	+5.9
PB18	Visviri	4.85	350	Pn	Pn	11 25 38.4	+2.0
AC06	Mina Casimiro	5.18	197		Pn	11 25 38.6	-1.7
GO03	Copiapo	5.38	195		Pn	11 25 41.4	-1.5
GO03	Copiapo	5.38	195	eP	Pn	11 25 41.6	-1.3
GO03				eS	Sn	11 26 42.6	-1.1
LPAZ	La Paz	6.10	4		Pn	11 25 54.5	+1.2
LPAZ	La Paz	6.10	4	P	Pn	11 25 55.0	+1.8
	comp=Z,2.8nm,0.3s,baz=146,slow=4.6,SNR=21						
LPAZ	La Paz	6.10	4	eP	Pn	11 25 49.5	-3.7
AC04	Llanos de Chal	6.19	201	Pn	Pn	11 25 50.7	-3.2
LCO	Las Campanas	6.85	195	Pn	Pn	11 25 59.9	-3.1
CO01	Juntas del Tor	7.66	190	Pn	Pn	11 26 12.7	-1.3
GO04	Tololo Observa	7.98	194	Pn	Pn	11 26 15.6	-2.8
CO03	El Pedregal	8.61	192	Pn	Pn	11 26 23.0	-3.7
CO06	Fray Jorge	8.67	197	Pn	Pn	11 26 22.7	-4.8
CO02	Combarbal	9.02	193	Pn	Pn	11 26 27.8	-4.5
ZON	Zonda	9.11	180	Pn	Pn	11 26 29.2	-4.3
BBSD	Serra de San D	9.15	57	eP	Pn	11 26 30.5	-3.5
BBSD				eS	Sn	11 28 04.9	-10
MT02	Curacav	11.04	191	Pn	Pn	11 26 57.1	-2.5
TRCB	Terra Rica	14.77	95	P	P	11 27 52.0	+0.8
TRCB	Terra Rica	14.77	95	eP	Pn	11 27 47.0	-1.2
PTGB	Pitanga	15.36	102	eP	Pn	11 27 55.5	-0.1
ITAB	Concordia	15.72	111	P	P	11 28 01.2	-0.4
ITAB				IAmb	IAmb	11 28 02.6	
	comp=Z,16nm,0.7s						
ITAB	Concordia	15.72	111	eP	Pn	11 28 00.3	+0.3
CPSB	Cacapava Do Su	15.76	124	eP	Pn	11 28 01.0	+0.6
PCMB	Pacaembu	16.12	90	eP	Pn	11 28 04.0	-1.0
LDASE	Londrina, Braz	16.16	97	eP	Pn	11 28 04.8	-0.7
PLTB	Pedras Altas	16.29	128	Pn	Pn	11 28 06.0	-1.0
PLTB				IAmb	IAmb	11 28 35.3	
	comp=Z,15nm,1.3s						
TRQA	Tornquist	16.62	161		P	11 28 12.6	+1.1
TRQA				IAmb	IAmb	11 28 25.6	
	comp=Z,18nm,1.1s						
FRTB	Fartura	17.59	97	eP	P	11 28 22.0	-0.3
PLCA	Paso Flores	18.35	185	P	P	11 28 28.6	-2.0
PLCA	Paso Flores	18.35	185	P	P	11 28 31.8	+1.2
	comp=Z,1.3nm,0.8s,baz=354,slow=10,SNR=3.4						
SPB	Sao Paulo	19.54	98	P	P	11 28 43.1	-0.5
SPB				IAmb	IAmb	11 28 43.9	
	comp=Z,6.3nm,0.8s						
VAO	Valinhos	19.99	96	P	P	11 28 47.2	-1.3
VAO				IAmb	IAmb	11 28 48.8	
	comp=Z,11nm,0.8s						
VAO	Valinhos	19.99	96	eP	P	11 28 46.5	-2.0
BDFB	Brasilia	20.60	75	P	P	11 28 53.7	-1.5
MACA	Manacapuru-AM	20.62	23	P	P	11 28 53.0	-2.2
MACA				IAmb	IAmb	11 28 57.3	
	comp=Z,19nm,0.6s						
MACA	Manacapuru-AM	20.62	23	eP	P	11 28 55.4	+0.2
LL07	Hotel Espejo d	20.77	190	P	P	11 28 54.6	-2.0
COHC	Cochancay	22.34	331	P	P	11 29 11.8	-1.7
BOAV	Boa Vista	25.88	19	P	P	11 29 46.7	+0.5
BOAV				IAmb	IAmb	11 30 20.6	
	comp=Z,8.4nm,1.4s						
TUMC	Tumaco	26.02	336	P	P	11 29 46.8	-0.6
MG05	Puerto Natales	29.38	185	P	P	11 30 15.4	-1.6
PAYG	Puerto Ayora	30.18	313	P	P	11 30 25.5	+1.0
SNAA	Sanae	61.35	161	P	P	11 34 28.8	+0.6
SNAA				IAmb	IAmb	11 34 55.7	
	comp=Z,4.7nm,1.3s						
SNAA	Sanae	61.35	161	P	P	11 34 29.6	+1.4
	comp=Z,0.5nm,0.4s,baz=290,slow=8.6,SNR=1.8						
	comp=Z,0.5nm,0.4s						
TXAR	Lajitas Array	61.52	325	P	P	11 34 29.3	-0.6
QSPA	South Pole Qui	67.80	180	P	P	11 35 12.2	+1.9
QSPA				IAmb	IAmb	11 35 51.6	
	comp=Z,6.8nm,1.4s						
QSPA	South Pole Qui	67.80	180	P	P	11 35 12.6	+2.3
	comp=Z,1.4nm,0.5s,baz=313,slow=0.9,SNR=18						
	comp=Z,1.4nm,0.5s						
DBIC	Dimbokro	68.74	73	P	P	11 35 17.0	+0.2
DBIC				IAmb	IAmb	11 35 47.6	
	comp=Z,10nm,1.2s						
DBIC	Dimbokro	68.74	73	P	P	11 35 16.3	-0.5
	comp=Z,1.7nm,0.4s,baz=265,slow=8.4,SNR=3.7						
	comp=Z,1.7nm,0.4s						
TORD	Torodi Ar. Bea	77.41	70	P	P	11 36 07.7	-0.1
TORD	Torodi Ar. Bea	77.41	70	P	P	11 36 07.5	-0.3
	comp=Z,1.2nm,0.4s,baz=258,slow=4.9,SNR=15						
	comp=Z,1.2nm,0.4s						
BOSA	Boshof	82.79	118	P	P	11 36 37.0	+0.2
	comp=Z,1.5nm,0.8s,baz=198,slow=11,SNR=3.1						
	comp=Z,1.5nm,0.8s						
MAW	Mawson	83.40	163	P	P	11 36 40.8	+1.8
	comp=Z,0.9nm,0.5s,baz=256,slow=8.3,SNR=1.6						
	comp=Z,0.9nm,0.5s						
MKAR	Makanchi Array	146.19	37	PKPbc	PKPab	11 43 52.8	0.0
	comp=Z,0.9nm,0.6s,baz=336,slow=2.7,SNR=10						

IDC **14** *11:37:45.9±0.9, 11.°94N×86.°90W, h0^{km}, mb4.1/9, mbtmp4.0/10, ML3.3/1, MS3.5/21, Error ellipse: s-maj=44.7km s-min=16.1km az=50.0*

SNET **14** *11:37:47.8±1.2, 11.°32N×87.°41W, h34^{km}±999^{km}, ML3.9*

UCR **14** *11:37:49.9±1.2, 11.°52N×87.°36W, h29^{km}, MW4.5*

CATAC **14** *11:37:49.2±0.2, 12°N±2°×8°7W±°, h20^{km}, M4.3/48, MLv4.3/48, Error ellipse: s-maj=3.9km s-min=1.9km az=20.1, confirmed*

GCG **14** *11:37:52.9±3.0, 11.°99N×87.°51W, h2^{km}±999^{km}, MD4.7*

NEIC **14** *11:37:52.3±1.5, 11.°74N±0.°05×87.°21W±0.°06, h35^{km}±1^{km}, mb4.5/146, Error ellipse: s-maj=9.9km s-min=9.2km az=73.0*

ISC 14 11:37:51.3±1.0**, 11.°60N**±0.°04×**87.°33W**±0.°03**, h45**^{km}±9^{km}**, n334, σ1^{s}13**/302**, mb4.5**/78**, MS3.5**/20**, 21C-1D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	Copaltepe	0.92	51	eP	Pn	11 38 07.9	0.0
COPN	Copaltepe	0.92	51	⇑P	Pn	11 38 07.9	0.0
ALEN	Leon	0.96	27	S	Sn	11 38 22.0	+1.0
ALEN	Leon	0.96	27	P	Pn	11 38 08.2	-0.2
BC86	Nagarote	1.00	48	S	Sn	11 38 22.9	+1.1
BC86	Nagarote	1.00	48	P	Pn	11 38 08.8	-0.1
AMTN	Mateare	1.08	54	P	Pn	11 38 10.3	+0.3
CNGA	Al SSO del Vol	1.08	34	⇑P	Pn	11 38 10.3	+0.3
CNGN	Cerro Negro	1.09	34	Pn	Pn	11 38 10.4	+0.3
CNGN	Cerro Negro	1.09	34	eP	Pn	11 38 10.4	+0.3
CNGN	Cerro Negro	1.09	34	S	Sn	11 38 24.2	+0.1
CNGN	Cerro Negro	1.09	34	⇑P	Pn	11 38 10.4	+0.3
QUEN	Al S del Volca	1.09	25	⇑P	Pn	11 38 10.5	+0.3
BC84	Volcan Momotom	1.10	44	S	Sn	11 38 24.6	+0.2
BC84	Volcan Momotom	1.10	44	P	Pn	11 38 11.0	+0.7
HOYN	Al Sur del Vol	1.11	26	⇑P	Pn	11 38 10.6	+0.1
HOYN				S	Sn	11 38 24.6	-0.1
MOMN	Momotombo	1.11	44	⇑P	Pn	11 38 10.5	0.0
MOMN				S	Sn	11 38 26.2	+1.5
HERN	Volcan Telica	1.12	26	Sn	Sn	11 38 19.0	-5.9
HERN	Volcan Telica	1.12	26	⇑P	Pn	11 38 10.7	+0.1
PKGN	Cerro Pekin	1.12	18	⇑P	Pn	11 38 10.9	+0.3
PKGN				S	Sn	11 38 25.4	+0.6
CRIN	San Cristobal	1.13	14		Pn	11 38 11.2	+0.5
CRIN	San Cristobal	1.13	14	eP	Pn	11 38 11.2	+0.5
CRIN	San Cristobal	1.13	14	S	Sn	11 38 25.6	+0.5
CRIN	San Cristobal	1.13	14	⇑P	Pn	11 38 11.3	+0.5
APQ2	Apoyeque	1.15	59	P	Pn	11 38 10.3	-0.6
USIM	UNAN	1.15	63		Pn	11 38 10.2	-0.8
APQ3	Volcan Apoyequ	1.15	54	⇑P	Pn	11 38 11.1	+0.1
UNAN	Cigeo UNAN	1.15	64	⇑P	Pn	11 38 10.7	-0.3
POLN	Al Sur del Vol	1.16	26	⇑P	Pn	11 38 10.5	-0.7
TISN	Laguna Tiscapa	1.17	62	⇑P	Pn	11 38 09.7	-1.5
ALLN	Telcor Managua	1.17	62	P	Pn	11 38 11.5	+0.2
MOM2	El Cardon	1.17	44	⇑P	Pn	11 38 11.4	+0.1
MOM2				S	Sn	11 38 26.5	+0.4
MAFN	Magfor	1.17	65	P	Pn	11 38 11.2	-0.1
MAFN	Magfor	1.17	65	S	Sn	11 38 27.2	+1.0
MGAN	Managua	1.19	63		Pn	11 38 11.4	-0.1
MGAN	Managua	1.19	63	eP	Pn	11 38 11.3	-0.1
MGAN	Managua	1.19	63	P	Pn	11 38 11.2	-0.3
MGAN	Managua	1.19	63	S	Sn	11 38 27.4	+0.9
MGAN	Managua	1.19	63	S	Sn	11 38 27.7	+1.3
MGAN	Managua	1.19	63	P	Pn	11 38 11.4	-0.1
SABN	Sabanita	1.19	72	P	Pn	11 38 11.1	-0.5
MAS3	Al N del Volca	1.20	69	⇑P	Pn	11 38 11.1	-0.6
MAS3				S	Sn	11 38 27.9	+1.0
MASN	Masaya	1.21	71	P	Pn	11 38 11.8	0.0
NANN	Nandasmo	1.23	74	S	Sn	11 38 28.2	+0.8
NANN	Nandasmo	1.23	74	⇑P	Pn	11 38 12.6	+0.5
WILN	Americas 2	1.25	63	⇓P	Pn	11 38 12.1	-0.2
WILN				S	Sn	11 38 28.5	+0.6
NADN	Granada	1.27	83	eP	Pn	11 38 12.0	-0.7
BC87	San Francisco	1.36	48	P	Pn	11 38 14.0	+0.2
CSGN	Cosiguina Volc	1.39	351	eP	Pn	11 38 14.1	-0.3
CSGN	Cosiguina Volc	1.39	351	⇑P	Pn	11 38 14.2	-0.1
POTN	Potosi Cosigui	1.41	353	eP	Pn	11 38 14.5	0.0
POTN	Potosi Cosigui	1.41	353	⇑P	Pn	11 38 14.4	0.0
POTN				S	Sn	11 38 32.1	+0.3
SBEN	San Benito	1.43	60	P	Pn	11 38 14.9	+0.2
SBEN	San Benito	1.43	60	S	Sn	11 38 32.8	+0.5
MORN	Al O del Volca	1.64	92	P	Pn	11 38 16.7	-1.1
MORN				S	Sn	11 38 38.8	+1.1
LIMN	Finca el Limon	1.73	33	P	Pn	11 38 19.2	+0.2
LCRUZ	La Cruz	1.74	107	eP	Pn	11 38 17.9	-1.2
CNCH	Conchagua	1.74	343	eP	Pn	11 38 19.0	-0.2
CNCH	Conchagua	1.74	343	S	Sn	11 38 40.6	+0.4
CNCH	Conchagua	1.74	343	⇑P	Pn	11 38 19.0	-0.2
LCND	La Caada	1.79	342	eP	Pn	11 38 19.6	-0.2
LCND				IAML		11 38 47.3	
	comp=Z,959nm,0.3s						
LCND	La Caada	1.79	342	⇑P	Pn	11 38 19.5	-0.2
CARN	Rivas	1.81	103	eP	Pn	11 38 18.2	-1.8
CARN	Rivas	1.81	103	P	Pn	11 38 20.2	+0.1
CARN				S	Sn	11 38 41.9	+0.1
BOAB	BOACO BROADBAN	1.83	62		Pn	11 38 19.6	-0.6
BOAB	BOACO BROADBAN	1.83	62	S	Sn	11 38 43.6	+1.4
BOAB	BOACO BROADBAN	1.83	62	P	Pn	11 38 19.7	-0.6
MATN	Matagalpa	1.90	46	S	Sn	11 38 45.2	+1.0
MATN	Matagalpa	1.90	46	⇑P	Pn	11 38 20.4	-1.0
ELI1	Hacienda Flor	1.98	118	eP	Pn	11 38 21.3	-1.1
ALIBA	Liberia Airpor	2.01	120	eP	Pn	11 38 27.2	+4.4
LAPC	Finca la Perla	2.03	114	eP	Pn	11 38 21.1	-1.9
BLLM	Bellamira	2.04	334	eP	Pn	11 38 22.8	-0.4
BUAI	Buenos Aires	2.08	110	eP	Pn	11 38 23.8	0.0
VRLE	La Escondida,	2.08	112	eP	Pn	11 38 22.8	-1.1
PEJA	Penjamo Buenos	2.09	109	eP	Pn	11 38 23.6	-0.4
GPS3	Bodega del ICE	2.10	113	eP	Pn	11 38 24.1	+0.1
PACA	Pacayal	2.10	332	P	Pn	11 38 24.1	0.0
GPS1	Guardaparques	2.10	113	eP	Pn	11 38 23.1	-1.0
ACON	Acoyapa	2.14	80		Pn	11 38 23.3	-1.2
ACON	Acoyapa	2.14	80	eP	Pn	11 38 23.0	-1.5
ACON	Acoyapa	2.14	80	P	Pn	11 38 23.2	-1.2
MESS	Mesas	2.26	112	eP	Pn	11 38 25.8	-0.4
RCVN	Varillal2	2.26	29	P	Pn	11 38 27.3	+1.0
ELVJ	El Viejo (Barb	2.27	120	eP	Pn	11 38 29.2	+2.9
COLC	Colonia	2.28	114	eP	Pn	11 38 26.9	+0.5
HORNC	Hornillas	2.28	112	eP	Pn	11 38 26.4	-0.1
BAGA	Bagaces	2.29	117	eP	Pn	11 38 27.3	+0.8
PLVR	Palo Verde	2.30	122	eP	Pn	11 38 25.6	-1.3
VMAR	Armenia, Volca	2.31	110	eP	Pn	11 38 25.6	-1.2
CUI	Cuipilapa	2.32	114	eP	Pn	11 38 26.7	-0.3
CAHU	Cacacuatique	2.33	338	eP	Pn	11 38 28.3	+1.0
NICO	Nicoya	2.35	128	eP	Pn	11 38 32.9	+5.5
UPAL	Upala	2.37	107	eP	Pn	11 38 28.0	+0.3
MOTZ	Rio Naranjo	2.39	112	eP	Pn	11 38 28.1	+0.1
TECO	Alcaldia de Te	2.40	324	P	Pn	11 38 27.6	-0.4
TECO	Alcaldia de Te	2.40	324	S	Sn	11 38 55.3	-1.0
CMARA	Lajas Hojancha	2.44	130	P	Pn	11 38 27.8	-0.9
TENO	El Achiote	2.47	111	eP	Pn	11 38 28.7	-0.4
TIMP	Tierras Morena	2.48	114	eP	Pn	11 38 29.2	0.0
UESV	Universidad de	2.48	325	S	Sn	11 38 58.2	-0.1
UESV	Universidad de	2.48	325	P	Pn	11 38 28.6	-0.6
INVE	Universidad In	2.48	116	eP	Pn	11 38 29.5	+0.2
SCLA	Alcaldia de Sa	2.50	327	P	Pn	11 38 29.4	-0.2
SCLA	Alcaldia de Sa	2.50	327	S	Sn	11 38 59.2	+0.4
COEG	Centro de Oper	2.52	323	eP	Pn	11 38 29.7	-0.1
COEG				IAML		11 39 15.0	
	comp=Z,396nm,0.3s						
COEG	Centro de Oper	2.52	323	P	Pn	11 38 28.8	-1.0
COEG	Centro de Oper	2.52	323	S	Sn	11 39 00.1	+0.7
TILA	Tilaran	2.57	116	eP	Pn	11 38 36.2	+5.7
QUEB	Quebradon, Cot	2.57	112	eP	Pn	11 38 29.8	-0.7
PAVA	Las Pavas	2.63	323	P	Pn	11 38 31.2	-0.2
PAVA	Las Pavas	2.63	323	S	Sn	11 39 02.4	+0.3
JTS	Las Juntas de	2.67	119		Pn	11 38 30.9	-0.9
JTS	Las Juntas de	2.67	119	Pn	Pn	11 38 30.3	-1.5
	comp=Z,6.4nm,0.3s,baz=312,slow=21,SNR=23						
JTS				Sn	Sn	11 39 01.5	-1.4
	comp=Z,58nm,0.3s,baz=287,slow=22,SNR=10						
JTS				LR	LR	11 39 35.4	
	comp=Z,328nm,19.2s,baz=291,slow=44						
	comp=Z,12nm,0.3s						
JTS	Las Juntas de	2.67	119	eP	Pn	11 38 33.3	+1.5
LFU	La Fuente	2.76	321	eS	Sn	11 39 07.2	+2.0
CASO	Castillo	2.79	114	eP	Pn	11 38 31.1	-2.5
ARE1	Arenal 1	2.80	114	eP	Pn	11 38 33.1	-0.5
VARE2	V. Arenal	2.80	114	eP	Pn	11 38 33.7	+0.1
CEDE	Laguna Cedeo	2.80	113	eP	Pn	11 38 33.1	-0.5
VACR	Volcan Arenal	2.83	113	eP	Pn	11 38 38.0	+4.0
BOQS	Boqueron	2.86	318	eP	Pn	11 38 34.6	+0.1
PMON	Piamonte	2.86	317	S	Sn	11 39 07.3	-0.5
PMON	Piamonte	2.86	317	P	Pn	11 38 34.1	-0.5
JAYA	Jayaque - finc	2.91	315	eP	Pn	11 38 33.0	-2.3
JAYA	Jayaque - finc	2.91	315	iS	Sn	11 39 07.5	-1.6
JAYA	Jayaque - finc	2.91	315	P	Pn	11 38 34.5	-0.8
JAYA	Jayaque - finc	2.91	315	S	Sn	11 39 07.6	-1.6
SOCE	Pocosol	2.92	114	Pn	Pn	11 38 35.4	+0.1
SOCE	Pocosol	2.92	114	P	Pn	11 38 35.4	+0.1
SOCE	Pocosol	2.92	114	S	Sn	11 39 09.6	+0.4
CBL1	Cabuya	2.97	132	eP	Pn	11 38 40.8	+4.9
ESPN	Las Esperanzas	3.02	78	Pn	Pn	11 38 34.2	-2.4
ESPN	Las Esperanzas	3.02	78	eP	Pn	11 38 41.1	+4.5
CEVE	Cerro Verde	3.15	315	eP	Pn	11 38 38.1	-0.6
CEVE	Cerro Verde	3.15	315	S	Sn	11 39 15.0	-0.2
CEVE	Cerro Verde	3.15	315	P	Pn	11 38 38.9	+0.2
SIUN	Universidad Ur	3.26	50	P	Pn	11 38 39.8	-0.1
NUBE	Las Nubes	3.31	314	iP	Pn	11 38 40.4	-0.4
NUBE				iS	Sn	11 39 17.4	-1.6
NUBE	Las Nubes	3.31	314	S	Sn	11 39 16.9	-2.2
NUBE	Las Nubes	3.31	314	P	Pn	11 38 40.0	-0.8
MTO3	Montecristo	3.42	325		Pn	11 38 42.4	+0.1
MTO3	Montecristo	3.42	325	iP	Pn	11 38 42.2	-0.2
MTO3	Montecristo	3.42	325	P	Pn	11 38 42.1	-0.2
FAME	Alcaldia de Sa	3.44	311	S	Sn	11 39 20.5	-1.6
FAME	Alcaldia de Sa	3.44	311	P	Pn	11 38 42.0	-0.5
VBV1	V. Barva	3.50	115	eP	Pn	11 38 46.5	+3.0
BLUN	Bluefields	3.50	83	P	Pn	11 38 43.1	-0.1
BLUN				S	Sn	11 39 24.2	+0.8
ESQI	Esquipulas	3.54	327		Pn	11 38 44.8	+0.9
ESQI	Esquipulas	3.54	327	P	Pn	11 38 44.1	+0.3
ACOS	Acosta	3.58	120	eP	Pn	11 38 45.5	+1.0
PAR1A	Puntarenas Pro	3.62	123	eP	Pn	11 38 45.5	+0.7
PICV	PH. Pirrs	3.65	122	eP	Pn	11 38 45.9	+0.6
ABE2	San Pablo	3.73	120	eP	Pn	11 38 47.1	+0.6
LCR2	La Lucha 2	3.75	119		Pn	11 38 47.8	+1.0
LCR2	La Lucha 2	3.75	119	eP	Pn	11 38 47.8	+1.0
REPA	Paraso	3.83	117	eP	Pn	11 38 49.7	+1.8
VTLA	Turrialba Volc	3.83	114	eP	Pn	11 38 50.5	+2.4
CVTQ	Turrialba Volc	3.84	114	eP	Pn	11 38 49.0	+0.8
CVTR	Volcan Turrial	3.84	114	eP	Pn	11 38 49.8	+1.6
PIEC	Cerro El Cedra	3.85	120	eP	Pn	11 38 48.6	+0.4
CVTV	Tajo	3.85	114	eP	Pn	11 38 51.5	+3.1
ABRB	Las Abras (San	3.88	114	eP	Pn	11 38 49.7	+1.0
VTCV	VTCV, Calle Va	3.88	114	eP	Pn	11 38 51.1	+2.4
EDPE	Pejibaye, P	4.42	123	eP	Pn	11 38 55.7	-0.2
DRK0	Durika	4.63	120	eP	Pn	11 38 59.0	0.0
FIMO	Fila Mora	4.69	123	eP	Pn	11 38 60.0	+0.3
STG0	El Palmar, Qui	4.82	306	iP	Pn	11 39 06.8	+5.3
STG0				iS	Sn	11 40 02.3	+6.1
STG8	El Palmar, Qui	4.84	306	eP	Pn	11 39 07.3	+5.4
RTAL	Retalhuleu	5.16	305	Pn	Pn	11 39 06.3	+0.3
BRU2	Volcan	5.34	121		Pn	11 39 09.7	+1.0
PBNVO	Pueblo Nuevo,	5.72	118	eP	Pn	11 39 13.3	-0.4
CCIG	Comitan	6.60	315		Pn	11 39 27.6	+1.7
TLIG	Tlapa	12.39	300		Pn	11 40 48.2	+3.0
FLOC	Florencia	15.27	130	Pn	Pn	11 41 21.9	-2.1
MOIG	Morelia	15.57	303	Pn	Pn	11 41 29.6	+1.5
MOIG				IAmb	IAmb	11 41 31.9	
	comp=Z,42nm,1.1s						
COHC	Cochancay	16.11	150	Pn	Pn	11 41 33.7	-1.1
SDV	Santo Domingo	16.64	98	Pn	Pn	11 41 38.6	-3.1
SDV	Santo Domingo	16.64	98	Pn	Pn	11 41 40.1	-1.6
	comp=Z,0.5nm,0.3s,baz=290,slow=8.3,SNR=3.7						
ZAIG	Zacatecas	18.30	309	P	P	11 42 00.0	-1.9
HBVL	Hebbronville	18.72	327	P	Pn	11 42 07.3	+0.3
HBVL				IAmb	IAmb	11 42 09.7	
	comp=Z,41nm,0.8s						

BAUV	**El Baul**	19.16	96	P	P	11 42 09.4	-1.7
441A	**DeRidder**	19.82	345	P	P	11 42 17.4	-0.8
HKT	**Hockley**	19.90	338	P	P	11 42 20.0	+1.0
833A	**Chaparral WMA,**	20.11	328	P	P	11 42 22.4	+1.0
ATAH	**Atahualpa**	20.62	154	LR	LR	11 49 33.9	
	comp=Z,172nm,18.4s,baz=348,slow=34						
HNDO	**Hondo**	21.03	330	P	P	11 42 31.2	-0.1
HNDO				IAmb	IAmb	11 42 37.3	
	comp=Z,12nm,0.7s						
LRAL	**Lakeview Retre**	21.34	1	P	P	11 42 34.1	-0.5
LRAL				IAmb	IAmb	11 42 39.1	
	comp=Z,22nm,1.1s						
Z47A	**Carrollton**	21.51	358	P	P	11 42 35.8	-0.6
Z47A				IAmb	IAmb	11 42 40.2	
	comp=Z,23nm,0.7s						
DRIO	**Del Rio**	21.63	327		P	11 42 38.2	+0.4
DRIO				IAmb	IAmb	11 42 44.1	
	comp=Z,16nm,1.0s						
237A	**Washetta, Mont**	21.76	340	P	P	11 42 37.9	-1.2
237A				IAmb	IAmb	11 42 46.9	
	comp=Z,24nm,0.8s						
GOGA	**Godfrey**	22.00	9	P	P	11 42 40.7	-1.0
GOGA				IAmb	IAmb	11 42 45.2	
	comp=Z,16nm,0.8s						
JCT	**Junction City**	22.07	330	P	P	11 42 42.1	-0.4
Z41A	**Richland Creek**	22.14	348	P	P	11 42 42.5	-0.6
Y49A	**Blount Mountai**	22.17	2	P	P	11 42 42.4	-1.1
Y49A				IAmb	IAmb	11 42 45.9	
	comp=Z,15nm,0.9s						
BRDY	**Brady**	22.37	333		P	11 42 45.9	+0.2
TREL	**Terrell**	22.52	340	P	P	11 42 47.5	+0.3
WLAR	**White Oak Lake**	22.62	347	P	P	11 42 48.5	+0.2
FW13	**Cleburne**	22.65	337	P	P	11 42 49.2	+0.5
Z38A	**Mt. Pleasant**	22.68	343	P	P	11 42 48.8	-0.1
X48A	**Hartselle**	22.75	1		P	11 42 49.0	-0.7
X48A				IAmb	IAmb	11 43 14.6	
	comp=Z,20nm,1.4s						
SAND	**Sanderson**	22.87	325	P	P	11 42 51.8	+0.8
OXF	**Oxford**	22.89	356		P	11 42 50.5	-0.7
HPIG		23.03	314	P	P	11 42 53.0	+0.1
OZNA	**Ozona**	23.09	328	P	P	11 42 53.8	+0.5
OZNA				IAmb	IAmb	11 43 14.8	
	comp=Z,13nm,0.8s						
FW07	**Weatherford**	23.10	337	P	P	11 42 53.9	+0.6
FW07				IAmb	IAmb	11 42 56.0	
	comp=Z,12nm,0.5s						
TXAR	**Lajitas Array**	23.31	322		P	11 42 56.4	+0.9
TXAR	**Lajitas Array**	23.31	322	P	P	11 42 56.5	+1.0
	comp=Z,4.6nm,0.6s,baz=134,slow=9.9,SNR=54						
TXAR				PcP	PcP	11 46 43.7	+1.9
	comp=Z,0.2nm,0.3s,baz=115,slow=2.5,SNR=4.8						
	comp=Z,4.6nm,0.6s						
TX31	**Lajitas Ar. Si**	23.31	322		P	11 42 56.3	+0.7
X40A	**Basin Creek Fa**	23.33	348	P	P	11 42 55.0	-0.5
PLPT	**Palo Pinto**	23.41	336	P	P	11 42 57.5	+1.2
PLPT				IAmb	IAmb	11 43 05.7	
	comp=Z,12nm,0.8s						
Z35A	**Perchaven, San**	23.47	339	P	P	11 42 57.1	+0.2
Z35A				IAmb	IAmb	11 43 00.4	
	comp=Z,20nm,0.9s						
FW03	**Perrin-Whitt E**	23.51	337	P	P	11 42 58.7	+1.5
FW03				IAmb	IAmb	11 43 09.6	
	comp=Z,17nm,1.1s						
UALR	**University of**	23.52	350	P	P	11 42 57.2	-0.2
UALR				IAmb	IAmb	11 42 58.4	
	comp=Z,15nm,0.8s						
MIAR	**Mount Ida**	23.54	347		P	11 42 58.1	+0.6
MIAR				IAmb	IAmb	11 42 59.4	
	comp=Z,14nm,0.7s						
SWET	**Sewanee**	23.55	3	P	P	11 42 57.2	-0.4
SWET				IAmb	IAmb	11 42 59.9	
	comp=Z,21nm,1.2s						
W50A	**Signal Mountai**	23.57	4	P	P	11 42 58.4	+0.5
W50A				IAmb	IAmb	11 42 59.6	
	comp=Z,14nm,0.6s						
W52A	**Murphy**	23.59	7	P	P	11 42 59.2	+1.1
W52A				IAmb	IAmb	11 43 00.1	
	comp=Z,21nm,1.0s						
BG3	**Lake Jocassee**	23.63	9	P	P	11 42 59.1	+0.7
BG3				IAmb	IAmb	11 43 00.5	
	comp=Z,17nm,0.6s						
ABTX	**Abilene, Hawle**	23.80	334	P	P	11 43 01.4	+1.5
CPCT	**Cooper Cave**	23.88	6		P	11 43 01.6	+0.9
CPCT				IAmb	IAmb	11 43 03.4	
	comp=Z,23nm,1.2s						
V48A	**Smith Brothers**	24.04	1	P	P	11 43 02.9	+0.7
V48A				IAmb	IAmb	11 43 03.5	
	comp=Z,9.6nm,0.8s						
TKL	**Tuckaleechee C**	24.17	7	P	P	11 43 04.2	+0.8
TKL				IAmb	IAmb	11 43 05.1	
	comp=Z,12nm,0.8s						
TKL	**Tuckaleechee C**	24.17	7	LR	LR	11 52 24.3	
	comp=Z,46nm,21.1s,baz=170,slow=37						
MNHN	**Monahans**	24.28	326		P	11 43 05.9	+1.4
V53A	**Saluda**	24.31	9	P	P	11 43 06.0	+1.3
V53A				IAmb	IAmb	11 43 08.7	
	comp=Z,9.9nm,0.8s						
CLTN	**Cedars of Leba**	24.40	2	P	P	11 43 05.5	0.0
CLTN				IAmb	IAmb	11 43 07.7	
	comp=Z,12nm,0.7s						
WVT	**Waverly**	24.43	359	P	P	11 43 05.1	-0.6
SN05	**Snyder 5**	24.57	332	P	P	11 43 07.5	+0.4
SN05				IAmb	IAmb	11 43 19.4	
	comp=Z,7.5nm,0.7s						
FCAR	**Ozark Folk Cen**	24.57	351	P	P	11 43 06.6	-0.4
FCAR				IAmb	IAmb	11 43 07.7	
	comp=Z,12nm,0.7s						
APMT	**Aspermont**	24.60	334	P	P	11 43 08.2	+0.9
LCAR	**Lake Charles**	24.61	353	P	P	11 43 06.7	-0.6
LCAR				IAmb	IAmb	11 43 07.5	
	comp=Z,12nm,0.7s						
SN07	**Snyder 07**	24.75	332	P	P	11 43 10.2	+1.5
ODSA	**Odessa**	24.78	328	P	P	11 43 09.5	+0.4
X34A	**Smith Ranch, M**	24.82	339	P	P	11 43 10.1	+0.8
U49A	**Red Boiling Sp**	24.85	3	P	P	11 43 09.0	-0.5
U49A				IAmb	IAmb	11 43 12.2	
	comp=Z,11nm,0.9s						
POST	**Post**	25.02	331		P	11 43 11.5	+0.4
POST				IAmb	IAmb	11 43 24.4	
	comp=Z,11nm,0.9s						
TZTN	**Tazewell**	25.07	7	P	P	11 43 12.4	+0.8
TZTN				IAmb	IAmb	11 43 13.0	
	comp=Z,8.5nm,0.7s						
LPIG	**La Paz**	25.11	303	LR	LR	11 53 43.6	
	comp=Z,86nm,19.0s,baz=149,slow=38						
VHRN	**Van Horn**	25.15	322	P	P	11 43 12.2	-0.3
PBMO	**Poplar Bluff**	25.23	354	P	P	11 43 12.7	-0.2
PBMO				IAmb	IAmb	11 43 14.4	
	comp=Z,13nm,0.6s						
DKNS	**Dickens**	25.25	333	P	P	11 43 14.3	+1.0
FNO	**Franklin**	25.27	340	P	P	11 43 13.1	-0.3
T47A	**Sharon Grove**	25.28	0	P	P	11 43 13.1	-0.3
T47A				IAmb	IAmb	11 43 14.0	
	comp=Z,18nm,0.8s						
WMOK	**Wichita Mounta**	25.29	337	IAmb	IAmb	11 43 16.6	
	comp=Z,12nm,1.1s						
HHAR	**Hobbs**	25.29	347	IAmb	IAmb	11 43 15.5	
	comp=Z,5.6nm,0.6s						
TUL3	**Leonard**	25.39	344		P	11 43 15.0	+0.5
T42A	**Van Buren**	25.55	353	IAmb	IAmb	11 43 16.0	
	comp=Z,9.2nm,0.7s						
QUOK	**Quay**	25.89	342	IAmb	IAmb	11 43 21.6	
	comp=Z,13nm,0.6s						
SIUC	**Southern Illin**	26.06	357	P	P	11 43 19.6	-0.9
SIUC				IAmb	IAmb	11 43 21.0	
	comp=Z,12nm,0.8s						
S51A	**Beattyville**	26.15	7	IAmb	IAmb	11 43 22.5	
	comp=Z,11nm,0.8s						
SMWD	**Samnorwood**	26.18	335	IAmb	IAmb	11 43 28.2	
	comp=Z,16nm,0.9s						
MSTX	**Muleshoe**	26.36	330	IAmb	IAmb	11 43 34.9	
	comp=Z,20nm,1.0s						
T35A	**Sooner Cattle**	26.53	343	P	P	11 43 25.2	+0.4
T35A				IAmb	IAmb	11 43 28.5	
	comp=Z,14nm,1.1s						
WCI	**Wyandotte Cave**	26.54	2	P	P	11 43 24.7	0.0
WCI				IAmb	IAmb	11 43 25.4	
	comp=Z,11nm,0.8s						
CCM	**Cathedral Cave**	26.58	353	P	P	11 43 24.9	-0.3
CCM				IAmb	IAmb	11 43 26.0	
	comp=Z,14nm,1.1s						
AMTX	**Amarillo**	26.61	333	IAmb	IAmb	11 43 29.1	
	comp=Z,14nm,1.1s						
P38A	**Dawn**	28.45	350	IAmb	IAmb	11 43 43.0	
	comp=Z,11nm,0.7s						
BINY	**Binghamton**	32.05	16	P	P	11 44 14.7	+1.0
PV13	**Radium Mtn., P**	32.69	328	P	P	11 44 20.5	+0.8
PV13				IAmb	IAmb	11 44 27.2	
	comp=Z,4.5nm,0.9s						
K30B	**Basset**	32.76	343	P	P	11 44 21.5	+1.5
PV03	**Paradox Valley**	32.78	328	P	P	11 44 21.5	+1.1
PV03				IAmb	IAmb	11 44 27.7	
	comp=Z,4.4nm,0.8s						
PV05	**Paradox Valley**	32.78	327	P	P	11 44 21.4	+0.9
PV05				IAmb	IAmb	11 44 27.1	
	comp=Z,3.8nm,0.8s						
PV17	**East Wray Mesa**	32.85	328	IAmb	IAmb	11 44 23.0	
	comp=Z,5.2nm,0.7s						
PV16	**Nyswonger Mesa**	32.85	328	IAmb	IAmb	11 44 36.5	
	comp=Z,8.3nm,1.4s						
PV19	**Morning Glory**	32.89	328	IAmb	IAmb	11 44 23.3	
	comp=Z,5.8nm,0.7s						
PV20	**West Nyswonger**	32.90	328	IAmb	IAmb	11 44 33.0	
	comp=Z,14nm,1.4s						
PV04	**Paradox Valley**	32.91	328	IAmb	IAmb	11 44 31.3	
	comp=Z,9.8nm,1.3s						
PV10	**Paradox Valley**	32.97	328	IAmb	IAmb	11 44 37.2	
	comp=Z,8.1nm,1.0s						
PV23	**Carpenter Ridg**	33.01	328	IAmb	IAmb	11 44 29.7	
	comp=Z,7.2nm,0.8s						
ECSD	**EROS Data Cent**	33.01	348		P	11 44 20.9	-1.3
ECSD				IAmb	IAmb	11 44 21.9	
	comp=Z,8.4nm,1.0s						
J57A	**Williamstown**	33.18	15	P	P	11 44 23.6	0.0
HMU	**Henry Mountain**	33.57	325	P	P	11 44 28.9	+1.5
LPAZ	**La Paz**	33.59	145	LR	LR	11 58 59.5	
	comp=Z,82nm,18.9s,baz=324,slow=38						
G40A	**Rib Lake**	33.65	356		P	11 44 26.8	-0.9
G40A				IAmb	IAmb	11 44 27.4	
	comp=Z,8.6nm,1.0s						
SADO	**Sadowa**	33.80	11	P	P	11 44 28.2	-0.7
SADO	**Sadowa**	33.80	11	LR	LR	11 58 31.0	
	comp=Z,58nm,18.7s,baz=141,slow=37						
O20A	**White River Ci**	33.91	331	IAmb	IAmb	11 45 05.4	
	comp=Z,6.6nm,1.0s						
SRU	**San Rafael Swe**	34.29	327	IAmb	IAmb	11 44 40.8	
	comp=Z,3.5nm,0.8s						
COWI	**Conover**	34.42	358	P	P	11 44 33.3	-1.0
PFO	**Pinyon Flats O**	34.48	314	LR	LR	12 00 47.6	
	comp=Z,87nm,18.3s,baz=187,slow=40						
P18A	**Preston Nutter**	34.52	328	P	P	11 44 36.9	+1.2
LONY	**Lake Ozonia**	34.68	16	P	P	11 44 36.6	0.0
MDP	**Montagnes des**	34.89	98	LR	LR	12 00 00.3	
	comp=Z,66nm,18.8s,baz=294,slow=39						
F33A	**5 Mile Ranch,**	34.97	349	P	P	11 44 38.0	-1.0
BSUT	**Blindstream Ca**	35.46	329	IAmb	IAmb	11 44 52.9	
	comp=Z,5.2nm,0.9s						
PDAR	**Pinedale Array**	36.58	332	P	P	11 44 53.6	+0.4
	comp=Z,0.8nm,0.5s,baz=126,slow=12,SNR=7.1						
PDAR				PcP	PcP	11 47 17.4	+1.6
	comp=Z,0.9nm,0.7s,baz=142,slow=5.6,SNR=4.7						
	comp=Z,0.8nm,0.5s						
HWUT	**Hardware Ranch**	36.66	329	IAmb	IAmb	11 45 00.9	
	comp=Z,5.9nm,0.8s						
AGMN	**Agassiz Nation**	37.28	351	IAmb	IAmb	11 44 59.2	
	comp=Z,10nm,1.0s						
AHID	**Auburn Hatcher**	37.30	331	P	P	11 44 59.6	+0.3
AHID				IAmb	IAmb	11 45 05.9	
	comp=Z,6.0nm,0.9s						
SNOW	**Snow King Moun**	37.67	332	IAmb	IAmb	11 45 17.1	
	comp=Z,9.1nm,0.8s						
TPAW	**Teton Pass**	37.78	332	IAmb	IAmb	11 45 17.5	
	comp=Z,4.2nm,0.8s						
NVAR	**Mina Array Bea**	38.42	319	P	P	11 45 10.2	+1.3
	comp=Z,0.6nm,0.7s,baz=138,slow=6.5,SNR=5.6						
NVAR				PcP	PcP	11 47 23.8	+2.2
	comp=Z,1.5nm,0.8s,baz=132,slow=5.5,SNR=7.5						
	comp=Z,0.6nm,0.7s						
LHV	**Little Huntoon**	38.45	319	P	P	11 45 09.7	+0.9
YNE	**Yellowstone No**	38.55	334	P	P	11 45 11.0	+1.2
ULM	**Lac du Bonnet**	39.18	351	IAmb	IAmb	11 45 14.4	
	comp=Z,16nm,1.2s						
ULM	**Lac du Bonnet**	39.18	351	P	P	11 45 12.8	-1.9
	comp=Z,7.2nm,0.8s,baz=164,slow=9.8,SNR=12						
ULM				LR	LR	12 04 33.1	
	comp=Z,18nm,19.7s,baz=176,slow=41						
	comp=Z,7.2nm,0.8s						
MCMT	**McKenzie Canyo**	39.69	331	P	P	11 45 20.9	+1.6
DLMT	**Dillon**	39.97	332	IAmb	IAmb	11 45 24.0	
	comp=Z,13nm,1.5s						
PLID	**Pearl Lake**	41.41	329	P	P	11 45 34.1	+0.5
J08A	**Circle Bar Ran**	41.56	325	P	P	11 45 34.4	-0.3
BMO	**Blue Mountains**	41.92	328		P	11 45 38.1	+0.5
YBH	**Yreka Blue Hor**	43.08	321	LR	LR	12 06 33.6	
	comp=Z,6.3nm,18.9s,baz=125,slow=40						
CO01	**Juntas del Tor**	44.54	159	P	P	11 46 00.8	+1.7
CO01				IAmb	IAmb	11 46 13.8	
	comp=Z,9.1nm,1.4s						
SCHQ	**Schefferville**	46.06	16	P	P	11 46 08.0	-2.5
	comp=Z,4.6nm,0.7s,baz=213,slow=6.4,SNR=7.5						
SCHQ				LR	LR	12 04 54.4	
	comp=Z,104nm,21.3s,baz=178,slow=36						
	comp=Z,4.6nm,0.7s						
BDFB	**Brasilia**	47.40	124	P	P	11 46 20.8	-0.8
	comp=Z,4.9nm,0.6s,baz=282,slow=9.7,SNR=7.0						
	comp=Z,4.9nm,0.6s						
FRB	**Frobisher Bay**	53.74	10	LR	LR	12 11 36.5	
	comp=Z,94nm,18.2s,baz=148,slow=38						
PLCA	**Paso Flores**	54.33	164	LR	LR	12 05 24.1	
	comp=Z,34nm,18.4s,baz=218,slow=30						
YKA	**Yellowknife Ar**	54.46	345	P	P	11 47 12.8	-1.1
	comp=Z,0.8nm,0.8s,baz=141,slow=6.9,SNR=6.9						
YKA				LR	LR	12 12 42.0	
	comp=Z,32nm,18.5s,baz=162,slow=39						
	comp=Z,0.8nm,0.8s						
TAOE	**Nuku Hiva Isla**	56.32	251	*e*LR	LR	12 03 47.5	
	comp=Z,25nm,22.8s						
SFJD	**Kangerlussuaq**	60.50	16	LR	LR	12 12 53.1	
	comp=Z,65nm,21.9s,baz=210,slow=35						
F28M	**Old Crow**	65.62	340	P	P	11 48 31.4	+1.0
F28M				IAmb	IAmb	11 48 33.1	
	comp=Z,2.7nm,0.8s						
I26K	**Coal Creek Min**	65.64	338	P	P	11 48 31.8	+1.3
I26K				IAmb	IAmb	11 48 59.1	
	comp=Z,5.7nm,1.5s						
ILAR	**Eielson Array**	66.85	336	P	P	11 48 38.4	+0.1
	comp=Z,0.3nm,0.6s,baz=149,slow=4.6,SNR=9.5						
	comp=Z,0.3nm,0.6s						
KDAK	**Kodiak Island**	67.15	328	LR	LR	12 20 17.4	
	comp=Z,49nm,18.1s,baz=123,slow=38						
PPT2	**Papeete2**	67.97	246	*e*LR	LR	12 09 16.6	
	comp=Z,45nm,22.5s						
MDT	**Midelt**	77.74	59	LR	LR	12 23 26.2	
	comp=Z,54nm,18.1s,baz=252,slow=36						
SPITS	**Spitsbergen Ar**	81.51	12	P	P	11 50 03.5	-0.1
	comp=Z,1.1nm,0.5s,baz=194,slow=2.4,SNR=4.4						
SPITS				LR	LR	12 26 40.7	
	comp=Z,55nm,20.9s,baz=260,slow=36						
	comp=Z,1.1nm,0.5s						
NOA	**NORSAR Array B**	84.05	29	LR	LR	12 25 08.9	
	comp=Z,19nm,20.3s,baz=75,slow=34						
ARCES	**ARCESS Array B**	86.95	19	LR	LR	12 30 28.8	
	comp=Z,20nm,18.2s,baz=340,slow=37						
TIXI	**Tiksi**	93.50	349	LR	LR	12 38 27.9	
	comp=Z,31nm,18.1s,baz=16,slow=39						
KURBB	**Kurchatov Arra**	116.82	10	PKP	PKiKP	11 56 31.0	+0.1
	comp=Z,0.5nm,0.5s,baz=348,slow=1.8,SNR=5.4						
SONM	**Songino Array**	119.59	349	PKP	PKiKP	11 56 37.1	+0.5
	comp=Z,0.5nm,0.3s,baz=179,slow=1.5,SNR=2.2						
POGA	**Pongola**	120.95	115	PKPdf	PKiKP	11 56 39.2	-0.4
KSRS	**Korea Array**	121.06	328	PKP	PKiKP	11 56 41.0	+1.5
	comp=Z,1.2nm,0.6s,baz=24,slow=1.9,SNR=7.2						
KSAR	**Wonju Array Be**	121.08	328	PKPdf	PKiKP	11 56 40.2	+0.6
MKAR	**Makanchi Array**	121.14	8	PKP	PKPdf	11 56 38.8	-0.6
	comp=Z,0.3nm,0.4s,baz=314,slow=4.1,SNR=4.5						
ASAR	**Alice Springs**	139.06	247	PKP	PKiKP	11 57 15.2	-0.9
	comp=Z,1.0nm,0.7s,baz=95,slow=1.8,SNR=11						
WRA	**Warramunga Arr**	139.15	253	PKP	PKiKP	11 57 14.8	-1.5
	comp=Z,1.2nm,0.7s,baz=90,slow=1.9,SNR=20						
FITZ	**Fitzroy Crossi**	147.52	255	PKPbc	PKPab	11 57 32.7	-0.9
CHTO	**Chiang Mai**	149.16	348	PKPbc	PKiKP	11 57 36.7	-0.3
MYLDM	**Lahad Datu**	149.38	302	PKPdf	PKPdf	11 57 32.6	+0.6
MYLDM				PKPbc	PKiKP	11 57 36.8	-0.7
MYLDM				PKPab	PKPab	11 57 42.5	+1.4
CMAR	**Chiang Mai Arr**	149.50	348	PKPbc	PKPbc	11 57 34.6	-2.0
	comp=Z,3.9nm,0.7s,baz=347,slow=3.6,SNR=5.8						
SMRI	**Semarang**	161.90	283	PKPdf	PKPdf	11 57 49.5	+0.9

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*KOLA **14** 12:07:29.5, 67.̊65N×33.̊78E, h0km, ML1.5, Error ellipse: s-maj=3.0km s-min=1.4km az=130.0, Khibiny, mines Kirovsk, Yukspor*

HEL 14 12:07:29.8±0.1**, 67.̊61N×33.̊83E, h0**km**, ML1.4, Suspected explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
APA	**Apatity**	0.17	257	P	Pg	12 07 32.1	-0.9
APA				S	Sg	12 07 34.7	-0.4
APA0	**Apatity Array**	0.32	270	P	Pg	12 07 34.5	-1.4
LVZ	**Lovozero**	0.43	46	P	Pg	12 07 37.1	-0.9
LVZ				S	Sg	12 07 42.8	-0.8
LVZ	**Lovozero**	0.43	46	PG	Pg	12 07 37.4	-0.6
	baz=225						
LVZ				SG	Sg	12 07 43.4	-0.2
KVDA	**Kovda**	0.99	203	P	Pg	12 07 48.0	-0.8
KVDA				S	Sg	12 08 01.5	-0.1
VRF	**Varrio**	1.62	277	PG	Pn	12 07 58.8	-0.8
VRF				SB	Sn	12 08 17.6	-3.5
VRF				MSG		12 08 18.3	
	comp=Z,3.7nm,0.2s						
TERR	**Teriberka**	1.67	16	P	Pn	12 07 57.8	-2.5
TERR				S	Sn	12 08 19.4	-2.9
OLKF	**Oulanka, Finla**	2.17	236	PG	Pb	12 08 08.8	-1.0
OLKF				MSG		12 08 34.1	
	comp=Z,1.6nm,0.2s						
OLKF				SG	Sb	12 08 36.8	-0.4
KU6	**Riekki**	2.23	226	PG	Pn	12 08 09.2	+1.4
KU6				MSG		12 08 35.6	
	comp=Z,1.1nm,0.2s						
KU6				SG	Sb	12 08 38.5	-0.3
RAJF	**Raja-Jooseppi**	2.25	295	PN	Pn	12 08 08.0	-0.3
RAJF				SN	Sn	12 08 35.3	-1.4
MSF	**Maaselka**	2.55	230	SG	Sb	12 08 48.3	+0.1
KU2	**Taivalkoski**	2.93	232	PG	Pb	12 08 23.0	+0.1
VADS	**Vadso**	3.00	329	S	Sn	12 08 54.5	-0.6
RANF	**Ranua**	3.21	243	SG	Sb	12 09 08.2	+1.0
RNF	**Rovaniemi**	3.22	255	SN	Sn	12 08 59.6	-0.8
KEV	**Kevo**	3.30	314	SN	Sn	12 08 59.9	-2.5
ARA0	**ARCESS Array S**	3.62	306	PN	Pn	12 08 26.0	-1.0
ARCES	**ARCESS Array B**	3.62	306	P	Pn	12 08 25.4	-1.6
ARCES				S	Sn	12 09 06.6	-3.8
HEF	**Hetta**	3.91	287	PN	Pn	12 08 31.6	+0.6
HEF				SN	Sn	12 09 14.9	-2.7
TOF	**Tornio**	4.05	252	SB	Sb	12 09 28.3	-3.1
PAJU	**Pajala**	4.19	267	SN	Sn	12 09 22.0	-2.5
LANU	**Lannavaara**	4.51	281	SN	Sn	12 09 30.2	-2.1
ERTU	**Ertsjaerv**	4.67	262	SN	Sn	12 09 33.9	-2.4

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*UUSS **14** 12:14:45.6±1.0, 42.̊709N±0.̊005×111.̊34W±0.̊03, h7km±3km, Error ellipse: s-maj=3.0km s-min=0.6km az=98.0*

NEIC 14 12:14:45.0±1.2**, 42.̊698N**±0.̊008×**111.̊32W**±0.̊03**,**
h5km±1km**, ML3.2**/82**, ML3.3**/19(UUSS)**, Error ellipse: s-maj=3.5km s-min=2.6km az=98.0, Eastern Idaho**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AHID	**Auburn Hatcher**	0.17	67	Pg	Pg	12 14 49.4	+0.9
AHID					Sg	12 14 52.5	+1.6
AHID				IAML		12 14 53.1	
	8µm,0.3s						
GRRI	**Grays Lake**	0.25	342		Pg	12 14 50.5	+0.5
BEI	**Bear River Ran**	0.68	211		Pg	12 14 58.5	+0.5
BMUT	**Black Mountain**	0.74	175		Pg	12 14 59.4	+0.1
TPAW	**Teton Pass**	0.84	19		Pg	12 15 00.6	-0.4
TPAW				Sg	Sb	12 15 14.3	+0.5
TPAW				IAML		12 15 14.4	
	832nm,0.5s						
SNOW	**Snow King Moun**	0.87	28		Pg	12 15 01.7	0.0
SNOW					Sb	12 15 14.6	-0.2
MLI	**Malad Range**	0.90	222		Pg	12 15 02.4	+0.1
HDU	**Hyde Park**	0.95	201		Pg	12 15 03.3	0.0
FXWY	**Fox Creek**	0.96	13		Pg	12 15 03.4	-0.2
FXWY				Sg	Sg	12 15 16.6	+0.6
FXWY				IAML		12 15 17.9	
	502nm,0.3s						
NPI	**North Pocatell**	1.05	239		Pg	12 15 04.6	-0.4
LOHW	**Long Hollow**	1.05	29		Pg	12 15 05.0	-0.3
LOHW				IAML		12 15 22.6	
	484nm,0.6s						
LOHW				IAML		12 15 23.4	
	711nm,0.5s						
PTU	**Portage**	1.07	225		Pg	12 15 05.3	-0.2
HWUT	**Hardware Ranch**	1.11	190		Pg	12 15 06.0	-0.2
HWUT				IAML		12 15 23.6	
	376nm,0.8s						
WVUT	**Wellsville**	1.19	204		Pg	12 15 07.7	-0.1
MCU	**Monte Cristo P**	1.24	187		Pg	12 15 08.9	+0.1
BCUT	**Brigham City**	1.28	203		Pg	12 15 09.4	-0.2
BW06	**Boulder Array**	1.30	86		Pb	12 15 10.3	+0.3
PD31	**Pinedale Array**	1.30	86	Pg	Pg	12 15 09.3	-0.5
LTU	**Little Mountai**	1.30	212		Pg	12 15 09.2	-0.8
HVU	**Hansel Valley**	1.42	230		Pn	12 15 11.1	-0.6
H17A	**Grant Village**	1.78	17		Pn	12 15 16.3	-0.4
YFT	**Old Faithful**	1.79	11		Pn	12 15 16.2	-0.6
YFT				IAML		12 15 25.4	
	comp=E,127nm,0.7s						
YFT				IAML		12 15 28.0	
	comp=N,270nm,0.8s						
CTU	**Camp Tracy**	2.03	189		Pn	12 15 20.8	+0.8
CTU				IAML		12 15 57.0	
	comp=N,143nm,0.9s						
YHB	**Horse Butte**	2.06	2		Pn	12 15 21.4	+0.9
YHB				IAML		12 15 53.6	
	comp=E,100nm,1.0s						
YHB				IAML		12 15 55.9	
	comp=N,154nm,0.6s						
YNR	**Norris Junctio**	2.07	13		Pb	12 15 22.2	-1.0
YNM	**Yellowstone No**	2.08	12	Pn	Pn	12 15 20.2	-0.5
YNM				IAML		12 16 23.8	
	comp=N,92nm,0.1s						
JLU	**Jordanelle**	2.10	183		Pn	12 15 22.1	+1.0
JLU				IAML		12 15 59.3	
	comp=N,147nm,0.7s						
JLU				IAML		12 16 03.6	
	comp=E,128nm,1.1s						
YHH	**Holmes Hill**	2.12	9		Pn	12 15 22.5	+1.2
YHL	**Hebgen Lake**	2.15	3		Pn	12 15 23.1	+1.2
YHL				IAML		12 15 55.9	
	comp=N,115nm,0.5s						
YHL				IAML		12 15 57.0	
	comp=E,121nm,0.7s						
BGU	**Big Grassy Mou**	2.19	216		Pn	12 15 21.8	-0.3
BGU				IAML		12 15 55.5	
	comp=N,132nm,0.7s						
BGU				IAML		12 15 58.0	
	comp=E,164nm,0.6s						
BSUT	**Blindstream Ca**	2.20	169		Pn	12 15 23.1	+0.5
BSUT				IAML		12 15 56.0	
	comp=E,189nm,1.2s						
YMP	**Mirror Lake Pl**	2.21	22		Pn	12 15 21.7	-1.0
MCMT	**McKenzie Canyo**	2.40	333		Pb	12 15 27.6	-1.2
HLID	**Hailey**	2.43	292		Pn	12 15 25.9	+0.4
HLID				IAML		12 16 02.4	
	comp=E,70nm,0.8s						
HLID				IAML		12 16 10.1	
	comp=E,69nm,0.9s						
YNE	**Yellowstone No**	2.50	22		Pn	12 15 28.2	+1.7
MPU	**Maple Canyon**	2.69	185		Pn	12 15 30.1	+0.9
DUG	**Dugway, Tooele**	2.74	205		Pn	12 15 30.3	+0.5
DUG				IAML		12 16 15.6	
	comp=E,79nm,0.9s						
DUG				IAML		12 16 15.6	
	comp=E,78nm,1.2s						
DLMT	**Dillon**	2.82	341		Pn	12 15 30.3	-0.6
DLMT				IAML		12 16 17.0	
	comp=E,102nm,0.8s						
RLMT	**Red Lodge**	2.84	31		Pn	12 15 31.4	+0.2
P18A	**Preston Nutter**	3.17	165		Pn	12 15 38.0	+2.1
P18A				IAML		12 16 27.0	
	comp=E,66nm,0.8s						
P18A				IAML		12 16 30.6	
	comp=N,56nm,1.0s						
LRM	**Limekiln Ridge**	3.23	346	Pn	Pn	12 15 35.8	-0.8
GCMT	**Greycliff**	3.31	20	Pn	Pn	12 15 36.8	-0.8
MFID	**Camas Ranch**	3.38	284	Pn	Pn	12 15 38.8	+0.2
MFID				IAML		12 16 45.2	
	comp=N,48nm,1.0s						
TMUT	**Trail Mountain**	3.40	179		Pn	12 15 40.2	+1.2
TMUT				IAML		12 16 33.2	
	comp=E,79nm,1.0s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TMUT				IAML		12 16 38.4	
	comp=N,57nm,1.0s						
O20A	White River Ci	3.45	137		Pn	12 15 40.4	+0.8
ELK	Elko	3.52	238		Pn	12 15 40.3	-0.4
ELK				IAML		12 16 45.5	
	comp=N,25nm,0.7s						
K22A	Casper	3.54	89		Pn	12 15 42.0	+1.2
K22A				IAML		12 16 42.7	
	comp=N,56nm,0.3s						
K22A				IAML		12 16 45.2	
	comp=N,48nm,0.3s						
SRU	San Rafael Swe	3.63	170		Pn	12 15 42.7	+0.6
SRU				IAML		12 16 41.8	
	comp=N,52nm,0.3s						
Q16A	Castle Valley	3.78	178		Pn	12 15 45.2	+1.1
Q16A				IAML		12 16 59.3	
	comp=N,38nm,1.2s						
BPMT	Black Pine Rid	4.04	339		Pn	12 15 47.5	-0.2
PLID	Pearl Lake	4.14	307	Pn	Pn	12 15 49.9	+0.8
PLID				IAML		12 17 00.3	
	comp=N,36nm,0.9s						
PLID				IAML		12 17 02.0	
	comp=N,36nm,1.6s						
MVU	Marysvale	4.25	190	Pn	Pn	12 15 50.4	-0.1
LYMT	Lyon Mountain	4.33	351	Pn	Pn	12 15 51.5	-0.2
SPR3	Spring Creek 3	4.34	213	Pn	Pn	12 15 54.1	+2.1
PV21	Cone Mtn., Par	4.50	156	Pn	Pn	12 15 55.7	+1.7
OVMT	Ovando	4.53	345		Pn	12 15 55.5	+1.2
MSO	Missoula	4.53	337	Pn	Pn	12 15 56.4	+2.0
MSO				IAML		12 17 11.4	
	comp=N,29nm,0.7s						
MSO				IAML		12 17 17.2	
	comp=N,27nm,0.6s						
PV22	Blue Mesa, Par	4.58	154		Pn	12 15 56.5	+1.4
PSUT	Pine Spring	4.59	206	Pn	Pn	12 15 56.4	+1.2
PV23	Carpenter Ridg	4.59	157		Pn	12 15 56.5	+1.2
PV10	Paradox Valley	4.65	157		Pn	12 15 58.8	+2.6
PV14	Lion Creek, Pa	4.66	157	Pn	Pn	12 15 57.5	+1.3
PV04	Paradox Valley	4.68	156	Pn	Pn	12 15 57.8	+1.4
PV20	West Nyswonger	4.71	157	Pn	Pn	12 15 56.9	+0.1
PV07	Paradox Valley	4.72	154		Pn	12 15 57.0	0.0
PV19	Morning Glory	4.73	157		Pn	12 15 58.1	+0.9
PV16	Nyswonger Mesa	4.75	157		Pn	12 15 59.0	+1.6
PV17	East Wray Mesa	4.76	157		Pn	12 15 59.1	+1.4
PV11	David Mesa, Pa	4.77	156		Pn	12 15 58.2	+0.5
HMU	Henry Mountain	4.78	175		Pn	12 15 58.3	+0.4
PV18	Skein Mesa, Pa	4.81	157		Pn	12 15 59.5	+1.2
PV03	Paradox Valley	4.82	156		Pn	12 15 59.9	+1.4
BMO	Blue Mountains	4.84	298		Pn	12 15 58.3	-0.3
BMO				IAML		12 17 27.4	
	comp=N,9.3nm,1.1s						
BMO				IAML		12 17 28.7	
	comp=N,14nm,1.1s						
PV15	Paradox Valley	4.86	153	Pn	Pn	12 16 00.9	+1.9
PV02	Paradox Valley	4.90	155		Pn	12 16 00.1	+0.6
PV05	Paradox Valley	4.92	159		Pn	12 15 59.7	-0.1
PV13	Radium Mtn., P	4.92	156		Pn	12 16 02.0	+2.2
PV01	Paradox Valley	5.02	154		Pn	12 16 01.5	+0.3
J08A	Circle Bar Ran	5.29	280	Pn	Pn	12 16 07.4	+2.7
LAO	LASA Array	5.39	41	Pn	Pn	12 16 05.5	-0.7
WVOR	Wild Horse Val	5.41	270	Pn	Pn	12 16 06.5	+0.1
R11B	Troy Canyon, C	5.43	218	Pn	Pn	12 16 06.7	0.0
EGMT	Eagleton	5.44	11	Pn	Pn	12 16 05.5	-1.2
JTMT	Jette	5.46	338	Pn	Pn	12 16 08.0	+0.8

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*SJA **14** 12:31:19.0±0.9, 30°.93S×71°.62W, h32km±2km, ML3.7, MW3.8*

*GUC **14** 12:31:22.9±0.5, 31°.01S×71°.32W, h65km±2km, ML3.6*

ISC 14 12:31:21.0±1.4**, 31°.07S**±0°.02×**71°.40W**±0°.03**, h13**km±10km**,**
n52, σ**2**^{s}**09**/84**, 1C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO02	Combarbal	0.37	112	⇑eP	Pn	12 31 33.6	+1.3
CO02				eS	Sn	12 31 41.7	+2.4
CO02	Combarbal	0.37	112	eP	Pg	12 31 27.7	-0.8
CO02				eS	Sn	12 31 42.0	+2.6
CO02				IAML		12 31 42.3	
	comp=Z,6µm,0.2s						
CO06	Fray Jorge	0.44	332	i P	Pn	12 31 34.4	+1.3
CO06				eS	Sn	12 31 42.8	+1.9
CO03	El Pedregal	0.65	70	eP	Pb	12 31 35.6	+1.3
CO03				eS	Sb	12 31 45.2	+1.9
CO03				IAML		12 31 46.2	
	comp=N,6µm,0.2s						
CO03	El Pedregal	0.65	70	eP	Pb	12 31 35.5	+1.2
CO03				eS	Sn	12 31 45.9	-0.4
CO03				IAML		12 31 46.0	
	comp=Z,2µm,0.1s						
GO04	Tololo Observa	1.03	30	eP	Pb	12 31 40.7	-0.2
GO04	Tololo Observa	1.03	30	eP	Pb	12 31 40.4	-0.5
GO04				eS	Sb	12 31 54.6	+0.2
GO04				IAML		12 31 55.4	
	comp=Z,3µm,0.6s						
CO05	La Serena	1.15	7	eP	Pn	12 31 42.3	-0.6
CO05				IAML		12 31 58.2	
	comp=N,1µm,0.3s						
VA06	Catapilco	1.49	177	eP	Pb	12 31 48.4	-0.2
VA06				IAML		12 32 16.5	
	comp=N,2µm,0.3s						
CO01	Juntas del Tor	1.56	46	eP	Pn	12 31 48.3	-0.5
CO01				eS	Sn	12 32 06.9	-2.1
CO01				IAML		12 32 08.1	
	comp=N,1µm,0.2s						
CO01	Juntas del Tor	1.56	46	eP	Pn	12 31 42.7	-6.0
CO01				eP		12 31 48.5	
CO01				eS	Sn	12 32 07.8	-1.2
CO01				IAML		12 32 08.3	
	comp=Z,720nm,0.2s						
VA03	San Esteban	1.84	157	eP	Pn	12 31 53.4	+0.9
VA03				IAML		12 32 20.4	
	comp=E,1µm,0.2s						
VA03	San Esteban	1.84	157	eP	Pb	12 31 53.7	-1.0
VA03				eS	Sb	12 32 17.2	-0.4
VA03				IAML		12 32 24.8	
	comp=Z,566nm,0.2s						
AROD	Rodeo	1.89	62	eP	Pn	12 31 54.6	+1.3
AROD				eS	Sn	12 32 18.6	+1.5
ROCH	El Roble	1.93	170	eP	Pn	12 31 54.5	+0.7
ROCH				IAML		12 32 24.8	
	comp=E,343nm,0.3s						
ROC1	El Roble	1.93	170	eP	Pn	12 31 54.2	+0.4
RTLS	Leoncito	1.94	113	eP	Pb	12 31 55.7	-0.8
RTLS				eS	Sb	12 32 21.4	+0.7
RTLS				IAML		12 32 26.0	
	comp=Z,585nm,1.1s						
VA01	Torpederas	1.96	186	IAML		12 32 29.1	
	comp=E,418nm,0.2s						
VA01	Torpederas	1.96	186	eP	Pn	12 31 40.0	-14
VA01				eS	Sn	12 32 01.7	-17
VA01				eS		12 32 01.7	
DOCA	Reserva Natura	1.99	87	eP	Pn	12 31 55.9	+1.1
DOCA				eS	Sn	12 32 05.7	-14
DOCA				eS		12 32 06.5	
ACCO	Cerro Coronel	2.06	77	eP	Pn	12 31 56.7	+1.0
ACCO				eP		12 31 56.8	
ACCO				eS	Sg	12 32 30.0	+2.5
LCO	Las Campanas	2.13	17	eP	Pn	12 31 55.7	-1.0
LCO	Las Campanas	2.13	17	eP	Pn	12 31 55.4	-1.3
LCO				eS	Sn	12 32 22.6	-0.6
LCO				IAML		12 32 23.4	
	comp=Z,1µm,0.3s						
ACDV	Cuesta del Vie	2.16	66	eP	Pn	12 31 58.1	+1.3
ACDV				eS	Sb	12 32 27.4	+0.6
PEL	Peldehue	2.16	164	eP	Pn	12 31 57.7	+0.9
PEL				eS	Sb	12 32 27.0	+0.2
PEL				IAML		12 32 32.4	
	comp=Z,321nm,0.2s						
MT02	Curacav	2.20	174	eP	Pn	12 31 57.6	+0.3
MT02				eS	Sb	12 32 27.0	-0.9
MT02				IAML		12 32 28.9	
	comp=Z,413nm,0.3s						
ZON	Zonda	2.38	102	eP	Pn	12 31 56.7	-3.1
ZON				eP		12 32 01.7	
ZON				eS	Sb	12 32 32.9	-0.2
ZON				IAML		12 32 39.2	
	comp=Z,173nm,0.3s						
MT05	Renca	2.39	167	eP	Pn	12 31 57.7	-2.2
MT05				eP		12 32 00.8	
MT05				eP		12 32 01.7	
MT05				eS	Sb	12 32 34.5	+1.2
MT05				IAML		12 32 38.5	
	comp=Z,321nm,0.4s						
FCH	Farellones	2.44	158	eP	Pn	12 32 02.4	+1.5
FCH				IAML		12 32 38.7	
	comp=E,432nm,0.3s						
SJA	San Juan	2.47	101	eP	Pn	12 32 03.0	+1.9
SJA				IAML		12 32 23.1	
	comp=Z,150nm,0.3s						
SJA				eS	Sn	12 32 23.1	-8.1
RTLL	Cerro Villicun	2.52	97	eP	Pn	12 32 02.7	+1.0
RTLL				eS	Sn	12 32 33.9	+1.5
MT04	Ro Olivares	2.57	156	eP	Pn	12 32 04.1	+1.6
MT04				eP		12 32 05.1	
MT04				eS	Sb	12 32 38.0	-0.7
MT04				IAML		12 32 42.1	
	comp=Z,437nm,0.5s						
MT08	Bocatoma Ro	2.65	154	eP	Pn	12 32 01.7	-1.9
MT08				eP		12 32 06.0	
MT08				eP		12 32 06.5	
MT08				eS	Sb	12 32 41.8	+0.9
MT08				IAML		12 32 48.4	
	comp=Z,285nm,0.3s						
ARCO	CERRO ARCO	2.74	131	eP	Pn	12 32 02.7	-2.2
ARCO				eP		12 32 08.1	
ARCO				eS	Sb	12 32 41.3	-2.4
ARCO				IAML		12 32 52.1	
	comp=Z,303nm,0.3s						
CFA	Coronel Fontan	2.76	102	eP	Pn	12 32 06.3	+1.3
CFA				eS	Sb	12 32 42.5	-1.5
CFA				IAML		12 32 46.4	
	comp=Z,150nm,0.3s						
MT01	Popeta	2.79	177	eP	Pn	12 32 05.9	+0.4
MT01				eS	Sb	12 32 42.7	-2.3
MT01				IAML		12 32 52.4	
	comp=Z,219nm,0.1s						
AC04	Llanos de Chal	2.87	6	eP	Pn	12 32 05.1	-1.4
AC04				eS	Sn	12 32 24.5	-16
AC04				IAML		12 32 47.1	
	comp=Z,220nm,0.4s						
LMEL	Las Melosas	2.95	160	eP	Pn	12 32 09.4	+1.6
LMEL				eS	Sb	12 32 48.0	-1.7
LMEL				IAML		12 32 52.7	
	comp=Z,278nm,0.4s						
AGUA	GUANDACOL	2.97	59	eP	Pn	12 32 10.0	+2.1
AGUA				eS	Sb	12 32 48.0	-2.1
AGUA				IAML		12 32 49.3	
	comp=Z,256nm,0.3s						
AAGR	Agrelo	2.97	133	eP	Pn	12 32 05.7	-2.3
AAGR				eP		12 32 11.3	
AAGR				eS	Sn	12 32 31.2	-12
AAGR				IAML		12 32 55.8	
	comp=Z,173nm,0.4s						
BO04	La Punta	2.99	167	eP	Pn	12 32 08.9	+0.7
BO04				IAML		12 32 57.1	
	comp=N,374nm,0.4s						
BO01	Tunca	3.33	176	eP	Pn	12 32 13.5	+0.7
BO01				eS	Sn	12 32 53.2	+1.0
BO01				IAML		12 33 06.2	
	comp=Z,105nm,0.3s						
AVFE	Valle Fertil	3.41	84	eP	Pn	12 32 14.3	+0.2
AVFE				eS	Sn	12 32 56.7	+2.2
AVFE				IAML		12 33 02.1	
	comp=Z,140nm,0.5s						
GO03	Copiapo	3.61	17	eP	Pn	12 32 15.6	-1.1
GO03				IAML		12 33 11.5	
	comp=E,164nm,0.3s						
GO03	Copiapo	3.61	17	eP	Pn	12 32 15.9	-0.8
GO03				eS	Sn	12 32 55.7	-3.5
GO03				IAML		12 33 16.8	
	comp=Z,132nm,0.3s						
VCA	Vinchina	3.62	51	eP	Pn	12 32 18.6	+1.7
VCA				eS	Sn	12 33 02.7	+3.1
VCA				IAML		12 33 04.6	
	comp=Z,196nm,0.5s						
BO02	Sierra Bellavi	3.75	172	eP	Pn	12 32 18.9	+0.2
BO02	Sierra Bellavi	3.75	172	eP	Pn	12 32 19.5	+0.7
BO02				eS	Sn	12 33 05.7	+2.9
BO02				IAML		12 33 17.5	
	comp=Z,169nm,0.6s						
ACHE	Chepes	4.06	93	eP	Pn	12 32 08.4	-15
ACHE				eS	Sn	12 33 08.8	-1.7
ACLC	CERRO LA CRUZ	4.18	68	eP	Pn	12 32 25.1	+0.4
ACLC				eS	Sn	12 33 07.2	-6.3
ACLC				IAML		12 33 14.8	
	comp=Z,76nm,0.4s						
AC02	Maricunga	4.66	26	eP	Pn	12 32 30.9	-0.6
AC02				eS	Sn	12 33 27.5	+1.7
AC02				eS		12 33 27.7	
AC01	Pan de Azucar	4.95	8	eP	Pn	12 32 31.5	-3.6
AC01				eS	Sn	12 33 39.5	+7.2
AC01				IAML		12 33 53.8	
	comp=Z,46nm,0.8s						

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*IDC **14** 12:33:47.7±3.1, 41°.74N×143°.27E, h0km, mb4.0/11, mbtmp4.0/12, ML4.3/1, MS2.7/3, Error ellipse: s-maj=68.1km s-min=29.6km az=163.0*

*MOS **14** 12:33:57.8±0.7, 42°.20N×143°.01E, h64km, mb4.1/3, Error ellipse: s-maj=14.1km s-min=9.6km az=69.4*

*NEIC **14** 12:33:57.6±1.1, 42°.18N±0°.07×143°.6E±0°.1, h68km±6km, mb4.2/10, Error ellipse: s-maj=15.7km s-min=9.3km az=107.0*

*NIED **14** 12:33:59.9, 42°.32N×143°.06E, h52km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.18; $M_{\theta\theta}$-1.60; $M_{\phi\phi}$-2.58; $M_{r\theta}$2.61; $M_{\theta\phi}$-2.68; $M_{\phi r}$2.10; Fault plane solution: $M_0$5.61000×10^{14} NP1: ϕ_s211.00000°, δ27.00000°, λ75.00000°. NP2: ϕ_s47.00000°, δ63.00000°, λ97.00000°.*

*JMA **14** 12:33:59.9±0.2, 42°.3N±0°.5×143°.1E±0°.6, h52km±1km, MV3.7/39, HIDAKA MOUNTAINS REGION*

JMA Felt I J1 at HIDAKA MOUNTAINS REGION .

*SKHL **14** 12:34:00.8±0.6, 42°.30N×143°.10E, h63km±1km, mb4.6/3*

ISC 14 12:33:58.6±0.7**, 42°.27N**±0°.04×**143°.10E**±0°.03**, h63**km±5km**,**
n75, σ**1**^{s}**57**/87**, mb4.2**/17**, 6D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTHR	Tokachihiroo	0.15	80	i P	Pn	12 34 08.2	+0.2
JTHR				S	Sn	12 34 14.7	-0.3
ERM	Erimo	0.25	171		Pn	12 34 09.4	+0.8
ERM				Sn	Sn	12 34 17.5	+1.5
ERM	Erimo	0.25	171	PN	Pn	12 34 09.4	+0.8
ERM						12 34 17.5	
JEM	Erimo	0.25	171	i P	Pn	12 34 09.4	+0.8
JEM				eS	Sn	12 34 17.1	+1.2
JNBK	Urakawa-nobuka	0.26	273	i P	Pn	12 34 08.4	-0.2
JNBK				S	Sn	12 34 15.5	-0.6
JCH	Churui	0.40	29	i P	Pn	12 34 09.8	0.0
JCH				S	Sn	12 34 17.5	-0.4
JSHD	Hidakashinhida	0.49	287	⇓iP	Pn	12 34 10.9	+0.2
JSHD				⇓eS	Sn	12 34 20.5	+1.0
JBT2	Biratori 2	0.75	313	⇓iP	Pn	12 34 13.8	+0.2
JBT2				⇓eS	Sn	12 34 25.2	+0.6
JOB	Onbets	0.83	40	i P	Pn	12 34 15.9	+1.3
JOB				eS	Sn	12 34 28.4	+2.0
JFR	Furan	0.97	337	⇓iP	Pn	12 34 15.6	-0.7
JFR				⇓eS	Sn	12 34 27.9	-1.7
JAR	Ashorobuto	1.14	25	P	Pn	12 34 19.0	+0.5
JAR				S	Sn	12 34 33.3	-0.2
JEW	Eniwo	1.35	296	i P	Pn	12 34 22.4	+1.1
JEW				eS	Sn	12 34 39.6	+1.3
JAK	Akkeshi	1.38	58	P	Pn	12 34 22.5	+0.8
JAB	Ashibetsu	1.40	333	i P	Pn	12 34 22.9	+1.0
AKK	Akkeshi	1.49	59	eP	Pn	12 34 24.0	+0.9
JKA	Kamikawa-asahi	1.89	349		Pn	12 34 29.6	+1.1
ASAJ	Asahikawa	1.89	349	Pn	Pn	12 34 29.8	+1.3
	46nm,0.3s,baz=200,slow=16,SNR=360						
	108nm,0.3s						
JTM	Tenmabayashi	2.12	227		Pn	12 34 32.8	+1.1
JTM				Sn	Sn	12 34 59.1	+2.0
NMR	Nemuro--Hokkai	2.22	59	ePN	Pn	12 34 33.4	+0.3
NMR				eS	Sn	12 34 58.8	-0.6
NMR	Nemuro--Hokkai	2.22	59	eP	Pn	12 34 33.9	+0.8
NMR				eS	Sn	12 34 58.9	-0.5
RUSJ	Misakicho	2.42	40	ePN	Pn	12 34 38.5	+2.8
RUSJ				eS	Sn	12 35 08.4	+4.3
YUK	Yuzh-Kuril'sk	2.68	48	ePN	Pn	12 34 41.0	+1.7
YUK				eS	Sn	12 35 12.2	+1.6
YUK				pmax	pmax		
	comp=Z,152nm,0.2s						
YUK				smax	smax		
	comp=E,192nm,0.3s						
YUK				smax	smax		
	comp=N,512nm,0.4s						
YUK	Yuzh-Kuril'sk	2.68	48	eP	Pn	12 34 41.5	+2.2
YUK				AMB	AMB	12 34 42.4	
	comp=N,160nm,0.3s						
YUK				eS	Sn	12 35 12.3	+1.6
YUK				A	A	12 35 14.4	
	comp=N,400nm,0.5s						
YUK				A	A	12 35 14.4	
	comp=N,500nm,0.5s						
SHO	Shikotan	3.17	58	ePN	Pn	12 34 47.3	+1.4
SHO				eS	Sn	12 35 22.3	-0.2
SHO				pmax	pmax		
	comp=N,10.0nm,0.2s						
SHO				pmax	pmax		
	comp=Z,26nm,0.2s						
SHO				pmax	pmax		
	comp=E,16nm,0.1s						
SHO				smax	smax		
	comp=N,184nm,0.2s						
SHO				smax	smax		
	comp=E,200nm,0.2s						
SHO	Shikotan	3.17	58	eP	Pn	12 34 47.5	+1.6
SHO				AMB	AMB	12 34 48.7	
	comp=E,30nm,0.2s						
SHO				eS	Sn	12 35 22.9	+0.4
SHO				A	A	12 35 25.5	
	comp=E,110nm,0.2s						
SHO				A	A	12 35 25.5	
	comp=E,160nm,0.2s						
KUR	Kuril'sk	4.55	48	ePN	Pn	12 35 08.5	+3.7
KUR				eS	Sn	12 36 02.0	+5.6
KUR				smax	smax		
	comp=E,67nm,1.2s						
KUR				smax	smax		
	comp=N,45nm,1.3s						
KUR	Kuril'sk	4.55	48	eP	Pn	12 35 08.0	+3.2
KUR				AMB	AMB	12 35 14.2	
	comp=N,40nm,0.5s						
KUR				eS	Sn	12 35 58.0	+1.6
KUR				A	A	12 36 04.8	
	comp=N,40nm,0.3s						
KUR				A	A	12 36 04.8	
	comp=N,30nm,0.3s						
JMM	Marumori	4.74	203	Pn	Pn	12 35 07.3	-0.1
MJB9	Matsu-Tunnel	6.86	215	Pn	Pn	12 35 37.5	+1.0
MAJO	Matsushiro	6.86	215	Pn	Pn	12 35 36.7	+0.2
MAJO	Matsushiro	6.86	215	PN	Pn	12 35 36.7	+0.2
JGF	Kuroka	8.02	216	Pn	Pn	12 35 52.6	+0.2
INU	Inuyama	8.38	216	Pn	Pn	12 35 58.4	+1.1
KLR	Kul'dur	10.55	315	LR	LR	12 40 34.7	
	comp=N,36nm,18.9s,baz=76,slow=37						
KSRS	Korea Array	12.61	253	LR	LR	12 41 30.0	
	comp=N,9µm,19.8s,baz=225,slow=37						
PETK	Petropavlovsk-	14.61	37	LR	LR	12 42 39.8	
	comp=N,26nm,19.7s,baz=171,slow=36						
YULB	Yu-li	26.14	231	P	P	12 39 25.5	-1.3
SONM	Songino Array	26.35	295	P	P	12 39 29.8	+1.1
SONM	Songino Array	26.35	295	P	P	12 39 29.3	+0.7
	comp=N,0.8nm,0.5s,baz=85,slow=8.3,SNR=4.6						
	comp=N,0.8nm,0.5s						
SONM	Songino Array	26.35	295	P	P	12 39 29.8	+1.1
SONM				pmax	pmax		
	comp=Z,2.0nm,1.2s						
H11N2	WAKE ISLAND Hy	30.16	131	T	T	13 11 38.9	
	baz=324,slow=75,SNR=82						
H11N1	WAKE ISLAND Hy	30.16	131	T	T	13 11 38.4	
	baz=324,slow=75,SNR=92						
H11N3	WAKE ISLAND Hy	30.17	131	T	T	13 11 40.4	
	baz=324,slow=75,SNR=63						
H11S1	WAKE ISLAND Hy	31.03	133	T	T	13 12 38.9	
	baz=325,slow=76,SNR=62						
H11S3	WAKE ISLAND Hy	31.04	133	T	T	13 12 44.4	
	baz=325,slow=76,SNR=55						
H11S2	WAKE ISLAND Hy	31.05	133	T	T	13 12 45.4	
	baz=325,slow=76,SNR=44						
ZALV	Zalesovo Beam	39.54	308	P	P	12 41 23.4	+0.4
	comp=Z,1.9nm,0.6s,baz=75,slow=6.3,SNR=7.1						
	comp=Z,1.9nm,0.6s						
IMAR	Indian Mountai	41.53	33	P	P	12 41 35.6	-3.7
MKAR	Makanchi Array	42.64	298	P	P	12 41 49.8	+1.2
MKAR	Makanchi Array	42.64	298	P	P	12 41 49.6	+1.0
	comp=Z,0.9nm,0.5s,baz=82,slow=9.3,SNR=10						
	comp=Z,0.9nm,0.5s						
MKAR	Makanchi Array	42.64	298	P	P	12 41 49.8	+1.2
GHO	Glory Hole Cre	43.79	40	P	P	12 41 54.5	-3.2
GHO				IAmb	IAmb	12 41 58.4	
	comp=Z,3.9nm,0.8s						
KURK	Kurchatov	43.90	304	P	P	12 41 59.9	+1.2
KURK				IAmb	IAmb	12 42 00.5	
	comp=Z,2.1nm,0.8s						
KURK	Kurchatov	43.90	304	P	P	12 42 00.1	+1.4
KURBB	Kurchatov Arra	43.98	304	P	P	12 42 00.1	+0.8
	comp=Z,1.3nm,0.4s,baz=76,slow=8.8,SNR=20						
	comp=Z,1.3nm,0.4s						
ILAR	Eielson Array	44.42	35	P	P	12 42 04.5	+1.8
	comp=Z,0.3nm,0.8s,baz=255,slow=5.3,SNR=6.4						
	comp=Z,0.3nm,0.8s						
E28M	Babbage River	46.93	29	P	P	12 42 19.3	-3.1
E28M				IAmb	IAmb	12 42 32.9	
	comp=Z,4.1nm,1.4s						
BVAR	Borovoye Array	48.14	309	P	P	12 42 33.1	+1.1
	comp=Z,1.0nm,0.3s,baz=83,slow=9.5,SNR=7.3						
	comp=Z,1.0nm,0.3s						
BOOM	Boomskoye usch	48.39	294	P	P	12 42 35.7	+1.4
BOOM				IAmb	IAmb	12 42 52.8	
	comp=Z,2.7nm,1.0s						
BOOM	Boomskoye usch	48.39	294	P	P	12 42 35.7	+1.4
BOOM				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KKAR	Karatay Array	51.76	297	P	P	12 43 00.1	+0.5
KKAR	Karatay Array	51.76	297	P	P	12 43 00.1	+0.5
ARTI	Arti	53.49	316	P	P	12 43 12.1	0.0
	comp=Z,3.8nm,0.6s,baz=135,slow=3.7,SNR=5.7						
	comp=Z,3.8nm,0.6s						
AB31	Akbulak array	55.66	308	P	P	12 43 29.1	+1.2
AB31				IAmb	IAmb	12 43 59.4	
	comp=Z,1.9nm,0.8s						
ABKAR	Akbulak array	55.66	308	P	P	12 43 29.0	+1.1
RES	Resolute Bay	57.22	16	P	P	12 43 37.0	-1.6
RES				IAmb	IAmb	12 43 46.0	
	comp=Z,4.5nm,1.4s						
RES	Resolute Bay	57.22	16	P	P	12 43 37.0	-1.6
RES				pmax	pmax		
	comp=Z,5.0nm,1.4s						
ARCES	ARCESS Array B	59.58	339	P	P	12 43 55.0	-0.1
	comp=Z,4.7nm,0.9s,baz=47,slow=7.1,SNR=4.5						
	comp=Z,4.7nm,0.9s						
FIA1	FINESS Array S	64.81	332	P	P	12 44 30.6	+0.4
FINES	FINESS Array B	64.81	332	P	P	12 44 30.7	+0.5
FINES	FINESS Array B	64.81	332	P	P	12 44 30.4	+0.1
	comp=Z,0.9nm,0.4s,baz=54,slow=7.1,SNR=19						
	comp=Z,0.9nm,0.4s						
FINES	FINESS Array B	64.81	332	P	P	12 44 30.7	+0.5
AS31	Alice Springs	66.15	189	P	P	12 44 37.4	-1.9
HFS	Hagfors	69.86	336	P	P	12 45 02.3	+0.1
	comp=Z,0.8nm,0.4s,baz=50,slow=7.9,SNR=9.1						
	comp=Z,0.8nm,0.4s						
NOA	NORSAR Array B	69.87	337	P	P	12 45 02.1	-0.2
	comp=Z,0.5nm,0.7s,baz=33,slow=6.4,SNR=3.3						
NOA				LR	LR	13 20 12.5	
	comp=Z,5.3nm,18.6s,baz=135,slow=40						
	comp=Z,0.5nm,0.7s						

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*IPEC **14** 12:34:11.3±0.1, 47°.74N×16°.11E, h8km, ML2.4/6, Error ellipse: s-maj=0.5km s-min=0.4km az=121.0*

*PRU **14** 12:34:11.3, 47°.79N×16°.10E, h10km*

*VIE **14** 12:34:11.2±0.1, 47°.75N×16°.11E, h9km±1km, mb2.0/9, ml2.5/9, Error ellipse: s-maj=1.1km s-min=1.0km az=115.0 4 km NE of Neunkirchen*

ISC 14 12:34:11.1±0.9**, 47°.77N**±0°.03×**16°.12E**±0°.03**, h11**km±7km**,**
n21, σ**0**^{s}**93**/34**, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RONA	Rosalia, Austr	0.14	118	i Pg	Pg	12 34 14.4	0.0
	64nm,0.1s,SNR=380						
RONA				i Sg	Sg	12 34 16.5	-0.2
	308nm,0.1s,SNR=713						
CONA	Conrad Observa	0.24	314	i Pg	Pg	12 34 16.1	0.0
	11nm,0.1s						
CONA				i Sg	Sg	12 34 19.6	+0.1
	42nm,0.1s						
ARSA	Arzberg	0.65	218	i Pg	Pg	12 34 23.3	-0.4

	6.2nm,0.1s,SNR=26						
ARSA				*i* Sg	**Sg**	**12 34 31.9**	**-0.4**
	15nm,0.1s						
MODS	**Modra-Piesok**	**0.99**	**52**	*e*PG	**Pg**	**12 34 29.2**	**-0.9**
MODS				*e*SG	**Sg**	**12 34 43.9**	**+0.9**
MODS				*e*LG	Lg	12 34 46.1	
MOA	**Molln**	**1.25**	**275**	*i* Pg	**Pg**	**12 34 35.2**	**0.0**
	4.8nm,0.1s						
MOA				*e*Sg	**Sn**	**12 34 52.1**	**+0.7**
	27nm,0.5s						
KRUC	**Moravsky**	**1.31**	**8**	*e*Pg	**Pn**	**12 34 35.4**	**+0.1**
	baz=8.0						
KRUC				*e*Sg	**Sb**	**12 34 53.0**	**+0.5**
	28nm,0.1s,baz=8.0						
SOKA	**Soboth**	**1.31**	**215**	*e*Pn	**Pn**	**12 34 34.8**	**-0.7**
	3.1nm,0.6s						
SOKA				*i* Sn	**Sb**	**12 34 52.4**	**-0.4**
	2.9nm,0.5s						
SRO	**Srobarova**	**1.48**	**87**	*e*PG	**Pn**	**12 34 38.5**	**+0.9**
JAVC	**Velka Javorina**	**1.51**	**43**	*e*PG	**Pn**	**12 34 38.3**	**+0.2**
VRAC	**Vranov**	**1.58**	**11**	*e*Pn	**Pn**	**12 34 39.2**	**+0.2**
	baz=11						
VRAC				*e*Sg	**Sn**	**12 34 59.3**	**-0.1**
	22nm,0.3s,baz=11						
TREC	**Trest**	**1.59**	**345**	*e*SG	**Sb**	**12 35 01.1**	**+0.6**
	comp=Z,35nm,0.3s						
CKRC	**Cesky Krumlov**	**1.60**	**312**	*e*PG	**Pb**	**12 34 40.7**	**0.0**
CKRC				*e*SG	**Sb**	**12 35 01.4**	**+0.4**
	comp=Z,25nm,0.3s						
OBKA	**Obir**	**1.65**	**221**	*i* Pn	**Pn**	**12 34 40.5**	**+0.4**
	4.2nm,0.3s						
OBKA				*e*Sg	**Sg**	**12 35 04.7**	**+0.5**
	3.3nm,0.3s						
BIOA	**Bad Ischl, Aus**	**1.68**	**268**	*e*Pn	**Pb**	**12 34 42.3**	**+0.3**
	6.6nm,0.2s,SNR=4.4						
BIOA				*i* Sn	**Sg**	**12 35 04.6**	**-0.4**
	1.0nm,0.1s						
VYHS	**Vyhne**	**1.96**	**67**	*e*PN	**Pn**	**12 34 43.9**	**-0.4**
VYHS				*e*SN	**Sn**	**12 35 08.2**	**-0.7**
ZVC	**Zvikov**	**2.11**	**323**	*e*SG	**Sb**	**12 35 16.2**	**+0.8**
	comp=Z,22nm,0.3s						
KHC	**Kasperske Hory**	**2.17**	**310**	*e*SG	**Sg**	**12 35 20.0**	**-0.9**
	comp=Z,13nm,0.3s						
MORC	**Moravsky Berou**	**2.22**	**25**	*e*PN	**Pn**	**12 34 48.5**	**+0.6**
MORC				*e*SG	**Sn**	**12 35 14.6**	**-0.8**
LESA	**Schwarzleotal**	**2.35**	**263**	*e*Sg	**Sg**	**12 35 25.9**	**-0.7**
	2.4nm,0.4s,SNR=5.2						
PRU	**Pruhonice**	**2.46**	**336**	*e*SG	**Sb**	**12 35 28.1**	**+2.6**
	comp=Z,15nm,0.4s						
CLL	**Collm**	**4.08**	**331**	*e*Pn	Pn	12 35 04.0	-9.4
CLL				*e*Sg	**Sg**	**12 36 19.0**	**-3.2**
	comp=Z,7.0nm,0.5s						

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*IDC **14** 12:36:25.8±2.1, 9°.65N×58°.18E, h0^{km}, mb3.7/7, mbtmp3.7/7, MS3.3/5, Error ellipse: s-maj=69.6km s-min=27.0km az=62.0*

ISC 14 12:36:28.5±2.1**, 9°.7N**±0°.3×**58°.2E**±0°.4**, h17^{km}, n12, σ0^s.23**/7**, mb3.6**/7**, MS3.4**/5**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**35.81**	**21**	LR	LR	12 59 41.4	
	comp=Z,61nm,18.2s,baz=8.0,slow=39						
KBZ	**Khabaz**	**36.42**	**341**	LR	LR	13 01 01.2	
	comp=Z,27nm,19.3s,baz=162,slow=40						
BRTR	**Keskin Array B**	**37.04**	**328**	P	**P**	**12 43 37.7**	**-0.1**
	0.8nm,0.8s,baz=159,slow=9.3,SNR=3.9						
	0.8nm,0.8s						
AKTO	**Aktyubinsk**	**40.63**	**360**	P	**P**	**12 44 07.7**	**+0.2**
	0.9nm,0.3s,baz=207,slow=5.1,SNR=5.7						
	0.9nm,0.3s						
KURBB	**Kurchatov Arra**	**44.15**	**19**	P	**P**	**12 44 35.8**	**-0.3**
	0.5nm,0.8s,baz=217,slow=7.5,SNR=4.4						
	0.5nm,0.8s						
BVAR	**Borovoye Array**	**44.34**	**11**	P	**P**	**12 44 37.8**	**+0.1**
	0.6nm,0.6s,baz=160,slow=4.6,SNR=2.6						
	0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**49.03**	**21**	P	**P**	**12 45 14.3**	**-0.1**
	0.9nm,0.4s,baz=216,slow=7.0,SNR=5.3						
	0.9nm,0.4s						
BOSA	**Boshof**	**49.59**	**219**	LR	LR	13 06 02.4	
	comp=Z,35nm,18.1s,baz=26,slow=36						
MDT	**Midelt**	**61.96**	**302**	LR	LR	13 15 14.6	
	comp=Z,14nm,18.9s,baz=219,slow=38						
USRK	**Ussuriysk Ar.**	**71.73**	**47**	LR	LR	13 19 07.0	
	comp=Z,39nm,21.6s,baz=204,slow=36						
WRA	**Warramunga Arr**	**80.51**	**112**	P	**P**	**12 48 40.5**	**+0.2**
	0.4nm,0.7s,baz=284,slow=5.4,SNR=2.9						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**81.03**	**116**	P	**P**	**12 48 43.0**	**-0.1**
	0.4nm,0.8s,baz=281,slow=4.9,SNR=5.9						
	0.4nm,0.8s						

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*SJA **14** 12:39:10.3±2.4, 23°.10S×67°.92W, h150^{km}±19^{km}, ML3.2, MW3.5*

*GUC **14** 12:39:11.7±0.7, 23°.07S×68°.00W, h164^{km}±7^{km}, ML3.4*

ISC 14 12:39:11.5±1.6**, 23°.09S**±0°.04×**67°.94W**±0°.05**, h148^{km}**±13^{km}**, n28, σ0^s.88**/39**, 6C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AF01	**San Pedro de A**	**0.26**	**302**	*e*P	**Pn**	**12 39 31.7**	**-0.4**
AF01	**San Pedro de A**	**0.26**	**302**	*i* P	**Pn**	**12 39 31.3**	**-0.8**
AF01				IAML		12 40 07.0	
	comp=Z,413nm,0.6s						
PB06	**IPOC Station P**	**1.55**	**284**	⇑*i*P	**Pn**	**12 39 42.5**	**+0.8**
PB06				*i* S	**Sn**	**12 40 05.3**	**+0.5**
PB06				IAML		12 40 07.8	
	comp=N,555nm,0.6s						
PB06	**IPOC Station P**	**1.55**	**284**	*i* P	**Pn**	**12 39 41.9**	**+0.2**
PB06				*e*S	**Sn**	**12 40 05.7**	**+0.9**
PB06				IAML		12 40 08.9	
	comp=Z,512nm,0.7s						
PB09	**IPOC Station P**	**1.76**	**317**	*i* P	**Pn**	**12 39 44.9**	**+0.8**
PB09				*i* S	**Sn**	**12 40 09.7**	**+0.8**
PB09				IAML		12 40 16.2	
	comp=E,147nm,0.8s						
PB09	**IPOC Station P**	**1.76**	**317**	*i* P	**Pn**	**12 39 44.5**	**+0.5**
PB09				IAML		12 40 24.0	
	comp=Z,79nm,0.5s						
PB03	**IPOC Station P**	**1.97**	**301**	⇑*i*P	**Pn**	**12 39 46.9**	**+0.5**
PB03				*i* S	**Sn**	**12 40 12.7**	**-0.4**
PB03				IAML		12 40 14.0	
	comp=N,300nm,0.3s						
PB03	**IPOC Station P**	**1.97**	**301**	*i* P	**Pn**	**12 39 46.3**	**-0.1**
PB03				IAML		12 40 16.1	
	comp=Z,290nm,0.3s						
PB05	**IPOC Station P**	**2.10**	**276**	*i* P	**Pn**	**12 39 48.2**	**+0.4**
PB05				*i* S	**Sn**	**12 40 15.6**	**-0.1**
PB05				IAML		12 40 24.7	
	comp=N,114nm,0.3s						
PB05	**IPOC Station P**	**2.10**	**276**	*i* P	**Pn**	**12 39 47.7**	**-0.1**
PB05				⇑*e*S	**Sn**	**12 40 12.9**	**-2.8**
PB05				IAML		12 40 19.5	
	comp=Z,95nm,0.3s						
YJA	**Yavi**	**2.42**	**68**	*i* P	**Pn**	**12 39 52.7**	**+0.7**
YJA				⇓*e*S	**Sn**	**12 40 22.4**	**-0.6**
YJA				IAML		12 40 24.1	
	comp=Z,7.5nm,0.7s						
PB10	**IPOC Station P**	**2.44**	**260**	*i* P	**Pn**	**12 39 52.7**	**+0.9**
PB10				*i* S	**Sn**	**12 40 23.0**	**+0.2**
PB10				IAML		12 40 31.8	
	comp=E,99nm,0.4s						
PB10	**IPOC Station P**	**2.44**	**260**	*i* P	**Pn**	**12 39 52.5**	**+0.7**
PB10				IAML		12 40 30.9	
	comp=Z,65nm,0.4s						
PB01	**IPOC Station P**	**2.49**	**324**	⇑*i*P	**Pn**	**12 39 52.8**	**+0.2**
PB01				*i* S	**Sn**	**12 40 23.3**	**-0.8**
PB01				IAML		12 40 28.7	
	comp=E,109nm,0.4s						
PB01	**IPOC Station P**	**2.49**	**324**	*i* P	**Pn**	**12 39 52.4**	**-0.2**
PB01				IAML		12 40 25.3	
	comp=Z,57nm,0.7s						
GO02	**Mina Guanaco**	**2.56**	**216**	⇑*e*P	**Pn**	**12 39 54.5**	**+1.0**
GO02				*i* S	**Sn**	**12 40 27.0**	**+1.1**
GO02	**Mina Guanaco**	**2.56**	**216**	*i* P	**Pn**	**12 39 53.8**	**+0.3**
GO02				IAML		12 40 31.8	
	comp=Z,209nm,0.3s						
PB14	**IPOC Station P**	**2.73**	**235**	⇓*i*P	**Pn**	**12 39 56.3**	**+0.6**
PB14				*i* S	**Sn**	**12 40 29.2**	**-0.5**
PB14	**IPOC Station P**	**2.73**	**235**	*i* P	**Pn**	**12 39 56.5**	**+0.8**
PB14				IAML		12 40 41.4	
	comp=Z,61nm,0.2s						
PB08	**IPOC Station P**	**3.14**	**339**	*e*P	**Pn**	**12 40 02.1**	**+1.0**
PB08	**IPOC Station P**	**3.14**	**339**	*i* P	**Pn**	**12 40 02.0**	**+1.0**
PB08				IAML		12 40 47.3	
	comp=Z,17nm,0.7s						
TA01	**Diego Aracena**	**3.26**	**320**	*e*P	**Pn**	**12 40 02.5**	**+0.4**
TA01				IAML		12 40 48.8	
	comp=N,54nm,0.4s						
TA01	**Diego Aracena**	**3.26**	**320**	*i* P	**Pn**	**12 40 01.2**	**-0.9**
TA01				IAML		12 40 43.5	
	comp=Z,104nm,0.7s						
PB11	**IPOC Station P**	**3.68**	**334**	*i* P	**Pn**	**12 40 07.1**	**-0.6**
PB11				IAML		12 40 54.9	
	comp=Z,16nm,0.4s						
AC02	**Maricunga**	**3.88**	**196**	⇑*e*P	**Pn**	**12 40 11.6**	**+1.0**
AC02	**Maricunga**	**3.88**	**196**	*i* P	**Pn**	**12 40 11.1**	**+0.4**
AC02				IAML		12 41 05.7	
	comp=Z,22nm,0.2s						
AC01	**Pan de Azucar**	**3.89**	**218**	*i* P	**Pn**	**12 40 09.2**	**-1.0**
AC01				IAML		12 40 58.5	
	comp=Z,41nm,0.5s						
GO03	**Copiapo**	**4.94**	**204**	*i* P	**Pn**	**12 40 22.6**	**-1.6**
GO03				IAML		12 41 20.3	
	comp=Z,50nm,0.3s						

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*NEIC **14** 12:40:08.3±1.0, 35°.24N±0°.01×97°.739W±0°.010, h5^{km}±2^{km}, mb_Lg2.2/5, ML1.8/3, ML2.1/36, Error ellipse: s-maj=1.7km s-min=1.1km az=184.0*

NEIC 14 12:40:08.5±0.9**, 35°.241N**±0°.008×**97°.76W**±0°.01**, h4^{km}**±2^{km}**, Error ellipse: s-maj=1.4km s-min=1.2km az=99.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNO	**Franklin**	**0.29**	**87**	Pg	Pg	12 40 14.3	+0.2
FNO				Sg	Sg	12 40 18.4	+0.4
OKCSW	**OKLAHOMA CITY**	**0.31**	**58**	Pg	Pg	12 40 14.5	+0.1
OKCSW				IAML		12 40 25.2	
	comp=E,362nm,0.7s						
OKCSW				IAML		12 40 25.3	
	comp=N,204nm,0.6s						
X34A	**Smith Ranch, M**	**0.64**	**186**	Pg	Pg	12 40 21.3	+0.5
X34A				IAML		12 40 31.6	
	comp=N,81nm,0.4s						
X34A				IAML		12 40 36.3	
	comp=E,68nm,0.4s						
CSTR	**Hydro, Custer**	**0.86**	**298**	Pg	Pg	12 40 24.8	-0.2
WMOK	**Wichita Mounta**	**0.98**	**239**		Pg	12 40 26.4	-0.9
OK052	**Battle Ridge R**	**1.08**	**46**	Pg	Pg	12 40 29.0	-0.3
QUOK	**Quay**	**1.26**	**42**	Pg	Pg	12 40 32.2	-0.4
CROK	**Carrier**	**1.27**	**352**	Pg	Pn	12 40 33.2	+0.1
OK051	**E0350 and S346**	**1.47**	**30**		Pn	12 40 35.0	-0.7
OK038	**West end E0370**	**1.47**	**327**		Pn	12 40 35.4	-0.4
WTFS	**Witchita Falls**	**1.58**	**202**		Pn	12 40 37.3	0.0
ELIS	**Ellis County**	**1.58**	**302**		Pn	12 40 37.4	0.0
GC02	**Grant County #**	**1.61**	**357**		Pn	12 40 37.4	-0.3
TUL3	**Leonard**	**1.73**	**67**		Pn	12 40 39.4	0.0
SMWD	**Samnorwood**	**2.04**	**267**	Pn	Pn	12 40 41.8	-1.9
DKNS	**Dickens**	**3.05**	**240**	IAmb_Lg		12 41 48.2	
	comp=Z,5.3nm,0.7s						
P40A	**Paris**	**6.24**	**45**	IAmb_Lg		12 43 27.0	
	comp=Z,6.7nm,0.9s						

IDC 14 12:45:41.4±2.4**, 50°.31N**×**27°.51E, h0^{km}, mbtmp3.5**/3**, ML2.7**/3**, Error ellipse: s-maj=23.8km s-min=11.9km az=22.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKASG	**Malin Array Be**	**1.16**	**70**	Pg	Pg	12 46 03.4	-0.2
	14nm,0.3s,baz=252,slow=18,SNR=21						
AKASG				Lg	Lg	12 46 20.3	
	9.9nm,0.3s,baz=251,slow=31,SNR=13						
AKASG				Rg	Rg	12 46 25.1	
	30nm,0.8s,baz=253,slow=36,SNR=9.7						
I26DE	**FREYUNG INFRAS**	**9.09**	**266**	I	I	13 39 30.0	
	baz=74,slow=315,SNR=2.0						
FINES	**FINESS Array B**	**11.19**	**356**	Pn	Pn	12 48 16.8	-5.5
	0.1nm,0.3s,baz=166,slow=12,SNR=5.1						
	0.4nm,0.4s						
HFS	**Hagfors**	**12.58**	**327**	Pn	Pn	12 48 35.7	-5.8
	0.2nm,0.3s,baz=119,slow=12,SNR=1.7						
	0.7nm,0.6s						
ARCES	**ARCESS Array B**	**19.31**	**358**	P	P	12 50 05.7	-1.9
	baz=170,slow=11,SNR=1.9						
	1.1nm,0.6s						

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*IDC **14** 12:52:57.4±2.8, 21°.56S×172°.46W, h0^{km}, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=117.3km s-min=44.1km az=146.0*

ISC 14 12:53:01.3±2.3**, 21°.8S**±0°.7×**172°.2W**±0°.4**, h35^{km}, n9, σ0^s.52**/9**, mb3.9**/3**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**49.47**	**257**	P	**P**	**13 01 49.2**	**+0.7**
	0.7nm,0.6s,baz=97,slow=7.7,SNR=6.3						
	0.7nm,0.6s						
WRA	**Warramunga Arr**	**49.74**	**262**	P	**P**	**13 01 49.9**	**-0.7**
	0.3nm,0.4s,baz=100,slow=8.1,SNR=6.0						
	0.3nm,0.4s						
KSRS	**Korea Array**	**81.46**	**316**	P	**P**	**13 05 15.1**	**+0.1**
	1.0nm,0.6s,baz=133,slow=6.1,SNR=7.2						
	1.0nm,0.6s						
NB2	**NORSAR Subarra**	**140.68**	**357**	PKP	**PKiKP**	**13 12 29.7**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=7.6,slow=3.0						
NOA	**NORSAR Array B**	**140.68**	**357**	PKP	**PKiKP**	**13 12 29.4**	**0.0**
	comp=Z,0.4nm,0.6s,baz=8.5,slow=3.6,SNR=4.6						
HFS	**Hagfors**	**141.44**	**355**	PKP	**PKiKP**	**13 12 30.6**	**-0.3**
	comp=Z,2.0nm,0.9s,baz=329,slow=1.7,SNR=5.6						
AKASG	**Malin Array Be**	**146.58**	**335**	PKPbc	**PKPbc**	**13 12 39.3**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=44,slow=4.0,SNR=6.9						
BRTR	**Keskin Array B**	**151.60**	**315**	PKPbc	**PKiKP**	**13 12 52.8**	**0.0**
	comp=Z,1.5nm,0.7s,baz=80,slow=1.6,SNR=7.2						
MMAI	**Mount Meron Ar**	**153.09**	**301**	PKP	**PKPdf**	**13 12 47.8**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=64,slow=3.4,SNR=2.7						

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*IDC **14** 12:57:48.4±0.9, 5°.08S×153°.72E, h0^{km}, mb4.0/13, mbtmp4.0/14, ML1.9/1, MS3.0/1, Error ellipse: s-maj=29.7km s-min=18.8km az=75.0*

ISC 14 12:57:56.6±0.8**, 5°.2S**±0°.1×**153°.5E**±0°.1**, h56^{km}, n15, σ0^s.95**/17**, mb3.8**/12**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.56**	**236**	Pn	**Pn**	**12 59 43.1**	**-1.2**
	1.0nm,0.3s,baz=49,slow=10,SNR=1.7						
PMG				Sn	**Sn**	**13 01 08.2**	**-0.3**
	1.1nm,0.3s,baz=94,slow=14,SNR=1.7						
	12nm,0.8s						
DZM	**Mont Dzumac**	**20.88**	**144**	P	**P**	**13 02 32.9**	**-1.5**
	3.4nm,0.5s,baz=168,slow=13,SNR=12						
	3.4nm,0.5s						
WRA	**Warramunga Arr**	**23.72**	**230**	P	**P**	**13 03 04.1**	**+0.4**
	0.8nm,0.8s,baz=55,slow=9.9,SNR=5.3						
WRA				PcP	**PcP**	**13 06 47.5**	**+0.7**
	0.8nm,0.7s,baz=58,slow=2.3,SNR=8.4						
	0.8nm,0.8s						
ASAR	**Alice Springs**	**26.33**	**224**	P	**P**	**13 03 28.1**	**+0.6**
	0.3nm,0.6s,baz=56,slow=8.4,SNR=5.4						
ASAR				PcP	**PcP**	**13 06 53.2**	**+0.6**
	0.4nm,0.6s,baz=64,slow=2.9,SNR=7.4						
	0.3nm,0.6s						
FITZ	**Fitzroy Crossi**	**30.10**	**243**	P	**P**	**13 04 01.6**	**+0.4**
	1.8nm,0.9s,baz=63,slow=11,SNR=1.3						
	1.8nm,0.9s						
MJAR	**Matsushiro Arr**	**43.97**	**342**	LR	LR	13 21 42.1	
	comp=Z,18nm,18.9s,baz=184,slow=33						
CMAR	**Chiang Mai Arr**	**58.73**	**295**	P	**P**	**13 07 50.6**	**+1.4**
	1.6nm,0.9s,baz=115,slow=5.7,SNR=7.5						
	1.6nm,0.9s						
SONM	**Songino Array**	**67.08**	**328**	P	**P**	**13 08 43.7**	**-0.6**
	0.5nm,0.5s,baz=131,slow=4.4,SNR=2.0						
	0.5nm,0.5s						
VNDA	**Vanda**	**72.37**	**178**	P	**P**	**13 09 16.6**	**+0.4**
	0.9nm,0.7s,baz=347,slow=5.0,SNR=6.9						
	0.9nm,0.7s						
MKAR	**Makanchi Array**	**81.14**	**319**	P	**P**	**13 10 05.4**	**-0.8**
	1.0nm,0.8s,baz=111,slow=5.7,SNR=7.1						
	1.0nm,0.8s						
ZALV	**Zalesovo Beam**	**81.92**	**326**	P	**P**	**13 10 08.7**	**-1.5**
	0.6nm,0.4s,baz=96,slow=5.8,SNR=2.2						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**84.59**	**322**	P	**P**	**13 10 23.5**	**-0.5**
	0.6nm,0.7s,baz=106,slow=3.9,SNR=5.3						
	0.6nm,0.7s						
QSPA	**South Pole Qui**	**84.72**	**180**	P	**P**	**13 10 25.0**	**+0.5**
	3.4nm,0.7s,baz=334,slow=0.9,SNR=29						
	3.4nm,0.7s						
MAW	**Mawson**	**85.45**	**203**	P	**P**	**13 10 28.8**	**+0.8**
	2.3nm,0.6s,baz=128,slow=7.1,SNR=7.5						
	2.3nm,0.6s						
BVAR	**Borovoye Array**	**90.03**	**323**	P	**P**	**13 10 49.4**	**-0.8**
	1.4nm,0.7s,baz=105,slow=5.1,SNR=7.4						
	1.4nm,0.7s						

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*TIR **14** 13:04:26.5, 40°.47N×20°.71E, h10^{km}±1^{km}, Ml3.3/5*

*SKO **14** 13:04:27.5, 40°.42N×20°.66E, h8^{km}, ML2.8*

*THE **14** 13:04:27.6, 40°N±1°×2°1E±°, h9^{km}±3^{km}, M2.8/21, MLh2.8/21*

*ATH **14** 13:04:28.4, 40°.38N×20°.85E, h10^{km}±1^{km}, ML3.0/15, Manual Solution by A.Agalos First location: 2019/06/14 13:05:33, This location: 2019/06/14 13:23:03 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*PDG **14** 13:04:28.1±0.9, 40°.52N×20°.80E, h2^{km}±2^{km}, ML3.0/8, Error ellipse: s-maj=1.2km s-min=2.0km az=0.0*

*BEO **14** 13:04:28.7±0.3, 40°.46N×20°.75E, h2^{km}±3^{km}, ML2.8/15*

ISC 14 13:04:27.5±1.0**, 40°.45N**±0°.01×**20°.77E**±0°.02**, h5^{km}**±9^{km}**, n106, σ1^s.11**/146**, 3C-6D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	**0.17**	**4**	Pg	**Pg**	**13 04 30.4**	**-0.6**
KBN				Sg	**Sg**	**13 04 32.1**	**-1.2**
KBN				AML	AML	13 04 38.0	
	23nm,0.5s						
KBN	**Korca**	**0.17**	**4**	P	**Pg**	**13 04 30.4**	**-0.6**
KBN				S	**Sg**	**13 04 34.2**	**+0.9**
NEST	**Nestorio**	**0.22**	**100**	⇑Pg	**Pg**	**13 04 32.2**	**+0.4**
NEST				Sg	**Sg**	**13 04 36.7**	**+2.0**
NEST				AML	AML	13 04 39.1	
	22nm,0.3s						
NEST	**Nestorio**	**0.22**	**100**	P	**Pg**	**13 04 32.1**	**+0.4**
NEST				S	**Sg**	**13 04 36.6**	**+2.0**
NEST	**Nestorio**	**0.22**	**100**	P	**Pg**	**13 04 32.2**	**+0.4**
NEST				S	**Sg**	**13 04 34.8**	**+0.1**
PENT	**Pentalofos**	**0.38**	**132**	P	**Pg**	**13 04 34.8**	**-0.1**
PENT				S	**Sg**	**13 04 41.5**	**+1.6**
PENT	**Pentalofos**	**0.38**	**132**	P	**Pg**	**13 04 34.7**	**-0.1**
PENT				S	**Sg**	**13 04 38.5**	**-1.4**
OHR	**Ohrid**	**0.66**	**2**	P	**Pg**	**13 04 40.0**	**-0.3**
OHR				S	**Sg**	**13 04 49.6**	**+0.8**
OHR	**Ohrid**	**0.66**	**2**	*e*Pg	**Pg**	**13 04 39.9**	**-0.3**
OHR				*i* Sg	**Sb**	**13 04 50.8**	**-0.4**
OHR				*e*Lg	Lg	13 04 51.1	
	comp=E,564nm,0.5s						
OHR				*e*Lg	Lg	13 04 53.5	
	comp=N,212nm,0.3s						
OHR	**Ohrid**	**0.66**	**2**	*e*Pg	**Pg**	**13 04 39.9**	**-0.3**
OHR				*e*Sg	**Sb**	**13 04 50.7**	**-0.4**
KPRO	**Kipourio**	**0.67**	**137**	P	**Pg**	**13 04 39.8**	**-0.6**
KPRO				S	**Sg**	**13 04 49.9**	**+0.8**
KPRO	**Kipourio**	**0.67**	**137**	P	**Pg**	**13 04 39.8**	**-0.6**
KPRO				S	**Sg**	**13 04 47.9**	**-1.2**
KZN	**Kozani**	**0.78**	**100**	P	**Pg**	**13 04 42.0**	**-0.4**
KZN	**Kozani**	**0.78**	**100**	P	**Pg**	**13 04 42.0**	**-0.4**
SRN	**Sarande**	**0.82**	**226**	⇓Pg	**Pg**	**13 04 42.1**	**-1.1**
SRN				Sg	**Sb**	**13 04 55.4**	**-0.2**
SRN				AML	AML	13 04 58.7	
	comp=N,0.9nm,0.6s						
SRN	**Sarande**	**0.82**	**226**	P	**Pg**	**13 04 42.9**	**-0.4**
SRN				S	**Sb**	**13 04 55.5**	**-0.1**
IGT	**Igoumenitsa**	**0.98**	**200**	⇓Pg	**Pg**	**13 04 46.0**	**-0.3**
IGT				Sg	**Sb**	**13 05 00.4**	**+0.2**
IGT	**Igoumenitsa**	**0.98**	**200**	P	**Pg**	**13 04 46.0**	**-0.3**
IGT				S	**Sn**	**13 05 01.5**	**-0.6**
IGT	**Igoumenitsa**	**0.98**	**200**	*e*Pg	**Pg**	**13 04 45.9**	**-0.3**
IGT				*e*Sg	**Sb**	**13 05 00.2**	**+0.1**
IGT	**Igoumenitsa**	**0.98**	**200**	P	**Pg**	**13 04 46.0**	**-0.3**
NASA	**Naoussa**	**1.00**	**79**	P	**Pg**	**13 04 47.1**	**+0.4**
KTI	**Kastanea**	**1.03**	**93**	P	**Pg**	**13 04 47.1**	**-0.2**
KEK	**Kerkira**	**1.05**	**226**	P	**Pb**	**13 04 48.7**	**+0.5**
KEK				S	**Sn**	**13 05 05.5**	**+1.6**
KEK	**Kerkira**	**1.05**	**226**	P	**Pn**	**13 04 48.8**	**0.0**
TIR	**Tirane**	**1.13**	**323**	Pn	**Pb**	**13 04 46.6**	**-2.9**
TIR	**Tirane**	**1.13**	**323**	*e*Pg	**Pb**	**13 04 47.9**	**-1.6**
TIR	**Tirane**	**1.13**	**323**	*e*Pg	**Pn**	**13 04 49.9**	**-0.1**
TIR				*e*Sg	**Sg**	**13 05 04.2**	**+0.4**
LFKM	**Lefkimmi**	**1.14**	**209**	P	**Pn**	**13 04 50.8**	**+0.7**
TETR	**Tetrakomo, Epi**	**1.17**	**161**	P	**Pg**	**13 04 50.7**	**+0.8**
THL	**Klokotos Trika**	**1.30**	**132**	P	**Pn**	**13 04 51.1**	**-1.2**
THL				S	**Sg**	**13 05 12.2**	**+2.9**
THL	**Klokotos Trika**	**1.30**	**132**	P	**Pn**	**13 04 51.1**	**-1.2**
TYRN	**Tyrnavos**	**1.34**	**123**	P	**Pn**	**13 04 52.4**	**-0.5**
TYRN	**Tyrnavos**	**1.34**	**123**	P	**Pn**	**13 04 52.0**	**-0.9**
SKO	**Skopje**	**1.60**	**18**	*i* Pn	**Pg**	**13 04 58.4**	**+0.2**
SKO				*i* Sg	**Sg**	**13 05 20.0**	**+1.0**
VAY	**Valandovo**	**1.62**	**57**	P	**Pn**	**13 04 56.9**	**+0.2**
VAY	**Valandovo**	**1.62**	**57**	*i* Pn	**Pn**	**13 04 56.9**	**+0.2**
VAY				*i* Sg	**Sg**	**13 05 21.1**	**+1.7**
VAY				*e*Lg	Lg	13 05 22.9	
	comp=N,89nm,0.7s						
VAY				*e*Lg	Lg	13 05 25.7	
	comp=E,89nm,0.6s						
VAY	**Valandovo**	**1.62**	**57**	*e*Pg	**Pn**	**13 04 57.0**	**+0.3**
VAY				*e*Sg	**Sg**	**13 05 20.6**	**+1.1**
LKD2	**Lefkada island**	**1.66**	**183**	P	**Pb**	**13 04 58.8**	**+0.2**
LKD2	**Lefkada island**	**1.66**	**183**	P	**Pn**	**13 04 57.7**	**+0.4**
THE	**Thessaloniki**	**1.68**	**83**	P	**Pn**	**13 04 57.0**	**-0.5**
PUK	**Puka**	**1.72**	**338**	Pn	**Pn**	**13 04 58.4**	**+0.2**
PUK				Sn	**Sg**	**13 05 27.0**	**+4.2**
PUK				AML	AML	13 05 34.9	
	comp=E,1.1nm,0.9s						
PUK	**Puka**	**1.72**	**338**	P	**Pb**	**13 04 59.8**	**+0.1**
EVR	**Evrytania**	**1.73**	**152**	P	**Pn**	**13 04 57.8**	**-0.5**
NYDR	**Nydri-Lefkada**	**1.74**	**182**	P	**Pb**	**13 05 00.5**	**+0.6**
NYDR	**Nydri-Lefkada**	**1.74**	**182**	P	**Pn**	**13 04 58.0**	**-0.3**
KNT	**Kendrikon**	**1.76**	**66**	P	**Pn**	**13 04 58.5**	**-0.2**
KNT	**Kendrikon**	**1.76**	**66**	*i* Pn	**Pn**	**13 04 58.5**	**-0.2**
KNT				*e*Sn	**Sg**	**13 05 25.5**	**+1.3**
KNT	**Kendrikon**	**1.76**	**66**	P	**Pn**	**13 04 58.4**	**-0.4**
MAKR	**Makrakomi, Fth**	**1.78**	**143**	P	**Pb**	**13 05 00.4**	**-0.2**
MAKR	**Makrakomi, Fth**	**1.78**	**143**	P	**Pn**	**13 04 58.8**	**-0.2**
HORT	**Hortiatis**	**1.78**	**85**	P	**Pn**	**13 04 58.4**	**-0.6**
HORT	**Hortiatis**	**1.78**	**85**	P	**Pn**	**13 04 58.3**	**-0.8**
SCTE	**Santa Cesarea**	**1.80**	**259**	P	**Pn**	**13 04 59.7**	**+0.5**
EVGI	**Lefkada island**	**1.83**	**183**	P	**Pn**	**13 04 58.9**	**-0.7**
AGG	**Agios Georgios**	**1.87**	**139**	P	**Pn**	**13 05 00.5**	**+0.3**
AGG	**Agios Georgios**	**1.87**	**139**	P	**Pn**	**13 04 59.9**	**-0.3**
ULC	**Ulcinj**	**1.90**	**323**	*i* Pn	**Pn**	**13 04 59.0**	**-1.7**
ULC	**Ulcinj**	**1.90**	**323**	⇓*i*Pn	**Pn**	**13 05 01.3**	**+0.7**
ULC				*i* Sn	**Sb**	**13 05 27.5**	**+0.8**
BCI	**Bajram Curri**	**1.98**	**345**	⇑Pn	**Pb**	**13 05 05.0**	**+0.8**
BCI				Sn	**Sb**	**13 05 30.2**	**+1.0**
BCI				AML	AML	13 05 35.4	
	comp=E,0.9nm,0.8s						
FSK	**Fiskardo**	**2.00**	**185**	P	**Pn**	**13 05 03.3**	**+1.5**
FSK	**Fiskardo**	**2.00**	**185**	P	**Pn**	**13 05 01.7**	**-0.2**
PLG	**Polygyros**	**2.04**	**91**	P	**Pn**	**13 05 03.0**	**+0.4**
PLG	**Polygyros**	**2.04**	**91**	P	**Pn**	**13 05 02.0**	**-0.6**
ANX	**Ano Chora**	**2.06**	**154**	P	**Pb**	**13 05 04.6**	**-0.8**
DRME	**Dracevica, Mon**	**2.11**	**326**	*e*Pn	**Pn**	**13 05 04.3**	**+0.9**
DRME	**Dracevica, Mon**	**2.11**	**326**	⇓*i*Pn	**Pn**	**13 05 04.1**	**+0.7**
DRME				*e*Sn	**Sb**	**13 05 32.9**	**+0.3**
NEO	**Neokhori**	**2.21**	**120**	P	**Pn**	**13 05 04.3**	**-0.5**
AXAR	**Agios Charalam**	**2.23**	**138**	P	**Pn**	**13 05 04.3**	**-0.8**
DMLN	**Damoulianata-K**	**2.23**	**188**	P	**Pn**	**13 05 04.7**	**-0.5**
SRS	**Serrai**	**2.24**	**72**	P	**Pn**	**13 05 05.4**	**+0.1**
SRS	**Serrai**	**2.24**	**72**	*i* Pn	**Pn**	**13 05 05.3**	**-0.1**
SRS				*e*Sn	**Sb**	**13 05 34.8**	**-1.8**
SRS	**Serrai**	**2.24**	**72**	*e*Pn	**Pn**	**13 05 05.9**	**+0.6**
SRS				*e*Sg	**Sg**	**13 05 40.1**	**+0.5**
SRS	**Serrai**	**2.24**	**72**	P	**Pn**	**13 05 05.1**	**-0.2**
KKB	**Krupnik**	**2.26**	**51**	*i* Pn	**Pn**	**13 05 06.6**	**+1.1**
KKB				*e*Sn	**Sb**	**13 05 35.4**	**-1.7**
SERG	**Sergoula**	**2.27**	**154**	P	**Pn**	**13 05 05.3**	**-0.3**
VLS	**Valsamata**	**2.28**	**184**	P	**Pn**	**13 05 04.9**	**-0.8**
VLS	**Valsamata**	**2.28**	**184**	P	**Pn**	**13 05 04.5**	**-1.2**
PDG	**Podgorica**	**2.28**	**331**	*e*Pn	**Pn**	**13 05 06.7**	**+0.9**
PDG				*e*Sg	**Sb**	**13 05 38.3**	**+0.6**
PDG	**Podgorica**	**2.28**	**331**	*e*Pn	**Pn**	**13 05 06.6**	**+0.8**

PDG				iSn	Sb	13 05 36.5	-1.2
PAIG	Paliouri	2.29	102	P	Pn	13 05 06.0	+0.1
BUM	Brajici-Budva	2.33	323	⇑iPn	Pn	13 05 06.9	+0.4
BUM				iSn	Sb	13 05 37.7	-1.3
PSDA	Pessada-Kefalo	2.34	184	P	Pn	13 05 07.7	+1.1
BOSS	Bosilegrad	2.41	32	ePn	Pn	13 05 08.5	+0.8
BARS	Barje	2.49	18	iPn	Pn	13 05 08.6	-0.1
BARS				eSn	Sn	13 05 39.0	-0.5
BARS	Barje	2.49	18	ePn	Pn	13 05 08.5	-0.2
LKR	Lokris	2.49	136	P	Pn	13 05 09.1	+0.5
CEME	Cevo	2.51	327	⇓iPn	Pn	13 05 09.8	+0.7
CEME				eSn	Sb	13 05 42.7	-1.7
KOME	Kolasin	2.58	339	ePn	Pb	13 05 12.6	-1.6
KOME	Kolasin	2.58	339	ePn	Pn	13 05 10.6	+0.6
KOME				eSn	Sb	13 05 44.0	-2.2
DRO	Drossia	2.60	163	P	Pb	13 05 12.8	-1.8
HCY	Herceg Novi	2.63	320	⇓iPn	Pn	13 05 10.9	+0.3
HCY				eSn	Sb	13 05 45.2	-2.4
SELS	Selova	2.78	5	ePn	Pn	13 05 15.1	+2.4
NOCI	Noci	2.84	278	Pn	Pn	13 05 11.8	-1.7
VTS	Vitosha	2.85	40	ePn	Pn	13 05 16.2	+2.4
VTS				eSg	Sg	13 05 59.5	+0.5
SJES	Sjenica	2.87	348	ePn	Pb	13 05 16.8	-2.5
BRY	Bratogost	2.96	326	ePn	Pn	13 05 15.9	+0.5
BRY				iSn	Sn	13 05 52.9	+1.5
GOCS	Kraljevo Serbi	3.11	1	ePn	Pn	13 05 19.0	+1.7
ZAPS	Zavoj	3.15	26	ePn	Pn	13 05 18.8	+1.1
IVAS	Ivanjica	3.16	352	ePn	Pn	13 05 19.7	+1.8
BOVS	Bovan	3.26	12	ePn	Pn	13 05 19.3	+0.1
GRUS	Gruza	3.44	359	ePn	Pn	13 05 24.4	+2.7
ZAGS	Zajecar	3.53	17	ePn	Pn	13 05 23.8	+0.8
BBLS	Lazi&#263i	3.56	344	ePn	Pn	13 05 25.1	+1.6
DIVS	Divibare	3.69	351	ePn	Pn	13 05 26.6	+1.3
TRUS	Trudelj	3.78	356	ePn	Pn	13 05 28.5	+2.1
KUBS	Kucevo	4.01	9	ePn	Pn	13 05 28.9	-0.8

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*NEIC **14** 13:05:29.1±1.2, 35°.270N±0°.010×97°.75W±0°.01, h5km±1km, ML1.6/4, ML2.0/26, Error ellipse: s-maj=2.3km s-min=1.3km az=144.0*

NEIC 14 13:05:29.8±1.8**, 35°.245N**±0°.010×**97°.749W**±0°.008**, h4**km±1km**, Error ellipse: s-maj=1.5km s-min=0.9km az=163.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNO	Franklin	0.28	88		Pg	13 05 35.6	+0.3
FNO				Sg	Sg	13 05 38.7	-0.4
X34A	Smith Ranch, M	0.65	186	Pg	Pg	13 05 41.8	-0.5
X34A				IAML		13 05 53.0	
	comp=N,53nm,0.4s						
X34A				IAML		13 05 57.7	
	comp=E,40nm,0.4s						
WMOK	Wichita Mounta	0.99	239	Pg	Pg	13 05 47.7	-1.1
OK052	Battle Ridge R	1.07	46	Pg	Pg	13 05 49.0	-1.4
CROK	Carrier	1.27	351	Pg	Pg	13 05 52.8	-1.4
OK051	E0350 and S346	1.46	30		Pn	13 05 54.9	-2.1
OK038	West end E0370	1.47	327		Pn	13 05 56.6	-0.6
GC02	Grant County #	1.60	357		Pn	13 05 57.6	-1.5
MIAR	Mount Ida	3.50	100	Pn	Pn	13 06 23.9	-1.1

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*GCG **14** 13:29:11.4±1.5, 16°.14N×93°.17W, h177km±14km, MD4.3, ML3.9*

*MEX **14** 13:29:12.2±0.8, 16°.17N×93°.09W, h192km±8km, MD4.3*

ISC 14 13:29:10.3±1.2**, 16°.21N**±0°.05×**93°.01W**±0°.06**, h190**km±9km**, n54,** σ3s04/96**, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.54	202	eP	Pn	13 29 37.0	+0.5
PCIG				eS	Sn	13 29 56.5	-0.2
TGBT	Tuxtla Gutierr	0.57	352	eP	Pn	13 29 37.6	+1.0
TGBT				eS	Sn	13 29 56.4	-0.5
TGIG		0.57	349	eP	Pn	13 29 37.7	+1.0
TGIG				eS	Sn	13 29 56.5	-0.7
TGIG		0.57	349	iP	Pn	13 29 37.7	+1.0
TGIG				iS	Sn	13 29 56.5	-0.7
TGIG				IAML		13 29 57.7	
	comp=E,1μm,0.4s						
CCIG	Comitan	0.84	85	iP	Pn	13 29 39.3	+1.1
CCIG				iS	Sn	13 29 56.5	-3.2
CCIG	Comitan	0.84	85	iP	Pn	13 29 39.4	+1.1
CCIG				IAML		13 29 43.6	
	comp=N,360nm,0.4s						
PAVE	Pavencul	1.29	142	eP	Pn	13 29 42.6	+0.9
PAVE				eS	Sn	13 30 06.8	+1.0
PATR	El Naranjo	1.32	145	eP	Pn	13 29 42.3	+0.4
PATR				eS	Sn	13 30 06.0	-0.3
THIG		1.48	151	eP	Pn	13 29 44.5	+1.4
THIG				eS	Sn	13 30 08.9	+0.6
THIG		1.48	151	iP	Pn	13 29 44.5	+1.4
THIG				iS	Sn	13 30 09.3	+0.9
THIG				IAML		13 30 10.8	
	comp=E,1μm,0.4s						
SMCA	Catarina	1.62	146	iP	Pn	13 29 45.2	+0.8
SMCA				iS	Sn	13 30 10.5	-0.2
SMCA				IAML		13 30 11.2	
	comp=N,526nm,0.2s						
HUEH	Huehuetenango	1.70	121	eP	Pn	13 29 40.8	-4.5
HUEH				iS	Sn	13 30 08.2	-4.2
HUEH	Huehuetenango	1.70	121	iS	Sn	13 30 12.1	-0.4
RTAL	Retalhuleu	2.10	143	iP	Pn	13 29 50.4	+1.2
RTAL				eS	Sn	13 30 16.7	-2.9
TUIG	Tuzandepetl	2.26	323	eP	Pn	13 29 52.5	+1.6
TUIG				eS	Sn	13 30 21.9	-0.7
STG0	El Palmar, Qui	2.40	138	iP	Pn	13 29 49.6	-3.1
STG0				iS	Sn	13 30 21.5	-4.1
STG0				IAML		13 30 24.2	
	comp=E,652nm,0.3s						
HUIG	Huatulco	3.01	262	eP	Pn	13 29 59.1	-0.5
HUIG				eS	Sn	13 30 35.7	-2.4
HUIG	Huatulco	3.01	262	iP	Pn	13 29 58.9	-0.7
HUIG				iS	Sn	13 30 35.7	-2.4
PETF	Flores	3.09	76	eP	Pn	13 29 59.2	-1.4
PETF				eS	Sn	13 30 38.0	-1.8
PANG	Puerto Angel	3.38	261	eP	Pn	13 29 54.5	-9.5
PANG				eS	Sn	13 30 44.5	-1.5
OXLC	Oaxaca	3.64	284	eP	Pn	13 30 09.1	+1.6
OXLC				eS	Sn	13 30 48.8	-3.4
OXBJ	Oaxaca	3.66	284	iP	Pn	13 30 09.1	+1.4
OXBJ				eS	Sn	13 30 48.7	-3.9
VHO	Vista Hermosa	3.67	284	eP	Pn	13 30 09.9	+2.0
VHO				eS	Sn	13 30 52.0	-0.9
PEIG	Puerto Escondi	3.98	268	eP	Pn	13 30 11.1	-0.5
PEIG				eS	Sn	13 30 58.0	-1.6
TOIG	Toxpalan	4.31	296	eP	Pn	13 30 16.4	+0.7
TOIG				eS	Sn	13 31 01.5	-5.6
YOIG	Yosondua	4.40	279	eP	Pn	13 30 18.7	+1.6
YOIG				eS	Sn	13 31 07.2	-2.2
TXIG	Tlaxiaco	4.67	283	eP	Pn	13 30 22.9	+2.3
TXIG				eS	Sn	13 31 08.6	-7.2
TPIG	Tehuac#an	4.70	298	eP	Pn	13 30 21.0	+0.1
TPIG				eS	Sn	13 31 08.9	-7.4
PNIG	Pinotepa	4.92	273	eP	Pn	13 30 24.3	+0.8
PNIG				eS	Sn	13 31 16.5	-4.5
FTIG	Fresnillo de T	5.18	290	eP	Pn	13 30 29.6	+2.6
FTIG				eS	Sn	13 31 19.7	-7.6
MGIG	Malinaltepec	5.48	281	eP	Pn	13 30 33.3	+2.3
MGIG				eS	Sn	13 31 32.1	-2.4
TLIG	Tlapa	5.49	285	iP	Pn	13 30 33.5	+2.6
TLIG				eS	Sn	13 31 29.3	-5.1
CXUV	Coxquihui	5.87	313	eP	Pn	13 30 36.8	+1.0
CXUV				eS	Sn	13 31 38.4	-4.9
CRIG	Cruz Grande	5.90	276	eP	Pn	13 30 37.6	+1.4
CRIG				eS	Sn	13 31 38.0	-5.9
PBCV	Popocatepetl	5.97	298	eP	Pn	13 30 41.3	+4.0
PBCV				eS	Sn	13 31 38.1	-7.9
PBPN	Popocatepetl	6.05	299	eP	Pn	13 30 42.1	+3.4
PBPN				eP		13 30 42.1	
PBPN				eS	Sn	13 31 47.4	-0.8
PBPN				eS		13 31 48.4	
PBXN	Popocatepetl	6.06	298	eP	Pn	13 30 42.4	+3.6
PBXN				eS	Sn	13 31 44.6	-3.8
PPM	Popocatepetl	6.06	299	iP	Pn	13 30 42.6	+3.9
PPM				eS	Sn	13 31 45.0	-3.4
YAIG	Yautepec	6.35	295	eP	Pn	13 30 45.5	+3.3
YAIG				eS	Sn	13 31 43.9	-11
DAIG	Los Arroyos	6.42	278	eP	Pn	13 30 43.5	+0.6
DAIG				eS	Sn	13 31 46.4	-10
MEIG	Mezcala	6.55	286	eP	Pn	13 30 47.8	+3.1
MEIG				eS	Sn	13 31 55.8	-3.5
PLIG	Platanillo	6.57	290	eP	Pn	13 30 48.4	+3.4
PLIG				eS	Sn	13 31 56.3	-3.5
AOVM	Tlapan	6.74	298	eP	Pn	13 30 50.7	+3.1
CAIG	El Cayaco	7.01	278	eP	Pn	13 30 52.8	+2.1
CAIG				eS	Sn	13 32 05.6	-4.4
DEIG	Demacu	7.02	306	eP	Pn	13 30 53.9	+2.9
ARIG	Puente Sto Nin	7.31	287	eP	Pn	13 30 58.3	+3.7
ARIG				eS	Sn	13 32 13.5	-3.7
ZIIG	Zihuatanejo	8.21	281	eP	Pn	13 31 08.9	+2.5
ZIIG				eS	Sn	13 32 34.1	-4.6
MOIG	Morelia	8.51	295	eP	Pn	13 31 17.5	+6.9
MMIG	Aquila	10.09	283	eP	Pn	13 31 33.8	+2.8
MNGA	Volcan de Coli	10.61	289	eP	P	13 31 43.3	-2.1
MNGA				eS	Sn	13 33 35.4	-1.0
INCO	Volcan de Coli	10.61	290	eP	P	13 31 45.1	-0.5
INCO				eS	S	13 33 42.3	+5.2
SOMAC	Volcano de Col	10.63	290	eP	P	13 31 43.3	-2.5
SOMAC				eS	Sn	13 33 37.2	+0.1
CEGR	Campo Tres	10.80	289	eP	P	13 31 47.0	-0.5
CEGR				eS	S	13 33 45.1	+3.7
CIHU	Emiliano Zapat	11.58	287	eP	P	13 31 58.1	+2.2

DJA 14 13:31:21.1±0.4**, 8°S**±4°×**10°7E**±°**, h37**km±9km**, M4.2**/13**, mb4.5**/2**, MLv4.0**/13**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNJI	Cibinong	0.54	344	P	Pn	13 31 33.3	+0.9
LEM	Lembang	1.05	19	P	Pn	13 31 40.5	+1.1
SKJI	Sukabumi	1.09	319	P	Pn	13 31 40.1	+0.3
SKJI				S	Sn	13 31 54.0	+0.4
CMJI	Cimerak	1.16	88	P	Pn	13 31 41.5	+0.8
JCJI	Jatiwangi	1.66	36	P	Pn	13 31 43.2	-4.4
CGJI	Cibinong	1.98	307	P	Pn	13 31 52.5	+0.4
CGJI				S	Sn	13 32 13.9	-1.8
SBJI	Serang	2.05	326	P	Pn	13 31 52.3	-0.7
UGM	Wanagama	3.21	92	P	Pn	13 32 08.7	-0.4
WOJI	Wonogiri, Jawa	3.61	90	P	Pn	13 32 14.3	-0.2
PCJI	Pacitan	3.88	96	P	Pn	13 32 18.5	+0.3
PCJI				S	Sn	13 33 00.7	-1.8
MDSI	Maura Dua	4.53	317	P	Pn	13 32 27.3	+0.1
TPI	Tanjungpandan	5.05	4	P	Pn	13 32 38.2	+3.8
JAGI	Jajag, Banyuwa	6.83	96	P	Pn	13 33 00.8	+2.0

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*SKHL **14** 13:37:11.2±0.1, 44°.20N×145°.30E, h149km±1km, mb4.1/2, msha4.6/2*

*JMA **14** 13:37:12.2±0.3, 44°N±1°×14°5E±°, h143km±1km, MV2.6/28, NEAR KUNASHIRI ISLAND*

ISC 14 13:37:13.4±2.7**, 44°.03N**±0°.09×**145°.44E**±0°.06**, h139**km±17km**, n16,** σ0s56/25**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK	Yuzh-Kuril'sk	0.31	90	iP	Pn	13 37 32.1	-0.4
YUK				AMB	AMB	13 37 32.5	
	290nm,0.5s						
YUK				eS	Sn	13 37 47.7	+0.7
YUK				A	A	13 37 50.6	
	250nm,0.8s						
YUK				A	A	13 37 50.6	
	200nm,0.8s						
JNSB	Nemuroshibetsu	0.40	231	eP	Pn	13 37 32.7	-0.3
JNSB				eS	Sn	13 37 48.5	+0.8
JNK	Nakash	0.69	229	P	Pn	13 37 34.2	-0.4
NMR	Nemuro--Hokkai	0.70	162	iP	Pn	13 37 34.0	-0.6
NMR				eS	Sn	13 37 51.1	+0.4
NEM2	Nemuro 2	0.70	161	eP	Pn	13 37 33.9	-0.8
NEM2				eS	Sn	13 37 50.7	-0.1
JKHN	Kushirohamanak	0.97	192	eP	Pn	13 37 36.4	-0.4
SHO	Shikotan	1.02	99	iP	Pn	13 37 36.9	-0.3
SHO				AMB	AMB	13 37 38.3	
	20nm,0.4s						
SHO				eS	Sn	13 37 56.4	+1.1
SHO				A	A	13 37 57.6	
	90nm,0.4s						
SHO				A	A	13 37 57.6	
	90nm,0.4s						
AKK	Akkeshi	1.10	203	eP	Pn	13 37 37.5	-0.5
JTKR	Abashiri--Toko	1.10	267	P	Pn	13 37 37.4	-0.6
JTKR				eS	Sn	13 37 56.7	0.0
JAK	Akkeshi	1.17	208	P	Pn	13 37 38.3	-0.3
JAK				eS	Sn	13 37 57.5	-0.3
JAR	Ashorobuto	1.42	239	eP	Pn	13 37 41.4	+0.3
JMP	Maruseppu	1.50	270	P	Pn	13 37 41.4	-0.7
JOB	Onbets	1.62	226	eP	Pn	13 37 43.8	+0.3
JOB				eS	Sn	13 38 07.3	+1.0
JKK2	Kamakawa 2	1.95	266	eP	Pn	13 37 46.9	-0.3
ASAJ	Asahikawa	2.05	273	eP	Pn	13 37 48.2	-0.1
JCH	Churui	2.07	228	eP	Pn	13 37 48.6	-0.1
JCH				eS	Sn	13 38 15.7	-0.1

TIR 14 13:57:16.6, 40°.45N×**20°.72E, h6**km±14km**, Md2.5**/3**, Ml2.1**/2**, 1C, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	Korca	0.18	16	⇑Pg	Pg	13 57 20.6	+0.3
KBN				Sg	Sg	13 57 23.9	+1.2
KBN				AML	AML	13 57 24.3	
	1.5nm,0.4s						
KBN	Korca	0.18	16	Pg	Pg	13 57 20.4	+0.2
KBN				Sg	Sg	13 57 22.8	+0.1
KBN				AML	AML	13 57 24.3	
	1.5nm,0.4s						
NEST	Nestorio	0.25	99	Pg	Pg	13 57 22.5	+0.9
NEST				Sg	Sb	13 57 27.1	-1.3
NEST				AML	AML	13 57 27.4	
	1.3nm,0.2s						
NEST	Nestorio	0.25	99	Pg	Pg	13 57 22.2	+0.6
NEST				Sg	Sg	13 57 26.1	+1.1
NEST				AML	AML	13 57 27.5	
	1.3nm,0.2s						
NEST				AMd		13 58 02.3	
SRN	Sarande	0.80	224	Pg	Pb	13 57 32.9	+0.1
SRN				Sg	Sb	13 57 44.9	+1.1
SRN				AMd		13 58 20.8	
IGT	Igoumenitsa	0.97	198	Pg	Pg	13 57 34.2	-1.0
IGT	Igoumenitsa	0.97	198	Pg	Pb	13 57 35.6	-0.2
IGT				Sg	Sn	13 57 49.8	-1.0
IGT				AMd		13 58 29.2	

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*VIE **14** 13:57:23.6±0.2, 46°.39N×12°.98E, h7km±1km, mb3.3/21, ml4.1/20, Error ellipse: s-maj=1.7km s-min=0.9km az=12.0 3 km WSW of Tolmezzo*

*NAO **14** 13:57:23.5, 46°.40N×13°.00E, h5km, mb3.8*

*ROM **14** 13:57:23.2±0.0, 46°.398N±0°.002×12°.997E±0°.003, h8km, ML3.9/270, Mw3.7, Error ellipse: s-maj=0.2km s-min=0.0km az=216.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}3.70; $M_{\theta\theta}$-3.49; $M_{\phi\phi}$-0.22; $M_{r\theta}$0.42; $M_{\theta\phi}$-0.48; $M_{\phi r}$0.25; Fault plane solution: $M_0$3.66361×10^{14} NP1:ϕ_s79.00000°, δ49.00000°, λ86.00000°. NP2:ϕ_s265.00000°, δ41.00000°, λ94.00000°.*

*LDG **14** 13:57:23.7±0.2, 46°.33N×13°.01E, h5km, Ml3.8/22 Error ellipse: s-maj=4.0km s-min=3.6km az=178.0*

*IDC **14** 13:57:24.3±1.2, 46°.37N×13°.27E, h0km, mb3.4/2, mbtmp3.6/12, ML3.3/9, MS2.9/11, Error ellipse: s-maj=18.6km s-min=13.8km az=120.0*

*RHSSO **14** 13:57:24.9±0.6, 46°.43N×13°.01E, h5km±2km, ML4.1/12*

*MED_RC **14** 13:57:24.0±0.4, 46°.40N×13°.00E, h10km, MW3.9/18, Moment Tensor Solution.Mantle waves: s18,c21; Duration: 1s0 Moment tensor: Scale 10^{15}Nm; M_{rr}0.91±.07; $M_{\theta\theta}$-0.73±.05; $M_{\phi\phi}$-0.18±.08; $M_{r\theta}$-0.04±.14; $M_{\theta\phi}$-0.20±.07; $M_{\phi r}$-0.34±.20; Best double couple: $M_0$0.90000×10^{15} NP1:ϕ_s86.00000°, δ42.00000°, λ113.00000°. NP2:ϕ_s236.00000°, δ52.00000°, λ71.00000°. Principal axes: T 1.0000, Plg74.0000°, Azm88.0000°; N -0.2000, Plg15.0000°, Azm249.0000°; P -0.8000, Plg5.0000°, Azm340.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*

*STR **14** 13:57:25.2±2.5, 46°N±4°×1°3E±2°3, h10km, MLv4.4/37 Error ellipse: s-maj=0.0km s-min=0.0km az=90.6, preliminary*

*BUG **14** 13:57:25.0, 46°.40N×13°.00E, h5km, MD4.4/11, ML4.5/16*

*PRU **14** 13:57:26.0, 46°.41N×12°.99E, h10km*

*BGR **14** 13:57:27.0±0.3, 46°.36N×13°.04E, h10km, ML4.1/25, Error ellipse: s-maj=11.1km s-min=5.6km az=5.0*

ISC 14 13:57:24.2±0.7**, 46°.39N**±0°.01×**13°.00E**±0°.01**, h5**km±4km**, n337,** σ1s64/481**, MS2.9**/3**, 11C-53D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUSE	Fusea	0.02	355	⇓ePg	Pg	13 57 24.8	-0.4
FUSE	Fusea	0.02	355	⇓P	Pg	13 57 24.8	-0.4
FUSE				S	Sg	13 57 25.3	-0.7
BOO	Bordano	0.10	137	⇓ePg	Pg	13 57 26.4	+0.2
BOO				eSg	Sg	13 57 28.2	+0.6
BOO	Bordano	0.10	137	⇓P	Pg	13 57 26.4	+0.2
BOO				S	Sg	13 57 28.3	+0.6
CLUD	Cludinico	0.11	308	⇓ePg	Pg	13 57 26.2	-0.2
CLUD				eSg	Sg	13 57 28.3	+0.4
CLUD	Cludinico	0.11	308	⇓P	Pg	13 57 26.2	-0.2
CLUD				S	Sg	13 57 27.8	-0.2
CLUD				AML	AML		
	comp=N,57750μm,1.1s						
CLUD				AML	AML		
	comp=N,62750μm,1.0s						
CLUD				AML	AML		
	comp=E,59100μm,1.0s						
CLUD				AML	AML		
	comp=N,57700μm,1.1s						
CLUD				AML	AML		
	comp=E,57750μm,1.0s						
CLUD				AML	AML		
	comp=N,62750μm,1.0s						
CLUD				AML	AML		
	comp=N,57700μm,0.9s						
CLUD				AML	AML		
	comp=E,59100μm,1.0s						
GEPF	Gemona	0.15	141	⇓P	Pg	13 57 27.3	+0.1
GEPF				S	Sg	13 57 29.9	+0.8
GEPF				AML	AML		
	comp=E,54700μm,1.4s						
GEPF				AML	AML		
	comp=N,91150μm,0.6s						
GEPF				AML	AML		
	comp=N,91150μm,1.4s						
MPRI	Monte Prat	0.15	184	⇓ePg	Pg	13 57 27.3	+0.1
MPRI				eSg	Sg	13 57 29.8	+0.7
MPRI	Monte Prat	0.15	184	⇓P	Pg	13 57 27.2	+0.1
MPRI				S	Sg	13 57 29.9	+0.7
MPRI				AML	AML		
	comp=E,40000μm,1.6s						
MPRI				AML	AML		
	comp=E,40050μm,1.6s						
MPRI				AML	AML		
	comp=N,98200μm,1.3s						
MPRI				AML	AML		
	comp=E,53200μm,1.6s						
MPRI				AML	AML		
MPRI				AML	AML		
MPRI				AML	AML		
	comp=N,98200μm,0.7s						
MPRI				AML	AML		
	comp=E,40000μm,0.4s						
MPRI				AML	AML		
	comp=E,53200μm,0.4s						
DST2	Trieste	0.16	201	⇓P	Pg	13 57 27.3	+0.1
DST2				S	Sg	13 57 30.1	+0.7
DST2				AML	AML		
DST2				AML	AML		
DST2				AML	AML		
ZOU	Zoufplan	0.17	353	⇓ePg	Pg	13 57 27.5	-0.1
ZOU				eSg	Sg	13 57 30.1	+0.2
ZOU	Zoufplan	0.17	353	⇓P	Pg	13 57 27.5	-0.1
ZOU				S	Sg	13 57 30.0	+0.2
ZOU				AML	AML		
	comp=E,61450μm,1.0s						
ZOU				AML	AML		
	comp=N,55800μm,1.6s						
ZOU				AML	AML		
	comp=N,54700μm,1.6s						
ZOU				AML	AML		
	comp=E,60900μm,1.0s						
ZOU				AML	AML		
	comp=E,60900μm,1.0s						
ZOU				AML	AML		
	comp=N,55800μm,0.4s						
ZOU				AML	AML		
	comp=N,54700μm,0.4s						
ZOU				AML	AML		
	comp=E,61450μm,1.0s						
PLRO	Paularo	0.19	32	⇑ePg	Pg	13 57 27.6	-0.4
PLRO				eSg	Sg	13 57 31.0	+0.6
PLRO	Paularo	0.19	32	⇓P	Pg	13 57 27.9	-0.1
PLRO				S	Sg	13 57 30.9	+0.5
BUA	Buia	0.19	154	⇓ePg	Pg	13 57 28.2	+0.2
BUA				eSg	Sg	13 57 31.3	+0.8
BAD	Bernadia	0.23	133	⇓ePg	Pg	13 57 28.7	+0.1
BAD				eSg	Sg	13 57 32.6	+1.0
BAD	Bernadia	0.23	133	⇓P	Pg	13 57 28.7	+0.1
BAD				S	Sg	13 57 32.6	+1.0
VINO	Villanova	0.23	125	⇓ePg	Pg	13 57 28.8	0.0
VINO				eSg	Sg	13 57 32.8	+0.9
VINO	Villanova	0.23	125	⇓P	Pg	13 57 28.8	0.0
VINO				S	Sg	13 57 32.5	+0.6
VINO				AML	AML		
	comp=E,53500μm,0.2s						
VINO				AML	AML		
	comp=N,56350μm,0.5s						
VINO				AML	AML		
	comp=E,53500μm,1.8s						
PTCC	Patocco-Chiusa	0.24	87	⇓P	Pg	13 57 29.0	+0.1
PTCC				S	Sg	13 57 33.2	+1.1
PTCC				AML	AML		
	comp=N,91050μm,0.2s						
PTCC				AML	AML		
	comp=E,46250μm,0.5s						
STAL	STALIGIAL	0.24	237	⇓P	Pg	13 57 28.6	-0.4
STAL				S	Sg	13 57 33.2	+1.1
STAL				AML	AML		
	comp=E,20050μm,1.1s						
STAL				AML	AML		
	comp=N,22650μm,1.5s						
STAL				AML	AML		
	comp=N,19300μm,1.5s						
STAL				AML	AML		
	comp=E,21600μm,1.0s						
STAL				AML	AML		
	comp=N,22650μm,0.5s						
STAL				AML	AML		
	comp=E,20050μm,0.9s						
STAL				AML	AML		
	comp=E,21600μm,1.0s						
STAL				AML	AML		
	comp=N,19300μm,0.5s						
FVI	Forni Avoltri	0.26	323	⇓P	Pg	13 57 28.8	-0.4
FVI				S	Sg	13 57 32.8	+0.2
FVI				AML	AML		
	comp=E,18100μm,1.1s						
FVI				AML	AML		
	comp=N,16750μm,0.9s						
FVI				AML	AML		
	comp=E,18100μm,0.9s						
CSMI	Casera Mimoias	0.27	296	⇓ePg	Pg	13 57 29.2	-0.3
MLNI	Malnisio	0.36	229	ePg	Pg	13 57 30.8	-0.4
MLNI				eSg	Sg	13 57 36.9	+0.8
COLI	Coloredo	0.37	135	⇓ePg	Pg	13 57 31.4	+0.1
LSR	Lussari	0.37	77	⇓ePg	Pg	13 57 31.6	+0.1
ROBS	Robic	0.38	113	⇓iPg	Pg	13 57 31.0	-0.5
ROBS				eSg	Sg	13 57 36.4	-0.1
ROBS				IAML		13 57 41.4	
	comp=Z,2μm,0.2s						
ACOM	Acomizza, Ital	0.39	66	ePg	Pg	13 57 31.9	+0.3
ACOM	Acomizza, Ital	0.39	66	P	Pg	13 57 32.0	+0.3
ACOM				AML	AML		
	comp=E,72450μm,0.5s						
ACOM				AML	AML		
	comp=N,74500μm,0.5s						
ACOM				AML	AML		
	comp=E,74400μm,0.5s						
ACOM				AML	AML		
	comp=N,77950μm,0.8s						
ACOM				AML	AML		
	comp=N,74500μm,1.5s						
PRED	Cave del Predi	0.39	82	ePg	Pg	13 57 31.9	+0.1
PRED	Cave del Predi	0.39	82	P	Pg	13 57 32.0	+0.3
PRED				S	Sg	13 57 38.2	+1.3

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CIMO  Cimolais          0.40 258⇓ePg    Pg     13 57 31.3 -0.6
CIMO  Cimolais          0.40 258 ⇓P     Pg     13 57 31.1 -0.8
CIMO                          AML       AML
      comp=E,2850µm,1.2s
CIMO                          AML       AML
      comp=N,3590µm,1.6s
CIMO                          AML       AML
      comp=N,3620µm,1.6s
CIMO                          AML       AML
      comp=E,2860µm,1.2s
CIMO                          AML       AML
      comp=N,3590µm,0.4s
CIMO                          AML       AML
      comp=E,2850µm,0.8s
CIMO                          AML       AML
      comp=N,3620µm,0.4s
CSO   Casso             0.49 256  ePg   Pg     13 57 33.1 -0.4
ABTA  Abfaltersbach     0.49 317  ePg   Pg     13 57 33.2 -0.5
      comp=N,16nm,0.1s,SNR=253
ABTA                              eSg   Sg     13 57 39.7 -0.4
      comp=N,281nm,0.1s
DRE   Drenchia          0.49 116  ePg   Pg     13 57 33.6 -0.1
DRE   Drenchia          0.49 116 ⇓P     Pg     13 57 33.1 -0.6
MYKA  Terra Mystica     0.50  61  ePg   Pg     13 57 33.7 -0.1
      comp=N,162nm,0.2s,SNR=436
MYKA                              eSg   Sg     13 57 40.9 +0.5
      comp=N,285nm,0.1s
APGO  Alpago            0.51 242  ePg   Pg     13 57 33.8 -0.1
POLC  Polcenigo         0.51 224   P    Pg     13 57 33.8 -0.1
CADS  Cadrg             0.53 108⇓iPg    Pg     13 57 33.5 -0.9
CADS                              i Sg  Sg     13 57 42.6 +1.3
CADS                           IAML            13 57 44.5
      comp=Z,3µm,0.2s
CAE   Caneva            0.55 226  ePg   Pg     13 57 34.6 -0.2
CAE   Caneva            0.55 226 ⇓P     Pg     13 57 34.3 -0.5
SABO  M.te Sabotino     0.58 135  ePg   Pg     13 57 35.5 +0.1
SABO  M.te Sabotino     0.58 135 ⇓P     Pg     13 57 35.2 -0.2
SABO                          AML       AML
      comp=N,22300µm,0.4s
SABO                          AML       AML
      comp=E,79450µm,0.7s
SABO                          AML       AML
      comp=N,85500µm,0.4s
SABO                          AML       AML
      comp=E,20150µm,0.6s
SABO                          AML       AML
      comp=N,22300µm,1.6s
SABO                          AML       AML
      comp=N,85500µm,1.6s
SABO                          AML       AML
      comp=E,79450µm,1.3s
SABO                          AML       AML
      comp=E,20150µm,1.4s
AFL   Alpe Faloria      0.59 284  ePg   Pg     13 57 35.5  0.0
FRE8  Fregona           0.59 230   P    Pg     13 57 35.5 +0.1
AGOR  Agordo            0.67 261  ePg   Pg     13 57 36.8 -0.3
AGOR  Agordo            0.67 261   P    Pg     13 57 37.1  0.0
GORS  Gorjuse           0.69  96  ePg   Pg     13 57 37.2 -0.2
GORS  Gorjuse           0.69  96  i Pg  Pg     13 57 36.4 -1.0
GORS                              eSg   Sb     13 57 48.2 -0.4
GORS                           IAML            13 57 49.6
      comp=Z,3µm,0.2s
VOJS  Vojsko            0.71 120⇓iPg    Pg     13 57 36.8 -1.0
VOJS                              eSg   Sg     13 57 48.0 +1.1
VOJS                           IAML            13 57 52.4
      comp=Z,2µm,0.2s
FAU   Forcella Aurin    0.73 258  ePg   Pg     13 57 38.0 -0.2
VARN  Col Varnada, M    0.74 238  ePg   Pg     13 57 38.1 -0.3
VARN  Col Varnada, M    0.74 238   P    Pg     13 57 37.2 -1.2
VARN                          AML       AML
      comp=E,9120µm,0.4s
VARN                          AML       AML
      comp=E,9230µm,0.4s
VARN                          AML       AML
      comp=N,9215µm,0.3s
VARN                          AML       AML
      comp=E,9120µm,1.6s
VARN                          AML       AML
      comp=N,9065µm,0.3s
VARN                          AML       AML
      comp=E,9230µm,1.6s
ED06  Collalto TV       0.77 226  ePg   Pg     13 57 39.0 +0.1
CRND  Cornuda           0.85 229   P    Pg     13 57 41.1 +0.6
MTLO  Montello          0.86 228  ePg   Pg     13 57 40.6  0.0
TRI   Trieste           0.86 142   P    Pg     13 57 39.5 -1.2
TRI                           AML       AML
      comp=N,3625µm,1.5s
TRI                           AML       AML
      comp=E,6335µm,1.1s
TRI                           AML       AML
      comp=N,3625µm,0.5s
JAVS  Javornik          0.89 124⇓iPg    Pg     13 57 39.8 -1.4
JAVS                              eSg   Sg     13 57 53.7 +0.9
JAVS                           IAML            13 58 01.1
      comp=Z,789nm,0.1s
CRNS  Crni Vrh          0.93 109⇓iPg    Pg     13 57 40.3 -1.6
CRNS                              eSg   Sn     13 57 56.8 -0.8
CRNS                           IAML            13 58 03.4
      comp=Z,1µm,0.2s
BRES  Bressanone        0.93 290   P    Pg     13 57 41.4 -0.7
BRES                          AML       AML
      comp=N,3945µm,0.4s
BRES                          AML       AML
      comp=E,3010µm,1.5s
BRES                          AML       AML
      comp=E,3010µm,0.5s
BRES                          AML       AML
      comp=N,3950µm,0.4s
CGRP  Cima Grappa       0.98 239   P    Pg     13 57 42.6 -0.4
CTI   Castel Tesino     1.00 250   P    Pg     13 57 43.5 +0.1
CTI                           AML       AML
      comp=E,12450µm,0.8s
CTI                           AML       AML
      comp=N,9660µm,0.3s
CTI                           AML       AML
      comp=E,12450µm,1.2s
MOZS  Mozjanca          1.00  95  ePg   Pg     13 57 42.2 -1.2
MOZS                              eSg   Sn     13 57 59.0 -0.4
MOZS                           IAML            13 58 03.9
      comp=Z,1µm,0.3s
ZIAN  Ziano             1.00 264   P    Pg     13 57 43.2 -0.3
ZIAN                          AML       AML
      comp=E,5305µm,0.6s
ZIAN                          AML       AML
      comp=E,3990µm,0.4s
ZIAN                          AML       AML
      comp=N,5440µm,0.6s
ZIAN                          AML       AML
      comp=E,5300µm,0.6s
ZIAN                          AML       AML
      comp=N,3790µm,0.4s
LESA  Schwarzleotal     1.06 348  ePg   Pg     13 57 43.7 -0.7
      comp=N,84nm,0.5s,SNR=142
LESA                              i Sg  Sg     13 57 58.3 +0.2
      comp=N,16nm,0.1s
OBKA  Obir              1.07  83  ePg   Pg     13 57 43.8 -1.0
OBKA                              eSg   Sg     13 57 58.7  0.0
OBKA  Obir              1.07  83  ePg   Pg     13 57 44.0 -0.7
      comp=N,187nm,0.7s,SNR=155
OBKA                              eSg   Sg     13 57 59.5 +0.8
      comp=N,4µm,0.6s
OBKA  Obir              1.07  83  ePg   Pg     13 57 44.0 -0.7
OBKA                              eSg   Sb     13 58 00.1 +0.4
GBAS  Gorenja Brezov    1.10 114  ePg   Pg     13 57 43.1 -2.2
GBAS                              eSg   Sn     13 58 01.9  0.0
GBAS                           IAML            13 58 05.8
      comp=Z,2µm,0.4s
SKDS  Skadanscina       1.10 140⇑iPg    Pg     13 57 45.3  0.0
SKDS                              eSg   Sb     13 58 00.8 +0.4
SKDS  Skadanscina       1.10 140  i Pg  Pg     13 57 43.3 -2.0
SKDS                              eSg   Sb     13 58 00.9 +0.5
SKDS                           IAML            13 58 08.2
      comp=Z,1µm,0.2s
LJU   Ljubljana         1.11 108  ePg   Pg     13 57 44.4 -1.2
LJU                               eSg   Sn     13 58 02.9 +0.7
LJU                            IAML            13 58 07.0
      comp=Z,1µm,0.1s
CEY   Cerknica          1.19 123  ePg   Pb     13 57 46.8 -0.4
CEY                               eSg   Sn     13 58 03.9 -0.1
CEY   Cerknica          1.19 123  i Pg  Pb     13 57 44.6 -2.5
CEY                               eSg   Sn     13 58 05.3 +1.3
CEY                            IAML            13 58 09.0
      comp=Z,2µm,0.3s
VNDS  Vrh nad Dolski    1.21 103  ePg   Pb     13 57 46.0 -1.6
VNDS                              eSg   Sn     13 58 05.1 +0.4
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VNDS                           IAML            13 58 09.0
      comp=Z,1µm,0.2s
WTTA  Wattenberg        1.28 313  ePn   Pn     13 57 47.7 -1.3
      comp=Z,74nm,0.2s,SNR=104
WTTA                              eSn   Sb     13 58 05.1 -0.7
      comp=Z,1µm,0.6s
WTTA  Wattenberg        1.28 313  ePn   Pn     13 57 47.9 -1.0
WTTA                              eSg   Sb     13 58 04.3 -1.4
KNDS  Knezji Dol        1.29 131  i Pg  Pn     13 57 46.9 -2.1
KNDS                              eSg   Sg     13 58 06.5 +0.9
KNDS                           IAML            13 58 15.3
      comp=Z,839nm,0.2s
RJOB  Jochberg          1.35 354  ePn   Pn     13 57 49.2 -0.6
RJOB                              eSg   Sg     13 58 10.4 +2.7
WATA  Walderalm         1.36 314  ePn   Pn     13 57 49.2 -0.8
      comp=Z,52nm,0.2s,SNR=94
WATA                              i Sn  Sb     13 58 07.7 -0.3
      comp=Z,421nm,0.3s
BIOA  Bad Ischl, Aus    1.37  18  ePn   Pn     13 57 49.5 -0.5
      comp=Z,60nm,0.2s,SNR=144
BIOA                              eSn   Sb     13 58 08.2  0.0
      comp=Z,3µm,0.6s
ZAVS  Zavodnje          1.40  88  i Pg  Pn     13 57 49.6 -0.8
ZAVS                              eSg   Sn     13 58 09.4 +0.1
ZAVS                           IAML            13 58 16.2
      comp=Z,676nm,0.2s
VISS  Visnje            1.41 114  ePg   Pn     13 57 48.8 -1.7
VISS                              eSg   Sg     13 58 12.1 +2.7
VISS                           IAML            13 58 14.6
      comp=Z,705nm,0.2s
PDKS  Podkum            1.42 103  ePg   Pn     13 57 49.8 -0.9
PDKS                              eSg   Sg     13 58 11.0 +1.1
PDKS                           IAML            13 58 16.4
      comp=Z,737nm,0.2s
SOKA  Soboth            1.43  78  ePn   Pn     13 57 50.5 -0.4
      comp=Z,80nm,0.4s,SNR=188
SOKA                              eSn   Sb     13 58 10.1 +0.2
      comp=Z,295nm,0.3s
PERS  Pernice           1.48  80  i Pg  Pn     13 57 51.3 -0.3
PERS                              eSg   Sn     13 58 11.4 +0.1
PERS                           IAML            13 58 16.6
      comp=Z,644nm,0.3s
SQTA  Sankt Quirin      1.49 305  ePn   Pn     13 57 51.3 -0.4
      comp=Z,74nm,0.6s,SNR=87
SQTA                              eSn   Sn     13 58 11.6  0.0
      comp=Z,341nm,0.5s
GBRS  Gornja Briga      1.53 124  i Pg  Pn     13 57 51.7 -0.5
GBRS                              i Sg  Sg     13 58 14.9 +1.7
GBRS                           IAML            13 58 16.8
      comp=Z,682nm,0.2s
MOTA  Moosalm           1.61 307  ePg   Pn     13 57 53.5  0.0
      comp=Z,255nm,0.5s,SNR=91
MOTA                              i Sg  Sg     13 58 17.1 +1.0
      comp=Z,978nm,0.6s
FETA  Feichten          1.69 293  ePg   Pn     13 57 55.1 +0.6
      comp=Z,85nm,0.3s,SNR=47
FETA                              eSg   Sg     13 58 19.9 +1.5
      comp=Z,343nm,0.5s
MOA   Molln             1.69  30  ePg   Pb     13 57 56.3 +0.4
      comp=Z,137nm,0.3s,SNR=176
MOA                               eSg   Sg     13 58 19.3 +0.7
      comp=Z,758nm,0.4s
MOA   Molln             1.69  30  ePn   Pb     13 57 56.4 +0.6
MOA                               eSg   Sg     13 58 20.6 +2.0
PART  Garmisch-Parte    1.70 311  eSg   Sg     13 58 21.3 +2.4
DOBS  Dobrina           1.73  97  i Pg  Pn     13 57 54.9  0.0
DOBS                              eSg   Sg     13 58 20.2 +0.6
DOBS                           IAML            13 58 25.7
      comp=Z,172nm,0.1s
GROS  Grobnik           1.73  87  ePg   Pn     13 57 55.2 +0.2
GROS                              eSg   Sg     13 58 20.3 +0.6
GROS                           IAML            13 58 28.4
      comp=Z,519nm,0.5s
CRES  Cresnjevec Ost    1.80 107⇑iPn    Pn     13 57 56.0 +0.1
CRES                              eSn   Sb     13 58 20.2 -0.2
CRES  Cresnjevec Ost    1.80 107  ePg   Pn     13 57 55.9  0.0
CRES                              eSg   Sb     13 58 20.5 +0.1
CRES                           IAML            13 58 28.3
      comp=Z,390nm,0.3s
BOJS  Bojanci           1.80 119⇓iPn    Pn     13 57 56.5 +0.6
BOJS                              eSn   Sb     13 58 20.3 -0.2
BOJS  Bojanci           1.80 119  i Pg  Pn     13 57 56.8 +0.9
BOJS                              eSg   Sb     13 58 21.3 +0.7
BOJS                           IAML            13 58 26.2
      comp=Z,330nm,0.2s
FERS  Ferrara-Casagl    1.81 215  AML       AML
      comp=N,5325µm,0.6s
FERS                          AML       AML
      comp=E,6520µm,1.4s
GOLS  Golise            1.86 101  ePg   Pn     13 57 56.8 +0.1
GOLS                              eSg   Sg     13 58 24.8 +0.9
GOLS                           IAML            13 58 29.6
      comp=Z,506nm,0.4s
RETA  Reutte            1.89 306  ePg   Pb     13 57 59.7 +0.5
      comp=Z,268nm,0.7s,SNR=220
RETA                              eSg   Sg     13 58 25.9 +1.1
      comp=Z,782nm,0.5s
GCIS  Gornji Cirnik     1.90 105  ePg   Pn     13 57 57.1 -0.2
GCIS                              eSg   Sb     13 58 23.9 +0.6
GCIS                           IAML            13 58 30.0
      comp=Z,556nm,0.4s
ARSA  Arzberg           1.93  63  ePn   Pn     13 57 58.7 +1.0
      comp=Z,45nm,0.4s,SNR=110
ARSA                              eSn   Sn     13 58 22.8 +0.4
      comp=Z,82nm,0.3s
ARSA  Arzberg           1.93  63  ePn   Pn     13 57 58.7 +1.0
ARSA                              eSg   Sg     13 58 26.1 -0.1
RAVA  Ravarino          2.10 220  AML       AML
      comp=E,3010µm,1.4s
RAVA                          AML       AML
      comp=N,4650µm,1.4s
RAVA                          AML       AML
      comp=N,4650µm,0.6s
RAVA                          AML       AML
      comp=E,3010µm,0.6s
A105A Obersdorf, Sch    2.12 300  Pn    Pb     13 58 03.1 +0.1
A105A                             Sg    Sg     13 58 32.4 +0.2
OBER  Oberstdorf        2.12 300  ePn   Pb     13 58 03.1  0.0
OBER                              eSg   Sg     13 58 32.5 +0.3
FUR   Furstenfeldbru    2.13 327  ePn   Pb     13 58 02.7 -0.5
FUR                               eSg   Sg     13 58 33.4 +0.9
ZAG   Zagreb            2.15 104  AML       AML
      comp=N,3540µm,1.3s
ZAG                           AML       AML
      comp=E,3910µm,1.0s
DAVOX Davos/Dischmat    2.19 281  Pn    Pb     13 58 04.6 +0.2
      comp=E,29nm,0.3s,baz=102,slow=15,SNR=211
DAVOX                             Sn    Sb     13 58 31.2 -0.7
      comp=E,13nm,0.3s,baz=30,slow=21,SNR=3.8
DAVOX                             LR    LR     13 59 09.5
      comp=E,139nm,21.8s,baz=262,slow=44
      comp=E,264nm,0.6s
KOGS  Kog               2.25  87  ePg   Pn     13 58 02.4 +0.4
KOGS                              eSg   Sn     13 58 31.7 +1.6
KOGS                           IAML            13 58 46.9
      comp=Z,302nm,0.3s
DAVA  Damuels           2.32 294  ePg   Pb     13 58 06.0 -0.6
      comp=Z,105nm,0.4s,SNR=57
DAVA                              eSn   Sb     13 58 36.0 +0.3
      comp=Z,606nm,0.6s
DAVA  Damuels           2.32 294  ePn   Pb     13 58 05.9 -0.7
DAVA                              eSg   Sg     13 58 39.0 +0.2
UBR   Ueberruh          2.36 304  ePn   Pb     13 58 06.2 -1.1
UBR                               eSg   Sg     13 58 39.9 -0.2
CONA  Conrad Observa    2.48  51  ePn   Pn     13 58 06.6 +1.3
      comp=Z,88nm,0.6s,SNR=90
CONA                              eSn   Sn     13 58 37.9 +1.8
      comp=Z,529nm,0.6s
GEC2  GERESS Array S    2.50  11  ePn   Pn     13 58 06.9 +1.3
GERES GERESS Array B    2.50  11  Pn    Pn     13 58 06.7 +1.0
      comp=Z,2.7nm,0.3s,baz=186,slow=12,SNR=290
GERES                             Sn    Sn     13 58 31.7 -4.9
      comp=Z,3.6nm,0.3s,baz=183,slow=20,SNR=9.6
GERES                             Lg    Lg     13 58 41.2
      comp=Z,5.6nm,0.3s,baz=185,slow=25,SNR=7.6
      comp=Z,41nm,0.3s
A107C Memmingen - Ei    2.51 311  Pn    Pb     13 58 08.1 -1.7
A107C                             Sg    Sb     13 58 42.3 +1.3
PLONS Plons/SG          2.58 286  ePn   Pb     13 58 09.4 -1.5
CKRC  Cesky Krumlov     2.58  19  ePN   Pn     13 58 08.0 +1.3
CKRC                              eSN   Sn     13 58 40.2 +1.7
RONA  Rosalia, Austr    2.60  59  ePn   Pn     13 58 07.9 +1.0
      comp=Z,185nm,0.8s,SNR=28
RONA                              eSn   Sn     13 58 39.3 +0.3
      comp=Z,103nm,0.4s
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GSCL  Gusciola          2.66 221  AML       AML
      comp=N,821µm,1.6s
GSCL                          AML       AML
      comp=E,673µm,0.9s
GSCL                          AML       AML
      comp=E,673µm,1.1s
A103D Ravensburg, Wa    2.75 302  Pn    Pn     13 58 11.1 +2.1
WET   Wettzell          2.76 358  ePn   Pn     13 58 10.4 +1.3
WET                               Sn    Sb     13 58 46.0 -2.1
KHC   Kasperske Hory    2.77   8  ePN   Pn     13 58 10.0 +0.8
KHC                               ePG   Pg     13 58 17.0 -0.2
KHC                               eSN   Sn     13 58 44.5 +1.4
KHC                               eSG   Sg     13 58 52.8 -0.3
      comp=E,318nm,0.6s
A104A Biberach, Staf    2.80 308  Pn    Pn     13 58 11.7 +2.1
NORI  Noerdlinger Ri    2.83 326  ePn   Pn     13 58 11.8 +1.7
NORI                              eSn   Sn     13 58 47.1 +2.5
POPM  Popiglio          2.83 215  AML       AML
      comp=E,314µm,1.1s
POPM                          AML       AML
      comp=N,532µm,1.2s
POPM                          AML       AML
      comp=N,532µm,0.8s
POPM                          AML       AML
      comp=E,314µm,0.9s
APEC  Apecchio          2.86 189  AML       AML
      comp=N,1405µm,0.5s
APEC                          AML       AML
      comp=E,860µm,1.0s
APEC                          AML       AML
      comp=N,1405µm,1.5s
A104C Biberach, Ahle    2.87 308  Pn    Pn     13 58 12.3 +1.7
A108A Ulm, Ringingen    2.91 313  Pn    Pn     13 58 13.1 +1.9
CARD  Cardoso           2.96 218  AML       AML
      comp=N,447µm,0.8s
CARD                          AML       AML
      comp=E,436µm,0.8s
WILA  Wila              2.99 292  ePn   Pn     13 58 14.3 +2.0
A051A Mrakovica         3.06 115  ePn   Pn     13 58 14.6 +1.3
A051A                             eSn   Sn     13 58 51.0 +0.6
A102A Sigmaringen, J    3.13 305  Pn    Pn     13 58 15.9 +1.7
A050A Klekovaca         3.13 126  ePn   Pn     13 58 15.2 +0.9
A050A                             eSn   Sn     13 58 52.6 +0.5
GUT   Gutenstein        3.14 304  P     Pn     13 58 16.3 +2.0
GUT   Gutenstein        3.14 304  S     Sn     13 58 55.7 +3.5
MURB  Monte Urbino      3.15 186  AML       AML
      comp=E,1365µm,1.3s
MURB                          AML       AML
      comp=N,1390µm,1.5s
MURB                          AML       AML
      comp=N,1390µm,1.3s
MURB                          AML       AML
      comp=E,1360µm,1.2s
MURB                          AML       AML
      comp=N,1390µm,0.7s
ZVC   Zvikov            3.15  14  ePN   Pn     13 58 15.7 +1.2
GORR  Gorreto           3.16 237  P     Pn     13 58 16.0 +1.3
GORR  Gorreto           3.16 237  S     Sn     13 58 55.4 +2.7
A109A Bad Urach, See    3.16 312  Pn    Pn     13 58 16.6 +1.9
PLMA  Palmaria, Port    3.23 225  AML       AML
      comp=E,352µm,0.4s
PLMA                          AML       AML
      comp=E,352µm,1.6s
PLMA                          AML       AML
      comp=N,284µm,0.7s
A106B Goeppingen, Ma    3.24 318  Pn    Pn     13 58 17.5 +1.7
SAP2  Sant'Angelo in    3.31 175  AML       AML
      comp=E,858µm,1.4s
SAP2                          AML       AML
      comp=E,858µm,0.6s
SAP2                          AML       AML
      comp=N,4490µm,0.4s
TREC  Trest             3.35  29  ePN   Pn     13 58 18.3 +1.1
BLY   Banja Luka        3.36 118  ePn   Pn     13 58 18.5 +1.1
BLY                               eSn   Sn     13 58 58.3 +0.6
BLY   Banja Luka        3.36 118  AML       AML
      comp=E,664µm,0.9s
BLY                           AML       AML
      comp=E,682µm,1.1s
BLY                           AML       AML
      comp=E,664µm,1.1s
BLY                           AML       AML
      comp=N,438µm,0.7s
BLY                           AML       AML
      comp=E,682µm,0.9s
BLY                           AML       AML
      comp=N,459µm,0.7s
SLE   Schleitheim       3.38 296  P     Pn     13 58 19.3 +1.7
SLE   Schleitheim       3.38 296  S     Sn     13 58 59.0 +1.0
SLE   Schleitheim       3.38 296  ePn   Pn     13 58 19.1 +1.5
SLATY Slatina           3.40 116  ePn   Pn     13 58 18.9 +1.1
SLATY                             eSn   Sn     13 58 58.6 +0.2
ROTZ  Rotzenmuhle       3.42 351  ePn   Pn     13 58 18.6 +0.4
ROTZ                              eSn   Sn     13 58 59.7 +0.6
RNCA  Ronca, Sant'Ol    3.44 238  P     Pn     13 58 20.5 +2.1
RNCA  Ronca, Sant'Ol    3.44 238  S     Sn     13 59 02.0 +2.5
A101B Rottweil, Deis    3.49 301  Pn    Pn     13 58 20.9 +1.7
STU   Stuttgart         3.51 314  ePn   Pn     13 58 21.3 +1.9
GRF   Grafenberg Arr    3.51 341  ePn   Pn     13 58 20.8 +1.3
GRF                               eSn   Sn     13 59 04.8 +3.5
MODS  Modra-Piesok      3.52  54  ePN   Pn     13 58 19.6 +0.1
MODS                              ePG   Pb     13 58 29.4 +2.5
MODS                              eSG   Sg     13 59 15.6 -1.4
KRUC  Moravsky          3.52  39  ePN   Pn     13 58 19.6 +0.1
KRUC                              eSN   Sn     13 59 01.3 -0.2
SULZ  Cheisacher        3.54 291  P     Pn     13 58 22.0 +2.2
SULZ  Cheisacher        3.54 291  S     Sn     13 59 03.7 +1.6
TRTR  Tortoreto Alta    3.64 169  AML       AML
      comp=N,1330µm,1.4s
TRTR                          AML       AML
      comp=E,1475µm,0.8s
TRTR                          AML       AML
      comp=N,1330µm,0.6s
PCP   Piancastagn       3.64 241  P     Pn     13 58 22.8 +1.5
PCP   Piancastagn       3.64 241  S     Sn     13 59 06.7 +2.0
MANZ  Manzenberg        3.65 351  ePn   Pn     13 58 21.9 +0.6
MANZ                              eSn   Sn     13 59 05.5 +0.8
GOPC  GO Pecny, Ondr    3.72  18  ePN   Pn     13 58 23.3 +1.0
BFO   Black Forest      3.72 303  P     Pn     13 58 23.4 +1.1
BFO   Black Forest      3.72 303  P     Pn     13 58 23.1 +0.8
BFO   Black Forest      3.72 303  ePn   Pn     13 58 23.9 +1.5
BFO                               eSn   Sn     13 59 08.1 +1.5
FELD  Feldberg im Sc    3.72 295  P     Pn     13 58 23.6 +1.1
FELD  Feldberg im Sc    3.72 295  S     Sn     13 59 08.0 +1.3
PRU   Pruhonice         3.74  15  ePN   Pn     13 58 23.7 +1.1
PRU                               eSG   Sg     13 59 24.6 +0.3
      comp=N,385nm,0.6s
BALST Balsthal          3.76 286  P     Pn     13 58 24.7 +1.7
BALST Balsthal          3.76 286  S     Sn     13 59 08.5 +0.9
BALST Balsthal          3.76 286  ePn   Pn     13 58 24.5 +1.5
VRAC  Vranov            3.79  38  Pn    Pn     13 58 23.6 +0.4
      comp=N,4.0nm,0.3s,baz=233,slow=13,SNR=14
VRAC                              Sn    Sn     13 59 03.6 -4.6
      comp=N,4.6nm,0.3s,baz=260,slow=10.0,SNR=6.7
VRAC                              Lg    Lg     13 59 19.7
      comp=N,8.6nm,0.3s,baz=132,slow=15,SNR=9.1
VRAC                              LR    LR     14 00 07.2
      comp=N,185nm,19.2s,baz=226,slow=44
      comp=N,8.0nm,0.3s
VRAC  Vranov            3.79  38  ePN   Pn     13 58 23.2  0.0
VRAC  Vranov            3.79  38 ⇑P     Pn     13 58 22.9 -0.4
PRA   Prague            3.80  14  ePN   Pn     13 58 24.8 +1.4
PRA                               eSG   Sg     13 59 24.9 -1.4
KIZ   Kirchzarten       3.81 296  P     Pn     13 58 25.0 +1.5
KIZ   Kirchzarten       3.81 296  S     Sn     13 59 10.0 +1.4
ENDD  Endenburg         3.84 292  P     Pn     13 58 25.3 +1.4
OPP   Oppenau           3.89 305  P     Pn     13 58 26.4 +1.8
SRO   Srobarova         3.90  67  ePN   Pn     13 58 25.1 +0.4
SRO                               ePG   Pg     13 58 38.2 -0.6
SRO                               eSN   Sn     13 59 12.5 +1.8
DIX   Grande Dixence    3.90 267  P     Pn     13 58 27.8 +2.8
MORH  Mrgy, Hungar      3.91  91 ⇑P     Pn     13 58 25.5 +0.6
BABA  Baden-Baden-Ne    4.00 307  P     Pn     13 58 28.1 +2.0
BABA  Baden-Baden-Ne    4.00 307  S     Sn     13 59 13.7 +0.3
JAVC  Velka Javorina    4.01  50  ePN   Pn     13 58 27.3 +1.0
VOGT  Vogtsburg - To    4.01 297  P     Pn     13 58 28.0 +1.8
CANO  Canova, Maglio    4.01 239  P     Pn     13 58 26.9 +0.6
BOURR Bourrignon        4.08 286  P     Pn     13 58 28.9 +1.5
FAGN  Fagnano           4.15 174  AML       AML
      comp=E,640µm,0.5s
FAGN                          AML       AML
      comp=N,417µm,0.4s
RORO  Rocca Rossa       4.17 239  P     Pn     13 58 28.5 +0.1
RORO  Rocca Rossa       4.17 239  S     Sn     13 59 16.4 -1.1
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NEEW	Neewiller pres	4.19	310	P	Pn	13 58 31.5	+2.8
AIGLE	Aigle	4.19	272	P	Pn	13 58 31.1	+2.3
AIGLE	Aigle	4.19	272	S	Sn	13 59 20.9	+2.8
RSP	Reno Superiore	4.20	255	P	Pn	13 58 28.0	-1.0
WALT	Westhalten	4.21	294	P	Pn	13 58 30.9	+1.9
RICC	Richard	4.22	10	ePN	Pn	13 58 29.3	+0.2
GBOS	Grotte di Boss	4.23	241	P	Pn	13 58 30.5	+1.1
MORSI	Morsiglia	4.31	218	P	Pn	13 58 29.7	-0.7
MORSI				S	Sn	13 59 18.7	-2.2
BHB	Bricherasio	4.32	251	P	Pn	13 58 30.4	-0.1
WLS	Welschbruch	4.34	300	P	Pn	13 58 32.5	+1.7
WLS				S	Sn	13 59 24.9	+3.1
MOX	Moxa	4.36	348	ePn	Pn	13 58 31.5	+0.5
MOX				eSn	Sn	13 59 20.9	-1.3
HOHE	HOHENGOEFT	4.37	303	P	Pn	13 58 32.3	+1.0
HOHE				S	Sn	13 59 25.4	+2.9
ECH	Echery	4.38	297	P	Pn	13 58 32.8	+1.5
ECH				S	Sn	13 59 24.7	+2.0
CDF	Champ du Feu	4.38	300	eP	Pn	13 58 32.6	+1.1
CDF				eSn	Sn	13 59 21.4	-1.6
	comp=N,36nm,0.4s						
MAUC	Maruska	4.40	46	ePN	Pn	13 58 32.7	+1.0
LEMB	Lembach	4.42	309	P	Pn	13 58 33.6	+1.7
LEMB				S	Sn	13 59 26.1	+2.5
PIAF	les Granges de	4.43	241	P	Pn	13 58 33.0	+0.9
PIAF				S	Sn	13 59 24.2	0.0
HINF	Hinteralfeld	4.44	291	eP	Pn	13 58 32.9	+0.7
HINF				eSn	Sn	13 59 18.5	-5.7
	comp=N,70nm,0.3s						
CHMF	Charmoille	4.45	283	P	Pn	13 58 33.7	+1.4
CHMF				S	Sn	13 59 24.3	-0.2
VYHS	Vyhne	4.48	60	ePN	Pn	13 58 32.2	-0.5
VYHS				ePG	Pg	13 58 48.8	-1.2
VYHS				eSN	Sn	13 59 23.9	-1.4
VYHS				eSG	Sg	13 59 54.0	+6.0
ENR	Entracque	4.49	243	P	Pn	13 58 32.8	-0.2
ENR	Entracque	4.49	243	S	Sn	13 59 24.3	-1.4
BRG	Berggiesshubel	4.53	8	Pn	Pn	13 58 34.3	+0.9
BRG				Pg	Pg	13 58 50.1	-0.7
BRG				Sn	Sn	13 59 26.7	+0.3
BRG				Sg	Sg	13 59 45.2	-4.3
BRG				Amp		14 00 02.5	
	comp=Z,284nm,0.9s						
CIEL	Dossenheim-sur	4.53	305	P	Pn	13 58 35.4	+2.0
BRANT	Les Verrieres	4.53	279	S	Sn	13 59 26.9	+0.3
BRANT	Les Verrieres	4.53	279	P	Pn	13 58 35.3	+1.8
DPC	Dobruska-Polom	4.54	28	ePN	Pn	13 58 33.0	-0.5
SAOF	Saorge	4.54	240	P	Pn	13 58 34.0	+0.4
VVLD	Villa Vallelon	4.54	174	AML	AML		
	comp=E,206µm,1.2s						
VVLD				AML	AML		
	comp=N,178µm,1.2s						
STV	Sant Anna di V	4.54	244	P	Pn	13 58 34.3	+0.6
MORC	Moravsky Berou	4.55	40	ePN	Pn	13 58 33.5	-0.2
MORC	Moravsky Berou	4.55	40	⇓P	Pn	13 58 34.6	+0.8
UPC	Upice	4.58	25	ePN	Pn	13 58 34.5	+0.4
TURF	col de Turini	4.64	241	P	Pn	13 58 35.8	+0.7
TURF				S	Sn	13 59 28.7	-0.8
CHVC	Chvalec	4.66	25	ePN	Pn	13 58 35.1	-0.2
MBDF	Montbardon	4.68	251	ePn	Pn	13 58 35.0	-0.7
OSTC	Ostas	4.68	26	ePN	Pn	13 58 35.5	0.0
SPIF	crte de Spivo	4.70	242	P	Pn	13 58 36.3	+0.5
BOUC	Bouclans	4.71	283	P	Pn	13 58 37.4	+1.5
BOUC				S	Sn	13 59 32.3	+1.4
VOEL	Voellerdingen	4.74	305	P	Pn	13 58 38.2	+2.0
ESCA	l'Escarene	4.74	239	P	Pn	13 58 37.6	+1.3
ISO	Isola	4.75	244	P	Pn	13 58 35.8	-0.6
SURF	Saint Ours	4.76	249	P	Pn	13 58 37.0	+0.3
CABF	La Chapelle	4.78	275	eP	Pn	13 58 38.4	+1.5
XAFF	Xaffevillers	4.78	297	P	Pn	13 58 37.9	+1.1
HAPS	Han Pijesak,BI	4.79	117	⇑iPn	Pn	13 58 37.8	+0.7
HAPS				eSn	Sn	13 59 32.0	-1.0
PGF	Pioggiola	4.79	218	ePn	Pn	13 58 36.0	-1.1
PGF				eSn	Sn	13 59 30.3	-2.8
	comp=N,8.8nm,0.2s						
PGF	Pioggiola	4.79	218	P	Pn	13 58 37.0	-0.1
PGF	Pioggiola	4.79	218	S	Sn	13 59 31.7	-1.4
HAU	Haudompre	4.82	292	eP	Pn	13 58 38.2	+0.8
HAU				eSn	Sn	13 59 27.8	-5.7
	comp=N,113nm,0.6s						
JAUF	Jausiers	4.82	248	P	Pn	13 58 38.2	+0.6
STON	Ston	4.86	135	⇑iPn	Pn	13 58 38.9	+1.0
STON				eSn	Sn	13 59 33.7	-0.8
TNS	Taunus Mts	4.89	323	ePn	Pn	13 58 40.1	+1.7
TNS				eSn	Sn	13 59 36.5	+1.0
RIVEL	MONT RIVEL	4.90	277	P	Pn	13 58 39.1	+0.6
RIVEL				S	Sn	13 59 34.2	-1.3
FRGS	Fruska Gora	4.92	102	ePn	Pn	13 58 38.7	-0.1
FRGS				eSn	Sn	13 59 35.3	-0.8
CLL	Collm	4.92	360	i Pn	Pn	13 58 39.8	+1.1
	comp=Z,28nm,0.7s						
CLL				ePg	Pg	13 58 58.0	-0.4
CLL				ex	x	13 59 37.0	
CLL				eSg	Sg	14 00 00.0	-2.1
	comp=Z,411nm,0.9s						
PSZ	Piszkesteto	4.94	70	⇓P	Pn	13 58 40.0	+0.9
TEKS	Tekeris	4.95	110	ePn	Pn	13 58 39.8	+0.7
TEKS				eSn	Sn	13 59 35.6	-1.1
ENAUX	Enaux	4.95	245	P	Pn	13 58 40.8	+1.5
OGMY	Moye	4.97	267	P	Pn	13 58 41.2	+1.7
FOURG	Fourg	5.00	281	P	Pn	13 58 40.9	+1.1
ABH	Alteburg	5.05	316	P	Pn	13 58 42.6	+2.0
CALF	Calern	5.05	241	P	Pn	13 58 41.3	+0.6
ETNF	Estrennes	5.09	294	P	Pn	13 58 43.0	+1.9
OGSM	Saint Maurice	5.15	264	P	Pn	13 58 42.4	+0.4
LANS	Liptovska Anna	5.16	55	ePN	Pn	13 58 42.8	+0.7
BBLS	Lazi&#263i	5.18	117	ePn	Pn	13 58 42.8	+0.3
BBLS				eSn	Sn	13 59 41.3	-1.4
GRN	Grenoble	5.20	260	P	Pn	13 58 45.2	+2.4
ORIF	Oris-en-Rattie	5.21	256	eP	Pn	13 58 44.8	+2.0
ORIF				eSn	Sn	13 59 40.3	-3.0
	comp=Z,14nm,0.3s						
ORIF	Oris-en-Rattie	5.21	256	P	Pn	13 58 45.0	+2.2
BRY	Bratogost	5.27	129	ePn	Pn	13 58 44.0	+0.3
RUDO	Rudo	5.30	119	ePn	Pn	13 58 44.3	+0.3
RUDO				eSn	Sn	13 59 43.8	-1.6
TREB	Trebinje	5.30	132	ePn	Pn	13 58 45.0	+1.0
TREB				eSn	Sn	13 59 44.7	-0.7
TRIGF	Trigance	5.37	243	P	Pn	13 58 45.4	+0.4
MANO	Manonville	5.37	300	P	Pn	13 58 47.8	+2.8
PAGF	Fort de Pagny	5.39	296	eP	Pn	13 58 46.8	+1.6
PAGF				eSn	Sn	13 59 47.6	0.0
	comp=Z,26nm,0.3s						
KECS	Kecovo	5.49	65	ePN	Pn	13 58 47.2	+0.6
KECS				eSN	Sn	13 59 49.4	-0.7
LMR	La Mourre	5.54	239	eP	Pn	13 58 46.7	-0.5
LMR				eSn	Sn	13 59 46.5	-4.7
	comp=Z,13nm,0.4s						
NEUF	Neufchef	5.54	305	P	Pn	13 58 50.3	+3.1
HCY	Herceg Novi	5.57	133	ePn	Pn	13 58 48.3	+0.6
WLF	Walferdange	5.64	308	P	Pn	13 58 52.2	+3.6
WLF	Walferdange	5.64	308	dP	Pn	13 58 48.4	-0.3
WLF				dS	Sn	13 59 56.4	+2.5
WLF	Walferdange	5.64	308	ePn	Pn	13 58 51.6	+3.0
KASTN	Kahler Asten	5.69	329	Pn	Pn	13 58 51.4	+2.1
SFTF	Sexfontaines	5.71	291	ePn	Pn	13 58 50.9	+1.2
	baz=112						
SFTF				eSn	Sn	13 59 54.4	-1.2
	comp=Z,12nm,0.3s						
SMRF	Simiane la Rot	5.78	248	eP	Pn	13 58 51.9	+1.3
SMRF				eSn	Sn	13 59 52.9	-4.4
	comp=Z,11nm,0.4s						
ARTF	Artigues	5.83	244	P	Pn	13 58 51.3	+0.1
RUSF	Rustrel	5.85	248	P	Pn	13 58 53.7	+2.1
SJES	Sjenica	5.86	120	ePn	Pn	13 58 51.5	-0.3
PDG	Podgorica	5.98	129	ePn	Pn	13 58 53.5	+0.2
PDG				eSn	Sn	14 00 00.5	-1.5
PDG	Podgorica	5.98	129	⇑P	Pn	13 58 54.1	+0.8
SSB	Saint Sauveur	6.02	262	P	Pn	13 58 53.7	-0.2
VIVF	Saint-Julien-l	6.04	258	ePn	Pn	13 58 54.9	+0.7
VIVF				eSn	Sn	14 00 00.7	-3.0
	comp=Z,3.0nm,0.3s						
BZS	Buzias	6.05	94	⇑P	Pn	13 58 55.0	+0.7
DRME	Dracevica, Mon	6.11	131	ePn	Pn	13 58 55.2	+0.1
BTNL	Ternell	6.20	315	dP	Pn	13 58 59.0	+2.6
BTNL				dS	Sn	14 00 06.8	-0.9
MEM	Membach	6.28	315	dP	Pn	13 58 59.5	+2.1
MEM				dS	Sn	14 00 08.4	-1.0
BUG	Bochum--Univer	6.31	325	Pn	Pn	13 59 00.7	+2.9
STHS	Stebnicka Huta	6.31	58	ePN	Pn	13 58 58.8	+0.9
STHS				eSG	Sg	14 00 58.9	+12
SMF	Signal de Mont	6.33	276	eP	Pn	13 58 59.0	+0.9
SMF				eSn	Sn	14 00 05.3	-5.5
	comp=Z,43nm,0.6s						
LOR	Lormes	6.34	281	ePn	Pn	13 58 58.6	+0.4
	baz=95						
LOR				eSn	Sn	14 00 04.2	-6.8
	comp=Z,16nm,0.3s						
MATE	Matera	6.34	154	⇑P	Pn	13 58 56.1	-2.1
BSTI	Sart Tilman	6.48	313	dP	Pn	13 59 02.8	+2.6
BCLA	Clavier	6.52	311	dP	Pn	13 59 03.7	+3.0
BCLA				dS	Sn	14 00 15.4	0.0
SSF	Saint Saulge	6.56	279	ePn	Pn	13 59 00.3	-1.0
SSF	Saint Saulge	6.56	279	eP	Pn	13 59 03.3	+2.0
SSF				eSn	Sn	14 00 09.1	-7.4
	comp=Z,10nm,0.4s						
GIVF	Givet	6.60	307	eP	Pn	13 59 04.9	+3.0
GIVF				eSn	Sn	14 00 12.7	-4.8
	comp=Z,48nm,0.6s						
BGES	Gesves	6.61	310	dP	Pn	13 59 05.0	+3.0
BGES				dS	Sn	14 00 16.9	-0.8
AVF	Avril sur Loir	6.66	277	eP	Pn	13 59 03.6	+0.9
AVF				eSn	Sn	14 00 13.8	-5.2
	comp=Z,37nm,0.8s						
DOU	Dourbes	6.73	306	dP	Pn	13 59 06.6	+3.0
DOU				dS	Sn	14 00 19.8	-0.7
BMRD	Maredsous	6.74	308	dP	Pn	13 59 06.4	+2.7
BOVS	Bovan	6.75	111	⇑P	Pn	13 59 05.4	+1.4
KOLS	Kolonicke sedl	6.76	65	ePN	Pn	13 59 05.0	+1.0
HERR	Herculane	6.77	100	⇓P	Pn	13 59 05.4	+1.3
IBBN	Ibbenburen	6.84	332	Pn	Pn	13 59 07.9	+2.8
LASF	Ste Croix	6.86	254	ePn	Pn	13 59 05.2	-0.2
LASF				eSn	Sn	14 00 18.4	-5.5
	comp=Z,29nm,0.7s						
GZR	Gura Zlata	6.89	95	⇓P	Pn	13 59 07.3	+1.3
BAIF	Baives	6.93	305	eP	Pn	13 59 09.2	+2.9
BGF	Bois d'Agland	7.02	275	ePn	Pn	13 59 08.4	+0.8
BGF				eSn	Sn	14 00 22.0	-5.7
	comp=Z,60nm,0.6s						
HYF	Humbligny	7.17	281	eP	Pn	13 59 11.6	+2.0
HYF				eSn	Sn	14 00 27.5	-3.8
TCF	Toulx Ste Croi	7.47	273	eP	Pn	13 59 15.2	+1.4
TCF				eSn	Sn	14 00 33.0	-6.0
	comp=Z,24nm,0.6s						
CAF	Calviac	7.80	263	eP	Pn	13 59 19.8	+1.4
CAF				eSn	Sn	14 00 40.9	-6.2
	comp=Z,5.2nm,0.4s						
MTLF	Montolieu	8.25	252	eP	Pn	13 59 25.0	+0.6
MFF	Saint Martin d	9.08	276	eP	Pn	13 59 37.7	+1.9
KEST	Kesra	11.00	196	Pn	Pn	14 00 03.5	+1.3
	comp=Z,0.3nm,0.3s,baz=8.8,slow=2.7,SNR=4.6						
KEST				LR	LR	14 04 27.2	
	comp=Z,90nm,20.7s,baz=360,slow=38						
	comp=Z,3.8nm,0.7s						
AKASG	Malin Array Be	11.58	62	Pn	Pn	14 00 08.9	-1.1
	comp=Z,0.3nm,0.3s,baz=253,slow=13,SNR=4.1						
AKASG				LR	LR	14 04 45.2	
	comp=Z,32nm,18.8s,baz=235,slow=39						
	comp=Z,1.2nm,0.6s						
EKA	Eskdalemuir Ar	13.55	317	Pn	Pn	14 00 38.1	+1.3
	comp=Z,1.7nm,0.4s,baz=128,slow=14,SNR=19						
HFS	Hagfors	13.77	1	Pn	Pn	14 00 40.3	+0.4
	comp=Z,0.1nm,0.3s,baz=198,slow=14,SNR=4.4						
HFS				LR	LR	14 06 18.1	
	comp=Z,87nm,21.7s,baz=170,slow=39						
	comp=Z,1.5nm,0.8s						
ESDC	Sonseca Array	14.10	248	Pn	Pn	14 00 47.2	+2.7
	comp=Z,0.1nm,0.3s,baz=77,slow=13,SNR=6.1						
ESDC				LR	LR	14 07 17.3	
	comp=Z,23nm,19.2s,baz=16,slow=42						
	comp=Z,0.4nm,0.6s						
NB2	NORSAR Subarra	14.71	357	P	P	14 00 59.8	+0.7
	comp=Z,5.0nm,0.9s,baz=175,slow=11						
NOA	NORSAR Array B	14.71	357	Pn	Pn	14 00 52.8	-0.1
	baz=174,slow=12,SNR=7.5						
NOA				LR	LR	14 06 43.7	
	comp=Z,41nm,19.3s,baz=185,slow=38						
	comp=Z,0.7nm,1.0s						
FINES	FINESS Array B	16.88	22	Pn	Pn	14 01 19.0	-1.9
	comp=Z,0.2nm,0.3s,baz=213,slow=14,SNR=6.0						
FINES				LR	LR	14 08 37.8	
	comp=Z,92nm,18.1s,baz=220,slow=40						
	comp=Z,1.8nm,0.7s						
ARCES	ARCESS Array B	24.04	11	P	P	14 02 39.0	-0.8
	comp=Z,1.1nm,0.6s,baz=198,slow=11,SNR=4.6						
ARCES				LR	LR	14 10 52.6	
	comp=Z,30nm,21.4s,baz=146,slow=34						
	comp=Z,1.1nm,0.6s						
ARTI	Arti	29.52	53	LR	LR	14 15 14.0	
	comp=Z,30nm,20.1s,baz=206,slow=36						
DBIC	Dimbokro	42.47	207	LR	LR	14 23 45.0	
	comp=Z,43nm,19.3s,baz=174,slow=37						
MKAR	Makanchi Array	46.16	63	P	P	14 05 48.8	-0.8
	comp=Z,0.2nm,0.5s,baz=305,slow=5.1,SNR=2.0						
	comp=Z,0.2nm,0.5s						
ASAR	Alice Springs	127.88	85	PKP	PKPdf	14 16 30.4	-0.6
	comp=Z,0.2nm,0.5s,baz=309,slow=1.1,SNR=7.2						

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*KOLA **14** 14:25:28.5, 67°.67N×34°.22E, h0^{km}, ML2.0, Error ellipse: s-maj=3.3km s-min=1.3km az=130.0, Khibiny, mines Koashva, Nyurkpakh*

*HEL **14** 14:25:29.6±0.2, 67°.74N×34°.19E, h0^{km}, ML2.1, Explosion*

*IDC **14** 14:25:33.4±2.6, 67°.59N×33°.20E, h0^{km}, mbtmp2.6/2, ML1.9/2, Error ellipse: s-maj=29.9km s-min=11.8km az=73.0*

ISC 14 14:25:27.8±0.9**, 67°.68N**±0°.04×**34°.21E**±0°.04**, h0^{km}, n18, σ0^{s}.82**/33**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVZ	Lovozero	0.28	37	P	Pg	14 25 33.3	+0.2
LVZ				S	Sg	14 25 37.3	+0.5
LVZ	Lovozero	0.28	37	eP	Pg	14 25 33.3	+0.2
LVZ				eS	Sg	14 25 37.7	+0.9
APA	Apatity	0.33	251	P	Pg	14 25 34.4	+0.3
APA				S	Sg	14 25 39.0	+0.7
APA0	Apatity Array	0.47	262	P	Pg	14 25 36.6	-0.3
APA0				S	Sg	14 25 43.2	+0.2
KVDA	Kovda	1.12	209	P	Pg	14 25 48.6	-0.6
KVDA				S	Sg	14 26 03.2	-0.4
TERR	Teriberka	1.57	12	P	Pn	14 25 56.1	-0.7
TERR				S	Sn	14 26 17.0	-0.9
VRF	Varrio	1.76	274	eP	Pb	14 26 00.6	-0.3
VRF				eS	Sn	14 26 22.4	-0.2
VRF				MSG		14 26 27.2	
	comp=Z,13nm,0.2s						
OLKF	Oulanka, Finla	2.33	236	ePB	Pb	14 26 10.4	-0.2
OLKF				eSB	Sb	14 26 40.1	+0.2
OLKF				MSN		14 26 41.3	
	comp=Z,2.5nm,0.2s						
RAJF	Raja-Jooseppi	2.36	293	ePB	Pb	14 26 10.2	-0.9
RAJF				eSB	Sb	14 26 39.5	-1.2
KU6	Riekki	2.38	228	eP	Pb	14 26 10.6	-0.9
KU6				eS	Sb	14 26 41.4	+0.1
KU6				MSN		14 26 44.4	
	comp=Z,4.4nm,0.3s						
MSF	Maaselka	2.71	232	eS	Sb	14 26 48.9	-1.9
MSF				MSN		14 26 54.2	
	comp=Z,1.9nm,0.2s						
SGF	Sodankyl	2.96	269	ePB	Pb	14 26 20.8	-0.6
SGF				eS	Sn	14 26 53.8	+1.7
VADS	Vadso	3.02	327	P	Pn	14 26 17.2	+0.5
VADS				S	Sn	14 26 53.8	+0.2
KU2	Taivalkoski	3.09	233	ePB	Pb	14 26 23.0	-0.6
KU2				eSB	Sb	14 27 02.8	+1.0
KEV	Kevo	3.36	312	eP	Pn	14 26 22.5	+1.1
KEV				eS	Sn	14 27 01.5	-0.4
ARCES	ARCESS Array B	3.70	304	Pn	Pn	14 26 26.1	0.0
	comp=Z,0.2nm,0.3s,baz=120,slow=14,SNR=24						
ARCES				Pg	Pb	14 26 34.5	+0.6
	comp=Z,0.1nm,0.3s,baz=124,slow=14,SNR=5.0						
ARCES				Sn	Sn	14 27 09.4	-0.9
	comp=Z,0.4nm,0.3s,baz=126,slow=28,SNR=9.5						
ARCES				Lg	Lg	14 27 21.6	
	comp=Z,1.0nm,0.3s,baz=123,slow=31,SNR=11						
	comp=Z,0.5nm,0.3s						
I37NO	I37NO	5.94	291	I	I	15 01 20.0	
	baz=98,slow=316,SNR=1.5						
FINES	FINESS Array B	7.16	213	Pn	Pn	14 27 15.2	+1.5
	comp=Z,0.1nm,0.3s,baz=27,slow=16,SNR=1.2						
FINES				Lg	Lg	14 29 07.8	
	comp=Z,0.1nm,0.3s,baz=41,slow=28,SNR=2.1						
	comp=Z,0.6nm,0.8s						

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*TIR **14** 14:32:17.8, 40°.48N×20°.77E, h6^{km}±1^{km}, Md3.2/6, Ml2.6/5*

*ATH **14** 14:32:20.4, 40°.45N×20°.95E, h11^{km}±4^{km}, ML2.3/11, Manual Solution by N.Liadopoulou First location: 2019/06/14 14:33:30, This location: 2020/06/29 17:02:37 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 10 km; Longitude uncertainty: 4 km*

ISC 14 14:32:18.9±1.1**, 40°.48N**±0°.02×**20°.82E**±0°.03**, h3^{km}**±13^{km}**, n28, σ0^{s}.89**/37**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.14	351	Pg	Pg	14 32 20.4	-1.3
KBN				Sg	Sg	14 32 22.8	-0.8
KBN				AML	AML	14 32 23.8	
	13nm,0.4s						
NEST	Nestorio	0.19	110	Pg	Pg	14 32 22.8	+0.2
NEST				Sg	Sg	14 32 26.5	+1.4
NEST				AML	AML	14 32 31.4	
	5.1nm,0.3s						
NEST				AMd		14 33 24.5	
NEST	Nestorio	0.19	110	P	Pg	14 32 23.3	+0.7
PENT	Pentalofos	0.38	139	P	Pg	14 32 26.7	+0.6
OHR	Ohrid	0.63	359	i Pg	Pg	14 32 30.8	-0.1
OHR				i Sg	Sg	14 32 40.9	+1.8
KPRO	Kipourio	0.67	141	P	Pg	14 32 31.8	+0.1
SRN	Sarande	0.87	226	Pg	Pg	14 32 34.9	-0.5
SRN				Sg	Sg	14 32 47.9	+1.2
SRN				AML	AML	14 32 58.2	
	0.3nm,0.5s						
SRN				AMd		14 33 45.1	
IGT	Igoumenitsa	1.02	202	Pg	Pg	14 32 37.8	-0.6
IGT				Sg	Sg	14 32 50.8	-0.7
IGT				AMd		14 34 07.8	
IGT	Igoumenitsa	1.02	202	P	Pb	14 32 38.8	-0.4
KEK	Kerkira	1.09	226	P	Pn	14 32 42.4	+1.2
THL	Klokotos Trika	1.30	134	P	Pg	14 32 43.4	-0.3
TYRN	Tyrnavos	1.33	125	P	Pn	14 32 43.4	-1.0
SKO	Skopje	1.56	17	i Pn	Pb	14 32 48.6	+0.2
SKO				eSn	Sb	14 33 08.4	-0.2
VAY	Valandovo	1.57	57	i Pn	Pb	14 32 47.6	-1.0
VAY				eSn	Sg	14 33 10.6	+1.2
TSLK	Tsoukalades, L	1.66	184	P	Pb	14 32 49.6	-0.4
LKD2	Lefkada island	1.69	184	Pn	Pb	14 32 50.2	-0.5
LKD2				AMd		14 34 08.0	
LKD2	Lefkada island	1.69	184	P	Pn	14 32 49.5	+0.1
PUK	Puka	1.71	336	Pn	Pn	14 32 50.1	+0.5
PUK				Sn	Sg	14 33 14.3	+0.6
PUK				AML	AML	14 33 21.6	
	0.2nm,0.6s						
PUK				AMd		14 34 10.2	
EVR	Evrytania	1.74	154	P	Pn	14 32 49.6	-0.5
NYDR	Nydri-Lefkada	1.77	183	P	Pb	14 32 50.8	-1.1
MAKR	Makrakomi, Fth	1.78	145	P	Pn	14 32 50.2	-0.4
SCTE	Santa Cesarea	1.84	258	Pn	Pn	14 32 51.5	+0.2
SCTE				Sn	Sb	14 33 18.1	+1.4
SCTE				AML	AML	14 33 25.9	
	0.3nm,0.6s						
SCTE				AMd		14 34 18.3	
EVGI	Lefkada island	1.86	184	P	Pn	14 32 51.8	+0.1
AGG	Agios Georgios	1.87	141	P	Pb	14 32 52.2	-1.4
PVO	Paravola	1.94	163	P	Pb	14 32 53.6	-1.2
ANX	Ano Chora	2.07	155	P	Pn	14 32 55.1	+0.4
EFP	Efpalio	2.22	157	P	Pn	14 32 55.6	-1.0
SERG	Sergoula	2.28	155	P	Pn	14 32 58.1	+0.7

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*NIED **14** 14:33:18.9, 36°.78N×141°.08E, h47^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.57; $M_{\theta\theta}$0.78; $M_{\phi\phi}$-0.21; $M_{r\theta}$0.84; $M_{\theta\phi}$0.13; $M_{\phi r}$1.54; Fault plane solution: $M_0$1.87000×10^{14} NP1: ϕ_s103.00000°, δ18.00000°, λ-23.00000°. NP2: ϕ_s216.00000°, δ83.00000°, λ-107.00000°.*

JMA 14 14:33:18.9±0.1**, 36°.8N**±0°.3×**141°.1E**±0°.7**, h47^{km}**±1^{km}**, MV3.6**/32**, 12D, E OFF IBARAKI PREF, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.39	324	⇓P	Pn	14 33 28.5	-0.3
ONAJ				⇓eS	Sn	14 33 35.0	-0.8
JHO	Hitachi	0.45	247	⇓P	Pn	14 33 29.2	-0.1
JHO				⇓eS	Sn	14 33 36.4	-0.4
JFFD	Fukushimafurud	0.52	306	⇓P	Pn	14 33 30.2	0.0
JFFD				⇓S	Sn	14 33 38.1	-0.2
JHYU	Hitachinakayam	0.60	222	⇓P	Pn	14 33 31.0	-0.1
JHYU				⇓S	Sn	14 33 39.6	-0.4
JFK	Kawauchi	0.60	344	⇓P	Pn	14 33 31.0	-0.4
JFK				⇓S	Sn	14 33 39.5	-0.8
JOTO	OTAMA OYAMA	0.98	323	P	Pn	14 33 37.0	+0.8
JOTO				S	Sn	14 33 50.1	+1.0
JMM	Marumori	1.10	348	⇓P	Pn	14 33 37.7	-0.2
JMM				⇓eS	Sn	14 33 51.5	-0.6

MEX 14 15:01:48.9±0.8**, 17°.06N**×**92°.79W, h5^{km}**±9^{km}**, MD4.1, 1D, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGBT	Tuxtla Gutierr	0.41	226	i P	Pg	15 01 56.5	-0.3
TGBT				i S	Sg	15 02 03.1	+1.0
TGIG		0.43	229	⇓eP	Pg	15 01 56.9	-0.3
	baz=49,slow=14						
TGIG				i S	Sg	15 02 02.7	-0.2
CCIG	Comitan	0.99	141	eP	Pg	15 02 05.4	-2.6
CCIG				i S	Sg	15 02 18.2	-2.7
PCIG		1.41	197	eP	Pn	15 02 12.2	-3.1
PCIG				eS	Sb	15 02 28.4	-5.7
PAVE	Pavencul	1.95	162	eP	Pn	15 02 18.9	-4.0
PAVE				eS	Sn	15 02 42.8	-5.0
PATR	El Naranjo	2.01	165	eP	Pn	15 02 20.8	-2.9
PATR				eS	Sn	15 02 45.7	-3.6
HUEH	Huehuetenango	2.13	144	eS	Sn	15 02 50.8	-1.5
PETF	Flores	2.80	93	eP	Pn	15 02 25.1	-9.2
PETF				eS	Sn	15 03 01.3	-7.2
HUIG	Huatulco	3.44	248	eP	Pn	15 02 42.8	-0.4
HUIG				eS	Sn	15 03 20.0	-4.3
VHO	Vista Hermosa	3.78	271	eP	Pn	15 02 46.7	-1.3
VHO				eS	Sn	15 03 27.9	-5.1
TOIG	Toxpalan	4.21	285	eP	Pn	15 02 48.7	-5.2
TOIG				eS	Sn	15 03 34.6	-9.0
PEIG	Puerto Escondi	4.32	256	eP	Pn	15 02 54.9	-0.3
PEIG				eS	Sn	15 03 46.9	+0.9
YOIG	Yosondua	4.56	268	eP	Pn	15 02 54.2	-4.7
YOIG				eS	Sn	15 03 47.7	-4.7
TXIG	Tlaxiaco	4.77	273	eP	Pn	15 02 58.6	-3.1
TXIG				eS	Sn	15 03 49.7	-7.8
PNIG	Pinotepa	5.16	263	eP	Pn	15 03 04.3	-2.6
PNIG				eS	Sn	15 04 00.8	-6.1
FTIG	Fresnillo de T	5.17	280	eP	Pn	15 03 05.2	-1.9
FTIG				eS	Sn	15 04 00.3	-7.0

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*HEL **14** 15:06:45.9±0.1, 59°.80N×27°.41E, h0^{km}, ML2.0, Explosion*

*EST **14** 15:06:46.2±0.1, 59°.81N×27°.38E, h0^{km}, ML2.0(HEL), Explosion*

*IDC **14** 15:06:47.8±1.2, 59°.90N×27°.29E, h0^{km}, mbtmp3.1/4, ML2.5/3, Error ellipse: s-maj=14.1km s-min=8.1km az=90.0*

ISC 14 15:06:44.5±0.8**, 59°.81N**±0°.02×**27°.33E**±0°.03**, h0^{km}, n32, σ1^{s}.57**/51**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EE04	Vaivara Sinima	0.52	147	eP	Pg	15 06 55.1	+0.7
EE04				eS	Sg	15 07 02.2	+1.1
VJF	Virojoki	0.74	9	eP	Pg	15 06 59.4	+0.7
VJF				eS	Sg	15 07 08.9	+0.6
PVF	Pernaja	1.04	316	eP	Pg	15 07 05.2	+0.7
PVF				eS	Sg	15 07 19.1	+1.1
EE03	Tooma soojaam,	1.08	210	eP	Pb	15 07 06.1	0.0
EE03				ePN	Pn	15 07 08.2	+1.3
EE03				eS	Sg	15 07 20.0	+0.7
HEL1	Helsinki	1.28	288	eP	Pg	15 07 09.5	+0.4
HEL1				eS	Sg	15 07 26.1	+0.4
HEL1				MSG		15 07 32.8	
	comp=Z,9.6nm,0.1s						
VSU	Vasula	1.39	193	eP	Pg	15 07 10.6	-0.4

VSU				*e*S	Sg	15 07 29.0	0.0
NUR	**Nurmijarvi**	1.51	299	*e*PG	Pn	15 07 13.8	+1.0
NUR				*e*S	Sn	15 07 33.6	+0.4
NUR				MSG		15 07 39.2	
	comp=Z,16nm,0.2s						
MEF	**Metsahovi**	1.53	287	*e*P	Pn	15 07 13.0	-0.1
MEF	**Metsahovi**	1.53	287	*e*PG	Pn	15 07 14.0	+1.0
MEF				*e*SB	Sg	15 07 34.7	+1.1
MEF				MSG		15 07 38.1	
	comp=Z,12nm,0.1s						
EE08	**Sarghaua, Vand**	1.58	224	*e*P	Pb	15 07 14.8	+0.3
EE08				*e*S	Sn	15 07 35.0	+0.2
FIA0	**FINESS Array S**	1.75	340	*e*P	Pn	15 07 16.8	+0.7
FIA0				*e*SN	Sb	15 07 41.0	+1.0
FIA0				MSG		15 07 44.3	
	comp=Z,8.6nm,0.2s						
FIA1	**FINESS Array S**	1.75	340	MSG		15 07 43.5	
	comp=Z,6.4nm,0.2s						
FINES	**FINESS Array B**	1.75	340	Pg	Pn	15 07 16.8	+0.7
	comp=Z,1.6nm,0.3s,baz=159,slow=16,SNR=115						
FINES				Lg	Lg	15 07 40.5	
	comp=Z,0.9nm,0.3s,baz=157,slow=33,SNR=5.3						
RUF	**Ruokolahti**	1.81	26	*e*P	Pn	15 07 17.1	+0.2
RUF				*e*SG	Sn	15 07 41.2	+0.8
RUF				MSG		15 07 44.2	
	comp=Z,21nm,0.1s						
EE07	**Piusa Caves, O**	1.98	178	*e*P	Pb	15 07 21.3	0.0
EE07				*e*SG	Sg	15 07 47.8	-0.1
TVF	**Tvarminne**	2.06	273	*e*PG	Pb	15 07 23.4	+0.6
TVF				*e*SG	Sb	15 07 50.1	+1.2
TVF				MSG		15 07 52.3	
	comp=Z,9.6nm,0.2s						
MTSE	**Matsula**	2.11	240	*e*P	Pb	15 07 23.6	0.0
MTSE	**Matsula**	2.11	240	*e*PG	Pb	15 07 24.1	+0.5
MTSE				*e*SG	Sg	15 07 52.3	0.0
KAF	**Kangasniemi**	2.37	348	*e*P	Pn	15 07 26.3	+1.7
KAF				*e*SB	Sb	15 07 57.6	-0.1
KAF				MSG		15 08 00.1	
	comp=Z,8.5nm,0.2s						
EE06	**Soera, Palade,**	2.44	252	*e*P	Pn	15 07 27.7	+2.1
EE06				*e*PB	Pb	15 07 28.9	-0.3
EE06				*e*SB	Sb	15 08 00.7	+0.9
KEF	**Keuruu**	2.65	334	*e*P	Pn	15 07 30.8	+2.3
KEF	**Keuruu**	2.65	334	*e*P	Pn	15 07 31.0	+2.5
SUF	**Sumiainen**	2.98	349	*e*P	Pn	15 07 35.4	+2.5
RAF	**Rauma**	3.02	296	*e*P	Pn	15 07 35.2	+1.7
RAF	**Rauma**	3.02	296	*e*P	Pn	15 07 35.7	+2.2
NIF	**Nilsia**	3.60	3	*e*P	Pn	15 07 43.7	+2.2
JOF	**Joensuu**	3.66	30	*e*P	Pn	15 07 43.7	+1.4
VAF	**Ylistaro**	3.94	327	*e*P	Pn	15 07 47.1	+0.9
HFS	**Hagfors**	6.85	279	Pn	Pn	15 08 25.7	-0.5
	comp=Z,0.1nm,0.3s,baz=92,slow=16,SNR=12						
HFS				Sn	Sn	15 09 42.2	-2.6
	comp=Z,0.3nm,0.3s,baz=100,slow=30,SNR=5.4						
HFS				Lg	Lg	15 10 16.5	
	comp=Z,0.5nm,0.3s,baz=87,slow=28,SNR=6.7						
	comp=Z,0.4nm,0.2s						
NOA	**NORSAR Array B**	8.07	286	Pn	Pn	15 08 42.5	-0.4
	baz=98,slow=9.9,SNR=8.7						
	comp=Z,0.1nm,0.4s						
AKASG	**Malin Array Be**	9.19	172	Pn	Pn	15 08 57.6	-0.6
	comp=Z,0.4nm,0.3s,baz=351,slow=13,SNR=4.3						
ARCES	**ARCESS Array B**	9.80	356	Pn	Pn	15 09 05.7	-0.8
	comp=Z,0.1nm,0.3s,baz=169,slow=15,SNR=15						
ARCES				Sn	Sn	15 10 49.7	-7.3
	comp=Z,0.1nm,0.3s,baz=175,slow=24,SNR=1.9						
ARCES				Lg	Lg	15 11 49.0	
	comp=Z,0.1nm,0.3s,baz=172,slow=33,SNR=1.5						
	comp=Z,1.5nm,0.8s						

DJA 14 15:13:43.0±1.1, 1˚S±2˚×12˚4E±˚, h19^{km}±9^{km}, M3.8/13, mB4.7/1, mb4.2/4, MLv3.6/13, Mw(mB)3.9/1, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	1.23	342	P	Pn	15 14 03.7	-1.5
KMSI				S	Sb	15 14 19.6	-1.5
LUWI	**Luwuk**	1.66	255	P	Pn	15 14 11.0	-0.1
LUWI				S	Sb	15 14 33.3	-0.2
SANI	**Sanana**	2.17	132	P	Pn	15 14 19.4	+1.3
SANI				S	Sn	15 14 43.7	-0.7
MRSI	**Marisa**	2.66	294	P	Pn	15 14 24.8	0.0
MRSI				S	Sn	15 14 54.5	-2.0
APSI	**Ampana**	2.74	264	P	Pn	15 14 26.4	+0.4
TTSI	**Tana Toraja**	5.16	242	P	Pn	15 14 56.9	-2.3
	0.1nm710nm14nm,0.6s						
BBSI	**Bau Bau**	5.18	200	P	Pn	15 14 58.4	-1.1
	21nm,1.0s						
SPSI	**Sidrap Palu**	5.68	234	P	Pn	15 15 06.8	+0.3
	0.1nm20nm,0.7s						
BNSI	**Bone**	5.69	228	P	Pn	15 15 06.5	-0.1

*IDC **14** 15:16:45.9±0.6, 49˚.95N×88˚.32E, h0^{km}, mb3.7/16, mbtmp3.9/24, ML3.8/8, MS3.2/15, Error ellipse: s-maj=10.5km s-min=7.9km az=172.0*

*MOS **14** 15:16:46.0±1.4, 49˚.85N×88˚.21E, h9^{km}, mb4.5/5, Error ellipse: s-maj=6.0km s-min=4.4km az=80.6*

*BJI **14** 15:16:47.8, 49˚.88N×88˚.14E, h7^{km}, mB4.4/2, mb4.3/9, ML4.6/7, Ms4.2/6*

*ASRS **14** 15:16:47.7±0.2, 50˚N±1˚×8˚8E±˚, h10^{km}, MLh4.9/19, Error ellipse: s-maj=2.9km s-min=2.3km az=21.0, confirmed*

*NEIC **14** 15:16:48.1±3.0, 49˚.98N±0˚.09×88˚.19E±0˚.07, h10^{km}±1^{km}, mb4.2/12, Error ellipse: s-maj=16.2km s-min=5.0km az=157.0*

*NNC **14** 15:16:49.9±3.0, 49˚.98N×87˚.83E, h0^{km}, mb4.8, mpv4.8, Error ellipse: s-maj=28.3km s-min=15.8km az=102.0*

ISC 14 15:16:48.5±0.8, 49˚.96N±0˚.03×88˚.15E±0˚.02, h15^{km}±5^{km}, n168, σ1^{s}76/198, mb3.8/20, MS3.3/12, 32C-24D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUR	**Chagan-Uzun**	0.20	42	⇓P	Pg	15 16 53.0	-0.3
CUR				S	Sg	15 16 56.6	+0.2
CUR	**Chagan-Uzun**	0.20	42	PG	Pg	15 16 52.9	-0.3
CUR				S	Sg	15 16 56.6	+0.2
AKAR	**Aktash**	0.50	317	⇓P	Pg	15 16 57.7	-0.8
AKAR				S	Sg	15 17 04.0	-1.3
AKAR	**Aktash**	0.50	317	PG	Pg	15 16 57.7	-0.8
AKAR				S	Sg	15 17 03.9	-1.3
DGZ	**Jazzator, Alta**	0.53	242	⇑P	Pg	15 16 57.5	-1.6
DGZ				S	Sg	15 17 03.7	-2.5
DGZ	**Jazzator, Alta**	0.53	242	PG	Pg	15 16 57.5	-1.6
DGZ				S	Sg	15 17 03.6	-2.5
CHBI	**Chibit, Altay**	0.55	311	⇓P	Pg	15 16 58.5	-1.0
CHBI				S	Sg	15 17 06.0	-0.8
CHBI	**Chibit, Altay**	0.55	311	PG	Pg	15 16 58.4	-1.0
CHBI				S	Sg	15 17 06.0	-0.8
ULGR	**Ulagan, Altay**	0.68	350	⇓P	Pg	15 17 00.1	-1.7
ULGR				S	Sg	15 17 09.6	-1.4
ULGR	**Ulagan, Altay**	0.68	350	PG	Pg	15 17 00.1	-1.7
ULGR				S	Sg	15 17 09.5	-1.4
TEL	**Teeli**	1.69	50	⇑P	Pg	15 17 20.4	-0.6
TEL				S	Sn	15 17 38.8	-0.1
TEL	**Teeli**	1.69	50	PN	Pg	15 17 20.3	-0.6
TEL				S	Sn	15 17 38.7	-0.1
ELDR	**Elanda**	1.82	315	⇓P	Pn	15 17 20.6	+1.3
ELDR				S	Sb	15 17 44.8	+0.7
ELDR	**Elanda**	1.82	315	PN	Pn	15 17 20.7	+1.4
ELDR						15 17 46.0	
YALR	**Yailyu, Altay**	1.85	350	⇓P	Pb	15 17 21.4	-0.6
YALR				S	Sn	15 17 43.0	+0.3
YALR	**Yailyu, Altay**	1.85	350	PN	Pb	15 17 21.4	-0.6
YALR				S	Sn	15 17 43.0	+0.3
ARTR	**Artybash**	1.93	344	⇓P	Pb	15 17 22.6	-0.6
ARTR				S	Sb	15 17 48.0	+0.9
ARTR	**Artybash**	1.93	344	PN	Pb	15 17 23.7	+0.4
ARTR						15 17 49.1	
GALT	**Gorno-Altaysk,**	2.44	326	⇑P	Pb	15 17 32.5	+0.4
GALT				S	Sn	15 17 58.0	+0.6
GALT	**Gorno-Altaysk,**	2.44	326	PN	Pb	15 17 32.5	+0.4
GALT				S	Sn	15 17 57.9	+0.6
TASR	**Tashtagol**	2.81	357	PN	Pg	15 17 40.5	-1.9
TASR						15 18 16.8	
ZSN	**Zaisan**	3.32	222	Pg	Pn	15 17 41.5	+1.6
	438nm,1.0s						
DJO	**Djoy, Khakassi**	3.42	33	Pg	Pg	15 17 51.6	-2.5
DJO				Sg	Sg	15 18 35.0	-3.4
KALT2	**Kaltan 2**	3.49	352	P	Pn	15 17 45.5	+3.3
DJOS	**Djoyskaya Sosn**	3.50	34	P	Pn	15 17 44.7	+2.4
DJOS	**Djoyskaya Sosn**	3.50	34	PN	Pn	15 17 44.6	+2.4
ELT	**Eltsovka**	3.52	341	⇓P	Pn	15 17 45.0	+2.4
ELT	**Eltsovka**	3.52	341	PN	Pn	15 17 44.9	+2.4
CERR	**Cheremushki**	3.55	34	⇑P	Pn	15 17 45.3	+2.3
VEH	**Verkhnyaya Baz**	3.57	21	⇑P	Pn	15 17 45.9	+2.5
VEH	**Verkhnyaya Baz**	3.57	21	PN	Pn	15 17 45.8	+2.5
KIYZ	**Kiyzas, Kuzbas**	3.62	356	P	Pn	15 17 47.0	+3.1
LUZB	**Luzhba, Kemero**	3.74	7	⇓P	Pn	15 17 48.5	+2.8
LUZB	**Luzhba, Kemero**	3.74	7	PN	Pn	15 17 48.4	+2.8
ZAA0	**Zalesovo Array**	4.50	334	Pn	Pn	15 17 57.9	+1.9
ZAA0	**Zalesovo Array**	4.50	334	⇓Pn	Pn	15 17 57.4	+1.4
	13nm,0.7s						
ZAA0				⇑Lg	Lg	15 19 09.1	
	110nm,0.8s						
ZALV	**Zalesovo Beam**	4.50	334	Pn	Pn	15 17 57.6	+1.7
	4.3nm,0.3s,baz=155,slow=13,SNR=44						
ZALV				Pg	Pb	15 18 07.9	+0.8
	14nm,0.3s,baz=151,slow=16,SNR=17						
ZALV				Sn	Sn	15 18 51.9	+3.9
	18nm,0.3s,baz=150,slow=18,SNR=3.6						
ZALV				Lg	Lg	15 19 08.9	
	37nm,0.3s,baz=139,slow=23,SNR=8.8						
ZALV				LR	LR	15 19 57.0	
	comp=Z,121nm,20.6s,baz=181,slow=42						
	18nm,0.3s						
SHRR	**Shira**	4.71	14	*i* PG	Pg	15 18 24.5	+5.8
SALR	**Pechorkino, Sa**	4.71	342	⇓P	Pn	15 18 01.7	+2.7
SALR	**Pechorkino, Sa**	4.71	342	PN	Pn	15 18 01.7	+2.7
MK31	**Makanchi Array**	5.02	233	⇑Pn	Pn	15 18 06.0	+2.8
	90nm,0.5s,baz=59,slow=12,SNR=1478						
MK31				⇑Sn	Sn	15 19 02.9	+1.8
	261nm,0.6s						
MK31				⇓Lg	Lg	15 19 26.3	
	706nm,0.9s						
MK31	**Makanchi Array**	5.02	233	*ce*PN	Pn	15 18 05.9	+2.6
MKAR	**Makanchi Array**	5.02	233		Pn	15 18 05.8	+2.5
MKAR	**Makanchi Array**	5.02	233	Pn	Pn	15 18 06.0	+2.7
	16nm,0.3s,baz=54,slow=14,SNR=606						
MKAR				Sn	Sn	15 19 02.1	+1.1
	41nm,0.3s,baz=50,slow=25,SNR=12						
MKAR				Lg	Lg	15 19 25.4	
	75nm,0.3s,baz=42,slow=29,SNR=6.5						
MKAR				LR	LR	15 19 28.1	
	comp=Z,150nm,19.6s,baz=284,slow=32						
	34nm,0.4s						
MKAR	**Makanchi Array**	5.02	233	⇑P	Pn	15 18 06.1	+2.8
MKAR	**Makanchi Array**	5.02	233	*i* PN	Pn	15 18 06.0	+2.7
MKAR				pmax	pmax		
	comp=Z,37nm,0.4s						
SEM	**Semipalatinsk**	5.10	278	Pg	Pn	15 18 07.9	+3.4
	comp=Z,71nm,0.5s						
MAKZ	**Makanchi**	5.18	235		Pn	15 18 07.9	+2.5
MAKZ	**Makanchi**	5.18	235	⇓Pn	Pn	15 18 07.8	+2.5
	comp=Z,68nm,0.6s						
MAKZ				⇑Lg	Lg	15 19 30.3	
	comp=Z,586nm,0.8s						
MAKZ	**Makanchi**	5.18	235	⇑P	Pn	15 18 07.0	+1.6
MAKZ	**Makanchi**	5.18	235	PN	Pn	15 18 07.9	+2.5
WMQ	**Urumqi**	6.14	183	Pn	Pn	15 18 20.4	+1.7
WMQ				Sn	Sn	15 19 28.4	-0.3
WMQ				smax	smax		
	comp=Z,270nm,1.1s						
WMQ				smax	smax		
	comp=Z,480nm,1.5s						
KURK	**Kurchatov**	6.15	281		Pn	15 18 19.5	+0.8
KURK	**Kurchatov**	6.15	281	⇑Pn	Pn	15 18 19.5	+0.8
	comp=Z,34nm,0.7s						
KURK				⇑Lg	Lg	15 19 58.7	
	comp=Z,375nm,0.8s						
KURK	**Kurchatov**	6.15	281	⇑P	Pn	15 18 19.7	+1.0
KURK	**Kurchatov**	6.15	281	*ce*PN	Pn	15 18 19.7	+1.0
KURK				pmax	pmax		
	comp=Z,81nm,1.0s						
KURBB	**Kurchatov Arra**	6.20	280	Pn	Pn	15 18 20.6	+1.2
	comp=Z,2.1nm,0.3s,baz=93,slow=14,SNR=293						
KURBB				Sn	Sn	15 19 31.6	+1.7
	comp=Z,3.3nm,0.3s,baz=91,slow=26,SNR=7.6						
KURBB				Lg	Lg	15 20 00.9	
	comp=Z,4.2nm,0.3s,baz=90,slow=34,SNR=5.5						
KURBB				LR	LR	15 20 34.9	
	comp=Z,94nm,20.4s,baz=192,slow=36						
	comp=Z,33nm,0.5s						
KURBB	**Kurchatov Arra**	6.20	280	⇑Pn	Pn	15 18 20.4	+1.0
	comp=Z,80nm,0.7s						
KURBB				⇑Sn	Sn	15 19 31.0	+1.1
	comp=Z,305nm,0.6s						
KURBB				⇓Lg	Lg	15 20 00.4	
	comp=Z,2µm,0.9s						
KURBB	**Kurchatov Arra**	6.20	280	PN	Pn	15 18 20.4	+1.0
KURBB				S	Sn	15 19 31.0	+1.1
DJR	**Jarkent**	8.00	229	Pg	Pn	15 18 46.5	+2.2
	comp=Z,28nm,0.3s						
DJR				Lg	Lg	15 20 17.6	
	comp=Z,94nm,0.7s						
TDK	**Taldyqorghan**	8.25	237	Pg	Pn	15 18 49.5	+2.0
	comp=Z,174nm,0.7s						
TDK				Lg	Lg	15 20 22.7	
	comp=Z,216nm,0.7s						
KNOS	**Konyrlen**	8.29	231	Pg	Pn	15 18 50.4	+2.3
	comp=Z,43nm,0.5s						
KNOS				Lg	Lg	15 20 23.4	
	comp=Z,138nm,0.7s						
KTMS	**Ketmen**	8.43	222	Pg	Pn	15 18 51.0	+0.9
	comp=Z,6.1nm,0.8s						
KTMS				Lg	Lg	15 20 25.6	
	comp=Z,20nm,0.5s						
BLB	**Baldybastay**	8.83	232	Pg	Pn	15 18 57.8	+2.2
	comp=Z,130nm,0.5s						
BLB				Lg	Lg	15 20 37.2	
	comp=Z,90nm,0.6s						
PDGK	**Podgornoye**	8.91	225	⇑Pn	Pn	15 18 59.8	+3.2
	comp=Z,35nm,0.7s						
PDGK				⇑Sn	Sn	15 20 42.1	+5.4
	comp=Z,83nm,0.8s						
PDGK				⇑Lg	Lg	15 21 31.7	
	comp=Z,218nm,1.0s						
PDGK	**Podgornoye**	8.91	225	P	Pn	15 18 59.8	+3.2
SHLS	**Shalkode**	9.05	225	*e*P	Pn	15 18 56.6	-2.1
ARXS	**Arharly**	9.08	235	Pg	Pn	15 19 00.9	+1.9
	comp=Z,15nm,0.5s						
ARXS				Lg	Lg	15 20 42.6	
	comp=Z,59nm,0.6s						
ARXS	**Arharly**	9.08	235	*e*P	Pn	15 19 00.3	+1.3
KPKS	**Kokpek**	9.18	229	Pg	Pn	15 19 03.0	+2.6
	comp=Z,8.9nm,0.6s						
KPKS				Lg	Lg	15 20 46.9	
	comp=Z,77nm,0.7s						
KPKS	**Kokpek**	9.18	229	*e*P	Pn	15 19 01.3	+0.9
UZB	**Uzynbulak**	9.26	226	Pg	Pn	15 19 03.4	+1.8
	comp=Z,10nm,0.5s						
UZB				Lg	Lg	15 20 47.4	
	comp=Z,51nm,0.7s						
UZB	**Uzynbulak**	9.26	226	*e*P	Pn	15 19 01.4	-0.2
KURS	**Kuram**	9.42	230	P	Pn	15 19 05.0	+1.4
	comp=Z,23nm,0.4s						
SATY	**Saty**	9.62	228	P	Pn	15 19 08.2	+1.7
	comp=Z,13nm,0.5s						
BRZS	**Berezniki**	9.97	276	Pg	Pn	15 19 14.5	+3.4
	comp=Z,2.5nm,0.8s						
BRZS				Lg	Lg	15 21 07.5	
	comp=Z,28nm,0.6s						
KTBS	**Karatobe**	10.03	236	Pg	Pn	15 19 14.0	+2.0
	comp=Z,14nm,0.6s						
KTBS				Lg	Lg	15 21 06.4	
	comp=Z,68nm,0.6s						
KOTS	**Kotyrbulak**	10.14	233	P	Pn	15 19 15.7	+2.2
	comp=Z,11nm,0.5s						
MDOK	**Medeo**	10.22	233	⇑Pn	Pn	15 19 15.3	+0.6
	comp=Z,11nm,0.5s						
MDOK				Pg		15 19 16.6	
	comp=Z,18nm,0.6s						
MDOK				⇑Sn	Sn	15 21 09.5	+0.5
	comp=Z,52nm,1.2s						
MDOK				Lg	Lg	15 22 11.0	
	comp=Z,130nm,1.0s						
MDOK	**Medeo**	10.22	233	P	Pn	15 19 15.3	+0.6
MDOK				S	Sn	15 21 09.5	+0.5
KNDC	**Almaty**	10.22	233	⇓Lg	Lg	15 22 11.0	
	comp=Z,288nm,0.8s						
OTUK	**Ortayu**	10.51	267	Pg	Pn	15 19 21.5	+3.0
	comp=Z,7.4nm,0.6s						
OTUK				Lg	Lg	15 21 19.9	
	comp=Z,8.6nm,0.6s						
OTUK	**Ortayu**	10.51	267	⇓Pn	Pn	15 19 18.4	-0.1
	comp=Z,16nm,0.6s						
OTUK				⇓Lg	Lg	15 22 20.3	
	comp=Z,218nm,1.2s						
OTUK	**Ortayu**	10.51	267	P	Pn	15 19 18.4	-0.1
BTLS	**Baital**	10.73	248	Pg	Pn	15 19 24.1	+2.6
	comp=Z,26nm,0.6s						
BTLS				Lg	Lg	15 21 25.4	
	comp=Z,20nm,0.6s						
BTLS	**Baital**	10.73	248	*e*P	Pn	15 19 21.4	-0.1
TARG	**Taragay, Kyrgy**	10.93	225		Pn	15 19 25.5	+0.8
TARG	**Taragay, Kyrgy**	10.93	225	P	Pn	15 19 25.5	+0.8
TKM2	**Tokmak 2**	11.15	236	⇓Pn	Pn	15 19 28.7	+1.3
	comp=Z,11nm,0.7s						
TKM2				⇑Lg	Lg	15 22 39.9	
	comp=Z,87nm,1.1s						
TKM2	**Tokmak 2**	11.15	236	P	Pn	15 19 28.7	+1.3
BOOM	**Boomskoye usch**	11.27	233		Pn	15 19 30.5	+1.4
BOOM	**Boomskoye usch**	11.27	233	P	Pn	15 19 30.5	+1.4
BVA0	**Borovoye Array**	11.49	292	⇓Pn	Pn	15 19 31.0	-0.8
	comp=Z,11nm,0.7s,baz=110,slow=14,SNR=64						
BVA0				Sn	Sn	15 21 38.0	-1.7
	comp=Z,24nm,0.8s,baz=109,slow=22,SNR=4.5						
BVA0				⇓Lg	Lg	15 22 49.5	
	comp=Z,39nm,0.8s,baz=9.5,slow=39,SNR=3.2						
BVA0	**Borovoye Array**	11.49	292	*e*P	Pn	15 19 34.1	+2.3
BVAR	**Borovoye Array**	11.49	292	Pn	Pn	15 19 31.5	-0.3
	comp=Z,0.1nm,0.3s,baz=108,slow=14,SNR=17						
BVAR				Sn	Sn	15 21 38.0	-1.7
	comp=Z,0.5nm,0.3s,baz=94,slow=21,SNR=6.1						
	comp=Z,3.0nm,0.5s						
BRVK	**Borovoye**	11.56	292		Pn	15 19 33.1	+0.3
BRVK	**Borovoye**	11.56	292	*ce*P	Pn	15 19 36.1	+3.4
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AAK	**Ala-Archa**	11.94	237		Pn	15 19 39.5	+1.4
AAK	**Ala-Archa**	11.94	237	Pn	Pn	15 19 40.3	+2.1
	comp=Z,1.7nm,0.3s,baz=90,slow=7.9,SNR=16						
AAK				Sn	Sn	15 21 46.8	-4.2
	comp=Z,1.2nm,0.3s,baz=72,slow=23,SNR=4.1						
AAK				Lg	Lg	15 23 02.3	
	comp=Z,0.6nm,0.3s,baz=176,slow=20,SNR=6.0						
AAK				LR	LR	15 24 32.0	
	comp=Z,165nm,20.4s,baz=63,slow=39						
	comp=Z,6.9nm,0.4s						
AAK	**Ala-Archa**	11.94	237	⇑Pn	Pn	15 19 39.6	+1.4
	comp=Z,1.3nm,0.5s						
AAK				⇑Sn	Sn	15 21 53.1	+2.1
	comp=Z,4.8nm,0.8s						
AAK				⇑Lg	Lg	15 23 07.7	
	comp=Z,42nm,1.1s						
AAK	**Ala-Archa**	11.94	237	*ce*P	Pn	15 19 40.1	+1.9
AAK				pmax	pmax		
	comp=Z,12nm,1.3s						
SONM	**Songino Array**	12.20	93	Pn	Pn	15 19 39.6	-2.0
SONM	**Songino Array**	12.20	93	Pn	Pn	15 19 40.5	-1.1
	comp=Z,0.4nm,0.3s,baz=278,slow=14,SNR=12						
SONM				Pg		15 20 29.0	
	comp=Z,0.2nm,0.3s,baz=290,slow=18,SNR=4.4						
SONM				Lg	Lg	15 23 07.0	
	comp=Z,1.0nm,0.3s,baz=282,slow=27,SNR=5.6						
	comp=Z,3.3nm,0.9s						
ULN	**Ulaanbaatar**	12.61	92	*i* P	Pn	15 19 48.7	+1.4
ULN				pmax	pmax		
	comp=Z,14nm,3.8s						
GTA	**Gaotai**	13.40	137	*e*P	P	15 20 08.1	+0.5
GTA				sP	Pn	15 20 18.8	+21
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KK31	**Karatay Array**	13.92	247		Pn	15 20 03.4	-1.8
KK31	**Karatay Array**	13.92	247	Pn	Pn	15 20 05.1	0.0
	comp=Z,7.7nm,0.5s,baz=57,slow=14,SNR=46						
KK31				⇓Sn	Sn	15 22 40.0	+0.6
	comp=Z,15nm,0.7s						
KK31				⇑Lg	Lg	15 24 07.2	
	comp=Z,44nm,0.8s,baz=60,slow=30,SNR=3.5						
KK31	**Karatay Array**	13.92	247	P	Pn	15 20 05.1	0.0
KK31				S	Sn	15 22 39.9	+0.6
KKAR	**Karatay Array**	13.92	247		Pn	15 20 03.9	-1.3
KKAR	**Karatay Array**	13.92	247	P	Pn	15 20 03.9	-1.3
BRLS	**Boroldаy**	14.37	248	*e*P	Pn	15 20 15.7	+4.4
IUG	**Iuzhnay**	14.78	245	*e*P	Pn	15 20 17.6	+0.6
GAR	**Garm**	16.74	236		Pn	15 20 43.0	+0.5
GAR				IAmb	IAmb	15 21 08.3	
	comp=Z,19nm,0.8s						
SIMJ	**Simiganj**	17.70	238		P	15 20 56.1	+0.9
SVE	**Sverdlovsk**	17.71	303	*e*P	P	15 20 56.3	+1.3
SVE				*e*S	Sn	15 24 08.5	-2.5
SVE				pmax	pmax		
	comp=Z,19nm,1.2s						
LZH	**Lanzhou**	17.94	135	P	P	15 21 05.8	+7.8
LZH				sP	sP	15 21 11.4	+6.2
LZH				pmax	pmax		
	comp=Z,13nm,1.1s						
LZH				LR	LR		
	comp=N,450nm,10.1s						
LZH				LR	LR		
	comp=E,490nm,8.8s						
LZH				LR	LR		
	comp=Z,200nm,11.3s						
AB31	**Akbulak array**	18.25	279		Pn	15 21 00.2	-0.8
AB31	**Akbulak array**	18.25	279	⇑Pn	P	15 21 03.1	+1.9
	comp=Z,3.0nm,0.6s,baz=75,slow=9.4,SNR=32						
AB31				⇓Lg	Lg	15 26 22.2	
	comp=Z,29nm,1.2s						
AB31	**Akbulak array**	18.25	279	P	P	15 21 03.9	+2.8
ABKAR	**Akbulak array**	18.25	279		Pn	15 21 01.1	+0.1
ARTI	**Arti**	18.86	301		P	15 21 06.4	-1.4
ARTI				IAmb	IAmb	15 21 21.3	
	comp=Z,13nm,0.6s						
ARTI	**Arti**	18.86	301	P	P	15 21 08.9	+1.1
	comp=Z,0.7nm,0.3s,baz=104,slow=9.8,SNR=5.7						
ARTI				S	Sn	15 24 37.1	-1.9
	comp=Z,7.9nm,0.9s,baz=112,slow=23,SNR=3.8						
ARTI				Lg	Lg	15 26 47.6	
	baz=120,slow=20						
	comp=Z,2.3nm,0.5s						
ARTI	**Arti**	18.86	301	P	P	15 21 07.0	-0.8
ARTI				S	Sn	15 24 39.4	+0.4
AKTO	**Aktyubinsk**	19.24	283	P	Pn	15 21 13.6	+0.6
	comp=Z,0.2nm,0.3s,baz=81,slow=11,SNR=13						
AKTO				S	Sn	15 24 44.2	-3.9
	comp=Z,2.0nm,0.8s,baz=280,slow=18,SNR=1.6						
AKTO				Lg	Lg	15 26 57.9	
	comp=Z,0.1nm,0.3s,baz=12,slow=18,SNR=1.6						
	comp=Z,7.0nm,0.8s						
AKTO	**Aktyubinsk**	19.24	283	⇓Pn	Pn	15 21 14.2	+1.2
	comp=Z,7.0nm,0.7s						
AKTO				⇓Lg	Lg	15 26 57.2	
	comp=Z,18nm,1.5s						
NIL	**Nilore**	19.66	220	P	P	15 21 13.8	-2.9
NIL				IAmb	IAmb	15 21 22.9	
	comp=Z,12nm,0.9s						
NIL	**Nilore**	19.66	220	P	P	15 21 13.8	-2.9
NIL				pmax	pmax		
	comp=Z,12nm,0.9s						
KBL	**Kabul**	20.82	229	P	P	15 21 28.8	-0.7
KBL				IAmb	IAmb	15 21 42.2	
	comp=Z,6.3nm,0.8s						
KBL	**Kabul**	20.82	229	P	P	15 21 28.8	-0.7
KBL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KIRV	**Kirov**	23.91	306	*ce*P	P	15 22 03.1	+1.8
HEH	**HeiHe**	24.99	74	*e*P	P	15 22 10.9	-0.4
HEH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
YAK	**Yakutsk**	25.68	46	Lg	Lg	15 30 09.2	
	comp=Z,0.6nm,0.3s,baz=192,slow=20,SNR=1.4						
YAK				LR	LR	15 32 46.8	
	comp=Z,112nm,18.5s,baz=254,slow=38						
YAK	**Yakutsk**	25.68	46	*e*P	P	15 22 17.6	+0.2
YAK				*e*S	S	15 26 45.3	+0.2
YAK				pmax	pmax		
	comp=Z,12nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.4s						
YAK				smax	smax		
	comp=E,63nm,4.4s						
YAK				smax	smax		
	comp=N,56nm,3.4s						
YAK				MLR	MLR		
	comp=Z,148nm,21.0s						
KLR	**Kul'dur**	27.98	74	LR	LR	15 34 34.6	
	comp=Z,41nm,18.8s,baz=272,slow=38						
TIXI	**Tiksi**	28.46	26	P	P	15 22 42.3	0.0
	comp=Z,1.3nm,0.5s,baz=264,slow=7.2,SNR=5.0						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TIXI				Lg	Lg	15 31 37.6	
	comp=Z,0.2nm,0.3s,baz=358,slow=23,SNR=2.3						
TIXI				LR	LR	15 34 41.4	
	comp=Z,89nm,19.2s,baz=244,slow=38						
	comp=Z,1.3nm,0.5s						
USRK	**Ussuriysk Ar.**	**30.06**	**84**	P	**P**	**15 22 56.9**	**+0.1**
	comp=Z,2.6nm,1.0s,baz=286,slow=10,SNR=3.6						
USRK				LR	LR	15 35 14.3	
	comp=Z,81nm,18.3s,baz=347,slow=37						
	comp=Z,2.6nm,1.0s						
KSRS	**Korea Array**	**30.98**	**98**	P	**P**	**15 23 05.2**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=307,slow=7.3,SNR=4.1						
	comp=Z,0.6nm,0.6s						
KBZ	**Khabaz**	**31.19**	**276**	LR	LR	15 38 11.0	
	comp=Z,23nm,19.8s,baz=188,slow=41						
KIV	**Kislovodsk**	**31.22**	**277**	*e*P	**P**	**15 23 05.5**	**-1.6**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,22nm,15.0s						
CMAR	**Chiang Mai Arr**	**32.60**	**161**	P	**P**	**15 23 18.9**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=354,slow=7.9,SNR=2.9						
	comp=Z,0.5nm,0.5s						
FINES	**FINESS Array B**	**35.43**	**313**	P	**P**	**15 23 44.1**	**+0.7**
	comp=Z,2.1nm,0.9s,baz=81,slow=14,SNR=3.7						
	comp=Z,2.1nm,0.9s						
MA2	**Magadan**	**36.07**	**50**	LR	LR	15 38 56.4	
	comp=Z,56nm,18.4s,baz=272,slow=37						
SEY	**Seymchan**	**36.17**	**44**	LR	LR	15 40 47.1	
	comp=Z,58nm,19.0s,baz=0.0,slow=40						
AKASG	**Malin Array Be**	**36.76**	**294**	P	**P**	**15 23 54.4**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=65,slow=8.9,SNR=7.7						
	comp=Z,0.2nm,0.3s						
ASAJ	**Asahikawa**	**36.86**	**78**	LR	LR	15 40 23.7	
	comp=Z,31nm,20.4s,baz=289,slow=39						
BR131	**Keskin Array S**	**39.18**	**276**	P	**P**	**15 24 15.9**	**+0.1**
BR131				IAmb	IAmb	15 24 27.6	
	comp=Z,4.0nm,0.8s						
BR131	**Keskin Array S**	**39.18**	**276**	P	**P**	**15 24 15.9**	**+0.1**
BR131				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRTR	**Keskin Array B**	**39.18**	**276**		**P**	**15 24 14.1**	**-1.7**
BRTR	**Keskin Array B**	**39.18**	**276**	P	**P**	**15 24 16.1**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=74,slow=5.9,SNR=7.4						
	comp=Z,0.5nm,0.6s						
BURAR	**Bucovina Array**	**40.45**	**292**	P	**P**	**15 24 25.5**	**-0.6**
HFS	**Hagfors**	**41.62**	**313**	P	**P**	**15 24 35.3**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=94,slow=8.9,SNR=8.4						
	comp=Z,0.9nm,0.5s						
PETK	**Petropavlovsk-**	**41.83**	**58**	P	**P**	**15 24 37.2**	**-0.1**
PETK	**Petropavlovsk-**	**41.83**	**58**	P	**P**	**15 24 36.0**	**-1.4**
	comp=Z,1.5nm,0.8s,baz=276,slow=8.3,SNR=6.1						
	comp=Z,1.5nm,0.8s						
PETK	**Petropavlovsk-**	**41.83**	**58**	P	**P**	**15 24 37.2**	**-0.1**
RAYN	**Ar Rayn**	**42.35**	**247**	P	**P**	**15 24 42.0**	**+0.1**
RAYN				IAmb	IAmb	15 24 53.9	
	comp=Z,3.5nm,0.6s						
RAYN	**Ar Rayn**	**42.35**	**247**	P	**P**	**15 24 42.0**	**+0.1**
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NB2	**NORSAR Subarra**	**42.44**	**315**	P	**P**	**15 24 42.8**	**+0.5**
	comp=Z,4.5nm,0.9s,baz=63,slow=7.9						
NOA	**NORSAR Array B**	**42.44**	**315**	P	**P**	**15 24 42.6**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=64,slow=7.8,SNR=8.2						
NOA				LR	LR	15 41 42.7	
	comp=Z,27nm,20.4s,baz=85,slow=35						
	comp=Z,0.4nm,0.6s						
EKA	**Eskdalemuir Ar**	**51.82**	**313**	P	**P**	**15 25 55.2**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=65,slow=6.5,SNR=8.1						
	comp=Z,0.5nm,0.5s						
ILAR	**Eielson Array**	**57.92**	**24**	P	**P**	**15 26 39.0**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=312,slow=4.7,SNR=9.7						
	comp=Z,0.5nm,0.6s						
INK	**Inuvik**	**58.04**	**17**	LR	LR	15 55 14.7	
	comp=Z,19nm,18.3s,baz=268,slow=40						
ESDC	**Sonseca Array**	**62.16**	**299**	P	**P**	**15 27 08.9**	**0.0**
	comp=Z,0.8nm,0.7s,baz=48,slow=6.9,SNR=5.3						
	comp=Z,0.8nm,0.7s						
YKA	**Yellowknife Ar**	**66.45**	**11**	P	**P**	**15 27 35.5**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=348,slow=7.0,SNR=1.9						
	comp=Z,0.4nm,0.6s						
ULM	**Lac du Bonnet**	**80.11**	**3**	LR	LR	16 06 22.3	
	comp=Z,15nm,21.0s,baz=77,slow=37						
WRA	**Warramunga Arr**	**80.69**	**137**	P	**P**	**15 28 59.2**	**-1.5**
	comp=Z,0.3nm,0.7s,baz=340,slow=5.7,SNR=8.0						
	comp=Z,0.3nm,0.7s						
ASAR	**Alice Springs**	**83.77**	**139**	P	**P**	**15 29 14.8**	**-2.0**
	comp=Z,0.3nm,0.6s,baz=335,slow=5.4,SNR=7.9						
	comp=Z,0.3nm,0.6s						
QSPA	**South Pole Qui**	**139.73**	**180**	PKP	**PKPdf**	**15 36 15.7**	**+1.4**
	comp=Z,0.8nm,0.8s,baz=282,slow=21,SNR=6.4						
CPUP	**Villa Florida**	**144.53**	**299**	PKP	**PKPab**	**15 36 22.8**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=290,slow=1.6,SNR=1.6						

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Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EWUT	**Wuta**	**0.13**	**285**	*i*P	Pg	15 20 07.1	+0.4
EWUT				*i*S	Sg	15 20 10.5	+1.0
ENA	**Nanau**	**0.16**	**276**	*i*P	Pg	15 20 07.4	+0.4
ENA				S	Sg	15 20 11.2	+1.1
ESAO	**Su ao**	**0.18**	**338**	*i*P	Pg	15 20 07.7	+0.4
ESAO				S	Sg	15 20 11.3	+0.8
EAHA	**Aohua**	**0.18**	**244**	P	Pg	15 20 07.6	+0.3
EAHA				S	Sg	15 20 11.9	+1.3
EHP	**Heping Village**	**0.19**	**238**	P	Pg	15 20 08.0	+0.6
EHP				*e*S	Sg	15 20 12.5	+1.7
TWC	**Suao**	**0.21**	**342**	*i*P	Pg	15 20 08.1	+0.4
TWC				*i*S	Sg	15 20 11.8	+0.6
EOS2	**EOS2**	**0.29**	**88**	P	Pb	15 20 09.7	+0.9
EOS2				*e*S	Sn	15 20 15.5	-1.5
NDS	**Dongshan**	**0.29**	**320**	⇑*e*P	Pg	15 20 08.4	-0.5
NDS				*e*S	Sb	15 20 13.3	0.0
ETL	**Fush Village**	**0.37**	**227**	P	Pb	15 20 10.6	+0.3
ETL				*i*S	Sb	15 20 17.2	+1.6
NACB	**Ninganchiao**	**0.38**	**232**	P	Pb	15 20 10.8	+0.3
NACB				S	Sb	15 20 17.4	+1.5
LATG	**Datong**	**0.38**	**289**	*i*P	Pb	15 20 11.0	+0.5
LATG				*i*S	Sb	15 20 17.2	+1.1
EOS3	**EOS3**	**0.39**	**109**	*e*P	Pb	15 20 11.1	+0.6
EOS3				S	Sb	15 20 17.6	+1.6
TWE	**Neicheng**	**0.39**	**324**	*i*P	Pb	15 20 11.0	+0.4
TWE				*i*S	Sb	15 20 17.1	+0.9
ILA	**Ilan**	**0.39**	**336**	P	Pb	15 20 11.3	+0.7
ILA				S	Sb	15 20 17.8	+1.5
ENTT	**Nioudou**	**0.39**	**306**	*i*P	Pb	15 20 11.1	+0.3
ENTT				S	Sb	15 20 18.1	+1.6
EGS		**0.43**	**2**	*i*P	Pb	15 20 11.9	+0.5
EGS				S	Sb	15 20 18.7	+1.1
TWD	**Chiawan**	**0.44**	**222**	P	Pb	15 20 11.7	+0.1
TWD				*e*S	Sb	15 20 19.3	+1.6
ETLH	**Xiulin Townshi**	**0.45**	**243**	*e*P	Pb	15 20 11.7	0.0
ETLH				*i*S	Sb	15 20 19.2	+1.2
FUSB	**Fushanzhiwuyua**	**0.46**	**319**	*i*P	Pb	15 20 12.5	+0.6
FUSB				*e*S	Sb	15 20 19.5	+1.1
EOS4	**EOS4**	**0.47**	**128**	P	Pg	15 20 11.8	0.0
EOS4				S	Sg	15 20 19.3	+1.2
NNSB	**Datong**	**0.49**	**272**	*i*P	Pg	15 20 12.9	+0.5
NNSB				S	Sb	15 20 20.2	+1.0
NNSH	**Datong**	**0.49**	**272**	*i*P	Pg	15 20 12.9	+0.5
NNSH				S	Sb	15 20 20.2	+1.0
NNS	**Nan Shan**	**0.50**	**274**	*e*P	Pg	15 20 13.0	+0.4
NNS				*i*S	Sb	15 20 20.4	+0.9
HWA	**Hwalien**	**0.52**	**214**	P	Pg	15 20 13.0	+0.1
HWA				S	Sg	15 20 21.0	+1.1
NWLT	**Wulai**	**0.53**	**314**	*e*P	Pg	15 20 13.4	+0.3
NWLT				*i*S	Sg	15 20 21.0	+0.8
YHNB	**Yeheng**	**0.56**	**298**	*e*P	Pg	15 20 14.2	+0.5
YHNB				S	Sg	15 20 22.2	+1.0
TIPB	**Shuangxi**	**0.57**	**351**	*i*P	Pg	15 20 14.2	+0.3
TIPB				S	Sg	15 20 22.0	+0.5
NSK	**Sanguang**	**0.57**	**298**	*e*P	Pg	15 20 14.4	+0.4
NSK				*i*S	Sg	15 20 22.4	+0.6
ETM	**Tongmen**	**0.59**	**221**	*e*P	Pb	15 20 14.1	+0.1
ETM				S	Sn	15 20 23.6	-1.1
TWB1	**Santiao Chiao**	**0.60**	**6**	*e*P	Pg	15 20 14.6	+0.2
TWB1				*i*S	Sg	15 20 23.0	+0.5
LXIB	**Xiulin Townshi**	**0.60**	**230**	P	Pb	15 20 14.4	+0.1
LXIB				*e*S	Sn	15 20 25.0	-0.2
TEYL	**Yanliau Villag**	**0.61**	**209**	*e*P	Pb	15 20 13.6	-0.8
FUSS	**Fushou**	**0.64**	**255**	*i*P	Pg	15 20 15.5	+0.4
FUSS				S	Sg	15 20 24.7	+0.9
TWA	**Mucha**	**0.64**	**332**	*e*P	Pn	15 20 17.1	+0.6
TWA				S	Sg	15 20 25.0	+1.1
WHF	**Hehuan Shan**	**0.65**	**246**	*i*P	Pg	15 20 15.6	+0.1
WHF				*e*S	Sn	15 20 25.7	-1.2
NHDH	**Xindian Distri**	**0.66**	**327**	*i*P	Pg	15 20 15.8	+0.4
NHDH				*i*S	Sn	15 20 25.6	-0.8
NWF	**Wu-fen Shan**	**0.67**	**349**	*e*P	Pn	15 20 16.5	-0.4
WFSB	**Wu-fen Shan**	**0.67**	**349**	*e*P	Pn	15 20 16.7	-0.1
WFSB				S	Sn	15 20 26.1	-0.7
SXI1	**Grass Mountain**	**0.68**	**357**	*e*P	Pn	15 20 16.6	-0.4
SXI1				S	Sn	15 20 26.4	-0.8
TATO	**Taipei**	**0.69**	**325**	⇓P	Pn	15 20 16.6	-0.5
TATO				S	Sn	15 20 27.1	0.0
TWT	**Tachien**	**0.69**	**257**	*i*P	Pg	15 20 16.7	+0.5
TWT				S	Sn	15 20 26.8	-0.8
SHUL	**Shoufeng**	**0.70**	**208**	P	Pg	15 20 16.5	+0.2
SHUL				*e*S	Sn	15 20 29.0	+1.5
TDCB	**Techi**	**0.71**	**257**	P	Pg	15 20 16.6	+0.1
TDCB				S	Sn	15 20 27.1	-0.9
ESL	**Shilin**	**0.74**	**217**	*e*P	Pb	15 20 16.4	-0.3
ESL				*i*S	Sn	15 20 28.0	-0.5
TNOU	**National Taiwa**	**0.75**	**350**	P	Pn	15 20 17.9	0.0
TNOU				S	Sn	15 20 28.0	-0.7
NFF	**Wufeng Townshi**	**0.76**	**287**	*e*P	Pn	15 20 19.4	+1.2
NFF				S	Sn	15 20 28.9	-0.2
KSHI	**Guanxi Townshi**	**0.77**	**299**	*e*P	Pn	15 20 18.7	+0.5
KSHI				*e*S	Sn	15 20 31.5	+2.3
YM01	**YM01**	**0.80**	**337**	P	Pn	15 20 18.8	+0.1
YM01				*e*S	Sn	15 20 30.2	+0.2
OWD	**Renai**	**0.81**	**236**	P	Pb	15 20 18.0	0.0
OWD				*e*S	Sn	15 20 30.1	-0.5
ZUZH	**Zhuzihu**	**0.82**	**336**	*e*P	Pn	15 20 19.2	+0.3
ZUZH				*i*S	Sn	15 20 30.5	-0.1
TWS1	**Kuangyinshan**	**0.82**	**327**	*e*P	Pn	15 20 20.0	+1.1
TWS1				*e*S	Sn	15 20 31.9	+1.4
YM08	**YM08**	**0.83**	**339**	*e*P	Pn	15 20 19.5	+0.4
YM08				S	Sn	15 20 30.4	-0.3
WUSB	**Renai**	**0.84**	**241**	*i*P	Pg	15 20 19.0	+0.1
WUSB				*i*S	Sn	15 20 31.1	0.0
WARBT	**Fenglin Townsh**	**0.84**	**215**	*e*P	Pb	15 20 17.8	-0.6
WARBT				S	Sg	15 20 30.5	+0.4
ANP	**Anpu**	**0.85**	**335**	*e*P	Pn	15 20 19.8	+0.4
ANP				S	Sg	15 20 31.0	+0.4
LIOB	**Emei**	**0.85**	**286**	*e*P	Pn	15 20 20.3	+0.9
LIOB				*e*S	Sn	15 20 33.1	+1.8
EGFH	**Guangfu**	**0.86**	**211**	*e*P	Pn	15 20 19.5	0.0
NTST	**Danshui**	**0.86**	**331**	*e*P	Pn	15 20 20.7	+1.3
NTST				*e*S	Sn	15 20 33.0	+1.5
WHP	**Taichung City**	**0.90**	**262**	*i*P	Pg	15 20 19.9	-0.1
WHP				*e*S	Sn	15 20 33.1	+0.6
TWY	**Chenhua**	**0.91**	**342**	⇑*i*P	Pn	15 20 20.0	-0.1
TWY				S	Sg	15 20 32.1	-0.1
HSN	**Hsinchu**	**0.95**	**295**	*e*S	Sn	15 20 35.1	+1.5
WPL	**Puli Township**	**0.96**	**246**	P	Pn	15 20 20.9	+0.1
WPL				S	Sn	15 20 34.6	+0.6
DPDB	**Guoxing**	**0.98**	**248**	⇓P	Pn	15 20 21.3	+0.1
DPDB				S	Sg	15 20 35.1	+0.6
WCS	**Beigang Elemen**	**0.98**	**249**	P	Pn	15 20 21.0	-0.1
WCS				*e*S	Sg	15 20 35.2	+0.6
HGSD	**Ruisui**	**1.02**	**206**	P	Pn	15 20 21.7	+0.1
HGSD				S	Sn	15 20 35.2	-0.1
NMLH	**Miaoli**	**1.03**	**277**	*e*P	Pg	15 20 23.3	+0.8
NMLH				*e*S	Sg	15 20 39.0	+2.8
TWQ1	**Liyutan**	**1.05**	**267**	*i*S	Sg	15 20 36.9	+0.4
EHY	**Hungye**	**1.05**	**211**	*e*P	Pb	15 20 21.2	-0.8
EHY				S	Sn	15 20 35.9	-0.3
SMLT	**Sun Moon Lake**	**1.07**	**241**	*e*P	Pg	15 20 24.1	+0.9
SMLT				S	Sg	15 20 37.8	+0.5
SSLB	**Suanglung**	**1.08**	**235**	P	Pb	15 20 22.1	-0.3
SSLB				S	Sn	15 20 36.9	+0.1
TYC	**Yuchr**	**1.09**	**243**	P	Pb	15 20 22.8	+0.1
TYC				*e*S	Sg	15 20 39.8	+1.8
YULB	**Yu-li**	**1.16**	**209**	*e*P	Pn	15 20 22.3	-1.3
YULB				*e*S	Sg	15 20 41.2	+1.0
TWF1	**Yuli**	**1.20**	**208**	*e*P	Pn	15 20 22.4	-1.7
TWF1				S	Sg	15 20 40.6	-0.7
WHYT	**Xinyi Township**	**1.21**	**234**	*e*P	Pg	15 20 25.9	+0.1
WJS	**Zhushan**	**1.23**	**242**	P	Pn	15 20 24.2	-0.4
WJS				S	Sn	15 20 40.7	0.0
CHKH	**Chenggong**	**1.30**	**202**	P	Pn	15 20 25.4	-0.1
FULB	**Fuli**	**1.33**	**205**	P	Pn	15 20 26.3	+0.3
FULB				*e*S	Sg	15 20 45.4	-0.3
ALS	**Alishan**	**1.36**	**229**	*e*P	Pg	15 20 28.0	-0.7
CHN5	**Tsauling**	**1.39**	**235**	P	Pn	15 20 26.6	-0.2
CHN5				*e*S	Sn	15 20 44.0	-0.7
CHKT	**Chengkung**	**1.40**	**201**	P	Pb	15 20 28.0	+0.1
EHD	**Haiduan**	**1.42**	**208**	P	Pn	15 20 27.3	+0.2
WGK	**Gukeng**	**1.43**	**240**	P	Pb	15 20 28.1	-0.3
WGK				*e*S	Sb	15 20 46.2	-0.1
ELDTW	**Lidau**	**1.47**	**214**	P	Pn	15 20 27.6	-0.3
ELDTW				*e*S	Sn	15 20 46.0	-0.7
RLNB	**Erlin**	**1.52**	**250**	P	Pn	15 20 28.4	0.0
RLNB				*e*S	Sg	15 20 50.4	-1.0
EDH	**Donghe**	**1.54**	**202**	P	Pn	15 20 28.6	-0.1
WCKO	**Fanlu**	**1.54**	**231**	P	Pb	15 20 30.1	-0.3
WTK	**Tuku**	**1.57**	**243**	P	Pb	15 20 30.3	-0.5
WTK				*e*S	Sg	15 20 52.6	-0.6
TPUB	**Ta-pu**	**1.62**	**227**	P	Pn	15 20 30.2	+0.4
LONT	**Longtian**	**1.66**	**206**	P	Pn	15 20 30.9	+0.4
WTP	**Ta-pu**	**1.66**	**226**	P	Pb	15 20 31.7	-0.7
WTP				*e*S	Sb	15 20 54.2	+1.2
TWK	**Hsinying**	**1.73**	**229**	*e*P	Pb	15 20 33.1	-0.5
TWK				*e*S	Sb	15 20 56.2	+1.1
SNST	**Tainan City**	**1.76**	**228**	*e*P	Pb	15 20 33.5	-0.6
SNST				*e*S	Sb	15 20 55.6	-0.1
TWGBT	**Beinan**	**1.76**	**206**	*e*S	Sn	15 20 53.7	0.0
CHN1	**Nanshi**	**1.76**	**227**	P	Pb	15 20 33.5	-0.6
LDUT	**Ludao**	**1.78**	**193**	P	Pn	15 20 32.6	+0.5
WSL	**Shuilin Townsh**	**1.78**	**241**	P	Pb	15 20 33.7	-0.7
WSL				*e*S	Sb	15 20 57.2	+0.9
MASBT	**Mashibuluo**	**2.14**	**214**	P	Pn	15 20 38.8	+1.7
MASBT				*e*S	Sn	15 21 04.0	+0.9
EAST	**Anshuo**	**2.24**	**206**	P	Pn	15 20 40.2	+1.6
EAST				*e*S	Sn	15 21 06.4	+0.7
VWUC	**VWUC**	**2.32**	**285**	P	Pn	15 20 39.9	+0.5
VWUC				*e*S	Sn	15 21 07.2	-0.3
PTMZ	**Houxiangcun**	**2.62**	**284**	*e*P	Pn	15 20 44.2	+0.6
PTMZ				*e*S	Sn	15 21 14.2	-0.7
XPSS	**Dashiqiu**	**2.95**	**329**	*e*P	Pn	15 20 48.0	-0.2

TAP 14 15:20:37.0,23°.09N×121°.58E,h14^{km}±1^{km},ML1.9,4D,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKH	**Chenggong**	**0.19**	**301**	⇓P	Pg	15 20 41.0	-0.4
CHKH				S	Sg	15 20 44.5	0.0
CHKT	**Chengkung**	**0.19**	**272**	⇓*i*P	Pg	15 20 41.2	-0.3
CHKT				S	Sg	15 20 44.7	+0.2
ECBN	**Changbin**	**0.25**	**333**	*i*S	Sg	15 20 46.3	+0.2
EDH	**Donghe**	**0.28**	**245**	⇓*i*P	Pg	15 20 42.4	-0.4
EDH				S	Sg	15 20 46.9	+0.1
FULB	**Fuli**	**0.28**	**292**	⇓P	Pg	15 20 42.6	-0.4
FULB				*i*S	Sg	15 20 47.4	+0.3
ECS	**Chishang**	**0.33**	**271**	P	Pg	15 20 43.7	-0.1
ECS				*e*S	Sb	15 20 49.8	0.0
EHD	**Haiduan**	**0.34**	**280**	P	Pg	15 20 43.3	-0.8
EHD				S	Sg	15 20 48.4	-0.5
EYUL	**Yuli**	**0.35**	**317**	*e*P	Pg	15 20 44.5	+0.4
EYUL				*i*S	Sg	15 20 49.5	+0.6
TWF1	**Yuli**	**0.36**	**315**	P	Pg	15 20 44.3	-0.1
TWF1				*e*S	Sg	15 20 48.9	-0.6
YULB	**Yu-li**	**0.40**	**320**	P	Pg	15 20 44.5	-0.5
YULB				*i*S	Sg	15 20 50.4	0.0
LDUT	**Ludao**	**0.43**	**193**	P	Pg	15 20 45.9	+0.3
LDUT				S	Sg	15 20 51.6	+0.3
LONT	**Longtian**	**0.45**	**246**	P	Pg	15 20 45.8	-0.1
LONT				S	Sg	15 20 52.6	+0.5
EHY	**Hungye**	**0.47**	**331**	P	Pg	15 20 46.5	0.0
EHY				S	Sg	15 20 53.2	+0.4
TWGBT	**Beinan**	**0.53**	**239**	P	Pg	15 20 47.3	-0.2
TWGBT				S	Sg	15 20 55.1	+0.5
TWG	**Pinlang**	**0.54**	**240**	P	Pg	15 20 47.3	-0.3
TWG				S	Sg	15 20 54.7	-0.1

IDC 14 15:25:56.6±4.1,47°.50N×92°.76W,h0^{km},mbtmp2.2/1, ML0.6/1,Error ellipse: s-maj=67.6km s-min=28.5km az=55.0,Minnesota

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULM	**Lac du Bonnet**	**3.44**	**324**	Pn	Pn	15 26 50.1	-1.4
	0.1nm,0.3s,baz=140,slow=17,SNR=1.1						
ULM				Pg	Pb	15 26 57.9	-0.5
	0.4nm,0.3s,baz=142,slow=15,SNR=6.7						
ULM				Lg	Lg	15 27 42.8	
	1.3nm,0.3s,baz=202,slow=5.4,SNR=21						
	0.4nm,0.3s						
I10CA	**LAC DU BONNET**	**3.46**	**323**	I	I	15 46 45.0	
	0.1nm,1.1s,baz=141,slow=322,SNR=47						
I56US	**NEWPORT INFRAS**	**16.35**	**282**	I	I	17 08 10.0	
	baz=83,slow=314,SNR=1.6						

GII 14 15:27:45.4±0.0,33°.70N±0°.04×35°.88E±0°.01,h1^{km}, Mws2.5/6,confirmed

GRAL 14 15:27:46.4±0.3,33°.69N×35°.86E,h10^{km}±3^{km},MD2.9

JSO 14 15:27:49.5±0.0,33°N±2°×3°6E±°,h0^{km}±8^{km},M2.6/13, Md2.9/13,ML2.6/11,MLv2.5/13,MLv2.5/13

ISC 14 15:27:45.2±1.0,33°.71N±0°.03×35°.88E±0°.04,h16^{km}±7^{km}, n43,σ0^{s}.59/45,Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAHL	**Zahle**	**0.15**	**2**	*e*P	**Pb**	**15 27 50.0**	**+0.2**
RCY	**Rachaya**	**0.21**	**189**	*e*P	**Pg**	**15 27 50.3**	**0.0**
RCY				*e*S	**Sg**	**15 27 53.3**	**-0.4**
QRWL	**Qaraoun**	**0.23**	**226**	*e*P	**Pb**	**15 27 50.6**	**-0.5**
DQRL	**Deir Qamar**	**0.26**	**270**	*e*P	**Pb**	**15 27 51.2**	**-0.4**
DQRL				*e*S	**Sg**	**15 27 54.7**	**-0.1**
BHL	**Bhannes**	**0.27**	**317**	*e*P	**Pb**	**15 27 51.5**	**-0.3**
SHBL	**Chebaa**	**0.38**	**197**	*e*P	**Pg**	**15 27 53.0**	**0.0**
NATI	**Neve Ativ**	**0.46**	**195**	P	**Pb**	**15 27 54.6**	**-0.4**
NATI	**Neve Ativ**	**0.46**	**195**	P	**Pb**	**15 27 54.6**	**-0.4**
NATI	**Neve Ativ**	**0.46**	**195**	S	**Sb**	**15 28 02.3**	**+0.8**
GEM	**Giv'at Ha'Em**	**0.53**	**200**	P	**Pb**	**15 27 56.0**	**-0.1**
GEM	**Giv'at Ha'Em**	**0.53**	**200**	P	**Pb**	**15 27 56.0**	**-0.1**
GEM	**Giv'at Ha'Em**	**0.53**	**200**	S	**Sb**	**15 28 04.5**	**+1.0**
HWQ	**Hawqa**	**0.57**	**6**	*e*P	**Pb**	**15 27 57.1**	**+0.1**
FKH	**Fakeheh**	**0.69**	**39**	*e*P	**Pb**	**15 27 59.4**	**+0.3**
KSHT	**Keshet**	**0.72**	**184**	P	**Pn**	**15 28 00.0**	**-0.9**
KSHT	**Keshet**	**0.72**	**184**	S	**Sn**	**15 28 11.0**	**-0.7**
MMC7	**Mount Meron ar**	**0.80**	**211**	P	**Pg**	**15 28 00.9**	**+0.2**
MMA0B	**Mount Meron ar**	**0.80**	**210**	P	**Pg**	**15 28 00.9**	**+0.1**
MMA0B	**Mount Meron ar**	**0.80**	**210**	S	**Sn**	**15 28 13.3**	**-0.2**
HNTI	**Hanita**	**0.86**	**224**	P	**Pn**	**15 28 02.3**	**-0.3**
HNTI	**Hanita**	**0.86**	**224**	P	**Pn**	**15 28 02.4**	**-0.3**
BEIL	**Beino**	**0.87**	**17**	*e*P	**Pn**	**15 28 02.5**	**-0.4**
BLGI	**Bet Lehem HaGe**	**1.13**	**211**	P	**Pg**	**15 28 07.0**	**-0.1**
BLGI	**Bet Lehem HaGe**	**1.13**	**211**	P	**Pg**	**15 28 07.0**	**-0.1**
BLGI	**Bet Lehem HaGe**	**1.13**	**211**	S	**Sg**	**15 28 23.3**	**+1.5**
OFRI	**`Ofer**	**1.32**	**215**	P	**Pg**	**15 28 10.4**	**-0.3**
OFRI	**`Ofer**	**1.32**	**215**	P	**Pg**	**15 28 10.3**	**-0.3**
OFRI	**`Ofer**	**1.32**	**215**	S	**Sg**	**15 28 28.8**	**+1.0**
MMLI	**Mount Malkishu**	**1.32**	**197**	P	**Pg**	**15 28 10.5**	**-0.2**
MMLI	**Mount Malkishu**	**1.32**	**197**	P	**Pg**	**15 28 10.2**	**-0.5**
MMLI	**Mount Malkishu**	**1.32**	**197**	S	**Sg**	**15 28 28.8**	**+0.9**
QRNJ	**Al-Qirein**	**1.39**	**191**	P	**Pg**	**15 28 11.9**	**-0.1**
HMDT	**Nahal Hemdat**	**1.48**	**192**	P	**Pb**	**15 28 12.7**	**+0.3**
HMDT	**Nahal Hemdat**	**1.48**	**192**	P	**Pb**	**15 28 12.6**	**+0.2**
HMDT	**Nahal Hemdat**	**1.48**	**192**	S	**Sg**	**15 28 33.6**	**+0.6**
HSUJ	**Al Zarqa**	**1.62**	**170**	P	**Pg**	**15 28 15.9**	**-0.5**
SLTI	**Sal'it**	**1.62**	**206**	P	**Pg**	**15 28 15.6**	**-0.9**
SLTI	**Sal'it**	**1.62**	**206**	P	**Pb**	**15 28 14.6**	**-0.3**
SLTI	**Sal'it**	**1.62**	**206**	S	**Sg**	**15 28 36.6**	**-0.9**
SALP	**Salfit**	**1.73**	**200**	P	**Pb**	**15 28 17.2**	**+0.5**
ASF	**Jabal al Asfar**	**1.75**	**150**	P	**Pg**	**15 28 18.2**	**-0.8**
DSI	**Dead Sea**	**2.17**	**191**	P	**Pb**	**15 28 23.4**	**-0.8**
DSI	**Dead Sea**	**2.17**	**191**	P	**Pn**	**15 28 21.8**	**+1.1**

SJA 14 15:27:46.8±0.7,29°.89S×72°.47W,h9^{km}±4^{km},ML3.6, MW3.7

GUC 14 15:27:54.6±0.5,29°.94S×72°.05W,h20^{km}±4^{km},ML3.3

ISC 14 15:27:50.5±1.7,29°.85S±0°.03×72°.16W±0°.06,h4^{km}±10^{km}, n27,σ1^{s}.89/51,3C-2D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.80**	**95**	⇓*i*P	**Pb**	**15 28 07.7**	**+0.7**
CO05				*e*S	**Sg**	**15 28 17.3**	**+1.0**
CO05				IAML		15 28 19.2	
	comp=E,4µm,0.3s						
CO06	**Fray Jorge**	**0.94**	**151**	⇑*i*P	**Pg**	**15 28 09.3**	**+0.8**
CO06				*e*S	**Sg**	**15 28 20.9**	**+0.3**
CO06				IAML		15 28 22.9	
	comp=E,2µm,0.3s						
GO04	**Tololo Observa**	**1.22**	**106**	⇓*i*P	**Pg**	**15 28 14.3**	**+0.5**
GO04				*e*S	**Sg**	**15 28 29.1**	**-0.6**
GO04	**Tololo Observa**	**1.22**	**106**	*e*P	**Pg**	**15 28 14.4**	**+0.5**
GO04				*e*S	**Sb**	**15 28 30.8**	**+0.2**
GO04				IAML		15 28 31.9	
	comp=Z,2µm,0.3s						
LCO	**Las Campanas**	**1.52**	**57**	⇑*i*P	**Pb**	**15 28 20.2**	**+0.7**
LCO				*e*S	**Sg**	**15 28 40.4**	**+0.9**
LCO	**Las Campanas**	**1.52**	**57**	*e*P	**Pg**	**15 28 20.4**	**+0.8**
LCO				IAML		15 28 46.9	
	comp=Z,1µm,1.1s						
CO03	**El Pedregal**	**1.60**	**128**	*e*P	**Pn**	**15 28 20.4**	**+0.6**
CO03				*e*S	**Sn**	**15 28 39.6**	**-1.5**
CO03				IAML		15 28 41.2	
	comp=E,1µm,0.2s						
CO03	**El Pedregal**	**1.60**	**128**	*e*P	**Pn**	**15 28 20.2**	**+0.4**
CO03				*e*S	**Sn**	**15 28 41.5**	**+0.4**
CO03				IAML		15 28 45.3	
	comp=Z,535nm,0.8s						
CO02	**Combarbal**	**1.68**	**144**	⇑*i*P	**Pn**	**15 28 21.3**	**+0.6**
CO02				*e*S	**Sn**	**15 28 41.6**	**-1.3**
CO02	**Combarbal**	**1.68**	**144**	*e*P	**Pn**	**15 28 21.4**	**+0.6**
CO02				*e*S	**Sb**	**15 28 44.1**	**+0.5**
CO02				IAML		15 28 45.0	
	comp=Z,1µm,1.2s						
CO01	**Juntas del Tor**	**1.79**	**95**	*e*P	**Pb**	**15 28 24.1**	**-0.1**
CO01				*e*S	**Sn**	**15 28 46.2**	**+0.3**
CO01				IAML		15 28 47.3	
	comp=N,314nm,0.3s						
CO01	**Juntas del Tor**	**1.79**	**95**	*e*P	**Pb**	**15 28 24.1**	**-0.1**
CO01				*e*S	**Sb**	**15 28 47.0**	**-0.1**
CO01				IAML		15 28 47.2	
	comp=Z,530nm,0.7s						
AC04	**Llanos de Chal**	**1.90**	**30**	*e*P	**Pn**	**15 28 24.2**	**+0.5**
AC04				*e*S	**Sg**	**15 28 51.4**	**-0.1**
AC04				IAML		15 29 06.8	
	comp=Z,221nm,1.0s						
AROD	**Rodeo**	**2.35**	**98**	*e*P	**Pb**	**15 28 33.8**	**+0.1**
AROD				*e*S	**Sn**	**15 28 58.4**	**-1.3**
ACDV	**Cuesta del Vie**	**2.65**	**98**	*e*P	**Pb**	**15 28 38.2**	**-0.5**
ACDV				*e*S	**Sg**	**15 29 15.3**	**-0.5**
ACDV				IAML		15 29 17.2	
	comp=Z,144nm,1.1s						
DOCA	**Reserva Natura**	**2.87**	**113**	*e*P	**Pb**	**15 28 41.5**	**-1.1**
DOCA				*e*S	**Sb**	**15 29 18.4**	**+0.1**
DOCA				IAML		15 29 25.8	
	comp=Z,176nm,1.5s						
VCA	**Vinchina**	**3.62**	**73**	*e*P	**Pb**	**15 28 53.0**	**-2.3**
VCA				*e*S	**Sg**	**15 29 45.9**	**-1.1**
VCA				IAML		15 29 59.4	
	comp=Z,124nm,0.6s						
CFA	**Coronel Fontan**	**3.80**	**118**	*e*P	**Pn**	**15 28 53.8**	**+3.8**
CFA				*e*S	**Sb**	**15 29 41.4**	**-3.3**
CFA				IAML		15 30 00.1	
	comp=Z,216nm,0.8s						
FCH	**Farellones**	**3.81**	**156**	*e*P	**Pn**	**15 28 52.8**	**+2.4**
AC01	**Pan de Azucar**	**3.94**	**21**	*e*P	**Pn**	**15 28 52.5**	**+0.6**
AC01				*e*S	**Sn**	**15 29 40.7**	**+2.2**
AC01				IAML		15 30 12.8	
	comp=Z,54nm,0.7s						
MT04	**Ro Olivares**	**3.94**	**155**	*e*P	**Pn**	**15 28 50.9**	**-1.2**
MT04				*e*P	Pb	15 28 54.7	-6.0
MT04				*e*S	**Sn**	**15 29 40.6**	**+1.7**
MT04				IAML		15 29 58.9	
	comp=Z,74nm,0.9s						
AC02	**Maricunga**	**4.02**	**42**	*e*P	**Pn**	**15 28 56.0**	**+2.7**
AC02				*e*S	**Sb**	**15 29 51.4**	**0.0**
AC02				*e*S	**Sg**	**15 29 52.4**	**-7.3**
AC02				IAML		15 30 02.8	
	comp=Z,97nm,1.0s						
MT01	**Popeta**	**4.07**	**169**	*e*P	**Pn**	**15 28 53.8**	**+0.1**
MT01				IAML		15 30 06.1	
	comp=Z,41nm,2.5s						

AVFE	**Valle Fertil**	**4.14**	**102**	eP	**Pn**	**15 28 58.5**	**+3.8**
AVFE				eS	**Sb**	**15 29 50.9**	**-3.8**
AVFE				IAML		15 30 03.1	
	comp=Z,90nm,0.7s						
LMEL	**Las Melosas**	**4.32**	**158**	eP	**Pn**	**15 28 59.7**	**+2.6**
LMEL				eS	**Sn**	**15 29 48.5**	**+0.4**
LMEL				IAML		15 30 13.8	
	comp=Z,41nm,0.8s						
ACLC	**CERRO LA CRUZ**	**4.55**	**86**	eS	**Sb**	**15 30 05.4**	**-1.0**
ACLC				IAML		15 30 10.4	
	comp=Z,48nm,0.9s						
BO01	**Tunca**	**4.62**	**169**	eP	**Pn**	**15 29 02.1**	**+0.9**
BO01				eS	**Sn**	**15 29 52.4**	**-2.9**
BO01				IAML		15 30 30.7	
	comp=Z,29nm,0.7s						

IDC 14 15:31:35.4±6.2,21°.57S×170°.04E,h89^{km}±48^{km},mb3.6/3, mbtmp3.8/3,MS3.4/13,Error ellipse: s-maj=140.4km s-min=37.8km az=159.0,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.38**	**261**	P	Pn	15 32 27.8	+1.8
	8.9nm,1.3s,baz=119,slow=19,SNR=1.4						
DZM				S	Sn	15 33 04.8	-0.4
	2.9nm,0.5s,baz=106,slow=19,SNR=2.1						
URZ	**Urewera**	**17.72**	**161**	LR	LR	15 40 56.4	
	comp=Z,176nm,21.7s,baz=63,slow=32						
ASAR	**Alice Springs**	**33.37**	**259**	P	P	15 38 05.8	+0.3
	0.2nm,0.5s,baz=92,slow=7.8,SNR=11						
ASAR				LR	LR	15 50 15.2	
	comp=Z,29nm,21.9s,baz=90,slow=34						
	0.2nm,0.5s						
JAY	**Jayapura**	**34.25**	**300**	LR	LR	15 52 26.6	
	comp=Z,45nm,18.1s,baz=208,slow=36						
GUMO	**Guam**	**42.79**	**322**	LR	LR	15 56 06.1	
	comp=Z,55nm,18.6s,baz=156,slow=34						
BATI	**Baumata**	**45.85**	**277**	LR	LR	15 59 28.5	
	comp=Z,190nm,18.3s,baz=153,slow=36						
KAPI	**Kappang**	**51.38**	**281**	LR	LR	16 06 41.9	
	comp=Z,31nm,18.2s,baz=140,slow=41						
VNDA	**Vanda**	**56.14**	**182**	LR	LR	16 04 37.2	
	comp=Z,30nm,18.2s,baz=210,slow=35						
MJAR	**Matsushiro Arr**	**65.15**	**332**	LR	LR	16 07 29.4	
	comp=Z,21nm,21.9s,baz=176,slow=33						
JNU	**Nakatsue**	**65.99**	**325**	LR	LR	16 09 14.5	
	comp=Z,18nm,19.2s,baz=164,slow=34						
ASAJ	**Asahikawa**	**70.03**	**339**	LR	LR	16 07 21.2	
	comp=Z,34nm,20.1s,baz=171,slow=31						
PETK	**Petropavlovsk-**	**75.13**	**352**	LR	LR	16 09 00.3	
	comp=Z,21nm,21.4s,baz=129,slow=30						
KLR	**Kul'dur**	**78.29**	**335**	LR	LR	16 13 44.8	
	comp=Z,15nm,21.8s,baz=200,slow=32						
MA2	**Magadan**	**82.38**	**350**	LR	LR	16 14 33.8	
	comp=Z,29nm,20.4s,baz=154,slow=31						
ILAR	**Eielson Array**	**92.22**	**17**	P	P	15 44 34.9	+0.2
	0.5nm,0.8s,baz=217,slow=5.8,SNR=4.4						
	0.5nm,0.8s						
TXAR	**Lajitas Array**	**97.22**	**61**	P	P	15 44 57.5	-1.0
	0.6nm,0.8s,baz=224,slow=3.5,SNR=5.5						
	0.6nm,0.8s						

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*IDC **14** 15:33:04.9±0.8,58°.76S×25°.10W,h0^{km},mb4.1/7, mbtmp4.1/8,ML4.2/1,MS3.3/2,Error ellipse: s-maj=31.7km s-min=23.0km az=94.0*

ISC 14 15:33:07.6±0.8,58°.8S±0°.1×25°.0W±0°.2,h18^{km},n23, σ0^{s}.49/16,mb4.0/6,4C,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.82**	**156**	⇑P	**Pn**	**15 36 22.0**	**-0.2**
	comp=Z,8.6nm,0.4s						
VNA3	**Neumayer Olymp**	**14.02**	**159**	⇑P	**Pn**	**15 36 25.1**	**+0.2**
	comp=Z,8.3nm,0.2s						
SNAA	**Sanae**	**15.77**	**154**	⇑P	**Pn**	**15 36 48.5**	**0.0**
	comp=Z,160nm,0.5s						
SNAA	**Sanae**	**15.77**	**154**	Pn	**Pn**	**15 36 48.5**	**0.0**
	comp=Z,1.0nm,0.3s,baz=320,slow=15,SNR=37						
SNAA				Sn	Sn	15 39 26.6	-16
	baz=351,slow=18,SNR=1.2						
	comp=Z,4.2nm,0.4s						
TROLL	**Troll, Antarti**	**17.28**	**151**	⇑P	**P**	**15 37 08.3**	**-0.8**
	comp=Z,192nm,0.5s						
PMSA	**Palmer Station**	**19.14**	**235**	LR	LR	15 43 02.3	
	comp=Z,101nm,18.6s,baz=79,slow=31						
QSPA	**South Pole Qui**	**31.46**	**180**	P	**P**	**15 39 27.9**	**+0.2**
	comp=Z,2.2nm,0.6s,baz=208,slow=2.0,SNR=22						
	comp=Z,2.2nm,0.6s						
PLCA	**Paso Flores**	**33.67**	**282**	P	**P**	**15 39 47.2**	**0.0**
	comp=Z,0.9nm,0.8s,baz=166,slow=8.3,SNR=1.6						
PLCA				LR	LR	15 52 57.4	
	comp=Z,42nm,18.5s,baz=145,slow=36						
	comp=Z,0.9nm,0.8s						
VNDA	**Vanda**	**43.88**	**182**	P	**P**	**15 41 13.1**	**+0.8**
	comp=Z,1.9nm,0.7s,baz=194,slow=7.5,SNR=9.0						
	comp=Z,1.9nm,0.7s						
H04S2	**CROZET ISLANDS**	**45.44**	**110**	T	T	16 30 57.1	
	baz=226,slow=75						
H04S3	**CROZET ISLANDS**	**45.45**	**110**	T	T	16 30 59.9	
	baz=226,slow=75						
H04S1	**CROZET ISLANDS**	**45.46**	**110**	T	T	16 31 01.4	
	baz=226,slow=75						
BOSA	**Boshof**	**45.64**	**71**	P	**P**	**15 41 27.5**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=187,slow=7.0,SNR=3.8						
	comp=Z,1.2nm,0.6s						
H10N1	**ASCENSION HYDR**	**51.46**	**13**	T	T	16 37 50.8	
	baz=194						
H10N3	**ASCENSION HYDR**	**51.47**	**13**	T	T	16 37 52.2	
	baz=194,slow=74						
H10N2	**ASCENSION HYDR**	**51.48**	**13**	T	T	16 37 51.3	
	baz=194,slow=74						
TORD	**Torodi Ar. Bea**	**74.92**	**27**	P	**P**	**15 44 47.3**	**+0.2**
	comp=Z,2.3nm,0.6s,baz=176,slow=3.9,SNR=4.0						
	comp=Z,2.3nm,0.6s						
STKA	**Stephens Creek**	**89.00**	**169**	P	**P**	**15 46 01.4**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=204,slow=10.0,SNR=2.9						
	comp=Z,0.8nm,0.5s						
ASAR	**Alice Springs**	**96.02**	**161**	P	**P**	**15 46 33.0**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=181,slow=4.0,SNR=6.7						
	comp=Z,0.3nm,0.7s						
FINES	**FINESS Array B**	**126.27**	**28**	PKP	**PKiKP**	**15 52 07.3**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=187,slow=2.4,SNR=4.1						
YKA	**Yellowknife Ar**	**138.96**	**315**	PKP	**PKPdf**	**15 52 31.0**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=116,slow=1.4,SNR=3.0						
SONM	**Songino Array**	**149.66**	**90**	PKPbc	**PKiKP**	**15 52 55.5**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=228,slow=2.8,SNR=7.5						
ILAR	**Eielson Array**	**152.75**	**307**	PKPbc	**PKiKP**	**15 53 01.8**	**0.0**
	comp=Z,4.1nm,0.9s,baz=121,slow=7.3,SNR=30						

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*PRE **14** 15:44:08.9±1.1,25°.65S×28°.78E,h0^{km},ML2.5,Suspected explosion*

*BGSI **14** 15:44:09.7±1.4,25°.76S×28°.92E,h0^{km}±54^{km},ML2.7*

ISC 14 15:44:09.4±0.9,25°.68S±0°.04×28°.76E±0°.03,h0^{km},n21, σ0^{s}.94/41,South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HRAO	**HartRAO**	**0.99**	**257**	eP	**Pg**	**15 44 28.4**	**+0.1**
HRAO				eS	**Sg**	**15 44 41.5**	**+0.4**
HRAO				IAML		15 44 49.6	
	comp=Z,139nm,0.3s						
CRLN	**Carolina, Mapu**	**1.19**	**106**	eP	**Pg**	**15 44 32.0**	**-0.1**
CRLN				eS	**Sg**	**15 44 47.8**	**+0.3**
CRLN				IAML		15 44 56.2	
	comp=Z,55nm,0.3s						
WDLM	**Western Deep L**	**1.41**	**238**	eP	**Pn**	**15 44 36.7**	**+0.2**
WDLM				eS	**Sn**	**15 44 55.9**	**-0.1**
WDLM				IAML		15 44 59.8	
	comp=Z,205nm,0.2s						
PRYS	**Parys**	**1.77**	**225**	eP	**Pb**	**15 44 42.5**	**-0.3**
PRYS				eS	**Sg**	**15 45 06.7**	**+0.5**
PRYS				IAML		15 45 12.0	
	comp=Z,69nm,0.3s						
PILG	**Pilgrimsrest,**	**1.92**	**68**	eP	**Pn**	**15 44 43.8**	**+0.3**
PILG				eS	**Sn**	**15 45 08.3**	**-0.2**
PILG				IAML		15 45 11.0	
	comp=Z,85nm,0.4s						
NWCL	**Newcastle**	**2.29**	**154**	eP	**Pn**	**15 44 49.4**	**+0.8**
NWCL				eS	**Sn**	**15 45 17.3**	**-0.3**
NWCL				IAML		15 45 31.0	
	comp=Z,35nm,0.4s						
SNKL	**Senekal, Frees**	**2.73**	**198**	eP	**Pn**	**15 44 55.2**	**+0.5**
SNKL				eS	**Sn**	**15 45 29.6**	**+1.1**
SNKL				IAML		15 45 40.0	
	comp=Z,32nm,0.3s						
LBTB	**Lobatse**	**2.93**	**282**	eP	**Pn**	**15 44 57.7**	**+0.4**
LBTB				eS	**Sn**	**15 45 33.7**	**+0.4**
LBTB				IAML		15 45 51.7	
	comp=Z,21nm,0.2s						
POGA	**Pongola**	**3.12**	**123**	eP	**Pn**	**15 45 00.9**	**+1.0**
POGA				eS	**Sn**	**15 45 37.0**	**-0.9**
POGA				IAML		15 45 53.1	
	comp=Z,29nm,0.5s						
MOPA	**Mopani**	**3.23**	**49**	eP	**Pn**	**15 45 00.2**	**-1.1**
MOPA				eS	**Sn**	**15 45 39.5**	**-0.9**
MOPA				IAML		15 45 52.6	
	comp=Z,62nm,0.4s						
MREMI	**Moremi**	**3.31**	**339**	i P	**Pn**	**15 45 03.5**	**+0.9**
MREMI				i S	**Sn**	**15 45 42.6**	**-0.1**
MREMI				IAML		15 45 50.7	
	comp=E,199nm,0.4s						
SWZ	**Schweizer**	**3.42**	**243**	eP	**Pn**	**15 45 04.4**	**+0.3**
SWZ				eS	**Sn**	**15 45 46.1**	**+0.7**
SWZ				IAML		15 46 02.2	
	comp=Z,23nm,0.3s						
LPHEP	**Lephephe**	**3.50**	**311**	i P	**Pn**	**15 45 05.2**	**+0.1**
LPHEP				i S	**Sn**	**15 45 46.7**	**-0.6**
LPHEP				IAML		15 46 00.6	
	comp=N,22nm,0.6s						
MUSN	**Musina, Limpop**	**3.52**	**17**	eP	**Pn**	**15 45 04.6**	**-0.8**
MUSN				eS	**Sn**	**15 45 47.1**	**-0.7**
MUSN				IAML		15 45 59.6	
	comp=Z,19nm,0.7s						
PMBG	**Pietermaritzbu**	**4.13**	**158**	eP	**Pn**	**15 45 14.5**	**+0.8**
PMBG				eS	**Sn**	**15 46 02.0**	**-0.8**
PMBG				IAML		15 46 06.9	
	comp=Z,18nm,0.3s						
BOSA	**Boshof**	**4.28**	**226**	eP	**Pn**	**15 45 16.3**	**+0.5**
BOSA				eS	**Sn**	**15 46 06.7**	**+0.2**
BOSA				IAML		15 46 31.6	
	comp=Z,12nm,0.2s						
SKOMA	**Sekoma**	**4.52**	**284**	i P	**Pn**	**15 45 19.8**	**+0.6**
SKOMA				i S	**Sn**	**15 46 12.0**	**-0.6**
SKOMA				IAML		15 46 42.1	
	comp=N,50nm,0.6s						
BROLN	**Tlhalogang**	**4.74**	**344**	i P	**Pn**	**15 45 21.6**	**-0.6**
BROLN				IAML		15 46 14.3	
	comp=N,8.3nm,0.8s						
KSTD	**Kokstad**	**4.95**	**174**	eP	**Pn**	**15 45 26.0**	**+0.9**
KSTD				eS	**Sn**	**15 46 21.5**	**-1.6**
KSTD				IAML		15 46 46.0	
	comp=Z,4.1nm,0.3s						
ALKP	**Alkanpan, Nort**	**7.16**	**232**	eP	**Pn**	**15 45 56.6**	**+1.2**
ALKP				eS	**Sn**	**15 47 15.5**	**-2.1**
ALKP				IAML		15 47 23.7	
	comp=Z,3.0nm,0.3s						
FRAZ	**Fraserburg**	**8.96**	**224**	eP	**Pn**	**15 46 21.6**	**+1.3**
FRAZ				eS	**Sn**	**15 47 58.8**	**-3.2**
FRAZ				IAML		15 48 27.3	
	comp=Z,1.1nm,0.6s						

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*SDD **14** 16:06:39.3±0.8,17°.69N×70°.61W,h31^{km}±528^{km},MD3.1, ML2.5,MW2.8*

*OSPL **14** 16:06:40.0±1.5,18°.01N×70°.59W,h17^{km}±185^{km},ML2.1*

ISC 14 16:06:38.8±1.6,17°.84N±0°.09×70°.59W±0°.06,h20^{km}±9^{km}, n9,σ0^{s}.99/18,1C-1D,Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BANI	**BANI**	**0.60**	**22**	ePg	**Pn**	**16 06 52.4**	**+0.1**
BANI				⇓eSg	**Sn**	**16 07 01.9**	**+0.5**
BANI				IAML		16 07 03.4	
	comp=N,273nm,0.1s						
PODR	**Polo**	**0.73**	**297**	ePg	**Pb**	**16 06 53.6**	**+0.6**
PODR				eSg	**Sb**	**16 07 03.1**	**+0.3**
PODR				IAML		16 07 04.7	
	comp=N,67nm,0.8s						
PODR	**Polo**	**0.73**	**297**	i P	**Pn**	**16 06 54.8**	**+0.6**
PODR				eS	**Sn**	**16 07 04.3**	**-0.6**
LOVI	**El Cajuil, Ovi**	**0.74**	**267**	i P	**Pb**	**16 06 53.4**	**+0.4**
LOVI				eS	**Sb**	**16 07 03.7**	**+1.0**
LOVI				IAML		16 07 06.7	
	comp=Z,53nm,0.7s						
ABDR	**Alto Bandera**	**0.97**	**358**	⇑ePg	**Pb**	**16 06 57.8**	**+0.6**
ABDR				eSg	**Sn**	**16 07 11.7**	**+0.7**
ABDR				IAML		16 07 15.7	
	comp=N,77nm,0.3s						
LODU1	**El Espartillar**	**0.98**	**302**	i P	**Pn**	**16 06 56.9**	**-0.6**
LODU1				eS	**Sb**	**16 07 07.0**	**-2.8**
LOBH	**Bahia de las A**	**1.00**	**272**	i P	**Pn**	**16 06 57.3**	**-0.4**
LOBH				eS	**Sn**	**16 07 11.3**	**+0.1**
LOBH				IAML		16 07 18.6	
	comp=Z,60nm,0.7s						
DR08	**Loma La Naviza**	**1.24**	**26**	ePg	**Pn**	**16 07 01.5**	**+0.4**
DR08				eSg	**Sn**	**16 07 17.5**	**+0.1**
DR08				IAML		16 07 19.1	
	comp=N,511nm,0.2s						
HATOM	**Hato Mayor del**	**1.49**	**50**	ePg	**Pn**	**16 07 04.1**	**-0.4**
HATOM				eSg	**Sn**	**16 07 22.0**	**-1.3**
HATOM				IAML		16 07 25.3	
	comp=N,19nm,0.7s						

BER 14 16:20:04.9±0.7,75°.23N×7°.77E,h29^{km}±12^{km},Mw4.1, Confirmed Earthquake,Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSPB	**Hornsund (broa**	**2.58**	**43**	eP	Pn	16 20 42.9	-1.7
HSPB				IAML		16 20 46.1	
	comp=Z,3.6nm,0.2s						
SPA0	**Spitsbergen Ar**	**3.56**	**30**	eP	Pn	16 20 57.5	-0.7
KBS	**Kingsbay**	**3.83**	**12**	eP	Pn	16 21 00.3	-1.5
KBS				eP	Pn	16 21 00.4	-1.3
HOPEN	**Hopen**	**4.41**	**65**	eP	Pn	16 21 08.3	-1.3
HOPEN				i		16 21 15.1	
HOPEN				IAML		16 21 15.2	
	comp=Z,20nm,0.2s						
HOPEN				eS	Sn	16 21 55.0	-5.0
JNW	**Jan Mayen West**	**6.31**	**236**	eP	Pn	16 21 33.7	-2.0
JNE	**Jan Mayen East**	**6.31**	**236**	eP	Pn	16 21 33.7	-2.0
JNE				IAML		16 21 34.1	
	comp=Z,21nm,0.5s						
JMIC	**Jan Mayen**	**6.36**	**236**	eP	Pn	16 21 34.1	-2.4
JMI	**Jan Mayen**	**6.45**	**236**	eP	Pn	16 21 35.6	-2.1
JMI				IAML		16 21 35.7	
	comp=Z,12nm,0.4s						

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*NEIC **14** 16:26:26.4,14°.20N×93°.19W,h16^{km}*

*NEIC **14** 16:26:26.9±2.5,14°.36N±0°.05×93°.16W±0°.05,h10^{km}±1^{km}, mb5.1/515,Mww5.1/12,Md5.0/145(MEX),Error ellipse: s-maj=9.4km s-min=7.5km az=156.0*

*GCG **14** 16:26:26.1±2.3,14°.11N×93°.31W,h22^{km}±35^{km},MD4.8, ML5.4,MW4.7*

*NEIC **14** 16:26:26.4,14°.30N×93°.19W,h16^{km},Moment Tensor Solution. Duration: 18^{s}.8 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.78; M$_{\theta\theta}$-2.94; M$_{\phi\phi}$-0.84; M$_{r\theta}$4.03; M$_{\theta\phi}$0.96; M$_{\phi r}$-0.21; Fault plane solution: M$_0$5.39000×10^{16} NP1: ϕ_s299.14000°,δ21.81000°,λ109.59000°. NP2: ϕ_s98.17000°,δ69.51000°,λ82.36000°. Principal axes: T 5.6733, Plg65.0000°, Azm355.0000°; N -0.6315, Plg7.0000°, Azm101.0000°; P -5.0418, Plg24.0000°, Azm194.0000°;*

*SNET **14** 16:26:27.5±0.9,14°.21N×93°.26W,h74^{km}±32^{km},ML5.5*

*GCMT **14** 16:26:28.9±0.2,14°.37N±0°.01×93°.29W±0°.01,h13^{km}, MW5.1/107,Moment Tensor Solution. s84,c116; s107,c163; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.93±.12; M$_{\theta\theta}$-3.30±.09; M$_{\phi\phi}$-0.63±.09; M$_{r\theta}$2.53±.24; M$_{\theta\phi}$1.33±.06; M$_{\phi r}$-3.56±.30; Best double couple: M$_0$5.81900×10^{16} NP1:ϕ_s277.00000°,δ25.00000°, λ55.00000°. NP2:ϕ_s135.00000°,δ70.00000°,λ105.00000°. Principal axes: T 6.1610, Plg62.0000°, Azm68.0000°; N -0.6870, Plg14.0000°, Azm309.0000°; P -5.4770, Plg23.0000°, Azm213.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **14** 16:26:28.5±1.0,14°.55N×92°.95W,h25^{km},mb5.2/39 Error ellipse: s-maj=10.6km s-min=5.6km az=98.6*

*CATAC **14** 16:26:29.9±0.5,14°N±3°×9°3W±°,h24^{km}±5^{km},M5.4/29, mb5.7/11,mB5.7/11,MLv5.5/29,Mw(mB)5.2/11, MwMwp4.5/1,Mwp4.9/1,Error ellipse: s-maj=6.6km s-min=3.9km az=36.7,Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.35; M$_{\theta\theta}$-3.31; M$_{\phi\phi}$-0.04; M$_{r\theta}$-1.74; M$_{\theta\phi}$1.50; M$_{\phi r}$-0.88; Fault plane solution: M$_0$4.14129×10^{16} NP1:ϕ_s131.88848°,δ39.02878°, λ124.34528°. NP2:ϕ_s270.55308°,δ58.67296°,λ65.42385°. Principal axes: T 4.1460, Plg66.4831°, Azm133.0746°; N -0.0093, Plg20.8100°, Azm283.9283°; P -4.1366, Plg10.4665°, Azm17.9544°; Moment Tensor Solution. Moment tensor: Scale 10^{16} Nm; M$_{rr}$3.19; M$_{\theta\theta}$-3.22; M$_{\phi\phi}$0.03; M$_{r\theta}$-1.21; M$_{\theta\phi}$1.35; M$_{\phi r}$-1.11; Fault plane solution: M$_0$3.84834×10^{16} NP1:ϕ_s131.40519°,δ43.21993°, λ124.43767°. NP2:ϕ_s268.14855°,δ55.61272°,λ62.01298°. Principal axes: T 3.8956, Plg66.1565°, Azm122.9775°; N -0.0964, Plg22.7842°, Azm284.8550°; P -3.7992, Plg6.6571°, Azm17.6650°; confirmed*

*MEX **14** 16:26:31.5±0.7,14°.38N×93°.19W,h16^{km}±16^{km},MD5.0*

*IDC **14** 16:26:34.3±2.4,14°.49N×92°.84W,h69^{km}±21^{km},mb4.4/34, mbtmp4.7/37,MS4.4/59,Error ellipse: s-maj=16.8km s-min=8.3km az=53.0*

ISC 14 16:26:28.7±0.8,14°.31N±0°.03×93°.19W±0°.03,h31^{km}±2^{km}, n1060,σ2^{s}.01/941,mb5.1/285,MS4.5/64,12C-14D,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**1.07**	**56**		**Pn**	**16 26 47.8**	**+0.2**
THIG					**Sn**	**16 26 59.8**	**-1.7**
THIG		**1.07**	**56**	⇓eP	**Pn**	**16 26 47.8**	**+0.2**
THIG				eS	**Sn**	**16 26 59.8**	**-1.7**
THIG		**1.07**	**56**	i P	**Pn**	**16 26 47.8**	**+0.2**
	comp=Z,17µm,0.5s						
THIG				i S	**Sn**	**16 27 01.8**	**+0.4**
THIG				IAML		16 27 19.2	
	comp=E,34µm,0.8s						
SMCA	**Catarina**	**1.21**	**63**	eP	**Pn**	**16 26 49.8**	**+0.3**
SMCA				i S	**Sb**	**16 27 07.0**	**+0.7**
SMCA				IAML		16 27 12.2	
	comp=E,16µm,0.5s						
PATR	**El Naranjo**	**1.23**	**49**	⇓eP	**Pn**	**16 26 49.6**	**-0.3**
PATR				eS	**Sn**	**16 27 04.0**	**-1.5**
PAVE	**Pavencul**	**1.32**	**48**	⇓eP	**Pn**	**16 26 51.1**	**0.0**
PAVE				i S	**Sn**	**16 27 06.6**	**-1.2**
PCIG		**1.39**	**359**		**Pn**	**16 26 51.0**	**-1.0**
PCIG					**Sn**	**16 27 07.9**	**-1.3**
PCIG		**1.39**	**359**	⇓eP	**Pn**	**16 26 51.0**	**-1.0**
PCIG				i S	**Sn**	**16 27 07.9**	**-1.3**
RTAL	**Retalhuleu**	**1.46**	**81**		**Pn**	**16 26 53.4**	**+0.5**
RTAL	**Retalhuleu**	**1.46**	**81**	⇑eP	**Pn**	**16 26 53.5**	**+0.5**
RTAL				eS	**Sn**	**16 27 10.5**	**-0.6**
RTAL	**Retalhuleu**	**1.46**	**81**	eP	**Pn**	**16 26 53.4**	**+0.5**
RTAL				eS	**Sb**	**16 27 13.5**	**-0.1**
RTAL	**Retalhuleu**	**1.46**	**81**	S	**Sb**	**16 27 12.9**	**-0.7**
RTAL	**Retalhuleu**	**1.46**	**81**	P	**Pn**	**16 26 53.6**	**+0.6**
STG8	**El Palmar, Qui**	**1.79**	**85**	i P	**Pn**	**16 26 55.2**	**-2.4**
	comp=Z,7µm,1.0s						
STG8				IAML		16 27 23.8	
	comp=N,27µm,0.4s						
STG0	**El Palmar, Qui**	**1.79**	**86**	i P	**Pn**	**16 26 55.3**	**-2.3**
	comp=Z,14µm,0.3s						
STG0				IAML		16 27 25.2	
	comp=E,48µm,0.3s						
SOKI	**Kika Raxquin**	**1.80**	**73**	i P	**Pn**	**16 26 59.2**	**+1.2**
	comp=Z,10µm,1.0s						
SOKI				IAML		16 27 33.9	
	comp=N,33µm,0.9s						
HUEH	**Huehuetenango**	**1.92**	**58**		**Pn**	**16 27 01.4**	**+2.0**
HUEH	**Huehuetenango**	**1.92**	**58**	⇑eP	**Pb**	**16 27 01.6**	**-1.6**
HUEH				i S	**Sn**	**16 27 21.7**	**-0.9**
HUEH	**Huehuetenango**	**1.92**	**58**	eP	**Pn**	**16 27 01.1**	**+1.7**
HUEH				eS	**Sb**	**16 27 26.2**	**-0.6**
HUEH	**Huehuetenango**	**1.92**	**58**	eP	**Pn**	**16 27 01.5**	**+2.0**
HUEH				i S	**Sb**	**16 27 30.2**	**+3.4**
HUEH				IAML		16 27 43.7	
	comp=E,36µm,0.8s						
HUEH	**Huehuetenango**	**1.92**	**58**	P	**Pn**	**16 27 01.2**	**+1.8**
HUEH	**Huehuetenango**	**1.92**	**58**	S	**Sn**	**16 27 23.7**	**+1.2**
CCIG	**Comitan**	**2.21**	**27**		**Pb**	**16 27 06.1**	**-2.1**
CCIG	**Comitan**	**2.21**	**27**	⇑eP	**Pb**	**16 27 06.4**	**-1.8**
CCIG				eS	**Sn**	**16 27 30.8**	**+1.1**
CCIG	**Comitan**	**2.21**	**27**	i P	**Pb**	**16 27 06.1**	**-2.1**
	comp=Z,6µm,0.5s						
CCIG				IAML		16 27 38.5	
	comp=N,14µm,0.5s						
CCIG	**Comitan**	**2.21**	**27**	P	**Pb**	**16 27 06.7**	**-1.5**
CCIG	**Comitan**	**2.21**	**27**	S	**Sb**	**16 27 34.1**	**-1.1**
ESSG	**Sabana Grande**	**2.29**	**88**	eP	**Pn**	**16 27 04.0**	**-0.4**
TGBT	**Tuxtla Gutierr**	**2.46**	**2**		**Pn**	**16 27 08.3**	**+1.7**
TGBT					**Sn**	**16 27 36.1**	**+0.5**
TGBT	**Tuxtla Gutierr**	**2.46**	**2**	eP	**Pn**	**16 27 08.3**	**+1.7**
TGBT				eS	**Sn**	**16 27 36.1**	**+0.5**
TGIG		**2.46**	**1**		**Pn**	**16 27 08.4**	**+1.6**
TGIG					**Sn**	**16 27 35.0**	**-0.8**
TGIG		**2.46**	**1**	⇓iP	**Pn**	**16 27 08.4**	**+1.6**
TGIG				eS	**Sn**	**16 27 35.0**	**-0.8**
TGIG		**2.46**	**1**	i P	**Pn**	**16 27 08.3**	**+1.6**
	comp=Z,5µm,0.6s						
TGIG				i S	**Sb**	**16 27 39.4**	**-2.8**
TGIG				IAML		16 27 43.2	
	comp=E,8µm,0.5s						
FG8	**Yepocapa, Chim**	**2.55**	**91**	i P	Pn	16 27 03.1	-4.9
FG8				i S	**Sn**	**16 27 29.6**	**-8.5**
GCG4	**OSOP**	**2.59**	**84**	eP	**Pn**	**16 27 10.7**	**+2.0**
	comp=Z,5µm,1.0s						
GCG4				IAML		16 27 48.5	
	comp=E,14µm,0.9s						
FG16	**Alotenango, Sa**	**2.60**	**90**	i P	Pn	16 27 04.2	-4.5
	comp=Z,10µm,0.6s						
FG16				IAML		16 27 41.2	
	comp=N,44µm,0.4s						
FAME	**Alcaldia de Sa**	**3.12**	**98**	P	**Pn**	**16 27 16.2**	**+0.5**
FAME	**Alcaldia de Sa**	**3.12**	**98**	S	**Sn**	**16 27 52.4**	**+0.5**
HUIG	**Huatulco**	**3.17**	**298**		**Pn**	**16 27 15.0**	**-1.5**
HUIG					**Sb**	**16 28 00.1**	**-2.5**
HUIG	**Huatulco**	**3.17**	**298**	eP	**Pn**	**16 27 15.0**	**-1.5**
HUIG				i S	**Sb**	**16 28 00.1**	**-2.5**
HUIG	**Huatulco**	**3.17**	**298**	eP	**Pn**	**16 27 14.9**	**-1.5**
SLOZ	**Alcaldia de Sa**	**3.31**	**94**	eP	**Pn**	**16 27 18.1**	**-0.4**
SLOZ				eS	**Sn**	**16 27 57.9**	**+1.0**
SLOZ	**Alcaldia de Sa**	**3.31**	**94**	P	**Pn**	**16 27 19.6**	**+1.1**
SLOZ	**Alcaldia de Sa**	**3.31**	**94**	S	**Sn**	**16 27 58.4**	**+1.5**
LOAL	**Lomas de Alarc**	**3.32**	**95**	S	**Sn**	**16 27 57.8**	**+0.7**
LOAL	**Lomas de Alarc**	**3.32**	**95**	P	**Pn**	**16 27 19.5**	**+1.0**
NUBE	**Las Nubes**	**3.33**	**97**	eP	**Pn**	**16 27 19.0**	**+0.2**
NUBE	**Las Nubes**	**3.33**	**97**	eP	**Pn**	**16 27 19.0**	**+0.2**
NUBE	**Las Nubes**	**3.33**	**97**	P	**Pn**	**16 27 19.4**	**+0.6**
NUBE	**Las Nubes**	**3.33**	**97**	S	**Sn**	**16 27 57.5**	**+0.1**
CEVE	**Cerro Verde**	**3.49**	**97**	eP	**Pn**	**16 27 21.8**	**+0.6**
CEVE				IAML		16 28 18.0	
	comp=Z,9µm,0.5s						
CEVE	**Cerro Verde**	**3.49**	**97**	P	**Pn**	**16 27 22.3**	**+1.2**
CEVE	**Cerro Verde**	**3.49**	**97**	S	**Sn**	**16 28 01.7**	**+0.2**
SBLS	**San Blas**	**3.49**	**97**	eP	**Pn**	**16 27 21.0**	**-0.1**
SNJE	**San Jose**	**3.50**	**97**	eP	**Pn**	**16 27 21.6**	**+0.4**
VHSA	**Villahermosa**	**3.66**	**4**	i P	**Pn**	**16 27 26.4**	**+3.2**
VHSA				i S	**Sn**	**16 28 10.0**	**+4.6**
JAYA	**Jayaque - finc**	**3.69**	**100**	eP	**Pn**	**16 27 23.9**	**+0.2**
JAYA	**Jayaque - finc**	**3.69**	**100**	P	**Pn**	**16 27 24.2**	**+0.5**
JAYA	**Jayaque - finc**	**3.69**	**100**	S	**Sn**	**16 28 06.0**	**-0.3**
MTO3	**Montecristo**	**3.71**	**88**		**Pn**	**16 27 24.3**	**+0.2**
MTO3	**Montecristo**	**3.71**	**88**	eP	**Pn**	**16 27 24.3**	**+0.2**
MTO3	**Montecristo**	**3.71**	**88**	⇓eP	**Pn**	**16 27 24.5**	**+0.3**
	comp=Z,603nm,1.0s						
MTO3	**Montecristo**	**3.71**	**88**	S	**Sn**	**16 28 07.9**	**+1.0**
MTO3	**Montecristo**	**3.71**	**88**	P	**Pn**	**16 27 24.7**	**+0.6**
ESQI	**Esquipulas**	**3.74**	**86**		**Pn**	**16 27 25.5**	**+1.2**
ESQI	**Esquipulas**	**3.74**	**86**	eP	**Pn**	**16 27 25.1**	**+0.7**
ESQI	**Esquipulas**	**3.74**	**86**	P	**Pn**	**16 27 25.5**	**+1.2**
PMON	**Piamonte**	**3.81**	**98**	eP	**Pn**	**16 27 25.4**	**+0.1**
PMON	**Piamonte**	**3.81**	**98**	P	**Pn**	**16 27 26.0**	**+0.7**
BOQS	**Boqueron**	**3.84**	**98**	eP	**Pn**	**16 27 26.4**	**+0.5**
LALI	**Alcalda de L**	**3.84**	**102**	P	**Pn**	**16 27 26.2**	**+0.5**
LALI	**Alcalda de L**	**3.84**	**102**	S	**Sn**	**16 28 09.9**	**+0.1**
TUIG	**Tuzandepetl**	**3.89**	**342**	eP	**Pn**	**16 27 25.6**	**-0.8**
TUIG				eS	**Sn**	**16 28 12.9**	**+1.9**
LOMA	**Loma Larga**	**3.96**	**99**	eP	**Pn**	**16 27 27.8**	**+0.4**
LOMA	**Loma Larga**	**3.96**	**99**	S	**Sn**	**16 28 14.2**	**+1.4**
LOMA	**Loma Larga**	**3.96**	**99**	P	**Pn**	**16 27 28.2**	**+0.8**
LFRS	**El Faro**	**4.06**	**99**	eP	**Pn**	**16 27 28.9**	**+0.1**
PETF	**Flores**	**4.12**	**51**	eP	**Pn**	**16 27 30.8**	**+1.3**
PETF				eS	**Sn**	**16 28 14.8**	**-1.9**

PETF	Flores	4.12	51	eP	Pn	16 27 31.5	+2.0
PETF				IAML		16 28 43.0	
	comp=N,5µm,0.6s						
PETF	Flores	4.12	51	P	Pn	16 27 31.2	+1.7
PETF	Flores	4.12	51	S	Sn	16 28 19.0	+2.4
PAVA	Las Pavas	4.17	98	P	Pn	16 27 30.9	+0.6
PAVA	Las Pavas	4.17	98	S	Sn	16 28 20.3	+2.2
PEIG	Puerto Escondi	4.17	294		Pn	16 27 28.6	-1.7
PEIG					Sn	16 28 24.9	+6.8
PEIG	Puerto Escondi	4.17	294	eP	Pn	16 27 28.6	-1.7
PEIG				iS	Sn	16 28 24.9	+6.8
COEG	Centro de Oper	4.24	99	P	Pn	16 27 31.7	+0.5
OXLC	Oaxaca	4.36	309	eP	Pn	16 27 34.1	+1.2
OXLC				eS	Sn	16 28 22.3	-0.4
SCLA	Alcaldia de Sa	4.37	97	eP	Pn	16 27 33.2	+0.2
SCLA	Alcaldia de Sa	4.37	97	P	Pn	16 27 33.8	+0.8
OXBJ	Oaxaca	4.37	309		Pn	16 27 34.2	+1.1
OXBJ					Sn	16 28 23.5	+0.3
OXBJ	Oaxaca	4.37	309	eP	Pn	16 27 34.2	+1.1
OXBJ				eS	Sn	16 28 23.5	+0.3
OXIG	Oaxaca	4.38	309		Pn	16 27 33.5	+0.2
OXIG					Sb	16 28 31.2	-6.4
VHO	Vista Hermosa	4.38	309	eP	Pn	16 27 33.5	+0.2
VHO				iS	Sb	16 28 31.2	-6.4
PACA	Pacayal	4.80	99	P	Pn	16 27 41.1	+2.1
PACA	Pacayal	4.80	99	S	Sn	16 28 34.1	+0.5
YOIG	Yosondua	4.90	302		Pn	16 27 42.6	+2.0
YOIG					Sn	16 28 36.6	+0.2
YOIG	Yosondua	4.90	302	eP	Pn	16 27 42.6	+2.0
YOIG				eS	Sn	16 28 36.6	+0.2
PNIG	Pinotepa	5.20	294		Pn	16 27 43.9	-0.4
PNIG					Sn	16 28 47.1	+3.9
PNIG	Pinotepa	5.20	294	⇑eP	Pn	16 27 43.9	-0.4
PNIG				iS	Sn	16 28 47.1	+3.9
LCND	La Caada	5.24	100	P	Pn	16 27 46.6	+1.7
TXIG	Tlaxiaco	5.29	304		Pn	16 27 44.0	-1.9
TXIG					Sn	16 28 49.2	+3.2
TXIG	Tlaxiaco	5.29	304	⇑eP	Pn	16 27 44.0	-1.9
TXIG				eS	Sn	16 28 49.2	+3.2
TOIG	Toxpalan	5.30	316		Pn	16 27 47.7	+1.9
TOIG					Sn	16 28 45.7	-0.1
TOIG	Toxpalan	5.30	316	⇑eP	Pn	16 27 47.7	+1.9
TOIG				eS	Sn	16 28 45.7	-0.1
CNCH	Conchagua	5.30	101	eP	Pn	16 27 46.3	+0.4
CNCH	Conchagua	5.30	101	P	Pn	16 27 47.1	+1.2
CNCH	Conchagua	5.30	101	S	Sn	16 28 47.4	+1.3
POTN	Potosi Cosigui	5.67	103	P	Pn	16 27 51.7	+0.8
POTN				S	Sn	16 28 56.7	+1.7
TPIG	Tehuac#an	5.72	316		Pn	16 27 50.1	-1.6
TPIG					Sn	16 28 58.5	+2.0
TPIG	Tehuac#an	5.72	316	eP	Pn	16 27 50.1	-1.6
TPIG				eS	Sn	16 28 58.5	+2.0
TGUH	Tegucigalpa,Un	5.74	92		Pn	16 27 52.9	+0.9
TGUH	Tegucigalpa,Un	5.74	92	eP	Pn	16 27 49.0	-3.0
TGUH	Tegucigalpa,Un	5.74	92	P	Pn	16 27 58.1	+6.1
	comp=N,5µmcomp=N,395nm,0.9s						
FTIG	Fresnillo de T	5.95	308		Pn	16 27 56.5	+1.7
FTIG					Sn	16 29 07.0	+5.0
FTIG	Fresnillo de T	5.95	308	⇑eP	Pn	16 27 56.5	+1.7
FTIG				eS	Sn	16 29 07.0	+5.0
MGIG	Malinaltepec	6.00	300		Pn	16 27 56.6	+1.1
MGIG					Sn	16 29 03.5	+0.3
MGIG	Malinaltepec	6.00	300	⇑eP	Pn	16 27 56.6	+1.1
MGIG				eS	Sn	16 29 03.5	+0.3
TLIG	Tlapa	6.10	303		Pn	16 27 58.7	+1.8
TLIG	Tlapa	6.10	303	eP	Pn	16 27 56.3	-0.6
TLIG				eS	Sn	16 29 09.4	+3.7
TLIG	Tlapa	6.10	303	S	Sn	16 29 11.9	+6.2
TLIG	Tlapa	6.10	303	P	Pn	16 27 58.6	+1.7
CRIN	San Cristobal	6.18	104		Pn	16 27 58.9	+0.9
CRIN	San Cristobal	6.18	104	P	Pn	16 27 59.5	+1.6
	comp=N,10µmcomp=N,850nm,0.6s						
CRIG	Cruz Grande	6.21	294		Pn	16 27 56.0	-2.4
CRIG					Sn	16 29 07.3	-1.1
CRIG	Cruz Grande	6.21	294	eP	Pn	16 27 56.0	-2.4
CRIG				eS	Sn	16 29 07.3	-1.1
PKGN	Cerro Pekin	6.26	104	P	Pn	16 27 59.6	+0.6
PKGN				S	Sn	16 29 10.8	+1.3
CNGN	Cerro Negro	6.57	105		Pn	16 28 03.0	-0.2
CNGN	Cerro Negro	6.57	105	P	Pn	16 28 03.4	+0.2
CNGN	Cerro Negro	6.57	105	P	Pn	16 28 02.6	-0.6
	comp=N,37µmcomp=N,5µm,1.1s						
MOMN	Momotombo	6.74	105	P	Pn	16 28 06.8	+1.2
LIMN	Finca el Limon	6.75	100	P	Pn	16 28 05.6	-0.2
COPN	Copaltepe	6.76	107	P	Pn	16 28 06.4	+0.5
DAIG	Los Arroyos	6.78	294		Pn	16 28 06.2	+0.1
DAIG					Sn	16 29 27.9	+5.6
DAIG	Los Arroyos	6.78	294	eP	Pn	16 28 06.2	+0.1
DAIG				eS	Sn	16 29 27.9	+5.6
RCVN	Varillal2	6.83	95	P	Pn	16 28 06.8	-0.1
SAPS	Ciudad Sandino	6.94	107	P	Pn	16 28 09.2	+0.9
PPM	Popocatepetl	7.04	313	eP	Pn	16 28 14.1	+4.0
PPM				eS	Sn	16 29 35.4	+6.0
PPIG	Popocatepetl	7.04	313		Pn	16 28 14.1	+4.0
PPIG					Sn	16 29 35.4	+6.0
MGAN	Managua	7.09	107	P	Pn	16 28 17.3	+6.9
	comp=N,8µmcomp=N,609nm,1.0s						
MEIG	Mezcala	7.15	301		Pn	16 28 13.5	+2.2
MEIG					Sn	16 29 38.3	+6.7
MEIG	Mezcala	7.15	301	eP	Pn	16 28 13.5	+2.2
MEIG				iS	Sn	16 29 38.3	+6.7
CXUV	Coxquihui	7.19	325	⇑eP	Pn	16 28 11.5	-0.2
CXUV				eS	Sn	16 29 29.9	-2.5
MATN	Matagalpa	7.19	100	P	Pn	16 28 11.5	-0.4
MATN	Matagalpa	7.19	100	S	Sn	16 29 32.7	+0.1
AMVM	AMECAMECA	7.19	313		Pn	16 28 17.0	+4.9
AMVM					Sn	16 29 34.7	+1.8
AMVM	AMECAMECA	7.19	313	eP	Pn	16 28 17.0	+4.9
AMVM				eS	Sn	16 29 34.7	+1.8
YAIG	Yautepec	7.23	310		Pn	16 28 14.9	+2.5
YAIG					Sn	16 29 35.9	+2.3
YAIG	Yautepec	7.23	310	eP	Pn	16 28 14.9	+2.5
YAIG				eS	Sn	16 29 35.9	+2.3
PLIG	Platanillo	7.29	305		Pn	16 28 15.6	+2.3
PLIG					Sn	16 29 44.4	+9.3
PLIG	Platanillo	7.29	305	eP	Pn	16 28 15.6	+2.3
PLIG				eS	Sn	16 29 44.4	+9.3
CAIG	El Cayaco	7.34	293		Pn	16 28 13.5	-0.3
CAIG					Sn	16 29 41.7	+5.6
CAIG	El Cayaco	7.34	293	eP	Pn	16 28 13.5	-0.3
CAIG				eS	Sn	16 29 41.7	+5.6
MYIG	Merida	7.39	26	eP	Pn	16 28 13.1	-1.3
MYIG				eS	Sn	16 29 38.4	+1.2
MPVM	San Francisco	7.40	312	eP	Pn	16 28 12.6	-2.3
MPVM				eS	Sn	16 29 36.8	-1.1
TXVM	Universitario	7.49	314	iS	Sn	16 29 42.1	+2.1
TLVM	San Miguel Top	7.51	311	eP	Pn	16 28 19.8	+3.3
TLVM				eS	Sn	16 29 38.5	-2.3
XCVM	Xochimilco	7.51	312	eP	Pn	16 28 18.1	+1.7
XCVM				eS	Sn	16 29 46.5	+5.8
BOAB	BOACO BROADBAN	7.55	103		Pn	16 28 18.5	+1.8
BOAB	BOACO BROADBAN	7.55	103	P	Pn	16 28 16.7	0.0
BOAB	BOACO BROADBAN	7.55	103	S	Sn	16 29 41.5	+0.2
UNM	Universidad Na	7.60	312	eP	Pn	16 28 17.9	+0.3
UNM				eS	Sn	16 29 41.9	-1.0
PBVM	Pinon	7.61	313		Pn	16 28 21.7	+4.3
PBVM					Sn	16 29 43.8	+1.2
PBVM	Pinon	7.61	313	eP	Pn	16 28 21.7	+4.3
PBVM				eS	Sn	16 29 43.8	+1.2
VTVM	Tizayuca	7.62	316		Pn	16 28 20.1	+2.2
VTVM					Sn	16 29 46.8	+3.4
VTVM	Tizayuca	7.62	316	eP	Pn	16 28 20.1	+2.2
VTVM				eS	Sn	16 29 46.8	+3.4
AOVM	Tlapan	7.67	311		Pn	16 28 20.6	+1.9
AOVM					Sn	16 29 50.9	+6.1
AOVM	Tlapan	7.67	311	eP	Pn	16 28 20.6	+1.9
AOVM				eS	Sn	16 29 50.9	+6.1
CJVM	Cuajimalpa	7.70	312	eP	Pn	16 28 19.7	+0.7
CJVM				eS	Sn	16 29 49.4	+4.1
INVM	La Marquesa	7.73	311	eP	Pn	16 28 18.4	-1.0
INVM				eS	Sn	16 29 46.1	-0.1
AZVM	Cuida Lopez Ma	7.84	313		Pn	16 28 20.1	-0.9
AZVM					Sn	16 29 51.6	+2.7
AZVM	Cuida Lopez Ma	7.84	313	eP	Pn	16 28 20.1	-0.9
AZVM				eS	Sn	16 29 51.6	+2.7
ZUVM	ZUMPANGO	7.86	315		Pn	16 28 26.5	+5.2
ZUVM					Sn	16 29 47.4	-1.9
ZUVM	ZUMPANGO	7.86	315	eP	Pn	16 28 26.5	+5.2
ZUVM				iS	Sn	16 29 47.4	-1.9
ARIG	Puente Sto Nin	7.93	301		Pn	16 28 24.4	+2.5
ARIG					Sn	16 29 52.1	+1.6
ARIG	Puente Sto Nin	7.93	301	eP	Pn	16 28 24.4	+2.5
ARIG				eS	Sn	16 29 52.1	+1.6
ACON	Acoyapa	8.15	106		Pn	16 28 24.4	-0.4
ACON	Acoyapa	8.15	106	P	Pn	16 28 24.3	-0.6
	comp=N,1µmcomp=N,142nm,1.0s						
DHIG	Demacu	8.16	318		Pn	16 28 27.4	+2.0
DHIG					Sn	16 29 56.4	-0.4
DEIG	Demacu	8.17	318	eP	Pn	16 28 27.4	+2.0
DEIG				eS	Sn	16 29 56.4	-0.4
ATVM	ATLACOMULCO	8.36	311		Pn	16 28 29.9	+1.9
ATVM					Sn	16 30 06.9	+5.3
ATVM	ATLACOMULCO	8.36	311	eP	Pn	16 28 29.9	+1.9
ATVM				eS	Sn	16 30 06.9	+5.3
ACIG	Acambay	8.53	312		Pn	16 28 32.7	+2.4
ACIG					Sn	16 30 04.0	-1.5
ACIG	Acambay	8.53	312	eP	Pn	16 28 32.7	+2.4
ACIG				eS	Sn	16 30 04.0	-1.5
ZIIG	Zihuatanejo	8.61	293		Pn	16 28 32.8	+1.6
ZIIG					Sn	16 30 06.5	-0.7
ZIIG	Zihuatanejo	8.61	293	⇑eP	Pn	16 28 32.8	+1.6
ZIIG				eS	Sn	16 30 06.5	-0.7
CTUV	Llano Grande	8.66	326	eP	Pn	16 28 32.9	+1.1
CTUV				eS	Sn	16 30 07.0	-1.4
ESPN	Las Esperanzas	8.90	103	P	Pn	16 28 39.5	+4.2
	comp=N,2µmcomp=N,166nm,0.9s						
JTS	Las Juntas de	8.98	115		Pn	16 28 39.1	+2.7
JTS	Las Juntas de	8.98	115	P	Pn	16 28 39.2	+2.8
	comp=N,14nm,0.7s,baz=323,slow=10,SNR=7.0						
JTS				S	Sn	16 30 11.1	-5.5
	comp=N,14nm,0.4s,baz=241,slow=19,SNR=0.9						
JTS	Las Juntas de	8.98	115	P	Pn	16 28 39.1	+2.7
JTS	Las Juntas de	8.98	115	P	Pn	16 28 39.5	+3.1
	comp=N,1µmcomp=N,181nm,1.0s						
SOCE	Pocosol	9.24	114		Pn	16 28 41.6	+1.7
MOIG	Morelia	9.33	306		Pn	16 28 45.5	+4.1
MOIG	Morelia	9.33	306	eP	Pn	16 28 44.6	+3.3
MOIG				eS	Sn	16 30 29.0	+3.6
JRQG	Juriquilla Cam	9.40	314	eS	Sn	16 30 33.8	+6.7
BLUN	Bluefields	9.45	103	P	Pn	16 28 48.6	+5.8
	comp=N,5µmcomp=N,78nm,0.8s						
RPIG	Rio Verde	9.92	320		Pn	16 28 49.9	+0.5
RPIG					Sn	16 30 42.4	+2.6
RPIG	Rio Verde	9.92	320	eP	Pn	16 28 49.9	+0.5
RPIG				eS	Sn	16 30 42.4	+2.6
LCR2	La Lucha 2	10.06	116		Pn	16 28 54.2	+2.8
GTIG	Gomez Farias	10.39	328		Pn	16 28 55.5	-0.2
GTIG					Sn	16 30 51.6	+0.6
GTIG	Gomez Farias	10.39	328	eP	Pn	16 28 55.5	-0.2
GTIG				eS	Sn	16 30 51.6	+0.6
MMIG	Aquila	10.52	293		Pn	16 28 59.1	+1.6
MMIG					Sn	16 31 02.3	+8.0
MMIG	Aquila	10.52	293	eP	Pn	16 28 59.1	+1.6
MMIG				eS	Sn	16 31 02.3	+8.0
MNGA	Volcan de Coli	11.22	299	eP	Pn	16 29 09.9	+2.6
MNGA				eS	Sn	16 31 16.6	+4.8
INCO	Volcan de Coli	11.23	299	⇓eP	Pn	16 29 10.8	+3.2
INCO				iS	Sn	16 31 18.2	+5.9
SOMAC	Volcano de Col	11.26	299	⇑eP	Pn	16 29 12.0	+4.2
SOMAC				eS	Sn	16 31 15.9	+3.0
CDAR	Ciudad de Arme	11.35	295	eP	Pn	16 29 11.1	+2.4
CDAR				eS	Sn	16 31 17.2	+2.7
CEGR	Campo Tres	11.39	298	⇓eP	Pn	16 29 12.5	+3.0
CEGR				eS	Sn	16 31 14.9	-1.0
AAIG	Aguscalientes	11.59	312		Pn	16 29 15.8	+3.5
AAIG					Sn	16 31 20.3	-0.4
AAIG	Aguscalientes	11.59	312	eP	Pn	16 29 15.8	+3.5
AAIG				eS	Sn	16 31 20.3	-0.4
LNIG	Linares	12.08	332	eP	Pn	16 29 18.9	+0.1
CIHU	Emiliano Zapat	12.10	296	eP	Pn	16 29 19.4	+0.3
CIHU				eS	Sn	16 31 34.0	+0.9
ZAIG	Zacatecas	12.24	315		Pn	16 29 25.3	+4.1
ZAIG	Zacatecas	12.24	315	eP	Pn	16 29 19.6	-1.6
CJM	Chamela	12.46	296	eP	Pn	16 29 26.2	+2.2
CJM				eS	Sn	16 31 41.0	-0.8
ANIG	Ahuacatlan	12.71	303		Pn	16 29 31.5	+4.0
ANIG	Ahuacatlan	12.71	303	eP	Pn	16 29 31.5	+4.0
SOR	Soroa	12.82	47		Pn	16 29 27.7	-1.1
SOR	Soroa	12.82	47	P	Pn	16 29 27.7	-1.1
HBVL	Hebbronville	13.69	339		Pn	16 29 43.5	+2.8
AZU	Azuero	14.23	116	P	Pn	16 29 51.2	+3.0
	comp=N,48nm,1.4s						
833A	Chaparral WMA,	15.09	339		Pn	16 30 00.4	+0.7
833A				IAmb	IAmb	16 30 06.9	
	comp=Z,186nm,1.5s						
MTDJ	Mount Denham	15.53	73	P	P	16 30 09.9	+0.3
	comp=Z,119nm,0.9s						
MCIG	Muzquiz	15.55	332		Pn	16 30 05.1	-0.7
MCIG	Muzquiz	15.55	332	eP	Pn	16 30 05.1	-0.7
PDIG	Papasquiaro	15.68	315	P	P	16 30 10.1	-1.3
PDIG	Papasquiaro	15.68	315	eP	P	16 30 10.1	-1.3
HKT	Hockley	15.76	352	iP	Pn	16 30 09.5	+1.2
HKT				pmax	pmax		
	comp=Z,228nm,2.0s						
MLDN	Muldoon	15.81	348	P	Pn	16 30 09.6	+0.4
MLDN				IAmb	IAmb	16 30 13.8	
	comp=Z,155nm,1.2s						
DRIO	Del Rio	16.54	337		Pn	16 30 19.8	+1.4
435B	Jarrell	16.89	347		Pn	16 30 23.3	+0.5
HPIG		17.13	319	P	P	16 30 28.8	+1.3
HPIG		17.13	319	eP	P	16 30 29.4	+1.8
JCT	Junction City	17.21	340		P	16 30 28.9	+0.7
JCT	Junction City	17.21	340	e	Pn	16 30 22.1	-4.8
JCT	Junction City	17.21	340	P	P	16 30 28.9	+0.7
JCT				pmax	pmax		
	comp=Z,105nm,1.2s						
NATX	Nacogdoches	17.42	356	IAmb	IAmb	16 30 33.6	
	comp=Z,280nm,1.9s						
APAC	Apartado, Choc	17.49	110	P	P	16 30 34.3	+2.9
	comp=Z,2µmcomp=Z,63nm,1.2s						
DWPF	Disney Wildern	17.55	37	IAmb	IAmb	16 30 35.4	
	comp=Z,141nm,1.1s						
SAND	Sanderson	17.62	334		P	16 30 33.9	+1.2
SAND				IAmb	IAmb	16 30 38.6	
	comp=Z,323nm,1.5s						
BRDY	Brady	17.72	343		P	16 30 34.9	+1.1
TXAR	Lajitas Array	17.82	329	P	P	16 30 38.0	+3.0
	comp=Z,43nm,1.0s,baz=148,slow=10,SNR=64						
TXAR				LR	LR	16 37 40.1	
	comp=Z,358nm,18.9s,baz=134,slow=37						
TXAR	Lajitas Array	17.82	329	eP	P	16 30 37.0	+2.0
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
OZNA	Ozona	18.07	338	P	Pn	16 30 38.0	+0.4
OZNA				IAmb	IAmb	16 30 46.1	
	comp=Z,180nm,1.2s						
SJCC	San Jacinto, C	18.14	102	P	Pn	16 30 31.6	-6.9
GTBY	Guantanamo Bay	18.15	70	P	P	16 30 39.6	+1.0
DBBC	Dabeiba	18.18	112	P	P	16 30 44.6	+5.5
FW13	Cleburne	18.38	349	P	Pn	16 30 43.3	+2.1
143A	Socs Landing,	18.39	5	P	P	16 30 41.3	+0.3
UREC	San Jos de Ur	18.51	109	P	Pn	16 30 44.0	+1.1
	comp=Z,212nmcomp=Z,23nm,0.8s						
146A	Union	18.63	11	P	Pn	16 30 44.7	+0.4
146A				IAmb	IAmb	16 30 50.5	
	comp=Z,127nm,1.1s						
ALPN	Alpine	18.66	331	P	P	16 30 44.1	-0.3
ALPN				IAmb	IAmb	16 30 50.8	
	comp=Z,156nm,1.4s						
250A	Grady	18.69	19	P	P	16 30 43.9	-0.6
250A				IAmb	IAmb	16 30 50.1	
	comp=Z,107nm,1.2s						
FW07	Weatherford	18.79	348	P	Pn	16 30 46.2	+0.1
LPIG	La Paz	18.86	304	P	Pn	16 30 51.4	+4.4
	comp=Z,30nm,0.5s,baz=207,slow=7.3,SNR=6.8						
LPIG				LR	LR	16 37 09.3	
	comp=Z,430nm,20.4s,baz=133,slow=33						
CBOC	Ciudad Bolivar	18.86	115	P	Pn	16 30 48.7	+1.3
	comp=Z,1µmcomp=Z,35nm,1.0s						
CSIG	Choix	18.88	314	P	Pn	16 30 48.4	+1.1
CSIG	Choix	18.88	314	eP	Pn	16 30 48.4	+1.1
Z38A	Mt. Pleasant	18.94	355	P	Pn	16 30 49.3	+1.4
SGCY	Sterling City	18.97	339	P	Pn	16 30 49.7	+1.3
SGCY				IAmb	IAmb	16 30 51.4	
	comp=Z,105nm,1.0s						
MNHN	Monahans	19.09	334	IAmb	IAmb	16 30 53.9	
	comp=Z,123nm,1.1s						
PLMC	San Jos del P	19.09	118	P	Pn	16 30 51.4	+1.3
	comp=Z,1µmcomp=Z,55nm,1.1s						
TIGA	Tifton	19.19	26	P	Pn	16 30 50.8	-0.2
TIGA				IAmb	IAmb	16 30 59.1	
	comp=Z,166nm,1.0s						
ZARC	Zaragoza, Cauc	19.22	109	P	Pn	16 30 57.6	+6.0
WLAR	White Oak Lake	19.29	0	IAmb	IAmb	16 30 57.6	
	comp=Z,204nm,1.3s						
Z35A	Perchaven, San	19.30	350	IAmb	IAmb	16 30 59.1	
	comp=Z,152nm,0.8s						
Z47A	Carrollton	19.38	13	IAmb	IAmb	16 30 59.5	
	comp=Z,122nm,1.3s						
YOTC	Yotoco, Valle	19.52	120	P	Pn	16 30 55.9	+0.7
	comp=Z,526nmcomp=Z,26nm,0.9s						
VHRN	Van Horn	19.66	328	IAmb	IAmb	16 31 02.6	
	comp=Z,120nm,1.4s						
JAMC	Jamundi, Valle	19.68	123	P	P	16 30 56.1	+0.5
	comp=Z,538nmcomp=Z,35nm,1.0s						
ODSA	Odessa	19.69	336	IAmb	IAmb	16 31 04.6	
	comp=Z,153nm,1.3s						
GUY2C	Guyana, Caldas	19.73	115	P	Pn	16 30 58.2	+0.1
	comp=Z,2µmcomp=Z,1µmcomp=Z,91nm,1.0s						
Y45A	Yeager Farm, C	19.75	9	P	Pn	16 30 57.5	-0.2
Y45A				IAmb	IAmb	16 31 04.0	
	comp=Z,80nm,0.9s						
SN05	Snyder 5	19.77	341	IAmb	IAmb	16 31 05.4	
	comp=Z,71nm,0.9s						
152A	Waverly Hall	19.84	21	P	Pn	16 30 58.7	-0.1
PTBC	PUERTO BERRIO,	19.96	111	P	P	16 30 59.4	+0.9
	comp=Z,351nmcomp=Z,29nm,1.1s						
SN07	Snyder 07	19.97	341	IAmb	IAmb	16 31 03.4	
	comp=Z,182nm,1.4s						
POPC	Popayan, Colom	20.07	124	P	Pn	16 31 02.9	+1.1
	comp=Z,869nmcomp=Z,67nm,1.3s						
MIAR	Mount Ida	20.15	359	P	P	16 31 00.1	-0.3
MIAR				IAmb	IAmb	16 31 09.1	
	comp=Z,244nm,1.5s						
MIAR	Mount Ida	20.15	359	P	P	16 31 00.1	-0.3
MIAR				pmax	pmax		
	comp=Z,244nm,1.5s						
OTAV	Otavalo	20.20	133	P	Pn	16 31 04.4	+0.8
OTAV				pmax	pmax		
	comp=Z,16nm,1.5s						
OTAV	Otavalo	20.20	133	eP	P	16 31 01.3	-0.2
154A	Montrose	20.41	25	P	P	16 31 02.7	-0.5
154A				IAmb	IAmb	16 31 09.8	
	comp=Z,133nm,1.0s						
ORTC	Ortega, Tolima	20.49	119	P	Pn	16 31 06.6	0.0
	comp=Z,1µmcomp=Z,146nm,1.0s						
DKNS	Dickens	20.51	341	P	P	16 31 05.7	+1.3
DKNS				IAmb	IAmb	16 31 14.1	
	comp=Z,48nm,0.7s						
MNTX	Cornudas Mount	20.60	329	IAmb	IAmb	16 31 11.7	
	comp=Z,62nm,0.9s						
MNTX	Cornudas Mount	20.60	329	i	Pn	16 31 07.3	-0.4
SPBC	San Pablo de B	20.68	113	P	Pn	16 31 10.7	+1.8
	comp=Z,945nmcomp=Z,65nm,1.1s						
X48A	Hartselle	20.81	14	IAmb	IAmb	16 31 16.1	
	comp=Z,109nm,1.3s						
ROSC	El Rosal	20.83	115	IAmb	IAmb	16 31 13.3	
	comp=Z,114nm,0.9s						
ROSC	El Rosal	20.83	115	P	P	16 31 10.2	+1.8
	comp=Z,93nm,0.9s,baz=341,slow=2.3,SNR=31						
ROSC				LR	LR	16 40 39.8	
	comp=Z,575nm,18.7s,baz=264,slow=41						
	comp=Z,93nm,0.9s						
ROSC	El Rosal	20.83	115	P	Pn	16 31 12.3	+1.4
	comp=Z,2µmcomp=Z,138nm,1.1s						
PRAC	Prado	20.90	119	P	Pn	16 31 10.7	-0.6
	comp=Z,2µmcomp=Z,69nm,1.0s						
WHAR	Wooly Hollow	20.91	2	IAmb	IAmb	16 31 18.2	
	comp=Z,129nm,1.4s						
WMOK	Wichita Mounta	20.96	347	P	P	16 31 10.4	+1.2
WMOK				pmax	pmax		
	comp=Z,23nm,0.8s						
GOGA	Godfrey	20.97	23	IAmb	IAmb	16 31 18.1	
	comp=Z,143nm,1.1s						
GOGA	Godfrey	20.97	23	P	P	16 31 05.8	-3.5
GOGA				pmax	pmax		
	comp=Z,128nm,1.4s						
PLAL	Pickwick Lake	21.10	12	P	P	16 31 12.4	+1.8
PLAL				IAmb	IAmb	16 31 19.4	
	comp=Z,84nm,1.2s						
BARC	Barichara	21.10	109	P	P	16 31 13.7	+2.6
Y52A	Lilburn	21.16	21	IAmb	IAmb	16 31 25.4	
	comp=Z,87nm,0.9s						
CVER	Cruz Verde, Cu	21.20	115	P	P	16 31 16.1	+3.7
	comp=Z,3µmcomp=Z,212nm,1.1s						
GARC	Garzon, Huila	21.23	123	P	P	16 31 17.4	+4.9
	comp=Z,701nmcomp=Z,38nm,1.2s						
PAMC	Pamplona, Colo	21.27	107	P	P	16 31 14.8	+1.6
CHIC	Chingaza	21.45	115	P	P	16 31 17.7	+2.7
	comp=Z,2µmcomp=Z,154nm,1.0s						
FLOC	Florencia	21.45	125	P	P	16 31 16.4	+1.7
FLOC				IAmb	IAmb	16 31 33.7	
	comp=Z,170nm,1.2s						
FLOC	Florencia	21.45	125	P	P	16 31 17.1	+2.4
	comp=Z,1µmcomp=Z,134nm,1.3s						
RUSC	La Rusia	21.47	111	P	P	16 31 16.8	+1.5
RUSC	La Rusia	21.47	111	P	P	16 31 18.1	+2.7
	comp=Z,1µmcomp=Z,169nm,1.1s						
SDDR	Presa de Saban	21.49	75	P	P	16 31 15.1	+0.1
FCAR	Ozark Folk Cen	21.51	2	IAmb	IAmb	16 31 19.4	
	comp=Z,70nm,0.8s						
COHC	Cochancay	21.64	139	P	P	16 31 19.2	+2.5
	comp=Z,1µmcomp=Z,26nm,0.9s						
DEOK	Depew	21.65	353	IAmb	IAmb	16 31 20.0	
	comp=Z,53nm,0.8s						
OK029	Liberty Lake	21.74	351	IAmb	IAmb	16 31 21.2	
	comp=Z,64nm,1.0s						
OK052	Battle Ridge R	21.84	352	IAmb	IAmb	16 31 21.7	
	comp=Z,97nm,0.8s						
W50A	Signal Mountai	21.98	17	IAmb	IAmb	16 31 29.8	
	comp=Z,70nm,1.1s						
QUOK	Quay	22.00	352	IAmb	IAmb	16 31 23.2	
	comp=Z,96nm,0.8s						
HSIG		22.02	315	P	P	16 31 19.6	-1.0
V48A	Smith Brothers	22.09	14	P	P	16 31 22.1	+0.7
HODGE	Hodges	22.17	25	IAmb	IAmb	16 31 43.1	
	comp=Z,71nm,1.1s						
WVT	Waverly	22.25	12	P	P	16 31 24.0	+0.9
TAMC	Tame, Arauca	22.44	108	P	P	16 31 27.0	+1.7
	comp=Z,3µmcomp=Z,352nm,0.9s						
319A	Douglas	22.50	322	IAmb	IAmb	16 31 44.2	
	comp=Z,61nm,1.1s						
OK038	West end E0370	22.63	348	P	P	16 31 26.8	-0.4
OK038				IAmb	IAmb	16 31 29.3	
	comp=Z,65nm,1.2s						
T35A	Sooner Cattle	22.71	353	P	P	16 31 26.9	-1.0
T35A				IAmb	IAmb	16 31 31.8	
	comp=Z,215nm,1.9s						
SDV	Santo Domingo	22.73	101	P	P	16 31 28.1	-0.5
SDV				IAmb	IAmb	16 31 31.9	
	comp=Z,50nm,0.8s						
SDV	Santo Domingo	22.73	101	P	P	16 31 29.3	+0.7
	comp=Z,52nm,0.8s,baz=296,slow=4.2,SNR=37						
	comp=Z,52nm,0.8s						
SDV	Santo Domingo	22.73	101	eP	P	16 31 26.4	-2.2
MGMO	Mountain Grove	22.77	2	P	P	16 31 28.6	0.0
MGMO				IAmb	IAmb	16 31 49.8	
	comp=Z,48nm,1.0s						
MGMO				PcP	PcP	16 35 20.1	+0.4
Y57A	Sumter	22.79	28	P	P	16 31 27.0	-1.8
TKL	Tuckaleechee C	22.88	20	P	P	16 31 27.1	-2.6
TKL				IAmb	IAmb	16 31 49.0	
	comp=Z,96nm,1.3s						
TKL	Tuckaleechee C	22.88	20	P	P	16 31 29.4	-0.3
	comp=Z,5.1nm,0.8s,baz=184,slow=13,SNR=4.8						
TKL				LR	LR	16 42 17.2	
	comp=Z,1µm,18.0s,baz=202,slow=42						
	comp=Z,5.1nm,0.8s						
TKL	Tuckaleechee C	22.88	20	P	P	16 31 27.1	-2.6
TKL				pmax	pmax		
	comp=Z,96nm,1.3s						
KAN17	Caldwell West	23.01	351	P	P	16 31 30.3	-0.7
PTGC	Puerto Gaitan,	23.06	114	P	P	16 31 32.8	+1.1
U49A	Red Boiling Sp	23.09	15	P	P	16 31 30.4	-1.4
CRNM	Carthage	23.09	330	P	P	16 31 34.4	+2.3
BNM	Barren Site	23.20	331	P	P	16 31 35.4	+2.2
V53A	Saluda	23.23	22	IAmb	IAmb	16 31 55.1	
	comp=Z,52nm,1.1s						
DUN6	Lazy B Ranch	23.24	324	P	P	16 31 36.0	+2.4
Y22D	IRIS PASSCAL I	23.28	330	P	P	16 31 36.7	+2.7
	baz=145						
KMSC	Kings Mountain	23.33	25	IAmb	IAmb	16 31 35.0	
	comp=Z,44nm,1.0s						
LENM	Lemitar	23.38	330	P	P	16 31 34.9	-0.1
S44A	Carbondale	23.55	8	IAmb	IAmb	16 32 02.3	
	comp=Z,44nm,0.9s						
SIUC	Southern Illin	23.58	8	IAmb	IAmb	16 32 00.2	
	comp=Z,71nm,1.2s						
RTBA	Rita Blanca	23.64	341	P	P	16 31 37.7	+0.3

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CCM    Cathedral Cave    23.72   4  P       P       16 31 36.2 -1.7
CCM                                 IAmb    IAmb    16 31 39.4
       comp=Z,61nm,1.0s
CCM    Cathedral Cave    23.72   4  P       P       16 31 36.3 -1.7
CCM                                 pmax    pmax
       comp=Z,61nm,1.0s
TZTN   Tazewell          23.76  20  IAmb    IAmb    16 31 59.9
       comp=Z,62nm,0.9s
ANMO   Albuquerque       23.78 332  P       P       16 31 39.5 +0.6
ANMO   Albuquerque       23.78 332  IAmb    IAmb    16 32 03.3
       comp=Z,20nm,0.7s
ANMO   Albuquerque       23.78 332  P       P       16 31 40.8 +1.9
       comp=Z,20nm,0.9s,baz=238,slow=9.4,SNR=22
ANMO                                LR      LR      16 41 49.4
       comp=Z,430nm,20.2s,baz=232,slow=38
       comp=Z,20nm,0.9s
ANMO   Albuquerque       23.78 332 e        P       16 31 40.6 +1.8
ANMO   Albuquerque       23.78 332 i P      P       16 31 40.4 +1.6
ANMO                                pmax    pmax
       comp=Z,18nm,1.0s
W57A   Gilead            23.92  27  IAmb    IAmb    16 32 00.7
       comp=Z,52nm,1.1s
V55A   Taylorsville      24.00  24  IAmb    IAmb    16 32 01.9
       comp=Z,62nm,1.3s
TUC    Tucson            24.07 321  P       P       16 31 42.5 +1.1
TUC                                 IAmb    IAmb    16 31 46.1
       comp=Z,73nm,1.1s
TUC    Tucson            24.07 321 e        P       16 31 43.8 +2.4
TUC    Tucson            24.07 321  P       P       16 31 42.5 +1.1
TUC                                 pmax    pmax
       comp=Z,73nm,1.1s
SLM    Saint Louis       24.37   6  IAmb    IAmb    16 31 45.7
       comp=Z,46nm,0.8s
WCI    Wyandotte Cave    24.60  13  P       P       16 31 44.4 -1.7
WCI                                 IAmb    IAmb    16 32 11.8
       comp=Z,55nm,0.9s
WCI    Wyandotte Cave    24.60  13  P       P       16 31 44.4 -1.7
WCI                                 pmax    pmax
       comp=Z,55nm,1.0s
OLIL   Olney             24.74  10  IAmb    IAmb    16 32 16.3
       comp=Z,54nm,0.9s
U56A   King              24.76  25  IAmb    IAmb    16 32 19.3
       comp=Z,31nm,0.9s
V58A   Windy Hill, Pi    24.85  28  IAmb    IAmb    16 31 48.3
       comp=Z,59nm,0.9s
KSU1   Kansas State U    24.88 354  IAmb    IAmb    16 31 50.0
       comp=Z,53nm,0.9s
R50A   Paris             25.14  17  IAmb    IAmb    16 32 19.3
       comp=Z,46nm,1.0s
P40A   Paris             25.14   2  IAmb    IAmb    16 31 51.5
       comp=Z,50nm,0.8s
BAUV   El Baul           25.19  99  P       P       16 31 48.8 -2.9
X18A   Snowflake         25.19 326  IAmb    IAmb    16 31 56.8
       comp=Z,37nm,1.1s
P38A   Dawn              25.22 359  IAmb    IAmb    16 31 54.2
       comp=Z,74nm,1.5s
P46A   Rosedale          25.76  11  IAmb    IAmb    16 32 20.7
       comp=Z,48nm,0.9s
SDCO   Great Sand Dun    25.78 337  P       P       16 31 56.6 -0.6
SDCO                                IAmb    IAmb    16 32 01.0
       comp=Z,60nm,1.2s
T57A   Hurt              25.79  26  IAmb    IAmb    16 32 32.6
       comp=Z,87nm,1.7s
ATAH   Atahualpa         25.87 144  P       P       16 32 01.1 +2.7
       comp=Z,10nm,1.1s,baz=313,slow=10.0,SNR=13
ATAH                                LR      LR      16 40 38.2
       comp=Z,676nm,18.9s,baz=316,slow=33
       comp=Z,10nm,1.1s
KSCO   Kaye Shedlock'    25.98 343  IAmb    IAmb    16 32 02.0
       comp=Z,76nm,1.2s
Q51A   Peebles           26.11  18  IAmb    IAmb    16 32 29.8
       comp=Z,42nm,1.0s
SJG    San Juan          26.23  78  P       P       16 31 59.7 -1.4
       comp=Z,6.0nm,0.3s,baz=285,slow=19,SNR=1.9
SJG                                 LR      LR      16 42 19.9
       comp=Z,674nm,21.6s,baz=240,slow=37
       comp=Z,6.0nm,0.3s
S22A   4UR Ranch, Cre    26.30 335  IAmb    IAmb    16 32 27.7
       comp=Z,44nm,1.3s
T59A   Double "B" Far    26.53  29  IAmb    IAmb    16 32 03.5
       comp=Z,48nm,0.9s
GLA    Glamis            27.12 317  IAmb    IAmb    16 32 12.8
       comp=Z,30nm,1.0s
BLYC   Blythe            27.36 319  P       P       16 32 11.6 +0.5
PV15   Paradox Valley    27.50 333  IAmb    IAmb    16 32 29.1
       comp=Z,54nm,1.2s
ISCO   Idaho Springs     27.64 339  P       P       16 32 13.8 -0.1
ISCO   Idaho Springs     27.64 339  P       P       16 32 13.9 -0.1
ISCO                                pmax    pmax
       comp=Z,23nm,1.2s
PV07   Paradox Valley    27.66 333  IAmb    IAmb    16 32 18.2
       comp=Z,40nm,1.1s
PV17   East Wray Mesa    27.66 333  IAmb    IAmb    16 32 29.3
       comp=Z,59nm,1.2s
L40A   Anamosa           27.71   3  IAmb    IAmb    16 32 15.5
       comp=Z,53nm,1.2s
PV14   Lion Creek, Pa    27.77 333  IAmb    IAmb    16 32 18.9
       comp=Z,95nm,1.7s
PV10   Paradox Valley    27.78 333  IAmb    IAmb    16 32 38.6
       comp=Z,51nm,1.1s
PV22   Blue Mesa, Par    27.80 333  IAmb    IAmb    16 32 22.2
       comp=Z,37nm,1.1s
PV23   Carpenter Ridg    27.83 333  IAmb    IAmb    16 32 30.4
       comp=Z,65nm,1.1s
PV21   Cone Mtn., Par    27.90 333  IAmb    IAmb    16 32 33.4
       comp=Z,48nm,1.4s
PCRV   Puerto La Cruz    28.19  95  LR      LR      16 45 22.5
       comp=Z,606nm,19.6s,slow=40
PFO    Pinyon Flats O    28.54 316  P       P       16 32 21.0 -0.9
PFO    Pinyon Flats O    28.54 316  P       P       16 32 24.7 +2.9
       comp=Z,5.1nm,0.8s,baz=330,slow=13,SNR=6.2
PFO                                 LR      LR      16 45 57.0
       comp=Z,701nm,18.0s,baz=128,slow=41
       comp=Z,5.1nm,0.8s
PFO    Pinyon Flats O    28.54 316 i P      P       16 32 24.0 +2.1
PFO                                 pmax    pmax
       comp=Z,17nm,1.0s
JFWS   Jewell Farm       28.62   5  IAmb    IAmb    16 32 24.4
       comp=Z,28nm,0.8s
K30B   Basset            28.80 350  IAmb    IAmb    16 32 25.8
       comp=Z,38nm,0.9s
V12A   Nelson            28.86 322  IAmb    IAmb    16 32 28.8
       comp=Z,32nm,1.1s
O20A   White River Ci    28.91 336  IAmb    IAmb    16 32 31.3
       comp=Z,39nm,1.2s
Q16A   Castle Valley     29.20 330  IAmb    IAmb    16 32 31.9
       comp=Z,38nm,1.3s
ECSD   EROS Data Cent    29.47 355  IAmb    IAmb    16 32 32.7
       comp=Z,30nm,1.1s
PSUT   Pine Spring       30.27 327  IAmb    IAmb    16 32 41.5
       comp=Z,21nm,1.0s
GWY    Greenwater Val    30.27 320  IAmb    IAmb    16 32 40.5
       comp=Z,38nm,1.8s
K22A   Casper            30.50 340  IAmb    IAmb    16 32 42.1
       comp=Z,29nm,1.0s
S11A   Rachel            30.69 323  IAmb    IAmb    16 32 53.5
       comp=Z,45nm,1.2s
NNA    Nana              30.74 147  LR      LR      16 43 08.0
       comp=Z,482nm,18.1s,baz=331,slow=32
SPMN   Marine on St.     30.82   1  IAmb    IAmb    16 32 44.5
       comp=Z,25nm,1.0s
SPR3   Spring Creek 3    30.86 327  P       P       16 32 44.2 +1.6
SPR3                                IAmb    IAmb    16 32 46.2
       comp=Z,21nm,1.0s
SPR3                                PcP     PcP     16 35 41.0 +1.9
RSSD   Black Hills       31.12 345  P       P       16 32 46.4 +1.7
RSSD                                pmax    pmax
       comp=Z,25nm,0.9s
GRAC   Grapevine Rang    31.22 321  IAmb    IAmb    16 32 50.1
       comp=Z,31nm,1.1s
PDAR   Pinedale Array    31.67 337  P       P       16 32 50.1 +0.5
PDAR   Pinedale Array    31.67 337  P       P       16 32 51.4 +1.8
       comp=Z,5.2nm,0.9s,baz=141,slow=7.6,SNR=6.0
PDAR                                PcP     PcP     16 35 42.0 +1.0
       comp=Z,2.8nm,0.9s,baz=144,slow=5.3,SNR=4.4
PDAR                                LR      LR      16 48 53.6
       comp=Z,242nm,20.2s,baz=142,slow=42
       comp=Z,5.2nm,0.9s
HVU    Hansel Valley     32.21 332  IAmb    IAmb    16 32 58.2
       comp=Z,26nm,1.0s
E38A   The Farm, Brul    32.23   2  IAmb    IAmb    16 32 54.4
       comp=Z,17nm,0.9s
AHID   Auburn Hatcher    32.28 335  IAmb    IAmb    16 33 01.4
       comp=Z,62nm,1.5s
ELK    Elko              32.61 328  P       P       16 33 00.7 +2.8
ELK                                         PcP     16 35 45.1 +1.4
ELK    Elko              32.61 328  P       P       16 33 00.2 +2.4
       comp=Z,10nm,0.8s,baz=142,slow=5.6,SNR=27
ELK                                 PcP     PcP     16 35 45.1 +1.4
       comp=Z,4.2nm,0.9s,baz=120,slow=3.6,SNR=6.1
       comp=Z,10nm,0.8s
ELK    Elko              32.61 328  P       P       16 33 00.7 +2.8
ELK                                                 16 35 45.1
ELK                                 pmax    pmax
       comp=Z,16nm,1.0s
SADO   Sadowa            32.63  19  LR      LR      16 47 50.9
       comp=Z,1µm,19.3s,baz=194,slow=40
NV11   Mina Array Sit    32.63 322  IAmb    IAmb    16 33 02.6
       comp=Z,34nm,1.0s
NVAR   Mina Array Bea    32.71 322  P       P       16 33 01.5 +2.8
NVAR   Mina Array Bea    32.71 322  P       P       16 33 02.1 +3.3
       comp=Z,23nm,0.8s,baz=139,slow=8.8,SNR=98
NVAR                                PcP     PcP     16 35 45.5 +1.5
       comp=Z,6.2nm,0.9s,baz=96,slow=3.1,SNR=7.4
NVAR                                LR      LR      16 48 00.1
       comp=Z,840nm,20.3s,baz=138,slow=39
       comp=Z,23nm,0.8s
LHV    Little Huntoon    32.72 321  IAmb    IAmb    16 33 02.9
       comp=Z,17nm,1.0s
PMPB   Monarch Peak      32.95 316  IAmb    IAmb    16 33 04.6
       comp=Z,40nm,1.2s
FXWY   Fox Creek         32.98 336  IAmb    IAmb    16 33 07.5
       comp=Z,29nm,1.2s
WAKR   Walker            33.45 321  IAmb    IAmb    16 33 09.9
       comp=Z,24nm,1.3s
H17A   Grant Village     33.45 337  IAmb    IAmb    16 33 11.1
       comp=Z,30nm,1.2s
M65A   Busby, Falmout    33.47  31  P       P       16 33 07.8 +2.8
       baz=222
YMP    Mirror Lake Pl    33.59 338  IAmb    IAmb    16 33 29.4
       comp=Z,44nm,1.0s
YFT    Old Faithful      33.59 337  IAmb    IAmb    16 33 21.0
       comp=Z,37nm,1.3s
RLMT   Red Lodge         33.60 339  IAmb    IAmb    16 33 09.5
       comp=Z,60nm,1.6s
PNTR   Pine Nut          33.91 322  IAmb    IAmb    16 33 13.7
       comp=Z,20nm,0.9s
AGMN   Agassiz Nation    33.96 357  IAmb    IAmb    16 33 12.0
       comp=Z,21nm,0.8s
LAO    LASA Array        34.08 344  IAmb    IAmb    16 33 12.7
       comp=Z,40nm,1.1s
MPK    Martis Peak       34.30 322  IAmb    IAmb    16 33 17.2
       comp=Z,35nm,1.0s
BOAV   Boa Vista         34.36 107  P       P       16 33 13.1  0.0
BOAV                                IAmb    IAmb    16 33 14.1
       comp=Z,19nm,0.8s
BOAV   Boa Vista         34.36 107 eP       P       16 33 12.8 -0.3
HLID   Hailey            34.36 332  IAmb    IAmb    16 33 16.6
       comp=Z,18nm,0.9s
TBO    Thunder Bay       34.38   4  IAmb    IAmb    16 33 35.7
       comp=Z,18nm,1.0s
DLMT   Dillon            35.04 336  IAmb    IAmb    16 33 22.8
       comp=Z,44nm,0.9s
DGMT   Dagmar            35.26 347  IAmb    IAmb    16 33 23.2
       comp=Z,30nm,0.8s
WVOR   Wild Horse Val    35.60 327  IAmb    IAmb    16 33 27.3
       comp=Z,38nm,1.1s
WVOR   Wild Horse Val    35.60 327  P       P       16 33 26.1 +2.5
ULM    Lac du Bonnet     35.91 357  P       P       16 33 25.0 -1.0
       comp=Z,14nm,0.9s,baz=179,slow=8.6,SNR=15
ULM                                 PcP     PcP     16 35 53.5 +0.9
       comp=Z,12nm,1.1s,baz=159,slow=5.4,SNR=3.9
ULM                                 LR      LR      16 52 26.6
       comp=Z,414nm,18.2s,baz=166,slow=43
       comp=Z,14nm,0.9s
HATC   Hat Creek Radi    36.11 322  IAmb    IAmb    16 33 31.9
       comp=Z,38nm,1.1s
PLID   Pearl Lake        36.26 332  IAmb    IAmb    16 33 32.5
       comp=Z,40nm,1.1s
MACA   Manacapuru-AM     36.60 116  P       P       16 33 30.4 -2.0
MACA                                IAmb    IAmb    16 33 44.2
       comp=Z,38nm,0.9s
MSO    Missoula          36.78 336  IAmb    IAmb    16 33 36.6
       comp=Z,24nm,0.9s
YBH    Yreka Blue Hor    37.42 323  P       P       16 33 39.7 +0.6
       comp=Z,0.3nm,0.7s,baz=118,slow=1.5,SNR=7.5
KHMM   Horse Mountain    37.52 321  IAmb    IAmb    16 33 43.7
       comp=Z,33nm,1.0s
G08A   Pilot Rock        37.80 330  P       P       16 33 41.5 -0.8
G08A                                        PcP     16 35 59.1 +0.5
J04A   Umpqua Nationa    38.03 325  IAmb    IAmb    16 33 47.8
       comp=Z,46nm,1.2s
G05A   Wamic             38.94 328  IAmb    IAmb    16 33 56.1
       comp=Z,41nm,1.1s
J01E   Myrtle Point      39.01 324  IAmb    IAmb    16 34 04.0
       comp=Z,49nm,1.1s
H04A   Detroit Lake      39.02 327  IAmb    IAmb    16 33 55.5
       comp=Z,48nm,1.0s
BUCK   Buck Mountain     39.13 326  IAmb    IAmb    16 33 56.1
       comp=Z,49nm,1.2s
LPAZ   La Paz            39.21 140  P       P       16 33 55.2 +0.2
LPAZ   La Paz            39.21 140  P       P       16 33 55.4 +0.4
       comp=Z,2.3nm,0.7s,baz=308,slow=7.2,SNR=8.1
LPAZ                                LR      LR      16 48 35.5
       comp=Z,440nm,21.3s,baz=320,slow=34
       comp=Z,2.3nm,0.7s
LPAZ   La Paz            39.21 140 eP       P       16 33 55.9 +0.9
LPAZ                                pmax    pmax
       comp=Z,2.0nm,0.7s
LPAZ   La Paz            39.21 140 eP       P       16 33 55.2 +0.2
H04D   Lebanon           39.21 326  IAmb    IAmb    16 33 56.5
       comp=Z,43nm,1.1s
NEW    Newport           39.22 335  LR      LR      16 53 15.6
       comp=Z,757nm,19.2s,baz=140,slow=41
NEW    Newport           39.22 335  P       P       16 33 55.3 +1.2
NEW                                 pmax    pmax
       comp=Z,8.0nm,0.8s
G04A   Mulino            39.52 327  IAmb    IAmb    16 33 59.7
       comp=Z,51nm,1.0s
FFC    Flin Flon         40.91 352  P       P       16 34 07.1 -0.9
FFC    Flin Flon         40.91 352  P       P       16 34 07.1 -0.9
FFC                                 pmax    pmax
       comp=Z,11nm,0.9s
MDP    Montagnes des     40.94  99  LR      LR      16 52 56.8
       comp=Z,468nm,20.5s,baz=291,slow=39
ITTB   Itaituba          41.52 114 eP       P       16 34 11.9 -1.7
NLWA   Neilton Lookou    41.70 329  IAmb    IAmb    16 34 18.4
       comp=Z,47nm,1.4s
PGC    Sidney            42.35 330  IAmb    IAmb    16 34 23.0
       comp=Z,44nm,1.3s
VILB   Vilhena           42.44 128 eP       P       16 34 21.3 +0.3
LLLB   Lillooet          43.02 333  IAmb    IAmb    16 34 28.6
       comp=Z,64nm,1.5s
NPGB   Novo Progresso    43.11 117 eP       P       16 34 25.0 -1.5
SIV    San Ignacio       43.74 132  P       P       16 34 31.9 +0.3
       comp=Z,9.1nm,0.8s,baz=302,slow=8.1,SNR=46
SIV                                 LR      LR      16 52 09.7
       comp=Z,533nm,18.3s,baz=298,slow=35
       comp=Z,9.1nm,0.8s
CBB    Campbell River    44.21 330  IAmb    IAmb    16 34 38.5
       comp=Z,36nm,1.3s
PDRB   Porto dos Gac     44.38 124 eP       P       16 34 36.2 -0.5
CLDB   Colider           44.73 122 eP       P       16 34 39.2 -0.2
PTLB   Pontes e Lacer    44.81 130 eP       P       16 34 39.4 -0.6
BBSD   Serra de San D    44.87 133 eP       P       16 34 40.2 -0.4
SCHQ   Schefferville     45.34  21  P       P       16 34 41.9 -1.9
       comp=Z,6.1nm,0.8s,baz=208,slow=12,SNR=4.7
SCHQ                                LR      LR      16 55 58.9
       comp=Z,2µm,18.1s,baz=202,slow=39
       comp=Z,6.1nm,0.8s
BBB    Bella Bella       46.93 331  LR      LR      16 55 24.7
       comp=Z,299nm,18.0s,baz=157,slow=37
TMAB   Tom-Au,PA,Br      47.65 107 eP       P       16 35 00.8 -1.7
SALV   Santo Antonio     47.69 128 eP       P       16 35 01.7 -1.0
LCO    Las Campanas      48.24 153  P       P       16 35 05.9 -1.2
LCO                                 IAmb    IAmb    16 35 17.3
       comp=Z,21nm,1.1s
LCO    Las Campanas      48.24 153  P       P       16 35 05.9 -1.2
LCO                                 pmax    pmax
       comp=Z,21nm,1.1s
SNDB   Serra Nova Dou    49.05 120 eP       P       16 35 12.4 -0.8
DIB    Dawson Inlet,     49.65 330  IAmb    IAmb    16 35 21.1
       comp=Z,33nm,1.2s
BDQN   Bodoquena, MS     49.76 133 eP       P       16 35 17.9 -0.6
CO03   El Pedregal       49.83 154  P       P       16 35 18.8 -0.2
CO03                                IAmb    IAmb    16 35 28.7
       comp=Z,16nm,1.0s
U35K   Hyder             50.23 334  P       P       16 35 24.5 +2.9
       baz=131
YKAW1  Yellowknife Wh    50.43 347  IAmb    IAmb    16 35 25.3
       comp=Z,80nm,0.8s
TOAD   Toad River Com    50.44 339  P       P       16 35 24.6 +1.3
       baz=138,SNR=16
YKA    Yellowknife Ar    50.47 347  P       P       16 35 23.6 +0.2
YKA    Yellowknife Ar    50.47 347  P       P       16 35 24.3 +1.0
       comp=Z,39nm,0.8s,baz=152,slow=7.0,SNR=150
YKA                                 PcP     PcP     16 36 41.7 +0.6
       comp=Z,2.9nm,0.8s,baz=146,slow=4.5,SNR=4.4
YKA                                 LR      LR      16 59 10.3
       comp=Z,158nm,20.9s,baz=170,slow=39
       comp=Z,39nm,0.8s
YKA    Yellowknife Ar    50.47 347 eP       P       16 35 24.3 +1.0
YKA                                 pmax    pmax
       comp=Z,40nm,0.8s
YKAW3  Yellowknife Wh    50.53 347  IAmb    IAmb    16 35 26.1
       comp=Z,73nm,0.9s
V35K   Ketchikan         50.54 333  IAmb    IAmb    16 35 28.3
       comp=Z,19nm,1.1s
V35K   Ketchikan         50.54 333  P       P       16 35 26.8 +2.8
       baz=129
SMTB   Santa Maria do    50.75 114 eP       P       16 35 26.3 +0.1
KOTAN  Kotaneelee Air    51.02 341  P       P       16 35 29.5 +1.9
       baz=140,SNR=5.1
T35M   Bob Quinn         51.02 335  IAmb    IAmb    16 35 32.3
       comp=Z,29nm,1.4s
T35M   Bob Quinn         51.02 335  P       P       16 35 30.5 +2.9
       baz=132,SNR=6.7
LIRD   Liard River Hi    51.15 339  P       P       16 35 30.1 +1.6
       baz=138
CRAG   Craig             51.31 332  IAmb    IAmb    16 35 33.9
       comp=Z,22nm,1.0s
CRAG   Craig             51.31 332  P       P       16 35 32.0 +2.3
       baz=127
BEAVL  Fort Liard        51.38 340  P       P       16 35 32.5 +2.2
       baz=139,SNR=19
WRAK   Wrangell Islan    51.55 333  P       P       16 35 34.2 +2.7
       baz=129
CFA    Coronel Fontan    51.55 153  P       P       16 35 33.0 +1.0
       comp=Z,4.3nm,0.7s,baz=343,slow=7.0,SNR=5.4
       comp=Z,4.3nm,0.7s
U33K   Whale Pass        51.70 333  P       P       16 35 34.8 +2.2
       baz=128
DLBC   Dease Lake        51.91 336  P       P       16 35 36.0 +1.7
DLBC   Dease Lake        51.91 336  LR      LR      17 00 32.9
       comp=Z,481nm,18.9s,baz=150,slow=39
DLBC   Dease Lake        51.91 336  P       P       16 35 37.2 +2.9
       baz=133,SNR=28
TAOE   Nuku Hiva Isla    51.95 247 eP       P       16 35 33.7 -1.6
       comp=Z,42nm,24.2s
TAOE                               eS       S       16 42 51.1 -5.8
       comp=Z,238nm,24.9s
TAOE                               eLR      LR      16 50 26.8
       comp=Z,402nm,25.4s
S34M   Telegraph Cree    51.99 335  P       P       16 35 37.2 +2.4
       baz=131,SNR=5.0
T33K   Petersburg        52.06 334  P       P       16 35 38.0 +2.7
       baz=128
FRB    Frobisher Bay     52.28  14  LR      LR      16 59 55.8
       comp=Z,633nm,18.7s,baz=194,slow=38
FRB    Frobisher Bay     52.28  14  P       P       16 35 37.2 +0.3
FRB                                 pmax    pmax
       comp=Z,15nm,0.8s
MT08   Bocatoma Ro       52.38 155  P       P       16 35 39.0 +0.6
MT08                                IAmb    IAmb    16 35 49.5
       comp=Z,17nm,0.9s
WTLY   Watson Lake, Y    52.61 338  IAmb    IAmb    16 35 42.9
       comp=Z,39nm,1.1s
WTLY   Watson Lake, Y    52.61 338  P       P       16 35 41.9 +2.4
       baz=135,SNR=7.8
R33M   Jennings River    52.91 337  P       P       16 35 43.0 +1.2
R33M   Jennings River    52.91 337  P       P       16 35 44.5 +2.7
       baz=132,SNR=24
Q32M   Nakina River      53.13 336  IAmb    IAmb    16 35 52.1
       comp=Z,33nm,1.1s
Q32M   Nakina River      53.13 336  P       P       16 35 46.8 +3.2
       baz=130,SNR=22
S32K   Killisnoo         53.16 333  IAmb    IAmb    16 35 47.6
       comp=Z,25nm,1.4s
S32K   Killisnoo         53.16 333  P       P       16 35 45.6 +2.1
       baz=127
SIT    Sitka             53.24 333  P       P       16 35 46.9 +2.8
       baz=126
WRGLY  Wrigley           53.27 343  P       P       16 35 45.8 +1.6
       baz=143
CPUP   Villa Florida     53.37 139  P       P       16 35 44.8 -0.7
       comp=Z,0.7nm,0.7s,baz=147,slow=6.9,SNR=3.1
CPUP                                LR      LR      16 58 25.0
       comp=Z,71nm,20.4s,baz=197,slow=36
       comp=Z,0.7nm,0.7s
CPUP   Villa Florida     53.37 139  P       P       16 35 49.0 +3.6
CPUP                                pmax    pmax
       comp=Z,3.0nm,1.1s
TGTN   Hyland Airport    53.44 340  P       P       16 35 48.3 +2.7
       baz=136,SNR=5.1
R32K   Eaglecrest        53.62 334  P       P       16 35 49.0 +2.1
       baz=128
BDFB   Brasilia          53.66 122  P       P       16 35 46.1 -1.8
       comp=Z,7.9nm,0.9s,baz=228,slow=2.8,SNR=5.6
BDFB                                LR      LR      17 00 53.0
       comp=Z,284nm,19.0s,baz=309,slow=38
       comp=Z,7.9nm,0.9s
BESE   Bessie Mountai    53.95 334  IAmb    IAmb    16 35 53.3
       comp=Z,39nm,1.6s
P32M   Atlin             54.11 336  IAmb    IAmb    16 35 54.2
       comp=Z,15nm,1.1s
P32M   Atlin             54.11 336  P       P       16 35 52.6 +2.1
       baz=129,SNR=7.9
P33M   Teslin, Yukon     54.16 337  IAmb    IAmb    16 35 54.6
       comp=Z,46nm,1.8s
P33M   Teslin, Yukon     54.16 337  P       P       16 35 53.2 +2.3
       baz=130,SNR=12
S31K   Pelican           54.17 333  IAmb    IAmb    16 35 55.0
       comp=Z,29nm,1.2s
S31K   Pelican           54.17 333  P       P       16 35 53.8 +3.0
       baz=126,SNR=8.4
SKAG   Skagway           54.67 335  IAmb    IAmb    16 35 58.4
       comp=Z,37nm,1.8s
SKAG   Skagway           54.67 335  P       P       16 35 57.1 +2.6
       baz=127
SDBA   SAO DESIDERIO     54.71 117 eP       P       16 35 55.1 -0.4
IPMB   Ipameri, GO       54.74 125 eP       P       16 35 57.1 +1.4
N32M   Quiet Lake        54.87 338  IAmb    IAmb    16 35 59.5
       comp=Z,29nm,0.9s
N32M   Quiet Lake        54.87 338  P       P       16 35 58.2 +2.2
       baz=131
PLBC   Pleasant Camp     55.10 335  P       P       16 36 00.4 +2.8
       baz=126,SNR=5.7
MMPY   Sheldon Lake,     55.21 340  IAmb    IAmb    16 36 02.3
       comp=Z,32nm,1.0s
MMPY   Sheldon Lake,     55.21 340  P       P       16 36 01.1 +2.6
       baz=133,SNR=41
WHY    Whitehorse        55.23 336  IAmb    IAmb    16 36 01.3
       comp=Z,19nm,1.0s
WHY    Whitehorse        55.23 336  P       P       16 36 00.8 +2.1
       baz=128,SNR=8.9
ILON   Igloolik, Nuna    55.50   5  P       P       16 36 00.4 +0.1
FARO   Faro, Yukon       55.67 339  P       P       16 36 03.8 +2.0
       baz=131,SNR=9.0
P30M   Million Dollar    55.73 335  P       P       16 36 05.2 +3.0
       baz=126
P29M   Windy Craggy      55.77 334  IAmb    IAmb    16 36 06.5
       comp=Z,31nm,1.1s
P29M   Windy Craggy      55.77 334  P       P       16 36 05.5 +3.0
       baz=125,SNR=8.0
O30N   Mendenhall        55.77 336  IAmb    IAmb    16 36 06.2
       comp=Z,16nm,1.0s
O30N   Mendenhall        55.77 336  P       P       16 36 05.0 +2.4
       baz=127,SNR=10
M31M   Drury Creek, Y    56.02 338  IAmb    IAmb    16 36 07.9
       comp=Z,29nm,1.6s
M31M   Drury Creek, Y    56.02 338  P       P       16 36 06.4 +2.1
       baz=130,SNR=8.9
N31M   Braeburn, Yuko    56.09 337  IAmb    IAmb    16 36 08.1
       comp=Z,28nm,0.9s
N31M   Braeburn, Yuko    56.09 337  P       P       16 36 07.1 +2.3
       baz=128,SNR=15
HYT    Haines Junctio    56.36 336  P       P       16 36 09.4 +2.6
       baz=126
PMNB   Patos De Minas    56.46 124 eP       P       16 36 08.1  0.0
JANB   Januaria          56.46 119 eP       P       16 36 06.6 -1.5
PNL    Peninsula         56.49 334  P       P       16 36 10.1 +2.5
       baz=123,SNR=6.6
O29M   Mount Kennedy     56.50 335  IAmb    IAmb    16 37 45.0
       comp=Z,13nm,0.7s
O29M   Mount Kennedy     56.50 335  P       P       16 36 10.2 +2.3
       baz=124
N30M   Aishikik Lake     56.57 336  IAmb    IAmb    16 36 12.1
       comp=Z,21nm,1.1s
N30M   Aishikik Lake     56.57 336  P       P       16 36 10.9 +2.6
       baz=126,SNR=13
YUK6   Outpost Mounta    56.77 336  P       P       16 36 12.5 +2.6
       baz=125
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PINM	Pinnacle	57.09	334	P	P	16 36 14.7	+2.8
	baz=122						
YUK4	Talbot Arm	57.12	336	P	P	16 36 14.9	+2.6
	baz=125						
O28M	Mount Upton	57.42	335	P	P	16 36 17.4	+2.8
	baz=123						
MAYO	Mayo, Yukon	57.44	339	P	P	16 36 16.4	+2.1
	baz=129						
YUK8	Steele Glacier	57.53	335	P	P	16 36 17.8	+2.6
	baz=124,SNR=6.6						
M29M	Somme Creek	57.68	337	P	P	16 36 17.9	+1.8
M29M	Somme Creek	57.68	337	P	P	16 36 18.4	+2.3
	baz=126,SNR=66						
MESA	MESA	57.85	334	P	P	16 36 20.0	+2.5
	baz=121						
L29M	L29M	57.95	338	IAmb	IAmb	16 36 21.0	
	comp=Z,25nm,1.1s						
L29M	L29M	57.95	338	P	P	16 36 19.9	+2.0
	baz=126,SNR=22						
CTGM	Chitina Glacie	58.00	335	IAmb	IAmb	16 36 28.2	
	comp=Z,25nm,1.2s						
CTG	Chitna Glacier	58.00	335	P	P	16 36 20.8	+2.4
	baz=122						
YUK3	Moose Creek	58.08	336	P	P	16 36 21.1	+2.0
	baz=123						
K29M	Barlow Dome	58.16	339	IAmb	IAmb	16 36 22.4	
	comp=Z,47nm,1.9s						
K29M	Barlow Dome	58.16	339	P	P	16 36 20.9	+1.4
	baz=127,SNR=11						
J30M	Hart River	58.21	340	P	P	16 36 21.4	+1.6
	baz=129,SNR=16						
ISLE	Juniper Island	58.23	334	IAmb	IAmb	16 36 23.8	
	comp=Z,19nm,1.1s						
C36M	Paulatuk	58.35	348	P	P	16 36 22.1	+1.6
	baz=144						
H31M	Peel River	58.36	341	IAmb	IAmb	16 37 16.7	
	comp=Z,13nm,0.8s						
H31M	Peel River	58.36	341	P	P	16 36 21.9	+1.2
	baz=132,SNR=6.9						
TGL	Tana Glacier	58.52	334	IAmb	IAmb	16 36 25.8	
	comp=Z,26nm,1.0s						
DIAM	Diamantina, MG	58.58	122	*e*P	P	16 36 23.3	+0.2
BVCY	Beaver Creek	58.59	336	P	P	16 36 24.5	+2.2
	baz=123,SNR=5.7						
I30M	Mount Dempster	58.63	340	IAmb	IAmb	16 36 29.3	
	comp=Z,22nm,1.2s						
I30M	Mount Dempster	58.63	340	P	P	16 36 24.3	+1.5
	baz=129,SNR=19						
CRQE	Cirque	58.63	334	P	P	16 36 25.4	+2.5
	baz=120						
PLCA	Paso Flores	58.65	160	P	P	16 36 24.6	+1.6
	comp=Z,8.1nm,1.1s,baz=345,slow=8.4,SNR=11						
PLCA				LR	LR	16 56 33.6	
	comp=Z,218nm,19.0s,baz=360,slow=31						
	comp=Z,8.1nm,1.1s						
PLCA	Paso Flores	58.65	160	P	P	16 36 29.1	+6.0
PLCA				pmax	pmax		
	comp=Z,23nm,1.0s						
PLCA	Paso Flores	58.65	160	*e*P	P	16 36 25.0	+1.9
CPSB	Cacapava Do Su	58.65	140	*e*P	P	16 36 24.4	+1.2
CRQM	Cirque	58.65	334	IAmb	IAmb	16 36 26.5	
	comp=Z,25nm,1.2s						
BERG	Berg Lake	58.72	333	IAmb	IAmb	16 36 27.4	
	comp=Z,29nm,1.1s						
J29N	Klondike Camp	58.78	339	P	P	16 36 26.8	+3.1
	baz=127						
KAIM	Kayak Island	58.81	333	P	P	16 36 26.8	+2.8
	baz=118						
MCARA	McCarthy VSAT	58.92	335	P	P	16 36 26.1	+1.4
MCARA	McCarthy VSAT	58.92	335	P	P	16 36 27.5	+2.9
	baz=120,SNR=8.5						
M27K	Edge Creek, AK	58.96	336	P	P	16 36 27.3	+2.2
	baz=122,SNR=7.2						
DAWY	Dawson	58.96	338	P	P	16 36 25.9	+0.9
	baz=125						
VRDI	Verde Repeater	59.02	334	IAmb	IAmb	16 36 29.1	
	comp=Z,20nm,1.0s						
POIN	Pond Inlet	59.06	5	P	P	16 36 25.4	0.0
POIN				IAmb	IAmb	16 36 27.1	
	comp=Z,14nm,0.9s						
G31M	Satah River	59.09	342	P	P	16 36 27.0	+1.3
	baz=132,SNR=23						
BSCB	Bom Sucesso	59.09	125	*e*P	P	16 36 27.3	+0.8
F31M	Tsiigehtchic	59.29	343	P	P	16 36 28.0	+0.9
	baz=133						
BCAR	Beaver Creek A	59.30	337	P	P	16 36 28.2	+0.9
L27K	Beaver Creek,	59.31	337	IAmb	IAmb	16 36 30.6	
	comp=Z,20nm,1.1s						
L27K	Beaver Creek,	59.31	337	P	P	16 36 29.4	+2.1
	baz=122,SNR=26						
I29M	Ogilvie Camp,	59.35	340	IAmb	IAmb	16 36 29.9	
	comp=Z,16nm,1.1s						
I29M	Ogilvie Camp,	59.35	340	P	P	16 36 28.5	+0.9
	baz=127						
BMRM	Bremner River	59.38	334	IAmb	IAmb	16 36 31.7	
	comp=Z,33nm,1.2s						
BMRM	Bremner River	59.38	334	P	P	16 36 30.5	+2.6
	baz=118,SNR=6.7						
M26K	Nabesna, AK	59.42	336	IAmb	IAmb	16 36 31.6	
	comp=Z,29nm,1.3s						
M26K	Nabesna, AK	59.42	336	P	P	16 36 30.4	+2.2
	baz=121,SNR=9.9						
Q23K	Middleton Isla	59.46	332	P	P	16 36 30.9	+2.6
	baz=116						
EPYK	Eagle Plains	59.47	341	IAmb	IAmb	16 37 17.7	
	comp=Z,14nm,0.9s						
EPYK	Eagle Plains	59.47	341	P	P	16 36 30.1	+1.7
	baz=129						
SFJD	Kangerlussuaq	59.58	18	LR	LR	17 03 50.3	
	comp=Z,1µm,18.4s,baz=223,slow=38						
N25K	Chitina, Valde	59.69	334	P	P	16 36 32.8	+2.7
	baz=119,SNR=17						
EYAK	Cordova Ski Ar	59.69	333	P	P	16 36 31.9	+1.9
EYAK	Cordova Ski Ar	59.69	333	P	P	16 36 32.6	+2.6
	baz=117						
G30M	tAoh Zraii Nji	59.70	342	P	P	16 36 31.0	+0.9
	baz=130						
INK	Inuvik	59.82	344	LR	LR	17 06 50.0	
	comp=Z,410nm,19.0s,baz=152,slow=40						
INK	Inuvik	59.82	344	P	P	16 36 32.2	+1.4
INK				pmax	pmax		
	comp=Z,49nm,1.0s						
INK	Inuvik	59.82	344	P	P	16 36 32.1	+1.4
	baz=134,SNR=21						
L26K	Log Cabin Wild	59.88	336	IAmb	IAmb	16 36 34.6	
	comp=Z,31nm,1.4s						
L26K	Log Cabin Wild	59.88	336	P	P	16 36 33.6	+2.3
	baz=121,SNR=6.6						
H29M	Whitestone	59.90	341	IAmb	IAmb	16 36 34.0	
	comp=Z,24nm,1.1s						
H29M	Whitestone	59.90	341	P	P	16 36 32.9	+1.6
	baz=128,SNR=19						
K27K	Chicken	59.92	337	P	P	16 36 33.5	+2.0
	baz=123						
GDU01	Guandu, BA	59.94	115	*e*P	P	16 36 31.8	-0.6
I28M	Miner Creek	59.96	339	P	P	16 36 32.9	+1.0
	baz=126,SNR=10						
DIV	Divide	59.96	334	IAmb	IAmb	16 36 35.4	
	comp=Z,27nm,1.0s						
MENT	Mentasta	59.98	336	IAmb	IAmb	16 36 35.3	
	comp=Z,41nm,1.6s						
F30M	Barrier River	59.99	343	P	P	16 36 33.5	+1.6
	baz=131,SNR=22						
P23K	Montague Islan	60.19	332	P	P	16 36 35.6	+2.2
	baz=115						
KLU	Klutina	60.19	334	P	P	16 36 35.7	+2.1
	baz=117,SNR=16						
G29M	Pine Creek	60.21	341	IAmb	IAmb	16 36 36.0	
	comp=Z,20nm,1.0s						
G29M	Pine Creek	60.21	341	P	P	16 36 34.9	+1.4
	baz=128,SNR=25						
RCBR	Riachuelo	60.24	105	LR	LR	17 07 02.6	
	comp=Z,123nm,19.1s,baz=297,slow=40						
HARP	HAARP	60.30	335	P	P	16 36 36.4	+2.2
	baz=119,SNR=5.3						
RES	Resolute Bay	60.38	359	LR	LR	17 05 38.4	
	comp=Z,436nm,19.9s,baz=179,slow=39						
RES	Resolute Bay	60.38	359	P	P	16 36 35.1	+0.6
RES				pmax	pmax		
	comp=Z,40nm,1.2s						
GLI	Glacier Island	60.43	333	P	P	16 36 36.3	+1.3
	baz=116						
M24K	Tolsona, Glenn	60.58	334	P	P	16 36 38.4	+2.2
	baz=118,SNR=8.5						
SCRK	Sand Creek	60.62	337	IAmb	IAmb	16 36 39.7	
	comp=Z,19nm,1.1s						
SCRK	Sand Creek	60.62	337	P	P	16 36 38.3	+1.8
	baz=121,SNR=19						
I27K	Kandik River	60.62	339	P	P	16 36 37.8	+1.4
	baz=124,SNR=25						
PAX	Paxson	60.70	336	IAmb	IAmb	16 36 39.8	
	comp=Z,21nm,0.9s						
PAX	Paxson	60.70	336	P	P	16 36 38.5	+1.5
	baz=119,SNR=24						
A36M	Sachs Harbour	60.73	349	P	P	16 36 37.8	+0.9
	baz=144						
J26L	Joseph Creek	60.73	338	P	P	16 36 39.2	+2.0
	baz=121,SNR=32						
RIDG	Independent Ri	60.83	336	P	P	16 36 39.7	+2.0
	baz=120,SNR=29						
H27K	Steamboat Moun	60.94	340	IAmb	IAmb	16 36 41.5	
	comp=Z,28nm,1.1s						
H27K	Steamboat Moun	60.94	340	P	P	16 36 40.2	+1.6
	baz=124,SNR=31						
SCM	Sheep Creek Mo	60.95	334	IAmb	IAmb	16 36 41.0	
	comp=Z,16nm,1.0s						
SCM	Sheep Creek Mo	60.95	334	P	P	16 36 39.9	+1.2
	baz=116,SNR=6.6						
PWL	Port Wells	60.97	333	P	P	16 36 40.4	+1.6
	baz=115						
I26K	Coal Creek Min	61.00	338	IAmb	IAmb	16 36 41.5	
	comp=Z,35nm,1.5s						
I26K	Coal Creek Min	61.00	338	P	P	16 36 40.2	+1.3
	baz=122,SNR=12						
E29M	Blow River	61.10	343	P	P	16 36 41.2	+1.8
	baz=129,SNR=26						
M23K	Glacier View	61.10	334	P	P	16 36 41.5	+1.8
	baz=116						
SEW	Seward	61.17	332	IAmb	IAmb	16 36 42.2	
	comp=Z,28nm,1.2s						
SEW	Seward	61.17	332	P	P	16 36 41.2	+1.1
	baz=113						
F28M	Old Crow	61.21	341	P	P	16 36 42.0	+1.8
	baz=126,SNR=62						
K24K	Donnelly Dome	61.22	336	P	P	16 36 42.3	+1.8
	baz=119,SNR=14						
KNK	Knik Glacier	61.25	333	IAmb	IAmb	16 36 43.6	
	comp=Z,22nm,1.0s						
KNK	Knik Glacier	61.25	333	P	P	16 36 42.3	+1.6
	baz=115						
G27K	Doyon Strip	61.31	340	IAmb	IAmb	16 36 43.5	
	comp=Z,12nm,1.0s						
G27K	Doyon Strip	61.31	340	P	P	16 36 42.1	+1.1
	baz=124,SNR=19						
SML	Sawmill	61.37	334	P	P	16 36 43.3	+1.8
	baz=115,SNR=6.4						
O22K	Cooper Landing	61.44	332	P	P	16 36 43.9	+2.0
	baz=113						
WAT6	Susitna Watana	61.45	335	P	P	16 36 43.6	+1.5
	baz=116,SNR=36						
J25K	Salcha River,	61.46	337	IAmb	IAmb	16 36 49.3	
	comp=Z,12nm,0.9s						
J25K	Salcha River,	61.46	337	P	P	16 36 43.7	+1.7
	baz=120,SNR=18						
DHY	Denali Highway	61.52	335	P	P	16 36 44.1	+1.5
	baz=117,SNR=8.1						
PMR	Palmer	61.62	333	P	P	16 36 44.7	+1.6
	baz=114						
BRSE	Bradley Lake S	61.63	331	P	P	16 36 44.8	+1.6
	baz=112						
RC01	Rabbit Creek A	61.69	333	P	P	16 36 45.3	+1.8
	baz=113						
E28M	Babbage River	61.71	342	IAmb	IAmb	16 36 46.0	
	comp=Z,22nm,0.9s						
E28M	Babbage River	61.71	342	P	P	16 36 45.0	+1.3
	baz=127,SNR=27						
RIB01	Linhares ES	61.78	121	*e*P	P	16 36 45.2	+0.4
KDAK	Kodiak Island	61.85	328	P	P	16 36 46.2	+1.5
	baz=109						
WAT1	Susitna Watana	61.89	335	P	P	16 36 46.4	+1.4
	baz=115						
D28M	Stokes Point	61.92	343	P	P	16 36 46.7	+1.7
	baz=128						
HDA	Harding Lake	61.96	337	P	P	16 36 46.7	+1.3
	baz=118,SNR=15						
PRP	Porcupine Dome	61.96	338	P	P	16 36 47.1	+1.5
	baz=120,SNR=18						
CAM01	Campos-RJ	61.99	125	*e*P	P	16 36 47.0	+0.8
HOM	Homer	62.03	331	P	P	16 36 47.8	+2.0
	baz=111						
Q20K	Shuyak Island	62.03	329	P	P	16 36 47.8	+1.9
	baz=110						
OHAK	Old Harbor	62.03	328	P	P	16 36 47.8	+1.8
	baz=108						
E27K	Coleen River	62.08	342	P	P	16 36 48.0	+1.8
	baz=125,SNR=34						
G26K	Porcupine Rive	62.09	340	IAmb	IAmb	16 36 48.9	
	comp=Z,16nm,1.1s						
G26K	Porcupine Rive	62.09	340	P	P	16 36 47.7	+1.5
	baz=122,SNR=13						
ILAR	Eielson Array	62.10	337	P	P	16 36 47.0	+0.7
ILAR	Eielson Array	62.10	337	P	P	16 36 47.4	+1.1
	comp=Z,13nm,1.0s,baz=133,slow=4.6,SNR=91						
ILAR				LR	LR	17 06 17.5	
	comp=Z,332nm,18.7s,baz=116,slow=38						
	comp=Z,13nm,1.0s						
ILAR	Eielson Array	62.10	337	*e*P	P	16 36 47.4	+1.1
ILAR				pmax	pmax		
	comp=Z,15nm,1.0s						
M22K	Willow	62.12	333	P	P	16 36 48.0	+1.6
	baz=113						
CAPN	Captain Cook N	62.20	332	P	P	16 36 49.5	+2.5
	baz=112						
SUA	Susitna One	62.28	333	P	P	16 36 49.4	+1.6
	baz=113						
H25L	Birch Creek	62.44	339	P	P	16 36 50.4	+1.9
	baz=120,SNR=16						
MCK	McKinley	62.44	335	P	P	16 36 50.0	+1.4
	baz=116,SNR=12						
CUT	Chulitna	62.44	334	P	P	16 36 50.3	+1.7
	baz=114,SNR=5.5						
POKR	Poker Plat Res	62.47	337	IAmb	IAmb	16 36 51.4	
	comp=Z,29nm,1.3s						
POKR	Poker Plat Res	62.47	337	P	P	16 36 50.1	+1.3
	baz=118						
D27M	Malcolm River	62.50	343	P	P	16 36 50.7	+1.7
	baz=126,SNR=18						
COLA	College	62.52	337	P	P	16 36 50.0	+1.0
COLA	College	62.52	337	*i* P	P	16 36 50.1	+1.0
COLA				pmax	pmax		
	comp=Z,20nm,1.0s						
COLA	College	62.52	337	P	P	16 36 50.3	+1.3
	baz=117						
F26K	Sheenjek River	62.61	340	IAmb	IAmb	16 36 52.3	
	comp=Z,13nm,1.1s						
F26K	Sheenjek River	62.61	340	P	P	16 36 51.6	+1.9
	baz=122,SNR=17						
BMAR	Burnt Mountain	62.61	340	P	P	16 36 50.7	+1.0
O20K	Slope Mountain	62.64	331	P	P	16 36 52.1	+2.0
	baz=110,SNR=5.2						
R18K	Karluk	62.74	328	P	P	16 36 51.8	+1.1
	baz=107						
Q19K	Cape Douglas,	62.75	330	P	P	16 36 52.0	+1.2
	baz=109						
STLK	Strandline Lak	62.78	333	IAmb	IAmb	16 36 53.7	
	comp=Z,14nm,1.1s						
P19K	Oil Pt	62.78	330	P	P	16 36 52.1	+1.1
	baz=109						
G25K	Bearman Lake	62.78	339	P	P	16 36 52.7	+1.9
	baz=120,SNR=12						
SKT	Skwentna	62.82	333	P	P	16 36 52.4	+1.2
	baz=112,SNR=16						
N20K	Mount Spurr	62.84	332	P	P	16 36 52.5	+1.1
	baz=111						
SPCR	Spurr Chakacha	62.84	332	P	P	16 36 52.4	+1.0
	baz=111						
NEA2	Nenana	62.86	336	IAmb	IAmb	16 36 53.8	
	comp=Z,15nm,1.2s						
NEA2	Nenana	62.86	336	P	P	16 36 52.4	+1.0
	baz=116,SNR=10.0						
TRF	Thorofare Moun	62.87	335	P	P	16 36 53.0	+1.4
	baz=114,SNR=30						
H24K	Noodor Dome	62.97	338	P	P	16 36 53.6	+1.5
	baz=118,SNR=32						
F25K	Christian Rive	63.05	340	P	P	16 36 54.6	+1.9
	baz=121,SNR=19						
I23K	Minto, Yukon-K	63.22	337	P	P	16 36 55.2	+1.5
	baz=116,SNR=39						
G24K	Hadweenzic Riv	63.23	339	IAmb	IAmb	16 36 56.9	
	comp=Z,24nm,1.1s						
G24K	Hadweenzic Riv	63.23	339	P	P	16 36 55.6	+1.8
	baz=118,SNR=19						
E25K	Arctic Village	63.29	341	P	P	16 36 56.1	+1.9
	baz=121,SNR=16						
Q18K	Katmai Hardscr	63.34	329	P	P	16 36 56.4	+1.6
	baz=107						
BPAW	Bear Paw Mtn.	63.42	335	IAmb	IAmb	16 36 57.4	
	comp=Z,23nm,1.0s						
BPAW	Bear Paw Mtn.	63.42	335	P	P	16 36 56.4	+1.2
	baz=114,SNR=7.7						
PPLA	Purkeypile	63.45	334	P	P	16 36 56.5	+1.0
	baz=112,SNR=10						
O19K	Port Alsworth	63.48	331	P	P	16 36 56.5	+1.0
	baz=109						
M20K	Styx River	63.49	333	IAmb	IAmb	16 36 57.7	
	comp=Z,14nm,0.9s						
M20K	Styx River	63.49	333	P	P	16 36 56.8	+1.1
	baz=110						
C27K	Jago River	63.52	342	P	P	16 36 57.6	+2.0
	baz=123,SNR=27						
H23K	Yukon River	63.58	337	P	P	16 36 57.5	+1.3
	baz=116,SNR=7.7						
CAST	Castle Rocks	63.60	335	P	P	16 36 57.2	+0.9
	baz=112,SNR=34						
P18K	Big Mountain,	63.67	330	P	P	16 36 57.8	+0.9
	baz=107						
Q17K	Contact Creek	63.67	328	P	P	16 36 58.4	+1.4
	baz=106						
MLY	Manley	63.70	336	P	P	16 36 58.2	+1.3
	baz=114,SNR=35						
N19K	Bonanza Creek	63.75	331	P	P	16 36 59.1	+1.6
	baz=109,SNR=8.3						
F24K	Squaw Lake	63.76	340	IAmb	IAmb	16 37 00.0	
	comp=Z,10nm,1.1s						
F24K	Squaw Lake	63.76	340	P	P	16 36 59.2	+1.8
	baz=118,SNR=10						
O18K	Koktuh Hills	63.80	330	IAmb	IAmb	16 36 59.4	
	comp=Z,26nm,1.1s						
O18K	Koktuh Hills	63.80	330	P	P	16 36 58.8	+1.1
	baz=108						
CHUM	Lake Minchumin	63.87	335	P	P	16 36 58.9	+0.8
	baz=112,SNR=8.8						
PPT	Papeete	64.01	242	LR	LR	16 58 12.5	
	comp=Z,192nm,20.2s,baz=66,slow=30						
PPT2	Papeete2	64.02	242	*e*S	S	16 45 30.5	-4.0
	comp=Z,110nm,24.2s						
PPT2				*e*LQ	LQ	16 53 22.4	
	comp=Z,330nm,33.5s						
PPT2				*e*LR	LR	16 55 52.0	
	comp=Z,242nm,26.0s						
PPT2				*e*LR	LR	16 56 04.5	
	comp=Z,324nm,24.5s						
L20K	Farewell, AK	64.03	333	P	P	16 37 00.2	+1.0
	baz=110,SNR=19						
C26K	Camden Bay	64.03	342	P	P	16 37 01.0	+2.0
	baz=122						
M19K	Big River Lodg	64.06	333	IAmb	IAmb	16 37 01.5	
	comp=Z,16nm,0.9s						
M19K	Big River Lodg	64.06	333	P	P	16 37 00.7	+1.3
	baz=109						
G23K	Bananza Creek	64.14	338	IAmb	IAmb	16 37 02.8	
	comp=Z,15nm,1.0s						
G23K	Bananza Creek	64.14	338	P	P	16 37 01.7	+1.8
	baz=116,SNR=15						
D25K	Kavik River	64.16	342	P	P	16 37 01.9	+2.0
	baz=120,SNR=36						
Q16K	King Salmon	64.17	329	P	P	16 37 01.5	+1.4
	baz=106						
P17K	Kvichak River	64.21	329	P	P	16 37 01.6	+1.3
	baz=106						
E24K	Your Creek	64.22	340	IAmb	IAmb	16 37 03.8	
	comp=Z,12nm,1.1s						
E24K	Your Creek	64.22	340	P	P	16 37 02.4	+2.0
	baz=118,SNR=9.5						
H22K	Ishtalitna Cre	64.29	337	P	P	16 37 01.8	+0.9
	baz=114,SNR=17						
L19K	White Mountain	64.36	333	IAmb	IAmb	16 37 05.0	
	comp=Z,22nm,1.4s						
L19K	White Mountain	64.36	333	P	P	16 37 02.5	+1.2
	baz=109,SNR=5.5						
R16K	Pilot Point	64.36	327	P	P	16 37 01.6	+0.3
	baz=104						
N18K	Kilae Creek	64.37	331	IAmb	IAmb	16 37 03.2	
	comp=Z,12nm,0.9s						
N18K	Kilae Creek	64.37	331	P	P	16 37 02.7	+1.3
	baz=107						
K20K	Telida	64.41	334	P	P	16 37 02.6	+0.9
	baz=110						
COLD	Coldfoot	64.43	339	IAmb	IAmb	16 37 05.2	
	comp=Z,23nm,1.2s						
COLD	Coldfoot	64.43	339	P	P	16 37 03.5	+1.8
	baz=116,SNR=17						
M18K	Stony River	64.58	332	P	P	16 37 03.6	+0.8
	baz=108,SNR=6.8						
E23K	Chandalar	64.59	340	P	P	16 37 05.2	+2.4
	baz=117,SNR=24						
O17K	Koliganek Bris	64.69	330	P	P	16 37 05.5	+2.1
	baz=106,SNR=5.1						
J20K	Nowinta River	64.73	335	IAmb	IAmb	16 37 05.8	
	comp=Z,23nm,1.1s						
J20K	Nowinta River	64.73	335	P	P	16 37 04.7	+1.0
	baz=111,SNR=11						
H21K	Melozitna Rive	64.74	337	IAmb	IAmb	16 37 05.7	
	comp=Z,9.8nm,0.9s						
H21K	Melozitna Rive	64.74	337	P	P	16 37 04.7	+0.9
	baz=112,SNR=10						
G22K	Bettles	64.76	338	P	P	16 37 05.5	+1.7
	baz=114						
D24K	Happy Valley	64.84	341	P	P	16 37 05.8	+1.4
	baz=118,SNR=5.1						
TOLK	Toolik Lake Re	64.84	340	IAmb	IAmb	16 37 07.3	
	comp=Z,16nm,0.8s						
TOLK	Toolik Lake Re	64.84	340	P	P	16 37 06.5	+2.0
	baz=117,SNR=11						
CHNA	Chernabura Isl	64.86	324	P	P	16 37 05.4	+0.7
	baz=101						
N17K	Nushagak Hills	64.94	331	IAmb	IAmb	16 37 07.2	
	comp=Z,27nm,1.2s						
N17K	Nushagak Hills	64.94	331	P	P	16 37 06.9	+1.8
	baz=106,SNR=5.2						
P16K	Nushagak River	64.94	329	P	P	16 37 06.0	+0.9
	baz=105						
C24K	Franklin Bluff	65.07	342	P	P	16 37 07.7	+1.9
	baz=118,SNR=13						
I20K	Naaghedeneel	65.08	336	P	P	16 37 07.2	+1.2
	baz=110,SNR=13						
O16K	Kokwok River B	65.13	329	P	P	16 37 08.1	+1.7
	baz=105						
L18K	Granite Mounta	65.19	332	IAmb	IAmb	16 37 19.2	
	comp=Z,16nm,1.2s						
L18K	Granite Mounta	65.19	332	P	P	16 37 08.2	+1.4
	baz=107,SNR=7.9						
IMAR	Indian Mountai	65.22	337	P	P	16 37 06.9	0.0
F22K	John River	65.24	339	P	P	16 37 09.2	+2.2
	baz=114,SNR=8.8						
J19K	Poorman	65.28	335	P	P	16 37 08.0	+0.7
	baz=109,SNR=20						
M17K	Holitna River	65.30	332	IAmb	IAmb	16 37 18.3	
	comp=Z,18nm,1.1s						
M17K	Holitna River	65.30	332	P	P	16 37 08.4	+1.0
	baz=106						
G21K	Allakaket	65.33	337	IAmb	IAmb	16 37 10.1	
	comp=Z,17nm,0.9s						
G21K	Allakaket	65.33	337	P	P	16 37 08.8	+1.2
	baz=112						
D23K	Nanushuk River	65.35	340	P	P	16 37 09.9	+2.3
	baz=116,SNR=19						
E22K	Anaktuvuk Pass	65.37	339	P	P	16 37 09.5	+1.7
	baz=115,SNR=28						
SDPT	Sand Point	65.46	325	P	P	16 37 09.4	+0.9
	baz=101						
H20K	Anotleneega Mo	65.48	336	P	P	16 37 09.8	+1.1
	baz=110,SNR=10						
J18K	Innoko River	65.58	334	IAmb	IAmb	16 37 11.3	
	comp=Z,19nm,1.3s						
J18K	Innoko River	65.58	334	P	P	16 37 10.4	+1.2
	baz=108,SNR=9.5						
F21K	Alatna River	65.59	338	P	P	16 37 11.2	+1.9
	baz=112,SNR=70						
N16K	Nishlik Lake	65.68	330	P	P	16 37 11.3	+1.4
	baz=104,SNR=5.7						
C23K	Itkillik River	65.71	341	P	P	16 37 12.0	+2.0
	baz=116,SNR=23						
L17K	Donlin	65.89	332	P	P	16 37 12.0	+0.8
	baz=106						
O15K	Ungalikthiuk R	65.89	329	P	P	16 37 11.5	+0.2
	baz=103						
M16K	Timber Creek	65.91	331	IAmb	IAmb	16 37 24.2	
	comp=Z,17nm,1.1s						
M16K	Timber Creek	65.91	331	P	P	16 37 12.9	+1.5
	baz=105						
D22K	Ayikyak River	65.97	340	P	P	16 37 13.8	+2.1
	baz=114,SNR=21						
GCSA	Galena City Sc	66.04	335	P	P	16 37 14.1	+2.0

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       baz=108
K17K  Iditarod          66.05 333  IAmb    IAmb    16 37 14.1
       comp=Z,13nm,0.9s
K17K  Iditarod          66.05 333  P       P       16 37 12.8 +0.6
       baz=106
H19K  Roundabout Mou    66.11 336  P       P       16 37 13.7 +1.1
       baz=109,SNR=21
E21K  Killik River      66.23 339  IAmb    IAmb    16 37 16.2
       comp=Z,23nm,1.0s
E21K  Killik River      66.23 339  P       P       16 37 15.0 +1.6
       baz=112
N15K  Kwethluk River    66.25 330  P       P       16 37 13.5  -0.1
       baz=103
SUMG  Summit            66.25  16  IAmb    IAmb    16 37 17.1
       comp=Z,8.8nm,0.9s
SUMG  Summit            66.25  16  P       P       16 37 12.9  -1.0
SUMG                               pmax    pmax
       comp=Z,15nm,1.1s
L16K  Owhat River       66.32 332  IAmb    IAmb    16 37 16.6
       comp=Z,17nm,1.0s
L16K  Owhat River       66.32 332  P       P       16 37 15.3 +1.4
       baz=104,SNR=6.1
F20K  Avaraart Lake     66.34 338  P       P       16 37 15.6 +1.6
       baz=110,SNR=40
S12K  Black Hills       66.41 325  P       P       16 37 15.2 +0.5
       baz=100
TBI   Tubuai            66.55 236  eS      S       16 45 58.8  -6.5
       comp=Z,395nm,23.5s
TBI                                eLQ     LQ      16 54 16.4
       comp=Z,1μm,30.2s
TBI                                eLR     LR      16 57 09.4
       comp=Z,1μm,26.2s
TBI                                eLR     LR      16 57 10.8
       comp=Z,630nm,26.0s
G19K  Purcell Mounta    66.56 337  P       P       16 37 16.8 +1.4
       baz=108,SNR=16
J17K  VABM Dome         66.57 333  IAmb    IAmb    16 37 17.8
       comp=Z,37nm,1.9s
J17K  VABM Dome         66.57 333  P       P       16 37 16.8 +1.2
       baz=106
O14K  Tigyukauivet M    66.63 329  P       P       16 37 17.2 +1.2
       baz=102
M15K  Kasigluk River    66.65 330  P       P       16 37 17.5 +1.4
       baz=103
H18K  Honhosa River     66.76 335  IAmb    IAmb    16 37 18.9
       comp=Z,11nm,1.1s
H18K  Honhosa River     66.76 335  P       P       16 37 18.2 +1.4
       baz=107
C21K  Knifeblade Rid    66.77 340  P       P       16 37 18.9 +2.1
       baz=112,SNR=6.9
B22K  Teshekpuk Lake    66.80 341  P       P       16 37 18.6 +1.7
       baz=114,SNR=11
B21K  Ikpikpuk River    66.89 340  IAmb    IAmb    16 37 20.2
       comp=Z,18nm,0.9s
B21K  Ikpikpuk River    66.89 340  P       P       16 37 19.2 +1.7
       baz=112,SNR=6.3
E20K  Nigu River        66.93 339  P       P       16 37 19.9 +2.0
       baz=110
N14K  Kuskokwak Cree    66.97 329  P       P       16 37 19.0 +0.8
       baz=102
E19K  Redstone River    67.03 338  P       P       16 37 19.9 +1.4
       baz=109
F19K  Shaleruckik Mo    67.04 337  IAmb    IAmb    16 37 21.2
       comp=Z,23nm,1.1s
F19K  Shaleruckik Mo    67.04 337  P       P       16 37 20.1 +1.6
       baz=108
FALS  False Pass        67.05 324  P       P       16 37 19.7 +1.0
       baz=98
G18K  Tagagawik         67.09 336  IAmb    IAmb    16 37 21.2
       comp=Z,14nm,1.1s
G18K  Tagagawik         67.09 336  P       P       16 37 20.6 +1.6
       baz=107,SNR=13
J16K  Anvik River       67.21 333  P       P       16 37 21.3 +1.6
       baz=104,SNR=13
D20K  Etivluk River     67.23 339  P       P       16 37 21.5 +1.7
       baz=110
L15K  Ungalak Mounta    67.24 331  P       P       16 37 21.8 +1.9
       baz=102,SNR=13
M14K  Bethel            67.28 330  P       P       16 37 21.6 +1.5
       baz=102,SNR=8.1
H17K  Granite Mounta    67.33 335  P       P       16 37 22.3 +1.9
       baz=105,SNR=6.8
I17K  Unalakleet        67.40 334  P       P       16 37 22.8 +2.0
       baz=104
K15K  Wolf Creek Mou    67.40 332  P       P       16 37 23.0 +2.1
       baz=103,SNR=11
A22K  Sinclair Lake     67.53 342  P       P       16 37 23.6 +2.0
       baz=112
F18K  Selawik           67.68 337  P       P       16 37 24.3 +1.8
       baz=106
D19K  Kuna River        67.68 339  IAmb    IAmb    16 37 24.7
       comp=Z,16nm,1.1s
D19K  Kuna River        67.68 339  P       P       16 37 24.1 +1.5
       baz=108
L14K  Kuka Creek        67.74 331  IAmb    IAmb    16 37 29.8
       comp=Z,16nm,0.9s
L14K  Kuka Creek        67.74 331  P       P       16 37 24.1 +1.1
       baz=101
G17K  Kiwalik Mounta    67.78 335  P       P       16 37 25.3 +2.1
       baz=105,SNR=8.3
B20K  Meade River       67.86 341  P       P       16 37 25.5 +1.9
       baz=110,SNR=11
M13K  Dall Lake         67.89 330  P       P       16 37 25.8 +1.9
       baz=100,SNR=5.8
A21K  Barrow            68.15 342  P       P       16 37 27.0 +1.6
       baz=111
H16K  Elim              68.23 334  P       P       16 37 28.0 +2.0
       baz=103,SNR=6.1
E18K  Tukpahlearik C    68.27 337  IAmb    IAmb    16 37 28.7
       comp=Z,14nm,1.2s
E18K  Tukpahlearik C    68.27 337  P       P       16 37 27.4 +1.1
       baz=106
C19K  Lookout Ridge     68.38 339  P       P       16 37 29.0 +2.0
       baz=107
J14K  Nanvaranak Lak    68.41 332  P       P       16 37 29.1 +1.9
       baz=101,SNR=9.2
G16K  Koyuk River       68.45 335  IAmb    IAmb    16 37 29.9
       comp=Z,8.9nm,0.9s
G16K  Koyuk River       68.45 335  P       P       16 37 29.4 +2.0
       baz=103
E17K  Hotham Inlet      68.64 337  P       P       16 37 30.2 +1.6
       baz=104,SNR=10
UNV   Unalaska Valle    68.73 322  P       P       16 37 30.8 +1.4
       baz=95
K13K  Kusilvak Mount    68.77 331  IAmb    IAmb    16 37 32.3
       comp=Z,16nm,1.2s
K13K  Kusilvak Mount    68.77 331  P       P       16 37 30.8 +1.3
       baz=100
C18K  Utukok River      68.81 339  IAmb    IAmb    16 37 31.5
       comp=Z,18nm,1.2s
C18K  Utukok River      68.81 339  P       P       16 37 31.2 +1.5
       baz=106
G15K  Niukluk           69.06 335  P       P       16 37 33.0 +1.8
       baz=102
B18K  Kokolik River     69.21 339  P       P       16 37 33.9 +1.8
       baz=105
D17K  Noatak River      69.26 337  P       P       16 37 33.8 +1.4
       baz=103,SNR=8.1
RDOG  Red Dog Mine      69.28 338  P       P       16 37 33.7 +1.1
       baz=104
M11K  Mekoryuk          69.28 329  P       P       16 37 34.7 +2.0
       baz=98
BORG  Borgarnes         69.43  26  LR      LR      17 07 10.9
       comp=Z,318nm,21.3s,baz=264,slow=35
F15K  North Star Dit    69.45 335  P       P       16 37 35.5 +1.9
       baz=101,SNR=5.8
C17K  DeLong Mountai    69.47 338  P       P       16 37 35.2 +1.5
       baz=104
ANM   Nome              69.54 334  P       P       16 37 35.8 +1.6
       baz=100
NIKH  Nikolski High     70.08 321  P       P       16 37 39.4 +1.7
       baz=93
F14K  Arctic Creek      70.09 335  P       P       16 37 39.5 +1.9
       baz=100
C16K  Lisburne Hills    70.21 338  P       P       16 37 40.2 +2.0
       baz=101
P08K  Saint George I    70.67 325  P       P       16 37 42.9 +1.7
       baz=94
TNA   Tin City          70.76 335  IAmb    IAmb    16 37 44.7
       comp=Z,15nm,1.2s
TNA   Tin City          70.76 335  P       P       16 37 43.5 +1.9
       baz=98
SPIA  Saint Paul Isl    71.08 326  P       P       16 37 45.2 +1.5
       baz=93
USHA  Ushuaia           72.00 165  LR      LR      17 03 41.8
       comp=Z,342nm,18.7s,baz=209,slow=31
GAMB  Gambell           72.20 333  P       P       16 37 52.1 +1.8
       baz=94
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BBTS  Babate            73.84  79  LR      LR      17 05 08.5
       comp=Z,235nm,21.3s,baz=166,slow=32
NOR   Nord              73.97   9  P       P       16 38 01.6 +1.0
NOR                                pmax    pmax
       comp=Z,8.0nm,1.2s
RAR   Rarotonga         74.27 243  LR      LR      17 05 41.7
       comp=Z,153nm,18.1s,baz=86,slow=31
JMIC  Jan Mayen         74.84  20  LR      LR      17 11 22.0
       comp=Z,632nm,20.3s,baz=252,slow=36
PGAV  Gavieira, Arco    76.84  50  eP      P       16 38 16.3  -1.6
PCAS  Casmilo, Conde    76.92  52  eP      P       16 38 16.8  -1.5
PCAS                               i Amb           16 38 18.4
       comp=Z,14nm,0.9s
PFVI  Vila Bisbo        77.07  55  eP      P       16 38 18.4  -0.8
PTEO  Sao Teotonio      77.09  54  eP      P       16 38 18.2  -1.1
PTEO                               i Amb           16 38 20.2
       comp=Z,27nm,2.5s
PSARD Sardoal           77.24  52  eP      P       16 38 18.0  -2.1
PSARD                              i Amb           16 38 19.6
       comp=Z,11nm,0.9s
PMTG  Montargil         77.27  53  eP      P       16 38 17.9  -2.4
PMTG                               i Amb           16 38 20.9
       comp=Z,17nm,1.4s
POLO  Lamas de Olo      77.27  50  eP      P       16 38 18.9  -1.5
PVIS  Viseu             77.29  51  eP      P       16 38 19.0  -1.4
MESJ  Messejana         77.45  54  eP      P       16 38 19.4  -1.9
EVO   Evora             77.51  53  eP      P       16 38 20.3  -1.3
MTE   Manteigas         77.60  51   IAmb   IAmb    16 38 21.9
       comp=Z,19nm,0.9s
MTE   Manteigas         77.60  51  eP      P       16 38 20.6  -1.5
MTE                                i Amb           16 38 22.5
       comp=Z,22nm,1.3s
PCVE  Castro Verde      77.62  54  eP      P       16 38 21.9  -0.3
PBEJ  Beja              77.70  54  eP      P       16 38 21.4  -1.3
PBEJ                               i Amb           16 38 24.6
       comp=Z,18nm,1.2s
PCBR  Castelo Branco    77.73  52  eP      P       16 38 21.9  -0.9
PCBR                               i Amb           16 38 24.6
       comp=Z,14nm,1.4s
PBDV  Barranco-do-Ve    77.76  54  eP      P       16 38 22.5  -0.6
PMRV  Marv??o           77.86  52  eP      P       16 38 20.8  -2.8
PMRV                               i Amb           16 38 23.0
       comp=Z,11nm,1.0s
MVO   Moncorvo          77.88  50  eP      P       16 38 21.9  -1.8
PVAQ  Vaqueiros         77.91  54  eP      P       16 38 23.0  -0.8
PBAR  Barrancos         78.32  53  eP      P       16 38 24.4  -1.7
PBAR                               i Amb           16 38 30.3
       comp=Z,21nm,1.3s
EKA   Eskdalemuir Ar    78.39  36  P       P       16 38 24.8  -1.3
       comp=Z,4.0nm,0.7s,baz=281,slow=6.1,SNR=13
       comp=Z,4.0nm,0.7s
EKA   Eskdalemuir Ar    78.39  36  P       P       16 38 23.7  -2.4
KBS   Kingsbay          78.93  11  P       P       16 38 30.2 +1.5
KBS                                IAmb    IAmb    16 38 32.3
       comp=Z,19nm,1.0s
KBS   Kingsbay          78.93  11  P       P       16 38 30.2 +1.5
KBS                                pmax    pmax
       comp=Z,19nm,1.0s
SPITS Spitsbergen Ar    80.02  11  P       P       16 38 35.1 +0.4
       comp=Z,6.0nm,0.8s,baz=291,slow=4.3,SNR=4.7
SPITS                              LR      LR      17 15 18.0
       comp=Z,578nm,21.2s,baz=248,slow=37
       comp=Z,6.0nm,0.8s
SHEM  Shemya Is, Ala    80.38 322  LR      LR      17 12 44.1
       comp=Z,65nm,20.3s,baz=32,slow=34
ESDC  Sonseca Array     80.43  52  P       P       16 38 36.1  -1.5
ESDC  Sonseca Array     80.43  52  P       P       16 38 36.5  -1.2
       comp=Z,7.0nm,0.8s,baz=288,slow=5.7,SNR=47
ESDC                               LR      LR      17 11 03.7
       comp=Z,264nm,19.1s,baz=294,slow=33
       comp=Z,7.0nm,0.8s
BILL  Bilibino          80.74 338  P       P       16 38 39.8 +1.1
BILL                               IAmb    IAmb    16 38 41.6
       comp=Z,21nm,0.9s
BILL  Bilibino          80.74 338  i P     P       16 38 40.2 +1.5
BILL                               pmax    pmax
       comp=Z,56nm,1.9s
MDT   Midelt            81.22  58  LR      LR      17 10 34.7
       comp=Z,128nm,19.6s,baz=254,slow=33
PMSA  Palmer Station    81.90 168  LR      LR      17 07 13.0
       comp=Z,128nm,19.3s,baz=314,slow=30
HOPE  Hope Point        83.50 150  i P     P       16 38 52.8  -0.4
BGES  Gesves            84.30  40  dP      P       16 38 56.8  -0.8
BGES                               dpP     PcP     16 39 00.2  -1.1
BCLA  Clavier           84.42  39  dP      P       16 38 57.4  -0.8
NB2   NORSAR Subarra    84.42  28  P       P       16 38 58.4 +0.3
       comp=Z,5.4nm,0.8s,baz=290,slow=5.3
NB2   NORSAR Subarra    84.42  28  P       P       16 38 57.8  -0.3
NOA   NORSAR Array B    84.42  28  P       P       16 38 58.6 +0.6
       comp=Z,3.6nm,0.8s,baz=291,slow=5.1,SNR=20
NOA                                LR      LR      17 14 55.0
       comp=Z,343nm,21.2s,baz=285,slow=34
       comp=Z,3.6nm,0.8s
NC405 NORSAR Array S    84.63  28  IAmb    IAmb    16 39 01.5
       comp=Z,25nm,1.2s
NORES NORESS Array B    84.68  29  P       P       16 39 01.2 +1.9
MEM   Membach           84.81  39  dP      P       16 38 59.3  -0.8
WLF   Walferdange       85.16  40  dP      P       16 39 01.5  -0.4
BUG   Bochum--Univer    85.33  38  eP      P       16 39 04.6 +1.8
       comp=Z,23nm,1.4s,baz=290,slow=4.9
HFS   Hagfors           85.89  29  P       P       16 39 05.2  -0.2
       comp=Z,4.1nm,0.7s,baz=242,slow=3.2,SNR=12
HFS                                LR      LR      17 15 16.1
       comp=Z,368nm,21.8s,baz=286,slow=34
       comp=Z,4.1nm,0.7s
KASTN Kahler Asten      86.09  38  eP      P       16 39 07.6 +1.0
       comp=Z,12nm,1.2s,baz=290,slow=4.9
RETH  Rethem/Aller,     86.17  37  eP      P       16 39 07.0 +0.2
       comp=Z,14nm,1.0s,baz=290,slow=4.9
ARCES ARCESS Array B    86.20  18  P       P       16 39 07.5 +0.7
ARCES                              IAmb    IAmb    16 39 08.3
       comp=Z,12nm,0.9s
ARCES ARCESS Array B    86.20  18  P       P       16 39 07.1 +0.3
       comp=Z,7.1nm,0.8s,baz=305,slow=4.3,SNR=13
ARCES                              LR      LR      17 18 05.2
       comp=Z,363nm,18.5s,baz=298,slow=36
       comp=Z,7.1nm,0.8s
ARCES ARCESS Array B    86.20  18  eP      P       16 39 07.5 +0.7
ARCES                              pmax    pmax
       comp=Z,7.0nm,0.8s
ECH   Echery            86.21  41  IAmb    IAmb    16 39 09.2
       comp=Z,9.5nm,1.0s
ECH   Echery            86.21  41  P       P       16 39 08.1 +0.9
ECH                                pmax    pmax
       comp=Z,11nm,1.3s
BSEG  Bad Segeberg      86.32  35  P       P       16 39 08.1 +0.5
BSEG                               pmax    pmax
       comp=Z,18nm,1.0s
BSEG  Bad Segeberg      86.32  35  eP      P       16 39 08.4 +0.9
       comp=Z,12nm,0.8s,baz=290,slow=4.9
TNS   Taunus Mts        86.41  39  P       P       16 39 07.0  -1.2
TNS                                pmax    pmax
       comp=Z,20nm,1.0s
TNS   Taunus Mts        86.41  39  eP      P       16 39 07.5  -0.7
       comp=Z,16nm,0.9s,baz=290,slow=4.9
DBIC  Dimbokro          86.77  84  P       P       16 39 10.2  -0.4
       comp=Z,11nm,0.9s,baz=253,slow=4.1,SNR=6.8
DBIC                               LR      LR      17 15 15.4
       comp=Z,127nm,20.8s,baz=300,slow=34
       comp=Z,11nm,0.9s
SENIN Lac Senin/Sane    86.85  43  P       P       16 39 11.0 +0.4
SENIN                              IAmb    IAmb    16 39 42.4
       comp=Z,26nm,1.4s
BFO   Black Forest      86.92  41  eP      P       16 39 10.8   0.0
       comp=Z,7.9nm,1.1s,baz=290,slow=4.9
ASSE  Asse, Remlinge    87.12  37  eP      P       16 39 12.4 +0.9
       comp=Z,8.6nm,1.1s,baz=290,slow=4.9
FLTG  Flechtingen       87.38  37  eP      P       16 39 13.6 +0.8
       comp=Z,7.5nm,1.0s,baz=290,slow=4.9
SEY   Seymchan          88.00 335  LR      LR      17 24 24.1
       comp=Z,162nm,18.5s,baz=82,slow=39
SEY   Seymchan          88.00 335  i P     P       16 39 16.8 +1.3
SEY                                pmax    pmax
       comp=Z,15nm,1.7s
TUE   Stuetta           88.16  42  P       P       16 39 16.5  -0.4
TUE                                IAmb    IAmb    16 39 18.9
       comp=Z,15nm,1.3s
MOX   Moxa              88.19  38  eL      L       17 19 00.2
       comp=Z,244nm,20.5s
DAVA  Damuels           88.24  42  i P     P       16 39 16.9  -0.3
       comp=Z,3.7nm,0.6s
GRF   Grafenberg Arr    88.28  39  eP      P       16 39 16.9  -0.3
       comp=Z,14nm,1.1s,baz=290,slow=4.9
GRF                                eL      L       17 20 38.3
       comp=Z,313nm,18.3s
DAVOX Davos/Dischmat    88.41  42  LR      LR      17 13 34.6
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       comp=Z,152nm,21.8s,baz=262,slow=32
OUL   Oulu              88.69  22  P       P       16 39 19.6 +0.9
OUL                                pmax    pmax
       comp=Z,16nm,1.1s
RETA  Reutte            88.74  41  i P     P       16 39 19.1  -0.4
       comp=Z,3.6nm,0.7s
CLL   Collm             88.77  37  eP      P       16 39 21.2 +1.8
       comp=Z,2.8nm,0.6s,baz=290,slow=4.9
CLL   Collm             88.77  37  eP      P       16 39 20.0 +0.6
CLL                                ePP     PP      16 42 48.0  -0.2
CLL                                eSKKSac S       16 49 52.0   -13
CLL                                ex      x       16 50 28.0
CLL                                ePS     PS      16 51 16.0 +4.0
CLL                                ePPS    PPS     16 51 33.0
CLL                                 AMS    AMS     17 19 00.0
       comp=Z,200nm,21.2s
FETA  Feichten          88.88  42  i P     P       16 39 19.7  -0.5
       comp=Z,3.7nm,0.8s
MOTA  Moosalm           89.01  41  i P     P       16 39 20.7  -0.2
       comp=Z,5.1nm,1.0s
PET   Petropavlovsk     89.24 325  eP      P       16 39 23.0 +1.4
PET                                eS      S       16 50 13.5 +4.7
PET                                 pmax   pmax
       comp=Z,100nm,11.3s
PET                                 pmax   pmax
       comp=Z,100nm,12.2s
BRG   Berggiesshubel    89.48  37  eP      P       16 39 23.3 +0.5
BRG                                 Amp            16 39 25.5
       comp=Z,5.2nm,1.0s
BRG   Berggiesshubel    89.48  37  S       S       16 50 08.0  -3.2
WET   Wettzell          89.48  39  P       P       16 39 23.9 +1.0
WET                                 pmax   pmax
       comp=Z,6.0nm,1.1s
WET   Wettzell          89.48  39  eP      P       16 39 23.8 +1.0
       comp=Z,8.5nm,1.2s,baz=290,slow=4.9
TIXI  Tiksi             89.72 348  LR      LR      17 25 26.4
       comp=Z,259nm,20.4s,baz=32,slow=39
PEA0B Petropavlovsk-    89.74 325  i P     P       16 39 25.9 +1.9
PETK  Petropavlovsk-    89.74 325  P       P       16 39 25.0 +1.1
       comp=Z,4.4nm,1.0s,baz=95,slow=8.9,SNR=7.7
       comp=Z,4.4nm,1.0s
KHC   Kasperske Hory    89.92  39  i P     P       16 39 26.0 +1.1
KHC                                 pmax   pmax
       comp=Z,4.0nm,1.0s
GEC2  GERESS Array S    90.10  39  P       P       16 39 27.3 +1.4
GEC2                               pmax    pmax
       comp=Z,7.0nm,1.2s
GEC2  GERESS Array S    90.10  39  eP      P       16 39 26.9 +1.1
       baz=290,slow=4.9
GERES GERESS Array B    90.10  39  P       P       16 39 24.4  -1.5
GERES GERESS Array B    90.10  39  P       P       16 39 25.3  -0.6
       comp=Z,3.4nm,1.0s,baz=329,slow=1.6,SNR=13
GERES                              LR      LR      17 20 46.9
       comp=Z,214nm,18.4s,baz=277,slow=36
       comp=Z,3.4nm,1.0s
ABTA  Abfaltersbach     90.12  41  i P     P       16 39 26.3 +0.3
       comp=Z,4.1nm,0.8s
MA2   Magadan           90.30 333  LR      LR      17 22 23.8
       comp=Z,104nm,19.0s,baz=58,slow=37
MA2   Magadan           90.30 333  i P     P       16 39 27.6 +1.2
MA2                                pmax    pmax
       comp=Z,11nm,0.9s
FINES FINESS Array B    90.71  25  P       P       16 39 28.4 +0.1
       comp=Z,3.9nm,0.9s,baz=300,slow=6.3,SNR=9.6
FINES                              LR      LR      17 21 51.7
       comp=Z,270nm,18.2s,baz=291,slow=37
       comp=Z,3.9nm,0.9s
TREC  Trest             91.01  38  P       P       16 39 28.8  -1.2
TREC                               pmax    pmax
       comp=Z,6.0nm,1.0s
DPC   Dobruska-Polom    91.08  37  P       P       16 39 30.9 +0.6
DPC                                pmax    pmax
       comp=Z,7.0nm,1.0s
TORD  Torodi Ar. Bea    91.43  76  P       P       16 39 30.9  -1.7
       comp=Z,1.3nm,0.6s,baz=270,slow=2.9,SNR=2.3
TORD                               LR      LR      17 18 10.7
       comp=Z,224nm,20.5s,baz=328,slow=34
       comp=Z,1.3nm,0.6s
KRLC  Kraliky           91.46  37  P       P       16 39 33.7 +1.6
KRLC                               pmax    pmax
       comp=Z,4.0nm,1.1s
OBKA  Obir              91.51  41  i P     P       16 39 32.0  -0.5
       comp=Z,4.0nm,0.9s
KEST  Kesra             91.63  53  P       P       16 39 33.2  -0.1
       comp=Z,5.6nm,0.8s,baz=241,slow=2.3,SNR=4.4
       comp=Z,5.6nm,0.8s
KRUC  Moravsky          91.65  38  eP      P       16 39 33.5 +0.6
KRUC  Moravsky          91.65  38  P       P       16 39 30.4  -2.5
VRAC  Vranov            91.67  38  P       P       16 39 33.0   0.0
       comp=Z,1.5nm,0.4s,baz=357,slow=5.4,SNR=6.2
VRAC                               LR      LR      17 23 01.5
       comp=Z,314nm,18.0s,baz=295,slow=37
       comp=Z,1.5nm,0.4s
VRAC  Vranov            91.67  38  eP      P       16 39 34.1 +1.1
VRAC  Vranov            91.67  38  P       P       16 39 34.3 +1.3
VRAC                               pmax    pmax
       comp=Z,7.0nm,1.3s
SOKA  Soboth            91.75  41  i P     P       16 39 33.1  -0.5
       comp=Z,3.6nm,1.0s
CONA  Conrad Observa    91.78  39  i P     P       16 39 33.7   0.0
       comp=Z,3.1nm,0.8s
ARSA  Arzberg           91.84  40  i P     P       16 39 34.2 +0.4
       comp=Z,0.7nm,0.5s
FDMO  Fiordimonte       91.84  45  IAmb    IAmb    16 39 36.0
       comp=Z,17nm,1.5s
MORC  Moravsky Berou    92.03  37  eP      P       16 39 35.9 +1.1
MORC  Moravsky Berou    92.03  37  P       P       16 39 36.6 +1.8
MORC                               pmax    pmax
       comp=Z,6.0nm,1.3s
RONA  Rosalia, Austr    92.14  40  i P     P       16 39 35.2  -0.1
       comp=Z,1.4nm,0.5s
TAM   Tamanrasset       92.34  66  P       P       16 39 37.8 +0.9
TAM                                pmax    pmax
       comp=Z,5.0nm,0.9s
MODS  Modra-Piesok      92.46  39  P       P       16 39 37.6 +0.9
MODS                               pmax    pmax
       comp=Z,12nm,1.9s
MODS  Modra-Piesok      92.46  39  eP      P       16 39 38.6 +1.9
JAVC  Velka Javorina    92.50  38  eP      P       16 39 39.3 +2.4
VYHS  Vyhne             93.35  38  P       P       16 39 41.1 +0.3
VYHS                               pmax    pmax
       comp=Z,1.0nm,1.1s
VYHS  Vyhne             93.35  38  eP      P       16 39 42.3 +1.5
PSZ   Piszkesteto       94.24  38  P       P       16 39 46.0 +1.0
PSZ                                pmax    pmax
       comp=Z,7.0nm,1.1s
VAE   Valguarnera       94.84  50  LR      LR      17 19 29.3
       comp=Z,454nm,19.8s,baz=323,slow=34
MNK   Minsk             95.30  30  i P     P       16 39 49.1  -0.4
       comp=E,21nm,0.9s
MNK                                i P     P       16 39 49.1  -0.4
MNK                                i P     P       16 39 49.1  -0.4
       comp=Z,9.0nm,0.7s,baz=303
MNK                                i PP    PP      16 43 38.0  -1.4
MNK                                i PPP   PPP     16 45 39.5
MNK                                i S     SKSac   16 50 24.5 +1.3
MNK                                i SS    SS      16 57 27.1  -2.3
MNK                                i SSS   SSS     17 01 12.5
MNK                                i LRM   MLR     17 22 39.2
       comp=Z,180nm,18.3s
MNK                                i LRM   MLR     17 22 53.9
       comp=N,165nm,18.7s
MNK                                i LRM   MLR     17 22 57.1
       comp=E,246nm,20.4s
MNK   Minsk             95.30  30  i P     P       16 39 49.1  -0.4
MNK                                i               16 43 37.9
MNK                                i PPP   PPP     16 45 39.5
MNK                                i S     SKSac   16 50 24.5 +1.3
MNK                                i SS    SS      16 57 27.0  -2.3
MNK                                i SSS   SSS     17 01 12.4
MNK                                 pmax   pmax
       comp=Z,9.0nm,0.7s
MNK                                 pmax   pmax
       comp=E,21nm,0.9s
MNK                                 MLR    MLR
       comp=Z,180nm,18.0s
MNK                                 MLR    MLR
       comp=N,165nm,19.0s
MNK                                 MLR    MLR
       comp=E,246nm,20.0s
KLMR  Klimovskoe        96.18  21  eP      P       16 39 52.1  -1.4
KLMR                                pmax   pmax
       comp=Z,13nm,1.6s
KLMR                                MLR    MLR
       comp=Z,491nm,20.0s
YAK   Yakutsk           96.80 341  LR      LR      17 32 37.0
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	comp=Z,170nm,18.1s,baz=36,slow=41						
AKASG	Malin Array Be	98.10	33	P	P	16 40 01.2	-1.2
	comp=Z,0.7nm,0.7s,baz=298,slow=3.8,SNR=5.1						
AKASG				LR	LR	17 27 19.4	
	comp=Z,182nm,18.2s,baz=305,slow=37						
	comp=Z,0.7nm,0.7s						
AKASG	Malin Array Be	98.10	33	eP	Pdif	16 40 03.1	+0.7
URZ	Urewera	98.48	233	LR	LR	17 18 38.7	
	comp=Z,72nm,18.2s,baz=100,slow=32						
OBN	Obninsk	98.93	27	LR	LR	17 24 48.8	
	comp=Z,239nm,20.4s,baz=215,slow=35						
DZM	Mont Dzumac	104.69	251	eLR	LR	17 14 49.4	
	comp=Z,178nm,21.9s						
KURBB	Kurchatov Arra	114.94	6	PKP	PKiKP	16 45 06.8	+0.3
	comp=Z,1.7nm,0.7s,baz=347,slow=2.3,SNR=12						
KSRS	Korea Array	115.63	325	PKP	PKiKP	16 45 08.2	0.0
	comp=Z,1.4nm,0.7s,baz=306,slow=1.6,SNR=6.8						
SONM	Songino Array	115.71	345	PKP	PKPdf	16 45 08.9	+0.6
	comp=Z,0.9nm,0.7s,baz=355,slow=1.7,SNR=2.9						
SYO	Syowa Base	117.80	163	⇑iPdiff	Pdif	16 41 29.2	-0.2
MKAR	Makanchi Array	119.05	4	PKP	PKPdf	16 45 14.7	+0.1
	comp=Z,1.7nm,0.9s,baz=5.7,slow=2.4,SNR=13						
HHC	Hu-ho-hao-te	120.52	338	ePKP	PKPdf	16 45 14.8	-2.9
BOSA	Boshof	121.53	115	PKP	PKPdf	16 45 20.2	+0.3
	comp=Z,8.5nm,0.8s,baz=234,slow=1.5,SNR=4.9						
WMQ	Urumqi	122.15	359	ePKP	PKiKP	16 45 21.6	+0.7
WMQ				LR	LR		
	comp=Z,280nm,13.7s						
WMQ				LR	LR		
	comp=Z,250nm,19.7s						
HNS	HongShan	122.26	334	⇓PKP	PKiKP	16 45 22.4	+1.3
MAW	Mawson	124.50	169	PKP	PKPdf	16 45 24.6	+0.3
	comp=Z,4.0nm,1.0s,baz=184,slow=4.6,SNR=3.6						
DZET	Dzherino	124.55	17	PKIKP	PKiKP	16 45 27.3	+1.5
NJ2	Nanjing	124.61	327	ePKP	PKPdf	16 45 25.3	-0.3
GTA	Gaotai	125.20	348	ePKP	PKPdf	16 45 27.3	+0.5
GTA				PP	PP	16 47 15.3	+0.2
GTA				LR	LR		
	comp=Z,210nm,22.9s						
GTA				LR	LR		
	comp=Z,150nm,20.4s						
GTA				LR	LR		
	comp=Z,240nm,20.0s						
KSH	Kashi	125.51	10	PKP	PKiKP	16 45 29.8	+2.1
KSH				LR	LR		
	comp=Z,400nm,18.9s						
KSH				LR	LR		
	comp=Z,410nm,20.3s						
STKA	Stephens Creek	127.20	241	PKP	PKiKP	16 45 31.5	+0.4
	comp=Z,3.1nm,0.8s,baz=119,slow=4.0,SNR=5.5						
LZH	Lanzhou	127.35	343	ePKP	PKiKP	16 45 31.8	+0.2
LZH				LR	LR		
	comp=Z,300nm,18.2s						
LZH				LR	LR		
	comp=Z,180nm,18.2s						
LZH				LR	LR		
	comp=Z,380nm,18.5s						
XAN	Xi'an	127.51	337	PKP	PKiKP	16 45 32.0	+0.2
CD2	Chengdu	132.18	340	PKP	PKPdf	16 45 39.5	-0.7
WRA	Warramunga Arr	134.35	256	PKP	PKPdf	16 45 45.1	+0.7
	comp=Z,2.2nm,0.8s,baz=84,slow=1.9,SNR=17						
WRA	Warramunga Arr	134.35	256	ePKIKP	PKiKP	16 45 46.3	+0.5
WRA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ASAR	Alice Springs	134.68	251	PKhKP	PKPpre	16 45 36.9	
	comp=Z,0.5nm,0.8s,baz=93,slow=2.3,SNR=5.9						
ASAR				PKP	PKPdf	16 45 45.7	+0.7
	comp=Z,1.0nm,0.7s,baz=99,slow=2.0,SNR=12						
PZH	PanZhiHua	136.91	340	PKP	PKPdf	16 45 49.3	0.0
FITZ	Fitzroy Crossi	142.57	259	PKhKP	PKPpre	16 45 56.0	
	comp=Z,3.2nm,0.9s,baz=53,slow=2.6,SNR=4.3						
CHTO	Chiang Mai	144.98	340		PKPab	16 46 02.1	-0.9
CHTO	Chiang Mai	144.98	340	PKIKP	PKPab	16 46 02.1	-0.9
CMAR	Chiang Mai Arr	145.31	339	PKPbc	PKPdf	16 46 04.8	+0.5
	comp=Z,22nm,0.8s,baz=341,slow=3.9,SNR=114						
NWAO	Narrogin (SRO)	146.71	231	PKPbc	PKiKP	16 46 11.6	+0.9
	comp=Z,14nm,0.9s,baz=130,slow=4.6,SNR=3.0						
HYB	Hyderabad	147.44	15	ePKPbc	PKPbc	16 46 10.2	-0.2
HYB				ePKPab	PKPab	16 46 12.1	-0.2
HYB				ePKiKP	PKiKP	16 46 13.1	+0.4
HYB				eSKSdf	SKSdf	16 53 16.8	+1.9

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*SJA **14** 16:26:40.9±0.7, 28°.57S×69°.52W, h128^{km}±4^{km}, ML3.9, MW3.8*

*GUC **14** 16:26:42.2±0.8, 28°.58S×69°.50W, h124^{km}±6^{km}, ML4.3*

*IDC **14** 16:26:44.5±3.8, 28°.66S×68°.93W, h126^{km}±27^{km}, mb3.9/5, mbtmp4.1/7, Error ellipse: s-maj=47.5km s-min=20.2km az=117.0*

ISC 14 16:26:41.7±0.7**, 28°.55S**±0°.03×**69°.47W**±0°.03**, h122**^{km}±6^{km}**, n50, σ1^{s}.57**/82**, mb4.1**/4**, 1C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VCA	Vinchina	1.13	100	eP	Pn	16 27 06.1	+0.8
VCA				i S	Sn	16 27 23.7	+0.5
VCA	Vinchina	1.13	100	eP	Pn	16 27 06.0	+0.8
VCA				eS	Sn	16 27 24.6	+1.4
VCA				IAML		16 27 25.7	
	comp=Z,3µm,0.2s						
GO03	Copiapo	1.17	325	⇑eP	Pn	16 27 05.9	+0.2
GO03				i S	Sn	16 27 23.9	0.0
GO03				IAML		16 27 25.0	
	comp=N,7µm,0.2s						
GO03	Copiapo	1.17	325	eP	Pn	16 27 05.2	-0.4
GO03				eS	Sn	16 27 24.6	+0.7
LCO	Las Campanas	1.17	247	eP	Pn	16 27 05.4	-0.5
LCO				i S	Sn	16 27 23.7	-0.6
LCO	Las Campanas	1.17	247	eP	Pn	16 27 06.1	+0.2
LCO				eS	Sn	16 27 24.4	+0.1
AGUA	GUANDACOL	1.27	138	eP	Pn	16 27 07.2	+0.5
AGUA				IAML		16 27 29.5	
	comp=Z,854nm,0.2s						
AC06	Mina Casimiro	1.43	326	eP	Pn	16 27 08.7	+0.3
AC06				i S	Sn	16 27 28.2	-0.5
AC06				IAML		16 27 31.3	
	comp=N,3µm,0.3s						
AC04	Llanos de Chal	1.46	283	eP	Pn	16 27 08.9	+0.2
AC04				i S	Sn	16 27 29.0	-0.3
AC04				IAML		16 27 30.1	
	comp=E,4µm,0.2s						
AC04	Llanos de Chal	1.46	283	eP	Pn	16 27 08.6	-0.1
AC04				eS	Sn	16 27 29.1	-0.3
AC04				IAML		16 27 30.1	
	comp=Z,1µm,0.2s						
CO01	Juntas del Tor	1.52	201	eP	Pn	16 27 10.5	+0.8
CO01				i S	Sn	16 27 30.5	-0.5
CO01	Juntas del Tor	1.52	201	eP	Pn	16 27 10.6	+0.9
CO01				eS	Sn	16 27 33.9	+2.8
AROD	Rodeo	1.61	180	eP	Pn	16 27 12.1	+1.2
AROD				eS	Sn	16 27 29.1	-4.0
ACDV	Cuesta del Vie	1.64	169	eP	Pn	16 27 11.9	+0.8
ACDV				eS	Sn	16 27 35.3	+1.8
AC02	Maricunga	1.74	10	eP	Pn	16 27 13.9	+1.3
AC02				i S	Sn	16 27 36.7	+0.7
AC02	Maricunga	1.74	10	eP	Pn	16 27 13.8	+1.3
AC02				eS	Sn	16 27 37.8	+1.8
AC02				IAML		16 27 39.1	
	comp=Z,732nm,0.3s						
GO04	Tololo Observa	1.99	215	eP	Pn	16 27 15.2	-0.1
GO04				i S	Sn	16 27 40.3	-0.8
GO04				IAML		16 27 44.8	
	comp=E,3µm,0.5s						
GO04	Tololo Observa	1.99	215	eP	Pn	16 27 15.2	-0.1
GO04				eS	Sn	16 27 40.3	-0.8
ACCO	Cerro Coronel	2.06	170	eP	Pn	16 27 21.6	+5.4
ACCO				eS	Sn	16 27 44.3	+1.6
CO05	La Serena	2.06	228	eP	Pn	16 27 15.3	-0.7
CO05				i S	Sn	16 27 40.5	-1.7
CO05				IAML		16 27 42.2	
	comp=E,2µm,0.2s						
ACLC	CERRO LA CRUZ	2.37	112	eP	Pn	16 27 20.0	-0.1
ACLC				eS	Sn	16 27 49.2	-0.2
ACLC				IAML		16 27 50.0	
	comp=Z,266nm,0.2s						
DOCA	Reserva Natura	2.41	172	eP	Pn	16 27 21.3	+0.5
DOCA				eP		16 27 21.4	
DOCA				eS	Sn	16 27 51.3	+0.5
DOCA				IAML		16 27 54.2	
	comp=Z,256nm,0.7s						
CO03	El Pedregal	2.51	205	eP	Pn	16 27 21.9	+0.2
CO03				i S	Sn	16 27 51.8	-0.9
CO03	El Pedregal	2.51	205	eP	Pn	16 27 21.8	0.0
CO03				eS	Sn	16 27 53.2	+0.6
CO03				IAML		16 27 55.5	
	comp=Z,250nm,0.3s						
AC01	Pan de Azucar	2.60	337	eP	Pn	16 27 23.3	+0.5
AC01				eS	Sn	16 27 49.8	-4.7
AC01				IAML		16 27 56.6	
	comp=Z,314nm,0.6s						
AVFE	Valle Fertil	2.73	141	eP	Pn	16 27 24.5	-0.2
AVFE				eS	Sn	16 27 56.4	-1.4
AVFE				IAML		16 27 58.1	
	comp=Z,753nm,0.4s						
RTLL	Cerro Villicun	2.90	163	eP	Pn	16 27 27.1	+0.3
RTLL				eS	Sn	16 28 00.7	-0.8
CO02	Combarbal	2.96	206	eP	Pn	16 27 26.9	-0.6
CO02				eS	Sn	16 28 02.5	-0.4
CO02				IAML		16 28 05.1	
	comp=Z,210nm,0.2s						
ZON	Zonda	3.06	167	eP	Pn	16 27 29.4	+0.5
ZON				eS	Sn	16 28 04.5	-0.7
SJA	San Juan	3.07	165	eP	Pn	16 27 33.6	+4.6
CFA	Coronel Fontan	3.22	161	P	Pn	16 27 31.0	0.0
	comp=Z,16nm,0.3s,baz=339,slow=13,SNR=104						
CFA				S	Sn	16 28 06.9	-2.2
	comp=Z,78nm,0.3s,baz=172,slow=17,SNR=25						
CFA	Coronel Fontan	3.22	161	eP	Pn	16 27 31.0	0.0
CFA				eS	Sn	16 28 07.5	-1.6
CYA	Choya	3.23	89	eP	Pn	16 27 19.3	-12
CYA				eS	Sn	16 28 06.8	-2.4
CYA				IAML		16 28 08.3	
	comp=Z,272nm,0.5s						
RTLS	Leoncito	3.24	177	eP	Pn	16 27 32.2	+0.8
RTLS				eS	Sn	16 28 11.7	+1.9
RTLS				IAML		16 28 13.2	
	comp=Z,381nm,0.3s						
PB14	IPOC Station P	4.00	348	eS	Sn	16 28 30.8	+2.9
PB14				IAML		16 28 39.8	
	comp=Z,148nm,0.5s						
AAGR	Agrelo	4.55	173	eS	Sn	16 28 22.9	-18
MRA	San Martin	5.03	141	eP	Pn	16 27 54.6	-0.5
MRA				eS	Sn	16 28 49.5	-2.8
MRA				IAML		16 29 12.3	
	comp=Z,95nm,1.1s						
TCA	Tanti	5.06	124	eP	Pn	16 27 54.0	-1.5
TCA				eS	Sn	16 28 49.0	-4.0
TCA				IAML		16 29 08.0	
	comp=Z,103nm,0.5s						
PB10	IPOC Station P	5.11	349	eP	Pn	16 27 55.2	-1.0
PB10				eS	Sn	16 28 50.5	-3.7
PB10				IAML		16 28 51.9	
	comp=Z,69nm,0.6s						
CPUP	Villa Florida	11.01	81	P	Pn	16 29 12.3	-3.4
	comp=Z,0.2nm,0.3s,baz=259,slow=16,SNR=1.7						
SNAA	Sanae	55.84	159	P	P	16 36 07.1	+1.1
	comp=Z,0.6nm,0.4s,baz=251,slow=7.1,SNR=11						
	comp=Z,0.6nm,0.4s						
QSPA	South Pole Qui	61.67	180	P	P	16 36 48.6	+2.1
	comp=Z,3.5nm,0.6s,baz=176,slow=0.8,SNR=35						
	comp=Z,3.5nm,0.6s						
DBIC	Dimbokro	71.35	71	P	P	16 37 49.9	+1.3
	comp=Z,3.9nm,0.7s,baz=229,slow=6.8,SNR=4.0						
	comp=Z,3.9nm,0.7s						
TORD	Torodi Ar. Bea	80.26	69	P	P	16 38 38.5	-0.8
	comp=Z,1.5nm,0.5s,baz=276,slow=4.0,SNR=3.7						
	comp=Z,1.5nm,0.5s						
BOSA	Boshof	80.63	117	P	P	16 38 39.5	-1.8
	comp=Z,1.4nm,0.6s,baz=236,slow=8.1,SNR=4.1						
	comp=Z,1.4nm,0.6s						
ASAR	Alice Springs	123.41	206	PKP	PKiKP	16 45 26.1	+0.9
	comp=Z,0.2nm,0.6s,baz=130,slow=2.3,SNR=5.5						
WRA	Warramunga Arr	126.58	208	PKP	PKiKP	16 45 32.7	+1.1
	comp=Z,0.5nm,0.7s,baz=165,slow=1.5,SNR=6.6						
KURBB	Kurchatov Arra	147.33	39	PKPbc	PKiKP	16 46 12.3	-0.4
	comp=Z,0.2nm,0.5s,baz=301,slow=3.4,SNR=4.2						
ZALV	Zalesovo Beam	148.44	29	PKPbc	PKiKP	16 46 15.1	+0.2
	comp=Z,1.2nm,0.5s,baz=286,slow=2.4,SNR=2.5						
MKAR	Makanchi Array	151.40	43	PKPbc	PKiKP	16 46 22.5	+1.2
	comp=Z,0.8nm,0.5s,baz=316,slow=1.1,SNR=10.0						

IDC 14 16:27:41.2±332.0**, 57°.47N×28°.87E, h0**^{km}**, Error ellipse: s-maj=135.9km s-min=99.7km az=95.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	4.61	96	I	I	16 58 30.0	
	baz=277,slow=301,SNR=2.1						
I37NO	I37NO	12.50	343	I	I	17 34 50.0	
	baz=148,slow=325,SNR=0.9						
I26DE	FREYUNG INFRAS	12.51	233	I	I	17 46 20.0	
	baz=38,slow=317,SNR=1.0						

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*HEL **14** 16:30:50.1±0.1, 59°.80N×27°.43E, h0^{km}, ML1.9, Explosion*

*EST **14** 16:30:50.4±0.1, 59°.82N×27°.41E, h0^{km}, ML1.9(HEL), Explosion*

*IDC **14** 16:30:52.9±1.3, 59°.89N×27°.11E, h0^{km}, mbtmp2.8/4, ML2.6/4, Error ellipse: s-maj=14.1km s-min=8.1km az=90.0*

ISC 14 16:30:48.8±0.8**, 59°.85N**±0°.02×**27°.39E**±0°.03**, h0**^{km}**, n33, σ1^{s}.39**/52**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EE04	Vaivara Sinima	0.54	153	eP	Pg	16 30 59.3	+0.2
EE04				eS	Sg	16 31 06.0	0.0
VJF	Virojoki	0.70	7	eP	Pb	16 31 03.8	-0.1
VJF				eS	Sb	16 31 13.7	-0.3
PVF	Pernaja	1.04	313	eP	Pb	16 31 09.7	+0.1
PVF				eS	Sb	16 31 23.8	0.0
EE03	Tooma soojaam,	1.13	211	eP	Pg	16 31 10.6	0.0
EE03				ePN	Pn	16 31 12.7	+0.8
EE03				eS	Sg	16 31 24.1	-1.1
HEL1	Helsinki	1.30	286	ePB	Pb	16 31 14.3	+0.2
HEL1				eS	Sg	16 31 30.7	0.0
HEL1				MSG		16 31 33.5	
	comp=Z,6.1nm,0.1s						
VSU	Vasula	1.43	194	eP	Pn	16 31 14.6	-1.4
VSU	Vasula	1.43	194	eP	Pn	16 31 14.8	-1.2
VSU				eSN	Sn	16 31 37.0	+1.5
NUR	Nurmijarvi	1.52	297	ePG	Pg	16 31 18.3	+0.3
NUR				eS	Sg	16 31 37.9	+0.1
NUR				MSG		16 31 42.1	
	comp=Z,13nm,0.2s						
MEF	Metsahovi	1.55	285	eP	Pb	16 31 18.2	-0.1
MEF	Metsahovi	1.55	285	ePG	Pb	16 31 18.6	+0.2
MEF				eS	Sn	16 31 38.3	-0.1
MEF				MSG		16 31 44.2	
	comp=Z,7.4nm,0.2s						
EE08	Sarghaua, Vand	1.63	224	eP	Pn	16 31 19.3	+0.6
EE08				eS	Sn	16 31 39.7	-0.6
FIA0	FINESS Array S	1.73	339	eP	Pb	16 31 21.2	-0.1
FIA0				eSN	Sg	16 31 45.6	+1.3
FIA0				MSG		16 31 49.1	
	comp=Z,6.7nm,0.1s						
FINES	FINESS Array B	1.73	339	Pg	Pb	16 31 21.3	-0.1
	comp=Z,0.9nm,0.3s,baz=160,slow=17,SNR=60						
FINES				Lg	Lg	16 31 44.5	
	comp=Z,2.1nm,0.3s,baz=159,slow=27,SNR=15						
FINES				Rg	Rg	16 31 56.2	
	comp=Z,4.8nm,0.7s,baz=157,slow=36,SNR=5.2						
FIA1	FINESS Array S	1.73	339	MSG		16 31 48.1	
	comp=Z,7.5nm,0.2s						
RUF	Ruokolahti	1.76	25	eP	Pb	16 31 21.4	-0.5
RUF				eSN	Sg	16 31 45.5	+0.2
RUF				MSG		16 31 48.5	
	comp=Z,16nm,0.2s						
EE07	Piusa Caves, O	2.01	179	ePG	Pb	16 31 26.2	0.0
EE07				eSG	Sb	16 31 52.2	+0.4
TVF	Tvarminne	2.09	272	ePG	Pb	16 31 28.3	+0.7
TVF				eSG	Sb	16 31 55.0	+0.9
TVF				MSG		16 31 56.4	
	comp=Z,4.5nm,0.1s						
MTSE	Matsula	2.16	240	eP	Pn	16 31 27.1	+1.1
MTSE	Matsula	2.16	240	ePB	Pb	16 31 28.2	-0.5
MTSE				eSG	Sb	16 31 56.7	+0.7
KAF	Kangasniemi	2.33	347	eP	Pb	16 31 30.9	-0.9
KAF				eSB	Sb	16 32 01.6	+0.6
KAF				MSG		16 32 04.9	
	comp=Z,4.0nm,0.2s						
EE06	Soera, Palade,	2.48	251	eP	Pn	16 31 32.5	+2.0
EE06				ePB	Pb	16 31 34.2	-0.1
EE06				eSG	Sb	16 32 06.1	+0.7
KEF	Keuruu	2.63	333	eP	Pb	16 31 35.3	-1.5
KEF	Keuruu	2.63	333	ePB	Pb	16 31 35.8	-1.0
KEF				eSB	Sb	16 32 09.4	-0.2
KEF				MSG		16 32 14.1	
	comp=Z,3.6nm,0.2s						
SUF	Sumiainen	2.94	349	ePB	Pb	16 31 41.2	-0.9
SUF				MSG		16 32 23.0	
	comp=Z,4.1nm,0.2s						
RAF	Rauma	3.03	295	eP	Pn	16 31 40.4	+2.5
SLIT	Slitere, Latvi	3.47	232	eP	Pn	16 31 44.4	+0.4
JOF	Joensuu	3.61	30	eP	Pn	16 31 47.8	+1.8
JOF	Joensuu	3.61	30	eP	Pn	16 31 48.0	+2.0
VAF	Ylistaro	3.92	327	eP	Pn	16 31 54.3	+4.0
HFS	Hagfors	6.88	278	Pn	Pn	16 32 30.8	0.0
	comp=Z,0.2nm,0.3s,baz=91,slow=15,SNR=5.5						
HFS				Sn	Sn	16 33 43.4	-6.4
	comp=Z,0.2nm,0.3s,baz=92,slow=26,SNR=1.8						
HFS				Lg	Lg	16 34 21.8	
	comp=Z,0.2nm,0.3s,baz=87,slow=32,SNR=2.6						
	comp=Z,0.3nm,0.3s						
NOA	NORSAR Array B	8.09	285	Pn	Pn	16 32 46.6	-0.8
	baz=96,slow=18,SNR=4.6						
	comp=Z,0.1nm,0.4s						
AKASG	Malin Array Be	9.23	173	Pn	Pn	16 33 02.7	-0.3
	comp=Z,0.5nm,0.3s,baz=357,slow=13,SNR=2.5						
	comp=Z,0.2nm,0.2s						
ARCES	ARCESS Array B	9.76	356	Pn	Pn	16 33 10.1	-0.2
	comp=Z,0.1nm,0.3s,baz=170,slow=13,SNR=9.1						
	comp=Z,0.2nm,0.3s						

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*GCG **14** 16:34:44.4±2.0, 14°.10N×93°.28W, h34^{km}±15^{km}, MD4.7, ML4.8*

*GCMT **14** 16:34:45.8±0.6, 14°.21N±0°.04×93°.33W±0°.04, h24^{km}±1^{km}, MW4.9/65, Moment Tensor Solution. s22,c24; s65,c80; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.63±.19; $M_{\theta\theta}$-1.57±.12; $M_{\phi\phi}$-1.06±.13; $M_{r\theta}$1.01±.14; $M_{\theta\phi}$0.55±.06; $M_{\phi r}$-0.65±.15; Best double couple: $M_0$2.57400×10^{16} NP1:ϕ_s303.00000°, δ31.00000°, λ90.00000°. NP2: ϕ_s123.00000°, δ59.00000°, λ90.00000°. Principal axes: T 2.9280, Plg76.0000°, Azm33.0000°; N -0.7080, Plg0.0000°, Azm303.0000°; P -2.2200, Plg14.0000°, Azm213.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **14** 16:34:45.8±1.5, 14°.43N±0°.05×93°.18W±0°.05, h10^{km}±1^{km}, mb4.6/180, Md4.6/31(MEX) Error ellipse: s-maj=9.6km s-min=6.8km az=146.0*

*MEX **14** 16:34:49.2±0.8, 14°.42N×93°.15W, h22^{km}±49^{km}, MD4.7*

*SNET **14** 16:34:49.4±0.9, 14°.14N×92°.87W, h21^{km}±5^{km}, ML4.9*

*CATAC **14** 16:34:50.0±0.6, 14°N±3°×9°3W±°, h11^{km}±4^{km}, M4.8/28, mb4.8/3, mB5.2/2, MLv4.8/28, Mw(mB)4.5/2, Error ellipse: s-maj=8.7km s-min=6.3km az=128.7, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.99; $M_{\theta\theta}$-0.79; $M_{\phi\phi}$-0.20; $M_{r\theta}$0.17; $M_{\theta\phi}$0.17; $M_{\phi r}$0.40; Fault plane solution: $M_0$1.01685×10^{16} NP1:ϕ_s86.39075°, δ49.99395°, λ65.92234°. NP2:ϕ_s301.19367°, δ45.62661°, λ115.92443°. Principal axes: T 1.1321, Plg71.6368°, Azm290.0853°; N -0.2964, Plg18.2099°, Azm102.4184°; P -0.8357, Plg2.2882°, Azm193.1716°; confirmed*

*IDC **14** 16:34:54.2±3.2, 14°.63N×92°.73W, h87^{km}±27^{km}, mb3.9/16, mbtmp4.2/18 Error ellipse: s-maj=30.7km s-min=14.5km az=48.0*

ISC 14 16:34:42.1±1.8**, 14°.26N**±0°.05×**93°.20W**±0°.04**, h4**^{km}±10^{km}**, n471, σ1^{s}.50**/467**, mb4.5**/83**, 1D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.11	55		Pn	16 35 04.9	+0.4
THIG					Sg	16 35 16.6	-1.2
THIG		1.11	55	eP	Pn	16 35 04.9	+0.4
THIG				eS	Sn	16 35 20.1	-0.2
THIG				IAML		16 35 24.0	
	comp=N,13µm,0.5s						
SMCA	Catarina	1.24	61	eP	Pn	16 35 07.0	+0.7
SMCA				i S	Sg	16 35 20.9	-1.2
PCIG		1.44	359		Pn	16 35 08.1	-0.8
PCIG					Sb	16 35 24.4	-3.7
RTAL	Retalhuleu	1.48	80	Pn	Pg	16 35 10.6	0.0
RTAL	Retalhuleu	1.48	80	eP	Pb	16 35 10.4	+0.1
RTAL				eS	Sb	16 35 27.4	-2.1
RTAL	Retalhuleu	1.48	80	P	Pg	16 35 10.6	0.0
RTAL	Retalhuleu	1.48	80	S	Sb	16 35 25.5	-4.0
STG8	El Palmar, Qui	1.81	84	i P	Pn	16 35 12.2	-2.1
STG8				IAML		16 35 42.1	
	comp=N,10µm,0.3s						
STG0	El Palmar, Qui	1.81	85	eP	Pn	16 35 12.6	-1.7
STG0				IAML		16 35 39.5	
	comp=E,18µm,0.3s						
SOKI	Kika Raxquin	1.83	72	eP	Pb	16 35 16.0	-0.4
SOKI				IAML		16 35 51.5	
	comp=E,6µm,0.8s						
HUEH	Huehuetenango	1.95	57		Pb	16 35 18.8	+0.4
HUEH	Huehuetenango	1.95	57	eP	Pg	16 35 19.1	-0.4
HUEH				eS	Sg	16 35 43.2	-1.7
HUEH	Huehuetenango	1.95	57	eP	Pb	16 35 18.7	+0.4
HUEH				IAML		16 35 54.5	
	comp=E,11µm,0.7s						
HUEH	Huehuetenango	1.95	57	P	Pb	16 35 18.8	+0.4
HUEH	Huehuetenango	1.95	57	S	Sn	16 35 39.6	-1.7
CCIG	Comitan	2.26	27		Pb	16 35 22.0	-1.6
CCIG	Comitan	2.26	27	i P	Pb	16 35 23.9	+0.3
CCIG				i S	Sg	16 35 53.9	-0.8
CCIG				IAML		16 36 02.4	
	comp=N,5µm,0.4s						
CCIG	Comitan	2.26	27	P	Pb	16 35 24.1	+0.6
ESSG	Sabana Grande	2.30	87	eP	Pn	16 35 21.5	+0.6
ESSG				IAML		16 35 54.6	
	comp=N,2µm,0.4s						
TGIG		2.50	2		Pn	16 35 25.4	+1.7
TGIG					Sn	16 35 52.3	-2.4
TGIG		2.50	2	i P	Pn	16 35 25.4	+1.7
TGIG				i S	Sn	16 35 56.1	+1.4
TGIG				IAML		16 35 59.1	
	comp=E,3µm,0.4s						
FG8	Yepocapa, Chim	2.56	90	eP	Pn	16 35 20.0	-4.5
FG16	Alotenango, Sa	2.61	89	eP	Pn	16 35 21.3	-4.0
FG16				IAML		16 35 57.9	
	comp=N,19µm,0.3s						
FAME	Alcaldia de Sa	3.12	97	P	Pn	16 35 34.2	+2.0
HUIG	Huatulco	3.18	298		Pn	16 35 32.0	-1.0
HUIG					Sn	16 36 07.6	-3.8
HUIG	Huatulco	3.18	298	⇓iP	Pn	16 35 32.2	-0.7
SLOZ	Alcaldia de Sa	3.33	94	P	Pn	16 35 36.2	+1.2
SLOZ	Alcaldia de Sa	3.33	94	S	Sn	16 36 12.7	-2.3
LOAL	Lomas de Alarc	3.33	94	P	Pn	16 35 37.3	+2.2
LOAL	Lomas de Alarc	3.33	94	S	Sn	16 36 12.6	-2.6
NUBE	Las Nubes	3.34	96	eP	Pn	16 35 36.2	+0.9
NUBE	Las Nubes	3.34	96	eP	Pn	16 35 36.5	+1.2
NUBE	Las Nubes	3.34	96	P	Pn	16 35 36.6	+1.2
NUBE	Las Nubes	3.34	96	S	Sn	16 36 13.7	-1.9
SBLS	San Blas	3.50	96	eP	Pn	16 35 38.8	+1.2
CEVE	Cerro Verde	3.50	97	P	Pn	16 35 39.5	+1.9
SNJE	San Jose	3.51	96	eP	Pn	16 35 38.9	+1.2
JAYA	Jayaque - finc	3.69	99	eP	Pn	16 35 40.4	+0.2
JAYA	Jayaque - finc	3.69	99	eP	Pn	16 35 41.2	+1.1
JAYA	Jayaque - finc	3.69	99	S	Sn	16 36 20.3	-4.1
JAYA	Jayaque - finc	3.69	99	P	Pn	16 35 41.2	+1.1
MTO3	Montecristo	3.73	87		Pn	16 35 41.6	+0.9
MTO3	Montecristo	3.73	87	eP	Pn	16 35 42.2	+1.5
MTO3	Montecristo	3.73	87	P	Pn	16 35 42.2	+1.5
ESQI	Esquipulas	3.75	85		Pn	16 35 43.9	+2.9
ESQI	Esquipulas	3.75	85	P	Pn	16 35 42.7	+1.8
PMON	Piamonte	3.81	98	P	Pn	16 35 43.4	+1.6
PMON	Piamonte	3.81	98	S	Sn	16 36 25.7	-1.4
LALI	Alcalda de L	3.85	101	P	Pn	16 35 43.8	+1.7
UEES	Universidad Ev	3.89	98	P	Pn	16 35 44.6	+1.9
SEMO	Seminario San	3.90	98	P	Pn	16 35 44.4	+1.5
UTEC	Universidad Te	3.92	98	P	Pn	16 35 44.7	+1.4
IGN	Direccin Gen	3.95	97	P	Pn	16 35 44.7	+1.1
PANCS	Alcalda de	3.96	99	P	Pn	16 35 45.5	+1.8
LOMA	Loma Larga	3.96	98	P	Pn	16 35 45.8	+2.0
UDBS	Universidad Do	3.97	97	P	Pn	16 35 45.7	+1.8
LLGN	La Laguna	4.13	91	P	Pn	16 35 46.2	+0.1
PETF	Flores	4.16	50		Pn	16 35 48.8	+2.4
PETF	Flores	4.16	50	eP	Pn	16 35 49.2	+2.8
PETF	Flores	4.16	50	eP	Pn	16 35 49.2	+2.8
PETF	Flores	4.16	50	P	Pn	16 35 49.8	+3.3
PAVA	Las Pavas	4.18	97	P	Pn	16 35 48.0	+1.2

PEIG	**Puerto Escondi**	4.18	295		Pn	16 35 44.9	-1.9
PEIG					Sn	16 36 29.3	-6.8
COEG	**Centro de Oper**	4.25	98	P	Pn	16 35 50.1	+2.4
UESV	**Universidad de**	4.33	98	P	Pn	16 35 49.8	+1.0
ALJI	**Alcalda de J**	4.60	101	P	Pn	16 35 53.5	+1.1
PACA	**Pacayal**	4.80	99	*e*P	Pn	16 35 57.1	+1.6
PACA				IAML		16 36 33.3	
	comp=Z,1µm,0.5s						
PACA	**Pacayal**	4.80	99	P	Pn	16 35 56.6	+1.2
RANC	**El Ranchito**	4.84	99	P	Pn	16 35 56.4	+0.4
CNCH	**Conchagua**	5.31	100	P	Pn	16 36 04.4	+2.1
CSGN	**Cosiguina Volc**	5.63	102	P	Pn	16 36 08.3	+1.5
POTN	**Potosi Cosigui**	5.68	102	P	Pn	16 36 08.4	+1.0
PKGN	**Cerro Pekin**	6.26	104	P	Pn	16 36 16.8	+1.5
HERN	**Volcan Telica**	6.41	104	Pn	Pn	16 36 20.9	+3.4
CNGN	**Cerro Negro**	6.57	105		Pn	16 36 23.0	+3.4
JTS	**Las Juntas de**	8.98	115	P	Pn	16 36 59.0	+6.3
	comp=Z,4.6nm,0.4s,baz=290,slow=10,SNR=4.7						
SOR	**Soroa**	12.86	47		Pn	16 37 46.1	+0.4
833A	**Chaparral WMA,**	15.13	339		Pn	16 38 19.4	+2.7
DRIO	**Del Rio**	16.57	337		Pn	16 38 33.8	-1.7
TXAR	**Lajitas Array**	17.85	329		P	16 38 53.4	+1.0
TXAR	**Lajitas Array**	17.85	329	P	P	16 38 55.1	+2.7
	comp=Z,4.9nm,0.7s,baz=153,slow=12,SNR=19						
TX31	**Lajitas Ar. Si**	17.85	329		P	16 38 53.1	+0.7
OZNA	**Ozona**	18.11	338	P	P	16 38 56.1	+1.0
ALPN	**Alpine**	18.70	331		P	16 39 01.0	-0.7
MNHN	**Monahans**	19.13	334		P	16 39 07.3	+1.0
MNHN				IAmb	IAmb	16 39 12.1	
	comp=Z,34nm,1.3s						
VHRN	**Van Horn**	19.70	329		Pn	16 39 14.2	+0.2
ODSA	**Odessa**	19.72	336	P	P	16 39 13.7	+0.8
ODSA				IAmb	IAmb	16 39 17.3	
	comp=Z,19nm,0.7s						
152A	**Waverly Hall**	19.89	21	P	P	16 39 14.0	-0.6
152A				IAmb	IAmb	16 39 23.7	
	comp=Z,31nm,1.3s						
APMT	**Aspermont**	19.99	343		P	16 39 16.6	+0.9
APMT				IAmb	IAmb	16 39 24.7	
	comp=Z,18nm,0.7s						
POST	**Post**	20.19	339		P	16 39 17.6	-0.3
POST				IAmb	IAmb	16 39 25.7	
	comp=Z,28nm,1.2s						
MIAR	**Mount Ida**	20.20	359		P	16 39 17.9	0.0
MIAR				IAmb	IAmb	16 39 24.2	
	comp=Z,20nm,0.8s						
CLNB	**Carlsbad**	20.40	333	P	P	16 39 20.9	+0.6
UALR	**University of**	20.44	2	P	P	16 39 21.4	+0.9
OXF	**Oxford**	20.45	9	P	P	16 39 21.5	+0.8
OXF				IAmb	IAmb	16 39 40.3	
	comp=Z,19nm,0.6s						
HTMS	**Hat Mesa**	20.48	334	P	P	16 39 21.6	+0.5
CLN7	**Carlsbad 7**	20.50	334	P	P	16 39 23.0	+1.7
DKNS	**Dickens**	20.55	341	P	P	16 39 22.1	+0.2
DKNS				IAmb	IAmb	16 39 31.5	
	comp=Z,17nm,0.7s						
MNTX	**Cornudas Mount**	20.63	329		P	16 39 23.3	+0.6
X34A	**Smith Ranch, M**	20.68	349	P	P	16 39 23.8	+0.6
X34A				IAmb	IAmb	16 39 49.4	
	comp=Z,17nm,0.7s						
ROSC	**El Rosal**	20.82	115	P	Pn	16 39 27.7	0.0
ROSC				IAmb	IAmb	16 39 30.6	
	comp=Z,33nm,1.0s						
ROSC	**El Rosal**	20.82	115	P	Pn	16 39 28.2	+0.5
	comp=Z,9.0nm,0.4s,baz=311,slow=17,SNR=7.0						
	comp=Z,9.0nm,0.4s						
X48A	**Hartselle**	20.86	14	P	P	16 39 25.9	+0.9
FNO	**Franklin**	21.25	350	P	P	16 39 29.8	+0.5
RUSC	**La Rusia**	21.47	111		P	16 39 33.6	+1.2
RUSC				IAmb	IAmb	16 39 46.6	
	comp=Z,23nm,0.9s						
FCAR	**Ozark Folk Cen**	21.56	2	P	P	16 39 33.4	+0.8
FCAR				IAmb	IAmb	16 39 36.9	
	comp=Z,15nm,0.7s						
SMWD	**Samnorwood**	21.70	344	P	P	16 39 36.0	+1.8
LCAR	**Lake Charles**	21.79	4	P	P	16 39 35.4	+0.2
RLO	**Rose Lookout**	21.87	356	P	P	16 39 37.0	+1.0
AMTX	**Amarillo**	21.91	341		P	16 39 37.8	+1.3
HHAR	**Hobbs**	21.94	358	P	P	16 39 37.0	+0.3
HHAR				IAmb	IAmb	16 39 39.8	
	comp=Z,9.9nm,0.6s						
U38A	**Gravette**	22.11	357	P	P	16 39 38.1	-0.5
319A	**Douglas**	22.53	322		P	16 39 43.4	+0.2
319A				IAmb	IAmb	16 39 50.5	
	comp=Z,11nm,0.8s						
PBMO	**Poplar Bluff**	22.56	6	P	P	16 39 43.4	0.0
PBMO				IAmb	IAmb	16 39 45.7	
	comp=Z,13nm,0.7s						
SDV	**Santo Domingo**	22.74	101		P	16 39 46.5	+0.8
TKL	**Tuckaleechee C**	22.93	20	P	P	16 39 44.2	-3.1
	comp=Z,1.6nm,0.6s,baz=200,slow=12,SNR=1.3						
	comp=Z,1.6nm,0.6s						
BNM	**Barren Site**	23.23	331	P	P	16 39 52.1	+1.4
DUN6	**Lazy B Ranch**	23.27	324	P	P	16 39 53.3	+2.3
LENM	**Lemitar**	23.41	330	P	P	16 39 53.6	+1.2
RTBA	**Rita Blanca**	23.68	341		P	16 39 57.2	+2.2
CCM	**Cathedral Cave**	23.76	4	P	P	16 39 53.3	-2.3
CCM				IAmb	IAmb	16 39 56.9	
	comp=Z,9.8nm,0.8s						
ANMO	**Albuquerque**	23.81	332	P	P	16 39 57.3	+0.9
ANMO	**Albuquerque**	23.81	332		P	16 39 57.3	+0.9
ANMO				IAmb	IAmb	16 40 01.3	
	comp=Z,4.4nm,0.8s						
ANMO	**Albuquerque**	23.81	332	P	P	16 39 56.5	+0.1
ANMO				IAmb	IAmb	16 40 01.4	
	comp=Z,4.2nm,0.8s						
ANMO	**Albuquerque**	23.81	332	P	P	16 39 57.9	+1.5
	comp=Z,4.7nm,0.7s,baz=118,slow=9.6,SNR=5.8						
	comp=Z,4.7nm,0.7s						
TUC	**Tucson**	24.09	321		P	16 40 00.8	+1.9
TUC				IAmb	IAmb	16 40 03.6	
	comp=Z,9.6nm,0.9s						
T25A	**Trinidad**	24.88	338	P	P	16 40 07.3	+1.0
T25A				IAmb	IAmb	16 40 13.3	
	comp=Z,18nm,1.0s						
CBKS	**Cedar Bluff**	25.13	348	P	P	16 40 08.1	-0.1
P40A	**Paris**	25.19	2		P	16 40 07.2	-1.6
P40A				IAmb	IAmb	16 40 08.9	
	comp=Z,12nm,0.8s						
BAUV	**El Baul**	25.20	99	P	P	16 40 08.7	-0.4
SDCO	**Great Sand Dun**	25.82	337	P	P	16 40 15.7	+0.9
MVCO	**Mesa Verde**	26.61	332		P	16 40 23.7	+1.7
MVCO				IAmb	IAmb	16 40 26.7	
	comp=Z,7.6nm,0.8s						
WUAZ	**Wupatki**	26.73	326		P	16 40 24.1	+1.0
PV01	**Paradox Valley**	27.40	333	P	P	16 40 29.7	+0.6
PV13	**Radium Mtn., P**	27.54	333	P	P	16 40 30.0	-0.3
PV13				IAmb	IAmb	16 41 10.7	
	comp=Z,11nm,1.4s						
PV15	**Paradox Valley**	27.54	333	P	P	16 40 31.2	+0.9
PV15				IAmb	IAmb	16 40 34.7	
	comp=Z,9.2nm,1.0s						
PV02	**Paradox Valley**	27.54	333	P	P	16 40 30.4	+0.2
PV02				IAmb	IAmb	16 40 37.6	
	comp=Z,12nm,1.1s						
PV03	**Paradox Valley**	27.63	333	P	P	16 40 30.4	-0.7
PV18	**Skein Mesa, Pa**	27.65	333		P	16 40 31.4	+0.2
PV18				IAmb	IAmb	16 40 42.0	
	comp=Z,18nm,1.2s						
PV12	**Saucer Basin,**	27.66	333	P	P	16 40 32.4	+1.0
PV12				IAmb	IAmb	16 40 50.2	
	comp=Z,17nm,1.1s						
PV11	**David Mesa, Pa**	27.67	333	P	P	16 40 32.7	+1.2
PV11				IAmb	IAmb	16 40 36.1	
	comp=Z,10.0nm,1.0s						
PV07	**Paradox Valley**	27.69	333	P	P	16 40 33.6	+2.0
PV17	**East Wray Mesa**	27.70	333	P	P	16 40 32.6	+0.9
PV16	**Nyswonger Mesa**	27.70	333	P	P	16 40 32.7	+0.9
PV16				IAmb	IAmb	16 40 45.4	
	comp=Z,10.0nm,1.3s						
PV19	**Morning Glory**	27.73	333	P	P	16 40 32.6	+0.6
PV19				IAmb	IAmb	16 41 00.5	
	comp=Z,9.8nm,0.7s						
PV04	**Paradox Valley**	27.77	333	P	P	16 40 31.6	-0.7
PV04				IAmb	IAmb	16 40 38.7	
	comp=Z,7.6nm,0.8s						
PV14	**Lion Creek, Pa**	27.80	333	P	P	16 40 33.2	+0.6
PV14				IAmb	IAmb	16 41 01.2	
	comp=Z,7.5nm,0.9s						
PV10	**Paradox Valley**	27.81	333	P	P	16 40 33.3	+0.5
PV10				IAmb	IAmb	16 40 48.1	
	comp=Z,12nm,1.0s						
PV22	**Blue Mesa, Par**	27.83	333		P	16 40 33.8	+0.9
PV22				IAmb	IAmb	16 40 36.8	
	comp=Z,19nm,1.5s						
PV23	**Carpenter Ridg**	27.86	333	P	P	16 40 34.1	+0.8
W13A	**Hualapai Mount**	27.88	322	P	P	16 40 35.1	+1.7
U15A	**North Rim**	27.91	326	P	P	16 40 35.5	+1.8
V12A	**Nelson**	28.89	322	P	P	16 40 44.3	+2.1
O20A	**White River Ci**	28.95	336	P	P	16 40 42.9	0.0
PSUT	**Pine Spring**	30.30	327		P	16 40 55.2	+0.4
SPR3	**Spring Creek 3**	30.89	327		P	16 41 01.4	+1.2
R11B	**Troy Canyon, C**	31.11	325		P	16 41 03.0	+1.0
PDAR	**Pinedale Array**	31.71	337	P	P	16 41 07.9	+0.7
	comp=Z,1.2nm,0.7s,baz=146,slow=8.6,SNR=4.8						
	comp=Z,1.2nm,0.7s						
MZP	**Montezuma Peak**	31.72	322	P	P	16 41 08.6	+1.2
HVU	**Hansel Valley**	32.24	332	P	P	16 41 12.8	+0.9
HVU				IAmb	IAmb	16 41 15.6	
	comp=Z,6.0nm,0.9s						
AHID	**Auburn Hatcher**	32.32	335	P	P	16 41 13.4	+0.8
AHID				IAmb	IAmb	16 41 16.7	
	comp=Z,4.7nm,0.7s						
ELK	**Elko**	32.65	328		P	16 41 16.8	+1.3
NV11	**Mina Array Sit**	32.65	322	P	P	16 41 16.6	+1.1
NV11				IAmb	IAmb	16 41 20.1	
	comp=Z,6.5nm,0.9s						
NVAR	**Mina Array Bea**	32.74	322	P	P	16 41 17.9	+1.6
NVAR	**Mina Array Bea**	32.74	322	P	P	16 41 19.6	+3.2
	comp=Z,4.6nm,0.8s,baz=135,slow=8.6,SNR=23						
NVAR				PcP	PcP	16 44 03.4	+1.5
	comp=Z,0.8nm,0.6s,baz=100,slow=1.8,SNR=4.2						
	comp=Z,4.6nm,0.8s						
LHV	**Little Huntoon**	32.75	322	P	P	16 41 17.9	+1.8
LHV				IAmb	IAmb	16 41 21.0	
	comp=Z,5.7nm,1.0s						
SNOW	**Snow King Moun**	32.76	336	P	P	16 41 17.1	+0.6
LOHW	**Long Hollow**	32.83	336	P	P	16 41 18.4	+1.3
LOHW				IAmb	IAmb	16 41 22.5	
	comp=Z,5.2nm,0.8s						
TPAW	**Teton Pass**	32.87	336		P	16 41 19.2	+1.8
FXWY	**Fox Creek**	33.02	336	P	P	16 41 19.0	+0.2
YNE	**Yellowstone No**	33.80	338	P	P	16 41 27.1	+1.5
YNE				IAmb	IAmb	16 41 31.0	
	comp=Z,9.0nm,1.1s						
AGMN	**Agassiz Nation**	34.01	357	P	P	16 41 26.4	-0.6
AGMN				IAmb	IAmb	16 41 29.4	
	comp=Z,6.6nm,0.8s						
YHL	**Hebgen Lake**	34.10	337		P	16 41 29.7	+1.5
YHL				IAmb	IAmb	16 41 32.4	
	comp=Z,5.6nm,0.7s						
HLID	**Hailey**	34.39	332		P	16 41 32.3	+1.7
MCMT	**McKenzie Canyo**	34.74	335	P	P	16 41 35.2	+1.6
DLMT	**Dillon**	35.08	336	P	P	16 41 37.0	+0.5
DLMT				IAmb	IAmb	16 41 40.3	
	comp=Z,9.7nm,0.9s						
EPLO	**Experimental L**	35.32	359	IAmb	IAmb	16 41 38.1	
	comp=Z,6.9nm,0.6s						
LRM	**Limekiln Ridge**	35.40	337	P	P	16 41 40.9	+1.6
WVOR	**Wild Horse Val**	35.63	327	P	P	16 41 42.3	+1.1
WVOR				IAmb	IAmb	16 41 44.8	
	comp=Z,10nm,1.3s						
ULM	**Lac du Bonnet**	35.96	357	P	P	16 41 43.0	-0.8
	comp=Z,3.3nm,0.8s,baz=182,slow=7.8,SNR=4.7						
	comp=Z,3.3nm,0.8s						
J08A	**Circle Bar Ran**	36.20	328		P	16 41 47.9	+1.8
J08A				IAmb	IAmb	16 41 49.6	
	comp=Z,8.4nm,0.8s						
PLID	**Pearl Lake**	36.30	332		P	16 41 48.2	+1.1
PLID				IAmb	IAmb	16 41 50.0	
	comp=Z,6.3nm,0.9s						
BPMT	**Black Pine Rid**	36.30	336	P	P	16 41 48.6	+1.5
LYMT	**Lyon Mountain**	36.30	338	P	P	16 41 47.8	+0.7
EGMT	**Eagleton**	36.36	341		P	16 41 48.8	+1.5
EGMT				IAmb	IAmb	16 41 50.3	
	comp=Z,13nm,1.1s						
OVMT	**Ovando**	36.65	337	P	P	16 41 50.3	+0.4
BMO	**Blue Mountains**	36.72	331	P	P	16 41 50.8	+0.3
MSO	**Missoula**	36.81	336	P	P	16 41 52.2	+0.9
LPAZ	**La Paz**	39.18	140	P	P	16 42 12.9	+0.8
	comp=Z,0.9nm,0.6s,baz=311,slow=9.3,SNR=4.2						
	comp=Z,0.9nm,0.6s						
YKAW1	**Yellowknife Wh**	50.47	347	IAmb	IAmb	16 43 42.8	
	comp=Z,18nm,0.8s						
TOAD	**Toad River Com**	50.48	339	P	P	16 43 42.7	+1.7
	baz=138						
YKA	**Yellowknife Ar**	50.51	347	P	P	16 43 41.8	+0.6
	comp=Z,8.8nm,0.7s,baz=152,slow=7.0,SNR=38						
	comp=Z,8.8nm,0.7s						
YKAW3	**Yellowknife Wh**	50.57	347	IAmb	IAmb	16 43 43.6	
	comp=Z,19nm,0.8s						
CRAG	**Craig**	51.34	332	P	P	16 43 49.5	+1.9
	baz=127						
BEAVL	**Fort Liard**	51.42	340	P	P	16 43 50.2	+2.1
	baz=139						
DLBC	**Dease Lake**	51.94	336		P	16 43 54.4	+2.3
DLBC				IAmb	IAmb	16 43 60.0	
	comp=Z,5.9nm,0.9s						
DLBC	**Dease Lake**	51.94	336	P	P	16 43 54.7	+2.6
	baz=132						
S34M	**Telegraph Cree**	52.03	335	P	P	16 43 55.2	+2.5
	baz=131						
WTLY	**Watson Lake, Y**	52.65	338	P	P	16 43 59.8	+2.5
	baz=135						
R33M	**Jennings River**	52.95	337	P	P	16 44 01.1	+1.5
R33M				IAmb	IAmb	16 44 07.5	
	comp=Z,9.6nm,1.4s						
R33M	**Jennings River**	52.95	337	P	P	16 44 02.1	+2.4
	baz=132						
Q32M	**Nakina River**	53.17	336	P	P	16 44 03.8	+2.5
Q32M				IAmb	IAmb	16 44 05.5	
	comp=Z,10nm,1.3s						
Q32M	**Nakina River**	53.17	336	P	P	16 44 03.8	+2.5
	baz=130						
SIT	**Sitka**	53.27	333	P	P	16 44 04.3	+2.4
	baz=126						
P32M	**Atlin**	54.14	336	P	P	16 44 10.7	+2.4
	baz=129						
P33M	**Teslin, Yukon**	54.19	337	P	P	16 44 10.8	+2.1
	baz=130						
S31K	**Pelican**	54.20	333	P	P	16 44 11.2	+2.6
	baz=125						
SKAG	**Skagway**	54.71	335	P	P	16 44 14.9	+2.6
	baz=127						
PLBC	**Pleasant Camp**	55.13	335	P	P	16 44 17.8	+2.4
	baz=126						
MMPY	**Sheldon Lake,**	55.25	340		P	16 44 17.4	+1.1
MMPY				IAmb	IAmb	16 44 19.7	
	comp=Z,5.5nm,0.9s						
MMPY	**Sheldon Lake,**	55.25	340	P	P	16 44 18.6	+2.3
	baz=133,SNR=6.7						
WHY	**Whitehorse**	55.27	337	P	P	16 44 17.9	+1.4
WHY				IAmb	IAmb	16 44 20.4	
	comp=Z,6.4nm,1.2s						
WHY	**Whitehorse**	55.27	337	P	P	16 44 18.6	+2.0
	baz=128						
ILON	**Igloolik, Nuna**	55.54	5		P	16 44 17.7	-0.5
FARO	**Faro, Yukon**	55.71	339	P	P	16 44 20.5	+1.0
FARO				IAmb	IAmb	16 44 25.9	
	comp=Z,3.6nm,0.9s						
FARO	**Faro, Yukon**	55.71	339	P	P	16 44 21.4	+1.8
	baz=131						
P30M	**Million Dollar**	55.77	335	P	P	16 44 22.3	+2.3
	baz=126						
P29M	**Windy Craggy**	55.80	334	P	P	16 44 22.4	+2.1
	baz=125						
O30N	**Mendenhall**	55.81	336	P	P	16 44 22.2	+1.9
	baz=127						
M31M	**Drury Creek, Y**	56.06	338	P	P	16 44 23.9	+1.8
M31M	**Drury Creek, Y**	56.06	338	P	P	16 44 23.7	+1.6
	baz=130						
N31M	**Braeburn, Yuko**	56.12	337	P	P	16 44 23.9	+1.4
N31M				IAmb	IAmb	16 44 25.6	
	comp=Z,6.6nm,0.9s						
N31M	**Braeburn, Yuko**	56.12	337	P	P	16 44 24.4	+1.8
	baz=128						
HYT	**Haines Junctio**	56.40	336	P	P	16 44 26.9	+2.3
HYT	**Haines Junctio**	56.40	336	P	P	16 44 26.5	+1.9
	baz=126						
PNL	**Peninsula**	56.52	334	P	P	16 44 27.5	+2.1
	baz=123						
O29M	**Mount Kennedy**	56.53	335	P	P	16 44 27.0	+1.4
O29M				IAmb	IAmb	16 44 29.6	
	comp=Z,6.0nm,1.4s						
O29M	**Mount Kennedy**	56.53	335	P	P	16 44 27.6	+1.9
	baz=124						
N30M	**Aishikik Lake**	56.61	337	P	P	16 44 27.3	+1.2
N30M				IAmb	IAmb	16 44 29.6	
	comp=Z,6.7nm,1.2s						
N30M	**Aishikik Lake**	56.61	337	P	P	16 44 27.9	+1.8
	baz=126						
YUK6	**Outpost Mounta**	56.81	336	P	P	16 44 29.9	+2.2
	baz=125						
PINM	**Pinnacle**	57.12	334	P	P	16 44 31.8	+2.1
	baz=122						
YUK4	**Talbot Arm**	57.15	336	P	P	16 44 32.3	+2.2
	baz=125						
O28M	**Mount Upton**	57.46	335	P	P	16 44 34.3	+2.0
	baz=123						
YUK8	**Steele Glacier**	57.57	335	P	P	16 44 35.1	+2.0
	baz=124						
M29M	**Somme Creek**	57.72	337	P	P	16 44 36.1	+2.1
	baz=126,SNR=15						
MESA	**MESA**	57.89	334	P	P	16 44 37.2	+1.9
	baz=121						
L29M	**L29M**	57.98	338	IAmb	IAmb	16 44 38.4	
	comp=Z,5.1nm,1.0s						
L29M	**L29M**	57.98	338	P	P	16 44 37.6	+1.8
	baz=126,SNR=5.2						
CTG	**Chitna Glacier**	58.04	335	P	P	16 44 38.2	+1.9
	baz=122						
GRNC	**Granite Creek**	58.09	334	P	P	16 44 39.0	+2.3
YUK3	**Moose Creek**	58.12	336	P	P	16 44 38.5	+1.6
	baz=123						
K29M	**Barlow Dome**	58.20	339	P	P	16 44 39.4	+2.0
	baz=127						
J30M	**Hart River**	58.24	340		P	16 44 38.4	+0.7
J30M	**Hart River**	58.24	340	P	P	16 44 39.8	+2.1
	baz=129						
H31M	**Peel River**	58.40	341	P	P	16 44 40.7	+2.1
	baz=132						
BVCY	**Beaver Creek**	58.62	336	P	P	16 44 41.4	+1.3
	baz=123						
I30M	**Mount Dempster**	58.67	340	IAmb	IAmb	16 44 42.3	
	comp=Z,3.0nm,0.8s						
I30M	**Mount Dempster**	58.67	340	P	P	16 44 41.7	+1.1
	baz=129,SNR=5.8						
MCARA	**McCarthy VSAT**	58.95	335	P	P	16 44 43.9	+1.4
	baz=120						
M27K	**Edge Creek, AK**	58.99	336	P	P	16 44 44.2	+1.3
	baz=122						
DAWY	**Dawson**	59.00	338	P	P	16 44 43.9	+1.1
	baz=125						
G31M	**Satah River**	59.13	342		P	16 44 44.4	+0.8
G31M				IAmb	IAmb	16 44 45.5	
	comp=Z,5.7nm,0.8s						
G31M	**Satah River**	59.13	342	P	P	16 44 44.7	+1.2
	baz=132,SNR=5.2						
GLB	**Gilahina Butte**	59.31	334	P	P	16 44 46.7	+1.7
GLB				IAmb	IAmb	16 44 48.4	
	comp=Z,5.0nm,0.9s						
F31M	**Tsiigehtchic**	59.33	343	P	P	16 44 45.6	+0.7
F31M	**Tsiigehtchic**	59.33	343	P	P	16 44 46.0	+1.1
	baz=133						
BCAR	**Beaver Creek A**	59.33	337		P	16 44 45.9	+0.8
L27K	**Beaver Creek,**	59.35	337	P	P	16 44 46.8	+1.6
	baz=122,SNR=6.0						
I29M	**Ogilvie Camp,**	59.39	340	P	P	16 44 44.8	-0.7
I29M				IAmb	IAmb	16 45 24.7	
	comp=Z,3.5nm,0.7s						
I29M	**Ogilvie Camp,**	59.39	340	P	P	16 44 47.1	+1.7
	baz=127,SNR=5.1						
BMRM	**Bremner River**	59.42	334	P	P	16 44 47.2	+1.4
	baz=118						
M26K	**Nabesna, AK**	59.46	336	P	P	16 44 47.5	+1.5
M26K				IAmb	IAmb	16 44 48.5	
	comp=Z,3.9nm,1.1s						
M26K	**Nabesna, AK**	59.46	336	P	P	16 44 47.5	+1.5
	baz=121						
Q23K	**Middleton Isla**	59.49	332	P	P	16 44 47.5	+1.3
	baz=116						
N25K	**Chitina, Valde**	59.72	334		P	16 44 49.3	+1.4
N25K	**Chitina, Valde**	59.72	334	P	P	16 44 49.4	+1.5
	baz=119						
G30M	**tAoh Zraii Nji**	59.74	342	P	P	16 44 49.2	+1.4
	baz=130						
INK	**Inuvik**	59.86	344		P	16 44 48.2	-0.4
INK	**Inuvik**	59.86	344	P	P	16 44 49.6	+1.1
	baz=134,SNR=5.3						
L26K	**Log Cabin Wild**	59.92	336	P	P	16 44 50.5	+1.4
	baz=121						
H29M	**Whitestone**	59.94	341	P	P	16 44 50.8	+1.6
	baz=127						
I28M	**Miner Creek**	59.99	339	P	P	16 44 51.1	+1.4
	baz=125						
F30M	**Barrier River**	60.02	343	P	P	16 44 51.3	+1.5
	baz=131						
P23K	**Montague Islan**	60.22	332	P	P	16 44 53.0	+1.8
	baz=115						
KLU	**Klutina**	60.23	334	P	P	16 44 52.9	+1.6
KLU				IAmb	IAmb	16 44 54.5	
	comp=Z,6.3nm,1.0s						
KLU	**Klutina**	60.23	334	P	P	16 44 53.0	+1.6
	baz=117						
G29M	**Pine Creek**	60.25	341	IAmb	IAmb	16 45 03.3	
	comp=Z,8.0nm,1.2s						
G29M	**Pine Creek**	60.25	341	P	P	16 44 53.2	+1.8
	baz=128						
DOT	**Dot Lake**	60.51	337	P	P	16 44 54.4	+1.2
DOT				IAmb	IAmb	16 44 55.9	
	comp=Z,4.8nm,0.8s						
M24K	**Tolsona, Glenn**	60.62	334	P	P	16 44 55.6	+1.6
	baz=117						
SCRK	**Sand Creek**	60.65	337	P	P	16 44 55.6	+1.4
SCRK				IAmb	IAmb	16 44 57.2	
	comp=Z,2.9nm,0.9s						
SCRK	**Sand Creek**	60.65	337	P	P	16 44 55.8	+1.6
	baz=120						
I27K	**Kandik River**	60.66	339	P	P	16 44 55.7	+1.5
	baz=124						
PAX	**Paxson**	60.73	336	IAmb	IAmb	16 44 57.2	
	comp=Z,4.6nm,0.8s						
PAX	**Paxson**	60.73	336	P	P	16 44 56.1	+1.3
	baz=118,SNR=6.8						
J26L	**Joseph Creek**	60.76	338		P	16 44 56.8	+1.8
J26L				IAmb	IAmb	16 44 57.4	
	comp=Z,3.3nm,0.7s						
J26L	**Joseph Creek**	60.76	338	P	P	16 44 56.4	+1.4
	baz=121,SNR=6.9						
RIDG	**Independent Ri**	60.86	336	P	P	16 44 57.2	+1.6
RIDG	**Independent Ri**	60.86	336	P	P	16 44 56.8	+1.2
	baz=120,SNR=5.7						
H27K	**Steamboat Moun**	60.98	340	IAmb	IAmb	16 44 59.0	
	comp=Z,3.9nm,0.9s						
H27K	**Steamboat Moun**	60.98	340	P	P	16 44 57.7	+1.3
	baz=124,SNR=5.8						
SCM	**Sheep Creek Mo**	60.98	334	P	P	16 44 57.5	+1.0
	baz=116						
I26K	**Coal Creek Min**	61.04	338	P	P	16 44 58.0	+1.3
	baz=122						
M23K	**Glacier View**	61.13	334	P	P	16 44 58.5	+1.0
	baz=116						
E29M	**Blow River**	61.14	343	P	P	16 44 58.6	+1.3
	baz=129						
F28M	**Old Crow**	61.25	341	P	P	16 44 59.3	+1.2
	baz=126,SNR=14						
K24K	**Donnelly Dome**	61.26	336	P	P	16 44 59.4	+1.1
K24K	**Donnelly Dome**	61.26	336	P	P	16 44 59.2	+0.9
	baz=119						
KNK	**Knik Glacier**	61.29	333	P	P	16 44 59.8	+1.3
	baz=115						
G27K	**Doyon Strip**	61.35	340	P	P	16 45 00.1	+1.2
	baz=124						
SML	**Sawmill**	61.40	334	P	P	16 45 00.7	+1.4
	baz=115						
WAT6	**Susitna Watana**	61.48	335	P	P	16 45 01.1	+1.2
	baz=116						
J25K	**Salcha River,**	61.49	337	P	P	16 45 00.8	+0.9
	baz=119						
DHY	**Denali Highway**	61.55	335	P	P	16 45 01.3	+0.8
	baz=117						
GHO	**Glory Hole Cre**	61.64	333	P	P	16 45 02.2	+1.2
BRSE	**Bradley Lake S**	61.66	331	P	P	16 45 02.5	+1.4
	baz=112						
RC01	**Rabbit Creek A**	61.72	333	P	P	16 45 02.8	+1.4
	baz=113						
E28M	**Babbage River**	61.75	342	P	P	16 45 02.4	+1.0
	baz=127,SNR=9.3						
WAT1	**Susitna Watana**	61.93	335	P	P	16 45 03.9	+1.1
	baz=115						
D28M	**Stokes Point**	61.96	343	P	P	16 45 03.9	+1.0
	baz=128						
HDA	**Harding Lake**	62.00	337	IAmb	IAmb	16 45 04.7	
	comp=Z,3.3nm,0.7s						
HDA	**Harding Lake**	62.00	337	P	P	16 45 04.3	+1.1
	baz=118						
PRP	**Porcupine Dome**	62.00	338	P	P	16 45 04.1	+0.8

PRP	Porcupine Dome	62.00	338	P	P	16 45 04.6	+1.2
	baz=120						
E27K	Coleen River	62.12	342	P	P	16 45 05.3	+1.4
	baz=125,SNR=6.0						
G26K	Porcupine Rive	62.13	340	P	P	16 45 05.4	+1.4
	baz=122						
IL31		62.14	337	P	P	16 45 05.5	+1.4
ILAR	Eielson Array	62.14	337	P	P	16 45 04.4	+0.2
ILAR	Eielson Array	62.14	337	P	P	16 45 04.8	+0.7
	comp=Z,2.2nm,0.8s,baz=138,slow=5.1,SNR=20						
	comp=Z,2.2nm,0.8s						
RND	Reindeer	62.30	335		P	16 45 06.5	+1.1
SUA	Susitna One	62.32	333	P	P	16 45 06.6	+1.0
SUA	Susitna One	62.32	333	P	P	16 45 06.7	+1.2
	baz=112						
CCB	Clear Creek Bu	62.43	337	P	P	16 45 06.3	+0.2
MCK	McKinley	62.47	336	P	P	16 45 07.7	+1.3
	baz=115						
H25L	Birch Creek	62.48	339	P	P	16 45 07.6	+1.3
	baz=120						
D27M	Malcolm River	62.54	343	P	P	16 45 08.1	+1.2
	baz=126						
F26K	Sheenjek River	62.65	341	P	P	16 45 08.7	+1.2
F26K				IAmb	IAmb	16 45 10.2	
	comp=Z,2.7nm,1.0s						
F26K	Sheenjek River	62.65	341	P	P	16 45 08.9	+1.4
	baz=122						
BMAR	Burnt Mountain	62.65	340		P	16 45 08.0	+0.4
R18K	Karluk	62.77	328	P	P	16 45 09.7	+1.3
	baz=107						
Q19K	Cape Douglas,	62.78	330	P	P	16 45 09.3	+0.7
	baz=108						
P19K	Oil Pt	62.82	330	P	P	16 45 09.7	+0.9
	baz=109						
G25K	Bearman Lake	62.82	339	P	P	16 45 09.5	+0.9
	baz=120						
SKT	Skwentna	62.86	333	P	P	16 45 09.9	+0.8
SKT				IAmb	IAmb	16 45 11.3	
	comp=Z,5.9nm,1.0s						
SKT	Skwentna	62.86	333	P	P	16 45 09.8	+0.8
	baz=112						
BWN	Browne	62.87	336	P	P	16 45 09.8	+0.7
NEA2	Nenana	62.90	336	P	P	16 45 09.9	+0.7
	baz=116						
TRF	Thorofare Moun	62.91	335		P	16 45 10.6	+1.1
TRF	Thorofare Moun	62.91	335	P	P	16 45 10.4	+0.9
	baz=114,SNR=5.3						
H24K	Noodor Dome	63.01	338	P	P	16 45 10.9	+0.9
	baz=117,SNR=6.3						
F25K	Christian Rive	63.08	340		P	16 45 11.5	+1.0
F25K				IAmb	IAmb	16 45 20.1	
	comp=Z,6.5nm,1.2s						
F25K	Christian Rive	63.08	340	P	P	16 45 11.8	+1.3
	baz=120						
KTH	Kantishna Hill	63.21	335	P	P	16 45 12.2	+0.8
I23K	Minto, Yukon-K	63.25	337	P	P	16 45 12.8	+1.3
	baz=116,SNR=7.3						
G24K	Hadweenzic Riv	63.27	339	P	P	16 45 12.8	+1.0
G24K				IAmb	IAmb	16 45 14.2	
	comp=Z,4.4nm,0.9s						
G24K	Hadweenzic Riv	63.27	339	P	P	16 45 12.7	+1.0
	baz=118						
E25K	Arctic Village	63.33	341	IAmb	IAmb	16 45 15.9	
	comp=Z,4.0nm,0.9s						
E25K	Arctic Village	63.33	341	P	P	16 45 13.2	+1.1
	baz=121						
BPAW	Bear Paw Mtn.	63.45	335	P	P	16 45 13.9	+0.9
	baz=114						
PPLA	Purkeypile	63.48	334	P	P	16 45 13.8	+0.5
	baz=112						
O19K	Port Alsworth	63.51	331	P	P	16 45 14.3	+1.0
	baz=108						
M20K	Styx River	63.53	333	P	P	16 45 14.3	+0.7
	baz=110						
C27K	Jago River	63.56	342	P	P	16 45 14.7	+1.1
	baz=123						
H23K	Yukon River	63.62	338	P	P	16 45 15.0	+1.0
	baz=116						
CAST	Castle Rocks	63.64	335	IAmb	IAmb	16 45 15.7	
	comp=Z,4.6nm,0.9s						
CAST	Castle Rocks	63.64	335	P	P	16 45 14.6	+0.4
	baz=112						
P18K	Big Mountain,	63.70	330	P	P	16 45 15.7	+1.0
	baz=107						
MLY	Manley	63.73	336	IAmb	IAmb	16 45 16.9	
	comp=Z,5.1nm,0.9s						
MLY	Manley	63.73	336	P	P	16 45 15.8	+1.0
	baz=114,SNR=8.6						
N19K	Bonanza Creek	63.78	331	P	P	16 45 15.9	+0.6
	baz=109						
F24K	Squaw Lake	63.80	340	P	P	16 45 16.7	+1.5
	baz=118						
O18K	Koktuh Hills	63.83	330	P	P	16 45 16.0	+0.5
	baz=108						
L20K	Farewell, AK	64.06	333	P	P	16 45 17.7	+0.7
	baz=110,SNR=5.0						
C26K	Camden Bay	64.07	342	P	P	16 45 17.8	+1.0
	baz=122						
M19K	Big River Lodg	64.10	333	P	P	16 45 18.3	+1.1
	baz=109						
G23K	Bananza Creek	64.18	338	P	P	16 45 18.8	+1.1
	baz=116						
D25K	Kavik River	64.20	342	P	P	16 45 19.1	+1.3
	baz=120,SNR=8.1						
Q16K	King Salmon	64.21	329	P	P	16 45 19.2	+1.2
	baz=106						
E24K	Your Creek	64.26	340	P	P	16 45 20.2	+2.0
E24K				IAmb	IAmb	16 45 45.9	
	comp=Z,4.9nm,1.4s						
E24K	Your Creek	64.26	340	P	P	16 45 19.6	+1.3
	baz=118						
H22K	Ishtalitna Cre	64.33	337	P	P	16 45 19.5	+0.8
	baz=114						
R16K	Pilot Point	64.39	327	P	P	16 45 20.2	+1.1
	baz=104						
K20K	Telida	64.45	334	P	P	16 45 20.6	+1.1
	baz=110						
COLD	Coldfoot	64.46	339	P	P	16 45 20.7	+1.2
	baz=116						
M18K	Stony River	64.61	332	P	P	16 45 21.9	+1.3
	baz=108						
E23K	Chandalar	64.63	340	P	P	16 45 22.1	+1.4
	baz=117,SNR=5.4						
J20K	Nowinta River	64.77	335	P	P	16 45 22.3	+0.8
	baz=110						
H21K	Melozitna Rive	64.78	337	P	P	16 45 22.4	+0.8
	baz=112						
D24K	Happy Valley	64.88	341	P	P	16 45 23.2	+1.0
	baz=118						
TOLK	Toolik Lake Re	64.88	340	P	P	16 45 23.1	+0.8
	baz=117						
CHNA	Chernabura Isl	64.89	324	P	P	16 45 23.0	+0.5
	baz=101						
C24K	Franklin Bluff	65.11	342	P	P	16 45 24.7	+1.1
	baz=118						
I20K	Naaghedeneel	65.12	336	P	P	16 45 24.4	+0.6
	baz=110						
O16K	Kokwok River B	65.16	330	P	P	16 45 24.8	+0.7
	baz=105						
L18K	Granite Mounta	65.22	332	P	P	16 45 25.6	+1.1
	baz=107						
J19K	Poorman	65.31	335	P	P	16 45 26.1	+1.0
	baz=109,SNR=5.5						
G21K	Allakaket	65.37	337	P	P	16 45 26.6	+1.1
	baz=112						
D23K	Nanushuk River	65.39	340	P	P	16 45 27.1	+1.5
	baz=116						
E22K	Anaktuvuk Pass	65.41	339	P	P	16 45 26.8	+1.1
	baz=114						
SDPT	Sand Point	65.49	325	P	P	16 45 27.5	+1.2
	baz=101						
H20K	Anotleneega Mo	65.52	336	P	P	16 45 27.2	+0.8
	baz=110						
J18K	Innoko River	65.61	334	P	P	16 45 28.1	+1.1
	baz=108						
F21K	Alatna River	65.63	338		P	16 45 28.5	+1.4
F21K	Alatna River	65.63	338	P	P	16 45 28.4	+1.2
	baz=112,SNR=17						
C23K	Itkillik River	65.75	341		P	16 45 29.2	+1.3
C23K	Itkillik River	65.75	341	P	P	16 45 29.5	+1.7
	baz=116,SNR=5.5						
O15K	Ungalikthiuk R	65.92	329	P	P	16 45 30.1	+1.0
	baz=103						
L17K	Donlin	65.92	332	P	P	16 45 29.9	+0.8
	baz=106						
M16K	Timber Creek	65.94	331	P	P	16 45 29.8	+0.6
	baz=104						
D22K	Ayikyak River	66.01	340	P	P	16 45 31.5	+2.0
D22K	Ayikyak River	66.01	340	P	P	16 45 31.2	+1.6
	baz=114						
K17K	Iditarod	66.08	333	P	P	16 45 30.6	+0.5
	baz=106						
H19K	Roundabout Mou	66.15	336	P	P	16 45 31.2	+0.7
	baz=109						
E21K	Killik River	66.27	339	P	P	16 45 32.4	+1.1
	baz=112						
L16K	Owhat River	66.35	332	P	P	16 45 32.8	+1.0
	baz=104						
F20K	Avaraart Lake	66.38	338	P	P	16 45 33.3	+1.4
	baz=110,SNR=5.7						
G19K	Purcell Mounta	66.59	337	P	P	16 45 34.5	+1.2
	baz=108						
J17K	VABM Dome	66.61	333	P	P	16 45 34.6	+1.2
	baz=105						
O14K	Tigyukauivet M	66.66	329	P	P	16 45 35.0	+1.1
	baz=102						
H18K	Honhosa River	66.80	335	P	P	16 45 35.7	+1.1
	baz=107						
C21K	Knifeblade Rid	66.81	340	P	P	16 45 36.0	+1.3
	baz=112						
B22K	Teshekpuk Lake	66.84	341	P	P	16 45 35.9	+1.1
	baz=114						
E20K	Nigu River	66.97	339	P	P	16 45 37.0	+1.3
	baz=110						
N14K	Kuskokwak Cree	67.01	329	P	P	16 45 37.1	+1.1
	baz=102						
F19K	Shaleruckik Mo	67.07	337	P	P	16 45 37.6	+1.3
	baz=108						
G18K	Tagagawik	67.13	336	P	P	16 45 38.2	+1.5
	baz=107						
J16K	Anvik River	67.25	333	P	P	16 45 39.0	+1.5
	baz=104						
D20K	Etivluk River	67.27	339	P	P	16 45 38.6	+1.0
	baz=110						
L15K	Ungalak Mounta	67.28	331	P	P	16 45 39.0	+1.3
	baz=102						
M14K	Bethel	67.31	330	P	P	16 45 39.3	+1.4
	baz=102						
H17K	Granite Mounta	67.37	335	P	P	16 45 39.6	+1.4
	baz=105						
I17K	Unalakleet	67.43	334	P	P	16 45 40.1	+1.4
	baz=104						
K15K	Wolf Creek Mou	67.43	332	P	P	16 45 40.2	+1.5
	baz=103						
A22K	Sinclair Lake	67.57	342	P	P	16 45 41.0	+1.6
	baz=112						
F18K	Selawik	67.72	337	P	P	16 45 42.0	+1.6
	baz=106						
D19K	Kuna River	67.72	339	P	P	16 45 41.8	+1.3
	baz=108						
L14K	Kuka Creek	67.77	331	P	P	16 45 42.4	+1.6
	baz=101						
G17K	Kiwalik Mounta	67.82	335	P	P	16 45 42.5	+1.4
	baz=105						
B20K	Meade River	67.90	341	P	P	16 45 43.1	+1.6
	baz=110						
M13K	Dall Lake	67.92	330	P	P	16 45 43.4	+1.6
	baz=100						
H16K	Elim	68.26	334	P	P	16 45 45.5	+1.6
	baz=103						
E18K	Tukpahlearik C	68.30	337	P	P	16 45 45.8	+1.7
	baz=106						
C19K	Lookout Ridge	68.42	339	P	P	16 45 46.4	+1.5
	baz=107						
J14K	Nanvaranak Lak	68.44	332	P	P	16 45 46.4	+1.4
	baz=101						
G16K	Koyuk River	68.48	335	P	P	16 45 46.7	+1.4
	baz=103						
E17K	Hotham Inlet	68.67	337	P	P	16 45 47.7	+1.2
	baz=104						
UNV	Unalaska Valle	68.76	322	P	P	16 45 47.9	+0.8
	baz=95						
K13K	Kusilvak Mount	68.80	331	P	P	16 45 48.3	+1.0
	baz=100						
C18K	Utukok River	68.85	339	P	P	16 45 48.9	+1.3
	baz=106						
A19K	Wainwright	69.23	340	P	P	16 45 51.2	+1.4
	baz=106						
B18K	Kokolik River	69.25	339	P	P	16 45 51.4	+1.4
	baz=105						
D17K	Noatak River	69.29	337	P	P	16 45 51.5	+1.3
	baz=103						
M11K	Mekoryuk	69.31	329	P	P	16 45 51.9	+1.5
	baz=98						
F15K	North Star Dit	69.48	335	P	P	16 45 52.7	+1.2
	baz=101						
C17K	DeLong Mountai	69.51	338	P	P	16 45 52.9	+1.3
	baz=104						
ANM	Nome	69.57	334	P	P	16 45 53.2	+1.1
	baz=100						
NIKH	Nikolski High	70.11	321	P	P	16 45 56.4	+0.8
	baz=93						
C16K	Lisburne Hills	70.25	338	P	P	16 45 57.5	+1.4
	baz=101						
P08K	Saint George I	70.70	325	P	P	16 46 00.5	+1.5
	baz=93						
TNA	Tin City	70.80	335	P	P	16 46 01.2	+1.7
	baz=98						
GAMB	Gambell	72.23	333	P	P	16 46 09.8	+1.6
	baz=94						
EKA	Eskdalemuir Ar	78.44	36	P	P	16 46 40.4	-3.7
	comp=Z,1.1nm,0.6s,baz=273,slow=5.5,SNR=4.8						
	comp=Z,1.1nm,0.6s						
SPITS	Spitsbergen Ar	80.06	11	P	P	16 46 52.9	+0.2
	comp=Z,2.7nm,0.7s,baz=284,slow=7.3,SNR=2.2						
	comp=Z,2.7nm,0.7s						
ESDC	Sonseca Array	80.47	51	P	P	16 46 53.5	-2.1
	comp=Z,1.6nm,0.8s,baz=294,slow=6.0,SNR=11						
	comp=Z,1.6nm,0.8s						
BILL	Bilibino	80.78	338		P	16 46 57.6	+0.9
BILL				IAmb	IAmb	16 46 58.6	
	comp=Z,4.0nm,0.7s						
NB2	NORSAR Subarra	84.47	28	P	P	16 47 15.8	-0.2
	comp=Z,6.6nm,1.1s,baz=292,slow=4.6						
NOA	NORSAR Array B	84.47	28	P	P	16 47 15.6	-0.5
	comp=Z,0.7nm,0.6s,baz=292,slow=4.8,SNR=6.9						
	comp=Z,0.7nm,0.6s						
HFS	Hagfors	85.94	29	P	P	16 47 21.8	-1.5
	comp=Z,1.3nm,0.6s,baz=237,slow=6.9,SNR=4.8						
	comp=Z,1.3nm,0.6s						
ARCES	ARCESS Array B	86.25	18	P	P	16 47 24.1	-0.7
	comp=Z,2.2nm,0.8s,baz=304,slow=2.8,SNR=5.9						
	comp=Z,2.2nm,0.8s						
FINES	FINESS Array B	90.75	25	P	P	16 47 45.1	-1.1
	comp=Z,1.9nm,0.8s,baz=307,slow=0.7,SNR=4.5						
	comp=Z,1.9nm,0.8s						
KURBB	Kurchatov Arra	114.99	6	PKP	PKiKP	16 53 24.2	-0.2
	comp=Z,0.4nm,0.6s,baz=342,slow=2.6,SNR=4.7						
SONM	Songino Array	115.75	345	PKP	PKiKP	16 53 26.1	-0.1
	comp=Z,0.8nm,0.4s,baz=98,slow=3.2,SNR=1.6						
MKAR	Makanchi Array	119.09	4	PKP	PKPdf	16 53 31.7	-0.9
	comp=Z,0.4nm,0.7s,baz=345,slow=2.9,SNR=4.4						
HHC	Hu-ho-hao-te	120.55	338	*e*P	PKPdf	16 53 32.0	-3.7
NJ2	Nanjing	124.64	327	*e*P	PKiKP	16 53 44.8	+0.9
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
LZH	Lanzhou	127.39	343	*e*PKP	PKiKP	16 53 50.5	+1.0
WRA	Warramunga Arr	134.32	256	PKP	PKPdf	16 54 02.2	0.0
	comp=Z,0.6nm,0.6s,baz=75,slow=1.5,SNR=15						
ASAR	Alice Springs	134.65	251	PKhKP	PKPpre	16 53 53.4	
	comp=Z,0.2nm,0.6s,baz=110,slow=2.9,SNR=4.6						
ASAR				PKP	PKPdf	16 54 02.6	-0.2
	comp=Z,0.3nm,0.7s,baz=90,slow=2.4,SNR=5.9						
PZH	PanZhiHua	136.95	340	PKP	PKPdf	16 54 07.8	+0.6
CMAR	Chiang Mai Arr	145.35	339	PKPbc	PKPbc	16 54 22.3	+0.3
	comp=Z,4.4nm,0.7s,baz=336,slow=3.2,SNR=31						

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*GCG **14** 16:58:52.9±1.9, 14°.11N×93°.25W, h36^{km}±999^{km}, MD4.4, ML4.3*

*NEIC **14** 16:58:53.2±2.8, 14°.36N±0°.04×93°.22W±0°.05, h10^{km}±1^{km}, mb4.2/15, Md4.2/46(MEX), Error ellipse: s-maj=9.0km s-min=4.9km az=128.0*

*MEX **14** 16:58:54.3±0.5, 14°.29N×93°.33W, h15^{km}±14^{km}, MD4.5*

*IDC **14** 16:59:00.0±5.3, 14°.59N×92°.75W, h63^{km}±52^{km}, mb3.6/5, mbtmp3.9/7, ML3.8/2, MS3.4/3, Error ellipse: s-maj=91.2km s-min=37.0km az=46.0*

ISC 14 16:58:51.2±0.9, **14°.24N**±0°.07×**93°.29W**±0°.05, **h10**^{km}, **n46,** σ**1^{s}.97**/50, **mb4.1**/9, **MS3.2**/3, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.19	56		Pg	16 59 12.9	-1.1
THIG					Sg	16 59 27.6	-2.0
THIG		1.19	56	*i* P	Pg	16 59 13.0	-1.1
THIG				*i* S	Sn	16 59 28.7	-1.4
THIG				IAML		16 59 33.0	
	comp=E,5µm,0.3s						
SMCA	Catarina	1.32	62	*i* P	Pn	16 59 15.2	-0.5
SMCA				IAML		16 59 35.2	
	comp=N,2µm,0.3s						
PCIG		1.46	3		Pn	16 59 16.1	-1.5
PCIG					Sb	16 59 33.8	-3.2
RTAL	Retalhuleu	1.57	79		Pn	16 59 18.6	-0.6
STG8	El Palmar, Qui	1.89	83	*i* P	Pn	16 59 20.4	-3.4
STG8				IAML		16 59 46.2	
	comp=E,3µm,0.3s						
STG0	El Palmar, Qui	1.89	84	*i* P	Pn	16 59 20.4	-3.3
STG0				IAML		16 59 46.8	
	comp=E,4µm,0.3s						
SOKI	Kika Raxquin	1.91	72	*e*P	Pn	16 59 24.2	0.0
SOKI				IAML		16 59 58.6	
	comp=N,3µm,0.7s						
HUEH	Huehuetenango	2.03	58		Pn	16 59 26.1	+0.4
HUEH	Huehuetenango	2.03	58	*i* P	Pn	16 59 26.8	+1.1
HUEH				*i* S	Sg	16 59 55.2	-1.3
HUEH				IAML		17 00 03.0	
	comp=N,4µm,0.5s						
CCIG	Comitan	2.31	29		Pn	16 59 31.0	+1.5
CCIG	Comitan	2.31	29	*e*P	Pb	16 59 31.8	-1.3
CCIG				*i* S	Sb	17 00 01.2	-0.6
CCIG				IAML		17 00 05.7	
	comp=N,2µm,0.5s						
TGIG		2.53	4		Pn	16 59 33.7	+1.4
TGIG					Sn	17 00 02.6	-0.7
TGIG		2.53	4	*i* P	Pn	16 59 33.8	+1.4
TGIG				*i* S	Sn	17 00 03.2	-0.1
TGIG				IAML		17 00 07.3	
	comp=E,2µm,0.4s						
TGBT	Tuxtla Gutierr	2.53	4		Pn	16 59 34.2	+1.9
TGBT					Sn	17 00 03.6	+0.4
FG8	Yepocapa, Chim	2.64	89	*i* P	Pn	16 59 28.2	-5.8
FG8				*i* S	Sn	16 59 56.1	-10
HUIG	Huatulco	3.12	299		Sn	17 00 11.3	-6.6
NUBE	Las Nubes	3.42	95	*i* P	Pn	16 59 44.6	-0.1
MTO3	Montecristo	3.81	87		Pn	16 59 51.7	+1.6
ESQI	Esquipulas	3.83	85		Pn	16 59 50.1	-0.3
PETF	Flores	4.23	51		Pn	16 59 57.4	+1.6
PETF	Flores	4.23	51	*e*P	Pn	16 59 57.1	+1.3
PETF				IAML		17 01 08.3	
	comp=E,515nm,0.6s						
TOIG	Toxpalan	5.28	317		Pn	17 00 09.0	-1.4
TOIG					Sn	17 01 02.2	-9.1
JTS	Las Juntas de	9.04	115	P	Pn	17 01 03.7	+1.8
	comp=E,1.3nm,0.3s,baz=343,slow=19,SNR=1.6						
	comp=E,4.1nm,0.2s						
833A	Chaparral WMA,	15.12	339		Pn	17 02 25.2	+0.2
833A				IAmb	IAmb	17 02 36.8	
	comp=Z,11nm,0.9s						
SAND	Sanderson	17.64	334	P	P	17 02 59.7	+1.5
SAND				IAmb	IAmb	17 03 06.8	
	comp=Z,8.7nm,1.1s						
TXAR	Lajitas Array	17.83	329		P	17 03 01.2	+0.9
TXAR	Lajitas Array	17.83	329	P	P	17 03 03.1	+2.7
	comp=Z,0.1nm,0.3s,baz=147,slow=13,SNR=10						
	comp=Z,1.3nm,0.9s						
TX31	Lajitas Ar. Si	17.83	329		P	17 03 06.3	+6.0
MNHN	Monahans	19.11	335	P	P	17 03 15.6	+1.2
VHRN	Van Horn	19.67	329	P	P	17 03 20.5	-0.2
MIAR	Mount Ida	20.22	359	P	P	17 03 26.6	+0.3
MIAR				IAmb	IAmb	17 03 34.3	
	comp=Z,27nm,1.5s						
SMWD	Samnorwood	21.70	344	P	P	17 03 41.7	-0.8
SMWD				IAmb	IAmb	17 03 49.4	
	comp=Z,11nm,0.7s						
AMTX	Amarillo	21.91	341	P	P	17 03 44.6	-0.1
AMTX				IAmb	IAmb	17 03 55.5	
	comp=Z,12nm,0.8s						
TKL	Tuckaleechee C	22.98	20	LR	LR	17 12 52.1	
	comp=Z,92nm,19.9s,baz=194,slow=37						
RTBA	Rita Blanca	23.67	341	P	P	17 04 04.0	+0.9
RTBA				IAmb	IAmb	17 04 05.3	
	comp=Z,6.8nm,0.8s						
SDCO	Great Sand Dun	25.80	337	P	P	17 04 24.7	+1.8
SDCO				IAmb	IAmb	17 04 28.6	
	comp=Z,5.1nm,1.1s						
PV03	Paradox Valley	27.61	333	P	P	17 04 39.5	+0.4
PDAR	Pinedale Array	31.70	337	LR	LR	17 19 36.5	
	comp=Z,42nm,19.7s,baz=88,slow=39						
NVAR	Mina Array Bea	32.71	322	P	P	17 05 27.6	+3.4
	comp=Z,1.3nm,0.8s,baz=109,slow=6.6,SNR=5.2						
	comp=Z,1.3nm,0.8s						
ULM	Lac du Bonnet	35.97	357	P	P	17 05 51.9	-0.2
	comp=Z,1.7nm,0.7s,baz=164,slow=7.4,SNR=3.6						
	comp=Z,1.7nm,0.7s						
SCHQ	Schefferville	45.44	21	LR	LR	17 27 28.0	
	comp=Z,67nm,18.9s,baz=213,slow=38						
YKA	Yellowknife Ar	50.51	347	P	P	17 07 49.9	+0.6
	comp=Z,2.7nm,0.8s,baz=154,slow=6.7,SNR=11						
	comp=Z,2.7nm,0.8s						
DLBC	Dease Lake	51.93	336	P	P	17 08 02.1	+1.9
	comp=Z,1.1nm,0.8s,baz=143,slow=5.1,SNR=2.1						
	comp=Z,1.1nm,0.8s						
ILAR	Eielson Array	62.13	337	P	P	17 09 12.7	+0.4
	comp=Z,0.5nm,0.9s,baz=122,slow=6.7,SNR=4.7						
	comp=Z,0.5nm,0.9s						
CMAR	Chiang Mai Arr	145.34	339	PKPbc	PKPbc	17 18 30.3	+0.2
	comp=Z,0.9nm,0.7s,baz=340,slow=3.1,SNR=5.5						

MDD 14 17:05:12.8±1.2, **28°.25N**×**16°.69W, h12**^{km}±8^{km}, **mb_Lg0.3**/4, **Error ellipse: s-maj=6.5km s-min=4.9km az=27.0, Canary Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPVI	La Orotava (Te	0.03	52	S	Sg	17 05 16.9	-0.4
CDOS	Garachico, Isl	0.07	315	S	Sg	17 05 17.6	+0.1
CDOS				*i* IVmb_Lg		17 05 18.1	
CCAN	Las Canadas	0.07	107	P	Pg	17 05 15.3	-0.3
CCAN				S	Sg	17 05 17.2	-0.5
CCAN				*i* IVmb_Lg		17 05 17.5	
CNOR	Icod de los Vi	0.07	18	P	Pg	17 05 15.2	-0.3
CNOR				S	Sg	17 05 17.4	-0.2
CLAJ	Vilaflor (Tene	0.09	174	P	Pg	17 05 15.9	+0.2
CLAJ				S	Sg	17 05 17.8	0.0
CFOR	Fortaleza, Los	0.11	50	S	Sg	17 05 18.3	0.0
CBOL	Buenavista del	0.15	298	P	Pg	17 05 16.3	-0.1
MACI	Morro de la Ar	0.16	88	S	Sg	17 05 19.7	+0.4

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*GCG **14** 17:08:55.4±1.4, 14°.06N×93°.18W, h17^{km}±10^{km}, MD4.2, ML3.8*

*MEX **14** 17:08:58.0±0.4, 14°.26N×93°.30W, h21^{km}±17^{km}, MD4.0*

ISC 14 17:08:49.4±2.3, **13°.97N**±0°.09×**93°.26W**±0°.05, **h2**^{km}±13^{km}, **n17,** σ**2^{s}.50**/25, **Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.34	46	*e*P	Pg	17 09 15.8	+0.7
THIG				*e*S	Sg	17 09 29.2	-3.3
THIG		1.34	46	*i* P	Pg	17 09 16.8	+1.7
THIG				*i* S	Sg	17 09 32.2	-0.3
THIG				IAML		17 09 36.5	
	comp=E,1µm,0.4s						
SMCA	Catarina	1.45	52	*i* P	Pn	17 09 18.7	+2.1
PATR	El Naranjo	1.51	41	*e*P	Pn	17 09 18.3	+0.6
PATR				*e*S	Sg	17 09 34.4	-3.7
PAVE	Pavencul	1.60	41	*e*P	Pn	17 09 20.1	+1.1
PAVE				*e*S	Sn	17 09 36.9	-3.5
RTAL	Retalhuleu	1.61	70	*e*P	Pn	17 09 22.1	+3.2
RTAL				*e*S	Sn	17 09 40.5	+0.2
PCIG		1.72	1	*e*P	Pn	17 09 19.9	-0.5
PCIG				*e*S	Sn	17 09 36.6	-6.4
STG8	El Palmar, Qui	1.91	75	*e*P	Pn	17 09 23.9	+0.7
STG8				IAML		17 09 54.0	
	comp=N,882nm,0.2s						
STG0	El Palmar, Qui	1.91	76	*i* P	Pn	17 09 23.9	+0.7
STG0				IAML		17 09 54.4	
	comp=N,1µm,0.3s						
HUEH	Huehuetenango	2.16	52	*e*P	Pn	17 09 28.1	+1.4
HUEH				*i* S	Sn	17 09 47.3	-7.0
CCIG	Comitan	2.54	25	*e*P	Pn	17 09 36.3	+4.5
CCIG				*e*S	Sn	17 10 01.9	-1.6
CCIG	Comitan	2.54	25	*e*P	Pn	17 09 35.9	+4.1
CCIG				*i* S	Sn	17 10 05.6	+2.1
CCIG				IAML		17 10 08.1	
	comp=N,304nm,0.5s						
FG8	Yepocapa, Chim	2.63	83	*i* P	Pn	17 09 31.8	-1.3

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
FG16	Alotenango, Sa	2.68	83	iP	Pn	17 09 33.1	-0.8
FG16				IAML		17 10 12.6	
	comp=N,1µm,0.2s						
TGIG		2.79	3	eP	Pn	17 09 37.4	+2.2
TGIG				eS	Sn	17 10 04.8	-4.7
TGIG		2.79	3	iP	Pn	17 09 37.6	+2.4
TGIG				iS	Sn	17 10 08.0	-1.6
TGIG				IAML		17 10 14.7	
	comp=E,193nm,0.5s						
HUIG	Huatulco	3.28	303	eP	Pn	17 09 43.7	+1.8
HUIG				eS	Sn	17 10 18.2	-3.4

IDC 14 17:11:47.5±4.1, 14°.34N×92°.78W, h0km, mb3.8/3, mbtmp3.7/4, ML4.0/1, MS3.6/1, Error ellipse: s-maj=146.4km s-min=71.5km az=47.0

GCG 14 17:11:50.4±1.8, 14°.11N×93°.25W, h37km±11km, MD4.3, ML4.2, MW3.7

MEX 14 17:11:52.6±0.5, 14°.36N×93°.29W, h14km±9km, MD4.3

ISC 14 17:11:49.1±1.0, 14°.29N±0°.07×93°.28W±0°.03, h10km, n44, σ2s.94/67, mb3.8/3, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.16	58	eP	Pb	17 12 10.0	-1.1
THIG				eS	Sb	17 12 23.2	-3.0
THIG		1.16	58	iP	Pb	17 12 10.9	-0.3
THIG				iS	Sb	17 12 26.0	-0.2
THIG				IAML		17 12 29.1	
	comp=N,3µm,0.5s						
SMCA	Catarina	1.29	64	eP	Pn	17 12 12.5	-0.7
SMCA				iS	Sb	17 12 29.2	-1.0
PATR	El Naranjo	1.30	51	eP	Pn	17 12 12.2	-1.3
PATR				iS	Sb	17 12 27.4	-3.3
PAVE	Pavencul	1.39	50	eP	Pn	17 12 13.6	-1.2
PAVE				iS	Sb	17 12 30.4	-2.9
PCIG		1.41	2	eP	Pn	17 12 13.6	-1.2
PCIG				iS	Sb	17 12 29.0	-4.5
RTAL	Retalhuleu	1.55	81	eP	Pn	17 12 16.2	-0.5
RTAL				eS	Sn	17 12 34.8	-2.1
STG8	El Palmar, Qui	1.87	85	iP	Pn	17 12 17.9	-3.5
	comp=Z,672nm,0.2s						
STG8				IAML		17 12 51.0	
	comp=N,2µm,0.2s						
STG0	El Palmar, Qui	1.88	86	iP	Pn	17 12 18.1	-3.4
STG0				IAML		17 12 44.7	
	comp=E,3µm,0.3s						
SOKI	Kika Raxquin	1.89	73	iP	Pn	17 12 22.0	+0.2
SOKI				IAML		17 12 56.0	
	comp=N,2µm,0.6s						
HUEH	Huehuetenango	2.00	59	eP	Pn	17 12 23.0	-0.1
HUEH				eS	Sn	17 12 46.5	-1.8
HUEH	Huehuetenango	2.00	59	iP	Pn	17 12 24.3	+1.2
HUEH				IAML		17 12 56.6	
	comp=E,3µm,0.6s						
CCIG	Comitan	2.27	29	eP	Pn	17 12 27.8	+1.1
CCIG				eS	Sn	17 12 52.2	-2.6
CCIG	Comitan	2.27	29	iP	Pn	17 12 29.0	+2.2
CCIG				iS	Sn	17 12 58.5	+3.6
CCIG				IAML		17 13 02.9	
	comp=N,1µm,0.4s						
TGIG		2.48	3	eP	Pn	17 12 30.8	+1.2
TGIG				eS	Sn	17 12 59.2	-0.7
TGIG		2.48	3	iP	Pn	17 12 31.1	+1.5
	comp=Z,391nm,0.4s						
TGIG				iS	Sn	17 13 02.0	+2.0
TGIG				IAML		17 13 04.6	
	comp=E,600nm,0.7s						
TGBT	Tuxtla Gutierr	2.48	4	eS	Sn	17 13 01.8	+1.9
FG8	Yepocapa, Chim	2.63	90	iP	Pn	17 12 25.8	-6.0
FG16	Alotenango, Sa	2.68	90	iP	Pn	17 12 27.1	-5.4
FG16				IAML		17 13 00.1	
	comp=N,3µm,0.3s						
HUIG	Huatulco	3.11	299	eP	Pn	17 12 37.8	-0.4
HUIG				eS	Sn	17 13 09.0	-6.4
PEIG	Puerto Escondi	4.11	295	eP	Pn	17 12 52.8	+0.8
PEIG				eS	Sn	17 13 34.1	-6.0
PETF	Flores	4.20	51	eP	Pn	17 12 54.1	+1.0
PETF				eS	Sn	17 13 42.4	+0.1
PETF	Flores	4.20	51	eP	Pn	17 12 55.0	+1.8
PETF				IAML		17 14 11.8	
	comp=E,298nm,0.6s						
VHO	Vista Hermosa	4.33	310	eP	Pn	17 12 54.8	-0.4
VHO				eS	Sn	17 13 42.5	-3.4
YOIG	Yosondua	4.84	302	eP	Pn	17 13 06.0	+3.7
YOIG				eS	Sn	17 13 57.3	-1.3
PNIG	Pinotepa	5.13	295	eP	Pn	17 13 06.9	+0.9
PNIG				eS	Sn	17 14 00.0	-5.3
TXIG	Tlaxiaco	5.23	305	eP	Pn	17 13 10.6	+2.9
TXIG				eS	Sn	17 14 02.5	-5.8
TOIG	Toxpalan	5.25	317	eP	Pn	17 13 10.3	+2.5
TOIG				eS	Sn	17 14 02.1	-6.4
FTIG	Fresnillo de T	5.89	308	eP	Pn	17 13 18.6	+2.0
FTIG				eS	Sn	17 14 22.6	-1.7
MGIG	Malinaltepec	5.93	300	eP	Pn	17 13 20.4	+3.2
MGIG				eS	Sn	17 14 20.9	-4.4
PBXN	Popocatepetl	6.97	313	eP	Pn	17 13 35.4	+3.6
PBXN				eS	Sn	17 14 52.6	+1.1
PPM	Popocatepetl	6.99	314	eP	Pn	17 13 36.6	+4.6
PPM				eS	Sn	17 14 49.3	-2.6
MEIG	Mezcala	7.09	302	eP	Pn	17 13 33.4	+0.4
MEIG				eS	Sn	17 14 53.3	-0.5
CXUV	Coxquihui	7.16	325	eP	Pn	17 13 32.2	-1.7
CXUV				eS	Sn	17 14 48.7	-6.7
PLIG	Platanillo	7.24	305	eP	Pn	17 13 34.0	-1.1
PLIG				eS	Sn	17 15 03.4	+6.0
CAIG	El Cayaco	7.27	293	eP	Pn	17 13 37.5	+2.1
CAIG				iS	Sn	17 15 02.4	+4.2
ARIG	Puente Sto Nin	7.87	301	eP	Pn	17 13 47.7	+4.0
ZIIG	Zihuatanejo	8.54	294	eP	Pn	17 13 56.1	+3.3
TXAR	Lajitas Array	17.79	329	P	P	17 16 00.5	+2.7
	comp=E,0.1nm,0.3s,baz=139,slow=12,SNR=9.4						
	comp=E,0.9nm,0.7s						
NVAR	Mina Array Bea	32.68	322	P	P	17 18 23.8	+1.9
	comp=E,0.9nm,0.8s,baz=129,slow=7.0,SNR=5.6						
	comp=E,0.9nm,0.8s						
SCHQ	Schefferville	45.39	21	LR	LR	17 39 56.5	
	comp=E,62nm,18.8s,baz=184,slow=37						
YKA	Yellowknife Ar	50.47	347	P	P	17 20 47.4	+0.5
	comp=E,1.5nm,0.7s,baz=154,slow=6.9,SNR=7.0						
	comp=E,1.5nm,0.7s						
ILAR	Eielson Array	62.09	337	P	P	17 22 10.3	+0.5
	comp=E,0.4nm,0.7s,baz=114,slow=7.3,SNR=3.3						
	comp=E,0.4nm,0.7s						
CMAR	Chiang Mai Arr	145.30	339	PKPbc	PKPbc	17 31 28.0	+0.2
	comp=E,0.4nm,0.3s,baz=356,slow=2.1,SNR=4.8						

KRNET 14 17:12:32.6±0.1, 39°.98N×69°.40E, h16km, mb2.5

ISU 14 17:12:35, 40°.07N×69°.60E, h5km

ISC 14 17:12:36.6±1.4, 39°.96N±0°.04×69°.63E±0°.03, h14km±11km, n13, σ1s.71/23, 8C-5D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	0.92	84	⇑iP	Pb	17 12 53.3	-1.1
BTK				⇑iS	Sn	17 13 08.7	+0.5
GAR	Garm	1.10	151	⇑iP	Pb	17 12 55.7	-1.7
GAR				⇑iS	Sn	17 13 12.4	-0.2
BXML	Bakhmal	1.26	258	P	Pb	17 13 00.1	-0.1
BXML				S	Sn	17 13 19.7	+3.0
TGS	TashGRES	1.46	357	S	Sn	17 13 22.1	+0.6
CHMI	Chimion	1.49	77	P	Pg	17 13 06.0	+0.8
CHMI				S	Sg	17 13 26.3	+1.8
CHMG	Chimgan	1.61	10	P	Pn	17 13 04.5	-0.3
CHMG				S	Sn	17 13 25.3	-0.2
CHRV	Charvak	1.70	8	S	Sb	17 13 29.3	+0.5
FRG	Fergana	1.70	75	S	Sg	17 13 35.5	+4.0
DRK	Karamyk	1.74	105	⇑iP	Pg	17 13 08.4	-1.7
DRK				⇑iS	Sg	17 13 34.4	+1.6
TRKS	Terek-Say	1.94	36	⇓eP	Pn	17 13 09.8	+0.5
TRKS				⇓eS	Sb	17 13 36.4	+0.3
AGL	Agalyk	2.16	259	P	Pn	17 13 11.8	-0.5
AGL				S	Sn	17 13 38.8	-0.1
OHH	Osh	2.48	76	⇑eP	Pb	17 13 18.6	-2.4
OHH				⇑eS	Sb	17 13 52.0	+0.6
KK31	Karatay Array	3.21	12	⇓Pn	Pn	17 13 27.7	+1.1
	0.1nm,0.2s,baz=164,slow=8.2,SNR=5.0						
KK31				⇓Pg	Pg	17 13 35.3	-2.8
	0.7nm,0.4s,baz=201,slow=16,SNR=5.0						
KK31				⇓Lg	Lg	17 14 14.5	
	0.8nm,0.2s,baz=195,slow=28,SNR=10						

IDC 14 17:15:41.4±0.9, 37°.15N×142°.74E, h70km±9km, mb3.2/3, mbtmp3.9/7, Error ellipse: s-maj=17.9km s-min=14.3km az=159.0

JMA 14 17:15:43.1±0.2, 37°.3N±0°.5×142°.6E±1°.0, h69km, MV4.3/35, E OFF FUKUSHIMA PREF

ISC 14 17:15:40.8±0.9, 37°.22N±0°.05×142°.79E±0°.08, h69km±10km, n30, σ1s.20/38, mb3.6/6, 8D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	1.52	316	⇓iP	Pn	17 16 06.8	+0.9
JIKH				⇓eS	Sn	17 16 23.8	-1.1
JFK	Kawauchi	1.54	276	P	Pn	17 16 06.6	+0.4
JFK				S	Sn	17 16 23.8	-1.7
JMST	Minamisoumatoc	1.60	289	P	Pn	17 16 07.4	+0.4
JMST				eS	Sn	17 16 25.7	-1.1
ONAJ	Iwakimizuishiy	1.60	266	⇓P	Pn	17 16 07.4	+0.4
ONAJ				⇓S	Sn	17 16 25.0	-1.9
JIO	Ouri	1.68	318	P	Pn	17 16 09.1	+1.0
JIO				S	Sn	17 16 27.9	-0.9
JMM	Marumori	1.71	293	⇓P	Pn	17 16 09.2	+0.7
JMM				⇓S	Sn	17 16 28.7	-0.9
JOTO	OTAMA OYAMA	1.99	281	P	Pn	17 16 13.4	+1.1
JOTO				S	Sn	17 16 35.7	-0.5
JOU	Okura	2.04	305	⇓iP	Pn	17 16 13.9	+0.9
JOU				⇓S	Sn	17 16 36.9	-0.6
JMK	Ichinoseki	2.13	325	iP	Pn	17 16 15.3	+1.1
JOM	Ohasama	2.54	333	iP	Pn	17 16 20.8	+1.1
JOM				S	Sn	17 16 49.0	-0.6
JYK	Kaneyama	2.56	312	P	Pn	17 16 21.1	+1.1
JYK				S	Sn	17 16 49.6	-0.5
JAG	Ashikaga	2.79	255	iP	Pn	17 16 23.9	+0.7
JAG				S	Sn	17 16 53.3	-2.4
JNS	Sasagawa	2.83	283	eP	Pn	17 16 24.8	+1.2
BSO1	Boso 1	2.95	210	P	Pn	17 16 25.9	+1.1
BSO1				eS	Sn	17 17 00.3	+1.5
MJAR	Matsushiro Arr	3.74	261	P	Pn	17 16 36.9	+0.9
	82nm,0.7s,baz=84,slow=15,SNR=4.6						
MJAR				S	Sn	17 17 17.6	-1.3
	9.9nm,0.4s,baz=107,slow=8.6,SNR=5.1						
ASAJ	Asahikawa	6.89	359	P	Pn	17 17 20.0	+0.9
	14nm,0.3s,baz=213,slow=15,SNR=130						
ASAJ				S	Sn	17 18 34.6	-1.4
	18nm,1.0s,baz=343,slow=30,SNR=6.4						
JCJ	Chichijima	10.11	183	P	Pn	17 18 02.0	-1.1
	36nm,0.4s,baz=305,slow=19,SNR=5.5						
USRK	Ussuriysk Ar.	10.76	314	P	Pn	17 18 14.2	+2.3
	1.0nm,0.5s,baz=122,slow=14,SNR=5.3						
H11N2	WAKE ISLAND Hy	27.31	123	T	T	17 50 35.1	
	baz=315,slow=75						
H11N1	WAKE ISLAND Hy	27.32	123	T	T	17 50 32.8	
	baz=315,slow=75						
H11N3	WAKE ISLAND Hy	27.33	123	T	T	17 50 35.1	
	baz=315,slow=75						
H11S1	WAKE ISLAND Hy	28.05	125	T	T	17 51 29.4	
	baz=320,slow=74						
H11S3	WAKE ISLAND Hy	28.05	125	T	T	17 51 29.4	
	baz=320,slow=74						
H11S2	WAKE ISLAND Hy	28.07	125	T	T	17 51 29.4	
	baz=320						
ZALV	Zalesovo Beam	42.60	312	pP	pP	17 23 48.4	+1.8
	0.3nm,0.3s,baz=103,slow=6.5,SNR=1.8						
MKAR	Makanchi Array	44.95	302	pP	pP	17 24 06.8	+0.9
	0.2nm,0.5s,baz=75,slow=7.8,SNR=2.2						
KURBB	Kurchatov Arra	46.76	308	pP	pP	17 24 20.8	+0.8
	0.5nm,0.5s,baz=82,slow=8.2,SNR=4.4						
ILAR	Eielson Array	48.75	32	P	P	17 24 17.7	-0.4
	0.2nm,0.6s,baz=271,slow=9.0,SNR=1.9						
ILAR				pP	pwP	17 24 37.5	-1.3
	0.2nm,0.8s,baz=271,slow=9.0,SNR=2.7						
	0.2nm,0.6s						
WRA	Warramunga Arr	57.41	189	P	P	17 25 22.4	+0.2
	1.1nm,0.8s,baz=7.8,slow=7.7,SNR=9.2						
WRA				pP	pP	17 25 39.2	+0.5
	0.3nm,0.5s,baz=2.5,slow=7.4,SNR=2.2						
	1.1nm,0.8s						
ASAR	Alice Springs	61.13	189	P	P	17 25 48.3	+0.4
	0.4nm,0.8s,baz=4.3,slow=6.3,SNR=8.5						
ASAR				pP	pP	17 26 06.5	+1.9
	0.2nm,0.9s,baz=7.1,slow=7.5,SNR=1.3						
	0.4nm,0.8s						

NEIC 14 17:15:46.0±1.0, 13°.14N±0°.09×89°.69W±0°.04, h31km±16km, ML3.9/22, Error ellipse: s-maj=13.2km s-min=5.0km az=194.0

SNET 14 17:15:48.3±1.3, 13°.26N×89°.59W, h46km, ML4.4

CATAC 14 17:15:48.8±0.3, 13°N±3°×9°0W±°, h37km±3km, M4.3/42, MLv4.3/42, Error ellipse: s-maj=8.1km s-min=3.3km az=28.0, confirmed

GCG 14 17:15:49.0±2.0, 13°.31N×89°.59W, h49km±15km, MD4.2, ML4.4

IDC 14 17:15:54.3±4.5, 13°.49N×89°.80W, h113km±42km, mb2.9/2, mbtmp3.6/3, MS2.6/1, Error ellipse: s-maj=96.4km s-min=25.7km az=48.0

ISC 14 17:15:47.2±1.0, 13°.20N±0°.06×89°.59W±0°.04, h58km±7km, n133, σ0s.76/140, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.39	42	eP	Pn	17 15 58.1	+0.2
LALI	Alcalda de L	0.39	42	eP	Pn	17 15 58.1	+0.2
LALI				iS	Sn	17 16 04.5	-1.1
LALI				IAML		17 16 06.1	
	comp=N,5µm,0.3s						
LALI	Alcalda de L	0.39	42	P	Pn	17 15 58.1	+0.2
LALI	Alcalda de L	0.39	42	S	Sn	17 16 05.1	-0.5
JAYA	Jayaque - finc	0.47	17	eP	Pn	17 15 59.0	0.0
JAYA	Jayaque - finc	0.47	17	iP	Pn	17 15 59.0	0.0
JAYA				iS	Sn	17 16 06.4	-1.1
JAYA	Jayaque - finc	0.47	17	P	Pn	17 15 59.0	0.0
ITCA	Escuela Especi	0.56	33	eP	Pn	17 16 00.1	+0.2
ITCA	Escuela Especi	0.56	33	P	Pn	17 16 00.1	+0.2
ITCA	Escuela Especi	0.56	33	S	Sn	17 16 08.3	-0.7
PANCS	Alcalda de	0.57	44	eP	Pn	17 15 59.9	-0.1
PANCS	Alcalda de	0.57	44	P	Pn	17 15 59.8	-0.1
PANCS	Alcalda de	0.57	44	S	Sn	17 16 08.3	-0.9
PMON	Piamonte	0.58	28	eP	Pn	17 16 00.2	+0.1
PMON	Piamonte	0.58	28	S	Sn	17 16 08.5	-0.8
PMON	Piamonte	0.58	28	P	Pn	17 16 00.2	+0.1
LOMA	Loma Larga	0.60	43	iP	Pn	17 16 00.5	+0.1
LOMA				eS	Sn	17 16 09.6	-0.3
LOMA	Loma Larga	0.60	43	P	Pn	17 16 00.2	-0.2
BOQS	Boqueron	0.61	29	iP	Pn	17 16 00.8	+0.2
SEMO	Seminario San	0.62	35	eP	Pn	17 16 00.6	+0.1
SEMO	Seminario San	0.62	35	S	Sn	17 16 09.7	-0.4
SEMO	Seminario San	0.62	35	P	Pn	17 16 00.6	+0.1
UEES	Universidad Ev	0.62	34	eP	Pn	17 16 00.7	+0.1
UEES				eS	Sn	17 16 09.9	-0.2
UEES	Universidad Ev	0.62	34	P	Pn	17 16 00.5	0.0
CEVE	Cerro Verde	0.63	357	eP	Pn	17 16 01.3	+0.5
CEVE	Cerro Verde	0.63	357	P	Pn	17 16 01.3	+0.5
CEVE	Cerro Verde	0.63	357	S	Sn	17 16 10.8	+0.2
UTEC	Universidad Te	0.63	37	eP	Pn	17 16 00.8	+0.2
UTEC				eS	Sn	17 16 10.0	-0.3
UTEC	Universidad Te	0.63	37	P	Pn	17 16 00.6	0.0
UTEC	Universidad Te	0.63	37	S	Sn	17 16 10.2	-0.1
CEDA	San Andres	0.63	18	iP	Pn	17 16 00.9	+0.3
CEDA				eS	Sn	17 16 10.5	+0.2
CEDA	San Andres	0.63	18	P	Pn	17 16 01.0	+0.3
PIC2	El Picacho	0.63	31	eP	Pn	17 16 01.1	+0.3
SBLS	San Blas	0.64	357	eP	Pn	17 16 01.4	+0.5
IGN	Direccin Gen	0.66	39	eP	Pn	17 16 01.1	+0.2
IGN				eS	Sn	17 16 11.0	+0.1
IGN	Direccin Gen	0.66	39	S	Sn	17 16 11.1	+0.2
IGN	Direccin Gen	0.66	39	P	Pn	17 16 01.1	+0.2
LFRS	El Faro	0.67	51	iP	Pn	17 16 01.1	0.0
UDBS	Universidad Do	0.67	39	eP	Pn	17 16 01.1	+0.1
UDBS				eS	Sn	17 16 11.0	-0.1
UDBS	Universidad Do	0.67	39	P	Pn	17 16 01.1	+0.1
UDBS	Universidad Do	0.67	39	S	Sn	17 16 11.0	-0.1
SNJE	San Jose	0.67	359	eP	Pn	17 16 01.5	+0.3
SNJE				eP		17 16 01.6	
SNJE				eS	Sn	17 16 11.7	+0.4
LFU	La Fuente	0.72	40	iP	Pn	17 16 02.0	+0.3
NUBE	Las Nubes	0.72	345	eP	Pn	17 16 02.1	+0.2
NUBE				eS	Sn	17 16 12.5	0.0
NUBE	Las Nubes	0.72	345	iP	Pn	17 16 02.2	+0.3
NUBE				iS	Sn	17 16 12.5	0.0
NUBE	Las Nubes	0.72	345	P	Pn	17 16 02.2	+0.3
LBRS	Las Brisas	0.76	45	eP	Pn	17 16 02.5	+0.3
FAME	Alcaldia de Sa	0.76	327	P	Pn	17 16 02.8	+0.6
UNIC	Universidad Ca	0.78	3	P	Pn	17 16 02.8	+0.3
COEG	Centro de Oper	0.81	59	eP	Pn	17 16 02.8	0.0
COEG	Centro de Oper	0.81	59	P	Pn	17 16 02.7	0.0
COEG	Centro de Oper	0.81	59	S	Sn	17 16 13.3	-0.9
PAVA	Las Pavas	0.82	51	eP	Pn	17 16 03.2	+0.3
PAVA	Las Pavas	0.82	51	P	Pn	17 16 03.3	+0.3
LOAL	Lomas de Alarc	0.82	347	eP	Pn	17 16 03.7	+0.7
LOAL	Lomas de Alarc	0.82	347	P	Pn	17 16 03.7	+0.7
SNVI	San Vicente	0.84	61	eP	Pn	17 16 03.4	+0.1
SLOZ	Alcaldia de Sa	0.84	347	P	Pn	17 16 03.8	+0.6
TECO	Alcaldia de Te	0.86	67	eP	Pn	17 16 03.1	-0.3
TECO				e		17 16 03.1	
TECO	Alcaldia de Te	0.86	67	P	Pn	17 16 03.2	-0.2
UESV	Universidad de	0.90	61	P	Pn	17 16 04.1	+0.2
SCLA	Alcaldia de Sa	0.98	59	eP	Pn	17 16 05.2	+0.2
SCLA	Alcaldia de Sa	0.98	59	P	Pn	17 15 60.0	-5.0
ALJI	Alcalda de J	1.00	83	eS	Sn	17 16 17.9	-0.6
ALJI	Alcalda de J	1.00	83	P	Pn	17 16 05.6	+0.3
ALJI	Alcalda de J	1.00	83	S	Sn	17 16 18.1	-0.5
PQSS	Presa 15 de Se	1.09	67	P	Pn	17 16 06.5	+0.2
PQSS	Presa 15 de Se	1.09	67	S	Sn	17 16 20.5	-0.1
TECA	Tecapa	1.10	74	eP	Pn	17 16 06.7	0.0
LLGN	La Laguna	1.15	33	iP	Pn	17 16 06.8	-0.5
LLGN	La Laguna	1.15	33	P	Pn	17 16 07.0	-0.3
MTO3	Montecristo	1.22	11		Pn	17 16 08.1	-0.1
MTO3				Sn	Sn	17 16 23.2	-0.7
MTO3				IAML		17 16 23.9	
	comp=N,2µm,0.3s						
MTO3				IAML		17 16 25.1	
	comp=E,2µm,0.3s						
MTO3	Montecristo	1.22	11	iP	Pn	17 16 08.2	-0.1
MTO3	Montecristo	1.22	11	iP	Pn	17 16 08.2	-0.1
MTO3	Montecristo	1.22	11	P	Pn	17 16 08.2	-0.1
PACA	Pacayal	1.26	78	P	Pn	17 16 09.5	+0.7
LCY	Lacayo	1.28	80	eP	Pn	17 16 09.7	+0.6
RANC	El Ranchito	1.29	79	P	Pn	17 16 03.9	-5.3
BLLM	Bellamira	1.34	79	eP	Pn	17 16 09.9	+0.2
ESQI	Esquipulas	1.38	10		Pn	17 16 10.3	0.0
ESQI				Sn	Sn	17 16 27.7	+0.1
ESQI				IAML		17 16 30.5	
	comp=N,975nm,0.7s						
ESQI	Esquipulas	1.38	10	iP	Pn	17 16 10.6	+0.3
ESQI	Esquipulas	1.38	10	P	Pn	17 16 10.6	+0.3
FG16	Alotenango, Sa	1.39	320	eP	Pn	17 16 17.1	+6.4
FG16				iS	Sn	17 16 38.6	+10
FG16				IAML		17 16 41.7	
	comp=N,19µm,0.2s						
FG8	Yepocapa, Chim	1.42	318	eP	Pn	17 16 17.0	+6.1
FG8				iS	Sn	17 16 38.6	+10
CAHU	Cacacuatique	1.46	67	iP	Pn	17 16 11.3	-0.2
LCND	La Caada	1.66	86	eP	Pn	17 16 14.5	+0.4
LCND	La Caada	1.66	86	P	Pn	17 16 14.7	+0.6
ESSG	Sabana Grande	1.69	315	iP	Pn	17 16 15.8	+1.4
ESSG				iS	Sn	17 16 35.5	+0.4
ESSG				IAML		17 16 38.6	
	comp=N,3µm,0.3s						
CNCH	Conchagua	1.71	87	eP	Pn	17 16 15.3	+0.4
CNCH	Conchagua	1.71	87	P	Pn	17 16 15.4	+0.5
CSGN	Cosiguina Volc	1.99	96	P	Pn	17 16 19.5	+0.8
POTN	Potosi Cosigui	2.04	95	P	Pn	17 16 20.5	+1.3
STG0	El Palmar, Qui	2.09	306	iP	Pn	17 16 26.7	+6.5
STG0				iS	Sn	17 16 55.1	+10
STG0				IAML		17 17 01.4	
	comp=E,6µm,0.2s						
STG8	El Palmar, Qui	2.12	306	iP	Pn	17 16 27.2	+6.7
STG8				iS	Sn	17 16 55.4	+10
STG8				IAML		17 17 05.9	
	comp=N,3µm,0.4s						
TGUH	Tegucigalpa,Un	2.41	69		Pn	17 16 24.2	-0.2
TGUH	Tegucigalpa,Un	2.41	69	P	Pn	17 16 24.4	-0.1
RTAL	Retalhuleu	2.43	303	Pn	Pn	17 16 22.2	-2.4
RTAL				IAML		17 17 02.5	
	comp=E,1µm,0.5s						
RTAL				IAML		17 17 07.5	
	comp=N,765nm,0.4s						
CRIN	San Cristobal	2.53	101		Pn	17 16 27.1	+1.2
CRIN	San Cristobal	2.53	101	P	Pn	17 16 27.4	+1.5
PKGN	Cerro Pekin	2.60	101	P	Pn	17 16 27.8	+0.9
QUEN	Al S del Volca	2.74	102	P	Pn	17 16 29.9	+1.1
TEL3	Telica 3	2.75	103	P	Pn	17 16 29.8	+0.9
HERN	Volcan Telica	2.75	102		Pn	17 16 29.4	+0.3
HERN				IAML		17 17 11.5	
	comp=E,849nm,0.5s						
HERN				IAML		17 17 12.6	
	comp=N,1µm,0.4s						
HERN	Volcan Telica	2.75	102	P	Pn	17 16 29.6	+0.6
TELN	Telica	2.75	102	P	Pn	17 16 27.9	-1.2
HOYN	Al Sur del Vol	2.76	102	P	Pn	17 16 29.7	+0.5
HUEH	Huehuetenango	2.81	319	Pn	Pn	17 16 28.2	-1.7
HUEH				IAML		17 17 19.6	
	comp=E,658nm,0.6s						
HUEH				IAML		17 17 22.5	
	comp=N,682nm,0.7s						
PACN	Al O del Volca	2.82	104	P	Pn	17 16 30.9	+1.1
CNGA	Al SSO del Vol	2.90	104	P	Pn	17 16 31.9	+0.8
CNGN	Cerro Negro	2.91	103		Pn	17 16 31.3	+0.2
CNGN	Cerro Negro	2.91	103	P	Pn	17 16 32.4	+1.2
MOMN	Momotombo	3.08	104	P	Pn	17 16 33.9	+0.5
COPN	Copaltepe	3.10	109	P	Pn	17 16 35.3	+1.6
THIG		3.10	304	iS	Sn	17 17 11.3	+1.6
LIMN	Finca el Limon	3.14	92	P	Pn	17 16 34.9	+0.5
SAPS	Ciudad Sandino	3.27	108	P	Pn	17 16 40.1	+4.0
RCVN	Varillal2	3.33	83	P	Pn	17 16 37.3	+0.3
MGAN	Managua	3.43	107	Pn	Pn	17 16 38.5	+0.4
MGAN				IAML		17 17 24.6	
	comp=N,200nm,0.8s						
MGAN				IAML		17 17 33.0	
	comp=E,187nm,1.0s						
MATN	Matagalpa	3.58	94	P	Pn	17 16 40.1	-0.3
PETF	Flores	3.71	356	Pn	Pn	17 16 41.6	-0.5
PETF				IAML		17 17 52.3	
	comp=N,224nm,0.6s						
PETF				IAML		17 18 00.9	
	comp=E,202nm,0.7s						
PETF	Flores	3.71	356	iP	Pn	17 16 43.7	+1.7
BOAB	BOACO BROADBAN	3.90	101		Pn	17 16 44.9	+0.2
BOAB	BOACO BROADBAN	3.90	101	P	Pn	17 16 45.0	+0.3
JTS	Las Juntas de	5.38	122	Pn	Pn	17 17 02.8	-2.2
JTS	Las Juntas de	5.38	122	P	Pn	17 17 14.9	+10
	comp=E,16nm,0.4s,baz=296,slow=14,SNR=10.0						
JTS				S	Sn	17 18 22.9	+17
	comp=E,162nm,0.9s,baz=105,slow=20,SNR=14						
JTS				LR	LR	17 18 53.2	
	comp=E,46nm,18.3s,baz=290,slow=31						
LCR2	La Lucha 2	6.46	122	Pn	Pn	17 17 19.7	-0.3
BCIP	Isla Barro Col	10.37	112	Pn	Pn	17 18 13.9	+0.5
SOR	Soroa	11.41	32		Pn	17 18 29.7	+2.2
TXAR	Lajitas Array	20.70	323	P	P	17 20 22.8	-0.1
	comp=E,0.4nm,0.4s,baz=136,slow=11,SNR=6.4						
	comp=E,0.4nm,0.4s						
YKA	Yellowknife Ar	52.36	346	P	P	17 24 51.5	-1.6
	comp=E,0.4nm,0.6s,baz=168,slow=9.5,SNR=5.2						
	comp=E,0.4nm,0.6s						
WRA	Warramunga Arr	137.46	255	PKP	PKPdf	17 35 06.0	+0.6
	comp=E,0.2nm,0.5s,baz=89,slow=2.2,SNR=6.5						
ASAR	Alice Springs	137.59	249	PKP	PKPdf	17 35 04.8	-0.8
	comp=E,0.1nm,0.4s,baz=90,slow=2.0,SNR=5.7						
CMAR	Chiang Mai Arr	147.44	345	PKPbc	PKPdf	17 35 23.7	+0.6
	comp=E,0.6nm,0.6s,baz=7.0,slow=2.9,SNR=1.5						

GCG 14 17:42:41.4±1.6, 14°.05N×93°.26W, h35km±999km, MD4.1, ML3.9, MW3.3

MEX 14 17:42:44.0±0.8, 14°.34N×93°.28W, h12km±29km, MD4.0

ISC 14 17:42:36.5±2.1, 14°.03N±0°.09×93°.27W±0°.04, h7km±13km, n20, σ2s.46/26, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.31	48	eP	Pg	17 43 02.2	+0.6
THIG				eS	Sg	17 43 15.1	-3.5
THIG		1.31	48	iP	Pg	17 43 02.3	+0.6
THIG				IAML		17 43 21.9	
	comp=N,1µm,0.3s						
SMCA	Catarina	1.42	55	iP	Pn	17 43 04.3	+1.4
PATR	El Naranjo	1.48	43	eP	Pn	17 43 04.0	+0.1
PATR				eS	Sg	17 43 19.3	-4.7
PAVE	Pavencul	1.57	42	eP	Pn	17 43 05.5	+0.4
PAVE				eS	Sn	17 43 23.0	-2.9
RTAL	Retalhuleu	1.61	72	eP	Pn	17 43 07.5	+2.1

RTAL				eS	Sn	17 43 26.4	-0.1
PCIG		1.67	2	eP	Pn	17 43 05.8	-0.4
PCIG				eS	Sn	17 43 21.1	-6.8
STG8	El Palmar, Qui	1.91	77	eP	Pn	17 43 09.6	-0.2
STG8				IAML		17 43 40.2	
	comp=N,1μm,0.2s						
STG0	El Palmar, Qui	1.91	78	i P	Pn	17 43 09.7	0.0
	comp=Z,839nm,0.2s						
STG0				IAML		17 43 36.0	
	comp=E,2μm,0.3s						
HUEH	Huehuetenango	2.14	53	eP	Pn	17 43 16.1	+3.2
HUEH				i S	Sn	17 43 34.7	-5.2
CCIG	Comitan	2.49	26	eP	Pn	17 43 21.3	+3.6
CCIG				eS	Sn	17 43 49.0	+0.5
CCIG	Comitan	2.49	26	i P	Pn	17 43 21.5	+3.7
CCIG				IAML		17 43 55.7	
	comp=N,383nm,0.5s						
FG8	Yepocapa, Chim	2.64	85	eP	Pn	17 43 17.3	-2.4
FG16	Alotenango, Sa	2.69	85	eP	Pn	17 43 18.5	-2.0
FG16				IAML		17 43 53.4	
	comp=N,3μm,0.2s						
TGIG		2.74	3	eP	Pn	17 43 23.2	+2.2
TGIG				eS	Sn	17 43 54.4	0.0
TGIG		2.74	3	i P	Pn	17 43 23.4	+2.3
	comp=Z,165nm,0.9s						
TGIG				i S	Sn	17 43 54.5	0.0
TGIG				IAML		17 43 57.2	
	comp=E,249nm,0.3s						
HUIG	Huatulco	3.24	303	eP	Pn	17 43 28.3	+0.4
HUIG				eS	Sn	17 44 04.3	-2.5
PEIG	Puerto Escondi	4.22	298	eP	Pn	17 43 44.5	+3.0
PEIG				eS	Sn	17 44 26.6	-4.6
PNIG	Pinotepa	5.24	297	eP	Pn	17 43 59.3	+3.9
PNIG				eS	Sn	17 44 51.2	-5.1
TOIG	Toxpalan	5.44	318	eP	Pn	17 44 06.1	+7.8
TOIG				eS	Sn	17 44 58.9	-2.4

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*IDC **14** 17:46:04.2±4.4, 15.°06S×175.°19W, h118^{km}±39^{km}, mb3.6/7, mbtmp4.0/8, MS3.7/16, Error ellipse: s-maj=41.1km s-min=22.0km az=140.0*

ISC 14 17:46:02.4±0.9, **15.°1S**±0.°3×**175.°1W**±0.°2, **h100**^{km}, **n24**, σ**1.^{s}47**/10, **mb3.8**/7, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	7.12	247	P	Pn	17 47 45.1	+1.1
	7.9nm,0.3s,baz=347,slow=7.0,SNR=14						
MSVF				LR	LR	17 50 07.0	
	comp=Z,738nm,18.6s,baz=61,slow=35						
RAR	Rarotonga	15.76	115	LR	LR	17 54 03.3	
	comp=Z,132nm,20.9s,baz=264,slow=30						
DZM	Mont Dzumac	18.85	246	LR	LR	17 56 22.9	
	comp=Z,278nm,19.7s,baz=36,slow=33						
PMG	Port Moresby	37.31	274	LR	LR	18 06 52.0	
	comp=Z,108nm,18.4s,baz=100,slow=34						
JAY	Jayapura	45.34	282	LR	LR	18 13 41.5	
	comp=Z,33nm,18.1s,baz=230,slow=37						
WRA	Warramunga Arr	48.35	257	P	P	17 54 32.8	-1.6
	0.5nm,1.0s,baz=89,slow=6.8,SNR=2.2						
	0.5nm,1.0s						
ASAR	Alice Springs	48.69	252	P	P	17 54 35.0	-1.9
	2.1nm,0.9s,baz=82,slow=8.5,SNR=15						
ASAR				LR	LR	18 13 48.5	
	comp=Z,76nm,18.9s,baz=88,slow=34						
	2.1nm,0.9s						
GUMO	Guam	48.81	304	LR	LR	18 12 16.1	
	comp=Z,41nm,19.8s,baz=113,slow=32						
DAV	Davao City (W)	62.80	286	LR	LR	18 22 59.1	
	comp=Z,64nm,18.2s,baz=334,slow=35						
MJAR	Matsushiro Arr	67.66	321	LR	LR	18 20 16.0	
	comp=Z,76nm,21.8s,baz=142,slow=30						
SHEM	Shemya Is, Ala	68.17	353	LR	LR	18 22 33.2	
	comp=Z,54nm,19.4s,baz=35,slow=32						
JNU	Nakatsue	70.41	314	LR	LR	18 22 33.6	
	comp=Z,60nm,19.7s,baz=158,slow=31						
ASAJ	Asahikawa	70.42	329	LR	LR	18 23 14.7	
	comp=Z,73nm,20.9s,baz=165,slow=32						
PETK	Petropavlovsk-	71.84	343	LR	LR	18 21 52.9	
	comp=Z,32nm,21.1s,baz=178,slow=30						
QSPA	South Pole Qui	74.97	180	P	P	17 57 33.4	+0.8
	2.5nm,1.0s,baz=16,slow=4.6,SNR=5.5						
	2.5nm,1.0s						
NVAR	Mina Array Bea	75.17	43	P	P	17 57 35.2	+1.0
	1.0nm,0.9s,baz=239,slow=5.1,SNR=2.0						
	1.0nm,0.9s						
USRK	Ussuriysk Ar.	76.16	324	LR	LR	18 26 05.9	
	comp=Z,81nm,20.2s,baz=119,slow=32						
KLR	Kul'dur	79.37	328	LR	LR	18 28 34.4	
	comp=Z,31nm,19.9s,baz=156,slow=32						
TXAR	Lajitas Array	81.77	57	P	P	17 58 09.8	-0.9
	1.4nm,1.0s,baz=253,slow=4.4,SNR=7.3						
	1.4nm,1.0s						
ILAR	Eielson Array	82.44	12	P	P	17 58 14.7	+1.5
	0.9nm,0.8s,baz=219,slow=6.2,SNR=7.7						
	0.9nm,0.8s						
PDAR	Pinedale Array	83.10	42	P	P	17 58 15.9	-1.5
	1.6nm,0.9s,baz=197,slow=2.9,SNR=8.9						
	1.6nm,0.9s						
CMAR	Chiang Mai Arr	90.98	289	LR	LR	18 34 38.4	
	comp=Z,20nm,21.9s,baz=185,slow=32						
BRTR	Keskin Array B	144.88	320	PKP	PKPab	18 05 28.2	+0.7
	1.5nm,0.9s,baz=63,slow=0.3,SNR=8.2						
GERES	GERESS Array B	145.56	350	PKPbc	PKPdf	18 05 28.5	-0.5
	0.4nm,0.7s,baz=336,slow=3.6,SNR=4.1						

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*IDC **14** 17:47:25.4±5.3, 36.°34N×71.°04E, h170^{km}±48^{km}, mb3.3/9, mbtmp3.8/14, Error ellipse: s-maj=40.0km s-min=16.5km az=32.0*

*NEIC **14** 17:47:29.4±1.1, 36.°64N±0.°07×71.°00E±0.°09, h209^{km}±6^{km}, mb4.1/15, Error ellipse: s-maj=11.6km s-min=8.7km az=59.0*

*NNC **14** 17:47:34.1±3.8, 37.°04N×70.°95E, h200^{km}±45^{km}, mb2.7, mpv3.7, Error ellipse: s-maj=36.6km s-min=20.3km az=19.0*

ISC 14 17:47:28.4±0.6, **36.°60N**±0.°06×**71.°06E**±0.°07, **h200**^{km}, **n71**, σ**1.^{s}37**/73, **mb4.0**/14, **6C, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAR	Garm	2.46	346		Pn	17 48 13.1	+1.1
SIMJ	Simiganj	2.62	322		Pn	17 48 14.6	+0.8
KBL	Kabul	2.63	219		Pn	17 48 15.1	+1.0
DRK	Karamyk	2.93	11		Pn	17 48 18.2	+0.7
NIL	Nilore	3.45	148		Pn	17 48 25.5	+2.0
SRNI	Srinagar	3.98	128	eP	Pn	17 48 36.2	+6.3
SRNI				IAML		17 49 20.2	
	comp=N,1μm,0.6s						
SRNI				eS	Sn	17 49 21.3	+3.1
ARSB	Arslanbob	4.95	17	Pn	Pn	17 48 42.9	+0.7
AML	Almayashu	5.89	20	P	Pn	17 48 55.5	+1.0
	SNR=49						
DHRM	DHARAMSHALA	6.13	134	eP	Pn	17 49 03.7	+6.0
DHRM				IAML		17 50 12.9	
	comp=E,139nm,0.3s						
NRN	Naryn	6.17	37		Pn	17 48 57.5	-0.6
UCH	Uchtor	6.22	24	P	Pn	17 49 00.4	+1.5
	SNR=6.1						
EKS2	Erkin-Say	6.41	18	P	Pn	17 49 02.2	+1.2
	SNR=12						
KK31	Karatay Array	6.51	356		Pn	17 49 02.7	+0.5
KK31	Karatay Array	6.51	356	⇑P	Pn	17 49 02.8	+0.6
	comp=E,1.0nm,0.2s,baz=175,slow=11,SNR=51						
KK31				⇑S	Sn	17 50 11.5	-5.0
	comp=E,21nm,0.6s,baz=171,slow=15,SNR=22						
KKAR	Karatay Array	6.51	356		Pn	17 49 02.4	+0.2
KKAR	Karatay Array	6.51	356		Pn	17 49 02.6	+0.4
AAK	Ala-Archa	6.58	23	P	Pn	17 49 04.7	+1.4
	SNR=16						
AAK	Ala-Archa	6.58	23		Pn	17 49 04.0	+0.6
AAK	Ala-Archa	6.58	23	P	Pn	17 49 04.8	+1.4
	comp=E,9.6nm,0.4s,baz=198,slow=6.7,SNR=35						
AAK				S	Sn	17 50 17.4	-1.2
	comp=E,6.6nm,0.6s,baz=22,slow=23,SNR=12						
AAK	Ala-Archa	6.58	23	⇑P	Pn	17 49 04.1	+0.8
	comp=E,1.8nm,0.5s						
AAK				⇑S	Sn	17 50 16.9	-1.7
	comp=E,2.1nm,0.5s						
KBK	Karagaybulak	6.75	25	P	Pn	17 49 07.1	+1.6
	SNR=22						
BOOM	Boomskoye usch	6.99	31	Pn	Pn	17 49 09.4	+0.8
CHMS	Chumysh	6.99	23	P	Pn	17 49 09.2	+0.7
	SNR=13						
USP	Ospenovka	7.16	21	P	Pn	17 49 11.5	+0.8
	SNR=9.3						
TKM2	Tokmak 2	7.21	28	P	Pn	17 49 12.7	+1.2
	SNR=42						
KDJ	Kajisay	7.28	39	Pn	Pn	17 49 13.1	+0.7
TARG	Taragay, Kyrgy	7.33	44	Pn	Pn	17 49 13.7	+0.4
SMLA	Simla	7.46	135	eP	Pn	17 49 21.3	+6.7
SMLA				IAML		17 50 37.7	
	comp=E,141nm,0.6s						
KLP	Kalpa	7.82	128	eP	Pn	17 49 26.3	+6.6
KLP				eS	Sn	17 50 47.3	-0.8
KLP				IAML		17 50 48.2	
	comp=E,151nm,0.7s						
MDOK	Medeo	8.01	33	P	Pn	17 49 22.9	+1.1
	comp=E,8.9nm,0.6s						
KUDL	Kundal	9.60	150	eP	Pn	17 49 49.7	+7.1
KUDL				eS	Sn	17 51 27.9	-2.0
KUDL				IAML		17 51 33.4	
	comp=E,111nm,2.5s						
PTH	Pithoragarh	10.41	130	eP	P	17 50 00.5	-0.2
PTH				eS	Sn	17 51 46.1	-3.5
MAKZ	Makanchi	13.04	35	Pn	Pn	17 50 26.6	+0.3
MK31	Makanchi Array	13.18	36	Pn	Pn	17 50 28.1	+0.1
MK31	Makanchi Array	13.18	36	⇑P	Pn	17 50 28.3	+0.2
	comp=E,3.0nm,1.1s,baz=222,slow=9.8,SNR=9.2						
MKAR	Makanchi Array	13.18	36	Pn	Pn	17 50 27.9	-0.2
MKAR	Makanchi Array	13.18	36	P	Pn	17 50 29.0	+1.0
	comp=E,1.5nm,0.8s,baz=220,slow=11,SNR=11						
KURBB	Kurchatov Arra	15.01	19	P	Pn	17 50 50.1	-0.5
	comp=E,0.4nm,0.7s,baz=203,slow=9.7,SNR=4.5						
AB31	Akbulak array	15.02	331		Pn	17 50 49.5	-1.1
AB31	Akbulak array	15.02	331	P	P	17 50 51.4	+0.1
	comp=E,1.0nm,0.5s,baz=143,slow=12,SNR=12						
ABKAR	Akbulak array	15.02	331		Pn	17 50 49.6	-1.0
KURK	Kurchatov	15.12	19		Pn	17 50 52.1	+0.2
EVN	Everest	15.86	118	P	P	17 51 01.1	-0.4
BVA0	Borovoye Array	16.43	359	P	Pn	17 51 11.8	+4.1
	comp=E,0.1nm,0.4s,baz=169,slow=9.8,SNR=3.9						
BVAR	Borovoye Array	16.43	359	P	P	17 51 07.3	+0.5
	comp=E,0.7nm,0.5s,baz=180,slow=8.6,SNR=5.7						
AKTO	Aktyubinsk	16.71	330	P	Pn	17 51 11.2	+0.1
	comp=E,4.8nm,0.7s,baz=143,slow=7.1,SNR=12						
AKTO	Aktyubinsk	16.71	330	⇑P	P	17 51 10.4	+0.4
	comp=E,4.6nm,0.9s						
ZALV	Zalesovo Beam	19.80	25	P	P	17 51 43.7	+0.2
	comp=E,1.0nm,0.6s,baz=240,slow=12,SNR=4.7						
	comp=E,1.0nm,0.6s						
GNI	Garni	20.91	288	P	P	17 51 54.2	-1.3
GNI				IAmb	IAmb	17 51 57.3	
	comp=Z,6.0nm,0.9s						
AKASG	Malin Array Be	32.92	309	P	P	17 53 44.8	+1.1
	comp=Z,0.5nm,0.5s,baz=82,slow=6.9,SNR=6.0						
	comp=Z,0.5nm,0.5s						
FIA1	FINESS Array S	37.42	326	P	P	17 54 23.5	+1.6
FINES	FINESS Array B	37.42	326	P	P	17 54 23.8	+1.9
	comp=Z,3.7nm,1.0s,baz=118,slow=9.0,SNR=9.6						
	comp=Z,3.7nm,1.0s						
ARCES	ARCESS Array B	41.07	338	P	P	17 54 53.5	+1.5
ARCES				IAmb	IAmb	17 55 04.0	
	comp=Z,10nm,1.2s						
ARCES	ARCESS Array B	41.07	338	P	P	17 54 54.2	+2.2
	comp=Z,0.7nm,0.4s,baz=108,slow=7.8,SNR=6.5						
	comp=Z,0.7nm,0.4s						
HFS	Hagfors	43.01	322	P	P	17 55 09.4	+1.6
	comp=Z,2.2nm,0.5s,baz=102,slow=11,SNR=17						
	comp=Z,2.2nm,0.5s						
NC405	NORSAR Array S	44.09	323	P	P	17 55 16.5	+0.1
NC602	NORSAR Array S	44.14	323	P	P	17 55 16.8	0.0
NC602				IAmb	IAmb	17 55 36.8	
	comp=Z,13nm,1.4s						
NB201	NORSAR Array S	44.29	323	P	P	17 55 17.9	-0.1
NB201				IAmb	IAmb	17 55 29.7	
	comp=Z,12nm,1.5s						
NB2	NORSAR Subarra	44.33	323	P	P	17 55 19.4	+1.1
	comp=Z,1.2nm,0.5s,baz=96,slow=7.9						
NOA	NORSAR Array B	44.33	323	P	P	17 55 19.4	+1.1
	comp=Z,1.1nm,0.5s,baz=96,slow=7.7,SNR=9.6						
	comp=Z,1.1nm,0.5s						
NC204	NORSAR Array S	44.56	323	P	P	17 55 20.7	+0.5
VSL	Villasalto	47.82	293	P	P	17 55 44.7	-1.1
TORD	Torodi Ar. Bea	65.77	269	P	P	17 57 51.1	-1.1
	comp=Z,0.4nm,0.8s,baz=49,slow=6.7,SNR=3.8						
	comp=Z,0.4nm,0.8s						
D19K	Kuna River	69.03	17	P	P	17 58 13.1	+1.1
E18K	Tukpahlearik C	69.22	19	P	P	17 58 14.1	+1.0
E18K				IAmb	IAmb	17 58 55.5	
	comp=Z,5.8nm,1.4s						
F21K	Alatna River	71.13	17	P	P	17 58 25.6	+0.9
F21K				IAmb	IAmb	17 58 27.4	
	comp=Z,5.7nm,1.4s						
PSA00	Pilbara Seismi	73.95	133	P	P	17 58 41.9	0.0
PSA00				IAmb	IAmb	17 59 00.4	
	comp=Z,7.6nm,1.4s						
I28M	Miner Creek	75.45	13	P	P	17 58 50.5	+0.4
I28M				IAmb	IAmb	17 59 11.9	
	comp=Z,3.9nm,1.4s						
H31M	Peel River	76.04	10	P	P	17 58 54.2	+0.9
H31M				IAmb	IAmb	17 58 55.1	
	comp=Z,2.8nm,0.8s						
WRA	Warramunga Arr	82.01	122	P	P	17 59 25.7	-0.6
	comp=Z,0.4nm,0.7s,baz=323,slow=5.1,SNR=5.1						
	comp=Z,0.4nm,0.7s						
ASAR	Alice Springs	84.28	125	P	P	17 59 38.0	+0.1
	comp=Z,0.4nm,0.6s,baz=316,slow=4.9,SNR=11						
	comp=Z,0.4nm,0.6s						

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*CATAC **14** 18:00:56.9±0.5, 12˚N±3˚×8˚8W±˚, h32^{km}±3^{km}, M3.6/18, MLv3.6/18, Error ellipse: s-maj=7.7km s-min=6.1km az=35.7, confirmed*

*SNET **14** 18:00:59.4±1.1, 12.°42N×87.°76W, h16^{km}±13^{km}, ML3.3*

ISC 14 18:00:56.2±1.6, **12.°29N**±0.°07×**87.°55W**±0.°04, **h26**^{km}±13^{km}, **n36**, σ**0.^{s}67**/48, **15D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIN	San Cristobal	0.64	50	S	Sn	18 01 21.0	+2.1
CRIN	San Cristobal	0.64	50	⇓P	Pn	18 01 10.5	+0.9
PKGN	Cerro Pekin	0.67	56	⇓P	Pn	18 01 10.5	+0.4
PKGN				S	Sn	18 01 20.9	+1.1
ALEN	Leon	0.68	76	P	Pb	18 01 09.8	+0.2
ALEN	Leon	0.68	76	S	Sn	18 01 19.4	-0.6
POTN	Potosi Cosigui	0.71	3	⇓P	Pn	18 01 10.7	+0.1
POTN				S	Sn	18 01 21.3	+0.7
TEL3	Telica 3	0.74	68	⇓P	Pn	18 01 11.2	+0.2
QUEN	Al S del Volca	0.74	66	⇓P	Pn	18 01 11.4	+0.4
TELN	Telica	0.77	66	⇓P	Pb	18 01 10.2	-0.8
TELN				S	Sn	18 01 21.7	-0.5
HOYN	Al Sur del Vol	0.77	66	⇓P	Pn	18 01 11.4	0.0
HOYN				S	Sn	18 01 22.5	+0.3
PACN	Al O del Volca	0.77	74	P	Pn	18 01 11.6	+0.3
PACN				S	Sn	18 01 23.0	+0.9
HERN	Volcan Telica	0.77	65	S	Sn	18 01 22.5	+0.2
HERN	Volcan Telica	0.77	65	⇓P	Pb	18 01 11.4	+0.3
POLN	Al Sur del Vol	0.80	63	⇓P	Pb	18 01 11.2	-0.4
POLN				S	Sn	18 01 22.8	-0.2
CNGA	Al SSO del Vol	0.85	76	⇓P	Pn	18 01 12.4	-0.1
CNGA				S	Sn	18 01 24.0	-0.2
CNGN	Cerro Negro	0.86	76	S	Sn	18 01 24.6	+0.2
CNGN	Cerro Negro	0.86	76	⇓P	Pn	18 01 12.5	-0.1
COPN	Copaltepe	0.94	96	⇓P	Pn	18 01 13.7	0.0
MOMN	Momotombo	0.99	83	⇓P	Pn	18 01 14.4	-0.1
MOMN				S	Sb	18 01 27.7	+0.3
CNCH	Conchagua	1.02	344	eP	Pn	18 01 14.8	-0.2
CNCH				eS	Sb	18 01 28.1	-0.3
CNCH				IAML		18 01 29.9	
	comp=Z,1μm,0.1s						
MOM2	El Cardon	1.05	82	P	Pn	18 01 14.9	-0.3
MOM2				S	Sb	18 01 29.4	+0.3
LCND	La Caada	1.07	342	eP	Pn	18 01 15.5	0.0
LCND				IAML		18 01 33.5	
	comp=Z,407nm,0.2s						
SAPS	Ciudad Sandino	1.12	96	S	Sn	18 01 30.6	-0.3
BLLM	Bellamira	1.33	330	eP	Pn	18 01 19.3	+0.1
LCY	Lacayo	1.34	327	eP	Pn	18 01 19.8	+0.5
LIMN	Finca el Limon	1.39	56	P	Pn	18 01 19.7	-0.3
PACA	Pacayal	1.40	327	eP	Pn	18 01 20.4	+0.3
PACA				eS	Sn	18 01 37.3	-0.4
PACA				IAML		18 01 40.1	
	comp=Z,2μm,0.2s						
NANN	Nandasmo	1.44	104	S	Sn	18 01 39.1	+0.5
NANN	Nandasmo	1.44	104	P	Pn	18 01 21.1	+0.5
RCVN	Varillal2	1.84	46	S	Sn	18 01 48.1	-0.7
RCVN	Varillal2	1.84	46	⇓P	Pn	18 01 26.6	+0.3
BOAB	BOACO BROADBAN	1.85	85	P	Pn	18 01 25.7	-0.5
BOAB	BOACO BROADBAN	1.85	85	S	Sn	18 01 47.5	-1.2
RCPN	Sur Rio San Ju	1.88	49	S	Sn	18 01 48.7	-0.9
RCPN	Sur Rio San Ju	1.88	49	⇓P	Pn	18 01 25.7	-1.0
JAYA	Jayaque - finc	2.30	306	eP	Pn	18 01 33.8	+1.3
JAYA				eS	Sn	18 01 58.6	-1.5
JAYA				IAML		18 02 03.5	
	comp=Z,116nm,0.2s						

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*DJA **14** 18:06:02.4±0.4, 2˚N±3˚×9˚9E±˚, h155^{km}±4^{km}, M4.0/13, mb4.3/1, MLv3.8/13*

*IDC **14** 18:06:02.6±0.9, 2.°02N×99.°36E, h150^{km}±5^{km}, mb3.5/7, mbtmp3.9/8, Error ellipse: s-maj=54.5km s-min=12.2km az=56.0*

ISC 14 18:06:02.2±0.8, **2.°01N**±0.°05×**99.°28E**±0.°07, **h150**^{km}, **n18**, σ**1.^{s}37**/25, **mb3.7**/7, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBSI	Sibolga	0.60	221	P	Pn	18 06 25.9	+1.8
PSI	Prapat	0.86	336	P	Pn	18 06 27.3	+1.2
	39nm,0.3s,baz=154,slow=8.6,SNR=25						
PSI				S	Sn	18 06 44.5	+0.2
	28nm,0.5s,baz=271,slow=19,SNR=19						
MNSI	Mandailing Nat	1.24	166	P	Pn	18 06 30.9	+1.7
MNSI				S	Sn	18 06 51.9	+2.0
GSI	Gunungsitoli	1.84	248	P	Pn	18 06 37.4	+1.8
GSI				S	Sn	18 07 02.3	+1.2
BKNI	Bangkinang	2.42	134	P	Pn	18 06 43.3	+0.9
BKNI				S	Sn	18 07 14.4	+1.0
PPI	Padang Panjang	2.69	156	P	Pn	18 06 44.4	-1.3
SISI	Saibi	3.32	183	P	Pn	18 06 52.5	-1.2
SISI				S	Sn	18 07 31.5	-2.1
MLSI	Meulaboh, Aceh	3.65	308	P	Pn	18 06 59.0	+1.1
MLSI				S	Sn	18 07 40.1	-1.0
LHMI	Lhok Sumawe	3.96	324	P	Pn	18 07 02.7	+0.7
BSI	Banda Aceh	5.28	311	P	Pn	18 07 20.0	+0.7
BSI				S	Sn	18 08 16.3	-3.2
CMAR	Chiang Mai Arr	16.35	359	P	Pn	18 09 42.5	-0.8
	0.4nm,0.5s,baz=182,slow=13,SNR=4.1						
FITZ	Fitzroy Crossi	32.76	129	P	P	18 12 20.3	-0.8
	1.2nm,0.5s,baz=310,slow=7.6,SNR=10						
	1.2nm,0.5s						
WRA	Warramunga Arr	40.73	124	P	P	18 13 28.1	-0.5
	1.2nm,0.5s,baz=301,slow=9.1,SNR=22						
	1.2nm,0.5s						
ASAR	Alice Springs	42.25	129	P	P	18 13 41.4	+0.3
	0.6nm,0.5s,baz=302,slow=7.9,SNR=44						
	0.6nm,0.5s						
MKAR	Makanchi Array	47.00	344	P	P	18 14 18.7	+0.4
	0.7nm,0.4s,baz=152,slow=8.0,SNR=13						
	0.7nm,0.4s						
KURBB	Kurchatov Arra	51.53	343	P	P	18 14 52.8	+0.2
	1.1nm,0.6s,baz=161,slow=7.4,SNR=14						
	1.1nm,0.6s						
ZALV	Zalesovo Beam	53.12	349	P	P	18 15 04.6	+0.3
	2.3nm,0.5s,baz=166,slow=6.6,SNR=9.7						
	2.3nm,0.5s						
BVAR	Borovoye Array	56.20	339	P	P	18 15 26.3	-0.2
	0.4nm,0.4s,baz=134,slow=8.3,SNR=3.6						
	0.4nm,0.4s						

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*NEIC **14** 18:07:51.8±2.5, 14.°34N±0.°05×93.°28W±0.°05, h10^{km}±2^{km}, mb4.0/29, Md4.2/18(MEX), Error ellipse: s-maj=9.3km s-min=8.5km az=128.0*

*GCG **14** 18:07:53.7±2.5, 14.°05N×93.°29W, h36^{km}±999^{km}, MD4.6, ML4.3, MW4.1*

*CATAC **14** 18:07:54.6±0.7, 14˚N±3˚×9˚3W±˚, h7^{km}±4^{km}, M4.7/10, mb4.4/1, MLv4.9/10, Error ellipse: s-maj=7.6km s-min=4.3km az=17.6, confirmed*

*MEX **14** 18:07:55.1±0.5, 14.°32N×93.°31W, h6^{km}±12^{km}, MD4.4*

*IDC **14** 18:08:03.2±4.3, 14.°54N×92.°81W, h92^{km}±39^{km}, mb3.6/7, mbtmp3.9/9, Error ellipse: s-maj=90.0km s-min=22.0km az=35.0*

ISC 14 18:07:52.4±1.5, **14.°37N**±0.°05×**93.°19W**±0.°03, **h10**^{km}±9^{km}, **n121**, σ**2.^{s}17**/147, **mb3.9**/8, **5C-3D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.04	59		Pn	18 08 13.8	+0.7
THIG					Sn	18 08 27.7	-0.1
THIG		1.04	59	eP	Pn	18 08 13.8	+0.7
THIG				eS	Sn	18 08 27.7	-0.1
THIG		1.04	59	⇑iP	Pn	18 08 14.6	+1.5
THIG				IAML		18 09 11.2	
	comp=Z,7μm,0.7s						
SMCA	Catarina	1.18	66	⇑iP	Pn	18 08 16.6	+1.5
SMCA				IAML		18 09 17.4	
	comp=Z,4μm,1.0s						
PATR	El Naranjo	1.19	51	eP	Pn	18 08 16.0	+0.7
PATR				eS	Sn	18 08 32.4	+0.8
PAVE	Pavencul	1.28	50	eP	Pb	18 08 17.7	+1.0
PAVE				eS	Sn	18 08 35.4	+1.5
PCIG		1.33	359		Pg	18 08 17.6	-0.4
PCIG					Sb	18 08 33.1	-1.5
PCIG		1.33	359	eP	Pg	18 08 17.6	-0.4
PCIG				i S	Sb	18 08 33.8	-0.7
RTAL	Retalhuleu	1.46	84		Pg	18 08 20.1	-0.3
RTAL	Retalhuleu	1.46	84	eP	Pg	18 08 19.8	-0.6
RTAL				eS	Sg	18 08 39.5	+0.2
RTAL	Retalhuleu	1.46	84	P	Pg	18 08 20.2	-0.2
SOKI	Kika Raxquin	1.79	75	⇑iP	Pb	18 08 25.6	+0.1
SOKI				IAML		18 09 29.1	
	comp=Z,4μm,0.7s						
STG0	El Palmar, Qui	1.79	88	⇓iP	Pn	18 08 08.7	-15
STG0				IAML		18 09 19.9	
	comp=Z,5μm,0.5s						
HUEH	Huehuetenango	1.88	60		Pb	18 08 27.3	+0.2
HUEH	Huehuetenango	1.88	60	eP	Pb	18 08 27.0	-0.1
HUEH				eS	Sb	18 08 50.9	+0.1
HUEH	Huehuetenango	1.88	60	⇓iP	Pg	18 08 30.9	+2.3
HUEH				IAML		18 09 38.6	
	comp=Z,5μm,0.6s						
HUEH	Huehuetenango	1.88	60	P	Pg	18 08 28.3	-0.3
CCIG	Comitan	2.16	28		Pb	18 08 32.1	+0.4
CCIG	Comitan	2.16	28	eP	Pb	18 08 32.0	+0.3
CCIG				eS	Sb	18 08 59.2	+0.6
CCIG	Comitan	2.16	28	i P	Pg	18 08 32.6	-1.2
CCIG	Comitan	2.16	28	⇑P	Pg	18 08 32.8	-1.1
TGBT	Tuxtla Gutierr	2.40	2	eP	Pb	18 08 35.5	-0.1
TGBT				eS	Sb	18 09 06.1	+0.8
TGIG		2.40	2		Pb	18 08 35.3	-0.5
TGIG					Sn	18 09 03.0	+1.8
TGIG		2.40	2	eP	Pb	18 08 35.3	-0.5
TGIG				eS	Sb	18 09 05.1	-0.3
TGIG		2.40	2	⇑iP	Pb	18 08 35.3	-0.5
TGIG				IAML		18 09 44.3	
	comp=Z,2μm,0.9s						
FG8	Yepocapa, Chim	2.55	92	i P	Pn	18 08 29.4	-4.6
FG16	Alotenango, Sa	2.60	92	i P	Pn	18 08 30.8	-3.9
	comp=Z,4μm,0.4s						
FAME	Alcaldia de Sa	3.12	99	S	Sn	18 09 19.1	0.0
FAME	Alcaldia de Sa	3.12	99	P	Pn	18 08 42.7	+0.9
HUIG	Huatulco	3.14	297		Pn	18 08 40.7	-1.3
HUIG	Huatulco	3.14	297	eP	Pn	18 08 40.7	-1.3
HUIG	Huatulco	3.14	297	i P	Pn	18 08 41.5	-0.6
HUIG				IAML		18 10 12.6	
	comp=Z,97nm,0.6s						
NUBE	Las Nubes	3.34	98	P	Pn	18 08 45.8	+1.0
NUBE	Las Nubes	3.34	98	S	Sn	18 09 24.4	-0.3
CEVE	Cerro Verde	3.50	98	S	Sn	18 09 29.0	+0.1
CEVE	Cerro Verde	3.50	98	P	Pn	18 08 48.0	+0.8
JAYA	Jayaque - finc	3.70	101	⇓iP	Pn	18 08 50.7	+0.8
JAYA	Jayaque - finc	3.70	101	P	Pn	18 08 50.3	+0.4
JAYA	Jayaque - finc	3.70	101	S	Sn	18 09 32.1	-1.5
MTO3	Montecristo	3.71	89	Pn	Pn	18 08 50.9	+0.9
MTO3	Montecristo	3.71	89	S	Sn	18 09 35.9	+2.0
MTO3	Montecristo	3.71	89	P	Pn	18 08 52.0	+1.9
ESQI	Esquipulas	3.73	87	Pn	Pn	18 08 50.6	+0.4
TUIG	Tuzandepetl	3.83	342	eP	Pn	18 08 51.5	0.0
TUIG				eS	Sn	18 09 36.5	-0.2
PETF	Flores	4.08	51	Pn	Pn	18 08 57.0	+2.1
PETF	Flores	4.08	51	eP	Pn	18 08 56.9	+1.9
PETF				i S	Sn	18 09 43.0	+0.1
PETF	Flores	4.08	51	P	Pn	18 08 59.1	+4.1
PEIG	Puerto Escondi	4.15	293	eP	Pn	18 08 55.7	-0.2
PEIG				eS	Sn	18 09 35.2	-9.3
VHO	Vista Hermosa	4.34	309	eP	Pn	18 09 00.3	+1.6
VHO				eS	Sn	18 09 50.7	+1.1

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YOIG  Yosondua            4.87 301 eP    Pn      18 09 06.1  0.0
YOIG                               eS    Sn      18 10 08.1 +5.3
PNIG  Pinotepa            5.17 294 eP    Pn      18 09 09.6 -0.4
PNIG                               eS    Sn      18 10 04.9 -4.8
TOIG  Toxpalan            5.25 315 eP    Pn      18 09 12.8 +1.7
TOIG                               eS    Sn      18 10 13.5 +1.6
HLIG  Huajuapan de L      5.61 308 eP    Pn      18 09 17.8 +1.5
HLIG                               eS    Sn      18 10 19.1 -1.8
TPIG  Tehuac#an           5.68 316 eS    Sn      18 10 28.9 +6.4
TGUH  Tegucigalpa,Un      5.75  92  Pn   Pn      18 09 19.6 +1.7
FTIG  Fresnillo de T      5.91 307 eP    Pn      18 09 23.1 +2.8
FTIG                               eS    Sn      18 10 19.1 -9.1
MGIG  Malinaltepec        5.96 299 eP    Pn      18 09 23.4 +2.3
TLIG  Tlapa               6.07 302  Pn   Pn      18 09 21.8 -0.6
TLIG  Tlapa               6.07 302 eP    Pn      18 09 17.7 -4.7
TLIG                               eS    Sn      18 10 31.6 -0.4
TLIG  Tlapa               6.07 302  P    Pn      18 09 27.5 +5.1
TLIG  Tlapa               6.07 302  S    Sn      18 10 40.7 +8.7
CRIG  Cruz Grande         6.19 293 eP    Pn      18 09 23.0 -1.0
CRIG                               eS    Sn      18 10 27.1 -7.8
CRIN  San Cristobal       6.20 105  Pn   Pn      18 09 24.9 +0.7
HERN  Volcan Telica       6.43 105  Pn   Pn      18 09 29.0 +1.7
CNGN  Cerro Negro         6.58 106  Pn   Pn      18 09 31.1 +1.7
DAIG  Los Arroyos         6.76 294 eP    Pn      18 09 33.4 +1.6
DAIG                               eS    Sn      18 10 48.9 +0.1
PBCV  Popocatepetl        6.89 312 eP    Pn      18 09 32.6 -1.4
PBCV                               eS    Sn      18 10 57.0 +4.4
PBXN  Popocatepetl        6.98 312 eS    Sn      18 10 49.0 -6.0
PPM   Popocatepetl        7.00 313 eP    Pn      18 09 39.1 +3.6
PPM                                eS    Sn      18 10 56.9 +1.5
MEIG  Mezcala             7.12 301 eP    Pn      18 09 38.9 +2.1
CXUV  Coxquihui           7.14 325 eP    Pn      18 09 39.6 +2.6
CXUV                               eS    Sn      18 10 52.7 -5.6
YAIG  Yautepec            7.19 309 eP    Pn      18 09 35.0 -2.8
YAIG                               eS    Sn      18 11 00.2 +0.6
PLIG  Platanillo          7.26 304 eP    Pn      18 09 40.2 +1.5
PLIG                               eS    Sn      18 10 58.5 -2.8
CAIG  El Cayaco           7.32 292 eP    Pn      18 09 41.4 +2.0
MYIG  Merida              7.33  26 eP    Pn      18 09 42.1 +2.5
MYIG                               eS    Sn      18 11 04.4 +1.5
UNM   Universidad Na      7.56 312  Pn   Pn      18 09 43.0 -0.1
AOVM  Tlapan              7.63 311 eS    Sn      18 11 10.5 -0.4
ARIG  Puente Sto Nin      7.90 300 eP    Pn      18 09 48.2 +0.8
ARIG                               eS    Sn      18 11 19.9 +3.0
ZIIG  Zihuatanejo         8.58 293 eP    Pn      18 09 59.7 +2.8
JTS   Las Juntas de       9.01 116  P    Pn      18 10 09.0 +6.3
      comp=Z,3.3nm,0.5s,baz=353,slow=19,SNR=1.9
MOIG  Morelia             9.29 306  Pn   Pn      18 10 09.0 +2.2
LCR2  La Lucha 2         10.09 116  Pn   Pn      18 10 18.2 +0.5
ZAIG  Zacatecas          12.20 315  Pn   Pn      18 10 45.8 -0.8
SOR   Soroa              12.78  48       Pn      18 10 55.1 +0.9
833A  Chaparral WMA,     15.04 338  Pn   Pn      18 11 23.5 -1.5
HKT   Hockley            15.70 351  Pn   Pn      18 11 34.1 +0.4
MLDN  Muldoon            15.75 347  Pn   Pn      18 11 34.2 -0.2
HNDO  Hondo              16.10 341  Pn   Pn      18 11 39.2 +0.2
HNDO                                IAmb IAmb    18 11 52.5
      comp=Z,19nm,1.5s
DRIO  Del Rio            16.48 337  Pn   Pn      18 11 41.9 -1.9
CHIV  Chivirico          16.97  68  Pn   Pn      18 11 47.8 -2.3
CHIV                                IAmb IAmb    18 12 03.2
      comp=Z,15nm,1.2s
SAND  Sanderson          17.57 333       Pn      18 11 56.2 -1.4
SAND                                IAmb IAmb    18 12 07.9
      comp=Z,16nm,1.2s
BRDY  Brady              17.66 343       Pn      18 11 57.5 -1.2
TX31  Lajitas Ar. Si     17.77 329  P    Pn      18 11 59.5 -0.6
TX31                                IAmb IAmb    18 12 15.8
      comp=Z,14nm,1.4s
TXAR  Lajitas Array      17.77 329  P    P       18 12 05.1 +4.2
      comp=Z,2.6nm,1.1s,baz=149,slow=10,SNR=14
OZNA  Ozona              18.02 337  P    Pn      18 12 02.3 -0.9
OZNA                                IAmb IAmb    18 12 09.0
      comp=Z,9.6nm,1.0s
ALPN  Alpine             18.61 331  P    P       18 12 08.2 -2.0
ALPN                                IAmb IAmb    18 12 21.9
      comp=Z,17nm,1.4s
Z38A  Mt. Pleasant       18.88 355       P       18 12 11.7 -1.2
MNHN  Monahans           19.04 334       P       18 12 15.1 +0.2
MNHN                                IAmb IAmb    18 12 20.5
      comp=Z,6.0nm,0.8s
PECS  Pecos              19.55 332       P       18 12 18.5 -2.0
VHRN  Van Horn           19.61 328       P       18 12 19.4 -1.8
VHRN                                IAmb IAmb    18 12 32.9
      comp=Z,8.6nm,1.2s
ODSA  Odessa             19.63 336  P    P       18 12 19.3 -2.0
ODSA                                IAmb IAmb    18 12 32.2
      comp=Z,9.6nm,0.6s
152A  Waverly Hall       19.79  22  P    P       18 12 22.4 -0.6
152A                                IAmb IAmb    18 12 32.5
      comp=Z,16nm,1.4s
APMT  Aspermont          19.90 343  P    P       18 12 22.3 -1.9
APMT                                IAmb IAmb    18 12 38.1
      comp=Z,5.2nm,0.7s
POST  Post               20.09 339       P       18 12 24.1 -2.2
POST                                IAmb IAmb    18 12 39.2
      comp=Z,6.2nm,0.7s
CLNB  Carlsbad           20.31 333  P    P       18 12 27.6 -1.2
HTMS  Hat Mesa           20.39 334  P    P       18 12 27.2 -2.4
MNTX  Cornudas Mount     20.55 329       P       18 12 28.5 -2.8
X34A  Smith Ranch, M     20.58 349  P    P       18 12 29.2 -2.3
X34A                                IAmb IAmb    18 12 34.8
      comp=Z,8.3nm,0.8s
Y52A  Lilburn            21.10  22  P    P       18 12 36.2 -1.0
FLOC  Florencia          21.49 125  P    P       18 12 40.5 -1.0
RUSC  La Rusia           21.49 111  P    P       18 12 39.8 -2.3
RUSC                                IAmb IAmb    18 12 49.5
      comp=Z,13nm,1.2s
SMWD  Samnorwood         21.60 344  P    P       18 12 42.1 -0.5
AMTX  Amarillo           21.82 341  P    P       18 12 42.9 -2.1
SDV   Santo Domingo      22.75 101  P    P       18 12 53.2 -2.0
      comp=Z,1.9nm,0.3s,baz=296,slow=18,SNR=3.6
      comp=Z,1.9nm,0.3s
PDAR  Pinedale Array     31.62 337  P    P       18 14 17.5 +1.6
      comp=Z,0.3nm,0.3s,baz=161,slow=11,SNR=2.3
      comp=Z,0.3nm,0.3s
NVAR  Mina Array Bea     32.67 322  P    P       18 14 25.8 +0.7
      comp=Z,0.9nm,0.6s,baz=139,slow=9.4,SNR=7.8
      comp=Z,0.9nm,0.6s
YKA   Yellowknife Ar     50.41 347  P    P       18 16 51.2 +1.5
      comp=Z,2.2nm,0.7s,baz=153,slow=7.1,SNR=8.9
      comp=Z,2.2nm,0.7s
ILAR  Eielson Array      62.05 337  P    P       18 18 14.4 +1.5
      comp=Z,0.6nm,0.8s,baz=135,slow=4.0,SNR=5.8
      comp=Z,0.6nm,0.8s
EKA   Eskdalemuir Ar     78.34  36  P    P       18 19 51.1 -1.8
      comp=Z,0.4nm,0.6s,baz=306,slow=7.7,SNR=1.5
      comp=Z,0.4nm,0.6s
TIXI  Tiksi              89.66 348  P    P       18 20 50.0 -0.2
      comp=Z,0.9nm,0.5s,baz=43,slow=7.3,SNR=4.2
      comp=Z,0.9nm,0.5s
CMAR  Chiang Mai Arr    145.26 340  PKPbc PKPbc  18 27 31.0 -0.1
      comp=Z,1.3nm,0.7s,baz=338,slow=2.2,SNR=10
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NEIC ***14*** *18:08:18.8±2.5, 14°.12N±0°.09×93°.2W±0°.1, h10^{km}±2^{km}, mb4.7/128, Error ellipse: s-maj=18.4km s-min=13.2km az=235.0*

MEX ***14*** *18:08:27.1±0.7, 14°.23N×93°.32W, h7^{km}±55^{km}, MD4.4*

IDC ***14*** *18:08:35.4±3.1, 14°.55N×92°.84W, h87^{km}±27^{km}, mb3.9/17, mbtmp4.3/19, Error ellipse: s-maj=28.6km s-min=13.1km az=47.0*

ISC 14 18:08:21.2±0.6**, 14°.24N**±0°.05×**93°.26W**±0°.04**, h10^{km}, n162,** σ**2ˢ.31**/124**, mb4.7**/65**, Near coast of Chiapas**

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Code  Station Name        Δ°   AZ°    Phase ID        Time      Res
                                    Op     ISC      h  m  s    ISC
THIG                      1.17  55 eP    Pg      18 08 46.2 +2.5
THIG                               eS    Sn      18 09 02.1 +2.5
PATR  El Naranjo          1.32  49 eP    Pg      18 08 49.2 +2.6
PATR                               eS    Sg      18 09 06.4 +2.6
CHUJ  Union Juarez        1.40  53 eS    Sg      18 09 06.9 +0.6
PAVE  Pavencul            1.41  48 eP    Pg      18 08 49.7 +1.3
PAVE                               eS    Sg      18 09 07.3 +0.6
PCIG                      1.46   2 eP    Pg      18 08 50.0 +0.9
PCIG                               eS    Sb      18 09 08.7 +1.7
RTAL  Retalhuleu          1.54  79  Pn   Pn      18 08 43.1 -5.7
RTAL  Retalhuleu          1.54  79 eP    Pg      18 08 52.2 +1.4
RTAL                               eS    Sg      18 09 11.2 +0.3
HUEH  Huehuetenango       2.01  58  Pn   Pn      18 08 53.1 -2.3
HUEH  Huehuetenango       2.01  58 eS    Sg      18 09 24.2 -1.7
HUEH  Huehuetenango       2.01  58  S    Pn      18 08 53.4 -2.0
CCIG  Comitan             2.30  28  Pn   Pn      18 08 57.9 -1.5
CCIG  Comitan             2.30  28 eP    Pg      18 09 03.1 -2.3
CCIG                               eS    Sb      18 09 32.0 +0.5
CCIG  Comitan             2.30  28 i S   Pn      18 09 02.7 +3.3
TGIG                      2.53   3 eS    Sb      18 09 37.2 -0.6
HUIG  Huatulco            3.14 299 eS    Pn      18 09 11.5 +0.7
HUIG  Huatulco            3.14 299       Pn      18 09 11.5 +0.7
MTO3  Montecristo         3.78  87  Pn   Pn      18 09 16.2 -3.6
ESQI  Esquipulas          3.81  85  Pn   Pn      18 09 16.9 -3.2
PEIG  Puerto Escondi      4.14 295 eS    Sn      18 10 11.2 -1.9
PETF  Flores              4.21  50  Pn   Pn      18 09 23.1 -2.5
YOIG  Yosondua            4.88 303 eP    Pb      18 09 41.9 -5.1
PNIG  Pinotepa            5.16 295 eP    Pn      18 09 42.8 +4.2
PNIG                               eS    Sn      18 10 34.8 -3.4
TGUH  Tegucigalpa,Un      5.81  91  Pn   Pn      18 09 45.6 -2.0
HERN  Volcan Telica       6.46 104  Pn   Pn      18 09 54.7 -1.8
CNGN  Cerro Negro         6.62 104  Pn   Pn      18 09 55.9 -2.8
MGAN  Managua             7.14 106  Pn   Pn      18 09 59.7 -6.1
UNM   Universidad Na      7.60 313  Pn   Pn      18 10 14.1 +1.8
BOAB  BOACO BROADBAN7.60 103        Pn   Pn      18 10 06.6 -5.5
ACON  Acoyapa             8.20 105  Pn   Pn      18 10 17.5 -2.8
ESPN  Las Esperanzas      8.96 102  Pn   Pn      18 10 27.3 -3.4
JTS   Las Juntas de       9.02 115  Pn   Pn      18 10 24.9 -6.6
JTS   Las Juntas de       9.02 115  P    Pn      18 10 38.1 +6.6
      7.7nm,0.6s,baz=278,slow=19,SNR=3.7
JTS                                 S    Sn      18 12 19.3 +6.0
      3.4nm,0.4s,baz=234,slow=22,SNR=0.7
SOR   Soroa              12.91  47  Pn   Pn      18 11 23.2 -1.7
833A  Chaparral WMA,     15.13 339  Pn   Pn      18 11 55.2 +0.1
833A                                IAmb IAmb    18 12 10.7
      comp=Z,47nm,0.9s
735A  Kenedy             15.14 345       Pn      18 11 53.9 -1.4
HKT   Hockley            15.81 352  Pn   Pn      18 12 04.5 +0.5
MLDN  Muldoon            15.86 348  Pn   Pn      18 12 05.1 +0.4
061Z  Ochoppi            16.37  43       Pn      18 12 09.7 -1.4
DRIO  Del Rio            16.57 337       Pn      18 12 14.0 +0.2
CHIV  Chivirico          17.08  68       P       18 12 18.4 -3.5
CHIV                                IAmb IAmb    18 12 46.8
      comp=Z,40nm,1.3s
HPIG                     17.14 319       Pn      18 12 20.6 -0.5
JCT   Junction City      17.25 341       Pn      18 12 22.1 -0.2
SAND  Sanderson          17.65 334       Pn      18 12 27.3 -0.1
SAND                                IAmb IAmb    18 12 38.6
      comp=Z,51nm,1.2s
451A  Vernon             17.70  22       P       18 12 28.0 -0.8
451A                                IAmb IAmb    18 12 38.7
      comp=Z,113nm,1.2s
BRDY  Brady              17.76 344       P       18 12 29.0 -0.5
553A  Crawfordville      17.84  26       P       18 12 28.9 -1.4
TX31  Lajitas Ar. Si     17.84 329       Pn      18 12 29.4 -0.4
TXAR  Lajitas Array      17.84 329       Pn      18 12 29.4 -0.4
TXAR  Lajitas Array      17.84 329  P    P       18 12 37.3 +6.9
      comp=Z,8.5nm,1.1s,baz=148,slow=7.4,SNR=16
OZNA  Ozona              18.11 338       Pn      18 12 31.8 -1.2
ALPN  Alpine             18.69 331  P    P       18 12 38.2 -1.6
Z41A  Richland Creek     18.94   1  P    P       18 12 39.8 -2.6
Z41A                                IAmb IAmb    18 12 53.4
      comp=Z,26nm,0.7s
SGCY  Sterling City      19.01 339  P    P       18 12 38.4 -4.9
SGCY                                IAmb IAmb    18 12 55.2
      comp=Z,53nm,1.1s
FW06  Azle               19.05 349  P    P       18 12 38.9 -4.8
FW06                                IAmb IAmb    18 12 56.5
      comp=Z,22nm,0.6s
ABTX  Abilene, Hawle     19.20 343  P    P       18 12 41.3 -4.1
TIGA  Tifton             19.28  26  P    P       18 12 42.7 -3.5
TIGA                                IAmb IAmb    18 12 52.5
      comp=Z,61nm,1.1s
SN05  Snyder 5           19.81 341  P    P       18 12 49.5 -2.6
SN05                                IAmb IAmb    18 13 04.4
      comp=Z,49nm,1.2s
152A  Waverly Hall       19.93  22  P    P       18 12 49.9 -3.3
SN07  Snyder 07          20.01 341  P    P       18 12 51.6 -2.6
SN07                                IAmb IAmb    18 12 56.6
      comp=Z,24nm,0.7s
X40A  Basin Creek Fa     20.16   1  P    P       18 12 52.6 -3.1
POST  Post               20.19 340       P       18 12 54.2 -1.9
POST                                IAmb IAmb    18 13 12.0
      comp=Z,26nm,1.0s
UALR  University of      20.46   2  P    P       18 12 55.4 -3.6
UALR                                IAmb IAmb    18 13 11.8
      comp=Z,36nm,1.3s
OXF   Oxford             20.48   9  P    P       18 12 55.7 -3.5
OXF                                 IAmb IAmb    18 13 23.5
      comp=Z,34nm,0.9s
CLN7  Carlsbad 7         20.49 334  P    P       18 12 57.0 -2.6
DKNS  Dickens            20.55 342  P    P       18 12 57.1 -3.0
MNTX  Cornudas Mount     20.62 329  P    P       18 12 58.2 -2.6
ROSC  El Rosal           20.86 115  P    P       18 12 59.2 -4.8
ROSC                                IAmb IAmb    18 13 35.3
      comp=Z,26nm,0.9s
ROSC  El Rosal           20.86 115  P    Pn      18 13 09.9 +3.4
      comp=Z,18nm,0.8s,baz=293,slow=2.5,SNR=6.6
      comp=Z,18nm,0.8s
WHAR  Wooly Hollow       20.98   2  P    P       18 13 01.5 -3.1
PLAL  Pickwick Lake      21.18  12  P    P       18 13 03.4 -3.3
FPAL  Fort Paine         21.36  18  P    P       18 13 05.4 -3.4
SDV   Santo Domingo      22.79 101  P    P       18 13 27.6 +3.2
      comp=Z,12nm,0.7s,baz=292,slow=4.6,SNR=9.3
      comp=Z,12nm,0.7s
U49A  Red Boiling Sp     23.17  15  P    P       18 13 25.2 -2.7
U49A                                IAmb IAmb    18 13 48.9
      comp=Z,40nm,1.1s
SBM   South Baldy        23.35 330  P    P       18 13 29.0 -1.3
LENM  Lemitar            23.40 330  P    P       18 13 28.8 -1.7
S51A  Beattyville        24.84  19  P    P       18 13 41.8 -2.0
S51A                                IAmb IAmb    18 14 14.4
      comp=Z,21nm,1.0s
BAUV  El Baul            25.25  99       P       18 13 43.7 -4.0
SSFO  Shawnee State      25.93  18  P    P       18 13 51.8 -1.9
SSFO                                IAmb IAmb    18 14 24.4
      comp=Z,19nm,1.0s
PV01  Paradox Valley     27.40 333  P    P       18 14 04.5 -2.7
PV01                                IAmb IAmb    18 14 17.2
      comp=Z,12nm,1.1s
PV15  Paradox Valley     27.53 333  P    P       18 14 05.3 -3.1
PV15                                IAmb IAmb    18 14 21.5
      comp=Z,22nm,1.4s
PV16  Nyswonger Mesa     27.70 333  P    P       18 14 06.5 -3.3
PV16                                IAmb IAmb    18 14 17.1
      comp=Z,21nm,1.4s
PV20  West Nyswonger     27.74 333  P    P       18 14 07.6 -2.7
PV20                                IAmb IAmb    18 14 24.3
      comp=Z,20nm,1.1s
PV04  Paradox Valley     27.76 333  P    P       18 14 08.8 -1.6
PV04                                IAmb IAmb    18 14 29.2
      comp=Z,15nm,0.8s
W13A  Hualapai Mount     27.86 322       P       18 14 09.7 -1.7
KNB   Kanab              28.61 326  P    P       18 14 16.0 -2.0
KNB                                 IAmb IAmb    18 14 36.4
      comp=Z,10nm,1.1s
ECSD  EROS Data Cent     29.53 355       P       18 14 24.2 -1.6
K22A  Casper             30.54 341       P       18 14 32.8 -2.2
K22A                                IAmb IAmb    18 14 47.8
      comp=Z,7.2nm,0.9s
BW06  Boulder Array      31.71 337  P    P       18 14 43.3 -2.1
PDAR  Pinedale Array     31.71 337  P    P       18 14 49.1 +3.8
      comp=Z,1.1nm,0.8s,baz=134,slow=11,SNR=5.6
PDAR                                PcP  PcP     18 17 39.8 +2.7
      comp=Z,0.2nm,0.5s,baz=154,slow=2.9,SNR=2.3
      comp=Z,1.1nm,0.8s
HVU   Hansel Valley      32.24 332       P       18 14 47.7 -2.3
HVU                                 IAmb IAmb    18 15 07.0
      comp=Z,16nm,1.5s
NVAR  Mina Array Bea     32.72 322  P    P       18 15 00.9 +6.6
      comp=Z,4.5nm,0.8s,baz=140,slow=9.1,SNR=14
NVAR                                PcP  PcP     18 17 43.5 +3.6
      comp=Z,1.5nm,0.7s,baz=92,slow=1.8,SNR=4.0
      comp=Z,4.5nm,0.8s
LOHW  Long Hollow        32.83 336  IAmb IAmb    18 15 09.0
      comp=Z,11nm,1.1s
YHH   Holmes Hill        33.92 337  P    P       18 15 02.9 -1.9
YHL   Hebgen Lake        34.10 337  P    P       18 15 04.3 -2.0
YHL                                 IAmb IAmb    18 15 25.1
      comp=Z,16nm,1.4s
HLID  Hailey             34.39 332       P       18 15 07.6 -1.1
DLMT  Dillon             35.07 336  IAmb IAmb    18 15 21.7
      comp=Z,9.9nm,0.9s
LRM   Limekiln Ridge     35.40 337  P    P       18 15 15.5 -2.0
J08A  Circle Bar Ran     36.19 328  IAmb IAmb    18 15 31.0
      comp=Z,16nm,1.1s
PLID  Pearl Lake         36.29 332  IAmb IAmb    18 15 35.4
      comp=Z,14nm,1.2s
BPMT  Black Pine Rid     36.30 336  P    P       18 15 25.4 +0.1
FCC   Fort Churchill     44.45 359  P    P       18 16 32.2  0.0
SCHQ  Schefferville      45.43  21  P    P       18 16 41.4 +1.2
      comp=Z,3.7nm,0.8s,baz=271,slow=7.8,SNR=3.1
      comp=Z,3.7nm,0.8s
YKAW1 Yellowknife Wh     50.48 347       P       18 17 18.8 -0.3
YKAW1                               IAmb IAmb    18 17 24.2
      comp=Z,19nm,0.8s
YKA   Yellowknife Ar     50.52 347  P    P       18 17 23.4 +4.0
      comp=Z,10nm,0.8s,baz=152,slow=7.0,SNR=26
      comp=Z,10nm,0.8s
YKAW3 Yellowknife Wh     50.58 347       P       18 17 18.9 -0.9
YKAW3                               IAmb IAmb    18 17 24.9
      comp=Z,18nm,0.8s
CPUP  Villa Florida      53.36 139  P    P       18 17 47.0 +6.0
      comp=Z,0.6nm,0.8s,baz=337,slow=20,SNR=2.9
      comp=Z,0.6nm,0.8s
P32M  Atlin              54.14 336  IAmb IAmb    18 17 52.6
      comp=Z,5.7nm,1.1s
N30M  Aishikik Lake      56.61 337  P    P       18 18 03.6 -0.5
N30M                                IAmb IAmb    18 18 10.4
      comp=Z,6.7nm,1.1s
L29M  L29M               57.98 338  IAmb IAmb    18 18 19.9
      comp=Z,10nm,1.2s
PLCA  Paso Flores        58.61 160  P    P       18 18 22.9 +4.4
      comp=Z,2.2nm,0.9s,baz=33,slow=13,SNR=2.9
      comp=Z,2.2nm,0.9s
M27K  Edge Creek, AK     58.99 336  IAmb IAmb    18 18 31.1
      comp=Z,11nm,1.5s
G31M  Satah River        59.13 342  IAmb IAmb    18 18 34.7
      comp=Z,9.9nm,1.1s
GLB   Gilahina Butte     59.31 334  IAmb IAmb    18 18 29.7
      comp=Z,8.8nm,1.2s
INK   Inuvik             59.87 344       P       18 18 26.5 -0.2
H29M  Whitestone         59.94 341  IAmb IAmb    18 18 46.4
      comp=Z,12nm,1.4s
K27K  Chicken            59.96 337  IAmb IAmb    18 18 34.0
      comp=Z,5.4nm,1.0s
KLU   Klutina            60.22 334  IAmb IAmb    18 18 37.3
      comp=Z,8.8nm,1.0s
G29M  Pine Creek         60.25 341  IAmb IAmb    18 18 36.3
      comp=Z,7.3nm,1.0s
DOT   Dot Lake           60.51 337  IAmb IAmb    18 18 37.4
      comp=Z,7.6nm,1.0s
SCRK  Sand Creek         60.65 337  P    P       18 18 30.2 -2.2
SCRK                                IAmb IAmb    18 18 48.7
      comp=Z,7.3nm,1.3s
PAX   Paxson             60.73 336  P    P       18 18 31.3 -1.6
PAX                                 IAmb IAmb    18 18 38.6
      comp=Z,4.5nm,0.8s
J26L  Joseph Creek       60.76 338       P       18 18 32.6 -0.5
RIDG  Independent Ri     60.86 336  P    P       18 18 32.9 -0.9
H27K  Steamboat Moun     60.98 340       P       18 18 33.4 -1.1
H27K                                IAmb IAmb    18 18 47.0
      comp=Z,11nm,1.4s
I26K  Coal Creek Min     61.04 338  IAmb IAmb    18 18 40.4
      comp=Z,8.6nm,1.4s
PRP   Porcupine Dome     62.00 338  IAmb IAmb    18 18 47.0
      comp=Z,5.9nm,0.8s
G26K  Porcupine Rive     62.13 340  IAmb IAmb    18 18 58.4
      comp=Z,9.4nm,1.4s
IL31                     62.14 337  P    P       18 18 42.0 -0.3
ILAR  Eielson Array      62.14 337  P    P       18 18 46.3 +4.0
      comp=Z,3.8nm,1.0s,baz=137,slow=5.0,SNR=14
      comp=Z,3.8nm,1.0s
MCK   McKinley           62.47 336  IAmb IAmb    18 18 57.4
      comp=Z,6.4nm,0.8s
F26K  Sheenjek River     62.65 341  IAmb IAmb    18 18 58.4
      comp=Z,5.9nm,1.2s
SKT   Skwentna           62.85 333  IAmb IAmb    18 18 52.2
      comp=Z,5.6nm,0.9s
H24K  Noodor Dome        63.01 338  IAmb IAmb    18 19 03.8
      comp=Z,7.8nm,1.0s
F25K  Christian Rive     63.08 340       P       18 18 47.2 -1.4
F25K                                IAmb IAmb    18 19 01.6
      comp=Z,7.9nm,1.2s
G24K  Hadweenzic Riv     63.27 339  IAmb IAmb    18 18 55.1
      comp=Z,4.9nm,1.0s
E25K  Arctic Village     63.33 341  IAmb IAmb    18 19 18.3
      comp=Z,10nm,1.4s
BPAW  Bear Paw Mtn.      63.45 335  IAmb IAmb    18 18 56.2
      comp=Z,9.6nm,1.2s
CAST  Castle Rocks       63.63 335  IAmb IAmb    18 19 07.9
      comp=Z,9.2nm,1.2s
MLY   Manley             63.73 336  IAmb IAmb    18 18 57.8
      comp=Z,6.4nm,0.9s
G23K  Bananza Creek      64.17 338  IAmb IAmb    18 19 01.0
      comp=Z,4.5nm,1.1s
D25K  Kavik River        64.20 342  P    P       18 18 55.0 -0.9
COLD  Coldfoot           64.46 339  IAmb IAmb    18 19 04.0
      comp=Z,7.2nm,1.2s
G21K  Allakaket          65.37 337  P    P       18 19 02.6 -0.9
G21K                                IAmb IAmb    18 19 19.2
      comp=Z,9.1nm,1.3s
E22K  Anaktuvuk Pass     65.41 339  IAmb IAmb    18 19 13.1
      comp=Z,7.5nm,1.1s
E21K  Killik River       66.27 339  IAmb IAmb    18 19 14.5
      comp=Z,5.6nm,0.9s
F20K  Avaraart Lake      66.38 338  P    P       18 19 09.0 -1.0
F20K                                IAmb IAmb    18 19 15.8
      comp=Z,8.7nm,1.1s
F19K  Shaleruckik Mo     67.07 337  P    P       18 19 13.4 -1.0
F19K                                IAmb IAmb    18 19 26.6
      comp=Z,9.5nm,1.2s
EKA   Eskdalemuir Ar     78.48  36  P    P       18 20 23.1 +0.7
      comp=Z,1.5nm,0.8s,baz=268,slow=4.2,SNR=4.1
      comp=Z,1.5nm,0.8s
ESDC  Sonseca Array      80.52  51  P    P       18 20 35.2 +1.3
      comp=Z,2.1nm,0.8s,baz=290,slow=6.0,SNR=13
      comp=Z,2.1nm,0.8s
NB2   NORSAR Subarra     84.51  28  P    P       18 20 56.7 +2.4
      comp=Z,1.3nm,0.8s,baz=292,slow=5.3
NOA   NORSAR Array B     84.51  28  P    P       18 20 57.2 +2.8
      comp=Z,1.5nm,0.9s,baz=290,slow=5.1,SNR=5.4
      comp=Z,1.5nm,0.9s
HFS   Hagfors            85.98  29  P    P       18 21 04.1 +2.5
      comp=Z,1.4nm,0.8s,baz=304,slow=3.3,SNR=2.9
      comp=Z,1.4nm,0.8s
TIXI  Tiksi              89.77 348  P    P       18 21 22.7 +3.2
      comp=Z,3.7nm,0.4s,baz=44,slow=6.0,SNR=10
      comp=Z,3.7nm,0.4s
GERES GERESS Array B     90.19  39  P    P       18 21 24.5 +2.3
      comp=Z,0.5nm,0.8s,baz=294,slow=4.2,SNR=4.3
      comp=Z,0.5nm,0.8s
FINES FINESS Array B     90.80  25  P    P       18 21 26.3 +1.8
      comp=Z,1.8nm,1.0s,baz=327,slow=2.3,SNR=2.0
      comp=Z,1.8nm,1.0s
TORD  Torodi Ar. Bea     91.51  76  P    P       18 21 30.3 +1.5
      comp=Z,0.4nm,0.3s,baz=289,slow=4.4,SNR=1.2
      comp=Z,0.4nm,0.3s
KURBB Kurchatov Arra    115.02   6  PKP  PKPdf   18 27 05.6 +3.1
      comp=Z,0.5nm,0.7s,baz=346,slow=2.8,SNR=6.7
MKAR  Makanchi Array    119.12   3  PKP  PKiKP   18 27 13.5 +2.8
      comp=Z,0.5nm,0.8s,baz=57,slow=4.5,SNR=3.7
BOSA  Boshof            121.56 115  PKP  PKiKP   18 27 19.9 +3.9
      comp=Z,2.2nm,0.8s,baz=261,slow=0.9,SNR=5.7
WRA   Warramunga Arr    134.27 256  PKP  PKiKP   18 27 43.5 +2.0
      comp=Z,0.5nm,0.8s,baz=82,slow=2.5,SNR=5.4
ASAR  Alice Springs     134.59 251  PKP  PKiKP   18 27 44.2 +2.1
      comp=Z,0.3nm,0.7s,baz=82,slow=3.0,SNR=4.1
CMAR  Chiang Mai Arr    145.35 339  PKPbc PKiKP  18 28 03.7 -0.6
      comp=Z,5.8nm,0.8s,baz=336,slow=3.1,SNR=9.9
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HEL ***14*** *18:10:20.1±0.1, 59°.79N×27°.42E, h0^{km}, ML2.1, Explosion*

EST ***14*** *18:10:20.6±0.1, 59°.82N×27°.39E, h0^{km}, ML2.0(HEL), Explosion*

IDC ***14*** *18:10:22.1±1.2, 59°.87N×27°.19E, h0^{km}, mbtmp3.1/4, ML2.4/3, Error ellipse: s-maj=11.6km s-min=8.3km az=94.0*

ISC 14 18:10:18.8±0.8**, 59°.82N**±0°.02×**27°.33E**±0°.03**, h0^{km}, n34,** σ**1ˢ.91**/56**, Baltic States-Belarus-Northwestern Russia**

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Code  Station Name        Δ°   AZ°    Phase ID        Time      Res
                                    Op     ISC      h  m  s    ISC
EE04  Vaivara Sinima      0.52 148 eP    Pg      18 10 29.3 +0.5
EE04                               eS    Sg      18 10 36.4 +0.9
VJF   Virojoki            0.73   9 eP    Pg      18 10 33.8 +1.0
VJF                                eS    Sg      18 10 43.6 +1.2
PVF   Pernaja             1.04 316 eP    Pg      18 10 39.5 +0.9
PVF                                eS    Sg      18 10 53.4 +1.3
EE03  Tooma soojaam,      1.09 210 eP    Pb      18 10 40.5  0.0
EE03                               ePN   Pn      18 10 43.2 +2.0
EE03                               eS    Sg      18 10 54.3 +0.5
HEL1  Helsinki            1.28 287 eP    Pg      18 10 43.9 +0.5
HEL1                               eSN   Sn      18 11 04.7 +2.9
HEL1                                MSG          18 11 06.5
      comp=Z,8.8nm,0.2s
VSU   Vasula              1.39 193 eP    Pg      18 10 44.9 -0.6
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VSU	Vasula	1.39	193	eP	Pg	18 10 44.8	-0.6
VSU				eSN	Sn	18 11 07.0	+2.6
NUR	Nurmijarvi	1.51	299	eP	Pn	18 10 47.9	+0.9
NUR				eS	Sn	18 11 07.3	-0.1
NUR				MSG		18 11 11.6	
	comp=Z,12nm,0.2s						
MEF	Metsahovi	1.53	287	eP	Pn	18 10 48.3	+1.0
MEF	Metsahovi	1.53	287	eP	Pn	18 10 48.3	+1.0
MEF				eSB	Sn	18 11 08.6	+0.8
MEF				MSG		18 11 12.3	
	comp=Z,12nm,0.1s						
EE08	Sarghaua, Vand	1.58	224	eP	Pb	18 10 49.1	+0.3
EE08				eS	Sn	18 11 09.5	+0.3
FIA0	FINESS Array S	1.75	340	eP	Pn	18 10 51.1	+0.8
FIA0				eSN	Sb	18 11 15.2	+1.1
FIA0				MSG		18 11 16.6	
	comp=Z,8.4nm,0.2s						
FINES	FINESS Array B	1.75	340	Pg	Pn	18 10 51.1	+0.8
	comp=Z,1.3nm,0.3s,baz=158,slow=17,SNR=132						
FINES				Lg	Lg	18 11 15.2	
	comp=Z,1.9nm,0.3s,baz=158,slow=30,SNR=5.4						
FIA1	FINESS Array S	1.75	340	eSN	Sb	18 11 15.1	+1.0
FIA1				MSG		18 11 17.3	
	comp=Z,7.5nm,0.1s						
RUF	Ruokolahti	1.80	26	eP	Pn	18 10 51.5	+0.4
RUF				eS	Sn	18 11 15.4	+0.9
RUF				MSG		18 11 18.5	
	comp=Z,24nm,0.1s						
EE07	Piusa Caves, O	1.98	178	ePB	Pb	18 10 55.6	-0.1
EE07				eSG	Sg	18 11 22.1	-0.3
TVF	Tvarminne	2.06	273	ePG	Pb	18 10 57.8	+0.8
TVF				eSB	Sb	18 11 24.1	+0.9
TVF				MSG		18 11 27.3	
	comp=Z,11nm,0.2s						
MTSE	Matsula	2.12	240	eP	Pn	18 10 56.6	+1.3
MTSE	Matsula	2.12	240	ePB	Pb	18 10 58.4	+0.4
MTSE				eSG	Sg	18 11 26.8	+0.1
KAF	Kangasniemi	2.36	348	eP	Pn	18 11 01.1	+2.4
KAF				eSB	Sb	18 11 31.5	-0.2
EE06	Soera, Palade,	2.44	252	eP	Pn	18 11 02.3	+2.5
EE06				ePB	Pb	18 11 03.9	+0.3
EE06				eSB	Sb	18 11 34.5	+0.3
KEF	Keuruu	2.65	334	eP	Pn	18 11 04.7	+2.1
KEF	Keuruu	2.65	334	ePB	Pb	18 11 06.4	-0.6
KEF				MSG		18 11 40.4	
	comp=Z,5.3nm,0.2s						
SUF	Sumiainen	2.97	349	eP	Pn	18 11 09.3	+2.2
SUF				MSG		18 11 53.4	
	comp=Z,3.7nm,0.2s						
RAF	Rauma	3.01	296	eP	Pn	18 11 10.3	+2.6
RAF	Rauma	3.01	296	eP	Pn	18 11 10.1	+2.4
RAF				eS	Sn	18 11 46.6	+2.1
RAF				MSG		18 11 54.0	
	comp=Z,3.7nm,0.2s						
SLIT	Slitere, Latvi	3.42	232	eP	Pn	18 11 15.1	+1.8
JOF	Joensuu	3.66	30	eP	Pn	18 11 17.9	+1.4
JOF	Joensuu	3.66	30	eP	Pn	18 11 17.9	+1.4
VAF	Ylistaro	3.93	327	eP	Pn	18 11 23.0	+2.7
HFS	Hagfors	6.85	279	Pn	Pn	18 12 00.5	+0.1
	comp=Z,0.1nm,0.3s,baz=83,slow=14,SNR=6.2						
HFS				Sn	Sn	18 13 16.1	-2.9
	comp=Z,0.2nm,0.3s,baz=90,slow=27,SNR=1.9						
HFS				Lg	Lg	18 13 51.4	
	comp=Z,0.5nm,0.3s,baz=88,slow=28,SNR=5.8						
	comp=Z,0.3nm,0.3s						
NOA	NORSAR Array B	8.07	286	Pn	Pn	18 12 16.2	-0.8
	baz=94,slow=11,SNR=6.2						
NOA				Sn	Sn	18 13 41.5	-7.3
	baz=127,slow=21,SNR=1.4						
NOA				Lg	Lg	18 14 30.4	
	baz=60,slow=11,SNR=1.2						
	comp=Z,0.1nm,0.2s						
AKASG	Malin Array Be	9.20	172	Pn	Pn	18 12 31.3	-1.3
	comp=Z,0.5nm,0.4s,baz=356,slow=13,SNR=4.4						
ARCES	ARCESS Array B	9.79	356	Pn	Pn	18 12 39.9	-0.7
	comp=Z,0.1nm,0.3s,baz=175,slow=14,SNR=13						
ARCES				Sn	Sn	18 14 24.9	-6.1
	comp=Z,0.1nm,0.3s,baz=171,slow=25,SNR=1.7						
	comp=Z,3.7nm,1.1s						

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*GCG **14** 18:12:57.6±2.2, 14°.05N×93°.27W, h26^{km}±36^{km}, MD4.8, ML5.0, MW4.6*

*CATAC **14** 18:12:57.7±0.6, 14°N±3°×9°3W±°, h6^{km}±3^{km}, M5.1/22, mb5.1/1, MLv5.1/22, Error ellipse: s-maj=7.2km s-min=4.2km az=18.3, confirmed*

*NEIC **14** 18:12:59.2±1.5, 14°.38N±0°.06×93°.02W±0°.06, h10^{km}±1^{km}, mb5.0/371, Md4.7/16(MEX), Error ellipse: s-maj=10.9km s-min=9.8km az=213.0*

*MEX **14** 18:13:01.5±0.9, 14°.32N×93°.28W, h18^{km}±42^{km}, MD4.9*

*GCMT **14** 18:13:02.2±0.3, 14°.34N±0°.01×93°.29W±0°.02, h14^{km}, MW5.0/100, Moment Tensor Solution. s65,c87; s100,c153; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.44±.12; $M_{\theta\theta}$-2.44±.08; $M_{\phi\phi}$-1.00±.08; $M_{r\theta}$1.24±.16; $M_{\theta\phi}$1.17±.05; $M_{\phi r}$-2.12±.19; Best double couple: $M_0$4.06400×10^{16} NP1:ϕ_s288.00000°, δ30.00000°, λ65.00000°. NP2:ϕ_s136.00000°, δ63.00000°, λ103.00000°. Principal axes: T 4.3690, Plg69.0000°, Azm72.0000°; N -0.6110, Plg12.0000°, Azm309.0000°; P -3.7580, Plg17.0000°, Azm216.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **14** 18:13:06.1±2.9, 14°.52N×92°.81W, h69^{km}±25^{km}, mb4.2/24, mbtmp4.6/27, MS4.3/57 Error ellipse: s-maj=21.8km s-min=11.3km az=51.0*

ISC 14 18:12:57.2±1.4**, 14°.31N**±0°.04×**93°.21W**±0°.03**, h8**^{km}±8^{km}**, n883,** σ1.80/851**, mb5.0**/184**, MS4.4**/61**, 1C-5D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.09	57		Pn	18 13 18.8	0.0
THIG					Sb	18 13 31.1	-1.5
THIG		1.09	57	eP	Pn	18 13 19.5	+0.8
THIG				eS	Sn	18 13 32.5	-1.5
THIG		1.09	57	eP	Pn	18 13 19.1	+0.3
	comp=Z,8µm,0.8s						
THIG				i S	Sn	18 13 35.0	+1.0
THIG				IAML		18 13 59.0	
	comp=E,14µm,0.6s						
SMCA	Catarina	1.22	64	eP	Pn	18 13 21.0	+0.3
SMCA				i S	Sn	18 13 38.7	+1.4
PATR	El Naranjo	1.23	50	eP	Pn	18 13 20.6	-0.4
PATR				i S	Sn	18 13 36.4	-1.6
PAVE	Pavencul	1.33	49	eP	Pg	18 13 22.3	-0.4
PAVE				eS	Sn	18 13 39.3	-0.9
PCIG		1.38	360		Pn	18 13 22.9	+0.1
PCIG					Sb	18 13 37.7	-3.4
PCIG		1.38	360	eP	Pn	18 13 22.9	+0.1
PCIG				eS	Sb	18 13 37.7	-3.4
RTAL	Retalhuleu	1.48	82		Pg	18 13 24.6	-1.0
RTAL	Retalhuleu	1.48	82	eP	Pb	18 13 24.3	-0.7
RTAL				i S	Sb	18 13 42.5	-1.5
RTAL	Retalhuleu	1.48	82	S	Sg	18 13 44.0	-0.8
RTAL	Retalhuleu	1.48	82	P	Pg	18 13 24.8	-0.8
STG8	El Palmar, Qui	1.80	85	eP	Pn	18 13 26.2	-2.6
	comp=Z,3µm,1.0s						
STG8				IAML		18 14 00.2	
	comp=E,9µm,0.3s						
STG0	El Palmar, Qui	1.81	86	i P	Pn	18 13 25.9	-2.9
	comp=Z,8µm,0.6s						
SOKI	Kika Raxquin	1.82	74	eP	Pb	18 13 30.3	-0.7
	comp=Z,6µm,0.8s						
SOKI				IAML		18 14 02.7	
	comp=E,27µm,0.9s						
HUEH	Huehuetenango	1.93	59		Pn	18 13 30.7	+0.2
HUEH	Huehuetenango	1.93	59	eP	Pb	18 13 32.0	-0.8
HUEH				eS	Sn	18 13 54.1	-1.0
HUEH	Huehuetenango	1.93	59	i P	Pg	18 13 33.0	-1.2
HUEH				IAML		18 14 13.6	
	comp=E,24µm,0.7s						
HUEH	Huehuetenango	1.93	59	S	Sg	18 13 59.9	+0.6
HUEH	Huehuetenango	1.93	59	⇓P	Pg	18 13 32.9	-1.3
CCIG	Comitan	2.21	28		Pb	18 13 36.5	-1.1
CCIG	Comitan	2.21	28	eP	Pb	18 13 37.4	-0.2
CCIG				eS	Sb	18 14 03.3	-2.0
CCIG	Comitan	2.21	28	i P	Pg	18 13 38.2	-1.5
	comp=Z,4µm,1.2s						
CCIG				i S	Sg	18 14 09.9	+1.5
CCIG				IAML		18 14 11.2	
	comp=N,10µm,0.6s						
CCIG	Comitan	2.21	28	⇑P	Pg	18 13 38.1	-1.6
ESSG	Sabana Grande	2.31	88	i P	Pn	18 13 35.4	-0.2
ESSG				IAML		18 14 19.7	
	comp=E,3µm,0.9s						
TGBT	Tuxtla Gutierr	2.45	3	i P	Pb	18 13 40.8	-0.7
TGBT				i S	Sb	18 14 11.7	-0.3
TGIG		2.45	2	eP	Pb	18 13 40.1	-1.5
TGIG				eS	Sn	18 14 07.9	+0.1
TGIG		2.45	2	eP	Pb	18 13 39.7	-1.9
	comp=Z,4µm,1.1s						
TGIG				i S	Sb	18 14 12.3	+0.3
TGIG				IAML		18 14 16.1	
	comp=E,5µm,0.4s						
FG8	Yepocapa, Chim	2.57	91	eP	Pn	18 13 33.8	-5.4
GCG4	OSOP	2.60	84	i P	Pn	18 13 40.7	+0.9
GCG4				IAML		18 14 24.5	
	comp=E,6µm,0.9s						
FG16	Alotenango, Sa	2.62	91	i P	Pn	18 13 35.1	-4.9
	comp=Z,3µm,0.7s						
FAME	Alcaldia de Sa	3.13	98	P	Pn	18 13 46.4	-0.5
FAME	Alcaldia de Sa	3.13	98	S	Sn	18 14 25.0	+0.4
HUIG	Huatulco	3.15	298	eP	Pn	18 13 46.4	-0.8
HUIG				eS	Sn	18 14 18.7	-6.4
HUIG	Huatulco	3.15	298	eP	Pn	18 13 46.6	-0.6
	comp=Z,314nm,1.0s						
SLOZ	Alcaldia de Sa	3.33	95	S	Sb	18 14 32.5	-4.9
SLOZ	Alcaldia de Sa	3.33	95	⇓P	Pn	18 13 50.7	+1.0
LOAL	Lomas de Alarc	3.34	95	P	Pn	18 13 51.1	+1.3
LOAL	Lomas de Alarc	3.34	95	S	Sn	18 14 31.4	+1.7
NUBE	Las Nubes	3.35	97	eP	Pn	18 13 50.9	+0.8
NUBE	Las Nubes	3.35	97	S	Sn	18 14 30.2	+0.1
NUBE	Las Nubes	3.35	97	⇓P	Pn	18 13 51.0	+1.0
CEVE	Cerro Verde	3.51	97	P	Pn	18 13 53.3	+0.9
CEVE	Cerro Verde	3.51	97	S	Sn	18 14 34.9	+0.6
UNIC	Universidad Ca	3.56	95	P	Pn	18 13 52.5	-0.5
UNIC	Universidad Ca	3.56	95	S	Sn	18 14 35.2	-0.2
VHSA	Villahermosa	3.66	4	eP	Pn	18 13 57.4	+3.2
VHSA				eS	Sb	18 14 41.7	-5.0
JAYA	Jayaque - finc	3.71	100	eP	Pn	18 13 54.5	-0.4
JAYA	Jayaque - finc	3.71	100	P	Pn	18 13 55.1	+0.2
JAYA	Jayaque - finc	3.71	100	S	Sn	18 14 36.4	-2.5
MTO3	Montecristo	3.73	88	Pn	Pn	18 13 53.9	-1.5
MTO3	Montecristo	3.73	88	P	Pn	18 13 57.1	+1.8
CEDA	San Andres	3.73	97	S	Sn	18 14 40.7	+1.3
ESQI	Esquipulas	3.75	86	Pn	Pn	18 13 53.7	-1.9
ESQI	Esquipulas	3.75	86	S	Sn	18 14 43.0	+3.0
ESQI	Esquipulas	3.75	86	P	Pn	18 13 57.0	+1.4
PMON	Piamonte	3.83	99	P	Pn	18 13 56.9	+0.3
LALI	Alcalda de L	3.86	102	P	Pn	18 13 56.9	-0.1
LALI	Alcalda de L	3.86	102	S	Sn	18 14 40.9	-1.7
TUIG	Tuzandepetl	3.88	343	eP	Pn	18 13 59.1	+1.9
TUIG				i S	Sn	18 14 40.4	-2.6
UEES	Universidad Ev	3.90	98	S	Sn	18 14 44.9	+1.3
UEES	Universidad Ev	3.90	98	P	Pn	18 13 57.3	-0.3
LOMA	Loma Larga	3.97	99	P	Pn	18 13 59.1	+0.5
LOMA	Loma Larga	3.97	99	S	Sn	18 14 46.2	+0.7
UDBS	Universidad Do	3.98	98	P	Pn	18 13 59.0	+0.4
UDBS	Universidad Do	3.98	98	S	Sn	18 14 46.3	+0.8
PETF	Flores	4.13	51		Pn	18 14 01.8	+1.1
PETF	Flores	4.13	51	eP	Pn	18 14 03.3	+2.6
PETF				eS	Sn	18 14 49.5	+0.4
PETF	Flores	4.13	51	i P	Pn	18 14 03.7	+3.1
PETF	Flores	4.13	51	P	Pn	18 14 03.2	+2.6
LLGN	La Laguna	4.14	92	P	Pn	18 14 01.8	+0.9
PEIG	Puerto Escondi	4.16	294	eP	Pn	18 13 59.9	-1.1
PEIG				eS	Sn	18 14 42.5	-7.4
PAVA	Las Pavas	4.19	98	P	Pn	18 14 01.8	+0.2
PAVA	Las Pavas	4.19	98	S	Sn	18 14 51.5	+0.8
COEG	Centro de Oper	4.26	99	P	Pn	18 14 03.0	+0.5
OXLC	Oaxaca	4.34	310	eP	Pn	18 14 05.6	+1.9
OXLC				eS	Sn	18 14 52.3	-2.3
UESV	Universidad de	4.34	98	S	Sn	18 14 56.2	+1.7
OXBJ	Oaxaca	4.36	309	eP	Pn	18 14 07.8	+3.8
OXBJ				eS	Sn	18 14 53.0	-2.1
VHO	Vista Hermosa	4.37	309	eP	Pn	18 14 05.3	+1.3
VHO				eS	Sn	18 14 47.9	-7.4
TECO	Alcaldia de Te	4.37	100	P	Pn	18 14 03.6	-0.3
YOIG	Yosondua	4.88	302	eP	Pn	18 14 14.3	+3.0
YOIG				eS	Sn	18 15 03.8	-4.4
PNIG	Pinotepa	5.18	294	eP	Pn	18 14 15.2	+0.1
PNIG				eS	Sn	18 15 08.4	-6.6
TXIG	Tlaxiaco	5.27	304	eP	Pn	18 14 18.1	+1.5
TXIG				i S	Sn	18 15 21.4	+3.6
TOIG	Toxpalan	5.28	316	eP	Pn	18 14 19.5	+2.9
TOIG				eS	Sn	18 15 14.5	-3.2
HLIG	Huajuapan de L	5.63	309	eP	Pn	18 14 24.5	+3.0
HLIG				eS	Sn	18 15 19.4	-7.2
TPIG	Tehuac#an	5.71	316	eP	Pn	18 14 28.7	+6.2
TPIG				eS	Sn	18 15 24.5	-3.8
TGUH	Tegucigalpa,Un	5.76	92		Pn	18 14 22.0	-1.2
FTIG	Fresnillo de T	5.93	308	eP	Pn	18 14 28.9	+3.4
FTIG				eS	Sn	18 15 35.1	+1.3
MGIG	Malinaltepec	5.98	300	eP	Pn	18 14 29.2	+3.0
MGIG				eS	Sn	18 15 32.2	-2.8
TLIG	Tlapa	6.08	303		Pn	18 14 30.4	+2.8
TLIG	Tlapa	6.08	303	eP	Pn	18 14 27.6	0.0
TLIG				eS	Sn	18 15 36.9	-0.7
TLIG	Tlapa	6.08	303	S	Sn	18 15 41.6	+4.1
TLIG	Tlapa	6.08	303	P	Pn	18 14 30.3	+2.7
CRIG	Cruz Grande	6.20	294	eP	Pn	18 14 30.3	+1.2
CRIG				eS	Sn	18 15 30.1	-10
CRIN	San Cristobal	6.20	104	Pn	Pn	18 14 28.9	-0.2
HERN	Volcan Telica	6.43	105		Pn	18 14 31.0	-1.3
CNGN	Cerro Negro	6.58	105		Pn	18 14 33.0	-1.4
DAIG	Los Arroyos	6.76	294	eP	Pn	18 14 38.7	+1.8
DAIG				eS	Sn	18 15 48.0	-6.2
PBCV	Popocatepetl	6.92	313	eP	Pn	18 14 41.4	+2.1
PBCV				eS	Sn	18 15 56.9	-1.6
PBXN	Popocatepetl	7.00	313	eP	Pn	18 14 42.7	+2.1
PBXN				eS	Sn	18 15 57.4	-3.4
PBPN	Popocatepetl	7.00	313	eS	Sn	18 15 59.0	-1.8
PBPN				eS	Sn	18 16 02.3	+1.5
PPM	Popocatepetl	7.02	313	eP	Pn	18 14 44.1	+3.2
PPM				eS	Sn	18 16 01.6	+0.4
MGAN	Managua	7.11	107	Pn	Pn	18 14 39.9	-1.7
MEIG	Mezcala	7.13	301	eP	Pn	18 14 44.8	+2.8
MEIG				eS	Sn	18 15 57.3	-6.1
CXUV	Coxquihui	7.17	325	eP	Pn	18 14 43.4	+0.9
CXUV				eS	Sn	18 15 57.3	-7.0
PLIG	Platanillo	7.28	305	eP	Pn	18 14 46.9	+2.9
PLIG				eS	Sn	18 15 59.0	-7.9
CAIG	El Cayaco	7.32	293	eP	Pn	18 14 46.8	+2.3
CAIG				eS	Sn	18 16 02.2	-5.7
MPVM	San Francisco	7.38	312	eS	Sn	18 16 07.0	-2.7
MYIG	Merida	7.39	26	eP	Pn	18 14 43.9	-1.5
MYIG				eS	Sn	18 16 03.8	-5.7
XCVM	Xochimilco	7.49	312	eS	Sn	18 16 06.2	-6.3
BOAB	BOACO BROADBAN	7.57	103		Pn	18 14 46.6	-1.3
UNM	Universidad Na	7.59	312	eS	Sn	18 16 18.2	+3.4
VTVM	Tizayuca	7.60	316	eS	Sn	18 16 13.6	-1.6
AOVM	Tlapan	7.65	311	eP	Pn	18 14 51.8	+2.3
AOVM				eS	Sn	18 16 14.4	-2.3
INVM	La Marquesa	7.71	311	eP	Pn	18 14 50.4	+0.2
ARIG	Puente Sto Nin	7.91	301	eP	Pn	18 14 56.7	+4.1
ARIG				eS	Sn	18 16 19.6	-2.8
DEIG	Demacu	8.15	318	eP	Pn	18 14 58.1	+2.0
DEIG				eS	Sn	18 16 29.5	+0.9
ACON	Acoyapa	8.16	106	Pn	Pn	18 14 54.5	-1.6
ZIIG	Zihuatanejo	8.59	293	eP	Pn	18 15 04.9	+2.9
CTUV	Llano Grande	8.64	326	eP	Pn	18 14 56.1	-6.5
CTUV				eS	Sn	18 16 41.9	+1.5
ESPN	Las Esperanzas	8.92	103	Pn	Pn	18 15 06.0	-0.5
JTS	Las Juntas de	9.00	115		Pn	18 15 07.6	0.0
JTS	Las Juntas de	9.00	115	P	Pn	18 15 10.3	+2.6
	comp=Z,7.4nm,0.5s,baz=302,slow=15,SNR=4.4						
JTS				S	Sn	18 16 54.0	+4.7
	comp=Z,36nm,1.0s,baz=320,slow=21,SNR=2.7						
SOCE	Pocosol	9.26	114	Pn	Pn	18 15 10.2	-0.9
MOIG	Morelia	9.31	306	Pn	Pn	18 15 14.4	+2.4
MOIG	Morelia	9.31	306	eP	Pn	18 15 16.9	+4.9
JRQG	Juriquilla Cam	9.38	314	Pn	Pn	18 15 14.9	+1.9
LCR2	La Lucha 2	10.08	116		Pn	18 15 22.5	-0.1
GTIG	Gomez Farias	10.38	328	eP	Pn	18 15 25.7	-0.7
GTIG				eS	Sn	18 17 15.9	-7.1
MMIG	Aquila	10.50	293	eP	Pn	18 15 30.3	+2.1
MMIG				eS	Sn	18 17 22.5	-3.6
MNGA	Volcan de Coli	11.20	299	eP	Pn	18 15 42.0	+4.0
INCO	Volcan de Coli	11.22	299	eP	Pn	18 15 42.2	+3.9
SOMAC	Volcano de Col	11.24	299	eP	Pn	18 15 42.8	+4.2
CDAR	Ciudad de Arme	11.33	295	eP	Pn	18 15 43.2	+3.7
CEGR	Campo Tres	11.38	298	eP	Pn	18 15 45.7	+5.4
CEGR				eS	Sn	18 17 47.4	-0.4
PRVC	Isla de Provid	11.54	93	Pn	Pn	18 15 40.5	-1.9
AAIG	Aguscalientes	11.57	312	eP	Pn	18 15 49.9	+6.9
LNIG	Linares	12.06	332	eP	Pn	18 15 52.6	+3.0
ZAIG	Zacatecas	12.22	315	Pn	Pn	18 15 53.5	+1.5
ZAIG	Zacatecas	12.22	315	eP	Pn	18 15 45.9	-6.0
SOR	Soroa	12.82	47		Pn	18 15 58.5	-1.4
GMAL	Guarumal, Vera	13.43	118	P	P	18 16 18.5	+0.7
HBVL	Hebbronville	13.67	339	Pn	Pn	18 16 10.3	-1.2
833A	Chaparral WMA,	15.08	339		Pn	18 16 31.5	+0.8
MTDJ	Mount Denham	15.54	73	Pn	Pn	18 16 34.4	-2.5
MTDJ				IAmb	IAmb	18 16 41.9	
	comp=Z,39nm,0.8s						
PDIG	Papasquiaro	15.66	315	eP	P	18 16 42.5	-0.2
HKT	Hockley	15.75	352	Pn	Pn	18 16 39.5	+0.1
HKT				IAmb	IAmb	18 16 45.7	
	comp=Z,238nm,1.9s						
MLDN	Muldoon	15.80	348	Pn	Pn	18 16 41.3	+1.2
MLDN				IAmb	IAmb	18 16 46.9	
	comp=Z,159nm,1.6s						
HNDO	Hondo	16.15	341	Pn	Pn	18 16 44.1	-0.6
061Z	Ochoppi	16.28	43	Pn	Pn	18 16 44.5	-1.8
HNVL	Huntsville, TX	16.50	353	Pn	Pn	18 16 49.5	+0.5
DRIO	Del Rio	16.52	337		Pn	18 16 49.7	+0.3
435B	Jarrell	16.88	347	Pn	Pn	18 16 54.7	+0.8
CHIV	Chivirico	17.00	68		Pn	18 16 54.2	-1.4
CHIV				IAmb	IAmb	18 16 59.0	
	comp=Z,18nm,0.8s						
HPIG		17.12	319		P	18 17 00.5	+1.6
HPIG		17.12	319	eP	P	18 16 59.7	+0.8
JCT	Junction City	17.20	340	P	P	18 17 00.4	+0.8
NATX	Nacogdoches	17.42	356	P	P	18 17 01.6	-0.3
NATX				IAmb	IAmb	18 17 06.3	
	comp=Z,163nm,1.8s						
SAND	Sanderson	17.61	334		P	18 17 04.3	+0.2
SAND				IAmb	IAmb	18 17 10.5	
	comp=Z,127nm,1.4s						
BRDY	Brady	17.71	343		P	18 17 06.0	+0.8
TXAR	Lajitas Array	17.81	329	P	P	18 17 09.1	+2.7
	comp=Z,18nm,1.0s,baz=148,slow=14,SNR=35						
TXAR				LR	LR	18 24 22.8	
	comp=Z,206nm,20.6s,baz=134,slow=38						
TX31	Lajitas Ar. Si	17.81	329		P	18 17 07.6	+1.2
WHTX	Lake Whitney,	18.02	348		P	18 17 09.3	+0.7
ALPN	Alpine	18.65	331	P	Pn	18 17 17.7	+1.7
LPIG	La Paz	18.84	304	P	Pn	18 17 23.6	+5.4
	comp=Z,20nm,0.4s,baz=358,slow=4.7,SNR=4.9						
Z41A	Richland Creek	18.86	1	P	Pn	18 17 19.2	+0.8
Z41A				IAmb	IAmb	18 17 26.9	
	comp=Z,112nm,1.4s						
CBOC	Ciudad Bolivar	18.88	115	P	Pn	18 17 22.2	+3.2
	comp=Z,856nmcomp=Z,28nm,1.1s						
PLPT	Palo Pinto	19.00	347	P	Pn	18 17 20.7	+0.7
MNHN	Monahans	19.08	334		Pn	18 17 22.1	+1.0
MNHN				IAmb	IAmb	18 17 32.4	
	comp=Z,77nm,1.0s						
ABTX	Abilene, Hawle	19.15	343		Pn	18 17 21.9	-0.1
TIGA	Tifton	19.19	26	P	Pn	18 17 22.0	-0.4
TIGA				IAmb	IAmb	18 17 24.4	
	comp=Z,69nm,1.0s						
Z35A	Perchaven, San	19.29	350	P	Pn	18 17 23.4	-0.1
Z35A				IAmb	IAmb	18 17 37.5	
	comp=Z,95nm,0.8s						
WLAR	White Oak Lake	19.29	0	P	Pn	18 17 23.6	+0.1
WLAR				IAmb	IAmb	18 17 36.7	
	comp=Z,65nm,1.0s						
Z47A	Carrollton	19.37	13		Pn	18 17 24.2	-0.4
PECS	Pecos	19.59	332	P	Pn	18 17 27.6	+0.3
VHRN	Van Horn	19.65	329		Pn	18 17 28.6	+0.6
VHRN				IAmb	IAmb	18 17 38.1	
	comp=Z,68nm,1.4s						
ODSA	Odessa	19.68	336	P	Pn	18 17 28.2	-0.1
ODSA				IAmb	IAmb	18 17 38.9	
	comp=Z,119nm,1.0s						
Y45A	Yeager Farm, C	19.75	9	P	P	18 17 27.4	-0.1
Y45A				IAmb	IAmb	18 17 40.7	
	comp=Z,175nm,1.3s						
GUY2C	Guyana, Caldas	19.75	115	P	Pn	18 17 31.6	+1.9
	comp=Z,838nmcomp=Z,66nm,0.9s						
APMT	Aspermont	19.94	343		Pn	18 17 31.0	-0.4
WTFS	Witchita Falls	19.95	347	P	Pn	18 17 31.0	-0.4
POPC	Popayan, Colom	20.08	124	P	Pn	18 17 33.9	+0.5
	comp=Z,553nmcomp=Z,47nm,1.5s						
X40A	Basin Creek Fa	20.09	1	P	Pn	18 17 32.5	-0.6
POST	Post	20.14	339	P	P	18 17 31.5	-0.4
POST				IAmb	IAmb	18 17 43.0	
	comp=Z,60nm,1.1s						
MIAR	Mount Ida	20.15	359	P	P	18 17 32.1	+0.2
MIAR				IAmb	IAmb	18 17 41.7	
	comp=Z,59nm,1.0s						
OTAV	Otavalo	20.22	133	P	P	18 17 33.7	+0.4
CLNB	Carlsbad	20.35	333	P	P	18 17 35.0	+0.6
UALR	University of	20.39	2	P	P	18 17 34.4	-0.1
Y49A	Blount Mountai	20.41	16	P	P	18 17 35.5	+0.7
154A	Montrose	20.41	25	P	P	18 17 34.7	-0.1
154A				IAmb	IAmb	18 17 42.0	
	comp=Z,82nm,1.0s						
HTMS	Hat Mesa	20.43	334	P	Pn	18 17 36.9	-0.3
DKNS	Dickens	20.50	341	P	P	18 17 37.2	+1.3
DKNS				IAmb	IAmb	18 17 48.0	
	comp=Z,65nm,1.0s						
ORTC	Ortega, Tolima	20.51	119	P	Pn	18 17 38.8	+0.6
	comp=Z,719nmcomp=Z,54nm,0.8s						
MNTX	Cornudas Mount	20.59	329		Pn	18 17 38.7	-0.3
X34A	Smith Ranch, M	20.63	349	P	Pn	18 17 38.6	-0.8
ROSC	El Rosal	20.85	115	P	P	18 17 40.9	+0.8
	comp=Z,46nm,0.8s,baz=48,slow=1.5,SNR=20						
ROSC				LR	LR	18 27 19.3	
	comp=Z,392nm,18.1s,baz=187,slow=41						
	comp=Z,46nm,0.8s						
WHAR	Wooly Hollow	20.90	2	P	P	18 17 41.3	+1.2
WHAR				IAmb	IAmb	18 17 55.4	
	comp=Z,66nm,1.4s						
CPRX	Cap Rock	21.01	334	P	P	18 17 42.5	+1.1
BARC	Barichara	21.12	109	P	P	18 17 47.1	+4.2
Y52A	Lilburn	21.16	21	P	P	18 17 41.8	-1.1
Y52A				IAmb	IAmb	18 17 57.0	
	comp=Z,41nm,0.9s						
FNO	Franklin	21.19	350		P	18 17 44.8	+1.5
EPT	El Paso	21.22	327	P	P	18 17 44.4	+0.7
PAMC	Pamplona, Colo	21.29	107	P	P	18 17 45.6	+0.6
RUSC	La Rusia	21.49	111		P	18 17 47.0	-0.2
RUSC				IAmb	IAmb	18 17 53.8	
	comp=Z,81nm,1.0s						
FCAR	Ozark Folk Cen	21.51	2	P	P	18 17 47.1	+0.5
FCAR				IAmb	IAmb	18 17 51.2	
	comp=Z,48nm,0.8s						
TUL3	Leonard	21.63	354	P	P	18 17 48.8	+0.9
TUL3				IAmb	IAmb	18 17 59.8	
	comp=Z,34nm,0.7s						
DEOK	Depew	21.64	353	P	P	18 17 47.1	-1.0
DEOK				IAmb	IAmb	18 17 51.8	
	comp=Z,42nm,0.8s						
SMWD	Samnorwood	21.65	344		P	18 17 49.1	+0.9
COHC	Cochancay	21.66	139		P	18 17 48.5	+0.1
OK029	Liberty Lake	21.73	351	P	P	18 17 50.3	+1.3
OK029				IAmb	IAmb	18 17 52.5	
	comp=Z,44nm,0.9s						
LCAR	Lake Charles	21.74	4	P	P	18 17 48.6	-0.5
CSTR	Hydro, Custer	21.80	348	P	P	18 17 50.3	+0.4
SWET	Sewanee	21.82	16	P	P	18 17 49.6	-0.4
OK052	Battle Ridge R	21.83	352	P	P	18 17 51.6	+1.5
OK052				IAmb	IAmb	18 17 53.5	
	comp=Z,75nm,0.9s						
AMTX	Amarillo	21.86	341	P	P	18 17 51.4	+0.9
HHAR	Hobbs	21.89	358	P	P	18 17 52.2	+1.5
W50A	Signal Mountai	21.98	17	P	P	18 17 52.4	+0.7
U38A	Gravette	22.06	357	P	P	18 17 53.0	+0.5
V48A	Smith Brothers	22.09	14	P	P	18 17 52.8	-0.2
HODGE	Hodges	22.17	25	P	P	18 17 52.9	-0.8
HODGE				IAmb	IAmb	18 18 04.0	
	comp=Z,40nm,1.0s						
WVT	Waverly	22.25	12	P	P	18 17 54.3	-0.3
CPCT	Cooper Cave	22.45	19	P	P	18 17 55.6	-1.2
PBMO	Poplar Bluff	22.51	6	P	P	18 17 57.1	-0.3
PBMO				IAmb	IAmb	18 18 00.0	
	comp=Z,35nm,0.7s						
OK038	West end E0370	22.62	348	P	P	18 17 57.2	-1.4
OK038				IAmb	IAmb	18 18 07.8	
	comp=Z,88nm,1.4s						
JSC	Jenkinsville	22.63	26	P	P	18 17 58.3	-0.4
T35A	Sooner Cattle	22.70	353	P	P	18 17 59.1	-0.4

T42A	**Van Buren**	**22.70**	**4**	P	**P**	**18 17 59.2**	**-0.2**
SDV	**Santo Domingo**	**22.75**	**101**		**P**	**18 17 60.0**	**-0.4**
SDV				IAmb	IAmb	18 18 03.3	
	comp=Z,27nm,0.8s						
SDV	**Santo Domingo**	**22.75**	**101**	P	**P**	**18 18 00.4**	**+0.1**
	comp=Z,25nm,0.7s,baz=286,slow=4.5,SNR=18						
SDV				LR	LR	18 29 02.3	
	comp=Z,674nm,18.6s,baz=281,slow=43						
	comp=Z,25nm,0.7s						
SDV	**Santo Domingo**	**22.75**	**101**	*e*P	**P**	**18 18 00.5**	**+0.1**
MGMO	**Mountain Grove**	**22.76**	**2**	P	**P**	**18 17 59.5**	**-0.5**
MGMO				IAmb	IAmb	18 18 02.9	
	comp=Z,28nm,0.9s						
TKL	**Tuckaleechee C**	**22.88**	**20**	P	**P**	**18 17 59.9**	**-1.5**
TKL				IAmb	IAmb	18 18 25.6	
	comp=Z,53nm,1.2s						
TKL	**Tuckaleechee C**	**22.88**	**20**	LR	LR	18 28 48.9	
	comp=Z,1µm,18.2s,baz=204,slow=42						
CRNM	**Carthage**	**23.08**	**330**		**P**	**18 18 05.7**	**+2.2**
BNM	**Barren Site**	**23.19**	**331**		**P**	**18 18 07.0**	**+2.3**
V53A	**Saluda**	**23.23**	**22**	P	**P**	**18 18 05.3**	**+0.4**
V53A				IAmb	IAmb	18 18 28.3	
	comp=Z,94nm,1.6s						
DUN6	**Lazy B Ranch**	**23.23**	**324**		**P**	**18 18 06.6**	**+1.6**
T47A	**Sharon Grove**	**23.23**	**12**	P	**P**	**18 18 03.7**	**-1.2**
T47A				IAmb	IAmb	18 18 28.6	
	comp=Z,28nm,0.9s						
Y22D	**IRIS PASSCAL I**	**23.27**	**330**	P	**P**	**18 18 08.3**	**+2.8**
	baz=144						
BIRD	**Birdtown, Kers**	**23.29**	**27**	P	**P**	**18 18 05.1**	**-0.4**
BIRD				IAmb	IAmb	18 18 18.1	
	comp=Z,36nm,1.2s						
LENM	**Lemitar**	**23.36**	**330**	P	**P**	**18 18 08.6**	**+2.1**
SIUC	**Southern Illin**	**23.57**	**8**	P	**P**	**18 18 07.9**	**-0.4**
SIUC				IAmb	IAmb	18 18 19.0	
	comp=Z,58nm,1.2s						
RTBA	**Rita Blanca**	**23.62**	**341**	P	**P**	**18 18 09.8**	**+0.8**
CCM	**Cathedral Cave**	**23.71**	**4**	P	**P**	**18 18 08.7**	**-1.0**
CCM				IAmb	IAmb	18 18 17.4	
	comp=Z,54nm,1.1s						
ANMO	**Albuquerque**	**23.77**	**332**	P	**P**	**18 18 12.0**	**+1.5**
ANMO	**Albuquerque**	**23.77**	**332**	P	**P**	**18 18 12.0**	**+1.5**
ANMO	**Albuquerque**	**23.77**	**332**	LR	LR	18 28 46.6	
	comp=Z,561nm,18.4s,baz=233,slow=40						
T50A	**Nancy**	**23.81**	**17**	P	**P**	**18 18 10.9**	**+0.3**
V55A	**Taylorsville**	**24.00**	**25**	P	**P**	**18 18 11.6**	**-0.8**
V55A				IAmb	IAmb	18 18 33.4	
	comp=Z,47nm,1.4s						
R32A	**Long Quarter,**	**24.50**	**350**	P	**P**	**18 18 17.4**	**+0.3**
U56A	**King**	**24.76**	**25**	P	**P**	**18 18 19.3**	**-0.1**
U56A				IAmb	IAmb	18 18 50.2	
	comp=Z,41nm,1.2s						
V58A	**Windy Hill, Pi**	**24.85**	**28**	P	**P**	**18 18 18.7**	**-1.5**
V58A				IAmb	IAmb	18 18 20.4	
	comp=Z,38nm,0.9s						
214A	**Organ Pipe Nat**	**25.09**	**318**	P	**P**	**18 18 24.5**	**+2.0**
214A				IAmb	IAmb	18 18 33.6	
	comp=Z,25nm,1.2s						
P40A	**Paris**	**25.14**	**2**	P	**P**	**18 18 21.5**	**-1.3**
P40A				IAmb	IAmb	18 18 23.3	
	comp=Z,32nm,0.8s						
X18A	**Snowflake**	**25.18**	**326**	P	**P**	**18 18 24.0**	**+0.6**
X18A				IAmb	IAmb	18 18 34.7	
	comp=Z,58nm,1.5s						
BAUV	**El Baul**	**25.21**	**99**		**P**	**18 18 21.6**	**-2.1**
P43A	**Skaggs, Pawnee**	**25.44**	**7**	P	**P**	**18 18 25.9**	**+0.4**
P43A				IAmb	IAmb	18 19 01.1	
	comp=Z,26nm,1.0s						
W18A	**Petrified Fore**	**25.51**	**327**	P	**P**	**18 18 28.2**	**+1.8**
W18A				IAmb	IAmb	18 18 33.4	
	comp=Z,31nm,1.3s						
SDCO	**Great Sand Dun**	**25.77**	**337**	P	**P**	**18 18 30.1**	**+1.2**
SDCO				IAmb	IAmb	18 18 39.6	
	comp=Z,59nm,1.4s						
ATAH	**Atahualpa**	**25.89**	**144**	LR	LR	18 26 41.1	
	comp=Z,477nm,18.0s,baz=315,slow=32						
X16A	**Lo Mia Camp, P**	**25.93**	**324**	P	**P**	**18 18 32.0**	**+1.7**
KSCO	**Kaye Shedlock’**	**25.97**	**343**	P	**P**	**18 18 31.7**	**+1.2**
KSCO				IAmb	IAmb	18 18 40.5	
	comp=Z,54nm,1.1s						
113A	**Mohawk Valley,**	**26.23**	**318**		**P**	**18 18 34.2**	**+1.4**
SJG	**San Juan**	**26.24**	**78**	LR	LR	18 28 28.2	
	comp=Z,641nm,21.1s,baz=268,slow=36						
Y14A	**Wickenburg**	**26.52**	**321**		**P**	**18 18 36.7**	**+1.2**
T59A	**Double "B" Far**	**26.54**	**29**	P	**P**	**18 18 34.3**	**-1.2**
T59A				IAmb	IAmb	18 18 35.1	
	comp=Z,30nm,0.9s						
MVCO	**Mesa Verde**	**26.56**	**332**		**P**	**18 18 37.7**	**+1.6**
MVCO				IAmb	IAmb	18 18 48.2	
	comp=Z,38nm,1.1s						
WUAZ	**Wupatki**	**26.69**	**326**		**P**	**18 18 39.0**	**+1.9**
WUAZ				IAmb	IAmb	18 18 51.6	
	comp=Z,27nm,1.1s						
GLA	**Glamis**	**27.10**	**317**	P	**P**	**18 18 42.9**	**+2.2**
GLA				IAmb	IAmb	18 18 51.8	
	comp=Z,33nm,1.4s						
PV01	**Paradox Valley**	**27.36**	**333**	P	**P**	**18 18 44.1**	**+0.9**
PV01				IAmb	IAmb	18 18 50.1	
	comp=Z,28nm,1.1s						
PV15	**Paradox Valley**	**27.49**	**333**	P	**P**	**18 18 46.2**	**+1.9**
PV15				IAmb	IAmb	18 18 55.1	
	comp=Z,60nm,1.5s						
PV02	**Paradox Valley**	**27.49**	**333**	P	**P**	**18 18 46.2**	**+1.8**
PV05	**Paradox Valley**	**27.55**	**332**	P	**P**	**18 18 46.3**	**+1.5**
PV03	**Paradox Valley**	**27.58**	**333**	P	**P**	**18 18 46.9**	**+1.8**
PV03				IAmb	IAmb	18 18 55.1	
	comp=Z,53nm,1.4s						
PV18	**Skein Mesa, Pa**	**27.60**	**333**	P	**P**	**18 18 46.2**	**+0.9**
PV11	**David Mesa, Pa**	**27.63**	**333**	P	**P**	**18 18 46.5**	**+1.0**
ISCO	**Idaho Springs**	**27.63**	**339**	P	**P**	**18 18 46.6**	**+0.9**
PV07	**Paradox Valley**	**27.64**	**333**	P	**P**	**18 18 47.5**	**+1.8**
PV07				IAmb	IAmb	18 18 56.1	
	comp=Z,51nm,1.3s						
PV16	**Nyswonger Mesa**	**27.66**	**333**	P	**P**	**18 18 47.2**	**+1.4**
PV19	**Morning Glory**	**27.68**	**333**	P	**P**	**18 18 47.5**	**+1.4**
L40A	**Anamosa**	**27.70**	**3**	P	**P**	**18 18 45.1**	**-0.8**
L40A				IAmb	IAmb	18 19 15.1	
	comp=Z,21nm,0.9s						
PV22	**Blue Mesa, Par**	**27.78**	**333**	P	**P**	**18 18 48.2**	**+1.2**
PV22				IAmb	IAmb	18 18 58.0	
	comp=Z,22nm,1.0s						
W13A	**Hualapai Mount**	**27.84**	**322**	P	**P**	**18 18 49.4**	**+1.9**
W13A				IAmb	IAmb	18 18 59.0	
	comp=Z,25nm,1.4s						
U15A	**North Rim**	**27.86**	**326**	P	**P**	**18 18 49.2**	**+1.5**
HMU	**Henry Mountain**	**28.21**	**330**	P	**P**	**18 18 52.8**	**+1.9**
HMU				IAmb	IAmb	18 18 55.0	
	comp=Z,44nm,1.5s						
PCRV	**Puerto La Cruz**	**28.21**	**95**	LR	LR	18 31 53.5	
	comp=Z,482nm,19.5s,slow=40						
PFO	**Pinyon Flats O**	**28.53**	**316**	P	**P**	**18 18 55.9**	**+2.3**
PFO	**Pinyon Flats O**	**28.53**	**316**	LR	LR	18 30 08.3	
	comp=Z,394nm,18.2s,baz=120,slow=36						
KNB	**Kanab**	**28.58**	**326**	P	**P**	**18 18 56.5**	**+2.4**
KNB				IAmb	IAmb	18 19 05.5	
	comp=Z,26nm,1.3s						
JFWS	**Jewell Farm**	**28.61**	**5**	P	**P**	**18 18 54.9**	**+0.9**
JFWS				IAmb	IAmb	18 18 56.2	
	comp=Z,22nm,0.7s						
LCMT	**Little Creek M**	**28.81**	**325**	P	**P**	**18 18 58.1**	**+2.0**
V12A	**Nelson**	**28.84**	**322**		**P**	**18 18 58.6**	**+2.3**
V12A				IAmb	IAmb	18 19 07.7	
	comp=Z,48nm,1.5s						
O20A	**White River Ci**	**28.90**	**336**		**P**	**18 18 58.7**	**+1.8**
O20A				IAmb	IAmb	18 19 08.5	
	comp=Z,24nm,1.1s						
SRU	**San Rafael Swe**	**29.04**	**332**	P	**P**	**18 18 59.6**	**+1.5**
Q16A	**Castle Valley**	**29.19**	**330**		**P**	**18 19 00.9**	**+1.5**
ECSD	**EROS Data Cent**	**29.46**	**355**		**P**	**18 19 00.2**	**-1.4**
ECSD				IAmb	IAmb	18 19 11.6	
	comp=Z,25nm,1.2s						
SHPR	**Sheep Range**	**29.55**	**322**		**P**	**18 19 04.4**	**+1.7**
PRN	**Pahroc Range**	**30.11**	**324**		**P**	**18 19 08.4**	**+0.8**
QSM	**Queen of Sheba**	**30.24**	**320**	P	**P**	**18 19 10.3**	**+1.7**
PSUT	**Pine Spring**	**30.25**	**327**		**P**	**18 19 11.4**	**+2.5**
GWY	**Greenwater Val**	**30.26**	**320**		**P**	**18 19 11.1**	**+2.2**
GWY					**PcP**	**18 22 10.8**	**+1.1**
MPU	**Maple Canyon**	**30.27**	**331**	P	**P**	**18 19 10.4**	**+1.4**
K22A	**Casper**	**30.48**	**340**	P	**P**	**18 19 12.1**	**+1.2**
K22A				IAmb	IAmb	18 19 20.6	
	comp=Z,19nm,1.0s						
TPNV	**Topopah Spring**	**30.50**	**322**		**P**	**18 19 13.7**	**+2.7**
TPNV				IAmb	IAmb	18 19 24.6	
	comp=Z,30nm,1.8s						
NNA	**Nana**	**30.75**	**147**	LR	LR	18 29 38.4	
	comp=Z,315nm,18.2s,baz=334,slow=32						
SPMN	**Marine on St.**	**30.81**	**1**	P	**P**	**18 19 13.0**	**-0.5**
SPMN				IAmb	IAmb	18 19 24.1	
	comp=Z,26nm,1.2s						
SPR3	**Spring Creek 3**	**30.84**	**327**	P	**P**	**18 19 15.4**	**+1.1**
SPR3				IAmb	IAmb	18 19 28.0	
	comp=Z,19nm,1.1s						
SPR3					**PcP**	**18 22 11.8**	**+0.5**
DUG	**Dugway, Tooele**	**30.97**	**330**	P	**P**	**18 19 16.7**	**+1.5**
R11B	**Troy Canyon, C**	**31.07**	**325**	P	**P**	**18 19 18.1**	**+2.0**
BIM	**Bigot**	**31.11**	**86**	P	**P**	**18 19 15.5**	**-1.1**
RSSD	**Black Hills**	**31.11**	**345**	P	**P**	**18 19 17.2**	**+0.8**
GRAC	**Grapevine Rang**	**31.21**	**321**	P	**P**	**18 19 19.4**	**+2.2**
HWUT	**Hardware Ranch**	**31.52**	**333**	P	**P**	**18 19 21.6**	**+1.6**
HWUT				IAmb	IAmb	18 19 30.0	
	comp=Z,32nm,1.6s						
F33A	**5 Mile Ranch,**	**31.53**	**356**	P	**P**	**18 19 18.9**	**-1.0**
BW06	**Boulder Array**	**31.66**	**337**	P	**P**	**18 19 21.9**	**+0.6**
PD31	**Pinedale Array**	**31.66**	**337**	P	**P**	**18 19 21.9**	**+0.5**
PD31				IAmb	IAmb	18 19 32.7	
	comp=Z,31nm,1.9s						
PDAR	**Pinedale Array**	**31.66**	**337**	P	**P**	**18 19 21.4**	**+0.1**
PDAR	**Pinedale Array**	**31.66**	**337**	P	**P**	**18 19 23.4**	**+2.1**
	comp=Z,2.9nm,0.8s,baz=139,slow=9.5,SNR=13						
PDAR				PcP	**PcP**	**18 22 13.5**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=131,slow=4.5,SNR=4.0						
PDAR				LR	LR	18 35 25.7	
	comp=Z,162nm,19.7s,baz=138,slow=42						
	comp=Z,2.9nm,0.8s						
DSP	**Deep Springs**	**31.82**	**321**	P	**P**	**18 19 24.3**	**+1.8**
DSP				IAmb	IAmb	18 19 34.2	
	comp=Z,26nm,1.5s						
TPH	**Tonopah**	**31.82**	**322**	P	**P**	**18 19 24.0**	**+1.2**
HVU	**Hansel Valley**	**32.20**	**332**	P	**P**	**18 19 26.4**	**+0.4**
HVU				IAmb	IAmb	18 19 29.9	
	comp=Z,17nm,1.0s						
AHID	**Auburn Hatcher**	**32.27**	**335**	P	**P**	**18 19 27.7**	**+1.0**
ELK	**Elko**	**32.60**	**328**		**P**	**18 19 31.0**	**+1.4**
ELK	**Elko**	**32.60**	**328**	LR	LR	18 34 43.8	
	comp=Z,530nm,19.7s,baz=150,slow=40						
NV11	**Mina Array Sit**	**32.61**	**322**	P	**P**	**18 19 31.9**	**+2.3**
SADO	**Sadowa**	**32.63**	**19**	LR	LR	18 34 22.9	
	comp=Z,858nm,19.0s,baz=168,slow=40						
NVAR	**Mina Array Bea**	**32.70**	**322**	P	**P**	**18 19 32.8**	**+2.3**
NVAR	**Mina Array Bea**	**32.70**	**322**	P	**P**	**18 19 33.4**	**+2.9**
	comp=Z,11nm,0.8s,baz=140,slow=9.1,SNR=40						
NVAR				PcP	**PcP**	**18 22 17.8**	**+1.6**
	comp=Z,3.0nm,0.8s,baz=129,slow=3.5,SNR=5.0						
NVAR				LR	LR	18 34 32.3	
	comp=Z,761nm,20.0s,baz=140,slow=39						
	comp=Z,11nm,0.8s						
LHV	**Little Huntoon**	**32.70**	**321**	P	**P**	**18 19 32.4**	**+2.2**
LHV				IAmb	IAmb	18 19 45.2	
	comp=Z,15nm,1.0s						
SNOW	**Snow King Moun**	**32.72**	**336**	P	**P**	**18 19 32.5**	**+1.9**
E28A	**Huff**	**32.77**	**350**		**P**	**18 19 31.0**	**+0.3**
LOHW	**Long Hollow**	**32.78**	**336**	P	**P**	**18 19 32.9**	**+1.8**
TPAW	**Teton Pass**	**32.82**	**336**		**P**	**18 19 32.8**	**+1.3**
RYN	**Ryan**	**32.96**	**322**	P	**P**	**18 19 34.6**	**+1.9**
RYN				IAmb	IAmb	18 19 43.5	
	comp=Z,54nm,2.0s						
FXWY	**Fox Creek**	**32.97**	**336**	P	**P**	**18 19 34.5**	**+1.7**
FXWY				IAmb	IAmb	18 19 45.0	
	comp=Z,16nm,1.1s						
TEFE	**Tefe**	**33.41**	**120**	*e*P	**P**	**18 19 34.8**	**-1.8**
M65A	**Busby, Falmout**	**33.47**	**31**	P	**P**	**18 19 38.9**	**+2.0**
	baz=222						
EYMN	**Ely**	**33.56**	**2**	P	**P**	**18 19 36.3**	**-1.3**
SAO	**San Andreas Ge**	**33.68**	**317**	P	**P**	**18 19 40.9**	**+2.1**
SAO				IAmb	IAmb	18 20 03.6	
	comp=Z,24nm,1.5s						
YNE	**Yellowstone No**	**33.75**	**338**	P	**P**	**18 19 40.9**	**+1.3**
MDND	**Maddock**	**33.85**	**352**	P	**P**	**18 19 39.6**	**-0.6**
YHH	**Holmes Hill**	**33.87**	**337**	P	**P**	**18 19 42.2**	**+1.5**
LAO	**LASA Array**	**34.07**	**344**		**P**	**18 19 42.9**	**+0.8**
LAO				IAmb	IAmb	18 19 53.1	
	comp=Z,20nm,1.0s						
BOAV	**Boa Vista**	**34.38**	**107**		**P**	**18 19 43.6**	**-1.5**
BOAV				IAmb	IAmb	18 19 45.4	
	comp=Z,11nm,0.8s						
BOAV	**Boa Vista**	**34.38**	**107**	*e*P	**P**	**18 19 44.6**	**-0.5**
TBO	**Thunder Bay**	**34.38**	**4**	P	**P**	**18 19 43.5**	**-1.2**
MCMT	**McKenzie Canyo**	**34.69**	**335**	P	**P**	**18 19 48.4**	**+0.6**
BEKR	**Beckworth**	**34.84**	**322**		**P**	**18 19 50.9**	**+1.8**
MFID	**Camas Ranch**	**34.89**	**331**		**P**	**18 19 50.8**	**+1.5**
MFID				IAmb	IAmb	18 19 59.0	
	comp=Z,18nm,1.4s						
DLMT	**Dillon**	**35.03**	**336**	P	**P**	**18 19 52.5**	**+2.0**
DGMT	**Dagmar**	**35.25**	**347**	P	**P**	**18 19 53.6**	**+1.3**
DGMT				IAmb	IAmb	18 19 54.3	
	comp=Z,16nm,0.8s						
EPLO	**Experimental L**	**35.26**	**359**		**P**	**18 19 51.3**	**-1.1**
EPLO				IAmb	IAmb	18 19 52.5	
	comp=Z,17nm,0.7s						
LRM	**Limekiln Ridge**	**35.35**	**337**	P	**P**	**18 19 55.5**	**+2.0**
WVOR	**Wild Horse Val**	**35.59**	**327**	P	**P**	**18 19 56.8**	**+1.4**
WVOR				IAmb	IAmb	18 19 59.1	
	comp=Z,20nm,1.1s						
ULM	**Lac du Bonnet**	**35.90**	**357**		**P**	**18 19 56.2**	**-1.6**
ULM	**Lac du Bonnet**	**35.90**	**357**	P	**P**	**18 19 56.1**	**-1.7**
	comp=Z,11nm,0.9s,baz=184,slow=8.9,SNR=12						
ULM				LR	LR	18 38 29.8	
	comp=Z,360nm,18.9s,baz=158,slow=43						
	comp=Z,11nm,0.9s						
J08A	**Circle Bar Ran**	**36.15**	**328**		**P**	**18 20 01.8**	**+1.6**
J08A				IAmb	IAmb	18 20 03.9	
	comp=Z,27nm,0.9s						
PLID	**Pearl Lake**	**36.25**	**332**		**P**	**18 20 02.2**	**+1.0**
PLID				IAmb	IAmb	18 20 04.3	
	comp=Z,23nm,1.0s						
BPMT	**Black Pine Rid**	**36.25**	**336**		**P**	**18 20 02.1**	**+0.9**
BMO	**Blue Mountains**	**36.67**	**331**		**P**	**18 20 05.4**	**+0.8**
MSO	**Missoula**	**36.77**	**336**		**P**	**18 20 06.5**	**+1.1**
MSO				IAmb	IAmb	18 20 14.7	
	comp=Z,34nm,1.4s						
I07A	**Izee**	**37.19**	**328**	P	**P**	**18 20 10.1**	**+1.0**
L04D	**Klamath Falls**	**37.47**	**324**	P	**P**	**18 20 12.3**	**+0.8**
L04D				IAmb	IAmb	18 20 24.4	
	comp=Z,53nm,1.6s						
JTMT	**Jette**	**37.65**	**337**	P	**P**	**18 20 11.8**	**-1.1**
PINE	**Pine Mountain**	**37.74**	**327**		**P**	**18 20 14.6**	**+0.8**
G08A	**Pilot Rock**	**37.78**	**330**	P	**P**	**18 20 14.4**	**+0.3**
G08A					**PcP**	**18 22 32.1**	**+1.2**
LNOR	**Lincton Mounta**	**37.89**	**331**	P	**P**	**18 20 15.3**	**+0.4**
H04A	**Detroit Lake**	**39.01**	**327**		**P**	**18 20 24.8**	**+0.5**
H04A				IAmb	IAmb	18 20 34.4	
	comp=Z,65nm,1.5s						
HOOD	**Mount Hood Mea**	**39.16**	**328**	P	**P**	**18 20 27.8**	**+2.1**
HOOD				IAmb	IAmb	18 20 30.1	
	comp=Z,57nm,1.1s						
NEW	**Newport**	**39.21**	**335**	LR	LR	18 39 29.8	
	comp=Z,509nm,19.2s,baz=142,slow=40						
LPAZ	**La Paz**	**39.22**	**140**		**P**	**18 20 26.3**	**-0.7**
LPAZ	**La Paz**	**39.22**	**140**	P	**P**	**18 20 26.8**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=328,slow=10,SNR=6.9						
LPAZ				LR	LR	18 35 17.0	
	comp=Z,399nm,21.7s,baz=316,slow=34						
	comp=Z,1.9nm,0.7s						
LPAZ	**La Paz**	**39.22**	**140**	*e*P	**P**	**18 20 23.7**	**-3.3**
MXC	**Moxie City**	**39.36**	**330**	P	**P**	**18 20 27.9**	**+0.8**
PB16	**IPOC Station P**	**39.98**	**144**	P	**P**	**18 20 33.1**	**-0.1**
FFC	**Flin Flon**	**40.90**	**352**		**P**	**18 20 39.9**	**+0.1**
MDP	**Montagnes des**	**40.96**	**99**	LR	LR	18 39 27.4	
	comp=Z,335nm,20.7s,baz=306,slow=39						
ITTB	**Itaituba**	**41.54**	**114**	*e*P	**P**	**18 20 43.9**	**-1.7**
LLLB	**Lillooet**	**43.01**	**333**		**P**	**18 20 58.3**	**+1.1**
LLLB				IAmb	IAmb	18 21 07.3	
	comp=Z,54nm,1.7s						
NPGB	**Novo Progresso**	**43.13**	**117**	*e*P	**P**	**18 20 56.6**	**-2.0**
SIV	**San Ignacio**	**43.76**	**132**	LR	LR	18 38 22.1	
	comp=Z,338nm,18.2s,baz=295,slow=35						
FCC	**Fort Churchill**	**44.37**	**359**		**P**	**18 21 07.7**	**-0.3**
FCC				IAmb	IAmb	18 21 09.3	
	comp=Z,14nm,0.9s						
PDRB	**Porto dos Gac**	**44.39**	**124**	*e*P	**P**	**18 21 07.8**	**-0.9**
PTLB	**Pontes e Lacer**	**44.82**	**130**	*e*P	**P**	**18 21 09.9**	**-2.2**
BBSD	**Serra de San D**	**44.89**	**133**	*e*P	**P**	**18 21 11.2**	**-1.4**
SCHQ	**Schefferville**	**45.34**	**21**	P	**P**	**18 21 13.2**	**-2.6**
	comp=Z,7.7nm,1.0s,baz=322,slow=5.5,SNR=3.5						
SCHQ				PcP	**PcP**	**18 22 55.8**	**+0.6**
	comp=Z,6.4nm,0.7s,baz=277,slow=0.2,SNR=6.4						
SCHQ				LR	LR	18 42 30.9	
	comp=Z,1µm,18.3s,baz=200,slow=39						
	comp=Z,7.7nm,1.0s						
BBB	**Bella Bella**	**46.92**	**331**	LR	LR	18 43 46.9	
	comp=Z,239nm,19.2s,baz=152,slow=39						
SALV	**Santo Antonio**	**47.70**	**128**	*e*P	**P**	**18 21 33.8**	**-1.0**
SNDB	**Serra Nova Dou**	**49.06**	**120**	*e*P	**P**	**18 21 44.1**	**-1.2**
YKAW1	**Yellowknife Wh**	**50.42**	**347**	IAmb	IAmb	18 21 57.1	
	comp=Z,49nm,0.8s						
TOAD	**Toad River Com**	**50.42**	**339**	P	**P**	**18 21 57.5**	**+2.4**
	baz=138,SNR=7.3						
YKA	**Yellowknife Ar**	**50.46**	**347**	P	**P**	**18 21 56.0**	**+0.8**
YKA	**Yellowknife Ar**	**50.46**	**347**	P	**P**	**18 21 56.4**	**+1.2**
	comp=Z,25nm,0.8s,baz=153,slow=7.0,SNR=86						
	comp=Z,25nm,0.8s						
YKAW3	**Yellowknife Wh**	**50.52**	**347**	IAmb	IAmb	18 21 57.9	
	comp=Z,44nm,0.8s						
V35K	**Ketchikan**	**50.53**	**333**	P	**P**	**18 21 58.6**	**+2.7**
	baz=129						
ARAG	**Araguaiana, MT**	**50.63**	**125**	*e*P	**P**	**18 21 53.3**	**-3.9**
SMTB	**Santa Maria do**	**50.77**	**114**	*e*P	**P**	**18 21 57.5**	**-0.9**
T35M	**Bob Quinn**	**51.01**	**335**	P	**P**	**18 22 01.4**	**+1.9**
T35M	**Bob Quinn**	**51.01**	**335**	P	**P**	**18 22 02.4**	**+2.8**
	baz=131						
CRAG	**Craig**	**51.29**	**332**	P	**P**	**18 22 03.6**	**+2.0**
	baz=127						
BEAVL	**Fort Liard**	**51.37**	**340**	P	**P**	**18 22 04.2**	**+2.0**
	baz=139,SNR=9.3						
WRAK	**Wrangell Islan**	**51.53**	**333**	P	**P**	**18 22 06.2**	**+2.8**
	baz=128						
U33K	**Whale Pass**	**51.69**	**333**	P	**P**	**18 22 07.1**	**+2.6**
	baz=127						
DLBC	**Dease Lake**	**51.90**	**336**	LR	LR	18 47 05.8	
	comp=Z,363nm,18.3s,baz=140,slow=39						
DLBC	**Dease Lake**	**51.90**	**336**	P	**P**	**18 22 08.9**	**+2.7**
	baz=132,SNR=11						
TAOE	**Nuku Hiva Isla**	**51.94**	**246**	*e*S	**S**	**18 29 34.2**	**+3.2**
	comp=Z,155nm,25.3s						
TAOE				*e*LR	LR	18 36 59.0	
	comp=Z,229nm,22.8s						
S34M	**Telegraph Cree**	**51.98**	**335**	P	**P**	**18 22 09.7**	**+3.0**
	baz=131,SNR=5.5						
T33K	**Petersburg**	**52.04**	**334**	P	**P**	**18 22 09.9**	**+2.7**
	baz=128						
FRB	**Frobisher Bay**	**52.28**	**14**	LR	LR	18 46 27.5	
	comp=Z,447nm,18.6s,baz=200,slow=38						
WTLY	**Watson Lake, Y**	**52.60**	**338**	P	**P**	**18 22 12.9**	**+1.5**
WTLY				IAmb	IAmb	18 22 21.1	
	comp=Z,20nm,1.0s						
WTLY	**Watson Lake, Y**	**52.60**	**338**	P	**P**	**18 22 13.7**	**+2.3**
	baz=135						
R33M	**Jennings River**	**52.90**	**337**	P	**P**	**18 22 16.2**	**+2.5**
	baz=132,SNR=12						
Q32M	**Nakina River**	**53.12**	**336**	P	**P**	**18 22 16.6**	**+1.1**
Q32M				IAmb	IAmb	18 22 26.0	
	comp=Z,19nm,1.0s						
Q32M	**Nakina River**	**53.12**	**336**	P	**P**	**18 22 18.1**	**+2.6**
	baz=130,SNR=15						
S32K	**Killisnoo**	**53.14**	**333**	P	**P**	**18 22 18.1**	**+2.8**
	baz=127						
SIT	**Sitka**	**53.23**	**333**	P	**P**	**18 22 18.5**	**+2.5**
	baz=126						
WRGLY	**Wrigley**	**53.26**	**343**	P	**P**	**18 22 17.0**	**+0.9**
WRGLY	**Wrigley**	**53.26**	**343**	P	**P**	**18 22 18.7**	**+2.6**
	baz=142						
CPUP	**Villa Florida**	**53.38**	**139**	P	**P**	**18 22 19.3**	**+1.8**
	comp=Z,0.6nm,0.6s,baz=182,slow=7.9,SNR=4.7						
CPUP				LR	LR	18 44 55.1	
	comp=Z,48nm,21.1s,baz=197,slow=36						
	comp=Z,0.6nm,0.6s						
TGTN	**Hyland Airport**	**53.43**	**340**	P	**P**	**18 22 20.1**	**+2.6**
	baz=136						
R32K	**Eaglecrest**	**53.61**	**334**	P	**P**	**18 22 21.4**	**+2.6**
	baz=127						
BDFB	**Brasilia**	**53.68**	**122**	LR	LR	18 45 41.2	
	comp=Z,211nm,18.9s,baz=319,slow=37						
P32M	**Atlin**	**54.09**	**336**	P	**P**	**18 22 24.6**	**+2.2**
	baz=129						
P33M	**Teslin, Yukon**	**54.14**	**337**		**P**	**18 22 24.2**	**+1.4**
P33M	**Teslin, Yukon**	**54.14**	**337**	P	**P**	**18 22 25.2**	**+2.4**
	baz=130						
S31K	**Pelican**	**54.15**	**333**		**P**	**18 22 24.6**	**+1.8**
S31K				IAmb	IAmb	18 22 26.8	
	comp=Z,27nm,1.3s						
S31K	**Pelican**	**54.15**	**333**	P	**P**	**18 22 25.2**	**+2.4**
	baz=125						
SKAG	**Skagway**	**54.66**	**335**	P	**P**	**18 22 28.1**	**+1.6**
SKAG				IAmb	IAmb	18 22 43.6	
	comp=Z,10.0nm,1.0s						
SKAG	**Skagway**	**54.66**	**335**	P	**P**	**18 22 28.7**	**+2.3**
	baz=127						
N32M	**Quiet Lake**	**54.85**	**338**	P	**P**	**18 22 30.2**	**+2.3**
	baz=130						
PLBC	**Pleasant Camp**	**55.09**	**335**	P	**P**	**18 22 32.0**	**+2.4**
	baz=126						
MMPY	**Sheldon Lake,**	**55.20**	**340**	P	**P**	**18 22 32.4**	**+2.0**
MMPY				IAmb	IAmb	18 22 40.4	
	comp=Z,22nm,1.0s						
MMPY	**Sheldon Lake,**	**55.20**	**340**	P	**P**	**18 22 32.7**	**+2.4**
	baz=133,SNR=21						
WHY	**Whitehorse**	**55.22**	**337**		**P**	**18 22 31.9**	**+1.2**
WHY				IAmb	IAmb	18 22 33.6	
	comp=Z,9.5nm,0.9s						
WHY	**Whitehorse**	**55.22**	**337**	P	**P**	**18 22 32.6**	**+1.9**
	baz=128,SNR=5.7						
ILON	**Igloolik, Nuna**	**55.49**	**5**	P	**P**	**18 22 32.5**	**+0.2**
FARO	**Faro, Yukon**	**55.66**	**339**	P	**P**	**18 22 35.0**	**+1.4**
FARO	**Faro, Yukon**	**55.66**	**339**	P	**P**	**18 22 35.8**	**+2.1**
	baz=131						
P30M	**Million Dollar**	**55.72**	**335**	P	**P**	**18 22 36.9**	**+2.7**
	baz=126						
P29M	**Windy Craggy**	**55.76**	**334**		**P**	**18 22 36.4**	**+2.0**
P29M				IAmb	IAmb	18 22 38.3	
	comp=Z,24nm,1.2s						
P29M	**Windy Craggy**	**55.76**	**334**	P	**P**	**18 22 37.0**	**+2.6**
	baz=124,SNR=7.7						
O30N	**Mendenhall**	**55.76**	**336**	P	**P**	**18 22 36.1**	**+1.6**
O30N				IAmb	IAmb	18 22 47.3	
	comp=Z,11nm,1.1s						
O30N	**Mendenhall**	**55.76**	**336**	P	**P**	**18 22 36.5**	**+2.0**
	baz=127,SNR=7.5						
M31M	**Drury Creek, Y**	**56.01**	**338**	P	**P**	**18 22 37.8**	**+1.6**
M31M	**Drury Creek, Y**	**56.01**	**338**	P	**P**	**18 22 38.1**	**+1.9**
	baz=130						
N31M	**Braeburn, Yuko**	**56.08**	**337**	P	**P**	**18 22 38.4**	**+1.7**
N31M				IAmb	IAmb	18 22 39.9	
	comp=Z,17nm,0.9s						
N31M	**Braeburn, Yuko**	**56.08**	**337**	P	**P**	**18 22 38.9**	**+2.2**
	baz=128,SNR=9.4						
HYT	**Haines Junctio**	**56.35**	**336**		**P**	**18 22 40.2**	**+1.4**
HYT				IAmb	IAmb	18 22 49.0	
	comp=Z,18nm,1.3s						
HYT	**Haines Junctio**	**56.35**	**336**	P	**P**	**18 22 41.1**	**+2.3**
	baz=125,SNR=7.5						
PNL	**Peninsula**	**56.48**	**334**	P	**P**	**18 22 41.7**	**+2.2**
	baz=123						
O29M	**Mount Kennedy**	**56.48**	**335**	P	**P**	**18 22 42.0**	**+2.2**
	baz=124,SNR=6.5						
N30M	**Aishikik Lake**	**56.56**	**336**	P	**P**	**18 22 41.5**	**+1.3**
N30M				IAmb	IAmb	18 22 43.9	
	comp=Z,13nm,1.1s						
N30M	**Aishikik Lake**	**56.56**	**336**	P	**P**	**18 22 42.7**	**+2.5**
	baz=126,SNR=10.0						
YUK6	**Outpost Mounta**	**56.76**	**336**	P	**P**	**18 22 44.1**	**+2.3**
	baz=125,SNR=7.8						
PINM	**Pinnacle**	**57.07**	**334**	P	**P**	**18 22 46.4**	**+2.6**
	baz=122,SNR=5.2						
PCA	**Pinnacle**	**57.07**	**334**	P	**P**	**18 22 45.2**	**+1.3**
PCA				IAmb	IAmb	18 24 17.3	
	comp=Z,19nm,0.9s						
YUK4	**Talbot Arm**	**57.10**	**336**	P	**P**	**18 22 46.5**	**+2.2**
	baz=125						
O28M	**Mount Upton**	**57.41**	**335**	P	**P**	**18 22 48.8**	**+2.3**
	baz=123						
YUK8	**Steele Glacier**	**57.52**	**335**	P	**P**	**18 22 49.3**	**+2.1**
	baz=123,SNR=8.7						
M29M	**Somme Creek**	**57.67**	**337**	P	**P**	**18 22 50.1**	**+2.1**
	baz=125,SNR=38						
MESA	**MESA**	**57.84**	**334**	P	**P**	**18 22 51.4**	**+2.0**
	baz=120						
L29M	**L29M**	**57.93**	**338**	IAmb	IAmb	18 22 52.7	
	comp=Z,14nm,1.0s						
L29M	**L29M**	**57.93**	**338**	P	**P**	**18 22 51.8**	**+1.9**
	baz=126,SNR=14						
CTGM	**Chitina Glacie**	**57.99**	**335**	P	**P**	**18 22 51.9**	**+1.5**
CTGM				IAmb	IAmb	18 23 00.5	
	comp=Z,25nm,1.2s						
CTG	**Chitna Glacier**	**57.99**	**335**	P	**P**	**18 22 52.3**	**+1.9**
	baz=122						
YUK3	**Moose Creek**	**58.07**	**336**	P	**P**	**18 22 53.0**	**+2.0**

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       baz=123,SNR=7.6
K29M   Barlow Dome        58.15 339  IAmb   IAmb   18 22 54.2
       comp=Z,35nm,1.9s
K29M   Barlow Dome        58.15 339  P      P      18 22 53.1 +1.6
       baz=127,SNR=8.4
J30M   Hart River         58.20 340  P      P      18 22 52.7 +0.9
J30M   Hart River         58.20 340  P      P      18 22 53.5 +1.8
       baz=129,SNR=7.2
ISLE   Juniper Island     58.22 334  P      P      18 22 53.9 +1.9
ISLE                                 IAmb   IAmb   18 22 55.5
       comp=Z,17nm,1.1s
C36M   Paulatuk           58.34 348  P      P      18 22 54.3 +1.8
       baz=144
H31M   Peel River         58.35 341  IAmb   IAmb   18 23 58.3
       comp=Z,14nm,1.1s
H31M   Peel River         58.35 341  P      P      18 22 54.4 +1.7
       baz=131
BGLC   Bering Glacier     58.39 333  P      P      18 22 54.4 +1.4
       baz=119
TGL    Tana Glacier       58.51 334  P      P      18 22 56.0 +2.0
BVCY   Beaver Creek       58.57 336  P      P      18 22 56.0 +1.7
       baz=123
DIAM   Diamantina, MG     58.60 122  eP     P      18 22 54.6  -0.7
CRQE   Cirque             58.62 334  P      P      18 22 56.8 +2.0
       baz=120
I30M   Mount Dempster     58.62 340  IAmb   IAmb   18 22 57.0
       comp=Z,29nm,1.6s
I30M   Mount Dempster     58.62 340  P      P      18 22 56.2 +1.5
       baz=129,SNR=11
CRQM   Cirque             58.64 334  P      P      18 22 56.6 +1.6
PLCA   Paso Flores        58.66 160  P      P      18 22 55.5 +0.3
       comp=Z,3.0nm,0.9s,baz=313,slow=9.6,SNR=3.4
PLCA                                 LR     LR     18 43 03.4
       comp=Z,135nm,18.7s,baz=357,slow=31
       comp=Z,3.0nm,0.9s
BERG   Berg Lake          58.70 333  P      P      18 22 56.9 +1.7
J29N   Klondike Camp      58.77 339  P      P      18 22 57.3 +1.6
       baz=126
KAIM   Kayak Island       58.80 333  P      P      18 22 57.4 +1.6
       baz=118
MCARA  McCarthy VSAT      58.91 335         P      18 22 58.4 +1.8
MCARA  McCarthy VSAT      58.91 335  P      P      18 22 58.7 +2.1
       baz=120,SNR=6.6
HMT    Hamilton           58.92 333  P      P      18 22 58.5 +1.7
HMT                                  IAmb   IAmb   18 23 10.5
       comp=Z,17nm,1.1s
M27K   Edge Creek, AK     58.94 336  P      P      18 22 58.7 +1.6
M27K                                 IAmb   IAmb   18 23 14.7
       comp=Z,22nm,1.6s
M27K   Edge Creek, AK     58.94 336  P      P      18 22 58.7 +1.6
       baz=122
DAWY   Dawson             58.95 338  P      P      18 22 58.3 +1.3
DAWY   Dawson             58.95 338  P      P      18 22 57.6 +0.7
       baz=125
VRDI   Verde Repeater     59.01 334  P      P      18 22 59.1 +1.6
VRDI                                 IAmb   IAmb   18 23 11.0
       comp=Z,16nm,1.2s
POIN   Pond Inlet         59.05   5  P      P      18 22 57.2  -0.2
POIN                                 IAmb   IAmb   18 22 58.8
       comp=Z,10nm,1.0s
G31M   Satah River        59.08 342  P      P      18 22 58.6 +1.0
       baz=132,SNR=13
RAGM   Ragged Mountai     59.13 333  P      P      18 22 59.5 +1.3
RAGM                                 IAmb   IAmb   18 23 01.9
       comp=Z,23nm,1.1s
GLB    Gilahina Butte     59.26 334  P      P      18 23 01.2 +2.1
GLB                                  IAmb   IAmb   18 23 02.6
       comp=Z,16nm,1.0s
F31M   Tsiigehtchic       59.28 343  P      P      18 22 59.5 +0.5
F31M   Tsiigehtchic       59.28 343  P      P      18 23 00.1 +1.1
       baz=133
BCAR   Beaver Creek A     59.28 337         P      18 23 00.5 +1.2
L27K   Beaver Creek,      59.30 337  IAmb   IAmb   18 23 02.3
       comp=Z,14nm,1.1s
L27K   Beaver Creek,      59.30 337  P      P      18 23 00.8 +1.5
       baz=122,SNR=14
I29M   Ogilvie Camp,      59.34 340  P      P      18 23 00.8 +1.2
I29M                                 IAmb   IAmb   18 23 07.9
       comp=Z,13nm,1.1s
I29M   Ogilvie Camp,      59.34 340  P      P      18 23 00.8 +1.2
       baz=127,SNR=9.3
BMRM   Bremner River      59.37 334  P      P      18 23 00.4 +0.5
BMRM                                 IAmb   IAmb   18 23 09.8
       comp=Z,12nm,1.0s
BMRM   Bremner River      59.37 334  P      P      18 23 01.9 +2.0
       baz=118,SNR=5.8
M26K   Nabesna, AK        59.41 336  P      P      18 23 01.4 +1.3
M26K                                 IAmb   IAmb   18 23 09.6
       comp=Z,15nm,1.1s
M26K   Nabesna, AK        59.41 336  P      P      18 23 01.9 +1.7
       baz=120,SNR=9.4
Q23K   Middleton Isla     59.45 332  P      P      18 23 01.7 +1.4
       baz=116
EPYK   Eagle Plains       59.45 341  P      P      18 23 01.4 +1.0
EPYK                                 IAmb   IAmb   18 23 59.0
       comp=Z,16nm,1.1s
EPYK   Eagle Plains       59.45 341  P      P      18 23 01.3 +1.0
       baz=129,SNR=5.7
SFJD   Kangerlussuaq      59.58  18  LR     LR     18 50 31.3
       comp=Z,1μm,18.2s,baz=222,slow=38
N25K   Chitina, Valde     59.67 334         P      18 23 03.9 +1.9
N25K   Chitina, Valde     59.67 334  P      P      18 23 04.0 +2.0
       baz=118,SNR=10
EYAK   Cordova Ski Ar     59.67 333  P      P      18 23 04.2 +2.3
       baz=117
G30M   tAoh Zraii Nji     59.69 342         P      18 23 02.1 +0.1
G30M   tAoh Zraii Nji     59.69 342  P      P      18 23 02.7 +0.7
       baz=130
INK    Inuvik             59.81 344  LR     LR     18 52 21.5
       comp=Z,347nm,19.1s,baz=152,slow=39
INK    Inuvik             59.81 344  P      P      18 23 04.1 +1.4
       baz=133,SNR=13
L26K   Log Cabin Wild     59.87 336  P      P      18 23 04.7 +1.4
       baz=120
H29M   Whitestone         59.88 341  P      P      18 23 04.8 +1.5
       baz=127,SNR=8.7
K27K   Chicken            59.91 337  P      P      18 23 05.2 +1.7
       baz=122
HIN    Hinchinbrook I     59.94 333  P      P      18 23 05.7 +1.9
I28M   Miner Creek        59.95 339  P      P      18 23 05.7 +1.8
       baz=125
MENT   Mentasta           59.97 336  P      P      18 23 05.5 +1.5
MENT                                 IAmb   IAmb   18 23 13.3
       comp=Z,33nm,1.6s
F30M   Barrier River      59.98 343         P      18 23 05.1 +1.2
F30M   Barrier River      59.98 343  P      P      18 23 05.3 +1.4
       baz=131,SNR=12
FID    Port Fidalgo       60.09 333  P      P      18 23 06.6 +1.9
FID                                  IAmb   IAmb   18 23 08.2
       comp=Z,20nm,1.1s
P23K   Montague Islan     60.17 332  P      P      18 23 07.0 +1.7
       baz=115
KLU    Klutina            60.18 334  P      P      18 23 06.6 +1.1
KLU    Klutina            60.18 334  P      P      18 23 07.4 +1.9
       baz=117,SNR=9.1
G29M   Pine Creek         60.20 341  IAmb   IAmb   18 23 07.7
       comp=Z,14nm,1.1s
G29M   Pine Creek         60.20 341  P      P      18 23 07.2 +1.7
       baz=128,SNR=10
RCBR   Riachuelo          60.25 105  LR     LR     18 53 32.5
       comp=Z,91nm,18.4s,baz=292,slow=40
HARP   HAARP              60.28 335  P      P      18 23 07.8 +1.6
       baz=118
RES    Resolute Bay       60.37 359  IAmb   IAmb   18 23 07.8
       comp=Z,17nm,0.8s
RES    Resolute Bay       60.37 359  LR     LR     18 52 19.4
       comp=Z,295nm,18.3s,baz=172,slow=39
GLI    Glacier Island     60.41 333  P      P      18 23 08.8 +1.8
       baz=116
DOT    Dot Lake           60.47 337  P      P      18 23 08.7 +1.4
M24K   Tolsona, Glenn     60.57 334  P      P      18 23 09.4 +1.3
M24K   Tolsona, Glenn     60.57 334  P      P      18 23 10.1 +2.0
       baz=117
SCRK   Sand Creek         60.60 337  IAmb   IAmb   18 23 17.7
       comp=Z,24nm,1.4s
SCRK   Sand Creek         60.60 337  P      P      18 23 10.1 +1.7
       baz=120,SNR=10
I27K   Kandik River       60.61 339  P      P      18 23 09.7 +1.3
       baz=124,SNR=12
PAX    Paxson             60.69 336  P      P      18 23 10.2 +1.2
PAX                                  IAmb   IAmb   18 23 17.9
       comp=Z,16nm,0.9s
PAX    Paxson             60.69 336  P      P      18 23 10.2 +1.2
       baz=118,SNR=16
J26L   Joseph Creek       60.71 338  P      P      18 23 10.7 +1.6
       baz=121,SNR=18
A36M   Sachs Harbour      60.72 349  P      P      18 23 09.3 +0.5
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       baz=144
RIDG   Independent Ri     60.81 336  P      P      18 23 11.2 +1.5
RIDG   Independent Ri     60.81 336  P      P      18 23 11.3 +1.6
       baz=119,SNR=16
H27K   Steamboat Moun     60.93 340  P      P      18 23 12.1 +1.6
       baz=124,SNR=15
SCM    Sheep Creek Mo     60.93 334  P      P      18 23 12.3 +1.6
       baz=116,SNR=5.6
PWL    Port Wells         60.95 333  P      P      18 23 11.8 +1.1
       baz=114
I26K   Coal Creek Min     60.99 338  IAmb   IAmb   18 23 19.5
       comp=Z,23nm,1.4s
I26K   Coal Creek Min     60.99 338  P      P      18 23 12.1 +1.3
       baz=122,SNR=8.1
M23K   Glacier View       61.09 334  P      P      18 23 12.9 +1.3
       baz=116
E29M   Blow River         61.09 343  IAmb   IAmb   18 23 18.0
       comp=Z,20nm,1.1s
E29M   Blow River         61.09 343  P      P      18 23 13.1 +1.7
       baz=129,SNR=14
SEW    Seward             61.16 332  P      P      18 23 12.9 +0.9
       baz=113
F28M   Old Crow           61.20 341  P      P      18 23 13.6 +1.3
F28M   Old Crow           61.20 341  P      P      18 23 13.5 +1.3
       baz=126,SNR=38
K24K   Donnelly Dome      61.21 336  P      P      18 23 13.8 +1.4
K24K   Donnelly Dome      61.21 336  P      P      18 23 13.8 +1.4
       baz=118
KNK    Knik Glacier       61.24 333  P      P      18 23 13.6 +1.0
KNK                                  IAmb   IAmb   18 23 15.4
       comp=Z,15nm,0.9s
KNK    Knik Glacier       61.24 333  P      P      18 23 13.9 +1.3
       baz=114
G27K   Doyon Strip        61.30 340  P      P      18 23 13.8 +0.8
G27K                                 IAmb   IAmb   18 23 15.3
       comp=Z,7.3nm,1.0s
G27K   Doyon Strip        61.30 340  P      P      18 23 14.3 +1.3
       baz=124,SNR=13
SML    Sawmill            61.35 334  P      P      18 23 14.5 +1.0
SML    Sawmill            61.35 334  P      P      18 23 14.8 +1.4
       baz=115,SNR=6.0
O22K   Cooper Landing     61.43 332  P      P      18 23 15.2 +1.4
       baz=113
WAT6   Susitna Watana     61.44 335  P      P      18 23 15.5 +1.4
       baz=116,SNR=24
J25K   Salcha River,      61.44 337  IAmb   IAmb   18 23 26.7
       comp=Z,14nm,1.1s
J25K   Salcha River,      61.44 337  P      P      18 23 15.5 +1.4
       baz=119,SNR=11
DHY    Denali Highway     61.51 335  P      P      18 23 15.3 +0.7
DHY                                  IAmb   IAmb   18 23 25.6
       comp=Z,6.6nm,1.0s
DHY    Denali Highway     61.51 335  P      P      18 23 15.6 +1.0
       baz=116
GHO    Glory Hole Cre     61.59 333  P      P      18 23 16.3 +1.2
PMR    Palmer             61.61 333  P      P      18 23 16.5 +1.4
       baz=114
BRSE   Bradley Lake S     61.62 331  P      P      18 23 16.4 +1.2
       baz=112
RC01   Rabbit Creek A     61.67 333  P      P      18 23 16.8 +1.3
       baz=113
E28M   Babbage River      61.70 342  IAmb   IAmb   18 23 17.7
       comp=Z,14nm,0.9s
E28M   Babbage River      61.70 342  P      P      18 23 16.7 +1.1
       baz=127,SNR=14
RIB01  Linhares ES        61.80 121  eP     P      18 23 16.8  -0.3
KDAK   Kodiak Island      61.84 328  P      P      18 23 18.0 +1.3
       baz=109
WAT1   Susitna Watana     61.88 335  P      P      18 23 18.4 +1.4
       baz=115
D28M   Stokes Point       61.91 343  P      P      18 23 18.3 +1.4
       baz=128
HDA    Harding Lake       61.95 337  P      P      18 23 18.0 +0.7
HDA    Harding Lake       61.95 337  P      P      18 23 18.2 +0.9
       baz=118,SNR=8.9
PRP    Porcupine Dome     61.95 338  IAmb   IAmb   18 23 19.9
       comp=Z,16nm,0.9s
PRP    Porcupine Dome     61.95 338  P      P      18 23 18.6 +1.1
       baz=120,SNR=5.5
HOM    Homer              62.01 331  P      P      18 23 19.2 +1.4
       baz=111
Q20K   Shuyak Island      62.02 329  P      P      18 23 19.6 +1.7
       baz=109
OHAK   Old Harbor         62.02 328  P      P      18 23 19.3 +1.3
       baz=108
E27K   Coleen River       62.06 342  P      P      18 23 19.7 +1.5
       baz=125,SNR=14
G26K   Porcupine Rive     62.08 340  P      P      18 23 18.0  -0.1
G26K                                 IAmb   IAmb   18 23 31.0
       comp=Z,12nm,1.1s
G26K   Porcupine Rive     62.08 340  P      P      18 23 19.5 +1.3
       baz=122,SNR=7.8
IL31                      62.09 337  P      P      18 23 18.5 +0.2
ILAR   Eielson Array      62.09 337         P      18 23 18.2  -0.1
ILAR   Eielson Array      62.09 337  P      P      18 23 19.5 +1.2
       comp=Z,7.2nm,0.9s,baz=138,slow=4.5,SNR=43
ILAR                                 LR     LR     18 52 59.1
       comp=Z,253nm,18.3s,baz=115,slow=39
       comp=Z,7.2nm,0.9s
M22K   Willow             62.10 333  P      P      18 23 19.6 +1.2
       baz=113
CAPN   Captain Cook N     62.19 332  P      P      18 23 20.7 +1.7
       baz=112
SUA    Susitna One        62.27 333  P      P      18 23 20.6 +0.9
SUA                                  IAmb   IAmb   18 23 21.9
       comp=Z,14nm,0.9s
SUA    Susitna One        62.27 333  P      P      18 23 21.2 +1.5
       baz=112
WRH    Wood River Hil     62.42 336  P      P      18 23 20.7 +0.2
WRH                                  IAmb   IAmb   18 23 28.5
       comp=Z,7.0nm,1.0s
MCK    McKinley           62.42 335  P      P      18 23 21.9 +1.3
       baz=115
H25L   Birch Creek        62.43 339  P      P      18 23 22.0 +1.5
       baz=120
CUT    Chulitna           62.43 334  P      P      18 23 21.4 +0.8
CUT    Chulitna           62.43 334  P      P      18 23 22.0 +1.4
       baz=113
POKR   Poker Plat Res     62.46 337  P      P      18 23 21.3 +0.6
POKR                                 IAmb   IAmb   18 23 29.4
       comp=Z,16nm,0.9s
POKR   Poker Plat Res     62.46 337  P      P      18 23 22.0 +1.2
       baz=117
D27M   Malcolm River      62.49 343  IAmb   IAmb   18 23 30.1
       comp=Z,22nm,1.2s
D27M   Malcolm River      62.49 343  P      P      18 23 22.4 +1.4
       baz=126
COLA   College            62.51 337  P      P      18 23 22.0 +1.0
F26K   Sheenjek River     62.60 340  P      P      18 23 23.2 +1.6
F26K                                 IAmb   IAmb   18 23 24.6
       comp=Z,9.8nm,1.1s
F26K   Sheenjek River     62.60 340  P      P      18 23 23.3 +1.7
       baz=122,SNR=8.4
BMAR   Burnt Mountain     62.60 340         P      18 23 23.1 +1.4
O20K   Slope Mountain     62.62 331  P      P      18 23 23.3 +1.2
       baz=110
Q19K   Cape Douglas,      62.73 330  P      P      18 23 23.9 +1.1
Q19K   Cape Douglas,      62.73 330  P      P      18 23 23.9 +1.1
       baz=108
P19K   Oil Pt             62.77 330  P      P      18 23 24.2 +1.2
       baz=109
G25K   Bearman Lake       62.77 339  P      P      18 23 24.5 +1.7
       baz=120,SNR=6.1
RED    Redoubt Volcan     62.81 331  P      P      18 23 23.9 +0.6
SKT    Skwentna           62.81 333  P      P      18 23 24.4 +1.2
       baz=112,SNR=9.4
SPCR   Spurr Chakacha     62.83 332  P      P      18 23 24.5 +1.2
       baz=111
ILSW   Iliamna Southw     62.84 331  P      P      18 23 24.6 +1.1
ILSW                                 IAmb   IAmb   18 25 18.1
       comp=Z,21nm,1.6s
NEA2   Nenana             62.85 336  P      P      18 23 24.6 +1.2
       baz=116
TRF    Thorofare Moun     62.86 335  P      P      18 23 24.8 +1.1
       baz=114,SNR=18
H24K   Noodor Dome        62.96 338  P      P      18 23 25.3 +1.1
       baz=117,SNR=19
F25K   Christian Rive     63.03 340  IAmb   IAmb   18 23 37.2
       comp=Z,22nm,1.4s
F25K   Christian Rive     63.03 340  P      P      18 23 26.4 +1.8
       baz=120,SNR=16
KTH    Kantishna Hill     63.16 335  IAmb   IAmb   18 23 27.5
       comp=Z,18nm,1.0s
I23K   Minto, Yukon-K     63.20 337  P      P      18 23 26.4 +0.7
I23K   Minto, Yukon-K     63.20 337  P      P      18 23 27.1 +1.5
       baz=115,SNR=20
G24K   Hadweenzic Riv     63.22 339  P      P      18 23 27.4 +1.5
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G24K                                 IAmb   IAmb   18 23 34.9
       comp=Z,17nm,1.1s
G24K   Hadweenzic Riv     63.22 339  P      P      18 23 27.8 +2.0
       baz=118,SNR=10
E25K   Arctic Village     63.28 341  P      P      18 23 27.9 +1.6
       baz=121,SNR=8.1
Q18K   Katmai Hardscr     63.33 329  P      P      18 23 27.7 +1.0
       baz=107
BPAW   Bear Paw Mtn.      63.40 335  IAmb   IAmb   18 23 29.1
       comp=Z,13nm,1.0s
BPAW   Bear Paw Mtn.      63.40 335  P      P      18 23 28.1 +1.0
       baz=113,SNR=12
PPLA   Purkeypile         63.44 334  P      P      18 23 28.3 +0.8
PPLA   Purkeypile         63.44 334  P      P      18 23 28.2 +0.7
       baz=112,SNR=5.1
O19K   Port Alsworth      63.46 331  P      P      18 23 28.3 +0.8
       baz=108
M20K   Styx River         63.48 333  P      P      18 23 28.2 +0.4
M20K                                 IAmb   IAmb   18 23 29.9
       comp=Z,9.3nm,0.8s
M20K   Styx River         63.48 333  P      P      18 23 28.8 +1.1
       baz=110
C27K   Jago River         63.51 342  P      P      18 23 29.2 +1.5
C27K   Jago River         63.51 342  P      P      18 23 29.3 +1.6
       baz=123,SNR=11
H23K   Yukon River        63.57 337  P      P      18 23 29.5 +1.3
H23K                                 IAmb   IAmb   18 23 36.9
       comp=Z,20nm,1.4s
H23K   Yukon River        63.57 337  P      P      18 23 29.0 +0.9
       baz=116
CAST   Castle Rocks       63.59 335  IAmb   IAmb   18 23 40.1
       comp=Z,16nm,1.0s
CAST   Castle Rocks       63.59 335  P      P      18 23 29.1 +0.7
       baz=112,SNR=18
P18K   Big Mountain,      63.66 330  P      P      18 23 29.6 +0.7
       baz=107
Q17K   Contact Creek      63.66 328  P      P      18 23 29.6 +0.6
       baz=106
MLY    Manley             63.68 336  P      P      18 23 29.8 +0.9
       baz=114,SNR=16
N19K   Bonanza Creek      63.74 331  IAmb   IAmb   18 23 37.9
       comp=Z,13nm,0.9s
N19K   Bonanza Creek      63.74 331  P      P      18 23 30.3 +0.9
       baz=108,SNR=6.5
F24K   Squaw Lake         63.75 340  IAmb   IAmb   18 23 51.2
       comp=Z,7.3nm,1.1s
F24K   Squaw Lake         63.75 340  P      P      18 23 30.7 +1.4
       baz=118
O18K   Koktuh Hills       63.78 330  P      P      18 23 30.3 +0.6
       baz=107
CHUM   Lake Minchumin     63.86 335  P      P      18 23 31.0 +0.9
       baz=112
PPT    Papeete            64.00 242  LR     LR     18 45 24.2
       comp=Z,129nm,19.6s,baz=46,slow=30
PPT2   Papeete2           64.01 242  eS     S      18 32 01.4  -7.4
       comp=Z,85nm,26.2s
PPT2                                 eSS    SS     18 36 24.2 +6.4
       comp=Z,131nm,28.8s
PPT2                                 eLR    LR     18 42 27.4
       comp=Z,107nm,24.5s
PPT2                                 eLR    LR     18 42 35.7
       comp=Z,131nm,21.5s
L20K   Farewell, AK       64.02 333  P      P      18 23 32.1 +0.9
       baz=110,SNR=12
C26K   Camden Bay         64.02 342  P      P      18 23 31.7 +0.7
       baz=122
M19K   Big River Lodg     64.05 333  P      P      18 23 30.8  -0.6
M19K                                 IAmb   IAmb   18 23 33.2
       comp=Z,9.2nm,0.9s
M19K   Big River Lodg     64.05 333  P      P      18 23 32.4 +1.1
       baz=109,SNR=5.1
G23K   Bananza Creek      64.13 338  IAmb   IAmb   18 23 40.8
       comp=Z,12nm,1.1s
G23K   Bananza Creek      64.13 338  P      P      18 23 33.0 +1.2
       baz=116,SNR=8.5
D25K   Kavik River        64.15 342  P      P      18 23 33.6 +1.7
D25K   Kavik River        64.15 342  P      P      18 23 33.5 +1.5
       baz=120,SNR=23
P17K   Kvichak River      64.19 329  P      P      18 23 33.3 +1.0
       baz=106
E24K   Your Creek         64.21 340  P      P      18 23 34.0 +1.6
E24K                                 IAmb   IAmb   18 23 41.8
       comp=Z,18nm,1.4s
E24K   Your Creek         64.21 340  P      P      18 23 33.7 +1.3
       baz=118,SNR=6.8
H22K   Ishtalitna Cre     64.28 337  P      P      18 23 34.0 +1.1
       baz=114,SNR=11
L19K   White Mountain     64.35 333         P      18 23 34.1 +0.8
L19K                                 IAmb   IAmb   18 23 44.7
       comp=Z,9.7nm,1.1s
L19K   White Mountain     64.35 333  P      P      18 23 34.0 +0.6
       baz=109
R16K   Pilot Point        64.35 327  P      P      18 23 33.4   0.0
       baz=104
N18K   Kilae Creek        64.35 331  P      P      18 23 34.2 +0.8
       baz=107
K20K   Telida             64.40 334  P      P      18 23 34.6 +1.0
       baz=110,SNR=12
COLD   Coldfoot           64.41 339  P      P      18 23 35.0 +1.3
COLD                                 IAmb   IAmb   18 23 46.3
       comp=Z,14nm,1.1s
COLD   Coldfoot           64.41 339  P      P      18 23 35.5 +1.8
       baz=116,SNR=11
M18K   Stony River        64.57 332  P      P      18 23 35.4 +0.7
       baz=108
E23K   Chandalar          64.58 340  P      P      18 23 36.7 +1.8
       baz=116,SNR=14
O17K   Koliganek Bris     64.67 330  P      P      18 23 36.4 +1.0
       baz=106
J20K   Nowinta River      64.72 335  IAmb   IAmb   18 23 43.9
       comp=Z,19nm,1.1s
J20K   Nowinta River      64.72 335  P      P      18 23 36.3 +0.7
       baz=110,SNR=8.9
H21K   Melozitna Rive     64.73 337  P      P      18 23 36.2 +0.4
H21K                                 IAmb   IAmb   18 23 43.8
       comp=Z,8.1nm,1.0s
H21K   Melozitna Rive     64.73 337  P      P      18 23 36.4 +0.6
       baz=112,SNR=5.4
G22K   Bettles            64.75 338  P      P      18 23 37.1 +1.3
       baz=114
D24K   Happy Valley       64.83 341  P      P      18 23 37.7 +1.4
       baz=118
TOLK   Toolik Lake Re     64.83 340  P      P      18 23 37.9 +1.5
       baz=117,SNR=7.1
P16K   Nushagak River     64.92 329  P      P      18 23 37.7 +0.7
       baz=104
C24K   Franklin Bluff     65.06 342  P      P      18 23 39.3 +1.6
C24K   Franklin Bluff     65.06 342  P      P      18 23 39.2 +1.4
       baz=118
I20K   Naaghedeneel       65.07 336  P      P      18 23 38.0 +0.1
I20K   Naaghedeneel       65.07 336  P      P      18 23 38.7 +0.7
       baz=110
O16K   Kokwok River B     65.11 329  P      P      18 23 39.0 +0.7
       baz=104
L18K   Granite Mounta     65.18 332  IAmb   IAmb   18 23 40.7
       comp=Z,18nm,1.3s
L18K   Granite Mounta     65.18 332  P      P      18 23 39.6 +0.9
       baz=107
IMAR   Indian Mountai     65.21 337  P      P      18 23 38.9   0.0
F22K   John River         65.23 339  P      P      18 23 40.7 +1.7
       baz=114,SNR=7.0
J19K   Poorman            65.27 335  P      P      18 23 39.8 +0.5
       baz=109,SNR=15
M17K   Holitna River      65.28 332  P      P      18 23 40.0 +0.5
M17K   Holitna River      65.28 332  P      P      18 23 40.3 +0.9
       baz=106
G21K   Allakaket          65.32 337  P      P      18 23 40.0 +0.4
G21K                                 IAmb   IAmb   18 23 48.2
       comp=Z,15nm,1.1s
G21K   Allakaket          65.32 337  P      P      18 23 40.9 +1.4
       baz=112
D23K   Nanushuk River     65.34 340  IAmb   IAmb   18 23 49.2
       comp=Z,16nm,1.0s
D23K   Nanushuk River     65.34 340  P      P      18 23 41.7 +2.0
       baz=116,SNR=7.2
E22K   Anaktuvuk Pass     65.36 339  P      P      18 23 41.2 +1.4
       baz=114,SNR=14
SDPT   Sand Point         65.44 325  P      P      18 23 41.5 +0.9
       baz=100
H20K   Anotleneega Mo     65.47 336  P      P      18 23 41.5 +0.9
       baz=110,SNR=8.1
J18K   Innoko River       65.56 334  IAmb   IAmb   18 23 43.0
       comp=Z,17nm,1.5s
J18K   Innoko River       65.56 334  P      P      18 23 41.8 +0.6
       baz=108
F21K   Alatna River       65.58 338  P      P      18 23 43.0 +1.7
       baz=112,SNR=33
N16K   Nishlik Lake       65.67 330  P      P      18 23 43.3 +1.4
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      baz=104
C23K  Itkillik River     65.70 341  P      P       18 23 43.7 +1.8
      baz=116,SNR=12
EUNU  Eureka             65.84   1  P      P       18 23 43.9 +1.0
L17K  Donlin             65.88 332  P      P       18 23 44.0 +0.7
      baz=105
O15K  Ungalikthiuk R     65.88 329  P      P       18 23 44.1 +0.8
      baz=103
M16K  Timber Creek       65.89 331  P      P       18 23 44.2 +0.8
M16K                                IAmb   IAmb    18 23 53.2
      comp=Z,11nm,1.0s
M16K  Timber Creek       65.89 331  P      P       18 23 44.7 +1.4
      baz=104
D22K  Ayikyak River      65.96 340  P      P       18 23 45.4 +1.7
      baz=114,SNR=14
K17K  Iditarod           66.04 333  P      P       18 23 44.6 +0.3
K17K                                IAmb   IAmb    18 23 52.3
      comp=Z,10nm,1.0s
K17K  Iditarod           66.04 333  P      P       18 23 45.4 +1.2
      baz=106
H19K  Roundabout Mou     66.10 336  IAmb   IAmb    18 23 46.5
      comp=Z,14nm,1.0s
H19K  Roundabout Mou     66.10 336  P      P       18 23 45.6 +1.0
      baz=109,SNR=7.9
E21K  Killik River       66.22 339  P      P       18 23 46.4 +1.0
E21K  Killik River       66.22 339  P      P       18 23 46.7 +1.3
      baz=112,SNR=8.4
L16K  Owhat River        66.31 332  IAmb   IAmb    18 23 54.7
      comp=Z,15nm,1.2s
L16K  Owhat River        66.31 332  P      P       18 23 47.2 +1.2
      baz=104
F20K  Avaraart Lake      66.33 338  P      P       18 23 47.3 +1.3
F20K  Avaraart Lake      66.33 338  P      P       18 23 47.6 +1.5
      baz=110,SNR=18
S12K  Black Hills        66.39 325  P      P       18 23 47.7 +1.0
      baz=99
TBI   Tubuai             66.54 236 eS      S       18 32 32.8 -6.8
      comp=Z,392nm,27.0s
TBI   Tubuai             66.54 236 eLR     LR      18 43 45.5
      comp=Z,1µm,27.2s
G19K  Purcell Mounta     66.55 337  IAmb   IAmb    18 23 56.0
      comp=Z,14nm,1.1s
G19K  Purcell Mounta     66.55 337  P      P       18 23 48.7 +1.2
      baz=108,SNR=10.0
J17K  VABM Dome          66.56 333  P      P       18 23 46.8 -0.8
J17K  VABM Dome          66.56 333  P      P       18 23 48.8 +1.2
      baz=105
O14K  Tigyukauivet M     66.62 329  P      P       18 23 49.9 +1.9
      baz=101
M15K  Kasigluk River     66.64 330  P      P       18 23 49.8 +1.7
      baz=103
H18K  Honhosa River      66.75 335  P      P       18 23 50.1 +1.3
      baz=107
C21K  Knifeblade Rid     66.76 340  P      P       18 23 50.6 +1.7
      baz=112
B22K  Teshekpuk Lake     66.79 341  P      P       18 23 48.9  0.0
B22K  Teshekpuk Lake     66.79 341  P      P       18 23 50.6 +1.7
      baz=114,SNR=6.2
B21K  Ikpikpuk River     66.88 340  IAmb   IAmb    18 23 51.4
      comp=Z,22nm,1.2s
B21K  Ikpikpuk River     66.88 340  P      P       18 23 50.9 +1.4
      baz=112
E20K  Nigu River         66.92 339  P      P       18 23 51.4 +1.5
      baz=110
N14K  Kuskokwak Cree     66.96 329  P      P       18 23 50.7 +0.5
      baz=101
E19K  Redstone River     67.02 338  P      P       18 23 51.1 +0.6
E19K                                IAmb   IAmb    18 23 59.2
      comp=Z,5.7nm,0.8s
E19K  Redstone River     67.02 338  P      P       18 23 51.7 +1.2
      baz=109
F19K  Shaleruckik Mo     67.02 337  P      P       18 23 51.5 +1.0
      baz=108
FALS  False Pass         67.03 324  P      P       18 23 51.4 +0.7
      baz=98
G18K  Tagagawik          67.08 336  P      P       18 23 52.6 +1.7
      baz=107,SNR=7.0
J16K  Anvik River        67.20 333  P      P       18 23 53.3 +1.6
      baz=104,SNR=6.9
D20K  Etivluk River      67.22 339  P      P       18 23 52.8 +1.0
D20K  Etivluk River      67.22 339  P      P       18 23 53.2 +1.4
      baz=110
L15K  Ungalak Mounta     67.23 331  P      P       18 23 53.5 +1.6
      baz=102,SNR=6.5
M14K  Bethel             67.26 330  P      P       18 23 53.6 +1.6
      baz=101,SNR=5.6
H17K  Granite Mounta     67.32 335  P      P       18 23 53.7 +1.3
      baz=105
I17K  Unalakleet         67.38 334  P      P       18 23 54.5 +1.7
I17K                                IAmb   IAmb    18 26 10.3
      comp=Z,16nm,1.0s
I17K  Unalakleet         67.38 334  P      P       18 23 54.5 +1.7
      baz=104
K15K  Wolf Creek Mou     67.39 332  IAmb   IAmb    18 23 55.9
      comp=Z,15nm,0.9s
K15K  Wolf Creek Mou     67.39 332  P      P       18 23 54.7 +1.8
      baz=102
A22K  Sinclair Lake      67.52 342  P      P       18 23 55.2 +1.6
      baz=112
F18K  Selawik            67.67 337  P      P       18 23 56.0 +1.5
      baz=106
D19K  Kuna River         67.67 339  P      P       18 23 55.7 +1.0
D19K                                IAmb   IAmb    18 24 05.5
      comp=Z,12nm,0.9s
D19K  Kuna River         67.67 339  P      P       18 23 55.8 +1.2
      baz=108
L14K  Kuka Creek         67.72 331  P      P       18 23 55.7 +0.7
L14K                                IAmb   IAmb    18 24 04.8
      comp=Z,14nm,0.9s
L14K  Kuka Creek         67.72 331  P      P       18 23 56.2 +1.2
      baz=101
G17K  Kiwalik Mounta     67.77 335  P      P       18 23 56.7 +1.4
      baz=105
B20K  Meade River        67.85 341  P      P       18 23 57.5 +1.8
      baz=110,SNR=7.4
M13K  Dall Lake          67.87 330  P      P       18 23 57.2 +1.3
M13K  Dall Lake          67.87 330  P      P       18 23 57.4 +1.5
      baz=100
A21K  Barrow             68.14 342  P      P       18 23 58.5 +1.0
      baz=111
H16K  Elim               68.22 334  P      P       18 23 59.6 +1.5
      baz=103
E18K  Tukpahlearik C     68.25 337  P      P       18 23 59.3 +1.1
      baz=105
C19K  Lookout Ridge      68.37 339  P      P       18 24 00.5 +1.5
      baz=107
J14K  Nanvaranak Lak     68.40 332  P      P       18 24 00.4 +1.2
      baz=101,SNR=6.0
G16K  Koyuk River        68.43 335  P      P       18 24 00.6 +1.2
G16K                                IAmb   IAmb    18 24 11.1
      comp=Z,17nm,1.4s
G16K  Koyuk River        68.43 335  P      P       18 24 00.7 +1.3
      baz=103
E17K  Hotham Inlet       68.63 337  P      P       18 24 01.9 +1.3
      baz=104,SNR=5.2
UNV   Unalaska Valle     68.72 322  P      P       18 24 02.3 +0.9
      baz=95
K13K  Kusilvak Mount     68.76 331  P      P       18 24 02.3 +0.8
K13K                                IAmb   IAmb    18 24 10.4
      comp=Z,6.0nm,0.9s
K13K  Kusilvak Mount     68.76 331  P      P       18 24 02.8 +1.4
      baz=99
C18K  Utukok River       68.80 339  P      P       18 24 02.8 +1.1
      baz=105
G15K  Niukluk            69.04 335  P      P       18 24 04.6 +1.4
      baz=101
A19K  Wainwright         69.18 340  P      P       18 24 05.4 +1.5
      baz=106
B18K  Kokolik River      69.20 339  P      P       18 24 05.3 +1.2
      baz=105
D17K  Noatak River       69.25 337  P      P       18 24 05.6 +1.2
      baz=103,SNR=5.6
F15K  North Star Dit     69.43 335  P      P       18 24 07.3 +1.7
F15K                                IAmb   IAmb    18 24 15.0
      comp=Z,7.6nm,1.0s
F15K  North Star Dit     69.43 335  P      P       18 24 06.9 +1.2
      baz=101
BORG  Borgarnes          69.44  26  P      P       18 24 06.9 +1.3
BORG  Borgarnes          69.44  26  LR     LR      18 53 31.7
      comp=Z,236nm,22.0s,baz=272,slow=35
C17K  DeLong Mountai     69.46 338  P      P       18 24 06.7 +0.9
      baz=103
ANM   Nome               69.53 334  P      P       18 24 06.9 +0.7
      baz=100
NIKH  Nikolski High      70.06 321  P      P       18 24 10.5 +0.8
      baz=92
F14K  Arctic Creek       70.08 335  P      P       18 24 10.5 +0.9
      baz=99
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C16K  Lisburne Hills     70.20 338  P      P       18 24 11.4 +1.1
      baz=101
PMOZ  Porto Moniz, M     70.74  60 eLR     LR      18 46 38.2
PMOZ                               i AMs_20        18 48 49.0
      comp=Z,122nm,22.0s
TNA   Tin City           70.75 335  IAmb   IAmb    18 24 16.5
      comp=Z,11nm,1.2s
TNA   Tin City           70.75 335  P      P       18 24 15.1 +1.4
      baz=98
USHA  Ushuaia            72.01 165  LR     LR      18 51 05.2
      comp=Z,278nm,18.9s,baz=196,slow=32
GAMB  Gambell            72.18 333  P      P       18 24 23.6 +1.3
      baz=94
BBTS  Babate             73.86  79  LR     LR      18 52 20.0
      comp=Z,185nm,20.8s,baz=162,slow=32
JMIC  Jan Mayen          74.84  20  LR     LR      18 57 43.8
      comp=Z,527nm,20.4s,baz=266,slow=36
PGAV  Gavieira, Arco     76.85  50 eP      P       18 24 48.0 -2.1
PGAV                               eLR     LR      18 49 18.8
PGAV                               i AMs_20        18 56 16.2
      comp=Z,183nm,20.0s
PCAS  Casmilo, Conde     76.93  52 eP      P       18 24 48.9 -1.6
PCAS                               i Amb           18 24 50.7
      comp=Z,17nm,1.8s
PFVI  Vila Bisbo         77.08  55 eP      P       18 24 51.7 +0.3
PFVI                               i Amb           18 25 27.6
      comp=Z,51nm,1.7s
MORF  Marmelete          77.20  54 eP      P       18 24 49.2 -2.9
MORF                               i Amb           18 25 23.3
      comp=Z,25nm,1.5s
PSARD Sardoal            77.25  52 eP      P       18 24 50.1 -2.2
PMTG  Montargil          77.28  53 eP      P       18 24 50.2 -2.2
PMTG                               i Amb           18 25 30.9
      comp=Z,19nm,1.8s
POLO  Lamas de Olo       77.28  50 eP      P       18 24 50.3 -2.3
PVIS  Viseu              77.30  51 eP      P       18 24 50.6 -2.0
EVO   Evora              77.52  53 eP      P       18 24 52.1 -1.7
EVO                                i Amb           18 25 34.3
      comp=Z,22nm,1.8s
MTE   Manteigas          77.61  51 eP      P       18 24 52.4 -2.0
MTE                                i Amb           18 25 12.2
      comp=Z,16nm,1.5s
MTE                                eLR     LR      18 50 03.6
MTE                                i AMs_20        18 55 40.5
      comp=Z,219nm,20.0s
PCVE  Castro Verde       77.63  54 eP      P       18 24 51.6 -2.8
PBEJ  Beja               77.71  54 eP      P       18 24 53.0 -1.9
PCBR  Castelo Branco     77.74  52 eP      P       18 24 53.9 -1.2
PCBR                               i Amb           18 25 25.6
      comp=Z,14nm,1.7s
PESTR Estremoz           77.80  53 eLR     LR      18 50 14.8
PESTR                              i AMs_20        19 00 12.6
      comp=Z,156nm,18.0s
PMRV  Marv??o            77.87  52 eP      P       18 24 53.7 -2.0
PMRV                               eLR     LR      18 51 03.0
PMRV                               i AMs_20        18 55 03.8
      comp=Z,164nm,20.0s
MVO   Moncorvo           77.89  50 eP      P       18 24 53.9 -2.0
MVO                                eLR     LR      18 50 56.0
MVO                                i AMs_20        19 03 01.6
      comp=Z,204nm,16.0s
PVAQ  Vaqueiros          77.92  54 eP      P       18 24 55.1 -0.9
EKA   Eskdalemuir Ar     78.39  36  P      P       18 24 55.8 -2.5
      comp=Z,2.5nm,0.7s,baz=269,slow=5.5,SNR=9.5
      comp=Z,2.5nm,0.7s
SPITS Spitsbergen Ar     80.01  11  P      P       18 25 04.8 -2.0
      comp=Z,4.1nm,0.9s,baz=18,slow=5.0,SNR=4.3
SPITS                               LR     LR      19 01 38.9
      comp=Z,420nm,21.8s,baz=232,slow=36
      comp=Z,4.1nm,0.9s
SHEM  Shemya Is, Ala     80.37 322  LR     LR      19 00 09.4
      comp=Z,45nm,19.7s,baz=50,slow=35
ESDC  Sonseca Array      80.44  51         P       18 25 07.8 -2.1
ESDC  Sonseca Array      80.44  51  P      P       18 25 07.8 -2.1
      comp=Z,4.0nm,0.8s,baz=288,slow=5.8,SNR=27
ESDC                                LR     LR      18 57 25.0
      comp=Z,197nm,19.2s,baz=287,slow=33
      comp=Z,4.0nm,0.8s
BILL  Bilibino           80.73 338         P       18 25 12.0 +1.2
BILL                                IAmb   IAmb    18 25 19.8
      comp=Z,16nm,0.9s
MDT   Midelt             81.23  58  LR     LR      18 57 14.6
      comp=Z,89nm,19.6s,baz=257,slow=33
PMSA  Palmer Station     81.91 168  LR     LR      18 53 54.0
      comp=Z,84nm,19.9s,baz=322,slow=30
BGES  Gesves             84.31  40 dP      P       18 25 28.3 -1.5
NB2   NORSAR Subarra     84.43  28  P      P       18 25 30.1 -0.2
      comp=Z,2.6nm,0.7s,baz=292,slow=5.1
NOA   NORSAR Array B     84.43  28  P      P       18 25 30.3  0.0
      comp=Z,2.0nm,0.7s,baz=291,slow=5.1,SNR=15
NOA                                 LR     LR      19 01 16.2
      comp=Z,256nm,21.4s,baz=285,slow=34
      comp=Z,2.0nm,0.7s
BCLA  Clavier            84.43  39 dP      P       18 25 29.2 -1.2
      comp=Z,4.1nm,0.8s
HFS   Hagfors            85.89  29  P      P       18 25 37.2 -0.3
      comp=Z,3.4nm,0.8s,baz=312,slow=5.4,SNR=8.6
HFS                                 LR     LR      19 01 47.9
      comp=Z,284nm,21.7s,baz=288,slow=34
      comp=Z,3.4nm,0.8s
KASTN Kahler Asten       86.09  38 eP      P       18 25 39.0 +0.2
      comp=Z,11nm,1.4s,baz=290,slow=4.5
RETH  Rethem/Aller,      86.17  36 eP      P       18 25 39.5 +0.4
      comp=Z,13nm,1.2s,baz=290,slow=4.5
ARCES ARCESS Array B     86.20  18  P      P       18 25 39.1 +0.2
      comp=Z,3.0nm,0.7s,baz=288,slow=4.8,SNR=9.2
ARCES                               LR     LR      19 05 29.7
      comp=Z,262nm,18.0s,baz=296,slow=37
      comp=Z,3.0nm,0.7s
BSEG  Bad Segeberg       86.33  35 eP      P       18 25 39.6 -0.2
      comp=Z,7.4nm,0.9s,baz=290,slow=4.5
TNS   Taunus Mts         86.42  39 eP      P       18 25 39.4 -1.0
      comp=Z,22nm,1.5s,baz=290,slow=4.5
DBIC  Dimbokro           86.79  84  P      P       18 25 42.7 -0.2
      comp=Z,5.2nm,0.8s,baz=252,slow=5.2,SNR=3.8
DBIC                                LR     LR      19 01 56.7
      comp=Z,90nm,20.9s,baz=308,slow=34
      comp=Z,5.2nm,0.8s
BFO   Black Forest       86.93  41 eP      P       18 25 42.4 -0.6
      comp=Z,4.5nm,0.9s,baz=290,slow=4.5
FLTG  Flechtingen        87.39  37 eP      P       18 25 44.6 -0.4
      comp=Z,9.1nm,1.1s,baz=290,slow=4.5
SEY   Seymchan           87.98 335  LR     LR      19 10 47.1
      comp=Z,101nm,18.7s,baz=80,slow=39
DAVOX Davos/Dischmat     88.42  42  LR     LR      19 01 32.7
      comp=Z,110nm,20.3s,baz=262,slow=33
CLL   Collm              88.77  37 i P     P       18 25 52.3 +0.6
CLL                                 AMS    AMS     19 05 00.0
      comp=Z,200nm,20.5s
BRG   Berggiesshubel     89.49  37 eP      P       18 25 54.7 -0.3
BRG                                 Amp            18 25 57.1
      comp=Z,3.2nm,0.9s
BRG   Berggiesshubel     89.49  37  P      P       18 26 01.3 +6.3
BRG                                 Amp            18 26 04.2
      comp=Z,2.9nm,0.9s
TIXI  Tiksi              89.71 348  P      P       18 25 56.0 +0.4
      comp=Z,9.5nm,0.7s,baz=45,slow=6.0,SNR=34
TIXI                                LR     LR      19 11 48.4
      comp=Z,194nm,20.4s,baz=26,slow=39
      comp=Z,9.5nm,0.7s
PETK  Petropavlovsk-     89.72 325  P      P       18 25 55.7 -0.4
      comp=Z,2.3nm,1.0s,baz=60,slow=12,SNR=4.2
      comp=Z,2.3nm,1.0s
GERES GERESS Array B     90.10  39  P      P       18 25 57.5 -0.5
      comp=Z,1.7nm,1.0s,baz=306,slow=4.6,SNR=6.4
GERES                               LR     LR      19 07 18.1
      comp=Z,135nm,18.4s,baz=276,slow=36
      comp=Z,1.7nm,1.0s
FINES FINESS Array B     90.71  25  P      P       18 25 59.2 -1.3
      comp=Z,3.0nm,0.8s,baz=312,slow=2.1,SNR=11
FINES                               LR     LR      19 08 23.9
      comp=Z,224nm,18.2s,baz=297,slow=37
      comp=Z,3.0nm,0.8s
PRED  Cave del Predi     90.91  41         P       18 26 00.2 -1.7
TORD  Torodi Ar. Bea     91.44  76  P      P       18 26 03.3 -1.5
      comp=Z,0.5nm,0.3s,baz=287,slow=5.0,SNR=3.3
      comp=Z,0.5nm,0.3s
KEST  Kesra              91.64  53  P      P       18 26 04.4 -1.1
      comp=Z,2.0nm,0.6s,baz=47,slow=15,SNR=4.5
      comp=Z,2.0nm,0.6s
VRAC  Vranov             91.67  38  LR     LR      19 09 15.3
      comp=Z,260nm,18.0s,baz=298,slow=37
VAE   Valguarnera        94.85  50  LR     LR      19 06 10.0
      comp=Z,351nm,19.4s,baz=325,slow=34
YAK   Yakutsk            96.79 341  LR     LR      19 19 09.6
      comp=Z,115nm,18.5s,baz=35,slow=41
AKASG Malin Array Be     98.10  33  LR     LR      19 13 42.3
      comp=Z,146nm,18.1s,baz=301,slow=37
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URZ   Urewera            98.47 233  LR     LR      19 02 34.6
      comp=Z,57nm,19.8s,baz=96,slow=30
OBN   Obninsk            98.93  27  LR     LR      19 09 58.0
      comp=Z,187nm,20.9s,baz=233,slow=35
MLR   Muntele Rosu       99.06  38  LR     LR      19 12 03.5
      comp=Z,83nm,20.3s,baz=321,slow=36
ZALV  Zalesovo Beam     111.99   1  PP     PP      18 32 14.9 -0.5
      comp=Z,1.4nm,0.8s,baz=2.8,slow=8.9,SNR=7.0
KURBB Kurchatov Arra    114.94   6  PKP    PKiKP   18 31 38.9 +0.1
      comp=Z,1.2nm,0.6s,baz=346,slow=2.1,SNR=11
KURBB                               PP     PP      18 32 37.7 +1.3
      comp=Z,0.5nm,0.8s,baz=6.3,slow=7.8,SNR=2.9
KSRS  Korea Array       115.61 325  PKP    PKiKP   18 31 40.7 +0.2
      comp=Z,0.7nm,0.8s,baz=66,slow=1.5,SNR=3.5
SONM  Songino Array     115.70 345  PP     PP      18 32 44.5 +2.4
      comp=Z,0.4nm,0.3s,baz=23,slow=5.2,SNR=1.5
MKAR  Makanchi Array    119.04   4  PKP    PKPdf   18 31 46.1 -0.8
      comp=Z,0.7nm,0.7s,baz=14,slow=2.5,SNR=8.7
MKAR                                PP     PP      18 33 04.7 -0.4
      comp=Z,0.6nm,0.8s,baz=15,slow=5.3,SNR=4.1
HHC   Hu-ho-hao-te      120.50 338 ePKP    PKPdf   18 31 45.9 -4.1
HHC                                 LR     LR
      comp=Z,170nm,14.8s
HHC                                 LR     LR
      comp=Z,100nm,14.6s
HHC                                 LR     LR
      comp=Z,200nm,16.1s
BOSA  Boshof            121.55 115  PKP    PKPdf   18 31 51.9 -0.3
      comp=Z,3.4nm,0.7s,baz=351,slow=5.9,SNR=3.4
WMQ   Urumqi            122.14 359 ePKP    PKiKP   18 31 55.3 +2.1
WMQ                                 LR     LR
      comp=Z,320nm,20.7s
WMQ                                 LR     LR
      comp=Z,210nm,20.7s
MAW   Mawson            124.50 169  PKP    PKPdf   18 31 56.3 -0.3
      comp=Z,1.7nm,0.9s,baz=194,slow=4.3,SNR=4.6
NJ2   Nanjing           124.60 327 ePKP    PKPdf   18 31 58.1 +0.2
GTA   Gaotai            125.19 348  PKP    PKPdf   18 31 59.4 +0.3
GTA                                 LR     LR
      comp=Z,120nm,18.2s
GTA                                 LR     LR
      comp=Z,140nm,18.9s
GTA                                 LR     LR
      comp=Z,200nm,21.4s
KSH   Kashi             125.51  10  PKP    PKiKP   18 32 01.0 +1.0
STKA  Stephens Creek    127.19 241  PKP    PKPdf   18 32 03.1 +0.3
      comp=Z,2.2nm,0.7s,baz=88,slow=6.4,SNR=5.4
LZH   Lanzhou           127.34 343 ePKP    PKiKP   18 32 05.0 +1.2
LZH                                 LR     LR
      comp=Z,290nm,16.1s
LZH                                 LR     LR
      comp=Z,150nm,15.8s
LZH                                 LR     LR
      comp=Z,360nm,16.8s
CD2   Chengdu           132.17 340  PKP    PKPdf   18 32 12.0 -0.5
WRA   Warramunga Arr    134.34 256  PKP    PKPdf   18 32 16.9 +0.2
      comp=Z,1.4nm,0.7s,baz=84,slow=2.2,SNR=21
ASAR  Alice Springs     134.66 251  PKhKP  PKPpre  18 32 08.7
      comp=Z,0.2nm,0.3s,baz=98,slow=2.7,SNR=4.3
ASAR                                PKP    PKPdf   18 32 17.3  0.0
      comp=Z,1.4nm,0.7s,baz=106,slow=1.4,SNR=10
PZH   PanZhiHua         136.90 340  PKP    PKiKP   18 32 31.8 +8.5
CHTO  Chiang Mai        144.97 340         PKPab   18 32 34.6 -0.6
UBPT  Khong Chiam       145.28 327         PKPab   18 32 36.8 +0.5
CMAR  Chiang Mai Arr    145.30 339  PKPbc  PKPdf   18 32 37.0 +0.3
      comp=Z,13nm,0.8s,baz=339,slow=3.5,SNR=72
```

IDC ***14*** *18:17:38.1±2.5, 81°.71N×37°.54E, h0^{km}, mb3.5/10, mbtmp3.5/12, ML3.7/2, MS2.9/1, Error ellipse: s-maj=45.7km s-min=16.8km az=160.0*

KOLA ***14*** *18:17:43.2, 82°.10N×31°.47E, h0^{km}, ML2.6, Error ellipse: s-maj=71.4km s-min=33.4km az=140.0, Arctic Ocean*

ISC 14 18:17:39.6±1.6**, 81°.7N**±0°.2×**35°.95E**±0°.09**, h10**^{km}**, n19, σ2^{s}.26**/24**, mb3.4**/9**, Franz Josef Land**

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Code  Station Name        Δ°   AZ°    Phase ID         Time       Res
                                     Op     ISC       h  m  s    ISC
KBS   Kingsbay            4.86 248  P      Pn      18 18 52.6  0.0
KBS                                 S      Sn      18 19 43.2 -5.7
SPITS Spitsbergen Ar      4.87 234  Pn     Pn      18 18 54.2 +1.3
      baz=54,slow=16
SPITS                               Sn     Sn      18 19 50.1 +1.0
      baz=55,slow=16
      3.7nm,0.3s
SPITS Spitsbergen Ar      4.87 234  P      Pn      18 18 54.1 +1.3
SPITS                               S      Sn      18 19 49.8 +0.6
BRBB  Barentsburg B       5.20 238  S      Sn      18 19 54.8 -2.4
HSPB  Hornsund (broa      5.97 229  P      Pn      18 19 10.3 +2.5
HSPB                                S      Sn      18 20 15.9 -0.2
HSPB  Hornsund (broa      5.97 229  P      Pn      18 19 10.3 +2.5
HSPB                                S      Sn      18 20 13.9 -2.2
KEV   Kevo               12.15 195 eP      Pn      18 20 34.2 +1.8
ARCES ARCESS Array B     12.43 197  Pn     Pn      18 20 36.2 -0.1
      0.2nm,0.3s,baz=10,slow=10.0,SNR=15
ARCES                               Sn     Sn      18 22 51.8 -2.8
      0.3nm,0.3s,baz=19,slow=23,SNR=5.7
      0.7nm,0.3s
FINES FINESS Array B     20.50 194  P      Pn      18 22 18.7 -0.7
      0.7nm,0.6s,baz=10,slow=12,SNR=4.0
FINES                               LR     LR      18 30 02.4
      comp=Z,37nm,20.3s,baz=322,slow=36
      0.7nm,0.6s
NB2   NORSAR Subarra     21.76 213  P      P       18 22 33.9 +3.0
      comp=Z,1.8nm,1.0s,baz=15,slow=6.2
NOA   NORSAR Array B     21.76 213  P      P       18 22 33.9 +3.0
      comp=Z,0.8nm,0.8s,baz=9.4,slow=9.5,SNR=4.4
      comp=Z,0.8nm,0.8s
HFS   Hagfors            22.47 210  P      P       18 22 40.8 +2.3
      comp=Z,0.9nm,0.6s,baz=21,slow=9.5,SNR=6.1
      comp=Z,0.9nm,0.6s
BVAR  Borovoye Array     30.56 138  P      P       18 23 52.5 -0.3
      comp=Z,0.5nm,0.8s,baz=344,slow=8.1,SNR=2.2
      comp=Z,0.5nm,0.8s
AKASG Malin Array Be     31.17 188  P      P       18 23 59.1 +0.9
      comp=Z,0.9nm,0.6s,baz=356,slow=8.6,SNR=4.3
      comp=Z,0.9nm,0.6s
ZALV  Zalesovo Beam      31.27 121  P      P       18 23 57.6 -1.5
      comp=Z,0.7nm,0.7s,baz=359,slow=9.2,SNR=2.0
      comp=Z,0.7nm,0.7s
GERES GERESS Array B     33.70 207  P      P       18 24 22.1 +1.6
      comp=Z,0.5nm,0.5s,baz=356,slow=9.6,SNR=3.5
      comp=Z,0.5nm,0.5s
KURBB Kurchatov Arra     33.79 129  P      P       18 24 19.8 -1.3
      comp=Z,0.4nm,0.7s,baz=358,slow=7.6,SNR=5.1
      comp=Z,0.4nm,0.7s
MKAR  Makanchi Array     38.00 126  P      P       18 24 54.9 -2.4
      comp=Z,0.3nm,0.6s,baz=348,slow=8.5,SNR=4.2
      comp=Z,0.3nm,0.6s
BRTR  Keskin Array B     42.08 183  P      P       18 25 30.9 -0.4
      comp=Z,0.6nm,0.6s,baz=3.9,slow=6.4,SNR=4.7
      comp=Z,0.6nm,0.6s
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IDC ***14*** *18:27:48.3±2.0, 14°.47N×92°.59W, h0^{km}, mb3.9/7, mbtmp3.9/9, ML3.6/2, Error ellipse: s-maj=70.8km s-min=25.6km az=36.0*

NEIC ***14*** *18:27:51.0±2.0, 14°.34N±0°.05×93°.18W±0°.05, h10^{km}±1^{km}, mb4.4/38, Md4.3/34(MEX), Error ellipse: s-maj=9.6km s-min=6.6km az=151.0*

GCG ***14*** *18:27:51.6±2.7, 14°.13N×93°.21W, h35^{km}±999^{km}, MD4.6, ML4.4*

MEX ***14*** *18:27:53.0±0.6, 14°.29N×93°.32W, h15^{km}±17^{km}, MD4.5*

CATAC ***14*** *18:27:54.1±0.7, 14°N±3°×9°3W±°, h8^{km}±4^{km}, M4.6/13, mb4.9/1, mB5.2/1, MLv4.4/13, Mw(mB)4.6/1, Error ellipse: s-maj=8.5km s-min=6.4km az=71.3, confirmed*

ISC 14 18:27:51.2±3.4**, 14°.11N**±0°.06×**93°.27W**±0°.03**, h29**^{km}±25^{km}**, n136, σ2^{s}.52**/174**, mb4.3**/20**, 3C-2D, Near coast of Chiapas**

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Code  Station Name        Δ°   AZ°    Phase ID         Time       Res
                                     Op     ISC       h  m  s    ISC
THIG                      1.25  50         Pn      18 28 11.1 -1.6
THIG                                       Sn      18 28 24.9 -3.8
THIG                      1.25  50 eP      Pn      18 28 11.1 -1.6
THIG                               eS      Sn      18 28 24.9 -3.8
THIG                      1.25  50 i P     Pn      18 28 11.6 -1.2
THIG                               i S     Sn      18 28 25.2 -3.5
SMCA  Catarina            1.37  57 eP      Pn      18 28 13.3 -1.1
SMCA                               eS      Sn      18 28 29.8 -1.8
SMCA                                 IAML          18 28 38.0
      comp=N,2µm,0.3s
PATR  El Naranjo          1.42  45 eP      Pn      18 28 13.1 -2.1
PATR                               i S     Sn      18 28 30.4 -2.6
PAVE  Pavencul            1.51  44 eP      Pn      18 28 14.7 -1.8
PAVE                               eS      Sn      18 28 31.4 -3.9
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RTAL	Retalhuleu	1.58	75		Pn	18 28 16.6	-0.6
RTAL	Retalhuleu	1.58	75	eP	Pn	18 28 16.6	-0.6
RTAL				eS	Sn	18 28 35.3	-1.4
RTAL	Retalhuleu	1.58	75	P	Pn	18 28 16.5	-0.6
PCIG		1.59	2		Pn	18 28 14.6	-2.8
PCIG					Sn	18 28 31.4	-5.6
PCIG		1.59	2	eP	Pn	18 28 14.6	-2.8
PCIG				eS	Sn	18 28 31.4	-5.6
STG8	El Palmar, Qui	1.89	79	eP	Pn	18 28 18.7	-3.0
STG8				iS	Sn	18 28 40.3	-4.4
STG8				IAML		18 28 45.3	
	comp=E,6µm,0.2s						
STG0	El Palmar, Qui	1.89	80	eP	Pn	18 28 18.7	-3.0
STG0				iS	Sn	18 28 40.0	-4.7
STG0				IAML		18 28 46.8	
	comp=N,11µm,0.2s						
SOKI	Kika Raxquin	1.94	68	eP	Pn	18 28 22.7	+0.2
SOKI				iS	Sn	18 28 47.4	+1.2
SOKI				IAML		18 29 00.8	
	comp=N,3µm,0.9s						
HUEH	Huehuetenango	2.09	55		Pn	18 28 21.8	-2.7
HUEH	Huehuetenango	2.09	55	eP	Pn	18 28 24.2	-0.2
HUEH				eS	Sn	18 28 48.0	-1.6
HUEH	Huehuetenango	2.09	55	iP	Pn	18 28 25.0	+0.6
HUEH				IAML		18 29 01.1	
	comp=E,5µm,0.7s						
HUEH	Huehuetenango	2.09	55	⇓P	Pn	18 28 25.3	+0.9
ESSG	Sabana Grande	2.38	83	eP	Pn	18 28 28.8	+0.5
ESSG				e	Sn	18 28 52.6	-3.9
ESSG				eS	Sn	18 28 52.6	-3.9
ESSG				IAML		18 29 01.1	
	comp=N,690nm,0.2s						
CCIG	Comitan	2.42	27		Pn	18 28 26.2	-2.8
CCIG	Comitan	2.42	27	eP	Pn	18 28 29.6	+0.6
CCIG				eS	Sn	18 28 56.2	-1.6
CCIG	Comitan	2.42	27	eP	Pn	18 28 30.0	+1.0
CCIG				eS	Sn	18 28 59.6	+1.8
CCIG				IAML		18 29 02.2	
	comp=N,2µm,0.7s						
CCIG	Comitan	2.42	27	⇑P	Pn	18 28 30.1	+1.1
FG8	Yepocapa, Chim	2.63	86	iP	Pn	18 28 26.5	-5.2
FG8				eS	Sn	18 28 54.0	-8.8
TGIG		2.66	3		Pn	18 28 32.4	+0.2
TGIG					Sn	18 29 00.3	-3.2
TGIG		2.66	3	eP	Pn	18 28 32.4	+0.2
TGIG				eS	Sn	18 29 00.3	-3.2
TGIG		2.66	3	eP	Pn	18 28 32.0	-0.1
TGIG				eS	Sn	18 29 02.6	-0.9
TGIG				IAML		18 29 06.1	
	comp=E,2µm,0.5s						
TGBT	Tuxtla Gutierr	2.66	4	eP	Pn	18 28 32.1	0.0
TGBT				iS	Sn	18 29 01.5	-1.9
FG16	Alotenango, Sa	2.68	86	iP	Pn	18 28 26.7	-5.8
FG16				iS	Sn	18 28 57.6	-6.5
FG16				IAML		18 29 04.7	
	comp=N,7µm,0.3s						
FAME	Alcaldia de Sa	3.17	94	S	Sn	18 29 15.4	-0.5
FAME	Alcaldia de Sa	3.17	94	⇑P	Pn	18 28 38.0	-1.1
HUIG	Huatulco	3.21	301		Pn	18 28 37.8	-1.8
HUIG	Huatulco	3.21	301	eP	Pn	18 28 37.8	-1.8
HUIG				eS	Sn	18 29 10.8	-6.0
HUIG	Huatulco	3.21	301	eP	Pn	18 28 38.8	-0.8
HUIG				IAML		18 29 57.3	
	comp=N,100nm,0.7s						
NUBE	Las Nubes	3.39	93	eP	Pn	18 28 43.0	+0.7
NUBE	Las Nubes	3.39	93	S	Sn	18 29 22.1	+0.5
NUBE	Las Nubes	3.39	93	⇓P	Pn	18 28 43.0	+0.7
CEVE	Cerro Verde	3.55	94	P	Pn	18 28 45.9	+1.4
CEVE	Cerro Verde	3.55	94	S	Sn	18 29 24.2	-1.5
JAYA	Jayaque - finc	3.73	96	eP	Pn	18 28 47.8	+0.8
JAYA				eS	Sn	18 29 26.8	-3.3
JAYA	Jayaque - finc	3.73	96	S	Sn	18 29 28.5	-1.6
JAYA	Jayaque - finc	3.73	96	P	Pn	18 28 47.6	+0.6
MTO3	Montecristo	3.80	85		Pn	18 28 47.7	-0.3
MTO3	Montecristo	3.80	85	eP	Pn	18 28 47.8	-0.1
MTO3	Montecristo	3.80	85	P	Pn	18 28 50.1	+2.1
MTO3	Montecristo	3.80	85	S	Sn	18 29 31.6	-0.1
PMON	Piamonte	3.86	95	P	Pn	18 28 51.5	+2.9
VHSA	Villahermosa	3.87	5	eS	Sn	18 29 37.2	+4.1
TUIG	Tuzandepetl	4.06	344	eP	Pn	18 28 47.5	-3.8
TUIG				eS	Sn	18 29 34.7	-3.3
PEIG	Puerto Escondi	4.20	297		Pn	18 28 53.1	-0.2
PEIG	Puerto Escondi	4.20	297	eP	Pn	18 28 53.1	-0.2
PEIG				eS	Sn	18 29 34.2	-7.1
PETF	Flores	4.30	49	eP	Pn	18 28 54.9	+0.1
PETF				eS	Sn	18 29 40.3	-3.7
PETF	Flores	4.30	49	⇑iP	Pn	18 28 56.8	+2.1
PETF				IAML		18 29 54.8	
	comp=E,444nm,0.6s						
PETF	Flores	4.30	49	P	Pn	18 28 55.3	+0.6
VHO	Vista Hermosa	4.46	312	eP	Pn	18 29 00.0	+3.0
VHO				eS	Sn	18 29 44.2	-3.8
YOIG	Yosondua	4.95	304		Pn	18 29 02.9	-1.0
YOIG	Yosondua	4.95	304	eP	Pn	18 29 02.9	-1.0
YOIG				eS	Sn	18 29 53.0	-7.3
PNIG	Pinotepa	5.21	296	eP	Pn	18 29 08.2	+1.0
PNIG				eS	Sn	18 30 01.2	-5.3
CNCH	Conchagua	5.34	98	P	Pn	18 29 11.3	+2.2
CNCH	Conchagua	5.34	98	S	Sn	18 30 10.8	+1.0
TXIG	Tlaxiaco	5.35	306	eP	Pn	18 29 10.7	+1.4
TXIG				eS	Sn	18 30 11.2	+1.1
TOIG	Toxpalan	5.39	318	eP	Pn	18 29 11.1	+1.3
TOIG				eS	Sn	18 30 08.0	-3.0
HLIG	Huajuapan de L	5.72	311	eP	Pn	18 29 18.8	+4.3
HLIG				eS	Sn	18 30 17.4	-1.9
TPIG	Tehuac#an	5.82	318	eS	Sn	18 30 17.3	-4.2
FTIG	Fresnillo de T	6.01	310	eP	Pn	18 29 20.9	+2.5
FTIG				eS	Sn	18 30 18.4	-7.9
MGIG	Malinaltepec	6.03	302	eP	Pn	18 29 21.5	+2.8
MGIG				eS	Sn	18 30 22.8	-4.1
TLIG	Tlapa	6.15	305	eP	Pn	18 29 23.0	+2.8
TLIG				eS	Sn	18 30 24.9	-4.8
CRIG	Cruz Grande	6.23	296	eP	Pn	18 29 22.1	+0.9
CRIG				eS	Sn	18 30 31.1	-0.4
DAIG	Los Arroyos	6.80	296	eP	Pn	18 29 30.6	+1.5
DAIG				eS	Sn	18 30 49.0	+3.5
PBCV	Popocatepetl	7.02	314	eS	Sn	18 30 52.2	+0.8
PBXN	Popocatepetl	7.10	314	eP	Pn	18 29 38.3	+4.6
PBXN				iS	Sn	18 30 49.3	-4.5
PBPN	Popocatepetl	7.11	314	eP	Pn	18 29 36.4	+2.6
PBPN				eP		18 29 38.9	
PBPN				eS	Sn	18 30 48.8	-5.0
PBPN				eS		18 31 00.5	
PPM	Popocatepetl	7.12	315	eP	Pn	18 29 37.4	+3.5
PPM				eS	Sn	18 30 45.9	-8.3
MEIG	Mezcala	7.19	303	eP	Pn	18 29 36.9	+2.4
MEIG				eS	Sn	18 30 45.0	-10
YAIG	Yautepec	7.30	311	eP	Pn	18 29 38.2	+2.2
YAIG				eS	Sn	18 30 52.9	-5.2
CXUV	Coxquihui	7.31	326	eP	Pn	18 29 36.4	+0.3
CXUV				iS	Sn	18 30 54.3	-3.9
PLIG	Platanillo	7.35	306	eP	Pn	18 29 38.4	+1.8
PLIG				eS	Sn	18 31 02.5	+3.2
CAIG	El Cayaco	7.35	294	eP	Pn	18 29 38.6	+2.0
MYIG	Merida	7.60	26	eP	Pn	18 29 38.4	-1.5
MYIG				eS	Sn	18 30 57.0	-8.1
ARIG	Puente Sto Nin	7.97	302	eP	Pn	18 29 46.9	+1.8
ARIG				eS	Sn	18 31 14.9	+0.6
ZIIG	Zihuatanejo	8.62	295	eP	Pn	18 29 57.2	+3.1
JTS	Las Juntas de	8.97	114	Pn	Pn	18 29 54.0	-4.9
	comp=E,0.4nm,0.3s,baz=212,slow=22,SNR=1.6						
	comp=E,2.5nm,0.7s						
MMIG	Aquila	10.54	295	eP	Pn	18 30 24.1	+3.8
833A	Chaparral WMA,	15.25	339		Pn	18 31 22.9	-1.6
833A				IAmb	IAmb	18 31 36.2	
	comp=Z,16nm,0.8s						
545A	Edgard	16.07	9	Pn	Pn	18 31 31.7	-3.4
DRIO	Del Rio	16.69	337		Pn	18 31 42.9	-0.1
SAND	Sanderson	17.77	334		Pn	18 31 55.8	-0.7
TXAR	Lajitas Array	17.95	329		Pn	18 31 58.3	-0.5
TXAR	Lajitas Array	17.95	329	P	P	18 32 00.5	+1.3
	comp=Z,0.1nm,0.3s,baz=146,slow=14,SNR=19						
	comp=Z,3.9nm,1.0s						
TX31	Lajitas Ar. Si	17.95	329		Pn	18 31 58.4	-0.5
MNHN	Monahans	19.24	335		P	18 32 12.0	-1.3
VHRN	Van Horn	19.80	329		P	18 32 20.4	+0.9
POST	Post	20.31	340	P	P	18 32 23.9	-1.0
POST				IAmb	IAmb	18 32 29.3	
	comp=Z,9.8nm,0.8s						
MIAR	Mount Ida	20.35	359	P	P	18 32 23.6	-1.7
MIAR				IAmb	IAmb	18 32 32.9	
	comp=Z,19nm,1.2s						
CLNB	Carlsbad	20.51	334		P	18 32 29.5	+2.3
HTMS	Hat Mesa	20.59	334	P	P	18 32 28.6	+0.6
MNTX	Cornudas Mount	20.73	330		P	18 32 30.6	+1.1
FLOC	Florencia	21.40	124	P	P	18 32 39.2	+2.3
RUSC	La Rusia	21.47	110		P	18 32 39.3	+1.3
RUSC				IAmb	IAmb	18 32 45.3	
	comp=Z,14nm,1.2s						
SMWD	Samnorwood	21.83	344		P	18 32 41.0	-0.3
SMWD				IAmb	IAmb	18 32 45.1	
	comp=Z,12nm,0.7s						
KAN09	Caldwell North	23.26	351	P	P	18 32 55.2	-1.1
SBM	South Baldy	23.46	330	P	P	18 33 00.0	+1.3
RTBA	Rita Blanca	23.80	341	P	P	18 33 01.9	+0.2
RTBA				IAmb	IAmb	18 33 06.4	
	comp=Z,15nm,1.0s						
T25A	Trinidad	25.00	339	P	P	18 33 13.7	+0.9
T25A				IAmb	IAmb	18 33 19.7	
	comp=Z,7.7nm,1.1s						
PV18	Skein Mesa, Pa	27.75	333	P	P	18 33 38.7	+1.0
PDAR	Pinedale Array	31.83	337	P	P	18 34 14.5	+0.9
	comp=Z,0.3nm,0.4s,baz=152,slow=6.6,SNR=4.6						
	comp=Z,0.3nm,0.4s						
NVAR	Mina Array Bea	32.83	322	P	P	18 34 25.8	+3.3
	comp=Z,1.9nm,0.7s,baz=143,slow=9.0,SNR=12						
	comp=Z,1.9nm,0.7s						
TPAW	Teton Pass	32.98	336		P	18 34 24.5	+0.7
TPAW				IAmb	IAmb	18 34 30.1	
	comp=Z,7.4nm,1.1s						
YNE	Yellowstone No	33.92	339	P	P	18 34 32.6	+0.6
YNE				IAmb	IAmb	18 34 39.5	
	comp=Z,5.4nm,1.2s						
MCMT	McKenzie Canyo	34.85	335	P	P	18 34 40.5	+0.5
PLID	Pearl Lake	36.40	333	P	P	18 34 53.3	-0.1
EGMT	Eagleton	36.48	341	P	P	18 34 54.5	+0.7
EGMT				IAmb	IAmb	18 34 59.0	
	comp=Z,5.2nm,1.1s						
YKAW1	Yellowknife Wh	50.61	347		P	18 36 47.7	+0.6
YKAW1				IAmb	IAmb	18 36 49.0	
	comp=Z,7.5nm,0.7s						
YKA	Yellowknife Ar	50.65	347	P	P	18 36 46.2	-1.2
	comp=Z,3.7nm,0.8s,baz=155,slow=6.8,SNR=14						
	comp=Z,3.7nm,0.8s						
YKAW3	Yellowknife Wh	50.71	347	P	P	18 36 48.4	+0.5
YKAW3				IAmb	IAmb	18 36 49.8	
	comp=Z,4.8nm,0.8s						
ILON	Igloolik, Nuna	55.70	5		P	18 37 24.3	-0.2
BCAR	Beaver Creek A	59.45	337	P	P	18 37 52.4	+1.3
L27K	Beaver Creek,	59.47	337	P	P	18 37 52.3	+1.1
L27K				IAmb	IAmb	18 38 00.3	
	comp=Z,2.0nm,1.0s						
G29M	Pine Creek	60.38	341	P	P	18 37 58.9	+1.4
RES	Resolute Bay	60.58	360	P	P	18 37 58.5	-0.1
RES				IAmb	IAmb	18 37 59.6	
	comp=Z,3.0nm,0.8s						
H27K	Steamboat Moun	61.10	340	P	P	18 38 04.5	+2.1
H27K				IAmb	IAmb	18 38 13.1	
	comp=Z,3.8nm,1.2s						
E29M	Blow River	61.27	343	P	P	18 38 04.8	+1.5
E29M				IAmb	IAmb	18 38 05.7	
	comp=Z,2.3nm,0.9s						
E28M	Babbage River	61.88	343	P	P	18 38 08.9	+1.4
E28M				IAmb	IAmb	18 38 12.4	
	comp=Z,2.5nm,1.0s						
ILAR	Eielson Array	62.26	337	P	P	18 38 11.6	+1.4
	comp=Z,1.0nm,0.8s,baz=125,slow=4.0,SNR=9.3						
	comp=Z,1.0nm,0.8s						
BMAR	Burnt Mountain	62.77	340	P	P	18 38 15.0	+1.4
TRF	Thorofare Moun	63.02	335	P	P	18 38 16.5	+1.0
D25K	Kavik River	64.32	342	P	P	18 38 25.2	+1.4
F21K	Alatna River	65.75	338	P	P	18 38 35.4	+2.3
D20K	Etivluk River	67.39	339	P	P	18 38 45.5	+1.9
F15K	North Star Dit	69.60	335	P	P	18 38 59.5	+2.2
ESDC	Sonseca Array	80.61	51	P	P	18 39 59.5	-1.9
	comp=Z,0.5nm,0.7s,baz=274,slow=5.8,SNR=4.0						
	comp=Z,0.5nm,0.7s						
NOA	NORSAR Array B	84.64	28	P	P	18 40 20.8	-1.1
	comp=Z,0.6nm,0.8s,baz=294,slow=8.7,SNR=2.9						
	comp=Z,0.6nm,0.8s						
FINES	FINESS Array B	90.92	25	P	P	18 40 50.9	-1.2
	comp=Z,1.0nm,0.8s,baz=330,slow=4.8,SNR=4.5						
	comp=Z,1.0nm,0.8s						
WRA	Warramunga Arr	134.23	256	PKP	PKPdf	18 47 08.6	+1.6
	comp=Z,0.3nm,0.7s,baz=93,slow=2.0,SNR=1.7						
PZH	PanZhiHua	137.08	340	PKP	PKiKP	18 47 15.6	+1.4
CMAR	Chiang Mai Arr	145.48	339	PKPbc	PKPbc	18 47 28.1	+0.7
	comp=Z,1.9nm,0.8s,baz=340,slow=3.9,SNR=13						

IDC ***14*** *18:30:48.1±1.7, 14°.20N×92°.67W, h0^{km}, mb3.8/6, mbtmp3.8/7, ML4.0/1, Error ellipse: s-maj=61.6km s-min=35.3km az=45.0*

GCG ***14*** *18:30:52.2±1.8, 14°.12N×93°.21W, h20^{km}±10^{km}, MD4.5, ML4.1*

MEX ***14*** *18:30:55.7±0.6, 14°.41N×93°.31W, h24^{km}±35^{km}, MD4.2*

ISC 14 18:30:50.1±2.0**, 14°.16N**±0°.05×**93°.24W**±0°.03**, h15**^{km}±12^{km}**, n47, σ3^{s}.08**/70**, mb3.9**/6**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.20	52	eP	Pb	18 31 13.0	+0.4
THIG				eS	Sb	18 31 26.1	-1.9
THIG		1.20	52	eP	Pn	18 31 12.5	+0.1
THIG				iS	Sg	18 31 29.3	+0.3
THIG				IAML		18 31 30.4	
	comp=E,5µm,0.4s						
SMCA	Catarina	1.32	58	eP	Pb	18 31 15.1	+0.3
SMCA				iS	Sn	18 31 32.4	+0.9
SMCA				IAML		18 31 39.6	
	comp=N,1µm,0.5s						
PATR	El Naranjo	1.36	46	eP	Pn	18 31 14.8	-0.1
PATR				eS	Sb	18 31 30.0	-2.8
PAVE	Pavencul	1.46	45	eP	Pn	18 31 16.4	+0.3
PAVE				eS	Sn	18 31 32.7	-2.3
PCIG		1.53	1	eP	Pn	18 31 15.9	-1.1
PCIG				eS	Sn	18 31 30.6	-6.0
RTAL	Retalhuleu	1.54	76	eP	Pn	18 31 16.9	-0.2
RTAL				eS	Sb	18 31 38.1	+0.3
STG8	El Palmar, Qui	1.86	81	eP	Pn	18 31 20.2	-1.4
STG8				eS	Sn	18 31 42.7	-2.3
STG8				IAML		18 31 54.1	
	comp=N,2µm,0.3s						
STG0	El Palmar, Qui	1.86	82	eP	Pn	18 31 20.3	-1.4
STG0				IAML		18 31 49.3	
	comp=E,4µm,0.4s						
SOKI	Kika Raxquin	1.90	70	eP	Pb	18 31 24.2	-0.5
SOKI				eS	Sg	18 31 50.5	-0.9
SOKI				IAML		18 31 58.9	
	comp=N,3µm,0.7s						
HUEH	Huehuetenango	2.04	55	eP	Pn	18 31 25.6	+1.5
HUEH				eS	Sn	18 31 46.9	-2.6
HUEH	Huehuetenango	2.04	55	eP	Pb	18 31 27.0	0.0
HUEH				IAML		18 32 07.7	
	comp=E,4µm,0.7s						
ESSG	Sabana Grande	2.35	84	IAML		18 32 09.1	
	comp=N,567nm,0.5s						
CCIG	Comitan	2.36	27	eP	Pb	18 31 31.5	-1.0
CCIG				eS	Sn	18 31 57.5	+0.1
CCIG	Comitan	2.36	27	iP	Pb	18 31 31.7	-0.8
CCIG				iS	Sb	18 32 01.9	+0.3
CCIG				IAML		18 32 07.8	
	comp=N,2µm,0.5s						
FG8	Yepocapa, Chim	2.60	88	eP	Pn	18 31 27.9	-3.9
FG8				iS	Sn	18 31 58.1	-5.2
TGBT	Tuxtla Gutierr	2.60	3	eP	Pn	18 31 33.0	+1.3
TGBT				eS	Sn	18 31 58.4	-4.7
TGIG		2.60	3	eP	Pn	18 31 33.8	+2.0
TGIG				iS	Sn	18 31 58.7	-4.5
TGIG		2.60	3	iP	Pb	18 31 34.5	-2.1
TGIG				eS	Sn	18 32 05.2	+2.0
TGIG				IAML		18 32 09.3	
	comp=E,917nm,0.4s						
HUIG	Huatulco	3.20	300	eP	Pn	18 31 39.7	-0.2
HUIG				eS	Sn	18 32 12.8	-5.0
HUIG	Huatulco	3.20	300	IAML		18 33 05.2	
	comp=N,74nm,0.5s						
NUBE	Las Nubes	3.37	94	eP	Pn	18 31 44.2	+1.8
JAYA	Jayaque - finc	3.72	97	eP	Pn	18 31 49.2	+2.0
PEIG	Puerto Escondi	4.19	296	eP	Pn	18 31 53.8	+0.2
PEIG				eS	Sn	18 32 34.8	-7.6
PETF	Flores	4.25	49	eP	Pn	18 31 53.0	-1.4
PETF				eS	Sn	18 32 47.0	+3.2
PETF	Flores	4.25	49	IAML		18 33 04.5	
	comp=N,376nm,0.6s						
VHO	Vista Hermosa	4.44	311	eP	Pb	18 32 04.0	-3.9
VHO				eS	Sn	18 32 52.7	+4.1
YOIG	Yosondua	4.94	303	eP	Pn	18 32 08.5	+4.4
YOIG				eS	Sn	18 32 56.8	-4.3
PNIG	Pinotepa	5.21	296	eP	Pn	18 32 09.3	+1.7
PNIG				eS	Sn	18 33 02.1	-5.4
TXIG	Tlaxiaco	5.33	306	eP	Pn	18 32 13.2	+3.6
TXIG				eS	Sn	18 33 15.1	+4.2
TOIG	Toxpalan	5.37	317	eP	Pn	18 32 14.2	+4.4
TOIG				eS	Sn	18 33 05.4	-6.0
HLIG	Huajuapan de L	5.70	310	eP	Pn	18 32 17.6	+3.1
HLIG				eS	Sn	18 33 17.1	-2.8
FTIG	Fresnillo de T	6.00	309	eP	Pn	18 32 19.0	+0.5
FTIG				eS	Sn	18 33 21.2	-5.8
MGIG	Malinaltepec	6.02	301	eS	Sn	18 33 23.3	-4.5
TLIG	Tlapa	6.14	304	eS	Sn	18 33 35.8	+5.3
CXUV	Coxquihui	7.28	326	eS	Sn	18 33 53.0	-5.5
TXAR	Lajitas Array	17.92	329	P	P	18 35 02.8	+3.3
	comp=N,0.1nm,0.3s,baz=149,slow=12,SNR=7.4						
	comp=N,1.5nm,0.9s						
PDAR	Pinedale Array	31.79	337	P	P	18 37 14.7	+0.4
	comp=N,0.2nm,0.5s,baz=159,slow=6.1,SNR=1.6						
	comp=N,0.2nm,0.5s						
NVAR	Mina Array Bea	32.80	322	P	P	18 37 27.0	+3.8
	comp=N,1.2nm,0.7s,baz=140,slow=8.4,SNR=5.8						
	comp=N,1.2nm,0.7s						
YKA	Yellowknife Ar	50.60	347	P	P	18 39 49.0	+0.9
	comp=N,2.4nm,0.7s,baz=154,slow=6.9,SNR=8.7						
	comp=N,2.4nm,0.7s						
ILAR	Eielson Array	62.22	337	P	P	18 41 12.5	+1.6
	comp=N,0.6nm,0.8s,baz=129,slow=5.4,SNR=4.9						
	comp=N,0.6nm,0.8s						
ESDC	Sonseca Array	80.56	51	P	P	18 43 01.3	-1.0
	comp=N,0.4nm,0.7s,baz=285,slow=5.2,SNR=2.7						
	comp=N,0.4nm,0.7s						
FINES	FINESS Array B	90.86	25	P	P	18 43 51.0	-2.0
	comp=N,1.6nm,1.0s,baz=231,slow=8.8,SNR=2.0						
	comp=N,1.6nm,1.0s						
SONM	Songino Array	115.84	345	PKP	PKiKP	18 49 32.8	+0.3
	comp=N,1.0nm,0.5s,baz=94,slow=9.0,SNR=4.2						
WRA	Warramunga Arr	134.26	256	PKP	PKPdf	18 50 09.1	+0.8
	comp=N,0.4nm,0.7s,baz=92,slow=2.5,SNR=4.8						
ASAR	Alice Springs	134.58	251	PKP	PKPdf	18 50 09.8	+1.0
	comp=N,0.3nm,0.8s,baz=105,slow=3.9,SNR=2.5						
CMAR	Chiang Mai Arr	145.43	339	PKPbc	PKPab	18 50 28.9	+0.3
	comp=N,1.0nm,0.8s,baz=337,slow=3.7,SNR=7.3						

NEIC ***14*** *18:36:25.6±1.7, 14°.33N±0°.07×93°.11W±0°.07, h10^{km}±1^{km}, mb4.7/360, Md4.6/14(MEX), Error ellipse: s-maj=11.6km s-min=10.8km az=134.0*

MEX ***14*** *18:36:26.8±0.7, 14°.26N×93°.36W, h6^{km}±12^{km}, MD4.8*

GCG ***14*** *18:36:26.9±2.1, 14°.21N×93°.22W, h38^{km}±10^{km}, MD4.7, ML4.7, MW4.3*

CATAC ***14*** *18:36:28.9±0.7, 14°N±5°×9°3W±°, h11^{km}±6^{km}, M5.0/19, mb5.3/7, mB5.2/7, MLv5.1/19, Mw(mB)4.6/7, Error ellipse: s-maj=13.6km s-min=7.7km az=129.3, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$8.59; M$_{\theta\theta}$-7.20; M$_{\phi\phi}$-1.40; M$_{r\theta}$-2.93; M$_{\theta\phi}$2.77; M$_{\phi r}$0.81; Fault plane solution: M$_0$8.98405×10^{15} NP1:ϕ_s113.82441°, δ35.20118°, λ93.29769°. NP2:ϕ_s289.79095°, δ54.86572°, λ87.67620°. Principal axes: T 9.1296, Plg79.9765°, Azm190.3096°; N -0.2985, Plg1.9002°, Azm291.1288°; P -8.8311, Plg9.8381°, Azm21.4584°; Moment Tensor Solution. Moment tensor: Scale 10^{15} Nm; M$_{rr}$8.12; M$_{\theta\theta}$-6.86; M$_{\phi\phi}$-1.27; M$_{r\theta}$-4.51; M$_{\theta\phi}$3.18; M$_{\phi r}$0.41; Fault plane solution: M$_0$9.37399×10^{15} NP1:ϕ_s123.33835°, δ31.87628°, λ105.50774°. NP2:ϕ_s285.24373°, δ59.41198°, λ80.55986°. Principal axes: T 9.3955, Plg73.7988°, Azm170.6821°; N -0.0432, Plg8.1169°, Azm290.0799°; P -9.3523, Plg13.9248°, Azm22.1063°; confirmed*

GCMT ***14*** *18:36:31.6±0.5, 14°.58N±0°.04×93°.33W±0°.03, h24^{km}, MW4.9/65, Moment Tensor Solution. s39,c45; s65,c80; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.17±.18; M$_{\theta\theta}$-1.55±.12; M$_{\phi\phi}$-1.62±.13; M$_{r\theta}$-0.01±.14; M$_{\theta\phi}$0.70±.07; M$_{\phi r}$-1.04±.17; Best double couple: M$_0$2.89200×10^{16} NP1:ϕ_s310.00000°, δ38.00000°, λ75.00000°. NP2: ϕ_s148.00000°, δ54.00000°, λ101.00000°. Principal axes: T 3.3910, Plg78.0000°, Azm99.0000°; N -0.9990, Plg9.0000°, Azm322.0000°; P -2.3920, Plg8.0000°, Azm230.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***14*** *18:36:37.2±2.8, 14°.75N×92°.73W, h97^{km}±25^{km}, mb4.0/19, mbtmp4.4/22, MS3.9/43 Error ellipse: s-maj=25.5km s-min=12.1km az=48.0*

ISC 14 18:36:28.5±1.3**, 14°.38N**±0°.05×**93°.15W**±0°.04**, h32**^{km}±9^{km}**, n779, σ1^{s}.66**/765**, mb4.7**/150**, MS3.9**/41**, 4C, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.00	58		Pn	18 36 46.7	+0.4
THIG					Sn	18 37 01.2	+1.9
THIG		1.00	58	iP	Pn	18 36 46.7	+0.4
THIG				iS	Sn	18 37 01.2	+1.9
THIG		1.00	58	eP	Pn	18 36 46.3	0.0
THIG				eS	Sn	18 37 00.2	+0.9
THIG				IAML		18 37 08.3	
	comp=E,21µm,0.9s						
THIG				IAML		18 37 13.8	
	comp=Z,9µm,0.6s						
SMCA	Catarina	1.14	65	eP	Pn	18 36 48.2	-0.1
	comp=Z,5µm,0.6s						
SMCA				eS	Sn	18 37 02.2	-0.6
SMCA				IAML		18 37 10.7	
	comp=E,7µm,0.8s						
SMCA				IAML		18 37 14.5	
	comp=Z,5µm,0.6s						
PATR	El Naranjo	1.15	50	eP	Pn	18 36 48.8	+0.3
PATR				eS	Sn	18 37 06.8	+3.5
CHUJ	Union Juarez	1.23	55	eP	Pb	18 36 51.2	-0.1
CHUJ				eS	Sn	18 37 05.6	+0.3
PAVE	Pavencul	1.24	49	eP	Pn	18 36 50.0	+0.2
PAVE				iS	Sb	18 37 08.1	+0.9
PCIG		1.32	357		Pn	18 36 49.6	-1.1
PCIG					Sn	18 37 07.5	+0.3
PCIG		1.32	357	eP	Pn	18 36 49.6	-1.1
PCIG				eS	Sn	18 37 07.5	+0.3
RTAL	Retalhuleu	1.41	84	Pn	Pn	18 36 51.0	-1.0
RTAL	Retalhuleu	1.41	84	eP	Pn	18 36 52.0	+0.1
RTAL				eS	Sb	18 37 12.4	+0.4
RTAL	Retalhuleu	1.41	84	⇑P	Pn	18 36 52.5	+0.6
STG8	El Palmar, Qui	1.74	87	iS	Sn	18 37 15.5	-2.4
STG8				IAML		18 37 22.3	
	comp=N,12µm,0.5s						
SOKI	Kika Raxquin	1.74	75	eP	Pn	18 36 58.1	+1.2
SOKI				IAML		18 37 31.9	
	comp=N,16µm,0.7s						
STG0	El Palmar, Qui	1.75	88	eP	Pn	18 36 54.1	-2.7
STG0				eS	Sn	18 37 15.5	-2.5
HUEH	Huehuetenango	1.84	59	Pn	Pn	18 36 57.0	-1.1
HUEH					Pn	18 36 59.9	+1.7
HUEH	Huehuetenango	1.84	59	eP	Pn	18 36 59.8	+1.7
HUEH				eS	Sb	18 37 26.1	+1.6
HUEH	Huehuetenango	1.84	59	iP	Pb	18 37 00.4	-1.3
HUEH				IAML		18 37 34.4	
	comp=E,22µm,1.1s						
HUEH	Huehuetenango	1.84	59	S	Sb	18 37 22.6	-1.9
HUEH	Huehuetenango	1.84	59	⇑P	Pb	18 37 00.4	-1.3
CCIG	Comitan	2.13	27	Pn	Pn	18 37 01.4	-0.6
CCIG	Comitan	2.13	27	eP	Pn	18 37 04.5	+2.5
CCIG				eS	Sb	18 37 32.1	-0.6
CCIG	Comitan	2.13	27	eP		18 40 56.0	
ESSG	Sabana Grande	2.24	90	iP	Pn	18 37 02.9	-0.6
ESSG				IAML		18 37 36.7	
	comp=Z,3µm,0.7s						
TGBT	Tuxtla Gutierr	2.39	1	iP	Pn	18 37 07.1	+1.8
TGBT				eS	Sn	18 37 35.9	+2.4
TGIG		2.39	1	iP	Pn	18 37 07.0	+1.6
TGIG				eS	Sb	18 37 37.7	-2.2
TGIG		2.39	1	iP	Pn	18 37 07.1	+1.7
TGIG				eS	Sn	18 37 37.3	+3.7
TGIG				IAML		18 37 40.7	
	comp=E,4µm,0.7s						
FG8	Yepocapa, Chim	2.51	92	iP	Pn	18 37 01.9	-5.3
GCG4	OSOP	2.54	85	IAML		18 37 54.6	
	comp=E,6µm,0.6s						
FG16	Alotenango, Sa	2.56	92	iP	Pn	18 37 03.0	-4.9

FG16				*i*S	Sn	18 37 31.0	-7.0
FG16				IAML		18 37 39.5	
	comp=N,19µm,0.5s						
FAME	Alcaldia de Sa	3.08	100	P	Pn	18 37 17.9	+2.9
HUIG	Huatulco	3.18	296	*e*P	Pn	18 37 12.9	-3.3
HUIG				*e*S	Sn	18 37 45.5	-7.6
HUIG	Huatulco	3.18	296	*i*P	Pn	18 37 13.8	-2.5
HUIG				IAML		18 38 34.5	
	comp=N,278nm,1.0s						
SLOZ	Alcaldia de Sa	3.28	96	P	Pn	18 37 18.5	+0.8
SLOZ	Alcaldia de Sa	3.28	96	S	Sn	18 37 58.8	+3.1
LOAL	Lomas de Alarc	3.29	96	S	Sn	18 37 58.6	+2.7
LOAL	Lomas de Alarc	3.29	96	P	Pn	18 37 19.2	+1.4
NUBE	Las Nubes	3.30	98	*e*P	Pn	18 37 17.5	-0.6
NUBE	Las Nubes	3.30	98	⇑P	Pn	18 37 18.4	+0.4
CEVE	Cerro Verde	3.46	99	P	Pn	18 37 21.7	+1.3
VHSA	Villahermosa	3.59	3	*e*S	Sn	18 38 04.1	+0.9
JAYA	Jayaque - finc	3.66	101	*e*P	Pn	18 37 23.0	0.0
JAYA				*e*S	Sn	18 38 03.4	-1.8
JAYA	Jayaque - finc	3.66	101	P	Pn	18 37 25.5	+2.5
MTO3	Montecristo	3.67	89	Pn	Pn	18 37 22.5	-0.7
MTO3	Montecristo	3.67	89	*i*P	Pn	18 37 23.3	+0.1
MTO3				IAML		18 38 34.1	
	comp=Z,314nm,0.8s						
MTO3	Montecristo	3.67	89	P	Pn	18 37 25.0	+1.8
ESQI	Esquipulas	3.69	87		Pn	18 37 22.8	-0.7
PMON	Piamonte	3.78	100	P	Pn	18 37 25.5	+0.9
LALI	Alcalda de L	3.82	103	IAML		18 38 25.3	
	comp=E,527nm,0.6s						
LALI				IAML		18 38 30.0	
	comp=Z,355nm,0.7s						
TUIG	Tuzandepetl	3.84	342	*e*P	Pn	18 37 20.9	-4.4
TUIG				*e*S	Sn	18 38 08.0	-1.4
PANCS	Alcalda de	3.92	101	P	Pn	18 37 09.9	-17
PETF	Flores	4.04	51		Pn	18 37 29.6	+1.5
PETF	Flores	4.04	51	*e*P	Pn	18 37 30.6	+2.5
PETF				*i*S	Sb	18 38 21.4	-6.1
PETF	Flores	4.04	51	IAML		18 38 36.8	
	comp=E,2µm,0.8s						
PETF	Flores	4.04	51	⇑P	Pn	18 37 31.0	+2.8
PAVA	Las Pavas	4.14	99	P	Pn	18 37 32.7	+3.2
PEIG	Puerto Escondi	4.18	293	*e*P	Pn	18 37 27.3	-2.8
PEIG				*e*S	Sn	18 38 09.0	-9.0
OXLC	Oaxaca	4.34	308	*e*P	Pn	18 37 29.6	-2.9
OXLC				*e*S	Sn	18 38 18.3	-3.9
VHO	Vista Hermosa	4.37	308	*e*P	Pn	18 37 30.8	-2.1
VHO				*e*S	Sn	18 38 21.7	-1.1
PACA	Pacayal	4.77	100	P	Pb	18 37 51.6	+0.2
YOIG	Yosondua	4.90	301	*e*P	Pn	18 37 37.3	-3.0
YOIG				*e*S	Sn	18 38 35.3	-0.8
PNIG	Pinotepa	5.21	293	*e*P	Pn	18 37 42.8	-1.3
PNIG				*e*S	Sn	18 38 36.0	-7.2
CNCH	Conchagua	5.28	101	P	Pn	18 37 47.0	+1.7
TOIG	Toxpalan	5.28	315	*e*P	Pn	18 37 46.4	+1.2
TOIG				*e*S	Sn	18 38 45.0	0.0
TXIG	Tlaxiaco	5.29	303	*e*P	Pn	18 37 45.0	-0.5
TXIG				*e*S	Sn	18 38 38.9	-6.6
CSGN	Cosiguina Volc	5.61	104	P	Pn	18 37 52.1	+2.3
HLIG	Huajuapan de L	5.64	308	*e*P	Pn	18 37 49.2	-1.1
HLIG				*e*S	Sn	18 38 50.5	-3.6
POTN	Potosi Cosigui	5.65	103	P	Pn	18 37 51.8	+1.6
TPIG	Tehuac#an	5.70	315	*e*P	Pn	18 37 53.1	+2.0
TPIG				*e*S	Sn	18 38 50.6	-5.0
TGUH	Tegucigalpa,Un	5.70	92		Pn	18 37 50.0	-1.1
FTIG	Fresnillo de T	5.94	307	*e*P	Pn	18 37 51.9	-2.5
FTIG				*e*S	Sn	18 38 58.1	-3.3
MGIG	Malinaltepec	6.00	299	*e*P	Pn	18 37 55.8	+0.6
MGIG				*e*S	Sn	18 38 54.1	-8.8
TLIG	Tlapa	6.10	302		Pn	18 37 56.9	+0.3
TLIG	Tlapa	6.10	302	*e*P	Pn	18 37 54.5	-2.1
TLIG				*e*S	Sn	18 38 60.0	-5.4
POHV	Veracruz	6.12	320	*e*P	Pn	18 37 18.0	-39
POHV				*e*S	Sn	18 38 34.7	-32
CRIN	San Cristobal	6.16	105		Pn	18 37 56.0	-1.3
CRIN	San Cristobal	6.16	105	P	Pn	18 38 00.8	+3.5
	comp=E,6µmcomp=E,549nm,0.7s						
CRIG	Cruz Grande	6.23	293	*e*P	Pn	18 37 56.9	-1.3
CRIG				*i*S	Sn	18 38 59.0	-9.3
PKGN	Cerro Pekin	6.24	105	P	Pn	18 38 01.1	+2.8
HERN	Volcan Telica	6.39	105	Pn	Pn	18 37 59.9	-0.6
CNGA	Al SSO del Vol	6.54	106	P	Pn	18 38 12.1	+10
CNGN	Cerro Negro	6.54	106		Pn	18 38 01.2	-1.4
LIMN	Finca el Limon	6.72	100	P	Pn	18 38 07.8	+2.8
MOMN	Momotombo	6.72	106	P	Pn	18 38 07.3	+2.3
COPN	Copaltepe	6.74	108	P	Pn	18 38 08.3	+3.0
DAIG	Los Arroyos	6.79	294	*e*P	Pn	18 38 05.4	-0.6
DAIG				*e*S	Sn	18 39 18.6	-3.7
PBCV	Popocatepetl	6.92	312	*e*P	Pn	18 38 12.7	+4.7
PBCV				*e*S	Sn	18 39 26.4	+0.6
PBPN	Popocatepetl	7.01	312	*e*P	Pn	18 38 05.9	-3.4
PBPN				*e*P	Pb	18 38 06.6	-23
PBPN				*e*S	Sn	18 39 23.5	-4.8
PBPN				*e*S	Sb	18 39 31.6	-22
PBXN	Popocatepetl	7.01	312	*e*P	Pn	18 38 10.9	+1.6
PBXN				*e*S	Sn	18 39 28.9	+0.7
PPM	Popocatepetl	7.02	312	*e*P	Pn	18 38 10.9	+1.4
PPM				*e*S	Sn	18 39 22.2	-6.3
MGAN	Managua	7.07	107	Pn	Pn	18 38 07.7	-2.1
MGAN	Managua	7.07	107	P	Pn	18 38 16.9	+7.1
	comp=E,339nm,0.9s						
MEIG	Mezcala	7.15	300	*e*P	Pn	18 38 12.0	+1.1
MEIG				*e*S	Sn	18 39 31.6	+0.4
CXUV	Coxquihui	7.16	324	*e*P	Pn	18 38 09.8	-1.2
CXUV				*e*S	Sn	18 39 29.1	-2.2
MATN	Matagalpa	7.17	101	P	Pn	18 38 18.5	+7.3
YAIG	Yautepec	7.22	309	*e*P	Pn	18 38 12.8	+0.9
YAIG				*e*S	Sn	18 39 31.6	-1.3
PLIG	Platanillo	7.29	304	*e*P	Pn	18 38 12.2	-0.7
PLIG				*e*S	Sn	18 39 33.0	-1.7
MYIG	Merida	7.30	26	*e*P	Pn	18 38 12.7	-0.3
MYIG				*e*S	Sn	18 39 35.9	+1.0
CAIG	El Cayaco	7.35	292	*e*P	Pn	18 38 13.7	0.0
CAIG				*e*S	Sn	18 39 25.7	-10
MPVM	San Francisco	7.39	311	*e*P	Pn	18 38 14.6	+0.2
MPVM				*e*S	Sn	18 39 39.5	+2.3
TLVM	San Miguel Top	7.50	311	*e*S	Sn	18 39 40.2	+0.1
BOAB	BOACO BROADBAN	7.53	104		Pn	18 38 14.5	-1.5
VTVM	Tizayuca	7.60	316	*e*S	Sn	18 39 40.0	-2.5
AOVM	Tlapan	7.66	310	*e*P	Pn	18 38 16.4	-1.9
AOVM				*e*S	Sn	18 39 36.0	-8.2
INVM	La Marquesa	7.71	310	*e*P	Pn	18 38 17.2	-1.8
INVM				*e*S	Sn	18 39 42.5	-3.0
ARIG	Puente Sto Nin	7.93	300	*e*P	Pn	18 38 22.4	+0.9
ARIG				*e*S	Sn	18 39 45.4	-4.8
ACON	Acoyapa	8.12	106		Pn	18 38 23.1	-1.1
ACON	Acoyapa	8.12	106	P	Pn	18 38 30.6	+6.3
	comp=E,922nmcomp=E,83nm,0.9s						
DEIG	Demacu	8.14	317	*e*P	Pn	18 38 26.4	+1.7
DEIG				*e*S	Sn	18 39 49.7	-6.1
ZIIG	Zihuatanejo	8.62	293	*e*P	Pn	18 38 31.6	+0.6
ZIIG				*e*S	Sn	18 40 06.3	-0.9
CTUV	Llano Grande	8.62	326	*e*P	Pn	18 38 32.6	+1.5
CTUV				*e*S	Sn	18 40 07.8	+0.6
ESPN	Las Esperanzas	8.88	103		Pn	18 38 33.5	-1.2
JTS	Las Juntas de	8.98	116		Pn	18 38 34.6	-1.4
JTS	Las Juntas de	8.98	116	P	Pn	18 38 40.1	+4.2
	comp=E,5.8nm,0.4s,baz=296,slow=12,SNR=4.8						
SOCE	Pocosol	9.23	115	Pn	Pn	18 38 37.8	-1.7
MOIG	Morelia	9.32	306	Pn	Pn	18 38 42.0	+1.1
MOIG	Morelia	9.32	306	*e*P	Pn	18 38 47.3	+6.4
MOIG				*e*S	Sn	18 40 32.5	+7.7
JRQG	Juriquilla Cam	9.38	313	Pn	Pn	18 38 41.4	-0.3
BLUN	Bluefields	9.43	103	P	Pn	18 38 48.0	+5.9
	comp=E,9µmcomp=E,25nm,0.7s						
RPIG	Rio Verde	9.90	320	*e*P	Pn	18 38 51.7	+3.0
RPIG				*e*S	Sn	18 40 32.1	-6.6
LCR2	La Lucha 2	10.06	116		Pn	18 38 50.2	-0.8
GTIG	Gomez Farias	10.35	327	*e*P	Pn	18 38 50.1	-4.7
GTIG				*e*S	Sn	18 40 53.0	+3.2
MMIG	Aquila	10.53	293	*e*P	Pn	18 38 58.2	+0.9
MMIG				*e*S	Sn	18 40 57.8	+3.6
MNGA	Volcan de Coli	11.23	298	*e*P	Pn	18 39 06.9	-0.1
MNGA				*e*S	Sn	18 41 09.8	-1.8
INCO	Volcan de Coli	11.24	299	*e*P	Pn	18 39 08.7	+1.4
INCO				*e*S	Sn	18 41 05.3	-6.8
SOMAC	Volcano de Col	11.26	298	*e*P	Pn	18 39 05.9	-1.7
SOMAC				*e*S	Sn	18 41 11.6	-1.0
CDAR	Ciudad de Arme	11.36	295	*e*P	Pn	18 39 11.0	+2.5
CEGR	Campo Tres	11.40	297	*e*P	Pn	18 39 11.8	+2.5
CEGR				*e*S	Sn	18 41 14.0	-1.7
BRU2	Volcan	11.65	117	Pn	Pn	18 39 10.1	-2.6
LNIG	Linares	12.04	331	*e*P	Pn	18 39 21.2	+3.4
ZAIG	Zacatecas	12.22	314	Pn	Pn	18 39 18.6	-2.0
CJM	Chamela	12.47	296	*e*P	Pn	18 39 27.5	+3.8
SOR	Soroa	12.74	47		Pn	18 39 25.4	-2.0
HBVL	Hebbronville	13.64	339		Pn	18 39 38.4	-1.3
833A	Chaparral WMA,	15.04	338		Pn	18 39 57.4	-1.4
HKT	Hockley	15.70	351		Pn	18 40 08.8	+1.6
MLDN	Muldoon	15.75	347	Pn	Pn	18 40 09.1	+1.1
MLDN				IAmb	IAmb	18 40 15.2	
	comp=Z,96nm,1.4s						
HNDO	Hondo	16.11	340	P	Pn	18 40 14.4	+1.8
061Z	Ochoppi	16.19	43		Pn	18 40 13.6	-0.1
441A	DeRidder	16.30	360		Pn	18 40 16.4	+1.5
441A				IAmb	IAmb	18 40 37.6	
	comp=Z,39nm,0.6s						
DRIO	Del Rio	16.49	336		Pn	18 40 18.6	+1.1
435B	Jarrell	16.83	347		Pn	18 40 23.8	+2.0
435B				IAmb	IAmb	18 40 30.2	
	comp=Z,80nm,1.4s						
CHIV	Chivirico	16.92	68	P	Pn	18 40 22.7	-0.2
CHIV				IAmb	IAmb	18 40 32.7	
	comp=Z,27nm,0.9s						
HPIG		17.11	319	P	Pn	18 40 26.4	+0.9
JCT	Junction City	17.16	340	P	Pn	18 40 27.2	+1.3
060A	Indiantown	17.35	41		Pn	18 40 28.4	+0.1
NATX	Nacogdoches	17.36	356		P	18 40 30.7	+1.3
SAND	Sanderson	17.58	333		Pn	18 40 32.4	+1.3
SAND				IAmb	IAmb	18 40 40.4	
	comp=Z,45nm,1.0s						
BRDY	Brady	17.67	343		Pn	18 40 33.5	+1.3
TXAR	Lajitas Array	17.78	329		P	18 40 36.2	+1.9
TXAR	Lajitas Array	17.78	329	P	P	18 40 35.8	+1.5
	comp=Z,12nm,0.9s,baz=148,slow=12,SNR=26						
TXAR				LR	LR	18 48 07.7	
	comp=Z,96nm,18.4s,baz=126,slow=39						
TX31	Lajitas Ar. Si	17.78	329		Pn	18 40 34.9	+1.2
VBMS	Vicksburg	17.92	7		Pn	18 40 35.5	+0.2
VBMS				IAmb	IAmb	18 41 08.5	
	comp=Z,72nm,1.2s						
WHTX	Lake Whitney,	17.97	348		P	18 40 37.4	+1.2
OZNA	Ozona	18.03	337	P	P	18 40 38.3	+1.4
OZNA				IAmb	IAmb	18 40 44.7	
	comp=Z,58nm,1.1s						
143A	Socs Landing,	18.31	5	P	P	18 40 40.3	+0.3
143A				IAmb	IAmb	18 41 00.0	
	comp=Z,28nm,0.6s						
FW13	Cleburne	18.32	348	P	P	18 40 41.2	+1.2
TREL	Terrell	18.47	352	P	Pn	18 40 43.5	+1.6
TREL				IAmb	IAmb	18 40 59.7	
	comp=Z,46nm,0.9s						
250A	Grady	18.61	19	P	P	18 40 44.6	+1.3
ALPN	Alpine	18.62	330	P	Pn	18 40 45.8	+1.8
ALPN				IAmb	IAmb	18 40 56.0	
	comp=Z,52nm,1.3s						
FW07	Weatherford	18.73	348	P	Pn	18 40 47.8	+2.6
FW07				IAmb	IAmb	18 41 21.3	
	comp=Z,23nm,0.6s						
Z41A	Richland Creek	18.80	1	P	Pn	18 40 47.1	+1.2
Z41A				IAmb	IAmb	18 41 05.0	
	comp=Z,42nm,1.0s						
LPIG	La Paz	18.85	303	P	Pn	18 40 52.1	+5.4
	comp=Z,21nm,0.3s,baz=29,slow=5.6,SNR=3.5						
LPIG				LR	LR	18 47 10.2	
	comp=Z,190nm,18.0s,baz=150,slow=33						
SGCY	Sterling City	18.92	339	P	P	18 40 47.6	+0.9
SGCY				IAmb	IAmb	18 40 56.3	
	comp=Z,44nm,0.9s						
FW06	Azle	18.94	349	P	Pn	18 40 50.2	+2.5
FW06				IAmb	IAmb	18 41 13.3	
	comp=Z,29nm,0.8s						
PLPT	Palo Pinto	18.95	346	P	P	18 40 48.1	+1.2
MNHN	Monahans	19.05	334		P	18 40 49.8	+1.7
MNHN				IAmb	IAmb	18 40 52.7	
	comp=Z,36nm,1.1s						
ABTX	Abilene, Hawle	19.11	343	P	P	18 40 48.9	+0.2
TIGA	Tifton	19.11	26	P	P	18 40 48.7	0.0
TIGA				IAmb	IAmb	18 40 57.7	
	comp=Z,62nm,0.9s						
WLAR	White Oak Lake	19.23	0	P	P	18 40 51.4	+1.5
WLAR				IAmb	IAmb	18 40 57.8	
	comp=Z,39nm,0.9s						
Z35A	Perchaven, San	19.23	350	P	Pn	18 40 52.5	+1.3
Z47A	Carrollton	19.30	13	P	P	18 40 45.8	-4.9
Z47A				IAmb	IAmb	18 40 51.4	
	comp=Z,44nm,1.0s						
LRAL	Lakeview Retre	19.40	16	P	P	18 40 51.4	-0.4
PECS	Pecos	19.56	332	P	Pn	18 40 56.0	+0.8
VHRN	Van Horn	19.63	328		P	18 40 56.3	+1.8
ODSA	Odessa	19.64	336	P	P	18 40 55.8	+1.2
ODSA				IAmb	IAmb	18 41 03.1	
	comp=Z,58nm,1.0s						
SN05	Snyder 5	19.72	340	P	P	18 40 56.0	+0.6
SN05				IAmb	IAmb	18 41 00.9	
	comp=Z,30nm,0.9s						
GUY2C	Guyana, Caldas	19.73	116	P	Pn	18 40 58.7	+1.0
	comp=Z,518nmcomp=Z,37nm,0.8s						
152A	Waverly Hall	19.76	21	P	P	18 40 56.9	+1.0
152A				IAmb	IAmb	18 41 04.9	
	comp=Z,56nm,1.3s						
WTFS	Witchita Falls	19.90	347	P	P	18 40 58.5	+1.2
WTFS				IAmb	IAmb	18 41 38.0	
	comp=Z,63nm,1.5s						
APMT	Aspermont	19.90	343		P	18 40 58.7	+1.3
SN07	Snyder 07	19.92	341	P	P	18 40 57.4	-0.2
SN07				IAmb	IAmb	18 41 16.5	
	comp=Z,29nm,0.9s						
X40A	Basin Creek Fa	20.02	1	P	P	18 40 58.9	+0.2
POPC	Popayan, Colom	20.07	124	P	Pn	18 41 01.7	+0.2
	comp=Z,292nmcomp=Z,35nm,1.0s						
MIAR	Mount Ida	20.08	359	P	P	18 40 58.9	-0.4
MIAR				IAmb	IAmb	18 41 07.7	
	comp=Z,62nm,1.2s						
POST	Post	20.10	339	P	P	18 41 00.8	+1.2
POST				IAmb	IAmb	18 41 04.2	
	comp=Z,37nm,1.0s						
OTAV	Otavalo	20.22	133	P	P	18 41 00.2	-1.3
UALR	University of	20.32	2	P	P	18 41 02.9	+1.0
UALR				IAmb	IAmb	18 41 31.4	
	comp=Z,28nm,0.9s						
CLNB	Carlsbad	20.32	333		P	18 41 04.1	+2.0
OXF	Oxford	20.33	9	P	P	18 41 04.2	+2.2
OXF				IAmb	IAmb	18 41 35.5	
	comp=Z,42nm,0.9s						
154A	Montrose	20.33	25	P	P	18 41 02.8	+0.7
HTMS	Hat Mesa	20.40	334	P	P	18 41 04.6	+1.7
CLN7	Carlsbad 7	20.42	333	P	P	18 41 04.9	+1.7
DKNS	Dickens	20.46	341	P	P	18 41 04.8	+1.3
DKNS				IAmb	IAmb	18 41 12.8	
	comp=Z,36nm,0.9s						
ORTC	Ortega, Tolima	20.48	119	P	Pn	18 41 06.5	+0.3
	comp=Z,593nmcomp=Z,72nm,0.8s						
MNTX	Cornudas Mount	20.56	329		P	18 41 05.1	+0.6
X34A	Smith Ranch, M	20.58	349	P	P	18 41 05.5	+0.8
X34A				IAmb	IAmb	18 41 24.3	
	comp=Z,26nm,0.9s						
ROSC	El Rosal	20.82	115	P	P	18 41 08.4	+0.5
ROSC	El Rosal	20.82	115	P	Pn	18 41 10.3	-0.2
	comp=Z,34nm,0.8s,baz=49,slow=1.0,SNR=16						
ROSC				LR	LR	18 50 39.0	
	comp=Z,214nm,19.5s,baz=206,slow=41						
	comp=Z,34nm,0.8s						
WHAR	Wooly Hollow	20.84	2	P	P	18 41 09.1	+1.6
WHAR				IAmb	IAmb	18 41 16.7	
	comp=Z,42nm,1.3s						
GOGA	Godfrey	20.89	23	P	P	18 41 07.7	-0.4
GOGA				IAmb	IAmb	18 41 16.6	
	comp=Z,60nm,1.1s						
CPRX	Cap Rock	20.98	334	P	P	18 41 11.0	+1.8
PLAL	Pickwick Lake	21.02	12	P	P	18 41 08.5	-0.9
PLAL				IAmb	IAmb	18 41 18.5	
	comp=Z,25nm,1.0s						
Y52A	Lilburn	21.08	21	P	P	18 41 12.0	+1.9
FNO	Franklin	21.14	350		P	18 41 10.1	-0.7
FPAL	Fort Paine	21.20	17	P	P	18 41 10.6	-0.8
PAMC	Pamplona, Colo	21.25	107	P	P	18 41 14.1	+1.4
MSTX	Muleshoe	21.37	338		P	18 41 13.9	+0.5
MSTX				IAmb	IAmb	18 41 25.8	
	comp=Z,54nm,1.2s						
FCAR	Ozark Folk Cen	21.44	2	P	P	18 41 15.0	+1.0
FCAR				IAmb	IAmb	18 41 18.1	
	comp=Z,22nm,0.8s						
X51A	Calhoun	21.45	19	P	P	18 41 14.9	+0.9
X51A				IAmb	IAmb	18 41 23.6	
	comp=Z,38nm,1.0s						
RUSC	La Rusia	21.46	111		P	18 41 14.5	-0.4
RUSC				IAmb	IAmb	18 41 28.6	
	comp=Z,41nm,0.9s						
FLOC	Florencia	21.46	125		P	18 41 15.4	+1.0
FLOC				IAmb	IAmb	18 41 33.2	
	comp=Z,58nm,1.2s						
TUL3	Leonard	21.57	354	P	P	18 41 16.2	+0.8
DEOK	Depew	21.59	353	P	P	18 41 15.8	+0.2
SMWD	Samnorwood	21.61	344		P	18 41 17.5	+1.7
COHC	Cochancay	21.67	139		P	18 41 16.7	+0.1
LCAR	Lake Charles	21.68	4	P	P	18 41 16.9	+0.5
LCAR				IAmb	IAmb	18 41 45.8	
	comp=Z,40nm,1.5s						
OK029	Liberty Lake	21.68	350	P	P	18 41 15.6	-0.9
OK029				IAmb	IAmb	18 41 38.5	
	comp=Z,22nm,0.8s						
OK052	Battle Ridge R	21.77	352	P	P	18 41 18.2	+0.7
AMTX	Amarillo	21.82	341	P	P	18 41 18.5	+0.4
HHAR	Hobbs	21.82	358	P	P	18 41 19.1	+1.0
QUOK	Quay	21.94	352	P	P	18 41 18.9	-0.4
QUOK				IAmb	IAmb	18 41 27.3	
	comp=Z,40nm,0.9s						
U38A	Gravette	22.00	357	P	P	18 41 17.2	-2.8
V48A	Smith Brothers	22.02	14	P	P	18 41 19.8	-0.4
V48A				IAmb	IAmb	18 41 44.9	
	comp=Z,21nm,1.0s						
HODGE	Hodges	22.09	25	P	P	18 41 21.1	+0.2
WVT	Waverly	22.18	11	P	P	18 41 23.1	+1.2
ELIS	Ellis County	22.32	347	P	P	18 41 24.0	+0.6
ELIS				IAmb	IAmb	18 41 28.4	
	comp=Z,37nm,0.8s						
CPCT	Cooper Cave	22.37	19	P	P	18 41 21.8	-2.2
TAMC	Tame, Arauca	22.42	108	P	P	18 41 26.9	+2.1
PBMO	Poplar Bluff	22.44	6	P	P	18 41 24.2	-0.5
PBMO				IAmb	IAmb	18 41 26.6	
	comp=Z,20nm,0.8s						
CLTN	Cedars of Leba	22.47	15	P	P	18 41 25.9	+0.9
319A	Douglas	22.47	322		P	18 41 25.7	+0.4
319A				IAmb	IAmb	18 41 31.6	
	comp=Z,16nm,0.8s						
BG3	Lake Jocassee	22.50	22	P	P	18 41 25.7	+0.3
BG3				IAmb	IAmb	18 41 46.5	
	comp=Z,21nm,1.0s						
T42A	Van Buren	22.63	4	P	P	18 41 27.1	+0.3
MGMO	Mountain Grove	22.70	2	P	P	18 41 27.3	-0.1
SDV	Santo Domingo	22.71	101		P	18 41 27.1	-0.9
SDV				IAmb	IAmb	18 41 30.2	
	comp=Z,20nm,0.8s						
PAULI	Pauline	22.78	25	P	P	18 41 28.8	+0.5
PAULI				IAmb	IAmb	18 41 39.1	
	comp=Z,25nm,0.9s						
TKL	Tuckaleechee C	22.80	20	P	P	18 41 28.3	-0.2
	comp=Z,2.2nm,0.6s,baz=177,slow=11,SNR=3.5						
TKL				LR	LR	18 51 35.5	
	comp=Z,209nm,19.2s,baz=207,slow=40						
	comp=Z,2.2nm,0.6s						
CRNM	Carthage	23.05	330		P	18 41 32.9	+1.5
T47A	Sharon Grove	23.15	12	P	P	18 41 30.2	-2.0
T47A				IAmb	IAmb	18 41 54.5	
	comp=Z,12nm,0.7s						
BNM	Barren Site	23.16	331		P	18 41 34.5	+1.9
DUN6	Lazy B Ranch	23.21	324	P	P	18 41 34.6	+1.7
KAN12	Harper NE Stat	23.23	350	P	P	18 41 33.0	0.0
KMSC	Kings Mountain	23.25	25	P	P	18 41 33.4	+0.2
KMSC				IAmb	IAmb	18 41 44.2	
	comp=Z,26nm,1.3s						
SBM	South Baldy	23.29	329	P	P	18 41 36.3	+2.3
LENM	Lemitar	23.34	330	P	P	18 41 35.9	+1.6
RTBA	Rita Blanca	23.59	340	P	P	18 41 36.9	+0.4
CCM	Cathedral Cave	23.64	4	P	P	18 41 35.1	-1.8
CCM				IAmb	IAmb	18 41 38.1	
	comp=Z,19nm,0.9s						
ANMO	Albuquerque	23.74	332	P	P	18 41 39.1	+1.1
ANMO	Albuquerque	23.74	332	P	P	18 41 39.4	+1.4
ANMO				IAmb	IAmb	18 42 05.3	
	comp=Z,9.7nm,1.1s						
ANMO	Albuquerque	23.74	332		P	18 41 39.1	+1.1
ANMO	Albuquerque	23.74	332	P	P	18 41 39.6	+1.6
	comp=Z,5.5nm,0.8s,baz=240,slow=8.3,SNR=8.6						
ANMO				LR	LR	18 53 04.5	
	comp=Z,125nm,21.3s,baz=224,slow=42						
	comp=Z,5.5nm,0.8s						
S51A	Beattyville	24.68	18	P	P	18 41 46.6	+0.1
S51A				IAmb	IAmb	18 42 13.6	
	comp=Z,18nm,0.9s						
V58A	Windy Hill, Pi	24.77	28	P	P	18 41 45.8	-1.5
V58A				IAmb	IAmb	18 41 47.0	
	comp=Z,23nm,1.0s						
T25A	Trinidad	24.79	338		P	18 41 48.6	+0.8
R49A	Shelbyville	24.84	15	P	P	18 41 47.7	-0.3
R49A				IAmb	IAmb	18 42 14.2	
	comp=Z,20nm,1.2s						
CBKS	Cedar Bluff	25.03	348		P	18 41 49.9	+0.2
P40A	Paris	25.07	2	P	P	18 41 48.8	-1.2
P40A				IAmb	IAmb	18 41 50.2	
	comp=Z,17nm,0.8s						
214A	Organ Pipe Nat	25.09	318	P	P	18 41 51.7	+1.4
P38A	Dawn	25.15	359		P	18 41 50.7	-0.1
P38A				IAmb	IAmb	18 42 19.7	
	comp=Z,13nm,1.1s						
X18A	Snowflake	25.16	326	P	P	18 41 51.8	+0.7
BAUV	El Baul	25.16	100		P	18 41 49.8	-1.3
W18A	Petrified Fore	25.49	327	P	P	18 41 55.7	+1.6
W18A				IAmb	IAmb	18 42 29.1	
	comp=Z,7.2nm,0.6s						
SDCO	Great Sand Dun	25.73	337	P	P	18 41 57.4	+1.0
SDCO				IAmb	IAmb	18 41 59.7	
	comp=Z,22nm,1.3s						
ATAH	Atahualpa	25.90	145	LR	LR	18 50 37.3	
	comp=Z,220nm,18.4s,baz=327,slow=32						
X16A	Lo Mia Camp, P	25.91	324	P	P	18 41 57.5	-0.4
KSCO	Kaye Shedlock’	25.92	343		P	18 41 58.6	+0.7
SJG	San Juan	26.17	78	LR	LR	18 52 18.7	
	comp=Z,228nm,21.5s,baz=242,slow=37						
S22A	4UR Ranch, Cre	26.26	335		P	18 42 02.5	+1.3
N38A	Joes South For	26.32	360	P	P	18 42 00.1	-1.2
T59A	Double "B" Far	26.45	29	P	P	18 42 01.0	-1.6
T59A				IAmb	IAmb	18 42 02.2	
	comp=Z,14nm,0.9s						
Y14A	Wickenburg	26.51	321	P	P	18 42 02.7	-0.5
MVCO	Mesa Verde	26.54	332		P	18 42 04.2	+0.5
WUAZ	Wupatki	26.67	325	P	P	18 42 05.5	+0.8
PV01	Paradox Valley	27.33	333	P	P	18 42 11.3	+0.6
PV01				IAmb	IAmb	18 42 14.5	
	comp=Z,18nm,1.3s						
PV13	Radium Mtn., P	27.46	332	P	P	18 42 13.1	+1.2
PV15	Paradox Valley	27.46	333	P	P	18 42 12.7	+0.7
PV15				IAmb	IAmb	18 42 26.9	
	comp=Z,12nm,1.1s						
PV02	Paradox Valley	27.46	333	P	P	18 42 12.8	+0.9
PV02				IAmb	IAmb	18 42 26.8	
	comp=Z,18nm,1.1s						
PV05	Paradox Valley	27.52	332	P	P	18 42 12.9	+0.5
PV05				IAmb	IAmb	18 42 24.1	
	comp=Z,27nm,1.2s						
PV03	Paradox Valley	27.55	333	P	P	18 42 13.8	+1.1
PV03				IAmb	IAmb	18 42 27.4	
	comp=Z,12nm,1.1s						
PV18	Skein Mesa, Pa	27.57	332		P	18 42 14.1	+1.2
PV18				IAmb	IAmb	18 42 28.1	
	comp=Z,25nm,1.2s						
PV12	Saucer Basin,	27.58	333	P	P	18 42 13.8	+0.8
ISCO	Idaho Springs	27.59	339		P	18 42 13.1	-0.1
PV11	David Mesa, Pa	27.60	333	P	P	18 42 13.5	+0.4
PV11				IAmb	IAmb	18 42 25.8	
	comp=Z,20nm,1.1s						
PV07	Paradox Valley	27.61	333	P	P	18 42 13.6	+0.4
PV07				IAmb	IAmb	18 42 32.0	
	comp=Z,14nm,1.2s						
PV17	East Wray Mesa	27.62	332	P	P	18 42 11.9	-1.4
PV16	Nyswonger Mesa	27.63	333	P	P	18 42 14.6	+1.2
L40A	Anamosa	27.64	3	P	P	18 42 11.9	-1.3
L40A				IAmb	IAmb	18 42 14.2	
	comp=Z,14nm,1.1s						
PV19	Morning Glory	27.66	332	P	P	18 42 15.0	+1.4
PV19				IAmb	IAmb	18 42 33.0	
	comp=Z,23nm,1.1s						
PV20	West Nyswonger	27.67	333	P	P	18 42 14.6	+0.8
PV20				IAmb	IAmb	18 42 55.3	
	comp=Z,16nm,1.0s						
PV04	Paradox Valley	27.69	333	P	P	18 42 15.0	+1.1
PV04				IAmb	IAmb	18 42 47.2	
	comp=Z,17nm,1.1s						

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PV22  Blue Mesa, Par    27.75 333          P       18 42 15.8 +1.2
PV22                              IAmb     IAmb    18 42 20.9
      comp=Z,15nm,1.1s
PV23  Carpenter Ridg    27.78 333  P       P       18 42 15.2 +0.3
W13A  Hualapai Mount    27.83 322          P       18 42 16.7 +1.5
U15A  North Rim         27.84 326          P       18 42 16.9 +1.5
PV21  Cone Mtn., Par    27.86 333  P       P       18 42 17.1 +1.6
PV21                              IAmb     IAmb    18 42 48.7
      comp=Z,8.7nm,0.7s
PCRV  Puerto La Cruz    28.16  95  LR      LR      18 55 20.4
      comp=Z,187nm,18.5s,slow=40
HMU   Henry Mountain    28.18 330  P       P       18 42 18.9 +0.4
HMU                               IAmb     IAmb    18 42 26.8
      comp=Z,14nm,1.3s
PFO   Pinyon Flats O    28.52 316  LR      LR      18 53 35.7
      comp=Z,102nm,20.9s,baz=102,slow=36
KNB   Kanab             28.56 326  P       P       18 42 22.8 +1.0
V12A  Nelson            28.83 321          P       18 42 25.7 +1.7
O20A  White River Ci    28.87 336  P       P       18 42 25.9 +1.5
O20A                              IAmb     IAmb    18 42 29.9
      comp=Z,7.8nm,0.9s
SRU   San Rafael Swe    29.01 331  P       P       18 42 26.7 +1.0
Q16A  Castle Valley     29.16 330  P       P       18 42 26.6  -0.5
P18A  Preston Nutter    29.30 332  P       P       18 42 29.9 +1.5
ECSD  EROS Data Cent    29.41 355          P       18 42 27.9  -1.0
ECSD                              IAmb     IAmb    18 42 31.3
      comp=Z,11nm,1.1s
SHPR  Sheep Range       29.54 322  P       P       18 42 31.2 +0.8
PSUT  Pine Spring       30.23 327          P       18 42 38.0 +1.5
BSUT  Blindstream Ca    30.27 333          P       18 42 37.5 +0.5
TPNV  Topopah Spring    30.48 322  P       P       18 42 40.4 +1.6
SPR3  Spring Creek 3    30.82 327          P       18 42 42.7 +0.8
TCUT  Toone Canyon      31.02 333  P       P       18 42 45.4 +1.8
TCUT                              IAmb     IAmb    18 42 47.1
      comp=Z,12nm,0.8s
R11B  Troy Canyon, C    31.05 324          P       18 42 44.3 +0.5
RSSD  Black Hills       31.07 345          P       18 42 44.8 +0.9
RSSD                              IAmb     IAmb    18 42 45.9
      comp=Z,5.9nm,0.8s
CPNY  Central Park      31.18  29  P       P       18 42 46.0 +1.4
GRAC  Grapevine Rang    31.20 321  P       P       18 42 46.7 +1.9
GRAC                              IAmb     IAmb    18 42 48.8
      comp=Z,7.4nm,0.9s
GMN   Gold Mountain     31.32 321  P       P       18 42 47.2 +0.9
BGU   Big Grassy Mou    31.62 331  P       P       18 42 49.3 +0.6
BW06  Boulder Array     31.63 337  P       P       18 42 49.5 +0.7
PD31  Pinedale Array    31.63 337  P       P       18 42 49.5 +0.7
PDAR  Pinedale Array    31.63 337  P       P       18 42 49.6 +0.8
      comp=Z,2.3nm,0.8s,baz=138,slow=9.1,SNR=9.9
PDAR                              LR       LR      18 57 22.3
      comp=Z,110nm,18.3s,baz=138,slow=40
      comp=Z,2.3nm,0.8s
MZP   Montezuma Peak    31.66 322  P       P       18 42 50.4 +1.2
DSP   Deep Springs      31.80 321  P       P       18 42 52.8 +2.7
DSP                               IAmb     IAmb    18 42 58.9
      comp=Z,9.4nm,1.4s
TPH   Tonopah           31.81 322  P       P       18 42 52.0 +1.5
HVU   Hansel Valley     32.17 332  P       P       18 42 54.6 +1.1
HVU                               IAmb     IAmb    18 43 05.4
      comp=Z,9.0nm,1.0s
AHID  Auburn Hatcher    32.24 335  P       P       18 42 55.2 +1.0
AHID                              IAmb     IAmb    18 42 59.3
      comp=Z,8.4nm,1.0s
SADO  Sadowa            32.55  19  LR      LR      18 57 49.1
      comp=Z,288nm,18.4s,baz=232,slow=40
ELK   Elko              32.58 328          P       18 42 58.8 +1.6
ELK   Elko              32.58 328  P       P       18 42 58.0 +0.7
      comp=Z,3.0nm,0.8s,baz=149,slow=7.6,SNR=12
ELK                               LR       LR      18 57 59.2
      comp=Z,227nm,18.9s,baz=146,slow=40
      comp=Z,3.0nm,0.8s
NV11  Mina Array Sit    32.60 322  P       P       18 42 58.9 +1.6
NV11                              IAmb     IAmb    18 43 00.7
      comp=Z,9.8nm,1.0s
SNOW  Snow King Moun    32.68 336  P       P       18 42 59.8 +1.7
NVAR  Mina Array Bea    32.69 322  P       P       18 43 00.3 +2.2
      comp=Z,6.0nm,0.8s,baz=140,slow=8.9,SNR=33
NVAR                              PcP      PcP     18 45 44.3 +0.8
      comp=Z,2.5nm,0.9s,baz=143,slow=4.0,SNR=4.0
      comp=Z,6.0nm,0.8s
LHV   Little Huntoon    32.69 321  P       P       18 42 59.1 +1.2
E28A  Huff              32.72 350  P       P       18 42 57.8  -0.3
TPAW  Teton Pass        32.78 336          P       18 42 58.8  -0.2
FXWY  Fox Creek         32.94 336          P       18 43 00.7 +0.4
FXWY                              IAmb     IAmb    18 43 06.1
      comp=Z,9.5nm,1.1s
RYN   Ryan              32.94 322  P       P       18 43 01.4 +1.0
L61B  Northampton       33.08  28  P       P       18 43 02.3 +1.0
H17A  Grant Village     33.40 337  P       P       18 43 06.5 +2.1
H17A                              IAmb     IAmb    18 43 09.7
      comp=Z,7.2nm,1.0s
YFT   Old Faithful      33.55 337  P       P       18 43 07.6 +2.0
YFT                               IAmb     IAmb    18 43 12.5
      comp=Z,10.0nm,1.0s
RLMT  Red Lodge         33.55 339  P       P       18 43 06.1 +0.4
RLMT                              IAmb     IAmb    18 43 07.6
      comp=Z,8.1nm,1.1s
YNE   Yellowstone No    33.72 338  P       P       18 43 07.9 +0.8
YNE                               IAmb     IAmb    18 43 14.3
      comp=Z,13nm,1.0s
YHH   Holmes Hill       33.84 337  P       P       18 43 10.0 +1.8
AGMN  Agassiz Nation    33.90 357  IAmb    IAmb    18 43 10.3
      comp=Z,9.3nm,0.8s
YHL   Hebgen Lake       34.02 337  P       P       18 43 10.0 +0.2
YHL                               IAmb     IAmb    18 43 13.7
      comp=Z,5.8nm,0.8s
LAO   LASA Array        34.02 344  P       P       18 43 10.5 +1.0
LAO                               IAmb     IAmb    18 43 11.4
      comp=Z,11nm,1.1s
HLID  Hailey            34.32 332          P       18 43 14.0 +1.7
BOAV  Boa Vista         34.34 107  P       P       18 43 11.8  -0.7
BOAV                              IAmb     IAmb    18 43 12.8
      comp=Z,6.4nm,0.8s
MCMT  McKenzie Canyo    34.66 335  P       P       18 43 17.4 +2.2
BEKR  Beckworth         34.83 322  P       P       18 43 18.5 +1.8
MFID  Camas Ranch       34.86 331  P       P       18 43 18.1 +1.2
DLMT  Dillon            34.99 336  P       P       18 43 19.8 +1.7
DLMT                              IAmb     IAmb    18 43 21.6
      comp=Z,12nm,0.8s
EPLO  Experimental L    35.20 359  P       P       18 43 18.9  -0.7
EPLO                              IAmb     IAmb    18 43 19.3
      comp=Z,8.0nm,0.7s
LRM   Limekiln Ridge    35.32 336  P       P       18 43 22.4 +1.4
WVOR  Wild Horse Val    35.56 327  P       P       18 43 23.8 +0.8
WVOR                              IAmb     IAmb    18 43 35.6
      comp=Z,7.0nm,0.5s
ULM   Lac du Bonnet     35.84 357  P       P       18 43 23.4  -1.7
      comp=Z,4.3nm,0.9s,baz=162,slow=8.4,SNR=5.2
ULM                               PcP      PcP     18 45 50.8  -1.3
      comp=Z,1.5nm,0.5s,baz=148,slow=4.4,SNR=3.2
ULM                               LR       LR      18 59 54.0
      comp=Z,172nm,20.6s,baz=132,slow=39
      comp=Z,4.3nm,0.9s
J08A  Circle Bar Ran    36.13 328          P       18 43 29.8 +2.0
J08A                              IAmb     IAmb    18 43 30.8
      comp=Z,14nm,0.9s
BPMT  Black Pine Rid    36.22 336          P       18 43 30.0 +1.3
PLID  Pearl Lake        36.22 332          P       18 43 29.7 +1.1
PLID                              IAmb     IAmb    18 43 31.2
      comp=Z,11nm,1.0s
EGMT  Eagleton          36.27 341  P       P       18 43 29.6 +0.8
OVMT  Ovando            36.56 337          P       18 43 32.5 +1.0
MACA  Manacapuru-AM     36.59 116  P       P       18 43 31.3  -0.7
MACA                              IAmb     IAmb    18 43 37.4
      comp=Z,19nm,1.0s
BMO   Blue Mountains    36.64 331          P       18 43 32.8 +0.7
MSO   Missoula          36.73 336          P       18 43 34.2 +1.3
MSO                               IAmb     IAmb    18 43 35.4
      comp=Z,8.9nm,1.0s
YBH   Yreka Blue Hor    37.39 323  LR      LR      18 58 44.6
      comp=Z,18nm,20.7s,baz=130,slow=36
G08A  Pilot Rock        37.76 330  P       P       18 43 42.4 +0.8
NEW   Newport           39.17 335  LR      LR      19 03 05.5
      comp=Z,228nm,18.3s,baz=144,slow=41
LPAZ  La Paz            39.23 140  LR      LR      18 58 34.8
      comp=Z,147nm,19.4s,baz=320,slow=34
FFC   Flin Flon         40.84 352          P       18 44 03.9  -3.2
MDP   Montagnes des     40.91  99  LR      LR      19 02 54.8
      comp=Z,132nm,19.7s,baz=314,slow=39
LLLB  Lillooet          42.98 333          P       18 44 25.5 +0.8
LLLB                              IAmb     IAmb    18 44 33.8
      comp=Z,16nm,1.4s
SIV   San Ignacio       43.76 132  LR      LR      19 02 38.2
      comp=Z,136nm,18.3s,baz=294,slow=36
FCC   Fort Churchill    44.31 359          P       18 44 34.6  -0.5
FCC                               IAmb     IAmb    18 44 36.2
      comp=Z,5.6nm,0.7s
SCHQ  Schefferville     45.26  21  LR      LR      19 05 57.3
      comp=Z,462nm,18.2s,baz=189,slow=39
BBB   Bella Bella       46.89 331  LR      LR      19 04 21.0
      comp=Z,67nm,19.8s,baz=140,slow=36
YKAW1 Yellowknife Wh    50.37 347          P       18 45 22.9 +0.6
YKAW1                             IAmb     IAmb    18 45 24.0
      comp=Z,25nm,0.8s
TOAD  Toad River Com    50.39 339  P       P       18 45 23.8 +1.3
      baz=138
YKA   Yellowknife Ar    50.41 347  P       P       18 45 23.6 +1.1
YKA   Yellowknife Ar    50.41 347  P       P       18 45 23.3 +0.7
      comp=Z,12nm,0.8s,baz=152,slow=7.1,SNR=48
      comp=Z,12nm,0.8s
YKAW3 Yellowknife Wh    50.47 347          P       18 45 22.8  -0.2
YKAW3                             IAmb     IAmb    18 45 24.8
      comp=Z,23nm,0.8s
V35K  Ketchikan         50.50 333  P       P       18 45 24.9 +1.5
      baz=129
KOTAN Kotaneelee Air    50.96 341  P       P       18 45 28.8 +2.0
      baz=140
T35M  Bob Quinn         50.98 335  P       P       18 45 29.0 +2.0
      baz=131
CRAG  Craig             51.27 332  P       P       18 45 31.1 +2.0
      baz=127
BEAVL Fort Liard        51.33 340  P       P       18 45 32.0 +2.4
      baz=139
WRAK  Wrangell Islan    51.50 333  P       P       18 45 33.5 +2.7
      baz=128
U33K  Whale Pass        51.66 333  P       P       18 45 34.4 +2.5
      baz=128
DLBC  Dease Lake        51.86 336  P       P       18 45 35.7 +2.1
DLBC                              IAmb     IAmb    18 45 44.1
      comp=Z,10nm,1.0s
DLBC  Dease Lake        51.86 336  LR      LR      19 10 10.3
      comp=Z,73nm,20.1s,baz=146,slow=39
DLBC  Dease Lake        51.86 336  P       P       18 45 36.3 +2.7
      baz=132
S34M  Telegraph Cree    51.95 335  P       P       18 45 37.0 +2.8
      baz=131
FRB   Frobisher Bay     52.20  14  LR      LR      19 09 53.7
      comp=Z,179nm,18.9s,baz=205,slow=39
R33M  Jennings River    52.87 337          P       18 45 43.1 +1.9
R33M                              IAmb     IAmb    18 45 45.6
      comp=Z,6.8nm,1.1s
R33M  Jennings River    52.87 337  P       P       18 45 43.5 +2.4
      baz=132
Q32M  Nakina River      53.09 336  P       P       18 45 44.9 +2.0
Q32M                              IAmb     IAmb    18 45 51.8
      comp=Z,8.4nm,0.9s
Q32M  Nakina River      53.09 336  P       P       18 45 45.1 +2.3
      baz=130
S32K  Killisnoo         53.11 333  P       P       18 45 44.9 +2.1
      baz=127
SIT   Sitka             53.20 333  P       P       18 45 45.2 +1.7
      baz=126
WRGLY Wrigley           53.21 343  P       P       18 45 44.7 +1.3
WRGLY Wrigley           53.21 343  P       P       18 45 45.3 +1.9
      baz=142
TGTN  Hyland Airport    53.39 340  P       P       18 45 47.0 +2.1
      baz=136
CPUP  Villa Florida     53.39 139  P       P       18 45 47.0 +1.7
      comp=Z,0.4nm,0.6s,baz=152,slow=9.3,SNR=2.9
CPUP                              LR       LR      19 10 49.0
      comp=Z,16nm,18.1s,baz=208,slow=38
      comp=Z,0.4nm,0.6s
R32K  Eaglecrest        53.58 334  P       P       18 45 48.4 +2.2
      baz=127
BDFB  Brasilia          53.66 122  LR      LR      19 09 19.2
      comp=Z,81nm,18.8s,baz=305,slow=37
P32M  Atlin             54.06 336  P       P       18 45 50.8 +1.0
P32M  Atlin             54.06 336  P       P       18 45 51.8 +2.0
      baz=129
P33M  Teslin, Yukon     54.11 337          P       18 45 50.8 +0.6
P33M                              IAmb     IAmb    18 45 59.9
      comp=Z,11nm,1.4s
P33M  Teslin, Yukon     54.11 337  P       P       18 45 52.4 +2.2
      baz=130
S31K  Pelican           54.12 333  P       P       18 45 51.5 +1.3
S31K                              IAmb     IAmb    18 45 53.9
      comp=Z,14nm,1.2s
S31K  Pelican           54.12 333  P       P       18 45 52.7 +2.5
      baz=125
SKAG  Skagway           54.63 335  P       P       18 45 55.7 +1.9
SKAG                              IAmb     IAmb    18 46 39.8
      comp=Z,3.7nm,0.7s
N32M  Quiet Lake        54.82 338  P       P       18 45 57.4 +2.1
      baz=130
PLBC  Pleasant Camp     55.05 335  P       P       18 45 59.2 +2.3
      baz=126
MMPY  Sheldon Lake,     55.16 340  P       P       18 45 59.4 +1.6
MMPY                              IAmb     IAmb    18 46 00.9
      comp=Z,9.2nm,1.0s
MMPY  Sheldon Lake,     55.16 340  P       P       18 45 59.4 +1.6
      baz=133
WHY   Whitehorse        55.19 336  P       P       18 45 59.6 +1.6
      baz=128
ILON  Igloolik, Nuna    55.42   5          P       18 45 59.4  0.0
FARO  Faro, Yukon       55.62 339  P       P       18 46 02.7 +1.6
      baz=131
P30M  Million Dollar    55.69 335  P       P       18 46 03.8 +2.2
      baz=126
P29M  Windy Craggy      55.72 334          P       18 46 03.0 +1.2
P29M                              IAmb     IAmb    18 46 05.2
      comp=Z,10nm,1.1s
P29M  Windy Craggy      55.72 334  P       P       18 46 04.0 +2.2
      baz=125
O30N  Mendenhall        55.73 336  P       P       18 46 03.2 +1.3
O30N                              IAmb     IAmb    18 46 04.9
      comp=Z,5.7nm,1.0s
O30N  Mendenhall        55.73 336  P       P       18 46 03.8 +2.0
      baz=127
M31M  Drury Creek, Y    55.98 338  P       P       18 46 05.1 +1.5
M31M  Drury Creek, Y    55.98 338  P       P       18 46 05.6 +2.0
      baz=130
N31M  Braeburn, Yuko    56.04 337  P       P       18 46 05.2 +1.1
N31M                              IAmb     IAmb    18 46 13.6
      comp=Z,8.0nm,0.9s
N31M  Braeburn, Yuko    56.04 337  P       P       18 46 06.2 +2.1
      baz=128,SNR=5.7
HYT   Haines Junctio    56.32 336  P       P       18 46 08.0 +1.9
HYT   Haines Junctio    56.32 336  P       P       18 46 08.2 +2.1
      baz=126
PNL   Peninsula         56.45 334  P       P       18 46 08.9 +2.0
      baz=123
O29M  Mount Kennedy     56.45 335  P       P       18 46 07.4 +0.2
O29M                              IAmb     IAmb    18 46 14.4
      comp=Z,7.5nm,1.1s
O29M  Mount Kennedy     56.45 335  P       P       18 46 08.5 +1.4
      baz=124
N30M  Aishikik Lake     56.53 336  P       P       18 46 08.6 +1.0
N30M                              IAmb     IAmb    18 46 10.3
      comp=Z,5.3nm,0.9s
N30M  Aishikik Lake     56.53 336  P       P       18 46 09.7 +2.2
      baz=126
YUK6  Outpost Mounta    56.73 336  P       P       18 46 10.9 +1.7
      baz=125
PINM  Pinnacle          57.04 334  P       P       18 46 13.0 +1.8
      baz=122
YUK4  Talbot Arm        57.07 336  P       P       18 46 13.2 +1.6
      baz=125
O28M  Mount Upton       57.38 335  P       P       18 46 15.7 +1.9
      baz=123
YUK8  Steele Glacier    57.48 335  P       P       18 46 16.2 +1.6
      baz=123
M29M  Somme Creek       57.63 337  P       P       18 46 17.0 +1.6
M29M  Somme Creek       57.63 337  P       P       18 46 17.3 +1.9
      baz=125,SNR=17
MESA  MESA              57.81 334  P       P       18 46 18.2 +1.4
      baz=120
L29M  L29M              57.90 338          P       18 46 17.9 +0.7
L29M                              IAmb     IAmb    18 46 19.8
      comp=Z,9.8nm,1.1s
L29M  L29M              57.90 338  P       P       18 46 18.8 +1.6
      baz=126,SNR=7.0
CTGM  Chitina Glacie    57.95 335  P       P       18 46 18.9 +1.1
CTGM                              IAmb     IAmb    18 46 25.6
      comp=Z,10nm,1.3s
CTG   Chitna Glacier    57.96 335  P       P       18 46 19.7 +1.9
      baz=122
GRNC  Granite Creek     58.01 334  P       P       18 46 19.8 +1.6
YUK3  Moose Creek       58.03 336  P       P       18 46 19.9 +1.5
      baz=123
K29M  Barlow Dome       58.12 339          P       18 46 19.2 +0.4
K29M  Barlow Dome       58.12 339  P       P       18 46 20.1 +1.3
      baz=127
J30M  Hart River        58.16 340  P       P       18 46 18.9  -0.2
J30M  Hart River        58.16 340  P       P       18 46 20.3 +1.2
      baz=129
ISLE  Juniper Island    58.19 334  P       P       18 46 19.9 +0.5
ISLE                              IAmb     IAmb    18 46 22.0
      comp=Z,12nm,1.2s
C36M  Paulatuk          58.29 348  P       P       18 46 21.5 +1.7
      baz=144
H31M  Peel River        58.31 341  P       P       18 46 20.8 +0.8
H31M                              IAmb     IAmb    18 46 22.2
      comp=Z,9.7nm,1.4s
H31M  Peel River        58.31 341  P       P       18 46 22.0 +2.0
      baz=131
WAX   Waxell Ridge      58.33 334  P       P       18 46 22.0 +1.6
BGLC  Bering Glacier    58.36 333  P       P       18 46 22.2 +1.8
      baz=119
TGL   Tana Glacier      58.48 334  P       P       18 46 22.7 +1.3
TGL                               IAmb     IAmb    18 46 24.5
      comp=Z,9.0nm,1.0s
BVCY  Beaver Creek      58.54 336  P       P       18 46 23.1 +1.4
      baz=123
I30M  Mount Dempster    58.58 340          P       18 46 22.6 +0.5
I30M                              IAmb     IAmb    18 46 30.7
      comp=Z,5.0nm,1.0s
I30M  Mount Dempster    58.58 340  P       P       18 46 23.1 +1.0
      baz=129,SNR=5.7
CRQE  Cirque            58.59 334  P       P       18 46 23.2 +1.0
      baz=120
PLCA  Paso Flores       58.70 160  P       P       18 46 26.8 +3.7
      comp=Z,4.3nm,1.1s,baz=313,slow=11,SNR=3.5
      comp=Z,4.3nm,1.1s
KAIM  Kayak Island      58.77 333  P       P       18 46 25.0 +1.7
      baz=118
MCARA McCarthy VSAT     58.87 335  P       P       18 46 24.2 +0.2
MCARA McCarthy VSAT     58.87 335  P       P       18 46 25.7 +1.7
      baz=120
M27K  Edge Creek, AK    58.91 336  P       P       18 46 25.9 +1.6
M27K  Edge Creek, AK    58.91 336  P       P       18 46 26.0 +1.6
      baz=122
DAWY  Dawson            58.91 338  P       P       18 46 25.5 +1.2
DAWY                              IAmb     IAmb    18 46 29.1
      comp=Z,6.8nm,1.3s
DAWY  Dawson            58.91 338  P       P       18 46 25.0 +0.7
      baz=125
G31M  Satah River       59.03 342          P       18 46 25.5 +0.6
G31M  Satah River       59.03 342  P       P       18 46 25.9 +0.9
      baz=132,SNR=6.9
RAGM  Ragged Mountai    59.10 333  P       P       18 46 27.2 +1.6
GLB   Gilahina Butte    59.23 334  P       P       18 46 28.1 +1.6
GLB                               IAmb     IAmb    18 46 29.6
      comp=Z,8.0nm,1.0s
F31M  Tsiigehtchic      59.23 343  P       P       18 46 27.5 +1.2
      baz=133
BCAR  Beaver Creek A    59.25 337          P       18 46 27.9 +1.3
L27K  Beaver Creek,     59.26 337          P       18 46 27.9 +1.2
L27K                              IAmb     IAmb    18 46 33.4
      comp=Z,4.9nm,0.9s
L27K  Beaver Creek,     59.26 337  P       P       18 46 28.0 +1.2
      baz=122,SNR=8.8
I29M  Ogilvie Camp,     59.30 340  P       P       18 46 27.1 +0.2
I29M                              IAmb     IAmb    18 46 28.6
      comp=Z,4.1nm,0.9s
I29M  Ogilvie Camp,     59.30 340  P       P       18 46 27.9 +0.9
      baz=127,SNR=5.2
BMRM  Bremner River     59.34 334  P       P       18 46 28.5 +1.3
BMRM  Bremner River     59.34 334  P       P       18 46 28.6 +1.3
      baz=118
M26K  Nabesna, AK       59.38 336  P       P       18 46 27.6   0.0
M26K                              IAmb     IAmb    18 46 30.3
      comp=Z,9.5nm,1.4s
M26K  Nabesna, AK       59.38 336  P       P       18 46 29.1 +1.6
      baz=121,SNR=5.3
EPYK  Eagle Plains      59.41 341  P       P       18 46 29.0 +1.3
      baz=129
Q23K  Middleton Isla    59.42 332  P       P       18 46 29.0 +1.3
      baz=116
SFJD  Kangerlussuaq     59.50  18  LR      LR      19 13 48.5
      comp=Z,370nm,18.4s,baz=227,slow=38
N25K  Chitina, Valde    59.64 334          P       18 46 30.9 +1.5
N25K  Chitina, Valde    59.64 334  P       P       18 46 30.6 +1.2
      baz=118,SNR=5.6
EYAK  Cordova Ski Ar    59.64 333  P       P       18 46 30.8 +1.5
      baz=117
G30M  tAoh Zraii Nji    59.65 342  P       P       18 46 31.0 +1.7
      baz=130
INK   Inuvik            59.77 344          P       18 46 30.2 +0.2
INK   Inuvik            59.77 344  LR      LR      19 16 30.2
      comp=Z,133nm,18.6s,baz=166,slow=40
INK   Inuvik            59.77 344  P       P       18 46 31.0 +1.0
      baz=133,SNR=8.0
H29M  Whitestone        59.84 341  P       P       18 46 30.9 +0.3
H29M                              IAmb     IAmb    18 46 32.7
      comp=Z,12nm,1.2s
H29M  Whitestone        59.84 341  P       P       18 46 31.6 +1.0
      baz=127
K27K  Chicken           59.88 337  IAmb    IAmb    18 46 34.4
      comp=Z,4.9nm,0.9s
K27K  Chicken           59.88 337  P       P       18 46 32.3 +1.4
      baz=122
I28M  Miner Creek       59.91 339  P       P       18 46 32.7 +1.6
I28M  Miner Creek       59.91 339  P       P       18 46 32.1 +1.0
      baz=125
HIN   Hinchinbrook I    59.91 333  P       P       18 46 32.4 +1.2
F30M  Barrier River     59.93 343          P       18 46 32.1 +1.0
F30M  Barrier River     59.93 343  P       P       18 46 32.5 +1.3
      baz=131,SNR=7.8
MENT  Mentasta          59.94 336  P       P       18 46 32.4 +1.0
MENT                              IAmb     IAmb    18 46 37.5
      comp=Z,6.0nm,1.1s
P23K  Montague Islan    60.14 332  P       P       18 46 34.5 +1.7
      baz=115
KLU   Klutina           60.15 334  P       P       18 46 33.9 +1.1
      baz=117,SNR=5.5
G29M  Pine Creek        60.16 341          P       18 46 33.3 +0.5
G29M                              IAmb     IAmb    18 46 35.3
      comp=Z,9.8nm,1.2s
G29M  Pine Creek        60.16 341  P       P       18 46 33.8 +1.0
      baz=128,SNR=6.3
RCBR  Riachuelo         60.21 105  LR      LR      19 17 00.6
      comp=Z,33nm,18.5s,baz=280,slow=40
HARP  HAARP             60.25 335  P       P       18 46 34.9 +1.4
      baz=118
RES   Resolute Bay      60.31 359          P       18 46 34.0 +0.4
RES   Resolute Bay      60.31 359  LR      LR      19 15 46.7
      comp=Z,120nm,18.4s,baz=64,slow=39
GLI   Glacier Island    60.38 333  P       P       18 46 35.7 +1.3
      baz=116
DOT   Dot Lake          60.43 337  IAmb    IAmb    18 46 37.2
      comp=Z,8.2nm,0.9s
M24K  Tolsona, Glenn    60.54 334  P       P       18 46 37.4 +1.9
M24K  Tolsona, Glenn    60.54 334  P       P       18 46 36.9 +1.4
      baz=117
SCRK  Sand Creek        60.57 337  P       P       18 46 36.7 +1.0
SCRK                              IAmb     IAmb    18 46 42.6
      comp=Z,11nm,1.5s
SCRK  Sand Creek        60.57 337  P       P       18 46 37.2 +1.4
      baz=120,SNR=5.5
I27K  Kandik River      60.57 339  P       P       18 46 37.0 +1.3
      baz=124,SNR=6.6
PAX   Paxson            60.65 335  P       P       18 46 36.3   0.0
PAX                               IAmb     IAmb    18 46 38.5
      comp=Z,5.7nm,0.8s
PAX   Paxson            60.65 335  P       P       18 46 37.4 +1.1
      baz=118,SNR=8.3
A36M  Sachs Harbour     60.67 349  P       P       18 46 37.7 +1.6
      baz=144
J26L  Joseph Creek      60.68 338  P       P       18 46 36.9 +0.4
J26L  Joseph Creek      60.68 338  P       P       18 46 37.9 +1.4
      baz=121,SNR=13
RIDG  Independent Ri    60.78 336  P       P       18 46 38.6 +1.5
RIDG  Independent Ri    60.78 336  P       P       18 46 38.7 +1.5
      baz=119,SNR=8.4
H27K  Steamboat Moun    60.89 340  IAmb    IAmb    18 46 40.3
      comp=Z,7.6nm,1.1s
H27K  Steamboat Moun    60.89 340  P       P       18 46 38.9 +1.1
      baz=124,SNR=9.9
SCM   Sheep Creek Mo    60.90 334  P       P       18 46 39.1 +1.1
SCM                               IAmb     IAmb    18 46 53.0
      comp=Z,9.1nm,1.1s
SCM   Sheep Creek Mo    60.90 334  P       P       18 46 39.6 +1.6
      baz=116
PWL   Port Wells        60.92 333  P       P       18 46 38.2 +0.1
PWL   Port Wells        60.92 333  P       P       18 46 39.9 +1.8
      baz=114
I26K  Coal Creek Min    60.95 338          P       18 46 40.0 +1.8
I26K  Coal Creek Min    60.95 338  P       P       18 46 39.6 +1.4
      baz=122
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E29M  Blow River        61.04 343  P      P       18 46 40.1 +1.3
E29M  Blow River        61.04 343  P      P       18 46 40.1 +1.3
      baz=129,SNR=9.8
M23K  Glacier View      61.05 334  P      P       18 46 40.7 +1.7
      baz=116
SEW   Seward            61.13 332  P      P       18 46 41.0 +1.6
      baz=113
F28M  Old Crow          61.16 341  P      P       18 46 40.9 +1.4
F28M  Old Crow          61.16 341  P      P       18 46 41.0 +1.4
      baz=126,SNR=18
K24K  Donnelly Dome     61.17 336  P      P       18 46 41.6 +1.8
      baz=118
KNK   Knik Glacier      61.21 333  P      P       18 46 41.5 +1.4
      baz=115
G27K  Doyon Strip       61.26 340  P      P       18 46 41.1 +0.8
      baz=124,SNR=5.1
SML   Sawmill           61.32 334  P      P       18 46 42.0 +1.2
      baz=115
WAT6  Susitna Watana    61.40 335  P      P       18 46 42.6 +1.1
      baz=116,SNR=11
J25K  Salcha River,     61.41 337  IAmb   IAmb    18 46 43.2
      comp=Z,5.8nm,1.1s
J25K  Salcha River,     61.41 337  P      P       18 46 42.6 +1.2
      baz=119
DHY   Denali Highway    61.47 335  P      P       18 46 42.2 +0.3
      baz=116
PMR   Palmer            61.58 333  P      P       18 46 44.1 +1.6
      baz=114
BRSE  Bradley Lake S    61.59 331  P      P       18 46 43.9 +1.3
      baz=112
RC01  Rabbit Creek A    61.64 333  P      P       18 46 44.6 +1.7
      baz=113
E28M  Babbage River     61.65 342  IAmb   IAmb    18 46 44.7
      comp=Z,6.7nm,0.9s
E28M  Babbage River     61.65 342  P      P       18 46 43.4 +0.5
      baz=127,SNR=7.0
KDAK  Kodiak Island     61.81 328  P      P       18 46 46.1 +2.0
      baz=109
WAT1  Susitna Watana    61.85 335  P      P       18 46 45.9 +1.5
      baz=115
D28M  Stokes Point      61.87 343  P      P       18 46 46.2 +1.9
      baz=128
HDA   Harding Lake      61.91 337  IAmb   IAmb    18 46 45.9
      comp=Z,5.3nm,0.8s
HDA   Harding Lake      61.91 337  P      P       18 46 45.6 +0.9
      baz=118
PRP   Porcupine Dome    61.91 338  P      P       18 46 46.2 +1.3
      baz=120
OHAK  Old Harbor        62.00 328  P      P       18 46 46.7 +1.4
      baz=108
E27K  Coleen River      62.02 342  P      P       18 46 46.4 +1.0
      baz=125,SNR=7.3
G26K  Porcupine Rive    62.04 340  P      P       18 46 47.4 +1.9
      baz=122
ILAR  Eielson Array     62.06 337         P       18 46 46.9 +1.2
ILAR  Eielson Array     62.06 337  P      P       18 46 45.8 +0.1
      comp=Z,3.8nm,0.9s,baz=137,slow=4.3,SNR=30
ILAR                               LR     LR      19 15 36.0
      comp=Z,105nm,18.9s,baz=104,slow=38
      comp=Z,3.8nm,0.9s
RND   Reindeer          62.22 335         P       18 46 48.6 +1.7
SUA   Susitna One       62.24 333  IAmb   IAmb    18 46 50.3
      comp=Z,5.3nm,0.7s
SUA   Susitna One       62.24 333  P      P       18 46 48.6 +1.5
      baz=112
H25L  Birch Creek       62.39 339  P      P       18 46 49.9 +2.1
      baz=120
MCK   McKinley          62.39 335  P      P       18 46 49.3 +1.3
      baz=115
CUT   Chulitna          62.40 334  P      P       18 46 49.4 +1.5
      baz=113
POKR  Poker Plat Res    62.42 337  P      P       18 46 49.5 +1.4
      baz=117
D27M  Malcolm River     62.45 343  P      P       18 46 50.0 +1.7
      baz=126
F26K  Sheenjek River    62.56 340  IAmb   IAmb    18 46 50.9
      comp=Z,4.1nm,1.0s
F26K  Sheenjek River    62.56 340  P      P       18 46 50.7 +1.7
      baz=122
BMAR  Burnt Mountain    62.56 340         P       18 46 49.3 +0.3
O20K  Slope Mountain    62.60 331  P      P       18 46 51.3 +1.8
      baz=110
Q19K  Cape Douglas,     62.71 329  P      P       18 46 51.8 +1.6
      baz=108
G25K  Bearman Lake      62.73 339  P      P       18 46 51.5 +1.4
      baz=120
P19K  Oil Pt            62.74 330  P      P       18 46 51.9 +1.5
      baz=109
SKT   Skwentna          62.78 333         P       18 46 51.2 +0.6
SKT                                IAmb   IAmb    18 46 52.1
      comp=Z,7.0nm,0.9s
SKT   Skwentna          62.78 333  P      P       18 46 51.9 +1.3
      baz=112
N20K  Mount Spurr       62.80 332  P      P       18 46 51.7 +0.9
      baz=111
SPCR  Spurr Chakacha    62.80 332  P      P       18 46 51.6 +0.8
      baz=111
NEA2  Nenana            62.82 336  P      P       18 46 51.5 +0.8
      baz=116
TRF   Thorofare Moun    62.83 335         P       18 46 52.3 +1.3
TRF   Thorofare Moun    62.83 335  P      P       18 46 51.8 +0.8
      baz=114,SNR=9.7
H24K  Noodor Dome       62.92 338  P      P       18 46 52.6 +1.1
      baz=117,SNR=10
F25K  Christian Rive    62.99 340  IAmb   IAmb    18 46 58.0
      comp=Z,8.7nm,1.2s
F25K  Christian Rive    62.99 340  P      P       18 46 52.9 +1.0
      baz=120,SNR=7.7
I23K  Minto, Yukon-K    63.17 337  P      P       18 46 54.1 +1.1
      baz=116,SNR=11
G24K  Hadweenzic Riv    63.18 339  IAmb   IAmb    18 46 55.0
      comp=Z,5.9nm,0.9s
G24K  Hadweenzic Riv    63.18 339  P      P       18 46 54.5 +1.4
      baz=118,SNR=6.7
E25K  Arctic Village    63.24 341  P      P       18 46 54.5 +1.0
      baz=121
Q18K  Katmai Hardscr    63.30 329  P      P       18 46 55.4 +1.2
      baz=107
BPAW  Bear Paw Mtn.     63.37 335  IAmb   IAmb    18 47 02.4
      comp=Z,8.9nm,1.1s
BPAW  Bear Paw Mtn.     63.37 335  P      P       18 46 55.5 +1.0
      baz=113,SNR=6.7
PPLA  Purkeypile        63.41 334  P      P       18 46 57.5 +2.6
PPLA  Purkeypile        63.41 334  P      P       18 46 55.6 +0.7
      baz=112
M20K  Styx River        63.45 333  P      P       18 46 56.0 +0.9
      baz=110
C27K  Jago River        63.47 342  P      P       18 46 56.2 +1.2
C27K  Jago River        63.47 342  P      P       18 46 56.0 +1.0
      baz=123,SNR=7.4
H23K  Yukon River       63.53 337  P      P       18 46 56.2 +0.8
      baz=116
CAST  Castle Rocks      63.56 335  IAmb   IAmb    18 46 57.0
      comp=Z,7.2nm,1.0s
CAST  Castle Rocks      63.56 335  P      P       18 46 56.1 +0.4
      baz=112,SNR=7.1
P18K  Big Mountain,     63.63 330  P      P       18 46 56.5 +0.2
      baz=107
Q17K  Contact Creek     63.64 328  P      P       18 46 57.9 +1.5
      baz=106
MLY   Manley            63.65 336  P      P       18 46 57.6 +1.3
      baz=114,SNR=7.9
F24K  Squaw Lake        63.71 339  P      P       18 46 58.2 +1.5
      baz=118
N19K  Bonanza Creek     63.71 331  P      P       18 46 57.2 +0.4
N19K                               IAmb   IAmb    18 47 31.5
      comp=Z,9.6nm,1.1s
N19K  Bonanza Creek     63.71 331  P      P       18 46 57.9 +1.1
      baz=108
O18K  Koktuh Hills      63.76 330  P      P       18 46 57.6 +0.5
      baz=107
CHUM  Lake Minchumin    63.83 335  P      P       18 46 59.0 +1.6
      baz=112
C26K  Camden Bay        63.98 342  P      P       18 46 59.7 +1.4
      baz=122
L20K  Farewell, AK      63.99 333  P      P       18 46 59.0 +0.5
      baz=110,SNR=6.7
M19K  Big River Lodg    64.02 333  P      P       18 46 59.6 +0.8
      baz=109
PPT   Papeete           64.08 242  LR     LR      19 08 34.9
      comp=Z,94nm,20.2s,baz=5.5,slow=30
PPT2  Papeete2          64.09 242  eLR    LR      19 06 03.6
      comp=Z,96nm,25.0s
G23K  Bananza Creek     64.09 338  P      P       18 47 00.2 +1.0
G23K                               IAmb   IAmb    18 47 00.9
      comp=Z,4.8nm,0.9s
G23K  Bananza Creek     64.09 338  P      P       18 47 00.0 +0.8
      baz=116,SNR=5.7
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D25K  Kavik River       64.11 342  P      P       18 47 00.3 +1.1
      baz=120,SNR=10
P17K  Kvichak River     64.17 329  P      P       18 47 00.6 +0.9
      baz=106
E24K  Your Creek        64.17 340  IAmb   IAmb    18 47 09.2
      comp=Z,8.5nm,1.4s
E24K  Your Creek        64.17 340  P      P       18 47 01.1 +1.4
      baz=118
H22K  Ishtalitna Cre    64.24 337  P      P       18 47 00.6 +0.4
      baz=114
L19K  White Mountain    64.32 333  P      P       18 47 01.3 +0.5
L19K  White Mountain    64.32 333  P      P       18 47 01.6 +0.8
      baz=109
R16K  Pilot Point       64.33 327  P      P       18 47 01.4 +0.6
      baz=104
N18K  Kilae Creek       64.33 331  P      P       18 47 01.5 +0.7
      baz=107
K20K  Telida            64.37 334  IAmb   IAmb    18 47 02.0
      comp=Z,6.0nm,0.8s
K20K  Telida            64.37 334  P      P       18 47 01.7 +0.6
      baz=110,SNR=5.9
COLD  Coldfoot          64.38 339  P      P       18 47 02.2 +1.3
      baz=116
M18K  Stony River       64.54 332  P      P       18 47 03.2 +1.1
      baz=108
E23K  Chandalar         64.54 340  P      P       18 47 03.5 +1.4
      baz=116,SNR=7.5
O17K  Koliganek Bris    64.65 330  P      P       18 47 04.0 +1.1
      baz=106
J20K  Nowinta River     64.69 335  IAmb   IAmb    18 47 32.7
      comp=Z,11nm,1.4s
J20K  Nowinta River     64.69 335  P      P       18 47 03.7 +0.7
      baz=110
H21K  Melozitna Rive    64.69 337  IAmb   IAmb    18 47 04.4
      comp=Z,4.4nm,1.0s
H21K  Melozitna Rive    64.69 337  P      P       18 47 03.4 +0.3
      baz=112
D24K  Happy Valley      64.79 341  P      P       18 47 05.2 +1.6
      baz=118
TOLK  Toolik Lake Re    64.79 340  P      P       18 47 05.1 +1.4
TOLK                               IAmb   IAmb    18 47 26.7
      comp=Z,8.2nm,1.1s
TOLK  Toolik Lake Re    64.79 340  P      P       18 47 05.4 +1.6
      baz=117
CHNA  Chernabura Isl    64.83 324  P      P       18 47 05.2 +1.1
      baz=101
N17K  Nushagak Hills    64.90 331  P      P       18 47 06.0 +1.5
      baz=106
C24K  Franklin Bluff    65.02 342  P      P       18 47 06.4 +1.3
      baz=118
I20K  Naaghedeneel      65.04 336  P      P       18 47 05.8 +0.5
      baz=110
O16K  Kokwok River B    65.09 329  P      P       18 47 07.1 +1.3
O16K                               IAmb   IAmb    18 47 33.9
      comp=Z,6.6nm,1.0s
O16K  Kokwok River B    65.09 329  P      P       18 47 06.5 +0.7
      baz=104
S14K  Fog Glacier       65.09 326  P      P       18 47 07.0 +1.0
      baz=102
L18K  Granite Mounta    65.15 332  P      P       18 47 07.6 +1.5
L18K                               IAmb   IAmb    18 47 21.5
      comp=Z,9.9nm,1.4s
L18K  Granite Mounta    65.15 332  P      P       18 47 07.0 +0.9
      baz=107
IMAR  Indian Mountai    65.18 337  P      P       18 47 06.6 +0.4
F22K  John River        65.19 339  P      P       18 47 07.8 +1.4
      baz=114
J19K  Poorman           65.23 334         P       18 47 06.8 +0.2
J19K                               IAmb   IAmb    18 47 07.9
      comp=Z,7.5nm,0.9s
J19K  Poorman           65.23 334  P      P       18 47 07.3 +0.6
      baz=109,SNR=8.1
M17K  Holitna River     65.25 331  P      P       18 47 07.8 +1.0
M17K  Holitna River     65.25 331  P      P       18 47 07.5 +0.7
      baz=106
G21K  Allakaket         65.28 337  P      P       18 47 08.0 +1.1
      baz=112
D23K  Nanushuk River    65.30 340  IAmb   IAmb    18 47 09.4
      comp=Z,8.5nm,1.1s
D23K  Nanushuk River    65.30 340  P      P       18 47 08.3 +1.3
      baz=116
E22K  Anaktuvuk Pass    65.32 339  IAmb   IAmb    18 47 13.0
      comp=Z,8.5nm,1.1s
E22K  Anaktuvuk Pass    65.32 339  P      P       18 47 08.0 +0.8
      baz=114,SNR=7.9
SDPT  Sand Point        65.43 325  P      P       18 47 09.1 +1.2
      baz=100
H20K  Anotleneega Mo    65.44 336  P      P       18 47 08.9 +1.0
      baz=110
J18K  Innoko River      65.53 334  P      P       18 47 09.4 +0.8
J18K                               IAmb   IAmb    18 47 19.1
      comp=Z,12nm,1.5s
J18K  Innoko River      65.53 334  P      P       18 47 10.0 +1.4
      baz=108
F21K  Alatna River      65.54 338  P      P       18 47 09.8 +1.2
      baz=112,SNR=19
N16K  Nishlik Lake      65.64 330  P      P       18 47 10.5 +1.1
      baz=104
C23K  Itkillik River    65.66 341  P      P       18 47 10.5 +1.3
      baz=116,SNR=7.1
L17K  Donlin            65.85 332  P      P       18 47 11.2 +0.6
      baz=106
O15K  Ungalikthiuk R    65.85 329  P      P       18 47 11.6 +0.9
      baz=103
M16K  Timber Creek      65.87 331  P      P       18 47 12.3 +1.5
M16K                               IAmb   IAmb    18 47 16.9
      comp=Z,6.5nm,1.1s
M16K  Timber Creek      65.87 331  P      P       18 47 12.1 +1.3
      baz=104
D22K  Ayikyak River     65.92 340  P      P       18 47 12.1 +1.1
      baz=114,SNR=6.3
GCSA  Galena City Sc    65.99 335  P      P       18 47 12.4 +0.9
      baz=108
K17K  Iditarod          66.01 333  P      P       18 47 12.2 +0.6
K17K                               IAmb   IAmb    18 47 17.1
      comp=Z,12nm,1.5s
K17K  Iditarod          66.01 333  P      P       18 47 12.4 +0.7
      baz=106
H19K  Roundabout Mou    66.07 336  P      P       18 47 12.4 +0.5
      baz=109
E21K  Killik River      66.18 339  P      P       18 47 13.9 +1.2
E21K                               IAmb   IAmb    18 47 14.4
      comp=Z,7.8nm,0.9s
E21K  Killik River      66.18 339  P      P       18 47 13.9 +1.2
      baz=112,SNR=5.3
N15K  Kwethluk River    66.21 330  P      P       18 47 14.0 +1.0
      baz=103
L16K  Owhat River       66.28 332  P      P       18 47 14.8 +1.4
      baz=104
F20K  Avaraart Lake     66.30 338  P      P       18 47 15.1 +1.6
F20K  Avaraart Lake     66.30 338  P      P       18 47 15.0 +1.6
      baz=110,SNR=8.1
S12K  Black Hills       66.37 325  P      P       18 47 15.2 +1.1
      baz=99
G19K  Purcell Mounta    66.51 337  P      P       18 47 15.6 +0.7
      baz=108
J17K  VABM Dome         66.53 333  P      P       18 47 14.6  -0.4
J17K                               IAmb   IAmb    18 47 39.5
      comp=Z,7.7nm,1.3s
J17K  VABM Dome         66.53 333  P      P       18 47 15.7 +0.7
      baz=105
O14K  Tigyukauivet M    66.59 329  P      P       18 47 16.1 +0.7
      baz=102
M15K  Kasigluk River    66.61 330  P      P       18 47 15.8 +0.3
      baz=103
TBI   Tubuai            66.62 236  eLR    LR      19 07 11.6
      comp=Z,705nm,34.0s
H18K  Honhosa River     66.72 335  P      P       18 47 17.2 +1.1
      baz=107
C21K  Knifeblade Rid    66.72 340  P      P       18 47 17.0 +0.9
      baz=112
B22K  Teshekpuk Lake    66.75 341  P      P       18 47 17.3 +1.1
B22K  Teshekpuk Lake    66.75 341  P      P       18 47 16.9 +0.7
      baz=114
B21K  Ikpikpuk River    66.84 340  P      P       18 47 17.4 +0.6
      baz=112
E20K  Nigu River        66.88 339  P      P       18 47 18.5 +1.2
      baz=110
N14K  Kuskokwak Cree    66.94 329  P      P       18 47 18.2 +0.6
      baz=101
E19K  Redstone River    66.98 338  P      P       18 47 18.9 +1.1
      baz=109
F19K  Shaleruckik Mo    66.99 337  IAmb   IAmb    18 47 19.3
      comp=Z,5.2nm,1.0s
F19K  Shaleruckik Mo    66.99 337  P      P       18 47 18.8 +1.0
      baz=108
G18K  Tagagawik         67.05 336  P      P       18 47 19.4 +1.2
G18K                               IAmb   IAmb    18 47 30.7
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      comp=Z,7.0nm,1.1s
G18K  Tagagawik         67.05 336  P      P       18 47 19.0 +0.7
      baz=107
J16K  Anvik River       67.17 333  P      P       18 47 20.0 +1.0
J16K  Anvik River       67.17 333  P      P       18 47 20.2 +1.2
      baz=104
D20K  Etivluk River     67.18 339  P      P       18 47 20.4 +1.3
      baz=110
L15K  Ungalak Mounta    67.20 331  P      P       18 47 20.0 +0.7
      baz=102
M14K  Bethel            67.24 330  P      P       18 47 20.1 +0.6
M14K  Bethel            67.24 330  P      P       18 47 20.3 +0.9
      baz=102
H17K  Granite Mounta    67.29 335  P      P       18 47 19.2  -0.6
H17K                               IAmb   IAmb    18 47 27.7
      comp=Z,5.8nm,1.2s
H17K  Granite Mounta    67.29 335  P      P       18 47 21.1 +1.3
      baz=105
I17K  Unalakleet        67.35 334  P      P       18 47 21.6 +1.4
      baz=104
K15K  Wolf Creek Mou    67.36 332  P      P       18 47 21.3 +1.0
      baz=102
A22K  Sinclair Lake     67.48 342  P      P       18 47 22.2 +1.4
      baz=112
D19K  Kuna River        67.63 339  P      P       18 47 22.8 +0.8
      baz=108
F18K  Selawik           67.63 337  P      P       18 47 22.9 +1.0
      baz=106
L14K  Kuka Creek        67.70 331  P      P       18 47 23.6 +1.2
      baz=101
G17K  Kiwalik Mounta    67.74 335  P      P       18 47 23.7 +1.1
      baz=105
B20K  Meade River       67.81 340  P      P       18 47 24.4 +1.5
      baz=110
M13K  Dall Lake         67.85 330  P      P       18 47 24.5 +1.2
      baz=100
A21K  Barrow            68.10 342  P      P       18 47 26.0 +1.3
      baz=111
E18K  Tukpahlearik C    68.22 337  P      P       18 47 26.3 +0.7
      baz=105
C19K  Lookout Ridge     68.33 339  P      P       18 47 28.1 +1.8
      baz=107
J14K  Nanvaranak Lak    68.37 332  P      P       18 47 27.5 +1.0
      baz=101
G16K  Koyuk River       68.40 335  P      P       18 47 27.6 +0.9
      baz=103
E17K  Hotham Inlet      68.59 337  P      P       18 47 29.1 +1.2
      baz=104
UNV   Unalaska Valle    68.70 322  P      P       18 47 29.7 +0.9
      baz=95
C18K  Utukok River      68.76 339  P      P       18 47 30.3 +1.2
      baz=105
G15K  Niukluk           69.01 335  P      P       18 47 32.0 +1.4
      baz=101
A19K  Wainwright        69.14 340  P      P       18 47 32.1 +0.9
      baz=106
B18K  Kokolik River     69.16 339  P      P       18 47 32.7 +1.3
      baz=105
D17K  Noatak River      69.21 337  P      P       18 47 33.3 +1.5
      baz=103
M11K  Mekoryuk          69.24 329  P      P       18 47 33.2 +1.2
      baz=98
BORG  Borgarnes         69.35  26  LR     LR      19 17 29.0
      comp=Z,96nm,18.6s,baz=283,slow=36
F15K  North Star Dit    69.40 335  P      P       18 47 34.2 +1.3
      baz=101
C17K  DeLong Mountai    69.42 338  P      P       18 47 34.1 +1.0
      baz=103
ANM   Nome              69.49 334  P      P       18 47 34.9 +1.4
      baz=100
F14K  Arctic Creek      70.05 335  P      P       18 47 38.2 +1.3
      baz=99
NIKH  Nikolski High     70.05 321  P      P       18 47 38.6 +1.4
      baz=92
C16K  Lisburne Hills    70.16 338  P      P       18 47 39.0 +1.4
      baz=101
P08K  Saint George I    70.64 325  P      P       18 47 42.0 +1.3
      baz=93
TNA   Tin City          70.72 335  P      P       18 47 42.3 +1.3
      baz=98
SPIA  Saint Paul Isl    71.05 326  P      P       18 47 43.7 +0.5
      baz=93
GAMB  Gambell           72.15 333  P      P       18 47 51.1 +1.4
      baz=94
JMIC  Jan Mayen         74.76  20  LR     LR      19 21 09.7
      comp=Z,168nm,20.4s,baz=266,slow=36
PCAS  Casmilo, Conde    76.85  52  eP     P       18 48 16.6  -0.9
PMTG  Montargil         77.19  53  eP     P       18 48 16.2  -3.3
PVIS  Viseu             77.21  51  eP     P       18 48 17.5  -2.1
MTE   Manteigas         77.52  51  eP     P       18 48 19.3  -2.1
PMRV  Marv??o           77.78  52  eP     P       18 48 20.6  -2.1
MVO   Moncorvo          77.80  50  eP     P       18 48 20.2  -2.7
PVAQ  Vaqueiros         77.83  54  eP     P       18 48 21.5  -1.5
PBAR  Barrancos         78.25  53  eP     P       18 48 23.1  -2.3
EKA   Eskdalemuir Ar    78.31  36  P      P       18 48 22.6  -2.7
      comp=Z,1.8nm,0.7s,baz=281,slow=5.9,SNR=5.1
      comp=Z,1.8nm,0.7s
SPITS Spitsbergen Ar    79.94  11  LR     LR      19 25 16.2
      comp=Z,164nm,21.2s,baz=254,slow=37
ESDC  Sonseca Array     80.35  52         P       18 48 35.6  -1.4
ESDC  Sonseca Array     80.35  52  P      P       18 48 34.6  -2.3
      comp=Z,2.6nm,0.8s,baz=290,slow=5.8,SNR=20
ESDC                               LR     LR      19 20 52.7
      comp=Z,78nm,19.7s,baz=292,slow=33
      comp=Z,2.6nm,0.8s
BILL  Bilibino          80.69 338  P      P       18 48 39.1 +1.0
BILL                               IAmb   IAmb    18 48 39.8
      comp=Z,8.3nm,1.0s
MDT   Midelt            81.15  58  LR     LR      19 18 46.2
      comp=Z,42nm,21.5s,baz=317,slow=31
NB2   NORSAR Subarra    84.34  28  P      P       18 48 57.3   0.0
      comp=Z,1.1nm,0.8s,baz=291,slow=5.3
NOA   NORSAR Array B    84.34  28  P      P       18 48 56.8  -0.5
      comp=Z,1.2nm,0.7s,baz=291,slow=5.1,SNR=8.5
NOA                                LR     LR      19 24 42.2
      comp=Z,96nm,21.3s,baz=285,slow=34
      comp=Z,1.2nm,0.7s
HFS   Hagfors           85.81  29  P      P       18 49 03.6  -1.0
      comp=Z,2.0nm,0.7s,baz=237,slow=4.9,SNR=4.9
HFS                                LR     LR      19 25 02.6
      comp=Z,98nm,21.8s,baz=298,slow=34
      comp=Z,2.0nm,0.7s
ARCES ARCESS Array B    86.13  18  P      P       18 49 04.2  -1.8
      comp=Z,2.3nm,0.8s,baz=303,slow=6.1,SNR=4.5
ARCES                              LR     LR      19 27 53.3
      comp=Z,98nm,19.1s,baz=290,slow=36
      comp=Z,2.3nm,0.8s
DBIC  Dimbokro          86.72  84  P      P       18 49 09.5  -0.5
      comp=Z,4.4nm,0.8s,baz=333,slow=8.1,SNR=3.1
DBIC                               LR     LR      19 21 25.0
      comp=Z,66nm,21.4s,baz=290,slow=31
      comp=Z,4.4nm,0.8s
DAVOX Davos/Dischmat    88.33  42  LR     LR      19 23 33.5
      comp=Z,44nm,21.9s,baz=182,slow=32
GERES GERESS Array B    90.02  39  P      P       18 49 22.8  -2.4
      comp=Z,1.2nm,0.9s,baz=282,slow=9.4,SNR=5.5
GERES                              LR     LR      19 30 45.5
      comp=Z,65nm,18.4s,baz=278,slow=36
      comp=Z,1.2nm,0.9s
FINES FINESS Array B    90.63  25  P      P       18 49 26.7  -0.8
      comp=Z,1.5nm,0.8s,baz=338,slow=4.5,SNR=4.1
FINES                              LR     LR      19 29 38.7
      comp=Z,68nm,20.0s,baz=308,slow=35
      comp=Z,1.5nm,0.8s
VRAC  Vranov            91.58  38  LR     LR      19 32 58.9
      comp=Z,75nm,18.1s,baz=288,slow=37
DZM   Mont Dzumac      104.75 251  eLR    LR      19 25 03.2
      comp=Z,94nm,23.3s
KURBB Kurchatov Arra   114.87   6  PKP    PKiKP   18 55 05.7  -0.3
      comp=Z,0.8nm,0.7s,baz=344,slow=2.5,SNR=5.4
MKAR  Makanchi Array   118.97   4  PKP    PKPdf   18 55 12.2  -1.9
      comp=Z,0.4nm,0.7s,baz=356,slow=1.6,SNR=4.8
HHC   Hu-ho-hao-te     120.47 338  eP     PKPdf   18 55 13.3  -3.9
BOSA  Boshof           121.52 115  PKP    PKPdf   18 55 19.4  -0.1
      comp=Z,2.6nm,0.8s,baz=156,slow=2.6,SNR=5.3
NJ2   Nanjing          124.58 327  eP     PKPdf   18 55 26.0 +0.8
NJ2                                pmax   pmax
      comp=Z,6.0nm,0.5s
GTA   Gaotai           125.14 348  PKP    PKPdf   18 55 26.4 +0.1
GTA                                pPKP   PKiKP   18 55 30.3 +3.7
GTA                                PP     PP      18 57 14.1  -0.2
LZH   Lanzhou          127.30 343  ePKP   PKPdf   18 55 27.1  -3.5
LZH                                sPKP           18 55 42.4
WRA   Warramunga Arr   134.41 256  PKP    PKPdf   18 55 43.6  -0.6
      comp=Z,0.6nm,0.7s,baz=84,slow=2.1,SNR=6.3
PZH   PanZhiHua        136.86 340  PKP    PKPdf   18 55 48.3  -0.5
CMAR  Chiang Mai Arr   145.26 340  PKPbc  PKPbc   18 56 03.8 +0.2
      comp=Z,6.8nm,0.8s,baz=339,slow=3.7,SNR=44
```

*NEIC **14** 18:50:33.4±1.4, 19°.369N±0°.005×155°.89W±0°.01, h5^{km}±2^{km}, Error ellipse: s-maj=3.0km s-min=2.1km az=261.0*

HVO 14 18:50:33.3±1.1**, 19°.36N**±0°.01×**155°.88W**±0°.01**, h8**^{km}±4^{km}**, ML2.6**/24**, ML2.6**/40(NEIC)**, Error ellipse: s-maj=1.7km s-min=1.5km az=217.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPH	Captain Cook	0.13	345		Pg	18 50 36.5	+0.3
KHU	Kahuku	0.28	115	Pg	Pg	18 50 39.0	+0.1
ALEP	Alea Permanent	0.29	52		Pg	18 50 39.6	+0.4
ALEP					Sg	18 50 44.1	+1.1
MWH	Mokuaweoweo	0.30	66		Sg	18 50 44.1	+0.7
MWH	Mokuaweoweo	0.30	66		Pg	18 50 39.5	+0.2
MWH				IAML		18 50 47.5	
	comp=N,2µm,0.4s						
MWH				IAML		18 50 50.0	
	comp=E,2µm,0.2s						
KKH	Kailua Kona	0.32	336		Pg	18 50 39.2	-0.4
KKH					Sg	18 50 44.5	+0.7
HUH	Hualalai	0.32	8		Pg	18 50 39.8	0.0
HUH	Hualalai	0.32	8	IAML		18 50 49.0	
	comp=N,600nm,0.2s						
HUH				IAML		18 50 50.7	
	comp=E,434nm,0.2s						
AIN	Ainahou	0.40	89		Sg	18 50 46.7	+0.1
AIN	Ainahou	0.40	89		Pg	18 50 41.2	0.0
AIN				IAML		18 50 47.5	
	comp=E,987nm,0.3s						
AIN				IAML		18 50 48.0	
	comp=N,1µm,0.2s						
HMH	Humu‘ula Sheep	0.45	58		Sg	18 50 48.3	+0.4
HMH	Humu‘ula Sheep	0.45	58		Pg	18 50 42.0	-0.1
HMH				IAML		18 50 50.0	
	comp=N,733nm,0.2s						
HMH				IAML		18 50 50.1	
	comp=E,1µm,0.3s						
HTC	Hot Caves	0.47	105		Pg	18 50 42.3	-0.3
MLH	Mauna Loa	0.49	74		Pg	18 50 42.5	-0.3
MLH				IAML		18 50 54.5	
	comp=N,629nm,0.5s						
MLH	Mauna Loa	0.49	74		Sg	18 50 49.2	-0.1
POHA	Pohakuloa	0.51	40		Pg	18 50 43.1	-0.2
POHA					Sg	18 50 50.2	+0.1
POHA	Pohakuloa	0.51	40	IAML		18 50 59.7	
	comp=N,261nm,0.8s						
POHA				IAML		18 51 00.8	
	comp=N,264nm,0.7s						
HLP	Hilina Pali	0.55	97		Pg	18 50 43.3	-0.6
HLP	Hilina Pali	0.55	97	IAML		18 50 56.4	
	comp=N,457nm,1.2s						
HLP				IAML		18 51 02.3	
	comp=E,395nm,0.8s						
WRMHI	West Rim	0.55	85		Pg	18 50 43.2	-0.8
WRMHI					Sg	18 50 50.9	-0.4
SDHHI	Sand Hill	0.56	87		Pg	18 50 43.2	-0.9
SDHHI					Sg	18 50 51.1	-0.3
UWE	Uwekahuna	0.56	84		Pg	18 50 43.4	-0.8
UWE	Uwekahuna	0.56	84		Sg	18 50 51.5	0.0
OBL	Observatory Le	0.57	84		Pg	18 50 43.4	-1.0
OBL					Sg	18 50 51.4	-0.4
UWB	Uwekahuna Bluf	0.57	84		Pg	18 50 43.5	-1.0
UWB					Sg	18 50 51.6	-0.4
RIM	Rim	0.58	87		Pg	18 50 43.5	-1.0
RIM					Sg	18 50 51.7	-0.3
RSD	Rainshed	0.58	80		Pg	18 50 43.9	-0.7
RSD					Sg	18 50 52.0	-0.2
KKO	Keanakako'i	0.58	87		Pg	18 50 43.6	-1.0
KKO					Sg	18 50 51.9	-0.4
SBLHI	Steaming Bluff	0.58	84		Pg	18 50 43.6	-1.0
SBLHI					Sg	18 50 51.8	-0.5
BYL	Byron's Ledge	0.59	85		Sg	18 50 52.3	-0.2
BYL	Byron's Ledge	0.59	85		Pg	18 50 43.9	-0.8
BYL				IAML		18 50 53.3	
	comp=E,385nm,0.6s						
BYL				IAML		18 50 57.7	
	comp=N,289nm,0.8s						
HATHI	Halema‘uma‘u T	0.59	84		Pg	18 50 43.6	-1.2
HATHI				IAML		18 51 00.4	
	comp=N,364nm,0.8s						
HATHI				IAML		18 51 01.0	
	comp=E,404nm,0.6s						
HATHI	Halema‘uma‘u T	0.59	84		Sg	18 50 51.9	-0.6
PUH	Pauahi	0.63	89	Pg	Pg	18 50 44.4	-1.1
PUH				IAML		18 50 54.0	
	comp=E,266nm,0.6s						
PUH				IAML		18 50 59.3	
	comp=N,210nm,0.6s						
PUH	Pauahi	0.63	89		Sg	18 50 53.0	-0.7
KNHH	Kane Nui o Ham	0.67	89		Pg	18 50 45.3	-1.0
STCH	Steam Cracks	0.72	88		Pg	18 50 45.2	-2.0
NPOC	North of Pu‘u	0.73	88		Pg	18 50 45.4	-2.0
NPOC					Sg	18 50 55.4	-1.5
JCUZ	Jacuzzi	0.74	88		Pg	18 50 46.0	-1.6
JCUZ					Sg	18 50 55.2	-2.0
JOKA	Jonika Flow	0.83	85		Pg	18 50 47.5	-1.9
JOKA	Jonika Flow	0.83	85		Sg	18 50 58.0	-2.2
JOKA	Jonika Flow	0.83	85	IAML		18 50 57.2	
	comp=N,157nm,3.0s						

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*IDC **14** 18:51:43.9±3.3, 31°.48S×138°.63E, h0^{km}, mbtmp3.1/4, ML2.8/4, Error ellipse: s-maj=52.8km s-min=13.6km az=31.0*

*AUST **14** 18:51:44.9±0.2, 32°S±1°×13°9E±°, h10^{km}, ML2.9/17, Error ellipse: s-maj=4.1km s-min=3.1km az=89.9*

ISC 14 18:51:44.8±1.0**, 31°.73S**±0°.04×**138°.52E**±0°.04**, h17**^{km}±7^{km}**, n27, σ1^{s}.18**/36**, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YAPP	Yappala Statio	0.23	232	P	Pg	18 51 49.7	-0.4
YAPP				S	Sg	18 51 53.2	-0.5
LCRK	Leigh Creek	1.30	348	P	Pg	18 52 09.9	-0.1
LCRK				S	Sg	18 52 28.7	+1.8
NAPP	Napperby	1.49	192	P	Pn	18 52 11.4	+0.6
PTPS	Port Pirie	1.51	197	P	Pn	18 52 11.0	-0.1
WHYH	Whyalla	1.53	211	P	Pn	18 52 12.2	+0.8
WHYH				S	Sn	18 52 32.1	+1.2
HTT	Hallett	1.73	169	P	Pn	18 52 14.7	+0.5
BBOO	Buckleboo	2.35	242	P	Pn	18 52 24.0	+1.3
STKA	Stephens Creek	2.62	94	P	Pn	18 52 27.0	+0.5
STKA	Stephens Creek	2.62	94	Pn	Pn	18 52 26.8	+0.4
	0.4nm,0.3s,baz=282,slow=20,SNR=2.5						
STKA				Pg	Pb	18 52 31.6	+0.3
	2.9nm,0.3s,baz=276,slow=15,SNR=21						
STKA				Sn	Sn	18 52 58.0	+0.1
	3.4nm,0.3s,baz=259,slow=5.2,SNR=5.9						
STKA				Lg	Lg	18 53 04.0	
	4.5nm,0.3s,baz=331,slow=19,SNR=10 1.8nm,0.3s						
SDAN	Sedan	2.86	166	P	Pn	18 52 30.4	+0.7
SDAN				S	Sn	18 53 05.0	+1.3
AUCAS	Cummins Area S	3.45	222	P	Pn	18 52 38.6	+0.8
AUMBR	Murray Bridge	3.46	170	P	Pn	18 52 38.6	+0.7
MULG	Mulgathing	4.09	289	P	Pn	18 52 48.3	+1.7
MULG				S	Sn	18 53 36.2	+2.1
INKA	Innaminka	4.42	27	P	Pn	18 52 52.6	+1.5
INKA				S	Sn	18 53 43.7	+1.6
KELC	Kelly Hill Cav	4.45	197	P	Pn	18 52 52.4	+0.8
ARPS	Mount Arapiles	5.73	152	P	Pn	18 53 09.1	-0.1
CMSA	Cobar Meteorol	6.12	90	P	Pn	18 53 14.2	-0.2
MGBR	Mount Gambier	6.22	165	P	Pn	18 53 16.5	+0.6
QLP	Quilpie	7.16	46	P	Pn	18 53 31.1	+2.4
GEXS	Deakin Univers	8.01	145	P	Pn	18 53 40.7	+0.3
TOO	Toolangi	8.18	137	P	Pn	18 53 43.0	+0.2
AS08	Alice Springs	8.97	332	P	Pn	18 53 54.6	+0.9
FORT	Forrest	9.01	273	P	Pn	18 53 53.9	-0.2
AS31	Alice Springs	9.01	332	P	Pn	18 53 55.5	+1.3
ASAR	Alice Springs	9.01	332	Pn	Pn	18 53 53.9	-0.3
	0.1nm,0.3s,baz=150,slow=13,SNR=9.8						
ASAR				Sn	Sn	18 55 33.9	-1.5
	0.2nm,0.3s,baz=152,slow=22,SNR=5.3						
ASAR				Lg	Lg	18 56 23.9	
	baz=149,slow=26 0.2nm,0.3s						
WRA	Warramunga Arr	12.32	341	Pn	Pn	18 54 37.8	-1.8
	0.2nm,0.3s,baz=167,slow=23,SNR=15						
WRA				Sn	Sn	18 56 53.2	-3.3
	0.1nm,0.3s,baz=167,slow=24,SNR=2.2 0.4nm,0.6s						
FITZ	Fitzroy Crossi	17.88	316	P	P	18 55 52.8	-0.6
	baz=121,slow=12,SNR=1.4 0.7nm,0.7s						

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*KRNET **14** 18:58:48.9±0.1, 39°.47N×72°.09E, h15^{km}, mb3.0*

*ISU **14** 18:58:50, 39°.54N×72°.01E, h9^{km}*

*NNC **14** 18:58:50.8±3.5, 39°.27N×71°.82E, h16^{km}±23^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=31.0km s-min=25.3km az=109.0*

ISC 14 18:58:48.8±1.2**, 39°.46N**±0°.05×**72°.10E**±0°.03**, h11**^{km}±9^{km}**, n27, σ1^{s}.90**/44**, 18C-12D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	0.23	274	⇑eP	Pg	18 58 53.2	-0.6
DRK				⇑eS	Sg	18 58 56.8	-0.3
CHMI	Chimion	0.92	331	P	Pg	18 59 06.7	+0.2
CHMI				S	Sg	18 59 18.9	+0.4
FRG	Fergana	0.94	345	P	Pn	18 59 07.7	-0.4
FRG				S	Sn	18 59 20.9	-0.7
BTK	Batken	1.15	301	⇑iP	Pn	18 59 10.4	-0.6
BTK				⇑iS	Sn	18 59 26.2	-0.6
OHH	Osh	1.18	26	⇓iP	Pb	18 59 11.1	-0.3
OHH				⇓iS	Sg	18 59 27.6	+0.6
SFK	Sufi-Kurgan	1.22	63	⇑iP	Pb	18 59 11.9	-0.1
SFK				⇑iS	Sg	18 59 29.2	+1.2
MINT	Mingtut	1.32	320	P	Pg	18 59 16.9	+2.7
MINT				S	Sg	18 59 34.3	+2.9
GAR	Garm	1.46	252	⇑eP	Pb	18 59 16.0	-0.1
GAR				⇑iS	Sg	18 59 35.6	-0.2
KSNS	Kasansay	1.75	346	S	Sg	18 59 47.5	+2.4
SALK	Salom-Alik	1.94	42	⇑iP	Pb	18 59 24.8	+0.5
SALK				⇑iS	Sg	18 59 50.8	-0.4
ARSB	Arslanbob	1.98	20	⇓eP	Pb	18 59 25.4	+0.4
ARSB				⇓eS	Sg	18 59 51.5	-0.9
TRKS	Terek-Say	2.19	341	⇑eP	Pb	18 59 27.2	-1.4
TRKS				⇑eS	Sb	18 59 55.1	-0.7
ARK	Arkit	2.33	358	⇓eP	Pb	18 59 30.4	-0.6
ARK				⇓eS	Sb	19 00 00.5	+0.6
CHMG	Chimgan	2.62	323	P	Pg	18 59 38.2	-0.9
CHMG				S	Sg	19 00 12.5	-0.6
AML	Almayashu	2.93	24	P	Pb	18 59 42.0	+0.7
	SNR=17						
ARLS	Aral	2.93	35	⇑eP	Pb	18 59 38.3	-3.0
ARLS				⇑eS	Sb	19 00 14.8	-2.4
MNAS	Manas	3.04	6	⇑eP	Pb	18 59 39.7	-3.3
MNAS				⇑eS	Sb	19 00 16.9	-3.3
EKS2	Erkin-Say	3.44	21	P	Pb	18 59 47.9	-2.0
	SNR=10						
AAK	Ala-Archa	3.65	29	P	Pb	18 59 51.8	-1.7
	SNR=6.5						
AAK	Ala-Archa	3.65	29	⇑Pn	Pb	18 59 51.3	-2.2
	1.0nm,0.6s						
AAK				⇓Sn	Sb	19 00 37.9	0.0
	2.3nm,0.8s						
KK31	Karatay Array	3.83	342	⇓Pn	Pn	18 59 50.9	+3.2
	0.7nm,0.2s,baz=148,slow=11,SNR=33						
KK31				⇓Pg	Pg	19 00 03.7	+1.5
	1.5nm,0.3s,baz=171,slow=15,SNR=12						
KK31				⇓Lg	Lg	19 00 54.7	
	1.5nm,0.3s,baz=158,slow=15,SNR=4.8						
KBK	Karagaybulak	3.85	33	P	Pb	18 59 54.9	-2.0
	SNR=5.6						
CHMS	Chumysh	4.06	29	P	Pb	18 59 56.8	-3.5
	SNR=13						
CHMS	Chumysh	4.06	29	⇓Pn	Pb	18 59 56.1	-4.2
	10nm,0.5s						
CHMS				⇓Sn	Sb	19 00 46.5	-3.0
	4.9nm,0.7s						
USP	Ospenovka	4.21	25	P	Pn	18 59 57.5	+4.5
	SNR=6.1						
TKM2	Tokmak 2	4.35	36	⇑Pn	Pn	18 59 58.1	+3.0
	2.4nm,0.8s						
AB31	Akbulak array	13.08	322	Pn	Pn	19 01 55.5	+1.0
	0.6nm,0.7s,baz=126,slow=13,SNR=9.8						

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*IDC **14** 18:59:16.5±0.7, 15°.17S×166°.98E, h0^{km}, mb4.2/15, mbtmp4.2/15, MS3.7/12, Error ellipse: s-maj=24.3km s-min=16.5km az=102.0*

*NOU **14** 18:59:20.9, 15°.10S×166°.90E, h10^{km}, MLv5.1/18, Vanuatu Islands*

*NEIC **14** 18:59:20.8±0.9, 15°.09S±0°.07×166°.94E±0°.09, h22^{km}±5^{km}, mb4.9/50, Error ellipse: s-maj=13.3km s-min=8.7km az=60.0*

ISC 14 18:59:19.0±0.4**, 15°.12S**±0°.05×**166°.80E**±0°.06**, h10**^{km}**, n111, σ1^{s}.33**/99**, mb4.8**/38**, MS3.8**/11**, 2C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.51	130		Pg	18 59 29.8	+0.8
SANVU				Sg	Sb	18 59 37.1	-0.5
SANVU	Saraoutou	0.51	130	P	Pb	18 59 30.6	+0.5
SANVU	Saraoutou	0.51	130	S	Sb	18 59 37.8	+0.2
VLAKA	Lakatoro	1.15	149	P	Pb	18 59 41.4	+0.4
VLAKA	Lakatoro	1.15	149	S	Sn	18 59 57.6	+0.6
LUES	Luesalemba Tem	4.51	349	P	Pn	19 00 29.3	+1.9
INH	Isangel	5.00	152	P	Pn	19 00 37.3	+3.1
KOUNC	Koumac, New Ca	5.91	204	P	Pn	19 00 49.4	+2.7
YATNC	Mamie plateau,	6.91	179	P	Pn	19 01 01.7	+1.3
DZM	Mont Dzumac	6.93	183		Pn	19 01 02.4	+1.6
DZM				Sn	Sn	19 02 16.9	-2.7
DZM	Mont Dzumac	6.93	183	Pn	Pn	19 01 01.9	+1.1
	7.2nm,0.3s,baz=320,slow=21,SNR=19						
DZM				Sn	Sn	19 02 19.1	-0.6
	5.7nm,0.3s,baz=160,slow=21,SNR=6.5						
DZM				LR	LR	19 03 20.0	
	comp=Z,591nm,21.9s,baz=360,slow=35						
DZM	Mont Dzumac	6.93	183	P	Pn	19 01 02.7	+2.0
ONTNC	Ouen Toro	7.16	183	P	Pn	19 01 05.3	+1.4
OUENC	Ouen Island, N	7.26	180	P	Pn	19 01 07.5	+2.2
NGOA	Tingoa Renbel	7.45	298	P	Pn	19 01 09.2	+1.3
HNR	Honiara	8.76	309	Pn	Pn	19 01 26.7	+0.8
SAVO	Savo Central	9.04	310	P	Pn	19 01 33.5	+3.7
TATA	Tatamba Isabel	9.57	314	P	Pn	19 01 40.9	+3.9
MSVF	Nonsavu	11.10	105	Pn	Pn	19 01 56.5	-1.5
MSVF	Nonsavu	11.10	105	Pn	Pn	19 02 02.7	+4.7
	0.2nm,0.3s,baz=266,slow=10,SNR=4.2						
EIDS	Eidsvold	17.91	233	Pn	Pn	19 03 28.0	-0.4
CTAO	Charters Tower	20.19	253	P	P	19 03 56.7	+2.6
RTZ	Ruatahuna	25.07	161	P	P	19 04 42.1	-1.7
BKZ	Black Stump Fm	25.43	162	P	P	19 04 46.3	-0.7
BKZ				IAmb	IAmb	19 05 10.6	
	comp=Z,91nm,2.0s						
MRZ	Mangatainoka R	26.58	165	P	P	19 04 56.5	-0.8
MRZ				IAmb	IAmb	19 05 25.0	
	comp=Z,65nm,1.9s						
NNZ	Nelson	26.63	169	P	P	19 04 57.5	-0.3
THZ	Tophouse	27.07	170	P	P	19 05 00.8	-1.1
THZ				IAmb	IAmb	19 05 39.8	
	comp=Z,33nm,1.4s						
LTZ	Lake Taylor	27.97	171	P	P	19 05 10.0	+0.2
LTZ				IAmb	IAmb	19 05 12.5	
	comp=Z,20nm,1.1s						
STKA	Stephens Creek	28.40	230	P	P	19 05 13.0	-0.8
	comp=Z,0.8nm,0.6s,baz=37,slow=8.4,SNR=4.2						
STKA				LR	LR	19 15 20.3	
	comp=Z,166nm,21.0s,baz=42,slow=34 comp=Z,0.8nm,0.6s						
WB0	Warramunga Arr	31.23	257	P	P	19 05 39.2	+0.2
WRA	Warramunga Arr	31.29	256	P	P	19 05 39.6	0.0
	comp=Z,0.8nm,0.5s,baz=85,slow=8.9,SNR=17						
WRA				LR	LR	19 17 58.2	
	comp=Z,312nm,19.2s,baz=22,slow=36 comp=Z,0.8nm,0.5s						
AS31	Alice Springs	32.11	250	P	P	19 05 47.0	+0.2
ASAR	Alice Springs	32.11	250	P	P	19 05 46.6	-0.2
ASAR	Alice Springs	32.11	250	P	P	19 05 47.3	+0.5
	comp=Z,2.3nm,0.8s,baz=72,slow=9.6,SNR=24						
ASAR				LR	LR	19 18 19.1	
	comp=Z,174nm,18.8s,baz=86,slow=35 comp=Z,2.3nm,0.8s						
BBOO	Buckleboo	32.98	232	P	P	19 05 54.4	+0.1
BBOO				IAmb	IAmb	19 06 43.5	
	comp=Z,25nm,1.3s						
H11S2	WAKE ISLAND Hy	33.39	360	T	T	19 41 42.0	
	baz=185						
H11S3	WAKE ISLAND Hy	33.40	360	T	T	19 41 36.9	
	baz=185						
H11S1	WAKE ISLAND Hy	33.41	360	T	T	19 41 42.0	
	baz=185						
H11N1	WAKE ISLAND Hy	34.61	0	T	T	19 43 19.5	
	baz=183						
H11N3	WAKE ISLAND Hy	34.62	0	T	T	19 43 14.7	
	baz=183						
H11N2	WAKE ISLAND Hy	34.63	0	T	T	19 43 10.4	
	baz=183						
GUMO	Guam	35.84	322	LR	LR	19 20 27.8	
	comp=Z,44nm,20.3s,baz=110,slow=35						
KNRA	Kununurra	36.64	264	P	P	19 06 26.1	0.0
FITZ	Fitzroy Crossi	39.50	260	P	P	19 06 49.9	-0.3
FITZ	Fitzroy Crossi	39.50	260	P	P	19 06 50.9	+0.8
	comp=Z,3.0nm,0.6s,baz=77,slow=8.2,SNR=16						
FITZ				LR	LR	19 23 19.2	
	comp=Z,260nm,18.7s,baz=80,slow=36 comp=Z,3.0nm,0.6s						
NWAO	Narrogin (SRO)	48.16	239	LR	LR	19 29 06.0	
	comp=Z,174nm,18.2s,baz=266,slow=37						
MORW	Morawa	48.69	245	P	P	19 08 03.3	-0.5
MJAR	Matsushiro Arr	58.04	333	P	P	19 09 10.1	-2.2
	comp=Z,0.7nm,0.5s,baz=173,slow=8.3,SNR=5.0 comp=Z,0.7nm,0.5s						
MAJO	Matsushiro	58.04	333	P	P	19 09 10.5	-1.8
JTM	Tenmabayashi	60.53	338	P	P	19 09 29.4	0.0
VNDA	Vanda	62.47	181	P	P	19 09 42.0	0.0
VNDA				IAmb	IAmb	19 09 44.1	
	comp=Z,14nm,1.9s						
VNDA	Vanda	62.47	181	P	P	19 09 39.5	-2.6
	comp=Z,1.4nm,0.6s,baz=11,slow=6.9,SNR=8.5 comp=Z,1.4nm,0.6s						
SBA	Scott Base	62.75	180	P	P	19 09 44.0	+0.1
SBA				IAmb	IAmb	19 09 46.5	
	comp=Z,8.5nm,0.8s						
JKA	Kamikawa-asahi	62.95	341	P	P	19 09 45.1	-0.6
KSRS	Korea Array	63.80	326	P	P	19 09 51.7	+0.2
	comp=Z,0.6nm,0.8s,baz=139,slow=6.2,SNR=3.2 comp=Z,0.6nm,0.8s						
USRK	Ussuriysk Ar.	67.03	334	P	P	19 10 13.0	+0.8
USRK	Ussuriysk Ar.	67.03	334	P	P	19 10 12.8	+0.6
	comp=Z,1.9nm,0.8s,baz=186,slow=5.7,SNR=5.0 comp=Z,1.9nm,0.8s						
SHEM	Shemya Is, Ala	67.86	5	P	P	19 10 17.1	-0.2
SHEM	Shemya Is, Ala	67.86	5	LR	LR	19 38 19.9	
	comp=Z,29nm,18.1s,baz=94,slow=34						
PEA0B	Petropavlovsk-	68.39	354	P	P	19 10 20.6	-0.1
PETK	Petropavlovsk-	68.39	354	P	P	19 10 20.4	-0.3
PETK	Petropavlovsk-	68.39	354	P	P	19 10 20.6	0.0
	comp=Z,4.3nm,0.8s,baz=148,slow=7.2,SNR=9.2 comp=Z,4.3nm,0.8s						
CMAR	Chiang Mai Arr	74.69	294	P	P	19 11 00.4	+0.9
CMAR	Chiang Mai Arr	74.69	294	P	P	19 10 59.6	+0.2
	comp=Z,1.5nm,0.8s,baz=112,slow=6.9,SNR=7.9 comp=Z,1.5nm,0.8s						
CHTO	Chiang Mai	74.82	295	P	P	19 10 59.7	-0.5
CHTO				IAmb	IAmb	19 11 21.0	
	comp=Z,20nm,1.8s						
QSPA	South Pole Qui	74.91	180	P	P	19 11 00.0	0.0
QSPA				IAmb	IAmb	19 11 11.3	
	comp=Z,13nm,1.1s						
QSPA	South Pole Qui	74.91	180	P	P	19 10 59.6	-0.4
	comp=Z,6.9nm,0.9s,baz=293,slow=1.5,SNR=18 comp=Z,6.9nm,0.9s						
O14K	Tigyukauivet M	78.53	16	P	P	19 11 19.3	-0.9
OHAK	Old Harbor	79.31	21	P	P	19 11 23.4	-1.1
M14K	Bethel	79.64	15	P	P	19 11 25.1	-1.2
M14K				IAmb	IAmb	19 13 10.7	
	comp=Z,24nm,1.4s						
KDAK	Kodiak Island	79.98	21	LR	LR	19 41 48.3	
	comp=Z,62nm,18.4s,baz=183,slow=32						
K13K	Kusilvak Mount	80.04	13	P	P	19 11 27.8	-0.6
GAMB	Gambell	80.38	10	P	P	19 11 29.6	-0.6
GAMB				IAmb	IAmb	19 11 30.6	
	comp=Z,6.4nm,0.8s						
M16K	Timber Creek	80.65	16	P	P	19 11 31.4	-0.3
M16K				IAmb	IAmb	19 14 09.4	
	comp=Z,16nm,1.4s						
K15K	Wolf Creek Mou	81.08	14	P	P	19 11 33.7	-0.3
CNPM	China Poot	81.77	20	P	P	19 11 37.0	-0.8
J16K	Anvik River	82.15	14	P	P	19 11 39.4	-0.2
J16K				IAmb	IAmb	19 12 27.2	
	comp=Z,15nm,1.6s						
BILL	Bilibino	82.92	360	P	P	19 11 42.6	-1.0
BILL				IAmb	IAmb	19 11 44.0	
	comp=Z,17nm,1.3s						
SUA	Susitna One	83.40	19	IAmb	IAmb	19 11 48.3	
	comp=Z,5.4nm,0.7s						
PWL	Port Wells	83.74	20	P	P	19 11 47.0	-1.0
PWL				IAmb	IAmb	19 14 36.3	
	comp=Z,11nm,0.9s						
CAST	Castle Rocks	84.50	17	IAmb	IAmb	19 11 51.1	
	comp=Z,6.2nm,0.6s						
SCM	Sheep Creek Mo	84.78	20	P	P	19 11 51.9	-1.4
SCM				IAmb	IAmb	19 12 32.6	
	comp=Z,16nm,1.4s						
WAX	Waxell Ridge	85.39	23	P	P	19 11 55.9	-0.5
RND	Reindeer	85.44	18	IAmb	IAmb	19 12 09.3	
	comp=Z,22nm,1.8s						
N25K	Chitina, Valde	85.55	21		P	19 11 56.2	-0.9
N25K				IAmb	IAmb	19 11 57.1	
	comp=Z,3.4nm,0.6s						
E18K	Tukpahlearik C	85.69	12	P	P	19 11 58.2	+0.6
E18K				IAmb	IAmb	19 11 59.1	
	comp=Z,6.8nm,1.2s						
F19K	Shaleruckik Mo	85.79	13	IAmb	IAmb	19 11 58.7	
	comp=Z,9.5nm,1.2s						
TABL	Table Mountain	86.02	23	P	P	19 11 59.2	-0.5
TABL				IAmb	IAmb	19 14 45.9	
	comp=Z,9.9nm,1.3s						
IMAR	Indian Mountai	86.06	15	P	P	19 11 59.0	-0.5
BELA	Belgrano 2	86.38	176	P	P	19 11 59.9	-1.2
HDA	Harding Lake	86.75	18	P	P	19 12 01.0	-2.0
HDA				IAmb	IAmb	19 12 03.2	
	comp=Z,5.1nm,0.9s						
ILAR	Eielson Array	87.03	18	P	P	19 12 01.9	-2.4
	comp=Z,1.9nm,0.6s,baz=236,slow=5.0,SNR=25 comp=Z,1.9nm,0.6s						
BBB	Bella Bella	87.35	34	LR	LR	19 42 39.9	
	comp=Z,38nm,21.6s,baz=204,slow=30						
EVN	Everest	88.41	299	P	P	19 12 11.8	-0.8
EVN				IAmb	IAmb	19 12 13.8	
	comp=Z,5.9nm,0.7s						
TROLL	Troll, Antarti	92.44	185	⇑P	P	19 12 30.6	+0.6
	comp=Z,210nm,0.6s						
SNAA	Sanae	93.14	183	⇑P	P	19 12 33.9	+0.8
	comp=Z,38nm,0.6s						
SNAA	Sanae	93.14	183	P	P	19 12 31.8	-1.3
	comp=Z,1.5nm,0.6s,baz=185,slow=5.7,SNR=9.2 comp=Z,1.5nm,0.6s						
ANMO	Albuquerque	95.89	56	LR	LR	19 49 58.4	
	comp=Z,27nm,18.1s,baz=18,slow=32						
TXAR	Lajitas Array	96.86	62	LR	LR	19 54 14.5	
	comp=Z,13nm,18.6s,baz=252,slow=34						
MKAR	Makanchi Array	97.17	316	P	P	19 12 51.1	-0.7
	comp=Z,0.3nm,0.5s,baz=86,slow=7.2,SNR=5.6 comp=Z,0.3nm,0.5s						
ZALV	Zalesovo Beam	97.43	324	P	P	19 12 50.9	-1.9
	comp=Z,0.7nm,0.5s,baz=108,slow=4.8,SNR=4.5 comp=Z,0.7nm,0.5s						
ARCES	ARCESS Array B	120.51	345	PKP	PKPdf	19 18 09.2	-1.2
	comp=Z,1.8nm,0.6s,baz=90,slow=2.4,SNR=9.7						
BOSA	Boshof	122.79	221	PKP	PKPdf	19 18 16.0	-0.2
	comp=Z,1.2nm,0.7s,baz=210,slow=4.1,SNR=3.7						
FINES	FINESS Array B	125.91	338	PKP	PKPdf	19 18 20.5	-0.4
	comp=Z,3.1nm,1.1s,baz=72,slow=4.4,SNR=3.6						
AKASG	Malin Array Be	130.80	325	SKPbc	SKPbc	19 21 55.5	+0.8
	comp=Z,0.8nm,0.7s,baz=46,slow=4.3,SNR=5.7						
NB2	NORSAR Subarra	130.88	345	pPKP		19 22 01.8	
	comp=Z,3.0nm,0.8s,baz=32,slow=4.3						
NOA	NORSAR Array B	130.88	345	PKP	PKPdf	19 18 30.0	-0.5
	comp=Z,0.2nm,0.5s,baz=40,slow=1.9,SNR=2.2						
NOA				SKPbc	SKPbc	19 21 55.3	+0.5
	comp=Z,1.9nm,0.7s,baz=30,slow=3.0,SNR=9.8						
HFS	Hagfors	130.96	343	PKP	PKPdf	19 18 29.8	-0.7
	comp=Z,0.7nm,0.6s,baz=57,slow=5.3,SNR=1.8						
HFS				SKPbc	SKPbc	19 21 55.6	+0.6
	comp=Z,1.4nm,0.8s,baz=133,slow=6.3,SNR=3.5						
KEST	Kesra	151.21	320	PKPbc	PKPbc	19 19 13.3	+0.1
	comp=Z,2.7nm,0.6s,baz=44,slow=3.6,SNR=2.4						
ESDC	Sonseca Array	154.23	343	PKPbc	PKPbc	19 19 21.2	+1.4
	comp=Z,0.1nm,0.3s,baz=10,slow=3.0,SNR=1.2						
ESDC				PKPab	PKPab	19 19 33.7	+0.2
	comp=Z,0.6nm,0.9s,baz=24,slow=4.1,SNR=4.7						
TORD	Torodi Ar. Bea	165.42	264	PKPab	PKPab	19 20 22.2	-0.7
	comp=Z,1.8nm,0.7s,baz=93,slow=4.4,SNR=2.8						

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*IDC **14** 19:05:47.3±1.1, 5°.52S×102°.89E, h0^{km}, mb4.1/14, mbtmp4.2/14, MS3.4/1, Error ellipse: s-maj=40.7km*

s-min=14.8km az=49.0

*DJA **14** 19:05:52.7±0.3, 6°S±3°×10°3E±°, h55^{km}±8^{km}, M4.5/12, mB6.2/1, mb4.6/6, MLv4.5/12, Mw(mB)5.9/1*

*NEIC **14** 19:05:53.0±1.8, 5°.57S±0°.07×102°.84E±0°.09, h40^{km}±8^{km}, mb4.4/19, Error ellipse: s-maj=14.7km s-min=7.6km az=58.0*

ISC 14 19:05:52.2±0.6**, 5°.60S**±0°.07×**102°.89E**±0°.08**, h38**^{km}**, n72, σ1.^{s}02**/62**, mb4.3**/25**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	1.23	3		Pn	19 06 13.4	+0.6
MNAI				Sn	Sn	19 06 25.9	-2.3
MNAI	Manna	1.23	3	P	Pn	19 06 13.5	+0.6
LWLI	Liwa	1.30	64	P	Pn	19 06 13.9	0.0
MDSI	Maura Dua	1.69	49	P	Pn	19 06 20.1	+0.9
MDSI				S	Sn	19 06 40.0	+0.4
KSI	Kapahiang	1.95	351	P	Pn	19 06 24.5	+1.6
KSI				S	Sn	19 06 49.3	+3.1
BLSI	Bandar Lampung	2.35	85	P	Pn	19 06 28.5	+0.2
CGJI	Cibinong	2.96	110	P	Pn	19 06 37.8	+1.1
SKJI	Sukabumi	3.90	111	P	Pn	19 06 49.7	+0.1
CNJI	Cibinong	4.54	112	P	Pn	19 06 58.6	+0.2
LEM	Lembang	4.86	105	Pn	Pn	19 07 05.9	+3.0
	6.5nm,0.3s,baz=296,slow=15,SNR=5.6						
LEM				Sn	Sn	19 08 07.6	+10
	0.5nm,0.3s,baz=341,slow=21,SNR=1.1						
SISI	Saibi	5.69	318	P	Pn	19 07 14.5	+0.3
	0.4nm46nm,0.6s						
UGM	Wanagama	7.92	107	Pn	Pn	19 07 45.8	+0.9
UGM	Wanagama	7.92	107	P	Pn	19 07 45.2	+0.3
	131nm,1.8s						
PCJI	Pacitan	8.62	108	P	Pn	19 07 54.2	-0.3
GSI	Gunungsitoli	8.67	322		Pn	19 07 54.8	-0.4
GSI	Gunungsitoli	8.67	322	P	Pn	19 07 54.0	-1.2
	28nm,1.6s						
GMJI	Gumukmas	10.81	105	P	Pn	19 08 25.6	+1.2
JAGI	Jajag, Banyuwa	11.54	105	Pn	Pn	19 08 34.0	-0.4
JAGI	Jajag, Banyuwa	11.54	105	P	Pn	19 08 33.8	-0.6
	49nm,1.1s						
TOLI2	Tolitoli	19.07	70	P	Pn	19 10 12.7	+0.1
UBPT	Khong Chiam	20.90	7	P	P	19 10 29.9	-1.6
BATI	Baumata	21.07	104	P	P	19 10 31.7	-1.7
	5.0nm,0.4s,baz=88,slow=9.0,SNR=5.0						
	5.0nm,0.4s						
SOEI	Soe	21.58	102	P	P	19 10 36.1	-2.8
SOEI				IAmb	IAmb	19 11 16.3	
	comp=Z,31nm,1.3s						
CM31	Chiang Mai Arr	24.22	351	P	P	19 11 04.2	-1.4
CM31				IAmb	IAmb	19 11 05.7	
	comp=Z,4.4nm,0.9s						
CMAR	Chiang Mai Arr	24.22	351	P	P	19 11 03.9	-1.6
CMAR	Chiang Mai Arr	24.22	351	P	P	19 11 05.2	-0.4
	comp=Z,2.4nm,0.5s,baz=181,slow=8.9,SNR=10						
	comp=Z,2.4nm,0.5s						
FITZ	Fitzroy Crossi	25.45	121	P	P	19 11 17.6	+0.8
KNRA	Kununurra	27.29	114	P	P	19 11 33.4	0.0
KNRA				IAmb	IAmb	19 11 43.8	
	comp=Z,11nm,1.2s						
H08S2	Diego Garcia H	30.26	264	T	T	19 43 00.9	
	baz=87,slow=76,SNR=8.6						
H08S3	Diego Garcia H	30.27	264	T	T	19 43 16.0	
	baz=87,slow=76,SNR=7.8						
H08S1	Diego Carcia H	30.28	264	T	T	19 43 16.7	
	baz=87,slow=76,SNR=7.4						
H01W3	Cape Leeuwin H	30.94	162	T	T	19 45 36.1	
	baz=340,slow=76,SNR=3.1						
H01W2	Cape Leeuwin H	30.95	162	T	T	19 45 22.1	
	baz=340,slow=76,SNR=2.8						
H01W1	Cape Leeuwin H	30.96	162	T	T	19 45 29.1	
	baz=340,slow=76,SNR=2.8						
WB0	Warramunga Arr	33.72	118	P	P	19 12 30.9	+0.7
WB0				IAmb	IAmb	19 12 40.9	
	comp=Z,8.1nm,1.4s						
WRA	Warramunga Arr	33.73	118	P	P	19 12 31.3	+1.0
WRA	Warramunga Arr	33.73	118	P	P	19 12 31.1	+0.7
	comp=Z,0.8nm,0.6s,baz=291,slow=10,SNR=7.5						
	comp=Z,0.8nm,0.6s						
WR8	Warramunga Arr	33.88	118	P	P	19 12 31.6	0.0
WR8				IAmb	IAmb	19 12 33.2	
	comp=Z,5.7nm,1.2s						
ASAR	Alice Springs	34.84	124	P	P	19 12 39.8	-0.1
ASAR	Alice Springs	34.84	124	P	P	19 12 41.2	+1.3
	comp=Z,1.4nm,0.6s,baz=304,slow=8.1,SNR=26						
	comp=Z,1.4nm,0.6s						
AS31	Alice Springs	34.84	124	P	P	19 12 39.9	-0.1
PMG	Port Moresby	44.03	98	LR	LR	19 35 50.2	
	comp=Z,54nm,21.1s,baz=110,slow=41						
STKA	Stephens Creek	44.62	131	P	P	19 14 01.4	+0.2
STKA	Stephens Creek	44.62	131	P	P	19 14 01.8	+0.7
	comp=Z,1.2nm,0.4s,baz=310,slow=5.2,SNR=5.5						
	comp=Z,1.2nm,0.4s						
KSRS	Korea Array	48.77	27	P	P	19 14 33.4	-0.1
	comp=Z,0.7nm,0.7s,baz=237,slow=7.9,SNR=5.1						
	comp=Z,0.7nm,0.7s						
KDJ	Kajisay	52.96	336	P	P	19 15 06.1	+0.9
KDJ				IAmb	IAmb	19 15 19.7	
	comp=Z,4.7nm,0.7s						
SONM	Songino Array	53.29	3	P	P	19 15 08.1	+0.7
	comp=Z,1.3nm,0.3s,baz=189,slow=8.6,SNR=5.2						
	comp=Z,1.3nm,0.3s						
MKAR	Makanchi Array	55.27	343		P	19 15 22.2	+0.5
MKAR	Makanchi Array	55.27	343	P	P	19 15 21.9	+0.2
	comp=Z,2.9nm,0.5s,baz=150,slow=8.8,SNR=46						
	comp=Z,2.9nm,0.5s						
USRK	Ussuriysk Ar.	56.07	25	P	P	19 15 27.1	-0.4
USRK	Ussuriysk Ar.	56.07	25	P	P	19 15 27.4	0.0
	comp=Z,0.7nm,0.4s,baz=208,slow=5.8,SNR=7.6						
	comp=Z,0.7nm,0.4s						
H04N2	CROZET ISLANDS	59.73	219	T	T	20 20 28.0	
	baz=64,slow=74,SNR=42						
H04N1	CROZET ISLANDS	59.74	219	T	T	20 20 33.9	
	baz=64,slow=74,SNR=49						
H04N3	CROZET ISLANDS	59.74	219	T	T	20 20 32.6	
	baz=64,slow=74,SNR=51						
KURBB	Kurchatov Arra	59.81	342	P	P	19 15 54.0	+0.5
	comp=Z,1.6nm,0.2s,baz=159,slow=5.6,SNR=5.1						
	comp=Z,1.6nm,0.2s						
KURK	Kurchatov	59.87	342		P	19 15 54.5	+0.6
KURK				IAmb	IAmb	19 15 55.2	
	comp=Z,2.8nm,0.9s						
H04S1	CROZET ISLANDS	59.96	218	T	T	20 20 43.8	
	baz=62,slow=75,SNR=8.9						
H04S3	CROZET ISLANDS	59.97	218	T	T	20 20 47.4	
	baz=62,slow=75,SNR=38						
H04S2	CROZET ISLANDS	59.98	218	T	T	20 20 45.8	
	baz=62,slow=75,SNR=18						
ZAA0	Zalesovo Array	61.24	348		P	19 16 03.2	0.0
ZALV	Zalesovo Beam	61.24	348		P	19 16 03.0	-0.3
ZALV	Zalesovo Beam	61.24	348	P	P	19 16 03.1	-0.1
	comp=Z,4.0nm,0.4s,baz=160,slow=4.7,SNR=19						
	comp=Z,4.0nm,0.4s						
BVAR	Borovoye Array	64.54	339	P	P	19 16 25.4	+0.2
	comp=Z,0.9nm,0.4s,baz=128,slow=7.8,SNR=8.0						
	comp=Z,0.9nm,0.4s						
AB31	Akbulak array	66.16	331		P	19 16 35.9	+0.1
AB31				IAmb	IAmb	19 16 36.8	
	comp=Z,3.1nm,0.7s						
ABKAR	Akbulak array	66.16	331		P	19 16 35.9	+0.1
ABKAR	Akbulak array	66.16	331	P	P	19 16 36.0	+0.2
ABKAR				IAmb	IAmb	19 16 36.8	
	comp=Z,3.1nm,0.7s						
ARTI	Arti	71.68	336		P	19 17 10.4	+0.5
KBZ	Khabaz	72.90	319	P	P	19 17 17.9	+0.5
	comp=Z,1.3nm,0.6s,baz=143,slow=6.6,SNR=2.8						
	comp=Z,1.3nm,0.6s						
BOSA	Boshof	76.50	242	P	P	19 17 38.3	-0.6
BOSA				IAmb	IAmb	19 18 14.6	
	comp=Z,5.7nm,1.2s						
BRTR	Keskin Array B	77.86	312	P	P	19 17 46.6	+0.3
	comp=Z,0.8nm,0.7s,baz=121,slow=9.3,SNR=6.3						
	comp=Z,0.8nm,0.7s						
VNDA	Vanda	78.10	169	P	P	19 17 46.9	+0.1
VNDA				IAmb	IAmb	19 17 51.8	
	comp=Z,5.8nm,1.4s						
TXAR	Lajitas Array	145.55	44	PKPbc	PKPab	19 25 28.8	+1.2
	comp=Z,2.5nm,0.5s,baz=247,slow=1.2,SNR=29						

*NOU **14** 19:07:02.5, 15°.06S×166°.87E, h7^{km}, MLv4.7/13, Vanuatu Islands*

*NEIC **14** 19:07:02.2±0.7, 15°.05S±0°.09×166°.8E±0°.1, h12^{km}±6^{km}, mb4.6/12, Error ellipse: s-maj=19.8km s-min=5.2km az=50.0*

*IDC **14** 19:07:10.5±4.2, 15°.48S×167°.16E, h116^{km}±38^{km}, mb3.4/5, mbtmp3.8/6, Error ellipse: s-maj=33.3km s-min=27.3km az=95.0*

ISC 14 19:07:01.5±0.7**, 15°.08S**±0°.06×**166°.75E**±0°.08**, h10**^{km}**, n30, σ1.^{s}30**/32**, mb4.4**/10**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.57	130		Pg	19 07 13.1	+0.4
SANVU					Sg	19 07 20.2	0.0
SANVU	Saraoutou	0.57	130	P	Pg	19 07 13.3	+0.6
SANVU	Saraoutou	0.57	130	S	Sg	19 07 19.9	-0.3
VLAKA	Lakatoro	1.21	147	P	Pn	19 07 23.8	-0.7
VLAKA	Lakatoro	1.21	147	S	Sb	19 07 40.8	+0.6
LUES	Luesalemba Tem	4.47	349	P	Pn	19 08 11.2	+1.9
YATNC	Mamie plateau,	6.94	179	P	Pn	19 08 44.6	+1.2
DZM	Mont Dzumac	6.96	182		Pn	19 08 44.5	+0.8
DZM				Sn	Sn	19 10 01.8	-1.2
DZM	Mont Dzumac	6.96	182	P	Pn	19 08 45.0	+1.3
	4.7nm,0.3s,baz=24,slow=20,SNR=34						
DZM				S	Sn	19 09 59.1	-3.9
	8.6nm,0.5s,baz=315,slow=18,SNR=6.0						
DZM	Mont Dzumac	6.96	182	P	Pn	19 08 45.2	+1.5
OUENC	Ouen Island, N	7.30	179	P	Pn	19 08 49.8	+1.5
NGOA	Tingoa Renbel	7.39	298	P	Pn	19 08 52.0	+2.5
RTZ	Ruatahuna	25.12	161	P	P	19 12 26.9	+0.2
BKZ	Black Stump Fm	25.48	162	P	P	19 12 30.2	+0.3
WRA	Warramunga Arr	31.25	256	P	P	19 13 21.7	0.0
	0.7nm,1.0s,baz=83,slow=8.6,SNR=2.9						
	0.7nm,1.0s						
ASAR	Alice Springs	32.08	249	P	P	19 13 29.0	+0.1
	0.8nm,0.8s,baz=79,slow=9.2,SNR=6.9						
	0.8nm,0.8s						
KNRA	Kununurra	36.60	264	P	P	19 14 08.3	+0.2
KNRA				IAmb	IAmb	19 14 17.2	
	comp=Z,14nm,1.2s						
FITZ	Fitzroy Crossi	39.45	260	P	P	19 14 32.1	-0.2
VNDA	Vanda	62.50	181	P	P	19 17 25.6	+0.8
SBA	Scott Base	62.79	180	P	P	19 17 28.0	+1.2
USRK	Ussuriysk Ar.	66.97	334	P	P	19 17 54.2	-0.2
PETK	Petropavlovsk-	68.36	354	P	P	19 18 01.0	-2.0
	comp=Z,1.2nm,0.7s,baz=153,slow=9.7,SNR=2.7						
	comp=Z,1.2nm,0.7s						
QSPA	South Pole Qui	74.95	180		P	19 18 42.4	-0.4
QSPA				IAmb	IAmb	19 18 48.1	
	comp=Z,7.4nm,1.3s						
QSPA	South Pole Qui	74.95	180	P	P	19 18 36.2	-6.6
	comp=Z,0.6nm,0.7s,baz=357,slow=3.5,SNR=10.0						
	comp=Z,0.6nm,0.7s						
R16K	Pilot Point	78.17	19	P	P	19 19 00.4	-0.3
M14K	Bethel	79.62	15	P	P	19 19 08.6	0.0
M14K				IAmb	IAmb	19 19 12.1	
	comp=Z,10nm,1.1s						
K13K	Kusilvak Mount	80.02	13	P	P	19 19 10.9	0.0
K13K				IAmb	IAmb	19 19 44.9	
	comp=Z,9.5nm,1.4s						
K15K	Wolf Creek Mou	81.06	14	P	P	19 19 16.4	0.0
K15K				IAmb	IAmb	19 19 17.6	
	comp=Z,11nm,1.4s						
TNA	Tin City	82.64	10	P	P	19 19 25.6	+1.0
TNA				IAmb	IAmb	19 19 53.8	
	comp=Z,6.3nm,1.4s						
ILAR	Eielson Array	87.02	18	P	P	19 19 44.5	-2.3
	comp=Z,0.5nm,0.5s,baz=231,slow=5.1,SNR=7.6						
	comp=Z,0.5nm,0.5s						

IDC 14 19:11:52.8±8.4**, 9°.28N**×**93°.11E, h0**^{km}**, mb3.4**/4**, mbtmp3.4**/4**, MS3.7**/1**, Error ellipse: s-maj=451.6km s-min=25.6km az=59.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	27.65	77	LR	LR	19 27 01.1	
	comp=Z,172nm,21.1s,baz=140,slow=33						
MKAR	Makanchi Array	38.51	348	P	P	19 19 16.3	-0.6
	0.4nm,0.6s,baz=177,slow=9.7,SNR=3.5						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	42.95	346	P	P	19 19 53.8	+0.4
	0.2nm,0.2s,baz=165,slow=7.5,SNR=2.0						
	0.2nm,0.2s						
WRA	Warramunga Arr	49.90	126	P	P	19 20 48.3	-0.3
	0.4nm,0.7s,baz=305,slow=8.4,SNR=5.0						
	0.4nm,0.7s						
ASAR	Alice Springs	51.59	130	P	P	19 21 01.4	0.0
	0.4nm,0.9s,baz=307,slow=7.8,SNR=4.2						
	0.4nm,0.9s						

*GCG **14** 19:17:20.5±1.4, 14°.92N×89°.58W, h16^{km}±33^{km}, MD3.8, MW3.3*

*SNET **14** 19:17:21.3±1.1, 14°.93N×89°.66W, h16^{km}±7^{km}, ML3.1*

ISC 14 19:17:19.6±1.3**, 14°.99N**±0°.06×**89°.59W**±0°.05**, h6**^{km}**, n15, σ0.^{s}95**/21**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTO3	Montecristo	0.63	160	*i* P	Pg	19 17 31.4	-0.4
LLGN	La Laguna	1.03	143	*e*P	Pg	19 17 39.4	0.0
LLGN				*e*P	Pb	19 17 39.5	-0.4
LLGN				IAML		19 17 55.0	
	comp=Z,615nm,0.3s						
NUBE	Las Nubes	1.10	190	*e*P	Pg	19 17 40.0	-0.7
NUBE				*e*S	Sg	19 17 54.4	-0.7
NUBE	Las Nubes	1.10	190	*i* P	Pg	19 17 40.0	-0.7
NUBE				*i* S	Sg	19 17 54.6	-0.5
SNJE	San Jose	1.12	181	*e*P	Pg	19 17 40.5	-0.6
SNJE				*e*P	Pg	19 17 40.5	-0.6
FG16	Alotenango, Sa	1.15	231	*i* P	Pn	19 17 44.2	+1.8
CEVE	Cerro Verde	1.16	182	*e*P	Pg	19 17 41.3	-0.6
CEVE				IAML		19 18 02.7	
	comp=Z,382nm,0.4s						
FG8	Yepocapa, Chim	1.19	232	*i* P	Pn	19 17 45.6	+2.6
BOQS	Boqueron	1.28	167	*e*P	Pg	19 17 44.1	-0.2
ESSG	Sabana Grande	1.35	243	*i* P	Pn	19 17 44.5	-0.5
PAVA	Las Pavas	1.42	154	*e*P	Pn	19 17 46.1	0.0
PAVA				*e*S	Sn	19 18 05.7	+0.5
PAVA				IAML		19 18 07.9	
	comp=Z,432nm,0.4s						
LFRS	El Faro	1.45	159	*e*P	Pn	19 17 47.1	+0.5
SCLA	Alcaldia de Sa	1.53	147	*e*P	Pn	19 17 48.1	+0.6
SCLA				*e*S	Sg	19 18 08.6	-0.2
CAHU	Cacacuatique	1.80	132	*e*P	Pn	19 17 52.8	+1.4
CAHU				IAML		19 18 19.7	
	comp=Z,449nm,0.4s						
PETF	Flores	1.93	352	*i* P	Pn	19 17 53.3	+0.3

*MEX **14** 19:17:50.8±0.6, 15°.01N×93°.60W, h16^{km}±9^{km}, MD4.3*

*GCG **14** 19:17:54.0±0.8, 15°.45N×92°.97W, h88^{km}±14^{km}, MD4.2, MW3.0*

ISC 14 19:17:47.3±1.3**, 15°.00N**±0°.06×**93°.55W**±0°.03**, h29**^{km}±13^{km}**, n28, σ2.^{s}64**/44**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.77	24	*e*P	Pn	19 18 03.6	+1.4
PCIG				*e*S	Sb	19 18 12.8	+0.4
THIG		1.24	94	*e*P	Pn	19 18 09.5	+0.8
THIG				*e*S	Sb	19 18 26.6	+0.7
PATR	El Naranjo	1.28	85	*e*P	Pb	19 18 11.0	+0.1
PATR				*e*S	Sn	19 18 26.4	+0.8
PAVE	Pavencul	1.34	82	*e*P	Pb	19 18 12.2	+0.2
PAVE				*e*S	Sn	19 18 27.8	+0.6
SMCA	Catarina	1.43	95	*i* P	Pb	19 18 13.7	+0.3
SMCA				*i* S	Sn	19 18 29.5	+0.3
TGIG		1.82	13	*e*P	Pn	19 18 17.3	+0.6
TGIG				*e*S	Sn	19 18 37.2	-1.5
TGIG		1.82	13	*i* P	Pn	19 18 18.0	+1.3
RTAL	Retalhuleu	1.85	104	*e*P	Pn	19 18 18.7	+1.5
RTAL				*e*S	Sb	19 18 42.6	-0.8
CCIG	Comitan	1.86	47	*e*P	Pn	19 18 11.8	-5.7
CCIG				*e*S	Sn	19 18 35.1	-5.1
HUEH	Huehuetenango	2.00	81	*e*P	Pn	19 18 19.7	+0.3
HUEH				*e*S	Sn	19 18 44.4	+0.8
STG8	El Palmar, Qui	2.20	104	*i* P	Pn	19 18 20.9	-1.2
STG0	El Palmar, Qui	2.21	105	*i* P	Pn	19 18 21.1	-1.1
HUIG	Huatulco	2.58	288	*e*P	Pn	19 18 28.0	+0.8
HUIG				*e*S	Sn	19 18 56.6	-1.1
PEIG	Puerto Escondi	3.61	286	*e*P	Pb	19 18 47.0	-3.4
PEIG				*e*S	Sn	19 19 23.6	+0.7
VHO	Vista Hermosa	3.69	304	*e*P	Pn	19 18 44.5	+1.9
VHO				*e*S	Sn	19 19 22.4	-2.9
PETF	Flores	4.02	61	*e*P	Pn	19 18 49.2	+2.2
PETF				*e*S	Sn	19 19 30.2	-2.9
YOIG	Yosondua	4.26	296	*e*P	Pn	19 18 54.0	+3.4
YOIG				*e*S	Sn	19 19 44.2	+4.6
TOIG	Toxpalan	4.57	313	*e*P	Pn	19 18 56.3	+1.7
TOIG				*e*S	Sn	19 19 44.9	-1.8
PNIG	Pinotepa	4.62	288	*e*P	Pn	19 18 57.7	+2.4
PNIG				*e*S	Sn	19 19 48.4	+0.4
TXIG	Tlaxiaco	4.63	300	*e*P	Pn	19 18 57.4	+1.8
TXIG				*e*S	Sn	19 19 43.5	-5.1
HLIG	Huajuapan de L	4.96	305	*e*P	Pn	19 19 03.2	+3.1
HLIG				*e*S	Sn	19 19 55.0	-1.6
TPIG	Tehuac#an	4.99	313	*e*S	Sn	19 20 04.1	+6.8
FTIG	Fresnillo de T	5.26	304	*e*P	Pn	19 19 09.5	+5.3
FTIG				*e*S	Sn	19 20 05.3	+1.3
MGIG	Malinaltepec	5.37	295	*e*P	Pn	19 19 11.2	+5.6
MGIG				*e*S	Sn	19 19 59.6	-7.0
POHV	Veracruz	5.40	319	*e*	Pb	19 19 29.1	+7.9
CXUV	Coxquihui	6.43	324	*e*P	Pn	19 19 22.3	+2.2
CXUV				*e*S	Sn	19 20 29.9	-2.7
MEIG	Mezcala	6.51	297	*e*S	Sn	19 20 36.5	+1.8
CAIG	El Cayaco	6.77	288	*e*P	Pn	19 19 19.5	-5.3

*IDC **14** 19:23:42.4±4.8, 10°.21S×161°.49E, h75^{km}±44^{km}, mb3.6/11, mbtmp4.0/12, ML4.0/1, Error ellipse: s-maj=27.8km s-min=20.3km az=83.0*

*NEIC **14** 19:23:43.7±2.5, 10°.26S±0°.06×161°.6E±0°.1, h85^{km}±9^{km}, mb4.4/19, Error ellipse: s-maj=16.5km s-min=2.5km az=61.0*

ISC 14 19:23:44.4±0.6**, 10°.33S**±0°.07×**161°.59E**±0°.09**, h100**^{km}**, n42, σ1.^{s}57**/38**, mb4.1**/21**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.85	299		Pn	19 24 13.5	-1.6
SANVU	Saraoutou	7.47	134	Pn	Pn	19 25 30.0	-0.7
DZM	Mont Dzumac	12.57	159	Pn	Pn	19 26 39.5	-0.3
DZM	Mont Dzumac	12.57	159	P	Pn	19 26 41.1	+1.3
	0.8nm,0.3s,baz=24,slow=7.4,SNR=29						
DZM				S	Sn	19 28 53.6	-4.5
	4.2nm,0.3s,baz=182,slow=15,SNR=9.3						
	2.3nm,0.3s						
CTAO	Charters Tower	17.68	235	P	Pn	19 27 45.6	+1.1
ARMA	Armidale	22.04	203	P	P	19 28 31.2	+0.1
JAY	Jayapura	22.15	289	P	P	19 28 30.4	-1.9
	3.3nm,0.4s,baz=132,slow=4.7,SNR=7.1						
	3.3nm,0.4s						
WR8	Warramunga Arr	27.81	247	P	P	19 29 23.0	-1.5
WR8				IAmb	IAmb	19 29 52.1	
	comp=Z,9.4nm,1.4s						
WB0	Warramunga Arr	27.85	247	P	P	19 29 23.6	-1.2
WB0				IAmb	IAmb	19 29 47.4	
	comp=Z,6.8nm,1.2s						
WRA	Warramunga Arr	27.95	247	P	P	19 29 25.3	-0.4
	comp=Z,0.8nm,0.5s,baz=72,slow=9.0,SNR=12						
WRA				PcP	PcP	19 32 38.8	-0.1
	comp=Z,0.3nm,0.9s,baz=75,slow=3.2,SNR=1.9						
	comp=Z,0.8nm,0.5s						
STKA	Stephens Creek	28.32	218	P	P	19 29 30.5	+1.6
	comp=Z,1.5nm,0.7s,baz=110,slow=21,SNR=3.5						
	comp=Z,1.5nm,0.7s						
H11S2	WAKE ISLAND Hy	29.08	10	T	T	19 59 04.7	
	baz=194,slow=76,SNR=15						
H11S3	WAKE ISLAND Hy	29.08	10	T	T	19 59 06.8	
	baz=194,slow=76,SNR=14						
H11S1	WAKE ISLAND Hy	29.09	10	T	T	19 59 06.0	
	baz=194,slow=76,SNR=9.8						
ASAR	Alice Springs	29.54	240	P	P	19 29 38.6	-1.2
	comp=Z,0.4nm,0.8s,baz=61,slow=9.9,SNR=6.6						
	comp=Z,0.4nm,0.8s						
H11N1	WAKE ISLAND Hy	30.31	10	T	T	20 00 21.2	
	baz=193,slow=76,SNR=13						
H11N3	WAKE ISLAND Hy	30.31	10	T	T	20 00 21.8	
	baz=193,slow=76,SNR=14						
H11N2	WAKE ISLAND Hy	30.32	10	T	T	20 00 38.5	
	baz=193,slow=76,SNR=16						
RTZ	Ruatahuna	31.36	156	P	P	19 29 59.1	+3.4
BKZ	Black Stump Fm	31.65	158	P	P	19 30 00.1	+1.9
KNRA	Kununurra	32.40	257	P	P	19 30 04.2	-0.8
KNRA				IAmb	IAmb	19 30 05.3	
	comp=Z,14nm,1.4s						
BBOO	Buckleboo	32.46	223	P	P	19 30 05.5	+0.1
BBOO				IAmb	IAmb	19 30 43.1	
	comp=Z,30nm,1.5s						
FITZ	Fitzroy Crossi	35.65	253	P	P	19 30 32.2	-0.9
MBWA	Marble Bar	41.59	250	P	P	19 31 22.1	-0.7
DHH	Diamond Head	50.76	52	P	P	19 32 32.0	-2.6
MJAR	Matsushiro Arr	51.55	336	P	P	19 32 39.3	-1.0
	comp=Z,1.2nm,0.7s,baz=166,slow=8.1,SNR=2.6						
	comp=Z,1.2nm,0.7s						
JKA	Kamikawa-asahi	56.87	344	P	P	19 33 19.1	+0.4
USRK	Ussuriysk Ar.	60.55	336	P	P	19 33 43.6	-0.6
	comp=Z,2.8nm,0.9s,baz=159,slow=6.7,SNR=5.2						
	comp=Z,2.8nm,0.9s						
CMAR	Chiang Mai Arr	68.10	295	P	P	19 34 35.5	+1.4
	comp=Z,0.3nm,0.7s,baz=134,slow=4.9,SNR=4.3						
	comp=Z,0.3nm,0.7s						
SONM	Songino Array	75.72	325	P	P	19 35 19.5	+0.3
SONM				IAmb	IAmb	19 35 20.7	
	comp=Z,3.0nm,0.7s						
SONM	Songino Array	75.72	325	P	P	19 35 20.1	+0.9
	comp=Z,3.3nm,0.7s,baz=142,slow=5.4,SNR=11						
	comp=Z,3.3nm,0.7s						
L18K	Granite Mounta	79.24	19	P	P	19 35 40.6	+2.3
L18K				IAmb	IAmb	19 35 42.0	
	comp=Z,5.5nm,1.0s						
J17K	VABM Dome	79.42	17	P	P	19 35 41.2	+2.0
J17K				IAmb	IAmb	19 35 42.3	
	comp=Z,2.5nm,0.8s						
QSPA	South Pole Qui	79.67	180	P	P	19 35 42.5	+1.6
	comp=Z,0.6nm,0.6s,baz=172,slow=2.5,SNR=7.5						
	comp=Z,0.6nm,0.6s						
L19K	White Mountain	79.79	19	P	P	19 35 43.1	+1.8
L19K				IAmb	IAmb	19 35 43.9	
	comp=Z,4.0nm,0.8s						
CAST	Castle Rocks	81.57	19	P	P	19 35 51.5	+0.7
CAST				IAmb	IAmb	19 35 52.4	
	comp=Z,3.9nm,0.8s						
BERG	Berg Lake	82.66	24	P	P	19 35 57.5	+1.0
BERG				IAmb	IAmb	19 36 04.5	
	comp=Z,5.2nm,0.9s						
IMAR	Indian Mountai	82.88	17	P	P	19 35 58.8	+1.2
M26K	Nabesna, AK	84.12	23	P	P	19 36 05.0	+0.9
M26K				IAmb	IAmb	19 36 07.4	
	comp=Z,3.2nm,0.6s						
ILAR	Eielson Array	84.18	20	P	P	19 36 03.8	-0.4
	comp=Z,0.3nm,0.4s,baz=249,slow=5.0,SNR=5.4						
	comp=Z,0.3nm,0.4s						
DOT	Dot Lake	84.46	21	P	P	19 36 07.0	+1.3
MKAR	Makanchi Array	90.22	318	P	P	19 36 33.6	-0.3
	comp=Z,0.6nm,0.4s,baz=93,slow=7.0,SNR=11						
	comp=Z,0.6nm,0.4s						

*TIR **14** 19:25:58.4, 40°.55N×20°.79E, h28^{km}, Md2.7/3, Ml2.3/3*

ISC 14 19:26:01.0±1.4**, 40°.47N**±0°.03×**20°.75E**±0°.05**, h1**^{km}±16^{km}**, n6, σ0.^{s}71**/11**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.16	11	Pg	Pg	19 26 03.6	-0.6
KBN				Sg	Sg	19 26 06.4	+0.2
KBN				AML	AML	19 26 07.2	
	1.6nm,0.3s						
NEST	Nestorio	0.24	103	Pg	Pg	19 26 05.1	-0.5
NEST				Sg	Sg	19 26 09.7	+1.0
NEST				AML	AML	19 26 10.6	
	1.2nm,0.3s						
NEST				AMd		19 26 54.0	
OHR	Ohrid	0.64	4	*e*Pg	Pg	19 26 13.9	+0.5
OHR				*e*Sg	Sb	19 26 23.9	-0.8
SRN	Sarande	0.82	224	Pg	Pg	19 26 16.6	-0.1
SRN				Sg	Sb	19 26 30.0	+0.4
SRN				AMd		19 27 07.2	
IGT	Igoumenitsa	0.99	199	Pg	Pg	19 26 19.1	-0.8
IGT				Sg	Sb	19 26 34.7	+0.3
IGT				AMd		19 27 26.5	
SCTE	Santa Cesarea	1.79	258	Sn	Sn	19 26 56.5	+0.1
SCTE				AML	AML	19 26 59.0	
	0.1nm,0.8s						

*NEIC **14** 19:46:20.3±1.9, 6°.18S±0°.09×146°.1E±0°.1, h106^{km}±9^{km}, mb4.1/14, Error ellipse: s-maj=21.6km s-min=11.9km*

az=71.0

*IDC **14** 19:46:20.5±1.9, 6.°25S×146.°09E, h109^{km}±18^{km}, mb3.5/9, mbtmp3.9/12, Error ellipse: s-maj=24.1km s-min=14.4km az=70.0*

ISC 14 19:46:20.0±0.6**, 6.°19S**±0.°07×**146.°04E**±0.°08**, h100**^{km}**, n37, σ1^{s}38**/39**, mb3.9**/11**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.38	161		Pn	19 47 11.9	+1.0
PMG				Sn	Sn	19 47 48.2	-1.9
PMG	Port Moresby	3.38	161	P	Pn	19 47 12.1	+1.3
	26nm,0.4s,baz=19,slow=9.1,SNR=29						
PMG				S	Sn	19 47 49.6	-0.5
	161nm,0.4s,baz=153,slow=20,SNR=29						
PMG	Port Moresby	3.38	161	P	Pn	19 47 12.4	+1.6
JAY	Jayapura	6.45	304	P	Pn	19 47 53.0	+0.4
	8.6nm,0.4s,baz=174,slow=23,SNR=17						
COEN	Coen	8.21	200		Pn	19 48 19.1	+2.7
COEN				Sn	Sn	19 49 48.0	+0.4
COEN	Coen	8.21	200	P	Pn	19 48 19.6	+3.2
CTAO	Charters Tower	13.81	179	P	P	19 49 34.9	-1.8
TATA	Tatamba Isabel	13.83	100	P	P	19 49 39.9	+3.1
QIS	Mount Isa	15.58	203	P	P	19 49 58.3	+2.0
MTN	Manton Dam	16.11	245	P	Pn	19 50 01.1	+0.4
MTN				IAmb	IAmb	19 50 10.2	
	comp=Z,33nm,1.5s						
WB0	Warramunga Arr	17.61	219	P	P	19 50 17.8	-0.9
WR8	Warramunga Arr	17.69	218	P	P	19 50 18.7	-0.8
WR8				IAmb	IAmb	19 50 27.0	
	comp=Z,6.2nm,1.1s						
WRA	Warramunga Arr	17.78	219	P	P	19 50 20.1	-0.5
	comp=Z,1.6nm,0.5s,baz=41,slow=11,SNR=21						
KNRA	Kununurra	19.39	240	P	P	19 50 36.5	-1.6
KNRA				IAmb	IAmb	19 50 58.2	
	comp=Z,9.3nm,1.0s						
EIDS	Eidsvold	19.67	166	P	P	19 50 41.4	+0.3
EIDS				IAmb	IAmb	19 50 44.0	
	comp=Z,4.4nm,0.8s						
QLP	Quilpie	20.35	185	P	P	19 50 50.1	+1.6
AS31	Alice Springs	20.93	213		P	19 50 54.7	-0.1
ASAR	Alice Springs	20.93	213	P	P	19 50 54.7	-0.1
ASAR	Alice Springs	20.93	213	P	P	19 50 54.2	-0.6
	comp=Z,1.3nm,0.5s,baz=51,slow=8.4,SNR=19						
	comp=Z,1.3nm,0.5s						
FITZ	Fitzroy Crossi	23.15	237	P	P	19 51 16.3	-1.6
FITZ	Fitzroy Crossi	23.15	237	P	P	19 51 17.0	-0.9
	comp=Z,2.6nm,0.3s,baz=50,slow=7.5,SNR=50						
	comp=Z,2.6nm,0.3s						
LUWI	Luwuk	23.77	282	P	P	19 51 23.7	+0.1
ARMA	Armidale	24.66	168	P	P	19 51 30.8	-0.8
ARMA				IAmb	IAmb	19 51 46.5	
	comp=Z,8.2nm,1.2s						
STKA	Stephens Creek	25.89	189	P	P	19 51 41.7	-0.8
STKA				IAmb	IAmb	19 51 43.4	
	comp=Z,11nm,0.7s						
STKA	Stephens Creek	25.89	189	P	P	19 51 42.4	-0.2
	comp=Z,2.3nm,0.6s,baz=5.2,slow=11,SNR=7.8						
	comp=Z,2.3nm,0.6s						
BBOO	Buckleboo	28.07	198	P	P	19 52 01.4	-0.7
PSA00	Pilbara Seismi	29.59	236	P	P	19 52 13.9	-1.9
PSA00				IAmb	IAmb	19 52 19.3	
	comp=Z,5.6nm,1.1s						
PSA00	Pilbara Seismi	29.59	236	P	P	19 52 14.6	-1.1
PSA00				IAmb	IAmb	19 52 58.0	
	comp=Z,29nm,1.5s						
CMAR	Chiang Mai Arr	52.50	299	P	P	19 55 24.9	+1.7
	comp=Z,0.4nm,0.3s,baz=122,slow=5.5,SNR=5.7						
	comp=Z,0.4nm,0.3s						
PETK	Petropavlovsk-	59.90	8	P	P	19 56 15.5	+0.2
	comp=Z,0.3nm,0.5s,baz=185,slow=7.4,SNR=1.8						
	comp=Z,0.3nm,0.5s						
EVN	Everest	66.42	304	P	P	19 56 59.3	-0.3
EVN				IAmb	IAmb	19 57 01.7	
	comp=Z,2.7nm,0.6s						
MKAR	Makanchi Array	77.04	321	P	P	19 58 01.4	-0.8
MKAR	Makanchi Array	77.04	321	P	P	19 58 02.1	0.0
	comp=Z,0.3nm,0.4s,baz=100,slow=6.8,SNR=9.5						
	comp=Z,0.3nm,0.4s						
KURBB	Kurchatov Arra	80.81	323	P	P	19 58 22.3	-0.3
	comp=Z,0.3nm,0.7s,baz=117,slow=4.5,SNR=3.3						
	comp=Z,0.3nm,0.7s						
QSPA	South Pole Qui	83.77	180	P	P	19 58 37.0	-1.0
	comp=Z,0.9nm,0.6s,baz=318,slow=3.1,SNR=12						
	comp=Z,0.9nm,0.6s						
ILAR	Eielson Array	86.04	23	P	P	19 58 47.3	-1.8
	comp=Z,0.4nm,0.7s,baz=230,slow=5.6,SNR=3.1						
	comp=Z,0.4nm,0.7s						
TORD	Torodi Ar. Bea	144.21	284	PKP	PKPbc	20 05 44.5	+0.8
	comp=Z,1.0nm,0.4s,baz=76,slow=2.7,SNR=2.1						

IDC 14 19:59:53.2±8.7**, 16.°17N×146.°16E, h0**^{km}**, mb4.0**/6**, mbtmp4.0**/6**, Error ellipse: s-maj=352.0km s-min=109.9km az=22.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	45.39	323	P	P	20 08 13.7	+0.1
	0.6nm,0.3s,baz=134,slow=4.2,SNR=1.7						
	0.6nm,0.3s						
MKAR	Makanchi Array	60.53	315	P	P	20 10 05.7	+0.3
	0.4nm,0.6s,baz=95,slow=7.0,SNR=5.3						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	63.49	319	P	P	20 10 24.8	-0.3
	0.5nm,0.4s,baz=92,slow=7.7,SNR=16						
	0.5nm,0.4s						
BVAR	Borovoye Array	68.69	321	P	P	20 10 58.6	0.0
	1.1nm,0.4s,baz=100,slow=7.4,SNR=13						
	1.1nm,0.4s						
FINES	FINESS Array B	89.35	335	P	P	20 12 52.1	+0.6
	0.8nm,0.8s,baz=57,slow=6.0,SNR=4.9						
	0.8nm,0.8s						
HFS	Hagfors	94.88	338	P	P	20 13 16.3	-0.8
	2.0nm,1.0s,baz=45,slow=5.6,SNR=2.8						
	2.0nm,1.0s						

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*BJI **14** 20:10:50.0, 6.°04S×131.°02E, h126^{km}, mB6.1/48, mb6.4/93*

*ISC-PP **14** 20:10:52, 5.°84S×130.°73E, h125^{km}±12^{km}, Mwppsm6.2, Moment Tensor Solution. s46 Moment tensor: Scale 10^{18}Nm; M_{rr}0.66±.20; $M_{\theta\theta}$-0.06±.19; $M_{\phi\phi}$-0.61±.13; $M_{r\theta}$-0.05±.10; $M_{\theta\phi}$0.21±.26; $M_{\phi r}$-0.21±.10; Fault plane solution: $M_0$2.16000×10^{18} NP1:ϕ_s9.70000°, δ53.20000°, λ78.90000°. NP2:ϕ_s207.90000°, δ38.30000°, λ104.40000°.*

*IPGP **14** 20:10:52.0, 5.°89S×130.°72E, h117^{km}, Mw5.7, Fault plane solution: NP1:ϕ_s110.00000°, δ48.00000°, λ32.00000°. NP2:ϕ_s357.00000°, δ67.00000°, λ133.00000°.*

*NEIC **14** 20:10:52.2±1.6, 5.°84S±0.°05×130.°73E±0.°05, h105^{km}±1^{km}, mb6.1/410, Mwb5.7/33, Mww5.7/51, Error ellipse: s-maj=9.6km s-min=8.7km az=131.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.72; $M_{\theta\theta}$-0.65; $M_{\phi\phi}$-2.08; $M_{r\theta}$0.81; $M_{\theta\phi}$2.37; $M_{\phi r}$2.00; Fault plane solution: $M_0$4.05000×10^{17} NP1:ϕ_s351.70000°, δ62.19000°, λ125.36000°. NP2:ϕ_s115.02000°, δ43.84000°, λ42.35000°. Principal axes: T 4.0479, Plg57.0000°, Azm311.0000°; N -0.0012, Plg31.0000°, Azm153.0000°; P -4.0466, Plg10.0000°, Azm57.0000°;*

*NEIC **14** 20:10:52.2, 5.°84S×130.°72E, h130^{km}*

*NEIC **14** 20:10:52.1, 5.°86S×130.°72E, h104^{km}*

*NEIC **14** 20:10:52.2, 5.°94S×130.°82E, h130^{km}, Moment Tensor Solution. Duration: 3^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}2.71; $M_{\theta\theta}$-0.66; $M_{\phi\phi}$-2.04; $M_{r\theta}$1.11; $M_{\theta\phi}$2.97; $M_{\phi r}$1.93; Fault plane solution: $M_0$4.45000×10^{17} NP1: ϕ_s109.78000°, δ49.75000°, λ38.01000°. NP2: ϕ_s352.99000°, δ61.97000°, λ132.95000°. Principal axes: T 4.3819, Plg52.0000°, Azm315.0000°; N 0.1269, Plg37.0000°, Azm149.0000°; P -4.5088, Plg7.0000°, Azm54.0000°;*

*DJA **14** 20:10:53.4±0.1, 6°S±1°×13°1E±°, h125^{km}±2^{km}, M5.8/145, mB6.3/121, mb6.2/145, MLv6.7/19, Mw5.7/167, Mw(mB)6.0/121, MwMwp5.4/73, Mwp5.6/73*

*MOS **14** 20:10:54.0±0.8, 5.°88S×130.°77E, h144^{km}, mb6.2/67, Error ellipse: s-maj=7.3km s-min=4.2km az=115.7*

*IDC **14** 20:10:54.3±1.0, 5.°84S×130.°77E, h128^{km}±8^{km}, mb5.8/32, mbtmp6.2/37, MS4.4/30, Error ellipse: s-maj=10.3km s-min=7.3km az=78.0*

*GCMT **14** 20:10:55.2±0.1, 5.°80S±0.°01×130.°77E±0.°01, h129^{km}, MW5.7/166, Moment Tensor Solution. s157,c300; s166,c353; Duration: 1^{s}7 Moment tensor: Scale 10^{17}Nm; M_{rr}2.53±.03; $M_{\theta\theta}$-0.66±.04; $M_{\phi\phi}$-1.87±.04; $M_{r\theta}$1.25±.03; $M_{\theta\phi}$2.99±.04; $M_{\phi r}$2.38±.03; Best double couple: $M_0$4.61400×10^{17} NP1:ϕ_s108.00000°, δ49.00000°, λ34.00000°. NP2:ϕ_s354.00000°, δ65.00000°, λ133.00000°. Principal axes: T 4.7310, Plg50.0000°, Azm313.0000°; N -0.2310, Plg39.0000°, Azm153.0000°; P -4.4970, Plg10.0000°, Azm55.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 20:10:54.0±0.2**, 5.°87S**±0.°02×**130.°76E**±0.°03**, h131**^{km}±1^{km}**, h130**^{km}**:pP-P, n1930, σ1^{s}49**/2154**, mb6.0**/359**, 188C-62D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.59	327	P	Pn	20 11 22.3	-0.9
BNDI	Bandanaira	1.59	327	P	Pn	20 11 23.9	+0.7
BNDI				S	Sn	20 11 45.7	+0.2
SAUI	Saumlaki	2.17	166		Pn	20 11 29.6	-0.6
SAUI	Saumlaki	2.17	166	P	Pn	20 11 29.7	-0.4
SAUI	Saumlaki	2.17	166	P	Pn	20 11 29.8	-0.4
SAUI				S	Sn	20 11 53.0	-4.9
MSAI	Masohi	3.10	324	P	Pn	20 11 42.2	+0.1
FAKI	Fak Fak	3.28	27		Pn	20 11 43.1	-1.3
FAKI				Sn	Sn	20 12 20.6	-2.7
FAKI	Fak Fak	3.28	27	P	Pn	20 11 43.0	-1.4
FAKI	Fak Fak	3.28	27	S	Sn	20 12 21.2	-2.2
FAKI	Fak Fak	3.28	27	P	Pn	20 11 43.0	-1.4
AAI	Ambon	3.35	310	P	Pn	20 11 46.2	+0.9
KMPI	Kaimana, Papua	3.66	53	P	Pn	20 11 48.6	-0.8
NLAI	Namlea	4.49	305	P	Pn	20 12 01.6	+1.2
SWI	Sorong	5.00	6	P	Pn	20 12 05.5	-1.7
	162nm37µm4µm,0.8s						
RKPI	Ransiki, Papua	5.51	38	P	Pn	20 12 13.7	-0.3
SANI	Sanana	6.09	308	P	Pn	20 12 21.1	-0.7
SANI	Sanana	6.09	308	S	Sn	20 13 28.3	-2.0
SANI	Sanana	6.09	308	P	Pn	20 12 20.6	-1.2
DRS	Darwin Rock St	6.52	179	P	Pn	20 12 25.8	-1.8
SRPI	Serui, Papua	6.75	54	P	Pn	20 12 29.5	-1.3
	30nm12µm44µm5µm,1.1s						
MTN	Manton Dam	6.94	177	Pn	Pn	20 12 31.0	-2.3
MTN				Sn	Sn	20 13 44.7	-6.2
MTN	Manton Dam	6.94	177	P	Pn	20 12 30.9	-2.3
MTN	Manton Dam	6.94	177	P	Pn	20 12 31.4	-1.9
KDU	Kakadu	6.98	166	P	Pn	20 12 30.7	-3.1
	comp=Z,0.0nmcomp=Z,2µm,0.8s						
KDU	Kakadu	6.98	166	P	Pn	20 12 31.1	-2.7
BAKI	Biak	7.07	49	P	Pn	20 12 35.7	+0.6
TNTI	Ternate	7.42	333		Pn	20 12 37.9	-1.8
TNTI	Ternate	7.42	333	P	Pn	20 12 39.5	-0.2
TNTI	Ternate	7.42	333	S	Sn	20 14 00.1	-2.3
TNTI	Ternate	7.42	333	P	Pn	20 12 39.0	-0.7
	comp=Z,7.1nmcomp=Z,17µmcomp=Z,2µm,0.9s						
SOEI	Soe	7.50	239		Pn	20 12 39.8	-1.2
SOEI	Soe	7.50	239	P	Pn	20 12 40.4	-0.6
SOEI	Soe	7.50	239	S	Sn	20 14 03.5	-1.2
SOEI	Soe	7.50	239	P	Pn	20 12 40.3	-0.7
BBSI	Bau Bau	8.16	272	P	Pn	20 12 52.5	+2.8
	comp=Z,29µmcomp=Z,27µmcomp=Z,3µm,1.0s						
BATI	Baumata	8.24	238	P	Pn	20 12 50.0	-0.9
	comp=Z,7µm,0.7s,baz=132,slow=2.2,SNR=435						
BATI				S	Sn	20 14 17.4	-5.1
	comp=Z,6µm,0.9s,baz=270,slow=23,SNR=8.7						
BATI	Baumata	8.24	238	P	Pn	20 12 49.8	-1.1
SMPI	Sarmi	8.81	64	P	Pn	20 12 57.8	-0.7
	comp=Z,15µmcomp=Z,37µmcomp=Z,3µm,1.2s						
MMRI	Maumere	8.89	251		Pn	20 12 58.3	-1.2
MMRI	Maumere	8.89	251	P	Pn	20 12 59.7	+0.1
MMRI	Maumere	8.89	251	S	Sn	20 14 37.0	-1.1
MMRI	Maumere	8.89	251	P	Pn	20 12 59.2	-0.4
	comp=Z,17µmcomp=Z,27µmcomp=Z,2µm,1.0s						
LUWI	Luwuk	9.30	301		Pn	20 13 03.5	-1.6
LUWI	Luwuk	9.30	301	P	Pn	20 13 05.5	+0.4
LUWI	Luwuk	9.30	301	P	Pn	20 13 05.3	+0.2
	comp=Z,10µmcomp=Z,20µmcomp=Z,2µm,1.1s						
KMSI	Cibinong	9.32	313	P	Pn	20 13 04.0	-1.3
	comp=Z,36µmcomp=Z,5µm,1.0s						
EDFI	Ende, Flores	9.44	252	P	Pn	20 13 06.2	-0.8
	comp=Z,15µmcomp=Z,21µmcomp=Z,2µm,1.1s						
GENI	Genyem	9.93	71	P	Pn	20 13 12.9	-0.6
GENI	Genyem	9.93	71	P	Pn	20 13 12.4	-1.1
	comp=Z,13µmcomp=Z,41µmcomp=Z,5µm,1.1s						
KNRA	Kununurra	9.94	191		Pn	20 13 09.9	-3.7
KNRA	Kununurra	9.94	191	P	Pn	20 13 10.1	-3.6
	comp=Z,0.0nmcomp=Z,4µm,1.0s						
BSSI	Bau Bau, Buton	10.22	268	P	Pn	20 13 18.4	+1.0
	comp=Z,11µmcomp=Z,14µmcomp=Z,1µm,0.8s						
APSI	Ampana	10.34	298	P	Pn	20 13 20.0	+1.0
	comp=Z,16µmcomp=Z,2µm,1.0s						
JAY	Jayapura	10.46	72	P	Pn	20 13 19.6	-1.0
	comp=Z,2µm,0.8s,baz=254,slow=7.7,SNR=134						
JAY				S	Sn	20 15 10.3	-5.8
	comp=Z,867nm,0.9s,baz=70,slow=9.5,SNR=5.8						
JAY				LR	LR	20 18 27.0	
	comp=Z,2µm,21.4s,baz=269,slow=43						
JAY	Jayapura	10.46	72	P	Pn	20 13 18.3	-2.3
	comp=Z,21µmcomp=Z,3µm,0.9s						
BNSI	Bone	10.71	277	P	Pn	20 13 25.1	+1.1
	comp=Z,14µmcomp=Z,16µmcomp=Z,2µm,1.0s						
MRSI	Marisa	10.83	305	P	Pn	20 13 25.0	-0.5
SGSI	Sangihe	10.84	331	P	Pn	20 13 23.7	-1.9
	comp=Z,8µmcomp=Z,4µm,0.9s						
BASI	Baing, Sumba	10.97	246	P	Pn	20 13 25.8	-1.6
	comp=Z,13µmcomp=Z,24µmcomp=Z,2µm,1.3s						
KAPI	Kappang	10.99	274		Pn	20 13 26.2	-1.5
KAPI	Kappang	10.99	274	P	Pn	20 13 29.2	+1.5
	comp=Z,168nm,0.7s,baz=164,slow=6.0,SNR=29						
KAPI				S	Sn	20 15 22.6	-6.4
	comp=Z,92nm,0.9s,baz=244,slow=21,SNR=0.8						
KAPI	Kappang	10.99	274	P	Pn	20 13 28.2	+0.4
KAPI				S	Sn	20 15 31.4	+2.4
KAPI	Kappang	10.99	274	P	Pn	20 13 27.2	-0.5
KAPI	Kappang	10.99	274	*i* P	Pn	20 13 28.1	+0.4
WSI	Waingapu	11.03	249	P	Pn	20 13 25.2	-3.0
SPSI	Sidrap Palu	11.12	279	P	Pn	20 13 30.8	+1.5
	comp=Z,12µmcomp=Z,18µmcomp=Z,2µm,1.1s						
TTSI	Tana Toraja	11.26	284	P	Pn	20 13 33.6	+2.3
	comp=Z,10µmcomp=Z,25µmcomp=Z,1µm,0.9s						
WBSI	Waikabubak, Su	11.87	251	P	Pn	20 13 36.0	-3.4
	comp=Z,10µmcomp=Z,14µmcomp=Z,2µm,0.9s						
PCI	Palu	11.97	294	P	Pn	20 13 42.2	+1.6
	comp=Z,12µmcomp=Z,15µmcomp=Z,1µm,1.0s						
TOLI2	Tolitoli	12.14	305		Pn	20 13 42.0	-0.8
TOLI2	Tolitoli	12.14	305	P	Pn	20 13 43.5	+0.7
MPSI	Mapaga	12.48	299	P	Pn	20 13 47.6	+0.4
	comp=Z,9µmcomp=Z,12µmcomp=Z,1µm,1.0s						
FITZ	Fitzroy Crossi	13.14	202	Pn	Pn	20 13 50.3	-5.5
FITZ	Fitzroy Crossi	13.14	202	P	Pn	20 13 50.6	-5.2
FITZ	Fitzroy Crossi	13.14	202	P	Pn	20 13 51.5	-4.4
	comp=Z,1µm,0.6s,baz=26,slow=10.0,SNR=1624						
FITZ				S	Sn	20 16 03.7	-17
	comp=Z,1µm,0.4s,baz=50,slow=14,SNR=6.4						
PLAI	Plampang	13.21	256	P	Pn	20 13 55.5	-1.2
PLAI	Plampang	13.21	256	P	Pn	20 13 53.7	-3.0
	comp=Z,10µmcomp=Z,10µmcomp=Z,1µm,0.9s						
I39PW	PALAU INFRASON	13.84	16	P	P	20 14 09.0	+0.2
	baz=219,slow=19,SNR=1.7						
DAV	Davao City (W)	13.85	338		Pn	20 14 03.4	-1.5
DAV	Davao City (W)	13.85	338	P	Pn	20 14 04.8	-0.2
	comp=Z,440nm,0.7s,baz=103,slow=1.7,SNR=19						
DAV	Davao City (W)	13.85	338	P	Pn	20 14 04.5	-0.5
DAV				S	Sn	20 16 38.2	0.0
DAV	Davao City (W)	13.85	338	P	Pn	20 14 05.2	+0.2
DAV	Davao City (W)	13.85	338	P	Pn	20 14 02.0	-3.0
WB0	Warramunga Arr	14.26	166	Pn	Pn	20 14 04.1	-6.0
WRAB	Tennant Creek	14.41	166	Pn	Pn	20 14 06.3	-5.7
WRAB	Tennant Creek	14.41	166	*i* P	Pn	20 14 06.4	-5.6
WRA	Warramunga Arr	14.42	166	Pn	Pn	20 14 06.1	-6.0
WRA	Warramunga Arr	14.42	166	P	Pn	20 14 06.5	-5.5
	comp=Z,22nm,0.4s,baz=350,slow=13,SNR=286						
WRA				S	Sn	20 16 35.3	-16
	comp=Z,309nm,0.8s,baz=342,slow=22,SNR=9.2						
WRA				P3KPbc		20 49 37.6	
	comp=Z,0.2nm,0.5s,baz=163,slow=3.0,SNR=9.8						
WRA	Warramunga Arr	14.42	166	P	Pn	20 14 06.1	-6.0
WR8	Warramunga Arr	14.47	166	Pn	Pn	20 14 06.5	-6.2
SMKI	Samarinda	14.56	291	P	P	20 14 16.0	-0.8
	comp=Z,13µmcomp=Z,14µmcomp=Z,1µm,1.0s						
BKB	Balikpapan	14.57	288	P	P	20 14 16.3	-0.6
BKB	Balikpapan	14.57	288	P	Pn	20 14 14.5	+0.4
BKB	Balikpapan	14.57	288	P	P	20 14 17.1	+0.2
	comp=Z,15µmcomp=Z,25µmcomp=Z,1µm,1.4s						
COEN	Coen	14.62	124		Pn	20 14 11.7	-3.0
COEN	Coen	14.62	124	P	Pn	20 14 12.0	-2.7
	comp=Z,1µm,1.0s						
COEN	Coen	14.62	124	P	Pn	20 14 13.6	-1.1
SRBI	Singaraja	15.59	261	P	Pn	20 14 25.7	-1.1
	comp=Z,10µmcomp=Z,14µmcomp=Z,930nm,1.1s						
DNP	Denpasar	15.68	259	P	Pn	20 14 26.2	-1.7
	comp=Z,22µmcomp=Z,1µm,0.8s						
MYLDM	Lahad Datu	16.44	312	P	P	20 14 37.7	0.0
MYLDM	Lahad Datu	16.44	312	P	P	20 14 38.1	+0.5
PMG	Port Moresby	16.63	103		Pn	20 14 38.2	-1.3
PMG	Port Moresby	16.63	103	P	P	20 14 40.2	+0.6
	comp=Z,1µm,0.8s,baz=300,slow=4.2,SNR=214						
PMG				S	Sn	20 17 31.4	-13
	comp=Z,524nm,0.7s,baz=30,slow=24,SNR=13						
PMG	Port Moresby	16.63	103	P	P	20 14 40.5	+0.8
PMG	Port Moresby	16.63	103	P	Pn	20 14 39.3	-0.2
JAGI	Jajag, Banyuwa	16.68	260	Pn	Pn	20 14 37.5	-2.7
JAGI	Jajag, Banyuwa	16.68	260	P	Pn	20 14 39.4	-0.8
JAGI	Jajag, Banyuwa	16.68	260	P	Pn	20 14 37.0	-3.2
	comp=Z,11µmcomp=Z,8µmcomp=Z,677nm,0.8s						
KMMI	Kalianget	16.73	265	P	P	20 14 43.1	+2.3
QIS	Mount Isa	16.94	150	P	P	20 14 40.5	-2.6
	comp=Z,0.0nmcomp=Z,610nm,0.8s						
QIS	Mount Isa	16.94	150	P	P	20 14 40.9	-2.2
MANU	Manus Island	16.99	78	P	P	20 14 43.4	-0.4
GMJI	Gumukmas	17.35	261	P	P	20 14 45.4	-2.3
AS15	Alice Springs	17.92	171	P	P	20 14 53.2	-0.8
	comp=Z,492nm,0.7s						
AS31	Alice Springs	17.95	171	P	P	20 14 53.6	-0.6
AS31	Alice Springs	17.95	171	P	P	20 14 53.6	-0.6
ASAR	Alice Springs	17.95	171	P	P	20 14 53.8	-0.4
ASAR	Alice Springs	17.95	171	P	P	20 14 54.6	+0.4
	comp=Z,228nm,0.5s,baz=3.2,slow=11,SNR=528						
ASAR				S	S	20 17 58.8	-15
	comp=Z,437nm,0.8s,baz=355,slow=27,SNR=13						
ASAR				P3KPbc		20 49 22.7	
	comp=Z,0.8nm,0.8s,baz=159,slow=3.9,SNR=5.3						
ASAR				P3KP		20 50 15.9	
	comp=Z,3.0nm,1.1s,baz=24,slow=0.4,SNR=4.8						
AS01	Alice Springs	17.96	170	P	P	20 14 54.6	+0.3
MTSU	Mount Surprise	17.99	134	P	P	20 14 54.9	+0.2
	comp=Z,547nm,0.8s						
MTSU	Mount Surprise	17.99	134	P	Pn	20 14 55.5	-0.5
BWJI	Bawean	18.01	269	P	P	20 14 55.0	+0.1
	comp=Z,37µmcomp=Z,3µm,1.3s						
GRJI	Gresik	18.20	266	P	P	20 14 56.5	-0.5
	comp=Z,31µmcomp=Z,3µm,1.1s						
MBWA	Marble Bar	18.58	214	P	P	20 15 00.7	-0.5
MBWA	Marble Bar	18.58	214	P	P	20 15 00.8	-0.3
	comp=Z,0.0nmcomp=Z,1µm,1.1s						
MBWA	Marble Bar	18.58	214	P	P	20 15 01.1	+0.1
MBWA	Marble Bar	18.58	214	P	P	20 15 01.2	+0.1
KKM	Kota Kinabalu	18.73	309	Pn	P	20 15 03.6	+0.7
KKM	Kota Kinabalu	18.73	309	P	Pn	20 15 03.9	-0.9
PSAD1	Pilbara Seismi	18.77	213	P	P	20 15 03.1	0.0
	comp=Z,1µm,1.1s						
PSAC2	Pilbara Seismi	18.82	213	P	P	20 15 03.7	+0.1
	comp=Z,1µm,1.1s						
TBJI	Tambak Boyo	18.82	266	P	P	20 15 03.8	0.0
	comp=Z,21µmcomp=Z,2µm,1.1s						
PSAB2	Pilbara Seismi	18.83	213	P	P	20 15 03.6	-0.2
	comp=Z,2µm,1.1s						
PSA00	Pilbara Seismi	18.85	213	P	P	20 15 04.0	-0.1
PSA00	Pilbara Seismi	18.85	213	P	P	20 15 04.2	+0.1
	comp=Z,2µm,0.9s						
PSA00	Pilbara Seismi	18.85	213	P	P	20 15 04.3	+0.3
NGJI	Ngawi	19.23	264	P	P	20 15 07.8	-0.4
	comp=Z,10µmcomp=Z,1µm,1.1s						
PCJI	Pacitan	19.57	262	P	P	20 15 09.2	-2.7
	comp=Z,8µmcomp=Z,624nm,0.9s						
WOJI	Wonogiri, Jawa	19.79	263	P	P	20 15 12.6	-1.7
	comp=Z,10µmcomp=Z,10µmcomp=Z,701nm,1.1s						
STKI	Sintang	20.13	286	P	P	20 15 17.4	-0.6
	comp=Z,10µmcomp=Z,16µmcomp=Z,1µm,1.3s						
UGM	Wanagama	20.20	263	P	P	20 15 17.5	-1.1
UGM	Wanagama	20.20	263	P	P	20 15 19.5	+0.8
UGM	Wanagama	20.20	263	P	P	20 15 17.6	-1.1
	comp=Z,9µmcomp=Z,8µmcomp=Z,429nm,0.6s						
SMRI	Semarang	20.23	266	P	P	20 15 18.3	-0.7
SMRI	Semarang	20.23	266	P	P	20 15 19.7	+0.7
SMRI	Semarang	20.23	266	P	P	20 15 18.7	-0.3
	comp=Z,696nm,0.7s						
YOGI	Yogyakarta	20.41	263	P	P	20 15 19.6	-1.4
	comp=Z,680nm,0.7s						
CTAO	Charters Tower	20.65	135	P	P	20 15 24.3	+0.8
CTAO	Charters Tower	20.65	135	P	P	20 15 24.9	+1.4
CTAO	Charters Tower	20.65	135	P	P	20 15 24.3	+0.8
RABL	Rabaul	21.38	87	P	P	20 15 30.5	-1.0
KSM	Kuching	21.69	289	P	P	20 15 32.8	-1.9
KSM	Kuching	21.69	289	P	P	20 15 34.5	-0.2
JCJI	Jatiwangi	22.37	267	P	P	20 15 40.1	-1.5
	comp=Z,8µmcomp=Z,23µmcomp=Z,2µm,1.4s						
BBJI	Bungbulang	23.01	265	P	P	20 15 45.7	-2.2
LEM	Lembang	23.02	266	P	P	20 15 46.7	-1.4
	comp=Z,15µmcomp=Z,1µm,0.7s						
GIRL	Giralia	23.08	222	P	P	20 15 48.8	+0.4
GIRL	Giralia	23.08	222	P	P	20 15 48.7	+0.4
	comp=Z,1µm,1.2s						
GIRL	Giralia	23.08	222	P	P	20 15 49.6	+1.3
TPI	Tanjungpandan	23.25	277	P	P	20 15 48.9	-1.1
	comp=Z,8µmcomp=Z,6µmcomp=Z,696nm,1.2s						
CNJI	Cibinong	23.52	265	P	P	20 15 49.4	-3.1
	comp=Z,4µm,1.2s						
MEEK	Meekatharra	23.68	208	P	P	20 15 53.4	-0.4
	comp=Z,0.0nmcomp=Z,563nm,1.0s						
MEEK	Meekatharra	23.68	208	P	P	20 15 54.0	+0.1
GUMO	Guam	23.87	36	P	P	20 15 56.1	+0.5
GUMO	Guam	23.87	36	LR	LR	20 25 10.1	
	comp=Z,1µm,20.8s,baz=221,slow=36						
GUMO	Guam	23.87	36	P	P	20 15 57.2	+1.6
GUMO	Guam	23.87	36	P	P	20 15 56.1	+0.5
SKJI	Sukabumi	24.08	266	P	P	20 15 54.0	-3.5
	comp=Z,6µmcomp=Z,22µmcomp=Z,3µm,0.9s						
QLP	Quilpie	24.28	150	P	P	20 15 59.8	+0.6
	comp=Z,1µm,1.2s						
QLP	Quilpie	24.28	150	P	P	20 16 00.3	+1.1
SBJI	Serang	24.50	268	P	P	20 15 59.7	-1.6
	comp=Z,10µmcomp=Z,739nm,1.9s						
FORT	Forrest	24.91	186	P	P	20 16 04.9	0.0
FORT	Forrest	24.91	186	P	P	20 16 05.1	+0.2
	comp=Z,586nm,0.8s						
FORT	Forrest	24.91	186	P	P	20 16 05.2	+0.3
CGJI	Cibinong	24.93	267	P	P	20 16 02.4	-2.9
	comp=Z,11µmcomp=Z,1µm,0.7s						
XMI	Christmas Isla	25.23	258	P	P	20 16 08.1	+0.1
XMIS	Christmas Isla	25.27	258	IAmb	IAmb	20 16 10.1	
	comp=Z,389nm,0.8s						
BLSI	Bandar Lampung	25.40	270	P	P	20 16 08.0	-1.5
PMBI	Palembang	26.07	275	P	P	20 16 14.9	-0.7
PMBI	Palembang	26.07	275	P	P	20 16 16.7	+1.1
PMBI	Palembang	26.07	275	P	P	20 16 15.5	-0.1
	comp=Z,5µmcomp=Z,12µmcomp=Z,1µm,0.9s						
MDSI	Maura Dua	26.51	272	P	P	20 16 18.7	-0.8
	comp=Z,6µmcomp=Z,311nm,1.2s						
GD1S	Gladstone Soft	26.55	134	P	P	20 16 20.8	+1.1
LWLI	Liwa	26.59	271	P	P	20 16 18.5	-2.0
	comp=Z,6µmcomp=Z,5µmcomp=Z,560nm,0.8s						
KMBL	Kambalda	26.70	197	P	P	20 16 21.3	+0.3
	comp=Z,521nm,0.7s						
KMBL	Kambalda	26.70	197	P	P	20 16 21.0	0.0
MORW	Morawa	26.95	209	P	P	20 16 22.6	-0.7
MORW				IAmb	IAmb	20 16 58.7	
	comp=Z,612nm,1.4s						
MORW	Morawa	26.95	209	P	P	20 16 23.2	-0.1
MORW	Morawa	26.95	209	P	P	20 16 22.9	-0.4
BBOO	Buckleboo	27.26	170	P	P	20 16 25.6	-0.3
BBOO				IAmb	IAmb	20 17 15.9	
	comp=Z,309nm,0.9s						
BBOO	Buckleboo	27.26	170	P	P	20 16 25.7	-0.3
	comp=Z,156nm,0.9s						
BBOO	Buckleboo	27.26	170	P	P	20 16 25.8	-0.2
EIDS	Eidsvold	27.47	137	P	P	20 16 27.8	-0.2
EIDS				IAmb	IAmb	20 17 15.4	
	comp=Z,531nm,1.1s						
EIDS	Eidsvold	27.47	137	P	P	20 16 27.7	-0.2
	comp=Z,0.0nmcomp=Z,99nm,1.2s						
EIDS	Eidsvold	27.47	137	P	P	20 16 28.2	+0.2
MNAI	Manna	27.73	272	P	P	20 16 29.4	-1.1
MNAI				IAmb	IAmb	20 16 40.6	
	comp=Z,470nm,1.0s						
MNAI	Manna	27.73	272	P	P	20 16 30.0	-0.5
	comp=Z,404nm,0.7s						
WHYH	Whyalla	27.76	168	P	P	20 16 30.7	+0.2
STKA	Stephens Creek	27.79	160	P	P	20 16 30.5	-0.2
STKA	Stephens Creek	27.79	160	P	P	20 16 30.9	+0.1

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      comp=Z,631nm,0.8s
STKA  Stephens Creek    27.79 160   P       P        20 16 31.1 +0.4
      comp=Z,104nm,0.6s,baz=335,slow=8.9,SNR=347
STKA                                P3KPbc           20 48 49.5
      comp=Z,5.1nm,0.9s,baz=160,slow=7.4,SNR=9.9
STKA                                P3KP             20 49 56.0
      comp=Z,1.1nm,0.7s,baz=121,slow=7.8,SNR=3.0
      comp=Z,104nm,0.6s
STKA  Stephens Creek    27.79 160   P       P        20 16 31.1 +0.4
STKA  Stephens Creek    27.79 160 i P       P        20 16 31.0 +0.2
BLDU  Ballidu           27.94 207   P       P        20 16 31.8 -0.3
      comp=Z,130nm,0.9s
BLDU  Ballidu           27.94 207   P       P        20 16 32.6 +0.5
KSI   Kapahiang         28.16 273   P       P        20 16 34.1 -0.2
      comp=Z,5µmcomp=Z,286nm,0.9s
KLBR  Kellerberrin      28.34 204   P       P        20 16 35.7  0.0
      comp=Z,1µm,0.6s
KLBR  Kellerberrin      28.34 204   P       P        20 16 35.7  0.0
DLV    Lat              28.35 309   P       P        20 16 35.7 -0.5
DLV                                 IAmb    IAmb     20 16 38.1
      comp=Z,508nm,1.2s
DLV    Lat              28.35 309   P       P        20 16 36.3 +0.1
HTT   Hallett           28.45 166   P       P        20 16 36.7 +0.1
      comp=Z,19nm,1.3s
HTT   Hallett           28.45 166   P       P        20 16 37.3 +0.6
HTT   Hallett           28.45 166   P       P        20 16 36.8 +0.1
TATA  Tatamba Isabel    28.92  97   P       P        20 16 41.6 +0.6
SAVO  Savo Central      28.98  98   P       P        20 16 41.9 +0.3
CMSA  Cobar Meteorol    29.12 153   P       P        20 16 42.7 +0.2
      comp=Z,133nm,1.0s
CMSA  Cobar Meteorol    29.12 153   P       P        20 16 43.0 +0.5
HNR   Honiara           29.13  99   P       P        20 16 42.9  0.0
HNR   Honiara           29.13  99   P       P        20 16 43.7 +0.8
HNR   Honiara           29.13  99   P       P        20 16 42.9  0.0
HNR                                 pmax    pmax
      comp=Z,790nm,0.9s
MUN   Mundaring         29.33 206   P       P        20 16 44.4  0.0
      comp=Z,165nm,0.8s
MUN   Mundaring         29.33 206   P       P        20 16 44.5 +0.1
MUN   Mundaring         29.33 206   P       P        20 16 44.2 -0.2
MTKN  Mount Kenneth     29.48 207   P       P        20 16 46.6 +0.9
      comp=Z,337nm,1.0s
MTKN  Mount Kenneth     29.48 207   P       P        20 16 47.1 +1.4
NGOA  Tingoa Renbel     29.49 103   P       P        20 16 46.0 -0.1
NWAO  Narrogin (SRO)    29.73 203   P       P        20 16 47.8 -0.1
NWAO                                IAmb    IAmb     20 17 37.8
      comp=Z,956nm,1.6s
NWAO  Narrogin (SRO)    29.73 203   P       P        20 16 48.1 +0.2
      comp=Z,232nm,0.8s
NWAO  Narrogin (SRO)    29.73 203   LR      LR       20 30 36.2
      comp=Z,1µm,19.1s,baz=16,slow=40
NWAO  Narrogin (SRO)    29.73 203   P       P        20 16 47.8 -0.1
NWAO  Narrogin (SRO)    29.73 203   P       P        20 16 48.1 +0.2
NWAO  Narrogin (SRO)    29.73 203   P       P        20 16 48.5 +0.6
NWAO  Narrogin (SRO)    29.73 203   P       P        20 16 47.8 -0.1
NWAO                                pmax    pmax
      comp=Z,956nm,1.6s
GHSS  Government Hou    29.80 167   P       P        20 16 49.3 +0.8
ALEG  Aligegeo Malai    29.82  97   P       P        20 16 48.6 -0.4
TWGBT Beinan            30.04 342   P       P        20 16 48.6 -2.2
TWG   Pinlang           30.05 342   P       P        20 16 47.8 -3.0
PATS  Pohnpei           30.25  66   P       P        20 16 51.9 -0.9
PATS                                IAmb    IAmb     20 16 55.0
      comp=Z,349nm,0.9s
PATS  Pohnpei           30.25  66   P       P        20 16 52.7 -0.1
      comp=Z,448nm,0.9s
PATS  Pohnpei           30.25  66   P       P        20 16 53.9 +1.1
BKNI  Bangkinang        30.30 281   P       P        20 16 51.3 -2.0
BKNI  Bangkinang        30.30 281   P       P        20 16 53.6 +0.3
BKNI  Bangkinang        30.30 281   P       P        20 16 52.4 -0.9
      comp=Z,4µmcomp=Z,6µmcomp=Z,681nm,0.8s
YULB  Yu-li             30.52 343   P       P        20 16 52.1 -2.9
YULB                                        PcP      20 19 49.7 -1.3
YULB  Yu-li             30.52 343   P       P        20 16 53.3 -1.7
TPUB  Ta-pu             30.63 341   P       P        20 16 53.4 -2.6
TPUB                                IAmb    IAmb     20 17 19.5
      comp=Z,217nm,1.0s
TPUB  Ta-pu             30.63 341   P       P        20 16 54.8 -1.2
PPI   Padang Panjang    30.78 279   P       P        20 16 55.4 -2.1
      comp=Z,4µmcomp=Z,6µmcomp=Z,647nm,0.8s
JMJ   Miyako jima 2     30.96 350   P       P        20 17 00.3 +1.5
SSLB  Suanglung         30.99 342   P       P        20 16 56.8 -2.4
SSLB                                IAmb    IAmb     20 16 59.6
      comp=Z,324nm,0.9s
SSLB  Suanglung         30.99 342   P       P        20 16 57.7 -1.5
YOJ   Yonaguni jima     31.08 346   P       P        20 16 59.7 -0.2
YOJ   Yonaguni jima     31.08 346   P       P        20 17 00.3 +0.4
YOJ   Yonaguni jima     31.08 346   P       P        20 16 59.7 -0.2
YOJ                                 pmax    pmax
      comp=Z,621nm,0.7s
HURO  Huro Makira       31.15 100   P       P        20 17 00.4 -0.3
NACB  Ninganchiao       31.17 344   P       P        20 16 58.8 -1.9
NACB                                IAmb    IAmb     20 17 00.3
      comp=Z,744nm,1.9s
NACB  Ninganchiao       31.17 344   P       P        20 16 59.5 -1.2
RKGY  Rocky Gully       31.31 202   P       P        20 17 03.2 +1.3
      comp=Z,114nm,1.2s
ARMA  Armidale          31.33 144   P       P        20 17 02.0 -0.3
ARMA  Armidale          31.33 144   P       P        20 17 03.1 +0.8
      comp=Z,54nm,1.1s
ARMA  Armidale          31.33 144   P       P        20 17 02.8 +0.5
JMZ   Minamidaito 2     31.50   1   P       P        20 17 03.5 -0.1
YHNB  Yeheng            31.70 344   P       P        20 17 05.3 -0.2
MNSI  Mandailing Nat    31.83 281   P       P        20 17 04.9 -1.8
      comp=Z,6µmcomp=Z,799nm,0.8s
SISI  Saibi             31.92 277   P       P        20 17 04.1 -3.4
      comp=Z,4µmcomp=Z,302nm,0.7s
TATO  Taipei            31.96 344   P       P        20 17 05.8 -1.8
TATO  Taipei            31.96 344   P       P        20 17 07.1 -0.5
TATO  Taipei            31.96 344   P       P        20 17 06.1 -1.5
TATO                                PcP     PcP      20 19 55.5 +0.6
TATO                                ScP     ScP      20 23 26.0 -0.3
QIZ   Qiongzhong        32.20 321           P        20 17 09.6 -0.2
QIZ                                 IAmb    IAmb     20 17 11.5
      comp=Z,556nm,1.0s
QIZ   Qiongzhong        32.20 321⇑iP       P        20 17 10.3 +0.5
QIZ                                 PP      PP       20 18 26.3 +1.0
QIZ                                 PcP     PcP      20 19 56.1 +0.5
QIZ                                 S       S        20 22 13.4  0.0
QIZ                                 ScP     ScP      20 23 28.5 +1.2
QIZ                                 pmax    pmax
      comp=Z,400nm,1.1s
QIZ                                 LR      LR
      comp=Z,810nm,15.1s
QIZ                                 LR      LR
      comp=Z,820nm,15.9s
QIZ   Qiongzhong        32.20 321   P       P        20 17 10.1 +0.3
QIZ   Qiongzhong        32.20 321   P       P        20 17 10.1 +0.3
QIZ                                 PcP     PcP      20 19 56.4 +0.8
QIZ                                 ScP     ScP      20 23 28.4 +1.2
HKPS  Hong Kong Po S    32.36 330   P       P        20 17 11.0 -0.2
HKPS                                IAmb    IAmb     20 17 12.5
      comp=Z,393nm,1.0s
HKPS                                        PcP      20 19 57.2 +1.2
ARPS  Mount Arapiles    32.38 163   P       P        20 17 12.1 +0.9
      comp=Z,167nm,0.8s
ARPS  Mount Arapiles    32.38 163   P       P        20 17 12.5 +1.3
KNMB  Chin-men Tao      32.47 339   P       P        20 17 11.7 -0.4
JOW   Kunigami          32.60 356   P       P        20 17 13.8 +0.6
JOW   Kunigami          32.60 356   LR      LR       20 29 38.6
      comp=Z,1µm,21.7s,baz=151,slow=34
JOW   Kunigami          32.60 356   P       P        20 17 14.8 +1.6
YNG   Young             32.66 152   P       P        20 17 14.6 +0.9
      comp=Z,231nm,0.9s
H01W1 Cape Leeuwin H    32.70 206   P       P        20 17 13.6 -0.1
      baz=180,slow=76,SNR=6.3
H01W3 Cape Leeuwin H    32.70 206   P       P        20 17 14.7 +1.0
      baz=180,slow=76,SNR=3.8
UBPT  Khong Chiam       32.70 310   P       P        20 17 14.2 -0.1
UBPT  Khong Chiam       32.70 310   P       P        20 17 14.6 +0.3
H01W2 Cape Leeuwin H    32.72 206   P       P        20 17 13.6 -0.2
      baz=180,slow=76,SNR=4.9
QZH   Quanzhou          32.84 339⇑iP       P        20 17 15.4 +0.1
QZH                                 PcP     PcP      20 19 58.4 +1.2
QZH                                 S       S        20 22 20.3 -2.7
QZH                                 pmax    pmax
      comp=Z,460nm,0.9s
QZH                                 pmax    pmax
      comp=Z,660nm,2.6s
RPSI  Rantau Prapat     32.91 284   P       P        20 17 14.1 -2.1
RPSI                                IAmb    IAmb     20 17 21.0
      comp=Z,282nm,1.0s
PSI   Prapat            32.94 284   LR      LR       20 30 38.0
      comp=Z,903nm,21.9s,baz=114,slow=36
PSI   Prapat            32.94 284   P       P        20 17 14.2 -2.4
PSI   Prapat            32.94 284   P       P        20 17 14.1 -2.5
PSI                                 pmax    pmax
      comp=Z,282nm,1.0s
MGBR  Mount Gambier     32.95 166   P       P        20 17 15.7 -0.4
MGCD  Mangrove Creek    33.14 148   P       P        20 17 19.2 +1.3
      comp=Z,111nm,0.7s
SYDH  Sydney Hard Ro    33.38 149   P       P        20 17 21.5 +1.6
GZH   Guangzhou         33.44 330   P       P        20 17 23.5 +3.0
GZH                                 PP      PP       20 18 42.3 +3.4
GZH                                 PcP     PcP      20 20 01.5 +2.5
GZH                                 S       S        20 22 39.5 +7.1
GZH                                 pmax    pmax
      comp=Z,600nm,1.1s
RIV   Riverview         33.65 148   P       P        20 17 22.7 +0.4
      comp=Z,113nm,1.0s
RIV   Riverview         33.65 148   P       P        20 17 22.8 +0.6
CAN   Canberra          33.79 153   P       P        20 17 24.2 +0.7
CAN   Canberra          33.79 153   P       P        20 17 24.8 +1.3
      comp=Z,190nm,0.9s
CAN   Canberra          33.79 153   P       P        20 17 25.2 +1.7
CAN   Canberra          33.79 153   P       P        20 17 24.2 +0.7
CAN                                 pmax    pmax
      comp=Z,123nm,0.8s
CAN   Canberra          33.79 153   P       P        20 17 24.9 +1.4
CAN                                 PcP     PcP      20 20 01.4 +1.6
CAN                                 ScP     ScP      20 23 34.4 +1.8
GSI   Gunungsitoli      33.90 281   P       P        20 17 21.7 -3.0
GSI   Gunungsitoli      33.90 281   P       P        20 17 22.4 -2.3
GSI   Gunungsitoli      33.90 281   P       P        20 17 21.7 -3.0
      comp=Z,4µmcomp=Z,472nm,0.8s
CNB   Canberra Magne    33.95 152   P       P        20 17 26.1 +1.2
      comp=Z,106nm,0.9s
CNB   Canberra Magne    33.95 152   P       P        20 17 26.6 +1.6
WOLH  Wollongong Har    33.95 149   P       P        20 17 25.6 +0.7
SRIT  Nakonsritamara    34.23 295   P       P        20 17 26.9 -0.6
SRIT                                IAmb    IAmb     20 17 29.6
      comp=Z,373nm,0.8s
SRIT  Nakonsritamara    34.23 295   P       P        20 17 27.8 +0.3
TOO   Toolangi          34.30 159   P       P        20 17 28.4 +0.5
TOO   Toolangi          34.30 159   P       P        20 17 29.2 +1.3
      comp=Z,0.0nmcomp=Z,46nm,1.0s
TOO   Toolangi          34.30 159   P       P        20 17 28.4 +0.5
TOO                                 pmax    pmax
      comp=Z,39nm,1.0s
GEXS  Deakin Univers    34.45 161   P       P        20 17 30.7 +1.6
JCJ   Chichijima        34.58  18   P       P        20 17 29.3 -1.1
JCJ                                 IAmb    IAmb     20 17 36.7
      comp=Z,431nm,1.0s
JCJ   Chichijima        34.58  18   LR      LR       20 30 38.7
      comp=Z,815nm,19.2s,baz=52,slow=34
JCJ   Chichijima        34.58  18   P       P        20 17 31.2 +0.8
MILA  Mila              35.30 154   P       P        20 17 37.2 +0.7
      comp=Z,14nm,1.6s
LHMI  Lhok Sumawe       35.52 287   P       P        20 17 37.2 -1.4
LHMI  Lhok Sumawe       35.52 287   P       P        20 17 38.9 +0.3
LHMI  Lhok Sumawe       35.52 287   P       P        20 17 37.5 -1.1
MLSI  Meulaboh, Aceh    35.76 286   P       P        20 17 38.3 -2.4
      comp=Z,7µmcomp=Z,820nm,0.9s
GULI  GuiLin            36.78 328   P       P        20 17 49.9 +0.7
GULI                                PP      PnPn     20 19 19.3 +1.9
GULI                                S       S        20 23 26.1 +2.5
GULI                                pmax    pmax
      comp=Z,400nm,1.2s
GULI                                LR      LR
      comp=Z,600nm,20.1s
GULI                                LR      LR
      comp=Z,400nm,17.4s
GULI                                LR      LR
      comp=Z,680nm,19.5s
SANVU Saraoutou         37.00 108   P       P        20 17 51.7 +0.5
SANVU Saraoutou         37.00 108   P       P        20 17 52.5 +1.3
SANVU Saraoutou         37.00 108   P       P        20 17 52.4 +1.3
SANVU                               pP      pP       20 18 15.9 -2.9
SANVU                               pwP     pwP      20 18 24.6  0.0
SANVU                               ScP     ScP      20 23 47.2 +2.7
BSI   Banda Aceh        37.16 287   P       P        20 17 49.1 -3.5
      comp=Z,2µmcomp=Z,258nm,0.9s
VLAKA Lakatoro          37.33 109   P       P        20 17 54.9 +0.9
SLVN  Son La            37.75 317   P       P        20 17 57.3 -0.2
SLVN  Son La            37.75 317   P       P        20 17 58.4 +0.9
SSE   Sheshan           37.88 347   P       P        20 17 59.3 +1.0
SSE                                 S       S        20 23 42.3 +2.3
SSE                                 pmax    pmax
      comp=Z,260nm,1.0s
SSE                                 LR      LR
      comp=Z,380nm,22.7s
SSE                                 LR      LR
      comp=Z,300nm,22.8s
SSE   Sheshan           37.88 347   P       P        20 17 59.0 +0.6
NOUC  Port Laguerre     37.93 119   P       P        20 17 59.6 +0.6
NOUC                                pP      pP       20 18 24.1 -3.1
NOUC                                pwP     pwP      20 18 31.8 +0.7
CNSH  ChangSha          37.97 334   P       P        20 17 59.8 +0.6
CNSH                                S       S        20 23 42.5 +0.9
CNSH                                pmax    pmax
      comp=Z,310nm,0.9s
CNSH                                LR      LR
      comp=Z,1µm,14.3s
CNSH                                LR      LR
      comp=Z,1µm,16.5s
CNSH                                LR      LR
      comp=Z,1µm,51.5s
DZM   Mont Dzumac       38.05 119   P       P        20 18 00.1 +0.1
DZM                                 IAmb    IAmb     20 19 14.9
      comp=Z,164nm,1.2s
DZM   Mont Dzumac       38.05 119  eP       P        20 17 59.2 -0.9
      comp=Z,170nm,1.1s
DZM                                eS       S        20 23 43.9 +0.7
      comp=Z,623nm,26.9s
DZM                                eSS      SS       20 26 31.8 -4.1
      comp=Z,3µm,33.5s
DZM                                eLR      LR       20 28 32.9
      comp=Z,3µm,34.5s
DZM   Mont Dzumac       38.05 119   P       P        20 18 01.6 +1.5
DZM   Mont Dzumac       38.05 119   P       P        20 18 00.9 +0.8
DZM                                 pP      pP       20 18 24.5 -3.7
ONTNC Ouen Toro         38.14 119   P       P        20 18 01.0 +0.3
CORO  Coronation Par    38.33 160   P       P        20 18 02.9 +0.9
YATNC Mamie plateau,    38.43 118   P       P        20 18 05.1 +1.9
OUENC Ouen Island, N    38.51 119   P       P        20 18 05.8 +2.0
JNU   Nakatsue          38.77   0   P       P        20 18 06.0 +0.1
JNU   Nakatsue          38.77   0   P       P        20 18 06.8 +0.9
PINNC Pines Island,     39.10 119   P       P        20 18 09.6 +0.8
MOO   Moorlands         39.23 161   P       P        20 18 11.0 +1.4
      comp=Z,129nm,0.9s
MOO   Moorlands         39.23 161   P       P        20 18 10.6 +1.1
NJ2   Nanjing           39.38 344⇑iP       P        20 18 11.8 +0.9
NJ2                                 ScP     ScP      20 23 53.6 +0.4
NJ2                                 S       S        20 24 01.6 -1.0
NJ2                                 ScS     ScS      20 28 05.3 -0.3
NJ2                                 pmax    pmax
      comp=Z,580nm,0.9s
NJ2                                 pmax    pmax
      comp=Z,2µm,4.4s
WHN   Wuhan             39.47 337 ⇑P       P        20 18 13.1 +1.5
WHN                                 pP      pP       20 18 40.8 +1.1
WHN                                 PP      PP       20 19 46.6 +1.6
WHN                                 ScP     ScP      20 23 54.5 +0.9
WHN                                 S       S        20 24 04.6 +0.6
WHN                                 PcS     PcS      20 24 08.1 +1.0
WHN                                 LR      LR
      comp=Z,1µm,18.2s
JMN   Monobe            39.49   4   P       P        20 18 12.3 +0.5
JMN                                 IAmb    IAmb     20 18 14.4
      comp=Z,645nm,1.4s
JMN   Monobe            39.49   4   P       P        20 18 12.8 +1.0
CM31  Chiang Mai Arr    39.61 308   P       P        20 18 13.2 +0.2
CM31  Chiang Mai Arr    39.61 308   P       P        20 18 14.1 +1.1
      SNR=111
CMAR  Chiang Mai Arr    39.61 308   P       P        20 18 13.5 +0.5
CMAR  Chiang Mai Arr    39.61 308   P       P        20 18 13.8 +0.8
      comp=Z,207nm,0.7s,baz=137,slow=7.3,SNR=1331
CMAR                                PcP     PcP      20 20 19.6 +1.9
      comp=Z,97nm,0.8s,baz=165,slow=2.8,SNR=15
CMAR                                ScP     ScP      20 23 55.7 +1.2
      comp=Z,61nm,1.0s,baz=157,slow=3.0,SNR=24
CMAR                                PKiKP   PKiKP    20 27 29.5 +0.1
      comp=Z,4.6nm,0.8s,baz=219,slow=1.1,SNR=10
CMAR                                PKPPKP  P'P'df   20 50 38.4 -1.2
      comp=Z,0.6nm,0.3s,baz=296,slow=3.1,SNR=4.7
      comp=Z,207nm,0.7s
CMAR  Chiang Mai Arr    39.61 308ceP       P        20 18 13.8 +0.8
CMAR                                pmax    pmax
      comp=Z,224nm,0.7s
TAU   Tasmania Unive    39.69 161   P       P        20 18 15.1 +1.8
TAU                                 sP      pwP      20 18 49.5 +2.4
TAU                                 PcP     PcP      20 20 18.2 +0.8
GYA   Guiyang           39.73 325 ⇑P       P        20 18 14.8 +0.8
GYA                                 PP      PnPn     20 19 50.5 -2.0
GYA                                 PcP     PcP      20 20 19.8 +1.7
GYA                                 ScP     ScP      20 23 55.9 +1.0
GYA                                 S       S        20 24 05.3 -3.0
GYA                                 ScS     ScS      20 28 08.6 +0.4
GYA                                 pmax    pmax
      comp=Z,900nm,0.9s
GYA                                 LR      LR
      comp=Z,850nm,18.0s
CHTO  Chiang Mai        39.81 309   P       P        20 18 14.4 -0.3
CHTO  Chiang Mai        39.81 309   P       P        20 18 15.4 +0.7
CHTO  Chiang Mai        39.81 309   P       P        20 18 14.9 +0.2
CHTO  Chiang Mai        39.81 309   P       P        20 18 14.4 -0.3
CHTO                                pmax    pmax
      comp=Z,697nm,1.0s
CHTO  Chiang Mai        39.81 309   P       P        20 18 15.1 +0.4
CHTO                                PcP     PcP      20 20 19.6 +1.2
CHTO                                ScP     ScP      20 23 56.4 +1.1
INH   Isangel           39.83 114   P       P        20 18 15.6 +0.7
JTU   Tsushima          40.20 358   P       P        20 18 18.6 +1.0
KMI   Kunming           41.13 320 ⇑P       P        20 18 26.9 +1.1
KMI                                 PP      PP       20 20 05.3 +1.9
KMI                                 PcP     PcP      20 20 24.8 +2.0
KMI                                 ScP     ScP      20 24 02.3 +1.7
KMI                                 PcS     PcS      20 24 09.8 -4.6
KMI                                 S       S        20 24 31.5 +2.1
KMI                                 pmax    pmax
      comp=Z,630nm,1.1s
KMI                                 LR      LR
      comp=Z,310nm,22.5s
KMI                                 LR      LR
      comp=Z,730nm,16.8s
KMI                                 LR      LR
      comp=Z,520nm,20.7s
KMI   Kunming           41.13 320   P       P        20 18 26.8 +1.1
KMI                                 PcP     PcP      20 20 24.5 +1.7
KMI                                 ScP     ScP      20 24 01.8 +1.2
ENH   Enshi             41.32 332           P        20 18 27.0 +0.1
ENH   Enshi             41.32 332   P       P        20 18 26.9  0.0
ENH   Enshi             41.32 332 ⇑P       P        20 18 27.2 +0.2
ENH                                 PcP     PcP      20 20 24.1 +1.1
ENH                                 ScP     ScP      20 24 01.3 +0.4
INU   Inuyama           41.42   8   P       P        20 18 26.8 -0.8
INU                                 IAmb    IAmb     20 18 29.4
      comp=Z,559nm,2.0s
INU   Inuyama           41.42   8   P       P        20 18 28.2 +0.6
INU   Inuyama           41.42   8   P       P        20 18 27.9 +0.4
INU                                 pP      pP       20 18 52.1 -2.7
INU                                 sP      pwP      20 19 03.6 -0.5
INU                                 PcP     PcP      20 20 24.0 +0.8
PBA   Port Blair        41.63 295   P       P        20 18 28.4 -1.3
PBA                                 IAmb    IAmb     20 18 32.0
      comp=Z,252nm,0.8s
PBA   Port Blair        41.63 295   P       P        20 18 28.2 -1.5
JGF   Kuroka            41.71   8   P       P        20 18 30.4 +0.3
TJN   Taejon            42.14 356   P       P        20 18 33.9 +0.5
TJN   Taejon            42.14 356   P       P        20 18 34.3 +0.8
TJN   Taejon            42.14 356 i P       P        20 18 34.4 +0.9
PZH   PanZhiHua         42.74 320 ⇑P       P        20 18 38.8 +0.2
PZH                                 PP      PP       20 20 24.0 +3.5
PZH                                 S       S        20 24 51.8 -1.0
PZH                                 pmax    pmax
      comp=Z,640nm,1.0s
PZH                                 pmax    pmax
      comp=Z,2µm,4.2s
PZH                                 LR      LR
      comp=Z,650nm,15.1s
PZH                                 LR      LR
      comp=Z,510nm,16.9s
PZH                                 LR      LR
      comp=Z,470nm,18.8s
MJAR  Matsushiro Arr    42.76   9   P       P        20 18 37.8 -0.7
      comp=Z,175nm,0.9s,baz=187,slow=9.1,SNR=261
MJAR                                PcP     PcP      20 20 27.9 +0.3
      comp=Z,47nm,0.8s,baz=162,slow=3.6,SNR=5.7
MJAR                                ScP     ScP      20 24 08.1 +1.6
      comp=Z,16nm,1.0s,baz=189,slow=4.3,SNR=6.2
      comp=Z,175nm,0.9s
MAJO  Matsushiro        42.76   9   P       P        20 18 37.8 -0.6
MAJO  Matsushiro        42.76   9   P       P        20 18 38.3 -0.2
MAJO  Matsushiro        42.76   9c iP       P        20 18 37.9 -0.6
MAJO                                pmax    pmax
      comp=Z,283nm,0.9s
MAJO  Matsushiro        42.76   9   P       P        20 18 37.9 -0.6
MAJO                                PcP     PcP      20 20 28.6 +0.9
MAJO                                ScP     ScP      20 24 08.0 +1.5
KSAR  Wonju Array Be    43.17 357   P       P        20 18 42.9 +1.1
KSAR  Wonju Array Be    43.17 357   P       P        20 18 42.9 +1.1
KSRS  Korea Array       43.18 357   P       P        20 18 43.0 +1.2
      comp=Z,99nm,0.7s,baz=175,slow=8.9,SNR=406
KSRS                                PcP     PcP      20 20 30.1 +1.1
      comp=Z,61nm,0.8s,baz=182,slow=3.4,SNR=14
KSRS                                ScP     ScP      20 24 08.3 +0.1
      comp=Z,5.2nm,0.8s,baz=179,slow=3.9,SNR=4.8
KSRS                                LR      LR       20 37 35.4
      comp=Z,311µm,19.9s,baz=180,slow=37
      comp=Z,99nm,0.7s
KS19  Wonju Array Si    43.23 357   IAmb    IAmb     20 18 43.6
      comp=Z,146nm,0.8s
INCN  Inchon            43.30 355   P       P        20 18 43.8 +1.0
INCN  Inchon            43.30 355   P       P        20 18 43.8 +1.0
INCN  Inchon            43.30 355   P       P        20 18 43.9 +1.0
INCN                                PcP     PcP      20 20 30.1 +0.7
H11N1 WAKE ISLAND Hy 43.70  54      P       P        20 18 47.0 +0.9
      baz=339,slow=74
H11N2 WAKE ISLAND Hy 43.72  53      P       P        20 18 47.5 +1.3
      baz=339
H11N3 WAKE ISLAND Hy 43.72  54      P       P        20 18 47.2 +1.0
      baz=339,slow=74
LYN   LuoYang           43.76 338   P       P        20 18 47.3 +0.8
LYN                                 PP      PP       20 20 32.5 +1.4
LYN                                 S       S        20 25 04.9 -2.2
LYN                                 pmax    pmax
      comp=Z,980nm,0.8s
TIA   Tai'an            43.77 344   P       P        20 18 46.8 +0.2
TIA                                 PcP     PP       20 20 32.5 +1.2
TIA                                 ScP     ScP      20 24 11.5 +0.8
TIA                                 PcS     PcS      20 24 24.6 +0.5
TIA                                 S       S        20 25 04.6 -2.7
TIA                                 SS      SS       20 28 23.3 -5.3
TIA                                 ScS     ScS      20 28 33.8 +1.5
TIA                                 pmax    pmax
      comp=Z,340nm,1.0s
TIA                                 pmax    pmax
      comp=Z,1µm,3.8s
TIA                                 LR      LR
      comp=Z,380nm,13.0s
TIA                                 LR      LR
      comp=Z,390nm,13.9s
TIA                                 LR      LR
      comp=Z,630nm,18.2s
HJU   Haeju             43.94 354   P       P        20 18 48.8 +1.0
HJU                                 sP      PcP      20 20 32.2 +0.6
HJU                                 S       S        20 25 10.9 +1.3
HJU                                 AmB
      comp=Z,1µm,1.9s
HJU                                 AMS     AMS
      comp=Z,70nm,1.6s
JSD   Sado              44.23   8   P       P        20 18 50.3  0.0
JMM   Marumori          44.50  11   P       P        20 18 53.0 +0.6
JMM                                 IAmb    IAmb     20 18 57.5
      comp=Z,276nm,0.8s
JMM   Marumori          44.50  11   P       P        20 18 53.1 +0.7
XAN   Xi'an             44.75 334 ⇑P       P        20 18 54.5  0.0
XAN                                 pP      pP       20 19 24.8 +1.6
XAN                                 PcP     PcP      20 20 36.0 +1.5
XAN                                 PP      PP       20 20 41.4 -0.3
XAN                                 ScP     ScP      20 24 15.5 +0.7
XAN                                 S       S        20 25 23.3 +1.7
XAN                                 sS      sS       20 26 16.0 +6.2
XAN                                 ScS     ScS      20 28 37.1 -1.6
XAN                                 pmax    pmax
      comp=Z,2µm,0.8s
XAN                                 LR      LR
      comp=Z,780nm,15.1s
XAN                                 LR      LR
      comp=Z,430nm,14.9s
XAN                                 LR      LR
      comp=Z,840nm,16.1s
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XAN	Xi'an	44.75	334	⇑P	P	20 18 54.5	0.0
XAN				PcP	PcP	20 20 35.5	+1.0
XAN				ScP	ScP	20 24 15.2	+0.4
CD2	Chengdu	44.77	326	P	P	20 18 54.6	-0.1
CD2				PP	PP	20 20 40.1	-1.9
CD2				S	S	20 25 25.5	+3.4
CD2				pmax	pmax		
	comp=Z,900nm,1.7s						
CD2				LR	LR		
	comp=Z,810nm,13.2s						
CD2				LR	LR		
	comp=Z,1µm,14.7s						
PYAG	Pyongyang	44.93	354	P	P	20 18 56.9	+1.2
PYAG				S	S	20 25 25.5	+1.5
PYAG				AmB			
	comp=Z,583nm,1.6s						
PYAG				AMS	AMS		
	comp=Z,166nm,2.9s						
DL2	Dalian	45.35	350	⇑iP	P	20 18 59.8	+0.8
DL2				pP	pP	20 19 24.6	-2.5
DL2				sP	sP	20 19 40.1	-1.0
DL2				S	S	20 25 28.5	-1.4
DL2				pmax	pmax		
	comp=Z,390nm,1.1s						
DL2				pmax	pmax		
	comp=Z,540nm,7.2s						
HNS	HongShan	45.58	342	⇑P	P	20 19 01.4	+0.5
HNS				pP	pwP	20 19 33.3	-2.9
HNS				PcP	PcP	20 20 38.9	+1.7
HNS				ScP	ScP	20 24 19.5	+1.5
HNS				S	S	20 25 29.4	-3.9
HNS				ScS	ScS	20 28 44.3	+0.6
HNS				pmax	pmax		
	comp=Z,1µm,1.0s						
HNS				LR	LR		
	comp=Z,290nm,18.2s						
HNS				LR	LR		
	comp=Z,350nm,15.5s						
HNS				LR	LR		
	comp=Z,400nm,15.3s						
HHU	Hamhung	45.66	357	P	P	20 19 02.7	+1.2
HHU				S	S	20 25 36.0	+1.6
HHU				AmB			
	comp=Z,1µm,1.0s						
HHU				AMS	AMS		
	comp=Z,193nm,4.6s						
SUJ	Sinuiju	46.11	353	P	P	20 19 05.5	+0.5
SUJ				S	S	20 25 40.9	+0.1
SUJ				AmB			
	comp=Z,1µm,2.2s						
SUJ				AMS	AMS		
	comp=Z,181nm,4.8s						
TIY	Taiyuan	46.60	340	eP	P	20 19 09.6	+0.6
TIY				PP	PP	20 21 03.0	+2.5
TIY				S	S	20 25 46.8	-1.4
TIY				pmax	pmax		
	comp=Z,510nm,0.7s						
TIY				pmax	pmax		
	comp=Z,2µm,3.6s						
IMP	Imphal	47.06	312	eP	P	20 19 12.2	-0.6
JTM	Tenmabayashi	47.38	11	IAmb	IAmb	20 19 16.9	
	comp=Z,390nm,1.0s						
JTM	Tenmabayashi	47.38	11	P	P	20 19 15.8	+0.9
AZL	Aizawl	47.39	310	eP	P	20 19 15.9	+0.4
BJT	Baijiatuau	47.60	345	P	P	20 19 17.3	+0.6
BJT	Baijiatuau	47.60	345	⇑P	P	20 19 17.2	+0.6
BJT				sP	pwP	20 19 55.0	+3.3
BJT				PcP	PcP	20 20 45.2	+0.9
BJT				ScP	ScP	20 24 28.1	+1.7
BJI	Beijing	47.62	345	P	P	20 19 17.4	+0.6
BJI				PcP	PcP	20 20 45.3	+0.9
BJI				PP	PP	20 21 09.0	-0.6
BJI				ScP	ScP	20 24 26.8	+0.3
BJI				S	S	20 26 01.8	-0.5
BJI				ScS	ScS	20 28 56.1	-0.9
BJI				pmax	pmax		
	comp=Z,380nm,1.2s						
BJI				LR	LR		
	comp=Z,270nm,15.7s						
BJI				LR	LR		
	comp=Z,100nm,18.0s						
BJI				LR	LR		
	comp=Z,230nm,17.7s						
BRDH	Bariadhala	47.63	308	LR	LR	20 42 01.2	
	comp=Z,489nm,21.5s,baz=134,slow=39						
MSVF	Nonsavu	47.63	109	P	P	20 19 18.8	+1.4
MSVF	Nonsavu	47.63	109	P	P	20 19 18.8	+1.4
MSVF	Nonsavu	47.63	109	P	P	20 19 18.8	+1.4
MSVF				pmax	pmax		
	comp=Z,125nm,1.1s						
SNY	Shenyang	47.92	353	⇑P	P	20 19 19.3	+0.3
SNY				pP	pwP	20 19 53.4	-1.4
SNY				PP	PP	20 21 11.6	-0.7
SNY				S	S	20 26 05.0	-1.5
SNY				SS	SS	20 29 34.4	-2.8
SNY				pmax	pmax		
	comp=Z,320nm,1.1s						
SNY				pmax	pmax		
	comp=Z,810nm,3.8s						
SNY				LR	LR		
	comp=Z,380nm,24.7s						
SNY				LR	LR		
	comp=Z,220nm,19.0s						
SNY				LR	LR		
	comp=Z,670nm,19.6s						
FUNA	Funafuti	48.10	96	P	P	20 19 21.5	+0.6
FUNA				IAmb	IAmb	20 19 23.1	
	comp=Z,283nm,0.9s						
FUNA	Funafuti	48.10	96	P	P	20 19 22.3	+1.3
FUNA	Funafuti	48.10	96	P	P	20 19 22.1	+1.1
FUNA				pP	pP	20 19 46.1	-3.2
FUNA				sP	pwP	20 19 57.7	+0.6
MSHR	Mys Shultsa	48.22	0	c iP	P	20 19 21.8	+0.5
MSHR				pmax	pmax		
	comp=Z,343nm,1.0s						
PSTR	Posyet	48.29	0	c iP	P	20 19 22.9	+1.0
AGT	Agartala	48.57	309	eP	P	20 19 25.9	+1.5
ZIRO	ZIRO	48.72	315	eP	P	20 19 26.2	+0.5
VLA	Vladivostok	48.77	1	d iP	P	20 19 26.9	+1.4
VLA				pmax	pmax		
	comp=Z,445nm,1.0s						
LZH	Lanzhou	48.78	331	⇑iP	P	20 19 27.3	+1.3
LZH				PcP	PcP	20 20 50.5	+1.6
LZH				PP	PP	20 21 19.8	-0.7
LZH				ScP	ScP	20 24 33.3	+1.5
LZH				PcS	PcS	20 24 46.3	+0.8
LZH				S	S	20 26 17.3	-1.9
LZH				ScS	ScS	20 29 05.5	+0.1
LZH				pmax	pmax		
	comp=Z,970nm,1.2s						
LZH				pmax	pmax		
	comp=Z,3µm,4.6s						
LZH				LR	LR		
	comp=Z,630nm,15.5s						
LZH				LR	LR		
	comp=Z,370nm,15.8s						
LZH				LR	LR		
	comp=Z,640nm,16.7s						
ERM	Erimo	48.98	12	P	P	20 19 27.7	+0.6
ERM	Erimo	48.98	12	c iP	P	20 19 28.1	+1.0
ERM				pmax	pmax		
	comp=Z,80nm,0.9s						
ERM	Erimo	48.98	12	P	P	20 19 28.3	+1.1
ERM				sP	pwP	20 20 04.7	0.0
OUZ	Omahuta	49.03	133	P	P	20 19 30.0	+2.3
OUZ				sP	pwP	20 20 03.4	-0.3
DGTI	Dogotuki	49.05	106	P	P	20 19 29.5	+1.3
CN2	Changchun	49.67	355	eP	P	20 19 32.4	0.0
CN2				PcP	PcP	20 20 52.3	+0.5
CN2				PP	PP	20 21 29.3	+1.0
CN2				eS	S	20 26 27.4	-3.6
CN2				ScS	ScS	20 29 09.3	-1.4
CN2				pmax	pmax		
	comp=Z,200nm,0.9s						
CN2				pmax	pmax		
	comp=Z,400nm,3.0s						
CN2				LR	LR		
	comp=Z,600nm,17.0s						
CN2				LR	LR		
	comp=Z,400nm,17.0s						
CN2				LR	LR		
	comp=Z,600nm,17.6s						
HHC	Hu-ho-hao-te	49.72	341	⇑iP	P	20 19 34.1	+1.1
HHC				sP	sP	20 20 13.1	-2.7
HHC				PP	PP	20 21 29.8	+0.9
HHC				S	S	20 26 33.8	+1.7
HHC				ScS	ScS	20 29 11.9	+0.5
HHC				SS	SS	20 30 04.4	-2.0
HHC				pmax	pmax		
	comp=Z,190nm,0.5s						
HHC				pmax	pmax		
	comp=Z,390nm,3.5s						
USA0B	Ussuriysk Arra	49.85	1	P	P	20 19 34.5	+0.8
USA0B				IAmb	IAmb	20 19 35.3	
	comp=Z,194nm,0.7s						
USA0B	Ussuriysk Arra	49.85	1	P	P	20 19 34.5	+0.8
USA0B				pmax	pmax		
	comp=Z,194nm,0.7s						
USRK	Ussuriysk Ar.	49.85	1	P	P	20 19 34.5	+0.8
	comp=Z,192nm,0.7s,baz=185,slow=7.2,SNR=429						
USRK				S	S	20 26 31.5	-2.0
	comp=Z,9.2nm,1.2s,baz=186,slow=13,SNR=4.6						
USRK				LR	LR	20 38 16.8	
	comp=Z,194nm,21.2s,baz=174,slow=33						
	comp=Z,192nm,0.7s						
WCZ	Waipu Caves	49.90	133	P	P	20 19 36.3	+1.9
WCZ				sP	pwP	20 20 10.3	0.0
BTO	Baotou	50.02	339	eP	P	20 19 36.8	+1.5
BTO				pP	pP	20 20 06.0	+2.1
BTO				sP	sP	20 20 20.1	+2.3
BTO				PP	PP	20 21 35.1	+3.4
BTO				S	S	20 26 36.6	+0.3
BTO				sS	sS	20 27 29.9	+4.7
BTO				pmax	pmax		
	comp=Z,420nm,0.8s						
BTO				pmax	pmax		
	comp=Z,2µm,7.2s						
BTO				LR	LR		
	comp=Z,570nm,20.9s						
BTO				LR	LR		
	comp=Z,760nm,15.2s						
BTO				LR	LR		
	comp=Z,1µm,21.0s						
TAWA	Tawang	50.18	313	eP	P	20 19 38.1	+1.1
MDJ	Mudanjiang	50.26	359	P	P	20 19 37.8	+0.9
MDJ				S	S	20 26 40.3	+1.1
MDJ				ScS	ScS	20 29 14.5	-0.2
MDJ				SS	SS	20 30 07.0	-7.7
MDJ				pmax	pmax		
	comp=Z,1µm,3.5s						
MSZ	Milford Sound	50.45	146	P	P	20 19 39.9	+1.6
DCZ	Deep Cove	50.53	147	P	P	20 19 40.2	+1.3
JCZ	Jackson Bay	50.56	145	P	P	20 19 40.0	+0.7
JCZ	Jackson Bay	50.56	145	P	P	20 19 41.0	+1.6
JCZ				sP	pwP	20 20 17.0	+1.6
LKBA	Tubou, Lakemba	50.66	109	P	P	20 19 41.1	+0.8
ASAJ	Asahikawa	50.89	11	LR	LR	20 40 44.6	
	comp=Z,474nm,21.4s,baz=198,slow=35						
JKA	Kamikawa-asahi	50.89	11	IAmb	IAmb	20 19 43.5	
	comp=Z,138nm,0.8s						
FUTU	Fugatoga	50.93	104	P	P	20 19 43.8	+1.4
FUTU				IAmb	IAmb	20 19 45.9	
	comp=Z,151nm,1.0s						
FUTU	Fugatoga	50.93	104	P	P	20 19 42.9	+0.5
MLZ	Mavora Lakes	50.99	147	P	P	20 19 42.8	+0.4
QRZ	Quartz Range	51.01	139	P	P	20 19 43.7	+1.1
QRZ				IAmb	IAmb	20 20 19.8	
	comp=Z,128nm,1.0s						
QRZ	Quartz Range	51.01	139	P	P	20 19 44.1	+1.5
QRZ				sP	pwP	20 20 18.5	0.0
DSZ	Denniston Nort	51.03	141	P	P	20 19 44.1	+1.2
WKZ	Wanaka	51.15	146	P	P	20 19 44.5	+0.8
WKZ				IAmb	IAmb	20 20 59.3	
	comp=Z,196nm,1.3s						
WKZ	Wanaka	51.15	146	P	P	20 19 44.6	+1.0
WHZ	Wether Hill Ro	51.23	147	P	P	20 19 43.6	-0.6
WHZ				IAmb	IAmb	20 20 22.4	
	comp=Z,147nm,1.2s						
WHZ	Wether Hill Ro	51.23	147	P	P	20 19 44.7	+0.5
WHZ				sP	pwP	20 20 20.8	+0.8
XLT	XiLinHaoTe	51.28	346	eP	P	20 19 45.3	+0.7
XLT				pP	pP	20 20 13.9	+0.7
XLT				PcP	PcP	20 20 58.4	+0.5
XLT				ScP	ScP	20 24 43.3	+1.0
XLT				PcS	PcS	20 24 50.8	-4.9
XLT				S	S	20 26 51.8	-1.7
XLT				ScS	ScS	20 29 18.0	-3.9
XLT				SS	SS	20 30 23.4	-7.6
XLT				pmax	pmax		
	comp=Z,340nm,1.0s						
XLT				LR	LR		
	comp=Z,33nm,18.5s						
XLT				LR	LR		
	comp=Z,290nm,14.6s						
XLT				LR	LR		
	comp=Z,470nm,18.1s						
INZ	Inchbonnie	51.35	142	P	P	20 19 45.2	+0.1
TKNZ	Takaka Hill	51.39	139	P	P	20 19 46.0	+0.5
HIZ	Hauiti	51.43	136	P	P	20 19 46.7	+0.9
HIZ				IAmb	IAmb	20 20 23.4	
	comp=Z,118nm,0.9s						
HIZ	Hauiti	51.43	136	P	P	20 19 47.8	+2.0
HIZ				sP	pwP	20 20 21.5	-0.4
MRNZ	Matariki Terra	51.45	140	P	P	20 19 46.6	+0.6
BNX	BinXian	51.46	357	⇑P	P	20 19 45.8	0.0
BNX				pP	pP	20 20 14.3	0.0
BNX				PP	PP	20 21 41.5	-3.0
BNX				S	S	20 26 54.0	-1.7
BNX				sS	sS	20 27 49.8	+4.8
BNX				pmax	pmax		
	comp=Z,190nm,1.0s						
BNX				LR	LR		
	comp=Z,350nm,17.9s						
BNX				LR	LR		
	comp=Z,290nm,15.7s						
BNX				LR	LR		
	comp=Z,540nm,19.0s						
TOZ	Tahuroa Road	51.52	135	P	P	20 19 47.7	+1.2
TOZ				IAmb	IAmb	20 20 24.5	
	comp=Z,111nm,0.9s						
TOZ	Tahuroa Road	51.52	135	P	P	20 19 48.6	+2.1
TOZ				sP	pwP	20 20 23.1	+0.4
LBZ	Lake Benmore	51.55	144	P	P	20 19 46.7	+0.1
LBZ				IAmb	IAmb	20 20 25.1	
	comp=Z,195nm,1.1s						
LBZ	Lake Benmore	51.55	144	P	P	20 19 47.3	+0.7
LBZ				sP	pwP	20 20 22.4	-0.5
EAZ	Earnscleugh	51.56	146	P	P	20 19 47.6	+0.9
PALK	Pallekele	51.62	284	P	P	20 19 46.7	-0.9
PALK				IAmb	IAmb	20 19 48.6	
	comp=Z,244nm,1.1s						
PALK	Pallekele	51.62	284	LR	LR	20 42 51.2	
	comp=Z,330nm,18.6s,baz=104,slow=37						
PALK	Pallekele	51.62	284	P	P	20 19 46.8	-0.9
PALK	Pallekele	51.62	284	c iP	P	20 19 47.0	-0.7
PALK				pmax	pmax		
	comp=Z,282nm,1.2s						
PALK	Pallekele	51.62	284	P	P	20 19 46.7	-0.9
PALK				PcP	PcP	20 21 00.8	+1.1
RPZ	Rata Peaks	51.67	143	P	P	20 19 48.1	+0.6
RPZ	Rata Peaks	51.67	143	LR	LR	20 41 35.4	
	comp=Z,1µm,19.9s,baz=310,slow=36						
RPZ	Rata Peaks	51.67	143	P	P	20 19 48.9	+1.4
THZ	Tophouse	51.74	140	P	P	20 19 49.2	+1.1
THZ	Tophouse	51.74	140	P	P	20 19 48.8	+0.7
NNZ	Nelson	51.76	139	P	P	20 19 48.3	+0.2
NNZ				sP	pwP	20 20 25.0	+0.8
TLZ	Tolley Road	51.82	135	P	P	20 19 50.7	+1.9
TLZ				sP	pwP	20 20 25.2	+0.3
APZ	The Paps	51.85	148	P	P	20 19 49.6	+0.8
LTZ	Lake Taylor	51.89	142	P	P	20 19 49.2	+0.1
LTZ				IAmb	IAmb	20 20 43.4	
	comp=Z,222nm,1.7s						
LTZ	Lake Taylor	51.89	142	P	P	20 19 50.0	+0.8
LSA	Lhasa	51.92	315		P	20 19 51.0	+0.9
LSA	Lhasa	51.92	315	P	P	20 19 51.4	+1.3
LSA				S	S	20 26 59.0	-4.5
LSA				pmax	pmax		
	comp=Z,660nm,0.8s						
LSA				LR	LR		
	comp=Z,280nm,13.3s						
LSA				LR	LR		
	comp=Z,770nm,37.4s						
LSA	Lhasa	51.92	315	P	P	20 19 51.0	+0.9
LSA				pmax	pmax		
	comp=Z,530nm,0.8s						
LSA	Lhasa	51.92	315	P	P	20 19 51.4	+1.3
LSA	Lhasa	51.92	315	P	P	20 19 51.2	+1.1
OXZ	Oxford	52.05	142	P	P	20 19 50.7	+0.4
TUZ	Tuapeka	52.18	146	P	P	20 19 52.0	+0.8
ODZ	Otahua Downs	52.21	145	P	P	20 19 51.1	-0.3
ODZ	Otahua Downs	52.21	145	P	P	20 19 52.3	+0.9
TUWZ	Tuamarina	52.23	139	P	P	20 19 51.5	-0.2
NGZ	Ngauruhoe	52.25	136	P	P	20 19 54.0	+1.9
NGZ				sP	pwP	20 20 29.4	+1.2
GTK	Tadong	52.43	311	eP	P	20 19 54.2	+0.7
GVZ	Greta Valley S	52.46	141	P	P	20 19 54.6	+1.2
KHZ	Kahutara	52.48	141	IAmb	IAmb	20 20 32.5	
	comp=Z,122nm,0.9s						
KHZ	Kahutara	52.48	141	P	P	20 19 53.8	+0.3
KHZ				sP	pwP	20 20 29.3	-0.3
MQZ	McQueen’s Vall	52.63	142	P	P	20 19 55.4	+0.9
HHSZ	Highcliff Hill	52.68	146	P	P	20 19 56.7	+1.8
BOK	Bokaro	52.77	306	eP	P	20 19 56.2	+0.3
BHW	Baring Head	52.83	139	P	P	20 19 55.6	-0.4
RAGD	RAYAGADA	52.84	299	eP	P	20 19 56.9	+0.4
BKZ	Black Stump Fm	52.86	136	P	P	20 19 57.0	+0.6
BKZ				IAmb	IAmb	20 20 34.0	
	comp=Z,177nm,0.9s						
BKZ	Black Stump Fm	52.86	136	P	P	20 19 58.1	+1.6
BKZ	Black Stump Fm	52.86	136	P	P	20 19 56.9	+0.4
BKZ				sP	pwP	20 20 31.7	-1.0
URZ	Urewera	52.90	134	S	S	20 27 22.8	+7.1
	comp=Z,13nm,1.0s,baz=225,slow=13,SNR=3.1						
URZ				LR	LR	20 43 12.8	
	comp=Z,1µm,18.8s,baz=36,slow=37						
URZ	Urewera	52.90	134	P	P	20 19 56.7	+0.1
TSZ	Takapari Road	52.91	137	P	P	20 19 57.4	+0.6
KNTI	KHUNTI	52.92	305	eP	P	20 19 57.5	+0.4
MRZ	Mangatainoka R	52.93	138	P	P	20 19 56.7	-0.2
MRZ	Mangatainoka R	52.93	138	P	P	20 19 56.5	-0.4
MRZ				sP	pwP	20 20 30.3	-2.4
RTZ	Ruatahuna	52.96	135	IAmb	IAmb	20 21 05.2	
	comp=Z,115nm,0.8s						
RTZ	Ruatahuna	52.96	135	P	P	20 19 57.8	+0.6
MSWZ	Moikau Station	53.08	139	P	P	20 19 57.4	-0.6
PLWZ	Palliser	53.16	139	P	P	20 19 56.8	-1.8
HAZ	Te Kaha	53.17	134	P	P	20 19 58.9	+0.3
MWZ	Matawai	53.23	134	P	P	20 19 59.9	+0.8
MWZ				sP	pwP	20 20 34.9	-0.5
GTA	Gaotai	53.36	330	P	P	20 20 02.0	+1.9
GTA				PcP	PcP	20 21 07.9	+2.0
GTA				PP	PP	20 22 01.3	-0.6
GTA				ScP	ScP	20 24 53.4	+1.9
GTA				PcS	PcS	20 25 05.0	-0.1
GTA				S	S	20 27 20.1	-2.0
GTA				ScS	ScS	20 29 36.8	0.0
GTA				pmax	pmax		
	comp=Z,880nm,1.4s						
GTA				LR	LR		
	comp=Z,240nm,18.2s						
GTA				LR	LR		
	comp=Z,410nm,18.5s						
GTA				LR	LR		
	comp=Z,480nm,20.4s						
BFZ	Birch Farm	53.39	138	P	P	20 20 01.3	+1.1
BFZ				sP	pwP	20 20 35.1	-1.1
MXZ	Matakaoa Point	53.47	133	P	P	20 20 01.9	+1.1
MXZ				sP	pwP	20 20 36.6	-0.6
JHSG	JHARSUGUGA	53.60	302	eP	P	20 20 02.5	+0.4
PUZ	Puketiti	53.64	134	P	P	20 20 02.7	+0.6
PUZ				sP	pwP	20 20 37.0	-1.4
RAO	Raoul Island	53.65	122	S	S	20 27 33.3	+7.2
	comp=Z,376nm,0.3s,baz=285,slow=22,SNR=5.3						
RAO				LR	LR	20 42 16.2	
	comp=Z,427nm,20.1s,baz=270,slow=35						
YSS	Yuzhno-Sakhali	53.66	10	P	P	20 20 02.5	+0.5
YSS				IAmb	IAmb	20 20 03.2	
	comp=Z,162nm,0.6s						
YSS	Yuzhno-Sakhali	53.66	10	P	P	20 20 02.7	+0.8
YSS	Yuzhno-Sakhali	53.66	10	α iP	P	20 20 02.5	+0.5
YSS				eS	S	20 27 26.8	+1.3
YSS				e		20 29 35.5	
YSS				eSS	SS	20 31 09.9	+1.7
YSS				pmax	pmax		
	comp=Z,150nm,0.7s						
YSS				pmax	pmax		
	comp=Z,900nm,3.2s						
YSS				smax	smax		
	comp=N,1µm,3.3s						
YSS				smax	smax		
	comp=E,400nm,3.9s						
YSS				MLR	MLR		
	comp=Z,700nm,15.0s						
YSS	Yuzhno-Sakhali	53.66	10	P	P	20 20 02.5	+0.5
GOMU	GeErMu	53.72	324	P	P	20 20 04.1	+1.0
GOMU				pP	pP	20 20 29.8	-3.3
GOMU				PcP	PcP	20 21 09.1	+1.5
GOMU				S	S	20 27 32.0	+4.4
GOMU				pmax	pmax		
	comp=Z,290nm,0.9s						
GOMU				LR	LR		
	comp=Z,410nm,16.9s						
GOMU				LR	LR		
	comp=Z,580nm,19.4s						
GOMU				LR	LR		
	comp=Z,870nm,18.5s						
KLR	Kul'dur	54.88	1	LR	LR	20 46 01.6	
	comp=Z,197nm,19.0s,baz=178,slow=38						
KLR	Kul'dur	54.88	1	c iP	P	20 20 11.7	+1.0
KLR				pmax	pmax		
	comp=Z,317nm,1.1s						
BLSP	Bilaspur	55.14	302	eP	P	20 20 12.7	-0.5
KOD	Kodaikanal	55.44	287	eP	P	20 20 16.0	+0.2
UGL	Uglegorsk	55.60	9	eP	P	20 20 09.5	-6.4
UGL				pmax	pmax		
	comp=Z,600nm,1.0s						
UGL				pmax	pmax		
	comp=Z,2µm,2.0s						
HIA	Hailar	55.74	351		P	20 20 17.4	+0.4
HIA				IAmb	IAmb	20 20 18.9	
	comp=Z,91nm,0.8s						
HIA	Hailar	55.74	351	P	P	20 20 18.1	+1.1
HIA	Hailar	55.74	351	P	P	20 20 17.4	+0.4
HIA				pmax	pmax		
	comp=Z,91nm,0.8s						
HIA	Hailar	55.74	351	P	P	20 20 17.6	+0.5
HIA				PcP	PcP	20 21 15.6	+1.0
HEH	HeiHe	55.97	357	eP	P	20 20 18.4	-0.1
HEH				PcP	PcP	20 21 15.9	+0.5
HEH				S	S	20 27 52.6	-3.7
HEH				ScS	ScS	20 29 51.5	-3.1
HEH				pmax	pmax		
	comp=Z,330nm,1.3s						
HEH				pmax	pmax		
	comp=Z,1µm,5.9s						
HYB	Hyderabad	56.51	295	IVmB_BB		20 20 22.9	
	comp=Z,6µm,1.7s						
HYB				eP	P	20 20 23.0	0.0
HYB				epP	pP	20 20 48.7	-4.5
HYB				ePcP	PcP	20 21 18.4	+0.1
HYB				ePP	PP	20 22 29.9	-0.4
HYB				eScP	ScP	20 25 08.2	+2.6
HYB				eS	S	20 28 07.3	+2.7
GRNR	Gornyy	56.62	4	⇑iP	P	20 20 24.2	+1.0
GRNR				pmax	pmax		
	comp=N,40nm,1.1s						
GRNR				pmax	pmax		
	comp=Z,80nm,1.0s						
ALBI	Allahabad	56.76	305	eP	P	20 20 24.4	-0.2
AFI	Afiamalu	57.05	103	P	P	20 20 27.2	+0.2
AFI				IAmb	IAmb	20 21 06.4	
	comp=Z,203nm,1.1s						
AFI	Afiamalu	57.05	103	P	P	20 20 28.4	+1.4
AFI	Afiamalu	57.05	103	P	P	20 20 27.2	+0.2
AFI				pmax	pmax		
	comp=Z,203nm,1.1s						
AFI	Afiamalu	57.05	103	P	P	20 20 28.9	+1.9
AFI				sP	pwP	20 21 05.0	+0.9
TYV	Tymovskoe	57.43	9	eP	P	20 20 30.4	+1.6
TYV				eS	S	20 28 18.6	+3.1
TYV				pmax	pmax		
	comp=Z,133nm,1.0s						
TYV				pmax	pmax		
	comp=Z,100nm,2.9s						
TYV				smax	smax		
	comp=N,2µm,6.9s						
TYV				smax	smax		
	comp=E,700nm,6.9s						
ULN	Ulaanbaatar	57.44	341	P	P	20 20 30.4	+1.2
ULN	Ulaanbaatar	57.44	341	P	P	20 20 31.1	+1.9

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ULN   Ulaanbaatar       57.44 341c iP     P        20 20 30.9 +1.7
ULN                              pmax     pmax
      comp=Z,688nm,0.8s
ULN   Ulaanbaatar       57.44 341 ⇑P      P        20 20 30.7 +1.5
ULN                              PcP      PcP      20 21 22.9 +1.4
SONM  Songino Array     57.62 341  P      P        20 20 31.5 +1.1
SONM  Songino Array     57.62 341  P      P        20 20 31.9 +1.4
      comp=Z,321nm,0.7s,baz=159,slow=6.9,SNR=478
SONM                             PcP      PcP      20 21 23.1 +0.9
      comp=Z,52nm,0.8s,baz=174,slow=4.4,SNR=3.6
SONM                             LR       LR       20 49 02.2
      comp=Z,239nm,19.8s,baz=106,slow=40
SONM                             PKPPKP   P'P'df   20 50 15.3 +1.5
      comp=Z,4.1nm,1.0s,baz=282,slow=1.4,SNR=6.4
SONM                             P4KPbc            20 57 36.1
      comp=Z,0.9nm,0.5s,baz=166,slow=5.7,SNR=5.5
      comp=Z,321nm,0.7s
AIS   Amsterdam Isla    57.71 229  P      P        20 20 32.4 +1.3
AIS                              IAmb     IAmb     20 20 34.0
      comp=Z,223nm,0.9s
H08S2 Diego Garcia H    57.86 265  P      P        20 20 33.5 +1.2
      baz=50,slow=9.0,SNR=37
H08S3 Diego Garcia H    57.87 265  P      P        20 20 33.4 +1.1
      baz=50,slow=9.0,SNR=45
H08S1 Diego Carcia H    57.88 265  P      P        20 20 33.6 +1.2
      baz=50,slow=9.0,SNR=36
KAAM  Kaadhehdhoo       58.01 274  P      P        20 20 33.1 -0.5
KAAM                             IAmb     IAmb     20 20 41.2
      comp=Z,163nm,0.8s
KAAM  Kaadhehdhoo       58.01 274  P      P        20 20 34.9 +1.3
HMDM  Hanimaadhoo       58.82 282  P      P        20 20 39.0 -0.2
HMDM  Hanimaadhoo       58.82 282  P      P        20 20 39.9 +0.7
AKL   Akola             59.00 298 eP      P        20 20 39.7 -0.7
ZEA   Zeya              59.46 358 eP      P        20 20 43.6 +0.7
ZEA                               e                20 21 30.7
ZEA                               eS      S        20 28 40.1 -1.6
ZEA                               e                20 30 19.8
ZEA                              pmax     pmax
      comp=N,300nm,1.6s
ZEA                              pmax     pmax
      comp=Z,600nm,1.4s
ZEA                              pmax     pmax
      comp=N,140nm,0.9s
ZEA                              pmax     pmax
      comp=Z,300nm,0.9s
ZEA                              smax     smax
      comp=E,400nm,6.0s
JHNI  Jhansi            59.51 304 eP      P        20 20 42.3 -1.5
CIT   Chita             59.51 348 eP      P        20 20 44.8 +1.4
CIT                               e                20 21 18.0
CIT                               e                20 21 26.6
CIT                               e                20 23 00.6
CIT                               e                20 24 25.4
CIT                               eS      S        20 28 42.8 +0.2
CIT                               e                20 30 20.6
CIT                              pmax     pmax
      comp=Z,578nm,2.0s
BHPL  Bhopal            59.57 301 eP      P        20 20 43.5 -0.7
NRDN  NARMADA NAGAR59.59 300 eP      P        20 20 46.6 +2.1
LGTI  Lohaghat          59.86 309 eP      P        20 20 46.3 +0.2
PTH   Pithoragarh       59.93 309 eP      P        20 20 46.5 -0.4
GUNA  GUNA              60.18 303 eP      P        20 20 48.5  0.0
MIDW  Midway            60.38  53  P      P        20 20 49.3 -0.3
MIDW                             IAmb     IAmb     20 20 51.8
      comp=Z,97nm,0.7s
SKR   Severo-Kuril's    60.43  18 eP      P        20 20 49.4 -0.1
SKR                               e                20 23 01.0
SKR                               eS      S        20 28 53.2 -1.0
SKR                              pmax     pmax
      comp=Z,200nm,3.8s
SKR                              MLR      MLR
      comp=Z,300nm,16.0s
KAD   Karad             60.44 294 eP      P        20 20 49.4 -0.9
ZAK   Zakamensk         60.86 340 eP      P        20 20 53.2 +0.6
ZAK                               e                20 21 32.9
ZAK                              pmax     pmax
      comp=Z,215nm,1.1s
ZAK                              pmax     pmax
      comp=Z,110nm,1.1s
JOSI  Joshimath         60.90 310 eP      P        20 20 54.2 +0.8
DRV   Dumont d'Urvil    61.03 176  P      P        20 20 54.4 +1.0
AYAN  Aya Nagar         61.90 307 eP      P        20 20 58.9 -1.0
NDI   New Delhi         61.91 307 eP      P        20 20 59.0 -1.0
NPLP  NPLP New Delhi    61.93 307 eP      P        20 20 59.2 -0.9
CASY  Casey             61.93 189  P      P        20 20 59.9 +0.5
CASY  Casey             61.93 189  P      P        20 21 00.0 +0.5
CASY                             PcP      pwP      20 21 37.9 +0.3
DDI   Dehra Dun         61.95 309 eP      P        20 21 00.6 +0.2
BHGR  Bahadurgarh       62.13 307 eP      P        20 21 00.6 -0.8
IRK   Irkutsk           62.14 342 eP      P        20 21 01.4 +0.3
IRK                              pmax     pmax
      comp=Z,754nm,1.4s
KUDL  Kundal            62.27 306 eP      P        20 21 01.5 -0.9
KLP   Kalpa             62.35 310 eP      P        20 21 04.1 +0.8
WMQ   Urumqi            62.87 326 ⇑P      P        20 21 07.8 +1.6
WMQ                               S       S        20 29 26.6 +1.1
WMQ                               ScS     SKSac    20 30 45.5 -0.9
WMQ                              pmax     pmax
      comp=Z,2μm,1.1s
WMQ                              pmax     pmax
      comp=Z,3μm,3.8s
WMQ                              LR       LR
      comp=Z,420nm,23.9s
WMQ   Urumqi            62.87 326  P      P        20 21 07.8 +1.6
PEA0B Petropavlovsk-    63.02  18  P      P        20 21 08.0 +1.1
PEA0B                            PcP      PcP      20 21 44.1 +0.5
PEA0B Petropavlovsk-    63.02  18ceP      P        20 21 08.2 +1.3
PETK  Petropavlovsk-    63.02  18  P      P        20 21 07.5 +0.6
PETK                             PcP      PcP      20 21 44.0 +0.4
PETK  Petropavlovsk-    63.02  18  P      P        20 21 07.7 +0.8
      comp=Z,211nm,0.9s,baz=197,slow=4.6,SNR=219
PETK                             PcP      PcP      20 21 43.9 +0.3
      comp=Z,70nm,0.8s,baz=199,slow=3.1,SNR=12
PETK                             PKPPKP   P'P'df   20 50 05.2 +0.2
      comp=Z,1.7nm,0.8s,baz=216,slow=4.8,SNR=4.6
PETK                             LR       LR       20 50 47.8
      comp=Z,186nm,18.1s,baz=200,slow=38
      comp=Z,211nm,0.9s
PET   Petropavlovsk     63.24  18  P      P        20 21 09.4 +1.1
PET   Petropavlovsk     63.24  18 eP      P        20 21 09.2 +0.9
PET                               e*SP    PcP      20 21 44.6 +0.2
PET                               eS      S        20 29 34.0 +4.4
PET                              pmax     pmax
      comp=Z,353nm,1.1s
PET                              pmax     pmax
      comp=Z,100nm,12.7s
PET   Petropavlovsk     63.24  18  P      P        20 21 09.4 +1.1
PET                              PcP      PcP      20 21 45.0 +0.5
BHK   Bhakra            63.70 309 eP      P        20 21 12.8 +1.0
DHRM  DHARAMSHALA       64.15 310 eP      P        20 21 15.4 +0.3
BOD   Bodaibo           64.91 350 eP      P        20 21 19.5 +0.3
BOD                              pmax     pmax
      comp=Z,503nm,1.2s
JMU   Jammu             65.42 310 eP      P        20 21 24.6 +1.7
PAF   Port-aux-Franc    66.63 218  P      P        20 21 31.9 +1.5
ZSN   Zaisan            66.72 328 eP      P        20 21 32.0 +1.1
ZSN                              pmax     pmax
      comp=Z,174nm,0.9s
ZSN   Zaisan            66.72 328 eP      P        20 21 32.1 +1.1
      comp=Z,174nm,0.9s
ROCAM Rodrigues Isla    66.78 251  P      P        20 21 31.8 -0.1
ROCAM Rodrigues Isla    66.78 251  P      P        20 21 33.1 +1.2
NIL   Nilore            67.06 310  P      P        20 21 33.6 +0.1
NIL   Nilore            67.06 310  P      P        20 21 33.6 +0.1
NIL                              pmax     pmax
      comp=Z,488nm,0.8s
NIL   Nilore            67.06 310  P      P        20 21 34.1 +0.6
MA2   Magadan           67.15  11  P      P        20 21 34.1 +0.6
MA2                              IAmb     IAmb     20 21 36.0
      comp=Z,295nm,0.9s
MA2   Magadan           67.15  11  LR     LR       20 50 48.7
      comp=Z,136nm,21.4s,baz=202,slow=36
MA2   Magadan           67.15  11  P      P        20 21 34.3 +0.9
MA2   Magadan           67.15  11c iP     P        20 21 34.7 +1.2
MA2                              pmax     pmax
      comp=Z,279nm,0.9s
MA2   Magadan           67.15  11  P      P        20 21 34.6 +1.2
MA2                              pP       PcP      20 22 01.0 +0.5
MA2                              sP       pwP      20 22 12.6  0.0
SHLS  Shalkode          67.30 322 eP      P        20 21 34.1 -0.8
SHLS                              eS      S        20 30 19.2 -0.6
SHLS                             pmax     pmax
      comp=Z,235nm,0.9s
SHLS  Shalkode          67.30 322 eP      P        20 21 34.1 -0.8
      comp=Z,235nm,0.9s
SHLS                              eS      S        20 30 19.2 -0.6
UZB   Uzynbulak         67.56 322 eP      P        20 21 37.3 +0.7
UZB                              pmax     pmax
      comp=Z,231nm,1.0s
UZB   Uzynbulak         67.56 322 eP      P        20 21 37.4 +0.7
      comp=Z,231nm,1.0s
PRZ   Przheval'sk       67.60 321  P      P        20 21 38.8 +1.9
PRZ   Przheval'sk       67.60 321  P      P        20 21 38.8 +1.9
PRZ                              pmax     pmax
      comp=Z,1μm,1.0s
MK31  Makanchi Array    67.71 326  P      P        20 21 38.1 +0.8
MK31  Makanchi Array    67.71 326c iP     P        20 21 38.5 +1.2
MKAR  Makanchi Array    67.71 326  P      P        20 21 38.6 +1.4
      comp=Z,2μm,0.8s,baz=122,slow=8.1
MKAR                             PcP      PcP      20 22 04.0 +0.9
      comp=Z,95nm,0.7s,baz=125,slow=6.1,SNR=4.0
MKAR                              S       S        20 30 24.4 +0.1
      comp=Z,7.5nm,1.0s,baz=134,slow=10,SNR=4.9
MKAR                             PKPPKP   P'P'df   20 49 55.2 -2.9
      comp=Z,2.8nm,1.0s,baz=330,slow=4.6,SNR=8.1
MKAR                             P4KPbc            20 58 13.4
      comp=Z,0.3nm,0.9s,baz=143,slow=3.1,SNR=1.7
      comp=Z,2μm,0.8s
MKAR  Makanchi Array    67.71 326 i P     P        20 21 38.7 +1.4
MKAR                             pmax     pmax
      comp=Z,2μm,0.8s
YAK   Yakutsk           67.71 359  P      P        20 21 37.5 +0.7
YAK   Yakutsk           67.71 359c iP     P        20 21 37.6 +0.7
YAK                               e*PP    pP       20 22 10.3 +3.6
YAK                               e                20 24 07.6
YAK                               ePPP    PPP      20 25 51.1
YAK                               eS      S        20 30 23.9 +0.3
YAK                               e*SS    SKiKP    20 31 20.2 -0.7
YAK                               eSS     SS       20 34 48.5 +1.0
YAK                               eSSS    SSS      20 37 56.2
YAK                              pmax     pmax
      comp=Z,1μm,0.9s
YAK                              pmax     pmax
      comp=N,327nm,1.1s
YAK                              pmax     pmax
      comp=E,117nm,1.1s
YAK                              pmax     pmax
      comp=Z,116nm,2.5s
YAK                              pmax     pmax
      comp=N,119nm,2.2s
YAK                              pmax     pmax
      comp=E,68nm,2.3s
YAK                              smax     smax
      comp=N,376nm,2.0s
YAK                              smax     smax
      comp=E,201nm,2.0s
YAK   Yakutsk           67.71 359 ⇑P      P        20 21 37.6 +0.7
KSH   Kashi             67.71 317  P      P        20 21 39.5 +1.9
KSH                               PP      PP       20 24 11.8 +3.2
KSH                               S       S        20 30 28.3 +3.5
KSH                               ScS     ScS      20 31 25.9 +1.8
KSH                              pmax     pmax
      comp=E,740nm,0.8s
KSH                              LR       LR
      comp=E,440nm,23.4s
KSH                              LR       LR
      comp=E,300nm,17.5s
KSH                              LR       LR
      comp=E,480nm,24.0s
MAKZ  Makanchi          67.89 326  P      P        20 21 39.4 +1.0
MAKZ  Makanchi          67.89 326 ⇑P      P        20 21 39.8 +1.4
MAKZ  Makanchi          67.89 326 ⇑P      P        20 21 39.6 +1.2
MAKZ                             PcP      PcP      20 22 04.3 +0.3
SATY  Saty              67.90 321 eP      P        20 21 39.5 +0.8
SATY                              eS      S        20 30 29.5 +2.5
SATY                             pmax     pmax
      comp=Z,178nm,0.8s
SATY  Saty              67.90 321 eP      P        20 21 39.5 +0.8
      comp=Z,178nm,0.8s
SATY                              eS      S        20 30 29.5 +2.5
KPKS  Kokpek            67.94 322 eP      P        20 21 39.7 +0.8
KPKS                             pmax     pmax
      comp=Z,242nm,0.9s
KPKS  Kokpek            67.94 322 eP      P        20 21 39.8 +0.8
      comp=Z,242nm,0.9s
KDJ   Kajisay           68.19 320  P      P        20 21 41.9 +1.3
KDJ   Kajisay           68.19 320  P      P        20 21 41.9 +1.3
KDJ                              pmax     pmax
      comp=Z,867nm,0.8s
MDOK  Medeo             68.80 321 eP      P        20 21 45.1 +0.8
MDOK  Medeo             68.80 321 eP      P        20 21 45.2 +0.8
ULHL  Ulahol            68.86 320  P      P        20 21 46.1 +1.4
      SNR=58
ARXS  Arharly           68.86 322 eP      P        20 21 45.5 +0.9
AAA   Alma-Ata          68.91 321 eP      P        20 21 46.6 +1.7
AAA   Alma-Ata          68.91 321 eP      P        20 21 45.9 +0.9
      comp=Z,235nm,0.9s
TDK   Taldyqorghan      68.93 323 eP      P        20 21 45.9 +1.0
TDK   Taldyqorghan      68.93 323 eP      P        20 21 45.9 +1.0
SHEM  Shemya Is, Ala    68.94  27  P      P        20 21 45.4 +0.7
SHEM                             IAmb     IAmb     20 21 47.2
      comp=Z,281nm,0.9s
SHEM  Shemya Is, Ala    68.94  27  LR     LR       20 50 08.4
      comp=Z,423nm,19.3s,baz=266,slow=34
SMY   Shemya            68.94  27  IAmb   IAmb     20 21 47.3
      comp=Z,392nm,1.0s
SMY   Shemya            68.94  27  P      P        20 21 46.0 +1.3
BOOM  Boomskoye usch    69.17 320  P      P        20 21 47.8 +1.1
BOOM  Boomskoye usch    69.17 320  P      P        20 21 47.8 +1.1
BOOM                             pmax     pmax
      comp=Z,1μm,1.0s
CCD   Concordia, Ant    69.31 182  P      P        20 21 48.4 +1.2
CCD                              PcP      PcP      20 22 11.1 +1.1
CCD                              sP       pwP      20 22 27.4 +1.6
TKM2  Tokmak 2          69.60 320  P      P        20 21 50.9 +1.5
      SNR=798
KBK   Karagaybulak      69.89 319  P      P        20 21 52.8 +1.7
      SNR=25
UCH   Uchtor            69.97 319  P      P        20 21 53.5 +1.6
      SNR=194
FRU1  Bishkek           70.17 319  P      P        20 21 53.6 +0.9
FRU1  Bishkek           70.17 319  P      P        20 21 53.6 +0.9
FRU1                             pmax     pmax
      comp=Z,317nm,0.7s
AAK   Ala-Archa         70.18 319  P      P        20 21 54.6 +1.7
      SNR=565
AAK   Ala-Archa         70.18 319  P      P        20 21 53.6 +0.8
AAK   Ala-Archa         70.18 319  P      P        20 21 54.3 +1.5
      comp=Z,654nm,0.9s,baz=119,slow=5.4,SNR=740
AAK                              LR       LR       20 56 59.8
      comp=Z,86nm,19.8s,baz=128,slow=39
      comp=Z,654nm,0.9s
AAK   Ala-Archa         70.18 319  P      P        20 21 54.8 +2.0
AAK   Ala-Archa         70.18 319c iP     P        20 21 54.6 +1.7
AAK                              pmax     pmax
      comp=Z,1μm,1.1s
AAK   Ala-Archa         70.18 319 i P     P        20 21 54.4 +1.6
      SNR=48
AAK   Ala-Archa         70.18 319  P      P        20 21 54.5 +1.7
AAK                              PcP      PcP      20 22 15.4 +1.5
AAK                              pP       pP       20 22 21.2 -3.4
CHMS  Chumysh           70.18 320  P      P        20 21 53.8 +1.1
      SNR=22
AML   Almayashu         70.46 319  P      P        20 21 56.7 +1.8
      SNR=856
USP   Ospenovka         70.47 320  P      P        20 21 55.9 +1.4
      SNR=92
SGDS  Sogindy           70.48 320 eP      P        20 21 55.5 +0.9
      comp=Z,195nm,1.1s
AMKA  Amchitka          70.51  30  P      P        20 21 55.4 +1.0
SEY   Seymchan          70.56  10  LR     LR       20 53 59.1
      comp=Z,154nm,19.4s,baz=198,slow=37
SEY   Seymchan          70.56  10ceP      P        20 21 55.7 +1.2
SEY                              pmax     pmax
      comp=Z,690nm,1.0s
DRK   Karamyk           70.57 315  P      P        20 21 56.7 +1.3
DRK   Karamyk           70.57 315  P      P        20 21 56.7 +1.3
DRK                              pmax     pmax
      comp=Z,1μm,0.8s
KBL   Kabul             70.62 310  P      P        20 21 56.4 +0.6
KBL   Kabul             70.62 310  P      P        20 21 56.7 +1.0
      SNR=285
KBL   Kabul             70.62 310  P      P        20 21 56.4 +0.6
KBL                              pmax     pmax
      comp=Z,984nm,1.0s
EKS2  Erkin-Say         70.66 319  P      P        20 21 57.6 +1.9
      SNR=1070
ZALV  Zalesovo Beam     70.91 333  P      P        20 21 56.8  0.0
ZALV  Zalesovo Beam     70.91 333  P      P        20 21 57.0 +0.2
      comp=Z,434nm,0.8s,baz=104,slow=4.7,SNR=1119
ZALV                              S       S        20 31 01.5 -0.1
      comp=Z,2.9nm,0.7s,baz=146,slow=10,SNR=3.8
ZALV                             PKP2ab            20 49 49.7
      comp=Z,4.0nm,1.0s,baz=308,slow=4.9,SNR=5.9
ZALV                             LR       LR       20 55 39.7
      comp=Z,147nm,19.8s,baz=146,slow=38
      comp=Z,434nm,0.8s
BTK   Batken            71.50 316  P      P        20 22 01.8 +1.0
BTK   Batken            71.50 316  P      P        20 22 01.8 +1.0
BTK                              pmax     pmax
      comp=Z,762nm,1.0s
BTLS  Baital            71.61 321 eP      P        20 22 02.1 +0.9
BTLS                             pmax     pmax
      comp=Z,254nm,1.2s
BTLS  Baital            71.61 321 eP      P        20 22 02.1 +0.9
      comp=Z,254nm,1.2s
KURBB Kurchatov Arra    71.95 328  P      P        20 22 03.9 +0.8
      comp=Z,474nm,0.7s,baz=127,slow=4.9,SNR=3313
KURBB                            PP       PP       20 24 42.5 -2.3
      comp=Z,52nm,1.1s,baz=125,slow=8.9,SNR=5.7
KURBB                             S       S        20 31 08.0 -5.6
      comp=Z,4.3nm,1.0s,baz=105,slow=16,SNR=6.6
KURBB                            PKPPKP   P'P'df   20 49 47.5 -3.1
      comp=Z,1.6nm,0.8s,baz=300,slow=3.0,SNR=7.2
      comp=Z,474nm,0.7s
KURK  Kurchatov         71.96 328  P      P        20 22 03.9 +0.7
KURK  Kurchatov         71.96 328ceP      P        20 22 03.8 +0.7
KURK                             pmax     pmax
      comp=Z,1μm,1.3s
KURK  Kurchatov         71.96 328 ⇑P      P        20 22 04.1 +1.0
XMAS  Kiritimati        72.12  86  P      P        20 22 05.6 +0.7
SIMJ  Simiganj          72.22 314  P      P        20 22 05.5 +0.4
DZA   Taraz             72.36 318 eP      P        20 22 06.7 +0.9
DZA                              pmax     pmax
      comp=Z,346nm,0.8s
DZA   Taraz             72.36 318 eP      P        20 22 06.8 +0.9
      comp=Z,346nm,0.8s
ADK   Adak              72.83  31  P      P        20 22 09.1 +0.8
ADK   Adak              72.83  31  P      P        20 22 09.5 +1.2
ADK   Adak              72.83  31  P      P        20 22 09.1 +0.8
ADK                              pmax     pmax
      comp=Z,132nm,0.9s
IUG   Iuzhnay           72.91 317 eP      P        20 22 10.0 +0.9
IUG   Iuzhnay           72.91 317 eP      P        20 22 10.1 +0.9
GSTR  Great Sitkin T    73.27  31  P      P        20 22 11.7 +0.8
CHM   Chimkent          73.28 317 eP      P        20 22 12.1 +1.0
CHM                              pmax     pmax
      comp=Z,149nm,0.4s
CHM   Chimkent          73.28 317 eP      P        20 22 12.2 +1.0
      comp=Z,149nm,0.4s
BRLS  Borolday          73.42 318 eP      P        20 22 12.9 +0.9
BRLS                             pmax     pmax
      comp=Z,279nm,0.9s
BRLS  Borolday          73.42 318 eP      P        20 22 13.0 +0.9
      comp=Z,279nm,0.9s
VNDA  Vanda             73.47 173  P      P        20 22 12.6 +0.9
      comp=Z,68nm,0.8s,baz=320,slow=6.3,SNR=308
VNDA                              S       S        20 31 33.2 +3.0
      comp=Z,3.1nm,1.1s,baz=242,slow=23,SNR=11
      comp=Z,68nm,0.8s
ATKA  Atka Island       74.29  32  IAmb   IAmb     20 22 18.7
      comp=Z,280nm,0.8s
ATKA  Atka Island       74.29  32  P      P        20 22 18.0 +1.2
NGCH  Negor - Chabah    74.33 298  P      P        20 22 19.7 +2.0
      SNR=17
SBA   Scott Base        74.35 173  P      P        20 22 18.2 +1.4
SBA   Scott Base        74.35 173  P      P        20 22 18.2 +1.4
SBA                              pmax     pmax
      comp=Z,60nm,0.8s
BRZS  Berezniki         74.81 325 eP      P        20 22 20.8 +0.9
BRZS  Berezniki         74.81 325 eP      P        20 22 20.8 +0.9
HON   Honolulu          74.83  66  P      P        20 22 22.2 +1.6
HON                              IAmb     IAmb     20 23 01.9
      comp=Z,452nm,1.0s
HON   Honolulu          74.83  66  P      P        20 22 22.2 +1.6
HON                              pmax     pmax
      comp=Z,452nm,1.0s
MSEY  Mahe Island       74.92 267  P      P        20 22 21.2 -0.2
MSEY                             IAmb     IAmb     20 22 23.2
      comp=Z,235nm,0.9s
MSEY  Mahe Island       74.92 267  P      P        20 22 22.2 +0.8
MSEY  Mahe Island       74.92 267  P      P        20 22 21.2 -0.2
MSEY                             pmax     pmax
      comp=Z,235nm,0.9s
MSEY  Mahe Island       74.92 267 i P     P        20 22 21.9 +0.6
      SNR=16
JLN   Jalan Bani Buh    75.12 295  P      P        20 22 23.2 +0.9
      SNR=30
WSAR  Wadi Sarin        76.06 296  P      P        20 22 28.6 +1.0
      comp=Z,2.5nm,0.9s,baz=130,slow=24,SNR=181
MHTO  MHTO              76.18 293  P      P        20 22 29.0 +0.7
      SNR=64
MAW   Mawson            76.27 201  P      P        20 22 29.0 +1.1
      comp=Z,43nm,1.2s
MAW   Mawson            76.27 201  P      P        20 22 29.1 +1.1
      comp=Z,168nm,1.0s,baz=72,slow=6.5,SNR=158
MAW                              LR       LR       20 54 54.7
      comp=Z,570nm,19.3s,baz=70,slow=35
      comp=Z,168nm,1.0s
JMDO  Jabal Madar       76.35 295  P      P        20 22 30.2 +0.9
      SNR=36
DQM   DQM               76.36 292  P      P        20 22 30.2 +0.8
      SNR=23
SMDO  Samad             76.54 295  P      P        20 22 31.5 +1.0
      SNR=43
BIDO  Bidbid            76.57 296  P      P        20 22 32.0 +1.5
      SNR=16
HMH   Humu'ula Sheep    76.79  68  P      P        20 22 34.4 +2.2
HMH                              IAmb     IAmb     20 23 14.4
      comp=Z,474nm,1.1s
MLH   Mauna Loa         76.86  69  P      P        20 22 33.9 +1.4
MLH                              IAmb     IAmb     20 23 13.8
      comp=Z,314nm,1.1s
KNHH  Kane Nui o Ham    77.04  69  P      P        20 22 35.0 +1.7
BSY   Bisya             77.24 295  P      P        20 22 35.0 +0.7
      SNR=22
HOQ   Hoqain            77.32 296  P      P        20 22 36.0 +1.3
      SNR=13
TIXI  Tiksi             77.37 359  LR     LR       21 01 15.2
      comp=Z,177nm,18.0s,baz=195,slow=39
NIKH  Nikolski High     77.50  33  P      P        20 22 35.9 +0.9
NIKH                             IAmb     IAmb     20 22 36.9
      comp=Z,208nm,0.9s
NIKH  Nikolski High     77.50  33  P      P        20 22 36.2 +1.2
NIKH  Nikolski High     77.50  33  P      P        20 22 35.7 +0.7
      baz=242
BVAR  Borovoye Array    77.52 327  P      P        20 22 35.8 +0.6
      comp=Z,458nm,0.8s,baz=116,slow=6.8,SNR=1440
BVAR                             PKPPKP   P'P'df   20 49 40.6 -0.2
      comp=Z,1.0nm,0.7s,baz=256,slow=3.1,SNR=4.5
      comp=Z,458nm,0.8s
BRVK  Borovoye          77.59 327  P      P        20 22 36.2 +0.7
BRVK  Borovoye          77.59 327  P      P        20 22 36.4 +0.9
BRVK  Borovoye          77.59 327ceP      P        20 22 36.0 +0.5
BRVK                             pmax     pmax
      comp=Z,824nm,1.3s
BILL  Bilibino          77.85  13  P      P        20 22 36.6 -0.1
BILL  Bilibino          77.85  13c iP     P        20 22 37.0 +0.3
BILL                             pmax     pmax
      comp=Z,44nm,1.2s
ARQ   Araqi             77.97 295  P      P        20 22 39.0 +0.6
      SNR=59
ARQ                               P       P        20 22 39.2 +0.8
      SNR=42
H04S1 CROZET ISLANDS78.12 223  P      P        20 22 40.9 +2.5
      baz=64,slow=74,SNR=6.1
CRZF  Crozet Islands    78.12 224  P      P        20 22 39.0 +0.3
CRZF                             IAmb     IAmb     20 22 40.8
      comp=Z,192nm,0.9s
SOHO  SOHO              78.13 296  P      P        20 22 40.0 +0.8
SOHO  SOHO              78.13 296 i P     P        20 22 39.5 +0.4
      SNR=217
H04S2 CROZET ISLANDS78.13 223  P      P        20 22 40.3 +1.9
      baz=64,slow=74,SNR=7.9
H04S3 CROZET ISLANDS78.13 223  P      P        20 22 40.8 +2.3
      baz=64,slow=74,SNR=7.8
H04N2 CROZET ISLANDS78.14 224  P      P        20 22 40.6 +2.1
      baz=65,slow=75,SNR=11
H04N3 CROZET ISLANDS78.16 224  P      P        20 22 40.5 +1.9
      baz=65,slow=75,SNR=10
H04N1 CROZET ISLANDS78.16 224  P      P        20 22 40.6 +2.0
      baz=65,slow=75,SNR=11
TBI   Tubuai            78.33 113 eP      P        20 22 41.9 +1.6
      comp=Z,947nm,24.5s
TBI                               eS      S        20 32 18.8 -6.5
      comp=Z,2μm,34.5s
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TBI				eSS	SS	20 37 18.8	-12
	comp=Z,800nm,34.2s						
TBI				eLQ	LQ	20 43 46.6	
	comp=Z,3µm,37.0s						
TBI				eLR	LR	20 47 07.9	
	comp=Z,4µm,33.8s						
TBI				eLR	LR	20 47 10.0	
	comp=Z,1µm,34.5s						
DMTO	DMTO	78.37	289	P	P	20 22 41.2	+0.7
PPT2	Papeete2	78.42	107	eP	P	20 22 40.6	-0.4
	comp=Z,444nm,25.2s						
PPT2				eS	S	20 32 23.9	-2.7
	comp=Z,341nm,28.5s						
PPT2				eSS	SS	20 37 32.3	-0.3
	comp=Z,338nm,26.0s						
PPT2				eLQ	LQ	20 43 54.1	
	comp=Z,1µm,33.2s						
PPT2				eLR	LR	20 47 10.9	
	comp=Z,2µm,40.8s						
PPT2				eLR	LR	20 47 11.7	
	comp=Z,835nm,43.5s						
PPT	Papeete	78.42	107	P	P	20 22 42.1	+1.2
	comp=Z,38nm,0.7s,baz=65,slow=12,SNR=1.7						
PPT				LR	LR	20 55 30.9	
	comp=Z,135nm,20.0s,baz=241,slow=34						
	comp=Z,38nm,0.7s						
MDH	Madha	78.58	297	P	P	20 22 41.4	-0.2
	SNR=14						
MDH	Madha	78.58	297	iP	P	20 22 41.2	-0.4
	SNR=11						
UOSS	Minazif	78.59	297	P	P	20 22 41.7	0.0
UOSS				IAmb	IAmb	20 22 43.1	
	comp=Z,250nm,0.8s						
UOSS	Minazif	78.59	297	P	P	20 22 42.3	+0.6
UOSS	Minazif	78.59	297	iP	P	20 22 41.8	+0.2
	SNR=94						
HATD	Hatta, Dubai	78.63	297	P	P	20 22 43.0	+1.1
	SNR=41						
HATD	Hatta, Dubai	78.63	297	iP	P	20 22 42.7	+0.8
	SNR=74						
ASHO	Ashiyiah	78.66	297	P	P	20 22 43.1	+1.0
	SNR=50						
ASHO	Ashiyiah	78.66	297	iP	P	20 22 42.8	+0.7
	SNR=49						
MSFE	Esma-Masafi	78.71	297	iP	P	20 22 43.1	+0.7
	SNR=180						
MASF	Masafi	78.72	297	P	P	20 22 43.7	+1.3
	SNR=73						
ALNE	Al Ain	78.81	296	P	P	20 22 43.9	+1.0
	SNR=68						
ALNE	Al Ain	78.81	296	iP	P	20 22 43.6	+0.7
	SNR=160						
SPIA	Saint Paul Isl	78.82	28	P	P	20 22 43.5	+1.3
SPIA				IAmb	IAmb	20 22 44.9	
	comp=Z,434nm,1.0s						
SPIA	Saint Paul Isl	78.82	28	P	P	20 22 43.1	+0.9
SPIA	Saint Paul Isl	78.82	28	P	P	20 22 43.3	+1.1
	baz=240,SNR=6.6						
P08K	Saint George I	78.87	29	P	P	20 22 43.3	+0.9
P08K				IAmb	IAmb	20 22 47.6	
	comp=Z,421nm,1.1s						
P08K	Saint George I	78.87	29	P	P	20 22 43.7	+1.2
	baz=241						
SHME	Shamm	78.87	298	P	P	20 22 44.6	+1.4
	SNR=124						
SHME	Shamm	78.87	298	iP	P	20 22 44.3	+1.1
	SNR=411						
RBK	Rabkut	79.03	289	P	P	20 22 45.0	+0.7
	SNR=15						
NAZ	Nazwa, Dubai	79.08	297	P	P	20 22 45.1	+0.8
	SNR=71						
NAZ	Nazwa, Dubai	79.08	297	iP	P	20 22 44.8	+0.4
	SNR=55						
UMZA	Um Al Zommool	79.08	294	P	P	20 22 44.8	+0.4
FAQ	Al Faqa, Dubai	79.09	296	P	P	20 22 45.5	+1.1
	SNR=87						
FAQ	Al Faqa, Dubai	79.09	296	iP	P	20 22 45.0	+0.6
	SNR=24						
UNV	Unalaska Valle	79.15	32	P	P	20 22 44.6	+0.5
UNV				IAmb	IAmb	20 22 47.1	
	comp=Z,183nm,0.8s						
UNV	Unalaska Valle	79.15	32	P	P	20 22 45.2	+1.1
	baz=244						
UMQ	Umm Al-Quwin	79.19	297	P	P	20 22 46.9	+2.0
	SNR=25						
UMQ	Umm Al-Quwin	79.19	297	iP	P	20 22 46.3	+1.4
	SNR=19						
DOK	Doka	79.29	290	P	P	20 22 46.0	+0.4
	SNR=16						
ASUD	Al Ashush, Dub	79.30	296	P	P	20 22 46.7	+1.1
	SNR=60						
ASUD	Al Ashush, Dub	79.30	296	iP	P	20 22 46.6	+1.1
	SNR=114						
WHFO	Wadi Hawf	79.50	289	P	P	20 22 47.2	+0.4
	SNR=17						
LVA	Lava Point	79.54	32	P	P	20 22 47.0	+0.8
LVA				IAmb	IAmb	20 22 48.4	
	comp=Z,299nm,0.9s						
AJN	Ajban	79.59	296	P	P	20 22 47.7	+0.6
	SNR=45						
AJN	Ajban	79.59	296	iP	P	20 22 47.4	+0.3
	SNR=50						
AKUT	Akutan	79.67	32	P	P	20 22 47.8	+0.9
AKUT				IAmb	IAmb	20 22 49.0	
	comp=Z,183nm,0.9s						
AKUT	Akutan	79.67	32	P	P	20 22 48.2	+1.4
SBV	Sambava	79.77	257	P	P	20 22 49.2	+1.0
	SNR=5.6						
ABTO	Aybut	79.86	289	P	P	20 22 49.5	+0.8
	SNR=16						
MZR	Muzera	80.66	294	P	P	20 22 54.0	+1.1
	SNR=74						
MZR	Muzera	80.66	294	iP	P	20 22 53.6	+0.7
	SNR=273						
FALS	False Pass	81.21	32	P	P	20 22 55.8	+0.7
FALS				IAmb	IAmb	20 22 57.0	
	comp=Z,269nm,0.8s						
FALS	False Pass	81.21	32	P	P	20 22 56.6	+1.5
FALS	False Pass	81.21	32	P	P	20 22 56.0	+0.9
	baz=247						
GHWR	Ruwais	81.38	295	P	P	20 22 57.6	+1.0
JRN	Qarnain Island	81.58	296	P	P	20 22 58.3	+0.6
	SNR=30						
GAMB	Gambell	81.59	22	P	P	20 22 58.5	+1.6
	baz=238						
FOMA	Nahampoana Res	81.93	246	P	P	20 22 59.6	+0.1
FOMA				IAmb	IAmb	20 23 01.8	
	comp=Z,268nm,1.1s						
ABPO	Ambohimpanom	82.02	252	P	P	20 23 00.2	-0.2
ABPO				IAmb	IAmb	20 23 02.2	
	comp=Z,257nm,1.6s						
ABPO	Ambohimpanom	82.02	252	P	P	20 23 00.2	-0.2
ABPO				pmax	pmax		
	comp=Z,257nm,1.6s						
AB31	Akbulak array	82.10	321	P	P	20 23 00.5	+0.5
AB31				IAmb	IAmb	20 23 01.4	
	comp=Z,201nm,0.9s						
ABKAR	Akbulak array	82.10	321	P	P	20 22 59.9	0.0
ABKAR	Akbulak array	82.10	321	P	P	20 22 59.9	0.0
ABKAR				IAmb	IAmb	20 23 01.4	
	comp=Z,202nm,0.9s						
M11K	Mekoryuk	82.19	27	P	P	20 23 01.1	+1.0
M11K	Mekoryuk	82.19	27	P	P	20 23 01.9	+1.8
	baz=244						
VOI	Vohitsoka	82.26	249	P	P	20 23 02.4	+0.8
	SNR=16						
S12K	Black Hills	82.26	32	P	P	20 23 01.3	+0.7
S12K				IAmb	IAmb	20 23 02.3	
	comp=Z,329nm,0.9s						
S12K	Black Hills	82.26	32	P	P	20 23 01.3	+0.7
	baz=248,SNR=21						
SDPT	Sand Point	82.97	32	P	P	20 23 05.8	+1.6
SDPT	Sand Point	82.97	32	P	P	20 23 05.0	+0.7
	baz=249,SNR=15						
TRNA	Turayna	83.00	296	P	P	20 23 06.0	+0.9
	SNR=28						
CNBA	Chernabura Isl	83.26	33	P	P	20 23 06.5	+0.7
CNBA				IAmb	IAmb	20 23 07.6	
	comp=Z,158nm,0.8s						
CHNA	Chernabura Isl	83.26	33	P	P	20 23 07.3	+1.5
CHNA	Chernabura Isl	83.26	33	P	P	20 23 06.5	+0.7
	baz=250,SNR=7.6						
SMRA	Abu-Samra	83.35	296	P	P	20 23 07.6	+0.6
	SNR=40						
M13K	Dall Lake	83.48	27	IAmb	IAmb	20 23 09.8	
	comp=Z,154nm,0.8s						
M13K	Dall Lake	83.48	27	P	P	20 23 08.6	+1.8
	baz=246,SNR=29						
K13K	Kusilvak Mount	83.54	25	P	P	20 23 08.6	+1.6
K13K	Kusilvak Mount	83.54	25	P	P	20 23 08.8	+1.8
	baz=245						
AKTO	Aktyubinsk	83.65	322	P	P	20 23 08.4	+0.5
	comp=Z,168nm,0.8s,baz=104,slow=4.9,SNR=417						
AKTO				LR	LR	21 03 15.8	
	comp=Z,144nm,22.0s,baz=84,slow=38						
	comp=Z,168nm,0.8s						
S14K	Fog Glacier	83.78	32	P	P	20 23 09.7	+1.1
	baz=250,SNR=18						
TNA	Tin City	83.90	22	P	P	20 23 09.7	+0.9
TNA	Tin City	83.90	22	P	P	20 23 10.0	+1.2
	baz=241						
O14K	Tigyukauivet M	84.00	29	IAmb	IAmb	20 23 11.9	
	comp=Z,182nm,0.9s						
O14K	Tigyukauivet M	84.00	29	P	P	20 23 10.7	+1.3
	baz=248						
N14K	Kuskokwak Cree	84.05	28	P	P	20 23 11.1	+1.4
N14K	Kuskokwak Cree	84.05	28	P	P	20 23 10.9	+1.2
	baz=248,SNR=18						
QSPA	South Pole Qui	84.10	180	P	P	20 23 10.0	-0.1
QSPA				IAmb	IAmb	20 23 11.3	
	comp=Z,148nm,0.8s						
QSPA	South Pole Qui	84.10	180	P	P	20 23 10.2	+0.1
	comp=Z,126nm,0.8s,baz=319,slow=1.4,SNR=491						
QSPA				S	SKSac	20 33 18.8	-2.2
	comp=Z,4.2nm,1.0s,baz=114,slow=23,SNR=6.1						
QSPA				PKKP	PKKPdf	20 41 18.0	+0.6
	comp=Z,4.3nm,0.7s,baz=129,slow=1.5,SNR=6.6						
QSPA				PKPPKP	P'P'df	20 49 29.5	+0.6
	comp=Z,5.4nm,1.0s,baz=199,slow=5.0,SNR=5.8						
QSPA				LR	LR	21 00 45.0	
	comp=Z,569nm,18.9s,baz=357,slow=36						
	comp=Z,126nm,0.8s						
L14K	Kuka Creek	84.16	26	P	P	20 23 11.5	+1.3
L14K				IAmb	IAmb	20 23 13.0	
	comp=Z,218nm,1.0s						
L14K	Kuka Creek	84.16	26	P	P	20 23 11.8	+1.6
	baz=247,SNR=65						
SVE	Sverdlovsk	84.20	329	d iP	P	20 23 10.7	+0.2
SVE				eS	SKSac	20 33 18.2	-3.4
SVE				pmax	pmax		
	comp=Z,1µm,1.3s						
M14K	Bethel	84.25	27	P	P	20 23 11.9	+1.3
M14K				IAmb	IAmb	20 23 14.2	
	comp=Z,179nm,0.8s						
M14K	Bethel	84.25	27	P	P	20 23 12.2	+1.6
	baz=247,SNR=35						
J14K	Nanvaranak Lak	84.35	25	P	P	20 23 12.6	+1.5
J14K				IAmb	IAmb	20 23 14.2	
	comp=Z,266nm,1.1s						
J14K	Nanvaranak Lak	84.35	25	P	P	20 23 12.9	+1.8
	baz=246						
ANM	Nome	84.40	23	P	P	20 23 11.9	+0.5
ANM	Nome	84.40	23	P	P	20 23 11.9	+0.5
ANM				pmax	pmax		
	comp=Z,103nm,1.0s						
ANM	Nome	84.40	23	P	P	20 23 13.0	+1.6
	baz=244						
F14K	Arctic Creek	84.44	22	P	P	20 23 13.2	+1.6
	baz=243						
O15K	Ungalikthiuk R	84.66	29	IAmb	IAmb	20 23 15.3	
	comp=Z,131nm,1.0s						
O15K	Ungalikthiuk R	84.66	29	P	P	20 23 14.2	+1.4
	baz=249,SNR=18						
M15K	Kasigluk River	84.80	27	P	P	20 23 14.7	+1.2
	baz=248,SNR=52						
L15K	Ungalak Mounta	84.81	26	P	P	20 23 14.8	+1.3
	baz=248,SNR=94						
N15K	Kwethluk River	84.89	28	IAmb	IAmb	20 23 16.7	
	comp=Z,236nm,1.1s						
N15K	Kwethluk River	84.89	28	P	P	20 23 15.4	+1.4
	baz=249,SNR=51						
SYO	Syowa Base	84.98	201	⇑iP	P	20 23 15.1	+0.8
SYO	Syowa Base	84.98	201	⇓ePcP	PcP	20 23 20.0	+2.7
K15K	Wolf Creek Mou	85.03	26	IAmb	IAmb	20 23 17.6	
	comp=Z,364nm,1.0s						
K15K	Wolf Creek Mou	85.03	26	P	P	20 23 16.4	+1.8
	baz=248						
G15K	Niukluk	85.10	23	P	P	20 23 15.6	+0.8
	baz=245						
F15K	North Star Dit	85.17	22	P	P	20 23 16.5	+1.3
	baz=244						
ARTI	Arti	85.23	328	P	P	20 23 15.0	-0.8
ARTI	Arti	85.23	328	P	P	20 23 15.2	-0.6
	comp=Z,242nm,0.7s,baz=114,slow=2.9,SNR=386						
	comp=Z,242nm,0.7s						
ARTI	Arti	85.23	328	c iP	P	20 23 15.1	-0.6
ARTI						20 26 32.9	
ARTI				S	SKSac	20 33 28.4	+0.1
ARTI				SS	SS	20 39 06.3	-5.9
ARTI				SSS	SSS	20 42 46.5	
ARTI				pmax	pmax		
	comp=Z,360nm,0.9s						
R16K	Pilot Point	85.23	31	P	P	20 23 15.6	-0.1
R16K	Pilot Point	85.23	31	P	P	20 23 16.2	+0.6
	baz=251						
P16K	Nushagak River	85.50	29	P	P	20 23 17.8	+0.8
P16K	Nushagak River	85.50	29	P	P	20 23 18.3	+1.4
	baz=251,SNR=14						
N16K	Nishlik Lake	85.61	28	P	P	20 23 19.4	+1.8
	baz=250,SNR=123						
O16K	Kokwok River B	85.64	29	IAmb	IAmb	20 23 20.1	
	comp=Z,220nm,0.9s						
O16K	Kokwok River B	85.64	29	P	P	20 23 18.8	+1.1
	baz=251,SNR=83						
H16K	Elim	85.66	23	P	P	20 23 18.6	+1.0
	baz=247,SNR=42						
M16K	Timber Creek	85.71	27	P	P	20 23 19.5	+1.5
	baz=250,SNR=155						
L16K	Owhat River	85.72	27	P	P	20 23 19.4	+1.4
	baz=249,SNR=142						
CHIR	Chirikof Islan	85.73	33	P	P	20 23 19.0	+0.9
CHIR				IAmb	IAmb	20 23 20.4	
	comp=Z,289nm,0.9s						
CHIR	Chirikof Islan	85.73	33	P	P	20 23 19.3	+1.2
	baz=253						
J16K	Anvik River	85.80	25	IAmb	IAmb	20 23 21.4	
	comp=Z,287nm,0.9s						
J16K	Anvik River	85.80	25	P	P	20 23 20.2	+1.8
	baz=248,SNR=191						
G16K	Koyuk River	85.91	23	P	P	20 23 19.9	+1.0
	baz=247,SNR=48						
I17K	Unalakleet	85.99	24	IAmb	IAmb	20 23 22.3	
	comp=Z,141nm,0.9s						
I17K	Unalakleet	85.99	24	P	P	20 23 20.8	+1.5
	baz=248,SNR=33						
C16K	Lisburne Hills	86.06	20	IAmb	IAmb	20 23 21.3	
	comp=Z,158nm,0.8s						
C16K	Lisburne Hills	86.06	20	P	P	20 23 20.2	+0.7
	baz=244,SNR=41						
O17K	Koliganek Bris	86.17	29	P	P	20 23 21.8	+1.6
	baz=252,SNR=54						
Q17K	Contact Creek	86.31	30	P	P	20 23 21.1	-0.1
	baz=253						
P17K	Kvichak River	86.31	30	P	P	20 23 21.5	+0.6
	baz=252,SNR=8.4						
N17K	Nushagak Hills	86.37	28	IAmb	IAmb	20 23 24.2	
	comp=Z,189nm,1.0s						
N17K	Nushagak Hills	86.37	28	P	P	20 23 23.1	+1.9
	baz=252,SNR=49						
L17K	Donlin	86.39	26	P	P	20 23 22.9	+1.6
	baz=250,SNR=151						
J17K	VABM Dome	86.48	25	IAmb	IAmb	20 23 25.1	
	comp=Z,202nm,0.8s						
J17K	VABM Dome	86.48	25	P	P	20 23 23.3	+1.6
	baz=250,SNR=145						
M17K	Holitna River	86.53	27	IAmb	IAmb	20 23 25.1	
	comp=Z,249nm,0.9s						
M17K	Holitna River	86.53	27	P	P	20 23 23.8	+1.8
	baz=251,SNR=108						
ACHA	Angle Creek He	86.57	31	IAmb	IAmb	20 23 25.9	
	comp=Z,147nm,1.0s						
D17K	Noatak River	86.58	20	P	P	20 23 23.3	+1.2
	baz=246,SNR=189						
K17K	Iditarod	86.58	26	P	P	20 23 23.8	+1.6
	baz=250,SNR=158						
G17K	Kiwalik Mounta	86.61	23	P	P	20 23 23.2	+0.9
	baz=248,SNR=104						
H17K	Granite Mounta	86.69	24	P	P	20 23 23.4	+0.7
H17K	Granite Mounta	86.69	24	P	P	20 23 23.8	+1.1
	baz=249,SNR=77						
SII	Sitkinak Islan	86.70	32	P	P	20 23 24.0	+1.0
SII	Sitkinak Islan	86.70	32	P	P	20 23 24.4	+1.4
	baz=254						
F17K	Baldwin Pennin	86.74	22	P	P	20 23 23.6	+0.7
	baz=248						
E17K	Hotham Inlet	86.78	21	P	P	20 23 23.9	+0.9
	baz=247,SNR=42						
RDOG	Red Dog Mine	86.79	20	IAmb	IAmb	20 23 24.9	
	comp=Z,151nm,0.9s						
RDOG	Red Dog Mine	86.79	20	P	P	20 23 23.9	+0.8
	baz=246,SNR=61						
KBD	Kabd	86.81	300	P	P	20 23 24.5	+0.4
R18K	Karluk	86.84	31	P	P	20 23 24.0	+0.5
	baz=254,SNR=8.2						
Q18K	Katmai Hardscr	86.86	30	P	P	20 23 23.8	0.0
	baz=254,SNR=24						
C17K	DeLong Mountai	86.87	20	P	P	20 23 24.4	+0.9
	baz=246,SNR=38						
P18K	Big Mountain,	86.96	30	IAmb	IAmb	20 23 25.3	
	comp=Z,115nm,1.0s						
P18K	Big Mountain,	86.96	30	P	P	20 23 24.3	+0.1
	baz=253,SNR=7.7						
N18K	Kilae Creek	87.03	28	IAmb	IAmb	20 23 27.2	
	comp=Z,126nm,1.1s						
N18K	Kilae Creek	87.03	28	P	P	20 23 25.9	+1.5
	baz=253,SNR=42						
O18K	Koktuh Hills	87.11	29	P	P	20 23 25.6	+0.7
	baz=253,SNR=18						
L18K	Granite Mounta	87.13	27	IAmb	IAmb	20 23 27.7	
	comp=Z,252nm,0.8s						
L18K	Granite Mounta	87.13	27	P	P	20 23 26.5	+1.6
	baz=252,SNR=223						
M18K	Stony River	87.30	27	P	P	20 23 27.2	+1.5
	baz=253,SNR=147						
E18K	Tukpahlearik C	87.35	21	P	P	20 23 26.5	+0.7
E18K				IAmb	IAmb	20 23 27.7	
	comp=Z,123nm,0.9s						
E18K	Tukpahlearik C	87.35	21	P	P	20 23 26.6	+0.7
	baz=248,SNR=79						
OHAK	Old Harbor	87.36	32	IAmb	IAmb	20 23 28.2	
	comp=Z,252nm,0.8s						
OHAK	Old Harbor	87.36	32	P	P	20 23 27.8	+1.8
OHAK	Old Harbor	87.36	32	P	P	20 23 27.2	+1.1
	baz=255,SNR=31						
H18K	Honhosa River	87.38	24	P	P	20 23 26.3	+0.2
	baz=250,SNR=61						
F18K	Selawik	87.39	22	P	P	20 23 26.4	+0.4
	baz=249,SNR=15						
LKRN	Lenkeran, Azer	87.40	309	P	P	20 23 27.6	+0.9
J18K	Innoko River	87.51	25	IAmb	IAmb	20 23 29.1	
	comp=Z,107nm,0.8s						
J18K	Innoko River	87.51	25	P	P	20 23 27.5	+0.8
	baz=252,SNR=152						
G18K	Tagagawik	87.52	23	P	P	20 23 27.0	+0.3
	baz=250						
C18K	Utukok River	87.61	20	P	P	20 23 27.5	+0.3
	baz=248,SNR=13						
Q19K	Cape Douglas,	87.62	30	IAmb	IAmb	20 23 29.2	
	comp=Z,326nm,1.4s						
Q19K	Cape Douglas,	87.62	30	P	P	20 23 27.4	+0.1
	baz=255,SNR=12						
O19K	Port Alsworth	87.63	29	P	P	20 23 27.6	+0.3
B18K	Kokolik River	87.69	19	P	P	20 23 28.4	+0.9
	baz=247,SNR=12						
N19K	Bonanza Creek	87.72	28	IAmb	IAmb	20 23 30.4	
	comp=Z,182nm,0.8s						
N19K	Bonanza Creek	87.72	28	P	P	20 23 29.1	+1.2
	baz=254,SNR=83						
GCSA	Galena City Sc	87.85	24	P	P	20 23 29.0	+0.8
	baz=252,SNR=16						
KDAK	Kodiak Island	87.86	31	P	P	20 23 29.2	+0.7
KDAK				IAmb	IAmb	20 23 30.6	
	comp=Z,241nm,0.9s						
KDAK	Kodiak Island	87.86	31	P	P	20 23 29.1	+0.7
	comp=Z,196nm,0.9s,baz=248,slow=2.1,SNR=58						
KDAK				LR	LR	20 59 23.2	
	comp=Z,260nm,21.7s,baz=259,slow=33						
	comp=Z,196nm,0.9s						
KDAK	Kodiak Island	87.86	31	c iP	P	20 23 29.5	+1.0
KDAK				pmax	pmax		
	comp=Z,363nm,0.9s						
KDAK	Kodiak Island	87.86	31	P	P	20 23 29.7	+1.2
	baz=256						
L19K	White Mountain	87.94	27	P	P	20 23 30.1	+1.3
	baz=254,SNR=189						
RAYN	Ar Rayn	87.98	294	P	P	20 23 30.2	+0.3
RAYN	Ar Rayn	87.98	294	P	P	20 23 30.8	+0.9
RAYN	Ar Rayn	87.98	294	⇓P	P	20 23 31.2	+1.3
RAYN	Ar Rayn	87.98	294	iP	P	20 23 30.5	+0.6
	SNR=19						
P19K	Oil Pt	88.01	30	P	P	20 23 29.4	+0.2
P19K	Oil Pt	88.01	30	P	P	20 23 29.0	-0.2
	baz=255						
M19K	Big River Lodg	88.07	27	IAmb	IAmb	20 23 32.3	
	comp=Z,187nm,0.9s						
M19K	Big River Lodg	88.07	27	P	P	20 23 30.8	+1.4
	baz=254						
J19K	Poorman	88.14	25	P	P	20 23 30.6	+0.9
	baz=253,SNR=107						
Q20K	Shuyak Island	88.17	31	P	P	20 23 30.3	+0.4
	baz=256						
SYI	Shuyak Island	88.17	31	IAmb	IAmb	20 23 33.8	
	comp=Z,110nm,0.9s						
F19K	Shaleruckik Mo	88.17	22	P	P	20 23 29.9	+0.1
	baz=251						
G19K	Purcell Mounta	88.21	23	IAmb	IAmb	20 23 31.8	
	comp=Z,120nm,0.8s						
G19K	Purcell Mounta	88.21	23	P	P	20 23 30.7	+0.7
	baz=251,SNR=100						
TAOE	Nuku Hiva Isla	88.22	99	P	P	20 23 31.6	+0.3
TAOE				IAmb	IAmb	20 24 13.8	
	comp=Z,110nm,1.1s						
TAOE	Nuku Hiva Isla	88.22	99	eP	P	20 23 29.2	-2.1
	comp=Z,286nm,24.9s						
TAOE	Nuku Hiva Isla	88.22	99	eS	SKSac	20 33 51.4	+2.9
	comp=Z,503nm,27.9s						
TAOE	Nuku Hiva Isla	88.22	99	eLR	LR	20 51 38.2	
	comp=Z,565nm,23.8s						
A19K	Wainwright	88.25	18	P	P	20 23 31.2	+1.2
	baz=248,SNR=10.0						
H19K	Roundabout Mou	88.26	23	IAmb	IAmb	20 23 33.2	
	comp=Z,132nm,0.9s						
H19K	Roundabout Mou	88.26	23	P	P	20 23 31.1	+0.9
	baz=252,SNR=105						
C19K	Lookout Ridge	88.32	20	P	P	20 23 31.6	+1.1
	baz=249,SNR=46						
O20K	Slope Mountain	88.42	29	P	P	20 23 31.0	-0.2
	baz=256						
L20K	Farewell, AK	88.46	27	P	P	20 23 32.4	+1.1
	baz=254,SNR=68						
E19K	Redstone River	88.58	22	IAmb	IAmb	20 23 33.5	
	comp=Z,151nm,0.9s						
E19K	Redstone River	88.58	22	P	P	20 23 32.4	+0.7
	baz=251						
D19K	Kuna River	88.61	20		P	20 23 32.6	+0.7
D19K				IAmb	IAmb	20 23 33.3	
	comp=Z,164nm,0.8s						
D19K	Kuna River	88.61	20	P	P	20 23 32.3	+0.4
	baz=250						
K20K	Telida	88.62	26	IAmb	IAmb	20 23 35.0	
	comp=Z,111nm,0.8s						
K20K	Telida	88.62	26	P	P	20 23 33.1	+1.1
	baz=254,SNR=107						
M20K	Styx River	88.64	27	IAmb	IAmb	20 23 34.8	
	comp=Z,112nm,0.9s						
M20K	Styx River	88.64	27	P	P	20 23 32.9	+0.7
	baz=255						
AKT	Akhty	88.64	312	eP	P	20 23 33.5	+0.8
AKT				e*SP	pwP	20 24 12.7	+4.5
AKT				e		20 27 00.2	
AKT				ePPP	PPP	20 29 00.3	
AKT				eS	SKSac	20 33 52.5	+2.4
AKT				pmax	pmax		
	comp=Z,614nm,1.4s						
AKT				pmax	pmax		
	comp=Z,318nm,1.2s						
AKT				pmax	pmax		
	comp=E,102nm,1.0s						
AKT				pmax	pmax		
	comp=N,87nm,1.0s						
AKT				smax	smax		
	comp=E,317nm,4.4s						
AKT				smax	smax		
	comp=N,199nm,3.8s						
HOM	Homer	88.80	30	IAmb	IAmb	20 24 13.3	
	comp=Z,168nm,0.8s						
HOM	Homer	88.80	30	P	P	20 23 33.1	+0.3
	baz=256						
J20K	Nowinta River	88.81	25	IAmb	IAmb	20 23 36.0	
	comp=Z,113nm,0.8s						
J20K	Nowinta River	88.81	25	P	P	20 23 34.0	+1.2
	baz=254,SNR=138						

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I20K  Naaghedeneel     88.84  24  IAmb   IAmb    20 23 36.1
      comp=Z,121nm,0.9s
I20K  Naaghedeneel     88.84  24  P      P       20 23 33.9 +1.0
      baz=254,SNR=6.9
H20K  Anotleneega Mo   88.88  24  P      P       20 23 33.8 +0.7
      baz=253,SNR=55
N20K  Mount Spurr      88.90  28  P      P       20 23 32.9 -0.5
      baz=256
SPCR  Spurr Chakacha   88.90  28  P      P       20 23 33.3 -0.1
      baz=256,SNR=11
CNPM  China Poot       88.97  30  IAmb   IAmb    20 23 35.4
      comp=Z,216nm,1.4s
SEKA  Sheki            89.00 311  P      P       20 23 34.8 +0.5
F20K  Avaraart Lake    89.01  22  IAmb   IAmb    20 23 35.6
      comp=Z,85nm,0.9s
F20K  Avaraart Lake    89.01  22  P      P       20 23 34.5 +0.8
      baz=253,SNR=70
MNGR  Mingechevir, A   89.02 311  P      P       20 23 35.2 +0.9
MAK   Makhachkala      89.04 313d iP     P       20 23 32.2 -2.1
MAK                              e*SP    pwP     20 24 13.2 +3.4
MAK                              e               20 27 03.3
MAK                              e               20 33 50.2
MAK                              eSS     SS      20 40 09.5 +1.2
MAK                              eSSS    SSS     20 43 48.7
MAK                               pmax   pmax
      comp=Z,301nm,1.2s
ATD   Arta Tunnel      89.12 282  P      P       20 23 36.5 +1.0
ATD   Arta Tunnel      89.12 282  P      P       20 23 38.0 +2.5
      SNR=14
D20K  Etivluk River    89.20  20  IAmb   IAmb    20 23 36.1
      comp=Z,136nm,0.8s
D20K  Etivluk River    89.20  20  P      P       20 23 35.1 +0.5
      baz=252
E20K  Nigu River       89.21  21  P      P       20 23 35.3 +0.6
      baz=252
BRSE  Bradley Lake S   89.26  30  P      P       20 23 35.3 +0.2
      baz=257
CAPN  Captain Cook N   89.29  29  P      P       20 23 36.2 +1.1
CAPN  Captain Cook N   89.29  29  P      P       20 23 36.2 +1.1
      baz=257
SKT   Skwentna         89.40  27  P      P       20 23 34.9 -0.8
      baz=256,SNR=42
B20K  Meade River      89.43  19  IAmb   IAmb    20 23 37.3
      comp=Z,229nm,1.1s
B20K  Meade River      89.43  19  P      P       20 23 36.3 +0.7
      baz=251,SNR=38
IMAR  Indian Mountai   89.46  23  P      P       20 23 35.9 +0.1
CAST  Castle Rocks     89.50  26  P      P       20 23 36.2 +0.1
      baz=256
CHUM  Lake Minchumin   89.51  26  P      P       20 23 36.8 +0.7
      baz=256
GANJ  Ganja            89.57 311  P      P       20 23 37.8 +0.8
SUA   Susitna One      89.64  28  IAmb   IAmb    20 23 38.9
      comp=Z,146nm,0.8s
SUA   Susitna One      89.64  28  P      P       20 23 36.5 -0.4
      baz=257
SLKM  Skilak Lake      89.68  29  IAmb   IAmb    20 23 39.3
      comp=Z,234nm,1.2s
G21K  Allakaket        89.70  23  P      P       20 23 37.4 +0.4
      baz=255,SNR=55
H21K  Melozitna Rive   89.75  24  P      P       20 23 37.9 +0.7
      baz=255,SNR=28
F21K  Alatna River     89.90  22  P      P       20 23 38.2 +0.3
      baz=255,SNR=15
O22K  Cooper Landing   89.92  29  IAmb   IAmb    20 23 45.8
      comp=Z,227nm,1.1s
O22K  Cooper Landing   89.92  29  P      P       20 23 38.2 +0.1
      baz=258
C21K  Knifeblade Rid   89.97  20  P      P       20 23 38.9 +0.8
      baz=254,SNR=30
SEW   Seward           89.97  30  P      P       20 23 38.5 +0.2
      baz=258
M22K  Willow           90.00  28  IAmb   IAmb    20 23 40.3
      comp=Z,157nm,0.8s
M22K  Willow           90.00  28  P      P       20 23 38.0 -0.4
      baz=258,SNR=8.0
NAX   Nakhchivan       90.00 309  P      P       20 23 39.8 +0.7
A21K  Barrow           90.02  18  P      P       20 23 38.8 +0.5
      baz=252,SNR=11
RC01  Rabbit Creek A   90.04  29  IAmb   IAmb    20 23 40.4
      comp=Z,105nm,0.8s
RC01  Rabbit Creek A   90.04  29  P      P       20 23 38.5 -0.1
      baz=258,SNR=28
E21K  Killik River     90.05  21  IAmb   IAmb    20 23 40.1
      comp=Z,87nm,0.9s
E21K  Killik River     90.05  21  P      P       20 23 39.0 +0.4
      baz=254,SNR=67
CUT   Chulitna         90.07  27  P      P       20 23 38.0 -0.7
      baz=258
BPAW  Bear Paw Mtn.    90.13  25  P      P       20 23 39.0 -0.1
      baz=257
B21K  Ikpikpuk River   90.16  20  IAmb   IAmb    20 23 40.6
      comp=Z,166nm,1.0s
B21K  Ikpikpuk River   90.16  20  P      P       20 23 39.6 +0.7
      baz=254,SNR=45
TRF   Thorofare Moun   90.29  26  P      P       20 23 39.6 -0.4
      baz=258,SNR=12
H22K  Ishtalitna Cre   90.38  24  P      P       20 23 41.0 +0.8
      baz=257,SNR=24
BELG  Belogornoye      90.42 323  P      P       20 23 39.5 -1.1
      comp=Z,199nm,0.9s,baz=354,slow=1.4,SNR=50
BELG                              S      SKSac   20 33 57.0 -2.6
      comp=Z,42nm,1.0s,baz=312,slow=24,SNR=6.5
      comp=Z,199nm,0.9s
BELG  Belogornoye      90.42 323c iP     P       20 23 39.6 -1.0
BELG                              pmax   pmax
      comp=Z,39nm,1.0s
PMR   Palmer           90.43  28  P      P       20 23 41.5 +1.1
PMR   Palmer           90.43  28  P      P       20 23 40.3 -0.1
      baz=259,SNR=18
A22K  Sinclair Lake    90.44  18  P      P       20 23 40.9 +0.6
      baz=253
MLY   Manley           90.44  25  P      P       20 23 40.2 -0.3
MLY   Manley           90.44  25  P      P       20 23 40.9 +0.4
      baz=257,SNR=70
F22K  John River       90.46  22  P      P       20 23 41.3 +0.8
      baz=256,SNR=104
KIRV  Kirov            90.47 329  P      P       20 23 39.5 -1.1
      comp=Z,91nm,0.8s,baz=92,slow=1.6,SNR=71
      comp=Z,91nm,0.8s
G22K  Bettles          90.57  23  P      P       20 23 41.3 +0.3
      baz=256
D22K  Ayikyak River    90.62  21  P      P       20 23 42.0 +0.8
      baz=255,SNR=24
PWL   Port Wells       90.66  29  IAmb   IAmb    20 23 43.8
      comp=Z,81nm,1.0s
PWL   Port Wells       90.66  29  P      P       20 23 41.6 +0.1
      baz=259,SNR=16
GNI   Garni            90.71 310  P      P       20 23 42.3 -0.2
GNI                               IAmb   IAmb    20 24 30.4
      comp=Z,61nm,0.8s
GNI   Garni            90.71 310  P      P       20 23 43.2 +0.7
      comp=Z,59nm,1.1s,baz=20,slow=2.0,SNR=12
      comp=Z,59nm,1.1s
GNI   Garni            90.71 310  P      P       20 23 43.9 +1.5
GNI   Garni            90.71 310c iP     P       20 23 43.6 +1.2
GNI                               pmax   pmax
      comp=Z,132nm,1.5s
GNI   Garni            90.71 310  P      P       20 23 43.6 +1.2
KNK   Knik Glacier     90.71  28  IAmb   IAmb    20 23 44.2
      comp=Z,119nm,0.8s
KNK   Knik Glacier     90.71  28  P      P       20 23 42.0 +0.3
      baz=259,SNR=29
E22K  Anaktuvuk Pass   90.75  21  IAmb   IAmb    20 23 43.6
      comp=Z,130nm,0.9s
E22K  Anaktuvuk Pass   90.75  21  P      P       20 23 42.6 +0.7
      baz=256,SNR=112
B22K  Teshekpuk Lake   90.75  19  IAmb   IAmb    20 23 43.2
      comp=Z,174nm,0.9s
B22K  Teshekpuk Lake   90.75  19  P      P       20 23 42.2 +0.5
      baz=255,SNR=32
BWN   Browne           90.80  26  IAmb   IAmb    20 23 43.4
      comp=Z,150nm,0.8s
SML   Sawmill          90.84  28  P      P       20 23 42.4 -0.1
SML                               IAmb   IAmb    20 23 43.7
      comp=Z,79nm,0.8s
SML   Sawmill          90.84  28  P      P       20 23 42.5 +0.1
      baz=259,SNR=45
RND   Reindeer         90.91  26  IAmb   IAmb    20 23 43.3
      comp=Z,149nm,0.8s
WAT1  Susitna Watana   90.94  27  P      P       20 23 42.7 -0.2
      baz=259
MCK   McKinley         90.94  26  IAmb   IAmb    20 23 43.5
      comp=Z,74nm,0.8s
MCK   McKinley         90.94  26  P      P       20 23 42.5 -0.3
      baz=259,SNR=32
P23K  Montague Islan   90.96  30  P      P       20 23 43.2 +0.3
P23K                              IAmb   IAmb    20 23 45.5
      comp=Z,92nm,0.9s
P23K  Montague Islan   90.96  30  P      P       20 23 43.5 +0.5
      baz=260,SNR=15
I23K  Minto, Yukon-K   91.04  25  IAmb   IAmb    20 23 44.8
      comp=Z,165nm,0.9s
I23K  Minto, Yukon-K   91.04  25  P      P       20 23 43.7 +0.5
      baz=258,SNR=173
NEA2  Nenana           91.05  25  P      P       20 23 42.7 -0.6
      baz=259,SNR=32
G23K  Bananza Creek    91.10  23  IAmb   IAmb    20 23 45.5
      comp=Z,126nm,0.9s
G23K  Bananza Creek    91.10  23  P      P       20 23 44.4 +0.9
      baz=258,SNR=202
H23K  Yukon River      91.10  24  IAmb   IAmb    20 23 45.3
      comp=Z,78nm,0.8s
H23K  Yukon River      91.10  24  P      P       20 23 44.2 +0.7
      baz=258,SNR=75
M23K  Glacier View     91.12  28  P      P       20 23 43.8 +0.1
      baz=260,SNR=22
COLD  Coldfoot         91.14  22  P      P       20 23 44.5 +0.9
COLD                              IAmb   IAmb    20 23 46.0
      comp=Z,140nm,0.9s
COLD  Coldfoot         91.14  22  P      P       20 23 44.6 +0.9
      baz=258,SNR=78
WAT6  Susitna Watana   91.26  27  P      P       20 23 44.5  0.0
      baz=260,SNR=58
GLI   Glacier Island   91.26  29  IAmb   IAmb    20 23 46.6
      comp=Z,76nm,0.9s
GLI   Glacier Island   91.26  29  P      P       20 23 44.4 +0.1
      baz=260,SNR=20
SCM   Sheep Creek Mo   91.32  28  P      P       20 23 44.4 -0.2
SCM                               IAmb   IAmb    20 23 49.9
      comp=Z,62nm,0.8s
SCM   Sheep Creek Mo   91.32  28  P      P       20 23 44.4 -0.2
SCM                               pmax   pmax
      comp=Z,62nm,0.8s
SCM   Sheep Creek Mo   91.32  28  P      P       20 23 45.0 +0.3
      baz=260,SNR=37
D23K  Nanushuk River   91.34  21  IAmb   IAmb    20 23 46.9
      comp=Z,171nm,1.1s
D23K  Nanushuk River   91.34  21  P      P       20 23 45.5 +0.9
      baz=257,SNR=89
TRLG  Trialeti         91.35 311  P      P       20 23 46.4 +1.0
Q23K  Middleton Isla   91.39  30  P      P       20 23 45.3 +0.3
      baz=261
WRH   Wood River Hil   91.44  25  IAmb   IAmb    20 23 45.6
      comp=Z,116nm,0.9s
HIN   Hinchinbrook I   91.47  30  IAmb   IAmb    20 23 47.9
      comp=Z,68nm,1.0s
DHY   Denali Highway   91.51  27  IAmb   IAmb    20 23 49.5
      comp=Z,86nm,0.7s
DHY   Denali Highway   91.51  27  P      P       20 23 45.8 +0.2
      baz=260,SNR=152
E23K  Chandalar        91.53  22  P      P       20 23 46.5 +1.0
      baz=258,SNR=231
C23K  Itkillik River   91.56  20  IAmb   IAmb    20 23 47.1
      comp=Z,162nm,1.0s
C23K  Itkillik River   91.56  20  P      P       20 23 46.0 +0.5
      baz=257,SNR=54
CCB   Clear Creek Bu   91.60  25  IAmb   IAmb    20 23 46.1
      comp=Z,133nm,0.8s
COLA  College          91.62  25  P      P       20 23 44.8 -1.1
COLA                              IAmb   IAmb    20 23 46.8
      comp=Z,61nm,0.8s
COLA  College          91.62  25  P      P       20 23 45.6 -0.2
COLA  College          91.62  25c iP     P       20 23 45.1 -0.7
COLA                              pmax   pmax
      comp=Z,56nm,0.8s
COLA  College          91.62  25  P      P       20 23 45.0 -0.8
      baz=260
TOLK  Toolik Lake Re   91.67  21  IAmb   IAmb    20 23 47.9
      comp=Z,77nm,0.8s
TOLK  Toolik Lake Re   91.67  21  P      P       20 23 46.9 +0.8
      baz=258,SNR=38
H24K  Noodor Dome      91.78  24  IAmb   IAmb    20 23 48.3
      comp=Z,138nm,0.9s
H24K  Noodor Dome      91.78  24  P      P       20 23 47.3 +0.6
      baz=260,SNR=182
GEVA  Gevas            91.80 308  P      P       20 23 48.2 +0.6
POKR  Poker Plat Res   91.83  25  P      P       20 23 45.7 -1.2
      baz=260,SNR=5.3
EYAK  Cordova Ski Ar   91.86  29  P      P       20 23 48.6 +1.5
EYAK  Cordova Ski Ar   91.86  29  P      P       20 23 47.6 +0.5
      baz=262,SNR=7.9
M24K  Tolsona, Glenn   91.90  28  P      P       20 23 47.8 +0.5
M24K                              IAmb   IAmb    20 23 50.6
      comp=Z,81nm,0.9s
M24K  Tolsona, Glenn   91.90  28  P      P       20 23 48.0 +0.6
      baz=261,SNR=16
HDA   Harding Lake     91.92  26  IAmb   IAmb    20 23 47.9
      comp=Z,82nm,0.8s
HDA   Harding Lake     91.92  26  P      P       20 23 46.5 -0.9
      baz=261,SNR=54
KLU   Klutina          91.92  28  P      P       20 23 48.0 +0.5
      baz=261,SNR=23
DIV   Divide           91.94  29  IAmb   IAmb    20 23 49.3
      comp=Z,110nm,0.9s
NCK   Nalchik          91.94 313 i P     P       20 23 48.1 +0.2
NCK                               pmax   pmax
      comp=Z,63nm,1.0s
E24K  Your Creek       91.95  22  P      P       20 23 47.9 +0.4
      baz=259,SNR=64
IL31                   92.01  25  IAmb   IAmb    20 23 47.5
      comp=Z,65nm,0.8s
ILAR  Eielson Array    92.01  25  P      P       20 23 46.1 -1.6
ILAR  Eielson Array    92.01  25  P      P       20 23 46.2 -1.4
      comp=Z,51nm,0.8s,baz=273,slow=4.3,SNR=330
ILAR                              PKKP   PKKPdf  20 41 03.7 -0.2
      comp=Z,1.4nm,0.7s,baz=51,slow=1.7,SNR=7.1
ILAR                              LR     LR      21 01 10.3
      comp=Z,176nm,21.8s,baz=262,slow=33
      comp=Z,51nm,0.8s
KARS  Kars             92.02 310  P      P       20 23 49.6 +1.1
KARS  Kars             92.02 310  P      P       20 23 49.6 +1.1
KARS                              pmax   pmax
      comp=Z,1µm,1.7s
D24K  Happy Valley     92.04  21  IAmb   IAmb    20 23 49.8
      comp=Z,115nm,1.0s
D24K  Happy Valley     92.04  21  P      P       20 23 48.6 +0.8
      baz=259,SNR=33
F24K  Squaw Lake       92.08  22  P      P       20 23 49.1 +1.1
      baz=260,SNR=202
G24K  Hadweenzic Riv   92.09  23  P      P       20 23 48.6 +0.5
G24K                              IAmb   IAmb    20 23 50.0
      comp=Z,116nm,0.9s
G24K  Hadweenzic Riv   92.09  23  P      P       20 23 49.0 +0.9
      baz=260,SNR=100
C24K  Franklin Bluff   92.19  20  IAmb   IAmb    20 23 50.6
      comp=Z,154nm,1.0s
C24K  Franklin Bluff   92.19  20  P      P       20 23 48.7 +0.3
      baz=259
K24K  Donnelly Dome    92.33  26  IAmb   IAmb    20 23 50.4
      comp=Z,90nm,0.9s
K24K  Donnelly Dome    92.33  26  P      P       20 23 49.3  0.0
      baz=262,SNR=29
PAX   Paxson           92.35  27  IAmb   IAmb    20 23 51.7
      comp=Z,169nm,1.6s
PAX   Paxson           92.35  27  P      P       20 23 49.7 +0.3
      baz=262,SNR=61
RAGM  Ragged Mountai   92.37  30  IAmb   IAmb    20 23 52.6
      comp=Z,57nm,1.1s
HARP  HAARP            92.41  28  P      P       20 23 50.1 +0.4
      baz=262,SNR=10.0
KAIM  Kayak Island     92.44  30  IAmb   IAmb    20 23 53.8
      comp=Z,126nm,1.0s
KAIM  Kayak Island     92.44  30  P      P       20 23 50.8 +1.1
      baz=263,SNR=24
KIBK  Kibwezi          92.46 267  P      P       20 23 51.5 +0.5
KIBK                              IAmb   IAmb    20 23 53.9
      comp=Z,165nm,1.1s
KIBK  Kibwezi          92.46 267  P      P       20 23 51.9 +0.8
      SNR=15
KBZ   Khabaz           92.47 314  P      P       20 23 50.2 -0.1
      comp=Z,25nm,0.8s,baz=110,slow=2.8,SNR=34
      comp=Z,25nm,0.8s
KBZ   Khabaz           92.47 314c iP     P       20 23 50.3  0.0
KBZ                               pmax   pmax
      comp=Z,31nm,0.8s
BMRM  Bremner River    92.48  29  IAmb   IAmb    20 23 51.6
      comp=Z,71nm,0.9s
BMRM  Bremner River    92.48  29  P      P       20 23 50.5 +0.5
      baz=262,SNR=33
GOF   Gofitskoye       92.50 315ceP      P       20 23 49.7 -0.7
HMT   Hamilton         92.57  30  IAmb   IAmb    20 23 52.2
      comp=Z,49nm,0.8s
N25K  Chitina, Valde   92.57  28  P      P       20 23 51.2 +0.8
      baz=263,SNR=26
GURO  Guroymak-BITLI   92.62 308  P      P       20 23 52.0 +0.7
J25K  Salcha River,    92.63  25  IAmb   IAmb    20 23 51.1
      comp=Z,59nm,1.1s
J25K  Salcha River,    92.63  25  P      P       20 23 50.0 -0.6
      baz=262,SNR=67
G25K  Bearman Lake     92.64  23  P      P       20 23 51.7 +1.2
      baz=261,SNR=22
KIV   Kislovodsk       92.64 314  P      P       20 23 50.5 -0.8
KIV   Kislovodsk       92.64 314  P      P       20 23 51.6 +0.4
KIV   Kislovodsk       92.64 314 eP      P       20 23 50.6 -0.6
KIV                              e               20 27 33.3
KIV                              e               20 34 13.1
KIV                               pmax   pmax
      comp=Z,52nm,3.4s
KIV                               pmax   pmax
      comp=Z,28nm,1.1s
KIV   Kislovodsk       92.64 314 i P     P       20 23 50.8 -0.5
      SNR=9.4
SHA1  Shidzhatmaz      92.64 314c iP     P       20 23 51.2 -0.2
H25L  Birch Creek      92.68  24  P      P       20 23 51.7 +1.0
      baz=262,SNR=17
PRP   Porcupine Dome   92.69  24  P      P       20 23 49.6 -1.4
      baz=262,SNR=6.5
RIDG  Independent Ri   92.73  26  IAmb   IAmb    20 23 52.3
      comp=Z,86nm,1.0s
RIDG  Independent Ri   92.73  26  P      P       20 23 51.3 +0.1
      baz=262,SNR=73
SUCK  Suckling Hills   92.77  30  P      P       20 23 52.0 +0.7
BERG  Berg Lake        92.85  30  P      P       20 23 52.4 +0.7
BERG                              IAmb   IAmb    20 23 53.6
      comp=Z,75nm,0.9s
GLB   Gilahina Butte   92.92  29  IAmb   IAmb    20 23 53.6
      comp=Z,54nm,0.9s
D25K  Kavik River      92.93  21  IAmb   IAmb    20 23 53.3
      comp=Z,68nm,0.9s
D25K  Kavik River      92.93  21  P      P       20 23 52.0 +0.1
      baz=261,SNR=63
F25K  Christian Rive   92.94  22  IAmb   IAmb    20 23 54.1
      comp=Z,95nm,0.9s
F25K  Christian Rive   92.94  22  P      P       20 23 53.1 +1.1
      baz=262,SNR=155
E25K  Arctic Village   93.04  22  IAmb   IAmb    20 23 54.5
      comp=Z,151nm,1.0s
E25K  Arctic Village   93.04  22  P      P       20 23 53.5 +1.0
      baz=262,SNR=98
DOT   Dot Lake         93.07  26  IAmb   IAmb    20 23 53.9
      comp=Z,56nm,0.8s
MENT  Mentasta         93.14  27  P      P       20 23 53.3 +0.3
MENT                              IAmb   IAmb    20 23 54.6
      comp=Z,32nm,0.6s
MENT  Mentasta         93.14  27  P      P       20 23 54.1 +1.1
SCRK  Sand Creek       93.14  26  P      P       20 23 53.1  0.0
      baz=263,SNR=40
CRQM  Cirque           93.17  29  IAmb   IAmb    20 23 55.6
      comp=Z,80nm,0.9s
CRQE  Cirque           93.19  29  P      P       20 23 54.1 +0.7
      baz=264,SNR=37
WAX   Waxell Ridge     93.28  30  IAmb   IAmb    20 23 55.7
      comp=Z,52nm,0.9s
MCARA McCarthy VSAT    93.29  29  P      P       20 23 54.2 +0.5
      baz=264,SNR=7.7
L26K  Log Cabin Wild   93.32  27  P      P       20 23 52.8 -1.0
L26K  Log Cabin Wild   93.32  27  P      P       20 23 54.5 +0.7
      baz=264,SNR=12
TGL   Tana Glacier     93.32  29  IAmb   IAmb    20 23 55.8
      comp=Z,75nm,1.0s
BMAR  Burnt Mountain   93.32  23  P      P       20 23 54.9 +1.1
J26L  Joseph Creek     93.39  26  P      P       20 23 54.6 +0.5
      baz=264,SNR=168
M26K  Nabesna, AK      93.41  28  P      P       20 23 54.7 +0.4
      baz=264,SNR=26
MARD  Mardin           93.50 307  P      P       20 23 55.6 +0.2
C26K  Camden Bay       93.52  20  P      P       20 23 55.6 +1.0
      baz=263,SNR=9.5
F26K  Sheenjek River   93.52  22  P      P       20 23 55.5 +0.9
F26K                              IAmb   IAmb    20 23 56.9
      comp=Z,106nm,0.9s
F26K  Sheenjek River   93.52  22  P      P       20 23 55.8 +1.1
      baz=263,SNR=170
ISLE  Juniper Island   93.54  30  IAmb   IAmb    20 23 59.4
      comp=Z,47nm,1.0s
G26K  Porcupine Rive   93.57  23  P      P       20 23 56.1 +1.3
      baz=264,SNR=203
I26K  Coal Creek Min   93.65  25  IAmb   IAmb    20 23 56.4
      comp=Z,60nm,1.0s
I26K  Coal Creek Min   93.65  25  P      P       20 23 55.2  0.0
      baz=264,SNR=54
MESA  MESA             93.69  30  P      P       20 23 55.8  0.0
      baz=265,SNR=7.4
YAH   Yahtse           93.81  30  IAmb   IAmb    20 27 34.2
      comp=Z,36nm,0.6s
GRNC  Granite Creek    93.84  29  IAmb   IAmb    20 23 58.5
      comp=Z,44nm,1.0s
C27K  Jago River       93.90  20  IAmb   IAmb    20 23 58.3
      comp=Z,107nm,0.9s
C27K  Jago River       93.90  20  P      P       20 23 57.1 +0.8
      baz=264,SNR=85
M27K  Edge Creek, AK   93.93  28  P      P       20 23 57.5 +0.8
      baz=265,SNR=44
VRH   Novokhopyorsk    93.93 321 eP      P       20 23 55.3 -1.5
VRH                               pmax   pmax
      comp=Z,120nm,0.7s
KOPT  Kop Dagi         93.93 310  P      P       20 23 58.2 +0.7
KOPT                              IAmb   IAmb    20 24 02.6
      comp=Z,79nm,0.8s
K27K  Chicken          93.99  26  P      P       20 23 58.3 +1.5
      baz=265
L27K  Beaver Creek,    94.01  27  IAmb   IAmb    20 23 59.0
      comp=Z,67nm,0.8s
L27K  Beaver Creek,    94.01  27  P      P       20 23 57.9 +0.8
      baz=265,SNR=111
BCAR  Beaver Creek A   94.03  27  P      P       20 23 57.8 +0.7
CTG   Chitna Glacier   94.06  29  P      P       20 23 58.3 +0.8
      baz=265,SNR=41
CTGM  Chitina Glacie   94.07  29  IAmb   IAmb    20 24 02.4
      comp=Z,73nm,1.0s
LABN  Labinsk          94.11 314 eP      P       20 23 57.3 -0.5
LABN                             e               20 27 47.1
LABN                             e               20 34 20.6
LABN                              pmax   pmax
      comp=Z,41nm,1.0s
TABL  Table Mountain   94.12  30  P      P       20 23 58.0 +0.2
I27K  Kandik River     94.32  25  P      P       20 23 59.4 +1.0
      baz=266,SNR=309
ERBR  Yeremizino-Bor   94.35 315 eP      P       20 23 56.3 -2.6
ERBR                             e               20 27 48.2
ERBR                             e               20 34 19.6
ERBR                              pmax   pmax
      comp=N,56nm,1.1s
ERBR                              pmax   pmax
      comp=E,18nm,0.9s
ERBR                              pmax   pmax
      comp=Z,94nm,1.2s
G27K  Doyon Strip      94.40  23  IAmb   IAmb    20 24 00.9
      comp=Z,96nm,1.4s
G27K  Doyon Strip      94.40  23  P      P       20 23 59.7 +1.0
      baz=266,SNR=69
H27K  Steamboat Moun   94.40  24  P      P       20 24 00.0 +1.2
      baz=266,SNR=144
BVCY  Beaver Creek     94.40  28  P      P       20 23 59.7 +0.9
      baz=266,SNR=13
E27K  Coleen River     94.53  22  P      P       20 24 00.1 +0.8
      baz=266,SNR=136
PCA   Pinnacle         94.53  30  P      P       20 24 00.4 +0.9
PCA                               IAmb   IAmb    20 24 03.4
      comp=Z,43nm,0.8s
PINM  Pinnacle         94.53  30  P      P       20 24 00.4 +0.9
      baz=266,SNR=6.5
YUK3  Moose Creek      94.55  28  P      P       20 24 00.3 +0.6
      baz=266,SNR=30
O28M  Mount Upton      94.61  29  P      P       20 24 00.7 +0.6
      baz=266,SNR=22
SOC   Sochi            94.76 313 eP      P       20 23 59.1 -1.7
SOC                              e               20 27 48.1
SOC                              eS      SKSac   20 34 23.2 -0.9
SOC                              eSS     SS      20 41 29.9 -0.5
SOC                              eSSS    SSS     20 45 15.2
SOC                               pmax   pmax
      comp=Z,21nm,0.8s
D27M  Malcolm River    94.83  21  IAmb   IAmb    20 24 02.4
      comp=Z,84nm,0.9s
D27M  Malcolm River    94.83  21  P      P       20 24 01.2 +0.6
      baz=266,SNR=32
YUK8  Steele Glacier   94.85  29  P      P       20 24 02.0 +0.8
      baz=267,SNR=17
PNL   Peninsula        94.94  31  P      P       20 24 02.2 +0.9
PNL   Peninsula        94.94  31  P      P       20 24 01.9 +0.6
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	baz=267,SNR=11						
I28M	Miner Creek	95.00	25	P	P	20 24 02.5	+0.9
	baz=267,SNR=378						
F28M	Old Crow	95.14	23	P	P	20 24 02.6	+0.6
	baz=267,SNR=105						
DAWY	Dawson	95.17	26	P	P	20 24 03.0	+0.7
	baz=267,SNR=158						
E28M	Babbage River	95.31	22	P	P	20 24 03.4	+0.6
	baz=268,SNR=111						
O29M	Mount Kennedy	95.38	30	P	P	20 24 03.9	+0.4
O29M	Mount Kennedy	95.38	30	P	P	20 24 04.2	+0.8
	baz=268,SNR=9.0						
YUK4	Talbot Arm	95.39	29	P	P	20 24 04.6	+1.0
	baz=268						
TROLL	Troll, Antarti	95.44	194	⇑P	P	20 24 04.6	+1.1
	comp=Z,4µm,1.1s						
TROLL				⇑x	x	20 40 54.7	
	comp=Z,372nm,0.7s						
VORD	Divnogorie	95.44	321	eP	P	20 23 59.9	-3.8
VORD				e		20 27 51.4	
VORD				pmax	pmax		
	comp=Z,70nm,1.0s						
YUK6	Outpost Mounta	95.51	29	P	P	20 24 04.8	+0.6
	baz=268,SNR=5.8						
M29M	Somme Creek	95.52	28	P	P	20 24 04.5	+0.4
M29M	Somme Creek	95.52	28	P	P	20 24 05.1	+1.1
	baz=268,SNR=54						
VORR	Voronezh	95.52	321	eP	P	20 24 03.1	-1.0
VORR				pmax	pmax		
	comp=Z,141nm,0.7s						
VSR	Storozhevoye	95.53	321	eP	P	20 23 59.9	-4.3
VSR				e		20 27 55.2	
VSR				pmax	pmax		
	comp=Z,50nm,0.9s						
D28M	Stokes Point	95.63	21	P	P	20 24 04.8	+0.6
	baz=268,SNR=6.3						
H29M	Whitestone	95.68	24	IAmb	IAmb	20 24 06.1	
	comp=Z,73nm,1.2s						
H29M	Whitestone	95.68	24	P	P	20 24 05.0	+0.4
	baz=268,SNR=21						
I29M	Ogilvie Camp,	95.68	25	P	P	20 24 05.0	+0.4
	baz=268						
KLMR	Klimovskoe	95.69	331	eP	P	20 24 01.6	-3.0
KLMR				e		20 27 54.2	
KLMR				S	SKSac	20 34 26.6	-1.7
KLMR				pmax	pmax		
	comp=Z,327nm,1.2s						
J29N	Klondike Camp	95.69	26	IAmb	IAmb	20 24 07.6	
	comp=Z,92nm,1.1s						
J29N	Klondike Camp	95.69	26	P	P	20 24 05.8	+1.0
	baz=268						
L29M	L29M	95.69	27	IAmb	IAmb	20 24 07.0	
	comp=Z,59nm,1.0s						
L29M	L29M	95.69	27	P	P	20 24 05.8	+1.1
	baz=268,SNR=67						
LODK	Lodwar	95.71	273	P	P	20 24 05.8	-0.1
LODK				IAmb	IAmb	20 24 07.8	
	comp=Z,36nm,0.9s						
LODK	Lodwar	95.71	273	P	P	20 24 06.8	+0.9
	SNR=14						
P29M	Windy Craggy	95.78	31	P	P	20 24 06.1	+0.9
	baz=268,SNR=6.8						
G29M	Pine Creek	95.83	23	P	P	20 24 05.8	+0.5
	baz=269,SNR=184						
E29M	Blow River	95.91	22	P	P	20 24 05.6	+0.1
	baz=269,SNR=52						
HYT	Haines Junctio	95.93	29	P	P	20 24 06.7	+0.7
	baz=269,SNR=35						
BELA	Belgrano 2	95.98	183	P	P	20 24 05.7	-0.1
BELA				IAmb	IAmb	20 24 06.8	
	comp=Z,65nm,1.3s						
K29M	Barlow Dome	95.98	26	IAmb	IAmb	20 24 08.2	
	comp=Z,96nm,1.1s						
K29M	Barlow Dome	95.98	26	P	P	20 24 07.0	+0.9
	baz=269,SNR=123						
N30M	Aishikik Lake	96.14	29	P	P	20 24 07.7	+0.8
	baz=269,SNR=19						
P30M	Million Dollar	96.18	30	P	P	20 24 07.7	+0.7
	baz=269						
GAZ	Gaziantep	96.33	307	P	P	20 24 08.3	0.0
GAZ				IAmb	IAmb	20 24 09.7	
	comp=Z,64nm,0.8s						
EPYK	Eagle Plains	96.35	24	P	P	20 24 07.7	+0.1
	baz=270,SNR=48						
ASF	Jabal al Asfar	96.36	302	P	P	20 24 08.8	+0.4
	comp=Z,80nm,0.8s,baz=130,slow=2.3,SNR=136						
ASF				PP	PP	20 28 03.0	-0.9
	comp=Z,22nm,1.2s,baz=305,slow=4.4,SNR=3.5						
	comp=Z,80nm,0.8s						
ANN	Anapa	96.46	314	eP	P	20 24 06.8	-1.7
ANN				e		20 34 32.2	
ANN				pmax	pmax		
	comp=E,8.0nm,0.9s						
ANN				pmax	pmax		
	comp=N,29nm,1.0s						
ANN				pmax	pmax		
	comp=Z,96nm,0.9s						
PLBC	Pleasant Camp	96.48	31	P	P	20 24 08.7	+0.5
	baz=270,SNR=10.0						
I30M	Mount Dempster	96.49	25	IAmb	IAmb	20 24 09.8	
	comp=Z,79nm,0.9s						
I30M	Mount Dempster	96.49	25	P	P	20 24 08.7	+0.3
	baz=270,SNR=140						
J30M	Hart River	96.51	26	P	P	20 24 09.3	+0.8
	baz=270,SNR=165						
S31K	Pelican	96.53	32	P	P	20 24 09.0	+0.5
	baz=270						
G30M	tAoh Zraii Nji	96.54	23	P	P	20 24 08.2	-0.3
	baz=270,SNR=168						
MOS	Moscow	96.58	325	eP	P	20 24 05.4	-3.4
MOS				e		20 28 01.2	
MOS				e		20 34 31.6	
MOS				ePS	PS	20 36 51.9	-4.1
MOS				eSS	SS	20 41 49.5	-5.9
MOS				eSSS	SSS	20 45 40.7	
MOS				pmax	pmax		
	comp=Z,200nm,1.2s						
MOS				pmax	pmax		
	comp=Z,187nm,1.2s						
O30N	Mendenhall	96.62	30	P	P	20 24 09.8	+0.8
	baz=270,SNR=10						
F30M	Barrier River	96.70	23	P	P	20 24 09.3	+0.2
	baz=271,SNR=63						
MAYO	Mayo, Yukon	96.71	27	IAmb	IAmb	20 25 01.5	
	comp=Z,76nm,0.9s						
MAYO	Mayo, Yukon	96.71	27	P	P	20 24 10.3	+1.0
	baz=270						
N31M	Braeburn, Yuko	96.77	29	P	P	20 24 10.5	+0.9
	baz=270,SNR=17						
SNAA	Sanae	96.93	193	⇑P	P	20 24 10.9	+0.6
	comp=Z,617nm,0.7s						
SNAA				⇑x	x	20 40 50.9	
	comp=Z,146nm,0.7s						
SNAA	Sanae	96.93	193	P	P	20 24 10.5	+0.3
SNAA				IAmb	IAmb	20 24 12.1	
	comp=Z,40nm,0.9s						
SNAA	Sanae	96.93	193	P	P	20 24 10.7	+0.5
	comp=Z,41nm,1.0s,baz=146,slow=3.5,SNR=48						
SNAA				PKKPbc	PKKPbc	20 40 50.6	-3.4
	comp=Z,8.2nm,0.9s,baz=330,slow=3.7,SNR=14						
SNAA				LR	LR	21 07 36.7	
	comp=Z,754nm,20.6s,baz=114,slow=35						
	comp=Z,41nm,1.0s						
SKAG	Skagway	97.00	31	P	Pdif	20 24 11.4	+0.7
SKAG	Skagway	97.00	31	P	Pdif	20 24 12.3	+1.6
SKAG	Skagway	97.00	31	P	Pdif	20 24 11.6	+0.9
	baz=270,SNR=6.7						
SIT	Sitka	97.02	33	P	Pdif	20 24 11.6	+0.8
	baz=270						
TOKA	Tokat	97.02	310	P	P	20 24 11.0	-0.3
OBN	Obninsk	97.18	325	P	P	20 24 10.4	-1.1
OBN	Obninsk	97.18	325	P	P	20 24 10.3	-1.2
	comp=Z,125nm,0.9s,baz=43,slow=1.1,SNR=46						
	comp=Z,125nm,0.9s						
OBN	Obninsk	97.18	325	⇑P	P	20 24 10.3	-1.2
OBN	Obninsk	97.18	325c	iP	P	20 24 10.1	-1.4
OBN				*SP	pwP	20 24 52.0	+3.9
OBN				i S	SKSac	20 34 35.8	-0.4
OBN				i *SS	ScS	20 35 26.8	+3.1
OBN				i		20 37 06.1	
OBN				pmax	pmax		
	comp=Z,205nm,1.1s						
WHY	Whitehorse	97.22	30	IAmb	IAmb	20 24 13.4	
	comp=Z,47nm,0.9s						
WHY	Whitehorse	97.22	30	P	Pdif	20 24 12.4	+0.6
	baz=271,SNR=29						
BESE	Bessie Mountai	97.26	32	IAmb	IAmb	20 24 13.9	
	comp=Z,32nm,1.0s						
G31M	Satah River	97.31	23	P	P	20 24 11.8	-0.1
	baz=272,SNR=129						
H31M	Peel River	97.33	24	IAmb	IAmb	20 24 13.8	
	comp=Z,73nm,0.9s						
H31M	Peel River	97.33	24	P	Pdif	20 24 12.1	0.0
	baz=272,SNR=72						
M31M	Drury Creek, Y	97.42	28	P	Pdif	20 24 12.6	0.0
	baz=272						
S32K	Killisnoo	97.42	33	P	Pdif	20 24 13.1	+0.6
	baz=271						
R32K	Eaglecrest	97.44	32	P	Pdif	20 24 12.8	0.0
R32K	Eaglecrest	97.44	32	P	Pdif	20 24 13.4	+0.7
	baz=271,SNR=5.2						
GHAJ	Ghor Haditha	97.45	301	P	Pdif	20 24 13.7	+0.4
BNN	Bunyan	97.47	308	P	P	20 24 12.8	-0.7
F31M	Tsiigehtchic	97.50	23	IAmb	IAmb	20 24 13.4	
	comp=Z,90nm,1.0s						
F31M	Tsiigehtchic	97.50	23	P	P	20 24 12.4	-0.2
	baz=273,SNR=23						
JIS	Juneau Island	97.51	32	P	Pdif	20 24 13.9	+0.9
INK	Inuvik	97.53	22	IAmb	IAmb	20 24 13.7	
	comp=Z,88nm,1.0s						
INK	Inuvik	97.53	22	P	P	20 24 11.8	-1.0
	comp=Z,64nm,0.9s,baz=281,slow=4.8,SNR=64						
INK				S	SKSac	20 34 36.1	-1.4
	comp=Z,1.7nm,0.4s,baz=120,slow=32,SNR=11						
	comp=Z,64nm,0.9s						
INK	Inuvik	97.53	22	P	P	20 24 12.5	-0.3
	baz=273						
MMAI	Mount Meron Ar	97.65	302	P	Pdif	20 24 15.0	+0.6
	comp=Z,43nm,1.0s,baz=91,slow=8.3,SNR=53						
MMAI				PKiKP	PKiKP	20 28 48.2	+0.2
	comp=Z,3.9nm,0.8s,baz=86,slow=2.7,SNR=5.2						
MMAI				PKKPbc	PKKPbc	20 40 51.6	+0.8
	comp=Z,0.5nm,0.4s,baz=230,slow=3.6,SNR=4.4						
MMAI				LR	LR	21 14 31.5	
	comp=Z,98nm,21.3s,baz=106,slow=39						
	comp=Z,43nm,1.0s						
LVZ	Lovozero	97.71	338	P	P	20 24 12.3	-1.4
LVZ	Lovozero	97.71	338c	iP	P	20 24 12.6	-1.1
LVZ				pmax	pmax		
	comp=Z,94nm,0.9s						
P32M	Atlin	97.83	31	P	Pdif	20 24 14.9	+0.5
	baz=272,SNR=11						
FARO	Faro, Yukon	97.91	28	IAmb	IAmb	20 24 16.2	
	comp=Z,30nm,0.9s						
FARO	Faro, Yukon	97.91	28	P	Pdif	20 24 15.3	+0.6
	baz=272,SNR=9.3						
EIL	Elat	97.91	299	P	Pdif	20 24 15.6	+0.1
	comp=Z,40nm,0.8s,baz=80,slow=2.1,SNR=52						
	comp=Z,40nm,0.8s						
DIKM	Dikmen	97.98	311	⇑P	P	20 24 11.9	-3.6
N32M	Quiet Lake	98.08	29	IAmb	IAmb	20 24 17.2	
	comp=Z,51nm,0.9s						
N32M	Quiet Lake	98.08	29	P	Pdif	20 24 16.1	+0.5
	baz=273						
APA	Apatity	98.20	337	⇓iP	P	20 24 13.1	-2.8
APA				i		20 28 12.8	
APA				i PPP	PPP	20 30 22.0	
APA				i		20 34 39.0	
APA				i S	S	20 35 25.0	-6.8
APA				i PS	PS	20 37 15.0	+1.8
APA				i SS	SS	20 42 13.0	-4.6
APA				pmax	pmax		
	comp=Z,49nm,0.9s						
U33K	Whale Pass	98.25	34	P	Pdif	20 24 17.3	+1.0
U33K	Whale Pass	98.25	34	P	Pdif	20 24 17.2	+0.9
	baz=272						
P33M	Teslin, Yukon	98.25	30	P	Pdif	20 24 16.6	+0.2
	baz=273,SNR=20						
CRAG	Craig	98.27	35	P	Pdif	20 24 17.1	+0.7
CRAG	Craig	98.27	35	P	Pdif	20 24 17.5	+1.1
CRAG	Craig	98.27	35	P	Pdif	20 24 17.4	+1.0
	baz=272						
Q32M	Nakina River	98.59	31	P	Pdif	20 24 18.9	+0.8
	baz=273,SNR=5.4						
WRAK	Wrangell Islan	98.67	34	P	Pdif	20 24 18.9	+0.7
	baz=272						
H02S1	DAWSON INLET T	98.72	37	P	Pdif	20 24 19.0	+0.5
VNA3	Neumayer Olymp	98.74	192	⇑P	Pdif	20 24 19.2	+0.9
	comp=Z,19nm,0.7s						
VNA3				⇑x	x	20 40 44.7	
	comp=Z,11nm,0.7s						
MMPY	Sheldon Lake,	98.85	28	P	Pdif	20 24 19.7	+0.8
MMPY	Sheldon Lake,	98.85	28	P	Pdif	20 24 19.7	+0.7
	baz=274						
BZK	Bozkurt	98.92	311	⇓P	P	20 24 19.2	-0.4
KIRS	Kirsehir-Merke	98.98	309	⇑P	P	20 24 19.4	-0.7
V35K	Ketchikan	99.14	35	P	Pdif	20 24 21.0	+0.7
	baz=273						
BR131	Keskin Array S	99.19	309	P	Pdif	20 24 20.1	-1.0
BR131				IAmb	IAmb	20 24 21.4	
	comp=Z,28nm,0.8s						
BR131	Keskin Array S	99.19	309	P	Pdif	20 24 20.4	-0.7
	SNR=21						
BR131	Keskin Array S	99.19	309c	iP	Pdif	20 24 20.2	-1.0
BRTR	Keskin Array B	99.19	309	P	Pdif	20 24 20.0	-1.2
BRTR	Keskin Array B	99.19	309	P	Pdif	20 24 20.2	-1.0
	comp=Z,22nm,0.9s,baz=128,slow=5.5,SNR=102						
BRTR				PP	PP	20 28 24.4	-1.1
	comp=Z,11nm,1.0s,baz=140,slow=7.9,SNR=5.5						
BRTR				PKKP	PKKPbc	20 40 46.2	-0.6
	comp=Z,1.8nm,0.9s,baz=217,slow=3.1,SNR=6.5						
BRTR				PKPPKP	P'P'df	20 48 60.0	-2.1
	comp=Z,0.4nm,0.9s,baz=212,slow=5.1,SNR=3.7						
	comp=Z,22nm,0.9s						
R33M	Jennings River	99.23	31	P	Pdif	20 24 21.8	+0.9
	baz=274,SNR=16						
S34M	Telegraph Cree	99.25	32	P	Pdif	20 24 21.9	+1.1
	baz=274,SNR=10						
HOPEN	Hopen	99.33	347	eP	Pdif	20 24 17.7	-3.0
VADS	Vadso	99.36	340	eP	Pdif	20 24 19.3	-1.7
CSS	Mathiatis	99.42	304	Pdif	Pdif	20 24 21.4	-0.7
CSS				IAmb	IAmb	20 24 23.5	
	comp=Z,59nm,1.0s						
CIDE	Kastamonu/Cide	99.70	311	⇑P	Pdif	20 24 22.6	-0.5
T35M	Bob Quinn	99.79	33	P	Pdif	20 24 24.5	+1.2
	baz=274,SNR=5.6						
DLBC	Dease Lake	99.80	32	P	Pdif	20 24 24.0	+0.7
	comp=Z,9.8nm,1.1s,baz=292,slow=4.8,SNR=12						
DLBC				PP	PP	20 28 29.1	-0.3
	comp=Z,6.1nm,1.0s,baz=265,slow=3.3,SNR=4.4						
DLBC				PKiKP	PKiKP	20 28 51.3	+0.2
	comp=Z,1.3nm,0.6s,baz=317,slow=7.1,SNR=3.2						
	comp=Z,9.8nm,1.1s						
DLBC	Dease Lake	99.80	32	P	Pdif	20 24 24.1	+0.9
	baz=275,SNR=9.4						
ANTO	Ankara	99.84	309	Pdif	Pdif	20 24 23.3	-0.6
ANTO	Ankara	99.84	309	⇑P	Pdif	20 24 23.5	-0.5
ANTO	Ankara	99.84	309	⇑P	Pdif	20 24 23.5	-0.5
A36M	Sachs Harbour	99.87	18	P	Pdif	20 24 23.4	+0.2
	baz=282						
MBAR	Mbarara	99.91	268	P	Pdif	20 24 25.3	+0.4
MREMI	Moremi	99.96	246	i P	Pdif	20 24 25.1	+0.2
U35K	Hyder	100.00	34	P	Pdif	20 24 24.9	+0.8
	baz=274						
MSF	Maaselka	100.11	336	P	Pdif	20 24 23.4	-1.0
KEV	Kevo	100.23	340	P	Pdif	20 24 24.7	-0.1
KEV				pmax	pmax		
	comp=Z,54nm,1.1s						
WTLY	Watson Lake, Y	100.27	30	P	Pdif	20 24 26.1	+0.8
	baz=276						
PUL	Pulkovo	100.30	330c	eP	Pdif	20 24 25.0	-0.4
PUL				pmax	pmax		
	comp=Z,62nm,1.0s						
BROLN	Tlhalogang	100.33	247	i P	Pdif	20 24 26.6	0.0
TGTN	Hyland Airport	100.36	29	P	Pdif	20 24 26.3	+0.6
	baz=277						
LSZ	Lusaka	100.51	253	P	Pdif	20 24 27.9	+0.4
SPA0	Spitsbergen Ar	100.61	349	eP	Pdif	20 24 25.2	-1.3
SPITS	Spitsbergen Ar	100.61	349	P	Pdif	20 24 26.2	-0.3
	comp=Z,57nm,0.9s,baz=115,slow=14,SNR=33						
SPITS				PKiKP	PKiKP	20 28 52.8	+0.8
	comp=Z,5.6nm,0.8s,baz=116,slow=3.4,SNR=1.2						
BOSA	Boshof	100.69	240	P	Pdif	20 24 28.1	0.0
	comp=Z,28nm,1.1s,baz=109,slow=5.6,SNR=23						
BOSA				PP	PP	20 28 34.9	-2.0
	comp=Z,8.9nm,0.9s,baz=103,slow=8.2,SNR=5.1						
BOSA				PKiKP	PKiKP	20 28 53.5	-0.1
	comp=Z,4.1nm,1.0s,baz=259,slow=22,SNR=1.9						
BOSA				PKKPbc	PKKPbc	20 40 41.5	-0.6
	comp=Z,2.2nm,0.9s,baz=306,slow=8.7,SNR=3.3						
ARA0	ARCESS Array S	100.79	340	eP	Pdif	20 24 25.7	-1.7
ARCES	ARCESS Array B	100.79	340	P	Pdif	20 24 26.8	-0.6
	comp=Z,66nm,1.0s,baz=72,slow=4.0,SNR=62						
ARCES				PP	PP	20 28 36.0	-0.5
	comp=Z,16nm,1.0s,baz=87,slow=7.5,SNR=5.5						
ARCES				PKiKP	PKiKP	20 28 52.7	+0.2
	comp=Z,3.9nm,0.5s,baz=98,slow=1.3,SNR=14						
ARCES				PKKPbc	PKKPbc	20 40 39.0	-4.2
	comp=Z,2.4nm,0.7s,baz=264,slow=2.3,SNR=9.5						
C36M	Paulatuk	100.80	20	P	Pdif	20 24 27.4	0.0
	baz=282						
SGF	Sodankyl	100.84	338	P	Pdif	20 24 26.7	-0.9
SGF				pmax	pmax		
	comp=Z,78nm,1.0s						
KBS	Kingsbay	101.09	350	eP	Pdif	20 24 25.1	-3.4
HAMF	Hammerfest	101.14	341	eP	Pdif	20 24 25.9	-2.9
HSPB	Hornsund (broa	101.24	348	ePdif	Pdif	20 24 28.6	-0.6
LPHEP	Lephephe	101.25	245	i P	Pdif	20 24 30.9	+0.3
SAHE	Sakarya_HENDEK	101.31	310	⇓P	Pdif	20 24 29.7	-0.6
SOOWA	Sowa	101.46	248	i P	Pdif	20 24 32.1	+0.5
OUL	Oulu	101.54	335	P	Pdif	20 24 29.8	-1.0
OUL				pmax	pmax		
	comp=Z,75nm,1.2s						
LIRD	Liard River Hi	101.71	31	P	Pdif	20 24 32.1	+0.4
	baz=278						
PURM	Purcari	101.73	316	⇑P	Pdif	20 24 32.1	+0.1
PURM	Purcari	101.73	316	⇑P	PP	20 28 41.6	-2.5
AKASG	Malin Array Be	101.83	320	P	Pdif	20 24 31.0	-1.4
	comp=Z,10nm,0.7s,baz=71,slow=4.3,SNR=49						
AKASG				PP	PP	20 28 43.9	-0.9
	comp=Z,26nm,1.0s,baz=78,slow=7.0,SNR=4.2						
AKASG				PKiKP	PKiKP	20 28 55.2	+0.3
	comp=Z,1.9nm,0.4s,baz=66,slow=2.4,SNR=8.2						
AKASG				PKKPbc	PKKPbc	20 40 36.8	-2.8
	comp=Z,0.3nm,0.4s,baz=269,slow=2.5,SNR=5.0						
AKBB	Malin Array Si	101.83	320c	eP	Pdif	20 24 31.3	-1.1
AKBB				pmax	pmax		
	comp=Z,16nm,0.9s						
KIEV	Kiev	101.83	320	⇑P	Pdif	20 24 31.2	-1.2
KIEV	Kiev	101.83	320	⇑P	Pdif	20 24 31.2	-1.2
KIEV	Kiev	101.83	320	i P	Pdif	20 24 31.0	-1.4
	SNR=11						
BEAVL	Fort Liard	102.10	30	P	Pdif	20 24 34.1	+0.7
	baz=280						
FINES	FINESS Array B	102.14	332	P	Pdif	20 24 32.4	-1.1
	comp=Z,31nm,0.8s,baz=92,slow=6.1,SNR=83						
FINES				PP	PP	20 28 46.1	-0.7
	comp=Z,22nm,0.8s,baz=111,slow=8.6,SNR=7.6						
FINES				PKiKP	PKiKP	20 28 55.1	+0.1
	comp=Z,9.8nm,0.8s,baz=78,slow=1.6,SNR=8.3						
FINES				PKKPbc	PKKPbc	20 40 37.2	-1.9
	comp=Z,5.5nm,0.8s,baz=225,slow=0.5,SNR=11						
ELL	Elmali	102.18	306	P	Pdif	20 24 34.3	-0.2
ELL				pmax	pmax		
	comp=Z,89nm,1.6s						
MNK	Minsk	102.23	324	i P	Pdif	20 24 33.2	-0.9
	comp=E,40nm,1.1s						
MNK				i P	Pdif	20 24 33.2	-0.9
	comp=N,82nm,1.0s						
MNK				i P	Pdif	20 24 33.2	-0.9
	comp=Z,164nm,1.0s,baz=83						
MNK				i pP	pPdif	20 25 03.2	-3.7
MNK				i PP	PP	20 28 44.0	-3.6
MNK				i PPP	PPP	20 30 57.2	
MNK				i S	SKSac	20 35 01.8	+0.5
MNK				i sS	SKKSac	20 35 58.5	+18
MNK				i SS	SS	20 43 20.3	+6.0
MNK				i SSS	SSS	20 47 07.3	
MNK				i LR	LR	21 09 52.7	
MNK	Minsk	102.23	324	i P	Pdif	20 24 33.2	-0.9
MNK				i		20 28 44.0	
MNK				i PPP	PPP	20 30 57.2	
MNK				i S	SKSac	20 35 01.7	+0.5
MNK				i *SS	SKKSac	20 35 58.4	+18
MNK				i SS	SS	20 43 20.2	+6.0
MNK				i SSS	SSS	20 47 07.3	
MNK				pmax	pmax		
	comp=Z,164nm,1.0s						
MNK				pmax	pmax		
	comp=N,82nm,1.0s						
MNK				pmax	pmax		
	comp=E,40nm,1.1s						
TOAD	Toad River Com	102.23	31	P	Pdif	20 24 34.2	+0.1
	baz=279						
WRGLY	Wrigley	102.30	26	P	Pdif	20 24 34.3	+0.1
	baz=282						
VSU	Vasula	102.31	329	P	Pdif	20 24 32.2	-2.1
VSU				pmax	pmax		
	comp=Z,44nm,0.8s						
KIS	Kishinev	102.41	317	⇑iP	Pdif	20 24 34.0	-1.1
	comp=Z,100nm,2.3s						
KIS	Kishinev	102.41	317	ePP	PKiKP	20 28 50.0	-6.0
	comp=Z,200nm,2.4s						
KIS				i SKS	SKSac	20 35 01.0	-1.4
KIS				eL	L	21 19 26.0	
KIS				LRM	MLR	21 21 04.0	
	comp=Z,150nm,18.5s						
KIS	Kishinev	102.41	317c	iP	Pdif	20 24 34.0	-1.1
KIS				e		20 28 50.0	
KIS				e		20 35 01.0	
KIS				pmax	pmax		
	comp=Z,100nm,2.3s						
MILM	Milestii Mici	102.42	317	⇑P	Pdif	20 24 33.9	-1.2
MILM	Milestii Mici	102.42	317c	iP	Pdif	20 24 34.0	-1.2
MILM				e		20 28 51.0	
MILM				ePPP	PPP	20 31 00.0	
MILM				e		20 35 01.0	
MILM				eS		20 36 07.0	
MILM				pmax	pmax		
	comp=Z,110nm,1.4s						
JETT	Jettan, Norway	102.51	340	eP	Pdif	20 24 32.3	-2.8
JURR	Jurilovca	102.55	314	⇑P	Pdif	20 24 35.6	-0.1
TLCR		102.56	315	⇑P	Pdif	20 24 36.0	+0.2
TLCR		102.56	315	⇑P	Pdif	20 24 36.0	+0.2
KOTAN	Kotaneelee Air	102.61	30	P	Pdif	20 24 36.2	+0.5
	baz=280						
SORM	Soroca	102.63	318	⇓P	Pdif	20 24 35.5	-0.5
SORM	Soroca	102.63	318	⇑P	PP	20 28 43.6	-7.3
SORM	Soroca	102.63	318	⇓P	Pdif	20 24 35.5	-0.5
SKOMA	Sekoma	102.74	243	i P	Pdif	20 24 37.8	+0.6
NACGM	Naroch	102.81	325	ePdif	Pdif	20 24 37.0	+0.3
TPGR	Topolog	102.86	315	⇓P	Pdif	20 24 37.3	+0.1
TIRR	Tirgusor	102.90	314	⇑P	Pdif	20 24 37.7	+0.4
TIRR	Tirgusor	102.90	314	⇑P	PP	20 28 53.3	+0.3
KSANE	Kasane	102.95	250	i P	Pdif	20 24 39.2	+0.9
TRO	Tromso	102.98	341	eP	Pdif	20 24 34.2	-2.9
CFR	Carcaliu	103.04	315	⇓P	Pdif	20 24 37.5	-0.4
CFR	Carcaliu	103.04	315	⇓P	PKiKP	20 28 44.3	-13
CFR	Carcaliu	103.04	315	⇓P	Pdif	20 24 37.5	-0.4
VASR	Vaslui	103.15	316	⇓P	Pdif	20 24 38.2	-0.2
TLBR	Topalu	103.15	314	⇓P	Pdif	20 24 38.3	-0.1
TLBR	Topalu	103.15	314	⇓P	PKiKP	20 28 57.6	+0.2
HARR	Harsova	103.22	314	⇓P	Pdif	20 24 37.7	-1.1
HARR	Harsova	103.22	314	⇑P	PKiKP	20 28 59.5	+2.0
HARR	Harsova	103.22	314	⇓P	Pdif	20 24 37.7	-1.1
BIR	Birlad	103.30	316	⇓P	PP	20 28 51.9	-4.0
ICOR	Ion Corvin	103.37	314	⇑P	Pdif	20 24 39.3	0.0
GHRR		103.47	316	⇑P	PKiKP	20 28 58.9	+0.9
PHPEN	Phepeng	103.47	242	i P	Pdif	20 24 41.0	+0.6
EDC	Edincik	103.61	310	P	Pdif	20 24 37.4	-3.2
PHSR	Pinarhisar	103.77	311	⇑P	Pdif	20 24 40.2	-1.0
NEF	NEVSHA	103.82	313	P	PP	20 29 03.8	+3.9
GRER		103.84	315	⇑P	Pdif	20 24 43.6	+2.1
TESR	Tescani	103.94	316	⇑P	Pdif	20 24 41.7	-0.2
VRI	Vrincioaia	103.96	316	⇓P	Pdif	20 24 42.7	+0.7
VRI	Vrincioaia	103.96	316	⇑P	PKiKP	20 28 54.6	-4.4
VRI	Vrincioaia	103.96	316	⇓P	Pdif	20 24 42.7	+0.7
PLOR	Plostina	104.02	316	⇑P	Pdif	20 24 42.5	+0.2
PLOR	Plostina	104.02	316	⇓P	PKiKP	20 28 58.5	-0.5
PLOR	Plostina	104.02	316	⇑P	Pdif	20 24 42.5	+0.2
PRAR	RASCA	104.14	317	⇓P	Pdif	20 24 43.1	+0.3
ONER	Baraj Valea Uz	104.14	316	⇑P	Pdif	20 24 43.3	+0.5
ONER	Baraj Valea Uz	104.14	316	⇓P	PKiKP	20 29 01.2	+2.0
ISR	Istrita	104.17	315	⇑P	PP	20 29 06.0	+3.5
NEHR	Nehoiu	104.31	315	⇓P	Pdif	20 24 43.9	+0.3
SULR		104.42	315	⇓P	PP	20 29 04.1	-0.2
TURR	Turia	104.43	316	⇓P	Pdif	20 24 44.9	+0.8
TURR	Turia	104.43	316	⇑P	PKiKP	20 29 02.8	+2.9
JMB	Yambol	104.43	312	P	PKiKP	20 28 50.8	-9.1
MLR	Muntele Rosu	104.55	315	Pdiff	Pdif	20 24 43.5	-1.3
	comp=Z,14nm,0.9s,baz=35,slow=3.5,SNR=13						
MLR				PP	PP	20 29 02.9	-2.5
	comp=Z,52nm,0.9s,baz=145,slow=1.7,SNR=5.1						
MLR	Muntele Rosu	104.55	315	⇓P	Pdif	20 24 45.1	+0.3
MLR	Muntele Rosu	104.55	315	⇑P	PKiKP	20 28 57.3	-2.9
MLR	Muntele Rosu	104.55	315	⇓P	Pdif	20 24 45.1	+0.3

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KGCAE Kacgae             104.64 245 i P       Pdif     20 24 46.4 +0.7
BOSR  Bodos              104.67 316 ⇑P        PKiKP    20 29 03.8 +3.5
SZH   Strazhitsa         104.76 313  P        PP       20 29 08.7 +1.8
BURAR Bucovina Array     104.78 318 ⇓P        Pdif     20 24 46.1 +0.3
BURAR Bucovina Array     104.78 318 ⇓P        PKiKP    20 28 59.2 -1.3
BURAR Bucovina Array     104.78 318 ⇓P        Pdif     20 24 46.1 +0.3
EZN   Ezine              104.82 310 ⇑P        Pdif     20 24 45.8 -0.2
EZN   Ezine              104.82 310 ⇑P        Pdif     20 24 45.8 -0.2
STEI  Steigen            104.83 339 eP        Pdif     20 24 42.6 -2.7
DOPR  Dopca              104.88 316 ⇓P        Pdif     20 24 42.0 -4.1
DOPR  Dopca              104.88 316 ⇓P        PKiKP    20 28 49.7  -11
FAUS  Fauske             105.02 339 eP        Pdif     20 24 43.4 -2.8
SUW   Suwalki            105.03 324 ePdif     Pdif     20 24 46.0 -0.5
SUW                                 ePP       PP       20 29 06.9 -1.6
VOIR                     105.18 315 ⇑P        Pdif     20 24 49.8 +2.3
VOIR                     105.18 315 ⇑P        Pdif     20 24 49.8 +2.3
ARCR  ARCALIA            105.44 317 ⇑P        Pdif     20 24 49.0 +0.5
ARCR  ARCALIA            105.44 317 ⇓P        PKiKP    20 29 06.5 +4.9
MOR8  Moi Rana           105.78 338 eP        Pdif     20 24 47.5 -2.1
GRTLG Ghanzi             105.87 246 i P       Pdif     20 24 51.8 +0.6
BMR   Baia Mare          105.93 318 ⇑P        Pdif     20 24 51.3 +0.6
BMR   Baia Mare          105.93 318 ⇓P        PKiKP    20 29 02.4 -0.1
BMR   Baia Mare          105.93 318 ⇑P        Pdif     20 24 51.3 +0.6
VAGH  Vaagaholmen        106.00 338 eP        Pdif     20 24 48.6 -2.0
CBBR  Cluj-Babes-Bol     106.03 317 ⇓P        Pdif     20 24 52.9 +1.7
LOT   Lotru              106.07 316 ⇓P        Pdif     20 24 52.0 +0.4
LOT   Lotru              106.07 316 ⇓P        PP       20 29 16.6  0.0
KWP   Kalwaria Pacla     106.12 320 ePdif     Pdif     20 24 51.1 -0.4
KWP                                 ePP       PKiKP    20 29 04.1 +1.3
KONS  Konsvik            106.15 338 eP        Pdif     20 24 50.7 -0.5
STOK  Stokkvaagen        106.25 338 eP        Pdif     20 24 50.7 -1.0
LEIR  Leirfjorden        106.31 338 eP        Pdif     20 24 49.7 -2.3
IDI   Anoyia             106.32 305  Pdiff    Pdif     20 24 51.4 -1.4
      comp=Z,15nm,1.1s,baz=45,slow=6.6,SNR=7.7
IDI                                  PKiKP    PKiKP    20 29 02.9 -0.7
      comp=Z,32nm,0.7s,baz=129,slow=6.1,SNR=19
MARR  Marisel-Cluj       106.34 317 ⇑P        Pdif     20 24 53.2 +0.5
MARR  Marisel-Cluj       106.34 317 ⇑P        PKiKP    20 29 03.9 +0.5
MPEP  Malo Peshtene      106.37 313  P        PKiKP    20 29 10.4 +6.9
YKA   Yellowknife Ar     106.41  26  Pdiff    Pdif     20 24 52.9 +0.4
      comp=Z,5.0nm,0.9s,baz=298,slow=4.8,SNR=17
YKA                                  PKiKP    PKiKP    20 29 03.3 +0.4
      comp=Z,8.8nm,0.7s,baz=304,slow=2.3,SNR=28
YKA                                  PKKPbc   PKKPbc   20 40 23.3 -2.9
      comp=Z,3.9nm,0.8s,baz=93,slow=2.4,SNR=13
YKA                                  PKKPab   PKKPdf   20 40 38.6 +1.2
      comp=Z,6.7nm,0.9s,baz=98,slow=4.7,SNR=17
YKAW1 Yellowknife Wh     106.46  26           Pdif     20 24 53.1 +0.4
KOLS  Kolonicke sedl     106.52 319 i P       Pdif     20 24 53.6 +0.2
KOLS  Kolonicke sedl     106.52 319 ePDIFF    Pdif     20 24 53.6 +0.2
KOLS                                e                  20 29 05.2
DRGR                     106.59 317 ⇑P        Pdif     20 24 53.9 +0.1
DRGR                     106.59 317 ⇑P        Pdif     20 24 53.9 +0.1
DEV   Deva               106.61 316 ⇑P        Pdif     20 24 55.0 +1.2
DEV   Deva               106.61 316 ⇓P        PKiKP    20 29 04.5 +0.7
DEV   Deva               106.61 316 ⇑P        Pdif     20 24 55.0 +1.2
GZR   Gura Zlata         106.77 316 ⇑P        Pdif     20 24 55.2 +0.6
GZR   Gura Zlata         106.77 316 ⇑P        Pdif     20 24 55.2 +0.6
VTS   Vitosha            106.84 313  P        PP       20 29 17.3 -5.1
BEL   Belsk              106.89 322 ePdif     Pdif     20 24 54.5 -0.3
BEL                                 ePP       PP       20 29 21.6 -0.6
KKB   Krupnik            107.02 312  P        PKiKP    20 29 04.5 -0.2
STHS  Stebnicka Huta     107.10 320 ePDIFF    Pdif     20 24 55.8 -0.1
STHS                                e                  20 29 04.4
STHS                                ePP       PP       20 29 29.2 +5.3
SURR  Surduc             107.16 316 ⇓P        Pdif     20 24 56.1 -0.2
DAG   Danmarks Havn      107.22 353 i P       PKiKP    20 29 04.1  0.0
BZS   Buzias             107.54 316 ⇑P        Pdif     20 24 57.4 -0.5
BZS   Buzias             107.54 316 ⇓P        PKiKP    20 29 05.5  0.0
BZS   Buzias             107.54 316 ⇑P        Pdif     20 24 57.4 -0.5
MDVR  Moldovita          107.61 315 ⇑P        Pdif     20 24 58.2 -0.2
MDVR  Moldovita          107.61 315 ⇓P        PKiKP    20 29 06.3 +0.5
NIE   Niedzica           107.70 320 ePdif     Pdif     20 24 59.3 +0.7
NIE                                 ePP       PP       20 29 33.3 +5.0
BOVS  Bovan              107.80 314 ⇑P        Pdif     20 24 59.8 +0.7
BOVS  Bovan              107.80 314 ⇓P        PKiKP    20 29 02.2 -3.9
OJC   Ojcow              107.85 321 ePdif     Pdif     20 24 59.3 +0.1
OJC                                 ePP       PP       20 29 18.4  -11
PSZ   Piszkesteto        108.27 319           Pdif     20 25 00.8 -0.5
PSZ   Piszkesteto        108.27 319 ⇓P        Pdif     20 25 01.5 +0.3
PSZ   Piszkesteto        108.27 319 ⇓P        Pdif     20 25 01.5 +0.3
LANS  Liptovska Anna     108.29 320 i P       Pdif     20 25 02.6 +1.3
LANS  Liptovska Anna     108.29 320 ePDIFF    Pdif     20 25 02.6 +1.3
LANS                                e                  20 29 08.5
HFS   Hagfors            108.33 332  Pdiff    Pdif     20 25 00.1 -1.0
      comp=Z,19nm,0.9s,baz=84,slow=6.1,SNR=36
HFS                                  PKiKP    PKiKP    20 29 06.0 -0.6
      comp=Z,11nm,0.8s,baz=93,slow=3.0,SNR=6.7
HFS                                  PP       PP       20 29 31.1 -1.3
      comp=Z,16nm,0.8s,baz=70,slow=9.6,SNR=8.3
HFS                                  PKKPbc   PKKPbc   20 40 18.1 -2.1
      comp=Z,4.3nm,0.6s,baz=197,slow=3.1,SNR=15
NEEM  North Greenlan     108.46   0 i P       PKiKP    20 29 07.1 +0.3
TULEG Thule              108.56   5 i P       PKiKP    20 29 04.6 -2.0
GKP   Gorka Klasztor     108.64 324 ePP       PP       20 29 33.2 -1.7
PMSA  Palmer Station     108.69 173 eP        Pdif     20 25 03.0 +0.4
VYHS  Vyhne              108.84 319 ePDIFF    Pdif     20 25 03.6 -0.1
VYHS                                e                  20 29 08.2
VYHS                                ePP       PP       20 29 40.1 +3.5
FRGS  Fruska Gora        108.87 316⇑iP        PKiKP    20 29 07.8 -0.3
OKC   Ostrava-Krasne     108.97 321 ePKP      PKiKP    20 29 09.1 +1.0
NEW   Newport            109.02  41  Pdiff    Pdif     20 25 04.4 -0.1
      comp=Z,1.6nm,0.7s,baz=50,slow=2.3,SNR=3.1
NEW                                  PKiKP    PKiKP    20 29 09.1 +0.8
      comp=Z,5.2nm,0.7s,baz=291,slow=2.0,SNR=6.8
NORES NORESS Array B     109.09 333  P        Pdif     20 25 03.8 -0.7
NORES                                pmax     pmax
      comp=Z,4.0nm,1.1s
SJES  Sjenica            109.11 314⇑iP        PKiKP    20 29 09.1 +0.4
NB2   NORSAR Subarra109.12 333       P        Pdif     20 25 03.3 -1.4
      comp=Z,28nm,0.9s,baz=67,slow=4.6
NB2                                  PP       PKiKP    20 29 07.0 -1.1
      comp=Z,11nm,1.1s,baz=71,slow=8.6
NB2                                  PKKP     PKKPbc   20 40 16.4 -1.4
      comp=Z,4.3nm,0.8s,baz=237,slow=3.8
NB2   NORSAR Subarra109.12 333       P        Pdif     20 25 01.2 -3.5
NB2                                  pmax     pmax
      comp=Z,1.0nm,0.8s
NB2   NORSAR Subarra109.12 333       P        Pdif     20 25 03.3 -1.4
      baz=68,slow=4.6
NOA   NORSAR Array B 109.12 333      Pdiff    Pdif     20 25 03.6 -1.1
      comp=Z,14nm,0.8s,baz=68,slow=4.6,SNR=60
NOA                                  PKiKP    PKiKP    20 29 08.2 +0.2
      comp=Z,12nm,0.9s,baz=261,slow=3.1,SNR=14
NOA                                  PP       PP       20 29 37.3 -0.8
      comp=Z,15nm,0.9s,baz=73,slow=7.6,SNR=8.0
NOA                                  PKKPbc   PKKPbc   20 40 16.4 -1.4
      comp=Z,5.5nm,0.9s,baz=242,slow=3.1,SNR=31
NOA                                  PKKPab   PKKPab   20 40 28.2 +0.1
      comp=Z,1.5nm,0.8s,baz=245,slow=4.0,SNR=4.9
STEB  Steborice          109.18 321 ePKP      PKiKP    20 29 09.4 +0.9
TEKS  Tekeris            109.19 315⇑iP        PKiKP    20 29 08.2 -0.5
MAUC  Maruska            109.29 320 ePKP      PKiKP    20 29 10.0 +1.2
SRO   Srobarova          109.33 319 e         PKiKP    20 29 09.5 +0.7
SRO                                 ePP       PP       20 29 43.4 +3.3
MORC  Moravsky Berou     109.37 321 ePDIFF    Pdif     20 25 05.6 -0.4
MORC                                ePKIKP    PKiKP    20 29 09.7 +0.8
MORC  Moravsky Berou     109.37 321 ⇑P        Pdif     20 25 06.4 +0.4
MORC  Moravsky Berou     109.37 321 ⇑P        PKiKP    20 29 10.5 +1.6
MORC  Moravsky Berou     109.37 321 ⇑P        Pdif     20 25 06.4 +0.4
BBLS  Lazi&#263i         109.40 314⇑iP        PKiKP    20 29 09.7 +0.5
MORH  Mrgy, Hungar       109.46 317 ⇑P        Pdif     20 25 06.4 -0.1
MORH  Mrgy, Hungar       109.46 317 ⇑P        PKiKP    20 29 09.5 +0.4
RUDO  Rudo               109.47 314⇑iP        PKiKP    20 29 09.0 -0.2
JAVC  Velka Javorina     109.51 320 ePDIFF    Pdif     20 25 08.0 +1.3
JAVC                                ePKIKP    PKiKP    20 29 10.8 +1.6
DEL   Delary             109.52 328 i P       PKiKP    20 29 08.0 -0.9
DOMB  Dombas             109.63 335 eP        Pdif     20 25 05.1 -1.8
HAPS  Han Pijesak,Bl     109.68 315⇑iP        PKiKP    20 29 10.0 +0.2
KRLC  Kraliky            109.77 321 ePKP      PKiKP    20 29 10.3 +0.7
KRLC                                ePS       PS       20 39 12.3 -1.5
OSL   Oslo               109.78 332 eP        Pdif     20 25 06.2 -1.4
KSP   Ksiaz              109.86 322 ePdif     Pdif     20 25 08.5 +0.4
KSP                                 ePP       PP       20 29 37.7 -6.2
DRME  Dracevica, Mon     109.87 313 eP        PKiKP    20 29 08.7 -1.3
MODS  Modra-Piesok       109.88 319 e         PKiKP    20 29 10.0 +0.1
MODS                                ePP       PP       20 29 46.9 +2.8
DPC   Dobruska-Polom     109.98 322 ePKP      PKiKP    20 29 11.1 +1.1
DPC                                 eSP       SP       20 39 06.1 +6.5
OSTC  Ostas              109.99 322 ePKP      PKiKP    20 29 11.1 +1.1
NVAR  Mina Array Bea     110.00  51  Pdiff    Pdif     20 25 10.0 +0.6
      comp=Z,2.1nm,0.8s,baz=262,slow=5.9,SNR=8.0
NVAR                                 PKiKP    PKiKP    20 29 11.1 +0.4
      comp=Z,4.4nm,0.8s,baz=240,slow=2.1,SNR=8.6
NVAR                                 PP       PP       20 29 46.0 +0.4
      comp=Z,4.1nm,0.9s,baz=254,slow=4.1,SNR=4.4
NVAR                                 PKKPbc   PKKPbc   20 40 14.9 +0.6
      comp=Z,3.1nm,0.8s,baz=94,slow=3.6,SNR=11
NVAR                                 PKKPab   PKKPab   20 40 25.5 +0.7
      comp=Z,1.3nm,0.8s,baz=108,slow=7.0,SNR=3.9
JNW   Jan Mayen West     110.01 347 eP        Pdif     20 25 07.2 -1.1
JMIC  Jan Mayen          110.06 347 eP        Pdif     20 25 07.2 -1.3
CHVC  Chvalec            110.08 322 ePKP      PKiKP    20 29 11.0 +0.8
VRAC  Vranov             110.08 321 ePDIFF    Pdif     20 25 09.1 -0.1
VRAC                                ePKIKP    PKiKP    20 29 10.8 +0.6
VRAC  Vranov             110.08 321 ⇑P        Pdif     20 25 09.6 +0.4
VRAC  Vranov             110.08 321 ⇓P        PKiKP    20 29 11.4 +1.2
VRAC  Vranov             110.08 321 ⇑P        Pdif     20 25 09.6 +0.4
UPC   Upice              110.13 322 ePKP      PKiKP    20 29 11.2 +0.9
BRY   Bratogost          110.20 314⇑iP        PKiKP    20 29 10.1 -0.7
KRUC  Moravsky           110.27 320 ePDIFF    Pdif     20 25 10.2 +0.2
KRUC                                ePKIKP    PKiKP    20 29 11.0 +0.4
HCY   Herceg Novi        110.32 313⇑iP        PKiKP    20 29 10.4 -0.5
TREB  Trebinje           110.38 313⇑iP        PKiKP    20 29 10.9 -0.1
AKN   Aaknes             110.43 335 eP        Pdif     20 25 10.4  0.0
RONA  Rosalia, Austr     110.68 319 i Pdiff   Pdif     20 25 12.1 +0.2
      comp=Z,4.7nm,1.1s
RONA                                i PKiKP   PKiKP    20 29 11.6 +0.1
      comp=Z,15nm,0.8s,SNR=5.9
BLY   Banja Luka         110.78 316⇑iP        PKiKP    20 29 11.6 -0.1
TREC  Trest              110.78 321 ePKP      PKiKP    20 29 12.1 +0.5
TREC  Trest              110.78 321 ePKIKP    PKiKP    20 29 12.1 +0.5
STON  Ston               110.81 314⇑iP        PKiKP    20 29 10.8 -0.9
RUE   Ruedersdorf        110.88 324 ePKiKP    PKiKP    20 29 12.4 +0.8
      baz=73,slow=1.9
CONA  Conrad Observa     110.91 319 i Pdiff   Pdif     20 25 12.7 -0.3
      comp=Z,4.5nm,1.4s
CONA                                i PKiKP   PKiKP    20 29 12.0 +0.1
      comp=Z,19nm,0.7s,SNR=5.2
CONA                                i SKS     SKSac    20 35 42.0 +2.0
      comp=Z,2.4nm,1.0s
CONA                                i PKKP    PKKPbc   20 40 10.2 -1.4
      comp=Z,3.1nm,1.0s
A051A Mrakovica          110.92 316⇑iP        PKiKP    20 29 11.9 -0.1
PVCC  Panska Ves         111.00 322 ePKP      PKiKP    20 29 12.9 +1.0
PVCC  Panska Ves         111.00 322 ePKIKP    PKiKP    20 29 12.9 +1.0
GOPC  GO Pecny, Ondr     111.05 321 ePKP      PKiKP    20 29 12.6 +0.6
GOPC  GO Pecny, Ondr     111.05 321 ePKIKP    PKiKP    20 29 12.6 +0.6
OVD   Ostervraa, Den     111.08 330 i P       PKiKP    20 29 12.7 +0.9
PRU   Pruhonice          111.18 322 ePKP      PKiKP    20 29 12.6 +0.4
PRU                                 eSP       SP       20 39 10.9 +0.3
PRU   Pruhonice          111.18 322 ePKIKP    PKiKP    20 29 12.6 +0.4
PRU                                 e                  20 39 10.9
KULLO Kullorsuaq         111.19   2 i P       PKiKP    20 29 10.4 -1.1
PRA   Prague             111.22 322 ePKP      PKiKP    20 29 13.2 +0.9
PRA   Prague             111.22 322 ePKIKP    PKiKP    20 29 13.2 +0.9
PRA                                  MLR      MLR
      comp=Z,400nm,16.1s
BRG   Berggiesshubel     111.28 323 ePKiKP    PKiKP    20 29 12.8 +0.4
      baz=73,slow=1.9
BRG   Berggiesshubel     111.28 323⇓ePif               20 25 14.7
BRG                                  Amp               20 25 15.9
      comp=Z,16nm,1.2s
BRG   Berggiesshubel     111.28 323  PKP      PKiKP    20 29 13.1 +0.7
BRG                                  Amp               20 29 14.0
      comp=Z,35nm,1.0s
BRG                                  PP       PP       20 29 54.2 +0.2
BRG                                  Amp               20 29 55.9
      comp=Z,26nm,1.1s
BRG   Berggiesshubel     111.28 323  SP       SP       20 39 22.0  +11
A050A Klekovaca          111.30 316⇑iP        PKiKP    20 29 12.2 -0.6
ARSA  Arzberg            111.31 319 ePdiff    Pdif     20 25 14.3 -0.4
      comp=Z,6.0nm,1.6s
ARSA                                i PKiKP   PKiKP    20 29 12.5 -0.1
      comp=Z,0.4nm,0.3s,SNR=6.5
ARSA                                i SKS     SKSac    20 35 45.5 +4.1
      comp=Z,5.1nm,1.3s
ARSA                                i PKKP    PKKPbc   20 40 09.3 -0.8
      comp=Z,4.7nm,1.4s
HOMB  Homborsund         111.52 331 i P       PKiKP    20 29 11.0 -1.6
ZVC   Zvikov             111.56 321 ePKP      PKiKP    20 29 13.8 +0.8
CKRC  Cesky Krumlov      111.66 320 ePKP      PKiKP    20 29 13.8 +0.6
CKRC                                ex        x        20 39 13.9
CKRC  Cesky Krumlov      111.66 320 ePKIKP    PKiKP    20 29 13.8 +0.6
CKRC                                e                  20 39 13.9
CLL   Collm              111.71 323 i Pdif    Pdif     20 25 16.3  0.0
      comp=Z,13nm,1.3s
CLL                                 ex        x        20 25 22.0
CLL                                 epPdif    pPdif    20 25 41.0 -8.2
CLL                                ⇑iPKiKP    PKiKP    20 29 13.2  0.0
      comp=Z,49nm,0.9s
CLL                                 epPKiKP   pPKiKP   20 29 41.0 -5.3
CLL                                 i PP      PP       20 29 56.9 -0.2
      comp=Z,34nm,1.1s
CLL                                 ePPP      PPP      20 32 25.0
CLL                                 ex        x        20 33 24.0
CLL                                 e(SKSac)           20 35 36.0
CLL                                 eSKKSac   SKKSac   20 36 42.0 -4.7
CLL                                 eSdif     Sdif     20 37 24.0 -1.3
CLL                                 e(sSdif)           20 38 24.0
CLL                                 eSP       SP       20 39 13.0 -2.4
CLL                                 ePS       PS       20 39 29.0 -2.5
CLL                                 i PKKPab  PKKPab   20 40 18.7 +2.0
      comp=Z,11nm,1.4s
CLL                                 ePPS      PPS      20 40 36.0
CLL                                 ex        x        20 42 08.0
CLL                                 ex        x        20 48 38.0
CRES  Cresnjevec Ost     111.71 317⇑iP        PKiKP    20 29 13.6 +0.2
CRES  Cresnjevec Ost     111.71 317 ePdiff    Pdif     20 25 16.6  0.0
CRES                                i PKiKP   PKiKP    20 29 13.8 +0.4
SOKA  Soboth             111.78 318 i Pdiff   Pdif     20 25 17.2 +0.3
      comp=Z,4.2nm,1.2s
SOKA                                i PKiKP   PKiKP    20 29 13.6  0.0
      comp=Z,22nm,0.8s,SNR=14
SOKA                                i SKS     SKSac    20 35 42.7 -0.8
      comp=Z,7.2nm,1.7s
SOKA                                ePKKP     PKKPbc   20 40 08.1 -0.6
      comp=Z,3.9nm,1.1s
ELK   Elko               111.93  48  Pdiff    Pdif     20 25 19.6 +1.7
      comp=Z,0.7nm,0.9s,baz=240,slow=7.4,SNR=3.6
ELK                                  PKiKP    PKiKP    20 29 15.6 +1.3
      comp=Z,8.7nm,0.8s,baz=308,slow=4.0,SNR=31
ELK                                  PP       PP       20 29 55.9 -3.5
      comp=Z,6.3nm,1.0s,baz=301,slow=2.9,SNR=6.2
BOJS  Bojanci            111.93 317⇑iP        PKiKP    20 29 14.3 +0.5
MOA   Molln              111.96 319 ePdiff    Pdif     20 25 17.5 -0.1
      comp=Z,8.4nm,1.3s
MOA                                 i PKiKP   PKiKP    20 29 13.5 -0.3
      comp=Z,7.2nm,0.8s,SNR=5.9
MATE  Matera             111.99 311 ⇑P        PKiKP    20 29 14.3 +0.2
KHC   Kasperske Hory     112.03 321 ePKP      PKiKP    20 29 14.4 +0.4
KHC                                 eSP       SP       20 39 19.1 +0.5
KHC   Kasperske Hory     112.03 321 ePKIKP    PKiKP    20 29 14.4 +0.4
KHC                                 e                  20 39 19.1
GEC2  GERESS Array S     112.04 321 ePKiKP    PKiKP    20 29 14.3 +0.2
      baz=73,slow=1.9
GERES GERESS Array B     112.04 321  Pdiff    Pdif     20 25 18.0  0.0
      comp=Z,2.5nm,0.9s,baz=66,slow=3.6,SNR=16
GERES                                PKiKP    PKiKP    20 29 14.3 +0.2
      comp=Z,30nm,0.7s,baz=64,slow=3.1,SNR=79
GERES                                PP       PP       20 29 58.8 -0.8
      comp=Z,5.1nm,0.7s,baz=85,slow=2.9,SNR=4.8
GERES                                SKP               20 32 37.5
      comp=Z,2.9nm,0.7s,baz=64,slow=3.4,SNR=3.8
GERES                                PKKPbc   PKKPbc   20 40 05.7 -2.2
      comp=Z,0.3nm,0.6s,baz=198,slow=1.3,SNR=3.7
SNART Snartemo           112.11 332 i P       PKiKP    20 29 12.0 -1.7
GORT1 Trebel             112.12 325 ePKiKP    PKiKP    20 29 14.9 +1.0
      baz=73,slow=1.9
OBKA  Obir               112.14 318⇑iP        PKiKP    20 29 14.2 -0.2
OBKA  Obir               112.14 318 ePdiff    Pdif     20 25 18.2 -0.3
      comp=Z,4.6nm,1.2s
OBKA                                i PKiKP   PKiKP    20 29 14.1 -0.2
      comp=Z,12nm,0.8s,SNR=7.0
PFO   Pinyon Flats O     112.17  56  PKiKP    PKiKP    20 29 16.2 +1.4
      comp=Z,14nm,0.9s,baz=277,slow=1.9,SNR=15
PFO                                  PP       PP       20 29 57.2 -4.0
      comp=Z,8.4nm,1.0s,baz=233,slow=1.9,SNR=7.0
TIP   Timpagrande        112.24 310 ⇑P        PKiKP    20 29 16.3 +1.6
LJU   Ljubljana          112.28 318 i PKiKP   PKiKP    20 29 14.9 +0.4
LJU                                 ePP       PP       20 30 03.0 +1.6
TANN  Tannenbergstha     112.32 322 ePKiKP    PKiKP    20 29 15.0 +0.5
      baz=73,slow=1.9
BSEG  Bad Segeberg       112.33 327 ePKiKP    PKiKP    20 29 15.1 +0.9
      baz=73,slow=1.9
GBAS  Gorenja Brezov     112.37 317 i Pdiff   Pdif     20 25 19.2 -0.2
GBAS                                ePP       PP       20 30 04.1 +2.1
FLTG  Flechtingen        112.40 325 ePKiKP    PKiKP    20 29 14.9 +0.5
      baz=73,slow=1.9
BIOA  Bad Ischl, Aus     112.41 319 i PKiKP   PKiKP    20 29 14.7  0.0
      comp=Z,20nm,0.7s,SNR=11
CEY   Cerknica           112.43 317⇑iP        PKiKP    20 29 14.9 +0.1
WET   Wettzell           112.47 321 ePKiKP    PKiKP    20 29 15.3 +0.6
      baz=73,slow=1.9
NEUB  Neuenburg          112.47 323 ePKiKP    PKiKP    20 29 15.6 +0.9
      baz=73,slow=1.9
JAVS  Javornik           112.63 317 i PKiKP   PKiKP    20 29 15.3  0.0
JAVS                                e                  20 35 46.2
JAVS                                ePS       PS       20 39 36.4 -4.1
JAVS                                e                  21 02 58.8
MANZ  Manzenberg         112.67 322 ePKiKP    PKiKP    20 29 15.6 +0.5
      baz=73,slow=1.9
ROTZ  Rotzenmuhle        112.69 322 ePKiKP    PKiKP    20 29 15.4 +0.3
      baz=73,slow=1.9
MYKA  Terra Mystica      112.71 318 i PKiKP   PKiKP    20 29 15.0 -0.3
      comp=Z,23nm,0.7s,SNR=8.4
MOX   Moxa               112.76 323 ePKiKP    PKiKP    20 29 15.6 +0.3
      baz=73,slow=1.9
SKDS  Skadanscina        112.76 317⇑iP        PKiKP    20 29 15.3 -0.1
ASSE  Asse, Remlinge     112.79 325 ePKiKP    PKiKP    20 29 15.8 +0.6
      baz=73,slow=1.9
RJOB  Jochberg           112.94 320 ePKiKP    PKiKP    20 29 15.4 -0.4
      baz=73,slow=1.9
NRDL  Niedersach Rie     112.98 325 ePKiKP    PKiKP    20 29 16.6 +1.2
      baz=73,slow=1.9
UPNV  Upernavik          113.02   2 i P       PKiKP    20 29 14.0 -1.1
SUMG  Summit             113.03 356 i P       PKiKP    20 29 15.6 -0.1
LESA  Schwarzleotal      113.11 319 ePdiff    Pdif     20 25 22.8  0.0
      comp=Z,5.8nm,1.1s
LESA                                i PKiKP   PKiKP    20 29 15.8 -0.4
      comp=Z,55nm,0.8s,SNR=19
LESA                                i SKS     SKSac    20 35 46.3 -2.6
      comp=Z,2.9nm,0.9s
LESA                                ePKKP     PKKPbc   20 40 01.7 -2.6
      comp=Z,3.6nm,0.7s
GRF   Grafenberg Arr     113.31 322 ePKiKP    PKiKP    20 29 16.6 +0.3
      baz=73,slow=1.9
RETH  Rethem/Aller,      113.32 326 ePKiKP    PKiKP    20 29 16.9 +0.8
      baz=73,slow=1.9
GTTG  Gottingen          113.42 324 ePKiKP    PKiKP    20 29 17.1 +0.7
      baz=73,slow=1.9
ABTA  Abfaltersbach      113.42 319 i PKiKP   PKiKP    20 29 16.3 -0.4
      comp=Z,170nm,2.6s,SNR=42
ABTA                                i SKS     SKSac    20 35 48.8 -1.3
      comp=Z,8.6nm,1.8s
ABTA                                ePKKP     PKKPbc   20 40 02.4 -0.7
      comp=Z,4.8nm,0.9s
UBBA  Unterbreizbach     113.66 323 ePKiKP    PKiKP    20 29 17.2 +0.4
      baz=73,slow=1.9
FUR   Furstenfeldbru     113.78 320 ePKiKP    PKiKP    20 29 17.6 +0.3
      baz=73,slow=1.9
WTTA  Wattenberg         113.84 319 i Pdiff   Pdif     20 25 26.1  0.0
      comp=Z,4.2nm,0.8s
WTTA                                i PKP     PKiKP    20 29 17.9 +0.2
      comp=Z,157nm,0.5s,SNR=42
WTTA                                eSKS      SKSac    20 35 50.8 -1.1
      comp=Z,25nm,1.1s
WATA  Walderalm          113.85 320 i Pdiff   Pdif     20 25 26.1  0.0
      comp=Z,5.3nm,0.8s
WATA                                i PKP     PKiKP    20 29 17.6  0.0
      comp=Z,67nm,0.7s,SNR=24
WATA                                i SKS     SKSac    20 35 51.7 -0.1
      comp=Z,21nm,1.4s
SQTA  Sankt Quirin       114.13 319 i PKP     PKiKP    20 29 18.2 +0.1
      comp=Z,56nm,0.7s,SNR=16
SQTA                                eSKS      SKSac    20 35 50.3 -2.6
      comp=Z,0.3nm,0.3s
SQTA                                i PKKP    PKKPbc   20 40 01.7 +0.9
      comp=Z,5.6nm,1.0s
MOTA  Moosalm            114.16 320 ePdiff    Pdif     20 25 26.7 -0.8
      comp=Z,7.0nm,0.9s
MOTA                                i PKP     PKPdf    20 29 18.1 -0.1
      comp=Z,92nm,1.3s,SNR=22
MOTA                                i SKS     SKSac    20 35 52.2 -0.8
      comp=Z,20nm,1.5s
MOTA                                ePKKP     PKKPbc   20 39 58.1 -2.7
      comp=Z,4.9nm,1.2s
RETA  Reutte             114.33 320 i PKP     PKPdf    20 29 18.4 -0.1
      comp=Z,38nm,0.7s,SNR=10.0
NUUG  Nuugaatsiaq        114.36   1 i P       PKiKP    20 29 18.0 +0.3
IBBN  Ibbenburen         114.39 326 ePKiKP    PKiKP    20 29 18.9 +0.6
      baz=73,slow=1.9
KASTN Kahler Asten       114.44 324 ePKiKP    PKiKP    20 29 19.3 +0.8
      baz=73,slow=1.9
FETA  Feichten           114.50 319 i PKP     PKiKP    20 29 19.1 +0.1
      comp=Z,28nm,0.5s,SNR=18
FETA                                i SKS     SKSac    20 35 53.6 -0.9
      comp=Z,14nm,1.4s
FETA                                ePKKP     PKKPbc   20 39 57.2 -2.4
      comp=Z,4.2nm,1.2s
UBR   Ueberruh           114.68 320 ePKiKP    PKPdf    20 29 19.2  0.0
      baz=73,slow=1.9
TNS   Taunus Mts         114.80 323 ePKiKP    PKPdf    20 29 19.6 +0.4
      baz=73,slow=1.9
LRW   Lerwick            114.88 336⇑eP        PKPdf    20 29 19.3 +0.3
STU   Stuttgart          114.88 322 ePKiKP    PKPdf    20 29 19.7 +0.3
      baz=73,slow=1.9
DAVA  Damuels            114.96 320 i PKP     PKPdf    20 29 20.0 +0.2
      comp=Z,90nm,0.6s,SNR=36
DAVA                                eSKS      SKSac    20 35 54.8 -1.4
      comp=Z,0.1nm,0.2s
DAVA                                ePKKP     PKKPbc   20 39 58.4 +0.3
      comp=Z,6.1nm,0.8s
BUG   Bochum--Univer     115.01 325 ePKiKP    PKPdf    20 29 20.1 +0.6
      baz=73,slow=1.9
OSSC  Osservatorio P     115.23 316           PKiKP    20 29 18.4 -1.8
UMMG  Uummannaq          115.25   1 i P       PKiKP    20 29 19.1 -0.4
Q16A  Castle Valley      115.38  50           PKPdf    20 29 21.0 +0.1
PRMA  PARMA              115.49 317           PKiKP    20 29 20.4 -0.3
PDAR  Pinedale Array     115.56  45  PKP      PKPdf    20 29 21.8 +0.6
      comp=Z,12nm,0.8s,baz=228,slow=1.3,SNR=54
PDAR                                 SKP               20 32 45.3
      comp=Z,4.4nm,0.8s,baz=221,slow=1.0,SNR=6.5
PDAR                                 PKKPbc   PKKPbc   20 39 54.8 -1.2
      comp=Z,5.6nm,0.9s,baz=119,slow=5.2,SNR=12
PDAR                                 SKKPbc   SKKPbc   20 43 27.8 -2.4
      comp=Z,0.8nm,0.7s,baz=104,slow=1.3,SNR=4.0
BFO   Black Forest       115.57 321  PKIKP    PKiKP    20 29 20.5 -0.3
BFO   Black Forest       115.57 321 ePKiKP    PKiKP    20 29 20.4 -0.4
      baz=73,slow=1.9
TUE   Stuetta            115.58 319           PKiKP    20 29 20.7 -0.4
FFC   Flin Flon          115.60  31  PKIKP    PKPdf    20 29 21.3 +0.7
P18A  Preston Nutter     115.91  49           PKPdf    20 29 21.3 -0.8
BTNL  Ternell            116.02 324 dPKPdf    PKiKP    20 29 21.8 +0.3
MEM   Membach            116.08 324 dPKPdf    PKiKP    20 29 21.9 +0.3
BSTI  Sart Tilman        116.35 324 dPKPdf    PKiKP    20 29 22.5 +0.4
WLF   Walferdange        116.38 323 dPKPdf    PKiKP    20 29 22.9 +0.7
WLF   Walferdange        116.38 323 ePKiKP    PKiKP    20 29 23.4 +1.2
      baz=73,slow=1.9
ICESG Greenland Ices     116.55 356 i P       PKiKP    20 29 22.5 +0.1
BCLA  Clavier            116.57 324 dPKPdf    PKiKP    20 29 22.9 +0.4
SOEG  Soedalen           116.61 353 i P       PKPdf    20 29 21.9 -0.2
BGES  Gesves             116.71 324 dPKPdf    PKiKP    20 29 23.1 +0.3
BMRD  Maredsous          116.93 324 dPKPdf    PKiKP    20 29 23.8 +0.5
UCC   Uccle              116.95 325 dPKPdf    PKiKP    20 29 23.7 +0.5
FCC   Fort Churchill     117.02  24           PKPdf    20 29 22.3 -0.8
FCC   Fort Churchill     117.02  24  PKIKP    PKPdf    20 29 22.3 -0.8
DOU   Dourbes            117.12 324 dPKP      PKiKP    20 29 24.2 +0.6
MCD   Coleburn Disti     117.25 334⇑eP        PKPdf    20 29 23.3 -0.4
X18A  Snowflake          117.33  54           PKPdf    20 29 24.4 -0.4
LINV  Loch Inver, As     117.73 335⇑eP        PKiKP    20 29 24.8 +0.3
MG03  Isla Dawson        117.88 166           PKPdf    20 29 24.8 -0.2
ESY   Stoneypath         117.94 332⇑eP        PKiKP    20 29 25.2 +0.2
WACR  West Acre          118.08 328 eP        PKiKP    20 29 25.7 +0.3
EDI   Edinburgh          118.20 333 eP        PKiKP    20 29 25.7 +0.2
EDMD  Edmundbyers        118.25 331⇑eP        PKiKP    20 29 25.7  0.0
INVG  Invergeldie, C     118.29 333⇑eP        PKiKP    20 29 25.9 +0.2
LEWI  Lewis, Hebride     118.42 336⇑eP        PKPdf    20 29 25.8  0.0
KPL   Plockton           118.43 335⇑eP        PKPdf    20 29 25.8 -0.1
EKA   Eskdalemuir Ar     118.53 332  PKP      PKiKP    20 29 26.3 +0.1
      comp=Z,25nm,0.6s,baz=29,slow=3.8,SNR=71
EKA                                  PP       PP       20 30 44.9 +0.3
      comp=Z,17nm,0.9s,baz=63,slow=8.2,SNR=6.6
EKA                                  PKKPbc   PKKPbc   20 39 44.5 -1.0
      comp=Z,8.2nm,0.7s,baz=246,slow=3.3,SNR=20
ESK   Eskdalemuir        118.56 332⇑eP        PKPdf    20 29 26.0 -0.2
ESK   Eskdalemuir        118.56 332  PKIKP    PKiKP    20 29 26.4 +0.1
HPK   Haverah Park       118.57 330⇑eP        PKiKP    20 29 26.7 +0.4
KEST  Kesra              118.75 308  PKP      PKiKP    20 29 27.8 +0.4
      comp=Z,57nm,0.9s,baz=343,slow=4.3,SNR=40
KEST                                 PP       PP       20 30 43.8 -3.3
      comp=Z,88nm,0.9s,baz=20,slow=5.5,SNR=13
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KEST				PKKPbc	PKKPab	20 39 45.4	-0.6
	comp=Z,5.9nm,0.9s,baz=34,slow=2.7,SNR=4.3						
KEST	Kesra	118.75	308	P	PKiKP	20 29 28.3	+0.9
	SNR=5.9						
LPIG	La Paz	118.75	66	PKP	PKiKP	20 29 28.5	+1.0
	comp=Z,21nm,0.3s,baz=12,slow=1.7,SNR=3.8						
PGBU	Glenifferbraes	118.86	333	⇑eP	PKPdf	20 29 26.7	-0.1
LBWR	Ladybower, Pea	118.93	330	⇑eP	PKiKP	20 29 27.4	+0.3
SFJD	Kangerlussuaq	118.97	1	i P	PKPdf	20 29 25.8	-0.8
LAWE	Loch Awe, Argy	118.99	334	⇑eP	PKiKP	20 29 27.2	+0.1
CWF	Charnwood Fore	119.07	329	eP	PKPdf	20 29 27.0	-0.3
SSB	Saint Sauveur	119.14	319		PKPdf	20 29 27.4	-0.3
SSB	Saint Sauveur	119.14	319	PKIKP	PKPdf	20 29 27.4	-0.3
NEWG	New Galloway	119.16	332	⇑eP	PKiKP	20 29 27.5	+0.1
STNC	Stoke	119.34	330	eP	PKiKP	20 29 28.4	+0.6
GAL1	Galloway	119.53	332	⇑eP	PKiKP	20 29 28.2	+0.1
ANGG	Ammassalik, Gr	119.80	354	i P	PKPdf	20 29 27.3	-1.0
IOMK	Kirk Michael	119.82	332	⇑eP	PKiKP	20 29 29.0	+0.3
Y22D	IRIS PASSCAL I	119.87	54	P	PKPdf	20 29 29.2	-0.4
	baz=284						
WIM	Isle of Man	119.94	332	⇑eP	PKiKP	20 29 29.1	+0.1
FOEL	Foel Wylfa	119.95	330	⇑eP	PKiKP	20 29 29.5	+0.4
SWN1	Swindon	119.99	328	⇑eP	PKiKP	20 29 29.4	+0.3
ISOG	Isortoq, Green	119.99	355	i P	PKPdf	20 29 28.1	-0.6
SDCO	Great Sand Dun	119.99	50		PKPdf	20 29 28.8	-1.2
HLM1	Long Mynd	120.00	329	⇑eP	PKiKP	20 29 29.4	+0.2
ANMO	Albuquerque	120.03	53	PKP	PKiKP	20 29 31.4	+1.3
	comp=Z,39nm,0.9s,baz=293,slow=2.1,SNR=50						
ANMO				PKKPbc	PKKPab	20 39 40.2	-0.4
	comp=Z,5.5nm,1.0s,baz=210,slow=5.8,SNR=6.2						
STRD	Stroud	120.03	328	⇑eP	PKPdf	20 29 29.2	0.0
CLGH	Cloghs, Cushen	120.04	333	⇑eP	PKiKP	20 29 29.3	+0.2
WME	Myndd Eilian	120.20	331	eP	PKiKP	20 29 29.7	+0.2
WPS	Cemaes, Angles	120.30	331	eP	PKiKP	20 29 29.9	+0.2
WLF1	Llynfaes	120.31	331	⇑eP	PKiKP	20 29 30.0	+0.3
MCH1	Michaelchurch	120.35	329	⇑eP	PKiKP	20 29 29.8	0.0
IDGL	Inch Island, C	120.67	334	⇑eP	PKiKP	20 29 30.5	+0.1
T25A	Trinidad	121.00	50		PKiKP	20 29 33.2	+1.2
ULM	Lac du Bonnet	121.09	33	PKP	PKPdf	20 29 31.0	-0.3
	comp=Z,37nm,0.7s,baz=311,slow=1.7,SNR=49						
ULM				PKKPab	PKKPab	20 39 34.2	-1.2
	comp=Z,17nm,0.9s,baz=120,slow=4.7,SNR=16						
ULM	Lac du Bonnet	121.09	33	PKIKP	PKPdf	20 29 31.0	-0.3
RSBS	Rosebush, Pemb	121.26	330	⇑eP	PKPdf	20 29 31.6	0.0
DSB	Dublin	121.29	331		PKPdf	20 29 30.8	-0.7
JSA	Saint Aubin	121.42	326	⇑eP	PKiKP	20 29 32.1	+0.1
DYA	Yadsworthy	121.70	328	⇑eP	PKiKP	20 29 32.6	0.0
NUUK	Nuuk	121.77	1	i P	PKPdf	20 29 31.5	-0.6
IWEX	Carrickbyrne,	122.02	331	eP	PKiKP	20 29 33.0	-0.1
SBD	Saint Breward	122.03	328	⇑eP	PKPdf	20 29 32.7	-0.3
RTBA	Rita Blanca	122.50	50		PKPdf	20 29 33.3	-1.2
CCA1	Carnmenellis	122.53	328	⇑eP	PKiKP	20 29 34.3	+0.1
IGLA	Glengowla, Co	122.58	333	⇑eP	PKPdf	20 29 33.8	-0.2
TX31	Lajitas Ar. Si	123.70	59		PKPdf	20 29 35.9	-1.2
TXAR	Lajitas Array	123.70	59	PKP	PKiKP	20 29 37.9	+0.6
	comp=Z,16nm,0.9s,baz=264,slow=1.3,SNR=73						
TXAR				PKKPbc	PKKPbc	20 39 25.4	0.0
	comp=Z,7.9nm,1.1s,baz=104,slow=5.3,SNR=12						
TXAR				SKKPbc	SKKPbc	20 43 04.2	+0.9
	comp=Z,2.0nm,0.9s,baz=83,slow=3.4,SNR=3.5						
NRS	Narsarsuaq	124.76	358	i P	PKPdf	20 29 37.0	-0.9
IVI	Ivigtut	124.78	359	i P	PKPdf	20 29 36.7	-1.3
TBO	Thunder Bay	125.46	32		PKPdf	20 29 38.9	-0.9
WMOK	Wichita Mounta	126.10	51		PKPdf	20 29 39.5	-1.9
WMOK	Wichita Mounta	126.10	51	PKIKP	PKPdf	20 29 39.5	-1.9
OK052	Battle Ridge R	127.14	49		PKPdf	20 29 42.8	-0.5
ESDC	Sonseca Array	127.22	316	PKP	PKiKP	20 29 44.6	+0.6
	comp=Z,35nm,1.1s,baz=18,slow=3.0,SNR=83						
ESDC				PP	PP	20 31 41.8	-2.1
	comp=Z,7.7nm,1.0s,baz=53,slow=6.9,SNR=4.8						
ESDC				SKPab	SKiKP	20 32 49.9	-18
	comp=Z,8.0nm,1.0s,baz=39,slow=3.1,SNR=4.6						
PAB	San Pablo	127.54	317	⇓PKIKP	PKiKP	20 29 45.2	+0.6
P38A	Dawn	127.91	43		PKPdf	20 29 43.9	-0.7
MVO	Moncorvo	128.53	320	⇑ePKPdf	PKiKP	20 29 46.6	0.0
MVO				ePP	PP	20 31 55.3	+3.0
MVO				i tx	tx	20 32 54.7	
MVO				eLR	LR	21 04 19.4	
MVO				i AMs_20		21 06 51.2	
	comp=Z,1µm,20.0s						
U38A	Gravette	128.75	47		PKPpre	20 29 40.3	
PCAB	Cabril	128.88	321	⇓ePKPdf	PKiKP	20 29 47.7	+0.5
PCAB				ePP	PP	20 31 54.6	+0.1
PCAB				i tx	tx	20 32 54.9	
PGAV	Gavieira, Arco	128.89	321	ePKPdf	PKiKP	20 29 47.3	0.0
PGAV				ePP	PP	20 31 49.2	-5.5
PGAV				i tx	tx	20 32 55.9	
PGAV				eLR	LR	21 03 58.4	
PGAV				i AMs_20		21 06 15.1	
	comp=Z,1µm,20.0s						
POLO	Lamas de Olo	128.91	320	⇑ePKPdf	PKiKP	20 29 47.3	0.0
POLO				ePP	PP	20 31 53.9	-1.0
POLO				i tx	tx	20 32 56.3	
PVRL	Vila Real	128.91	320	⇓ePKPdf	PKiKP	20 29 48.2	+0.9
PVRL				ePP	PP	20 31 56.6	+1.7
SCHQ	Schefferville	129.16	13	PKP	PKPdf	20 29 46.8	+0.2
	comp=Z,37nm,1.1s,baz=27,slow=3.1,SNR=12						
SCHQ				SKPbc	SKPbc	20 32 56.8	+0.7
	comp=Z,11nm,0.8s,baz=352,slow=3.5,SNR=4.9						
L42A	Oliver, Polo	129.21	39		PKPdf	20 29 45.9	-1.2
MTE	Manteigas	129.26	319	ePKPdf	PKiKP	20 29 48.1	0.0
MTE				ePP	PP	20 31 58.8	+1.7
MTE				i tx	tx	20 32 58.2	
MTE				eLR	LR	21 03 51.4	
MTE				i AMs_20		21 06 43.6	
	comp=Z,2µm,20.0s						
TOA0	Torodi Ar. Sit	129.32	282	P	PKiKP	20 29 48.8	0.0
TORD	Torodi Ar. Bea	129.32	282		PKPpre	20 29 32.6	
TORD	Torodi Ar. Bea	129.32	282	PKP	PKPdf	20 29 47.8	-0.2
	comp=Z,75nm,0.8s,baz=47,slow=2.4,SNR=72						
TORD				PP	PP	20 31 57.4	-1.3
	comp=Z,5.9nm,0.8s,baz=57,slow=5.1,SNR=4.5						
TORD				SKPbc	SKPab	20 32 57.4	+0.5
	comp=Z,21nm,0.7s,baz=57,slow=4.4,SNR=7.1						
TORD				SKKPbc	SKKPbc	20 42 43.8	+0.5
	comp=Z,2.9nm,0.9s,baz=234,slow=1.2,SNR=3.1						
PVIS	Viseu	129.32	320	⇑ePKPdf	PKPdf	20 29 47.6	+0.2
PVIS				ePP	PP	20 32 00.6	+3.1
PVIS				i tx	tx	20 32 57.4	
PCBR	Castelo Branco	129.51	318	⇓ePKPdf	PKiKP	20 29 48.9	+0.5
PCBR				ePP	PP	20 32 02.0	+3.3
PCBR				i tx	tx	20 32 58.0	
PTO	Porto	129.55	320	ePKPdf	PKPdf	20 29 47.7	0.0
PMRV	Marv??o	129.66	318	⇑ePKPdf	PKPdf	20 29 48.3	+0.3
PMRV				ePP	PP	20 32 01.7	+2.0
PMRV				i tx	tx	20 32 58.8	
PMRV				eLR	LR	21 03 37.4	
PMRV				i AMs_20		21 06 28.3	
	comp=Z,1µm,20.0s						
PLCA	Paso Flores	129.66	159	PKP	PKiKP	20 29 49.1	+0.2
	comp=Z,20nm,0.7s,baz=238,slow=1.7,SNR=34						
PLCA				SKPbc	SKPbc	20 32 58.7	+0.3
	comp=Z,5.2nm,0.8s,baz=235,slow=6.8,SNR=3.8						
COI	Coimbra	129.93	319	ePKPdf	PKiKP	20 29 50.0	+0.7
COI				ePP	PP	20 32 02.2	+0.8
COI				i tx	tx	20 32 59.0	
PBAR	Barrancos	130.04	316	ePKPdf	PKiKP	20 29 49.7	+0.1
PBAR				ePP	PP	20 32 04.0	+1.8
PBAR				i tx	tx	20 32 59.4	
PCAS	Casmilo, Conde	130.07	319	⇑ePKPdf	PKiKP	20 29 49.4	-0.2
PCAS				ePP	PP	20 32 03.8	+1.5
PCAS				i tx	tx	20 32 60.0	
HKT	Hockley	130.07	55	PKIKP	PKiKP	20 29 50.9	+1.1
PESTR	Estremoz	130.08	317	ePKPdf	PKiKP	20 29 49.4	-0.2
PESTR				ePP	PP	20 32 03.9	+1.4
PESTR				i tx	tx	20 33 00.4	
PSARD	Sardoal	130.08	318	ePKPdf	PKPdf	20 29 48.7	-0.1
PSARD				i tx	tx	20 33 00.4	
CCM	Cathedral Cave	130.23	44		PKPpre	20 29 43.8	
CCM	Cathedral Cave	130.23	44	PKIKP	PKPdf	20 29 43.8	-5.3
HDIL	Hopedale	130.24	40		PKPdf	20 29 48.1	-1.0
PMTG	Montargil	130.40	318	⇑ePKPdf	PKPdf	20 29 49.1	-0.3
PMTG				ePP	PP	20 32 06.3	+1.8
PMTG				i tx	tx	20 33 01.2	
EVO	Evora	130.53	317	ePKPdf	PKPdf	20 29 49.4	-0.3
EVO				ePP	PP	20 32 06.7	+1.3
EVO				i tx	tx	20 33 02.1	
PSBE	So Bento	130.54	319	⇑ePKPdf	PKPdf	20 29 50.0	+0.3
PSBE				ePP	PP	20 32 06.7	+1.2
PSBE				i tx	tx	20 33 01.8	
FCAR	Ozark Folk Cen	130.63	47		PKPpre	20 29 39.2	
PBEJ	Beja	130.68	317	⇑ePKPdf	PKiKP	20 29 50.8	-0.1
PBEJ				i tx	tx	20 33 03.1	
PVAQ	Vaqueiros	130.89	316	ePKPdf	PKiKP	20 29 51.5	+0.2
PVAQ				ePP	PP	20 32 09.0	+1.3
PVAQ				i tx	tx	20 33 04.2	
PVAQ				eLR	LR	21 02 56.5	
PVAQ				i AMs_20		21 07 38.9	
	comp=Z,923nm,18.0s						
PCVE	Castro Verde	131.00	316	ePKPdf	PKiKP	20 29 51.3	-0.2
PCVE				ePP	PP	20 32 09.3	+0.9
PCVE				i tx	tx	20 33 03.1	
MESJ	Messejana	131.02	316	ePKPdf	PKiKP	20 29 51.1	-0.4
MESJ				ePP	PP	20 32 09.3	+0.7
MESJ				eSKP		20 33 03.7	
MESJ				IAMs_20	IAMs_20	21 03 36.5	
	comp=Z,2µm,34.3s						
MESJ	Messejana	131.02	316	ePKPdf	PKiKP	20 29 51.6	0.0
MESJ				ePP	PP	20 32 10.0	+1.4
MESJ				i tx	tx	20 33 04.2	
MESJ	Messejana	131.02	316	ePKIKP	PKiKP	20 29 51.1	-0.4
MESJ				e		20 32 09.3	
LIS	Lisbon	131.20	318	ePKPdf	PKiKP	20 29 51.5	-0.4
LIS				eSKP		20 33 04.5	
LIS				IAMs_20	IAMs_20	21 05 34.1	
	comp=Z,3µm,27.7s						
LIS	Lisbon	131.20	318	ePKPdf	PKiKP	20 29 53.5	+1.6
LIS				i tx	tx	20 33 04.9	
LIS	Lisbon	131.20	318	ePKIKP	PKiKP	20 29 51.5	-0.4
LIS	Lisbon	131.20	318	ePKIKP	PKiKP	20 29 53.0	+1.1
Z41A	Richland Creek	131.26	50		PKPdf	20 29 50.2	-1.0
PTEO	Sao Teotonio	131.51	316	ePKPdf	PKiKP	20 29 52.7	+0.1
PTEO				ePP	PP	20 32 11.2	-0.6
PTEO				i tx	tx	20 33 05.6	
MORF	Marmelete	131.59	316	ePKPdf	PKPdf	20 29 52.3	+0.5
MORF				ePP	PP	20 32 12.7	+0.4
MORF				eSKP		20 33 05.8	
MORF				IAMs_20	IAMs_20	21 06 54.8	
	comp=Z,1µm,20.5s						
MORF	Marmelete	131.59	316	ePKPdf	PKiKP	20 29 52.8	0.0
MORF				ePP	PP	20 32 14.3	+2.0
MORF				i tx	tx	20 33 06.0	
MORF	Marmelete	131.59	316	ePKIKP	PKPdf	20 29 52.3	+0.5
MORF				e		20 32 12.7	
PFVI	Vila Bisbo	131.79	316	ePKPdf	PKiKP	20 29 53.1	0.0
PFVI				ePP	PP	20 32 14.2	+0.7
PFVI				i tx	tx	20 33 08.0	
SIUC	Southern Illin	131.79	43		PKPdf	20 29 50.6	-1.5
K50A	Casco	132.87	34		PKPdf	20 29 53.1	-0.9
WCI	Wyandotte Cave	133.46	41		PKPpre	20 29 42.1	
WCI	Wyandotte Cave	133.46	41	PKHKP	PKPpre	20 29 42.1	
WVT	Waverly	133.56	44		PKPpre	20 29 43.8	
WVT	Waverly	133.56	44	PKIKP	PKPdf	20 29 55.9	+0.4
R49A	Shelbyville	134.15	40		PKPdf	20 29 56.1	-0.4
TRQA	Tornquist	134.72	166	PKIKP	PKiKP	20 29 58.5	-0.6
BO02	Sierra Bellavi	134.74	155		PKPpre	20 29 49.2	
P51A	Williamsport	134.74	37		PKPdf	20 29 56.7	-0.9
BO01	Tunca	134.95	154		PKPpre	20 29 51.3	
P52A	Corning	135.20	37		PKPdf	20 29 57.8	-0.6
MT01	Popeta	135.32	154		PKPpre	20 29 51.6	
Q52A	Bidwell	135.55	37		PKPdf	20 29 58.0	-1.1
Y49A	Blount Mountai	135.72	46	PKPdf	PKPdf	20 29 59.4	-0.2
DBIC	Dimbokro	135.89	274		PKPpre	20 29 46.9	
DBIC	Dimbokro	135.89	274	PKhKP	PKPpre	20 29 46.1	
	comp=Z,10nm,0.7s,baz=88,slow=2.2,SNR=12						
DBIC				PKP	PKPdf	20 30 00.9	+0.5
	comp=Z,25nm,0.9s,baz=123,slow=2.5,SNR=4.2						
DBIC				SKPbc	SKPbc	20 33 19.6	-0.6
	comp=Z,37nm,0.9s,baz=120,slow=3.1,SNR=13						
VT1	Waterbury	136.50	25		PKPdf	20 29 59.3	-1.5
ACCN	Adirondack Com	136.88	26		PKPdf	20 30 00.5	-0.9
SSPA	Standing Stone	136.91	32		PKPpre	20 29 50.1	
CO02	Combarbal	137.67	152		PKPpre	20 29 55.3	
GOGA	Godfrey	138.04	45		PKPpre	20 29 54.1	
GOGA	Godfrey	138.04	45	PKHKP	PKPpre	20 29 54.1	
L61B	Northampton	138.06	26		PKPdf	20 30 02.4	-1.3
CFA	Coronel Fontan	138.56	155	PKhKP	PKPpre	20 29 56.1	
	comp=Z,17nm,0.7s,baz=239,slow=2.4,SNR=20						
CFA				SKPbc	SKPbc	20 33 28.1	+0.4
	comp=Z,15nm,0.7s,baz=227,slow=3.9,SNR=10						
T57A	Hurt	138.63	37		PKPpre	20 29 55.2	
T57A					PKPdf	20 30 04.4	-0.5
CO01	Juntas del Tor	139.12	152		PKPpre	20 29 59.2	
PMPST	Porto Santo, M	139.15	316	ePKPdf	PKPdf	20 30 05.9	-0.1
W57A	Gilead	139.35	40		PKPpre	20 29 57.5	
LCO	Las Campanas	139.64	150		PKPpre	20 30 00.2	
LCO	Las Campanas	139.64	150	PKHKP	PKPpre	20 30 00.2	
PMAR	Madeira	139.75	316	ePKPdf	PKPdf	20 30 04.2	-3.1
PMAR				i tx	tx	20 33 33.2	
PMOZ	Porto Moniz, M	139.89	316	ePKPdf	PKPdf	20 30 02.7	-4.8
PMOZ				ePP	PP	20 33 04.2	-0.4
PMOZ				eLR	LR	20 59 11.3	
PMOZ				i AMs_20		21 05 46.8	
	comp=Z,834nm,16.0s						
X58A	Rowland	140.15	40		PKPpre	20 30 00.7	
Y58A	Scranton	140.34	41		PKPpre	20 30 02.2	
656A	Willston	140.84	49		PKPpre	20 30 04.1	
PSBA	Serra de Santa	141.71	332	ePKP	PKPdf	20 30 07.1	-3.4
PSBA	Serra de Santa	141.71	332	ePKP	PKPdf	20 30 07.1	-3.4
ADH	Angra Heroismo	141.75	332	ePKP	PKPdf	20 30 06.7	-3.8
ADH	Angra Heroismo	141.75	332	ePKP	PKPdf	20 30 06.7	-3.8
ROSA	Rosais	142.17	333	ePKP	PKPdf	20 30 08.0	-3.2
ROSA	Rosais	142.17	333	ePKP	PKPdf	20 30 08.0	-3.2
PMAN	Manadas	142.17	333	ePKP	PKPdf	20 30 08.1	-3.1
PMAN	Manadas	142.17	333	ePKP	PKPdf	20 30 08.1	-3.1
PID	Ribeirinha	142.34	332	ePKP	PKPdf	20 30 09.1	-2.5
PID	Ribeirinha	142.34	332	ePKP	PKPdf	20 30 09.1	-2.5
PICO	Pico	142.43	333	ePKP	PKPdf	20 30 09.6	-2.2
PICO	Pico	142.43	333	ePKP	PKPdf	20 30 09.6	-2.2
PCAN	Candelaria	142.49	333	ePKP	PKPdf	20 30 10.2	-1.6
PCAN	Candelaria	142.49	333	ePKP	PKPdf	20 30 10.2	-1.6
CALA	Caldeira	142.49	333	ePKP	PKPdf	20 30 09.0	-2.9
CALA	Caldeira	142.49	333	ePKP	PKPdf	20 30 09.0	-2.9
GO02	Mina Guanaco	143.35	148		PKPbc	20 30 11.6	+0.1
LAPC	Finca la Perla	143.88	80	eP	PKPbc	20 30 13.4	+0.4
PG27	Guanacaste Pro	143.91	80	eP	PKPdf	20 30 14.5	-0.6
VRLE	La Escondida,	143.94	80	eP	PKPbc	20 30 13.6	+0.3
GPS1	Guardaparques	143.96	80	eP	PKPbc	20 30 14.0	+0.7
PEJA	Penjamo Buenos	143.98	80	eP	PKPbc	20 30 14.2	+0.8
PLVR	Palo Verde	143.99	81	eP	PKPdf	20 30 15.4	+0.1
ACON	Acoyapa	144.01	78		PKPbc	20 30 14.2	+0.8
ACON	Acoyapa	144.01	78	⇑eP	PKPdf	20 30 14.4	-0.7
COLC	Colonia	144.11	80	eP	PKPdf	20 30 15.0	-0.4
MESS	Mesas	144.11	80	eP	PKPbc	20 30 14.3	+0.5
HORNC	Hornillas	144.13	80	eP	PKPdf	20 30 15.1	-0.4
PB10	IPOC Station P	144.14	145		PKPbc	20 30 14.2	+0.7
VMAR	Armenia, Volca	144.18	80	eP	PKPbc	20 30 14.4	+0.4
MOTZ	Rio Naranjo	144.24	80	eP	PKPdf	20 30 15.2	-0.4
INVE	Universidad In	144.26	80	eP	PKPbc	20 30 14.9	+0.7
TIMP	Tierras Morena	144.30	80	eP	PKPdf	20 30 15.3	-0.4
JTS	Las Juntas de	144.38	81		PKPbc	20 30 15.0	+0.4
JTS	Las Juntas de	144.38	81	PKIKP	PKPbc	20 30 15.0	+0.4
JTS	Las Juntas de	144.38	81	eP	PKPdf	20 30 15.8	0.0
JTS	Las Juntas de	144.38	81	eP	PKPdf	20 30 16.1	+0.3
TABAC	Tabacon	144.55	80	eP	PKPdf	20 30 16.6	+0.4
ARE1	Arenal 1	144.60	80	⇑eP	PKPdf	20 30 16.5	+0.3
VARE2	V. Arenal	144.60	80	eP	PKPdf	20 30 16.7	+0.5
CEDE	Laguna Cedeo	144.61	80	⇑iP	PKPdf	20 30 16.9	+0.6
ESPN	Las Esperanzas	144.83	77	eP	PKPdf	20 30 17.4	+0.9
VPS8	V Poas	145.09	81	eP	PKPdf	20 30 18.3	+0.8
VPS5	V. Poas	145.10	81	eP	PKPdf	20 30 18.5	+1.1
PAR1A	Puntarenas Pro	145.12	82	eP	PKiKP	20 30 19.6	-1.4
PICV	PH. Pirrs	145.17	82	eP	PKiKP	20 30 19.6	-1.6
HDC	Heredia	145.23	81	eP	PKiKP	20 30 19.8	-1.6
VBV1	V. Barva	145.24	81	⇑iP	PKPab	20 30 18.7	+0.9
LUJA	Lujan	145.28	81	eP	PKiKP	20 30 19.8	-1.7
ECI	Escuela Centro	145.29	81	eP	PKPab	20 30 19.0	+1.1
ABE2	San Pablo	145.31	81	eP	PKiKP	20 30 19.9	-1.8
LCR2	La Lucha 2	145.35	81	eP	PKPab	20 30 18.7	+0.6
TRIO	Tres Rios	145.35	81	eP	PKPab	20 30 18.7	+0.7
CVIMO	Finca Echandi	145.40	81	eP	PKPab	20 30 19.0	+0.7
PIEC	Cerro El Cedra	145.41	82	eP	PKPab	20 30 19.8	+1.4
VICA	Volcano Irazu	145.49	81	eP	PKPab	20 30 20.5	+1.6
TRT2	Tortugero	145.56	80	eP	PKPdf	20 30 17.2	-0.6
VTLA	Turrialba Volc	145.56	81	eP	PKPab	20 30 19.7	+0.6
CVTQ	Turrialba Volc	145.57	81	eP	PKPab	20 30 20.1	+1.0
CVTR	Volcan Turrial	145.57	81	eP	PKPab	20 30 19.7	+0.5
VTR0	Volcan Turrial	145.57	81	eP	PKPab	20 30 20.0	+0.8
CVTV	Tajo	145.59	81	eP	PKPab	20 30 19.8	+0.6
VTCV	VTCV, Calle Va	145.61	81	eP	PKPab	20 30 20.0	+0.9
ABRB	Las Abras (San	145.62	81	eP	PKPab	20 30 20.0	+0.9
RESJ	San Isidro (Tu	145.69	81	eP	PKiKP	20 30 20.7	-1.5
EDPE	Pejibaye, P	145.81	82	eP	PKiKP	20 30 21.1	-1.4
IRES	Siquirres	145.82	81	eP	PKPab	20 30 20.8	+1.2
SAJE	San Jernim	145.87	82	eP	PKPab	20 30 20.0	0.0
FIMO	Fila Mora	146.04	83	eP	PKiKP	20 30 22.6	-0.4
DRK0	Durika	146.13	82	eP	PKPbc	20 30 20.5	+0.3
DRK0	Durika	146.13	82	eP	PKiKP	20 30 22.7	-0.6
DRK0				eS	pPKiKP	20 30 59.1	+3.1
VERH	Veragua Rainfo	146.14	81	eP	PKiKP	20 30 22.0	-1.1
EDP2	Potrero Grande	146.21	83	eP	PKPab	20 30 21.8	+0.6
CEUA	Cerro Uatsi, L	146.41	81	eP	PKPab	20 30 22.5	+0.5
BRIBI	Bribri	146.53	81	eP	PKPab	20 30 23.0	+0.6
ALCO	Alturas Coton,	146.55	83	eP	PKPbc	20 30 21.0	-0.5
BRU2	Volcan	146.70	83	eP	PKPbc	20 30 21.3	-0.5
BRU2	Volcan	146.70	83	eP	PKPbc	20 30 22.0	+0.2
BRU2				eS	pPKiKP	20 31 03.2	+6.0
BC3P	Paso Ancho	146.78	83	eP	PKiKP	20 30 25.1	+0.5
BC3P				eS	pPKiKP	20 31 05.4	+8.0
CLLRA	Cordillera,	146.78	83	eP	PKPbc	20 30 21.9	-0.1
MCANO	Manzana, Boque	146.83	83	eP	PKiKP	20 30 24.1	-0.4
BQSF3	Alto Boquete,	146.96	83	eP	PKPab	20 30 23.5	-0.7
CSTBL	De las Acacias	146.96	84	eP	PKiKP	20 30 24.6	-0.2
ITAB	Concordia	146.97	175		PKPbc	20 30 21.3	-0.7
PEDE3	Pedregal, Chir	146.98	84	eP	PKiKP	20 30 25.4	+0.6
PEDE3				eS	sPKPdf	20 31 04.0	-1.7
CPUP	Villa Florida	147.04	167	PKPbc	PKPdf	20 30 20.9	+0.9
	comp=Z,52nm,0.9s,baz=88,slow=0.2,SNR=81						
CPUP				PP	PP	20 33 48.5	+2.3
	comp=Z,5.0nm,0.9s,baz=138,slow=4.4,SNR=3.3						
CPUP	Villa Florida	147.04	167	PKIKP	PKPdf	20 30 21.0	+0.9
RBALA	Bur	147.23	83	eP	PKPab	20 30 24.1	-1.0
NNA	Nana	147.31	123	PKPbc	PKPbc	20 30 22.7	-0.6
	comp=Z,152nm,0.7s,baz=253,slow=5.8,SNR=26						
ISECA	Islas Secas	147.38	84	eP	PKPab	20 30 25.8	+0.1
KKNTU	Kakintº	147.57	83	eP	PKPdf	20 30 22.0	+0.8
PB08	IPOC Station P	147.57	143		PKPdf	20 30 22.4	+0.8
GMAL	Guarumal, Vera	148.18	85	eP	PKPbc	20 30 25.1	-0.5
CACAO	El Cacao, Vera	148.56	86	eP	PKiKP	20 30 27.8	-0.2
CACAO				eS	sPKPdf	20 31 03.1	-5.2
CHIT3	Chitre	148.98	84	eP	PKiKP	20 30 29.4	+0.4
CHIT3				eS	sPKPdf	20 31 07.9	-1.2
AZU	Azuero	149.13	85	eP	PKPdf	20 30 22.7	-1.0
AZU	Azuero	149.13	85	eP	PKiKP	20 30 29.3	0.0
ZANG	Zanguenga, Cho	149.48	82	eP	PKPbc	20 30 29.1	+0.1
BCIP	Isla Barro Col	149.49	82	eP	PKPdf	20 30 23.1	-1.2
BCIP	Isla Barro Col	149.49	82	eP	PKPdf	20 30 24.4	+0.1
BCIP				i S	sPKPdf	20 31 09.8	-0.1
CHOR3	La Chorrera	149.58	82	eP	PKiKP	20 30 30.8	+0.7
CAZU	Cerro Azul, Pa	149.91	82	eP	PKPdf	20 30 24.7	-0.4
OTAV	Otavalo	150.31	100	⇑PKIKP	PKPdf	20 30 28.4	+2.2
LPAZ	La Paz	151.12	140	PKP	PKPdf	20 30 29.3	+1.7
	comp=Z,16nm,1.0s,baz=214,slow=2.5,SNR=18						
LPAZ				PKPbc	PKiKP	20 30 35.2	+1.1
	comp=Z,17nm,1.0s,baz=30,slow=0.2,SNR=38						
GTBY	Guantanamo Bay	151.23	59		PKPdf	20 30 23.9	-3.0
GTBY				PKPbc	PKPbc	20 30 32.3	-0.7
PTAC	Punta Ardita,	151.59	86	eP	PKPdf	20 30 28.9	+1.3
ROSC	El Rosal	155.01	91	PKP	PKPdf	20 30 33.7	+0.7
	comp=Z,48nm,0.8s,baz=178,slow=4.0,SNR=17						
ROSC				PKPbc	PKPbc	20 30 42.6	
	comp=Z,39nm,0.7s,baz=232,slow=4.0,SNR=12						
ROSC				PKPab	PKPab	20 30 58.0	+0.1
	comp=Z,38nm,0.7s,baz=304,slow=23,SNR=3.7						
SIV	San Ignacio	155.32	152	PKP	PKPdf	20 30 33.8	+0.8
	comp=Z,17nm,1.0s,baz=205,slow=1.7,SNR=38						
SIV				PKPab	PKPab	20 30 58.0	-0.5
	comp=Z,65nm,0.7s,baz=210,slow=4.6,SNR=30						
PTLB	Pontes e Lacer	156.66	155		PKPdf	20 30 33.4	-1.3
BDFB	Brasilia	158.59	183	PKP	PKPdf	20 30 37.7	+0.5
	comp=Z,17nm,0.9s,baz=109,slow=1.7,SNR=19						
BDFB				PKPab	PKPab	20 31 12.2	-0.4
	comp=Z,18nm,0.9s,baz=149,slow=2.1,SNR=6.0						
SJG	San Juan	159.49	52		PKPdf	20 30 34.9	-3.1
SJG				PKPab	PKPab	20 31 15.9	-0.6
SJG	San Juan	159.49	52	PKIKP	PKPdf	20 30 34.9	-3.1
SJG						20 31 15.9	
HUMP	Col San Antoni	159.71	52		PKPdf	20 30 35.5	-2.8
HUMP					PKPab	20 31 17.7	+0.2
BAUV	El Baul	161.11	80		PKPdf	20 30 38.8	-1.1
BAUV				PKPab	PKPab	20 31 20.8	-3.0
BOAV	Boa Vista	168.23	107		PKPdf	20 30 44.6	-1.5
BOAV				PKPab	PKPab	20 31 55.3	0.0

MOS ***14*** *20:44:51.9±0.9, 15.°45N×46.°58W, h10^{km}, mb5.1/63, MS4.7/7, Error ellipse: s-maj=6.3km s-min=5.8km az=60.0*

IDC ***14*** *20:44:52.1±0.4, 15.°43N×46.°49W, h0^{km}, mb4.4/32, mbtmp4.4/34, ML5.1/3, MS4.5/69, Error ellipse: s-maj=13.1km s-min=10.4km az=133.0*

NEIC ***14*** *20:44:54.0±0.9, 15.°39N±0.°09×46.°58W±0.°09, h10^{km}±1^{km}, mb5.0/309, Mww5.2/21, Error ellipse: s-maj=15.8km s-min=13.2km az=131.0*

NEIC ***14*** *20:44:54, 15.°39N×46.°58W, h12^{km}*

NEIC ***14*** *20:44:54, 15.°29N×46.°47W, h12^{km}, Moment Tensor Solution. Duration: 2.^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.69; $M_{\theta\theta}$-0.23; $M_{\phi\phi}$2.92; $M_{r\theta}$2.23; $M_{\theta\phi}$-6.36; $M_{\phi r}$-3.92; Fault plane solution: $M_0$8.29000×10^{16} NP1:ϕ_s94.24000°, δ56.68000°, λ-175.61000°. NP2:ϕ_s1.83000°, δ86.34000°, λ-33.40000°. Principal axes: T 9.5273, Plg20.0000°, Azm53.0000°; N -3.9996, Plg56.0000°, Azm176.0000°; P -5.5277, Plg26.0000°, Azm313.0000°;*

GCMT ***14*** *20:44:55.0±0.2, 15.°43N±0.°01×46.°54W±0.°01, h13^{km}±1^{km}, MW5.2/129, Moment Tensor Solution. s71,c105; s129,c207; Duration: 1.^{s}0 Moment tensor: Scale 10^{16} Nm; M_{rr}-2.56±.24; $M_{\theta\theta}$-0.85±.22; $M_{\phi\phi}$3.41±.23; $M_{r\theta}$-1.96±.56; $M_{\theta\phi}$-8.74±.20; $M_{\phi r}$-0.49±.51; Best double couple: $M_0$9.32100×10^{16} NP1:ϕ_s6.00000°, δ75.00000°, λ-10.00000°. NP2:ϕ_s98.00000°, δ80.00000°, λ-165.00000°. Principal axes: T 10.3270, Plg4.0000°, Azm231.0000°; N -2.0180, Plg72.0000°, Azm130.0000°; P -8.3140, Plg18.0000°, Azm323.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

INMG ***14*** *20:45:00.0±20.0, 14.°86N×46.°99W, h10^{km}, mb4.8, Ms4.7, MW5.0, #DIST_RANGE: DISTANT*

ISC 14 20:44:54.8±0.3, **15.°40N**±0.°05×**46.°58W**±0.°05, **h17^{km}, n905, σ1.^{s}13**/824, **mb5.0**/271, **MS4.7**/89, **6C-7D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDP	Montagnes des	11.84	211	Pn	Pn	20 47 42.1	-0.8
	35nm,0.3s,baz=21,slow=15,SNR=269						
MDP				Sn	Sn	20 49 43.8	-11
	1.9nm,0.3s,baz=143,slow=19,SNR=2.2						
MDP				LR	LR	20 51 29.1	
	comp=Z,3µm,20.0s,baz=24,slow=33						
H05S1	Guadeloupe/Mar	13.81	268	Pn	Pn	20 48 10.1	+0.1
H05S1				T	T	21 02 19.5	
	SNR=14						
ILAM	Ilet Lapin Mar	13.82	269	eP	P	20 48 22.2	+3.9
MPOM	Morne Pois Mar	13.83	268		Pn	20 48 08.9	-1.3
H05N1	Guadeloupe/Mar	13.96	276	Pn	Pn	20 48 12.3	+0.3
H05N1				T	T	21 02 34.0	
	SNR=16						
GDSD	La Dsirade Is	13.97	276		Pn	20 48 10.6	-1.5
BIM	Bigot	14.03	268		Pn	20 48 11.1	-1.8
MAGL	Barre de l'ile	14.17	274	eS	S	20 51 21.0	+8.5
ANBD	Bethesda, Anti	14.68	279	⇓eP	Pn	20 48 20.6	-1.2
GCMP	Grenada, Carri	14.70	261	eP	Pn	20 48 16.7	-5.3
TRN	Trinidad (W)	15.19	254	eP	Pn	20 48 21.4	-7.2
TRN	Trinidad (W)	15.19	254	eP	Pn	20 48 27.8	-0.9
TMAB	Tom-Au,PA,Br	17.71	185	eP	P	20 49 01.8	+0.2
PCRV	Puerto La Cruz	18.35	256	P	P	20 49 08.0	-0.7
	2.3nm,0.3s,baz=65,slow=3.8,SNR=10						
	32nm,0.8s						
PCRV	Puerto La Cruz	18.35	256	eP	P	20 48 54.9	-14
HUMP	Col San Antoni	18.65	281	P	P	20 49 10.7	-1.2
PDPR	Patillas Dam,	18.80	281	P	P	20 49 13.0	-0.7
BOAV	Boa Vista	18.86	228		P	20 49 13.3	-1.0
BOAV				IAmb	IAmb	20 49 20.2	
	comp=Z,106nm,0.7s						
BOAV	Boa Vista	18.86	228	eP	P	20 49 12.8	-1.5
BOAV	Boa Vista	18.86	228	P	P	20 49 13.7	-0.6
	comp=Z,1µmcomp=Z,244nm,0.8s						
MAL2	Monte Alegre,	18.86	204		P	20 49 13.9	-0.4
IGPR	InterUniversit	18.88	281	P	P	20 49 13.4	-1.1
SJG	San Juan	18.93	281	P	Pn	20 49 15.5	-0.2
	comp=Z,6.8nm,0.3s,baz=98,slow=7.8,SNR=20						
	comp=Z,66nm,0.6s						

SJG	San Juan	18.93	281	P	P	20 49 15.2	+0.2
	comp=Z,569nmcomp=Z,49nm,0.7s						
CELP	Cerrillos	19.34	281	P	P	20 49 19.3	-0.2
NBCL	Cascavel-CE	21.15	157	*e*P	P	20 49 37.0	-2.2
ITTB	Itaituba	21.63	205	*e*P	P	20 49 44.1	-0.2
PRPB	Parauapebas	21.67	189	*e*P	P	20 49 45.0	+0.3
BAUV	El Baul	21.93	255		P	20 49 47.0	-0.6
NBPB	Pedra_Branca-C	21.93	161	*e*P	P	20 49 48.3	+0.7
DR12	Loma Pena Alta	22.05	282	P	P	20 49 48.4	-0.5
NBPA	Parau_RN	23.01	155	*e*P	P	20 50 00.7	+1.7
MACA	Manacapuru-AM	23.13	218		P	20 49 60.0	-0.3
MACA	Manacapuru-AM	23.13	218	*e*P	P	20 50 00.5	+0.2
RCBR	Riachuelo	23.59	153	LR	LR	20 56 56.6	
	comp=Z,360nm,20.6s,baz=340,slow=31						
RCBR	Riachuelo	23.59	153	*e*P	P	20 50 06.8	+1.9
SDDR	Presa de Saban	23.86	282	P	P	20 50 11.1	+3.5
	comp=Z,746nmcomp=Z,67nm,1.0s						
NBMA	Muriti-CE	23.90	161	*e*P	P	20 50 06.6	-1.3
NPGB	Novo Progresso	23.93	202	*e*P	P	20 50 07.5	-0.7
SMTB	Santa Maria do	24.12	182	*e*P	P	20 50 11.1	+1.1
SDV	Santo Domingo	24.37	257		P	20 50 12.2	-0.4
SDV	Santo Domingo	24.37	257	*e*P	P	20 50 12.5	0.0
SDV	Santo Domingo	24.37	257	P	P	20 50 13.1	+0.6
	comp=Z,2µmcomp=Z,139nm,1.0s						
NBPV	Pedro Velho	24.39	152	*e*P	P	20 50 13.5	+1.1
URIC	Uribia, Colomb	24.97	265	P	P	20 50 17.2	-0.5
	comp=Z,28nm,0.9s						
SGC2	Sao Gabriel da	25.39	234	P	P	20 50 23.9	+2.4
	comp=Z,36nm,1.0s						
NBCA	Caruaru-PE	25.70	155	*e*P	P	20 50 26.1	+1.7
TEFE	Tefe	25.93	225	*e*P	P	20 50 27.4	+1.1
CRJC	Cerrejon, Guaj	25.96	264	P	P	20 50 27.2	+0.4
	comp=Z,762nmcomp=Z,50nm,0.8s						
TAMC	Tame, Arauca	26.28	253	P	P	20 50 32.2	+2.5
	comp=Z,1µmcomp=Z,76nm,0.8s						
NBAN	Anadia - AL	26.91	157	*e*P	P	20 50 36.1	+0.9
OCAC	Ocana	27.10	258	P	P	20 50 37.9	+0.7
	comp=Z,1µmcomp=Z,63nm,0.8s						
SMRC	Santa Marta, M	27.22	265	P	P	20 50 37.9	-0.2
SMRC				IAmb	IAmb	20 50 49.2	
	comp=Z,52nm,1.0s						
ARGC	Ariguani, Magd	27.54	262	P	P	20 50 41.6	+0.7
	comp=Z,2µmcomp=Z,106nm,0.9s						
SNDB	Serra Nova Dou	27.59	190	*e*P	P	20 50 41.5	+0.2
CLDB	Colider	27.65	200	*e*P	P	20 50 41.9	0.0
RUSC	La Rusia	27.67	253		P	20 50 42.3	-0.4
RUSC	La Rusia	27.67	253	P	P	20 50 45.6	+2.9
SDBA	SAO DESIDERIO	27.68	176	*e*P	P	20 50 42.9	+0.7
SJCC	San Jacinto, C	28.42	262	P	P	20 50 49.6	+0.7
	comp=Z,610nmcomp=Z,66nm,1.1s						
PDRB	Porto dos Gac	28.65	201	*e*P	P	20 50 51.1	+0.2
BBTS	Babate	29.02	87	LR	LR	20 59 45.2	
	comp=Z,791nm,19.5s,baz=144,slow=31						
ROSC	El Rosal	29.21	252	P	P	20 50 56.7	+0.4
	comp=Z,5.8nm,0.3s,baz=92,slow=19,SNR=1.6						
ROSC				LR	LR	21 04 21.9	
	comp=Z,2µm,18.4s,baz=70,slow=40						
	comp=Z,5.8nm,0.3s						
MACC	Macarena, Meta	29.93	247	P	P	20 51 03.0	+0.7
GUY2C	Guyana, Caldas	30.03	253	P	P	20 51 03.9	+0.3
	comp=Z,274nmcomp=Z,24nm,0.8s						
PRAC	Prado	30.18	250	P	P	20 51 05.9	+1.4
	comp=Z,667nmcomp=Z,40nm,1.6s						
TBTG	Tabatinga, AM	30.20	232	*e*P	P	20 51 05.2	+0.5
APAC	Apartado, Choc	30.28	259	P	P	20 51 08.3	+2.9
	comp=Z,2µmcomp=Z,214nm,1.0s						
JANB	Januaria	30.34	176	*e*P	P	20 51 05.8	-0.1
ORTC	Ortega, Tolima	30.43	251	P	P	20 51 07.0	+0.3
	comp=Z,715nmcomp=Z,84nm,1.0s						
BDFB	Brasilia	30.87	183		P	20 51 10.8	+0.2
BDFB				IAmb	IAmb	20 51 13.7	
	comp=Z,17nm,0.9s						
BDFB	Brasilia	30.87	183	P	P	20 51 11.2	+0.6
	comp=Z,12nm,0.8s,baz=9.4,slow=10,SNR=16						
BDFB				LR	LR	21 02 49.1	
	comp=Z,649nm,19.8s,baz=353,slow=35						
	comp=Z,12nm,0.8s						
NBRS	Nobres	30.90	198	*e*P	P	20 51 11.7	+1.0
PLMC	San Jos del P	30.99	253	P	P	20 51 11.9	+0.2
	comp=Z,608nmcomp=Z,28nm,1.2s						
VILB	Vilhena	31.23	206	*e*P	P	20 51 14.6	+0.9
ARAG	Araguaiana, MT	31.33	190	*e*P	P	20 51 15.3	+0.8
CMC01	Camacan, BA	31.34	167	*e*P	P	20 51 16.6	+2.0
PMOZ	Porto Moniz, M	31.79	52	*e*LR	LR	20 59 09.4	
PMOZ				*i* AMs_20		21 01 08.3	
	comp=Z,868nm,22.0s						
PMOZ				*e*tx	tx	21 23 50.8	
PMAR	Madeira	31.96	52	*e*tx	tx	21 23 48.1	
DVLD	Doverlandia	32.30	190	*e*P	P	20 51 23.1	0.0
SALV	Santo Antonio	32.37	197	*e*P	P	20 51 24.5	+0.9
VBST	Vila Bela da S	32.57	205	*e*P	P	20 51 26.4	+1.0
PTLB	Pontes e Lacer	33.06	203		P	20 51 30.1	+0.4
PTLB	Pontes e Lacer	33.06	203	*e*P	P	20 51 30.7	+1.0
IPMB	Ipameri, GO	33.21	183	*e*P	P	20 51 31.3	+0.3
POCN	Pocone	33.35	198	*e*P	P	20 51 33.8	+1.6
DIAM	Diamantina, MG	33.60	175	*e*P	P	20 51 36.0	+1.5
PMNB	Patos De Minas	33.72	180	*e*P	P	20 51 37.2	+1.7
PP1B	Ponte de Pedra	33.79	194	*e*P	P	20 51 37.4	+1.3
SJMB	Sao Joao De Ma	34.30	171	*e*P	P	20 51 42.2	+1.8
SIV	San Ignacio	34.31	205	LR	LR	21 05 23.4	
	comp=Z,2µm,18.8s,baz=62,slow=36						
BSFB	Barra de Sao F	34.48	170	*e*P	P	20 51 43.5	+1.5
CZSB	Cruzeiro do Su	34.61	230		P	20 51 42.8	-0.5
CZSB	Cruzeiro do Su	34.61	230	*e*P	P	20 51 43.2	-0.1
GMAL	Guarumal, Vera	34.74	261	P	P	20 51 46.0	+1.5
OTAV	Otavalo	34.89	247		P	20 51 45.8	-0.4
OTAV				IAmb	IAmb	20 51 59.3	
	comp=Z,32nm,1.1s						
OTAV	Otavalo	34.89	247	P	P	20 51 45.8	-0.4
OTAV				pmax	pmax		
	comp=Z,32nm,1.2s						
OTAV	Otavalo	34.89	247	*e*P	P	20 51 46.6	+0.3
OTAV	Otavalo	34.89	247	P	P	20 51 47.7	+1.5
	comp=Z,328nmcomp=Z,28nm,1.7s						
ITRB	Iturama	35.08	186	*e*P	P	20 51 49.9	+2.7
PAC1	Pacto, Paraso	35.18	248	P	P	20 51 49.1	+0.7
RVDE	Rio Verde (Bra	35.18	194	*e*P	P	20 51 49.3	+1.2
BBSD	Serra de San D	35.21	204	*e*P	P	20 51 48.1	-0.3
R58B	Mineral	35.60	315	P	P	20 51 51.8	+0.2
R58B				IAmb	IAmb	20 52 02.0	
	comp=Z,39nm,1.4s						
BSCB	Bom Sucesso	36.21	177	*e*P	P	20 51 57.7	+0.7
RPRD	Ribas do Rio P	36.33	191	*e*P	P	20 51 59.0	+1.1
JSC	Jenkinsville	36.42	307	P	P	20 51 58.5	-0.1
JSC	Jenkinsville	36.42	307	P	P	20 51 58.5	-0.1
JSC				pmax	pmax		
	comp=Z,13nm,0.9s						
ESPN	Las Esperanzas	36.74	270	P	P	20 52 02.0	+0.4
AQDB	Aquidauana	36.76	194		P	20 52 01.9	+0.4
AQDB				IAmb	IAmb	20 53 18.4	
	comp=Z,19nm,1.0s						
AQDB	Aquidauana	36.76	194	*e*P	P	20 52 03.1	+1.6
LCR2	La Lucha 2	36.92	266	P	P	20 52 03.0	-0.4
LCR2				IAmb	IAmb	20 52 14.8	
	comp=Z,32nm,0.8s						
BDQN	Bodoquena, MS	36.99	196	*e*P	P	20 52 05.2	+1.6
BLA	Blacksburg	37.01	312	P	P	20 52 03.2	-0.5
BLA				IAmb	IAmb	20 52 06.5	
	comp=Z,22nm,0.8s						
BLA	Blacksburg	37.01	312	P	P	20 52 03.3	-0.5
BLA				pmax	pmax		
	comp=Z,22nm,0.9s						
PCMB	Pacaembu	37.06	187	*e*P	P	20 52 05.7	+1.6
HODGE	Hodges	37.16	307	P	P	20 52 05.6	+0.6
HODGE				IAmb	IAmb	20 52 09.2	
	comp=Z,23nm,1.1s						
R55A	Marlinton	37.30	314	P	P	20 52 06.2	0.0
R55A				IAmb	IAmb	20 52 10.9	
	comp=Z,31nm,1.0s						
CAM01	Campos-RJ	37.30	172	*e*P	P	20 52 07.3	+1.2
K57A	Scipio Center	37.41	323	P	P	20 52 06.8	-0.2
K57A				IAmb	IAmb	20 52 09.2	
	comp=Z,30nm,1.1s						
J57A	Williamstown	37.54	324	P	P	20 52 07.1	-0.9
J57A				IAmb	IAmb	20 52 12.0	
	comp=Z,24nm,1.0s						
VAS01	Vassouras-RJ	37.57	175	*e*P	P	20 52 09.3	+0.9
MCWV	Mont Chateau	37.79	316	P	P	20 52 09.9	-0.3
GOGA	Godfrey	37.83	305	P	P	20 52 10.4	-0.2
GOGA	Godfrey	37.83	305	P	P	20 52 10.4	-0.2
GOGA				pmax	pmax		
	comp=Z,17nm,0.9s						
S54A	Dingess, Beckl	37.91	313	P	P	20 52 11.0	-0.3
S54A				IAmb	IAmb	20 52 15.3	
	comp=Z,27nm,0.8s						
LPAZ	La Paz	38.00	215	P	P	20 52 12.3	-0.5
LPAZ	La Paz	38.00	215	P	P	20 52 13.3	+0.5
	comp=Z,9.5nm,0.8s,baz=14,slow=7.0,SNR=24						
LPAZ				PP	PnPn	20 53 45.2	+4.0
	comp=Z,7.7nm,1.0s,baz=26,slow=12,SNR=3.6						
LPAZ				LR	LR	21 07 30.7	
	comp=Z,1µm,20.3s,baz=33,slow=36						
	comp=Z,9.5nm,0.8s						
LPAZ	La Paz	38.00	215	*e*P	P	20 52 13.2	+0.5
BOAB	BOACO BROADBAN	38.02	271	P	P	20 52 12.6	+0.2
MAN01	Angra dos Reis	38.11	176	*e*P	P	20 52 14.9	+1.8
V53A	Saluda	38.12	309	P	P	20 52 13.3	+0.2
VAO	Valinhos	38.16	181	*e*P	P	20 52 15.2	+1.7
MMNY	Mt. Morris Dam	38.24	322	P	P	20 52 13.7	-0.2
MMNY				IAmb	IAmb	20 52 16.1	
	comp=Z,31nm,1.1s						
MURT	Porto Murtinho	38.38	197	*e*P	P	20 52 16.1	+0.8
TRCB	Terra Rica	38.41	189	*e*P	P	20 52 17.4	+1.7
J55A	Hilton	38.50	323	P	P	20 52 15.0	-1.1
J55A				IAmb	IAmb	20 52 40.5	
	comp=Z,27nm,0.8s						
PARB	Paraibuna	38.51	179	*e*P	P	20 52 18.2	+1.8
FRTB	Fartura	38.61	184	*e*P	P	20 52 18.8	+1.5
TRQ	Mont Tremblant	38.62	329	P	P	20 52 16.7	-0.5
ATAH	Atahualpa	38.66	237	LR	LR	21 08 53.6	
	comp=Z,1µm,18.8s,baz=56,slow=37						
P53A	Whipple	38.74	315	P	P	20 52 17.9	-0.3
P53A				IAmb	IAmb	20 52 28.4	
	comp=Z,30nm,1.0s						
SPB	Sao Paulo	38.76	181	*e*P	P	20 52 20.7	+2.3
LDASE	Londrina, Braz	38.80	187	*e*P	P	20 52 20.4	+1.5
TKL	Tuckaleechee C	38.84	308	LR	LR	21 06 53.4	
	comp=Z,546nm,18.7s,baz=107,slow=34						
AMBA	Amambai (Brazi	38.97	192	*e*P	P	20 52 21.5	+1.3
N53A	Lisbon	39.02	317	P	P	20 52 20.2	-0.4
N53A				IAmb	IAmb	20 52 31.4	
	comp=Z,60nm,1.5s						
Q52A	Bidwell	39.10	314	P	P	20 52 21.2	0.0
H10N3	ASCENSION HYDR	39.28	124	T	T	21 34 02.3	
	baz=306,slow=76,SNR=139						
H10N2	ASCENSION HYDR	39.29	124	T	T	21 34 02.6	
	baz=306,slow=76,SNR=174						
H10N1	ASCENSION HYDR	39.30	124	T	T	21 34 03.8	
	baz=306,slow=76,SNR=216						
P52A	Corning	39.32	315	P	P	20 52 22.7	-0.3
O52A	Adamsville	39.34	316	P	P	20 52 22.7	-0.5
PET01	Itanhaem-SP	39.45	181	*e*P	P	20 52 26.0	+1.8
SSFO	Shawnee State	39.64	313	P	P	20 52 25.9	+0.2
SSFO				IAmb	IAmb	20 52 28.2	
	comp=Z,34nm,0.8s						
M52A	Chesterland	39.73	318	P	P	20 52 26.3	-0.1
M52A				IAmb	IAmb	20 52 28.6	
	comp=Z,28nm,0.7s						
H10S3	ASCENSION HYDR	39.81	125	T	T	21 34 40.7	
	baz=276,slow=74,SNR=130						
H10S2	ASCENSION HYDR	39.83	125	T	T	21 34 38.2	
	baz=304,slow=74,SNR=122						
W50A	Signal Mountai	39.86	307	P	P	20 52 27.2	-0.5
W50A				IAmb	IAmb	20 52 32.7	
	comp=Z,25nm,1.0s						
FPAL	Fort Paine	39.88	306	P	P	20 52 27.7	-0.1
PTEO	Sao Teotonio	40.05	49	*e*P	P	20 52 30.6	+1.3
PTEO				*i* Amb		20 52 32.9	
	comp=Z,43nm,1.6s						
T50A	Nancy	40.15	310	P	P	20 52 30.3	+0.3
SADO	Sadowa	40.16	324	LR	LR	21 06 09.9	
	comp=Z,455nm,20.7s,baz=102,slow=32						
PTGB	Pitanga	40.23	188	*e*P	P	20 52 32.4	+1.6
NNA	Nana	40.47	229	LR	LR	21 09 42.4	
	comp=Z,1µm,18.4s,baz=8.5,slow=37						
MESJ	Messejana	40.54	49	P	P	20 52 33.4	+0.2
MESJ				IAmb	IAmb	20 52 43.8	
	comp=Z,53nm,1.9s						
MESJ	Messejana	40.54	49	P	P	20 52 33.4	+0.2
MESJ				pmax	pmax		
	comp=Z,53nm,1.9s						
PCVE	Castro Verde	40.59	49	*e*P	P	20 52 35.0	+1.3
PCVE				*i* Amb		20 52 46.0	
	comp=Z,46nm,2.0s						
PVAQ	Vaqueiros	40.74	50	*e*LR	LR	21 03 19.5	
PVAQ				*i* AMs_20		21 07 39.5	
	comp=Z,923nm,18.0s						
PSBE	So Bento	40.81	46	*e*P	P	20 52 40.4	+4.9
PSBE				*i* Amb		20 52 48.7	
	comp=Z,54nm,1.8s						
PBEJ	Beja	40.87	49	*e*P	P	20 52 37.2	+1.3
R49A	Shelbyville	40.88	311	P	P	20 52 36.2	+0.2
EVO	Evora	40.96	48	*e*P	P	20 52 37.5	+0.8
EVO				*i* Amb		20 52 47.9	
	comp=Z,28nm,1.6s						
X48A	Hartselle	40.98	305	P	P	20 52 36.6	-0.3
PMTG	Montargil	41.02	47	*e*P	P	20 52 43.4	+6.2
PMTG				*i* Amb		20 52 48.9	
	comp=Z,25nm,1.9s						
O49A	Covington	41.08	314	P	P	20 52 37.6	-0.1
SJPY	San Joaquin	41.21	193	*e*P	P	20 52 40.5	+1.7
PCAS	Casmilo, Conde	41.25	46	*e*P	P	20 52 39.1	0.0
PSARD	Sardoal	41.29	47	*e*P	P	20 52 39.8	+0.4
N49A	Columbus Grove	41.30	316	P	P	20 52 38.9	-0.5
N49A				IAmb	IAmb	20 52 49.1	
	comp=Z,28nm,1.1s						
PBAR	Barrancos	41.53	49	*e*P	P	20 52 42.0	+0.6
PBAR				*i* Amb		20 52 52.9	
	comp=Z,26nm,1.7s						
P48A	Milroy	41.53	313	P	P	20 52 40.4	-1.0
P48A				IAmb	IAmb	20 52 43.0	
	comp=Z,19nm,0.8s						
PB11	IPOC Station P	41.66	214	P	P	20 52 41.2	-1.6
PB11				IAmb	IAmb	20 52 43.9	
	comp=Z,41nm,0.9s						
WCI	Wyandotte Cave	41.67	311	P	P	20 52 42.4	-0.2
WCI	Wyandotte Cave	41.67	311	P	P	20 52 42.4	-0.2
WCI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PB08	IPOC Station P	41.71	213	P	P	20 52 41.4	-2.0
MDT	Midelt	41.74	58	LR	LR	21 07 52.4	
	comp=Z,578nm,18.2s,baz=302,slow=33						
PMRV	Marv??o	41.76	47	*e*P	P	20 52 42.7	-0.6
PMRV				*i* Amb		20 52 47.1	
	comp=Z,20nm,1.5s						
PMRV				*e*S	S	20 59 11.6	+12
PMRV				*e*LR	LR	21 03 39.9	
DBIC	Dimbokro	41.79	97	P	P	20 52 42.5	-1.3
DBIC	Dimbokro	41.79	97	P	P	20 52 42.0	-1.8
	comp=Z,9.7nm,0.8s,baz=278,slow=9.9,SNR=7.4						
DBIC				LR	LR	21 06 53.0	
	comp=Z,370nm,21.4s,baz=274,slow=32						
	comp=Z,9.7nm,0.8s						
DBIC	Dimbokro	41.79	97	P	P	20 52 42.5	-1.3
DBIC				pmax	pmax		
	comp=Z,14nm,1.0s						
T47A	Sharon Grove	41.83	309	P	P	20 52 42.7	-1.2
PCBR	Castelo Branco	41.87	47	*e*P	P	20 52 44.2	+0.1
PCBR				*i* Amb		20 52 56.8	
	comp=Z,34nm,1.6s						
PVIS	Viseu	41.95	45	*e*P	P	20 52 48.0	+3.2
MTE	Manteigas	42.06	46	P	P	20 52 45.3	-0.4
MTE	Manteigas	42.06	46	*e*P	P	20 52 45.9	+0.2
MTE				*i* Amb		20 52 57.5	
	comp=Z,38nm,1.7s						
MTE				*e*S	S	20 59 17.9	+14
MTE				*e*LR	LR	21 03 46.7	
MTE				*i* AMs_20		21 06 47.5	
	comp=Z,2µm,20.0s						
WVT	Waverly	42.10	307	P	P	20 52 45.8	-0.3
WVT	Waverly	42.10	307	P	P	20 52 45.8	-0.3
WVT				pmax	pmax		
	comp=Z,15nm,0.9s						
BLO	Bloomington	42.20	312	P	P	20 52 46.9	+0.1
BLO				pmax	pmax		
	comp=Z,14nm,0.8s						
HMBC	Humberstone	42.21	214	IAmb	IAmb	20 52 47.7	
	comp=Z,30nm,1.0s						
PGAV	Gavieira, Arco	42.25	43	*e*P	P	20 52 48.7	+1.4
PGAV				*e*S	S	20 59 19.0	+12
PGAV				*e*LR	LR	21 04 10.9	
PGAV				*i* AMs_20		21 06 19.6	
	comp=Z,1µm,20.0s						
POLO	Lamas de Olo	42.30	44	*e*P	P	20 52 48.3	+0.5
POLO				*i* Amb		20 52 59.5	
	comp=Z,13nm,1.9s						
N47A	Urbana	42.31	315	P	P	20 52 47.1	-0.7
N47A				IAmb	IAmb	20 52 49.6	
	comp=Z,20nm,0.9s						
SCHQ	Schefferville	42.38	343	P	P	20 52 46.4	-1.7
	comp=Z,7.8nm,0.8s,baz=118,slow=5.7,SNR=6.0						
SCHQ				LR	LR	21 07 50.4	
	comp=Z,316nm,21.6s,baz=159,slow=32						
	comp=Z,7.8nm,0.8s						
MAJ01	Sao Joao Batis	42.60	183	*e*P	P	20 52 51.8	+1.6
PB01	IPOC Station P	42.63	212	IAmb	IAmb	20 52 51.5	
	comp=Z,37nm,1.1s						
ITAB	Concordia	42.72	187	*e*P	P	20 52 53.0	+1.9
MVO	Moncorvo	42.73	45	*e*P	P	20 52 51.7	+0.5
MVO				*i* Amb		20 53 03.1	
	comp=Z,21nm,2.0s						
MVO				*e*S	S	20 59 29.0	+15
MVO				*e*LR	LR	21 04 17.2	
MVO				*i* AMs_20		21 06 56.0	
	comp=Z,1µm,20.0s						
CPUP	Villa Florida	42.77	194	P	P	20 52 51.1	-0.4
CPUP	Villa Florida	42.77	194	P	P	20 52 51.5	0.0
	comp=Z,6.4nm,0.8s,baz=237,slow=8.9,SNR=7.7						
CPUP				LR	LR	21 11 42.0	
	comp=Z,134nm,18.2s,baz=244,slow=38						
	comp=Z,6.4nm,0.8s						
CPUP	Villa Florida	42.77	194	*e*P	P	20 52 52.1	+0.6
J47A	Sunmer	42.80	318	P	P	20 52 51.4	-0.3
J47A				IAmb	IAmb	20 52 53.9	
	comp=Z,45nm,0.9s						
OXF	Oxford	42.87	304	P	P	20 52 51.5	-0.8
OXF				IAmb	IAmb	20 52 56.2	
	comp=Z,44nm,1.1s						
OXF	Oxford	42.87	304	P	P	20 52 51.5	-0.8
OXF				pmax	pmax		
	comp=Z,44nm,1.2s						
S44A	Carbondale	43.68	309	P	P	20 52 58.7	-0.2
S44A				IAmb	IAmb	20 53 03.7	
	comp=Z,21nm,0.9s						
CCIG	Comitan	43.77	278	P	P	20 52 59.3	-0.7
CCIG				IAmb	IAmb	20 53 13.0	
	comp=Z,36nm,1.0s						
E46A	Sault Ste Mari	44.06	322	P	P	20 53 01.9	+0.1
E46A				IAmb	IAmb	20 53 04.0	
	comp=Z,28nm,0.8s						
ESDC	Sonseca Array	44.31	48	P	P	20 53 03.4	-0.6
	comp=Z,2.0nm,1.0s,baz=253,slow=7.7,SNR=9.8						
ESDC				PcP	PcP	20 54 48.3	+0.2
	comp=Z,1.2nm,1.0s,baz=277,slow=4.2,SNR=4.5						
ESDC				LR	LR	21 07 01.1	
	comp=Z,1µm,21.9s,baz=235,slow=30						
	comp=Z,2.0nm,1.0s						
P43A	Skaggs, Pawnee	44.53	311	P	P	20 53 05.4	-0.3
P43A				IAmb	IAmb	20 53 09.4	
	comp=Z,22nm,0.8s						
CNLB	Canela	44.64	185	*e*P	P	20 53 07.5	+0.9
FVM	French Village	44.65	309	P	P	20 53 07.3	+0.6
FVM				IAmb	IAmb	20 53 11.2	
	comp=Z,17nm,0.8s						
FVM	French Village	44.65	309	P	P	20 53 07.3	+0.6
FVM				pmax	pmax		
	comp=Z,17nm,0.8s						
LCAR	Lake Charles	44.66	306	P	P	20 53 06.8	+0.1
T42A	Van Buren	44.88	307	P	P	20 53 08.1	-0.3
UALR	University of	45.27	304	P	P	20 53 11.4	-0.3
WHAR	Wooly Hollow	45.35	305	P	P	20 53 12.5	+0.2
FCAR	Ozark Folk Cen	45.37	305	P	P	20 53 11.9	-0.5
FCAR				IAmb	IAmb	20 53 17.0	
	comp=Z,30nm,1.6s						
L42A	Oliver, Polo	45.50	314	P	P	20 53 13.0	-0.3
X40A	Basin Creek Fa	45.60	303	P	P	20 53 14.3	0.0
X40A				IAmb	IAmb	20 53 18.5	
	comp=Z,13nm,0.9s						
MGMO	Mountain Grove	45.81	307	P	P	20 53 15.2	-0.8
MGMO				IAmb	IAmb	20 53 21.5	
	comp=Z,20nm,1.2s						
ITQB	Itaqui	45.84	192	P	P	20 53 16.2	+0.2
ITQB	Itaqui	45.84	192	*e*P	P	20 53 16.3	+0.3
CPSB	Cacapava Do Su	46.01	188	*e*P	P	20 53 18.1	+0.7
MIAR	Mount Ida	46.21	303	P	P	20 53 19.7	+0.6
MIAR				pmax	pmax		
	comp=Z,18nm,1.1s						
JFWS	Jewell Farm	46.24	315	P	P	20 53 18.4	-0.8
JFWS				IAmb	IAmb	20 53 23.0	
	comp=Z,23nm,0.9s						
JFWS	Jewell Farm	46.24	315	P	P	20 53 18.4	-0.8
JFWS				pmax	pmax		
	comp=Z,23nm,0.9s						
P40A	Paris	46.34	310	P	P	20 53 19.1	-0.9
P40A				IAmb	IAmb	20 53 21.6	
	comp=Z,16nm,0.8s						
L40A	Anamosa	46.60	314	P	P	20 53 21.9	-0.1
TORD	Torodi Ar. Bea	46.77	86	P	P	20 53 22.1	-1.6
TORD				IAmb	IAmb	20 53 32.1	
	comp=Z,15nm,1.1s						
TORD	Torodi Ar. Bea	46.77	86	P	P	20 53 22.4	-1.2
	comp=Z,2.3nm,0.6s,baz=297,slow=6.3,SNR=6.1						
TORD				PcP	PcP	20 54 58.6	+1.6
	comp=Z,0.8nm,0.3s,baz=289,slow=4.4,SNR=1.2						
TORD				LR	LR	21 10 59.8	
	comp=Z,574nm,19.7s,baz=290,slow=34						
	comp=Z,2.3nm,0.6s						
I40A	Norwalk	46.88	316	P	P	20 53 24.0	-0.2
HKT	Hockley	47.35	297	*i* P	P	20 53 27.6	-0.4
HKT				pmax	pmax		
	comp=Z,13nm,1.0s						
PLTB	Pedras Altas	47.37	188	*e*P	P	20 53 29.0	+1.0
P38A	Dawn	47.46	310		P	20 53 29.0	+0.3
P38A				IAmb	IAmb	20 53 38.0	
	comp=Z,30nm,1.3s						
TBOT	Tacuaremb	47.66	191	*e*P	P	20 53 31.3	+1.0
TBO	Thunder Bay	48.19	323	P	P	20 53 34.7	+0.4
I37A	Lemond, Waseca	48.78	316	P	P	20 53 38.8	-0.1
SPMN	Marine on St.	48.83	317	P	P	20 53 39.7	+0.4
CEST	Esterri de Car	49.00	46	P	P	20 53 41.0	+0.2
EYMN	Ely	49.12	321	P	P	20 53 40.8	-0.6
EYMN				IAmb	IAmb	20 53 42.9	
	comp=Z,50nm,2.0s						
N35A	Tabor	49.36	311	P	P	20 53 42.8	-0.6
OK029	Liberty Lake	49.58	304	P	P	20 53 45.5	+0.3
TAM	Tamanrasset	49.58	73		P	20 53 45.6	+0.1
TAM				IAmb	IAmb	20 53 55.1	
	comp=Z,18nm,1.0s						
TAM	Tamanrasset	49.58	73	P	P	20 53 45.6	+0.1
TAM				pmax	pmax		
	comp=Z,18nm,1.0s						
KAN14	Manchester OK	50.20	305	P	P	20 53 48.0	-1.9
BRDY	Brady	50.21	298		P	20 53 49.9	-0.2
HNDO	Hondo	50.30	296	P	P	20 53 50.0	-0.7
HNDO				IAmb	IAmb	20 54 02.2	
	comp=Z,36nm,1.3s						
833A	Chaparral WMA,	50.32	294	P	P	20 53 50.6	-0.3
WMOK	Wichita Mounta	50.47	302	P	P	20 53 52.4	+0.4
WMOK				pmax	pmax		
	comp=Z,14nm,1.2s						
FRB	Frobisher Bay	50.65	348	LR	LR	21 13 03.2	
	comp=Z,265nm,21.2s,baz=142,slow=33						
JCT	Junction City	50.82	297	P	P	20 53 53.8	-0.9
JCT				IAmb	IAmb	20 54 05.6	
	comp=Z,32nm,1.2s						
JCT	Junction City	50.82	297	P	P	20 53 53.8	-0.9
JCT				pmax	pmax		
	comp=Z,33nm,1.2s						
ECSD	EROS Data Cent	50.89	314		P	20 53 54.5	-0.5
ABTX	Abilene, Hawle	50.90	300		P	20 53 54.2	-1.1
ABTX				IAmb	IAmb	20 54 01.2	
	comp=Z,14nm,0.8s						
EPLO	Experimental L	51.19	322	P	P	20 53 57.4	+0.3
ZON	Zonda	51.27	204	P	P	20 53 56.5	-1.4
ZON				pmax	pmax		
	comp=Z,37nm,1.4s						
F33A	5 Mile Ranch,	51.34	317		P	20 53 58.3	0.0
F33A				IAmb	IAmb	20 54 07.8	
	comp=Z,24nm,1.1s						
APMT	Aspermont	51.38	300		P	20 53 58.7	-0.1
APMT				IAmb	IAmb	20 54 02.4	
	comp=Z,22nm,0.9s						
SFJD	Kangerlussuaq	51.63	358	LR	LR	21 12 31.8	
	comp=Z,322nm,18.7s,baz=190,slow=32						
EKA	Eskdalemuir Ar	51.92	30	P	P	20 54 01.6	-0.9
	comp=Z,2.7nm,0.9s,baz=230,slow=7.1,SNR=2.8						
	comp=Z,2.7nm,0.9s						
AGMN	Agassiz Nation	51.94	320		P	20 54 02.7	-0.1
AGMN				IAmb	IAmb	20 54 03.9	
	comp=Z,14nm,0.8s						
OZNA	Ozona	52.00	297	P	P	20 54 02.7	-0.9
OZNA				IAmb	IAmb	20 54 06.8	
	comp=Z,20nm,1.0s						
DKNS	Dickens	52.08	301	IAmb	IAmb	20 54 07.6	

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      comp=Z,18nm,1.0s
BORG  Borgarnes         52.23  13  LR     LR     21 11 10.9
      comp=Z,354nm,19.2s,baz=148,slow=30
POST  Post              52.50 300  IAmb   IAmb   20 54 18.2
      comp=Z,15nm,0.9s
ULM   Lac du Bonnet     52.69 322  P      P      20 54 07.8 -0.4
      comp=Z,35nm,0.7s,baz=107,slow=7.4,SNR=60
ULM                                LR     LR     21 13 24.5
      comp=Z,745nm,21.6s,baz=128,slow=32
      comp=Z,35nm,0.7s
ULM   Lac du Bonnet     52.69 322 i P     P      20 54 07.7 -0.6
SAND  Sanderson         52.79 296  IAmb   IAmb   20 54 12.6
      comp=Z,16nm,0.9s
AMTX  Amarillo          52.85 302  IAmb   IAmb   20 54 13.4
      comp=Z,26nm,0.9s
MNHN  Monahans          53.42 298         P      20 54 13.6 -0.5
MNHN                               IAmb   IAmb   20 54 25.2
      comp=Z,25nm,1.5s
KEST  Kesra             53.62  57         P      20 54 15.3 -0.3
KEST                               IAmb   IAmb   20 54 17.1
      comp=Z,20nm,1.1s
KEST  Kesra             53.62  57  P      P      20 54 15.8 +0.3
      comp=Z,12nm,0.9s,baz=278,slow=7.6,SNR=8.5
KEST                               LR     LR     21 14 28.9
      comp=Z,866nm,21.9s,baz=265,slow=33
      comp=Z,12nm,0.9s
UCC   Uccle             53.87  38 dP      P      20 54 17.0 +0.1
TXAR  Lajitas Array     54.11 295  P      P      20 54 18.3 -0.9
TXAR  Lajitas Array     54.11 295  P      P      20 54 20.1 +0.9
      comp=Z,6.0nm,1.0s,baz=107,slow=6.1,SNR=25
TXAR                               PcP    PcP    20 55 24.8 +0.8
      comp=Z,3.0nm,0.9s,baz=84,slow=5.0,SNR=4.6
      comp=Z,6.0nm,1.0s
TX31  Lajitas Ar. Si    54.11 295         P      20 54 18.0 -1.2
MDND  Maddock           54.14 318         P      20 54 17.5 -1.6
BGES  Gesves            54.15  38 dP      P      20 54 19.4 +0.4
MT09  Talagante         54.15 205  P      P      20 54 18.2 -1.2
MT09                               IAmb   IAmb   20 54 21.0
      comp=Z,26nm,0.9s
BCLA  Clavier           54.29  38 dP      P      20 54 20.8 +0.7
      comp=Z,4.2nm,1.1s
MT01  Popeta            54.34 205  P      P      20 54 20.7 +0.1
E28A  Huff              54.48 317  P      P      20 54 21.3 -0.2
WLF   Walferdange       54.55  39 dP      P      20 54 21.9  0.0
ECH   Echery            54.71  41  P      P      20 54 23.1 -0.1
ECH   Echery            54.71  41  P      P      20 54 23.1 -0.1
ECH                                pmax   pmax
      comp=Z,7.0nm,1.2s
MEM   Membach           54.78  38 dP      P      20 54 23.4 -0.2
VHRN  Van Horn          55.30 297         P      20 54 28.3 +0.4
BFO   Black Forest      55.49  42  P      P      20 54 28.9 +0.1
BFO   Black Forest      55.49  42 eP      P      20 54 29.2 +0.3
      comp=Z,7.6nm,1.0s,baz=255,slow=6.6
FCC   Fort Churchill    55.62 332         P      20 54 29.6 +0.2
FCC   Fort Churchill    55.62 332  P      P      20 54 29.6 +0.2
FCC                                pmax   pmax
      comp=Z,28nm,1.0s
MNTX  Cornudas Mount    55.68 298         P      20 54 30.4 -0.1
MNTX                               IAmb   IAmb   20 54 34.1
      comp=Z,18nm,1.1s
DAVOX Davos/Dischmat    56.09  44  LR     LR     21 16 18.3
      comp=Z,871nm,19.3s,baz=264,slow=34
TNS   Taunus Mts        56.13  39 eP      P      20 54 33.9 +0.5
      comp=Z,7.8nm,1.0s,baz=255,slow=6.6
RSSD  Black Hills       56.17 313  P      P      20 54 32.9 -1.1
RSSD  Black Hills       56.17 313  P      P      20 54 32.9 -1.1
RSSD                               pmax   pmax
      comp=Z,17nm,1.6s
DAVA  Damuels           56.22  43 i pP    P      20 54 34.5 +0.3
      comp=Z,10nm,1.0s
SDCO  Great Sand Dun    56.25 305  P      P      20 54 34.1 -0.6
SDCO                               IAmb   IAmb   20 54 40.0
      comp=Z,50nm,1.9s
OSSC  Osservatorio P    56.31  48  P      P      20 54 34.8  0.0
OSSC                               IAmb   IAmb   20 54 49.6
      comp=Z,21nm,1.1s
KASTN Kahler Asten      56.42  38 eP      P      20 54 35.6 +0.2
      comp=Z,20nm,1.6s,baz=255,slow=6.6
UBR   Ueberruh          56.47  43 eP      P      20 54 36.5 +0.6
      comp=Z,83nm,2.3s,baz=255,slow=6.6
ISCO  Idaho Springs     56.59 308         P      20 54 36.8 -0.4
ISCO                               IAmb   IAmb   20 55 01.5
      comp=Z,16nm,1.1s
ISCO  Idaho Springs     56.59 308  P      P      20 54 36.8 -0.4
ISCO                               pmax   pmax
      comp=Z,16nm,1.2s
FETA  Feichten          56.71  44 i pP    P      20 54 38.3 +0.6
      comp=Z,11nm,1.1s
ANMO  Albuquerque       56.76 302  P      P      20 54 37.7 -0.7
ANMO  Albuquerque       56.76 302  P      P      20 54 37.8 -0.7
ANMO                               IAmb   IAmb   20 54 42.4
      comp=Z,8.0nm,1.3s
ANMO  Albuquerque       56.76 302  P      P      20 54 37.7 -0.7
ANMO  Albuquerque       56.76 302  LR     LR     21 20 13.1
      comp=Z,310nm,18.3s,baz=116,slow=37
ANMO  Albuquerque       56.76 302 i P     P      20 54 37.4 -1.0
ANMO                               pmax   pmax
      comp=Z,7.0nm,1.4s
RETA  Reutte            56.85  43 i P     P      20 54 38.3 -0.3
      comp=Z,7.7nm,1.0s
BNM   Barren Site       56.85 301  P      P      20 54 38.7 -0.4
CRNM  Carthage          56.93 301         P      20 54 39.2 -0.3
TEOL  Teolo             56.98  46  P      P      20 54 38.6 -0.9
TEOL                               IAmb   IAmb   20 54 39.9
      comp=Z,16nm,0.8s
MOTA  Moosalm           57.04  43 i P     P      20 54 40.0  0.0
      comp=Z,12nm,1.3s
SQTA  Sankt Quirin      57.08  43 i pP    P      20 54 40.5 +0.2
      comp=Z,15nm,1.1s
CTI   Castel Tesino     57.11  45  P      P      20 54 39.2 -1.3
CTI   Castel Tesino     57.11  45  P      P      20 54 39.2 -1.3
CTI                                pmax   pmax
      comp=Z,68nm,1.9s
LENM  Lemitar           57.14 301  P      P      20 54 40.3 -0.7
MURB  Monte Urbino      57.18  48  P      P      20 54 40.2 -0.8
MURB                               IAmb   IAmb   20 54 51.1
      comp=Z,40nm,1.5s
UBBA  Unterbreizbach    57.25  39 eP      P      20 54 41.7 +0.5
      comp=Z,35nm,2.1s,baz=255,slow=6.6
DGMT  Dagmar            57.27 318  P      P      20 54 41.2 -0.3
FUR   Furstenfeldbru    57.35  42 eP      P      20 54 42.2 +0.2
      comp=Z,19nm,1.0s,baz=255,slow=6.6
WATA  Walderalm         57.35  43 i pP    P      20 54 42.9 +0.7
      comp=Z,21nm,1.8s
SUMG  Summit            57.37   3  P      P      20 54 41.6 -0.6
SUMG                               IAmb   IAmb   20 54 51.9
      comp=Z,14nm,1.0s
SUMG  Summit            57.37   3  P      P      20 54 41.6 -0.6
SUMG                               pmax   pmax
      comp=Z,14nm,1.0s
SUMG  Summit            57.37   3 i P     P      20 54 42.0 -0.2
WTTA  Wattenberg        57.37  43 eP      P      20 54 42.4  0.0
      comp=Z,5.5nm,0.7s
RETH  Rethem/Aller,     57.46  37 eP      P      20 54 42.4 -0.2
      comp=Z,15nm,1.4s,baz=255,slow=6.6
AQU   L'Aquila          57.67  49  P      P      20 54 48.3 +3.8
AQU                                pmax   pmax
      comp=Z,19nm,1.1s
GRFO  Grafenberg        57.70  41  P      P      20 54 44.7 +0.2
GRFO                               pmax   pmax
      comp=Z,12nm,1.1s
GRF   Grafenberg Arr    57.70  41 eP      P      20 54 44.5  0.0
      comp=Z,21nm,1.6s,baz=255,slow=6.6
GRF                               eL      L      21 19 56.0
      comp=Z,405nm,20.3s
CAMP  Campotosto        57.70  49  P      P      20 54 44.2 -0.6
CAMP                               IAmb   IAmb   20 55 05.2
      comp=Z,14nm,1.2s
NRDL  Niedersach Rie    57.81  37 eP      P      20 54 45.6 +0.5
      comp=Z,12nm,1.2s,baz=255,slow=6.6
FFC   Flin Flon         57.82 326  P      P      20 54 45.2 +0.1
FFC   Flin Flon         57.82 326  P      P      20 54 45.3 +0.1
FFC                                pmax   pmax
      comp=Z,53nm,1.8s
ABTA  Abfaltersbach     57.84  44 i P     P      20 54 45.3 -0.4
      comp=Z,0.1nm,0.3s
VAE   Valguarnera       57.86  55  LR     LR     21 17 53.3
      comp=Z,905nm,19.6s,baz=337,slow=34
STAL  STALIGIAL         57.88  45  IAmb   IAmb   20 55 00.6
      comp=Z,20nm,1.5s
ASSE  Asse, Remlinge    58.04  38 eP      P      20 54 47.3 +0.6
      comp=Z,53nm,1.9s,baz=255,slow=6.6
LESA  Schwarzleotal     58.10  43 i P     P      20 54 47.1 -0.4
      comp=Z,6.8nm,1.0s
MOX   Moxa              58.19  40 eP      P      20 54 47.9  0.0
      comp=Z,39nm,2.2s,baz=255,slow=6.6
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MOX                               eL      L      21 19 28.2
      comp=Z,664nm,18.3s
LAO   LASA Array        58.20 316  P      P      20 54 48.3 +0.2
RJOB  Jochberg          58.24  43 eP      P      20 54 47.3 -1.2
      comp=Z,5.6nm,0.8s,baz=255,slow=6.6
MANZ  Manzenberg        58.33  40 eP      P      20 54 48.8 -0.1
      comp=Z,4.4nm,1.8s,baz=255,slow=6.6
ROTZ  Rotzenmuhle       58.33  41 eP      P      20 54 47.7 -1.2
      comp=Z,9.0nm,2.1s,baz=255,slow=6.6
BSEG  Bad Segeberg      58.38  36 eP      P      20 54 49.2 +0.1
      comp=Z,27nm,1.5s,baz=255,slow=6.6
FLTG  Flechtingen       58.43  38 eP      P      20 54 49.8 +0.3
      comp=Z,19nm,1.4s,baz=255,slow=6.6
SABO  M.te Sabotino     58.43  45  P      P      20 54 49.3 -0.4
SABO                               IAmb   IAmb   20 55 01.1
      comp=Z,32nm,1.5s
TRI   Trieste           58.49  46  P      P      20 54 49.3 -0.8
TRI                                pmax   pmax
      comp=Z,26nm,1.6s
PRED  Cave del Predi    58.49  45  P      P      20 54 49.9 -0.3
PRED                               IAmb   IAmb   20 54 51.3
      comp=Z,19nm,1.1s
MYKA  Terra Mystica     58.58  45 i P     P      20 54 50.7 -0.1
      comp=Z,4.9nm,0.8s
WET   Wettzell          58.61  41 eP      P      20 54 50.3 -0.6
      comp=Z,4.8nm,1.1s,baz=255,slow=6.6
TANN  Tannenbergstha    58.65  40 eP      P      20 54 50.7 -0.5
      comp=Z,32nm,1.9s,baz=255,slow=6.6
BIOA  Bad Ischl, Aus    58.79  43 eP      P      20 54 51.5 -0.7
      comp=Z,5.6nm,0.8s,SNR=6.3
PV07  Paradox Valley    58.79 306  P      P      20 54 52.0 -0.6
PV22  Blue Mesa, Par    58.91 306  P      P      20 54 53.0 -0.4
PV03  Paradox Valley    58.93 306  P      P      20 54 53.2 -0.4
PV20  West Nyswonger    59.03 306  P      P      20 54 53.4 -0.9
PV20                               IAmb   IAmb   20 55 44.8
      comp=Z,16nm,1.1s
KHC   Kasperske Hory    59.06  42 eP      P      20 54 53.5 -0.5
KHC                               eS      S      21 03 09.8 +10
KHC                                AMS    AMS    21 21 40.0
      comp=Z,700nm,16.6s
KHC   Kasperske Hory    59.06  42 eP      P      20 54 53.5 -0.5
KHC                               eS      S      21 03 09.8 +10
KHC                                MLR    MLR
      comp=Z,700nm,16.6s
GEC2  GERESS Array S    59.07  42 eP      P      20 54 53.1 -1.1
      comp=Z,31nm,2.0s,baz=255,slow=6.6
GERES GERESS Array B    59.07  42  P      P      20 54 53.4 -0.8
GERES GERESS Array B    59.07  42  P      P      20 54 53.2 -1.0
      comp=Z,0.6nm,0.6s,baz=248,slow=7.1,SNR=8.6
GERES                              LR     LR     21 17 23.7
      comp=Z,382nm,20.9s,baz=242,slow=33
      comp=Z,0.6nm,0.6s
GERES GERESS Array B    59.07  42  P      P      20 54 53.4 -0.8
PV10  Paradox Valley    59.09 306  P      P      20 54 54.3 -0.5
PV10                               IAmb   IAmb   20 55 02.0
      comp=Z,21nm,1.1s
OBKA  Obir              59.17  45 epP     P      20 54 55.1 +0.2
      comp=Z,5.5nm,0.8s,SNR=7.7
CUC   Castrocucco       59.19  52  P      P      20 54 53.6 -1.5
CUC                                IAmb   IAmb   20 55 07.2
      comp=Z,22nm,1.5s
CLL   Collm             59.21  39  P      P      20 54 53.7 -1.2
CLL   Collm             59.21  39  P      P      20 54 53.7 -1.2
CLL                                pmax   pmax
      comp=Z,7.0nm,0.9s
CLL   Collm             59.21  39 eP      P      20 54 54.0 -1.0
      comp=Z,7.0nm,0.9s,baz=255,slow=6.6
CLL   Collm             59.21  39 i P     P      20 54 54.9 -0.1
      comp=Z,10.0nm,1.1s
CLL                               i x     x      20 55 02.4
CLL                               ePP     PP     20 57 06.0 +0.3
CLL                               eS      S      21 03 03.0 +1.0
CLL                                AMS    AMS    21 16 00.0
      comp=Z,600nm,19.3s
BLKN  Baker Lake        59.28 337  P      P      20 54 55.0 -0.1
W18A  Petrified Fore    59.46 302  P      P      20 54 56.4 -0.9
W18A                               IAmb   IAmb   20 55 01.6
      comp=Z,14nm,1.3s
CKRC  Cesky Krumlov     59.46  42  AMS    AMS    21 19 40.0
      comp=Z,900nm,18.8s
ZVC   Zvikov            59.52  41 eP      P      20 54 57.3 +0.2
ZVC                                AMS    AMS    21 21 20.0
      comp=Z,600nm,14.7s
SOKA  Soboth            59.53  45 eP      P      20 54 56.8 -0.6
      comp=Z,5.1nm,1.1s
BRG   Berggiesshubel    59.68  40 eP      P      20 54 58.1 -0.1
      comp=Z,44nm,2.4s,baz=255,slow=6.6
BRG   Berggiesshubel    59.68  40 eP      P      20 54 58.7 +0.4
BRG                                Amp           20 54 59.7
      comp=Z,4.8nm,1.2s
BRG   Berggiesshubel    59.68  40  P      P      20 55 05.9 +7.6
BRG                                Amp           20 55 09.2
      comp=Z,8.5nm,1.4s
PRA   Prague            59.80  41 eS      S      21 03 18.3 +8.6
PRA                                AMS    AMS    21 18 10.0
      comp=Z,400nm,16.1s
PRU   Pruhonice         59.85  41  AMS    AMS    21 18 20.0
      comp=Z,500nm,17.8s
PD31  Pinedale Array    59.92 311  P      P      20 54 59.2 -1.1
PD31                               IAmb   IAmb   20 55 06.3
      comp=Z,18nm,1.4s
PDAR  Pinedale Array    59.92 311  P      P      20 54 59.3 -1.1
PDAR  Pinedale Array    59.92 311  P      P      20 55 00.7 +0.3
      comp=Z,1.5nm,0.6s,baz=110,slow=8.5,SNR=13
PDAR                               LR     LR     21 18 11.9
      comp=Z,221nm,21.0s,baz=54,slow=33
      comp=Z,1.5nm,0.6s
BW06  Boulder Array     59.92 311  IAmb   IAmb   20 55 06.3
      comp=Z,20nm,1.4s
ARSA  Arzberg           59.96  44  IAmb   IAmb   20 55 15.1
      comp=Z,10.0nm,1.1s
ARSA  Arzberg           59.96  44 i P     P      20 54 59.9 -0.4
      comp=Z,8.5nm,1.0s,SNR=6.9
GOPC  GO Pecny, Ondr    59.99  41  AMS    AMS    21 22 10.0
      comp=Z,500nm,16.6s
KONO  Kongsberg         60.01  29 i P     P      20 54 58.2 -2.1
KONO                               pmax   pmax
      comp=Z,4.0nm,0.9s
RLMT  Red Lodge         60.02 313  P      P      20 55 00.4 -0.6
RLMT                               IAmb   IAmb   20 55 09.0
      comp=Z,18nm,1.2s
PLCA  Paso Flores       60.11 201  P      P      20 55 02.9 +1.6
      comp=Z,4.5nm,0.9s,baz=27,slow=8.8,SNR=6.4
PLCA                               LR     LR     21 21 14.0
      comp=Z,808nm,21.9s,baz=18,slow=36
      comp=Z,4.5nm,0.9s
PLCA  Paso Flores       60.11 201 eP      P      20 55 01.9 +0.6
JMIC  Jan Mayen         60.12  13  LR     LR     21 14 09.5
      comp=Z,394nm,21.4s,baz=204,slow=29
TUC   Tucson            60.28 299  P      P      20 55 01.8 -1.0
TUC                                IAmb   IAmb   20 55 07.2
      comp=Z,13nm,0.9s
TUC   Tucson            60.28 299  P      P      20 55 01.8 -1.0
TUC                                pmax   pmax
      comp=Z,13nm,0.9s
SRU   San Rafael Swe    60.30 306  P      P      20 55 02.2 -0.8
SRU   San Rafael Swe    60.30 306  P      P      20 55 02.2 -0.8
SRU                                pmax   pmax
      comp=Z,60nm,1.9s
CONA  Conrad Observa    60.31  43 eP      P      20 55 02.6 -0.1
      comp=Z,22nm,2.1s,SNR=8.8
TREC  Trest             60.31  42  AMS    AMS    21 20 10.0
      comp=Z,900nm,18.7s
RONA  Rosalia, Austr    60.55  44 i P     P      20 55 04.5 +0.1
      comp=Z,26nm,1.7s,SNR=6.7
BSUT  Blindstream Ca    60.59 308         P      20 55 05.1 -0.1
BSUT                               IAmb   IAmb   20 55 25.0
      comp=Z,31nm,1.9s
YMP   Mirror Lake Pl    60.59 313  P      P      20 55 04.6 -0.4
BEHE  Becsehely         60.68  45  P      P      20 55 05.0 -0.2
LOHW  Long Hollow       60.78 312  P      P      20 55 05.7 -0.5
LOHW                               IAmb   IAmb   20 55 11.7
      comp=Z,14nm,1.2s
WUAZ  Wupatki           60.81 302  P      P      20 55 05.7 -0.8
WUAZ                               IAmb   IAmb   20 55 13.3
      comp=Z,12nm,1.1s
KRUC  Moravsky          60.86  42 eP      P      20 55 05.9 -0.4
UPC   Upice             60.89  40  AMS    AMS    21 20 10.0
      comp=Z,600nm,16.7s
CHVC  Chvalec           60.93  40  AMS    AMS    21 20 10.0
      comp=Z,600nm,14.5s
TPAW  Teton Pass        61.02 311  IAmb   IAmb   20 55 13.6
      comp=Z,18nm,1.1s
OSTC  Ostas             61.02  40 eP      P      20 55 07.8 +0.3
OSTC                               AMS    AMS    21 20 20.0
      comp=Z,600nm,20.2s
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OSTC  Ostas             61.02  40 eP      P      20 55 07.8 +0.3
OSTC                               MLR    MLR
      comp=Z,600nm,20.2s
VRAC  Vranov            61.03  42 eP      P      20 55 07.3 -0.2
AHID  Auburn Hatcher    61.05 311  IAmb   IAmb   20 55 13.3
      comp=Z,31nm,1.6s
DPC   Dobruska-Polom    61.05  41 eP      P      20 55 08.2 +0.5
DPC                                AMS    AMS    21 21 20.0
      comp=Z,500nm,19.6s
DPC   Dobruska-Polom    61.05  41 eP      P      20 55 08.2 +0.5
DPC                                MLR    MLR
      comp=Z,500nm,19.6s
FXWY  Fox Creek         61.09 312  IAmb   IAmb   20 55 13.8
      comp=Z,11nm,0.9s
YHH   Holmes Hill       61.09 313  P      P      20 55 08.6 +0.2
JLU   Jordanelle        61.12 308  P      P      20 55 08.6  0.0
JLU                                IAmb   IAmb   20 55 15.6
      comp=Z,20nm,1.2s
KSP   Ksiaz             61.13  40 eP      P      20 55 08.3 +0.2
MPU   Maple Canyon      61.22 307  P      P      20 55 09.2 -0.1
NB2   NORSAR Subarra    61.27  28  P      P      20 55 03.1 -5.9
      comp=Z,38nm,2.5s,baz=249,slow=6.9
NOA   NORSAR Array B    61.27  28  P      P      20 55 08.6 -0.4
      comp=Z,1.0nm,0.9s,baz=249,slow=6.8,SNR=5.4
NOA                                LR     LR     21 17 21.1
      comp=Z,336nm,18.4s,baz=250,slow=32
      comp=Z,1.0nm,0.9s
KRLC  Kraliky           61.29  41 eP      P      20 55 09.8 +0.5
KRLC                               AMS    AMS    21 20 00.0
      comp=Z,700nm,18.3s
KRLC  Kraliky           61.29  41 eP      P      20 55 09.8 +0.5
KRLC                               MLR    MLR
      comp=Z,700nm,18.3s
MODS  Modra-Piesok      61.31  43 eP      P      20 55 08.7 -0.8
YHL   Hebgen Lake       61.33 313  P      P      20 55 10.5 +0.5
H09N1 TRISTAN DA CUN    61.36 149  T      T      22 01 38.2
      SNR=13
MORC  Moravsky Berou    61.72  41  IAmb   IAmb   20 55 23.6
      comp=Z,24nm,1.5s
MORC  Moravsky Berou    61.72  41 eP      P      20 55 12.4 +0.2
MAUC  Maruska           61.83  42 eP      P      20 55 13.3 +0.3
STEB  Steborice         61.89  41 eP      P      20 55 13.6 +0.3
SRO   Srobarova         61.92  44 eP      P      20 55 12.7 -0.8
214A  Organ Pipe Nat    62.00 298  P      P      20 55 14.3 -0.2
214A                               IAmb   IAmb   20 55 25.8
      comp=Z,26nm,1.5s
HFS   Hagfors           62.11  29  P      P      20 55 14.4 -0.1
      comp=Z,4.8nm,0.9s,baz=225,slow=3.6,SNR=8.1
HFS                                LR     LR     21 17 58.0
      comp=Z,89nm,19.4s,baz=358,slow=32
      comp=Z,4.8nm,0.9s
OKC   Ostrava-Krasne    62.12  41  AMS    AMS    21 20 10.0
      comp=Z,600nm,18.5s
DUG   Dugway, Tooele    62.14 308  P      P      20 55 15.2 -0.2
DUG   Dugway, Tooele    62.14 308  P      P      20 55 15.2 -0.2
DUG                                pmax   pmax
      comp=Z,45nm,2.0s
HVU   Hansel Valley     62.20 309  IAmb   IAmb   20 55 39.7
      comp=Z,12nm,1.1s
VYHS  Vyhne             62.36  43 eP      P      20 55 16.3 -0.2
PSZ   Piszkesteto       62.99  44  P      P      20 55 20.4 -0.4
PSZ                                pmax   pmax
      comp=Z,8.0nm,1.2s
OJC   Ojcow             63.23  41 eP      P      20 55 23.3 +1.1
NIE   Niedzica          63.44  42 eP      P      20 55 25.1 +1.4
MSO   Missoula          63.47 315         P      20 55 24.3 +0.3
HLID  Hailey            63.53 311  IAmb   IAmb   20 55 26.2
      comp=Z,6.0nm,0.8s
V12A  Nelson            63.65 302         P      20 55 25.5  0.0
V12A                               IAmb   IAmb   20 55 29.7
      comp=Z,16nm,1.4s
JTMT  Jette             63.79 316  P      P      20 55 26.3 +0.2
ITM   Ithomi            63.83  56         P      20 55 26.7 +0.2
ELK   Elko              64.01 308         P      20 55 27.9  0.0
ELK                                IAmb   IAmb   20 55 33.9
      comp=Z,12nm,1.0s
ELK   Elko              64.01 308  LR     LR     21 22 44.0
      comp=Z,370nm,18.7s,baz=86,slow=36
ELK   Elko              64.01 308  P      P      20 55 27.9  0.0
ELK                                pmax   pmax
      comp=Z,12nm,1.0s
R11B  Troy Canyon, C    64.23 305         P      20 55 30.0 +0.7
YUH   Yuha Desert       64.61 299  P      P      20 55 31.6  0.0
YUH                                IAmb   IAmb   20 55 36.2
      comp=Z,10.0nm,1.2s
PLID  Pearl Lake        64.76 313  P      P      20 55 32.4 -0.3
PLID                               IAmb   IAmb   20 55 37.9
      comp=Z,23nm,1.6s
TPNV  Topopah Spring    64.76 304         P      20 55 32.4 -0.4
TPNV  Topopah Spring    64.76 304  P      P      20 55 32.4 -0.4
TPNV                               pmax   pmax
      comp=Z,42nm,1.9s
RES   Resolute Bay      64.86 347  LR     LR     21 20 26.1
      comp=Z,335nm,20.6s,baz=94,slow=33
KWP   Kalwaria Pacla    65.02  42 eP      P      20 55 35.3 +1.2
PFO   Pinyon Flats O    65.02 300 i P     P      20 55 33.8 -0.7
PFO                                pmax   pmax
      comp=Z,3.0nm,0.6s
GWY   Greenwater Val    65.11 303         P      20 55 35.6 +0.5
GWY                                IAmb   IAmb   20 56 04.7
      comp=Z,13nm,1.2s
QSM   Queen of Sheba    65.28 303  P      P      20 55 36.8 +0.8
MZP   Montezuma Peak    65.66 305  P      P      20 55 38.8 +0.1
NEW   Newport           65.73 316  LR     LR     21 22 59.1
      comp=Z,522nm,19.1s,baz=104,slow=35
NEW   Newport           65.73 316  P      P      20 55 39.1 +0.4
SUW   Suwalki           65.80  37 eP      P      20 55 39.8 +0.8
DSP   Deep Springs      66.13 304  P      P      20 55 41.4  0.0
IDI   Anoyia            66.27  58  LR     LR     21 23 16.5
      comp=Z,438nm,20.9s,baz=284,slow=35
E09A  Wood Farm, Sta    66.33 314  P      P      20 55 42.5  0.0
YKA   Yellowknife Ar    66.34 332  P      P      20 55 42.1 -0.2
      comp=Z,3.3nm,0.9s,baz=101,slow=6.9,SNR=11
YKA                                LR     LR     21 22 54.7
      comp=Z,415nm,18.5s,baz=100,slow=34
      comp=Z,3.3nm,0.9s
YKAW3 Yellowknife Wh    66.36 332  IAmb   IAmb   20 55 47.8
      comp=Z,37nm,1.9s
NVAR  Mina Array Bea    66.37 306  P      P      20 55 44.0 +0.8
      comp=Z,0.9nm,0.7s,baz=80,slow=5.4,SNR=5.5
      comp=Z,0.9nm,0.7s
LNOR  Lincton Mounta    66.40 314  P      P      20 55 42.3 -0.8
LNOR                               IAmb   IAmb   20 55 52.4
      comp=Z,18nm,1.3s
BUR08 Bucovina Ar. S    66.53  44         P      20 55 43.7 -0.2
BUR08                              IAmb   IAmb   20 55 55.9
      comp=Z,25nm,1.6s
BURAR Bucovina Array    66.54  44  P      P      20 55 43.8 -0.2
BURAR Bucovina Array    66.54  44  P      P      20 55 43.9 -0.1
BURAR                              pmax   pmax
      comp=Z,5.0nm,1.4s
ISA   Isabella, Lake    66.59 303  P      P      20 55 46.1 +1.6
ISA                                pmax   pmax
      comp=Z,11nm,0.7s
RDO   Rodhopi           66.63  52  P      P      20 55 43.4 -1.2
RDO                                IAmb   IAmb   20 55 56.0
      comp=Z,19nm,1.3s
D08A  Wollman Farm,     66.89 315  IAmb   IAmb   20 55 49.3
      comp=Z,14nm,1.2s
MLR   Muntele Rosu      66.97  47  P      P      20 55 46.1 -0.7
MLR   Muntele Rosu      66.97  47  LR     LR     21 21 15.2
      comp=Z,423nm,21.8s,baz=254,slow=33
MLR   Muntele Rosu      66.97  47  P      P      20 55 46.1 -0.7
MLR                                pmax   pmax
      comp=Z,54nm,1.6s
ALN   Alexandroupoli    67.02  52  P      P      20 55 47.9 +0.9
ALN                                pmax   pmax
      comp=Z,11nm,1.3s
B08A  Colville Reser    67.21 316  P      P      20 55 47.5 -0.7
B08A                               IAmb   IAmb   20 56 14.6
      comp=Z,28nm,1.9s
WAKR  Walker            67.25 306  P      P      20 55 48.2 -0.7
WAKR                               IAmb   IAmb   20 55 53.4
      comp=Z,14nm,1.2s
EFI   East Falkland     67.53 188  P      P      20 55 50.4 +0.6
EFI   East Falkland     67.53 188  P      P      20 55 50.4 +0.6
EFI                                pmax   pmax
      comp=Z,82nm,1.5s
MXC   Moxie City        67.81 314  P      P      20 55 52.5 +0.4
NACGM Naroch            67.98  37 eP      P      20 55 53.7 +0.9
      comp=Z,7.0nm,1.1s,baz=266
FINES FINESS Array B    68.31  30  P      P      20 55 55.0 +0.2
      comp=Z,0.9nm,0.4s,baz=266,slow=3.9,SNR=14
FINES                              LR     LR     21 22 23.3
      comp=Z,327nm,18.2s,baz=267,slow=33
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	comp=Z,0.9nm,0.4s						
FINES	FINESS Array B	68.31	30	P	P	20 55 55.0	+0.2
MNK	Minsk	68.59	37	*i* P	P	20 55 56.9	+0.2
	comp=E,13nm,0.9s						
MNK				*i* P	P	20 55 56.9	+0.2
	comp=N,15nm,1.0s						
MNK				*i* P	P	20 55 56.9	+0.2
	comp=Z,22nm,0.8s,baz=267						
MNK				*i* PP	PP	20 58 27.8	-0.2
MNK				*i* PPP	PPP	21 00 07.3	
MNK				*i* S	S	21 04 59.9	+1.4
MNK				*i* SS	SS	21 09 26.1	+3.6
MNK				*i* SSS	SSS	21 12 38.4	
MNK				*i* LR	LR	21 25 07.2	
MNK				*i* LRM	MLR	21 27 55.7	
	comp=E,273nm,16.7s						
MNK				*i* LRM	MLR	21 28 31.7	
	comp=Z,524nm,17.1s						
MNK				*i* LRM	MLR	21 28 33.9	
	comp=N,325nm,16.2s						
MNK	Minsk	68.59	37	*i* P	P	20 55 56.9	+0.2
MNK				*i*		20 58 27.7	
MNK				*i* PPP	PPP	21 00 07.2	
MNK				*i* S	S	21 04 59.8	+1.4
MNK				*i* SS	SS	21 09 26.0	+3.6
MNK				pmax	pmax		
	comp=Z,22nm,0.8s						
MNK				pmax	pmax		
	comp=E,13nm,0.9s						
MNK				pmax	pmax		
	comp=N,15nm,1.0s						
MNK				MLR	MLR		
	comp=E,273nm,17.0s						
MNK				MLR	MLR		
	comp=Z,524nm,17.0s						
MNK				MLR	MLR		
	comp=N,325nm,16.0s						
TIRR	Tirgusor	68.72	48	P	P	20 55 58.1	+0.5
TIRR				pmax	pmax		
	comp=Z,11nm,1.0s						
HATC	Hat Creek Radi	68.73	308		P	20 55 57.8	-0.2
ORV	Oroville	68.82	307	P	P	20 55 58.5	+0.1
ORV				pmax	pmax		
	comp=Z,27nm,1.7s						
LLLB	Lillooet	68.94	319		P	20 55 58.9	-0.2
MANT	Manisa	69.04	54	P	P	20 55 59.3	-0.8
MANT				IAmb	IAmb	20 56 10.7	
	comp=Z,9.6nm,1.0s						
KIEV	Kiev	69.26	41	P	P	20 56 00.1	-0.7
KIEV				IAmb	IAmb	20 57 21.4	
	comp=Z,15nm,1.6s						
KIEV	Kiev	69.26	41	P	P	20 56 00.1	-0.7
KIEV				pmax	pmax		
	comp=Z,15nm,1.7s						
AKASG	Malin Array Be	69.27	41	P	P	20 56 00.3	-0.6
	comp=Z,1.4nm,0.6s,baz=276,slow=5.2,SNR=15						
AKASG				LR	LR	21 23 19.1	
	comp=Z,347nm,19.8s,baz=268,slow=33						
	comp=Z,1.4nm,0.6s						
AKASG	Malin Array Be	69.27	41	*ce*P	P	20 56 00.3	-0.6
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKBB	Malin Array Si	69.27	41	*ce*P	P	20 56 00.7	-0.2
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.9s						
L04D	Klamath Falls	69.31	310		P	20 56 00.4	-1.2
ARCES	ARCESS Array B	69.43	21	P	P	20 56 01.8	+0.1
	comp=Z,2.6nm,0.9s,baz=251,slow=6.3,SNR=6.7						
ARCES				LR	LR	21 21 01.8	
	comp=Z,499nm,21.2s,baz=267,slow=31						
	comp=Z,2.6nm,0.9s						
SPITS	Spitsbergen Ar	69.60	11	P	P	20 56 02.9	+0.4
	comp=Z,4.5nm,0.8s,baz=256,slow=5.8,SNR=1.7						
SPITS				PP	PP	20 58 36.6	+0.4
	comp=Z,0.8nm,0.3s,baz=293,slow=11,SNR=11						
SPITS				LR	LR	21 21 26.3	
	comp=Z,232nm,18.5s,baz=104,slow=32						
	comp=Z,4.5nm,0.8s						
YBH	Yreka Blue Hor	69.63	309	LR	LR	21 25 56.5	
	comp=Z,30nm,19.4s,baz=94,slow=35						
E03A	Lebam	70.07	314	P	P	20 56 05.7	-0.3
NLWA	Neilton Lookou	70.26	315	P	P	20 56 06.8	-0.4
WRGLY	Wrigley	70.47	332	P	P	20 56 07.3	-0.7
	baz=94						
KOTAN	Kotaneelee Air	70.54	329	P	P	20 56 08.5	-0.1
	baz=93						
BEAVL	Fort Liard	71.05	329	P	P	20 56 11.7	-0.1
	baz=92						
TOAD	Toad River Com	71.09	327	P	P	20 56 12.7	+0.6
	baz=91,SNR=9.7						
C36M	Paulatuk	71.29	339	P	P	20 56 12.1	-0.9
	baz=96						
TSUM	Tsumeb	71.88	116	LR	LR	21 20 50.8	
	comp=Z,545nm,21.6s,baz=308,slow=30						
A36M	Sachs Harbour	71.96	341	P	P	20 56 17.6	+0.6
A36M	Sachs Harbour	71.96	341	P	P	20 56 17.2	+0.2
	baz=96						
USHA	Ushuaia	72.38	193	LR	LR	21 31 24.8	
	comp=Z,500nm,18.7s,baz=138,slow=39						
BBB	Bella Bella	72.82	320	LR	LR	21 26 17.1	
	comp=Z,342nm,20.0s,baz=86,slow=34						
BR131	Keskin Array S	72.88	53		P	20 56 22.2	-1.1
BR131				IAmb	IAmb	20 56 34.1	
	comp=Z,17nm,1.4s						
BR131	Keskin Array S	72.88	53	*i* P	P	20 56 23.2	-0.1
BRTR	Keskin Array B	72.88	53		P	20 56 22.2	-1.1
BRTR	Keskin Array B	72.88	53	P	P	20 56 22.9	-0.5
	comp=Z,3.4nm,0.9s,baz=269,slow=4.9,SNR=17						
BRTR				LR	LR	21 24 50.4	
	comp=Z,106nm,21.1s,baz=252,slow=33						
	comp=Z,3.4nm,0.9s						
BRTR	Keskin Array B	72.88	53	*ce*P	P	20 56 23.6	+0.3
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
DLBC	Dease Lake	73.60	327	P	P	20 56 27.0	-0.1
DLBC				IAmb	IAmb	20 56 37.7	
	comp=Z,15nm,1.1s						
DLBC	Dease Lake	73.60	327	LR	LR	21 26 13.7	
	comp=Z,502nm,21.0s,baz=102,slow=34						
DLBC	Dease Lake	73.60	327	P	P	20 56 26.8	-0.3
	baz=87						
OBN	Obninsk	73.62	36	LR	LR	21 25 36.9	
	comp=Z,448nm,20.8s,baz=212,slow=33						
OBN	Obninsk	73.62	36⇓	*e*P	P	20 56 27.7	+0.6
OBN				*e**PP	pP	20 56 30.4	-1.2
OBN				*e**SP	pwP	20 56 35.2	-0.8
OBN				*e*		20 56 37.9	
OBN				pmax	pmax		
	comp=Z,29nm,1.7s						
OBN				MLR	MLR		
	comp=Z,355nm,17.0s						
T35M	Bob Quinn	73.80	325	P	P	20 56 28.1	-0.1
	baz=87						
MMPY	Sheldon Lake,	74.02	331	P	P	20 56 29.2	-0.2
	baz=87						
R33M	Jennings River	74.04	328	IAmb	IAmb	20 56 40.1	
	comp=Z,16nm,1.1s						
R33M	Jennings River	74.04	328	P	P	20 56 29.2	-0.5
	baz=87,SNR=10						
MOS	Moscow	74.18	36	*e*P	P	20 56 30.2	-0.2
MOS				pmax	pmax		
	comp=Z,34nm,1.3s						
MOS				MLR	MLR		
	comp=Z,500nm,16.0s						
S34M	Telegraph Cree	74.22	326	P	P	20 56 30.5	-0.1
	baz=86						
V35K	Ketchikan	74.68	324	P	P	20 56 32.4	-0.9
	baz=85						
INK	Inuvik	74.69	337		P	20 56 33.0	-0.1
INK				IAmb	IAmb	20 56 55.9	
	comp=Z,27nm,1.3s						
INK	Inuvik	74.69	337	LR	LR	21 27 21.3	
	comp=Z,446nm,19.4s,baz=96,slow=34						
INK	Inuvik	74.69	337	P	P	20 56 33.0	-0.1
INK				pmax	pmax		
	comp=Z,27nm,1.3s						
INK	Inuvik	74.69	337	P	P	20 56 32.8	-0.3
	baz=87						
Q32M	Nakina River	74.74	328	P	P	20 56 33.9	0.0
Q32M	Nakina River	74.74	328	P	P	20 56 33.3	-0.6
	baz=86						
KLMR	Klimovskoe	74.80	30	*e*P	P	20 56 31.2	-2.7
KLMR				pmax	pmax		
	comp=Z,42nm,1.7s						
F31M	Tsiigehtchic	74.82	336	P	P	20 56 33.1	-0.8
	baz=86						
P33M	Teslin, Yukon	74.92	329	IAmb	IAmb	20 56 44.0	
	comp=Z,16nm,1.1s						
P33M	Teslin, Yukon	74.92	329	P	P	20 56 34.0	-0.8
	baz=85,SNR=21						
WRAK	Wrangell Islan	75.00	325	P	P	20 56 34.5	-0.6
	baz=85						
FARO	Faro, Yukon	75.02	331	P	P	20 56 34.6	-0.6
	baz=85						
G31M	Satah River	75.06	336	P	P	20 56 34.1	-1.2
	baz=86						
MMAI	Mount Meron Ar	75.16	59	P	P	20 56 37.1	+0.4
	comp=Z,1.2nm,0.6s,baz=255,slow=8.8,SNR=2.8						
MMAI				LR	LR	21 33 23.4	
	comp=Z,144nm,18.1s,baz=318,slow=39						
	comp=Z,1.2nm,0.6s						
H31M	Peel River	75.17	335	IAmb	IAmb	20 57 00.7	
	comp=Z,14nm,1.1s						
H31M	Peel River	75.17	335	P	P	20 56 34.3	-1.8
	baz=86						
EIL	Elat	75.31	63	LR	LR	21 28 29.2	
	comp=Z,424nm,21.9s,baz=251,slow=35						
P32M	Atlin	75.42	328	P	P	20 56 38.0	+0.3
P32M	Atlin	75.42	328	P	P	20 56 36.1	-1.5
	baz=84						
U33K	Whale Pass	75.45	325	P	P	20 56 36.6	-1.1
	baz=84						
VORR	Voronezh	75.49	40	*e*P	P	20 56 38.2	+0.1
VORR				pmax	pmax		
	comp=Z,36nm,1.9s						
M31M	Drury Creek, Y	75.50	331	P	P	20 56 37.4	-0.6
	baz=84						
VSR	Storozhevoye	75.52	40	*e*P	P	20 56 36.5	-1.7
VSR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CRAG	Craig	75.52	324	P	P	20 56 37.4	-0.8
	baz=84						
F30M	Barrier River	75.59	337	IAmb	IAmb	20 57 01.3	
	comp=Z,17nm,1.0s						
F30M	Barrier River	75.59	337	P	P	20 56 37.6	-0.8
	baz=85						
VORD	Divnogorie	75.62	41	*e*P	P	20 56 36.2	-2.6
VORD				pmax	pmax		
	comp=Z,6.0nm,0.9s						
G30M	tAoh Zraii Nji	75.82	336	P	P	20 56 38.9	-0.9
	baz=84						
WHY	Whitehorse	75.89	329		P	20 56 40.6	+0.2
WHY				IAmb	IAmb	20 56 49.3	
	comp=Z,16nm,1.3s						
WHY	Whitehorse	75.89	329	P	P	20 56 39.7	-0.7
	baz=84						
R32K	Eaglecrest	75.98	327	P	P	20 56 39.7	-1.0
	baz=83						
GAZ	Gaziantep	75.99	55	P	P	20 56 41.1	-0.3
GAZ				IAmb	IAmb	20 56 52.9	
	comp=Z,22nm,1.4s						
I30M	Mount Dempster	76.07	334	P	P	20 56 40.9	-0.5
	baz=84						
EPYK	Eagle Plains	76.08	335	P	P	20 56 40.9	-0.3
	baz=84						
S32K	Killisnoo	76.10	326	P	P	20 56 40.5	-0.9
	baz=83						
J30M	Hart River	76.13	334	P	P	20 56 41.2	-0.5
J30M	Hart River	76.13	334	P	P	20 56 40.6	-1.1
	baz=83						
N31M	Braeburn, Yuko	76.24	330	P	P	20 56 41.5	-0.7
	baz=83						
SKAG	Skagway	76.26	328	P	P	20 56 41.6	-0.6
	baz=83						
E29M	Blow River	76.30	338	P	P	20 56 42.9	+0.5
E29M	Blow River	76.30	338	P	P	20 56 41.7	-0.7
	baz=83						
O30N	Mendenhall	76.47	330	P	P	20 56 43.7	+0.1
O30N				IAmb	IAmb	20 56 53.7	
	comp=Z,18nm,1.1s						
O30N	Mendenhall	76.47	330	P	P	20 56 42.4	-1.2
	baz=83,SNR=14						
D28M	Stokes Point	76.48	339	P	P	20 56 42.3	-1.1
	baz=82						
G29M	Pine Creek	76.53	336		P	20 56 43.9	+0.1
G29M	Pine Creek	76.53	336	P	P	20 56 42.8	-0.9
	baz=82						
ASF	Jabal al Asfar	76.54	60	LR	LR	21 31 41.4	
	comp=Z,226nm,20.4s,baz=329,slow=37						
SIT	Sitka	76.56	326	P	P	20 56 43.3	-0.7
	baz=82						
K29M	Barlow Dome	76.73	333	P	P	20 56 45.3	+0.2
K29M	Barlow Dome	76.73	333	P	P	20 56 43.8	-1.3
	baz=82						
H29M	Whitestone	76.77	335	P	P	20 56 45.4	+0.3
H29M				IAmb	IAmb	20 57 08.2	
	comp=Z,16nm,1.1s						
H29M	Whitestone	76.77	335	P	P	20 56 44.3	-0.8
	baz=82,SNR=12						
PLBC	Pleasant Camp	76.78	328	P	P	20 56 44.3	-1.0
	baz=82						
I29M	Ogilvie Camp,	76.86	335	P	P	20 56 45.0	-0.7
	baz=82						
N30M	Aishikik Lake	76.86	330	P	P	20 56 45.8	0.0
N30M				IAmb	IAmb	20 56 55.8	
	comp=Z,14nm,1.3s						
N30M	Aishikik Lake	76.86	330	P	P	20 56 44.9	-0.9
	baz=82						
E28M	Babbage River	76.87	338	P	P	20 56 44.7	-1.0
	baz=82						
S31K	Pelican	76.92	327	P	P	20 56 44.5	-1.6
	baz=82						
P30M	Million Dollar	76.99	329	P	P	20 56 45.3	-1.2
	baz=82						
L29M	L29M	77.11	332	IAmb	IAmb	20 56 56.8	
	comp=Z,16nm,1.2s						
L29M	L29M	77.11	332	P	P	20 56 45.4	-1.8
	baz=82						
VRH	Novokhopyorsk	77.11	40	*e*P	P	20 56 47.9	+0.6
VRH				pmax	pmax		
	comp=Z,39nm,1.8s						
F28M	Old Crow	77.14	337	P	P	20 56 47.0	-0.2
F28M	Old Crow	77.14	337	P	P	20 56 46.2	-1.0
	baz=81,SNR=8.2						
HYT	Haines Junctio	77.15	330	IAmb	IAmb	20 56 57.9	
	comp=Z,17nm,1.2s						
HYT	Haines Junctio	77.15	330	P	P	20 56 45.6	-1.9
	baz=82						
VSLR	Vesyoloye	77.15	48	*i* P	P	20 56 48.2	+0.5
D27M	Malcolm River	77.28	339	IAmb	IAmb	20 56 55.0	
	comp=Z,27nm,1.5s						
D27M	Malcolm River	77.28	339	P	P	20 56 46.5	-1.5
	baz=80						
M29M	Somme Creek	77.36	332	P	P	20 56 48.9	+0.3
M29M	Somme Creek	77.36	332	P	P	20 56 46.9	-1.7
	baz=81						
P29M	Windy Craggy	77.45	329	IAmb	IAmb	20 57 02.0	
	comp=Z,16nm,1.2s						
P29M	Windy Craggy	77.45	329	P	P	20 56 47.5	-1.6
	baz=81						
DAWY	Dawson	77.52	333	P	P	20 56 48.1	-1.3
	baz=81						
I28M	Miner Creek	77.52	335	P	P	20 56 47.8	-1.7
	baz=80						
YUK6	Outpost Mounta	77.55	330	P	P	20 56 48.0	-1.9
	baz=81						
YUK4	Talbot Arm	77.62	330	P	P	20 56 48.4	-1.9
	baz=81						
E27K	Coleen River	77.69	338	P	P	20 56 48.8	-1.5
	baz=80,SNR=13						
O29M	Mount Kennedy	77.76	329	P	P	20 56 51.3	+0.3
O29M				IAmb	IAmb	20 57 04.2	
	comp=Z,12nm,1.0s						
O29M	Mount Kennedy	77.76	329	P	P	20 56 49.6	-1.3
	baz=80						
MBAR	Mbarara	77.94	94	*i* P	P	20 56 54.0	+1.2
MBAR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
G27K	Doyon Strip	77.97	336	P	P	20 56 52.0	+0.2
G27K	Doyon Strip	77.97	336	P	P	20 56 50.6	-1.3
	baz=79						
H27K	Steamboat Moun	78.03	336	P	P	20 56 51.0	-1.2
	baz=79						
C27K	Jago River	78.16	339	P	P	20 56 51.4	-1.5
	baz=78,SNR=11						
YUK8	Steele Glacier	78.16	330	P	P	20 56 51.9	-1.4
	baz=80						
I27K	Kandik River	78.18	335	P	P	20 56 51.6	-1.4
	baz=79						
PNL	Peninsula	78.27	329	P	P	20 56 52.2	-1.4
	baz=80						
YUK3	Moose Creek	78.40	331	P	P	20 56 53.0	-1.6
	baz=79,SNR=11						
O28M	Mount Upton	78.46	330	P	P	20 56 53.6	-1.4
	baz=79						
BVCY	Beaver Creek	78.47	332	P	P	20 56 53.6	-1.1
	baz=79,SNR=12						
C26K	Camden Bay	78.50	340	P	P	20 56 53.8	-0.9
	baz=77						
PINM	Pinnacle	78.62	329	P	P	20 56 54.2	-1.4
	baz=79						
K27K	Chicken	78.69	333	P	P	20 56 54.7	-1.2
	baz=78						
F26K	Sheenjek River	78.73	337	P	P	20 56 56.4	+0.4
F26K				IAmb	IAmb	20 57 20.3	
	comp=Z,13nm,1.1s						
F26K	Sheenjek River	78.73	337	P	P	20 56 55.8	-0.3
	baz=77,SNR=11						
BCAR	Beaver Creek A	78.75	332		P	20 56 56.6	+0.3
G26K	Porcupine Rive	78.76	337	P	P	20 56 56.7	+0.5
G26K				IAmb	IAmb	20 57 05.5	
	comp=Z,12nm,0.8s						
G26K	Porcupine Rive	78.76	337	P	P	20 56 55.9	-0.3
	baz=77,SNR=19						
L27K	Beaver Creek,	78.77	332	P	P	20 56 56.3	-0.1
	baz=78,SNR=12						
LOGN	Logan Glacier	78.84	330	P	P	20 56 56.1	-0.9
LOGN				IAmb	IAmb	20 57 20.4	
	comp=Z,35nm,1.6s						
I26K	Coal Creek Min	78.87	335	P	P	20 56 55.7	-1.1
	baz=78						
M27K	Edge Creek, AK	78.94	332	P	P	20 56 57.9	+0.4
M27K				IAmb	IAmb	20 57 20.4	
	comp=Z,31nm,1.6s						
M27K	Edge Creek, AK	78.94	332	P	P	20 56 55.7	-1.7
	baz=78						
BMAR	Burnt Mountain	78.96	337		P	20 56 57.8	+0.4
KIV	Kislovodsk	78.97	47	*e*P	P	20 56 58.4	+0.5
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KVAR	Kislovodsk Arr	78.97	47	LR	LR	21 32 47.8	
	comp=Z,131nm,18.7s,baz=255,slow=36						
CTG	Chitna Glacier	78.97	330	P	P	20 56 56.3	-1.4
	baz=78						
SHA1	Shidzhatmaz	78.98	48	*i* P	P	20 56 58.5	+0.3
D25K	Kavik River	79.14	339	P	P	20 56 58.7	+0.4
D25K				IAmb	IAmb	20 57 24.4	
	comp=Z,22nm,0.8s						
D25K	Kavik River	79.14	339	P	P	20 56 57.2	-1.1
	baz=75,SNR=18						
E25K	Arctic Village	79.16	338	P	P	20 56 59.0	+0.6
E25K	Arctic Village	79.16	338	P	P	20 56 57.7	-0.7
	baz=76						
KBZ	Khabaz	79.16	48	P	P	20 56 58.6	-0.2
	comp=Z,0.7nm,0.3s,baz=241,slow=2.1,SNR=3.8						
KBZ				LR	LR	21 33 17.8	
	comp=Z,131nm,18.4s,baz=313,slow=37						
	comp=Z,0.7nm,0.3s						
KBZ	Khabaz	79.16	48	*i* P	P	20 56 59.4	+0.6
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
J26L	Joseph Creek	79.22	334	P	P	20 56 58.3	-0.6
	baz=77						
F25K	Christian Rive	79.31	337	P	P	20 56 58.2	-1.1
	baz=76,SNR=13						
MESA	MESA	79.43	330	P	P	20 56 58.3	-1.9
	baz=78						
M26K	Nabesna, AK	79.44	332	P	P	20 56 59.1	-0.9
	baz=77						
SCRK	Sand Creek	79.52	334	P	P	20 57 00.8	+0.2
SCRK	Sand Creek	79.52	334	P	P	20 56 59.4	-1.1
	baz=76						
DOT	Dot Lake	79.63	333	P	P	20 57 00.9	-0.1
MCARA	McCarthy VSAT	79.68	331		P	20 57 01.5	+0.2
MCARA				IAmb	IAmb	20 57 11.6	
	comp=Z,22nm,1.0s						
MCARA	McCarthy VSAT	79.68	331	P	P	20 57 00.9	-0.4
	baz=77						
G25K	Bearman Lake	79.70	337	P	P	20 57 00.7	-0.6
	baz=75						
H25L	Birch Creek	79.71	336	P	P	20 57 00.8	-0.6
	baz=75						
PRP	Porcupine Dome	79.79	335	P	P	20 57 01.4	-0.6
	baz=75						
CRQE	Cirque	79.86	330	P	P	20 57 01.5	-0.9
	baz=77						
LSZ	Lusaka	79.89	109	LR	LR	21 26 43.5	
	comp=Z,148nm,21.1s,baz=302,slow=32						
LSZ	Lusaka	79.89	109	P	P	20 57 03.8	+0.4
LSZ				pmax	pmax		
	comp=Z,16nm,1.4s						
KARS	Kars	79.89	51	P	P	20 57 02.9	-0.2
KARS	Kars	79.89	51	P	P	20 57 02.9	-0.2
KARS				pmax	pmax		
	comp=Z,23nm,0.7s						
RIDG	Independent Ri	79.94	333	P	P	20 57 02.8	0.0
RIDG	Independent Ri	79.94	333	P	P	20 57 02.1	-0.7
	baz=76						
J25K	Salcha River,	79.95	334	P	P	20 57 02.6	-0.2
J25K	Salcha River,	79.95	334	P	P	20 57 02.4	-0.4
	baz=75						
D24K	Happy Valley	80.03	339	P	P	20 57 03.1	0.0
	baz=73						
BGLC	Bering Glacier	80.10	330	P	P	20 57 03.4	-0.1
	baz=76						
KIRV	Kirov	80.10	32	LR	LR	21 28 10.8	
	comp=Z,508nm,21.3s,baz=287,slow=32						
KIRV	Kirov	80.10	32	*ce*P	P	20 57 04.3	+0.7
F24K	Squaw Lake	80.17	337	P	P	20 57 03.8	-0.1
	baz=74						
E24K	Your Creek	80.23	338	P	P	20 57 04.2	0.0
	baz=73,SNR=12						
G24K	Hadweenzic Riv	80.24	337	P	P	20 57 04.5	+0.3
	baz=74,SNR=8.7						
K24K	Donnelly Dome	80.33	334	P	P	20 57 04.6	-0.3
	baz=75						
N25K	Chitina, Valde	80.36	331	P	P	20 57 04.8	-0.3
	baz=76						
PAX	Paxson	80.41	333	P	P	20 57 04.5	-0.9
	baz=75						
HARP	HAARP	80.42	332	P	P	20 57 04.4	-0.9
	baz=75						
C23K	Itkillik River	80.42	340	P	P	20 57 04.7	-0.5
	baz=72						
TOLK	Toolik Lake Re	80.44	339	P	P	20 57 04.1	-1.2
	baz=72						
BELG	Belogornoye	80.50	38	LR	LR	21 31 02.1	
	comp=Z,556nm,18.2s,baz=303,slow=34						
BELG	Belogornoye	80.50	38	*i* P	P	20 57 05.9	+0.1
BELG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BMRM	Bremner River	80.53	331	P	P	20 57 04.7	-1.3
	baz=75						
ILAR	Eielson Array	80.54	335		P	20 57 06.2	+0.3
ILAR	Eielson Array	80.54	335	P	P	20 57 06.6	+0.7
	comp=Z,7.5nm,0.9s,baz=72,slow=4.7,SNR=53						
ILAR				LR	LR	21 31 48.6	
	comp=Z,196nm,19.5s,baz=65,slow=35						
	comp=Z,7.5nm,0.9s						
E23K	Chandalar	80.64	338	IAmb	IAmb	20 57 20.1	
	comp=Z,37nm,1.8s						
E23K	Chandalar	80.64	338	P	P	20 57 04.9	-1.5
	baz=72						
H24K	Noodor Dome	80.64	336	P	P	20 57 05.2	-1.3
	baz=73,SNR=12						
HDA	Harding Lake	80.66	334	P	P	20 57 05.1	-1.4
	baz=74						
POKR	Poker Plat Res	80.67	335	P	P	20 57 05.5	-1.1
	baz=74						
KAIM	Kayak Island	80.70	330	P	P	20 57 05.5	-1.3
	baz=75						
D23K	Nanushuk River	80.72	339	P	P	20 57 05.5	-1.3
	baz=71						
COLA	College	80.91	335	*i* P	P	20 57 08.4	+0.6
COLA				pmax	pmax		
	comp=Z,18nm,1.2s						
CCB	Clear Creek Bu	80.95	335	P	P	20 57 08.2	+0.2
CCB				IAmb	IAmb	20 57 29.9	
	comp=Z,10nm,0.9s						
M24K	Tolsona, Glenn	80.95	332	P	P	20 57 06.9	-1.3
	baz=74						
LBTB	Lobatse	80.97	119	LR	LR	21 26 07.6	
	comp=Z,405nm,21.0s,baz=284,slow=31						
KLU	Klutina	81.00	331	P	P	20 57 07.3	-1.2
	baz=74						
COLD	Coldfoot	81.11	337	P	P	20 57 07.9	-1.0
	baz=72						
B22K	Teshekpuk Lake	81.16	341	P	P	20 57 07.3	-1.8
	baz=69						
EYAK	Cordova Ski Ar	81.18	330	P	P	20 57 07.8	-1.5

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           baz=74
G23K  Bananza Creek    81.20 337  P      P       20 57 08.4 -1.0
           baz=72,SNR=8.8
DHY   Denali Highway   81.22 333  P      P       20 57 09.9 +0.2
DHY                               IAmb   IAmb    20 57 19.4
           comp=Z,21nm,1.6s
DHY   Denali Highway   81.22 333  P      P       20 57 08.2 -1.5
           baz=73
GNI   Garni            81.23  51  LR     LR      21 33 58.4
           comp=Z,77nm,19.1s,baz=310,slow=36
H23K  Yukon River      81.30 336  P      P       20 57 08.6 -1.4
           baz=72,SNR=8.0
E22K  Anaktuvuk Pass   81.39 339  IAmb   IAmb    20 57 35.9
           comp=Z,12nm,0.9s
E22K  Anaktuvuk Pass   81.39 339  P      P       20 57 09.1 -1.4
           baz=70,SNR=9.6
A22K  Sinclair Lake    81.40 342  P      P       20 57 08.3 -2.0
           baz=68
I23K  Minto, Yukon-K   81.44 335  P      P       20 57 11.1 +0.5
I23K                              IAmb   IAmb    20 57 33.6
           comp=Z,13nm,1.1s
I23K  Minto, Yukon-K   81.44 335  P      P       20 57 09.4 -1.2
           baz=72
D22K  Ayikyak River    81.44 339  P      P       20 57 09.6 -1.1
           baz=70
FID   Port Fidalgo     81.47 331  P      P       20 57 10.3 -0.6
FID                               IAmb   IAmb    20 57 36.5
           comp=Z,17nm,1.1s
NEA2  Nenana           81.49 335  P      P       20 57 09.6 -1.4
           baz=72
WAT6  Susitna Watana   81.52 333  P      P       20 57 09.2 -2.1
           baz=73
SCM   Sheep Creek Mo   81.55 332  P      P       20 57 10.9 -0.6
           baz=73
G22K  Bettles          81.69 337  P      P       20 57 10.8 -1.2
           baz=70
MCK   McKinley         81.70 334  P      P       20 57 12.4 +0.3
MCK                               IAmb   IAmb    20 57 37.5
           comp=Z,15nm,1.3s
MCK   McKinley         81.70 334  P      P       20 57 12.4 +0.3
MCK   McKinley         81.70 334  P      P       20 57 11.1 -1.0
           baz=72
GLI   Glacier Island   81.72 331  P      P       20 57 11.1 -1.2
           baz=73
F22K  John River       81.74 338  P      P       20 57 11.2 -1.1
           baz=70
RND   Reindeer         81.76 334  P      P       20 57 14.1 +1.6
RND                               pmax   pmax
           comp=Z,29nm,1.6s
Q23K  Middleton Isla   81.77 329  P      P       20 57 10.9 -1.6
           baz=74
WAT1  Susitna Watana   81.81 333  P      P       20 57 11.6 -1.1
           baz=72
B21K  Ikpikpuk River   81.81 340  P      P       20 57 10.5 -2.0
           baz=68
MATP  Matopo           81.87 114  LR     LR      21 27 46.8
           comp=Z,79nm,19.8s,baz=282,slow=32
H22K  Ishtalitna Cre   81.99 336  P      P       20 57 12.6 -1.0
           baz=70
SML   Sawmill          82.02 332  P      P       20 57 13.0 -0.9
           baz=72
MLY   Manley           82.03 335  P      P       20 57 13.1 -0.7
           baz=71
BOSA  Boshof           82.03 122  P      P       20 57 13.5 -1.1
           comp=Z,4.0nm,0.8s,baz=309,slow=2.6,SNR=8.1
BOSA                              LR     LR      21 26 44.1
           comp=Z,247nm,19.6s,baz=298,slow=31
           comp=Z,4.0nm,0.8s
E21K  Killik River     82.03 339  P      P       20 57 13.0 -0.8
           baz=68
C21K  Knifeblade Rid   82.04 340  P      P       20 57 13.0 -0.8
           baz=68
P23K  Montague Islan   82.12 330  P      P       20 57 12.5 -1.8
           baz=73
PWL   Port Wells       82.31 331  P      P       20 57 14.6 -0.7
           baz=72
F21K  Alatna River     82.31 338  P      P       20 57 14.5 -0.8
           baz=68
TRF   Thorofare Moun   82.36 334  IAmb   IAmb    20 57 44.3
           comp=Z,17nm,1.0s
TRF   Thorofare Moun   82.36 334  P      P       20 57 14.4 -1.4
           baz=71
BPAW  Bear Paw Mtn.    82.44 335  P      P       20 57 15.0 -1.0
           baz=70
PMR   Palmer           82.45 332  P      P       20 57 17.7 +1.7
PMR                               pmax   pmax
           comp=Z,27nm,1.5s
PMR   Palmer           82.45 332  P      P       20 57 15.0 -1.0
           baz=72
B20K  Meade River      82.47 341  P      P       20 57 15.3 -0.6
           baz=66
G21K  Allakaket        82.58 337         P       20 57 17.1 +0.4
G21K                              IAmb   IAmb    20 57 40.0
           comp=Z,33nm,1.6s
G21K  Allakaket        82.58 337  P      P       20 57 15.6 -1.0
           baz=68,SNR=9.1
KTH   Kantishna Hill   82.59 334  IAmb   IAmb    20 57 26.5
           comp=Z,17nm,1.1s
H21K  Melozitna Rive   82.62 336  P      P       20 57 17.2 +0.3
H21K                              IAmb   IAmb    20 57 23.8
           comp=Z,16nm,1.5s
H21K  Melozitna Rive   82.62 336  P      P       20 57 15.9 -1.0
           baz=69
CUT   Chulitna         82.69 333  P      P       20 57 16.4 -0.9
           baz=71
D20K  Etivluk River    82.82 340  P      P       20 57 17.0 -0.9
           baz=66
E20K  Nigu River       82.86 339  P      P       20 57 17.2 -1.0
           baz=66
IMAR  Indian Mountai   82.87 337  P      P       20 57 18.7 +0.6
RC01  Rabbit Creek A   82.88 332  P      P       20 57 17.4 -0.9
           baz=71
SEW   Seward           83.07 331  P      P       20 57 19.6 +0.4
SEW   Seward           83.07 331  P      P       20 57 18.1 -1.1
           baz=71
AKT   Akhty            83.13  49 eP      P       20 57 18.9 -1.3
AKT                               pmax   pmax
           comp=Z,9.0nm,1.0s
CAST  Castle Rocks     83.13 334  P      P       20 57 17.9 -1.7
           baz=69
F20K  Avaraart Lake    83.19 338  P      P       20 57 18.9 -0.9
           baz=66
SUA   Susitna One      83.22 332  P      P       20 57 19.0 -1.2
           baz=70
SKT   Skwentna         83.39 333         P       20 57 21.6 +0.7
SKT                               IAmb   IAmb    20 57 30.6
           comp=Z,17nm,1.1s
SKT   Skwentna         83.39 333  P      P       20 57 19.8 -1.2
           baz=70
D19K  Kuna River       83.42 340  P      P       20 57 19.9 -1.1
           baz=64
H20K  Anotleneega Mo   83.49 337  P      P       20 57 20.3 -1.1
           baz=67
E19K  Redstone River   83.56 339  P      P       20 57 22.2 +0.5
E19K                              IAmb   IAmb    20 57 45.4
           comp=Z,9.3nm,0.9s
E19K  Redstone River   83.56 339  P      P       20 57 20.8 -0.9
           baz=65
A19K  Wainwright       83.58 342  P      P       20 57 20.4 -1.3
           baz=62
C19K  Lookout Ridge    83.63 341  P      P       20 57 21.0 -1.1
           baz=63
J20K  Nowinta River    83.70 335  P      P       20 57 20.8 -1.7
           baz=68
BRSE  Bradley Lake S   83.80 330  P      P       20 57 22.0 -1.1
           baz=70
SPU   Mount Spurr      83.91 332  P      P       20 57 23.9 +0.2
SPU                               IAmb   IAmb    20 57 30.0
           comp=Z,20nm,1.5s
N20K  Mount Spurr      83.97 332  P      P       20 57 23.3 -0.7
           baz=69
SPCR  Spurr Chakacha   83.97 332  P      P       20 57 22.5 -1.5
           baz=69
K20K  Telida           83.98 334  P      P       20 57 24.2 +0.2
K20K                              IAmb   IAmb    20 57 47.0
           comp=Z,13nm,1.2s
K20K  Telida           83.98 334  P      P       20 57 23.0 -1.0
           baz=68
F19K  Shaleruckik Mo   84.01 338  P      P       20 57 23.3 -0.7
           baz=65
G19K  Purcell Mounta   84.06 337  P      P       20 57 23.0 -1.3
           baz=65
H19K  Roundabout Mou   84.07 337  P      P       20 57 23.0 -1.4
           baz=66
M20K  Styx River       84.14 333  P      P       20 57 24.2 -0.6
           baz=68
B18K  Kokolik River    84.20 341  P      P       20 57 23.7 -1.3
           baz=61
L20K  Farewell, AK     84.24 334  P      P       20 57 23.8 -1.5
           baz=68
C18K  Utukok River     84.36 340  P      P       20 57 24.9 -0.9
           baz=62
J19K  Poorman          84.37 335  IAmb   IAmb    20 57 48.4
           comp=Z,28nm,1.8s
J19K  Poorman          84.37 335  P      P       20 57 25.3 -0.6
           baz=66
GCSA  Galena City Sc   84.56 336  P      P       20 57 26.6 -0.2
           baz=65
O20K  Slope Mountain   84.57 331  P      P       20 57 26.6 -0.5
           baz=68
M19K  Big River Lodg   84.68 333  P      P       20 57 28.0 +0.4
M19K                              IAmb   IAmb    20 57 36.7
           comp=Z,16nm,1.2s
M19K  Big River Lodg   84.68 333  P      P       20 57 26.0 -1.6
           baz=67
E18K  Tukpahlearik C   84.74 339  P      P       20 57 26.4 -1.3
           baz=62
G18K  Tagagawik        84.74 338  P      P       20 57 26.0 -1.8
           baz=64
L19K  White Mountain   84.77 333  P      P       20 57 27.1 -0.9
           baz=67
F18K  Selawik          84.78 338  P      P       20 57 27.1 -0.8
           baz=63
H18K  Honhosa River    84.96 337  P      P       20 57 28.2 -0.7
H18K                              IAmb   IAmb    20 57 52.3
           comp=Z,30nm,1.9s
H18K  Honhosa River    84.96 337  P      P       20 57 27.9 -1.0
           baz=64
Q20K  Shuyak Island    85.00 330  P      P       20 57 27.8 -1.3
           baz=69
P19K  Oil Pt           85.01 331  P      P       20 57 28.3 -1.0
           baz=68
J18K  Innoko River     85.03 335  P      P       20 57 28.2 -1.1
           baz=65
C17K  DeLong Mountai   85.08 341  P      P       20 57 28.0 -1.4
           baz=60
E17K  Hotham Inlet     85.32 339  P      P       20 57 29.3 -1.3
           baz=61
ARTI  Arti             85.37  33         P       20 57 31.1  0.0
ARTI                              IAmb   IAmb    20 57 35.4
           comp=Z,6.9nm,0.9s
ARTI  Arti             85.37  33  LR     LR      21 31 25.7
           comp=Z,616nm,21.9s,baz=294,slow=33
ARTI  Arti             85.37  33c iP     P       20 57 31.5 +0.4
ARTI                                             21 00 50.4
ARTI                              S      SKSac   21 07 56.1 +0.7
ARTI                              SS     SS      21 13 40.0 +4.6
ARTI                              pmax   pmax
           comp=Z,9.0nm,1.1s
KDAK  Kodiak Island    85.39 329  LR     LR      21 34 04.1
           comp=Z,385nm,20.2s,baz=75,slow=35
KDAK  Kodiak Island    85.39 329  P      P       20 57 30.6 -0.5
           baz=68
F17K  Baldwin Pennin   85.43 339  P      P       20 57 30.3 -0.8
           baz=62
D17K  Noatak River     85.44 340  P      P       20 57 29.9 -1.3
           baz=60
M18K  Stony River      85.47 333  P      P       20 57 30.0 -1.4
           baz=66
Q19K  Cape Douglas,    85.48 330  P      P       20 57 30.4 -1.2
           baz=68
L18K  Granite Mounta   85.54 334  P      P       20 57 29.7 -2.1
           baz=65
H17K  Granite Mounta   85.64 337  IAmb   IAmb    20 58 01.1
           comp=Z,17nm,1.4s
H17K  Granite Mounta   85.64 337  P      P       20 57 30.5 -1.8
           baz=62
G17K  Kiwalik Mounta   85.66 338  P      P       20 57 31.1 -1.2
           baz=62
N18K  Kilae Creek      85.83 332  P      P       20 57 32.3 -1.1
           baz=66
O18K  Koktuh Hills     85.86 331  P      P       20 57 32.4 -1.1
           baz=66
OHAK  Old Harbor       85.95 329  P      P       20 57 32.8 -1.1
           baz=68
K17K  Iditarod         86.01 335  P      P       20 57 33.2 -1.0
           baz=64
J17K  VABM Dome        86.02 335  P      P       20 57 33.1 -1.1
           baz=63
P18K  Big Mountain,    86.05 331  P      P       20 57 32.9 -1.5
           baz=66
M17K  Holitna River    86.21 333  P      P       20 57 33.2 -1.9
           baz=64
Q18K  Katmai Hardscr   86.25 330  P      P       20 57 33.4 -2.1
           baz=66
L17K  Donlin           86.26 334  P      P       20 57 34.4 -1.0
           baz=64
G16K  Koyuk River      86.33 338  P      P       20 57 36.3 +0.6
G16K  Koyuk River      86.33 338  P      P       20 57 34.9 -0.8
           baz=60
SVE   Sverdlovsk       86.36  32 eP      P       20 57 36.8 +0.8
SVE                               pmax   pmax
           comp=Z,13nm,0.9s
R18K  Karluk           86.41 329  P      P       20 57 35.2 -0.9
           baz=67
I17K  Unalakleet       86.44 336  P      P       20 57 35.5 -0.6
           baz=62
ATD   Arta Tunnel      86.45  79  LR     LR      21 34 41.5
           comp=Z,12nm,20.9s,baz=289,slow=35
N17K  Nushagak Hills   86.48 332  P      P       20 57 35.7 -0.8
           baz=65
H16K  Elim             86.66 337  P      P       20 57 37.0 -0.3
           baz=60
SII   Sitkinak Islan   86.67 328  P      P       20 57 36.2 -1.3
           baz=67
J16K  Anvik River      86.68 336  P      P       20 57 36.3 -1.1
           baz=62
P17K  Kvichak River    86.70 331  P      P       20 57 36.3 -1.2
           baz=65
O17K  Koliganek Bris   86.76 332  P      P       20 57 36.9 -0.9
           baz=65
Q17K  Contact Creek    86.83 330  P      P       20 57 36.6 -1.8
           baz=66
L16K  Owhat River      86.95 334  P      P       20 57 37.5 -1.2
           baz=63
F15K  North Star Dit   87.00 339  IAmb   IAmb    20 57 46.3
           comp=Z,17nm,1.3s
F15K  North Star Dit   87.00 339  P      P       20 57 37.9 -1.0
           baz=58
Q16K  King Salmon      87.02 331  P      P       20 57 38.0 -1.1
           baz=65
M16K  Timber Creek     87.04 333  P      P       20 57 37.5 -1.7
           baz=63
G15K  Niukluk          87.15 338  P      P       20 57 38.2 -1.5
           baz=59
N16K  Nishlik Lake     87.21 333  P      P       20 57 38.8 -1.3
           baz=63
AKTO  Aktyubinsk       87.28  38  LR     LR      21 34 00.7
           comp=Z,291nm,21.1s,baz=70,slow=34
O16K  Kokwok River B   87.29 332  P      P       20 57 39.3 -1.1
           baz=64
P16K  Nushagak River   87.49 331  P      P       20 57 40.9 -0.6
           baz=64
K15K  Wolf Creek Mou   87.53 335  P      P       20 57 39.8 -1.8
           baz=61
CHIR  Chirikof Islan   87.70 328  P      P       20 57 40.6 -1.9
           baz=66
F14K  Arctic Creek     87.71 339  P      P       20 57 40.8 -1.6
           baz=57
L15K  Ungalak Mounta   87.81 334  P      P       20 57 41.0 -1.9
           baz=61
ANM   Nome             87.86 338  P      P       20 57 42.3 -0.8
           baz=58
N15K  Kwethluk River   87.93 333  P      P       20 57 41.3 -2.2
           baz=62
R16K  Pilot Point      87.94 330  P      P       20 57 40.9 -2.6
           baz=64
M15K  Kasigluk River   87.94 333  P      P       20 57 42.3 -1.3
           baz=62
J14K  Nanvaranak Lak   88.12 336  P      P       20 57 41.8 -2.5
           baz=59
TNA   Tin City         88.21 339  P      P       20 57 43.3 -1.5
           baz=55
O15K  Ungalikthiuk R   88.27 332  P      P       20 57 43.4 -1.8
           baz=62
M14K  Bethel           88.47 334  P      P       20 57 44.1 -1.9
           baz=60
L14K  Kuka Creek       88.48 334  P      P       20 57 44.3 -1.7
           baz=60
N14K  Kuskokwak Cree   88.75 333  P      P       20 57 46.0 -1.4
           baz=61
AB31  Akbulak array    88.88  39         P       20 57 48.5 +0.3
AB31                              IAmb   IAmb    20 57 52.6
           comp=Z,6.8nm,0.8s
ABKAR Akbulak array    88.88  39         P       20 57 48.5 +0.3
O14K  Tigyukauivet M   88.89 332  P      P       20 57 46.6 -1.4
           baz=61
K13K  Kusilvak Mount   88.98 335  P      P       20 57 46.7 -1.8
           baz=58
M13K  Dall Lake        89.23 334  P      P       20 57 47.9 -1.7
           baz=59
S14K  Fog Glacier      89.48 329  P      P       20 57 48.8 -2.2
           baz=62
CHNA  Chernabura Isl   90.17 328  P      P       20 57 52.3 -1.8
           baz=62
SDPT  Sand Point       90.38 329  P      P       20 57 52.4 -2.7
           baz=62
M11K  Mekoryuk         90.45 334  P      P       20 57 53.5 -1.8
           baz=57
GAMB  Gambell          90.58 339  P      P       20 57 54.7 -1.2
           baz=52
S12K  Black Hills      91.00 329  P      P       20 57 56.7 -1.3
           baz=60
SNAA  Sanae            91.71 167  P      P       20 58 01.1 +0.3
           comp=Z,1.2nm,0.9s,baz=302,slow=7.5,SNR=3.6
SNAA                              LR     LR      21 32 19.1
           comp=Z,233nm,19.4s,baz=332,slow=31
           comp=Z,1.2nm,0.9s
BRVK  Borovoye         93.02  33ceP      P       20 58 08.3 +0.9
BRVK                              pmax   pmax
           comp=Z,2.0nm,0.6s
BVAR  Borovoye Array   93.09  33  P      P       20 58 07.1 -0.7
           comp=Z,1.3nm,0.8s,baz=341,slow=3.1,SNR=4.9
BVAR                              LR     LR      21 36 53.8
           comp=Z,439nm,21.2s,baz=301,slow=34
           comp=Z,1.3nm,0.8s
TIXI  Tiksi            93.11   1  LR     LR      21 36 09.2
           comp=Z,59nm,18.8s,baz=12,slow=33
BILL  Bilibino         93.46 348 i P     P       20 58 08.4 -0.7
BILL                              pmax   pmax
           comp=Z,13nm,3.3s
P08K  Saint George I   94.04 332  P      P       20 58 10.0 -2.0
           baz=54
UNV   Unalaska Valle   94.16 329  P      P       20 58 10.1 -2.5
           baz=57
TAOE  Nuku Hiva Isla   95.72 262 eLR     LR      21 29 18.9
           comp=Z,232nm,36.5s
NIKH  Nikolski High    95.82 329  P      P       20 58 17.6 -2.6
           baz=55
KURK  Kurchatov        98.62  32  P      P       20 58 32.7 -0.2
KURBB Kurchatov Arra   98.63  32  P      P       20 58 32.7 -0.2
           comp=Z,0.7nm,0.8s,baz=303,slow=5.1,SNR=5.2
KURBB                             LR     LR      21 40 09.8
           comp=Z,288nm,21.1s,baz=174,slow=34
           comp=Z,0.7nm,0.8s
ZALV  Zalesovo Beam    99.45  27  P      Pdif    20 58 36.9 +0.4
           comp=Z,0.8nm,0.6s,baz=289,slow=4.4,SNR=3.9
ZALV                              LR     LR      21 42 03.2
           comp=Z,179nm,18.2s,baz=292,slow=34
           comp=Z,0.8nm,0.6s
PPT2  Papeete2        106.63 256 eLR     LR      21 34 11.2
           comp=Z,260nm,27.2s
PPT2                             eLR     LR      21 34 17.1
           comp=Z,226nm,28.5s
TBI   Tubuai          107.55 250 eLR     LR      21 34 36.4
           comp=Z,798nm,30.5s
WMQ   Urumqi          107.78  33  Pdif   Pdif    20 59 16.3 +2.3
WMQ                               LR     LR
           comp=N,300nm,20.5s
WMQ                               LR     LR
           comp=E,240nm,24.7s
WMQ                               LR     LR
           comp=Z,310nm,22.7s
VNDA  Vanda           116.23 187  PKP    PKPdf   21 03 37.5 +1.0
           comp=Z,1.0nm,0.9s,baz=108,slow=4.1,SNR=2.8
HHC   Hu-ho-hao-te    120.48  19 eP      PKPdf   21 03 41.4 -4.5
HHC                               LR     LR
           comp=N,250nm,17.7s
HHC                               LR     LR
           comp=E,200nm,16.1s
HHC                               LR     LR
           comp=Z,260nm,17.1s
LZH   Lanzhou         121.65  28 ePKP    PKPdf   21 03 47.0 -1.4
LZH                               sPKP           21 04 03.3
LZH                               LR     LR
           comp=N,160nm,17.5s
LZH                               LR     LR
           comp=E,250nm,17.4s
LZH                               LR     LR
           comp=Z,390nm,17.9s
CD2   Chengdu         125.84  32  PKP    PKPdf   21 03 55.5 -0.9
PZH   PanZhiHua       128.21  37  PKP    PKPdf   21 04 00.8 -0.3
NJ2   Nanjing         130.80  16 eP      PKPdf   21 04 04.8 -0.9
NJ2                               pmax   pmax
           comp=Z,8.0nm,0.5s
CMAR  Chiang Mai Arr  132.20  46  PKP    PKPdf   21 04 08.2 -0.6
           comp=Z,1.7nm,0.8s,baz=297,slow=1.4,SNR=8.0
DZM   Mont Dzumac     148.07 253  PKPbc  PKPbc   21 04 40.6 +0.1
           baz=104,slow=8.3
STKA  Stephens Creek  161.98 203  PKPab  PKPab   21 05 41.9 +0.2
           comp=Z,2.4nm,1.0s,baz=176,slow=24,SNR=3.1
ASAR  Alice Springs   171.76 183  PKPab  PKPab   21 06 24.4 -0.5
           comp=Z,0.8nm,0.8s,baz=177,slow=4.3,SNR=3.0
WRA   Warramunga Arr  175.39 191  PKPab  PKPab   21 06 40.6 -0.5
           comp=Z,0.9nm,0.8s,baz=180,slow=4.5,SNR=4.3
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*NIED **14** 20:54:45.4, 32°.24N×132°.13E, h18^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.75; $M_{\theta\theta}$-0.29; $M_{\phi\phi}$-0.46; $M_{r\theta}$1.08; $M_{\theta\phi}$-0.61; $M_{\phi r}$1.68; Fault plane solution: $M_0$2.18000×10^{15} NP1: ϕ_s234.00000°, δ12.00000°, λ111.00000°. NP2: ϕ_s33.00000°, δ78.00000°, λ85.00000°.*

*JMA **14** 20:54:45.4±0.1, 32°.2N±0°.3×132°.1E±0°.3, h18^{km}±1^{km}, MD4.1/39, MV4.3/39, HYUGANADA REGION*

JMA Felt II J1 at HYUGANADA REGION .

*NEIC **14** 20:54:47.8±1.6, 32°.23N±0°.07×131°.94E±0°.06, h48^{km}±9^{km}, mb4.4/11, Error ellipse: s-maj=9.6km s-min=7.4km az=190.0*

*IDC **14** 20:54:49.2±1.7, 32°.28N×132°.14E, h69^{km}±13^{km}, mb3.5/14, mbtmp3.8/17, Error ellipse: s-maj=21.7km s-min=13.9km az=64.0*

ISC 14 20:54:46.3±0.6**, 32°.26N**±0°.04×**132°.05E**±0°.03**, h39**^{km}±2^{km}**, n76, σ1^{s}79**/70**, mb3.9**/21**, 14D, Shikoku**

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Code  Station Name       Δ°   AZ°    Phase ID          Time     Res
                                   Op     ISC        h  m  s    ISC
JHHC  Hyugahichiya     0.39 298⇓iP    Pn         20 54 54.7 -0.8
JHHC                           ⇓S     Sn         20 55 01.1 -1.0
JHHC  Hyugahichiya     0.39 298  A    A          20 54 54.7
           comp=N,30nm,0.4s,comp=E,15nm,0.5s
JTSN  Tsuno            0.46 268⇓iP    Pn         20 54 55.6 -0.8
JTSN                           ⇓S     Sn         20 55 03.1 -0.5
JTSN  Tsuno            0.46 268  A    A          20 54 55.6
           comp=N,26nm,0.7s,comp=E,16nm,0.3s
JSKE  Saikikamae       0.55 347⇓iP    Pn         20 54 57.0 -0.8
JSKE                           ⇓S     Sn         20 55 05.2 -0.6
JSKE  Saikikamae       0.55 347  A    A          20 54 57.0
           comp=N,9.0nm,0.6s,comp=E,16nm,0.6s
JKIT  Kitakata         0.62 306⇓iP    Pn         20 54 58.6 -0.1
JKIT                           ⇓S     Sn         20 55 08.3 +0.8
JKIT  Kitakata         0.62 306  A    A          20 54 58.6
           comp=N,20nm,0.3s,comp=E,14nm,0.7s
JNKG  Nichinankitago   0.83 224  A    A          20 55 01.5
           comp=N,20nm,0.6s,comp=E,23nm,0.4s
JUS   Usuki            0.84 343⇓iP    Pn         20 55 01.9 +0.3
JUS                           ⇓eS     Sn         20 55 14.6 +1.7
JUS   Usuki            0.84 343  A    A          20 55 01.9
           comp=N,8.0nm,1.2s,comp=E,10.0nm,1.9s
JTO   Tosashimizu      0.87  47 ⇓P    Pn         20 55 00.8 -1.2
JTO                            ⇓S     Sn         20 55 13.3 -0.3
JTO   Tosashimizu      0.87  47  A    A          20 55 00.8
           comp=N,4.0nm,0.7s,comp=E,5.0nm,1.3s
JTZ   Takazaki         0.89 247 i P   Pn         20 55 03.1 +0.8
JTZ                              S    Sn         20 55 16.9 +2.8
JTZ   Takazaki         0.89 247  A    A          20 55 03.1
           comp=N,16nm,0.6s,comp=E,13nm,3.3s
JNAR  Kushima--Naru    0.99 222  P    Pn         20 55 04.9 +1.2
JNAR                             S    Sn         20 55 19.7 +3.3
JNAR  Kushima--Naru    0.99 222  A    A          20 55 04.9
           comp=N,21nm,1.1s,comp=E,18nm,1.1s
JIU3  Izumi3           1.08 286⇓iP    Pn         20 55 06.5 +1.5
JIU3                          ⇓eS     Sn         20 55 21.8 +3.0
JIU3  Izumi3           1.08 286  A    A          20 55 06.5
           comp=N,7.0nm,1.9s,comp=E,12nm,0.7s
JBEP  Beppuamama       1.20 333  A    A          20 55 07.9
           comp=N,15nm,2.0s,comp=E,15nm,1.1s
JZO   Okuchi           1.24 265  A    A          20 55 08.8
           comp=N,11nm,0.5s,comp=E,9.0nm,0.7s
JNU   Nakatsue         1.31 311       Pn         20 55 09.6 +1.5
JNU                              Sn   Sn         20 55 26.6 +2.2
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JNU	Nakatsue	1.31	311	P	Pn	20 55 10.3	+2.2
	comp=E,962nm,0.4s,baz=113,slow=4.6,SNR=1178						
JNU				S	Sn	20 55 30.5	+6.1
	comp=E,485nm,0.4s,baz=40,slow=6.6,SNR=5.2						
JNU	Nakatsue	1.31	311	A	A	20 55 09.9	
	comp=N,4.0nm,1.2s,comp=E,5.0nm,3.7s						
JKU	Kubokawa	1.35	39	P	Pn	20 55 08.4	-0.3
JKU				S	Sn	20 55 24.8	-0.6
JKI	Kunimi	1.43	344	A	A	20 55 11.3	
	comp=N,8.0nm,4.7s,comp=E,6.0nm,2.3s						
JTSR	Tashiro 2	1.45	222	A	A	20 55 11.6	
	comp=N,4.0nm,0.4s,comp=E,5.0nm,2.0s						
JTA	Tamana	1.46	299	A	A	20 55 12.3	
	comp=N,5.0nm,1.4s,comp=E,7.0nm,1.0s						
JSU	Suzuyama	1.55	241	A	A	20 55 13.3	
	comp=N,3.0nm,4.7s,comp=E,2.0nm,2.9s						
JHD	Hondo	1.63	278	A	A	20 55 14.8	
	comp=N,4.0nm,1.9s,comp=E,5.0nm,1.4s						
JMN	Monobe	2.12	46		Pn	20 55 22.0	+2.7
JMN				Sn	Sn	20 55 51.9	+7.4
JTY	Toyota	2.16	338	A	A	20 55 22.2	
	comp=N,3.0nm,1.5s,comp=E,2.0nm,1.5s						
INU	Inuyama	5.16	52	Pn	Pn	20 56 02.4	+1.5
INU					Sn	20 56 57.6	-1.6
JGF	Kuroka	5.53	51	Pn	Pn	20 56 06.9	+0.8
KSRS	Korea Array	6.19	328	P	Pn	20 56 16.8	+1.7
	comp=E,1.4nm,0.3s,baz=146,slow=14,SNR=7.3						
KSRS				S	Sn	20 57 23.4	-1.2
	comp=E,1.2nm,0.5s,baz=149,slow=17,SNR=1.4						
KSAR	Wonju Array Be	6.20	328	Pn	Pn	20 56 16.4	+1.2
JOW	Kunigami	6.33	212	P	Pn	20 56 17.1	0.0
	comp=E,14nm,0.6s,baz=73,slow=20,SNR=1.4						
JOW				S	Sn	20 57 23.6	-4.5
	comp=E,14nm,0.3s,baz=130,slow=27,SNR=6.4						
MAJO	Matsushiro	6.64	48	Pn	Pn	20 56 24.5	+3.1
MJAR	Matsushiro Arr	6.64	48	P	Pn	20 56 22.6	+1.2
	comp=E,1.1nm,0.5s,baz=238,slow=14,SNR=4.8						
KLR	Kul'dur	16.95	359	P	P	20 58 42.2	+0.2
	comp=E,5.8nm,0.6s,baz=164,slow=9.1,SNR=15						
ENH	Enshi	19.39	270	P	P	20 59 08.9	-0.1
ENH				IAmb	IAmb	20 59 19.9	
	comp=Z,16nm,1.1s						
ULN	Ulaanbaatar	24.52	317	P	P	21 00 01.1	-1.2
SONM	Songino Array	24.89	316	P	P	21 00 04.7	-0.9
SONM	Songino Array	24.89	316	P	P	21 00 05.3	-0.2
	comp=Z,2.0nm,0.6s,baz=127,slow=9.4,SNR=6.2						
	comp=Z,2.0nm,0.6s						
H11N2	WAKE ISLAND Hy	33.56	103	T	T	21 37 02.7	
	baz=298,slow=75,SNR=9.4						
H11N1	WAKE ISLAND Hy	33.57	103	T	T	21 36 58.3	
	baz=298,slow=75,SNR=6.8						
H11N3	WAKE ISLAND Hy	33.58	103	T	T	21 36 53.2	
	baz=298,slow=75,SNR=8.6						
H11S3	WAKE ISLAND Hy	34.00	105	T	T	21 37 37.1	
	baz=301,slow=75,SNR=3.6						
H11S1	WAKE ISLAND Hy	34.01	105	T	T	21 37 25.2	
	baz=301,slow=75,SNR=5.5						
H11S2	WAKE ISLAND Hy	34.02	105	T	T	21 37 21.3	
	baz=301,slow=75,SNR=3.7						
ZALV	Zalesovo Beam	39.78	317	PcP	PcP	21 04 20.5	-0.3
	comp=Z,0.3nm,0.2s,baz=129,slow=3.9,SNR=1.7						
MKAR	Makanchi Array	40.36	306		P	21 02 19.4	-0.8
MKAR	Makanchi Array	40.36	306	P	P	21 02 20.1	-0.1
	comp=Z,0.6nm,0.6s,baz=84,slow=11,SNR=7.1						
MKAR				PcP	PcP	21 04 22.4	-0.5
	comp=Z,0.6nm,0.9s,baz=63,slow=4.6,SNR=2.5						
	comp=Z,0.6nm,0.6s						
MAKZ	Makanchi	40.57	306	P	P	21 02 21.2	-0.8
MAKZ				IAmb	IAmb	21 03 00.1	
	comp=Z,4.8nm,1.3s						
KURBB	Kurchatov Arra	43.08	311	P	P	21 02 41.8	-0.5
	comp=Z,1.2nm,1.0s,baz=96,slow=8.9,SNR=5.5						
KURBB				PcP	PcP	21 04 31.4	-0.4
	comp=Z,0.7nm,0.7s,baz=90,slow=3.7,SNR=5.3						
	comp=Z,1.2nm,1.0s						
LEM	Lembang	45.31	215	P	P	21 02 59.8	-1.0
	comp=Z,7.6nm,0.3s,baz=318,slow=20,SNR=2.0						
KNRA	Kununurra	47.77	184	P	P	21 03 18.9	-0.9
BVAR	Borovoye Array	48.22	315	P	P	21 03 22.4	-0.5
	comp=Z,1.8nm,0.6s,baz=101,slow=9.3,SNR=8.9						
BVAR				PcP	PcP	21 04 50.1	+0.5
	comp=Z,1.1nm,0.5s,baz=64,slow=3.4,SNR=4.9						
	comp=Z,1.8nm,0.6s						
BRVK	Borovoye	48.28	315	P	P	21 03 23.6	+0.2
BRVK				IAmb	IAmb	21 03 32.7	
	comp=Z,2.9nm,0.7s						
KK31	Karatay Array	48.90	301	P	P	21 03 27.9	-0.5
KK31				IAmb	IAmb	21 03 38.5	
	comp=Z,4.2nm,1.0s						
KKAR	Karatay Array	48.90	301	P	P	21 03 28.6	+0.3
KKAR	Karatay Array	48.90	301	P	P	21 03 28.0	-0.4
KKAR				IAmb	IAmb	21 03 38.5	
	comp=Z,4.4nm,1.0s						
WRA	Warramunga Arr	51.95	177	P	P	21 03 51.5	0.0
	comp=Z,0.9nm,0.8s,baz=355,slow=8.2,SNR=7.2						
	comp=Z,0.9nm,0.8s						
AB31	Akbulak array	55.12	311	P	P	21 04 14.2	-0.3
AB31				IAmb	IAmb	21 04 23.9	
	comp=Z,3.8nm,0.8s						
ABKAR	Akbulak array	55.12	311	P	P	21 04 14.0	-0.5
ABKAR				IAmb	IAmb	21 04 23.9	
	comp=Z,3.8nm,0.8s						
ABKAR	Akbulak array	55.12	311	P	P	21 04 14.3	-0.2
ASAR	Alice Springs	55.64	178	P	P	21 04 18.4	-0.1
	comp=Z,0.9nm,0.9s,baz=1.8,slow=7.2,SNR=7.8						
	comp=Z,0.9nm,0.9s						
ILAR	Eielson Array	57.56	30	P	P	21 04 32.1	+0.4
	comp=Z,0.2nm,0.6s,baz=276,slow=8.6,SNR=2.6						
	comp=Z,0.2nm,0.6s						
G30M	tAoh Zraii Nji	61.42	27	P	P	21 05 00.4	+2.1
STKA	Stephens Creek	64.43	171	P	P	21 05 18.9	+0.4
	comp=Z,0.7nm,0.6s,baz=325,slow=5.9,SNR=3.4						
	comp=Z,0.7nm,0.6s						
KBZ	Khabaz	67.98	309	P	P	21 05 41.5	+0.2
	comp=Z,1.4nm,0.8s,baz=90,slow=4.0,SNR=2.1						
	comp=Z,1.4nm,0.8s						
FINES	FINESS Array B	69.28	330	P	P	21 05 48.7	-0.4
	comp=Z,0.8nm,0.7s,baz=72,slow=5.5,SNR=8.3						
	comp=Z,0.8nm,0.7s						
AKASG	Malin Array Be	73.12	320	P	P	21 06 12.5	-0.1
	comp=Z,1.0nm,0.4s,baz=55,slow=6.8,SNR=7.6						
	comp=Z,1.0nm,0.4s						
HFS	Hagfors	75.02	333	P	P	21 06 23.1	-0.3
	comp=Z,0.6nm,0.7s,baz=0.0,slow=1.7,SNR=1.8						
	comp=Z,0.6nm,0.7s						
NOA	NORSAR Array B	75.36	334	P	P	21 06 24.1	-1.4
	comp=Z,0.3nm,0.7s,baz=349,slow=5.5,SNR=1.7						
	comp=Z,0.3nm,0.7s						
BRTR	Keskin Array B	75.96	308	P	P	21 06 29.4	-0.1
	comp=Z,0.6nm,0.9s,baz=84,slow=6.1,SNR=7.8						
	comp=Z,0.6nm,0.9s						

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*MEX **14** 20:58:37.7±0.7, 14.°17N×93.°46W, h7^{km}±60^{km}, MD4.4*
*GCG **14** 20:58:43.4±3.5, 14.°23N×93.°20W, h35^{km}±31^{km}, MD4.5, ML4.2*
*IDC **14** 20:58:45.1±5.0, 14.°75N×92.°39W, h39^{km}±44^{km}, mb3.6/5, mbtmp3.8/7, ML3.7/2, Error ellipse: s-maj=113.8km s-min=31.1km az=40.0*
ISC 14 20:58:37.4±3.1**, 14.°11N**±0.°07×**93.°42W**±0.°03**, h17**^{km}±20^{km}**, n54, σ3**^{s}**.60**/74**, mb3.8**/5**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.37	54	eP	Pn	20 58 58.5	-3.3
THIG				eS	Sb	20 59 15.0	-4.9
THIG		1.37	54	i P	Pn	20 59 01.2	-0.6
THIG				i S	Sb	20 59 17.9	-2.0
THIG				IAML		20 59 22.2	
	comp=E,4µm,0.3s						
SMCA	Catarina	1.50	60	i S	Sn	20 59 19.9	-2.8
PATR	El Naranjo	1.52	49	eP	Pn	20 59 01.3	-2.8
PATR				eS	Sn	20 59 20.0	-3.7
PCIG		1.60	7	eP	Pn	20 59 01.0	-4.0
PCIG				eS	Sn	20 59 21.6	-3.6
PAVE	Pavencul	1.61	48	eP	Pn	20 58 59.4	-5.9
PAVE				eS	Sn	20 59 19.7	-6.2
RTAL	Retalhuleu	1.72	76	eP	Pn	20 59 05.6	-1.0
RTAL				eS	Sn	20 59 26.4	-1.8
STG8	El Palmar, Qui	2.03	80	i P	Pn	20 59 08.5	-2.6
STG8				i P	Pb	20 59 10.6	-3.5
STG0	El Palmar, Qui	2.04	81	i P	Pn	20 59 08.7	-2.4
HUEH	Huehuetenango	2.21	57	eP	Pn	20 59 10.9	-2.7
HUEH				eS	Sn	20 59 37.8	-2.8
HUEH	Huehuetenango	2.21	57	i P	Pb	20 59 16.7	-0.4
CCIG	Comitan	2.49	30	eP	Pb	20 59 20.8	-1.1
CCIG				eS	Sn	20 59 48.5	+1.0
CCIG	Comitan	2.49	30	i P	Pb	20 59 21.4	-0.4
TGIG		2.67	6	eP	Pn	20 59 21.5	+1.8
TGIG				eS	Sn	20 59 49.5	-2.2
TGIG		2.67	6	i P	Pn	20 59 21.8	+2.1
TGIG				i S	Sn	20 59 52.3	+0.6
TGIG				IAML		20 59 55.2	
	comp=E,1µm,0.4s						
TGBT	Tuxtla Gutierr	2.67	7	eP	Pn	20 59 22.2	+2.5
TGBT				eS	Sn	20 59 50.5	-1.1
FG8	Yepocapa, Chim	2.77	87	i S	Sn	20 59 45.5	-8.9
HUIG	Huatulco	3.08	303	eP	Pn	20 59 26.7	+1.3
HUIG				eS	Sn	20 59 55.2	-6.6
VHSA	Villahermosa	3.88	7	eS	Sn	21 00 16.9	-4.6
TUIG	Tuzandepetl	4.02	346	eP	Pn	20 59 27.4	-11
TUIG				eS	Sn	21 00 22.1	-2.9
PEIG	Puerto Escondi	4.06	298	eP	Pn	20 59 37.5	-1.4
PEIG				eS	Sn	21 00 19.7	-6.4
OXLC	Oaxaca	4.32	313	eS	Sn	21 00 23.5	-9.1
VHO	Vista Hermosa	4.35	313	eP	Pn	20 59 41.8	-1.2
VHO				eS	Sn	21 00 33.3	0.0
PETF	Flores	4.42	50	eP	Pn	20 59 42.8	-0.9
YOIG	Yosondua	4.83	305	eP	Pn	20 59 45.2	-4.4
YOIG				eS	Sn	21 00 42.5	-2.8
PNIG	Pinotepa	5.08	297	eP	Pn	20 59 55.3	+2.4
TXIG	Tlaxiaco	5.23	307	eP	Pn	20 59 52.8	-2.3
TXIG				eS	Sn	21 00 51.4	-3.8
TOIG	Toxpalan	5.29	319	eP	Pn	20 59 51.5	-4.4
TOIG				eS	Sn	21 00 48.7	-7.8
HLIG	Huajuapan de L	5.61	312	eP	Pn	20 59 58.2	-2.1
HLIG				eS	Sn	21 00 58.4	-6.2
TPIG	Tehuac#an	5.72	319	eP	Pn	21 00 05.3	+3.5
TPIG				eS	Sn	21 01 01.9	-5.3
FTIG	Fresnillo de T	5.90	310	eP	Pn	21 00 04.2	0.0
FTIG				eS	Sn	21 01 11.2	-0.3
MGIG	Malinaltepec	5.91	302	eP	Pn	21 00 02.5	-1.9
MGIG				eS	Sn	21 01 05.3	-6.5
TLIG	Tlapa	6.03	305	eP	Pn	21 00 05.0	-1.0
TLIG				eS	Sn	21 01 08.8	-5.9
CRIG	Cruz Grande	6.10	296	eP	Pn	21 00 01.9	-4.9
CRIG				eS	Sn	21 01 11.9	-4.3
DAIG	Los Arroyos	6.67	297	eP	Pn	21 00 14.9	+0.2
DAIG				eS	Sn	21 01 25.5	-4.8
PBCV	Popocatepetl	6.92	315	eP	Pn	21 00 13.2	-5.1
PBXN	Popocatepetl	7.00	315	eP	Pn	21 00 09.0	-11
PPM	Popocatepetl	7.02	315	eP	Pn	21 00 18.3	-1.6
PPM				eS	Sn	21 01 36.6	-2.9
MEIG	Mezcala	7.07	303	eP	Pn	21 00 18.0	-2.2
MEIG				eS	Sn	21 01 37.0	-3.2
YAIG	Yautepec	7.19	312	eP	Pn	21 00 13.9	-8.0
YAIG				eS	Sn	21 01 43.2	-0.2
CAIG	El Cayaco	7.22	295	eP	Pn	21 00 15.1	-7.1
CAIG				eS	Sn	21 01 35.7	-8.1
CXUV	Coxquihui	7.23	327	eP	Pn	21 00 18.5	-3.9
CXUV				eS	Sn	21 01 39.2	-4.9
PLIG	Platanillo	7.23	307	eP	Pn	21 00 21.7	-0.8
PLIG				eS	Sn	21 01 39.8	-4.5
MYIG	Merida	7.66	27	eP	Pn	21 00 32.1	+3.8
MYIG				eS	Sn	21 01 48.1	-6.6
ARIG	Puente Sto Nin	7.84	303	eP	Pn	21 00 34.5	+3.7
ARIG				eS	Sn	21 01 47.9	-11
DEIG	Demacu	8.17	320	eP	Pn	21 00 30.6	-4.9
DEIG				eS	Sn	21 02 04.1	-3.4
JTS	Las Juntas de	9.10	114	Pn	Pn	21 00 45.7	-2.5
	comp=E,1.0nm,0.3s,baz=327,slow=23,SNR=1.9						
JTS				Lg	Lg	21 02 56.6	
	comp=E,0.3nm,0.3s,baz=135,slow=15,SNR=3.8						
	comp=E,2.6nm,0.3s						
TXAR	Lajitas Array	17.88	330	P	P	21 02 51.0	+4.9
	comp=E,0.1nm,0.3s,baz=153,slow=11,SNR=9.8						
	comp=E,1.6nm,0.8s						
PDAR	Pinedale Array	31.77	337	P	P	21 05 04.3	+3.2
	comp=E,0.4nm,0.7s,baz=147,slow=9.3,SNR=1.7						
	comp=E,0.4nm,0.7s						
NVAR	Mina Array Bea	32.73	322	P	P	21 05 15.7	+6.1
	comp=E,0.8nm,0.6s,baz=150,slow=7.1,SNR=6.5						
	comp=E,0.8nm,0.6s						
YKA	Yellowknife Ar	50.61	347	P	P	21 07 37.3	+2.1
	comp=E,2.1nm,0.7s,baz=158,slow=6.4,SNR=7.9						
	comp=E,2.1nm,0.7s						
ILAR	Eielson Array	62.20	337	P	P	21 09 00.1	+2.3
	comp=E,0.6nm,0.8s,baz=151,slow=5.3,SNR=6.6						
	comp=E,0.6nm,0.8s						
ARCES	ARCESS Array B	86.46	18	P	P	21 11 18.8	-0.1
	comp=E,2.4nm,1.0s,baz=304,slow=2.1,SNR=4.1						
	comp=E,2.4nm,1.0s						
CMAR	Chiang Mai Arr	145.42	339	PKPbc	PKPdf	21 18 18.6	+3.1
	comp=E,1.3nm,0.3s,baz=339,slow=3.1,SNR=6.3						

IDC 14 21:01:54.6±2.3**, 7.°65S**×**129.°90E, h0**^{km}**, mb3.5**/1**, mbtmp3.3**/4**, ML3.2**/3**, Error ellipse: s-maj=75.4km s-min=30.6km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.19	201	Pn	Pn	21 04 38.0	+2.1
	0.1nm,0.3s,baz=27,slow=11,SNR=8.4						
FITZ				Sn	Sn	21 06 35.8	-6.0
	0.6nm,0.3s,baz=213,slow=21,SNR=7.6						
	1.7nm,0.7s						
WRA	Warramunga Arr	12.96	161	Pn	Pn	21 04 59.2	-1.0
	0.1nm,0.3s,baz=338,slow=13,SNR=8.5						
WRA				Sn	Sn	21 07 14.1	-11
	0.5nm,0.3s,baz=337,slow=22,SNR=12						
	0.3nm,0.5s						
ASAR	Alice Springs	16.38	167	Pn	Pn	21 05 45.0	-1.2
	0.1nm,0.3s,baz=351,slow=14,SNR=5.4						
ASAR				Sn	Sn	21 08 39.0	-10
	0.1nm,0.3s,baz=350,slow=25,SNR=7.2						
	0.1nm,0.4s						
MKAR	Makanchi Array	68.71	327	P	P	21 13 00.2	-0.1
	0.3nm,0.6s,baz=122,slow=8.2,SNR=3.0						
	0.3nm,0.6s						

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*IDC **14** 21:04:03.5±0.4, 30.°28S×178.°02W, h0^{km}, mb4.5/17, mbtmp4.5/20, ML4.1/3, MS3.8/9, Error ellipse: s-maj=17.9km s-min=12.7km az=100.0*
*NEIC **14** 21:04:07.0±1.8, 30.°22S±0.°06×177.°9W±0.°1, h15^{km}±2^{km}, mb4.8/52, Error ellipse: s-maj=15.2km s-min=7.9km az=100.0*
ISC 14 21:04:10.4±0.4**, 30.°31S**±0.°05×**178.°00W**±0.°07**, h46**^{km}**, n170, σ1**^{s}**.99**/186**, mb4.8**/44**, MS3.9**/9**, 2C-1D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.05	4	P	Pn	21 04 26.1	-2.6
GLKZ				S	Sn	21 04 39.0	-3.1
RAO	Raoul Island	1.06	4		Pn	21 04 26.5	-2.3
RAO				Sn	Sn	21 04 39.8	-2.6
RAO	Raoul Island	1.06	4	Pn	Pn	21 04 26.5	-2.3
	821nm,0.3s,baz=93,slow=10,SNR=46						
RAO				Sn	Sn	21 04 38.3	-4.1
	7µm,0.3s,baz=133,slow=22,SNR=18						
RAO				LR	LR	21 04 49.0	
	comp=Z,489nm,21.6s,baz=154,slow=44						
RIZ	Raoul Island	1.06	3	P	Pn	21 04 26.5	-2.4
RIZ				S	Sn	21 04 39.1	-3.5
MXZ	Matakaoa Point	7.86	202	Pn	Pn	21 05 59.6	-2.5
MXZ	Matakaoa Point	7.86	202	P	Pn	21 05 59.4	-2.6
MXZ				S	Sn	21 07 27.5	-2.1
WMGZ	Waiomatatini S	8.06	201	P	Pn	21 06 01.7	-3.2
WMGZ				S	Sn	21 07 34.9	+0.4
GRZ	Great Barrier	8.07	221	P	Pn	21 06 13.0	+8.1
PKGZ	Pakihiroa	8.21	202	P	Pn	21 06 04.2	-2.7
PKGZ				S	Sn	21 07 37.5	-0.8
HAZ	Te Kaha	8.21	204	P	Pn	21 06 04.7	-2.2
HAZ				S	Sn	21 07 40.6	+2.3
PUZ	Puketiti	8.34	201	P	Pn	21 06 05.1	-3.7
PUZ				S	Sn	21 07 40.5	-1.0
RUGZ	Raukumara Rang	8.43	204	P	Pn	21 06 07.1	-3.0
RUGZ				S	Sn	21 07 44.6	+0.6
TWGZ	Tauwhareparae	8.52	202	P	Pn	21 06 09.0	-2.2
TWGZ				S	Sn	21 07 44.3	-1.7
WCZ	Waipu Caves	8.53	227	P	Pn	21 06 18.3	+7.0
OUZ	Omahuta	8.60	233	P	Pn	21 06 19.6	+7.3
CNGZ	Carnagh Statio	8.73	200	P	Pn	21 06 10.9	-3.2
MWZ	Matawai	8.81	204	P	Pn	21 06 11.0	-4.2
MWZ				S	Sn	21 07 51.5	-1.8
URZ	Urewera	8.90	206	Pn	Pn	21 06 12.7	-3.6
	2.7nm,0.3s,baz=56,slow=5.1,SNR=14						
URZ				Sn	Sn	21 07 54.2	-1.1
	13nm,0.3s,baz=282,slow=23,SNR=14						
	6.0nm,0.3s						
URZ	Urewera	8.90	206	P	Pn	21 06 13.3	-3.1
URZ				S	Sn	21 07 53.8	-1.4
RIGZ	Rimuhau	9.07	202	P	Pn	21 06 15.2	-3.6
RIGZ				S	Sn	21 07 56.4	-3.2
RTZ	Ruatahuna	9.26	205		Pn	21 06 19.4	-2.0
SNGZ	Shannon Statio	9.28	203	P	Pn	21 06 19.6	-2.1
SNGZ				S	Sn	21 08 01.6	-3.1
RAHZ	Arahi	9.49	204	P	Pn	21 06 23.3	-1.2
RAHZ				S	Sn	21 08 06.9	-2.9
MTHZ	Maungataniwha	9.52	205	P	Pn	21 06 21.5	-3.4
MTHZ				S	Sn	21 08 08.3	-2.3
BKZ	Black Stump Fm	9.93	206	Pn	Pn	21 06 28.6	-1.9
BKZ	Black Stump Fm	9.93	206	P	Pn	21 06 28.4	-2.1
HIZ	Hauiti	10.08	214	Pn	Pn	21 06 32.2	-0.4
TMVZ	Te Maari	10.20	209	P	Pn	21 06 33.4	-0.8
ETVZ	East Tongariro	10.21	209	P	Pn	21 06 33.4	-1.0
ETVZ				S	Sn	21 08 27.4	-0.2
TUVZ	Tukino	10.34	209	P	Pn	21 06 38.4	+2.1
KAHZ	Kahuranaki	10.35	203	P	Pn	21 06 34.3	-2.0
KAHZ				S	Sn	21 08 25.7	-5.1
KRHZ	Kereru	10.39	205	P	Pn	21 06 33.8	-3.0
KRHZ				S	Sn	21 08 26.0	-5.9
WNVZ	Wahianoa	10.42	209	P	Pn	21 06 38.2	+0.8
PNHZ	Pukenui	10.69	205	P	Pn	21 06 36.2	-4.8
PNHZ				S	Sn	21 08 31.7	-7.5
DVHZ	Dannevirke	11.04	204	P	Pn	21 06 45.9	+0.2
DVHZ				S	Sn	21 08 39.9	-7.9
BFZ	Birch Farm	11.36	203	Pn	Pn	21 06 48.0	-2.0
TCW	Tory Channel	12.55	208	Pn	Pn	21 07 05.2	-1.1
TUWZ	Tuamarina	12.87	208	Pn	Pn	21 07 09.2	-1.4
NNZ	Nelson	12.93	210	Pn	Pn	21 07 10.1	-1.4
QRZ	Quartz Range	13.01	214	Pn	Pn	21 07 12.5	-0.1
MSVF	Nonsavu	13.03	343	LR	LR	21 11 30.8	
	comp=Z,324nm,19.1s,baz=173,slow=34						
CMWZ	Cape Campbell	13.03	207	Pn	Pn	21 07 14.2	+1.4
BSWZ	Blackbirch Sta	13.13	208	Pn	Pn	21 07 14.5	+0.2
NIUE	Niue	13.37	35	Pn	Pn	21 07 10.1	-7.4
CTZ	Chatham Island	13.45	176	Pn	Pn	21 07 17.4	-1.0
THZ	Tophouse	13.58	210	Pn	Pn	21 07 21.0	+0.6
KHZ	Kahutara	13.86	207	Pn	Pn	21 07 23.3	-0.8
LTZ	Lake Taylor	14.68	209	Pn	Pn	21 07 33.4	-1.8
RPZ	Rata Peaks	15.96	210	Pn	Pn	21 07 48.7	-3.0
	1.7nm,0.3s,baz=16,slow=4.2,SNR=6.9						
RPZ				Sn	Sn	21 10 32.3	-15
	2.8nm,0.3s,baz=97,slow=24,SNR=11						
	2.1nm,0.3s						
DZM	Mont Dzumac	16.18	297	eP	P	21 07 59.3	+2.0
	88nm,1.4s						
DZM				eLR	LR	21 11 41.7	
	524nm,25.6s						
DZM	Mont Dzumac	16.18	297	Pn	P	21 07 57.3	-0.1
	0.3nm,0.3s,baz=118,slow=9.6,SNR=5.6						
ODZ	Otahua Downs	17.21	208	Pn	Pn	21 08 05.3	-2.0
MLZ	Mavora Lakes	18.56	212	P	Pn	21 08 24.1	+0.1
RAR	Rarotonga	18.73	65	P	P	21 08 24.7	-0.7
RAR				IAmb	IAmb	21 08 37.8	
	comp=Z,79nm,1.1s						
RAR	Rarotonga	18.73	65	P	P	21 08 25.5	+0.2
	comp=Z,2.3nm,0.3s,baz=36,slow=10,SNR=4.5						
RAR				LR	LR	21 13 14.2	
	comp=Z,304nm,20.9s,baz=266,slow=29						
	comp=Z,34nm,0.8s						
ARMA	Armidale	26.17	262	P	P	21 09 42.5	+1.8
TBI	Tubuai	26.35	82	eLR	LR	21 16 11.8	
	comp=Z,1µm,25.8s						
EIDS	Eidsvold	27.73	273		P	21 09 56.1	+1.5
EIDS				IAmb	IAmb	21 09 57.9	
	comp=Z,11nm,0.7s						
CAN	Canberra	28.10	251	P	P	21 09 58.7	+0.7
CAN				IAmb	IAmb	21 10 01.4	
	comp=Z,13nm,1.0s						
PPT2	Papeete2	28.81	70	eLR	LR	21 17 15.7	
	comp=Z,321nm,25.0s						
PPT2				eLR	LR	21 17 22.3	
	comp=Z,301nm,27.8s						
PPT	Papeete	28.82	70	LR	LR	21 18 32.2	
	comp=Z,86nm,20.5s,baz=202,slow=30						
TOO	Toolangi	31.00	247	P	P	21 10 25.3	+1.7
CTAO	Charters Tower	33.78	279		P	21 10 50.1	+1.9
STKA	Stephens Creek	34.50	257		P	21 10 56.7	+2.5
STKA	Stephens Creek	34.50	257	P	P	21 10 56.0	+1.8
	comp=Z,23nm,0.8s,baz=96,slow=11,SNR=54						
STKA				LR	LR	21 23 59.6	
	comp=Z,145nm,18.5s,baz=53,slow=35						
BBOO	Buckleboo	38.99	254		P	21 11 33.2	+0.8
BBOO				IAmb	IAmb	21 11 35.0	
	comp=Z,22nm,0.8s						
COEN	Coen	39.25	286	P	P	21 11 35.9	+1.1
TAOE	Nuku Hiva Isla	41.27	67	eLR	LR	21 23 04.7	
	comp=Z,137nm,24.8s						
AS31	Alice Springs	43.11	267		P	21 12 06.5	+0.1
ASAR	Alice Springs	43.11	267		P	21 12 06.2	-0.3
ASAR	Alice Springs	43.11	267	P	P	21 12 06.5	0.0
	comp=Z,7.2nm,0.7s,baz=103,slow=7.7,SNR=75						
ASAR				PcP	PcP	21 13 54.5	-1.3
	comp=Z,0.7nm,0.4s,baz=119,slow=4.0,SNR=4.3						
ASAR				LR	LR	21 30 09.7	
	comp=Z,144nm,18.4s,baz=90,slow=36						
	comp=Z,7.2nm,0.7s						
WR8	Warramunga Arr	43.95	272		P	21 12 13.4	+0.2
WR8				IAmb	IAmb	21 12 15.9	
	comp=Z,13nm,0.7s						
WRAB	Tennant Creek	44.09	272	P	P	21 12 14.2	-0.1
WRAB				IAmb	IAmb	21 12 16.6	
	comp=Z,14nm,0.6s						
WRA	Warramunga Arr	44.09	272	P	P	21 12 13.7	-0.7
WRA	Warramunga Arr	44.09	272	P	P	21 12 14.3	-0.1
	comp=Z,15nm,0.4s,baz=111,slow=8.1,SNR=143						
WRA				PcP	PP	21 13 57.2	-0.5
	comp=Z,0.6nm,0.5s,baz=120,slow=3.3,SNR=1.0						
WRA				S	S	21 18 39.7	-4.3
	comp=Z,1.3nm,0.9s,baz=110,slow=13,SNR=5.7						
WRA				LR	LR	21 30 33.3	
	comp=Z,128nm,18.0s,baz=4.5,slow=36						
	comp=Z,15nm,0.4s						
WB0	Warramunga Arr	44.12	272		P	21 12 14.4	-0.2
WB0				IAmb	IAmb	21 12 17.5	
	comp=Z,27nm,1.1s						
FORT	Forrest	46.07	255	P	P	21 12 29.8	-0.1
JAY	Jayapura	47.86	297	P	P	21 12 43.9	-0.2
	comp=Z,6.3nm,0.6s,baz=95,slow=3.8,SNR=4.7						
	comp=Z,6.3nm,0.6s						
SBA	Scott Base	48.13	184	P	P	21 12 48.6	+3.3
SBA				IAmb	IAmb	21 12 49.8	
	comp=Z,6.6nm,0.8s						
VNDA	Vanda	48.18	186	P	P	21 12 48.5	+2.8
VNDA	Vanda	48.18	186	P	P	21 12 45.2	-0.5
	comp=Z,0.7nm,0.6s,baz=359,slow=7.9,SNR=7.9						
VNDA				PcP	PcP	21 14 11.3	-1.1
	comp=Z,1.9nm,0.7s,baz=16,slow=3.7,SNR=5.9						
	comp=Z,0.7nm,0.6s						
KNRA	Kununurra	50.70	274		P	21 13 05.8	+0.1
SAUI	Saumlaki	52.28	284	P	P	21 13 17.5	-0.1
FITZ	Fitzroy Crossi	52.36	270	P	P	21 13 17.9	-0.2
FITZ	Fitzroy Crossi	52.36	270	P	P	21 13 18.0	-0.2
	comp=Z,7.4nm,0.8s,baz=145,slow=5.5,SNR=13						
FITZ				LR	LR	21 34 23.4	
	comp=Z,134nm,19.8s,baz=124,slow=35						
	comp=Z,7.4nm,0.8s						
NWAO	Narrogin (SRO)	54.43	249	LR	LR	21 34 22.1	
	comp=Z,74nm,18.4s,baz=299,slow=33						
BATI	Baumata	57.64	277	LR	LR	21 38 47.4	
	comp=Z,235nm,18.1s,baz=140,slow=36						
QSPA	South Pole Qui	59.80	180		P	21 14 12.9	+2.2
QSPA	South Pole Qui	59.80	180	P	P	21 14 12.5	+1.7
	comp=Z,8.9nm,0.8s,baz=3.9,slow=0.6,SNR=46						
	comp=Z,8.9nm,0.8s						
BELA	Belgrano 2	69.87	172	P	P	21 15 16.4	+0.5
BELA				IAmb	IAmb	21 15 33.0	
	comp=Z,7.2nm,0.8s						
MAW	Mawson	72.39	201	P	P	21 15 31.0	-0.2
	comp=Z,2.9nm,0.8s,baz=159,slow=3.8,SNR=8.2						
	comp=Z,2.9nm,0.8s						
SYO	Syowa Base	77.20	193	⇓eP	P	21 16 00.0	+1.0
TROLL	Troll, Antarti	77.96	180	⇑P	P	21 16 03.4	0.0
	comp=Z,691nm,0.8s						
MJAR	Matsushiro Arr	78.17	325	P	P	21 16 03.4	-1.5
	comp=Z,3.2nm,1.0s,baz=157,slow=5.0,SNR=4.8						
	comp=Z,3.2nm,1.0s						
SNAA	Sanae	78.24	178	⇑P	P	21 16 05.6	+0.7
	comp=Z,55nm,0.5s						
SNAA	Sanae	78.24	178		P	21 16 05.6	+0.7

SNAA				IAmb	IAmb	21 16 06.1	
	comp=Z,7.4nm,1.1s						
SNAA	**Sanae**	**78.24**	**178**	P	**P**	**21 16 04.7**	**-0.3**
	comp=Z,4.8nm,1.0s,baz=173,slow=6.3,SNR=8.3						
	comp=Z,4.8nm,1.0s						
H03S2	**Juan Fernandez**	**80.51**	**124**	T	T	22 45 30.8	
	baz=238,slow=74,SNR=39						
H03S1	**Juan Fernandez**	**80.53**	**124**	T	T	22 45 31.2	
	baz=238,slow=74,SNR=34						
H03S3	**Juan Fernandez**	**80.53**	**124**	T	T	22 45 29.8	
	baz=238,slow=74,SNR=49						
PLCA	**Paso Flores**	**82.57**	**133**	P	**P**	**21 16 29.1**	**+0.3**
	comp=Z,4.0nm,1.0s,baz=243,slow=6.8,SNR=3.8						
	comp=Z,4.0nm,1.0s						
KSRS	**Korea Array**	**84.28**	**320**	P	**P**	**21 16 37.7**	**+0.5**
	comp=Z,3.0nm,1.0s,baz=137,slow=5.6,SNR=7.2						
	comp=Z,3.0nm,1.0s						
PEA0B	**Petropavlovsk-**	**85.73**	**346**	P	**P**	**21 16 45.2**	**+1.1**
PEA0B				IAmb	IAmb	21 16 46.3	
	comp=Z,6.5nm,0.8s						
PETK	**Petropavlovsk-**	**85.73**	**346**		**P**	**21 16 44.5**	**+0.4**
PETK	**Petropavlovsk-**	**85.73**	**346**	P	**P**	**21 16 43.5**	**-0.6**
	comp=Z,7.0nm,0.8s,baz=153,slow=8.3,SNR=12						
	comp=Z,7.0nm,0.8s						
MT01	**Popeta**	**85.92**	**127**	P	**P**	**21 16 46.3**	**+0.5**
NJ2	**Nanjing**	**86.19**	**311**	*e*P	**P**	**21 16 48.8**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MT02	**Curacav**	**86.33**	**127**	P	**P**	**21 16 48.6**	**+0.8**
MT02				IAmb	IAmb	21 17 04.1	
	comp=Z,5.5nm,0.8s						
S12K	**Black Hills**	**86.75**	**9**	P	**P**	**21 16 49.4**	**+0.3**
O02D	**Mt. Diablo Mer**	**86.83**	**39**	P	**P**	**21 16 50.7**	**+0.8**
USRK	**Ussuriysk Ar.**	**87.09**	**327**	P	**P**	**21 16 51.5**	**+0.6**
USRK	**Ussuriysk Ar.**	**87.09**	**327**	P	**P**	**21 16 51.0**	**0.0**
	comp=Z,3.0nm,0.9s,baz=114,slow=2.5,SNR=4.2						
	comp=Z,3.0nm,0.9s						
USA0B	**Ussuriysk Arra**	**87.09**	**327**	P	**P**	**21 16 51.8**	**+0.8**
214A	**Organ Pipe Nat**	**87.48**	**51**	P	**P**	**21 16 54.7**	**+1.5**
NVAR	**Mina Array Bea**	**88.17**	**43**	P	**P**	**21 16 57.4**	**+0.7**
	comp=Z,2.6nm,0.8s,baz=224,slow=8.6,SNR=11						
	comp=Z,2.6nm,0.8s						
PRN	**Pahroc Range**	**89.46**	**45**	P	**P**	**21 17 03.9**	**+1.3**
PRN				IAmb	IAmb	21 17 05.6	
	comp=Z,4.4nm,1.0s						
X16A	**Lo Mia Camp, P**	**89.89**	**49**	P	**P**	**21 17 05.5**	**+0.8**
X16A				IAmb	IAmb	21 17 23.4	
	comp=Z,6.9nm,0.9s						
TIA	**Tai'an**	**89.91**	**313**	P	**P**	**21 17 06.6**	**+2.0**
U15A	**North Rim**	**90.57**	**47**		**P**	**21 17 08.2**	**+0.2**
U15A				IAmb	IAmb	21 17 26.4	
	comp=Z,4.3nm,0.8s						
KNB	**Kanab**	**90.60**	**47**	P	**P**	**21 17 08.1**	**+0.1**
KNB				IAmb	IAmb	21 17 10.2	
	comp=Z,5.0nm,1.0s						
WUAZ	**Wupatki**	**90.60**	**48**	P	**P**	**21 17 08.0**	**-0.1**
WUAZ				IAmb	IAmb	21 17 10.4	
	comp=Z,5.6nm,1.0s						
PSUT	**Pine Spring**	**90.90**	**45**	P	**P**	**21 17 09.3**	**-0.1**
I07A	**Izee**	**91.29**	**38**	P	**P**	**21 17 11.1**	**+0.2**
I07A				IAmb	IAmb	21 17 28.5	
	comp=Z,4.6nm,1.0s						
N15K	**Kwethluk River**	**91.35**	**9**	P	**P**	**21 17 10.7**	**0.0**
J08A	**Circle Bar Ran**	**91.36**	**39**	P	**P**	**21 17 11.1**	**-0.2**
NLWA	**Neilton Lookou**	**91.39**	**33**	P	**P**	**21 17 10.7**	**-0.5**
NLWA				IAmb	IAmb	21 17 25.6	
	comp=Z,5.0nm,1.1s						
ILSW	**Iliamna Southw**	**92.27**	**12**	P	**P**	**21 17 14.8**	**-0.3**
TXAR	**Lajitas Array**	**92.34**	**57**	P	**P**	**21 17 17.1**	**+0.9**
	comp=Z,1.0nm,1.1s,baz=205,slow=5.5,SNR=5.1						
	comp=Z,1.0nm,1.1s						
G08A	**Pilot Rock**	**92.39**	**37**		**P**	**21 17 15.8**	**-0.2**
G08A				IAmb	IAmb	21 17 34.0	
	comp=Z,5.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**93.37**	**289**	P	**P**	**21 17 22.6**	**+1.6**
	comp=Z,1.6nm,0.3s,baz=115,slow=5.0,SNR=6.7						
	comp=Z,1.6nm,0.3s						
J16K	**Anvik River**	**94.30**	**8**		**P**	**21 17 23.9**	**-0.3**
J16K				IAmb	IAmb	21 17 25.9	
	comp=Z,6.5nm,0.9s						
BMRM	**Bremner River**	**94.94**	**16**	P	**P**	**21 17 27.6**	**+0.3**
PZH	**PanZhiHua**	**95.27**	**298**	P	**P**	**21 17 32.3**	**+2.6**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,110nm,5.1s						
TNA	**Tin City**	**95.88**	**4**		**P**	**21 17 31.7**	**+0.4**
TRF	**Thorofare Moun**	**96.00**	**12**	P	**P**	**21 17 32.0**	**-0.2**
TRF				IAmb	IAmb	21 17 48.6	
	comp=Z,4.5nm,0.8s						
BPMT	**Black Pine Rid**	**96.07**	**39**		**P**	**21 17 32.6**	**-0.5**
HHC	**Hu-ho-hao-te**	**96.17**	**314**	*e*P	**P**	**21 17 35.3**	**+1.8**
HHC				pmax	pmax		
	comp=Z,13nm,0.5s						
HHC				pmax	pmax		
	comp=Z,41nm,3.5s						
RND	**Reindeer**	**96.23**	**13**	P	**P**	**21 17 33.2**	**+0.1**
RND				IAmb	IAmb	21 17 34.1	
	comp=Z,5.4nm,1.0s						
DOT	**Dot Lake**	**97.42**	**15**	P	**P**	**21 17 37.4**	**-1.1**
DOT				IAmb	IAmb	21 17 55.2	
	comp=Z,3.8nm,0.9s						
ILAR	**Eielson Array**	**97.84**	**13**	P	**P**	**21 17 39.5**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=207,slow=6.3,SNR=4.8						
	comp=Z,0.7nm,0.8s						
J26L	**Joseph Creek**	**98.28**	**14**		Pdif	21 17 42.2	-0.2
LZH	**Lanzhou**	**98.67**	**307**	*e*P	Pdif	21 17 48.0	+3.0
LZH				sP	pP	21 17 56.4	-1.8
LZH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MKAR	**Makanchi Array**	**117.72**	**310**	PKP	**PKPdf**	**21 22 50.0**	**-1.3**
	comp=Z,0.8nm,0.5s,baz=72,slow=4.0,SNR=4.4						
KSH	**Kashi**	**120.19**	**301**	PKP	**PKiKP**	**21 22 58.0**	**+1.5**
NRN	**Naryn**	**120.68**	**303**	PKPdf	**PKPdf**	**21 22 56.5**	**-1.1**
KURBB	**Kurchatov Arra**	**121.03**	**314**	PKP	**PKPdf**	**21 22 55.9**	**-1.6**
	comp=Z,3.7nm,0.8s,baz=82,slow=2.0,SNR=11						
BVAR	**Borovoye Array**	**126.34**	**316**	PKP	**PKPdf**	**21 23 06.9**	**-0.7**
	comp=Z,8.2nm,0.9s,baz=87,slow=3.1,SNR=29						
ARCES	**ARCESS Array B**	**138.50**	**348**	PKhKP	PKPpre	21 23 20.4	
	comp=Z,1.7nm,0.7s,baz=349,slow=1.2,SNR=7.9						
FINES	**FINESS Array B**	**145.06**	**340**	PKPbc	**PKPbc**	**21 23 40.3**	**-1.2**
	comp=Z,22nm,0.5s,baz=58,slow=3.6,SNR=201						
KBZ	**Khabaz**	**145.06**	**304**	PKPbc	**PKPab**	**21 23 41.6**	**-0.4**
	comp=Z,4.1nm,0.8s,baz=115,slow=3.7,SNR=7.1						
NB2	**NORSAR Subarra**	**148.66**	**351**	PKP	**PKPbc**	**21 23 51.2**	**-0.7**
	comp=Z,3.1nm,0.5s,baz=12,slow=2.6						
NOA	**NORSAR Array B**	**148.66**	**351**	PKPbc	**PKPbc**	**21 23 50.9**	**-1.0**
	comp=Z,5.9nm,0.6s,baz=16,slow=4.2,SNR=37						
HFS	**Hagfors**	**149.16**	**349**	PKPbc	**PKPbc**	**21 23 51.7**	**-1.4**
	comp=Z,10nm,0.7s,baz=242,slow=3.2,SNR=7.6						
MNK	**Minsk**	**149.51**	**330**	*i* PKP	**PKPbc**	**21 23 53.2**	**-0.9**
	comp=E,8.0nm,0.9s						
MNK				*i* PKP	**PKPbc**	**21 23 53.2**	**-0.9**
	comp=N,3.0nm,0.7s						
MNK				*i* PKP	**PKPbc**	**21 23 53.2**	**-0.9**
	comp=Z,21nm,0.8s,baz=48						
MNK				*i* PP	**PP**	**21 27 29.6**	**+2.6**
MNK				*i* PPP	PPP	21 30 52.6	
MNK				*i* SKS	**SKSdf**	**21 30 55.2**	**+1.6**
MNK				*i* SS	**SS**	**21 46 43.2**	**+5.9**
MNK				*i* SSS	SSS	21 52 22.0	
MNK				*i* LQ	LQ	22 23 23.4	
MNK				*i* LRM	MLR	22 31 14.3	
	comp=N,38nm,18.5s						
MNK				*i* LRM	MLR	22 31 24.4	
	comp=E,31nm,17.7s						
MNK				*i* LRM	MLR	22 32 00.8	
	comp=Z,32nm,14.1s						
NACGM	**Naroch**	**149.70**	**331**	*e*PKP	**PKPbc**	**21 23 54.4**	**-0.2**
	comp=Z,20nm,1.0s,baz=46						
STRU	**Stroemstad**	**150.60**	**350**	*e*P	**PKPbc**	**21 23 56.1**	**-0.5**
AKASG	**Malin Array Be**	**151.23**	**323**	PKPbc	**PKPbc**	**21 23 57.5**	**-0.9**
	comp=Z,12nm,0.7s,baz=50,slow=2.8,SNR=53						
MMAI	**Mount Meron Ar**	**151.51**	**284**	PKPbc	**PKiKP**	**21 24 00.2**	**+0.1**
	comp=Z,4.7nm,0.4s,baz=88,slow=6.8,SNR=43						
BORU	**Boraas**	**151.68**	**348**	*e*P	**PKPbc**	**21 23 58.1**	**-1.1**
HOMB	**Homborsund**	**151.69**	**353**	*i* P	**PKPbc**	**21 23 57.0**	**-2.1**
SNART	**Snartemo**	**151.75**	**354**	*e*P	**PKPbc**	**21 23 58.6**	**-0.7**
ONAU	**Onsala**	**152.05**	**349**	*e*P	**PKPbc**	**21 23 58.9**	**-1.1**
FABU	**Falkenberg**	**152.28**	**347**	*e*P	**PKPbc**	**21 23 59.6**	**-1.0**
DEL	**Delary**	**152.55**	**346**	*i* P	**PKPbc**	**21 24 00.0**	**-1.2**
BRTR	**Keskin Array B**	**152.56**	**299**	PKPbc	**PKPbc**	**21 24 01.1**	**-0.9**
	comp=Z,1.8nm,0.5s,baz=148,slow=5.7,SNR=13						
EKA	**Eskdalemuir Ar**	**154.72**	**7**	PKPab	**PKPab**	**21 24 20.1**	**-0.9**
	comp=Z,3.3nm,0.8s,baz=350,slow=4.3,SNR=7.0						
CLL	**Collm**	**157.48**	**342**	*i* PKPab	**PKPab**	**21 24 31.7**	**-1.2**
	comp=Z,5.0nm,0.8s						
CLL				AMS	AMS	22 32 00.0	
	comp=Z,100nm,18.7s						
GERES	**GERESS Array B**	**159.45**	**338**	PKP	**PKPdf**	**21 24 02.4**	**-1.3**
	comp=Z,0.4nm,0.8s,baz=273,slow=2.5,SNR=3.8						
TORD	**Torodi Ar. Bea**	**162.92**	**179**	PKPab	**PKPab**	**21 24 57.7**	**+0.3**
	comp=Z,4.9nm,0.7s,baz=152,slow=2.0,SNR=8.1						
ESDC	**Sonseca Array**	**169.46**	**26**	PKP	**PKPdf**	**21 24 13.0**	**+0.2**
	comp=Z,1.1nm,1.0s,baz=339,slow=3.6,SNR=5.2						
ESDC				PKPab	**PKPab**	**21 25 24.8**	**-1.1**
	comp=Z,0.7nm,0.9s,baz=324,slow=5.5,SNR=4.2						

GCG ***14*** *21:18:58.5±2.1, 13°.99N×93°.33W, h36km±999km, MD3.8, ML3.5*

MEX ***14*** *21:19:03.4±0.6, 14°.28N×93°.17W, h15km±999km, MD3.8*

ISC 14 21:18:56.7±2.7**, 14°.3N**±0°.1×**93°.27W**±0°.09**, h15**km±12km**,** **n10, σ0s.94**/16**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**1.16**	**57**	*e*S	**Sn**	**21 19 34.9**	**+0.9**
PATR	**El Naranjo**	**1.31**	**50**	*e*P	**Pg**	**21 19 22.3**	**+0.5**
PATR				*e*S	**Sn**	**21 19 38.2**	**+0.2**
PAVE	**Pavencul**	**1.40**	**49**	*e*P	**Pg**	**21 19 24.1**	**+0.4**
PAVE				*e*S	**Sb**	**21 19 39.1**	**-1.3**
PCIG		**1.43**	**2**	*e*P	**Pg**	**21 19 24.1**	**0.0**
PCIG				*e*S	**Sn**	**21 19 39.0**	**-1.7**
STG8	**El Palmar, Qui**	**1.86**	**84**	*i* P	**Pn**	**21 19 28.2**	**-0.2**
STG8				IAML		21 19 52.7	
	comp=E,366nm,0.2s						
STG0	**El Palmar, Qui**	**1.87**	**85**	*i* P	**Pn**	**21 19 28.0**	**-0.4**
STG0				IAML		21 19 54.8	
	comp=E,687nm,0.2s						
CCIG	**Comitan**	**2.28**	**28**	*e*P	**Pg**	**21 19 39.4**	**-1.0**
CCIG				*e*S	**Sb**	**21 20 06.0**	**+0.2**
CCIG	**Comitan**	**2.28**	**28**	*i* P	**Pg**	**21 19 39.7**	**-0.7**
CCIG				*i* S	**Sg**	**21 20 10.1**	**+0.1**
CCIG				IAML		21 20 12.7	
	comp=N,104nm,0.4s						
TGIG		**2.50**	**3**	*e*P	**Pb**	**21 19 41.7**	**+0.3**
TGIG				*e*S	**Sn**	**21 20 08.6**	**+1.4**
TGIG		**2.50**	**3**	*i* S	**Sb**	**21 20 12.8**	**+0.9**

IDC 14 21:36:07.1±1.5**, 44°.01N**×**105°.74W, h0**km**, mbtmp3.2**/2**,** **ML1.9**/1**, Error ellipse: s-maj=39.7km s-min=10.5km az=147.0, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDAR	**Pinedale Array**	**3.05**	**247**	Pn	Pn	21 36 59.5	+2.7
	1.9nm,0.3s,baz=61,slow=13,SNR=19						
PDAR				Lg	Lg	21 37 43.0	
	5.0nm,0.3s,baz=62,slow=30,SNR=1.5						
I56US	**NEWPORT INFRAS**	**8.98**	**302**	I	I	22 32 40.0	
	0.1nm,1.7s,baz=116,slow=313,SNR=7.2						
ULM	**Lac du Bonnet**	**9.17**	**44**	Pn	Pn	21 38 19.1	-1.5
	0.2nm,0.3s,baz=228,slow=14,SNR=2.0						
ULM				Pg		21 38 49.6	
	0.2nm,0.3s,baz=216,slow=19,SNR=1.4						
ULM				Lg	Lg	21 40 49.0	
	0.4nm,0.3s,baz=180,slow=8.1,SNR=3.3						
	1.0nm,0.4s						
TXAR	**Lajitas Array**	**14.74**	**173**	Pg	P	21 40 36.5	+53
	baz=359,slow=18,SNR=1.8						
TXAR				Lg	Lg	21 43 46.7	
	baz=353,slow=32,SNR=5.1						

IDC ***14*** *22:09:27.4±1.8, 26°.10N×59°.72E, h0km, mb3.9/8, mbtmp3.9/8, ML2.2/1, Error ellipse: s-maj=42.8km s-min=24.5km az=116.0*

TEH ***14*** *22:09:28.0, 26°.01N×59°.87E, h28km±54km*

NEIC ***14*** *22:09:29.1±1.3, 26°.1N±0°.1×59°.83E±0°.07, h16km±5km, mb4.0/3, Error ellipse: s-maj=14.7km s-min=9.3km az=172.0*

THR ***14*** *22:09:29.9±0.0, 26°.21N×59°.86E, h21km±8km, ML3.9*

OMAN ***14*** *22:09:33.1±0.1, 25°.81N×59°.58E, h10km, ml3.7/20, Error ellipse: s-maj=1.3km s-min=0.9km az=43.0*

DSN ***14*** *22:09:36.7±1.9, 25°.89N×59°.48E, h30km, ML3.1/14, Error ellipse: s-maj=23.9km s-min=12.1km az=23.0*

ISC 14 22:09:28.1±0.6**, 26°.04N**±0°.04×**59°.83E**±0°.04**, h10**km**, n96,** **σ1s.75**/122**, mb4.0**/11**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHBR	**Chabahar**	**0.74**	**127**	*e*Pg	**Pn**	**22 09 45.5**	**+0.9**
CHBR				IAML		22 10 09.4	
	comp=Z,7.8nm,1.0s						
NGCH	**Negor - Chabah**	**1.36**	**120**	Pg	**Pn**	**22 09 53.9**	**+0.8**
NGCH	**Negor - Chabah**	**1.36**	**120**	P	**Pb**	**22 09 54.4**	**+0.7**
	SNR=70						
SRVN	**Saravan**	**2.67**	**59**	Pn	**Pn**	**22 10 11.9**	**+0.6**
SRVN	**Saravan**	**2.67**	**59**	*e*Pn	**Pn**	**22 10 12.4**	**+1.2**
SRVN				IAML		22 10 31.3	
	comp=Z,110nm,1.0s						
KHNJ	**Kahnooj**	**2.68**	**315**	Pn	**Pn**	**22 10 12.7**	**+1.3**
BIDO	**Bidbid**	**2.95**	**212**	P	**Pn**	**22 10 15.7**	**+0.6**
	SNR=70						
BIDO				S	**Sn**	**22 10 48.8**	**-1.7**
WSAR	**Wadi Sarin**	**3.00**	**202**	Pn	**Pn**	**22 10 16.8**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=234,slow=24,SNR=329						
WSAR				Sn	**Sn**	**22 10 49.0**	**-2.7**
	comp=Z,0.5nm,0.3s,baz=79,slow=24,SNR=9.4						
WSAR	**Wadi Sarin**	**3.00**	**202**	P	**Pn**	**22 10 16.9**	**+1.3**
WSAR				S	**Sn**	**22 10 49.6**	**-2.1**
IBND	**Bandar-abas**	**3.26**	**296**	Pn	**Pn**	**22 10 20.7**	**+1.5**
MDH	**Madha**	**3.27**	**258**	P	**Pn**	**22 10 20.3**	**+0.9**
	SNR=62						
MDH				S	**Sn**	**22 10 56.2**	**-2.3**
MDH	**Madha**	**3.27**	**258**	P	**Pn**	**22 10 20.0**	**+0.6**
MDH				S	**Sn**	**22 10 55.8**	**-2.7**
KBAM	**BAM**	**3.31**	**339**	Pn	**Pn**	**22 10 20.6**	**+0.5**
SHME	**Shamm**	**3.32**	**271**	P	**Pn**	**22 10 22.0**	**+1.9**
	SNR=26						
SHME	**Shamm**	**3.32**	**271**	P	**Pn**	**22 10 21.9**	**+1.8**
SHME				S	**Sn**	**22 10 58.3**	**-1.3**
HOQ	**Hoqain**	**3.35**	**224**	Pn	**Pn**	**22 10 20.8**	**+0.2**
HOQ	**Hoqain**	**3.35**	**224**	P	**Pn**	**22 10 21.0**	**+0.4**
	SNR=176						
HOQ				S	**Sn**	**22 10 57.3**	**-3.2**
MASF	**Masafi**	**3.38**	**259**	P	**Pn**	**22 10 21.7**	**+0.8**
	SNR=14						
MASF				S	**Sn**	**22 10 58.7**	**-2.4**
MSFE	**Esma-Masafi**	**3.38**	**259**	*i* P	**Pn**	**22 10 21.6**	**+0.6**
	SNR=6.7						
SMDO	**Samad**	**3.38**	**209**	P	**Pn**	**22 10 23.0**	**+1.9**
	SNR=56						
SMDO				S	**Sn**	**22 11 00.6**	**-0.8**
UOSS	**Minazif**	**3.46**	**252**		**Pn**	**22 10 22.2**	**+0.3**
UOSS				Sn	**Sn**	**22 11 02.6**	**-0.4**
UOSS	**Minazif**	**3.46**	**252**	Pn	**Pn**	**22 10 22.5**	**+0.5**
UOSS	**Minazif**	**3.46**	**252**	P	**Pn**	**22 10 22.6**	**+0.7**
UOSS				S	**Sn**	**22 11 01.1**	**-1.9**
UOSS	**Minazif**	**3.46**	**252**	*i* P	**Pn**	**22 10 22.5**	**+0.5**
	SNR=16						
BNDS	**Bandar-Abbas**	**3.54**	**293**	Pn	**Pn**	**22 10 24.8**	**+1.5**
BNDS	**Bandar-Abbas**	**3.54**	**293**	*e*Pn	**Pn**	**22 10 25.6**	**+2.3**
BNDS				IAML		22 11 09.4	
	comp=Z,0.2nm,1.0s						
SOHO	**SOHO**	**3.54**	**238**	P	**Pn**	**22 10 23.7**	**+0.6**
SOHO				S	**Sn**	**22 11 02.4**	**-2.8**
SOHO	**SOHO**	**3.54**	**238**	*i* P	**Pn**	**22 10 23.5**	**+0.3**
	SNR=19						
HATD	**Hatta, Dubai**	**3.56**	**251**	P	**Pn**	**22 10 24.1**	**+0.7**
	SNR=27						
HATD				S	**Sn**	**22 11 02.8**	**-2.7**
HATD	**Hatta, Dubai**	**3.56**	**251**	*i* P	**Pn**	**22 10 24.0**	**+0.6**
	SNR=27						
ZHSF	**Zahedan**	**3.65**	**13**	Pn	**Pn**	**22 10 25.6**	**+0.8**
ZHSF	**Zahedan**	**3.65**	**13**	*e*Pn	**Pn**	**22 10 25.8**	**+1.0**
ZHSF				IAML		22 11 31.1	
	comp=Z,0.0nm,1.0s						
ASHO	**Ashiyiah**	**3.67**	**249**	P	**Pn**	**22 10 26.0**	**+1.0**
	SNR=53						
ASHO				S	**Sn**	**22 11 06.6**	**-1.7**
ASHO	**Ashiyiah**	**3.67**	**249**	*i* P	**Pn**	**22 10 25.8**	**+0.8**
	SNR=53						
JLN	**Jalan Bani Buh**	**3.89**	**186**	P	**Pn**	**22 10 28.3**	**+0.3**
JLN				S	**Sn**	**22 11 11.3**	**-2.5**
NAZ	**Nazwa, Dubai**	**3.91**	**255**	*i* P	**Pn**	**22 10 31.8**	**+3.6**
	SNR=12						
JMDO	**Jabal Madar**	**3.98**	**204**	P	**Pn**	**22 10 31.6**	**+2.4**
	SNR=95						
JMDO				S	**Sn**	**22 11 15.2**	**-0.8**
ARQ	**Araqi**	**4.04**	**229**	P	**Pn**	**22 10 33.8**	**+3.8**
	SNR=113						
ARQ				S	**Sn**	**22 11 16.0**	**-1.5**
FAQ	**Al Faqa, Dubai**	**4.04**	**252**	P	**Pn**	**22 10 34.0**	**+3.9**
	SNR=13						
FAQ				S	**Sn**	**22 11 19.6**	**+2.1**
	SNR=9.8						
FAQ	**Al Faqa, Dubai**	**4.04**	**252**	*i* P	**Pn**	**22 10 33.9**	**+3.8**
	SNR=13						
BSY	**Bisya**	**4.07**	**217**	P	**Pn**	**22 10 33.5**	**+3.0**
	SNR=50						
BSY				S	**Sn**	**22 11 19.9**	**+1.7**
	SNR=8.2						
ALNE	**Al Ain**	**4.20**	**243**	P	**Pn**	**22 10 35.5**	**+3.4**
	SNR=37						
ALNE				S	**Sn**	**22 11 22.5**	**+1.3**
ALNE	**Al Ain**	**4.20**	**243**	*i* P	**Pn**	**22 10 34.8**	**+2.6**
	SNR=15						
CHMN	**Cheshme madani**	**4.31**	**332**	Pn	**Pn**	**22 10 35.3**	**+1.2**
ASUD	**Al Ashush, Dub**	**4.31**	**252**	P	**Pn**	**22 10 37.9**	**+4.2**
	SNR=62						
ASUD				S	**Sn**	**22 11 25.7**	**+1.6**
ASUD	**Al Ashush, Dub**	**4.31**	**252**	*i* P	**Pn**	**22 10 37.3**	**+3.5**
	SNR=62						
AJN	**Ajban**	**4.63**	**252**	P	**Pn**	**22 10 41.3**	**+3.3**
	SNR=11						
AJN				S	**Sn**	**22 11 31.4**	**-0.4**
AJN	**Ajban**	**4.63**	**252**	*i* P	**Pn**	**22 10 41.1**	**+3.1**
	SNR=11						
KRBR	**Kerman**	**4.77**	**326**	Pn	**Pn**	**22 10 41.6**	**+1.3**
KRBR	**Kerman**	**4.77**	**326**	*e*Pn	**Pn**	**22 10 40.2**	**-0.1**
KRBR				IAML		22 11 42.3	
	comp=Z,0.1nm,1.0s						
LAR1	**LAR**	**5.14**	**290**	Pn	**Pn**	**22 10 46.9**	**+1.7**
MHTO	**MHTO**	**5.32**	**199**	P	**Pn**	**22 10 49.6**	**+2.0**
MHTO				S	**Sn**	**22 11 47.0**	**-1.9**
NHDN	**Nehbandan**	**5.33**	**2**	Pn	**Pn**	**22 10 48.7**	**+0.8**
UMZA	**Um Al Zommool**	**5.39**	**233**	P	**Pn**	**22 10 51.1**	**+2.4**
UMZA				S	**Sn**	**22 11 50.1**	**-0.7**
BSRN	**Basiran**	**5.93**	**354**	Pn	**Pn**	**22 10 56.4**	**+0.3**
BSRN	**Basiran**	**5.93**	**354**	*e*Pn	**Pn**	**22 10 56.5**	**+0.3**
BSRN				IAML		22 11 01.5	
	comp=Z,0.0nm,1.0s						
MZR	**Muzera**	**6.53**	**244**	P	**Pn**	**22 11 05.7**	**+1.5**
MZR				S	**Sn**	**22 12 15.2**	**-3.6**
MZR	**Muzera**	**6.53**	**244**	P	**Pn**	**22 11 05.6**	**+1.3**
ITEG	**Tejag**	**6.89**	**352**	Pn	**Pn**	**22 11 10.2**	**+0.8**
IMEH	**Mehriz**	**7.03**	**321**	Pn	**Pn**	**22 11 11.9**	**+0.6**
TPRV	**Parvadeh(Tabas**	**7.48**	**339**	Pn	**Pn**	**22 11 18.0**	**+0.7**
SHRT	**Shahrakht**	**7.59**	**3**	*e*Pn	**Pn**	**22 11 19.8**	**+1.0**
SHRT				IAML		22 12 06.1	
	comp=Z,0.0nm,1.0s						
YZKH	**Yazd**	**7.81**	**325**	*e*Pn	**Pn**	**22 11 22.2**	**+0.4**
YZKH				IAML		22 13 03.5	
	comp=Z,0.0nm,1.0s						
TRNA	**Turayna**	**7.90**	**262**	P	**Pn**	**22 11 25.0**	**+1.9**
	SNR=5.9						
TRNA				S	**Sn**	**22 12 50.0**	**-2.6**
	SNR=8.0						
TABS	**Tabas**	**7.94**	**343**	*e*Pn	**Pn**	**22 11 23.7**	**+0.1**
TABS				IAML		22 12 06.6	
	comp=Z,0.0nm,1.0s						
SHMA	**Al-Shehemyia**	**7.98**	**271**	P	**Pn**	**22 11 25.7**	**+1.5**
SHMA				S	**Sn**	**22 12 51.2**	**-3.4**
KAZ2	**Kazeron-Fars-I**	**8.06**	**298**	Pn	**Pn**	**22 11 26.3**	**+1.0**
IRAM	**Ramesheh**	**8.69**	**313**	Pn	**Pn**	**22 11 34.6**	**+0.5**
KLNJ	**Kolanjah**	**8.77**	**306**	Pn	**Pn**	**22 11 36.0**	**+0.6**
KLNJ	**Kolanjah**	**8.77**	**306**	*e*Pn	**Pn**	**22 11 36.4**	**+1.1**
KLNJ				IAML		22 11 38.7	
	comp=Z,20nm,0.6s						
DOK	**Doka**	**9.08**	**217**	P	**Pn**	**22 11 40.1**	**+0.9**
DMTO	**DMTO**	**9.44**	**210**	P	**Pn**	**22 11 45.1**	**+0.9**
IZEF	**Zefreh**	**9.45**	**318**	Pn	**Pn**	**22 11 44.9**	**+0.3**
WHFO	**Wadi Hawf**	**9.85**	**216**	P	**Pn**	**22 11 50.2**	**+0.4**
ZNGN	**Zangian**	**9.91**	**310**	Pn	**Pn**	**22 11 51.4**	**+0.5**
SBZV	**Sabzevar**	**10.49**	**350**	Pn	**Pn**	**22 12 00.1**	**+1.4**
SBZV	**Sabzevar**	**10.49**	**350**	*i* P	**Pn**	**22 12 01.4**	**+2.7**
SBZV				IAML		22 12 02.2	
	comp=Z,5.0nm,0.6s						
RAYN	**Ar Rayn**	**13.26**	**262**		**Pn**	**22 12 35.2**	**-1.2**
RAYN					Sn	22 14 54.0	-10
RAYN	**Ar Rayn**	**13.26**	**262**	P	**Pn**	**22 12 35.3**	**-1.2**
SMLA	**Simla**	**16.04**	**68**	*e*P	**Pn**	**22 13 11.8**	**-2.0**
HYB	**Hyderabad**	**19.38**	**113**	*e*P	**P**	**22 13 54.2**	**0.0**
MARD	**Mardin**	**19.69**	**309**	P	**P**	**22 13 57.3**	**-0.3**
KBZ	**Khabaz**	**22.38**	**326**	P	**P**	**22 14 28.9**	**+2.4**
	comp=Z,1.5nm,0.7s,baz=119,slow=8.8,SNR=4.0						
AB31	**Akbulak array**	**23.17**	**0**	P	**P**	**22 14 33.8**	**-0.9**
AB31				IAmb	IAmb	22 14 35.9	
	comp=Z,6.6nm,1.4s						
ABKAR	**Akbulak array**	**23.17**	**0**	P	**P**	**22 14 33.9**	**-0.9**
ABKAR				IAmb	IAmb	22 14 35.9	
	comp=Z,6.7nm,1.4s						
EVN	**Everest**	**24.11**	**79**	P	**P**	**22 14 44.1**	**-0.7**
EVN				IAmb	IAmb	22 14 47.7	
	comp=Z,7.5nm,1.3s						
BRTR	**Keskin Array B**	**25.77**	**308**	P	**P**	**22 15 00.3**	**+1.0**
	comp=Z,1.6nm,0.8s,baz=123,slow=12,SNR=11						
	comp=Z,1.6nm,0.8s						
BVAR	**Borovoye Array**	**28.09**	**14**	P	**P**	**22 15 21.1**	**+1.3**
	comp=Z,1.0nm,0.6s,baz=206,slow=9.9,SNR=6.2						
	comp=Z,1.0nm,0.6s						
MILM	**Milestii Mici**	**32.17**	**318**	PKPM		22 15 58.0	
	comp=Z,2µm,3.2s						
ZALV	**Zalesovo Beam**	**33.47**	**27**	P	**P**	**22 16 07.8**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=244,slow=9.4,SNR=2.8						
	comp=Z,0.4nm,0.3s						
FINES	**FINESS Array B**	**42.07**	**337**	P	**P**	**22 17 19.4**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=137,slow=8.3,SNR=14						
	comp=Z,0.6nm,0.3s						
HFS	**Hagfors**	**46.37**	**330**	P	**P**	**22 17 54.1**	**-0.1**
	comp=Z,1.9nm,0.5s,baz=120,slow=8.9,SNR=22						
	comp=Z,1.9nm,0.5s						
NB2	**NORSAR Subarra**	**47.86**	**330**	P	**P**	**22 18 05.0**	**-1.0**
	comp=Z,1.1nm,0.6s,baz=114,slow=7.9						
NOA	**NORSAR Array B**	**47.86**	**330**	P	**P**	**22 18 05.3**	**-0.7**
	comp=Z,1.1nm,0.7s,baz=118,slow=7.6,SNR=7.8						
	comp=Z,1.1nm,0.7s						
ARCES	**ARCESS Array B**	**47.93**	**345**	P	**P**	**22 18 05.9**	**-0.4**
	comp=Z,1.3nm,0.9s,baz=134,slow=8.1,SNR=1.3						
	comp=Z,1.3nm,0.9s						
TORD	**Torodi Ar. Bea**	**55.85**	**269**	P	**P**	**22 19 05.7**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=57,slow=7.6,SNR=1.9						
	comp=Z,0.7nm,0.4s						

IDC ***14*** *22:15:14.2±0.6, 55°.62S×27°.16W, h0km, mb4.3/10, mbtmp4.3/11, ML3.7/1, MS3.5/20, Error ellipse: s-maj=27.6km s-min=15.3km az=60.0*

NEIC ***14*** *22:15:20.7±1.8, 55°.7S±0°.1×27°.3W±0°.2, h35km±2km, mb4.9/37, Error ellipse: s-maj=21.8km s-min=14.8km az=197.0*

ISC 14 22:15:18.2±0.5**, 55°.66S**±0°.08×**27°.24W**±0°.08**, h25**km**, n85,** **σ0s.86**/63**, mb4.8**/23**, MS3.6**/19**, 3C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.50**	**281**		**Pn**	**22 16 38.5**	**0.0**
HOPE					**Sn**	**22 17 39.8**	**-1.1**
VNA3	**Neumayer Olymp**	**17.37**	**161**	⇑P	**P**	**22 19 19.7**	**-0.1**
	comp=Z,9.7nm,0.7s						
EFI	**East Falkland**	**18.61**	**269**	P	**Pn**	**22 19 33.9**	**+0.1**
SNAA	**Sanae**	**19.11**	**156**	⇑P	**Pn**	**22 19 41.1**	**+1.2**
	comp=Z,170nm,0.7s						
SNAA	**Sanae**	**19.11**	**156**	P	**P**	**22 19 39.1**	**+0.1**
SNAA	**Sanae**	**19.11**	**156**	P	**P**	**22 19 38.6**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=304,slow=11,SNR=16						
SNAA				LR	LR	22 25 16.0	
	comp=Z,154nm,21.9s,baz=30,slow=32						
	comp=Z,3.5nm,0.7s						
PMSA	**Palmer Station**	**20.14**	**228**	LR	LR	22 25 60.0	
	comp=Z,148nm,20.8s,baz=26,slow=32						
TROLL	**Troll, Antarti**	**20.61**	**154**	⇑P	Pn	22 19 57.9	+0.3
	comp=Z,229nm,0.5s						
BELA	**Belgrano 2**	**22.47**	**184**		**P**	**22 20 14.2**	**-0.9**
MG03	**Isla Dawson**	**24.71**	**256**	P	**P**	**22 20 37.8**	**+0.7**
GO09	**Cerro Castillo**	**26.83**	**260**	P	**P**	**22 20 55.7**	**-0.5**
GO09				IAmb	IAmb	22 21 25.2	
	comp=Z,34nm,1.4s						
TRQA	**Tornquist**	**29.14**	**293**	P	**P**	**22 21 17.6**	**+0.5**
TRQA				IAmb	IAmb	22 21 53.5	

	comp=Z,55nm,1.9s						
PLTB	**Pedras Altas**	**30.22**	**311**	P	**P**	**22 21 27.4**	**+0.8**
PLTB				IAmb	IAmb	22 21 30.1	
	comp=Z,33nm,1.6s						
PLCA	**Paso Flores**	**31.91**	**279**	LR	LR	22 34 59.9	
	comp=Z,36nm,18.6s,baz=112,slow=37						
ITQB	**Itaqui**	**33.33**	**309**	P	**P**	**22 21 52.6**	**-1.3**
ITQB				IAmb	IAmb	22 21 55.2	
	comp=Z,22nm,1.1s						
QSPA	**South Pole Qui**	**34.59**	**180**		**P**	**22 22 05.2**	**+0.4**
QSPA				IAmb	IAmb	22 22 10.9	
	comp=Z,39nm,1.6s						
QSPA	**South Pole Qui**	**34.59**	**180**	P	**P**	**22 22 05.2**	**+0.4**
	comp=Z,5.0nm,0.7s,baz=105,slow=0.1,SNR=25						
QSPA				LR	LR	22 35 41.6	
	comp=Z,105nm,20.3s,baz=210,slow=35						
	comp=Z,5.0nm,0.7s						
CPUP	**Villa Florida**	**36.53**	**311**		**P**	**22 22 21.9**	**+0.4**
CPUP	**Villa Florida**	**36.53**	**311**	P	**P**	**22 22 21.0**	**-0.5**
	comp=Z,2.1nm,0.9s,baz=9.8,slow=8.2,SNR=13						
CPUP				LR	LR	22 38 12.9	
	comp=Z,24nm,18.5s,baz=2.0,slow=38						
	comp=Z,2.1nm,0.9s						
CPUP	**Villa Florida**	**36.53**	**311**	P	**P**	**22 22 21.6**	**+0.1**
MT09	**Talagante**	**37.16**	**288**	P	**P**	**22 22 26.2**	**-0.9**
MT02	**Curacav**	**37.64**	**288**	P	**P**	**22 22 30.6**	**-0.3**
ZON	**Zonda**	**37.66**	**292**		**P**	**22 22 31.9**	**+0.7**
ZON				IAmb	IAmb	22 22 39.6	
	comp=Z,12nm,0.7s						
CO02	**Combarbal**	**39.15**	**290**	P	**P**	**22 22 45.5**	**+1.7**
CO02				IAmb	IAmb	22 23 54.2	
	comp=Z,50nm,1.6s						
CO03	**El Pedregal**	**39.27**	**291**	P	**P**	**22 22 45.7**	**+0.9**
CO03				IAmb	IAmb	22 22 59.2	
	comp=Z,26nm,1.5s						
CO01	**Juntas del Tor**	**39.64**	**292**	P	**P**	**22 22 49.5**	**+1.4**
MAW	**Mawson**	**40.48**	**144**	P	**P**	**22 22 54.4**	**+0.1**
	comp=Z,2.5nm,0.9s,baz=242,slow=8.7,SNR=3.7						
	comp=Z,2.5nm,0.9s						
AC02	**Maricunga**	**41.68**	**296**		**P**	**22 23 06.5**	**+1.3**
AC02				IAmb	IAmb	22 23 07.6	
	comp=Z,21nm,1.0s						
AC01	**Pan de Azucar**	**42.99**	**295**	P	**P**	**22 23 15.9**	**+0.6**
BDFB	**Brasilia**	**43.01**	**330**	P	**P**	**22 23 15.0**	**-0.6**
	comp=Z,1.1nm,0.4s,baz=143,slow=10,SNR=3.2						
BDFB				LR	LR	22 38 20.2	
	comp=Z,86nm,18.7s,baz=162,slow=32						
	comp=Z,1.1nm,0.4s						
GO02	**Mina Guanaco**	**43.29**	**297**		**P**	**22 23 18.8**	**+0.8**
GO02				IAmb	IAmb	22 23 19.7	
	comp=Z,26nm,0.9s						
PB14	**IPOC Station P**	**44.14**	**297**	P	**P**	**22 23 26.5**	**+1.5**
PB14				IAmb	IAmb	22 23 30.0	
	comp=Z,32nm,1.2s						
PB05	**IPOC Station P**	**45.52**	**298**	P	**P**	**22 23 35.8**	**+0.2**
BOSA	**Boshof**	**45.90**	**76**	P	**P**	**22 23 37.8**	**-0.9**
BOSA				IAmb	IAmb	22 24 05.2	
	comp=Z,41nm,1.9s						
BOSA	**Boshof**	**45.90**	**76**	P	**P**	**22 23 38.0**	**-0.7**
	comp=Z,2.1nm,0.9s,baz=223,slow=7.8,SNR=4.2						
BOSA				LR	LR	22 38 38.6	
	comp=Z,119nm,20.8s,baz=202,slow=31						
	comp=Z,2.1nm,0.9s						
BOSA	**Boshof**	**45.90**	**76**	P	**P**	**22 23 38.3**	**-0.4**
PB09	**IPOC Station P**	**45.93**	**300**	P	**P**	**22 23 40.4**	**+1.4**
PB09				IAmb	IAmb	22 24 41.7	
	comp=Z,29nm,1.3s						
SBA	**Scott Base**	**46.47**	**184**	P	**P**	**22 23 43.8**	**+1.4**
PB01	**IPOC Station P**	**46.69**	**300**	P	**P**	**22 23 46.1**	**+1.2**
VNDA	**Vanda**	**46.97**	**183**		**P**	**22 23 47.2**	**+0.9**
VNDA	**Vanda**	**46.97**	**183**	P	**P**	**22 23 46.4**	**+0.1**
	comp=Z,3.8nm,0.8s,baz=171,slow=5.2,SNR=17						
	comp=Z,3.8nm,0.8s						
VNDA	**Vanda**	**46.97**	**183**	P	**P**	**22 23 46.8**	**+0.5**
PTLB	**Pontes e Lacer**	**46.99**	**316**		**P**	**22 23 47.8**	**+0.6**
SIV	**San Ignacio**	**47.29**	**313**	P	**P**	**22 23 49.4**	**-0.1**
	comp=Z,4.0nm,0.7s,baz=146,slow=8.7,SNR=22						
SIV				LR	LR	22 42 06.4	
	comp=Z,76nm,21.9s,baz=116,slow=34						
	comp=Z,4.0nm,0.7s						
PB08	**IPOC Station P**	**47.29**	**301**	P	**P**	**22 23 50.8**	**+0.8**
PB08				IAmb	IAmb	22 23 54.2	
	comp=Z,17nm,1.0s						
H10S2	**ASCENSION HYDR**	**47.63**	**17**	T	T	23 15 15.8	
	baz=31,slow=74,SNR=24						
H10S3	**ASCENSION HYDR**	**47.63**	**17**	T	T	23 15 13.0	
	baz=189,slow=74,SNR=25						
GO01	**Chusmiza**	**47.71**	**302**	P	**P**	**22 23 54.3**	**+1.0**
H04S2	**CROZET ISLANDS**	**47.73**	**114**	T	T	23 15 35.2	
	baz=231						
H04S3	**CROZET ISLANDS**	**47.74**	**114**	T	T	23 15 34.2	
	baz=231,slow=74						
H04S1	**CROZET ISLANDS**	**47.75**	**114**	T	T	23 15 33.6	
	baz=231,slow=74						
PB11	**IPOC Station P**	**47.86**	**301**	P	**P**	**22 23 55.2**	**+1.1**
CCD	**Concordia, Ant**	**48.07**	**170**	P	**P**	**22 23 54.8**	**-0.6**
H10N1	**ASCENSION HYDR**	**48.75**	**17**	T	T	23 16 40.6	
	baz=189,slow=75,SNR=8.0						
H10N3	**ASCENSION HYDR**	**48.75**	**17**	T	T	23 16 41.1	
	baz=189,slow=75,SNR=17						
H10N2	**ASCENSION HYDR**	**48.77**	**17**	T	T	23 16 39.5	
	baz=189,slow=75,SNR=13						
LBTB	**Lobatse**	**48.92**	**74**	LR	LR	22 42 15.3	
	comp=Z,69nm,18.6s,baz=201,slow=33						
LBTB	**Lobatse**	**48.92**	**74**	P	**P**	**22 24 02.1**	**-0.1**
PB16	**IPOC Station P**	**49.01**	**302**	P	**P**	**22 24 04.4**	**+0.9**
PB16				IAmb	IAmb	22 24 16.1	
	comp=Z,28nm,1.9s						
GRTLG	**Ghanzi**	**49.55**	**66**	P	**P**	**22 24 06.6**	**-0.4**
GRTLG				IAmb	IAmb	22 24 11.5	
	comp=Z,16nm,1.6s						
LPAZ	**La Paz**	**50.13**	**305**		**P**	**22 24 12.8**	**+0.8**
LPAZ				IAmb	IAmb	22 24 14.1	
	comp=Z,9.7nm,0.8s						
LPAZ	**La Paz**	**50.13**	**305**	P	**P**	**22 24 12.3**	**+0.3**
	comp=Z,7.0nm,0.7s,baz=142,slow=5.5,SNR=27						
LPAZ				LR	LR	22 46 39.8	
	comp=Z,42nm,20.4s,baz=146,slow=38						
	comp=Z,7.0nm,0.7s						
LPAZ	**La Paz**	**50.13**	**305**	P	**P**	**22 24 12.9**	**+0.9**
MREMI	**Moremi**	**51.89**	**73**		**P**	**22 24 24.8**	**+0.1**
MREMI				IAmb	IAmb	22 24 25.7	
	comp=Z,11nm,0.9s						
DRV	**Dumont d’Urvil**	**57.62**	**174**	P	**P**	**22 25 04.4**	**-1.0**
NNA	**Nana**	**58.03**	**299**	LR	LR	22 50 21.1	
	comp=Z,36nm,20.8s,baz=152,slow=36						
LSZ	**Lusaka**	**58.26**	**69**	LR	LR	22 48 00.1	
	comp=Z,67nm,19.4s,baz=188,slow=34						
ATAH	**Atahualpa**	**62.97**	**300**	LR	LR	22 53 35.2	
	comp=Z,28nm,21.9s,baz=133,slow=36						
BOAV	**Boa Vista**	**63.95**	**322**	P	**P**	**22 25 48.9**	**-0.2**
DBIC	**Dimbokro**	**64.82**	**25**	LR	LR	22 47 34.1	
	comp=Z,47nm,19.2s,baz=192,slow=30						
ROSC	**El Rosal**	**71.61**	**310**	LR	LR	22 59 38.2	
	comp=Z,17nm,19.6s,baz=198,slow=37						
PCRV	**Puerto La Cruz**	**72.62**	**321**	LR	LR	23 01 40.8	
	comp=Z,34nm,18.9s,slow=38						
TORD	**Torodi Ar. Bea**	**72.73**	**30**		**P**	**22 26 44.9**	**+0.9**
TORD	**Torodi Ar. Bea**	**72.73**	**30**	P	**P**	**22 26 44.4**	**+0.5**
	comp=Z,1.5nm,0.5s,baz=204,slow=5.3,SNR=3.1						
	comp=Z,1.5nm,0.5s						
SDV	**Santo Domingo**	**73.71**	**315**	LR	LR	22 58 32.4	
	comp=Z,82nm,21.8s,baz=68,slow=35						
SJG	**San Juan**	**80.51**	**323**	LR	LR	23 02 17.2	
	comp=Z,29nm,21.9s,baz=176,slow=35						
JTS	**Las Juntas de**	**81.28**	**303**	LR	LR	23 07 43.1	
	comp=Z,15nm,18.5s,baz=142,slow=39						
STKA	**Stephens Creek**	**92.29**	**171**	LR	LR	23 08 26.2	
	comp=Z,74nm,19.0s,baz=205,slow=35						
PPT2	**Papeete2**	**92.39**	**234**	*e*LR	LR	22 57 57.0	
	comp=Z,65nm,26.5s						
ASAR	**Alice Springs**	**99.37**	**163**	P	**Pdif**	**22 28 56.5**	**-1.9**
	comp=Z,0.5nm,0.7s,baz=179,slow=4.3,SNR=6.4						
	comp=Z,0.5nm,0.7s						
FINES	**FINESS Array B**	**124.05**	**28**	PKP	**PKPdf**	**22 34 12.5**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=234,slow=1.6,SNR=6.6						
ARCES	**ARCESS Array B**	**130.59**	**22**	PKP	**PKPdf**	**22 34 23.1**	**-2.0**
	comp=Z,1.8nm,0.8s,baz=158,slow=0.5,SNR=4.7						
BVAR	**Borovoye Array**	**134.59**	**57**	PKP	**PKPdf**	**22 34 33.3**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=225,slow=1.9,SNR=4.8						
ILAR	**Eielson Array**	**149.83**	**312**	PKPbc	**PKPbc**	**22 35 04.3**	**-0.1**
	comp=Z,4.3nm,0.9s,baz=121,slow=1.4,SNR=34						
SONM	**Songino Array**	**150.73**	**86**	PKPbc	**PKPbc**	**22 35 07.3**	**0.0**
	comp=Z,4.0nm,0.8s,baz=200,slow=3.0,SNR=8.5						

MEX ***14*** *22:22:04.7±0.7, 14.°04N×93.°31W, h16^{km}±55^{km}, MD4.1*
GCG ***14*** *22:22:06.7±1.6, 14.°11N×93.°14W, h36^{km}±999^{km}, MD4.1, ML3.7*
ISC 14 22:22:01.0±3.5, **14.°0N**±0.°1×**93.°23W**±0.°05, **h1**^{km}±19^{km}**, n21,** σ**1.^{s}63**/17**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**1.31**	**46**	*e*P	Pn	22 22 23.9	-2.5
THIG				*e*S	**Sg**	**22 22 42.2**	**-0.8**
PATR	**El Naranjo**	**1.48**	**41**	*e*P	Pn	22 22 27.9	-1.0
PATR				*e*S	Sn	22 22 44.8	-4.3
PAVE	**Pavencul**	**1.57**	**41**	*e*P	Pn	22 22 29.2	-1.1
PAVE				*e*S	Sn	22 22 46.1	-5.3
RTAL	**Retalhuleu**	**1.58**	**70**	*e*P	Pn	22 22 29.1	-1.1
RTAL				*e*S	**Sn**	**22 22 50.1**	**-1.3**
PCIG		**1.70**	**0**	*e*P	Pn	22 22 29.2	-2.6
PCIG				*e*S	Sn	22 22 49.1	-5.1
STG8	**El Palmar, Qui**	**1.88**	**76**	*i* P	Pn	22 22 33.4	-1.1
STG8				*e*S	Sn	22 22 54.4	-4.6
STG0	**El Palmar, Qui**	**1.88**	**77**	*e*P	Pn	22 22 33.2	-1.3
STG0				IAML		22 23 01.8	
	comp=E,1µm,0.3s						
SOKI	**Kika Raxquin**	**1.96**	**65**	*e*P	**Pn**	**22 22 37.1**	**+1.4**
SOKI				IAML		22 23 11.7	
	comp=N,472nm,0.7s						
HUEH	**Huehuetenango**	**2.13**	**52**	*e*S	**Sn**	**22 23 04.0**	**-1.2**
CCIG	**Comitan**	**2.51**	**25**	*e*P	**Pn**	**22 22 44.4**	**+1.2**
CCIG				*e*S	**Sn**	**22 23 15.0**	**+0.5**
CCIG	**Comitan**	**2.51**	**25**	*i* P	**Pn**	**22 22 45.1**	**+2.0**
CCIG				*e*S	**Sn**	**22 23 14.0**	**-0.4**
CCIG				IAML		22 23 20.6	
	comp=N,340nm,0.6s						
FG8	**Yepocapa, Chim**	**2.61**	**84**	*i* P	Pn	22 22 40.8	-3.7
TGIG		**2.77**	**2**	*e*P	**Pn**	**22 22 47.2**	**+0.6**
TGIG				*e*S	Sn	22 23 17.2	-3.6
TGIG		**2.77**	**2**	*i* P	**Pn**	**22 22 47.3**	**+0.7**
TGIG				*i* S	**Sn**	**22 23 17.8**	**-3.0**
TGIG				IAML		22 23 22.3	
	comp=E,287nm,0.4s						
HUIG	**Huatulco**	**3.29**	**303**	*e*P	**Pn**	**22 22 53.0**	**-0.8**
HUIG				*e*S	Sn	22 23 25.2	-8.3
PETF	**Flores**	**4.36**	**48**	*e*P	**Pn**	**22 23 08.0**	**-0.4**
PETF				*e*S	**Sn**	**22 24 00.1**	**+0.3**
YOIG	**Yosondua**	**5.04**	**305**	*e*P	Pn	22 23 22.1	+4.0
YOIG				*e*S	**Sn**	**22 24 15.1**	**-2.0**
TXIG	**Tlaxiaco**	**5.44**	**307**	*e*P	Pn	22 23 27.2	+3.6
TXIG				*e*S	Sn	22 24 18.7	-8.2
TOIG	**Toxpalan**	**5.49**	**318**	*e*P	Pn	22 23 27.1	+3.0
TOIG				*e*S	**Sn**	**22 24 30.7**	**+2.6**
HLIG	**Huajuapan de L**	**5.82**	**312**	*e*P	**Pn**	**22 23 30.1**	**+1.3**
HLIG				*e*S	Sn	22 24 28.2	-8.1
FTIG	**Fresnillo de T**	**6.11**	**310**	*e*P	Pn	22 23 37.1	+4.5
FTIG				*e*S	Sn	22 24 34.3	-9.0

IDC ***14*** *22:23:33.6±1.1, 60.°19N×60.°06E, h0^{km}, mb3.2/2, mbtmp3.5/12, ML3.2/10, Error ellipse: s-maj=22.3km s-min=10.3km az=31.0*
MIRAS ***14*** *22:23:33.0, 60.°29N×60.°02E, h0^{km}, ML3.2/7*
NNC ***14*** *22:23:41.7±2.7, 59.°61N×60.°76E, h0^{km}, mb3.8, mpv3.6, Error ellipse: s-maj=31.6km s-min=12.4km az=11.0*
ISC 14 22:23:32.0±1.0, **60.°29N**±0.°06×**60.°16E**±0.°05, **h10**^{km}**, n23,** σ**2.^{s}45**/64**, 3C-2D, Ural Mountains region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PR7R	**Sarany**	**1.88**	**203**	*e*P	**Pn**	**22 24 04.6**	**+0.3**
	516nm,0.5s						
PR7R				*e*P	**Pn**	**22 24 04.6**	**+0.3**
PR7R				*e*P	**Pn**	**22 24 04.6**	**+0.3**
PR7R				*e*S	**Sg**	**22 24 31.9**	**-0.6**
PR7R				*e*S	**Sg**	**22 24 31.9**	**-0.6**
PR7R				*e*S	**Sg**	**22 24 31.9**	**-0.6**
	424nm,0.5s						
PR7R				*i* AML	AML	22 24 33.6	
	365nm,0.4s						
PR1R	**Pomanovo**	**2.05**	**239**	*e*P	**Pb**	**22 24 09.2**	**-0.1**
PR1R				*e*P	**Pb**	**22 24 09.2**	**-0.1**
	154nm,0.3s						
PR1R				*e*P	**Pb**	**22 24 09.2**	**-0.1**
PR1R				*e*S	**Sg**	**22 24 36.4**	**-1.5**
PR1R				*e*S	**Sg**	**22 24 36.4**	**-1.5**
	245nm,0.4s						
PR1R				*e*S	**Sg**	**22 24 36.4**	**-1.5**
PR1R				*i* AML	AML	22 24 38.5	
	262nm,0.2s						
PR0R	**Verkhnechusovs**	**2.61**	**218**	*e*P	**Pn**	**22 24 16.4**	**+2.3**
	151nm,0.3s						
PR0R				*e*P	**Pn**	**22 24 16.4**	**+2.3**
PR0R				*e*P	**Pn**	**22 24 16.4**	**+2.3**
PR0R				*e*S	**Sb**	**22 24 49.9**	**-0.9**
	735nm,0.3s						
PR0R				*e*S	**Sb**	**22 24 49.9**	**-0.9**
PR0R				*e*S	**Sb**	**22 24 49.9**	**-0.9**
PR0R				*i* AML	AML	22 24 52.6	
	648nm,0.2s						
PR6R	**Ekimyata**	**2.98**	**226**	*e*P	**Pn**	**22 24 20.9**	**+1.6**
	20nm,0.2s						
PR6R				*e*P	**Pn**	**22 24 20.9**	**+1.6**
PR6R				*e*P	**Pn**	**22 24 20.9**	**+1.6**
PR6R				*e*S	**Sb**	**22 25 00.3**	**-1.3**
PR6R				*e*S	**Sb**	**22 25 00.3**	**-1.3**
PR6R				*e*S	**Sb**	**22 25 00.3**	**-1.3**
	119nm,0.3s						
PR6R				*i* AML	AML	22 25 03.6	
	119nm,0.3s						
PR3R	**Kungur**	**3.29**	**211**	*e*P	**Pn**	**22 24 26.2**	**+2.7**
	32nm,0.4s						
PR3R				*e*P	**Pn**	**22 24 26.2**	**+2.7**
PR3R				*e*P	**Pn**	**22 24 26.2**	**+2.7**
PR3R				*e*S	**Sn**	**22 25 06.4**	**+3.8**
PR3R				*e*S	**Sn**	**22 25 06.4**	**+3.8**
	81nm,0.4s						
PR3R				*e*S	**Sn**	**22 25 06.4**	**+3.8**
PR3R				*i* AML	AML	22 25 10.4	
	65nm,0.5s						
PR4R	**Vlasy**	**3.32**	**226**	*e*P	**Pn**	**22 24 23.8**	**-0.1**
PR4R				*e*P	**Pn**	**22 24 23.8**	**-0.1**
PR4R				*e*P	**Pn**	**22 24 23.8**	**-0.1**
	54nm,0.2s						
PR4R				*e*S	**Sn**	**22 25 04.6**	**+1.3**
PR4R				*e*S	**Sn**	**22 25 04.6**	**+1.3**
	93nm,0.3s						
PR4R				*e*S	**Sn**	**22 25 04.6**	**+1.3**
PR4R				*i* AML	AML	22 25 08.6	
	176nm,0.3s						
ARTI	**Arti**	**4.02**	**194**	Pn	**Pn**	**22 24 35.7**	**+2.1**
	2.1nm,0.3s,baz=5.5,slow=13,SNR=20						
ARTI				Lg	Lg	22 25 33.7	
	5.4nm,0.3s,baz=154,slow=23,SNR=8.8						
	5.1nm,0.3s						
ARTI	**Arti**	**4.02**	**194**	*e*P	**Pn**	**22 24 36.8**	**+3.2**
ARTI				*e*P	**Pn**	**22 24 36.8**	**+3.2**
	6.2nm,0.3s						
ARTI				*e*P	**Pn**	**22 24 36.8**	**+3.2**
ARTI				*e*S	**Sn**	**22 25 23.9**	**+3.1**
	30nm,0.4s						
ARTI				*e*S	**Sn**	**22 25 23.9**	**+3.1**
ARTI				*e*S	**Sn**	**22 25 23.9**	**+3.1**
ARTI				*i* AML	AML	22 25 31.5	
	39nm,0.5s						
KIRV	**Kirov**	**5.74**	**257**	Pn	**Pn**	**22 24 59.3**	**+2.2**
	0.9nm,0.3s,baz=51,slow=13,SNR=1.5						
KIRV				Pg	**Pb**	**22 25 13.7**	**+1.6**
	2.0nm,0.3s,baz=75,slow=19,SNR=6.9						
KIRV				Sn	**Sn**	**22 25 59.8**	**-3.2**
	1.6nm,0.3s,baz=91,slow=15,SNR=1.7						
KIRV				Lg	Lg	22 26 25.6	
	0.7nm,0.3s,baz=313,slow=24,SNR=2.0						
	2.3nm,0.3s						
BRVK	**Borovoye**	**9.13**	**138**	⇑Pn	**Pn**	**22 25 45.0**	**+1.3**
	1.3nm,0.7s						
BRVK				⇓Sn	**Sn**	**22 27 21.6**	**-4.8**
	2.0nm,0.8s						
BVA0	**Borovoye Array**	**9.20**	**138**	Pn	**Pn**	**22 25 45.9**	**+1.2**
	2.4nm,0.6s,baz=330,slow=14,SNR=25						
BVA0				⇓Sn	**Sn**	**22 27 23.6**	**-4.4**
	3.6nm,0.8s,baz=327,slow=26,SNR=19						
BVAR	**Borovoye Array**	**9.20**	**138**	Pn	**Pn**	**22 25 46.2**	**+1.6**
	0.2nm,0.3s,baz=324,slow=16,SNR=35						
BVAR				Sn	**Sn**	**22 27 22.9**	**-5.2**
	0.1nm,0.3s,baz=323,slow=24,SNR=7.4						
	4.2nm,0.5s						
AKTO	**Aktyubinsk**	**9.95**	**188**	Pn	**Pn**	**22 25 54.4**	**-0.5**
	0.5nm,0.3s,baz=14,slow=8.3,SNR=4.1						
AKTO				Sn	Sn	22 27 37.6	-9.0
	0.1nm,0.3s,baz=162,slow=16,SNR=1.4						
	0.8nm,0.4s						
AKTO	**Aktyubinsk**	**9.95**	**188**	⇑Pn	**Pn**	**22 25 57.7**	**+2.8**
	0.9nm,0.6s						
BELG	**Belogornoye**	**10.52**	**227**	Pn	**Pn**	**22 26 02.1**	**-0.5**
	0.8nm,0.3s,baz=31,slow=19,SNR=6.4						
BELG				Sn	**Sn**	**22 27 53.9**	**-6.4**
	0.2nm,0.3s,baz=66,slow=20,SNR=1.2						
BELG				Lg	Lg	22 29 01.3	
	0.4nm,0.3s,baz=37,slow=20,SNR=2.0						
	7.1nm,0.6s						
AB31	**Akbulak array**	**11.06**	**181**	⇑Pn	**Pn**	**22 26 11.0**	**+0.9**
	0.9nm,0.4s,baz=13,slow=12,SNR=35						
KURBB	**Kurchatov Arra**	**14.18**	**125**	Pn	**Pn**	**22 26 50.1**	**-2.4**
	baz=316,slow=13,SNR=2.1						
	0.2nm,0.4s						
FINES	**FINESS Array B**	**16.52**	**289**	Pn	**Pn**	**22 27 19.7**	**-3.8**
	0.1nm,0.3s,baz=99,slow=17,SNR=7.6						
	0.7nm,0.5s						
ARCES	**ARCESS Array B**	**17.09**	**317**	Pn	**Pn**	**22 27 28.7**	**-1.9**
	0.1nm,0.3s,baz=105,slow=12,SNR=12						
	2.7nm,0.8s						
MKAR	**Makanchi Array**	**18.73**	**126**	P	**P**	**22 27 52.1**	**+1.5**
	0.1nm,0.3s,baz=324,slow=9.6,SNR=4.5						
	0.2nm,0.5s						
AKASG	**Malin Array Be**	**19.79**	**255**	P	**P**	**22 28 02.5**	**+0.3**
	0.1nm,0.3s,baz=42,slow=10,SNR=1.8						
	0.2nm,0.3s						
HFS	**Hagfors**	**22.72**	**290**	P	**P**	**22 28 37.4**	**+3.8**
	0.9nm,0.5s,baz=66,slow=14,SNR=7.3						
	0.9nm,0.5s						
NOA	**NORSAR Array B**	**23.55**	**293**	P	**P**	**22 28 44.7**	**+2.6**
	0.2nm,0.5s,baz=72,slow=11,SNR=3.2						
	0.2nm,0.5s						

IDC ***14*** *22:28:06.1±1.7, 5.°71S×146.°44E, h112^{km}±14^{km}, mb3.5/4, mbtmp4.0/7, Error ellipse: s-maj=20.3km s-min=12.3km az=72.0*
ISC 14 22:28:07.4±0.9, **5.°72S**±0.°09×**146.°35E**±0.°10, **h123**^{km}**, n12,** σ**1.^{s}29**/15**, mb3.8**/4**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.75**	**168**	P	**Pn**	**22 29 02.8**	**-0.9**
	56nm,0.5s,baz=345,slow=9.9,SNR=30						
PMG				S	**Sn**	**22 29 45.2**	**-2.1**
	107nm,0.5s,baz=181,slow=20,SNR=20						
PMG	**Port Moresby**	**3.75**	**168**	P	**Pn**	**22 29 02.8**	**-0.9**
JAY	**Jayapura**	**6.47**	**299**	P	**Pn**	**22 29 39.8**	**-0.5**
	3.5nm,0.3s,baz=139,slow=9.3,SNR=8.3						
JAY				S	**Sn**	**22 30 52.9**	**+0.2**
	4.1nm,0.7s,baz=190,slow=18,SNR=1.4						
TATA	**Tatamba Isabel**	**13.61**	**102**	P	**P**	**22 31 21.0**	**+0.9**
CTAO	**Charters Tower**	**14.29**	**180**	P	**P**	**22 31 28.4**	**+0.8**
QIS	**Mount Isa**	**16.14**	**203**	P	**P**	**22 31 49.7**	**+1.5**
MTN	**Manton Dam**	**16.60**	**244**	P	**Pn**	**22 31 51.3**	**-1.6**
WRA	**Warramunga Arr**	**18.34**	**218**	P	**P**	**22 32 13.7**	**+1.2**
	1.8nm,0.4s,baz=40,slow=12,SNR=41						
ASAR	**Alice Springs**	**21.50**	**213**	P	**P**	**22 32 48.0**	**+1.5**
	0.7nm,0.4s,baz=38,slow=10.0,SNR=19						
ASAR				S	**S**	**22 36 38.7**	**+0.9**
	0.9nm,0.8s,baz=28,slow=20,SNR=5.4						
	0.7nm,0.4s						
STKA	**Stephens Creek**	**26.40**	**189**	P	**P**	**22 33 33.5**	**+1.1**
	1.5nm,0.7s,baz=6.3,slow=9.2,SNR=2.9						
	1.5nm,0.7s						
QSPA	**South Pole Qui**	**84.25**	**180**	P	**P**	**22 40 25.8**	**+0.7**
	1.6nm,1.0s,baz=282,slow=5.4,SNR=3.2						
	1.6nm,1.0s						
ILAR	**Eielson Array**	**85.48**	**23**	P	**P**	**22 40 29.9**	**-1.2**
	0.9nm,0.7s,baz=253,slow=4.6,SNR=8.1						
	0.9nm,0.7s						

UPA ***14*** *22:37:35.9±1.0, 9.°27N×82.°64W, h8^{km}±5^{km}, MW3.8*
UCR ***14*** *22:37:36.1±1.2, 9.°32N×82.°62W, h6^{km}±9^{km}, MW4.0*
CATAC ***14*** *22:37:36.2±0.4, 9°N±2°×8°3W±°, h17^{km}±2^{km}, M3.7/12, MLv3.7/12, Error ellipse: s-maj=6.8km s-min=3.5km az=96.1, confirmed*
ISC 14 22:37:36.1±1.1, **9.°28N**±0.°02×**82.°62W**±0.°03, **h11**^{km}±9^{km}**, n68,** σ**0.^{s}88**/79**, 1C-23D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RGM0	**Gandoca**	**0.31**	**2**	⇓*e*P	**Pb**	**22 37 43.8**	**+0.1**
RGM0	**Gandoca**	**0.31**	**2**	P	**Pb**	**22 37 43.8**	**+0.1**
RGM0	**Gandoca**	**0.31**	**2**	S	**Sb**	**22 37 52.6**	**+3.8**
ALCO	**Alturas Coton,**	**0.39**	**213**	⇓*e*P	**Pg**	**22 37 44.4**	**+0.5**
BRIBI	**Bribri**	**0.39**	**330**	⇓*e*P	**Pg**	**22 37 44.0**	**+0.1**
BRIBI				*e*S	**Sb**	**22 37 51.5**	**+0.3**
BC3P	**Paso Ancho**	**0.46**	**179**	⇓*i*P	**Pb**	**22 37 45.8**	**-0.6**
BC3P				*e*S	**Sb**	**22 37 53.2**	**-0.1**
CEUA	**Cerro Uatsi, L**	**0.47**	**317**	⇓*e*P	**Pb**	**22 37 46.6**	**+0.2**
SCLRA	**Santa Clara, W**	**0.47**	**200**	*e*P	**Pb**	**22 37 46.1**	**-0.4**
BRU2	**Volcan**	**0.49**	**188**	⇓*e*P	**Pg**	**22 37 46.2**	**+0.6**
BRU2				*e*S	**Sb**	**22 37 53.8**	**-0.2**
BRU2	**Volcan**	**0.49**	**188**	P	**Pg**	**22 37 46.1**	**+0.6**
BRU2	**Volcan**	**0.49**	**188**	⇓*i*P	**Pg**	**22 37 46.2**	**+0.6**
BRU2				*e*S	**Sb**	**22 37 54.1**	**+0.1**
MLIR3	**Monte Lirio, C**	**0.52**	**203**	⇓*i*P	**Pb**	**22 37 47.4**	**0.0**
MLIR3				*e*S	**Sb**	**22 37 55.2**	**+0.2**
CLLRA	**Cordillera,**	**0.53**	**179**	⇓*e*P	**Pb**	**22 37 47.1**	**-0.4**
BQTLY	**Boquete Panama**	**0.54**	**163**	⇓*e*P	**Pg**	**22 37 47.0**	**+0.3**
BQSF3	**Alto Boquete,**	**0.56**	**161**	⇓*e*P	**Pg**	**22 37 47.4**	**+0.3**
BQSF3				*e*S	**Sb**	**22 37 55.8**	**-0.5**
PBNVO	**Pueblo Nuevo,**	**0.57**	**132**	*e*P	**Pg**	**22 37 47.1**	**-0.1**
VITO	**San Vito**	**0.57**	**217**	*e*P	**Pb**	**22 37 48.1**	**-0.2**
PTAR3	**Potrerillos Ar**	**0.59**	**168**	⇓*i*P	**Pb**	**22 37 48.1**	**-0.5**
PTAR3				*e*S	**Sb**	**22 37 56.9**	**-0.2**
RBALA	**Bur**	**0.61**	**131**	⇓*e*P	**Pg**	**22 37 47.5**	**-0.4**
EDP2	**Potrero Grande**	**0.61**	**245**	*e*P	**Pg**	**22 37 48.1**	**+0.2**
DRK0	**Durika**	**0.62**	**269**	*e*P	**Pg**	**22 37 47.9**	**-0.2**
DRK0				*e*S	**Sg**	**22 37 56.5**	**+0.2**
DRK0	**Durika**	**0.62**	**269**	P	**Pg**	**22 37 48.4**	**+0.2**
DRK0	**Durika**	**0.62**	**269**	*e*P	**Pg**	**22 37 48.0**	**-0.2**
DRK0				*e*S	**Sg**	**22 37 56.5**	**+0.2**
SCZRO	**Santa Cruz, Re**	**0.64**	**192**	⇓*e*P	**Sn**	**22 38 05.1**	**+3.6**
NELY	**Ciudad Neily**	**0.70**	**207**	*e*P	**Pb**	**22 37 50.5**	**+0.1**
CDITO	**Canoas**	**0.74**	**200**	P	**Pb**	**22 37 51.1**	**0.0**
CDITO	**Canoas**	**0.74**	**200**	S	**Sn**	**22 38 02.9**	**-1.0**
FIMO	**Fila Mora**	**0.78**	**248**	*e*P	**Pg**	**22 37 51.5**	**+0.3**
GUAL3	**Gualaca, Chiri**	**0.81**	**157**	*e*P	**Pb**	**22 37 52.0**	**-0.2**
GUAL3				*e*S	**Sb**	**22 38 03.5**	**+0.4**
EDAD	**Golfito**	**0.82**	**221**	*e*P	**Pg**	**22 37 52.0**	**0.0**
FITO	**Golfito**	**0.84**	**219**	*e*P	**Pg**	**22 37 52.1**	**-0.2**
DVD	**David**	**0.85**	**169**	*e*P	**Pg**	**22 37 52.7**	**+0.1**
DVD				*e*S	**Sn**	**22 38 06.1**	**-0.5**
VERH	**Veragua Rainfo**	**0.86**	**319**	⇓*e*P	**Pg**	**22 37 51.7**	**-1.0**
CSTBL	**De las Acacias**	**0.88**	**168**	*e*P	**Pg**	**22 37 53.0**	**-0.1**
LOCO3	**Loma Colorada,**	**0.89**	**167**	*e*P	**Pg**	**22 37 53.0**	**-0.1**
PANP	**Palmar Norte**	**0.89**	**249**	*e*P	**Pg**	**22 37 53.2**	**0.0**
QLAJS	**Quebrada de La**	**0.89**	**155**	⇓*e*P	**Sn**	**22 38 09.3**	**+1.8**
KKNTU	**Kakintº**	**0.91**	**118**	⇑*e*P	**Pg**	**22 37 52.7**	**-1.0**
PTJ1	**Puerto Jimnez**	**1.00**	**222**	*e*P	**Pb**	**22 37 55.0**	**-0.5**
PTJ1	**Puerto Jimnez**	**1.00**	**222**	P	**Pb**	**22 37 55.1**	**-0.4**
PTJ1	**Puerto Jimnez**	**1.00**	**222**	S	**Sn**	**22 38 10.5**	**+0.3**
OCHAL	**Ojochal**	**1.03**	**260**	P	**Pb**	**22 37 55.7**	**-0.2**
OCHAL	**Ojochal**	**1.03**	**260**	S	**Sn**	**22 38 11.2**	**+0.2**
LMNES	**Limones**	**1.20**	**191**	⇓*e*P	**Pn**	**22 37 58.4**	**-0.4**
RVLA	**Villa Bonita**	**1.26**	**311**	*e*P	**Pn**	**22 37 58.1**	**-1.6**
VTCV	**VTCV, Calle Va**	**1.30**	**303**	⇓*e*P	**Pn**	**22 37 59.2**	**-1.2**
ABRB	**Las Abras (San**	**1.30**	**304**	*e*P	**Pn**	**22 37 59.6**	**-0.9**
RMDIO	**Remedios, Chir**	**1.30**	**143**	*e*P	**Pb**	**22 38 00.4**	**-0.2**
CVTV	**Tajo**	**1.33**	**303**	⇓*e*P	**Pn**	**22 37 60.0**	**-1.0**
PDCAN	**Manzana , Fuen**	**1.34**	**137**	*e*P	**Pn**	**22 38 00.7**	**-0.2**
CVTQ	**Turrialba Volc**	**1.34**	**303**	⇓*e*P	**Pn**	**22 38 00.1**	**-1.1**
VTR0	**Volcan Turrial**	**1.34**	**303**	⇓*e*P	**Pn**	**22 38 00.1**	**-1.1**
CVTR	**Volcan Turrial**	**1.34**	**303**	⇓*e*P	**Pn**	**22 37 60.0**	**-1.2**
REPA	**Paraso**	**1.35**	**294**	*e*P	**Pn**	**22 38 00.8**	**-0.3**
VTLA	**Turrialba Volc**	**1.35**	**302**	⇓*e*P	**Pn**	**22 38 00.2**	**-1.0**
VICA	**Volcano Irazu**	**1.40**	**300**	*e*P	**Pn**	**22 38 00.9**	**-1.1**
LCR2	**La Lucha 2**	**1.44**	**289**	*e*P	**Pn**	**22 38 01.9**	**-0.4**
LCR2	**La Lucha 2**	**1.44**	**289**	P	**Pn**	**22 38 01.6**	**-0.8**
LCR2	**La Lucha 2**	**1.44**	**289**	S	**Sn**	**22 38 21.4**	**0.0**
ABE2	**San Pablo**	**1.48**	**287**	*e*P	**Pn**	**22 38 02.5**	**-0.4**
PICV	**PH. Pirrs**	**1.59**	**283**	*e*P	**Pn**	**22 38 04.7**	**+0.4**
TRT2	**Tortugero**	**1.68**	**319**	S	**Sn**	**22 38 27.2**	**+0.1**
TRT2	**Tortugero**	**1.68**	**319**	P	**Pn**	**22 38 03.3**	**-2.1**

GMAL	Guarumal, Vera	2.04	138	*e*P	Pn	22 38 10.4	0.0
SOCE	Pocosol	2.25	299	P	Pn	22 38 13.8	+0.4
COVE	Coope Vega, Sa	2.27	309	S	Sn	22 38 41.5	0.0
COVE	Coope Vega, Sa	2.27	309	P	Pn	22 38 12.9	-0.6
ACON	Acoyapa	3.67	317	P	Pn	22 38 31.5	-1.3

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*IDC **14** 22:42:50.7±1.8, 6°.53S×130°.24E, h0^{km}, mb3.7/2, mbtmp3.9/6, ML4.0/4, Error ellipse: s-maj=56.9km s-min=24.8km az=84.0*

*NEIC **14** 22:43:05.7±2.3, 7°.02S±0°.08×129°.62E±0°.07, h127^{km}±17^{km}, mb4.2/3, Error ellipse: s-maj=11.7km s-min=9.9km az=183.0*

ISC 14 22:43:05.4±0.8**, 7°.15S**±0°.07×**129°.66E**±0°.06**, h139**^{km}**, n20, σ2^s.28**/26**, mb3.8**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.82	117	Pn	Pn	22 43 38.8	+0.9
SAUI				Sn	Sn	22 44 02.3	-0.4
FAKI	Fak Fak	4.93	32	Pn	Pn	22 44 15.9	-1.9
MTN	Manton Dam	5.84	166		Pn	22 44 31.8	+1.8
MTN				Sn	Sn	22 45 36.6	+0.5
SOEI	Soe	5.93	244		Pn	22 44 31.7	+0.4
SOEI				Sn	Sn	22 45 38.1	-0.2
BATI	Baumata	6.66	242	Pn	Pn	22 44 42.1	+1.1
	2.2nm,0.3s,baz=115,slow=18,SNR=2.1						
BATI				Sn	Sn	22 45 54.3	-1.5
	6.7nm,0.3s,baz=133,slow=18,SNR=3.6						
	10nm,0.2s						
KNRA	Kununurra	8.52	186		Pn	22 45 06.8	+0.8
LUWI	Luwuk	9.16	311		Pn	22 45 12.6	-2.0
FITZ	Fitzroy Crossi	11.57	199	Pn	Pn	22 45 46.3	-0.1
	0.8nm,0.3s,baz=21,slow=12,SNR=26						
FITZ				Sn	Sn	22 47 48.2	-6.0
	2.3nm,0.3s,baz=218,slow=17,SNR=13						
	1.8nm,0.3s						
WB0	Warramunga Arr	13.36	160		Pn	22 46 08.8	-0.9
WRA	Warramunga Arr	13.51	161	Pn	Pn	22 46 11.2	-0.3
WRA	Warramunga Arr	13.51	161	Pn	Pn	22 46 10.0	-1.6
	0.7nm,0.3s,baz=339,slow=14,SNR=24						
WRA				Sn	Sn	22 48 33.1	-7.9
	1.6nm,0.3s,baz=333,slow=22,SNR=11						
	0.7nm,0.4s						
WB2	Warramunga Arr	13.51	161	Pn	Pn	22 46 11.4	-0.3
WR8	Warramunga Arr	13.57	160		Pn	22 46 12.1	-0.3
AS31	Alice Springs	16.92	167	P	P	22 46 55.9	+2.1
AS31				IAmb	IAmb	22 47 00.5	
	comp=Z,1.3nm,1.0s						
ASAR	Alice Springs	16.92	167	P	Pn	22 46 56.9	+2.8
ASAR	Alice Springs	16.92	167	P	P	22 46 55.5	+1.7
	comp=Z,0.6nm,0.3s,baz=350,slow=10,SNR=25						
ASAR				S	S	22 49 57.4	-5.7
	comp=Z,0.7nm,0.6s,baz=348,slow=24,SNR=5.1						
	comp=Z,1.0nm,0.5s						
PSA00	Pilbara Seismi	17.19	212		P	22 46 58.6	+1.9
PSA00				IAmb	IAmb	22 47 35.6	
	comp=Z,28nm,1.2s						
BBOO	Buckleboo	26.22	168	P	P	22 48 30.6	+3.2
BBOO				IAmb	IAmb	22 49 03.8	
	comp=Z,23nm,1.4s						
MKAR	Makanchi Array	68.16	327	P	P	22 53 52.0	+1.3
	comp=Z,0.6nm,0.4s,baz=123,slow=7.5,SNR=15						
	comp=Z,0.6nm,0.4s						
KURBB	Kurchatov Arra	72.46	329	P	P	22 54 17.0	+0.3
	comp=Z,0.3nm,0.7s,baz=138,slow=5.3,SNR=4.2						
	comp=Z,0.3nm,0.7s						

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*IDC **14** 22:48:53.2±1.4, 1°.96N×127°.49E, h0^{km}, mb3.9/6, mbtmp3.9/6, Error ellipse: s-maj=106.6km s-min=18.2km az=68.0*

*NEIC **14** 22:49:08.2±0.8, 1°.8N±0°.1×127°.46E±0°.09, h124^{km}±12^{km}, mb4.0/7, Error ellipse: s-maj=21.6km s-min=13.3km az=169.0*

ISC 14 22:49:06.3±1.2**, 1°.8N**±0°.1×**127°.41E**±0°.09**, h112**^{km}**, n18, σ1^s.38**/19**, mb4.1**/8**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.06	182		Pn	22 49 30.6	+2.2
LUWI	Luwuk	5.45	238	Pn	Pn	22 50 27.4	+2.2
LUWI					Sn	22 51 29.2	+2.4
TOLI2	Tolitoli	6.67	264	Pn	Pn	22 50 41.7	0.0
KAPI	Kappang	10.24	228	Sn	Sn	22 53 20.1	-3.1
	1.4nm,0.3s,baz=22,slow=22,SNR=1.9						
MTN	Manton Dam	15.05	166	Pn	Pn	22 52 32.5	-0.7
KNRA	Kununurra	17.46	176		Pn	22 53 02.8	-0.1
KNRA				IAmb	IAmb	22 53 33.5	
	comp=Z,15nm,1.4s						
FITZ	Fitzroy Crossi	19.89	185	P	P	22 53 28.4	-0.5
FITZ				IAmb	IAmb	22 53 56.0	
	comp=Z,2.4nm,1.4s						
FITZ	Fitzroy Crossi	19.89	185	P	P	22 53 27.9	-1.1
	comp=Z,2.0nm,0.6s,baz=10,slow=10,SNR=2.5						
	comp=Z,2.0nm,0.6s						
WB0	Warramunga Arr	22.54	163	P	P	22 53 57.0	-0.2
WB0				IAmb	IAmb	22 53 57.2	
	comp=Z,7.3nm,0.9s						
WRAB	Tennant Creek	22.68	163	P	P	22 53 58.2	-0.4
WRAB				IAmb	IAmb	22 53 59.2	
	comp=Z,9.8nm,0.9s						
WRA	Warramunga Arr	22.69	163	P	P	22 53 57.6	-1.1
WRA	Warramunga Arr	22.69	163	P	P	22 53 58.1	-0.6
	comp=Z,5.9nm,0.5s,baz=342,slow=11,SNR=27						
	comp=Z,5.9nm,0.5s						
WR8	Warramunga Arr	22.75	163	P	P	22 53 59.0	-0.3
WR8				IAmb	IAmb	22 53 59.4	
	comp=Z,5.7nm,0.5s						
ASAR	Alice Springs	26.13	166	P	P	22 54 29.5	-0.6
	comp=Z,0.3nm,0.4s,baz=344,slow=12,SNR=7.1						
	comp=Z,0.3nm,0.4s						
BBOO	Buckleboo	35.42	167	P	P	22 55 50.7	-0.9
STKA	Stephens Creek	36.13	159	P	P	22 55 57.8	0.0
	comp=Z,1.6nm,0.4s,baz=333,slow=8.7,SNR=5.9						
	comp=Z,1.6nm,0.4s						
MKAR	Makanchi Array	59.49	326	P	P	22 58 58.1	+0.4
	comp=Z,0.4nm,0.3s,baz=116,slow=7.8,SNR=10						
	comp=Z,0.4nm,0.3s						
KURBB	Kurchatov Arra	63.69	328	P	P	22 59 25.8	0.0
	comp=Z,0.7nm,0.7s,baz=118,slow=7.0,SNR=6.2						
	comp=Z,0.7nm,0.7s						

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*SOME **14** 22:50:18.3, 39°.92N×69°.85E, h10^{km}*

*KRNET **14** 22:50:19.1±0.1, 39°.95N×69°.58E, h16^{km}, mb2.5*

ISC 14 22:50:18.2±1.9**, 39°.93N**±0°.05×**69°.55E**±0°.08**, h14**^{km}±13^{km}**, n9, σ1^s.71**/17**, 10C-4D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTK	Batken	0.99	82	⇑*i*P	Pb	22 50 37.2	+0.1
BTK				⇑*i*S	Sg	22 50 50.8	+0.6
GAR	Garm	1.10	147	⇑*i*P	Pg	22 50 40.3	+0.8
GAR				⇑*i*S	Sn	22 50 55.4	+0.9
DRK	Karamyk	1.80	104	⇑*i*P	Pg	22 50 52.4	-0.3
DRK				⇑*i*S	Sg	22 51 16.4	+0.3
TRKS	Terek-Say	2.00	37	⇑*e*P	Pb	22 50 55.1	+0.6
TRKS				⇑*e*S	Sg	22 51 21.2	-1.5
OHH	Osh	2.55	76	⇑*e*P	Pb	22 51 02.9	-0.9
OHH				⇑*e*S	Sb	22 51 35.1	+0.1
SFK	Sufi-Kurgan	3.04	87	⇓*e*P	Pb	22 51 10.1	-2.2
SFK				⇓*e*S	Sb	22 51 47.3	-2.1
BRLS	Borolday	3.10	4	*e*P	Pb	22 51 11.7	-1.5
	0.4nm,0.1s						
BRLS				*e*S	Sb	22 51 48.5	-2.4
	9.3nm,0.3s						
KK31	Karatay Array	3.25	13	⇓Pg	Pb	22 51 17.2	+1.5
	0.4nm,0.3s,baz=196,slow=17,SNR=9.1						
KK31				⇓Lg	Lg	22 52 00.4	
	0.7nm,0.2s,baz=192,slow=29,SNR=11						
MRKS	Merke	3.95	43	*e*P	Pb	22 51 29.2	+1.6
	0.8nm,0.1s						
MRKS				*e*S	Sb	22 52 18.5	+3.3
	2.6nm,0.3s						

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*NEIC **14** 22:59:33.0±3.0, 40°.22N±0°.01×124°.17W±0°.03, h10^{km}±1^{km}, Error ellipse: s-maj=4.6km s-min=2.7km az=241.0*

NCEDC 14 22:59:33.2±2.5**, 40°.23N**±0°.02×**124°.17W**±0°.05**, h12**^{km}±4^{km}**, Md2.9**/34**, ML2.8**/63(NEIC)**, Error ellipse: s-maj=6.3km s-min=2.7km az=70.0, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETL	Petrolia	0.14	294		Pg	22 59 37.0	+0.4
PETL					Sg	22 59 40.6	+1.5
KMPM	Mount Pierce	0.19	12		Pg	22 59 37.8	+0.3
KMPM				Sg	Sg	22 59 41.7	+1.2
BRIC	Briceland Vine	0.24	119		Pb	22 59 39.0	-0.5
BRIC					Sg	22 59 43.4	+1.8
KCTM	Capetown	0.28	333		Pb	22 59 40.0	-0.2
KMRM	Mail Ridge	0.35	91	Pg	Pb	22 59 41.0	-0.5
KMRM				Sg	Sb	22 59 46.7	-0.4
JCC	Jacoby Creek,	0.60	10		Pg	22 59 45.1	+0.3
JCC				IAML		22 59 55.7	
	comp=N,556nm,0.9s						
KIPM	Iron Peak	0.68	128		Pg	22 59 46.5	+0.1
KCPM	Cahto Peak	0.71	140		Pg	22 59 46.7	-0.3
KHMM	Horse Mountain	0.73	27		Pb	22 59 47.8	-0.1
KBNM	Bluenose Ridge	0.82	114		Pg	22 59 48.9	-0.2
KFPM	Farley Peak	0.82	135		Pg	22 59 48.2	-0.9
KHBM	Hayfork Bally	0.84	59		Pg	22 59 49.1	-0.5
KHBM	Hayfork Bally	0.84	59	IAML		23 00 06.7	
	comp=E,394nm,0.5s						
KHBM				IAML		23 00 07.1	
	comp=N,552nm,0.6s						
KRPM	Rodgers	0.94	7	Pg	Pg	22 59 51.3	0.0
KRPM				IAML		23 00 12.1	
	comp=N,322nm,1.1s						
KRPM				IAML		23 00 14.8	
	comp=E,250nm,1.1s						
GTC	Three Chop Rid	0.95	150		Pg	22 59 49.8	-1.9
LBPM	Beegum Peak	0.99	84		Pg	22 59 51.3	-1.0
DCMP	DeCamp, Califo	0.99	139		Pg	22 59 50.3	-2.1
DCMP	DeCamp, Califo	0.99	139	IAML		23 00 10.9	
	comp=N,290nm,0.5s						
WEAV	Weaverville	1.04	60		Pb	22 59 51.8	-1.4
O02D	Mt. Diablo Mer	1.06	92		Pb	22 59 52.5	-1.0
O02D	Mt. Diablo Mer	1.06	92	IAML		23 00 10.6	
	comp=N,359nm,0.9s						
O02D				IAML		23 00 13.9	
	comp=E,247nm,1.1s						
KOMM	Orleans Mounta	1.18	27		Pb	22 59 54.0	-1.7
GROM	Round Mountain	1.19	105		Pb	22 59 54.0	-1.8
GVV	Valley View	1.24	111		Pn	22 59 54.6	-1.8
KRMB	Red Mountain	1.31	9		Pn	22 59 56.4	-1.0
N02D	Trinity Center	1.34	56		Pn	22 59 56.4	-1.5
N02D	Trinity Center	1.34	56	IAML		23 00 22.7	
	comp=E,216nm,0.5s						
LBKM	Bonanza King	1.43	53		Pn	22 59 57.5	-1.6
GGUM	Gualala	1.47	159		Pn	22 59 56.4	-3.1
GSNM	Snow Mountain	1.49	149		Pn	22 59 57.3	-2.6
HOPS	Hopland Field	1.50	145		Pn	22 59 58.8	-1.1
HOPS				IAML		23 00 32.4	
	comp=E,124nm,1.1s						
HOPS				IAML		23 00 33.0	
	comp=N,94nm,0.9s						
M02C	Callahan	1.53	40		Pn	22 59 59.2	-1.2
M02C	Callahan	1.53	40	IAML		23 00 36.5	
	comp=N,63nm,1.3s						
M02C				IAML		23 00 38.5	
	comp=E,58nm,1.0s						
GALB	Galbreath Wild	1.54	152		Pn	22 59 57.7	-2.8
KSXB	Camp Six Broad	1.61	8		Pn	23 00 00.4	-1.3
SIGP	Signal Peak, C	1.64	3		Pn	23 00 00.2	-1.8
LSHM	Sage Hen Hill	1.72	70		Pn	23 00 01.7	-1.3
GDXM	Geysers	1.77	143		Pn	23 00 03.3	-0.5
YBH	Yreka Blue Hor	1.86	36		Pn	23 00 05.3	+0.2
L02F	Cave Junction	1.94	13	Pn	Pn	23 00 04.4	-1.7
L02F				IAML		23 00 30.3	
	comp=N,37nm,0.5s						
LBFM	Black Fox Moun	2.06	56		Pn	23 00 07.9	+0.1
HATC	Hat Creek Radi	2.15	73		Pn	23 00 08.4	-0.5
HATC				IAML		23 00 55.9	
	comp=E,100nm,1.1s						
ORV	Oroville	2.16	107		Pn	23 00 08.6	-0.4
LBCM	Butte Creek Ri	2.23	73		Pg	23 00 15.4	-0.6
L04D	Klamath Falls	2.44	35		Pn	23 00 13.4	+0.5
L04D				IAML		23 01 06.0	
	comp=N,39nm,1.4s						
L04D				IAML		23 01 09.3	
	comp=E,34nm,1.7s						
KEBM	Edson Butte	2.64	357	Pn	Pn	23 00 16.9	+1.1
KEBM				IAML		23 00 55.4	
	comp=E,60nm,2.9s						
KEBM				IAML		23 01 20.5	
	comp=N,66nm,2.8s						
AFDM	Forest Hills D	2.78	116		Pn	23 00 17.9	+0.3
BBOR	Butler Butte	2.88	22		Pn	23 00 19.2	+0.2
BBOR				IAML		23 00 58.7	
	comp=E,16nm,2.6s						
J01E	Myrtle Point	2.94	3	Pn	Pn	23 00 20.4	+0.8
J01E				IAML		23 01 06.0	
	comp=N,26nm,2.6s						
J01E				IAML		23 01 07.7	
	comp=E,37nm,2.9s						
BEKR	Beckworth	2.95	96		Pn	23 00 19.8	-0.2
BEKR				IAML		23 01 16.5	
	comp=E,18nm,0.8s						
BEKR				IAML		23 01 17.0	
	comp=N,24nm,1.0s						
MPK	Martis Peak	3.33	105	Pn	Pn	23 00 26.0	+0.7
PNTR	Pine Nut	3.71	106		Pn	23 00 30.6	+0.1
PAHR	Pah Rah Range	3.72	97	IAML		23 01 52.9	
	comp=E,8.6nm,1.3s						
JPLM	Pleasant Valle	3.73	150		Pn	23 00 28.1	-2.4
JPLM					Pb	23 00 33.0	-6.0
J05D	Fort Rock, OR	3.76	35		Pn	23 00 30.9	-0.3
J05D				IAML		23 01 17.1	
	comp=N,13nm,3.6s						
J05D				IAML		23 01 57.6	
	comp=E,14nm,1.6s						
I04A	Tendick Farm,	3.80	20	Pn	Pn	23 00 31.7	+0.1
I04A				IAML		23 01 58.1	
	comp=E,11nm,3.0s						
I04A				IAML		23 02 25.6	
	comp=N,14nm,3.4s						
I02E	Swisshome, OR	3.88	3	Pn	Pn	23 00 34.2	+1.5
PINE	Pine Mountain	4.30	33	Pn	Pn	23 00 39.0	+0.4

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*MEX **14** 23:09:04.7±0.6, 14°.05N×93°.17W, h12^{km}±46^{km}, MD3.9*

*GCG **14** 23:09:05.1±2.4, 14°.03N×93°.27W, h36^{km}±999^{km}, MD4.0, ML3.2*

ISC 14 23:08:59.6±3.2**, 14°.1N**±0°.1×**93°.24W**±0°.09**, h18**^{km}±4^{km}**, n10, σ0^s.80**/20**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.22	51	*e*P	Pg	23 09 24.2	+0.9
THIG				*e*S	Sg	23 09 40.3	+1.0
PATR	El Naranjo	1.38	45	*e*P	Pg	23 09 26.0	-0.4
PATR				*e*S	Sg	23 09 43.9	-0.7
PAVE	Pavencul	1.48	44	*e*P	Pg	23 09 28.6	+0.4
PAVE				*e*S	Sb	23 09 45.1	-0.1
RTAL	Retalhuleu	1.55	75	*e*P	Pb	23 09 27.6	-0.2
RTAL				*e*S	Sb	23 09 46.4	-0.7
PCIG		1.57	1	*e*P	Pg	23 09 30.1	+0.2
PCIG				*e*S	Sb	23 09 48.8	+1.2
STG0	El Palmar, Qui	1.86	81	*i* P	Pb	23 09 33.3	0.0
STG0				*e*S	Sb	23 09 56.4	0.0
STG0				IAML		23 10 02.8	
	comp=E,331nm,0.3s						
CCIG	Comitan	2.39	26	*e*P	Pg	23 09 45.0	-0.6
CCIG				*e*S	Sb	23 10 12.9	+1.4
CCIG	Comitan	2.39	26	*i* P	Pg	23 09 45.4	-0.2
CCIG				*i* S	Sg	23 10 15.9	-0.8
CCIG				IAML		23 10 20.5	
	comp=N,112nm,0.4s						
TGIG		2.64	2	*e*P	Pb	23 09 45.9	-0.5
TGIG				*e*S	Sb	23 10 17.3	-1.2
TGIG		2.64	2	*i* P	Pb	23 09 47.1	+0.7
TGIG				*e*S	Sb	23 10 17.7	-0.7
TGIG				IAML		23 10 21.9	
	comp=E,66nm,0.4s						

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*CRAAG **14** 23:34:19.6, 35°.35N×0°.63W, Ml3.5, Algerie 08km SE Tamzoura*

*CNRM **14** 23:34:21.2, 35°.44N×0°.71W, h40^{km}, ML2.8*

*INMG **14** 23:34:22.7±1.6, 35°.51N×0°.68W, h25^{km}±22^{km}, ML2.2, Error ellipse: s-maj=15.6km s-min=5.8km az=144.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NW Argelia (ALG)*

*MDD **14** 23:34:24.1±0.7, 35°.51N×0°.76W, h30^{km}, mb_Lg3.2/27, Error ellipse: s-maj=6.0km s-min=4.0km az=159.0*

ISC 14 23:34:21.5±1.4**, 35°.50N**±0°.04×**0°.71W**±0°.04**, h30**^{km}±15^{km}**, n88, σ1^s.76**/114**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFRG	Douar Fergoug	0.61	88	P	Pb	23 34 31.4	-2.4
OLHC	Oulhaca	0.63	247	P	Pb	23 34 34.8	+0.8
OBBL	Beni Bahdel	1.02	219	P	Pb	23 34 39.0	-1.7
ESMB	Sidi M'hamed B	1.06	86	P	Pn	23 34 39.7	-0.6
OJGS	Djebel Guires	1.19	89	P	Pn	23 34 41.8	-0.4
EANR	'Ain N'Sour	1.54	73	P	Pb	23 34 53.4	+4.0
TAF	Taforalt	1.55	244	P	Pn	23 34 46.0	-1.1
TAF	Taforalt	1.55	244	S	Sn	23 35 06.2	-0.1
GOG	Mont Gurugu	1.89	262	P	Pn	23 34 51.1	-0.6
GOG	Mont Gurugu	1.89	262	S	Sn	23 35 14.5	-0.1
ENIJ	Nijar	1.90	321	Pn	Pn	23 34 52.1	+0.2
ENIJ	Nijar	1.90	321	P	Pn	23 34 52.2	+0.3
ENIJ				S	Sn	23 35 15.0	+0.2
ENIJ				*i* IVmb_Lg		23 35 17.1	
JBK	JBK	1.92	233	P	Pn	23 34 51.1	-1.1
JBK	JBK	1.92	233	S	Sn	23 35 15.8	+0.3
EADEB	Ain Deheb	1.97	108	P	Pn	23 34 52.2	-0.7
CART	Cartagena	2.09	354	Pn	Pn	23 34 53.5	-1.0
CART				Sn	Sn	23 35 17.3	-2.3
CART	Cartagena	2.09	354	P	Pn	23 34 54.0	-0.5
EXMAZ	Mazarron	2.14	347	P	Pn	23 34 54.9	-0.3
EXMAZ				S	Sn	23 35 19.0	-1.7
ELOR	Lorca, Murcia	2.29	339	P	Pn	23 34 57.8	+0.6
ELOR				S	Sn	23 35 22.7	-1.7
ELOR				*i* IVmb_Lg		23 35 27.7	
TLOR	Lorca, Murcia	2.29	340	Pn	Pn	23 34 58.3	+1.1
TLOR				Sn	Sn	23 35 22.5	-1.9
EXAHM	Alhama Murcia,	2.41	346	P	Pn	23 34 59.3	+0.5
EZAR	Zarzadilla de	2.50	342	P	Pn	23 35 00.7	+0.5
EZAR				*i* IVmb_Lg		23 35 03.3	
EZAR				S	Sn	23 35 29.4	-0.2
EXBUL	Bullas, Murcia	2.65	344	P	Pn	23 35 03.4	+1.2
PALE	Palemas	2.65	265	P	Pn	23 35 02.6	+0.4
PALE	Palemas	2.65	265	S	Sn	23 35 34.0	+0.6
AKLM	AKL	2.77	250	P	Pn	23 35 04.1	+0.2
AKLM	AKL	2.77	250	S	Sn	23 35 37.7	+1.3
EQUE	Quentar	2.78	308	P	Pn	23 35 05.5	+1.4
EQTA	Presa de Quent	2.78	308	Pn	Pn	23 35 05.6	+1.5
EQES	Quesada	2.98	321	P	Pn	23 35 09.6	+2.9
EQES				*i* IVmb_Lg		23 35 10.7	
EQES				S	Sn	23 35 40.6	-0.9
EGOR	Sierra Gorda,	3.18	301	Pn	Pn	23 35 11.5	+2.0
EGOR	Sierra Gorda,	3.18	301	P	Pn	23 35 11.8	+2.2
EGOR				S	Sn	23 35 46.1	-0.5
EGOR				*i* IVmb_Lg		23 36 01.0	
EBEN2	Beniarda presa	3.19	7	P	Pn	23 35 10.3	+0.6
EBEN2				S	Sn	23 35 45.0	-1.8
EBEN2				*i* IVmb_Lg		23 35 52.0	
E0803	Jimena (Jaen)	3.21	317	P	Pn	23 35 12.9	+2.9
E0803				S	Sn	23 35 51.8	+4.4
EMAL	Malaga-Limoner	3.26	294	Pn	Pn	23 35 10.3	-0.2
EMAL				Sn	Sn	23 35 45.1	-3.2
E0802	Ubeda,Jaen	3.30	320	P	Pn	23 35 13.6	+2.4
E0802				S	Sn	23 35 47.6	-1.9
EMIJ	Mijas	3.46	289	Sn	Sn	23 35 50.1	-3.1
EMIJ				Pn	Pn	23 35 12.5	-0.8
EMIJ	Mijas	3.46	289	P	Pn	23 35 11.7	-1.6
EMIJ				S	Sn	23 35 50.6	-2.6
SMIR	Smir Dam	3.81	274	P	Pn	23 35 19.1	+1.1
SMIR	Smir Dam	3.81	274	S	Sn	23 35 58.6	-3.2
EIBI	Ibiza	3.88	24	Sn	Sn	23 36 02.3	-1.4
EIBI				Pn	Pn	23 35 19.3	+0.2
EIBI	Ibiza	3.88	24	P	Pn	23 35 19.8	+0.8
EIBI				S	Sn	23 36 02.7	-1.0
EIBI				*i* IVmb_Lg		23 37 04.6	
EADA	Adamuz	4.08	312	Pn	Pn	23 35 23.1	+1.2
EADA				Sn	Sn	23 36 05.9	-2.8
EADA	Adamuz	4.08	312	P	Pn	23 35 23.4	+1.5
EADA				S	Sn	23 36 07.7	-1.0
EADA				*i* IVmb_Lg		23 36 21.0	
ECHE	Chera	4.09	357	Pn	Pn	23 35 22.7	+0.7
ECHE				Sn	Sn	23 36 07.2	-1.6
ECHE	Chera	4.09	357	P	Pn	23 35 23.0	+1.0
ECHE				S	Sn	23 36 07.1	-1.6
ECHE				*i* IVmb_Lg		23 37 36.4	
PSIM	Granatula de C	4.11	325	P	Pn	23 35 23.5	+1.2
PSIM				S	Sn	23 36 07.3	-2.0
IFR	Ifrane	4.15	243	Sn	Sn	23 36 11.5	+1.0
MD31	MD31	4.26	233	P	Pn	23 35 24.0	-0.4
MD31	MD31	4.26	233	S	Sn	23 36 12.1	-1.0
ECAB	El Cabril	4.57	306	Pn	Pn	23 35 29.1	+0.5
ECAB				Sn	Sn	23 36 16.2	-4.4
ECAB	El Cabril	4.57	306	P	Pn	23 35 28.9	+0.4
ECAB				S	Sn	23 36 17.3	-3.3
EMOS	Mosqueruela	4.86	2	P	Pn	23 35 34.3	+1.7
EMOS				S	Sn	23 36 26.6	-1.4
EMOS				*i* IVmb_Lg		23 38 01.0	
PAB	San Pablo	4.96	325	P	Pn	23 35 35.1	+1.1
PAB				*i* IVmb_Lg		23 35 37.0	
PAB				S	Sn	23 36 28.1	-2.3
ETOS	Mallorca	5.09	32	Sn	Sn	23 36 32.8	-0.8
UCM	Universidad Co	5.20	338	Pn	Pn	23 35 39.5	+2.3
ZHG	ZHG	5.31	249	P	Pn	23 35 38.9	+0.1
ZHG	ZHG	5.31	249	S	Sn	23 36 41.8	+2.8
ETOR	Torete	5.41	349	P	Pn	23 35 42.4	+2.2
ETOR				*i* IVmb_Lg		23 37 01.0	
ERTA	Horta de San J	5.51	8	P	Pn	23 35 43.6	+2.2
ERTA				*i* IVmb_Lg		23 35 45.0	
ERTA				S	Sn	23 36 40.6	-3.2
PBAR	Barrancos	5.73	300	*e*S	Sn	23 36 47.2	-2.0
PBAR				*i* AML	AML	23 36 49.3	
PBAR				*i* AML	AML	23 36 53.2	
PBAR				*i* AML	AML	23 37 11.2	
GUD	Guadarrama	5.80	333	P	Pn	23 35 47.6	+2.0
GUD				*i* IVmb_Lg		23 35 50.5	
PVAQ	Vaqueiros	5.96	291	Pn	Pn	23 35 47.7	+0.2
PVAQ	Vaqueiros	5.96	291	*e*P	Pn	23 35 47.9	+0.3
PVAQ				*i* AML	AML	23 36 58.9	
PVAQ	Vaqueiros	5.96	291	P	Pn	23 35 47.8	+0.2
PVAQ	Vaqueiros	5.96	291	S	Sn	23 36 55.9	+1.1
EBAD	Badajoz	5.99	305	Pn	Pn	23 35 48.6	+0.6
EBAD	Badajoz	5.99	305	P	Pn	23 35 48.0	0.0
EBAD				S	Sn	23 36 52.0	-3.6
EBAD				*i* IVmb_Lg		23 36 57.6	
EPOB	Poblet	6.01	13	P	Pn	23 35 49.4	+1.1
EPOB				*i* IVmb_Lg		23 37 25.4	
EPLA	Plasencia	6.23	319	P	Pn	23 35 52.8	+1.4
EPLA				*i* IVmb_Lg		23 39 44.5	
PESTR	Estremoz	6.43	303	*e*P	Pn	23 35 55.0	+0.8
PESTR				*e*S	Sn	23 37 06.2	-0.4
PESTR				*i* AML	AML	23 37 43.5	
MESJ	Messejana	6.47	293	*e*P	Pn	23 35 55.4	+0.7
MESJ				*e*S	Sn	23 36 38.9	-29
MESJ				*i* AML	AML	23 36 43.0	
MESJ				*i* AML	AML	23 36 43.4	
MESJ				*i* AML	AML	23 36 48.1	
PMRV	Marv??o	6.60	308	*e*P	Pn	23 35 57.8	+1.4
PMRV				*e*S	Sn	23 37 10.1	-0.6
PMRV				*i* AML	AML	23 37 47.1	
PMRV				*i* AML	AML	23 37 47.4	
PMRV				*i* AML	AML	23 37 47.8	
PFVI	Vila Bisbo	6.75	286	*e*P	Pn	23 35 59.3	+0.8
PFVI				*e*S	Sn	23 37 12.3	-2.0
PFVI				*i* AML	AML	23 37 19.4	
PFVI				*i* AML	AML	23 37 35.8	
PCBR	Castelo Branco	6.89	311	*e*P	Pn	23 36 01.6	+1.1
PCBR				*e*S	Sn	23 37 16.6	-1.3
PCBR				*i* AML	AML	23 37 19.2	
PCBR				*i* AML	AML	23 37 19.7	
PMTG	Montargil	6.97	303	*e*S	Sn	23 37 17.5	-2.1
PMTG				*i* AML	AML	23 37 19.2	
PMTG				*i* AML	AML	23 37 19.9	
PSARD	Sardoal	7.19	307	*e*P	Pn	23 36 05.5	+0.9
PSARD				*e*S	Sn	23 37 23.6	-1.7
PSARD				*i* AML	AML	23 37 27.7	
PSARD				*i* AML	AML	23 37 28.3	
PSARD				*i* AML	AML	23 37 29.9	
MTE	Manteigas	7.28	314	*e*P	Pn	23 36 07.4	+1.5
MTE				*i* AML	AML	23 38 14.9	
PARRA	Arraiolos	7.42	299	*e*P	Pn	23 35 58.6	-9.2
PARRA				*e*S	Sn	23 37 12.9	-18
PARRA				*i* AML	AML	23 37 14.3	
PARRA				*i* AML	AML	23 37 15.2	

PARRA				*i* AML	AML	23 38 10.3	
MVO	Moncorvo	7.52	321	*e*P	Pn	23 36 11.3	+2.2
PVIS	Viseu	7.69	315	*e*P	Pn	23 36 12.3	+0.9
EALK	Alkurruntz	7.73	356	P	Pn	23 36 15.2	+3.2
ELAN	Lanestosa	8.00	346	P	Pn	23 36 18.4	+2.8
ELAN				*i* IVmb_Lg		23 39 45.6	
POLO	Lamas de Olo	8.07	319	*e*P	Pn	23 36 17.5	+0.7
PCAB	Cabril	8.43	319	*e*P	Pn	23 36 23.4	+1.8
EARI	Arriondas	8.53	337	P	Pn	23 36 25.0	+2.1
ELOB	Lobios	8.56	320	P	Pn	23 36 24.9	+1.4
ELOB				*i* IVmb_Lg		23 37 32.2	
PGAV	Gavieira, Arco	8.74	320	*e*P	Pn	23 36 27.7	+1.7

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*SNET **14** 23:35:01.3±0.8, 13°.04N×89°.02W, h47^{km}±9^{km}, ML3.7*

*GCG **14** 23:35:01.7±0.3, 13°.13N×89°.04W, h52^{km}±4^{km}, MD4.1*

*CATAC **14** 23:35:01.0±0.5, 13°N±5°×8°9W±°, h38^{km}±5^{km}, M3.5/17, MLv3.5/17, Error ellipse: s-maj=11.8km s-min=3.4km az=30.2, confirmed*

ISC 14 23:35:00.7±1.5, **13°.02N**±0°.09×**89°.02W**±0°.05, **h50**^{km}±16^{km}, **n56,** σ0^{s}.**52**/66, **1C-6D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALJI	Alcalda de J	0.54	55	*e*P	Pn	23 35 12.6	+0.2
ALJI	Alcalda de J	0.54	55	S	Sn	23 35 21.8	+1.0
ALJI	Alcalda de J	0.54	55	P	Pn	23 35 12.5	+0.1
LALI	Alcalda de L	0.55	328	*e*P	Pn	23 35 12.4	-0.2
LALI				*e*S	Sn	23 35 20.6	-0.5
LALI	Alcalda de L	0.55	328	*i* P	Pn	23 35 12.5	-0.1
LALI				*e*S	Sn	23 35 20.9	-0.3
TECO	Alcaldia de Te	0.57	24	⇓*e*P	Pn	23 35 12.7	-0.2
TECO	Alcaldia de Te	0.57	24	P	Pn	23 35 12.6	-0.3
TECO	Alcaldia de Te	0.57	24	S	Sn	23 35 21.9	+0.4
LFRS	El Faro	0.61	356	⇑*i*P	Pn	23 35 13.1	-0.2
LFRS				*e*S	Sn	23 35 22.0	-0.5
COEG	Centro de Oper	0.62	13	*e*P	Pn	23 35 13.2	-0.3
LOMA	Loma Larga	0.64	347	⇓*i*P	Pn	23 35 13.7	-0.2
LOMA				*e*S	Sn	23 35 23.5	+0.2
LOMA	Loma Larga	0.64	347	P	Pn	23 35 13.6	-0.2
TECA	Tecapa	0.69	47	⇓*i*P	Pn	23 35 14.7	+0.1
PAVA	Las Pavas	0.70	7	*e*P	Pn	23 35 14.7	+0.1
PAVA	Las Pavas	0.70	7	P	Pn	23 35 14.5	-0.1
PAVA	Las Pavas	0.70	7	S	Sn	23 35 25.0	+0.4
LFU	La Fuente	0.73	353	*e*P	Pn	23 35 15.0	+0.1
SCLA	Alcaldia de Sa	0.74	23	⇓*i*P	Pn	23 35 15.4	+0.3
PMON	Piamonte	0.75	338	⇓*e*P	Pn	23 35 15.1	-0.1
PMON	Piamonte	0.75	338	S	Sn	23 35 25.8	+0.1
PMON	Piamonte	0.75	338	P	Pn	23 35 15.1	-0.1
PQSS	Presa 15 de Se	0.75	36	*e*P	Pn	23 35 15.4	+0.3
BOQS	Boqueron	0.76	341	*e*P	Pn	23 35 15.5	+0.1
JAYA	Jayaque - finc	0.76	327	*e*P	Pn	23 35 15.2	-0.2
JAYA				*e*S	Sn	23 35 26.1	0.0
JAYA	Jayaque - finc	0.76	327	*i* P	Pn	23 35 15.1	-0.2
LCY	Lacayo	0.82	60	*e*P	Pn	23 35 16.2	+0.1
PACA	Pacayal	0.82	56	*e*P	Pn	23 35 16.4	+0.3
BLLM	Bellamira	0.87	61	*e*P	Pn	23 35 16.9	+0.1
CEVE	Cerro Verde	1.00	324	*e*P	Pn	23 35 19.1	+0.5
SBLS	San Blas	1.01	325	*e*P	Pn	23 35 19.4	+0.7
SNJE	San Jose	1.02	326	*e*P	Pn	23 35 18.9	0.0
CAHU	Cacacuatique	1.09	46	*e*P	Pn	23 35 20.0	+0.1
LCND	La Caada	1.14	75	*e*P	Pn	23 35 20.3	0.0
LCND	La Caada	1.14	75	P	Pn	23 35 20.2	-0.1
NUBE	Las Nubes	1.15	320	*e*P	Pn	23 35 20.6	0.0
NUBE	Las Nubes	1.15	320	*i* P	Pn	23 35 20.6	0.0
NUBE				*i* S	Sn	23 35 35.7	+0.3
CNCH	Conchagua	1.19	77	*e*P	Pn	23 35 20.8	-0.2
CNCH	Conchagua	1.19	77	S	Sn	23 35 36.0	-0.1
CNCH	Conchagua	1.19	77	P	Pn	23 35 20.8	-0.2
SLOZ	Alcaldia de Sa	1.25	324	S	Sn	23 35 37.4	-0.2
SLOZ	Alcaldia de Sa	1.25	324	P	Pn	23 35 21.6	-0.2
MTO3	Montecristo	1.42	347	⇓*i*P	Pn	23 35 24.4	+0.2
MTO3	Montecristo	1.42	347	*i* P	Pn	23 35 24.4	+0.2
POTN	Potosi Cosigui	1.48	90	P	Pn	23 35 24.9	0.0
POTN				S	Sn	23 35 43.6	+0.6
ESQI	Esquipulas	1.57	349	P	Pn	23 35 26.7	+0.4
PKGN	Cerro Pekin	2.02	100	P	Pn	23 35 32.2	-0.1
PKGN				S	Sn	23 35 55.6	-0.9
QUEN	Al S del Volca	2.16	101	P	Pn	23 35 34.2	0.0
HERN	Volcan Telica	2.17	100	S	Sn	23 35 58.8	-1.5
HERN	Volcan Telica	2.17	100	P	Pn	23 35 34.3	-0.2
CNGA	Al SSO del Vol	2.32	103	P	Pn	23 35 37.9	+1.4
CNGA				S	Sn	23 36 02.4	-1.4
CNGN	Cerro Negro	2.32	102	P	Pn	23 35 38.1	+1.6
CNGN	Cerro Negro	2.32	102	S	Sn	23 36 04.0	+0.1
MOMN	Momotombo	2.50	104	P	Pn	23 35 39.7	+0.9
MOMN				S	Sn	23 36 09.0	+0.9
OCON	Estacion meteo	2.55	76	P	Pn	23 35 39.6	0.0
LIMN	Finca el Limon	2.59	89	P	Pn	23 35 39.9	-0.2
RCPN	Sur Rio San Ju	2.90	80	P	Pn	23 35 43.4	-1.1

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*IDC **15** 00:14:47.0±14.0, 14°.17N×88°.32W, h0^{km}, mb3.4/3, mbtmp3.5/3, MS3.3/4, Error ellipse: s-maj=432.9km s-min=111.7km az=22.0*

*CATAC **15** 00:14:50.2±0.7, 13°N±3°×9°1W±°, h6^{km}±4^{km}, M3.6/11, MLv3.6/11, Error ellipse: s-maj=7.8km s-min=5.3km az=27.8, confirmed*

*GCG **15** 00:14:51.3±0.6, 12°.84N×90°.75W, h29^{km}, MD4.8*

*SNET **15** 00:14:53.9±0.9, 13°.06N×90°.65W, h18^{km}±7^{km}, ML3.4*

ISC 15 00:14:55.2±1.5, **13°.00N**±0°.08×**90°.63W**±0°.06, **h24**^{km}, **n47,** σ**1**^{s}.**23**/46, **MS3.4**/4, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAME	Alcaldia de Sa	1.03	35	P	Pn	00 15 12.0	-2.2
FAME	Alcaldia de Sa	1.03	35	S	Sn	00 15 29.3	+1.3
NUBE	Las Nubes	1.22	42	*e*P	Pn	00 15 15.3	-1.7
NUBE				*e*S	Sn	00 15 31.0	-1.8
NUBE	Las Nubes	1.22	42	*e*P	Pn	00 15 15.4	-1.6
NUBE	Las Nubes	1.22	42	P	Pn	00 15 15.1	-1.9
NUBE	Las Nubes	1.22	42	S	Sb	00 15 34.5	+1.3
FG8	Yepocapa, Chim	1.26	3	*e*P	Pb	00 15 18.2	-0.2
FG16	Alotenango, Sa	1.27	5	*i* P	Pb	00 15 18.8	+0.1
CEVE	Cerro Verde	1.28	50	*e*P	Pn	00 15 16.7	-1.2
CEVE				*e*S	Sb	00 15 35.7	+0.7
CEVE				IAML		00 15 40.4	
	comp=Z,1µm,0.4s						
CEVE	Cerro Verde	1.28	50	P	Pn	00 15 16.3	-1.6
CEVE	Cerro Verde	1.28	50	S	Sb	00 15 37.7	+2.7
SBLS	San Blas	1.29	49	*e*P	Pn	00 15 16.6	-1.4
SBLS				*e*S	Sn	00 15 34.7	+0.1
LOAL	Lomas de Alarc	1.29	40	P	Pn	00 15 16.7	-1.2
LOAL	Lomas de Alarc	1.29	40	S	Sb	00 15 36.7	+1.6
SLOZ	Alcaldia de Sa	1.31	39	*e*P	Pn	00 15 16.8	-1.3
SLOZ	Alcaldia de Sa	1.31	39	S	Sn	00 15 35.3	+0.3
SLOZ	Alcaldia de Sa	1.31	39	P	Pn	00 15 16.4	-1.7
SNJE	San Jose	1.32	49	*e*P	Pn	00 15 16.9	-1.5
JAYA	Jayaque - finc	1.32	60	*e*P	Pn	00 15 17.0	-1.3
JAYA				*e*S	Sn	00 15 34.9	-0.5
JAYA				IAML		00 15 43.2	
	comp=Z,412nm,0.3s						
PMON	Piamonte	1.46	61	*e*P	Pn	00 15 19.5	-0.8
PMON	Piamonte	1.46	61	S	Sb	00 15 41.7	+1.5
PMON	Piamonte	1.46	61	P	Pn	00 15 19.2	-1.1
BOQS	Boqueron	1.50	61	*e*P	Pn	00 15 20.5	-0.4
LOMA	Loma Larga	1.56	65	P	Pn	00 15 21.6	0.0
LOMA	Loma Larga	1.56	65	S	Sb	00 15 43.6	+0.7
STG0	El Palmar, Qui	1.58	334	*i* P	Pb	00 15 24.6	+0.7
STG8	El Palmar, Qui	1.60	334	*i* P	Pb	00 15 24.4	0.0
LFRS	El Faro	1.65	68	*e*P	Pn	00 15 21.8	-1.0
COEG	Centro de Oper	1.81	70	*e*P	Pn	00 15 24.6	-0.4
COEG	Centro de Oper	1.81	70	P	Pn	00 15 24.3	-0.8
COEG	Centro de Oper	1.81	70	S	Sb	00 15 50.1	0.0
MTO3	Montecristo	1.86	41	*e*P	Pn	00 15 25.0	-0.9
MTO3	Montecristo	1.86	41	*e*P	Pn	00 15 24.8	-1.1
MTO3	Montecristo	1.86	41	P	Pn	00 15 24.8	-1.1
MTO3	Montecristo	1.86	41	S	Sb	00 15 51.2	-0.5
SCLA	Alcaldia de Sa	1.98	69	*e*P	Pn	00 15 26.9	-0.4
PACA	Pacayal	2.29	78	S	Sb	00 16 02.5	-1.6
PACA	Pacayal	2.29	78	P	Pn	00 15 31.1	-0.6
CNCH	Conchagua	2.74	84	P	Pn	00 15 36.5	-1.3
CNCH	Conchagua	2.74	84	S	Sn	00 16 11.3	+1.0
TXAR	Lajitas Array	20.27	325	P	P	00 19 28.7	-0.5
	comp=Z,0.9nm,0.7s,baz=153,slow=12,SNR=9.5						
	comp=Z,0.9nm,0.7s						
NVAR	Mina Array Bea	35.28	321	P	P	00 21 49.7	+1.1
	comp=Z,0.4nm,0.6s,baz=125,slow=6.7,SNR=2.2						
	comp=Z,0.4nm,0.6s						
SCHQ	Schefferville	45.71	19	LR	LR	00 41 22.3	
	comp=Z,33nm,18.9s,baz=150,slow=36						
FRB	Frobisher Bay	53.00	12	LR	LR	00 48 23.8	
	comp=Z,35nm,18.6s,baz=148,slow=39						
SFJD	Kangerlussuaq	60.07	17	LR	LR	00 51 56.6	
	comp=Z,39nm,18.1s,baz=216,slow=38						
ILAR	Eielson Array	64.28	337	P	P	00 25 22.5	-5.8
	comp=Z,0.6nm,0.9s,baz=104,slow=6.4,SNR=4.3						
	comp=Z,0.6nm,0.9s						
NOA	NORSAR Array B	84.39	29	LR	LR	01 04 18.6	
	comp=Z,5.0nm,18.9s,baz=100,slow=36						

IDC 15 00:17:41.6±54.0, **19°.40S**×**176°.10W**, **h0**^{km}, **mb4.0**/3, **mbtmp4.0**/3, **Error ellipse: s-maj=1010.0km s-min=172.1km az=82.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	39.88	243	P	P	00 25 17.4	0.0
	0.5nm,0.3s,baz=63,slow=11,SNR=1.9						
	0.5nm,0.3s						
ASAR	Alice Springs	46.52	255	P	P	00 26 11.2	-0.1
	1.8nm,0.8s,baz=98,slow=7.2,SNR=17						
	1.8nm,0.8s						
WRA	Warramunga Arr	46.53	261	P	P	00 26 11.1	-0.3
	0.9nm,0.3s,baz=98,slow=7.5,SNR=24						
	0.9nm,0.3s						

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*IDC **15** 00:32:34.7±7.6, 40°.95N×140°.87E, h0^{km}, mb3.7/6, mbtmp3.6/7, ML3.0/1, Error ellipse: s-maj=188.5km s-min=35.6km az=172.0*

*JMA **15** 00:32:46.9±0.1, 40°.7N±0°.3×140°.9E±0°.6, h110^{km}, MV2.5/34, EASTERN AOMORI PREF*

ISC 15 00:32:46.6±0.9, **40°.73N**±0°.05×**140°.92E**±0°.09, **h113**^{km}±6^{km}, **n19,** σ0^{s}.**57**/26, **mb3.6**/6, **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTM	Tenmabayashi	0.12	64	P	Pn	00 33 02.2	+0.1
JTM				*e*S	Sn	00 33 13.5	-0.3
JANG	Nango	0.58	128	*i* P	Pn	00 33 04.0	-0.2
JANG				S	Sn	00 33 17.3	-0.2
JAH	Hinai	0.59	202	P	Pn	00 33 04.4	+0.1
JAH				S	Sn	00 33 17.5	-0.1
JOT	Ohata	0.66	8	P	Pn	00 33 05.3	+0.5
JIW	Iwasaki	0.71	259	P	Pn	00 33 05.5	+0.2
JSR	Shiriuchi	0.88	334	P	Pn	00 33 07.0	+0.2
JSR				*e*S	Sn	00 33 21.8	-0.3
JOMM	Oshimamatsumae	1.05	319	P	Pn	00 33 08.8	+0.3
JOMM				S	Sn	00 33 24.6	-0.4
JKB	Kayabe	1.16	4	P	Pn	00 33 10.3	+0.7
JOM	Ohasama	1.29	167	*i* P	Pn	00 33 11.1	0.0
JOM				S	Sn	00 33 29.6	0.0
JRG	Rokugo	1.35	190	*i* P	Pn	00 33 12.5	+0.7
JRG				S	Sn	00 33 32.2	+1.2
JMK	Ichinoseki	1.79	173	P	Pn	00 33 17.0	-0.1
JMK				*e*S	Sn	00 33 40.0	-0.3
JYK	Kaneyama	1.86	194	P	Pn	00 33 18.2	+0.2
USRK	Ussuriysk Ar.	7.46	301	Pn	Pn	00 34 24.2	-8.4
	0.2nm,0.3s,baz=111,slow=15,SNR=2.2						
	1.1nm,0.6s						
ZALV	Zalesovo Beam	39.21	309	P	P	00 40 02.7	-0.8
	0.7nm,0.5s,baz=81,slow=8.9,SNR=2.2						
	0.7nm,0.5s						
MKAR	Makanchi Array	41.92	299	P	P	00 40 25.9	0.0
	0.4nm,0.4s,baz=89,slow=9.9,SNR=8.5						
	0.4nm,0.4s						
KURBB	Kurchatov Arra	43.50	305	P	P	00 40 38.0	-0.5
	1.2nm,0.5s,baz=82,slow=8.6,SNR=9.4						
	1.2nm,0.5s						
ILAR	Eielson Array	46.61	34	P	P	00 41 03.8	+0.9
	0.2nm,0.6s,baz=260,slow=6.4,SNR=2.7						
	0.2nm,0.6s						
BVAR	Borovoye Array	47.86	310	P	P	00 41 13.8	+1.1
	0.3nm,0.4s,baz=74,slow=7.9,SNR=2.7						
	0.3nm,0.4s						
FINES	FINESS Array B	65.38	331	P	P	00 43 15.6	-0.9
	1.6nm,1.0s,baz=39,slow=12,SNR=5.8						
	1.6nm,1.0s						

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*KRNET **15** 00:42:38.9±0.1, 43°.13N×77°.43E, h12^{km}, mb2.4*

*NNC **15** 00:42:38.5±0.3, 43°.14N×77°.44E, h0^{km}, mb2.0, mpv2.9, Error ellipse: s-maj=3.3km s-min=1.5km az=0.0*

*SOME **15** 00:42:39.3, 43°.15N×77°.42E, h15^{km}*

ISC 15 00:42:38.7±0.9, **43°.14N**±0°.02×**77°.44E**±0°.02, **h12**^{km}±8^{km}, **n29,** σ0^{s}.**44**/56, **9C-9D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOTS	Kotyrbulak	0.26	292	P	Pg	00 42 44.1	0.0
	30nm,0.2s						
KOTS				S	Sg	00 42 47.6	-0.2
	151nm,0.2s						
KOTS	Kotyrbulak	0.26	292	*e*P	Pg	00 42 44.1	0.0
KOTS				*e*S	Sg	00 42 47.6	-0.2
KOTS	Kotyrbulak	0.26	292	*e*P	Pg	00 42 44.1	0.0
	30nm,0.2s						
KOTS				*e*S	Sg	00 42 47.6	-0.2
	151nm,0.2s						
SATY	Saty	0.71	96	P	Pg	00 42 52.6	+0.1
	5.7nm,0.1s						
SATY				S	Sg	00 43 02.2	+0.3
	28nm,0.1s						
SATY	Saty	0.71	96	*e*P	Pg	00 42 52.6	+0.1
SATY				*e*S	Sg	00 43 02.2	+0.3
KTBS	Karatobe	0.80	317	P	Pg	00 42 54.1	0.0
	0.9nm,0.1s						
KTBS				S	Sg	00 43 04.8	+0.2
	12nm,0.2s						
KTBS	Karatobe	0.80	317	*e*P	Pg	00 42 54.1	0.0
KTBS				*e*S	Sg	00 43 04.8	+0.2
PRZ	Przheval'sk	0.96	132	⇑*e*P	Pg	00 42 57.2	-0.1
PRZ				⇑*e*S	Sb	00 43 10.2	0.0
KPKS	Kokpek	0.97	70	P	Pg	00 42 57.4	0.0
	1.1nm,0.1s						
KPKS				S	Sb	00 43 10.7	+0.5
	6.3nm,0.2s						
KDJ	Kajisay	1.02	191	⇓*i*P	Pg	00 42 58.3	-0.1
KDJ				⇓*i*S	Sg	00 43 11.5	-0.3
KST	Kastek	1.08	266	P	Pg	00 42 59.7	+0.1
	3.2nm,0.1s						
KST				S	Sn	00 43 14.4	-0.5
	2.7nm,0.2s						
KST	Kastek	1.08	266	*e*P	Pg	00 42 59.7	+0.1
KST				*e*S	Sn	00 43 14.4	-0.5
KST	Kastek	1.08	266	*e*P	Pg	00 42 59.7	+0.1
	3.2nm,0.1s						
KST				*e*S	Sn	00 43 14.4	-0.5
	2.7nm,0.2s						
ARXS	Arharly	1.11	15	P	Pb	00 42 59.5	-0.4
	2.9nm,0.1s						
ARXS				S	Sb	00 43 14.3	-0.1
	1.9nm,0.1s						
UZB	Uzynbulak	1.16	89	P	Pb	00 43 00.3	-0.5
	2.5nm,0.2s						
UZB				S	Sb	00 43 15.4	-0.4
	2.9nm,0.1s						
UZB	Uzynbulak	1.16	89	*e*P	Pb	00 43 00.5	-0.3
UZB				*e*S	Sb	00 43 15.7	-0.2
BLB	Baldybastay	1.22	38	P	Pn	00 43 01.6	-0.2
	13nm,0.1s						
BLB				S	Sb	00 43 17.7	+0.1
	6.0nm,0.3s						
ULHL	Ulahol	1.25	225	⇓*i*P	Pb	00 43 02.4	0.0
ULHL				⇓*i*S	Sb	00 43 18.9	+0.3
BOOM	Boomskoye usch	1.28	240	⇑*i*P	Pb	00 43 02.8	0.0
BOOM				⇑*i*S	Sn	00 43 19.7	0.0
TKM2	Tokmak 2	1.37	262	⇑P	Pn	00 43 04.0	+0.2
	0.2nm,0.2s						
TKM2				⇓S	Sg	00 43 22.6	-0.1
	0.8nm,0.2s						
TKM2	Tokmak 2	1.37	262	⇓*i*P	Pb	00 43 04.4	0.0
TKM2				⇓*i*S	Sg	00 43 22.7	-0.1
TARG	Taragay, Kyrgy	1.43	169	⇑*i*P	Pb	00 43 05.6	0.0
TARG				⇑*i*S	Sg	00 43 24.5	-0.3
PDGK	Podgornoye	1.51	82	⇓P	Pn	00 43 06.1	+0.4
	1.7nm,0.4s						
PDGK				⇓S	Sb	00 43 26.6	+0.7
	2.3nm,0.5s						
KNOS	Konyrlen	1.76	45	P	Pb	00 43 11.5	+0.6
	1.5nm,0.1s						
KNOS				S	Sg	00 43 34.7	-0.5
	2.7nm,0.2s						
DJR	Jarkent	2.08	54	Pg	Pb	00 43 17.2	+0.7
	0.9nm,0.1s						
DJR				Lg	Lg	00 43 44.5	
	11nm,0.3s						
DJR	Jarkent	2.08	54	*e*P	Pb	00 43 17.2	+0.7
	0.9nm,0.1s						
DJR				*e*S	Sg	00 43 44.5	-1.2
	11nm,0.3s						
KTMS	Ketmen	2.15	81	Pg	Pb	00 43 18.5	+0.9
	0.7nm,0.1s						
KTMS				Lg	Lg	00 43 46.7	
	2.1nm,0.1s						
KTMS	Ketmen	2.15	81	*e*P	Pb	00 43 18.5	+0.9
	0.7nm,0.1s						
KTMS				*e*S	Sg	00 43 46.7	-1.1
	2.1nm,0.1s						
USP	Ospenovka	2.15	274	⇑*i*P	Pb	00 43 17.2	-0.4
USP				⇑*i*S	Sb	00 43 45.3	+1.0

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*IDC **15** 00:46:04.9±2.5, 20°.44S×69°.18W, h102^{km}±22^{km}, mb3.5/7, mbtmp3.8/11, MS2.3/1, Error ellipse: s-maj=26.9km s-min=19.7km az=61.0*

*SJA **15** 00:46:04.9±0.7, 20°.12S×69°.22W, h102^{km}±2^{km}, ML4.0, MW3.9*

*GUC **15** 00:46:06.3±0.8, 20°.12S×69°.22W, h91^{km}±3^{km}, ML3.9*

*NEIC **15** 00:46:06.4±1.5, 20°.12S±0°.02×69°.13W±0°.07, h95^{km}±5^{km}, mb4.1/5, ML3.9(GUC), Error ellipse: s-maj=10.0km s-min=2.2km az=87.0*

ISC 15 00:46:05.5±0.6, **20°.13S**±0°.03×**69°.19W**±0°.05, **h97**^{km}±5^{km}, **n76,** σ**1**^{s}.**49**/96, **mb3.9**/7, **5D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	IPOC Station P	0.04	116		Pn	00 46 20.1	+0.5
PB08				Sn	Sn	00 46 30.8	+0.9
PB08	IPOC Station P	0.04	116	⇓*i*P	Pn	00 46 20.0	+0.5
PB08				*e*S	Sn	00 46 30.0	+0.1
PB08				IAML		00 46 33.0	
	comp=N,9µm,0.1s						
PB08	IPOC Station P	0.04	116	*e*P	Pn	00 46 19.9	+0.4
PB08				*e*S	Sn	00 46 31.5	+1.6
PB08				IAML		00 46 32.9	
	comp=Z,3µm,0.1s						
GO01	Chusmiza	0.46	359		Pn	00 46 21.7	+0.4
GO01				Sn	Sn	00 46 33.8	+0.8
GO01	Chusmiza	0.46	359	*e*P	Pn	00 46 21.4	+0.1
GO01				*e*S	Sn	00 46 33.2	+0.3
GO01				IAML		00 46 35.1	
	comp=N,13µm,0.2s						
GO01	Chusmiza	0.46	359	*e*P	Pn	00 46 21.6	+0.3
GO01				*e*S	Sn	00 46 34.3	+1.3
PX03	IPOC Station P	0.50	236	*e*P	Pn	00 46 20.7	-0.4
PX03				*e*S	Sn	00 46 33.0	+0.2
PX03				IAML		00 46 33.9	
	comp=N,6µm,0.2s						
PB11	IPOC Station P	0.57	309		Pn	00 46 22.2	+0.5
PB11				Sn	Sn	00 46 34.8	+1.0
PB11	IPOC Station P	0.57	309	⇓*i*P	Pn	00 46 22.0	+0.3
PB11				*e*S	Sn	00 46 34.5	+0.6
PB11				IAML		00 46 36.6	
	comp=N,8µm,0.3s						
PB11	IPOC Station P	0.57	309	*e*P	Pn	00 46 22.0	+0.3
PB11				*e*S	Sn	00 46 35.0	+1.2
PB11				IAML		00 46 37.5	
	comp=Z,4µm,0.2s						
TA02	Huaiquique	0.90	261		Pn	00 46 25.4	+0.8
TA02				Sn	Sn	00 46 40.0	+1.0
TA02	Huaiquique	0.90	261	*e*P	Pn	00 46 25.2	+0.6
TA02	Huaiquique	0.90	261	*e*P	Pn	00 46 24.8	+0.2
TA02				*e*S	Sn	00 46 39.4	+0.4
TA02				IAML		00 46 41.1	
	comp=Z,8µm,0.1s						
PB01	IPOC Station P	0.95	197		Pn	00 46 26.1	+0.7
PB01				Sn	Sn	00 46 41.3	+1.1
PB01	IPOC Station P	0.95	197	⇓*i*P	Pn	00 46 26.0	+0.7
PB01				*e*S	Sn	00 46 41.2	+1.0
PB01				IAML		00 46 42.8	
	comp=E,5µm,0.3s						
PB01	IPOC Station P	0.95	197	*e*P	Pn	00 46 26.0	+0.7
PB01				*e*S	Sn	00 46 41.8	+1.5
PB01				IAML		00 46 43.6	
	comp=Z,2µm,0.2s						
TA01	Diego Aracena	1.03	245		Pn	00 46 26.6	+0.6
TA01	Diego Aracena	1.03	245	⇓*i*P	Pn	00 46 26.4	+0.4
TA01				*e*S	Sn	00 46 41.7	+0.2
TA01				IAML		00 46 46.1	
	comp=E,2µm,0.3s						
TA01	Diego Aracena	1.03	245	*e*P	Pn	00 46 26.4	+0.4
TA01				*e*S	Sn	00 46 42.5	+1.0
TA01				IAML		00 46 47.1	
	comp=Z,2µm,0.4s						
PATCX	Punta Patache	1.14	232		Pn	00 46 28.1	+0.7
PATCX	Punta Patache	1.14	232	*e*P	Pn	00 46 27.8	+0.4
PATCX				*e*S	Sn	00 46 46.1	+2.2
PATCX				IAML		00 46 46.5	
	comp=Z,2µm,0.4s						
PB09	IPOC Station P	1.66	182		Pn	00 46 34.3	+0.4
PB09	IPOC Station P	1.66	182	⇓*i*P	Pn	00 46 35.1	+1.3
PB09				*e*S	Sn	00 46 57.1	+1.8
PB09				IAML		00 47 00.4	
	comp=N,1µm,0.4s						
PB09	IPOC Station P	1.66	182	*e*P	Pn	00 46 34.6	+0.8
PB09				*e*S	Sn	00 46 58.4	+3.0
PB09				IAML		00 47 01.7	
	comp=Z,818nm,0.5s						
PB16	IPOC Station P	1.81	350		Pn	00 46 37.1	+1.0
PB16	IPOC Station P	1.81	350	*e*P	Pn	00 46 37.4	+1.3
PB16	IPOC Station P	1.81	350	*e*P	Pn	00 46 36.8	+0.7
PB16				*e*S	Sn	00 47 02.0	+2.8
PB03	IPOC Station P	1.98	195		Pn	00 46 39.1	+1.2
PB03	IPOC Station P	1.98	195	*e*P	Pn	00 46 39.2	+1.2
PB03				IAML		00 47 12.1	
	comp=E,1µm,0.3s						
PB03	IPOC Station P	1.98	195	*e*P	Pn	00 46 38.7	+0.7
PB03				*e*S	Sn	00 47 04.0	+1.3
PB03				IAML		00 47 12.5	
	comp=Z,1µm,0.3s						
AP01	Chacalluta	2.06	328		Pn	00 46 40.5	+1.7
AP01	Chacalluta	2.06	328	*e*P	Pn	00 46 39.9	+1.1
AP01				*e*S	Sn	00 47 04.9	+0.8
AP01	Chacalluta	2.06	328	*e*P	Pn	00 46 39.4	+0.7
AP01				*e*S	Sn	00 47 04.5	+0.4
AP01				IAML		00 47 14.4	
	comp=Z,1µm,0.2s						
PB18	Visviri	2.54	354		Pn	00 46 48.4	+2.8
PB06	IPOC Station P	2.59	188		Pn	00 46 47.2	+1.2
PB06	IPOC Station P	2.59	188	*e*P	Pn	00 46 46.9	+0.9
PB06				*e*S	Sn	00 47 19.8	+2.8
PB06				IAML		00 47 25.7	
	comp=Z,546nm,0.2s						
PB05	IPOC Station P	2.87	199		Pn	00 46 51.0	+1.4
PB05	IPOC Station P	2.87	199	*e*P	Pn	00 46 50.2	+0.5
PB05				*e*S	Sn	00 47 34.2	+11
PB05				IAML		00 47 36.9	
	comp=Z,336nm,0.4s						
AF01	San Pedro de A	2.96	162		Pn	00 46 54.1	+3.0
PB10	IPOC Station P	3.60	200		Pn	00 47 00.6	+1.2
PB10	IPOC Station P	3.60	200	*e*P	Pn	00 46 59.8	+0.4
PB10				*e*S	Sn	00 47 54.0	+13
LPAZ	La Paz	3.95	15		Pn	00 47 06.5	+1.9
LPAZ	La Paz	3.95	15	P	Pn	00 47 07.0	+2.4
	comp=Z,24nm,0.5s,baz=164,slow=4.4,SNR=90						
LPAZ				S	Sn	00 47 52.2	+2.1
	comp=Z,8.9nm,0.5s,baz=147,slow=11,SNR=4.5						
LPAZ				LR	LR	00 49 03.8	
	comp=Z,34nm,19.7s,baz=150,slow=42						
LPAZ	La Paz	3.95	15	*e*P	Pn	00 47 07.2	+2.6
YJA	Yavi	3.99	121	*e*P	Pn	00 47 08.3	+3.3
PB14	IPOC Station P	4.62	194		Pn	00 47 13.4	+0.1
AC02	Maricunga	6.68	180	Pn	Pn	00 47 41.4	-0.1
SIV	San Ignacio	8.74	63	P	Pn	00 48 06.6	-2.7
	comp=Z,4.8nm,0.5s,baz=249,slow=10.0,SNR=23						
PTLB	Pontes e Lacer	10.64	66	Pn	Pn	00 48 34.3	-0.8
CFA	Coronel Fontan	11.46	176	P	Pn	00 48 42.5	-3.6
	comp=Z,0.5nm,0.4s,baz=325,slow=18,SNR=1.6						
CFA				S	Sn	00 50 38.7	-13
	comp=Z,0.7nm,0.4s,baz=31,slow=19,SNR=1.6						
CPUP	Villa Florida	12.53	122	P	Pn	00 48 56.9	-3.4
	comp=Z,0.8nm,0.8s,baz=307,slow=20,SNR=7.3						
MT02	Curacav	13.20	187	Pn	Pn	00 49 12.8	+3.7
BO04	La Punta	13.87	185	Pn	Pn	00 49 19.4	+1.5

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BO01  Tunca               14.31 186  Pn     Pn      00 49 23.9 +0.3
BO02  Sierra Bellavi      14.68 185         Pn      00 49 30.1 +1.7
ATAH  Atahualpa           15.70 324  P      P       00 49 45.9 +2.1
      comp=Z,1.4nm,0.5s,baz=118,slow=16,SNR=1.6
ITAB  Concordia           17.14 118         P       00 50 00.1 +0.8
ITAB                                 IAmb   IAmb    00 50 00.9
      comp=Z,25nm,1.5s
PLTB  Pedras Altas        18.16 133  P      P       00 50 10.5 +0.1
BDFB  Brasilia            20.63  81  P      P       00 50 37.4 -0.2
      comp=Z,1.3nm,0.7s,baz=230,slow=13,SNR=1.6
      comp=Z,1.3nm,0.7s
BOAV  Boa Vista           23.94  22  P      P       00 51 10.0 -0.9
BOAV                                 IAmb   IAmb    00 51 10.4
      comp=Z,3.5nm,0.7s
RUSC  La Rusia            26.14 351  P      P       00 51 31.4  0.0
RUSC                                 IAmb   IAmb    00 51 35.7
      comp=Z,12nm,1.3s
FW14  Alvarado            58.70 332  P      P       00 55 53.5 +0.3
TXAR  Lajitas Array       59.36 325  P      P       00 55 57.6 -0.2
      comp=Z,0.1nm,0.4s,baz=154,slow=5.9,SNR=2.4
      comp=Z,0.1nm,0.4s
DBIC  Dimbokro            68.60  74  P      P       00 56 59.6 +1.0
      comp=Z,1.9nm,0.6s,baz=216,slow=8.7,SNR=1.4
      comp=Z,1.9nm,0.6s
NVAR  Mina Array Bea      74.26 322  P      P       00 57 33.2 +0.7
      comp=Z,0.4nm,0.7s,baz=116,slow=17,SNR=3.7
      comp=Z,0.4nm,0.7s
TORD  Torodi Ar. Bea      77.14  71  P      P       00 57 46.9 -2.2
      comp=Z,0.9nm,0.3s,baz=254,slow=5.3,SNR=1.6
      comp=Z,0.9nm,0.3s
VNDA  Vanda               78.15 190  P      P       00 57 49.7 -4.0
      comp=Z,0.6nm,0.7s,baz=135,slow=4.3,SNR=4.0
      comp=Z,0.6nm,0.7s
YKA   Yellowknife Ar      89.81 341  P      P       00 58 52.8  0.0
      comp=Z,1.2nm,0.8s,baz=138,slow=3.8,SNR=6.4
      comp=Z,1.2nm,0.8s
H11S2 WAKE ISLAND Hy127.44 278       T      T       03 24 46.8
      baz=102,slow=74,SNR=31
H11S1 WAKE ISLAND Hy127.44 278       T      T       03 24 44.8
      baz=102,slow=74,SNR=24
H11S3 WAKE ISLAND Hy127.45 278       T      T       03 24 45.9
      baz=102,slow=74,SNR=18
H11N3 WAKE ISLAND Hy127.48 280       T      T       03 24 51.3
      baz=101
H11N2 WAKE ISLAND Hy127.50 280       T      T       03 24 50.5
      baz=101
H11N1 WAKE ISLAND Hy127.50 280       T      T       03 24 50.5
      baz=101
WRA   Warramunga Arr     133.99 211  PKP    PKPdf   01 05 11.8 -0.6
      comp=Z,0.4nm,0.7s,baz=181,slow=1.8,SNR=2.5
MKAR  Makanchi Array     144.67  35  PKP    PKPab   01 05 29.1 -0.7
      comp=Z,0.3nm,0.4s,baz=315,slow=3.3,SNR=6.2
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IDC ***15*** *01:04:25.9±0.6, 15°.58S×176°.86W, h0^{km}, mb4.1/14, mbtmp4.1/16, ML5.2/1, MS4.1/51, Error ellipse: s-maj=24.9km s-min=16.7km az=133.0*

NEIC ***15*** *01:04:27.5±1.1, 15°.29S±0°.08×177°.10W±0°.09, h10^{km}±1^{km}, mb4.7/19, Error ellipse: s-maj=16.8km s-min=11.6km az=52.0*

GCMT ***15*** *01:04:31.5±0.2, 15°.56S±0°.01×176°.79W±0°.01, h14^{km}±1^{km}, MW5.0/119, Moment Tensor Solution. s44,c61; s119,c182; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.10±.09; $M_{\theta\theta}$-2.06±.09; $M_{\phi\phi}$2.16±.08; $M_{r\theta}$-0.15±.18; $M_{\theta\phi}$2.97±.09; $M_{\phi r}$0.03±.18; Best double couple: $M_0$3.64700×10^{16} NP1:ϕ_s162.00000°,δ88.00000°, λ-179.00000°. NP2:ϕ_s72.00000°,δ89.00000°,λ-2.00000°. Principal axes: T 3.6940, Plg1.0000°, Azm117.0000°; N -0.0940, Plg87.0000°, Azm224.0000°; P -3.5990, Plg2.0000°, Azm27.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 01:04:30.5±0.4**, 15°.39S**±0°.08×**177°.01W**±0°.07**, h35**^{km}**, n105, σ1^{s}53**/59**, mb4.5**/27**, MS4.2**/48**, 4D, Fiji Islands region**

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Code  Station Name         Δ°  AZ°    Phase ID          Time    Res
                                     Op     ISC      h  m  s   ISC
FUTU  Fugatoga             1.52 315         Pn      01 04 53.1 -2.2
FUTU                                 Sn     Sn      01 05 10.4 -3.5
MSVF  Nonsavu              5.28 243         Pn      01 05 46.2 -0.9
MSVF  Nonsavu              5.28 243  Pn     Pn      01 05 47.4 +0.4
      2.9nm,0.3s,baz=145,slow=18,SNR=10
MSVF                                 LR     LR      01 07 35.5
      comp=Z,1μm,18.7s,baz=35,slow=36
      3.9nm,0.3s
NIUE  Niue                 7.69 119  Pn     Pn      01 06 16.2 -3.9
RAO   Raoul Island        13.82 183  LR     LR      01 12 05.8
      comp=Z,1μm,20.6s,baz=326,slow=34
DZM   Mont Dzumac         17.02 245         P       01 08 26.3 -1.3
DZM   Mont Dzumac         17.02 245  eP     P       01 08 27.1 -0.4
      51nm,1.2s
DZM                                  eLR    LR      01 12 14.9
      1μm,23.9s
DZM   Mont Dzumac         17.02 245  Pn     P       01 08 28.0 +0.5
      3.3nm,0.8s,baz=86,slow=16,SNR=3.8
DZM                                  LR     LR      01 13 59.3
      comp=Z,696nm,18.9s,baz=73,slow=34
RAR   Rarotonga           17.35 112  LR     LR      01 13 31.8
      comp=Z,738nm,19.1s,baz=282,slow=32
URZ   Urewera             23.36 192  LR     LR      01 17 10.3
      comp=Z,1μm,21.8s,baz=168,slow=33
PPT   Papeete             26.38  99  LR     LR      01 18 09.8
      comp=Z,404nm,18.8s,baz=254,slow=31
PPT2  Papeete2            26.38  99  eP     P       01 10 00.9 -3.0
      49nm,25.0s
PPT2                                 eS     S       01 14 37.6 +2.4
      1μm,28.5s
PPT2                                 eLR    LR      01 16 36.3
      2μm,25.8s
PPT2                                 eLR    LR      01 16 43.1
      1μm,25.0s
TBI   Tubuai              27.13 111  eP     P       01 10 10.3 -0.2
      511nm,32.0s
TBI                                  eLR    LR      01 17 01.9
      8μm,28.5s
TBI                                  eLR    LR      01 17 05.0
      2μm,26.8s
PMG   Port Moresby        35.47 275  LR     LR      01 23 53.3
      comp=Z,468nm,21.0s,baz=122,slow=33
TAOE  Nuku Hiva Isla      36.58  84  eLR    LR      01 21 24.0
      534nm,24.0s
H11S2 WAKE ISLAND Hy      37.30 334  T      T       01 51 20.0
      baz=155
H11S3 WAKE ISLAND Hy      37.31 334  T      T       01 51 21.8
      baz=155
H11S1 WAKE ISLAND Hy      37.31 334  T      T       01 51 23.7
      baz=155
H11N3 WAKE ISLAND Hy      38.31 335  T      T       01 52 35.2
      baz=154,slow=76,SNR=8.7
H11N1 WAKE ISLAND Hy      38.31 335  T      T       01 52 35.5
      baz=154,slow=76,SNR=14
H11N2 WAKE ISLAND Hy      38.33 335  T      T       01 52 36.8
      baz=154,slow=76,SNR=12
STKA  Stephens Creek      41.05 239         P       01 12 10.3 -0.4
STKA  Stephens Creek      41.05 239  P      P       01 12 11.2 +0.5
      9.0nm,1.1s,baz=82,slow=7.7,SNR=7.8
STKA                                 LR     LR      01 27 36.7
      comp=Z,273nm,19.8s,baz=63,slow=34
      9.0nm,1.1s
JAY   Jayapura            43.58 283  LR     LR      01 29 31.1
      comp=Z,259nm,20.7s,baz=185,slow=34
WB0   Warramunga Arr      46.42 257  P      P       01 12 52.7 -1.4
WB0                                  IAmb   IAmb    01 12 55.1
      comp=Z,9.4nm,1.4s
WRA   Warramunga Arr      46.46 257  P      P       01 12 54.0 -0.5
      comp=Z,2.0nm,1.1s,baz=84,slow=6.6,SNR=4.8
WRA                                  LR     LR      01 30 39.6
      comp=Z,113nm,19.2s,baz=79,slow=34
      comp=Z,2.0nm,1.1s
AS31  Alice Springs       46.81 252  P      P       01 12 56.2 -0.9
ASAR  Alice Springs       46.81 252  P      P       01 12 56.0 -1.1
ASAR  Alice Springs       46.81 252  P      P       01 12 57.0 -0.2
      comp=Z,3.1nm,0.6s,baz=84,slow=8.5,SNR=50
ASAR                                 LR     LR      01 31 57.5
      comp=Z,324nm,18.5s,baz=92,slow=35
      comp=Z,3.1nm,0.6s
GUMO  Guam                47.45 305  LR     LR      01 30 12.1
      comp=Z,150nm,21.8s,baz=114,slow=32
MTN   Manton Dam          50.27 266         P       01 13 22.7 -1.1
FITZ  Fitzroy Crossi      54.81 259  LR     LR      01 35 28.3
      comp=Z,319nm,21.2s,baz=104,slow=34
SOEI  Soe                 57.45 268  P      P       01 14 16.1 -0.4
JCJ   Chichijima          57.90 317  LR     LR      01 33 46.4
      comp=Z,300nm,21.4s,baz=126,slow=30
DAV   Davao City (W)      61.10 287  LR     LR      01 39 31.8
      comp=Z,116nm,18.7s,baz=168,slow=34
NWAO  Narrogin (SRO)      61.59 241  LR     LR      01 39 43.7
      comp=Z,257nm,21.4s,baz=106,slow=34
KAPI  Kappang             62.90 272  LR     LR      01 40 49.4
      comp=Z,93nm,19.9s,baz=89,slow=35
VNDA  Vanda               63.05 185  P      P       01 14 55.2 +1.5
      comp=Z,1.5nm,1.0s,baz=2.6,slow=8.3,SNR=4.2
VNDA                                 LR     LR      01 38 07.5
      comp=Z,54nm,20.8s,baz=12,slow=32
      comp=Z,1.5nm,1.0s
MJAR  Matsushiro Arr      66.74 322  P      P       01 15 21.7 +3.4
      comp=Z,3.1nm,1.0s,baz=151,slow=11,SNR=2.5
      comp=Z,3.1nm,1.0s
SHEM  Shemya Is, Ala      68.27 354  LR     LR      01 42 26.3
      comp=Z,71nm,18.6s,baz=296,slow=33
JNU   Nakatsue            69.29 315  LR     LR      01 41 20.9
      comp=Z,98nm,18.6s,baz=140,slow=32
ASAJ  Asahikawa           69.75 330  LR     LR      01 40 00.1
      comp=Z,135nm,21.8s,baz=133,slow=30
PETK  Petropavlovsk-      71.62 344  P      P       01 15 50.8 +2.6
      comp=Z,2.0nm,0.9s,baz=146,slow=9.0,SNR=4.9
PETK                                 LR     LR      01 42 06.6
      comp=Z,101nm,20.5s,baz=156,slow=32
      comp=Z,2.0nm,0.9s
KSRS  Korea Array         73.75 317  P      P       01 16 05.4 +4.2
      comp=Z,0.7nm,0.7s,baz=101,slow=6.3,SNR=1.4
      comp=Z,0.7nm,0.7s
QSPA  South Pole Qui      74.65 180  P      P       01 16 06.1 -0.1
QSPA                                 IAmb   IAmb    01 16 14.9
      comp=Z,12nm,1.4s
QSPA  South Pole Qui      74.65 180  P      P       01 16 06.0 -0.2
      comp=Z,2.9nm,0.9s,baz=105,slow=1.9,SNR=10
QSPA                                 LR     LR      01 44 09.7
      comp=Z,123nm,20.6s,baz=64,slow=32
      comp=Z,2.9nm,0.9s
USRK  Ussuriysk Ar.       75.33 325  LR     LR      01 43 48.5
      comp=Z,136nm,21.6s,baz=128,slow=31
PFO   Pinyon Flats O      75.49  49  LR     LR      01 43 15.4
      comp=Z,165nm,18.3s,baz=235,slow=31
KDAK  Kodiak Island       75.66  13  LR     LR      01 43 34.7
      comp=Z,189nm,19.9s,baz=207,slow=31
YBH   Yreka Blue Hor      75.73  39  LR     LR      01 42 02.8
      comp=Z,18nm,20.8s,baz=243,slow=30
LPIG  La Paz              76.02  60  LR     LR      01 44 50.0
      comp=Z,59nm,18.1s,baz=208,slow=32
DSP   Deep Springs        76.35  45  P      P       01 16 16.8 +0.7
DSP                                  IAmb   IAmb    01 16 24.9
      comp=Z,4.8nm,1.2s
NVAR  Mina Array Bea      76.69  44  P      P       01 16 18.9 +0.5
NVAR  Mina Array Bea      76.69  44  P      P       01 16 20.1 +1.7
      comp=Z,0.8nm,0.7s,baz=224,slow=10,SNR=7.9
NVAR                                 LR     LR      01 46 20.4
      comp=Z,88nm,18.1s,baz=210,slow=33
      comp=Z,0.8nm,0.7s
NJ2   Nanjing             77.41 308  eP     P       01 16 22.4 +0.1
NJ2                                  pmax   pmax
      comp=Z,6.0nm,0.5s
KLR   Kul'dur             78.66 329  LR     LR      01 46 29.0
      comp=Z,100nm,20.3s,baz=151,slow=32
MA2   Magadan             79.15 344  LR     LR      01 47 00.8
      comp=Z,105nm,20.6s,baz=136,slow=32
BBB   Bella Bella         79.48  28  LR     LR      01 44 59.4
      comp=Z,141nm,19.5s,baz=188,slow=31
J18K  Innoko River        80.17   9         P       01 16 36.0 -0.7
J18K                                 IAmb   IAmb    01 16 41.1
      comp=Z,5.7nm,0.8s
J20K  Nowinta River       81.25  10  P      P       01 16 42.9 +0.4
J20K                                 IAmb   IAmb    01 16 58.1
      comp=Z,9.7nm,1.5s
NEW   Newport             82.69  36  LR     LR      01 46 06.6
      comp=Z,133nm,20.6s,baz=213,slow=30
CCB   Clear Creek Bu      82.85  12  IAmb   IAmb    01 17 04.8
      comp=Z,9.4nm,1.4s
DLBC  Dease Lake          83.00  23  LR     LR      01 47 12.6
      comp=Z,365nm,19.9s,baz=258,slow=31
ILAR  Eielson Array       83.15  13  P      P       01 16 52.8 +0.4
      comp=Z,0.9nm,0.9s,baz=228,slow=5.8,SNR=7.9
ILAR                                 LR     LR      01 47 04.4
      comp=Z,103nm,21.3s,baz=232,slow=31
      comp=Z,0.9nm,0.9s
POKR  Poker Plat Res      83.34  12  P      P       01 16 52.8 -0.6
POKR                                 IAmb   IAmb    01 17 08.2
      comp=Z,8.0nm,1.1s
ANMO  Albuquerque         83.48  51  LR     LR      01 45 58.9
      comp=Z,216nm,21.5s,baz=336,slow=30
TXAR  Lajitas Array       83.52  57  P      P       01 16 56.0 +0.7
      comp=Z,0.6nm,0.9s,baz=235,slow=4.4,SNR=6.0
TXAR                                 LR     LR      01 46 50.5
      comp=Z,59nm,20.0s,baz=228,slow=30
      comp=Z,0.6nm,0.9s
S22A  4UR Ranch, Cre      84.35  49         P       01 16 59.6 +0.1
S22A                                 IAmb   IAmb    01 17 08.2
      comp=Z,6.4nm,1.2s
BELA  Belgrano 2          84.47 173  P      P       01 16 58.8 -0.4
BELA                                 IAmb   IAmb    01 17 06.2
      comp=Z,5.9nm,1.1s
YHL   Hebgen Lake         84.51  41  P      P       01 17 01.7 +1.4
YHL                                  IAmb   IAmb    01 17 12.0
      comp=Z,7.9nm,1.2s
PDAR  Pinedale Array      84.61  43  P      P       01 17 00.2 -0.5
      comp=Z,0.6nm,0.8s,baz=202,slow=1.6,SNR=5.3
PDAR                                 LR     LR      01 47 16.2
      comp=Z,65nm,21.0s,baz=244,slow=30
      comp=Z,0.6nm,0.8s
XLT   XiLinHaoTe          84.77 318  eP     P       01 16 57.8 -3.5
XLT                                  sP     PcP     01 17 05.0 +0.3
XLT                                  pmax   pmax
      comp=Z,6.0nm,0.8s
MNHN  Monahans            84.97  56  P      P       01 17 03.2 +0.6
MNHN                                 IAmb   IAmb    01 17 12.5
      comp=Z,3.4nm,0.9s
PMSA  Palmer Station      85.58 157  LR     LR      01 45 36.6
      comp=Z,88nm,20.8s,baz=240,slow=29
HHC   Hu-ho-hao-te        86.49 314  eP     P       01 17 10.4 +0.4
HHC                                  pmax   pmax
      comp=Z,8.0nm,0.5s
HHC                                  pmax   pmax
      comp=Z,82nm,3.8s
HHC                                  LR     LR
      comp=N,85nm,9.8s
HHC                                  LR     LR
      comp=E,93nm,11.4s
HHC                                  LR     LR
      comp=Z,210nm,20.6s
MAW   Mawson              86.67 199  LR     LR      01 53 31.8
      comp=Z,162nm,18.4s,baz=102,slow=34
USHA  Ushuaia             87.86 147  LR     LR      01 46 17.8
      comp=Z,98nm,20.3s,baz=168,slow=29
H03S2 Juan Fernandez      88.09 124  T      T       02 54 31.8
      baz=250,slow=75,SNR=4.2
H03S1 Juan Fernandez      88.10 124  T      T       02 54 34.6
      baz=250,slow=75,SNR=3.8
H03S3 Juan Fernandez      88.11 124  T      T       02 54 33.3
      baz=250,slow=75,SNR=3.3
INK   Inuvik              89.12  15  LR     LR      01 49 54.1
      comp=Z,87nm,21.9s,baz=204,slow=31
CMAR  Chiang Mai Arr      89.32 289  P      P       01 17 25.0 +1.2
      comp=Z,0.8nm,0.3s,baz=112,slow=9.5,SNR=1.3
CMAR                                 LR     LR      01 53 22.8
      comp=Z,91nm,21.5s,baz=120,slow=33
      comp=Z,0.8nm,0.3s
YKA   Yellowknife Ar      91.50  24  LR     LR      01 52 30.3
      comp=Z,265nm,20.0s,baz=250,slow=32
PLCA  Paso Flores         92.07 133  LR     LR      01 50 47.3
      comp=Z,61nm,20.7s,baz=241,slow=30
SNAA  Sanae               93.06 178  P      P       01 17 39.8 -0.6
SNAA  Sanae               93.06 178  P      P       01 17 40.1 -0.2
      comp=Z,2.8nm,1.1s,baz=179,slow=3.5,SNR=4.1
      comp=Z,2.8nm,1.1s
TIXI  Tiksi               94.08 345  LR     LR      01 57 58.6
      comp=Z,70nm,18.8s,baz=190,slow=34
JTS   Las Juntas de       94.64  81  LR     LR      01 49 28.8
      comp=Z,57nm,21.4s,baz=231,slow=29
ULM   Lac du Bonnet       96.13  40  LR     LR      01 54 50.2
      comp=Z,185nm,20.3s,baz=262,slow=31
ATAH  Atahualpa           96.36  99  LR     LR      01 51 29.5
      comp=Z,234nm,21.1s,baz=254,slow=29
NNA   Nana                96.44 104  LR     LR      01 51 28.1
      comp=Z,39nm,21.3s,baz=234,slow=29
BRDH  Bariadhala          97.02 292  LR     LR      01 59 23.9
      comp=Z,118nm,19.1s,baz=144,slow=34
STHS  Stebnicka Huta     142.94 340  ePKP   PKPdf   01 24 01.3 +0.8
MORC  Moravsky Berou     143.72 344  ePKP   PKPdf   01 24 01.7 -0.2
BRTR  Keskin Array B     143.89 318  PKP    PKPdf   01 24 02.7 +0.1
      comp=Z,0.5nm,0.7s,baz=90,slow=2.9,SNR=4.4
VRAC  Vranov             144.40 345  ePKP   PKPdf   01 24 04.5 +1.5
VYHS  Vyhne              144.51 342  ePKP   PKPdf   01 24 03.7 +0.4
JAVC  Velka Javorina     144.52 343  ePKP   PKPdf   01 24 05.0 +1.7
KRUC  Moravsky           144.67 345  ePKP   PKPdf   01 24 05.1 +1.6
MEM   Membach            144.79 357  dPKPdf PKPdf   01 24 03.8 +0.1
MODS  Modra-Piesok       145.07 343  ePKP   PKiKP   01 24 06.8 -1.3
DOU   Dourbes            145.36 358  dPKP   PKPbc   01 24 04.0 -0.5
GERES GERESS Array B     145.50 347  PKPbc  PKPab   01 24 07.0 +1.6
      comp=Z,0.9nm,0.7s,baz=346,slow=1.7,SNR=4.6
WLF   Walferdange        145.72 356  dPKP   PKPbc   01 24 05.9 +0.2
WLF                                  dPKiKP PKiKP   01 24 09.4  0.0
MMAI  Mount Meron Ar     145.82 307  PKPbc  PKiKP   01 24 09.4 -0.8
      comp=Z,3.1nm,0.8s,baz=76,slow=3.5,SNR=5.0
```

IDC ***15*** *01:41:11.9±0.8, 23°.11N×122°.17E, h0^{km}, mb3.6/12, mbtmp3.6/13, ML3.6/1, MS3.4/2, Error ellipse: s-maj=27.3km s-min=17.3km az=70.0*

JMA ***15*** *01:41:13.9±0.1, 23°.5N±0°.7×122°.1E±0°.6, h35^{km}, MV4.1/17, TAIWAN REGION*

ASIES ***15*** *01:41:14.7, 23°.46N×122°.04E, h31^{km}, ML4.4, Mw3.9, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}6.82; $M_{\theta\theta}$1.45; $M_{\phi\phi}$-8.27; $M_{r\theta}$-4.08; $M_{\theta\phi}$-3.90; $M_{\phi r}$2.65; Fault plane solution: $M_0$9.86618×10^{21} NP1: ϕ_s228.13000°,δ49.86000°,λ135.58000°. NP2: ϕ_s350.41000°,δ57.65000°,λ49.73000°. Principal axes: T Plg56.5310°, Azm204.4470°; N Plg33.0940°, Azm14.7910°; P Plg4.4450°, Azm107.6950°;*

TAP ***15*** *01:41:14.7, 23°.46N×122°.04E, h31^{km}, ML4.4, C*

ISC 15 01:41:12.8±1.1**, 23°.43N**±0°.02×**122°.10E**±0°.02**, h12**^{km}±7^{km}**, n190, σ1^{s}30**/303**, mb3.6**/12**, 6C-58D, Taiwan region**

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Code  Station Name         Δ°  AZ°    Phase ID          Time    Res
                                     Op     ISC      h  m  s   ISC
TEGC  Jichi Village        0.58 299⇓iP      Pg      01 41 24.9 +0.6
TEGC                                 i S    Sg      01 41 32.8 +0.8
ECBN  Changbin             0.60 260⇓iP      Pg      01 41 25.5 +0.9
ECBN                                 i S    Sg      01 41 33.6 +1.0
SHUL  Shoufeng             0.61 306⇓iP      Pg      01 41 25.4 +0.7
SHUL                                   S    Sb      01 41 33.7 -0.2
HGSD  Ruisui               0.62 276⇓iP      Pg      01 41 25.2 +0.2
HGSD                                   S    Sg      01 41 33.1 -0.1
TEYL  Yanliau Villag       0.64 314  eP     Pg      01 41 25.9 +0.7
TEYL                                 eS     Sg      01 41 33.7 +0.1
EGFH  Guangfu              0.66 292  eP     Pg      01 41 26.0 +0.3
EGFH                                 eS     Sg      01 41 35.0 +0.6
CHKH  Chenggong            0.69 250⇓iP      Pg      01 41 26.3 +0.1
CHKH                                 i S    Sg      01 41 34.8 -0.3
EHYH  Wanrong              0.69 276 ⇓P      Pg      01 41 26.7 +0.4
EHYH                                 i S    Sg      01 41 36.1 +0.7
HWA   Hwalien              0.71 321  eP     Pg      01 41 26.9 +0.2
HWA                                  i S    Sg      01 41 35.5 -0.5
WARBT Fenglin Townsh       0.71 294⇓iP      Pg      01 41 26.5 -0.2
WARBT                                  S    Sg      01 41 35.2 -0.9
EHY   Hungye               0.72 277⇓iP      Pg      01 41 27.0 +0.2
EHY                                  eS     Sg      01 41 36.3 +0.1
EYUL  Yuli                 0.72 264⇓iP      Pg      01 41 27.2 +0.4
EYUL                                 eS     Sg      01 41 37.1 +0.8
EOS4  EOS4                 0.72  16 ⇑P      Pb      01 41 27.7 +0.5
EOS4                                 i S    Sb      01 41 37.2 +0.4
ESL   Shilin               0.72 303⇓iP      Pg      01 41 26.4 -0.4
ESL                                  eS     Sg      01 41 35.2 -1.1
YULB  Yu-li                0.74 268    P    Pg      01 41 27.5 +0.4
YULB  Yu-li                0.74 268    S    Sg      01 41 37.2 +0.4
YULB  Yu-li                0.74 268⇓iP      Pg      01 41 27.1  0.0
YULB                                 eS     Sg      01 41 36.5 -0.3
TWF1  Yuli                 0.74 264⇓iP      Pg      01 41 27.3 +0.1
TWF1                                   S    Sg      01 41 36.9 +0.1
CHKT  Chengkung            0.75 244⇓iP      Pb      01 41 27.1 -0.7
CHKT                                 i S    Sg      01 41 36.2 -0.9
ETM   Tongmen              0.77 314⇓iP      Pb      01 41 27.2 -1.0
ETM                                  eS     Sg      01 41 36.7 -1.2
FULB  Fuli                 0.77 253⇓iP      Pb      01 41 27.4 -0.8
FULB                                 i S    Sb      01 41 37.3 -1.4
TWD   Chiawan              0.80 325⇓iP      Pb      01 41 27.8 -0.9
TWD                                  i S    Sb      01 41 38.0 -1.4
ETL   Fush Village         0.85 329    P    Pb      01 41 28.8 -0.8
ETL                                  eS     Sb      01 41 39.4 -1.6
EDH   Donghe               0.86 238⇓iP      Pb      01 41 28.9 -0.8
EDH                                  eS     Sb      01 41 39.4 -1.7
LXIB  Xiulin Townshi       0.86 314⇓iP      Pb      01 41 28.8 -1.1
LXIB                                 eS     Sb      01 41 38.9 -2.6
EHD   Haiduan              0.86 252 ⇓P      Pb      01 41 29.0 -0.8
EHD                                  i S    Sb      01 41 39.6 -1.7
ECS   Chishang             0.87 248  eP     Pb      01 41 29.5 -0.4
ECS                                  eS     Sb      01 41 41.1 -0.4
NACB  Ninganchiao          0.88 328    P    Pb      01 41 29.3 -0.7
NACB  Ninganchiao          0.88 328⇓iP      Pb      01 41 28.9 -1.1
NACB                                   S    Sb      01 41 39.0 -2.7
EOS3  EOS3                 0.88  13⇑iP      Pb      01 41 30.5 +0.5
VWDT  VWDT                 0.94 291⇓iP      Pb      01 41 30.5 -0.5
VWDT                                 eS     Sb      01 41 40.9 -2.5
LDUT  Ludao                0.95 218  eP     Pb      01 41 30.3 -0.8
EAHA  Aohua                0.96 340⇓eP      Pb      01 41 30.6 -0.8
EAHA                                 eS     Sb      01 41 42.4 -1.6
ETLH  Xiulin Townshi       0.96 324 ⇓P      Pb      01 41 30.4 -1.1
ETLH                                 eS     Sb      01 41 42.1 -2.1
OWD   Renai                1.00 302  i P    Pb      01 41 31.1 -1.0
OWD                                  i S    Sb      01 41 43.1 -2.1
EOS2  EOS2                 1.00   7  eP     Pb      01 41 31.6 -0.4
ELDTW Lidau                1.02 257⇓iP      Pb      01 41 31.2 -1.3
ELDTW                                eS     Sb      01 41 43.5 -2.4
LONT  Longtian             1.03 240⇓eP      Pb      01 41 31.8 -0.8
LONT                                   S    Sb      01 41 45.0 -1.1
WHF   Hehuan Shan          1.05 313⇓iP      Pb      01 41 31.9 -1.3
WHF                                  i S    Sb      01 41 44.9 -2.1
ENA   Nanau                1.05 342 ⇓P      Pb      01 41 32.1 -0.8
ENA                                  i S    Sb      01 41 45.2 -1.5
EWUT  Wuta                 1.06 344  eP     Pb      01 41 32.4 -0.7
EWUT                                   S    Sb      01 41 45.5 -1.4
WUSB  Renai                1.06 302⇓iP      Pb      01 41 32.4 -0.9
WUSB                                 eS     Sb      01 41 44.8 -2.3
SSLB  Suanglung            1.11 289    P    Pb      01 41 32.9 -1.1
SSLB  Suanglung            1.11 289    S    Sb      01 41 47.3 -1.1
SSLB  Suanglung            1.11 289⇓iP      Pb      01 41 32.8 -1.1
SSLB                                 eS     Sb      01 41 46.5 -2.0
TWGBT Beinan               1.11 237    P    Pb      01 41 33.0 -1.1
TWGBT Beinan               1.11 237⇓iP      Pb      01 41 32.8 -1.3
TWGBT                                eS     Sb      01 41 46.2 -2.3
TWG   Pinlang              1.12 238⇓iP      Pb      01 41 32.9 -1.3
TWG                                  eS     Sb      01 41 46.4 -2.3
FUSS  Fushou               1.13 316⇓iP      Pb      01 41 33.5 -1.0
FUSS                                 eS     Sb      01 41 47.1 -2.2
ESAO  Su ao                1.17 349  eP     Pn      01 41 34.3 -0.7
ESAO                                 eS     Sb      01 41 48.4 -1.6
WHYT  Xinyi Township       1.17 284⇓eP      Pn      01 41 34.6 -0.5
TWT   Tachien              1.18 314⇓iP      Pn      01 41 34.5 -0.8
TWT                                  eS     Sb      01 41 48.0 -2.6
SMLT  Sun Moon Lake        1.19 293⇓iP      Pn      01 41 34.4 -1.0
SMLT                                 eS     Sb      01 41 48.5 -2.3
ALS   Alishan              1.19 274⇓iP      Pn      01 41 35.0 -0.6
ALS                                  eS     Sb      01 41 49.2 -1.8
TDCB  Techi                1.19 314⇓iP      Pn      01 41 34.5 -1.0
TDCB                                 eS     Sb      01 41 48.2 -2.7
NNSB  Datong               1.19 327⇓iP      Pn      01 41 34.2 -1.3
NNSB                                   S    Sb      01 41 47.9 -3.0
TWC   Suao                 1.20 349 ⇑P      Pn      01 41 34.8 -0.7
TWC                                  i S    Sb      01 41 49.6 -1.4
NNS   Nan Shan             1.21 327⇓iP      Pn      01 41 34.5 -1.2
NNS                                  i S    Sb      01 41 48.8 -2.5
LATG  Datong               1.22 335  eP     Pn      01 41 34.6 -1.2
LATG                                 eS     Sb      01 41 49.6 -2.1
TYC   Yuchr                1.23 293⇓iP      Pn      01 41 35.0 -0.9
TYC                                  eS     Sb      01 41 49.7 -2.2
STYH  Taoyuan              1.24 258  i P    Pn      01 41 35.3 -0.7
STYH                                 i S    Sb      01 41 50.2 -2.0
NDS   Dongshan             1.25 344  eP     Pn      01 41 34.6 -1.6
NDS                                    S    Sb      01 41 49.9 -2.6
WCS   Beigang Elemen       1.26 300 ⇓P      Pn      01 41 35.5 -0.7
WCS                                  eS     Sb      01 41 50.3 -2.3
JYNG  Yonagunijimaku       1.28  37    P    Pn      01 41 36.5  0.0
JYNG                                 eS     Sb      01 41 52.3 -1.1
ENTT  Nioudou              1.30 338 ⇓P      Pn      01 41 36.1 -0.8
ENTT                                 eS     Sb      01 41 51.9 -2.1
CHN5  Tsauling             1.31 278 ⇓P      Pn      01 41 37.2 +0.1
WJS   Zhushan              1.32 288    P    Pn      01 41 37.5 +0.4
WJS                                  eS     Sb      01 41 53.9 -0.5
YOJ   Yonaguni jima        1.33  39    P    Pn      01 41 37.4 +0.2
YOJ   Yonaguni jima        1.33  39  eP     Pn      01 41 36.7 -0.5
YOJ                                  eS     Sn      01 41 53.3 -1.5
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YOJ	**Yonaguni jima**	1.33	39	eP	Pn	01 41 37.0	-0.1
YOJ				eS	Sn	01 41 54.5	-0.3
ECL	**Taimali**	1.34	232	⇓iP	Pn	01 41 35.6	-1.7
ECL				S	Sn	01 41 51.0	-4.1
TWE	**Neicheng**	1.35	343	eP	Pn	01 41 36.7	-0.8
WHP	**Taichung City**	1.35	309	⇓iP	Pn	01 41 37.2	-0.4
WHP				S	Sn	01 41 53.6	-2.0
TPUB	**Ta-pu**	1.35	265	P	Pn	01 41 37.7	+0.1
TPUB	**Ta-pu**	1.35	265	S	Sn	01 41 55.1	-0.4
TPUB	**Ta-pu**	1.35	265	⇓iP	Pn	01 41 37.5	-0.1
TPUB				eS	Sn	01 41 53.7	-1.8
WCKO	**Fanlu**	1.37	271	eP	Pn	01 41 38.5	+0.7
WCKO				eS	Sn	01 41 55.2	-0.8
WNT	**Mingjian**	1.37	289	⇓P	Pn	01 41 38.2	+0.4
WNT				eS	Sn	01 41 55.5	-0.5
WTP	**Ta-pu**	1.38	263	⇓iP	Pn	01 41 38.0	+0.1
WTP				eS	Sn	01 41 55.5	-0.6
YHNB	**Yeheng**	1.40	332	P	Pn	01 41 37.7	-0.6
YHNB	**Yeheng**	1.40	332	S	Sn	01 41 54.5	-2.3
YHNB	**Yeheng**	1.40	332	⇓eP	Pn	01 41 37.6	-0.8
YHNB				eS	Sn	01 41 53.8	-3.0
FUSB	**Fushanzhiwuyua**	1.41	341	⇓P	Pn	01 41 37.8	-0.6
FUSB				eS	Sn	01 41 53.9	-3.0
NSK	**Sanguang**	1.42	332	⇓iP	Pn	01 41 37.7	-0.8
NSK				eS	Sn	01 41 53.8	-3.3
EGS		1.42	354	eP	Pn	01 41 38.8	+0.3
EGS				eS	Sn	01 41 54.8	-2.4
WGK	**Gukeng**	1.43	281	⇓iP	Pn	01 41 39.0	+0.4
WGK				eS	Sn	01 41 56.9	-0.6
NWLT	**Wulai**	1.45	338	eP	Pn	01 41 38.6	-0.3
NWLT				S	Sn	01 41 56.0	-2.0
WDLH	**Douliu**	1.46	281	⇓eP	Pn	01 41 39.4	+0.5
WDLH				eS	Sn	01 41 57.2	-0.8
WDL	**Douliou City**	1.46	282	eP	Pn	01 41 39.2	+0.2
CHN1	**Nanshi**	1.46	261	⇓P	Pn	01 41 39.6	+0.5
CHN1				i S	Sn	01 41 58.3	+0.1
LAY	**Lan-yu**	1.47	200	eP	Pn	01 41 37.1	-2.0
SNST	**Tainan City**	1.48	262	⇑iP	Pn	01 41 39.9	+0.6
SNST				S	Sn	01 41 59.0	+0.3
TCU	**Taichung**	1.49	299	eP	Pn	01 41 40.2	+0.8
TCU				eS	Sn	01 41 58.4	-0.4
TWK	**Hsinying**	1.49	264	⇓iP	Pn	01 41 39.8	+0.3
TWK				eS	Sn	01 41 58.6	-0.2
CHN2	**Minshiung**	1.49	274	eP	Pb	01 41 40.7	+0.2
LYUB	**Lan-yu**	1.49	199	eP	Pn	01 41 37.1	-2.3
NFF	**Wufeng Townshi**	1.50	323	⇓eP	Pn	01 41 39.6	0.0
NFF				eS	Sn	01 41 56.8	-2.4
SSD	**Sandimen**	1.51	244	eP	Pn	01 41 39.0	-0.8
SSD				eS	Sn	01 41 56.3	-3.0
TSMG	**Majia**	1.52	242	eP	Pn	01 41 39.4	-0.4
TSMG				eS	Sn	01 41 56.5	-3.0
TWQ1	**Liyutan**	1.52	307	⇓iP	Pn	01 41 40.6	+0.7
TWQ1				eS	Sn	01 41 58.1	-1.5
TAW	**Tawu**	1.54	226	eP	Pn	01 41 38.8	-1.3
TAW				eS	Sn	01 41 56.6	-3.3
CHY	**Chiayi**	1.54	273	eP	Pn	01 41 41.2	+1.1
CHY				eS	Sn	01 41 59.7	-0.4
EAST	**Anshuo**	1.55	228	eP	Pn	01 41 39.1	-1.2
EAST				eS	Sn	01 41 57.2	-3.1
TAWH	**Dawu Township**	1.55	226	eP	Pn	01 41 39.4	-0.9
TAWH				S	Sn	01 41 57.4	-3.0
WCHH	**Zhanghua**	1.55	295	P	Pn	01 41 41.2	+0.9
WCHH				eS	Sn	01 42 00.4	0.0
TIPB	**Shuangxi**	1.56	351	⇑eP	Pn	01 41 40.7	+0.3
TIPB				eS	Sn	01 41 59.4	-1.2
WCH1	**Changhua City**	1.56	295	eP	Pn	01 41 40.9	+0.5
NSTT	**Nanjuang**	1.56	320	⇑eP	Pn	01 41 40.9	+0.5
NSTT				eS	Sn	01 41 58.7	-2.0
LIOB	**Emei**	1.57	321	⇓P	Pn	01 41 41.2	+0.7
LIOB				eS	Sn	01 41 59.7	-1.1
NSY	**Sanyi**	1.57	309	eP	Pb	01 41 42.2	+0.3
SCST	**Cishan**	1.57	250	eP	Pn	01 41 41.9	+1.3
SCST				S	Sb	01 42 02.6	+1.0
MASBT	**Mashibuluo**	1.57	239	eP	Pn	01 41 39.9	-0.7
MASBT				eS	Sn	01 41 58.6	-2.3
TWB1	**Santiao Chiao**	1.58	356	eP	Pn	01 41 40.4	-0.3
TWB1				eS	Sn	01 41 59.2	-1.8
KSHI	**Guanxi Townshi**	1.59	328	eP	Pn	01 41 41.7	+0.9
KSHI				eS	Sn	01 41 59.9	-1.3
WTK	**Tuku**	1.59	280	eP	Pn	01 41 41.6	+0.8
TWA	**Mucha**	1.62	343	P	Pn	01 41 41.8	+0.6
TWA				i S	Sn	01 42 00.8	-1.2
NHDH	**Xindian Distri**	1.62	341	eP	Pn	01 41 41.5	+0.3
NHDH				eS	Sn	01 42 01.1	-0.9
WDJ	**Dajia District**	1.62	305	eP	Pn	01 41 42.2	+1.0
NMLH	**Miaoli**	1.63	313	i P	Pn	01 41 42.1	+0.7
NMLH				eS	Sn	01 42 00.8	-1.4
CHN3	**Shinhua**	1.63	258	eP	Pb	01 41 43.7	+0.8
CHN3				eS	Sb	01 42 04.6	+1.2
TATO	**Taipei**	1.64	340	P	Pn	01 41 41.7	+0.2
TATO	**Taipei**	1.64	340	S	Sn	01 42 01.9	-0.6
TWM1	**Shoushan**	1.65	249	eP	Pb	01 41 43.5	+0.2
TWM1				i S	Sb	01 42 05.7	+1.6
NWF	**Wu-fen Shan**	1.66	350	eP	Pn	01 41 42.3	+0.4
NWF				i S	Sn	01 42 02.6	-0.7
WFSB	**Wu-fen Shan**	1.66	350	eP	Pn	01 41 42.6	+0.8
WFSB				eS	Sn	01 42 02.6	-0.5
ICHU	**Yijhu**	1.67	268	eP	Pn	01 41 42.9	+0.9
ICHU				S	Sn	01 42 03.1	-0.2
SXI1	**Grass Mountain**	1.67	353	eP	Pn	01 41 41.9	-0.1
SXI1				eS	Sn	01 42 01.1	-2.4
HATJ	**Hateruma jima**	1.69	68	P	Pn	01 41 42.0	-0.1
HATJ				S	Sn	01 42 02.1	-1.5
SSHA	**Shanhua**	1.69	261	eP	Pn	01 41 43.6	+1.5
SSHA				eS	Sb	01 42 05.7	+0.7
SBCB	**Hsinchu**	1.70	323	eP	Pn	01 41 43.6	+1.3
SBCB				eS	Sn	01 42 04.2	+0.2
SLIU	**Shizi**	1.70	225	eP	Pn	01 41 41.6	-0.7
HSN	**Hsinchu**	1.71	323	eP	Pn	01 41 43.8	+1.3
HSN				S	Sn	01 42 03.6	-0.8
SCZT	**Fangliau**	1.72	233	eP	Pn	01 41 42.5	-0.1
SCZT				eS	Sn	01 42 02.7	-1.8
WSL	**Shuilin Townsh**	1.72	274	eP	Pn	01 41 43.4	+0.8
WSL				S	Sn	01 42 05.0	+0.6
WTCT	**Ta-ch'eng**	1.72	285	eP	Pn	01 41 43.4	+0.8
WTCT				eS	Sn	01 42 04.2	-0.4
CHN8	**Yiju**	1.73	268	eP	Pn	01 41 43.4	+0.6
CHN8				eS	Sn	01 42 05.6	+0.7
TNOU	**National Taiwa**	1.74	350	eP	Pn	01 41 43.0	0.0
TNOU				eS	Sn	01 42 03.4	-1.6
IRIF	**Iriomote-Funau**	1.75	58	P	Pn	01 41 43.1	+0.1
IRIF				eS	Sn	01 42 03.6	-1.6
NCUH	**Zhongli**	1.75	332	eP	Pn	01 41 43.3	+0.3
NCUH				S	Sn	01 42 04.7	-0.5
SNJT	**Kaohsiung City**	1.75	248	eP	Pb	01 41 45.7	+0.7
SNJT				eS	Sb	01 42 08.4	+1.4
TWS1	**Kuangyinshan**	1.78	340	eP	Pb	01 41 45.1	-0.3
TWS1				eS	Sn	01 42 05.1	-0.9
YM01	**YM01**	1.78	344	eP	Pn	01 41 43.9	+0.4
YM01				S	Sn	01 42 04.9	-1.2
ZUZH	**Zhuzihu**	1.80	344	eP	Pn	01 41 43.8	0.0
ZUZH				i S	Sn	01 42 04.7	-1.9
YM08	**YM08**	1.81	345	eP	Pn	01 41 43.8	-0.1
SMST	**Manzhou Townsh**	1.82	220	eP	Pn	01 41 44.2	+0.2
NTST	**Danshui**	1.83	341	eP	Pn	01 41 44.3	+0.2
WSSB	**Gushan**	1.86	246	eP	Pn	01 41 46.4	+1.8
WSSB				eS	Sb	01 42 09.7	-0.4
TSCK	**Chigu Township**	1.87	262	eP	Pn	01 41 45.6	+0.9
TWKBT	**Hengchun**	1.90	219	eP	Pn	01 41 44.3	-0.7
TWKBT				eS	Sn	01 42 07.5	-1.4
TWK1	**Hengchun**	1.90	219	eP	Pn	01 41 44.7	-0.3
TWP	**Hsiaoliuchiu**	1.93	236	eP	Pb	01 41 49.0	+1.1
JKRS	**Kuro-shima**	1.93	65	P	Pn	01 41 45.9	+0.4
JKRS				S	Sn	01 42 08.8	-0.8
JIJ	**Ishigaki jima**	2.09	63	P	Pn	01 41 47.4	-0.4
JIJ				S	Sn	01 42 12.0	-1.7
PCYT	**Pengchaiyu**	2.19	359	eP	Pn	01 41 49.0	-0.1
WDGT	**Dungji**	2.25	266	eP	Pn	01 41 49.9	0.0
PHUB	**P'eng-hu**	2.32	273	P	Pn	01 41 50.9	0.0
JISG	**Ishigakijimahi**	2.33	60	P	Pn	01 41 50.4	-0.6
JISG				S	Sn	01 42 17.4	-2.2
PNG	**Penghu**	2.34	274	eP	Pn	01 41 51.1	0.0
VCHM	**Qimei**	2.46	265	i P	Pn	01 41 52.8	0.0
JTJ	**Tarama**	2.67	63	eP	Pn	01 41 55.9	+0.3
JTJ				eS	Sn	01 42 26.1	-1.9
VWUC	**VWUC**	2.88	303	eP	Pn	01 41 58.1	-0.4
JIRB	**Irabujima**	3.14	63	P	Pn	01 42 02.0	-0.1
JIRB				S	Sn	01 42 37.8	-1.7
PTMZ	**Houxiangcun**	3.16	301	eP	Pn	01 42 01.8	-0.6
JMJ2	**Miyako jima3**	3.23	65	P	Pn	01 42 04.2	+0.8
JMJ2				S	Sn	01 42 40.4	-1.3
JMJ	**Miyako jima 2**	3.23	64	P	Pn	01 42 04.2	+0.8
JMJ	**Miyako jima 2**	3.23	64	S	Sn	01 42 40.6	-1.2
JOGS	**Gusukube**	3.30	66	P	Pn	01 42 04.7	+0.3
JOGS				eS	Sn	01 42 41.7	-1.9
MATB	**Ma-tsu**	3.34	325	eP	Pn	01 42 04.0	-1.0
KNMB	**Chin-men Tao**	3.55	288	eP	Pn	01 42 06.7	-1.1
KSRS	**Korea Array** 0.2nm,0.3s,baz=200,slow=11,SNR=6.4 1.4nm,0.6s	14.85	18	Pn	P	01 44 47.3	-1.2
DAV	**Davao City (W)** comp=Z,57nm,21.2s,baz=56,slow=35	16.60	168	LR	LR	01 50 47.5	
CMAR	**Chiang Mai Arr** 2.0nm,0.3s,baz=70,slow=11,SNR=5.0 2.0nm,0.3s	22.17	261	P	P	01 46 10.5	+1.5
MKAR	**Makanchi Array** 0.5nm,0.7s,baz=110,slow=9.7,SNR=4.7 0.5nm,0.7s	39.46	316	P	P	01 48 44.8	+1.8
PETK	**Petropavlovsk-** 0.7nm,0.9s,baz=256,slow=8.8,SNR=1.4 0.7nm,0.9s	40.03	33	P	P	01 48 49.0	+1.4
ZALV	**Zalesovo Beam** 0.5nm,0.4s,baz=96,slow=9.1,SNR=4.5 0.5nm,0.4s	41.33	327	P	P	01 49 02.9	+4.6
H11N1	**WAKE ISLAND Hy** baz=282,slow=75,SNR=9.2	41.70	86	T	T	02 34 29.7	
H11N2	**WAKE ISLAND Hy** baz=282,slow=75,SNR=9.8	41.70	86	T	T	02 34 33.5	
H11N3	**WAKE ISLAND Hy** baz=282,slow=75,SNR=7.6	41.71	86	T	T	02 34 28.4	
H11S3	**WAKE ISLAND Hy** baz=284,slow=74,SNR=9.6	41.80	88	T	T	02 34 32.6	
H11S1	**WAKE ISLAND Hy** baz=284,slow=74,SNR=8.4	41.81	88	T	T	02 34 43.5	
H11S2	**WAKE ISLAND Hy** baz=284,slow=74,SNR=9.1	41.82	88	T	T	02 34 25.2	
KURBB	**Kurchatov Arra** 0.1nm,0.4s,baz=115,slow=8.7,SNR=1.7 0.1nm,0.4s	43.23	320	P	P	01 49 18.9	+5.1
WRA	**Warramunga Arr** 1.0nm,0.7s,baz=344,slow=8.6,SNR=7.6 1.0nm,0.7s	44.73	164	P	P	01 49 24.6	-1.6
ASAR	**Alice Springs** 0.3nm,0.5s,baz=355,slow=14,SNR=5.5 0.3nm,0.5s	48.20	165	P	P	01 49 52.1	-1.3
BVAR	**Borovoye Array** 0.2nm,0.4s,baz=74,slow=7.7,SNR=1.8 0.2nm,0.4s	48.79	321	P	P	01 49 59.2	+1.5
STKA	**Stephens Creek** 1.5nm,0.7s,baz=258,slow=9.3,SNR=3.9 1.5nm,0.7s	58.07	160	P	P	01 51 04.1	-1.8
ILAR	**Eielson Array** 0.2nm,0.5s,baz=291,slow=6.6,SNR=1.7 0.2nm,0.5s	69.50	27	P	P	01 52 24.7	+3.7
ASF	**Jabal al Asfar** comp=Z,51nm,19.6s,baz=117,slow=40	74.06	298	LR	LR	02 30 33.8	
YKA	**Yellowknife Ar** 0.4nm,0.8s,baz=314,slow=5.7,SNR=3.8 0.4nm,0.8s	83.34	23	P	P	01 53 42.8	+3.3
GERES	**GERESS Array B** 0.3nm,0.8s,baz=47,slow=5.9,SNR=1.3 0.3nm,0.8s	83.96	321	P	P	01 53 44.4	+1.4

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*NEIC **15** 02:36:12.0±1.5, 35°.227N±0°.010×97°.74W±0°.01, h5^{km}±1^{km}, mb_Lg2.5/73, ML2.7/42, ML2.6/18, Error ellipse: s-maj=2.1km s-min=1.7km az=81.0*

NEIC 15 02:36:12.6±1.7**, 35°.248N**±0°.010×**97°.75W**±0°.01**, h5**^{km}±1^{km}**, Error ellipse: s-maj=1.6km s-min=1.3km az=131.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNO	**Franklin**	0.29	88		Pg	02 36 18.7	+0.5
FNO					Sg	02 36 21.6	-0.5
OKCSW	**OKLAHOMA CITY**	0.30	58		Pg	02 36 18.8	+0.3
OKCSW					Sg	02 36 23.2	+0.8
OKCSW	comp=E,1μm,0.5s			IAML		02 36 26.6	
OK004	**Okla Sci Mus**	0.36	40		Pg	02 36 20.3	+0.8
OK004					Sg	02 36 23.9	-0.3
BCOK	**Bluff Creek, N**	0.42	16		Pg	02 36 21.1	+0.3
ADOK	**Arcadia Dam**	0.51	38	Pg	Pg	02 36 22.6	+0.2
ADOK				Sg	Sg	02 36 30.0	+0.9
OK029	**Liberty Lake**	0.60	24		Pg	02 36 24.1	0.0
OK029				Sg	Sg	02 36 32.6	+0.7
OK029	comp=E,381nm,0.4s			IAML		02 36 32.9	
OK029	comp=E,268nm,0.6s			IAML		02 36 36.0	
X34A	**Smith Ranch, M**	0.65	186		Pg	02 36 25.5	+0.4
X34A				Sg	Sg	02 36 32.9	-0.6
X34A	comp=N,334nm,0.4s			IAML		02 36 35.8	
CSTR	**Hydro, Custer**	0.86	298	Pg	Pg	02 36 29.2	+0.1
CSTR					Sg	02 36 41.1	+0.8
WMOK	**Wichita Mounta**	0.98	239		Pg	02 36 30.2	-1.3
OK052	**Battle Ridge R**	1.07	46		Pg	02 36 32.4	-0.8
OK052	comp=N,436nm,0.3s			IAML		02 36 49.4	
DEOK	**Depew**	1.18	60		Pg	02 36 34.0	-1.3
DEOK	comp=E,301nm,0.2s			IAML		02 36 55.5	
QUOK	**Quay**	1.25	42		Pg	02 36 35.3	-1.4
CROK	**Carrier**	1.27	352		Pg	02 36 35.8	-1.1
CROK					Sg	02 36 53.0	-0.4
LOOK	**Love County**	1.34	159		Pn	02 36 37.3	-0.6
OK051	**E0350 and S346**	1.46	30		Pn	02 36 38.4	-1.2
OK038	**West end E0370**	1.47	327		Pn	02 36 39.4	-0.3
WTFS	**Witchita Falls**	1.59	202		Pn	02 36 40.8	-0.7
GC02	**Grant County #**	1.60	357		Pn	02 36 41.2	-0.4
KAN14	**Manchester OK**	1.71	354		Pn	02 36 42.7	-0.4
TUL3	**Leonard**	1.73	67		Pn	02 36 43.1	-0.2
TUL3	comp=Z,35nm,0.9s			IAmb_Lg		02 37 09.6	
KAN13	**South Haven SW**	1.78	7		Pn	02 36 44.3	+0.4
KAN17	**Caldwell West**	1.79	360		Pn	02 36 44.4	+0.1
KAN05	**Bluff City Nor**	1.86	357		Pn	02 36 45.3	+0.2
KAN09	**Caldwell North**	1.89	3		Pn	02 36 45.5	0.0
KAN01	**Argonia South** comp=Z,26nm,0.8s	1.90	360	IAmb_Lg		02 37 16.8	
T35A	**Sooner Cattle**	1.94	31		Pn	02 36 46.5	+0.2
Z35A	**Perchaven, San**	1.96	168		Pn	02 36 46.6	+0.2
SMWD	**Samnorwood**	2.04	267		Pn	02 36 47.7	0.0
FW03	**Perrin-Whitt E** comp=Z,29nm,0.8s	2.22	187	IAmb_Lg		02 37 23.8	
FW06	**Azle** comp=Z,22nm,0.8s	2.27	176	IAmb_Lg		02 37 24.7	
RLO	**Rose Lookout**	2.40	67		Pn	02 36 52.1	-0.5
PLPT	**Palo Pinto**	2.47	191		Pn	02 36 52.8	-0.8
PLPT	comp=Z,15nm,0.8s			IAmb_Lg		02 37 34.2	
U38A	**Gravette**	2.98	66		Pn	02 37 00.6	0.0
Z38A	**Mt. Pleasant** comp=Z,13nm,0.8s	3.03	130	IAmb_Lg		02 37 50.7	
DKNS	**Dickens** comp=Z,12nm,0.7s	3.06	240	IAmb_Lg		02 37 52.9	
AMTX	**Amarillo** comp=Z,12nm,0.8s	3.24	265	IAmb_Lg		02 37 52.9	
WHTX	**Lake Whitney,**	3.26	176	Pn	Pn	02 37 03.9	-0.5
WHTX	comp=Z,14nm,1.0s			IAmb_Lg		02 37 55.6	
R32A	**Long Quarter,**	3.26	347		Pn	02 37 04.7	+0.2
HHAR	**Hobbs**	3.27	70		Pn	02 37 04.3	-0.2
MIAR	**Mount Ida**	3.50	100		Pn	02 37 08.4	+0.7
SN05	**Snyder 5** comp=Z,13nm,0.7s	3.51	229	IAmb_Lg		02 38 08.1	
237A	**Washetta, Mont**	3.62	153	Pn	Pn	02 37 09.2	-0.2
POST	**Post** comp=Z,8.4nm,0.8s	3.79	236	IAmb_Lg		02 38 17.0	
KSU1	**Kansas State U**	3.95	13		Pn	02 37 13.6	-0.3
BRDY	**Brady**	4.09	195		Pn	02 37 15.7	-0.1
BRDY	comp=Z,8.5nm,0.9s			IAmb_Lg		02 38 23.0	
X40A	**Basin Creek Fa**	4.12	99		Pn	02 37 16.7	+0.6
X40A	comp=Z,14nm,0.7s			IAmb_Lg		02 38 27.3	
WLAR	**White Oak Lake** comp=Z,13nm,1.1s	4.14	111	IAmb_Lg		02 38 24.9	
MSTX	**Muleshoe** comp=Z,7.5nm,0.9s	4.33	254	IAmb_Lg		02 38 36.6	
SGCY	**Sterling City** comp=Z,12nm,0.8s	4.36	221	IAmb_Lg		02 38 39.3	
435B	**Jarrell** comp=Z,12nm,0.7s	4.46	178	IAmb_Lg		02 38 42.3	
UALR	**University of** comp=Z,7.0nm,0.8s	4.46	95	IAmb_Lg		02 38 45.3	
WHAR	**Wooly Hollow**	4.47	88		Pn	02 37 21.4	+0.4
FCAR	**Ozark Folk Cen**	4.63	80		Pn	02 37 23.5	+0.2
MGMO	**Mountain Grove** comp=Z,14nm,0.8s	4.83	65	IAmb_Lg		02 38 52.2	
ODSA	**Odessa** comp=Z,9.8nm,1.1s	5.07	233	IAmb_Lg		02 39 05.8	
OZNA	**Ozona** comp=Z,9.7nm,0.8s	5.16	214	IAmb_Lg		02 39 03.5	
R40A	**Maddies Statio** comp=Z,7.8nm,0.7s	5.35	54	IAmb_Lg		02 39 01.5	
LCAR	**Lake Charles** comp=Z,6.2nm,0.8s	5.43	79	IAmb_Lg		02 39 10.4	
P38A	**Dawn** comp=Z,12nm,0.7s	5.51	36	IAmb_Lg		02 39 14.9	
T42A	**Van Buren** comp=Z,7.8nm,0.8s	5.68	70	IAmb_Lg		02 39 24.0	
T25A	**Trinidad** comp=Z,9.5nm,0.9s	5.71	291	IAmb_Lg		02 39 17.9	
MNHN	**Monahans** comp=Z,5.1nm,0.7s	5.72	228	IAmb_Lg		02 39 28.2	
HNDO	**Hondo** comp=Z,7.6nm,0.8s	5.85	193	IAmb_Lg		02 39 30.7	
CCM	**Cathedral Cave** comp=Z,9.0nm,0.7s	5.94	60	IAmb_Lg		02 39 25.0	
DRIO	**Del Rio** comp=Z,5.2nm,0.9s	6.29	203	IAmb_Lg		02 39 31.2	
SAND	**Sanderson** comp=Z,7.2nm,1.0s	6.44	216	IAmb_Lg		02 39 46.1	
FVM	**French Village** comp=Z,9.1nm,1.0s	6.49	63	IAmb_Lg		02 39 37.3	
S44A	**Carbondale** comp=Z,7.8nm,0.8s	7.27	68	IAmb_Lg		02 40 07.8	

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*NEIC **15** 02:36:14.7±2.8, 35°.22N±0°.01×97°.76W±0°.01, h5^{km}±1^{km}, Error ellipse: s-maj=2.1km s-min=1.5km az=17.0*

NEIC 15 02:36:15.5±2.4**, 35°.23N**±0°.01×**97°.718W**±0°.010**, h5**^{km}±1^{km}**, mb_Lg2.5**/73**, ML2.7**/21**, Error ellipse: s-maj=2.0km s-min=1.7km az=169.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNO	**Franklin**	0.26	84		Pg	02 36 20.4	-0.2
FNO					Sg	02 36 25.1	+1.0
OK004	**Okla Sci Mus**	0.36	34		Pg	02 36 23.0	+0.6
OK004					Sg	02 36 28.2	+1.1
X34A	**Smith Ranch, M**	0.63	189		Sb	02 36 38.8	+0.6
CSTR	**Hydro, Custer**	0.90	298		Pg	02 36 30.2	-2.5
CSTR					Sg	02 36 43.9	-0.4
Z35A	**Perchaven, San** comp=Z,19nm,0.8s	1.93	168	IAmb_Lg		02 37 16.6	
FW03	**Perrin-Whitt E** comp=Z,25nm,0.8s	2.20	188	IAmb_Lg		02 37 26.0	
FW07	**Weatherford** comp=Z,7.8nm,0.7s	2.52	181	IAmb_Lg		02 37 40.6	
APMT	**Aspermont** comp=Z,9.9nm,1.0s	2.75	227	IAmb_Lg		02 37 49.3	
TREL	**Terrell** comp=Z,19nm,0.8s	2.83	151	IAmb_Lg		02 37 51.7	
FW14	**Alvarado** comp=Z,12nm,0.8s	2.85	171	IAmb_Lg		02 37 51.1	
U38A	**Gravette** comp=Z,13nm,0.7s	2.96	65	IAmb_Lg		02 37 49.4	
WHTX	**Lake Whitney,** comp=Z,13nm,0.8s	3.24	176	IAmb_Lg		02 38 02.2	
AMTX	**Amarillo** comp=Z,14nm,1.0s	3.27	265	IAmb_Lg		02 38 07.4	
SN07	**Snyder 07** comp=Z,10nm,0.8s	3.39	232	IAmb_Lg		02 38 07.8	
SN05	**Snyder 5** comp=Z,15nm,0.8s	3.52	229	IAmb_Lg		02 38 09.1	
WLAR	**White Oak Lake** comp=Z,14nm,1.1s	4.10	111	IAmb_Lg		02 38 34.4	
RTBA	**Rita Blanca** comp=Z,5.7nm,0.8s	4.25	288	IAmb_Lg		02 38 39.8	
SGCY	**Sterling City** comp=Z,19nm,1.0s	4.36	222	IAmb_Lg		02 38 40.4	
435B	**Jarrell** comp=Z,17nm,1.1s	4.43	179	IAmb_Lg		02 38 49.0	
Z41A	**Richland Creek** comp=Z,12nm,1.0s	4.52	114	IAmb_Lg		02 38 47.2	
JCT	**Junction City** comp=Z,14nm,0.8s	5.05	201	IAmb_Lg		02 39 04.8	
KSCO	**Kaye Shedlock'** comp=Z,12nm,1.0s	5.44	315	IAmb_Lg		02 39 16.4	
MNHN	**Monahans** comp=Z,5.6nm,0.8s	5.73	229	IAmb_Lg		02 39 30.0	
N35A	**Tabor** comp=Z,31nm,0.9s	5.86	16	IAmb_Lg		02 39 34.7	
PBMO	**Poplar Bluff** comp=Z,12nm,0.8s	6.11	73	IAmb_Lg		02 39 30.3	
P40A	**Paris** comp=Z,23nm,0.8s	6.23	45	IAmb_Lg		02 39 31.2	
N38A	**Joes South For** comp=Z,24nm,0.8s	6.59	31	IAmb_Lg		02 39 54.8	
SDCO	**Great Sand Dun** comp=Z,3.5nm,0.9s	6.75	294	IAmb_Lg		02 39 50.8	
L34A	**Svendsen Farm,** comp=Z,17nm,0.7s	6.81	8	IAmb_Lg		02 40 06.8	
CGM3	**Cape Girardeau** comp=Z,10nm,0.9s	6.83	70	IAmb_Lg		02 39 50.4	
ALPN	**Alpine** comp=Z,6.9nm,1.0s	6.95	227	IAmb_Lg		02 40 09.7	
Q24A	**Divide** comp=Z,6.5nm,0.8s	7.01	304	IAmb_Lg		02 40 06.1	
SIUC	**Southern Illin** comp=Z,9.4nm,0.8s	7.28	68	IAmb_Lg		02 40 14.4	
N41A	**Harden Midland** comp=Z,19nm,0.8s	7.70	43	IAmb_Lg		02 40 21.1	
ISCO	**Idaho Springs** comp=Z,2.9nm,0.9s	7.76	308	IAmb_Lg		02 40 29.8	
P43A	**Skaggs, Pawnee** comp=Z,13nm,0.7s	7.87	54	IAmb_Lg		02 40 37.6	
OLIL	**Olney** comp=Z,18nm,1.1s	8.45	63	IAmb_Lg		02 40 44.7	
HDIL	**Hopedale** comp=Z,15nm,0.7s	8.52	49	IAmb_Lg		02 40 55.0	
L42A	**Oliver, Polo** comp=Z,12nm,0.9s	9.24	41	IAmb_Lg		02 41 17.2	
JFWS	**Jewell Farm** comp=Z,8.8nm,0.8s	9.62	35	IAmb_Lg		02 41 22.4	

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*NIED **15** 02:46:33.8, 38°.71N×142°.28E, h37^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.73; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$-1.72; $M_{r\theta}$0.70; $M_{\theta\phi}$-0.47; $M_{\phi r}$2.85; Fault plane solution: $M_0$3.43000×10^{14} NP1: ϕ_s195.00000°, δ16.00000°, λ91.00000°. NP2: ϕ_s14.00000°, δ74.00000°, λ90.00000°.*

*JMA **15** 02:46:33.8±0.1, 38°.7N±0°.2×142°.3E±0°.6, h37^{km}±1^{km}, MV3.8/40, E OFF MIYAGI PREF*

JMA Felt I J1 at E OFF MIYAGI PREF .

*IDC **15** 02:46:34.5±1.6, 39°.06N×141°.42E, h0^{km}, mb3.6/6, mbtmp3.6/9, ML2.9/3, Error ellipse: s-maj=31.8km s-min=20.1km az=92.0*

ISC 15 02:46:33.0±2.3**, 38°.71N**±0°.05×**142°.3E**±0°.1**, h29**^{km}±12^{km}**, n24, **σ**1**^{s}**.02**/27**, mb3.7**/7**, 12D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	0.60	308	⇓iP	Pn	02 46 45.9	+0.4
OFUJ				⇓eS	Sn	02 46 54.3	-0.1
JKMT	**Kesennumamotoy**	0.64	280	⇓iP	Pn	02 46 46.4	+0.4
JKMT				⇓S	Sn	02 46 54.9	-0.2
JIKH	**Ishinomakikobu**	0.75	239	⇓iP	Pn	02 46 47.8	+0.3
JIKH				⇓S	Sb	02 46 57.5	+0.2
JIO	**Ouri**	0.77	251	⇓iP	Pn	02 46 48.1	+0.3
JIO				⇓eS	Sn	02 46 57.9	-0.5
JMK	**Ichinoseki**	0.86	287	⇓iP	Pb	02 46 49.7	+0.3
JMK				⇓eS	Sn	02 47 00.7	0.0
JOM	**Ohasama**	1.08	315	⇓iP	Pb	02 46 53.0	-0.1
JOM				⇓eS	Sb	02 47 07.0	0.0
JTH	**Tanohata**	1.27	345	eP	Pn	02 46 55.3	+0.6
JOU	**Okura**	1.31	256	P	Pn	02 46 56.4	+1.1
JOU				eS	Sn	02 47 13.0	+1.2
JMM	**Marumori**	1.44	235	eP	Pn	02 46 57.2	+0.2
JMM				eS	Sn	02 47 15.0	+0.1
JRG	**Rokugo**	1.46	299	eP	Pn	02 46 58.3	+1.1
JRG				eS	Sb	02 47 17.1	-0.4
JYK	**Kaneyama**	1.52	279	eP	Pn	02 46 59.4	+1.3
JYK				eS	Sb	02 47 18.4	-0.8

MJAR	Matsushiro Arr	3.89	237	Pn	Pn	02 47 33.2	+2.5
	0.4nm,0.3s,baz=37,slow=13,SNR=26						
MJAR				Lg	Lg	02 48 26.2	
	0.2nm,0.3s,baz=336,slow=24,SNR=4.8						
	7.4nm,0.5s						
USRK	Ussuriysk Ar.	9.47	309	Pn	Pn	02 48 42.3	-5.0
	0.1nm,0.3s,baz=108,slow=14,SNR=1.8						
	1.1nm,0.7s						
KSRS	Korea Array	11.39	268	Pn	Pn	02 49 10.4	-3.1
	0.5nm,0.3s,baz=262,slow=31,SNR=2.7						
	0.6nm,0.3s						
H11N2	WAKE ISLAND Hy	28.47	125	T	T	03 22 52.0	
	baz=318,slow=75,SNR=59						
H11N1	WAKE ISLAND Hy	28.48	125	T	T	03 22 52.8	
	baz=318,slow=75,SNR=72						
H11N3	WAKE ISLAND Hy	28.49	125	T	T	03 22 53.3	
	baz=318,slow=75,SNR=73						
ZALV	Zalesovo Beam	41.32	311	P	P	02 54 15.6	0.0
	0.9nm,0.5s,baz=95,slow=6.5,SNR=3.7						
	0.9nm,0.5s						
MKAR	Makanchi Array	43.83	301	P	P	02 54 36.0	-0.2
	0.3nm,0.5s,baz=83,slow=12,SNR=4.6						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	45.53	307	P	P	02 54 49.1	-0.5
	1.5nm,0.5s,baz=83,slow=8.3,SNR=11						
	1.5nm,0.5s						
BVAR	Borovoye Array	49.97	311	P	P	02 55 24.2	+0.1
	0.7nm,0.4s,baz=108,slow=7.5,SNR=1.9						
	0.7nm,0.4s						
WRA	Warramunga Arr	58.81	189	P	P	02 56 36.0	+7.5
	0.4nm,0.8s,baz=8.1,slow=7.0,SNR=2.5						
	0.4nm,0.8s						
ASAR	Alice Springs	62.54	189	P	P	02 57 01.9	+8.0
	0.3nm,0.8s,baz=19,slow=4.2,SNR=1.7						
	0.3nm,0.8s						
LPIG	La Paz	87.77	61	P	P	02 59 09.3	-10
	42nm,0.4s,baz=193,slow=5.1,SNR=4.2						

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*IDC **15** 02:56:14.0±1.9, 6°.23S×129°.88E, h0^{km}, mb3.9/2, mbtmp3.8/5, ML3.9/3, Error ellipse: s-maj=90.5km s-min=25.5km az=77.0*

ISC 15 02:56:28.6±1.2**, 6°.9S**±0°.1×**129°.7E**±0°.1**, h139**^{km}**, n13, σ2^s.67**/14**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTN	Manton Dam	6.07	167	P	Pn	02 57 59.6	+3.5
MTN	Manton Dam	6.07	167	S	Sn	02 59 06.0	+1.5
KDU	Kakadu	6.36	155	P	Pn	02 58 01.9	+1.8
KDU	Kakadu	6.36	155	S	Sn	02 59 09.5	-2.1
FITZ	Fitzroy Crossi	11.80	199	Pn	Pn	02 59 14.6	+1.9
	1.0nm,0.3s,baz=24,slow=9.3,SNR=15						
	1.2nm,0.3s						
FITZ	Fitzroy Crossi	11.80	199	P	P	02 59 18.1	-2.0
WRA	Warramunga Arr	13.72	161	Pn	Pn	02 59 37.2	-0.2
	0.7nm,0.3s,baz=340,slow=13,SNR=25						
WRA				Sn	Sn	03 02 04.2	-5.1
	1.7nm,0.3s,baz=348,slow=23,SNR=10						
	0.8nm,0.3s						
COEN	Coen	14.99	119	P	Pn	02 59 52.4	-1.1
QIS	Mount Isa	16.62	146	P	P	03 00 15.9	+2.2
ASAR	Alice Springs	17.15	167	P	Pn	03 00 22.4	+2.4
	0.2nm,0.3s,baz=352,slow=11,SNR=8.9						
	0.6nm,0.6s						
AS01	Alice Springs	17.16	167	P	Pn	03 00 23.3	+3.2
MKAR	Makanchi Array	67.98	327	P	P	03 07 12.3	-0.4
	1.1nm,0.4s,baz=118,slow=8.2,SNR=17						
	1.1nm,0.4s						
KURBB	Kurchatov Arra	72.27	329	P	P	03 07 38.0	-0.7
	0.4nm,0.5s,baz=127,slow=5.2,SNR=2.0						
	0.4nm,0.5s						

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*NOU **15** 02:59:38.3, 21°.40S×121°.13E, h0^{km}, mb4.6/21, Western Australia*

*AUST **15** 02:59:39.8±0.2, 21°S±3°×12°1E±°, h10^{km}, mb4.6/15, ML4.3/10, Error ellipse: s-maj=6.7km s-min=4.9km az=153.5*

*NEIC **15** 02:59:40.9±2.2, 21°.41S±0°.07×121°.09E±0°.03, h16^{km}±5^{km}, mb4.4/6, Error ellipse: s-maj=10.8km s-min=3.8km az=175.0*

*IDC **15** 02:59:41.3±1.5, 21°.65S×121°.35E, h0^{km}, mb4.0/2, mbtmp4.7/6, ML4.6/4, Error ellipse: s-maj=30.7km s-min=27.3km az=130.0*

ISC 15 02:59:38.9±0.6**, 21°.36S**±0°.06×**121°.16E**±0°.04**, h10**^{km}**, n77, σ1^s.68**/78**, mb4.3**/5**, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSA00	Pilbara Seismi	1.24	260		Pg	03 00 03.6	+0.9
PSA00				Sn	Sb	03 00 16.1	-2.4
PSA00	Pilbara Seismi	1.24	260		Pg	03 00 03.6	+0.9
PSA00	Pilbara Seismi	1.24	260	P	Pg	03 00 03.3	+0.6
PSA00	Pilbara Seismi	1.24	260	P	Pg	03 00 03.0	+0.3
MBWA	Marble Bar	1.35	278		Pg	03 00 05.1	+0.4
MBWA				Sn	Sb	03 00 18.6	-2.9
MBWA	Marble Bar	1.35	278	P	Pg	03 00 04.9	+0.1
MBWA	Marble Bar	1.35	278	P	Pg	03 00 05.1	+0.4
MBWA	Marble Bar	1.35	278	S	Sb	03 00 18.8	-2.7
FITZ	Fitzroy Crossi	5.32	53		Pn	03 01 01.4	+2.9
FITZ	Fitzroy Crossi	5.32	53	P	Pn	03 01 01.2	+2.8
FITZ	Fitzroy Crossi	5.32	53	Pn	Pn	03 01 00.5	+2.1
	17nm,0.3s,baz=224,slow=9.8,SNR=55						
FITZ				Sn	Sn	03 01 57.4	-2.5
	14nm,0.3s,baz=195,slow=12,SNR=12						
	49nm,0.2s						
FITZ	Fitzroy Crossi	5.32	53	P	Pn	03 01 01.7	+3.3
MEEK	Meekatharra	5.75	203	P	Pn	03 01 06.1	+1.8
MEEK	Meekatharra	5.75	203	P	Pn	03 01 05.0	+0.7
GIRL	Giralia	6.55	257		Pn	03 01 16.7	+1.3
GIRL	Giralia	6.55	257	P	Pn	03 01 16.7	+1.3
GIRL	Giralia	6.55	257	P	Pn	03 01 16.6	+1.3
MORW	Morawa	8.97	210	Pn	Pn	03 01 47.2	-1.2
MORW	Morawa	8.97	210	P	Pn	03 01 47.0	-1.5
	comp=Z,18nm,1.0s,comp=Z,0.5nm						
MORW	Morawa	8.97	210	P	Pn	03 01 47.0	-1.5
KNRA	Kununurra	9.16	53	Pn	Pn	03 01 53.9	+2.7
KNRA	Kununurra	9.16	53	P	Pn	03 01 53.9	+2.7
KMBL	Kambalda	9.99	176	P	Pn	03 02 02.4	-0.1
	comp=Z,45nm,0.4s,comp=Z,0.2nm						
KMBL	Kambalda	9.99	176	P	Pn	03 02 02.9	+0.4
BLDU	Ballidu	10.05	203	P	Pn	03 02 03.0	-0.3
	comp=Z,18nm,0.6s,comp=Z,0.3nm						
BLDU	Ballidu	10.05	203	P	Pn	03 02 03.0	-0.3
KLBR	Kellerberrin	10.64	196	P	Pn	03 02 11.8	+0.4
	comp=Z,143nm,0.5s,comp=Z,0.8nm						
KLBR	Kellerberrin	10.64	196	P	Pn	03 02 11.8	+0.4
FORT	Forrest	11.24	148		Pn	03 02 20.6	+1.0
FORT	Forrest	11.24	148	P	Pn	03 02 20.8	+1.2
	comp=Z,54nm,0.8s						
FORT	Forrest	11.24	148	P	Pn	03 02 20.6	+1.0
MUN	Mundaring	11.46	202	P	Pn	03 02 22.1	-0.6
	comp=Z,24nm,1.6s						
MUN	Mundaring	11.46	202	P	Pn	03 02 22.6	-0.1
ASAR	Alice Springs	12.00	103		Pn	03 02 32.5	+2.3
ASAR	Alice Springs	12.00	103	Pn	Pn	03 02 31.6	+1.4
	comp=Z,3.3nm,0.3s,baz=284,slow=12,SNR=165						
ASAR				Sn	Sn	03 04 37.1	-7.1
	comp=Z,4.9nm,0.3s,baz=273,slow=24,SNR=13						
	comp=Z,12nm,0.4s						
AS31	Alice Springs	12.00	103		Pn	03 02 31.8	+1.6
AS31	Alice Springs	12.00	103	P	Pn	03 02 32.3	+2.2
	comp=Z,7.9nm,0.6s						
NWAO	Narrogin (SRO)	12.04	196	Pn	Pn	03 02 29.7	-0.9
	comp=Z,34nm,0.3s,baz=21,slow=12,SNR=178						
NWAO				Sn	Sn	03 04 29.9	-15
	comp=Z,33nm,0.3s,baz=350,slow=12,SNR=14						
	comp=Z,114nm,0.4s						
NWAO	Narrogin (SRO)	12.04	196	P	Pn	03 02 30.1	-0.5
AS01	Alice Springs	12.04	103	P	Pn	03 02 32.9	+2.2
WRA	Warramunga Arr	12.42	86	Pn	Pn	03 02 37.2	+1.3
WRA	Warramunga Arr	12.42	86	Pn	Pn	03 02 36.6	+0.7
	comp=Z,6.8nm,0.3s,baz=264,slow=14,SNR=24						
WRA				Sn	Sn	03 04 44.9	-10
	comp=Z,4.6nm,0.3s,baz=278,slow=25,SNR=7.7						
	comp=Z,11nm,0.4s						
WB2	Warramunga Arr	12.43	86	Pn	Pn	03 02 37.1	+1.1
WB2	Warramunga Arr	12.43	86	P	Pn	03 02 37.1	+1.1
	comp=Z,21nm,0.4s						
WRAB	Tennant Creek	12.43	86	Pn	Pn	03 02 37.3	+1.4
WRAB	Tennant Creek	12.43	86	P	Pn	03 02 37.3	+1.4
	comp=Z,27nm,0.5s						
WB0	Warramunga Arr	12.50	85	Pn	Pn	03 02 38.0	+1.1
WR8	Warramunga Arr	12.57	86	Pn	Pn	03 02 39.1	+1.2
WR0	Warramunga Arr	12.61	86	Pn	Pn	03 02 39.7	+1.4
MTN	Manton Dam	12.74	50		Pn	03 02 41.4	+1.1
MTN	Manton Dam	12.74	50	P	Pn	03 02 40.9	+0.7
	comp=Z,35nm,0.4s						
MTN	Manton Dam	12.74	50	P	Pn	03 02 42.0	+1.7
PLAI	Plampang	12.88	345	P	Pn	03 02 42.9	+0.8
RKGY	Rocky Gully	13.71	195	P	Pn	03 02 52.8	-0.5
	comp=Z,36nm,1.6s						
JAGI	Jajag, Banyuwa	14.48	331		Pn	03 03 02.9	-1.2
JAGI	Jajag, Banyuwa	14.48	331	P	Pn	03 03 02.6	-1.5
	comp=Z,72nm,0.9s						
JAGI	Jajag, Banyuwa	14.48	331	P	Pn	03 03 02.9	-1.2
MULG	Mulgathing	14.62	130	P	Pn	03 03 05.5	-0.3
	comp=Z,6.6nm,1.0s						
QIS	Mount Isa	17.25	91	P	Pn	03 03 40.1	+0.1
	comp=Z,15nm,1.1s						
QIS	Mount Isa	17.25	91	P	Pn	03 03 39.9	-0.1
BBOO	Buckleboo	17.48	134		Pn	03 03 41.4	-1.4
BBOO				IAmb	IAmb	03 03 41.7	
	comp=Z,44nm,1.4s						
BBOO	Buckleboo	17.48	134	P	Pn	03 03 41.3	-1.4
YAPP	Yappala Statio	18.54	128	P	P	03 03 55.6	-0.1
HTT	Hallett	19.80	131	P	P	03 04 09.2	-0.3
SDAN	Sedan	20.68	133	P	Pn	03 04 21.7	+0.3
	comp=Z,3.0nm,0.6s						
STKA	Stephens Creek	21.03	124	P	P	03 04 23.0	+0.2
STKA				IAmb	IAmb	03 04 28.1	
	comp=Z,51nm,1.5s						
STKA	Stephens Creek	21.03	124	P	P	03 04 25.2	+2.3
STKA	Stephens Creek	21.03	124	P	P	03 04 25.0	+2.1
	comp=Z,2.7nm,0.4s,baz=306,slow=9.9,SNR=8.5						
STKA				S	S	03 08 05.4	-12
	comp=Z,4.8nm,0.5s,baz=308,slow=12,SNR=6.3						
	comp=Z,2.7nm,0.4s						
STKA	Stephens Creek	21.03	124	P	P	03 04 21.8	-1.0
QLP	Quilpie	21.71	108	P	P	03 04 30.9	+0.7
COEN	Coen	22.21	74	P	P	03 04 37.1	+1.4
COEN				IAmb	IAmb	03 04 58.4	
	comp=Z,11nm,0.8s						
QSPA	South Pole Qui	68.71	180	P	P	03 10 43.0	+0.5
QSPA				IAmb	IAmb	03 10 45.3	
	comp=Z,2.4nm,1.0s						
QSPA	South Pole Qui	68.71	180	P	P	03 10 44.2	+1.6
	comp=Z,2.2nm,1.1s,baz=309,slow=1.3,SNR=5.2						
	comp=Z,2.2nm,1.1s						
KSH	Kashi	73.81	325	P	P	03 11 20.3	+6.5
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MKAR	Makanchi Array	76.38	334	P	P	03 11 35.4	+7.1
	comp=Z,0.1nm,0.4s,baz=148,slow=4.0,SNR=1.6						
SNAA	Sanae	79.71	195	P	P	03 11 47.5	+0.9
BOSA	Boshof	84.94	241	P	P	03 12 15.2	+0.3

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*IDC **15** 03:28:09.4±0.9, 54°.92S×0°.36W, h0^{km}, mb4.2/7, mbtmp4.2/8, ML3.7/1, MS3.7/19, Error ellipse: s-maj=61.3km s-min=19.9km az=81.0*

ISC 15 03:28:11.0±0.9**, 54°.9S**±0°.1×**0°.3W**±0°.3**, h10**^{km}**, n37, σ0^s.95**/13**, mb4.3**/6**, MS3.8**/19**, 3C, Bouvet Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	16.17	190	⇑P	P	03 32 00.4	-0.7
	comp=Z,14nm,0.8s						
SNAA	Sanae	16.84	183	⇑P	P	03 32 09.6	+0.9
	comp=Z,129nm,0.8s						
SNAA	Sanae	16.84	183	Pn	Pn	03 32 05.8	-0.7
	comp=Z,0.2nm,0.3s,baz=20,slow=12,SNR=15						
	comp=Z,8.1nm,1.0s						
TROLL	Troll, Antarti	17.18	177	⇑P	P	03 32 13.4	+0.9
	comp=Z,159nm,0.6s						
MAW	Mawson	31.31	139	P	P	03 34 30.3	-0.6
	comp=Z,4.4nm,1.0s,baz=239,slow=4.8,SNR=4.5						
MAW				LR	LR	03 44 51.8	
	comp=Z,146nm,21.4s,baz=280,slow=32						
	comp=Z,4.4nm,1.0s						
H04S2	CROZET ISLANDS	33.17	98	T	T	04 10 54.7	
	baz=237,slow=75,SNR=63						
H04S3	CROZET ISLANDS	33.17	98	T	T	04 10 56.1	
	baz=237,slow=75,SNR=62						
H04S1	CROZET ISLANDS	33.19	98	T	T	04 10 55.6	
	baz=237,slow=75,SNR=70						
QSPA	South Pole Qui	35.31	180	P	P	03 35 05.8	-0.1
	comp=Z,3.5nm,0.9s,baz=221,slow=5.3,SNR=8.0						
	comp=Z,3.5nm,0.9s						
PLCA	Paso Flores	47.26	257	LR	LR	03 53 42.5	
	comp=Z,58nm,21.6s,baz=76,slow=32						
H10S2	ASCENSION HYDR	47.27	340	T	T	04 27 08.4	
	baz=168,slow=74,SNR=23						
H10S3	ASCENSION HYDR	47.28	340	T	T	04 27 09.0	
	baz=52,slow=74,SNR=33						
VNDA	Vanda	47.34	175	P	P	03 36 45.6	+1.3
	comp=Z,4.9nm,0.8s,baz=216,slow=7.9,SNR=20						
VNDA				LR	LR	03 56 22.6	
	comp=Z,87nm,18.0s,baz=188,slow=36						
	comp=Z,4.9nm,0.8s						
CPUP	Villa Florida	50.08	281	LR	LR	03 54 24.7	
	comp=Z,19nm,21.9s,baz=6.5,slow=32						
BDFB	Brasilia	53.66	298	LR	LR	03 56 02.6	
	comp=Z,101nm,19.6s,baz=148,slow=31						
RCBR	Riachuelo	56.71	316	LR	LR	03 57 15.6	
	comp=Z,32nm,19.2s,baz=96,slow=31						
SIV	San Ignacio	60.39	285	LR	LR	04 00 50.5	
	comp=Z,72nm,20.4s,baz=117,slow=32						
DBIC	Dimbokro	61.50	355	P	P	03 38 27.2	-0.6
	comp=Z,4.3nm,1.0s,baz=186,slow=10,SNR=3.1						
DBIC				LR	LR	03 57 02.2	
	comp=Z,67nm,20.8s,baz=157,slow=28						
	comp=Z,4.3nm,1.0s						
LPAZ	La Paz	64.13	279	LR	LR	04 03 32.3	
	comp=Z,50nm,21.0s,baz=92,slow=33						
TORD	Torodi Ar. Bea	67.84	2	P	P	03 39 09.9	+0.7
	comp=Z,1.5nm,0.8s,baz=158,slow=2.7,SNR=4.6						
	comp=Z,1.5nm,0.8s						
NNA	Nana	72.58	274	LR	LR	04 08 55.1	
	comp=Z,70nm,21.9s,baz=144,slow=34						
MDP	Montagnes des	73.82	305	LR	LR	04 07 50.7	
	comp=Z,73nm,19.9s,baz=141,slow=32						
H01W2	Cape Leeuwin H	74.38	129	T	T	05 02 52.3	
	baz=212,slow=76,SNR=8.8						
H01W1	Cape Leeuwin H	74.39	129	T	T	05 02 51.0	
	baz=212,slow=76,SNR=7.7						
H01W3	Cape Leeuwin H	74.39	129	T	T	05 02 54.9	
	baz=212,slow=76,SNR=9.6						
PCRV	Puerto La Cruz	84.13	297	LR	LR	04 14 55.6	
	comp=Z,67nm,19.0s,slow=33						
ROSC	El Rosal	84.87	286	LR	LR	04 16 45.6	
	comp=Z,109nm,19.6s,baz=86,slow=34						
SDV	Santo Domingo	86.21	291	LR	LR	04 18 04.0	
	comp=Z,70nm,18.7s,baz=123,slow=35						
STKA	Stephens Creek	87.53	148	P	P	03 40 58.9	-0.1
	comp=Z,0.5nm,0.3s,baz=210,slow=5.9,SNR=3.2						
	comp=Z,0.5nm,0.3s						
EIL	Elat	89.53	30	LR	LR	04 18 25.6	
	comp=Z,34nm,20.7s,baz=242,slow=34						
SJG	San Juan	91.62	300	LR	LR	04 18 57.4	
	comp=Z,74nm,20.9s,baz=122,slow=33						
ASAR	Alice Springs	92.44	139	P	P	03 41 21.4	-0.7
	comp=Z,0.4nm,0.8s,baz=191,slow=7.0,SNR=2.8						
	comp=Z,0.4nm,0.8s						
MMAI	Mount Meron Ar	92.80	29	LR	LR	04 20 41.1	
	comp=Z,30nm,20.4s,baz=164,slow=34						
FITZ	Fitzroy Crossi	93.99	129	LR	LR	04 20 28.0	
	comp=Z,64nm,18.6s,baz=262,slow=33						
JTS	Las Juntas de	95.31	280	LR	LR	04 22 56.5	
	comp=Z,24nm,21.5s,baz=116,slow=34						
MKAR	Makanchi Array	122.81	54	PKP	PKiKP	03 47 07.8	+1.4
	comp=Z,0.5nm,0.9s,baz=224,slow=4.0,SNR=2.4						
YKA	Yellowknife Ar	146.50	310	PKPbc	PKPdf	03 47 48.5	-1.0
	comp=Z,0.9nm,0.8s,baz=96,slow=2.6,SNR=7.8						

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*IDC **15** 03:45:04.3±0.6, 12°.91S×45°.64E, h0^{km}, mb3.9/17, mbtmp3.9/18, ML4.6/2, MS3.6/13, Error ellipse: s-maj=21.9km s-min=15.4km az=90.0*

*NEIC **15** 03:45:05.9±2.4, 12°.78S±0°.08×45°.61E±0°.10, h10^{km}±1^{km}, mb4.8/28, Error ellipse: s-maj=16.3km s-min=12.8km az=271.0*

ISC 15 03:45:05.1±0.4**, 12°.95S**±0°.05×**45°.65E**±0°.06**, h10**^{km}**, n99, σ2^s.02**/99**, mb4.6**/34**, MS3.6**/10**, 2D, Northwest of Madagascar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBV	Sambava	4.19	97	P	Pn	03 46 09.8	+0.7
SBV				S	Sn	03 46 54.3	-3.9
OPO	Ambohidratompo	5.78	165	Pn	Pn	03 46 32.6	+1.4
	7.8nm,0.3s,baz=339,slow=13,SNR=575						
OPO				Sn	Sn	03 47 34.3	-3.5
	44nm,0.3s,baz=280,slow=19,SNR=33						
OPO				LR	LR	03 48 54.3	
	comp=Z,470nm,22.0s,baz=185,slow=40						
OPO	Ambohidratompo	5.78	165	P	Pn	03 46 33.2	+2.0
OPO				S	Sn	03 47 34.4	-3.4
FIRM	Firavahana	5.84	168	P	Pn	03 46 34.2	+2.2
FIRM				S	Sn	03 47 35.4	-3.8
ATG	Ambohiby	5.92	175	P	Pn	03 46 34.5	+1.4
ATG				S	Sn	03 47 39.2	-2.0
ABPO	Ambohimpanom	6.22	166	Pn	Pn	03 46 38.9	+1.7
ABPO	Ambohimpanom	6.22	166	P	Pn	03 46 39.0	+1.7
ABPO				S	Sn	03 47 43.9	-4.7
MDSM	Mandiavato	6.25	168	P	Pn	03 46 39.6	+2.0
MDSM				S	Sn	03 47 45.5	-3.7
AVY	Angavokely	6.28	162	P	Pn	03 46 39.4	+1.4
AVY				S	Sn	03 47 42.4	-7.5
DGRM	Ambatolahisoa	6.32	173	P	Pn	03 46 40.4	+1.8
DGRM				S	Sn	03 47 46.3	-4.7
ABM	Ambohimiarambe	6.99	167	P	Pn	03 46 49.6	+1.7
VOI	Vohitsoka	8.98	173	Pn	Pn	03 47 16.4	+1.4
FOMA	Nahampoana Res	12.03	174	Pn	Pn	03 47 57.5	+0.8
RER	Riviere de l'E	12.64	132		Pn	03 48 04.3	-0.8
MSEY	Mahe Island	12.72	51	Pn	Pn	03 48 03.3	-2.9
KIBK	Kibwezi	12.95	324	Pn	Pn	03 48 05.4	-4.0
CHIPN	CHIPINGE	14.41	238	*i* P	Pn	03 48 24.0	-5.5
KRI	Karoi	15.97	254	*i* P	Pn	03 48 42.5	-7.8
LSZ	Lusaka	17.09	260	Pn	Pn	03 49 02.6	-1.9
LSZ	Lusaka	17.09	260	P	Pn	03 49 01.4	-3.2
	12nm,0.8s,baz=83,slow=9.6,SNR=19						
LSZ				S	Sn	03 51 55.4	-19
	11nm,0.7s,baz=352,slow=13,SNR=5.1						
LSZ				LR	LR	03 54 51.9	
	comp=Z,240nm,21.0s,baz=102,slow=34						
LSZ	Lusaka	17.09	260	*i* P	Pn	03 49 00.4	-4.2
MOPA	Mopani	17.12	230	*i* P	Pn	03 49 03.5	-1.3
MUSN	Musina, Limpop	17.67	236	*i* P	Pn	03 49 08.7	-2.9
BLWY	Bulawayo	17.82	244	*i* P	Pn	03 49 11.7	-1.9
MATP	Matopo	18.02	243	P	Pn	03 49 15.6	-0.5
	0.4nm,0.3s,baz=60,slow=12,SNR=34						
MATP				S	Sn	03 52 26.4	-11
	1.6nm,0.5s,baz=345,slow=20,SNR=2.9						
MATP				LR	LR	03 56 07.2	
	comp=Z,101nm,18.9s,baz=66,slow=37						
	11nm,0.9s						
LODK	Lodwar	19.21	327		P	03 49 26.6	-2.8
MBAR	Mbarara	19.21	309	P	P	03 49 29.3	-0.3
BROLN	Tlhalogang	19.29	243	*i* P	Pn	03 49 30.9	-0.5
POGA	Pongola	19.38	220		Pn	03 49 32.1	-0.2
POGA				IAmb	IAmb	03 49 36.6	
	comp=Z,40nm,0.9s						
MREMI	Moremi	19.78	239		P	03 49 35.7	-0.1
MREMI	Moremi	19.78	239	*i* P	Pn	03 49 36.8	-0.6
LPHEP	Lephephe	21.44	238	P	P	03 49 53.5	-0.3
LPHEP				IAmb	IAmb	03 49 58.2	
	comp=Z,62nm,0.9s						
LPHEP	Lephephe	21.44	238	*i* P	P	03 49 54.7	+0.9
PHDHD	Phuduhudu	21.47	248	P	P	03 49 53.0	-1.0
PHDHD				IAmb	IAmb	03 49 58.6	
	comp=Z,74nm,1.4s						
PHDHD	Phuduhudu	21.47	248	*i* P	P	03 49 54.7	+0.6
LBTB	Lobatse	22.41	235		P	03 50 03.9	-0.2
LBTB				IAmb	IAmb	03 50 10.6	
	comp=Z,26nm,0.8s						
LBTB	Lobatse	22.41	235	LR	LR	03 58 47.2	
	comp=Z,220nm,19.1s,baz=60,slow=37						
LBTB	Lobatse	22.41	235	*i* P	P	03 50 02.3	-1.8
SKOMA	Sekoma	23.53	238	*i* P	P	03 50 16.0	+0.2
XAUDM	Khaudum	24.04	254	P	P	03 50 19.8	-0.9
KGCAE	Kacgae	24.35	243	*i* P	P	03 50 24.1	+0.5
BOSA	Boshof	24.57	227		P	03 50 25.4	-0.1
BOSA				IAmb	IAmb	03 50 27.0	
	comp=Z,27nm,1.4s						
BOSA	Boshof	24.57	227	P	P	03 50 25.4	-0.1
	comp=Z,6.8nm,0.6s,baz=61,slow=8.6,SNR=35						
BOSA				LR	LR	03 59 27.3	
	comp=Z,137nm,21.1s,baz=42,slow=35						
	comp=Z,6.8nm,0.6s						
BOSA	Boshof	24.57	227	*i* P	P	03 50 26.2	+0.7
GRTLG	Ghanzi	24.77	247	IAmb	IAmb	03 50 29.2	
	comp=Z,23nm,1.2s						
GRTLG	Ghanzi	24.77	247	*i* P	P	03 50 28.2	+0.7
LKGWB	Lokgwabe	25.64	241		P	03 50 32.0	-3.4
KOOLE	Kule	26.15	244	IAmb	IAmb	03 50 41.2	
	comp=Z,25nm,0.8s						
KOOLE	Kule	26.15	244	*i* P	P	03 50 40.7	+0.7
TSUM	Tsumeb	27.65	253	P	P	03 50 53.6	0.0
TSUM	Tsumeb	27.65	253	LR	LR	04 01 50.6	
	comp=Z,280nm,19.1s,baz=134,slow=36						
SUR	Sutherland	29.86	226	P	P	03 51 14.2	+1.1
CRZF	Crozet Islands	33.78	172	P	P	03 51 48.6	+1.4
MMAI	Mount Meron Ar	46.74	348	P	P	03 53 35.8	+1.1
	comp=Z,1.1nm,0.8s,baz=256,slow=12,SNR=1.9						
	comp=Z,1.1nm,0.8s						
BRTR	Keskin Array B	53.58	348	P	P	03 54 25.7	-0.9
BRTR	Keskin Array B	53.58	348	P	P	03 54 26.8	+0.2
	comp=Z,0.3nm,0.6s,baz=164,slow=12,SNR=5.0						
	comp=Z,0.3nm,0.6s						
MAW	Mawson	55.77	172	P	P	03 54 44.0	+2.0
	comp=Z,1.5nm,0.9s,baz=307,slow=10,SNR=1.4						
MAW				LR	LR	04 16 14.5	
	comp=Z,109nm,18.2s,baz=358,slow=34						
	comp=Z,1.5nm,0.9s						
SIMJ	Simiganj	55.79	22	P	P	03 54 42.8	+0.1
SIMJ				IAmb	IAmb	03 54 55.5	
	comp=Z,12nm,1.1s						
KBZ	Khabaz	56.46	358	P	P	03 54 51.5	+4.5
	comp=Z,1.2nm,0.5s,baz=155,slow=10,SNR=3.7						
GAR	Garm	56.58	23	P	P	03 54 48.0	-0.3
KIV	Kislovodsk	56.69	357	P	P	03 54 48.6	-0.3
KIV				IAmb	IAmb	03 54 56.8	
	comp=Z,9.9nm,1.0s						
KSH	Kashi	59.35	27	P	P	03 55 08.6	+0.9
KSH				sP	pwP	03 55 15.3	+1.3
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KK31	Karatay Array	60.25	21	P	P	03 55 13.1	-0.6
KK31				IAmb	IAmb	03 55 25.5	
	comp=Z,9.2nm,1.4s						
KKAR	Karatay Array	60.25	21	P	P	03 55 12.9	-0.8
CMAR	Chiang Mai Arr	61.12	60	P	P	03 55 18.9	-1.1
CMAR	Chiang Mai Arr	61.12	60	P	P	03 55 20.0	-0.1
	comp=Z,0.9nm,0.3s,baz=234,slow=8.8,SNR=4.3						
	comp=Z,0.9nm,0.3s						
CHTO	Chiang Mai	61.28	60	P	P	03 55 20.6	-0.5
CHTO				IAmb	IAmb	03 55 30.3	
	comp=Z,14nm,1.4s						
AB31	Akbulak array	63.20	10	P	P	03 55 33.5	+0.1
AB31				IAmb	IAmb	03 55 40.9	
	comp=Z,8.0nm,0.8s						
ABKAR	Akbulak array	63.20	10	P	P	03 55 33.5	+0.1
ABKAR	Akbulak array	63.20	10	P	P	03 55 32.2	-1.3
ABKAR				IAmb	IAmb	03 55 40.9	
	comp=Z,8.0nm,0.8s						
BELG	Belogornoye	65.09	1	LR	LR	04 27 23.3	
	comp=Z,33nm,18.1s,baz=191,slow=39						
SNAA	Sanae	65.44	195	P	P	03 55 49.7	+1.8
SNAA				IAmb	IAmb	03 57 02.2	
	comp=Z,19nm,1.9s						
VYHS	Vyhne	65.64	341	*e*P	P	03 55 54.0	+4.6
KRUC	Moravsky	66.94	340	*e*P	P	03 55 58.1	+0.4
VRAC	Vranov	67.08	340	LR	LR	04 28 25.4	
	comp=Z,18nm,18.5s,baz=199,slow=39						
PZH	PanZhiHua	67.14	54	P	P	03 56 01.4	+1.8
PZH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,4.3s						
MORC	Moravsky Berou	67.17	341	*e*P	P	03 55 56.4	-2.9
GERES	GERESS Array B	67.71	338	P	P	03 56 02.9	+0.2
	comp=Z,0.6nm,0.7s,baz=180,slow=8.0,SNR=4.6						
	comp=Z,0.6nm,0.7s						
MKAR	Makanchi Array	67.93	26	P	P	03 56 05.3	+1.1
	comp=Z,0.2nm,0.5s,baz=225,slow=5.0,SNR=7.1						
	comp=Z,0.2nm,0.5s						
WMQ	Urumqi	68.26	31	*e*P	P	03 56 08.1	+1.8
BVAR	Borovoye Array	69.06	16	P	P	03 56 10.5	-0.5
	comp=Z,0.6nm,0.7s,baz=190,slow=5.2,SNR=2.3						
	comp=Z,0.6nm,0.7s						
KURBB	Kurchatov Arra	69.52	22	P	P	03 56 13.7	-0.1
	comp=Z,0.2nm,0.6s,baz=220,slow=6.9,SNR=4.7						
	comp=Z,0.2nm,0.6s						
ESDC	Sonseca Array	69.76	321	P	P	03 56 16.9	+1.2

	comp=Z,1.1nm,1.1s,baz=124,slow=5.5,SNR=7.2						
ESDC				LR	LR	04 28 30.6	
	comp=Z,32nm,20.4s,baz=136,slow=37						
	comp=Z,1.1nm,1.1s						
MEM	Membach	72.14	335	*d*PcP	PcP	03 56 47.8	-0.3
DOU	Dourbes	72.35	334	*d*P	P	03 56 30.6	-0.5
ZALV	Zalesovo Beam	74.50	23	P	P	03 56 44.4	+0.7
	comp=Z,0.3nm,0.3s,baz=223,slow=6.1,SNR=6.2						
	comp=Z,0.3nm,0.3s						
FINES	FINESS Array B	75.75	350	P	P	03 56 52.2	+1.5
	comp=Z,2.1nm,0.9s,baz=152,slow=7.7,SNR=2.7						
	comp=Z,2.1nm,0.9s						
QSPA	South Pole Qui	77.15	180	P	P	03 57 00.0	+1.1
	comp=Z,2.5nm,1.0s,baz=296,slow=5.6,SNR=4.8						
QSPA				LR	LR	04 28 32.7	
	comp=Z,74nm,18.1s,baz=249,slow=34						
	comp=Z,2.5nm,1.0s						
HFS	Hagfors	77.22	344	P	P	03 56 59.9	+0.9
	comp=Z,1.2nm,0.9s,baz=148,slow=8.6,SNR=5.7						
	comp=Z,1.2nm,0.9s						
NOA	NORSAR Array B	78.65	344	P	P	03 57 08.4	+1.3
	comp=Z,0.3nm,0.8s,baz=135,slow=5.6,SNR=2.8						
NOA				LR	LR	04 33 53.5	
	comp=Z,11nm,20.6s,baz=175,slow=37						
	comp=Z,0.3nm,0.8s						
HHC	Hu-ho-hao-te	80.98	45	*e*P	P	03 57 20.3	0.0
HHC				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,97nm,4.5s						
NJ2	Nanjing	83.01	55	*e*P	P	03 57 31.8	+0.8
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ASAR	Alice Springs	83.33	113	P	P	03 57 34.2	+1.2
	comp=Z,2.6nm,0.7s,baz=263,slow=4.9,SNR=39						
	comp=Z,2.6nm,0.7s						
WRA	Warramunga Arr	84.46	109	P	P	03 57 39.3	+0.5
WRA	Warramunga Arr	84.46	109	P	P	03 57 39.8	+0.9
	comp=Z,2.2nm,0.8s,baz=267,slow=3.9,SNR=17						
	comp=Z,2.2nm,0.8s						
WB0	Warramunga Arr	84.55	109	P	P	03 57 39.7	+0.4
WR8	Warramunga Arr	84.61	109	P	P	03 57 39.7	+0.1
CPUP	Villa Florida	95.64	241	LR	LR	04 35 38.4	
	comp=Z,13nm,21.4s,baz=360,slow=32						
TXAR	Lajitas Array	147.20	305	PKPbc	PKPbc	04 04 50.2	+0.8
	comp=Z,0.4nm,0.7s,baz=106,slow=4.0,SNR=4.2						

CATAC ***15*** *03:57:12.5±0.6, 13°N±3°×8°9W±°, h23^{km}±4^{km}, M2.7/14, MLv2.7/14, Error ellipse: s-maj=7.9km s-min=3.7km az=22.6, confirmed*

SNET ***15*** *03:57:14.1±1.4, 13°.01N×89°.02W, h36^{km}±273^{km}, ML2.7*

GCG ***15*** *03:57:14.3±0.3, 13°.10N×89°.08W, h61^{km}±8^{km}, MD3.6*

ISC 15 03:57:13.5±1.7**, 12°.96N**±0°.08×**89°.05W**±0°.04**, h31**^{km}±11^{km}**, n48, σ0^{s}.52**/58**, 3D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.59	333	P	Pb	03 57 25.4	0.0
LALI	Alcalda de L	0.59	333	S	Sn	03 57 34.2	-0.1
ALJI	Alcalda de J	0.59	52	P	Pb	03 57 25.3	-0.2
ALJI	Alcalda de J	0.59	52	S	Sn	03 57 34.8	+0.4
TECO	Alcaldia de Te	0.63	25	*e*P	Pb	03 57 25.7	-0.5
TECO				*e*S	Sb	03 57 35.0	+0.2
TECO	Alcaldia de Te	0.63	25	P	Pb	03 57 25.6	-0.5
LFRS	El Faro	0.66	359	*e*P	Pb	03 57 26.3	-0.4
LFRS				*e*S	Sb	03 57 35.7	0.0
PANCS	Alcalda de	0.66	349	S	Sn	03 57 36.0	-0.2
COEG	Centro de Oper	0.68	14	*e*P	Pn	03 57 27.0	0.0
COEG	Centro de Oper	0.68	14	P	Pn	03 57 25.5	-1.5
COEG	Centro de Oper	0.68	14	S	Sn	03 57 36.7	+0.1
LOMA	Loma Larga	0.69	350	⇓*i*P	Pn	03 57 26.9	-0.4
LOMA				*e*S	Sn	03 57 37.2	+0.2
LOMA				IAML		03 57 38.3	
	comp=Z,320nm,0.2s						
LOMA	Loma Larga	0.69	350	P	Pn	03 57 26.8	-0.5
UESV	Universidad de	0.72	21	P	Pn	03 57 27.0	-0.5
UESV	Universidad de	0.72	21	S	Sn	03 57 37.5	-0.1
ITCA	Escuela Especi	0.74	343	P	Sb	03 57 38.4	+0.4
TECA	Tecapa	0.75	45	*e*P	Pn	03 57 28.0	-0.1
TECA				*e*P	Pn	03 57 28.1	-0.1
TECA				*e*S	Sn	03 57 39.1	+0.4
TECA				IAML		03 57 39.8	
	comp=Z,207nm,0.1s						
PAVA	Las Pavas	0.76	8	P	Pn	03 57 27.8	-0.3
PAVA	Las Pavas	0.76	8	S	Sn	03 57 39.3	+0.7
IGN	Direccin Gen	0.76	351	S	Sn	03 57 38.6	0.0
UEES	Universidad Ev	0.78	346	S	Sn	03 57 39.1	+0.1
PMON	Piamonte	0.79	341	*e*P	Pn	03 57 28.3	-0.3
PMON				*e*S	Sb	03 57 39.5	+0.1
PMON	Piamonte	0.79	341	P	Pn	03 57 28.3	-0.3
JAYA	Jayaque - finc	0.79	331	⇓*i*P	Pn	03 57 28.2	-0.5
JAYA				*e*S	Sb	03 57 38.8	-0.6
JAYA				IAML		03 57 40.1	
	comp=Z,865nm,0.2s						
JAYA	Jayaque - finc	0.79	331	*i* P	Pn	03 57 28.2	-0.5
JAYA				*e*S	Sb	03 57 38.8	-0.6
JAYA	Jayaque - finc	0.79	331	P	Pn	03 57 28.2	-0.5
SCLA	Alcaldia de Sa	0.80	23	⇓*e*P	Pn	03 57 28.5	-0.2
SCLA				*e*S	Sb	03 57 40.1	+0.5
SCLA	Alcaldia de Sa	0.80	23	P	Pn	03 57 28.6	-0.2
BOQS	Boqueron	0.80	344	*e*P	Pb	03 57 31.2	+2.1
PQSS	Presa 15 de Se	0.81	36	S	Sb	03 57 40.2	+0.3
LCY	Lacayo	0.87	58	*e*P	Pn	03 57 29.4	-0.3
CEVE	Cerro Verde	1.03	327	S	Sn	03 57 45.6	+0.1
SBLS	San Blas	1.04	328	*e*P	Pn	03 57 32.2	0.0
UNIC	Universidad Ca	1.13	335	S	Sn	03 57 48.2	+0.5
UNIC	Universidad Ca	1.13	335	P	Pn	03 57 32.8	-0.4
NUBE	Las Nubes	1.18	323	*e*P	Pn	03 57 33.5	-0.4
NUBE	Las Nubes	1.18	323	*i* P	Pn	03 57 33.6	-0.4
NUBE				*i* S	Sn	03 57 48.7	-0.3
NUBE	Las Nubes	1.18	323	P	Pn	03 57 33.7	-0.3
LCND	La Caada	1.18	73	*e*P	Pn	03 57 33.4	-0.5
LCND				IAML		03 57 51.3	
	comp=Z,95nm,0.2s						
LCND	La Caada	1.18	73	P	Pn	03 57 33.4	-0.5
LLGN	La Laguna	1.20	5	P	Pn	03 57 33.9	-0.4
CNCH	Conchagua	1.23	75	*e*P	Pn	03 57 34.0	-0.7
CNCH	Conchagua	1.23	75	P	Pn	03 57 33.9	-0.7
CNCH	Conchagua	1.23	75	S	Sn	03 57 50.7	+0.5
FAME	Alcaldia de Sa	1.29	313	P	Pn	03 57 34.9	-0.4
MTO3	Montecristo	1.46	348	*i* P	Pn	03 57 37.5	-0.5
MTO3	Montecristo	1.46	348	P	Pn	03 57 37.9	-0.1
PKGN	Cerro Pekin	2.04	98	P	Pn	03 57 45.9	+0.1

IDC ***15*** *03:57:31.1±1.2, 2°.94S×138°.15E, h0^{km}, mb3.9/4, mbtmp3.9/5, ML3.4/2, MS3.0/2, Error ellipse: s-maj=34.4km s-min=25.7km az=82.0*

DJA ***15*** *03:57:42.4±0.8, 4°S±4°×13°5E±°, h16^{km}±9^{km}, M4.0/7, mb4.2/3, MLv3.9/7*

ISC 15 03:57:42.3±1.0**, 3°.42S**±0°.06×**134°.90E**±0°.09**, h10**^{km}**, n12, σ1^{s}.01**/13**, mb4.0**/3**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMPI	Kaimana, Papua	1.22	258	P	Pn	03 58 05.4	-0.1
KMPI				S	Sb	03 58 21.1	-0.3
RKPI	Ransiki, Papua	2.03	339	P	Pg	03 58 21.5	+0.2
RKPI				S	Sg	03 58 47.6	0.0
BAKI	Biak	2.52	29	P	Pb	03 58 27.3	-0.3
FAKI	Fak Fak	2.70	280	P	Pn	03 58 25.4	-0.4
SWI	Sorong	4.44	305	P	Pn	03 58 51.4	+1.6
DAV	Davao City (W)	13.97	318	LR	LR	04 07 10.2	
	comp=Z,41nm,20.2s,baz=238,slow=36						
WRA	Warramunga Arr	16.43	182	P	Pn	04 01 34.5	+1.2
	0.3nm,0.3s,baz=4.5,slow=12,SNR=21						
	0.8nm,0.5s						
ASAR	Alice Springs	20.15	183	P	P	04 02 16.0	-1.0
	4.3nm,0.8s,baz=8.1,slow=10.0,SNR=40						
ASAR				S	S	04 06 04.8	+1.4
	0.1nm,0.6s,baz=2.2,slow=26,SNR=2.8						
	4.3nm,0.8s						
CMAR	Chiang Mai Arr	41.56	303	LR	LR	04 26 04.2	
	comp=Z,23nm,18.1s,baz=215,slow=39						
MKAR	Makanchi Array	68.07	324	P	P	04 08 42.5	+0.2
	0.8nm,0.5s,baz=112,slow=7.7,SNR=8.4						
	0.8nm,0.5s						
ZALV	Zalesovo Beam	70.68	331	P	P	04 08 57.3	-0.9
	0.5nm,0.5s,baz=110,slow=12,SNR=1.7						
	0.5nm,0.5s						
KURBB	Kurchatov Arra	72.15	326	P	P	04 09 05.9	-1.3
	0.7nm,0.7s,baz=121,slow=6.5,SNR=5.3						
	0.7nm,0.7s						

MEX ***15*** *04:06:17.6±0.4, 14°.02N×93°.32W, h13^{km}±999^{km}, MD4.1*

GCG ***15*** *04:06:18.0±1.9, 14°.04N×93°.27W, h55^{km}±104^{km}, MD4.3, ML3.8*

ISC 15 04:06:10.6±1.7**, 14°.26N**±0°.07×**93°.65W**±0°.03**, h9**^{km}±12^{km}**, n23, σ1^{s}.68**/34**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.48	64	*e*P	Pb	04 06 39.1	+0.8
THIG				*e*S	Sn	04 06 53.5	-3.4
THIG		1.48	64	*i* P	Pg	04 06 39.3	+0.2
THIG				*e*S	Sn	04 06 56.8	-0.1
THIG				IAML		04 07 01.2	
	comp=E,1µm,0.3s						
PCIG		1.49	16	*e*P	Pg	04 06 43.0	+3.8
PCIG				*e*S	Sg	04 06 57.8	-0.9
PATR	El Naranjo	1.61	58	*e*P	Pb	04 06 41.1	+0.5
PATR				*e*S	Sn	04 06 59.5	-0.9
SMCA	Catarina	1.63	69	*e*P	Pb	04 06 41.1	+0.2
PAVE	Pavencul	1.70	57	*e*P	Pb	04 06 42.5	+0.4
PAVE				*e*S	Sn	04 07 01.8	-0.8
RTAL	Retalhuleu	1.91	82	*e*P	Pb	04 06 46.0	+0.4
STG8	El Palmar, Qui	2.23	85	*e*P	Pn	04 06 46.6	-1.3
STG0	El Palmar, Qui	2.24	86	*e*P	Pn	04 06 46.6	-1.4
STG0				IAML		04 07 15.8	
	comp=E,1µm,0.2s						
HUEH	Huehuetenango	2.32	63	*e*P	Pb	04 06 52.6	-0.2
HUEH	Huehuetenango	2.32	63	*i* P	Pb	04 06 54.1	+1.3
CCIG	Comitan	2.48	36	*e*P	Pg	04 06 58.1	-0.1
CCIG				*e*S	Sg	04 07 28.6	-1.8
CCIG	Comitan	2.48	36	*e*P	Pg	04 06 57.7	-0.5
CCIG				*i* S	Sb	04 07 26.6	+0.4
CCIG				IAML		04 07 34.7	
	comp=E,314nm,0.4s						
TGIG		2.55	11	*e*P	Pg	04 06 59.9	+0.4
TGIG				*e*S	Sg	04 07 30.3	-2.4
TGIG		2.55	11	*e*P	Pg	04 07 00.2	+0.6
TGIG				*e*S	Sg	04 07 31.0	-1.7
TGIG				IAML		04 07 35.6	
	comp=E,155nm,0.8s						
HUIG	Huatulco	2.81	302	*e*P	Pg	04 07 05.0	+0.5
HUIG				*e*S	Sb	04 07 36.6	+1.0
FG8	Yepocapa, Chim	2.99	90	*e*P	Pn	04 06 53.9	-4.5
FG16	Alotenango, Sa	3.04	89	*i* P	Pn	04 06 55.0	-4.1
FG16				IAML		04 07 33.9	
	comp=N,979nm,0.2s						
NUBE	Las Nubes	3.77	95	*i* P	Pn	04 07 10.4	+1.4
PEIG	Puerto Escondi	3.80	297	*e*P	Pg	04 07 26.3	+2.9
PEIG				*e*S	Sb	04 08 02.2	-1.7
PETF	Flores	4.50	54	*e*P	Pn	04 07 22.5	+3.5
PETF				*e*S	Sn	04 08 13.7	+2.3
PNIG	Pinotepa	4.81	297	*e*P	Pb	04 07 34.8	-0.4
TOIG	Toxpalan	5.03	320	*e*P	Pg	04 07 45.0	-2.1
TOIG				*e*S	Sb	04 08 38.9	-0.7

BUG ***15*** *04:12:42.9±0.6, 46°.15N×13°.53E, h0^{km}, MD4.5/12, ML4.5/16*

STR ***15*** *04:12:43.7±2.2, 46°N±6°×1°4E±1°9, h10^{km}, MLv4.2/4, Error ellipse: s-maj=0.0km s-min=0.0km az=83.2, preliminary*

ROM ***15*** *04:12:46.0±0.0, 46°.397N±0°.002×12°.994E±0°.003, h8^{km}, ML3.5/229, Error ellipse: s-maj=0.2km s-min=0.1km az=196.0*

LDG ***15*** *04:12:46.2±0.1, 46°.35N×12°.95E, h2^{km}, Ml3.3/23, Error ellipse: s-maj=3.9km s-min=2.7km az=15.0*

VIE ***15*** *04:12:46.4±0.1, 46°.41N×12°.98E, h8^{km}, mb3.1/22, ml3.7/21, Error ellipse: s-maj=1.3km s-min=0.8km az=17.0 3 km WNW of Tolmezzo*

RHSSO ***15*** *04:12:46.9±0.6, 46°.47N×12°.91E, h8^{km}±2^{km}, ML3.5/18*

BEO ***15*** *04:12:47.1±1.0, 46°.38N×12°.89E, h4^{km}±5^{km}, ML3.4/11*

PRU ***15*** *04:12:47.9, 46°.42N×13°.03E, h1^{km}*

BGR ***15*** *04:12:49.0±0.4, 46°.30N×13°.00E, h10^{km}, ML3.7/21, Error ellipse: s-maj=11.1km s-min=6.7km az=8.0*

ISC 15 04:12:46.7±0.7**, 46°.39N**±0°.01×**12°.99E**±0°.01**, h9**^{km}±4^{km}**, n265, σ2^{s}.00**/411**, 7C-53D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUSE	Fusea	0.03	14	⇓*e*Pg	Pg	04 12 47.4	-0.9
FUSE	Fusea	0.03	14	⇓P	Pg	04 12 47.4	-0.9
FUSE				S	Sg	04 12 47.8	-1.8
BOO	Bordano	0.10	131	⇓*e*Pg	Pg	04 12 49.0	-0.1
BOO				*e*Sg	Sg	04 12 50.7	-0.2
BOO	Bordano	0.10	131	⇓P	Pg	04 12 49.0	-0.1
BOO				S	Sg	04 12 51.1	+0.2
CLUD	Cludinico	0.10	313	⇓*e*Pg	Pg	04 12 48.9	-0.4
CLUD				*e*Sg	Sg	04 12 50.5	-0.6
CLUD	Cludinico	0.10	313	⇓P	Pg	04 12 48.9	-0.4
CLUD				S	Sg	04 12 50.4	-0.6
CLUD				AML	AML		
	comp=N,55800µm,0.7s						
CLUD				AML	AML		
	comp=N,59800µm,0.7s						
CLUD				AML	AML		
	comp=N,55850µm,0.7s						
CLUD				AML	AML		
	comp=N,55850µm,1.3s						
CLUD				AML	AML		
	comp=E,56318µm,0.3s						
CLUD				AML	AML		
	comp=E,54957µm,0.3s						
CLUD				AML	AML		
	comp=E,54950µm,0.3s						
CLUD				AML	AML		
	comp=E,56300µm,0.3s						
CLUD				AML	AML		
	comp=N,59800µm,1.3s						
CLUD				AML	AML		
	comp=N,54811µm,0.4s						
CLUD				AML	AML		
	comp=N,52314µm,0.4s						
MPRI	Monte Prat	0.14	181	⇓*e*Pg	Pg	04 12 49.9	+0.1
MPRI				*e*Sg	Sg	04 12 52.5	+0.5
MPRI	Monte Prat	0.14	181	⇓P	Pg	04 12 49.9	+0.1
MPRI				S	Sg	04 12 52.5	+0.5
MPRI				AML	AML		
	comp=N,31150µm,0.9s						
MPRI				AML	AML		
	comp=E,17550µm,0.5s						
MPRI				AML	AML		
	comp=N,40550µm,0.9s						
MPRI				AML	AML		
	comp=E,23050µm,0.5s						
MPRI				AML	AML		
	comp=E,17572µm,0.5s						
MPRI				AML	AML		
	comp=E,23061µm,0.5s						
MPRI				AML	AML		
	comp=N,24937µm,0.5s						
MPRI				AML	AML		
	comp=N,32650µm,0.4s						
DST2	Trieste	0.15	198	⇓P	Pg	04 12 50.0	+0.2
DST2				S	Sg	04 12 52.7	+0.6
DST2				AML	AML		
	comp=N,81250µm,0.8s						
DST2				AML	AML		
	comp=E,66050µm,0.2s						
DST2				AML	AML		
	comp=N,69429µm,0.2s						
DST2				AML	AML		
	comp=E,66072µm,0.2s						
GEPF	Gemona	0.15	137	⇓P	Pg	04 12 49.9	0.0
GEPF				S	Sg	04 12 52.6	+0.5
GEPF				AML	AML		
	comp=E,12700µm,1.6s						
GEPF				AML	AML		
	comp=N,20150µm,0.7s						
GEPF				AML	AML		
	comp=E,11375µm,0.3s						
GEPF				AML	AML		
	comp=N,18577µm,0.4s						
ZOU	Zoufplan	0.17	356	⇓*e*Pg	Pg	04 12 50.1	-0.3
ZOU				*e*Sg	Sg	04 12 52.8	-0.2
ZOU	Zoufplan	0.17	356	P	Pg	04 12 50.1	-0.3
ZOU				S	Sg	04 12 52.8	-0.2
ZOU				AML	AML		
	comp=N,39300µm,0.4s						
ZOU				AML	AML		
	comp=E,42850µm,0.9s						
ZOU				AML	AML		
	comp=N,38900µm,0.4s						
ZOU				AML	AML		
	comp=E,43300µm,0.9s						
ZOU				AML	AML		
	comp=E,41311µm,0.3s						
ZOU				AML	AML		
	comp=E,41258µm,0.3s						
ZOU				AML	AML		
	comp=N,37835µm,0.3s						
ZOU				AML	AML		
	comp=N,37428µm,0.3s						
BUA	Buia	0.19	151	⇓*e*Pg	Pg	04 12 50.8	+0.2
BUA				*e*Sg	Sg	04 12 53.9	+0.6
PLRO	Paularo	0.20	34	⇓*e*Pg	Pg	04 12 50.5	-0.3
PLRO				*e*Sg	Sg	04 12 53.7	+0.1
PLRO	Paularo	0.20	34	⇓P	Pg	04 12 50.5	-0.3
PLRO				S	Sg	04 12 53.6	0.0
BAD	Bernadia	0.23	131	⇓*e*Pg	Pg	04 12 51.4	0.0
BAD				*e*Sg	Sg	04 12 54.9	+0.4
BAD	Bernadia	0.23	131	⇓P	Pg	04 12 51.3	0.0
BAD				S	Sg	04 12 55.2	+0.7
STAL	STALIGIAL	0.23	237	⇓P	Pg	04 12 51.2	-0.1
STAL				S	Sg	04 12 55.1	+0.6
STAL				AML	AML		
	comp=E,15250µm,1.5s						
STAL				AML	AML		
	comp=N,19300µm,0.2s						
STAL				AML	AML		
	comp=N,15250µm,0.2s						
STAL				AML	AML		
	comp=E,15250µm,1.5s						
STAL				AML	AML		
	comp=E,11040µm,0.2s						
STAL				AML	AML		
	comp=E,13016µm,0.2s						
STAL				AML	AML		
	comp=E,11049µm,0.2s						
STAL				AML	AML		
	comp=E,15250µm,0.5s						
STAL				AML	AML		
	comp=N,15278µm,0.2s						
STAL				AML	AML		
	comp=N,19283µm,0.2s						
STAL				AML	AML		
	comp=N,19300µm,0.2s						
VINO	Villanova	0.24	123	⇓*e*Pg	Pg	04 12 51.5	-0.1
VINO				*e*Sg	Sg	04 12 55.3	+0.6
VINO	Villanova	0.24	123	⇓P	Pg	04 12 51.4	-0.1
VINO				S	Sg	04 12 55.4	+0.6
VINO				AML	AML		
	comp=E,12550µm,0.8s						
VINO				AML	AML		
	comp=N,14750µm,0.4s						
VINO				AML	AML		
	comp=E,12550µm,1.2s						
VINO				AML	AML		
	comp=N,13783µm,0.3s						
VINO				AML	AML		
	comp=E,10784µm,0.3s						
PTCC	Patocco-Chiusa	0.25	86	⇓P	Pg	04 12 51.6	-0.1
PTCC				S	Sg	04 12 55.8	+0.6
PTCC				AML	AML		
	comp=E,10035µm,1.2s						
PTCC				AML	AML		
	comp=E,10035µm,0.8s						
PTCC				AML	AML		
	comp=N,14500µm,0.4s						
PTCC				AML	AML		
	comp=E,8488µm,0.3s						
PTCC				AML	AML		
	comp=N,14492µm,0.4s						
CSMI	Casera Mimoias	0.27	298	⇓*e*Pg	Pg	04 12 51.9	-0.2
CSMI				*e*Sg	Sg	04 12 55.9	+0.2
MLNI	Malnisio	0.35	228	*e*Pg	Pg	04 12 53.6	-0.1
COLI	Coloredo	0.37	133	⇓*e*Pg	Pg	04 12 54.0	+0.1
COLI				*e*Sg	Sb	04 12 59.8	-1.5
LSR	Lussari	0.38	76	⇓*e*Pg	Pg	04 12 54.2	0.0
LSR				*e*Sg	Sb	04 13 00.4	-1.5
ROBS	Robic	0.39	111	⇓*i*Pg	Pg	04 12 53.7	-0.5
ROBS				*e*Sg	Sb	04 13 00.7	-1.1
CIMO	Cimolais	0.39	259	⇓*e*Pg	Pg	04 12 53.8	-0.5
CIMO				*e*Sg	Sg	04 12 59.9	+0.5
CIMO	Cimolais	0.39	259	P	Pg	04 12 53.8	-0.5
CIMO				S	Sg	04 13 00.1	+0.7
CIMO				AML	AML		
	comp=E,1465µm,0.7s						
CIMO				AML	AML		
	comp=E,1475µm,0.7s						
CIMO				AML	AML		
	comp=N,1755µm,0.3s						
CIMO				AML	AML		
	comp=N,1765µm,0.3s						
CIMO				AML	AML		
	comp=N,1757µm,0.3s						
CIMO				AML	AML		
	comp=N,1764µm,0.3s						
CIMO				AML	AML		
	comp=E,1275µm,0.4s						
CIMO				AML	AML		
	comp=E,1339µm,0.4s						
ACOM	Acomizza, Ital	0.40	66	⇑*e*Pg	Pg	04 12 54.3	-0.2
ACOM				*e*Sg	Sg	04 13 00.6	+0.9
ACOM	Acomizza, Ital	0.40	66	P	Pg	04 12 54.5	0.0
ACOM				S	Sb	04 13 01.2	-1.0
ACOM				AML	AML		
	comp=E,17350µm,0.8s						
ACOM				AML	AML		
	comp=N,16300µm,0.5s						
ACOM				AML	AML		
	comp=E,17450µm,0.8s						
ACOM				AML	AML		
	comp=N,15600µm,0.5s						
ACOM				AML	AML		
	comp=N,16300µm,1.5s						
ACOM				AML	AML		
	comp=N,15600µm,1.5s						
ACOM				AML	AML		
	comp=E,16877µm,0.3s						
ACOM				AML	AML		
	comp=E,17058µm,0.3s						
ACOM				AML	AML		
	comp=N,16336µm,0.5s						
ACOM				AML	AML		
	comp=N,15609µm,0.5s						
PRED	Cave del Predi	0.40	82	*e*Pg	Pg	04 12 54.6	0.0
PRED				*e*Sg	Sb	04 13 01.0	-1.3
PRED	Cave del Predi	0.40	82	P	Pg	04 12 54.3	-0.2
PRED				S	Sb	04 13 00.9	-1.3
CSO	Casso	0.48	256	*e*Pg	Pg	04 12 55.8	-0.2
ABTA	Abfaltersbach	0.49	318	*e*Pg	Pg	04 12 55.8	-0.4
	comp=N,67nm,0.1s,SNR=251						
ABTA				*i* Sg	Sg	04 13 02.7	0.0
	comp=N,778nm,0.2s						
APGO	Alpago	0.49	242	*e*Pg	Pg	04 12 56.3	+0.1
POLC	Polcenigo	0.50	224	⇓P	Pg	04 12 56.4	+0.2
DRE	Drenchia	0.50	115	*e*Pg	Pg	04 12 56.5	+0.1
DRE	Drenchia	0.50	115	⇓P	Pg	04 12 55.8	-0.6
DRE				S	Sb	04 13 04.3	-0.8
MYKA	Terra Mystica	0.51	61	*e*Pg	Pg	04 12 56.3	-0.3
	comp=N,196nm,0.2s,SNR=149						
MYKA				*i* Sg	Sg	04 13 03.4	+0.1
	comp=N,331nm,0.2s						
CADS	Cadrg	0.54	107	⇓*i*Pg	Pg	04 12 56.2	-1.0
CADS				Sg	Sb	04 13 05.6	-0.6
CAE	Caneva	0.54	226	*e*Pg	Pg	04 12 57.2	+0.1
CAE	Caneva	0.54	226	⇓P	Pg	04 12 57.0	-0.2
FRE8	Fregona	0.58	230	P	Pg	04 12 58.0	+0.2
AFL	Alpe Faloria	0.58	285	*e*Pg	Pg	04 12 58.0	+0.1
SABO	M.te Sabotino	0.59	134	*e*Pg	Pg	04 12 58.2	+0.2
SABO	M.te Sabotino	0.59	134	⇓P	Pg	04 12 57.8	-0.2
SABO				S	Sb	04 13 08.1	+0.5
SABO				AML	AML		
	comp=N,27850µm,0.5s						
SABO				AML	AML		
	comp=E,5665µm,1.5s						
SABO				AML	AML		
	comp=E,24150µm,0.3s						
SABO				AML	AML		
	comp=N,7570µm,0.4s						
SABO				AML	AML		
	comp=E,5665µm,0.5s						
SABO				AML	AML		
	comp=E,5361µm,0.3s						
SABO				AML	AML		
	comp=E,24135µm,0.3s						

SABO				AML	AML		
	comp=N,7570µm,0.4s						
SABO				AML	AML		
	comp=N,27830µm,0.5s						
AGOR	Agordo	0.66	261	*e*Pg	Pb	04 13 00.0	-0.4
AGOR	Agordo	0.66	261	P	Pb	04 13 00.2	-0.2
GORS	Gorjuse	0.70	95	*e*Pg	Pg	04 12 59.0	-1.2
GORS				*i* Sg	Sb	04 13 10.9	+0.1
GORS				IAML		04 13 12.2	
	comp=Z,796nm,0.2s						
VOJS	Vojsko	0.71	119	⇓*i*Pg	Pg	04 12 59.5	-1.0
VOJS				*e*Sg	Sb	04 13 11.7	+0.4
VOJS				IAML		04 13 15.0	
	comp=Z,311nm,0.2s						
FAU	Forcella Aurin	0.72	258	*e*Pg	Pg	04 13 00.5	-0.1
VARN	Col Varnada, M	0.73	238	*e*Pg	Pg	04 13 00.5	-0.3
VARN	Col Varnada, M	0.73	238	P	Pg	04 12 60.0	-0.8
VARN				AML	AML		
	comp=E,2875µm,1.6s						
VARN				AML	AML		
	comp=N,1890µm,0.5s						
VARN				AML	AML		
	comp=E,2940µm,1.6s						
VARN				AML	AML		
	comp=N,1915µm,0.4s						
VARN				AML	AML		
	comp=E,2940µm,0.4s						
VARN				AML	AML		
	comp=E,2875µm,0.4s						
VARN				AML	AML		
	comp=N,1915µm,1.6s						
VARN				AML	AML		
	comp=E,2930µm,0.2s						
VARN				AML	AML		
	comp=E,2835µm,0.2s						
VARN				AML	AML		
	comp=N,1890µm,1.5s						
VARN				AML	AML		
	comp=N,1882µm,0.4s						
VARN				AML	AML		
	comp=N,1912µm,0.4s						
ED06	Collalto TV	0.76	226	*e*Pg	Pb	04 13 01.6	-0.4
CRND	Cornuda	0.84	229	P	Pb	04 13 03.8	+0.4
MTLO	Montello	0.85	228	*e*Pg	Pb	04 13 03.3	-0.3
TRI	Trieste	0.87	141	*e*Pg	Pb	04 13 03.6	-0.3
TRI	Trieste	0.87	141	P	Pg	04 13 01.9	-1.3
TRI				AML	AML		
	comp=E,1755µm,0.8s						
TRI				AML	AML		
	comp=N,748µm,1.0s						
TRI				AML	AML		
	comp=E,1440µm,0.2s						
TRI				AML	AML		
	comp=N,699µm,0.3s						
JAVS	Javornik	0.89	123	⇓*i*Pg	Pg	04 13 02.5	-1.4
JAVS				*e*Sg	Sb	04 13 17.2	+0.7
JAVS				IAML		04 13 23.3	
	comp=Z,181nm,0.2s						
BRES	Bressanone	0.92	290	P	Pg	04 13 04.1	-0.4
BRES				AML	AML		
	comp=E,3055µm,0.2s						
BRES				AML	AML		
	comp=N,2790µm,1.3s						
BRES				AML	AML		
	comp=E,3057µm,0.2s						
BRES				AML	AML		
	comp=N,2611µm,0.2s						
BRES				AML	AML		
	comp=N,2790µm,0.7s						
ASOL	Asolo	0.96	233	P	Pn	04 13 06.2	-0.1
CGRP	Cima Grappa	0.97	239	⇓P	Pg	04 13 05.2	-0.1
CGRP				AML	AML		
	comp=E,2330µm,1.5s						
CGRP				AML	AML		
	comp=N,2590µm,0.6s						
CGRP				AML	AML		
	comp=E,2275µm,1.5s						
CGRP				AML	AML		
	comp=N,2600µm,0.6s						
CGRP				AML	AML		
	comp=E,2325µm,1.5s						
CGRP				AML	AML		
	comp=N,2595µm,0.6s						
CGRP				AML	AML		
	comp=E,2275µm,0.5s						
CGRP				AML	AML		
	comp=E,2325µm,0.5s						
CGRP				AML	AML		
	comp=E,2209µm,0.3s						
CGRP				AML	AML		
	comp=E,2179µm,0.3s						
CGRP				AML	AML		
	comp=N,2601µm,0.6s						
CGRP				AML	AML		
	comp=N,2590µm,0.6s						
CTI	Castel Tesino	0.99	251	P	Pb	04 13 06.0	-0.1
CTI				AML	AML		
	comp=E,5905µm,0.7s						
CTI				AML	AML		
	comp=N,4895µm,0.2s						
CTI				AML	AML		
	comp=N,4895µm,0.2s						
CTI				AML	AML		
	comp=E,5259µm,0.2s						
ZIAN	Ziano	1.00	264	P	Pb	04 13 05.9	-0.2
ZIAN				AML	AML		
	comp=E,1280µm,0.8s						
ZIAN				AML	AML		
	comp=N,1240µm,0.8s						
ZIAN				AML	AML		
	comp=N,1195µm,1.0s						
ZIAN				AML	AML		
	comp=N,1240µm,1.2s						
ZIAN				AML	AML		
	comp=E,1280µm,1.2s						
ZIAN				AML	AML		
	comp=E,1305µm,1.0s						
ZIAN				AML	AML		
	comp=N,1128µm,0.2s						
ZIAN				AML	AML		
	comp=E,1135µm,0.2s						
ZIAN				AML	AML		
	comp=E,1133µm,0.4s						
ZIAN				AML	AML		
	comp=N,1176µm,0.4s						
LESA	Schwarzleotal	1.06	348	*e*Pg	Pg	04 13 06.3	-0.8
	comp=N,87nm,0.1s,SNR=109						
LESA				*i* Sg	Sg	04 13 20.5	-0.3
	comp=N,518nm,0.3s						
OBKA	Obir	1.08	83	⇓*i*Pg	Pg	04 13 06.4	-1.1
OBKA				*e*Sg	Sn	04 13 22.7	-0.6
OBKA	Obir	1.08	83	*e*Pg	Pg	04 13 06.7	-0.8
	comp=N,94nm,0.3s,SNR=55						
OBKA				*e*Sg	Sb	04 13 21.9	0.0
	comp=N,1µm,0.6s						
OBKA	Obir	1.08	83	*e*Pn	Pg	04 13 06.6	-0.9
OBKA				*e*Sg	Sn	04 13 24.0	+0.7
SKDS	Skadanscina	1.10	139	⇑*i*Pg	Pn	04 13 08.4	+0.1
SKDS				*e*Sg	Sn	04 13 25.1	+1.4
SKDS	Skadanscina	1.10	139	*e*Pg	Pg	04 13 06.2	-1.6
SKDS				*e*Sg	Sn	04 13 24.0	+0.3
CEY	Cerknica	1.19	122	⇑*i*Pg	Pn	04 13 10.9	+1.4
CEY				*e*Sg	Sn	04 13 28.6	+2.7
CEY	Cerknica	1.19	122	*e*Pg	Pg	04 13 07.8	-1.7
CEY				*e*Sg	Sn	04 13 28.1	+2.2
PANI	Panarotta	1.20	254	*e*Pn	Pn	04 13 10.3	+0.5
WTTA	Wattenberg	1.28	314	*e*Pn	Pn	04 13 10.4	-0.5
	comp=N,134nm,0.2s,SNR=42						
WTTA				*e*Sg	Sg	04 13 27.6	-0.2
	comp=N,246nm,0.2s						
WTTA	Wattenberg	1.28	314	*e*Pn	Pn	04 13 10.4	-0.5
WTTA				*e*Sg	Sb	04 13 27.9	+0.2
RJOB	Jochberg	1.36	354	*e*Pn	Pn	04 13 12.0	+0.1
WATA	Walderalm	1.36	315	*e*Pg	Pn	04 13 11.8	-0.1
	comp=N,34nm,0.2s,SNR=40						
WATA				*e*Sg	Sn	04 13 30.4	+0.2
	comp=N,207nm,0.3s						
BIOA	Bad Ischl, Aus	1.38	18	*e*Pg	Pb	04 13 12.4	-0.2
	comp=N,68nm,0.2s,SNR=87						
BIOA				*e*Sg	Sg	04 13 31.2	+0.2
	comp=N,716nm,0.6s						
SOKA	Soboth	1.44	78	*e*Pg	Pn	04 13 13.1	+0.1
	comp=N,60nm,0.3s,SNR=72						
SOKA				*e*Sg	Sg	04 13 32.9	0.0
	comp=N,126nm,0.4s						
SQTA	Sankt Quirin	1.48	305	*e*Pg	Pb	04 13 14.3	-0.2
	comp=N,35nm,0.2s,SNR=73						
SQTA				*e*Sg	Sg	04 13 34.3	0.0
	comp=N,460nm,0.3s						
MOTA	Moosalm	1.61	307	*e*Pg	Pb	04 13 16.1	-0.5
	comp=N,53nm,0.2s,SNR=80						
MOTA				*e*Sg	Sg	04 13 38.6	+0.1
	comp=N,294nm,0.3s						
FETA	Feichten	1.68	293	*e*Pg	Pb	04 13 17.8	-0.1
	comp=N,33nm,0.2s,SNR=45						
FETA				*e*Sg	Sg	04 13 40.7	0.0
	comp=N,69nm,0.4s						
PART	Garmisch-Parte	1.70	311	*e*Pn	Pg	04 13 19.3	+0.1
PART				*e*Sg	Sg	04 13 44.3	+3.0
MOA	Molln	1.70	30	*e*Pg	Pg	04 13 19.1	-0.2
	comp=N,41nm,0.2s,SNR=62						
MOA				Sg	Sg	04 13 42.1	+0.7
	comp=N,235nm,0.4s						
MOA	Molln	1.70	30	*e*Pn	Pg	04 13 18.8	-0.5
MOA	Molln	1.70	30	*e*Pn	Pg	04 13 18.9	-0.4
MOA				*e*Sg	Sg	04 13 43.6	+2.2
CRES	Cresnjevec Ost	1.81	107	⇓*i*Pn	Pb	04 13 19.1	-0.8
CRES				*e*Sn	Sg	04 13 43.4	-1.2
BOJS	Bojanci	1.81	118	⇓*i*Pn	Pb	04 13 19.2	-0.7
BOJS				*e*Sn	Sg	04 13 43.7	-1.0
BOJS	Bojanci	1.81	118	*e*Pn	Pb	04 13 19.4	-0.5
BOJS				*e*Sn	Sb	04 13 42.2	-0.5
RETA	Reutte	1.88	307	*e*Pg	Pg	04 13 22.3	-0.4
	comp=N,37nm,0.2s,SNR=78						
RETA				*e*Sg	Sg	04 13 48.9	+1.8
	comp=N,329nm,0.6s						
ARSA	Arzberg	1.94	63	⇑*i*Pn	Pn	04 13 20.8	+0.9
ARSA				*e*Sn	Sn	04 13 45.4	+1.0
ARSA	Arzberg	1.94	63	*e*Pn	Pb	04 13 21.3	-1.0
	comp=N,33nm,0.3s,SNR=49						
ARSA				*e*Sn	Sb	04 13 47.4	+0.9
	comp=N,46nm,0.3s						
ARSA	Arzberg	1.94	63	*e*Pn	Pb	04 13 21.2	-1.0
ARSA	Arzberg	1.94	63	*e*Pn	Pb	04 13 21.3	-1.0
SBPO	S.Benedetto Po	1.97	228	AML	AML		
	comp=N,2115µm,0.8s						
SBPO				AML	AML		
	comp=E,2800µm,0.4s						
SBPO				AML	AML		
	comp=N,2115µm,1.2s						
A105A	Obersdorf, Sch	2.11	300	Pn	Pg	04 13 26.2	-1.0
A105A				Sg	Sg	04 13 55.2	+0.7
OBER	Oberstdorf	2.11	300	*e*Pn	Pb	04 13 25.7	+0.5
OBER				*e*Sg	Sg	04 13 56.2	+1.6
FUR	Furstenfeldbru	2.13	327	Pn	Pb	04 13 26.0	+0.6
FUR				*e*Sg	Sg	04 13 55.6	+0.6
DAVA	Damuels	2.32	294	*i* Pg	Pb	04 13 28.7	-0.1
	comp=N,61nm,0.2s,SNR=35						
DAVA				Sg	Sg	04 14 02.7	+1.6
	comp=N,318nm,0.4s						
DAVA	Damuels	2.32	294	*e*Pn	Pb	04 13 28.6	-0.1
DAVA				*e*Sg	Sg	04 14 02.9	+1.8
UBR	Ueberruh	2.36	304	*e*Pn	Pb	04 13 29.0	-0.4
UBR				Sg	Sg	04 14 00.9	-1.5
CONA	Conrad Observa	2.49	51	*e*Pn	Pn	04 13 29.2	+1.7
	comp=N,8.5nm,0.2s,SNR=21						
CONA				*e*Sn	Sb	04 14 01.7	-0.8
	comp=N,34nm,0.5s						
GEC2	GERESS Array S	2.51	11	*e*Pn	Pn	04 13 29.4	+1.7
GEC2				*e*Sn	Sb	04 14 03.0	+0.1
A107C	Memmingen - Ei	2.51	312	Pn	Pb	04 13 30.6	-1.3
A107C				Sg	Sg	04 14 07.7	+0.5
CKRC	Cesky Krumlov	2.59	20	*e*PN	Pn	04 13 30.3	+1.5
CKRC				*e*SG	Sg	04 14 07.8	-2.1
	comp=N,90nm,0.5s						
RONA	Rosalia, Austr	2.61	59	*e*Pn	Pn	04 13 30.5	+1.4
	comp=N,16nm,0.3s,SNR=12						
RONA				*e*Sn	Sn	04 14 03.3	+2.3
	comp=N,20nm,0.4s						
BEHE	Becsehely	2.62	87	*e*Pn	Pn	04 13 30.1	+1.0
BEHE				*e*Sn	Sn	04 14 02.5	+1.4
A103D	Ravensburg, Wa	2.74	302	Pn	Pb	04 13 34.6	-1.3
A103D				Sg	Sg	04 14 14.8	0.0
WET	Wettzell	2.76	358	*e*Pn	Pn	04 13 32.7	+1.6
WET				*e*Sn	Sb	04 14 08.4	-1.7
KHC	Kasperske Hory	2.77	8	*e*PN	Pn	04 13 33.1	+1.8
KHC				*e*PG	Pg	04 13 40.5	+0.7
KHC				*e*SN	Sb	04 14 08.2	-2.3
KHC				*e*SG	Sg	04 14 14.8	-0.9
	comp=N,97nm,0.5s						
A104A	Biberach, Staf	2.79	308	Pn	Pb	04 13 34.5	-2.3
A104A				Sg	Sg	04 14 16.1	-0.3
NORI	Noerdlinger Ri	2.83	326	*e*Pn	Pn	04 13 33.9	+1.8
NORI				*e*Sn	Sb	04 14 10.4	-1.8
A104C	Biberach, Ahle	2.86	309	Pn	Pb	04 13 35.4	-2.6
A104C				Sg	Sg	04 14 17.8	-0.7
FIR	Firenze	2.89	206	AML	AML		
	comp=N,329µm,0.5s						
FIR				AML	AML		
	comp=N,381µm,0.7s						
FIR				AML	AML		
	comp=E,735µm,0.3s						
FIR				AML	AML		
	comp=E,764µm,0.7s						
FIR				AML	AML		
	comp=N,381µm,1.3s						
A108A	Ulm, Ringingen	2.91	314	Pn	Pn	04 13 35.8	+2.7
A051A	Mrakovica	3.07	115	⇑*i*Pn	Pn	04 13 36.1	+0.7
A051A				*e*Sn	Sn	04 14 14.6	+2.3
A102A	Sigmaringen, J	3.12	306	Pn	Pn	04 13 38.7	+2.6
A102A				Sg	Sg	04 14 25.9	-1.0
GUT	Gutenstein	3.13	304	P	Pn	04 13 38.8	+2.6
A050A	Klekovaca	3.14	126	⇓*i*Pn	Pn	04 13 37.9	+1.6
A050A				*e*Sn	Sn	04 14 16.1	+2.2
ZVC	Zvikov	3.16	14	*e*PN	Pn	04 13 38.6	+2.0
A109A	Bad Urach, See	3.16	312	Pn	Pn	04 13 39.0	+2.4
ZUR	Degenried	3.18	290	P	Pn	04 13 39.9	+3.0
A106B	Goeppingen, Ma	3.24	318	Pn	Pn	04 13 40.0	+2.2
TREC	Trest	3.36	29	*e*PN	Pn	04 13 40.7	+1.3
BLY	Banja Luka	3.37	118	⇓*i*Pn	Pn	04 13 40.5	+1.0
BLY				*e*Sn	Sn	04 14 21.0	+1.4
BLY	Banja Luka	3.37	118	*e*Pn	Pn	04 13 41.0	+1.5
ROTZ	Rotzenmuhle	3.42	351	*e*Pn	Pn	04 13 41.1	+0.9
ROTZ				*e*Sn	Sn	04 14 23.0	+2.1
A100A	Rottenburg, We	3.45	308	Pn	Pn	04 13 43.3	+2.7
A101B	Rottweil, Deis	3.49	301	Pn	Pn	04 13 43.6	+2.5
A101B				Sn	Sn	04 14 24.3	+1.8
STU	Stuttgart	3.51	314	*e*Pn	Pn	04 13 43.8	+2.4
GRF	Grafenberg Arr	3.51	341	*e*Pn	Pn	04 13 43.1	+1.7
GRF				*e*Sn	Sn	04 14 25.5	+2.4
MODS	Modra-Piesok	3.53	54	*e*PN	Pn	04 13 42.7	+1.1
MODS				*e*PG	Pg	04 13 52.5	-1.7
MODS				*e*SG	Sg	04 14 38.5	-1.3
KRUC	Moravsky	3.53	39	*e*PN	Pn	04 13 42.3	+0.7
KRUC				*e*PG	Pb	04 13 50.7	+1.5
KRUC				*e*SG	Sg	04 14 36.0	-3.9
SULZ	Cheisacher	3.53	291	P	Pn	04 13 44.0	+2.3
MANZ	Manzenberg	3.65	351	*e*Pn	Pn	04 13 44.6	+1.3
MANZ				*e*Sn	Sn	04 14 27.7	+1.2
BFO	Black Forest	3.72	303	*e*Pn	Pn	04 13 46.5	+2.2
PRU	Pruhonice	3.75	15	*e*PN	Pn	04 13 45.5	+0.8
PRU				*e*SG	Sg	04 14 46.0	-1.0
	comp=N,122nm,0.6s						
BALST	Balsthal	3.76	287	P	Pn	04 13 47.3	+2.4
VRAC	Vranov	3.80	38	*e*PN	Pn	04 13 46.0	+0.6
VRAC				*e*PG	Pb	04 13 55.3	+1.4
VRAC				*e*SN	Sn	04 14 30.3	+0.1
VRAC				*e*SG	Sb	04 14 43.3	+3.3
PRA	Prague	3.81	14	*e*PN	Pn	04 13 46.8	+1.3
PRA				*e*SG	Sg	04 14 47.8	-1.2
	comp=N,153nm,0.7s						
OPP	Oppenau	3.88	305	P	Pn	04 13 49.0	+2.4
OPP	Oppenau	3.88	305	S	Sn	04 14 35.3	+3.0
DIX	Grande Dixence	3.89	267	P	Pn	04 13 49.6	+2.8
SRO	Srobarova	3.91	67	*e*PN	Pn	04 13 47.8	+1.0
SRO				*e*SN	Sn	04 14 34.5	+1.8
MORH	Mrgy, Hungar	3.92	90	*e*Pn	Pn	04 13 48.4	+1.4
MORH				*e*Sn	Sn	04 14 34.0	+0.8
MORH	Mrgy, Hungar	3.92	90	*e*Pn	Pn	04 13 47.4	+0.4
BABA	Baden-Baden-Ne	4.00	307	P	Pn	04 13 50.5	+2.4
BABA	Baden-Baden-Ne	4.00	307	S	Sn	04 14 37.9	+2.8
JAVC	Velka Javorina	4.02	50	*e*PN	Pn	04 13 50.8	+2.4
BOURR	Bourrignon	4.08	286	P	Pn	04 13 51.6	+2.3
TORNY	Torny/Romont	4.18	277	P	Pn	04 13 53.4	+2.8
AIGLE	Aigle	4.18	272	P	Pn	04 13 53.6	+2.9
NEEW	Neewiller pres	4.18	310	P	Pn	04 13 53.6	+3.0
GBOS	Grotte di Boss	4.22	241	P	Pn	04 13 53.0	+1.8
RICC	Richard	4.22	10	*e*PN	Pn	04 13 52.7	+1.5
PVCC	Panska Ves	4.28	14	*e*SG	Sg	04 15 02.7	-1.2
BHB	Bricherasio	4.31	251	P	Pn	04 13 52.2	-0.1
MOX	Moxa	4.36	348	*e*Pn	Pn	04 13 54.3	+1.2
MOX				*e*Sn	Sn	04 14 44.7	+0.7
CDF	Champ du Feu	4.38	300	*e*P	Pn	04 13 55.7	+2.3
CDF				*e*Sn	Sn	04 14 40.2	-4.4
	comp=N,16nm,0.3s						
MAUC	Maruska	4.41	46	*e*PN	Pn	04 13 55.0	+1.2
LEMB	Lembach	4.42	309	P	Pn	04 13 56.3	+2.5
PIAF	les Granges de	4.42	241	P	Pn	04 13 55.5	+1.5
HINF	Hinteralfeld	4.43	291	*e*P	Pn	04 13 55.7	+1.6
CHMF	Charmoille	4.44	283	P	Pn	04 13 56.3	+2.1
LPG	La Plagne	4.44	261	*e*P	Pn	04 13 56.7	+2.2
LPL	La Plagne	4.45	261	*e*P	Pn	04 13 56.5	+2.0
KRLC	Kraliky	4.48	33	*e*SG	Sg	04 15 09.8	-0.5
	comp=N,58nm,0.6s						
ENR	Entracque	4.48	243	P	Pn	04 13 54.6	-0.2
VYHS	Vyhne	4.49	60	*e*PN	Pn	04 13 55.3	+0.4
VYHS				*e*SN	Sn	04 14 47.2	-0.1
VYHS				*e*SG	Sg	04 15 08.5	-2.3
SAOF	Saorge	4.53	240	P	Pn	04 13 56.4	+1.0
BRG	Berggiesshubel	4.53	8	Pn	Pn	04 13 57.0	+1.5
BRG				Pg	Pg	04 14 12.1	-1.4
BRG				Sn	Sn	04 14 48.2	-0.1
BRG				Sg	Sg	04 15 08.1	-4.1
BRG				Amp		04 15 20.8	
	comp=Z,61nm,0.7s						
MORC	Moravsky Berou	4.56	40	*e*PN	Pn	04 13 56.6	+0.7
RRL	Rocca Remolon	4.59	254	P	Pn	04 13 56.7	+0.2
TURF	col de Turini	4.63	241	P	Pn	04 13 58.4	+1.3
CHVC	Chvalec	4.67	25	*e*PN	Pn	04 13 58.1	+0.7
MBDF	Montbardon	4.67	251	*e*P	Pn	04 13 57.8	+0.3
SURF	Saint Ours	4.75	249	P	Pn	04 13 58.5	-0.1
CABF	La Chapelle	4.77	275	*e*P	Pn	04 14 00.5	+1.7
CABF				*e*Sn	Sn	04 14 49.7	-4.6
	comp=Z,21nm,0.4s						
PGF	Pioggiola	4.78	218	*e*P	Pn	04 13 59.0	0.0
PGF				*e*Sn	Sn	04 14 50.1	-4.5
	comp=Z,2.8nm,0.2s						
HAPS	Han Pijesak,BI	4.80	117	⇑*i*Pn	Pn	04 14 00.8	+1.6
HAPS				*e*Sn	Sn	04 14 55.7	+0.8
HAPS	Han Pijesak,BI	4.80	117	*e*Pn	Pn	04 14 00.8	+1.6
HAU	Haudompre	4.81	292	*e*P	Pn	04 14 01.2	+1.9
HAU				*e*Sn	Sn	04 14 50.6	-4.5
	comp=Z,148nm,0.5s						
JAUF	Jausiers	4.81	248	P	Pn	04 13 59.6	+0.2
CREF	Crivoux	4.84	250	P	Pn	04 14 02.7	+2.9
STON	Ston	4.86	135	*e*Pn	Pn	04 14 01.6	+1.7
STON				*e*Sn	Sn	04 14 57.3	+1.0
STON	Ston	4.86	135	*e*Pn	Pn	04 14 00.8	+0.9
RIVEL	MONT RIVEL	4.89	277	P	Pn	04 14 02.9	+2.5
TNS	Taunus Mts	4.89	323	*e*Pn	Pn	04 14 02.7	+2.3
TNS				*e*Sn	Sn	04 14 59.4	+2.3
CLL	Collm	4.93	0	*e*Pn	Pn	04 14 02.0	+1.2
CLL				*e*Pg	Pg	04 14 21.0	+0.1
CLL				*e*x	x	04 15 00.0	
CLL				*e*Sg	Sg	04 15 23.0	-1.7
	comp=Z,113nm,0.9s						
FRGS	Fruska Gora	4.93	102	*e*Pn	Pn	04 14 01.3	+0.4
FRGS				*e*Sn	Sn	04 14 57.9	-0.1
FRGS	Fruska Gora	4.93	102	*e*Pn	Pn	04 14 00.6	-0.3
ENAUX	Enaux	4.94	245	P	Pn	04 14 02.9	+1.7
TEKS	Tekeris	4.95	109	*e*Pn	Pn	04 14 01.7	+0.5
TEKS				*e*Sn	Sn	04 14 58.4	-0.2
TEKS	Tekeris	4.95	109	*e*Pn	Pn	04 14 01.8	+0.5
OGMY	Moye	4.96	267	P	Pn	04 14 04.2	+2.8
SALSA	La sagne	5.11	243	P	Pn	04 14 05.4	+1.9
OGSM	Saint Maurice	5.14	264	P	Pn	04 14 06.5	+2.7
OG35	Corcelles	5.16	269	P	Pn	04 14 06.2	+2.1
OG35				S	Sn	04 15 07.7	+3.8
BBLS	Lazi&#263i	5.19	117	⇓*i*Pn	Pn	04 14 06.3	+1.7
BBLS	Lazi&#263i	5.19	117	*e*Pn	Pn	04 14 06.1	+1.5
GRN	Grenoble	5.19	260	P	Pn	04 14 08.2	+3.6
ORIF	Oris-en-Rattie	5.20	256	*e*P	Pn	04 14 07.1	+2.4
ORIF				*e*Sn	Sn	04 14 59.7	-5.1
	comp=Z,3.1nm,0.4s						
BRY	Bratogost	5.27	129	*e*Pn	Pn	04 14 07.2	+1.5
UPM	Unac-Piva	5.28	125	*e*Pn	Pn	04 14 06.8	+1.0
TREB	Trebinje	5.30	132	*e*Pn	Pn	04 14 07.9	+1.9
TREB				*e*Sn	Sn	04 15 08.1	+0.9
TREB	Trebinje	5.30	132	*e*Pn	Pn	04 14 07.9	+1.9
RUDO	Rudo	5.30	119	⇑*i*Pn	Pn	04 14 06.8	+0.7
RUDO				*e*Sn	Sn	04 15 07.5	+0.2
RUDO	Rudo	5.30	119	*e*Pn	Pn	04 14 06.7	+0.7
TRIGF	Trigance	5.36	243	P	Pn	04 14 08.0	+1.2
MANO	Manonville	5.37	300	P	Pn	04 14 10.4	+3.5
PAGF	Fort de Pagny	5.38	296	*e*P	Pn	04 14 10.0	+2.9
PAGF				*e*Sn	Sn	04 15 04.3	-4.9
	comp=Z,14nm,0.3s						
DIVS	Divibare	5.45	112	*e*Pn	Pn	04 14 08.9	+0.8
KECS	Kecovo	5.50	65	*e*PN	Pn	04 14 11.2	+2.5
KECS				*e*SN	Sn	04 15 14.1	+2.0
LMR	La Mourre	5.53	239	*e*P	Pn	04 14 09.6	+0.5
LMR				*e*Sn	Sn	04 15 08.1	-4.6
	comp=Z,5.7nm,0.3s						
HCY	Herceg Novi	5.57	133	*e*Pn	Pn	04 14 10.4	+0.7
WLF	Walferdange	5.64	308	P	Pn	04 14 14.5	+3.9
WLF	Walferdange	5.64	308	*d*P	Pn	04 14 14.3	+3.7
WLF				*d*S	Sn	04 15 17.9	+2.4
WLF	Walferdange	5.64	308	*e*Pn	Pn	04 14 14.5	+3.9
MLYF	Mely	5.64	247	P	Pn	04 14 14.6	+3.8
TRUS	Trudelj	5.66	110	*e*Pn	Pn	04 14 12.2	+1.3
SFTF	Sexfontaines	5.71	291	*e*P	Pn	04 14 14.1	+2.5
BSTF	la Bastide-des	5.77	247	P	Pn	04 14 14.1	+1.6
SMRF	Simiane la Rot	5.77	248	*e*P	Pn	04 14 14.4	+1.9
SMRF				*e*Sn	Sn	04 15 13.9	-4.9
	comp=Z,10.0nm,0.4s						
SAVF	Savonnieres en	5.78	296	*e*P	Pn	04 14 16.4	+3.9
MEZF	Maizieres J'vi	5.79	294	*e*P	Pn	04 14 15.7	+3.1
MEZF				*e*Sn	Sn	04 15 13.3	-5.8
	comp=Z,13nm,0.4s						
IVAS	Ivanjica	5.80	116	*e*Pn	Pn	04 14 14.4	+1.4
RUSF	Rustrel	5.84	248	P	Pn	04 14 16.4	+2.9
SJES	Sjenica	5.87	120	*e*Pn	Pn	04 14 14.9	+1.0
SJES				*e*Sn	Sn	04 15 21.0	-0.3
PDG	Podgorica	5.98	129	*e*Pn	Pn	04 14 15.7	+0.4
PDG				*e*Sn	Sn	04 15 23.2	-0.7
GRUS	Gruza	6.01	112	*e*Pn	Pn	04 14 17.7	+2.0
VIVF	Saint-Julien-l	6.03	258	*e*P	Pn	04 14 17.2	+1.1
VIVF				*e*Sn	Sn	04 15 20.0	-5.2
	comp=Z,2.4nm,0.3s						
DRME	Dracevica, Mon	6.11	131	*e*Pn	Pn	04 14 18.0	+0.8
DRME	Dracevica, Mon	6.11	131	*e*Pn	Pn	04 14 17.9	+0.8
BTNL	Ternell	6.20	315	*d*P	Pn	04 14 21.9	+3.6
BTNL				*d*S	Sn	04 15 29.5	+0.1
GOCS	Kraljevo Serbi	6.26	114	*e*Pn	Pn	04 14 21.0	+1.7
MEM	Membach	6.27	315	*d*P	Pn	04 14 22.6	+3.3
MEM				*d*S	Sn	04 15 32.6	+1.5
SMF	Signal de Mont	6.32	276	*e*P	Pn	04 14 22.0	+2.0
SMF				*e*Sn	Sn	04 15 26.7	-5.6
	comp=Z,4.8nm,0.3s						
LOR	Lormes	6.33	281	*e*P	Pn	04 14 21.8	+1.7
	baz=99						
LOR				*e*Sn	Sn	04 15 26.8	-5.7
	comp=Z,16nm,0.4s						
BSTI	Sart Tilman	6.48	313	*d*P	Pn	04 14 25.9	+3.8
BSTI				*d*S	Sn	04 15 39.5	+3.4
BCLA	Clavier	6.52	311	*d*P	Pn	04 14 26.3	+3.7
BCLA				*d*S	Sn	04 15 37.8	+0.8
SSF	Saint Saulge	6.56	279	*e*P	Pn	04 14 25.3	+2.1
SSF				*e*Sn	Sn	04 15 32.2	-5.9
	comp=Z,5.0nm,0.4s						
SELS	Selova	6.59	116	*e*Pn	Pn	04 14 25.2	+1.4
GIVF	Givet	6.60	307	*e*P	Pn	04 14 27.7	+3.9
GIVF				*e*Sn	Sn	04 15 33.1	-6.0
	comp=Z,1.5nm,0.2s						
BGES	Gesves	6.61	310	*d*P	Pn	04 14 27.4	+3.5
AVF	Avril sur Loir	6.66	277	*e*P	Pn	04 14 26.3	+1.7
AVF				*e*Sn	Sn	04 15 34.3	-6.2
	comp=Z,4.4nm,0.4s						
DOU	Dourbes	6.72	307	*d*P	Pn	04 14 29.2	+3.7
DOU				*d*S	Sn	04 15 42.5	+0.3
BMRD	Maredsous	6.74	309	*d*P	Pn	04 14 29.3	+3.6
BOVS	Bovan	6.76	111	*e*Pn	Pn	04 14 27.6	+1.6
BORS2	Bor- Borsko je	6.77	107	*e*Pn	Pn	04 14 27.9	+1.7
LASF	Ste Croix	6.85	254	*e*P	Pn	04 14 28.9	+1.6
LASF				*e*Sn	Sn	04 15 39.4	-6.0
	comp=Z,1.0nm,0.3s						
BAIF	Baives	6.92	305	*e*P	Pn	04 14 31.4	+3.2
BAIF				*e*Sn	Sn	04 15 40.8	-6.2
	comp=Z,14nm,0.6s						

BGF	Bois d'Agland	7.01	275	*e*P	Pn	04 14 31.3	+1.9
BGF				*e*Sn	Sn	04 15 43.2	-6.0
	comp=Z,31nm,0.4s						
ZAGS	Zajecar	7.03	108	*e*Pn	Pn	04 14 30.8	+1.1
HYF	Humbligny	7.16	281	*e*P	Pn	04 14 33.6	+2.1
HYF				*e*Sn	Sn	04 15 46.8	-6.1
BARS	Barje	7.24	116	*e*Pn	Pn	04 14 34.0	+1.4
TCF	Toulx Ste Croi	7.46	273	*e*P	Pn	04 14 37.3	+1.6
TCF				*e*Sn	Sn	04 15 54.1	-6.4
	comp=Z,3.3nm,0.3s						
ZAPS	Zavoj	7.53	111	*e*Pn	Pn	04 14 38.4	+1.8
CAF	Calviac	7.79	263	*e*P	Pn	04 14 41.6	+1.3
RJF	Les Rejaudoux	8.09	266	*e*P	Pn	04 14 46.0	+1.8
MFF	Saint Martin d	9.07	276	*e*P	Pn	04 14 59.7	+2.0
MFF	Saint Martin d	9.07	276	*e*P	Pn	04 15 00.2	+2.5
MFF				*e*Sn	Sn	04 16 32.4	-7.4
LDF	La Druitiere	9.15	289	*e*P	Pn	04 15 02.2	+3.4
FLN	La Foliniere	9.41	290	*e*P	Pn	04 15 05.7	+3.3
	baz=102						
GRR	Gorron	9.61	287	*e*P	Pn	04 15 08.2	+3.2
QUIF	Quistinic	11.11	284	*e*P	Pn	04 15 27.0	+1.4

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*IDC **15** 04:24:19.6±14.0, 14°.66S×175°.95W, h270^{km}±142^{km}, mb3.1/7, mbtmp3.7/7, Error ellipse: s-maj=46.2km s-min=28.8km az=128.0*

ISC 15 04:24:17.5±1.0**, 14°.6S**±0°.3×**175°.9W**±0°.3**, h250^{km}, n9, σ0^{s}.51**/7**, mb3.3**/7**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	47.65	256	P	P	04 32 28.9	-0.3
	0.2nm,0.5s,baz=91,slow=7.6,SNR=1.9 0.2nm,0.5s						
ASAR	Alice Springs	48.04	251	P	P	04 32 32.3	+0.1
	1.6nm,0.5s,baz=86,slow=8.0,SNR=25 1.6nm,0.5s						
NVAR	Mina Array Bea	75.39	43	P	P	04 35 33.7	-0.5
	0.3nm,0.6s,baz=234,slow=5.5,SNR=2.7 0.3nm,0.6s						
QSPA	South Pole Qui	75.45	180	P	P	04 35 34.1	+0.1
	1.2nm,1.0s,baz=303,slow=4.6,SNR=2.3 1.2nm,1.0s						
ILAR	Eielson Array	82.15	12	P	P	04 36 10.7	+0.7
	0.5nm,0.5s,baz=217,slow=5.4,SNR=9.2 0.5nm,0.5s						
PDAR	Pinedale Array	83.32	43	P	P	04 36 16.8	0.0
	0.3nm,0.5s,baz=270,slow=10,SNR=2.1 0.3nm,0.5s						
YKA	Yellowknife Ar	90.34	24	P	P	04 36 49.6	-0.3
	0.3nm,0.8s,baz=265,slow=4.3,SNR=2.9 0.3nm,0.8s						
BRTR	Keskin Array B	143.97	320	PKP	PKPab	04 43 22.9	+1.3
	1.4nm,0.8s,baz=82,slow=2.1,SNR=8.4						
GERES	GERESS Array B	144.93	349	PKPbc	PKPbc	04 43 23.2	-1.6
	0.2nm,0.5s,baz=17,slow=7.2,SNR=1.8						

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*IDC **15** 04:30:35.0±1.0, 16°.24S×177°.54W, h0^{km}, mb3.8/7, mbtmp3.7/8, ML4.9/1, MS3.6/11, Error ellipse: s-maj=49.2km s-min=21.5km az=145.0*

ISC 15 04:30:40.4±0.9**, 16°.2S**±0°.3×**177°.7W**±0°.2**, h35^{km}, n18, σ1^{s}.01**/11**, mb3.9**/7**, MS3.8**/9**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.33	248	Pn	Pn	04 31 43.8	0.0
	2.4nm,0.3s,baz=108,slow=21,SNR=6.2						
MSVF				Sn	Sn	04 32 31.6	-1.5
	2.2nm,0.3s,baz=146,slow=23,SNR=4.2						
MSVF				LR	LR	04 33 17.6	
	comp=Z,673nm,19.6s,baz=53,slow=36 2.6nm,0.4s						
RAR	Rarotonga	17.74	109	LR	LR	04 38 49.1	
	comp=Z,59nm,20.3s,baz=284,slow=28						
URZ	Urewera	22.48	191	LR	LR	04 42 46.9	
	comp=Z,178nm,18.0s,baz=143,slow=33						
PPT	Papeete	26.98	97	LR	LR	04 44 13.0	
	comp=Z,81nm,19.8s,baz=300,slow=30						
PMG	Port Moresby	34.85	277	LR	LR	04 49 30.6	
	comp=Z,68nm,18.5s,baz=118,slow=32						
STKA	Stephens Creek	40.05	240	P	P	04 38 13.7	+1.2
	1.9nm,0.8s,baz=119,slow=19,SNR=1.7 1.9nm,0.8s						
WRA	Warramunga Arr	45.60	258	P	P	04 38 58.8	+1.2
	1.0nm,1.1s,baz=87,slow=6.9,SNR=4.8						
WRA				LR	LR	04 55 28.5	
	comp=Z,78nm,21.5s,baz=19,slow=33 1.0nm,1.1s						
ASAR	Alice Springs	45.90	253	P	P	04 39 00.9	+0.9
	2.1nm,1.0s,baz=88,slow=8.0,SNR=12						
ASAR				LR	LR	04 56 42.5	
	comp=Z,124nm,20.0s,baz=92,slow=34 2.1nm,1.0s						
FITZ	Fitzroy Crossi	53.97	259	LR	LR	05 00 32.6	
	comp=Z,120nm,21.6s,baz=100,slow=33						
QSPA	South Pole Qui	73.89	180	P	P	04 42 11.0	-0.7
	1.2nm,0.9s,baz=58,slow=1.7,SNR=3.8 1.2nm,0.9s						
NVAR	Mina Array Bea	77.72	44	P	P	04 42 34.8	+0.7
	0.6nm,0.8s,baz=263,slow=5.2,SNR=3.4 0.6nm,0.8s						
ILAR	Eielson Array	84.05	13	P	P	04 43 06.2	-0.7
	0.9nm,1.1s,baz=206,slow=5.2,SNR=4.8 0.9nm,1.1s						
PDAR	Pinedale Array	85.64	43	P	P	04 43 15.5	-0.3
	0.2nm,0.5s,baz=237,slow=4.8,SNR=1.6 0.2nm,0.5s						
YKA	Yellowknife Ar	92.48	24	LR	LR	05 17 29.2	
	comp=Z,32nm,20.3s,baz=203,slow=30						
JTS	Las Juntas de	95.45	81	LR	LR	05 17 10.1	
	comp=Z,36nm,21.1s,baz=281,slow=29						
ATAH	Atahualpa	96.93	99	LR	LR	05 17 43.2	
	comp=Z,29nm,19.2s,baz=232,slow=29						
BRTR	Keskin Array B	143.98	317	PKP	PKPdf	04 50 11.9	-0.8
	1.5nm,0.8s,baz=22,slow=1.4,SNR=8.0						
GERES	GERESS Array B	146.08	346	PKPbc	PKPab	04 50 17.2	-0.3
	0.3nm,0.6s,baz=12,slow=4.5,SNR=1.4						

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*MOS **15** 04:47:43.9±1.2, 39°.01N×142°.79E, h31^{km}, mb4.8/37, MS4.4/5, Error ellipse: s-maj=7.9km s-min=4.8km az=95.9*

*BJI **15** 04:47:45.9, 39°.02N×142°.76E, h46^{km}, mB4.9/17, mb4.6/45, Ms4.2/28, Ms7 4.1/32*

*JMA **15** 04:47:45.2±0.1, 39°.0N±0°.3×142°.8E±0°.5, h29^{km}±1^{km}, MD4.7/32, MW4.6/32, E OFF IWATE PREF*

JMA Felt II J1 at E OFF IWATE PREF .

*NIED **15** 04:47:45.2, 39°.04N×142°.75E, h29^{km}, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-6.10; M$_{\theta\theta}$6.02; M$_{\phi\phi}$0.08; M$_{r\theta}$2.11; M$_{\theta\phi}$1.53; M$_{\phi r}$4.47; Fault plane solution: M$_{0}$7.88000×10^{15} NP1:φ$_{s}$96.00000°, δ35.00000°, λ-50.00000°. NP2:φ$_{s}$231.00000°, δ64.00000°, λ-115.00000°.*

*NEIC **15** 04:47:46.4±1.5, 39°.02N±0°.06×142°.74E±0°.10, h30^{km}±5^{km}, mb4.8/275 Error ellipse: s-maj=11.8km s-min=7.4km az=115.0*

*IDC **15** 04:47:48.5±2.0, 39°.00N×142°.67E, h54^{km}±17^{km}, mb4.1/24, mbtmp4.3/30, ML3.7/6, MS3.9/54, Error ellipse: s-maj=15.3km s-min=11.1km az=121.0*

*BGR **15** 04:47:50.5, 39°.52N×143°.50E, h42^{km}, mb4.6*

ISC 15 04:47:45.4±0.5**, 39°.01N**±0°.04×**142°.89E**±0°.04**, h32^{km}**±2^{km}**, h33^{km}:pP-P, n693, σ1^{s}.24**/543**, mb4.8**/200**, MS4.0**/63**, 13C-15D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.95	275	⇓P	Pn	04 48 00.9	-1.6
OFUJ				⇓S	Sn	04 48 11.8	-3.2
OFUJ	Ofunato	0.95	275	A	A	04 48 00.9	
	comp=N,37nm,0.4s,comp=E,17nm,0.4s						
MIYJ	Miyakonagasawa	1.01	305	⇓*i*P	Pn	04 48 01.4	-1.8
MIYJ				⇓S	Sn	04 48 13.3	-3.1
MIYJ	Miyakonagasawa	1.01	305	A	A	04 48 01.4	
	comp=N,31nm,0.9s,comp=E,23nm,2.6s						
JKMT	Kesennumamotoy	1.12	260	⇓*i*P	Pn	04 48 03.5	-1.3
JKMT				⇓*e*S	Sn	04 48 16.4	-2.8
JKMT	Kesennumamotoy	1.12	260	A	A	04 48 03.5	
	comp=N,14nm,0.4s,comp=E,8.0nm,3.2s						
JTH	Tanohata	1.23	320	P	Pn	04 48 05.2	-1.1
JTH				*e*S	Sn	04 48 20.2	-1.5
JTH	Tanohata	1.23	320	A	A	04 48 05.2	
	comp=N,14nm,1.0s,comp=E,21nm,1.4s						
JMK	Ichinoseki	1.30	268	⇓P	Pn	04 48 06.3	-1.0
JMK				⇓S	Sn	04 48 21.4	-2.3
JMK	Ichinoseki	1.30	268	A	A	04 48 06.3	
	comp=N,19nm,1.1s,comp=E,11nm,1.0s						
JIO	Ouri	1.32	246	⇓P	Pn	04 48 06.7	-1.0
JIO				⇓S	Sn	04 48 21.9	-2.3
JIO	Ouri	1.32	246	A	A	04 48 06.7	
	comp=N,8.0nm,0.5s,comp=E,8.0nm,1.3s						
JOM	Ohasama	1.33	291	⇓P	Pn	04 48 06.8	-0.9
JOM				⇓S	Sn	04 48 22.2	-2.0
JOM	Ohasama	1.33	291	A	A	04 48 06.8	
	comp=N,41nm,0.4s,comp=E,41nm,0.4s						
JKEN	Kujiedanarisaw	1.51	323	A	A	04 48 09.6	
	comp=N,39nm,0.8s,comp=E,31nm,0.4s						
JKZ	Kuzumaki	1.55	310	P	Pn	04 48 10.3	-0.6
JKZ				*e*S	Sn	04 48 29.0	-0.9
JKZ	Kuzumaki	1.55	310	A	A	04 48 10.3	
	comp=N,27nm,1.8s,comp=E,28nm,1.5s						
JOFO	Osakifurukawao	1.60	256	A	A	04 48 10.8	
	comp=N,57nm,1.0s,comp=E,97nm,1.6s						
JSZI	Iwateshizukuis	1.67	297	A	A	04 48 11.7	
	comp=N,121nm,1.4s,comp=E,55nm,1.7s						
JANG	Nango	1.73	323	A	A	04 48 13.0	
	comp=N,7.0nm,1.1s,comp=E,9.0nm,0.7s						
JRG	Rokugo	1.80	283	A	A	04 48 13.6	
	comp=N,25nm,1.6s,comp=E,23nm,1.8s						
JOU	Okura	1.85	251	A	A	04 48 14.7	
	comp=N,13nm,1.0s,comp=E,11nm,1.2s						
JYK	Kaneyama	1.98	268	A	A	04 48 16.2	
	comp=N,9.0nm,4.4s,comp=E,6.0nm,2.1s						
JMM	Marumori	2.00	236		Pn	04 48 16.2	-0.8
JMM	Marumori	2.00	236	P	Pn	04 48 18.0	+1.1
JMM	Marumori	2.00	236	A	A	04 48 17.1	
	comp=N,5.0nm,2.6s,comp=E,6.0nm,2.2s						
JMST	Minamisoumatoc	2.03	232	A	A	04 48 17.6	
	comp=N,10.0nm,4.3s,comp=E,8.0nm,1.0s						
JAH	Hinai	2.10	305	A	A	04 48 18.1	
	comp=N,15nm,1.4s,comp=E,16nm,2.7s						
JYW	Yuwa	2.15	285	A	A	04 48 18.7	
	comp=N,40nm,2.6s,comp=E,31nm,1.0s						
JTM	Tenmabayashi	2.27	322		Pn	04 48 20.3	-0.3
JTM	Tenmabayashi	2.27	322	P	Pn	04 48 21.7	+1.1
JTM	Tenmabayashi	2.27	322	S	Sn	04 48 49.7	+2.3
JTM	Tenmabayashi	2.27	322	A	A	04 48 20.7	
	comp=N,7.0nm,1.8s,comp=E,10.0nm,3.2s						
JFK	Kawauchi	2.28	225	A	A	04 48 21.4	
	comp=N,4.0nm,3.2s,comp=E,5.0nm,4.7s						
JYYZ	Yamagatayuza	2.31	271	A	A	04 48 20.9	
	comp=N,30nm,1.7s,comp=E,20nm,2.1s						
JARK	Aomorirokkasho	2.32	330	A	A	04 48 21.5	
	comp=N,10.0nm,2.0s,comp=E,12nm,3.3s						
JYS	Shirataka	2.35	251	A	A	04 48 21.8	
	comp=N,11nm,1.1s,comp=E,14nm,1.3s						
JYAR	Yonezawaarcadi	2.42	244	A	A	04 48 22.9	
	comp=N,19nm,1.0s,comp=E,12nm,1.2s						
JNTW	Noshirotokiwa	2.46	302	A	A	04 48 23.1	
	comp=N,58nm,3.4s,comp=E,43nm,2.3s						
JYA	Atsumi	2.52	262	A	A	04 48 24.1	
	comp=N,11nm,0.9s,comp=E,14nm,0.9s						
ONAJ	Iwakimizuishiy	2.52	222	A	A	04 48 24.8	
	comp=N,5.0nm,7.5s,comp=E,6.0nm,0.3s						
JHHS	Hirosakihyakuz	2.55	311	A	A	04 48 24.6	
	comp=N,21nm,1.7s,comp=E,17nm,5.0s						
JAHD	Aomorihigashid	2.55	333	A	A	04 48 25.0	
	comp=N,20nm,1.4s,comp=E,20nm,1.2s						
JIW	Iwasaki	2.73	306	A	A	04 48 27.1	
	comp=N,11nm,1.5s,comp=E,11nm,1.6s						
JOT	Ohata	2.76	330	A	A	04 48 28.0	
	comp=N,4.0nm,3.3s,comp=E,4.0nm,3.5s						
JSI2	Shiura 2	2.80	318	A	A	04 48 28.2	
	comp=N,15nm,1.2s,comp=E,11nm,1.0s						
ERM	Erimo	3.01	4		Pn	04 48 31.7	+0.8
ERM	Erimo	3.01	4	P	Pn	04 48 31.6	+0.8
ERM	Erimo	3.01	4	*ce*P	Pn	04 48 31.5	+0.6
ERM				pmax	pmax		
	comp=Z,210nm,1.7s						
JEM	Erimo	3.01	4	P	Pn	04 48 31.7	+0.8
JOG3	Oga3	3.09	288	A	A	04 48 24.5	
	comp=N,25nm,1.4s,comp=E,12nm,1.5s						
JNBK	Urakawa-nobuka	3.27	358	A	A	04 48 35.9	
	comp=N,7.0nm,3.5s,comp=E,5.0nm,1.7s						
JSHD	Hidakashinhida	3.42	355	A	A	04 48 37.8	
	comp=N,8.0nm,8.3s,comp=E,7.0nm,1.9s						
JSD	Sado	3.76	257	P	Pn	04 48 42.3	+1.2
MAJO	Matsushiro	4.45	238		Pn	04 48 48.5	-2.1
MAJO	Matsushiro	4.45	238	P	Pn	04 48 48.5	-2.1
MJAR	Matsushiro Arr	4.45	238	P	Pn	04 48 53.0	+2.3
	comp=E,2.8nm,0.3s,baz=40,slow=12,SNR=115						
MJAR				S	Sn	04 49 39.5	-1.8
	comp=E,47nm,0.9s,baz=78,slow=14,SNR=4.5						
MJAR				LR	LR	04 50 47.9	
	comp=E,1µm,19.4s,baz=69,slow=42 comp=E,56nm,0.8s						
MJB9	Matsu-Tunnel	4.45	238		Pn	04 48 51.1	+0.4
NMR	Nemuro--Hokkai	4.86	25	⇓*i*P	Pn	04 48 55.2	-1.0
NMR				*i* S	Sn	04 49 46.5	-4.8
JKA	Kamikawa-asahi	5.11	358		Pn	04 49 01.1	+1.4
ASAJ	Asahikawa	5.11	358	P	Pn	04 49 02.7	+3.0
	comp=E,3.5nm,0.3s,baz=210,slow=15,SNR=14						
ASAJ				S	Sn	04 49 52.8	-4.8
	comp=E,55nm,0.7s,baz=204,slow=20,SNR=5.6 comp=E,19nm,0.3s						
GLVR	Golovnino	5.13	22	P	Pn	04 49 00.6	+0.7
GLVR				*e*S	Sn	04 49 54.8	-3.1
GLVR				pmax	pmax		
	comp=Z,155nm,0.2s						
GLVR				smax	smax		
	comp=N,725nm,0.4s						
GLVR				smax	smax		
	comp=E,470nm,0.4s						
RUSJ	Misakicho	5.39	18	*e*P	Pn	04 49 03.4	-0.1
RUSJ				*e*S	Sn	04 50 03.9	-0.6
YUK	Yuzh-Kuril'sk	5.50	23	*e*P	Pn	04 49 06.8	+1.8
YUK				*e*S	Sn	04 50 03.1	-3.9
YUK				pmax	pmax		
	comp=Z,258nm,0.3s						
YUK				pmax	pmax		
	comp=N,112nm,0.1s						
YUK				smax	smax		
	comp=N,783nm,0.5s						
YUK				smax	smax		
	comp=E,673nm,0.5s						
JGF	Kuroka	5.57	234		Pn	04 49 05.4	-0.6
JGF	Kuroka	5.57	234	P	Pn	04 49 07.9	+1.9
SHO	Shikotan	5.69	30	*e*P	Pn	04 49 07.2	-0.4
SHO				*e*S	Sn	04 50 06.9	-4.9
SHO				pmax	pmax		
	comp=Z,42nm,0.4s						
SHO				pmax	pmax		
	comp=N,16nm,0.2s						
SHO				pmax	pmax		
	comp=E,20nm,0.2s						
SHO				smax	smax		
	comp=N,197nm,0.4s						
SHO				smax	smax		
	comp=E,115nm,0.4s						
INU	Inuyama	5.94	234		Pn	04 49 12.7	+1.6
INU	Inuyama	5.94	234	P	Pn	04 49 13.4	+2.3
JHJ2	Mitsune	6.39	204	Pn	Pn	04 49 18.6	+1.4
JHJ2	Mitsune	6.39	204	P	Pn	04 49 20.7	+3.5
KUR	Kuril'sk	7.24	29	P	Pn	04 49 30.0	+1.1
KUR				S	Sn	04 50 46.1	-3.8
KUR				smax	smax		
	comp=N,151nm,0.5s						
KUR				smax	smax		
	comp=E,133nm,0.5s						
TEY	Ternei	7.63	324	*e*P	Pn	04 49 38.6	+4.4
YSS	Yuzhno-Sakhali	7.95	359	*e*P	Pn	04 49 38.4	-0.2
YSS				*e*S	Sn	04 51 09.2	+1.9
YSS				pmax	pmax		
	comp=Z,50nm,1.1s						
YSS				MLR	MLR		
	comp=Z,900nm,15.0s						
JMN	Monobe	8.97	237	Pn	Pn	04 49 54.7	+2.0
VLA	Vladivostok	9.27	300	*i* P	Pn	04 49 54.7	-2.1
USA0B	Ussuriysk Arra	9.67	306		Pn	04 50 03.8	+1.6
USA0B	Ussuriysk Arra	9.67	306	*i* P	Pn	04 50 01.5	-0.7
USRK	Ussuriysk Ar.	9.67	306		Pn	04 50 02.6	+0.3
USRK	Ussuriysk Ar.	9.67	306	P	Pn	04 50 03.3	+1.0
	comp=Z,0.9nm,0.3s,baz=120,slow=13,SNR=22						
USRK				LR	LR	04 53 36.9	
	comp=Z,1µm,18.5s,baz=128,slow=36 comp=Z,35nm,0.9s						
JNU	Nakatsue	11.35	243	Pn	Pn	04 50 26.0	+0.6
JNU	Nakatsue	11.35	243	P	Pn	04 50 26.7	+1.4
	comp=Z,0.5nm,0.3s,baz=106,slow=12,SNR=3.6						
JNU				LR	LR	04 55 05.3	
	comp=Z,451nm,21.0s,baz=62,slow=39 comp=Z,12nm,1.1s						
MDJ	Mudanjiang	11.39	304	P	Pn	04 50 30.3	+4.5
MDJ				sP		04 50 41.8	
MDJ				S	Sn	04 52 34.3	+2.4
MDJ				pmax	pmax		
	comp=Z,63nm,1.1s						
MDJ				LR	LR		
	comp=Z,350nm,20.6s						
MDJ				LR	LR		
	comp=Z,980nm,17.9s						
MDJ				LR	LR		
	comp=Z,1µm,16.5s						
TYV	Tymovskoe	11.86	359	*e*P	Pn	04 50 39.8	+7.7
TYV				pmax	pmax		
	comp=Z,21nm,1.2s						
TYV				pmax	pmax		
	comp=Z,200nm,2.0s						
KSRS	Korea Array	11.88	267	P	Pn	04 50 34.0	+1.6
	comp=Z,0.4nm,0.3s,baz=77,slow=13,SNR=9.6 comp=Z,1.6nm,0.7s						
KS19	Wonju Array Si	11.91	267	Pn	Pn	04 50 32.4	-0.5
KLR	Kul'dur	12.97	326	P	Pn	04 50 47.1	-0.2
	comp=Z,0.2nm,0.3s,baz=121,slow=12,SNR=7.3						
KLR				LR	LR	04 55 46.0	
	comp=Z,691nm,19.3s,baz=150,slow=37 comp=Z,2.6nm,0.6s						
KLR	Kul'dur	12.97	326	*ce*P	Pn	04 50 46.0	-1.3
KLR				pmax	pmax		
	comp=Z,11nm,1.0s						
BNX	BinXian	13.27	305	⇓P	Pn	04 50 50.4	-1.0
BNX				pmax	pmax		
	comp=Z,14nm,0.3s						
CN2	Changchun	13.94	296	*e*P	Pn	04 51 03.0	+2.5
CN2				*e*S	Sn	04 53 35.3	+1.3
CN2				PcP	PcP	04 56 25.5	+4.7
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CN2				LR	LR		
	comp=Z,780nm,15.0s						
CN2				LR	LR		
	comp=Z,290nm,15.0s						
CN2				LR	LR		
	comp=Z,520nm,17.0s						
OKH	Okha	14.55	0	*de*P	Pn	04 51 04.8	-4.0
JOW	Kunigami	17.23	230	LR	LR	04 58 50.9	
	comp=Z,255nm,20.3s,baz=269,slow=39						
PETK	Petropavlovsk-	17.40	31	P	Pn	04 51 43.7	-1.8
	comp=Z,3.2nm,0.8s,baz=202,slow=7.4,SNR=7.3						
PETK				LR	LR	04 58 55.8	
	comp=Z,183nm,18.8s,baz=213,slow=38						
ZEA	Zeya	18.20	329	*e*P	Pn	04 51 55.0	-0.4
ZEA				*e*		04 55 20.5	
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ZEA				MLR	MLR		
	comp=Z,300nm,14.0s						
TIA	Tai'an	20.58	270	P	P	04 52 21.8	+0.2
TIA				pmax	pmax		
	comp=Z,16nm,0.9s						
TIA				LR	LR		
	comp=Z,280nm,13.7s						
TIA				LR	LR		
	comp=Z,350nm,18.8s						
TIA				LR	LR		
	comp=Z,500nm,15.3s						
XLT	XiLinHaoTe	20.64	292	*e*P	P	04 52 15.3	-6.9
XLT				sP	sP	04 52 32.8	-1.5
XLT				pmax	pmax		
	comp=Z,8.0nm,0.6s						
XLT				pmax	pmax		
	comp=Z,130nm,4.2s						
XLT				LR	LR		
	comp=E,190nm,14.5s						
XLT				LR	LR		
	comp=Z,260nm,17.4s						
NJ2	Nanjing	20.72	258	*e*P	P	04 52 22.8	-0.3
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MA2	Magadan	21.19	11		P	04 52 29.6	+1.7
MA2				IAmb	IAmb	04 52 30.6	
	comp=Z,33nm,0.9s						
MA2	Magadan	21.19	11	P	P	04 52 28.7	+0.8
	comp=Z,26nm,0.8s,baz=190,slow=7.7,SNR=10						
MA2				LR	LR	05 02 06.0	
	comp=Z,108nm,19.0s,baz=236,slow=40 comp=Z,26nm,0.8s						
MA2	Magadan	21.19	11	P	P	04 52 29.6	+1.7
MA2				pmax	pmax		
	comp=Z,33nm,0.9s						
MA2	Magadan	21.19	11	P	P	04 52 29.5	+1.6
	comp=Z,43nm,1.0s						
HNS	HongShan	22.17	275	⇑P	P	04 52 41.1	+2.5
HNS				LR	LR		
	comp=Z,460nm,15.4s						
HNS				LR	LR		
	comp=Z,360nm,16.5s						
TATO	Taipei	22.84	239	P	P	04 52 43.1	-2.8
HHC	Hu-ho-hao-te	24.03	284	*e*P	P	04 52 55.0	-2.5
HHC				pmax	pmax		
	comp=Z,15nm,0.5s						
HHC				pmax	pmax		
	comp=Z,80nm,3.8s						
HHC				LR	LR		
	comp=Z,180nm,14.7s						
HHC				LR	LR		
	comp=Z,390nm,16.9s						
HHC				LR	LR		
	comp=Z,550nm,16.8s						
YAK	Yakutsk	24.44	345	*e*P	P	04 53 01.7	+0.9
YAK				*e**PP	pP	04 53 09.1	-0.5
YAK				*e*		04 53 32.7	
YAK				*e*PPP	PPP	04 53 41.5	
YAK				*e*		04 56 39.9	
YAK				*e*S	S	04 57 19.6	+1.1
YAK				*e**SS	sS	04 57 33.0	+0.1
YAK				*e*SS	SnSn	04 58 04.4	+0.6
YAK				*e*		05 04 04.2	
YAK				pmax	pmax		
	comp=Z,21nm,0.9s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,25nm,0.8s						
YAK				pmax	pmax		
	comp=N,22nm,1.6s						
YAK				pmax	pmax		
	comp=E,36nm,2.5s						
YAK				smax	smax		
	comp=N,182nm,2.3s						
YAK				smax	smax		
	comp=E,99nm,1.9s						
SEY	Seymchan	24.64	10	*ce*P	P	04 53 04.4	+1.7
SEY				pmax	pmax		
	comp=Z,39nm,1.7s						
WHN	Wuhan	24.84	259	P	P	04 53 04.1	-0.7
GUMO	Guam	25.38	176	LR	LR	05 02 03.6	
	comp=Z,162nm,21.7s,baz=42,slow=34						
SHEM	Shemya Is, Ala	25.46	47	LR	LR	05 02 08.5	
	comp=Z,65nm,21.6s,baz=296,slow=34						
ULN	Ulaanbaatar	27.28	301	*i* P	P	04 53 26.2	-0.8
ULN				pmax	pmax		
	comp=Z,2.0nm,0.5s						
XAN	Xi'an	27.64	270	P	P	04 53 30.5	+0.3
XAN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
XAN				LR	LR		
	comp=Z,410nm,14.4s						
XAN				LR	LR		
	comp=Z,330nm,16.5s						
XAN				LR	LR		
	comp=Z,280nm,16.7s						
SONM	Songino Array	27.72	301	LR	LR	05 04 58.6	
	comp=Z,355nm,19.8s,baz=258,slow=37						
H11N2	WAKE ISLAND Hy	28.26	126	T	T	05 24 09.9	
	baz=318,slow=75,SNR=886						
H11N1	WAKE ISLAND Hy	28.27	126	T	T	05 24 09.9	
	baz=318,slow=75,SNR=1024						
H11N3	WAKE ISLAND Hy	28.27	126	T	T	05 24 09.9	
	baz=318,slow=75,SNR=1092						
H11S1	WAKE ISLAND Hy	29.05	128	T	T	05 25 09.1	
	baz=312,slow=71,SNR=59						
H11S3	WAKE ISLAND Hy	29.05	128	T	T	05 25 09.1	
	baz=312,slow=71,SNR=82						
H11S2	WAKE ISLAND Hy	29.07	128	T	T	05 25 09.1	
	baz=312,slow=71,SNR=51						

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ZAK   Zakamensk        30.02 305 eP    P     04 53 51.1 -0.1
ZAK                              pmax  pmax
      comp=Z,5.0nm,1.4s
BILL  Bilibino         31.81  16       P     04 54 08.2 +1.6
BILL  Bilibino         31.81  16 ceP   P     04 54 08.6 +2.0
BILL                             pmax  pmax
      comp=Z,14nm,1.7s
GYA   Guiyang          32.73 258 P     P     04 54 16.5 +1.2
GYA                              LR    LR
      comp=Z,340nm,22.4s
CD2   Chengdu          32.87 268 P     P     04 54 15.0 -1.5
CD2                              pmax  pmax
      comp=Z,10.0nm,0.5s
GTA   Gaotai           33.15 285 eP    P     04 54 19.9 +1.0
GTA                              PcP   PcP   04 57 02.1 +0.8
GTA                              pmax  pmax
      comp=Z,6.0nm,1.4s
GTA                              LR    LR
      comp=Z,270nm,16.7s
GTA                              LR    LR
      comp=Z,470nm,17.5s
GTA                              LR    LR
      comp=Z,610nm,18.5s
TIXI  Tiksi            33.49 352 LR    LR    05 09 29.0
      comp=Z,245nm,18.6s,slow=39
QIZ   Qiongzhong       34.81 245 P     P     04 54 33.5 +0.2
QIZ                              S     S     05 00 02.4 +0.3
QIZ                              LR    LR
      comp=Z,180nm,15.3s
QIZ                              LR    LR
      comp=Z,280nm,17.0s
SPIA  Saint Paul Isl   35.33  43 P     P     04 54 37.7 +0.3
      baz=260
P08K  Saint George I   35.61  45 P     P     04 54 40.1 +0.3
      baz=261
NIKH  Nikolski High    35.62  51 P     P     04 54 39.7 -0.1
      baz=267
GAMB  Gambell          36.43  32 P     P     04 54 46.7  0.0
      baz=249
KMI   Kunming          36.44 260 ⇑P    P     04 54 47.6 +0.1
KMI                              pmax  pmax
      comp=Z,14nm,0.7s
KMI                              LR    LR
      comp=Z,230nm,25.1s
KMI                              LR    LR
      comp=Z,320nm,18.6s
KMI                              LR    LR
      comp=Z,270nm,17.3s
PZH   PanZhiHua        36.49 263 P     P     04 54 48.5 +0.7
PZH                              pmax  pmax
      comp=Z,10.0nm,0.7s
PZH                              pmax  pmax
      comp=Z,110nm,4.4s
UNV   Unalaska Valle   37.06  49 P     P     04 54 52.6 +0.4
      baz=268
GOMU  GeErMu           37.85 281 P     P     04 54 59.8 +0.3
GOMU                             S     S     05 00 43.4 -5.5
GOMU                             pmax  pmax
      comp=Z,12nm,0.5s
GOMU                             LR    LR
      comp=Z,320nm,13.5s
GOMU                             LR    LR
      comp=Z,190nm,13.7s
GOMU                             LR    LR
      comp=Z,240nm,13.3s
M11K  Mekoryuk         37.99  39 P     P     04 54 60.0  0.0
      baz=259
TNA   Tin City         38.57  30 P     P     04 55 04.2 -0.5
      baz=251
K13K  Kusilvak Mount   39.03  37 P     P     04 55 08.6 -0.1
      baz=259
F14K  Arctic Creek     39.17  31 P     P     04 55 10.3 +0.4
      baz=253
ANM   Nome             39.31  32 P     P     04 55 11.0  0.0
      baz=255
M13K  Dall Lake        39.40  39 P     P     04 55 12.2 +0.5
      baz=262
J14K  Nanvaranak Lak   39.69  35 P     P     04 55 14.3 +0.1
      baz=259
S12K  Black Hills      39.70  47 P     P     04 55 14.5 +0.1
      baz=269
L14K  Kuka Creek       39.85  38 P     P     04 55 16.2 +0.7
      baz=262
F15K  North Star Dit   39.91  31 P     P     04 55 17.4 +1.4
F15K  North Star Dit   39.91  31 P     P     04 55 16.6 +0.6
      baz=254
G15K  Niukluk          39.97  32 P     P     04 55 16.9 +0.4
      baz=256
M14K  Bethel           40.12  39 P     P     04 55 20.1 +2.4
M14K                             IAmb  IAmb  04 55 21.9
      comp=Z,21nm,0.9s
M14K  Bethel           40.12  39 P     P     04 55 18.5 +0.7
      baz=263
N14K  Kuskokwak Cree   40.16  40 P     P     04 55 18.6 +0.5
      baz=264
O14K  Tigyukauivet M   40.31  41 P     P     04 55 19.6 +0.2
      baz=265
C16K  Lisburne Hills   40.42  27 P     P     04 55 22.0 +1.8
C16K  Lisburne Hills   40.42  27 P     P     04 55 20.1 -0.1
      baz=251
L15K  Ungalak Mounta   40.47  37 P     P     04 55 20.9 +0.2
      baz=262
K15K  Wolf Creek Mou   40.53  36 P     P     04 55 21.2  0.0
      baz=262
SDPT  Sand Point       40.60  47 P     P     04 55 21.7 -0.1
      baz=271
M15K  Kasigluk River   40.73  39 P     P     04 55 23.2 +0.3
      baz=264
G16K  Koyuk River      40.76  32 P     P     04 55 23.1 +0.2
      baz=257
N15K  Kwethluk River   40.98  40 P     P     04 55 24.4 -0.5
      baz=265
WMQ   Urumqi           41.03 295 eP    P     04 55 27.8 +2.2
WMQ                              LR    LR
      comp=Z,110nm,17.9s
O15K  Ungalikthiuk R   41.05  41 P     P     04 55 26.8 +1.4
O15K                             IAmb  IAmb  04 55 29.1
      comp=Z,12nm,0.9s
O15K  Ungalikthiuk R   41.05  41 P     P     04 55 25.2 -0.3
      baz=267
D17K  Noatak River     41.06  28 P     P     04 55 24.7 -0.8
      baz=254,SNR=6.9
J16K  Anvik River      41.11  35 P     P     04 55 25.0 -0.9
      baz=261
S14K  Fog Glacier      41.11  46 P     P     04 55 25.6 -0.6
      baz=270
CHNA  Chernabura Isl   41.12  48 P     P     04 55 26.0 -0.1
      baz=272
I17K  Unalakleet       41.16  34 P     P     04 55 26.0 -0.3
      baz=261
C17K  DeLong Mountai   41.25  27 P     P     04 55 27.1 +0.1
      baz=253
E17K  Hotham Inlet     41.36  29 P     P     04 55 27.8 -0.1
      baz=256
L16K  Owhat River      41.42  37 P     P     04 55 28.9 +0.4
      baz=264
F17K  Baldwin Pennin   41.43  30 P     P     04 55 28.4 -0.1
      baz=257
G17K  Kiwalik Mounta   41.47  32 P     P     04 55 29.2 +0.4
      baz=259,SNR=6.0
ZAA0  Zalesovo Array   41.48 311 P     P     04 55 28.8 -0.3
ZALV  Zalesovo Beam    41.48 311 P     P     04 55 29.3 +0.2
ZALV  Zalesovo Beam    41.48 311 P     P     04 55 29.1  0.0
      comp=Z,1.5nm,0.3s,baz=82,slow=6.5,SNR=7.5
ZALV                             PcP   PcP   04 57 26.5 +0.2
      comp=Z,0.7nm,0.2s,baz=79,slow=7.5,SNR=2.3
ZALV                             LR    LR    05 13 17.9
      comp=Z,308nm,18.9s,baz=96,slow=37
      comp=Z,1.5nm,0.3s
ZALV  Zalesovo Beam    41.48 311 i P   P     04 55 32.7 +3.6
ZALV                             pmax  pmax
      comp=Z,3.0nm,0.4s
M16K  Timber Creek     41.61  39 P     P     04 55 32.2 +2.2
M16K  Timber Creek     41.61  39 P     P     04 55 29.4 -0.7
      baz=266
N16K  Nishlik Lake     41.66  39 P     P     04 55 30.2 -0.3
      baz=266
H17K  Granite Mounta   41.68  33 P     P     04 55 33.7 +3.2
H17K  Granite Mounta   41.68  33 P     P     04 55 31.0 +0.5
      baz=260
J17K  VABM Dome        41.80  35 P     P     04 55 32.0 +0.4
      baz=263,SNR=5.7
E18K  Tukpahlearik C   41.91  29 P     P     04 55 35.1 +2.8
E18K                             IAmb  IAmb  04 55 36.5
      comp=Z,16nm,1.1s
E18K  Tukpahlearik C   41.91  29 P     P     04 55 32.7 +0.3
      baz=257,SNR=6.0
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O16K  Kokwok River B   41.95  41 P     P     04 55 32.8 -0.1
      baz=268
B18K  Kokolik River    41.98  26 P     P     04 55 32.6 -0.4
      baz=253
P16K  Nushagak River   41.99  42 P     P     04 55 33.2 +0.1
      baz=269
C18K  Utukok River     42.00  27       P     04 55 34.9 +1.7
C18K                             IAmb  IAmb  04 55 37.5
      comp=Z,14nm,0.9s
C18K  Utukok River     42.00  27 P     P     04 55 33.1 -0.1
      baz=255
L17K  Donlin           42.02  37 P     P     04 55 34.1 +0.7
      baz=265
K17K  Iditarod         42.08  36       P     04 55 36.0 +2.1
K17K                             IAmb  IAmb  04 55 38.1
      comp=Z,22nm,1.1s
K17K  Iditarod         42.08  36 P     P     04 55 34.3 +0.5
      baz=264,SNR=7.4
F18K  Selawik          42.09  30 P     P     04 55 34.0 +0.1
      baz=259
R16K  Pilot Point      42.19  44 P     P     04 55 35.5 +0.7
      baz=271
G18K  Tagagawik        42.36  31 IAmb  IAmb  04 55 39.8
      comp=Z,12nm,0.8s
G18K  Tagagawik        42.36  31 P     P     04 55 36.5 +0.4
      baz=260,SNR=13
H18K  Honhosa River    42.36  32 IAmb  IAmb  04 55 39.9
      comp=Z,14nm,0.8s
H18K  Honhosa River    42.36  32 P     P     04 55 36.1  0.0
      baz=262,SNR=10.0
M17K  Holitna River    42.37  38 IAmb  IAmb  04 55 40.4
      comp=Z,16nm,0.9s
M17K  Holitna River    42.37  38 P     P     04 55 36.6 +0.3
      baz=266
N17K  Nushagak Hills   42.45  39 P     P     04 55 36.8 -0.1
      baz=268
O17K  Koliganek Bris   42.46  40 P     P     04 55 37.3 +0.3
      baz=269
A19K  Wainwright       42.47  25 P     P     04 55 37.0 +0.1
      baz=253
C19K  Lookout Ridge    42.68  27 IAmb  IAmb  04 55 43.0
      comp=Z,17nm,1.0s
C19K  Lookout Ridge    42.68  27 P     P     04 55 38.7  0.0
      baz=256,SNR=6.3
L18K  Granite Mounta   42.78  37 P     P     04 55 39.7 +0.1
      baz=266
P17K  Kvichak River    42.79  41 P     P     04 55 39.8 +0.2
      baz=270
J18K  Innoko River     42.87  35 P     P     04 55 39.9 -0.4
      baz=265,SNR=5.4
F19K  Shaleruckik Mo   42.87  30 P     P     04 55 40.8 +0.5
      baz=260
GCSA  Galena City Sc   42.93  33 P     P     04 55 41.1 +0.4
      baz=263
D19K  Kuna River       43.06  28 IAmb  IAmb  04 55 45.4
      comp=Z,26nm,1.0s
D19K  Kuna River       43.06  28 P     P     04 55 41.6 -0.2
      baz=258,SNR=11
Q17K  Contact Creek    43.08  43 P     P     04 55 42.6 +0.4
      baz=271
N18K  Kilae Creek      43.09  39 P     P     04 55 43.0 +0.9
      baz=269
CMAR  Chiang Mai Arr   43.14 254 P     P     04 55 43.2 +0.2
      comp=Z,1.7nm,0.3s,baz=50,slow=7.9,SNR=5.2
CMAR                             LR    LR    05 15 32.1
      comp=Z,72nm,18.5s,baz=60,slow=39
      comp=Z,1.7nm,0.3s
M18K  Stony River      43.15  38 P     P     04 55 43.0 +0.4
      baz=268
E19K  Redstone River   43.19  29 P     P     04 55 45.1 +2.2
E19K                             IAmb  IAmb  04 55 46.6
      comp=Z,17nm,1.0s
E19K  Redstone River   43.19  29 P     P     04 55 42.7 -0.1
      baz=260,SNR=12
H19K  Roundabout Mou   43.21  32       P     04 55 45.0 +2.1
H19K  Roundabout Mou   43.21  32 P     P     04 55 42.9  0.0
      baz=263,SNR=16
CHIR  Chirikof Islan   43.33  46 P     P     04 55 44.1  0.0
      baz=274
J19K  Poorman          43.40  34 IAmb  IAmb  04 55 48.5
      comp=Z,16nm,0.9s
J19K  Poorman          43.40  34 P     P     04 55 44.9 +0.3
      baz=265,SNR=16
P18K  Big Mountain,    43.41  41 P     P     04 55 44.5 -0.3
      baz=271
O18K  Koktuh Hills     43.42  40 P     P     04 55 45.0 +0.2
      baz=270
Q18K  Katmai Hardscr   43.54  42 P     P     04 55 46.1 +0.2
      baz=272
L19K  White Mountain   43.64  37 P     P     04 55 46.2 -0.3
      baz=268,SNR=7.0
D20K  Etivluk River    43.64  27 P     P     04 55 46.4 -0.1
      baz=259
F20K  Avaraart Lake    43.70  30 P     P     04 55 47.0 +0.1
      baz=262
B20K  Meade River      43.72  26 IAmb  IAmb  04 55 51.4
      comp=Z,12nm,0.8s
B20K  Meade River      43.72  26 P     P     04 55 46.7 -0.3
      baz=258
E20K  Nigu River       43.72  28 P     P     04 55 46.8 -0.3
      baz=260,SNR=18
N19K  Bonanza Creek    43.78  39 IAmb  IAmb  04 55 51.2
      comp=Z,13nm,1.1s
N19K  Bonanza Creek    43.78  39 P     P     04 55 47.6 -0.2
      baz=270
M19K  Big River Lodg   43.84  37 P     P     04 55 48.2  0.0
      baz=269
H20K  Anotleneega Mo   43.85  32 P     P     04 55 48.6 +0.4
      baz=264,SNR=15
O19K  Port Alsworth    43.86  40 P     P     04 55 48.4 +0.1
      baz=270
R18K  Karluk           43.87  44 P     P     04 55 48.2 -0.2
      baz=273
I20K  Naaghedeneel     43.96  33 IAmb  IAmb  04 55 53.1
      comp=Z,20nm,1.0s
I20K  Naaghedeneel     43.96  33 P     P     04 55 48.4 -0.6
      baz=266
K20K  Telida           44.05  35       P     04 55 51.6 +1.8
K20K                             IAmb  IAmb  04 55 53.8
      comp=Z,11nm,0.9s
K20K  Telida           44.05  35 P     P     04 55 49.4 -0.4
      baz=267,SNR=8.8
J20K  Nowinta River    44.06  34       P     04 55 52.3 +2.5
J20K                             IAmb  IAmb  04 55 53.8
      comp=Z,15nm,1.0s
J20K  Nowinta River    44.06  34 P     P     04 55 49.7 -0.2
      baz=266,SNR=10
SII   Sitkinak Islan   44.08  45 P     P     04 55 49.6 -0.6
      baz=274
MK31  Makanchi Array   44.09 301 ceP   P     04 55 51.0 +0.6
MKAR  Makanchi Array   44.09 301       P     04 55 50.1 -0.3
MKAR  Makanchi Array   44.09 301 P     P     04 55 49.9 -0.5
      comp=Z,4.5nm,0.8s,baz=85,slow=9.6,SNR=33
MKAR                             LR    LR    05 14 47.3
      comp=Z,179nm,20.7s,baz=127,slow=37
      comp=Z,4.5nm,0.8s
L20K  Farewell, AK     44.10  37 P     P     04 55 49.7 -0.6
      baz=268
Q19K  Cape Douglas,    44.24  42 P     P     04 55 50.5 -0.9
      baz=272
MAKZ  Makanchi         44.30 301       P     04 55 52.0 -0.1
MAKZ  Makanchi         44.30 301 P     P     04 55 52.0 -0.1
MAKZ                             pmax  pmax
      comp=Z,12nm,1.3s
MAKZ  Makanchi         44.30 301 P     P     04 55 52.5 +0.4
IMAR  Indian Mountai   44.36  32 P     P     04 55 54.3 +2.0
C21K  Knifeblade Rid   44.37  27 P     P     04 55 51.7 -0.6
      baz=261,SNR=9.1
P19K  Oil Pt           44.42  41 P     P     04 55 52.5 -0.3
      baz=272
M20K  Styx River       44.44  37 P     P     04 55 52.7 -0.4
      baz=270
B21K  Ikpikpuk River   44.51  26 P     P     04 55 53.0 -0.3
      baz=260,SNR=9.1
G21K  Allakaket        44.51  31 IAmb  IAmb  04 55 57.2
      comp=Z,13nm,1.1s
G21K  Allakaket        44.51  31 P     P     04 55 53.2 -0.2
      baz=265,SNR=15
OHAK  Old Harbor       44.52  44 P     P     04 55 53.2 -0.5
      baz=274
E21K  Killik River     44.56  28 IAmb  IAmb  04 55 57.2
      comp=Z,16nm,0.9s
E21K  Killik River     44.56  28 P     P     04 55 53.3 -0.5
      baz=262
F21K  Alatna River     44.59  30 P     P     04 55 53.6 -0.5
      baz=264
RED   Redoubt Volcan   44.63  40 IAmb  IAmb  04 55 57.7
      comp=Z,13nm,0.8s
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A22K  Sinclair Lake    44.64  24 P     P     04 55 53.8 -0.5
      baz=259
O20K  Slope Mountain   44.71  40 P     P     04 55 54.9 -0.4
      baz=272
H21K  Melozitna Rive   44.73  32 IAmb  IAmb  04 55 58.9
      comp=Z,10nm,0.9s
H21K  Melozitna Rive   44.73  32 P     P     04 55 54.5 -0.7
      baz=266,SNR=13
CHUM  Lake Minchumin   44.85  35 P     P     04 55 55.7 -0.4
      baz=268
KDAK  Kodiak Island    44.86  43 LR    LR    05 14 34.9
      comp=Z,92nm,20.7s,baz=240,slow=36
KDAK  Kodiak Island    44.86  43 P     P     04 55 55.7 -0.6
      baz=274
KDAK  Kodiak Island    44.86  43 P     P     04 55 58.0 +1.6
PPLA  Purkeypile       44.89  36 IAmb  IAmb  04 56 01.0
      comp=Z,26nm,1.3s
PPLA  Purkeypile       44.89  36 P     P     04 55 56.3 -0.4
      baz=270
Q20K  Shuyak Island    44.90  42 P     P     04 55 56.5 -0.1
      baz=274
CAST  Castle Rocks     44.94  35 IAmb  IAmb  04 56 01.0
      comp=Z,9.8nm,0.9s
CAST  Castle Rocks     44.94  35 P     P     04 55 56.7 -0.2
      baz=269
SPU   Mount Spurr      44.96  38 IAmb  IAmb  04 56 01.0
      comp=Z,16nm,1.2s
B22K  Teshekpuk Lake   45.03  25 IAmb  IAmb  04 56 00.9
      comp=Z,11nm,0.8s
B22K  Teshekpuk Lake   45.03  25 P     P     04 55 57.3 -0.2
      baz=261
STLK  Strandline Lak   45.06  38 IAmb  IAmb  04 56 01.8
      comp=Z,9.8nm,1.2s
D22K  Ayikyak River    45.08  27 P     P     04 55 57.9 -0.1
      baz=263,SNR=10
SKT   Skwentna         45.20  37 P     P     04 55 58.6 -0.4
      baz=271
HOM   Homer            45.23  41 P     P     04 55 59.4 +0.1
      baz=273
E22K  Anaktuvuk Pass   45.32  29       P     04 56 01.8 +1.9
E22K  Anaktuvuk Pass   45.32  29 P     P     04 55 59.5 -0.4
      baz=265,SNR=27
H22K  Ishtalitna Cre   45.33  32 P     P     04 55 59.9  0.0
      baz=267,SNR=11
G22K  Bettles          45.34  30 P     P     04 56 00.1 +0.1
      baz=266
CAPN  Captain Cook N   45.42  39 P     P     04 56 00.4 -0.3
      baz=273
BPAW  Bear Paw Mtn.    45.44  34 IAmb  IAmb  04 56 05.4
      comp=Z,17nm,1.4s
BPAW  Bear Paw Mtn.    45.44  34 P     P     04 56 00.2 -0.7
      baz=270,SNR=5.8
KTH   Kantishna Hill   45.47  35 IAmb  IAmb  04 56 05.0
      comp=Z,17nm,1.0s
MLY   Manley           45.56  33 IAmb  IAmb  04 56 05.8
      comp=Z,13nm,1.0s
MLY   Manley           45.56  33 P     P     04 56 01.2 -0.7
      baz=269,SNR=16
SUA   Susitna One      45.59  38 P     P     04 56 01.6 -0.6
      baz=272
KURK  Kurchatov        45.66 307       P     04 56 01.6 -1.2
KURK                             IAmb  IAmb  04 56 15.2
      comp=Z,14nm,0.9s
KURK  Kurchatov        45.66 307 ceP   P     04 56 02.9 +0.1
KURK                             pmax  pmax
      comp=Z,20nm,1.7s
KURK  Kurchatov        45.66 307 P     P     04 56 03.5 +0.8
KURK                             pP    pwP   04 56 13.3 +1.4
BRSE  Bradley Lake S   45.68  40 P     P     04 56 02.4 -0.5
      baz=274
KURBB Kurchatov Arra   45.73 307 P     P     04 56 03.2 -0.2
      comp=Z,8.2nm,0.4s,baz=80,slow=8.5,SNR=34
KURBB                            LR    LR    05 15 53.0
      comp=Z,192nm,18.4s,baz=173,slow=37
      comp=Z,8.2nm,0.4s
TRF   Thorofare Moun   45.75  35 IAmb  IAmb  04 56 08.4
      comp=Z,8.0nm,0.9s
TRF   Thorofare Moun   45.75  35 P     P     04 56 03.3 -0.2
      baz=271,SNR=6.5
CUT   Chulitna         45.78  37 P     P     04 56 03.6 +0.1
      baz=272
D23K  Nanushuk River   45.81  27 P     P     04 56 03.8 +0.1
      baz=265
COLD  Coldfoot         45.87  30 P     P     04 56 04.3 +0.1
      baz=267
G23K  Bananza Creek    45.91  31 P     P     04 56 04.5 -0.1
      baz=268,SNR=6.5
C23K  Itkillik River   45.92  26 P     P     04 56 04.1 -0.5
      baz=264,SNR=11
H23K  Yukon River      46.08  32 P     P     04 56 06.0  0.0
      baz=269,SNR=18
RC01  Rabbit Creek A   46.09  39 P     P     04 56 05.7 -0.4
      baz=274
E23K  Chandalar        46.13  29 P     P     04 56 06.5 +0.1
      baz=267,SNR=17
I23K  Minto, Yukon-K   46.15  33 IAmb  IAmb  04 56 10.4
      comp=Z,22nm,1.4s
I23K  Minto, Yukon-K   46.15  33 P     P     04 56 06.2 -0.2
      baz=270,SNR=6.5
TOLK  Toolik Lake Re   46.19  28 IAmb  IAmb  04 56 10.4
      comp=Z,9.5nm,0.9s
TOLK  Toolik Lake Re   46.19  28 P     P     04 56 07.0 +0.2
      baz=266,SNR=5.4
NEA2  Nenana           46.27  34 P     P     04 56 07.5 +0.1
      baz=271,SNR=14
SEW   Seward           46.30  40 P     P     04 56 07.5 -0.2
      baz=275
MCK   McKinley         46.35  35 IAmb  IAmb  04 56 11.1
      comp=Z,11nm,1.0s
MCK   McKinley         46.35  35 P     P     04 56 08.0 -0.1
      baz=272
PMR   Palmer           46.35  38 IAmb  IAmb  04 56 11.3
      comp=Z,17nm,1.2s
PMR   Palmer           46.35  38 P     P     04 56 07.8 -0.2
      baz=274,SNR=5.7
RND   Reindeer         46.40  35 IAmb  IAmb  04 56 11.3
      comp=Z,14nm,0.9s
D24K  Happy Valley     46.49  27 P     P     04 56 08.8 -0.3
      baz=267,SNR=6.0
WAT1  Susitna Watana   46.56  36 P     P     04 56 09.7 -0.1
      baz=273
E24K  Your Creek       46.56  29 IAmb  IAmb  04 56 13.7
      comp=Z,12nm,0.9s
E24K  Your Creek       46.56  29 P     P     04 56 09.7  0.0
      baz=268
C24K  Franklin Bluff   46.57  27 P     P     04 56 08.8 -0.8
      baz=266
KNK   Knik Glacier     46.69  38 P     P     04 56 10.6 -0.2
      baz=274
WRH   Wood River Hil   46.70  34 IAmb  IAmb  04 56 38.4
      comp=Z,6.9nm,0.5s
SML   Sawmill          46.72  37 IAmb  IAmb  04 56 14.1
      comp=Z,13nm,0.8s
SML   Sawmill          46.72  37 P     P     04 56 10.9 -0.1
      baz=274
H24K  Noodor Dome      46.77  32 IAmb  IAmb  04 56 15.4
      comp=Z,12nm,1.1s
H24K  Noodor Dome      46.77  32 P     P     04 56 11.1 -0.2
      baz=271,SNR=10.0
F24K  Squaw Lake       46.77  30 P     P     04 56 09.7 -1.6
      baz=269
PWL   Port Wells       46.79  39 P     P     04 56 10.6 -1.0
      baz=275
COLA  College          46.79  33 i P   P     04 56 13.1 +1.7
COLA                             pmax  pmax
      comp=Z,9.0nm,0.9s
COLA  College          46.79  33 P     P     04 56 11.2 -0.3
      baz=272
COLA  College          46.79  33 P     P     04 56 13.8 +2.3
G24K  Hadweenzic Riv   46.92  31 IAmb  IAmb  04 56 17.3
      comp=Z,18nm,1.2s
G24K  Hadweenzic Riv   46.92  31 P     P     04 56 12.0 -0.5
      baz=270,SNR=14
WAT6  Susitna Watana   46.95  36 P     P     04 56 12.8 -0.1
      baz=274
POKR  Poker Plat Res   46.96  33 P     P     04 56 12.4 -0.4
      baz=272,SNR=8.2
M23K  Glacier View     47.01  37 P     P     04 56 12.8 -0.4
      baz=275
DHY   Denali Highway   47.08  36 IAmb  IAmb  04 56 16.8
      comp=Z,6.3nm,0.9s
DHY   Denali Highway   47.08  36 P     P     04 56 13.6 -0.4
      baz=274
SCM   Sheep Creek Mo   47.19  37 P     P     04 56 14.4 -0.4
      baz=275,SNR=5.7
HDA   Harding Lake     47.20  34 P     P     04 56 14.7  0.0
      baz=273,SNR=13
ILAR  Eielson Array    47.21  33       P     04 56 16.2 +1.5
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ILAR  Eielson Array    47.21  33    P      P      04 56 16.3 +1.6
      comp=Z,8.8nm,0.8s,baz=268,slow=6.4,SNR=90
      comp=Z,8.8nm,0.8s
P23K  Montague Islan   47.33  40    P      P      04 56 15.3 -0.5
      baz=276
D25K  Kavik River      47.37  27    P      P      04 56 14.9 -1.1
      baz=269,SNR=15
GLI   Glacier Island   47.39  39    P      P      04 56 15.4 -0.8
      baz=276
G25K  Bearman Lake     47.47  31    P      P      04 56 15.7 -1.0
      baz=271,SNR=5.9
H25L  Birch Creek      47.60  31    P      P      04 56 17.5 -0.2
      baz=272,SNR=7.0
F25K  Christian Rive   47.63  29    IAmb   IAmb   04 56 22.4
      comp=Z,6.6nm,0.8s
F25K  Christian Rive   47.63  29    P      P      04 56 17.2 -0.9
      baz=271,SNR=7.8
E25K  Arctic Village   47.65  29    IAmb   IAmb   04 56 22.5
      comp=Z,15nm,1.2s
E25K  Arctic Village   47.65  29    P      P      04 56 16.7 -1.5
      baz=271,SNR=8.3
M24K  Tolsona, Glenn   47.71  37    P      P      04 56 18.3 -0.5
      baz=276
K24K  Donnelly Dome    47.75  35    P      P      04 56 19.1 +0.1
      baz=274
PRP   Porcupine Dome   47.75  32    IAmb   IAmb   04 56 22.6
      comp=Z,11nm,0.8s
PRP   Porcupine Dome   47.75  32    P      P      04 56 18.3 -0.8
      baz=273,SNR=15
KSM   Kuching          47.75 227    P      P      04 56 19.1 -0.4
J25K  Salcha River,    47.87  34    P      P      04 56 19.9 -0.1
      baz=274
C26K  Camden Bay       47.89  26    P      P      04 56 20.2 +0.3
      baz=270
KLU   Klutina          47.89  38    P      P      04 56 19.3 -0.8
      baz=276,SNR=6.3
Q23K  Middleton Isla   47.93  41    P      P      04 56 20.2 -0.2
      baz=278
PAX   Paxson           47.95  36    P      P      04 56 20.0 -0.7
      baz=275
BMAR  Burnt Mountain   48.05  30           P      04 56 24.1 +2.8
EYAK  Cordova Ski Ar   48.09  39    IAmb   IAmb   04 56 25.2
      comp=Z,13nm,0.9s
EYAK  Cordova Ski Ar   48.09  39    P      P      04 56 21.3 -0.2
      baz=277
HARP  HAARP            48.16  36    P      P      04 56 21.5 -0.7
      baz=276
RIDG  Independent Ri   48.16  35    IAmb   IAmb   04 56 28.7
      comp=Z,15nm,1.4s
RIDG  Independent Ri   48.16  35    P      P      04 56 22.3 +0.1
      baz=275
F26K  Sheenjek River   48.20  29    P      P      04 56 22.3 -0.2
      baz=272,SNR=22
C27K  Jago River       48.31  27    P      P      04 56 23.1 -0.1
      baz=271,SNR=8.2
PMG   Port Moresby     48.33 174    LR     LR     05 17 38.9
      comp=Z,22nm,18.1s,baz=124,slow=37
G26K  Porcupine Rive   48.38  30    IAmb   IAmb   04 56 28.2
      comp=Z,17nm,1.2s
G26K  Porcupine Rive   48.38  30    P      P      04 56 23.4 -0.3
      baz=273,SNR=7.0
N25K  Chitina, Valde   48.51  37    P      P      04 56 24.7 -0.3
      baz=277
DOT   Dot Lake         48.52  35    IAmb   IAmb   04 56 27.6
      comp=Z,6.1nm,0.9s
SCRK  Sand Creek       48.52  34    P      P      04 56 24.6 -0.5
      baz=276,SNR=20
BMRM  Bremner River    48.59  38    IAmb   IAmb   04 56 29.1
      comp=Z,13nm,0.9s
BMRM  Bremner River    48.59  38    P      P      04 56 25.4 -0.2
      baz=278
TARG  Taragay, Kyrgy   48.60 295    P      P      04 56 28.9 +2.6
TARG                                pmax   pmax
      comp=Z,5.0nm,0.9s
J26L  Joseph Creek     48.66  34    P      P      04 56 25.6 -0.5
      baz=276
I26K  Coal Creek Min   48.75  32    P      P      04 56 26.5 -0.2
      baz=275
KAIM  Kayak Island     48.83  40    P      P      04 56 27.0 -0.3
      baz=279
GLB   Gilahina Butte   48.91  38    IAmb   IAmb   04 56 31.6
      comp=Z,11nm,1.3s
VRDI  Verde Repeater   49.11  38    IAmb   IAmb   04 56 33.2
      comp=Z,8.7nm,0.9s
E27K  Coleen River     49.14  29    IAmb   IAmb   04 56 33.7
      comp=Z,9.5nm,0.8s
E27K  Coleen River     49.14  29    P      P      04 56 29.0 -0.6
      baz=274,SNR=7.1
M26K  Nabesna, AK      49.15  36    P      P      04 56 29.2 -0.6
      baz=278,SNR=8.7
G27K  Doyon Strip      49.23  30    P      P      04 56 30.3 -0.1
      baz=275
MCARA McCarthy VSAT    49.29  38    P      P      04 56 30.7 -0.1
      baz=279
D27M  Malcolm River    49.30  27    P      P      04 56 30.7 -0.1
      baz=274
H27K  Steamboat Moun   49.33  31    IAmb   IAmb   04 56 36.3
      comp=Z,7.9nm,1.0s
H27K  Steamboat Moun   49.33  31    P      P      04 56 30.5 -0.7
      baz=276,SNR=11
CRQE  Cirque           49.35  38    P      P      04 56 30.8 -0.7
      baz=279,SNR=6.9
K27K  Chicken          49.35  34    IAmb   IAmb   04 56 34.9
      comp=Z,9.5nm,0.9s
K27K  Chicken          49.35  34    P      P      04 56 30.9 -0.3
      baz=277
BGLC  Bering Glacier   49.36  39    P      P      04 56 30.6 -0.7
      baz=280
I27K  Kandik River     49.36  32    P      P      04 56 31.0 -0.4
      baz=276
WAX   Waxell Ridge     49.52  39    IAmb   IAmb   04 56 36.5
      comp=Z,11nm,0.9s
L27K  Beaver Creek,    49.59  35    IAmb   IAmb   04 56 37.1
      comp=Z,12nm,1.1s
L27K  Beaver Creek,    49.59  35    P      P      04 56 32.6 -0.6
      baz=278,SNR=17
BCAR  Beaver Creek A   49.61  35           P      04 56 33.6 +0.2
BOOM  Boomskoye usch   49.65 297    P      P      04 56 34.3 +0.2
BOOM                                IAmb   IAmb   04 56 46.9
      comp=Z,10nm,1.2s
BOOM  Boomskoye usch   49.65 297    P      P      04 56 34.3 +0.2
BOOM                                pmax   pmax
      comp=Z,10.0nm,1.2s
M27K  Edge Creek, AK   49.68  36    IAmb   IAmb   04 56 37.7
      comp=Z,9.1nm,0.9s
M27K  Edge Creek, AK   49.68  36    P      P      04 56 33.5 -0.4
      baz=279,SNR=11
F28M  Old Crow         49.84  29    IAmb   IAmb   04 56 39.1
      comp=Z,11nm,1.0s
F28M  Old Crow         49.84  29    P      P      04 56 34.5 -0.4
      baz=276,SNR=7.0
E28M  Babbage River    49.86  28    IAmb   IAmb   04 56 39.2
      comp=Z,12nm,1.1s
E28M  Babbage River    49.86  28    P      P      04 56 35.2  0.0
      baz=276
GRNC  Granite Creek    50.01  38    IAmb   IAmb   04 56 39.9
      comp=Z,11nm,1.0s
MESA  MESA             50.01  39    P      P      04 56 36.2 -0.4
      baz=281
I28M  Miner Creek      50.08  32           P      04 56 38.6 +1.7
I28M                                IAmb   IAmb   04 56 41.6
      comp=Z,7.4nm,0.8s
I28M  Miner Creek      50.08  32    P      P      04 56 36.3 -0.6
      baz=278,SNR=16
D28M  Stokes Point     50.08  27    P      P      04 56 36.5 -0.1
      baz=276
BVAR  Borovoye Array   50.13 311    P      P      04 56 38.1 +0.7
      comp=Z,1.6nm,0.4s,baz=46,slow=10,SNR=6.9
BVAR                                PcP    PcP    04 57 57.0 +0.6
      comp=Z,0.5nm,0.5s,baz=72,slow=4.8,SNR=3.7
BVAR                                LR     LR     05 18 45.3
      comp=Z,223nm,19.5s,baz=76,slow=37
      comp=Z,1.6nm,0.4s
BVCY  Beaver Creek     50.13  36    P      P      04 56 37.0 -0.3
      baz=280
CTG   Chitna Glacier   50.16  38    P      P      04 56 36.9 -0.8
      baz=280
BRVK  Borovoye         50.18 311 ceP       P      04 56 38.9 +1.2
BRVK                                pmax   pmax
      comp=Z,3.0nm,0.7s
YUK3  Moose Creek      50.43  37    P      P      04 56 39.4 -0.4
      baz=281,SNR=6.8
E29M  Blow River       50.49  28    P      P      04 56 39.8 -0.1
      baz=277,SNR=12
DAWY  Dawson           50.52  34    P      P      04 56 40.1 -0.1
      baz=280
AAK   Ala-Archa        50.60 297    LR     LR     05 19 37.4
      comp=Z,116nm,18.4s,baz=78,slow=38
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AAK   Ala-Archa        50.60 297  i P      P      04 56 42.2 +0.9
AAK                                 pmax   pmax
      comp=Z,5.0nm,0.9s
H29M  Whitestone       50.60  31    IAmb   IAmb   04 56 44.8
      comp=Z,8.1nm,1.1s
H29M  Whitestone       50.60  31    P      P      04 56 40.8  0.0
      baz=279,SNR=5.4
G29M  Pine Creek       50.64  30    P      P      04 56 41.1  0.0
      baz=278,SNR=17
O28M  Mount Upton      50.75  38    P      P      04 56 41.8 -0.5
      baz=282
I29M  Ogilvie Camp,    50.76  32    P      P      04 56 41.9 -0.1
      baz=280,SNR=9.8
YUK8  Steele Glacier   50.85  37    P      P      04 56 42.7 -0.4
      baz=282
PINM  Pinnacle         50.86  39    P      P      04 56 42.6 -0.2
      baz=282
M29M  Somme Creek      51.23  36    P      P      04 56 45.9 +0.3
      baz=282,SNR=7.3
EPYK  Eagle Plains     51.24  31    P      P      04 56 45.8 +0.2
      baz=280,SNR=15
L29M  L29M             51.24  35    P      P      04 56 45.8 +0.1
      baz=281,SNR=14
G30M  tAoh Zraii Nji   51.33  30    IAmb   IAmb   04 56 49.8
      comp=Z,16nm,0.9s
G30M  tAoh Zraii Nji   51.33  30    P      P      04 56 45.9 -0.4
      baz=280,SNR=10
YUK4  Talbot Arm       51.37  37    P      P      04 56 46.9 +0.1
      baz=282
K29M  Barlow Dome      51.37  34    IAmb   IAmb   04 56 50.6
      comp=Z,13nm,0.9s
K29M  Barlow Dome      51.37  34    P      P      04 56 46.9 +0.2
      baz=281,SNR=13
PNL   Peninsula        51.37  39    P      P      04 56 46.6 -0.1
      baz=283
F30M  Barrier River    51.39  29    P      P      04 56 46.5 -0.1
      baz=280,SNR=11
I30M  Mount Dempster   51.59  32    P      P      04 56 48.1 -0.2
      baz=281,SNR=35
YUK6  Outpost Mounta   51.59  38    P      P      04 56 49.1 +0.6
      baz=283
O29M  Mount Kennedy    51.63  38    IAmb   IAmb   04 56 53.6
      comp=Z,12nm,1.4s
O29M  Mount Kennedy    51.63  38    P      P      04 56 48.7  0.0
      baz=283
J30M  Hart River       51.73  33    P      P      04 56 49.2 -0.2
      baz=282,SNR=7.7
HYT   Haines Junctio   52.03  38           P      04 56 53.6 +2.0
HYT   Haines Junctio   52.03  38    P      P      04 56 51.3 -0.3
      baz=284,SNR=19
N30M  Aishikik Lake    52.07  37    P      P      04 56 52.3 +0.4
      baz=284
G31M  Satah River      52.09  30    IAmb   IAmb   04 56 55.0
      comp=Z,10nm,0.8s
G31M  Satah River      52.09  30    P      P      04 56 51.7 -0.2
      baz=282
INK   Inuvik           52.10  28    P      P      04 56 51.0 -0.9
      baz=281
MAYO  Mayo, Yukon      52.13  34    P      P      04 56 51.9 -0.3
      baz=283
F31M  Tsiigehtchic     52.19  29    P      P      04 56 52.5 -0.1
      baz=282
P29M  Windy Craggy     52.20  39    IAmb   IAmb   04 56 57.3
      comp=Z,12nm,1.0s
P29M  Windy Craggy     52.20  39    P      P      04 56 52.4 -0.4
      baz=284,SNR=6.2
H31M  Peel River       52.30  31    P      P      04 56 53.1 -0.4
      baz=282,SNR=29
P30M  Million Dollar   52.46  38    P      P      04 56 54.2 -0.6
      baz=285
N31M  Braeburn, Yuko   52.68  37    IAmb   IAmb   04 57 00.6
      comp=Z,14nm,0.9s
N31M  Braeburn, Yuko   52.68  37    P      P      04 56 56.3  0.0
      baz=285,SNR=6.9
COEN  Coen             52.69 180    P      P      04 56 58.4 +1.6
O30N  Mendenhall       52.71  38    P      P      04 56 56.1 -0.5
      baz=285
MTN   Manton Dam       52.73 194    P      P      04 56 57.9 +0.8
MTN                                 IAmb   IAmb   04 56 58.5
      comp=Z,16nm,1.0s
PLBC  Pleasant Camp    52.92  39    P      P      04 56 58.3 +0.2
      baz=286
M31M  Drury Creek, Y   53.13  36    IAmb   IAmb   04 57 03.4
      comp=Z,8.0nm,0.8s
M31M  Drury Creek, Y   53.13  36    P      P      04 56 59.5 -0.1
      baz=285,SNR=9.2
KK31  Karatay Array    53.16 299    IAmb   IAmb   04 57 12.3
      comp=Z,9.6nm,1.2s
KKAR  Karatay Array    53.16 299           P      04 56 59.2 -1.0
KKAR  Karatay Array    53.16 299    P      P      04 56 59.2 -1.0
WHY   Whitehorse       53.31  37    IAmb   IAmb   04 57 05.1
      comp=Z,15nm,1.0s
WHY   Whitehorse       53.31  37    P      P      04 57 01.1  0.0
      baz=286
S31K  Pelican          53.40  41    P      P      04 57 01.3 -0.4
      baz=287
SKAG  Skagway          53.43  39    P      P      04 57 02.1 +0.3
      baz=286
FARO  Faro, Yukon      53.60  35    IAmb   IAmb   04 57 06.7
      comp=Z,6.0nm,0.8s
FARO  Faro, Yukon      53.60  35    P      P      04 57 03.4 +0.3
      baz=286,SNR=8.3
A36M  Sachs Harbour    54.00  23    P      P      04 57 05.9 +0.1
      baz=286
N32M  Quiet Lake       54.02  37    P      P      04 57 06.3  0.0
      baz=287
SIT   Sitka            54.14  42    P      P      04 57 07.5 +0.4
      baz=288
P32M  Atlin            54.18  39    P      P      04 57 07.1 -0.3
      baz=288
R32K  Eaglecrest       54.18  40    P      P      04 57 07.4  0.0
      baz=288
S32K  Killisnoo        54.40  41    P      P      04 57 08.8 -0.1
      baz=288
MMPY  Sheldon Lake,    54.42  35    P      P      04 57 09.0 -0.1
      baz=287
P33M  Teslin, Yukon    54.42  38    IAmb   IAmb   04 57 13.2
      comp=Z,11nm,1.1s
P33M  Teslin, Yukon    54.42  38    P      P      04 57 09.0 -0.2
      baz=288,SNR=8.3
SVE   Sverdlovsk       54.45 318  eP       P      04 57 10.2 +0.8
SVE                                 pmax   pmax
      comp=Z,19nm,1.1s
SVE                                 MLR    MLR
      comp=Z,461nm,17.0s
Q32M  Nakina River     55.08  39    P      P      04 57 13.5 -0.6
      baz=289
C36M  Paulatuk         55.15  26    P      P      04 57 14.3 +0.1
      baz=289,SNR=7.3
R33M  Jennings River   55.57  38    P      P      04 57 17.2 -0.4
      baz=290
U33K  Whale Pass       55.60  42    P      P      04 57 17.6  0.0
      baz=290
ARTI  Arti             55.77 318           P      04 57 18.8 -0.1
ARTI  Arti             55.77 318    LR     LR     05 23 35.2
      comp=Z,421nm,18.9s,baz=77,slow=39
ARTI  Arti             55.77 318c iP       P      04 57 18.6 -0.3
ARTI                                              04 58 17.7
ARTI                                              04 59 23.1
ARTI                                S      S      05 05 02.8 -0.6
ARTI                                SS     SS     05 08 46.5 -2.0
ARTI                                pmax   pmax
      comp=Z,9.0nm,1.0s
ARTI                                MLR    MLR
      comp=Z,450nm,17.0s
ARTI  Arti             55.77 318    P      P      04 57 18.0 -0.9
ARTI                                pP     pP     04 57 27.8 -0.4
ARTI                                sP     pwP    04 57 30.9 +0.7
CRAG  Craig            55.82  43    P      P      04 57 19.1 -0.2
      baz=291
WRAK  Wrangell Islan   55.90  42    P      P      04 57 20.0 +0.3
      baz=291
KNRA  Kununurra        55.98 196    IAmb   IAmb   04 57 22.0
      comp=Z,10nm,0.8s
SIMJ  Simiganj         55.99 295           P      04 57 20.8 -0.1
SIMJ                                IAmb   IAmb   04 57 32.0
      comp=Z,10nm,0.9s
SIMJ  Simiganj         55.99 295    P      P      04 57 21.2 +0.3
SIMJ                                pP     pP     04 57 30.9 +0.6
S34M  Telegraph Cree   56.00  40    P      P      04 57 20.5  0.0
      baz=290
DZET  Dzherino         56.06 295    P      P      04 57 21.6 +0.2
DZET                                pmax   pmax
      comp=Z,10.0nm,0.7s
DLBC  Dease Lake       56.36  39    IAmb   IAmb   04 57 27.6
      comp=Z,7.2nm,1.1s
DLBC  Dease Lake       56.36  39    P      P      04 57 23.1  0.0
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      baz=291
V35K  Ketchikan        56.68  43    P      P      04 57 25.0 -0.3
      baz=292
T35M  Bob Quinn        56.78  41    P      P      04 57 25.3 -0.7
      baz=292
WRGLY Wrigley          57.56  32    IAmb   IAmb   04 57 35.2
      comp=Z,8.9nm,0.9s
WRGLY Wrigley          57.56  32    P      P      04 57 31.5 +0.1
      baz=293
AB31  Akbulak array    57.57 310           P      04 57 30.8 -1.0
AB31                                IAmb   IAmb   04 57 44.6
      comp=Z,6.6nm,0.7s
ABKAR Akbulak array    57.57 310    P      P      04 57 30.6 -1.1
ABKAR                               IAmb   IAmb   04 57 44.5
      comp=Z,6.6nm,0.7s
ABKAR Akbulak array    57.57 310           P      04 57 31.3 -0.5
BEAVL Fort Liard       58.06  36    P      P      04 57 34.7 -0.3
      baz=294
AKTO  Aktyubinsk       58.24 311    LR     LR     05 23 52.5
      comp=Z,184nm,18.4s,baz=320,slow=37
TOAD  Toad River Com   58.52  38    P      P      04 57 38.8 +0.4
      baz=294
KOTAN Kotaneelee Air   58.54  36    P      P      04 57 38.7 +0.2
      baz=294
SANVU Saraoutou        58.75 152    P      P      04 57 38.6 -1.7
SANVU                               pP     pP     04 57 48.1 -1.5
SANVU                               sP     sP     04 57 51.6 -1.5
SPITS Spitsbergen Ar   58.82 349    LR     LR     05 26 07.5
      comp=Z,82nm,18.2s,baz=3.0,slow=39
WB0   Warramunga Arr   59.00 189           P      04 57 41.8 -0.2
WRAB  Tennant Creek    59.17 189    P      P      04 57 42.7 -0.5
WRAB  Tennant Creek    59.17 189    P      P      04 57 42.7 -0.5
WRAB                                pmax   pmax
      comp=Z,20nm,1.0s
WR8   Warramunga Arr   59.17 189           P      04 57 42.7 -0.5
WRA   Warramunga Arr   59.18 189    P      P      04 57 42.6 -0.6
WRA   Warramunga Arr   59.18 189    P      P      04 57 43.3 +0.1
      comp=Z,11nm,0.6s,baz=7.3,slow=7.2,SNR=62
      comp=Z,11nm,0.6s
KIRV  Kirov            59.39 323    LR     LR     05 26 33.0
      comp=Z,98nm,18.7s,baz=45,slow=39
KIRV  Kirov            59.39 323ceP        P      04 57 44.3 +0.1
RES   Resolute Bay     60.40  15    IAmb   IAmb   04 57 53.5
      comp=Z,8.3nm,1.1s
RES   Resolute Bay     60.40  15    LR     LR     05 26 54.3
      comp=Z,35nm,19.4s,baz=44,slow=39
RES   Resolute Bay     60.40  15    P      P      04 57 47.8 -3.2
RES                                 pmax   pmax
      comp=Z,10.0nm,1.0s
YKAW3 Yellowknife Wh   61.48  31           P      04 57 59.9 +1.3
YKAW3                               IAmb   IAmb   04 58 01.2
      comp=Z,5.0nm,1.0s
YKA   Yellowknife Ar   61.52  31    P      P      04 58 00.0 +1.3
      comp=Z,2.7nm,0.9s,baz=302,slow=7.1,SNR=17
      comp=Z,2.7nm,0.9s
YKA   Yellowknife Ar   61.52  31  i P      P      04 57 59.0 +0.2
YKA                                 pmax   pmax
      comp=Z,3.0nm,0.9s
YKAW1 Yellowknife Wh   61.58  31           P      04 57 59.9 +0.7
YKAW1                               IAmb   IAmb   04 58 01.8
      comp=Z,7.7nm,1.1s
ARCES ARCESS Array B   62.56 339    LR     LR     05 30 04.4
      comp=Z,109nm,18.5s,baz=33,slow=41
KLMR  Klimovskoe       62.72 328  eP       P      04 58 04.8 -2.0
KLMR                              e*PP     pP     04 58 14.7 -1.5
KLMR                                pmax   pmax
      comp=Z,16nm,1.4s
AS31  Alice Springs    62.91 189           P      04 58 09.1 +0.6
ASAR  Alice Springs    62.91 189           P      04 58 08.5  0.0
ASAR  Alice Springs    62.91 189    P      P      04 58 08.8 +0.4
      comp=Z,5.7nm,0.7s,baz=11,slow=6.2,SNR=49
      comp=Z,5.7nm,0.7s
BELG  Belogornoye      63.16 317    LR     LR     05 27 44.5
      comp=Z,234nm,18.7s,baz=55,slow=38
NEEM  North Greenlan   63.50   3  i P      P      04 58 12.6 +0.4
NEEM                                IAmb   IAmb   04 58 14.2
      comp=Z,6.1nm,0.7s
DZM   Mont Dzumac      64.64 156  eLR      LR     05 17 41.8
      comp=Z,180nm,22.8s
DZM   Mont Dzumac      64.64 156    LR     LR     05 26 59.6
      comp=Z,68nm,19.0s,baz=17,slow=36
MSVF  Nonsavu          65.33 143    LR     LR     05 23 14.9
      comp=Z,77nm,18.6s,baz=175,slow=32
MOS   Moscow           66.36 323  eP       P      04 58 29.0 -1.7
MOS                                 pmax   pmax
      comp=Z,29nm,0.7s
B08A  Colville Reser   66.63  46           P      04 58 34.6 +2.0
B08A                                IAmb   IAmb   04 58 35.7
      comp=Z,11nm,1.3s
HOOD  Mount Hood Mea   66.92  50    P      P      04 58 38.2 +3.5
MXC   Moxie City       67.04  48    IAmb   IAmb   04 58 38.8
      comp=Z,7.9nm,0.9s
BLKN  Baker Lake       67.12  24           P      04 58 36.8 +1.4
OBN   Obninsk          67.22 323    LR     LR     05 31 29.1
      comp=Z,107nm,18.6s,baz=162,slow=39
OBN   Obninsk          67.22 323  eP       P      04 58 36.5 +0.4
OBN                               e               04 59 04.5
OBN                               e               05 01 03.6
OBN                                 pmax   pmax
      comp=Z,6.0nm,0.9s
C09A  Chrisman Ranch   67.53  46    IAmb   IAmb   04 58 41.3
      comp=Z,11nm,0.9s
FINES FINESS Array B   67.61 332    P      P      04 58 37.8 -0.7
      comp=Z,3.2nm,0.8s,baz=20,slow=8.7,SNR=10
FINES                               LR     LR     05 30 26.3
      comp=Z,183nm,20.2s,baz=54,slow=38
      comp=Z,3.2nm,0.8s
NEW   Newport          67.91  45    IAmb   IAmb   04 58 43.7
      comp=Z,6.2nm,0.9s
NEW   Newport          67.91  45    LR     LR     05 27 16.8
      comp=Z,21nm,21.4s,baz=299,slow=35
NEW   Newport          67.91  45    P      P      04 58 39.2 -1.5
NEW                                 pmax   pmax
      comp=Z,8.0nm,1.0s
J05D  Fort Rock, OR    68.28  51    IAmb   IAmb   04 58 47.3
      comp=Z,9.2nm,1.2s
SUMG  Summit           68.71   0    P      P      04 58 47.4 +1.6
SUMG                                pmax   pmax
      comp=Z,9.0nm,0.9s
SUMG  Summit           68.71   0  i P      P      04 58 46.5 +0.7
SUMG                                IAmb   IAmb   04 58 48.1
      comp=Z,7.7nm,0.9s
AKT   Akhty            68.84 307  eP       P      04 58 45.1 -1.7
AKT                               e               04 59 10.1
AKT                                 pmax   pmax
      comp=Z,14nm,1.4s
AKT                                 MLR    MLR
      comp=Z,139nm,14.0s
NUUG  Nuugaatsiaq      69.17   5  i P      P      04 58 44.1 -3.9
NUUG                                IAmb   IAmb   04 58 45.0
      comp=Z,188nm,0.3s
J08A  Circle Bar Ran   69.91  50    IAmb   IAmb   04 58 57.0
      comp=Z,10nm,1.2s
KIV   Kislovodsk       70.50 311  eP       P      04 58 56.6 -0.3
KIV                                 pmax   pmax
      comp=Z,13nm,1.0s
KIV                                 MLR    MLR
      comp=Z,106nm,17.0s
KBZ   Khabaz           70.50 311    P      P      04 58 57.3 +0.5
      comp=Z,2.9nm,0.8s,baz=321,slow=0.8,SNR=6.4
KBZ                                 LR     LR     05 34 54.5
      comp=Z,66nm,18.3s,baz=28,slow=40
      comp=Z,2.9nm,0.8s
KBZ   Khabaz           70.50 311ceP        P      04 58 56.1 -0.7
KBZ                                 pmax   pmax
      comp=Z,6.0nm,1.0s
STKA  Stephens Creek   70.53 181    LR     LR     05 29 29.0
      comp=Z,39nm,21.9s,baz=23,slow=36
SHA1  Shidzhatmaz      70.64 311  i P      P      04 58 56.7 -1.2
BEKR  Beckworth        70.75  54    IAmb   IAmb   04 59 01.7
      comp=Z,7.5nm,0.9s
MPK   Martis Peak      71.28  54    IAmb   IAmb   04 59 04.5
      comp=Z,13nm,1.2s
FFC   Flin Flon        71.42  34    P      P      04 59 03.4 +1.2
FFC                                 IAmb   IAmb   04 59 04.6
      comp=Z,11nm,0.9s
FFC   Flin Flon        71.42  34    P      P      04 59 03.4 +1.2
FFC                                 pmax   pmax
      comp=Z,11nm,1.0s
FFC   Flin Flon        71.42  34    P      P      04 59 03.6 +1.4
PAHR  Pah Rah Range    71.45  54    IAmb   IAmb   04 59 06.1
      comp=Z,8.0nm,1.0s
MNK   Minsk            71.52 326  i P      P      04 59 01.3 -1.4
MNK                               i P      P      04 59 01.3 -1.4
MNK                               i P      P      04 59 01.3 -1.4
      comp=Z,7.0nm,0.9s,baz=48
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MNK				i PP	PP	05 01 37.9	-3.1
MNK				i PPP	PPP	05 03 22.2	
MNK				i S	S	05 08 17.5	-1.7
MNK				i SS	SS	05 12 52.9	-0.6
MNK				i SSS	SSS	05 16 11.4	
MNK				i LQ	LQ	05 25 07.2	
MNK				i LR	LR	05 30 57.0	
MNK				i LRM	MLR	05 33 29.1	
	comp=Z,177nm,16.3s						
MNK				i LRM	MLR	05 33 31.1	
	comp=N,169nm,17.3s						
MNK				i LRM	MLR	05 34 07.9	
	comp=E,317nm,28.6s						
MNK	Minsk	71.52	326	i P	P	04 59 01.3	-1.4
MNK				i		05 01 37.9	
MNK				i PPP	PPP	05 03 22.2	
MNK				i S	S	05 08 17.4	-1.7
MNK				i SS	SS	05 12 52.8	-0.6
MNK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MNK				MLR	MLR		
	comp=Z,177nm,16.0s						
MNK				MLR	MLR		
	comp=N,169nm,17.0s						
MNK				MLR	MLR		
	comp=E,317nm,29.0s						
FCC	Fort Churchill	71.72	27	IAmb	IAmb	04 59 06.0	
	comp=Z,13nm,1.1s						
EGMT	Eagleton	72.03	42	IAmb	IAmb	04 59 08.8	
	comp=Z,9.0nm,1.0s						
DLMT	Dillon	72.13	46	IAmb	IAmb	04 59 09.9	
	comp=Z,7.0nm,0.9s						
ICESG	Greenland Ices	72.20	1	i P	P	04 59 08.0	+0.9
ICESG				IAmb	IAmb	04 59 09.1	
	comp=Z,8.3nm,0.8s						
HFS	Hagfors	72.77	336	P	P	04 59 10.1	-0.1
	comp=Z,2.2nm,0.7s,baz=38,slow=7.5,SNR=12						
HFS				LR	LR	05 33 32.6	
	comp=Z,160nm,20.5s,baz=31,slow=38						
	comp=Z,2.2nm,0.7s						
NB2	NORSAR Subarra	72.82	338	P	P	04 59 10.5	0.0
	comp=Z,1.1nm,0.8s,baz=37,slow=6.2						
NB2	NORSAR Subarra	72.82	338	P	P	04 59 10.4	0.0
NOA	NORSAR Array B	72.82	338	P	P	04 59 10.3	-0.2
	comp=Z,2.2nm,0.8s,baz=38,slow=5.9,SNR=9.8						
NOA				LR	LR	05 35 23.1	
	comp=Z,87nm,19.8s,baz=30,slow=39						
	comp=Z,2.2nm,0.8s						
LHV	Little Huntoon	72.86	55	IAmb	IAmb	04 59 15.2	
	comp=Z,13nm,1.0s						
NVAR	Mina Array Bea	72.88	54	P	P	04 59 13.3	+1.8
NVAR	Mina Array Bea	72.88	54	P	P	04 59 13.6	+2.0
	comp=Z,4.2nm,0.9s,baz=286,slow=6.7,SNR=23						
	comp=Z,4.2nm,0.9s						
ELK	Elko	73.39	51	LR	LR	05 29 22.7	
	comp=Z,21nm,20.0s,baz=325,slow=34						
AKASG	Malin Array Be	73.45	323	P	P	04 59 13.6	-0.7
	comp=Z,1.9nm,0.6s,baz=46,slow=5.8,SNR=14						
AKASG				LR	LR	05 34 53.6	
	comp=Z,106nm,18.6s,baz=48,slow=38						
	comp=Z,1.9nm,0.6s						
AKASG	Malin Array Be	73.45	323	i P	P	04 59 14.3	0.0
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKBB	Malin Array Si	73.45	323	ceP	P	04 59 14.2	-0.1
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AK01	Malin Array Si	73.46	323	P	P	04 59 14.6	+0.2
AK09	Malin Array Si	73.48	322	P	P	04 59 15.0	+0.5
AK02	Malin Array Si	73.49	323	P	P	04 59 14.9	+0.4
AK11	Malin Array Si	73.49	323	P	P	04 59 15.1	+0.5
AK15	Malin Array Si	73.50	323	P	P	04 59 15.1	+0.5
SFJD	Kangerlussuaq	73.82	5	LR	LR	05 33 55.8	
	comp=Z,86nm,19.9s,baz=350,slow=38						
H17A	Grant Village	73.86	46	IAmb	IAmb	04 59 22.1	
	comp=Z,9.6nm,1.0s						
TPAW	Teton Pass	74.21	47	IAmb	IAmb	04 59 23.2	
	comp=Z,14nm,1.5s						
FRB	Frobisher Bay	74.59	14	LR	LR	05 36 11.9	
	comp=Z,64nm,19.2s,baz=334,slow=39						
LUBAR	Lubar, Ukraine	74.67	323	P	P	04 59 21.0	-0.5
HWUT	Hardware Ranch	75.04	48	IAmb	IAmb	04 59 27.6	
	comp=Z,10nm,1.2s						
DUG	Dugway, Tooele	75.19	50	IAmb	IAmb	04 59 28.3	
	comp=Z,6.4nm,0.9s						
DUG	Dugway, Tooele	75.19	50	P	P	04 59 26.6	+1.7
DUG				pmax	pmax		
	comp=Z,8.0nm,1.1s						
QSM	Queen of Sheba	75.28	56	IAmb	IAmb	04 59 28.4	
	comp=Z,8.5nm,1.0s						
TCUT	Toone Canyon	75.44	49	IAmb	IAmb	04 59 29.7	
	comp=Z,5.7nm,0.8s						
PDAR	Pinedale Array	75.46	46	P	P	04 59 27.1	+0.6
PDAR	Pinedale Array	75.46	46	P	P	04 59 28.1	+1.6
	comp=Z,1.7nm,0.7s,baz=256,slow=1.1,SNR=15						
	comp=Z,1.7nm,0.7s						
SORM	Soroca	75.60	321	P	P	04 59 26.7	-0.2
	comp=Z,11nm,1.4s						
BORG	Borgarnes	75.84	353	LR	LR	05 34 53.3	
	comp=Z,21nm,18.7s,baz=30,slow=37						
MPU	Maple Canyon	76.01	50	IAmb	IAmb	04 59 32.9	
	comp=Z,6.9nm,1.0s						
KMPD	K-Podol'skiy	76.22	322	P	P	04 59 30.3	-0.1
LCMT	Little Creek M	76.92	53	IAmb	IAmb	04 59 38.4	
	comp=Z,7.0nm,1.0s						
Q16A	Castle Valley	76.98	50	IAmb	IAmb	04 59 38.7	
	comp=Z,7.8nm,1.1s						
PFO	Pinyon Flats O	76.98	57	LR	LR	05 25 20.1	
	comp=Z,42nm,20.9s,baz=252,slow=29						
KNB	Kanab	77.18	53	IAmb	IAmb	04 59 40.1	
	comp=Z,9.1nm,1.1s						
KWP	Kalwaria Pacla	77.20	325	P	P	04 59 37.2	+1.2
	comp=Z,14nm,2.0s						
ULM	Lac du Bonnet	77.22	34	P	P	04 59 35.5	-0.5
	comp=Z,6.0nm,1.0s,baz=286,slow=3.8,SNR=3.8						
	comp=Z,6.0nm,1.0s						
SRU	San Rafael Swe	77.25	50	IAmb	IAmb	04 59 39.6	
	comp=Z,9.6nm,0.8s						
TESR	Tescani	77.56	321	P	P	04 59 38.3	+0.3
	comp=Z,13nm,1.4s						
RSSD	Black Hills	77.59	43	P	P	04 59 38.9	+0.4
RSSD	Black Hills	77.59	43	P	P	04 59 38.9	+0.4
RSSD				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HMU	Henry Mountain	77.87	51	IAmb	IAmb	04 59 43.3	
	comp=Z,10nm,0.9s						
U15A	North Rim	77.88	53	IAmb	IAmb	04 59 44.1	
	comp=Z,9.3nm,1.2s						
O20A	White River Ci	77.92	48	IAmb	IAmb	04 59 43.6	
	comp=Z,9.6nm,1.3s						
BRTR	Keskin Array B	78.41	312	P	P	04 59 42.8	-0.3
BRTR	Keskin Array B	78.41	312	P	P	04 59 42.4	-0.6
	comp=Z,0.9nm,0.8s,baz=81,slow=7.6,SNR=7.8						
BRTR				LR	LR	05 39 38.6	
	comp=Z,74nm,19.0s,baz=324,slow=40						
	comp=Z,0.9nm,0.8s						
BRTR	Keskin Array B	78.41	312	i P	P	04 59 43.4	+0.4
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BR104	Keskin Array S	78.42	312	P	P	04 59 43.6	+0.5
	comp=Z,2.5nm,1.1s						
PV21	Cone Mtn., Par	78.52	49	IAmb	IAmb	04 59 46.9	
	comp=Z,9.8nm,0.8s						
EPLO	Experimental L	78.58	34	IAmb	IAmb	04 59 45.3	
	comp=Z,9.4nm,0.9s						
PV14	Lion Creek, Pa	78.62	50	IAmb	IAmb	04 59 47.4	
	comp=Z,13nm,1.0s						
PV22	Blue Mesa, Par	78.65	49	IAmb	IAmb	04 59 47.5	
	comp=Z,8.6nm,1.0s						
PV04	Paradox Valley	78.67	50	IAmb	IAmb	04 59 47.8	
	comp=Z,8.1nm,0.9s						
PV16	Nyswonger Mesa	78.72	50	IAmb	IAmb	04 59 48.0	
	comp=Z,7.2nm,0.9s						
PV11	David Mesa, Pa	78.75	50	IAmb	IAmb	04 59 48.3	
	comp=Z,10.0nm,0.9s						
PV12	Saucer Basin,	78.78	50	IAmb	IAmb	04 59 59.8	
	comp=Z,13nm,1.2s						
PV03	Paradox Valley	78.80	50	IAmb	IAmb	04 59 48.4	
	comp=Z,6.3nm,0.9s						
PV13	Radium Mtn., P	78.88	50	IAmb	IAmb	04 59 48.9	
	comp=Z,14nm,1.0s						
PV02	Paradox Valley	78.89	50	IAmb	IAmb	04 59 49.7	
	comp=Z,8.9nm,0.8s						
LANS	Liptovska Anna	78.99	326	eP	P	04 59 48.3	+2.4
LANS	Liptovska Anna	78.99	326	eP	P	04 59 48.3	+2.4
WUAZ	Wupatki	79.04	53	IAmb	IAmb	04 59 50.1	
	comp=Z,7.1nm,1.1s						
MORC	Moravsky Berou	79.34	327	eP	P	04 59 48.6	+0.8
MORC				e		05 00 00.0	
MORC	Moravsky Berou	79.34	327	P	P	04 59 49.1	+1.3
MORC				pmax	pmax		
	comp=Z,5.0nm,1.7s						
VYHS	Vyhne	79.76	326	eP	P	04 59 51.0	+0.9
BRG	Berggiesshubel	79.94	330	eP	P	04 59 51.7	+0.7
	comp=Z,5.1nm,1.2s,baz=38,slow=4.4						
BRG	Berggiesshubel	79.94	330	eP	P	04 59 51.6	+0.6
BRG				Amp		04 59 53.1	
	comp=Z,5.1nm,1.2s						
CLL	Collm	79.96	331	ePx	Px	04 59 50.0	
	comp=Z,5.0nm,1.0s						
CLL				i pP	sP	05 00 02.6	-1.6
JAVC	Velka Javorina	79.98	327	eP	P	04 59 53.1	+1.8
VRAC	Vranov	80.09	328	LR	LR	05 38 22.3	
	comp=Z,149nm,19.5s,baz=45,slow=38						
VRAC	Vranov	80.09	328	eP	P	04 59 52.7	+0.8
VRAC				e		05 00 04.1	
F33A	5 Mile Ranch,	80.26	38	IAmb	IAmb	04 59 54.9	
	comp=Z,6.5nm,0.8s						
KRUC	Moravsky	80.37	328	eP	P	04 59 54.0	+0.7
BZS	Buzias	80.64	323	P	P	04 59 55.5	+0.6
BZS				pmax	pmax		
	comp=Z,4.0nm,1.5s						
ASF	Jabal al Asfar	81.37	304	LR	LR	05 40 44.3	
	comp=Z,50nm,18.3s,baz=93,slow=39						
ROTZ	Rotzenmuhle	81.50	330	eP	P	05 00 01.2	+1.8
	comp=Z,4.4nm,1.9s,baz=38,slow=4.4						
GERES	GERESS Array B	81.64	329	P	P	05 00 01.0	+0.7
	comp=Z,0.4nm,0.7s,baz=27,slow=5.4,SNR=2.2						
GERES				LR	LR	05 39 17.8	
	comp=Z,144nm,19.8s,baz=70,slow=38						
	comp=Z,0.4nm,0.7s						
GERES	GERESS Array B	81.64	329	P	P	05 00 01.0	+0.7
EKA	Eskdalemuir Ar	81.66	341	P	P	05 00 01.0	+0.9
	comp=Z,0.9nm,0.7s,baz=46,slow=4.8,SNR=2.5						
	comp=Z,0.9nm,0.7s						
EKA	Eskdalemuir Ar	81.66	341	P	P	05 00 01.0	+0.9
WET	Wettzell	81.73	329	eP	P	05 00 01.4	+0.8
	comp=Z,3.9nm,1.1s,baz=38,slow=4.4						
MMAI	Mount Meron Ar	81.77	306	P	P	05 00 00.9	-0.3
	comp=Z,1.6nm,0.8s,baz=32,slow=8.1,SNR=5.0						
MMAI				LR	LR	05 40 35.6	
	comp=Z,58nm,18.2s,baz=48,slow=39						
	comp=Z,1.6nm,0.8s						
GRF	Grafenberg Arr	81.94	331	eP	P	05 00 03.1	+1.4
	comp=Z,13nm,1.3s,baz=38,slow=4.4						
GRF				epP	sP	05 00 15.3	+0.4
ANMO	Albuquerque	82.43	51	P	P	05 00 06.3	+1.5
ANMO	Albuquerque	82.43	51	P	P	05 00 07.2	+2.4
	comp=Z,3.5nm,0.9s,baz=36,slow=7.4,SNR=7.9						
	comp=Z,3.5nm,0.9s						
RJOB	Jochberg	82.89	329	eP	P	05 00 08.2	+1.4
	comp=Z,3.4nm,0.8s,baz=38,slow=4.4						
SCHQ	Schefferville	83.12	17	LR	LR	05 40 10.9	
	comp=Z,33nm,19.4s,baz=288,slow=38						
BFO	Black Forest	84.14	331	P	P	05 00 13.4	+0.2
BFO	Black Forest	84.14	331	P	P	05 00 13.4	+0.2
BFO				pmax	pmax		
	comp=Z,15nm,1.4s						
BFO	Black Forest	84.14	331	eP	P	05 00 13.9	+0.7
	comp=Z,8.8nm,1.2s,baz=38,slow=4.4						
PDG	Podgorica	84.15	322	P	P	05 00 13.3	0.0
EIL	Elat	84.27	304	LR	LR	05 40 55.7	
	comp=Z,51nm,19.5s,baz=68,slow=38						
PPT	Papeete	84.49	118	LR	LR	05 31 05.3	
	comp=Z,76nm,21.7s,baz=314,slow=31						
PPT2	Papeete2	84.51	118	eLR	LR	05 26 53.0	
	comp=Z,131nm,22.8s						
PPT2				eLR	LR	05 27 01.3	
	comp=Z,152nm,25.0s						
FUORN	Ofenpass-Fuorn	84.81	329	P	P	05 00 17.3	+0.5
DAVOX	Davos/Dischmat	84.83	330	LR	LR	05 40 28.4	
	comp=Z,87nm,19.5s,baz=85,slow=37						
VHRN	Van Horn	86.17	53	IAmb	IAmb	05 00 26.5	
	comp=Z,4.5nm,1.1s						
P38A	Dawn	86.25	40	IAmb	IAmb	05 00 26.1	
	comp=Z,5.9nm,0.8s						
LPIG	La Paz	87.21	61	LR	LR	05 33 33.5	
	comp=Z,27nm,19.9s,baz=208,slow=31						
R40A	Maddies Statio	87.91	40	IAmb	IAmb	05 00 33.7	
	comp=Z,5.4nm,0.8s						
TXAR	Lajitas Array	88.00	53	P	P	05 00 31.6	-1.0
TXAR	Lajitas Array	88.00	53	P	P	05 00 31.6	-1.0
TBI	Tubuai	88.55	122	eLR	LR	05 28 48.2	
	comp=Z,615nm,31.0s						
CCM	Cathedral Cave	88.60	40	P	P	05 00 36.0	+0.8
CCM	Cathedral Cave	88.60	40	P	P	05 00 36.0	+0.8
CCM				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BRDY	Brady	89.45	49	IAmb	IAmb	05 00 41.8	
	comp=Z,8.2nm,1.3s						
FCAR	Ozark Folk Cen	89.82	42	IAmb	IAmb	05 00 42.7	
	comp=Z,5.7nm,1.1s						
VAE	Valguarnera	90.34	321	LR	LR	05 45 46.0	
	comp=Z,47nm,19.0s,baz=121,slow=38						
TKL	Tuckaleechee C	94.11	36	LR	LR	05 45 16.7	
	comp=Z,30nm,21.6s,baz=353,slow=37						
ESDC	Sonseca Array	96.02	335	P	P	05 01 10.2	+0.7
	comp=Z,0.5nm,0.8s,baz=58,slow=3.2,SNR=2.8						
ESDC				LR	LR	05 51 50.6	
	comp=Z,55nm,19.3s,baz=27,slow=40						
	comp=Z,0.5nm,0.8s						
QSPA	South Pole Qui	128.74	180	PKP	PKPdf	05 06 47.4	-0.9
	comp=Z,0.7nm,0.5s,baz=263,slow=1.4,SNR=9.1						
SNAA	Sanae	142.97	197	PKhKP	PKPpre	05 07 10.7	
	comp=Z,2.5nm,0.7s,baz=86,slow=3.8,SNR=12						
LPAZ	La Paz	144.68	59	PKP	PKPbc	05 07 19.5	+0.6
	comp=Z,2.5nm,0.8s,baz=339,slow=4.0,SNR=10						

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*IDC **15** 04:52:15.7±0.7, 26°.90N×140°.54E, h414km±7km, mb3.2/14, mbtmp4.0/15, Error ellipse: s-maj=20.6km s-min=15.3km az=78.0*

*JMA **15** 04:52:19.6±0.2, 27°N±2°×14°1E±°, h423km, MV4.8/23, W OFF OGASAWARA*

ISC 15 04:52:15.4±0.7**, 26°.92N**±0°.09×**140°.2E**±0°.1**, h400**km**, n27,** σ**2s.12**/32**, mb3.6**/15**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.79	84	eP	Pn	04 53 13.4	+3.4
CBIJ				S	S	04 53 56.0	+1.8
JCJ	Chichijima	1.79	84	P	Pn	04 53 11.9	+1.9
	98nm,0.3s,baz=356,slow=20,SNR=28						
JCJ				S	S	04 53 53.8	-0.5
	145nm,0.4s,baz=267,slow=22,SNR=7.1						
JHH2	Haha-jima-NKT2	1.79	99	eP	Pn	04 53 14.2	+4.1
JHH2				eS	S	04 53 57.2	+2.9
BSO3	Boso 3	7.87	2	eP	P	04 54 11.2	+2.4
JIE	Ise	8.03	339	eP	P	04 54 16.6	+5.6
JNY	Yasuok	8.65	347	eP	P	04 54 22.4	+4.4
JRY	Ryogami san	9.14	353	eP	Pn	04 54 26.2	+2.8
JAG	Ashikaga	9.50	356	eP	P	04 54 28.5	+1.1
JAG				eS	S	04 56 12.0	-3.9
JHO	Hitachi	9.67	2	eP	Pn	04 54 31.0	+1.5
MJAR	Matsushiro Arr	9.74	351	P	Pn	04 54 31.6	+1.3
	1.3nm,0.4s,baz=172,slow=8.6,SNR=4.2						
WRA	Warramunga Arr	46.92	188	P	P	05 00 07.4	-0.6
	1.5nm,0.7s,baz=5.1,slow=7.6,SNR=6.4						
	1.5nm,0.7s						
ZALV	Zalesovo Beam	48.47	319	P	P	05 00 19.8	+0.6
	0.8nm,0.3s,baz=116,slow=3.4,SNR=3.3						
ZALV				PcP	PcP	05 01 37.1	-1.2
	0.8nm,0.3s,baz=132,slow=4.1,SNR=2.7						
	0.8nm,0.3s						
MKAR	Makanchi Array	49.22	310	P	P	05 00 26.4	+1.3
	0.4nm,0.5s,baz=86,slow=10,SNR=4.7						
MKAR				PcP	PcP	05 01 40.8	-0.5
	0.3nm,0.6s,baz=76,slow=10,SNR=2.9						
	0.4nm,0.5s						
ASAR	Alice Springs	50.65	187	P	P	05 00 35.4	-0.5
	0.4nm,0.8s,baz=13,slow=6.4,SNR=1.5						
	0.4nm,0.8s						
KURBB	Kurchatov Arra	51.90	315	P	P	05 00 45.8	+1.1
	1.1nm,0.3s,baz=91,slow=8.3,SNR=5.4						
	1.1nm,0.3s						
BVAR	Borovoye Array	56.97	317	P	P	05 01 21.6	+0.9
	1.5nm,0.4s,baz=81,slow=7.9,SNR=4.8						
	1.5nm,0.4s						
ILAR	Eielson Array	58.72	29	P	P	05 01 31.1	-1.4
	0.4nm,0.5s,baz=254,slow=5.9,SNR=6.3						
	0.4nm,0.5s						
ARCES	ARCESS Array B	73.12	340	P	P	05 03 03.3	+0.2
	1.4nm,0.8s,baz=61,slow=6.0,SNR=1.7						
	1.4nm,0.8s						
YKA	Yellowknife Ar	73.14	28	P	P	05 03 01.9	-1.3
	0.5nm,0.7s,baz=296,slow=6.4,SNR=5.5						
	0.5nm,0.7s						
FINES	FINESS Array B	77.32	333	P	P	05 03 26.3	-0.4
	3.0nm,0.3s,baz=66,slow=4.9,SNR=51						
	3.0nm,0.3s						
AKASG	Malin Array Be	81.70	323	P	P	05 03 49.8	-0.5
	1.0nm,0.4s,baz=52,slow=5.1,SNR=7.1						
	1.0nm,0.4s						
NVAR	Mina Array Bea	82.02	51	P	P	05 03 51.1	-1.4
	0.4nm,0.6s,baz=290,slow=4.8,SNR=3.7						
	0.4nm,0.6s						
HFS	Hagfors	82.88	336	P	P	05 03 54.7	-1.4
	0.9nm,0.5s,baz=124,slow=2.7,SNR=7.1						
	0.9nm,0.5s						
NB2	NORSAR Subarra	83.11	338	P	P	05 03 55.8	-1.6
	comp=Z,0.4nm,0.5s,baz=51,slow=4.6						
NOA	NORSAR Array B	83.11	338	P	P	05 03 56.2	-1.2
	comp=Z,0.5nm,0.5s,baz=47,slow=4.8,SNR=4.0						
	comp=Z,0.5nm,0.5s						
TXAR	Lajitas Array	97.12	52	P	P	05 05 00.3	-3.5
	comp=Z,0.4nm,0.3s,baz=325,slow=8.4,SNR=6.6						
QSPA	South Pole Qui	116.69	180	PKP	PKPdf	05 10 10.7	-1.4
	comp=Z,0.3nm,0.5s,baz=320,slow=2.3,SNR=1.0						

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*GCG **15** 04:53:43.7±1.6, 14°.17N×93°.09W, h21km±10km, MD4.3, ML3.8*

*MEX **15** 04:53:43.7±0.6, 14°.20N×93°.34W, h16km±162km, MD4.1*

*CATAC **15** 04:53:46.3±0.7, 14°N±3°×9°3W±°, h1km, M3.6/10, MLv3.6/10, Error ellipse: s-maj=9.9km s-min=6.6km az=76.2, confirmed*

ISC 15 04:53:33.0±1.7**, 13°.84N**±0°.06×**93°.41W**±0°.04**, h15**km±12km**, n35,** σ**1s.81**/47**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.54	46	eP	Pg	04 54 03.0	+0.4
THIG				eS	Sn	04 54 16.8	-2.7
THIG		1.54	46	i P	Pg	04 54 03.4	+0.9
THIG				i S	Sn	04 54 15.9	-3.6
THIG				IAML		04 54 20.1	
	comp=E,2μm,0.4s						
SMCA	Catarina	1.64	52	eP	Pg	04 54 05.0	+0.4
PATR	El Naranjo	1.71	42	eP	Pg	04 54 05.1	-0.7
PATR				eS	Sn	04 54 22.3	-1.8
PAVE	Pavencul	1.80	42	eP	Pb	04 54 06.5	+0.6
PAVE				eS	Sn	04 54 24.5	-1.9
RTAL	Retalhuleu	1.80	68	eP	Pg	04 54 08.5	+0.9
RTAL				eS	Sb	04 54 27.3	-0.8
RTAL	Retalhuleu	1.80	68	P	Pg	04 54 07.8	+0.3
PCIG		1.86	6	eP	Pb	04 54 06.9	+0.2
PCIG				eS	Sn	04 54 22.6	-4.9
STG8	El Palmar, Qui	2.09	73	i P	Pb	04 54 10.6	-0.2
STG8				i S	Sn	04 54 32.4	-1.2
STG0	El Palmar, Qui	2.09	74	eP	Pb	04 54 10.4	-0.4
STG0				IAML		04 54 41.2	
	comp=E,1μm,0.2s						
HUEH	Huehuetenango	2.36	51	eP	Pb	04 54 14.6	-0.8
HUEH				eS	Sn	04 54 40.2	-0.1
HUEH	Huehuetenango	2.36	51	IAML		04 54 50.3	
	comp=E,1μm,0.5s						
HUEH	Huehuetenango	2.36	51	S	Sn	04 54 41.6	+1.3
HUEH	Huehuetenango	2.36	51	P	Pb	04 54 15.8	+0.4
CCIG	Comitan	2.72	27	eP	Pb	04 54 22.0	+0.5
CCIG				eS	Sn	04 54 50.3	+1.3
CCIG	Comitan	2.72	27	i P	Pb	04 54 21.6	+0.1
CCIG				i S	Sn	04 54 51.8	+2.7
CCIG				IAML		04 54 54.4	
	comp=N,446nm,0.6s						
CCIG	Comitan	2.72	27	S	Sn	04 54 52.4	+3.3
CCIG	Comitan	2.72	27	P	Pb	04 54 22.5	+1.0
FG8	Yepocapa, Chim	2.80	81	i P	Pn	04 54 18.0	+0.6
FG16	Alotenango, Sa	2.85	81	i P	Pn	04 54 19.4	+1.3
TGIG		2.93	5	eP	Pb	04 54 24.3	-0.7
TGIG				eS	Sn	04 54 55.0	+0.8
TGIG		2.93	5	i P	Pb	04 54 24.3	-0.7
TGIG				i S	Sn	04 54 55.6	+1.4
TGIG				IAML		04 54 58.1	
	comp=E,225nm,0.4s						
HUIG	Huatulco	3.23	307	eP	Pb	04 54 28.3	-1.8
HUIG				eS	Sn	04 54 58.9	-2.6
FAME	Alcaldia de Sa	3.30	90	P	Pb	04 54 31.0	-0.3
FAME	Alcaldia de Sa	3.30	90	S	Sn	04 55 05.5	+2.3
SLOZ	Alcaldia de Sa	3.53	87	P	Pb	04 54 35.0	-0.3
NUBE	Las Nubes	3.53	89	eP	Pb	04 54 34.1	-1.2
NUBE	Las Nubes	3.53	89	P	Pb	04 54 34.6	-0.7
NUBE	Las Nubes	3.53	89	S	Sn	04 55 11.5	+2.4
JAYA	Jayaque - finc	3.86	92	P	Pb	04 54 38.7	-2.2
JAYA	Jayaque - finc	3.86	92	S	Sn	04 55 16.9	-0.3
MTO3	Montecristo	3.97	82	P	Pb	04 54 41.9	-0.9
PEIG	Puerto Escondi	4.20	301	eP	Pb	04 54 46.1	-0.5
PEIG				eS	Sn	04 55 29.2	+3.9
IZABA	Izabal, Puerto	5.03	68	P	Pb	04 54 57.6	-3.2
PNIG	Pinotepa	5.21	300	eP	Pb	04 54 60.0	-3.9

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*CATAC **15** 05:20:25.2±0.2, 12°N±2°×8°8W±°, h50km, M3.1/33, MLv3.1/33, Error ellipse: s-maj=5.9km s-min=1.7km az=28.7, confirmed*

*SNET **15** 05:20:26.1±0.7, 12°.51N×87°.97W, h27km±3km, ML2.9*

ISC 15 05:20:24.9±1.3**, 12°.43N**±0°.06×**87°.84W**±0°.04**, h54**km±20km**, n75,** σ**0s.50**/97**, 7C-14D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POTN	Potosi Cosigui	0.66	30	⇓P	Pn	05 20 38.2	-0.2
POTN				S	Sn	05 20 47.9	-0.2
CRIN	San Cristobal	0.82	70	S	Sn	05 20 53.4	+1.5
CRIN	San Cristobal	0.82	70	⇓P	Pn	05 20 40.9	+0.5
CNCH	Conchagua	0.85	0	eP	Pn	05 20 40.9	0.0
CNCH				eS	Sn	05 20 52.8	+0.2
CNCH	Conchagua	0.85	0	P	Pn	05 20 40.9	0.0
PKGN	Cerro Pekin	0.88	74	⇓P	Pn	05 20 41.5	+0.3
PKGN				S	Sn	05 20 53.7	+0.7
LCND	La Caada	0.88	357	eP	Pn	05 20 41.3	+0.1
LCND				IAML		05 20 56.1	
	comp=Z,571nm,0.3s						
LCND	La Caada	0.88	357	P	Pn	05 20 41.2	+0.1
LCND	La Caada	0.88	357	S	Sn	05 20 53.1	-0.1
QUEN	Al S del Volca	0.98	80	P	Pn	05 20 42.7	+0.2
TEL3	Telica 3	0.98	81	⇓P	Pn	05 20 42.5	-0.1
TELN	Telica	1.00	80	⇓P	Pn	05 20 41.2	-1.6
TELN				S	Sn	05 20 55.8	-0.4
HERN	Volcan Telica	1.00	79	S	Sn	05 20 56.3	+0.1
HERN	Volcan Telica	1.00	79	⇓P	Pn	05 20 42.8	0.0
HOYN	Al Sur del Vol	1.00	80	⇑P	Pn	05 20 42.9	0.0
HOYN				S	Sn	05 20 56.3	+0.2
POLN	Al Sur del Vol	1.03	77	⇓P	Pn	05 20 42.2	-0.9
POLN				S	Sn	05 20 55.9	-0.7
CNRM	Centro Naciona	1.09	343	P	Pn	05 20 44.0	0.0
CNRM	Centro Naciona	1.09	343	S	Sn	05 20 57.6	-0.5
CNGA	Al SSO del Vol	1.11	86	⇓P	Pn	05 20 44.3	0.0
CNGA				S	Sn	05 20 58.1	-0.6
CNGN	Cerro Negro	1.12	86	S	Sn	05 20 58.9	0.0
CNGN	Cerro Negro	1.12	86	⇓P	Pn	05 20 44.2	-0.2
PACA	Pacayal	1.14	336	eP	Pn	05 20 44.9	+0.1
PACA				eS	Sn	05 20 59.4	-0.1
PACA	Pacayal	1.14	336	P	Pn	05 20 45.0	+0.2
ALJI	Alcalda de J	1.15	322	eP	Pn	05 20 44.5	-0.2
ALJI				eS	Sn	05 20 58.2	-1.2
ALJI	Alcalda de J	1.15	322	P	Pn	05 20 44.5	-0.2
ALJI	Alcalda de J	1.15	322	S	Sn	05 20 59.3	-0.1
COPN	Copaltepe	1.24	101	⇓P	Pn	05 20 45.9	-0.1
TECA	Tecapa	1.24	329	eP	Pn	05 20 46.4	+0.1
TECA				eS	Sn	05 21 02.4	+0.3
MOMN	Momotombo	1.27	91	⇓P	Pn	05 20 46.3	-0.2
MOMN				S	Sn	05 21 02.1	-0.4
MOM2	El Cardon	1.32	89	⇓P	Pn	05 20 47.2	+0.1
MOM2				S	Sn	05 21 03.7	-0.1
AMTN	Mateare	1.39	98	S	Sn	05 21 05.4	0.0
SAPS	Ciudad Sandino	1.43	100	S	Sn	05 21 06.0	-0.2
SAPS	Ciudad Sandino	1.43	100	P	Pn	05 20 48.3	-0.2
TECO	Alcaldia de Te	1.44	320	eP	Pn	05 20 48.2	-0.4
TECO				eS	Sn	05 21 05.5	-1.0
TECO	Alcaldia de Te	1.44	320	P	Pn	05 20 48.3	-0.4
APQ3	Volcan Apoyequ	1.45	96	P	Pn	05 20 48.9	+0.1
APQ3				S	Sn	05 21 06.7	0.0
APQ2	Apoyeque	1.50	99	P	Pn	05 20 49.1	-0.4
APQ2				S	Sn	05 21 08.0	0.0
UESV	Universidad de	1.52	323	eP	Pn	05 20 49.9	+0.1

UESV	Universidad de	1.52	323	S	Sn	05 21 08.6	+0.1
UESV	Universidad de	1.52	323	P	Pn	05 20 49.7	-0.1
ABCN	Banco Central	1.53	101	S	Sn	05 21 08.3	-0.4
SCLA	Alcaldia de Sa	1.54	326	*e*P	Pn	05 20 50.5	+0.5
SCLA	Alcaldia de Sa	1.54	326	S	Sn	05 21 10.1	+1.1
SCLA	Alcaldia de Sa	1.54	326	P	Pn	05 20 50.6	+0.5
COEG	Centro de Oper	1.56	320	*e*P	Pn	05 20 50.2	-0.3
COEG				IAML		05 21 15.3	
	comp=Z,125nm,0.3s						
COEG	Centro de Oper	1.56	320	P	Pn	05 20 50.1	-0.3
COEG	Centro de Oper	1.56	320	S	Sn	05 21 10.1	+0.5
TISN	Laguna Tiscapa	1.56	100	⇑P	Pn	05 20 49.6	-0.7
UNAN	Cigeo UNAN	1.57	101	⇓P	Pn	05 20 50.7	+0.3
UNAN				S	Sn	05 21 09.3	-0.3
LIMN	Finca el Limon	1.57	66	⇑P	Pn	05 20 50.3	-0.2
MGAN	Managua	1.58	100	P	Pn	05 20 50.4	-0.2
MGAN	Managua	1.58	100	S	Sn	05 21 09.7	-0.3
WILN	Americas 2	1.64	99	P	Pn	05 20 50.5	-0.9
WILN				S	Sn	05 21 11.3	0.0
MAS3	Al N del Volca	1.68	104	⇑P	Pn	05 20 52.0	+0.1
MAS3				S	Sn	05 21 11.3	-1.1
TGUH	Tegucigalpa,Un	1.71	19	⇓P	Pn	05 20 53.1	+0.5
TGUH				S	Sn	05 21 12.6	-0.8
NANN	Nandasmo	1.75	106	S	Sn	05 21 14.7	+0.6
NANN	Nandasmo	1.75	106	⇑P	Pn	05 20 54.1	+1.2
LOMA	Loma Larga	1.77	313	*e*P	Pn	05 20 53.3	-0.1
LOMA				*e*S	Sn	05 21 14.9	0.0
LOMA	Loma Larga	1.77	313	P	Pn	05 20 53.3	-0.1
LOMA	Loma Larga	1.77	313	S	Sn	05 21 15.1	+0.1
PMON	Piamonte	1.92	312	S	Sn	05 21 19.3	+0.8
RCVN	Varillal2	1.98	54	S	Sn	05 21 20.2	+0.4
RCVN	Varillal2	1.98	54	⇑P	Pn	05 20 56.8	+0.6
JAYA	Jayaque - finc	1.99	308	*e*P	Pn	05 20 56.0	-0.3
JAYA				*e*S	Sn	05 21 19.8	-0.4
JAYA				IAML		05 21 27.5	
	comp=Z,93nm,0.2s						
JAYA	Jayaque - finc	1.99	308	P	Pn	05 20 56.4	+0.1
JAYA	Jayaque - finc	1.99	308	S	Sn	05 21 20.2	0.0
RCPN	Sur Rio San Ju	2.02	57	⇑P	Pn	05 20 56.4	-0.3
BOAB	BOACO BROADBAN	2.12	89	P	Pn	05 20 57.7	-0.3
BOAB	BOACO BROADBAN	2.12	89	S	Sn	05 21 22.8	-0.5
NUBE	Las Nubes	2.39	308	*e*P	Pn	05 21 01.5	-0.3
NUBE				*e*S	Sn	05 21 29.2	-0.9
NUBE	Las Nubes	2.39	308	S	Sn	05 21 30.4	+0.3
NUBE	Las Nubes	2.39	308	P	Pn	05 21 02.3	+0.5
MTO3	Montecristo	2.46	323	*e*P	Pn	05 21 03.0	+0.3
MTO3	Montecristo	2.46	323	P	Pn	05 21 02.9	+0.1
CMARA	Lajas Hojancha	3.37	135	P	Pn	05 21 15.8	+0.7

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*NEIC **15** 05:25:37.0±0.6, 34°.099N±0°.008×116°.928W±0°.009, h7^{km}±3^{km}, Error ellipse: s-maj=1.1km s-min=1.0km az=196.0*

PAS 15 05:25:37.5±0.7**, 34°.100N**±0°.007×**116°.928W**±0°.009**, h5**^{km}±1^{km}**, ML3.0**/204**, ML2.8**/52(NEIC)**, Error ellipse: s-maj=1.1km s-min=1.0km az=212.0, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVD	Seven Oaks Dam	0.14	273		Pg	05 25 42.9	+2.5
BBRC	Big Bear Solar	0.16	2		Pg	05 25 40.8	-0.1
BBRC					Sg	05 25 43.4	+0.4
CFT	Crafton Hills	0.17	247		Pg	05 25 41.1	+0.3
CFT					Sg	05 25 43.8	+0.8
BBSC	Beaumont Base	0.18	194		Pg	05 25 41.5	+0.4
BBSC					Sg	05 25 44.9	+1.3
HLNC	Highland	0.24	275		Pg	05 25 42.4	+0.2
HLNC					Sg	05 25 46.4	+0.9
PEC	Perris	0.28	223		Pg	05 25 43.1	+0.1
PEC					Sg	05 25 47.3	+0.6
CFSC	Central Fire S	0.29	271		Pg	05 25 43.5	+0.3
CFSC					Sg	05 25 48.5	+1.4
SBVC	San Bernardino	0.32	268		Pb	05 25 45.0	-0.7
CLTC	Calectric	0.32	269		Pg	05 25 44.2	+0.4
CLTC					Sb	05 25 49.7	-1.6
DEVC	Devers	0.33	119		Pg	05 25 44.1	+0.2
DEVC					Sg	05 25 49.1	+0.7
RSBC	Riverside Bore	0.35	249		Pg	05 25 44.2	-0.1
RSBC					Sg	05 25 49.4	+0.3
RSBC	Riverside Bore	0.35	249		Pg	05 25 44.1	-0.3
RSBC					Sg	05 25 49.5	+0.4
RVR	Riverside	0.39	254		Pg	05 25 44.8	-0.1
RVR					Sg	05 25 50.3	+0.3
HMTC	Hemet	0.40	189		Pg	05 25 45.1	0.0
HMTC					Sg	05 25 50.5	+0.1
CSP	Cedar Springs	0.41	299		Pg	05 25 45.3	-0.1
CSP					Sg	05 25 51.0	+0.2
POB	Polly Butte	0.41	179		Pg	05 25 45.5	0.0
POB					Sg	05 25 51.0	+0.1
FON	Fontana	0.42	270		Pg	05 25 45.6	-0.1
FON					Sg	05 25 51.7	+0.5
BLAC	Blackrock camp	0.45	94		Pg	05 25 46.2	0.0
BLAC					Sg	05 25 52.4	+0.4
DGR	Domenigoni Val	0.45	189		Pg	05 25 46.1	-0.1
DGR					Sg	05 25 52.3	+0.1
EW2	E Wide Canyon	0.46	110		Pg	05 25 46.3	0.0
EW2					Sg	05 25 52.6	+0.3
GVDA	Garner Valley	0.48	154		Pg	05 25 46.5	-0.3
GVDA					Sg	05 25 53.0	0.0
SS2	San Sevaine	0.49	283		Pg	05 25 47.0	+0.1
BACC	Bachelor Mtn.	0.50	191		Pg	05 25 46.8	-0.2
BACC					Sg	05 25 53.2	-0.2
GTM	Goat Mountain	0.51	68		Sg	05 25 53.6	-0.4
MLSC	Mira Loma	0.54	260		Pg	05 25 47.5	-0.3
MLSC					Sg	05 25 54.8	0.0
MURC	Murrieta	0.55	204		Pg	05 25 47.8	-0.2
MURC					Sg	05 25 55.1	0.0
CRY	Cary Ranch	0.56	163		Pg	05 25 48.1	-0.1
CRY					Sg	05 25 55.6	+0.1
VTV	Victorville	0.57	324		Pg	05 25 47.9	-0.5
VTV					Sg	05 25 55.4	-0.4
CRNC	Corona	0.57	247		Pg	05 25 48.1	-0.4
CRNC					Sg	05 25 55.9	-0.1
SNDA	J Saunders Pla	0.61	154		Pg	05 25 49.0	-0.2
SNDA					Sg	05 25 57.4	+0.3
ELS	Elsinore Mount	0.61	223		Sg	05 25 56.9	-0.4
ELS	Elsinore Mount	0.61	223		Pg	05 25 48.6	-0.7
ELS				IAML		05 25 57.3	
	comp=E,664nm,0.2s						
ELS				IAML		05 25 58.4	
	comp=N,372nm,0.4s						
ADO	Adelanto Recei	0.61	317		Pg	05 25 49.1	-0.2
ADO					Sg	05 25 57.2	-0.1
BFSC	Mount Baldy Ra	0.62	283		Pg	05 25 49.2	-0.3
BFSC					Sg	05 25 57.5	0.0
PFO	Pinyon Flats O	0.62	141		Pg	05 25 49.1	-0.4
PFO					Sg	05 25 57.5	-0.1
PFO	Pinyon Flats O	0.62	141		Pg	05 25 48.8	-0.7
PFO				IAML		05 25 58.7	
	comp=N,173nm,0.4s						
PFO				IAML		05 25 58.9	
	comp=N,148nm,0.3s						
XPFO	Pinon Flat	0.63	141		Pg	05 25 49.1	-0.5
XPFO					Sg	05 25 57.1	-0.7
CHNC	Chino	0.63	261		Sg	05 25 57.6	-0.3
PMD	Palm Desert	0.64	134		Pg	05 25 49.2	-0.6
PMD					Sg	05 25 57.6	-0.6
SSK	Sunset Peak	0.64	280		Pg	05 25 49.8	-0.1
BZNA	Buzz No.'s Pla	0.65	160		Pg	05 25 49.7	-0.2
BZNA					Sg	05 25 58.4	+0.1
FRD	Ford Ranch, An	0.66	156		Pg	05 25 49.9	-0.3
FRD					Sg	05 25 58.4	-0.4
FRD	Ford Ranch, An	0.66	156		Pg	05 25 50.0	-0.3
FRD					Sg	05 25 58.8	-0.1
TPC	Twentynine Pal	0.73	89		Pg	05 25 51.1	-0.4
PSRC	Puddingstone R	0.73	270		Pg	05 25 51.1	-0.4
PSRC					Sg	05 26 01.0	0.0
PLM	Palomar	0.75	176		Pg	05 25 51.5	-0.4
PLM					Sg	05 26 01.5	-0.1
RRX	Edison Barstow	0.78	356		Pg	05 25 52.1	-0.3
RRX					Sg	05 26 02.6	+0.1
HOLC	Holcomb Ridge	0.84	295		Pg	05 25 53.0	-0.6
HOLC					Sg	05 26 04.1	-0.4
HEC	Hector,Ludlow	0.88	34		Pg	05 25 53.8	-0.5
HEC					Sg	05 26 05.3	-0.4
SANC	Santa Ana	0.89	244		Pg	05 25 54.5	-0.1
CTCC	Cactus City	0.90	119		Pg	05 25 54.2	-0.5
CTCC					Sg	05 26 06.6	+0.2
RHC	Rose Hills Cem	0.91	264		Pg	05 25 53.6	-1.3
RHC					Sg	05 26 06.9	+0.2
JNH	Juniper Hills	0.92	292		Pg	05 25 54.4	-0.7
JNH					Sg	05 26 06.7	-0.3
BREC	Barre Substati	0.92	252		Pg	05 25 55.6	+0.4
HYS	Haystack Butte	0.93	325		Pg	05 25 54.6	-0.7
HYS					Sg	05 26 06.7	-0.7
MATG	Mataguay Scout	0.93	165		Pg	05 25 54.9	-0.5
BORC	Borrego Spring	0.93	153		Pg	05 25 54.7	-0.7
BORC					Sg	05 26 06.7	-0.8
CHFC	Chilao Flat St	0.94	285		Pg	05 25 54.6	-0.9
MWC	Mount Wilson	0.94	278		Pg	05 25 54.9	-0.8
SBB	Saddle Back Bu	0.95	309		Pg	05 25 54.9	-0.8
GORC	Green Oak Ranc	0.98	195		Pg	05 25 55.0	-1.2
LRRC	Littlerock Res	1.00	295		Pg	05 25 56.0	-0.7
PASC	Pasadena Art C	1.04	274		Pg	05 25 56.1	-1.5
PASC				IAML		05 26 13.1	
	comp=E,190nm,0.6s						
PASC				IAML		05 26 13.3	
	comp=N,293nm,0.5s						
JUEM	Julian Eagle M	1.05	165		Pg	05 25 56.9	-0.8
SLH	Sleepy Hollow	1.07	148		Pg	05 25 57.4	-0.5
CJV	Casa Juvan	1.09	293		Pg	05 25 58.0	-0.5
DPP	Dos Picos Cty	1.10	181		Pg	05 25 57.2	-1.4
EDW2	Edwards Air Fo	1.18	312		Pg	05 25 59.1	-1.0
GSC	Goldstone, Bar	1.20	5		Pg	05 25 59.8	-0.8
GSC				IAML		05 26 16.4	
	comp=N,208nm,0.5s						
EML	El Monte Cty P	1.21	177		Pg	05 25 58.8	-1.9
CCAC	Calif City Air	1.38	320		Pn	05 26 02.2	-1.3
CCAC				IAML		05 26 27.3	
	comp=E,166nm,1.0s						
TKX	Tecate	1.55	170		Pn	05 26 04.8	-1.0
YUH	Yuha Desert	1.68	150		Pn	05 26 06.1	-1.4
CBX	Cerro Bola	1.80	173		Pn	05 26 08.7	-0.6
ISA	Isabella, Lake	2.01	321		Pn	05 26 11.4	-0.8
BLYC	Blythe	2.03	99		Pn	05 26 11.3	-1.0
BLYC				IAML		05 26 44.3	
	comp=E,57nm,0.3s						
BLYC				IAML		05 26 45.1	
	comp=N,84nm,0.6s						
GLA	Glamis	2.04	120		Pn	05 26 11.2	-1.3
GLA				IAML		05 26 43.9	
	comp=E,50nm,0.6s						
GLA				IAML		05 26 46.3	
	comp=N,47nm,0.7s						
GWY	Greenwater Val	2.09	6	Pn	Pn	05 26 12.6	-0.8
BCW	Bitter Crk WRg	2.22	293		Pn	05 26 14.8	-0.3
BCW				IAML		05 26 52.5	
	comp=E,77nm,1.1s						
ESJX	Sierra Juarez	2.25	158		Pn	05 26 14.6	-0.9
ESJX				IAML		05 26 47.4	
	comp=E,74nm,0.4s						
ESJX				IAML		05 26 47.8	
	comp=N,66nm,0.2s						
V12A	Nelson	2.35	46		Pn	05 26 15.8	-1.1
V12A				IAML		05 26 53.5	
	comp=E,36nm,0.3s						
V12A				IAML		05 26 55.2	
	comp=N,29nm,0.5s						
W13A	Hualapai Mount	2.70	67		Pn	05 26 20.5	-1.3
SHPR	Sheep Range	2.80	31		Pn	05 26 22.5	-0.6
TPNV	Topopah Spring	2.90	11		Pn	05 26 23.6	-0.9
GRAC	Grapevine Rang	2.91	353		Pn	05 26 24.3	-0.2
GRAC				IAML		05 27 13.6	
	comp=E,41nm,0.6s						
GMN	Gold Mountain	3.21	355		Pn	05 26 27.8	-1.0
GMN				IAML		05 27 24.8	
	comp=N,16nm,0.6s						
Y14A	Wickenburg	3.26	92		Pn	05 26 28.0	-1.3
Y14A				IAML		05 27 23.1	
	comp=N,24nm,1.0s						
Y14A				IAML		05 27 25.6	
	comp=E,16nm,0.7s						
DSP	Deep Springs	3.37	346		Pn	05 26 30.9	+0.1
PRN	Pahroc Range	3.63	24		Pn	05 26 34.8	+0.2
S11A	Rachel	3.66	15		Pn	05 26 35.5	+0.5
LCMT	Little Creek M	4.18	45		Pn	05 26 41.5	-0.6
KNB	Kanab	4.43	48		Pn	05 26 45.4	-0.2
U15A	North Rim	4.45	57		Pn	05 26 45.8	-0.1
X16A	Lo Mia Camp, P	4.55	84	Pn	Pn	05 26 46.8	-0.5
WUAZ	Wupatki	4.78	71		Pn	05 26 48.7	-1.7
WUAZ				IAML		05 28 16.3	
	comp=E,6.3nm,1.6s						
WUAZ				IAML		05 28 21.3	
	comp=E,5.6nm,0.7s						
PSUT	Pine Spring	5.07	28		Pn	05 26 54.3	-0.1

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*IDC **15** 05:30:47.4±1.6, 13°.36S×166°.76E, h0^{km}, mb3.8/4, mbtmp3.8/5, ML3.3/1, Error ellipse: s-maj=52.2km s-min=29.3km az=127.0*

ISC 15 05:30:49.3±1.4**, 13°.4S**±0°.2×**166°.7E**±0°.3**, h10**^{km}**, n6, σ1^{s}.46**/6**, mb3.7**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.66	181	Pn	Pn	05 32 55.3	+0.5
	0.3nm,0.3s,baz=347,slow=19,SNR=9.0						
DZM				Sn	Sn	05 34 18.9	-14
	0.5nm,0.3s,baz=78,slow=20,SNR=1.7						
	0.7nm,0.3s						
STKA	Stephens Creek	29.47	227	P	P	05 36 52.2	-1.4
	2.3nm,0.5s,baz=63,slow=9.4,SNR=5.6						
	2.3nm,0.5s						
WRA	Warramunga Arr	31.63	254	P	P	05 37 14.2	+1.4
	0.3nm,0.4s,baz=82,slow=8.4,SNR=6.8						
	0.3nm,0.4s						
ASAR	Alice Springs	32.65	247	P	P	05 37 22.1	+0.3
	0.5nm,0.4s,baz=82,slow=8.6,SNR=14						
	0.5nm,0.4s						
ILAR	Eielson Array	85.42	18	P	P	05 43 27.2	+0.6
	0.3nm,0.8s,baz=231,slow=5.7,SNR=2.4						
	0.3nm,0.8s						
ARCES	ARCESS Array B	118.80	345	PKP	PKPdf	05 49 36.0	-1.4
	3.7nm,1.1s,baz=60,slow=2.4,SNR=6.9						

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*TEH **15** 05:38:07.7, 32°.49N×46°.93E, h8^{km}±54^{km}*

*ISN **15** 05:38:09.1±0.6, 32°.49N×46°.97E, h11^{km}±9^{km}, ML3.2*

ISC 15 05:38:11.4±1.1**, 32°.59N**±0°.04×**46°.99E**±0°.04**, h20**^{km}**, n28, σ1^{s}.32**/31**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAFI	Al-Rafai	1.14	221	*e*Pn	Pb	05 38 32.0	-0.4
RAFI				*e*Sn	Sn	05 38 48.0	+0.9
RAFI				AML	AML	05 38 50.8	
	comp=E,452nm,0.0s						
RAFI				AML	AML	05 39 07.5	
	comp=N,535nm,0.7s						
IKFM	Kafar-mosalman	1.18	38	Pg	Pn	05 38 32.7	-0.1
ILBA	Ilam Banvizeh	1.22	328	Pg	Pn	05 38 32.7	-0.7
IDOB	Doab	1.56	40	Pg	Pb	05 38 39.4	-0.4
KCHF	Cheshme Sefid,	1.68	2	Pg	Pb	05 38 41.4	-0.5
GLG1	Gilan-e-Gharb	1.77	330	Pn	Pn	05 38 41.1	+0.1
IGHG	Ghaleghazi	1.77	349	Pn	Pb	05 38 42.2	-1.2
IBZA	Bozab	2.02	21	Pn	Pb	05 38 45.9	-1.6
HSAM	Samen	2.11	39	Pn	Pb	05 38 47.5	-1.7
IDHR	Dehrash	2.17	347	Pn	Pn	05 38 47.6	+1.0
KGS1	Ghasr-e-Shirin	2.24	329	Pn	Pn	05 38 47.3	-0.1
BHD	Baghdad	2.29	288	*e*Pn	Pn	05 38 49.0	+0.9
BHD				*e*Sn	Sb	05 39 18.0	-2.0
BHD				AML	AML	05 39 41.3	
	comp=E,287nm,1.1s						
ILIN	Lien	2.33	360	Pn	Pn	05 38 49.6	+0.8
SNQR	Sonqor, Kerman	2.33	13	Pn	Pb	05 38 50.6	-2.2
HAGD	Aghdareh	2.86	38	Pn	Pn	05 38 57.3	+1.1
JHBN	Jahan bin	3.13	96	Pn	Pn	05 38 59.9	-0.1
HGHA	Hamedan- Ghaye	3.28	28	Pn	Pn	05 39 03.8	+1.9
IPIR	Pirpir	3.30	87	Pn	Pn	05 39 02.9	+0.7
IKRK	Kirkuk	3.56	323	*e*Pn	Pn	05 39 07.0	+1.4
IKRK				*e*Sn	Sn	05 39 50.0	+2.9
IBRJ	Brojen	3.69	99	Pn	Pn	05 39 06.9	-0.7
QABG	Abgarm-Qazvin	3.79	34	Pn	Pn	05 39 10.5	+1.7
QAMS	Qamsar	3.87	72	Pn	Pn	05 39 11.9	+1.8
IKLH	Kolahrood	3.93	78	Pn	Pn	05 39 12.4	+1.5
KLNJ	Kolanjah	4.23	111	Pn	Pn	05 39 15.2	+0.2
KRSH	Karshahi	4.53	71	Pn	Pn	05 39 20.2	+1.2
IVRN	Varamin	4.62	57	Pn	Pn	05 39 21.3	+1.1
IGZV	Ghazvin	4.63	34	Pn	Pn	05 39 21.7	+1.2
ISFB	Sefidab	4.73	67	Pn	Pn	05 39 22.2	+0.4

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*IDC **15** 05:49:18.5±0.8, 9°.82N×126°.66E, h0^{km}, mb4.1/11, mbtmp4.0/11, MS3.0/5, Error ellipse: s-maj=50.1km s-min=20.3km az=76.0*

ISC 15 05:49:24.6±0.8**, 9°.7N**±0°.1×**126°.5E**±0°.3**, h43**^{km}**, n19, σ0^{s}.83**/15**, mb4.0**/12**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	2.78	200	LR	LR	05 50 57.5	
	comp=Z,231nm,18.6s,baz=357,slow=34						
KAPI	Kappang	16.10	205	LR	LR	06 00 49.1	
	comp=Z,61nm,18.1s,baz=34,slow=42						
GUMO	Guam	18.37	76	LR	LR	05 58 33.1	
	comp=Z,28nm,21.8s,baz=96,slow=30						
BATI	Baumata	19.98	188	P	Pn	05 53 55.9	+0.3
	50nm,0.6s,baz=80,slow=2.6,SNR=5.0						
WRA	Warramunga Arr	30.45	165	P	P	05 55 38.7	+5.3
	0.6nm,0.6s,baz=346,slow=9.2,SNR=8.3						
ASAR	Alice Springs	33.94	168	P	P	05 56 03.3	-0.7
	0.4nm,0.6s,baz=342,slow=7.5,SNR=7.9						
ASAR				PcP	PcP	05 58 42.9	+1.1
	0.3nm,0.8s,baz=354,slow=2.4,SNR=2.1						
	0.4nm,0.6s						
ASAJ	Asahikawa	37.02	19	LR	LR	06 10 13.3	
	comp=Z,18nm,21.4s,baz=49,slow=34						
MKAR	Makanchi Array	52.63	323	P	P	05 58 34.3	-0.1
	1.0nm,0.7s,baz=121,slow=7.8,SNR=8.5						
MKAR				PcP	PcP	05 59 43.6	-0.4
	0.4nm,0.7s,baz=114,slow=3.5,SNR=2.2						
	1.0nm,0.7s						
AAK	Ala-Archa	55.91	315	LR	LR	06 25 28.1	
	comp=Z,30nm,19.0s,baz=138,slow=39						
KURBB	Kurchatov Arra	56.68	325	P	P	05 59 03.2	-0.4
	2.1nm,0.2s,baz=125,slow=6.6,SNR=5.0						
	2.1nm,0.2s						
BVAR	Borovoye Array	62.27	325	P	P	05 59 42.4	+0.2
	0.4nm,0.4s,baz=106,slow=3.1,SNR=1.6						
	0.4nm,0.4s						
ILAR	Eielson Array	79.84	26	P	P	06 01 27.2	-1.1
	0.3nm,0.8s,baz=227,slow=4.8,SNR=4.6						
	0.3nm,0.8s						
SPITS	Spitsbergen Ar	84.62	349	P	P	06 01 54.2	+1.1
	3.6nm,0.7s,baz=120,slow=14,SNR=2.6						
	3.6nm,0.7s						
ARCES	ARCESS Array B	84.81	340	P	P	06 01 54.9	+0.6
	1.2nm,0.6s,baz=78,slow=6.3,SNR=6.3						
	1.2nm,0.6s						
FINES	FINESS Array B	86.51	332	P	P	06 02 02.8	0.0
	1.8nm,0.8s,baz=69,slow=6.3,SNR=7.9						
	1.8nm,0.8s						
HFS	Hagfors	92.67	332	P	P	06 02 31.1	-0.7
	1.6nm,0.8s,baz=66,slow=16,SNR=4.4						
	1.6nm,0.8s						
NB2	NORSAR Subarra	93.38	334	P	P	06 02 34.1	-1.0
	comp=Z,0.2nm,0.4s,baz=66,slow=4.6						
NOA	NORSAR Array B	93.38	334	P	P	06 02 34.3	-0.8
	comp=Z,0.5nm,0.8s,baz=63,slow=4.9,SNR=4.1						
	comp=Z,0.5nm,0.8s						
YKA	Yellowknife Ar	94.17	24	P	P	06 02 39.6	+1.0
	comp=Z,0.4nm,0.9s,baz=308,slow=5.9,SNR=4.8						
	comp=Z,0.4nm,0.9s						

KRSC 15 06:01:53.1±1.4**, 55°.29N**×**165°.09E, h50**^{km}±19^{km}**, Ml3.6, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	0.51	99	*e*P	Pn	06 02 04.8	+0.4
BKI				*e*S	Sn	06 02 12.7	+0.1
KBTR	Krutoberegovo	1.58	307	*e*P	Pn	06 02 20.3	+1.6
KBTR				*e*S	Sn	06 02 39.9	+1.9
KBG	Krutoberegovo	1.66	307	*e*S	Sn	06 02 42.7	+2.8
MKZ	Mys Kozlova	2.08	251	*e*P	Pn	06 02 27.9	+2.5
SMKR	Semkarok	2.42	304	*e*P	Pn	06 02 30.6	+0.4
TUMD	Tumrok D	2.69	270	*e*S	Sn	06 03 09.9	+4.7
KMNR	Kamenistaya	2.80	282	*e*P	Pn	06 02 38.7	+3.3
KMNR				*e*S	Sn	06 03 14.8	+6.7
SPN	Mys Shipunski	3.70	236	*e*S	Sn	06 03 30.4	+0.5
SDLR	Sedlovina	4.16	244	*e*P	Pn	06 02 57.9	+3.8
SMAR	Somma	4.21	244	*e*P	Pn	06 02 58.6	+3.8
KRER	Koryakskii	4.21	244	*e*P	Pn	06 02 59.2	+4.3
UGLR	Uglovaya	4.23	243	*e*P	Pn	06 02 58.9	+3.9
KRX	Arik	4.24	246	*e*P	Pn	06 02 59.1	+4.0
AVH	Avacha	4.24	244	*e*P	Pn	06 02 59.3	+4.2
AVH				*e*S	Sn	06 03 47.0	+3.6
KOK	Koryaka	4.28	245	*e*P	Pn	06 02 59.7	+4.0
KOK				*e*S	Sn	06 03 49.3	+4.9
GNL	Ganaly	4.46	252	*e*P	Pn	06 03 02.8	+4.5
MTVR	Mutnovka	4.96	238	*e*P	Pn	06 03 08.5	+3.5
GRL	Gorelyy	4.97	239	*e*P	Pn	06 03 10.8	+5.6
ASAK	Asacha	5.16	239	*e*P	Pn	06 03 11.9	+4.2

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*IDC **15** 06:04:41.4±1.5, 39°.49N×144°.23E, h0^{km}, mb3.5/4, mbtmp3.5/4, MS2.7/1, Error ellipse: s-maj=44.7km s-min=32.7km az=80.0*

*JMA **15** 06:04:51.2±0.1, 39°.0N±0°.3×142°.7E±0°.6, h28^{km}±1^{km}, MV3.7/37, E OFF IWATE PREF*

ISC 15 06:04:52.0±1.8**, 39°.00N**±0°.08×**142°.7E**±0°.2**, h36**^{km}±5^{km}**, n18, σ0^{s}.88**/21**, mb3.6**/4**, 4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.83	276	⇓P	Pn	06 05 06.7	-0.5
OFUJ				⇓S	Sn	06 05 17.5	-0.8
MIYJ	Miyakonagasawa	0.92	309	P	Pn	06 05 07.3	-1.0
MIYJ				S	Sn	06 05 18.6	-1.6
JKMT	Kesennumamotoy	1.00	260	⇓P	Pn	06 05 09.3	-0.1
JKMT				⇓S	Sn	06 05 22.1	-0.3
JTH	Tanohata	1.16	325	P	Pn	06 05 11.2	-0.4
JMK	Ichinoseki	1.18	268	P	Pn	06 05 12.1	+0.2
JMK				S	Sn	06 05 26.9	+0.1
JIO	Ouri	1.21	244	P	Pn	06 05 12.4	0.0
JIO				S	Sn	06 05 27.4	-0.2
JOM	Ohasama	1.22	293	P	Pn	06 05 12.6	+0.1
JOM				S	Sn	06 05 28.0	+0.4
JKZ	Kuzumaki	1.47	313	P	Pn	06 05 16.3	+0.4
JKZ				S	Sn	06 05 34.9	+1.0
JANG	Nango	1.66	326	P	Pn	06 05 18.8	+0.2
JANG				S	Sn	06 05 40.6	+1.9
JOU	Okura	1.74	249	P	Pn	06 05 21.2	+1.5
USRK	Ussuriysk Ar.	9.58	306	LR	LR	06 10 43.3	
	comp=Z,43nm,20.1s,baz=113,slow=35						
H11N2	WAKE ISLAND Hy	28.35	126	T	T	06 40 25.0	
	baz=318,slow=75,SNR=42						
H11N1	WAKE ISLAND Hy	28.36	126	T	T	06 40 25.0	
	baz=318,slow=75,SNR=39						
H11N3	WAKE ISLAND Hy	28.37	126	T	T	06 40 25.0	
	baz=318,slow=75,SNR=45						
MKAR	Makanchi Array	43.99	301	P	P	06 12 56.4	+0.8
	0.4nm,0.7s,baz=80,slow=8.7,SNR=4.0						
	0.4nm,0.7s						
KURBB	Kurchatov Arra	45.64	307	P	P	06 13 08.3	-0.3
	0.6nm,0.4s,baz=81,slow=8.4,SNR=3.9						
	0.6nm,0.4s						
WRA	Warramunga Arr	59.16	189	P	P	06 14 48.6	-0.5
	0.3nm,0.4s,baz=6.0,slow=6.7,SNR=6.5						
	0.3nm,0.4s						
YKA	Yellowknife Ar	61.59	31	P	P	06 14 53.2	-12
	0.2nm,0.8s,baz=298,slow=7.9,SNR=2.7						
	0.2nm,0.8s						

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*IDC **15** 06:10:41.3±6.3, 10°.37N×126°.04E, h268^{km}±68^{km}, mb3.3/11, mbtmp3.9/12, MS3.5/2, Error ellipse: s-maj=37.1km s-min=23.6km az=50.0*

ISC 15 06:10:39.3±0.9**, 10°.4N**±0°.2×**126°.0E**±0°.3**, h250**^{km}**, n14, σ1^{s}.09**/12**, mb3.4**/11**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	19.42	130	P	P	06 14 49.3	+1.9
	3.9nm,0.4s,baz=325,slow=23,SNR=6.7						
CMAR	Chiang Mai Arr	27.41	290	LR	LR	06 27 05.7	
	comp=Z,33nm,19.7s,baz=245,slow=36						
WRA	Warramunga Arr	31.20	165	P	P	06 16 34.2	-1.5
	0.3nm,0.6s,baz=346,slow=9.3,SNR=1.2						
	0.3nm,0.6s						
PETK	Petropavlovsk-	49.66	25	P	P	06 19 04.1	-1.6
	0.7nm,0.5s,baz=232,slow=6.8,SNR=2.1						
	0.7nm,0.5s						
MKAR	Makanchi Array	51.81	323	P	P	06 19 22.2	+0.3
	0.8nm,0.6s,baz=120,slow=8.0,SNR=9.7						
	0.8nm,0.6s						

KURBB	Kurchatov Arra	55.86	325	P	P	06 19 51.0	-0.1
	0.3nm,0.3s,baz=124,slow=7.6,SNR=5.3						
	0.3nm,0.3s						
TIXI	Tiksi	61.27	1	LR	LR	06 49 14.2	
	comp=Z,113nm,19.7s,baz=48,slow=38						
ILAR	Eielson Array	79.46	26	P	P	06 22 17.6	-0.3
	0.1nm,0.6s,baz=252,slow=4.9,SNR=1.8						
	0.1nm,0.6s						
SPITS	Spitsbergen Ar	83.88	349	P	P	06 22 41.2	+0.5
	2.1nm,0.7s,baz=0.0,slow=14,SNR=1.2						
	2.1nm,0.7s						
ARCES	ARCESS Array B	84.03	340	P	P	06 22 42.5	+1.0
	2.4nm,0.7s,baz=72,slow=7.8,SNR=5.7						
	2.4nm,0.7s						
FINES	FINESS Array B	85.70	332	P	P	06 22 50.1	+0.2
	2.0nm,0.8s,baz=30,slow=5.0,SNR=6.0						
	2.0nm,0.8s						
HFS	Hagfors	91.86	332	P	P	06 23 19.3	+0.3
	1.0nm,0.8s,baz=55,slow=5.9,SNR=2.3						
	1.0nm,0.8s						
NOA	NORSAR Array B	92.57	334	P	P	06 23 22.6	+0.2
	0.4nm,0.7s,baz=49,slow=1.9,SNR=3.7						
	0.4nm,0.7s						
YKA	Yellowknife Ar	93.77	24	P	P	06 23 28.3	+0.6
	0.3nm,0.8s,baz=254,slow=6.4,SNR=3.4						
	0.3nm,0.8s						

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*NDI **15** 06:23:12.1±0.8, 17°.10N×93°.95E, h10^{km}, ML3.8, MW3.7, mb4.0(NEIC)*

*IDC **15** 06:23:17.3±0.9, 16°.99N×93°.83E, h0^{km}, mb3.8/13, mbtmp3.8/14, ML4.0/1, Error ellipse: s-maj=40.9km s-min=16.7km az=49.0*

*NEIC **15** 06:23:19.7±0.9, 17°.10N±0°.09×93°.9E±0°.1, h10^{km}±2^{km}, mb4.0/5, Error ellipse: s-maj=21.2km s-min=15.1km az=255.0*

ISC 15 06:23:19.2±0.8**, 17°.2N**±0°.1×**93°.98E**±0°.09**, h10**^{km}**, n37, σ0^s.92**/27**, mb3.9**/16**, Bay of Bengal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGPR	DIGLIPUR	4.08	194	*e*P	Pn	06 24 14.2	-7.6
DGPR				IAML		06 25 13.0	
	comp=E,174nm,0.2s						
CM31	Chiang Mai Arr	4.91	74	Pn	Pn	06 24 34.1	+0.9
CMAR	Chiang Mai Arr	4.91	74	Pn	Pn	06 24 34.3	+1.2
CMAR	Chiang Mai Arr	4.91	74	Pn	Pn	06 24 34.8	+1.6
	comp=E,1.6nm,0.3s,baz=255,slow=15,SNR=15						
CMAR				Sn	Sn	06 25 27.8	-2.2
	comp=E,2.5nm,0.3s,baz=252,slow=24,SNR=5.6						
	comp=E,4.8nm,0.4s						
CHTO	Chiang Mai	5.01	70	Pn	Pn	06 24 35.8	+1.3
IMP	Imphal	7.64	360	*e*P	Pn	06 25 03.2	-7.5
IMP				*e*S	Sn	06 26 25.9	-12
IMP				IAML		06 26 33.0	
	comp=E,114nm,0.3s						
IMP				IAML		06 26 33.4	
	comp=N,105nm,0.3s						
KOHI	KOHIMA	8.53	1	*e*P	Pn	06 25 15.6	-7.4
KOHI				IAML		06 27 00.0	
	comp=E,30nm,0.6s						
SRIT	Nakonsritamara	10.12	147	Pn	Pn	06 25 44.6	-0.1
RAGD	RAYAGADA	10.21	283	*e*P	Pn	06 25 37.7	-8.2
RAGD				*e*S	Sn	06 27 24.3	-16
RAGD				IAML		06 27 36.8	
	comp=N,15nm,0.8s						
JHSG	JHARSUGUGA	10.66	297	*e*P	Pn	06 25 44.1	-8.0
JHSG				*e*S	Sn	06 27 35.0	-17
JHSG				IAML		06 27 37.4	
	comp=N,54nm,0.1s						
JHSG				IAML		06 27 38.2	
	comp=E,52nm,0.0s						
EVN	Everest	12.62	330	Pn	Pn	06 26 18.1	-1.3
TARG	Taragay, Kyrgy	28.15	334	P	P	06 29 12.3	+0.2
TARG				IAmb	IAmb	06 29 25.0	
	comp=Z,2.0nm,0.8s						
ARSB	Arslanbob	30.10	327	P	P	06 29 28.2	-1.0
BTK	Batken	30.39	323	P	P	06 29 32.8	+1.1
BTK				IAmb	IAmb	06 29 55.7	
	comp=Z,2.6nm,0.7s						
MKAR	Makanchi Array	31.10	344	P	P	06 29 38.1	+0.3
MKAR	Makanchi Array	31.10	344	P	P	06 29 38.9	+1.1
	comp=Z,0.6nm,0.5s,baz=161,slow=9.8,SNR=7.2						
	comp=Z,0.6nm,0.5s						
H08S3	Diego Garcia H	32.52	222	T	T	07 03 58.3	
	baz=40,slow=75,SNR=9.6						
H08S2	Diego Garcia H	32.53	222	T	T	07 04 00.8	
	baz=40,slow=75,SNR=16						
H08S1	Diego Carcia H	32.54	222	T	T	07 03 59.8	
	baz=40,slow=75,SNR=14						
KURBB	Kurchatov Arra	35.61	343	P	P	06 30 17.8	+0.8
	comp=Z,1.3nm,0.7s,baz=153,slow=8.3,SNR=10						
	comp=Z,1.3nm,0.7s						
ZAA0	Zalesovo Array	37.41	351	P	P	06 30 32.5	+0.2
ZAA0				IAmb	IAmb	06 30 33.8	
	comp=Z,1.5nm,0.7s						
ZALV	Zalesovo Beam	37.41	351	P	P	06 30 32.5	+0.3
	comp=Z,0.6nm,0.3s,baz=182,slow=8.8,SNR=5.0						
	comp=Z,0.6nm,0.3s						
BVAR	Borovoye Array	40.28	338	P	P	06 30 56.4	-0.1
	comp=Z,0.5nm,0.4s,baz=125,slow=9.0,SNR=2.7						
	comp=Z,0.5nm,0.4s						
AB31	Akbulak array	42.22	327	P	P	06 31 12.7	+0.2
ABKAR	Akbulak array	42.22	327	P	P	06 31 13.2	+0.8
WRA	Warramunga Arr	54.13	131	P	P	06 32 44.0	-0.9
	comp=Z,0.4nm,0.4s,baz=311,slow=7.4,SNR=13						
	comp=Z,0.4nm,0.4s						
ASAR	Alice Springs	56.27	135	P	P	06 33 00.3	0.0
	comp=Z,0.4nm,0.6s,baz=315,slow=7.1,SNR=9.0						
	comp=Z,0.4nm,0.6s						
BRTR	Keskin Array B	56.53	307	P	P	06 33 01.6	-0.6
	comp=Z,0.5nm,0.7s,baz=101,slow=4.6,SNR=2.1						
	comp=Z,0.5nm,0.7s						
AKASG	Malin Array Be	60.95	319	P	P	06 33 31.7	-0.8
	comp=Z,0.1nm,0.3s,baz=76,slow=7.1,SNR=1.6						
	comp=Z,0.1nm,0.3s						
FINES	FINESS Array B	64.54	330	P	P	06 33 56.3	0.0
	comp=Z,1.6nm,0.9s,baz=133,slow=11,SNR=2.2						
	comp=Z,1.6nm,0.9s						
HFS	Hagfors	70.45	328	P	P	06 34 33.7	0.0
	comp=Z,0.8nm,0.5s,baz=164,slow=6.6,SNR=2.3						
	comp=Z,0.8nm,0.5s						
SPITS	Spitsbergen Ar	70.78	348	P	P	06 34 36.1	+0.6
	comp=Z,5.1nm,0.8s,baz=116,slow=9.8,SNR=2.7						
	comp=Z,5.1nm,0.8s						
GERES	GERESS Array B	70.93	316	P	P	06 34 37.1	+0.1
	comp=Z,0.8nm,0.6s,baz=76,slow=5.6,SNR=5.9						
	comp=Z,0.8nm,0.6s						
NOA	NORSAR Array B	71.66	329	P	P	06 34 41.0	0.0
	comp=Z,0.2nm,0.6s,baz=110,slow=3.9,SNR=1.6						
	comp=Z,0.2nm,0.6s						
H04N2	CROZET ISLANDS	73.64	209	T	T	07 55 31.6	
	baz=41,slow=75,SNR=11						
H04N1	CROZET ISLANDS	73.65	209	T	T	07 55 28.7	
	baz=41,slow=75,SNR=4.9						
H04N3	CROZET ISLANDS	73.66	209	T	T	07 55 27.9	
	baz=41,slow=75,SNR=5.4						

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*NEIC **15** 06:31:23.7±1.3, 66°.29N±0°.02×157°.2W±0°.1, h7^{km}±10^{km}, Error ellipse: s-maj=6.1km s-min=3.0km az=109.0*

*ANF **15** 06:31:23.0±0.1, 66°.30N×157°.26W, h6^{km}±1^{km}, ML4.9/65, Error ellipse: s-maj=1.4km s-min=1.0km az=75.0*

*AEIC **15** 06:31:23.2±1.7, 66°.31N±0°.04×157°.24W±0°.09, h7^{km}±7^{km}, ML2.6, Error ellipse: s-maj=6.1km s-min=5.1km az=160.0*

ISC 15 06:31:23.2±0.9**, 66°.29N**±0°.02×**157°.24W**±0°.03**, h11**^{km}±8^{km}**, n110, σ0^s.82**/115**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
G19K	Purcell Mounta	0.16	158	Pg	Pg	06 31 26.9	+0.1
G19K				Sg	Sg	06 31 29.4	0.0
G19K	Purcell Mounta	0.16	158	P	Pg	06 31 26.9	0.0
	baz=340,SNR=148						
G19K				S	Sg	06 31 29.4	0.0
	baz=340						
F19K	Shaleruckik Mo	0.58	339		Pg	06 31 34.0	-0.5
F19K				Sg	Sg	06 31 42.3	0.0
F19K	Shaleruckik Mo	0.58	339	P	Pg	06 31 34.1	-0.5
	baz=158						
F19K				S	Sg	06 31 42.4	+0.1
	baz=158						
G18K	Tagagawik	0.70	236	Pg	Pg	06 31 36.9	+0.1
G18K				Sg	Sb	06 31 47.1	0.0
G18K	Tagagawik	0.70	236	P	Pg	06 31 36.9	+0.1
	baz=55,SNR=18						
H19K	Roundabout Mou	0.83	157	Pg	Pg	06 31 38.8	-0.5
H19K	Roundabout Mou	0.83	157	P	Pg	06 31 39.0	-0.2
	baz=338,SNR=14						
F20K	Avaraart Lake	0.97	38		Pg	06 31 40.9	-0.9
F20K	Avaraart Lake	0.97	38	P	Pg	06 31 40.9	-0.9
	baz=219						
F18K	Selawik	1.02	289	P	Pg	06 31 42.0	-0.8
	baz=106,SNR=11						
E19K	Redstone River	1.17	0		Pg	06 31 45.0	-0.7
E19K	Redstone River	1.17	0	P	Pg	06 31 44.8	-0.9
	baz=180,SNR=12						
H18K	Honhosa River	1.24	203		Pb	06 31 46.1	-0.4
H18K	Honhosa River	1.24	203	P	Pb	06 31 46.1	-0.4
	baz=22,SNR=18						
H20K	Anotleneega Mo	1.26	129	P	Pn	06 31 46.6	-0.1
	baz=311,SNR=8.5						
IMAR	Indian Mountai	1.45	101	Pn	Pn	06 31 49.5	+0.2
G21K	Allakaket	1.52	80	Pn	Pn	06 31 50.4	+0.1
G21K	Allakaket	1.52	80	P	Pn	06 31 50.2	-0.1
	baz=263,SNR=20						
GCSA	Galena City Sc	1.56	174	P	Pn	06 31 51.3	+0.5
	baz=355,SNR=23						
G17K	Kiwalik Mounta	1.61	242	P	Pn	06 31 51.4	-0.2
	baz=59,SNR=14						
E18K	Tukpahlearik C	1.75	312	Pn	Pn	06 31 54.6	+1.2
E18K	Tukpahlearik C	1.75	312	P	Pn	06 31 53.8	+0.4
	baz=129,SNR=10						
F21K	Alatna River	1.76	56		Pb	06 31 55.2	-0.3
F21K	Alatna River	1.76	56	P	Pn	06 31 54.0	+0.4
	baz=240						
H17K	Granite Mounta	1.76	220	Pn	Pn	06 31 53.8	+0.3
H17K	Granite Mounta	1.76	220	P	Pn	06 31 53.8	+0.3
	baz=38,SNR=28						
I20K	Naaghedeneel	1.89	141		Pn	06 31 56.1	+0.8
I20K	Naaghedeneel	1.89	141	P	Pn	06 31 55.6	+0.3
	baz=324						
H21K	Melozitna Rive	1.92	107		Pn	06 31 56.7	+0.9
H21K	Melozitna Rive	1.92	107	P	Pn	06 31 56.3	+0.5
	baz=292						
E17K	Hotham Inlet	1.99	296	P	Pn	06 31 57.4	+0.7
	baz=111						
E20K	Nigu River	2.02	11	P	Pn	06 31 57.4	+0.3
	baz=192,SNR=12						
D19K	Kuna River	2.24	352		Pn	06 32 02.1	+1.9
D19K	Kuna River	2.24	352	P	Pn	06 32 00.4	+0.2
	baz=171,SNR=9.6						
G16K	Koyuk River	2.29	249	Pn	Pn	06 32 00.4	-0.5
G16K	Koyuk River	2.29	249	P	Pn	06 32 00.5	-0.3
	baz=64,SNR=8.2						
J19K	Poorman	2.41	163		Pn	06 32 03.0	+0.5
J19K	Poorman	2.41	163	P	Pn	06 32 02.9	+0.5
	baz=344						
H22K	Ishtalitna Cre	2.42	97	P	Pn	06 32 03.2	+0.5
	baz=282,SNR=35						
D20K	Etivluk River	2.44	5		Pn	06 32 05.2	+2.2
D20K	Etivluk River	2.44	5	P	Pn	06 32 03.8	+0.8
	baz=186,SNR=7.5						
J20K	Nowinta River	2.49	147		Pn	06 32 04.2	+0.5
J20K	Nowinta River	2.49	147	P	Pn	06 32 04.0	+0.4
	baz=330,SNR=22						
E21K	Killik River	2.50	29		Pn	06 32 04.9	+1.1
E21K	Killik River	2.50	29	P	Pn	06 32 04.7	+0.9
	baz=212						
E22K	Anaktuvuk Pass	2.81	46		Pn	06 32 09.7	+1.7
E22K	Anaktuvuk Pass	2.81	46	P	Pn	06 32 08.9	+0.9
	baz=231,SNR=8.5						
I17K	Unalakleet	2.83	213		Pn	06 32 08.9	+0.8
I17K	Unalakleet	2.83	213	P	Pn	06 32 08.6	+0.4
	baz=30,SNR=99						
J18K	Innoko River	2.85	175	P	Pn	06 32 08.5	0.0
	baz=356,SNR=77						
G23K	Bananza Creek	2.92	78	P	Pn	06 32 09.7	+0.1
	baz=265,SNR=37						
MLY	Manley	2.97	112		Pn	06 32 11.2	+0.9
MLY	Manley	2.97	112	P	Pn	06 32 11.1	+0.8
	baz=298,SNR=70						
J17K	VABM Dome	3.01	196	Pn	Pn	06 32 11.5	+0.8
J17K	VABM Dome	3.01	196	P	Pn	06 32 11.7	+0.9
	baz=14,SNR=49						
D22K	Ayikyak River	3.13	32		Pn	06 32 13.7	+1.3
D22K	Ayikyak River	3.13	32	P	Pn	06 32 13.4	+1.0
	baz=216						
H23K	Yukon River	3.17	95		Pn	06 32 13.6	+0.6
H23K	Yukon River	3.17	95	P	Pn	06 32 13.7	+0.7
	baz=282						
J16K	Anvik River	3.35	207	Pn	Pn	06 32 16.8	+1.4
J16K	Anvik River	3.35	207	P	Pn	06 32 16.3	+1.0
	baz=24						
BPAW	Bear Paw Mtn.	3.43	127		Pn	06 32 17.8	+1.2
BPAW	Bear Paw Mtn.	3.43	127	P	Pn	06 32 16.9	+0.3
	baz=313						
I23K	Minto, Yukon-K	3.45	106		Pn	06 32 18.5	+1.7
I23K	Minto, Yukon-K	3.45	106	P	Pn	06 32 17.2	+0.5
	baz=293						
E23K	Chandalar	3.46	56		Pn	06 32 18.6	+1.6
K17K	Iditarod	3.62	188	Pn	Pn	06 32 19.5	+0.4
K17K	Iditarod	3.62	188	P	Pn	06 32 19.3	+0.2
	baz=6.9						
CAST	Castle Rocks	3.63	140	Pn	Pn	06 32 20.9	+1.7
CAST	Castle Rocks	3.63	140	P	Pn	06 32 20.5	+1.3
	baz=325						
D23K	Nanushuk River	3.67	40	P	Pn	06 32 20.8	+1.0
	baz=226						
C16K	Lisburne Hills	3.72	306	Pn	Pn	06 32 22.2	+1.7
B20K	Meade River	3.73	0	P	Pn	06 32 21.1	+0.5
	baz=180						
TOLK	Toolik Lake Re	3.78	48	Pn	Pn	06 32 22.6	+1.3
TOLK	Toolik Lake Re	3.78	48	P	Pn	06 32 22.0	+0.7
	baz=235						
NEA2	Nenana	3.81	113	P	Pn	06 32 22.0	+0.2
	baz=300						
H24K	Noodor Dome	3.84	93		Pn	06 32 23.1	+0.9
H24K	Noodor Dome	3.84	93	P	Pn	06 32 22.6	+0.4
	baz=281						
E24K	Your Creek	3.85	58	Pn	Pn	06 32 24.2	+1.9
E24K	Your Creek	3.85	58	P	Pn	06 32 22.7	+0.3
	baz=246						
F24K	Squaw Lake	3.88	67	P	Pn	06 32 22.7	0.0
	baz=256						
G24K	Hadweenzic Riv	3.93	80	Pn	Pn	06 32 24.7	+1.2
G24K	Hadweenzic Riv	3.93	80	P	Pn	06 32 23.9	+0.4
	baz=268						
PPLA	Purkeypile	4.04	145	P	Pn	06 32 25.0	-0.1
	baz=330						
L18K	Granite Mounta	4.10	176	Pn	Pn	06 32 26.1	+0.5
L18K	Granite Mounta	4.10	176	P	Pn	06 32 25.7	0.0
	baz=357						
L20K	Farewell, AK	4.10	158	P	Pn	06 32 25.8	0.0
	baz=341						
TRF	Thorofare Moun	4.11	131	Pn	Pn	06 32 27.4	+1.3
TRF	Thorofare Moun	4.11	131	P	Pn	06 32 26.3	+0.2
	baz=317						
L17K	Donlin	4.20	187	P	Pn	06 32 26.9	-0.2
	baz=6.0						
POKR	Poker Plat Res	4.22	102	Pn	Pn	06 32 28.3	+0.9
POKR	Poker Plat Res	4.22	102	P	Pn	06 32 28.2	+0.8
	baz=291						
L19K	White Mountain	4.26	165		Pn	06 32 28.6	+0.7
L19K	White Mountain	4.26	165	P	Pn	06 32 29.0	+1.0
	baz=347						
B22K	Teshekpuk Lake	4.30	17		Pn	06 32 30.6	+2.1
B22K	Teshekpuk Lake	4.30	17	P	Pn	06 32 29.5	+1.0
	baz=201,SNR=129						
C23K	Itkillik River	4.34	32	P	Pn	06 32 29.5	+0.6
	baz=218						
IL31		4.57	105		Pn	06 32 32.8	+0.7
ILAR	Eielson Array	4.57	105		Pn	06 32 32.9	+0.7
M19K	Big River Lodg	4.58	163	P	Pn	06 32 32.8	+0.5
	baz=346						
L16K	Owhat River	4.71	193	Pn	Pn	06 32 34.2	+0.2
A22K	Sinclair Lake	4.80	9	P	Pn	06 32 35.8	+0.5
	baz=191						
M18K	Stony River	4.86	172	P	Pn	06 32 36.2	0.0
	baz=353						
PRP	Porcupine Dome	4.86	94	P	Pn	06 32 36.6	+0.2
	baz=284						
SKT	Skwentna	5.00	147	P	Pn	06 32 38.7	+0.6
	baz=333						
A21K	Barrow	5.06	2	P	Pn	06 32 39.0	+0.1
	baz=183,SNR=26						
D25K	Kavik River	5.12	49	P	Pn	06 32 40.0	+0.3
	baz=239						
J25K	Salcha River,	5.23	103	P	Pn	06 32 41.6	+0.3
	baz=294						
DHY	Denali Highway	5.32	123	P	Pn	06 32 43.4	+0.8
	baz=312						

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*BJI **15** 06:31:35.0, 66°.30N×157°.20W, h7^{km}, mB5.1/5, mb4.5/20, Ms4.6/9, Ms7 4.4/11*

*AEIC **15** 06:31:35.8±1.5, 66°.30N±0°.01×157°.21W±0°.04, h6^{km}±5^{km}, ML4.5, mb4.6/25(NEIC), ML4.7/122(NEIC), Mwr4.6/72(NEIC), Error ellipse: s-maj=2.2km s-min=2.0km az=69.0*

*NEIC **15** 06:31:36.0±1.5, 66°.30N±0°.01×157°.20W±0°.04, h7^{km}±4^{km}, Error ellipse: s-maj=2.2km s-min=1.6km az=59.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-6.04; $M_{\theta\theta}$5.57; $M_{\phi\phi}$0.47; $M_{r\theta}$0.67; $M_{\theta\phi}$-5.19; $M_{\phi r}$3.73; Fault plane solution: $M_0$8.67000×10^{15} NP1: ϕ_s149.70000°, δ58.24000°, λ-51.84000°. NP2: ϕ_s273.51000°, δ48.04000°, λ-134.95000°. Principal axes: T 8.9449, Plg6.0000°, Azm214.0000°; N -0.5749, Plg32.0000°, Azm307.0000°; P -8.3700, Plg58.0000°, Azm114.0000°;*

*ANF **15** 06:31:35.5±0.1, 66°.31N×157°.21W, h4^{km}±1^{km}, ML5.0/52 Error ellipse: s-maj=0.8km s-min=0.6km az=95.0*

*IDC **15** 06:31:35.8±0.5, 66°.44N×157°.43W, h0^{km}, mb4.0/24, mbtmp4.0/27, ML4.1/4, MS3.7/47, Error ellipse: s-maj=14.5km s-min=9.5km az=33.0*

*NEIC **15** 06:31:36.2, 66°.29N×157°.20W, h7^{km}*

*GCMT **15** 06:31:36.8±0.3, 66°.47N±0°.03×157°.39W±0°.07, h17^{km}±1^{km}, MW4.8/82, Moment Tensor Solution. s18,c22; s82,c104; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.36±.12; $M_{\theta\theta}$0.93±.08; $M_{\phi\phi}$0.43±.08; $M_{r\theta}$1.13±.23; $M_{\theta\phi}$-0.84±.05; $M_{\phi r}$0.37±.23; Best double couple: $M_0$1.87500×10^{16} NP1: ϕ_s150.00000°, δ38.00000°, λ-46.00000°. NP2: ϕ_s279.00000°, δ64.00000°, λ-118.00000°. Principal axes: T 1.7390, Plg15.0000°, Azm29.0000°; N 0.2760, Plg25.0000°, Azm292.0000°; P -2.0110, Plg60.0000°, Azm147.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 06:31:35.8±1.0**, 66°.30N**±0°.01×**157°.15W**±0°.02**, h5**^{km}±6^{km}**, n516, σ0^s.90**/516**, mb4.5**/54**, MS3.7**/48**, 3D, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
G19K	Purcell Mounta	0.16	171	Pg	Pg	06 31 39.3	+0.2
G19K				Sg	Sg	06 31 42.0	+0.8
G19K				IAML		06 31 42.8	
	comp=E,227µm,0.3s						
G19K				IAML		06 31 42.8	
	comp=N,196µm,0.5s						
G19K	Purcell Mounta	0.16	171	P	Pg	06 31 39.2	+0.2
	baz=342						
G19K				S	Sg	06 31 41.9	+0.6
	baz=342						
F19K	Shaleruckik Mo	0.59	335		Pg	06 31 46.5	-0.6
F19K					Sg	06 31 55.2	+0.5
F19K	Shaleruckik Mo	0.59	335	P	Pg	06 31 46.9	-0.1
	baz=157						
F19K				S	Sg	06 31 54.6	-0.1
	baz=157						
G18K	Tagagawik	0.74	237	Pg	Pg	06 31 49.3	-0.6
G18K				Sg	Sg	06 31 59.5	0.0
G18K	Tagagawik	0.74	237	P	Pg	06 31 49.4	-0.6
	baz=55						
G18K				S	Sg	06 31 59.8	+0.3
	baz=55						
H19K	Roundabout Mou	0.83	159	Pg	Pg	06 31 51.4	-0.3
H19K				Sg	Sb	06 32 03.6	-0.5
H19K				IAML		06 32 07.8	
	comp=N,22µm,0.4s						
H19K				IAML		06 32 08.2	
	comp=E,26µm,0.3s						
H19K	Roundabout Mou	0.83	159	P	Pg	06 31 51.5	-0.3
	baz=338						
H19K				S	Sb	06 32 03.5	-0.5
	baz=338						
F20K	Avaraart Lake	0.94	37		Pg	06 31 53.3	-0.4
F20K	Avaraart Lake	0.94	37	IAML		06 32 10.3	
	comp=N,25µm,0.7s						
F20K	Avaraart Lake	0.94	37	P	Pg	06 31 53.5	-0.3
	baz=219						
F20K				S	Sg	06 32 06.6	+0.6
	baz=219						
F18K	Selawik	1.05	288		Pg	06 31 54.9	-1.0
F18K					Pb	06 31 55.2	-1.2
F18K					Sg	06 32 09.3	-0.1
F18K	Selawik	1.05	288	P	Pg	06 31 54.9	-1.0
	baz=106						
F18K				S	Sg	06 32 09.5	+0.1
	baz=106						
E19K	Redstone River	1.16	358	Pg	Pg	06 31 57.9	-0.1
E19K				Sg	Sg	06 32 12.2	-0.8
E19K				IAML		06 32 16.1	
	comp=N,20µm,0.6s						
E19K				IAML		06 32 16.3	
	comp=E,13µm,0.6s						
E19K	Redstone River	1.16	358	P	Pg	06 31 57.5	-0.5
	baz=180						
E19K				S	Sg	06 32 12.4	-0.6
	baz=180						
H20K	Anotleneega Mo	1.24	130		Pg	06 31 59.5	0.0
H20K					Pn	06 31 59.9	+0.2
H20K					Sn	06 32 16.8	+0.1
H20K	Anotleneega Mo	1.24	130	P	Pg	06 31 59.1	-0.4
	baz=311,SNR=313						
H20K				S	Sn	06 32 16.8	+0.1
	baz=311						
H18K	Honhosa River	1.26	204		Sg	06 32 15.6	-0.6
H18K	Honhosa River	1.26	204		Pg	06 31 59.1	-0.8
H18K				IAML		06 32 18.2	
	comp=E,14µm,0.4s						
H18K	Honhosa River	1.26	204	P	Pg	06 31 58.5	-1.4
	baz=22						
H18K				S	Sg	06 32 15.7	-0.6
	baz=22						
G21K	Allakaket	1.48	80		Pn	06 32 02.8	-0.2
G21K					Sb	06 32 23.2	+0.4
G21K	Allakaket	1.48	80	IAML		06 32 25.5	
	comp=E,12µm,0.9s						
G21K				IAML		06 32 26.3	
	comp=N,11µm,0.8s						
G21K	Allakaket	1.48	80	P	Pn	06 32 02.8	-0.2
	baz=263						
G21K				S	Sb	06 32 23.3	+0.4
	baz=263						
GCSA	Galena City Sc	1.57	176		Pn	06 32 04.2	0.0
GCSA					Pb	06 32 04.5	-0.7
GCSA					Sb	06 32 25.5	+0.2
GCSA	Galena City Sc	1.57	176	P	Pn	06 32 03.8	-0.4
	baz=355						
GCSA				S	Sn	06 32 25.0	+0.2
	baz=355						
G17K	Kiwalik Mounta	1.65	242		Pn	06 32 04.2	-1.1
G17K					Pb	06 32 04.5	-2.1
G17K					Sn	06 32 26.5	-0.4
G17K	Kiwalik Mounta	1.65	242	P	Pn	06 32 04.1	-1.2
	baz=59						
G17K				S	Sn	06 32 26.3	-0.5
	baz=59						
F17K	Baldwin Pennin	1.66	277		Pn	06 32 04.9	-0.5
F17K				IAML		06 32 29.5	
	comp=E,11µm,0.8s						
F17K	Baldwin Pennin	1.66	277		Sn	06 32 26.9	-0.2
F17K	Baldwin Pennin	1.66	277	P	Pn	06 32 04.5	-0.9
	baz=93						
F17K				S	Sn	06 32 26.4	-0.7
	baz=93						
F21K	Alatna River	1.72	56		Pn	06 32 06.6	+0.2
F21K				IAML		06 32 33.7	
	comp=N,5µm,1.4s						
F21K				IAML		06 32 35.0	
	comp=E,5µm,0.6s						
F21K	Alatna River	1.72	56		Sb	06 32 29.7	-0.1
F21K	Alatna River	1.72	56	P	Pn	06 32 06.2	-0.2
	baz=240,SNR=126						
F21K				S	Sn	06 32 29.5	+0.8
	baz=240						
E18K	Tukpahlearik C	1.77	311		Sn	06 32 29.6	-0.2
E18K				IAML		06 32 32.1	
	comp=N,5µm,0.7s						
E18K	Tukpahlearik C	1.77	311		Pn	06 32 07.0	+0.1
E18K	Tukpahlearik C	1.77	311	P	Pn	06 32 06.7	-0.2
	baz=129						
E18K				S	Sn	06 32 29.5	-0.2

	baz=129						
H17K	Granite Mounta	1.79	221		Pn	06 32 06.2	-1.1
H17K				IAML		06 32 33.5	
	comp=N,5µm,1.0s						
H17K	Granite Mounta	1.79	221	P	Pn	06 32 06.4	-0.9
	baz=38						
H17K				S	Sn	06 32 30.0	-0.3
	baz=38						
I20K	Naaghedeneel	1.88	142		Pn	06 32 09.0	+0.5
I20K				IAML		06 32 51.0	
	comp=N,8µm,0.6s						
I20K				IAML		06 33 02.4	
	comp=E,8µm,1.2s						
I20K	Naaghedeneel	1.88	142	P	Pn	06 32 08.5	0.0
	baz=324,SNR=97						
I20K				Sb	Sg	06 32 36.1	+0.1
	baz=324						
H21K	Melozitna Rive	1.89	108		Pn	06 32 08.3	-0.4
H21K				IAML		06 32 38.9	
	comp=N,4µm,0.7s						
H21K				IAML		06 32 41.3	
	comp=E,5µm,0.5s						
H21K	Melozitna Rive	1.89	108		Sg	06 32 36.5	0.0
H21K	Melozitna Rive	1.89	108	P	Pn	06 32 08.1	-0.6
	baz=292						
H21K				Sb	Sg	06 32 36.5	0.0
	baz=292						
E20K	Nigu River	2.00	10		Pn	06 32 10.9	+0.8
E20K	Nigu River	2.00	10	P	Pn	06 32 11.0	+0.8
	baz=192						
E20K				S	Sn	06 32 36.5	+1.0
	baz=192						
E17K	Hotham Inlet	2.02	295		Pn	06 32 10.1	-0.2
E17K	Hotham Inlet	2.02	295	P	Pn	06 32 09.8	-0.6
	baz=111,SNR=83						
E17K				S	Sn	06 32 36.6	+0.6
	baz=111						
D19K	Kuna River	2.23	351		Pn	06 32 14.3	+0.9
D19K				IAML		06 32 47.9	
	comp=E,6µm,0.8s						
D19K	Kuna River	2.23	351	P	Pn	06 32 13.8	+0.4
	baz=171						
D19K				S	Sn	06 32 41.8	+0.5
	baz=171						
F22K	John River	2.30	56	P	Pn	06 32 13.9	-0.4
	baz=241						
F22K				Sb	Sg	06 32 48.5	-1.2
	baz=241						
G16K	Koyuk River	2.33	249	P	Pn	06 32 12.9	-1.7
	baz=64						
G16K				Sb	Sb	06 32 48.1	+0.9
	baz=64						
G22K	Bettles	2.34	72	P	Pn	06 32 14.2	-0.6
	baz=257						
G22K				Sb	Sg	06 32 49.8	-0.9
	baz=257						
H22K	Ishtalitna Cre	2.39	97		Pn	06 32 15.9	+0.4
H22K	Ishtalitna Cre	2.39	97	P	Pn	06 32 15.2	-0.3
	baz=282						
H22K				Sb	Sb	06 32 50.9	+2.0
	baz=282						
J19K	Poorman	2.41	164		Pn	06 32 15.9	+0.2
J19K	Poorman	2.41	164	IAML		06 32 54.1	
	comp=E,2µm,0.5s						
J19K	Poorman	2.41	164	P	Pn	06 32 15.0	-0.7
	baz=345						
J19K				Sb	Sb	06 32 51.2	+1.7
	baz=345						
D20K	Etivluk River	2.43	5	P	Pn	06 32 15.8	-0.3
	baz=186						
D20K				Sb	Sb	06 32 51.6	+1.5
	baz=186						
E21K	Killik River	2.47	28	P	Pn	06 32 17.0	+0.3
	baz=212						
E21K				Sb	Sb	06 32 53.3	+1.9
	baz=212						
J20K	Nowinta River	2.48	148		Pn	06 32 17.5	+0.8
J20K	Nowinta River	2.48	148	IAML		06 33 02.8	
	comp=E,3µm,0.5s						
J20K	Nowinta River	2.48	148	P	Pn	06 32 16.3	-0.5
	baz=330						
J20K				Sb	Sg	06 32 53.9	-1.5
	baz=330						
D17K	Noatak River	2.72	304		Pn	06 32 19.3	-0.7
D17K	Noatak River	2.72	304	P	Pn	06 32 19.6	-0.4
	baz=119,SNR=41						
D17K				Sb	Sb	06 32 58.4	+0.1
	baz=119						
E22K	Anaktuvuk Pass	2.77	46	P	Pn	06 32 21.6	+0.8
	baz=231						
E22K				S	Sn	06 32 56.2	+1.5
	baz=231						
C18K	Utukok River	2.82	328		Pn	06 32 21.6	+0.1
C18K				IAML		06 33 14.0	
	comp=E,2µm,1.6s						
C18K	Utukok River	2.82	328	P	Pn	06 32 21.0	-0.5
	baz=145,SNR=40						
RDOG	Red Dog Mine	2.85	311		Pn	06 32 21.1	-0.8
RDOG	Red Dog Mine	2.85	311	P	Pn	06 32 21.3	-0.5
	baz=126,SNR=33						
RDOG				S	Sn	06 32 56.4	-0.1
	baz=126						
I17K	Unalakleet	2.85	213		Pn	06 32 21.6	-0.2
I17K	Unalakleet	2.85	213	IAML		06 33 09.6	
	comp=N,3µm,0.7s						
I17K				IAML		06 33 14.2	
	comp=E,3µm,0.8s						
I17K	Unalakleet	2.85	213	P	Pn	06 32 21.4	-0.5
	baz=30						
I17K				Sb	Sb	06 33 03.8	+1.6
	baz=30						
J18K	Innoko River	2.86	176	Pn	Pn	06 32 21.5	-0.4
J18K	Innoko River	2.86	176	P	Pn	06 32 21.3	-0.6
	baz=356						
J18K				Sb	Sb	06 33 04.6	+2.2
	baz=356						
G23K	Bananza Creek	2.88	79	P	Pn	06 32 21.6	-0.8
	baz=265						
G23K				Sb	Sb	06 33 06.0	+2.8
	baz=265						
COLD	Coldfoot	2.91	68	IAML		06 33 13.2	
	comp=N,2µm,1.8s						
COLD	Coldfoot	2.91	68	P	Pn	06 32 21.9	-0.7
	baz=255,SNR=21						
COLD				Sb	Sg	06 33 07.0	-2.1
	baz=255						
MLY	Manley	2.95	113	IAML		06 33 16.1	
	comp=N,1µm,1.1s						
MLY	Manley	2.95	113	P	Pn	06 32 22.4	-0.8
	baz=298						
MLY				S	Sb	06 33 02.5	-2.5
	baz=298						
C19K	Lookout Ridge	2.96	343	P	Pn	06 32 23.5	0.0
	baz=161,SNR=25						
C19K				Sb	Sb	06 33 07.0	+1.6
	baz=161						
C21K	Knifeblade Rid	3.00	16	P	Pn	06 32 23.8	-0.2
	baz=199,SNR=34						
J17K	VABM Dome	3.03	197	P	Pn	06 32 23.8	-0.5
	baz=14						
D22K	Ayikyak River	3.10	31		Pn	06 32 26.0	+0.7
D22K	Ayikyak River	3.10	31	P	Pn	06 32 25.7	+0.4
	baz=216,SNR=120						
F15K	North Star Dit	3.12	262	P	Pn	06 32 24.0	-1.5
	baz=76						
F15K				Sb	Sb	06 33 12.1	+2.1
	baz=76						
H23K	Yukon River	3.14	95	P	Pn	06 32 25.7	-0.2
	baz=282,SNR=54						
G15K	Niukluk	3.14	248	P	Pn	06 32 23.7	-2.2
	baz=62,SNR=20						
CHUM	Lake Minchumin	3.18	138	P	Pn	06 32 26.0	-0.3
	baz=322						
C17K	DeLong Mountai	3.19	316	P	Pn	06 32 25.9	-0.6
	baz=131,SNR=24						
K20K	Telida	3.24	155		Pn	06 32 27.3	+0.1
K20K	Telida	3.24	155	P	Pn	06 32 27.1	-0.1
	baz=337,SNR=41						
J16K	Anvik River	3.37	208	P	Pn	06 32 28.6	-0.4
	baz=24,SNR=111						
BPAW	Bear Paw Mtn.	3.41	128		Pn	06 32 30.3	+0.7
BPAW	Bear Paw Mtn.	3.41	128	P	Pn	06 32 29.6	0.0
	baz=313,SNR=90						
I23K	Minto, Yukon-K	3.42	106	IAML		06 33 30.0	
	comp=E,2µm,1.1s						
I23K				IAML		06 33 31.2	
	comp=N,2µm,1.6s						
I23K	Minto, Yukon-K	3.42	106	P	Pn	06 32 29.3	-0.3
	baz=293,SNR=73						
E23K	Chandalar	3.42	56	IAML		06 33 29.4	
	comp=E,2µm,1.1s						
E23K				IAML		06 33 36.1	
	comp=N,2µm,0.8s						
E23K	Chandalar	3.42	56	P	Pn	06 32 29.8	0.0
	baz=243,SNR=36						
B21K	Ikpikpuk River	3.47	15		Pn	06 32 29.6	-0.7
B21K	Ikpikpuk River	3.47	15	P	Pn	06 32 29.9	-0.3
	baz=198						
B18K	Kokolik River	3.54	332		Pn	06 32 31.1	-0.3
B18K	Kokolik River	3.54	332	P	Pn	06 32 31.3	0.0
	baz=148,SNR=11						
CAST	Castle Rocks	3.61	141	P	Pn	06 32 32.7	+0.4
	baz=325						
K17K	Iditarod	3.64	188	P	Pn	06 32 32.0	-0.6
	baz=7.0,SNR=59						
D23K	Nanushuk River	3.64	40		Pn	06 32 32.7	+0.1
D23K	Nanushuk River	3.64	40	P	Pn	06 32 33.1	+0.4
	baz=226,SNR=35						
B20K	Meade River	3.72	360	P	Pn	06 32 33.8	+0.1
	baz=180						
C16K	Lisburne Hills	3.74	306		Pn	06 32 33.9	-0.2
C16K	Lisburne Hills	3.74	306	IAML		06 33 38.5	
	comp=E,1µm,1.2s						
C16K				IAML		06 33 45.1	
	comp=N,1µm,1.9s						
C16K	Lisburne Hills	3.74	306	P	Pn	06 32 33.8	-0.2
	baz=118,SNR=29						
TOLK	Toolik Lake Re	3.74	48		Pn	06 32 34.6	+0.4
TOLK	Toolik Lake Re	3.74	48	P	Pn	06 32 34.5	+0.4
	baz=235,SNR=47						
NEA2	Nenana	3.79	113	P	Pn	06 32 34.4	-0.3
	baz=300,SNR=73						
H24K	Noodor Dome	3.81	93	IAML		06 33 43.4	
	comp=E,808nm,1.2s						
H24K				IAML		06 33 48.8	
	comp=N,1µm,1.0s						
H24K	Noodor Dome	3.81	93	P	Pn	06 32 34.5	-0.5
	baz=281,SNR=58						
E24K	Your Creek	3.81	58	P	Pn	06 32 34.7	-0.4
	baz=246						
KTH	Kantishna Hill	3.83	133		Pn	06 32 36.2	+0.8
KTH				IAML		06 33 55.6	
	comp=N,1µm,1.1s						
KTH				IAML		06 33 59.5	
	comp=E,737nm,1.3s						
F24K	Squaw Lake	3.85	67		Pn	06 32 35.4	-0.1
F24K	Squaw Lake	3.85	67	IAML		06 33 42.2	
	comp=N,917nm,1.5s						
F24K				IAML		06 33 50.1	
	comp=E,1µm,0.9s						
F24K	Squaw Lake	3.85	67	P	Pn	06 32 35.3	-0.3
	baz=256,SNR=45						
ANM	Nome	3.85	247		Pn	06 32 34.6	-0.9
ANM				IAML		06 33 46.5	
	comp=E,1µm,0.7s						
ANM				IAML		06 33 49.3	
	comp=N,1µm,1.3s						
ANM	Nome	3.85	247	P	Pn	06 32 33.9	-1.7
	baz=59						
F14K	Arctic Creek	3.86	262	P	Pn	06 32 34.3	-1.4
	baz=73						
BWN	Browne	3.88	120		Pn	06 32 36.8	+0.8
BWN	Browne	3.88	120	IAML		06 33 53.4	
	comp=E,1µm,1.0s						
BWN				IAML		06 33 57.9	
	comp=N,1µm,1.0s						
G24K	Hadweenzic Riv	3.90	80	P	Pn	06 32 35.7	-0.5
	baz=268,SNR=42						
PPLA	Purkeypile	4.03	146		Pn	06 32 38.6	+0.4
PPLA				IAML		06 33 50.5	
	comp=E,721nm,2.2s						
PPLA				IAML		06 34 23.0	
	comp=N,610nm,1.5s						
PPLA	Purkeypile	4.03	146	P	Pn	06 32 38.4	+0.1
	baz=330						
TRF	Thorofare Moun	4.09	131		Pn	06 32 39.5	+0.4
TRF	Thorofare Moun	4.09	131	IAML		06 33 54.9	
	comp=E,966nm,1.7s						
TRF				IAML		06 33 57.0	
	comp=N,956nm,1.7s						
TRF	Thorofare Moun	4.09	131	P	Pn	06 32 39.4	+0.3
	baz=317,SNR=100						
L20K	Farewell, AK	4.09	158		Pn	06 32 39.6	+0.6
L20K	Farewell, AK	4.09	158	P	Pn	06 32 39.2	+0.3
	baz=341,SNR=79						
L18K	Granite Mounta	4.11	177		Pn	06 32 39.7	+0.6
L18K	Granite Mounta	4.11	177	P	Pn	06 32 39.1	0.0
	baz=357,SNR=40						
COLA	College	4.12	106	P	Pn	06 32 39.6	+0.4
	baz=294						
A19K	Wainwright	4.18	341	P	Pn	06 32 40.1	+0.1
	baz=158						
POKR	Poker Plat Res	4.19	102		Pn	06 32 40.3	+0.1
POKR				IAML		06 33 50.2	
	comp=E,618nm,0.6s						
POKR				IAML		06 33 52.7	
	comp=N,1µm,1.5s						
POKR	Poker Plat Res	4.19	102	P	Pn	06 32 40.7	+0.5
	baz=291,SNR=83						
WRH	Wood River Hil	4.21	112		Pn	06 32 40.5	-0.1
WRH	Wood River Hil	4.21	112	IAML		06 33 56.5	
	comp=E,483nm,0.8s						
WRH				IAML		06 34 01.6	
	comp=N,585nm,1.7s						
L17K	Donlin	4.22	187		Pn	06 32 40.2	-0.3
L17K	Donlin	4.22	187	P	Pn	06 32 40.3	-0.3
	baz=6.0,SNR=31						
L19K	White Mountain	4.26	165	IAML		06 34 20.0	
	comp=E,486nm,1.8s						
L19K	White Mountain	4.26	165	P	Pn	06 32 41.6	+0.4
	baz=347,SNR=77						
D24K	Happy Valley	4.27	44		Pn	06 32 42.0	+0.8
D24K	Happy Valley	4.27	44	P	Pn	06 32 41.6	+0.3
	baz=232,SNR=22						
B22K	Teshekpuk Lake	4.28	17	P	Pn	06 32 42.4	+0.9
	baz=201						
C23K	Itkillik River	4.31	32		Pn	06 32 42.0	+0.2
C23K	Itkillik River	4.31	32	P	Pn	06 32 41.5	-0.3
	baz=218,SNR=38						
MCK	McKinley	4.34	123	Pn	Pn	06 32 42.3	+0.1
MCK	McKinley	4.34	123	P	Pn	06 32 42.4	+0.2
	baz=310,SNR=43						
G25K	Bearman Lake	4.44	79	P	Pn	06 32 44.2	+0.5
	baz=269,SNR=12						
K15K	Wolf Creek Mou	4.46	207	P	Pn	06 32 43.3	-0.5
	baz=23,SNR=27						
TNA	Tin City	4.47	265	Pn	Pn	06 32 44.1	0.0
TNA	Tin City	4.47	265	P	Pn	06 32 43.7	-0.4
	baz=76,SNR=5.4						
J14K	Nanvaranak Lak	4.51	221	P	Pn	06 32 43.4	-1.2
	baz=35,SNR=24						
IL31		4.54	105		Pn	06 32 45.0	+0.1
ILAR	Eielson Array	4.54	105	Pn	Pn	06 32 45.0	0.0
	comp=E,39nm,0.3s,baz=292,slow=14,SNR=462						
ILAR				Sn	Sn	06 33 37.9	-0.1
	comp=E,20nm,0.3s,baz=291,slow=22,SNR=9.2						
ILAR				Lg	Lg	06 33 58.0	
	comp=E,39nm,0.3s,baz=302,slow=30,SNR=11						
H25L	Birch Creek	4.58	85	P	Pn	06 32 45.9	+0.4
	baz=276,SNR=18						
M19K	Big River Lodg	4.58	163	P	Pn	06 32 46.3	+0.7
	baz=346						
RND	Reindeer	4.58	126	Pn	Pn	06 32 46.0	+0.4
C24K	Franklin Bluff	4.67	39		Pn	06 32 47.0	+0.2
C24K	Franklin Bluff	4.67	39	P	Pn	06 32 47.0	+0.2
	baz=227						
HDA	Harding Lake	4.67	109	IAML		06 34 05.8	
	comp=N,582nm,0.6s						
HDA				IAML		06 34 06.2	
	comp=E,339nm,1.3s						
HDA	Harding Lake	4.67	109	P	Pn	06 32 46.3	-0.6
	baz=298,SNR=73						
F25K	Christian Rive	4.71	69		Pn	06 32 47.1	-0.2
F25K				IAML		06 34 14.4	
	comp=E,638nm,1.2s						
F25K				IAML		06 34 14.7	
	comp=N,700nm,1.4s						
F25K	Christian Rive	4.71	69	P	Pn	06 32 47.5	+0.1
	baz=259,SNR=34						
L16K	Owhat River	4.72	194	P	Pn	06 32 47.1	-0.4
	baz=11,SNR=21						
M20K	Styx River	4.78	156	P	Pn	06 32 49.0	+0.7
	baz=340						
A22K	Sinclair Lake	4.79	9	P	Pn	06 32 48.4	0.0
	baz=191						
FYU	Fort Yukon	4.79	81		Pn	06 32 48.6	+0.1
PRP	Porcupine Dome	4.83	94		Pn	06 32 49.1	-0.1
PRP	Porcupine Dome	4.83	94	IAML		06 34 14.7	
	comp=E,552nm,0.7s						
PRP				IAML		06 34 14.8	
	comp=N,614nm,1.2s						
PRP	Porcupine Dome	4.83	94	P	Pn	06 32 49.0	-0.1
	baz=285,SNR=54						
E25K	Arctic Village	4.86	63	IAML		06 34 21.5	
	comp=E,544nm,1.1s						
E25K	Arctic Village	4.86	63	P	Pn	06 32 49.1	-0.3
	baz=253,SNR=30						
M18K	Stony River	4.87	172		Pn	06 32 49.2	-0.3
M18K	Stony River	4.87	172	P	Pn	06 32 49.7	+0.2
	baz=353,SNR=58						
CUT	Chulitna	4.92	139	P	Pn	06 32 50.8	+0.5
	baz=325						
M17K	Holitna River	4.92	182		Pn	06 32 50.1	-0.2
M17K	Holitna River	4.92	182	IAML		06 34 16.3	
	comp=E,678nm,1.9s						
M17K				IAML		06 34 19.7	
	comp=N,642nm,1.4s						
M17K	Holitna River	4.92	182	P	Pn	06 32 50.1	-0.2
	baz=1.1,SNR=21						
SKT	Skwentna	4.99	148		Pn	06 32 52.0	+0.9
SKT	Skwentna	4.99	148	IAML		06 34 23.4	
	comp=E,319nm,1.0s						
SKT	Skwentna	4.99	148	P	Pn	06 32 52.1	+0.9
	baz=333,SNR=114						
WAT7	Susitna Watana	4.99	130		Pn	06 32 51.5	+0.2
L15K	Ungalak Mounta	5.02	204	P	Pn	06 32 51.2	-0.4
	baz=20						
A21K	Barrow	5.05	2	P	Pn	06 32 50.9	-1.0
	baz=183						
D25K	Kavik River	5.08	49		Pn	06 32 51.8	-0.7
D25K	Kavik River	5.08	49	P	Pn	06 32 52.5	-0.1
	baz=239						
BMAR	Burnt Mountain	5.08	71		Pn	06 32 52.0	-0.5
WAT1	Susitna Watana	5.09	129		Pn	06 32 52.8	+0.2
WAT1	Susitna Watana	5.09	129	P	Pn	06 32 53.0	+0.4
	baz=317						
J25K	Salcha River,	5.20	104	P	Pn	06 32 53.9	-0.2
	baz=294,SNR=65						
F26K	Sheenjek River	5.29	69	P	Pn	06 32 55.4	+0.1
	baz=261,SNR=17						
DHY	Denali Highway	5.30	123		Pn	06 32 55.9	+0.3
DHY	Denali Highway	5.30	123	P	Pn	06 32 55.9	+0.3
	baz=312,SNR=87						
G26K	Porcupine Rive	5.36	77		Pn	06 32 55.8	-0.5
G26K	Porcupine Rive	5.36	77	P	Pn	06 32 54.9	-1.4
	baz=269						
M16K	Timber Creek	5.36	189	P	Pn	06 32 56.1	-0.3
	baz=7.6,SNR=10.0						
STLK	Strandline Lak	5.36	152		Pn	06 32 57.2	+0.8
K24K	Donnelly Dome	5.43	112		Pn	06 32 57.3	0.0
K24K	Donnelly Dome	5.43	112	P	Pn	06 32 57.2	0.0
	baz=302,SNR=19						
K13K	Kusilvak Mount	5.48	220		Pn	06 32 57.3	-0.6
K13K	Kusilvak Mount	5.48	220	P	Pn	06 32 57.1	-0.8
	baz=33						
M22K	Willow	5.51	143	P	Pn	06 32 58.2	-0.1
	baz=329						
WAT6	Susitna Watana	5.53	128	P	Pn	06 32 58.9	+0.2
	baz=316,SNR=42						
L14K	Kuka Creek	5.55	209	P	Pn	06 32 58.6	-0.2
	baz=24						
N20K	Mount Spurr	5.57	155	P	Pn	06 32 59.7	+0.4
	baz=339						
SPCR	Spurr Chakacha	5.57	155	P	Pn	06 32 59.6	+0.3
	baz=339,SNR=8.9						
SPU	Mount Spurr	5.62	154		Pn	06 33 01.0	+1.2
SUA	Susitna One	5.62	147	P	Pn	06 33 00.5	+0.6
	baz=332,SNR=16						
N19K	Bonanza Creek	5.64	167		Pn	06 33 00.5	+0.3
N19K	Bonanza Creek	5.64	167	P	Pn	06 33 00.6	+0.4
	baz=349,SNR=15						
N18K	Kilae Creek	5.67	174	P	Pn	06 33 00.9	+0.2
	baz=355,SNR=55						
N17K	Nushagak Hills	5.80	180		Pn	06 33 02.4	+0.1
N17K	Nushagak Hills	5.80	180	P	Pn	06 33 02.7	+0.3
	baz=360,SNR=40						
RIDG	Independent Ri	5.81	111	P	Pn	06 33 02.7	+0.2
	baz=302,SNR=21						
C26K	Camden Bay	5.83	46	P	Pn	06 33 03.1	+0.4
	baz=238,SNR=53						
I26K	Coal Creek Min	5.84	93	P	Pn	06 33 02.3	-0.5
	baz=286,SNR=28						
M15K	Kasigluk River	5.85	197	P	Pn	06 33 02.8	-0.2
	baz=14,SNR=9.4						
N16K	Nishlik Lake	5.90	188		Pn	06 33 03.1	-0.6
N16K	Nishlik Lake	5.90	188	P	Pn	06 33 03.4	-0.3
	baz=6.2,SNR=11						
PMR	Palmer	5.90	140	P	Pn	06 33 04.4	+0.7
	baz=327,SNR=26						
SML	Sawmill	5.94	135	P	Pn	06 33 05.5	+1.2
	baz=323,SNR=32						
J26L	Joseph Creek	5.95	101	P	Pn	06 33 04.2	-0.3
	baz=294,SNR=104						
M14K	Bethel	5.97	203	P	Pn	06 33 04.8	+0.2
	baz=19						
SCRK	Sand Creek	6.02	107		Pn	06 33 04.9	-0.6
SCRK	Sand Creek	6.02	107	P	Pn	06 33 04.6	-0.8
	baz=299,SNR=21						
PAX	Paxson	6.03	118		Pn	06 33 05.9	+0.3
PAX	Paxson	6.03	118	P	Pn	06 33 05.4	-0.2
	baz=309,SNR=28						
C27K	Jago River	6.05	51	P	Pn	06 33 06.7	+0.9
	baz=243,SNR=31						
M23K	Glacier View	6.13	133	P	Pn	06 33 07.0	+0.1
	baz=322,SNR=24						
CAPN	Captain Cook N	6.17	151	P	Pn	06 33 06.5	-0.8
	baz=337						
RC01	Rabbit Creek A	6.18	144	P	Pn	06 33 08.0	+0.4
	baz=331						
RDSO	Redoubt South	6.20	159		Pn	06 33 08.5	+0.6
G27K	Doyon Strip	6.20	78		Pn	06 33 08.9	+1.0
G27K	Doyon Strip	6.20	78	P	Pn	06 33 08.2	+0.3
	baz=272,SNR=12						
SCM	Sheep Creek Mo	6.22	132		Pn	06 33 08.3	+0.2
SCM	Sheep Creek Mo	6.22	132	P	Pn	06 33 08.1	0.0
	baz=320,SNR=26						
RED	Redoubt Volcan	6.23	160		Pn	06 33 08.7	+0.5
KNK	Knik Glacier	6.23	138		Pn	06 33 08.5	+0.3
KNK	Knik Glacier	6.23	138	P	Pn	06 33 08.6	+0.3
	baz=326,SNR=16						
O19K	Port Alsworth	6.26	167		Pn	06 33 07.8	-0.9
O19K	Port Alsworth	6.26	167	P	Pn	06 33 08.2	-0.5
	baz=349,SNR=7.5						
N15K	Kwethluk River	6.30	194		Pn	06 33 09.4	+0.2
N15K	Kwethluk River	6.30	194	P	Pn	06 33 08.6	-0.6
	baz=11						
H27K	Steamboat Moun	6.31	84		Pn	06 33 10.0	+0.7
H27K	Steamboat Moun	6.31	84	P	Pn	06 33 08.6	-0.8
	baz=278,SNR=12						
E27K	Coleen River	6.32	66		Pn	06 33 09.3	-0.2
E27K	Coleen River	6.32	66	P	Pn	06 33 09.2	-0.2
	baz=260						
M24K	Tolsona, Glenn	6.37	126		Pn	06 33 11.2	+1.0
M24K	Tolsona, Glenn	6.37	126	P	Pn	06 33 11.1	+0.9
	baz=316,SNR=28						
I27K	Kandik River	6.39	89	P	Pn	06 33 10.3	-0.1
	baz=283,SNR=17						
HARP	HAARP	6.51	121		Pn	06 33 12.6	+0.5
HARP	HAARP	6.51	121	P	Pn	06 33 13.2	+1.1
	baz=312,SNR=13						
M13K	Dall Lake	6.53	208	Pn	Pn	06 33 13.0	+0.6
M13K	Dall Lake	6.53	208	P	Pn	06 33 12.2	-0.2
	baz=22						
O18K	Koktuh Hills	6.54	171		Pn	06 33 12.5	+0.1
O18K	Koktuh Hills	6.54	171	P	Pn	06 33 11.3	-1.1
	baz=353						
O17K	Koliganek Bris	6.56	180		Pn	06 33 12.5	-0.2
O17K	Koliganek Bris	6.56	180	P	Pn	06 33 12.9	+0.3
	baz=360,SNR=20						
O20K	Slope Mountain	6.57	160		Pn	06 33 13.8	+0.8
O20K	Slope Mountain	6.57	160	P	Pn	06 33 13.1	+0.1
	baz=344,SNR=11						
ILSW	Iliamna Southw	6.60	162		Pn	06 33 13.8	+0.4
ILS	Iliamna Low So	6.63	162		Pn	06 33 14.8	+0.9
GAMB	Gambell	6.66	254	P	Pn	06 33 14.0	-0.1
	baz=61						
MENT	Mentasta	6.68	114		Pn	06 33 14.9	+0.4
N14K	Kuskokwak Cree	6.72	200		Pn	06 33 13.8	-1.2
N14K	Kuskokwak Cree	6.72	200	P	Pn	06 33 15.4	+0.4
	baz=16						

O22K	**Cooper Landing**	**6.72**	**147**	P	**Pn**	**06 33 15.2**	**+0.2**
	baz=333						
PWL	**Port Wells**	**6.73**	**140**	P	**Pn**	**06 33 14.6**	**-0.5**
	baz=328						
K27K	**Chicken**	**6.74**	**103**		**Pn**	**06 33 15.9**	**+0.6**
K27K	**Chicken**	**6.74**	**103**	P	**Pn**	**06 33 15.3**	**0.0**
	baz=296						
O16K	**Kokwok River B**	**6.75**	**184**		**Pn**	**06 33 15.2**	**-0.2**
O16K	**Kokwok River B**	**6.75**	**184**	P	**Pn**	**06 33 15.0**	**-0.4**
	baz=3.0,SNR=11						
L26K	**Log Cabin Wild**	**6.77**	**113**		**Pn**	**06 33 15.3**	**-0.4**
L26K	**Log Cabin Wild**	**6.77**	**113**	P	**Pn**	**06 33 15.3**	**-0.4**
	baz=305,SNR=30						
D27M	**Malcolm River**	**6.80**	**57**		**Pn**	**06 33 17.3**	**+1.2**
D27M	**Malcolm River**	**6.80**	**57**	P	**Pn**	**06 33 16.1**	**0.0**
	baz=252						
F28M	**Old Crow**	**6.90**	**71**		**Pn**	**06 33 17.2**	**-0.2**
F28M	**Old Crow**	**6.90**	**71**	P	**Pn**	**06 33 17.8**	**+0.3**
	baz=267						
KLU	**Klutina**	**6.91**	**129**	P	**Pn**	**06 33 18.5**	**+0.8**
	baz=319,SNR=25						
P19K	**Oil Pt**	**6.91**	**163**		**Pn**	**06 33 18.5**	**+0.9**
P19K	**Oil Pt**	**6.91**	**163**	P	**Pn**	**06 33 17.3**	**-0.3**
	baz=346,SNR=6.9						
P18K	**Big Mountain,**	**6.99**	**172**	P	**Pn**	**06 33 17.7**	**-1.0**
	baz=353						
GLI	**Glacier Island**	**7.05**	**136**	P	**Pn**	**06 33 18.7**	**-0.8**
	baz=325						
I28M	**Miner Creek**	**7.11**	**89**	P	**Pn**	**06 33 20.0**	**-0.3**
	baz=285,SNR=26						
HOM	**Homer**	**7.12**	**157**	P	**Pn**	**06 33 21.0**	**+0.5**
	baz=342						
SEW	**Seward**	**7.12**	**147**	P	**Pn**	**06 33 20.4**	**-0.1**
	baz=334						
P17K	**Kvichak River**	**7.14**	**177**		**Pn**	**06 33 20.8**	**+0.1**
P17K	**Kvichak River**	**7.14**	**177**	P	**Pn**	**06 33 20.5**	**-0.2**
	baz=358						
E28M	**Babbage River**	**7.15**	**63**		**Pn**	**06 33 21.2**	**+0.4**
E28M	**Babbage River**	**7.15**	**63**	P	**Pn**	**06 33 21.0**	**+0.2**
	baz=260,SNR=11						
M11K	**Mekoryuk**	**7.20**	**219**	P	**Pn**	**06 33 20.5**	**-0.9**
	baz=30						
BRSE	**Bradley Lake S**	**7.20**	**153**	P	**Pn**	**06 33 21.1**	**-0.5**
	baz=339						
N25K	**Chitina, Valde**	**7.25**	**125**	P	**Pn**	**06 33 22.4**	**+0.1**
	baz=316,SNR=17						
O15K	**Ungalikthiuk R**	**7.26**	**191**	P	**Pn**	**06 33 22.3**	**0.0**
	baz=8.4						
M26K	**Nabesna, AK**	**7.28**	**116**	P	**Pn**	**06 33 22.7**	**+0.1**
	baz=309,SNR=9.8						
P16K	**Nushagak River**	**7.31**	**183**	P	**Pn**	**06 33 23.0**	**0.0**
	baz=2.5						
O14K	**Tigyukauivet M**	**7.32**	**197**	P	**Pn**	**06 33 22.6**	**-0.5**
	baz=13						
L27K	**Beaver Creek,**	**7.32**	**109**	P	**Pn**	**06 33 22.7**	**-0.6**
	baz=303,SNR=44						
FID	**Port Fidalgo**	**7.33**	**135**		**Pn**	**06 33 24.7**	**+1.4**
BCAR	**Beaver Creek A**	**7.34**	**109**		**Pn**	**06 33 22.7**	**-0.8**
H29M	**Whitestone**	**7.58**	**82**		**Pn**	**06 33 26.7**	**0.0**
H29M	**Whitestone**	**7.58**	**82**	P	**Pn**	**06 33 27.3**	**+0.6**
	baz=279						
Q19K	**Cape Douglas,**	**7.58**	**166**	P	**Pn**	**06 33 26.4**	**-0.4**
	baz=349						
D28M	**Stokes Point**	**7.59**	**58**	P	**Pn**	**06 33 27.3**	**+0.6**
	baz=255						
G29M	**Pine Creek**	**7.63**	**77**		**Pn**	**06 33 27.6**	**+0.2**
G29M	**Pine Creek**	**7.63**	**77**	P	**Pn**	**06 33 28.3**	**+0.8**
	baz=274,SNR=15						
GLB	**Gilahina Butte**	**7.64**	**123**		**Pn**	**06 33 28.7**	**+1.1**
EYAK	**Cordova Ski Ar**	**7.70**	**133**	P	**Pn**	**06 33 28.3**	**-0.1**
	baz=323						
P23K	**Montague Islan**	**7.71**	**141**	P	**Pn**	**06 33 28.5**	**+0.1**
	baz=329						
E29M	**Blow River**	**7.71**	**66**		**Pn**	**06 33 29.0**	**+0.5**
E29M	**Blow River**	**7.71**	**66**	P	**Pn**	**06 33 27.6**	**-0.9**
	baz=263,SNR=19						
M27K	**Edge Creek, AK**	**7.71**	**114**		**Pn**	**06 33 28.9**	**+0.2**
M27K	**Edge Creek, AK**	**7.71**	**114**	P	**Pn**	**06 33 27.7**	**-1.0**
	baz=307,SNR=13						
BMRM	**Bremner River**	**7.73**	**128**	P	**Pn**	**06 33 27.5**	**-1.3**
	baz=319						
Q18K	**Katmai Hardscr**	**7.75**	**172**	P	**Pn**	**06 33 28.5**	**-0.7**
	baz=353						
I29M	**Ogilvie Camp,**	**7.79**	**88**		**Pn**	**06 33 29.0**	**-0.6**
I29M	**Ogilvie Camp,**	**7.79**	**88**	P	**Pn**	**06 33 29.0**	**-0.6**
	baz=285,SNR=9.9						
DAWY	**Dawson**	**7.79**	**99**	P	**Pn**	**06 33 29.5**	**-0.2**
	baz=295,SNR=31						
MCARA	**McCarthy VSAT**	**7.95**	**122**	P	**Pn**	**06 33 31.4**	**-0.4**
	baz=314						
Q20K	**Shuyak Island**	**8.03**	**162**	P	**Pn**	**06 33 32.4**	**-0.5**
	baz=346						
SYI	**Shuyak Island**	**8.03**	**162**		**Pn**	**06 33 33.6**	**+0.7**
BVCY	**Beaver Creek**	**8.06**	**111**	P	**Pn**	**06 33 33.2**	**-0.2**
	baz=306,SNR=17						
Q17K	**Contact Creek**	**8.09**	**175**	P	**Pn**	**06 33 32.3**	**-1.5**
	baz=356						
J29N	**Klondike Camp**	**8.11**	**94**		**Pn**	**06 33 34.2**	**+0.1**
J29N	**Klondike Camp**	**8.11**	**94**	P	**Pn**	**06 33 34.5**	**+0.4**
	baz=292						
EPYK	**Eagle Plains**	**8.21**	**80**	P	**Pn**	**06 33 35.2**	**-0.2**
	baz=279						
G30M	**tAoh Zraii Nji**	**8.33**	**76**		**Pn**	**06 33 37.0**	**-0.1**
G30M	**tAoh Zraii Nji**	**8.33**	**76**	P	**Pn**	**06 33 37.4**	**+0.3**
	baz=275,SNR=14						
CRQE	**Cirque**	**8.38**	**125**	P	**Pn**	**06 33 37.6**	**-0.2**
	baz=318						
F30M	**Barrier River**	**8.47**	**71**	P	**Pn**	**06 33 39.0**	**+0.1**
	baz=271						
Q23K	**Middleton Isla**	**8.47**	**139**	P	**Pn**	**06 33 39.1**	**+0.2**
	baz=329						
KAIM	**Kayak Island**	**8.60**	**132**	P	**Pn**	**06 33 40.3**	**-0.4**
	baz=323						
YUK3	**Moose Creek**	**8.60**	**114**	P	**Pn**	**06 33 40.6**	**-0.3**
	baz=309						
I30M	**Mount Dempster**	**8.60**	**88**	P	**Pn**	**06 33 40.4**	**-0.5**
	baz=287,SNR=26						
K29M	**Barlow Dome**	**8.64**	**97**		**Pn**	**06 33 41.0**	**-0.4**
K29M	**Barlow Dome**	**8.64**	**97**	P	**Pn**	**06 33 41.2**	**-0.1**
	baz=295,SNR=11						
WAX	**Waxell Ridge**	**8.68**	**126**		**Pn**	**06 33 41.5**	**-0.4**
L29M	**L29M**	**8.74**	**103**		**Pn**	**06 33 42.4**	**-0.2**
L29M	**L29M**	**8.74**	**103**	P	**Pn**	**06 33 43.2**	**+0.6**
	baz=300,SNR=17						
R16K	**Pilot Point**	**8.77**	**181**	P	**Pn**	**06 33 42.4**	**-0.7**
	baz=1.0						
BGLC	**Bering Glacier**	**8.80**	**128**	P	**Pn**	**06 33 43.9**	**+0.6**
	baz=321						
KDAK	**Kodiak Island**	**8.81**	**164**	Pn	**Pn**	**06 33 43.0**	**-0.7**
	comp=E,2.3nm,0.3s,baz=7.5,slow=6.9,SNR=14						
KDAK				LR	LR	06 36 44.9	
	comp=E,462nm,20.4s,baz=360,slow=34						
	comp=E,12nm,0.5s						
KDAK	**Kodiak Island**	**8.81**	**164**	P	**Pn**	**06 33 44.8**	**+1.2**
	baz=348						
CTG	**Chitna Glacier**	**8.82**	**120**	P	**Pn**	**06 33 43.1**	**-0.8**
	baz=314						
J30M	**Hart River**	**8.83**	**92**		**Pn**	**06 33 43.9**	**-0.1**
J30M	**Hart River**	**8.83**	**92**	P	**Pn**	**06 33 44.4**	**+0.4**
	baz=291,SNR=20						
R18K	**Karluk**	**8.86**	**171**	P	**Pn**	**06 33 43.8**	**-0.4**
	baz=353						
M29M	**Somme Creek**	**8.96**	**107**		**Pn**	**06 33 45.6**	**-0.1**
M29M	**Somme Creek**	**8.96**	**107**	P	**Pn**	**06 33 46.0**	**+0.3**
	baz=304,SNR=18						
G31M	**Satah River**	**9.10**	**76**	P	**Pn**	**06 33 46.7**	**-0.8**
	baz=277						
YUK8	**Steele Glacier**	**9.17**	**115**	P	**Pn**	**06 33 49.6**	**+0.8**
	baz=311,SNR=12						
F31M	**Tsiigehtchic**	**9.26**	**72**	P	**Pn**	**06 33 49.9**	**+0.2**
	baz=274						
H31M	**Peel River**	**9.27**	**83**		**Pn**	**06 33 49.0**	**-0.9**
H31M	**Peel River**	**9.27**	**83**	P	**Pn**	**06 33 49.9**	**0.0**
	baz=283						
O28M	**Mount Upton**	**9.36**	**118**	P	**Pn**	**06 33 51.2**	**-0.2**
	baz=314,SNR=15						
YUK4	**Talbot Arm**	**9.55**	**113**	P	**Pn**	**06 33 53.7**	**-0.2**
	baz=309						
PINM	**Pinnacle**	**9.82**	**121**	P	**Pn**	**06 33 56.9**	**-0.6**
	baz=316						
YUK6	**Outpost Mounta**	**9.91**	**114**	P	**Pn**	**06 33 59.1**	**+0.2**
	baz=311						
N30M	**Aishikik Lake**	**10.06**	**109**	P	**Pn**	**06 34 01.6**	**+0.9**
	baz=307,SNR=6.7						
O29M	**Mount Kennedy**	**10.27**	**117**	P	**Pn**	**06 34 04.6**	**+1.0**
	baz=314						
HYT	**Haines Junctio**	**10.31**	**113**	P	**Pn**	**06 34 05.1**	**+1.0**
	baz=310						
PNL	**Peninsula**	**10.43**	**121**	P	**Pn**	**06 34 06.4**	**+0.6**
	baz=317						
N31M	**Braeburn, Yuko**	**10.55**	**107**		**Pn**	**06 34 07.1**	**-0.3**
N31M	**Braeburn, Yuko**	**10.55**	**107**	P	**Pn**	**06 34 07.6**	**+0.2**
	baz=306						
M31M	**Drury Creek, Y**	**10.68**	**102**		**Pn**	**06 34 09.9**	**+0.7**
M31M	**Drury Creek, Y**	**10.68**	**102**	P	**Pn**	**06 34 09.9**	**+0.7**
	baz=302,SNR=8.3						
O30N	**Mendenhall**	**10.87**	**111**		**Pn**	**06 34 11.8**	**-0.1**
O30N	**Mendenhall**	**10.87**	**111**	P	**Pn**	**06 34 12.5**	**+0.6**
	baz=310						
P30M	**Million Dollar**	**10.98**	**115**	P	**Pn**	**06 34 13.4**	**+0.1**
	baz=313						
SPIA	**Saint Paul Isl**	**11.03**	**220**	P	**Pn**	**06 34 12.6**	**-1.4**
	baz=28						
FARO	**Faro, Yukon**	**11.08**	**100**		**Pn**	**06 34 14.0**	**-0.7**
FARO	**Faro, Yukon**	**11.08**	**100**	P	**Pn**	**06 34 14.7**	**0.0**
	baz=302						
SDPT	**Sand Point**	**11.11**	**190**	P	**Pn**	**06 34 13.9**	**-1.1**
	baz=6.9						
P08K	**Saint George I**	**11.37**	**217**	P	**Pn**	**06 34 17.7**	**-0.9**
	baz=26						
MMPY	**Sheldon Lake,**	**11.72**	**96**	P	**Pn**	**06 34 23.3**	**-0.1**
	baz=300,SNR=7.0						
P33M	**Teslin, Yukon**	**12.48**	**108**	P	**Pn**	**06 34 33.6**	**-0.2**
	baz=310						
P32M	**Atlin**	**12.54**	**111**	P	**Pn**	**06 34 33.9**	**-0.8**
	baz=312						
A36M	**Sachs Harbour**	**12.57**	**49**		**Pn**	**06 34 33.5**	**-1.3**
A36M	**Sachs Harbour**	**12.57**	**49**	P	**Pn**	**06 34 32.6**	**-2.3**
	baz=259,SNR=11						
C36M	**Paulatuk**	**12.75**	**61**		**Pn**	**06 34 37.2**	**-0.2**
C36M	**Paulatuk**	**12.75**	**61**	P	**Pn**	**06 34 36.9**	**-0.5**
	baz=272						
S31K	**Pelican**	**12.80**	**121**	P	**Pn**	**06 34 37.5**	**-0.7**
	baz=319						
Q32M	**Nakina River**	**13.52**	**111**	P	**Pn**	**06 34 47.4**	**-0.7**
	baz=313						
R33M	**Jennings River**	**13.72**	**108**	P	**Pn**	**06 34 50.0**	**-0.8**
	baz=311						
SIT	**Sitka**	**13.81**	**122**	P	**Pn**	**06 34 51.3**	**-0.6**
	baz=321						
WRGLY	**Wrigley**	**14.58**	**86**	P	**Pn**	**06 35 02.4**	**+0.1**
	baz=297						
S34M	**Telegraph Cree**	**14.68**	**113**	P	**Pn**	**06 35 04.4**	**+0.6**
	baz=316						
DLBC	**Dease Lake**	**14.73**	**109**	Pn	**Pn**	**06 35 06.2**	**+1.7**
	comp=E,0.8nm,0.3s,baz=308,slow=10,SNR=14						
DLBC				Lg	Lg	06 39 20.2	
	comp=E,0.2nm,0.3s,baz=46,slow=24,SNR=4.0						
DLBC				LR	LR	06 41 30.4	
	comp=E,279nm,19.3s,baz=323,slow=40						
	comp=E,7.6nm,0.9s						
DLBC	**Dease Lake**	**14.73**	**109**	P	**Pn**	**06 35 05.6**	**+1.1**
	baz=314,SNR=14						
BEAVL	**Fort Liard**	**15.55**	**98**	P	**Pn**	**06 35 15.1**	**-0.3**
	baz=307						
T35M	**Bob Quinn**	**15.69**	**114**	IAmb	IAmb	06 35 25.9	
	comp=Z,29nm,1.3s						
T35M	**Bob Quinn**	**15.69**	**114**	P	**Pn**	**06 35 17.6**	**+0.4**
	baz=317						
CRAG	**Craig**	**15.82**	**122**	P	**Pn**	**06 35 18.6**	**-0.3**
	baz=323						
KOTAN	**Kotaneelee Air**	**15.99**	**97**	P	**Pn**	**06 35 22.1**	**+1.1**
	baz=307						
TOAD	**Toad River Com**	**16.32**	**102**	P	**Pn**	**06 35 24.9**	**-0.4**
	baz=310						
V35K	**Ketchikan**	**16.46**	**120**	P	**Pn**	**06 35 26.3**	**-0.8**
	baz=322						
YKAW3	**Yellowknife Wh**	**18.45**	**82**		**P**	**06 35 51.6**	**-0.2**
YKAW3				IAmb	IAmb	06 35 55.1	
	comp=Z,17nm,1.2s						
YKA	**Yellowknife Ar**	**18.49**	**82**	P	**P**	**06 35 52.1**	**-0.1**
YKA	**Yellowknife Ar**	**18.49**	**82**	Pn	**P**	**06 35 49.9**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=306,slow=13,SNR=24						
YKA				LR	LR	06 44 10.2	
	comp=Z,141nm,18.6s,baz=266,slow=40						
	comp=Z,4.3nm,1.0s						
YKAW1	**Yellowknife Wh**	**18.55**	**82**		**Pn**	**06 35 53.0**	**+0.1**
YKAW1				IAmb	IAmb	06 35 57.0	
	comp=Z,16nm,1.1s						
SHEM	**Shemya Is, Ala**	**19.68**	**240**	LR	LR	06 43 51.0	
	comp=Z,266nm,18.3s,baz=26,slow=37						
BBB	**Bella Bella**	**20.23**	**120**	LR	LR	06 43 52.7	
	comp=Z,216nm,18.8s,baz=318,slow=36						
RES	**Resolute Bay**	**21.28**	**40**		**P**	**06 36 23.0**	**+0.5**
RES	**Resolute Bay**	**21.28**	**40**	P	**P**	**06 36 22.8**	**+0.3**
	comp=Z,2.3nm,0.9s,baz=240,slow=9.1,SNR=9.8						
RES				S	**S**	**06 40 09.2**	**-10**
	comp=Z,8.3nm,1.0s,baz=341,slow=14,SNR=5.8						
RES				LR	LR	06 46 25.2	
	comp=Z,227nm,20.6s,baz=254,slow=42						
	comp=Z,2.3nm,0.9s						
SEY	**Seymchan**	**21.40**	**285**	P	**P**	**06 36 24.6**	**+0.7**
	comp=Z,3.8nm,0.6s,baz=77,slow=12,SNR=16						
SEY				LR	LR	06 44 38.2	
	comp=Z,186nm,21.4s,baz=52,slow=37						
	comp=Z,3.8nm,0.6s						
MA2	**Magadan**	**23.97**	**279**	LR	LR	06 46 53.4	
	comp=Z,210nm,18.1s,baz=66,slow=38						
BLKN	**Baker Lake**	**24.73**	**66**	P	**P**	**06 36 58.4**	**+0.9**
BLKN				IAmb	IAmb	06 36 60.0	
	comp=Z,13nm,0.7s						
PETK	**Petropavlovsk-**	**25.63**	**261**	P	**P**	**06 37 05.4**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=70,slow=13,SNR=4.8						
PETK				LR	LR	06 47 17.5	
	comp=Z,124nm,18.0s,baz=39,slow=37						
	comp=Z,1.3nm,0.7s						
B08A	**Colville Reser**	**26.56**	**114**	P	**P**	**06 37 14.2**	**0.0**
NEW	**Newport**	**27.46**	**111**	LR	LR	06 49 46.5	
	comp=Z,157nm,18.1s,baz=330,slow=40						
FCC	**Fort Churchill**	**28.83**	**74**	P	**P**	**06 37 35.7**	**+1.4**
FCC				IAmb	IAmb	06 37 36.2	
	comp=Z,5.2nm,0.8s						
YAK	**Yakutsk**	**30.48**	**297**	LR	LR	06 51 56.1	
	comp=Z,205nm,18.1s,baz=58,slow=40						
YMP	**Mirror Lake Pl**	**33.06**	**107**	P	**P**	**06 38 12.0**	**-0.2**
YMP				IAmb	IAmb	06 38 47.1	
	comp=Z,4.4nm,0.9s						
ULM	**Lac du Bonnet**	**34.31**	**87**	P	**P**	**06 38 23.2**	**+0.6**
	comp=Z,4.4nm,0.8s,baz=325,slow=8.3,SNR=6.0						
ULM				LR	LR	06 53 53.7	
	comp=Z,74nm,20.0s,baz=332,slow=39						
	comp=Z,4.4nm,0.8s						
FRB	**Frobisher Bay**	**34.55**	**52**	LR	LR	06 54 03.8	
	comp=Z,162nm,19.2s,baz=308,slow=39						
ELK	**Elko**	**34.59**	**117**	LR	LR	06 53 55.3	
	comp=Z,222nm,18.2s,baz=340,slow=38						
PDAR	**Pinedale Array**	**34.96**	**108**	P	**P**	**06 38 29.6**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=348,slow=6.7,SNR=5.7						
PDAR				LR	LR	06 53 47.2	
	comp=Z,189nm,19.1s,baz=330,slow=38						
	comp=Z,0.6nm,0.6s						
SUMG	**Summit**	**35.54**	**27**	*i* P	**P**	**06 38 31.0**	**-2.5**
NVAR	**Mina Array Bea**	**35.57**	**122**	P	**P**	**06 38 35.9**	**+2.0**
	comp=Z,2.5nm,0.8s,baz=312,slow=7.4,SNR=12						
NVAR				LR	LR	06 53 16.5	
	comp=Z,72nm,19.6s,baz=3.0,slow=36						
	comp=Z,2.5nm,0.8s						
SPITS	**Spitsbergen Ar**	**35.69**	**2**	LR	LR	06 52 58.6	
	comp=Z,62nm,18.4s,baz=314,slow=36						
R11B	**Troy Canyon, C**	**36.59**	**119**		**P**	**06 38 43.6**	**+1.0**
SFJD	**Kangerlussuaq**	**37.26**	**38**	LR	LR	06 56 18.7	
	comp=Z,91nm,20.1s,baz=328,slow=40						
KLR	**Kul'dur**	**39.05**	**280**	LR	LR	06 55 58.6	
	comp=Z,107nm,18.8s,baz=68,slow=38						
SPMN	**Marine on St.**	**39.57**	**89**	P	**P**	**06 39 08.1**	**+0.7**
JMIC	**Jan Mayen**	**41.32**	**15**	LR	LR	06 55 43.3	
	comp=Z,85nm,21.5s,baz=36,slow=35						
SCHQ	**Schefferville**	**41.86**	**60**	P	**P**	**06 39 27.7**	**+1.5**
	comp=Z,4.5nm,0.8s,baz=280,slow=14,SNR=2.1						
SCHQ				LR	LR	06 58 38.1	
	comp=Z,106nm,18.4s,baz=330,slow=39						
	comp=Z,4.5nm,0.8s						
N35A	**Tabor**	**42.07**	**96**	P	**P**	**06 39 28.2**	**+0.1**
USRK	**Ussuriysk Ar.**	**43.05**	**275**	LR	LR	06 59 19.9	
	comp=Z,120nm,18.1s,baz=39,slow=39						
P40A	**Paris**	**44.65**	**93**	P	**P**	**06 39 48.1**	**-0.7**
P40A				IAmb	IAmb	06 39 53.4	
	comp=Z,7.9nm,1.0s						
BORG	**Borgarnes**	**45.42**	**25**	LR	LR	06 58 54.7	
	comp=Z,92nm,21.9s,baz=339,slow=36						
SADO	**Sadowa**	**45.43**	**78**	LR	LR	06 58 43.1	
	comp=Z,96nm,21.4s,baz=344,slow=36						
CN2	**Changchun**	**45.99**	**281**	*e*P	P	06 39 48.3	-11
MGMO	**Mountain Grove**	**46.59**	**95**	P	**P**	**06 40 03.6**	**-0.8**
MGMO				IAmb	IAmb	06 40 06.3	
	comp=Z,6.3nm,1.1s						
MJAR	**Matsushiro Arr**	**47.03**	**264**	P	**P**	**06 40 08.2**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=8.1,slow=10,SNR=2.3						
MJAR				LR	LR	07 00 13.1	
	comp=Z,81nm,20.6s,baz=25,slow=37						
	comp=Z,1.5nm,0.7s						
T42A	**Van Buren**	**47.18**	**94**	P	**P**	**06 40 08.5**	**-0.3**
T42A				IAmb	IAmb	06 40 12.2	
	comp=Z,3.9nm,0.9s						
PBMO	**Poplar Bluff**	**47.66**	**94**	P	**P**	**06 40 12.6**	**0.0**
FCAR	**Ozark Folk Cen**	**47.75**	**96**	P	**P**	**06 40 12.4**	**-0.9**
FCAR				IAmb	IAmb	06 40 53.3	
	comp=Z,4.6nm,1.0s						
TXAR	**Lajitas Array**	**49.02**	**112**	P	**P**	**06 40 23.8**	**+0.5**
	comp=Z,2.0nm,0.9s,baz=323,slow=6.2,SNR=14						
TXAR				LR	LR	07 03 01.2	
	comp=Z,37nm,20.3s,baz=336,slow=38						
	comp=Z,2.0nm,0.9s						
SSPA	**Standing Stone**	**49.41**	**80**	P	**P**	**06 40 26.3**	**+0.3**
XLT	**XiLinHaoTe**	**49.57**	**289**	*e*P	P	06 40 33.5	+6.2
XLT				sP	sP	06 40 40.9	+11
XLT				pmax	pmax		
	comp=Z,10.0nm,0.6s						
XLT				LR	LR		
	comp=Z,500nm,15.3s						
XLT				LR	LR		
	comp=Z,300nm,15.7s						
T50A	**Nancy**	**49.71**	**89**	P	**P**	**06 40 28.6**	**+0.2**
KSRS	**Korea Array**	**50.39**	**274**	P	**P**	**06 40 32.7**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=13,slow=6.8,SNR=3.2						
	comp=Z,0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**51.28**	**318**		**P**	**06 40 39.2**	**-0.8**
ZALV	**Zalesovo Beam**	**51.28**	**318**	P	**P**	**06 40 39.4**	**-0.6**
	comp=Z,2.3nm,0.6s,baz=2.3,slow=7.4,SNR=7.2						
ZALV				LR	LR	07 04 54.7	
	comp=Z,54nm,18.2s,baz=360,slow=39						
	comp=Z,2.3nm,0.6s						
TKL	**Tuckaleechee C**	**51.32**	**88**	LR	LR	07 05 49.5	
	comp=Z,41nm,18.7s,baz=334,slow=40						
LPIG	**La Paz**	**51.39**	**121**	LR	LR	07 04 38.7	
	comp=Z,78nm,18.4s,baz=48,slow=38						
FINES	**FINESS Array B**	**52.53**	**358**	P	**P**	**06 40 47.5**	**-1.8**
	comp=Z,2.6nm,1.0s,baz=354,slow=11,SNR=4.2						
FINES				LR	LR	07 03 00.1	
	comp=Z,39nm,20.4s,baz=18,slow=36						
	comp=Z,2.6nm,1.0s						
NB2	**NORSAR Subarra**	**52.67**	**7**	P	**P**	**06 40 51.2**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=354,slow=7.9						
NOA	**NORSAR Array B**	**52.67**	**7**	P	**P**	**06 40 50.1**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=353,slow=7.2,SNR=4.2						
	comp=Z,0.4nm,0.7s						
JNU	**Nakatsue**	**52.96**	**269**	LR	LR	07 04 02.3	
	comp=Z,66nm,18.0s,baz=16,slow=37						
HFS	**Hagfors**	**53.69**	**6**	P	**P**	**06 40 57.5**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=40,slow=9.7,SNR=2.7						
	comp=Z,1.0nm,0.7s						
KIRV	**Kirov**	**53.85**	**343**	LR	LR	07 06 50.8	
	comp=Z,68nm,20.1s,baz=5.9,slow=39						
HHC	**Hu-ho-hao-te**	**53.91**	**290**	*e*P	**P**	**06 40 58.1**	**-1.7**
HHC				pmax	pmax		
	comp=Z,13nm,0.5s						
HHC				pmax	pmax		
	comp=Z,22nm,3.8s						
HHC				LR	LR		
	comp=Z,140nm,13.5s						
HHC				LR	LR		
	comp=Z,180nm,13.5s						
HHC				LR	LR		
	comp=Z,360nm,16.5s						
BVAR	**Borovoye Array**	**55.66**	**327**	P	**P**	**06 41 12.0**	**-0.1**
	comp=Z,2.0nm,0.5s,baz=40,slow=7.8,SNR=8.6						
BVAR				PcP	**PcP**	**06 42 11.1**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=4.6,slow=6.3,SNR=4.0						
	comp=Z,2.0nm,0.5s						
KURK	**Kurchatov**	**55.84**	**321**	P	**P**	**06 41 13.0**	**-0.5**
KURK				IAmb	IAmb	06 41 16.4	
	comp=Z,6.5nm,0.9s						
KURBB	**Kurchatov Arra**	**55.95**	**321**	P	**P**	**06 41 13.8**	**-0.4**
	comp=Z,2.9nm,1.0s,baz=28,slow=7.1,SNR=11						
	comp=Z,2.9nm,1.0s						
EKA	**Eskdalemuir Ar**	**57.10**	**17**	P	**P**	**06 41 22.7**	**+0.3**
	comp=Z,7.4nm,0.7s,baz=335,slow=4.7,SNR=32						
	comp=Z,7.4nm,0.7s						
MKAR	**Makanchi Array**	**58.44**	**316**		**P**	**06 41 31.4**	**-0.5**
MKAR	**Makanchi Array**	**58.44**	**316**	P	**P**	**06 41 30.7**	**-1.2**
	comp=Z,0.8nm,0.6s,baz=43,slow=4.6,SNR=8.6						
	comp=Z,0.8nm,0.6s						
NJ2	**Nanjing**	**58.74**	**279**	*e*P	**P**	**06 41 34.3**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
GTA	**Gaotai**	**59.48**	**299**	*e*P	**P**	**06 41 39.3**	**-0.2**
GTA				pP	sP	06 41 42.1	0.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.5s						
GTA				LR	LR		
	comp=Z,180nm,16.0s						
GTA				LR	LR		
	comp=Z,240nm,15.3s						
GTA				LR	LR		
	comp=Z,120nm,13.5s						
WMQ	**Urumqi**	**59.55**	**311**	*e*P	**P**	**06 41 42.1**	**+2.3**
WMQ				LR	LR		
	comp=Z,110nm,15.7s						
BELG	**Belogornoye**	**60.14**	**343**	LR	LR	07 10 23.1	
	comp=Z,80nm,20.6s,baz=142,slow=39						
LZH	**Lanzhou**	**60.98**	**294**	*e*P	**P**	**06 41 52.3**	**+2.5**
LZH				sP	sP	06 41 59.8	+7.4
LZH				pmax	pmax		
	comp=Z,12nm,1.2s						
LZH				LR	LR		
	comp=Z,240nm,17.2s						
LZH				LR	LR		
	comp=Z,240nm,17.5s						
ABKAR	**Akbulak array**	**61.33**	**333**		**P**	**06 41 51.0**	**-0.7**
ABKAR	**Akbulak array**	**61.33**	**333**	P	**P**	**06 41 51.8**	**+0.1**
ABKAR				IAmb	IAmb	06 41 59.9	
	comp=Z,7.5nm,0.9s						
CLL	**Collm**	**62.48**	**7**	*i* P	**P**	**06 41 59.5**	**+0.1**
	comp=Z,6.0nm,1.3s						
MEM	**Membach**	**62.71**	**12**	*d*P	**P**	**06 42 02.1**	**+1.1**
MEM				*d*PcP	**PcP**	**06 42 38.6**	**-1.0**
DOU	**Dourbes**	**63.09**	**13**	*d*P	**P**	**06 42 03.6**	**0.0**
	comp=Z,4.9nm,1.4s						
AKASG	**Malin Array Be**	**63.22**	**355**	P	**P**	**06 42 04.3**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=3.9,slow=6.5,SNR=9.1						
AKASG				LR	LR	07 12 18.7	
	comp=Z,28nm,18.2s,baz=11,slow=39						
	comp=Z,0.5nm,0.4s						
MORC	**Moravsky Berou**	**64.18**	**4**	*e*P	**P**	**06 42 11.8**	**+1.0**
VRAC	**Vranov**	**64.62**	**5**	LR	LR	07 09 57.2	
	comp=Z,21nm,20.8s,baz=37,slow=36						
VRAC	**Vranov**	**64.62**	**5**	*e*P	**P**	**06 42 14.8**	**+1.2**
KRUC	**Moravsky**	**64.86**	**5**	*e*P	**P**	**06 42 16.0**	**+0.8**
GERES	**GERESS Array B**	**64.97**	**7**	P	**P**	**06 42 16.6**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=348,slow=4.5,SNR=6.6						
	comp=Z,0.9nm,0.8s						
GUMO	**Guam**	**65.05**	**245**	LR	LR	07 08 58.4	
	comp=Z,35nm,20.6s,baz=70,slow=34						
CONA	**Conrad Observa**	**65.97**	**5**	*i* P	**P**	**06 42 24.2**	**+1.6**
	comp=Z,2.9nm,0.7s						
MOA	**Molln**	**65.99**	**6**	*i* P	**P**	**06 42 23.9**	**+1.4**
	comp=Z,7.0nm,1.4s						
BIOA	**Bad Ischl, Aus**	**66.12**	**7**	*i* P	**P**	**06 42 24.7**	**+1.3**
	comp=Z,2.4nm,0.5s						
MOTA	**Moosalm**	**66.33**	**9**	*i* P	**P**	**06 42 26.3**	**+1.4**
	comp=Z,4.1nm,1.0s						
WATA	**Walderalm**	**66.36**	**8**	*i* P	**P**	**06 42 26.4**	**+1.3**
	comp=Z,2.4nm,0.5s						
WTTA	**Wattenberg**	**66.44**	**8**	*i* P	**P**	**06 42 27.5**	**+1.8**
	comp=Z,7.8nm,1.0s						
SQTA	**Sankt Quirin**	**66.46**	**9**	*i* P	**P**	**06 42 27.6**	**+1.9**
	comp=Z,3.7nm,0.5s						
FETA	**Feichten**	**66.62**	**9**	*e*P	**P**	**06 42 28.7**	**+1.9**
	comp=Z,7.1nm,1.2s						
KBA	**Koelnbreinsper**	**66.72**	**7**	*i* P	**P**	**06 42 29.8**	**+2.4**
	comp=Z,2.2nm,1.0s						
KSH	**Kashi**	**66.92**	**318**	P	**P**	**06 42 32.9**	**+4.2**
KSH				pmax	pmax		
	comp=Z,4.0nm,1.3s						
FUORN	**Ofenpass-Fuorn**	**66.99**	**9**		**P**	**06 42 29.1**	**-0.2**
FUORN				IAmb	IAmb	06 42 31.5	
	comp=Z,5.0nm,0.9s						
ABTA	**Abfaltersbach**	**67.00**	**8**	*i* P	**P**	**06 42 31.2**	**+2.1**
	comp=Z,2.9nm,0.9s						
SOKA	**Soboth**	**67.19**	**6**	*i* P	**P**	**06 42 32.1**	**+1.8**
	comp=Z,0.7nm,0.5s						
OBKA	**Obir**	**67.34**	**6**	*i* P	**P**	**06 42 32.9**	**+1.6**
	comp=Z,8.2nm,0.7s						

PRED	Cave del Predi	67.36	7	P	P	06 42 32.1	+0.7
PRED				IAmb	IAmb	06 42 32.5	
	comp=Z,8.9nm,1.5s						
KBZ	Khabaz	69.22	345	P	P	06 42 44.4	+1.5
	comp=Z,1.2nm,0.7s,baz=23,slow=6.9,SNR=4.1						
	comp=Z,1.2nm,0.7s						
PZH	PanZhiHua	70.35	291	P	P	06 42 51.3	+0.9
PZH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.1s						
ESDC	Sonseca Array	72.35	21	P	P	06 43 03.3	+1.2
	comp=Z,1.9nm,0.8s,baz=349,slow=6.3,SNR=14						
ESDC				LR	LR	07 16 50.5	
	comp=Z,27nm,18.4s,baz=348,slow=38						
	comp=Z,1.9nm,0.8s						
JTS	Las Juntas de	73.50	102	LR	LR	07 20 50.3	
	comp=Z,38nm,19.1s,baz=352,slow=40						
BRTR	Keskin Array B	73.97	351	P	P	06 43 11.6	-0.3
	comp=Z,0.7nm,0.7s,baz=28,slow=4.0,SNR=4.1						
	comp=Z,0.7nm,0.7s						
SJG	San Juan	73.98	82	LR	LR	07 17 28.9	
	comp=Z,52nm,20.1s,baz=320,slow=37						
VAE	Valguarnera	76.34	7	LR	LR	07 16 15.7	
	comp=Z,37nm,20.6s,baz=348,slow=35						
DAV	Davao City (W)	78.45	261	LR	LR	07 20 19.3	
	comp=Z,48nm,18.8s,baz=190,slow=37						
CMAR	Chiang Mai Arr	78.72	290	LR	LR	07 21 48.3	
	comp=Z,86nm,18.0s,baz=10.0,slow=38						
ASF	Jabal al Asfar	81.25	348	LR	LR	07 27 20.8	
	comp=Z,26nm,18.3s,baz=104,slow=41						
BAUV	El Baul	81.52	87		P	06 43 53.7	-0.3
PCRV	Puerto La Cruz	81.77	84	LR	LR	07 23 46.1	
	comp=Z,43nm,18.5s,slow=38						
PPT	Papeete	83.81	173	LR	LR	07 16 48.2	
	comp=Z,59nm,20.4s,baz=302,slow=32						
PPT2	Papeete2	83.83	173	*e*LR	LR	07 10 24.3	
	comp=Z,62nm,23.5s						
PMG	Port Moresby	85.63	235	LR	LR	07 14 15.4	
	comp=Z,39nm,21.8s,baz=134,slow=30						
MDP	Montagnes des	91.15	75	LR	LR	07 23 59.4	
	comp=Z,30nm,21.7s,baz=358,slow=34						
DZM	Mont Dzumac	92.29	213	*e*LR	LR	07 14 16.5	
	comp=Z,145nm,26.7s						
WRA	Warramunga Arr	99.84	243	P	Pdif	06 45 20.9	+0.1
	comp=Z,0.5nm,0.9s,baz=7.0,slow=4.9,SNR=1.9						
	comp=Z,0.5nm,0.9s						
VNDA	Vanda	145.73	195	PKPbc	PKPdf	06 51 12.1	-1.0
	comp=Z,1.3nm,0.8s,baz=325,slow=5.7,SNR=6.1						
QSPA	South Pole Qui	156.12	180	PKPab	PKPab	06 51 58.9	+1.7
	comp=Z,1.8nm,0.9s,baz=82,slow=3.7,SNR=3.7						

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*NEIC **15** 06:53:54.9±1.2, 36°.46N±0°.01×98°.77W±0°.01, h5^{km}±1^{km}, mb_Lg2.2/25, ML2.6/26, ML2.6/28, Error ellipse: s-maj=2.3km s-min=1.8km az=2.0*

NEIC 15 06:53:55.2±1.0**, 36°.46N**±0°.02×**98°.76W**±0°.01**, h9**^{km}±5^{km}**, Error ellipse: s-maj=2.4km s-min=1.4km az=170.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK038	West end E0370	0.02	42		Pg	06 53 57.2	+0.3
CROK	Carrier	0.63	86		Pg	06 54 07.4	0.0
CROK				Sg	Sg	06 54 16.1	+0.5
CROK				IAML		06 54 20.2	
	comp=E,278nm,0.2s						
CROK				IAML		06 54 21.2	
	comp=N,364nm,0.3s						
ELIS	Ellis County	0.66	234	Pg	Pg	06 54 08.1	+0.1
ELIS				Sg	Sb	06 54 17.7	-0.7
ELIS				IAML		06 54 25.5	
	comp=N,326nm,0.2s						
KAN14	Manchester OK	0.81	52		Pg	06 54 10.7	-0.2
KAN14				Sg	Sg	06 54 21.8	+0.4
KAN14				IAML		06 54 24.0	
	comp=E,188nm,0.1s						
KAN14				IAML		06 54 24.2	
	comp=N,180nm,0.1s						
CSTR	Hydro, Custer	0.82	176		Pg	06 54 10.9	-0.1
CSTR				Sg	Sg	06 54 22.0	+0.4
GC02	Grant County #	0.82	61		Pg	06 54 10.8	-0.3
GC02				Sg	Sg	06 54 21.9	+0.1
KAN05	Bluff City Nor	0.96	48	Pg	Pg	06 54 12.9	-0.9
KAN05				IAML		06 54 32.5	
	comp=N,241nm,0.2s						
KAN08	Anthony NE Sta	0.99	39	Pg	Pg	06 54 13.9	-0.4
KAN08				IAML		06 54 27.9	
	comp=N,147nm,0.1s						
KAN08				IAML		06 54 27.9	
	comp=E,177nm,0.1s						
KAN13	South Haven SW	1.17	62		Pb	06 54 17.0	-0.7
KAN13				IAML		06 54 33.2	
	comp=E,189nm,0.3s						
KAN13				IAML		06 54 41.9	
	comp=N,172nm,0.3s						
DRZT	Darrouzett	1.24	270		Pn	06 54 18.4	-0.4
DRZT					Sg	06 54 35.4	+0.3
OK029	Liberty Lake	1.25	122		Pn	06 54 18.1	-0.8
OK029					Sb	06 54 35.1	-0.1
OK051	E0350 and S346	1.55	88		Pn	06 54 23.6	+0.5
OK051					Sb	06 54 44.5	+0.6
FNO	Franklin	1.63	137		Pn	06 54 24.7	+0.5
OK052	Battle Ridge R	1.65	106		Pn	06 54 25.1	+0.6
WMOK	Wichita Mounta	1.72	181		Pn	06 54 25.6	+0.1
SMWD	Samnorwood	1.81	222		Pn	06 54 27.6	+0.9
SMWD				IAmb_Lg		06 54 54.5	
	comp=Z,16nm,0.7s						
T35A	Sooner Cattle	1.86	75		Pn	06 54 27.4	0.0
T35A				IAmb_Lg		06 54 56.7	
	comp=Z,11nm,0.7s						
DEOK	Depew	1.93	108		Pn	06 54 28.5	+0.1
X34A	Smith Ranch, M	2.00	158	Pn	Pb	06 54 30.9	-1.0
X34A				IAmb_Lg		06 54 58.6	
	comp=Z,13nm,0.9s						
TUL3	Leonard	2.46	102	Pn	Pn	06 54 35.6	0.0
TUL3				IAmb_Lg		06 55 17.9	
	comp=Z,11nm,1.0s						
WTFS	Witchita Falls	2.70	175	Pn	Pn	06 54 39.1	+0.2
APMT	Aspermont	3.32	200	IAmb_Lg		06 55 48.2	
	comp=Z,4.3nm,0.7s						
KSCO	Kaye Shedlock’	3.98	311	IAmb_Lg		06 56 06.2	
	comp=Z,7.3nm,0.9s						
POST	Post	4.07	214	IAmb_Lg		06 56 12.9	
	comp=Z,4.6nm,0.8s						
MIAR	Mount Ida	4.64	113	IAmb_Lg		06 56 27.6	
	comp=Z,3.7nm,0.8s						
P38A	Dawn	5.20	51	IAmb_Lg		06 56 42.3	
	comp=Z,3.7nm,0.7s						
X40A	Basin Creek Fa	5.22	110	IAmb_Lg		06 56 50.9	
	comp=Z,5.1nm,0.7s						
MGMO	Mountain Grove	5.25	81	IAmb_Lg		06 56 51.2	
	comp=Z,6.0nm,1.2s						
FCAR	Ozark Folk Cen	5.40	94	IAmb_Lg		06 56 54.8	
	comp=Z,5.8nm,1.0s						

TAP 15 06:58:52.9, 24°.42N×121°.90E, h21^{km}±1^{km}**, ML1.6, B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EWUT	Wuta	0.12	281	P	Pb	06 58 56.7	-2.6
EWUT				S	Sb	06 59 00.1	-3.7
ENA	Nanau	0.15	272	P	Pb	06 58 57.0	-2.0
ENA				S	Sb	06 59 00.7	-2.5
ESAO	Su ao	0.16	340	P	Pb	06 58 57.3	-1.5
ESAO				S	Sb	06 59 00.7	-2.3
TWC	Suao	0.19	345	P	Pb	06 58 57.6	-1.2
TWC				*i* S	Sb	06 59 01.5	-1.4
EOS2	EOS2	0.30	91	P	Pb	06 58 59.3	-0.2
EOS2				S	Sb	06 59 05.2	+1.2
LATG	Datong	0.36	288	*e*P	Pb	06 59 00.4	-0.2
EOS3	EOS3	0.40	110	*e*S	Sb	06 59 07.3	+0.6
EGS		0.42	4	*e*P	Pb	06 59 01.6	0.0
EGS				S	Sb	06 59 07.1	-0.4
ETLH	Xiulin Townshi	0.44	241	P	Pb	06 59 01.4	-0.6
ETLH				*e*S	Sb	06 59 08.5	+0.3
FUSB	Fushanzhiwuyua	0.44	319	P	Pb	06 59 01.7	-0.3
FUSB				*e*S	Sb	06 59 08.9	+0.7
NNSB	Datong	0.47	271	*e*P	Pb	06 59 00.8	-1.8
NNSB				*e*S	Sb	06 59 09.5	+0.3
YHNB	Yeheng	0.54	297	*e*S	Sb	06 59 11.6	+0.4
TIPB	Shuangxi	0.55	353	P	Pb	06 59 03.7	-0.3
TIPB				S	Sb	06 59 11.9	+0.4

JMA 15 06:59:25.4±0.1**, 24°.3N**±0°.4×**124°.0E**±0°.3**, h18**^{km}±1^{km}**, MV0.8**/6**, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKRS	Kuro-shima	0.10	172	P	Pg	06 59 29.1	0.0
JKRS				*e*S	Sg	06 59 32.0	+0.4
JIJ	Ishigaki jima	0.14	78	P	Pg	06 59 29.3	-0.2
JIJ				*e*S	Sg	06 59 32.1	-0.2
IRIF	Iriomote-Funau	0.24	270	*e*P	Pg	06 59 30.9	-0.1
IRIF				*e*S	Sb	06 59 35.0	+0.1
HATJ	Hateruma jima	0.33	212	*e*P	Pg	06 59 32.2	-0.2
HATJ				*e*S	Sg	06 59 37.1	-0.1
JISG	Ishigakijimahi	0.38	49	*e*P	Pg	06 59 33.3	-0.1
JISG				*e*S	Sg	06 59 38.9	0.0
JTJ	Tarama	0.71	65	*e*S	Sg	06 59 49.4	+0.5

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*RSNC **15** 07:07:31.3±1.2, 6°S±9°×7°6W±°, h20^{km}±11^{km}, M4.3, mB5.2, mb4.3, ML3.7, Mw(mB)4.6*

*NEIC **15** 07:07:52.9±1.6, 4°.07S±0°.06×76°.83W±0°.08, h109^{km}±10^{km}, mb4.4/14, Error ellipse: s-maj=12.0km s-min=9.2km az=78.0*

*IDC **15** 07:07:53.2±1.9, 4°.06S×77°.06W, h118^{km}±18^{km}, mb3.3/5, mbtmp3.9/11, Error ellipse: s-maj=22.5km s-min=15.8km az=94.0*

*VAO **15** 07:07:54.8±0.6, 3°.95S×76°.38W, h60^{km}±6^{km}, mb4.2*

ISC 15 07:07:52.1±0.5**, 4°.08S**±0°.05×**76°.75W**±0°.06**, h100**^{km}**, n80, σ1^{s}97**/81**, mb3.6**/5**, Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COHC	Cochancay	2.97	303		Pn	07 08 36.1	-1.4
PIAT	Ana Tenorio	3.41	334	P	Pn	07 08 42.6	-1.2
ATAH	Atahualpa	3.45	208	P	Pn	07 08 45.0	+0.7
	110nm,0.5s,baz=21,slow=12,SNR=147						
ATAH				S	Sn	07 09 23.8	-0.8
	130nm,0.7s,baz=14,slow=8.3,SNR=12						
SLOR	San Lorenzo -	3.75	332		Pn	07 08 48.5	0.0
BONI	La Bonita	4.57	350	P	Pn	07 09 01.9	+2.7
	1µm18nm,0.5s						
OTAV	Otavalo	4.61	338		Pn	07 09 00.7	+0.7
OTAV	Otavalo	4.61	338	*e*P	Pn	07 09 01.8	+1.8
OTAV	Otavalo	4.61	338	P	Pn	07 09 02.0	+2.0
	8.9nm,0.8s						
PTLC	Puerto Leguiza	4.65	25	P	Pn	07 08 56.4	-3.7
	2µm79nm,0.5s						
CUSE	Cuicocha Este	4.66	339	P	Pn	07 09 03.9	+3.3
PAC1	Pacto, Paraso	4.77	335	P	Pn	07 09 04.4	+2.5
TULM	Tulcn-Chalpat	4.87	348	P	Pn	07 09 06.5	+2.9
	952nm19nm,1.0s						
CMBC	Cumbal	5.10	348	P	Pn	07 09 10.9	+4.3
GCUF	Volcan Galeras	5.30	354	P	Pn	07 09 11.2	+1.8
	512nm7.8nm,0.4s						
CZSB	Cruzeiro do Su	5.42	132		Pn	07 09 12.2	+1.7
CZSB	Cruzeiro do Su	5.42	132	*e*P	Pn	07 09 11.2	+0.7
CZSB				*e*S	Sn	07 10 09.9	-1.7
CRUC	La Cruz	5.61	358	P	Pn	07 09 14.0	+0.5
FLOC	Florencia	5.73	11		Pn	07 09 13.9	-0.9
FLOC	Florencia	5.73	11	P	Pn	07 09 14.2	-0.6
	1µm27nm,0.4s						
BBAC	Balboa, Cauca	6.08	355	P	Pn	07 09 21.6	+1.9
	3µm8.2nm,0.5s						
GARC	Garzon, Huila	6.35	11	P	Pn	07 09 22.8	-0.6
POPC	Popayan, Colom	6.57	1	P	Pn	07 09 27.4	+1.0
TBTG	Tabatinga, AM	6.82	91		Pn	07 09 30.6	+1.0
TBTG	Tabatinga, AM	6.82	91	*e*P	Pn	07 09 27.9	-1.8
MACC	Macarena, Meta	6.83	25	P	Pn	07 09 26.4	-3.3
URMC	La Uribe, Meta	7.65	18	P	Pn	07 09 41.7	+0.7
GUVC	San Jose del G	7.76	32	P	Pn	07 09 42.6	+0.2
NNA	Nana	7.86	181	Pn	Pn	07 09 44.4	+0.6
NNA	Nana	7.86	181	P	Pn	07 09 45.0	+1.2
	7.6nm,0.2s,baz=337,slow=10,SNR=7.0						
NNA				S	Sn	07 11 05.1	-6.1
	14nm,0.3s,baz=322,slow=18,SNR=5.0						
PRAC	Prado	7.96	14	P	Pn	07 09 45.9	+0.8
ORTC	Ortega, Tolima	8.07	11	P	Pn	07 09 47.5	+0.8
VILC	Villavicencio,	8.69	21	P	Pn	07 09 55.8	+0.7
ROSC	El Rosal	9.18	15	P	Pn	07 10 10.8	+8.7
	3.5nm,0.4s,baz=171,slow=19,SNR=1.7						
RUSC	La Rusia	10.56	20		Pn	07 10 21.3	+0.4
TEFE	Tefe	12.10	88	*e*P	Pn	07 10 39.8	-1.4
BRU2	Volcan	14.09	335	Pn	Pn	07 11 06.3	-1.2
SDV	Santo Domingo	14.25	25	P	P	07 11 13.1	-0.7
	2.3nm,0.4s,baz=270,slow=1.0,SNR=2.0						
LPAZ	La Paz	14.80	146	P	P	07 11 21.4	+1.1
	0.9nm,0.6s,baz=334,slow=8.0,SNR=5.8						
LPAZ				S	Sn	07 14 01.9	+1.4
	1.2nm,0.7s,baz=270,slow=2.0,SNR=2.4						
LPAZ	La Paz	14.80	146	*e*P	P	07 11 19.6	-0.7
PB18	Visviri	15.20	153	Pn	Pn	07 11 22.5	+0.5
PB18				IAmb	IAmb	07 11 25.2	
	comp=Z,32nm,1.5s						
SMRC	Santa Marta, M	15.35	9	Pn	Pn	07 11 22.8	-0.5
SMRC				IAmb	IAmb	07 11 55.1	
	comp=Z,23nm,1.0s						
BAUV	El Baul	15.58	34		Pn	07 11 25.9	-0.3
BAUV				IAmb	IAmb	07 11 29.2	
	comp=Z,12nm,0.6s						
HDC	Heredia	15.79	332	*e*P	P	07 11 34.8	+3.9
PB16	IPOC Station P	15.84	154		Pn	07 11 30.9	+0.9
MACA	Manacapuru-AM	16.06	87		Pn	07 11 32.0	-0.2
MACA	Manacapuru-AM	16.06	87	*e*P	Pn	07 11 32.2	0.0
BOAV	Boa Vista	17.44	69	P	P	07 11 49.5	+0.5
BOAV				IAmb	IAmb	07 12 14.0	
	comp=Z,8.0nm,1.0s						
BOAV	Boa Vista	17.44	69	*e*P	P	07 11 48.9	-0.1
PATCX	Punta Patache	17.84	159	P	Pn	07 11 54.6	+0.5
VILB	Vilhena	18.58	119	*e*P	Pn	07 12 05.0	+2.1
PCRV	Puerto La Cruz	18.60	40	P	P	07 12 02.9	+1.1
	comp=Z,4.5nm,0.5s,baz=210,slow=8.1,SNR=8.7						
PB09	IPOC Station P	19.06	158	P	P	07 12 07.8	+0.9
PB09				IAmb	IAmb	07 12 30.4	
	comp=Z,36nm,1.4s						
SIV	San Ignacio	19.43	129	P	Pn	07 12 13.1	+0.1
	comp=Z,0.9nm,0.5s,baz=306,slow=12,SNR=11						
VBST	Vila Bela da S	19.49	123	*e*P	Pn	07 12 14.7	+1.1
BBSD	Serra de San D	20.50	131	*e*P	P	07 12 23.9	+1.6
PTLB	Pontes e Lacer	20.69	124	P	P	07 12 24.8	+0.4
PTLB	Pontes e Lacer	20.69	124	*e*P	Pn	07 12 28.1	+0.6
ITTB	Itaituba	20.96	92	*e*P	P	07 12 28.3	+1.0
PDRB	Porto dos Gac	21.18	112	*e*P	P	07 12 33.0	+3.3
NPGB	Novo Progresso	21.49	99	*e*P	P	07 12 32.9	-0.1
CLDB	Colider	21.83	109	*e*P	P	07 12 39.9	+3.2
CCRS	Cacerres, MT,	22.67	127	*e*P	P	07 12 49.5	+4.3
NBRS	Nobres	23.04	118	*e*P	P	07 12 53.1	+4.0
POCN	Pocone	23.27	124	*e*P	P	07 12 55.6	+4.5
DR12	Loma Pena Alta	23.85	17	P	P	07 12 57.2	+0.8
PDPR	Patillas Dam,	24.37	25	P	P	07 13 02.3	+1.3
TXAR	Lajitas Array	42.08	324	P	P	07 15 33.1	-1.3
TXAR	Lajitas Array	42.08	324	P	P	07 15 32.8	-1.6
	comp=Z,0.3nm,0.6s,baz=147,slow=6.5,SNR=4.1						
	comp=Z,0.3nm,0.6s						
TX31	Lajitas Ar. Si	42.08	324	P	P	07 15 32.8	-1.6
PDAR	Pinedale Array	55.28	331	P	P	07 17 12.9	-2.5
	comp=Z,0.4nm,0.6s,baz=122,slow=9.2,SNR=2.3						
	comp=Z,0.4nm,0.6s						
YKA	Yellowknife Ar	72.35	343	P	P	07 19 04.5	-2.4
	comp=Z,0.3nm,0.7s,baz=140,slow=5.0,SNR=6.4						
	comp=Z,0.3nm,0.7s						
TORD	Torodi Ar. Bea	79.70	76	P	P	07 19 54.7	+5.2
	comp=Z,1.7nm,0.4s,baz=282,slow=5.2,SNR=1.6						
SNAA	Sanae	81.11	162	P	P	07 19 55.1	-1.0
SNAA				IAmb	IAmb	07 20 35.5	
	comp=Z,7.0nm,1.4s						
SNAA	Sanae	81.11	162	P	P	07 19 55.3	-0.8
	comp=Z,0.7nm,0.6s,baz=263,slow=9.6,SNR=7.7						
	comp=Z,0.7nm,0.6s						
QSPA	South Pole Qui	86.00	180	P	P	07 20 20.6	-0.6
QSPA				IAmb	IAmb	07 20 25.9	
	comp=Z,6.9nm,1.4s						
QSPA	South Pole Qui	86.00	180	P	P	07 20 20.8	-0.5
	comp=Z,2.1nm,1.0s,baz=128,slow=11,SNR=3.7						
	comp=Z,2.1nm,1.0s						
KURBB	Kurchatov Arra	129.17	20	PKP	PKPdf	07 26 48.3	-0.3
	comp=Z,0.4nm,0.3s,baz=333,slow=2.8,SNR=1.4						
ASAR	Alice Springs	139.34	226	PKhKP	PKPpre	07 27 00.2	
	comp=Z,0.4nm,1.0s,baz=129,slow=2.5,SNR=1.9						
ASAR				PKP	PKPdf	07 27 06.6	-2.0
	comp=Z,0.4nm,0.7s,baz=114,slow=1.9,SNR=5.8						
WRA	Warramunga Arr	141.23	231	PKhKP	PKPpre	07 27 04.6	
	comp=Z,0.2nm,0.6s,baz=130,slow=2.5,SNR=4.6						
WRA				PKP	PKPdf	07 27 09.0	-3.0
	comp=Z,0.4nm,0.5s,baz=124,slow=2.1,SNR=8.8						
FITZ	Fitzroy Crossi	148.81	224	PKPbc	PKPdf	07 27 27.2	+2.1
	comp=Z,2.2nm,0.6s,baz=138,slow=2.2,SNR=7.9						

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*IDC **15** 07:08:25.2±0.8, 30°.93N×56°.85E, h0^{km}, mb3.9/20, mbtmp3.9/25, ML3.8/5, MS3.4/19, Error ellipse: s-maj=19.0km s-min=13.6km az=178.0*

*MOS **15** 07:08:25.9±1.5, 30°.73N×56°.81E, h15^{km}, mb4.2/15, Error ellipse: s-maj=8.3km s-min=6.2km az=101.8*

*TEH **15** 07:08:26.5, 31°.11N×56°.75E, h8^{km}±59^{km}*

*THR **15** 07:08:26.7±0.0, 31°.11N×56°.82E, h10^{km}±8^{km}, ML4.5*

*NEIC **15** 07:08:28.0±1.8, 31°.05N±0°.06×56°.71E±0°.09, h10^{km}±1^{km}, mb4.3/26, Error ellipse: s-maj=14.1km s-min=8.4km az=291.0*

*DSN **15** 07:08:30.8±1.5, 31°.13N×56°.21E, h30^{km}, ML3.8/11, Error ellipse: s-maj=19.2km s-min=10.7km az=52.0*

*OMAN **15** 07:08:31.1±0.1, 30°.94N×56°.55E, h10^{km}±1^{km}, mb4.9/25, ml4.2/2, ms2.9/4, Error ellipse: s-maj=1.5km s-min=0.8km az=38.0*

ISC 15 07:08:28.0±0.4**, 31°.06N**±0°.04×**56°.74E**±0°.04**, h11**^{km}**, n251, σ1^{s}56**/250**, mb4.2**/41**, MS3.3**/17**, 7C-6D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZRDN	Zarand Kerman	0.19	243	Pg	Pg	07 08 30.8	-1.5
KHGB	Koh Gabri	0.71	198	Pg	Pg	07 08 40.6	-1.3
KRM1	Kerman Provinc	0.72	140	Pg	Pg	07 08 41.2	-0.7
KRBR	Kerman	1.07	179	Pg	Pg	07 08 48.1	-0.6
KRBR	Kerman	1.07	179	*e*Pg	Pg	07 08 47.9	-0.8
KRBR				*e*Sg	Sn	07 09 04.0	-0.3
KRBR				IAML		07 09 09.7	
	comp=Z,15nm,1.0s						
IBAF	Bafgh	1.13	298	Pg	Pb	07 08 47.2	-2.5
CHMN	Cheshme madani	1.38	150	Pg	Pn	07 08 52.4	-1.1
NGRK	Negar Kerman	1.41	180	Pg	Pn	07 08 54.4	+0.4
IMEH	Mehriz	1.85	281	Pn	Pn	07 09 00.3	+0.4
TPRV	Parvadeh(Tabas	1.97	359	Pn	Pn	07 09 00.8	-0.6
BSRN	Basiran	2.23	65	Pn	Pn	07 09 04.5	-0.7
BSRN	Basiran	2.23	65	*e*PnA		07 09 04.1	
BSRN				IAML		07 09 41.5	
	comp=Z,5.6nm,1.0s						
YZKH	Yazd	2.26	307	*e*PnA		07 09 06.2	
YZKH				IAML		07 10 06.9	
	comp=Z,2.7nm,1.0s						
TAFT	Taft - Yazd	2.29	288	Pn	Pn	07 09 06.1	+0.1
ICHK	Chekchek	2.31	301	Pn	Pn	07 09 06.7	+0.4
IKOO	Kooshah	2.37	54	Pn	Pn	07 09 06.7	-0.3
KBAM	BAM	2.42	142	Pn	Pn	07 09 08.4	+0.7
ITEG	Tejag	2.51	42	Pn	Pn	07 09 08.5	-0.4
TABS	Tabas	2.60	7	*e*PnA		07 09 09.7	
TABS				IAML		07 10 03.4	
	comp=Z,4.2nm,1.0s						
ISAD	Sadrabad	2.74	289	Pn	Pn	07 09 13.1	+0.8
NHDN	Nehbandan	2.86	82	Pn	Pn	07 09 13.8	+0.1
TNSJ	Nastanj	2.90	358	Pn	Pn	07 09 14.3	0.0
AFRZ	Afriz	3.05	39	Pn	Pn	07 09 15.7	-0.6
IDAH	Dahanechah	3.15	57	Pn	Pn	07 09 17.2	-0.6
KHNJ	Kahnooj	3.21	164	Pn	Pn	07 09 19.9	+1.4
ANAR	Anarak	3.32	311	Pn	Pn	07 09 20.3	+0.3
IBND	Bandar-abas	3.60	183	Pn	Pn	07 09 25.2	+1.4
BNDS	Bandar-Abbas	3.68	188	Pn	Pn	07 09 26.6	+1.6
BNDS	Bandar-Abbas	3.68	188	*e*PnA		07 09 26.8	
BNDS				IAML		07 10 37.7	
	comp=Z,1.4nm,1.0s						
ZHSF	Zahedan	3.78	111	*e*PnA		07 09 26.7	
ZHSF				IAML		07 10 40.2	
	comp=Z,0.6nm,1.0s						
IRAM	Ramesheh	3.80	283	Pn	Pn	07 09 27.3	+0.6
TAPT	Tabas- Tapeh t	3.83	5	Pn	Pn	07 09 26.5	-0.6
SHI	Shiraz	3.91	250	Pn	Pn	07 09 29.8	+1.6
SHRT	Shahrakht	3.96	48	Pn	Pn	07 09 28.2	-0.7
SHRT	Shahrakht	3.96	48	*e*PnA		07 09 28.8	
SHRT				IAML		07 10 49.6	
	comp=Z,1.0nm,1.0s						
IZEF	Zefreh	4.17	297	Pn	Pn	07 09 32.5	+0.7
IGAR	Gharneh	4.22	290	Pn	Pn	07 09 32.9	+0.4
KLNJ	Kolanjah	4.42	271	Pn	Pn	07 09 36.4	+1.1
KLNJ	Kolanjah	4.42	271	*e*Pn	Pn	07 09 38.3	+3.0
KLNJ				IAML		07 11 06.2	
	comp=Z,0.8nm,1.0s						
IBRJ	Brojen	4.75	282	Pn	Pn	07 09 40.6	+0.7
TBHD	Torbat heydari	4.82	25	Pn	Pn	07 09 40.7	0.0
KRSH	Karshahi	4.85	308	Pn	Pn	07 09 41.5	+0.4
IKLH	Kolahrood	4.92	299	Pn	Pn	07 09 43.0	+0.9
SHRO	Shahrood	4.96	353	*e*PnA		07 09 42.5	
SHRO				IAML		07 11 18.9	
	comp=Z,0.4nm,1.0s						
IANJ	Anjilo	4.99	333	Pn	Pn	07 09 43.1	-0.1
ISFB	Sefidab	5.01	312	Pn	Pn	07 09 43.9	+0.6
SHME	Shamm	5.02	186	P	Pn	07 09 45.9	+2.7
SHME				S	Sn	07 10 42.3	+1.1
SHME	Shamm	5.02	186	P	Pn	07 09 45.3	+2.1
BANOM	Banah	5.13	184	P	Pn	07 09 46.7	+1.8
BANOM				S	Sn	07 10 45.3	+1.2
BANOM	Banah	5.13	184	P	Pn	07 09 46.3	+1.5
TBJM	Torbat-e-JAM	5.17	35	Pn	Pn	07 09 45.4	-0.1
IPIR	Pirpir	5.23	290	Pn	Pn	07 09 48.2	+1.7
QAMS	Qamsar	5.25	302	Pn	Pn	07 09 46.8	+0.1
JHBN	Jahan bin	5.31	284	Pn	Pn	07 09 48.7	+1.2
ILAS	Lasjerd	5.35	325	Pn	Pn	07 09 48.2	+0.2
SBZV	Sabzevar	5.37	8	Pn	Pn	07 09 48.2	0.0
DSBU	Dashti - Bushe	5.47	242	Pn	Pn	07 09 50.1	+0.6
IMOG	Moghan	5.49	23	Pn	Pn	07 09 50.2	+0.3
IFIR	Firoozkooh	5.66	325	Pn	Pn	07 09 52.4	+0.1
MASF	Masafi	5.69	185	P	Pn	07 09 55.2	+2.7
	SNR=8.9						
MASF				S	Sn	07 10 59.6	+1.7
MSFE	Esma-Masafi	5.70	185	P	Pn	07 09 53.8	+1.1
IPAY	Payeh	5.70	19	Pn	Pn	07 09 53.3	+0.4
JRKH	Jarkhoshk	5.70	31	Pn	Pn	07 09 53.0	+0.2
HRA	Herat	5.71	53		Pn	07 09 53.1	+0.1
IKIA	Kiasar	5.73	334	Pn	Pn	07 09 53.4	+0.1
MDH	Madha	5.75	184	P	Pn	07 09 56.0	+2.6
MDH	Madha	5.75	184	P	Pn	07 09 54.3	+1.0
IVRN	Varamin	5.75	314	Pn	Pn	07 09 54.3	+0.8
IAKL	Akhelmad	5.78	16	Pn	Pn	07 09 54.4	+0.4
IGLO	Ghaloghah	5.95	337	Pn	Pn	07 09 57.3	+1.1
IMYA	Miami	5.97	27	Pn	Pn	07 09 56.3	-0.2
IDMV	Damavand	5.99	320	Pn	Pn	07 09 57.4	+0.6
IALA	Alasht	5.99	328	Pn	Pn	07 09 57.2	+0.4
ISFR	Sfrayin	6.07	10	Pn	Pn	07 09 58.2	+0.1
IQOM	Qom	6.08	310	Pn	Pn	07 09 58.7	+0.7
UOSS	Minazif	6.11	185		Pn	07 09 58.1	-0.2
UOSS	Minazif	6.11	185	Pn	Pn	07 10 00.2	+2.0
UOSS	Minazif	6.11	185	P	Pn	07 10 00.9	+2.7
UOSS				S	Sn	07 11 10.8	+2.7
UOSS	Minazif	6.11	185	P	Pn	07 09 59.7	+1.5
NAZ	Nazwa, Dubai	6.12	189	P	Pn	07 10 00.5	+2.1
NAZ	Nazwa, Dubai	6.12	189	P	Pn	07 09 59.7	+1.3
SRVN	Saravan	6.14	125	Pn	Pn	07 10 00.4	+1.6
SRVN	Saravan	6.14	125	*e*Pn	Pn	07 10 00.7	+1.8
SRVN				IAML		07 12 14.6	
	comp=Z,0.2nm,1.0s						
IKRD	Kardeh	6.16	21	Pn	Pn	07 09 59.0	-0.1
HATD	Hatta, Dubai	6.23	185	P	Pn	07 10 03.7	+3.8
HATD				S	Sn	07 11 12.7	+1.5
HATD	Hatta, Dubai	6.23	185	P	Pn	07 10 03.5	+3.5
IMND	Minoodasht	6.28	350	Pn	Pn	07 10 00.3	-0.3
FAQ	Al Faqa, Dubai	6.37	189	P	Pn	07 10 05.0	+3.1
FAQ	Al Faqa, Dubai	6.37	189	P	Pn	07 10 03.8	+2.0
ASHO	Ashiyiah	6.38	186	P	Pn	07 10 04.2	+2.2
	SNR=19						
ASHO				S	Sn	07 11 17.3	+2.4
ASHO	Ashiyiah	6.38	186	P	Pn	07 10 03.4	+1.4
ASHO				S	Sn	07 11 17.1	+2.3
ASUD	Al Ashush, Dub	6.53	191	P	Pn	07 10 06.5	+2.5
ASUD				S	Sn	07 11 20.8	+2.3
ASUD	Al Ashush, Dub	6.53	191	P	Pn	07 10 04.5	+0.5
IEMG	Emamgholi	6.54	14	Pn	Pn	07 10 04.5	+0.1
MRVT	Maraveh tapeh	6.61	356	Pn	Pn	07 10 05.5	+0.3
MRVT	Maraveh tapeh	6.61	356	*e*PnA		07 10 05.7	
MRVT				IAML		07 12 26.1	
	comp=Z,0.2nm,1.0s						
ASAO	Ashtian	6.64	303	*e*Pn	Pn	07 10 08.2	+2.5
ASAO				IAML		07 12 36.9	
	comp=Z,0.2nm,1.0s						
GTMR	Gotvand	6.64	284	*e*Pn	Pn	07 10 05.4	-0.2

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GTMR                                IAML          07 12 21.7
      comp=Z,0.2nm,1.0s
BJRD  Bojnurd            6.65   5 ePnA          07 10 06.5
BJRD                                IAML          07 12 17.3
      comp=Z,0.1nm,1.0s
AJN   Ajban              6.65 194  P      Pn    07 10 07.9 +2.2
AJN                                S      Sn    07 11 22.7 +1.1
AJN   Ajban              6.65 194  P      Pn    07 10 07.5 +1.8
CHTH  Charan             6.74 317 ePn     Pn    07 10 07.9 +0.8
CHTH                                IAML          07 12 16.4
      comp=Z,0.2nm,1.0s
NGCH  Negor - Chabah     6.88 145  P      Pn    07 10 13.4 +4.6
MZPU  Pul - Mazandar     6.88 323  Pn     Pn    07 10 10.1 +1.0
SOHO  SOHO               6.90 182  P      Pn    07 10 11.3 +2.2
JRN   Qarnain Island     6.99 210  P      Pn    07 10 12.9 +2.5
ALNE  Al Ain             7.03 187  P      Pn    07 10 12.8 +1.9
KLST  Kelardasht - M     7.21 321  Pn     Pn    07 10 14.1 +0.5
SHMA  Al-Shehemyia       7.25 226  P      Pn    07 10 14.7 +0.7
HOQ   Hoqain             7.46 176  Pn     Pn    07 10 17.6 +0.7
HOQ   Hoqain             7.46 176  P      Pn    07 10 17.6 +0.7
      SNR=9.8
QABG  Abgarm-Qazvin      7.57 310  Pn     Pn    07 10 19.5 +1.0
BIDO  Bidbid             7.61 170  P      Pn    07 10 20.5 +1.6
ARQ   Araqi              7.69 181  P      Pn    07 10 21.9 +1.9
ARQ                                P      Pn    07 10 21.9 +1.9
WSAR  Wadi Sarin         7.97 167  Pn     Pn    07 10 24.1 +0.3
      baz=0.0,slow=20,SNR=16
WSAR                               Sn     Sn    07 11 54.3 +0.3
      baz=270,slow=20,SNR=1.9
WSAR  Wadi Sarin         7.97 167  P      Pn    07 10 24.4 +0.6
WSAR                               S      Sn    07 11 54.4 +0.4
TRNA  Turayna            7.97 219  P      Pn    07 10 23.7 -0.1
TRNA                               S      Sn    07 11 53.6 -0.4
SMDO  Samad              8.05 171  P      Pn    07 10 26.8 +1.8
SMDO                               P      Pn    07 10 26.8 +1.8
SMDO                               S      Sn    07 11 56.0 -0.2
SMDO                               S      Sn    07 11 56.0 -0.2
KBD   Kabd               8.05 259  P      Pn    07 10 25.4 +0.5
SMRA  Abu-Samra          8.18 221  P      Pn    07 10 27.3 +0.6
SMRA                               S      Sn    07 11 55.7 -3.3
SLWR  Sila               8.27 214  P      Pn    07 10 27.5 -0.5
BSY   Bisya              8.29 177  P      Pn    07 10 31.0 +2.8
BSY                                P      Pn    07 10 31.0 +2.8
MZR   Muzera             8.53 201  P      Pn    07 10 31.5  0.0
ZNJK  Zanjan             8.72 312 ePn     Pn    07 10 36.9 +2.5
ZNJK                               IAML         07 10 42.1
      comp=Z,19nm,0.7s
JMDO  Jabal Madar        8.74 172  P      Pn    07 10 36.2 +1.8
JMDO                               P      Pn    07 10 36.2 +1.8
JLN   Jalan Bani Buh     9.19 164  P      Pn    07 10 42.3 +1.7
ILBA  Ilam Banvizeh      9.27 289 ePnA          07 10 41.9
ILBA                               IAML         07 10 47.5
      comp=Z,12nm,0.9s
MHTO  MHTO              10.09 173  P      Pn    07 10 54.2 +1.3
MHTO                               S      Sn    07 12 48.4 +2.3
DQM   DQM               11.10 176  P      Pn    07 11 06.2 -0.6
RAYN  Ar Rayn           12.49 236         Pn    07 11 22.6 -3.2
RAYN  Ar Rayn           12.49 236  P      Pn    07 11 22.6 -3.2
RAYN  Ar Rayn           12.49 236  P      Pn    07 11 22.0 -3.8
SIMJ  Simiganj          12.61  50         Pn    07 11 26.8 -0.6
DOK   Doka              12.61 191  P      Pn    07 11 26.7 -0.7
WHFO  Wadi Hawf         13.35 192  P      Pn    07 11 37.3 -0.3
GAR   Garm              13.65  51         Pn    07 11 40.9 -0.8
MAK   Makhachkala       13.97 331 eP      Pn    07 11 42.3 -3.6
MAK                                pmax   pmax
      comp=Z,302nm,1.3s
MAK                                MLR    MLR
      comp=Z,76nm,14.0s
ABTO  Aybut             14.00 194  P      Pn    07 11 45.0 -1.5
BTK   Batken            14.55  48         Pn    07 11 53.1 -0.8
BTK   Batken            14.55  48  P      Pn    07 11 53.1 -0.8
KOPT  Kop Dagi          15.94 309  Pn     Pn    07 12 11.9 -0.6
KOPT                               IAmb   IAmb  07 12 35.5
      comp=Z,19nm,0.9s
NCK   Nalchik           16.21 324⇓eP      P     07 12 21.2 +2.4
NCK                                pmax   pmax
      comp=Z,19nm,0.3s
KBZ   Khabaz            16.73 323  Pn     P     07 12 26.7 +2.1
      comp=Z,0.2nm,0.3s,baz=127,slow=12,SNR=7.7
KBZ   Khabaz            16.73 323⇑iP      P     07 12 27.1 +2.5
KBZ                                pmax   pmax
      comp=Z,5.0nm,0.9s
SHA1  Shidzhatmaz       16.86 323⇓eP      P     07 12 28.1 +1.8
ASF   Jabal al Asfar    16.94 279  P      Pn    07 12 24.2 -0.9
      comp=Z,0.6nm,0.3s,baz=98,slow=5.3,SNR=7.6
      comp=Z,2.7nm,0.5s
KVAR  Kislovodsk Arr    16.99 323  P      P     07 12 29.8 +2.2
      comp=Z,1.8nm,0.3s,baz=90,slow=20,SNR=1.4
KIV   Kislovodsk        17.00 323         P     07 12 28.7 +1.0
KIV   Kislovodsk        17.00 323 eP      P     07 12 30.5 +2.8
KIV                                pmax   pmax
      comp=Z,19nm,1.1s
GAZ   Gaziantep         17.27 296  P      Pn    07 12 29.5 +0.3
KSH   Kashi             17.81  56  P      Pn    07 12 34.5 -1.4
KSH                                pmax   pmax
      comp=Z,8.0nm,1.0s
MMAI  Mount Meron Ar    18.19 282  P      P     07 12 42.5 +1.6
      comp=Z,0.5nm,0.3s,baz=105,slow=17,SNR=5.0
MMAI                               LR     LR    07 21 08.1
      comp=Z,100nm,19.1s,baz=73,slow=42
      comp=Z,3.3nm,0.8s
AAK   Ala-Archa         18.28  46  P      Pn    07 12 41.3 -0.5
      comp=Z,0.2nm,0.3s,baz=232,slow=19,SNR=6.1
AAK                                LR     LR    07 20 26.2
      comp=Z,110nm,21.4s,baz=260,slow=39
      comp=Z,2.5nm,0.6s
AAK   Ala-Archa         18.28  46⇑eP      Pn    07 12 41.7  0.0
AAK                                pmax   pmax
      comp=Z,9.0nm,1.3s
AB31  Akbulak array     18.34   7         Pn    07 12 41.2 -1.0
ABKAR Akbulak array     18.34   7  P      Pn    07 12 41.5 -0.7
BNN   Bunyan            18.78 300  P      P     07 12 46.9 -0.6
EIL   Elat              18.85 271  P      Pn    07 12 49.5 +0.9
      comp=Z,0.2nm,0.3s,baz=131,slow=19,SNR=2.2
      comp=Z,2.3nm,0.7s
AKTO  Aktyubinsk        19.38   2  P      P     07 12 53.4 -0.3
      comp=Z,0.5nm,0.3s,baz=186,slow=13,SNR=8.0
AKTO                               LR     LR    07 21 17.5
      comp=Z,200nm,20.1s,baz=268,slow=40
      comp=Z,1.9nm,0.3s
KDJ   Kajisay           19.74  50  P      P     07 12 58.3 +0.4
KDJ   Kajisay           19.74  50  P      P     07 12 58.3 +0.4
KDJ                                pmax   pmax
      comp=Z,6.0nm,1.0s
TARG  Taragay, Kyrgy    19.98  52         Pn    07 13 02.3 -0.2
TARG  Taragay, Kyrgy    19.98  52  P      Pn    07 13 02.3 -0.2
TARG                               pmax   pmax
      comp=Z,8.0nm,0.9s
CSS   Mathiatis         20.00 287         P     07 13 01.4 +0.7
CSS                                IAmb   IAmb  07 13 06.8
      comp=Z,11nm,0.8s
BR131 Keskin Array S    20.68 301         P     07 13 08.3 +0.2
BR131 Keskin Array S    20.68 301  P      Pn    07 13 09.7 -0.7
      SNR=9.3
BR131 Keskin Array S    20.68 301c iP     P     07 13 09.2 +1.1
BRTR  Keskin Array B    20.68 301         P     07 13 08.3 +0.2
BRTR  Keskin Array B    20.68 301  P      P     07 13 08.5 +0.4
      comp=Z,3.5nm,0.7s,baz=115,slow=11,SNR=23
      comp=Z,3.5nm,0.7s
BRTR  Keskin Array B    20.68 301 eP      P     07 13 08.3 +0.2
BRTR                               pmax   pmax
      comp=Z,4.0nm,0.8s
ILGA  Ilgaz             21.06 305         P     07 13 12.5 +0.2
ILGA                               IAmb   IAmb  07 13 18.4
      comp=Z,32nm,1.3s
BELG  Belogornoye       22.34 345  LR     LR    07 24 35.3
      comp=Z,46nm,18.7s,baz=122,slow=43
BELG  Belogornoye       22.34 345⇑eP      P     07 13 27.3 +1.6
BELG                               pmax   pmax
      comp=Z,5.0nm,1.4s
VRH   Novokhopyorsk     23.00 335  P      P     07 13 34.9 +2.2
VRH                                pmax   pmax
      comp=Z,12nm,1.5s
ATD   Arta Tunnel       23.30 216  LR     LR    07 24 19.4
      comp=Z,5.8nm,20.2s,baz=330,slow=41
VORD  Divnogorie        23.74 332 eP      P     07 13 41.4 +1.3
VORD                               pmax   pmax
      comp=Z,10.0nm,1.5s
VSR   Storozhevoye      23.98 332 eP      P     07 13 41.4 -1.0
VSR                                pmax   pmax
      comp=Z,10.0nm,1.8s
BRVK  Borovoye          24.10  20⇑eP      P     07 13 43.6 +0.1
BRVK                               pmax   pmax
      comp=Z,4.0nm,1.4s
```

```
BVAR  Borovoye Array    24.10  20  P      P     07 13 43.4 -0.1
      comp=Z,0.9nm,0.6s,baz=190,slow=7.3,SNR=5.6
BVAR                               LR     LR    07 24 45.4
      comp=Z,160nm,18.3s,baz=211,slow=40
      comp=Z,0.9nm,0.6s
VORR  Voronezh          24.32 333 eP      P     07 13 47.0 +1.5
VORR                               pmax   pmax
      comp=Z,27nm,1.6s
MAKZ  Makanchi          25.00  44  P      P     07 13 52.5 +0.6
MAKZ                               IAmb   IAmb  07 13 55.4
      comp=Z,9.3nm,1.1s
MAKZ  Makanchi          25.00  44  P      P     07 13 52.5 +0.6
MAKZ                               pmax   pmax
      comp=Z,9.0nm,1.1s
MK31  Makanchi Array    25.18  44deP      P     07 13 54.2 +0.7
MKAR  Makanchi Array    25.18  44  P      P     07 13 53.7 +0.3
      comp=Z,2.3nm,0.7s,baz=232,slow=8.8,SNR=16
MKAR                               LR     LR    07 24 36.9
      comp=Z,74nm,19.4s,baz=212,slow=38
      comp=Z,2.3nm,0.7s
ARTI  Arti              25.35   2  LR     LR    07 24 42.1
      comp=Z,80nm,20.1s,baz=216,slow=38
ARTI  Arti              25.35   2c iP     P     07 13 58.2 +3.4
ARTI                                            07 14 32.6
ARTI                               S      S     07 18 27.2 +6.4
ARTI                               pmax   pmax
      comp=Z,4.0nm,0.9s
KURBB Kurchatov Arra    25.41  33  P      P     07 13 55.8 +0.4
      comp=Z,2.7nm,0.8s,baz=232,slow=8.8,SNR=22
KURBB                              LR     LR    07 26 14.9
      comp=Z,45nm,20.7s,baz=178,slow=42
      comp=Z,2.7nm,0.8s
KURK  Kurchatov         25.51  33  P      P     07 13 56.1 -0.3
KURK                               IAmb   IAmb  07 14 00.2
      comp=Z,4.9nm,0.8s
KURK  Kurchatov         25.51  33⇓eP      P     07 13 58.0 +1.7
KURK                               pmax   pmax
      comp=Z,6.0nm,0.9s
EVN   Everest           26.32  89  P      P     07 14 04.6 -0.1
EVN                                IAmb   IAmb  07 14 08.2
      comp=Z,6.9nm,0.9s
KIRV  Kirov             27.98 352  LR     LR    07 27 29.1
      comp=Z,57nm,21.1s,baz=166,slow=41
OBN   Obninsk           28.00 335⇓eP      P     07 14 22.7 +4.1
OBN                               e             07 15 11.1
OBN                               ePPP    PPP   07 15 18.4
OBN                               e             07 17 34.4
OBN                                pmax   pmax
      comp=Z,10.0nm,0.6s
AKASG Malin Array Be    28.33 322  P      P     07 14 22.4 +0.7
      comp=Z,0.2nm,0.2s,baz=122,slow=8.5,SNR=5.8
      comp=Z,0.2nm,0.2s
AKASG Malin Array Be    28.33 322 eP      P     07 14 22.9 +1.2
ZAA0  Zalesovo Array    30.50  33  P      P     07 14 39.7 -1.3
ZAA0                               IAmb   IAmb  07 14 43.5
      comp=Z,5.8nm,0.9s
ZALV  Zalesovo Beam     30.50  33         P     07 14 40.4 -0.5
ZALV  Zalesovo Beam     30.50  33  P      P     07 14 40.6 -0.4
      comp=Z,6.7nm,0.8s,baz=238,slow=8.5,SNR=17
ZALV                               LR     LR    07 28 19.2
      comp=Z,58nm,18.5s,baz=238,slow=39
      comp=Z,6.7nm,0.8s
KOLS  Kolonicke sedl    31.52 314 eP      P     07 14 52.8 +2.8
KOLS  Kolonicke sedl    31.52 314 eP      P     07 14 52.8 +2.8
VYHS  Vyhne             33.51 312 eP      P     07 15 12.3 +4.8
JAVC  Velka Javorina    34.36 312 eP      P     07 15 20.6 +5.7
MORC  Moravsky Berou    34.71 314 eP      P     07 15 20.6 +2.7
VRAC  Vranov            35.16 313 eP      P     07 15 22.1 +0.3
FINES FINESS Array B    36.40 336  P      P     07 15 32.6 +0.5
      comp=Z,0.9nm,0.6s,baz=132,slow=8.9,SNR=5.8
      comp=Z,0.9nm,0.6s
FINES FINESS Array B    36.40 336 eP      P     07 15 34.6 +2.5
FINES                              pmax   pmax
      comp=Z,1.0nm,0.7s
FDMO  Fiordimonte       36.45 302         P     07 15 31.9 -1.0
FDMO                               IAmb   IAmb  07 16 02.4
      comp=Z,6.8nm,1.2s
GERES GERESS Array B    36.89 311  P      P     07 15 36.3 -0.4
      comp=Z,1.1nm,0.7s,baz=100,slow=8.2,SNR=6.1
      comp=Z,1.1nm,0.7s
GERES GERESS Array B    36.89 311 eP      P     07 15 38.8 +2.1
GERES                              pmax   pmax
      comp=Z,1.0nm,0.7s
KHC   Kasperske Hory    37.03 312⇓eP      P     07 15 37.6 -0.2
KHC                                pmax   pmax
      comp=Z,5.0nm,1.5s
CLL   Collm             37.92 315         P     07 15 44.9 -0.3
CLL                                IAmb   IAmb  07 15 49.1
      comp=Z,7.0nm,1.1s
CLL   Collm             37.92 315  P      P     07 15 44.9 -0.3
CLL                                pmax   pmax
      comp=Z,7.0nm,1.1s
CLL   Collm             37.92 315 i P     P     07 15 46.5 +1.3
      comp=Z,8.0nm,1.1s
KEST  Kesra             39.54 290  LR     LR    07 34 58.9
      comp=Z,41nm,18.8s,baz=333,slow=40
CHTO  Chiang Mai        39.94  98         P     07 16 02.3 -0.3
CHTO                               IAmb   IAmb  07 16 02.5
      comp=Z,4.6nm,0.8s
CHTO  Chiang Mai        39.94  98  P      P     07 16 02.3 -0.3
CHTO                               pmax   pmax
      comp=Z,5.0nm,0.9s
CMAR  Chiang Mai Arr    40.10  98  P      P     07 16 04.0 +0.1
CMAR  Chiang Mai Arr    40.10  98  P      P     07 16 01.9 -1.9
      comp=Z,0.9nm,0.3s,baz=301,slow=5.9,SNR=4.2
      comp=Z,0.9nm,0.3s
CMAR  Chiang Mai Arr    40.10  98 eP      P     07 16 03.7 -0.2
CMAR                               pmax   pmax
      comp=Z,1.0nm,0.3s
HFS   Hagfors           40.68 328  P      P     07 16 08.0 -0.2
      comp=Z,1.4nm,0.7s,baz=119,slow=12,SNR=3.6
HFS                                LR     LR    07 37 15.7
      comp=Z,38nm,19.2s,baz=134,slow=42
      comp=Z,1.4nm,0.7s
HFS   Hagfors           40.68 328  P      P     07 16 08.0 -0.2
NOA   NORSAR Array B    42.18 329  P      P     07 16 20.5  0.0
      comp=Z,1.0nm,0.9s,baz=116,slow=7.9,SNR=3.4
      comp=Z,1.0nm,0.9s
NOA   NORSAR Array B    42.18 329 eP      P     07 16 24.9 +4.4
NOA                                pmax   pmax
      comp=Z,1.0nm,0.9s
ARCES ARCESS Array B    42.38 344  LR     LR    07 35 44.2
      comp=Z,39nm,18.4s,baz=3.5,slow=38
XLT   XiLinHaoTe        47.85  57 eP      P     07 17 06.0  0.0
XLT                                pmax   pmax
      comp=Z,9.0nm,0.7s
XLT                                pmax   pmax
      comp=Z,110nm,4.1s
EKA   Eskdalemuir Ar    48.15 318  P      P     07 17 08.1 +0.2
      comp=Z,1.1nm,0.7s,baz=98,slow=6.9,SNR=4.1
      comp=Z,1.1nm,0.7s
TORD  Torodi Ar. Bea    53.48 263         P     07 17 48.4 -0.3
TORD                               IAmb   IAmb  07 17 51.1
      comp=Z,4.4nm,1.4s
TORD  Torodi Ar. Bea    53.48 263  P      P     07 17 47.5 -1.2
      comp=Z,3.1nm,0.7s,baz=62,slow=7.5,SNR=2.2
      comp=Z,3.1nm,0.7s
TIXI  Tiksi             55.23  22  LR     LR    07 43 01.2
      comp=Z,35nm,18.1s,baz=86,slow=38
KLR   Kul'dur           57.78  48  LR     LR    07 43 59.7
      comp=Z,43nm,18.1s,baz=299,slow=37
KSRS  Korea Array       57.92  63  P      P     07 18 17.8 -2.4
      comp=Z,0.7nm,0.5s,baz=300,slow=9.6,SNR=1.7
      comp=Z,0.7nm,0.5s
SUMG  Summit            62.22 340 i P     P     07 18 51.0 +1.3
SEY   Seymchan          65.30  30⇑eP      P     07 19 10.7 +1.0
SEY                                pmax   pmax
      comp=Z,4.0nm,1.0s
MA2   Magadan           65.72  34  LR     LR    07 52 25.7
      comp=Z,30nm,18.6s,baz=187,slow=40
MJAR  Matsushiro Arr    66.00  61  P      P     07 19 13.1 -1.6
      comp=Z,1.0nm,0.4s,baz=307,slow=9.0,SNR=7.9
MJAR                               LR     LR    07 49 12.0
      comp=Z,38nm,18.3s,baz=251,slow=37
      comp=Z,1.0nm,0.4s
MJAR  Matsushiro Arr    66.00  61 eP      P     07 19 15.5 +0.8
MJAR                               pmax   pmax
      comp=Z,2.0nm,0.4s
MJA0  Matsu Arr-Jizo    66.03  61 eP      P     07 19 15.5 +0.6
MJA0                               pmax   pmax
      comp=Z,2.0nm,0.4s
BOSA  Boshof            66.49 210  P      P     07 19 16.7 -1.1
BOSA  Boshof            66.49 210  P      P     07 19 16.8 -1.0
      comp=Z,3.2nm,0.8s,baz=27,slow=8.9,SNR=5.3
      comp=Z,3.2nm,0.8s
B22K  Teshekpuk Lake    76.59  10  P      P     07 20 18.2 +0.1
A36M  Sachs Harbour     77.23   1  P      P     07 20 20.8 -0.9
```

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C23K  Itkillik River    77.46   9  P      P     07 20 23.1 +0.1
E19K  Redstone River    78.51  13  P      P     07 20 28.0 -0.9
E19K                               IAmb   IAmb  07 20 43.9
      comp=Z,5.7nm,1.2s
TOLK  Toolik Lake Re    78.71  10  P      P     07 20 29.9 -0.2
TOLK                               IAmb   IAmb  07 20 33.0
      comp=Z,2.7nm,0.8s
BMAR  Burnt Mountain    80.51   8  P      P     07 20 40.0 +0.1
J20K  Nowinta River     82.02  13  P      P     07 20 47.2 -0.6
J20K                               IAmb   IAmb  07 21 13.2
      comp=Z,5.4nm,1.4s
ILAR  Eielson Array     82.71  10  P      P     07 20 49.5 -2.0
      comp=Z,0.2nm,0.7s,baz=327,slow=5.7,SNR=4.1
      comp=Z,0.2nm,0.7s
ILAR  Eielson Array     82.71  10 eP      P     07 20 54.6 +3.1
YKA   Yellowknife Ar    86.52 356  P      P     07 21 10.0 -0.7
      comp=Z,0.4nm,0.9s,baz=10,slow=4.6,SNR=4.8
YKA                                LR     LR    08 04 08.8
      comp=Z,31nm,20.1s,baz=88,slow=39
      comp=Z,0.4nm,0.9s
KDAK  Kodiak Island     88.13  15  LR     LR    08 06 27.0
      comp=Z,35nm,21.3s,baz=288,slow=40
WRA   Warramunga Arr    90.04 113  P      P     07 21 26.5 -1.6
      comp=Z,0.6nm,1.1s,baz=311,slow=4.3,SNR=3.1
      comp=Z,0.6nm,1.1s
ASAR  Alice Springs     91.73 117  P      P     07 21 34.8 -1.2
      comp=Z,0.5nm,0.9s,baz=306,slow=4.7,SNR=4.0
      comp=Z,0.5nm,0.9s
```

RSNC 15 07:26:25.0±0.0, 7°N±1°×7°3W±°, h147^{km}±1^{km}, M2.7, mb2.9, mB4.6, ML2.3, Mw(mB)3.8, Northern Colombia

```
Code  Station Name         Δ°   AZ°   Phase ID       Time       Res
                                      Op     ISC     h  m  s    ISC
BARC  Barichara          0.25 192  P      Pn    07 26 44.7 -0.7
BARC                               S      Sn    07 26 59.6 -1.2
BRJC  Barrancabermej     0.62 282  P      Pn    07 26 46.4 -0.3
BRJC                               S      Sn    07 27 03.2  0.0
PAMC  Pamplona, Colo     0.66  41  P      Pn    07 26 47.6 +0.1
PAMC                               S      Sn    07 27 04.3 -0.3
RUSC  La Rusia           0.94 177  P      Pn    07 26 48.6 -1.0
RUSC                               S      Sn    07 27 06.6 -1.7
PTBC  PUERTO BERRIO,     1.35 257  P      Pn    07 26 51.2 -1.6
PTBC                               S      Sn    07 27 12.3 -1.7
TAMC  Tame, Arauca       1.39 107  P      Pn    07 26 53.0 -0.2
TAMC                               S      Sn    07 27 14.4 -0.4
OCAC  Ocana              1.40 352  P      Pn    07 26 52.9 -0.6
OCAC                               S      Sn    07 27 14.6 -0.7
SPBC  San Pablo de B     1.51 218  P      Pn    07 26 53.6 -0.9
SPBC                               S      Sn    07 27 15.8 -1.3
ZARC  Zaragoza, Cauc     1.83 291  P      Pn    07 26 58.0  0.0
ZARC                               S      Sn    07 27 23.6 +0.2
NORC  Norcasia           2.14 234  P      Pn    07 27 01.2 -0.5
NORC                               S      Sn    07 27 28.6 -1.3
CHIC  Chingaza           2.28 195  P      Pn    07 27 03.1 -0.6
CHIC                               S      Sn    07 27 30.9 -2.5
ROSC  El Rosal           2.31 211  P      Pn    07 27 04.1  0.0
ROSC                               S      Sn    07 27 33.6 -0.5
CVER  Cruz Verde, Cu     2.49 202  P      Pn    07 27 06.2 -0.1
CVER                               S      Sn    07 27 34.6 -3.5
UREC  San Jos de Ur      2.55 291  P      Pn    07 27 05.2 -1.4
UREC                               S      Sn    07 27 37.0 -1.7
GUY2C Guyana, Caldas     2.74 234  P      Pn    07 27 09.5  0.0
GUY2C                              S      Sn    07 27 43.6 -0.1
VILC  Villavicencio,     2.77 192  P      Pn    07 27 08.1 -1.4
VILC                               S      Sn    07 27 42.2 -1.6
DBBC  Dabeiba            3.06 273  P      Pn    07 27 12.0 -1.1
DBBC                               S      Sn    07 27 49.2 -1.1
ARGC  Ariguani, Magd     3.19 340  P      Pn    07 27 13.9 -0.9
ARGC                               S      Sn    07 27 53.0 -0.3
SDV   Santo Domingo      3.20  50  P      Pn    07 27 14.2 -0.8
SDV                                S      Sn    07 27 51.9 -1.8
PRAC  Prado              3.56 209  P      Pn    07 27 19.2 -0.4
PRAC                               S      Sn    07 28 00.1 -1.8
APAC  Apartado, Choc     3.58 287  P      Pn    07 27 19.4 -0.3
APAC                               S      Sn    07 28 01.9 -0.2
ORTC  Ortega, Tolima     3.59 216  P      Pn    07 27 19.9 -0.1
ORTC                               S      Sn    07 28 01.9 -0.7
SJCC  San Jacinto, C     3.65 326  P      Pn    07 27 19.6 -1.1
SJCC                               S      Sn    07 28 00.4 -3.6
PLMC  San Jos del P      3.68 239  P      Pn    07 27 21.0 -0.1
PLMC                               S      Sn    07 28 03.3 -1.3
CRJC  Cerrejon, Guaj     4.16   3  P      Pn    07 27 25.1 -2.3
CRJC                               S      Sn    07 28 13.8 -2.1
JAMC  Jamundi, Valle     5.04 225  P      Pn    07 27 40.3 +1.1
      1.4nm,0.8s
GARC  Garzon, Huila      5.19 207  P      Pn    07 27 39.0 -2.2
GARC                               S      Sn    07 28 37.2 -3.3
POPC  Popayan, Colom     5.54 220  P      Pn    07 27 45.0 -0.9
POPC                               S      Sn    07 28 48.5 -0.5
```

ROM 15 07:27:51.5±0.5, 38°.49N±0°.05×15°.50E±0°.05, h125^{km}±4^{km}, ML2.1/10, Error ellipse: s-maj=6.3km s-min=3.9km az=151.0, Sicily

```
Code  Station Name         Δ°   AZ°   Phase ID       Time       Res
                                      Op     ISC     h  m  s    ISC
MSRU  Castanea           0.23 178  P      Pn    07 28 08.8  0.0
MSRU                               S      Sn    07 28 21.2 -0.6
SICLA Scilla             0.29 144  P      Pn    07 28 09.1 +0.2
MILZ  Milazzo            0.30 224  P      Pn    07 28 09.1 +0.1
MILZ                               S      Sn    07 28 21.9 -0.3
MILZ                               AML    AML
      comp=E,181µm,1.3s
MILZ                               AML    AML
      comp=N,110µm,0.2s
JOPP  Joppolo            0.32  69  P      Pn    07 28 09.9 +0.7
JOPP                               S      Sn    07 28 23.3 +0.8
JOPP                               AML    AML
      comp=E,57µm,0.3s
JOPP                               AML    AML
      comp=N,49µm,1.3s
JOPP                               AML    AML
      comp=N,49µm,0.7s
MPNC  Port Mandanici     0.36 199  P      Pn    07 28 09.1 -0.3
MPNC                               S      Sn    07 28 22.0 -0.8
MPNC                               AML    AML
      comp=N,60µm,1.2s
MPNC                               AML    AML
      comp=E,49µm,0.6s
MPNC                               AML    AML
      comp=E,49µm,1.4s
CEL   Celeste            0.39 127  P      Pn    07 28 09.9 +0.4
CEL                                S      Sn    07 28 23.0  0.0
CEL                                AML    AML
      comp=N,70µm,0.3s
CEL                                AML    AML
      comp=E,38µm,0.2s
VPL   Vulcano Piano      0.42 255  P      Pn    07 28 09.9 +0.3
MTTG  Motta San Giov     0.51 163  P      Pn    07 28 10.4 +0.3
MTTG                               S      Sn    07 28 24.8 +0.6
NOV   Novara             0.54 212  P      Pn    07 28 11.2 +0.8
AIO   Antillo            0.56 202  P      Pn    07 28 10.9 +0.4
PLAC  Placanica          0.74  93  P      Pn    07 28 10.4 -1.3
PLAC                               AML    AML
      comp=N,74µm,0.3s
PLAC                               AML    AML
      comp=N,74µm,1.7s
PLAC                               AML    AML
      comp=E,136µm,0.4s
```

ROM 15 07:28:41.0±0.1, 38°.498N±0°.004×16°.141E±0°.005, h11^{km}, ML1.0/2, Error ellipse: s-maj=0.5km s-min=0.3km az=23.0, Southern Italy

```
Code  Station Name         Δ°   AZ°   Phase ID       Time       Res
                                      Op     ISC     h  m  s    ISC
JOPP  Joppolo            0.23 299  P      Pg    07 28 46.4 +0.7
JOPP                               S      Sg    07 28 50.2 +1.3
JOPP                               AML    AML
      comp=E,60µm,0.1s
JOPP                               AML    AML
      comp=N,49µm,1.0s
JOPP                               AML    AML
      comp=N,49µm,1.0s
PLAC  Placanica          0.24 102  P      Pg    07 28 46.4 +0.5
PLAC                               S      Sg    07 28 50.6 +1.3
CEL   Celeste            0.31 219  P      Pg    07 28 47.5 +0.3
CEL                                S      Sg    07 28 52.4 +1.1
SOI   Samo               0.43 189  P      Pg    07 28 49.9 +0.5
SOI                                S      Sb    07 28 56.4 -0.7
```

NNC 15 07:32:30.1±0.7**, 50°.04N×78°.73E, h0^{km}, mb3.6, mpv3.2, 11C-14D, Error ellipse: s-maj=7.0km s-min=3.6km az=64.0, Suspected Mining explosion., Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.56**	**346**	⇓P	Pg	07 32 40.3	-0.6
KUR07				⇑S	Sb	07 32 49.8	-1.6
KUR06	**Kurchatov Arra**	**0.58**	**347**	⇑P	Pg	07 32 40.6	-0.5
KUR06				⇑S	Sg	07 32 50.1	+1.4
KUR14	**Kurchatov Arra**	**0.58**	**351**	⇓P	Pg	07 32 40.7	-0.5
KUR14				⇑S	Sg	07 32 50.0	+1.2
KUR15	**Kurchatov Arra**	**0.59**	**350**	⇓P	Pg	07 32 41.3	-0.1
KUR15				⇓S	Sg	07 32 50.6	+1.5
KURBB	**Kurchatov Arra**	**0.60**	**348**	⇑P	Pg	07 32 41.2	-0.4
	5.0nm,0.3s						
KURBB				⇓S	Sb	07 32 51.0	-1.5
	67nm,0.8s						
KUR16	**Kurchatov Arra**	**0.61**	**346**	⇓P	Pg	07 32 41.4	-0.3
KUR16				⇑S	Sg	07 32 51.0	+1.4
KUR05	**Kurchatov Arra**	**0.62**	**349**	⇑P	Pg	07 32 41.0	-0.9
KUR05				⇓S	Sg	07 32 50.9	+1.0
KUR17	**Kurchatov Arra**	**0.62**	**344**	⇑P	Pg	07 32 41.5	-0.4
KUR17				⇓S	Sg	07 32 51.1	+1.2
KUR04	**Kurchatov Arra**	**0.64**	**349**	⇓P	Pg	07 32 42.0	-0.2
KUR04				⇑S	Sb	07 32 52.0	-1.5
KURK	**Kurchatov**	**0.68**	**354**	⇓P	Pg	07 32 42.6	-0.5
	5.9nm,0.8s						
KURK				⇓S	Sg	07 32 53.2	+1.2
	25nm,0.9s						
SEM	**Semipalatinsk**	**1.04**	**69**	P	Pn	07 32 52.1	-0.1
	4.8nm,0.1s						
SEM				S	Sg	07 33 03.4	-0.2
	11nm,0.1s						
MAKZ	**Makanchi**	**3.89**	**145**	⇓Pg	Pb	07 33 40.6	+1.1
	5.5nm,1.1s						
MAKZ				⇑Lg	Lg	07 34 31.0	
	9.2nm,0.8s						
MK31	**Makanchi Array**	**4.02**	**143**	⇑Pg	Pg	07 33 45.5	-1.6
	1.2nm,0.5s,baz=316,slow=15,SNR=8.8						
MK31				Lg	Lg	07 34 39.3	
	15nm,0.8s,baz=323,slow=26,SNR=24						
OTUK	**Ortayu**	**4.56**	**249**	Pg	Pg	07 33 56.3	-1.2
	0.5nm,0.2s						
OTUK				Lg	Lg	07 34 53.2	
	2.1nm,0.6s						
OTUK	**Ortayu**	**4.56**	**249**	⇓Lg	Lg	07 34 54.5	
	7.3nm,0.8s						
ZSN	**Zaisan**	**4.81**	**120**	Pg	Pb	07 33 58.6	+3.3
	15nm,0.5s						
ZSN				Lg	Lg	07 34 57.3	
	3.5nm,0.3s						
DJR	**Jarkent**	**5.75**	**172**	Pg	Pg	07 34 16.9	-3.4
	1.1nm,0.1s						
DJR				Lg	Lg	07 35 28.2	
	3.0nm,0.9s						
ARXS	**Arharly**	**5.86**	**186**	Pg	Pg	07 34 19.9	-2.4
	0.9nm,0.7s						
ARXS				Lg	Lg	07 35 33.1	
	5.9nm,1.1s						
BLB	**Baldybastay**	**5.95**	**182**	Pg	Pg	07 34 20.1	-3.8
	7.7nm,0.8s						
BLB				Lg	Lg	07 35 33.6	
	13nm,0.8s						
KTBS	**Karatobe**	**6.48**	**193**	Pg	Pg	07 34 32.3	-1.9
	0.6nm,0.3s						
KTBS				Lg	Lg	07 35 54.6	
	7.4nm,1.2s						
PDGK	**Podgornoye**	**6.73**	**175**	⇓Lg	Lg	07 36 00.3	
	14nm,1.0s						

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*TRN **15** 07:36:18.3, 15°.33N×61°.30W, h12^{km}, MD3.5, Dominica. Felt in Dominica, MMI V, VI.*

*NEIC **15** 07:36:19.5±1.0, 15°.33N±0°.03×61°.25W±0°.06, h31^{km}±10^{km}, ML2.9/22, Error ellipse: s-maj=9.0km s-min=3.3km az=68.0*

ISC 15 07:36:18.4±0.8**, 15°.33N**±0°.02×**61°.31W**±0°.05**, h17**^{km}±4^{km}**, n34, σ1^{s}25**/47**, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLPL	**La Plaine**	**0.06**	**91**	*e*P	**Pg**	**07 36 21.8**	**+0.1**
DLPL				*e*S	**Sg**	**07 36 23.4**	**-0.6**
DRTD	**Roseau, Domini**	**0.08**	**241**	*e*P	**Pg**	**07 36 21.9**	**+0.1**
DRTD				*e*S	**Sg**	**07 36 24.1**	**0.0**
MDN	**Morne-Daniel**	**0.08**	**259**	*e*P	**Pg**	**07 36 21.8**	**0.0**
MDN				*e*S	**Sg**	**07 36 23.7**	**-0.4**
DSLB	**Salisbury**	**0.15**	**315**	*e*P	**Pg**	**07 36 23.3**	**+0.7**
DSLB				*e*S	**Sg**	**07 36 25.9**	**+0.5**
DWS	**Wesley**	**0.23**	**0**	*e*P	**Pb**	**07 36 25.0**	**+0.8**
DWS				*e*S	**Sb**	**07 36 28.8**	**+0.8**
SVN	**Savane Anatole**	**0.51**	**164**		**Pb**	**07 36 29.9**	**+1.0**
SVN	**Savane Anatole**	**0.51**	**164**	*e*P	**Pb**	**07 36 30.1**	**+1.2**
TDBA	**Terre de Bas,**	**0.60**	**329**		**Pb**	**07 36 31.5**	**+1.1**
TDBA				Sg	**Sb**	**07 36 40.0**	**+1.4**
TDBA				IAML		07 36 44.7	
	comp=N,522nm,0.2s						
TDBA				IAML		07 36 48.3	
	comp=E,316nm,0.2s						
TBG	**Guadaloupe-3**	**0.61**	**328**	*e*P	**Pn**	**07 36 32.0**	**-0.2**
MAGL	**Barre de l’ile**	**0.61**	**3**		**Pg**	**07 36 31.6**	**+1.1**
MAGL				Sg	**Sb**	**07 36 40.1**	**+1.1**
MAGL				IAML		07 36 41.0	
	comp=N,638nm,0.5s						
MAGL				IAML		07 36 41.1	
	comp=E,860nm,0.6s						
MAGL	**Barre de l’ile**	**0.61**	**3**	*e*P	**Pg**	**07 36 31.8**	**+1.2**
MAGL				*e*S	**Sb**	**07 36 40.0**	**+1.0**
FDF	**Fort de France**	**0.62**	**165**		**Pb**	**07 36 31.4**	**+0.7**
FDF				Sg	**Sb**	**07 36 39.8**	**+0.6**
FDF				IAML		07 36 42.8	
	comp=E,444nm,0.6s						
FDF				IAML		07 36 45.1	
	comp=N,460nm,0.3s						
ILAM	**Ilet Lapin Mar**	**0.70**	**143**		**Pg**	**07 36 32.7**	**+0.5**
ILAM					**Sb**	**07 36 42.0**	**+0.5**
ILAM	**Ilet Lapin Mar**	**0.70**	**143**	*e*P	**Pn**	**07 36 33.6**	**+0.1**
ILAM				*e*S	**Sg**	**07 36 42.6**	**+1.1**
CBE	**Ff, Capester**	**0.79**	**339**		**Pn**	**07 36 35.0**	**+0.3**
BIM	**Bigot**	**0.84**	**164**		**Pb**	**07 36 35.0**	**+0.3**
BIM				IAML		07 36 47.9	
	comp=E,332nm,0.3s						
BIM	**Bigot**	**0.84**	**164**	*e*P	**Pn**	**07 36 35.8**	**+0.2**
MPOM	**Morne Pois Mar**	**0.99**	**154**		**Pb**	**07 36 36.9**	**-0.1**
GDSD	**La Dsirade Is**	**1.00**	**14**		**Pb**	**07 36 37.2**	**-0.1**
GDSD				IAML		07 36 51.6	
	comp=E,576nm,0.5s						
GDSD				IAML		07 36 53.1	
	comp=N,546nm,0.2s						
GDHS	**Morne Mazeau,**	**1.03**	**335**		**Pg**	**07 36 39.6**	**+1.1**
GDHS				IAML		07 37 10.2	
	comp=N,427nm,0.4s						
ABD	**La Joyeuse, An**	**1.15**	**352**		**Pb**	**07 36 40.4**	**+0.7**
ABD				IAML		07 36 57.6	
	comp=E,272nm,0.5s						
ABD				IAML		07 36 57.6	
	comp=N,342nm,0.5s						
SLBI	**Saint Lucia, B**	**1.34**	**166**	*e*P	**Pb**	**07 36 43.6**	**+0.5**
SLBI				*e*S	**Sn**	**07 36 55.9**	**-3.9**
MBFL	**Flemmings, Mon**	**1.65**	**329**	*e*P	**Pn**	**07 36 47.6**	**+0.9**
MBFL	**Flemmings, Mon**	**1.65**	**329**	*e*P	**Pb**	**07 36 49.3**	**+0.9**
MBFL				*e*S	**Sn**	**07 37 03.1**	**-4.4**
ANBD	**Bethesda, Anti**	**1.76**	**346**	*e*P	**Pb**	**07 36 50.0**	**-0.2**
SVB	**Belmont**	**2.05**	**178**	*e*P	**Pn**	**07 36 53.4**	**+1.2**
ANWB	**Willy Bob**	**2.37**	**349**	*e*	**Pn**	**07 36 53.6**	**-2.8**
ANWB	**Willy Bob**	**2.37**	**349**	*e*P	**Pn**	**07 36 57.6**	**+1.2**
SKI	**Saint Kitts**	**2.41**	**326**	*e*	**Pb**	**07 37 00.2**	**-1.2**
HUMP	**Col San Antoni**	**5.17**	**303**	Pn	**Pn**	**07 37 35.8**	**+0.8**
IGPR	**InterUniversit**	**5.29**	**300**	Pn	**Pn**	**07 37 36.4**	**-0.2**
SJG	**San Juan**	**5.39**	**301**	Pn	**Pn**	**07 37 38.5**	**+0.4**
CELP	**Cerrillos**	**5.74**	**299**	Pn	**Pn**	**07 37 43.3**	**+0.5**
AOPR	**Arecibo Observ**	**6.01**	**301**	Pn	**Pn**	**07 37 47.3**	**+0.7**

NEIC 15 07:42:18.9±0.3**, 37°.64N**±0°.01×**105°.50W**±0°.02**, h5**^{km}±1^{km}**, ML1.4**/14**, Error ellipse: s-maj=3.1km s-min=2.6km az=261.0, Colorado**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDCO	**Great Sand Dun**	**0.10**	**358**	Pg	Pg	07 42 21.7	+0.4
SDCO				Sg	Sg	07 42 23.4	+0.5
SDCO				IAML		07 42 24.2	
	232nm,0.1s						
T25A	**Trinidad**	**1.00**	**120**	Pg	Pg	07 42 38.0	-0.1
T25A				Sg	Sg	07 42 51.0	-0.1
T25A				IAML		07 42 51.4	
	comp=N,11nm,0.6s						
S22A	**4UR Ranch, Cre**	**1.06**	**276**	Pg	Pg	07 42 39.1	-0.2
S22A				IAML		07 42 54.6	
	comp=E,6.9nm,0.1s						
Q24A	**Divide**	**1.35**	**12**	Pg	Pn	07 42 44.1	-0.6
Q24A				Sg	Sg	07 43 01.5	-0.8
Q24A				IAML		07 43 02.5	
	comp=E,6.5nm,0.3s						

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*IDC **15** 07:52:27.7±4.0, 36°.13N×71°.00E, h94^{km}±35^{km}, mb3.6/15, mbtmp4.0/20, MS3.1/2, Error ellipse: s-maj=24.2km s-min=16.4km az=21.0*

*MOS **15** 07:52:28.5±1.0, 36°.22N×70°.96E, h107^{km}, mb4.3/7, Error ellipse: s-maj=12.7km s-min=6.0km az=85.6*

*NEIC **15** 07:52:29.6±1.6, 36°.21N±0°.04×70°.80E±0°.08, h109^{km}±7^{km}, mb4.3/23, Error ellipse: s-maj=9.3km s-min=4.4km az=71.0*

*NNC **15** 07:52:33.1±2.3, 36°.59N×70°.72E, h102^{km}±45^{km}, mb3.9, mpv4.2, Error ellipse: s-maj=19.9km s-min=17.2km az=131.0*

ISC 15 07:52:29.0±0.4**, 36°.15N**±0°.05×**71°.06E**±0°.05**, h102**^{km}**, n113, σ2^{s}16**/128**, mb4.0**/27**, 7C-10D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.30**	**226**		**Pn**	**07 53 05.7**	**-0.1**
KBL	**Kabul**	**2.30**	**226**	PN	**Pn**	**07 53 05.7**	**-0.1**
GAR	**Garm**	**2.91**	**348**		**Pn**	**07 53 13.0**	**-0.7**
SIMJ	**Simiganj**	**2.99**	**327**		**Pn**	**07 53 12.8**	**-2.1**
NIL	**Nilore**	**3.07**	**144**		**Pn**	**07 53 18.8**	**+2.9**
NIL	**Nilore**	**3.07**	**144**	PN	**Pn**	**07 53 18.8**	**+2.9**
BTK	**Batken**	**3.91**	**357**		**Pn**	**07 53 28.0**	**+0.9**
BTK	**Batken**	**3.91**	**357**	PN	**Pn**	**07 53 28.0**	**+0.9**
JMU	**Jammu**	**4.66**	**136**	*e*P	**Pn**	**07 53 39.2**	**+2.0**
JMU				*e*S	**Sn**	**07 54 30.3**	**+0.1**
JMU				IAML		07 54 34.0	
	comp=N,328nm,0.3s						
JMU				IAML		07 54 35.2	
	comp=E,313nm,0.6s						
KSH	**Kashi**	**5.14**	**48**	Pn	**Pn**	**07 53 41.4**	**-2.3**
KSH				Sn	**Sn**	**07 54 33.6**	**-8.3**
KSH				smax	smax		
	comp=N,260nm,0.8s						
KSH				smax	smax		
	comp=E,160nm,0.5s						
THN	**Thein Dam**	**5.34**	**133**	*e*P	**Pn**	**07 53 48.9**	**+2.6**
THN				*e*P	**Sn**	**07 54 47.4**	**+0.7**
THN				IAML		07 54 48.6	
	comp=E,198nm,0.9s						
THN				IAML		07 54 49.0	
	comp=N,286nm,0.4s						
ARSB	**Arslanbob**	**5.38**	**16**	Pn	**Pn**	**07 53 46.8**	**-0.3**
ARSB	**Arslanbob**	**5.38**	**16**	PN	**Pn**	**07 53 46.8**	**-0.3**
DHRM	**DHARAMSHALA**	**5.82**	**130**	*e*P	**Pn**	**07 53 54.3**	**+1.1**
DHRM				*e*S	**Sn**	**07 54 58.9**	**+0.2**
DHRM				IAML		07 55 00.7	
	comp=E,483nm,0.4s						
DHRM				IAML		07 55 01.4	
	comp=N,594nm,0.3s						
AML	**Almayashu**	**6.32**	**18**	P	**Pn**	**07 54 00.2**	**+0.3**
	SNR=32						
NRN	**Naryn**	**6.54**	**35**		**Pn**	**07 54 03.2**	**+0.3**
NRN	**Naryn**	**6.54**	**35**	PN	**Pn**	**07 54 03.2**	**+0.3**
EKS2	**Erkin-Say**	**6.84**	**17**	P	**Pn**	**07 54 07.4**	**+0.7**
	SNR=5.8						
KK31	**Karatay Array**	**6.96**	**357**		**Pn**	**07 54 07.0**	**-1.3**
KK31	**Karatay Array**	**6.96**	**357**	⇓P	**Pn**	**07 54 06.6**	**-1.7**
	comp=N,16nm,0.4s,baz=181,slow=13,SNR=208						
KK31				⇑S	**Sn**	**07 55 19.4**	**-6.5**
	comp=N,23nm,0.7s						
KK31	**Karatay Array**	**6.96**	**357**	PN	**Pn**	**07 54 07.0**	**-1.3**
KKAR	**Karatay Array**	**6.96**	**357**		**Pn**	**07 54 06.6**	**-1.7**
KKAR	**Karatay Array**	**6.96**	**357**		**Pn**	**07 54 07.1**	**-1.2**
KKAR	**Karatay Array**	**6.96**	**357**	PN	**Pn**	**07 54 07.1**	**-1.2**
AAK	**Ala-Archa**	**7.00**	**21**	P	**Pn**	**07 54 09.4**	**+0.4**
	SNR=25						
AAK	**Ala-Archa**	**7.00**	**21**	P	**Pn**	**07 54 09.6**	**+0.6**
	comp=N,14nm,0.3s,baz=204,slow=8.0,SNR=42						
AAK				S	**Sn**	**07 55 24.7**	**-2.5**
	comp=N,7.9nm,0.4s,baz=163,slow=19,SNR=9.6						
AAK	**Ala-Archa**	**7.00**	**21**	⇓P	**Pn**	**07 54 09.3**	**+0.3**
	comp=N,1.9nm,0.5s						
AAK				⇓S	**Sn**	**07 55 24.7**	**-2.5**
	comp=N,5.1nm,0.5s						
AAK	**Ala-Archa**	**7.00**	**21**	*d i*PN	**Pn**	**07 54 09.0**	**-0.1**
AAK				pmax	pmax		
	comp=Z,25nm,0.8s						
SMLA	**Simla**	**7.14**	**133**	*e*P	**Pn**	**07 54 10.2**	**-0.5**
SMLA				*e*S	**Sn**	**07 55 29.0**	**-1.2**
SMLA				IAML		07 55 31.4	
	comp=E,148nm,0.2s						
SMLA				IAML		07 55 32.4	
	comp=N,208nm,0.2s						
KBK	**Karagaybulak**	**7.16**	**24**	P	**Pn**	**07 54 12.2**	**+1.0**
	SNR=8.1						
HNLY	**HANLEY**	**7.34**	**115**	*e*P	**Pn**	**07 54 13.3**	**-0.8**
HNLY				*e*S	**Sn**	**07 55 34.5**	**-1.7**
HNLY				IAML		07 55 36.5	
	comp=N,214nm,0.9s						
HNLY				IAML		07 55 36.8	
	comp=E,212nm,0.7s						
CHMS	**Chumysh**	**7.41**	**21**	P	**Pn**	**07 54 15.1**	**+0.6**
	SNR=8.6						
KLP	**Kalpa**	**7.54**	**126**	*e*P	**Pn**	**07 54 15.3**	**-1.3**
KLP				*e*S	**Sn**	**07 55 35.0**	**-5.7**
KLP				IAML		07 55 39.9	
	comp=E,135nm,0.3s						
KLP				IAML		07 55 42.4	
	comp=N,108nm,0.2s						
TKM2	**Tokmak 2**	**7.62**	**26**	P	**Pn**	**07 54 17.6**	**+0.2**
	SNR=11						
TKM2	**Tokmak 2**	**7.62**	**26**	⇑P	**Pn**	**07 54 17.3**	**-0.1**
	comp=N,27nm,0.6s						
TKM2				⇓S	**Sn**	**07 55 40.4**	**-1.8**
	comp=N,15nm,1.1s						
TARG	**Taragay, Kyrgy**	**7.66**	**41**		**Pn**	**07 54 19.5**	**+1.3**
TARG	**Taragay, Kyrgy**	**7.66**	**41**	PN	**Pn**	**07 54 19.5**	**+1.3**
KUDL	**Kundal**	**9.21**	**149**	*e*P	**Pn**	**07 54 38.0**	**-0.9**
KUDL				*e*S	**Sn**	**07 56 13.8**	**-6.9**
KUDL				IAML		07 56 19.1	
	comp=E,36nm,0.4s						
KUDL				IAML		07 56 20.0	
	comp=N,27nm,0.4s						
PTH	**Pithoragarh**	**10.12**	**128**	*e*P	**Pn**	**07 54 49.7**	**-1.8**
PTH				*e*S	**Sn**	**07 56 35.8**	**-7.5**
PTH				IAML		07 56 40.0	
	comp=E,22nm,0.5s						
PTH				IAML		07 56 40.6	
	comp=N,19nm,0.1s						
MK31	**Makanchi Array**	**13.55**	**35**	⇓*e*P	**Pn**	**07 55 36.4**	**-0.5**
MKAR	**Makanchi Array**	**13.55**	**35**	P	**Pn**	**07 55 36.3**	**-0.6**
	comp=N,0.8nm,0.5s,baz=220,slow=14,SNR=7.9						
WMQ	**Urumqi**	**14.86**	**54**	*e*P	**P**	**07 55 56.6**	**-0.4**
WMQ				pmax	pmax		
	comp=Z,20nm,0.7s						
AB31	**Akbulak array**	**15.42**	**332**		**Pn**	**07 55 57.3**	**-3.4**
AB31				IAmb	IAmb	07 55 59.1	
	comp=Z,14nm,0.6s						
AB31	**Akbulak array**	**15.42**	**332**	⇑P	**Pn**	**07 55 57.0**	**-3.8**
	comp=Z,9.3nm,0.5s,baz=151,slow=12,SNR=125						
ABKAR	**Akbulak array**	**15.42**	**332**		**Pn**	**07 55 57.4**	**-3.4**
ABKAR	**Akbulak array**	**15.42**	**332**		**Pn**	**07 55 57.2**	**-3.5**
ABKAR				IAmb	IAmb	07 55 59.1	
	comp=Z,14nm,0.6s						
KURBB	**Kurchatov Arra**	**15.44**	**18**	P	**Pn**	**07 56 00.4**	**-0.6**
	comp=Z,2.3nm,0.7s,baz=206,slow=10,SNR=11						
KURK	**Kurchatov**	**15.55**	**18**	P	**P**	**07 56 04.5**	**0.0**
KURK	**Kurchatov**	**15.55**	**18**	⇑*i*P	**P**	**07 56 04.1**	**-0.4**
EVN	**Everest**	**15.64**	**117**	Pn	**Pn**	**07 56 02.6**	**-1.7**
EVN				IAmb	IAmb	07 56 07.9	
	comp=Z,5.5nm,0.5s						
BVAR	**Borovoye Array**	**16.88**	**359**	P	**Pn**	**07 56 17.4**	**-1.4**
	comp=Z,2.1nm,0.6s,baz=170,slow=8.8,SNR=8.9						
BRVK	**Borovoye**	**16.92**	**358**	⇑*e*P	**P**	**07 56 19.4**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKTO	**Aktyubinsk**	**17.11**	**331**	P	**Pn**	**07 56 20.0**	**-1.6**
	comp=Z,9.1nm,0.5s,baz=144,slow=14,SNR=22						
AKTO				S	Sn	07 59 15.0	-17
	comp=Z,0.7nm,0.3s,baz=90,slow=20,SNR=1.4						
AKTO	**Aktyubinsk**	**17.11**	**331**	⇓P	**Pn**	**07 56 20.6**	**-1.1**
	comp=Z,12nm,0.9s						
HYB	**Hyderabad**	**19.80**	**158**	*e*P	**Pn**	**07 56 57.2**	**+3.2**
HYB				*e*pP	**sP**	**07 57 20.8**	**-3.8**
ZAA0	**Zalesovo Array**	**20.21**	**24**		**P**	**07 56 56.2**	**+0.6**
ZAA0				IAmb	IAmb	07 56 57.7	
	comp=Z,8.0nm,0.6s						
ZALV	**Zalesovo Beam**	**20.21**	**24**		**P**	**07 56 56.0**	**+0.4**
ZALV	**Zalesovo Beam**	**20.21**	**24**	P	**P**	**07 56 55.7**	**+0.1**
	comp=Z,8.1nm,0.5s,baz=226,slow=11,SNR=32						
	comp=Z,8.1nm,0.5s						
ZALV	**Zalesovo Beam**	**20.21**	**24**	*e*P	**P**	**07 56 56.0**	**+0.4**
ZALV				pmax	pmax		
	comp=Z,8.0nm,0.5s						
GNI	**Garni**	**21.05**	**289**	⇓*i*P	**P**	**07 57 08.4**	**+3.4**
GNI				pmax	pmax		
	comp=Z,13nm,1.0s						
ARTI	**Arti**	**21.99**	**341**	P	**P**	**07 57 13.2**	**-1.4**
ARTI				IAmb	IAmb	07 57 17.7	
	comp=Z,8.2nm,0.5s						
ARTI	**Arti**	**21.99**	**341**	P	**P**	**07 57 15.5**	**+1.0**
	comp=Z,6.2nm,0.8s,baz=153,slow=8.6,SNR=8.3						
	comp=Z,6.2nm,0.8s						
ARTI	**Arti**	**21.99**	**341**	*c i*P	**P**	**07 57 17.3**	**+2.7**
ARTI				*PP	**pP**	**07 57 40.2**	**+5.5**
ARTI						07 57 54.7	
ARTI				S	**S**	**08 01 15.8**	**+5.0**
ARTI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GTA	**Gaotai**	**22.91**	**73**	*e*P	**P**	**07 57 27.0**	**+2.6**
GTA				pP	pP	07 57 52.5	+6.6
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KIV	**Kislovodsk**	**23.00**	**299**	*e*P	**P**	**07 57 27.9**	**+2.8**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GURO	**Guroymak-BITLI**	**23.16**	**285**	P	**P**	**07 57 23.9**	**-2.9**
BELG	**Belogornoye**	**23.20**	**322**	LR	LR	08 09 24.8	
	comp=Z,22nm,19.4s,baz=88,slow=44						
BELG	**Belogornoye**	**23.20**	**322**	*d i*P	**P**	**07 57 27.4**	**+0.7**
BELG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SOC	**Sochi**	**25.07**	**297**	*e*P	**P**	**07 57 43.5**	**-0.4**
SOC				*e*		07 58 27.2	
SOC				*e*S	**S**	**08 02 00.7**	**-0.1**
SOC				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KIRV	**Kirov**	**26.58**	**334**	⇓*e*P	**P**	**07 58 00.3**	**+3.0**
PZH	**PanZhiHua**	**27.82**	**102**	P	**P**	**07 58 12.4**	**+3.5**
PALK	**Pallekele**	**30.06**	**161**	LR	LR	08 09 43.2	
	comp=Z,85nm,18.9s,baz=98,slow=34						
OBN	**Obninsk**	**30.24**	**320**	*e*P	**P**	**07 58 29.9**	**+0.1**
OBN				*e*		07 59 30.4	
OBN				*e*		08 01 29.6	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**31.84**	**69**	*e*P	**P**	**07 58 46.0**	**+1.8**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,100nm,6.7s						
AKASG	**Malin Array Be**	**33.21**	**309**	P	**P**	**07 58 55.2**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=84,slow=7.1,SNR=7.8						
	comp=Z,0.2nm,0.3s						
AKASG	**Malin Array Be**	**33.21**	**309**	*e*P	**P**	**07 58 57.1**	**+1.2**
XLT	**XiLinHaoTe**	**34.98**	**63**	*e*P	**P**	**07 59 14.4**	**+3.0**
XLT				sP	sP	07 59 51.3	+2.9
XLT				pmax	pmax		
	comp=Z,11nm,0.7s						
UBPT	**Khong Chiam**	**37.03**	**115**	P	**P**	**07 59 30.4**	**+1.3**
FINES	**FINESS Array B**	**37.80**	**326**	P	**P**	**07 59 34.9**	**-0.2**
	comp=Z,2.7nm,1.0s,baz=108,slow=14,SNR=6.4						
	comp=Z,2.7nm,1.0s						
FINES	**FINESS Array B**	**37.80**	**326**	*e*P	**P**	**07 59 35.0**	**-0.1**
FINES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ARCES	**ARCESS Array B**	**41.49**	**338**	P	**P**	**08 00 04.9**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=116,slow=8.5,SNR=4.3						
	comp=Z,0.8nm,0.6s						
ARCES	**ARCESS Array B**	**41.49**	**338**	*e*P	**P**	**08 00 05.8**	**+0.2**
HFS	**Hagfors**	**43.38**	**322**	P	**P**	**08 00 20.3**	**-0.6**
	comp=Z,1.7nm,0.7s,baz=95,slow=12,SNR=6.5						
	comp=Z,1.7nm,0.7s						
NB2	**NORSAR Subarra**	**44.69**	**323**	P	**P**	**08 00 30.2**	**-1.3**
	comp=Z,1.0nm,0.6s,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.69**	**323**	P	**P**	**08 00 30.1**	**-1.3**
	comp=Z,0.8nm,0.6s,baz=96,slow=8.0,SNR=6.9						
	comp=Z,0.8nm,0.6s						
NBO00	**NORSAR Array S**	**44.90**	**323**	P	**P**	**08 00 31.8**	**-1.3**
KSRS	**Korea Array**	**44.95**	**71**	P	**P**	**08 00 34.5**	**+0.8**
	comp=Z,0.7nm,0.4s,baz=274,slow=6.8,SNR=2.0						
	comp=Z,0.7nm,0.4s						
MMRI	**Maumere**	**65.53**	**122**	P	**P**	**08 03 02.3**	**+0.5**
TORD	**Torodi Ar. Bea**	**65.76**	**269**	P	**P**	**08 03 00.9**	**-2.5**
	comp=Z,1.6nm,0.4s,baz=52,slow=5.1,SNR=1.5						
	comp=Z,1.6nm,0.4s						
B22K	**Teshekpuk Lake**	**69.07**	**15**	P	**P**	**08 03 24.1**	**+0.7**
D19K	**Kuna River**	**69.46**	**17**	P	**P**	**08 03 26.3**	**+0.4**
D19K				IAmb	IAmb	08 04 07.6	
	comp=Z,9.0nm,1.4s						
C23K	**Itkillik River**	**70.05**	**14**	P	**P**	**08 03 30.6**	**+1.2**
C23K				IAmb	IAmb	08 04 03.2	
	comp=Z,7.8nm,1.4s						
E22K	**Anaktuvuk Pass**	**71.20**	**16**	P	**P**	**08 03 36.4**	**-0.1**
C27K	**Jago River**	**71.50**	**12**	P	**P**	**08 03 39.7**	**+1.5**
C27K				IAmb	IAmb	08 03 51.5	
	comp=Z,9.9nm,1.5s						
H19K	**Roundabout Mou**	**72.17**	**19**	P	**P**	**08 03 42.2**	**-0.1**
H19K				IAmb	IAmb	08 04 24.1	
	comp=Z,4.8nm,1.3s						
COLD	**Coldfoot**	**72.30**	**16**	P	**P**	**08 03 42.4**	**-0.6**
COLD				IAmb	IAmb	08 03 42.9	
	comp=Z,4.9nm,1.5s						
IMAR	**Indian Mountai**	**72.49**	**18**	P	**P**	**08 03 44.1**	**-0.1**
E27K	**Coleen River**	**73.14**	**12**	P	**P**	**08 03 48.9**	**+0.9**
E27K				IAmb	IAmb	08 03 54.6	
	comp=Z,6.0nm,1.4s						
J19K	**Poorman**	**73.60**	**20**	P	**P**	**08 03 51.4**	**+0.7**
J18K	**Innoko River**	**73.72**	**20**	P	**P**	**08 03 52.0**	**+0.5**
M14K	**Bethel**	**74.19**	**24**	P	**P**	**08 03 55.1**	**+1.0**
C36M	**Paulatuk**	**74.22**	**6**	P	**P**	**08 03 54.3**	**+0.1**
DBIC	**Dimbokro**	**74.73**	**267**	P	**P**	**08 03 58.7**	**+0.6**
	comp=Z,5.3nm,0.9s,baz=27,slow=2.3,SNR=2.2						
	comp=Z,5.3nm,0.9s						
ILAR	**Eielson Array**	**75.10**	**16**	P	**P**	**08 03 58.4**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=322,slow=6.4,SNR=5.2						
	comp=Z,0.3nm,0.5s						
ILAR	**Eielson Array**	**75.10**	**16**	*e*P	**P**	**08 03 58.7**	**-0.7**
BOSA	**Boshof**	**77.51**	**220**	P	**P**	**08 04 12.9**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=63,slow=6.3,SNR=3.1						
	comp=Z,1.3nm,0.7s						
YKA	**Yellowknife Ar**	**81.59**	**3**	P	**P**	**08 04 35.4**	**+0.3**
YKA	**Yellowknife Ar**	**81.59**	**3**	P	**P**	**08 04 35.2**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=355,slow=5.8,SNR=16						
	comp=Z,0.4nm,0.7s						
YKA	**Yellowknife Ar**	**81.59**	**3**	*ce*P	**P**	**08 04 35.9**	**+0.7**
WRA	**Warramunga Arr**	**81.76**	**122**	P	**P**	**08 04 36.3**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=313,slow=5.2,SNR=9.0						
	comp=Z,0.5nm,0.6s						
WRA	**Warramunga Arr**	**81.76**	**122**	*e*P	**P**	**08 04 37.1**	**+0.4**
WB2	**Warramunga Arr**	**81.77**	**122**	P	**P**	**08 04 36.4**	**-0.3**
WB2				IAmb	IAmb	08 04 40.1	
	comp=Z,6.6nm,1.2s						
ASAR	**Alice Springs**	**84.01**	**125**	P	**P**	**08 04 47.9**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=317,slow=5.3,SNR=8.0						
	comp=Z,0.5nm,0.7s						

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*NOU **15** 07:54:49.9, 41°.28S×172°.78E, h134^{km}, MLv3.8/20, South Island, New Zealand*

*WEL **15** 07:54:51.1±0.6, 41°S±4°×17°3E±°, h130^{km}±4^{km}, M3.4/24, MLv3.4/24, Error ellipse: s-maj=6.8km s-min=4.1km az=128.8, confirmed*

ISC 15 07:54:48.4±1.4**, 41°.28S**±0°.04×**172°.75E**±0°.04**, h155**^{km}±7^{km}**, n115, σ1^{s}09**/124**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRNZ	**Matariki Terra**	**0.12**	**176**	P	**Pn**	**07 55 10.0**	**+0.8**
MRNZ				S	**Sn**	**07 55 23.9**	**-1.2**
MATW	**Matariki Wadsw**	**0.15**	**193**	P	**Pn**	**07 55 10.0**	**+0.8**

MATW				S	Sn	07 55 24.0	-1.2
MOTS	Motueka DOC wo	0.25	51	P	Pn	07 55 10.1	+0.7
MOTS				S	Sn	07 55 24.7	-0.6
TKNZ	Takaka Hill	0.30	33	P	Pn	07 55 10.1	+0.5
TKNZ				S	Sn	07 55 24.6	-1.1
KASC	Karamea School	0.48	274	P	Pn	07 55 11.2	+1.1
NNZ	Nelson	0.48	82	P	Pn	07 55 10.8	+0.7
NNZ				S	Sn	07 55 26.3	-0.5
QRZ	Quartz Range	0.49	340	P	Pn	07 55 10.9	+0.6
QRZ	Quartz Range	0.49	340	P	Pn	07 55 10.9	+0.6
QRZ				S	Sn	07 55 25.4	-1.5
THZ	Tophouse	0.49	166	P	Pn	07 55 11.5	+1.1
THZ				S	Sn	07 55 26.8	-0.5
HAVS	Havelock	0.78	90	P	Pn	07 55 13.2	+1.2
INGS	Inangahua Fire	0.83	226	P	Pn	07 55 13.2	+0.9
DSZ	Denniston Nort	0.84	237	P	Pn	07 55 13.4	+0.9
DSZ				S	Sn	07 55 29.2	-1.7
BWRS	Waikakaho Road	0.89	101	P	Pn	07 55 13.7	+1.0
TUWZ	Tuamarina	0.91	100	P	Pn	07 55 14.5	+1.6
BSWZ	Blackbirch Sta	0.95	117	P	Pn	07 55 14.5	+1.3
WBCS	Westport Bulle	0.98	241	S	Sn	07 55 30.1	-2.5
DUWZ	D'Urville Isla	1.01	62	P	Pn	07 55 14.6	+0.9
DUWZ				S	Sn	07 55 32.6	-0.5
TCW	Tory Channel	1.16	87	P	Pn	07 55 16.1	+1.1
CMWZ	Cape Campbell	1.20	113	P	Pn	07 55 16.7	+1.4
KHZ	Kahutara	1.28	153	P	Pn	07 55 17.7	+1.6
KHZ	Kahutara	1.28	153	P	Sn	07 55 36.7	-0.7
KHZ	Kahutara	1.28	153	P	Pn	07 55 17.6	+1.6
SNZO	South Karori	1.48	92	P	Pn	07 55 18.7	+0.7
SNZO	South Karori	1.48	92	P	Sn	07 55 39.7	-1.0
WEL	Wellington	1.52	91	P	Pn	07 55 19.3	+0.7
LTZ	Lake Taylor	1.54	193	P	Pn	07 55 20.3	+1.6
BHW	Baring Head	1.60	95	P	Pn	07 55 20.0	+0.7
KIW	Kapiti Island	1.69	76	P	Pn	07 55 21.0	+0.7
GVZ	Greta Valley S	1.70	173	P	Pn	07 55 22.3	+1.9
INZ	Inchbonnie	1.74	214	P	Pn	07 55 22.1	+1.3
MSWZ	Moikau Station	1.89	95	P	Pn	07 55 23.1	+0.6
OGWZ	Otaki Gorge	1.89	77	P	Pn	07 55 23.2	+0.7
AMCZ	Amberley	1.89	182	P	Pn	07 55 24.1	+1.5
PLWZ	Palliser	1.91	99	P	Pn	07 55 23.4	+0.7
PAWZ	Paruwai Farm	2.02	94	P	Pn	07 55 24.5	+0.5
MTW	Mount Morrison	2.08	87	P	Pn	07 55 25.0	+0.3
OXZ	Oxford	2.11	194	P	Pn	07 55 26.0	+0.9
HOWZ	Holdsworth Sta	2.13	80	P	Pn	07 55 25.6	+0.3
NBEZ	Newall Road No	2.19	23	P	Pn	07 55 27.4	+1.4
KHEZ	Kahui Hut	2.21	26	P	Pn	07 55 28.6	+2.2
KHEZ	Kahui Hut	2.21	26	S	Sn	07 55 55.9	+0.3
KHEZ	Kahui Hut	2.21	26	P	Pn	07 55 28.4	+2.0
LREZ	Lake Rotokare	2.22	35	P	Pn	07 55 28.0	+1.6
TRWZ	Traveller	2.22	94	P	Pn	07 55 27.1	+0.7
PREZ	Palmer Road	2.22	30	P	Pn	07 55 28.1	+1.6
OHWZ	Ohakea	2.23	62	P	Pn	07 55 27.5	+1.0
MRZ	Mangatainoka R	2.23	75	P	Pn	07 55 26.7	+0.2
NEZ	North Egmont	2.26	28	P	Pn	07 55 28.8	+1.8
WAZ	Wanganui	2.29	49	P	Pn	07 55 28.9	+1.7
PKE	Pukeiti	2.29	25	P	Pn	07 55 28.7	+1.4
WVZ	Waitaha Valley	2.33	219	P	Pn	07 55 28.6	+0.9
TMWZ	Te Maipa	2.38	87	P	Pn	07 55 28.7	+0.4
MHCZ	Mount Hutt	2.41	201	P	Pn	07 55 29.4	+0.7
MQZ	McQueen's Vall	2.42	182	P	Pn	07 55 29.7	+0.9
TIWZ	Tintock	2.43	79	P	Pn	07 55 29.2	+0.3
OKCZ	Okains Bay	2.45	175	P	Pn	07 55 30.5	+1.4
POWZ	Post Office Ro	2.46	70	P	Pn	07 55 29.3	+0.1
RACZ	Rakaia	2.48	190	P	Pn	07 55 30.6	+1.1
PRWZ	Pori Road	2.55	74	P	Pn	07 55 30.7	+0.4
AKCZ	Akaroa Harbour	2.59	177	P	Pn	07 55 32.0	+1.2
VRZ	Vera Road	2.65	36	P	Pn	07 55 32.5	+0.9
GCSZ	Gaunt Creek Bo	2.71	221	P	Pn	07 55 33.2	+1.0
BFZ	Birch Farm	2.72	78	P	Pn	07 55 32.6	+0.2
BFZ	Birch Farm	2.72	78	S	Sn	07 56 05.0	-1.4
BFZ	Birch Farm	2.72	78	P	Pn	07 55 32.6	+0.2
TSZ	Takapari Road	2.73	64	P	Pn	07 55 32.7	+0.1
RPZ	Rata Peaks	2.73	207	P	Pn	07 55 33.5	+0.9
RPZ	Rata Peaks	2.73	207	S	Sn	07 56 05.4	-1.5
RPZ	Rata Peaks	2.73	207	P	Pn	07 55 33.3	+0.7
WACZ	Wakanui South	2.74	194	P	Pn	07 55 33.8	+1.2
DVHZ	Dannevirke	2.78	70	P	Pn	07 55 32.9	-0.2
MTVZ	Mangateitei	2.82	49	P	Pn	07 55 35.1	+1.4
ARCZ	Arundel	2.90	203	P	Pn	07 55 35.2	+0.5
TRVZ	Turoa	2.92	48	P	Pn	07 55 36.5	+1.3
WNVZ	Wahianoa	2.93	49	P	Pn	07 55 35.8	+0.6
ANWZ	Angora Road	2.94	75	P	Pn	07 55 35.5	+0.3
FWVZ	Far West T-bar	2.95	48	P	Pn	07 55 36.6	+1.1
WHVZ	Whangaehu Hut	2.95	48	P	Pn	07 55 36.8	+1.2
PNHZ	Pukenui	2.96	64	P	Pn	07 55 35.3	-0.2
MOVZ	Moawhango	2.96	52	P	Pn	07 55 35.9	+0.3
TUVZ	Tukino	3.00	49	P	Pn	07 55 36.4	+0.3
WPHZ	Waipukurau	3.06	68	P	Pn	07 55 36.7	-0.1
ETVZ	East Tongariro	3.12	48	P	Pn	07 55 38.3	+0.7
PRHZ	Porangahau	3.12	72	P	Pn	07 55 37.6	+0.1
FOZ	Fox Glacier	3.12	223	P	Pn	07 55 38.1	+0.6
TMVZ	Te Maari	3.13	47	P	Pn	07 55 38.5	+0.8
HIZ	Hauiti	3.21	31	P	Pn	07 55 39.1	+0.5
HIZ	Hauiti	3.21	31	S	Sn	07 56 16.4	-1.0
HIZ	Hauiti	3.21	31	P	Pn	07 55 38.8	+0.2
KRHZ	Kereru	3.21	61	P	Pn	07 55 38.4	-0.3
TMZ	Timaru	3.35	202	P	Pn	07 55 41.2	+0.8
KWHZ	Kaweka Forest	3.37	58	P	Pn	07 55 40.9	+0.2
PXZ	Pawanui	3.37	70	P	Pn	07 55 40.5	-0.1
KAHZ	Kahuranaki	3.48	66	P	Pn	07 55 42.0	-0.1
BKZ	Black Stump Fm	3.56	55	P	Pn	07 55 43.0	-0.2
BKZ	Black Stump Fm	3.56	55	S	Sn	07 56 24.5	-1.2
BKZ	Black Stump Fm	3.56	55	P	Pn	07 55 42.7	-0.5
LBZ	Lake Benmore	3.63	210	P	Pn	07 55 44.3	+0.4
NMHZ	Naumai	3.80	56	P	Pn	07 55 46.0	-0.2
JCZ	Jackson Bay	4.04	225	P	Pn	07 55 49.9	+0.6
JCZ	Jackson Bay	4.04	225	P	Pn	07 55 49.9	+0.6
ODZ	Otahua Downs	4.06	202	P	Pn	07 55 50.5	+1.0
ODZ	Otahua Downs	4.06	202	P	Pn	07 55 50.3	+0.8
WKZ	Wanaka	4.47	216	P	Pn	07 55 55.0	+0.1
EAZ	Earnscleugh	4.68	211	P	Pn	07 55 57.4	-0.2
MWZ	Matawai	4.71	53	P	Pn	07 55 59.7	+1.5
WIAZ	Waiheke Island	4.85	23	P	Pn	07 56 02.4	+2.4
HHSZ	Highcliff Hill	4.86	198	P	Pn	07 56 01.3	+1.4
MSZ	Milford Sound	4.90	225	P	Pn	07 56 01.2	+0.7
MLZ	Mavora Lakes	5.30	218	P	Pn	07 56 06.5	+0.8
WHZ	Wether Hill Ro	5.78	215	P	Pn	07 56 12.1	0.0
SYZ	Scrubby Hill	5.86	205	P	Pn	07 56 14.4	+1.2
SYZ	Scrubby Hill	5.86	205	P	Pn	07 56 14.0	+0.8
OUZ	Omahuta	6.09	7	P	Pn	07 56 18.3	+2.0
CTZ	Chatham Island	8.23	111	P	Pn	07 56 48.1	+3.4

JMA ***15*** *07:57:54.4±0.3, 35°N±2°×13°7E±°, h319^{km}±3^{km}, MV2.8/24, CENTRAL AICHI PREF*

IDC ***15*** *07:57:54.8±0.8, 35°.20N×137°.09E, h314^{km}±12^{km}, mb2.8/3, mbtmp3.6/6, Error ellipse: s-maj=23.9km s-min=21.2km az=33.0*

ISC 15 07:57:55.0±1.0**, 35°.2N**±0°.1×**136°.95E**±0°.08**, h300**^{km}**, n17, σ1^{s}57**/20**, mb3.0**/3**, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYTA	Yamagatataniai	0.43	336	eP	Pn	07 58 35.0	+1.6
JWT	Wachi	1.27	274	P	Pn	07 58 38.3	+1.6
JYN	Shimob	1.34	77	P	Pn	07 58 38.7	+1.4
JWY	Kouya	1.48	229	P	Pn	07 58 40.0	+1.8
MAT	Matsushiro	1.69	37	P	Pn	07 58 40.4	+1.0
MJAR	Matsushiro Arr	1.69	37	P	Pn	07 58 40.6	+1.2
	20nm,0.4s,baz=210,slow=7.0,SNR=96						
MJAR				S	S	07 59 16.6	+1.9
	4.8nm,0.9s,baz=199,slow=14,SNR=2.4						
JTNC	Tanabenakahech	1.77	219	eP	Pn	07 58 41.7	+1.6
JRY	Ryogami san	1.79	62	eP	Pn	07 58 41.7	+1.5
JRY				eS	S	07 59 18.6	+2.5
JAG	Ashikaga	2.38	58	P	Pn	07 58 45.0	+0.1
JAG				eS	S	07 59 23.4	-1.3
JAI	Aioi	2.49	236	eP	Pn	07 58 47.2	+1.2
JHS	Saijyo	3.15	267	P	Pn	07 58 53.2	+1.0
JNU	Nakatsue	5.44	249	P	Pn	07 59 19.0	+1.3
	7.2nm,0.6s,baz=64,slow=3.1,SNR=7.6						
KSRS	Korea Array	7.62	290	P	Pn	07 59 44.7	+0.8
	1.7nm,0.6s,baz=106,slow=13,SNR=5.2						
ASAJ	Asahikawa	9.91	24	P	Pn	08 00 09.9	-1.9
	9.0nm,0.8s,baz=231,slow=13,SNR=5.4						
MKAR	Makanchi Array	42.06	303	P	P	08 05 17.2	-0.7
	0.1nm,0.5s,baz=79,slow=9.0,SNR=1.9						
	0.1nm,0.5s						
WRA	Warramunga Arr	54.90	183	P	P	08 06 53.7	-1.5
	0.6nm,0.3s,baz=1.7,slow=7.3,SNR=23						
	0.6nm,0.3s						
ASAR	Alice Springs	58.62	183	P	P	08 07 19.9	-1.2
	0.2nm,0.4s,baz=3.0,slow=6.6,SNR=5.7						
	0.2nm,0.4s						

TRN 15 07:58:56.9, 15°.32N×61°.24W, h12^{km}, MD1.5, Dominica., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLPL	La Plaine	0.02	331	eP	Pg	07 58 59.7	+0.7
DLPL				eS	Sg	07 59 02.1	+1.5
DLPL	La Plaine	0.02	331	eP	Pg	07 58 58.7	-0.4
DLPL				eS	Sg	07 59 02.0	+1.5
DRTD	Roseau, Domini	0.14	262	eP	Pb	07 59 02.1	+0.5
DRTD				eS	Sg	07 59 04.1	+1.3
DRTD	Roseau, Domini	0.14	262	eP	Pb	07 59 02.0	+0.5
MDN	Morne-Daniel	0.15	271	eP	Pb	07 59 01.8	+0.1
MDN				eS	Sg	07 59 03.6	+0.7
MDN	Morne-Daniel	0.15	271	eP	Pb	07 59 01.9	+0.1
MDN				eS	Sg	07 59 03.6	+0.7
DSLB	Salisbury	0.21	304	eP	Pb	07 59 03.4	+0.5
DSLB				eS	Sg	07 59 06.0	+1.3
DSLB	Salisbury	0.21	304	eP	Pb	07 59 03.4	+0.5
DSLB				eS	Sg	07 59 06.1	+1.4

IDC ***15*** *08:07:24.8±1.5, 30°.78S×179°.97W, h420^{km}±15^{km}, mb3.1/4, mbtmp3.9/5, Error ellipse: s-maj=25.3km s-min=19.2km az=134.0*

WEL ***15*** *08:07:30.3±0.9, 31°S±5°×18°0W±1°4, h349^{km}±12^{km}, M4.4/12, mB4.8/6, ML5.0/5, MLv4.7/12, Mw(mB)4.0/6, Error ellipse: s-maj=19.1km s-min=5.2km az=104.5, confirmed*

ISC 15 08:07:23.5±0.7**, 30°.82S**±0°.07×**179°.8W**±0°.1**, h400**^{km}**, n72, σ2^{s}24**/89**, mb3.2**/4**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.22	46	P	Pn	08 08 22.1	+1.2
GLKZ				S	S	08 09 08.3	+1.1
RIZ	Raoul Island	2.22	46	P	Pn	08 08 22.3	+1.4
RIZ				S	S	08 09 08.5	+1.2
RAO	Raoul Island	2.23	46	P	Pn	08 08 25.1	+4.2
	145nm,0.3s,baz=233,slow=20,SNR=1.7						
RAO				S	S	08 09 05.5	-1.9
	136nm,0.3s,baz=53,slow=23,SNR=1.2						
GRZ	Great Barrier	6.74	215	P	P	08 09 08.4	+3.8
MXZ	Matakaoa Point	6.92	193	P	P	08 09 10.9	+4.2
MXZ				S	S	08 10 29.5	-0.5
KUZ	Kuaotunu	7.01	211	P	P	08 09 12.1	+4.4
KUZ	Kuaotunu	7.01	211	P	P	08 09 12.1	+4.4
WCZ	Waipu Caves	7.11	222	P	P	08 09 12.3	+3.5
OUZ	Omahuta	7.11	230	P	P	08 09 12.2	+3.4
OUZ	Omahuta	7.11	230	P	P	08 09 12.0	+3.2
WMGZ	Waiomatatini S	7.15	192	P	P	08 09 11.9	+2.6
WMGZ				S	S	08 10 36.6	+1.9
HAZ	Te Kaha	7.22	196	P	P	08 09 12.4	+2.4
HAZ				S	S	08 10 34.4	-1.7
WIAZ	Waiheke Island	7.32	214	P	P	08 09 15.3	+4.0
MBAZ	Motutapu North	7.42	215	P	P	08 09 16.3	+4.0
RUGZ	Raukumara Rang	7.44	196	P	P	08 09 13.6	+1.0
RUGZ				S	S	08 10 39.1	-1.9
ETAZ	East Tamaki Re	7.55	214	P	P	08 09 18.1	+4.3
HBAZ	Herne Bay Bore	7.57	216	P	P	08 09 18.2	+4.3
TWGZ	Tauwhareparae	7.58	194	P	P	08 09 17.1	+3.0
TWGZ				S	S	08 10 43.2	-0.4
WTAZ	Waiatarua	7.71	216	P	P	08 09 19.7	+4.2
AWAZ	Awhitu Peninsu	7.78	215	P	P	08 09 19.4	+3.2
MWZ	Matawai	7.83	196	P	P	08 09 19.4	+2.5
MWZ				S	S	08 10 47.1	-1.8
CNGZ	Carnagh Statio	7.83	192	P	P	08 09 20.6	+3.8
TKGZ	Te Karaka	7.86	194	P	P	08 09 19.4	+2.3
TKGZ				S	S	08 10 48.4	-0.9
URZ	Urewera	7.86	198	P	P	08 09 19.1	+1.9
	123nm,0.3s,baz=8.2,slow=3.7,SNR=191						
URZ				S	S	08 10 47.5	-2.0
	21nm,0.6s,baz=343,slow=19,SNR=13						
URZ	Urewera	7.86	198	P	P	08 09 19.0	+1.9
URZ	Urewera	7.86	198	P	P	08 09 18.0	+0.8
URZ				S	S	08 10 48.3	-1.2
TOZ	Tahuroa Road	7.94	208	P	P	08 09 23.6	+5.6
OMRZ	Omania	7.94	203	P	P	08 09 21.7	+3.6
RAGZ	Rawiri	8.01	196	P	P	08 09 21.9	+3.1
RRRZ	Republican Roa	8.11	201	P	P	08 09 23.4	+3.4
RIGZ	Rimuhau	8.13	194	P	Pn	08 09 20.0	+0.1
RIGZ				S	S	08 10 53.9	-1.4
MUGZ	Murupara	8.16	200	P	P	08 09 21.1	+0.6
SNGZ	Shannon Statio	8.30	196	P	P	08 09 22.2	+0.2
SNGZ				S	S	08 10 56.6	-2.2
PRGZ	Paritu Road	8.32	193	P	P	08 09 25.1	+2.9
MHGZ	Mahia Peninsul	8.54	192	P	P	08 09 28.2	+3.5
HIZ	Hauiti	8.87	209	P	P	08 09 33.4	+5.0
BKZ	Black Stump Fm	8.88	199	P	P	08 09 29.9	+1.3
TUVZ	Tukino	9.23	203	P	Pn	08 09 34.1	+1.5
WHVZ	Whangaehu Hut	9.27	203	P	Pn	08 09 34.5	+1.4
TRVZ	Turoa	9.30	203	P	Pn	08 09 34.9	+1.4
WNVZ	Wahianoa	9.30	203	P	Pn	08 09 33.9	+0.4
WNVZ				S	S	08 11 20.6	+0.4
MOVZ	Moawhango	9.33	202	P	Pn	08 09 34.1	+0.4
MOVZ				S	S	08 11 17.6	-2.9
PKVZ	Pokaka	9.36	204	P	Pn	08 09 34.9	+1.0
VRZ	Vera Road	9.43	207	P	Pn	08 09 37.7	+2.9
TSZ	Takapari Road	9.86	200	P	P	08 09 38.3	-1.1
POWZ	Post Office Ro	10.22	200	P	Pn	08 09 44.0	+0.1
BFZ	Birch Farm	10.37	197	P	P	08 09 45.2	+0.2
BFZ	Birch Farm	10.37	197	P	Pn	08 09 46.2	+0.7
MRZ	Mangatainoka R	10.53	200	P	P	08 09 46.8	+0.1
HOWZ	Holdsworth Sta	10.77	200	P	P	08 09 49.7	+0.3
OGWZ	Otaki Gorge	10.79	201	P	P	08 09 48.9	-0.8
TMWZ	Te Maipa	10.86	198	P	Pn	08 09 52.0	+0.7
KIW	Kapiti Island	10.92	202	P	P	08 09 50.7	-0.4
DUWZ	D'Urville Isla	11.21	206	P	P	08 09 53.9	-0.3
PAWZ	Paruwai Farm	11.24	199	P	P	08 09 54.5	-0.1
MSWZ	Moikau Station	11.32	200	P	P	08 09 55.9	+0.4
TCW	Tory Channel	11.44	203	P	P	08 09 56.2	-0.6
PLWZ	Palliser	11.46	199	P	P	08 09 57.3	+0.2
TUWZ	Tuamarina	11.75	204	P	P	08 10 00.2	0.0
NNZ	Nelson	11.77	206	P	P	08 09 59.6	-0.9
THZ	Tophouse	12.42	206	P	P	08 10 07.7	+0.1
KHZ	Kahutara	12.76	203	P	P	08 10 11.5	+0.1
KHZ	Kahutara	12.76	203	P	P	08 10 11.8	+0.5
STKA	Stephens Creek	32.92	258	P	P	08 13 22.3	-0.2
	0.6nm,0.5s,baz=83,slow=8.1,SNR=1.5						
	0.6nm,0.5s						
ASAR	Alice Springs	41.59	268	P	P	08 14 32.3	-2.1
	0.4nm,0.5s,baz=111,slow=7.8,SNR=11						
ASAR				PcP	PP	08 16 21.3	+0.5
	0.3nm,0.5s,baz=97,slow=4.1,SNR=2.3						
	0.4nm,0.5s						
WRA	Warramunga Arr	42.61	274	P	P	08 14 40.7	-2.0
	3.4nm,0.5s,baz=113,slow=8.0,SNR=60						
	3.4nm,0.5s						
SNAA	Sanae	77.77	179	P	P	08 18 37.9	+0.7
	0.5nm,0.8s,baz=218,slow=19,SNR=1.6						
	0.5nm,0.8s						
FINES	FINESS Array B	145.00	339	PKP	PKPdf	08 26 11.5	-1.6
	2.8nm,0.5s,baz=51,slow=3.3,SNR=28						
NOA	NORSAR Array B	148.91	350	PKPbc	PKPbc	08 26 22.9	-1.3
	0.5nm,0.7s,baz=25,slow=2.8,SNR=3.8						
HFS	Hagfors	149.33	347	PKPbc	PKPdf	08 26 22.9	+2.6
	0.4nm,0.3s,baz=48,slow=2.1,SNR=5.8						
HFS				PKPab	PKPab	08 26 29.5	-1.9
	0.8nm,0.4s,baz=46,slow=4.2,SNR=7.9						
AKASG	Malin Array Be	150.70	321	PKPbc	PKPbc	08 26 27.0	-1.6
	0.3nm,0.4s,baz=56,slow=2.3,SNR=4.2						
BRTR	Keskin Array B	151.46	297	PKPbc	PKPbc	08 26 29.9	-1.1
	0.2nm,0.3s,baz=80,slow=3.9,SNR=4.0						
BRTR				PKPab	PKPab	08 26 39.2	-2.0
	0.2nm,0.3s,baz=97,slow=5.6,SNR=2.0						

NEIC 15 08:18:50.7±0.5**, 37°.66N**±0°.02×**105°.52W**±0°.02**, h8**^{km}±1^{km}**, mb_Lg2.3**/43**, ML2.4**/26**, Error ellipse: s-maj=2.6km s-min=2.1km az=66.0, Colorado**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDCO	Great Sand Dun	0.09	9	Pg	Pg	08 18 53.6	+0.4
SDCO				Sg	Sg	08 18 55.3	+0.4
SDCO				IAML		08 18 55.5	
	3μm,0.2s						
T25A	Trinidad	1.02	120		Pg	08 19 09.9	-0.5
T25A				Sg	Sg	08 19 22.9	-0.8
T25A				IAML		08 19 23.3	
	comp=N,151nm,0.5s						
T25A				IAML		08 19 23.5	
	comp=E,88nm,0.2s						
S22A	4UR Ranch, Cre	1.04	275	Pg	Pg	08 19 10.3	-0.4
S22A				IAML		08 19 26.3	
	comp=N,54nm,0.1s						
S22A				IAML		08 19 29.4	
	comp=E,109nm,0.1s						
Q24A	Divide	1.33	12		Pn	08 19 15.2	-0.7
Q24A					Sb	08 19 33.3	-0.3
Q24A				IAML		08 19 34.3	
	comp=E,101nm,0.3s						
ISCO	Idaho Springs	2.14	358	Pn	Pb	08 19 28.5	-1.4
MVCO	Mesa Verde	2.41	260		Pn	08 19 30.4	-0.3
MVCO				IAML		08 20 14.9	
	comp=E,22nm,0.8s						
PV15	Paradox Valley	2.44	287		Pn	08 19 31.2	+0.2
PV01	Paradox Valley	2.46	282		Pn	08 19 31.5	+0.2
RTBA	Rita Blanca	2.54	118		Pb	08 19 36.3	-0.3
RTBA				IAmb_Lg		08 20 13.8	
	comp=Z,9.0nm,0.7s						
KSCO	Kaye Shedlock'	2.64	58		Pn	08 19 34.4	+0.5
PV13	Radium Mtn., P	2.66	282	Pn	Pn	08 19 36.2	+2.1
PV16	Nyswonger Mesa	2.76	285		Pn	08 19 37.8	+2.3
ANMO	Albuquerque	2.81	196		Pn	08 19 37.7	+1.6
ANMO				IAML		08 20 20.3	
	comp=Z,5.8nm,0.7s						
ANMO	Albuquerque	2.81	196		Pn	08 19 37.6	+1.4
ANMO				IAmb_Lg		08 20 22.8	
	comp=Z,3.0nm,0.7s						
ANMO				IAmb_Lg		08 20 22.8	
	comp=Z,3.0nm,0.7s						
ANMO	Albuquerque	2.81	196	IAML		08 20 19.5	
	comp=Z,4.7nm,0.4s						
ANMO				IAML		08 20 20.8	
	comp=Z,3.1nm,0.5s						
ANMO				IAmb_Lg		08 20 22.8	
	comp=Z,3.3nm,0.8s						
BNM	Barren Site	3.62	195	Pn	Pn	08 19 48.4	+1.1
LENM	Lemitar	3.68	199	Pn	Pn	08 19 45.6	-2.5
HMU	Henry Mountain	4.15	275	Pn	Pn	08 19 55.9	+1.3
AMTX	Amarillo	4.16	131	IAmb_Lg		08 21 12.9	
	comp=Z,12nm,1.0s						
P18A	Preston Nutter	4.19	299	IAmb_Lg		08 21 10.3	
	comp=Z,3.3nm,1.1s						
SRU	San Rafael Swe	4.19	292	Pn	Pn	08 19 58.0	+2.9
MSTX	Muleshoe	4.31	148	IAmb_Lg		08 21 08.8	
	comp=Z,8.9nm,1.2s						
SMWD	Samnorwood	4.96	119	IAmb_Lg		08 21 31.3	
	comp=Z,5.0nm,0.8s						
DKNS	Dickens	5.46	135	IAmb_Lg		08 21 45.2	
	comp=Z,7.4nm,1.0s						
FW07	Weatherford	8.03	126	IAmb_Lg		08 23 23.2	
	comp=Z,4.4nm,0.9s						

MOS ***15*** *08:20:22.2±1.1, 42°.85N×144°.97E, h62^{km}, mb4.7/16, Error ellipse: s-maj=9.0km s-min=6.2km az=88.7*

SKHL ***15*** *08:20:23.2±0.5, 42°.80N×145°.10E, h67^{km}±8^{km}, mb5.0/3*

JMA ***15*** *08:20:23.2±0.1, 42°.9N±0°.4×144°.9E±0°.5, h50^{km}, MD4.0/35, MV4.2/35, OFF NEMURO PENINSULA*

JMA Felt II J1 at OFF NEMURO PENINSULA .

NIED ***15*** *08:20:23.2, 42°.88N×144°.92E, h50^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.57; $M_{\theta\theta}$-0.44; $M_{\phi\phi}$-1.13; $M_{r\theta}$0.57; $M_{\theta\phi}$-0.75; $M_{\phi r}$0.84; Fault plane solution: $M_0$1.89000×10^{15} NP1: ϕ_s212.00000°, δ29.00000°, λ88.00000°. NP2: ϕ_s34.00000°, δ61.00000°, λ91.00000°.*

NEIC ***15*** *08:20:23.7±1.9, 42°.92N±0°.07×144°.9E±0°.1, h54^{km}±8^{km}, mb4.5/33 Error ellipse: s-maj=15.8km s-min=9.3km az=102.0*

IDC ***15*** *08:20:25.0±2.0, 42°.96N×144°.88E, h67^{km}±15^{km}, mb3.9/27, mbtmp4.1/33, MS3.1/20, Error ellipse: s-maj=14.9km s-min=13.8km az=157.0*

ISC 15 08:20:23.5±0.6**, 42°.88N**±0°.05×**144°.96E**±0°.03**, h55**^{km}±5^{km}**, n418, σ0^{s}95**/413**, mb4.4**/54**, MS3.3**/15**, 10C-17D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKK	Akkeshi	0.16	328	i P	Pn	08 20 32.0	-0.2
JAK	Akkeshi	0.22	301	⇓iP	Pn	08 20 31.5	-1.0
JAK				⇓S	Sn	08 20 37.7	-1.3
JAK	Akkeshi	0.22	301	A	A	08 20 31.5	
	comp=N,95nm,0.4s,comp=E,140nm,0.9s						
JKHN	Kushirohamanak	0.25	37	i P	Pn	08 20 32.3	-0.4
JKHN				S	Sn	08 20 38.5	-0.9
JKHN	Kushirohamanak	0.25	37	A	A	08 20 32.3	
	comp=N,108nm,0.4s,comp=E,47nm,1.0s						
JNK	Nakash	0.72	346	⇓iP	Pn	08 20 37.0	-0.8
JNK				⇓S	Sn	08 20 46.9	-1.4
JNK	Nakash	0.72	346	A	A	08 20 37.0	
	comp=N,12nm,0.2s,comp=E,23nm,0.6s						
NMR	Nemuro--Hokkai	0.74	49	⇑iPN	Pn	08 20 37.2	-0.8
NMR				i S	Sn	08 20 47.2	-1.4
NMR	Nemuro--Hokkai	0.74	49	i P	Pn	08 20 37.2	-0.8
NMR				i S	Sn	08 20 47.2	-1.4
NEM2	Nemuro 2	0.75	50	i P	Pn	08 20 37.2	-0.9
NEM2				S	Sn	08 20 47.2	-1.5
NEM2	Nemuro 2	0.75	50	A	A	08 20 37.2	
	comp=N,11nm,4.1s,comp=E,6.0nm,0.3s						
JOB	Onbets	0.83	272	⇓iP	Pn	08 20 38.2	-0.9
JOB				⇓eS	Sn	08 20 49.0	-1.4
JOB	Onbets	0.83	272	A	A	08 20 38.2	
	comp=N,6.0nm,1.5s,comp=E,5.0nm,2.6s						
JNSB	Nemuroshibetsu	0.89	2	A	A	08 20 39.7	
	comp=N,13nm,1.8s,comp=E,17nm,1.0s						
GLVR	Golovnino	0.95	25	ePN	Pn	08 20 40.5	-0.2
GLVR				eS	Sn	08 20 53.3	0.0
GLVR				pmax	pmax		
	comp=Z,1μm,0.1s						
GLVR				smax	smax		
	comp=E,24μm,0.2s						
GLVR				smax	smax		
	comp=N,31μm,0.3s						
GLVR	Golovnino	0.95	25	eP	Pn	08 20 40.5	-0.2
GLVR				AMB	AMB	08 20 42.4	
	comp=N,1μm,0.3s						
GLVR				eS	Sn	08 20 53.3	0.0
GLVR				A	A	08 20 54.4	
	comp=N,31μm,0.3s						
GLVR				A	A	08 20 54.4	
	comp=N,24μm,0.3s						
JAR	Ashorobuto	0.96	296	⇓iP	Pn	08 20 40.2	-0.7
JAR				⇓eS	Sn	08 20 52.7	-1.0
JAR	Ashorobuto	0.96	296	A	A	08 20 40.2	
	comp=N,9.0nm,0.8s,comp=E,7.0nm,0.7s						
JRA	Rausu	1.06	6	⇓iP	Pn	08 20 41.8	-0.4
JRA				⇓S	Sn	08 20 55.5	-0.5
JRA	Rausu	1.06	6	A	A	08 20 41.8	
	comp=N,5.0nm,0.3s,comp=E,10.0nm,0.4s						
JCH	Churui	1.21	258	⇓iP	Pn	08 20 42.9	-1.2
JCH				⇓S	Sn	08 20 58.3	-1.1
JCH	Churui	1.21	258	A	A	08 20 42.9	
	comp=N,4.0nm,1.2s,comp=E,4.0nm,1.3s						
YUK	Yuzh-Kuril'sk	1.33	29	ce PN	Pn	08 20 45.6	-0.1
YUK	Yuzh-Kuril'sk	1.33	29	i P	Pn	08 20 45.6	-0.1
YUK				AMB	AMB	08 20 46.3	
	comp=E,400nm,0.2s						
YUK				eS	Sn	08 21 01.0	-1.3
YUK				A	A	08 21 03.4	
	comp=E,7μm,0.4s						
YUK				A	A	08 21 03.4	
	comp=E,4μm,0.4s						
ERM	Erimo	1.59	238		Pn	08 20 50.0	+0.7
ERM	Erimo	1.59	238	c iPN	Pn	08 20 50.7	+1.4
SHO	Shikotan	1.68	53	c iPN	Pn	08 20 50.5	-0.1
SHO				i S	Sn	08 21 09.8	-1.3
SHO				pmax	pmax		
	comp=Z,216nm,0.1s						
SHO				smax	smax		
	comp=E,4μm,0.3s						
SHO				smax	smax		
	comp=N,1μm,0.1s						
SHO	Shikotan	1.68	53	i P	Pn	08 20 50.3	-0.3
SHO				AMB	AMB	08 20 51.5	
	comp=N,190nm,0.2s						
SHO				i S	Sn	08 21 09.7	-1.3
SHO				A	A	08 21 11.0	
	comp=N,2μm,0.3s						

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SHO                                A      A        08 21 11.0
      comp=N,3µm,0.3s
JNBK  Urakawa-nobuka   1.74 250   A      A        08 20 51.3
      comp=N,4.0nm,6.3s,comp=E,5.0nm,1.1s
JKA   Kamikawa-asahi   2.11 307          Pn       08 20 56.9 +0.4
ASAJ  Asahikawa        2.12 306   P      Pn       08 20 57.0 +0.6
      comp=E,157nm,0.3s,baz=130,slow=13,SNR=157
ASAJ                               S      Sn       08 21 22.1 +0.5
      comp=E,181nm,0.5s,baz=197,slow=19,SNR=8.9
ASAJ                               LR     LR       08 21 30.9
      comp=E,148nm,19.5s,baz=180,slow=32
KUR   Kuril'sk         3.15  41  ePN     Pn       08 21 12.1 +1.5
KUR                               eS      Sn       08 21 47.4 +0.5
KUR                                pmax   pmax
      comp=E,77nm,0.4s
KUR                                pmax   pmax
      comp=Z,104nm,0.4s
KUR                                smax   smax
      comp=N,438nm,0.5s
KUR                                smax   smax
      comp=E,406nm,0.5s
KUR   Kuril'sk         3.15  41  eP      Pn       08 21 11.6 +1.0
KUR                                AMB    AMB      08 21 15.4
      comp=E,80nm,0.4s
KUR                               eS      Sn       08 21 46.1 -0.8
KUR                                A      A        08 21 54.0
      comp=E,440nm,0.4s
KUR                                A      A        08 21 54.0
      comp=E,420nm,0.4s
JTM   Tenmabayashi     3.58 236          Pn       08 21 16.1 -0.5
YSS   Yuzhno-Sakhali   4.36 340   Pn     Pn       08 21 27.2  0.0
YSS   Yuzhno-Sakhali   4.36 340  ePN     Pn       08 21 27.8 +0.6
YSS                               eS      Sn       08 22 15.8 -0.9
YSS                                pmax   pmax
      comp=Z,20nm,0.7s
YSS                                smax   smax
      comp=N,20nm,0.7s
YSS                                smax   smax
      comp=E,30nm,1.1s
YSS                                MLR    MLR
      comp=Z,300nm,12.0s
YSS   Yuzhno-Sakhali   4.36 340  eP      Pn       08 21 28.3 +1.1
JMM   Marumori         5.93 214   Pn     Pn       08 21 47.6 -1.2
TYV   Tymovskoe        8.14 350  ePN     Pn       08 22 22.9 +4.0
TYV                                pmax   pmax
      comp=Z,200nm,2.7s
TYV                                pmax   pmax
      comp=Z,8.0nm,1.3s
TYV   Tymovskoe        8.14 350  eP      Pn       08 22 22.9 +4.0
MJB9  Matsu-Tunnel     8.19 222   Pn     Pn       08 22 19.6 -0.1
MAJO  Matsushiro       8.19 222   Pn     Pn       08 22 18.5 -1.2
MAJO  Matsushiro       8.19 222   PN     Pn       08 22 18.5 -1.2
MJAR  Matsushiro Arr   8.19 222   P      Pn       08 22 19.4 -0.3
      comp=Z,2.8nm,0.7s,baz=30,slow=13,SNR=9.1
JGF   Kuroka           9.36 222   Pn     Pn       08 22 35.2 -0.5
USRK  Ussuriysk Ar.    9.51 282   P      Pn       08 22 39.4 +1.7
      comp=Z,2.0nm,0.6s,baz=92,slow=16,SNR=2.9
USRK                               LR     LR       08 26 15.1
      comp=Z,45nm,21.2s,baz=161,slow=37
KLR   Kul'dur         11.15 309   P      Pn       08 23 00.0 -0.1
      comp=Z,1.8nm,0.6s,baz=121,slow=15,SNR=4.2
KLR                                LR     LR       08 27 43.8
      comp=Z,94nm,20.9s,baz=120,slow=40
KLR   Kul'dur         11.15 309⇑ePN     Pn       08 23 03.9 +3.8
KLR                                pmax   pmax
      comp=Z,6.0nm,0.9s
KLR   Kul'dur         11.15 309  eP      Pn       08 23 03.9 +3.8
BNX   BinXian         12.89 289  ⇑P      Pn       08 23 24.4 +0.5
BNX                                pmax   pmax
      comp=Z,9.0nm,0.9s
PETK  Petropavlovsk-  13.30  35   P      Pn       08 23 29.7 +0.4
      comp=Z,1.6nm,0.9s,baz=215,slow=7.3,SNR=3.9
PETK                               LR     LR       08 29 53.1
      comp=Z,45nm,18.1s,baz=190,slow=43
KSRS  Korea Array     14.10 253   P      Pn       08 23 40.9 +0.6
      comp=Z,2.0nm,1.1s,baz=62,slow=15,SNR=2.7
JNU   Nakatsue        14.75 233   LR     LR       08 29 30.2
      comp=Z,52nm,19.3s,baz=5.0,slow=37
ZEA   Zeya            15.97 319  eP      P        08 24 08.0 +0.9
MA2   Magadan         17.09  10   LR     LR       08 30 55.6
      comp=Z,41nm,18.3s,baz=196,slow=37
SEY   Seymchan        20.55  10   P      P        08 24 56.1 -1.1
      comp=Z,1.5nm,0.5s,baz=180,slow=15,SNR=4.4
      comp=Z,1.5nm,0.5s
XLT   XiLinHaoTe      20.97 283  eP      P        08 25 01.3 -0.7
XLT                                sP     sP       08 25 27.6 +6.3
XLT                                pmax   pmax
      comp=Z,65nm,4.5s
YAK   Yakutsk         21.21 340   LR     LR       08 33 49.4
      comp=Z,46nm,19.5s,baz=155,slow=38
SONM  Songino Array   27.34 294   P      P        08 26 02.8 -0.5
      comp=Z,2.9nm,0.6s,baz=74,slow=7.9,SNR=2.1
      comp=Z,2.9nm,0.6s
GUMO  Guam            29.19 180   LR     LR       08 36 14.5
      comp=Z,16nm,21.2s,baz=36,slow=32
H11N2 WAKE ISLAND Hy  29.56 134   T      T        08 57 31.6
      baz=327,slow=75,SNR=960
H11N1 WAKE ISLAND Hy  29.57 135   T      T        08 57 30.3
      baz=327,slow=75,SNR=646
H11N3 WAKE ISLAND Hy  29.58 134   T      T        08 57 30.2
      baz=327,slow=75,SNR=852
TIXI  Tiksi           29.91 350   LR     LR       08 40 10.1
      comp=Z,33nm,19.1s,baz=197,slow=40
H11S1 WAKE ISLAND Hy  30.48 136   T      T        08 58 37.6
      baz=329,slow=76,SNR=997
H11S3 WAKE ISLAND Hy  30.48 136   T      T        08 58 36.8
      baz=329,slow=76,SNR=733
H11S2 WAKE ISLAND Hy  30.50 136   T      T        08 58 37.9
      baz=329,slow=76,SNR=713
SPIA  Saint Paul Isl  31.49  47   P      P        08 26 42.6 +2.9
      baz=263
P08K  Saint George I  31.80  48   P      P        08 26 45.4 +3.0
      baz=264
NIKH  Nikolski High   32.03  55   P      P        08 26 50.0 +5.5
      baz=271
GAMB  Gambell         32.33  35   P      P        08 26 47.4 +0.4
      baz=251
UNV   Unalaska Valle  33.43  54   P      P        08 27 01.0 +4.3
      baz=271
M11K  Mekoryuk        34.03  42   P      P        08 27 02.6 +0.8
      baz=262
TNA   Tin City        34.45  33   P      P        08 27 04.8 -0.6
      baz=252
K13K  Kusilvak Mount  35.01  39   P      P        08 27 11.1 +0.8
      baz=261
ANM   Nome            35.22  35   P      P        08 27 11.7 -0.3
      baz=256
M13K  Dall Lake       35.44  42   P      P        08 27 15.1 +1.2
      baz=264
J14K  Nanvaranak Lak  35.65  38   P      P        08 27 17.3 +1.6
J14K                               IAmb   IAmb     08 27 59.4
      comp=Z,12nm,1.4s
J14K  Nanvaranak Lak  35.65  38   P      P        08 27 16.5 +0.7
      baz=261
F15K  North Star Dit  35.79  33   P      P        08 27 16.7 -0.3
      baz=256
L14K  Kuka Creek      35.86  41   P      P        08 27 18.6 +1.0
      baz=264
S12K  Black Hills     35.96  50   P      P        08 27 20.6 +2.1
      baz=272
M14K  Bethel          36.15  42   P      P        08 27 20.0  0.0
      baz=265
N14K  Kuskokwak Cree  36.22  43   P      P        08 27 21.7 +1.0
      baz=266
C16K  Lisburne Hills  36.26  29   P      P        08 27 19.9 -1.0
      baz=251
O14K  Tigyukauivet M  36.40  44   P      P        08 27 23.4 +1.1
      baz=268
L15K  Ungalak Mounta  36.47  40   P      P        08 27 23.2 +0.4
      baz=264
K15K  Wolf Creek Mou  36.51  39   P      P        08 27 23.3 +0.1
      baz=263
G16K  Koyuk River     36.65  34   P      P        08 27 23.6 -0.7
      baz=258
D17K  Noatak River    36.91  30   P      P        08 27 25.0 -1.4
      baz=255
N15K  Kwethluk River  37.04  43   P      P        08 27 28.3 +0.6
      baz=268
J16K  Anvik River     37.06  38   P      P        08 27 27.1 -0.7
      baz=263
RDOG  Red Dog Mine    37.07  29   P      P        08 27 27.1 -0.7
      baz=254
C17K  DeLong Mountai  37.09  29   P      P        08 27 26.7 -1.3
      baz=254
I17K  Unalakleet      37.10  37   P      P        08 27 29.2 +1.1
I17K  Unalakleet      37.10  37   P      P        08 27 28.2 +0.2
      baz=262
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O15K  Ungalikthiuk R  37.14  44   P      P        08 27 29.0 +0.4
      baz=269
G17K  Kiwalik Mounta  37.37  34   P      P        08 27 29.8 -0.6
      baz=260
CHNA  Chernabura Isl  37.42  52   P      P        08 27 33.5 +2.6
      baz=275
L16K  Owhat River     37.42  40   P      P        08 27 31.1 +0.2
L16K                               IAmb   IAmb     08 28 13.2
      comp=Z,4.8nm,1.1s
L16K  Owhat River     37.42  40   P      P        08 27 31.2 +0.3
      baz=266
H17K  Granite Mounta  37.59  35   P      P        08 27 32.0 -0.3
      baz=261
M16K  Timber Creek    37.63  41   P      P        08 27 33.6 +0.9
      baz=267
N16K  Nishlik Lake    37.70  42   P      P        08 27 34.1 +0.7
      baz=268
J17K  VABM Dome       37.75  38   P      P        08 27 33.0 -0.7
      baz=264
E18K  Tukpahlearik C  37.77  31   P      P        08 27 32.8 -1.0
      baz=258
B18K  Kokolik River   37.82  28   P      P        08 27 33.3 -0.9
      baz=254
C18K  Utukok River    37.84  29   P      P        08 27 33.8 -0.6
C18K                               IAmb   IAmb     08 27 35.5
      comp=Z,6.5nm,0.9s
C18K  Utukok River    37.84  29   P      P        08 27 33.1 -1.3
      baz=255
F18K  Selawik         37.97  32   P      P        08 27 34.4 -1.0
      baz=260
L17K  Donlin          38.01  40   P      P        08 27 36.6 +0.7
      baz=267
O16K  Kokwok River B  38.03  44   P      P        08 27 37.3 +1.3
      baz=270
K17K  Iditarod        38.05  39   P      P        08 27 36.3 +0.1
      baz=266
G18K  Tagagawik       38.25  34          P        08 27 37.9 +0.1
G18K                               IAmb   IAmb     08 27 39.3
      comp=Z,6.4nm,1.2s
G18K  Tagagawik       38.25  34   P      P        08 27 37.1 -0.8
      baz=262
H18K  Honhosa River   38.27  35   P      P        08 27 38.3 +0.3
H18K                               IAmb   IAmb     08 27 39.3
      comp=Z,3.2nm,0.7s
H18K  Honhosa River   38.27  35   P      P        08 27 37.5 -0.5
      baz=263
R16K  Pilot Point     38.35  47   P      P        08 27 40.1 +1.4
      baz=273
M17K  Holitna River   38.38  41   P      P        08 27 39.1 +0.1
      baz=268
N17K  Nushagak Hills  38.49  42   P      P        08 27 40.7 +0.8
      baz=270
C19K  Lookout Ridge   38.52  28   P      P        08 27 39.6 -0.5
      baz=256
O17K  Koliganek Bris  38.54  43   P      P        08 27 40.7 +0.4
      baz=271
F19K  Shaleruckik Mo  38.74  32   P      P        08 27 40.3 -1.6
      baz=261
L18K  Granite Mounta  38.77  40   P      P        08 27 42.1 -0.1
      baz=268
J18K  Innoko River    38.82  38   P      P        08 27 42.7  0.0
      baz=266
GCSA  Galena City Sc  38.85  36   P      P        08 27 42.0 -0.8
      baz=265
P17K  Kvichak River   38.88  44   P      P        08 27 43.8 +0.7
      baz=272
D19K  Kuna River      38.91  29   P      P        08 27 41.2 -2.1
      baz=259
E19K  Redstone River  39.05  31   P      P        08 27 43.2 -1.3
      baz=261
H19K  Roundabout Mou  39.11  34          P        08 27 45.1 +0.1
H19K                               IAmb   IAmb     08 27 46.7
      comp=Z,6.3nm,0.8s
H19K  Roundabout Mou  39.11  34   P      P        08 27 44.3 -0.6
      baz=264,SNR=6.8
N18K  Kilae Creek     39.13  42   P      P        08 27 45.5 +0.2
      baz=271
M18K  Stony River     39.16  41   P      P        08 27 45.7 +0.2
      baz=270
Q17K  Contact Creek   39.22  46   P      P        08 27 47.8 +1.7
      baz=274
J19K  Poorman         39.34  37   P      P        08 27 47.0 +0.1
J19K  Poorman         39.34  37   P      P        08 27 46.8 -0.2
      baz=267
O18K  Koktuh Hills    39.49  43   P      P        08 27 49.3 +1.0
      baz=272
D20K  Etivluk River   39.49  29          P        08 27 48.0 -0.1
D20K                               IAmb   IAmb     08 27 49.5
      comp=Z,5.3nm,1.1s
D20K  Etivluk River   39.49  29   P      P        08 27 47.4 -0.8
      baz=260
P18K  Big Mountain,   39.50  44   P      P        08 27 50.1 +1.7
      baz=273
B20K  Meade River     39.55  27   P      P        08 27 48.4 -0.2
B20K                               IAmb   IAmb     08 27 49.1
      comp=Z,7.3nm,0.6s
B20K  Meade River     39.55  27   P      P        08 27 48.0 -0.6
      baz=258
E20K  Nigu River      39.57  30   P      P        08 27 48.1 -0.8
      baz=261
F20K  Avaraart Lake   39.57  32   P      P        08 27 48.5 -0.3
      baz=263
CHIR  Chirikof Islan  39.58  50   P      P        08 27 51.9 +2.9
      baz=277
L19K  White Mountain  39.63  40   P      P        08 27 50.3 +0.9
      baz=270
Q18K  Katmai Hardscr  39.65  45   P      P        08 27 51.3 +1.5
      baz=274
H20K  Anotleneega Mo  39.76  34   P      P        08 27 50.6 +0.2
      baz=266
N19K  Bonanza Creek   39.82  42   P      P        08 27 51.6 +0.5
      baz=272
M19K  Big River Lodg  39.84  40   P      P        08 27 52.1 +0.9
      baz=270
I20K  Naaghedeneel    39.88  36   P      P        08 27 51.8 +0.4
      baz=267
J20K  Nowinta River   39.99  37          P        08 27 52.6 +0.3
J20K  Nowinta River   39.99  37   P      P        08 27 52.6 +0.3
      baz=268
K20K  Telida          40.00  38   P      P        08 27 52.9 +0.4
      baz=269
A21K  Barrow          40.01  25   P      P        08 27 51.6 -0.8
      baz=257
R18K  Karluk          40.03  47   P      P        08 27 54.1 +1.4
      baz=276
L20K  Farewell, AK    40.08  39   P      P        08 27 52.5 -0.7
      baz=270
C21K  Knifeblade Rid  40.22  29   P      P        08 27 53.5 -0.7
      baz=261
ZALV  Zalesovo Beam   40.25 307   P      P        08 27 54.5 -0.1
      comp=Z,0.6nm,0.3s,baz=93,slow=8.6,SNR=3.0
ZALV                               PcP    PcP      08 29 57.4 -0.1
      comp=Z,1.9nm,0.4s,baz=88,slow=2.5,SNR=7.4
ZALV                               LR     LR       08 46 05.0
      comp=Z,33nm,19.1s,baz=92,slow=38
      comp=Z,0.6nm,0.3s
IMAR  Indian Mountai  40.26  34   P      P        08 27 54.7 +0.2
SII   Sitkinak Islan  40.29  48   P      P        08 27 55.9 +1.0
      baz=277
B21K  Ikpikpuk River  40.35  28   P      P        08 27 54.7 -0.5
      baz=261
G21K  Allakaket       40.39  33          P        08 27 55.8 +0.1
G21K  Allakaket       40.39  33   P      P        08 27 54.6 -1.1
      baz=266
E21K  Killik River    40.41  30   P      P        08 27 55.0 -0.9
      baz=263
M20K  Styx River      40.44  40   P      P        08 27 55.4 -0.8
      baz=272
F21K  Alatna River    40.46  32   P      P        08 27 54.8 -1.5
      baz=265
A22K  Sinclair Lake   40.47  26   P      P        08 27 54.8 -1.4
      baz=259
P19K  Oil Pt          40.50  44   P      P        08 27 56.9 +0.2
      baz=274
H21K  Melozitna Rive  40.63  34   P      P        08 27 56.5 -1.2
      baz=267
OHAK  Old Harbor      40.70  47   P      P        08 27 59.5 +1.2
      baz=277
O20K  Slope Mountain  40.77  43   P      P        08 27 59.0  0.0
      baz=274
CHUM  Lake Minchumin  40.79  37   P      P        08 27 58.1 -0.9
      baz=270
PPLA  Purkeypile      40.86  39   P      P        08 27 59.1 -0.6
      baz=271
B22K  Teshekpuk Lake  40.86  27   P      P        08 27 58.1 -1.3
      baz=261
CAST  Castle Rocks    40.90  38   P      P        08 28 01.1 +1.2
CAST  Castle Rocks    40.90  38   P      P        08 27 59.4 -0.5
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      baz=271
D22K  Ayikyak River   40.93  29   P      P        08 27 58.5 -1.6
      baz=264
KDAK  Kodiak Island   41.01  46   LR     LR       08 45 56.3
      comp=Z,18nm,20.4s,baz=219,slow=37
KDAK  Kodiak Island   41.01  46   P      P        08 28 01.9 +1.1
      baz=277
Q20K  Shuyak Island   41.02  45   P      P        08 28 01.5 +0.6
      baz=276
E22K  Anaktuvuk Pass  41.18  31          P        08 28 01.9 -0.3
E22K  Anaktuvuk Pass  41.18  31   P      P        08 28 00.9 -1.3
      baz=265,SNR=5.2
SKT   Skwentna        41.19  40   P      P        08 28 01.7 -0.7
      baz=273
G22K  Bettles         41.21  32   P      P        08 28 00.9 -1.5
      baz=267
H22K  Ishtalitna Cre  41.22  34   P      P        08 28 01.1 -1.4
      baz=268
HOM   Homer           41.30  43   P      P        08 28 03.1 -0.1
      baz=275
BPAW  Bear Paw Mtn.   41.38  37   P      P        08 28 03.4 -0.5
      baz=271
KTH   Kantishna Hill  41.42  38   P      P        08 28 05.6 +1.4
KTH                                IAmb   IAmb     08 28 12.6
      comp=Z,7.1nm,1.1s
CAPN  Captain Cook N  41.45  42   P      P        08 28 04.4 +0.1
      baz=274
MLY   Manley          41.48  35   P      P        08 28 03.5 -1.1
      baz=270
SUA   Susitna One     41.60  41   P      P        08 28 05.7 -0.1
      baz=274
D23K  Nanushuk River  41.66  29   P      P        08 28 05.0 -1.1
      baz=266
TRF   Thorofare Moun  41.70  38   P      P        08 28 05.5 -1.2
      baz=272
COLD  Coldfoot        41.74  32   P      P        08 28 05.3 -1.4
      baz=268
BRSE  Bradley Lake S  41.75  43   P      P        08 28 07.3 +0.4
      baz=276
C23K  Itkillik River  41.76  28   P      P        08 28 05.5 -1.3
      baz=265
CUT   Chulitna        41.76  39   P      P        08 28 06.9  0.0
      baz=273
G23K  Bananza Creek   41.79  33   P      P        08 28 06.1 -1.1
      baz=269
M22K  Willow          41.87  40   P      P        08 28 07.9  0.0
      baz=274
H23K  Yukon River     41.98  34   P      P        08 28 09.6 +0.9
H23K                               IAmb   IAmb     08 28 10.9
      comp=Z,4.6nm,0.8s
H23K  Yukon River     41.98  34   P      P        08 28 07.7 -1.0
      baz=270,SNR=5.9
E23K  Chandalar       41.99  31   P      P        08 28 07.8 -1.1
      baz=268
TOLK  Toolik Lake Re  42.04  30   P      P        08 28 08.9 -0.3
      baz=267
I23K  Minto, Yukon-K  42.06  35   P      P        08 28 09.1 -0.2
      baz=271
RC01  Rabbit Creek A  42.11  41   P      P        08 28 10.0 +0.1
      baz=275
NEA2  Nenana          42.20  36   P      P        08 28 10.6 +0.1
      baz=272,SNR=6.4
MCK   McKinley        42.30  37   P      P        08 28 11.7 +0.4
      baz=273
D24K  Happy Valley    42.34  29   P      P        08 28 10.7 -0.8
      baz=267
SEW   Seward          42.35  43   P      P        08 28 12.9 +1.1
      baz=277
PMR   Palmer          42.36  40   P      P        08 28 12.2 +0.4
      baz=275
C24K  Franklin Bluff  42.41  28   P      P        08 28 11.5 -0.6
      baz=267
E24K  Your Creek      42.42  31   P      P        08 28 11.8 -0.5
      baz=269
F24K  Squaw Lake      42.64  32   P      P        08 28 13.7 -0.4
      baz=270
H24K  Noodor Dome     42.66  34          P        08 28 15.2 +0.9
H24K  Noodor Dome     42.66  34   P      P        08 28 13.8 -0.5
      baz=272
KNK   Knik Glacier    42.70  41   P      P        08 28 15.4 +0.8
      baz=276
COLA  College         42.71  35d iP      P        08 28 15.7 +1.1
COLA                               pmax   pmax
      comp=Z,6.0nm,0.8s
COLA  College         42.71  35   P      P        08 28 14.5 -0.1
      baz=273
SML   Sawmill         42.72  40   P      P        08 28 15.1 +0.3
      baz=276
G24K  Hadweenzic Riv  42.81  33   P      P        08 28 15.1 -0.3
      baz=271
PWL   Port Wells      42.82  41   P      P        08 28 15.9 +0.3
      baz=277
POKR  Poker Plat Res  42.88  35   P      P        08 28 15.8 -0.2
      baz=273
WAT6  Susitna Watana  42.92  39   P      P        08 28 16.7 +0.1
      baz=275
M23K  Glacier View    43.00  40   P      P        08 28 17.8 +0.7
      baz=276
DHY   Denali Highway  43.04  38   P      P        08 28 17.2 -0.3
      baz=275
HDA   Harding Lake    43.13  36   P      P        08 28 18.6 +0.6
      baz=274
ILAR  Eielson Array   43.13  36   P      P        08 28 18.6 +0.6
      comp=Z,1.1nm,0.6s,baz=274,slow=8.4,SNR=22
      comp=Z,1.1nm,0.6s
ILAR  Eielson Array   43.13  36  eP      P        08 28 19.6 +1.6
ILAR                               pmax   pmax
      comp=Z,1.0nm,0.5s
SCM   Sheep Creek Mo  43.19  40   P      P        08 28 18.8 +0.2
      baz=276
D25K  Kavik River     43.21  29   P      P        08 28 17.8 -0.9
      baz=269
G25K  Bearman Lake    43.35  33   P      P        08 28 18.7 -1.0
      baz=272
P23K  Montague Islan  43.39  43   P      P        08 28 21.2 +1.1
      baz=278
GLI   Glacier Island  43.42  41   P      P        08 28 21.5 +1.1
      baz=278
H25L  Birch Creek     43.48  33   P      P        08 28 20.8  0.0
      baz=273
F25K  Christian Rive  43.50  31   P      P        08 28 20.3 -0.8
      baz=272
E25K  Arctic Village  43.51  31   P      P        08 28 20.7 -0.4
      baz=271
MK31  Makanchi Array  43.57 298c iP      P        08 28 21.7 -0.2
MKAR  Makanchi Array  43.57 298          P        08 28 21.2 -0.7
MKAR  Makanchi Array  43.57 298   P      P        08 28 21.6 -0.3
      comp=Z,4.8nm,0.7s,baz=79,slow=8.9,SNR=42
MKAR                               PcP    PcP      08 30 08.6  0.0
      comp=Z,0.7nm,0.6s,baz=72,slow=4.2,SNR=3.8
      comp=Z,4.8nm,0.7s
PRP   Porcupine Dome  43.65  34          P        08 28 22.9 +0.5
PRP                                IAmb   IAmb     08 28 24.3
      comp=Z,4.9nm,0.6s
PRP   Porcupine Dome  43.65  34   P      P        08 28 22.6 +0.2
      baz=274,SNR=9.1
K24K  Donnelly Dome   43.69  37   P      P        08 28 22.6  0.0
      baz=276
M24K  Tolsona, Glenn  43.70  39   P      P        08 28 22.1 -0.6
      baz=277
MAKZ  Makanchi        43.77 298          P        08 28 23.0 -0.4
MAKZ                               IAmb   IAmb     08 28 24.1
      comp=Z,5.8nm,0.8s
MAKZ  Makanchi        43.77 298   P      P        08 28 23.0 -0.4
MAKZ                               pmax   pmax
      comp=Z,6.0nm,0.8s
J25K  Salcha River,   43.79  36   P      P        08 28 22.9 -0.5
      baz=275
KLU   Klutina         43.90  40   P      P        08 28 24.6 +0.2
      baz=278
PAX   Paxson          43.92  38   P      P        08 28 24.4 -0.1
      baz=277
Q23K  Middleton Isla  44.00  43   P      P        08 28 25.7 +0.6
      baz=280
F26K  Sheenjek River  44.07  31   P      P        08 28 24.9 -0.6
      baz=273
RIDG  Independent Ri  44.11  37   P      P        08 28 25.6 -0.3
      baz=277
EYAK  Cordova Ski Ar  44.12  42   P      P        08 28 26.6 +0.6
      baz=279
HARP  HAARP           44.13  39   P      P        08 28 26.0 -0.1
      baz=278
C27K  Jago River      44.15  28   P      P        08 28 24.9 -1.3
      baz=272
G26K  Porcupine Rive  44.25  32   P      P        08 28 26.8 -0.2
      baz=274
SCRK  Sand Creek      44.46  37          P        08 28 28.8  0.0
SCRK  Sand Creek      44.46  37   P      P        08 28 29.3 +0.5
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             baz=277,SNR=5.8
N25K  Chitina, Valde     44.51  40   P        P        08 28 29.5 +0.3
             baz=279
J26L  Joseph Creek       44.58  36   P        P        08 28 30.1 +0.3
             baz=277
BMRM  Bremner River      44.61  41   P        P        08 28 30.6 +0.6
             baz=280
I26K  Coal Creek Min     44.66  35   P        P        08 28 29.9 -0.4
             baz=276
KURK  Kurchatov          44.69 304            P        08 28 29.9 -0.8
KURK                                 IAmb     IAmb     08 28 31.1
             comp=Z,4.7nm,0.7s
KURK  Kurchatov          44.69 304ceP         P        08 28 30.0 -0.7
KURK                                 pmax     pmax
             comp=Z,5.0nm,0.7s
KURK  Kurchatov          44.69 304 eP         P        08 28 30.0 -0.7
KURBB Kurchatov Arra     44.77 304   P        P        08 28 31.0 -0.4
             comp=Z,3.8nm,0.6s,baz=73,slow=8.8,SNR=22
KURBB                                PcP      PcP      08 30 12.5 -0.1
             comp=Z,1.7nm,0.8s,baz=74,slow=3.3,SNR=8.0
             comp=Z,3.8nm,0.6s
L26K  Log Cabin Wild     44.87  38   P        P        08 28 32.5 +0.5
             baz=278
KAIM  Kayak Island       44.88  42   P        P        08 28 32.8 +0.7
             baz=281
E27K  Coleen River       44.99  30   P        P        08 28 32.3 -0.6
             baz=275
G27K  Doyon Strip        45.10  32   P        P        08 28 33.9  0.0
             baz=276
M26K  Nabesna, AK        45.13  39   P        P        08 28 34.9 +0.8
             baz=279
D27M  Malcolm River      45.14  29   P        P        08 28 33.9 -0.2
             baz=274
H27K  Steamboat Moun     45.22  33   P        P        08 28 36.2 +1.4
H27K  Steamboat Moun     45.22  33   P        P        08 28 34.4 -0.4
             baz=277
I27K  Kandik River       45.26  34   P        P        08 28 35.3 +0.2
             baz=277
K27K  Chicken            45.28  36   P        P        08 28 35.4 +0.1
             baz=279
MCARA McCarthy VSAT      45.29  40   P        P        08 28 36.1 +0.8
             baz=280
CRQE  Cirque             45.37  41   P        P        08 28 36.8 +0.7
             baz=281
L27K  Beaver Creek,      45.55  38   P        P        08 28 37.6 +0.1
             baz=280,SNR=5.7
M27K  Edge Creek, AK     45.65  39   P        P        08 28 38.5 +0.2
             baz=280
F28M  Old Crow           45.70  31   P        P        08 28 38.3 -0.2
             baz=277
E28M  Babbage River      45.71  30   P        P        08 28 38.2 -0.4
             baz=276
CMAR  Chiang Mai Arr     45.74 252   P        P        08 28 39.3 -0.1
             comp=Z,1.6nm,0.3s,baz=48,slow=8.3,SNR=5.2
CMAR                                 LR       LR       08 47 41.6
             comp=Z,22nm,18.1s,baz=170,slow=36
             comp=Z,1.6nm,0.3s
I28M  Miner Creek        45.98  34            P        08 28 41.8 +0.9
I28M                                 IAmb     IAmb     08 28 42.9
             comp=Z,2.8nm,0.6s
I28M  Miner Creek        45.98  34   P        P        08 28 40.5 -0.3
             baz=279,SNR=6.3
MESA  MESA               46.04  42   P        P        08 28 42.7 +1.1
             baz=282
BVCY  Beaver Creek       46.10  38   P        P        08 28 42.2 +0.4
             baz=281
CTG   Chitna Glacier     46.17  40   P        P        08 28 43.3 +0.8
             baz=282
E29M  Blow River         46.34  30   P        P        08 28 43.5  0.0
             baz=278
YUK3  Moose Creek        46.42  39   P        P        08 28 44.8 +0.3
             baz=282
DAWY  Dawson             46.44  36   P        P        08 28 45.1 +0.6
             baz=281
H29M  Whitestone         46.49  33   P        P        08 28 45.1 +0.4
             baz=280
G29M  Pine Creek         46.51  32   P        P        08 28 45.0 +0.1
             baz=279
I29M  Ogilvie Camp,      46.66  34   P        P        08 28 46.1  0.0
             baz=280
O28M  Mount Upton        46.76  41   P        P        08 28 48.0 +0.8
             baz=283
YUK8  Steele Glacier     46.85  40   P        P        08 28 48.4 +0.4
             baz=283
PINM  Pinnacle           46.89  41   P        P        08 28 48.5 +0.5
             baz=284
EPYK  Eagle Plains       47.12  33   P        P        08 28 49.1 -0.6
             baz=281
M29M  Somme Creek        47.19  38   P        P        08 28 50.5 +0.2
             baz=283
L29M  L29M               47.19  37   P        P        08 28 50.3  0.0
             baz=283
G30M  tAoh Zraii Nji     47.20  32   P        P        08 28 50.1 -0.2
             baz=281
F30M  Barrier River      47.25  31   P        P        08 28 50.4 -0.2
             baz=280
K29M  Barlow Dome        47.30  36   P        P        08 28 51.1 -0.1
             baz=282
YUK4  Talbot Arm         47.36  40   P        P        08 28 52.6 +0.8
             baz=284
PNL   Peninsula          47.41  42   P        P        08 28 53.3 +1.2
             baz=285
I30M  Mount Dempster     47.49  34   P        P        08 28 52.6 -0.1
             baz=282,SNR=8.1
YUK6  Outpost Mounta     47.59  40   P        P        08 28 53.6  0.0
             baz=284
J30M  Hart River         47.65  35   P        P        08 28 53.9  0.0
             baz=283
O29M  Mount Kennedy      47.65  41   P        P        08 28 54.1 +0.1
             baz=285
G31M  Satah River        47.96  32   P        P        08 28 55.8 -0.3
             baz=282
HYT   Haines Junctio     48.03  40   P        P        08 28 57.5 +0.6
             baz=285,SNR=7.7
F31M  Tsiigehtchic       48.05  31   P        P        08 28 56.0 -0.8
             baz=282
N30M  Aishikik Lake      48.06  39   P        P        08 28 57.8 +0.7
             baz=285
MAYO  Mayo, Yukon        48.06  36   P        P        08 28 56.7 -0.3
             baz=284
H31M  Peel River         48.18  33   P        P        08 28 57.6 -0.4
             baz=283,SNR=5.5
P29M  Windy Craggy       48.23  42   P        P        08 28 58.7 +0.3
             baz=286
P30M  Million Dollar     48.48  41   P        P        08 29 00.5 +0.2
             baz=286
N31M  Braeburn, Yuko     48.66  39   P        P        08 29 01.2 -0.4
             baz=286
O30N  Mendenhall         48.71  40   P        P        08 29 02.7 +0.7
             baz=286
BVAR  Borovoye Array     48.81 309   P        P        08 29 02.0 -1.0
             comp=Z,1.4nm,0.5s,baz=80,slow=11,SNR=9.0
BVAR                                 PcP      PcP      08 30 27.1 +0.3
             comp=Z,1.1nm,0.5s,baz=101,slow=6.0,SNR=4.3
BVAR                                 LR       LR       08 51 10.2
             comp=Z,37nm,18.8s,baz=101,slow=38
             comp=Z,1.4nm,0.5s
BRVK  Borovoye           48.86 309⇑eP         P        08 29 03.5 +0.2
BRVK                                 pmax     pmax
             comp=Z,2.0nm,0.5s
BRVK  Borovoye           48.86 309 eP         P        08 29 03.5 +0.2
PLBC  Pleasant Camp      48.95  42   P        P        08 29 04.9 +1.0
             baz=287
M31M  Drury Creek, Y     49.09  38   P        P        08 29 05.3 +0.4
             baz=286
WHY   Whitehorse         49.31  40   P        P        08 29 06.9 +0.2
             baz=287
SKAG  Skagway            49.46  41   P        P        08 29 09.2 +1.5
             baz=288
S31K  Pelican            49.48  43   P        P        08 29 08.7 +0.8
             baz=289
FARO  Faro, Yukon        49.55  38   P        P        08 29 09.0 +0.6
             baz=287
A36M  Sachs Harbour      49.82  24   P        P        08 29 09.4 -0.8
             baz=286
N32M  Quiet Lake         50.00  39   P        P        08 29 11.8 -0.1
             baz=288
P32M  Atlin              50.20  41   P        P        08 29 13.7 +0.3
             baz=289
R32K  Eaglecrest         50.24  43   P        P        08 29 14.8 +1.1
             baz=290
SIT   Sitka              50.24  44   P        P        08 29 15.2 +1.6
             baz=290
MMPY  Sheldon Lake,      50.35  37   P        P        08 29 14.2 -0.4
             baz=288
P33M  Teslin, Yukon      50.42  40   P        P        08 29 15.9 +0.8
             baz=289
S32K  Killisnoo          50.48  44   P        P        08 29 17.1 +1.7
             baz=290
C36M  Paulatuk           50.99  27   P        P        08 29 19.1  0.0
             baz=289
Q32M  Nakina River       51.11  41   P        P        08 29 21.3 +0.8
             baz=291
R33M  Jennings River     51.58  41   P        P        08 29 24.3 +0.4
             baz=291
U33K  Whale Pass         51.72  45   P        P        08 29 25.6 +0.8
             baz=292
ARSB  Arslanbob          51.88 294   P        P        08 29 26.0 -0.4
ARSB  Arslanbob          51.88 294   P        P        08 29 26.0 -0.4
ARSB                                 pmax     pmax
             comp=Z,9.0nm,0.8s
CRAG  Craig              51.96  46   P        P        08 29 28.6 +2.0
             baz=293
WRAK  Wrangell Islan     52.00  44   P        P        08 29 27.9 +1.1
             baz=292
S34M  Telegraph Cree     52.05  42   P        P        08 29 28.4 +1.1
             baz=292
DLBC  Dease Lake         52.39  41   P        P        08 29 30.4 +0.6
             baz=292
KKAR  Karatay Array      52.70 298   P        P        08 29 31.4 -0.9
KKAR                                 IAmb     IAmb     08 29 32.7
             comp=Z,4.3nm,0.7s
KKAR  Karatay Array      52.70 298            P        08 29 31.1 -1.2
KKAR  Karatay Array      52.70 298   P        P        08 29 31.1 -1.2
KKAR                                 pmax     pmax
             comp=Z,4.0nm,0.7s
V35K  Ketchikan          52.81  45   P        P        08 29 33.7 +0.9
             baz=294
T35M  Bob Quinn          52.85  43   P        P        08 29 34.4 +1.2
             baz=293
WRGLY Wrigley            53.46  34   P        P        08 29 37.4 -0.2
             baz=294
LIRD  Liard River Hi     53.87  39   P        P        08 29 41.4 +0.7
             baz=295
ARTI  Arti               53.99 317   P        P        08 29 40.2 -1.3
             comp=Z,2.8nm,0.6s,baz=90,slow=6.1,SNR=4.7
ARTI                                 LR       LR       08 53 53.9
             comp=Z,26nm,21.5s,baz=26,slow=37
             comp=Z,2.8nm,0.6s
ARTI  Arti               53.99 317c iP        P        08 29 40.7 -0.8
ARTI                                                   08 30 45.4
ARTI                                 S        S        08 37 11.3 -1.7
ARTI                                 SS       SKiKP    08 40 47.6 -0.9
ARTI                                 pmax     pmax
             comp=Z,4.0nm,1.0s
BEAVL Fort Liard         54.02  38   P        P        08 29 42.2 +0.5
             baz=295
KOTAN Kotaneelee Air     54.51  38   P        P        08 29 45.4 +0.2
             baz=296
TOAD  Toad River Com     54.51  40   P        P        08 29 46.5 +1.1
             baz=296
SPITS Spitsbergen Ar     55.32 349   P        P        08 29 49.7 -1.2
             comp=Z,1.7nm,0.7s,baz=34,slow=5.4,SNR=1.4
             comp=Z,1.7nm,0.7s
SIMJ  Simiganj           55.84 293            P        08 29 54.9 -0.4
RES   Resolute Bay       56.25  16            P        08 29 57.1 -0.4
RES   Resolute Bay       56.25  16   P        P        08 29 57.1 -0.4
RES                                  pmax     pmax
             comp=Z,9.0nm,1.0s
ABKAR Akbulak array      56.35 308            P        08 29 57.8 -0.9
ABKAR Akbulak array      56.35 308   P        P        08 29 58.0 -0.6
ABKAR                                IAmb     IAmb     08 29 59.0
             comp=Z,5.3nm,0.5s
AKTO  Aktyubinsk         56.88 310   P        P        08 30 02.0 -0.4
             comp=Z,2.1nm,0.7s,baz=60,slow=9.4,SNR=7.4
AKTO                                 LR       LR       08 56 07.3
             comp=Z,30nm,18.1s,baz=46,slow=38
             comp=Z,2.1nm,0.7s
AKTO  Aktyubinsk         56.88 310   P        P        08 30 02.0 -0.4
YKA   Yellowknife Ar     57.40  33   P        P        08 30 06.5 +0.6
             comp=Z,0.5nm,0.8s,baz=304,slow=6.9,SNR=7.7
             comp=Z,0.5nm,0.8s
YKA   Yellowknife Ar     57.40  33 eP         P        08 30 06.3 +0.4
YKA                                  pmax     pmax
             comp=Z,1.0nm,0.8s
ARCES ARCESS Array B     59.49 339   P        P        08 30 20.0 -0.3
             comp=Z,1.8nm,0.9s,baz=46,slow=7.2,SNR=3.9
             comp=Z,1.8nm,0.9s
ARCES ARCESS Array B     59.49 339 eP         P        08 30 21.1 +0.7
ARCES                                pmax     pmax
             comp=Z,2.0nm,0.9s
NEEM  North Greenlan     59.53   4 i P        P        08 30 18.5 -2.3
NEEM                                 IAmb     IAmb     08 30 21.2
             comp=Z,4.0nm,0.7s
BELG  Belogornoye        61.42 316   P        P        08 30 33.3 -0.4
             comp=Z,15nm,0.7s,baz=36,slow=19,SNR=5.6
BELG                                 LR       LR       08 57 35.4
             comp=Z,17nm,20.7s,baz=272,slow=36
             comp=Z,15nm,0.7s
BELG  Belogornoye        61.42 316deP         P        08 30 33.0 -0.7
BELG                                 pmax     pmax
             comp=Z,3.0nm,0.8s
DBG   Daneborg           62.67 356 i P        P        08 30 32.5 -9.3
DBG                                  IAmb     IAmb     08 30 36.1
             comp=Z,2.2nm,0.5s
WRAB  Tennant Creek      63.26 191   P        P        08 30 47.8 +1.5
WRAB                                 IAmb     IAmb     08 30 49.6
             comp=Z,8.0nm,1.1s
WRAB  Tennant Creek      63.26 191⇓eP         P        08 30 48.4 +2.1
WRAB                                 pmax     pmax
             comp=Z,21nm,2.3s
KMPM  Mount Pierce       64.60  58   P        P        08 30 55.9 +0.8
SUMG  Summit             64.82   1            P        08 30 56.1 -0.4
SUMG  Summit             64.82   1   P        P        08 30 56.1 -0.4
SUMG                                 pmax     pmax
             comp=Z,9.0nm,0.9s
SUMG  Summit             64.82   1 i P        P        08 30 56.0 -0.4
SUMG                                 IAmb     IAmb     08 30 57.4
             comp=Z,8.2nm,0.8s
FIA1  FINESS Array S     64.91 332   P        P        08 30 55.2 -1.4
FINES FINESS Array B     64.91 332   P        P        08 30 55.5 -1.1
FINES FINESS Array B     64.91 332   P        P        08 30 56.3 -0.4
             comp=Z,2.5nm,0.5s,baz=45,slow=7.2,SNR=25
FINES                                LR       LR       09 01 35.5
             comp=Z,19nm,20.0s,baz=63,slow=38
             comp=Z,2.5nm,0.5s
FINES FINESS Array B     64.91 332 eP         P        08 30 56.0 -0.6
FINES                                pmax     pmax
             comp=Z,3.0nm,0.5s
OBN   Obninsk            65.06 323 eP         P        08 30 57.7  0.0
OBN                                e                   08 31 31.1
OBN                                e                   08 33 20.9
OBN                                  pmax     pmax
             comp=Z,7.0nm,0.8s
ASAR  Alice Springs      67.00 191   P        P        08 31 11.3 +0.8
             comp=Z,0.9nm,0.8s,baz=10,slow=6.0,SNR=7.6
             comp=Z,0.9nm,0.8s
ICESG Greenland Ices     68.30   2 i P        P        08 31 18.3 -0.2
ICESG                                IAmb     IAmb     08 31 19.7
             comp=Z,5.6nm,0.7s
KVAR  Kislovodsk Arr     69.13 311   P        P        08 31 22.9 -1.0
             comp=Z,2.9nm,0.3s,baz=27,slow=4.5,SNR=1.9
             comp=Z,2.9nm,0.3s
KIV   Kislovodsk         69.14 311 eP         P        08 31 24.3 +0.4
KIV                                  pmax     pmax
             comp=Z,5.0nm,1.0s
KIV                                  MLR      MLR
             comp=Z,16nm,17.0s
KIV   Kislovodsk         69.14 311 eP         P        08 31 25.5 +1.6
KBZ   Khabaz             69.16 311   P        P        08 31 24.9 +1.0
             comp=Z,2.0nm,0.7s,baz=45,slow=7.1,SNR=5.3
             comp=Z,2.0nm,0.7s
KBZ   Khabaz             69.16 311 eP         P        08 31 25.5 +1.6
KBZ                                  pmax     pmax
             comp=Z,2.0nm,0.6s
KBZ   Khabaz             69.16 311 eP         P        08 31 25.5 +1.6
NVAR  Mina Array Bea     69.39  56   P        P        08 31 26.3 +0.5
             comp=Z,0.5nm,0.6s,baz=309,slow=6.9,SNR=4.9
             comp=Z,0.5nm,0.6s
NB2   NORSAR Subarra     69.82 338   P        P        08 31 27.4 -0.4
             comp=Z,0.9nm,0.5s,baz=33,slow=6.5
NOA   NORSAR Array B     69.82 338   P        P        08 31 27.0 -0.8
             comp=Z,2.0nm,0.7s,baz=35,slow=6.1,SNR=15
NOA                                  LR       LR       09 05 39.5
             comp=Z,17nm,20.7s,baz=25,slow=39
             comp=Z,2.0nm,0.7s
NOA   NORSAR Array B     69.82 338 eP         P        08 31 27.2 -0.6
NOA                                  pmax     pmax
             comp=Z,2.0nm,0.6s
HFS   Hagfors            69.86 336   P        P        08 31 27.3 -0.7
             comp=Z,2.6nm,0.6s,baz=38,slow=7.3,SNR=15
             comp=Z,2.6nm,0.6s
AKASG Malin Array Be     71.32 323   P        P        08 31 36.0 -1.0
             comp=Z,1.4nm,0.5s,baz=42,slow=6.0,SNR=18
             comp=Z,1.4nm,0.5s
AKASG Malin Array Be     71.32 323 eP         P        08 31 36.3 -0.7
AKASG                                pmax     pmax
             comp=Z,1.0nm,0.4s
AKBB  Malin Array Si     71.32 323            P        08 31 35.8 -1.2
AKBB                                 IAmb     IAmb     08 31 37.2
             comp=Z,5.2nm,0.8s
AKBB  Malin Array Si     71.32 323d iP        P        08 31 36.5 -0.5
AKBB                                 pmax     pmax
             comp=Z,6.0nm,0.9s
PDAR  Pinedale Array     71.69  48   P        P        08 31 39.9 +0.2
             comp=Z,1.2nm,0.4s,baz=298,slow=1.6,SNR=4.2
             comp=Z,1.2nm,0.4s
CLL   Collm              77.33 331 i P        P        08 32 11.3 -0.6
             comp=Z,3.0nm,0.7s
CLL                                i pP       pP       08 32 29.4 +1.9
VRAC  Vranov             77.64 328   LR       LR       09 08 52.2
             comp=Z,22nm,18.1s,baz=35,slow=38
EKA   Eskdalemuir Ar     78.47 342   P        P        08 32 18.3 +0.1
             comp=Z,0.7nm,0.5s,baz=22,slow=6.1,SNR=3.8
             comp=Z,0.7nm,0.5s
KHC   Kasperske Hory     78.92 330⇓iP         P        08 32 21.4 +0.5
GERES GERESS Array B     79.11 330   P        P        08 32 21.4 -0.6
             comp=Z,0.4nm,0.5s,baz=29,slow=6.2,SNR=3.4
             comp=Z,0.4nm,0.5s
GERES GERESS Array B     79.11 330 eP         P        08 32 22.1 +0.1
MMAI  Mount Meron Ar     80.74 307   P        P        08 32 31.6 +0.6
             comp=Z,1.6nm,0.6s,baz=46,slow=6.2,SNR=2.8
             comp=Z,1.6nm,0.6s
DAVOX Davos/Dischmat     82.25 331   LR       LR       09 11 38.6
             comp=Z,18nm,20.0s,baz=296,slow=37
M65A  Busby, Falmout     90.02  26   P        P        08 33 21.8 +4.8
             baz=335
ESDC  Sonseca Array      93.14 336   P        P        08 33 30.1 -1.4
             comp=Z,0.4nm,0.6s,baz=27,slow=4.2,SNR=1.7
             comp=Z,0.4nm,0.6s
QSPA  South Pole Qui    132.62 180   PKP      PKPdf    08 39 29.9 -0.9
             comp=Z,1.0nm,0.9s,baz=345,slow=3.6,SNR=2.4
H03N2 Juan Fernandez    144.57  89   T        T        11 21 08.9
             baz=301
H03N3 Juan Fernandez    144.58  89   T        T        11 21 08.3
             baz=301
H03N1 Juan Fernandez    144.59  89   T        T        11 21 13.2
             baz=301
SNAA  Sanae             147.14 198   PKPbc    PKPab    08 39 59.1 -1.8
             comp=Z,1.1nm,0.8s,baz=194,slow=4.2,SNR=6.8
```

AUST 15 08:21:13.3±0.6, 30˚S±2˚×11˚8E±˚, h10^{km}±4^{km}, mb4.4/1, ML2.5/4, Error ellipse: s-maj=6.5km s-min=4.9km az=73.6, Western Australia

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Code  Station Name         Δ°  AZ°   Phase ID            Time     Res
                                     Op       ISC      h  m  s   ISC
BLDU  Ballidu             0.89 259   P        Pg       08 21 30.2 -0.2
BLDU  Ballidu             0.89 259   S        Sg       08 21 41.9 -0.1
KLBR  Kellerberrin        1.14 178   P        Pb       08 21 35.3 +0.1
KLBR  Kellerberrin        1.14 178   S        Sb       08 21 50.1  0.0
MORW  Morawa              2.00 313   P        Pb       08 21 48.7 -1.1
MORW  Morawa              2.00 313   S        Sn       08 22 11.8 -0.4
MUN   Mundaring           2.00 220   P        Pn       08 21 48.4 +1.2
MUN   Mundaring           2.00 220   S        Sb       08 22 14.3 -0.5
NWAO  Narrogin (SRO)      2.51 189   P        Pn       08 21 54.8 +0.6
NWAO  Narrogin (SRO)      2.51 189   S        Sn       08 22 24.0 -0.8
MEEK  Meekatharra         3.87  12   P        Pn       08 22 13.3 +0.4
FORT  Forrest             8.92  95   P        Pn       08 23 20.9 -1.3
             comp=Z,23nm,1.0s
```

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*IDC **15** 08:24:15.0±1.1, 13˚.09N×143˚.90E, h120^{km}±13^{km}, mb3.4/11, mbtmp3.8/11, Error ellipse: s-maj=29.7km s-min=13.5km az=92.0*

ISC 15 08:24:16.5±0.8, 13˚.1N±0˚.1×144˚.1E±0˚.2, h138^{km}, n18, σ1^{s}.17/13, mb3.7/11, Mariana Islands

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Code  Station Name         Δ°  AZ°   Phase ID            Time     Res
                                     Op       ISC      h  m  s   ISC
GUMO  Guam                0.90  55   P        Pn       08 24 38.2 -1.0
             58nm,0.3s,baz=231,slow=6.5,SNR=28
GUMO                                 S        Sn       08 24 55.1 -1.4
             503nm,0.3s,baz=163,slow=19,SNR=17
H11S3 WAKE ISLAND Hy     22.37  73   T        T        08 53 08.6
             baz=253
H11S1 WAKE ISLAND Hy     22.39  73   T        T        08 53 12.4
             baz=253
H11S2 WAKE ISLAND Hy     22.39  73   T        T        08 53 26.0
             baz=253
H11N1 WAKE ISLAND Hy     22.81  70   T        T        08 52 59.3
             baz=255,slow=75,SNR=4.0
H11N2 WAKE ISLAND Hy     22.82  70   T        T        08 53 07.1
             baz=255,slow=75,SNR=4.0
H11N3 WAKE ISLAND Hy     22.83  70   T        T        08 53 04.1
             baz=255,slow=75,SNR=3.8
MJAR  Matsushiro Arr     23.96 348   P        P        08 29 16.1 -1.9
             2.6nm,0.6s,baz=166,slow=8.6,SNR=9.4
             2.6nm,0.6s
KSRS  Korea Array        28.26 332   P        P        08 29 56.4 -0.2
             0.6nm,0.5s,baz=140,slow=10,SNR=4.3
             0.6nm,0.5s
WRA   Warramunga Arr     34.19 197   P        P        08 30 48.8 -0.1
             3.7nm,0.8s,baz=15,slow=8.6,SNR=44
             3.7nm,0.8s
ASAR  Alice Springs      37.86 195   P        P        08 31 20.1  0.0
             0.6nm,0.6s,baz=17,slow=12,SNR=18
             0.6nm,0.6s
STKA  Stephens Creek     44.76 183   P        P        08 32 15.7 -0.6
             0.8nm,0.4s,baz=0.0,slow=6.1,SNR=5.6
             0.8nm,0.4s
MKAR  Makanchi Array     61.35 316   P        P        08 34 17.7  0.0
             0.2nm,0.3s,baz=99,slow=8.7,SNR=4.0
             0.2nm,0.3s
KURBB Kurchatov Arra     64.54 320   P        P        08 34 38.1 -0.6
             0.7nm,0.4s,baz=102,slow=6.8,SNR=8.3
             0.7nm,0.4s
ILAR  Eielson Array      69.34  25   P        P        08 35 10.6 +1.8
             0.2nm,0.5s,baz=257,slow=5.8,SNR=1.8
             0.2nm,0.5s
BVAR  Borovoye Array     69.87 322   P        P        08 35 11.9 -0.4
             0.7nm,0.5s,baz=102,slow=2.1,SNR=2.1
             0.7nm,0.5s
YKA   Yellowknife Ar     83.65  27   P        P        08 36 30.2 +0.9
             0.1nm,0.6s,baz=280,slow=5.5,SNR=1.8
             0.1nm,0.6s
NVAR  Mina Array Bea     87.81  51   P        P        08 36 52.2 +1.4
             0.5nm,0.6s,baz=297,slow=5.7,SNR=5.6
             0.5nm,0.6s
```

NEIC 15 08:37:06.8±0.3, 37˚.64N±0˚.02×105˚.51W±0˚.02, h5^{km}±1^{km}, ML1.7/22, Error ellipse: s-maj=3.2km s-min=2.8km az=237.0, Colorado

```
Code  Station Name         Δ°  AZ°   Phase ID            Time     Res
                                     Op       ISC      h  m  s   ISC
SDCO  Great Sand Dun      0.10   2   Pg       Pg       08 37 09.6 +0.5
SDCO                                 Sg       Sg       08 37 11.2 +0.5
SDCO                                 IAML              08 37 11.8
             501nm,0.1s
T25A  Trinidad            1.01 120   Pg       Pg       08 37 26.1  0.0
T25A                                 Sg       Sg       08 37 39.1 -0.1
T25A                                 IAML              08 37 39.7
             comp=N,28nm,0.5s
T25A                                 IAML              08 37 39.8
             comp=E,18nm,0.2s
S22A  4UR Ranch, Cre      1.05 276   Pg       Pg       08 37 26.9 -0.2
S22A                                 IAML              08 37 42.5
             comp=E,20nm,0.1s
Q24A  Divide              1.35  12   Pg       Pn       08 37 31.9 -0.7
Q24A                                          Sg       08 37 49.2 -1.0
Q24A                                 IAML              08 37 50.3
             comp=E,21nm,0.3s
ISCO  Idaho Springs       2.15 358   Pn       Pn       08 37 42.2 -1.5
ISCO                                 IAML              08 38 13.5
             comp=E,3.4nm,3.1s
MVCO  Mesa Verde          2.42 261            Pn       08 37 47.8 +0.5
MVCO                                 IAML              08 38 30.8
             comp=E,5.4nm,0.8s
PV01  Paradox Valley      2.47 282   Pn       Pn       08 37 47.6 -0.4
ANMO  Albuquerque         2.80 196   Pn       Pn       08 37 53.8 +1.3
ANMO                                 IAML              08 39 08.9
             comp=E,1.7nm,4.0s
ANMO  Albuquerque         2.80 196   Pn       Pn       08 37 53.1 +0.6
ANMO                                 IAML              08 38 36.3
             comp=E,1.2nm,0.8s
ANMO                                 IAML              08 39 17.1
             comp=E,1.2nm,4.2s
```

IDC 15 08:43:06.2±1.9, 57°.04S×142°.14W, h0km, mb3.7/3, mbtmp3.7/3, MS3.6/10, Error ellipse: s-maj=76.8km s-min=35.8km az=29.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	32.61	288	LR	LR	08 59 21.4	
	comp=Z,103nm,19.7s,baz=212,slow=30						
QSPA	South Pole Qui	33.12	180	LR	LR	09 00 34.5	
	comp=Z,88nm,20.9s,baz=66,slow=32						
PMSA	Palmer Station	36.40	135	LR	LR	09 00 43.1	
	comp=Z,117nm,20.9s,baz=282,slow=29						
PPT	Papeete	39.80	349	LR	LR	09 03 42.9	
	comp=Z,70nm,19.0s,baz=145,slow=31						
H03S2	Juan Fernandez	48.00	89	T	T	09 43 36.9	
	baz=220,slow=74,SNR=13						
H03S1	Juan Fernandez	48.00	89	T	T	09 43 38.8	
	baz=220,slow=74,SNR=14						
H03S3	Juan Fernandez	48.01	89	T	T	09 43 38.0	
	baz=220,slow=74,SNR=14						
H03N3	Juan Fernandez	48.28	89	T	T	09 43 56.2	
	baz=222,slow=72,SNR=14						
H03N2	Juan Fernandez	48.29	89	T	T	09 43 42.5	
	baz=222,slow=72,SNR=24						
H03N1	Juan Fernandez	48.30	89	T	T	09 43 57.7	
	baz=222,slow=72,SNR=26						
SNAA	Sanae	48.46	164	P	P	08 51 49.8	-0.1
	0.7nm,0.8s,baz=210,slow=14,SNR=6.1						
SNAA				LR	LR	09 11 12.0	
	comp=Z,46nm,18.8s,baz=256,slow=35						
	0.7nm,0.8s						
ASAR	Alice Springs	67.23	261	P	P	08 54 03.3	+1.0
	1.1nm,0.8s,baz=145,slow=6.0,SNR=8.6						
	1.1nm,0.8s						
ATAH	Atahualpa	69.92	71	LR	LR	09 17 13.1	
	comp=Z,52nm,21.3s,baz=184,slow=29						
WRA	Warramunga Arr	70.01	264	P	P	08 54 17.8	-1.8
	0.8nm,0.8s,baz=143,slow=6.2,SNR=5.5						
	0.8nm,0.8s						
JTS	Las Juntas de	81.78	57	LR	LR	09 23 57.0	
	comp=Z,14nm,19.6s,baz=250,slow=30						
PCRV	Puerto La Cruz	91.75	74	LR	LR	09 31 02.2	
	comp=Z,32nm,20.8s,slow=31						
BOSA	Boshof	94.02	169	LR	LR	09 36 34.5	
	comp=Z,48nm,18.3s,baz=200,slow=34						
LBTB	Lobatse	97.62	169	LR	LR	09 39 10.0	
	comp=Z,38nm,18.3s,baz=168,slow=34						
ESDC	Sonseca Array	147.87	105	PKPbc	PKPdf	09 02 51.0	+1.4
	0.3nm,0.5s,baz=250,slow=2.6,SNR=2.7						
MKAR	Makanchi Array	151.24	268	PKPbc	PKiKP	09 03 01.7	+0.7
	0.6nm,0.8s,baz=126,slow=2.5,SNR=4.8						

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*IDC **15** 08:54:17.3±1.6, 2°.66N×124°.93E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=194.4km s-min=21.6km az=64.0*

*DJA **15** 08:54:31.7±0.9, 3°N±7°×12°6E±°, h88km±17km, M4.4/12, mB5.2/3, mb4.6/4, MLv4.2/12, Mw(mB)4.5/3*

ISC 15 08:54:28.6±1.2, 3°.2N±0°.1×126°.3E±0°.1, h100km, n10, σ1ˢ.67/10, mb3.5/4, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	0.91	300	P	Pn	08 54 50.0	+2.0
TNTI	Ternate	2.66	157	P	Pn	08 55 12.3	+2.4
MRSI	Marisa	5.16	238	P	Pn	08 55 44.5	+1.0
APSI	Ampana	6.22	229	P	Pn	08 55 59.3	+1.3
	0.1nm45nm,0.8s						
NLAI	Namlea	6.48	173	P	Pn	08 56 01.5	+0.1
AAI	Ambon	7.13	165	P	Pn	08 56 11.6	+1.3
WRA	Warramunga Arr	24.34	161	P	P	08 59 37.0	-0.3
	0.9nm,0.8s,baz=337,slow=10,SNR=13						
	0.9nm,0.8s						
ASAR	Alice Springs	27.74	165	P	P	09 00 06.2	-1.8
	0.2nm,0.6s,baz=342,slow=8.8,SNR=4.1						
	0.2nm,0.6s						
MKAR	Makanchi Array	57.73	326	P	P	09 04 08.1	-1.0
	0.4nm,0.4s,baz=126,slow=7.6,SNR=8.5						
	0.4nm,0.4s						
KURBB	Kurchatov Arra	61.93	328	P	P	09 04 36.7	-1.0
	0.5nm,0.6s,baz=126,slow=7.1,SNR=6.3						
	0.5nm,0.6s						

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*IDC **15** 09:12:18.0±0.6, 12°.75S×165°.95E, h0km, mb4.4/17, mbtmp4.3/18, ML3.4/1, MS3.8/26, Error ellipse: s-maj=23.7km s-min=15.5km az=98.0*

*NEIC **15** 09:12:19.8±1.6, 12°.72S±0°.07×166°.0E±0°.1, h10km±1km, mb4.7/23, Error ellipse: s-maj=21.8km s-min=2.9km az=56.0*

*NOU **15** 09:12:22.6, 12°.68S×166°.02E, h30km, mb5.0/19, Santa Cruz Islands*

ISC 15 09:12:23.7±0.4, 12°.74S±0°.06×165°.95E±0°.08, h40km, n93, σ0ˢ.99/78, mb4.6/26, MS3.8/23, 2C, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUES	Luesalemba Tem	2.06	359	P	Pn	09 12 54.5	-1.4
SANVU	Saraoutou	2.95	156		Pn	09 13 07.1	-1.0
SANVU	Saraoutou	2.95	156	P	Pn	09 13 07.5	-0.6
VLAKA	Lakatoro	3.64	157	P	Pn	09 13 17.4	-0.1
HURO	Huro Makira	4.56	299	P	Pn	09 13 28.9	-1.3
NGOA	Tingoa Renbel	5.88	281	P	Pn	09 13 46.7	-1.6
ALEG	Aligegeo Malai	6.51	307	P	Pn	09 13 56.3	-0.6
HNR	Honiara	6.75	299	Pn	Pn	09 14 00.3	+0.1
HNR	Honiara	6.75	299	P	Pn	09 14 01.0	+0.8
SAVO	Savo Central	7.00	300	P	Pn	09 14 04.9	+1.1
TATA	Tatamba Isabel	7.43	305	P	Pn	09 14 09.8	+0.2
DZM	Mont Dzumac	9.29	177	Pn	Pn	09 14 35.0	-0.3
DZM	Mont Dzumac	9.29	177	Pn	Pn	09 14 34.6	-0.6
	0.4nm,0.3s,baz=349,slow=16,SNR=7.1						
DZM				Sn	Sn	09 16 19.2	+0.6
	0.4nm,0.3s,baz=321,slow=12,SNR=2.4						
DZM				LR	LR	09 17 27.8	
	comp=Z,263nm,19.1s,baz=16,slow=33						
	1.9nm,0.6s						
DZM	Mont Dzumac	9.29	177	P	Pn	09 14 35.3	0.0
YATNC	Mamie plateau,	9.31	175	P	Pn	09 14 35.6	+0.2
OUENC	Ouen Island, N	9.66	175	P	Pn	09 14 40.6	+0.4
MSVF	Nonsavu	12.69	115	LR	LR	09 19 16.4	
	comp=Z,947nm,18.2s,baz=300,slow=33						
PMG	Port Moresby	18.74	278	P	P	09 16 38.4	-0.8
PMG				IAmb	IAmb	09 16 44.4	
	comp=Z,36nm,1.1s						
PMG	Port Moresby	18.74	278	LR	LR	09 23 58.9	
	comp=Z,158nm,18.1s,baz=120,slow=37						
EIDS	Eidsvold	18.83	226		P	09 16 39.5	-0.7
EIDS				IAmb	IAmb	09 16 46.4	
	comp=Z,15nm,0.7s						
EIDS	Eidsvold	18.83	226	P	Pn	09 16 41.9	+0.9
CTAO	Charters Tower	20.25	246		P	09 16 55.7	-0.1
CTAO				IAmb	IAmb	09 17 13.2	
	comp=Z,21nm,1.1s						
ARMA	Armidale	22.02	215		P	09 17 14.5	-0.4
ARMA				IAmb	IAmb	09 17 18.3	
	comp=Z,27nm,1.0s						
ARMA	Armidale	22.02	215	P	P	09 17 15.9	+1.0
COEN	Coen	22.19	264	P	P	09 17 16.6	-0.2
COEN				IAmb	IAmb	09 17 22.5	
	comp=Z,16nm,0.9s						
CMSA	Cobar Meteorol	26.41	222	P	P	09 17 57.4	+0.7
BKZ	Black Stump Fm	27.93	162	P	P	09 18 10.0	-0.2
STKA	Stephens Creek	29.38	226		P	09 18 23.5	+0.3
STKA	Stephens Creek	29.38	226	P	P	09 18 23.3	+0.1
	comp=Z,12nm,0.8s,baz=48,slow=11,SNR=13						
STKA				LR	LR	09 30 51.4	
	comp=Z,212nm,18.3s,baz=27,slow=38						
	comp=Z,12nm,0.8s						
TOO	Toolangi	30.75	213	P	P	09 18 35.1	-0.2
WRAB	Tennant Creek	31.12	253	P	P	09 18 37.5	-1.2
WRA	Warramunga Arr	31.13	253	P	P	09 18 37.6	-1.2
	comp=Z,3.4nm,1.0s,baz=81,slow=8.6,SNR=6.5						
WRA				PcP	PcP	09 21 34.4	+0.9
	comp=Z,0.6nm,0.8s,baz=86,slow=2.9,SNR=3.2						
WRA				LR	LR	09 31 00.2	
	comp=Z,115nm,19.5s,baz=148,slow=36						
	comp=Z,3.4nm,1.0s						
AS31	Alice Springs	32.25	246	P	P	09 18 48.2	-0.5
ASAR	Alice Springs	32.25	246	P	P	09 18 47.7	-1.0
ASAR	Alice Springs	32.25	246	P	P	09 18 47.4	-1.3
	comp=Z,4.8nm,0.8s,baz=76,slow=8.8,SNR=29						
ASAR				PcP	PcP	09 21 37.9	+1.3
	comp=Z,0.8nm,0.8s,baz=86,slow=2.5,SNR=3.6						
ASAR				LR	LR	09 32 33.0	
	comp=Z,225nm,18.4s,baz=86,slow=38						
	comp=Z,4.8nm,0.8s						
BBOO	Buckleboo	33.85	229	P	P	09 19 03.1	+0.7
BBOO	Buckleboo	33.85	229	P	P	09 19 03.2	+0.7
MTN	Manton Dam	33.94	266	P	P	09 19 01.4	-2.0
MTN				IAmb	IAmb	09 19 27.9	
	comp=Z,8.7nm,0.9s						
KNRA	Kununurra	36.14	261		P	09 19 21.6	-0.8
FITZ	Fitzroy Crossi	39.17	257		P	09 19 48.1	+0.1
FITZ	Fitzroy Crossi	39.17	257	P	P	09 19 47.9	0.0
	comp=Z,7.5nm,0.6s,baz=86,slow=8.6,SNR=9.6						
	comp=Z,7.5nm,0.6s						
PPT	Papeete	43.12	102	LR	LR	09 34 28.3	
	comp=Z,85nm,19.9s,baz=272,slow=31						
DAV	Davao City (W)	44.69	294	LR	LR	09 37 21.8	
	comp=Z,43nm,21.3s,baz=205,slow=34						
PSA00	Pilbara Seismi	44.78	252	P	P	09 20 33.5	-0.4
MBWA	Marble Bar	44.87	253	P	P	09 20 34.8	+0.3
MBWA				IAmb	IAmb	09 20 56.0	
	comp=Z,17nm,1.1s						
NWAO	Narrogin (SRO)	48.70	237	P	P	09 21 03.9	-0.5
NWAO	Narrogin (SRO)	48.70	237	LR	LR	09 41 02.6	
	comp=Z,90nm,20.2s,baz=35,slow=35						
MORW	Morawa	49.01	243	P	P	09 21 07.1	+0.3
MORW				IAmb	IAmb	09 21 07.6	
	comp=Z,7.7nm,0.8s						
JOW	Kunigami	53.72	317	LR	LR	09 44 05.7	
	comp=Z,59nm,19.2s,baz=273,slow=36						
MJAR	Matsushiro Arr	55.56	333	P	P	09 21 54.3	-0.9
	comp=Z,2.3nm,0.9s,baz=155,slow=7.7,SNR=3.3						
	comp=Z,2.3nm,0.9s						
ASAJ	Asahikawa	60.45	341	LR	LR	09 47 55.8	
	comp=Z,49nm,18.9s,baz=146,slow=35						
KSRS	Korea Array	61.38	326	P	P	09 22 37.2	+1.5
	comp=Z,1.3nm,0.8s,baz=149,slow=7.2,SNR=2.9						
	comp=Z,1.3nm,0.8s						
USRK	Ussuriysk Ar.	64.54	334	P	P	09 23 04.1	+7.5
	comp=Z,2.4nm,0.6s,baz=142,slow=7.3,SNR=5.8						
VNDA	Vanda	64.81	181	P	P	09 22 59.3	+1.3
	comp=Z,0.9nm,0.7s,baz=16,slow=3.4,SNR=4.2						
VNDA				LR	LR	09 49 31.8	
	comp=Z,52nm,18.3s,baz=346,slow=34						
	comp=Z,0.9nm,0.7s						
PETK	Petropavlovsk-	65.96	355	P	P	09 23 05.8	+0.2
	comp=Z,0.9nm,0.4s,baz=161,slow=5.7,SNR=3.6						
	comp=Z,0.9nm,0.4s						
CMAR	Chiang Mai Arr	72.97	294	P	P	09 23 50.9	+1.3
	comp=Z,1.4nm,0.4s,baz=112,slow=6.1,SNR=8.7						
CMAR				LR	LR	09 58 03.2	
	comp=Z,17nm,18.7s,baz=175,slow=38						
	comp=Z,1.4nm,0.4s						
MA2	Magadan	73.10	352	LR	LR	09 53 00.7	
	comp=Z,77nm,19.6s,baz=156,slow=33						
SEY	Seymchan	76.17	354	LR	LR	09 55 05.3	
	comp=Z,76nm,19.6s,baz=156,slow=34						
QSPA	South Pole Qui	77.28	180	P	P	09 24 13.7	-0.1
QSPA				IAmb	IAmb	09 24 27.5	
	comp=Z,13nm,0.9s						
QSPA	South Pole Qui	77.28	180	P	P	09 24 13.1	-0.6
	comp=Z,14nm,1.0s,baz=5.2,slow=2.5,SNR=16						
	comp=Z,14nm,1.0s						
KDAK	Kodiak Island	78.07	21	LR	LR	09 54 10.9	
	comp=Z,152nm,19.2s,baz=215,slow=32						
SONM	Songino Array	80.14	324	P	P	09 24 29.6	-0.2
	comp=Z,1.8nm,0.4s,baz=131,slow=4.4,SNR=1.9						
	comp=Z,1.8nm,0.4s						
BILL	Bilibino	80.56	0		P	09 24 31.3	-0.1
BILL				IAmb	IAmb	09 24 46.7	
	comp=Z,11nm,1.1s						
ILAR	Eielson Array	85.05	18	P	P	09 24 53.4	-1.3
	comp=Z,1.2nm,0.7s,baz=231,slow=5.7,SNR=4.7						
ILAR				LR	LR	09 59 11.0	
	comp=Z,46nm,19.2s,baz=183,slow=33						
	comp=Z,1.2nm,0.7s						
M27K	Edge Creek, AK	85.11	22	P	P	09 24 56.3	+1.0
M27K				IAmb	IAmb	09 25 01.2	
	comp=Z,6.1nm,1.1s						
BBB	Bella Bella	85.85	34	LR	LR	09 58 26.9	
	comp=Z,98nm,18.8s,baz=248,slow=32						
EVN	Everest	86.53	300		P	09 25 02.7	-1.0
EVN				IAmb	IAmb	09 25 30.0	
	comp=Z,11nm,1.0s						
PFO	Pinyon Flats O	86.89	55	LR	LR	09 56 53.6	
	comp=Z,79nm,19.4s,baz=246,slow=31						
NVAR	Mina Array Bea	86.96	50	LR	LR	09 57 58.9	
	comp=Z,119nm,19.3s,baz=230,slow=32						
BELA	Belgrano 2	88.79	176		P	09 25 11.5	-1.4
BELA				IAmb	IAmb	09 25 15.8	
	comp=Z,4.9nm,0.9s						
LPIG	La Paz	89.53	65	LR	LR	09 57 44.9	
	comp=Z,39nm,19.9s,baz=180,slow=30						
ELK	Elko	89.92	48	LR	LR	09 59 29.0	
	comp=Z,93nm,18.8s,baz=264,slow=32						
PDAR	Pinedale Array	94.55	47	LR	LR	10 02 49.2	
	comp=Z,31nm,19.2s,baz=242,slow=32						
TROLL	Troll, Antarti	94.72	185	⇑P	P	09 25 39.8	-0.9
	comp=Z,172nm,0.8s						
MKAR	Makanchi Array	94.89	317	P	P	09 25 42.2	+0.6
	comp=Z,3.5nm,1.0s,baz=112,slow=3.6,SNR=11						
	comp=Z,3.5nm,1.0s						
ZALV	Zalesovo Beam	95.04	324	P	P	09 25 42.0	-0.1
	comp=Z,0.6nm,0.2s,baz=101,slow=3.1,SNR=4.7						
	comp=Z,0.6nm,0.2s						
MAKZ	Makanchi	95.10	317		P	09 25 42.8	+0.2
ANMO	Albuquerque	95.24	56	LR	LR	10 02 45.0	
	comp=Z,134nm,19.3s,baz=342,slow=32						
SNAA	Sanae	95.45	184	⇑P	P	09 25 41.5	-2.3
	comp=Z,46nm,1.0s						
SNAA	Sanae	95.45	184	P	P	09 25 43.1	-0.8
	comp=Z,2.3nm,1.0s,baz=171,slow=5.3,SNR=4.5						
	comp=Z,2.3nm,1.0s						
YKA	Yellowknife Ar	96.38	27	P	P	09 25 47.4	-0.6
	comp=Z,0.2nm,0.7s,baz=263,slow=4.2,SNR=2.2						
YKA				LR	LR	10 01 11.1	
	comp=Z,25nm,21.4s,baz=200,slow=30						
	comp=Z,0.2nm,0.7s						
TXAR	Lajitas Array	96.46	61	LR	LR	10 01 31.7	
	comp=Z,40nm,20.1s,baz=246,slow=31						
KURBB	Kurchatov Arra	98.10	320	P	Pdif	09 25 56.9	+0.8
	comp=Z,0.1nm,0.3s,baz=93,slow=3.3,SNR=1.6						
	comp=Z,0.1nm,0.3s						
ARCES	ARCESS Array B	118.01	345	PKP	PKPdf	09 31 05.2	-0.4
	comp=Z,1.6nm,0.6s,baz=58,slow=4.5,SNR=6.9						
WBO	Williamsburg	119.18	45		PKiKP	09 31 09.5	+1.0
LPAZ	La Paz	119.25	117	PKP	PKiKP	09 31 12.5	+2.2
	comp=Z,0.4nm,0.4s,baz=162,slow=3.2,SNR=2.4						
AKASG	Malin Array Be	128.38	326	PKP	PKiKP	09 31 26.6	0.0
	comp=Z,0.2nm,0.2s,baz=79,slow=1.4,SNR=5.9						
NOA	NORSAR Array B	128.38	345	PKP	PKiKP	09 31 26.5	+0.1
	comp=Z,0.6nm,0.8s,baz=29,slow=1.9,SNR=4.0						
BRTR	Keskin Array B	130.24	312	PKP	PKiKP	09 31 31.5	+0.5
	comp=Z,0.2nm,0.3s,baz=137,slow=3.0,SNR=0.8						
BRTR				SKPbc	SKPbc	09 34 54.3	+4.2
	comp=Z,0.7nm,0.8s,baz=90,slow=3.0,SNR=4.5						
GERES	GERESS Array B	137.30	333	PKP	PKiKP	09 31 45.0	+0.1
	comp=Z,0.8nm,0.8s,baz=50,slow=1.5,SNR=4.4						
KEST	Kesra	148.87	321	PKPbc	PKiKP	09 32 08.4	-0.6
	comp=Z,6.6nm,0.7s,baz=327,slow=2.9,SNR=6.7						
ESDC	Sonseca Array	151.73	343	PKPbc	PKiKP	09 32 15.0	+0.3
	comp=Z,2.7nm,0.8s,baz=26,slow=3.6,SNR=13						
ESDC				PKPab	pPKPbc	09 32 24.2	-0.6
	comp=Z,2.7nm,0.8s,baz=19,slow=3.1,SNR=11						
TORD	Torodi Ar. Bea	164.65	273	PKPab	PKPab	09 33 20.0	+0.3
	comp=Z,2.0nm,0.4s,baz=75,slow=4.8,SNR=2.2						

SSNC 15 09:42:30.2±2.6, 22°.20N×72°.50W, h10km±191km, MD4.0, Bahama Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRTK	Grand Turk	1.44	118	IVmB_BB		09 42 28.6	
	comp=Z,334nm,0.3s						
GRTK				*e*S	Sn	09 43 07.8	-7.4
MASC	Masc	2.58	219	*e*P	Pn	09 43 10.2	-1.8
MASC				IVmB_BB		09 43 10.7	
	comp=Z,253nm,0.4s						
NMDO	Nuevo Mundo	2.83	235	*e*P	Pn	09 43 13.6	-1.9
QMBU	Quimbuelo	2.94	228	*e*P	Pn	09 43 15.5	-1.4
PINC	Pinares de May	3.51	242	*e*P	Pn	09 43 22.6	-2.2
RCC	Rio Carpintero	3.70	234	*e*P	Pn	09 43 25.2	-2.2
MARVS	Santiago de Cu	3.86	236	*e*P	Pn	09 43 27.2	-2.4
YAR	Yar	4.03	244	*e*P	Pn	09 43 29.9	-2.2
PILO	Pilon	5.12	244	*e*P	Pn	09 43 44.7	-2.3

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*NOU **15** 09:42:32.9, 38°.26S×176°.39E, h185km, MLv4.0/20, North Island, New Zealand*

*IDC **15** 09:42:34.0±0.7, 38°.37S×176°.12E, h156km±10km, mb3.4/4, mbtmp3.9/5, Error ellipse: s-maj=30.4km s-min=16.8km az=126.0*

*WEL **15** 09:42:36.3±1.0, 38°S±6°×17°6E±°, h154km±8km, M3.9/105, ML2.8/9, MLv3.9/105, Error ellipse: s-maj=9.3km s-min=7.3km az=87.9, confirmed*

ISC 15 09:42:34.6±0.9, 38°.26S±0°.05×176°.29E±0°.04, h180km±6km, n189, σ1ˢ.45/200, mb3.6/4, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HLRZ	Highlands Stat	0.05	76	P	Pn	09 42 58.0	-0.4
HSRZ	Hossack Road	0.06	216	P	Pn	09 42 57.9	-0.4
UTU	Utuhina	0.12	319	P	Pn	09 42 58.0	-0.4
HRRZ	Handcock Road	0.13	182	P	Pn	09 42 58.0	-0.4
GRRZ	Galatos Road	0.17	239	P	Pn	09 42 58.2	-0.3
OMRZ	Omania	0.17	23	P	Pn	09 42 57.7	-0.9
TARZ	Mount Tarawera	0.17	81	P	Pn	09 42 57.9	-0.7
NGRZ	Ngongotaha	0.18	334	P	Pn	09 42 58.0	-0.6
RRRZ	Republican Roa	0.19	113	P	Pn	09 42 57.8	-0.7
KARZ	Kaharoa	0.25	352	P	Pn	09 42 57.8	-0.8
PRRZ	Plateau Road	0.25	161	P	Pn	09 42 58.1	-0.5
LIRZ	Lichensteins R	0.27	16	P	Pn	09 42 57.8	-0.9
WPRZ	Whakapapatarin	0.27	201	P	Pn	09 42 58.4	-0.2
ALRZ	Allen Road	0.30	172	P	Pn	09 42 58.4	-0.3
EDRZ	Edgecumbe	0.39	66	P	Pn	09 42 58.0	-1.1
MARZ	Manawahe	0.41	48	P	Pn	09 42 58.2	-0.9
KUTZ	Kaahu Road	0.43	238	P	Pn	09 42 59.1	0.0
MUGZ	Murupara	0.43	119	P	Pn	09 42 58.3	-0.8
MUGZ				S	Sn	09 43 15.9	-2.1
OPRZ	Ohinepanea	0.47	27	P	Pn	09 42 58.0	-1.3
OPRZ				S	Sn	09 43 15.5	-2.6
KMRZ	Kaimai	0.50	327	P	Pn	09 42 58.7	-0.7
TGRZ	Tauranga	0.54	358	P	Pn	09 42 58.4	-1.1
MRHZ	Matea Rd	0.58	170	P	Pn	09 42 59.6	-0.2
TLZ	Tolley Road	0.59	263	P	Pn	09 42 59.9	0.0
WATZ	Wairara	0.62	224	P	Pn	09 43 00.2	+0.2
RTZ	Ruatahuna	0.65	123	P	Pn	09 42 59.7	-0.5
RTZ				S	Sn	09 43 18.2	-1.7
URZ	Urewera	0.65	90	P	Pn	09 42 57.9	-2.1
	823nm,0.3s,baz=327,slow=6.0,SNR=2685						
URZ				S	Sn	09 43 16.6	-2.9
	246nm,0.2s,baz=270,slow=20,SNR=7.3						
URZ	Urewera	0.65	90	P	Pn	09 42 58.7	-1.3
URZ	Urewera	0.65	90	P	Pn	09 42 58.8	-1.3
WHRZ	Whale Island	0.68	53	P	Pn	09 42 59.2	-1.0
RATZ	Rangitukua	0.72	214	P	Pn	09 43 00.7	+0.2
MTHZ	Maungataniwha	0.73	144	P	Pn	09 43 00.5	-0.1
MTHZ				S	Sn	09 43 19.2	-1.4
RITZ	Rihia Road	0.79	205	P	Pn	09 43 01.5	+0.7
TOZ	Tahuroa Road	0.82	310	P	Pn	09 43 00.5	-0.5
RAHZ	Arahi	0.90	136	P	Pn	09 43 02.1	+0.4
RAHZ				S	Sn	09 43 21.9	-0.7
BKZ	Black Stump Fm	0.91	170	P	Pn	09 43 01.8	+0.1
BKZ	Black Stump Fm	0.91	170	S	Sn	09 43 22.1	-0.7
BKZ	Black Stump Fm	0.91	170	P	Pn	09 43 01.9	+0.2
BKZ				S	Sn	09 43 21.6	-1.2
RAGZ	Rawiri	0.92	105	P	Pn	09 43 01.4	-0.4
RAGZ				S	Sn	09 43 20.9	-1.8
NMHZ	Naumai	0.93	154	P	Pn	09 43 02.8	+1.0
NMHZ				S	Sn	09 43 23.2	+0.2
NTVZ	North Tongarir	0.96	210	P	Pn	09 43 03.3	+1.1
TMVZ	Te Maari	0.97	208	P	Pn	09 43 02.6	+0.5
KRVZ	Karewarewa	0.97	211	P	Pn	09 43 02.7	+0.5
SNGZ	Shannon Statio	0.97	122	P	Pn	09 43 02.3	+0.2
MWZ	Matawai	0.98	94	P	Pn	09 43 01.3	-0.8
MWZ				S	Sn	09 43 20.6	-2.8
ETVZ	East Tongariro	0.98	207	P	Pn	09 43 02.8	+0.6
WTVZ	West Tongariro	1.01	213	P	Pn	09 43 02.9	+0.4
NNVZ	North Ngauruho	1.01	211	P	Pn	09 43 03.0	+0.5
OTVZ	Oturere	1.02	208	P	Pn	09 43 03.5	+0.9
WIZ	White Island	1.02	44	P	Pn	09 43 00.8	-1.7
TWVZ	Taurewa	1.04	219	P	Pn	09 43 03.2	+0.4
SNVZ	South Ngauruho	1.05	209	P	Pn	09 43 03.4	+0.5
NGZ	Ngauruhoe	1.06	210	P	Pn	09 43 03.5	+0.6
WHHZ	Waihua	1.10	138	P	Pn	09 43 03.6	+0.6
TUVZ	Tukino	1.12	206	P	Pn	09 43 04.0	+0.7
RUGZ	Raukumara Rang	1.14	75	P	Pn	09 43 01.5	-2.0
RUGZ				S	Sn	09 43 20.7	-5.0
ARHZ	Aropaoanui	1.14	151	P	Pn	09 43 04.2	+0.9
FWVZ	Far West T-bar	1.15	210	P	Pn	09 43 03.9	+0.3
MAVZ	Matarangi	1.15	209	P	Pn	09 43 04.5	+0.7
HIZ	Hauiti	1.15	257	P	Pn	09 43 03.8	+0.4
HIZ	Hauiti	1.15	257	S	Sn	09 43 26.3	+0.6
HIZ	Hauiti	1.15	257	P	Pn	09 43 03.9	+0.4
WHVZ	Whangaehu Hut	1.16	208	P	Pn	09 43 04.3	+0.5
KWHZ	Kaweka Forest	1.16	175	P	Pn	09 43 04.4	+0.8
TRVZ	Turoa	1.18	209	P	Pn	09 43 04.7	+0.7
WNVZ	Wahianoa	1.19	207	P	Pn	09 43 04.5	+0.5
MOVZ	Moawhango	1.22	200	P	Pn	09 43 04.3	+0.2
MCHZ	McNeill Hill	1.22	165	P	Pn	09 43 05.2	+1.2
RIGZ	Rimuhau	1.24	111	P	Pn	09 43 04.3	0.0
TKGZ	Te Karaka	1.24	99	P	Pn	09 43 03.8	-0.4
PKVZ	Pokaka	1.26	215	P	Pn	09 43 04.9	+0.5
HAZ	Te Kaha	1.28	67	P	Pn	09 43 02.7	-1.9
MTVZ	Mangateitei	1.29	209	P	Pn	09 43 05.3	+0.6
KNZ	Kokohu	1.32	125	P	Pn	09 43 05.1	+0.2
TWGZ	Tauwhareparae	1.33	87	P	Pn	09 43 04.5	-0.6
KRHZ	Kereru	1.38	177	P	Pn	09 43 06.1	+0.7
PRGZ	Paritu Road	1.41	118	P	Pn	09 43 05.8	+0.1
MKAZ	Moumakai	1.46	322	P	Pn	09 43 05.6	-0.7
PKGZ	Pakihiroa	1.47	75	P	Pn	09 43 05.1	-1.2
VRZ	Vera Road	1.47	234	P	Pn	09 43 07.2	+0.9
CKHZ	Cape Kidnapper	1.52	156	P	Pn	09 43 07.8	+1.1
CNGZ	Carnagh Statio	1.52	99	P	Pn	09 43 06.9	+0.2
MHGZ	Mahia Peninsul	1.55	126	P	Pn	09 43 07.5	+0.6
PUZ	Puketiti	1.56	84	P	Pn	09 43 05.9	-1.2
KUZ	Kuaotunu	1.58	343	P	Pn	09 43 05.9	-1.5
KUZ	Kuaotunu	1.58	343	P	Pn	09 43 06.1	-1.3
KAHZ	Kahuranaki	1.59	164	P	Pn	09 43 08.5	+1.0
PNHZ	Pukenui	1.65	182	P	Pn	09 43 08.5	+0.5
ETAZ	East Tamaki Re	1.70	320	P	Pn	09 43 07.8	-0.7
WIAZ	Waiheke Island	1.73	328	P	Pn	09 43 08.2	-0.7
WMGZ	Waiomatatini S	1.74	76	P	Pn	09 43 07.8	-1.1
MHEZ	Mangahewa	1.74	242	P	Pn	09 43 10.3	+1.4
MXZ	Matakaoa Point	1.74	67	P	Pn	09 43 07.9	-1.0
MXZ	Matakaoa Point	1.74	67	P	Sn	09 43 32.7	-2.8
MXZ	Matakaoa Point	1.74	67	P	Pn	09 43 07.8	-1.2
AWAZ	Awhitu Peninsu	1.77	312	P	Pn	09 43 08.6	-0.6
WAZ	Wanganui	1.80	214	P	Pn	09 43 10.3	+0.8
WPHZ	Waipukurau	1.80	176	P	Pn	09 43 10.1	+0.6
TSZ	Takapari Road	1.81	188	P	Pn	09 43 10.2	+0.5
PXZ	Pawanui	1.82	166	P	Pn	09 43 10.4	+0.7
EPAZ	Eden Park BICE	1.85	318	P	Pn	09 43 09.3	-0.7
MBAZ	Motutapu North	1.86	323	P	Pn	09 43 09.5	-0.6
DREZ	Durham Road	1.88	240	P	Pn	09 43 11.6	+1.3
HBAZ	Herne Bay Bore	1.88	318	P	Pn	09 43 09.5	-0.8
LREZ	Lake Rotokare	1.90	230	P	Pn	09 43 11.7	+1.2
WTAZ	Waiatarua	1.90	314	P	Pn	09 43 10.2	-0.5
PREZ	Palmer Road	1.98	236	P	Pn	09 43 12.9	+1.5
NEZ	North Egmont	1.99	239	P	Pn	09 43 13.0	+1.4
PRHZ	Porangahau	2.02	172	P	Pn	09 43 12.3	+0.5
ABAZ	Army Bay	2.02	325	P	Pn	09 43 11.5	-0.4
PKE	Pukeiti	2.03	242	P	Pn	09 43 13.2	+1.2
DVHZ	Dannevirke	2.03	183	P	Pn	09 43 12.2	+0.2
KHEZ	Kahui Hut	2.05	239	P	Pn	09 43 13.3	+1.0
KHEZ	Kahui Hut	2.05	239	P	Pn	09 43 13.5	+1.2
OHWZ	Ohakea	2.08	201	P	Pn	09 43 13.5	+1.0
GRZ	Great Barrier	2.12	341	P	Pn	09 43 11.8	-1.1
NBEZ	Newall Road No	2.14	241	P	Pn	09 43 14.3	+1.1
POWZ	Post Office Ro	2.16	191	P	Pn	09 43 13.7	+0.3
ANWZ	Angora Road	2.20	176	P	Pn	09 43 14.3	+0.5
NMEZ	Namu Road	2.21	238	P	Pn	09 43 14.9	+1.0
PRWZ	Pori Road	2.30	186	P	Pn	09 43 15.4	+0.4
BFZ	Birch Farm	2.42	181	P	Pn	09 43 16.4	+0.1
BFZ	Birch Farm	2.42	181	S	Sn	09 43 48.2	-0.6
BFZ	Birch Farm	2.42	181	P	Pn	09 43 16.3	+0.1
MRZ	Mangatainoka R	2.46	193	P	Pn	09 43 16.7	-0.1
TIWZ	Tintock	2.53	187	P	Pn	09 43 17.7	+0.1
CPWZ	Castlepoint	2.64	181	P	Pn	09 43 19.5	+0.6
OGWZ	Otaki Gorge	2.69	198	P	Pn	09 43 19.5	0.0
HOWZ	Holdsworth Sta	2.70	193	P	Pn	09 43 19.2	-0.4
WCZ	Waipu Caves	2.79	326	P	Pn	09 43 20.1	-0.7
KIW	Kapiti Island	2.80	202	P	Pn	09 43 20.4	-0.5
TMWZ	Te Maipa	2.86	186	P	Pn	09 43 21.0	-0.4
MTW	Mount Morrison	2.95	192	P	Pn	09 43 21.9	-0.7
DUWZ	D’Urville Isla	3.13	215	P	Pn	09 43 23.8	-1.0
TRWZ	Traveller	3.16	188	P	Pn	09 43 24.6	-0.6
PAWZ	Paruwai Farm	3.18	192	P	Pn	09 43 24.6	-0.9
WEL	Wellington	3.24	201	P	Pn	09 43 25.4	-0.6
MSWZ	Moikau Station	3.25	194	P	Pn	09 43 25.3	-1.0

SNZO	South Karori	3.28	201	P	Pn	09 43 25.7	-0.9
SNZO	South Karori	3.28	201	S	Sn	09 44 06.9	-0.3
BHW	Baring Head	3.33	199	P	Pn	09 43 26.3	-0.8
TCW	Tory Channel	3.33	207	P	Pn	09 43 26.2	-0.9
PLWZ	Palliser	3.40	193	P	Pn	09 43 27.1	-1.0
TUWZ	Tuamarina	3.64	209	P	Pn	09 43 30.5	-0.6
NNZ	Nelson	3.71	216	P	Pn	09 43 30.6	-1.3
OUZ	Omahuta	3.73	324	P	Pn	09 43 31.8	-0.5
OUZ	Omahuta	3.73	324	P	Pn	09 43 32.0	-0.3
TKNZ	Takaka Hill	3.77	222	P	Pn	09 43 31.2	-1.6
CMWZ	Cape Campbell	3.83	204	P	Pn	09 43 33.1	-0.3
QRZ	Quartz Range	3.87	227	P	Pn	09 43 32.0	-2.0
QRZ	Quartz Range	3.87	227	P	Pn	09 43 32.1	-2.0
BSWZ	Blackbirch Sta	3.91	208	P	Pn	09 43 33.5	-1.1
MRNZ	Matariki Terra	4.15	220	P	Pn	09 43 35.6	-1.9
THZ	Tophouse	4.35	216	P	Pn	09 43 38.6	-1.6
KHZ	Kahutara	4.65	206	P	Pn	09 43 42.6	-1.3
KHZ	Kahutara	4.65	206	P	Pn	09 43 42.7	-1.2
DSZ	Denniston Nort	4.89	223	P	Pn	09 43 44.5	-2.6
GVZ	Greta Valley S	5.31	207	P	Pn	09 43 50.8	-1.7
LTZ	Lake Taylor	5.45	213	P	Pn	09 43 51.9	-2.5
AMCZ	Amberley	5.63	208	P	Pn	09 43 54.8	-1.9
INZ	Inchbonnie	5.79	218	P	Pn	09 43 55.6	-3.1
OKCZ	Okains Bay	5.97	203	P	Pn	09 43 59.3	-1.9
OXZ	Oxford	6.00	211	P	Pn	09 43 58.9	-2.6
MQZ	McQueen’s Vall	6.09	206	P	Pn	09 43 59.8	-2.9
AKCZ	Akaroa Harbour	6.16	203	P	Pn	09 44 01.4	-2.2
RACZ	Rakaia	6.29	209	P	Pn	09 44 02.7	-2.7
MHCZ	Mount Hutt	6.36	213	P	Pn	09 44 04.1	-2.2
WVZ	Waitaha Valley	6.39	220	P	Pn	09 44 05.2	-1.5
WACZ	Wakanui South	6.59	209	P	Pn	09 44 06.7	-2.6
RPZ	Rata Peaks	6.73	214	P	Pn	09 44 09.3	-1.9
	5.9nm,0.4s,baz=27,slow=4.0,SNR=31						
RPZ				S	Sn	09 45 20.4	-7.0
	14nm,0.3s,baz=36,slow=17,SNR=18						
RPZ	Rata Peaks	6.73	214	P	Pn	09 44 09.6	-1.6
RPZ	Rata Peaks	6.73	214	P	Pn	09 44 08.9	-2.2
GCSZ	Gaunt Creek Bo	6.78	220	P	Pn	09 44 09.7	-2.0
ARCZ	Arundel	6.86	213	P	Pn	09 44 10.7	-2.2
FOZ	Fox Glacier	7.19	221	P	Pn	09 44 14.7	-2.4
TMZ	Timaru	7.29	211	P	Pn	09 44 15.0	-3.5
LBZ	Lake Benmore	7.65	215	P	Pn	09 44 20.7	-2.5
ODZ	Otahua Downs	7.98	210	P	Pn	09 44 25.6	-2.0
ODZ	Otahua Downs	7.98	210	P	Pn	09 44 25.2	-2.4
JCZ	Jackson Bay	8.10	222	P	Pn	09 44 26.9	-2.4
JCZ	Jackson Bay	8.10	222	P	Pn	09 44 26.3	-3.0
WKZ	Wanaka	8.52	217	P	Pn	09 44 31.9	-2.8
EAZ	Earnscleugh	8.70	215	P	Pn	09 44 34.6	-2.3
MSZ	Milford Sound	8.96	222	P	Pn	09 44 37.5	-3.0
SYZ	Scrubby Hill	9.81	210	P	Pn	09 44 50.6	-0.9
ASAR	Alice Springs	38.80	280	P	P	09 49 43.2	+1.1
	1.2nm,0.6s,baz=120,slow=8.6,SNR=24						
	1.2nm,0.6s						
WRA	Warramunga Arr	40.55	285	P	P	09 49 57.2	+0.7
	0.6nm,0.6s,baz=126,slow=7.1,SNR=2.3						
	0.6nm,0.6s						
SNAA	Sanae	70.37	180	P	P	09 53 30.9	+2.4
	0.3nm,0.4s,baz=188,slow=7.1,SNR=2.0						
	0.3nm,0.4s						
KSRS	Korea Array	87.55	323	P	P	09 55 03.9	+2.0
	0.9nm,0.7s,baz=152,slow=5.5,SNR=2.8						
	0.9nm,0.7s						
ARCES	ARCESS Array B	144.98	343	PKPbc	PKPbc	10 01 48.4	-0.6
	1.8nm,0.9s,baz=28,slow=2.9,SNR=4.9						

CATAC ***15*** *10:24:06.4±0.6, 13°N±4°×9°1W±°, h1^{km}, M3.3/12, MLv3.3/12, Error ellipse: s-maj=8.5km s-min=4.6km az=26.4, confirmed*

GCG ***15*** *10:24:07.4±2.1, 12°.78N×91°.14W, h4^{km}±49^{km}, MD4.0*

ISC 15 10:24:11.3±2.6**, 12°.8N**±0°.1×**91°.11W**±0°.07**, h33^{km}, n33, σ1^{s}.39**/35**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAME	Alcaldia de Sa	1.50	45	P	Pn	10 24 34.9	-1.1
FAME	Alcaldia de Sa	1.50	45	S	Sn	10 24 56.0	+1.6
FG16	Alotenango, Sa	1.59	21	*i* P	Pb	10 24 38.5	-1.8
ESSG	Sabana Grande	1.62	10	*e*P	Pn	10 24 36.9	-0.7
STG0	El Palmar, Qui	1.65	352	*i* P	Pb	10 24 40.5	-0.8
STG8	El Palmar, Qui	1.68	352	*i* P	Pb	10 24 41.3	-0.4
NUBE	Las Nubes	1.71	49	*i* P	Pn	10 24 38.2	-0.7
NUBE				*e*S	Sn	10 25 01.2	+1.5
NUBE	Las Nubes	1.71	49	P	Pn	10 24 38.3	-0.7
NUBE	Las Nubes	1.71	49	S	Sb	10 25 02.7	-0.7
LOAL	Lomas de Alarc	1.77	47	P	Pn	10 24 39.8	+0.1
CEVE	Cerro Verde	1.78	54	P	Pn	10 24 39.2	-0.8
CEVE	Cerro Verde	1.78	54	S	Sb	10 25 07.4	+1.9
SLOZ	Alcaldia de Sa	1.79	46	P	Pn	10 24 39.4	-0.5
SLOZ	Alcaldia de Sa	1.79	46	S	Sb	10 25 03.8	-1.7
RTAL	Retalhuleu	1.83	342	P	Pn	10 24 39.0	-1.3
RTAL	Retalhuleu	1.83	342	S	Sn	10 25 03.0	+0.6
JAYA	Jayaque - finc	1.84	62	*i* P	Pn	10 24 39.4	-1.3
JAYA				*e*S	Sb	10 25 06.1	-0.9
JAYA	Jayaque - finc	1.84	62	P	Pn	10 24 39.7	-0.9
JAYA	Jayaque - finc	1.84	62	S	Sb	10 25 05.8	-1.2
UNIC	Universidad Ca	1.93	52	P	Pn	10 24 41.4	-0.5
PMON	Piamonte	1.98	62	S	Sb	10 25 10.7	-0.4
PMON	Piamonte	1.98	62	P	Pn	10 24 41.7	-0.8
SOKI	Kika Raxquin	2.05	352	*e*P	Pn	10 24 43.0	-0.9
COEG	Centro de Oper	2.33	69	P	Pn	10 24 45.5	-1.8
COEG	Centro de Oper	2.33	69	S	Sn	10 25 18.1	+3.2
MTO3	Montecristo	2.34	46	*i* P	Pn	10 24 47.6	0.0
MTO3	Montecristo	2.34	46	P	Pn	10 24 47.7	+0.1
SCLA	Alcaldia de Sa	2.49	68	P	Pn	10 24 49.5	-0.1
PACA	Pacayal	2.80	76	P	Pn	10 24 53.5	-0.3
PACA	Pacayal	2.80	76	S	Sn	10 25 29.9	+3.3
CCIG	Comitan	3.62	344	*e*P	Pn	10 25 06.9	+1.7
CCIG	Comitan	3.62	344	P	Pn	10 25 05.4	+0.1
CCIG	Comitan	3.62	344	S	Sn	10 25 49.5	+2.5

UCR ***15*** *10:25:03.5±1.1, 10°.20N×86°.41W, h5^{km}±8^{km}, MW3.7*

CATAC ***15*** *10:25:03.3±0.5, 10°N±4°×8°6W±°, h1^{km}, M3.4/24, MLv3.4/24, Error ellipse: s-maj=10.2km s-min=3.2km az=43.1, confirmed*

ISC 15 10:25:02.4±1.8**, 10°.20N**±0°.06×**86°.43W**±0°.06**, h6^{km}**±12^{km}**, n79, σ0^{s}.98**/86**, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SACU	Santa Cruz	0.83	86	*e*P	Pb	10 25 19.6	+0.3
SACU				*e*S	Sb	10 25 31.4	+0.7
ALIBA	Liberia Airpor	0.95	66	*e*P	Pn	10 25 22.6	+0.2
ELI1	Hacienda Flor	0.96	63	*e*P	Pn	10 25 23.0	+0.5
NICO	Nicoya	0.96	94	*e*P	Pg	10 25 21.3	+0.3
NICO				*e*S	Sb	10 25 34.3	-0.3
INDI	Punta indio, G	0.97	110	P	Pg	10 25 20.8	-0.2
INDI	Punta indio, G	0.97	110	S	Sg	10 25 32.6	-1.0
CMARA	Lajas Hojancha	1.00	100	*e*P	Pg	10 25 21.8	+0.1
CMARA	Lajas Hojancha	1.00	100	P	Pg	10 25 21.6	-0.1
PLVR	Palo Verde	1.07	82	*e*P	Pg	10 25 23.5	+0.6
ELVJ	El Viejo (Barb	1.11	77	*e*P	Pg	10 25 22.1	-1.7
LAPC	Finca la Perla	1.13	60	*e*P	Pb	10 25 24.5	+0.2
LCRUZ	La Cruz	1.17	42	*e*P	Pn	10 25 25.9	+0.4
NYURE	Nandayure	1.17	100	*e*P	Pg	10 25 24.1	-0.8
VRLE	La Escondida,	1.20	61	*e*P	Pg	10 25 25.5	+0.2
GPS1	Guardaparques	1.20	62	*e*P	Pg	10 25 25.7	+0.2
VORI	VORI	1.23	60	*e*P	Pb	10 25 26.6	+0.5
BUAI	Buenos Aires	1.27	58	*e*P	Pn	10 25 27.6	+0.9
COLC	Colonia	1.29	69	*e*P	Pg	10 25 27.0	-0.1
PEJA	Penjamo Buenos	1.29	58	*e*P	Pn	10 25 28.2	+1.1
CUI	Cuipilapa	1.32	70	*e*P	Pg	10 25 27.6	-0.1
CARN	Rivas	1.32	42	P	Pg	10 25 27.3	-0.4
MESS	Mesas	1.32	66	*e*P	Pg	10 25 27.6	-0.2
HORNC	Hornillas	1.33	67	*e*P	Pg	10 25 27.7	-0.2
CNAS	Canas	1.33	80	*e*P	Pg	10 25 27.9	-0.1
INVE	Universidad In	1.37	78	*e*P	Pg	10 25 28.3	-0.3
MOTZ	Rio Naranjo	1.42	70	*e*P	Pn	10 25 29.3	+0.5
VMAR	Armenia, Volca	1.43	65	*e*P	Pn	10 25 29.6	+0.6
TIMP	Tierras Morena	1.44	75	*e*P	Pn	10 25 28.9	-0.2
JUNT	Juntas	1.45	87	*e*P	Pn	10 25 28.7	-0.5
JTS	Las Juntas de	1.45	86	*e*P	Pn	10 25 28.8	-0.5
TILA	Tilaran	1.46	79	*e*P	Pn	10 25 29.4	0.0
TENO	El Achiote	1.51	71	*e*P	Pn	10 25 29.7	-0.4
UPAL	Upala	1.55	63	*e*P	Pn	10 25 31.4	+0.8
QUEB	Quebradon, Cot	1.56	74	*e*P	Pn	10 25 31.2	+0.4
NADN	Granada	1.59	14	*e*P	Pn	10 25 32.2	+1.1
NADN	Granada	1.59	14	P	Pn	10 25 31.8	+0.7
TABAC	Tabacon	1.66	80	*e*P	Pn	10 25 33.0	+0.9
VARE2	V. Arenal	1.70	81	*e*P	Pn	10 25 33.5	+0.7
ARE1	Arenal 1	1.70	81	*e*P	Pn	10 25 33.5	+0.9
VACR	Volcan Arenal	1.74	81	*e*P	Pn	10 25 34.6	+1.3
NANN	Nandasmo	1.75	10	P	Pb	10 25 35.3	+0.2
SOCE	Pocosol	1.79	84	P	Pn	10 25 35.0	+1.1
COPN	Copaltepe	1.97	355	*e*P	Pn	10 25 37.4	+0.9
COPN	Copaltepe	1.97	355	P	Pn	10 25 37.4	+0.9
VPL2	V. Platanar	2.01	87	*e*P	Pn	10 25 38.4	+1.2
COVE	Coope Vega, Sa	2.06	75	P	Pn	10 25 38.7	+1.2
ACON	Acoyapa	2.14	35	*e*P	Pn	10 25 39.5	+0.8
ACON	Acoyapa	2.14	35	P	Pn	10 25 38.9	+0.2
ACON	Acoyapa	2.14	35	S	Sn	10 26 06.7	+0.9
MOMN	Momotombo	2.20	357	P	Pn	10 25 40.9	+1.3
SANTA	Santa Ana	2.22	97	*e*P	Pn	10 25 41.7	+1.8
PAR1A	Puntarenas Pro	2.22	105	*e*P	Pn	10 25 40.5	+0.6
MOM2	El Cardon	2.22	358	P	Pn	10 25 39.0	-0.8
ACOS	Acosta	2.26	100	*e*P	Pn	10 25 42.0	+1.4
VBV1	V. Barva	2.29	92	*e*P	Pn	10 25 43.4	+2.3
CNGA	Al SSO del Vol	2.30	353	P	Pn	10 25 41.2	+0.2
BOAB	BOACO BROADBAN	2.35	18	P	Pn	10 25 42.3	+0.6
QUEN	Al S del Volca	2.41	350	P	Pn	10 25 43.9	+1.3
HOYN	Al Sur del Vol	2.42	351	P	Pn	10 25 44.0	+1.3
HOYN				S	Sn	10 26 12.7	+0.1
HERN	Volcan Telica	2.43	351	S	Sn	10 26 12.1	-0.8
LCR2	La Lucha 2	2.43	101	P	Pn	10 25 43.4	+0.5
LCR2	La Lucha 2	2.43	101	S	Sn	10 26 11.6	-1.5
POLN	Al Sur del Vol	2.46	351	P	Pn	10 25 43.8	+0.6
POLN				S	Sn	10 26 12.0	-1.7
PKGN	Cerro Pekin	2.51	348	P	Pn	10 25 45.2	+1.4
PKGN				S	Sn	10 26 14.1	-0.8
VICA	Volcano Irazu	2.55	95	*e*P	Pn	10 25 46.8	+2.0
CRIN	San Cristobal	2.56	346	*e*P	Pn	10 25 46.1	+1.5
CRIN	San Cristobal	2.56	346	P	Pn	10 25 45.7	+1.1
CRIN	San Cristobal	2.56	346	S	Sn	10 26 15.0	-1.1
MATN	Matagalpa	2.76	10	P	Pn	10 25 47.3	0.0
LIMN	Finca el Limon	2.84	1	P	Pn	10 25 49.2	+0.7
ESPN	Las Esperanzas	2.88	46	P	Pn	10 25 49.8	+0.9
CSGN	Cosiguina Volc	2.97	338	P	Pn	10 25 50.7	+0.4
CSGN				S	Sn	10 26 25.4	-1.0
POTN	Potosi Cosigui	2.98	339	P	Pn	10 25 51.4	+1.2
POTN				S	Sn	10 26 25.2	-1.1
DRK0	Durika	3.27	106	P	Pn	10 25 55.0	+0.5
CNCH	Conchagua	3.35	336	P	Pn	10 25 56.9	+1.4
CNCH	Conchagua	3.35	336	S	Sn	10 26 33.0	-2.8
RCVN	Varillal2	3.37	4	P	Pn	10 25 56.8	+1.0
LCND	La Caada	3.41	335	P	Pn	10 25 57.4	+1.2
SIUN	Universidad Ur	3.85	25	P	Pn	10 26 04.1	+1.8

IDC ***15*** *10:32:32.7±1.6, 35°.39N×27°.73E, h0^{km}, mb3.7/6, mbtmp3.5/9, ML2.8/3, MS3.1/5, Error ellipse: s-maj=35.7km s-min=19.6km az=149.0*

NIC ***15*** *10:32:35.3, 35°.25N×27°.75E, h20^{km}±1^{km}, Ml3.4/12*

ATH ***15*** *10:32:36.6, 35°.37N×27°.74E, h11^{km}±4^{km}, ML3.5/6, Manual Solution by A.Agalos First location: 2019/06/15 10:34:01, This location: 2019/06/15 13:27:03 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 5 km; Longitude uncertainty: 3 km*

ISK ***15*** *10:32:37.7, 35°.46N×27°.67E, h16^{km}, ML3.6/22*

THE ***15*** *10:32:37.4, 35°N±12°×2°8E±2°9, h4^{km}±30^{km}, M3.4/8, MLh3.4/8*

AFAD ***15*** *10:32:37.0, 35°.38N×27°.74E, h38^{km}±14^{km}, MW3.8*

ISC 15 10:32:35.8±1.1**, 35°.33N**±0°.03×**27°.77E**±0°.02**, h17^{km}**±7^{km}**, n105, σ1^{s}.41**/126**, mb3.6**/5**, MS3.1**/4**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	Karpathos	0.54	293	Pg	Pg	10 32 46.5	-0.1
KARP				Sg	Sg	10 32 53.2	-0.8
KARP	Karpathos	0.54	293	P	Pg	10 32 46.6	0.0
KARP				S	Sb	10 32 54.8	+0.3
KARP	Karpathos	0.54	293	P	Pg	10 32 46.7	0.0
KARP				S	Sg	10 32 53.5	-0.5
KARP	Karpathos	0.54	293	P	Pg	10 32 46.6	-0.1
KARP				S	Sb	10 32 55.4	+0.9
KARP				AML	AML	10 32 55.7	
	25nm,0.4s						
KARP				AML	AML	10 32 59.8	
	14nm,0.4s						
ARG	Arkhangelos	0.93	18	Pg	Pg	10 32 54.5	+0.7
ARG				Sg	Sn	10 33 06.8	-0.2
ARG	Arkhangelos	0.93	18	P	Pb	10 32 53.7	+0.3
ARG				S	Sg	10 33 05.8	-0.2
ARG	Arkhangelos	0.93	18	P	Pb	10 32 53.8	+0.4
ARG				S	Sg	10 33 06.0	-0.1
ARG	Arkhangelos	0.93	18	P	Pg	10 32 54.1	+0.3
ARG				AML	AML	10 33 08.4	
	3.6nm,0.9s						
ARG				S	Sn	10 33 08.9	+1.9
ARG				AML	AML	10 33 14.3	
	4.3nm,0.4s						
ZKR	Zakros	1.29	261	Pn	Pb	10 33 00.7	+1.0
ZKR				Sn	Sg	10 33 17.7	0.0
ZKR	Zakros	1.29	261	P	Pb	10 33 01.0	+1.3
ZKR	Zakros	1.29	261	P	Pn	10 33 00.1	+1.0
ZKR				S	Sn	10 33 17.2	+1.1
ZKR	Zakros	1.29	261	P	Pn	10 32 57.6	-1.5
ZKR				AML	AML	10 33 27.4	
	1.5nm,0.8s						
ZKR				AML	AML	10 33 28.3	
	3.5nm,1.0s						
YAZI	Mula-Dat§a-	1.37	349	P	Pb	10 33 01.4	+0.4
YAZI				S	Sg	10 33 20.1	0.0
YAZI				*i* IAML		10 33 23.0	
	comp=E,426nm,0.4s						
YAZI				*i* IAML		10 33 24.0	
	comp=N,411nm,0.5s						
DAT	Datca	1.40	354	Pn	Pn	10 33 01.5	+0.8
TURN	Turunc	1.49	15	Pn	Pb	10 33 03.1	+0.1
TURN				Sn	Sb	10 33 21.8	+0.2
TURN	Turunc	1.49	15	P	Pb	10 33 03.7	+0.7
TURN				S	Sg	10 33 23.6	-0.3
TURN				*i* IAML		10 33 33.0	
	comp=E,394nm,0.3s						
IZZE	Mula-Seydike	1.61	47	P	Pn	10 33 04.9	+1.4
DALY	Dalyan (Mula)	1.64	25	Pn	Pb	10 33 05.8	+0.2
DALY				Sn	Sb	10 33 26.2	+0.1
ASTA	Astypalaia	1.67	317	P	Pn	10 33 05.3	+1.0
FETY	Fethiye	1.68	39	Pn	Pb	10 33 06.8	+0.5
FETY	Fethiye	1.68	39	P	Pg	10 33 09.7	+1.6
AKAS	Kas	1.74	58	Pn	Pb	10 33 07.7	+0.3
AKAS	Kas	1.74	58	P	Pn	10 33 06.7	+1.3
BDRM	Kayabasi	1.75	351	P	Pb	10 33 06.9	-0.6
BDRM				S	Sn	10 33 27.9	+0.6
BDRM				*i* IAML		10 33 34.0	
	comp=E,340nm,0.6s						
BODT	Bodrum	1.77	348	Pn	Pn	10 33 06.5	+0.8
BODT				Sn	Sn	10 33 27.4	-0.3
BODT	Bodrum	1.77	348	P	Pn	10 33 06.4	+0.8
SABU	Mula-Dalaman	1.77	33	P	Pn	10 33 07.4	+1.6
YKAV	Yalikavak-Bodr	1.83	348	Pn	Pn	10 33 07.4	+0.9
MLSB	Milas	1.96	0	Pn	Pn	10 33 09.5	+1.2
MULA	Mugla, Merkez-	1.97	13	P	Pb	10 33 11.0	-0.3
MULA				S	Sg	10 33 39.1	-0.2
MULA				*i* IAML		10 33 49.0	
	comp=N,187nm,0.8s						
CAME	Cameli-Denizli	2.03	37	Pn	Pb	10 33 11.8	-0.5
THR8	Santorini-Mono	2.15	301	P	Pn	10 33 12.7	+1.8
DDIM	Aydin, Didim	2.16	349	P	Pn	10 33 11.7	+0.7
CAEL	Denizli, Camel	2.18	35	P	Pb	10 33 15.4	+0.5
THR6	Thira Island,	2.18	299	P	Pn	10 33 13.6	+2.3
DNZT	Denizli-Tavas-	2.19	27	P	Pn	10 33 13.4	+1.9
THR3	Thira Island,	2.21	300	P	Pn	10 33 13.5	+1.9
CMBO	Columbo, Santo	2.23	301	P	Pn	10 33 13.0	+1.0
THR5	Thira Island,	2.25	299	P	Pn	10 33 14.5	+2.2
TAVA	DENIZLI_Tavas	2.32	23	P	Pn	10 33 14.0	+0.7
AYDN	Tasoluk	2.33	2	P	Pn	10 33 15.5	+2.1
IDI	Anoyia	2.36	270	Pn	Pn	10 33 15.8	+2.0
IDI	Anoyia	2.36	270	P	Pn	10 33 15.8	+2.0
IDI	Anoyia	2.36	270	P	Pn	10 33 15.4	+1.6
GOLH	Golhisar	2.39	37	P	Pb	10 33 18.2	-0.1
GCAM	G?zelcaml?	2.40	350	Pn	Pn	10 33 15.5	+1.2
GCAM	G?zelcaml?	2.40	350	P	Pn	10 33 16.1	+1.7
APMY	Acipayam-Deniz	2.46	30	Pn	Pn	10 33 17.7	+2.4
ESEN	Aydn-Nazilli	2.50	10	P	Pb	10 33 18.6	-1.7
DNIZ	Denizli-Tavas-	2.50	24	P	Pn	10 33 18.1	+2.3
APE	Apeiranthos	2.51	314	Pn	Pn	10 33 16.9	+1.0
APE	Apeiranthos	2.51	314	P	Pn	10 33 17.1	+1.2
APE	Apeiranthos	2.51	314	P	Pn	10 33 16.7	+0.8
AYDB	Zeytinkoy-Aydi	2.61	2	Pn	Pn	10 33 18.6	+1.3
NAZL	Nazilli-Aydin	2.66	9	Pn	Pn	10 33 19.8	+1.9
KORT	Korkueli	2.67	51	Pn	Pn	10 33 21.5	+3.4
PRNS	Prines Rethymn	2.68	272	P	Pn	10 33 20.6	+2.5
IZMR	zmir-demi	2.80	3	P	Pn	10 33 20.0	+0.1
ANTB	Antalya	2.81	55	Pn	Pn	10 33 23.4	+3.5
DGB	zmir	2.81	345	P	Pn	10 33 20.1	+0.2
KIRA	zmir-Kiraz	2.90	10	P	Pn	10 33 22.2	+0.9
ODEM	Odemis-Izmir	2.95	5	Pn	Pn	10 33 23.4	+1.5
GVD	Gavdhos	3.06	262	Pn	Pn	10 33 26.0	+2.5
GVD	Gavdhos	3.06	262	P	Pn	10 33 26.9	+3.4
GVD	Gavdhos	3.06	262	P	Pn	10 33 25.2	+1.7
IMMV	Iera Moni Meta	3.10	273	Pn	Pn	10 33 26.5	+2.5
IMMV	Iera Moni Meta	3.10	273	P	Pn	10 33 27.1	+3.1
BLCB	Balcova	3.10	349	Pn	Pn	10 33 25.6	+1.6
URLA	Izmir	3.17	343	Pn	Pn	10 33 26.0	+1.1
URLA	Izmir	3.17	343	P	Pn	10 33 26.2	+1.3
KULA	Kula-Manisa	3.25	12	Pn	Pn	10 33 28.1	+1.9
CHOS	Chios island	3.34	336	Pn	Pn	10 33 28.9	+1.5
CHOS	Chios island	3.34	336	P	Pn	10 33 29.1	+1.7
KNDR	Palaiochora Ch	3.35	269	Pn	Pn	10 33 30.5	+3.2
GORD	Gordes-Manisa	3.58	5	Pn	Pn	10 33 32.5	+1.8
ANKY	Antikythira Is	3.68	280	P	Pn	10 33 34.2	+2.2
ANKY	Antikythira Is	3.68	280	P	Pn	10 33 33.5	+1.5
AKMS	Akamas	3.75	93	P	Pn	10 33 32.7	-0.2
AKMS				S	Sn	10 34 16.6	0.0
AKMS				AML	AML	10 34 22.1	
	0.2nm,0.4s						
AKMS				AML	AML	10 34 25.4	
	0.2nm,0.6s						
SIMA	Simav-Kutahya	3.87	14	Pn	Pn	10 33 36.8	+2.2
SEYD	Seydisehir-KON	3.88	57	Pn	Pn	10 33 37.7	+3.0
KTHA	Kythira Island	3.94	285	P	Pn	10 33 37.3	+1.8
ALFC	Alefka	3.95	91	P	Pn	10 33 35.4	-0.3
ALFC				S	Sn	10 34 22.7	+1.0
ALFC				AML	AML	10 34 23.6	
	0.2nm,0.5s						
ALFC				AML	AML	10 34 24.3	
	0.3nm,0.8s						
NATA	Nata	3.97	97	P	Pn	10 33 35.9	-0.1
NATA				S	Sn	10 34 22.8	+0.6
NATA				AML	AML	10 34 25.0	
	0.7nm,0.8s						
NATA				AML	AML	10 34 35.2	
	0.6nm,0.5s						
VLI	Veliai	4.16	291	P	Pn	10 33 40.1	+1.6
VLI	Veliai	4.16	291	P	Pn	10 33 39.7	+1.2
TROD	Troodos	4.19	94	P	Pn	10 33 38.4	-0.7
TROD				S	Sn	10 34 28.7	+0.9
TROD				AML	AML	10 34 35.4	
	0.2nm,0.7s						
TROD				AML	AML	10 34 40.7	
	0.1nm,0.5s						
APOL	The Sanctuary	4.23	98	P	Pn	10 33 39.3	-0.2
APOL				S	Sn	10 34 30.0	+1.6
APOL				AML	AML	10 34 32.0	
	0.2nm,1.1s						
APOL				AML	AML	10 34 35.7	
	0.1nm,0.6s						
XYLS	Xyliatos	4.33	93	P	Pn	10 33 41.1	+0.2
XYLS				S	Sn	10 34 32.2	+1.1
XYLS				AML	AML	10 34 35.0	
	0.1nm,0.5s						
XYLS				AML	AML	10 34 38.4	
	0.2nm,0.9s						
ASGA	Asgata	4.52	95	P	Pn	10 33 43.8	+0.3
ASGA				S	Sn	10 34 36.9	+1.2
ASGA				AML	AML	10 34 38.4	
	0.2nm,1.1s						
ASGA				AML	AML	10 34 42.2	
	0.3nm,0.7s						
CSS	Mathiatis	4.57	93	P	Pn	10 33 43.9	-0.3
CSS				S	Sn	10 34 37.9	+1.1
CSS				AML	AML	10 34 38.6	
	0.1nm,0.9s						
CSS				AML	AML	10 34 42.5	
	0.1nm,0.8s						
MVOU	Mavrovouni	4.81	92	P	Pn	10 33 47.9	+0.5
MVOU				AML	AML	10 34 49.9	
	0.1nm,0.9s						
MVOU				AML	AML	10 34 51.1	
	0.1nm,0.8s						
BRTR	Keskin Array B	6.40	45	Pn	Pn	10 34 08.8	-0.6
	0.2nm,0.3s,baz=219,slow=15,SNR=8.1						
BRTR				Sn	Sn	10 35 23.3	+1.2
	0.2nm,0.3s,baz=219,slow=22,SNR=7.1						
	0.4nm,0.3s						
ASF	Jabal al Asfar	8.22	110	LR	LR	10 39 07.8	
	comp=Z,53nm,18.4s,baz=348,slow=48						
AKASG	Malin Array Be	15.40	3	Pn	Pn	10 36 09.7	-2.4
	0.4nm,0.3s,baz=195,slow=11,SNR=1.1						
	0.1nm,0.4s						
GERES	GERESS Array B	17.03	327	Pn	Pn	10 36 32.9	-0.3
	baz=135,slow=13,SNR=4.3						
	0.6nm,0.7s						
ESDC	Sonseca Array	25.47	289	P	P	10 38 02.1	-1.0
	1.8nm,0.8s,baz=86,slow=8.9,SNR=14						
	1.8nm,0.8s						
FINES	FINESS Array B	26.15	358	P	P	10 38 07.5	-1.4
	1.3nm,0.9s,baz=180,slow=12,SNR=1.6						
	1.3nm,0.9s						
HFS	Hagfors	26.44	344	LR	LR	10 49 26.2	
	comp=Z,34nm,19.6s,baz=196,slow=38						
NOA	NORSAR Array B	27.82	343	LR	LR	10 50 45.0	
	comp=Z,21nm,18.3s,baz=130,slow=39						
TORD	Torodi Ar. Bea	32.27	233	P	P	10 39 02.9	-0.9
	0.6nm,0.3s,baz=40,slow=8.2,SNR=1.3						
	0.6nm,0.3s						
ARCES	ARCESS Array B	34.28	359	P	P	10 39 19.8	-0.9
	0.6nm,0.7s,baz=176,slow=8.7,SNR=1.0						
	0.6nm,0.7s						
MKAR	Makanchi Array	41.89	57	P	P	10 40 25.4	+0.3
	0.2nm,0.4s,baz=284,slow=7.3,SNR=1.9						
	0.2nm,0.4s						
ZALV	Zalesovo Beam	43.34	46	P	P	10 40 36.1	-0.7
	0.3nm,0.3s,baz=277,slow=12,SNR=1.5						
	0.3nm,0.3s						
KLR	Kul'dur	72.22	42	LR	LR	11 20 34.5	
	comp=Z,52nm,18.1s,baz=200,slow=40						
RCBR	Riachuelo	72.38	249	LR	LR	11 14 24.9	
	comp=Z,19nm,21.5s,baz=358,slow=35						

SJA ***15*** *10:37:12.0±0.7, 29°.93S×72°.29W, h20^{km}±7^{km}, ML4.5, MW4.7*

IDC ***15*** *10:37:13.9±0.6, 30°.03S×71°.94W, h0^{km}, mb4.2/12, mbtmp4.2/15, ML4.1/3, MS3.7/28, Error ellipse: s-maj=27.5km s-min=15.1km az=80.0*

NEIC ***15*** *10:37:14.8, 29°.95S×72°.09W, h10^{km}*

NEIC ***15*** *10:37:14.9±1.3, 29°.95S±0°.04×72°.08W±0°.04, h10^{km}±1^{km}, mb4.8/71, Mwr4.4/65, Mwr4.6(GUC), Error ellipse: s-maj=6.9km s-min=5.9km az=173.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.33; $M_{\theta\theta}$1.73; $M_{\phi\phi}$-3.05; $M_{r\theta}$2.80; $M_{\theta\phi}$2.92; $M_{\phi r}$-2.01; Fault plane solution: $M_0$5.24000×10^{15} NP1:ϕ_s117.70000°, δ81.66000°, λ46.47000°. NP2:ϕ_s19.01000°, δ44.16000°, λ167.98000°. Principal axes: T 4.4435, Plg38.0000°, Azm350.0000°; N 1.3353, Plg43.0000°, Azm126.0000°; P -5.7788, Plg24.0000°, Azm240.0000°;*

GUC ***15*** *10:37:15.8±0.6, 29°.98S×72°.06W, h37^{km}±2^{km}, ML4.4*

VAO ***15*** *10:37:25.6±1.9, 29°.64S×71°.46W, h65^{km}±6^{km}, mb4.4*

ISC 15 10:37:17.7±1.0**, 29°.94S**±0°.03×**72°.07W**±0°.05**, h29^{km}**±6^{km}**, n203, σ1^{s}.71**/173**, mb4.7**/45**, MS3.7**/27**, 5C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	La Serena	0.72	89		Pn	10 37 29.1	-2.9
CO05				Sg	Sn	10 37 38.5	-3.5
CO05	La Serena	0.72	89	*e*P	Pn	10 37 29.2	-2.8
CO06	Fray Jorge	0.82	153		Pn	10 37 30.1	-3.2
CO06	Fray Jorge	0.82	153	*e*P	Pn	10 37 30.0	-3.4
GO04	Tololo Observa	1.13	102		Pn	10 37 35.8	-1.9
GO04	Tololo Observa	1.13	102	*e*P	Pn	10 37 35.6	-2.1
GO04				IAML		10 37 58.0	
	comp=E,16μm,0.4s						
GO04	Tololo Observa	1.13	102	*e*P	Pb	10 37 51.2	+12
CO03	El Pedregal	1.49	127		Pn	10 37 41.4	-1.2
CO03	El Pedregal	1.49	127	*e*P	Pn	10 37 41.1	-1.5
CO03	El Pedregal	1.49	127	*e*P	Pn	10 37 41.3	-1.4
CO03				*e*S	Sn	10 38 02.7	+1.5
CO03				IAML		10 38 11.8	

	comp=Z,4µm,0.7s						
LCO	Las Campanas	1.51	53	Pn	Pn	10 37 42.3	-0.7
LCO				Sn	Sn	10 38 02.8	+0.9
LCO	Las Campanas	1.51	53	eP	Pn	10 37 42.3	-0.7
LCO				IAML		10 38 11.7	
	comp=Z,13µm,0.6s						
LCO	Las Campanas	1.51	53	eP	Pn	10 37 42.4	-0.7
LCO				IAML		10 38 11.3	
	comp=Z,5µm,0.9s						
CO02	Combarbal	1.56	144		Pn	10 37 42.8	-0.9
CO02	Combarbal	1.56	144	eP	Pn	10 37 42.2	-1.4
CO02				IAML		10 38 13.6	
	comp=N,12µm,0.5s						
CO02	Combarbal	1.56	144	eP	Pn	10 37 42.7	-0.9
CO02				eS	Sb	10 38 05.0	-0.4
CO02				IAML		10 38 10.9	
	comp=Z,6µm,0.8s						
CO01	Juntas del Tor	1.71	92		Pn	10 37 45.1	-0.7
CO01	Juntas del Tor	1.71	92	eP	Pn	10 37 45.3	-0.6
CO01				eS	Sn	10 38 07.1	+0.2
CO01	Juntas del Tor	1.71	92	eP	Pn	10 37 45.8	-0.1
CO01				eS	Sn	10 38 09.3	+2.4
AC04	Llanos de Chal	1.94	27		Pn	10 37 47.2	-1.5
AC04	Llanos de Chal	1.94	27	⇑eP	Pn	10 37 47.3	-1.4
AC04	Llanos de Chal	1.94	27	eP	Pn	10 37 46.5	-2.1
AC04				eS	Sn	10 38 13.7	+1.7
AC04				IAML		10 38 30.8	
	comp=Z,1µm,1.1s						
AROD	Rodeo	2.26	96	eP	Pn	10 37 55.1	+1.6
AROD				eS	Sb	10 38 25.7	-0.1
ACDV	Cuesta del Vie	2.57	96	eP	Pn	10 37 58.2	+0.7
ACDV				eS	Sb	10 38 32.7	-1.7
ACDV				IAML		10 38 55.4	
	comp=Z,864nm,0.7s						
ACCO	Cerro Coronel	2.68	105	eP	Pn	10 38 01.7	+2.5
ACCO				eS	Sb	10 38 47.8	+10
VA06	Catapilco	2.70	166		Pn	10 37 57.4	-1.7
VA06	Catapilco	2.70	166	eP	Pn	10 37 57.5	-1.6
VA06				IAML		10 38 52.8	
	comp=E,2µm,0.5s						
DOCA	Reserva Natura	2.77	112	eP	Pn	10 37 58.2	-2.3
DOCA				eP		10 38 02.3	
DOCA				eS	Sn	10 38 35.7	+2.6
DOCA				IAML		10 38 47.6	
	comp=Z,1µm,0.8s						
GO03	Copiapo	2.84	35		Pn	10 38 00.8	-0.4
GO03	Copiapo	2.84	35	eP	Pn	10 38 00.6	-0.6
GO03				IAML		10 38 56.6	
	comp=N,687nm,0.4s						
GO03	Copiapo	2.84	35	eP	Pn	10 38 00.8	-0.4
GO03				eS	Sb	10 38 43.7	+1.6
AC06	Mina Casimiro	2.98	31		Pn	10 38 02.5	-0.5
AC06	Mina Casimiro	2.98	31	eP	Pn	10 38 02.4	-0.7
RTLS	Leoncito	3.02	129	eP	Pn	10 38 06.5	+2.6
RTLS				eS	Sb	10 38 46.2	-1.4
RTLS				IAML		10 38 59.1	
	comp=Z,3µm,1.0s						
VA01	Torpederas	3.10	173		Pn	10 38 03.0	-1.6
VA01	Torpederas	3.10	173	eP	Pn	10 38 03.0	-1.6
VA01				IAML		10 38 55.8	
	comp=E,446nm,0.6s						
VA03	San Esteban	3.10	156		Pn	10 38 05.2	+0.4
VA03	San Esteban	3.10	156	eP	Pn	10 38 03.8	-0.9
VA03				IAML		10 39 01.3	
	comp=E,2µm,0.4s						
VA03	San Esteban	3.10	156	eP	Pn	10 38 04.7	-0.1
VA03				eS	Sn	10 38 43.8	+2.9
VA03				IAML		10 39 00.3	
	comp=Z,2µm,0.8s						
AGUA	GUANDACOL	3.15	83	eP	Pn	10 38 08.8	+3.4
AGUA				eS	Sb	10 38 52.7	+1.7
AGUA				IAML		10 39 06.7	
	comp=Z,811nm,0.8s						
ROCH	El Roble	3.16	164	eP	Pn	10 38 04.4	-1.2
ROCH				IAML		10 39 02.8	
	comp=E,532nm,0.5s						
MT02	Curacav	3.40	167		Pn	10 38 08.7	-0.2
MT02	Curacav	3.40	167	eP	Pn	10 38 07.3	-1.6
MT02				IAML		10 39 11.8	
	comp=E,376nm,0.4s						
MT02	Curacav	3.40	167	eP	Pn	10 38 07.7	-1.2
MT02				IAML		10 39 09.5	
	comp=Z,633nm,0.7s						
PEL	Peldehue	3.41	160		Pn	10 38 08.6	-0.3
MT10	Hacienda Santa	3.57	159	eP	Pn	10 38 11.1	-0.2
MT05	Renca	3.62	162		Pn	10 38 11.8	-0.1
MT05	Renca	3.62	162	eP	Pn	10 38 11.4	-0.6
MT05				eS	Sn	10 38 58.8	+5.1
MT05				eS		10 39 01.7	
MT05				IAML		10 39 12.6	
	comp=Z,1µm,1.7s						
CFA	Coronel Fontan	3.69	118	Pn	Pn	10 38 15.0	+2.1
	comp=Z,2.6nm,0.3s,baz=305,slow=14,SNR=34						
CFA				Sn	Sn	10 38 55.8	+0.4
	comp=Z,5.4nm,0.3s,baz=302,slow=16,SNR=6.4						
CFA				Lg	Lg	10 39 07.6	
	comp=Z,12nm,0.3s,baz=198,slow=20,SNR=13						
CFA	Coronel Fontan	3.69	118	eP	Pn	10 38 14.6	+1.7
CFA				eS	Sn	10 38 59.2	+3.7
CFA				eS		10 39 13.4	
FCH	Farellones	3.70	156	eP	Pn	10 38 13.1	-0.2
FCH				IAML		10 39 15.9	
	comp=N,365nm,0.6s						
VA05	Santo Domingo	3.73	174		Pn	10 38 10.9	-2.4
VA05	Santo Domingo	3.73	174	IAML		10 39 28.5	
	comp=N,526nm,0.2s						
MT03	Universidad Ad	3.79	160		Pn	10 38 14.0	-0.1
MT03	Universidad Ad	3.79	160	eP	Pn	10 38 14.2	0.0
MT03				eS	Sn	10 38 59.2	+1.4
MT03				IAML		10 39 22.1	
	comp=Z,1µm,0.9s						
MT04	Ro Olivares	3.83	155	eP	Pn	10 38 15.7	+0.8
MT04				eS	Sb	10 39 07.7	-3.0
MT04				IAML		10 39 19.6	
	comp=Z,647nm,1.0s						
MT08	Bocatoma Ro	3.91	154	eP	Pn	10 38 17.3	+1.3
MT08				eP		10 38 18.7	
MT08				eS	Sb	10 39 17.2	+4.2
MT08				IAML		10 39 37.2	
	comp=Z,509nm,0.8s						
MT09	Talagante	3.94	167		Pn	10 38 15.4	-0.8
MT01	Popeta	3.98	170		Pn	10 38 15.2	-1.5
MT01	Popeta	3.98	170	eP	Pn	10 38 14.6	-2.1
MT01				IAML		10 39 23.3	
	comp=Z,385nm,0.7s						
AC01	Pan de Azucar	3.99	19		Pn	10 38 14.7	-2.2
AC01	Pan de Azucar	3.99	19	IAML		10 39 29.0	
	comp=E,218nm,0.5s						
AC01	Pan de Azucar	3.99	19	eP	Pn	10 38 14.8	-2.2
AC01				eS	Sb	10 39 14.7	-0.6
AC01				IAML		10 39 31.1	
	comp=Z,490nm,1.1s						
AC02	Maricunga	4.03	41		Pn	10 38 18.4	+0.4
AC02	Maricunga	4.03	41	eP	Pn	10 38 17.9	-0.1
AC02				IAML		10 39 37.0	
	comp=N,303nm,0.5s						
AC02	Maricunga	4.03	41	eP	Pn	10 38 17.9	-0.1
AC02				eS	Sb	10 39 18.7	+1.8
AC02				IAML		10 39 28.6	
	comp=Z,503nm,1.3s						
AVFE	Valle Fertil	4.05	101	eP	Pn	10 38 19.7	+1.8
AVFE				eS	Sb	10 39 12.7	-4.4
AVFE				eS		10 39 18.7	
AVFE				IAML		10 39 24.9	
	comp=Z,520nm,0.8s						
LMEL	Las Melosas	4.21	158	eP	Pn	10 38 20.3	+0.2
BO04	La Punta	4.22	163		Pn	10 38 19.4	-0.8
BO01	Tunca	4.52	170		Pn	10 38 22.5	-1.6
BO01	Tunca	4.52	170	eP	Pn	10 38 22.8	-1.3
BO01				eS	Sb	10 39 34.7	+4.4
BO01				IAML		10 39 40.1	
	comp=Z,290nm,1.2s						
BO02	Sierra Bellavi	4.96	168		Pn	10 38 29.1	-1.2
GO02	Mina Guanaco	5.24	25		Pn	10 38 33.4	-1.0
ML02	Panimavida	5.83	175		Pn	10 38 40.5	-1.7
BI02	San Fabin de	6.74	175		Pn	10 38 53.5	-1.3
H03N1	Juan Fernandez	6.80	237	T	T	10 46 10.2	
	baz=69,slow=71,SNR=324						
H03N2	Juan Fernandez	6.81	237	T	T	10 46 09.6	
	baz=69,slow=71,SNR=330						
H03N3	Juan Fernandez	6.81	237	T	T	10 46 02.9	
	baz=69,slow=71,SNR=217						
BI05	Punta Hualpn	6.86	188		Pn	10 38 53.0	-3.2
PB05	IPOC Station P	7.25	14	Pn	Pn	10 38 58.3	-3.6
PB01	IPOC Station P	9.16	15	Pn	Pn	10 39 26.3	-1.7
PLCA	Paso Flores	10.84	174		Pn	10 39 49.3	-1.7
PLCA	Paso Flores	10.84	174	Pn	Pn	10 39 49.1	-1.8
	comp=Z,0.4nm,0.3s,baz=337,slow=13,SNR=15						
PLCA				Sn	Sn	10 41 49.1	-2.2
	baz=357,slow=18						
PLCA				Lg	Lg	10 42 55.1	
	comp=Z,0.1nm,0.3s,baz=333,slow=18,SNR=1.8						
	comp=Z,1.7nm,0.5s						
CPUP	Villa Florida	13.49	78	Pn	P	10 40 32.0	-4.1
	baz=146,slow=18,SNR=3.6						
CPUP				Sn	Sn	10 42 56.1	-0.1
	baz=330,slow=20,SNR=2.4						
CPUP				Lg	Lg	10 44 23.5	
	comp=Z,0.1nm,0.3s,baz=232,slow=18,SNR=2.2						
CPUP				LR	LR	10 45 48.9	
	comp=Z,55nm,20.2s,baz=110,slow=38						
LPAZ	La Paz	14.06	16		Pn	10 40 34.0	-1.6
LPAZ	La Paz	14.06	16	Pn	Pn	10 40 37.7	+2.1
	comp=Z,0.4nm,0.3s,baz=192,slow=8.7,SNR=27						
LPAZ				Sn	Sn	10 43 13.0	+2.0
	baz=197,slow=15						
LPAZ				Lg	Lg	10 44 10.7	
	comp=Z,0.1nm,0.3s,baz=128,slow=19,SNR=1.3						
	comp=Z,5.9nm,0.7s						
LPAZ	La Paz	14.06	16	eP	Pn	10 40 37.7	+2.1
COYC	Coyhaique	15.61	180		Pn	10 40 54.6	-0.9
COYC				IAmb	IAmb	10 41 09.2	
	comp=Z,39nm,0.9s						
BBSD	Serra de San D	16.46	42	eP	Pn	10 41 02.6	-4.0
SIV	San Ignacio	17.17	38	P	P	10 41 17.0	0.0
	baz=222,slow=12,SNR=46						
SIV				LR	LR	10 48 59.4	
	comp=Z,414nm,18.1s,baz=224,slow=41						
	comp=Z,12nm,0.8s						
AY03	Cochrane	17.29	181	P	Pn	10 41 15.7	-1.1
AQDB	Aquidauana	17.54	61	P	Pn	10 41 17.4	-2.7
PTLB	Pontes e Lacer	18.69	42		P	10 41 33.5	-0.3
PTLB	Pontes e Lacer	18.69	42	eP	P	10 41 33.6	-0.1
LDASE	Londrina, Braz	19.81	76	eP	P	10 41 45.4	-0.7
VILB	Vilhena	20.17	36		P	10 41 49.4	-0.5
VILB	Vilhena	20.17	36	eP	P	10 41 49.4	-0.5
PCMB	Pacaembu	20.47	71	eP	P	10 41 51.8	-1.4
PCMB				epP	sP	10 42 04.9	+1.3
SALV	Santo Antonio	20.52	51	eP	P	10 41 52.8	-1.0
FRTB	Fartura	21.14	77	eP	P	10 41 59.2	-1.3
CZSB	Cruzeiro do Su	22.10	358		P	10 42 11.2	+0.5
CZSB				IAmb	IAmb	10 42 19.1	
	comp=Z,59nm,1.0s						
CZSB	Cruzeiro do Su	22.10	358	eP	P	10 42 12.2	+1.5
ITRB	Iturama	22.15	68	eP	P	10 42 09.7	-1.6
PDRB	Porto dos Gac	23.15	41	eP	P	10 42 18.3	-3.5
ARAG	Araguaiana, MT	23.38	57	eP	P	10 42 23.1	-1.0
ATAH	Atahualpa	23.45	344	LR	LR	10 50 17.6	
	comp=Z,170nm,18.5s,baz=174,slow=33						
VAO	Valinhos	23.48	79		P	10 42 23.9	-1.2
VAO	Valinhos	23.48	79	eP	P	10 42 22.4	-2.7
CLDB	Colider	24.28	42	eP	P	10 42 32.1	-0.5
USHA	Ushuaia	25.02	175	LR	LR	10 52 10.4	
	comp=Z,308nm,19.5s,baz=172,slow=36						
TBTG	Tabatinga, AM	25.70	5		P	10 42 45.2	-0.2
TBTG	Tabatinga, AM	25.70	5	eP	P	10 42 46.1	+0.7
BDFB	Brasilia	26.27	63		P	10 42 50.3	-0.5
BDFB				IAmb	IAmb	10 43 01.2	
	comp=Z,19nm,1.2s						
BDFB	Brasilia	26.27	63	P	P	10 42 49.9	-0.9
	comp=Z,5.8nm,0.9s,baz=230,slow=7.9,SNR=5.6						
BDFB				LR	LR	10 54 12.4	
	comp=Z,215nm,20.4s,baz=189,slow=39						
	comp=Z,5.8nm,0.9s						
SNDB	Serra Nova Dou	26.30	52	eP	P	10 42 50.7	-0.3
NPGB	Novo Progresso	27.67	38	eP	P	10 43 02.8	-0.5
MACA	Manacapuru-AM	28.74	24	P	P	10 43 12.7	0.0
JANB	Januaria	29.51	66	eP	P	10 43 18.3	-1.4
ITTB	Itaituba	29.76	34	eP	P	10 43 21.0	-0.8
BOAV	Boa Vista	33.99	21	P	P	10 43 57.6	-1.4
BOAV				IAmb	IAmb	10 44 04.6	
	comp=Z,9.7nm,1.1s						
ROSC	El Rosal	34.65	356	LR	LR	10 59 15.6	
	comp=Z,140nm,18.1s,baz=64,slow=38						
PMSA	Palmer Station	35.22	174	LR	LR	10 57 58.4	
	comp=Z,168nm,18.8s,baz=338,slow=35						
SDV	Santo Domingo	38.62	2	LR	LR	11 02 50.3	
	comp=Z,85nm,18.2s,baz=244,slow=40						
BAUV	El Baul	38.85	6	IAmb	IAmb	10 44 42.0	
	comp=Z,42nm,1.2s						
MDP	Montagnes des	39.51	31	LR	LR	11 02 28.0	
	comp=Z,293nm,18.6s,baz=201,slow=38						
PCRV	Puerto La Cruz	40.52	11	LR	LR	11 02 50.4	
	comp=Z,122nm,19.2s,slow=38						
JTS	Las Juntas de	41.88	341	LR	LR	10 57 43.3	
	comp=Z,41nm,20.6s,baz=184,slow=29						
SJG	San Juan	48.11	8	LR	LR	11 06 13.9	
	comp=Z,42nm,21.9s,baz=169,slow=36						
BELA	Belgrano 2	50.87	170	P	P	10 46 16.1	+0.6
VNA3	Neumayer Olymp	53.13	159	⇑P	P	10 46 33.7	+1.4
	comp=Z,6.0nm,0.9s						
VNA2	Neumayer--Watz	53.77	158	⇑P	P	10 46 37.8	+0.8
	comp=Z,5.5nm,0.6s,baz=288,slow=7.4						
SNAA	Sanae	55.36	159	⇑P	P	10 46 49.7	+1.1
	comp=Z,98nm,0.7s						
SNAA	Sanae	55.36	159	P	P	10 46 48.8	+0.2
SNAA				IAmb	IAmb	10 46 59.0	
	comp=Z,10nm,1.1s						
SNAA	Sanae	55.36	159	P	P	10 46 48.9	+0.3
	comp=Z,6.1nm,1.1s,baz=279,slow=7.3,SNR=8.8						
SNAA				LR	LR	11 08 40.6	
	comp=Z,88nm,21.1s,baz=310,slow=34						
	comp=Z,6.1nm,1.1s						
TROLL	Troll, Antarti	57.07	159	⇑P	P	10 47 01.5	+0.6
	comp=Z,133nm,0.7s						
QSPA	South Pole Qui	60.28	180	P	P	10 47 23.6	+0.3
	comp=Z,3.7nm,1.1s,baz=147,slow=5.2,SNR=4.3						
	comp=Z,3.7nm,1.1s						
LPIG	La Paz	65.08	321	LR	LR	11 11 21.0	
	comp=Z,29nm,18.1s,baz=214,slow=31						
X48A	Hartselle	65.59	346	IAmb	IAmb	10 48 09.7	
	comp=Z,11nm,1.0s						
W50A	Signal Mountai	65.98	348	IAmb	IAmb	10 48 11.8	
	comp=Z,10.0nm,1.0s						
V53A	Saluda	66.04	350	IAmb	IAmb	10 48 13.7	
	comp=Z,7.7nm,1.2s						
CPCT	Cooper Cave	66.09	349	IAmb	IAmb	10 48 14.2	
	comp=Z,17nm,1.2s						
SWET	Sewanee	66.11	348	IAmb	IAmb	10 48 12.6	
	comp=Z,9.3nm,0.9s						
TKL	Tuckaleechee C	66.17	350	P	P	10 48 02.7	+0.3
	comp=Z,8.5nm,1.1s,baz=183,slow=9.3,SNR=5.7						
TKL				LR	LR	11 16 47.7	
	comp=Z,27nm,21.5s,baz=157,slow=36						
	comp=Z,8.5nm,1.1s						
TX31	Lajitas Ar. Si	66.20	330	IAmb	IAmb	10 48 14.5	
	comp=Z,6.6nm,1.4s						
TXAR	Lajitas Array	66.20	330	P	P	10 48 04.7	+1.8
	comp=Z,1.0nm,0.8s,baz=131,slow=2.2,SNR=10						
TXAR				LR	LR	11 13 01.2	
	comp=Z,17nm,18.1s,baz=150,slow=32						
	comp=Z,1.0nm,0.8s						
T59A	Double "B" Far	66.76	355	IAmb	IAmb	10 48 18.9	
	comp=Z,12nm,1.0s						
V48A	Smith Brothers	66.79	347	IAmb	IAmb	10 48 18.7	
	comp=Z,13nm,1.2s						
CLTN	Cedars of Leba	67.04	347	IAmb	IAmb	10 48 19.1	
	comp=Z,5.1nm,1.1s						
U49A	Red Boiling Sp	67.34	348	IAmb	IAmb	10 48 11.2	
	comp=Z,6.7nm,1.0s						
WVT	Waverly	67.37	346	P	P	10 48 09.7	-0.3
WVT				IAmb	IAmb	10 48 21.0	
	comp=Z,9.9nm,1.1s						
MNHN	Monahans	67.56	332	IAmb	IAmb	10 48 22.9	
	comp=Z,5.4nm,0.9s						
R58B	Mineral	67.77	355	IAmb	IAmb	10 48 25.1	
	comp=Z,13nm,1.0s						
FVM	French Village	69.72	345	IAmb	IAmb	10 48 36.2	
	comp=Z,12nm,1.0s						
P52A	Corning	69.85	352	IAmb	IAmb	10 48 36.2	
	comp=Z,17nm,1.1s						
CCM	Cathedral Cave	69.98	344	P	P	10 48 25.9	-0.4
CCM				IAmb	IAmb	10 48 38.4	
	comp=Z,11nm,1.0s						
S39A	Bolivar	70.16	342	IAmb	IAmb	10 48 40.0	
	comp=Z,10.0nm,1.1s						
PPT2	Papeete2	70.84	260	eLR	LR	11 09 58.2	
	comp=Z,57nm,23.2s						
PPT	Papeete	70.85	260	LR	LR	11 13 16.0	
	comp=Z,68nm,19.9s,baz=118,slow=30						
N49A	Columbus Grove	71.39	350	P	P	10 48 34.4	-0.5
P40A	Paris	71.57	344	P	P	10 48 36.2	+0.2
P40A				IAmb	IAmb	10 48 47.5	
	comp=Z,16nm,1.0s						
N47A	Urbana	71.58	349	P	P	10 48 36.1	+0.1
ANMO	Albuquerque	72.22	331	P	P	10 48 43.2	+3.0
	comp=Z,1.0nm,0.8s,baz=172,slow=7.1,SNR=5.1						
ANMO				LR	LR	11 15 50.3	
	comp=Z,43nm,20.7s,baz=242,slow=32						
	comp=Z,1.0nm,0.8s						
DBIC	Dimbokro	73.94	72	LR	LR	11 19 48.7	
	comp=Z,84nm,18.8s,baz=201,slow=35						
SADO	Sadowa	74.63	355	LR	LR	11 23 20.4	
	comp=Z,21nm,21.3s,baz=152,slow=37						
PFO	Pinyon Flats O	75.88	323	LR	LR	11 15 55.1	
	comp=Z,30nm,20.2s,baz=160,slow=30						
PV18	Skein Mesa, Pa	76.06	331	IAmb	IAmb	10 49 14.5	
	comp=Z,5.8nm,0.8s						
MAW	Mawson	77.07	164	LR	LR	11 22 57.8	
	comp=Z,74nm,18.6s,baz=236,slow=36						
PRN	Pahroc Range	78.15	326	IAmb	IAmb	10 49 27.0	
	comp=Z,7.3nm,1.1s						
BSUT	Blindstream Ca	78.76	331	IAmb	IAmb	10 49 30.0	
	comp=Z,7.6nm,1.0s						
K22A	Casper	78.88	335	IAmb	IAmb	10 49 30.2	
	comp=Z,9.6nm,0.9s						
RSSD	Black Hills	79.29	337	P	P	10 49 20.3	-0.2
PDAR	Pinedale Array	80.14	333	P	P	10 49 27.1	+2.0
	comp=Z,0.5nm,0.7s,baz=157,slow=3.3,SNR=3.9						
	comp=Z,0.5nm,0.7s						
NVAR	Mina Array Bea	80.55	325	P	P	10 49 28.3	+0.9
	comp=Z,0.6nm,0.8s,baz=164,slow=3.1,SNR=3.8						
	comp=Z,0.6nm,0.8s						
AGMN	Agassiz Nation	80.75	344	IAmb	IAmb	10 49 38.8	
	comp=Z,8.2nm,0.8s						
ELK	Elko	80.90	328	P	P	10 49 31.1	+1.9
	comp=Z,1.4nm,0.8s,baz=146,slow=5.3,SNR=7.1						
ELK				LR	LR	11 21 53.7	
	comp=Z,29nm,19.9s,baz=172,slow=33						
	comp=Z,1.4nm,0.8s						
PAHR	Pah Rah Range	82.07	325	IAmb	IAmb	10 49 47.8	
	comp=Z,8.0nm,1.2s						
ULM	Lac du Bonnet	82.58	345	IAmb	IAmb	10 49 48.6	
	comp=Z,13nm,1.0s						
ULM	Lac du Bonnet	82.58	345	P	P	10 49 38.4	+0.8
	comp=Z,4.1nm,0.9s,baz=173,slow=8.1,SNR=4.3						
	comp=Z,4.1nm,0.9s						
HLID	Hailey	82.80	330		P	10 49 39.0	-0.1
HLID				IAmb	IAmb	10 49 51.3	
	comp=Z,4.6nm,1.0s						
TORD	Torodi Ar. Bea	82.87	70		P	10 49 40.1	+0.2
TORD				IAmb	IAmb	10 49 50.9	
	comp=Z,6.6nm,1.1s						
TORD	Torodi Ar. Bea	82.87	70	P	P	10 49 40.5	+0.6
	comp=Z,2.2nm,0.7s,baz=256,slow=4.6,SNR=4.2						
	comp=Z,2.2nm,0.7s						
J08A	Circle Bar Ran	84.44	328	IAmb	IAmb	10 50 00.6	
	comp=Z,12nm,1.2s						
SCHQ	Schefferville	84.54	3	LR	LR	11 29 43.4	
	comp=Z,14nm,18.8s,baz=110,slow=37						
PLID	Pearl Lake	84.70	330	IAmb	IAmb	10 50 00.4	
	comp=Z,5.3nm,0.9s						
I07A	Izee	85.47	328	IAmb	IAmb	10 50 05.2	
	comp=Z,4.3nm,0.9s						
URZ	Urewera	86.37	228	LR	LR	11 21 24.7	
	comp=Z,54nm,18.5s,baz=256,slow=31						
MDT	Midelt	89.29	51	LR	LR	11 30 12.0	
	comp=Z,43nm,18.4s,baz=233,slow=36						
FCC	Fort Churchill	90.25	349	IAmb	IAmb	10 50 26.8	
	comp=Z,9.9nm,0.9s						
FRB	Frobisher Bay	93.41	2	LR	LR	11 34 59.0	
	comp=Z,26nm,19.8s,baz=168,slow=37						
ESDC	Sonseca Array	93.78	46	LR	LR	11 33 31.2	
	comp=Z,62nm,18.1s,baz=210,slow=36						
YKA	Yellowknife Ar	98.21	342	P	Pdif	10 50 52.6	+1.1
	comp=Z,0.5nm,1.0s,baz=149,slow=3.0,SNR=3.9						
	comp=Z,0.5nm,1.0s						
CLL	Collm	109.86	42	ePKiKP	PKiKP	10 55 45.0	-0.6
WRA	Warramunga Arr	124.26	210	PKP	PKiKP	10 56 14.4	-0.3
	comp=Z,0.5nm,0.8s,baz=146,slow=1.8,SNR=5.7						
H11S2	WAKE ISLAND Hy	125.70	272	T	T	13 15 14.9	
	baz=115,slow=75,SNR=8.4						
H11S1	WAKE ISLAND Hy	125.71	272	T	T	13 15 12.4	
	baz=115,slow=75,SNR=7.9						
H11S3	WAKE ISLAND Hy	125.72	272	T	T	13 15 11.9	
	baz=115,slow=75,SNR=8.0						
BVAR	Borovoye Array	144.24	39	PKP	PKPdf	10 56 50.4	0.0
	comp=Z,1.3nm,0.8s,baz=243,slow=0.3,SNR=4.6						
KURBB	Kurchatov Arra	149.82	38	PKPbc	PKiKP	10 57 05.5	0.0
	comp=Z,2.2nm,0.8s,baz=306,slow=3.3,SNR=11						
ZALV	Zalesovo Beam	150.74	28	PKPbc	PKiKP	10 57 07.7	+0.5
	comp=Z,5.2nm,0.6s,baz=306,slow=2.9,SNR=23						
MKAR	Makanchi Array	153.96	43	PKPbc	PKiKP	10 57 15.3	+1.0
	comp=Z,0.8nm,0.7s,baz=304,slow=0.5,SNR=6.3						
WMQ	Urumqi	158.77	44	ePKP	PKPdf	10 57 12.9	+0.3
WMQ				LR	LR		
	comp=Z,74nm,20.5s						
KMI	Kunming	173.35	135	PKP	PKPdf	10 57 24.5	-0.4
PZH	PanZhiHua	173.56	121	PKP	PKPdf	10 57 24.5	-0.3

NEIC ***15*** *10:43:56.2±1.1, 35°.247N±0°.009×97°.746W±0°.004, h5km±1km, mb_Lg2.3/30, ML2.1/9, ML2.2/38, Error ellipse: s-maj=2.4km s-min=1.6km az=11.0*

NEIC 15 10:43:56.4±1.1**, 35°.243N**±0°.010×**97°.74W**±0°.01**, h4**km±2km**,**
Error ellipse: s-maj=1.4km s-min=1.3km az=139.0,
Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNO	Franklin	0.28	87	Pg	Pg	10 44 02.5	+0.6
FNO				Sg	Sg	10 44 06.0	+0.4
OKCSW	OKLAHOMA CITY	0.30	57	Pg	Pg	10 44 02.7	+0.4
OKCSW				Sg	Sg	10 44 07.4	+1.3
OKCSW				IAML		10 44 10.4	
	comp=E,416nm,0.5s						
OK029	Liberty Lake	0.60	23	Pg	Pg	10 44 07.8	-0.2
OK029				Sg	Sg	10 44 16.3	+0.4
OK029				IAML		10 44 16.7	
	comp=E,121nm,0.4s						
OK029				IAML		10 44 19.5	
	comp=E,85nm,0.3s						
X34A	Smith Ranch, M	0.64	187	Pg	Pg	10 44 09.3	+0.5
X34A				Sg	Sb	10 44 19.4	-0.2
X34A				IAML		10 44 19.6	
	comp=N,96nm,0.4s						
X34A				IAML		10 44 24.3	
	comp=E,68nm,0.3s						
CSTR	Hydro, Custer	0.87	298	Pg	Pg	10 44 13.1	-0.1
CSTR				Sg	Sg	10 44 24.8	+0.3
WMOK	Wichita Mounta	0.99	240	Pg	Pg	10 44 14.1	-1.3
WMOK				Sg	Sg	10 44 27.9	-0.4
OK052	Battle Ridge R	1.07	45	Pg	Pg	10 44 16.4	-0.6
CROK	Carrier	1.27	351		Pg	10 44 19.5	-1.4
OK051	E0350 and S346	1.46	30	IAmb_Lg		10 44 45.4	
	comp=Z,42nm,1.1s						
OK038	West end E0370	1.48	327		Pn	10 44 23.1	-0.7
WTFS	Witchita Falls	1.59	202		Pn	10 44 25.0	-0.3
TUL3	Leonard	1.73	67		Pn	10 44 27.0	-0.2
TUL3				IAmb_Lg		10 44 54.6	
	comp=Z,9.6nm,0.7s						
KAN01	Argonia South	1.91	360	IAmb_Lg		10 44 59.5	
	comp=Z,12nm,0.9s						
T35A	Sooner Cattle	1.94	30	Pn	Pn	10 44 29.4	-0.9
Z35A	Perchaven, San	1.95	168	Pn	Pn	10 44 30.2	-0.2
KAN08	Anthony NE Sta	1.99	355	IAmb_Lg		10 45 03.6	
	comp=Z,6.3nm,0.9s						
FW03	Perrin-Whitt E	2.21	187	IAmb_Lg		10 45 05.0	
	comp=Z,17nm,0.9s						
RLO	Rose Lookout	2.40	67	Pn	Pn	10 44 35.9	-0.6
PLPT	Palo Pinto	2.47	191	IAmb_Lg		10 45 14.0	
	comp=Z,6.2nm,0.7s						
DKNS	Dickens	3.06	240	IAmb_Lg		10 45 34.8	
	comp=Z,5.5nm,0.8s						
WHTX	Lake Whitney,	3.25	176	Pn	Pn	10 44 48.2	0.0
R32A	Long Quarter,	3.27	347	IAmb_Lg		10 45 46.5	
	comp=Z,7.0nm,1.1s						
MIAR	Mount Ida	3.50	100	Pn	Pn	10 44 52.4	+0.8
CBKS	Cedar Bluff	3.91	336	Pn	Pn	10 44 57.0	-0.2
MGMO	Mountain Grove	4.82	65	IAmb_Lg		10 46 41.8	
	comp=Z,5.3nm,0.8s						
JCT	Junction City	5.06	201	IAmb_Lg		10 46 48.6	
	comp=Z,4.2nm,0.8s						
R40A	Maddies Statio	5.34	54	IAmb_Lg		10 46 57.2	
	comp=Z,6.5nm,1.2s						
MNHN	Monahans	5.73	229	IAmb_Lg		10 47 03.4	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,2.1nm,0.7s						
PBMO	Poplar Bluff	6.12	73	IAmb_Lg		10 47 16.8	
	comp=Z,5.2nm,0.8s						
P40A	Paris	6.23	45	IAmb_Lg		10 47 12.5	
	comp=Z,7.4nm,0.9s						
SAND	Sanderson	6.44	216	IAmb_Lg		10 47 29.9	
	comp=Z,4.0nm,1.3s						
N38A	Joes South For	6.58	31	IAmb_Lg		10 47 42.0	
	comp=Z,9.3nm,0.8s						
WVT	Waverly	8.12	81	IAmb_Lg		10 48 12.0	
	comp=Z,9.3nm,1.2s						

CATAC ***15*** *10:54:07.0±0.5, 12°N±2°×8°8W±°, h19km±3km, M3.3/31, MLv3.3/31, Error ellipse: s-maj=5.1km s-min=2.2km az=20.5, confirmed*

SNET ***15*** *10:54:07.8±0.7, 12°.09N×87°.71W, h23km±258km, ML2.8*

ISC 15 10:54:09.4±1.4**, 12°.09N**±0°.06×**87°.69W**±0°.04**, h48km, n60, σ1s.24**/74**, 16D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIN	San Cristobal	0.87	46	P	Pn	10 54 25.9	+0.4
CRIN	San Cristobal	0.87	46	S	Sn	10 54 37.2	0.0
CSGN	Cosiguina Volc	0.89	8	⇓P	Pn	10 54 24.7	-1.1
CSGN				S	Sn	10 54 37.4	-0.4
PKGN	Cerro Pekin	0.91	50	⇓P	Pn	10 54 25.3	-0.6
PKGN				S	Sn	10 54 38.1	+0.3
POTN	Potosi Cosigui	0.93	11	⇓P	Pn	10 54 25.0	-1.1
POTN				S	Sn	10 54 39.7	+1.4
TEL3	Telica 3	0.95	60	P	Pn	10 54 25.7	-0.8
QUEN	Al S del Volca	0.96	58	P	Pn	10 54 25.5	-1.1
HOYN	Al Sur del Vol	0.98	59	⇓P	Pn	10 54 25.6	-1.4
TELN	Telica	0.98	58	⇓P	Pn	10 54 24.5	-2.5
HERN	Volcan Telica	0.99	58	S	Sn	10 54 39.7	-0.2
HERN	Volcan Telica	0.99	58	⇓P	Pn	10 54 25.5	-1.5
POLN	Al Sur del Vol	1.02	57	⇓P	Pn	10 54 25.2	-2.3
POLN				S	Sn	10 54 40.1	-0.7
CNGA	Al SSO del Vol	1.05	67	P	Pn	10 54 26.9	-0.9
CNGN	Cerro Negro	1.05	67	⇓P	Pn	10 54 26.8	-1.0
COPN	Copaltepe	1.08	85	⇓P	Pn	10 54 26.9	-1.3
COPN				S	Sn	10 54 46.3	+4.3
MOMN	Momotombo	1.17	74	⇓P	Pn	10 54 28.0	-1.5
MOMN				S	Sn	10 54 43.9	-0.4
CNCH	Conchagua	1.19	353	*e*P	Pn	10 54 29.3	-0.5
CNCH				*e*S	Sn	10 54 46.1	+1.1
CNCH	Conchagua	1.19	353	P	Pn	10 54 29.1	-0.8
MOM2	El Cardon	1.23	73	⇓P	Pn	10 54 29.6	-0.6
MOM2				S	Sn	10 54 47.6	+2.0
APQ3	Volcan Apoyequ	1.30	82	P	Pn	10 54 30.4	-0.8
APQ3				S	Sn	10 54 47.9	+0.4
UNAN	Cigeo UNAN	1.39	89	P	Pn	10 54 30.8	-1.5
UNAN				S	Sn	10 54 49.9	+0.3
TISN	Laguna Tiscapa	1.39	88	P	Pn	10 54 30.0	-2.4
MGAN	Managua	1.41	87	S	Sn	10 54 51.2	+1.1
MGAN	Managua	1.41	87	P	Pn	10 54 31.8	-0.9
WILN	Americas 2	1.47	87	P	Pn	10 54 32.6	-0.9
WILN				S	Sn	10 54 52.9	+1.3
MAS3	Al N del Volca	1.48	92	P	Pn	10 54 33.3	-0.4
MAS3				S	Sn	10 54 53.2	+1.3
ALJI	Alcalda de J	1.50	325	S	Sn	10 54 53.0	+0.6
ALJI	Alcalda de J	1.50	325	P	Pn	10 54 32.8	-1.2
PACA	Pacayal	1.51	336	*e*P	Pn	10 54 33.9	-0.3
PACA	Pacayal	1.51	336	P	Pn	10 54 34.0	-0.1
PACA	Pacayal	1.51	336	S	Sn	10 54 55.3	+2.6
NANN	Nandasmo	1.54	95	S	Sn	10 54 55.9	+2.5
NANN	Nandasmo	1.54	95	⇓P	Pn	10 54 33.7	-0.8
TECA	Tecapa	1.61	331	*e*P	Pn	10 54 34.7	-0.9
TECA				IAML		10 54 58.5	
	comp=Z,107nm,0.3s						
LIMN	Finca el Limon	1.61	53	⇓P	Pn	10 54 34.8	-0.8
TECO	Alcaldia de Te	1.79	324	P	Pn	10 54 36.7	-1.2
TECO	Alcaldia de Te	1.79	324	S	Sn	10 54 59.5	-0.1
UESV	Universidad de	1.88	325	P	Pn	10 54 37.5	-1.6
UESV	Universidad de	1.88	325	S	Sn	10 55 01.1	-0.6
SCLA	Alcaldia de Sa	1.90	328	*e*P	Pn	10 54 39.3	-0.1
SCLA	Alcaldia de Sa	1.90	328	P	Pn	10 54 39.2	-0.3
SCLA	Alcaldia de Sa	1.90	328	S	Sn	10 55 03.4	+1.2
MATN	Matagalpa	1.92	64	P	Pn	10 54 37.6	-2.1
MATN	Matagalpa	1.92	64	S	Sn	10 55 03.4	+0.7
COEG	Centro de Oper	1.92	323	*e*P	Pn	10 54 39.2	-0.5
COEG	Centro de Oper	1.92	323	P	Pn	10 54 39.2	-0.5
COEG	Centro de Oper	1.92	323	S	Sn	10 55 03.2	+0.5
OCON	Estacion meteo	1.94	37	P	Pn	10 54 39.3	-0.7
OCON				S	Sn	10 55 04.6	+1.5
TGUH	Tegucigalpa,Un	2.00	12	⇓P	Pn	10 54 40.8	-0.1
TGUH				S	Sn	10 55 06.8	+2.0
BOAB	BOACO BROADBAN	2.01	79	P	Pn	10 54 40.2	-0.7
PAVA	Las Pavas	2.02	323	S	Sn	10 55 06.6	+1.2
RCVN	Varillal2	2.08	44	S	Sn	10 55 06.7	-0.2
RCVN	Varillal2	2.08	44	⇓P	Pn	10 54 42.1	+0.1
RCPN	Sur Rio San Ju	2.11	47	⇓P	Pn	10 54 41.6	-0.9
ITCA	Escuela Especi	2.21	316	P	Pn	10 54 44.5	+0.7
JAYA	Jayaque - finc	2.32	312	P	Pn	10 54 45.7	+0.4
JAYA	Jayaque - finc	2.32	312	S	Sn	10 55 11.6	-1.1
NUBE	Las Nubes	2.72	312	P	Pn	10 54 49.6	-1.2
NUBE	Las Nubes	2.72	312	S	Sn	10 55 22.9	+0.2
MTO3	Montecristo	2.82	325	P	Pn	10 54 51.8	-0.4

PRE ***15*** *10:59:51.1±0.8, 23°.71S×27°.54E, h0km, ML2.2, Suspected explosion*

BUL ***15*** *10:59:54.9±0.9, 23°.71S×27°.46E, h10km, MD3.2*

BGSI ***15*** *10:59:56.1±0.7, 23°.55S×27°.37E, h0km±4km, ML2.5*

ISC 15 10:59:51.3±1.0**, 23°.69S**±0°.03×**27°.49E**±0°.04**, h0km, n17, σ1s.55**/32**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MREMI	Moremi	1.11	358	*i* P	Pb	11 00 13.5	+0.1
MREMI				*i* S	Sg	11 00 26.7	-0.3
MREMI				IAML		11 00 28.5	
	comp=E,365nm,0.3s						
LPHEP	Lephephe	1.53	282	*i* P	Pn	11 00 20.7	+0.8
LPHEP				*i* S	Sg	11 00 39.7	-0.7
LPHEP				IAML		11 00 45.2	
	comp=E,75nm,0.4s						
LBTB	Lobatse	2.17	232	*e*P	Pn	11 00 29.5	+0.7
LBTB				*e*S	Sn	11 00 58.0	+1.4
LBTB				IAML		11 01 07.5	
	comp=Z,22nm,0.2s						
LBTB	Lobatse	2.17	232	*i* P	Pn	11 00 30.1	+1.2
LBTB				*i* S	Sn	11 00 56.8	+0.2
HRAO	HartRAO	2.20	175	*e*P	Pn	11 00 30.1	+0.9
HRAO				*e*S	Sn	11 00 57.3	0.0
HRAO				IAML		11 01 03.4	
	comp=Z,31nm,0.4s						
BROLN	Tlhalogang	2.58	357	*i* P	Pn	11 00 35.9	+1.5
BROLN				*i* S	Sn	11 01 04.4	-2.2
BROLN				IAML		11 01 13.4	
	comp=E,26nm,0.2s						
MUSN	Musina, Limpop	2.59	58	*e*P	Pn	11 00 34.5	0.0
MUSN				*e*S	Sn	11 01 06.8	0.0
MUSN				IAML		11 01 22.8	
	comp=Z,9.1nm,0.2s						
MUSN	Musina, Limpop	2.59	58	*i* P	Pn	11 00 36.2	+1.6
MUSN				*i* S	Sn	11 01 08.2	+1.4
PILG	Pilgrimsrest,	3.19	114	*e*P	Pn	11 00 42.6	-0.3
PILG				*e*S	Sn	11 01 20.4	-1.5
PILG				IAML		11 01 32.3	
	comp=Z,9.8nm,0.4s						
PRYS	Parys	3.23	182	*e*P	Pn	11 00 43.5	+0.1
PRYS				*e*S	Sn	11 01 22.8	+0.2
PRYS				IAML		11 01 36.8	
	comp=Z,7.8nm,0.3s						
MOPA	Mopani	3.59	88	*e*P	Pn	11 00 48.1	-0.1
MOPA				*e*S	Sn	11 01 29.6	-1.9
MOPA				IAML		11 01 47.1	
	comp=Z,16nm,0.4s						
MOPA	Mopani	3.59	88	*i* P	Pn	11 00 50.1	+1.9
MOPA				*i* S	Sn	11 01 31.5	+0.1
BLWY	Bulawayo	3.68	17	*i* P	Pn	11 00 51.0	+1.4
BLWY				*i* S	Sn	11 01 33.1	-0.7
SWZ	Schweizer	3.99	209	*e*P	Pn	11 00 54.3	+0.5
SWZ				*e*S	Sn	11 01 40.1	-1.3
SWZ				IAML		11 01 57.0	
	comp=Z,7.6nm,0.2s						
BOSA	Boshof	5.30	202	*i* P	Pn	11 01 12.8	+1.0
BOSA				*i* S	Sn	11 02 10.8	-3.0
CHIPN	CHIPINGE	5.89	55	*i* P	Pn	11 01 25.0	+5.0
CHIPN				*i* S	Sn	11 02 31.9	+3.6
KRI	Karoi	7.11	17	*i* P	Pn	11 01 32.7	-4.0
KRI				*i* S	Sn	11 02 45.2	-13

IDC ***15*** *11:17:26.5±1.1, 12°.56S×166°.03E, h0km, mb3.7/5, mbtmp3.7/6, ML3.0/1, MS3.1/1, Error ellipse: s-maj=39.9km s-min=27.5km az=127.0*

ISC 15 11:17:32.4±1.1**, 12°.6S**±0°.2×**166°.0E**±0°.2**, h40km, n9, σ0s.75**/8**, mb3.6**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	9.42	178	Pn	Pn	11 19 45.7	-0.1
	0.2nm,0.3s,baz=332,slow=12,SNR=2.0						
	4.2nm,1.0s						
MSVF	Nonsavu	12.69	115	LR	LR	11 24 15.7	
	comp=Z,81nm,19.8s,baz=157,slow=32						
STKA	Stephens Creek	29.52	226	P	P	11 23 33.7	+0.6
	1.9nm,0.7s,baz=34,slow=11,SNR=4.0						
	1.9nm,0.7s						
WRA	Warramunga Arr	31.23	252	P	P	11 23 48.0	-0.4
	0.4nm,0.7s,baz=81,slow=8.8,SNR=2.5						
	0.4nm,0.7s						
ASAR	Alice Springs	32.36	246	P	P	11 23 57.8	-0.6
	0.5nm,0.7s,baz=70,slow=9.5,SNR=9.9						
	0.5nm,0.7s						
QSPA	South Pole Qui	77.41	180	P	P	11 29 23.5	+0.3
	0.9nm,0.7s,baz=30,slow=0.7,SNR=6.5						
	0.9nm,0.7s						
ILAR	Eielson Array	84.90	18	P	P	11 30 02.6	-0.1
	0.3nm,0.6s,baz=218,slow=6.4,SNR=4.5						
	0.3nm,0.6s						
CPUP	Villa Florida	122.78	133	PKP	PKPdf	11 36 23.8	-1.0
	0.3nm,0.3s,baz=274,slow=0.8,SNR=3.6						
ESDC	Sonseca Array	151.62	344	PKPbc	PKiKP	11 37 24.2	+0.9
	0.6nm,0.6s,baz=359,slow=2.6,SNR=5.0						

NNC 15 11:19:55.5±3.3**, 43°.73N**×**69°.75E, h0km, mb3.7, mpv2.9, 1C-1D, Error ellipse: s-maj=21.2km s-min=8.5km az=141.0, Suspected Mining explosion., Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRLS	Borolday	0.70	175	P	Pn	11 20 12.7	-0.1
	2.2nm,0.1s						
BRLS				S	Sn	11 20 26.1	+1.7
	0.3nm,0.2s						
KK31	Karatay Array	0.84	138	⇑P	Pg	11 20 11.7	+0.1
	0.4nm,0.2s,baz=321,slow=14,SNR=9.5						
KK31				⇓S	Sg	11 20 23.1	+0.6
	15nm,0.5s,baz=318,slow=30,SNR=99						
IUG	Iuzhnay	1.60	172	P	Pb	11 20 25.7	-0.3
	22nm,0.2s						
IUG				S	Sg	11 20 48.6	+1.7
	42nm,0.5s						
MRKS	Merke	2.73	110	Pg	Pb	11 20 44.9	-0.3
	3.7nm,0.4s						
MRKS				Lg	Lg	11 21 21.4	
	7.3nm,0.6s						

BUL ***15*** *11:26:01.3±1.5, 18°.28S×26°.32E, h10km, MD3.4*

BGSI ***15*** *11:26:04.8±1.4, 18°.39S×26°.42E, h27km±23km, ML2.9*

ISC 15 11:26:00.5±0.9**, 18°.43S**±0°.05×**26°.34E**±0°.05**, h10km, n11, σ2s.53**/20**, Zimbabwe**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSANE	Kasane	1.28	299	*i* P	Pg	11 26 27.1	+2.0
KSANE				*i* S	Sb	11 26 42.0	+0.6
KSANE				IAML		11 26 49.3	
	comp=N,252nm,0.1s						
SOOWA	Sowa	2.13	183	*i* P	Pb	11 26 38.5	-0.7
SOOWA				*i* S	Sn	11 27 02.6	-0.1
SOOWA				IAML		11 27 12.5	
	comp=E,253nm,0.5s						
PHDHD	Phuduhudu	2.45	224	*i* P	Pn	11 26 42.3	+1.8
PHDHD				IAML		11 27 35.1	
	comp=E,170nm,0.5s						
BLWY	Bulawayo	2.74	129	*i* P	Pn	11 26 44.9	+0.2
BLWY				*i* S	Sn	11 27 17.5	-0.4
BROLN	Tlhalogang	2.82	161	*i* P	Pn	11 26 46.2	+0.5
BROLN				*i* S	Sn	11 27 18.4	-1.4
BROLN				IAML		11 27 29.9	
	comp=E,36nm,0.6s						
KRI	Karoi	3.51	64	*i* P	Pn	11 26 57.1	+1.9
KRI				*i* S	Sn	11 27 38.5	+1.6
LSZ	Lusaka	3.60	30	*i* P	Pn	11 26 55.5	-1.0
LSZ				*i* S	Sn	11 27 35.7	-3.5
MUSN	Musina, Limpop	5.07	140	*i* P	Pn	11 27 18.1	+1.5
MUSN				*i* S	Sn	11 28 15.6	+0.4
CHIPN	CHIPINGE	6.22	108	*i* P	Pn	11 27 36.8	+4.3
LBTB	Lobatse	6.59	186	*i* P	Pn	11 27 39.3	+1.7
LBTB				*i* S	Sn	11 28 51.7	-1.2
BOSA	Boshof	10.19	185	*i* P	Pn	11 28 26.5	-0.4
BOSA				*i* S	Sn	11 30 14.0	-7.3

CATAC 15 11:31:45.2±0.4**, 12°N**±3°×**8°7W**±°**, h27km, M2.7**/25**, MLv2.7**/25**, Error ellipse: s-maj=6.4km s-min=3.4km az=36.3, confirmed, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	Copaltepe	0.67	40	P	Pn	11 31 59.4	+0.4
SAPS	Ciudad Sandino	0.79	51	P	Pn	11 32 01.2	+0.5
PACN	Al O del Volca	0.86	16	P	Pn	11 32 01.7	+0.1
PACN				S	Sn	11 32 14.3	+1.0
UNAN	Cigeo UNAN	0.87	59	P	Pb	11 32 02.0	+0.4
UNAN				S	Sn	11 32 14.0	+0.5
APQ2	Apoyeque	0.87	52	P	Pn	11 32 01.5	-0.2
MOMN	Momotombo	0.88	33	P	Pb	11 32 02.0	+0.1
MOMN				S	Sn	11 32 13.9	0.0
TISN	Laguna Tiscapa	0.88	57	P	Pb	11 32 02.2	+0.2
CNGA	Al SSO del Vol	0.89	21	P	Pb	11 32 02.0	0.0
CNGA				S	Sn	11 32 14.6	+0.6
CNGN	Cerro Negro	0.89	21	P	Pn	11 32 01.8	-0.3
CNGN	Cerro Negro	0.89	21	S	Sn	11 32 15.1	+1.0
MGAN	Managua	0.90	58	P	Pn	11 32 02.2	+0.1
MGAN	Managua	0.90	58	S	Sn	11 32 15.3	+1.0
MAS3	Al N del Volca	0.91	67	P	Pn	11 32 02.2	-0.1
MAS3				S	Sn	11 32 14.8	+0.2
TEL3	Telica 3	0.92	11	P	Pn	11 32 02.5	0.0
NANN	Nandasmo	0.93	73	P	Pb	11 32 03.7	+1.0
NANN	Nandasmo	0.93	73	S	Sn	11 32 14.9	-0.1
MOM2	El Cardon	0.94	35	P	Pb	11 32 02.9	+0.1
MOM2				S	Sn	11 32 15.3	+0.2
QUEN	Al S del Volca	0.94	11	P	Pn	11 32 02.7	0.0
HOYN	Al Sur del Vol	0.95	12	P	Pn	11 32 02.7	-0.2
HOYN				S	Sb	11 32 15.3	-0.1
TELN	Telica	0.95	12	P	Pb	11 32 03.2	0.0
TELN				S	Sb	11 32 15.5	0.0
HERN	Volcan Telica	0.96	12	P	Pn	11 32 03.1	+0.1
HERN	Volcan Telica	0.96	12	S	Sn	11 32 15.9	+0.1
WILN	Americas 2	0.96	59	P	Pb	11 32 03.3	0.0
WILN				S	Sn	11 32 16.0	+0.2
ILCN	San Idelfonso	0.96	20	P	Pn	11 32 02.7	-0.3
ILCN				S	Sn	11 32 16.8	+1.0
PKGN	Cerro Pekin	1.00	3	P	Pn	11 32 03.4	-0.1
PKGN				S	Sn	11 32 18.5	+1.7
POLN	Al Sur del Vol	1.00	12	P	Pn	11 32 03.2	-0.3
POLN				S	Sn	11 32 20.0	+3.2
CRIN	San Cristobal	1.03	359	P	Pn	11 32 03.8	-0.2
CSGN	Cosiguina Volc	1.40	338	P	Pn	11 32 09.0	-0.1
CSGN				S	Sn	11 32 26.5	-0.3
POTN	Potosi Cosigui	1.41	341	P	Pn	11 32 09.0	-0.1
POTN				S	Sn	11 32 26.6	-0.2
LIMN	Finca el Limon	1.53	25	P	Pn	11 32 11.0	0.0
BOAB	BOACO BROADBAN	1.55	60	P	Pn	11 32 10.9	-0.1
MATN	Matagalpa	1.66	41	P	Pn	11 32 12.1	-0.5
MATN	Matagalpa	1.66	41	S	Sn	11 32 32.4	-0.7
CNCH	Conchagua	1.78	334	P	Pn	11 32 14.3	-0.1
CNCH	Conchagua	1.78	334	S	Sn	11 32 35.2	-1.1
RCPN	Sur Rio San Ju	2.06	26	P	Pn	11 32 18.5	+0.2

IDC ***15*** *11:43:45.2±2.0, 17°.62S×178°.69W, h566km±21km, mb3.1/5, mbtmp4.0/6, Error ellipse: s-maj=49.5km s-min=25.6km az=165.0*

ISC 15 11:43:44.3±1.3**, 17°.8S**±0°.3×**178°.6W**±0°.2**, h550km, n6, σ1s.26**/6**, mb3.5**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.21	270	P	P	11 45 02.2	+1.4
	26nm,0.7s,baz=135,slow=11,SNR=16						
STKA	Stephens Creek	38.57	241	P	P	11 50 20.5	+0.1
	1.7nm,0.5s,baz=76,slow=9.7,SNR=6.4						
	1.7nm,0.5s						
WRA	Warramunga Arr	44.50	259	P	P	11 51 06.1	-1.4
	0.8nm,0.6s,baz=96,slow=6.8,SNR=36						
	0.8nm,0.6s						
ASAR	Alice Springs	44.68	254	P	P	11 51 08.2	-0.7
	5.9nm,0.4s,baz=90,slow=7.7,SNR=192						
	5.9nm,0.4s						
QSPA	South Pole Qui	72.31	180	P	P	11 54 14.4	+0.2
	0.6nm,0.8s,baz=9.5,slow=6.1,SNR=1.3						
	0.6nm,0.8s						
TXAR	Lajitas Array	86.05	58	P	P	11 55 27.1	-0.3
	0.4nm,0.7s,baz=218,slow=7.5,SNR=4.7						
	0.4nm,0.7s						

NOU ***15*** *12:02:27.5, 41°.58S×173°.25E, h78km, MLv3.5/9, South Island, New Zealand*

WEL ***15*** *12:02:29.1±0.9, 41°S±5°×17°3E±°, h48km±8km, M2.7/7, ML2.8/7, MLv2.7/7, Error ellipse: s-maj=6.6km s-min=4.8km az=177.8, confirmed*

ISC 15 12:02:28.1±1.4**, 41°.53S**±0°.04×**173°.28E**±0°.04**, h73km**±8km**, n54, σ0s.88**/61**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNZ	Nelson	0.32	13	P	Pn	12 02 39.2	-0.5
NNZ				S	Sn	12 02 47.5	-0.7
THZ	Tophouse	0.37	230	P	Pn	12 02 40.1	-0.1
THZ				S	Sn	12 02 48.8	-0.2
MRNZ	Matariki Terra	0.41	288	P	Pn	12 02 40.3	-0.2
MRNZ				S	Sn	12 02 49.0	-0.5
MOTS	Motueka DOC wo	0.45	333	P	Pn	12 02 40.8	+0.1
HAVS	Havelock	0.46	56	P	Pn	12 02 40.8	+0.1
HAVS				S	Sn	12 02 49.9	-0.2
BWRS	Waikakaho Road	0.48	80	P	Pn	12 02 41.0	+0.1
BWRS				S	Sn	12 02 50.0	-0.4
BSWZ	Blackbirch Sta	0.48	113	P	Pn	12 02 41.7	+0.7
BSWZ				S	Sn	12 02 52.2	+1.7
TUWZ	Tuamarina	0.51	79	P	Pn	12 02 41.9	+0.7
TUWZ				S	Sn	12 02 51.1	+0.3
TKNZ	Takaka Hill	0.55	334	P	Pn	12 02 41.5	-0.2
TKNZ				S	Sn	12 02 51.2	-0.4
CMWZ	Cape Campbell	0.73	108	P	Pn	12 02 44.4	+0.9
TCW	Tory Channel	0.81	67	P	Pn	12 02 44.9	+0.5
TCW				S	Sn	12 02 56.9	+0.3
DUWZ	D’Urville Isla	0.87	34	P	Pn	12 02 45.4	+0.2
QRZ	Quartz Range	0.90	321	P	Pn	12 02 44.9	-0.6
QRZ	Quartz Range	0.90	321	P	Pn	12 02 45.2	-0.3
KHZ	Kahutara	0.91	168	P	Pn	12 02 46.3	+0.7
KHZ	Kahutara	0.91	168	P	Pn	12 02 46.2	+0.6
SNZO	South Karori	1.09	79	P	Pn	12 02 47.8	0.0
DSZ	Denniston Nort	1.13	258	P	Pn	12 02 48.2	-0.2
WEL	Wellington	1.14	78	P	Pn	12 02 48.6	+0.1
BHW	Baring Head	1.20	85	P	Pn	12 02 48.8	-0.4
KIW	Kapiti Island	1.40	62	P	Pn	12 02 52.0	+0.2
GVZ	Greta Valley S	1.45	187	P	Pn	12 02 52.7	+0.2
LTZ	Lake Taylor	1.46	211	P	Pn	12 02 52.9	+0.3
PLWZ	Palliser	1.48	92	P	Pn	12 02 52.0	-0.9
MSWZ	Moikau Station	1.48	86	P	Pn	12 02 52.1	-0.8
OGWZ	Otaki Gorge	1.59	64	P	Pn	12 02 54.1	-0.3
PAWZ	Paruwai Farm	1.62	86	P	Pn	12 02 53.6	-1.1
MTW	Mount Morrison	1.71	78	P	Pn	12 02 54.8	-1.1
HOWZ	Holdsworth Sta	1.80	70	P	Pn	12 02 56.1	-1.0
INZ	Inchbonnie	1.82	228	P	Pn	12 02 57.8	+0.5
MRZ	Mangatainoka R	1.94	64	P	Pn	12 02 58.0	-0.9
TMWZ	Te Maipa	2.01	79	P	Pn	12 02 58.8	-1.1
OXZ	Oxford	2.02	207	P	Pn	12 03 00.5	+0.5
TIWZ	Tintock	2.10	70	P	Pn	12 02 59.9	-1.3
NMEZ	Namu Road	2.16	12	P	Pn	12 03 03.8	+1.8
POWZ	Post Office Ro	2.20	60	P	Pn	12 03 06.9	+4.4
MQZ	McQueen’s Vall	2.23	192	P	Pn	12 03 02.6	-0.2
PRWZ	Pori Road	2.25	65	P	Pn	12 03 08.9	+5.8
KHEZ	Kahui Hut	2.30	14	P	Pn	12 03 05.2	+1.3
KHEZ	Kahui Hut	2.30	14	P	Pn	12 03 05.3	+1.4
NBEZ	Newall Road No	2.30	11	P	Pn	12 03 05.1	+1.3
AKCZ	Akaroa Harbour	2.36	187	P	Pn	12 03 06.1	+1.5
MHCZ	Mount Hutt	2.37	212	P	Pn	12 03 05.8	+1.0
PKE	Pukeiti	2.39	13	P	Pn	12 03 06.5	+1.4
BFZ	Birch Farm	2.39	70	P	Pn	12 03 04.5	-0.6
BFZ	Birch Farm	2.39	70	P	Pn	12 03 03.3	-1.8
WVZ	Waitaha Valley	2.44	230	P	Pn	12 03 06.4	+0.7
WACZ	Wakanui South	2.64	203	P	Pn	12 03 08.7	+0.4
GCSZ	Gaunt Creek Bo	2.83	230	P	Pn	12 03 11.6	+0.7
TUVZ	Tukino	2.89	40	P	Pn	12 03 13.4	+1.4
HIZ	Hauiti	3.24	22	P	Pn	12 03 17.4	+0.8
BKZ	Black Stump Fm	3.40	47	P	Pn	12 03 18.4	-0.4
ODZ	Otahua Downs	4.01	208	P	Pn	12 03 26.3	-0.7
JCZ	Jackson Bay	4.17	231	P	Pn	12 03 27.1	-2.3

IDC ***15*** *12:14:00.2±2.4, 27°.74S×177°.12W, h57km±20km, mb3.8/12, mbtmp4.1/13, ML5.2/1, MS3.6/15, Error ellipse: s-maj=22.1km s-min=14.8km az=86.0*

NEIC ***15*** *12:14:03.5±1.4, 28°.01S±0°.10×177°.3W±0°.1, h68km±7km, mb4.2/15, Error ellipse: s-maj=19.2km s-min=13.8km az=104.0*

ISC 15 12:14:06.3±0.5**, 28°.23S**±0°.06×**177°.43W**±0°.10**, h100km, n109, σ2s.30**/76**, mb4.1**/21**, 4D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	1.10	203	P	Pn	12 14 26.8	-1.1
RIZ				S	Sn	12 14 47.4	+3.2
RAO	Raoul Island	1.11	203		Pn	12 14 27.0	-0.9
RAO	Raoul Island	1.11	203	P	Pn	12 14 26.8	-1.1
	6µm,0.2s,baz=91,slow=7.5,SNR=100						
RAO				S	Sn	12 14 47.2	+3.0
	6µm,0.2s,baz=96,slow=22,SNR=4.4						
RAO	Raoul Island	1.11	203	P	Pn	12 14 26.8	-1.1
GLKZ	Green Lake	1.12	203	P	Pn	12 14 26.6	-1.4
GLKZ				S	Sn	12 14 47.4	+3.0
MXZ	Matakaoa Point	9.97	200	P	Pn	12 16 20.4	-6.2
WMGZ	Waiomatatini S	10.18	199	P	Pn	12 16 22.6	-6.7
HAZ	Te Kaha	10.31	202	P	Pn	12 16 25.8	-5.4
HAZ				S	Sn	12 18 26.3	+1.5
OUZ	Omahuta	10.34	225	P	Pn	12 16 40.3	+8.8
PUZ	Puketiti	10.46	199	P	Pn	12 16 26.0	-7.2
PUZ				S	Sn	12 18 27.1	-1.3
RUGZ	Raukumara Rang	10.54	202	P	Pn	12 16 28.6	-5.8
TWGZ	Tauwhareparae	10.64	200	P	Pn	12 16 30.8	-4.9
MWZ	Matawai	10.92	201	P	Pn	12 16 33.1	-6.5
MWZ				S	Sn	12 18 39.0	-0.7
URZ	Urewera	10.99	203	P	Pn	12 16 33.5	-7.0
	14nm,1.0s,baz=112,slow=4.6,SNR=3.3						
URZ				S	Sn	12 18 41.6	+0.2
	8.4nm,0.4s,baz=228,slow=22,SNR=11						
URZ	Urewera	10.99	203	P	Pn	12 16 33.7	-6.7
URZ				S	Sn	12 18 41.9	+0.5
MSVF	Nonsavu	11.24	337	Pn	Pn	12 16 37.7	-6.3
MSVF	Nonsavu	11.24	337	P	Pn	12 16 34.1	-10
	0.6nm,0.3s,baz=178,slow=18,SNR=5.6						
MSVF				LR	LR	12 20 23.0	
	comp=Z,132nm,18.6s,baz=157,slow=35						
	7.5nm,0.8s						
NIUE	Niue	11.41	39	Pn	Pn	12 16 38.2	-8.0
BKZ	Black Stump Fm	12.02	203	P	Pn	12 16 45.1	-9.1
BKZ				S	Sn	12 19 03.1	-3.3
DVHZ	Dannevirke	13.15	202	P	Pn	12 17 04.9	-4.2
DVHZ				S	Sn	12 19 27.4	-6.3
BFZ	Birch Farm	13.47	201	P	Pn	12 17 07.9	-5.3
BFZ				S	Sn	12 19 35.3	-6.1
MRZ	Mangatainoka R	13.67	203	P	Pn	12 17 05.7	-10
MRZ				S	Sn	12 19 38.9	-7.3
OGWZ	Otaki Gorge	13.95	204	P	Pn	12 17 10.5	-9.0
OGWZ				S	Sn	12 19 45.1	-8.0
PAWZ	Paruwai Farm	14.37	202	P	Pn	12 17 20.6	-4.3
PAWZ				S	Sn	12 19 54.2	-9.0
TCW	Tory Channel	14.62	206	P	Pn	12 17 22.7	-5.5
TCW				S	Sn	12 20 01.1	-8.3
DZM	Mont Dzumac	15.83	289		Pn	12 17 42.5	-1.1
DZM				IAmb	IAmb	12 18 01.5	
	comp=Z,6.3nm,0.9s						
RAR	Rarotonga	17.49	70	P	P	12 18 00.2	-3.4
RAR	Rarotonga	17.49	70	LR	LR	12 24 39.2	
	comp=Z,111nm,19.0s,baz=288,slow=37						

RPZ	**Rata Peaks**	**18.02**	**208**	P	**P**	**12 18 07.5**	**-1.8**
	comp=Z,4.7nm,0.5s,baz=40,slow=20,SNR=1.7						
ARMA	**Armidale**	**27.02**	**258**	P	**P**	**12 19 39.9**	**+0.6**
ARMA				IAmb	IAmb	12 20 07.7	
	comp=Z,17nm,1.4s						
PPT	**Papeete**	**27.70**	**73**	LR	LR	12 27 32.8	
	comp=Z,59nm,20.4s,baz=312,slow=30						
TOO	**Toolangi**	**32.32**	**244**	P	**P**	**12 20 25.4**	**-0.6**
TOO				IAmb	IAmb	12 20 37.7	
	comp=Z,7.9nm,1.5s						
CTAO	**Charters Tower**	**34.01**	**276**	P	**P**	**12 20 40.7**	**-0.2**
CTAO				IAmb	IAmb	12 21 00.4	
	comp=Z,4.6nm,0.8s						
STKA	**Stephens Creek**	**35.51**	**254**	P	**P**	**12 20 55.6**	**+2.1**
	comp=Z,1.8nm,0.9s,baz=29,slow=4.1,SNR=3.3						
STKA				LR	LR	12 34 17.1	
	comp=Z,82nm,18.2s,baz=27,slow=34						
	comp=Z,1.8nm,0.9s						
COEN	**Coen**	**39.21**	**283**	P	**P**	**12 21 25.0**	**-0.1**
AS31	**Alice Springs**	**43.77**	**264**	P	**P**	**12 22 02.3**	**0.0**
ASAR	**Alice Springs**	**43.77**	**264**	P	**P**	**12 22 02.1**	**-0.2**
ASAR	**Alice Springs**	**43.77**	**264**	P	**P**	**12 22 03.5**	**+1.2**
	comp=Z,2.2nm,0.9s,baz=96,slow=6.5,SNR=18						
ASAR				PcP	**PP**	**12 23 45.8**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=123,slow=4.2,SNR=4.7						
	comp=Z,2.2nm,0.9s						
WR8	**Warramunga Arr**	**44.41**	**270**	P	**P**	**12 22 06.5**	**-0.9**
WR8				IAmb	IAmb	12 22 31.1	
	comp=Z,2.0nm,0.9s						
WRAB	**Tennant Creek**	**44.55**	**270**	P	**P**	**12 22 09.1**	**+0.6**
WRAB				IAmb	IAmb	12 22 09.9	
	comp=Z,3.3nm,0.9s						
WRA	**Warramunga Arr**	**44.56**	**270**	P	**P**	**12 22 09.5**	**+1.0**
WRA	**Warramunga Arr**	**44.56**	**270**	P	**P**	**12 22 08.9**	**+0.3**
	comp=Z,1.8nm,0.6s,baz=111,slow=6.2,SNR=22						
WRA				PcP	**PcP**	**12 23 50.4**	**+0.3**
	comp=Z,2.1nm,1.0s,baz=115,slow=3.0,SNR=6.2						
	comp=Z,1.8nm,0.6s						
WB0	**Warramunga Arr**	**44.58**	**270**	P	**P**	**12 22 08.9**	**+0.3**
WB0				IAmb	IAmb	12 22 10.3	
	comp=Z,3.5nm,0.9s						
SBA	**Scott Base**	**50.23**	**184**	P	**P**	**12 22 52.8**	**+1.2**
KNRA	**Kununurra**	**51.08**	**272**	P	**P**	**12 22 58.8**	**-0.1**
KNRA				IAmb	IAmb	12 23 16.2	
	comp=Z,2.3nm,0.8s						
FITZ	**Fitzroy Crossi**	**52.90**	**268**	P	**P**	**12 23 13.0**	**+0.6**
GUMO	**Guam**	**55.32**	**314**	LR	LR	12 44 26.1	
	comp=Z,14nm,21.2s,baz=150,slow=33						
BATI	**Baumata**	**57.90**	**276**	LR	LR	12 50 20.8	
	comp=Z,155nm,18.3s,baz=223,slow=38						
QSPA	**South Pole Qui**	**61.87**	**180**	P	**P**	**12 24 16.6**	**+1.7**
QSPA				IAmb	IAmb	12 24 23.4	
	comp=Z,2.0nm,0.7s						
QSPA	**South Pole Qui**	**61.87**	**180**	P	**P**	**12 24 16.7**	**+1.8**
	comp=Z,1.5nm,0.6s,baz=21,slow=1.2,SNR=13						
	comp=Z,1.5nm,0.6s						
KAPI	**Kappang**	**63.74**	**279**	LR	LR	12 54 40.3	
	comp=Z,34nm,18.1s,baz=56,slow=38						
MAW	**Mawson**	**74.51**	**200**	P	**P**	**12 25 36.1**	**+2.6**
	comp=Z,4.6nm,0.7s,baz=135,slow=6.2,SNR=7.7						
	comp=Z,4.6nm,0.7s						
JOW	**Kunigami**	**75.59**	**311**	LR	LR	12 56 39.1	
	comp=Z,78nm,21.4s,baz=108,slow=34						
MJAR	**Matsushiro Arr**	**76.75**	**325**	P	**P**	**12 25 44.8**	**-2.0**
	comp=Z,2.2nm,0.6s,baz=171,slow=6.3,SNR=9.2						
MJAR				LR	LR	12 55 23.8	
	comp=Z,15nm,19.1s,baz=190,slow=32						
	comp=Z,2.2nm,0.6s						
JNU	**Nakatsue**	**78.28**	**318**	LR	LR	12 53 02.5	
	comp=Z,74nm,21.8s,baz=172,slow=30						
TROLL	**Troll, Antarti**	**80.04**	**180**	⇓P	**P**	**12 26 06.0**	**+1.4**
	comp=Z,111nm,0.7s						
SNAA	**Sanae**	**80.30**	**178**	⇓P	**P**	**12 26 04.8**	**-1.1**
	comp=Z,14nm,0.6s						
SNAA	**Sanae**	**80.30**	**178**	P	**P**	**12 26 07.4**	**+1.5**
	comp=Z,1.2nm,1.0s,baz=191,slow=8.1,SNR=7.6						
	comp=Z,1.2nm,1.0s						
VNA3	**Neumayer Olymp**	**80.43**	**176**	⇓P	**P**	**12 26 05.0**	**-1.5**
	comp=Z,3.1nm,0.7s						
ASAJ	**Asahikawa**	**80.76**	**332**	LR	LR	12 55 31.5	
	comp=Z,32nm,20.6s,baz=164,slow=31						
VNA2	**Neumayer--Watz**	**80.87**	**177**	⇓P	**P**	**12 26 09.9**	**+1.0**
	comp=Z,2.9nm,0.6s,baz=181,slow=5.0						
H03S2	**Juan Fernandez**	**81.25**	**124**	T	T	13 56 19.5	
	baz=240,slow=74,SNR=23						
H03S1	**Juan Fernandez**	**81.26**	**124**	T	T	13 56 21.8	
	baz=240,slow=74,SNR=20						
H03S3	**Juan Fernandez**	**81.26**	**124**	T	T	13 56 20.6	
	baz=240,slow=74,SNR=13						
H03N3	**Juan Fernandez**	**81.43**	**123**	T	T	13 56 24.2	
	baz=266,slow=73,SNR=7.1						
H03N2	**Juan Fernandez**	**81.43**	**123**	T	T	13 56 26.0	
	baz=266,slow=73,SNR=3.5						
H03N1	**Juan Fernandez**	**81.44**	**123**	T	T	13 56 21.6	
	baz=266,slow=73,SNR=7.9						
KSRS	**Korea Array**	**83.03**	**319**	P	P	12 26 17.0	-3.5
	comp=Z,1.3nm,1.0s,baz=140,slow=6.1,SNR=2.8						
	comp=Z,1.3nm,1.0s						
PLCA	**Paso Flores**	**83.62**	**133**	P	**P**	**12 26 23.8**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=162,slow=11,SNR=3.0						
	comp=Z,1.0nm,0.8s						
PETK	**Petropavlovsk-**	**83.84**	**345**	P	P	12 26 20.5	-3.8
	comp=Z,1.6nm,0.3s,baz=148,slow=5.9,SNR=4.4						
	comp=Z,1.6nm,0.3s						
PFO	**Pinyon Flats O**	**84.37**	**47**	LR	LR	13 01 46.8	
	comp=Z,25nm,18.1s,baz=240,slow=34						
PSI	**Prapat**	**85.72**	**275**	LR	LR	13 06 28.9	
	comp=Z,193nm,18.1s,baz=184,slow=37						
NVAR	**Mina Array Bea**	**86.31**	**42**	P	P	12 26 34.3	-3.0
	comp=Z,1.0nm,0.8s,baz=216,slow=7.5,SNR=8.2						
	comp=Z,1.0nm,0.8s						
KDAK	**Kodiak Island**	**88.19**	**13**	LR	LR	13 01 16.8	
	comp=Z,26nm,18.5s,baz=192,slow=32						
TXAR	**Lajitas Array**	**90.80**	**57**	P	P	12 26 55.9	-2.8
	comp=Z,0.2nm,0.7s,baz=286,slow=8.9,SNR=3.6						
	comp=Z,0.2nm,0.7s						
ATAH	**Atahualpa**	**94.56**	**101**	LR	LR	12 59 55.9	
	comp=Z,26nm,21.8s,baz=171,slow=29						
ZALV	**Zalesovo Beam**	**116.74**	**319**	PKP	**PKPdf**	**12 32 35.9**	**-2.5**
	comp=Z,0.5nm,0.3s,baz=189,slow=2.8,SNR=1.4						
MKAR	**Makanchi Array**	**116.75**	**311**	PKP	**PKPdf**	**12 32 36.7**	**-2.1**
	comp=Z,0.9nm,0.8s,baz=101,slow=1.5,SNR=6.6						
KURBB	**Kurchatov Arra**	**119.94**	**315**	PKP	**PKPdf**	**12 32 42.4**	**-2.3**
	comp=Z,1.0nm,0.7s,baz=100,slow=2.0,SNR=8.6						
BVAR	**Borovoye Array**	**125.19**	**317**	PKP	**PKPdf**	**12 32 52.9**	**-1.9**
	comp=Z,1.3nm,0.5s,baz=90,slow=0.7,SNR=6.5						
ARCES	**ARCESS Array B**	**136.57**	**348**	PKP	**PKPdf**	**12 33 13.8**	**-2.0**
	comp=Z,1.4nm,0.8s,baz=71,slow=3.1,SNR=5.2						
H10S3	**ASCENSION HYDR**	**139.46**	**153**	T	T	15 09 28.8	
	baz=204,slow=74,SNR=10						
H10S2	**ASCENSION HYDR**	**139.46**	**153**	T	T	15 09 46.9	
	baz=16,slow=74,SNR=8.4						
H10N3	**ASCENSION HYDR**	**140.53**	**153**	T	T	15 10 59.8	
	baz=203,slow=74,SNR=7.4						
H10N1	**ASCENSION HYDR**	**140.53**	**153**	T	T	15 11 14.5	
	baz=203,slow=74,SNR=9.0						
H10N2	**ASCENSION HYDR**	**140.55**	**153**	T	T	15 11 03.5	
	baz=203,slow=74,SNR=7.7						
FINES	**FINESS Array B**	**143.27**	**341**	PKhKP	PKPpre	12 33 22.9	
	comp=Z,1.1nm,0.5s,baz=62,slow=4.3,SNR=9.7						
NC303	**NORSAR Array S**	**146.48**	**352**		**PKPdf**	**12 33 33.3**	**-0.4**
NC405	**NORSAR Array S**	**146.55**	**352**	PKPdf	**PKPdf**	**12 33 34.5**	**+0.7**
NOA	**NORSAR Array B**	**146.68**	**352**	PKPbc	**PKPdf**	**12 33 33.1**	**-1.0**
	comp=Z,1.4nm,0.7s,baz=13,slow=4.1,SNR=11						
HFS	**Hagfors**	**147.21**	**350**	PKPbc	**PKPdf**	**12 33 34.6**	**-0.3**
	comp=Z,3.0nm,0.6s,baz=60,slow=3.6,SNR=15						
AK03	**Malin Array Si**	**149.83**	**325**	PKP	**PKPdf**	**12 33 42.7**	**+3.2**
AKASG	**Malin Array Be**	**149.84**	**325**		**PKPdf**	**12 33 43.3**	**+3.8**
AKASG	**Malin Array Be**	**149.84**	**325**	PKPbc	**PKPdf**	**12 33 42.5**	**+2.9**
	comp=Z,5.4nm,0.8s,baz=45,slow=3.4,SNR=17						
AKBB	**Malin Array Si**	**149.84**	**325**		**PKPdf**	**12 33 43.3**	**+3.8**
AKBB	**Malin Array Si**	**149.84**	**325**	PKP	**PKPdf**	**12 33 42.8**	**+3.3**
AK01	**Malin Array Si**	**149.85**	**325**	PKP	**PKPdf**	**12 33 43.0**	**+3.5**
KIEV	**Kiev**	**149.85**	**325**		**PKPdf**	**12 33 43.3**	**+3.8**
KIEV	**Kiev**	**149.85**	**325**	PKP	**PKPdf**	**12 33 42.6**	**+3.1**
AK04	**Malin Array Si**	**149.86**	**325**	PKP	**PKPdf**	**12 33 42.8**	**+3.3**
AK02	**Malin Array Si**	**149.88**	**325**	PKP	**PKPdf**	**12 33 43.0**	**+3.4**
BNN	**Bunyan**	**150.46**	**300**	PKPbc	**PKPbc**	**12 33 46.6**	**+0.1**
MMAI	**Mount Meron Ar**	**151.41**	**288**	PKPbc	**PKPbc**	**12 33 49.4**	**+0.6**
	comp=Z,3.5nm,0.6s,baz=72,slow=4.7,SNR=4.9						
BRTR	**Keskin Array B**	**151.94**	**302**		**PKPbc**	**12 33 49.1**	**-0.8**
BRTR	**Keskin Array B**	**151.94**	**302**	PKPbc	**PKPbc**	**12 33 48.9**	**-1.1**
	comp=Z,1.4nm,0.5s,baz=129,slow=4.5,SNR=8.8						
EKA	**Eskdalemuir Ar**	**152.60**	**7**	PKPbc	**PKPdf**	**12 33 46.2**	**+2.6**
	comp=Z,1.3nm,0.7s,baz=335,slow=3.4,SNR=1.5						
CSS	**Mathiatis**	**153.02**	**292**	PKPdf	**PKPdf**	**12 33 43.9**	**-1.0**
CSS				PKPab	**PKPab**	**12 34 04.5**	**+0.4**
BURAR	**Bucovina Array**	**153.82**	**324**	PKPbc	**PKPbc**	**12 33 53.8**	**+0.1**
TORD	**Torodi Ar. Bea**	**164.97**	**177**	PKPab	**PKPab**	**12 34 56.7**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=184,slow=4.0,SNR=2.4						

AEIC ***15*** *12:27:11.8±1.2, 66°.32N±0°.01×157°.26W±0°.02, h6^{km}±3^{km}, ML3.5, ML3.7/130(NEIC), Mwr3.5/45(SLM), Error ellipse: s-maj=1.9km s-min=1.2km az=184.0*

IDC ***15*** *12:27:12.0±1.0, 66°.46N×157°.96W, h0^{km}, mb3.6/6, mbtmp3.6/10, ML3.3/4, Error ellipse: s-maj=33.0km s-min=14.9km az=38.0*

NEIC ***15*** *12:27:12.1±1.4, 66°.33N±0°.01×157°.23W±0°.04, h12^{km}±7^{km}, Error ellipse: s-maj=2.4km s-min=1.9km az=85.0*

NEIC ***15*** *12:27:12, 66°.32N×157°.29W, h11^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.83; M$_{\theta\theta}$1.09; M$_{\phi\phi}$-0.26; M$_{r\theta}$-0.92; M$_{\theta\phi}$-1.45; M$_{\phi r}$-0.66; Fault plane solution: M$_0$2.09000×10^{14} NP1:ϕ_s85.00000°, δ70.00000°, λ-142.00000°. NP2:ϕ_s340.00000°, δ55.00000°, λ-25.00000°. Principal axes: T 2.0836, Plg9.0000°, Azm209.0000°; N 0.0022, Plg48.0000°, Azm109.0000°; P -2.0857, Plg41.0000°, Azm308.0000°;*

ISC 15 12:27:11.6±1.1, **66°.33N**±0°.02×**157°.25W**±0°.03, **h3**^{km}±8^{km}, **n124**, σ0^{s}.**90**/136, **mb3.8**/6, **Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
G19K	**Purcell Mounta**	**0.20**	**160**		**Pg**	**12 27 16.1**	**+0.6**
G19K					**Sg**	**12 27 19.0**	**+1.0**
F19K	**Shaleruckik Mo**	**0.55**	**338**		**Pg**	**12 27 22.4**	**+0.2**
F19K	**Shaleruckik Mo**	**0.55**	**338**		**Sg**	**12 27 29.9**	**+0.7**
F19K				IAML		12 27 32.1	
	comp=N,2µm,0.5s						
F19K				IAML		12 27 34.7	
	comp=E,1µm,0.5s						
G18K	**Tagagawik**	**0.72**	**233**		**Pg**	**12 27 25.5**	**+0.1**
G18K					**Sg**	**12 27 35.4**	**+0.8**
H19K	**Roundabout Mou**	**0.87**	**157**		**Pg**	**12 27 28.1**	**-0.1**
H19K					**Sg**	**12 27 39.8**	**+0.3**
H19K				IAML		12 27 44.1	
	comp=N,2µm,0.8s						
F20K	**Avaraart Lake**	**0.95**	**39**		**Pg**	**12 27 29.5**	**-0.2**
F20K					**Sg**	**12 27 42.0**	**0.0**
F18K	**Selawik**	**1.00**	**287**		**Pg**	**12 27 30.6**	**-0.1**
F18K					**Sg**	**12 27 44.1**	**+0.4**
E19K	**Redstone River**	**1.14**	**0**		**Pg**	**12 27 33.2**	**-0.2**
H18K	**Honhosa River**	**1.27**	**202**		**Pn**	**12 27 35.0**	**-1.1**
H18K					**Sg**	**12 27 51.8**	**-0.4**
H18K				IAML		12 27 54.2	
	comp=E,2µm,0.5s						
H20K	**Anotleneega Mo**	**1.28**	**130**		**Pn**	**12 27 35.4**	**-1.0**
H20K					**Sg**	**12 27 53.2**	**+0.3**
IMAR	**Indian Mountai**	**1.47**	**102**		**Pn**	**12 27 38.5**	**-0.4**
G21K	**Allakaket**	**1.52**	**81**		**Pn**	**12 27 38.9**	**-0.7**
G21K					**Sn**	**12 27 58.8**	**-1.2**
G21K				IAML		12 28 02.9	
	comp=N,1µm,0.7s						
G21K				IAML		12 28 06.0	
	comp=E,1µm,0.8s						
GCSA	**Galena City Sc**	**1.60**	**174**		**Pn**	**12 27 40.3**	**-0.4**
GCSA					**Sb**	**12 28 01.9**	**-0.3**
F17K	**Baldwin Pennin**	**1.61**	**276**		**Pn**	**12 27 40.1**	**-0.8**
F17K	**Baldwin Pennin**	**1.61**	**276**	IAML		12 28 04.4	
	comp=N,985nm,0.9s						
F17K				IAML		12 28 06.6	
	comp=E,1µm,0.6s						
G17K	**Kiwalik Mounta**	**1.62**	**241**		**Pn**	**12 27 39.9**	**-1.2**
G17K					**Sn**	**12 28 01.5**	**-0.9**
G17K					**Sb**	**12 28 02.0**	**-1.0**
E18K	**Tukpahlearik C**	**1.72**	**311**		**Pn**	**12 27 42.4**	**0.0**
F21K	**Alatna River**	**1.74**	**57**		**Pn**	**12 27 42.3**	**-0.4**
F21K				IAML		12 28 11.3	
	comp=E,692nm,0.9s						
F21K				IAML		12 28 12.5	
	comp=N,513nm,0.8s						
H17K	**Granite Mounta**	**1.78**	**220**		**Pn**	**12 27 42.4**	**-0.9**
H17K				IAML		12 28 19.4	
	comp=N,767nm,0.5s						
I20K	**Naaghedeneel**	**1.92**	**142**		**Pn**	**12 27 45.4**	**+0.2**
E17K	**Hotham Inlet**	**1.97**	**295**		**Pn**	**12 27 45.2**	**-0.6**
E20K	**Nigu River**	**1.98**	**12**		**Pn**	**12 27 46.4**	**+0.3**
E20K					**Pb**	**12 27 47.2**	**-1.2**
D19K	**Kuna River**	**2.20**	**352**		**Pn**	**12 27 49.9**	**+0.9**
D19K	**Kuna River**	**2.20**	**352**	IAML		12 28 21.5	
	comp=E,448nm,0.6s						
D19K				IAML		12 28 28.8	
	comp=N,501nm,0.8s						
F22K	**John River**	**2.33**	**57**		**Pn**	**12 27 49.5**	**-1.2**
F22K					**Pb**	**12 27 50.7**	**-3.4**
H22K	**Ishtalitna Cre**	**2.43**	**98**		**Pn**	**12 27 51.8**	**-0.4**
J19K	**Poorman**	**2.44**	**163**		**Pn**	**12 27 52.3**	**-0.1**
J19K				IAML		12 28 29.5	
	comp=E,347nm,0.7s						
E21K	**Killik River**	**2.47**	**29**		**Pn**	**12 27 53.3**	**+0.5**
E21K				IAML		12 28 37.0	
	comp=N,363nm,0.9s						
D17K	**Noatak River**	**2.67**	**304**		**Pn**	**12 27 55.1**	**-0.3**
C18K	**Utukok River**	**2.78**	**329**		**Pn**	**12 27 57.0**	**-0.1**
E22K	**Anaktuvuk Pass**	**2.79**	**47**		**Pn**	**12 27 58.6**	**+1.5**
RDOG	**Red Dog Mine**	**2.80**	**311**	Pn	**Pn**	**12 27 58.3**	**+1.0**
I17K	**Unalakleet**	**2.85**	**212**		**Pn**	**12 27 57.8**	**-0.1**
I17K				IAML		12 28 47.2	
	comp=E,341nm,0.7s						
J18K	**Innoko River**	**2.88**	**175**		**Pn**	**12 27 58.3**	**-0.1**
G23K	**Bananza Creek**	**2.92**	**79**		**Pn**	**12 27 58.5**	**-0.5**
G23K				IAML		12 28 52.6	
	comp=E,176nm,0.6s						
COLD	**Coldfoot**	**2.94**	**69**		**Pn**	**12 27 58.8**	**-0.3**
COLD				IAML		12 28 51.8	
	comp=N,195nm,1.1s						
C21K	**Knifeblade Rid**	**2.99**	**17**		**Pn**	**12 28 00.0**	**+0.1**
MLY	**Manley**	**2.99**	**113**		**Pn**	**12 28 00.7**	**+0.8**
MLY				IAML		12 28 52.4	
	comp=N,156nm,0.9s						
J17K	**VABM Dome**	**3.04**	**196**		**Pn**	**12 28 00.6**	**0.0**
J17K				IAML		12 28 50.1	
	comp=E,240nm,0.6s						
J17K				IAML		12 28 53.9	
	comp=N,171nm,0.7s						
F15K	**North Star Dit**	**3.08**	**262**		**Pn**	**12 28 00.7**	**-0.4**
F15K				IAML		12 28 55.0	
	comp=E,234nm,0.6s						
D22K	**Ayikyak River**	**3.10**	**32**		**Pn**	**12 28 02.2**	**+0.8**
G15K	**Niukluk**	**3.11**	**248**		**Pn**	**12 28 00.1**	**-1.4**
H23K	**Yukon River**	**3.18**	**96**		**Pn**	**12 28 03.0**	**+0.5**
H23K				IAML		12 28 57.0	
	comp=N,235nm,1.1s						
H23K				IAML		12 29 01.6	
	comp=E,199nm,1.0s						
K20K	**Telida**	**3.28**	**154**		**Pn**	**12 28 03.8**	**0.0**
J16K	**Anvik River**	**3.38**	**207**		**Pn**	**12 28 05.1**	**0.0**
J16K				IAML		12 29 08.8	
	comp=N,192nm,0.7s						
E23K	**Chandalar**	**3.44**	**56**		**Pn**	**12 28 06.7**	**+0.5**
E23K				IAML		12 29 09.6	
	comp=N,193nm,0.6s						
B21K	**Ikpikpuk River**	**3.46**	**16**		**Pn**	**12 28 05.3**	**-0.9**
B21K				IAML		12 29 04.2	
	comp=E,202nm,0.8s						
B21K				IAML		12 29 05.7	
	comp=N,186nm,0.7s						
BPAW	**Bear Paw Mtn.**	**3.46**	**127**		**Pn**	**12 28 07.1**	**+0.7**
I23K	**Minto, Yukon-K**	**3.47**	**106**		**Pn**	**12 28 07.0**	**+0.6**
I23K				IAML		12 29 07.2	
	comp=N,183nm,1.0s						
B18K	**Kokolik River**	**3.50**	**333**		**Pn**	**12 28 06.5**	**-0.4**
B18K					Pb	12 28 07.1	-7.0
D23K	**Nanushuk River**	**3.65**	**40**		**Pn**	**12 28 09.8**	**+0.8**
K17K	**Iditarod**	**3.66**	**188**		**Pn**	**12 28 08.5**	**-0.5**
K17K				IAML		12 29 18.1	
	comp=E,100nm,0.8s						
K17K				IAML		12 29 18.5	
	comp=N,123nm,0.9s						
CAST	**Castle Rocks**	**3.66**	**141**		**Pn**	**12 28 09.9**	**+0.8**
C16K	**Lisburne Hills**	**3.69**	**306**		**Pn**	**12 28 09.7**	**+0.2**
B20K	**Meade River**	**3.70**	**1**		**Pn**	**12 28 09.8**	**+0.3**
B20K				IAML		12 29 22.6	
	comp=N,124nm,0.9s						
TOLK	**Toolik Lake Re**	**3.76**	**48**		**Pn**	**12 28 10.7**	**+0.3**
TOLK				IAML		12 29 13.9	
	comp=E,145nm,0.8s						
TOLK				IAML		12 29 27.4	
	comp=N,150nm,0.8s						
NEA2	**Nenana**	**3.83**	**113**		**Pn**	**12 28 11.6**	**+0.2**
NEA2				IAML		12 29 17.2	
	comp=E,92nm,1.1s						
E24K	**Your Creek**	**3.84**	**59**		**Pn**	**12 28 11.7**	**+0.1**
E24K				IAML		12 29 21.7	
	comp=N,105nm,0.9s						
E24K				IAML		12 29 27.3	
	comp=E,82nm,0.8s						
H24K	**Noodor Dome**	**3.85**	**93**		**Pn**	**12 28 11.9**	**+0.2**
H24K				IAML		12 29 16.8	
	comp=E,105nm,0.7s						
H24K				IAML		12 29 19.2	
	comp=N,129nm,0.8s						
F24K	**Squaw Lake**	**3.88**	**68**		**Pn**	**12 28 11.7**	**-0.4**
F24K				IAML		12 29 16.4	
	comp=E,117nm,0.6s						
F24K				IAML		12 29 18.3	
	comp=N,106nm,0.5s						
BWN	**Browne**	**3.92**	**120**		**Pn**	**12 28 12.8**	**+0.1**
G24K	**Hadweenzic Riv**	**3.93**	**80**	Pn	**Pn**	**12 28 11.8**	**-1.0**
G24K				IAML		12 29 20.6	
	comp=N,128nm,0.9s						
L20K	**Farewell, AK**	**4.13**	**158**		**Pn**	**12 28 15.7**	**+0.1**
L18K	**Granite Mounta**	**4.13**	**176**		**Pn**	**12 28 15.7**	**+0.2**
L18K				IAML		12 29 24.1	
	comp=N,68nm,1.0s						
TRF	**Thorofare Moun**	**4.14**	**131**		**Pn**	**12 28 16.6**	**+0.7**
TRF				IAML		12 29 24.6	
	comp=E,87nm,0.9s						
TRF				IAML		12 29 26.4	
	comp=N,75nm,0.9s						
A19K	**Wainwright**	**4.14**	**342**		**Pn**	**12 28 15.9**	**+0.2**
COLA	**College**	**4.17**	**106**		**Pn**	**12 28 16.1**	**+0.2**
POKR	**Poker Plat Res**	**4.23**	**102**		**Pn**	**12 28 16.9**	**-0.1**
POKR				IAML		12 29 29.5	
	comp=E,73nm,1.0s						
POKR				IAML		12 29 33.1	
	comp=N,60nm,0.9s						
WRH	**Wood River Hil**	**4.26**	**112**		**Pn**	**12 28 16.8**	**-0.5**
WRH				IAML		12 29 29.9	
	comp=N,63nm,0.9s						
B22K	**Teshekpuk Lake**	**4.27**	**18**		**Pn**	**12 28 16.2**	**-1.2**
B22K				IAML		12 29 40.8	
	comp=N,104nm,0.8s						
B22K				IAML		12 30 00.1	
	comp=E,71nm,1.1s						
CCB	**Clear Creek Bu**	**4.28**	**109**		**Pn**	**12 28 17.3**	**-0.3**
CCB				IAML		12 29 28.8	
	comp=E,60nm,0.8s						
CCB				IAML		12 29 36.5	
	comp=N,61nm,0.8s						
L19K	**White Mountain**	**4.29**	**165**		**Pn**	**12 28 17.7**	**-0.1**
L19K				IAML		12 29 35.1	
	comp=N,61nm,0.9s						
C23K	**Itkillik River**	**4.31**	**32**		**Pn**	**12 28 17.9**	**-0.1**
C23K				IAML		12 29 47.2	
	comp=N,70nm,0.8s						
C23K				IAML		12 29 54.8	
	comp=E,78nm,1.1s						
TNA	**Tin City**	**4.43**	**265**		**Pn**	**12 28 19.1**	**-0.5**
TNA				IAML		12 29 36.0	
	comp=E,67nm,0.5s						
K15K	**Wolf Creek Mou**	**4.46**	**207**		**Pn**	**12 28 20.1**	**+0.1**
K15K				IAML		12 29 37.0	
	comp=N,60nm,0.9s						
K15K				IAML		12 29 50.7	
	comp=E,73nm,0.7s						
J14K	**Nanvaranak Lak**	**4.50**	**220**		**Pn**	**12 28 19.1**	**-1.4**
J14K				IAML		12 29 41.9	
	comp=N,87nm,0.9s						
ILAR	**Eielson Array**	**4.58**	**105**	Pn	**Pn**	**12 28 21.6**	**-0.1**
	comp=N,2.2nm,0.3s,baz=295,slow=14,SNR=81						
ILAR				Sn	**Sn**	**12 29 11.8**	**-3.6**
	comp=N,1.7nm,0.3s,baz=288,slow=17,SNR=6.4						
ILAR				Lg	Lg	12 29 34.2	
	comp=N,6.5nm,0.3s,baz=294,slow=32,SNR=6.2						
	comp=N,12nm,0.5s						
M19K	**Big River Lodg**	**4.62**	**163**		**Pn**	**12 28 23.0**	**+0.8**
M19K				IAML		12 29 42.7	
	comp=E,69nm,1.1s						
C24K	**Franklin Bluff**	**4.68**	**39**		**Pn**	**12 28 22.6**	**-0.4**
C24K				IAML		12 29 50.8	
	comp=N,62nm,0.8s						
C24K				IAML		12 30 03.2	
	comp=E,74nm,1.0s						
L16K	**Owhat River**	**4.74**	**193**		**Pn**	**12 28 23.1**	**-0.8**
L16K				IAML		12 29 47.7	
	comp=N,42nm,1.1s						
L16K				IAML		12 29 49.3	
	comp=E,41nm,0.9s						
A22K	**Sinclair Lake**	**4.77**	**9**		**Pn**	**12 28 23.8**	**-0.4**
PRP	**Porcupine Dome**	**4.87**	**94**		**Pn**	**12 28 25.6**	**-0.3**
PRP				IAML		12 29 49.2	
	comp=N,65nm,1.0s						
PRP				IAML		12 29 51.9	
	comp=E,47nm,0.8s						
M17K	**Holitna River**	**4.95**	**181**		**Pn**	**12 28 26.5**	**-0.2**
L15K	**Ungalak Mounta**	**5.03**	**204**		**Pn**	**12 28 27.4**	**-0.3**
SKT	**Skwentna**	**5.03**	**148**		**Pn**	**12 28 29.0**	**+1.1**
WAT7	**Susitna Watana**	**5.04**	**130**		**Pn**	**12 28 28.5**	**+0.4**
WAT1	**Susitna Watana**	**5.13**	**129**		**Pn**	**12 28 29.5**	**+0.2**
M16K	**Timber Creek**	**5.38**	**189**		**Pn**	**12 28 31.9**	**-0.8**
M16K				IAML		12 30 18.0	
	comp=N,31nm,0.9s						
M16K				IAML		12 30 19.0	
	comp=E,26nm,0.8s						
SPWE	**Spurr West**	**5.48**	**156**		**Pn**	**12 28 34.5**	**+0.4**
WAT6	**Susitna Watana**	**5.57**	**128**		**Pn**	**12 28 35.9**	**+0.4**
N19K	**Bonanza Creek**	**5.67**	**166**		**Pn**	**12 28 36.8**	**0.0**
N18K	**Kilae Creek**	**5.70**	**173**		**Pn**	**12 28 37.3**	**+0.2**
N17K	**Nushagak Hills**	**5.82**	**180**		**Pn**	**12 28 38.6**	**-0.2**
C26K	**Camden Bay**	**5.85**	**46**		**Pn**	**12 28 39.7**	**+0.7**
M15K	**Kasigluk River**	**5.86**	**197**		**Pn**	**12 28 38.8**	**-0.4**
I26K	**Coal Creek Min**	**5.88**	**94**		**Pn**	**12 28 39.0**	**-0.5**
M14K	**Bethel**	**5.98**	**203**	Pn	**Pn**	**12 28 40.8**	**-0.1**
SML	**Sawmill**	**5.99**	**135**		**Pn**	**12 28 41.5**	**+0.5**
J26L	**Joseph Creek**	**6.00**	**101**		**Pn**	**12 28 40.7**	**-0.5**
C27K	**Jago River**	**6.07**	**51**		**Pn**	**12 28 42.9**	**+0.8**
N15K	**Kwethluk River**	**6.31**	**193**	Pn	**Pn**	**12 28 44.9**	**-0.6**
HARP	**HAARP**	**6.56**	**121**		**Pn**	**12 28 48.3**	**-0.6**
O18K	**Koktuh Hills**	**6.56**	**171**	Pn	**Pn**	**12 28 48.4**	**-0.6**
O17K	**Koliganek Bris**	**6.58**	**179**		**Pn**	**12 28 48.8**	**-0.3**
O16K	**Kokwok River B**	**6.77**	**184**		**Pn**	**12 28 51.3**	**-0.4**
K27K	**Chicken**	**6.79**	**103**		**Pn**	**12 28 52.8**	**+0.8**
F28M	**Old Crow**	**6.94**	**71**	Pn	**Pn**	**12 28 54.1**	**+0.1**
I28M	**Miner Creek**	**7.15**	**89**		**Pn**	**12 28 56.5**	**-0.5**
E28M	**Babbage River**	**7.17**	**63**	Pn	**Pn**	**12 28 56.8**	**-0.4**
O15K	**Ungalikthiuk R**	**7.27**	**191**	Pn	**Pn**	**12 28 57.8**	**-0.9**
L27K	**Beaver Creek,**	**7.37**	**109**		**Pn**	**12 28 58.5**	**-1.6**
BCAR	**Beaver Creek A**	**7.38**	**109**	Pn	**Pn**	**12 29 00.1**	**-0.1**
G29M	**Pine Creek**	**7.67**	**77**	Pn	**Pn**	**12 29 04.1**	**+0.1**
DAWY	**Dawson**	**7.84**	**99**		**Pn**	**12 29 05.8**	**-0.6**
I30M	**Mount Dempster**	**8.64**	**88**	Pn	**Pn**	**12 29 17.3**	**-0.2**
KDAK	**Kodiak Island**	**8.85**	**164**	Pn	**Pn**	**12 29 19.0**	**-1.2**
	comp=E,0.3nm,0.3s,baz=325,slow=12,SNR=2.2						
	comp=E,7.4nm,0.9s						
DLBC	**Dease Lake**	**14.78**	**109**	Pn	**P**	**12 30 48.7**	**+1.3**
	comp=E,0.1nm,0.3s,baz=310,slow=11,SNR=4.5						
	comp=E,1.7nm,0.7s						
YKA	**Yellowknife Ar**	**18.53**	**82**	P	**Pn**	**12 31 31.6**	**+2.7**
	comp=E,0.1nm,0.3s,baz=304,slow=11,SNR=4.1						
	comp=E,0.3nm,0.7s						
TXAR	**Lajitas Array**	**49.07**	**112**	P	**P**	**12 36 03.5**	**+3.6**
	comp=E,0.1nm,0.3s,baz=357,slow=3.2,SNR=2.3						
	comp=E,0.1nm,0.3s						
ZALV	**Zalesovo Beam**	**51.23**	**318**	P	**P**	**12 36 13.1**	**-2.8**
	comp=E,0.7nm,0.2s,baz=34,slow=10.0,SNR=2.0						
	comp=E,0.7nm,0.2s						
BVAR	**Borovoye Array**	**55.61**	**327**	P	**P**	**12 36 47.4**	**-0.6**
	comp=E,0.5nm,0.5s,baz=15,slow=6.0,SNR=2.8						
	comp=E,0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**55.90**	**320**	P	**P**	**12 36 49.5**	**-0.6**
	comp=E,0.3nm,0.3s,baz=28,slow=6.3,SNR=4.1						
	comp=E,0.3nm,0.3s						
MKAR	**Makanchi Array**	**58.39**	**316**	P	**P**	**12 37 06.2**	**-1.6**
	comp=E,0.3nm,0.6s,baz=25,slow=5.1,SNR=3.4						
	comp=E,0.3nm,0.6s						
ESDC	**Sonseca Array**	**72.34**	**21**	P	**P**	**12 38 39.2**	**+0.9**
	comp=E,0.7nm,0.8s,baz=343,slow=5.2,SNR=6.6						
	comp=E,0.7nm,0.8s						

NEIC ***15*** *12:39:27.7±0.6, 4°.49S±0°.10×154°.3E±0°.2, h416^{km}±10^{km}, mb4.1/12, Error ellipse: s-maj=24.8km s-min=11.6km az=69.0*

*IDC **15** 12:39:29.4±3.3, 4°.64S×154°.21E, h430^{km}±35^{km}, mb3.1/6, mbtmp3.9/8, Error ellipse: s-maj=24.7km s-min=21.8km az=50.0*

ISC 15 12:39:26.5±0.8**, 4°.5S**±0°.1×**154°.3E**±0°.1**, h400^{km}, n23, σ1ˢ.13**/25**, mb3.9**/10**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	2.17	278	P	Pn	12 40 26.6	+2.9
PMG	Port Moresby	8.63	235	P	P	12 41 29.5	+0.5
PMG	Port Moresby	8.63	235	P	P	12 41 30.9	+2.0
	12nm,0.6s,baz=34,slow=7.4,SNR=1.7						
JAY	Jayapura	13.73	278	P	Pn	12 42 26.7	-1.2
	3.5nm,0.4s,baz=116,slow=6.5,SNR=5.0						
COEN	Coen	14.47	229	P	P	12 42 34.3	+0.9
CTAO	Charters Tower	17.39	206	P	P	12 43 04.6	-0.1
CTAO				IAmb	IAmb	12 43 05.7	
	comp=Z,7.3nm,0.8s						
DZM	Mont Dzumac	21.07	147	P	P	12 43 40.6	-0.3
DZM				IAmb	IAmb	12 43 46.6	
	comp=Z,7.1nm,1.1s						
DZM	Mont Dzumac	21.07	147	P	P	12 43 41.3	+0.4
	comp=Z,1.6nm,0.4s,baz=214,slow=1.9,SNR=7.2						
	comp=Z,1.6nm,0.4s						
FAKI	Fak Fak	22.08	273	P	P	12 43 48.6	-1.5
WB0	Warramunga Arr	24.66	230	P	P	12 44 12.4	-0.9
WB0				IAmb	IAmb	12 44 34.0	
	comp=Z,10nm,1.4s						
WR8	Warramunga Arr	24.68	230	P	P	12 44 12.8	-0.7
WR8				IAmb	IAmb	12 44 49.1	
	comp=Z,11nm,1.4s						
WRAB	Tennant Creek	24.79	230	P	P	12 44 13.7	-0.8
WRAB				IAmb	IAmb	12 44 45.4	
	comp=Z,7.0nm,1.2s						
WRA	Warramunga Arr	24.80	230	P	P	12 44 13.7	-0.9
	comp=Z,1.0nm,0.5s,baz=54,slow=9.4,SNR=22						
WRA				PcP	PcP	12 47 38.5	-0.1
	comp=Z,0.1nm,0.3s,baz=56,slow=2.6,SNR=1.6						
	comp=Z,1.0nm,0.5s						
AS31	Alice Springs	27.42	224	P	P	12 44 36.5	-1.2
ASAR	Alice Springs	27.42	224	P	P	12 44 36.2	-1.5
	comp=Z,0.2nm,0.4s,baz=54,slow=9.0,SNR=16						
ASAR				PcP	PcP	12 47 43.5	-1.3
	comp=Z,0.3nm,0.8s,baz=30,slow=2.5,SNR=1.8						
	comp=Z,0.2nm,0.4s						
SONM	Songino Array	66.87	327	P	P	12 49 36.6	-0.7
VNDA	Vanda	73.10	178	P	P	12 50 14.4	+0.4
SBA	Scott Base	73.62	177	P	P	12 50 17.1	+0.2
SBA				IAmb	IAmb	12 51 01.2	
	comp=Z,5.9nm,1.2s						
O16K	Kokwok River B	74.02	23	P	P	12 50 19.0	-0.5
MKAR	Makanchi Array	81.08	319	P	P	12 50 59.4	+0.9
	comp=Z,0.5nm,0.6s,baz=103,slow=6.5,SNR=6.9						
	comp=Z,0.5nm,0.6s						
ILAR	Eielson Array	81.30	22	P	P	12 50 59.5	+0.3
	comp=Z,0.4nm,0.5s,baz=235,slow=4.4,SNR=6.7						
	comp=Z,0.4nm,0.5s						
QSPA	South Pole Qui	85.48	180	P	P	12 51 20.1	-0.2
QSPA	South Pole Qui	85.48	180	P	P	12 51 19.9	-0.5
	comp=Z,1.9nm,1.0s,baz=319,slow=1.3,SNR=6.8						
	comp=Z,1.9nm,1.0s						

*NEIC **15** 12:56:24.3±0.9, 19°.22N±0°.02×155°.41W±0°.02, h42^{km}±2^{km}, Error ellipse: s-maj=3.7km s-min=2.5km az=151.0*

HVO 15 12:56:26.3±1.0**, 19°.22N**±0°.04×**155°.40W**±0°.03**, h32**^{km}±7^{km}**, ML2.4**/36**, ML2.5**/44(NEIC)**, Error ellipse: s-maj=7.0km s-min=2.8km az=148.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HTC	Hot Caves	0.02	354		Pb	12 56 31.4	-0.3
HLP	Hilina Pali	0.11	48		Pn	12 56 31.4	-0.6
HLP					Sb	12 56 36.0	0.0
HLP				IAML		12 56 36.1	
	comp=N,853nm,0.4s						
HLP				IAML		12 56 38.5	
	comp=E,952nm,0.3s						
AIN	Ainahou	0.16	339		Pb	12 56 32.2	-0.4
AIN					Sn	12 56 36.5	-0.2
SDHHI	Sand Hill	0.19	30		Pb	12 56 32.1	-0.7
SDHHI					Sb	12 56 36.3	-0.9
HPO	Honuapo	0.20	229		Pb	12 56 32.2	-0.5
HPO					Sb	12 56 36.9	-0.2
WRMHI	West Rim	0.21	26		Pb	12 56 32.1	-0.8
WRMHI					Sb	12 56 36.5	-0.9
KHU	Kahuku	0.21	277		Pb	12 56 32.3	-0.8
KHU					Sb	12 56 36.9	-0.8
RIM	Rim	0.21	33		Pb	12 56 32.2	-0.8
RIM					Sb	12 56 36.6	-0.9
KKO	Keanakako'i	0.21	35		Pb	12 56 32.3	-0.8
KKO					Sb	12 56 36.6	-1.0
UWE	Uwekahuna	0.22	26		Pb	12 56 32.1	-1.0
UWE					Sb	12 56 37.3	-0.5
UWE				IAML		12 56 37.4	
	comp=N,691nm,0.3s						
UWE				IAML		12 56 41.5	
	comp=E,711nm,0.4s						
OBL	Observatory Le	0.22	28		Pb	12 56 32.2	-0.9
OBL					Sb	12 56 36.7	-1.0
PUH	Pauahi	0.23	48		Pb	12 56 32.5	-0.7
PUH					Sb	12 56 36.9	-0.9
PUH				IAML		12 56 37.1	
	comp=E,564nm,0.2s						
PUH				IAML		12 56 43.1	
	comp=N,447nm,0.5s						
BYL	Byron's Ledge	0.23	34		Pb	12 56 32.6	-0.6
BYL					Sb	12 56 37.2	-0.6
UWB	Uwekahuna Bluf	0.23	29		Pb	12 56 32.2	-1.0
UWB					Sb	12 56 36.7	-1.2
HATHI	Halema‘uma‘u T	0.24	32		Pb	12 56 32.6	-0.7
HATHI					Sb	12 56 36.5	-1.5
HATHI				IAML		12 56 37.1	
	comp=E,445nm,0.8s						
SBLHI	Steaming Bluff	0.24	30		Pb	12 56 32.3	-1.0
SBLHI					Sb	12 56 36.7	-1.4
KNHH	Kane Nui o Ham	0.27	53		Pb	12 56 32.5	-1.1
RSD	Rainshed	0.27	25		Pb	12 56 33.0	-0.6
RSD	Rainshed	0.27	25		Sb	12 56 37.7	-0.9
MLH	Mauna Loa	0.27	2		Pb	12 56 33.0	-0.8
MLH					Sb	12 56 38.1	-0.8
MLH				IAML		12 56 38.8	
	comp=N,476nm,0.1s						
MLH				IAML		12 56 44.0	
	comp=E,490nm,0.3s						
STCH	Steam Cracks	0.30	57		Pb	12 56 33.3	-0.8
STCH					Sb	12 56 38.0	-1.3
STCH				IAML		12 56 38.5	
	comp=E,546nm,0.1s						
STCH				IAML		12 56 38.9	
	comp=N,393nm,0.2s						
NPOC	North of Pu‘u	0.32	58		Pb	12 56 33.2	-1.0
NPOC					Sb	12 56 38.5	-1.2
JCUZ	Jacuzzi	0.32	60		Pb	12 56 33.4	-0.9
JCUZ					Sb	12 56 38.7	-1.0
MWH	Mokuaweoweo	0.33	324		Pb	12 56 33.4	-1.3
MWH					Sb	12 56 39.3	-1.1
MWH				IAML		12 56 45.9	
	comp=N,421nm,0.4s						
HMH	Humu‘ula Sheep	0.39	348		Pb	12 56 34.6	-0.8
HMH					Sb	12 56 40.6	-1.0
HMH				IAML		12 56 41.0	
	comp=N,304nm,0.2s						
ALEP	Alea Permanent	0.40	324		Pb	12 56 34.1	-1.5
ALEP					Sb	12 56 39.9	-2.0
JOKA	Jonika Flow	0.43	60		Pb	12 56 34.4	-1.3
JOKA					Sb	12 56 40.5	-1.7
POHA	Pohakuloa	0.55	346		Pb	12 56 35.9	-1.9
POHA					Sb	12 56 43.4	-2.3
POHA	Pohakuloa	0.55	346	IAML		12 56 43.7	
	comp=N,99nm,0.5s						
POHA				IAML		12 56 55.2	
	comp=N,112nm,1.4s						
CPH	Captain Cook	0.56	298		Pb	12 56 35.8	-2.0
HUH	Hualalai	0.62	318		Pb	12 56 37.2	-1.7
HUH				IAML		12 56 51.5	
	comp=E,303nm,1.3s						
HUH				IAML		12 56 54.2	
	comp=N,287nm,1.1s						
KKH	Kailua Kona	0.73	307		Pn	12 56 38.0	-2.4
KKH					Sb	12 56 47.1	-3.3
HPAH	Hawaii Prepara	0.85	341		Pn	12 56 39.8	-2.4
HPAH					Sn	12 56 49.5	-4.2
HPAH	Hawaii Prepara	0.85	341	IAML		12 56 50.2	
	comp=N,194nm,0.1s						
HPAH				IAML		12 56 50.4	
	comp=E,220nm,0.1s						
HLK	Haleakala	1.73	333		Pn	12 56 51.8	-2.5
HLK					Sn	12 57 10.8	-4.7
KHLH	Kahului Airpor	1.93	330		Pn	12 56 55.0	-1.9
KHLH					Sn	12 57 16.9	-3.1
WMR	Waimanalo Ridg	3.00	315		Pn	12 57 08.8	-2.8
WMR					Sn	12 57 42.1	-4.3
HON	Honolulu	3.22	311		Pn	12 57 12.0	-2.6
HON					Sn	12 57 45.7	-6.2

NEIC 15 13:01:26.8±0.8**, 37°.03N**±0°.01×**104°.99W**±0°.01**, h5**^{km}±1^{km}**, ML1.7**/10**, Error ellipse: s-maj=3.5km s-min=2.1km az=224.0, Colorado**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T25A	Trinidad	0.48	77		Pg	13 01 36.7	+0.7
T25A				Sg	Sg	13 01 43.0	+0.7
SDCO	Great Sand Dun	0.82	331	Pg	Pg	13 01 42.8	+0.2
S22A	4UR Ranch, Cre	1.63	297		Pn	13 01 56.0	-0.5
RTBA	Rita Blanca	1.91	107		Pb	13 02 01.1	-1.0
RTBA					Sb	13 02 25.8	-0.4
ANMO	Albuquerque	2.40	210	Pn	Pn	13 02 06.6	-0.3
ANMO	Albuquerque	2.40	210	Pn	Pn	13 02 06.2	-0.7
MVCO	Mesa Verde	2.81	275	Pn	Pn	13 02 12.9	+0.4

*JMA **15** 13:09:27.6±0.5, 22°N±2°×12°4E±°, h57^{km}, MV3.2/16, FAR S OFF ISHIGAKIJIMA*

ISC 15 13:09:27.5±2.3**, 22°.4N**±0°.1×**123°.70E**±0°.07**, h35^{km}, n19, σ0ˢ.96**/26**, Southeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	Hateruma jima	1.63	3	*e*P	Pn	13 09 54.3	+0.7
HATJ				S	Sn	13 10 12.6	-0.7
JKRS	Kuro-shima	1.83	9	P	Pn	13 09 57.3	+1.0
JKRS				*e*S	Sn	13 10 17.9	-0.4
IRIF	Iriomote-Funau	1.90	1	P	Pn	13 09 58.5	+1.1
IRIF				*e*S	Sn	13 10 19.4	-0.7
JIJ	Ishigaki jima	1.97	12	P	Pn	13 09 58.5	+0.2
JIJ				*e*S	Sn	13 10 20.8	-1.1
YOJ	Yonaguni jima	2.12	343	S	Sn	13 10 25.4	-0.2
JYNG	Yonagunijimaku	2.13	341	*e*P	Pn	13 10 01.8	+1.2
JYNG				*e*S	Sn	13 10 25.5	-0.3
JISG	Ishigakijimahi	2.22	15	P	Pn	13 10 01.9	+0.1
JISG				S	Sn	13 10 27.0	-1.1
JTJ	Tarama	2.39	22	*e*P	Pn	13 10 04.4	+0.3
JTJ				*e*S	Sn	13 10 32.0	-0.2
YULB	Yu-li	2.41	294	P	Pn	13 10 04.6	+0.1
TWGBT	Beinan	2.45	280	P	Pn	13 10 05.5	+0.5
TWGBT	Beinan	2.45	280	S	Sn	13 10 32.9	-0.8
NACB	Ninganchiao	2.60	312	P	Pn	13 10 07.3	+0.3
NACB	Ninganchiao	2.60	312	S	Sn	13 10 34.9	-2.5
JIRB	Irabujima	2.75	29	P	Pn	13 10 09.3	+0.3
JIRB				S	Sn	13 10 40.5	-0.6
JMJ2	Miyako jima3	2.75	33	*e*P	Pn	13 10 09.5	+0.5
JMJ2				*e*S	Sn	13 10 40.5	-0.5
SSLB	Suanglung	2.87	299	P	Pn	13 10 12.0	+1.3
TPUB	Ta-pu	2.96	288	P	Pn	13 10 14.3	+2.3
YHNB	Yeheng	3.09	317	P	Pn	13 10 15.6	+1.8
TATO	Taipei	3.25	322	P	Pn	13 10 18.8	+2.9

GCG 15 13:18:20.1±0.3**, 13°.14N×90°.06W, h24**^{km}±5^{km}**, MD3.9, 1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NUBE	Las Nubes	0.81	20	*i* P	Pb	13 18 35.4	-0.1
NUBE				*i* S	Sn	13 18 47.4	0.0
MTO3	Montecristo	1.42	29	*i* P	Pn	13 18 45.1	+0.4
STG0	El Palmar, Qui	1.78	316	*e*P	Pb	13 18 54.8	+2.6
STG8	El Palmar, Qui	1.80	316	⇓*i*P	Pb	13 18 55.6	+3.0

*NNC **15** 13:31:47.3±0.5, 47°.55N×79°.78E, h0^{km}, mb3.8, mpv3.6, Error ellipse: s-maj=4.2km s-min=3.7km az=35.0, Suspected Mining explosion.*

*SOME **15** 13:31:49.6, 47°.52N×79°.75E, h20^{km}*

*ASRS **15** 13:31:50.2±0.5, 48°N±2°×8°0E±°, h8^{km}, MLh4.3/5, Error ellipse: s-maj=5.0km s-min=3.7km az=61.0, confirmed*

ISC 15 13:31:48.5±0.7**, 47°.61N**±0°.02×**79°.93E**±0°.03**, h0^{km}, n47, σ1ˢ.93**/70**, 16C-8D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAKZ	Makanchi	1.61	119	⇓P	Pn	13 32 18.0	-0.1
	37nm,0.4s						
MAKZ				⇑S	Sn	13 32 39.2	-0.4
	230nm,0.3s						
MAKZ	Makanchi	1.61	119	Pg	Pn	13 32 17.8	-0.4
MAKZ				Sg	Sn	13 32 39.1	-0.5
MK31	Makanchi Array	1.80	116	⇑P	Pb	13 32 21.6	-0.7
	8.9nm,0.2s,baz=294,slow=16,SNR=613						
MK31				⇑S	Sb	13 32 45.3	-0.2
	38nm,0.2s,baz=283,slow=21,SNR=22						
MKAR	Makanchi Array	1.80	116	Pg	Pb	13 32 22.1	-0.3
MKAR				Sg	Sg	13 32 45.8	-0.6
SEM	Semipalatinsk	2.81	4	Pg	Pb	13 32 38.0	-1.7
	16nm,0.3s						
SEM				Lg	Lg	13 33 12.6	
	398nm,0.4s						
SEM	Semipalatinsk	2.81	4	*e*P	Pg	13 32 40.7	-1.7
	16nm,0.2s						
SEM				*e*S	Sg	13 33 17.1	-1.6
	288nm,0.2s						
TDK	Taldyqorghan	2.81	203	Pg	Pb	13 32 38.7	-0.8
	32nm,0.2s						
TDK				Lg	Lg	13 33 13.9	
	601nm,0.4s						
TDK	Taldyqorghan	2.81	203	*e*P	Pb	13 32 38.7	-0.8
	32nm,0.2s						
TDK				*e*S	Sb	13 33 13.9	-0.7
	601nm,0.4s						
KURBB	Kurchatov Arra	3.15	344	⇑Pn	Pn	13 32 38.5	-0.8
	0.6nm,0.2s						
KURBB				⇑Pg	Pb	13 32 46.1	+0.7
	15nm,0.3s						
KURBB				⇑Lg	Lg	13 33 29.3	
	168nm,0.5s						
KURK	Kurchatov	3.23	345	⇑Pn	Pn	13 32 39.5	-0.9
	0.4nm,0.4s						
KURK				⇑Pg	Pb	13 32 46.2	-0.4
	7.4nm,0.5s						
KURK				⇓Lg	Lg	13 33 32.3	
	44nm,0.3s						
KURK	Kurchatov	3.23	345	Pn	Pn	13 32 39.0	-1.4
KURK				Pg	Pg	13 32 48.2	-2.1
KURK				Sg	Sg	13 33 31.7	-0.4
DJR	Jarkent	3.28	182	Pg	Pb	13 32 47.7	+0.1
	6.3nm,0.4s						
DJR				Lg	Lg	13 33 29.3	
	100nm,0.3s						
DJR	Jarkent	3.28	182	*e*P	Pb	13 32 47.7	+0.1
	6.3nm,0.4s						
DJR				*e*S	Sb	13 33 29.3	+1.3
	100nm,0.3s						
ZSN	Zaisan	3.35	91	*e*P	Pg	13 32 52.0	-0.6
	32nm,0.3s						
ZSN				*e*S	Sg	13 33 37.0	+1.0
	143nm,0.4s						
KTMS	Ketmen	4.17	176	Pg	Pb	13 33 04.1	+1.3
	4.9nm,0.6s						
KTMS				Lg	Lg	13 33 57.4	
	35nm,0.4s						
KTMS	Ketmen	4.17	176	*e*P	Pb	13 33 04.1	+1.3
	4.9nm,0.6s						
KTMS				*e*S	Sb	13 33 57.4	+3.6
	35nm,0.4s						
KPKS	Kokpek	4.23	192	Pg	Pb	13 33 04.4	+0.6
	2.8nm,0.3s						
KPKS				Lg	Lg	13 33 58.2	
	95nm,0.3s						
PDGK	Podgornoye	4.29	184	⇑Pn	Pn	13 32 53.9	-1.2
	3.4nm,0.3s						
PDGK				⇑Pg	Pb	13 33 06.2	+1.4
	3.0nm,0.3s						
PDGK				⇓Lg	Lg	13 33 57.4	
	59nm,0.5s						
SHLS	Shalkode	4.46	184	Pg	Pb	13 33 07.3	-0.4
	12nm,0.5s						
SHLS				Lg	Lg	13 34 03.6	
	111nm,1.1s						
SHLS	Shalkode	4.46	184	*e*P	Pb	13 33 08.8	+1.0
	12nm,0.3s						
SHLS				*e*S	Sb	13 34 05.3	+3.1
	111nm,0.5s						
KUU	Kurty	4.49	215	Pg	Pb	13 33 07.5	-0.5
	4.9nm,0.4s						
KUU				Lg	Lg	13 34 03.6	
	165nm,0.4s						
KUU	Kurty	4.49	215	*e*P	Pb	13 33 07.5	-0.5
	4.9nm,0.4s						
KUU				*e*S	Sb	13 34 03.6	+1.0
	165nm,0.4s						
UZB	Uzynbulak	4.51	188	Pg	Pb	13 33 09.0	+0.5
	4.8nm,0.6s						
UZB				Lg	Lg	13 34 06.6	
	62nm,0.3s						
KTBS	Karatobe	4.51	211	Pg	Pb	13 33 08.6	0.0
	4.8nm,0.3s						
KTBS				Lg	Lg	13 34 05.3	
	336nm,0.5s						
SATY	Saty	4.67	194	Pg	Pb	13 33 12.8	+1.5
	4.2nm,0.2s						
SATY				Lg	Lg	13 34 13.1	
	48nm,0.3s						
KNDC	Almaty	4.86	207	⇑Lg	Lg	13 34 16.9	
	62nm,0.5s						
MDOK	Medeo	4.89	206	Pg	Pb	13 33 16.0	+1.0
	3.8nm,0.5s						
MDOK				⇓Lg	Lg	13 34 16.8	
	67nm,0.6s						
MDOK				Lg	Lg	13 34 18.7	
	86nm,0.7s						
MTBS	Maitube	5.11	210	Pg	Pb	13 33 18.7	-0.1
	3.2nm,0.2s						
MTBS				Lg	Lg	13 34 23.2	
	111nm,0.9s						
MTBS	Maitube	5.11	210	*e*P	Pb	13 33 19.6	+0.8
	3.1nm,0.1s						
MTBS				*e*S	Sb	13 34 24.1	+3.3
	122nm,0.4s						
OTUK	Ortayu	5.14	280	Pg	Pb	13 33 21.1	+1.8
	3.1nm,0.1s						
OTUK				Lg	Lg	13 34 26.5	
	42nm,0.6s						
OTUK	Ortayu	5.14	280	⇑Pn	Pn	13 33 05.5	-1.2
	0.7nm,0.2s						
OTUK				⇑Pg	Pb	13 33 20.7	+1.4
	1.5nm,0.3s						
OTUK				⇑Lg	Lg	13 34 25.3	
	102nm,0.8s						
BRZS	Berezniki	5.35	299	Pg	Pb	13 33 24.7	+1.9
	1.1nm,0.4s						
BRZS				Lg	Lg	13 34 32.9	
	58nm,0.9s						
BRZS	Berezniki	5.35	299	*e*P	Pb	13 33 24.7	+1.9
	1.1nm,0.4s						
BRZS				*e*S	Sb	13 34 32.9	+5.4
	58nm,0.9s						
KST	Kastek	5.35	213	Pg	Pb	13 33 22.0	-0.9
	3.9nm,0.6s						
KST				Lg	Lg	13 34 28.9	
	105nm,0.5s						
KST	Kastek	5.35	213	*e*P	Pb	13 33 24.2	+1.3
	6.0nm,0.4s						
KST				*e*S	Sb	13 34 31.6	+3.9
	115nm,0.5s						
DGZ	Jazzator, Alta	5.39	64	Sg	Sg	13 34 40.4	-1.2
ELDR	Elanda	5.40	46	Pn	Pn	13 33 12.6	+2.3
ELDR				Sg	Sg	13 34 42.3	+0.4
SGDS	Sogindy	5.58	224	Pg	Pb	13 33 26.6	-0.2
	14nm,0.4s						
SGDS				Lg	Lg	13 34 37.0	
	32nm,0.5s						
TKM2	Tokmak 2	5.59	215	⇓Pn	Pn	13 33 12.7	-0.4
	2.9nm,0.4s						
TKM2				⇓Lg	Lg	13 34 37.9	
	38nm,0.5s						
CHBI	Chibit, Altay	5.67	59	Pn	Pn	13 33 17.5	+3.5
CHBI				Sg	Sg	13 34 50.9	+0.3
AKAR	Aktash	5.75	59	Pn	Pn	13 33 18.8	+3.8
AKAR				Sg	Sg	13 34 54.2	+1.3
ULGR	Ulagan, Altay	6.07	57	Sg	Sg	13 35 02.1	-1.4
AAK	Ala-Archa	6.28	220	⇓Lg	Lg	13 34 57.9	
	7.6nm,0.6s						
ARTR	Artybash	6.35	46	Sg	Sg	13 35 11.5	-0.8
YALR	Yailyu, Altay	6.49	47	Sg	Sg	13 35 17.2	+0.3
KK31	Karatay Array	8.02	239	⇑Pn	Pn	13 33 43.6	-2.6
	1.0nm,0.2s,baz=55,slow=14,SNR=40						
KK31				⇑Sn	Sn	13 35 09.6	-7.9
	1.7nm,0.3s,baz=52,slow=22,SNR=8.6						
KK31				Lg	Lg	13 35 55.1	
	9.6nm,0.6s,baz=52,slow=30,SNR=5.0						
BVA0	Borovoye Array	8.16	315	Pn	Pn	13 33 51.1	+3.0
	1.3nm,0.6s,baz=117,slow=13,SNR=4.1						
BVA0				Sn	Sn	13 35 19.2	-1.8
	2.2nm,0.5s,baz=119,slow=26,SNR=4.2						
BVA0				⇓Lg	Lg	13 36 03.2	
	5.8nm,0.6s,baz=127,slow=26,SNR=4.4						

*DJA **15** 14:04:21.7±0.4, 9°S±6°×11°8E±°, h163^{km}±5^{km}, M4.1/12, mb4.0/1, MLv4.1/12*

*IDC **15** 14:04:22.7±2.6, 8°.51S×118°.08E, h183^{km}±21^{km}, mb2.7/2, mbtmp3.5/6, Error ellipse: s-maj=49.8km s-min=14.0km az=51.0*

ISC 15 14:04:21.3±0.9**, 8°.63S**±0°.06×**118°.12E**±0°.04**, h143^{km}, n20, σ2ˢ.69**/29**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.39	240	P	Pn	14 04 45.2	+3.8
PLAI				S	Sn	14 05 01.6	+5.0
TWSI	Taliwang, Sumb	1.23	265	P	Pn	14 04 50.2	+2.6
TWSI				S	Sn	14 05 10.6	+3.0
WBSI	Waikabubak, Su	1.61	129	P	Pn	14 04 54.0	+2.4
WBSI				S	Sn	14 05 18.5	+3.8
WSI	Waingapu	2.38	116	P	Pn	14 05 03.2	+2.5
WSI				S	Sn	14 05 34.9	+3.9
DNP	Denpasar	2.88	269	P	Pn	14 05 07.6	+0.7
BASI	Baing, Sumba	2.89	123	P	Pn	14 05 09.9	+2.8
SRBI	Singaraja	2.93	280	P	Pn	14 05 07.6	+0.1
BSSI	Bau Bau, Buton	3.41	44	P	Pn	14 05 15.7	+1.9
EDFI	Ende, Flores	3.53	92	P	Pn	14 05 17.0	+1.6
EDFI				S	Sn	14 05 59.7	+2.5
JAGI	Jajag, Banyuwa	3.93	272	P	Pn	14 05 19.4	-1.1
KAPI	Kappang	3.94	24	P	Pn	14 05 22.2	+1.5
	9.1nm,0.3s,baz=203,slow=9.8,SNR=6.4						
MMRI	Maumere	4.07	90	P	Pn	14 05 23.6	+1.2
GMJI	Gumukmas	4.64	274	P	Pn	14 05 28.7	-1.2
BNSI	Bone	4.64	25	P	Pn	14 05 33.7	+3.8
BATI	Baumata	5.69	106	P	Pn	14 05 45.9	+2.0
	18nm,0.3s,baz=291,slow=2.4,SNR=1.6						
BATI				S	Sn	14 06 47.7	-0.6
	34nm,0.3s,baz=352,slow=24,SNR=11						
SOEI	Soe	6.17	101	P	Pn	14 05 51.4	+1.0
FITZ	Fitzroy Crossi	11.91	143	P	Pn	14 07 07.9	+1.1
	1.8nm,0.6s,baz=317,slow=7.7,SNR=12						
FITZ				S	Sn	14 09 14.2	-4.1
	1.6nm,0.4s,baz=172,slow=22,SNR=6.5						
WRA	Warramunga Arr	19.30	127	P	P	14 08 35.5	0.0
	0.8nm,0.9s,baz=300,slow=12,SNR=12						
WRA				S	S	14 12 06.9	+0.5
	0.7nm,0.6s,baz=309,slow=24,SNR=7.2						
ASAR	Alice Springs	21.26	137	P	P	14 08 56.5	+0.1
	0.2nm,0.6s,baz=312,slow=10.0,SNR=12						
ASAR				S	S	14 12 41.1	-3.3
	0.3nm,0.7s,baz=317,slow=19,SNR=2.6						
	0.2nm,0.6s						
MKAR	Makanchi Array	63.74	333	P	P	14 14 34.1	-3.7
	0.4nm,0.5s,baz=140,slow=7.8,SNR=4.7						
	0.4nm,0.5s						

*AEIC **15** 14:08:44.6±2.1, 54°.76N±0°.04×163°.13W±0°.03, h5^{km}±7^{km}, Error ellipse: s-maj=5.5km s-min=1.8km az=160.0*

NEIC 15 14:08:44.7±0.9**, 54°.71N**±0°.05×**163°.06W**±0°.04**, h9**^{km}±11^{km}**, ML2.8**/12**, ML2.3**(AEIC)**, Error ellipse: s-maj=8.0km s-min=2.0km az=156.0, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FALS	False Pass	0.25	305		Pg	14 08 49.7	-0.1

FALS					Sg	14 08 53.2	0.0
FALS	**False Pass**	**0.25**	**305**	IAML		14 08 53.4	
	comp=N,7µm,0.3s						
FALS				IAML		14 08 54.4	
	comp=E,7µm,0.3s						
ISLZ	**Isanotski Laza**	**0.38**	**272**		Pg	14 08 52.0	-0.1
ISLZ					Sg	14 08 57.2	+0.1
ISNN	**Isanotski Nort**	**0.43**	**286**		Pg	14 08 53.5	+0.3
ISNN					Sg	14 08 59.8	+1.0
SSLS	**Shishaldin Sou**	**0.54**	**270**		Pg	14 08 55.4	+0.1
SSLS					Sg	14 09 03.2	+0.8
SSBA	**Shishaldin**	**0.62**	**276**		Pg	14 08 56.5	-0.2
SSBA					Sb	14 09 06.2	-0.3
HAG	**Hague Volcano**	**0.90**	**47**		Pg	14 09 02.1	0.0
HAG					Sb	14 09 14.5	-0.1
PS4A	**Pavlof South-4**	**0.94**	**47**		Pg	14 09 02.6	-0.2
PVV	**Pavlof Volcano**	**0.99**	**47**		Pg	14 09 03.3	-0.5
WECS	**Westdahl Cape**	**1.01**	**260**		Pg	14 09 03.7	-0.5
PS1A	**Pavlof South-1**	**1.04**	**46**		Pg	14 09 04.4	-0.3
S12K	**Black Hills**	**1.15**	**30**		Pb	14 09 06.2	-0.5
S12K	**Black Hills**	**1.15**	**30**	IAML		14 09 24.3	
	comp=E,354nm,0.2s						
S12K				IAML		14 09 24.6	
	comp=N,146nm,0.2s						
SDPT	**Sand Point**	**1.62**	**66**	Pn	Pn	14 09 13.7	+0.2
SDPT				IAML		14 09 38.0	
	comp=E,155nm,0.3s						
AKUT	**Akutan**	**1.69**	**251**		Pn	14 09 14.6	+0.3
AKUT				IAML		14 09 39.5	
	comp=N,70nm,0.4s						
AHB	**Akutan Harbor**	**1.72**	**251**		Pn	14 09 15.2	+0.4
AKBBA	**Akutan Broad B**	**1.79**	**251**		Pn	14 09 16.1	+0.4
LVA	**Lava Point**	**1.82**	**254**	Pn	Pn	14 09 16.8	+0.6
LVA				IAML		14 09 45.0	
	comp=E,51nm,1.1s						
LVA				IAML		14 09 55.8	
	comp=N,81nm,0.8s						
UNV	**Unalaska Valle**	**2.20**	**248**		Pn	14 09 21.2	-0.1

PGC 15 15:17:14.1±0.0**,60°.66N**×**116°.98W,h15^{km},ML4.0**/10**,
39km southeast of Kakisa, Nt Nw Territories - Nunavut,
Canada,Northwest Territories**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YKAW1	**Yellowknife Wh**	**2.18**	**32**	Pn	Pn	15 17 49.7	-0.1
YKAW3	**Yellowknife Wh**	**2.22**	**30**	Pn	Pn	15 17 50.1	-0.2
YKAW3				Sn	Sn	15 18 16.7	-0.8
FNSB	**Fort Nelson**	**3.46**	**240**	Sn	Sn	15 18 46.6	-1.4
BEAVL	**Fort Liard**	**4.04**	**267**	Pn	Pn	15 18 14.2	-1.2
TOAD	**Toad River Com**	**4.55**	**250**	Sn	Sn	15 19 12.4	-2.7
WTMTA	**White Mountain**	**5.12**	**195**	Pn	Pn	15 18 29.5	-0.7
WTMTA				Sn	Sn	15 19 26.1	-3.0
BMTB	**Bullhead Mount**	**5.36**	**213**	Pn	Pn	15 18 33.4	-0.3
BMTB				Sn	Sn	15 19 30.9	-4.2
TGTN	**Hyland Airport**	**5.55**	**284**	Pn	Pn	15 18 35.4	-0.8
TGTN				Sn	Sn	15 19 34.1	-5.5
WTLY	**Watson Lake, Y**	**5.89**	**270**	Pn	Pn	15 18 40.2	-0.5
BDMTA	**Bald Mountain**	**5.95**	**191**	Pn	Pn	15 18 40.0	-1.6
BDMTA				Sn	Sn	15 19 45.7	-3.9
DLBC	**Dease Lake**	**7.00**	**257**	Pn	Pn	15 18 53.6	-2.4
MMPY	**Sheldon Lake,**	**7.08**	**292**	Pn	Pn	15 18 55.0	-2.1
MMPY				Sn	Sn	15 20 11.2	-6.1
R33M	**Jennings River**	**7.12**	**266**	Pn	Pn	15 18 55.9	-1.9
R33M				Sn	Sn	15 20 12.4	-6.1
KUKN	**Kugluktuk,NWT**	**7.24**	**6**	Pn	Pn	15 18 56.5	-2.7
KUKN				Sn	Sn	15 20 14.3	-6.7
FSJB	**Fort St James**	**7.35**	**216**	Pn	Pn	15 19 00.1	-0.7
FSJB				Sn	Sn	15 20 18.9	-5.1
T35M	**Bob Quinn**	**7.81**	**248**	Pn	Pn	15 19 05.9	-1.2
P33M	**Teslin, Yukon**	**7.85**	**274**	Pn	Pn	15 19 06.8	-0.9
P33M				Sn	Sn	15 20 29.9	-6.2
FARO	**Faro, Yukon**	**8.00**	**288**	Pn	Pn	15 19 08.5	-1.2
P32M	**Atlin**	**8.42**	**270**	Pn	Pn	15 19 14.5	-1.1
M31M	**Drury Creek, Y**	**8.48**	**288**	Pn	Pn	15 19 14.4	-1.9
UBRB	**Upper Baezaeko**	**8.70**	**210**	Pn	Pn	15 19 18.1	-1.3
WHY	**Whitehorse**	**8.79**	**278**	Pn	Pn	15 19 19.2	-1.3
C36M	**Paulatuk**	**9.22**	**344**	Pn	Pn	15 19 23.8	-2.5
C36M				Sn	Sn	15 20 59.4	-10
MAYO	**Mayo, Yukon**	**9.32**	**297**	Pn	Pn	15 19 26.1	-1.8
H31M	**Peel River**	**9.36**	**311**	Pn	Pn	15 19 25.7	-2.6
H31M				Sn	Sn	15 21 03.5	-10
O30N	**Mendenhall**	**9.37**	**279**	Pn	Pn	15 19 26.8	-1.6
J30M	**Hart River**	**9.72**	**302**	Pn	Pn	15 19 31.1	-2.3
PLBC	**Pleasant Camp**	**9.76**	**271**	Sn	Sn	15 21 17.3	-5.8
N30M	**Aishikik Lake**	**9.78**	**283**	Pn	Pn	15 19 32.2	-1.9
N30M				Sn	Sn	15 21 17.6	-5.8
G31M	**Satah River**	**9.87**	**317**	Pn	Pn	15 19 30.0	-5.2
P30M	**Million Dollar**	**9.90**	**276**	Pn	Pn	15 19 32.5	-3.2
I30M	**Mount Dempster**	**9.93**	**306**	Pn	Pn	15 19 33.6	-2.6
I30M				Sn	Sn	15 21 17.3	-10
HYT	**Haines Junctio**	**10.04**	**280**	Pn	Pn	15 19 36.5	-1.2
BLKN	**Baker Lake**	**10.35**	**60**	Sn	Sn	15 21 26.7	-11
M29M	**Somme Creek**	**10.39**	**289**	Pn	Pn	15 19 40.3	-2.2
EPYK	**Eagle Plains**	**10.48**	**312**	Pn	Pn	15 19 39.8	-3.8
EPYK				Sn	Sn	15 21 29.8	-11
YUK4	**Talbot Arm**	**10.53**	**283**	Pn	Pn	15 19 41.5	-3.1
G30M	**tAoh Zraii Nji**	**10.56**	**315**	Sn	Sn	15 21 31.3	-11
F30M	**Barrier River**	**10.73**	**318**	Pn	Pn	15 19 43.5	-3.5
F30M				Sn	Sn	15 21 34.8	-12
I29M	**Ogilvie Camp,**	**10.74**	**305**	Pn	Pn	15 19 43.8	-3.5
H29M	**Whitestone**	**11.04**	**309**	Pn	Pn	15 19 47.4	-3.9
H29M				Sn	Sn	15 21 41.8	-12
G29M	**Pine Creek**	**11.17**	**313**	Pn	Pn	15 19 48.3	-4.8
G29M				Sn	Sn	15 21 45.5	-12
I28M	**Miner Creek**	**11.43**	**305**	Pn	Pn	15 19 53.0	-3.7
E29M	**Blow River**	**11.82**	**320**	Pn	Pn	15 19 57.4	-4.5
A36M	**Sachs Harbour**	**11.83**	**347**	Pn	Pn	15 19 58.2	-3.8
F28M	**Old Crow**	**12.12**	**315**	Pn	Pn	15 20 01.4	-4.6
I27K	**Kandik River**	**12.14**	**305**	Pn	Pn	15 20 02.9	-3.5
H27K	**Steamboat Moun**	**12.26**	**308**	Pn	Pn	15 20 03.9	-4.0
G27K	**Doyon Strip**	**12.48**	**310**	Pn	Pn	15 20 05.9	-5.0
I26K	**Coal Creek Min**	**12.72**	**303**	Pn	Pn	15 20 10.4	-3.7

*IDC **15** 15:19:48.7±1.6,8°.31S×113°.42E,h0^{km},mb3.6/7,
mbtmp3.7/9,ML3.7/2,Error ellipse: s-maj=67.5km
s-min=18.0km az=46.0*

ISC 15 15:19:57.3±1.5**,8°.8S**±0°.2×**113°.7E**±0°.2**,h100^{km},n9,
σ0^{s}.67**/8**,mb3.6**/7**,Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**9.90**	**99**	Pn	**Pn**	**15 22 16.0**	**-0.7**
	4.5nm,0.3s,baz=178,slow=7.1,SNR=4.4						
	9.5nm,0.4s						
FITZ	**Fitzroy Crossi**	**14.83**	**130**	Pn	**P**	**15 23 25.2**	**0.0**
	0.1nm,0.3s,baz=160,slow=18,SNR=1.6						
FITZ				Sn	**Sn**	**15 26 06.2**	**+0.5**
	0.1nm,0.3s,baz=131,slow=19,SNR=1.7						
	1.0nm,0.6s						
WRA	**Warramunga Arr**	**22.82**	**121**	P	P	15 25 00.5	+8.5
	0.9nm,1.0s,baz=291,slow=9.7,SNR=5.2						
	0.9nm,1.0s						
ASAR	**Alice Springs**	**24.34**	**130**	P	P	15 25 12.9	+7.0
	1.3nm,1.1s,baz=299,slow=9.8,SNR=6.3						
	1.3nm,1.1s						
CMAR	**Chiang Mai Arr**	**30.74**	**332**	P	**P**	**15 26 02.7**	**-0.5**
	0.9nm,0.8s,baz=172,slow=8.2,SNR=5.7						
	0.9nm,0.8s						
MJAR	**Matsushiro Arr**	**50.60**	**26**	P	**P**	**15 28 46.8**	**+0.8**
	0.6nm,0.7s,baz=212,slow=9.0,SNR=1.7						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**62.00**	**336**	P	**P**	**15 30 07.4**	**+0.5**
	0.5nm,0.5s,baz=147,slow=7.5,SNR=7.0						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**66.56**	**336**	P	**P**	**15 30 36.8**	**+0.3**
	0.4nm,0.7s,baz=151,slow=5.3,SNR=4.8						
	0.4nm,0.7s						
BVAR	**Borovoye Array**	**71.72**	**334**	P	**P**	**15 31 08.0**	**-0.5**
	0.9nm,0.7s,baz=132,slow=6.6,SNR=5.4						
	0.9nm,0.7s						

KRSC 15 15:33:16.2±1.3**,48°.08N**×**157°.75E,h6^{km}**±61^{km}**,Ml3.8,
East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDTR	**Khodutka, Kamc**	**3.74**	**3**	*e*P	Pn	15 34 17.3	+2.9
KDTR				*e*S	Sn	15 35 03.3	+4.5
ASAK	**Asacha**	**4.31**	**1**	*e*P	Pn	15 34 26.2	+3.8
MTVR	**Mutnovka**	**4.42**	**3**	*e*P	Pn	15 34 27.5	+3.7
MTVR				*e*S	Sn	15 35 19.8	+4.1
GRL	**Gorelyy**	**4.48**	**3**	*e*P	Pn	15 34 28.5	+3.7
GRL				*e*S	Sn	15 35 22.2	+4.9
DALK	**Dalny**	**5.00**	**7**	*e*P	Pn	15 34 35.2	+3.5
UGLR	**Uglovaya**	**5.18**	**7**	*e*P	Pn	15 34 38.7	+4.4
SPN	**Mys Shipunski**	**5.23**	**15**	*e*P	Pn	15 34 40.3	+5.4
SPN				*e*S	Sn	15 35 41.4	+5.9
AVH	**Avacha**	**5.23**	**7**	*e*P	Pn	15 34 39.2	+4.2
KOK	**Koryaka**	**5.25**	**6**	*e*P	Pn	15 34 39.9	+4.7
SDLR	**Sedlovina**	**5.26**	**7**	*e*P	Pn	15 34 39.0	+3.7
KRX	**Arik**	**5.32**	**6**	*e*P	Pn	15 34 40.3	+4.1
MKZ	**Mys Kozlova**	**6.95**	**20**	*e*P	Pn	15 35 03.0	+4.6

*IDC **15** 15:47:15.2±0.7,28°.86N×82°.36E,h0^{km},mb3.9/17,
mbtmp3.9/20,ML4.0/3,MS3.2/12,Error ellipse:
s-maj=24.6km s-min=13.7km az=51.0*

*DMN **15** 15:47:18.1±0.0,28°.94N×81°.96E,h30^{km},Ml4.6/8,Error
ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 15 15:47:17.6±1.9**,28°.92N**±0°.08×**82°.26E**±0°.07**,h13^{km}**±12^{km}**,
n43,σ1^{s}.04**/45**,mb4.0**/16**,MS3.2**/11**,Nepal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYUN	**Piuthan**	**1.04**	**142**	Pg	**Pg**	**15 47 37.5**	**-0.1**
	baz=132,slow=0.0						
PYUN				Sg	**Sn**	**15 47 52.8**	**+0.3**
	5µm,0.5s,baz=132,slow=0.0						
DANN	**Dangsing**	**1.44**	**113**	Pg	**Pn**	**15 47 42.8**	**-0.8**
	baz=110,slow=0.0						
DANN				Sg	**Sb**	**15 48 03.7**	**+1.0**
	baz=110,slow=0.0						
KOLN	**Koldanda**	**1.65**	**134**	Pg	**Pb**	**15 47 48.4**	**+0.5**
	baz=128,slow=0.0						
KOLN				Sg	**Sb**	**15 48 08.8**	**+0.2**
	baz=128,slow=0.0						
GKN	**Gorkha**	**2.28**	**113**	Pg	**Pn**	**15 47 55.9**	**+0.8**
	baz=111,slow=0.0						
GKN				Sg	**Sn**	**15 48 24.7**	**+1.5**
	2µm,0.6s,baz=111,slow=0.0						
DMN	**Daman**	**2.83**	**117**	Pg	**Pn**	**15 48 03.9**	**+1.2**
	baz=115,slow=0.0						
DMN				Sg	**Sn**	**15 48 37.7**	**+0.9**
	734nm,0.6s,baz=115,slow=0.0						
KKN	**Kakani**	**2.89**	**112**	Pn	**Pn**	**15 48 04.4**	**+0.9**
	baz=110,slow=0.0						
KKN				Sn	**Sn**	**15 48 39.3**	**+1.1**
	450nm,0.6s,baz=110,slow=0.0						
PKIN	**Phulchoki**	**3.07**	**115**	Pn	**Pn**	**15 48 07.2**	**+1.1**
	baz=113,slow=0.0						
PKIN				Sn	**Sn**	**15 48 42.9**	**+0.1**
	629nm,0.6s,baz=113,slow=0.0						
PKI	**Pulchoki**	**3.09**	**115**	Pg	**Pn**	**15 48 07.3**	**+1.0**
	baz=113,slow=0.0						
GUN	**Gumba**	**3.34**	**107**	Pn	**Pn**	**15 48 10.7**	**+0.9**
	baz=106,slow=0.0						
GUN				Sn	**Sn**	**15 48 49.7**	**+0.1**
	799nm,0.7s,baz=106,slow=0.0						
RAMN	**Ramite**	**4.31**	**116**	Pn	**Pn**	**15 48 23.4**	**+0.3**
	baz=115,slow=0.0						
RAMN				Sn	**Sn**	**15 49 11.6**	**-1.8**
	99nm,0.3s,baz=115,slow=0.0						
ODAN	**Odare**	**4.98**	**113**	Pn	**Pn**	**15 48 32.4**	**+0.1**
	baz=112,slow=0.0						
ODAN				Sn	**Sn**	**15 49 28.3**	**-1.6**
	130nm,0.5s,baz=112,slow=0.0						
LSA	**Lhasa**	**7.80**	**82**	Pn	**Pn**	**15 49 11.5**	**+0.3**
LSA				Sn	Sn	15 50 18.9	-21
LSA				smax	smax		
	comp=N,14nm,0.9s						
AAK	**Ala-Archa**	**15.06**	**337**	Pn	**Pn**	**15 50 49.2**	**-0.9**
	comp=N,0.5nm,0.3s,baz=192,slow=6.5,SNR=2.6						
	comp=N,0.9nm,0.3s						
WMQ	**Urumqi**	**15.50**	**15**	*e*P	Pn	15 50 41.4	-14
MKAR	**Makanchi Array**	**17.85**	**0**	P	**Pn**	**15 51 23.7**	**-1.9**
	comp=N,0.5nm,0.3s,baz=172,slow=13,SNR=19						
	comp=N,0.8nm,0.3s						
GTA	**Gaotai**	**17.88**	**50**	*e*P	**P**	**15 51 27.8**	**+1.1**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				LR	LR		
	comp=N,130nm,14.9s						
GTA				LR	LR		
	comp=E,92nm,12.4s						
GTA				LR	LR		
	comp=Z,93nm,13.8s						
CMAR	**Chiang Mai Arr**	**18.47**	**121**	P	**P**	**15 51 30.5**	**-2.7**
	comp=Z,0.3nm,0.3s,baz=308,slow=12,SNR=8.0						
CMAR				LR	LR	15 59 01.7	
	comp=Z,22nm,19.9s,baz=210,slow=38						
	comp=Z,2.0nm,0.9s						
PALK	**Pallekele**	**21.58**	**184**	LR	LR	15 59 43.7	
	comp=Z,76nm,18.9s,baz=3.5,slow=35						
KURBB	**Kurchatov Arra**	**21.86**	**354**	P	**P**	**15 52 09.5**	**-0.3**
	comp=Z,5.1nm,0.9s,baz=182,slow=10,SNR=56						
	comp=Z,5.1nm,0.9s						
ZALV	**Zalesovo Beam**	**25.08**	**4**	P	**P**	**15 52 41.8**	**+0.2**
	comp=Z,4.9nm,0.5s,baz=193,slow=8.5,SNR=24						
ZALV				LR	LR	16 02 35.8	
	comp=Z,22nm,19.2s,baz=157,slow=37						
	comp=Z,4.9nm,0.5s						
BVAR	**Borovoye Array**	**25.63**	**343**	P	**P**	**15 52 46.8**	**+0.2**
	comp=Z,1.2nm,0.4s,baz=140,slow=8.3,SNR=9.8						
	comp=Z,1.2nm,0.4s						
SONM	**Songino Array**	**26.55**	**38**	P	**P**	**15 52 55.7**	**+0.5**
	comp=Z,2.7nm,0.7s,baz=234,slow=10,SNR=7.7						
	comp=Z,2.7nm,0.7s						
AKTO	**Aktyubinsk**	**28.23**	**326**	LR	LR	16 05 42.6	
	comp=Z,75nm,19.2s,baz=36,slow=39						
ARTI	**Arti**	**32.26**	**335**	LR	LR	16 06 53.8	
	comp=Z,24nm,18.9s,baz=136,slow=36						
BELG	**Belogornoye**	**34.70**	**322**	LR	LR	16 09 45.9	
	comp=Z,28nm,18.5s,baz=138,slow=39						
KVAR	**Kislovodsk Arr**	**34.83**	**306**	LR	LR	16 11 10.3	
	comp=Z,43nm,19.9s,baz=304,slow=41						
BRTR	**Keskin Array B**	**41.13**	**298**	P	**P**	**15 55 00.3**	**-1.3**
	comp=Z,0.2nm,0.4s,baz=76,slow=12,SNR=1.5						
	comp=Z,0.2nm,0.4s						
AKASG	**Malin Array Be**	**45.05**	**314**	P	**P**	**15 55 32.6**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=78,slow=7.5,SNR=1.8						
	comp=Z,0.1nm,0.3s						
FINES	**FINESS Array B**	**48.98**	**328**	P	**P**	**15 56 04.3**	**+0.9**
	comp=Z,1.1nm,0.3s,baz=116,slow=8.2,SNR=26						
	comp=Z,1.1nm,0.3s						
ARCES	**ARCESS Array B**	**51.73**	**338**	P	**P**	**15 56 24.8**	**+0.6**
	comp=Z,1.5nm,0.7s,baz=109,slow=8.1,SNR=5.0						
ARCES				LR	LR	16 19 43.4	
	comp=Z,34nm,19.4s,baz=44,slow=38						
	comp=Z,1.5nm,0.7s						
VRAC	**Vranov**	**53.12**	**312**	LR	LR	16 21 36.8	
	comp=Z,14nm,18.2s,baz=348,slow=39						
HFS	**Hagfors**	**54.77**	**325**	P	**P**	**15 56 47.1**	**+0.5**
	comp=Z,0.8nm,0.4s,baz=106,slow=5.3,SNR=11						
HFS				LR	LR	16 22 04.9	
	comp=Z,27nm,18.6s,baz=112,slow=38						
	comp=Z,0.8nm,0.4s						
GERES	**GERESS Array B**	**55.05**	**311**	P	**P**	**15 56 50.2**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=89,slow=8.0,SNR=1.9						
	comp=Z,0.2nm,0.5s						
SEY	**Seymchan**	**55.66**	**31**	LR	LR	16 22 01.3	
	comp=Z,43nm,19.3s,baz=142,slow=38						
NB2	**NORSAR Subarra**	**56.02**	**326**	P	**P**	**15 56 55.9**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=91,slow=7.9						
NOA	**NORSAR Array B**	**56.02**	**326**	P	**P**	**15 56 54.5**	**-1.2**
	comp=Z,0.4nm,0.7s,baz=80,slow=8.4,SNR=1.6						
NOA				LR	LR	16 22 22.0	
	comp=Z,27nm,20.7s,baz=100,slow=38						
	comp=Z,0.4nm,0.7s						
ESDC	**Sonseca Array**	**69.48**	**305**	P	**P**	**15 58 26.9**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=125,slow=11,SNR=1.3						
	comp=Z,0.2nm,0.5s						
WRA	**Warramunga Arr**	**69.89**	**128**	P	**P**	**15 58 27.6**	**-0.9**
	comp=Z,0.9nm,0.6s,baz=323,slow=6.2,SNR=22						
	comp=Z,0.9nm,0.6s						
ASAR	**Alice Springs**	**72.14**	**131**	P	**P**	**15 58 41.2**	**-0.8**
	comp=Z,0.7nm,0.5s,baz=313,slow=6.2,SNR=33						
	comp=Z,0.7nm,0.5s						
TORD	**Torodi Ar. Bea**	**75.60**	**277**	P	**P**	**15 59 03.3**	**+0.7**
	comp=Z,3.1nm,0.5s,baz=51,slow=5.7,SNR=2.2						
	comp=Z,3.1nm,0.5s						
STKA	**Stephens Creek**	**82.67**	**132**	P	**P**	**15 59 40.0**	**-0.9**
	comp=Z,1.4nm,0.9s,baz=335,slow=14,SNR=3.1						
	comp=Z,1.4nm,0.9s						
DBIC	**Dimbokro**	**84.30**	**274**	P	**P**	**15 59 50.9**	**+1.2**
	comp=Z,4.2nm,0.7s,baz=74,slow=4.0,SNR=5.4						
	comp=Z,4.2nm,0.7s						
CPUP	**Villa Florida**	**144.22**	**264**	PKP	**PKPdf**	**16 06 52.5**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=324,slow=5.9,SNR=7.8						

*GCG **15** 15:50:58.9±1.3,14°.17N×93°.20W,h22^{km}±12^{km},MD4.2,
ML3.8*

*MEX **15** 15:50:58.3±0.7,14°.06N×93°.33W,h16^{km}±118^{km},MD4.0*

ISC 15 15:50:54.7±1.3**,14°.00N**±0°.07×**93°.31W**±0°.04**,h22^{km},n17,
σ2^{s}.28**/30**,Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**1.36**	**48**	*e*P	**Pb**	**15 51 19.6**	**+0.2**
THIG				*e*S	**Sn**	**15 51 34.6**	**-1.1**
PATR	**El Naranjo**	**1.53**	**43**	*e*P	**Pn**	**15 51 20.9**	**0.0**
PATR				*e*S	**Sn**	**15 51 39.0**	**-1.2**
PAVE	**Pavencul**	**1.62**	**43**	*e*P	**Pn**	**15 51 22.6**	**+0.4**
PAVE				*e*S	**Sn**	**15 51 41.1**	**-1.4**
RTAL	**Retalhuleu**	**1.65**	**71**	*e*P	**Pb**	**15 51 25.0**	**+0.5**
RTAL				*e*S	**Sn**	**15 51 44.2**	**+1.2**
PCIG		**1.70**	**3**	*e*P	**Pn**	**15 51 22.8**	**-0.3**
PCIG				*e*S	**Sn**	**15 51 41.5**	**-2.6**
STG8	**El Palmar, Qui**	**1.96**	**76**	*e*P	**Pn**	**15 51 26.0**	**-0.8**
STG8				IAML		15 51 53.4	
	comp=N,773nm,0.3s						
STG0	**El Palmar, Qui**	**1.96**	**77**	*e*P	**Pn**	**15 51 26.4**	**-0.4**
STG0				IAML		15 51 53.6	
	comp=E,946nm,0.2s						
SOKI	**Kika Raxquin**	**2.02**	**66**	*e*P	**Pb**	**15 51 31.7**	**+0.7**
CCIG	**Comitan**	**2.54**	**26**	*e*P	**Pb**	**15 51 37.8**	**-1.9**
CCIG				*e*S	**Sn**	**15 52 05.4**	**+0.3**
CCIG	**Comitan**	**2.54**	**26**	*e*P	**Pn**	**15 51 37.4**	**+2.6**
CCIG				*e*S	**Sn**	**15 52 06.1**	**+1.0**
CCIG				IAML		15 52 13.3	
	comp=N,365nm,0.4s						
FG8	**Yepocapa, Chim**	**2.68**	**84**	*e*P	**Pn**	**15 51 34.2**	**-2.5**
FG8				*e*S	**Sn**	**15 52 03.6**	**-5.0**
FG16	**Alotenango, Sa**	**2.73**	**84**	*e*P	**Pn**	**15 51 35.5**	**-1.9**
FG16				IAML		15 52 33.5	
	comp=N,869nm,0.3s						
TGIG		**2.77**	**4**	*e*P	**Pn**	**15 51 40.1**	**+2.2**
TGIG				*e*S	**Sn**	**15 52 11.0**	**+0.3**
TGIG		**2.77**	**4**	*i* P	**Pn**	**15 51 40.1**	**+2.2**
TGIG				*i* S	**Sn**	**15 52 10.7**	**0.0**
TGIG				IAML		15 52 14.6	
	comp=E,261nm,0.6s						
HUIG	**Huatulco**	**3.23**	**303**	*e*P	**Pn**	**15 51 45.7**	**+1.7**
HUIG				*e*S	**Sn**	**15 52 18.7**	**-3.1**
NUBE	**Las Nubes**	**3.43**	**91**	*e*P	**Pn**	**15 51 50.5**	**+3.4**
NUBE				*e*S	**Sn**	**15 52 30.8**	**+3.6**
PNIG	**Pinotepa**	**5.22**	**298**	*e*P	**Pn**	**15 52 15.1**	**+3.5**
PNIG				*e*S	**Sn**	**15 53 06.7**	**-4.5**

*SOME **15** 15:52:38.2,39°.30N×72°.27E,h5^{km}*

*KRNET **15** 15:52:38.3±0.1,39°.32N×72°.20E,h17^{km},mb3.4*

*NNC **15** 15:52:41.9±1.8,39°.44N×72°.23E,h0^{km},mb3.7,mpv3.5,
Error ellipse: s-maj=14.0km s-min=7.0km az=176.0*

ISC 15 15:52:39.2±1.1**,39°.35N**±0°.05×**72°.21E**±0°.03**,h10^{km},n40,
σ2^{s}.21**/68**,25C-28D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**1.20**	**56**	⇓*i*P	**Pb**	**15 53 01.1**	**-1.1**
SFK				⇓*i*S	**Sg**	**15 53 17.6**	**-0.4**
OHH	**Osh**	**1.26**	**21**	⇓*i*P	**Pg**	**15 53 02.4**	**-1.0**
OHH				⇓*i*S	**Sn**	**15 53 19.7**	**-0.3**
BTK	**Batken**	**1.28**	**304**	⇑*i*P	**Pg**	**15 53 02.5**	**-1.4**
BTK				⇑*i*S	**Sn**	**15 53 20.1**	**-0.5**
GAR	**Garm**	**1.51**	**257**	⇑*i*P	**Pb**	**15 53 06.1**	**-1.3**
GAR				⇑*i*S	**Sg**	**15 53 26.1**	**-1.7**
SALK	**Salom-Alik**	**1.97**	**38**	⇑*i*P	**Pb**	**15 53 14.5**	**-0.8**
SALK				⇑*i*S	**Sb**	**15 53 40.8**	**+0.8**
ARSB	**Arslanbob**	**2.06**	**16**	⇓*i*P	**Pb**	**15 53 15.6**	**-1.2**
ARSB				⇓*i*S	**Sb**	**15 53 43.0**	**+0.4**
TRKS	**Terek-Say**	**2.33**	**340**	⇓*i*P	**Pn**	**15 53 18.4**	**+0.7**
TRKS				⇓*i*S	**Sn**	**15 53 47.6**	**+1.1**
ARK	**Arkit**	**2.45**	**356**	⇓*e*P	**Pb**	**15 53 21.0**	**-2.5**
ARK				⇓*e*S	**Sb**	**15 53 52.6**	**-1.3**
ARLS	**Aral**	**2.98**	**32**	⇓*i*P	**Pn**	**15 53 28.5**	**+1.7**
ARLS				⇓*i*S	**Sn**	**15 54 05.0**	**+2.3**
AML	**Almayashu**	**3.00**	**22**	⇓*i*P	**Pn**	**15 53 28.9**	**+1.7**
AML				⇓*i*S	**Sn**	**15 54 05.9**	**+2.4**
MNAS	**Manas**	**3.14**	**4**	⇓*i*P	**Pn**	**15 53 30.7**	**+1.7**
MNAS				⇓*i*S	**Sn**	**15 54 09.1**	**+2.5**
IUG	**Iuzhnay**	**3.25**	**330**	Pg	**Pb**	**15 53 38.1**	**+1.1**
	71nm,0.6s						
IUG				Lg	Lg	15 54 22.5	
	69nm,0.8s						
UCH	**Uchtor**	**3.37**	**31**	⇑*i*P	**Pn**	**15 53 34.0**	**+1.7**
UCH				⇑*i*S	**Sn**	**15 54 14.8**	**+2.2**
EKS2	**Erkin-Say**	**3.52**	**19**	⇓*i*P	**Pn**	**15 53 35.9**	**+1.8**
EKS2				⇓*i*S	**Sn**	**15 54 17.9**	**+2.1**
NRN	**Naryn**	**3.57**	**53**	⇑*e*P	**Pn**	**15 53 36.5**	**+1.5**
NRN				⇑*e*S	**Sn**	**15 54 18.5**	**+1.2**
AAK	**Ala-Archa**	**3.71**	**27**	⇑Pg	**Pg**	**15 53 47.9**	**-2.5**
	3.8nm,0.6s						
AAK				⇓Lg	Lg	15 54 36.4	
	1.4nm,0.4s						
AAK	**Ala-Archa**	**3.71**	**27**	⇑*i*P	**Pn**	**15 53 38.7**	**+1.9**
AAK				⇑*i*S	**Sn**	**15 54 22.7**	**+2.0**
KBK	**Karagaybulak**	**3.90**	**31**	⇑*i*P	**Pn**	**15 53 41.3**	**+1.9**
KBK				⇑*i*S	**Sn**	**15 54 27.3**	**+1.9**
FRU1	**Bishkek**	**3.91**	**27**	⇑*i*P	**Pn**	**15 53 41.6**	**+2.1**
FRU1				⇑*i*S	**Sn**	**15 54 27.8**	**+2.3**
KK31	**Karatay Array**	**3.96**	**342**	⇑Pn	**Pb**	**15 53 44.7**	**-4.4**
	1.9nm,0.3s,baz=147,slow=11,SNR=30						
KK31				Pg	**Pg**	**15 53 54.5**	**-0.6**
	2.5nm,0.3s,baz=156,slow=14,SNR=7.7						
KK31				⇑Lg	Lg	15 54 46.2	
	4.4nm,0.3s,baz=153,slow=28,SNR=5.9						
KKAR	**Karatay Array**	**3.96**	**342**	⇓*i*P	**Pn**	**15 53 42.0**	**+1.9**
KKAR				⇓*i*S	**Sn**	**15 54 28.4**	**+1.8**
BRLS	**Borolday**	**4.09**	**335**	Pg	**Pb**	**15 53 52.1**	**+0.8**
	3.0nm,0.3s						
BRLS				Lg	Lg	15 54 46.2	
	9.6nm,0.6s						
BRLS	**Borolday**	**4.09**	**335**	*e*P	**Pb**	**15 53 52.1**	**+0.8**
	3.0nm,0.3s						
BRLS				*e*S	**Sg**	**15 54 46.2**	**-4.4**
	9.6nm,0.6s						
CHMS	**Chumysh**	**4.12**	**27**	⇓*i*P	**Pn**	**15 53 44.2**	**+1.9**
CHMS				⇓*i*S	**Sn**	**15 54 32.2**	**+1.6**
ULHL	**Ulahol**	**4.21**	**45**	⇓*i*P	**Pn**	**15 53 45.6**	**+1.9**
ULHL				⇓*i*S	**Sn**	**15 54 34.7**	**+1.6**
BOOM	**Boomskoye usch**	**4.23**	**41**	⇑*i*P	**Pn**	**15 53 45.7**	**+1.9**
BOOM				⇑*i*S	**Sn**	**15 54 34.9**	**+1.6**
USP	**Ospenovka**	**4.28**	**23**	⇑*i*P	**Pn**	**15 53 46.5**	**+2.0**
USP				⇑*i*S	**Sn**	**15 54 36.1**	**+1.6**
TKM2	**Tokmak 2**	**4.39**	**35**	⇑Pg	**Pg**	**15 54 00.4**	**-3.0**
	2.7nm,0.5s						
TKM2				⇓Lg	Lg	15 54 58.4	
	4.0nm,0.5s						
SGDS	**Sogindy**	**4.49**	**23**	Pg	**Pg**	**15 54 01.3**	**-3.9**
	3.8nm,0.5s						
SGDS				Lg	Lg	15 55 02.0	
	13nm,0.4s						
KST	**Kastek**	**4.65**	**36**	Pg	**Pg**	**15 54 05.4**	**-3.0**
	5.2nm,1.4s						
KST				Lg	Lg	15 55 09.0	
	7.9nm,0.7s						
KST	**Kastek**	**4.65**	**36**	*e*P	**Pg**	**15 54 05.4**	**-3.0**
	5.2nm,1.4s						
KST				*e*S	**Sg**	**15 55 09.0**	**+0.4**
	7.9nm,0.7s						
KDJ	**Kajisay**	**4.69**	**52**	⇓*e*P	**Pn**	**15 53 52.2**	**+2.0**
KDJ				⇓*i*S	**Sn**	**15 54 46.1**	**+1.3**
MTBS	**Maitube**	**4.94**	**39**	Pg	**Pg**	**15 54 11.3**	**-2.5**
	3.0nm,0.1s						
MTBS				Lg	Lg	15 55 19.5	
	7.7nm,0.5s						
MTBS	**Maitube**	**4.94**	**39**	*e*P	**Pg**	**15 54 10.2**	**-3.7**
	2.4nm,0.1s						
MTBS				*e*S	**Sg**	**15 55 16.6**	**-1.2**
	4.4nm,0.1s						
KUU	**Kurty**	**5.50**	**33**	Pg	**Pg**	**15 54 19.8**	**-4.7**
	2.3nm,0.1s						
KUU				Lg	Lg	15 55 33.4	
	14nm,0.5s						
KUU	**Kurty**	**5.50**	**33**	*e*P	**Pg**	**15 54 20.4**	**-4.0**
	2.0nm,0.1s						
KUU				*e*S	**Sg**	**15 55 34.1**	**-1.5**
	5.2nm,0.1s						
KTBS	**Karatobe**	**5.50**	**36**	Pg	**Pg**	**15 54 20.0**	**-4.6**

	3.4nm,1.0s						
KTBS				Lg	Lg	15 55 33.9	
	9.8nm,0.6s						
BTLS	Baital	5.85	13	Pg	Pg	15 54 26.1	-5.2
	4.2nm,0.7s						
BTLS				Lg	Lg	15 55 44.6	
	4.5nm,0.9s						
BTLS	Baital	5.85	13	eP	Pg	15 54 28.4	-2.9
	3.4nm,0.4s						
BTLS				eS	Sg	15 55 47.9	+0.9
	3.8nm,0.5s						
AB31	Akbulak array	13.22	323	⇑P	Pn	15 55 49.5	+2.6
	0.2nm,0.3s,baz=129,slow=14,SNR=5.9						

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*GCG **15** 15:53:11.5±1.9, 14°.11N×93°.28W, h27^{km}±66^{km}, MD4.1, ML3.7*

*MEX **15** 15:53:12.1±0.7, 14°.22N×93°.45W, h16^{km}±999^{km}, MD4.0*

ISC 15 15:53:07.7±3.1**, 14°.2N**±0°.1×**93°.4W**±0°.1**, h29**^{km}±19^{km}**, n15, σ1^{s}.11**/25**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.32	57	eP	Pb	15 53 32.3	+0.5
THIG				eS	Sb	15 53 48.9	+0.5
SMCA	Catarina	1.45	63	eP	Pb	15 53 34.8	+0.6
PATR	El Naranjo	1.47	51	eP	Pb	15 53 34.4	-0.1
PATR				eS	Sb	15 53 53.0	+0.2
PCIG		1.52	7	eP	Pb	15 53 35.7	+0.4
PCIG				eS	Sn	15 53 51.7	-0.1
PAVE	Pavencul	1.56	50	eP	Pb	15 53 36.0	-0.1
PAVE				eS	Sb	15 53 54.8	-0.7
RTAL	Retalhuleu	1.70	78	eP	Pb	15 53 37.8	-0.4
RTAL				eS	Sb	15 53 57.5	-1.7
STG8	El Palmar, Qui	2.01	82	eP	Pn	15 53 39.7	-0.3
STG8				IAML		15 54 08.8	
	comp=N,743nm,0.4s						
STG0	El Palmar, Qui	2.02	83	eP	Pn	15 53 40.0	-0.1
STG0				IAML		15 54 05.5	
	comp=E,936nm,0.4s						
SOKI	Kika Raxquin	2.04	72	eP	Pb	15 53 44.5	+0.1
SOKI				eS	Sb	15 54 09.7	+0.1
CCIG	Comitan	2.42	30	eP	Pb	15 53 51.2	+0.5
CCIG				eS	Sb	15 54 20.5	+0.4
CCIG	Comitan	2.42	30	eP	Pb	15 53 51.3	+0.6
CCIG				i S	Sb	15 54 20.9	+0.8
CCIG				IAML		15 54 27.7	
	comp=N,414nm,0.5s						
TGIG		2.59	6	eP	Pb	15 53 53.7	+0.2
TGIG				eS	Sb	15 54 23.9	-1.0
TGIG		2.59	6	i P	Pb	15 53 53.2	-0.3
TGIG				eS	Sb	15 54 24.0	-0.9
TGIG				IAML		15 54 28.2	
	comp=E,249nm,0.5s						
FG8	Yepocapa, Chim	2.76	88	eP	Pn	15 53 47.5	-2.7
NUBE	Las Nubes	3.54	94	eP	Pn	15 54 04.1	+3.2

IDC 15 16:15:06.0±5.5**, 20°.87S**×**178°.57W, h74**^{km}±43^{km}**, mb3.6**/3**, mbtmp3.9**/5**, ML4.0**/2**, Error ellipse: s-maj=59.3km s-min=43.7km az=74.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.46	314	P	Pn	16 16 11.0	-0.2
	0.3nm,0.3s,baz=137,slow=23,SNR=8.6						
	9.0nm,1.1s						
URZ	Urewera	17.73	191	P	Pn	16 19 08.2	+0.3
	0.5nm,0.3s,baz=360,slow=6.3,SNR=1.4						
	6.1nm,0.9s						
STKA	Stephens Creek	37.15	244	P	P	16 22 08.1	-1.7
	1.8nm,0.9s,baz=79,slow=10,SNR=3.9						
	1.8nm,0.9s						
ASAR	Alice Springs	43.91	257	P	P	16 23 05.6	-0.2
	1.6nm,0.8s,baz=98,slow=7.2,SNR=32						
	1.6nm,0.8s						
WRA	Warramunga Arr	44.02	263	P	P	16 23 07.5	+0.9
	0.8nm,0.6s,baz=92,slow=8.4,SNR=22						
	0.8nm,0.6s						
TORD	Torodi Ar. Bea	172.32	182	PKP	PKPdf	16 35 06.5	-0.7
	4.4nm,0.7s,baz=163,slow=1.5,SNR=4.4						

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*SJA **15** 16:22:52.4±0.6, 21°.43S×66°.85W, h263^{km}±8^{km}, ML4.4, MW4.1*

*NEIC **15** 16:22:53.9±2.3, 21°.50S±0°.06×66°.7W±0°.1, h227^{km}±8^{km}, mb4.3/70, Error ellipse: s-maj=14.3km s-min=9.0km az=83.0*

*VAO **15** 16:22:53.0±1.1, 21°.34S×66°.80W, h215^{km}±7^{km}, mb4.4*

*IDC **15** 16:22:53.9±1.1, 21°.40S×66°.57W, h216^{km}±10^{km}, mb3.9/12, mbtmp4.5/19, Error ellipse: s-maj=12.8km s-min=8.9km az=69.0*

*SCB **15** 16:22:56.2±1.4, 21°.39S×66°.73W, h193^{km}±26^{km}, ML4.6/2, MW3.6, Error ellipse: s-maj=10.7km s-min=8.4km az=0.0*

ISC 15 16:22:53.5±0.6**, 21°.47S**±0°.04×**66°.70W**±0°.04**, h218**^{km}±6^{km}**, n166, σ1^{s}.41**/161**, mb4.3**/40**, 3C, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YJA	Yavi	1.31	123	Pg	Pn	16 23 29.9	+2.0
AOVT	TarijaAcel	1.86	92	Pg	Pn	16 23 33.7	+1.4
AF01	San Pedro de A	2.02	223	Pn	Pn	16 23 34.6	+0.7
PB09	IPOC Station P	2.39	262		Pn	16 23 39.0	+1.4
PB09	IPOC Station P	2.39	262	Pg	Pn	16 23 38.9	+1.4
PB09	IPOC Station P	2.39	262	eP	Pn	16 23 38.7	+1.2
PB09				eS	S	16 24 14.2	+2.5
PB01	IPOC Station P	2.63	279		Pn	16 23 40.7	+0.5
PB01	IPOC Station P	2.63	279	Pg	Pn	16 23 41.0	+0.8
PB01				Sg	S	16 24 15.5	-0.8
PB01				IAML		16 24 17.4	
	823nm,0.2s						
PB01	IPOC Station P	2.63	279	eP	Pn	16 23 40.9	+0.8
PB01				eS	S	16 24 16.8	+0.4
PB01				IAML		16 24 20.1	
	comp=Z,420nm,0.2s						
PB08	IPOC Station P	2.65	299		Pn	16 23 41.7	+1.1
PB08	IPOC Station P	2.65	299	Pg	Pn	16 23 41.9	+1.3
PB08	IPOC Station P	2.65	299	eP	Pn	16 23 41.5	+0.8
PB08				eS	S	16 24 19.5	+2.3
PB03	IPOC Station P	2.90	258		Pn	16 23 43.0	-0.1
PB03	IPOC Station P	2.90	258	eP	Pn	16 23 43.8	+0.7
PB03				eS	S	16 24 21.5	-0.2
PB03				IAML		16 24 23.2	
	comp=Z,655nm,0.1s						
PB06	IPOC Station P	2.93	245		Pn	16 23 43.7	+0.1
PB06	IPOC Station P	2.93	245	eP	Pn	16 23 44.5	+0.9
PB06				eS	S	16 24 23.1	+0.6
PB06				IAML		16 24 29.7	
	comp=Z,319nm,0.3s						
GO01	Chusmiza	2.94	307		Pn	16 23 45.1	+1.0
GO01	Chusmiza	2.94	307	Pg	Pn	16 23 45.1	+1.0
GO01	Chusmiza	2.94	307	eP	Pn	16 23 44.5	+0.5
GO01				eS	S	16 24 26.7	+3.5
GO01				eS	S	16 24 26.9	+3.7
GO01				IAML		16 24 27.8	
	comp=Z,254nm,0.2s						
HMBC	Humberstone	3.21	291		Pn	16 23 46.5	-0.1
HMBC	Humberstone	3.21	291	eP	Pn	16 23 46.6	-0.1
HMBC				eS	S	16 24 26.9	-1.2
HMBC				IAML		16 24 29.0	
	comp=Z,1µm,0.4s						
PB11	IPOC Station P	3.25	301		Pn	16 23 46.8	-0.4
PB11	IPOC Station P	3.25	301	Pg	Pn	16 23 47.7	+0.5
PB11				Sg	S	16 24 27.7	-1.3
PB11				IAML		16 24 30.2	
	comp=Z,2µm,0.8s						
PB11	IPOC Station P	3.25	301	eP	Pn	16 23 47.6	+0.4
PB11				eS	S	16 24 28.1	-0.9
PB11				IAML		16 24 31.5	
	comp=Z,1µm,0.3s						
PATCX	Punta Patache	3.29	281		Pn	16 23 47.3	-0.2
PATCX	Punta Patache	3.29	281	eP	Pn	16 23 47.8	+0.2
PATCX				eS	S	16 24 28.4	-1.3
PATCX				IAML		16 24 32.2	
	comp=Z,706nm,0.6s						
TA01	Diego Aracena	3.37	285		Pn	16 23 48.5	+0.1
TA01	Diego Aracena	3.37	285	eP	Pn	16 23 48.3	-0.2
TA01				eS	S	16 24 29.5	-1.9
TA01				IAML		16 24 31.0	
	comp=Z,457nm,0.5s						
SLA	San Lorenzo	3.42	161	eP	Pn	16 23 51.8	+2.6
SLA				eS	S	16 24 34.2	+1.4
SLA				IAML		16 24 45.4	
	comp=Z,207nm,0.8s						
TA02	Huaiquique	3.42	290		Pn	16 23 48.7	-0.3
TA02	Huaiquique	3.42	290	eP	Pn	16 23 49.3	+0.2
TA02				eS	S	16 24 30.8	-1.6
TA02				IAML		16 24 32.2	
	comp=Z,1µm,0.2s						
PB05	IPOC Station P	3.53	246		Pn	16 23 50.9	+0.5
PB05	IPOC Station P	3.53	246	eP	Pn	16 23 50.6	+0.2
PB05				eS	S	16 24 33.6	-1.3
AOEA	Aiquile	3.55	23	Pg	Pn	16 23 51.5	+0.6
AOEA	Aiquile	3.55	23	Pg	Pn	16 23 51.7	+0.8
PB16	IPOC Station P	4.08	319		Pn	16 23 58.7	+1.1
PB16	IPOC Station P	4.08	319	Pg	Pn	16 23 59.1	+1.4
PB16	IPOC Station P	4.08	319	eP	Pn	16 23 58.3	+0.7
PB16				eS	S	16 24 45.2	-2.6
PB16				IAML		16 24 50.2	
	comp=Z,262nm,0.7s						
PB10	IPOC Station P	4.10	240		Pn	16 23 57.5	+0.2
PB10	IPOC Station P	4.10	240	eP	Pn	16 23 57.2	0.0
PB10				eS	S	16 24 45.1	-2.2
PB10				IAML		16 24 47.8	
	comp=Z,221nm,0.3s						
GO02	Mina Guanaco	4.54	215		Pn	16 24 03.7	+0.8
GO02	Mina Guanaco	4.54	215	eP	Pn	16 24 03.2	+0.3
GO02				eS	S	16 24 56.6	-0.9
PB14	IPOC Station P	4.64	227		Pn	16 24 04.2	0.0
PB18	Visviri	4.66	325		Pn	16 24 06.7	+2.0
BBOJ	La Paz, Jacaqu	4.69	342	Pg	Pn	16 24 07.0	+2.0
SOEJ	Jacaque	4.69	342	Pg	Pn	16 24 07.3	+2.3
BBOE	La Paz, Chanca	4.79	345	Pg	Pn	16 24 08.3	+2.0
BBOD	La Paz, Gloria	5.13	339	Pg	Pn	16 24 12.4	+1.8
LPAZ	La Paz	5.33	345	P	Pn	16 24 14.2	+1.0
	comp=Z,117nm,0.5s,baz=156,slow=7.4,SNR=408						
LPAZ				S	S	16 25 17.6	+1.6
	comp=Z,50nm,0.9s,baz=250,slow=12,SNR=1.5						
BBOB	La Paz, Bander	5.47	345	Pg	Pn	16 24 15.8	+0.9
AC02	Maricunga	5.79	202		Pn	16 24 18.4	-0.4
BBSD	Serra de San D	7.15	55	eP	Pn	16 24 34.7	-1.3
SIV	San Ignacio	7.62	45	P	Pn	16 24 40.8	-1.2
	comp=Z,40nm,0.4s,baz=216,slow=12,SNR=206						
SIV				S	S	16 26 04.3	-4.4
	comp=Z,11nm,0.5s,baz=225,slow=17,SNR=6.7						
LCO	Las Campanas	8.34	205		Pn	16 24 50.1	-1.3
MURT	Porto Murtinho	8.46	93	eP	Pn	16 24 52.4	-0.4
CO01	Juntas del Tor	9.01	199		Pn	16 24 58.5	-1.5
PTLB	Pontes e Lacer	9.34	51		Pn	16 25 03.0	-1.2
PTLB	Pontes e Lacer	9.34	51	eP	Pn	16 25 03.2	-0.9
CPUP	Villa Florida	9.85	121	P	Pn	16 25 10.1	-0.4
	comp=Z,0.5nm,0.5s,baz=295,slow=19,SNR=5.6						
CPUP				S	S	16 27 01.5	+0.5
	comp=Z,0.6nm,0.3s,baz=159,slow=16,SNR=1.6						
CFA	Coronel Fontan	10.19	187	P	Pn	16 25 14.5	-0.4
	comp=Z,9.9nm,0.3s,baz=360,slow=12,SNR=25						
CFA				S	S	16 27 01.4	-7.9
	comp=Z,4.0nm,0.3s,baz=320,slow=19,SNR=3.3						
SJPY	San Joaquin	10.36	112	eP	Pn	16 25 18.9	+1.8
CO02	Combarbal	10.43	201		Pn	16 25 16.5	-1.6
VILB	Vilhena	10.50	37		Pn	16 25 18.6	-0.5
VILB	Vilhena	10.50	37	eP	Pn	16 25 18.3	-0.7
VA06	Catapilco	11.78	199		Pn	16 25 31.4	-3.7
SALV	Santo Antonio	11.81	64	eP	Pn	16 25 36.0	+0.4
PEL	Peldehue	12.16	196		Pn	16 25 36.4	-3.5
RPRD	Ribas do Rio P	12.19	88	eP	Pn	16 25 41.3	+1.0
MT01	Popeta	12.99	197		Pn	16 25 49.8	-0.4
TRCB	Terra Rica	13.11	98	eP	Pn	16 25 52.8	+1.0
NNA	Nana	13.53	313	P	Pn	16 25 57.5	+0.4
	comp=Z,14nm,0.4s,baz=155,slow=9.9,SNR=5.0						
PDRB	Porto dos Gac	13.68	46	eP	Pn	16 25 57.8	-1.2
PTGB	Pitanga	13.85	106	eP	P	16 26 03.0	+0.3
PCMB	Pacaembu	14.37	93	eP	P	16 26 09.0	+0.7
ITAB	Concordia	14.46	116		P	16 26 10.2	+0.9
LDASE	Londrina, Braz	14.54	100	eP	P	16 26 11.0	+0.7
CPSB	Cacapava Do Su	14.87	129	eP	P	16 26 14.3	+0.4
ITRB	Iturama	15.40	86	eP	Pn	16 26 21.4	+1.4
PLTB	Pedras Altas	15.55	134		Pn	16 26 21.8	+0.2
PLTB				IAmb	IAmb	16 26 22.8	
	comp=Z,14nm,0.9s						
PLTB	Pedras Altas	15.55	134	eP	Pn	16 26 22.1	+0.5
FRTB	Fartura	15.96	100	eP	Pn	16 26 27.5	+0.8
BB19B	Bebedouro	16.95	92	eP	Pn	16 26 38.2	-0.2
TRQA	Tornquist	17.03	167		P	16 26 36.7	-0.8
MAJ01	Sao Joao Batis	17.15	114	eP	Pn	16 26 40.2	-0.5
SNDB	Serra Nova Dou	17.50	60	eP	P	16 26 43.6	+0.7
IPMB	Ipameri, GO	17.75	82	eP	Pn	16 26 46.9	-0.9
SPB	Sao Paulo	17.93	100	eP	P	16 26 48.4	+1.0
TEFE	Tefe	17.96	7	eP	P	16 26 46.4	-1.5
NPGB	Novo Progresso	18.05	39	eP	P	16 26 47.8	-1.0
ATAH	Atahualpa	18.18	320	P	P	16 26 51.7	+1.0
	comp=Z,2.0nm,0.5s,baz=201,slow=17,SNR=6.7						
VAO	Valinhos	18.34	98		P	16 26 52.2	+0.2
VAO	Valinhos	18.34	98	eP	P	16 26 52.0	+0.1
BDFB	Brasilia	18.63	75	P	P	16 26 54.6	-0.7
	comp=Z,6.1nm,0.4s,baz=262,slow=12,SNR=14						
MACA	Manacapuru-AM	19.11	19		P	16 26 58.4	-1.9
MACA	Manacapuru-AM	19.11	19	eP	P	16 26 59.3	-1.0
PMNB	Patos De Minas	19.26	85	eP	P	16 27 02.3	+0.4
PLCA	Paso Flores	19.48	189	P	P	16 27 04.9	+0.8
	comp=Z,1.8nm,0.5s,baz=8.7,slow=9.3,SNR=10						
PARB	Paraibuna	19.58	99	eP	P	16 27 05.5	+0.2
SLP01	Ubatuba-SP	20.01	99	eP	P	16 27 09.6	-0.3
ITTB	Itaituba	20.06	34	eP	P	16 27 09.0	-1.4
BSCB	Bom Sucesso	20.45	93	eP	P	16 27 15.0	+0.4
DIAM	Diamantina, MG	21.88	86	eP	P	16 27 28.8	-0.6
JANB	Januaria	22.18	77	eP	P	16 27 31.2	-1.0
SMTB	Santa Maria do	22.27	59	eP	P	16 27 32.7	-0.2
SDBA	SAO DESIDERIO	22.69	70	eP	P	16 27 35.8	-0.9
RUSC	La Rusia	27.90	346		P	16 28 23.9	-0.1
BAUV	El Baul	30.25	357		P	16 28 43.4	-0.8
VNA2	Neumayer--Watz	60.01	161	⇑P	P	16 32 38.8	+2.0
	comp=Z,1.9nm,0.6s,baz=303,slow=7.4						
WVT	Waverly	60.67	340	P	P	16 32 40.6	-1.0
MIAR	Mount Ida	61.28	335	P	P	16 32 44.3	-1.5
MIAR				IAmb	IAmb	16 32 46.6	
	comp=Z,11nm,1.3s						
SNAA	Sanae	61.64	161	⇑P	P	16 32 49.6	+1.8
	comp=Z,39nm,0.8s						
SNAA	Sanae	61.64	161	P	P	16 32 48.6	+0.7
	comp=Z,1.4nm,0.8s,baz=243,slow=2.8,SNR=7.6						
	comp=Z,1.4nm,0.8s						
TXAR	Lajitas Array	61.80	323	P	P	16 32 49.4	-0.2
	comp=Z,0.5nm,0.5s,baz=149,slow=8.5,SNR=7.4						
	comp=Z,0.5nm,0.5s						
S44A	Carbondale	62.56	340		pP	16 33 39.8	-5.6
MGMO	Mountain Grove	63.09	337	IAmb	IAmb	16 33 01.8	
	comp=Z,4.7nm,0.8s						
APMT	Aspermont	63.13	329	IAmb	IAmb	16 32 59.3	
	comp=Z,7.3nm,0.9s						
TROLL	Troll, Antarti	63.35	161	⇑P	P	16 33 01.4	+2.1
	comp=Z,121nm,0.6s						
CCM	Cathedral Cave	63.54	339	P	P	16 33 00.1	-0.6
VHRN	Van Horn	63.65	323	IAmb	IAmb	16 33 03.0	
	comp=Z,3.8nm,0.7s						
OK052	Battle Ridge R	63.86	333		pP	16 34 00.3	+6.2
R40A	Maddies Statio	64.11	338	IAmb	IAmb	16 33 04.9	
	comp=Z,3.8nm,0.6s						
319A	Douglas	66.54	321	IAmb	IAmb	16 33 22.7	
	comp=Z,6.5nm,0.7s						
DBIC	Dimbokro	66.76	72	P	P	16 33 20.6	-1.3
	comp=Z,9.5nm,0.8s,baz=226,slow=6.0,SNR=6.3						
	comp=Z,9.5nm,0.8s						
ANMO	Albuquerque	67.62	325	IAmb	IAmb	16 33 29.2	
	comp=Z,2.3nm,0.7s						
QSPA	South Pole Qui	68.73	180	P	P	16 33 35.8	+2.3
QSPA				IAmb	IAmb	16 33 36.2	
	comp=Z,4.1nm,0.6s						
QSPA	South Pole Qui	68.73	180	P	P	16 33 35.0	+1.6
	comp=Z,4.3nm,0.7s,baz=150,slow=1.4,SNR=13						
	comp=Z,4.3nm,0.7s						
SDCO	Great Sand Dun	69.29	328	IAmb	IAmb	16 33 39.7	
	comp=Z,4.8nm,0.8s						
MVCO	Mesa Verde	70.41	326	IAmb	IAmb	16 33 46.5	
	comp=Z,11nm,1.4s						
WUAZ	Wupatki	70.73	323	IAmb	IAmb	16 33 49.1	
	comp=Z,5.9nm,0.9s						
PV01	Paradox Valley	71.14	326	IAmb	IAmb	16 33 51.2	
	comp=Z,5.7nm,1.3s						
PV12	Saucer Basin,	71.40	326	IAmb	IAmb	16 33 52.1	
	comp=Z,4.6nm,0.6s						
PV22	Blue Mesa, Par	71.56	326	IAmb	IAmb	16 33 53.4	
	comp=Z,3.6nm,0.7s						
PV10	Paradox Valley	71.57	326	IAmb	IAmb	16 33 53.0	
	comp=Z,7.8nm,0.9s						
U15A	North Rim	71.91	323	IAmb	IAmb	16 33 56.5	
	comp=Z,4.4nm,0.8s						
HMU	Henry Mountain	72.14	325	IAmb	IAmb	16 33 58.1	
	comp=Z,7.2nm,1.0s						
MVU	Marysvale	73.35	324	IAmb	IAmb	16 34 04.6	
	comp=Z,5.5nm,0.8s						
BSUT	Blindstream Ca	74.06	327	IAmb	IAmb	16 34 08.5	
	comp=Z,5.9nm,0.8s						
PSUT	Pine Spring	74.27	323	IAmb	IAmb	16 34 09.8	
	comp=Z,3.8nm,0.8s						
GWY	Greenwater Val	74.29	320		P	16 34 09.1	+2.0
GWY				IAmb	IAmb	16 34 09.6	
	comp=Z,4.6nm,0.7s						
TPNV	Topopah Spring	74.55	321	IAmb	IAmb	16 34 11.7	
	comp=Z,5.3nm,1.1s						
PDAR	Pinedale Array	75.13	329	P	P	16 34 12.4	+0.5
	comp=Z,1.1nm,0.5s,baz=127,slow=8.2,SNR=9.2						
	comp=Z,1.1nm,0.5s						
GRAC	Grapevine Rang	75.25	320	IAmb	IAmb	16 34 14.9	
	comp=Z,4.0nm,0.6s						
TORD	Torodi Ar. Bea	75.41	69	P	P	16 34 13.3	-0.5
	comp=Z,13nm,0.5s,baz=260,slow=5.2,SNR=12						
	comp=Z,13nm,0.5s						
AHID	Auburn Hatcher	75.88	328	IAmb	IAmb	16 34 18.1	
	comp=Z,5.6nm,0.7s						
ULM	Lac du Bonnet	75.93	341	P	P	16 34 15.7	-0.3
	comp=Z,5.3nm,0.6s,baz=148,slow=5.3,SNR=11						
	comp=Z,5.3nm,0.6s						
LOHW	Long Hollow	76.27	329	IAmb	IAmb	16 34 20.5	
	comp=Z,3.2nm,0.7s						
NVAR	Mina Array Bea	76.75	321	P	P	16 34 22.6	+1.5
	comp=Z,1.4nm,0.8s,baz=151,slow=6.0,SNR=9.2						
	comp=Z,1.4nm,0.8s						
RLMT	Red Lodge	76.78	331	IAmb	IAmb	16 34 22.9	
	comp=Z,4.0nm,0.6s						
YNE	Yellowstone No	77.03	330	IAmb	IAmb	16 34 24.8	
	comp=Z,6.0nm,0.7s						
YHL	Hebgen Lake	77.47	329	IAmb	IAmb	16 34 27.9	
	comp=Z,3.3nm,0.6s						
GCMT	Greycliff	77.47	331		pP	16 35 22.2	+4.0
HLID	Hailey	78.13	327	IAmb	IAmb	16 34 31.5	
	comp=Z,4.5nm,0.7s						
BOSA	Boshof	81.64	117	P	P	16 34 48.5	+0.6
	comp=Z,2.4nm,0.4s,baz=262,slow=4.1,SNR=15						
	comp=Z,2.4nm,0.4s						
FCC	Fort Churchill	83.08	346	IAmb	IAmb	16 34 55.0	
	comp=Z,5.1nm,0.6s						
MAW	Mawson	83.76	163	P	P	16 34 59.5	+1.8
	comp=Z,3.0nm,0.6s,baz=158,slow=6.8,SNR=7.6						
	comp=Z,3.0nm,0.6s						
ESDC	Sonseca Array	84.38	44	P	P	16 35 02.1	+0.8
	comp=Z,1.9nm,1.0s,baz=242,slow=4.9,SNR=11						
	comp=Z,1.9nm,1.0s						
YKA	Yellowknife Ar	91.85	340	P	P	16 35 37.0	+0.7
	comp=Z,2.1nm,0.7s,baz=128,slow=4.0,SNR=29						
	comp=Z,2.1nm,0.7s						
ASAR	Alice Springs	130.86	205	PKP	PKiKP	16 41 40.0	-0.5
	comp=Z,1.2nm,0.5s,baz=132,slow=1.8,SNR=38						
ASAR				SKPbc	SKPab	16 44 43.3	-0.2
	comp=Z,0.5nm,0.6s,baz=143,slow=3.6,SNR=8.7						
WRA	Warramunga Arr	133.99	208	PKP	PKPdf	16 41 45.9	+0.3
	comp=Z,1.0nm,0.4s,baz=153,slow=1.7,SNR=22						
KURBB	Kurchatov Arra	140.16	35	PKhKP	PKPpre	16 41 52.8	
	comp=Z,0.7nm,0.7s,baz=309,slow=3.1,SNR=4.2						
KURBB				PKP	PKiKP	16 41 57.6	-0.8
	comp=Z,0.7nm,0.9s,baz=294,slow=2.5,SNR=5.5						
ZALV	Zalesovo Beam	141.03	27	PKP	PKPdf	16 41 58.1	+0.8
	comp=Z,2.8nm,0.7s,baz=321,slow=2.1,SNR=7.9						
MKAR	Makanchi Array	144.38	37	PKP	PKPdf	16 42 03.5	-0.1
	comp=Z,13nm,0.8s,baz=339,slow=2.8,SNR=71						
USRK	Ussuriysk Ar.	152.55	330	PKP	PKPdf	16 42 17.1	+0.3
	comp=Z,1.8nm,0.9s,baz=4.8,slow=2.4,SNR=1.5						
USRK				PKPbc	PKiKP	16 42 24.8	+0.6
	comp=Z,2.3nm,0.7s,baz=328,slow=2.5,SNR=7.5						
SONM	Songino Array	153.11	10	PKP	PKPdf	16 42 17.8	+0.1
	comp=Z,0.4nm,0.5s,baz=347,slow=3.5,SNR=4.3						
SONM				PKPbc	PKiKP	16 42 26.4	+1.0
	comp=Z,3.4nm,0.7s,baz=346,slow=0.9,SNR=8.4						
MJAR	Matsushiro Arr	153.64	310	PKPbc	PKiKP	16 42 27.4	+0.7
	comp=Z,0.6nm,0.5s,baz=58,slow=1.8,SNR=4.0						
PZH	PanZhiHua	168.31	62	PKP	PKPdf	16 42 31.3	-3.4

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*IDC **15** 16:25:22.3±1.0, 23°.66N×121°.45E, h0^{km}, mb3.5/6, mbtmp3.5/6, MS2.5/1, Error ellipse: s-maj=56.2km s-min=21.4km az=68.0*

*JMA **15** 16:25:27.6±0.1, 23°.8N±0°.4×121°.6E±1°.0, h39^{km}±1^{km}, MV3.8/18, TAIWAN REGION*

*TAP **15** 16:25:28.2, 23°.85N×121°.64E, h37^{km}, ML4.0, B*

*ASIES **15** 16:25:28.2, 23°.85N×121°.64E, h37^{km}, ML4.0, Mw3.7, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}1.80; $M_{\theta\theta}$-0.76; $M_{\phi\phi}$-1.04; $M_{r\theta}$-1.70; $M_{\theta\phi}$-1.08; $M_{\phi r}$-2.84; Fault plane solution: $M_0$3.81713×10^{21} NP1: ϕ_s51.94000°, δ15.59000°, λ109.15000°. NP2: ϕ_s212.12000°, δ75.30000°, λ84.77000°. Principal axes: T Plg59.3850°, Azm114.8440°; N Plg5.0580°, Azm213.4460°; P Plg30.1040°, Azm306.3870°;*

ISC 15 16:25:27.8±0.7**, 23°.84N**±0°.01×**121°.68E**±0°.02**, h33**^{km}±2^{km}**, n185, σ1^{s}.17**/304**, mb3.5**/6**, 19C-22D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEYL	Yanliau Villag	0.08	290	⇑iP	Pb	16 25 34.6	+1.1
TEYL				eS	Sb	16 25 39.6	+2.2
SHUL	Shoufeng	0.12	243	⇑iP	Pb	16 25 34.8	+1.1
SHUL				eS	Sb	16 25 40.9	+3.1
HWA	Hwalien	0.15	334	⇑P	Pb	16 25 35.0	+1.0
HWA				eS	Sb	16 25 40.0	+1.8
TEGC	Jichi Village	0.18	224	eP	Pb	16 25 35.4	+1.1
TEGC				eS	Sb	16 25 40.8	+2.2
ETM	Tongmen	0.21	306	⇑iP	Pn	16 25 35.0	+0.9
ETM				eS	Sb	16 25 40.2	+1.0
ESL	Shilin	0.23	263	⇑iP	Pn	16 25 35.0	+0.6
ESL				eS	Sn	16 25 39.9	+2.3
TWD	Chiawan	0.25	343	⇑iP	Pn	16 25 35.6	+0.6
TWD				S	Sb	16 25 41.3	+1.5
EGFH	Guangfu	0.29	233	i P	Pn	16 25 35.7	+0.1
EGFH				eS	Sn	16 25 41.2	+1.0
WARBT	Fenglin Townsh	0.29	245	⇑iP	Pn	16 25 35.6	-0.2
WARBT				i S	Sn	16 25 41.0	+0.5
LXIB	Xiulin Townshi	0.30	307	⇑iP	Pn	16 25 35.8	-0.2
LXIB				S	Sn	16 25 41.4	+0.5
ETL	Fush Village	0.32	351	eP	Pb	16 25 36.3	+0.4
ETL				eS	Sn	16 25 42.4	+1.0
NACB	Ninganchiao	0.34	347	P	Pb	16 25 36.6	+0.5
NACB	Ninganchiao	0.34	347	⇑iP	Pb	16 25 36.4	+0.3
NACB				eS	Sn	16 25 42.0	0.0
ETLH	Xiulin Townshi	0.41	334	⇑iP	Pb	16 25 37.2	+0.1
ETLH				i S	Sb	16 25 43.6	+0.2
HGSD	Ruisui	0.42	214	⇓iP	Pb	16 25 37.9	+0.7
HGSD				S	Sn	16 25 45.4	+1.3
EHYH	Wanrong	0.46	221	⇑P	Pb	16 25 37.5	-0.3
EHYH				eS	Sb	16 25 44.2	-0.6
EHY	Hungye	0.47	224	⇑iP	Pb	16 25 37.5	-0.5
EHY				eS	Sb	16 25 44.3	-0.6
EHP	Heping Village	0.47	7	eP	Pb	16 25 38.7	+0.7
EHP				eS	Sn	16 25 46.7	+1.2
OWD	Renai	0.47	284	⇑iP	Pb	16 25 38.3	+0.2
OWD				i S	Sb	16 25 45.1	-0.1
WHF	Hehuan Shan	0.48	309	⇑iP	Pb	16 25 38.4	-0.2
WHF				S	Sb	16 25 45.7	-0.2
EAHA	Aohua	0.49	7	⇑iP	Pb	16 25 38.7	+0.4
EAHA				S	Sb	16 25 46.5	+1.1
VWDT	VWDT	0.50	260	⇑iP	Pn	16 25 38.7	0.0
VWDT				eS	Sb	16 25 45.9	+0.2
WUSB	Renai	0.53	286	⇓P	Pn	16 25 39.2	0.0
WUSB				eS	Sn	16 25 46.6	-0.5
ECBN	Changbin	0.56	202	eP	Pn	16 25 39.7	+0.2
ECBN				eS	Sn	16 25 48.7	+1.0
FUSS	Fushou	0.57	316	⇓iP	Pn	16 25 39.7	-0.1
FUSS				eS	Sn	16 25 48.2	+0.1
YULB	Yu-li	0.57	218	P	Pn	16 25 38.9	-0.7
YULB	Yu-li	0.57	218	⇑iP	Pn	16 25 38.7	-0.9
YULB				eS	Sn	16 25 46.6	-1.2
ENA	Nanau	0.59	6	⇓iP	Pn	16 25 39.9	+0.1
ENA				eS	Sn	16 25 48.5	+0.2
EYUL	Yuli	0.59	214	eP	Pn	16 25 39.6	-0.3
TWF1	Yuli	0.60	216	⇑iP	Pn	16 25 39.2	-0.8
EWUT	Wuta	0.61	9	P	Pn	16 25 40.3	+0.1
EWUT				eS	Sn	16 25 48.9	+0.1
TWT	Tachien	0.61	312	P	Pn	16 25 40.7	+0.3
TWT				i S	Sn	16 25 49.1	-0.2
TDCB	Techi	0.63	311	⇓P	Pn	16 25 40.6	+0.1
TDCB				S	Sn	16 25 48.9	-0.6
NNSB	Datong	0.64	335	⇓P	Pn	16 25 40.5	-0.2

NNSB				S	Sn	16 25 49.2	-0.7
EOS4	EOS4	0.65	65	iP	Pn	16 25 40.9	+0.6
EOS4				S	Sn	16 25 50.0	+0.7
NNS	Nan Shan	0.66	335	⇓P	Pn	16 25 40.9	-0.1
NNS				eS	Sn	16 25 49.7	-0.5
SSLB	Suanglung	0.66	265	P	Pn	16 25 41.0	+0.1
SSLB	Suanglung	0.66	265	P	Pn	16 25 40.7	-0.2
SSLB				eS	Sn	16 25 49.2	-1.0
CHKH	Chenggong	0.70	202	eP	Pn	16 25 41.3	0.0
CHKH				eS	Sb	16 25 52.6	+1.6
LATG	Datong	0.70	349	⇓P	Pn	16 25 41.2	-0.3
LATG				S	Sn	16 25 51.1	-0.3
SMLT	Sun Moon Lake	0.71	273	⇓iP	Pn	16 25 41.7	0.0
SMLT				iS	Sn	16 25 51.3	-0.3
FULB	Fuli	0.73	209	eP	Pn	16 25 42.2	+0.4
WCS	Beigang Elemen	0.73	287	eP	Pn	16 25 42.1	+0.2
WCS				eS	Sn	16 25 51.9	0.0
EOS3	EOS3	0.73	53	⇓P	Pn	16 25 42.7	+0.9
ESAO	Su ao	0.75	12	eP	Pn	16 25 42.8	+0.7
ESAO				eS	Sn	16 25 53.3	+1.1
EOS2	EOS2	0.77	41	eP	Pn	16 25 43.5	+1.3
WHYT	Xinyi Township	0.77	259	eP	Pn	16 25 42.8	+0.4
WHYT				iS	Sn	16 25 53.0	+0.2
TWC	Suao	0.78	12	⇓P	Pn	16 25 43.0	+0.4
TWC				eS	Sb	16 25 54.5	+1.2
NDS	Dongshan	0.79	3	eP	Pn	16 25 41.5	-1.1
CHKT	Chengkung	0.79	201	P	Pn	16 25 42.4	-0.3
CHKT				iS	Sn	16 25 54.5	+1.1
WHP	Taichung City	0.80	303	P	Pn	16 25 43.4	+0.5
WHP				iS	Sn	16 25 53.8	+0.2
ENTT	Nioudou	0.80	353	eP	Pn	16 25 42.8	-0.1
ENTT				eS	Sn	16 25 53.8	+0.2
EHD	Haiduan	0.81	212	eP	Pn	16 25 42.3	-0.7
ECS	Chishang	0.85	210	eP	Pn	16 25 43.9	+0.3
ALS	Alishan	0.86	248	eP	Pn	16 25 44.4	+0.5
ALS				iS	Sn	16 25 56.0	+0.4
WJS	Zhushan	0.87	269	eP	Pn	16 25 45.0	+1.2
WJS				eS	Sn	16 25 56.8	+1.6
YHNB	Yeheng	0.87	342	P	Pn	16 25 44.1	+0.2
YHNB	Yeheng	0.87	342	⇓iP	Pn	16 25 44.1	+0.2
YHNB				eS	Sn	16 25 55.5	+0.1
TWE	Neicheng	0.88	359	⇓iP	Pn	16 25 43.9	0.0
NSK	Sanguang	0.88	341	⇓iP	Pn	16 25 44.2	+0.2
NSK				S	Sn	16 25 55.3	-0.3
ELDTW	Lidau	0.89	223	eP	Pn	16 25 43.5	-0.6
WNT	Mingjian	0.91	272	⇓P	Pn	16 25 45.4	+1.1
WNT				S	Sn	16 25 57.9	+1.6
FUSB	Fushanzhiwuyua	0.92	355	⇓iP	Pn	16 25 44.5	0.0
FUSB				eS	Sn	16 25 56.4	-0.2
ILA	Ilan	0.92	4	eP	Pb	16 25 46.5	+1.1
EDH	Donghe	0.93	202	eP	Pn	16 25 44.7	+0.1
EDH				eS	Sn	16 25 57.6	+0.8
NFF	Wufeng Townshi	0.94	327	P	Pn	16 25 45.5	+0.7
NFF				eS	Sn	16 25 57.8	+0.7
NWLT	Wulai	0.94	350	eP	Pn	16 25 45.1	+0.3
NWLT				eS	Sn	16 25 56.9	-0.3
CHN5	Tsauling	0.95	255	eP	Pn	16 25 45.7	+0.8
CHN5				eS	Sn	16 25 58.7	+1.3
TCU	Taichung	0.96	289	eP	Pn	16 25 46.4	+1.4
TCU				eS	Sn	16 25 59.6	+2.0
TWQ1	Liyutan	0.97	302	⇓iP	Pn	16 25 46.3	+1.2
TWQ1				iS	Sn	16 25 59.3	+1.5
NSTT	Nanjuang	1.00	322	⇓iP	Pn	16 25 46.8	+1.3
NSTT				iS	Sn	16 25 59.2	+0.7
LIOB	Emei	1.00	323	⇓iP	Pn	16 25 47.0	+1.4
LIOB				iS	Sn	16 25 59.9	+1.3
NSY	Sanyi	1.01	305	⇓iP	Pn	16 25 47.7	+2.0
EGS		1.03	13	eP	Pb	16 25 47.9	+0.8
EGS				eS	Sb	16 26 02.7	+2.4
WGK	Gukeng	1.03	262	eP	Pn	16 25 47.0	+1.0
WGK				eS	Sn	16 26 01.4	+2.1
KSHI	Guanxi Townshi	1.04	334	⇓iP	Pn	16 25 47.6	+1.5
KSHI				eS	Sn	16 26 01.1	+1.7
WCHH	Zhanghua	1.05	283	eP	Pn	16 25 47.6	+1.4
WCHH				eS	Sb	16 26 02.4	+1.4
WDL	Douliou City	1.05	263	eP	Pn	16 25 47.4	+1.1
WDL				eS	Sb	16 26 02.0	+1.0
WDLH	Douliu	1.05	262	eP	Pn	16 25 47.6	+1.3
WDLH				iS	Sn	16 26 01.7	+1.8
LONT	Longtian	1.06	208	eP	Pn	16 25 45.6	-0.8
WCH1	Changhua City	1.06	283	eP	Pn	16 25 48.0	+1.6
WCH1				eS	Sn	16 26 02.2	+2.2
WCKO	Fanlu	1.06	248	eP	Pn	16 25 48.0	+1.6
WCKO				iS	Sn	16 26 01.7	+1.6
STYH	Taoyuan	1.06	231	eP	Pn	16 25 46.9	+0.5
STYH				iS	Sn	16 26 01.1	+1.1
NMLH	Miaoli	1.06	311	eP	Pn	16 25 47.1	+0.7
NMLH				iS	Sn	16 26 01.7	+1.6
WDJ	Dajia District	1.07	298	⇓iP	Pn	16 25 47.7	+1.1
WDJ				eS	Sn	16 26 01.9	+1.5
TPUB	Ta-pu	1.10	241	P	Pn	16 25 47.7	+0.7
TPUB	Ta-pu	1.10	241	S	Sn	16 26 03.1	+2.0
TPUB	Ta-pu	1.10	241	eP	Pn	16 25 48.0	+1.0
TPUB				eS	Sn	16 26 02.0	+1.0
NHDH	Xindian Distri	1.12	353	eP	Pn	16 25 48.2	+0.9
NHDH				eS	Sn	16 26 02.3	+0.7
TIPB	Shuangxi	1.13	7	eP	Pn	16 25 48.3	+0.9
TIPB				eS	Sn	16 26 02.8	+0.9
SBCB	Hsinchu	1.14	326	eP	Pn	16 25 48.9	+1.4
SBCB				eS	Sb	16 26 04.5	+1.0
TWA	Mucha	1.14	356	⇑iP	Pn	16 25 48.1	+0.7
TWA				eS	Sn	16 26 01.5	-0.4
TATO	Taipei	1.14	351	P	Pn	16 25 48.2	+0.7
TATO	Taipei	1.14	351	S	Sn	16 26 03.4	+1.4
WTP	Ta-pu	1.14	239	eP	Pn	16 25 48.7	+1.2
WTP				iS	Sn	16 26 04.3	+2.2
CHN2	Minshiung	1.14	255	P	Pn	16 25 49.4	+1.8
CHN2				iS	Sb	16 26 05.1	+1.5
HSN	Hsinchu	1.15	326	iP	Pn	16 25 49.0	+1.4
HSN				iS	Sb	16 26 05.0	+1.1
TWG	Pinlang	1.16	209	eP	Pn	16 25 46.6	-1.2
TWG				eS	Sn	16 26 01.8	-0.7
TWGBT	Beinan	1.16	208	P	Pn	16 25 46.6	-1.2
TWGBT	Beinan	1.16	208	eP	Pn	16 25 46.6	-1.2
LDUT	Ludao	1.18	189	eP	Pn	16 25 46.9	-1.1
TTN	Taitung	1.19	204	eP	Pn	16 25 49.0	+0.9
WTK	Tuku	1.19	263	P	Pn	16 25 49.8	+1.7
WTK				eS	Sn	16 26 05.4	+2.2
TWB1	Santiao Chiao	1.20	14	eP	Pn	16 25 49.7	+1.5
TWB1				S	Sb	16 26 06.1	+1.0
CHY	Chiayi	1.20	254	eP	Pn	16 25 49.4	+1.1
CHY				eS	Sn	16 26 05.5	+2.1
NCUH	Zhongli	1.21	338	eP	Pn	16 25 49.5	+1.1
NCU	National Centr	1.21	338	eP	Pn	16 25 47.1	-1.3
NWF	Wu-fen Shan	1.23	4	eP	Pn	16 25 49.9	+1.1
NWF				eS	Sn	16 26 05.4	+1.1
WFSB	Wu-fen Shan	1.23	4	eP	Pn	16 25 50.2	+1.5
WFSB				eS	Sn	16 26 05.6	+1.4
TWK	Hsinying	1.23	243	eP	Pn	16 25 50.0	+1.2
TWK				eS	Sn	16 26 06.6	+2.2
CHN1	Nanshi	1.24	238	eP	Pn	16 25 50.8	+1.9
CHN1				iS	Sn	16 26 06.9	+2.4
SNST	Tainan City	1.25	240	eP	Pn	16 25 50.3	+1.4
SNST				eS	Sn	16 26 07.1	+2.5
SXI1	Grass Mountain	1.26	8	eP	Pn	16 25 50.5	+1.2
TWS1	Kuangyinshan	1.28	349	eP	Pn	16 25 50.2	+0.8
WTCT	Ta-ch'eng	1.28	271	eP	Pn	16 25 50.6	+1.2
WTCT				iS	Sn	16 26 07.8	+2.4
YM01	YM01	1.30	356	eP	Pn	16 25 49.9	+0.2
TNOU	National Taiwa	1.30	4	eP	Pn	16 25 50.0	+0.3
JYNG	Yonagunijimaku	1.31	62	P	Pn	16 25 50.6	+0.8
JYNG				eS	Sn	16 26 07.6	+1.5
ZUZH	Zhuzihu	1.32	355	iP	Pn	16 25 50.3	+0.3
ZUZH				eS	Sn	16 26 06.8	+0.3
NTST	Danshui	1.33	351	eP	Pn	16 25 51.8	+1.6
YM08	YM08	1.34	357	P	Pn	16 25 50.2	-0.1
ANP	Anpu	1.35	354	eP	Pn	16 25 51.4	+0.9
WSF	Szhu	1.35	262	iP	Pn	16 25 51.6	+1.3
WSF				iS	Sn	16 26 09.1	+2.0
WSL	Shuilin Townsh	1.37	257	eP	Pn	16 25 51.6	+1.0
WSL				eS	Sn	16 26 10.0	+2.5
YOJ	Yonaguni jima	1.37	63	P	Pn	16 25 51.6	+1.0
YOJ	Yonaguni jima	1.37	63	P	Pn	16 25 51.4	+0.8
YOJ				eS	Sn	16 26 08.4	+0.9
YOJ	Yonaguni jima	1.37	63	eP	Pn	16 25 51.4	+0.8
YOJ				eS	Sn	16 26 08.7	+1.1
ICHU	Yijhu	1.37	250	eP	Pn	16 25 51.9	+1.2
ICHU				eS	Sb	16 26 10.4	+0.3
ECL	Taimali	1.41	208	eP	Pn	16 25 50.2	-1.0
ECL				eS	Sn	16 26 09.3	+0.8
CHN3	Shinhua	1.43	238	eP	Pn	16 25 53.8	+2.4
CHN3				eS	Sb	16 26 13.2	+1.5
TWY	Chenhua	1.43	357	eP	Pn	16 25 52.2	+0.7
TWY				eS	Sn	16 26 11.4	+2.3
CHN8	Yiju	1.43	250	eP	Pn	16 25 52.6	+1.1
CHN8				eS	Sn	16 26 11.5	+2.3
SCST	Cishan	1.45	229	iP	Pn	16 25 54.0	+2.3
SCST				eS	Sb	16 26 13.8	+1.6
SSD	Sandimen	1.45	222	eP	Pn	16 25 53.2	+1.4
SSD				eS	Sb	16 26 13.4	+0.9
SSHA	Shanhua	1.46	241	eP	Pn	16 25 53.8	+2.0
SSHA				eS	Sb	16 26 13.3	+0.8
TSMG	Majia	1.48	220	eP	Pn	16 25 54.7	+2.5
TSMG				eS	Sb	16 26 13.1	0.0
SCLT	Jiali	1.51	244	eP	Pn	16 25 53.9	+1.3
SCLT				eS	Sn	16 26 13.7	+2.5
TWM1	Shoushan	1.54	229	eP	Pb	16 25 56.1	+0.4
MASBT	Mashibuluo	1.56	218	eP	Pn	16 25 53.5	+0.2
MASBT				eS	Sb	16 26 15.4	0.0
SGLT	Jiouru	1.56	225	eP	Pb	16 25 56.2	+0.1
SGLT				eS	Sb	16 26 17.0	+1.6
TSCK	Chigu Township	1.62	245	eP	Pn	16 25 55.0	+0.9
TSCK				eS	Sn	16 26 16.2	+2.5
EAST	Anshuo	1.64	208	eP	Pn	16 25 53.6	-0.8
TAW	Tawu	1.64	206	eP	Pn	16 25 55.1	+0.7
TAW				eS	Sn	16 26 14.6	+0.2
TAWH	Dawu Township	1.66	206	eP	Pn	16 25 54.9	+0.2
SCZT	Fangliau	1.76	214	eP	Pn	16 25 57.8	+1.8
SCZT				S	Sn	16 26 20.3	+3.1
SLIU	Shizi	1.81	207	eP	Pn	16 25 57.7	+1.0
PCYT	Pengchaiyu	1.82	11	eP	Pn	16 25 58.3	+1.5
LYUB	Lan-yu	1.83	183	eP	Pn	16 25 55.1	-1.9
WLCH	Liuqiu	1.91	219	eP	Pb	16 26 02.9	+0.9
WDGT	Dungji	1.94	253	iP	Pn	16 25 59.0	+0.5
WDGT				eS	Sn	16 26 22.2	+0.5
IRIF	Iriomote-Funau	1.94	75	P	Pn	16 25 59.5	+1.0
IRIF				eS	Sn	16 26 23.1	+1.4
PHUB	P'eng-hu	1.96	261	eP	Pn	16 25 59.2	+0.5
PHUB				eS	Sn	16 26 22.0	-0.1
HATJ	Hateruma jima	1.96	83	P	Pn	16 25 59.7	+1.0
HATJ				eS	Sn	16 26 23.0	+0.8
PNG	Penghu	1.96	262	eP	Pn	16 25 59.1	+0.3
HEN	Hengchun	2.02	206	eP	Pn	16 26 02.5	+2.8
TWK1	Hengchun	2.05	203	eP	Pn	16 26 01.6	+1.6
TWK1				eS	Sn	16 26 26.4	+1.9
TWKBT	Hengchun	2.05	203	eP	Pn	16 26 01.1	+1.0
TWKBT				eS	Sn	16 26 26.0	+1.5
TSEB	Hengchuen, Pin	2.06	200	eP	Pn	16 26 02.0	+1.8
VCHM	Qimei	2.16	253	eP	Pn	16 26 01.8	+0.4
VCHM				S	Sn	16 26 28.5	+1.4
JKRS	Kuro-shima	2.17	79	P	Pn	16 26 02.7	+1.1
JKRS				eS	Sn	16 26 28.7	+1.3
JIJ	Ishigaki jima	2.31	77	P	Pn	16 26 04.2	+0.6
JIJ				eS	Sn	16 26 30.6	-0.3
VWUC	VWUC	2.33	300	eP	Pn	16 26 03.3	-0.6
JISG	Ishigakijimahi	2.52	72	P	Pn	16 26 07.0	+0.5
JISG				eS	Sn	16 26 36.0	+0.1
PTMZ	Houxiangcun	2.62	298	eP	Pn	16 26 07.4	-0.4
MATB	Ma-tsu	2.79	326	eP	Pn	16 26 09.3	-0.8
JTJ	Tarama	2.87	73	P	Pn	16 26 12.1	+0.8
JTJ				eS	Sn	16 26 44.8	+0.1
KNM	Kinmen	3.02	282	eP	Pn	16 26 14.5	+1.2
KNMB	Chin-men Tao	3.07	282	eP	Pn	16 26 13.6	-0.4
MHZQ	Yeshan	3.29	314	eP	Pn	16 26 15.9	-1.2
JIRB	Irabujima	3.34	72	eP	Pn	16 26 18.4	+0.7
JIRB				eS	Sn	16 26 57.1	+0.9
XPSS	Dashiqiu	3.36	337	eP	Pn	16 26 17.1	-0.9
JIKM	Ikemajima	3.43	71	eS	Sn	16 26 58.4	-0.1
JMJ2	Miyako jima3	3.45	74	eP	Pn	16 26 20.5	+1.3
JMJ2				eS	Sn	16 27 00.1	+1.1
JOGS	Gusukube	3.52	74	eS	Sn	16 27 02.4	+1.6
AXDP	Jialang	3.54	288	eP	Pn	16 26 20.1	-0.3
ZPLA	Ao Xicun	3.59	272	eP	Pn	16 26 21.1	-0.1
DSXP	Dongshan	3.90	269	eP	Pn	16 26 24.9	-0.5
SXFK	Yanhouchang	4.45	306	eP	Pn	16 26 32.2	-0.9
CMAR	Chiang Mai Arr	21.86	260	LR	LR	16 39 20.2	
	comp=Z,12nm,18.3s,baz=270,slow=39						
MKAR	Makanchi Array	38.90	316	P	P	16 32 49.3	-1.0
	0.4nm,0.6s,baz=100,slow=12,SNR=2.7						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	42.66	320	P	P	16 33 20.4	-0.7
	0.2nm,0.5s,baz=110,slow=9.4,SNR=1.9						
	0.2nm,0.5s						
WRA	Warramunga Arr	45.24	163	P	P	16 33 40.2	-2.0
	0.4nm,0.5s,baz=346,slow=8.6,SNR=5.6						
	0.4nm,0.5s						
ASAR	Alice Springs	48.69	165	P	P	16 34 08.1	-1.1
	0.3nm,0.6s,baz=339,slow=6.9,SNR=5.7						
	0.3nm,0.6s						
STKA	Stephens Creek	58.59	160	P	P	16 35 19.9	-1.6
	1.1nm,0.6s,baz=353,slow=6.6,SNR=3.4						
	1.1nm,0.6s						
ILAR	Eielson Array	69.31	27	P	P	16 36 33.0	+1.3
	0.2nm,0.7s,baz=308,slow=7.7,SNR=4.6						
	0.2nm,0.7s						

NEIC 15 16:57:17.4±0.4**, 37°.65N**±0°.01×**105°.49W**±0°.02**, h5**^{km}±1^{km}**,**
ML1.7/18**, Error ellipse: s-maj=3.0km s-min=2.9km**
az=257.0, Colorado

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDCO	Great Sand Dun	0.09	352	Pg	Pg	16 57 19.9	+0.3
SDCO				Sg	Sg	16 57 21.6	+0.5
SDCO				IAML		16 57 21.8	
	540nm,0.1s						
T25A	Trinidad	1.00	121	Pg	Pg	16 57 36.4	-0.2
T25A				Sg	Sg	16 57 49.3	-0.2
T25A				IAML		16 57 50.0	
	comp=N,18nm,0.2s						
S22A	4UR Ranch, Cre	1.07	275	Pg	Pg	16 57 37.3	-0.7
S22A				IAML		16 57 53.5	
	comp=E,22nm,0.1s						
Q24A	Divide	1.33	11	Pg	Pn	16 57 41.8	-1.3
Q24A					Sg	16 57 59.5	-0.9
ISCO	Idaho Springs	2.15	357	Pn	Pn	16 57 53.5	-0.7
MVCO	Mesa Verde	2.44	260	Pn	Pn	16 57 57.9	-0.3
MVCO				IAML		16 58 41.5	
	comp=E,4.0nm,0.6s						

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*IDC **15** 16:58:02.0±1.3, 28°.33S×67°.43W, h115^{km}±12^{km}, mb3.9/10, mbtmp4.2/16, MS3.5/2, Error ellipse: s-maj=16.4km s-min=10.2km az=103.0*
*NEIC **15** 16:58:03.2±1.6, 28°.41S±0°.06×67°.39W±0°.10, h131^{km}±8^{km}, mb4.5/91, Error ellipse: s-maj=12.6km s-min=8.7km az=83.0*
*VAO **15** 16:58:03.4±1.1, 28°.30S×67°.39W, h125^{km}±7^{km}, mb4.5*
*SJA **15** 16:58:03.3±0.8, 28°.40S×67°.45W, h141^{km}±4^{km}, ML4.7, MW4.4*
ISC 15 16:58:03.5±0.6**, 28°.39S**±0°.03×**67°.49W**±0°.04**, h138**^{km}±5^{km}**,**
n189, σ1^{s}.34/185**, mb4.4**/48**, La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VCA	Vinchina	0.72	241	eP	Pn	16 58 26.1	+1.1
VCA				eS	Sn	16 58 42.4	+1.0
VCA				IAML		16 58 45.1	
	comp=Z,12µm,0.3s						
ACLC	CERRO LA CRUZ	1.14	156	eP	Pn	16 58 29.3	+0.7
ACLC				eS	Sn	16 58 47.7	-0.1
AGUA	GUANDACOL	1.40	218	eP	Pn	16 58 32.2	+1.0
AGUA				eS	Sn	16 58 53.8	+1.3
AGUA				IAML		16 58 54.8	
	comp=Z,12µm,1.1s						
CYA	Choya	1.49	93	eP	Pn	16 58 32.7	+0.6
CYA				eS	Sn	16 58 53.5	-0.4
CYA				IAML		16 58 54.2	
	comp=Z,3µm,0.7s						
AC02	Maricunga	2.12	316		Pn	16 58 41.0	+1.1
AC02	Maricunga	2.12	316	eP	Pn	16 58 41.7	+1.8
AC02				eS	Sn	16 59 08.9	+1.3
AVFE	Valle Fertil	2.27	179	eP	Pn	16 58 41.9	+0.6
AVFE				eS	Sn	16 59 09.7	-0.5
AVFE				IAML		16 59 11.9	
	comp=Z,2µm,0.4s						
ACDV	Cuesta del Vie	2.28	218	eP	Pn	16 58 42.8	+1.4
ACDV				eS	Sn	16 59 12.3	+1.7
ACDV				IAML		16 59 12.6	
	comp=Z,3µm,0.6s						
AROD	Rodeo	2.48	224	eP	Pn	16 58 45.6	+1.5
AROD				eS	Sn	16 59 17.4	+2.0
GO03	Copiapo	2.55	287		Pn	16 58 45.0	+0.3
GO03	Copiapo	2.55	287	eP	Pn	16 58 44.6	-0.1
GO03				eS	Sn	16 59 15.8	-0.6
ACCO	Cerro Coronel	2.59	212	eP	Pn	16 58 51.8	+6.3
ACCO				eS	Sn	16 59 24.5	+6.8
FSA	Cafayete	2.63	31	eP	Pn	16 58 47.5	+1.5
FSA				eS	Sn	16 59 20.9	+2.3
AC06	Mina Casimiro	2.73	291		Pn	16 58 47.1	+0.1
CO01	Juntas del Tor	2.77	234		Pn	16 58 48.9	+1.2
CO01	Juntas del Tor	2.77	234	eP	Pn	16 58 49.8	+2.1
CO01				eS	Sn	16 59 20.0	-1.8
CO01				IAML		16 59 26.0	
	comp=Z,987nm,1.0s						
ACHE	Chepes	2.86	166	eP	Pn	16 58 49.6	+0.9
LCO	Las Campanas	2.89	257		Pn	16 58 49.1	-0.1
LCO	Las Campanas	2.89	257	eP	Pn	16 58 49.7	+0.5
LCO				eS	Sn	16 59 23.6	-0.8
LCO				IAML		16 59 25.7	
	comp=Z,4µm,0.2s						
DOCA	Reserva Natura	2.91	208	eP	Pn	16 58 49.9	+0.4
DOCA				eS	Sn	16 59 25.3	+0.3
DOCA				IAML		16 59 26.4	
	comp=Z,1µm,0.5s						
RTLL	Cerro Villicun	3.06	196	eP	Pn	16 58 46.9	-4.3
RTLL				eS	Sn	16 59 22.2	-5.8
AC04	Llanos de Chal	3.16	272		Pn	16 58 52.2	-0.3
AC04	Llanos de Chal	3.16	272	eP	Pn	16 58 52.3	-0.3
AC04				eS	Sn	16 59 27.9	-2.5
AC04				IAML		16 59 29.5	
	comp=Z,881nm,0.6s						
SJA	San Juan	3.27	196	eP	Pn	16 58 55.0	+1.1
SJA				eS	Sn	16 59 31.9	-1.0
SJA				IAML		16 59 35.4	
	comp=Z,2µm,0.5s						
CFA	Coronel Fontan	3.27	191	P	Pn	16 58 53.7	-0.3
	comp=Z,56nm,0.3s,baz=42,slow=17,SNR=1311						
CFA				S	Sn	16 59 31.9	-1.1
	comp=Z,960nm,0.3s,baz=257,slow=20,SNR=38						
CFA	Coronel Fontan	3.27	191	eP	Pn	16 58 54.5	+0.5
CFA				eS	Sn	16 59 32.3	-0.7
ZON	Zonda	3.31	198		Pn	16 58 54.5	0.0
ZON	Zonda	3.31	198	eP	Pn	16 58 55.2	+0.7
ZON				eS	Sn	16 59 33.6	-0.4
ZON				IAML		16 59 35.2	
	comp=Z,2µm,0.5s						
GO04	Tololo Observa	3.39	238		Pn	16 58 55.7	0.0
GO04	Tololo Observa	3.39	238	eP	Pn	16 58 55.1	-0.6
GO04				eS	Sn	16 59 37.0	+0.9
AC01	Pan de Azucar	3.55	308		Pn	16 58 57.0	-0.6
AC01	Pan de Azucar	3.55	308	eP	Pn	16 58 57.4	-0.2
AC01				eS	Sn	16 59 35.4	-4.0
CO05	La Serena	3.62	244		Pn	16 58 57.3	-1.0
CO03	El Pedregal	3.71	228		Pn	16 58 59.7	0.0
CO03	El Pedregal	3.71	228	eP	Pn	16 58 59.3	-0.3
CO03				eS	Sn	16 59 44.4	+1.3
CO03				IAML		16 59 46.7	
	comp=Z,1µm,1.0s						
GO02	Mina Guanaco	3.72	329		Pn	16 59 00.7	+0.6
GO02	Mina Guanaco	3.72	329	eP	Pn	16 59 00.7	+0.6
GO02				eS	Sn	16 59 44.3	+0.5
RTLS	Leoncito	3.74	204	eP	Pn	16 59 00.9	+0.6
RTLS				eS	Sn	16 59 39.9	-4.5
RTLS				IAML		16 59 48.5	
	comp=Z,3µm,0.8s						
SLA	San Lorenzo	4.06	26	eP	Pn	16 59 05.1	+0.6
CO02	Combarbal	4.14	226		Pn	16 59 04.6	-0.9
CO02	Combarbal	4.14	226	eP	Pn	16 59 04.3	-1.1
CO02				eS	Sn	16 59 54.0	+0.4
CO02				IAML		16 59 57.9	
	comp=Z,1µm,0.7s						
CO06	Fray Jorge	4.27	237		Pn	16 59 04.9	-2.1
PB14	IPOC Station P	4.56	324		Pn	16 59 11.1	-0.2
PB14	IPOC Station P	4.56	324	eS	Sn	17 00 02.8	-1.0
PB14				IAML		17 00 05.0	
	comp=Z,287nm,0.5s						
ARCO	CERRO ARCO	4.61	195	eP	Pn	16 59 12.6	+0.9
ARCO				eS	Sn	17 00 01.8	-2.9
ARCO				IAML		17 00 07.8	
	comp=Z,1µm,0.4s						
VA03	San Esteban	5.10	210		Pn	16 59 18.4	+0.3
VA03	San Esteban	5.10	210	IAML		17 00 57.1	
	comp=Z,515nm,0.6s						
VA06	Catapilco	5.30	217		Pn	16 59 18.4	-2.3
PEL	Peldehue	5.48	209		Pn	16 59 23.1	-0.1
MT08	Bocatoma Ro	5.49	203		Pn	16 59 24.5	+1.0
PB10	IPOC Station P	5.58	330		Pn	16 59 23.8	-0.7
MT16	CCHEN	5.66	207		Pn	16 59 25.0	-0.6
MT09	Talagante	6.15	208		Pn	16 59 30.3	-2.0
CPUP	Villa Florida	9.27	80	P	Pn	17 00 11.9	-2.0
	comp=Z,2.4nm,0.6s,baz=120,slow=12,SNR=16						
CPUP				S	Sn	17 01 54.4	-2.1
	comp=Z,2.3nm,0.6s,baz=60,slow=15,SNR=0.8						
ITQB	Itaqui	9.60	100	eP	Pn	17 00 16.7	-1.6
PB16	IPOC Station P	10.17	349		Pn	17 00 24.2	-2.4
TRQA	Tornquist	10.69	156		Pn	17 00 31.9	-1.0
SJPY	San Joaquin	10.73	74	eP	Pn	17 00 32.8	-0.7
PB18	Visviri	10.90	350		Pn	17 00 37.4	+1.1
MURT	Porto Murtinho	11.18	55	eP	Pn	17 00 37.8	-1.7
LPAZ	La Paz	12.05	357	P	Pn	17 00 50.8	-0.7
	comp=Z,4.4nm,0.6s,baz=174,slow=9.3,SNR=14						
LPAZ				S	Sn	17 03 02.8	-2.1
	comp=Z,3.6nm,1.0s,baz=292,slow=17,SNR=1.9						
CPSB	Cacapava Do Su	12.42	103	eP	Pn	17 00 56.2	+0.6
PLTB	Pedras Altas	12.49	109		Pn	17 00 54.0	-2.5
PLTB	Pedras Altas	12.49	109	eP	Pn	17 00 55.4	-1.1
PLCA	Paso Flores	12.57	191	P	Pn	17 00 57.8	+0.2
	comp=Z,2.5nm,1.0s,baz=343,slow=11,SNR=3.4						
PLCA				S	Sn	17 03 19.1	+2.9
	comp=Z,2.2nm,0.6s,baz=16,slow=15,SNR=1.4						
BBSD	Serra de San D	12.82	31	eP	Pn	17 00 59.1	-1.8
AQDB	Aquidauana	13.31	56	Pn	Pn	17 01 05.9	-1.3
AQDB	Aquidauana	13.31	56	eP	Pn	17 01 05.8	-1.4
ITAB	Concordia	13.65	89	P	Pn	17 01 10.1	-1.4
ITAB	Concordia	13.65	89	eP	Pn	17 01 10.0	-1.4
SIV	San Ignacio	13.69	27	P	Pn	17 01 09.8	-2.2
	comp=Z,2.4nm,0.6s,baz=202,slow=16,SNR=8.8						
PTGB	Pitanga	14.28	79	eP	Pn	17 01 19.3	-0.4
TRCB	Terra Rica	14.51	71	eP	Pn	17 01 22.2	-0.3
LL01	San Ignacio de	14.52	195		Pn	17 01 21.4	-0.9
RPRD	Ribas do Rio P	14.81	61	eP	Pn	17 01 25.5	-0.7
PTLB	Pontes e Lacer	15.02	33	P	Pn	17 01 27.5	-1.3
PTLB	Pontes e Lacer	15.02	33	eP	Pn	17 01 28.1	-0.7
LDASE	Londrina, Braz	15.55	75	eP	Pn	17 01 33.9	-1.5
PCMB	Pacaembu	16.18	69	eP	Pn	17 01 42.3	-0.8
SALV	Santo Antonio	16.53	44	eP	Pn	17 01 45.8	-1.6
VILB	Vilhena	16.79	25	eP	Pn	17 01 49.7	-0.9
FRTB	Fartura	16.90	77	eP	Pn	17 01 51.1	-0.8
COYC	Coyhaique	17.54	191	P	P	17 01 57.0	-1.4
COYC				IAmb	IAmb	17 02 00.8	
	comp=Z,16nm,0.7s						
ITRB	Iturama	17.86	65	eP	P	17 02 01.8	-0.4
NNA	Nana	18.51	330	P	P	17 02 09.2	-0.1
	comp=Z,4.5nm,0.4s,baz=206,slow=13,SNR=4.7						
PET01	Itanhaem-SP	18.57	82	eP	P	17 02 09.4	-0.6
SPB	Sao Paulo	18.65	80	P	P	17 02 10.0	-0.7
SPB				IAmb	IAmb	17 02 14.2	
	comp=Z,31nm,1.5s						
SPB	Sao Paulo	18.65	80	eP	P	17 02 10.7	0.0
BB19B	Bebedouro	18.69	71	eP	P	17 02 11.1	-0.2
ARAG	Araguaiana, MT	19.22	52	eP	P	17 02 16.5	-0.6
VAO	Valinhos	19.25	78	P	P	17 02 16.3	-1.2
VAO				IAmb	IAmb	17 02 18.1	
	comp=Z,35nm,1.3s						
VAO	Valinhos	19.25	78	eP	P	17 02 17.1	-0.4
PDRB	Porto dos Gac	19.49	33	eP	P	17 02 18.7	-1.3
PARB	Paraibuna	20.30	81	eP	P	17 02 28.3	-0.5
IPMB	Ipameri, GO	20.50	64	eP	P	17 02 29.9	-1.0
CLDB	Colider	20.59	34	eP	P	17 02 30.4	-1.4
CZSB	Cruzeiro do Su	21.13	346	P	P	17 02 38.1	+0.6
CZSB	Cruzeiro do Su	21.13	346	eP	P	17 02 38.9	+1.4
PMNB	Patos De Minas	21.63	68	eP	P	17 02 43.6	+0.6
BSCB	Bom Sucesso	21.89	75	eP	P	17 02 46.5	+0.8
MAN01	Angra dos Reis	21.90	81	eP	P	17 02 45.3	-0.5
BDFB	Brasilia	22.03	59	P	P	17 02 45.3	-1.8
	comp=Z,5.6nm,0.6s,baz=227,slow=11,SNR=10						
	comp=Z,5.6nm,0.6s						
SNDB	Serra Nova Dou	22.27	46	eP	P	17 02 47.5	-2.0
DIAM	Diamantina, MG	24.02	70	eP	P	17 03 05.6	-0.3
TBTG	Tabatinga, AM	24.18	354	P	P	17 03 07.6	+0.4
TBTG	Tabatinga, AM	24.18	354	eP	P	17 03 08.5	+1.3

CAM01	Campos-RJ	24.26	80	*e*P	P	17 03 08.7	+0.8
TEFE	Tefe	24.89	7	*e*P	P	17 03 14.2	+0.6
JANB	Januaria	25.23	63	*e*P	P	17 03 15.6	-1.2
MACA	Manacapuru-AM	25.91	16	P	P	17 03 22.5	-0.3
MACA	Manacapuru-AM	25.91	16	*e*P	P	17 03 23.8	+0.9
SJMB	Sao Joao De Ma	25.92	74	*e*P	P	17 03 22.9	-0.1
RIB01	Linhares ES	26.33	76	*e*P	P	17 03 27.8	+1.1
SDBA	SAO DESIDERIO	26.40	58	*e*P	P	17 03 28.1	+0.8
SMTB	Santa Maria do	26.99	48	*e*P	P	17 03 33.2	+0.6
PRPB	Parauapebas	27.72	40	*e*P	P	17 03 39.2	0.0
COHC	Cochancay	28.11	334	P	P	17 03 43.4	+0.8
BOAV	Boa Vista	31.33	13	P	P	17 04 11.0	0.0
BOAV				IAmb	IAmb	17 04 12.4	
	comp=Z,8.3nm,0.8s						
BOAV	Boa Vista	31.33	13	*e*P	P	17 04 11.1	+0.2
RUSC	La Rusia	34.50	350	P	P	17 04 38.7	-0.4
BAUV	El Baul	37.11	359	P	P	17 04 59.8	-1.0
SDV	Santo Domingo	37.18	355		P	17 05 01.1	-0.4
SDV	Santo Domingo	37.18	355	LR	LR	17 21 10.7	
	comp=Z,33nm,18.3s,baz=356,slow=37						
SDV	Santo Domingo	37.18	355	*e*P	P	17 05 00.9	-0.6
OBIP	Obispado Ponce	46.16	1	P	P	17 06 13.9	-0.4
OBIP				IAmb	IAmb	17 06 51.1	
	comp=Z,16nm,0.9s						
CELP	Cerrillos	46.19	1	P	P	17 06 13.4	-1.2
MTDJ	Mount Denham	47.34	347	P	P	17 06 23.8	+0.2
MTO3	Montecristo	47.51	331	P	P	17 06 26.2	+1.0
MTO3				IAmb	IAmb	17 06 27.7	
	comp=Z,8.1nm,0.9s						
SNAA	Sanae	55.39	160	P	P	17 07 23.5	+0.5
SNAA				IAmb	IAmb	17 07 57.6	
	comp=Z,11nm,1.4s						
SNAA	Sanae	55.39	160	P	P	17 07 23.9	+0.9
	comp=Z,1.4nm,0.7s,baz=284,slow=9.0,SNR=12						
	comp=Z,1.4nm,0.7s						
QSPA	South Pole Qui	61.84	180	P	P	17 08 08.8	+1.0
	comp=Z,3.6nm,0.8s,baz=211,slow=2.5,SNR=11						
	comp=Z,3.6nm,0.8s						
833A	Chaparral WMA,	64.14	329	P	P	17 08 24.3	+1.1
Y49A	Blount Mountai	64.45	343	P	P	17 08 25.1	0.0
Y49A				IAmb	IAmb	17 08 26.6	
	comp=Z,6.9nm,0.7s						
X48A	Hartselle	65.18	342	P	P	17 08 29.6	-0.2
V53A	Saluda	65.33	346	IAmb	IAmb	17 08 32.2	
	comp=Z,8.3nm,1.0s						
W50A	Signal Mountai	65.44	344	P	P	17 08 32.0	+0.4
CPCT	Cooper Cave	65.50	345	IAmb	IAmb	17 08 33.1	
	comp=Z,8.6nm,0.7s						
BRDY	Brady	66.50	331	IAmb	IAmb	17 08 40.5	
	comp=Z,8.8nm,1.2s						
CLTN	Cedars of Leba	66.54	343	P	P	17 08 38.8	+0.3
CLTN				IAmb	IAmb	17 08 39.8	
	comp=Z,6.8nm,0.7s						
SAND	Sanderson	66.78	328	P	P	17 08 41.2	+0.9
SAND				IAmb	IAmb	17 08 43.0	
	comp=Z,11nm,1.3s						
U49A	Red Boiling Sp	66.81	344	IAmb	IAmb	17 08 41.1	
	comp=Z,5.2nm,0.7s						
WVT	Waverly	66.97	342	P	P	17 08 41.3	+0.1
TXAR	Lajitas Array	67.01	326	P	P	17 08 42.9	+1.2
	comp=Z,0.4nm,0.5s,baz=146,slow=6.1,SNR=4.1						
	comp=Z,0.4nm,0.5s						
LCAR	Lake Charles	67.88	339	P	P	17 08 46.7	-0.2
LCAR				IAmb	IAmb	17 08 48.4	
	comp=Z,10nm,0.8s						
FCAR	Ozark Folk Cen	68.02	339	IAmb	IAmb	17 08 49.9	
	comp=Z,7.4nm,0.7s						
P57A	Homestead Farm	68.23	351	P	P	17 08 49.6	+0.5
P57A				IAmb	IAmb	17 08 51.8	
	comp=Z,8.3nm,0.8s						
MGMO	Mountain Grove	69.22	339	P	P	17 08 55.9	+0.6
MGMO				IAmb	IAmb	17 08 57.1	
	comp=Z,15nm,1.2s						
U38A	Gravette	69.27	337	IAmb	IAmb	17 08 57.2	
	comp=Z,5.2nm,0.7s						
CCM	Cathedral Cave	69.74	340	P	P	17 08 58.0	-0.4
R40A	Maddies Statio	70.26	339	P	P	17 09 02.1	+0.5
R40A				IAmb	IAmb	17 09 03.3	
	comp=Z,5.5nm,0.8s						
MSTX	Muleshoe	70.44	329	IAmb	IAmb	17 09 04.9	
	comp=Z,8.1nm,0.7s						
P40A	Paris	71.34	340	IAmb	IAmb	17 09 09.6	
	comp=Z,8.9nm,0.7s						
ANMO	Albuquerque	72.95	327	P	P	17 09 18.8	+0.7
L40A	Anamosa	73.44	342	P	P	17 09 21.1	+0.6
T25A	Trinidad	73.82	330	IAmb	IAmb	17 09 26.1	
	comp=Z,5.6nm,0.7s						
D62A	Allapoint, All	75.13	359	IAmb	IAmb	17 09 32.5	
	comp=Z,15nm,0.9s						
PV01	Paradox Valley	76.53	328	IAmb	IAmb	17 09 42.6	
	comp=Z,8.8nm,1.4s						
PV13	Radium Mtn., P	76.67	328	IAmb	IAmb	17 09 42.4	
	comp=Z,4.6nm,1.0s						
U15A	North Rim	77.02	324	IAmb	IAmb	17 09 45.1	
	comp=Z,4.8nm,1.0s						
HMU	Henry Mountain	77.41	326	IAmb	IAmb	17 09 47.0	
	comp=Z,5.2nm,1.0s						
KNB	Kanab	77.74	324	IAmb	IAmb	17 09 49.5	
	comp=Z,7.8nm,1.0s						
SRU	San Rafael Swe	78.23	327	IAmb	IAmb	17 09 50.7	
	comp=Z,6.2nm,0.9s						
P18A	Preston Nutter	78.51	328	IAmb	IAmb	17 09 52.9	
	comp=Z,6.7nm,0.8s						
TORD	Torodi Ar. Bea	78.58	68	P	P	17 09 51.5	+1.3
	comp=Z,5.9nm,0.6s,baz=272,slow=5.0,SNR=11						
	comp=Z,5.9nm,0.6s						
BOSA	Boshof	79.16	117	P	P	17 09 54.4	+0.9
	comp=Z,1.1nm,0.5s,baz=238,slow=2.0,SNR=3.9						
	comp=Z,1.1nm,0.5s						
PRN	Pahroc Range	79.20	323	IAmb	IAmb	17 09 56.8	
	comp=Z,5.7nm,1.0s						
PSUT	Pine Spring	79.43	325	IAmb	IAmb	17 09 57.8	
	comp=Z,4.2nm,0.9s						
BSUT	Blindstream Ca	79.47	328	IAmb	IAmb	17 09 58.1	
	comp=Z,4.7nm,0.8s						
JLU	Jordanelle	79.84	328	IAmb	IAmb	17 10 01.4	
	comp=Z,3.8nm,0.7s						
HWUT	Hardware Ranch	80.68	328	IAmb	IAmb	17 10 03.7	
	comp=Z,6.3nm,0.8s						
PDAR	Pinedale Array	80.69	330	P	P	17 10 02.6	+1.3
	comp=Z,1.7nm,0.5s,baz=119,slow=6.3,SNR=14						
	comp=Z,1.7nm,0.5s						
HVU	Hansel Valley	81.39	327	IAmb	IAmb	17 10 07.2	
	comp=Z,4.3nm,0.8s						
NVAR	Mina Array Bea	81.69	322	P	P	17 10 08.3	+1.6
	comp=Z,0.7nm,0.8s,baz=160,slow=9.0,SNR=4.2						
	comp=Z,0.7nm,0.8s						
LOHW	Long Hollow	81.83	330	IAmb	IAmb	17 10 09.8	
	comp=Z,3.3nm,0.6s						
ULM	Lac du Bonnet	82.24	342	P	P	17 10 08.9	0.0
	comp=Z,3.7nm,0.8s,baz=100,slow=1.7,SNR=4.4						
	comp=Z,3.7nm,0.8s						
YNM	Yellowstone No	82.76	331		pP	17 10 47.2	-0.3
PNTR	Pine Nut	82.87	322	IAmb	IAmb	17 10 17.2	
	comp=Z,5.1nm,0.9s						
HLID	Hailey	83.53	328	IAmb	IAmb	17 10 19.0	
	comp=Z,4.3nm,1.1s						
J08A	Circle Bar Ran	85.35	325	IAmb	IAmb	17 10 27.8	
	comp=Z,5.9nm,0.8s						
PLID	Pearl Lake	85.43	328	IAmb	IAmb	17 10 28.0	
	comp=Z,3.9nm,0.8s						
PINE	Pine Mountain	86.91	324	IAmb	IAmb	17 10 35.8	
	comp=Z,6.3nm,0.8s						
RPZ	Rata Peaks	90.44	218	LR	LR	17 47 30.3	
	comp=Z,37nm,18.2s,baz=96,slow=33						
YKA	Yellowknife Ar	98.07	340	P	P	17 11 22.9	-0.8
	comp=Z,0.5nm,0.9s,baz=134,slow=3.5,SNR=4.0						
	comp=Z,0.5nm,0.9s						
ASAR	Alice Springs	124.29	204	PKP	PKPdf	17 16 46.9	+0.2
	comp=Z,0.3nm,0.7s,baz=153,slow=1.2,SNR=9.1						
KAPI	Kappang	146.07	193	PKPbc	PKPab	17 17 29.3	+0.5
	comp=Z,6.0nm,0.8s,baz=219,slow=14,SNR=1.6						
KURBB	Kurchatov Arra	146.10	40	PKPbc	PKPab	17 17 28.3	+0.4
	comp=Z,3.6nm,0.9s,baz=298,slow=3.4,SNR=24						
ZALV	Zalesovo Beam	147.42	31	PKPbc	PKPbc	17 17 31.6	+0.9
	comp=Z,5.2nm,0.3s,baz=301,slow=3.1,SNR=25						
MKAR	Makanchi Array	150.08	44	PKPbc	PKiKP	17 17 39.0	+0.4
	comp=Z,2.9nm,0.8s,baz=304,slow=1.8,SNR=19						
MKAR				PKPab	PKPab	17 17 44.9	+0.7
	comp=Z,0.8nm,0.6s,baz=306,slow=3.5,SNR=7.2						
PZH	PanZhiHua	170.25	99	PKP	PKPdf	17 17 54.3	-1.2

*AEIC **15** 16:58:06.0±1.2, 53°.82N±0°.06×164°.16W±0°.07, h21^{km}±8^{km}, Error ellipse: s-maj=9.7km s-min=4.1km az=153.0*

NEIC 15 16:58:05.3±1.3**, 53°.82N**±0°.06×**164°.14W**±0°.07**, h18**^{km}±11^{km}**, ML3.1**/16**, ML3.0**(AEIC)**, Error ellipse: s-maj=10.9km s-min=1.2km az=149.0, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESE	West Dahl East	0.71	338		Pn	16 58 20.1	-0.4
WESE					Sn	16 58 30.5	-0.5
WEBT	Westdahl Beart	0.86	335		Pn	16 58 22.4	-0.1
SSLS	Shishaldin Sou	0.90	5		Pb	16 58 22.6	+0.2
SSLS					Sn	16 58 35.7	0.0
ISLZ	Isanotski Laza	0.94	15		Pb	16 58 23.0	-0.2
ISLZ					Sg	16 58 36.1	-0.1
SSBA	Shishaldin	0.96	0		Pb	16 58 23.4	0.0
SSBA					Sn	16 58 37.6	+0.5
AKUT	Akutan	1.02	289		Pb	16 58 24.2	-0.1
AKUT				IAML		16 58 41.2	
	comp=N,325nm,0.3s						
AKUT				IAML		16 58 41.8	
	comp=E,325nm,0.4s						
AKUT	Akutan	1.02	289		Sn	16 58 38.4	-0.1
AHB	Akutan Harbor	1.04	287		Pb	16 58 24.5	-0.2
ISNN	Isanotski Nort	1.04	12		Pn	16 58 25.1	+0.1
ZRO	Akutan Zero	1.12	285		Pn	16 58 25.9	-0.3
AKGG	Akutan Green G	1.16	290		Pn	16 58 26.4	-0.3
LVA	Lava Point	1.17	288		Pn	16 58 26.4	-0.4
LVA				IAML		16 58 47.6	
	comp=N,446nm,0.6s						
LVA				IAML		16 58 54.9	
	comp=E,274nm,0.8s						
UNV	Unalaska Valle	1.40	272		Pn	16 58 29.0	-1.0
MTBL	Makushin Table	1.51	277		Pn	16 58 31.4	-0.1
MTBL					Sn	16 58 50.2	-0.6
MGOD	Makushin Gods	1.62	270		Pn	16 58 32.6	-0.4
MAPS	Pakushin South	1.66	271		Pn	16 58 33.1	-0.4
S12K	Black Hills	2.24	32		Pn	16 58 42.3	+0.8
S12K	Black Hills	2.24	32	IAML		16 59 14.1	
	comp=N,181nm,0.6s						
OKTU	Okmok Mt. Tuli	2.37	261		Pn	16 58 44.2	+0.9
SDPT	Sand Point	2.63	53		Pn	16 58 47.4	+0.6
SDPT	Sand Point	2.63	53	IAML		16 59 19.6	
	comp=E,112nm,0.3s						
CNBA	Chernabura Isl	2.85	67	Pn	Pn	16 58 49.5	-0.3
NIKH	Nikolski High	2.95	255	Pn	Pn	16 58 51.0	-0.2
NIKH				IAML		16 59 33.0	
	comp=E,81nm,0.8s						
NIKH				IAML		16 59 33.9	
	comp=N,93nm,0.7s						
O14K	Tigyukauivet M	5.68	15	Pn	Pn	16 59 30.1	+1.5
O15K	Ungalikthiuk R	5.88	22	Pn	Pn	16 59 33.1	+1.7
N14K	Kuskokwak Cree	6.27	11	Pn	Pn	16 59 38.5	+1.8

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*DJA **15** 17:11:57.1±0.5, 2°S±2°×12°3E±°, h11^{km}±4^{km}, M4.1/21, mB4.6/2, mb4.1/7, MLv4.1/21, Mw(mB)3.8/2*

ISC 15 17:11:56.9±1.0**, 1°.87S**±0°.04×**122°.64E**±0°.04**, h10**^{km}**, n26,** σ**0^{s}.92**/32**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	0.83	9	P	Pg	17 12 12.3	-0.7
LUWI	Luwuk	0.83	9	S	Sg	17 12 24.2	+0.3
LUWI	Luwuk	0.83	9	P	Pg	17 12 12.3	-0.7
LUWI				S	Sg	17 12 23.7	-0.2
APSI	Ampana	1.37	314	P	Pn	17 12 21.2	-0.9
KDI	Kendari	2.07	180	P	Pn	17 12 31.7	-0.1
MRSI	Marisa	2.43	343	P	Pn	17 12 35.1	-1.6
MRSI				S	Sn	17 13 06.2	-0.4
KMSI	Cibinong	2.78	29	P	Pn	17 12 41.8	+0.4
KMSI				S	Sn	17 13 17.1	+2.1
PCI	Palu	2.96	289	P	Pn	17 12 45.8	+1.8
TTSI	Tana Toraja	3.05	247	P	Pn	17 12 44.0	-1.2
SANI	Sanana	3.35	93	P	Pn	17 12 49.1	-0.4
SANI	Sanana	3.35	93	S	Sn	17 13 27.5	-1.8
SANI	Sanana	3.35	93	P	Pn	17 12 49.0	-0.4
TOLI2	Tolitoli	3.49	328	P	Pn	17 12 51.8	+0.5
MPSI	Mapaga	3.51	309	P	Pn	17 12 50.8	-0.7
MPSI				S	Sn	17 13 32.2	-0.9
SPSI	Sidrap Palu	3.54	234	P	Pn	17 12 52.2	+0.3
SPSI				S	Sn	17 13 33.6	-0.3
BNSI	Bone	3.56	225	P	Pn	17 12 52.3	0.0
BBSI	Bau Bau	3.59	181	P	Pn	17 12 53.8	+1.1
KAPI	Kappang	4.25	223	P	Pn	17 13 02.4	+0.7
NLAI	Namlea	4.66	107	P	Pn	17 13 08.7	+1.3
BSSI	Bau Bau, Buton	4.75	207	P	Pn	17 13 08.9	+0.2
TNTI	Ternate	5.41	61	P	Pn	17 13 18.1	+0.4
TNTI	Ternate	5.41	61	S	Sn	17 14 19.9	-0.2
TNTI	Ternate	5.41	61	P	Pn	17 13 17.6	-0.1
	0.1nm726nm19nm,0.8s						
TNTI				S	Sn	17 14 20.4	+0.3
	0.1nm726nm19nm,0.8s						
EDFI	Ende, Flores	6.90	188	P	Pn	17 13 38.2	-0.1
	0.1nm8.5nm,0.8s						
MYLDM	Lahad Datu	8.13	329	P	Pn	17 13 56.1	+1.0
SWI	Sorong	8.68	83	P	Pn	17 14 03.3	+0.7

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*NEIC **15** 17:19:09.9±1.7, 43°.43N±0°.06×105°.44W±0°.08, h0^{km}±1^{km}, ML3.2/42, Error ellipse: s-maj=10.4km s-min=9.8km az=191.0*

*IDC **15** 17:19:15.6±2.0, 43°.69N×105°.70W, h0^{km}, mbtmp3.2/2, ML3.0/2, Error ellipse: s-maj=49.7km s-min=10.5km az=150.0*

ISC 15 17:19:11.3±1.1**, 43°.45N**±0°.06×**105°.50W**±0°.04**, h0**^{km}**, n32,** σ**1^{s}.31**/31**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
K22A	Casper	1.09	224		Pn	17 19 36.6	+2.6
RSSD	Black Hills	1.26	57	Pg	Pb	17 19 36.5	+0.4
BW06	Boulder Array	3.05	258	Pn	Pn	17 20 01.0	+0.1
PD31	Pinedale Array	3.05	258		Pb	17 20 04.9	-1.6
PDAR	Pinedale Array	3.05	258	Pn	Pb	17 20 07.1	+0.6
	2.4nm,0.3s,baz=76,slow=19,SNR=21						
PDAR				Lg	Lg	17 20 49.1	
	3.6nm,0.3s,baz=72,slow=28,SNR=3.5						
	1.6nm,0.4s						
RLMT	Red Lodge	3.18	303	Pn	Pn	17 20 04.0	+1.2
RLMT				IAML		17 21 03.2	
	52nm,0.8s						
LAO	LASA Array	3.28	351	Pn	Pn	17 20 03.3	-0.7
YMP	Mirror Lake Pl	3.59	293		Pn	17 20 08.5	0.0
YMP				IAML		17 21 12.9	
	comp=E,64nm,0.8s						
OGNE	Ogallala	3.59	133	Pn	Pn	17 20 08.9	+0.6
YNE	Yellowstone No	3.59	297	Pn	Pb	17 20 13.4	-2.5
YNE				IAML		17 21 12.9	
	comp=N,70nm,0.8s						
YNE				IAML		17 21 21.0	
	comp=E,49nm,1.0s						
ISCO	Idaho Springs	3.65	181	Pn	Pn	17 20 08.6	-0.6
LOHW	Long Hollow	3.71	274		Pn	17 20 12.5	+2.4
LOHW				IAML		17 21 29.3	
	comp=E,24nm,0.9s						
LOHW				IAML		17 21 37.5	
	comp=E,24nm,1.8s						
SNOW	Snow King Moun	3.82	272	Pn	Pn	17 20 14.2	+2.6
SNOW				IAML		17 21 58.8	
	comp=E,52nm,1.7s						
O20A	White River Ci	3.89	213	Pn	Pn	17 20 13.1	+0.5
O20A				IAML		17 21 44.7	
	comp=E,45nm,1.1s						
O20A				IAML		17 22 01.3	
	comp=E,44nm,1.9s						
TPAW	Teton Pass	3.96	272		Pn	17 20 13.9	+0.3
TPAW				IAML		17 21 35.7	
	comp=E,26nm,0.9s						
TPAW				IAML		17 21 39.8	
	comp=E,58nm,1.1s						
FXWY	Fox Creek	4.02	275		Pn	17 20 15.3	+1.0
FXWY				IAML		17 21 39.0	
	comp=E,19nm,2.6s						
YHH	Holmes Hill	4.08	291	Pn	Pn	17 20 15.2	0.0
AHID	Auburn Hatcher	4.16	262	Pn	Pn	17 20 17.6	+1.4
AHID				IAML		17 21 36.5	
	comp=E,28nm,1.1s						
AHID				IAML		17 21 42.8	
	comp=E,27nm,0.8s						
YHL	Hebgen Lake	4.32	291	Pn	Pn	17 20 20.4	+1.9
YHL				IAML		17 21 49.0	
	comp=N,25nm,1.0s						
YHL				IAML		17 21 53.6	
	comp=E,27nm,1.0s						
K30B	Basset	4.38	98	Pn	Pn	17 20 18.1	-1.1
E28A	Huff	4.63	46	Pn	Pn	17 20 22.5	0.0
BSUT	Blindstream Ca	4.88	235	Pn	Pn	17 20 26.7	+0.4
BSUT				IAML		17 21 58.8	
	comp=N,14nm,1.1s						
BSUT				IAML		17 22 02.8	
	comp=E,13nm,1.0s						
PV21	Cone Mtn., Par	5.54	209	Pn	Pn	17 20 36.1	+0.9
HVU	Hansel Valley	5.62	255		Pn	17 20 38.0	+1.7
PV23	Carpenter Ridg	5.65	209		Pn	17 20 38.4	+1.6
PV14	Lion Creek, Pa	5.73	209	Pn	Pn	17 20 38.3	+0.5
PV11	David Mesa, Pa	5.74	208	Pn	Pn	17 20 38.5	+0.5
PV19	Morning Glory	5.77	208	Pn	Pn	17 20 39.0	+0.6
PV03	Paradox Valley	5.78	207	Pn	Pn	17 20 38.6	+0.1
PV02	Paradox Valley	5.78	206	Pn	Pn	17 20 39.1	+0.6
I56US	NEWPORT INFRAS	9.43	305	I	I	18 13 37.4	
	comp=E,0.1nm,1.2s,baz=118,slow=314,SNR=12						
ULM	Lac du Bonnet	9.47	41	Pn	Pn	17 21 29.7	+0.8
	comp=E,0.2nm,0.3s,baz=233,slow=12,SNR=1.8						
ULM				Lg	Lg	17 24 07.2	
	comp=E,0.1nm,0.3s,baz=343,slow=17,SNR=5.6						
	comp=E,0.7nm,0.3s						

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*TXNET **15** 17:23:20.6, 32°.0N±0°.7×102°.3W±0°.7, h8^{km}±1^{km}, ML2.9/18, Error ellipse: s-maj=1.2km s-min=1.0km az=129.8, final*

*NEIC **15** 17:23:20.6±1.4, 31°.97N±0°.01×102°.319W±0°.009, h8^{km}±4^{km}, Error ellipse: s-maj=2.0km s-min=1.1km az=178.0*

*NEIC **15** 17:23:21.4±1.0, 31°.98N±0°.01×102°.31W±0°.02, h5^{km}±1^{km}, mb_Lg2.7/38, ML2.7/16, ML2.4/14, Error ellipse: s-maj=2.9km s-min=2.7km az=322.0*

ISC 15 17:23:20.8±0.9**, 31°.99N**±0°.02×**102°.31W**±0°.01**, h9**^{km}±9^{km}**, n97,** σ**0^{s}.88**/140**, 3C-6D, Western Texas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ODSA	Odessa	0.24	304		Pg	17 23 25.8	+0.1
ODSA				Sg	Sg	17 23 29.3	+0.3
ODSA				IAML		17 23 32.5	
	1μm,0.6s						
ODSA	Odessa	0.24	304	⇑P	Pg	17 23 25.8	+0.1
ODSA				S	Sg	17 23 29.5	+0.5
TMB01	Midkiff	0.37	148	⇑P	Pg	17 23 28.2	0.0
TMB01				S	Sg	17 23 33.4	+0.3
TMB06	Greenwood	0.44	91	⇓P	Pg	17 23 29.4	0.0
TMB06				S	Sg	17 23 35.4	+0.2
TMB04	Seminole	0.65	347	⇑P	Pg	17 23 33.4	-0.1
TMB04				S	Sg	17 23 42.6	+0.5
TMB05	Klondike	0.74	31	⇓P	Pg	17 23 34.9	-0.3
TMB05				S	Sg	17 23 45.1	+0.1
MNHN	Monahans	0.75	211		Pg	17 23 34.6	-0.6
MNHN				Sg	Sg	17 23 44.3	-0.8
MNHN				IAML		17 23 45.1	
	512nm,0.3s						
MNHN				IAML		17 23 45.3	
	550nm,0.2s						
MNHN	Monahans	0.75	211	⇓P	Pg	17 23 34.7	-0.6
MNHN				S	Sg	17 23 44.4	-0.6
TMB02	Rankin	0.82	163	P	Pg	17 23 36.0	-0.6
TMB02				S	Sg	17 23 46.9	-0.5
TPB06	Permian Basin	0.84	247	P	Pg	17 23 36.7	-0.3
TPB19	West of Imperi	0.96	225	P	Pg	17 23 38.8	-0.4
TPB19				S	Sg	17 23 51.9	+0.2
NM01	Eunice	0.99	292	P	Pg	17 23 39.3	-0.6
NM01				S	Sg	17 23 52.8	0.0
SGCY	Sterling City	1.01	94		Pg	17 23 39.5	-0.7
SGCY	Sterling City	1.01	94	⇓P	Pg	17 23 39.6	-0.7
SGCY				S	Sg	17 23 53.0	-0.5
TPB04	Verhalen	1.14	226	P	Pg	17 23 42.0	-0.7
TPB04				S	Sg	17 23 57.4	-0.1
TPB16	Coyonosa	1.17	223	⇓P	Pg	17 23 42.7	-0.7
TPB16				S	Sg	17 23 58.5	-0.1
TPB08	Permian Basin	1.20	205	P	Pg	17 23 43.4	-0.6
TPB08				S	Sg	17 23 59.6	0.0
HTMS	Hat Mesa	1.22	294		Pg	17 23 43.6	-0.7
HTMS	Hat Mesa	1.22	294	P	Pg	17 23 43.5	-0.7
HTMS				S	Sg	17 24 00.0	-0.1
TPB07	Mentone	1.22	251	P	Pg	17 23 43.8	-0.5
POST	Post	1.28	32		Pg	17 23 44.0	-1.3
POST				IAML		17 24 06.3	
	201nm,0.4s						
POST	Post	1.28	32	P	Pg	17 23 44.1	-1.2
POST				S	Sg	17 24 00.9	-1.1
SN08	Arah	1.32	53	P	Pn	17 23 45.2	-0.4
SN08				S	Sg	17 24 03.5	0.0
CLN7	Carlsbad 7	1.34	289		Pn	17 23 45.8	0.0
CLN7	Carlsbad 7	1.34	289	P	Pn	17 23 45.8	0.0
CLNB	Carlsbad	1.36	282		Pn	17 23 46.3	+0.2
CLNB	Carlsbad	1.36	282	P	Pn	17 23 46.3	+0.2
CLNB				S	Sg	17 24 04.6	+0.1
TPB03	Saragosa	1.36	229	P	Pn	17 23 45.9	-0.3
TPB03				S	Sb	17 24 04.4	+0.2
TPB05	Hovey Rd	1.37	219	⇓P	Pn	17 23 45.9	-0.3
TPB05				S	Sb	17 24 04.5	+0.1
TPB10	Southeast of T	1.42	241	P	Pn	17 23 46.8	-0.1
TPB10				S	Sb	17 24 06.9	+1.2
PECS	Pecos	1.46	246		Pn	17 23 47.4	0.0
PECS				Sg	Sb	17 24 07.8	+0.8
PECS	Pecos	1.46	246	P	Pn	17 23 47.5	0.0
PECS				S	Sb	17 24 06.7	-0.2
TPB11	China Draw	1.46	268	P	Pn	17 23 48.0	+0.4
TPB11				S	Sb	17 24 07.3	+0.3
OZNA	Ozona	1.47	136		Pn	17 23 48.1	+0.5
OZNA					Sb	17 24 07.6	+0.4
OZNA	Ozona	1.47	136	P	Pn	17 23 48.1	+0.5
OZNA				S	Sb	17 24 07.6	+0.4
SN02	Snyder 2	1.47	53		Pn	17 23 47.8	+0.1
SN02					Sg	17 24 09.0	+0.7
SN02	Snyder 2	1.47	53	P	Pn	17 23 47.8	+0.1
SN02				S	Sg	17 24 09.0	+0.7
SN01	Snyder 1	1.49	54		Pn	17 23 48.1	+0.3
SN01	Snyder 1	1.49	54	P	Pn	17 23 48.1	+0.3
SN03	Snyder 3	1.49	51		Pn	17 23 48.2	+0.3
SN03	Snyder 3	1.49	51	P	Pn	17 23 48.2	+0.3
SN05	Snyder 5	1.50	53		Pn	17 23 48.2	+0.2
SN05				Sg	Sg	17 24 10.4	+1.2
SN05	Snyder 5	1.50	53	P	Pn	17 23 48.2	+0.2
SN05				Sg	Sg	17 24 10.4	+1.2
TPB12	Southwest of T	1.60	242	P	Pn	17 23 49.9	+0.5
TPB12				S	Sb	17 24 12.5	+1.5
TPB01	Permian Basin	1.63	231	P	Pn	17 23 49.9	0.0
TPB01				S	Sn	17 24 11.6	+0.6
SN07	Snyder 07	1.63	47		Pn	17 23 50.8	+1.0
SN07				IAmb_Lg		17 24 13.0	
	comp=Z,29nm,0.7s						
SN07	Snyder 07	1.63	47	P	Pn	17 23 50.8	+1.0
SN07				S	Sb	17 24 12.9	+1.1
CPRX	Cap Rock	1.68	309		Pn	17 23 51.4	+0.9
CPRX	Cap Rock	1.68	309	P	Pn	17 23 51.4	+0.9
GDL2	Guadalupe Moun	1.75	278		Pn	17 23 53.2	+1.6
ALPN	Alpine	1.97	216		Pn	17 23 55.8	+1.2
ALPN	Alpine	1.97	216	P	Pn	17 23 56.0	+1.5
ALPN				Sg	Sb	17 24 22.9	+1.3
MSTX	Muleshoe	2.02	349		Pn	17 23 56.8	+1.6
MSTX	Muleshoe	2.02	349	P	Pn	17 23 57.0	+1.8
MSTX				S	Sb	17 24 24.3	+1.3
SAND	Sanderson	2.03	175		Pn	17 23 56.6	+1.3
SAND				IAmb_Lg		17 24 26.3	
	comp=Z,45nm,0.8s						
SAND	Sanderson	2.03	175	P	Pn	17 23 56.6	+1.3
SAND				S	Sb	17 24 23.7	+0.3
DKNS	Dickens	2.04	35		Pn	17 23 56.7	+1.2
DKNS	Dickens	2.04	35	P	Pn	17 23 56.8	+1.3
DKNS				S	Sb	17 24 23.9	+0.2
APMT	Aspermont	2.28	54		Pn	17 24 00.0	+1.3
APMT					Sb	17 24 30.7	+0.1
APMT				Sg	Sg	17 24 31.9	-2.3
APMT				IAmb_Lg		17 24 37.7	
	comp=Z,37nm,0.7s						
APMT	Aspermont	2.28	54	Pg	Pb	17 24 02.4	+0.2
APMT				S	Sb	17 24 30.7	+0.1
APMT				Sg	Sg	17 24 31.9	-2.3
ABTX	Abilene, Hawle	2.35	74	Pn	Pn	17 24 00.6	+1.0
ABTX				Sg	Sb	17 24 33.8	+1.3
ABTX	Abilene, Hawle	2.35	74	Pg	Pb	17 24 03.2	-0.1
ABTX				Sg	Sb	17 24 33.8	+1.3
VHRN	Van Horn	2.58	243		Pn	17 24 03.8	+0.8
VHRN	Van Horn	2.58	243	P	Pn	17 24 04.4	+1.5
VHRN				Pg	Pb	17 24 06.3	-1.1

JCT	Junction City	2.62	124	Pn	Pn	17 24 05.0	+1.5
MNTX	Cornudas Mount	2.63	265		Pn	17 24 04.7	+1.2
MNTX	Cornudas Mount	2.63	265	P	Pn	17 24 05.6	+2.1
TX31	Lajitas Ar. Si	2.89	204	Pn	Pn	17 24 07.9	+0.7
BRDY	Brady	2.91	103		Pn	17 24 08.3	+0.9
BRDY				IAmb_Lg		17 24 54.4	
	comp=Z,24nm,0.7s						
AMTX	Amarillo	2.94	10	Pn	Pn	17 24 09.0	+1.1
DRIO	Del Rio	2.94	150		Pn	17 24 08.8	+0.9
DRIO				IAmb_Lg		17 24 56.4	
	comp=Z,24nm,0.8s						
DRIO	Del Rio	2.94	150	P	Pn	17 24 09.3	+1.5
PLPT	Palo Pinto	3.48	75		Pn	17 24 15.2	0.0
SMWD	Samnorwood	3.56	29	IAmb_Lg		17 25 16.5	
	comp=Z,18nm,0.8s						
HNDO	Hondo	3.58	132	Pn	Pn	17 24 17.0	+0.4
HNDO				IAmb_Lg		17 25 20.1	
	comp=Z,22nm,1.0s						
WTFS	Witchita Falls	3.69	60		Pn	17 24 18.4	+0.2
FW07	Weatherford	3.90	78	Pn	Pn	17 24 20.9	-0.1
FW07				IAmb_Lg		17 25 32.9	
	comp=Z,19nm,0.8s						
WMOK	Wichita Mounta	4.03	46	Pn	Pn	17 24 23.2	+0.4
WMOK				IAmb_Lg		17 25 29.7	
	comp=Z,11nm,0.7s						
WHTX	Lake Whitney,	4.13	89	Pn	Pn	17 24 23.2	-0.9
FW06	Azle	4.14	75	Pn	Pn	17 24 24.0	-0.3
FW13	Cleburne	4.16	84	Pn	Pn	17 24 22.6	-1.9
CRNM	Carthage	4.20	299		Pn	17 24 24.2	-1.1
BNM	Barren Site	4.22	302		Pn	17 24 26.2	+0.6
435B	Jarrell	4.22	105	Pn	Pn	17 24 23.6	-1.7
833A	Chaparral WMA,	4.44	145	Pn	Pn	17 24 27.6	-0.8
833A				IAmb_Lg		17 25 50.2	
	comp=Z,11nm,0.8s						
RTBA	Rita Blanca	4.45	356	Pn	Pn	17 24 29.0	+0.3
SBM	South Baldy	4.55	297	Pn	Pn	17 24 29.4	-0.8
ANMO	Albuquerque	4.55	312		Pn	17 24 28.4	-1.7
ANMO	Albuquerque	4.55	312		Pn	17 24 29.1	-1.0
ANMO				IAmb_Lg		17 25 49.7	
	comp=Z,11nm,0.8s						
ANMO	Albuquerque	4.55	312		Pn	17 24 28.6	-1.5
ANMO				IAmb_Lg		17 25 43.6	
	comp=Z,9.9nm,0.8s						
ANMO	Albuquerque	4.55	312		Pn	17 24 28.9	-1.2
ANMO				IAmb_Lg		17 25 43.6	
	comp=Z,9.2nm,0.8s						
ANMO				IAmb_Lg		17 25 43.6	
	comp=Z,9.3nm,0.8s						
X34A	Smith Ranch, M	4.57	54	IAmb_Lg		17 25 48.1	
	comp=Z,16nm,0.9s						
ELIS	Ellis County	4.73	30	Pn	Pn	17 24 31.1	-1.3
CSTR	Hydro, Custer	4.74	39	Pn	Pn	17 24 31.6	-0.9
T25A	Trinidad	5.42	342	Pn	Pn	17 24 41.7	-0.4
OK029	Liberty Lake	5.55	45	Pn	Pn	17 24 43.5	-0.1
DUN6	Lazy B Ranch	5.77	277	Pn	Pn	17 24 47.4	+0.7

KRSC 15 17:39:26.4±1.9**,49°.71N**×**159°.23E,h48**^{km}±51^{km}**,Ml3.9, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	2.22	341	*e*P	Pn	17 40 03.7	+2.9
KDTR				*e*S	Sn	17 40 30.0	+3.0
SKR	Severo-Kuril's	2.23	297	*e*P	Pn	17 40 01.6	+0.8
SKR				*e*S	Sn	17 40 26.8	-0.2
PAU	Pauzhetka	2.34	320	*e*P	Pn	17 40 05.5	+3.1
PAU				*e*S	Sn	17 40 32.9	+3.1
RUS	Russkaya	2.76	351	*e*P	Pn	17 40 11.3	+3.1
ASAK	Asacha	2.80	343	*e*P	Pn	17 40 12.1	+3.3
ASAK				*e*S	Sn	17 40 45.1	+3.8
MTVR	Mutnovka	2.85	347	*e*P	Pn	17 40 13.1	+3.6
MTVR				*e*S	Sn	17 40 46.4	+3.7
GRL	Gorelyy	2.94	346	*e*P	Pn	17 40 14.4	+3.8
GRL				*e*S	Sn	17 40 48.3	+3.6
MIPR	Malaya Ipel'ka	3.00	330	*e*P	Pn	17 40 15.1	+3.6
KRMR	Karymshinskiy	3.20	348	*e*P	Pn	17 40 18.4	+4.2
KRMR				*e*S	Sn	17 40 55.1	+4.2
DALK	Dalny	3.34	355	*e*P	Pn	17 40 19.3	+3.3
DALK				*e*S	Sn	17 40 57.0	+2.7
SPN	Mys Shipunski	3.43	8	*e*P	Pn	17 40 21.1	+3.8
APC	Apacha	3.47	339	*e*P	Pn	17 40 21.8	+3.9
APC				*e*S	Sn	17 41 01.8	+4.1
UGLR	Uglovaya	3.51	356	*e*P	Pn	17 40 22.6	+4.1
SMAR	Somma	3.56	356	*e*P	Pn	17 40 25.1	+5.7
AVH	Avacha	3.57	355	*e*P	Pn	17 40 23.2	+3.9
SDLR	Sedlovina	3.58	357	*e*P	Pn	17 40 22.5	+3.1
KOK	Koryaka	3.60	354	*e*P	Pn	17 40 23.9	+4.1
KRER	Koryakskii	3.61	355	*e*S	Sn	17 41 06.6	+5.2
KRX	Arik	3.67	355	*e*P	Pn	17 40 24.5	+3.7
GNL	Ganaly	4.07	349	*e*P	Pn	17 40 30.5	+4.4
MKZ	Mys Kozlova	5.09	17	*e*P	Pn	17 40 43.2	+3.1
MKZ				*e*S	Sn	17 41 39.5	+2.1

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*DJA **15** 17:40:05.6±0.3,8°S±3°×11°6E±°,h10^{km},M4.2/13,mB5.3/1, mb4.2/1,MLv4.2/13,Mw(mB)4.7/1*

ISC 15 17:40:08.2±1.1**,8°.22S**±0°.09×**116°.27E**±0°.05**,h35**^{km}**,n21,** σ**1^{s}.03**/22**,Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRBI	Singaraja	1.05	277	P	Pn	17 40 25.1	-1.4
SRBI				S	Sn	17 40 40.0	+0.1
DNP	Denpasar	1.14	246	P	Pn	17 40 27.9	+0.2
PLAI	Plampang	1.61	112	P	Pn	17 40 34.7	+0.5
PLAI	Plampang	1.61	112	P	Pn	17 40 34.4	+0.2
PLAI				S	Sn	17 40 55.9	+2.0
JAGI	Jajag, Banyuwa	2.11	263	P	Pn	17 40 40.4	-0.6
JAGI	Jajag, Banyuwa	2.11	263	P	Pn	17 40 40.2	-0.8
KMMI	Kalianget	2.56	297	P	Pn	17 40 47.0	-0.2
GMJI	Gumukmas	2.79	269	P	Pn	17 40 50.2	-0.3
WBSI	Waikabubak, Su	3.40	115	P	Pn	17 40 58.4	-0.4
WSI	Waingapu	4.24	110	P	Pn	17 41 10.3	-0.1
BWJI	Bawean	4.28	303	P	Pn	17 41 11.0	0.0
BSSI	Bau Bau, Buton	4.67	64	P	Pn	17 41 15.4	-0.9
KAPI	Kappang	4.70	48	P	Pn	17 41 16.8	+0.1
PCJI	Pacitan	5.04	270	P	Pn	17 41 21.5	+0.2
UGM	Wanagama	5.69	273	P	Pn	17 41 34.8	+4.4
BBJI	Bungbulang	8.57	274	P	Pn	17 42 12.6	+2.7
MBWA	Marble Bar	13.30	166	P	Pn	17 43 13.8	-0.8
FITZ	Fitzroy Crossi	13.40	138	P	Pn	17 43 15.0	-1.1
GIRL	Giralia	14.48	188	P	Pn	17 43 29.6	-1.1
MEEK	Meekatharra	18.46	173	P	Pn	17 44 22.6	+1.2
AS01	Alice Springs	22.87	134	P	P	17 45 09.3	+0.4

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*TEH **15** 17:40:16.6,34°.62N×46°.26E,h10^{km}±27^{km}*

*ISN **15** 17:40:20.0±2.7,34°.64N×46°.08E,h18^{km}±33^{km},ML2.7*

ISC 15 17:40:16.2±1.1**,34°.61N**±0°.04×**46°.19E**±0°.04**,h9**^{km}±13^{km}**, n11,**σ**0^{s}.45**/16**,Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDHR	Dehrash	0.19	61	Pg	Pg	17 40 20.1	0.0
IDHR				Sg	Sg	17 40 22.7	-0.2
IGHG	Ghaleghazi	0.42	131	Pg	Pg	17 40 24.7	+0.2
GLG1	Gilan-e-Gharb	0.55	205	Pg	Pb	17 40 28.0	0.0
ILIN	Lien	0.71	64	Pg	Pg	17 40 29.2	-0.7
ILIN				Sg	Sg	17 40 39.4	+0.2
KCHF	Cheshme Sefid,	0.78	115	Pg	Pg	17 40 30.9	-0.3
KCHF				Sg	Sg	17 40 41.8	+0.4
ILBA	Ilam Banvizeh	0.98	179	Pg	Pb	17 40 35.8	+0.4
SNQR	Sonqor, Kerman	1.21	78	Pg	Pg	17 40 39.7	+0.2
IBZA	Bozab	1.39	95	Pg	Pn	17 40 41.8	-0.2
IKRK	Kirkuk	1.71	298	*e*Pg	Pb	17 40 48.0	+0.2
	baz=118						
IKRK				*e*Sg	Sg	17 41 12.0	+0.8
IKRK				AML	AML	17 41 18.8	
	comp=N,7.9nm,0.9s						
IKFM	Kafar-mosalman	1.75	128	Pg	Pg	17 40 49.8	0.0
BHD	Baghdad	2.01	229	*e*Pn	Pb	17 40 53.0	+0.1
BHD				*e*Sn	Sg	17 41 20.0	-0.8

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*IDC **15** 17:58:32.5±0.9,13°.21N×124°.40E,h0^{km},mb3.7/8, mbtmp3.7/8,Error ellipse: s-maj=55.1km s-min=17.5km az=72.0*

ISC 15 17:58:38.4±1.1**,13°.2N**±0°.2×**124°.5E**±0°.4**,h44**^{km}**,n11,** σ**0^{s}.57**/8**,mb3.7**/8**,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	24.34	7	P	P	18 03 52.3	+0.2
	1.0nm,0.8s,baz=185,slow=9.4,SNR=2.7						
	1.0nm,0.8s						
USRK	Ussuriysk Ar.	31.55	10	P	P	18 04 56.6	+0.1
	1.2nm,0.6s,baz=189,slow=6.9,SNR=4.2						
	1.2nm,0.6s						
WRA	Warramunga Arr	34.35	163	P	P	18 05 20.5	-0.7
	0.3nm,0.5s,baz=339,slow=9.0,SNR=6.7						
	0.3nm,0.5s						
ASAR	Alice Springs	37.80	166	P	P	18 05 51.4	+0.7
	0.6nm,0.6s,baz=352,slow=7.7,SNR=24						
	0.6nm,0.6s						
H11S3	WAKE ISLAND Hy	40.88	77	T	T	18 49 55.2	
	baz=269,slow=75,SNR=38						
H11S1	WAKE ISLAND Hy	40.90	77	T	T	18 49 45.2	
	baz=269,slow=75,SNR=30						
H11S2	WAKE ISLAND Hy	40.90	77	T	T	18 49 46.6	
	baz=269,slow=75,SNR=36						
MKAR	Makanchi Array	48.63	322	P	P	18 07 18.2	+0.2
	0.6nm,0.6s,baz=117,slow=9.5,SNR=6.4						
	0.6nm,0.6s						
ZALV	Zalesovo Beam	51.21	331	P	P	18 07 36.6	-0.7
	0.8nm,0.4s,baz=111,slow=8.1,SNR=5.6						
	0.8nm,0.4s						
KURBB	Kurchatov Arra	52.66	325	P	P	18 07 48.2	0.0
	1.3nm,0.8s,baz=120,slow=8.0,SNR=11						
	1.3nm,0.8s						
BVAR	Borovoye Array	58.26	325	P	P	18 08 28.5	+0.1
	0.4nm,0.6s,baz=111,slow=11,SNR=2.9						
	0.4nm,0.6s						

IDC 15 18:02:27.6±16.0**,0°.19N**×**128°.16E,h250**^{km}±189^{km}**, mb3.0**/4**,mbtmp3.6**/4**,Error ellipse: s-maj=127.8km s-min=34.6km az=77.0,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.90	164	P	P	18 06 49.8	-1.4
	1.4nm,0.6s,baz=344,slow=11,SNR=12						
	1.4nm,0.6s						
ASAR	Alice Springs	24.36	167	P	P	18 07 24.6	+1.4
	0.2nm,0.3s,baz=344,slow=8.6,SNR=12						
	0.2nm,0.3s						
SONM	Songino Array	51.09	341	P	P	18 11 05.6	+0.7
	0.8nm,0.6s,baz=153,slow=8.2,SNR=5.0						
	0.8nm,0.6s						
MKAR	Makanchi Array	61.27	326	P	P	18 12 15.6	-1.0
	0.5nm,0.8s,baz=123,slow=7.0,SNR=3.5						
	0.5nm,0.8s						

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*WEL **15** 18:23:22.3±0.8,33°S±6°×17°8W±1°5,h12^{km},mB4.8/6, ML4.8/19,MLv4.6/13,Mw(mB)4.1/6,Error ellipse: s-maj=20.2km s-min=4.0km az=109.3,confirmed*

*IDC **15** 18:23:22.7±1.3,32°.97S×178°.34W,h0^{km},mb4.3/2, mbtmp4.4/3,ML4.5/1,Error ellipse: s-maj=54.8km s-min=28.7km az=137.0*

*NEIC **15** 18:23:22.4±1.4,32°.94S±0°.09×178°.0W±0°.2,h10^{km}±2^{km}, mb4.5/9,Error ellipse: s-maj=27.0km s-min=13.0km az=107.0*

ISC 15 18:23:23.1±0.7**,32°.98S**±0°.07×**178°.2W**±0°.1**,h10**^{km}**,n65,** σ**1^{s}.69**/79**,mb4.5**/6**,2C,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.72	4	P	Pn	18 24 18.6	-2.1
GLKZ				S	Sn	18 24 59.5	-5.0
RAO	Raoul Island	3.73	4	Pn	Pn	18 24 18.7	-2.0
MXZ	Matakaoa Point	5.37	211	Pn	Pn	18 24 42.4	-0.9
MXZ	Matakaoa Point	5.37	211	P	Pn	18 24 43.5	+0.2
MXZ				S	Sn	18 25 45.6	+0.4
WMGZ	Waiomatatini S	5.54	209	P	Pn	18 24 47.0	+1.3
PKGZ	Pakihiroa	5.72	211	P	Pn	18 24 47.6	-0.6
PKGZ				S	Sn	18 25 54.3	+0.4
HAZ	Te Kaha	5.76	213	P	Pn	18 24 48.8	+0.1
HAZ				S	Sn	18 25 57.1	+2.2
PUZ	Puketiti	5.83	208	P	Pn	18 24 48.6	-0.9
PUZ				S	Sn	18 25 56.7	+0.2
RUGZ	Raukumara Rang	5.98	213	P	Pn	18 24 51.7	-0.2
RUGZ				S	Sn	18 26 01.7	+1.2
TKGZ	Te Karaka	6.30	209	P	Pn	18 24 56.2	+0.1
TKGZ				S	Sn	18 26 06.6	-1.7
MWZ	Matawai	6.35	212	P	Pn	18 24 55.9	-1.0
MWZ				S	Sn	18 26 08.5	-1.0
URZ	Urewera	6.48	214	Pn	Pn	18 24 59.5	+0.9
	9.2nm,0.3s,baz=346,slow=4.2,SNR=68						
URZ				Sn	Sn	18 26 12.2	-0.4
	5.4nm,0.3s,baz=340,slow=9.4,SNR=6.6						
	17nm,0.3s						
URZ	Urewera	6.48	214	P	Pn	18 24 57.9	-0.7
URZ				S	Sn	18 26 11.2	-1.4
TGRZ	Tauranga	6.53	222	P	Pn	18 25 03.0	+3.8
RAGZ	Rawiri	6.54	211	P	Pn	18 24 58.8	-0.6
RAGZ				S	Sn	18 26 13.2	-0.8
RIGZ	Rimuhau	6.57	208	P	Pn	18 25 00.2	+0.4
RIGZ				S	Sn	18 26 13.6	-1.1
PRGZ	Paritu Road	6.71	207	P	Pn	18 25 02.8	+1.1
MBAZ	Motutapu North	6.79	234	P	Pb	18 25 14.7	-6.5
MKAZ	Moumakai	6.79	231	P	Pb	18 25 14.9	-6.4
WCZ	Waipu Caves	6.80	242	P	Pn	18 25 07.7	+4.8
SNGZ	Shannon Statio	6.81	211	P	Pn	18 25 04.0	+0.9
SNGZ				S	Sn	18 26 19.9	-0.8
RTZ	Ruatahuna	6.83	213	Pn	Pn	18 25 03.0	-0.4
TOZ	Tahuroa Road	6.97	225	Pn	Pn	18 25 07.2	+1.9
TOZ	Tahuroa Road	6.97	225	P	Pn	18 25 07.6	+2.4
RAHZ	Arahi	7.03	211	P	Pn	18 25 07.0	+0.9
MTHZ	Maungataniwha	7.09	213	P	Pn	18 25 07.6	+0.7
MTHZ				S	Sn	18 26 26.7	-0.9
OUZ	Omahuta	7.13	250	P	Pn	18 25 12.1	+4.7
MRHZ	Matea Rd	7.27	215	P	Pn	18 25 09.6	+0.1
NMHZ	Naumai	7.30	212	P	Pn	18 25 10.2	+0.3
NMHZ				S	Sn	18 26 31.4	-1.4
ARHZ	Aropaoanui	7.36	210	P	Pn	18 25 11.8	+1.2
ARHZ				S	Sn	18 26 33.6	-0.5
BKZ	Black Stump Fm	7.50	213	Pn	Pn	18 25 11.4	-1.2
BKZ	Black Stump Fm	7.50	213	P	Pn	18 25 11.4	-1.2
BKZ				S	Sn	18 26 35.5	-2.2
MCHZ	McNeill Hill	7.63	211	P	Pn	18 25 13.8	-0.7
MCHZ				S	Sn	18 26 39.5	-1.5
HIZ	Hauiti	7.87	224	Pn	Pn	18 25 19.3	+1.7
MOVZ	Moawhango	8.04	215	P	Pn	18 25 20.2	+0.1
MOVZ				S	Sn	18 26 47.9	-3.1
PXZ	Pawanui	8.06	208	P	Pn	18 25 19.7	-0.6
PXZ				S	Sn	18 26 46.2	-5.2
PNHZ	Pukenui	8.24	211	P	Pn	18 25 21.4	-1.4
PNHZ				S	Sn	18 26 52.2	-3.7
PRHZ	Porangahau	8.35	208	P	Pn	18 25 23.3	-1.0
PRHZ				S	Sn	18 26 53.5	-5.1
BFZ	Birch Farm	8.86	208	P	Pn	18 25 29.6	-1.6
CTZ	Chatham Island	10.81	174	Pn	Pn	18 25 51.3	-6.6
CTZ	Chatham Island	10.81	174	P	Pn	18 25 59.7	+1.8
CTZ				S	Sn	18 27 48.9	-10
OXZ	Oxford	12.84	214	Pn	Pn	18 26 21.3	-4.4
NIUE	Niue	15.72	30	Pn	Pn	18 26 54.4	-10
CTAO	Charters Tower	34.10	283	P	P	18 30 09.4	+1.3
CTAO				IAmb	IAmb	18 30 35.0	
	comp=Z,9.3nm,1.1s						
AS31	Alice Springs	42.83	270	P	P	18 31 21.9	+0.3
ASAR	Alice Springs	42.83	270	P	P	18 31 21.9	+0.3
	comp=Z,1.6nm,0.5s,baz=101,slow=7.4,SNR=7.1						
	comp=Z,1.6nm,0.5s						
WR8	Warramunga Arr	43.91	275	P	P	18 31 30.2	0.0
WR8				IAmb	IAmb	18 31 31.1	
	comp=Z,3.4nm,0.7s						
WRA	Warramunga Arr	44.05	275	P	P	18 31 31.8	+0.3
	comp=Z,3.0nm,0.3s,baz=115,slow=7.7,SNR=73						
	comp=Z,3.0nm,0.3s						
WB0	Warramunga Arr	44.09	275	P	P	18 31 32.2	+0.5
MTN	Manton Dam	50.23	281	P	P	18 32 19.2	-0.4
KNRA	Kununurra	50.74	277	P	P	18 32 23.4	-0.1
KNRA				IAmb	IAmb	18 32 58.8	
	comp=Z,9.4nm,1.3s						
QSPA	South Pole Qui	57.13	180	P	P	18 33 09.9	+0.2
QSPA				IAmb	IAmb	18 33 24.2	
	comp=Z,2.9nm,0.8s						
TROLL	Troll, Antarti	75.30	180	⇑P	P	18 35 12.1	+6.0
	comp=Z,7.9nm,0.1s						
SNAA	Sanae	75.59	178	⇑P	P	18 35 16.7	+8.9
	comp=Z,7.3nm,0.3s						
SNAA	Sanae	75.59	178	P	P	18 35 07.8	+0.1
BVAR	Borovoye Array	128.08	314	PKP	PKPdf	18 42 29.7	+0.7
	comp=Z,0.2nm,0.4s,baz=94,slow=4.5,SNR=2.5						
ARCES	ARCESS Array B	141.06	347	PKP	PKPdf	18 42 54.0	+1.3
	comp=Z,2.3nm,0.9s,baz=43,slow=5.4,SNR=0.9						
FINES	FINESS Array B	147.48	338	PKPbc	PKPbc	18 43 07.2	+0.6
	comp=Z,1.8nm,0.4s,baz=45,slow=3.8,SNR=28						
NB2	NORSAR Subarra	151.26	350	PKP	PKPbc	18 43 17.1	+0.9
	comp=Z,1.5nm,0.7s,baz=18,slow=4.1						
NOA	NORSAR Array B	151.26	350	PKPbc	PKPbc	18 43 17.1	+0.9
	comp=Z,0.6nm,0.6s,baz=19,slow=4.3,SNR=5.8						
EIL	Elat	151.52	272	PKPbc	PKiKP	18 43 19.0	+0.8
	comp=Z,1.1nm,0.5s,baz=0.0,slow=4.0,SNR=3.6						
HFS	Hagfors	151.72	347	PKPbc	PKPbc	18 43 17.5	+0.3
	comp=Z,2.7nm,0.9s,baz=90,slow=1.4,SNR=6.2						
MMAI	Mount Meron Ar	151.85	279	PKPbc	PKiKP	18 43 19.6	+0.8
	comp=Z,0.7nm,0.4s,baz=120,slow=3.3,SNR=4.1						
AKASG	Malin Array Be	153.18	319	PKPbc	PKiKP	18 43 22.2	+1.4
	comp=Z,0.2nm,0.4s,baz=50,slow=3.1,SNR=1.4						
BRTR	Keskin Array B	153.55	294	PKPbc	PKPbc	18 43 22.6	+0.5
	comp=Z,0.5nm,0.6s,baz=136,slow=5.5,SNR=3.5						

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*NOU **15** 18:33:14.7,25°.08S×179°.92E,h527^{km},mb4.6/68,South of Fiji Islands*

*IDC **15** 18:33:14.8±0.7,25°.04S×179°.63E,h508^{km}±6^{km},mb3.8/18, mbtmp4.7/22,Error ellipse: s-maj=10.2km s-min=9.0km az=113.0*

*NEIC **15** 18:33:15.8±1.7,25°.10S±0°.10×179°.7E±0°.1,h515^{km}±6^{km}, mb4.8/267,Error ellipse: s-maj=14.9km s-min=13.3km az=132.0*

*BGR **15** 18:33:16.6,24°.33S×179°.34E,h511^{km}*

ISC 15 18:33:15.1±0.4**,25°.16S**±0°.04×**179°.75E**±0°.05**,h515**^{km}±4^{km}**, h515**^{km}**:pP-P,n537,**σ**1^{s}.14**/578**,mb4.8**/154**,33C-27D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	4.58	154		P	18 34 39.5	+0.4
RAO	Raoul Island	4.58	154	P	P	18 34 39.9	+0.8
	905nm,0.3s,baz=109,slow=12,SNR=12						
RAO				S	S	18 35 50.9	+3.1
	645nm,0.3s,baz=107,slow=22,SNR=4.3						
RAO	Raoul Island	4.58	154	P	P	18 34 40.1	+1.0
GLKZ	Green Lake	4.59	154	P	P	18 34 39.8	+0.6
GLKZ				S	S	18 35 50.5	+2.6
LKBA	Tubou, Lakemba	7.02	11	P	P	18 35 01.5	-0.6
MSVF	Nonsavu	7.55	348	P	P	18 35 06.2	-1.4
	67nm,0.4s,baz=264,slow=23,SNR=179						
MSVF				S	S	18 36 37.7	-1.9
	25nm,0.9s,baz=6.0,slow=19,SNR=1.9						
MSVF	Nonsavu	7.55	348	P	P	18 35 05.8	-1.8
TAVE	Taveuni	8.41	2	P	P	18 35 16.1	-0.1
YSA	Yasawairara	8.66	346	P	P	18 35 17.8	-0.9
DGTI	Dogotuki	8.81	360	P	P	18 35 19.8	-0.6
INH	Isangel	11.18	298	P	P	18 35 47.0	+1.9
NIUE	Niue	11.32	60	P	P	18 35 44.9	-1.6
OUZ	Omahuta	11.35	206	P	P	18 35 48.5	+1.9
OUZ	Omahuta	11.35	206	P	P	18 35 48.8	+2.2
MARNC	Mare, Loyalty	11.37	286	P	P	18 35 48.4	+1.4
PINNC	Pines Island,	11.54	280	P	P	18 35 50.6	+1.8
WCZ	Waipu Caves	11.71	202	P	P	18 35 52.2	+1.9
KUZ	Kuaotunu	12.06	196	P	P	18 35 55.0	+1.0
KUZ	Kuaotunu	12.06	196	P	P	18 35 55.2	+1.2
OUENC	Ouen Island, N	12.13	280	P	P	18 35 55.4	+0.4
YATNC	Mamie plateau,	12.19	282	P	P	18 35 55.9	+0.3
MXZ	Matakaoa Point	12.43	185	P	P	18 35 58.9	+1.0
MXZ	Matakaoa Point	12.43	185	P	P	18 35 58.8	+0.9
MXZ	Matakaoa Point	12.43	185	P	P	18 35 58.1	+0.2
ETAZ	East Tamaki Re	12.46	198	P	P	18 36 00.2	+2.0
ONTNC	Ouen Toro	12.50	280	P	P	18 35 59.4	+0.4
MKAZ	Moumakai	12.54	197	P	P	18 36 00.4	+1.3
DZM	Mont Dzumac	12.58	281		P	18 36 01.0	+1.2
DZM	Mont Dzumac	12.58	281	P	P	18 35 59.8	-0.1
	128nm,0.9s,baz=68,slow=21,SNR=90						
DZM				S	S	18 38 17.5	+1.9
	7.8nm,1.0s,baz=161,slow=21,SNR=3.1						
DZM	Mont Dzumac	12.58	281	P	P	18 36 01.5	+1.6
HAZ	Te Kaha	12.67	187	P	P	18 35 59.8	-0.7
HAZ				S	S	18 38 12.2	-4.6
WMGZ	Waiomatatini S	12.68	185	P	P	18 36 00.4	-0.2
WMGZ				S	S	18 38 15.5	-1.3
PKGZ	Pakihiroa	12.75	186	P	P	18 36 00.9	-0.4
PKGZ				S	S	18 38 13.4	-5.0
RUGZ	Raukumara Rang	12.89	187	P	P	18 36 04.2	+1.2
PUZ	Puketiti	12.94	185	P	P	18 36 01.8	-1.5
PUZ				S	S	18 38 17.1	-4.9
TOZ	Tahuroa Road	13.05	195		P	18 36 05.6	+1.2
TOZ	Tahuroa Road	13.05	195	P	P	18 36 04.1	-0.3
KMRZ	Kaimai	13.06	193	P	P	18 36 07.8	+3.2
OMRZ	Omania	13.22	192	P	P	18 36 07.6	+1.2
URZ	Urewera	13.25	189	P	P	18 36 05.6	-1.0
	22nm,0.4s,baz=18,slow=2.9,SNR=54						
URZ				S	S	18 38 27.9	-0.1
	43nm,0.8s,baz=294,slow=20,SNR=8.1						
URZ	Urewera	13.25	189	P	P	18 36 05.6	-1.0
URZ	Urewera	13.25	189	P	P	18 36 04.5	-2.0
URZ				S	S	18 38 23.7	-4.3
MWZ	Matawai	13.27	188	P	P	18 36 05.0	-1.8
MWZ				S	S	18 38 28.1	-0.4
RAGZ	Rawiri	13.45	188	P	P	18 36 06.5	-2.2
PRRZ	Plateau Road	13.60	191	P	P	18 36 09.5	-0.8
RIGZ	Rimuhau	13.61	187	P	P	18 36 09.7	-0.7
RIGZ				S	S	18 38 28.5	-6.5
SNGZ	Shannon Statio	13.74	188	P	P	18 36 10.5	-1.2
SNGZ				S	S	18 38 37.2	-0.1
AFI	Afiamalu	13.74	37		P	18 36 06.7	-5.4
MTHZ	Maungataniwha	13.88	190	P	P	18 36 12.3	-0.9
MTHZ				S	S	18 38 35.5	-4.5
RAHZ	Arahi	13.90	189	P	P	18 36 10.2	-3.2
RAHZ				S	S	18 38 35.8	-4.6
HIZ	Hauiti	13.95	196	P	P	18 36 14.7	+0.8
NMHZ	Naumai	14.12	189	P	P	18 36 14.6	-1.1
NMHZ				S	S	18 38 40.2	-4.5
BKZ	Black Stump Fm	14.24	190	P	P	18 36 14.9	-2.0
BKZ	Black Stump Fm	14.24	190	P	P	18 36 15.8	-1.2
BKZ	Black Stump Fm	14.24	190	P	P	18 36 14.0	-3.0
BKZ				S	S	18 38 40.6	-6.3
WHVZ	Whangaehu Hut	14.52	193	P	P	18 36 19.1	-1.0
WNVZ	Wahianoa	14.56	193	P	P	18 36 19.3	-1.1
VLAKA	Lakatoro	14.63	306	P	P	18 36 21.1	-0.2
KRHZ	Kereru	14.72	190	P	P	18 36 19.7	-2.4
SANVU	Saraoutou	15.21	307	P	P	18 36 26.3	-1.2
SANVU	Saraoutou	15.21	307	P	P	18 36 26.6	-0.8
BFZ	Birch Farm	15.76	190	P	P	18 36 32.8	+0.1
SNZO	South Karori	16.65	193	P	P	18 36 40.5	-1.3
SNZO	South Karori	16.65	193	P	P	18 36 42.6	+0.8
QRZ	Quartz Range	16.75	199	P	P	18 36 41.6	-1.3
QRZ	Quartz Range	16.75	199	P	P	18 36 43.2	+0.4
NNZ	Nelson	16.87	197	P	P	18 36 43.7	-0.4
BSWZ	Blackbirch Sta	17.22	195	P	P	18 36 47.1	-0.3
THZ	Tophouse	17.51	197		P	18 36 48.3	-1.8
DSZ	Denniston Nort	17.81	200	P	P	18 36 54.3	+1.4
KHZ	Kahutara	17.96	195	P	P	18 36 54.3	+0.1
KHZ	Kahutara	17.96	195	P	P	18 36 54.4	+0.3
LTZ	Lake Taylor	18.63	197		P	18 36 59.5	-0.7
INZ	Inchbonnie	18.81	199		P	18 37 03.0	+1.2
AMCZ	Amberley	18.90	196	P	P	18 37 01.8	-0.9
OXZ	Oxford	19.20	197	P	P	18 37 05.2	-0.2
LHI	Lord Howe Isla	19.27	246	P	P	18 37 08.5	+2.2
MQZ	McQueen's Vall	19.39	196	P	P	18 37 07.9	+0.7
LUES	Luesalemba Tem	19.50	315	P	P	18 37 06.3	-2.2
RPZ	Rata Peaks	19.83	199	P	P	18 37 13.0	+1.8
RPZ	Rata Peaks	19.83	199	P	P	18 37 12.7	+1.4
	19nm,0.6s,baz=21,slow=4.6,SNR=17						
RPZ	Rata Peaks	19.83	199	P	P	18 37 11.2	0.0
FOZ	Fox Glacier	20.05	201	P	P	18 37 15.5	+2.3
LBZ	Lake Benmore	20.70	200	P	P	18 37 20.0	+0.9
JCZ	Jackson Bay	20.88	203	P	P	18 37 20.1	-0.7
ODZ	Otahua Downs	21.17	198	P	P	18 37 23.3	0.0
NGOA	Tingoa Renbel	23.02	302	P	P	18 37 40.4	0.0
ALEG	Aligegeo Malai	24.40	309	P	P	18 37 51.9	-0.7
HNR	Honiara	24.48	306	P	P	18 37 52.0	-1.3
HNR	Honiara	24.48	306	P	P	18 37 52.7	-0.6
TATA	Tatamba Isabel	25.29	308	P	P	18 37 59.7	-0.8
ARMA	Armidale	25.39	252	P	P	18 38 01.5	+0.2
ARMA	Armidale	25.39	252	P	P	18 38 02.0	+0.7
EIDS	Eidsvold	25.91	263		P	18 38 06.4	+0.5
EIDS	Eidsvold	25.91	263	P	P	18 38 06.9	+1.0
CNB	Canberra Magne	28.04	242	P	P	18 38 24.2	-0.4
CAN	Canberra	28.33	242	P	P	18 38 28.1	+1.0
CAN	Canberra	28.33	242	P	P	18 38 28.2	+1.1
CMSA	Cobar Meteorol	30.56	250	P	P	18 38 47.2	+0.8

CTAO	Charters Tower	31.28	272		P	18 38 53.3	+0.6
CTAO	Charters Tower	31.28	272	P	P	18 38 53.7	+1.0
CTAO	Charters Tower	31.28	272	P	P	18 38 53.2	+0.4
CTAO				pP	pP	18 40 18.3	-0.5
CTAO				PcP	PcP	18 41 30.8	-0.8
CTAO				ScP	ScP	18 44 28.3	+2.7
TOO	Toolangi	31.59	239	P	P	18 38 56.0	+0.8
QLP	Quilpie	31.93	260	P	P	18 38 58.6	+0.4
MTSU	Mount Surprise	33.59	275	P	P	18 39 13.5	+1.0
STKA	Stephens Creek	34.06	250	P	P	18 39 16.6	+0.4
	6.7nm,0.5s,baz=97,slow=11,SNR=27						
STKA				ScP	ScP	18 44 36.2	+1.0
	3.8nm,0.9s,baz=65,slow=2.7,SNR=4.0						
	6.7nm,0.5s						
STKA	Stephens Creek	34.06	250	P	P	18 39 16.9	+0.7
ARPS	Mount Arapiles	34.30	241	P	P	18 39 18.4	+0.2
PMG	Port Moresby	34.71	291	P	P	18 39 21.9	0.0
PMG				IAmb	IAmb	18 39 22.3	
	comp=Z,29nm,0.8s						
PMG	Port Moresby	34.71	291	P	P	18 39 22.6	+0.8
PMG	Port Moresby	34.71	291	P	P	18 39 22.4	+0.6
PMG	Port Moresby	34.71	291	P	P	18 39 21.1	-0.8
XMAS	Kiritimati	34.93	43	P	P	18 39 23.7	+0.1
XMAS	Kiritimati	34.93	43	P	P	18 39 21.7	-1.9
XMAS	Kiritimati	34.93	43	P	P	18 39 23.5	-0.1
COEN	Coen	36.11	281		P	18 39 34.0	+0.5
COEN				IAmb	IAmb	18 39 34.8	
	comp=Z,22nm,0.8s						
COEN	Coen	36.11	281	P	P	18 39 34.1	+0.5
HTT	Hallett	36.36	247	P	P	18 39 36.2	+0.7
QIS	Mount Isa	37.18	269	P	P	18 39 42.3	0.0
BBOO	Buckleboo	38.76	248	P	P	18 39 54.2	-0.9
BBOO				IAmb	IAmb	18 40 25.4	
	comp=Z,62nm,1.5s						
BBOO	Buckleboo	38.76	248	P	P	18 39 54.1	-0.9
MANU	Manus Island	38.76	301	P	P	18 39 55.4	+0.2
MANU				IAmb	IAmb	18 39 56.6	
	comp=Z,32nm,0.9s						
AS01	Alice Springs	41.58	262	P	P	18 40 17.6	-0.2
ASAR	Alice Springs	41.62	262	P	P	18 40 17.9	-0.3
	comp=Z,6.9nm,0.3s,baz=86,slow=6.7,SNR=187						
ASAR				ScP	ScP	18 45 05.8	+1.6
	comp=Z,2.2nm,0.9s,baz=104,slow=3.5,SNR=5.8						
ASAR				S	S	18 45 55.9	-1.4
	comp=Z,2.5nm,0.7s,baz=100,slow=14,SNR=14						
ASAR				PKiKP	PKiKP	18 49 06.5	-1.8
	comp=Z,0.5nm,1.0s,baz=89,slow=1.5,SNR=5.0						
	comp=Z,6.9nm,0.3s						
WRAB	Tennant Creek	42.10	268	P	P	18 40 21.3	-0.6
WRAB				IAmb	IAmb	18 40 21.5	
	comp=Z,26nm,0.5s						
WRA	Warramunga Arr	42.11	268	P	P	18 40 21.1	-0.9
	comp=Z,30nm,0.6s,baz=104,slow=8.0,SNR=230						
WRA				ScP	ScP	18 45 08.4	+2.1
	comp=Z,6.2nm,0.8s,baz=103,slow=4.0,SNR=16						
WRA				S	S	18 46 02.5	-1.8
	comp=Z,7.0nm,0.9s,baz=100,slow=15,SNR=16						
WRA				PKiKP	PKiKP	18 49 07.7	-1.1
	comp=Z,0.3nm,0.5s,baz=90,slow=0.5,SNR=4.7						
	comp=Z,30nm,0.6s						
FORT	Forrest	45.67	251	P	P	18 40 48.6	-0.8
FORT				IAmb	IAmb	18 40 49.2	
	comp=Z,31nm,0.7s						
FORT	Forrest	45.67	251	P	P	18 40 49.7	+0.2
KDU	Kakadu	46.19	277	P	P	18 40 52.9	-0.7
MTN	Manton Dam	47.34	276		P	18 41 01.4	-0.9
MTN	Manton Dam	47.34	276	P	P	18 41 01.8	-0.5
DRV	Dumont d’Urvil	48.29	200	P	P	18 41 08.3	-0.3
KNRA	Kununurra	48.47	271		P	18 41 10.6	-0.2
AIN	Ainahou	50.41	31	P	P	18 41 24.9	-0.2
FITZ	Fitzroy Crossi	50.52	267		P	18 41 25.6	-0.2
FITZ	Fitzroy Crossi	50.52	267	P	P	18 41 25.7	-0.2
MLH	Mauna Loa	50.55	31	P	P	18 41 26.6	+0.3
KNHH	Kane Nui o Ham	50.55	31	P	P	18 41 26.3	+0.2
STCH	Steam Cracks	50.58	31	P	P	18 41 26.2	-0.1
HMH	Humu‘ula Sheep	50.60	31	P	P	18 41 26.7	+0.1
JOKA	Jonika Flow	50.67	31	P	P	18 41 26.9	-0.1
FAKI	Fak Fak	50.74	288	P	P	18 41 27.0	-0.5
FAKI				IAmb	IAmb	18 41 52.0	
	comp=Z,45nm,1.3s						
FAKI	Fak Fak	50.74	288	P	P	18 41 27.3	-0.3
HPAH	Hawaii Prepara	50.87	30	P	P	18 41 28.4	+0.1
MHA	Mahukona	50.91	30	P	P	18 41 29.1	+0.5
DHH	Diamond Head	51.04	27	P	P	18 41 29.7	+0.2
HLK	Haleakala	51.26	29	P	P	18 41 31.6	+0.2
VNDA	Vanda	53.11	185	P	P	18 41 44.8	+1.1
	comp=Z,1.5nm,0.5s,baz=50,slow=2.9,SNR=5.8						
	comp=Z,1.5nm,0.5s						
VNDA	Vanda	53.11	185	P	P	18 41 44.4	+0.7
VNDA				PcP	PcP	18 42 43.9	+0.3
SBA	Scott Base	53.12	183	P	P	18 41 46.1	+2.4
SBA				PcP	PcP	18 42 44.8	+1.2
KLBR	Kellerberrin	54.30	248	P	P	18 41 52.3	-0.6
MEEK	Meekatharra	54.54	254	P	P	18 41 54.4	-0.3
PSA00	Pilbara Seismi	54.72	261	P	P	18 41 54.2	-1.8
PSA00	Pilbara Seismi	54.72	261	P	P	18 41 55.1	-0.8
PSA00				IAmb	IAmb	18 43 03.0	
	comp=Z,62nm,1.7s						
PSA00	Pilbara Seismi	54.72	261	P	P	18 41 54.9	-1.1
SOEI	Soe	54.73	276	P	P	18 41 56.6	+0.3
SOEI				IAmb	IAmb	18 42 09.5	
	comp=Z,35nm,0.9s						
MBWA	Marble Bar	54.94	261	P	P	18 41 56.7	-0.8
MBWA				IAmb	IAmb	18 43 56.8	
	comp=Z,106nm,1.9s						
MBWA	Marble Bar	54.94	261	P	P	18 41 56.7	-0.8
MBWA	Marble Bar	54.94	261	P	P	18 41 56.3	-1.2
MBWA				pP	pP	18 43 36.4	-0.2
BLDU	Ballidu	55.36	249	P	P	18 41 59.7	-0.6
MUN	Mundaring	55.53	247	P	P	18 42 01.1	-0.4
MORW	Morawa	56.24	251	P	P	18 42 06.0	-0.5
MORW				IAmb	IAmb	18 43 06.8	
	comp=Z,63nm,1.9s						
MORW	Morawa	56.24	251	P	P	18 42 06.2	-0.2
TNTI	Ternate	56.81	289	P	P	18 42 09.9	-0.6
MMRI	Maumere	57.02	276	P	P	18 42 12.0	0.0
MMRI				IAmb	IAmb	18 42 27.1	
	comp=Z,47nm,1.1s						
CCD	Concordia, Ant	57.46	195	P	P	18 42 14.4	-0.1
CCD				PcP	PcP	18 43 01.2	0.0
CCD				pP	pP	18 43 55.4	+0.4
CCD				ScP	ScP	18 46 11.7	+0.3
GIRL	Giralia	59.41	258	P	P	18 42 29.1	+1.0
GIRL	Giralia	59.41	258	P	P	18 42 27.6	-0.5
PLAI	Plampang	60.97	274	P	P	18 42 38.1	-0.4
TOLI2	Tolitoli	62.68	285	P	P	18 42 48.7	-1.0
TOLI2				IAmb	IAmb	18 42 51.9	
	comp=Z,15nm,0.7s						
TOLI2	Tolitoli	62.68	285	P	P	18 42 49.5	-0.2
JAGI	Jajag, Banyuwa	64.39	273	P	P	18 42 59.4	-1.3
JAGI				IAmb	IAmb	18 43 52.2	
	comp=Z,49nm,1.3s						
JAGI	Jajag, Banyuwa	64.39	273	P	P	18 42 59.4	-1.3
QSPA	South Pole Qui	64.93	180		P	18 43 04.6	+1.2
QSPA	South Pole Qui	64.93	180	P	P	18 43 04.4	+1.1
	comp=Z,9.8nm,0.6s,baz=13,slow=0.9,SNR=72						
	comp=Z,9.8nm,0.6s						
QSPA	South Pole Qui	64.93	180	P	P	18 43 04.2	+0.8
QSPA				PcP	PcP	18 43 31.7	+0.3
MYLDM	Lahad Datu	66.66	288	P	P	18 43 15.8	+1.0
KKM	Kota Kinabalu	69.06	288	P	P	18 43 29.0	-0.7
KKM				IAmb	IAmb	18 44 50.1	
	comp=Z,32nm,1.4s						
KSM	Kuching	72.10	280		P	18 43 47.4	-0.2
MJAR	Matsushiro Arr	72.80	326	P	P	18 43 50.0	-1.2
	comp=Z,1.4nm,0.5s,baz=150,slow=4.6,SNR=7.0						
	comp=Z,1.4nm,0.5s						
JNU	Nakatsue	74.32	319	P	P	18 43 59.5	-0.3
YULB	Yu-li	74.41	306	P	P	18 43 59.1	-1.5
SMAI	San Martin Ant	75.02	159	P	P	18 44 04.6	+1.4
BELA	Belgrano 2	75.22	173		P	18 44 04.3	+0.1
AMKA	Amchitka	76.20	360	P	P	18 44 09.2	-0.6
MAW	Mawson	76.50	201	P	P	18 44 11.8	+0.4
	comp=Z,7.2nm,0.6s,baz=131,slow=6.7,SNR=12						
	comp=Z,7.2nm,0.6s						
KIWB	Kanaga Island	76.72	2	P	P	18 44 12.4	-0.3
ADK	Adak	76.77	2	P	P	18 44 12.6	-0.4
ADK				IAmb	IAmb	18 44 13.1	
	comp=Z,33nm,0.8s						
ATKA	Atka Island	77.21	4	P	P	18 44 14.1	-1.2
ATKA				IAmb	IAmb	18 44 20.5	
	comp=Z,45nm,1.0s						
NIKH	Nikolski High	78.43	7	P	P	18 44 21.4	-0.5
KSRS	Korea Array	79.06	320	P	P	18 44 25.0	-0.7
	comp=Z,0.9nm,0.7s,baz=123,slow=6.7,SNR=2.1						
	comp=Z,0.9nm,0.7s						
UNV	Unalaska Valle	79.57	8	P	P	18 44 26.9	-1.1
UNV				IAmb	IAmb	18 47 26.8	
	comp=Z,107nm,1.6s						
PET	Petropavlovsk	79.99	347	P	P	18 44 29.7	-0.4
PET				IAmb	IAmb	18 44 54.5	
	comp=Z,40nm,1.3s						
PET	Petropavlovsk	79.99	347	P	P	18 44 29.8	-0.4
	comp=Z,15nm,1.1s						
PETK	Petropavlovsk-	80.26	347	P	P	18 44 31.6	0.0
	comp=Z,10nm,0.8s,baz=117,slow=7.2,SNR=20						
	comp=Z,10nm,0.8s						
ESPZ	Base Esperanza	81.16	158	P	P	18 44 36.7	+0.5
NJ2	Nanjing	81.31	311	*e*P	P	18 44 40.3	+2.7
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
USRK	Ussuriysk Ar.	81.69	327	P	P	18 44 39.1	-0.2
	comp=Z,1.5nm,0.7s,baz=144,slow=4.5,SNR=4.2						
	comp=Z,1.5nm,0.7s						
SYO	Syowa Base	81.74	193	⇑*e*P	P	18 44 38.2	-1.0
SYO	Syowa Base	81.74	193	⇑*e*PcP	PcP	18 44 41.6	-1.7
S12K	Black Hills	82.02	10	P	P	18 44 40.5	-0.2
BCW	Bitter Crk WRg	83.01	46	P	P	18 44 47.5	+1.2
BCW				IAmb	IAmb	18 44 48.1	
	comp=Z,20nm,0.8s						
TROLL	Troll, Antarti	83.08	181	⇓P	P	18 44 46.3	+0.2
	comp=Z,2µm,0.6s						
TROLL				⇑pP	pP	18 46 37.2	+0.1
CBX	Cerro Bola	83.31	50		P	18 44 49.1	+1.2
CBX				IAmb	IAmb	18 44 49.9	
	comp=Z,24nm,0.6s						
KCPM	Cahto Peak	83.38	40	P	P	18 44 49.5	+1.4
KCPM				IAmb	IAmb	18 44 50.1	
	comp=Z,21nm,0.9s						
SNAA	Sanae	83.42	179	⇓P	P	18 44 47.4	-0.3
	comp=Z,90nm,0.6s						
SNAA				⇓pP	pP	18 46 39.8	+0.9
SNAA	Sanae	83.42	179		P	18 44 47.4	-0.3
SNAA	Sanae	83.42	179	P	P	18 44 47.1	-0.7
	comp=Z,2.5nm,0.5s,baz=209,slow=9.1,SNR=49						
	comp=Z,2.5nm,0.5s						
KMPM	Mount Pierce	83.54	40		P	18 44 50.4	+1.6
ELS	Elsinore Mount	83.56	48	P	P	18 44 50.0	+0.9
SLBS	Sierra La Lagu	83.62	60		P	18 44 50.9	+1.3
SLBS				IAmb	IAmb	18 44 51.7	
	comp=Z,22nm,0.8s						
ESJX	Sierra Juarez	83.63	50	P	P	18 44 51.1	+1.5
ESJX				IAmb	IAmb	18 44 52.1	
	comp=Z,18nm,0.9s						
VNA3	Neumayer Olymp	83.64	177	⇓P	P	18 44 48.5	-0.2
	comp=Z,23nm,0.7s						
VNA3				⇓pP	pwP	18 46 42.7	-1.3
KMRM	Mail Ridge	83.65	40	P	P	18 44 51.0	+1.6
KMRM				IAmb	IAmb	18 44 51.8	
	comp=Z,23nm,0.8s						
JCC	Jacoby Creek,	83.85	39	P	P	18 44 50.7	+0.5
YUH	Yuha Desert	84.02	50	P	P	18 44 52.3	+1.0
YUH				IAmb	IAmb	18 44 53.4	
	comp=Z,16nm,0.9s						
VNA2	Neumayer--Watz	84.05	178	⇓P	P	18 44 50.6	-0.2
	comp=Z,10nm,0.5s,baz=175,slow=5.3						
VNA2				⇓pP	pwP	18 46 45.3	-0.9
	baz=59,slow=19						
KHMM	Horse Mountain	84.06	39	P	P	18 44 52.9	+1.5
KHMM				IAmb	IAmb	18 44 53.7	
	comp=Z,15nm,0.8s						
KRPM	Rodgers	84.08	39	P	P	18 44 51.2	-0.2
COYC	Coyhaique	84.12	138	P	P	18 44 52.5	+0.9
COYC				IAmb	IAmb	18 44 54.0	
	comp=Z,18nm,0.8s						
O02D	Mt. Diablo Mer	84.16	40		P	18 44 53.0	+1.2
O02D				IAmb	IAmb	18 44 54.4	
	comp=Z,36nm,1.0s						
PFO	Pinyon Flats O	84.20	49	P	P	18 44 52.2	-0.1
CMB	Columbia Colle	84.27	43		P	18 44 53.0	+0.6
VNA1	Neumayer--Stat	84.29	177	⇓P	P	18 44 52.1	+0.1
	comp=Z,9.0nm,0.7s						
SII	Sitkinak Islan	84.34	14	P	P	18 44 52.4	+0.1
KRMB	Red Mountain	84.38	39	P	P	18 44 54.5	+1.6
KRMB				IAmb	IAmb	18 44 55.4	
	comp=Z,27nm,1.1s						
AFDM	Forest Hills D	84.47	42		P	18 44 54.0	+0.6
ORV	Oroville	84.53	42	P	P	18 44 53.5	-0.1
KSXB	Camp Six Broad	84.60	39	P	P	18 44 55.0	+1.0
KSXB				IAmb	IAmb	18 45 07.1	
	comp=Z,42nm,1.4s						
KBO	Bosley Butte	84.65	38	P	P	18 44 55.0	+0.8
CN2	Changchun	84.76	324	P	P	18 44 56.0	+1.4
CN2				pP	pP	18 46 48.4	+2.4
CN2				pmax	pmax		
	comp=Z,10.0nm,1.3s						
GSC	Goldstone, Bar	84.94	47	P	P	18 44 56.9	+1.0
GSC				IAmb	IAmb	18 44 57.6	
	comp=Z,15nm,0.9s						
GLA	Glamis	85.01	50	P	P	18 44 58.0	+1.8
GLA				IAmb	IAmb	18 44 58.7	
	comp=Z,34nm,0.9s						
OHAK	Old Harbor	85.15	14	P	P	18 44 56.3	+0.2
YBH	Yreka Blue Hor	85.20	39		P	18 44 57.4	+0.4
QSM	Queen of Sheba	85.29	47	P	P	18 44 57.5	+0.1
QSM				IAmb	IAmb	18 44 59.2	
	comp=Z,37nm,1.8s						
HATC	Hat Creek Radi	85.35	41	P	P	18 44 58.6	+0.9
HATC				IAmb	IAmb	18 44 59.1	
	comp=Z,19nm,0.8s						
DSP	Deep Springs	85.39	45	P	P	18 44 58.4	+0.6
DSP				IAmb	IAmb	18 44 59.7	
	comp=Z,40nm,1.9s						
PNTR	Pine Nut	85.40	43		P	18 44 58.9	+0.8
PNTR				IAmb	IAmb	18 44 59.8	
	comp=Z,17nm,0.8s						
BEKR	Beckworth	85.41	42		P	18 44 58.6	+0.5
J01E	Myrtle Point	85.44	38	P	P	18 44 59.3	+1.4
LL02	Futaleuf	85.47	136		P	18 44 59.1	+0.9
LL02				IAmb	IAmb	18 45 00.3	
	comp=Z,11nm,0.8s						
GWY	Greenwater Val	85.55	47		P	18 44 59.3	+0.5
GWY				IAmb	IAmb	18 45 00.1	
	comp=Z,26nm,1.6s						
LHV	Little Huntoon	85.58	44	P	P	18 44 59.2	+0.6
ACHA	Angle Creek He	85.62	13	P	P	18 44 58.2	-0.3
L04D	Klamath Falls	85.74	39	P	P	18 45 00.5	+0.9
L04D				IAmb	IAmb	18 45 01.5	
	comp=Z,19nm,0.8s						
RYN	Ryan	85.79	44	P	P	18 45 00.5	+0.6
GMN	Gold Mountain	85.81	45	P	P	18 45 00.7	+0.6
NVAR	Mina Array Bea	85.81	44	P	P	18 45 00.6	+0.5
	comp=Z,7.1nm,0.7s,baz=223,slow=8.4,SNR=34						
	comp=Z,7.1nm,0.7s						
214A	Organ Pipe Nat	85.82	52		P	18 45 01.6	+1.5
214A				IAmb	IAmb	18 45 02.1	
	comp=Z,10nm,0.7s						
PAHR	Pah Rah Range	85.91	42		P	18 45 00.9	+0.4
BBOR	Butler Butte	85.96	38	P	P	18 45 01.1	+0.5
MZP	Montezuma Peak	85.97	45	P	P	18 45 01.5	+0.5
M11K	Mekoryuk	86.00	7	P	P	18 45 01.2	+1.0
I02E	Swisshome, OR	86.10	37	P	P	18 45 02.4	+1.4
I03D	Drain, OR	86.11	38	P	P	18 45 02.4	+1.3
N14K	Kuskokwak Cree	86.13	9	P	P	18 45 01.3	+0.5
N14K				IAmb	IAmb	18 47 17.0	
	comp=Z,23nm,1.1s						
TPNV	Topopah Spring	86.26	46		P	18 45 03.1	+0.8
TPNV				IAmb	IAmb	18 45 03.9	
	comp=Z,14nm,0.8s						
TPH	Tonopah	86.29	45	P	P	18 45 03.1	+0.8
O16K	Kokwok River B	86.39	11	P	P	18 45 01.9	-0.2
O16K				IAmb	IAmb	18 45 57.9	
	comp=Z,18nm,1.4s						
N15K	Kwethluk River	86.61	10	P	P	18 45 03.9	+0.8
N15K				IAmb	IAmb	18 45 04.5	
	comp=Z,14nm,0.8s						
BUCK	Buck Mountain	86.63	37	P	P	18 45 04.3	+0.6
I04A	Tendick Farm,	86.69	38	P	P	18 45 04.6	+0.6
I04A				IAmb	IAmb	18 45 05.5	
	comp=Z,38nm,1.6s						
SHPR	Sheep Range	86.73	47		P	18 45 05.2	+0.7
Y14A	Wickenburg	86.76	50		P	18 45 05.7	+1.1
W13A	Hualapai Mount	86.80	49		P	18 45 05.6	+0.7
W13A				IAmb	IAmb	18 45 06.8	
	comp=Z,47nm,2.0s						
HEBO	Mount Hebo	86.87	36	P	P	18 45 05.4	+0.6
M14K	Bethel	86.89	9	P	P	18 45 05.3	+1.0
M14K				IAmb	IAmb	18 45 54.4	
	comp=Z,20nm,1.4s						
H04D	Lebanon	86.98	37	P	P	18 45 06.4	+1.2
H04D				IAmb	IAmb	18 45 06.8	
	comp=Z,14nm,0.8s						
J05D	Fort Rock, OR	87.03	39		P	18 45 06.8	+1.1
J05D				IAmb	IAmb	18 45 07.8	
	comp=Z,34nm,1.1s						
O18K	Koktuh Hills	87.17	12	P	P	18 45 05.5	-0.2
PRN	Pahroc Range	87.31	46		P	18 45 08.3	+1.1
PRN				IAmb	IAmb	18 45 09.3	
	comp=Z,13nm,0.9s						
P19K	Oil Pt	87.38	13	P	P	18 45 06.5	-0.2
H04A	Detroit Lake	87.38	37		P	18 45 07.4	+0.2
H04A				IAmb	IAmb	18 45 12.6	
	comp=Z,13nm,0.8s						
TUC	Tucson	87.46	53	P	P	18 45 09.7	+1.8
TUC				IAmb	IAmb	18 45 10.7	
	comp=Z,17nm,0.8s						
R11B	Troy Canyon, C	87.50	45		P	18 45 08.3	+0.3
PINE	Pine Mountain	87.51	39		P	18 45 09.0	+1.0
PLCA	Paso Flores	87.56	134	P	P	18 45 09.2	+0.9
	comp=Z,4.2nm,1.0s,baz=231,slow=5.9,SNR=6.5						
	comp=Z,4.2nm,1.0s						
M16K	Timber Creek	87.60	10	P	P	18 45 08.6	+0.8
M16K				IAmb	IAmb	18 47 36.6	
	comp=Z,22nm,1.6s						
K13K	Kusilvak Mount	87.69	7	P	P	18 45 08.8	+0.7
CNPM	China Poot	87.70	14	P	P	18 45 08.4	+0.2
ILSW	Iliamna Southw	87.70	13	P	P	18 45 08.5	+0.1
N18K	Kilae Creek	87.80	12	P	P	18 45 08.1	-0.6
E03A	Lebam	87.84	35	P	P	18 45 10.5	+1.3
WVOR	Wild Horse Val	88.01	41	P	P	18 45 11.0	+0.7
WVOR				IAmb	IAmb	18 45 12.1	
	comp=Z,21nm,1.1s						
319A	Douglas	88.07	54		P	18 45 12.4	+1.6
X16A	Lo Mia Camp, P	88.11	50	P	P	18 45 12.1	+1.0
X16A				IAmb	IAmb	18 45 13.4	
	comp=Z,14nm,0.9s						
L16K	Owhat River	88.17	10	P	P	18 45 09.7	-0.7
N19K	Bonanza Creek	88.19	12	P	P	18 45 09.8	-0.8
M17K	Holitna River	88.20	11	P	P	18 45 11.2	+0.7
M17K				IAmb	IAmb	18 45 11.7	
	comp=Z,8.0nm,0.7s						
HG4B	Hotspring	88.22	28	P	P	18 45 11.9	+1.1
HG4B				IAmb	IAmb	18 47 46.4	
	comp=Z,29nm,1.3s						
NLWA	Neilton Lookou	88.24	34	P	P	18 45 11.6	+0.5
NLWA				IAmb	IAmb	18 45 13.3	
	comp=Z,13nm,0.9s						
EFI	East Falkland	88.27	148	P	P	18 45 12.5	+1.2
LCMT	Little Creek M	88.28	47	P	P	18 45 12.8	+1.1
LCMT				IAmb	IAmb	18 45 13.7	
	comp=Z,11nm,1.1s						
HOLB	Holberg	88.38	30	P	P	18 45 12.6	+1.0
K15K	Wolf Creek Mou	88.43	9	P	P	18 45 12.5	+0.9
K15K				IAmb	IAmb	18 45 13.0	
	comp=Z,9.3nm,0.8s						
OZB	Mount Ozzard	88.47	33	P	P	18 45 12.9	+0.7
I07A	Izee	88.51	39	P	P	18 45 13.6	+1.0
KNB	Kanab	88.57	48	P	P	18 45 14.0	+0.9
KNB				IAmb	IAmb	18 45 15.3	
	comp=Z,22nm,1.3s						
G06A	Carlson Farm,	88.58	38		P	18 45 13.6	+0.8
G06A				IAmb	IAmb	18 45 14.4	
	comp=Z,18nm,1.0s						
U15A	North Rim	88.61	48		P	18 45 14.6	+1.2
U15A				IAmb	IAmb	18 45 15.7	
	comp=Z,16nm,0.9s						
J08A	Circle Bar Ran	88.66	40	P	P	18 45 14.2	+0.9
SPR3	Spring Creek 3	88.67	45		P	18 45 13.8	+0.1
SPR3				IAmb	IAmb	18 45 15.1	
	comp=Z,14nm,1.4s						
PSUT	Pine Spring	88.72	46		P	18 45 14.9	+1.1
SLKM	Skilak Lake	88.81	14		P	18 45 13.4	0.0
DUN6	Lazy B Ranch	88.81	53		P	18 45 14.7	+0.5
GNW	Green Mountain	88.89	35		P	18 45 15.2	+1.2
GNW				IAmb	IAmb	18 45 15.8	
	comp=Z,15nm,0.7s						
CLRS	Cowichan Lake	89.05	33	P	P	18 45 15.9	+1.1
CLRS				IAmb	IAmb	18 45 16.5	
	comp=Z,21nm,1.0s						
ELK	Elko	89.08	44		P	18 45 16.2	+0.7
ELK				IAmb	IAmb	18 45 16.9	
	comp=Z,14nm,1.2s						
L18K	Granite Mounta	89.10	11	P	P	18 45 15.1	+0.4
BI02	San Fabin de	89.18	130		P	18 45 17.1	+1.1
BI02				IAmb	IAmb	18 45 17.7	
	comp=Z,7.7nm,0.8s						
X18A	Snowflake	89.22	51		P	18 45 16.6	+0.4
X18A				IAmb	IAmb	18 45 18.2	
	comp=Z,12nm,0.8s						
PGC	Sidney	89.28	34	P	P	18 45 16.7	+0.9
K17K	Iditarod	89.30	10	P	P	18 45 15.8	+0.2
K17K				IAmb	IAmb	18 46 50.3	
	comp=Z,24nm,1.6s						
STLK	Strandline Lak	89.35	13	P	P	18 45 14.9	-1.0
STLK				IAmb	IAmb	18 45 15.3	
	comp=Z,7.7nm,0.7s						
L19K	White Mountain	89.39	12	P	P	18 45 16.4	+0.4
L19K				IAmb	IAmb	18 45 17.1	
	comp=Z,18nm,0.8s						
RC01	Rabbit Creek A	89.43	14	P	P	18 45 16.3	0.0
RC01				IAmb	IAmb	18 45 16.8	
	comp=Z,18nm,0.9s						
BBB	Bella Bella	89.47	29	P	P	18 45 17.7	+1.1
BBB				IAmb	IAmb	18 45 18.4	
	comp=Z,22nm,1.0s						
BBB	Bella Bella	89.47	29	P	P	18 45 17.6	+1.1
	comp=Z,14nm,0.9s,baz=216,slow=2.1,SNR=8.1						
	comp=Z,14nm,0.9s						
J16K	Anvik River	89.50	9	P	P	18 45 16.8	+0.2
J16K				IAmb	IAmb	18 48 49.5	
	comp=Z,28nm,1.5s						
SUA	Susitna One	89.55	14	IAmb	IAmb	18 45 17.5	
	comp=Z,17nm,0.8s						
G08A	Pilot Rock	89.55	38	IAmb	IAmb	18 45 19.7	
	comp=Z,9.2nm,0.8s						
CMAR	Chiang Mai Arr	89.75	290	P	P	18 45 18.9	+0.2
	comp=Z,0.7nm,0.8s,baz=148,slow=4.4,SNR=5.3						
	comp=Z,0.7nm,0.8s						
MVU	Marysvale	89.78	47	IAmb	IAmb	18 45 21.1	
	comp=Z,11nm,1.1s						
HAWA	Hanford	89.91	37	P	P	18 45 19.0	+0.2
HAWA				IAmb	IAmb	18 45 20.5	
	comp=Z,20nm,1.4s						
XLT	XiLinHaoTe	90.09	320	*e*P	P	18 45 19.9	+0.1
XLT				sP	sP	18 48 00.8	-3.4
XLT				pmax	pmax		
	comp=Z,8.0nm,0.7s						
XLT				pmax	pmax		
	comp=Z,100nm,4.4s						
GHO	Glory Hole Cre	90.22	14	IAmb	IAmb	18 45 20.5	
	comp=Z,16nm,0.8s						
MFID	Camas Ranch	90.25	41	IAmb	IAmb	18 45 22.2	
	comp=Z,14nm,1.0s						
J18K	Innoko River	90.26	10	IAmb	IAmb	18 45 20.8	
	comp=Z,11nm,0.8s						
V35K	Ketchikan	90.27	25	P	P	18 45 21.4	+1.2
V35K				IAmb	IAmb	18 45 22.2	
	comp=Z,21nm,1.3s						
U33K	Whale Pass	90.28	24	P	P	18 45 21.6	+1.4
SML	Sawmill	90.39	15	P	P	18 45 19.4	-1.3
HMU	Henry Mountain	90.46	48	P	P	18 45 22.4	+0.4
PPLA	Purkeypile	90.55	12	P	P	18 45 20.6	-1.0
PPLA				IAmb	IAmb	18 47 38.7	
	comp=Z,27nm,1.6s						
BMRM	Bremner River	90.56	17	P	P	18 45 21.6	0.0
BMRM				IAmb	IAmb	18 45 21.9	
	comp=Z,12nm,0.9s						
BGU	Big Grassy Mou	90.57	44	P	P	18 45 22.7	+0.5
K20K	Telida	90.61	11	P	P	18 45 21.6	-0.1
MT01	Popeta	90.63	128	P	P	18 45 23.3	+0.6
SCM	Sheep Creek Mo	90.64	15	P	P	18 45 21.8	-0.1
SCM				IAmb	IAmb	18 45 22.5	
	comp=Z,12nm,0.6s						
D08A	Wollman Farm,	90.64	37	P	P	18 45 22.5	+0.2
Q16A	Castle Valley	90.69	47		P	18 45 24.0	+1.1
Q16A				IAmb	IAmb	18 45 25.9	
	comp=Z,10nm,0.9s						
TMUT	Trail Mountain	90.87	46	P	P	18 45 24.6	+0.8
SBM	South Baldy	90.91	53	P	P	18 45 25.2	+1.0
J19K	Poorman	90.93	11	P	P	18 45 23.3	+0.2
J19K				IAmb	IAmb	18 48 32.7	
	comp=Z,19nm,1.9s						
VHRN	Van Horn	90.97	56		P	18 45 24.5	+0.2

MPU	Maple Canyon	90.97	46	P	P	18 45 24.2	0.0
MPU				IAmb	IAmb	18 45 25.9	
	comp=Z,12nm,0.9s						
CAST	Castle Rocks	91.04	12		P	18 45 22.4	-1.3
CAST				IAmb	IAmb	18 45 23.9	
	comp=Z,9.7nm,1.0s						
PZH	PanZhiHua	91.08	299	P	P	18 45 26.4	+1.5
PLID	Pearl Lake	91.12	40		P	18 45 24.9	+0.1
PLID				IAmb	IAmb	18 45 25.8	
	comp=Z,11nm,1.4s						
HHC	Hu-ho-hao-te	91.14	315	*e*P	P	18 45 28.3	+3.5
HHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,63nm,4.5s						
LENM	Lemitar	91.15	53	P	P	18 45 26.0	+0.9
GLB	Gilahina Butte	91.17	17	P	P	18 45 24.7	+0.4
HLID	Hailey	91.18	42		P	18 45 25.8	+0.7
HLID				IAmb	IAmb	18 45 26.9	
	comp=Z,14nm,1.4s						
HVU	Hansel Valley	91.20	44		P	18 45 25.6	+0.5
HVU				IAmb	IAmb	18 45 26.7	
	comp=Z,12nm,0.8s						
B08A	Colville Reser	91.22	36		P	18 45 24.7	-0.1
CRNM	Carthage	91.22	53	P	P	18 45 26.0	+0.5
SRU	San Rafael Swe	91.22	47	P	P	18 45 25.7	+0.3
CTU	Camp Tracy	91.26	45	P	P	18 45 25.4	-0.1
CTU				IAmb	IAmb	18 45 26.9	
	comp=Z,12nm,0.8s						
TXAR	Lajitas Array	91.29	58	P	P	18 45 26.7	+0.9
	comp=Z,8.1nm,0.8s,baz=213,slow=6.4,SNR=77						
	comp=Z,8.1nm,0.8s						
BNM	Barren Site	91.39	53	P	P	18 45 26.4	0.0
JLU	Jordanelle	91.41	45	P	P	18 45 26.1	-0.1
JLU				IAmb	IAmb	18 45 28.6	
	comp=Z,6.4nm,0.7s						
BARN	Barnard Glacie	91.42	18	P	P	18 45 25.8	+0.1
BARN				IAmb	IAmb	18 45 26.7	
	comp=Z,8.8nm,0.8s						
TRF	Thorofare Moun	91.42	13		P	18 45 24.4	-1.2
TRF				IAmb	IAmb	18 45 25.3	
	comp=Z,9.0nm,0.8s						
CTGM	Chitina Glacie	91.44	18	P	P	18 45 24.5	-1.2
CTGM				IAmb	IAmb	18 45 26.6	
	comp=Z,6.8nm,0.8s						
O28M	Mount Upton	91.60	18	P	P	18 45 26.2	-0.5
O28M				IAmb	IAmb	18 45 27.6	
	comp=Z,6.6nm,0.8s						
PV05	Paradox Valley	91.64	48	P	P	18 45 27.8	+0.4
PV05				IAmb	IAmb	18 45 29.1	
	comp=Z,6.3nm,0.8s						
P18A	Preston Nutter	91.68	47	P	P	18 45 27.9	+0.3
P18A				IAmb	IAmb	18 45 29.0	
	comp=Z,6.7nm,0.9s						
RND	Reindeer	91.68	14		P	18 45 25.9	-0.8
RND				IAmb	IAmb	18 45 26.9	
	comp=Z,9.6nm,0.8s						
TCUT	Toone Canyon	91.71	45	P	P	18 45 28.1	+0.4
ALPN	Alpine	91.80	57	P	P	18 45 28.8	+0.7
ALPN				IAmb	IAmb	18 45 29.7	
	comp=Z,9.7nm,0.8s						
BSUT	Blindstream Ca	91.82	46		P	18 45 29.1	+0.8
PV10	Paradox Valley	91.83	48	P	P	18 45 28.7	+0.4
PV10				IAmb	IAmb	18 45 29.1	
	comp=Z,7.4nm,0.8s						
PV19	Morning Glory	91.84	48	P	P	18 45 28.1	-0.2
PV19				IAmb	IAmb	18 45 29.4	
	comp=Z,6.4nm,0.8s						
PV18	Skein Mesa, Pa	91.85	48		P	18 45 28.1	-0.2
PV18				IAmb	IAmb	18 45 30.0	
	comp=Z,6.9nm,0.8s						
PV20	West Nyswonger	91.86	48	P	P	18 45 28.2	-0.1
PV20				IAmb	IAmb	18 45 29.5	
	comp=Z,12nm,1.1s						
HWUT	Hardware Ranch	91.87	44	P	P	18 45 27.8	-0.5
HWUT				IAmb	IAmb	18 45 29.2	
	comp=Z,5.9nm,0.7s						
PV23	Carpenter Ridg	91.89	48	P	P	18 45 28.6	+0.1
PV23				IAmb	IAmb	18 45 29.8	
	comp=Z,12nm,0.9s						
ANMO	Albuquerque	91.91	52	P	P	18 45 28.6	0.0
ANMO	Albuquerque	91.91	52		P	18 45 28.3	-0.3
ANMO				IAmb	IAmb	18 45 30.1	
	comp=Z,5.5nm,0.9s						
PV02	Paradox Valley	91.95	48	P	P	18 45 28.7	-0.1
PV02				IAmb	IAmb	18 45 29.9	
	comp=Z,6.3nm,0.8s						
PV12	Saucer Basin,	91.96	48	P	P	18 45 28.7	-0.2
PV21	Cone Mtn., Par	91.97	48	P	P	18 45 29.3	+0.4
PV21				IAmb	IAmb	18 45 30.1	
	comp=Z,5.4nm,0.8s						
PV01	Paradox Valley	92.03	49	P	P	18 45 28.8	-0.3
PV01				IAmb	IAmb	18 45 30.1	
	comp=Z,5.3nm,0.8s						
PV22	Blue Mesa, Par	92.08	48		P	18 45 28.8	-0.5
M27K	Edge Creek, AK	92.44	17	P	P	18 45 30.6	+0.2
M27K				IAmb	IAmb	18 45 31.4	
	comp=Z,8.2nm,0.8s						
K24K	Donnelly Dome	92.71	15	P	P	18 45 31.0	-0.3
Q32M	Nakina River	92.71	23	P	P	18 45 32.4	+0.7
Q32M				IAmb	IAmb	18 47 51.1	
	comp=Z,7.7nm,1.2s						
MLY	Manley	92.75	12	P	P	18 45 30.3	-1.2
SAND	Sanderson	92.76	58		P	18 45 31.9	-0.6
SAND				IAmb	IAmb	18 45 33.5	
	comp=Z,8.0nm,0.9s						
AHID	Auburn Hatcher	92.78	44	P	P	18 45 33.1	+0.7
AHID				IAmb	IAmb	18 45 34.1	
	comp=Z,8.7nm,1.2s						
WRH	Wood River Hil	92.78	13	P	P	18 45 30.9	-0.7
MCMT	McKenzie Canyo	92.82	41	P	P	18 45 32.6	-0.1
HDA	Harding Lake	92.97	14	P	P	18 45 31.9	-0.6
HDA				IAmb	IAmb	18 45 32.4	
	comp=Z,4.5nm,0.6s						
DOT	Dot Lake	92.98	15	P	P	18 45 32.4	-0.2
CCB	Clear Creek Bu	93.00	13	IAmb	IAmb	18 45 32.1	
	comp=Z,7.3nm,1.2s						
DLMT	Dillon	93.26	41	P	P	18 45 34.9	+0.4
DLMT				IAmb	IAmb	18 45 36.0	
	comp=Z,8.3nm,1.4s						
ILAR	Eielson Array	93.30	14	P	P	18 45 32.8	-1.3
	comp=Z,1.6nm,0.7s,baz=224,slow=5.1,SNR=15						
ILAR				PP	PP	18 49 17.6	-10
	comp=Z,0.7nm,0.8s,baz=208,slow=7.8,SNR=5.0						
	comp=Z,1.6nm,0.7s						
M29M	Somme Creek	93.44	18	P	P	18 45 34.9	0.0
E18K	Tukpahlearik C	93.46	7	P	P	18 45 34.0	-0.7
E18K				IAmb	IAmb	18 45 35.5	
	comp=Z,6.4nm,0.8s						
J25K	Salcha River,	93.50	14		P	18 45 34.4	-0.7
DRIO	Del Rio	93.69	59		P	18 45 36.7	0.0
DRIO				IAmb	IAmb	18 45 37.9	
	comp=Z,9.5nm,0.8s						
BW06	Boulder Array	93.75	44	P	P	18 45 36.2	-0.7
PDAR	Pinedale Array	93.75	44	P	P	18 45 36.9	-0.1
	comp=Z,1.1nm,0.7s,baz=259,slow=1.5,SNR=9.3						
	comp=Z,1.1nm,0.7s						
K27K	Chicken	93.78	16	IAmb	IAmb	18 45 37.3	
	comp=Z,4.3nm,0.8s						
J26L	Joseph Creek	93.81	15		P	18 45 36.6	+0.2
J26L				IAmb	IAmb	18 45 37.5	
	comp=Z,6.5nm,0.8s						
YHL	Hebgen Lake	93.83	42	P	P	18 45 37.7	+0.4
E19K	Redstone River	93.93	9	IAmb	IAmb	18 45 37.1	
	comp=Z,4.8nm,0.8s						
L29M	L29M	94.06	18		P	18 45 37.1	-0.5
L29M				IAmb	IAmb	18 45 39.3	
	comp=Z,6.1nm,0.9s						
PRP	Porcupine Dome	94.24	14		P	18 45 38.6	+0.2
PRP				IAmb	IAmb	18 45 41.2	
	comp=Z,16nm,2.0s						
I26K	Coal Creek Min	94.59	15		P	18 45 39.4	-0.5
I26K				IAmb	IAmb	18 45 41.3	
	comp=Z,12nm,1.7s						
YNE	Yellowstone No	94.63	42	P	P	18 45 41.0	+0.1
K29M	Barlow Dome	94.81	18		P	18 45 40.9	-0.2
BRDY	Brady	95.77	58	P	P	18 45 45.4	-0.7
H29M	Whitestone	96.48	16	P	P	18 45 47.9	-0.5
H29M				IAmb	IAmb	18 47 20.8	
	comp=Z,12nm,1.4s						
G30M	tAoh Zraii Nji	97.61	16		Pdif	18 45 52.8	-0.7
G30M				IAmb	IAmb	18 45 54.0	
	comp=Z,4.9nm,0.8s						
ZALV	Zalesovo Beam	112.77	320	PKiKP	PKiKP	18 50 52.0	-0.6
	comp=Z,0.9nm,0.4s,baz=294,slow=1.5,SNR=4.4						
MKAR	Makanchi Array	112.83	312	PKiKP	PKiKP	18 50 52.0	-1.1
	comp=Z,0.9nm,0.6s,baz=191,slow=0.6,SNR=8.7						
MKAR				SKP		18 53 40.2	
	comp=Z,0.5nm,0.6s,baz=139,slow=1.1,SNR=5.7						
MKAR				PKKPbc	PKKPbc	19 01 42.5	-0.4
	comp=Z,1.0nm,0.6s,baz=281,slow=3.7,SNR=9.6						
MKAR				PKKPab	PKKPab	19 01 51.5	+0.9
	comp=Z,0.4nm,0.7s,baz=296,slow=6.1,SNR=3.9						
KURK	Kurchatov	115.95	316		PKPdf	18 50 57.8	-1.0
KURBB	Kurchatov Arra	115.99	316	PKP	PKPdf	18 50 57.7	-1.2
	comp=Z,2.3nm,0.8s,baz=101,slow=1.9,SNR=29						
KURBB				SKP		18 53 45.8	
	comp=Z,0.7nm,0.7s,baz=102,slow=1.9,SNR=8.0						
KURBB				PKKPbc	PKKPbc	19 01 32.4	+0.1
	comp=Z,0.8nm,0.9s,baz=282,slow=4.5,SNR=6.9						
BOSA	Boshof	121.18	206	PKP	PKiKP	18 51 10.4	+0.3
	comp=Z,2.2nm,0.7s,baz=143,slow=4.9,SNR=4.5						
BVAR	Borovoye Array	121.22	318	PKP	PKPdf	18 51 08.3	-0.7
	comp=Z,3.8nm,0.4s,baz=115,slow=2.2,SNR=40						
BVAR				SKP		18 53 56.3	
	comp=Z,1.0nm,0.6s,baz=318,slow=0.7,SNR=4.6						
SPITS	Spitsbergen Ar	126.35	356	PKP	PKPdf	18 51 17.9	-0.3
	comp=Z,3.1nm,0.4s,baz=98,slow=6.3,SNR=16						
ARTI	Arti	127.86	323		PKPdf	18 51 20.8	-0.8
ARCES	ARCESS Array B	133.06	348	PKhKP	PKPpre	18 51 24.2	
	comp=Z,2.1nm,0.8s,baz=53,slow=0.6,SNR=6.0						
ARCES				PKP	PKPdf	18 51 30.4	-0.7
	comp=Z,4.1nm,0.6s,baz=63,slow=1.7,SNR=17						
ARCES				SKPbc	SKPbc	18 54 11.5	+0.8
	comp=Z,6.1nm,0.7s,baz=23,slow=3.2,SNR=12						
FINES	FINESS Array B	139.56	341	PKhKP	PKPpre	18 51 35.0	
	comp=Z,1.3nm,0.4s,baz=49,slow=3.7,SNR=24						
FINES				PKP	PKPdf	18 51 44.4	+1.1
	comp=Z,2.2nm,0.4s,baz=45,slow=2.3,SNR=9.7						
FINES				SKPbc	SKPbc	18 54 30.7	+0.5
	comp=Z,7.2nm,0.7s,baz=56,slow=3.4,SNR=17						
MARD	Mardin	143.15	299		PKPbc	18 51 48.6	-0.2
NB2	NORSAR Subarra	143.28	351	PKP	PKPab	18 51 46.9	-1.0
	comp=Z,13nm,0.7s,baz=15,slow=3.3						
NOA	NORSAR Array B	143.28	351	PKP	PKPab	18 51 47.2	-0.7
	comp=Z,16nm,0.8s,baz=15,slow=4.9,SNR=71						
HFS	Hagfors	143.73	348	PKP	PKPab	18 51 48.5	-1.1
	comp=Z,32nm,0.4s,baz=60,slow=3.9,SNR=301						
MNK	Minsk	144.05	332	*i* PKP	PKPbc	18 51 50.1	-0.7
	comp=Z,46nm,0.9s,baz=47						
MNK				*i* PKiKP	PKiKP	18 51 54.2	-1.0
MNK				*i* PP	PP	18 55 11.2	-0.9
MNK				*i* SKS	SKSdf	18 58 09.8	-1.9
MNK				*i* PPP	PPP	18 58 27.7	
MNK				*i* SKKS	SKKSdf	19 07 22.7	-3.8
MNK				*i* SS	SS	19 13 15.6	+0.8
MNK				*i* SSS	SSS	19 18 48.8	
NACGM	Naroch	144.23	333	⇑*i*PKP	PKPbc	18 51 51.1	-0.3
	comp=Z,55nm,0.8s,baz=45						
KONO	Kongsberg	144.85	351		PKPdf	18 51 52.4	-0.3
AK03	Malin Array Si	145.88	326	PKP	PKPdf	18 51 55.2	+0.5
AKASG	Malin Array Be	145.89	326	PKPbc	PKPdf	18 51 55.5	+0.8
	comp=Z,9.1nm,0.6s,baz=45,slow=4.1,SNR=59						
AKASG				SKPbc	SKiKP	18 54 46.0	-0.2
	comp=Z,1.6nm,0.6s,baz=49,slow=2.4,SNR=4.1						
AKBB	Malin Array Si	145.89	326	PKP	PKPdf	18 51 55.2	+0.5
AK01	Malin Array Si	145.90	326	PKP	PKPdf	18 51 55.3	+0.6
KIEV	Kiev	145.90	326	⇑P	PKPdf	18 51 55.1	+0.4
KIEV	Kiev	145.90	326	PKP	PKPdf	18 51 55.2	+0.4
AK04	Malin Array Si	145.91	326	PKP	PKPdf	18 51 55.3	+0.6
AK05	Malin Array Si	145.95	326	PKP	PKPdf	18 51 55.4	+0.6
SUW	Suwalki	146.31	335	*e*PKP	PKPbc	18 51 57.5	0.0
DIKM	Dikmen	146.38	308	⇑P	PKPdf	18 51 56.8	+0.9
MI28	Mi28,Pidlybu	146.52	328	PKP	PKPbc	18 51 57.1	-1.1
BZK	Bozkurt	147.17	309	⇓P	PKPbc	18 52 00.5	+0.3
SORM	Soroca	147.87	323	⇓P	PKPbc	18 52 01.7	-0.1
CIDE	Kastamonu/Cide	147.94	310	⇓P	PKPbc	18 52 02.0	-0.2
MMAI	Mount Meron Ar	147.99	292	PKPbc	PKiKP	18 52 03.6	-0.5
	comp=Z,8.4nm,0.4s,baz=80,slow=6.0,SNR=49						
KIRS	Kirsehir-Merke	148.09	304	⇓P	PKPdf	18 52 00.9	+2.0
BRTR	Keskin Array B	148.13	305	PKPbc	PKPbc	18 52 02.1	-0.9
	comp=Z,3.2nm,0.7s,baz=77,slow=6.5,SNR=12						
MILM	Milestii Mici	148.30	321	⇓P	PKPbc	18 52 02.6	-0.4
ANTO	Ankara	148.71	306	⇑P	PKPbc	18 52 03.6	-0.8
DRBR	Darabani	148.76	324	⇑P	PKPbc	18 52 03.1	-1.0
BEL	Belsk	148.91	334	*e*PKP	PKPbc	18 52 04.5	+0.1
TLCR		149.21	318	⇑P	PKPbc	18 52 04.9	-0.3
JURR	Jurilovca	149.39	317	⇑P	PKPbc	18 52 04.4	-1.3
SCTR	Scanteiesti	149.45	319	⇓P	PKiKP	18 52 06.4	-0.2
TPGR	Topolog	149.62	318	⇑P	PKPbc	18 52 06.6	+0.3
SCHLR	Schela	149.66	319	⇓P	PKiKP	18 52 08.6	+1.6
KWP	Kalwaria Pacla	149.74	330	*e*PKP	PKPbc	18 52 06.5	+0.1
COSR	Cosmesti PH	149.75	320	⇑P	PKiKP	18 52 07.5	+0.2
TESR	Tescani	149.76	322	⇑P	PKPbc	18 52 04.8	-1.8
EKA	Eskdalemuir Ar	149.78	3	PKPbc	PKPbc	18 52 05.7	-0.6
	comp=Z,3.5nm,0.5s,baz=320,slow=1.8,SNR=9.0						
TIRR	Tirgusor	149.83	317	⇑P	PKiKP	18 52 07.3	-0.1
PANC	Panciu	149.84	320	⇓P	PKiKP	18 52 07.1	-0.3
BURAR	Bucovina Array	149.87	325	⇑P	PKiKP	18 52 07.8	+0.2
ODBI	Odobesti	149.95	320	⇑P	PKPbc	18 52 07.1	+0.1
HARR	Harsova	150.01	318	⇑P	PKiKP	18 52 08.0	+0.2
VRI	Vrincioaia	150.08	321	⇓P	PKPbc	18 52 06.9	-0.4
PLOR	Plostina	150.14	321	⇑P	PKPbc	18 52 07.1	-0.4
BSEG	Bad Segeberg	150.19	347	*e*PKPbc	PKPbc	18 52 07.4	+0.2
	baz=24,slow=2.1						
BISRR	Bisoca	150.27	320	⇓P	PKiKP	18 52 08.5	0.0
ICOR	Ion Corvin	150.38	317	⇓P	PKPbc	18 52 06.9	-1.1
KOLS	Kolonicke sedl	150.44	329	*e*PKP	PKiKP	18 52 09.1	+0.5
OZUR		150.49	322	⇓P	PKPbc	18 52 08.0	-0.4
STHS	Stebnicka Huta	150.56	331	*e*PKP	PKPbc	18 52 08.0	-0.4
OJC	Ojcow	150.56	333	*e*PKP	PKPbc	18 52 08.1	-0.2
NEHR	Nehoiu	150.58	320	⇑P	PKPbc	18 52 08.8	+0.2
ISR	Istrita	150.61	319	⇓P	PKPbc	18 52 08.3	-0.4
ARCR	ARCALIA	150.66	325	⇑P	PKPbc	18 52 08.0	-0.7
RUE	Ruedersdorf	150.72	342	*e*PKPbc	PKPbc	18 52 08.7	+0.2
	baz=24,slow=2.1						
BMR	Baia Mare	150.72	326	⇑P	PKPbc	18 52 08.8	+0.1
MLR	Muntele Rosu	150.75	321	PKPbc	PKPbc	18 52 08.7	-0.4
	comp=Z,3.7nm,0.6s,baz=313,slow=6.6,SNR=13						
MLR	Muntele Rosu	150.75	321	⇓P	PKPbc	18 52 09.0	-0.1
DOPR	Dopca	150.78	322	⇑P	PKiKP	18 52 10.0	+0.6
GORT1	Trebel	150.87	346	*e*PKPbc	PKPbc	18 52 09.0	+0.2
	baz=24,slow=2.1						
NIE	Niedzica	150.97	332	*e*PKP	PKiKP	18 52 09.9	+0.2
CBBR	Cluj-Babes-Bol	151.28	325	⇓P	PKPbc	18 52 09.7	-0.4
KSP	Ksiaz	151.37	338	*e*PKP	PKiKP	18 52 10.3	-0.1
FLTG	Flechtingen	151.50	345	*e*PKPbc	PKPbc	18 52 10.1	-0.2
	baz=24,slow=2.1						
RETH	Rethem/Aller,	151.51	348	*e*PKPbc	PKPbc	18 52 10.2	-0.1
	baz=24,slow=2.1						
LANS	Liptovska Anna	151.52	332	*e*PKP	PKiKP	18 52 11.4	+0.5
MARR	Marisel-Cluj	151.57	325	⇑P	PKPbc	18 52 10.7	-0.2
STEB	Steborice	151.58	335	⇑*e*PKP	PKPbc	18 52 10.7	+0.1
NRDL	Niedersach Rie	151.59	347	*e*PKPbc	PKPbc	18 52 10.4	-0.1
	baz=24,slow=2.1						
OSTC	Ostas	151.63	338	⇑*e*PKP	PKiKP	18 52 11.5	+0.5
CHVC	Chvalec	151.66	338	⇑*e*PKP	PKPbc	18 52 10.8	0.0
DRGR		151.70	326	⇑P	PKPbc	18 52 10.9	-0.2
UPC	Upice	151.75	338	⇑*e*PKP	PKiKP	18 52 11.3	+0.1
DPC	Dobruska-Polom	151.77	337	⇑*e*PKP	PKiKP	18 52 11.6	+0.2
MORC	Moravsky Berou	151.80	335	*e*PKP	PKPbc	18 52 10.9	-0.3
MORC	Moravsky Berou	151.80	335	⇓P	PKPbc	18 52 11.0	-0.2
CLL	Collm	151.98	342	*e*PKPbc	PKPbc	18 52 11.3	-0.1
	baz=24,slow=2.1						
CLL				*e*PKPab	PKPab	18 52 23.1	-0.1
	baz=22,slow=4.5						
CLL				*e*pPKPbc	pPKPbc	18 54 11.4	-0.1
CLL	Collm	151.98	342	*i* PKPbc	PKPbc	18 52 11.3	-0.1
	comp=Z,26nm,0.8s						
CLL				*i* PKPab	PKPab	18 52 23.1	-0.1
	comp=Z,8.0nm,0.6s						
CLL				*e*pPKPbc	pPKPbc	18 54 12.0	+0.4
MAUC	Maruska	152.02	334	⇑*e*PKP	PKiKP	18 52 12.3	+0.4
BRG	Berggiesshubel	152.10	341	*e*PKPbc	PKPbc	18 52 11.6	-0.2
	baz=24,slow=2.1						
BRG				*e*PKPab	PKPab	18 52 23.4	-0.4
	baz=22,slow=4.5						
IBBN	Ibbenburen	152.21	349	*e*PKPbc	PKiKP	18 52 12.6	+0.5
	baz=24,slow=2.1						
IBBN				*e*PKPab	PKPab	18 52 24.0	-0.2
	baz=22,slow=4.5						
PSZ	Piszkesteto	152.27	330	⇓P	PKPbc	18 52 09.5	-2.8
VYHS	Vyhne	152.29	332	*e*PKP	PKPbc	18 52 12.3	0.0
NEUB	Neuenburg	152.40	344	*e*PKPbc	PKiKP	18 52 12.7	+0.2
	baz=24,slow=2.1						
JAVC	Velka Javorina	152.49	334	*e*PKP	PKiKP	18 52 13.6	+0.7
GTTG	Gottingen	152.52	346	*e*PKPbc	PKPbc	18 52 12.6	-0.1
	baz=24,slow=2.1						
GTTG				*e*PKPab	PKPab	18 52 25.3	-0.2
	baz=22,slow=4.5						
VRAC	Vranov	152.54	336	*e*PKP	PKiKP	18 52 12.9	0.0
PRU	Pruhonice	152.68	339	⇑*e*PKP	PKPbc	18 52 12.6	-0.5
KRUC	Moravsky	152.81	336	*e*PKP	PKPbc	18 52 12.9	-0.5
TANN	Tannenbergstha	152.94	342	*e*PKPbc	PKPbc	18 52 13.6	-0.1
	baz=24,slow=2.1						
TANN				*e*PKPab	PKPab	18 52 27.3	-0.2
	baz=22,slow=4.5						
MOX	Moxa	152.96	343	*e*PKPbc	PKPbc	18 52 13.5	-0.1
	baz=24,slow=2.1						
MOX				*e*PKPab	PKPab	18 52 26.9	-0.6
	baz=22,slow=4.5						
MODS	Modra-Piesok	153.03	334	*e*PKP	PKPbc	18 52 13.9	0.0
BUG	Bochum--Univer	153.13	350	*e*PKPab	PKPab	18 52 28.4	+0.3
	baz=22,slow=4.5						
KASTN	Kahler Asten	153.16	348	*e*PKPbc	PKPbc	18 52 13.9	-0.2
	baz=24,slow=2.1						
UBBA	Unterbreizbach	153.19	346	*e*PKPbc	PKPbc	18 52 13.5	-0.5
	baz=24,slow=2.1						
MANZ	Manzenberg	153.42	342	*e*PKPbc	PKPbc	18 52 14.2	-0.5
	baz=24,slow=2.1						
MANZ				*e*PKPab	PKPab	18 52 29.3	-0.2
	baz=22,slow=4.5						
ROTZ	Rotzenmuhle	153.59	342	*e*PKPab	PKPab	18 52 30.4	+0.3
	baz=22,slow=4.5						
KHC	Kasperske Hory	153.74	339	⇑*e*PKP	PKPbc	18 52 15.4	0.0
CKRC	Cesky Krumlov	153.76	338	⇑*e*PKP	PKPbc	18 52 15.4	-0.1
GRF	Grafenberg Arr	153.93	343	*e*PKPbc	PKiKP	18 52 15.9	+0.1
	baz=24,slow=2.1						
GRF				*e*PKPab	PKPab	18 52 32.0	+0.3
	baz=22,slow=4.5						
GEC2	GERESS Array S	153.95	339	*e*PKPbc	PKPbc	18 52 15.5	-0.4
	baz=24,slow=2.1						
GERES	GERESS Array B	153.95	339	PKPbc	PKPbc	18 52 14.7	-1.3
	comp=Z,1.7nm,0.8s,baz=44,slow=4.1,SNR=8.2						
WET	Wettzell	153.95	340	*e*PKPab	PKPab	18 52 32.2	+0.4
	baz=22,slow=4.5						
TNS	Taunus Mts	154.08	347	*e*PKPbc	PKiKP	18 52 16.2	+0.1
	baz=24,slow=2.1						
BMRD	Maredsous	154.60	352	*d*PKP	PKPab	18 52 33.9	-0.5
WLF	Walferdange	155.03	350	*e*PKPbc	PKPbc	18 52 18.3	
	baz=24,slow=2.1						
RJOB	Jochberg	155.21	339	*e*PKPab	PKPab	18 52 37.9	+0.6
	baz=22,slow=4.5						
FUR	Furstenfeldbru	155.30	341	*e*PKPab	PKPab	18 52 37.9	+0.3
	baz=22,slow=4.5						
UBR	Ueberruh	156.07	343	*e*PKPbc	PKPdf	18 52 19.8	+9.5
	baz=24,slow=2.1						
DAVOX	Davos/Dischmat	156.96	342	PKPab	PKPab	18 52 44.4	-0.6
	comp=Z,4.8nm,0.5s,baz=38,slow=3.5,SNR=8.4						
MATE	Matera	159.05	322	⇓P	PKPdf	18 52 10.0	-4.1
ESDC	Sonseca Array	165.19	11	PKPab	PKPab	18 53 20.1	-1.0
	comp=Z,3.0nm,0.8s,baz=340,slow=4.2,SNR=19						

RSNC 15 18:33:26.7±0.5,0°S±3°×8°0W±°,h0^{km},M3.1,ML2.8, MLv3.5,Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PAC1	Pacto, Paraso	1.27	74	P	Pg	18 33 48.9	-2.2
PAC1				S	Sg	18 34 06.2	-1.3
OTAV	Otavalo	1.59	78	P	Pn	18 33 54.0	-2.6
OTAV				S	Sg	18 34 09.7	-8.3
PPLP	Puerto Lpez	1.64	208	P	Pn	18 33 56.0	-0.8
PPLP				S	Sn	18 34 17.7	-0.9
CUSE	Cuicocha Este	1.66	76	P	Pn	18 33 56.1	-1.4
CUSE				S	Sn	18 34 12.3	-7.4
PIAT	Ana Tenorio	1.97	117	P	Pb	18 34 02.8	-0.9
PIAT				S	Sn	18 34 27.1	-0.2
TULM	Tulcn-Chalpat	2.36	70	P	Pn	18 34 08.1	+0.9
COHC	Cochancay	2.48	162	P	Pn	18 34 08.3	-0.1
COHC				S	Sn	18 34 38.9	-0.4
BONI	La Bonita	2.54	78	P	Pb	18 34 11.9	-1.4
GCUF	Volcan Galeras	2.97	64	P	Pn	18 34 16.6	+1.0
GCUF				S	Sn	18 34 52.4	+0.2
BBAC	Balboa, Cauca	3.47	53	P	Pn	18 34 21.2	-1.0
BBAC				S	Sn	18 35 02.2	-1.9
POPC	Popayan, Colom	4.24	52	P	Pn	18 34 31.4	-1.4
POPC				S	Sn	18 35 26.1	+3.0
MCRA	Macar, Loja	4.25	179	P	Pn	18 34 35.5	+2.7
MCRA				S	Sn	18 35 26.7	+3.5

IDC ***15*** *18:41:40.8±1.0,35°.97N×27°.12E,h0^{km},mb3.7/11, mbtmp3.7/17,ML3.2/5,MS2.5/1,Error ellipse: s-maj=20.3km s-min=13.3km az=0.0*

GII ***15*** *18:41:46.8±0.0,35°.35N±0°.03×27°.442E±0°.009, h20^{km},Mws3.7,confirmed*

ISK ***15*** *18:41:47.7,35°.68N×27°.08E,h64^{km}±2^{km},ML3.4/13*

AFAD ***15*** *18:41:48.9,35°.86N×27°.19E,h29^{km}±1^{km},MW3.5*

ATH ***15*** *18:41:49.0±0.3,35°.78N×27°.01E,h30^{km}±5^{km},ML3.3/9, Manual Solution by A.Agalos First location: 2019/06/15 18:43:01, This location: 2019/06/15 18:57:48 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*

THE ***15*** *18:41:50.2,36°N±2°×2°7E±°,h34^{km}±6^{km},M3.3/12, MLh3.3/12*

ISC 15 18:41:46.7±0.7,35°.66N±0°.03×27°.10E±0°.03,h61^{km}±6^{km}, n135,σ2^{s}10/127,mb3.5/11,3D,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KARP	Karpathos	0.12	158	Pg	Pn	18 41 57.6	+1.5
KARP	Karpathos	0.12	158	P	Pn	18 41 57.5	+1.5
KARP				S	Sn	18 42 02.2	-0.6
KARP	Karpathos	0.12	158	P	Pn	18 41 57.5	+1.5
KARP				S	Sn	18 42 03.8	+1.0
ZKR	Zakros	0.91	233	Pg	Pn	18 42 05.6	+2.0
ZKR				Sg	Sn	18 42 18.6	+2.5
ZKR	Zakros	0.91	233	P	Pn	18 42 06.4	+2.8
ZKR	Zakros	0.91	233	P	Pn	18 42 06.0	+2.4
ZKR				S	Sn	18 42 19.0	+2.9
NISR	Nisiros	0.95	1	P	Pn	18 42 05.6	+1.5
NISR				S	Sn	18 42 17.8	+0.9
ARG	Arkhangelos	1.00	56	Pg	Pn	18 42 06.8	+2.1
ARG				Sg	Sn	18 42 20.7	+2.6
ARG	Arkhangelos	1.00	56	P	Pn	18 42 07.1	+2.4
ARG				S	Sn	18 42 20.6	+2.6
ARG	Arkhangelos	1.00	56	P	Pn	18 42 06.9	+2.2
ARG				S	Sn	18 42 20.7	+2.6
YAZI	Mula-Dat§a-	1.06	15	P	Pn	18 42 07.2	+1.7
YAZI				S	Sn	18 42 16.3	-3.2
ASTA	Astypalaia	1.07	326	P	Pn	18 42 06.4	+0.7
ASTA				S	Sn	18 42 19.0	-0.8
DAT	Datca	1.13	20	Pn	Pn	18 42 08.4	+1.8
DAT				Sn	Sn	18 42 23.3	+1.9
KLNA	Kalymnos	1.30	355	P	Pn	18 42 08.9	+0.2
KLNA				S	Sn	18 42 24.8	-0.3
BODT	Bodrum	1.41	7	Pn	Pn	18 42 12.1	+1.9
BODT				Sn	Sn	18 42 29.7	+1.9
BODT	Bodrum	1.41	7	P	Pn	18 42 12.3	+2.1
BODT				S	Sn	18 42 29.7	+1.9
BDRM	Kayabasi	1.43	11	P	Pn	18 42 11.7	+1.3
BDRM				S	Sn	18 42 29.9	+1.6
BDRM				*i* IAML		18 42 30.0	
	comp=E,363nm,0.3s						
TURN	Turunc	1.44	39	Pn	Pn	18 42 12.7	+2.1
TURN	Turunc	1.44	39	P	Pn	18 42 12.7	+2.1
TURN				S	Sn	18 42 30.7	+2.1
TURN				*i* IAML		18 42 32.0	
	comp=E,318nm,0.2s						
TURN				*i* IAML		18 42 38.0	
	comp=N,284nm,0.5s						
YKAV	Yalikavak-Bodr	1.47	5	Pn	Pn	18 42 12.9	+2.0
YKAV				Sn	Sn	18 42 31.1	+1.9
THR8	Santorini-Mono	1.51	300	P	Pn	18 42 13.1	+1.6
THR6	Thira Island,	1.55	297	P	Pn	18 42 13.6	+1.6
THR2	Thira island,	1.56	301	P	Pn	18 42 14.0	+1.8
THR3	Thira Island,	1.57	299	P	Pn	18 42 14.0	+1.7
THR9	Santorini-Faro	1.58	297	P	Pn	18 42 14.5	+2.1
CMBO	Columbo, Santo	1.59	301	P	Pn	18 42 14.5	+1.8
CMBO				S	Sn	18 42 33.1	+0.8
CMBO	Columbo, Santo	1.59	301	P	Pn	18 42 13.4	+0.7
CMBO				S	Sn	18 42 32.0	-0.3
THR5	Thira Island,	1.61	298	P	Pn	18 42 14.8	+1.9
SAP3	Santorini-Thir	1.62	299	P	Pn	18 42 15.1	+2.0
SAP3	Santorini-Thir	1.62	299	P	Pn	18 42 13.4	+0.3
DALY	Dalyan (Mula)	1.70	47	Pn	Pn	18 42 16.4	+2.3
MLSB	Milas	1.72	18	Pn	Pn	18 42 16.7	+2.3

MLSB				Sn	Sn	18 42 37.2	+1.9
DDIM	Aydin, Didim	1.79	3	P	Pn	18 42 17.9	+2.5
DDIM				S	Sn	18 42 39.8	+2.7
DDIM				*i* IAML		18 42 46.0	
	comp=E,175nm,0.8s						
DDIM				*i* IAML		18 42 49.0	
	comp=N,190nm,1.2s						
IDI	Anoyia	1.84	259	Pn	Pn	18 42 17.7	+1.5
IDI	Anoyia	1.84	259	Pn	Pn	18 42 17.2	+1.1
	12nm,0.3s,baz=82,slow=13,SNR=100						
IDI				Sn	Sn	18 42 40.0	+1.6
	38nm,0.3s,baz=292,slow=19,SNR=9.8						
IDI	Anoyia	1.84	259	P	Pn	18 42 17.6	+1.5
MULA	Mugla, Merkez-	1.87	31	P	Pn	18 42 19.1	+2.7
MULA				S	Sn	18 42 41.5	+2.4
MULA				*i* IAML		18 42 50.0	
	comp=N,78nm,0.4s						
MULA				*i* IAML		18 42 51.0	
	comp=E,154nm,0.4s						
FETY	Fethiye	1.87	58	Pn	Pn	18 42 18.4	+1.9
FETY	Fethiye	1.87	58	P	Pn	18 42 19.9	+3.5
IZZE	Mula-Seydike	1.89	65	P	Pn	18 42 18.3	+1.7
IZZE				S	Sn	18 42 40.5	+1.2
APE	Apeiranthos	1.89	318	Pn	Pn	18 42 18.3	+1.6
APE	Apeiranthos	1.89	318	P	Pn	18 42 18.3	+1.6
APE				S	Sn	18 42 39.8	+0.2
APE	Apeiranthos	1.89	318	⇓P	Pn	18 42 18.4	+1.6
APE				⇓S	Sn	18 42 40.7	+1.1
APE	Apeiranthos	1.89	318	P	Pn	18 42 18.9	+2.1
APE	Apeiranthos	1.89	318	P	Pn	18 42 17.5	+0.8
APE				S	Sn	18 42 39.2	-0.4
SABU	Mula-Dalaman	1.90	52	P	Pn	18 42 19.4	+2.6
SABU				*i* IAML		18 42 45.0	
	comp=E,105nm,0.3s						
SABU				*i* IAML		18 42 46.0	
	comp=N,93nm,0.4s						
GCAM	G?zelcaml?	2.04	3	Pn	Pn	18 42 21.1	+2.5
GCAM	G?zelcaml?	2.04	3	P	Pn	18 42 21.2	+2.5
GCAM				S	Sn	18 42 45.3	+2.3
GCAM				*i* IAML		18 42 46.0	
	comp=E,120nm,0.7s						
GCAM				*i* IAML		18 42 49.0	
	comp=N,85nm,0.3s						
AKAS	Kas	2.11	74	Pn	Pn	18 42 21.6	+1.9
PRNS	Prines Rethymn	2.14	263	P	Pn	18 42 22.4	+2.3
CAME	Cameli-Denizli	2.19	54	Pn	Pn	18 42 23.4	+2.6
DNZT	Denizli-Tavas-	2.24	43	P	Pn	18 42 24.2	+2.7
DNZT				S	Sn	18 42 52.1	+4.1
DNZT				*i* IAML		18 42 57.0	
	comp=E,62nm,0.9s						
DNZT				*i* IAML		18 42 59.0	
	comp=N,108nm,0.5s						
TAVA	DENIZLI_Tavas	2.31	38	P	Pn	18 42 24.9	+2.4
TAVA				S	Sn	18 42 52.0	+2.0
TAVA				*i* IAML		18 42 58.0	
	comp=N,66nm,0.2s						
TAVA				*i* IAML		18 42 58.0	
	comp=E,110nm,0.3s						
ESEN	Aydn-Nazilli	2.35	25	P	Pn	18 42 25.5	+2.6
ESEN				S	Sn	18 42 52.8	+2.1
ESEN				*i* IAML		18 42 54.0	
	comp=E,75nm,0.2s						
ESEN				*i* IAML		18 42 56.0	
	comp=N,69nm,0.5s						
ELL	Elmali	2.51	64	P	Pn	18 42 27.9	+2.7
IMMV	Iera Moni Meta	2.55	266	P	Pn	18 42 27.8	+2.1
IMMV	Iera Moni Meta	2.55	266	P	Pn	18 42 27.8	+2.1
IZMR	zmir-demi	2.56	15	P	Pn	18 42 28.2	+2.5
IZMR				S	Sn	18 42 57.0	+1.2
IZMR				*i* IAML		18 42 58.0	
	comp=E,37nm,0.4s						
IZMR				*i* IAML		18 43 03.0	
	comp=N,30nm,0.5s						
GVD	Gavdhos	2.60	252	P	Pn	18 42 29.2	+2.9
GVD	Gavdhos	2.60	252	P	Pn	18 42 28.9	+2.5
BLCB	Balcova	2.72	359	P	Pn	18 42 30.2	+2.3
KNDR	Palaiochora Ch	2.82	262	P	Pn	18 42 32.8	+3.5
KNDR	Palaiochora Ch	2.82	262	P	Pn	18 42 32.0	+2.7
CHOS	Chios island	2.85	343	P	Pn	18 42 31.7	+2.0
CHOS				S	Sn	18 43 04.2	+1.3
CHOS	Chios island	2.85	343	P	Pn	18 42 30.8	+1.1
ANKY	Antikythira Is	3.10	275	P	Pn	18 42 35.8	+2.6
ANKY	Antikythira Is	3.10	275	P	Pn	18 42 34.9	+1.8
KTHA	Kythira Island	3.33	281	P	Pn	18 42 38.5	+2.2
VLI	Veliai	3.53	289	P	Pn	18 42 40.4	+1.3
VLX	Vlachokerasia	4.17	296	P	Pn	18 42 50.4	+2.6
EZN	Ezine	4.20	352	⇓P	Pn	18 42 49.8	+1.6
CSS	Mathiatis	5.14	96	P	Pn	18 42 59.1	-2.0
CSS	Mathiatis	5.14	96	S	Sn	18 43 54.4	-4.7
BRTR	Keskin Array B	6.58	50	Pn	Pn	18 43 16.4	-4.4
	0.1nm,0.3s,baz=210,slow=11,SNR=4.6						
BRTR				Sn	Sn	18 44 33.1	-1.4
	0.3nm,0.3s,baz=219,slow=26,SNR=7.6						
OFRI	`Ofer	7.20	113	P	Pn	18 43 25.9	-3.5
OFRI	`Ofer	7.20	113	S	Sn	18 44 43.2	-6.6
MMA0B	Mount Meron ar	7.35	109	P	Pn	18 43 29.1	-2.3
MMA0B	Mount Meron ar	7.35	109	S	Sn	18 44 47.9	-5.6
MMAI	Mount Meron Ar	7.35	109	Pn	Pn	18 43 29.9	-1.6
	2.1nm,0.3s,baz=316,slow=13,SNR=10						
MMAI				Sn	Sn	18 44 53.7	+0.2
	8.2nm,0.3s,baz=272,slow=26,SNR=4.1						
	1.1nm,0.3s						
SLTI	Sal'it	7.42	115	P	Pn	18 43 29.1	-3.2
SLTI	Sal'it	7.42	115	S	Sn	18 44 48.7	-6.4
GEM	Giv'at Ha'Em	7.48	107	P	Pn	18 43 30.4	-2.8
GEM	Giv'at Ha'Em	7.48	107	S	Sn	18 44 50.9	-5.6
NATI	Neve Ativ	7.52	106	P	Pn	18 43 30.6	-3.0
NATI	Neve Ativ	7.52	106	S	Sn	18 44 52.2	-5.2
MMLI	Mount Malkishu	7.61	113	P	Pn	18 43 32.1	-2.9
MMLI	Mount Malkishu	7.61	113	S	Sn	18 44 53.2	-6.6
AMAZ	Amatzia	7.71	120	P	Pn	18 43 32.9	-3.4
AMAZ	Amatzia	7.71	120	S	Sn	18 44 55.7	-6.4
KZIT	Kziot	7.73	126	P	Pn	18 43 33.4	-3.2
KZIT	Kziot	7.73	126	S	Sn	18 44 55.2	-7.4
HMDT	Nahal Hemdat	7.78	114	P	Pn	18 43 34.1	-3.1
HMDT	Nahal Hemdat	7.78	114	S	Sn	18 44 58.2	-5.6
UJAP	Al Uja	7.88	116	P	Pn	18 43 35.1	-3.4
UJAP	Al Uja	7.88	116	S	Sn	18 45 00.7	-5.5
YTIR	Yattir	7.95	120	P	Pn	18 43 36.1	-3.4
YTIR	Yattir	7.95	120	S	Sn	18 45 02.2	-5.8
DSI	Dead Sea	8.02	118	P	Pn	18 43 37.4	-3.1
DSI	Dead Sea	8.02	118	S	Sn	18 45 03.2	-6.5
MDBI	Mazsada	8.14	120	P	Pn	18 43 38.4	-3.8
MDBI	Mazsada	8.14	120	S	Sn	18 45 06.0	-6.7
MSBI	Mazada	8.14	120	P	Pn	18 43 38.9	-3.3
MSBI	Mazada	8.14	120	S	Sn	18 45 06.5	-6.2
GHAJ	Ghor Haditha	8.30	119	P	Pn	18 43 41.1	-3.1
GHAJ	Ghor Haditha	8.30	119	S	Sn	18 45 10.7	-5.8
KRMI	Paran Flat	8.46	129	P	Pn	18 43 43.4	-3.2
KRMI	Paran Flat	8.46	129	S	Sn	18 45 13.3	-7.3
ZFRI	Zfri	8.47	125	P	Pn	18 43 42.9	-3.8
ZFRI	Zfri	8.47	125	S	Sn	18 45 13.0	-7.8
PRNI	Paran	8.49	126	P	Pn	18 43 43.9	-3.0
PRNI	Paran	8.49	126	S	Sn	18 45 14.0	-7.3
HRFI	Mount Harif	8.71	128	P	Pn	18 43 46.9	-3.2
HRFI	Mount Harif	8.71	128	S	Sn	18 45 19.5	-7.4
MBRI	Mt Berech	8.80	129	P	Pn	18 43 47.9	-3.4
MBRI	Mt Berech	8.80	129	S	Sn	18 45 21.7	-7.3
ASF	Jabal al Asfar	8.85	110	Pn	Pn	18 43 51.1	-0.8
	0.4nm,0.3s,baz=338,slow=5.7,SNR=2.0						
ASF				Sn	Sn	18 45 28.4	-1.8
	0.6nm,0.3s,baz=7.5,slow=4.8,SNR=2.3						
	1.2nm,0.4s						
EIL	Elat	8.91	130	Pn	Pn	18 43 51.4	-1.3
	0.5nm,0.3s,baz=304,slow=3.1,SNR=15						
EIL				Sn	Sn	18 45 23.3	-8.3
	3.4nm,0.3s,baz=239,slow=23,SNR=14						
	1.4nm,0.3s						
EIL	Elat	8.91	130	P	Pn	18 43 49.4	-3.3
EIL	Elat	8.91	130	S	Sn	18 45 24.0	-7.6
VAE	Valguarnera	10.37	284	Pn	Pn	18 44 10.0	-2.6
	2.2nm,0.3s,baz=2.4,slow=21,SNR=1.0						
AKASG	Malin Array Be	15.11	5	Pn	Pn	18 45 10.8	-5.5
	0.1nm,0.3s,baz=194,slow=11,SNR=15						
VRAC	Vranov	15.66	334	Pn	Pn	18 45 19.9	-3.5
	1.7nm,0.4s,baz=73,slow=3.8,SNR=4.6						
GERES	GERESS Array B	16.46	327	Pn	Pn	18 45 30.6	-2.9
	baz=176,slow=17,SNR=7.1						
DAVOX	Davos/Dischmat	17.03	316	LR	LR	18 52 37.4	
	comp=Z,15nm,20.1s,baz=177,slow=39						
ESDC	Sonseca Array	24.85	289	P	P	18 47 04.0	+0.7
	0.4nm,0.7s,baz=80,slow=9.4,SNR=4.4						
	0.4nm,0.7s						
FINES	FINESS Array B	25.81	359	P	P	18 47 09.9	-1.9
	0.4nm,0.4s,baz=167,slow=12,SNR=5.5						
	0.4nm,0.4s						
HFS	Hagfors	25.98	345	P	P	18 47 11.4	-1.9
	1.3nm,0.9s,baz=156,slow=12,SNR=5.9						
	1.3nm,0.9s						
EKA	Eskdalemuir Ar	28.57	323	P	P	18 47 36.5	-0.1
	0.1nm,0.3s,baz=75,slow=15,SNR=1.4						
	0.1nm,0.3s						
BVAR	Borovoye Array	34.85	46	P	P	18 48 31.4	-0.3
	0.2nm,0.4s,baz=179,slow=30,SNR=2.1						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	39.57	51	P	P	18 49 12.1	+0.4
	0.5nm,0.3s,baz=271,slow=8.4,SNR=16						
	0.5nm,0.3s						
MKAR	Makanchi Array	42.17	57	P	P	18 49 34.9	+1.7
	0.4nm,0.5s,baz=271,slow=8.0,SNR=6.5						
	0.4nm,0.5s						
ZALV	Zalesovo Beam	43.51	47	P	P	18 49 44.9	+1.0
	1.0nm,0.3s,baz=265,slow=10.0,SNR=5.2						
	1.0nm,0.3s						
SONM	Songino Array	57.94	51	P	P	18 51 34.8	+2.2
	0.7nm,0.5s,baz=301,slow=8.9,SNR=2.8						
	0.7nm,0.5s						
USRK	Ussuriysk Ar.	75.36	46	P	P	18 53 24.1	+0.6
	0.9nm,0.5s,baz=286,slow=3.2,SNR=6.5						
	0.9nm,0.5s						
KSRS	Korea Array	76.71	53	P	P	18 53 31.6	+0.3
	0.9nm,0.8s,baz=308,slow=4.6,SNR=2.1						
	0.9nm,0.8s						

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*SJA **15** 19:04:15.8±0.8, 22°.52S×66°.14W, h269^{km}±8^{km}, ML3.8, MW3.6*

ISC 15 19:04:17.8±1.4, **22°.58S**±0°.06×**66°.28W**±0°.06, **h250^{km}, n20, σ1^{s}.14**/35, **2C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YJA	Yavi	0.82	61	*e*P	Pn	19 04 52.9	+0.5
YJA				*e*S	S	19 05 17.9	-1.7
SALTA		1.64	182	*e*P	Pn	19 04 58.7	+0.9
SLA	San Lorenzo	2.25	162	*e*P	Pn	19 05 03.1	+0.4
PB09	IPOC Station P	2.85	285	⇑*i*P	Pn	19 05 10.3	+1.4
PB09				*e*S	S	19 05 50.3	+1.1
PB09				IAML		19 05 55.6	
	comp=N,77nm,0.3s						
PB09	IPOC Station P	2.85	285	*e*P	Pn	19 05 09.9	+1.0
PB09				*e*S	S	19 05 50.8	+1.6
PB06	IPOC Station P	3.04	267	*e*P	Pn	19 05 11.9	+1.0
PB06				*e*S	S	19 05 52.1	-0.8
PB06				IAML		19 05 55.9	
	comp=N,178nm,0.1s						
PB06	IPOC Station P	3.04	267	*e*P	Pn	19 05 11.5	+0.6
PB06				*e*S	S	19 05 53.4	+0.5
PB06				IAML		19 05 56.1	
	comp=Z,97nm,0.4s						
PB03	IPOC Station P	3.26	279	⇑*i*P	Pn	19 05 13.8	+0.5
PB03				IAML		19 05 56.4	
	comp=E,277nm,0.2s						
PB03	IPOC Station P	3.26	279	*e*P	Pn	19 05 13.9	+0.7
PB03				*e*S	S	19 05 56.1	-1.0
PB03				IAML		19 05 58.9	
	comp=Z,208nm,0.2s						
PB01	IPOC Station P	3.35	297	*e*P	Pn	19 05 14.4	+0.2
PB01				*e*S	S	19 05 58.6	-0.3
PB01				IAML		19 05 60.0	
	comp=Z,91nm,0.3s						
PB08	IPOC Station P	3.61	312	*e*P	Pn	19 05 18.6	+1.0
PB08				*e*S	S	19 06 05.9	+1.1
PB05	IPOC Station P	3.63	265	*e*P	Pn	19 05 17.9	+0.5
PB05				*e*S	S	19 06 03.2	-1.5
GO02	Mina Guanaco	3.97	229	*e*P	Pn	19 05 22.1	+0.6
GO02				*e*S	S	19 06 11.8	-0.4
GO01	Chusmiza	3.97	316	*e*P	Pn	19 05 11.5	-10
GO01				*e*S	S	19 06 14.6	+2.1
PATCX	Punta Patache	4.00	295	*e*P	Pn	19 05 22.2	+0.4
PATCX				*e*S	S	19 06 11.3	-1.2
PATCX				IAML		19 06 12.3	
	comp=Z,89nm,0.5s						
PB10	IPOC Station P	4.04	256	*e*P	Pn	19 05 22.5	+0.4
PB10				*e*S	S	19 06 11.5	-1.7
PB10				IAML		19 06 12.9	
	comp=Z,84nm,0.4s						
HMBC	Humberstone	4.07	304	*e*P	Pn	19 05 22.5	-0.1
HMBC				*e*S	S	19 06 12.3	-1.6
HMBC				IAML		19 06 15.1	
	comp=Z,106nm,0.3s						
TA01	Diego Aracena	4.15	298	*e*P	Pn	19 05 23.5	+0.2
TA01				*e*S	S	19 06 13.0	-2.4
TA01				IAML		19 06 14.6	
	comp=Z,39nm,1.6s						
PB11	IPOC Station P	4.22	311	*e*P	Pn	19 05 24.2	-0.1
PB11				*e*S	S	19 06 15.1	-2.1
PB11				IAML		19 06 17.1	
	comp=Z,50nm,0.3s						
PB14	IPOC Station P	4.29	241	*e*P	Pn	19 05 25.7	+0.3
PB14				IAML		19 06 20.6	
	comp=Z,105nm,0.3s						

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*NAO **15** 19:13:21.6±0.7, 71°.41N×11°.28W, ML3.4*

*BER **15** 19:13:22.7±4.5, 71°.46N×11°.11W, h10^{km}, Mw4.7, ML3.4(NAO), Confirmed Earthquake*

*DNK **15** 19:13:24.9±2.3, 71°.63N×11°.97W, h15^{km}, ML2.2*

ISC 15 19:13:19.3±2.3, **71°.6N**±0°.1×**11°.17W**±0°.07, **h3^{km}**±21^{km}, **n43, σ1^{s}.89**/57, **1C-1D, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMI	Jan Mayen	1.01	128	Pg	Pg	19 13 39.0	+0.3
JMI				Sg	Sg	19 13 50.5	-1.3
JMI	Jan Mayen	1.01	128	⇑*e*P	Pg	19 13 38.9	+0.3
JMI				*e*S	Sg	19 13 50.4	-1.3
JMI				IAML		19 13 51.7	
	comp=Z,1µm,0.3s						
JNW	Jan Mayen West	1.03	120	⇓*i*P	Pg	19 13 39.0	-0.1
JNW				*e*S	Sg	19 13 51.0	-1.4
JNW				IAML		19 13 52.6	
	comp=Z,863nm,0.2s						
JMIC	Jan Mayen	1.04	123	Pg	Pg	19 13 39.3	+0.1
JMIC				Sg	Sg	19 13 51.0	-1.5
JMIC	Jan Mayen	1.04	123	*e*P	Pg	19 13 38.9	-0.2
JMIC				*e*S	Sg	19 13 50.7	-1.8
JMIC				IAML		19 13 56.0	
	comp=Z,1µm,0.3s						
JNE	Jan Mayen East	1.09	120	*e*P	Pg	19 13 39.7	-0.5
JNE				*e*S	Sg	19 13 51.4	-2.9
JNE				IAML		19 13 54.2	
	comp=Z,1µm,0.2s						
SCO	Scoresbysund	3.68	258	*i* P	Pn	19 14 17.7	+0.7
SCO	Scoresbysund	3.68	258	*i* P	Pn	19 14 16.6	-0.4
DBG	Daneborg	3.84	320	Pn	Pn	19 14 20.6	+1.5
DBG				Sn	Sn	19 15 02.3	-2.3
DBG	Daneborg	3.84	320	*i* P	Pn	19 14 18.8	-0.3
DBG				*i* S	Sn	19 15 02.0	-2.5
DBG	Daneborg	3.84	320	*i* P	Pn	19 14 21.0	+1.9
DBG				IAML		19 15 04.7	
	comp=Z,11nm,0.5s						
DAG	Danmarks Havn	5.62	342	*i* P	Pn	19 14 45.2	+1.7
DAG				*i* S	Sn	19 15 46.1	-2.4
DAG	Danmarks Havn	5.62	342	*e*	Pn	19 14 43.1	-0.5
	baz=165,slow=14						
DAG				*i* P	Pn	19 14 45.0	+1.5
DAG				*i* P	Pn	19 14 45.5	+2.0
DAG				*i* S	Sn	19 15 43.8	-4.6
DAG				IAML		19 15 47.8	
	comp=Z,6.9nm,0.3s						
HSPB	Hornsund (broa	8.97	41	Pn	Pn	19 15 31.6	+2.0
HSPB	Hornsund (broa	8.97	41	*e*P	Pn	19 15 31.5	+2.0
LOF	Lofoten	9.15	100	Pn	Pn	19 15 33.1	+1.2
LOF	Lofoten	9.15	100	*e*P	Pn	19 15 34.2	+2.2
KBS	Kingsbay	9.35	28	Pn	Pn	19 15 36.8	+2.2
KBS	Kingsbay	9.35	28	*e*P	Pn	19 15 37.0	+2.3
KBS	Kingsbay	9.35	28	*e*P	Pn	19 15 37.3	+2.7
KBS				*e*S	Sn	19 17 13.0	-7.1
SPA0	Spitsbergen Ar	9.66	35	Pn	Pn	19 15 41.8	+2.9
	baz=230,slow=14						
SPA0				Sn	Sn	19 17 25.0	-2.7
	baz=239,slow=28						
SPA0	Spitsbergen Ar	9.66	35	Pn	Pn	19 15 41.8	+2.9
	baz=230,slow=14						
SPA0				Sn	Sn	19 17 25.0	-2.7
	baz=239,slow=28						
STEI	Steigen	9.80	99	Pn	Pn	19 15 41.8	+1.0
STEI	Steigen	9.80	99	*e*P	Pn	19 15 42.6	+1.8
KONS	Konsvik	10.01	108	Pn	Pn	19 15 44.6	+0.8
KONS				Sn	Sn	19 17 28.3	-8.1
KONS	Konsvik	10.01	108	*e*P	Pn	19 15 44.4	+0.6
STOK	Stokkvaagen	10.09	109	Pn	Pn	19 15 45.7	+0.8
STOK				Sn	Sn	19 17 30.1	-8.2
TRO	Tromso	10.13	86	*e*P	Pn	19 15 46.6	+1.2
NOR	Nord	10.17	355	Pn	Pn	19 15 47.8	+1.9
NOR				Sn	Sn	19 17 35.6	-4.5
NOR	Nord	10.17	355	*i* P	Pn	19 15 47.4	+1.6
NOR				*i* S	Sn	19 17 38.2	-1.9
NOR	Nord	10.17	355	*i* P	Pn	19 15 47.0	+1.1
NOR				IAML		19 17 41.0	
	comp=Z,6.2nm,0.4s						
LEIR	Leirfjorden	10.27	110	*e*P	Pn	19 15 48.2	+0.9
HOPEN	Hopen	10.94	47	Pn	Pn	19 15 59.2	+2.8
HOPEN	Hopen	10.94	47	*e*P	Pn	19 15 59.8	+3.4
KIF	Kilpisjarvi	11.01	88	Pn	Pn	19 15 59.8	+2.4
KIF	Kilpisjarvi	11.01	88	*e*P	Pn	19 15 59.8	+2.4
AKN	Aaknes	11.75	134	Pn	Pn	19 16 08.1	+0.6
AKN				Sn	Sn	19 18 08.1	-11
AKN	Aaknes	11.75	134	Pn	Pn	19 16 08.1	+0.6
AKN				Sn	Sn	19 18 08.1	-11
HEF	Hetta	12.21	88	Pn	Pn	19 16 16.1	+2.3
HEF	Hetta	12.21	88	Pn	Pn	19 16 16.1	+2.3
ARA0	ARCESS Array S	12.26	82	Pn	Pn	19 16 16.1	+1.7
	baz=286,slow=12						
ARA0	ARCESS Array S	12.26	82	Pn	Pn	19 16 16.1	+1.7
	baz=286,slow=12						
KEV	Kevo	12.63	80	*e*P	Pn	19 16 22.0	+2.5

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*LDG **15** 19:24:02.9±0.1, 48°.24N×7°.27E, h2^{km}, Md2.4/2, Ml2.6/19, Error ellipse: s-maj=1.6km s-min=1.2km az=118.0*

*STR **15** 19:24:03.2±0.3, 48°N±2°×°±°, h2^{km}, MLv2.0/6, Error ellipse: s-maj=0.0km s-min=0.0km az=118.4, preliminary*

*BGR **15** 19:24:03.2±0.4, 48°.28N×7°.29E, h10^{km}, ML2.2/11, Error ellipse: s-maj=4.4km s-min=3.3km az=68.0*

*VIE **15** 19:24:03.8±0.8, 48°.24N×7°.39E, h10^{km}±3^{km}, mb2.3/3, ml2.4/4, Error ellipse: s-maj=5.0km s-min=3.1km az=132.0 11 km NW of Elsass*

*PRU **15** 19:24:16.3, 48°.61N×7°.83E, h1^{km}*

ISC 15 19:24:01.7±0.8, **48°.25N**±0°.02×**7°.26E**±0°.01, **h15^{km}**±5^{km}, **n61, σ0^{s}.98**/101, **France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECH	Echery	0.07	244	Pg	Pg	19 24 04.7	0.0
ECH				Sg	Sg	19 24 06.0	-0.7
CDF	Champ du Feu	0.17	5	*e*Pg	Pb	19 24 06.0	-0.6
CDF				*e*Sg	Sg	19 24 08.2	-0.5
	96nm,0.3s						
WLS	Welschbruch	0.18	22	Pg	Pb	19 24 06.5	-0.3
WLS				Sg	Sg	19 24 08.9	-0.1
ZELS	Zelsheim	0.26	77	Pg	Pb	19 24 08.0	0.0
ZELS				Sg	Sg	19 24 12.0	+1.0
WALT	Westhalten	0.28	177	Pg	Pb	19 24 08.5	0.0
WALT				Sg	Sb	19 24 12.5	-0.6
VOGT	Vogtsburg - To	0.32	121	Pg	Pb	19 24 09.1	-0.1
VOGT	Vogtsburg - To	0.32	121	Sg	Sb	19 24 13.3	-0.9
HOHE	HOHENGOEFT	0.44	20	Pg	Pb	19 24 11.4	+0.1
HOHE				Sg	Sb	19 24 17.4	-0.3
XAFF	Xaffevillers	0.45	291	Pg	Pb	19 24 12.2	+0.7
XAFF				Sg	Sb	19 24 18.3	+0.3
HINF	Hinteralfeld	0.51	212	*e*Pg	Pb	19 24 12.7	+0.3
HINF	Hinteralfeld	0.51	212	*e*Pn	Pn	19 24 14.9	+0.4
HINF				*e*Sg	Sb	19 24 19.5	-0.1
	56nm,0.2s						
KIZ	Kirchzarten	0.53	123	Pg	Pb	19 24 12.7	-0.1
KIZ	Kirchzarten	0.53	123	Sg	Sb	19 24 20.1	-0.2
ILLF	Illfurth	0.56	180	Pg	Pb	19 24 14.2	+0.8
ILLF				Sg	Sb	19 24 21.8	+0.6
HAU	Haudompre	0.65	249	*e*Pg	Pb	19 24 15.6	+0.7
HAU	Haudompre	0.65	249	*e*Pn	Pn	19 24 16.8	+0.3
HAU				*e*Sn	Sn	19 24 27.6	+1.0
	182nm,0.3s						
BFO	Black Forest	0.72	83	*e*Pg	Pb	19 24 16.2	+0.1
BFO				*e*Sg	Sn	19 24 27.7	-0.6
SULZ	Cheisacher	0.92	141	*e*Pg	Pn	19 24 20.8	+0.6
SULZ				*e*Sg	Sn	19 24 33.3	0.0
BALST	Balsthal	0.96	162	*e*Sg	Sn	19 24 35.0	+0.8
SLE	Schleitheim	0.96	120	*e*Pg	Pn	19 24 21.4	+0.6
PAGF	Fort de Pagny	1.06	287	*e*Pg	Pn	19 24 23.9	+1.8
PAGF				*e*Sg	Sn	19 24 38.1	+1.4
	56nm,0.3s						
WILA	Wila	1.39	126	*e*Sg	Sg	19 24 47.7	+1.2
STU	Stuttgart	1.39	67	*e*Sg	Sg	19 24 47.1	+0.5
SAVF	Savonnieres en	1.47	285	*e*Pg	Pg	19 24 30.4	+0.5
SAVF	Savonnieres en	1.47	285	*e*Pg	Pg	19 24 30.9	+1.0
	baz=106						
SAVF				*e*Sn	Sn	19 24 47.2	+0.6
SAVF				*e*Sg	Sg	19 24 49.6	+0.7
	12nm,0.2s						
SAVF				*e*Sg	Sg	19 24 49.6	+0.7
	15nm,0.2s						
SFTF	Sexfontaines	1.48	269	*e*Pn	Pb	19 24 29.0	0.0
SFTF	Sexfontaines	1.48	269	*e*Pg	Pg	19 24 31.5	+1.3
SFTF				*e*Sg	Sg	19 24 51.4	+1.9
	15nm,0.2s						
MEZF	Maizieres J'vi	1.49	281	*e*Pg	Pg	19 24 31.6	+1.2
	baz=100						
MEZF				*e*Sg	Sg	19 24 51.4	+1.7
	17nm,0.3s						
WLF	Walferdange	1.59	333	*e*Pg	Pg	19 24 33.0	+0.6
WLF				*e*Sg	Sg	19 24 53.8	+0.7
CABF	La Chapelle	1.82	206	*e*Pn	Pn	19 24 33.6	+1.0
CABF				*e*Sn	Sn	19 24 54.8	-0.6
CABF				*e*Sg	Sg	19 25 01.2	+1.0
	4.9nm,0.2s						
UBR	Ueberruh	2.00	105	*e*Sg	Sg	19 25 06.4	+0.4
DAVA	Damuels	2.02	118	*e*Pn	Pn	19 24 36.2	+0.9
	0.2nm,0.1s						
DAVA				*e*Sn	Sb	19 25 02.0	-1.1
	1.5nm,0.3s						
DAVA				*e*Sg	Sg	19 25 07.9	+1.4
	1.1nm,0.2s						
TNS	Taunus Mts	2.13	21	*e*Sg	Sg	19 25 08.8	-1.3
NORI	Noerdlinger Ri	2.29	77	*e*Sg	Sg	19 25 15.3	0.0
GIVF	Givet	2.45	320	*e*Pg	Pg	19 24 47.7	-0.9
GIVF				*e*Sg	Sg	19 25 19.6	-0.8
	5.0nm,0.3s						
RETA	Reutte	2.48	107	*e*Sn	Sn	19 25 13.6	+1.9
	0.5nm,0.2s						
RETA				*e*Sg	Sg	19 25 22.5	+1.0
	3.3nm,0.3s						
LOR	Lormes	2.49	248	*e*Pn	Pn	19 24 42.2	+0.4
	baz=64						
LOR	Lormes	2.49	248	*e*Pg	Pg	19 24 49.2	-0.3
	baz=65						
LOR				*e*Sg	Sg	19 25 20.8	-0.9
	6.9nm,0.2s						
BAIF	Baives	2.70	313	*e*P	Pb	19 24 47.7	-2.0
BAIF	Baives	2.70	313	*e*Pg	Pg	19 24 52.9	-0.5
BAIF				*e*Sg	Sg	19 25 27.9	-0.5
	2.1nm,0.2s						
MOTA	Moosalm	2.75	108	*e*Sg	Sg	19 25 30.0	+0.1
	1.5nm,0.1s						
LPL	La Plagne	2.75	188	*e*Pn	Pn	19 24 45.8	+0.2
LPG	La Plagne	2.77	187	*e*P	Pn	19 24 47.6	+1.7
LPG				*e*Sn	Sn	19 25 18.8	-0.4
	1.0nm,0.2s						
SSF	Saint Saulge	2.80	246	*e*Pn	Pn	19 24 46.3	+0.4
SSF	Saint Saulge	2.80	246	*e*Pg	Pg	19 24 55.5	+0.2
SSF				*e*Sg	Sg	19 25 30.7	-0.9
	5.1nm,0.3s						
SMF	Signal de Mont	2.82	237	*e*Pg	Pg	19 24 55.8	+0.1
SMF				*e*Sn	Sn	19 25 19.5	-0.4
SMF				*e*Sg	Sg	19 25 31.5	-0.7
	5.3nm,0.2s						
SQTA	Sankt Quirin	2.86	110	*i* Pn	Pn	19 24 49.1	+2.2
	1.1nm,0.2s						
SQTA				*e*Sg	Sg	19 25 34.6	+1.0
	4.7nm,0.4s						
GRF	Grafenberg Arr	2.99	60	*e*Sg	Sg	19 25 35.8	-1.8
AVF	Avril sur Loir	3.02	243	*e*Pn	Pn	19 24 49.4	+0.4
AVF	Avril sur Loir	3.02	243	*e*Pg	Pg	19 24 59.5	0.0
AVF				*e*Sn	Sn	19 25 24.4	-0.5
AVF				*e*Sg	Sg	19 25 37.7	-0.9
	2.3nm,0.3s						
HYF	Humbligny	3.26	254	*e*Pg	Pg	19 25 05.0	+0.8
HYF				*e*Sg	Sg	19 25 46.3	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BGF	Bois d'Agland	3.44	242	ePn	Pn	19 24 55.0	+0.3
BGF	Bois d'Agland	3.44	242	ePg	Pg	19 25 06.9	-0.6
BGF				eSn	Sn	19 25 34.5	-0.7
BGF				eSg	Sg	19 25 51.2	-0.9
	8.7nm,0.4s						
ORIF	Oris-en-Rattie	3.46	196	ePn	Pn	19 24 55.8	+0.6
VIVF	Saint-Julien-l	3.83	209	ePg	Pg	19 25 14.4	-0.7
VIVF				eSg	Sg	19 26 02.4	-2.3
	0.9nm,0.2s						
WET	Wettzell	3.83	74	eSg	Sg	19 26 03.2	-1.5
TCF	Toulx Ste Croi	3.95	242	ePg	Pg	19 25 15.1	-2.3
TCF				eSg	Sg	19 26 07.1	-1.5
	1.3nm,0.2s						
KHC	Kasperske Hory	4.28	76	eSG	Sg	19 26 17.4	-1.7
	2.0nm,0.5s						
CKRC	Cesky Krumlov	4.72	80	eSG	Sg	19 26 32.1	-1.1
LASF	Ste Croix	4.79	211	ePg	Pg	19 25 31.8	-1.7
LASF				eSg	Sg	19 26 34.1	-1.4
	1.3nm,0.3s						
MFF	Saint Martin d	5.29	255	ePg	Pg	19 25 41.7	-1.2

IDC 15 19:28:21.6±13.0**,20°.25S**×**178°.25W,h482**km±98km**,**
mb3.2/4**,mbtmp4.2**/6**,Error ellipse: s-maj=164.8km**
s-min=30.0km az=41.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	14.40	260	P	P	19 31 27.1	+1.2
	7.8nm,0.8s,baz=74,slow=17,SNR=7.3						
URZ	Urewera	18.39	192	P	P	19 32 05.3	-1.0
	8.3nm,1.0s,baz=355,slow=21,SNR=1.5						
STKA	Stephens Creek	37.69	244	P	P	19 34 55.1	+0.1
	2.3nm,0.7s,baz=80,slow=11,SNR=3.8						
	2.3nm,0.7s						
ASAR	Alice Springs	44.35	257	P	P	19 35 48.4	+0.1
	3.5nm,0.6s,baz=94,slow=8.2,SNR=51						
	3.5nm,0.6s						
WRA	Warramunga Arr	44.40	262	P	P	19 35 48.2	-0.6
	0.7nm,0.3s,baz=96,slow=8.2,SNR=31						
	0.7nm,0.3s						
QSPA	South Pole Qui	69.81	180	P	P	19 38 43.2	+0.5
	1.3nm,0.9s,baz=100,slow=22,SNR=2.1						
	1.3nm,0.9s						

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*UPP **15** 19:30:25.3±0.0,67°.84N×20°.23E,h0km,ML2.5,Confirmed Induced event*
*HEL **15** 19:30:26.1±0.1,67°.85N×20°.18E,h1km,ML1.8, ML2.5(UPP),Confirmed Induced event*
*IDC **15** 19:30:26.6±1.1,67°.78N×20°.47E,h0km,mbtmp2.7/4, ML2.0/4,Error ellipse: s-maj=18.0km s-min=8.0km az=117.0*
ISC 15 19:30:24.7±0.8**,67°.82N**±0°.02×**20°.31E**±0°.03**,h0**km**,n33,**
σ**0ˢ.75**/42**,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.13	5	P	Pg	19 30 27.9	+0.8
KUA				S	Sg	19 30 29.5	+0.7
KUA	Kurravaara	0.13	5	iP	Pg	19 30 27.9	+0.8
KUA				iS	Sg	19 30 29.5	+0.7
RATU	Laukkuluspa	0.27	270	P	Pg	19 30 30.1	+0.3
RATU	Laukkuluspa	0.27	270	iP	Pg	19 30 30.1	+0.3
KOVU	Salmi	0.40	352	P	Pg	19 30 32.7	+0.3
KOVU	Salmi	0.40	352	iP	Pg	19 30 32.7	+0.3
LANU	Lannavaara	0.68	70	eP	Pb	19 30 39.6	+0.3
LANU				eS	Sb	19 30 48.9	-0.3
DUNU	Dundret	0.71	172	P	Pg	19 30 38.6	+0.4
DUNU	Dundret	0.71	172	iP	Pg	19 30 38.6	+0.4
MASU	Masugnsbyn	0.74	119	P	Pb	19 30 40.3	-0.2
MASU	Masugnsbyn	0.74	119	iP	Pb	19 30 40.3	-0.2
SALU	Saltoluokta	0.82	238	P	Pg	19 30 40.5	+0.1
SALU	Saltoluokta	0.82	238	eP	Pg	19 30 40.5	+0.1
SALU	Saltoluokta	0.82	238	iP	Pg	19 30 40.5	+0.1
KIF	Kilpisjarvi	1.20	9	eP	Pn	19 30 48.8	+0.1
KIF	Kilpisjarvi	1.20	9	eP	Pn	19 30 48.8	+0.1
KIF				eS	Sg	19 31 03.7	+0.6
PAJU	Pajala	1.35	125	P	Pb	19 30 50.8	+0.1
PAJU	Pajala	1.35	125	eP	Pn	19 30 50.6	-0.1
PAJU				eS	Sn	19 31 09.6	+0.3
HEF	Hetta	1.39	63	eP	Pn	19 30 51.2	0.0
HEF				eS	Sg	19 31 09.0	-0.1
ERTU	Ertsjaerv	1.47	149	P	Pb	19 30 52.9	0.0
ERTU	Ertsjaerv	1.47	149	eP	Pg	19 30 52.7	-0.1
ERTU				eS	Sn	19 31 13.0	+0.7
KLF	Kolari	1.52	111	eP	Pg	19 30 54.2	+0.3
KLF				MSG		19 31 20.5	
	comp=Z,5.2nm,0.2s						
HARU	Harads	1.69	171	P	Pb	19 30 56.3	-0.2
HARU	Harads	1.69	171	eP	Pb	19 30 56.3	-0.2
KALU	Kalix	2.31	147	eP	Pb	19 31 06.2	-0.9
TOF	Tornio	2.36	136	eP	Pb	19 31 07.6	-0.3
TOF				MSG		19 31 40.6	
	comp=Z,3.5nm,0.2s						
SGF	Sodankyl	2.41	96	MSG		19 31 42.5	
	comp=Z,2.1nm,0.2s						
RNF	Rovaniemi	2.53	116	eP	Pb	19 31 10.1	-0.8
RNF				MSG		19 31 45.4	
	comp=Z,6.9nm,0.2s						
ARCES	ARCESS Array B	2.56	45	Pn	Pb	19 31 09.6	-1.8
	comp=Z,0.7nm,0.3s,baz=225,slow=15,SNR=34						
ARCES				Sn	Sb	19 31 41.9	-1.5
	comp=Z,1.9nm,0.3s,baz=229,slow=24,SNR=17						
	comp=Z,1.4nm,0.3s						
BURU	Burvik	3.28	172	eP	Pn	19 31 19.7	+2.4
FINES	FINESS Array B	6.87	156	Pn	Pn	19 32 07.4	+1.0
	comp=Z,0.1nm,0.3s,baz=340,slow=12,SNR=5.5						
FINES				Sn	Sn	19 33 24.9	-0.3
	comp=Z,0.2nm,0.3s,baz=346,slow=20,SNR=4.5						
FINES				Lg	Lg	19 34 00.5	
	comp=Z,0.3nm,0.3s,baz=341,slow=28,SNR=8.1						
	comp=Z,1.2nm,0.8s						
NOA	NORSAR Array B	7.86	214	Pn	Pn	19 32 20.0	0.0
	baz=24,slow=12,SNR=1.3						
NOA				Lg	Lg	19 34 31.3	
	baz=32,slow=15,SNR=5.6						
	comp=Z,0.1nm,0.4s						
HFS	Hagfors	8.24	204	Pn	Pn	19 32 25.4	+0.1
	comp=Z,0.1nm,0.3s,baz=20,slow=12,SNR=0.9						
HFS				Sn	Sn	19 33 57.1	-2.0
	comp=Z,0.1nm,0.3s,baz=24,slow=22,SNR=2.6						
HFS				Lg	Lg	19 34 44.1	
	comp=Z,0.2nm,0.3s,baz=32,slow=30,SNR=3.6						
	comp=Z,0.8nm,0.8s						

IDC 15 19:31:26.4±3.1**,33°.02S**×**178°.41W,h0**km**,mb3.4**/2**,**
mbtmp3.5/3**,ML3.5**/1**,Error ellipse: s-maj=74.4km**
s-min=36.3km az=117.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.38	214	Pn	Pn	19 33 01.5	-0.1
	1.1nm,0.3s,baz=340,slow=3.5,SNR=9.7						
URZ				Sn	Sn	19 34 14.9	-0.2
	0.5nm,0.3s,baz=172,slow=21,SNR=6.8						
	13nm,1.1s						
ASAR	Alice Springs	42.69	270	P	P	19 39 25.4	+0.2
	0.3nm,0.7s,baz=106,slow=8.0,SNR=1.9						
	0.3nm,0.7s						
WRA	Warramunga Arr	43.92	275	P	P	19 39 34.9	-0.2
	0.4nm,0.4s,baz=115,slow=7.5,SNR=7.2						
	0.4nm,0.4s						
FINES	FINESS Array B	147.46	338	PKPbc	PKPbc	19 51 10.7	-0.8
	0.6nm,0.8s,baz=35,slow=5.1,SNR=6.3						

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*GII **15** 19:36:10.9±0.0,33°.34N±0°.02×35°.771E±0°.006,h7km, Mws1.6,confirmed*
*GRAL **15** 19:36:11.0±0.3,33°.32N×35°.80E,h6km±2km,MD2.6*
ISC 15 19:36:10.6±1.1**,33°.35N**±0°.03×**35°.78E**±0°.05**,h9**km±6km**,**
n23,σ**0ˢ.64**/33**,Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHBL	Chebaa	0.03	272	eP	Pg	19 36 12.4	0.0
SHBL				eS	Sg	19 36 13.6	-0.3
NATI	Neve Ativ	0.09	203	P	Pg	19 36 13.0	+0.1
NATI	Neve Ativ	0.09	203	S	Sg	19 36 14.9	+0.3
RCY	Rachaya	0.16	17	eP	Pg	19 36 14.4	+0.4
RCY				eS	Sg	19 36 17.0	+0.5
GEM	Giv'at Ha'Em	0.17	216	P	Pg	19 36 14.3	+0.1
GEM	Giv'at Ha'Em	0.17	216	S	Sg	19 36 17.2	+0.6
MTLA	Metula	0.18	248	P	Pg	19 36 14.7	+0.3
QRWL	Qaraoun	0.22	338	eP	Pg	19 36 15.6	+0.5
MSAM	Misgav Am	0.22	243	P	Pg	19 36 15.5	+0.4
MSAM				S	Sg	19 36 19.3	+1.2
KIRY	Kiryat Shemona	0.23	232	P	Pg	19 36 15.6	+0.4
LVBS	Lehavot Habash	0.23	208	P	Pg	19 36 15.7	+0.4
LVBS				S	Sg	19 36 19.3	+0.8
KDZV	Kedmat Zvi	0.33	193	P	Pb	19 36 17.9	-0.7
KDZV				S	Sb	19 36 22.8	-1.1
KSHT	Keshet	0.36	176	P	Pg	19 36 18.3	+0.5
KSHT	Keshet	0.36	176	S	Sb	19 36 24.1	-1.0
DQRL	Deir Qamar	0.40	334	eP	Pg	19 36 18.8	+0.3
RSPN	Rosh Pina	0.42	208	P	Pg	19 36 19.5	+0.6
RSPN				S	Sb	19 36 25.9	-0.9
HDNS	Had-Ness	0.43	196	P	Pg	19 36 19.8	+0.7
HDNS				S	Sb	19 36 26.4	-0.6
MMA0B	Mount Meron ar	0.46	224	P	Pb	19 36 20.4	-0.5
MMA0B	Mount Meron ar	0.46	224	S	Sb	19 36 27.0	-0.8
MMC7	Mount Meron ar	0.46	225	P	Pg	19 36 19.7	+0.1
AMID	Amiad	0.47	206	P	Pg	19 36 20.4	+0.8
AMID				S	Sb	19 36 27.4	-0.5
KNHM	Kefar Nahum	0.49	200	P	Pg	19 36 20.3	+0.2
KNHM				S	Sb	19 36 28.0	-0.7
HMDT	Nahal Hemdat	1.11	191	P	Pb	19 36 32.1	+0.1
HMDT				S	Sb	19 36 47.2	+0.7

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*IDC **15** 19:55:05.7±2.2,5°.25N×125°.37E,h0km,mb3.7/4, mbtmp3.9/5,ML4.5/1,Error ellipse: s-maj=115.7km s-min=12.6km az=92.0*
ISC 15 19:55:10.8±1.3**,5°.3N**±0°.1×**125°.6E**±0°.6**,h35**km**,n9,**σ**0ˢ.38**/6**,**
mb3.6/4**,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	1.79	1	Pg	Pn	19 55 39.2	0.0
	48nm,0.3s,baz=25,slow=8.3,SNR=2.0						
DAV				Lg	Lg	19 56 03.4	
	49nm,0.3s,baz=119,slow=22,SNR=3.7						
BATI	Baumata	15.49	187	Pn	Pn	19 58 47.0	+0.2
	1.7nm,0.3s,baz=58,slow=19,SNR=4.8						
	26nm,1.2s						
FITZ	Fitzroy Crossi	23.22	180	P	P	20 00 15.0	0.0
	1.8nm,0.5s,baz=2.5,slow=11,SNR=12						
	1.8nm,0.5s						
WRA	Warramunga Arr	26.50	161	P	P	20 00 45.1	0.0
	0.9nm,0.8s,baz=337,slow=10,SNR=11						
	0.9nm,0.8s						
ASAR	Alice Springs	29.89	165	P	P	20 01 14.9	-0.5
	0.2nm,0.3s,baz=340,slow=8.4,SNR=8.9						
	0.2nm,0.3s						
STKA	Stephens Creek	39.98	159	P	P	20 02 42.5	+0.4
	1.6nm,0.7s,baz=345,slow=8.4,SNR=4.2						
	1.6nm,0.7s						
H11N1	WAKE ISLAND Hy	42.69	67	T	T	20 48 49.8	
	baz=254						
H11N2	WAKE ISLAND Hy	42.70	67	T	T	20 48 42.1	
	baz=254						
H11N3	WAKE ISLAND Hy	42.70	67	T	T	20 48 42.6	
	baz=254						

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*PDG **15** 19:58:25.7±0.5,43°.55N×17°.29E,h11km±1km,MD3.5/1, ML3.4/10,Error ellipse: s-maj=0.6km s-min=1.0km az=0.0*
*BEO **15** 19:58:26.6±0.3,43°.64N×17°.34E,h1km±2km,ML3.2/25*
*RHSSO **15** 19:58:26.6±0.2,43°.57N×17°.32E,h5km±1km,ML3.3/17*
*VIE **15** 19:58:27.8±0.7,43°.71N×17°.64E,h8km,mb3.1/18, ml3.1/11,ms3.3/7,Error ellipse: s-maj=6.8km s-min=5.4km az=38.0 64 km WSW of Sarajevo*
*PRU **15** 19:58:27.5,43°.46N×17°.36E,h10km*
ISC 15 19:58:26.5±0.7**,43°.58N**±0°.02×**17°.34E**±0°.02**,h10**km**,n128,**
σ**1ˢ.66**/223**,28C-18D,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RICI	Ricice	0.17	241	iPg	Pg	19 58 29.1	-1.1
RICI				Sg	Sg	19 58 31.9	-0.9
MAKA	Makarska	0.37	219	iPg	Pg	19 58 32.7	-1.1
MAKA				Sg	Sg	19 58 37.5	-1.3
STON	Ston	0.75	159	⇑iPg	Pg	19 58 39.6	-1.4
STON				eSg	Sb	19 58 51.4	-0.6
STON	Ston	0.75	159	iPg	Pg	19 58 39.9	-1.1
STON				Sg	Sg	19 58 49.7	-1.1
STON	Ston	0.75	159	ePg	Pg	19 58 39.8	-1.2
STON				eSg	Sb	19 58 52.0	0.0
HVAR	Hvar	0.76	239	iPg	Pg	19 58 39.6	-1.5
HVAR				Sg	Sg	19 58 50.9	-0.2
KIJV	Kijevo	0.80	303	ePg	Pg	19 58 41.5	-0.4
KIJV				Sg	Sg	19 58 52.1	-0.3
LSTV	Lastovo	0.87	202	iPg	Pg	19 58 41.5	-1.7
LSTV				Sg	Sg	19 58 53.0	-1.7
A050A	Klekovaca	1.07	328	⇑iPg	Pg	19 58 45.1	-2.1
A050A				eSg	Sg	19 59 00.9	-0.3
DBRK	Dubrovnik	1.08	147	iPg	Pg	19 58 46.4	-0.9
DBRK				Sg	Sg	19 58 59.8	-1.6
BRY	Bratogost	1.11	127	⇓iPg	Pg	19 58 45.9	-1.9
BRY				eSg	Sb	19 59 02.6	+0.3
BRY	Bratogost	1.11	127	⇓iPg	Pg	19 58 45.9	-1.9
BRY				iSg	Sn	19 59 04.0	+0.4
TREB	Trebinje	1.14	139	⇓iPg	Pb	19 58 46.4	-1.8
TREB				eSg	Sg	19 59 03.1	+0.1
TREB	Trebinje	1.14	139	ePg	Pb	19 58 46.4	-1.8
TREB				eSg	Sn	19 59 05.5	+1.5
BLY	Banja Luka	1.18	355	⇓iPg	Pb	19 58 48.2	-0.7
BLY				eSg	Sg	19 59 04.0	-0.4
BLY	Banja Luka	1.18	355	ePg	Pb	19 58 47.8	-1.1
BLY				eSg	Sb	19 59 02.3	-1.9
UPM	Unac-Piva	1.20	108	⇑iPg	Pb	19 58 48.6	-0.8
UPM				eSg	Sn	19 59 05.8	-0.2
UPM	Unac-Piva	1.20	108	⇑iPg	Pb	19 58 48.4	-1.0
UPM				iSg	Sn	19 59 07.9	+1.9
MORI	Morici	1.22	284	ePg	Pn	19 58 49.0	-0.5
MORI				Sg	Sb	19 59 04.6	-0.8
ZIRJ	Zirje	1.23	274	ePg	Pn	19 58 48.6	-1.2
ZIRJ				Sg	Sb	19 59 05.3	-0.5
SLATY	Slatina	1.25	359	⇑iPg	Pn	19 58 48.8	-1.2
SLATY				eSg	Sb	19 59 06.1	-0.2
HAPS	Han Pijesak,BI	1.27	66	⇓iPg	Pn	19 58 49.8	-0.6
HAPS				eSg	Sn	19 59 07.8	+0.2
HAPS	Han Pijesak,BI	1.27	66	ePg	Pn	19 58 50.2	-0.2
HAPS				eSg	Sn	19 59 07.6	0.0
DOB	Doboj	1.28	25	⇑iPg	Pn	19 58 49.5	-0.9
DOB				eSg	Sb	19 59 06.8	-0.3
HCY	Herceg Novi	1.41	143	⇓iPg	Pn	19 58 51.3	-0.9
HCY	Herceg Novi	1.41	143	⇓iPg	Pn	19 58 51.4	-0.8
HCY				iSg	Sg	19 59 13.3	+1.4
A051A	Mrakovica	1.47	348	⇑iPg	Pn	19 58 53.1	0.0
A051A				eSg	Sg	19 59 14.0	+0.3
RUDO	Rudo	1.48	88	⇓iPg	Pn	19 58 52.3	-0.8
RUDO				eSg	Sg	19 59 13.7	-0.3
RUDO	Rudo	1.48	88	ePg	Pn	19 58 52.3	-0.8
RUDO				eSg	Sg	19 59 14.2	+0.2
PLE	Pljevlja	1.51	99	⇑iPg	Pb	19 58 54.1	-0.6
PLE				iSg	Sg	19 59 16.8	+1.6
BBLS	Lazi&#263i	1.53	78	⇑iPn	Pb	19 58 54.5	-0.5
BBLS				eSn	Sg	19 59 14.9	-0.7
BBLS	Lazi&#263i	1.53	78	ePn	Pb	19 58 54.4	-0.5
BBLS				eSn	Sg	19 59 14.9	-0.7
CEME	Cevo	1.55	131	⇓iPg	Pn	19 58 54.0	-0.2
CEME				iSg	Sg	19 59 17.2	+0.9
BUM	Brajici-Budva	1.71	138	⇓iPn	Pn	19 58 57.1	+0.7
BUM				iSn	Sb	19 59 20.4	+0.7
KOME	Kolasin	1.75	114	ePn	Pb	19 58 58.9	+0.2
KOME	Kolasin	1.75	114	⇓iPn	Pb	19 58 58.5	-0.2
KOME				iSn	Sg	19 59 22.4	-0.3
PDG	Podgorica	1.81	129	⇑iPn	Pb	19 58 58.8	-1.0
PDG				eSn	Sb	19 59 22.1	-0.4
PDG	Podgorica	1.81	129	⇑P	Pb	19 58 59.6	-0.1
PDG				⇓S	Sg	19 59 26.9	+2.1
PDG	Podgorica	1.81	129	ePn	Pb	19 58 59.3	-0.5
PDG				eSn	Sg	19 59 24.1	-0.7
PDG	Podgorica	1.81	129	⇑iPn	Pb	19 58 59.4	-0.4
PDG				iSn	Sb	19 59 23.0	+0.5
TEKS	Tekeris	1.85	58	ePn	Pb	19 58 59.4	-1.1
TEKS				eSn	Sb	19 59 23.0	-0.7
TEKS	Tekeris	1.85	58	ePn	Pn	19 58 58.3	0.0
TEKS				eSn	Sb	19 59 23.4	-0.3
DRME	Dracevica, Mon	1.94	135	ePn	Pn	19 59 00.6	+1.1
DRME				eSn	Sn	19 59 24.5	+0.5
DRME	Dracevica, Mon	1.94	135	⇓iPn	Pb	19 59 01.1	-0.9
DRME				iSn	Sb	19 59 26.4	+0.2
SJES	Sjenica	1.95	98	⇑iPn	Pn	19 59 00.5	+0.8
SJES				eSn	Sb	19 59 25.5	-0.9
SJES	Sjenica	1.95	98	ePn	Pb	19 59 01.5	-0.6
SJES				eSn	Sb	19 59 26.5	+0.1
DIVS	Divibare	1.99	74	ePn	Pb	19 59 01.5	-1.3
DIVS				eSn	Sb	19 59 26.7	-1.0
IVA	Berane	2.00	110	⇓iPn	Pb	19 59 01.8	-1.1
IVA				iSn	Sb	19 59 28.5	+0.6
IVAS	Ivanjica	2.04	89	ePn	Pn	19 59 01.7	+0.7
IVAS				eSn	Sb	19 59 29.2	-0.1
ULC	Ulcinj	2.14	138	⇓iPn	Pn	19 59 03.6	+1.4
ULC				iSn	Sb	19 59 31.3	-0.6
TRUS	Trudelj	2.31	73	ePn	Pn	19 59 05.5	+0.9
TRUS				eSn	Sn	19 59 34.1	+1.0
FRGS	Fruska Gora	2.38	47	ePn	Pn	19 59 06.6	+1.1
FRGS				eSn	Sn	19 59 35.9	+1.2
FRGS	Fruska Gora	2.38	47	ePn	Pn	19 59 04.9	-0.6
GRUS	Gruza	2.47	82	ePn	Pn	19 59 07.6	+0.9
GRUS				eSn	Sb	19 59 39.7	-1.6
AVAS	Avala Beograd	2.54	63	ePn	Pn	19 59 07.9	+0.1
AVAS				eSn	Sn	19 59 38.8	-0.1
GOCS	Kraljevo Serbi	2.57	89	ePn	Pn	19 59 09.1	+0.9
GOCS				eSn	Sb	19 59 42.0	-2.4
CRES	Cresnjevec Ost	2.62	330	⇑iPn	Pn	19 59 09.4	+0.6
CRES				eSn	Sn	19 59 41.7	+1.0
GBRS	Gornja Briga	2.66	318	ePn	Pb	19 59 11.8	-2.4
GBRS				eSn	Sb	19 59 45.7	-1.2
SELS	Selova	2.78	96	ePn	Pn	19 59 12.5	+1.4
SELS				eSn	Sn	19 59 46.6	+1.9
MORH	Mrgy, Hungar	2.80	19	⇑iPn	Pn	19 59 11.7	+0.5
MORH				eSn	Sn	19 59 46.1	+1.1
MORH	Mrgy, Hungar	2.80	19	⇓P	Pn	19 59 11.8	+0.5
MORH				⇑S	Sb	19 59 49.3	-1.5
MORH	Mrgy, Hungar	2.80	19	ePn	Pn	19 59 11.5	+0.3
MORH				eSn	Sn	19 59 45.8	+0.8
SVIS	Svilajnac	2.88	75	eSn	Sn	19 59 48.0	+0.8
TIR	Tirane	2.91	139	⇑P	Pn	19 59 14.4	+1.6
BEHE	Becsehely	2.92	352	ePn	Pn	19 59 14.2	+1.2
BEHE				eSn	Sn	19 59 49.2	+1.1
MATE	Matera	2.96	189	⇓P	Pn	19 59 13.6	+0.1
CEY	Cerknica	3.00	317	⇑iPn	Pn	19 59 15.2	+1.1
CEY				eSn	Sn	19 59 50.9	+0.8
CEY	Cerknica	3.00	317	ePn	Pn	19 59 15.9	+1.8
GROS	Grobnik	3.16	336	iPn	Pn	19 59 17.6	+1.2
BOVS	Bovan	3.17	87	⇑P	Pn	19 59 18.0	+1.5
BOVS	Bovan	3.17	87	ePn	Pn	19 59 17.7	+1.3
BOVS				eSn	Sn	19 59 56.3	+2.0
KUBS	Kucevo	3.24	74	ePn	Pn	19 59 17.0	-0.4
KUBS				eSn	Sn	19 59 55.3	-0.7
VRSS	Vrsac	3.25	60	ePn	Pn	19 59 17.2	-0.3
BARS	Barje	3.36	102	ePn	Pn	19 59 21.2	+2.2
BARS				eSn	Sn	20 00 01.0	+2.0
MDVR	Moldovita	3.37	68	⇑P	Pn	19 59 21.4	+2.2
BORS2	Bor- Borsko je	3.42	80	ePn	Pn	19 59 19.9	0.0
BORS2				eSn	Sn	20 00 00.3	-0.3
VOJS	Vojsko	3.47	316	iPn	Pn	19 59 22.6	+1.9
SOKA	Soboth	3.50	333	iPn	Pn	19 59 22.1	+1.1
	3.5nm,0.2s,SNR=12						
SOKA				iSn	Sn	20 00 04.8	+2.1
	11nm,0.5s						
OBKA	Obir	3.54	327	ePn	Pn	19 59 22.1	+0.6
OBKA				eSn	Sn	20 00 03.5	+0.1
OBKA	Obir	3.54	327	iPn	Pn	19 59 23.8	+2.3
	1.5nm,0.2s						
OBKA				eSn	Sb	20 00 08.0	-4.2
	26nm,0.6s						
OHR	Ohrid	3.56	133	ePn	Pb	19 59 29.6	+0.1
OHR				eSn	Sb	20 00 14.0	+1.2
OHR	Ohrid	3.56	133	iPn	Pg	19 59 32.5	-2.1
ZAGS	Zajecar	3.56	85	ePn	Pn	19 59 22.9	+1.2
ZAGS				eSn	Sn	20 00 03.7	-0.1
BZS	Buzias	3.67	55	⇑P	Pn	19 59 25.2	+1.9
BZS	Buzias	3.67	55	ePn	Pn	19 59 24.2	+0.9
ZAPS	Zavoj	3.87	93	ePn	Pn	19 59 27.5	+1.4
ZAPS				eSn	Sn	20 00 13.0	+1.4
HERR	Herculane	3.88	69	⇑P	Pn	19 59 27.7	+1.6
ARSA	Arzberg	3.89	341	⇑iPn	Pn	19 59 26.9	+0.6
ARSA				eSn	Sn	20 00 12.5	+0.5
ARSA	Arzberg	3.89	341	iPn	Pn	19 59 27.6	+1.2
	17nm,0.3s,SNR=35						
ARSA				iSn	Sn	20 00 12.5	+0.5
	8.8nm,0.6s						
ARSA	Arzberg	3.89	341	ePn	Pn	19 59 27.2	+0.9
BOSS	Bosilegrad	3.92	104	eSn	Sn	20 00 14.7	+1.9
MYKA	Terra Mystica	4.02	321	iPn	Pn	19 59 30.1	+1.9
	1.7nm,0.3s						
MYKA				iSn	Sn	20 00 18.0	+2.7
	6.9nm,0.4s						
SURR	Surduc	4.05	56	⇑P	Pn	19 59 30.9	+2.4
RONA	Rosalia, Austr	4.19	350	iPn	Pn	19 59 31.7	+1.2
	7.4nm,0.3s,SNR=8.4						
RONA				iSn	Sn	20 00 19.8	+0.4
	12nm,0.6s						
SRO	Srobarova	4.29	9	ePN	Pn	19 59 33.9	+2.1
SRO				eSN	Sn	20 00 24.0	+2.1
GZR	Gura Zlata	4.29	63	⇑P	Pn	19 59 34.6	+2.7
GZR	Gura Zlata	4.29	63	ePn	Pn	19 59 32.3	+0.4
TIP	Timpagrande	4.42	186	⇑P	Pn	19 59 32.3	-1.3
VTS	Vitosha	4.42	100	ePn	Pn	19 59 35.9	+2.1
CONA	Conrad Observa	4.47	347	iPn	Pn	19 59 35.9	+1.5
	4.4nm,0.3s,SNR=7.0						
CONA				eSn	Sn	20 00 26.6	+0.1
	4.3nm,0.3s						
IGT	Igoumenitsa	4.62	150	ePn	Pn	19 59 36.9	+0.5
ABTA	Abfaltersbach	4.66	315	iPn	Pn	19 59 38.3	+1.4
	6.8nm,0.5s,SNR=7.8						
ABTA				iSn	Sn	20 00 34.1	+3.1
	15nm,0.6s						
PSZ	Piszkesteto	4.70	22	⇓P	Pn	19 59 38.2	+0.8
MOA	Molln	4.78	334	iPn	Pn	19 59 41.0	+2.4
	5.4nm,0.3s						
MOA				iSn	Sn	20 00 36.4	+2.3
	6.0nm,0.3s						
MOA	Molln	4.78	334	ePn	Pn	19 59 39.9	+1.3
MODS	Modra-Piesok	4.80	360	ePN	Pn	19 59 39.2	+0.4
MODS				eSN	Sn	20 00 32.2	-2.2
BIOA	Bad Ischl, Aus	4.86	329	iPn	Pn	19 59 42.8	+3.1
	3.6nm,0.3s						
DRGR		4.97	48	⇑P	Pn	19 59 44.0	+2.7
VYHS	Vyhne	5.03	11	ePN	Pn	19 59 43.0	+1.1
VYHS				ePG	Pg	20 00 04.0	+1.3
VYHS				eSN	Sn	20 00 40.2	+0.1
LESA	Schwarzleotal	5.05	321	ePn	Pn	19 59 44.9	+2.5
	19nm,0.4s,SNR=26						
LESA				iSn	Sn	20 00 44.4	+3.6
	12nm,0.7s						
MARR	Marisel-Cluj	5.13	51	⇑P	Pn	19 59 46.0	+2.6
SRS	Serrai	5.25	116	ePn	Pn	19 59 47.4	+2.5
JAVC	Velka Javorina	5.29	2	ePN	Pn	19 59 46.0	+0.4
JAVC				eSN	Sn	20 00 46.9	+0.3
WTTA	Wattenberg	5.45	315	iPn	Pn	19 59 49.8	+1.9
	8.3nm,0.3s,SNR=7.1						
WTTA				eSn	Sn	20 00 55.9	+5.2
	20nm,0.5s						
KRUC	Moravsky	5.53	354	ePN	Pn	19 59 49.1	+0.4
KRUC				eSN	Sn	20 00 51.5	-0.8
WATA	Walderalm	5.53	315	ePn	Pn	19 59 51.3	+2.3
	8.4nm,0.3s,SNR=11						
WATA				iSn	Sn	20 00 57.8	+5.3
	16nm,0.7s						
SQTA	Sankt Quirin	5.65	312	iPn	Pn	19 59 53.5	+3.0
	6.9nm,0.3s						
SQTA				iSn	Sn	20 01 00.5	+5.0
	8.2nm,0.5s						
CKRC	Cesky Krumlov	5.65	339	ePN	Pn	19 59 52.9	+2.4
CKRC				eSN	Sn	20 00 56.2	+0.8
VRAC	Vranov	5.76	355	ePN	Pn	19 59 53.2	+1.3
VRAC				eSN	Sn	20 00 56.0	-2.0
MOTA	Moosalm	5.78	313	iPn	Pn	19 59 54.8	+2.3
	27nm,0.8s,SNR=14						
MOTA				iSn	Sn	20 01 03.4	+4.6
	10nm,0.6s						
FETA	Feichten	5.79	309	iPn	Pn	19 59 54.7	+2.1
	1.2nm,0.3s						
FETA				iSn	Sn	20 01 03.7	+4.5
	2.2nm,0.5s						
MAUC	Maruska	5.80	3	eSN	Sn	20 01 00.6	+1.5
RETA	Reutte	6.05	313	ePn	Pn	19 59 58.5	+2.4
	1.0nm,0.2s						
RETA				iSn	Sn	20 01 11.2	+5.8
	4.1nm,0.5s						
KHC	Kasperske Hory	6.13	336	ePN	Pn	19 59 59.6	+2.5
KHC				eSN	Sn	20 01 07.3	0.0
MORC	Moravsky Berou	6.20	1	ePN	Pn	19 59 57.6	-0.5

DAVA	Damuels	6.42	308	*i* Pn	Pn	20 00 04.9	+3.6
	2.1nm,0.4s						
DAVA				*i* Sn	Sn	20 01 20.2	+5.5
	5.8nm,0.4s						
STHS	Stebnicka Huta	6.43	23	*e*PG	Pg	20 00 29.3	-0.3
BRG	Berggiesshubel	7.66	344	Sg	Sb	20 02 07.5	-3.0
BRG				Amp		20 02 22.4	
	comp=Z,3.1nm,0.7s						

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*IDC **15** 20:01:58.9±2.9, 43°.20N×105°.19W, h0^{km}, mbtmp3.8/2, ML3.7/2, Error ellipse: s-maj=62.8km s-min=9.4km az=156.0*

*NEIC **15** 20:02:01.5±1.3, 43°.73N±0°.05×105°.33W±0°.05, h0^{km}±1^{km}, ML3.1/38, Error ellipse: s-maj=9.7km s-min=2.6km az=323.0*

ISC 15 20:02:02.0±1.1**, 43°.72N**±0°.06×**105°.34W**±0°.07**, h0**^{km}**, n22, σ1s.19**/21**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	1.02	66	Pg	Pb	20 02 21.9	-0.8
K22A	Casper	1.38	220		Pg	20 02 27.3	-1.1
K22A				IAML		20 02 48.4	
	277nm,0.3s						
LAO	LASA Array	3.03	348		Pn	20 02 52.8	+1.5
RLMT	Red Lodge	3.15	298		Pn	20 02 54.0	+1.0
RLMT				IAML		20 03 44.8	
	49nm,0.3s						
RLMT				IAML		20 03 50.1	
	42nm,0.6s						
PDAR	Pinedale Array	3.23	254	Pn	Pn	20 02 54.5	+0.4
	6.2nm,0.3s,baz=62,slow=14,SNR=30						
PDAR				Lg	Lg	20 03 39.4	
	8.6nm,0.3s,baz=76,slow=32,SNR=7.7						
	3.8nm,0.3s						
BW06	Boulder Array	3.23	254		Pn	20 02 55.3	+1.1
BW06				IAML		20 03 46.9	
	42nm,0.3s						
BW06				IAML		20 03 47.4	
	39nm,0.6s						
YNE	Yellowstone No	3.59	293		Pn	20 03 00.6	+1.5
YNE				IAML		20 04 07.7	
	comp=E,41nm,0.3s						
YNE				IAML		20 05 01.9	
	comp=N,39nm,1.1s						
YMP	Mirror Lake Pl	3.61	288		Pn	20 03 00.8	+1.4
OGNE	Ogallala	3.70	137		Pn	20 03 01.4	+0.9
GCMT	Greycliff	3.71	305		Pn	20 03 02.1	+1.4
ISCO	Idaho Springs	3.92	183	Pn	Pn	20 03 04.7	+0.9
TPAW	Teton Pass	4.08	269		Pn	20 03 07.0	+1.1
TPAW				IAML		20 04 37.1	
	comp=N,21nm,0.9s						
O20A	White River Ci	4.19	212		Pn	20 03 09.2	+1.9
O20A				IAML		20 04 38.1	
	comp=N,25nm,1.1s						
O20A				IAML		20 04 54.0	
	comp=N,26nm,2.5s						
AHID	Auburn Hatcher	4.32	259	Pn	Pn	20 03 09.3	+0.3
AHID				IAML		20 04 46.1	
	comp=N,18nm,1.0s						
E28A	Huff	4.35	47	Pn	Pn	20 03 10.4	+1.0
DGMT	Dagmar	4.82	9	Pn	Pn	20 03 17.3	+1.6
EGMT	Eagleton	5.29	326	Pn	Pn	20 03 22.9	+0.5
PV07	Paradox Valley	5.84	206		Pn	20 03 30.5	+0.5
LYMT	Lyon Mountain	5.88	306		Pn	20 03 31.0	+0.5
ECSD	EROS Data Cent	6.32	87	Pn	Pn	20 03 37.1	+0.7
ULM	Lac du Bonnet	9.18	41	Pn	Pn	20 04 14.4	-1.2
	comp=N,1.6nm,0.3s,baz=224,slow=13,SNR=11						
ULM				Lg	Lg	20 06 52.3	
	comp=N,0.4nm,0.3s,baz=100,slow=23,SNR=2.9						
	comp=N,3.2nm,0.3s						
I56US	NEWPORT INFRAS	9.38	303	I	I	20 59 40.0	
	baz=119,slow=311,SNR=2.1						

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*NEIC **15** 20:16:39.0±0.5, 35°.798N±0°.006×96°.66W±0°.01, h7^{km}±2^{km}, Error ellipse: s-maj=1.5km s-min=1.0km az=89.0*

NEIC 15 20:16:39.0±0.4**, 35°.798N**±0°.006×**96°.66W**±0°.01**, h7**^{km}±2^{km}**, mb_Lg1.9**/4**, ML2.0**/20**, ML2.0**/32**, Error ellipse: s-maj=1.5km s-min=1.0km az=92.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DEOK	Depew	0.14	72		Pg	20 16 42.2	+0.2
DEOK				Sg	Sg	20 16 44.5	+0.5
DEOK				IAML		20 16 44.7	
	comp=E,458nm,0.2s						
QUOK	Quay	0.37	355		Pg	20 16 46.6	+0.3
QUOK					Sg	20 16 51.7	+0.4
QUOK				IAML		20 16 52.1	
	comp=E,185nm,0.2s						
OK029	Liberty Lake	0.64	270		Pg	20 16 51.3	-0.1
TUL3	Leonard	0.72	81		Pg	20 16 52.6	-0.2
TUL3					Sg	20 17 02.0	-0.2
OK051	E0350 and S346	0.72	349		Pg	20 16 52.9	0.0
OK051					Sg	20 17 02.6	+0.3
FNO	Franklin	0.81	228		Pg	20 16 54.4	-0.1
FNO					Sg	20 17 05.6	+0.6
FNO				IAML		20 17 06.0	
	comp=N,48nm,0.3s						
FNO				IAML		20 17 10.5	
	comp=E,52nm,0.5s						
BLOK	Blackwell	1.06	335		Pg	20 16 59.0	-0.4
BLOK					Sg	20 17 13.4	+0.3
T35A	Sooner Cattle	1.12	6		Pg	20 16 59.9	-0.7
T35A					Sg	20 17 14.6	-0.6
T35A				IAML		20 17 15.8	
	comp=E,42nm,0.1s						
T35A				IAML		20 17 16.3	
	comp=E,36nm,0.1s						
CROK	Carrier	1.28	304		Pn	20 17 02.7	-0.7
CROK				IAML		20 17 26.8	
	comp=N,51nm,0.3s						
RLO	Rose Lookout	1.38	74		Pn	20 17 04.6	-0.2
GC02	Grant County #	1.43	318		Pn	20 17 05.2	-0.2
X34A	Smith Ranch, M	1.53	219		Pn	20 17 06.8	0.0
KAN09	Caldwell North	1.54	330		Pb	20 17 07.8	-0.2
KAN14	Manchester OK	1.56	318		Pn	20 17 06.9	-0.4
OK038	West end E0370	1.81	293	Pn	Pn	20 17 11.5	+0.8
U38A	Gravette	1.95	70		Pn	20 17 13.4	+0.7
WMOK	Wichita Mounta	2.03	239		Pn	20 17 14.3	+0.6
WMOK	Wichita Mounta	2.03	239		Pn	20 17 14.5	+0.8
WMOK				IAmb_Lg		20 17 43.0	
	comp=Z,3.1nm,0.8s						
HHAR	Hobbs	2.26	77	Pn	Pn	20 17 17.4	+0.5
MGMO	Mountain Grove	3.79	68	IAmb_Lg		20 18 40.2	
	comp=Z,4.6nm,0.7s						

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*CATAC **15** 20:28:42.3±0.6, 10°N±2°×8°2W±°, h28^{km}±3^{km}, M3.5/8, MLv3.5/8, Error ellipse: s-maj=7.3km s-min=4.5km az=106.0, confirmed*

*UCR **15** 20:28:42.6±1.2, 9°.56N×82°.23W, h15^{km}±9^{km}, MW3.5*

*UPA **15** 20:28:43.7±1.3, 9°.49N×82°.27W, h19^{km}±9^{km}, MW3.8*

ISC 15 20:28:42.2±1.4**, 9°.50N**±0°.04×**82°.22W**±0°.05**, h19**^{km}±3^{km}**, n58, σ0s.47**/70**, 1C-3D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RGM0	Gandoca	0.39	283	S	Sn	20 29 00.8	+1.1
RGM0	Gandoca	0.39	283	P	Pn	20 28 52.4	-0.4
RGM0	Gandoca	0.39	283	⇑*e*P	Pn	20 28 52.2	-0.6
RGM0				*e*S	Sb	20 28 57.2	+0.9
PBNVO	Pueblo Nuevo,	0.61	178	*e*P	Pg	20 28 54.8	+0.4
CEUA	Cerro Uatsi, L	0.72	280	*e*P	Pg	20 28 56.8	+0.4
KKNTU	Kakintº	0.77	148	*e*P	Pg	20 28 57.2	-0.2
BQTLY	Boquete Panama	0.78	198	*e*P	Pg	20 28 57.4	-0.1
BC3P	Paso Ancho	0.78	210	*e*P	Pb	20 28 57.3	0.0
BC3P				*e*S	Sg	20 29 08.6	+0.5
BQSF3	Alto Boquete,	0.78	196	⇓*i*P	Pg	20 28 57.6	0.0
BQSF3				*e*S	Sn	20 29 09.0	-0.6
ALCO	Alturas Coton,	0.82	228	*e*P	Pb	20 28 57.4	-0.5
ALCO				*e*S	Sb	20 29 08.4	-0.1
TBS2		0.83	212	*e*P	Pb	20 28 56.7	-1.3
BRU2	Volcan	0.84	214	*e*P	Pb	20 28 58.3	-0.1
BRU2	Volcan	0.84	214	P	Pg	20 28 58.7	0.0
BRU2	Volcan	0.84	214	⇓*i*P	Pb	20 28 58.2	-0.1
BRU2				*e*S	Sg	20 29 10.0	0.0
CLLRA	Cordillera,	0.85	208	*e*P	Pg	20 28 58.6	-0.3
PTAR3	Potrerillos Ar	0.85	199	⇓*i*P	Pg	20 28 58.7	-0.2
PTAR3				*e*S	Sg	20 29 10.1	0.0
SCLRA	Santa Clara, W	0.87	220	*e*P	Pb	20 28 58.9	+0.2
MLIR3	Monte Lirio, C	0.92	220	*e*P	Pn	20 29 00.1	-0.1
MLIR3				*e*S	Sg	20 29 12.8	+0.3
MCANO	Manzana, Boque	0.99	201	*e*P	Pg	20 29 01.4	-0.1
DRK0	Durika	1.04	257	*e*P	Pb	20 29 00.9	-0.8
DRK0	Durika	1.04	257	P	Pb	20 29 01.3	-0.4
DRK0	Durika	1.04	257	S	Sb	20 29 15.3	+0.3
DRK0	Durika	1.04	257	*e*P	Pb	20 29 00.9	-0.8
DRK0				*e*S	Sb	20 29 14.4	-0.6
VERH	Veragua Rainfo	1.05	294	*e*P	Pb	20 29 01.0	-0.7
EDP2	Potrero Grande	1.06	243	*e*P	Pb	20 29 01.8	-0.2
LOMA3	Las Lomas, Chi	1.08	189	*e*S	Sn	20 29 17.0	+0.3
DVD	David	1.08	192	*e*P	Pg	20 29 02.8	-0.5
DVD				*e*S	Sg	20 29 17.5	0.0
LOCO3	Loma Colorada,	1.10	190	*e*P	Pg	20 29 03.5	-0.1
LOCO3				*e*S	Sb	20 29 16.4	-0.2
CSTBL	De las Acacias	1.10	192	*e*P	Pg	20 29 03.8	+0.1
NELY	Ciudad Neily	1.11	220	*e*P	Pg	20 29 03.9	+0.1
CDITO	Canoas	1.13	215	P	Pg	20 29 03.7	-0.3
CDITO	Canoas	1.13	215	S	Sg	20 29 19.3	+0.4
PEDE3	Pedregal, Chir	1.13	190	*e*P	Pn	20 29 02.6	-0.3
PEDE3				*e*S	Sn	20 29 18.2	+0.3
BURE	Buenos Aires	1.15	254	*e*P	Pn	20 29 02.8	-0.5
FIMO	Fila Mora	1.23	246	*e*P	Pb	20 29 05.4	+0.5
EDAD	Golfito	1.26	228	*e*P	Pn	20 29 04.8	0.0
SAJE	San Jernim	1.28	263	*e*P	Pn	20 29 04.7	-0.5
EDPE	Pejibaye, P	1.38	256	*e*P	Pb	20 29 07.0	-0.4
PTJ1	Puerto Jimnez	1.44	228	S	Sb	20 29 26.5	+0.2
PTJ1	Puerto Jimnez	1.44	228	P	Pn	20 29 07.1	-0.1
OCHAL	Ojochal	1.47	254	S	Sb	20 29 27.3	+0.2
OCHAL	Ojochal	1.47	254	P	Pb	20 29 08.3	-0.5
ABRB	Las Abras (San	1.56	289	*e*P	Pn	20 29 08.8	-0.3
VTCV	VTCV, Calle Va	1.56	288	*e*P	Pb	20 29 10.1	-0.5
CVTV	Tajo	1.59	288	*e*P	Pn	20 29 09.3	-0.3
CVTQ	Turrialba Volc	1.61	288	*e*P	Pn	20 29 09.5	-0.4
VICA	Volcano Irazu	1.67	287	*e*P	Pb	20 29 11.7	-1.0
PIEC	Cerro El Cedra	1.72	274	*e*P	Pn	20 29 11.5	+0.2
LCR2	La Lucha 2	1.78	278	*e*P	Pn	20 29 12.1	0.0
LCR2	La Lucha 2	1.78	278	P	Pn	20 29 12.1	0.0
LCR2	La Lucha 2	1.78	278	S	Sn	20 29 33.9	-0.4
TRT2	Tortugero	1.83	305	P	Pn	20 29 12.8	+0.2
TRT2	Tortugero	1.83	305	S	Sn	20 29 35.4	+0.3
GMAL	Guarumal, Vera	1.98	151	*e*P	Pn	20 29 14.9	+0.2
GMAL				*e*S	Sn	20 29 39.5	+0.5
PAR1A	Puntarenas Pro	2.01	273	*e*P	Pn	20 29 16.2	+1.1
COVE	Coope Vega, Sa	2.47	300	S	Sn	20 29 50.6	-0.4
COVE	Coope Vega, Sa	2.47	300	P	Pn	20 29 21.8	+0.4
JTS	Las Juntas de	2.81	286	*e*P	Pn	20 29 26.8	+0.7

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*NEIC **15** 20:34:35.9±1.3, 35°.247N±0°.010×97°.742W±0°.009, h4^{km}±2^{km}, mb_Lg2.2/32, ML2.5/19, ML2.4/40, Error ellipse: s-maj=1.5km s-min=0.9km az=159.0*

NEIC 15 20:34:35.8±1.2**, 35°.25N**±0°.01×**97°.76W**±0°.01**, h6**^{km}±1^{km}**, Error ellipse: s-maj=1.6km s-min=1.4km az=219.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNO	Franklin	0.29	88		Pg	20 34 41.9	+0.4
FNO				Sg	Sg	20 34 44.3	-1.2
OKCSW	OKLAHOMA CITY	0.31	59	Pg	Pg	20 34 41.4	-0.4
OKCSW				IAML		20 34 50.0	
	comp=E,570nm,0.5s						
OKCSW				IAML		20 34 50.5	
	comp=N,275nm,0.3s						
X34A	Smith Ranch, M	0.65	185		Pb	20 34 48.9	-0.6
X34A				Sg	Sg	20 34 56.2	-0.5
X34A				IAmb_Lg		20 34 57.8	
	comp=Z,34nm,1.1s						
X34A				IAML		20 34 59.2	
	comp=N,154nm,0.3s						
CSTR	Hydro, Custer	0.86	298	Pg	Pg	20 34 52.3	0.0
WMOK	Wichita Mounta	0.98	239		Pg	20 34 53.8	-0.8
WMOK					Sg	20 35 06.9	-0.4
OK052	Battle Ridge R	1.08	46		Pg	20 34 55.7	-0.8
OK052					Sg	20 35 10.4	-0.1
DEOK	Depew	1.19	60		Pg	20 34 57.5	-1.1
DEOK					Sg	20 35 13.8	-0.2
DEOK				IAML		20 35 18.9	
	comp=E,111nm,0.2s						
QUOK	Quay	1.26	43		Pn	20 34 58.9	-1.1
QUOK					Sg	20 35 15.7	-0.6
CROK	Carrier	1.27	352		Pn	20 34 58.7	-1.3
CROK					Sg	20 35 16.0	-0.6
CROK				IAML		20 35 23.0	
	comp=N,136nm,0.3s						
OK038	West end E0370	1.47	327		Pn	20 35 03.0	+0.2
GC02	Grant County #	1.60	357		Pn	20 35 04.4	-0.3
TUL3	Leonard	1.74	67	IAmb_Lg		20 35 34.2	
	comp=Z,16nm,0.7s						
KAN09	Caldwell North	1.89	3		Pn	20 35 09.2	+0.6
KAN09				IAmb_Lg		20 35 36.1	
	comp=Z,18nm,0.9s						
KAN01	Argonia South	1.90	0	IAmb_Lg		20 35 39.2	
	comp=Z,15nm,0.9s						
SMWD	Samnorwood	2.04	267		Pn	20 35 11.0	+0.3
RLO	Rose Lookout	2.41	67		Pn	20 35 15.6	-0.1
PLPT	Palo Pinto	2.47	191	IAmb_Lg		20 35 53.0	
	comp=Z,11nm,0.9s						
AMTX	Amarillo	3.24	265	IAmb_Lg		20 36 23.4	
	comp=Z,5.8nm,0.7s						
SN07	Snyder 07	3.37	231	IAmb_Lg		20 36 28.1	
	comp=Z,6.1nm,0.8s						
SN05	Snyder 5	3.51	229	IAmb_Lg		20 36 33.4	
	comp=Z,6.7nm,0.8s						
BRDY	Brady	4.08	195	IAmb_Lg		20 36 50.1	
	comp=Z,4.4nm,0.8s						
MGMO	Mountain Grove	4.83	65	IAmb_Lg		20 37 21.5	
	comp=Z,6.0nm,0.7s						
R40A	Maddies Statio	5.35	54	IAmb_Lg		20 37 28.2	
	comp=Z,5.2nm,0.8s						
T42A	Van Buren	5.68	70	IAmb_Lg		20 37 47.4	
	comp=Z,4.1nm,0.8s						
MNHN	Monahans	5.72	228	IAmb_Lg		20 37 53.8	
	comp=Z,3.3nm,0.8s						
HNDO	Hondo	5.84	193	IAmb_Lg		20 37 50.3	
	comp=Z,5.7nm,0.8s						
DRIO	Del Rio	6.29	203	IAmb_Lg		20 38 00.1	
	comp=Z,4.0nm,0.8s						
SAND	Sanderson	6.43	216	IAmb_Lg		20 38 08.8	
	comp=Z,2.7nm,0.7s						

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*GII **15** 20:42:53.9±0.0, 33°.319N±0°.002×35°.437E±0°.001, h1^{km}, Mws1.6, confirmed*

*GRAL **15** 20:42:54.9±0.3, 33°.32N×35°.44E, h7^{km}±10^{km}, MD2.9*

ISC 15 20:42:53.9±0.9**, 33°.32N**±0°.03×**35°.45E**±0°.03**, h15**^{km}±6^{km}**, n35, σ0s.46**/51**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAM	Misgav Am	0.11	131	P	Pg	20 42 57.1	-0.2
MTLA	Metula	0.12	112	P	Pg	20 42 57.0	-0.4
KIRY	Kiryat Shemona	0.15	138	P	Pg	20 42 57.8	0.0
KIRY				S	Sg	20 43 00.5	+0.1
GOSH	HaGoshrim	0.18	125	P	Pg	20 42 58.3	+0.1
GEM	Giv'at Ha'Em	0.21	122	P	Pg	20 42 58.9	+0.2
GEM	Giv'at Ha'Em	0.21	122	S	Sb	20 43 03.0	-0.3
YFTH	Yftach	0.21	156	P	Pg	20 42 59.1	+0.4
YFTH				S	Sb	20 43 02.8	-0.5
LVBS	Lehavot Habash	0.25	137	P	Pb	20 42 59.8	-0.3
LVBS				S	Sb	20 43 04.4	+0.1
NATI	Neve Ativ	0.25	104	P	Pg	20 42 59.5	+0.2
NATI	Neve Ativ	0.25	104	S	Sb	20 43 04.4	+0.1
SHBL	Chebaa	0.25	84	*e*P	Pg	20 42 59.6	+0.2
SHBL				*e*S	Sg	20 43 03.2	0.0
ZRT	Zar'it	0.26	211	P	Pg	20 42 59.5	0.0
ZRT				S	Sb	20 43 04.1	-0.5
QRWL	Qaraoun	0.30	41	*e*P	Pg	20 43 00.4	+0.2
QRWL				*e*S	Sg	20 43 04.7	+0.1
MMC7	Mount Meron ar	0.30	189	P	Pg	20 43 00.5	+0.2
MMA0B	Mount Meron ar	0.31	187	P	Pg	20 43 00.4	+0.1
MMA0B	Mount Meron ar	0.31	187	S	Sb	20 43 06.1	0.0
HNTI	Hanita	0.33	224	P	Pg	20 43 00.7	0.0
HNTI	Hanita	0.33	224	S	Sb	20 43 06.7	+0.1
ZEFT	Zefat	0.35	174	P	Pb	20 43 02.9	+0.9
ZEFT				S	Sb	20 43 07.4	0.0
KDZV	Kedmat Zvi	0.36	144	P	Pb	20 43 01.9	-0.2
KDZV				S	Sb	20 43 08.3	+0.8
RSPN	Rosh Pina	0.36	167	P	Pb	20 43 02.5	+0.5
RSPN				S	Sb	20 43 07.8	+0.2
RCY	Rachaya	0.37	62	*e*P	Pg	20 43 01.8	+0.3
RCY				*e*S	Sg	20 43 06.6	0.0
DQRL	Deir Qamar	0.40	15	*e*P	Pg	20 43 02.2	+0.3
DQRL				*e*S	Sg	20 43 07.6	+0.1
AMID	Amiad	0.40	169	P	Pg	20 43 02.4	+0.4
AMID				S	Sb	20 43 09.1	+0.4
HDNS	Had-Ness	0.43	157	P	Pg	20 43 02.7	+0.3
HDNS				S	Sb	20 43 10.6	+1.3
KNHM	Kefar Nahum	0.45	166	P	Pb	20 43 03.7	+0.1
KNHM				S	Sb	20 43 10.8	+0.7
KSHT	Keshet	0.46	138	P	Pb	20 43 04.1	+0.3
KSHT	Keshet	0.46	138	S	Sb	20 43 11.3	+0.9
RMOT	Ramot	0.50	159	P	Pn	20 43 06.2	-0.3
RMOT				S	Sn	20 43 13.3	-1.7
BHL	Bhannes	0.60	17	*e*P	Pg	20 43 05.7	-0.1
BTOR	Bet Oren	0.70	212	P	Pb	20 43 08.1	+0.3
BTOR				S	Sn	20 43 19.6	-0.3
OFRI	\`Ofer	0.80	209	P	Pb	20 43 09.8	+0.3
OFRI	\`Ofer	0.80	209	S	Sn	20 43 22.3	-0.1
MMLI	Mount Malkishu	0.88	181	P	Pb	20 43 11.2	+0.3
HWQ	Hawqa	1.04	23	*e*P	Pb	20 43 14.1	+0.4

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*IDC **15** 20:43:09.1±0.7, 5°.09N×125°.52E, h0^{km}, mb4.0/12, mbtmp4.0/12, MS3.2/8, Error ellipse: s-maj=38.9km s-min=11.6km az=81.0*

*NEIC **15** 20:43:16.9±1.8, 5°.35N±0°.04×126°.36E±0°.06, h58^{km}±9^{km}, mb4.2/15, Error ellipse: s-maj=9.9km s-min=2.2km az=124.0*

*DJA **15** 20:43:16.2±0.3, 5°N±2°×12°6E±°, h10^{km}, M4.4/12, mB4.9/3, mb4.5/8, MLv4.4/12, Mw(mB)4.2/3*

ISC 15 20:43:17.5±0.5**, 5°.33N**±0°.05×**126°.28E**±0°.10**, h66**^{km}**, n58, σ1s.22**/50**, mb4.1**/22**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.80	205	P	Pn	20 43 45.2	-1.2
SGSI				S	Sn	20 44 09.3	+1.0
DAV	Davao City (W)	1.86	338		Pn	20 43 46.3	-1.0
DAV				Sn	Sn	20 44 09.3	-0.5
DAV	Davao City (W)	1.86	338	Pg	Pn	20 43 46.8	-0.5
	35nm,0.3s,baz=92,slow=19,SNR=6.0						
DAV				Lg	Lg	20 44 12.0	
	90nm,0.3s,baz=136,slow=23,SNR=4.2						
TNTI	Ternate	4.66	166	Pn	Pn	20 44 24.5	-1.0
TNTI	Ternate	4.66	166	P	Pn	20 44 24.4	-1.0
MRSI	Marisa	6.48	222	P	Pn	20 44 50.4	0.0
	0.3nm729nm57nm,0.6s						
TOLI2	Tolitoli	6.90	233		Pn	20 44 54.0	-2.2
LUWI	Luwuk	7.24	209		Pn	20 45 02.4	+1.7
SANI	Sanana	7.34	182	P	Pn	20 45 00.4	-1.7
	0.2nm28nm,1.1s						
APSI	Ampana	7.73	217	P	Pn	20 45 07.7	+0.2
MYLDM	Lahad Datu	7.75	269	Pn	Pn	20 45 09.2	+1.5
SWI	Sorong	7.91	141	P	Pn	20 45 09.6	-0.4
	0.1nm12nm,0.7s						
NLAI	Namlea	8.55	174	P	Pn	20 45 16.1	-2.6
	829nm35nm,0.6s						
FAKI	Fak Fak	10.14	144	Pn	Pn	20 45 38.9	-1.5
GUMO	Guam	20.08	65	LR	LR	20 56 16.0	
	comp=Z,12nm,19.7s,baz=138,slow=38						
KNRA	Kununurra	21.02	173	P	P	20 47 54.7	-1.2
KNRA				IAmb	IAmb	20 48 19.3	
	comp=Z,7.7nm,0.7s						
FITZ	Fitzroy Crossi	23.29	182	P	P	20 48 20.1	+0.4
COEN	Coen	25.46	139	P	P	20 48 39.8	+0.1
WB0	Warramunga Arr	26.19	162	P	P	20 48 45.9	-0.2
WB0				IAmb	IAmb	20 49 08.2	
	comp=Z,8.4nm,0.9s						
WRA	Warramunga Arr	26.34	163	P	P	20 48 45.0	-2.5
WRA	Warramunga Arr	26.34	163	P	P	20 48 47.8	+0.2
	comp=Z,1.6nm,0.8s,baz=340,slow=10,SNR=16						
	comp=Z,1.6nm,0.8s						
CMAR	Chiang Mai Arr	29.70	298	LR	LR	21 01 54.9	
	comp=Z,23nm,18.0s,baz=200,slow=39						
AS31	Alice Springs	29.77	166	P	P	20 49 19.6	+1.6
ASAR	Alice Springs	29.77	166	P	P	20 49 20.1	+2.0
ASAR	Alice Springs	29.77	166	P	P	20 49 17.1	-1.1
	comp=Z,0.4nm,0.7s,baz=342,slow=7.1,SNR=8.2						
ASAR				PcP	PcP	20 52 20.9	+0.3
	comp=Z,0.5nm,0.7s,baz=344,slow=2.3,SNR=5.2						
	comp=Z,0.4nm,0.7s						
KSRS	Korea Array	32.01	2	P	P	20 49 40.1	+2.5
	comp=Z,1.1nm,0.7s,baz=196,slow=8.5,SNR=2.7						
	comp=Z,1.1nm,0.7s						
MJAR	Matsushiro Arr	32.94	18	LR	LR	21 04 58.0	
	comp=Z,14nm,18.2s,baz=182,slow=39						
EIDS	Eidsvold	38.89	143	P	P	20 50 36.3	-0.5
EIDS				IAmb	IAmb	20 50 51.5	
	comp=Z,5.7nm,1.2s						
USRK	Ussuriysk Ar.	39.04	7	P	P	20 50 39.0	+1.2
	comp=Z,2.0nm,0.8s,baz=157,slow=7.8,SNR=2.6						
	comp=Z,2.0nm,0.8s						
XLT	XiLinHaoTe	39.45	348	*e*P	P	20 50 48.5	+7.1
XLT				sP	pP	20 50 54.9	-2.2
XLT				pmax	pmax		
	comp=Z,5.0nm,0.5s						
STKA	Stephens Creek	39.78	159	P	P	20 50 44.0	-0.1
STKA	Stephens Creek	39.78	159	P	P	20 50 45.1	+1.0
	comp=Z,1.4nm,0.6s,baz=328,slow=5.1,SNR=6.5						
	comp=Z,1.4nm,0.6s						
H11N1	WAKE ISLAND Hy	42.01	66	T	T	21 35 37.9	
	baz=254,slow=75,SNR=6.0						
H11N2	WAKE ISLAND Hy	42.02	66	T	T	21 35 35.8	
	baz=254,slow=75,SNR=4.3						
H11N3	WAKE ISLAND Hy	42.02	66	T	T	21 35 36.8	
	baz=254,slow=75,SNR=4.7						
MKAR	Makanchi Array	55.99	325	P	P	20 52 48.3	-1.0
MKAR	Makanchi Array	55.99	325	P	P	20 52 48.6	-0.7
	comp=Z,1.0nm,0.5s,baz=129,slow=7.9,SNR=15						
	comp=Z,1.0nm,0.5s						
MAKZ	Makanchi	56.18	325	P	P	20 52 49.7	-1.0
MAKZ				IAmb	IAmb	20 52 54.2	
	comp=Z,1.8nm,0.8s						
YAK	Yakutsk	56.63	2	P	P	20 52 53.6	+0.1
ZALV	Zalesovo Beam	58.97	333	P	P	20 53 08.2	-1.9
	comp=Z,0.4nm,0.3s,baz=126,slow=7.3,SNR=2.1						
ZALV				LR	LR	21 18 24.8	
	comp=Z,23nm,18.8s,baz=155,slow=36						
	comp=Z,0.4nm,0.3s						
KURBB	Kurchatov Arra	60.16	327	P	P	20 53 17.4	-1.0
	comp=Z,1.3nm,0.6s,baz=123,slow=6.1,SNR=16						
	comp=Z,1.3nm,0.6s						
KURK	Kurchatov	60.16	327	P	P	20 53 17.6	-0.8
KURK				IAmb	IAmb	20 53 20.4	
	comp=Z,2.3nm,0.6s						
KKAR	Karatay Array	61.76	317	P	P	20 53 28.2	-1.2
BVAR	Borovoye Array	65.74	327	P	P	20 53 54.2	-1.2
	comp=Z,0.9nm,0.7s,baz=101,slow=4.6,SNR=4.8						
	comp=Z,0.9nm,0.7s						
ABKAR	Akbulak array	70.63	320	P	P	20 54 25.2	-0.8
ABKAR	Akbulak array	70.63	320	P	P	20 54 25.6	-0.5
ABKAR				IAmb	IAmb	20 54 35.3	
	comp=Z,2.6nm,1.2s						
AKTO	Aktyubinsk	72.13	321	LR	LR	21 28 37.8	
	comp=Z,30nm,18.2s,baz=252,slow=38						
ARTI	Arti	73.43	327	P	P	20 54 42.4	-0.2
ARTI				IAmb	IAmb	20 54 45.3	
	comp=Z,2.2nm,0.5s						
BELG	Belogornoye	78.87	322	LR	LR	21 32 18.3	
	comp=Z,25nm,18.2s,baz=334,slow=38						
IMAR	Indian Mountai	81.07	24	P	P	20 55 26.1	+0.8
H21K	Melozitna Rive	81.42	24	P	P	20 55 27.1	-0.1
H21K				IAmb	IAmb	20 55 56.3	
	comp=Z,2.0nm,1.1s						
MLY	Manley	82.23	25	P	P	20 55 31.4	0.0
MLY				IAmb	IAmb	20 55 46.9	
	comp=Z,1.7nm,1.0s						
ILAR	Eielson Array	83.86	25	P	P	20 55 41.8	+2.0
	comp=Z,0.5nm,0.9s,baz=258,slow=6.7,SNR=4.3						
	comp=Z,0.5nm,0.9s						
ARCES	ARCESS Array B	88.80	340	P	P	20 56 03.9	0.0
	comp=Z,5.6nm,1.0s,baz=79,slow=5.2,SNR=2.6						
	comp=Z,5.6nm,1.0s						
INK	Inuvik	88.85	21	LR	LR	21 41 03.1	
	comp=Z,23nm,18.9s,baz=250,slow=39						
FINES	FINESS Array B	90.22	332	P	P	20 56 10.2	-0.5
	comp=Z,0.8nm,0.7s,baz=90,slow=7.6,SNR=3.9						
	comp=Z,0.8nm,0.7s						
NOA	NORSAR Array B	97.16	334	LR	LR	21 42 50.8	
	comp=Z,13nm,20.1s,baz=235,slow=37						
TORD	Torodi Ar. Bea	121.98	289	PKP	PKPdf	21 02 04.9	-0.6
	comp=Z,9.1nm,0.4s,baz=42,slow=0.2,SNR=3.8						

*MCSM **15** 20:46:01.7±0.3,52°N±2°×1°6E±°,h10km,mb3.9,MLv3.8*
*IPEC **15** 20:46:01.5±0.2,51°.59N×16°.20E,h1km,ML3.3/5,Error ellipse: s-maj=1.5km s-min=1.0km az=36.0*
*IDC **15** 20:46:02.2±0.5,51°.56N×16°.00E,h0km,mb3.6/4, mbtmp3.5/12,ML3.1/8,MS2.9/1,Error ellipse: s-maj=9.6km s-min=5.4km az=105.0*
*BGR **15** 20:46:02.1±0.4,51°.56N×16°.15E,h1km,ML3.5/14,Error ellipse: s-maj=4.4km s-min=2.2km az=13.0*
*VIE **15** 20:46:03.4±0.6,51°.43N×15°.95E,h0km,mb3.0/18, ml3.2/15,ms3.4/2,Error ellipse: s-maj=6.1km s-min=3.2km az=56.0   83 km WNW of Wroclaw Suspected Mining induced.*
*DNK **15** 20:46:03.2±1.2,51°.77N×15°.77E,h0km±91km,ML2.4*
*PRU **15** 20:46:05.0,51°.46N×16°.12E,h0km,Felt In Harrachov*
ISC 15 20:46:00.4±0.5,**51°.61N**±0°.02×**16°.16E**±0°.02,**h0km,n122,** σ**1ˢ.29**/194,**mb3.6**/3,**9C-4D,Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.77**	**174**	*i* Pg	**Pg**	**20 46 16.1**	**+1.0**
KSP				*e*Sg	**Sg**	**20 46 25.9**	**+0.9**
KSP	**Ksiaz**	**0.77**	**174**	*e*Pg	**Pg**	**20 46 16.2**	**+1.0**
KSP				*e*Sg	**Sg**	**20 46 26.2**	**+1.1**
KSP	**Ksiaz**	**0.77**	**174**	Pg	**Pg**	**20 46 15.9**	**+0.7**
KSP				Sg	**Sg**	**20 46 26.0**	**+0.9**
CHVC	**Chvalec**	**1.02**	**184**	*e*PG	**Pb**	**20 46 21.0**	**0.0**
CHVC				*e*SG	**Sg**	**20 46 34.1**	**+0.9**
	comp=Z,289nm,0.6s						
OSTC	**Ostas**	**1.05**	**178**	*e*PG	**Pb**	**20 46 21.8**	**+0.3**
OSTC				*e*SG	**Sg**	**20 46 35.0**	**+0.8**
	comp=Z,212nm,0.4s						
UPC	**Upice**	**1.10**	**185**	*e*PG	**Pg**	**20 46 22.3**	**+0.7**
UPC				*e*SG	**Sg**	**20 46 36.0**	**+0.1**
DPC	**Dobruska-Polom**	**1.26**	**175**	*e*PG	**Pg**	**20 46 25.0**	**+0.4**
DPC				*e*SG	**Sg**	**20 46 40.2**	**-0.7**
	comp=Z,316nm,0.8s						
DPC	**Dobruska-Polom**	**1.26**	**175**	*e*Pn	**Pg**	**20 46 25.0**	**+0.4**
DPC				*e*Sg	**Sg**	**20 46 41.3**	**+0.4**
DPC	**Dobruska-Polom**	**1.26**	**175**	Pg	**Pg**	**20 46 24.8**	**+0.2**
DPC				Sg	**Sg**	**20 46 41.3**	**+0.4**
PIVO	**Bartosovice**	**1.44**	**170**	*e*Pg	**Pn**	**20 46 27.9**	**0.0**
	baz=351						
PIVO				*e*Sg	**Sg**	**20 46 45.8**	**-0.9**
	507nm,0.5s,baz=351						
PVCC	**Panska Ves**	**1.47**	**224**	*e*PG	**Pg**	**20 46 29.4**	**+0.7**
PVCC				*e*SG	**Sb**	**20 46 48.8**	**+0.9**
	comp=Z,727nm,0.3s						
BRG	**Berggiesshubel**	**1.57**	**243**	*e*Pn	**Pn**	**20 46 29.0**	**-0.5**
BRG				*e*Sg	**Sn**	**20 46 51.4**	**+0.7**
BRG	**Berggiesshubel**	**1.57**	**243**	Pn	**Pn**	**20 46 29.1**	**-0.5**
BRG				Pg	**Pb**	**20 46 31.1**	**+0.7**
BRG				Sg	**Sn**	**20 46 51.5**	**+0.8**
BRG				Amp		20 46 54.0	
	comp=Z,307nm,0.4s						
KRLC	**Kraliky**	**1.58**	**165**	*e*PG	**Pn**	**20 46 30.4**	**+0.6**
KRLC				*e*SG	**Sn**	**20 46 51.2**	**+0.2**
	comp=Z,216nm,0.4s						
RICC	**Richard**	**1.68**	**232**	*e*SG	**Sg**	**20 46 55.1**	**+0.7**
	comp=Z,304nm,0.4s						
RUE	**Ruedersdorf**	**1.71**	**302**	*e*P	**Pn**	**20 46 31.8**	**+0.4**
GKP	**Gorka Klasztor**	**1.79**	**21**	*e*P	**Pg**	**20 46 38.5**	**+3.7**
PRA	**Prague**	**1.89**	**216**	*e*PG	**Pb**	**20 46 36.6**	**+0.9**
PRA				*e*SG	**Sb**	**20 47 00.3**	**+0.5**
	comp=Z,235nm,0.6s						
GOPC	**GO Pecny, Ondr**	**1.91**	**208**	*e*PG	**Pb**	**20 46 35.8**	**-0.3**
PRU	**Pruhonice**	**1.92**	**213**	*e*PG	**Pb**	**20 46 36.2**	**-0.1**
PRU				*e*SG	**Sb**	**20 47 01.4**	**+0.7**
	comp=Z,177nm,0.7s						
STEB	**Steborice**	**1.96**	**148**	*e*PN	**Pn**	**20 46 35.0**	**0.0**
STEB				*e*PG	**Pg**	**20 46 38.2**	**+0.2**
STEB				*e*SG	**Sg**	**20 47 03.2**	**-0.3**
CLL	**Collm**	**2.00**	**263**	*e*Pn	**Pn**	**20 46 35.1**	**-0.3**
CLL				*e*Sg	**Sg**	**20 47 05.3**	**+0.8**
CLL	**Collm**	**2.00**	**263**	Pn	**Pn**	**20 46 35.1**	**-0.3**
CLL	**Collm**	**2.00**	**263**	*i* Pn	**Pn**	**20 46 35.2**	**-0.3**
	comp=Z,48nm,0.5s						
CLL				*e*Pg	**Pb**	**20 46 38.0**	**+0.4**
CLL				*i* x	x	20 46 42.1	
CLL				*e*Sg	**Sg**	**20 47 05.0**	**+0.5**
	comp=Z,197nm,0.4s						
MORC	**Moravsky Berou**	**2.03**	**154**	*e*Pn	**Pn**	**20 46 36.1**	**+0.1**
	baz=335						
MORC				*e*Sg	**Sb**	**20 47 04.3**	**+0.2**
	comp=Z,154nm,0.4s,baz=335						
MORC	**Moravsky Berou**	**2.03**	**154**	⇑P	**Pn**	**20 46 36.5**	**+0.5**
MORC				⇑S	**Sb**	**20 47 03.8**	**-0.3**
MORC	**Moravsky Berou**	**2.03**	**154**	*e*Pn	**Pn**	**20 46 36.2**	**+0.2**
MORC				*e*Sg	**Sb**	**20 47 04.6**	**+0.5**
OKC	**Ostrava-Krasne**	**2.18**	**144**	*e*Pn	**Pn**	**20 46 36.8**	**-1.1**
OKC				*e*Sg	**Sg**	**20 47 09.5**	**-0.8**
VRAC	**Vranov**	**2.32**	**173**	Pn	**Pn**	**20 46 40.5**	**+0.6**
	comp=Z,6.8nm,0.3s,baz=346,slow=14,SNR=54						
VRAC				Pg	**Pg**	**20 46 44.4**	**-0.4**
	comp=Z,12nm,0.3s,baz=353,slow=15,SNR=29						
VRAC				Sn	**Sn**	**20 47 10.8**	**+1.7**
	comp=Z,19nm,0.3s,baz=90,slow=18,SNR=8.7						
	comp=Z,33nm,0.3s						
VRAC	**Vranov**	**2.32**	**173**	*e*Pn	**Pn**	**20 46 40.4**	**+0.6**
	baz=354						
VRAC				*e*Sg	**Sb**	**20 47 13.5**	**+1.2**
	comp=Z,119nm,0.6s,baz=354						
VRAC	**Vranov**	**2.32**	**173**	⇑P	**Pn**	**20 46 40.5**	**+0.6**
VRAC				⇑S	**Sb**	**20 47 12.3**	**0.0**
TREC	**Trest**	**2.35**	**191**	*e*PG	**Pb**	**20 46 44.8**	**+1.1**
TREC				*e*SG	**Sb**	**20 47 14.6**	**+1.3**
MAUC	**Maruska**	**2.48**	**154**	*e*SG	**Sg**	**20 47 19.8**	**-0.4**
ZVC	**Zvikov**	**2.51**	**211**	*e*PG	**Pb**	**20 46 47.3**	**+1.0**
ZVC				*e*SG	**Sb**	**20 47 18.8**	**+1.1**
KRUC	**Moravsky**	**2.55**	**176**	*e*Pn	**Pn**	**20 46 43.6**	**+0.5**
	baz=357						
KRUC	**Moravsky**	**2.55**	**176**	*e*Pg	**Pb**	**20 46 47.9**	**+0.8**
	baz=357						
KRUC				*e*Sg	**Sb**	**20 47 20.6**	**+1.6**
	comp=Z,113nm,0.7s,baz=357						
TANN	**Tannenbergstha**	**2.62**	**244**	*e*Pn	**Pn**	**20 46 44.4**	**+0.4**
TANN				*e*Sg	**Sg**	**20 47 24.1**	**-0.5**
OJC	**Ojcow**	**2.69**	**120**	*e*Pn	**Pn**	**20 46 44.0**	**-1.0**
OJC				*e*Pg	**Pg**	**20 46 52.0**	**0.0**
OJC				*e*Sg	**Sg**	**20 47 27.9**	**+1.1**
OJC	**Ojcow**	**2.69**	**120**	*e*Pn	**Pn**	**20 46 44.0**	**-1.0**
OJC				*e*Sg	**Sg**	**20 47 28.1**	**+1.3**
WERD	**Werda**	**2.69**	**246**	*e*Pn	**Pn**	**20 46 45.3**	**+0.3**
WERD				*e*Sg	**Sg**	**20 47 27.7**	**+0.8**
JAVC	**Velka Javorina**	**2.92**	**160**	*e*Pn	**Pn**	**20 46 48.7**	**+0.6**
	baz=341						
JAVC	**Velka Javorina**	**2.92**	**160**	*e*PN	**Pn**	**20 46 48.8**	**+0.6**
KHC	**Kasperske Hory**	**2.98**	**215**	*e*PN	**Pn**	**20 46 49.2**	**+0.2**
KHC				*e*PG	**Pb**	**20 46 55.9**	**+1.5**
KHC				*e*SG	**Sb**	**20 47 34.5**	**+3.2**
	comp=Z,71nm,0.4s						
KHC	**Kasperske Hory**	**2.98**	**215**	Pn	**Pn**	**20 46 49.0**	**0.0**
MOX	**Moxa**	**3.02**	**253**	*e*Pn	**Pn**	**20 46 49.6**	**+0.1**
MOX				*e*Sg	**Sg**	**20 47 36.8**	**-0.6**
CKRC	**Cesky Krumlov**	**3.03**	**204**	*e*PN	**Pn**	**20 46 50.6**	**+0.9**
CKRC				*e*PG	**Pb**	**20 46 56.7**	**+1.4**
CKRC				*e*SG	**Sb**	**20 47 35.7**	**+2.9**
	comp=Z,90nm,0.5s						
MANZ	**Manzenberg**	**3.04**	**239**	*e*Pn	**Pn**	**20 46 50.6**	**+0.8**
MANZ				*e*Sg	**Sg**	**20 47 38.5**	**+0.5**
ROTZ	**Rotzenmuhle**	**3.12**	**235**	*e*Pn	**Pn**	**20 46 51.2**	**+0.4**
ROTZ				*e*Sg	**Sg**	**20 47 39.3**	**-1.2**
GEC2	**GERESS Array S**	**3.18**	**211**	*e*Pn	**Pn**	**20 46 52.1**	**+0.3**
GEC2				*e*Sg	**Sb**	**20 47 40.6**	**+3.4**
GERES	**GERESS Array B**	**3.18**	**211**	Pn	**Pn**	**20 46 52.8**	**+0.9**
	comp=Z,8.4nm,0.3s,baz=13,slow=25,SNR=24						
GERES				Pg	**Pb**	**20 46 58.8**	**+1.0**
	comp=Z,2.2nm,0.3s,baz=31,slow=18,SNR=44						
GERES				Sn	**Sn**	**20 47 29.9**	**-0.6**
	comp=Z,1.2nm,0.3s,baz=26,slow=23,SNR=3.5						
GERES				Lg	Lg	20 47 39.7	
	comp=Z,2.7nm,0.3s,baz=30,slow=26,SNR=6.3						
	comp=Z,11nm,0.3s						
WET	**Wettzell**	**3.24**	**222**	*e*Pn	**Pn**	**20 46 52.7**	**+0.2**
LANS	**Liptovska Anna**	**3.25**	**138**	*e*PN	**Pn**	**20 46 53.4**	**+0.8**
LANS				*e*PG	**Pg**	**20 47 02.2**	**-0.4**
LANS				*e*SG	**Sg**	**20 47 44.6**	**0.0**
MODS	**Modra-Piesok**	**3.32**	**167**	*e*PN	**Pn**	**20 46 54.2**	**+0.6**
MODS				*e*PG	**Pg**	**20 47 03.8**	**-0.2**
MODS				*e*SG	**Sg**	**20 47 46.4**	**-0.5**
NIE	**Niedzica**	**3.43**	**128**	*e*Pg	**Pg**	**20 47 06.5**	**+0.2**
NIE				*e*Sg	**Sg**	**20 47 51.0**	**+0.3**
NIE	**Niedzica**	**3.43**	**128**	Pn	**Pn**	**20 46 55.6**	**+0.4**
VYHS	**Vyhne**	**3.56**	**150**	*e*PN	**Pn**	**20 46 57.2**	**+0.2**
VYHS				*e*PG	**Pg**	**20 47 10.7**	**+2.0**
VYHS				*e*SG	**Sg**	**20 47 55.6**	**+0.8**
GRF	**Grafenberg Arr**	**3.68**	**241**	*e*Pn	**Pn**	**20 46 59.2**	**+0.6**
GRF				*e*Sg	**Sg**	**20 47 57.9**	**-0.7**
CONA	**Conrad Observa**	**3.69**	**183**	*i* Pn	**Pn**	**20 46 59.6**	**+0.8**
	comp=Z,9.5nm,0.4s,SNR=30						
CONA				*e*Sg	**Sg**	**20 47 56.5**	**-2.4**
	comp=Z,58nm,0.4s						
RONA	**Rosalia, Austr**	**3.91**	**179**	*i* Pn	**Pn**	**20 47 02.2**	**+0.4**
	comp=Z,1.8nm,0.2s,SNR=6.9						
RONA				*e*Sg	**Sg**	**20 48 03.3**	**-2.7**
	comp=Z,21nm,0.4s						
STHS	**Stebnicka Huta**	**3.92**	**122**	*e*PN	**Pn**	**20 47 02.2**	**+0.4**
STHS				*e*PG	**Pg**	**20 47 17.6**	**+2.1**
STHS				*e*SG	**Sg**	**20 48 06.9**	**+0.7**
MOA	**Molln**	**3.96**	**199**	*i* Pn	**Pn**	**20 47 03.2**	**+0.8**
	comp=Z,21nm,0.3s,SNR=75						
MOA				Sg	**Sg**	**20 48 06.9**	**-0.6**
	comp=Z,71nm,0.6s						
BIOA	**Bad Ischl, Aus**	**4.25**	**204**	*i* Pn	**Pn**	**20 47 07.1**	**+0.7**
	comp=Z,16nm,0.4s,SNR=18						
BIOA				*e*Sg	**Sg**	**20 48 16.4**	**-0.4**
	comp=Z,58nm,0.4s						
LUNU	**Lund**	**4.34**	**339**	*i* P	**Pn**	**20 47 07.5**	**-0.1**
ARSA	**Arzberg**	**4.38**	**186**	*e*Pn	**Pn**	**20 47 09.9**	**+1.7**
	comp=Z,8.7nm,0.3s,SNR=8.2						
ARSA				*e*Sg	**Sg**	**20 48 18.2**	**-2.8**
	comp=Z,43nm,0.6s						
PSZ	**Piszkesteto**	**4.42**	**145**	⇑P	**Pn**	**20 47 09.9**	**+1.1**
PSZ	**Piszkesteto**	**4.42**	**145**	*e*P	**Pn**	**20 47 13.3**	**+4.6**
MPLH	**Magyarpolny**	**4.53**	**168**	Pn	**Pn**	**20 47 11.3**	**+1.0**
KWP	**Kalwaria Pacla**	**4.62**	**113**	Pn	**Pn**	**20 47 11.5**	**+0.1**
BLEU	**Blekinge**	**4.71**	**358**	*i* P	**Pn**	**20 47 13.8**	**+1.1**
BLEU				IAML		20 48 12.3	
	comp=Z,1.9nm,0.3s						
KOLS	**Kolonicke sedl**	**4.75**	**122**	*e*PN	**Pn**	**20 47 14.3**	**+1.1**
KOLS				*e*PG	**Pg**	**20 47 34.9**	**+3.5**
LESA	**Schwarzleotal**	**4.76**	**210**	*e*Pn	**Pn**	**20 47 14.0**	**+0.5**
	comp=Z,3.8nm,0.4s,SNR=7.1						
LESA				*e*Sg	**Sg**	**20 48 30.2**	**-3.1**
	comp=Z,19nm,0.4s						
SOKA	**Soboth**	**4.99**	**189**	*e*Pn	**Pn**	**20 47 17.7**	**+1.1**
	comp=Z,2.4nm,0.3s,SNR=8.8						
DEL	**Delary**	**5.06**	**345**	*i* P	**Pn**	**20 47 16.8**	**-0.6**
DEL				IAML		20 48 17.0	
	comp=Z,2.2nm,0.4s						
HOLU	**Holmets**	**5.06**	**125**	Pn	**Pn**	**20 47 17.6**	**+0.1**
OBKA	**Obir**	**5.21**	**192**	*i* Pn	**Pn**	**20 47 19.9**	**+0.2**
	comp=Z,1.3nm,0.3s						
WATA	**Walderalm**	**5.21**	**217**	*e*Pn	**Pn**	**20 47 20.8**	**+1.0**
	comp=Z,9.9nm,0.6s,SNR=7.4						
WATA				*i* Sn	**Sn**	**20 48 21.2**	**+0.5**
	comp=Z,8.8nm,0.3s						
MYKA	**Terra Mystica**	**5.25**	**199**	*i* Pn	**Pn**	**20 47 20.7**	**+0.5**
	comp=Z,4.7nm,0.4s						
MYKA				*e*Sg	**Sg**	**20 48 47.6**	**-1.4**
	comp=Z,25nm,0.8s						
WTTA	**Wattenberg**	**5.25**	**216**	*i* Pn	**Pn**	**20 47 21.4**	**+1.1**
	comp=Z,4.9nm,0.4s,SNR=5.3						
WTTA				*e*Sg	**Sg**	**20 48 47.0**	**-2.1**
	comp=Z,24nm,0.6s						
STU	**Stuttgart**	**5.30**	**240**	*e*P	Pn	20 47 26.4	+5.6
MOTA	**Moosalm**	**5.39**	**220**	*i* Pn	**Pn**	**20 47 24.1**	**+2.0**
	comp=Z,4.4nm,0.4s,SNR=6.1						
MOTA				*i* Sn	**Sn**	**20 48 22.6**	**-2.3**
	comp=Z,5.5nm,0.4s						
ABTA	**Abfaltersbach**	**5.42**	**208**	*e*Pn	**Pn**	**20 47 23.6**	**+1.1**
	comp=Z,4.2nm,0.4s,SNR=6.6						
ABTA				Sg	**Sg**	**20 48 55.1**	**+0.7**
	comp=Z,61nm,0.9s						
SQTA	**Sankt Quirin**	**5.45**	**218**	*e*Pn	**Pn**	**20 47 24.9**	**+1.9**
	comp=Z,5.4nm,0.3s,SNR=5.9						
SQTA				*e*Sg	**Sg**	**20 48 55.4**	**0.0**
	comp=Z,22nm,0.5s						
PBUR	**Paburge**	**5.59**	**35**	*e*P	Pb	20 47 31.9	-6.9
MORH	**Mrgy, Hungar**	**5.64**	**162**	⇓P	**Pn**	**20 47 26.8**	**+1.4**
MORH	**Mrgy, Hungar**	**5.64**	**162**	Pn	**Pn**	**20 47 26.8**	**+1.4**
	comp=Z,0.0nmcomp=Z,3.7nm,0.9s						
FABU	**Falkenberg**	**5.77**	**341**	*i* P	**Pn**	**20 47 27.1**	**-0.1**
FETA	**Feichten**	**5.80**	**220**	*i* Pn	**Pn**	**20 47 28.9**	**+1.1**
	comp=Z,1.8nm,0.4s						
FETA				*e*Sg	**Sg**	**20 49 06.5**	**-0.1**
	comp=Z,8.6nm,0.7s						
DAVA	**Damuels**	**5.95**	**226**	*e*Sg	**Sg**	**20 49 13.6**	**+2.0**
	comp=Z,21nm,0.5s						
PABE	**Paberze**	**6.07**	**47**	*e*P	Pn	20 47 37.8	+6.4
RNPP5	**Staryi Chortor**	**6.10**	**90**	Pn	**Pn**	**20 47 31.6**	**-0.1**
RAKU	**Rahkiv**	**6.30**	**122**	Pn	**Pn**	**20 47 33.2**	**-1.4**
DAVOX	**Davos/Dischmat**	**6.34**	**223**	Pn	**Pn**	**20 47 35.8**	**+0.5**
	comp=Z,0.8nm,0.3s,baz=44,slow=18,SNR=3.5						
DAVOX				Sn	**Sn**	**20 48 47.6**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=296,slow=23,SNR=1.3						
DAVOX				Lg	Lg	20 49 20.5	
	comp=Z,2.1nm,0.3s,baz=263,slow=11,SNR=5.5						
	comp=Z,1.6nm,0.4s						
BORU	**Boraas**	**6.35**	**343**	*i* P	**Pn**	**20 47 35.7**	**+0.5**
DRGR		**6.45**	**136**	⇑P	**Pn**	**20 47 37.7**	**+1.0**
KSV	**Kosov**	**6.62**	**116**	Pn	**Pn**	**20 47 39.2**	**+0.2**
MARR	**Marisel-Cluj**	**6.72**	**135**	⇓P	**Pn**	**20 47 40.7**	**+0.3**
BZS	**Buzias**	**7.00**	**147**	⇓P	**Pn**	**20 47 44.6**	**+0.5**
SURR	**Surduc**	**7.06**	**144**	⇑P	**Pn**	**20 47 45.0**	**0.0**
BURAR	**Bucovina Array**	**7.11**	**121**	⇑P	**Pn**	**20 47 45.9**	**+0.1**
NACGM	**Naroch**	**7.18**	**58**	*e*P	**Pn**	**20 47 45.9**	**-0.7**
	comp=Z,4.0nm,0.9s,baz=247						
MI28	**Mi28,Pidlybu**	**7.26**	**91**	Pn	**Pn**	**20 47 47.5**	**-0.1**
GZR	**Gura Zlata**	**7.61**	**142**	⇓P	**Pn**	**20 47 52.8**	**+0.2**
AK20	**Malin Array Si**	**8.13**	**91**	Pn	**Pn**	**20 47 59.0**	**-0.6**
AK19	**Malin Array Si**	**8.13**	**91**	Pn	**Pn**	**20 47 59.0**	**-0.6**
AK21	**Malin Array Si**	**8.14**	**91**	Pn	**Pn**	**20 47 59.5**	**-0.2**
AK22	**Malin Array Si**	**8.16**	**91**	Pn	**Pn**	**20 47 59.7**	**-0.3**
KIEV	**Kiev**	**8.26**	**91**	⇑P	**Pn**	**20 48 01.2**	**-0.2**
KIEV	**Kiev**	**8.26**	**91**	Pn	**Pn**	**20 48 00.8**	**-0.6**
	comp=Z,31nm,0.7s						
AKASG	**Malin Array Be**	**8.27**	**91**	Pn	**Pn**	**20 48 00.9**	**-0.6**
	comp=Z,1.9nm,0.3s,baz=280,slow=12,SNR=15						
AKASG				Sn	**Sn**	**20 49 32.4**	**-3.2**
	comp=Z,1.0nm,0.3s,baz=269,slow=24,SNR=4.1						
AKASG				Lg	Lg	20 50 26.8	
	comp=Z,0.1nm,0.3s,baz=276,slow=26,SNR=1.5						
	comp=Z,2.0nm,0.5s						
AKBB	**Malin Array Si**	**8.27**	**91**	Pn	**Pn**	**20 48 00.8**	**-0.7**
SORM	**Soroca**	**8.61**	**109**	Pn	**Pn**	**20 48 06.2**	**0.0**
	comp=Z,2.6nm,0.8s						
HFS	**Hagfors**	**8.66**	**352**	Pn	**Pn**	**20 48 07.0**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=170,slow=12,SNR=5.0						
HFS				Sn	**Sn**	**20 49 40.5**	**-4.6**
	comp=Z,0.1nm,0.3s,baz=183,slow=22,SNR=1.4						
HFS				Lg	Lg	20 50 37.8	
	comp=Z,0.2nm,0.3s,baz=166,slow=28,SNR=3.5						
	comp=Z,0.4nm,0.3s						
VSU	**Vasula**	**9.16**	**37**	*e*P	**Pn**	**20 48 15.9**	**+2.2**
NOA	**NORSAR Array B**	**9.84**	**346**	Pn	**Pn**	**20 48 22.2**	**-0.9**
	baz=159,slow=13,SNR=2.6						
	comp=Z,0.6nm,1.0s						
FINES	**FINESS Array B**	**11.26**	**25**	Pn	**Pn**	**20 48 41.1**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=207,slow=12,SNR=15						
FINES				Sn	**Sn**	**20 50 44.6**	**-4.3**
	comp=Z,0.2nm,0.3s,baz=218,slow=22,SNR=4.0						
	comp=Z,0.7nm,0.3s						
EKA	**Eskdalemuir Ar**	**12.09**	**296**	Pn	**Pn**	**20 48 50.6**	**-3.2**
	baz=101,slow=14						
ARCES	**ARCESS Array B**	**18.52**	**10**	Pn	**P**	**20 50 14.0**	**-4.1**
	comp=Z,0.1nm,0.3s,baz=199,slow=11,SNR=4.4						
	comp=Z,1.8nm,0.8s						
GNI	**Garni**	**22.81**	**109**	LR	LR	21 02 02.7	
	comp=Z,25nm,18.1s,baz=165,slow=42						
BVAR	**Borovoye Array**	**32.52**	**66**	P	**P**	**20 52 35.0**	**+2.3**
	comp=Z,0.5nm,0.7s,baz=317,slow=5.9,SNR=3.1						
	comp=Z,0.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**40.10**	**202**	P	**P**	**20 53 38.0**	**+0.4**
	comp=Z,1.3nm,1.1s,baz=18,slow=9.6						
	comp=Z,1.3nm,1.1s						
YKA	**Yellowknife Ar**	**59.78**	**336**	P	**P**	**20 56 08.1**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=36,slow=7.9,SNR=2.3						
	comp=Z,0.3nm,0.6s						
PDAR	**Pinedale Array**	**74.88**	**322**	P	**P**	**20 57 44.6**	**+1.6**
	comp=Z,0.4nm,0.6s,baz=33,slow=6.1,SNR=2.1						
	comp=Z,0.4nm,0.6s						

*IDC **15** 20:48:36.1±1.8,24°.51S×116°.04W,h0km,mb3.5/5, mbtmp3.5/5,MS3.4/7,Error ellipse: s-maj=68.6km s-min=33.8km az=39.0*
ISC 15 20:48:37.5±1.9,**24°.6S**±0°.4×**116°.1W**±0°.3,**h12km,n23,** σ**0ˢ.26**/9,**mb3.6**/5,**MS3.5**/7,**Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H03N2	**Juan Fernandez**	**33.53**	**114**	T	T	21 30 11.1	
	baz=283,slow=76						
H03N3	**Juan Fernandez**	**33.54**	**114**	T	T	21 30 18.5	
	baz=283,slow=76						
H03N1	**Juan Fernandez**	**33.55**	**114**	T	T	21 30 12.2	
	baz=283,slow=76						
PLCA	**Paso Flores**	**41.10**	**124**	LR	LR	21 09 15.6	
	comp=Z,98nm,18.4s,baz=244,slow=30						
LPAZ	**La Paz**	**45.51**	**89**	P	**P**	**20 56 57.8**	**-0.1**
	0.6nm,0.6s,baz=217,slow=5.1,SNR=2.0						
LPAZ				LR	LR	21 10 52.6	
	comp=Z,61nm,21.6s,baz=248,slow=29						
	0.6nm,0.6s						
JTS	**Las Juntas de**	**46.10**	**45**	LR	LR	21 10 56.8	
	comp=Z,22nm,19.0s,baz=218,slow=29						
ROSC	**El Rosal**	**50.07**	**60**	LR	LR	21 12 56.2	
	comp=Z,63nm,21.3s,baz=63,slow=29						
CPUP	**Villa Florida**	**52.68**	**105**	P	**P**	**20 57 52.0**	**0.0**
	0.2nm,0.3s,baz=301,slow=18,SNR=2.2						
CPUP				LR	LR	21 16 14.4	
	comp=Z,16nm,18.3s,baz=112,slow=32						
	0.2nm,0.3s						
TXAR	**Lajitas Array**	**54.93**	**13**	P	**P**	**20 58 08.7**	**+0.3**
	0.1nm,0.3s,baz=197,slow=11,SNR=1.9						
	0.1nm,0.3s						
SDV	**Santo Domingo**	**55.43**	**59**	LR	LR	21 19 15.5	
	comp=Z,33nm,18.1s,baz=236,slow=33						
NVAR	**Mina Array Bea**	**62.72**	**358**	P	**P**	**20 59 02.2**	**-0.3**
	0.6nm,0.6s,baz=185,slow=5.3,SNR=3.5						
	0.6nm,0.6s						
NEW	**Newport**	**72.52**	**359**	LR	LR	21 26 21.2	
	comp=Z,39nm,18.4s,baz=194,slow=31						
H11S2	**WAKE ISLAND Hy**	**86.51**	**292**	T	T	22 37 43.3	
	baz=116,slow=75,SNR=42						
H11S1	**WAKE ISLAND Hy**	**86.52**	**292**	T	T	22 37 44.9	
	baz=116,slow=75,SNR=34						
H11S3	**WAKE ISLAND Hy**	**86.52**	**292**	T	T	22 37 44.5	
	baz=116,slow=75,SNR=21						
YKA	**Yellowknife Ar**	**86.79**	**1**	P	**P**	**21 01 20.9**	**-0.1**
	0.4nm,0.9s,baz=184,slow=4.2,SNR=3.6						
	0.4nm,0.9s						
H11N3	**WAKE ISLAND Hy**	**86.89**	**293**	T	T	22 38 13.5	
	baz=117,slow=74						
H11N1	**WAKE ISLAND Hy**	**86.91**	**293**	T	T	22 38 08.9	
	baz=117						
H11N2	**WAKE ISLAND Hy**	**86.91**	**293**	T	T	22 38 10.7	
	baz=117,slow=74						
BRTR	**Keskin Array B**	**150.44**	**52**	PKPbc	**PKiKP**	**21 08 30.2**	**+0.2**
	0.3nm,0.6s,baz=267,slow=2.7,SNR=2.3						
BVAR	**Borovoye Array**	**151.18**	**352**	PKPbc	**PKiKP**	**21 08 31.2**	**+0.3**
	0.5nm,0.5s,baz=4.2,slow=5.9,SNR=2.4						
KURBB	**Kurchatov Arra**	**151.65**	**340**	PKPbc	**PKiKP**	**21 08 32.1**	**+0.2**
	0.4nm,0.6s,baz=25,slow=2.1,SNR=4.9						
MKAR	**Makanchi Array**	**153.41**	**331**	PKPbc	**PKiKP**	**21 08 35.5**	**-0.2**
	0.2nm,0.7s,baz=21,slow=1.3,SNR=3.5						

*NOU **15** 21:19:14.7,33°.88S×177°.76E,h308km,MLv4.3/5,North of New Zealand*
WEL 15 21:18:44.9±0.9,**32°S**±19°×**17°9W**±3°8,**h420km**±19km, **mB4.3**/7,**MLv4.6**/7,**Mw(mB)3.5**/7,**Error ellipse: s-maj=55.0km s-min=9.0km az=114.8,confirmed,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**5.80**	**199**	P	P	21 20 17.9	+2.1
MXZ	**Matakaoa Point**	**5.80**	**199**	P	P	21 20 16.7	+0.9
MXZ				S	S	21 21 31.2	+0.8
WMGZ	**Waiomatatini S**	**6.02**	**197**	P	P	21 20 18.6	+0.5
WMGZ				S	S	21 21 34.9	+0.4
HAZ	**Te Kaha**	**6.14**	**202**	P	P	21 20 19.1	-0.2
HAZ				S	S	21 21 37.7	+0.9
PKGZ	**Pakihiroa**	**6.15**	**199**	P	P	21 20 16.8	-2.7
PKGZ				S	S	21 21 38.8	+1.6
PUZ	**Puketiti**	**6.30**	**197**	P	P	21 20 20.8	-0.3
PUZ				S	S	21 21 40.3	+0.3
RUGZ	**Raukumara Rang**	**6.36**	**202**	P	P	21 20 22.5	+0.7
RUGZ				S	S	21 21 40.3	-1.2
MWZ	**Matawai**	**6.75**	**201**	P	P	21 20 27.3	+0.8
MWZ				S	S	21 21 51.8	+2.9
URZ	**Urewera**	**6.82**	**204**	P	P	21 20 26.5	-0.6
URZ	**Urewera**	**6.82**	**204**	P	P	21 20 26.4	-0.7
URZ				S	S	21 21 48.4	-1.8
MUGZ	**Murupara**	**7.13**	**205**	P	P	21 20 30.6	0.0
MUGZ				S	S	21 21 57.9	+1.3
SNGZ	**Shannon Statio**	**7.22**	**201**	P	P	21 20 32.7	+1.2
SNGZ				S	S	21 21 57.0	-1.4
MTHZ	**Maungataniwha**	**7.44**	**204**	P	P	21 20 34.3	+0.3
MTHZ				S	S	21 22 02.3	-0.7
NMHZ	**Naumai**	**7.67**	**203**	P	P	21 20 37.0	+0.4
NMHZ				S	S	21 22 10.0	+2.2
BKZ	**Black Stump Fm**	**7.84**	**204**	P	P	21 20 35.8	-2.6
BKZ	**Black Stump Fm**	**7.84**	**204**	P	P	21 20 37.8	-0.7
BKZ				S	S	21 22 12.0	+0.9
MCHZ	**McNeill Hill**	**8.02**	**202**	P	P	21 20 41.3	+1.1
MCHZ				S	S	21 22 16.6	+1.8
KWHZ	**Kaweka Forest**	**8.10**	**204**	P	P	21 20 41.2	+0.1
KWHZ				S	S	21 22 18.9	+2.5
KAHZ	**Kahuranaki**	**8.29**	**201**	P	P	21 20 42.7	-0.5
KAHZ				P	S	21 22 17.2	-3.1
KRHZ	**Kereru**	**8.31**	**203**	P	P	21 20 42.2	-1.2
KRHZ				P	S	21 22 21.4	+0.6
PXZ	**Pawanui**	**8.51**	**200**	P	P	21 20 45.5	-0.1
PXZ				P	S	21 22 24.6	-0.2
WPHZ	**Waipukurau**	**8.67**	**202**	P	S	21 22 29.1	+1.0
PRHZ	**Porangahau**	**8.79**	**201**	P	P	21 20 49.1	+0.3
PRHZ				S	S	21 22 30.7	0.0
TSZ	**Takapari Road**	**8.82**	**204**	S	S	21 22 29.7	-1.6
DVHZ	**Dannevirke**	**8.97**	**203**	P	S	21 22 34.5	+0.2
ANWZ	**Angora Road**	**9.02**	**201**	P	P	21 20 51.7	+0.5
ANWZ				P	S	21 22 34.2	-1.1
BFZ	**Birch Farm**	**9.29**	**201**	P	P	21 20 55.1	+0.9
BFZ	**Birch Farm**	**9.29**	**201**	P	P	21 20 54.9	+0.7
BFZ				P	S	21 22 40.5	-0.4
MRZ	**Mangatainoka R**	**9.49**	**204**	P	P	21 20 55.6	-0.9
MRZ				P	S	21 22 39.6	-5.4
TIWZ	**Tintock**	**9.49**	**202**	P	P	21 20 56.5	+0.1
TIWZ				P	S	21 22 44.5	-0.5
HOWZ	**Holdsworth Sta**	**9.72**	**204**	P	S	21 22 48.3	-1.4
OGWZ	**Otaki Gorge**	**9.77**	**205**	P	P	21 20 58.5	-1.0
OGWZ				P	S	21 22 50.5	-0.2
TMWZ	**Te Maipa**	**9.79**	**202**	P	P	21 20 59.6	-0.1
TMWZ				P	S	21 22 49.3	-1.7
MTW	**Mount Morrison**	**9.96**	**203**	P	S	21 22 52.8	-1.7
PAWZ	**Paruwai Farm**	**10.19**	**203**	P	S	21 22 59.7	+0.6
DUWZ	**D'Urville Isla**	**10.25**	**210**	P	S	21 23 00.7	+0.3
MSWZ	**Moikau Station**	**10.28**	**203**	P	P	21 21 03.7	-1.4
MSWZ				P	S	21 22 59.3	-1.5
BHW	**Baring Head**	**10.40**	**205**	P	S	21 23 02.6	-0.6
TCW	**Tory Channel**	**10.45**	**207**	P	S	21 23 03.9	-0.4
TUWZ	**Tuamarina**	**10.77**	**208**	P	P	21 21 09.5	-0.9
TUWZ				P	S	21 23 11.2	+0.5
NNZ	**Nelson**	**10.83**	**211**	P	P	21 21 09.7	-1.4
NNZ				P	S	21 23 10.5	-1.4
TKNZ	**Takaka Hill**	**10.87**	**212**	P	S	21 23 13.5	+0.8
KHZ	**Kahutara**	**11.77**	**207**	P	P	21 21 22.2	+0.8

*IDC **15** 21:21:32.0±0.8,23°.24S×175°.44W,h0km,mb4.1/11, mbtmp4.1/12,ML3.3/1,Error ellipse: s-maj=33.6km s-min=22.5km az=151.0*
*NEIC **15** 21:21:33.1±2.0,23°.2S±0°.1×175°.3W±0°.1,h10km±1km, mb4.6/11,Error ellipse: s-maj=23.4km s-min=17.1km az=59.0*
ISC 15 21:21:36.3±0.6,**23°.3S**±0°.1×**175°.4W**±0°.1,**h30km,n51,** σ**0ˢ.95**/43,**mb4.4**/14,**Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**6.61**	**52**		Pn	21 23 01.6	-10
AFI	**Afiamalu**	**9.92**	**21**	Pn	Pn	21 23 48.4	-8.6
RAR	**Rarotonga**	**14.65**	**85**	Pn	Pn	21 24 51.3	-10
URZ	**Urewera**	**16.26**	**201**	Pn	Pn	21 25 12.4	-10
	0.2nm,0.3s,baz=176,slow=13,SNR=1.2						
URZ				Sn	Sn	21 28 10.7	-11
	0.4nm,0.3s,baz=196,slow=20,SNR=1.4						
DZM	**Mont Dzumac**	**16.77**	**271**	Pn	**Pn**	**21 25 29.6**	**+0.4**
DZM				IAmb	IAmb	21 25 51.8	
	comp=Z,23nm,1.3s						

DZM	Mont Dzumac	16.77	271	Pn	Pn	21 25 29.0	-0.2
	comp=Z,0.1nm,0.3s,baz=158,slow=23,SNR=1.5						
	comp=Z,2.7nm,0.8s						
MRZ	Mangatainoka R	18.93	201	P	P	21 25 54.0	-0.7
MRZ				IAmb	IAmb	21 26 24.1	
	comp=Z,27nm,1.2s						
CTAO	Charters Tower	35.67	268	P	P	21 28 31.2	-0.9
CTAO				IAmb	IAmb	21 28 53.5	
	comp=Z,10nm,1.0s						
TOO	Toolangi	36.32	238	P	P	21 28 37.5	0.0
ASAR	Alice Springs	46.27	259	P	P	21 29 59.3	-0.1
	comp=Z,0.2nm,0.3s,baz=96,slow=7.5,SNR=8.8						
ASAR				PcP	PcP	21 31 35.8	+1.2
	comp=Z,0.4nm,0.8s,baz=106,slow=2.3,SNR=1.7						
	comp=Z,0.2nm,0.3s						
WB0	Warramunga Arr	46.62	264	P	P	21 30 01.2	-1.0
WB0				IAmb	IAmb	21 30 16.9	
	comp=Z,5.1nm,0.8s						
WRA	Warramunga Arr	46.63	264	P	P	21 30 00.6	-1.6
WRA	Warramunga Arr	46.63	264	P	P	21 30 01.2	-1.0
	comp=Z,1.8nm,0.7s,baz=91,slow=8.5,SNR=47						
	comp=Z,1.8nm,0.7s						
QSPA	South Pole Qui	66.83	180	P	P	21 32 25.6	+0.5
QSPA				IAmb	IAmb	21 32 43.7	
	comp=Z,8.1nm,1.1s						
QSPA	South Pole Qui	66.83	180	P	P	21 32 26.1	+1.0
	comp=Z,2.1nm,0.9s,baz=55,slow=4.9,SNR=4.6						
	comp=Z,2.1nm,0.9s						
MJAR	Matsushiro Arr	73.83	323	P	P	21 33 08.8	+0.6
	comp=Z,1.2nm,0.8s,baz=143,slow=6.0,SNR=1.8						
	comp=Z,1.2nm,0.8s						
PETK	Petropavlovsk-	79.55	344	P	P	21 33 40.1	+0.1
	comp=Z,3.5nm,0.8s,baz=187,slow=7.2,SNR=2.6						
	comp=Z,3.5nm,0.8s						
NVAR	Mina Array Bea	81.43	42	P	P	21 33 51.0	+0.3
	comp=Z,1.6nm,0.9s,baz=226,slow=9.4,SNR=5.8						
	comp=Z,1.6nm,0.9s						
H03S2	Juan Fernandez	82.48	123	T	T	23 05 52.4	
	baz=245						
H03S1	Juan Fernandez	82.50	123	T	T	23 05 53.3	
	baz=245						
H03S3	Juan Fernandez	82.50	123	T	T	23 05 55.7	
	baz=245						
USRK	Ussuriysk Ar.	82.58	325	P	P	21 33 56.6	+0.3
	comp=Z,3.8nm,1.0s,baz=120,slow=6.6,SNR=2.1						
	comp=Z,3.8nm,1.0s						
M17K	Holitna River	85.60	9	P	P	21 34 10.7	-0.6
L18K	Granite Mounta	86.49	9	P	P	21 34 15.1	-0.6
L18K				IAmb	IAmb	21 34 42.4	
	comp=Z,6.1nm,1.4s						
TXAR	Lajitas Array	86.57	56	P	P	21 34 14.9	-2.1
TXAR	Lajitas Array	86.57	56	P	P	21 34 16.7	-0.3
	comp=Z,0.6nm,0.9s,baz=212,slow=6.9,SNR=5.2						
	comp=Z,0.6nm,0.9s						
ENH	Enshi	89.55	303	P	P	21 34 31.7	+0.6
BCAR	Beaver Creek A	90.05	15	P	P	21 34 30.9	-1.8
ILAR	Eielson Array	90.49	12	P	P	21 34 35.8	+1.1
	comp=Z,0.3nm,0.6s,baz=205,slow=4.7,SNR=4.6						
	comp=Z,0.3nm,0.6s						
J26L	Joseph Creek	90.91	13	P	P	21 34 35.8	-0.9
J26L				IAmb	IAmb	21 34 49.7	
	comp=Z,3.5nm,0.9s						
CMAR	Chiang Mai Arr	93.26	289	P	P	21 34 48.4	-0.2
CMAR	Chiang Mai Arr	93.26	289	P	P	21 34 50.2	+1.6
	comp=Z,3.1nm,0.9s,baz=124,slow=3.4,SNR=13						
	comp=Z,3.1nm,0.9s						
BMAR	Burnt Mountain	93.29	11		P	21 34 47.3	-0.3
YKA	Yellowknife Ar	98.03	24	P	Pdif	21 35 10.1	+0.9
	comp=Z,0.2nm,0.5s,baz=238,slow=4.6,SNR=1.5						
	comp=Z,0.2nm,0.5s						
ZALV	Zalesovo Beam	114.12	320	PKP	PKiKP	21 40 14.1	+1.8
	comp=Z,0.3nm,0.3s,baz=114,slow=3.5,SNR=2.1						
MKAR	Makanchi Array	114.81	312	PKP	PKPdf	21 40 13.2	-0.7
	comp=Z,0.3nm,0.7s,baz=101,slow=1.5,SNR=2.5						
KURBB	Kurchatov Arra	117.68	316	PKP	PKPdf	21 40 17.7	-1.5
	comp=Z,0.5nm,0.8s,baz=91,slow=2.0,SNR=5.9						
BVAR	Borovoye Array	122.71	319	PKP	PKPdf	21 40 28.3	-0.5
	comp=Z,0.8nm,0.8s,baz=129,slow=2.1,SNR=4.8						
KBL	Kabul	123.28	297		PKPdf	21 40 31.0	+0.2
FINES	FINESS Array B	139.07	344	PKP	PKPdf	21 40 59.9	+0.5
	comp=Z,0.7nm,0.8s,baz=90,slow=1.4,SNR=3.5						
HFS	Hagfors	142.60	352	PKhKP	PKPpre	21 41 01.7	
	comp=Z,1.8nm,0.9s,baz=49,slow=6.5,SNR=1.9						
KOPT	Kop Dagi	145.42	307		PKPbc	21 41 11.2	-0.6
AKASG	Malin Array Be	146.57	331	PKPbc	PKPbc	21 41 14.5	-0.1
AKASG	Malin Array Be	146.57	331	PKPbc	PKPbc	21 41 14.2	-0.4
	comp=Z,0.5nm,0.4s,baz=41,slow=4.0,SNR=6.7						
BR131	Keskin Array S	150.44	311	PKPbc	PKPbc	21 41 23.8	-1.5
BRTR	Keskin Array B	150.44	311	PKPbc	PKPbc	21 41 24.2	-1.0
BRTR	Keskin Array B	150.44	311	PKPbc	PKPbc	21 41 25.6	+0.3
	comp=Z,1.1nm,0.7s,baz=145,slow=3.9,SNR=8.0						
BURAR	Bucovina Array	150.62	331	PKPbc	PKPbc	21 41 24.9	-0.5
MMAI	Mount Meron Ar	151.21	297	PKPbc	PKiKP	21 41 28.1	+0.3
	comp=Z,1.4nm,0.6s,baz=78,slow=8.1,SNR=6.5						
CLL	Collm	151.25	349	*i* PKPbc	PKiKP	21 41 28.3	+1.2
	comp=Z,8.0nm,1.4s						
CLL				*i* (PKPab)	sPKPdf	21 41 32.1	-0.3
	comp=Z,5.0nm,1.0s						
CLL				*i* x	x	21 41 38.1	
	comp=Z,7.0nm,0.9s						
GERES	GERESS Array B	153.46	346	PKPbc	PKiKP	21 41 32.7	+0.9
	comp=Z,0.1nm,0.3s,baz=7.8,slow=7.9,SNR=1.8						

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*IDC **15** 21:41:58.8±4.8, 5.°87S×153.°17E, h50^{km}±41^{km}, mb3.8/10, mbtmp4.1/11, ML2.0/1, Error ellipse: s-maj=34.7km s-min=20.7km az=73.0*

ISC 15 21:41:56.1±1.0,**5.°8S**±0.°2×**153.°4E**±0.°2,**h32**^{km},**n16**, σ**1**^{s}**00**/15,**mb4.1**/9,**New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	7.13	240	P	Pn	21 43 38.6	+0.4
	1.6nm,0.3s,baz=122,slow=19,SNR=1.7						
PMG				S	Sn	21 44 58.7	+0.5
	16nm,0.8s,baz=72,slow=12,SNR=2.3						
	5.0nm,0.5s						
DZM	Mont Dzumac	20.50	143	P	Pn	21 46 34.2	+0.2
	6.5nm,0.9s,baz=280,slow=1.9,SNR=6.0						
	6.5nm,0.9s						
WRA	Warramunga Arr	23.24	231	P	P	21 46 59.1	-1.8
	0.7nm,0.6s,baz=56,slow=10.0,SNR=6.0						
WRA				PcP	PcP	21 50 48.0	-0.3
	0.3nm,0.4s,baz=58,slow=2.5,SNR=7.6						
	0.7nm,0.6s						
ASAR	Alice Springs	25.82	225	P	P	21 47 23.4	-1.3
	0.5nm,0.6s,baz=57,slow=9.1,SNR=5.3						
ASAR				PcP	PcP	21 50 53.9	0.0
	0.3nm,0.5s,baz=62,slow=1.9,SNR=5.4						
	0.5nm,0.6s						
H11S3	WAKE ISLAND Hy	27.49	28	T	T	22 16 02.3	
	baz=208,slow=74,SNR=5.8						
H11S2	WAKE ISLAND Hy	27.50	28	T	T	22 15 48.5	
	baz=208,slow=74,SNR=4.7						
H11S1	WAKE ISLAND Hy	27.51	28	T	T	22 15 45.3	
	baz=208,slow=74,SNR=4.0						
USRK	Ussuriysk Ar.	53.40	341	P	P	21 51 12.9	+0.1
	1.3nm,0.6s,baz=160,slow=5.9,SNR=1.9						
	1.3nm,0.6s						
KLR	Kul'dur	57.99	343	P	P	21 51 46.0	+0.4
	2.2nm,0.5s,baz=194,slow=8.3,SNR=4.0						
	2.2nm,0.5s						
MKAR	Makanchi Array	81.48	319	P	P	21 54 11.2	+0.9
	1.0nm,0.6s,baz=93,slow=7.2,SNR=13						
	1.0nm,0.6s						
ZALV	Zalesovo Beam	82.33	326	P	P	21 54 14.7	+0.1
	1.9nm,0.4s,baz=113,slow=5.7,SNR=11						
	1.9nm,0.4s						
QSPA	South Pole Qui	84.14	180	P	P	21 54 25.7	+1.7
	0.9nm,0.7s,baz=97,slow=12,SNR=2.2						
	0.9nm,0.7s						
KURBB	Kurchatov Arra	84.96	322	P	P	21 54 28.2	0.0
	1.0nm,0.7s,baz=109,slow=3.8,SNR=11						
	1.0nm,0.7s						
BVAR	Borovoye Array	90.41	323	P	P	21 54 53.3	-1.1
	1.9nm,0.6s,baz=104,slow=5.6,SNR=15						
	1.9nm,0.6s						
BDFB	Brasilia	149.93	135	PKPbc	PKPbc	22 01 43.2	-1.3
	2.1nm,0.6s,baz=234,slow=1.6,SNR=4.0						
TORD	Torodi Ar. Bea	151.17	287	PKPbc	PKiKP	22 01 47.6	-0.2
	1.0nm,0.6s,baz=80,slow=2.3,SNR=0.6						

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*JMA **15** 21:52:13.7±0.5, 33°N±1°×14°2E±°, h28^{km}, MV3.6/21, FAR E OFF IZU ISLANDS*

*IDC **15** 21:52:20.1±3.4, 32.°57N×140.°23E, h0^{km}, mb3.5/3, mbtmp3.4/4, ML2.5/1, Error ellipse: s-maj=128.5km s-min=23.6km az=72.0*

ISC 15 21:52:19.6±1.6,**33.°11N**±0.°09×**141.°9E**±0.°2,**h40**^{km},**n11**, σ**1**^{s}**07**/14,**mb3.6**/3,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	Boso 1	1.73	333	*e*P	Pn	21 52 45.8	-0.9
BSO1				*e*S	Sn	21 53 09.6	+2.2
JHJ2	Mitsune	1.78	271	*e*P	Pn	21 52 46.7	-1.1
BSO3	Boso 3	2.06	325	*e*P	Pn	21 52 50.4	-1.1
BSO4	Boso 4	2.30	325	*e*P	Pn	21 52 54.5	-0.4
JHO	Hitachi	3.67	343	*e*P	Pn	21 53 12.5	-1.4
JAG	Ashikaga	3.89	329	*e*P	Pn	21 53 15.9	-0.9
JAG				*e*S	Sn	21 54 00.8	-0.4
MJAR	Matsushiro Arr	4.59	319	Pn	Pn	21 53 26.3	-0.3
	0.2nm,0.3s,baz=159,slow=12,SNR=20						
MJAR				Sn	Sn	21 54 18.8	+0.1
	0.1nm,0.3s,baz=180,slow=32,SNR=4.0						
	2.2nm,0.4s						
MAT	Matsushiro	4.60	319	*e*P	Pn	21 53 27.3	+0.7
MKAR	Makanchi Array	46.65	305	P	P	22 00 43.6	-0.4
	0.3nm,0.6s,baz=80,slow=9.1,SNR=4.1						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	48.82	311	P	P	22 01 00.8	+0.1
	0.5nm,0.8s,baz=81,slow=7.4,SNR=4.1						
	0.5nm,0.8s						
WRA	Warramunga Arr	53.25	189	P	P	22 01 35.1	+0.8
	0.3nm,0.3s,baz=5.6,slow=7.5,SNR=16						
	0.3nm,0.3s						

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*NIED **15** 21:55:50.6, 33.°13N×142.°03E, h4^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.16; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$-3.15; $M_{r\theta}$5.52; $M_{\theta\phi}$-0.27; $M_{\phi r}$-2.39; Fault plane solution: $M_0$6.41000×10^{14} NP1:ϕ_s1.00000°, δ17.00000°, λ145.00000°. NP2:ϕ_s125.00000°, δ80.00000°, λ76.00000°.*

*JMA **15** 21:55:50.6±0.6, 33°N±1°×14°2E±°, h4^{km}, MV3.8/25, FAR E OFF IZU ISLANDS*

*IDC **15** 21:55:50.9±2.3, 33.°42N×142.°37E, h0^{km}, mb3.9/9, mbtmp3.9/11, ML3.2/2, Error ellipse: s-maj=59.0km s-min=45.8km az=34.0*

ISC 15 21:55:54.8±1.4,**33.°27N**±0.°09×**142.°4E**±0.°1,**h35**^{km},**n30**, σ**1**^{s}**72**/32,**mb3.9**/9,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	Boso 1	1.79	321	*e*S	Sn	21 56 45.0	+0.9
JHJ2	Mitsune	2.14	266	P	Pn	21 56 25.9	-2.1
JHJ2	Mitsune	2.14	266	*e*P	Pn	21 56 23.9	-4.1
BSO3	Boso 3	2.16	315	*e*P	Pn	21 56 26.8	-1.4
BSO4	Boso 4	2.40	316	*e*P	Pn	21 56 31.2	-0.2
BSO4				*e*S	Sn	21 57 00.7	+1.1
JAG	Ashikaga	3.95	324	*e*P	Pn	21 56 52.6	-0.3
JAG				*e*S	Sn	21 57 37.8	-0.3
JRY	Ryogami san	3.95	315	*e*P	Pn	21 56 52.6	-0.4
JRY				*e*S	Sn	21 57 38.1	0.0
JNY	Yasuok	4.26	300	*e*P	Pn	21 56 56.9	-0.4
JOTO	OTAMA OYAMA	4.59	339	*e*S	Sn	21 57 52.5	-1.3
MJAR	Matsushiro Arr	4.72	315	Pn	Pn	21 57 02.9	-0.7
	0.6nm,0.3s,baz=160,slow=12,SNR=35						
MJAR				Sn	Sn	21 57 56.6	-0.5
	0.2nm,0.3s,baz=160,slow=19,SNR=4.3						
	4.6nm,0.3s						
MAJO	Matsushiro	4.72	315	P	Pn	21 57 03.3	-0.2
MAT	Matsushiro	4.72	315	*e*P	Pn	21 57 03.3	-0.2
JGF	Kuroka	4.74	301	P	Pn	21 57 03.1	-0.7
JMM	Marumori	4.76	345	P	Pn	21 57 04.7	+0.7
INU	Inuyama	4.88	297	P	Pn	21 57 05.0	-0.7
JSD	Sado	5.81	326	P	Pn	21 57 18.9	+0.4
ASAJ	Asahikawa	10.83	1	Pn	Pn	21 58 23.6	-3.7
	0.3nm,0.3s,baz=303,slow=25,SNR=1.5						
ASAJ				Sn	Sn	22 00 21.9	-5.4
	0.2nm,0.3s,baz=47,slow=31,SNR=1.6						
	9.0nm,1.1s						
H11N2	WAKE ISLAND Hy	25.69	116	T	T	22 28 49.9	
	baz=307						
H11N1	WAKE ISLAND Hy	25.70	116	T	T	22 28 51.4	
	baz=307						
H11N3	WAKE ISLAND Hy	25.71	116	T	T	22 28 44.5	
	baz=307						
ZALV	Zalesovo Beam	45.07	315	P	P	22 04 06.6	-0.6
	0.3nm,0.3s,baz=57,slow=5.3,SNR=2.3						
	0.3nm,0.3s						
MKAR	Makanchi Array	46.85	305	P	P	22 04 21.5	+0.2
	0.7nm,0.6s,baz=85,slow=10.0,SNR=11						
	0.7nm,0.6s						
KURBB	Kurchatov Arra	48.98	311	P	P	22 04 37.9	+0.2
	1.4nm,0.8s,baz=85,slow=7.7,SNR=12						
	1.4nm,0.8s						
BVAR	Borovoye Array	53.72	315	P	P	22 05 14.5	+1.3
	1.3nm,0.9s,baz=93,slow=7.4,SNR=7.2						
	1.3nm,0.9s						
FINES	FINESS Array B	72.50	333	P	P	22 07 19.1	+1.4
	1.0nm,0.9s,baz=36,slow=6.3,SNR=3.8						
	1.0nm,0.9s						
HFS	Hagfors	77.83	336	P	P	22 07 49.2	+0.8
	1.8nm,0.8s,baz=70,slow=12,SNR=2.3						
	1.8nm,0.8s						
NB2	NORSAR Subarra	77.95	338	P	P	22 07 51.4	+2.3
	comp=Z,0.9nm,1.0s,baz=41,slow=5.9						
NOA	NORSAR Array B	77.95	338	P	P	22 07 50.6	+1.5
	comp=Z,0.8nm,0.8s,baz=46,slow=5.1,SNR=4.6						
	comp=Z,0.8nm,0.8s						
BRTR	Keskin Array B	81.94	312	P	P	22 08 12.2	+1.0
	comp=Z,0.7nm,0.8s,baz=110,slow=3.2,SNR=5.8						
	comp=Z,0.7nm,0.8s						
MMAI	Mount Meron Ar	84.79	306	P	P	22 08 26.6	+0.7
	comp=Z,1.4nm,0.8s,baz=31,slow=3.4,SNR=5.1						
	comp=Z,1.4nm,0.8s						

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*BJI **15** 21:56:07.8, 21.°11S×174.°03W, h10^{km}, mB6.4/77, mb5.8/77, Ms6.1/97, Ms7 5.9/94*

*NOU **15** 21:56:08.7, 21.°43S×173.°95W, h0^{km}, ML6.1/133, Tonga Islands*

*MOS **15** 21:56:08.8±1.1, 21.°29S×174.°40W, h10^{km}, mb6.0/69, MS6.3/40, Error ellipse: s-maj=7.5km s-min=7.1km az=76.6*

*IDC **15** 21:56:09.5±0.3, 21.°19S×174.°54W, h0^{km}, mb5.4/32, mbtmp5.4/34, ML5.6/2, MS5.9/23, Error ellipse: s-maj=12.6km s-min=12.2km az=155.0*

*IPGP **15** 21:56:09.0, 21.°14S×174.°03W, h15^{km}, Mw6.2, Fault plane solution: NP1:ϕ_s217.00000°, δ30.00000°, λ109.00000°. NP2:ϕ_s15.00000°, δ62.00000°, λ80.00000°.*

*ISC-PP **15** 21:56:10, 21.°18S×174.°17W, h5^{km}, Mwppsm6.4, Moment Tensor Solution. s24 Moment tensor: Scale 10^{18}Nm; M_{rr}0.68±.17; $M_{\theta\theta}$0.00±.20; $M_{\phi\phi}$-0.65±.18; $M_{r\theta}$0.10±.15; $M_{\theta\phi}$0.20±.29; $M_{\phi r}$0.08±.15; Fault plane solution: $M_0$5.13000×10^{18} NP1:ϕ_s163.50000°, δ37.90000°, λ74.40000°. NP2:ϕ_s2.90000°, δ53.70000°, λ101.80000°.*

*NEIC **15** 21:56:10.2, 21.°15S×174.°01W, h26^{km}*

*NEIC **15** 21:56:10.2, 21.°25S×173.°80W, h26^{km}, Moment Tensor Solution. Duration: 4^{s}8 Moment tensor: Scale 10^{18}Nm; M_{rr}1.71; $M_{\theta\theta}$-0.27; $M_{\phi\phi}$-1.44; $M_{r\theta}$0.27; $M_{\theta\phi}$-0.62; $M_{\phi r}$0.36; Fault plane solution: $M_0$1.77000×10^{18} NP1: ϕ_s199.98000°, δ37.95000°, λ84.69000°. NP2:ϕ_s26.69000°, δ52.24000°, λ94.13000°. Principal axes: T 1.7752, Plg82.0000°, Azm319.0000°; N -0.0095, Plg3.0000°, Azm204.0000°; P -1.7658, Plg7.0000°, Azm114.0000°;*

*NEIC **15** 21:56:10.1, 21.°17S×173.°99W, h10^{km}*

*NEIC **15** 21:56:10.8±1.8, 21.°18S±0.°07×174.°17W±0.°09, h13^{km}±1^{km}, mb6.0/200, Ms_20 6.0/675, Mwb6.1/86, Mww6.1/36, Error ellipse: s-maj=14.6km s-min=11.1km az=104.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.64; $M_{\theta\theta}$0.09; $M_{\phi\phi}$-1.73; $M_{r\theta}$0.42; $M_{\theta\phi}$-0.47; $M_{\phi r}$0.66; Fault plane solution: $M_0$1.92000×10^{18} NP1:ϕ_s22.14000°, δ57.08000°, λ99.94000°. NP2:ϕ_s184.27000°, δ34.22000°, λ75.07000°. Principal axes: T 1.8326, Plg76.0000°, Azm322.0000°; N 0.1674, Plg8.0000°, Azm197.0000°; P -2.0000, Plg12.0000°, Azm105.0000°;*

*BGR **15** 21:56:14.9, 21.°30S×174.°43W, h33^{km}*

*GCMT **15** 21:56:15.8±0.1, 21.°33S×174.°01W, h15^{km}, MW6.1/176, Moment Tensor Solution. s163,c375; s176,c647; Duration: 2^{s}7 Moment tensor: Scale 10^{18}Nm; M_{rr}1.38±.01; $M_{\theta\theta}$-0.03±.01; $M_{\phi\phi}$-1.36±.01; $M_{r\theta}$0.41±.02; $M_{\theta\phi}$-0.63±.01; $M_{\phi r}$0.89±.02; Best double couple: $M_0$1.78500×10^{18} NP1:ϕ_s199.00000°, δ28.00000°, λ86.00000°. NP2:ϕ_s23.00000°, δ62.00000°, λ92.00000°. Principal axes: T 1.6710, Plg73.0000°, Azm298.0000°; N 0.2190, Plg2.0000°, Azm203.0000°; P -1.8990, Plg17.0000°, Azm112.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 15 21:56:09.8±0.3,**21.°21S**±0.°03×**174.°17W**±0.°03,**h10**^{km}±1^{km}, **h9**^{km}**:pP-P**,**n2115**, σ**1**^{s}**65**/2239,**mb5.8**/251,**MS6.0**/419, **183C-63D**,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	4.51	63		Pn	21 57 14.3	-4.0
NIUE	Niue	4.51	63	P	Pn	21 57 14.9	-3.4
NIUE				S	Sn	21 58 02.6	-8.4
NIUE	Niue	4.51	63	P	Pn	21 57 15.1	-3.2
NIUE	Niue	4.51	63	⇑P	Pn	21 57 14.4	-4.0
LKBA	Tubou, Lakemba	5.28	303	P	Pn	21 57 33.8	+4.9
TAVE	Taveuni	7.04	309	P	Pn	21 57 57.5	+4.5
DGTI	Dogotuki	7.56	309	P	Pn	21 58 05.3	+5.1
AFI	Afiamalu	7.61	18		Pn	21 57 58.3	-2.7
AFI	Afiamalu	7.61	18	P	Pn	21 58 01.1	+0.1
AFI	Afiamalu	7.61	18	P	Pn	21 57 59.2	-1.8
AFI				pmax	pmax		
	comp=Z,487nm,0.9s						
AFI	Afiamalu	7.61	18	P	Pn	21 57 58.5	-2.5
AFI	Afiamalu	7.61	18	⇑P	Pn	21 57 58.6	-2.4
FUTU	Fugatoga	7.83	331		Pn	21 58 04.9	+1.0
FUTU	Fugatoga	7.83	331	P	Pn	21 58 09.4	+5.5
MSVF	Nonsavu	8.11	294		Pn	21 58 12.8	+5.0
MSVF	Nonsavu	8.11	294	Pn	Pn	21 58 14.0	+6.2
	comp=Z,28nm,0.3s,baz=128,slow=11,SNR=136						
MSVF				LR	LR	22 00 58.5	
	comp=Z,329µm,18.5s,baz=80,slow=37						
MSVF	Nonsavu	8.11	294	P	Pn	21 58 13.0	+5.1
MSVF	Nonsavu	8.11	294	⇑P	Pn	21 58 13.8	+6.0
RAO	Raoul Island	8.70	202		Pn	21 58 14.7	-1.1
RAO	Raoul Island	8.70	202	Pn	Pn	21 58 14.6	-1.2
	comp=Z,206nm,0.3s,baz=53,slow=14,SNR=13						
RAO				Sn	Sn	21 59 45.6	-8.3
	comp=Z,199nm,0.3s,baz=285,slow=23,SNR=13						
	comp=Z,770nm,0.5s						
RAO	Raoul Island	8.70	202	P	Pn	21 58 14.7	-1.1
RAO	Raoul Island	8.70	202	⇑P	Pn	21 58 15.3	-0.5
GLKZ	Green Lake	8.71	202	P	Pn	21 58 14.7	-1.2
GLKZ				S	Sn	21 59 48.7	-5.5
YSA	Yasawairara	9.00	298	P	Pn	21 58 24.9	+4.9
RAR	Rarotonga	13.43	93		Pn	21 59 15.7	-4.8
RAR	Rarotonga	13.43	93	Pn	Pn	21 59 16.0	-4.6
	comp=Z,33nm,0.3s,baz=260,slow=6.9,SNR=26						
RAR				Sn	Sn	22 01 33.3	-17
	comp=Z,11nm,0.3s,baz=291,slow=16,SNR=2.0						
RAR				LR	LR	22 05 29.1	
	comp=Z,34µm,18.1s,baz=232,slow=41						
RAR	Rarotonga	13.43	93	P	Pn	21 59 17.3	-3.3
RAR	Rarotonga	13.43	93	⇑P	Pn	21 59 16.5	-4.1
FUNA	Funafuti	14.14	332		Pn	21 59 30.7	+0.4
FUNA	Funafuti	14.14	332	P	P	21 59 34.6	-3.4
INH	Isangel	15.61	273	P	P	21 59 53.3	-1.1
MARNC	Mare, Loyalty	16.59	266	P	P	22 00 04.7	-0.5
MARNC	Mare, Loyalty	16.59	266	P	P	22 00 07.7	+2.5
MARNC	Mare, Loyalty	16.59	266	⇑P	Pn	22 00 04.1	+1.5
PINNC	Pines Island,	17.12	262	P	P	22 00 12.6	+1.6
PINNC	Pines Island,	17.12	262	S	S	22 03 31.1	+1.6
PINNC	Pines Island,	17.12	262	P	P	22 00 12.7	+1.7
GRZ	Great Barrier	17.51	209	P	Pn	22 00 14.3	+0.1
MXZ	Matakaoa Point	17.55	200	P	Pn	22 00 16.0	+1.3
MXZ				S	Sn	22 03 13.2	-17
OUZ	Omahuta	17.61	215	P	Pn	22 00 14.5	-1.0
OUZ	Omahuta	17.61	215	⇑P	Pn	22 00 15.2	-0.2
YATNC	Mamie plateau,	17.63	264	P	P	22 00 18.5	+1.8
OUENC	Ouen Island, N	17.67	263	P	P	22 00 19.1	+1.9
OUENC	Ouen Island, N	17.67	263	P	P	22 00 18.8	+1.6
WMGZ	Waiomatatini S	17.75	200	P	Pn	22 00 14.7	-2.4
WMGZ				S	Sn	22 03 17.7	-17
WCZ	Waipu Caves	17.79	212	P	Pn	22 00 17.3	-0.3
KUZ	Kuaotunu	17.81	207	P	Pn	22 00 17.4	-0.5
KUZ	Kuaotunu	17.81	207	P	Pn	22 00 19.1	+1.2
HAZ	Te Kaha	17.90	201	P	Pn	22 00 14.0	-5.0
HAZ				S	Sn	22 03 25.3	-13
NFK	Norfolk Island	17.97	241	P	P	22 00 21.9	+1.5
	comp=Z,0.0nmcomp=Z,289nm,0.9s						
ONTNC	Ouen Toro	18.03	263	P	P	22 00 22.7	+1.5
ONTNC	Ouen Toro	18.03	263	⇑P	Pn	22 00 20.2	-0.5
PUZ	Puketiti	18.04	200	P	Pn	22 00 17.0	-3.7
PUZ				S	Sn	22 03 22.9	-19
DZM	Mont Dzumac	18.04	264	P	Pn	22 00 21.7	+0.7
DZM	Mont Dzumac	18.04	264	*e*P	Pn	22 00 20.0	-1.0
	comp=Z,645nm,1.2s						
DZM				*e*S	Sn	22 03 36.8	-5.7
	comp=Z,14µm,25.3s						
DZM				*e*LR	LR	22 04 35.1	
	comp=Z,58µm,21.0s						
DZM	Mont Dzumac	18.04	264	P	P	22 00 22.5	+1.1
	comp=Z,40nm,0.7s,baz=119,slow=17,SNR=37						
DZM				LR	LR	22 06 10.5	
	comp=Z,61µm,19.9s,baz=95,slow=34						
DZM	Mont Dzumac	18.04	264	P	P	22 00 23.7	+2.3
DZM	Mont Dzumac	18.04	264	⇑P	P	22 00 22.0	+0.6
ABAZ	Army Bay	18.09	210	P	Pn	22 00 21.2	-0.1
WIAZ	Waiheke Island	18.11	209	P	Pn	22 00 22.2	+0.7
RUGZ	Raukumara Rang	18.13	201	P	Pn	22 00 19.5	-2.4
MBAZ	Motutapu North	18.19	209	P	P	22 00 23.9	+1.1
ETAZ	East Tamaki Re	18.33	209	P	P	22 00 25.5	+1.2
MKAZ	Moumakai	18.35	208	P	P	22 00 26.1	+1.5
CNGZ	Carnagh Statio	18.43	199	P	P	22 00 23.6	-1.8
TKGZ	Te Karaka	18.50	200	P	P	22 00 26.8	+0.6
TKGZ				S	Sn	22 03 34.1	-19
MWZ	Matawai	18.51	201	P	P	22 00 25.4	-1.0
AWAZ	Awhitu Peninsu	18.55	209	P	Pn	22 00 28.0	+1.1
EDRZ	Edgecumbe	18.58	203	P	P	22 00 28.1	+0.9
SANVU	Saraoutou	18.58	285		Pn	22 00 28.2	+0.8
SANVU	Saraoutou	18.58	285	P	Pn	22 00 30.4	+2.9
SANVU	Saraoutou	18.58	285	⇑P	P	22 00 27.2	0.0
URZ	Urewera	18.59	202	P	P	22 00 26.1	-1.0
	comp=Z,7.5nm,0.3s,baz=107,slow=5.4,SNR=27						
URZ				S	Sn	22 03 36.4	-19
	comp=Z,70nm,0.7s,baz=293,slow=12,SNR=5.2						
	comp=Z,104nm,0.8s						
KMRZ	Kaimai	18.66	205	P	Pn	22 00 30.0	+1.7
KARZ	Kaharoa	18.69	204	P	Pn	22 00 30.4	+1.7
RAGZ	Rawiri	18.69	201	P	P	22 00 29.4	+1.0
OMRZ	Omania	18.72	204	P	P	22 00 29.6	+0.9
TOZ	Tahuroa Road	18.74	206		P	22 00 28.4	-0.4
TOZ	Tahuroa Road	18.74	206	P	P	22 00 29.2	+0.4
RIGZ	Rimuhau	18.77	200	P	P	22 00 29.8	+0.5
NGRZ	Ngongotaha	18.78	204	P	Pn	22 00 31.2	+1.4
PRGZ	Paritu Road	18.93	199	P	Pn	22 00 33.1	+1.5
RTZ	Ruatahuna	18.95	202		P	22 00 30.9	-0.3
SNGZ	Shannon Statio	18.98	201	P	P	22 00 31.1	-0.4
PRRZ	Plateau Road	19.06	203	P	P	22 00 31.8	-0.5
KNZ	Kokohu	19.09	200	P	Pn	22 00 35.7	+2.2
ALRZ	Allen Road	19.13	203	P	P	22 00 32.8	-0.3
MHGZ	Mahia Peninsul	19.14	199	P	P	22 00 33.9	+0.7
RAHZ	Arahi	19.18	201	P	P	22 00 33.2	-0.5
MTHZ	Maungataniwha	19.21	202	P	P	22 00 33.9	-0.2
KUTZ	Kaahu Road	19.26	204	P	P	22 00 36.0	+1.3
WHHZ	Waihua	19.28	201	P	Pn	22 00 36.4	+0.7
NMHZ	Naumai	19.44	202	P	P	22 00 37.9	+1.3
BKZ	Black Stump Fm	19.61	202	P	P	22 00 39.0	+0.5
KWHZ	Kaweka Forest	19.87	202	P	P	22 00 40.9	-0.4
ETVZ	East Tongariro	19.87	204	P	P	22 00 40.4	-1.0
TWVZ	Taurewa	19.92	204	P	Pn	22 00 44.1	+0.6
SNVZ	South Ngauruho	19.94	204	P	P	22 00 41.7	-0.5
TUVZ	Tukino	20.00	204	P	P	22 00 42.8	-0.1
KAHZ	Kahuranaki	20.05	200	P	P	22 00 44.4	+1.2
WNVZ	Wahianoa	20.08	204	P	P	22 00 42.0	-1.7
KRHZ	Kereru	20.08	202	P	P	22 00 40.2	-3.4
MOVZ	Moawhango	20.09	203	P	P	22 00 42.7	-1.0
PKVZ	Pokaka	20.14	204	P	P	22 00 42.6	-1.7
VRZ	Vera Road	20.23	206	P	P	22 00 45.9	+0.8
PXZ	Pawanui	20.27	200	P	P	22 00 46.4	+0.9
PNHZ	Pukenui	20.38	202	P	P	22 00 47.1	+0.3
WPHZ	Waipukurau	20.43	201	P	P	22 00 48.4	+1.0
PRHZ	Porangahau	20.55	200	P	P	22 00 49.5	+0.9
ANWZ	Angora Road	20.78	200	P	P	22 00 51.4	+0.3
PRWZ	Pori Road	21.03	201	P	P	22 00 55.9	+2.1
BFZ	Birch Farm	21.05	201	P	P	22 00 54.6	+0.5
BFZ	Birch Farm	21.05	201	P	P	22 00 56.0	+1.9
TIWZ	Tintock	21.26	201	P	P	22 00 56.7	+0.4
MRZ	Mangatainoka R	21.26	202	P	P	22 00 55.2	-1.1

CPWZ	**Castlepoint**	21.27	200	P	P	22 00 55.1	-1.3
OGWZ	**Otaki Gorge**	21.54	202	P	P	22 00 57.1	-2.2
TMWZ	**Te Maipa**	21.55	201	P	P	22 01 00.7	+1.2
TRWZ	**Traveller**	21.88	201	P	P	22 01 01.0	-1.9
PAWZ	**Paruwai Farm**	21.95	201	P	P	22 01 04.2	+0.4
DUWZ	**D'Urville Isla**	22.00	205	P	P	22 01 02.5	-1.8
MSWZ	**Moikau Station**	22.05	202	P	P	22 01 04.5	-0.2
SNZO	**South Karori**	22.14	203	P	P	22 01 06.2	+0.5
SNZO	**South Karori**	22.14	203	⇑P	P	22 01 05.1	-0.7
PLWZ	**Palliser**	22.18	201	P	P	22 01 05.8	-0.4
TUWZ	**Tuamarina**	22.53	204	P	P	22 01 07.5	-2.4
CTZ	**Chatham Island**	22.56	185	P	P	22 01 11.5	+1.4
CTZ				IAmb	IAmb	22 01 28.4	
	comp=Z,253nm,0.8s						
CTZ	**Chatham Island**	22.56	185	P	P	22 01 08.8	-1.3
QRZ	**Quartz Range**	22.58	207	IAMs_20	IAMs_20	22 10 33.7	
	comp=Z,52µm,18.0s						
QRZ	**Quartz Range**	22.58	207	P	P	22 01 11.3	+0.8
QRZ	**Quartz Range**	22.58	207	P	P	22 01 11.1	+0.7
BSWZ	**Blackbirch Sta**	22.80	204	P	P	22 01 13.1	+0.3
TBI	**Tubuai**	22.96	100	*e*P	P	22 01 12.0	-2.6
	comp=Z,843nm,1.3s						
TBI				*e*S	S	22 05 15.0	-10
	comp=Z,159µm,27.2s						
TBI				*e*LR	LR	22 06 34.7	
	comp=Z,56µm,27.5s						
TBI				*e*LR	LR	22 06 40.6	
	comp=Z,296µm,29.0s						
MRNZ	**Matariki Terra**	22.97	206	P	P	22 01 13.0	-1.5
THZ	**Tophouse**	23.21	205	P	P	22 01 15.5	-1.6
PAE	**Paea**	23.45	86	*e*P	P	22 01 17.8	-1.8
	comp=Z,241nm,1.4s						
PAE				*e*S	S	22 05 26.7	-6.5
	comp=Z,1µm,23.5s						
PAE				*e*LR	LR	22 07 00.0	
	comp=Z,10µm,25.4s						
PPT2	**Papeete2**	23.47	85	*e*P	P	22 01 19.1	-0.8
	comp=Z,325nm,1.2s						
PPT2				*e*S	S	22 05 29.8	-3.9
	comp=Z,58µm,27.8s						
PPT2				*e*LR	LR	22 06 51.6	
	comp=Z,43µm,27.0s						
PPT2				*e*LR	LR	22 06 57.9	
	comp=Z,50µm,24.8s						
PPT	**Papeete**	23.47	85	P	P	22 01 20.9	+1.0
	comp=Z,215nm,0.8s,baz=288,slow=11,SNR=11						
PPT				LR	LR	22 10 16.1	
	comp=Z,20µm,18.1s,baz=264,slow=36						
PPTF	**Pamatai, Papee**	23.48	85	P	P	22 01 17.9	-2.1
PPTF				IAmb	IAmb	22 01 37.9	
	comp=Z,538nm,1.1s						
PPTF	**Pamatai, Papee**	23.48	85	P	P	22 01 19.4	-0.6
PPTF	**Pamatai, Papee**	23.48	85	⇑P	P	22 01 20.9	+1.0
KHZ	**Kahutara**	23.53	203	P	P	22 01 20.0	-0.2
KHZ	**Kahutara**	23.53	203	P	P	22 01 18.9	-1.3
KHZ	**Kahutara**	23.53	203	⇑P	P	22 01 18.9	-1.3
DSZ	**Denniston Nort**	23.65	207	IAMs_20	IAMs_20	22 10 48.7	
	comp=Z,59µm,18.0s						
DSZ	**Denniston Nort**	23.65	207	P	P	22 01 21.7	+0.2
TVO	**Taravao**	23.73	86	*e*P	P	22 01 21.4	-1.0
	comp=Z,176nm,1.1s						
TVO				*e*S	S	22 05 36.7	-1.2
	comp=Z,2µm,25.0s						
TVO				*e*LR	LR	22 07 07.4	
	comp=Z,10µm,25.4s						
GVZ	**Greta Valley S**	24.20	203	P	P	22 01 24.6	-2.0
LTZ	**Lake Taylor**	24.33	205	P	P	22 01 24.6	-3.2
AMCZ	**Amberley**	24.52	204	P	P	22 01 27.6	-1.9
INZ	**Inchbonnie**	24.61	206	IAMs_20	IAMs_20	22 11 31.3	
	comp=Z,55µm,18.0s						
INZ	**Inchbonnie**	24.61	206	P	P	22 01 31.0	+0.7
OXZ	**Oxford**	24.88	204	P	P	22 01 31.6	-1.2
MQZ	**McQueen's Vall**	24.97	203	P	P	22 01 34.7	+1.1
AKCZ	**Akaroa Harbour**	25.03	202	P	P	22 01 35.2	+1.1
WVZ	**Waitaha Valley**	25.19	207	P	P	22 01 36.2	+0.7
MHCZ	**Mount Hutt**	25.24	205	P	P	22 01 35.6	-0.5
GCSZ	**Gaunt Creek Bo**	25.56	207	P	P	22 01 41.9	+2.9
RPZ	**Rata Peaks**	25.59	205	IAMs_20	IAMs_20	22 12 22.3	
	comp=Z,56µm,18.0s						
RPZ	**Rata Peaks**	25.59	205	LR	LR	22 11 33.2	
	comp=Z,49µm,19.0s,baz=22,slow=36						
RPZ	**Rata Peaks**	25.59	205	P	P	22 01 38.3	-1.0
PMOR	**Pomariorio Ree**	25.71	80	*e*P	P	22 01 36.6	-3.9
	comp=Z,483nm,1.2s						
ARCZ	**Arundel**	25.74	205	P	P	22 01 41.9	+1.3
FOZ	**Fox Glacier**	25.96	207	IAMs_20	IAMs_20	22 12 25.9	
	comp=Z,57µm,18.0s						
FOZ	**Fox Glacier**	25.96	207	P	P	22 01 44.0	+1.5
LHI	**Lord Howe Isla**	26.03	241	P	P	22 01 41.4	-1.9
LHI	**Lord Howe Isla**	26.03	241	P	P	22 01 42.4	-0.9
	comp=Z,0.0nmcomp=Z,139nm,1.2s						
LHI	**Lord Howe Isla**	26.03	241	⇑P	P	22 01 43.0	-0.2
TMZ	**Timaru**	26.17	205	P	P	22 01 44.2	-0.3
LBZ	**Lake Benmore**	26.50	206	P	P	22 01 49.6	+2.1
JCZ	**Jackson Bay**	26.84	208	P	P	22 01 50.5	-0.1
JCZ	**Jackson Bay**	26.84	208	P	P	22 01 50.6	0.0
ODZ	**Otahua Downs**	26.87	204	IAMs_20	IAMs_20	22 11 56.0	
	comp=Z,31µm,18.0s						
ODZ	**Otahua Downs**	26.87	204	P	P	22 01 54.6	+3.9
ODZ	**Otahua Downs**	26.87	204	⇑P	P	22 01 51.1	+0.4
ALEG	**Aligegeo Malai**	27.20	293	P	P	22 01 57.2	+3.2
WKZ	**Wanaka**	27.34	207	IAMs_20	IAMs_20	22 13 01.6	
	comp=Z,42µm,19.0s						
WKZ	**Wanaka**	27.34	207	P	P	22 01 58.0	+2.9
HNR	**Honiara**	27.52	291	P	P	22 01 56.7	-0.2
HNR				IAmb	IAmb	22 02 20.3	
	comp=Z,404nm,1.2s						
HNR				IAMs_20	IAMs_20	22 12 12.0	
	comp=Z,31µm,18.0s						
HNR	**Honiara**	27.52	291	P	P	22 01 56.7	-0.2
HNR				pmax	pmax		
	comp=Z,404nm,1.3s						
HNR				MLR	MLR		
	comp=Z,31µm,18.0s						
EAZ	**Earnscleugh**	27.55	206	P	P	22 01 60.0	+3.1
MSZ	**Milford Sound**	27.69	208	P	P	22 01 59.8	+1.7
SAVO	**Savo Central**	27.77	292	P	P	22 02 02.4	+3.2
TUZ	**Tuapeka**	28.02	204	P	P	22 02 04.0	+2.9
TATA	**Tatamba Isabel**	28.15	293	P	P	22 02 03.3	+0.8
MLZ	**Mavora Lakes**	28.15	207	IAMs_20	IAMs_20	22 13 24.1	
	comp=Z,36µm,20.0s						
MLZ	**Mavora Lakes**	28.15	207	P	P	22 02 02.9	+0.5
WHZ	**Wether Hill Ro**	28.65	207	P	P	22 02 07.8	+1.1
DCZ	**Deep Cove**	28.65	208	P	P	22 02 08.4	+1.7
SYZ	**Scrubby Hill**	28.69	204	P	P	22 02 08.9	+1.9
APZ	**The Paps**	29.39	205	P	P	22 02 16.0	+2.7
PYZ	**Puysegur Point**	29.40	208	IAMs_20	IAMs_20	22 13 50.1	
	comp=Z,35µm,19.0s						
ARMA	**Armidale**	32.02	246	P	P	22 02 36.0	-0.9
ARMA	**Armidale**	32.02	246	P	P	22 02 36.0	-0.9
	comp=Z,0.0nmcomp=Z,45nm,0.9s						
ARMA	**Armidale**	32.02	246	P	P	22 02 37.1	+0.2
ARMA	**Armidale**	32.02	246	⇑P	P	22 02 35.6	-1.2
EIDS	**Eidsvold**	32.13	256	P	P	22 02 36.0	-1.7
EIDS				IAmb	IAmb	22 02 37.8	
	comp=Z,254nm,1.9s						
EIDS	**Eidsvold**	32.13	256	P	P	22 02 35.6	-2.1
	comp=Z,0.0nmcomp=Z,51nm,1.5s						
EIDS	**Eidsvold**	32.13	256	P	P	22 02 37.3	-0.4
EIDS	**Eidsvold**	32.13	256	⇑P	P	22 02 35.6	-2.1
MGCD	**Mangrove Creek**	32.96	241	P	P	22 02 44.9	0.0
	comp=Z,69nm,1.2s						
SYDH	**Sydney Hard Ro**	33.38	240	P	P	22 02 49.5	+0.9
CNB	**Canberra Magne**	34.85	238	P	P	22 03 00.8	-0.6
	comp=Z,0.0nmcomp=Z,58nm,2.3s						
CNB	**Canberra Magne**	34.85	238	P	P	22 03 02.5	+1.1
TAOE	**Nuku Hiva Isla**	34.99	75	*e*PKP1	P	22 02 59.6	-3.2
	comp=Z,2µm,26.8s						
TAOE				*e*S	S	22 08 32.3	-2.8
	comp=Z,5µm,26.1s						
TAOE				*e*LR	LR	22 12 13.9	
	comp=Z,29µm,26.2s						
CAN	**Canberra**	35.14	238	P	P	22 03 03.0	-0.9
CAN				IAMs_20	IAMs_20	22 16 58.7	
	comp=Z,19µm,18.0s						
CAN	**Canberra**	35.14	238	P	P	22 03 02.8	-1.1
	comp=Z,0.0nmcomp=Z,48nm,1.2s						
CAN	**Canberra**	35.14	238	P	P	22 03 04.5	+0.6
CAN	**Canberra**	35.14	238	P	P	22 03 03.0	-0.9
CAN				pmax	pmax		
	comp=Z,54nm,1.1s						
CAN				MLR	MLR		
	comp=Z,19µm,18.0s						
CAN	**Canberra**	35.14	238	⇑P	P	22 03 03.0	-0.9
YNG	**Young**	35.40	240	P	P	22 03 04.9	-1.2
	comp=Z,30nm,2.3s						
CTAO	**Charters Tower**	36.99	264	P	P	22 03 18.0	-1.8
CTAO	**Charters Tower**	36.99	264	IAMs_20	IAMs_20	22 17 15.1	
	comp=Z,22µm,18.0s						
CTAO	**Charters Tower**	36.99	264	P	P	22 03 18.7	-1.1
CTAO	**Charters Tower**	36.99	264	P	P	22 03 18.0	-1.8
CTAO				pmax	pmax		
	comp=Z,52nm,1.0s						
CTAO				MLR	MLR		
	comp=Z,22µm,18.0s						
CTAO	**Charters Tower**	36.99	264	⇑P	P	22 03 17.3	-2.5
CMSA	**Cobar Meteorol**	37.22	245	P	P	22 03 20.0	-1.7
	comp=Z,0.0nmcomp=Z,107nm,1.1s						
CMSA	**Cobar Meteorol**	37.22	245	P	P	22 03 20.0	-1.7
GLAD	**Gladstone**	37.53	230	P	P	22 03 24.7	+0.5
QLP	**Quilpie**	38.28	254	P	P	22 03 28.0	-2.7
	comp=Z,103nm,1.7s						
QLP	**Quilpie**	38.28	254	P	P	22 03 30.0	-0.7
QLP	**Quilpie**	38.28	254	⇑P	P	22 03 28.4	-2.3
CORO	**Coronation Par**	38.31	229	P	P	22 03 31.1	+0.4
TOO	**Toolangi**	38.42	236	P	P	22 03 30.5	-1.3
TOO	**Toolangi**	38.42	236	P	P	22 03 30.9	-0.9
	comp=Z,0.0nmcomp=Z,17nm,1.3s						
TOO	**Toolangi**	38.42	236	P	P	22 03 30.5	-1.3
TOO				pmax	pmax		
	comp=Z,44nm,1.6s						
TOO	**Toolangi**	38.42	236	⇑P	P	22 03 30.9	-0.9
MOO	**Moorlands**	38.62	228	P	P	22 03 33.4	+0.1
	comp=Z,0.0nmcomp=Z,119nm,1.2s						
MOO	**Moorlands**	38.62	228	P	P	22 03 34.5	+1.1
TAU	**Tasmania Unive**	38.70	227	P	P	22 03 33.1	-0.9
TAU	**Tasmania Unive**	38.70	227	P	P	22 03 35.2	+1.2
TAU	**Tasmania Unive**	38.70	227	P	P	22 03 33.1	-0.9
TAU				pmax	pmax		
	comp=Z,187nm,1.4s						
TAU	**Tasmania Unive**	38.70	227	⇑P	P	22 03 33.8	-0.2
PATS	**Pohnpei**	38.81	313	IAMs_20	IAMs_20	22 15 11.1	
	comp=Z,26µm,21.0s						
PATS	**Pohnpei**	38.81	313	P	P	22 03 35.2	0.0
	comp=Z,0.0nmcomp=Z,103nm,1.2s						
PMG	**Port Moresby**	38.99	282	P	P	22 03 34.9	-1.9
PMG				IAmb	IAmb	22 03 46.7	
	comp=Z,174nm,0.8s						
PMG	**Port Moresby**	38.99	282	P	P	22 03 35.3	-1.5
	comp=Z,56nm,0.8s,baz=102,slow=8.1,SNR=12						
PMG				LR	LR	22 17 52.0	
	comp=Z,19µm,18.6s,baz=144,slow=34						
	comp=Z,56nm,0.8s						
PMG	**Port Moresby**	38.99	282	P	P	22 03 36.6	-0.2
PMG	**Port Moresby**	38.99	282	P	P	22 03 36.5	-0.2
MTSU	**Mount Surprise**	39.13	267	P	P	22 03 36.2	-1.8
	comp=Z,30nm,0.7s						
MTSU	**Mount Surprise**	39.13	267	P	P	22 03 36.6	-1.4
GEXS	**Deakin Univers**	39.49	235	P	P	22 03 40.9	+0.2
STKA	**Stephens Creek**	40.73	245	P	P	22 03 49.6	-1.6
STKA				IAmb	IAmb	22 04 03.4	
	comp=Z,585nm,1.4s						
STKA	**Stephens Creek**	40.73	245	P	P	22 03 49.3	-1.8
	comp=Z,0.0nmcomp=Z,349nm,1.3s						
STKA	**Stephens Creek**	40.73	245	P	P	22 03 48.9	-2.2
	comp=Z,19nm,0.6s,baz=90,slow=9.4,SNR=41						
STKA				LR	LR	22 19 21.4	
	comp=Z,14µm,18.2s,baz=80,slow=34						
	comp=Z,19nm,0.6s						
STKA	**Stephens Creek**	40.73	245	P	P	22 03 50.0	-1.1
STKA	**Stephens Creek**	40.73	245	*c i*P	P	22 03 49.5	-1.6
ARPS	**Mount Arapiles**	41.12	238	P	P	22 03 52.8	-1.3
	comp=Z,96nm,1.0s						
ARPS	**Mount Arapiles**	41.12	238	P	P	22 03 55.4	+1.2
COEN	**Coen**	41.20	273	P	P	22 03 53.9	-1.2
COEN	**Coen**	41.20	273	P	P	22 03 53.6	-1.5
	comp=Z,0.0nmcomp=Z,75nm,1.0s						
COEN	**Coen**	41.20	273	P	P	22 03 56.7	+1.6
COEN	**Coen**	41.20	273	⇑P	P	22 03 53.6	-1.5
MANU	**Manus Island**	42.02	292	P	P	22 04 01.1	-0.7
MANU				IAmb	IAmb	22 04 04.4	
	comp=Z,364nm,1.8s						
MGBR	**Mount Gambier**	42.27	237	P	P	22 04 02.3	-1.3
QIS	**Mount Isa**	43.07	262	P	P	22 04 08.4	-2.0
	comp=Z,0.0nmcomp=Z,24nm,2.1s						
QIS	**Mount Isa**	43.07	262	P	P	22 04 09.4	-1.0
HTT	**Hallett**	43.09	243	P	P	22 04 08.6	-1.9
	comp=Z,35nm,1.3s						
HTT	**Hallett**	43.09	243	P	P	22 04 09.7	-0.7
HTT	**Hallett**	43.09	243	P	P	22 04 08.9	-1.5
HTT	**Hallett**	43.09	243	⇑P	P	22 04 07.5	-3.0
WHYH	**Whyalla**	44.19	244	P	P	22 04 18.6	-0.6
PUH	**Pauahi**	44.40	26	P	P	22 04 20.1	-0.9
PUH				IAmb	IAmb	22 05 00.3	
	comp=Z,188nm,1.2s						
KNHH	**Kane Nui o Ham**	44.42	26	P	P	22 04 19.9	-1.3
STCH	**Steam Cracks**	44.44	26	P	P	22 04 20.5	-0.8
STCH				IAmb	IAmb	22 04 36.9	
	comp=Z,300nm,1.4s						
POHA	**Pohakuloa**	44.61	25	P	P	22 04 24.2	+1.3
KIP	**Kipapa**	45.21	21	P	P	22 04 26.4	-1.0
KIP				IAmb	IAmb	22 04 53.6	
	comp=Z,271nm,1.3s						
KIP	**Kipapa**	45.21	21	P	P	22 04 29.2	+1.8
KIP	**Kipapa**	45.21	21	P	P	22 04 29.0	+1.6
KIP	**Kipapa**	45.21	21	⇑*e*P	P	22 04 28.3	+0.9
BBOO	**Buckleboo**	45.46	244	P	P	22 04 27.5	-1.8
BBOO	**Buckleboo**	45.46	244	P	P	22 04 26.9	-2.5
	comp=Z,96nm,1.2s						
BBOO	**Buckleboo**	45.46	244	P	P	22 04 28.6	-0.8
JAY	**Jayapura**	47.67	287	P	P	22 04 45.1	-1.9
	comp=Z,89nm,0.6s,baz=148,slow=5.1,SNR=71						
JAY				LR	LR	22 24 39.6	
	comp=Z,11µm,18.6s,baz=96,slow=36						
	comp=Z,89nm,0.6s						
JAY	**Jayapura**	47.67	287	P	P	22 04 45.2	-1.8
	comp=Z,4µmcomp=Z,155nm,0.9s						
AS17	**Alice Springs**	47.77	257	P	P	22 04 44.7	-3.0
	comp=Z,96nm,1.0s						
AS01	**Alice Springs**	47.80	257	P	P	22 04 46.0	-1.9
AS31	**Alice Springs**	47.84	257	P	P	22 04 46.1	-2.1
ASAR	**Alice Springs**	47.84	257	P	P	22 04 45.8	-2.5
	comp=Z,40nm,0.7s,baz=94,slow=8.0,SNR=206						
ASAR				PcP	PcP	22 06 17.1	+0.1
	comp=Z,16nm,0.7s,baz=99,slow=4.8,SNR=6.4						
ASAR				ScP	ScP	22 10 15.4	+3.7
	comp=Z,1.0nm,1.0s,baz=96,slow=3.6,SNR=1.1						
ASAR				S	S	22 11 34.9	-11
	comp=Z,5.0nm,0.9s,baz=99,slow=14,SNR=7.5						
ASAR				ScS	ScS	22 14 43.0	+0.5
	comp=Z,1.9nm,0.9s,baz=106,slow=7.6,SNR=4.2						
ASAR				LR	LR	22 24 07.1	
	comp=Z,19µm,18.2s,baz=100,slow=35						
ASAR				PKPPKP	P'P'df	22 36 01.6	-2.3
	comp=Z,0.7nm,1.1s,baz=241,slow=1.0,SNR=4.2						
	comp=Z,40nm,0.7s						
WR8	**Warramunga Arr**	47.90	262	P	P	22 04 46.1	-2.6
WR7	**Warramunga Arr**	47.92	262	P	P	22 04 46.4	-2.4
WB0	**Warramunga Arr**	48.03	262	P	P	22 04 47.0	-2.7
WRAB	**Tennant Creek**	48.04	262	*c i*P	P	22 04 46.8	-3.0
WRAB				pmax	pmax		
	comp=Z,131nm,2.0s						
WRAB				MLR	MLR		
	comp=Z,33µm,16.0s						
WRA	**Warramunga Arr**	48.05	262	P	P	22 04 46.8	-3.0
WRA	**Warramunga Arr**	48.05	262	P	P	22 04 47.0	-2.8
	comp=Z,15nm,0.6s,baz=96,slow=8.3,SNR=128						
WRA				PcP	PcP	22 06 18.7	+0.9
	comp=Z,16nm,0.6s,baz=96,slow=3.2,SNR=7.8						
WRA				ScP	ScP	22 10 14.2	+1.7
	comp=Z,2.0nm,1.1s,baz=102,slow=7.9,SNR=4.6						
WRA				S	S	22 11 39.0	-10
	comp=Z,0.5nm,0.3s,baz=96,slow=15,SNR=7.1						
WRA				ScS	ScS	22 14 43.2	-0.7
	comp=Z,1.1nm,1.1s,baz=102,slow=5.7,SNR=2.6						
WRA				LR	LR	22 24 46.4	
	comp=Z,19µm,18.4s,baz=96,slow=36						
	comp=Z,15nm,0.6s						
GENI	**Genyem**	48.12	286	P	P	22 04 50.3	-0.1
GENI	**Genyem**	48.12	286	P	P	22 04 49.8	-0.6
	comp=Z,11µmcomp=Z,7µmcomp=Z,254nm,2.6s						
GENI	**Genyem**	48.12	286	⇑P	P	22 04 48.7	-1.6
MIDW	**Midway**	49.23	356	P	P	22 04 56.4	-2.2
MIDW				IAMs_20	IAMs_20	22 23 36.3	
	comp=Z,15µm,20.0s						
SMPI	**Sarmi**	49.69	286	P	P	22 05 00.6	-1.8
	comp=Z,11µmcomp=Z,3µmcomp=Z,91nm,1.7s						
KDU	**Kakadu**	51.54	270	P	P	22 05 13.5	-3.0
	comp=Z,0.0nmcomp=Z,69nm,0.7s						
KDU	**Kakadu**	51.54	270	P	P	22 05 16.8	+0.4
KDU	**Kakadu**	51.54	270	⇑P	P	22 05 13.8	-2.7
FORT	**Forrest**	52.31	247	P	P	22 05 20.2	-1.7
FORT				IAmb	IAmb	22 05 33.2	
	comp=Z,180nm,0.9s						
FORT	**Forrest**	52.31	247	P	P	22 05 19.4	-2.6
	comp=Z,0.0nmcomp=Z,253nm,0.9s						
FORT	**Forrest**	52.31	247	P	P	22 05 23.3	+1.3
FORT	**Forrest**	52.31	247	⇑P	P	22 05 19.4	-2.6
BAKI	**Biak**	52.37	286	P	P	22 05 29.8	+7.2
MTN	**Manton Dam**	52.75	270	P	P	22 05 22.9	-2.6
MTN	**Manton Dam**	52.75	270	P	P	22 05 22.4	-3.0
	comp=Z,0.0nmcomp=Z,78nm,0.7s						
MTN	**Manton Dam**	52.75	270	P	P	22 05 24.8	-0.6
MTN	**Manton Dam**	52.75	270	⇑P	P	22 05 23.2	-2.2
GUMO	**Guam**	53.05	307	P	P	22 05 26.0	-1.5
GUMO				IAmb	IAmb	22 05 46.7	
	comp=Z,241nm,0.9s						
GUMO	**Guam**	53.05	307	P	P	22 05 26.2	-1.3
	comp=Z,79nm,0.7s,baz=215,slow=9.5,SNR=5.8						
GUMO				LR	LR	22 25 01.7	
	comp=Z,9µm,22.0s,baz=134,slow=33						
	comp=Z,79nm,0.7s						
GUMO	**Guam**	53.05	307	P	P	22 05 30.0	+2.5
GUMO	**Guam**	53.05	307	⇑P	P	22 05 25.9	-1.5
SAUI	**Saumlaki**	54.13	276	IAMs_20	IAMs_20	22 32 11.5	
	comp=Z,12µm,19.0s						
KNRA	**Kununurra**	54.18	266	P	P	22 05 33.9	-2.0
KNRA	**Kununurra**	54.18	266	P	P	22 05 34.0	-2.0
	comp=Z,0.0nmcomp=Z,53nm,0.7s						
FAKI	**Fak Fak**	55.15	282	P	P	22 05 41.2	-1.8
FAKI				IAMs_20	IAMs_20	22 31 10.4	
	comp=Z,12µm,18.0s						
FAKI	**Fak Fak**	55.15	282	P	P	22 05 45.4	+2.4
FAKI	**Fak Fak**	55.15	282	P	P	22 05 42.4	-0.6
	comp=Z,10µmcomp=Z,3µmcomp=Z,95nm,1.2s						
FAKI	**Fak Fak**	55.15	282	⇑P	P	22 05 40.5	-2.5
FITZ	**Fitzroy Crossi**	56.48	262	P	P	22 05 51.3	-1.2
FITZ	**Fitzroy Crossi**	56.48	262	P	P	22 05 50.3	-2.2
FITZ	**Fitzroy Crossi**	56.48	262	P	P	22 05 50.5	-1.9
	comp=Z,9.4nm,0.5s,baz=122,slow=6.3,SNR=29						
FITZ				LR	LR	22 29 29.2	
	comp=Z,27µm,19.0s,baz=97,slow=36						
	comp=Z,9.4nm,0.5s						
SWI	**Sorong**	56.89	283	P	P	22 05 54.7	-0.8
	comp=Z,8µmcomp=Z,4µmcomp=Z,187nm,0.9s						
SBA	**Scott Base**	57.43	185	P	P	22 05 58.9	+0.6
SBA				IAmb	IAmb	22 06 05.0	
	comp=Z,124nm,0.9s						
SBA	**Scott Base**	57.43	185	P	P	22 05 58.9	+0.6
SBA				pmax	pmax		
	comp=Z,124nm,1.0s						
SBA				MLR	MLR		
	comp=Z,8µm,19.0s						
KMBL	**Kambalda**	57.53	246	P	P	22 05 58.3	-1.5
	comp=Z,67nm,1.2s						
KMBL	**Kambalda**	57.53	246	P	P	22 06 01.5	+1.7
VNDA	**Vanda**	57.55	186	P	P	22 05 59.6	+0.4
VNDA	**Vanda**	57.55	186	P	P	22 06 01.4	+2.2
	comp=Z,44nm,0.9s,baz=7.1,slow=6.8,SNR=66						
VNDA				LR	LR	22 30 49.3	
	comp=Z,4µm,18.4s,baz=18,slow=36						
	comp=Z,44nm,0.9s						
VNDA	**Vanda**	57.55	186	P	P	22 05 59.6	+0.4
VNDA				pmax	pmax		
	comp=Z,54nm,0.9s						
MSAI	**Masohi**	58.03	280	P	P	22 06 07.9	+4.4
	comp=Z,10µmcomp=Z,5µmcomp=Z,182nm,0.8s						
NLAI	**Namlea**	59.75	279	P	P	22 06 15.2	-0.3
	comp=Z,10µmcomp=Z,3µmcomp=Z,79nm,0.7s						
SOEI	**Soe**	60.10	271	P	P	22 06 16.3	-1.7
SOEI	**Soe**	60.10	271	P	P	22 06 17.3	-0.8
SOEI				IAMs_20	IAMs_20	22 31 52.5	
	comp=Z,13µm,20.0s						
SOEI	**Soe**	60.10	271	P	P	22 06 20.3	+2.3
SOEI	**Soe**	60.10	271	P	P	22 06 18.0	0.0
SOEI	**Soe**	60.10	271	⇑P	P	22 06 17.7	-0.4
BATI	**Baumata**	60.52	270	P	P	22 06 19.7	-1.1
	comp=Z,43nm,0.5s,baz=227,slow=2.1,SNR=13						
BATI				LR	LR	22 30 30.1	
	comp=Z,15µm,21.2s,baz=134,slow=34						
	comp=Z,43nm,0.5s						
BATI	**Baumata**	60.52	270	P	P	22 06 21.0	+0.2
	comp=Z,10µmcomp=Z,3µmcomp=Z,72nm,0.9s						
PSAC2	**Pilbara Seismi**	60.94	256	P	P	22 06 21.8	-1.8
	comp=Z,69nm,1.6s						
PSAB3	**Pilbara Seismi**	60.98	256	P	P	22 06 21.9	-1.9
	comp=Z,78nm,1.6s						
PSA00	**Pilbara Seismi**	60.99	256	P	P	22 06 22.4	-1.5
PSA00	**Pilbara Seismi**	60.99	256	P	P	22 06 22.5	-1.5
PSA00				IAmb	IAmb	22 06 44.1	
	comp=Z,38nm,1.2s						
PSA00	**Pilbara Seismi**	60.99	256	P	P	22 06 22.6	-1.3
KLBR	**Kellerberrin**	61.00	245	P	P	22 06 23.5	-0.4
	comp=Z,213nm,0.8s						
KLBR	**Kellerberrin**	61.00	245	P	P	22 06 25.5	+1.7
MEEK	**Meekatharra**	61.07	251	P	P	22 06 22.6	-1.8
	comp=Z,0.0nmcomp=Z,43nm,0.9s						
MEEK	**Meekatharra**	61.07	251	P	P	22 06 25.1	+0.7
TNTI	**Ternate**	61.11	283	P	P	22 06 23.9	-0.8
TNTI				IAmb	IAmb	22 06 43.0	
	comp=Z,131nm,1.0s						
TNTI	**Ternate**	61.11	283	P	P	22 06 25.6	+0.8
TNTI	**Ternate**	61.11	283	P	P	22 06 25.5	+0.8
	comp=Z,3µmcomp=Z,148nm,1.1s						
TNTI	**Ternate**	61.11	283	⇑P	P	22 06 23.1	-1.7
MBWA	**Marble Bar**	61.19	257	P	P	22 06 23.2	-2.0
MBWA				IAmb	IAmb	22 06 26.5	
	comp=Z,53nm,0.7s						
MBWA				IAMs_20	IAMs_20	22 32 02.3	
	comp=Z,14µm,20.0s						
MBWA	**Marble Bar**	61.19	257	P	P	22 06 23.1	-2.2
	comp=Z,0.0nmcomp=Z,95nm,0.7s						
MBWA	**Marble Bar**	61.19	257	P	P	22 06 23.3	-2.0
MBWA				P	P	22 06 23.3	-2.0
MBWA	**Marble Bar**	61.19	257	P	P	22 06 23.1	-2.2
MBWA	**Marble Bar**	61.19	257	⇑P	P	22 06 22.9	-2.3
SANI	**Sanana**	61.23	280	P	P	22 06 23.1	-2.5
SANI	**Sanana**	61.23	280	P	P	22 06 25.2	-0.4
SANI	**Sanana**	61.23	280	P	P	22 06 25.5	-0.1
	comp=Z,8µmcomp=Z,3µmcomp=Z,75nm,0.8s						
SANI	**Sanana**	61.23	280	⇑P	P	22 06 23.3	-2.3
RKGY	**Rocky Gully**	61.25	241	P	P	22 06 25.1	-0.3
	comp=Z,36nm,2.3s						
NWAO	**Narrogin (SRO)**	61.25	243	P	P	22 06 24.6	-0.9
NWAO	**Narrogin (SRO)**	61.25	243	IAMs_20	IAMs_20	22 33 47.2	
	comp=Z,13µm,18.0s						
NWAO	**Narrogin (SRO)**	61.25	243	P	P	22 06 24.9	-0.6
	comp=Z,92nm,1.6s						
NWAO	**Narrogin (SRO)**	61.25	243	LR	LR	22 31 50.3	
	comp=Z,11µm,19.1s,baz=86,slow=35						
NWAO	**Narrogin (SRO)**	61.25	243	P	P	22 06 24.7	-0.8
NWAO				P	P	22 06 24.7	-0.8
NWAO				S	S	22 14 39.2	-6.6
NWAO				S	S	22 14 39.2	-6.6
NWAO	**Narrogin (SRO)**	61.25	243	P	P	22 06 27.0	+1.5
NWAO	**Narrogin (SRO)**	61.25	243	P	P	22 06 26.4	+0.9
NWAO	**Narrogin (SRO)**	61.25	243	P	P	22 06 24.6	-0.9
NWAO				pmax	pmax		
	comp=Z,61nm,1.2s						
NWAO				MLR	MLR		
	comp=Z,13µm,18.0s						
BLDU	**Ballidu**	62.03	246	P	P	22 06 29.4	-1.4
BLDU	**Ballidu**	62.03	246	P	P	22 06 30.4	-0.4
MUN	**Mundaring**	62.25	244	P	P	22 06 31.8	-0.4
	comp=Z,0.0nmcomp=Z,85nm,1.8s						
MUN	**Mundaring**	62.25	244	P	P	22 06 34.1	+1.9
MUN	**Mundaring**	62.25	244	P	P	22 06 31.6	-0.6
MMRI	**Maumere**	62.35	271	P	P	22 06 32.2	-1.0
MMRI	**Maumere**	62.35	271	P	P	22 06 34.0	+0.8
MMRI	**Maumere**	62.35	271	P	P	22 06 36.4	+3.2
	comp=Z,8µmcomp=Z,4µmcomp=Z,69nm,1.6s						
EDFI	**Ende, Flores**	62.83	271	P	P	22 06 34.8	-1.7
	comp=Z,3µmcomp=Z,63nm,0.7s						
MORW	**Morawa**	62.87	247	P	P	22 06 35.4	-1.0
MORW				IAmb	IAmb	22 06 47.7	
	comp=Z,116nm,1.2s						
MORW	**Morawa**	62.87	247	P	P	22 06 35.8	-0.7
	comp=Z,0.0nmcomp=Z,74nm,0.9s						
MORW	**Morawa**	62.87	247	P	P	22 06 36.7	+0.2
MORW	**Morawa**	62.87	247	⇑P	P	22 06 35.0	-1.4
BBSI	**Bau Bau**	63.12	275	P	P	22 06 44.6	+6.3
WSI	**Waingapu**	63.83	269	P	P	22 06 42.3	-0.7
JCJ	**Chichijima**	63.96	317	LR	LR	22 30 16.0	
	comp=Z,7µm,20.8s,baz=116,slow=32						

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SGSI   Sangihe            64.00 285   P        P        22 06 44.3 +0.2
       comp=Z,8µmcomp=Z,4µmcomp=Z,217nm,0.8s
KMSI   Cibinong           64.11 281   P        P        22 06 50.4 +5.6
LUWI   Luwuk              64.58 279   P        P        22 06 45.7 -2.3
LUWI   Luwuk              64.58 279   P        P        22 06 47.1 -0.8
LUWI                                  IAmb     IAmb     22 06 54.4
       comp=Z,181nm,1.0s
LUWI   Luwuk              64.58 279   P        P        22 06 50.6 +2.7
LUWI   Luwuk              64.58 279   P        P        22 06 48.8 +0.9
       comp=Z,4µmcomp=Z,190nm,1.4s
WBSI   Waikabubak, Su     64.68 269   P        P        22 06 49.1 +0.4
       comp=Z,8µmcomp=Z,2µmcomp=Z,78nm,0.7s
CASY   Casey              64.87 206   P        P        22 06 49.1 +0.2
CASY                                  IAmb     IAmb     22 06 53.2
       comp=Z,116nm,1.1s
CASY   Casey              64.87 206 ⇑P        P        22 06 49.9 +1.0
DAV    Davao City (W)     65.45 289   P        P        22 06 52.8 -0.7
DAV    Davao City (W)     65.45 289   P        P        22 06 52.4 -1.2
       comp=Z,88nm,0.4s,baz=78,slow=2.7,SNR=4.3
DAV                                   LR       LR       22 33 45.8
       comp=Z,5µm,18.6s,baz=98,slow=35
       comp=Z,88nm,0.4s
DAV    Davao City (W)     65.45 289   P        P        22 06 51.0 -2.5
DAV                                   P        P        22 06 51.0 -2.5
DAV                                   S        S        22 15 32.9 -5.7
DAV                                   S        S        22 15 32.9 -5.7
APSI   Ampana             65.67 279   P        P        22 06 56.5 +1.5
       comp=Z,2µmcomp=Z,124nm,1.3s
BNSI   Bone               65.80 275   P        P        22 06 56.1 +0.3
       comp=Z,8µmcomp=Z,2µmcomp=Z,58nm,2.0s
GIRL   Giralia            65.81 254   P        P        22 06 55.9 +0.1
       comp=Z,0.0nmcomp=Z,334nm,1.4s
GIRL   Giralia            65.81 254   P        P        22 06 56.9 +1.1
KAPI   Kappang            65.91 274   P        P        22 06 55.2 -1.4
KAPI                                  IAmb     IAmb     22 06 57.2
       comp=Z,191nm,1.9s
KAPI   Kappang            65.91 274   P        P        22 06 54.7 -1.9
       comp=Z,9.8nm,0.7s,baz=175,slow=2.9,SNR=8.4
KAPI                                  LR       LR       22 35 11.4
       comp=Z,7µm,20.6s,baz=110,slow=36
       comp=Z,9.8nm,0.7s
KAPI   Kappang            65.91 274   P        P        22 06 54.0 -2.6
KAPI                                  P        P        22 06 54.0 -2.6
KAPI   Kappang            65.91 274c iP        P        22 06 54.8 -1.8
KAPI                                  pmax     pmax
       comp=Z,89nm,2.0s
MRSI   Marisa             65.94 280   P        P        22 06 58.3 +1.6
       comp=Z,2µmcomp=Z,44nm,0.7s
SPSI   Sidrap Palu        66.27 275   P        P        22 06 57.5 -1.4
PLAI   Plampang           66.45 269   P        P        22 07 02.5 +2.4
PLAI   Plampang           66.45 269   P        P        22 06 59.5 -0.6
       comp=Z,9µmcomp=Z,3µmcomp=Z,117nm,0.9s
TTSI   Tana Toraja        66.56 276   P        P        22 07 04.0 +3.3
TOLI2  Tolitoli           67.25 281   P        P        22 07 03.5 -1.7
TOLI2  Tolitoli           67.25 281   P        P        22 07 06.3 +1.1
PCI    Palu               67.34 278   P        P        22 07 07.0 +1.3
       comp=Z,4µmcomp=Z,109nm,0.8s
MPSI   Mapaga             67.76 279   P        P        22 07 07.7 -0.7
       comp=Z,8µmcomp=Z,2µmcomp=Z,73nm,1.5s
QSPA   South Pole Qui     68.87 180   P        P        22 07 14.3 -0.3
QSPA   South Pole Qui     68.87 180   P        P        22 07 16.5 +1.9
       comp=Z,52nm,0.9s,baz=46,slow=1.0,SNR=36
QSPA                                  LR       LR       22 32 03.9
       comp=Z,4µm,21.8s,baz=42,slow=31
QSPA                                  PKP2bc            22 35 26.9
       comp=Z,7.8nm,1.2s,baz=220,slow=3.3,SNR=6.2
       comp=Z,52nm,0.9s
BKB    Balikpapan         69.93 277   P        P        22 07 21.8  0.0
BKB                                   IAmb     IAmb     22 08 14.1
       comp=Z,129nm,1.2s
SMKI   Samarinda          69.95 278   P        P        22 07 25.8 +3.8
       comp=Z,69nm,0.5s
JAGI   Jajag, Banyuwa     69.95 268   P        P        22 07 19.9 -2.1
JAGI                                  IAmb     IAmb     22 07 46.1
       comp=Z,72nm,1.0s
JAGI   Jajag, Banyuwa     69.95 268   P        P        22 07 23.2 +1.2
JAGI   Jajag, Banyuwa     69.95 268   P        P        22 07 23.6 +1.6
       comp=Z,7µmcomp=Z,3µmcomp=Z,77nm,1.0s
JAGI   Jajag, Banyuwa     69.95 268 ⇑P        P        22 07 23.6 +1.6
GMJI   Gumukmas           70.68 268   P        P        22 07 28.2 +1.7
       comp=Z,44nm,1.1s
MYLDM  Lahad Datu         70.98 284   P        P        22 07 27.4 -0.8
MYLDM  Lahad Datu         70.98 284   P        P        22 07 30.9 +2.6
JYT    Yasato             71.58 322   P        P        22 07 32.1 +0.7
JSG    Sagara             71.67 320   P        P        22 07 31.2 -0.8
JRY    Ryogami san        72.18 322   P        P        22 07 35.6 +0.6
JMM    Marumori           72.42 324   P        P        22 07 35.9 -0.5
JMM    Marumori           72.42 324   P        P        22 07 38.7 +2.3
AMKA   Amchitka           72.50 356   P        P        22 07 35.9 -0.7
TGY    Tagaytay City      72.72 293   P        P        22 07 39.3 +0.5
       comp=Z,98nm,0.3s,baz=35,slow=8.1,SNR=3.5
TGY                                   LR       LR       22 38 34.9
       comp=Z,3µm,19.2s,baz=116,slow=35
       comp=Z,98nm,0.3s
KIWB   Kanaga Island      72.79 358   P        P        22 07 38.0 -0.3
JGF    Kuroka             72.80 320   P        P        22 07 38.6 -0.1
JGF                                   IAmb     IAmb     22 07 51.0
       comp=Z,210nm,1.5s
JGF    Kuroka             72.80 320   P        P        22 07 40.6 +1.8
ADK    Adak               72.81 358   P        P        22 07 37.5 -0.8
ADK    Adak               72.81 358   P        P        22 07 40.9 +2.5
ADK    Adak               72.81 358   P        P        22 07 37.5 -0.8
ADK                                   pmax     pmax
       comp=Z,493nm,1.8s
ADK                                   MLR      MLR
       comp=Z,6µm,20.0s
ADK    Adak               72.81 358 ⇑P        P        22 07 39.2 +0.8
PCJI   Pacitan            72.82 268   P        P        22 07 39.5 +0.2
       comp=Z,4µmcomp=Z,152nm,0.6s
INU    Inuyama            72.83 320   P        P        22 07 37.4 -1.6
INU                                   IAmb     IAmb     22 07 41.4
       comp=Z,209nm,1.7s
INU    Inuyama            72.83 320   P        P        22 07 41.8 +2.9
MJAR   Matsushiro Arr     72.94 322   P        P        22 07 39.7 +0.1
       comp=Z,28nm,0.7s,baz=153,slow=5.3,SNR=86
MJAR                                  LR       LR       22 35 20.0
       comp=Z,4µm,21.5s,baz=122,slow=32
       comp=Z,28nm,0.7s
MAJO   Matsushiro         72.95 322   P        P        22 07 39.4 -0.2
MAJO                                  IAmb     IAmb     22 07 41.9
       comp=Z,82nm,0.9s
MAJO   Matsushiro         72.95 322   P        P        22 07 40.6 +1.0
MAJO   Matsushiro         72.95 322c iP        P        22 07 40.3 +0.7
MAJO                                  pmax     pmax
       comp=Z,104nm,1.0s
MAJO                                  MLR      MLR
       comp=Z,3µm,16.0s
MAJO   Matsushiro         72.95 322 ⇑P        P        22 07 39.9 +0.3
MAT    Matsushiro         72.95 322   P        P        22 07 39.8 +0.2
ATKA   Atka Island        73.09 360   P        P        22 07 39.2 -0.8
ATKA   Atka Island        73.09 360   P        P        22 07 42.5 +2.5
WOJI   Wonogiri, Jawa     73.17 268   P        P        22 07 44.0 +2.5
       comp=Z,7µmcomp=Z,4µmcomp=Z,88nm,2.3s
JOW    Kunigami           73.39 308   P        P        22 07 41.4 -1.0
JOW                                   IAmb     IAmb     22 07 54.1
       comp=Z,302nm,2.0s
JOW    Kunigami           73.39 308   P        P        22 07 41.4 -1.0
       comp=Z,21nm,0.7s,baz=159,slow=5.3,SNR=5.6
JOW                                   LR       LR       22 34 50.4
       comp=Z,7µm,21.8s,baz=128,slow=32
       comp=Z,21nm,0.7s
KKM    Kota Kinabalu      73.41 283   P        P        22 07 41.7 -1.3
KKM                                   IAmb     IAmb     22 07 44.4
       comp=Z,336nm,1.9s
KKM    Kota Kinabalu      73.41 283   P        P        22 07 44.5 +1.6
H06S1  SOCORRO T          73.52  62   T        T        23 28 42.3
       SNR=12
UGM    Wanagama           73.52 268   P        P        22 07 42.1 -1.5
JYA    Atsumi             73.53 324   P        P        22 07 44.1 +1.1
JMN    Monobe             73.71 317   P        P        22 07 44.6 +0.4
JMN                                   IAmb     IAmb     22 07 57.0
       comp=Z,424nm,1.7s
JMN    Monobe             73.71 317   P        P        22 07 46.7 +2.5
JSD    Sado               73.95 323   P        P        22 07 45.4  0.0
JSD                                   IAmb     IAmb     22 07 48.3
       comp=Z,437nm,2.0s
JSD    Sado               73.95 323   P        P        22 07 47.3 +1.8
JSD    Sado               73.95 323   P        P        22 07 46.3 +0.8
NIKH   Nikolski High      74.01   3   P        P        22 07 44.7 -0.7
NIKH                                  IAmb     IAmb     22 07 48.2
       comp=Z,296nm,1.4s
NIKH   Nikolski High      74.01   3   P        P        22 07 45.9 +0.5
       baz=185
NIKH                                  S        SKiKP    22 17 15.8 +1.7
       baz=185
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ERM    Erimo              74.25 328ceP        P        22 07 49.2 +2.1
ERM                                   pmax     pmax
       comp=Z,161nm,1.6s
JAD    Aida               74.31 318   P        P        22 07 49.2 +1.6
SHEM   Shemya Is, Ala     74.33 353   LR       LR       22 36 11.5
       comp=Z,12µm,19.9s,baz=162,slow=32
SMY    Shemya             74.33 353   IAMs_20  IAMs_20  22 36 19.6
       comp=Z,13µm,20.0s
JTM    Tenmabayashi       74.39 326   P        P        22 07 47.8 -0.2
YUK    Yuzh-Kuril'sk      74.53 331c iP        P        22 07 50.4 +1.7
YUK                                 e                   22 10 37.6
YUK                                 i S        S        22 17 21.9 -2.1
YUK                                 eSS        SS       22 22 06.7 -4.7
YUK                                   pmax     pmax
       comp=Z,779nm,2.7s
YUK                                   pmax     pmax
       comp=Z,360nm,1.0s
YUK                                   pmax     pmax
       comp=E,101nm,0.5s
KUR    Kuril'sk           74.61 333 eP         P        22 07 48.8 -0.3
KUR                                 eS         S        22 17 28.2 +3.4
KUR                                   pmax     pmax
       comp=Z,374nm,2.0s
KUR                                   pmax     pmax
       comp=Z,4µm,6.2s
KUR                                   MLR      MLR
       comp=N,7µm,18.0s
KUR                                   MLR      MLR
       comp=Z,7µm,18.0s
JHS    Saijyo             75.01 317   P        P        22 07 52.9 +1.1
UNV    Unalaska Valle     75.03   5   P        P        22 07 51.3 -0.1
UNV    Unalaska Valle     75.03   5   P        P        22 07 51.2 -0.1
       baz=187
UNV                                   S        S        22 17 28.1 -1.0
       baz=187
JNU    Nakatsue           75.28 315   P        P        22 07 53.2 -0.2
JNU    Nakatsue           75.28 315   P        P        22 07 55.3 +1.9
JNU    Nakatsue           75.28 315   P        P        22 07 54.3 +0.9
AKUT   Akutan             75.38   5   P        P        22 07 53.2 -0.2
STKI   Sintang            75.45 276   P        P        22 07 56.1 +1.4
       comp=Z,8µmcomp=Z,63nm,0.6s
YOJ    Yonaguni jima      76.09 303   P        P        22 07 57.3 -0.8
YOJ                                   IAmb     IAmb     22 08 18.2
       comp=Z,164nm,1.3s
YOJ    Yonaguni jima      76.09 303   P        P        22 08 00.3 +2.2
YOJ    Yonaguni jima      76.09 303   P        P        22 07 57.3 -0.8
YOJ                                   pmax     pmax
       comp=Z,164nm,1.3s
JKA    Kamikawa-asahi     76.10 329   P        P        22 07 57.9 +0.2
JKA                                   IAmb     IAmb     22 08 03.2
       comp=Z,331nm,1.7s
JKA                                   IAMs_20  IAMs_20  22 35 06.4
       comp=Z,9µm,21.0s
ASAJ   Asahikawa          76.10 329   P        P        22 07 57.9 +0.2
ASAJ                                  pmax     pmax
       comp=Z,331nm,1.7s
ASAJ                                  MLR      MLR
       comp=Z,9µm,21.0s
SAO    San Andreas Ge     76.14  41   P        P        22 07 57.2 -1.0
SAO                                   IAmb     IAmb     22 08 14.8
       comp=Z,100nm,1.0s
SAO    San Andreas Ge     76.14  41   P        P        22 07 57.2 -1.0
SAO                                   pmax     pmax
       comp=Z,100nm,1.0s
SAO                                   MLR      MLR
       comp=Z,14µm,18.0s
MCCM   Marconi Confer     76.18  39   IAMs_20  IAMs_20  22 37 03.7
       comp=Z,8µm,19.0s
SKR    Severo-Kuril's     76.23 341c iP        P        22 07 58.8 +0.5
JSH    Shimam             76.27 327   P        P        22 08 00.9 +2.3
FALS   False Pass         76.31   6   IAMs_20  IAMs_20  22 34 42.1
       comp=Z,6µm,21.0s
FALS   False Pass         76.31   6   P        P        22 07 58.8 +0.2
       baz=190
FALS                                  S        S        22 17 41.0 -2.2
       baz=190
BBJI   Bungbulang         76.35 267   P        P        22 08 01.9 +1.9
CBX    Cerro Bola         76.52  47   P        P        22 07 59.8 -0.8
LEM    Lembang            76.60 268   P        P        22 08 00.4 -1.1
       comp=Z,65nm,0.7s,baz=102,slow=7.9,SNR=11
       comp=Z,65nm,0.7s
PASC   Pasadena Art C     76.60  45   IAMs_20  IAMs_20  22 35 51.9
       comp=Z,7µm,19.0s
SMAI   San Martin Ant     76.65 158   P        P        22 08 01.0 +0.4
SMAI                                  IAmb     IAmb     22 08 19.8
       comp=Z,396nm,1.9s
CNBA   Chernabura Isl     76.74   9   IAMs_20  IAMs_20  22 37 14.7
       comp=Z,6µm,19.0s
CHNA   Chernabura Isl     76.75   9   P        P        22 08 01.5 +0.4
       baz=194
CHNA                                  S        S        22 17 48.0 -0.1
       baz=194
TWGBT  Beinan             76.79 301   P        P        22 08 04.4 +2.3
TWG    Pinlang            76.80 301   IAMs_20  IAMs_20  22 39 27.5
       comp=Z,7µm,20.0s
SLBS   Sierra La Lagu     76.80  58   P        P        22 08 01.4 -0.9
SLBS                                  IAmb     IAmb     22 08 12.8
       comp=Z,180nm,1.9s
SLBS   Sierra La Lagu     76.80  58   IAMs_20  IAMs_20  22 37 42.4
       comp=Z,9µm,18.0s
YULB   Yu-li              76.90 302   P        P        22 08 01.5 -1.3
YULB                                  IAmb     IAmb     22 08 20.7
       comp=Z,184nm,1.8s
YULB                                  IAMs_20  IAMs_20  22 37 53.4
       comp=Z,6µm,20.0s
YULB   Yu-li              76.90 302   P        P        22 08 04.8 +2.0
KSM    Kuching            77.05 277   P        P        22 08 03.7 -0.1
KSM    Kuching            77.05 277   P        P        22 08 05.2 +1.3
NACB   Ninganchiao        77.06 302   P        P        22 08 01.9 -1.7
NACB                                  IAmb     IAmb     22 08 27.8
       comp=Z,87nm,1.0s
NACB   Ninganchiao        77.06 302   P        P        22 08 05.1 +1.5
SDPT   Sand Point         77.14   8   P        P        22 08 03.6 +0.3
       baz=193
SDPT                                  S        S        22 17 50.9 -1.3
       baz=193
S12K   Black Hills        77.29   7   IAMs_20  IAMs_20  22 45 15.0
       comp=Z,5µm,18.0s
S12K   Black Hills        77.29   7   P        P        22 08 05.2 +1.0
       baz=191
S12K                                  S        S        22 17 52.5 -1.4
       baz=191
JCC    Jacoby Creek,      77.31  37   IAMs_20  IAMs_20  22 37 39.5
       comp=Z,9µm,19.0s
ISA    Isabella, Lake     77.32  44   P        P        22 08 04.9  0.0
ISA                                   pmax     pmax
       comp=Z,145nm,1.4s
SSLB   Suanglung          77.37 302   P        P        22 08 04.6 -0.8
SSLB                                  IAMs_20  IAMs_20  22 38 07.8
       comp=Z,6µm,20.0s
SSLB   Suanglung          77.37 302   P        P        22 08 04.6 -0.8
TPUB   Ta-pu              77.39 301   P        P        22 08 03.8 -1.7
TPUB                                  IAmb     IAmb     22 08 24.8
       comp=Z,166nm,1.1s
TPUB                                  IAMs_20  IAMs_20  22 37 57.3
       comp=Z,8µm,20.0s
TPUB   Ta-pu              77.39 301   P        P        22 08 05.3 -0.2
PFO    Pinyon Flats O     77.42  46   P        P        22 08 03.6 -2.0
PFO    Pinyon Flats O     77.42  46c iP        P        22 08 08.2 +2.6
PFO                                   pmax     pmax
       comp=Z,127nm,1.2s
YHNB   Yeheng             77.48 303   P        P        22 08 07.5 +1.4
TATO   Taipei             77.55 303   IAMs_20  IAMs_20  22 38 33.2
       comp=Z,7µm,20.0s
TATO   Taipei             77.55 303   P        P        22 08 04.1 -2.2
PET    Petropavlovsk      77.60 344   P        P        22 08 06.0 +0.1
PET                                   IAmb     IAmb     22 08 08.6
       comp=Z,429nm,2.0s
PET                                   IAMs_20  IAMs_20  22 38 30.4
       comp=Z,6µm,20.0s
PET    Petropavlovsk      77.60 344   P        P        22 08 07.9 +2.0
PET    Petropavlovsk      77.60 344d iP        P        22 08 05.6 -0.3
PET                                 eS         S        22 17 56.5 -0.8
PET                                 eSS        SS       22 22 57.9 +0.5
PET                                   pmax     pmax
       comp=Z,86nm,2.0s
PET                                   pmax     pmax
       comp=Z,2µm,9.7s
PET                                   pmax     pmax
       comp=Z,2µm,11.3s
PET                                   MLR      MLR
       comp=Z,4µm,18.0s
P08K   Saint George I     77.60   3   P        P        22 08 07.2 +1.4
       baz=184
CMB    Columbia Colle     77.60  41   IAMs_20  IAMs_20  22 39 20.4
       comp=Z,9µm,18.0s
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AFDM   Forest Hills D     77.84  40   P        P        22 08 07.0 -0.7
AFDM                                  IAmb     IAmb     22 08 30.3
       comp=Z,139nm,1.3s
ORV    Oroville           77.92  39   IAMs_20  IAMs_20  22 37 59.6
       comp=Z,5µm,19.0s
PEA0B  Petropavlovsk-     77.93 343   P        P        22 08 07.5 -0.3
PEA0B                                 IAmb     IAmb     22 08 29.8
       comp=Z,265nm,1.2s
PEA0B  Petropavlovsk-     77.93 343c iP        P        22 08 08.8 +1.0
PETK   Petropavlovsk-     77.93 343   P        P        22 08 08.3 +0.5
       comp=Z,20nm,0.7s,baz=131,slow=6.2,SNR=23
       comp=Z,20nm,0.7s
TPI    Tanjungpandan      77.99 272   P        P        22 08 15.7 +6.6
SPIA   Saint Paul Isl     78.15   2   P        P        22 08 10.2 +1.3
       baz=184
S14K   Fog Glacier        78.17   8   P        P        22 08 10.0 +0.8
       baz=194
S14K                                  S        S        22 18 06.0 +2.4
       baz=194
YSS    Yuzhno-Sakhali     78.18 331   P        P        22 08 09.0 -0.3
YSS                                   IAmb     IAmb     22 08 24.4
       comp=Z,156nm,1.1s
YSS                                   IAMs_20  IAMs_20  22 37 40.9
       comp=Z,7µm,20.0s
YSS    Yuzhno-Sakhali     78.18 331   P        P        22 08 12.3 +3.0
YSS    Yuzhno-Sakhali     78.18 331αeP        P        22 08 10.3 +1.0
YSS                                 e                   22 08 20.1
YSS                                 e                   22 11 06.9
YSS                                 eS         S        22 17 58.5 -5.3
YSS                                 e                   22 18 28.0
YSS                                   pmax     pmax
       comp=Z,3µm,5.9s
YSS                                   pmax     pmax
       comp=Z,80nm,1.1s
SBJI   Serang             78.23 268   P        P        22 08 16.9 +6.5
CHIR   Chirikof Islan     78.33  11   IAMs_20  IAMs_20  22 37 50.2
       comp=Z,8µm,21.0s
CHIR   Chirikof Islan     78.33  11   P        P        22 08 11.8 +1.9
       baz=198
BELA   Belgrano 2         78.38 172   P        P        22 08 10.1  0.0
CGJI   Cibinong           78.47 267   P        P        22 08 12.5 +0.8
       comp=Z,3µmcomp=Z,142nm,0.8s
HATC   Hat Creek Radi     78.76  38   IAMs_20  IAMs_20  22 38 31.0
       comp=Z,12µm,19.0s
HSIG                      78.78  53   P        P        22 08 11.7 -1.4
K02D   Willamette Mer     78.78  35   P        P        22 08 12.1 -0.8
K02D                                  IAmb     IAmb     22 08 17.7
       comp=Z,146nm,1.6s
RYN    Ryan               79.12  41   P        P        22 08 14.6 -0.3
RYN                                   IAmb     IAmb     22 08 30.8
       comp=Z,302nm,1.6s
NVAR   Mina Array Bea     79.13  41   P        P        22 08 17.1 +2.1
       comp=Z,60nm,0.8s,baz=224,slow=9.1,SNR=106
       comp=Z,60nm,0.8s
L04D   Klamath Falls      79.21  36   P        P        22 08 15.0 -0.4
L04D                                  IAmb     IAmb     22 08 38.7
       comp=Z,216nm,1.2s
SII    Sitkinak Islan     79.28  11   P        P        22 08 14.9 -0.3
SII                                   IAmb     IAmb     22 08 18.9
       comp=Z,260nm,1.4s
SII                                   IAMs_20  IAMs_20  22 39 52.4
       comp=Z,7µm,20.0s
SII    Sitkinak Islan     79.28  11   P        P        22 08 17.6 +2.4
SII    Sitkinak Islan     79.28  11   P        P        22 08 16.4 +1.2
       baz=199
SII                                   S        S        22 18 16.6 +1.2
       baz=199
TPNV   Topopah Spring     79.53  44   P        P        22 08 16.4 -0.8
TPNV                                  IAMs_20  IAMs_20  22 39 23.5
       comp=Z,8µm,19.0s
TPNV   Topopah Spring     79.53  44   P        P        22 08 16.5 -0.8
TPNV                                  pmax     pmax
       comp=Z,55nm,0.9s
TPNV                                  MLR      MLR
       comp=Z,8µm,19.0s
TJN    Taejon             79.55 316   P        P        22 08 19.6 +2.5
TJN    Taejon             79.55 316c iP        P        22 08 17.8 +0.7
TPH    Tonopah            79.59  42   P        P        22 08 17.2 -0.4
TPH    Tonopah            79.59  42   P        P        22 08 17.2 -0.4
TPH                                   pmax     pmax
       comp=Z,1µm,1.5s
R16K   Pilot Point        79.69   9   P        P        22 08 18.5 +1.1
       baz=196
R16K                                  S        S        22 18 20.7 +1.2
       baz=196
TEY    Ternei             79.72 327 eP         P        22 08 15.6 -2.2
TEY                                 e                   22 18 26.3
QZH    Quanzhou           79.81 302⇑iP         P        22 08 19.1 +0.3
QZH                                   S        S        22 18 22.0 -0.2
QZH                                   pmax     pmax
       comp=Z,110nm,1.4s
QZH                                   pmax     pmax
       comp=Z,4µm,5.6s
QZH                                   LR       LR
       comp=Z,4µm,19.6s
QZH                                   LR       LR
       comp=Z,6µm,21.0s
QZH                                   LR       LR
       comp=Z,8µm,19.6s
KSRS   Korea Array        79.82 317   P        P        22 08 19.6 +1.1
       comp=Z,30nm,1.0s,baz=137,slow=5.0,SNR=33
       comp=Z,30nm,1.0s
KSAR   Wonju Array Be     79.84 317   P        P        22 08 18.7  0.0
KSAR   Wonju Array Be     79.84 317   P        P        22 08 18.7  0.0
KS19   Wonju Array Si     79.89 317   P        P        22 08 18.8 -0.1
KS19                                  IAmb     IAmb     22 08 22.3
       comp=Z,370nm,1.7s
OHAK   Old Harbor         80.07  11   P        P        22 08 19.6 +0.2
OHAK                                  IAmb     IAmb     22 08 45.6
       comp=Z,192nm,1.5s
OHAK   Old Harbor         80.07  11   P        P        22 08 22.2 +2.8
OHAK   Old Harbor         80.07  11   P        P        22 08 21.5 +2.0
       baz=200,SNR=7.0
OHAK                                  S        S        22 18 24.9 +1.4
       baz=200
UGL    Uglegorsk          80.09 333 eP         P        22 08 14.1 -5.6
UGL                                 eS         S        22 18 18.8 -5.3
UGL                                   pmax     pmax
       comp=Z,3µm,6.0s
UGL                                   smax     smax
       comp=E,2µm,8.0s
UGL                                   smax     smax
       comp=N,2µm,4.0s
UGL                                   MLR      MLR
       comp=Z,4µm,14.0s
R18K   Karluk             80.19  11   P        P        22 08 21.5 +1.4
       baz=198,SNR=11
R18K                                  S        S        22 18 25.2 +0.4
       baz=198
COR    Corvallis          80.26  34   P        P        22 08 20.5 -0.3
COR    Corvallis          80.26  34   P        P        22 08 20.5 -0.3
COR                                   pmax     pmax
       comp=Z,106nm,1.2s
COR                                   MLR      MLR
       comp=Z,11µm,19.0s
LWLI   Liwa               80.54 268   P        P        22 08 24.2 +1.0
MG05   Puerto Natales     80.56 142   P        P        22 08 22.8 +0.3
MG05                                  IAmb     IAmb     22 08 46.3
       comp=Z,143nm,1.3s
PMBI   Palembang          80.61 270   P        P        22 08 23.9 +0.4
PMBI                                  IAMs_20  IAMs_20  22 43 10.3
       comp=Z,6µm,22.0s
MDSI   Maura Dua          80.62 269   P        P        22 08 22.6 -0.9
Q17K   Contact Creek      80.62  10   P        P        22 08 23.3 +0.8
       baz=197,SNR=21
Q17K                                  S        S        22 18 29.0 -0.5
       baz=197
TUC    Tucson             80.64  50   IAMs_20  IAMs_20  22 39 35.9
       comp=Z,9µm,18.0s
TUC    Tucson             80.64  50   P        P        22 08 25.9 +2.7
TUC                                   pmax     pmax
       comp=Z,46nm,1.6s
INCN   Inchon             80.67 316   P        P        22 08 23.6 +0.5
INCN                                  IAmb     IAmb     22 08 26.6
       comp=Z,112nm,1.1s
INCN   Inchon             80.67 316   P        P        22 08 25.7 +2.5
INCN   Inchon             80.67 316   P        P        22 08 23.7 +0.5
INCN                                  pmax     pmax
       comp=Z,113nm,1.1s
KDAK   Kodiak Island      80.73  12   P        P        22 08 23.4 +0.4
KDAK                                  IAmb     IAmb     22 08 26.9
       comp=Z,338nm,1.5s
KDAK   Kodiak Island      80.73  12c iP        P        22 08 25.0 +2.0
KDAK                                  pmax     pmax
       comp=Z,356nm,1.6s
KDAK   Kodiak Island      80.73  12   P        P        22 08 24.8 +1.9
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	baz=200						
KDAK				S	S	22 18 30.7	+0.2
	baz=200						
GO09	Cerro Castillo	80.81	141	P	P	22 08 23.5	-0.4
GO09				IAmb	IAmb	22 08 39.8	
	comp=Z,337nm,1.8s						
O14K	Tigyukauivet M	80.87	7	IAMs_20	IAMs_20	22 47 43.9	
	comp=Z,6µm,18.0s						
O14K	Tigyukauivet M	80.87	7	P	P	22 08 25.2	+1.5
	baz=192						
O14K				S	S	22 18 32.3	+0.4
	baz=192						
Q16K	King Salmon	80.90	9	P	P	22 08 25.2	+1.4
	baz=196,SNR=15						
Q16K				S	S	22 18 33.2	+1.0
	baz=196						
SSE	Sheshan	80.91	308	P	P	22 08 24.4	-0.2
SSE				S	S	22 18 32.8	-0.7
SSE				pmax	pmax		
	comp=Z,12nm,0.6s						
SSE				pmax	pmax		
	comp=Z,1µm,6.1s						
SSE				LR	LR		
	comp=Z,910nm,23.0s						
O15K	Ungalikthiuk R	80.96	7	P	P	22 08 25.3	+1.2
	baz=193						
O15K				S	S	22 18 33.1	+0.3
	baz=193						
VLA	Vladivostok	80.96	323	*d i*P	P	22 08 26.0	+1.5
VLA				pmax	pmax		
	comp=Z,238nm,1.9s						
MSHR	Mys Shultsa	81.02	322	*c i*P	P	22 08 25.8	+0.9
MSHR				pmax	pmax		
	comp=Z,182nm,1.3s						
MSHR				MLR	MLR		
	comp=Z,1µm,14.0s						
P16K	Nushagak River	81.05	8	P	P	22 08 25.8	+1.1
	baz=195,SNR=16						
P16K				S	S	22 18 35.8	+2.1
	baz=195						
Q18K	Katmai Hardscr	81.13	10	P	P	22 08 26.1	+0.8
	baz=198,SNR=30						
Q18K				S	S	22 18 34.7	-0.2
	baz=198						
TYV	Tymovskoe	81.20	334	*e*P	P	22 08 27.1	+1.5
TYV				*e*S	S	22 18 33.5	-2.2
TYV				pmax	pmax		
	comp=Z,72nm,1.3s						
TYV				pmax	pmax		
	comp=Z,700nm,2.1s						
TYV				smax	smax		
	comp=N,21nm,2.3s						
TYV				smax	smax		
	comp=E,19nm,2.3s						
TYV				smax	smax		
	comp=N,900nm,4.7s						
TYV				smax	smax		
	comp=E,1µm,4.7s						
PSTR	Posyet	81.27	322	*c i*P	P	22 08 28.5	+2.3
WVOR	Wild Horse Val	81.42	38	P	P	22 08 29.2	+2.0
WVOR				pmax	pmax		
	comp=Z,106nm,1.3s						
P17K	Kvichak River	81.43	9	P	P	22 08 27.5	+0.9
	baz=197,SNR=9.9						
P17K				S	S	22 18 37.8	+0.2
	baz=197						
N14K	Kuskokwak Cree	81.48	6	IAMs_20	IAMs_20	22 48 22.8	
	comp=Z,6µm,19.0s						
N14K	Kuskokwak Cree	81.48	6	P	P	22 08 28.4	+1.6
	baz=192,SNR=22						
N14K				S	S	22 18 38.9	+0.7
	baz=192						
HHU	Hamhung	81.54	319	P	P	22 08 29.0	+1.3
Q20K	Shuyak Island	81.54	11	P	P	22 08 29.5	+2.3
	baz=200,SNR=5.9						
Q20K				S	S	22 18 40.6	+1.8
	baz=200						
SYI	Shuyak Island	81.54	11	IAMs_20	IAMs_20	22 44 26.4	
	comp=Z,7µm,18.0s						
M11K	Mekoryuk	81.56	4	P	P	22 08 29.6	+2.3
	baz=187,SNR=7.8						
M11K				S	SKSac	22 18 43.1	-3.5
	baz=187						
HJU	Haeju	81.58	316	P	P	22 08 29.2	+1.3
HJU				AmB			
	comp=Z,1µm,2.1s						
O16K	Kokwok River B	81.58	8	IAMs_20	IAMs_20	22 48 10.5	
	comp=Z,5µm,18.0s						
O16K	Kokwok River B	81.58	8	P	P	22 08 28.7	+1.2
	baz=195,SNR=24						
O16K				S	S	22 18 40.2	+0.9
	baz=195						
USRK	Ussuriysk Ar.	81.60	324	P	P	22 08 29.0	+1.1
USRK	Ussuriysk Ar.	81.60	324	P	P	22 08 29.4	+1.5
	comp=Z,8.4nm,0.7s,baz=126,slow=4.9,SNR=33						
	comp=Z,8.4nm,0.7s						
USRK	Ussuriysk Ar.	81.60	324	P	P	22 08 29.0	+1.1
USA0B	Ussuriysk Arra	81.60	324	P	P	22 08 28.8	+0.8
USA0B	Ussuriysk Arra	81.60	324	*c i*P	P	22 08 29.8	+1.9
Q19K	Cape Douglas,	81.62	11	IAMs_20	IAMs_20	22 41 19.5	
	comp=Z,6µm,20.0s						
Q19K	Cape Douglas,	81.62	11	P	P	22 08 28.7	+0.9
	baz=199,SNR=6.8						
Q19K				S	S	22 18 40.7	+0.9
	baz=199						
HPIG		81.77	57	P	P	22 08 29.1	-0.5
P18K	Big Mountain,	81.80	10	P	P	22 08 30.1	+1.4
	baz=198,SNR=9.3						
P18K				S	S	22 18 41.7	0.0
	baz=198						
MNAI	Manna	81.80	268	P	P	22 08 29.9	+0.1
M13K	Dall Lake	81.80	5	P	P	22 08 31.1	+2.5
	baz=190,SNR=12						
M13K				S	SKSac	22 18 45.5	-2.8
	baz=190						
NLWA	Neilton Lookou	81.89	32	P	P	22 08 29.0	-0.5
NLWA				IAmb	IAmb	22 08 40.5	
	comp=Z,184nm,1.7s						
NLWA				IAMs_20	IAMs_20	22 42 07.3	
	comp=Z,6µm,18.0s						
O17K	Koliganek Bris	81.89	9	P	P	22 08 30.5	+1.4
	baz=196,SNR=20						
O17K				S	S	22 18 44.4	+1.9
	baz=196						
N15K	Kwethluk River	81.89	7	IAMs_20	IAMs_20	22 48 15.0	
	comp=Z,6µm,18.0s						
N15K	Kwethluk River	81.89	7	P	P	22 08 30.9	+1.7
	baz=193,SNR=17						
N15K				S	S	22 18 43.7	+1.1
	baz=193						
WUAZ	Wupatki	81.95	47	P	P	22 08 29.5	-0.7
MAW	Mawson	82.09	199	P	P	22 08 31.8	+1.6
	comp=Z,27nm,0.7s,baz=134,slow=8.6,SNR=49						
	comp=Z,27nm,0.7s						
MOIG	Morelia	82.13	65	P	P	22 08 29.8	-1.8
PYAG	Pyongyang	82.14	317	P	P	22 08 32.1	+1.3
PYAG				S	S	22 18 46.2	+0.4
PYAG				AmB			
	comp=Z,2µm,2.2s						
PYAG				AMS	AMS		
	comp=Z,2µm,11.4s						
HKPS	Hong Kong Po S	82.19	297	IAMs_20	IAMs_20	22 40 09.6	
	comp=Z,9µm,20.0s						
AY03	Cochrane	82.20	138	P	P	22 08 31.2	-0.1
AY03				IAmb	IAmb	22 08 46.5	
	comp=Z,120nm,1.5s						
OZB	Mount Ozzard	82.21	30	P	P	22 08 29.9	-1.2
O18K	Koktuh Hills	82.25	10	P	P	22 08 32.1	+1.1
	baz=198,SNR=37						
O18K				S	S	22 18 47.4	+1.2
	baz=198						
M14K	Bethel	82.27	6	P	P	22 08 33.2	+2.2
	baz=191,SNR=27						
M14K				S	SKSac	22 18 49.4	-2.0
	baz=191						
ZAIG	Zacatecas	82.33	62	P	P	22 08 31.7	-1.0
M15K	Kasigluk River	82.34	7	P	P	22 08 33.0	+1.6
	baz=192,SNR=61						
M15K				S	S	22 18 49.0	+2.0
	baz=192						
N16K	Nishlik Lake	82.35	8	P	P	22 08 33.1	+1.6
	baz=194,SNR=22						
N16K				S	S	22 18 49.4	+2.2
	baz=194						
P19K	Oil Pt	82.38	11	IAMs_20	IAMs_20	22 40 42.5	
	comp=Z,5µm,21.0s						
P19K	Oil Pt	82.38	11	P	P	22 08 33.0	+1.2
	baz=200,SNR=6.3						
P19K				S	S	22 18 48.4	+0.8
	baz=200						
KSI	Kapahiang	82.39	269	P	P	22 08 33.2	+0.3
ELK	Elko	82.41	41	P	P	22 08 34.7	+2.1
H02S1	DAWSON INLET T	82.42	24	P	P	22 08 34.0	+2.0
	SNR=6.5						
ESPZ	Base Esperanza	82.57	156	P	P	22 08 32.8	0.0
ESPZ				IAmb	IAmb	22 08 43.7	
	comp=Z,173nm,1.4s						
N17K	Nushagak Hills	82.61	8	P	P	22 08 33.9	+1.0
	baz=196,SNR=15						
N17K				S	S	22 18 50.7	+0.9
	baz=196						
CNPM	China Poot	82.61	12	IAMs_20	IAMs_20	22 45 08.7	
	comp=Z,8µm,19.0s						
H03S2	Juan Fernandez	82.62	123	T	T	23 40 55.5	
	baz=248,slow=75,SNR=210						
H03S1	Juan Fernandez	82.64	123	T	T	23 40 55.2	
	baz=248,slow=75,SNR=224						
H03S3	Juan Fernandez	82.64	123	T	T	23 40 54.0	
	baz=248,slow=75,SNR=210						
HOM	Homer	82.66	11	IAMs_20	IAMs_20	22 47 24.0	
	comp=Z,6µm,18.0s						
HOM	Homer	82.66	11	P	P	22 08 35.2	+2.1
	baz=201						
HOM				S	SKSac	22 18 52.5	-1.7
	baz=201						
O19K	Port Alsworth	82.71	10	P	P	22 08 34.6	+1.2
	baz=198,SNR=16						
O19K				S	S	22 18 51.6	+0.8
	baz=198						
DLV	Lat	82.75	286	P	P	22 08 34.2	-0.7
DLV				IAmb	IAmb	22 08 56.6	
	comp=Z,110nm,1.4s						
DLV	Lat	82.75	286	P	P	22 08 36.3	+1.4
H03N2	Juan Fernandez	82.76	123	T	T	23 41 01.4	
	baz=249,slow=71,SNR=106						
H03N3	Juan Fernandez	82.76	123	T	T	23 41 02.6	
	baz=249,slow=71,SNR=96						
H03N1	Juan Fernandez	82.78	123	T	T	23 41 09.0	
	baz=249,slow=71,SNR=73						
L14K	Kuka Creek	82.78	6	P	P	22 08 34.2	+0.5
L14K	Kuka Creek	82.78	6	P	P	22 08 35.5	+1.9
	baz=191,SNR=29						
L14K				S	SKSac	22 18 55.1	+0.3
	baz=191						
M16K	Timber Creek	82.86	7	IAMs_20	IAMs_20	22 48 35.6	
	comp=Z,5µm,19.0s						
M16K	Timber Creek	82.86	7	P	P	22 08 36.3	+2.1
	baz=194,SNR=60						
M16K				S	SKSac	22 18 56.2	+0.8
	baz=194						
O20K	Slope Mountain	82.89	11	P	P	22 08 35.9	+1.5
	baz=200						
O20K				S	S	22 18 54.0	+1.2
	baz=200						
BRLK	Bradley Lake	82.90	12	P	P	22 08 34.4	-0.1
BRLK				IAMs_20	IAMs_20	22 45 08.9	
	comp=Z,6µm,19.0s						
BRSE	Bradley Lake S	82.91	12	P	P	22 08 35.8	+1.3
	baz=202						
BRSE				S	SKSac	22 18 55.3	-0.6
	baz=202						
N18K	Kilae Creek	82.94	9	P	P	22 08 36.2	+1.6
	baz=197,SNR=13						
N18K				S	S	22 18 53.2	0.0
	baz=197						
PGC	Sidney	82.96	31	P	P	22 08 34.8	-0.2
PGC				IAmb	IAmb	22 08 39.3	
	comp=Z,68nm,1.0s						
GO07	Milladeo Hill,	83.09	134	P	P	22 08 34.9	-1.1
GO07				IAmb	IAmb	22 08 55.7	
	comp=Z,289nm,1.6s						
NJ2	Nanjing	83.11	308	⇑P	P	22 08 37.8	+1.7
NJ2				S	SKSac	22 18 59.8	+1.4
NJ2				SS	SS	22 24 17.0	-3.8
NJ2				pmax	pmax		
	comp=Z,71nm,1.3s						
NJ2				pmax	pmax		
	comp=Z,3µm,5.3s						
NJ2				LR	LR		
	comp=Z,2µm,18.0s						
NJ2				LR	LR		
	comp=Z,2µm,18.7s						
NJ2				LR	LR		
	comp=Z,2µm,19.8s						
COYC	Coyhaique	83.18	136	P	P	22 08 36.7	+0.3
COYC				IAmb	IAmb	22 08 52.4	
	comp=Z,240nm,1.4s						
MDJ	Mudanjiang	83.19	323	P	P	22 08 37.8	+1.6
MDJ				sP	pwP	22 08 43.4	+0.6
MDJ				S	S	22 19 02.0	+5.6
MDJ				pmax	pmax		
	comp=Z,200nm,1.8s						
MDJ				pmax	pmax		
	comp=Z,5µm,6.1s						
MDJ				LR	LR		
	comp=Z,3µm,22.0s						
MDJ				LR	LR		
	comp=Z,4µm,22.0s						
MDJ				LR	LR		
	comp=Z,9µm,23.4s						
JRQG	Juriquilla Cam	83.20	65	P	P	22 08 36.1	-1.0
K13K	Kusilvak Mount	83.20	5	IAMs_20	IAMs_20	22 38 53.1	
	comp=Z,6µm,22.0s						
K13K	Kusilvak Mount	83.20	5	P	P	22 08 37.8	+1.9
	baz=189,SNR=14						
K13K				S	S	22 18 59.9	+4.1
	baz=189						
GZH	Guangzhou	83.20	298	P	P	22 08 37.8	+1.0
GZH				S	SKSac	22 19 00.4	+1.0
GZH				pmax	pmax		
	comp=Z,100nm,1.5s						
GZH				pmax	pmax		
	comp=Z,2µm,4.8s						
GZH				LR	LR		
	comp=Z,2µm,17.6s						
GZH				LR	LR		
	comp=Z,3µm,17.5s						
GZH				LR	LR		
	comp=Z,4µm,19.9s						
L15K	Ungalak Mounta	83.22	6	P	P	22 08 37.5	+1.5
	baz=192,SNR=45						
L15K				S	SKSac	22 18 58.8	+1.1
	baz=192						
N19K	Bonanza Creek	83.27	10	IAMs_20	IAMs_20	22 48 35.2	
	comp=Z,5µm,18.0s						
N19K	Bonanza Creek	83.27	10	P	P	22 08 37.1	+0.7
	baz=198,SNR=30						
N19K				S	SKSac	22 18 57.9	-0.5
	baz=198						
M17K	Holitna River	83.42	8	P	P	22 08 39.2	+2.2
	baz=196,SNR=35						
M17K				S	SKSac	22 19 00.9	+1.8
	baz=196						
L16K	Owhat River	83.47	7	IAMs_20	IAMs_20	22 49 05.2	
	comp=Z,5µm,18.0s						
L16K	Owhat River	83.47	7	P	P	22 08 39.5	+2.2
	baz=194						
L16K				S	S	22 19 02.3	+3.8
	baz=194						
EPT	El Paso	83.48	52	IAMs_20	IAMs_20	22 41 55.1	
	comp=Z,9µm,18.0s						
SEW	Seward	83.49	12	IAMs_20	IAMs_20	22 47 52.0	
	comp=Z,7µm,18.0s						
SEW	Seward	83.49	12	P	P	22 08 38.8	+1.4
	baz=203						
SEW				S	S	22 18 59.0	+0.2
	baz=203						
Q23K	Middleton Isla	83.53	14	IAMs_20	IAMs_20	22 47 25.8	
	comp=Z,6µm,18.0s						
Q23K	Middleton Isla	83.53	14	P	P	22 08 39.4	+1.8
	baz=206						
Q23K				S	SKSac	22 19 01.4	+1.6
	baz=206						
SUJ	Sinuiju	83.54	317	P	P	22 08 38.8	+0.7
SUJ				S	SKSac	22 19 00.6	-0.2
SUJ				AmB			
	comp=Z,3µm,2.6s						
SUJ				AMS	AMS		
	comp=Z,5µm,16.9s						
DUG	Dugway, Tooele	83.60	43	IAMs_20	IAMs_20	22 46 05.2	
	comp=Z,8µm,18.0s						
DUG	Dugway, Tooele	83.60	43	P	P	22 08 40.8	+2.1
DUG				pmax	pmax		
	comp=Z,33nm,1.2s						
BMO	Blue Mountains	83.69	37	IAMs_20	IAMs_20	22 41 40.2	
	comp=Z,7µm,19.0s						
UNM	Universidad Na	83.69	67	IAMs_20	IAMs_20	22 37 09.5	
	comp=Z,5µm,21.0s						
SLKM	Skilak Lake	83.72	12	P	P	22 08 38.5	-0.1
SLKM				IAMs_20	IAMs_20	22 45 35.0	
	comp=Z,5µm,18.0s						
M18K	Stony River	83.72	9	P	P	22 08 40.2	+1.6
	baz=197,SNR=25						
M18K				S	SKSac	22 19 02.5	+1.4
	baz=197						
CAPN	Captain Cook N	83.79	11	IAMs_20	IAMs_20	22 48 46.8	
	comp=Z,8µm,18.0s						
CAPN	Captain Cook N	83.79	11	P	P	22 08 41.1	+2.2
	baz=201						
O22K	Cooper Landing	83.79	12	IAMs_20	IAMs_20	22 51 11.6	
	comp=Z,6µm,18.0s						
O22K	Cooper Landing	83.79	12	P	P	22 08 40.6	+1.6
	baz=203						
O22K				S	S	22 19 01.6	-0.1
	baz=203						
P23K	Montague Islan	83.81	13	IAMs_20	IAMs_20	22 41 42.3	
	comp=Z,6µm,20.0s						
P23K	Montague Islan	83.81	13	P	P	22 08 40.8	+1.7
	baz=205						
P23K				S	S	22 19 02.9	+0.8
	baz=205						
GRNR	Gornyy	83.82	331	⇑*i*P	P	22 08 40.2	+0.8
GRNR				pmax	pmax		
	comp=Z,30nm,1.2s						
K15K	Wolf Creek Mou	83.82	6	IAMs_20	IAMs_20	22 49 29.8	
	comp=Z,5µm,18.0s						
K15K	Wolf Creek Mou	83.82	6	P	P	22 08 41.5	+2.4
	baz=192,SNR=106						
K15K				S	S	22 19 06.8	+4.7
	baz=192						
LL05	Los Muermos	83.88	132	P	P	22 08 40.1	0.0
BGU	Big Grassy Mou	83.88	42	P	P	22 08 39.9	-0.2
BGU				IAmb	IAmb	22 09 13.2	
	comp=Z,108nm,1.7s						
CRAG	Craig	83.97	22	P	P	22 08 42.3	+2.4
CRAG	Craig	83.97	22	P	P	22 08 42.9	+2.9
	baz=218,SNR=6.8						
CRAG				S	S	22 19 06.1	+2.4
	baz=218						
N20K	Mount Spurr	84.01	10	P	P	22 08 41.2	+1.0
	baz=200						
N20K				S	S	22 19 03.9	-0.3
	baz=200						
SPCR	Spurr Chakacha	84.01	10	P	P	22 08 41.4	+1.2
	baz=200,SNR=11						
SPCR				S	S	22 19 03.9	-0.3
	baz=200						
L17K	Donlin	84.02	7	P	P	22 08 42.8	+2.7
	baz=195,SNR=67						
L17K				S	S	22 19 09.2	+5.2
	baz=195						
PAYG	Puerto Ayora	84.05	88	IAMs_20	IAMs_20	22 39 22.1	
	comp=Z,7µm,18.0s						
J14K	Nanvaranak Lak	84.09	5	IAMs_20	IAMs_20	22 39 30.0	
	comp=Z,6µm,22.0s						
J14K	Nanvaranak Lak	84.09	5	P	P	22 08 42.9	+2.5
	baz=190,SNR=12						
J14K				S	S	22 19 08.5	+3.8
	baz=190						
LL01	San Ignacio de	84.22	133	P	P	22 08 41.3	-0.5
MNTX	Cornudas Mount	84.28	53	P	P	22 08 41.6	-0.6
MNTX				IAmb	IAmb	22 08 57.0	
	comp=Z,80nm,1.3s						
MNTX				IAMs_20	IAMs_20	22 41 54.3	
	comp=Z,6µm,18.0s						
LL02	Futaleuf	84.28	134	P	P	22 08 42.0	-0.1
LL02				IAmb	IAmb	22 08 56.8	
	comp=Z,79nm,1.2s						
L18K	Granite Mounta	84.30	8	P	P	22 08 43.8	+2.2
	baz=196,SNR=56						
L18K				S	S	22 19 10.3	+3.4
	baz=196						
Y22D	IRIS PASSCAL I	84.32	50	IAMs_20	IAMs_20	22 42 15.4	
	comp=Z,7µm,18.0s						
Y22D	IRIS PASSCAL I	84.32	50	P	P	22 08 45.4	+2.9
	baz=240						
Y22D				S	S	22 19 08.8	+0.2
	baz=240						
M19K	Big River Lodg	84.33	9	P	P	22 08 41.8	+0.1
M19K				IAmb	IAmb	22 08 44.9	
	comp=Z,60nm,0.9s						
M19K				IAMs_20	IAMs_20	22 49 27.8	
	comp=Z,5µm,18.0s						
M19K	Big River Lodg	84.33	9	P	P	22 08 42.9	+1.2
	baz=198						
M19K				S	S	22 19 06.3	-0.9
	baz=198						
RC01	Rabbit Creek A	84.35	12	P	P	22 08 42.8	+1.0
	baz=203,SNR=23						
RC01				S	S	22 19 07.5	+0.1
	baz=203						
HIN	Hinchinbrook I	84.37	13	IAMs_20	IAMs_20	22 41 27.9	
	comp=Z,6µm,20.0s						
V35K	Ketchikan	84.40	23	P	P	22 08 44.2	+2.1
	baz=219,SNR=6.2						
V35K				S	S	22 19 09.4	+1.4
	baz=219						
PWL	Port Wells	84.41	12	P	P	22 08 42.4	+0.3
PWL				IAMs_20	IAMs_20	22 45 49.2	
	comp=Z,5µm,19.0s						
PWL	Port Wells	84.41	12	P	P	22 08 43.2	+1.0
	baz=204,SNR=13						
PWL				S	S	22 19 07.8	-0.3
	baz=204						
KAIM	Kayak Island	84.42	15	IAMs_20	IAMs_20	22 41 54.2	
	comp=Z,7µm,20.0s						
KAIM	Kayak Island	84.42	15	P	P	22 08 45.0	+2.8
	baz=208,SNR=5.8						
QIZ	Qiongzhong	84.42	293	P	P	22 08 43.7	+0.5
QIZ				IAmb	IAmb	22 08 46.2	
	comp=Z,160nm,1.8s						
QIZ	Qiongzhong	84.42	293	P	P	22 08 43.0	-0.2
QIZ				PP	PP	22 11 57.3	-1.2
QIZ				S	S	22 19 12.1	+2.2
QIZ				SS	SS	22 24 43.0	+2.4
QIZ				pmax	pmax		
	comp=Z,42nm,1.8s						
QIZ				pmax	pmax		
	comp=Z,2µm,8.8s						
QIZ				LR	LR		
	comp=Z,2µm,17.0s						
QIZ				LR	LR		
	comp=Z,4µm,23.5s						
QIZ	Qiongzhong	84.42	293	P	P	22 08 45.2	+2.0
TXAR	Lajitas Array	84.45	56	P	P	22 08 43.5	+0.3
TXAR	Lajitas Array	84.45	56	P	P	22 08 45.5	+2.3
	comp=Z,6.0nm,1.0s,baz=217,slow=7.6,SNR=27						
	comp=Z,6.0nm,1.0s						
TXAR	Lajitas Array	84.45	56	P	P	22 08 43.5	+0.3
U33K	Whale Pass	84.48	22	P	P	22 08 44.7	+2.1
	baz=218,SNR=8.3						
U33K				S	S	22 19 10.2	+1.4
	baz=218						
M20K	Styx River	84.50	10	P	P	22 08 42.4	-0.2
M20K				IAmb	IAmb	22 08 45.6	
	comp=Z,163nm,1.6s						
M20K				IAMs_20	IAMs_20	22 41 59.4	
	comp=Z,5µm,20.0s						
M20K	Styx River	84.50	10	P	P	22 08 43.9	+1.2
	baz=200,SNR=23						
M20K				S	S	22 19 09.8	+0.7
	baz=200						
SIT	Sitka	84.50	20	P	P	22 08 44.1	+1.5
SIT	Sitka	84.50	20	P	P	22 08 44.4	+1.8
	baz=216						
SIT				S	S	22 19 10.3	+1.3
	baz=216						
SUA	Susitna One	84.51	11	IAMs_20	IAMs_20	22 42 30.7	
	comp=Z,6µm,20.0s						
SUA	Susitna One	84.51	11	P	P	22 08 43.9	+1.1
	baz=202,SNR=32						
SUA				S	S	22 19 09.8	+0.5
	baz=202						
L19K	White Mountain	84.52	9	IAMs_20	IAMs_20	22 49 43.0	
	comp=Z,5µm,18.0s						
L19K	White Mountain	84.52	9	P	P	22 08 44.2	+1.5
	baz=198,SNR=27						
L19K				S	S	22 19 10.3	+1.1
	baz=198						
PLID	Pearl Lake	84.56	37	P	P	22 08 44.0	+0.4
PLID				IAmb	IAmb	22 08 56.8	

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      comp=Z,96nm,1.2s
K17K  Iditarod           84.58   7   IAMs_20  IAMs_20  22 49 50.1
      comp=Z,5µm,19.0s
K17K  Iditarod           84.58   7   P        P        22 08 45.0 +2.0
      baz=195,SNR=23
K17K                                 S        S        22 19 13.6 +3.9
      baz=195
EYAK  Cordova Ski Ar     84.67  14   IAMs_20  IAMs_20  22 41 55.9
      comp=Z,7µm,20.0s
EYAK  Cordova Ski Ar     84.67  14   P        P        22 08 46.0 +2.6
EYAK  Cordova Ski Ar     84.67  14   P        P        22 08 45.4 +2.0
      baz=206,SNR=11
EYAK                                 S        S        22 19 10.6  0.0
      baz=206
GLI   Glacier Island     84.68  13   IAMs_20  IAMs_20  22 41 50.2
      comp=Z,5µm,20.0s
GLI   Glacier Island     84.68  13   P        P        22 08 45.0 +1.5
      baz=205,SNR=17
GLI                                  S        S        22 19 09.9 -0.9
      baz=205
FID   Port Fidalgo       84.69  13   IAMs_20  IAMs_20  22 42 07.3
      comp=Z,6µm,20.0s
SUCK  Suckling Hills     84.70  15   IAMs_20  IAMs_20  22 41 52.6
      comp=Z,8µm,19.0s
LL03  Petrohue           84.72 132   P        P        22 08 44.6 +0.2
LL03                                 IAmb     IAmb     22 09 00.2
      comp=Z,62nm,0.8s
GAMB  Gambell            84.72   1   P        P        22 08 46.0 +2.4
      baz=182
GAMB                                 S        S        22 19 13.3 +2.3
      baz=182
DL2   Dalian             84.73 315   P        P        22 08 44.5 +0.3
DL2                                  S        SKSac    22 19 09.3 +0.7
DL2                                  pmax     pmax
      comp=Z,190nm,1.5s
DL2                                  pmax     pmax
      comp=Z,3µm,7.8s
DL2                                  LR       LR
      comp=Z,4µm,17.7s
DL2                                  LR       LR
      comp=Z,2µm,18.6s
DL2                                  LR       LR
      comp=Z,4µm,18.4s
COCO  West Island        84.75 259   P        P        22 08 43.8 -1.1
COCO  West Island        84.75 259   P        P        22 08 44.3 -0.7
COCO                                 P        P        22 08 44.3 -0.7
COCO  West Island        84.75 259   P        P        22 08 43.8 -1.1
COCO                                 pmax     pmax
      comp=Z,868nm,1.7s
HMT   Hamilton           84.82  14   IAMs_20  IAMs_20  22 42 06.7
      comp=Z,9µm,20.0s
MVCO  Mesa Verde         84.82  47   P        P        22 08 44.8 -0.3
MVCO                                 IAmb     IAmb     22 09 30.3
      comp=Z,92nm,1.5s
SKT   Skwentna           84.86  11   IAMs_20  IAMs_20  22 43 02.8
      comp=Z,6µm,20.0s
SKT   Skwentna           84.86  11   P        P        22 08 45.1 +0.8
      baz=201,SNR=31
SKT                                  S        S        22 19 11.5 -1.0
      baz=201
BGLC  Bering Glacier     84.86  15   P        P        22 08 46.9 +2.6
      baz=209
J16K  Anvik River        84.89   6   P        P        22 08 46.4 +1.9
      baz=193,SNR=31
J16K                                 S        S        22 19 17.8 +5.1
      baz=193
KNK   Knik Glacier       84.89  12   IAMs_20  IAMs_20  22 48 08.8
      comp=Z,5µm,18.0s
KNK   Knik Glacier       84.89  12   P        P        22 08 45.9 +1.3
      baz=204,SNR=25
KNK                                  S        S        22 19 13.2 +0.3
      baz=204
M22K  Willow             84.89  11   IAMs_20  IAMs_20  22 48 55.8
      comp=Z,6µm,18.0s
M22K  Willow             84.89  11   P        P        22 08 46.1 +1.6
      baz=202,SNR=12
M22K                                 S        S        22 19 14.3 +1.6
      baz=202
PMR   Palmer             84.93  12   P        P        22 08 44.7  0.0
PMR   Palmer             84.93  12   P        P        22 08 46.9 +2.2
PMR   Palmer             84.93  12   P        P        22 08 44.7  0.0
PMR                                  pmax     pmax
      comp=Z,331nm,1.6s
PMR   Palmer             84.93  12   P        P        22 08 46.3 +1.6
      baz=203,SNR=14
PMR                                  S        S        22 19 14.1 +1.0
      baz=203
L20K  Farewell, AK       84.95   9   P        P        22 08 46.4 +1.5
      baz=199,SNR=42
L20K                                 S        S        22 19 14.3 +0.8
      baz=199
S31K  Pelican            84.95  19   P        P        22 08 46.8 +1.9
      baz=215,SNR=14
S31K                                 S        S        22 19 16.0 +2.5
      baz=215
WRAK  Wrangell Islan     84.99  22   P        P        22 08 47.1 +2.1
      baz=218
WRAK                                 S        S        22 19 17.3 +3.4
      baz=218
KLR   Kul'dur            85.00 328   P        P        22 08 45.3 -0.1
      comp=Z,5.6nm,0.8s,baz=126,slow=3.7,SNR=25
      comp=Z,5.6nm,0.8s
KLR   Kul'dur            85.00 328c iP        P        22 08 46.5 +1.2
KLR                                  pmax     pmax
      comp=Z,141nm,2.3s
BERG  Berg Lake          85.00  15   IAMs_20  IAMs_20  22 42 12.6
      comp=Z,8µm,20.0s
S32K  Killisnoo          85.07  20   P        P        22 08 47.3 +1.8
      baz=216,SNR=6.8
S32K                                 S        S        22 19 16.6 +1.9
      baz=216
CN2   Changchun          85.08 321 ⇑P        P        22 08 46.8 +0.9
CN2                                  SKS      SKSac    22 19 06.8 -3.8
CN2                                  SS       SS       22 24 49.5 +0.1
CN2                                  pmax     pmax
      comp=Z,200nm,1.7s
CN2                                  pmax     pmax
      comp=Z,3µm,7.5s
CN2                                  LR       LR
      comp=Z,1µm,20.0s
CN2                                  LR       LR
      comp=Z,2µm,20.0s
CN2                                  LR       LR
      comp=Z,3µm,21.0s
SNY   Shenyang           85.08 318 ⇓P        P        22 08 47.8 +1.9
SNY                                  S        S        22 19 15.1 -0.4
SNY                                  pmax     pmax
      comp=Z,120nm,2.0s
SNY                                  pmax     pmax
      comp=Z,3µm,5.5s
SNY                                  LR       LR
      comp=Z,1µm,18.0s
SNY                                  LR       LR
      comp=Z,2µm,17.1s
SNY                                  LR       LR
      comp=Z,3µm,19.1s
ANMO  Albuquerque        85.09  50   IAMs_20  IAMs_20  22 42 47.7
      comp=Z,5µm,18.0s
ANMO  Albuquerque        85.09  50   IAMs_20  IAMs_20  22 42 47.7
      comp=Z,5µm,18.0s
ANMO  Albuquerque        85.09  50   IAMs_20  IAMs_20  22 42 47.7
      comp=Z,5µm,18.0s
ANMO  Albuquerque        85.09  50c iP        P        22 08 49.1 +2.7
ANMO                                 pmax     pmax
      comp=Z,150nm,1.7s
T33K  Petersburg         85.09  21   P        P        22 08 47.7 +2.1
      baz=218
BNX   BinXian            85.10 323 ⇑P        P        22 08 46.4 +0.5
BNX                                  pP       pwP      22 08 52.8 +0.3
BNX                                  PP       PP       22 12 00.5 -3.0
BNX                                  S        S        22 19 14.3 -1.2
BNX                                  sS       ScS      22 19 26.8 +0.7
BNX                                  pmax     pmax
      comp=Z,120nm,1.7s
BNX                                  pmax     pmax
      comp=Z,3µm,6.2s
BNX                                  LR       LR
      comp=Z,2µm,17.4s
BNX                                  LR       LR
      comp=Z,3µm,19.0s
BNX                                  LR       LR
      comp=Z,5µm,20.6s
GHO   Glory Hole Cre     85.13  12   IAMs_20  IAMs_20  22 45 43.1
      comp=Z,5µm,19.0s
J17K  VABM Dome          85.16   7   P        P        22 08 47.9 +2.1
      baz=194,SNR=36
J17K                                 S        S        22 19 19.1 +3.8
      baz=194
DIV   Divide             85.19  13   IAMs_20  IAMs_20  22 42 24.5
      comp=Z,6µm,20.0s
MESA  MESA               85.24  16   IAMs_20  IAMs_20  22 42 08.8
      comp=Z,9µm,20.0s
MESA  MESA               85.24  16   P        P        22 08 48.3 +1.7
      baz=210,SNR=14
MESA                                 S        S        22 19 18.6 +1.9
      baz=210
WAX   Waxell Ridge       85.25  15   IAMs_20  IAMs_20  22 42 21.2
      comp=Z,9µm,20.0s
BKNI  Bangkinang         85.26 272   P        P        22 08 47.2 -0.3
BKNI  Bangkinang         85.26 272   P        P        22 08 47.4 -0.2
BKNI                                 IAMs_20  IAMs_20  22 48 22.4
      comp=Z,6µm,19.0s
BKNI  Bangkinang         85.26 272   P        P        22 08 49.4 +1.9
BKNI  Bangkinang         85.26 272   P        P        22 08 49.4 +1.9
      comp=Z,8µmcomp=Z,5µmcomp=Z,171nm,1.5s
SML   Sawmill            85.28  12   IAMs_20  IAMs_20  22 49 33.0
      comp=Z,5µm,18.0s
SML   Sawmill            85.28  12   P        P        22 08 48.0 +1.5
      baz=204,SNR=17
SML                                  S        S        22 19 18.1 +1.4
      baz=204
BMRM  Bremner River      85.30  14   IAMs_20  IAMs_20  22 45 40.5
      comp=Z,7µm,18.0s
BMRM  Bremner River      85.30  14   P        P        22 08 48.1 +1.5
      baz=207,SNR=33
BMRM                                 S        S        22 19 18.2 +1.2
      baz=207
LR03  Panguipulli        85.36 131   P        P        22 08 47.5 -0.1
LR05  Currie             85.36 131   P        P        22 08 47.8 +0.2
M23K  Glacier View       85.38  12   P        P        22 08 48.7 +1.6
      baz=204,SNR=11
M23K                                 S        S        22 19 18.6 +0.9
      baz=204
U35K  Hyder              85.43  23   IAMs_20  IAMs_20  22 47 37.8
      comp=Z,5µm,18.0s
U35K  Hyder              85.43  23   P        P        22 08 49.6 +2.3
      baz=220
YAH   Yahtse             85.45  16   IAMs_20  IAMs_20  22 42 16.3
      comp=Z,8µm,20.0s
CRQM  Cirque             85.45  15   IAMs_20  IAMs_20  22 42 17.7
      comp=Z,9µm,20.0s
CRQE  Cirque             85.46  15   P        P        22 08 49.1 +1.5
      baz=209,SNR=19
MA2   Magadan            85.46 343   P        P        22 08 47.4  0.0
MA2                                  IAMs_20  IAMs_20  22 42 58.7
      comp=Z,7µm,20.0s
MA2   Magadan            85.46 343   P        P        22 08 49.7 +2.3
MA2   Magadan            85.46 343c iP        P        22 08 47.5  0.0
MA2                                  pmax     pmax
      comp=Z,192nm,2.0s
MA2                                  MLR      MLR
      comp=Z,3µm,17.0s
PNL   Peninsula          85.46  17   P        P        22 08 49.6 +2.1
PNL   Peninsula          85.46  17   P        P        22 08 49.2 +1.7
      baz=212,SNR=16
PNL                                  S        S        22 19 20.1 +1.5
      baz=212
I17K  Unalakleet         85.47   6   P        P        22 08 49.3 +2.0
      baz=192,SNR=6.1
I17K                                 S        S        22 19 23.3 +4.9
      baz=192
CUT   Chulitna           85.47  11   IAMs_20  IAMs_20  22 43 12.1
      comp=Z,6µm,20.0s
CUT   Chulitna           85.47  11   P        P        22 08 48.5 +1.1
      baz=202,SNR=15
R31K  City Hall, Gus     85.47  19   P        P        22 08 49.2 +1.8
      baz=215
R31K                                 S        S        22 19 20.8 +2.3
      baz=215
KLU   Klutina            85.48  13   IAMs_20  IAMs_20  22 42 53.3
      comp=Z,5µm,20.0s
KLU   Klutina            85.48  13   P        P        22 08 49.0 +1.3
      baz=206,SNR=17
KLU                                  S        S        22 19 19.1 +0.3
      baz=206
J18K  Innoko River       85.50   8   P        P        22 08 49.1 +1.5
      baz=196,SNR=106
J18K                                 S        S        22 19 20.8 +2.0
      baz=196
SCM   Sheep Creek Mo     85.50  12   P        P        22 08 48.2 +0.5
SCM   Sheep Creek Mo     85.50  12   P        P        22 08 48.2 +0.5
SCM                                  pmax     pmax
      comp=Z,151nm,0.8s
SCM                                  MLR      MLR
      comp=Z,4µm,18.0s
SCM   Sheep Creek Mo     85.50  12   P        P        22 08 49.0 +1.3
      baz=205,SNR=34
SCM                                  S        S        22 19 20.3 +1.3
      baz=205
ISLE  Juniper Island     85.51  15   IAMs_20  IAMs_20  22 42 00.0
      comp=Z,8µm,20.0s
TGL   Tana Glacier       85.53  15   IAMs_20  IAMs_20  22 42 30.4
      comp=Z,9µm,20.0s
PPI   Padang Panjang     85.58 271   P        P        22 08 50.9 +1.8
      comp=Z,7µmcomp=Z,2µmcomp=Z,40nm,1.4s
PCA   Pinnacle           85.60  16   IAMs_20  IAMs_20  22 42 11.4
      comp=Z,5µm,20.0s
PINM  Pinnacle           85.60  16   P        P        22 08 49.9 +1.6
      baz=211,SNR=8.2
PINM                                 S        S        22 19 21.1 +1.1
      baz=211
PPLA  Purkeypile         85.61  10   IAMs_20  IAMs_20  22 42 23.7
      comp=Z,6µm,20.0s
PPLA  Purkeypile         85.61  10   P        P        22 08 48.5 +0.2
      baz=200,SNR=11
PPLA                                 S        S        22 19 23.5 +3.4
      baz=200
BCPM  Bancas Point       85.64  17   IAMs_20  IAMs_20  22 42 02.5
      comp=Z,6µm,20.0s
TABL  Table Mountain     85.67  16   IAMs_20  IAMs_20  22 42 14.2
      comp=Z,8µm,20.0s
R32K  Eaglecrest         85.74  20   P        P        22 08 50.4 +1.6
      baz=216,SNR=9.0
K20K  Telida             85.75   9   P        P        22 08 50.1 +1.3
      baz=199
K20K                                 S        S        22 19 22.8 +1.5
      baz=199
ANM   Nome               85.77   4   P        P        22 08 50.8 +1.9
      baz=188
ANM                                  S        S        22 19 25.9 +4.6
      baz=188
GRNC  Granite Creek      85.77  15   IAMs_20  IAMs_20  22 42 26.8
      comp=Z,7µm,20.0s
WHN   Wuhan              85.77 305 ⇑P        P        22 08 50.8 +1.2
WHN                                  sP       pwP      22 08 56.8 +0.6
WHN                                  S        S        22 19 19.6 -3.1
WHN                                  SS       SS       22 25 01.9 +1.8
WHN                                  pmax     pmax
      comp=Z,2µm,1.9s
WHN                                  pmax     pmax
      comp=Z,7µm,5.8s
WHN                                  LR       LR
      comp=Z,9µm,17.3s
WHN                                  LR       LR
      comp=Z,4µm,15.2s
WHN                                  LR       LR
      comp=Z,14µm,19.1s
JIS   Juneau Island      85.78  20   P        P        22 08 50.7 +1.7
VRDI  Verde Repeater     85.79  14   P        P        22 08 49.8 +0.5
VRDI                                 IAMs_20  IAMs_20  22 42 59.6
      comp=Z,6µm,20.0s
CNSH  ChangSha           85.80 302   P        P        22 08 52.0 +2.1
CNSH                                 S        S        22 19 27.8 +4.6
CNSH                                 pmax     pmax
      comp=Z,73nm,1.7s
CNSH                                 LR       LR
      comp=Z,2µm,18.6s
CNSH                                 LR       LR
      comp=Z,2µm,17.1s
CNSH                                 LR       LR
      comp=Z,4µm,18.0s
N25K  Chitina, Valde     85.87  14   IAMs_20  IAMs_20  22 43 03.6
      comp=Z,5µm,19.0s
N25K  Chitina, Valde     85.87  14   P        P        22 08 50.9 +1.3
      baz=207,SNR=37
N25K                                 S        S        22 19 24.4 +1.7
      baz=207
P29M  Windy Craggy       85.89  18   IAMs_20  IAMs_20  22 41 41.1
      comp=Z,6µm,20.0s
P29M  Windy Craggy       85.89  18   P        P        22 08 51.6 +2.0
      baz=214,SNR=23
P29M                                 S        S        22 19 24.1 +1.2
      baz=214
NEW   Newport            85.90  34   P        P        22 08 51.5 +1.6
NEW                                  pmax     pmax
      comp=Z,24nm,1.3s
GLB   Gilahina Butte     85.90  14   IAMs_20  IAMs_20  22 45 13.4
      comp=Z,5µm,19.0s
SAND  Sanderson          85.93  56   P        P        22 08 50.6  0.0
M24K  Tolsona, Glenn     85.98  13   P        P        22 08 52.0 +1.9
      baz=206,SNR=25
M24K                                 S        S        22 19 25.3 +1.6
      baz=206
MCARA McCarthy VSAT      86.03  14   IAMs_20  IAMs_20  22 43 05.8
      comp=Z,6µm,20.0s
MCARA McCarthy VSAT      86.03  14   P        P        22 08 51.8 +1.6
      baz=209,SNR=13
LOGN  Logan Glacier      86.03  16   IAMs_20  IAMs_20  22 42 44.8
      comp=Z,7µm,20.0s
CTG   Chitna Glacier     86.07  15   P        P        22 08 52.1 +1.5
      baz=210,SNR=25
CTG                                  S        S        22 19 25.7 +1.0
      baz=210
CTGM  Chitina Glacie     86.07  15   IAMs_20  IAMs_20  22 42 55.9
      comp=Z,5µm,20.0s
BARN  Barnard Glacie     86.07  15   IAMs_20  IAMs_20  22 42 46.7
      comp=Z,6µm,20.0s
WAT6  Susitna Watana     86.10  12   P        P        22 08 52.0 +1.2
      baz=204,SNR=80
WAT6                                 S        S        22 19 26.3 +1.3
      baz=204
AHID  Auburn Hatcher     86.11  41   IAMs_20  IAMs_20  22 42 53.5
      comp=Z,9µm,19.0s
CAST  Castle Rocks       86.11  10   IAMs_20  IAMs_20  22 42 39.1
      comp=Z,5µm,20.0s
CAST  Castle Rocks       86.11  10   P        P        22 08 51.3 +0.6
      baz=200,SNR=64
PLBC  Pleasant Camp      86.14  18   P        P        22 08 52.8 +2.0
      baz=215,SNR=41
PLBC                                 S        S        22 19 27.5 +2.3
      baz=215
J19K  Poorman            86.15   8   P        P        22 08 52.5 +1.8
      baz=197,SNR=51
J19K                                 S        S        22 19 29.2 +4.1
      baz=197
T35M  Bob Quinn          86.16  22   P        P        22 08 53.1 +2.1
      baz=220,SNR=16
T35M                                 S        S        22 19 28.7 +3.1
      baz=220
PLCA  Paso Flores        86.17 132   P        P        22 08 53.9 +2.1
      comp=Z,6.1nm,0.6s,baz=240,slow=5.0,SNR=12
      comp=Z,6.1nm,0.6s
PLCA  Paso Flores        86.17 132  eP        P        22 08 55.2 +3.5
WAT1  Susitna Watana     86.17  11   P        P        22 08 52.0 +1.1
      baz=204
WAT1                                 S        S        22 19 25.5 +0.1
      baz=204
O28M  Mount Upton        86.19  16   IAMs_20  IAMs_20  22 42 31.1
      comp=Z,7µm,20.0s
O28M  Mount Upton        86.19  16   P        P        22 08 52.8 +1.4
      baz=211,SNR=20
O28M                                 S        S        22 19 26.7 +0.4
      baz=211
MCMT  McKenzie Canyo     86.22  39   P        P        22 08 51.3 -0.6
O29M  Mount Kennedy      86.22  17   IAMs_20  IAMs_20  22 42 29.8
      comp=Z,6µm,20.0s
O29M  Mount Kennedy      86.22  17   P        P        22 08 53.3 +2.0
      baz=213,SNR=23
O29M                                 S        S        22 19 27.9 +1.7
      baz=213
G15K  Niukluk            86.28   4   P        P        22 08 52.9 +1.6
      baz=189
G15K                                 S        S        22 19 29.5 +3.2
      baz=189
TIA   Tai'an             86.42 311   P        P        22 08 53.3 +0.5
TIA                                  S        SKSac    22 19 20.3 +0.9
TIA                                  pmax     pmax
      comp=Z,120nm,1.7s
TIA                                  pmax     pmax
      comp=Z,4µm,8.6s
TIA                                  LR       LR
      comp=Z,3µm,22.6s
TIA                                  LR       LR
      comp=Z,2µm,20.8s
TIA                                  LR       LR
      comp=Z,4µm,19.8s
KTH   Kantishna Hill     86.43  10   IAMs_20  IAMs_20  22 40 37.4
      comp=Z,7µm,22.0s
TRF   Thorofare Moun     86.44  11   IAMs_20  IAMs_20  22 49 49.7
      comp=Z,8µm,18.0s
TRF   Thorofare Moun     86.44  11   P        P        22 08 53.1 +0.6
      baz=202,SNR=118
TRF                                  S        S        22 19 28.7 +0.4
      baz=202
SKAG  Skagway            86.45  19   P        P        22 08 53.7 +1.4
SKAG  Skagway            86.45  19   P        P        22 08 54.4 +2.1
      baz=216,SNR=33
SKAG                                 S        S        22 19 30.9 +2.8
      baz=216
HARP  HAARP              86.46  13   P        P        22 08 54.5 +2.1
      baz=207,SNR=13
HARP                                 S        S        22 19 30.3 +2.1
      baz=207
SISI  Saibi              86.48 270   P        P        22 08 57.4 +3.8
      comp=Z,100nm,0.8s
CHUM  Lake Minchumin     86.52  10   P        P        22 08 53.1 +0.5
      baz=200,SNR=62
CHUM                                 S        S        22 19 27.2 -1.4
      baz=200
P30M  Million Dollar     86.52  18   P        P        22 08 54.8 +2.0
      baz=214
P30M                                 S        S        22 19 31.3 +2.3
      baz=214
J20K  Nowinta River      86.52   9   IAMs_20  IAMs_20  22 51 23.0
      comp=Z,4µm,18.0s
J20K  Nowinta River      86.52   9   P        P        22 08 54.0 +1.4
      baz=198,SNR=106
J20K                                 S        S        22 19 31.4 +2.7
      baz=198
S34M  Telegraph Cree     86.57  21   P        P        22 08 55.0 +2.1
      baz=220,SNR=41
S34M                                 S        S        22 19 31.8 +2.4
      baz=220
H17K  Granite Mounta     86.57   6   P        P        22 08 54.5 +1.7
      baz=193,SNR=21
H17K                                 S        S        22 19 32.1 +2.9
      baz=193
TPAW  Teton Pass         86.60  41   IAMs_20  IAMs_20  22 45 25.4
      comp=Z,9µm,18.0s
GULI  GuiLin             86.61 299   P        P        22 08 55.9 +2.0
GULI                                 S        SKSac    22 19 23.6 +2.5
GULI                                 pmax     pmax
      comp=Z,100nm,1.7s
GULI                                 LR       LR
      comp=Z,1µm,17.1s
GULI                                 LR       LR
      comp=Z,2µm,18.5s
GULI                                 LR       LR
      comp=Z,4µm,19.6s
F14K  Arctic Creek       86.62   3   P        P        22 08 54.6 +1.6
      baz=187
F14K                                 S        S        22 19 33.8 +4.2
      baz=187
DHY   Denali Highway     86.62  12   IAMs_20  IAMs_20  22 49 30.5
      comp=Z,5µm,18.0s
DHY   Denali Highway     86.62  12   P        P        22 08 54.4 +1.1
      baz=205,SNR=50
DHY                                  S        S        22 19 29.6 -0.5
      baz=205
TNA   Tin City           86.63   3   P        P        22 08 54.8 +1.8
      baz=186
TNA                                  S        S        22 19 32.0 +2.4
      baz=186
FXWY  Fox Creek          86.63  40   IAMs_20  IAMs_20  22 45 26.4
      comp=Z,8µm,18.0s
RND   Reindeer           86.65  11   IAMs_20  IAMs_20  22 43 16.2
      comp=Z,6µm,21.0s
DLMT  Dillon             86.67  38   IAMs_20  IAMs_20  22 43 36.3
      comp=Z,7µm,19.0s
SNOW  Snow King Moun     86.70  41   IAMs_20  IAMs_20  22 45 20.2
      comp=Z,9µm,18.0s
GCSA  Galena City Sc     86.72   7   P        P        22 08 55.2 +1.8
      baz=196,SNR=21
GCSA                                 S        S        22 19 36.1 +5.6
      baz=196
YUK8  Steele Glacier     86.74  16   P        P        22 08 55.5 +1.5
      baz=212,SNR=34
YUK8                                 S        S        22 19 36.5 +5.0
      baz=212
MSO   Missoula           86.75  37   IAMs_20  IAMs_20  22 40 51.4
      comp=Z,8µm,20.0s
UBPT  Khong Chiam        86.75 288   P        P        22 08 54.5 -0.4
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UBPT  Khong Chiam      86.75 288   P         P         22 08 56.2 +1.4
MNSI  Mandailing Nat   86.79 272   P         P         22 08 54.3 -0.8
      comp=Z,6µmcomp=Z,3µmcomp=Z,119nm,0.7s
SYO   Syowa Base       86.79 192⇑iP        P         22 08 55.0 +0.9
SYO   Syowa Base       86.79 192⇑iPcP      PcP       22 08 57.0 +0.6
YUK6  Outpost Mounta   86.82  17   P         P         22 08 56.1 +1.7
      baz=213,SNR=23
YUK6                               S         S         22 19 35.0 +2.7
      baz=213
LOHW  Long Hollow      86.88  41   IAMs_20   IAMs_20   22 45 25.8
      comp=Z,8µm,18.0s
PAX   Paxson           86.90  13   P         P         22 08 55.5 +0.9
      baz=206,SNR=43
PAX                                S         S         22 19 32.1 -0.6
      baz=206
BPAW  Bear Paw Mtn.    86.93  10   IAMs_20   IAMs_20   22 51 00.6
      comp=Z,5µm,18.0s
BPAW  Bear Paw Mtn.    86.93  10   P         P         22 08 55.5 +0.9
      baz=201,SNR=34
BPAW                               S         S         22 19 32.2 -0.5
      baz=201
M26K  Nabesna, AK      86.93  14   IAMs_20   IAMs_20   22 43 19.6
      comp=Z,5µm,20.0s
M26K  Nabesna, AK      86.93  14   P         P         22 08 56.2 +1.5
      baz=209,SNR=61
M26K                               S         S         22 19 34.8 +1.9
      baz=209
MCK   McKinley         86.94  11   IAMs_20   IAMs_20   22 47 31.8
      comp=Z,5µm,19.0s
MCK   McKinley         86.94  11   P         P         22 08 55.8 +1.2
      baz=203,SNR=74
MCK                                S         S         22 19 33.4 +0.6
      baz=203
H18K  Honhosa River    86.94   7   P         P         22 08 56.0 +1.4
      baz=195,SNR=21
H18K                               S         S         22 19 35.4 +2.6
      baz=195
F15K  North Star Dit   86.95   4   IAMs_20   IAMs_20   22 41 30.7
      comp=Z,5µm,21.0s
F15K  North Star Dit   86.95   4   P         P         22 08 56.5 +1.8
      baz=189
F15K                               S         S         22 19 35.4 +2.6
      baz=189
HYT   Haines Junctio   86.95  17   P         P         22 08 56.7 +1.8
      baz=214,SNR=36
HYT                                S         S         22 19 35.2 +1.9
      baz=214
YUK3  Moose Creek      86.99  15   P         P         22 08 56.7 +1.6
      baz=211,SNR=75
YUK3                               S         S         22 19 36.2 +2.4
      baz=211
TROLL Troll, Antarti   87.00 179 ⇑P         P         22 08 55.5 +0.3
      comp=Z,951nm,0.8s
TROLL                            ⇓S         S         22 19 33.8 -0.1
Q32M  Nakina River     87.00  20   P         P         22 08 57.2 +1.9
      baz=218,SNR=28
Q32M                               S         S         22 19 36.6 +2.5
      baz=218
P32M  Atlin            87.05  19   P         P         22 08 57.2 +1.9
      baz=217,SNR=16
P32M                               S         S         22 19 37.5 +3.4
      baz=217
G17K  Kiwalik Mounta   87.05   6   P         P         22 08 56.6 +1.4
      baz=192,SNR=23
G17K                               S         S         22 19 36.3 +2.5
      baz=192
BW06  Boulder Array    87.06  42   IAMs_20   IAMs_20   22 45 32.8
      comp=Z,7µm,18.0s
PDAR  Pinedale Array   87.06  42   P         P         22 08 56.3 +0.3
PDAR  Pinedale Array   87.06  42   P         P         22 08 57.0 +0.9
      comp=Z,21nm,1.1s,baz=212,slow=2.3,SNR=40
      comp=Z,21nm,1.1s
I20K  Naaghedeneel     87.07   8   P         P         22 08 56.9 +1.7
      baz=198,SNR=11
I20K                               S         S         22 19 37.4 +3.5
      baz=198
YUK4  Talbot Arm       87.08  16   P         P         22 08 58.0 +2.3
      baz=213,SNR=16
SDCO  Great Sand Dun   87.14  48   P         P         22 08 56.3 -0.3
SDCO                               IAMs_20   IAMs_20   22 43 57.0
      comp=Z,4µm,18.0s
M27K  Edge Creek, AK   87.15  14   IAMs_20   IAMs_20   22 42 55.4
      comp=Z,5µm,20.0s
M27K  Edge Creek, AK   87.15  14   P         P         22 08 57.9 +2.0
      baz=210,SNR=103
M27K                               S         S         22 19 37.0 +1.8
      baz=210
VNA3  Neumayer Olymp   87.17 175 ⇑P         P         22 08 56.8 +0.9
      comp=Z,23nm,0.8s
VNA3                             ⇓S         S         22 19 33.0 -2.3
SNAA  Sanae            87.17 177 ⇑P         P         22 08 56.8 +0.7
      comp=Z,348nm,0.9s
SNAA                             ⇑S         S         22 19 36.7 +1.3
SNAA  Sanae            87.17 177   P         P         22 08 55.9 -0.2
SNAA                               IAMs_20   IAMs_20   22 42 28.0
      comp=Z,7µm,21.0s
SNAA  Sanae            87.17 177   P         P         22 08 56.4 +0.4
      comp=Z,19nm,0.9s,baz=201,slow=5.5,SNR=27
      comp=Z,19nm,0.9s
SNAA  Sanae            87.17 177⇑iP         P         22 08 57.1 +1.1
MENT  Mentasta         87.24  13   P         P         22 08 58.3 +2.1
BWN   Browne           87.25  11   IAMs_20   IAMs_20   22 44 18.9
      comp=Z,8µm,20.0s
O30N  Mendenhall       87.30  18   IAMs_20   IAMs_20   22 42 45.3
      comp=Z,6µm,19.0s
O30N  Mendenhall       87.30  18   P         P         22 08 58.4 +1.9
      baz=215,SNR=34
O30N                               S         S         22 19 38.8 +2.3
      baz=215
BI02  San Fabin de     87.34 128   P         P         22 08 57.4 -0.2
BI02                               IAmb      IAmb      22 09 11.6
      comp=Z,78nm,1.4s
DLBC  Dease Lake       87.35  22   P         P         22 08 58.8 +2.0
      baz=220,SNR=34
DLBC                               S         S         22 19 40.8 +3.7
      baz=220
L26K  Log Cabin Wild   87.40  14   IAMs_20   IAMs_20   22 43 26.1
      comp=Z,6µm,20.0s
L26K  Log Cabin Wild   87.40  14   P         P         22 08 58.8 +1.9
      baz=208,SNR=27
L26K                               S         S         22 19 39.7 +2.4
      baz=208
BVCY  Beaver Creek     87.44  15   P         P         22 08 58.8 +1.7
      baz=211,SNR=37
BVCY                               S         S         22 19 39.9 +2.1
      baz=211
H19K  Roundabout Mou   87.52   7   IAMs_20   IAMs_20   22 51 49.5
      comp=Z,4µm,18.0s
H19K  Roundabout Mou   87.52   7   P         P         22 08 59.1 +1.7
      baz=196,SNR=56
H19K                               S         S         22 19 42.6 +4.4
      baz=196
WHY   Whitehorse       87.56  18   P         P         22 08 59.5 +1.7
      baz=216,SNR=30
WHY                                S         S         22 19 42.3 +3.1
      baz=216
N30M  Aishikik Lake    87.59  17   IAMs_20   IAMs_20   22 43 06.0
      comp=Z,5µm,20.0s
N30M  Aishikik Lake    87.59  17   P         P         22 08 59.7 +1.7
      baz=214,SNR=22
N30M                               S         S         22 19 41.7 +2.4
      baz=214
K24K  Donnelly Dome    87.59  12   IAMs_20   IAMs_20   22 43 56.1
      comp=Z,5µm,20.0s
K24K  Donnelly Dome    87.59  12   P         P         22 08 59.6 +1.8
      baz=206,SNR=33
K24K                               S         S         22 19 40.3 +1.1
      baz=206
ML02  Panimavida       87.61 127   P         P         22 08 58.8  0.0
ML02                               IAmb      IAmb      22 09 13.3
      comp=Z,132nm,1.3s
T25A  Trinidad         87.61  49   IAMs_20   IAMs_20   22 44 29.3
      comp=Z,4µm,18.0s
G18K  Tagagawik        87.63   6   P         P         22 08 59.3 +1.3
      baz=194,SNR=28
G18K                               S         S         22 19 41.7 +2.2
      baz=194
VNA2  Neumayer--Watz   87.65 176 ⇑P         P         22 08 59.5 +1.2
      comp=Z,32nm,0.7s,baz=181,slow=4.2
H20K  Anotleneega Mo   87.68   8   P         P         22 08 59.7 +1.5
      baz=198,SNR=55
H20K                               S         S         22 19 43.4 +3.5
      baz=198
NEA2  Nenana           87.70  11   IAMs_20   IAMs_20   22 44 01.1
      comp=Z,7µm,20.0s
NEA2  Nenana           87.70  11   P         P         22 08 59.1 +0.8
      baz=203,SNR=36
NEA2                               S         S         22 19 39.7 -0.5
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      baz=203
RIDG  Independent Ri   87.72  13   IAMs_20   IAMs_20   22 43 38.5
      comp=Z,5µm,20.0s
RIDG  Independent Ri   87.72  13   P         P         22 08 59.6 +1.1
      baz=207,SNR=42
RIDG                               S         S         22 19 41.6 +1.2
      baz=207
WRH   Wood River Hil   87.76  11   P         P         22 08 58.7 +0.1
R33M  Jennings River   87.77  21   P         P         22 09 01.0 +2.1
      baz=220,SNR=34
R33M                               S         S         22 19 43.2 +2.0
      baz=220
L27K  Beaver Creek,    87.77  14   IAMs_20   IAMs_20   22 47 19.9
      comp=Z,5µm,19.0s
L27K  Beaver Creek,    87.77  14   P         P         22 09 00.6 +1.8
      baz=210,SNR=57
L27K                               S         S         22 19 43.7 +2.8
      baz=210
BCAR  Beaver Creek A   87.79  14   P         P         22 09 00.2 +1.4
DOT   Dot Lake         87.80  13   IAMs_20   IAMs_20   22 43 58.6
      comp=Z,5µm,20.0s
P33M  Teslin, Yukon    87.81  19   P         P         22 09 01.0 +1.9
      baz=218,SNR=30
P33M                               S         S         22 19 42.7 +1.2
      baz=218
HEH   HeiHe            87.83 327  eP         P         22 08 59.4 +0.2
HEH                                pP        pwP       22 09 04.6 -1.2
HEH                                SKS       SKSac     22 19 28.3 +0.9
HEH                                S         S         22 19 44.8 +2.9
HEH                                sS        sS        22 19 53.3 +7.9
HEH                                pmax      pmax
      comp=Z,100nm,2.1s
HEH                                pmax      pmax
      comp=Z,3µm,5.7s
HEH                                LR        LR
      comp=Z,2µm,21.2s
HEH                                LR        LR
      comp=Z,3µm,19.7s
HEH                                LR        LR
      comp=Z,6µm,20.5s
MLY   Manley           87.84  10   P         P         22 08 59.0 -0.1
MLY                                IAmb      IAmb      22 09 02.0
      comp=Z,166nm,1.6s
MLY   Manley           87.84  10   P         P         22 08 59.7 +0.6
      baz=202,SNR=53
MLY                                S         S         22 19 41.5  0.0
      baz=202
VNA1  Neumayer--Stat   87.86 175 ⇑P         P         22 09 01.5 +2.3
      comp=Z,46nm,1.0s
HDA   Harding Lake     87.91  11   P         P         22 09 00.4 +1.1
      baz=205,SNR=37
HDA                                S         S         22 19 42.9 +0.8
      baz=205
SEY   Seymchan         87.92 345c iP         P         22 09 00.5 +1.2
SEY                                pmax      pmax
      comp=Z,88nm,1.3s
SEY                                MLR       MLR
      comp=Z,3µm,18.0s
JCT   Junction City    87.96  56   IAMs_20   IAMs_20   22 45 02.9
      comp=Z,7µm,18.0s
JCT   Junction City    87.96  56   P         P         22 09 02.2 +1.8
N31M  Braeburn, Yuko   87.97  17   IAMs_20   IAMs_20   22 42 57.1
      comp=Z,5µm,20.0s
N31M  Braeburn, Yuko   87.97  17   P         P         22 09 01.8 +2.0
      baz=215,SNR=20
N31M                               S         S         22 19 44.6 +1.7
      baz=215
G19K  Purcell Mounta   88.04   7   P         P         22 09 01.6 +1.7
      baz=196,SNR=37
G19K                               S         S         22 19 45.1 +1.8
      baz=196
M29M  Somme Creek      88.05  16   IAMs_20   IAMs_20   22 43 33.3
      comp=Z,6µm,20.0s
M29M  Somme Creek      88.05  16   P         P         22 09 01.9 +1.7
      baz=213,SNR=57
M29M                               S         S         22 19 44.3 +0.5
      baz=213
RPSI  Rantau Prapat    88.08 274   P         P         22 09 00.3 -1.0
RPSI                               IAmb      IAmb      22 09 07.8
      comp=Z,86nm,1.0s
RPSI                               IAMs_20   IAMs_20   22 50 20.2
      comp=Z,8µm,20.0s
ISCO  Idaho Springs    88.08  46   P         P         22 09 01.5 +0.4
ISCO  Idaho Springs    88.08  46   P         P         22 09 01.5 +0.4
ISCO                               pmax      pmax
      comp=Z,27nm,1.4s
SCRK  Sand Creek       88.11  13   P         P         22 09 01.9 +1.5
      baz=208,SNR=77
SCRK                               S         S         22 19 46.4 +2.2
      baz=208
H21K  Melozitna Rive   88.12   9   IAMs_20   IAMs_20   22 52 24.0
      comp=Z,4µm,18.0s
H21K  Melozitna Rive   88.12   9   P         P         22 09 01.9 +1.7
      baz=200,SNR=52
H21K                               S         S         22 19 45.8 +1.7
      baz=200
PSI   Prapat           88.12 274   P         P         22 09 01.8 +0.1
PSI   Prapat           88.12 274   P         P         22 09 00.3 -1.4
PSI                                pmax      pmax
      comp=Z,86nm,1.0s
PSI                                MLR       MLR
      comp=Z,8µm,20.0s
I23K  Minto, Yukon-K   88.17  10   IAMs_20   IAMs_20   22 48 33.4
      comp=Z,9µm,19.0s
I23K  Minto, Yukon-K   88.17  10   P         P         22 09 01.7 +1.2
      baz=203,SNR=41
I23K                               S         S         22 19 44.5  0.0
      baz=203
COLA  College          88.17  11   IAMs_20   IAMs_20   22 44 36.5
      comp=Z,6µm,20.0s
COLA  College          88.17  11   P         P         22 09 02.1 +1.6
COLA  College          88.17  11c iP         P         22 09 01.8 +1.3
COLA                               pmax      pmax
      comp=Z,284nm,1.3s
COLA                               MLR       MLR
      comp=Z,4µm,17.0s
COLA  College          88.17  11   P         P         22 09 02.1 +1.6
      baz=204
COLA                               S         S         22 19 45.3 +0.8
      baz=204
F18K  Selawik          88.22   6   P         P         22 09 01.8 +1.2
      baz=193,SNR=5.7
F18K                               S         S         22 19 47.1 +2.2
      baz=193
IL31                   88.25  11   P         P         22 09 01.4 +0.5
ILAR  Eielson Array    88.25  11   P         P         22 09 01.3 +0.4
ILAR  Eielson Array    88.25  11   P         P         22 09 02.0 +1.1
      comp=Z,28nm,1.0s,baz=224,slow=3.5,SNR=102
ILAR                               PP        PP        22 12 30.8 +2.2
      comp=Z,2.5nm,1.0s,baz=209,slow=5.8,SNR=2.4
ILAR                               PKKP      PKKPdf    22 26 43.2 +0.3
      comp=Z,0.2nm,0.6s,baz=0.0,slow=2.1,SNR=1.6
      comp=Z,28nm,1.0s
ILAR  Eielson Array    88.25  11   P         P         22 09 01.3 +0.4
IMAR  Indian Mountai   88.30   8   P         P         22 09 02.1 +1.0
VA05  Santo Domingo    88.33 125   P         P         22 09 02.4 +0.3
VA05                               IAmb      IAmb      22 09 15.9
      comp=Z,107nm,1.4s
J25K  Salcha River,    88.40  12   IAMs_20   IAMs_20   22 50 35.4
      comp=Z,5µm,18.0s
J25K  Salcha River,    88.40  12   P         P         22 09 03.1 +1.4
      baz=207,SNR=76
J25K                               S         S         22 19 47.4 +0.6
      baz=207
POKR  Poker Plat Res   88.47  11   IAMs_20   IAMs_20   22 44 24.4
      comp=Z,5µm,20.0s
POKR  Poker Plat Res   88.47  11   P         P         22 09 03.2 +1.3
      baz=205,SNR=26
POKR                               S         S         22 19 48.9 +1.5
      baz=205
N32M  Quiet Lake       88.48  19   P         P         22 09 03.9 +1.8
      baz=218,SNR=6.4
N32M                               S         S         22 19 50.7 +3.0
      baz=218
BO02  Sierra Bellavi   88.48 127   P         P         22 09 02.8 -0.3
BO02                               IAmb      IAmb      22 09 18.0
      comp=Z,168nm,1.6s
RLMT  Red Lodge        88.50  40   IAMs_20   IAMs_20   22 46 29.7
      comp=Z,6µm,18.0s
E17K  Hotham Inlet     88.51   5   P         P         22 09 03.4 +1.3
      baz=191,SNR=14
E17K                               S         S         22 19 49.9 +2.3
      baz=191
MT01  Popeta           88.52 126   P         P         22 09 02.9 -0.2
EFI   East Falkland    88.52 146   P         P         22 09 03.4 +0.7
EFI   East Falkland    88.52 146   P         P         22 09 03.4 +0.7
EFI                                pmax      pmax
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      comp=Z,378nm,1.7s
H22K  Ishtalitna Cre   88.55   9   P         P         22 09 03.7 +1.4
      baz=201,SNR=32
H22K                               S         S         22 19 48.9 +0.8
      baz=201
K27K  Chicken          88.56  14   IAMs_20   IAMs_20   22 44 21.7
      comp=Z,5µm,20.0s
K27K  Chicken          88.56  14   P         P         22 09 04.5 +2.1
      baz=210
K27K                               S         S         22 19 51.2 +2.9
      baz=210
CCIG  Comitan          88.62  72   P         P         22 09 04.0  0.0
CCIG                               IAmb      IAmb      22 09 19.0
      comp=Z,77nm,1.4s
F19K  Shaleruckik Mo   88.63   6   P         P         22 09 04.1 +1.4
      baz=195
F19K                               S         S         22 19 49.8 +0.9
      baz=195
J26L  Joseph Creek     88.66  13   P         P         22 09 05.0 +2.0
      baz=208,SNR=202
J26L                               S         S         22 19 52.4 +3.0
      baz=208
HNS   HongShan         88.69 311 ⇑P         P         22 09 04.8 +1.2
HNS                                PP        PP        22 12 31.4 -1.2
HNS                                SKS       SKSac     22 19 34.3 +1.2
HNS                                S         SKKSac    22 19 44.4 +0.1
HNS                                pmax      pmax
      comp=Z,100nm,2.0s
HNS                                pmax      pmax
      comp=Z,3µm,9.3s
HNS                                LR        LR
      comp=Z,3µm,18.8s
HNS                                LR        LR
      comp=Z,2µm,21.0s
HNS                                LR        LR
      comp=Z,4µm,19.8s
L29M  L29M             88.70  16   IAMs_20   IAMs_20   22 44 32.3
      comp=Z,7µm,20.0s
L29M  L29M             88.70  16   P         P         22 09 05.3 +2.1
      baz=213,SNR=127
L29M                               S         S         22 19 51.8 +2.1
      baz=213
TSI   Tuntungan        88.70 274   P         P         22 09 10.5 +6.2
MT09  Talagante        88.75 126   P         P         22 09 04.0 -0.4
MT09                               IAmb      IAmb      22 09 18.2
      comp=Z,234nm,1.7s
H23K  Yukon River      88.76  10   IAMs_20   IAMs_20   22 51 50.2
      comp=Z,7µm,18.0s
H23K  Yukon River      88.76  10   P         P         22 09 04.6 +1.2
      baz=203,SNR=16
H23K                               S         S         22 19 50.7 +0.5
      baz=203
G21K  Allakaket        88.83   8   P         P         22 09 05.3 +1.6
      baz=199,SNR=67
G21K                               S         S         22 19 52.9 +2.1
      baz=199
735A  Kenedy           88.84  59   IAMs_20   IAMs_20   22 44 27.1
      comp=Z,6µm,18.0s
GSI   Gunungsitoli     88.84 272             P         22 09 04.4 -0.5
GSI                                IAMs_20   IAMs_20   22 47 54.3
      comp=Z,10µm,21.0s
GSI   Gunungsitoli     88.84 272   P         P         22 09 06.9 +2.0
GSI   Gunungsitoli     88.84 272   P         P         22 09 06.1 +1.2
BJT   Baijiatuau       88.93 314   P         P         22 09 05.2 +0.5
BJT   Baijiatuau       88.93 314   P         P         22 09 07.3 +2.6
BJT   Baijiatuau       88.93 314   P         P         22 09 05.2 +0.5
BJT                                pmax      pmax
      comp=Z,322nm,1.9s
BJT                                MLR       MLR
      comp=Z,4µm,18.0s
BJI   Beijing          88.94 314   P         P         22 09 05.4 +0.7
BJI                                sP        pwP       22 09 12.0 +0.7
BJI                                PP        PP        22 12 35.8 +1.2
BJI                                SKS       SKSac     22 19 30.3 -4.2
BJI                                SS        SS        22 25 45.3 -0.8
BJI                                pmax      pmax
      comp=Z,61nm,2.1s
BJI                                pmax      pmax
      comp=Z,1µm,7.9s
BJI                                LR        LR
      comp=Z,1µm,16.3s
BJI                                LR        LR
      comp=Z,1µm,17.8s
BJI                                LR        LR
      comp=Z,2µm,17.8s
E18K  Tukpahlearik C   88.94   5   IAMs_20   IAMs_20   22 42 32.0
      comp=Z,5µm,21.0s
E18K  Tukpahlearik C   88.94   5   P         P         22 09 05.5 +1.4
      baz=192,SNR=24
E18K                               S         S         22 19 53.5 +1.7
      baz=192
M31M  Drury Creek, Y   88.94  17   IAMs_20   IAMs_20   22 52 52.7
      comp=Z,6µm,18.0s
M31M  Drury Creek, Y   88.94  17   P         P         22 09 05.6 +1.4
      baz=216
M31M                               S         S         22 19 52.5 +0.5
      baz=216
BO04  La Punta         88.95 126   P         P         22 09 04.8 -0.5
BO04                               IAmb      IAmb      22 09 20.2
      comp=Z,229nm,2.0s
LYN   LuoYang          89.00 308   P         P         22 09 07.5 +2.3
LYN                                pP        pwP       22 09 15.9 +4.1
LYN                                sP        PcP       22 09 18.9  +12
LYN                                S         S         22 19 46.5 -7.2
LYN                                sS        ScS       22 20 06.0 +7.1
LYN                                pmax      pmax
      comp=Z,240nm,1.8s
LYN                                pmax      pmax
      comp=Z,4µm,8.7s
LYN                                LR        LR
      comp=Z,4µm,17.5s
LYN                                LR        LR
      comp=Z,3µm,19.6s
LYN                                LR        LR
      comp=Z,5µm,18.6s
D17K  Noatak River     89.02   4   P         P         22 09 06.2 +1.7
      baz=190,SNR=14
D17K                               S         S         22 19 56.1 +3.6
      baz=190
WTLY  Watson Lake, Y   89.03  21   P         P         22 09 06.8 +2.1
      baz=222
WTLY                               S         S         22 19 55.5 +2.6
      baz=222
H24K  Noodor Dome      89.05  11   IAMs_20   IAMs_20   22 48 49.7
      comp=Z,9µm,19.0s
H24K  Noodor Dome      89.05  11   P         P         22 09 05.2 +0.4
      baz=204,SNR=13
H24K                               S         S         22 19 52.8 -0.2
      baz=204
F20K  Avaraart Lake    89.07   7   P         P         22 09 06.1 +1.4
      baz=197,SNR=49
F20K                               S         S         22 19 55.1 +2.3
      baz=197
MT05  Renca            89.10 126   P         P         22 09 05.9  0.0
PRP   Porcupine Dome   89.18  12   P         P         22 09 06.0 +0.6
PRP   Porcupine Dome   89.18  12   P         P         22 09 06.8 +1.3
      baz=206,SNR=63
PRP                                S         S         22 19 54.5 +0.1
      baz=206
DAWY  Dawson           89.20  15   P         P         22 09 07.5 +2.0
      baz=212,SNR=83
DAWY                               S         S         22 19 55.7 +1.2
      baz=212
PEL   Peldehue         89.25 125   P         P         22 09 06.1 -0.5
PEL                                IAMs_20   IAMs_20   22 45 25.8
      comp=Z,4µm,18.0s
PEL   Peldehue         89.25 125   P         P         22 09 06.1 -0.5
PEL                                pmax      pmax
      comp=Z,300nm,1.8s
PEL                                MLR       MLR
      comp=Z,4µm,18.0s
FARO  Faro, Yukon      89.26  18   P         P         22 09 07.7 +1.9
      baz=217,SNR=8.5
FARO                               S         S         22 19 57.8 +2.7
      baz=217
E19K  Redstone River   89.29   6   P         P         22 09 06.9 +1.1
E19K                               IAmb      IAmb      22 09 09.7
      comp=Z,96nm,0.9s
E19K                               IAMs_20   IAMs_20   22 53 07.4
      comp=Z,5µm,19.0s
E19K  Redstone River   89.29   6   P         P         22 09 07.2 +1.4
      baz=196,SNR=86
E19K                               S         S         22 19 55.5 +0.4
      baz=196
TOAD  Toad River Com   89.35  23   P         P         22 09 08.2 +1.9
      baz=225,SNR=88
TOAD                               S         S         22 19 56.6 +0.6
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	baz=225						
RDOG	**Red Dog Mine**	**89.39**	**4**	P	**P**	**22 09 07.1**	**+0.9**
RDOG				IAmb	IAmb	22 09 10.1	
	comp=Z,64nm,1.2s						
RDOG				IAMs_20	IAMs_20	22 42 48.2	
	comp=Z,6µm,21.0s						
RDOG	**Red Dog Mine**	**89.39**	**4**	P	**P**	**22 09 07.6**	**+1.4**
	baz=190						
RDOG				S	**S**	**22 19 58.2**	**+2.2**
	baz=190						
ENH	**Enshi**	**89.42**	**303**	P	**P**	**22 09 07.5**	**+0.2**
ENH				IAMs_20	IAMs_20	22 48 31.7	
	comp=Z,4µm,18.0s						
ENH	**Enshi**	**89.42**	**303**	P	**P**	**22 09 09.4**	**+2.1**
LIRD	**Liard River Hi**	**89.44**	**22**	P	**P**	**22 09 08.9**	**+2.3**
	baz=224,SNR=8.5						
LIRD				S	**S**	**22 19 57.4**	**+0.7**
	baz=224						
I26K	**Coal Creek Min**	**89.45**	**13**	IAMs_20	IAMs_20	22 45 12.3	
	comp=Z,5µm,20.0s						
I26K	**Coal Creek Min**	**89.45**	**13**	P	**P**	**22 09 08.4**	**+1.9**
	baz=209,SNR=74						
I26K				S	**S**	**22 19 58.4**	**+1.8**
	baz=209						
C16K	**Lisburne Hills**	**89.46**	**3**	IAMs_20	IAMs_20	22 43 01.3	
	comp=Z,5µm,21.0s						
C16K	**Lisburne Hills**	**89.46**	**3**	P	**P**	**22 09 08.1**	**+1.6**
	baz=188						
C16K				S	**S**	**22 19 55.9**	**-0.6**
	baz=188						
K29M	**Barlow Dome**	**89.46**	**15**	IAMs_20	IAMs_20	22 44 55.5	
	comp=Z,7µm,20.0s						
K29M	**Barlow Dome**	**89.46**	**15**	P	**P**	**22 09 08.7**	**+1.9**
	baz=214,SNR=118						
K29M				S	**S**	**22 19 57.6**	**+0.6**
	baz=214						
G22K	**Bettles**	**89.49**	**9**	P	**P**	**22 09 08.3**	**+1.6**
	baz=201						
G22K				S	**S**	**22 19 58.2**	**+1.3**
	baz=201						
F21K	**Alatna River**	**89.51**	**8**	IAMs_20	IAMs_20	22 53 02.0	
	comp=Z,5µm,18.0s						
F21K	**Alatna River**	**89.51**	**8**	P	**P**	**22 09 08.1**	**+1.3**
	baz=199,SNR=43						
F21K				S	**S**	**22 19 57.2**	**+0.1**
	baz=199						
G23K	**Bananza Creek**	**89.51**	**9**	P	**P**	**22 09 08.7**	**+1.8**
	baz=202,SNR=32						
G23K				S	**S**	**22 19 58.7**	**+1.5**
	baz=202						
MAYO	**Mayo, Yukon**	**89.67**	**16**	P	**P**	**22 09 09.8**	**+2.2**
	baz=215,SNR=8.8						
MAYO				S	**S**	**22 20 01.6**	**+2.8**
	baz=215						
EGMT	**Eagleton**	**89.78**	**37**	P	**P**	**22 09 08.0**	**-0.6**
EGMT				IAMs_20	IAMs_20	22 45 42.4	
	comp=Z,9µm,19.0s						
C17K	**DeLong Mountai**	**89.78**	**4**	P	**P**	**22 09 10.0**	**+1.9**
	baz=190,SNR=9.5						
C17K				S	**S**	**22 20 02.3**	**+2.6**
	baz=190						
H25L	**Birch Creek**	**89.80**	**11**	P	**P**	**22 09 09.3**	**+1.1**
	baz=206						
H25L				S	**S**	**22 19 59.3**	**-0.5**
	baz=206						
J29N	**Klondike Camp**	**89.80**	**15**	IAMs_20	IAMs_20	22 47 27.5	
	comp=Z,5µm,19.0s						
J29N	**Klondike Camp**	**89.80**	**15**	P	**P**	**22 09 11.1**	**+2.7**
	baz=213						
J29N				S	**S**	**22 20 03.0**	**+2.9**
	baz=213						
G24K	**Hadweenzic Riv**	**89.91**	**10**	IAMs_20	IAMs_20	22 49 26.3	
	comp=Z,7µm,19.0s						
G24K	**Hadweenzic Riv**	**89.91**	**10**	P	**P**	**22 09 10.0**	**+1.3**
	baz=205,SNR=17						
G24K				S	**S**	**22 20 00.9**	**0.0**
	baz=205						
F22K	**John River**	**89.95**	**8**	P	**P**	**22 09 10.3**	**+1.4**
	baz=200,SNR=11						
F22K				S	**S**	**22 20 04.5**	**+3.3**
	baz=200						
COLD	**Coldfoot**	**89.96**	**9**	P	**P**	**22 09 10.8**	**+1.8**
	baz=202,SNR=36						
COLD				S	**S**	**22 20 03.0**	**+1.7**
	baz=202						
ZEA	**Zeya**	**90.02**	**330**	*e*P	**P**	**22 09 11.1**	**+1.6**
ZEA				*e*		22 12 50.5	
ZEA				*e*		22 19 42.0	
ZEA				*e*PS	**PnS**	**22 21 02.6**	**-7.0**
ZEA				pmax	pmax		
	comp=N,30nm,1.8s						
ZEA				pmax	pmax		
	comp=Z,70nm,1.9s						
ZEA				pmax	pmax		
	comp=E,400nm,9.6s						
ZEA				pmax	pmax		
	comp=N,400nm,6.3s						
ZEA				pmax	pmax		
	comp=Z,1µm,7.3s						
ZEA				pmax	pmax		
	comp=Z,400nm,10.0s						
ZEA				smax	smax		
	comp=E,600nm,10.3s						
ZEA				smax	smax		
	comp=N,1µm,15.2s						
I27K	**Kandik River**	**90.03**	**13**	P	**P**	**22 09 10.9**	**+1.6**
	baz=210,SNR=37						
I27K				S	**S**	**22 20 04.1**	**+1.9**
	baz=210						
C18K	**Utukok River**	**90.10**	**5**	IAMs_20	IAMs_20	22 43 20.6	
	comp=Z,6µm,21.0s						
C18K	**Utukok River**	**90.10**	**5**	P	**P**	**22 09 11.1**	**+1.5**
	baz=192,SNR=22						
C18K				S	**S**	**22 20 03.7**	**+1.1**
	baz=192						
PLPT	**Palo Pinto**	**90.11**	**55**	P	**P**	**22 09 10.5**	**0.0**
PLPT				IAmb	IAmb	22 09 25.5	
	comp=Z,209nm,1.8s						
GYA	**Guiyang**	**90.12**	**298**	⇑P	**P**	**22 09 12.4**	**+1.6**
GYA				pP	pwP	22 09 17.9	+0.5
GYA				SKS	**SKSac**	**22 19 37.1**	**-5.3**
GYA				S	**S**	**22 20 06.3**	**+1.5**
GYA				pmax	pmax		
	comp=Z,110nm,2.0s						
GYA				pmax	pmax		
	comp=Z,2µm,8.6s						
GYA				LR	LR		
	comp=Z,2µm,18.9s						
GYA				LR	LR		
	comp=Z,3µm,19.4s						
GYA				LR	LR		
	comp=Z,5µm,18.6s						
BILL	**Bilibino**	**90.14**	**353**	P	**P**	**22 09 10.1**	**+0.4**
BILL	**Bilibino**	**90.14**	**353***c*	*i*P	**P**	**22 09 10.8**	**+1.1**
BILL				pmax	pmax		
	comp=Z,83nm,1.9s						
MMPY	**Sheldon Lake,**	**90.17**	**18**	P	**P**	**22 09 12.2**	**+2.2**
	baz=219,SNR=32						
MMPY				S	**S**	**22 20 05.7**	**+2.2**
	baz=219						
E20K	**Nigu River**	**90.18**	**7**	P	**P**	**22 09 11.5**	**+1.5**
	baz=197,SNR=86						
E20K				S	**S**	**22 20 05.6**	**+2.2**
	baz=197						
G25K	**Bearman Lake**	**90.20**	**11**	P	**P**	**22 09 11.3**	**+1.3**
	baz=206,SNR=6.6						
D19K	**Kuna River**	**90.21**	**6**	P	**P**	**22 09 11.5**	**+1.4**
	baz=195,SNR=39						
D19K				S	**S**	**22 20 05.0**	**+1.3**
	baz=195						
I28M	**Miner Creek**	**90.25**	**14**	IAMs_20	IAMs_20	22 46 13.5	
	comp=Z,6µm,20.0s						
I28M	**Miner Creek**	**90.25**	**14**	P	**P**	**22 09 11.8**	**+1.4**
	baz=212,SNR=61						
I28M				S	**S**	**22 20 05.8**	**+1.5**
	baz=212						
TGTN	**Hyland Airport**	**90.26**	**20**	P	**P**	**22 09 12.4**	**+2.0**
	baz=222,SNR=7.3						
TGTN				S	**S**	**22 20 03.1**	**-1.3**
	baz=222						
BEAVL	**Fort Liard**	**90.35**	**22**	P	**P**	**22 09 13.0**	**+2.1**
	baz=225,SNR=16						
BEAVL				S	**S**	**22 20 06.9**	**+1.7**
	baz=225						
J30M	**Hart River**	**90.36**	**15**	IAMs_20	IAMs_20	22 45 16.3	
	comp=Z,8µm,20.0s						
J30M	**Hart River**	**90.36**	**15**	P	**P**	**22 09 12.7**	**+1.7**
	baz=215,SNR=68						
J30M				S	**S**	**22 20 08.2**	**+2.8**
	baz=215						
GO04	**Tololo Observa**	**90.40**	**123**	P	**P**	**22 09 11.2**	**-1.2**
MTO3	**Montecristo**	**90.41**	**75**	P	**P**	**22 09 11.6**	**-0.9**
MTO3				IAmb	IAmb	22 09 27.7	
	comp=Z,68nm,1.3s						
WHTX	**Lake Whitney,**	**90.42**	**56**	IAMs_20	IAMs_20	22 44 11.1	
	comp=Z,7µm,19.0s						
TIY	**Taiyuan**	**90.44**	**311**	*e*P	**P**	**22 09 13.5**	**+1.6**
TIY				SKS	**SKSac**	**22 19 44.1**	**+0.5**
TIY				S	**ScS**	**22 20 11.4**	**+0.6**
TIY				pmax	pmax		
	comp=Z,67nm,0.6s						
TIY				pmax	pmax		
	comp=Z,1µm,3.5s						
TIY				LR	LR		
	comp=Z,3µm,19.9s						
TIY				LR	LR		
	comp=Z,1µm,21.3s						
TIY				LR	LR		
	comp=Z,3µm,17.9s						
SLVN	**Son La**	**90.45**	**293**	P	**P**	**22 09 12.9**	**+0.6**
SLVN	**Son La**	**90.45**	**293**	P	**P**	**22 09 14.7**	**+2.3**
ESQI	**Esquipulas**	**90.48**	**75**	P	**P**	**22 09 12.7**	**+0.1**
ESQI				IAmb	IAmb	22 09 33.9	
	comp=Z,164nm,1.4s						
I29M	**Ogilvie Camp,**	**90.55**	**14**	IAMs_20	IAMs_20	22 45 33.2	
	comp=Z,6µm,20.0s						
I29M	**Ogilvie Camp,**	**90.55**	**14**	P	**P**	**22 09 13.1**	**+1.4**
	baz=213						
I29M				S	**S**	**22 20 07.6**	**+0.7**
	baz=213						
D20K	**Etivluk River**	**90.57**	**6**	P	**P**	**22 09 13.2**	**+1.4**
	baz=196,SNR=66						
D20K				S	**S**	**22 20 08.2**	**+1.2**
	baz=196						
WMOK	**Wichita Mounta**	**90.58**	**53**	P	**P**	**22 09 12.8**	**+0.2**
WMOK	**Wichita Mounta**	**90.58**	**53**	P	**P**	**22 09 12.8**	**+0.2**
WMOK				pmax	pmax		
	comp=Z,39nm,1.5s						
WMOK				MLR	MLR		
	comp=Z,4µm,18.0s						
E22K	**Anaktuvuk Pass**	**90.58**	**8**	IAMs_20	IAMs_20	22 53 28.3	
	comp=Z,6µm,18.0s						
E22K	**Anaktuvuk Pass**	**90.58**	**8**	P	**P**	**22 09 13.2**	**+1.4**
	baz=201						
E22K				S	**S**	**22 20 08.2**	**+1.1**
	baz=201						
F24K	**Squaw Lake**	**90.59**	**10**	IAMs_20	IAMs_20	22 53 14.3	
	comp=Z,8µm,18.0s						
F24K	**Squaw Lake**	**90.59**	**10**	P	**P**	**22 09 13.6**	**+1.7**
	baz=204,SNR=32						
F24K				S	**S**	**22 20 10.1**	**+2.9**
	baz=204						
H27K	**Steamboat Moun**	**90.59**	**13**	IAMs_20	IAMs_20	22 52 37.4	
	comp=Z,5µm,18.0s						
H27K	**Steamboat Moun**	**90.59**	**13**	P	**P**	**22 09 13.5**	**+1.5**
	baz=210,SNR=90						
H27K				S	**S**	**22 20 08.9**	**+1.7**
	baz=210						
E21K	**Killik River**	**90.60**	**7**	P	**P**	**22 09 13.0**	**+1.1**
	baz=199,SNR=22						
E21K				S	**S**	**22 20 08.3**	**+1.0**
	baz=199						
C19K	**Lookout Ridge**	**90.67**	**5**	IAMs_20	IAMs_20	22 53 50.9	
	comp=Z,5µm,19.0s						
C19K	**Lookout Ridge**	**90.67**	**5**	P	**P**	**22 09 13.7**	**+1.4**
	baz=193,SNR=50						
C19K				S	**S**	**22 20 08.6**	**+0.7**
	baz=193						
KOTAN	**Kotaneelee Air**	**90.68**	**23**	P	**P**	**22 09 14.5**	**+2.1**
	baz=226,SNR=22						
KOTAN				S	**S**	**22 20 11.1**	**+2.9**
	baz=226						
B18K	**Kokolik River**	**90.76**	**4**	P	**P**	**22 09 14.2**	**+1.7**
	baz=191,SNR=15						
B18K				S	**S**	**22 20 09.0**	**+0.5**
	baz=191						
G26K	**Porcupine Rive**	**90.78**	**11**	IAMs_20	IAMs_20	22 52 20.5	
	comp=Z,4µm,18.0s						
G26K	**Porcupine Rive**	**90.78**	**11**	P	**P**	**22 09 14.8**	**+2.1**
	baz=208,SNR=24						
G26K				S	**S**	**22 20 12.4**	**+3.6**
	baz=208						
E23K	**Chandalar**	**90.82**	**9**	P	**P**	**22 09 14.6**	**+1.5**
	baz=203,SNR=40						
E23K				S	**S**	**22 20 11.5**	**+2.1**
	baz=203						
LHMI	**Lhok Sumawe**	**90.83**	**275**	P	**P**	**22 09 13.8**	**-0.4**
LHMI	**Lhok Sumawe**	**90.83**	**275**	P	**P**	**22 09 15.5**	**+1.3**
LHMI	**Lhok Sumawe**	**90.83**	**275**	P	**P**	**22 09 17.0**	**+2.8**
HKT	**Hockley**	**90.86**	**58**	IAMs_20	IAMs_20	22 46 46.6	
	comp=Z,6µm,18.0s						
HKT	**Hockley**	**90.86**	**58**	*i* P	**P**	**22 09 16.2**	**+2.3**
HKT				pmax	pmax		
	comp=Z,83nm,1.5s						
XLT	**XiLinHaoTe**	**90.86**	**317**	*e*P	**P**	**22 09 15.1**	**+1.3**
XLT				sP	pwP	22 09 25.3	+4.9
XLT				PP	**PP**	**22 12 46.0**	**-4.0**
XLT				SKS	**SKSac**	**22 19 45.0**	**-0.8**
XLT				pmax	pmax		
	comp=Z,74nm,1.9s						
XLT				pmax	pmax		
	comp=Z,2µm,9.0s						
XLT				LR	LR		
	comp=Z,160nm,21.3s						
XLT				LR	LR		
	comp=Z,2µm,17.9s						
XLT				LR	LR		
	comp=Z,3µm,20.4s						
I30M	**Mount Dempster**	**90.88**	**15**	IAMs_20	IAMs_20	22 46 11.1	
	comp=Z,5µm,20.0s						
I30M	**Mount Dempster**	**90.88**	**15**	P	**P**	**22 09 15.0**	**+1.6**
	baz=215,SNR=144						
I30M				S	**S**	**22 20 12.1**	**+2.0**
	baz=215						
LCO	**Las Campanas**	**90.97**	**122**	P	**P**	**22 09 13.6**	**-1.4**
LCO	**Las Campanas**	**90.97**	**122**	P	**P**	**22 09 13.6**	**-1.4**
LCO				pmax	pmax		
	comp=Z,219nm,1.6s						
LCO				MLR	MLR		
	comp=Z,4µm,20.0s						
MLSI	**Meulaboh, Aceh**	**90.99**	**274**	P	**P**	**22 09 16.5**	**+1.5**
E24K	**Your Creek**	**91.00**	**9**	IAMs_20	IAMs_20	22 49 49.4	
	comp=Z,6µm,19.0s						
E24K	**Your Creek**	**91.00**	**9**	P	**P**	**22 09 15.4**	**+1.6**
	baz=204,SNR=22						
E24K				S	**S**	**22 20 13.5**	**+2.5**
	baz=204						
F25K	**Christian Rive**	**91.03**	**11**	IAMs_20	IAMs_20	22 46 03.9	
	comp=Z,6µm,20.0s						
F25K	**Christian Rive**	**91.03**	**11**	P	**P**	**22 09 16.1**	**+2.1**
	baz=206,SNR=34						
F25K				S	**S**	**22 20 14.3**	**+3.1**
	baz=206						
OGNE	**Ogallala**	**91.03**	**46**	IAMs_20	IAMs_20	22 45 24.0	
	comp=Z,5µm,19.0s						
BMAR	**Burnt Mountain**	**91.06**	**11**	P	**P**	**22 09 14.9**	**+0.8**
G27K	**Doyon Strip**	**91.07**	**12**	IAMs_20	IAMs_20	22 46 15.0	
	comp=Z,5µm,20.0s						
G27K	**Doyon Strip**	**91.07**	**12**	P	**P**	**22 09 16.0**	**+1.9**
	baz=210,SNR=52						
G27K				S	**S**	**22 20 14.5**	**+2.9**
	baz=210						
Z35A	**Perchaven, San**	**91.14**	**55**	IAMs_20	IAMs_20	22 46 04.0	
	comp=Z,8µm,18.0s						
D22K	**Ayikyak River**	**91.18**	**8**	P	**P**	**22 09 16.2**	**+1.6**
	baz=200,SNR=35						
D22K				S	**S**	**22 20 13.6**	**+1.1**
	baz=200						
C21K	**Knifeblade Rid**	**91.19**	**7**	P	**P**	**22 09 16.5**	**+1.9**
	baz=198						
C21K				S	**S**	**22 20 13.6**	**+1.1**
	baz=198						
RSSD	**Black Hills**	**91.21**	**43**	IAMs_20	IAMs_20	22 48 10.7	
	comp=Z,9µm,18.0s						
RSSD	**Black Hills**	**91.21**	**43**	P	**P**	**22 09 17.3**	**+1.7**
RSSD				pmax	pmax		
	comp=Z,46nm,1.8s						
H29M	**Whitestone**	**91.25**	**14**	IAMs_20	IAMs_20	22 52 07.9	
	comp=Z,5µm,18.0s						
H29M	**Whitestone**	**91.25**	**14**	P	**P**	**22 09 16.5**	**+1.5**
	baz=213,SNR=60						
H29M				S	**S**	**22 20 15.7**	**+2.5**
	baz=213						
TOLK	**Toolik Lake Re**	**91.37**	**9**	P	**P**	**22 09 16.9**	**+1.4**
	baz=203,SNR=22						
TOLK				S	**S**	**22 20 15.9**	**+1.7**
	baz=203						
HIA	**Hailar**	**91.38**	**323**	P	**P**	**22 09 16.4**	**+0.4**
HIA				IAmb	IAmb	22 09 29.6	
	comp=Z,70nm,1.5s						
HIA	**Hailar**	**91.38**	**323**	IAMs_20	IAMs_20	22 46 26.7	
	comp=Z,6µm,20.0s						
HIA	**Hailar**	**91.38**	**323**	P	**P**	**22 09 18.9**	**+3.0**
HIA	**Hailar**	**91.38**	**323**	P	**P**	**22 09 16.4**	**+0.4**
HIA				pmax	pmax		
	comp=Z,70nm,1.5s						
HIA				MLR	MLR		
	comp=Z,6µm,20.0s						
F26K	**Sheenjek River**	**91.38**	**11**	P	**P**	**22 09 17.8**	**+2.2**
	baz=208,SNR=54						
F26K				S	**S**	**22 20 18.6**	**+4.2**
	baz=208						
XAN	**Xi'an**	**91.43**	**306**	⇑P	**P**	**22 09 17.8**	**+1.2**
XAN				SKS	**SKSac**	**22 19 49.4**	**0.0**
XAN				S	**ScS**	**22 20 19.0**	**-0.2**
XAN				pmax	pmax		
	comp=Z,250nm,1.5s						
XAN				pmax	pmax		
	comp=Z,3µm,5.5s						
XAN				LR	LR		
	comp=Z,3µm,17.9s						
XAN				LR	LR		
	comp=Z,3µm,19.9s						
XAN				LR	LR		
	comp=Z,5µm,21.3s						
ZON	**Zonda**	**91.46**	**125**	P	**P**	**22 09 16.8**	**-0.2**
ZON				IAmb	IAmb	22 09 31.5	
	comp=Z,145nm,1.5s						
ZON	**Zonda**	**91.46**	**125**	P	**P**	**22 09 16.8**	**-0.2**
ZON				pmax	pmax		
	comp=Z,145nm,1.5s						
E25K	**Arctic Village**	**91.51**	**10**	IAMs_20	IAMs_20	22 46 29.8	
	comp=Z,5µm,20.0s						
E25K	**Arctic Village**	**91.51**	**10**	P	**P**	**22 09 17.9**	**+1.7**
	baz=206,SNR=26						
E25K				S	**S**	**22 20 18.1**	**+2.5**
	baz=206						
D23K	**Nanushuk River**	**91.52**	**8**	IAMs_20	IAMs_20	22 46 31.9	
	comp=Z,4µm,20.0s						
D23K	**Nanushuk River**	**91.52**	**8**	P	**P**	**22 09 17.9**	**+1.8**
	baz=202,SNR=48						
D23K				S	**S**	**22 20 17.0**	**+1.5**
	baz=202						
A19K	**Wainwright**	**91.63**	**4**	P	**P**	**22 09 18.0**	**+1.4**
	baz=192						
A19K				S	**S**	**22 20 16.5**	**0.0**
	baz=192						
B21K	**Ikpikpuk River**	**91.66**	**7**	IAMs_20	IAMs_20	22 54 34.8	
	comp=Z,6µm,19.0s						
B21K	**Ikpikpuk River**	**91.66**	**7**	P	**P**	**22 09 18.1**	**+1.4**
	baz=198,SNR=16						
B21K				S	**S**	**22 20 17.3**	**+0.6**
	baz=198						
CBKS	**Cedar Bluff**	**91.66**	**49**	IAMs_20	IAMs_20	22 46 33.5	
	comp=Z,5µm,18.0s						
EPYK	**Eagle Plains**	**91.75**	**14**	IAMs_20	IAMs_20	22 46 39.0	
	comp=Z,4µm,20.0s						
EPYK	**Eagle Plains**	**91.75**	**14**	P	**P**	**22 09 18.8**	**+1.5**
	baz=214,SNR=19						
EPYK				S	**S**	**22 20 18.4**	**+0.6**
	baz=214						
B20K	**Meade River**	**91.77**	**6**	IAMs_20	IAMs_20	22 50 19.8	
	comp=Z,4µm,19.0s						
B20K	**Meade River**	**91.77**	**6**	P	**P**	**22 09 18.8**	**+1.6**
	baz=196,SNR=43						
B20K				S	**S**	**22 20 18.2**	**+0.5**
	baz=196						
H31M	**Peel River**	**91.85**	**15**	IAMs_20	IAMs_20	22 46 40.8	
	comp=Z,7µm,19.0s						
H31M	**Peel River**	**91.85**	**15**	P	**P**	**22 09 19.1**	**+1.4**
	baz=217,SNR=19						
H31M				S	**S**	**22 20 18.8**	**+0.1**
	baz=217						
G29M	**Pine Creek**	**91.91**	**13**	IAMs_20	IAMs_20	22 49 42.3	
	comp=Z,5µm,19.0s						
G29M	**Pine Creek**	**91.91**	**13**	P	**P**	**22 09 19.7**	**+1.7**
	baz=213,SNR=38						
G29M				S	**S**	**22 20 20.2**	**+1.1**
	baz=213						
D24K	**Happy Valley**	**91.95**	**9**	IAMs_20	IAMs_20	22 51 30.3	
	comp=Z,5µm,19.0s						
D24K	**Happy Valley**	**91.95**	**9**	P	**P**	**22 09 20.0**	**+1.9**
	baz=203,SNR=9.3						
D24K				S	**S**	**22 20 22.3**	**+3.0**
	baz=203						
OK029	**Liberty Lake**	**92.01**	**52**	IAMs_20	IAMs_20	22 46 51.1	
	comp=Z,9µm,19.0s						
F28M	**Old Crow**	**92.12**	**12**	IAMs_20	IAMs_20	22 47 07.8	
	comp=Z,6µm,20.0s						
F28M	**Old Crow**	**92.12**	**12**	P	**P**	**22 09 20.8**	**+1.9**
	baz=212,SNR=44						
F28M				S	**S**	**22 20 22.0**	**+0.9**
	baz=212						
CNGN	**Cerro Negro**	**92.13**	**78**	P	**P**	**22 09 19.6**	**-0.7**
TGUH	**Tegucigalpa,Un**	**92.17**	**76**	P	**P**	**22 09 20.4**	**-0.1**
TGUH				IAmb	IAmb	22 09 35.5	
	comp=Z,129nm,1.6s						
R32A	**Long Quarter,**	**92.21**	**50**	IAMs_20	IAMs_20	22 50 25.2	
	comp=Z,8µm,18.0s						
E27K	**Coleen River**	**92.28**	**12**	P	**P**	**22 09 21.8**	**+2.1**
	baz=210,SNR=49						
E27K				S	**S**	**22 20 23.8**	**+1.4**
	baz=210						
C23K	**Itkillik River**	**92.34**	**8**	IAMs_20	IAMs_20	22 47 09.6	
	comp=Z,4µm,20.0s						
C23K	**Itkillik River**	**92.34**	**8**	P	**P**	**22 09 21.8**	**+2.0**
	baz=202,SNR=35						
C23K				S	**S**	**22 20 24.5**	**+1.7**
	baz=202						
G30M	**tAoh Zraii Nji**	**92.37**	**14**	P	**P**	**22 09 21.7**	**+1.5**
	baz=215,SNR=66						
G30M				S	**S**	**22 20 22.0**	**-1.4**
	baz=215						
HHC	**Hu-ho-hao-te**	**92.43**	**313**	*e*P	**P**	**22 09 21.8**	**+0.7**
HHC				sP	pwP	22 09 28.3	+0.6
HHC				PP	**PP**	**22 13 03.4**	**+0.9**
HHC				SKS	**SKSac**	**22 19 51.8**	**-3.1**
HHC				S	**S**	**22 20 24.3**	**-0.9**
HHC				sS	ScS	22 20 29.8	+2.5
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
HHC				pmax	pmax		
	comp=Z,2µm,8.5s						
HHC				LR	LR		
	comp=Z,3µm,16.5s						
HHC				LR	LR		
	comp=Z,3µm,16.7s						
HHC				LR	LR		
	comp=Z,5µm,16.2s						
BSI	**Banda Aceh**	**92.46**	**275**	P	**P**	**22 09 22.8**	**+1.0**
D25K	**Kavik River**	**92.47**	**10**	IAMs_20	IAMs_20	22 51 22.0	
	comp=Z,6µm,19.0s						
D25K	**Kavik River**	**92.47**	**10**	P	**P**	**22 09 22.2**	**+1.7**
	baz=206,SNR=25						
D25K				S	**S**	**22 20 22.5**	**-1.7**
	baz=206						
B22K	**Teshekpuk Lake**	**92.47**	**7**	P	**P**	**22 09 22.1**	**+1.6**
	baz=199,SNR=43						
B22K				S	**S**	**22 20 23.3**	**-0.7**
	baz=199						
C24K	**Franklin Bluff**	**92.49**	**9**	IAMs_20	IAMs_20	22 55 01.5	
	comp=Z,4µm,19.0s						
C24K	**Franklin Bluff**	**92.49**	**9**	P	**P**	**22 09 22.4**	**+1.8**
	baz=204						
C24K				S	**S**	**22 20 24.8**	**+0.7**
	baz=204						
OK052	**Battle Ridge R**	**92.58**	**52**	IAMs_20	IAMs_20	22 47 36.0	
	comp=Z,7µm,18.0s						
G31M	**Satah River**	**92.77**	**15**	IAMs_20	IAMs_20	22 47 21.0	
	comp=Z,6µm,20.0s						
G31M	**Satah River**	**92.77**	**15**	P	**P**	**22 09 23.5**	**+1.6**
	baz=217,SNR=55						
G31M				S	**S**	**22 20 26.8**	**+0.1**
	baz=217						
KMI	**Kunming**	**92.87**	**296**	⇑P	**P**	**22 09 25.1**	**+1.4**
KMI				PP	**PP**	**22 13 06.5**	**+0.1**
KMI				SKS	**SKSac**	**22 19 59.3**	**+1.0**
KMI				pmax	pmax		
	comp=Z,120nm,1.8s						
KMI				pmax	pmax		
	comp=Z,2µm,8.7s						
KMI				LR	LR		

	comp=Z,4µm,19.2s						
KMI				LR	LR		
	comp=Z,8µm,19.8s						
KMI				LR	LR		
	comp=Z,8µm,21.0s						
A22K	**Sinclair Lake**	**92.94**	**6**	P	**P**	**22 09 24.2**	**+1.6**
	baz=198						
A22K				S	**S**	**22 20 26.9**	**-1.2**
	baz=198						
JTS	**Las Juntas de**	**92.94**	**80**	P	**P**	**22 09 23.9**	**-0.1**
JTS				IAmb	IAmb	22 09 39.7	
	comp=Z,55nm,1.1s						
JTS	**Las Juntas de**	**92.94**	**80**	P	**P**	**22 09 23.9**	**-0.1**
JTS				pmax	pmax		
	comp=Z,55nm,1.1s						
F30M	**Barrier River**	**92.98**	**14**	P	**P**	**22 09 24.9**	**+2.0**
	baz=215,SNR=20						
F30M				S	**S**	**22 20 28.1**	**-0.5**
	baz=215						
E28M	**Babbage River**	**93.03**	**12**	IAMs_20	IAMs_20	22 50 52.9	
	comp=Z,5µm,19.0s						
E28M	**Babbage River**	**93.03**	**12**	P	**P**	**22 09 25.1**	**+2.0**
	baz=212,SNR=44						
E28M				S	**S**	**22 20 27.6**	**-1.5**
	baz=212						
PB14	**IPOC Station P**	**93.04**	**118**	P	**P**	**22 09 23.8**	**-0.9**
PB14				IAmb	IAmb	22 09 39.5	
	comp=Z,127nm,1.6s						
WRGLY	**Wrigley**	**93.04**	**21**	P	**P**	**22 09 25.4**	**+2.2**
	baz=226,SNR=6.0						
WRGLY				S	**S**	**22 20 28.7**	**-0.6**
	baz=226						
BOAB	**BOACO BROADBA**	**93.05**	**78**	P	**P**	**22 09 26.4**	**+2.0**
BOAB	**BOACO BROADBA**	**93.05**	**78**	P	**P**	**22 09 24.6**	**+0.2**
BOAB				IAmb	IAmb	22 09 48.1	
	comp=Z,104nm,1.5s						
BOAB				IAMs_20	IAMs_20	22 40 45.6	
	comp=Z,5µm,20.0s						
A21K	**Barrow**	**93.09**	**6**	P	**P**	**22 09 24.8**	**+1.5**
	baz=196						
A21K				S	**S**	**22 20 29.5**	**+0.1**
	baz=196						
C27K	**Jago River**	**93.16**	**10**	IAMs_20	IAMs_20	22 47 14.4	
	comp=Z,6µm,21.0s						
C27K	**Jago River**	**93.16**	**10**	P	**P**	**22 09 25.6**	**+1.8**
	baz=208,SNR=22						
C27K				S	**S**	**22 20 30.5**	**+0.3**
	baz=208						
E29M	**Blow River**	**93.17**	**13**	IAMs_20	IAMs_20	22 47 39.7	
	comp=Z,7µm,20.0s						
E29M	**Blow River**	**93.17**	**13**	P	**P**	**22 09 25.3**	**+1.5**
	baz=213,SNR=29						
E29M				S	**S**	**22 20 30.9**	**+0.6**
	baz=213						
DGMT	**Dagmar**	**93.20**	**39**	IAMs_20	IAMs_20	22 47 27.0	
	comp=Z,7µm,19.0s						
C26K	**Camden Bay**	**93.23**	**10**	P	**P**	**22 09 25.7**	**+1.7**
	baz=207,SNR=12						
C26K				S	**S**	**22 20 32.0**	**+1.2**
	baz=207						
441A	**DeRidder**	**93.27**	**58**	IAMs_20	IAMs_20	22 49 10.5	
	comp=Z,6µm,18.0s						
TRQA	**Tornquist**	**93.29**	**133**	*e*P	P	22 09 30.9	+5.7
TUL3	**Leonard**	**93.29**	**53**	IAMs_20	IAMs_20	22 46 58.9	
	comp=Z,7µm,18.0s						
D27M	**Malcolm River**	**93.31**	**11**	P	**P**	**22 09 26.2**	**+1.7**
	baz=211,SNR=18						
D27M				S	**S**	**22 20 34.2**	**+2.5**
	baz=211						
F31M	**Tsiigehtchic**	**93.31**	**15**	IAMs_20	IAMs_20	22 47 37.3	
	comp=Z,5µm,20.0s						
F31M	**Tsiigehtchic**	**93.31**	**15**	P	**P**	**22 09 25.9**	**+1.5**
	baz=217,SNR=43						
F31M				S	**S**	**22 20 33.0**	**+1.5**
	baz=217						
BTO	**Baotou**	**93.38**	**312**	*e*P	**P**	**22 09 28.1**	**+2.6**
BTO				pP	**pwP**	**22 09 34.5**	**+2.3**
BTO				sP	sP	22 09 37.3	+8.9
BTO				PP	**PP**	**22 13 15.1**	**+5.1**
BTO				SKS	**SKSac**	**22 20 01.3**	**+1.1**
BTO				S	**S**	**22 20 33.9**	**+0.3**
BTO				sS	sS	22 20 44.0	+7.0
BTO				SS	**SS**	**22 26 53.3**	**+2.8**
BTO				pmax	pmax		
	comp=Z,110nm,2.1s						
BTO				pmax	pmax		
	comp=Z,4µm,8.4s						
BTO				LR	LR		
	comp=Z,6µm,18.2s						
BTO				LR	LR		
	comp=Z,5µm,24.5s						
BTO				LR	LR		
	comp=Z,9µm,22.9s						
COHC	**Cochancay**	**93.70**	**94**	P	**P**	**22 09 26.9**	**-0.7**
CM31	**Chiang Mai Arr**	**93.73**	**288**	P	**P**	**22 09 27.7**	**+0.2**
CM31	**Chiang Mai Arr**	**93.73**	**288**	P	**P**	**22 09 28.4**	**+0.9**
CM31				P	**P**	**22 09 28.4**	**+0.9**
CMAR	**Chiang Mai Arr**	**93.73**	**288**	P	**P**	**22 09 28.4**	**+0.9**
CMAR	**Chiang Mai Arr**	**93.73**	**288**	P	**P**	**22 09 28.8**	**+1.2**
	comp=Z,29nm,1.0s,baz=104,slow=2.7,SNR=80						
	comp=Z,29nm,1.0s						
CMAR	**Chiang Mai Arr**	**93.73**	**288**	*i* P	**P**	**22 09 28.7**	**+1.2**
CMAR				pmax	pmax		
	comp=Z,33nm,1.0s						
D28M	**Stokes Point**	**93.80**	**12**	P	**P**	**22 09 28.3**	**+1.7**
	baz=213						
D28M				S	**S**	**22 20 37.5**	**+1.8**
	baz=213						
CHTO	**Chiang Mai**	**93.86**	**289**	P	**P**	**22 09 27.7**	**-0.4**
CHTO				IAmb	IAmb	22 09 31.5	
	comp=Z,92nm,1.1s						
CHTO	**Chiang Mai**	**93.86**	**289**	P	**P**	**22 09 25.7**	**-2.4**
CHTO				P	**P**	**22 09 25.7**	**-2.4**
CHTO	**Chiang Mai**	**93.86**	**289**	P	**P**	**22 09 29.8**	**+1.7**
CHTO	**Chiang Mai**	**93.86**	**289**	P	**P**	**22 09 27.7**	**-0.4**
CHTO				pmax	pmax		
	comp=Z,92nm,1.2s						
CHTO				MLR	MLR		
	comp=Z,3µm,20.0s						
BGNE	**Belgrade**	**93.87**	**47**	IAMs_20	IAMs_20	22 46 17.1	
	comp=Z,5µm,20.0s						
KSU1	**Kansas State U**	**93.99**	**50**	IAMs_20	IAMs_20	22 47 29.2	
	comp=Z,7µm,19.0s						
INK	**Inuvik**	**94.05**	**14**	P	**P**	**22 09 28.2**	**+0.4**
INK				IAmb	IAmb	22 09 31.4	
	comp=Z,62nm,1.1s						
INK	**Inuvik**	**94.05**	**14**	P	**P**	**22 09 28.2**	**+0.4**
INK				pmax	pmax		
	comp=Z,62nm,1.1s						
INK	**Inuvik**	**94.05**	**14**	P	**P**	**22 09 28.9**	**+1.2**
	baz=217,SNR=24						
INK				S	**S**	**22 20 39.8**	**+1.8**
	baz=217						
YAK	**Yakutsk**	**94.14**	**337**	P	**P**	**22 09 27.8**	**-0.5**
YAK				IAmb	IAmb	22 09 31.6	
	comp=Z,204nm,1.9s						
YAK	**Yakutsk**	**94.14**	**337***c*	*i*P	**P**	**22 09 28.1**	**-0.2**
YAK				*e**PP	**pwP**	**22 09 34.9**	**0.0**
YAK				*e*S	**SKSac**	**22 20 01.2**	**-1.8**
YAK				*e*		22 20 37.3	
YAK				*e*SP	**SP**	**22 21 50.5**	**-2.9**
YAK				*e*SS	**SS**	**22 26 55.4**	**-4.6**
YAK				*e*SSS	SSS	22 30 36.5	
YAK				pmax	pmax		
	comp=Z,12nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.6s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.7s						
YAK				smax	smax		
	comp=N,198nm,2.8s						
YAK				smax	smax		
	comp=E,153nm,3.6s						
YAK				MLR	MLR		
	comp=Z,4µm,23.0s						
YAK				MLR	MLR		
	comp=N,2µm,20.0s						
YAK				MLR	MLR		
	comp=E,2µm,22.0s						
CD2	**Chengdu**	**94.20**	**301**	P	**P**	**22 09 30.6**	**+1.1**
CD2				sP	pwP	22 09 39.0	+2.9
CD2				PP	**PP**	**22 13 14.9**	**-1.6**
CD2				SKS	**SKSac**	**22 20 05.3**	**+0.4**
CD2				pmax	pmax		
	comp=E,30nm,1.0s						
CD2				pmax	pmax		
	comp=E,2µm,8.0s						
CD2				LR	LR		
	comp=E,5µm,18.1s						
CD2				LR	LR		
	comp=E,4µm,19.2s						
CD2				LR	LR		
	comp=E,3µm,18.6s						
PZH	**PanZhiHua**	**94.22**	**297**	P	**P**	**22 09 30.5**	**+0.8**
PZH				sP	**pwP**	**22 09 35.5**	**-0.9**
PZH				SKS	**SKSac**	**22 20 04.4**	**-1.0**
PZH				S	**S**	**22 20 40.1**	**-1.5**
PZH				sS	sS	22 20 51.4	+6.4
PZH				SS	**SS**	**22 27 04.3**	**+1.3**
PZH				pmax	pmax		
	comp=E,70nm,1.8s						
PZH				pmax	pmax		
	comp=E,1µm,8.7s						
PZH				LR	LR		
	comp=E,3µm,24.0s						
PZH				LR	LR		
	comp=E,3µm,22.6s						
PZH				LR	LR		
	comp=E,4µm,23.0s						
MIAR	**Mount Ida**	**94.42**	**55**	P	**P**	**22 09 30.4**	**+0.1**
MIAR				IAMs_20	IAMs_20	22 48 28.0	
	comp=Z,6µm,18.0s						
MIAR	**Mount Ida**	**94.42**	**55**	P	**P**	**22 09 30.4**	**+0.1**
MIAR				pmax	pmax		
	comp=Z,70nm,1.9s						
MIAR				MLR	MLR		
	comp=Z,6µm,18.0s						
E28A	**Huff**	**94.43**	**42**	IAMs_20	IAMs_20	22 46 53.9	
	comp=Z,6µm,20.0s						
PB06	**IPOC Station P**	**94.54**	**116**	P	**P**	**22 09 31.2**	**-0.2**
PB06				IAmb	IAmb	22 09 47.4	
	comp=Z,82nm,1.2s						
U38A	**Gravette**	**94.55**	**53**	IAMs_20	IAMs_20	22 48 22.1	
	comp=Z,6µm,18.0s						
SUSD	**Miller**	**94.61**	**44**	IAMs_20	IAMs_20	22 52 13.7	
	comp=Z,4µm,18.0s						
L34A	**Svendsen Farm,**	**95.31**	**47**	IAMs_20	IAMs_20	22 47 57.2	
	comp=Z,5µm,19.0s						
PB01	**IPOC Station P**	**95.31**	**115**	P	**P**	**22 09 33.7**	**-1.2**
PB01				IAmb	IAmb	22 09 50.3	
	comp=Z,57nm,1.3s						
N35A	**Tabor**	**95.37**	**48**	IAMs_20	IAMs_20	22 50 11.9	
	comp=Z,4µm,19.0s						
OTAV	**Otavalo**	**95.42**	**92**	*e*P	**P**	**22 09 40.6**	**+4.6**
MDND	**Maddock**	**95.66**	**41**	IAMs_20	IAMs_20	22 51 22.2	
	comp=Z,7µm,18.0s						
YKA	**Yellowknife Ar**	**95.69**	**24**	P	**P**	**22 09 36.3**	**+0.9**
YKA	**Yellowknife Ar**	**95.69**	**24**	P	**P**	**22 09 36.8**	**+1.4**
	comp=Z,8.2nm,0.9s,baz=247,slow=4.2,SNR=46						
YKA				PP	**PP**	**22 13 28.0**	**+0.8**
	comp=Z,1.0nm,1.0s,baz=246,slow=7.2,SNR=1.8						
YKA				PKKP	**PKKPbc**	**22 26 29.3**	**+1.1**
	comp=Z,0.8nm,0.8s,baz=35,slow=3.1,SNR=4.3						
	comp=Z,8.2nm,0.9s						
YKA	**Yellowknife Ar**	**95.69**	**24**	P	**P**	**22 09 36.3**	**+0.9**
S39A	**Bolivar**	**95.81**	**52**	IAMs_20	IAMs_20	22 49 27.4	
	comp=Z,8µm,18.0s						
ECSD	**EROS Data Cent**	**95.86**	**45**	P	**P**	**22 09 36.9**	**+0.2**
ECSD	**EROS Data Cent**	**95.86**	**45**	IAMs_20	IAMs_20	22 49 55.7	
	comp=Z,4µm,19.0s						
VBMS	**Vicksburg**	**95.93**	**58**	IAMs_20	IAMs_20	22 50 06.0	
	comp=Z,6µm,18.0s						
LZH	**Lanzhou**	**96.06**	**306**	⇑P	**P**	**22 09 39.6**	**+1.6**
LZH				sP	pwP	22 09 49.8	+5.2
LZH				SKS	**SKSac**	**22 20 14.8**	**-0.1**
LZH				S	**ScS**	**22 21 02.0**	**+4.1**
LZH				pmax	pmax		
	comp=Z,68nm,1.3s						
LZH				pmax	pmax		
	comp=Z,1µm,5.5s						
LZH				LR	LR		
	comp=Z,1µm,17.2s						
LZH				LR	LR		
	comp=Z,3µm,17.5s						
LZH				LR	LR		
	comp=Z,3µm,21.3s						
CIT	**Chita**	**96.16**	**324**	*e*P	**P**	**22 09 39.2**	**+1.3**
CIT				pmax	pmax		
	comp=Z,148nm,2.5s						
346A	**Big Creek Wild**	**96.47**	**59**	IAMs_20	IAMs_20	22 51 28.4	
	comp=Z,4µm,18.0s						
F33A	**5 Mile Ranch,**	**96.90**	**44**	IAMs_20	IAMs_20	22 48 53.3	
	comp=Z,7µm,19.0s						
N38A	**Joes South For**	**97.03**	**49**	IAMs_20	IAMs_20	22 53 58.8	
	comp=Z,7µm,18.0s						
C36M	**Paulatuk**	**97.12**	**16**	P	**P**	**22 09 42.1**	**+0.4**
C36M				IAmb	IAmb	22 09 46.5	
	comp=Z,26nm,1.0s						
C36M				IAMs_20	IAMs_20	22 49 20.9	
	comp=Z,5µm,20.0s						
C36M	**Paulatuk**	**97.12**	**16**	P	**P**	**22 09 42.4**	**+0.7**
	baz=226						
C36M				S	**S**	**22 21 06.3**	**+1.8**
	baz=226						
T42A	**Van Buren**	**97.22**	**53**	IAMs_20	IAMs_20	22 48 05.9	
	comp=Z,5µm,20.0s						
146A	**Union**	**97.24**	**58**	IAMs_20	IAMs_20	22 51 15.5	
	comp=Z,5µm,18.0s						
Y45A	**Yeager Farm, C**	**97.28**	**57**	IAMs_20	IAMs_20	22 48 45.7	
	comp=Z,5µm,20.0s						
FFC	**Flin Flon**	**97.32**	**34**	P	**P**	**22 09 42.6**	**-0.4**
FFC				IAmb	IAmb	22 09 48.6	
	comp=Z,52nm,1.9s						
FFC	**Flin Flon**	**97.32**	**34**	P	**P**	**22 09 42.6**	**-0.4**
FFC				pmax	pmax		
	comp=Z,52nm,2.0s						
SCIA	**State Center**	**97.46**	**48**	IAMs_20	IAMs_20	22 51 45.1	
	comp=Z,4µm,18.0s						
I37A	**Lemond, Waseca**	**98.11**	**46**	IAMs_20	IAMs_20	22 50 56.3	
	comp=Z,5µm,19.0s						
ULN	**Ulaanbaatar**	**98.26**	**318**	P	**P**	**22 09 48.2**	**+0.6**
ULN				IAmb	IAmb	22 09 50.5	
	comp=Z,89nm,2.0s						
ULN	**Ulaanbaatar**	**98.26**	**318**	P	**P**	**22 09 47.1**	**-0.5**
ULN				P	**P**	**22 09 47.1**	**-0.5**
ULN	**Ulaanbaatar**	**98.26**	**318**	*i* P	**P**	**22 09 48.0**	**+0.4**
ULN				pmax	pmax		
	comp=Z,36nm,1.7s						
ULN				MLR	MLR		
	comp=Z,3µm,17.0s						
BRAL	**Brewton**	**98.34**	**60**	IAMs_20	IAMs_20	22 52 55.8	
	comp=Z,4µm,18.0s						
LPAZ	**La Paz**	**98.47**	**111**	P	Pdif	22 09 52.5	+2.5
	comp=Z,2.1nm,0.7s,baz=280,slow=2.8,SNR=8.6						
LPAZ				PP	**PP**	**22 13 55.0**	**+4.9**
	comp=Z,1.6nm,0.9s,baz=179,slow=5.1,SNR=3.7						
	comp=Z,2.1nm,0.7s						
LPAZ	**La Paz**	**98.47**	**111**	*e*P	Pdif	22 09 54.8	+4.8
SONM	**Songino Array**	**98.66**	**318**	P	**P**	**22 09 49.6**	**+0.2**
SONM				IAmb	IAmb	22 09 52.1	
	comp=Z,71nm,1.9s						
SONM	**Songino Array**	**98.66**	**318**	P	**P**	**22 09 49.8**	**+0.4**
	comp=Z,1.8nm,0.4s,baz=147,slow=3.4,SNR=3.6						
	comp=Z,1.8nm,0.4s						
SONM	**Songino Array**	**98.66**	**318**	P	**P**	**22 09 49.6**	**+0.2**
SONM				pmax	pmax		
	comp=Z,71nm,1.9s						
A36M	**Sachs Harbour**	**98.69**	**14**	IAMs_20	IAMs_20	22 50 52.4	
	comp=Z,5µm,20.0s						
A36M	**Sachs Harbour**	**98.69**	**14**	Pdiff	Pdif	22 09 50.0	+1.2
	baz=225						
A36M				S	**S**	**22 21 19.0**	**+1.2**
	baz=225						
N41A	**Harden Midland**	**98.69**	**50**	IAMs_20	IAMs_20	22 51 17.7	
	comp=Z,7µm,19.0s						
S44A	**Carbondale**	**98.82**	**53**	IAMs_20	IAMs_20	22 51 13.4	
	comp=Z,5µm,18.0s						
ULM	**Lac du Bonnet**	**98.87**	**40**	P	**P**	**22 09 50.1**	**0.0**
ULM				IAmb	IAmb	22 10 02.1	
	comp=Z,42nm,1.6s						
ULM	**Lac du Bonnet**	**98.87**	**40**	P	Pdif	22 09 51.9	+1.8
	comp=Z,2.4nm,0.8s,baz=240,slow=7.6,SNR=4.3						
	comp=Z,2.4nm,0.8s						
ULM	**Lac du Bonnet**	**98.87**	**40**	P	**P**	**22 09 50.1**	**0.0**
ULM				pmax	pmax		
	comp=Z,42nm,1.6s						
SPMN	**Marine on St.**	**98.94**	**45**	IAMs_20	IAMs_20	22 51 47.4	
	comp=Z,4µm,18.0s						
LRAL	**Lakeview Retre**	**99.00**	**58**	IAMs_20	IAMs_20	22 52 23.3	
	comp=Z,6µm,18.0s						
T45A	**Paducah**	**99.05**	**54**	IAMs_20	IAMs_20	22 51 11.4	
	comp=Z,7µm,18.0s						
P43A	**Skaggs, Pawnee**	**99.28**	**51**	IAMs_20	IAMs_20	22 51 24.5	
	comp=Z,7µm,18.0s						
WVT	**Waverly**	**99.38**	**55**	IAMs_20	IAMs_20	22 51 12.1	
	comp=Z,7µm,18.0s						
X48A	**Hartselle**	**99.43**	**57**	IAMs_20	IAMs_20	22 51 30.6	
	comp=Z,5µm,18.0s						
Y49A	**Blount Mountai**	**99.73**	**58**	IAMs_20	IAMs_20	22 52 30.6	
	comp=Z,6µm,18.0s						
JFWS	**Jewell Farm**	**99.87**	**48**	IAMs_20	IAMs_20	22 51 49.9	
	comp=Z,5µm,19.0s						
L42A	**Oliver, Polo**	**99.97**	**49**	IAMs_20	IAMs_20	22 51 30.6	
	comp=Z,5µm,18.0s						
V48A	**Smith Brothers**	**100.02**	**56**	IAMs_20	IAMs_20	22 49 51.2	
	comp=Z,6µm,19.0s						
GTA	**Gaotai**	**100.21**	**308**	P	**Pdif**	**22 09 57.9**	**+1.4**
GTA				PP	**PP**	**22 14 04.8**	**+2.1**
GTA				SKS	**SKSac**	**22 20 35.1**	**-0.6**
GTA				pmax	pmax		
	comp=Z,18nm,2.0s						
GTA				pmax	pmax		
	comp=Z,730nm,9.0s						
GTA				LR	LR		
	comp=Z,2µm,20.0s						
GTA				LR	LR		
	comp=Z,2µm,20.4s						
GTA				LR	LR		
	comp=Z,3µm,20.0s						
T47A	**Sharon Grove**	**100.21**	**54**	IAMs_20	IAMs_20	22 49 38.0	
	comp=Z,6µm,20.0s						
G40A	**Rib Lake**	**100.69**	**46**	IAMs_20	IAMs_20	22 52 52.5	
	comp=Z,4µm,18.0s						
EYMN	**Ely**	**100.73**	**43**	IAMs_20	IAMs_20	22 53 07.6	
	comp=Z,6µm,18.0s						
ROSC	**El Rosal**	**100.91**	**89**	P	**Pdif**	**22 10 02.2**	**+1.7**
	comp=Z,4.5nm,0.4s,baz=310,slow=22,SNR=1.6						
M44A	**Midewin, Midew**	**100.92**	**50**	IAMs_20	IAMs_20	22 50 29.8	
	comp=Z,7µm,20.0s						
W50A	**Signal Mountai**	**101.02**	**57**	IAMs_20	IAMs_20	22 50 58.7	
	comp=Z,5µm,20.0s						
I42A	**Draeger Farm,**	**101.11**	**47**	IAMs_20	IAMs_20	22 52 39.8	
	comp=Z,5µm,19.0s						
K43A	**Burlington**	**101.14**	**49**	IAMs_20	IAMs_20	22 56 42.4	
	comp=Z,5µm,18.0s						
X51A	**Calhoun**	**101.18**	**57**	IAMs_20	IAMs_20	22 53 20.9	
	comp=Z,4µm,18.0s						
HQIL	**Hanson Quary C**	**101.19**	**50**	IAMs_20	IAMs_20	22 52 01.8	
	comp=Z,6µm,19.0s						
L44A	**Lake County Fo**	**101.26**	**49**	IAMs_20	IAMs_20	22 53 14.8	
	comp=Z,5µm,18.0s						
SFIN	**Lafayette**	**101.28**	**51**	IAMs_20	IAMs_20	22 52 56.5	
	comp=Z,6µm,18.0s						
ZAK	**Zakamensk**	**101.47**	**320**	*e*P	**Pdif**	**22 10 01.7**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,6.0nm,2.3s						
Y52A	**Lilburn**	**101.59**	**58**	IAMs_20	IAMs_20	22 53 40.9	
	comp=Z,6µm,18.0s						
COWI	**Conover**	**101.66**	**45**	IAMs_20	IAMs_20	22 53 03.2	
	comp=Z,5µm,18.0s						
154A	**Montrose**	**101.98**	**60**	IAMs_20	IAMs_20	22 52 00.1	
	comp=Z,4µm,20.0s						
W52A	**Murphy**	**102.07**	**57**	IAMs_20	IAMs_20	22 53 46.4	
	comp=Z,5µm,18.0s						
R49A	**Shelbyville**	**102.07**	**54**	IAMs_20	IAMs_20	22 52 46.3	
	comp=Z,7µm,18.0s						
H43A	**Windswept, Lux**	**102.07**	**47**	IAMs_20	IAMs_20	22 53 28.3	
	comp=Z,4µm,19.0s						
F42A	**Maple Grove Fa**	**102.22**	**46**	IAMs_20	IAMs_20	22 53 32.1	
	comp=Z,5µm,18.0s						
N47A	**Urbana**	**102.45**	**51**	IAMs_20	IAMs_20	22 53 25.4	
	comp=Z,7µm,18.0s						
CPUP	**Villa Florida**	**102.67**	**125**	P	**Pdif**	**22 10 10.3**	**+2.6**
	comp=Z,0.1nm,0.3s,baz=129,slow=7.6,SNR=1.4						
R50A	**Paris**	**102.70**	**54**	IAMs_20	IAMs_20	22 53 24.1	
	comp=Z,6µm,18.0s						
TZTN	**Tazewell**	**102.79**	**56**	IAMs_20	IAMs_20	22 53 26.5	
	comp=Z,6µm,18.0s						
GOMU	**GeErMu**	**102.99**	**304**	Pdif	**Pdif**	**22 10 10.4**	**+1.1**
GOMU				LR	LR		
	comp=Z,1µm,17.5s						
GOMU				LR	LR		
	comp=Z,3µm,17.9s						
GOMU				LR	LR		
	comp=Z,5µm,17.4s						
I45A	**Fountain**	**103.00**	**48**	IAMs_20	IAMs_20	22 55 04.6	
	comp=Z,5µm,18.0s						
S51A	**Beattyville**	**103.07**	**55**	IAMs_20	IAMs_20	22 52 15.9	
	comp=Z,7µm,19.0s						
V53A	**Saluda**	**103.11**	**57**	IAMs_20	IAMs_20	22 51 46.9	
	comp=Z,4µm,20.0s						
Q51A	**Peebles**	**103.65**	**53**	IAMs_20	IAMs_20	22 53 55.2	
	comp=Z,6µm,18.0s						
J47A	**Sunmer**	**103.75**	**49**	IAMs_20	IAMs_20	22 54 44.7	
	comp=Z,3µm,18.0s						
U54A	**Nelsons Funny**	**104.12**	**56**	IAMs_20	IAMs_20	22 52 27.7	
	comp=Z,4µm,19.0s						
KMSC	**Kings Mountain**	**104.12**	**58**	IAMs_20	IAMs_20	22 55 09.7	
	comp=Z,6µm,18.0s						
ACSO	**Alum Creek Sta**	**104.25**	**52**	IAMs_20	IAMs_20	22 54 57.0	
	comp=Z,7µm,18.0s						
GLMI	**Grayling**	**104.33**	**47**	IAMs_20	IAMs_20	22 53 18.0	
	comp=Z,4µm,19.0s						
V55A	**Taylorsville**	**104.41**	**57**	IAMs_20	IAMs_20	22 52 48.3	
	comp=Z,5µm,19.0s						
Q52A	**Bidwell**	**104.44**	**54**	IAMs_20	IAMs_20	22 50 01.1	
	comp=Z,6µm,22.0s						
NHSC	**New Hope**	**104.48**	**60**	IAMs_20	IAMs_20	22 55 39.8	
	comp=Z,7µm,18.0s						
Y57A	**Sumter**	**104.56**	**59**	IAMs_20	IAMs_20	22 55 24.4	
	comp=Z,4µm,18.0s						
E46A	**Sault Ste Mari**	**104.95**	**46**	IAMs_20	IAMs_20	22 58 26.3	
	comp=Z,5µm,18.0s						
Y58A	**Scranton**	**105.11**	**59**	IAMs_20	IAMs_20	22 57 01.0	
	comp=Z,5µm,18.0s						
W57A	**Gilead**	**105.18**	**58**	IAMs_20	IAMs_20	22 57 27.8	
	comp=Z,5µm,18.0s						
U56A	**King**	**105.19**	**57**	IAMs_20	IAMs_20	22 53 03.0	
	comp=Z,5µm,20.0s						
BLA	**Blacksburg**	**105.38**	**56**	IAMs_20	IAMs_20	22 58 13.2	
	comp=Z,5µm,18.0s						
Q54A	**Coxs Mills**	**105.53**	**54**	IAMs_20	IAMs_20	22 53 05.8	
	comp=Z,7µm,20.0s						
X58A	**Rowland**	**105.54**	**59**	IAMs_20	IAMs_20	22 56 42.4	
	comp=Z,3µm,18.0s						
N53A	**Lisbon**	**105.98**	**52**	IAMs_20	IAMs_20	22 55 25.8	
	comp=Z,6µm,18.0s						
V58A	**Windy Hill, Pi**	**106.04**	**57**	IAMs_20	IAMs_20	22 57 43.5	
	comp=Z,4µm,18.0s						
T57A	**Hurt**	**106.23**	**56**	IAMs_20	IAMs_20	22 53 44.6	
	comp=Z,4µm,20.0s						
Y60A	**Bolivia**	**106.30**	**59**	IAMs_20	IAMs_20	22 58 03.5	
	comp=Z,4µm,18.0s						
W59A	**Clinton**	**106.41**	**58**	IAMs_20	IAMs_20	22 58 50.4	
	comp=Z,5µm,18.0s						
S57A	**Dark Hollow, R**	**106.65**	**55**	IAMs_20	IAMs_20	22 58 28.7	
	comp=Z,5µm,18.0s						
Q56A	**Snyder Ridge,**	**106.78**	**54**	IAMs_20	IAMs_20	22 54 23.1	
	comp=Z,7µm,19.0s						
ERPA	**Erie**	**106.91**	**51**	IAMs_20	IAMs_20	22 56 21.4	
	comp=Z,4µm,18.0s						
R58B	**Mineral**	**107.53**	**55**	IAMs_20	IAMs_20	22 54 15.9	
	comp=Z,4µm,19.0s						
T59A	**Double "B" Far**	**107.55**	**57**	IAMs_20	IAMs_20	22 59 30.4	
	comp=Z,5µm,18.0s						
CBN	**Corbin Frederi**	**107.97**	**55**	IAMs_20	IAMs_20	22 56 02.6	
	comp=Z,6µm,19.0s						
V61A	**Roper**	**108.04**	**58**	IAMs_20	IAMs_20	22 59 38.5	
	comp=Z,6µm,18.0s						
SSPA	**Standing Stone**	**108.12**	**53**	IAMs_20	IAMs_20	23 10 09.5	
	comp=Z,6µm,18.0s						
SDDR	**Presa de Saban**	**108.25**	**76**	IAMs_20	IAMs_20	22 49 11.3	
	comp=Z,4µm,22.0s						
S61A	**Accomac**	**109.17**	**56**	IAMs_20	IAMs_20	23 10 27.3	
	comp=Z,6µm,19.0s						
R61A	**Willards**	**109.56**	**56**	IAMs_20	IAMs_20	22 57 18.7	
	comp=Z,5µm,18.0s						
WMQ	**Urumqi**	**110.10**	**310**	*e*PKP	**PKiKP**	**22 14 42.0**	**0.0**
WMQ				LR	LR		
	comp=Z,2µm,18.1s						
WMQ				LR	LR		
	comp=Z,2µm,18.9s						
WMQ				LR	LR		
	comp=Z,3µm,22.5s						
KOD	**Kodaikanal**	**110.66**	**273**	*e*P	PP	22 15 33.4	+13
ALBI	**Allahabad**	**110.95**	**290**	*e*P	PP	22 15 34.0	+12
LONY	**Lake Ozonia**	**111.27**	**49**	IAMs_20	IAMs_20	22 58 44.6	
	comp=Z,5µm,18.0s						
SPB	**Sao Paulo**	**111.65**	**128**	IAMs_20	IAMs_20	23 09 31.8	
	comp=Z,6µm,22.0s						
HYB	**Hyderabad**	**111.81**	**281**	*e*Pdif	**Pdif**	**22 10 47.8**	**-0.7**

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HYB                                 ePKiKP   PKiKP    22 14 46.7 +0.8
HYB                                 epPKiKP  pPKiKP   22 14 49.7 +1.6
HYB                                 eSKSac   SKSac    22 21 26.6 -1.6
J61A   Chester           112.52  51  IAMs_20 IAMs_20  23 10 43.8
       comp=Z,5µm,18.0s
ZSN    Zaisan            112.62 314 i PKIKP  PKiKP    22 14 46.3 -0.3
ZSN    Zaisan            112.62 314 ePKiKP   PKiKP    22 14 46.3 -0.3
HNH    Hanover           112.77  50  IAMs_20 IAMs_20  22 59 40.3
       comp=Z,5µm,18.0s
LGTI   Lohaghat          113.24 294 eP       PKiKP    22 14 48.4 +0.1
LGTI   Lohaghat          113.24 294 eP       PP       22 15 38.6  0.0
PTH    Pithoragarh       113.28 294 eP       PKiKP    22 14 46.7 -2.0
PTH    Pithoragarh       113.28 294 eP       PP       22 15 38.3 -0.9
ZALV   Zalesovo Beam     113.29 321  Pdiff   Pdif     22 10 54.6 +0.4
       comp=Z,0.2nm,0.2s,baz=100,slow=1.6,SNR=1.2
ZALV                                 PKiKP   PKiKP    22 14 47.9 +0.3
       comp=Z,8.5nm,0.6s,baz=129,slow=0.9,SNR=35
ZALV                                 PP      PP       22 15 40.4 +2.1
       comp=Z,5.1nm,0.9s,baz=357,slow=3.0,SNR=4.2
I62A   Tamworth          113.47  50  IAMs_20 IAMs_20  22 58 50.9
       comp=Z,5µm,19.0s
L64A   Middleborough     113.58  52  IAMs_20 IAMs_20  22 58 03.8
       comp=Z,7µm,20.0s
TULEG  Thule             114.05  14  IAMs_20 IAMs_20  23 00 03.2
       comp=Z,3µm,21.0s
G62A   West of Eustis    114.20  49  IAMs_20 IAMs_20  23 14 23.1
       comp=Z,5µm,19.0s
MK31   Makanchi Array    114.29 313c iPKIKP  PKPdf    22 14 49.8  0.0
MKAR   Makanchi Array    114.29 313  Pdiff   Pdif     22 10 59.0 +0.1
       comp=Z,0.4nm,0.7s,baz=80,slow=6.7,SNR=4.7
MKAR                                 PKP     PKPdf    22 14 49.6 -0.2
       comp=Z,2.1nm,0.5s,baz=193,slow=0.8,SNR=30
MKAR                                 PKKPbc  PKKPbc   22 25 32.2 +1.4
       comp=Z,0.6nm,0.7s,baz=259,slow=2.9,SNR=4.6
MAKZ   Makanchi          114.51 313 ⇑PKIKP   PKPdf    22 14 50.2  0.0
SABA   Saba              115.22  80  IAMs_20 IAMs_20  23 14 06.0
       comp=Z,4µm,19.0s
DDI    Dehra Dun         115.28 294 eP       PP       22 15 42.4  -11
NDI    New Delhi         115.68 292 eP       PP       22 15 42.9  -13
BDFB   Brasilia          115.72 120  PKP     PKiKP    22 14 54.6 +1.0
       comp=Z,1.3nm,0.6s,baz=73,slow=18,SNR=1.7
BDFB                                 PKKPbc  PKKPbc   22 25 24.4 -0.9
       comp=Z,3.4nm,0.9s,baz=101,slow=7.8,SNR=3.0
F64A   Sherman           115.79  48  IAMs_20 IAMs_20  23 00 35.1
       comp=Z,5µm,19.0s
KAD    Karad             115.80 280 eP       PP       22 15 44.2  -13
SHLS   Shalkode          115.95 309 ePKIKP   PKPdf    22 14 52.0 -1.2
SHLS                                e                 22 15 53.3
SHLS   Shalkode          115.95 309 ePKP     PKPdf    22 14 52.1 -1.2
SHLS                                ePP      PP       22 15 53.3 -4.2
SMLA   Simla             116.17 295 eP       PKPdf    22 14 52.8 -1.0
SMLA   Simla             116.17 295 eP       PP       22 15 43.6  -16
UZB    Uzynbulak         116.27 309 ePKIKP   PKPdf    22 14 53.2 -0.7
UZB    Uzynbulak         116.27 309 ePKP     PKPdf    22 14 53.2 -0.7
CBE    Ff, Capester      116.31  82  IAMs_20 IAMs_20  23 15 17.8
       comp=Z,3µm,20.0s
FDF    Fort de France    116.36  84  IAMs_20 IAMs_20  23 15 20.3
       comp=Z,3µm,18.0s
ABD    La Joyeuse, An    116.53  82  IAMs_20 IAMs_20  23 10 27.7
       comp=Z,3µm,22.0s
KPKS   Kokpek            116.54 309 ePKIKP   PKPdf    22 14 53.7 -0.6
KPKS                                e                 22 15 59.6
KPKS   Kokpek            116.54 309 ePKP     PKPdf    22 14 53.8 -0.6
KPKS                                ePP      PP       22 15 59.7 -2.0
SATY   Saty              116.71 308 ePKIKP   PKPdf    22 14 54.0 -0.7
SATY   Saty              116.71 308 ePKP     PKPdf    22 14 54.0 -0.7
TDK    Taldyqorghan      116.85 311 ePKIKP   PKPdf    22 14 54.3 -0.5
TDK    Taldyqorghan      116.85 311 ePKP     PKPdf    22 14 54.3 -0.5
TDK                                  LR      LR       23 07 00.9
       comp=Z,2µm,17.5s
BHK    Bhakra            116.85 295 eP       PP       22 15 46.4  -18
GDSD   La Dsirade Is     116.87  82  IAMs_20 IAMs_20  23 15 24.9
       comp=Z,3µm,20.0s
KURK   Kurchatov         116.94 317          PKPdf    22 14 54.2 -0.5
KURK   Kurchatov         116.94 317c iPKIKP  PKPdf    22 14 54.7  0.0
KURK                                 MLR     MLR
       comp=Z,4µm,19.0s
KURBB  Kurchatov Arra    117.00 317  Pdiff   Pdif     22 11 11.6 +0.8
       comp=Z,0.2nm,0.5s,baz=93,slow=3.7,SNR=1.1
KURBB                                PKP     PKPdf    22 14 54.6 -0.2
       comp=Z,6.7nm,0.6s,baz=90,slow=1.8,SNR=52
KURBB                                PP      PP       22 16 05.0 +0.5
       comp=Z,3.0nm,1.1s,baz=94,slow=2.9,SNR=4.3
KURBB                                PKKPbc  PKKPbc   22 25 22.4 +1.1
       comp=Z,0.7nm,0.2s,baz=272,slow=4.5,SNR=9.1
SCHQ   Schefferville     117.01  38  PKP     PKiKP    22 14 55.9 +1.1
       comp=Z,3.1nm,0.8s,baz=19,slow=19,SNR=2.6
TARG   Taragay, Kyrgy    117.04 307          PKPdf    22 14 56.3 +0.5
TARG   Taragay, Kyrgy    117.04 307  PKIKP   PKPdf    22 14 56.3 +0.5
DHRM   DHARAMSHALA       117.08 296 eP       PKPdf    22 14 54.8 -1.1
DHRM   DHARAMSHALA       117.08 296 eP       PP       22 15 46.9  -19
ARXS   Arharly           117.21 310 i PKIKP  PKPdf    22 14 55.2 -0.4
KSH    Kashi             118.24 304  PKP     PKiKP    22 14 58.9 +1.1
KSH                                  SS      SS       22 32 32.8 +3.0
KSH                                  AMB     AMB
       comp=Z,1µm,7.7s
KSH                                  LR      LR
       comp=Z,2µm,20.6s
KSH                                  LR      LR
       comp=Z,3µm,20.3s
KSH                                  LR      LR
       comp=Z,4µm,20.6s
JMU    Jammu             118.32 297 eP       PP       22 15 48.2  -26
BOOM   Boomskoye usch    118.48 308          PKPdf    22 14 57.9 -0.3
BOOM   Boomskoye usch    118.48 308  PKIKP   PKPdf    22 14 57.9 -0.3
TKM2   Tokmak 2          118.76 308  PKIKP   PKPdf    22 14 57.7 -1.1
SGDS   Sogindy           119.49 309 ePKP     PKPdf    22 14 59.4 -0.6
AAK    Ala-Archa         119.55 308          PKPdf    22 14 60.0 -0.3
AAK    Ala-Archa         119.55 308c iPKIKP  PKiKP    22 15 01.3 +1.0
AAK                                  MLR     MLR
       comp=Z,2µm,22.0s
AAK    Ala-Archa         119.55 308  P       PKPdf    22 15 00.5 +0.2
ARLS   Aral              119.65 307  PKIKP   PKPdf    22 15 01.2 +0.7
BTLS   Baital            119.94 311 ePKIKP   PKPdf    22 15 00.2 -0.5
BTLS                                e                 22 16 23.1
BTLS   Baital            119.94 311 ePKP     PKPdf    22 15 00.3 -0.5
BTLS                                ePP      PP       22 16 23.2 -1.9
OHH    Osh               120.75 305  PKIKP   PKPdf    22 14 59.5 -3.0
OTUK   Ortayu            121.07 314  PKIKP   PKPdf    22 15 01.5 -1.3
ILULI  Ilulissat         121.18  20  PKPdf   PKiKP    22 15 03.2 +0.8
ILULI  Ilulissat         121.18  20  PKIKP   PKiKP    22 15 03.2 +0.8
ILULI                                MLR     MLR
       comp=Z,11µm,21.0s
ARK    Arkit             121.41 307  PKIKP   PKiKP    22 15 04.8 +0.9
DRK    Karamyk           121.45 304  PKPdf   PKPdf    22 15 04.2  0.0
DRK    Karamyk           121.45 304  PKIKP   PKPdf    22 15 04.2  0.0
GUA01  Guaratinga, BA    121.58 126 eP       PKiKP    22 15 08.8 +3.9
DZA    Taraz             121.89 308 ePKIKP   PKPdf    22 15 04.0 -0.6
DZA    Taraz             121.89 308 ePKP     PKPdf    22 15 04.0 -0.6
BVA0   Borovoye Array    121.92 320 i PKIKP  PKPdf    22 15 03.9 -0.4
BVAR   Borovoye Array    121.92 320  PKP     PKPdf    22 15 04.3 +0.1
       comp=Z,14nm,0.6s,baz=97,slow=1.5,SNR=93
BVAR                                 PKKPbc  PKKPbc   22 25 04.6 +1.3
       comp=Z,0.4nm,0.6s,baz=2.6,slow=3.2,SNR=2.8
BRVK   Borovoye          121.98 320          PKPdf    22 15 04.4 +0.1
BRVK   Borovoye          121.98 320c iPKIKP  PKPdf    22 15 04.7 +0.4
BRVK                                 pmax    pmax
       comp=Z,42nm,1.7s
BRVK                                 MLR     MLR
       comp=Z,3µm,22.0s
TRKS   Terek-Say         122.02 306  PKIKP   PKiKP    22 15 06.0 +0.8
BTK    Batken            122.23 305          PKPdf    22 15 05.4  0.0
BTK    Batken            122.23 305  PKIKP   PKPdf    22 15 05.4  0.0
KK31   Karatay Array     122.49 308 i PKIKP  PKPdf    22 15 05.4 -0.3
KKAR   Karatay Array     122.49 308          PKPdf    22 15 05.5 -0.1
KKAR   Karatay Array     122.49 308          PKPdf    22 15 05.3 -0.4
KKAR   Karatay Array     122.49 308  PKIKP   PKPdf    22 15 05.3 -0.4
KKAR                                                  22 15 05.6
SPITS  Spitsbergen Ar    122.76 357  PKP     PKiKP    22 15 06.2 +0.8
       comp=Z,16nm,0.8s,baz=111,slow=4.6,SNR=6.9
SPITS  Spitsbergen Ar    122.76 357  PKIKP   PKPdf    22 15 04.8 -0.4
SPB2   Spitsbergen Ar    122.76 357          PKiKP    22 15 06.6 +1.2
IUG    Iuzhnay           122.85 307 ePKIKP   PKPdf    22 15 05.7 -0.8
IUG                                 e                 22 16 42.9
IUG    Iuzhnay           122.85 307 ePKP     PKPdf    22 15 05.8 -0.8
IUG                                 ePP      PP       22 16 43.0 -2.2
SUMG   Summit            122.97  15          PKPdf    22 15 06.5 +0.2
SUMG   Summit            122.97  15  PKIKP   PKPdf    22 15 06.5 +0.2
SUMG                                 MLR     MLR
       comp=Z,19µm,22.0s
SUMG   Summit            122.97  15 i P      PKiKP    22 15 07.4 +1.0
BRLS   Borolday          122.98 308 ePKIKP   PKPdf    22 15 06.3 -0.4
BRLS   Borolday          122.98 308 ePKP     PKPdf    22 15 06.3 -0.4
DAG    Danmarks Havn     123.06   7  PKP     PKPdf    22 15 05.1 -0.7
DAG    Danmarks Havn     123.06   7  PKIKP   PKPdf    22 15 05.7 -0.1
CHM    Chimkent          123.17 307 ePKIKP   PKPdf    22 15 06.4 -0.6
CHM    Chimkent          123.17 307 ePKP     PKPdf    22 15 06.5 -0.6
KBU    Kabul Universi    123.30 298  PKP     PKiKP    22 15 12.1 +4.1
KBL    Kabul             123.38 298          PKPdf    22 15 08.1 +0.2
KBL    Kabul             123.38 298  P       PKiKP    22 15 09.1 +1.0
       SNR=26
KBL    Kabul             123.38 298  PKIKP   PKPdf    22 15 08.1 +0.2
SIMJ   Simiganj          123.60 303          PKPdf    22 15 07.9 -0.2
DZET   Dzherino          123.74 303  PKIKP   PKPdf    22 15 09.1 +0.7
SUR    Sutherland        124.82 195  PKPdf   PKPdf    22 15 10.4 -0.5
SVE    Sverdlovsk        126.59 326 i PKIKP  PKPdf    22 15 13.8 +0.7
SVE                                  pmax    pmax
       comp=Z,47nm,1.0s
SVE                                  MLR     MLR
       comp=Z,4µm,21.0s
SVE                                  MLR     MLR
       comp=E,3µm,21.0s
NRS    Narsarsuaq        126.71  28  PKIKP   PKiKP    22 15 14.2 +0.6
BOSA   Boshof            127.04 201  PKPdf   PKPdf    22 15 13.9 -1.2
BOSA   Boshof            127.04 201  PKP     PKPdf    22 15 15.7 +0.6
       comp=E,7.5nm,1.0s,baz=172,slow=2.8,SNR=9.0
BOSA   Boshof            127.04 201  PKIKP   PKPdf    22 15 13.9 -1.2
ARTI   Arti              127.91 326          PKPdf    22 15 15.6  0.0
ARTI   Arti              127.91 326 i PKIKP  PKPdf    22 15 16.5 +0.9
ARTI                                                  22 17 15.6
ARTI                                 PPP     PPP      22 19 59.1
ARTI                                                  22 22 27.5
ARTI                                 SP      SP       22 27 24.7 +2.3
ARTI                                 SSS     SSS      22 39 14.2
ARTI                                 MLR     MLR
       comp=Z,5µm,21.0s
SCO    Scoresbysund      128.04  11 i P      PKPdf    22 15 16.4 +1.0
AB31   Akbulak array     129.06 317          PKPdf    22 15 18.7 +0.7
AB31   Akbulak array     129.06 317 i PKIKP  PKPdf    22 15 19.0 +1.0
ABKAR  Akbulak array     129.06 317          PKPdf    22 15 18.8 +0.8
MAKGR  Makgori           129.76 202  PKPdf   PKPdf    22 15 20.8 +0.5
AKTO   Aktyubinsk        129.97 319  PKIKP   PKPdf    22 15 20.8 +1.1
LBTB   Lobatse           130.20 204  PKPdf   PKPdf    22 15 21.2  0.0
LBTB   Lobatse           130.20 204  PKIKP   PKPdf    22 15 21.2  0.0
ARCES  ARCESS Array B    130.22 351  PKP     PKiKP    22 15 21.4 +0.9
       comp=Z,6.1nm,0.6s,baz=355,slow=1.0,SNR=26
JLN    Jalan Bani Buh    130.42 282  P       PKPdf    22 15 21.7 +0.3
APA    Apatity           130.51 346⇓iPKIKP   PKPdf    22 15 18.9 -1.3
APA                                 i                 22 22 32.0
APA                                 i PS     PS       22 27 38.0 -8.8
APA                                  pmax    pmax
       comp=Z,9.0nm,1.1s
JETT   Jettan, Norway    130.84 353 ePKPdf   PKPdf    22 15 18.8 -2.1
JETT                                ePP      PP       22 17 37.4 +0.7
TRO    Tromso            130.93 354  PKIKP   PKPdf    22 15 20.0 -0.9
TRO    Tromso            130.93 354 ePdif    Pdif     22 12 11.7 -0.5
TRO                                 ePKPdf   PKPdf    22 15 19.5 -1.4
TRO                                 ePP      PP       22 17 34.7 -2.4
TRO                                  IVMs_BB IVMs_BB  23 05 31.7
       comp=Z,723nm,20.4s
SKOMA  Sekoma            131.26 202 i P      PKiKP    22 15 25.1 +1.0
KIRV   Kirov             131.33 331c iPKIKP  PKPdf    22 15 22.2 +0.2
MHTO   MHTO              131.55 280  P       PKPdf    22 15 23.9 +0.3
LPHEP  Lephephe          131.59 205  PKPdf   PKPdf    22 15 24.6 +0.7
MREMI  Moremi            131.65 207  PKPdf   PKPdf    22 15 25.0 +1.0
JMDO   Jabal Madar       131.65 282  P       PKiKP    22 15 25.3 +0.5
SMDO   Samad             131.80 282  P       PKiKP    22 15 25.9 +0.8
       SNR=7.5
SGF    Sodankyl          131.96 349  PKIKP   PKiKP    22 15 24.6 +0.6
LKGWB  Lokgwabe          132.53 199  PKPdf   PKPdf    22 15 25.9 +0.2
BSY    Bisya             132.53 282  P       PKPdf    22 15 26.2 +0.7
LOF    Lofoten           132.83 356 ePKPdf   PKPdf    22 15 23.4 -1.2
LOF                                 eSS      SS       22 35 31.0 +0.9
MSF    Maaselka          132.84 347  PKIKP   PKPdf    22 15 25.7 +1.0
STEI   Steigen           132.91 355 ePKPdf   PKPdf    22 15 24.7 -0.1
STEI                                 IVMs_BB IVMs_BB  23 05 30.8
       comp=Z,497nm,20.5s
SOHO   SOHO              133.32 284  P       PKPdf    22 15 27.6 +0.8
SOHO   SOHO              133.32 284 i P      PKPdf    22 15 26.5 -0.3
       SNR=11
FAUS   Fauske            133.44 355 ePKPdf   PKPdf    22 15 25.9 +0.2
FAUS                                ePP      PP       22 17 51.3 -2.0
FAUS                                eSS      SS       22 35 37.0 -0.5
FAUS                                 IVMs_BB IVMs_BB  23 05 43.0
       comp=Z,574nm,26.2s
MDH    Madha             133.67 285 i P      PKPdf    22 15 27.0 -0.5
       SNR=5.8
DMTO   DMTO              133.70 275  P       PKiKP    22 15 29.9 +0.9
UOSS   Minazif           133.72 285  PKPdf   PKPdf    22 15 27.5 -0.1
UOSS   Minazif           133.72 285  P       PKPdf    22 15 28.6 +1.0
UOSS   Minazif           133.72 285 i P      PKPdf    22 15 26.7 -0.9
       SNR=5.6
HATD   Hatta, Dubai      133.77 285  P       PKPdf    22 15 28.8 +1.1
       SNR=7.3
HATD   Hatta, Dubai      133.77 285 i P      PKPdf    22 15 27.9 +0.2
       SNR=6.5
MSFE   Esma-Masafi       133.80 285  P       PKPdf    22 15 28.8 +1.0
MASF   Masafi            133.80 285  P       PKiKP    22 15 29.4 +0.3
ASHO   Ashiyiah          133.82 284  P       PKPdf    22 15 28.6 +0.7
SHME   Shamm             133.88 286  P       PKiKP    22 15 29.7 +0.6
SHME   Shamm             133.88 286  P       PKPdf    22 15 28.8 +0.9
KOOLE  Kule              133.89 198 i P      PKPdf    22 15 28.9 +0.7
KLMR   Klimovskoe        133.92 338 ePKIKP   PKPdf    22 15 27.2 +0.4
KLMR                                e                 22 17 56.9
KLMR                                 SSS     SSS      22 40 43.9
KLMR                                 pmax    pmax
       comp=Z,44nm,1.6s
KLMR                                 MLR     MLR
       comp=Z,18µm,19.0s
SOOWA  Sowa              133.95 207 i P      PKiKP    22 15 30.6 +1.0
ALNE   Al Ain            134.03 283 i P      PKPdf    22 15 28.8 +0.5
       SNR=6.3
OUL    Oulu              134.19 348  PKIKP   PKPdf    22 15 28.0 +0.8
NAZ    Nazwa, Dubai      134.21 285  P       PKPdf    22 15 29.6 +1.1
VAGH   Vaagaholmen       134.24 356 ePKPdf   PKPdf    22 15 26.6 -0.7
VAGH                                ePP      PP       22 17 58.5 +0.2
VAGH                                 IVMs_BB IVMs_BB  23 06 54.2
       comp=Z,655nm,21.5s
FAQ    Al Faqa, Dubai    134.25 284  P       PKiKP    22 15 30.7 +0.8
UMZA   Um Al Zommool     134.39 281  P       PKPdf    22 15 29.2 +0.3
ASUD   Al Ashush, Dub    134.47 284  P       PKPdf    22 15 30.3 +1.3
ASUD   Al Ashush, Dub    134.47 284  P       PKPdf    22 15 30.1 +1.1
STOK   Stokkvaagen       134.65 356 ePKPdf   PKPdf    22 15 27.9 -0.2
STOK                                ePP      PP       22 17 59.3 -1.6
MOR8   Moi Rana          134.71 355 ePKPdf   PKPdf    22 15 27.0 -1.2
MOR8                                ePP      PP       22 18 00.5 -0.8
MOR8                                 IVMs_BB IVMs_BB  23 07 42.8
       comp=Z,578nm,25.6s
LEIR   Leirfjorden       134.86 356 ePKPdf   PKPdf    22 15 26.4 -2.0
ABTO   Aybut             135.16 274  P       PKPdf    22 15 31.3 +0.8
BELG   Belogornoye       135.28 325c iPKIKP  PKPdf    22 15 30.3 +0.7
MZR    Muzera            135.97 282  P       PKiKP    22 15 34.2 +0.7
       SNR=5.2
MZR    Muzera            135.97 282 i P      PKPdf    22 15 32.7 +0.8
       SNR=12
NSS    Namsos            136.51 356 ePKPdf   PKPdf    22 15 28.9 -2.7
GHWR   Ruwais            136.63 283  P       PKiKP    22 15 35.3 +0.6
JRN    Qarnain Island    136.75 284  P       PKPdf    22 15 34.8 +1.6
FIA1   FINESS Array S    137.40 346          PKPdf    22 15 33.5 +0.2
FINES  FINESS Array B    137.40 346  PKhKP   PKPpre   22 15 22.2
       comp=Z,2.8nm,0.7s,baz=67,slow=2.0,SNR=6.8
FINES                                PKP     PKPdf    22 15 32.6 -0.7
       comp=Z,6.1nm,0.9s,baz=48,slow=2.1,SNR=10
FINES                                PP      PP       22 18 19.3 +1.0
       comp=Z,1.7nm,0.9s,baz=29,slow=6.9,SNR=1.7
LSZ    Lusaka            137.62 213  PKPdf   PKPdf    22 15 35.3  0.0
LSZ    Lusaka            137.62 213  PKIKP   PKPdf    22 15 35.3  0.0
LSZ                                  MLR     MLR
       comp=Z,11µm,22.0s
MOS    Moscow            138.17 333 i PKIKP  PKPdf    22 15 33.9 -1.0
MOS                                  pmax    pmax
       comp=Z,45nm,1.4s
SHMA   Al-Shehemyia      138.51 285  P       PKiKP    22 15 38.8 +0.2
MOL    Molde             138.65 359 ePKPdf   PKPdf    22 15 34.7 -0.8
MOL                                 eSS      SS       22 36 36.8 -2.8
VRH    Novokhopyorsk     139.04 326 ePKIKP   PKPdf    22 15 35.4 -1.2
VRH                                  pmax    pmax
       comp=Z,50nm,1.8s
OBN    Obninsk           139.04 333  PKPdf   PKPdf    22 15 36.7 +0.2
OBN    Obninsk           139.04 333c iPKIKP  PKPdf    22 15 36.4 -0.1
OBN                                 i                 22 15 44.3
OBN                                 i                 22 18 30.9
OBN                                 ePPP     PPP      22 21 34.6
OBN                                 eSS      SS       22 36 38.5 -6.5
OBN                                  pmax    pmax
       comp=Z,25nm,1.0s
AKN    Aaknes            139.05 359 ePP      PP       22 18 26.4 -2.1
MAK    Makhachkala       139.10 312 ePKIKP   PKPdf    22 15 32.9 -4.1
MAK                                 e                 22 18 25.7
MAK                                 eSSS     SSS      22 41 52.4
MAK                                  pmax    pmax
       comp=Z,155nm,1.7s
DOMB   Dombas            139.13 358 ePP      PP       22 18 28.0 -1.0
DOMB                                eSS      SS       22 36 41.8 -3.7
AKT    Akhty             139.39 310 ePKIKP   PKPdf    22 15 35.5 -2.3
AKT                                 e                 22 18 28.1
AKT                                 ePPP     PPP      22 21 31.1
AKT                                  pmax    pmax
       comp=Z,44nm,1.8s
FOO    Floro             139.64   1 ePKPdf   PKPdf    22 15 32.3 -5.1
FOO                                 ePP      PP       22 18 33.1 +1.1
VSU    Vasula            139.83 343c iPKIKP  PKPdf    22 15 37.0 -0.8
NB2    NORSAR Subarra    140.02 356  PKP     PKPdf    22 15 30.1 -8.1
       comp=Z,9.7nm,1.0s,baz=10,slow=3.2
NB2    NORSAR Subarra    140.02 356  PKPab   PKPdf    22 15 30.1 -8.1
       baz=10,slow=3.2
NOA    NORSAR Array B    140.02 356  PKhKP   PKPpre   22 15 29.9
       comp=Z,1.3nm,0.7s,baz=6.3,slow=4.0,SNR=18
VORR   Voronezh          140.05 328  PKIKP   PKPdf    22 15 36.1 -2.4
VORR                                 pmax    pmax
       comp=Z,124nm,1.4s
HYA    Hoyanger          140.07 360 ePKPdf   PKPdf    22 15 30.8 -7.4
HYA                                 eSS      SS       22 36 56.8 +0.4
SUE    Sulen             140.18   1 ePKPdf   PKPdf    22 15 34.7 -3.7
SUE                                 ePP      PP       22 18 30.9 -4.4
SUE                                 eSS      SS       22 36 58.6 +1.0
NC602  NORSAR Array S    140.30 356 ePP      PP       22 18 36.4 +0.2
NC602                               eSS      SS       22 37 01.7 +2.6
VSR    Storozhevoye      140.34 327 ePKIKP   PKPdf    22 15 38.9 -0.1
VSR                                  pmax    pmax
       comp=Z,60nm,1.8s
VORD   Divnogorie        140.43 327 ePKIKP   PKPdf    22 15 39.5 +0.3
VORD                                 pmax    pmax
       comp=Z,20nm,1.0s
SKAR   Skarslia          140.52 358 ePKPdf   PKPdf    22 15 36.6 -2.5
HFS    Hagfors           140.71 354  PKhKP   PKPpre   22 15 32.0
       comp=Z,6.3nm,0.7s,baz=68,slow=4.0,SNR=19
KIBK   Kibwezi           140.73 237  PKP     PKPdf    22 15 41.2 +0.1
ASK    Askoy             140.76   0 ePP      PP       22 18 37.7 -1.2
BER    Bergen            140.86   0 ePKPdf   PKPdf    22 15 35.4 -4.3
BER                                 ePP      PP       22 18 38.3 -1.2
BER                                 eSS      SS       22 37 06.7 +1.2
OSL    Oslo              141.15 356 ePKPdf   PKPdf    22 15 38.8 -1.4
GOF    Gofitskoye        141.30 317cePKIKP   PKPdf    22 15 41.8 +0.8
ODD1   Odda              141.33 359 ePP      PP       22 18 42.5 +0.1
KONO   Kongsberg         141.50 357 ⇑PKIKP   PKPdf    22 15 36.6 -4.2
KONO   Kongsberg         141.50 357 ePKPdf   PKPdf    22 15 38.0 -2.8
KONO                                eSS      SS       22 37 12.7 -0.4
NCK    Nalchik           141.58 314⇑ePKIKP   PKPdf    22 15 41.2 -0.3
BLS5   Blasjo            141.82 359 ePKPdf   PKPdf    22 15 35.8 -5.7
KBZ    Khabaz            141.95 315  PKhKP   PKPpre   22 15 37.8
       comp=Z,2.5nm,0.7s,baz=92,slow=2.7,SNR=7.6
GNI    Garni             141.95 309c iPKHKP  PKPpre   22 15 36.1
KIV    Kislovodsk        142.00 315 ⇓P       PKiKP    22 15 45.4 +0.1
KIV    Kislovodsk        142.00 315 i PKIKP  PKPdf    22 15 44.1 +1.7
KIV                                 e                 22 18 43.7
KIV                                 eSS      SS       22 37 16.7 -4.3
KIV                                 eSSS     SSS      22 42 36.7
KIV                                  pmax    pmax
       comp=Z,8.0nm,1.0s
KIV    Kislovodsk        142.00 315 i P      PKPdf    22 15 40.8 -1.6
       SNR=10.0
SHA1   Shidzhatmaz       142.10 315d iPKIKP  PKPdf    22 15 38.1 -4.7
ERBR   Yeremizino-Bor    142.60 319 i PKIKP  PKPdf    22 15 41.0 -2.3
ERBR                                e                 22 15 48.4
ERBR                                 pmax    pmax
       comp=Z,45nm,1.3s
MNK    Minsk             142.80 339 i PKIKP  PKPdf    22 15 39.4 -3.9
MNK                                 i                 22 22 51.8
MNK                                 i SS     SS       22 37 26.4 -2.3
MNK                                 i SSS    SSS      22 42 48.8
MNK                                  pmax    pmax
       comp=N,6.0nm,0.6s
MNK                                  pmax    pmax
       comp=E,8.0nm,0.7s
MNK                                  pmax    pmax
       comp=Z,22nm,0.8s
NACGM  Naroch            142.83 340 ePKP     PKPdf    22 15 41.0 -2.3
       comp=Z,13nm,0.8s,baz=34
SNART  Snartemo          142.90 359 ePKPdf   PKPdf    22 15 42.5 -0.8
SNART  Snartemo          142.90 359 i P      PKPdf    22 15 40.7 -2.7
HOMB   Homborsund        142.93 358 ePKPdf   PKPdf    22 15 38.5 -4.9
HOMB   Homborsund        142.93 358 i P      PKPdf    22 15 40.4 -3.0
LABN   Labinsk           142.96 317 i PKIKP  PKPdf    22 15 45.3 +1.4
LABN                                e                 22 15 48.8
LABN                                 pmax    pmax
       comp=Z,26nm,1.3s
BORU   Boraas            143.26 354 i P      PKPab    22 15 41.0 +1.2
RAYN   Ar Rayn           143.32 281          PKPbc    22 15 43.4 +1.1
RAYN   Ar Rayn           143.32 281 ⇓PKIKP   PKPab    22 15 42.5 +1.3
RAYN   Ar Rayn           143.32 281 i P      PKPab    22 15 42.3 +1.1
       SNR=14
ONAU   Onsala            143.58 354 i P      PKPab    22 15 41.0 -0.1
GEVA   Gevas             143.75 306          PKPbc    22 15 44.9 +1.5
OVD    Ostervraa, Den    143.79 356 i P      PKPbc    22 15 43.3 +0.8
OVD    Ostervraa, Den    143.79 356 i P      PKPab    22 15 42.6 +0.8
FABU   Falkenberg        143.89 354 i P      PKPab    22 15 42.2 -0.1
VSLR   Vesyoloye         143.94 316d iPKIKP  PKPbc    22 15 44.6 +1.1
LAWE   Loch Awe, Argy    144.01  11 eP       PKPbc    22 15 44.0 +0.8
INVG   Invergeldie, C    144.07   9 eP       PKPab    22 15 43.0 +0.1
SOC    Sochi             144.09 316c iPKIKP  PKPab    22 15 43.7 +0.2
SOC                                 e                 22 18 56.2
SOC                                 eSSS     SSS      22 43 03.5
SOC                                  pmax    pmax
       comp=Z,41nm,1.3s
BLEU   Blekinge          144.17 350 i P      PKPab    22 15 43.1 -0.2
DEL    Delary            144.28 352 i P      PKPab    22 15 43.9 +0.1
GURO   Guroymak-BITLI    144.45 307          PKPab    22 15 45.5 +0.4
PGBU   Glenifferbraes    144.60  10 eP       PKPab    22 15 45.0  0.0
SUW    Suwalki           144.68 342 ePKP     PKPab    22 15 45.7 +0.4
SUW    Suwalki           144.68 342          PKPab    22 15 45.4 +0.1
SUW    Suwalki           144.68 342  PKIKP   PKPab    22 15 45.4 +0.1
SUW                                  MLR     MLR
       comp=Z,14µm,22.0s
EDI    Edinburgh         144.69   9 eP       PKPab    22 15 45.8 +0.6
ESY    Stoneypath        144.77   8 eP       PKPbc    22 15 46.8 +1.1
ANN    Anapa             144.92 320 i PKIKP  PKPab    22 15 45.8 -0.7
ANN                                 e                 22 15 52.3
ANN                                 eSS      SS       22 37 49.1 -5.0
ANN                                  pmax    pmax
       comp=Z,265nm,1.2s
CLGH   Cloghs, Cushen    145.00  12 eP       PKPdf    22 15 47.6 +0.4
KOPT   Kop Dagi          145.06 310  PKPdf   PKPbc    22 15 47.9 +0.4
LUNU   Lund              145.16 352 i P      PKPbc    22 15 46.5 -0.4
COP    Copenhagen        145.22 353  PKIKP   PKPdf    22 15 48.3 +0.8
COP    Copenhagen        145.22 353 i P      PKPbc    22 15 47.5 +0.4
COP    Copenhagen        145.22 353 i P      PKPbc    22 15 46.0 -1.1
EKA    Eskdalemuir Ar    145.26   9  PKPbc   PKPdf    22 15 48.5 +1.0
       comp=Z,42nm,0.7s,baz=335,slow=3.0,SNR=80
ESK    Eskdalemuir       145.27   9          PKPbc    22 15 46.7 -0.6
ESK    Eskdalemuir       145.27   9 eP       PKPbc    22 15 47.7 +0.4
ESK    Eskdalemuir       145.27   9  PKIKP   PKPbc    22 15 46.7 -0.6
AKASG  Malin Array Be    145.30 334          PKPbc    22 15 47.0 -0.5
AKASG  Malin Array Be    145.30 334  PKPbc   PKPbc    22 15 47.4 -0.2
       comp=Z,71nm,0.6s,baz=42,slow=4.2,SNR=251
AKASG  Malin Array Be    145.30 334  PKIKP   PKPbc    22 15 47.0 -0.5
AKBB   Malin Array Si    145.30 334          PKPbc    22 15 47.2 -0.4
AKBB   Malin Array Si    145.30 334c iPKIKP  PKPbc    22 15 46.8 -0.7
NEWG   New Galloway      145.30  10 eP       PKPbc    22 15 47.5 +0.1
KIEV   Kiev              145.31 334          PKPbc    22 15 47.3 -0.3
KIEV   Kiev              145.31 334 ⇑P       PKPab    22 15 48.4 +0.7
KIEV   Kiev              145.31 334  PKIKP   PKPbc    22 15 47.3 -0.3
KIEV                                 MLR     MLR
       comp=Z,15µm,19.0s
KIEV   Kiev              145.31 334 i P      PKPbc    22 15 47.3 -0.3
       SNR=59
GAL1   Galloway          145.46  11 eP       PKPbc    22 15 48.3 +0.4
SSRD   Sdr. Stenderup    145.66 356 i P      PKPdf    22 15 47.7 -0.5
SSRD   Sdr. Stenderup    145.66 356 i P      PKPab    22 15 50.3 +1.5
MARD   Mardin            145.78 306  PKPbc   PKPdf    22 15 49.4 +0.1
EDMD   Edmundbyers       145.92   8 eP       PKPdf    22 15 49.6 +0.9
IOMK   Kirk Michael      146.07  11 eP       PKPdf    22 15 49.8 +0.8
WIM    Isle of Man       146.16  11 eP       PKPab    22 15 51.4 +0.6
LODK   Lodwar            146.28 242          PKPdf    22 15 51.9 +1.1
LODK   Lodwar            146.28 242  P       PKPbc    22 15 53.0 +1.2
       SNR=76
GDLE   Glaisdale, N Y    146.46   7⇑eP       PKPdf    22 15 50.5 +0.9
DSB    Dublin            146.67  13  PKP     PKPbc    22 15 51.7 +0.1
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DSB   Dublin           146.67  13  PKPbc     PKPbc   22 15 52.0 +0.3
SIM   Simferopol'      146.79 322cePKP2      PKPab   22 15 53.7 +0.2
SIM                              e                   22 19 24.0
SIM                              ePS                 22 32 01.0
SIM                                pmax      pmax
      comp=Z,91nm,0.6s
SIM                                pmax      pmax
      comp=Z,9µm,2.7s
SIM                                pmax      pmax
      comp=Z,400nm,15.0s
HPK   Haverah Park     146.81   8 eP         PKPab   22 15 53.6 +0.3
GKP   Gorka Klasztor   146.82 347 ePKP       PKPbc   22 15 52.1  0.0
R9F13 Warsaw-Wawer     146.84 343 ePKPdf     PKPbc   22 15 52.6 +0.4
R9F13                             ePKPab     pPKPab  22 15 54.8 -0.8
R9F13                             eSKS       SKSdf   22 22 48.9  -10
WPS   Cemaes, Angles   146.90  11 eP         PKPdf   22 15 51.8 +1.4
WME   Myndd Eilian     146.94  11 eP         PKPbc   22 15 53.3 +0.9
WLF1  Llynfaes         147.03  11 eP         PKPdf   22 15 51.7 +1.1
BSEG  Bad Segeberg     147.15 355 ePKPbc     PKPab   22 15 54.6  0.0
      baz=11,slow=2.4
BEL   Belsk            147.29 343 ePKP       PKPdf   22 15 52.7 +1.6
BEL   Belsk            147.29 343  PKP2      PKPbc   22 15 54.0 +0.6
LBWR  Ladybower, Pea   147.34   8 eP         PKPdf   22 15 51.6 +0.4
MBAR  Mbarara          147.41 231  PKPbc     PKPdf   22 15 54.2 +1.5
MBAR  Mbarara          147.41 231  P         PKPbc   22 15 55.8 +0.6
MBAR  Mbarara          147.41 231  PKP2      PKPdf   22 15 54.2 +1.5
LMK   Market Rasen     147.46   7 eP         PKPbc   22 15 53.4 -0.5
STNC  Stoke            147.58   9 eP         PKPbc   22 15 55.0 +0.8
SORM  Soroca           147.61 331 ⇑P         PKPdf   22 15 52.8 +1.1
SORM  Soroca           147.61 331 ⇑PKP2      PKPdf   22 15 52.8 +1.1
FOEL  Foel Wylfa       147.62  10 eP         PKPdf   22 15 52.0 +0.3
DIKM  Dikmen           147.91 316 ⇓P         PKiKP   22 15 57.9 +0.5
GORT1 Trebel           147.99 354 ePKPbc     PKiKP   22 15 57.1  0.0
      baz=11,slow=2.4
HLM1  Long Mynd        148.03  10 eP         PKPdf   22 15 53.2 +0.8
PURM  Purcari          148.05 328 ⇑P         PKPbc   22 15 56.6 +0.9
KIS   Kishinev         148.23 329 ePKP       PKPdf   22 15 52.6 -0.2
      comp=Z,680nm,3.2s
KIS   Kishinev         148.23 329 ePP        PP      22 19 21.0 -3.1
KIS   Kishinev         148.23 329 ⇑P         PKiKP   22 15 58.7 +0.8
KIS   Kishinev         148.23 329 ePKIKP     PKPdf   22 15 52.6 -0.2
KIS                               i                  22 15 57.0
KIS                               e                  22 19 21.0
KIS                                pmax      pmax
      comp=Z,680nm,3.2s
RSBS  Rosebush, Pemb   148.23  12 eP         PKPdf   22 15 53.2 +0.5
MILM  Milestii Mici    148.29 329 ⇑P         PKPbc   22 15 56.2 -0.1
MILM  Milestii Mici    148.29 329 i PKIKP    PKPdf   22 15 52.6 -0.3
MILM                              i                  22 15 57.0
MILM                               pmax      pmax
      comp=Z,68nm,3.2s
DRBR  Darabani         148.31 333 ⇓P         PKiKP   22 15 58.2 +0.2
RETH  Rethem/Aller,    148.41 356 ePKPbc     PKiKP   22 15 58.2 +0.2
      baz=11,slow=2.4
MCH1  Michaelchurch    148.51  10 eP         PKPdf   22 15 54.2 +1.1
BZK   Bozkurt          148.54 318 ⇑P         PKiKP   22 15 59.1 +0.4
NRDL  Niedersach Rie   148.59 355 ePKPbc     PKiKP   22 15 58.5 +0.1
      baz=11,slow=2.4
KWP   Kalwaria Pacla   148.63 339 ePKP       PKiKP   22 15 58.8 +0.2
KWP   Kalwaria Pacla   148.63 339  PKP2      PKPdf   22 15 55.8 +2.3
FLTG  Flechtingen      148.65 354 ePKPbc     PKPbc   22 15 58.4 +1.3
      baz=11,slow=2.4
IASR  Iasi             148.67 331 ⇓P         PKPbc   22 15 57.9 +0.6
MONM  Monmouth         148.69  10 eP         PKPdf   22 15 54.1 +0.7
BNN   Bunyan           148.82 311            PKPdf   22 15 53.2 -1.1
STRD  Stroud           148.86  10 eP         PKPdf   22 15 54.6 +0.9
ASSE  Asse, Remlinge   148.91 354 ePKPbc     PKiKP   22 15 59.2 +0.2
      baz=11,slow=2.4
IBBN  Ibbenburen       148.92 358 ePKPbc     PKiKP   22 15 59.5 +0.4
      baz=11,slow=2.4
VASR  Vaslui           148.97 330 ⇑P         PKPdf   22 15 55.3 +1.2
OJC   Ojcow            149.01 342 ePKP       PKPdf   22 15 55.4 +1.3
OJC   Ojcow            149.01 342            PKPdf   22 15 53.5 -0.6
OJC   Ojcow            149.01 342  PKIKP     PKPdf   22 15 53.5 -0.6
OJC   Ojcow            149.01 342 ePKPdf     PKPdf   22 15 55.4 +1.3
      baz=16,slow=1.4
OJC                               ePKPbc     pPKPbc  22 15 59.4 -0.9
      baz=11,slow=2.4
PRAR  RASCA            149.13 332 ⇓P         PKPdf   22 15 56.2 +1.8
SWN1  Swindon          149.17   9 eP         PKPdf   22 15 51.2 -3.0
ILGA  Ilgaz            149.21 316            PKPdf   22 15 54.9  0.0
CIDE  Kastamonu/Cide   149.25 318 ⇓P         PKPdf   22 15 55.7 +1.0
STHS  Stebnicka Huta   149.30 340 ePKP       PKPbc   22 15 58.1 -0.8
STHS                              e                  22 16 01.1
KSP   Ksiaz            149.30 347 ePKP       PKPdf   22 15 56.0 +1.5
KSP   Ksiaz            149.30 347 ePKPdf     PKPdf   22 15 56.3 +1.8
      baz=16,slow=1.4
KSP                               ePKPbc     PKiKP   22 16 00.7 +0.7
      baz=11,slow=2.4
BIR   Birlad           149.32 330 ⇓P         PKiKP   22 16 01.1 +0.9
BIR   Birlad           149.32 330 ⇓PKP2      PKiKP   22 16 01.1 +0.9
BURAR Bucovina Array   149.36 334            PKPdf   22 15 56.5 +1.7
BURAR Bucovina Array   149.36 334 ⇑P         PKPbc   22 15 59.2  0.0
BURAR Bucovina Array   149.36 334 ⇑PKP2      PKPbc   22 15 59.2  0.0
KOLS  Kolonicke sedl   149.38 339 ePKIKP     PKPdf   22 15 56.3 +1.6
KOLS                              e                  22 16 05.8
KOLS  Kolonicke sedl   149.38 339 ePKP       PKPdf   22 15 56.3 +1.6
KOLS                              e                  22 16 05.8
VLDR  Vladesti         149.41 329 ⇓P         PKPdf   22 15 56.2 +1.4
CLL   Collm            149.44 351            PKPdf   22 15 56.3 +1.6
CLL   Collm            149.44 351  PKHKP     PKPdf   22 15 56.3 +1.6
CLL                                MLR       MLR
      comp=Z,18µm,21.0s
CLL   Collm            149.44 351 ePKPdf     PKPdf   22 15 56.4 +1.7
      baz=16,slow=1.4
CLL                               ePKPbc     pPKPbc  22 16 00.6 -0.7
      baz=11,slow=2.4
CLL   Collm            149.44 351 ePKPdf     PKPdf   22 15 56.0 +1.3
      comp=Z,87nm,1.9s
CLL                               i PKPbc    pPKPbc  22 16 00.8 -0.5
      comp=Z,481nm,1.8s
CLL                               i PKPab    pPKPab  22 16 05.0 -1.0
      comp=Z,178nm,1.1s
CLL                               ePKPlp             22 16 07.0
      comp=Z,3µm,17.8s
CLL                               i sPKPab   sPKPab  22 16 10.7 +3.9
      comp=Z,1µm,2.2s
CLL                               ePP        PP      22 19 32.0 +1.3
CLL                               e(sPP)             22 19 44.0
CLL                               eSKSdf     SKSdf   22 22 58.0 -4.8
CLL                               ePSKS              22 29 49.0
CLL                               ePPS       PPS     22 32 24.0
CLL                               eSS        SS      22 38 40.0 -3.7
CLL                               ex         x       22 40 04.0
CLL                               eSSS       SSS     22 44 28.0
CLL                               eSSSS              22 48 25.0
VARL  Varlezi          149.49 329 ⇓P         PKPdf   22 15 57.0 +2.1
TLCR                   149.51 327 ⇑P         PKPbc   22 15 59.8 +0.3
TLCR                   149.51 327 ⇑PKP2      PKPbc   22 15 59.8 +0.3
GTTG  Gottingen        149.55 355 ePKPbc     PKiKP   22 16 01.1 +0.6
      baz=11,slow=2.4
SCTR  Scanteiesti      149.58 329 ⇑P         PKPdf   22 15 56.5 +1.4
NIE   Niedzica         149.59 341 ePKP       PKPdf   22 15 56.9 +1.8
NIE   Niedzica         149.59 341  PKHKP     PKPdf   22 15 57.9 +2.9
OSTC  Ostas            149.59 347 ePKPDF     PKPdf   22 15 56.6 +1.6
OSTC  Ostas            149.59 347 ePKHKP     PKPdf   22 15 56.6 +1.6
CHVC  Chvalec          149.59 347⇑ePKP       PKiKP   22 16 01.9 +1.3
CHVC  Chvalec          149.59 347 ePKP2      PKiKP   22 16 01.9 +1.3
TESR  Tescani          149.59 331 ⇑P         PKPdf   22 15 56.4 +1.3
UPC   Upice            149.68 347⇑ePKP       PKiKP   22 16 01.0 +0.2
UPC   Upice            149.68 347 ePKP2      PKiKP   22 16 01.0 +0.2
NEUB  Neuenburg        149.70 353 ePKPbc     PKiKP   22 16 01.2 +0.5
      baz=11,slow=2.4
BRG   Berggiesshubel   149.72 350  PKHKP     PKPpre  22 15 57.3
BRG   Berggiesshubel   149.72 350 ePKPdf     PKPdf   22 15 57.1 +2.0
      baz=16,slow=1.4
BRG                               ePKPbc     pPKPbc  22 16 01.2 -0.8
      baz=11,slow=2.4
BRG   Berggiesshubel   149.72 350 i PKP      PKPdf   22 15 57.1 +2.0
BRG                                Amp               22 15 59.2
      comp=Z,99nm,1.8s
BRG   Berggiesshubel   149.72 350  P         PKiKP   22 16 02.4 +1.6
BRG                                Amp               22 16 03.3
      comp=Z,72nm,1.0s
BRG   Berggiesshubel   149.72 350  P         PKPab   22 16 12.1 +7.1
BRG                                Amp               22 16 13.1
      comp=Z,192nm,1.1s
BRG   Berggiesshubel   149.72 350  PP        PP      22 19 34.0 +1.7
NEGRR Negrea           149.73 328 ⇑P         PKiKP   22 16 01.5 +0.5
DPC   Dobruska-Polom   149.76 347⇑ePKP       PKiKP   22 16 02.1 +1.1
DPC                               ex         x       22 29 39.1
DPC   Dobruska-Polom   149.76 347 ePKP2      PKiKP   22 16 02.1 +1.1
DPC   Dobruska-Polom   149.76 347 ePKPdf     PKPdf   22 15 56.7 +1.4
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      baz=16,slow=1.4
DPC                               ePKPbc     PKiKP   22 16 02.1 +1.1
      baz=11,slow=2.4
COSR  Cosmesti PH      149.78 329 ⇑P         PKiKP   22 16 02.9 +1.9
IZVR  Izvoarele        149.78 329 ⇑P         PKiKP   22 16 02.6 +1.5
SCHL  Schela           149.78 328 ⇓P         PKPdf   22 15 56.5 +1.1
TUDR                   149.79 329 ⇓P         PKPdf   22 15 57.5 +2.1
SCHLR Schela           149.80 328 ⇓P         PKPdf   22 15 56.8 +1.3
BUG   Bochum--Univer   149.81 358  PKHKP     PKPpre  22 15 57.4
BUG   Bochum--Univer   149.81 358 ePKPbc     PKiKP   22 16 01.5 +0.6
      baz=11,slow=2.4
OKC   Ostrava-Krasne   149.81 344 ePKPbc     PKiKP   22 16 01.7 +0.6
      baz=11,slow=2.4
STEB  Steborice        149.81 345⇑ePKP       PKiKP   22 16 01.6 +0.5
PANC  Panciu           149.84 330 ⇓P         PKiKP   22 16 01.9 +0.7
ONER  Baraj Valea Uz   149.84 331 ⇑P         PKPdf   22 15 58.0 +2.5
KRLC  Kraliky          149.92 346 ePKPDF     PKPdf   22 15 57.1 +1.5
KRLC                             ⇑ePKP       PKiKP   22 16 02.0 +0.7
KRLC  Kraliky          149.92 346 ePKHKP     PKPpre  22 15 57.1
KRLC                              e                  22 16 02.0
BR131 Keskin Array S   149.93 314  P         PKPdf   22 15 57.1 +1.1
      SNR=62
BR131 Keskin Array S   149.93 314c iPKHKP    PKPpre  22 15 56.0
BRTR  Keskin Array B   149.93 314            PKPdf   22 15 55.9 -0.1
BRTR  Keskin Array B   149.93 314  PKPbc     PKPbc   22 16 01.0 +0.1
      comp=Z,30nm,0.7s,baz=114,slow=1.5,SNR=52
BRTR  Keskin Array B   149.93 314  PKHKP     PKPpre  22 15 55.9
PVCC  Panska Ves       149.94 349 ePKPDF     PKPdf   22 15 58.1 +2.6
PVCC  Panska Ves       149.94 349 ePKHKP     PKPpre  22 15 58.1
TPGR  Topolog          149.95 327 ⇓P         PKPdf   22 15 57.3 +1.5
BMR   Baia Mare        149.99 336 ⇑P         PKiKP   22 16 02.3 +0.8
BMR   Baia Mare        149.99 336 ⇑PKP2      PKiKP   22 16 02.3 +0.8
KASTN Kahler Asten     150.00 357 ePKPdf     PKPdf   22 15 57.9 +2.3
      baz=16,slow=1.4
KASTN                             ePKPbc     PKiKP   22 16 01.9 +0.5
      baz=11,slow=2.4
RICC  Richard          150.01 349 ePKPDF     PKiKP   22 16 02.6 +1.2
MORC  Moravsky Berou   150.01 345  PKPdf     PKPdf   22 15 55.9 +0.2
MORC  Moravsky Berou   150.01 345 ePKP       PKPdf   22 15 56.6 +0.9
MORC                              e                  22 16 02.5
MORC                              ePP        PP      22 19 33.1 -1.1
MORC  Moravsky Berou   150.01 345 ⇓P         PKPdf   22 15 56.7 +0.9
MORC  Moravsky Berou   150.01 345  PKIKP     PKPdf   22 15 55.9 +0.2
MORC                               MLR       MLR
      comp=Z,26µm,22.0s
MORC  Moravsky Berou   150.01 345 ePKPdf     PKPdf   22 15 56.8 +1.1
      baz=16,slow=1.4
MORC                              ePKPbc     pPKPbc  22 16 02.4 -0.4
      baz=11,slow=2.4
KIRS  Kirsehir-Merke   150.03 313 ⇓P         PKPbc   22 16 02.1 +1.0
VRI   Vrincioaia       150.04 330 ⇑P         PKPdf   22 15 56.2 +0.4
VRI   Vrincioaia       150.04 330 ⇑PKIKP     PKPdf   22 15 56.2 +0.4
LANS  Liptovska Anna   150.07 342 ePKIKP     PKPbc   22 15 59.1 -1.7
LANS                              e                  22 16 03.1
LANS  Liptovska Anna   150.07 342 ePKP       PKPbc   22 15 59.1 -1.7
LANS                              e                  22 16 03.1
PLOR  Plostina         150.09 330 ⇓P         PKPbc   22 16 01.7 +0.8
PLOR  Plostina         150.09 330 ⇓PKIKP     PKPbc   22 16 01.7 +0.8
ARCR  ARCALIA          150.13 334 ⇑P         PKiKP   22 16 03.0 +1.1
TURR  Turia            150.22 331 ⇓P         PKPdf   22 15 57.9 +1.8
TIRR  Tirgusor         150.23 326 ⇓P         PKPdf   22 15 59.0 +2.9
TIRR  Tirgusor         150.23 326 ⇓PKIKP     PKPdf   22 15 59.0 +2.9
UBBA  Unterbreizbach   150.27 355 ePKPbc     PKiKP   22 16 02.7 +0.9
      baz=11,slow=2.4
MOX   Moxa             150.27 353  PKIKP     PKPdf   22 15 57.7 +1.7
MOX   Moxa             150.27 353 ePKPdf     PKPdf   22 15 57.3 +1.3
      baz=16,slow=1.4
MOX                               ePKPbc     PKiKP   22 16 02.8 +0.8
      baz=11,slow=2.4
ASF   Jabal al Asfar   150.27 298  PKPbc     PKiKP   22 16 03.4 +0.7
      comp=Z,14nm,0.7s,baz=62,slow=0.8,SNR=12
GRER                   150.28 329 ⇑P         PKiKP   22 16 03.9 +1.7
BISRR Bisoca           150.29 330 ⇑P         PKPdf   22 15 58.5 +2.2
OZUR                   150.30 331 ⇓P         PKiKP   22 16 03.8 +1.6
HARR  Harsova          150.31 327 ⇓P         PKiKP   22 16 03.3 +1.1
MAUC  Maruska          150.32 344⇑ePKP       PKiKP   22 16 03.6 +1.4
MAUC                              ex         x       22 29 46.8
TLBR  Topalu           150.35 327 ⇑P         PKPbc   22 16 00.5 -1.1
KECS  Kecovo           150.36 340 ePKP       PKiKP   22 16 04.8 +2.6
KECS                              e                  22 16 11.0
WERD  Werda            150.38 352 ePKPdf     PKPdf   22 15 57.9 +1.6
      baz=16,slow=1.4
WERD                              ePKPbc     PKiKP   22 16 02.9 +0.7
      baz=11,slow=2.4
TANN  Tannenbergstha   150.39 351 ePKPdf     PKPdf   22 15 57.7 +1.4
      baz=16,slow=1.4
TANN                              ePKPbc     PKiKP   22 16 02.9 +0.6
      baz=11,slow=2.4
PRA   Prague           150.40 349⇑ePKP       PKiKP   22 16 03.3 +1.0
MFTR  Murfatlar        150.41 326 ⇑P         PKiKP   22 16 03.4 +0.9
ANTO  Ankara           150.42 315 ⇑P         PKiKP   22 16 03.6 +0.9
ANTO  Ankara           150.42 315 ⇑PKIKP     PKiKP   22 16 03.6 +0.9
UCC   Uccle            150.45   2            PKPdf   22 15 57.0 +0.7
UCC   Uccle            150.45   2  PKIKP     PKPdf   22 15 57.0 +0.7
UCC                                MLR       MLR
      comp=Z,20µm,21.0s
UCC   Uccle            150.45   2 dPKPdf     PKPdf   22 15 57.8 +1.6
PRU   Pruhonice        150.46 349 ePKPDF     PKPdf   22 15 58.6 +2.3
PRU                              ⇑ePKP       PKiKP   22 16 03.1 +0.7
PRU   Pruhonice        150.46 349 ePKIKP     PKPdf   22 15 58.6 +2.3
PRU                               e                  22 16 03.1
BEBN  Eben Emael       150.47   0 dPKPdf     PKPdf   22 15 57.4 +1.1
GOPC  GO Pecny, Ondr   150.49 348⇑ePKP       PKiKP   22 16 03.4 +0.9
GOPC  GO Pecny, Ondr   150.49 348 ePKIKP     PKiKP   22 16 03.4 +0.9
NEHR  Nehoiu           150.57 330 ⇑P         PKiKP   22 16 03.5 +0.6
DOPR  Dopca            150.57 332 ⇑P         PKiKP   22 16 03.6 +0.8
MANR  Mangalia         150.57 325 ⇑P         PKPbc   22 16 02.7 +0.6
MESR  Meseseni         150.63 336 ⇓P         PKiKP   22 16 04.0 +1.1
MEM   Membach          150.66 360  PKIKP     PKPdf   22 15 58.0 +1.4
MEM   Membach          150.66 360 dPKPdf     PKPdf   22 15 57.1 +0.4
AMRR  Amara            150.67 328 ⇑P         PKPdf   22 15 59.2 +2.4
AMRR  Amara            150.67 328 ⇑PKIKP     PKPdf   22 15 59.2 +2.4
VRAC  Vranov           150.68 346 ePKP       PKPdf   22 15 57.5 +0.8
VRAC                              e                  22 16 04.0
VRAC                              e                  22 16 10.5
VRAC                              ePP        PP      22 19 37.1 -0.8
VRAC  Vranov           150.68 346 ⇑P         PKPdf   22 15 57.8 +1.1
VRAC  Vranov           150.68 346 ⇑PKIKP     PKPdf   22 15 57.8 +1.1
BTNL  Ternell          150.68 360 dPKPdf     PKPdf   22 15 57.8 +1.1
ISR   Istrita          150.68 329 ⇑P         PKiKP   22 16 05.0 +1.9
BSTI  Sart Tilman      150.68   0 dPKPdf     PKPdf   22 15 59.0 +2.3
MLR   Muntele Rosu     150.69 330 ⇑P         PKPdf   22 15 58.8 +1.8
MLR   Muntele Rosu     150.69 330 ⇑PKIKP     PKPdf   22 15 58.8 +1.8
CBBR  Cluj-Babes-Bol   150.71 335 ⇑P         PKiKP   22 16 04.6 +1.6
JAVC  Velka Javorina   150.83 344 ePKP       PKPdf   22 15 59.0 +2.0
JAVC                              e                  22 16 05.4
BCLA  Clavier          150.84   1 dPKPdf     PKPdf   22 15 57.6 +0.7
VYHS  Vyhne            150.84 342 ePKP       PKPdf   22 15 58.1 +1.1
VYHS                              e                  22 16 04.4
MANZ  Manzenberg       150.85 352 ePKPdf     PKPdf   22 15 58.1 +1.1
      baz=16,slow=1.4
MANZ                              ePKPbc     pPKPbc  22 16 04.4 -0.5
      baz=11,slow=2.4
MDB   Medias           150.87 333 ⇑P         PKPbc   22 16 03.7 +0.9
BGES  Gesves           150.88   1 dPKP       PKPdf   22 15 58.4 +1.4
TREC  Trest            150.94 347⇑ePKP       PKPbc   22 16 03.8 +1.0
TREC  Trest            150.94 347  PKIKP     PKPdf   22 15 59.4 +2.3
BMRD  Maredsous        150.95   1 dPKPdf     PKPdf   22 15 57.5 +0.4
KRUC  Moravsky         150.96 346 ePKP       PKPdf   22 15 57.7 +0.6
KRUC                              e                  22 16 04.5
KRUC                              e                  22 16 11.8
KRUC                              ePP        PP      22 19 38.4 -1.1
MARR  Marisel-Cluj     150.96 335 ⇑P         PKiKP   22 16 04.5 +0.9
TNS   Taunus Mts       150.97 357 ePKPdf     PKPdf   22 15 59.3 +2.0
      baz=16,slow=1.4
TNS                               ePKPbc     pPKPbc  22 16 04.5 -0.7
      baz=11,slow=2.4
LEHL  Lehliu           151.02 328 ⇓P         PKiKP   22 16 04.4 +0.7
DRGR                   151.02 336 ⇓P         PKiKP   22 16 04.3 +0.5
DRGR                   151.02 336  PKIKP     PKPdf   22 15 59.2 +1.8
PSZ   Piszkesteto      151.04 340  PKPdf     PKPdf   22 15 57.8 +0.4
PSZ   Piszkesteto      151.04 340 ⇓P         PKiKP   22 16 05.7 +2.0
PSZ   Piszkesteto      151.04 340  PKIKP     PKPdf   22 15 57.8 +0.4
PSZ                                MLR       MLR
      comp=Z,25µm,19.0s
ZVC   Zvikov           151.05 349⇑ePKP       PKiKP   22 16 04.5 +0.9
ROTZ  Rotzenmuhle      151.06 351 ePKPdf     PKPdf   22 15 58.6 +1.3
      baz=16,slow=1.4
ROTZ                              ePKPbc     pPKPbc  22 16 04.9 -0.4
      baz=11,slow=2.4
BORR  Bors             151.12 337 ⇓P         PKiKP   22 16 06.5 +2.7
CICN  Ciocanesti       151.12 327 ⇓P         PKiKP   22 16 05.1 +1.2
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SAHE  Sakarya_HENDEK151.13 318 ⇑P         PKPdf   22 15 58.0 +0.2
MDUB  Mudurnu          151.13 317  PKPdf     PKPdf   22 15 58.2 +0.4
VOIR                   151.13 331 ⇓P         PKPdf   22 15 58.0 +0.4
VOIR                   151.13 331 ⇓PKIKP     PKPdf   22 15 58.0 +0.4
SULR                   151.15 329 ⇑P         PKPdf   22 15 58.6 +1.1
DOU   Dourbes          151.16   2 dPKPdf     PKPdf   22 15 58.8 +1.4
GRF   Grafenberg Arr   151.26 353 ePKPbc     PKiKP   22 16 05.1 +1.0
      baz=11,slow=2.4
MMAI  Mount Meron Ar   151.27 300  PKPbc     PKiKP   22 16 05.8 +1.1
      comp=Z,0.3nm,0.2s,baz=35,slow=13,SNR=9.2
MTUR  Matau            151.29 331 ⇑P         PKPbc   22 16 03.4 -0.5
MTUR  Matau            151.29 331 ⇑PKIKP     PKPbc   22 16 03.4 -0.5
ARR   Arges            151.37 332 ⇑P         PKPdf   22 16 00.3 +2.3
MODS  Modra-Piesok     151.38 344 ePKP       PKPdf   22 15 59.0 +1.2
MODS                              e                  22 16 05.5
MODS                              e                  22 16 14.6
KHC   Kasperske Hory   151.46 349 ePKPDF     PKPdf   22 15 59.9 +1.9
KHC                              ⇑ePKP       pPKPbc  22 16 05.7 -0.6
KHC                               ex         x       22 16 13.0
KHC                               ex         x       22 29 57.8
KHC   Kasperske Hory   151.46 349 ePKIKP     PKPdf   22 15 59.9 +1.9
KHC                               e                  22 16 05.7
KHC                               e                  22 16 13.0
WET   Wettzell         151.56 350  PKIKP     PKPdf   22 16 00.3 +2.2
WET   Wettzell         151.56 350 ePKPdf     PKPdf   22 15 59.6 +1.5
      baz=16,slow=1.4
WET                               ePKPbc     pPKPbc  22 16 05.8 -0.7
      baz=11,slow=2.4
WLF   Walferdange      151.60 360  PKP       PKPdf   22 15 59.7 +1.6
WLF   Walferdange      151.60 360  PKIKP     PKPdf   22 16 00.9 +2.8
WLF   Walferdange      151.60 360 dPKP       PKPdf   22 16 00.1 +2.0
WLF   Walferdange      151.60 360 ePKPdf     PKPdf   22 15 59.7 +1.6
      baz=16,slow=1.4
WLF                               ePKPbc     sPKPbc  22 16 06.4 -0.9
      baz=11,slow=2.4
SRO   Srobarova        151.61 342 ePKP       PKiKP   22 16 06.5 +1.7
SRO                               e                  22 16 16.5
CKRC  Cesky Krumlov    151.63 348 ePKPDF     PKPdf   22 15 59.5 +1.3
CKRC                             ⇑ePKP       pPKPbc  22 16 06.0 -0.7
CKRC                              ex         x       22 29 54.7
CKRC  Cesky Krumlov    151.63 348 ePKIKP     PKPdf   22 15 59.5 +1.3
CKRC                              e                  22 16 06.0
LOT   Lotru            151.69 333 ⇑P         PKPbc   22 16 05.4 +0.6
DEV   Deva             151.69 334 ⇓P         PKiKP   22 16 05.7 +0.6
DEV   Deva             151.69 334  PKIKP     PKPdf   22 15 59.7 +1.3
GEC2  GERESS Array S   151.71 349 ePKPdf     PKPdf   22 15 60.0 +1.5
      baz=16,slow=1.4
GEC2                              ePKPbc     pPKPbc  22 16 06.2 -0.8
      baz=11,slow=2.4
GERES GERESS Array B   151.71 349  PKP       PKPdf   22 15 59.3 +0.8
      comp=Z,3.6nm,1.0s,baz=22,slow=2.1,SNR=10
GERES                              PKPbc     PKiKP   22 16 05.8 +0.7
      comp=Z,15nm,0.9s,baz=12,slow=0.8,SNR=35
HUMR  Humele           151.86 330 ⇓P         PKPbc   22 16 05.7 +0.6
COPA  Copaceanca       152.05 329 ⇓P         PKPdf   22 15 59.1 +0.2
ISK   Istanbul-Kandi   152.09 320  P         PKPdf   22 15 59.4 +0.3
SURR  Surduc           152.11 335 ⇓P         PKPdf   22 16 00.5 +1.5
CONA  Conrad Observa   152.14 345 epPKP      PKPdf   22 16 00.0 +0.9
      comp=Z,577nm,2.3s,SNR=14
CONA                              i pPKP     PKiKP   22 16 07.0 +0.9
      comp=Z,577nm,2.3s
CONA                              i pPKP     sPKPab  22 16 17.4 -0.8
      comp=Z,1µm,2.4s
CONA                               PP        PP      22 19 43.8 -2.6
      comp=Z,1µm,10.4s
GZR   Gura Zlata       152.14 334 ⇓P         PKPdf   22 16 01.4 +2.3
GZR   Gura Zlata       152.14 334 ⇓PKIKP     PKPdf   22 16 01.4 +2.3
SOP   Sopron           152.20 344  PKIKP     PKPdf   22 16 01.1 +2.0
RONA  Rosalia, Austr   152.25 345 epPKP      PKPdf   22 16 00.1 +0.9
      comp=Z,703nm,2.9s,SNR=14
RONA                              i PKiKP    PKiKP   22 16 07.0 +0.8
      comp=Z,703nm,2.9s
RONA                              i pPKP     sPKPab  22 16 17.5 -1.0
      comp=Z,1µm,2.5s
RONA                               PP        PP      22 19 44.6 -2.3
      comp=Z,687nm,5.2s
SZH   Strazhitsa       152.31 327  P         PKPdf   22 16 01.0 +1.6
STU   Stuttgart        152.37 355  PKIKP     PKPdf   22 16 01.1 +1.8
STU   Stuttgart        152.37 355 ePKPbc     PKiKP   22 16 07.5 +1.1
      baz=11,slow=2.4
BZS   Buzias           152.42 336 ⇑P         PKPdf   22 16 00.5 +1.1
BZS   Buzias           152.42 336 ⇑PKIKP     PKPdf   22 16 00.5 +1.1
EIL   Elat             152.44 294  PKP       PKPdf   22 16 01.6 +1.5
      comp=Z,3.6nm,0.9s,baz=342,slow=0.5,SNR=12
EIL                                PKPbc     PKiKP   22 16 08.1 +0.9
      comp=Z,33nm,0.6s,baz=356,slow=2.9,SNR=52
VLAD  Vladila          152.53 330 ⇓P         PKPdf   22 16 01.3 +1.7
MOA   Molln            152.56 348 i PKP      PKPdf   22 16 00.1 +0.5
      comp=Z,634nm,4.1s,SNR=10
MOA                               i PKiKP    PKPbc   22 16 07.2 +0.6
      comp=Z,634nm,4.1s
MOA                               i pPKP     pPKPab  22 16 18.1 -1.0
      comp=Z,1µm,3.2s
MOA                                PP        PP      22 19 47.9 -0.8
      comp=Z,1µm,6.9s
JMB   Yambol           152.58 325  P         PKPdf   22 15 60.0 +0.2
PHSR  Pinarhisar       152.62 323 ⇓P         PKPdf   22 15 59.6 -0.3
HERR  Herculane        152.71 334 ⇑P         PKPbc   22 16 06.2 -0.8
FUR   Furstenfeldbru   152.75 352 ePKPbc     PKiKP   22 16 08.5 +1.3
      baz=11,slow=2.4
BANR  Banloc           152.80 336 ⇓P         PKiKP   22 16 08.7 +1.3
BIOA  Bad Ischl, Aus   152.84 348 i PKP      PKPdf   22 16 00.5 +0.4
      comp=Z,1µm,4.7s,SNR=10
BIOA                              i PKiKP    PKPbc   22 16 07.4 +0.2
      comp=Z,272nm,3.0s
BIOA                              i PKP      PKPab   22 16 18.4 +0.2
      comp=Z,1µm,4.7s
BIOA                               PP        PP      22 19 48.3 -1.9
      comp=Z,639nm,4.9s
ARSA  Arzberg          152.86 345 ePKP       PKPdf   22 16 00.5 +0.4
      comp=Z,388nm,3.0s,SNR=12
ARSA                              i PKiKP    PKPbc   22 16 07.8 +0.5
      comp=Z,388nm,3.0s
ARSA                              i PKP      PKPab   22 16 18.3 +0.1
      comp=Z,876nm,4.1s
ARSA                               PP        PP      22 19 52.5 +2.1
      comp=Z,561nm,5.2s
BFO   Black Forest     152.87 356  PKPdf     PKPdf   22 15 59.5 -0.6
BFO   Black Forest     152.87 356  PKIKP     PKPdf   22 15 59.5 -0.6
BFO                                MLR       MLR
      comp=Z,29µm,22.0s
BFO   Black Forest     152.87 356 ePKPdf     PKPdf   22 16 01.2 +1.1
      baz=16,slow=1.4
BFO                               ePKPbc     PKiKP   22 16 08.5 +1.1
      baz=11,slow=2.4
EDRB  Edirne           152.91 324  P         PKPdf   22 16 00.3  0.0
RJOB  Jochberg         152.94 350 ePKPdf     PKPdf   22 16 01.3 +1.1
      baz=16,slow=1.4
RJOB                              ePKPbc     sPKPbc  22 16 09.6 -0.9
      baz=11,slow=2.4
MORH  Mrgy, Hungar     152.95 340 ⇑P         PKPdf   22 16 01.0 +0.8
ECH   Echery           153.03 358            PKPbc   22 16 05.3 -2.3
BAND  Balkesir-Ban     153.10 320 ⇑P         PKiKP   22 16 09.7 +1.5
VALD  Valchedram       153.22 331  P         PKPdf   22 16 01.9 +1.2
LESA  Schwarzleotal    153.26 350 i pPKP     PKPdf   22 16 01.5 +0.7
      comp=Z,857nm,6.1s,SNR=14
LESA                              i PKiKP    PKPbc   22 16 08.0 -0.3
      comp=Z,388nm,2.6s
LESA                              i PKP      PKPab   22 16 19.6 -0.4
      comp=Z,528nm,2.5s
LESA                              ePP        PP      22 19 52.4 -0.3
      comp=Z,953nm,7.4s
MPEP  Malo Peshtene    153.34 330  P         PKPdf   22 16 01.0 +0.1
UBR   Ueberruh         153.36 354 ePKPbc     PKiKP   22 16 09.5 +0.9
      baz=11,slow=2.4
SLE   Schleitheim      153.42 356  PKIKP     PKPdf   22 16 02.8 +1.9
RETA  Reutte           153.48 352 i pPKP     PKPdf   22 16 01.7 +0.6
      comp=Z,379nm,2.6s
RETA                              i PKiKP    PKPbc   22 16 09.4 +0.6
      comp=Z,379nm,2.6s
RETA                              i PKP      PKPab   22 16 19.9 -1.0
      comp=Z,613nm,2.6s
RETA                              ePP        PP      22 19 53.4 -0.5
      comp=Z,747nm,5.8s
FRGS  Fruska Gora      153.48 337⇑iP         PKPdf   22 16 01.2 +0.1
SOKA  Soboth           153.51 346 i pPKP     PKPdf   22 16 01.7 +0.6
      comp=Z,786nm,6.2s,SNR=22
SOKA                              ePKiKP     PKPbc   22 16 08.8  0.0
      comp=Z,260nm,2.4s
SOKA                              i PKP      PKPab   22 16 19.8 -1.3
      comp=Z,343nm,2.6s
SOKA                               PP        PP      22 19 52.8 -1.4
      comp=Z,662nm,6.1s
WATA  Walderalm        153.52 351 i pPKP     PKPdf   22 16 01.7 +0.5
      comp=Z,917nm,6.4s,SNR=6.7
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WATA                                 i PKiKP   PKPbc    22 16 09.0 +0.2
          comp=Z,357nm,2.5s
WATA                                 i PKP     PKPab    22 16 20.1  -1.0
          comp=Z,498nm,2.4s
WATA                                   PP      PP       22 19 53.5  -0.8
          comp=Z,862nm,6.3s
MOTA  Moosalm          153.58 352  i pPKP    PKPdf    22 16 01.9 +0.6
          comp=Z,209nm,1.7s,SNR=8.2
MOTA                                 i PKiKP   PKPbc    22 16 09.1   0.0
          comp=Z,209nm,1.7s
MOTA                                 i PKP     PKPab    22 16 20.3  -1.1
          comp=Z,474nm,2.6s
MOTA                                 ePP       PP       22 19 53.5  -1.0
          comp=Z,589nm,5.1s
WTTA  Wattenberg       153.58 351  i pPKP    PKPdf    22 16 02.2 +0.8
          comp=Z,529nm,2.6s,SNR=9.8
WTTA                                 i PKiKP   PKiKP    22 16 09.9 +0.7
          comp=Z,529nm,2.6s
WTTA                                 i PKP     PKPab    22 16 20.4  -1.0
          comp=Z,868nm,2.4s
WTTA                                 ePP       PP       22 19 53.6  -1.1
          comp=Z,418nm,3.9s
SQTA  Sankt Quirin     153.69 352  i pPKP    PKPdf    22 16 02.2 +0.8
          comp=Z,254nm,1.9s,SNR=6.3
SQTA                                 i PKiKP   PKPbc    22 16 09.3 +0.1
          comp=Z,254nm,1.9s
SQTA                                 i PKP     PKPab    22 16 20.5  -1.3
          comp=Z,496nm,2.5s
SQTA                                 ePP       PP       22 19 53.7  -1.4
          comp=Z,369nm,3.5s
PLD   Plovdiv          153.75 327    P       PKPdf    22 16 00.6  -0.9
PGB   Panagyurishte    153.77 328    P       PKPdf    22 16 01.0  -0.6
DAVA  Damuels          153.78 354  i pPKP    PKPdf    22 16 02.4 +0.8
          comp=Z,317nm,2.1s
DAVA                                 i PKiKP   PKPbc    22 16 09.6 +0.1
          comp=Z,317nm,2.1s
DAVA                                 ePKP      PKPab    22 16 20.6  -1.6
          comp=Z,483nm,2.6s
DAVA                                 ePP       PP       22 19 55.2  -0.4
          comp=Z,562nm,4.3s
OBKA  Obir             153.78 346⇑iP       PKPdf    22 16 00.8  -0.7
OBKA  Obir             153.78 346  i PKP     PKPdf    22 16 01.7 +0.2
          comp=Z,675nm,5.3s,SNR=8.3
OBKA                                 i PKiKP   PKPbc    22 16 09.2  -0.3
          comp=Z,436nm,3.5s
OBKA                                 i PKP     PKPab    22 16 20.0  -2.2
          comp=Z,431nm,3.6s
OBKA                                   PP      PP       22 19 54.6  -1.1
          comp=Z,638nm,4.4s
KDZ   Kurdzhali        153.81 325    P       PKPdf    22 16 01.4  -0.2
MYKA  Terra Mystica    153.85 348  i PKP     PKPdf    22 16 01.7 +0.1
          comp=Z,225nm,2.3s,SNR=11
MYKA                                 i PKiKP   PKPbc    22 16 09.0  -0.5
          comp=Z,225nm,2.3s
MYKA                                 ePKP      PKPab    22 16 20.2  -2.3
          comp=Z,302nm,2.4s
MYKA                                   PP      PP       22 19 54.7  -1.4
          comp=Z,399nm,4.6s
KULA  Kula-Manisa      153.85 316    P       PKPdf    22 16 01.6  -0.3
ALN   Alexandroupoli   153.94 323    P       PKPdf    22 16 01.7   0.0
ALN   Alexandroupoli   153.94 323    PKIKP   PKPdf    22 16 01.8   0.0
FETA  Feichten         153.94 352  i pPKP    PKPdf    22 16 02.7 +0.9
          comp=Z,1µm,7.8s,SNR=7.4
FETA                                 i PKiKP   PKPbc    22 16 10.1 +0.2
          comp=Z,163nm,1.7s
FETA                                 i PKP     PKPab    22 16 21.1  -1.9
          comp=Z,632nm,2.7s
FETA                                 ePP       PP       22 19 54.8  -1.8
          comp=Z,959nm,7.8s
ABTA  Abfaltersbach    153.95 350  i pPKP    PKPdf    22 16 02.2 +0.4
          comp=Z,182nm,1.6s,SNR=19
ABTA                                 i PKiKP   PKPbc    22 16 09.8 +0.1
          comp=Z,182nm,1.6s
ABTA                                 i PKP     PKPab    22 16 20.8  -2.1
          comp=Z,405nm,2.3s
ABTA                                 ePP       PP       22 19 55.5  -1.1
          comp=Z,301nm,3.9s
LOR   Lormes           153.95   3    PKIKP   PKPdf    22 16 04.3 +2.6
ELL   Elmali           153.96 312            PKPdf    22 16 00.9  -1.2
ELL   Elmali           153.96 312    PKIKP   PKPdf    22 16 00.9  -1.2
BOVS  Bovan            154.02 333  ⇓P        PKPdf    22 16 03.1 +1.3
RDO   Rodhopi          154.05 324    P       PKPdf    22 16 01.7  -0.2
RZN   Rozhen           154.08 326    P       PKPdf    22 16 02.1  -0.1
TEKS  Tekeris          154.11 337⇑iP       PKPdf    22 16 02.6 +0.6
VTS   Vitosha          154.14 330    P       PKPdf    22 16 02.5 +0.2
VTS   Vitosha          154.14 330    P       PKPdf    22 16 02.0  -0.2
CRES  Cresnjevec Ost   154.21 344⇑iP       PKPdf    22 16 02.6 +0.5
CADS  Cadrg            154.22 347  i PKPdf   PKPdf    22 16 02.5 +0.4
CADS                                 ePP       PP       22 19 52.0  -6.1
CADS                                 e                  22 39 32.5
LJU   Ljubljana        154.22 346  ePKPdf    PKPdf    22 16 02.5 +0.5
GBAS  Gorenja Brezov   154.35 346  i PKPdf   PKPdf    22 16 02.7 +0.4
AKAS  Kas              154.43 311            PKPdf    22 16 02.8  -0.1
EZN   Ezine            154.49 321    P       PKPdf    22 16 01.6  -1.0
EZN   Ezine            154.49 321  ⇑P        PKiKP    22 16 12.1 +1.1
CEY   Cerknica         154.54 346⇑iP       PKPdf    22 16 02.8 +0.3
A051A Mrakovica        154.56 342⇑iP       PKPdf    22 16 03.0 +0.3
SLATY Slatina          154.61 341  eP        PKPdf    22 16 01.3  -1.3
TUE   Stuetta          154.64 354    PKPdf   PKPdf    22 16 02.6  -0.3
MMB   Musomishta       154.70 327    P       PKPdf    22 16 02.4  -0.5
MMB   Musomishta       154.70 327    P       PKPdf    22 16 01.7  -1.2
KAVA  Kavala           154.70 325    P       PKPdf    22 16 01.7  -1.2
TRI   Trieste          154.71 347    PKPdf   PKPdf    22 16 01.7  -1.0
TRI   Trieste          154.71 347    PKIKP   PKPdf    22 16 01.7  -1.0
BLY   Banja Luka       154.72 341⇑iP       PKPdf    22 16 02.9 +0.1
HAPS  Han Pijesak,BI   154.72 337⇑iP       PKPdf    22 16 03.9 +0.9
BBLS  Lazi&#263i       154.74 337⇑iP       PKPdf    22 16 03.8 +0.9
CTI   Castel Tesino    154.77 350    PKPdf   PKPdf    22 16 03.1 +0.1
CTI   Castel Tesino    154.77 350    PKIKP   PKPdf    22 16 03.1 +0.1
KKB   Krupnik          154.78 329    P       PKPdf    22 16 02.6  -0.4
KKB   Krupnik          154.78 329    P       PKPdf    22 16 01.7  -1.3
THAS  Thassos island   154.87 325    P       PKPdf    22 16 01.6  -1.5
PRK   Paraskevi        154.90 320    P       PKPdf    22 16 03.0  -0.1
BLCB  Balcova          154.96 318    P       PKPdf    22 16 02.4  -0.9
RUDO  Rudo             154.97 336  eP        PKPdf    22 16 03.5 +0.3
SJES  Sjenica          155.04 335⇑iP       PKPdf    22 16 04.0 +0.6
SRS   Serrai           155.09 327    P       PKPdf    22 16 01.6  -1.8
LIA   Limnos Island    155.10 323    P       PKPdf    22 16 02.3  -1.1
A050A Klekovaca        155.16 342⇑iP       PKPdf    22 16 03.2  -0.3
SIGR  SIGRI            155.17 321    P       PKPdf    22 16 02.4  -1.1
KNT   Kendrikon        155.41 328    P       PKPdf    22 16 02.3  -1.5
KNT   Kendrikon        155.41 328    PKIKP   PKPdf    22 16 04.6 +0.7
VAY   Valandovo        155.45 329    P       PKPdf    22 16 02.3  -1.6
VAY   Valandovo        155.45 329  i P       PKPdf    22 16 04.9 +1.1
OUR   Ouranopolis      155.46 325    P       PKPdf    22 16 02.7  -1.2
ARG   Arkhangelos      155.47 312    P       PKPdf    22 16 04.3 +0.2
SKO   Skopje           155.47 331  i P       PKPdf    22 16 05.4 +1.5
BODT  Bodrum           155.56 315    P       PKPdf    22 16 03.7  -0.5
PLG   Polygyros        155.71 326    P       PKPdf    22 16 03.0  -1.3
HORT  Hortiatis        155.73 327    P       PKPdf    22 16 03.0  -1.4
THE   Thessaloniki     155.77 327    P       PKPdf    22 16 03.0  -1.3
BRY   Bratogost        155.89 337  eP        PKPdf    22 16 05.5 +0.9
PAIG  Paliouri         155.91 325    P       PKPdf    22 16 03.0  -1.5
PDG   Podgorica        156.02 335    PKPdf   PKPdf    22 16 04.5  -0.2
PDG   Podgorica        156.02 335⇑iP       PKPdf    22 16 04.4  -0.2
PDG   Podgorica        156.02 335  ⇓P        PKPdf    22 16 05.6 +1.0
PUK   Puka             156.09 333    P       PKPdf    22 16 02.7  -2.1
PGAV  Gavieira, Arco   156.14  27  ePKPdf    PKPdf    22 16 06.7 +1.7
PGAV                                 ePP       PP       22 20 10.4 +1.2
BNI   Bardonecchia     156.21 359    PKIKP   PKPdf    22 16 06.3 +1.3
STON  Ston             156.22 338⇑iP       PKPdf    22 16 04.0  -0.8
DRME  Dracevica, Mon   156.26 335⇑iP       PKPdf    22 16 05.0 +0.1
HCY   Herceg Novi      156.30 336  eP        PKPdf    22 16 04.8  -0.2
AOS   Alonnisos        156.33 323    P       PKPdf    22 16 04.0  -1.2
ORIF  Oris-en-Rattie   156.35 360    PKIKP   PKPdf    22 16 07.7 +2.6
OHR   Ohrid            156.45 331  i P       PKPdf    22 16 07.1 +1.8
PCAB  Cabril           156.45  27  ePKPdf    PKPdf    22 16 06.8 +1.5
KARP  Karpathos        156.48 312    P       PKPdf    22 16 05.4  -0.1
PMOZ  Porto Moniz, M   156.50  56  ePP       PP       22 20 12.7 +0.4
KYMI  Kymi, Euboea I   156.57 322    P       PKPdf    22 16 04.3  -1.2
NEO   Neokhori         156.60 324    P       PKPdf    22 16 05.2  -0.3
KZN   Kozani           156.62 328    P       PKPdf    22 16 03.1  -2.4
PMAR  Madeira          156.76  56  ePKPdf    PKPdf    22 16 08.6 +2.5
ECAL  Calabor          156.77  24    PKP     PKPdf    22 16 06.1 +0.4
KARY  Karystos         156.78 320    P       PKPdf    22 16 05.0  -0.7
POLO  Lamas de Olo     156.82  27  ePKPdf    PKPdf    22 16 07.7 +1.8
TYRN  Tyrnavos         156.83 326    P       PKPdf    22 16 04.0  -1.8
KBN   Korca            156.84 330    P       PKPdf    22 16 04.0  -1.9
NEST  Nestorio         156.88 329    P       PKPdf    22 16 05.9   0.0
PVRL  Vila Real        156.94  27  ePKPdf    PKPdf    22 16 08.3 +2.4
PENT  Pentalofos       157.01 329    P       PKPdf    22 16 05.8  -0.3
THL   Klokotos Trika   157.05 326    P       PKPdf    22 16 04.9  -1.1
PMPST Porto Santo, M   157.06  54  ePKPdf    PKPdf    22 16 06.6 +0.3
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KPRO  Kipourio         157.09 328    P       PKPdf    22 16 06.1  -0.1
PTL   Penteli          157.10 321    P       PKPdf    22 16 05.6  -0.6
LKR   Lokris           157.19 323    P       PKPdf    22 16 05.0  -1.2
ATHU  Athens Univers   157.21 321    P       PKPdf    22 16 05.4  -0.9
ATH   Athens Observa   157.24 321    P       PKPdf    22 16 05.0  -1.3
AGG   Agios Georgios   157.28 325    P       PKPdf    22 16 05.7  -0.7
AXAR  Agios Charalam   157.29 324    P       PKPdf    22 16 05.9  -0.5
MURB  Monte Urbino     157.31 347    PKPdf   PKPdf    22 16 06.3  -0.1
MVO   Moncorvo         157.32  26  ePKPdf    PKPdf    22 16 08.2 +1.8
MVO                                  ePP       PP       22 20 17.2 +1.5
PVIS  Viseu            157.32  28  ePKPdf    PKPdf    22 16 07.9 +1.5
VILL  Villia           157.35 322    P       PKPdf    22 16 05.8  -0.7
MAKR  Makrakomi, Fth   157.40 325    P       PKPdf    22 16 05.3  -1.2
COI   Coimbra          157.50  29  ePKPdf    PKPdf    22 16 07.8 +1.2
VLO   Vlora            157.55 332    P       PKPdf    22 16 06.3  -0.3
JAN   Janina           157.57 328    P       PKPdf    22 16 06.9 +0.1
PCAS  Casmilo, Conde   157.59  30  ePKPdf    PKPdf    22 16 08.8 +2.1
EVR   Evrytania        157.64 326    P       PKPdf    22 16 08.3 +1.3
LTK   Loutraki         157.64 322    P       PKPdf    22 16 06.2  -0.6
MTE   Manteigas        157.74  28  ePKPdf    PKPdf    22 16 09.2 +2.2
MTE                                  ePP       PP       22 20 20.2 +2.2
SRN   Sarande          157.80 330    P       PKPdf    22 16 06.5  -0.4
ANX   Ano Chora        157.82 325    P       PKPdf    22 16 07.6 +0.4
KALE  Kalithea         157.84 324    P       PKPdf    22 16 06.5  -0.6
PSBE  So Bento         157.87  31  ePKPdf    PKPdf    22 16 08.3 +1.2
SERG  Sergoula         157.87 324    P       PKPdf    22 16 06.9  -0.3
IGT   Igoumenitsa      157.91 329    P       PKPdf    22 16 05.6  -1.5
AMPL  Ampelaki         157.94 327    P       PKPdf    22 16 07.1  -0.1
EFP   Efpalio          157.94 325    P       PKPdf    22 16 07.6 +0.4
AQU   L'Aquila         157.98 345    PKP     PKPdf    22 16 07.4 +0.2
AQU   L'Aquila         157.98 345    PKIKP   PKPdf    22 16 08.0 +0.8
PVO   Paravola         158.01 326    P       PKPdf    22 16 02.0  -5.3
KEK   Kerkira          158.02 330    P       PKPdf    22 16 09.1 +1.8
GUR   Goura            158.06 323    P       PKPdf    22 16 07.0  -0.5
PMAFR Mafra            158.06  33    PKP     PKPdf    22 16 09.6 +2.3
KLV   Kalavryta, Ach   158.09 324    P       PKPdf    22 16 07.0  -0.5
PSARD Sardoal          158.10  30  ePKPdf    PKPdf    22 16 08.4 +1.0
IDI   Anoyia           158.18 314    PKP     PKPdf    22 16 08.1 +0.5
IDI   Anoyia           158.18 314    P       PKPdf    22 16 07.9 +0.2
IDI   Anoyia           158.18 314    PKP     PKPdf    22 16 08.3 +0.6
          comp=Z,13nm,1.1s,baz=43,slow=4.7,SNR=3.7
IDI                                    PKPab   PKPab    22 16 41.4  -0.1
          comp=Z,15nm,0.8s,baz=70,slow=7.2,SNR=5.4
PCBR  Castelo Branco   158.22  29  ePKPdf    PKPdf    22 16 09.6 +2.1
LIS   Lisbon           158.31  33  ePKPdf    PKPdf    22 16 08.7 +1.1
LKD2  Lefkada island   158.33 327    P       PKPdf    22 16 07.8 +0.1
DRO   Drossia          158.39 324    P       PKPdf    22 16 08.0 +0.2
AXS   Araxos           158.40 325    P       PKPdf    22 16 08.0 +0.2
VLX   Vlachokerasia    158.43 322    P       PKPdf    22 16 07.8  -0.2
RLS   Riolos of Patr   158.45 325    P       PKPdf    22 16 08.7 +0.9
EVGI  Lefkada island   158.46 327    P       PKPdf    22 16 08.0 +0.2
PMTG  Montargil        158.49  31  ePKPdf    PKPdf    22 16 08.7 +0.9
MATE  Matera           158.53 337  ⇓P        PKPdf    22 16 05.4  -2.4
VLI   Veliai           158.54 320    P       PKPdf    22 16 07.3  -0.7
PMRV  Marv??o          158.60  29  ePKPdf    PKPdf    22 16 09.4 +1.4
PMRV                                 ePP       PP       22 20 24.7 +2.0
CHAN  Chania           158.60 316    P       PKPdf    22 16 07.8  -0.3
FSK   Fiskardo         158.63 327    P       PKPdf    22 16 08.0   0.0
ACER  Acerenza         158.68 338    PKPdf   PKPdf    22 16 06.6  -1.5
IMMV  Iera Moni Meta   158.68 316    P       PKPdf    22 16 08.3 +0.1
KTHA  Kythira Island   158.76 319    P       PKPdf    22 16 08.4 +0.1
ITM   Ithomi           158.82 322    P       PKPdf    22 16 08.5 +0.2
VLS   Valsamata        158.83 326    P       PKPdf    22 16 08.4 +0.1
KTLO  Katakolo         158.83 324    P       PKPdf    22 16 09.1 +0.9
ANKY  Antikythira Is   158.86 317    P       PKPdf    22 16 08.7 +0.3
PSDA  Pessada-Kefalo   158.88 326    P       PKPdf    22 16 08.1  -0.2
PESTR Estremoz         158.96  30    PKP     PKPdf    22 16 10.3 +1.8
PESTR Estremoz         158.96  30  ePKPdf    PKPdf    22 16 09.9 +1.4
GVD   Gavdhos          158.97 314    P       PKPdf    22 16 08.5  -0.1
KNDR  Palaiochora Ch   159.00 316    P       PKPdf    22 16 08.6 +0.1
EVO   Evora            159.02  32    PKP     PKPdf    22 16 10.6 +2.1
EVO   Evora            159.02  32  ePKPdf    PKPdf    22 16 10.5 +2.1
LTHK  Lithakia         159.04 325    P       PKPdf    22 16 08.3  -0.2
PYL   PYLOS            159.12 322    P       PKPdf    22 16 08.0  -0.7
EBAD  Badajoz          159.31  29    PKP     PKPdf    22 16 10.7 +1.9
PTEO  Sao Teotonio     159.41  35  ePKPdf    PKPdf    22 16 11.4 +2.5
EOSO  Osorio           159.41  66    PKP     PKPdf    22 16 10.9 +1.6
MESJ  Messejana        159.45  33  ePKPdf    PKPdf    22 16 10.1 +1.0
MESJ                                 ePP       PP       22 20 29.8 +2.3
MESJ                                 eSS       SS       22 40 37.0 +3.4
MESJ  Messejana        159.45  33  ePKPdf    PKPdf    22 16 11.4 +2.4
UCM   Universidad Co   159.45  20    PKP     PKPdf    22 16 11.4 +2.4
PBEJ  Beja             159.48  32  ePKPdf    PKPdf    22 16 10.4 +1.4
MORF  Marmelete        159.62  35  ePKPdf    PKPdf    22 16 10.1 +0.8
MORF                                 ePP       PP       22 20 30.7 +2.1
MORF  Marmelete        159.62  35  ePKPdf    PKPdf    22 16 10.7 +1.4
PFVI  Vila Bisbo       159.66  36    PKP     PKPdf    22 16 11.7 +2.4
PFVI  Vila Bisbo       159.66  36  ePKPdf    PKPdf    22 16 11.6 +2.4
PCVE  Castro Verde     159.70  33    PKP     PKPdf    22 16 11.5 +2.1
PCVE  Castro Verde     159.70  33  ePKPdf    PKPdf    22 16 11.8 +2.5
PAB   San Pablo        159.75  23    PKPdf   PKPdf    22 16 09.3  -0.1
PAB   San Pablo        159.75  23    PKIKP   PKPdf    22 16 09.4  -0.1
PAB                                    MLR     MLR
          comp=Z,30µm,20.0s
PBAR  Barrancos        159.77  31    PKP     PKPdf    22 16 11.5 +2.1
PBAR  Barrancos        159.77  31  ePKPdf    PKPdf    22 16 11.3 +1.9
ESDC  Sonseca Array    159.78  22    PKPdf   PKPdf    22 16 09.8 +0.4
ESDC  Sonseca Array    159.78  22    PKP     PKPdf    22 16 11.1 +1.7
          comp=Z,2.8nm,0.9s,baz=347,slow=2.8,SNR=25
ESDC                                   PKPab   sPKPab   22 16 49.8  -0.7
          comp=Z,5.4nm,0.8s,baz=331,slow=4.4,SNR=4.1
ESDC                                   PP      PP       22 20 30.4 +1.4
          comp=Z,1.7nm,1.1s,baz=344,slow=4.8,SNR=4.1
TIP   Timpagrande      159.78 335  ⇑P        PKPdf    22 16 10.2 +0.7
PVAQ  Vaqueiros        160.04  33    PKP     PKPdf    22 16 11.9 +2.2
PVAQ  Vaqueiros        160.04  33  ePKPdf    PKPdf    22 16 11.8 +2.1
PVAQ                                 ePP       PP       22 20 32.9 +2.2
PBDV  Barranco-do-Ve   160.05  34  ePKPdf    PKPdf    22 16 11.9 +2.2
EGRO  El Granado       160.06  32    PKP     PKPdf    22 16 11.2 +1.5
EMIN  Mina Concepcio   160.27  31    PKP     PKPdf    22 16 12.0 +2.0
ECAB  El Cabril        160.58  28    PKP     PKPdf    22 16 12.0 +1.6
EADA  Adamuz           160.86  26    PKP     PKPdf    22 16 12.6 +1.9
ESPR  Espera           161.38  31    PKP     PKPdf    22 16 13.6 +2.4
EGOR  Sierra Gorda,    161.95  26    PKP     PKPdf    22 16 13.1 +1.1
EMAL  Malaga-Limoner   162.11  28    PKP     PKPdf    22 16 13.4 +1.5
EMIJ  Mijas            162.12  29    PKP     PKPdf    22 16 12.4 +0.4
EQTA  Presa de Quent   162.14  25    PKP     PKPdf    22 16 13.2 +1.1
VAE   Valguarnera      162.16 337    PKP     PKPdf    22 16 14.1 +2.1
          comp=Z,2.6nm,0.7s,baz=152,slow=19,SNR=3.2
VAE                                    PKPab   PKPab    22 16 59.4 +0.8
          comp=Z,2.2nm,0.3s,baz=207,slow=10,SNR=3.8
TARIF Tarifa           162.18  32    PKP     PKPdf    22 16 15.1 +3.1
DBIC  Dimbokro         162.23 143    PKP     PKPdf    22 16 13.2 +0.5
          comp=Z,14nm,0.9s,baz=149,slow=3.2,SNR=7.4
DBIC                                   PKPab   sPKPab   22 17 01.7  -0.1
          comp=Z,13nm,0.7s,baz=167,slow=5.3,SNR=7.0
ECEU  Ceuta            162.38  31    PKP     PKPdf    22 16 12.7 +0.4
ECEU                                   PKP     pPKPdf   22 16 13.7  -0.7
CEU   Ceuta            162.38  31    PKP     PKPdf    22 16 14.0 +1.8
CART  Cartagena        162.64  18    PKP     PKPdf    22 16 13.1 +0.7
ENIJ  Nijar            162.81  22    PKP     PKPdf    22 16 13.6 +1.0
AVE   Averroes         163.18  42    PKP     PKPdf    22 16 14.9 +1.8
IFR   Ifrane           164.36  36    PKP     PKPdf    22 16 16.4 +2.0
TIO   Tiouine          164.78  48    PKP     PKPdf    22 16 16.8 +2.0
KEST  Kesra            165.21 349    PKP     PKPdf    22 16 15.3 +0.3
          comp=Z,3.5nm,1.0s,baz=353,slow=1.6,SNR=5.4
KEST                                   PKPab   PKPab    22 17 12.6 +0.6
          comp=Z,6.0nm,0.7s,baz=285,slow=7.0,SNR=4.0
KEST                                   PP      PP       22 21 01.6 +4.0
          comp=Z,4.5nm,0.9s,baz=307,slow=13,SNR=1.8
TORD  Torodi Ar. Bea   171.06 153    PKPab   PKPab    22 17 40.3 +2.0
          comp=Z,11nm,0.3s,baz=332,slow=5.9,SNR=4.2
TAM   Tamanrasset      178.40  10    PKIKP   PKPdf    22 16 23.9 +2.3
```

NOU ***15*** *22:22:02.4, 19°.03S×169°.20E, h200km, MLv4.2/12, Vanuatu Islands*

NEIC ***15*** *22:22:02.7±1.7, 18°.94S±0°.09×169°.3E±0°.1, h214km±9km, mb4.3/21, Error ellipse: s-maj=20.2km s-min=12.4km az=93.0*

IDC ***15*** *22:22:02.4±3.1, 18°.97S×169°.20E, h219km±27km, mb3.7/9, mbtmp4.2/10, Error ellipse: s-maj=23.4km s-min=21.4km az=108.0*

ISC 15 22:22:00.6±0.6**, 18°.97S**±0°.05×**169°.24E**±0°.10**, h200**km**, n59, σ1ˢ15**/61**, mb4.2**/19**, Vanuatu Islands**

```
Code  Station Name      Δ°   AZ°     Phase ID              Time       Res
                                   Op       ISC         h  m  s     ISC
INH   Isangel           0.58 177   P        Pn        22 22 30.5 +2.4
MARNC Mare, Loyalty     2.75 204   P        Pn        22 22 48.1 +0.8
MARNC Mare, Loyalty     2.75 204   P        Sn        22 23 23.8  -0.1
VLAKA Lakatoro          3.33 328   P        Pn        22 22 56.2 +1.9
YATNC Mamie plateau,    3.78 215   P        Pn        22 22 59.8 +0.1
PINNC Pines Island,     4.00 205   P        Pn        22 23 03.4 +1.0
SANVU Saraoutou         4.01 331   Pn       Pn        22 23 03.8 +1.3
SANVU Saraoutou         4.01 331   P        Pn        22 23 04.2 +1.6
DZM   Mont Dzumac       4.05 220            Pn        22 23 04.9 +1.8
DZM   Mont Dzumac       4.05 220   P        Pn        22 23 04.5 +1.4
          25nm,0.6s,baz=58,slow=19
DZM                                S        Sn        22 23 52.7 +0.4
          13nm,0.4s,baz=112,slow=20,SNR=1.6
DZM   Mont Dzumac       4.05 220   P        Pn        22 23 04.5 +1.4
OUENC Ouen Island, N    4.10 213   P        Pn        22 23 05.7 +2.0
ONTNC Ouen Toro         4.22 218   P        Pn        22 23 06.0 +0.8
EIDS  Eidsvold         17.98 246   P        Pn        22 25 58.2  -0.3
EIDS                               IAmb     IAmb      22 25 59.5
          comp=Z,7.7nm,0.7s
BKZ   Black Stump Fm   21.09 164   P        P         22 26 31.9 +2.4
CTAO  Charters Tower   21.69 263   P        P         22 26 37.1 +1.1
CTAO                               IAmb     IAmb      22 26 52.8
          comp=Z,11nm,1.3s
SNZO  South Karori     22.75 169   P        P         22 26 46.8 +1.1
STKA  Stephens Creek   27.99 237   P        P         22 27 33.5 +0.5
STKA  Stephens Creek   27.99 237   P        P         22 27 34.0 +1.1
          comp=Z,2.1nm,0.8s,baz=86,slow=12,SNR=3.9
          comp=Z,2.1nm,0.8s
WR8   Warramunga Arr   32.74 262   P        P         22 28 14.0  -0.8
WRA   Warramunga Arr   32.89 262   P        P         22 28 15.2  -0.9
WRA   Warramunga Arr   32.89 262   P        P         22 28 15.2  -0.9
          comp=Z,1.6nm,0.5s,baz=88,slow=8.4,SNR=24
          comp=Z,1.6nm,0.5s
AS31  Alice Springs    33.19 256   P        P         22 28 18.7  -0.1
ASAR  Alice Springs    33.20 256   P        P         22 28 18.3  -0.5
ASAR  Alice Springs    33.20 256   P        P         22 28 18.7  -0.1
          comp=Z,9.4nm,0.4s,baz=82,slow=8.8,SNR=236
ASAR                               PcP      PcP       22 30 54.8  -2.0
          comp=Z,0.3nm,0.7s,baz=81,slow=2.8,SNR=2.7
          comp=Z,9.4nm,0.4s
MTN   Manton Dam       37.10 274   P        P         22 28 51.8  -0.3
MTN                                IAmb     IAmb      22 29 13.5
          comp=Z,18nm,1.4s
KNRA  Kununurra        38.72 268   P        P         22 29 05.5  -0.2
KNRA                               IAmb     IAmb      22 29 19.4
          comp=Z,11nm,1.2s
FITZ  Fitzroy Crossi   41.27 264   P        P         22 29 27.2 +0.5
VNDA  Vanda            58.70 182   P        P         22 31 37.1 +0.3
          comp=Z,0.7nm,0.8s,baz=18,slow=6.4,SNR=2.9
          comp=Z,0.7nm,0.8s
SBA   Scott Base       58.93 181   P        P         22 31 39.3 +0.9
SBA                                IAmb     IAmb      22 31 40.6
          comp=Z,4.5nm,0.8s
QSPA  South Pole Qui   71.08 180   P        P         22 32 56.7  -0.2
QSPA  South Pole Qui   71.08 180   P        P         22 32 56.9   0.0
          comp=Z,2.6nm,0.8s,baz=33,slow=2.2,SNR=8.6
          comp=Z,2.6nm,0.8s
PEA0B Petropavlovsk-   72.47 353   P        P         22 33 05.5 +0.5
PETK  Petropavlovsk-   72.47 353   P        P         22 33 06.3 +1.3
          comp=Z,2.7nm,0.7s,baz=150,slow=5.8,SNR=4.0
          comp=Z,2.7nm,0.7s
BELA  Belgrano 2       82.37 175   P        P         22 33 58.9  -0.8
BELA                               IAmb     IAmb      22 33 59.4
          comp=Z,4.3nm,0.6s
N15K  Kwethluk River   82.69  15   P        P         22 34 02.0 +0.6
N15K                               IAmb     IAmb      22 34 13.6
          comp=Z,10nm,1.2s
M16K  Timber Creek     83.71  15   P        P         22 34 07.5 +0.8
M16K                               IAmb     IAmb      22 34 08.6
          comp=Z,5.6nm,0.8s
J18K  Innoko River     86.36  15   P        P         22 34 20.0 +0.2
J18K                               IAmb     IAmb      22 34 21.4
          comp=Z,3.0nm,0.7s
CAST  Castle Rocks     87.49  16   P        P         22 34 23.8  -1.4
CAST                               IAmb     IAmb      22 34 26.6
          comp=Z,6.2nm,1.4s
NVAR  Mina Array Bea   88.62  49   P        P         22 34 31.7 +0.3
          comp=Z,0.7nm,0.8s,baz=251,slow=6.6,SNR=2.4
          comp=Z,0.7nm,0.8s
IMAR  Indian Mountai   89.17  14   P        P         22 34 32.9  -0.1
SNAA  Sanae            89.43 182   P        P         22 34 33.3  -1.2
          comp=Z,1.9nm,1.0s,baz=241,slow=4.6,SNR=3.5
          comp=Z,1.9nm,1.0s
E19K  Redstone River   89.65  12   P        P         22 34 36.6 +1.3
ILAR  Eielson Array    89.97  17   P        P         22 34 35.5  -1.2
          comp=Z,0.3nm,0.4s,baz=246,slow=5.1,SNR=6.2
          comp=Z,0.3nm,0.4s
U15A  North Rim        92.20  52   P        P         22 34 48.1   0.0
U15A                               IAmb     IAmb      22 34 50.4
          comp=Z,2.7nm,0.8s
ARCES ARCESS Array B  124.81 345   PKP      PKPdf     22 40 35.0  -1.0
          comp=Z,4.5nm,0.9s,baz=63,slow=2.2,SNR=6.0
RONA  Rosalia, Austr  143.86 329 i PKiKP    PKPdf     22 41 11.5  -0.6
          comp=Z,2.7nm,0.8s
CONA  Conrad Observa  143.91 329 i PKiKP    PKPdf     22 41 11.4  -0.8
          comp=Z,2.0nm,0.9s
GERES GERESS Array B  144.25 332   PKP      PKPab     22 41 10.4  -0.8
          comp=Z,1.4nm,0.7s,baz=35,slow=3.6,SNR=9.1
MOA   Molln           144.72 330 i PKiKP    PKPdf     22 41 13.2  -0.3
          comp=Z,4.8nm,0.6s
BIOA  Bad Ischl, Aus  145.13 331 i PKP      PKPbc     22 41 12.5  -1.7
          comp=Z,3.5nm,1.0s
SOKA  Soboth          145.19 328 i PKiKP    PKPbc     22 41 14.3  -0.2
          comp=Z,2.1nm,0.6s
LESA  Schwarzleotal   145.77 331 ePKiKP     PKPbc     22 41 15.8  -0.4
          comp=Z,2.0nm,0.6s
WATA  Walderalm       146.33 332 ePKiKP     PKPbc     22 41 17.7  -0.3
          comp=Z,1.4nm,0.5s
ABTA  Abfaltersbach   146.35 331 i PKP      PKPdf     22 41 15.1  -1.3
          comp=Z,5.5nm,1.0s
WTTA  Wattenberg      146.36 332 i PKiKP    PKPdf     22 41 15.8  -0.7
          comp=Z,2.2nm,0.8s
MOTA  Moosalm         146.53 333 i PKP      PKPdf     22 41 15.3  -1.5
          comp=Z,2.2nm,0.7s
FETA  Feichten        146.94 333 i PKP      PKPdf     22 41 14.6  -3.0
          comp=Z,3.3nm,0.9s
DAVA  Damuels         147.09 334 i PKiKP    PKPbc     22 41 19.0  -1.2
          comp=Z,4.5nm,1.0s
```

LDG ***15*** *22:26:57.5±0.1, 46°.72N×10°.29E, h2km, Ml2.4/3, Error ellipse: s-maj=3.4km s-min=2.4km az=59.0*

ROM ***15*** *22:26:57.0±0.2, 46°.710N±0°.010×10°.27E±0°.01, h8km, ML1.7/21, Error ellipse: s-maj=1.1km s-min=0.5km az=204.0*

VIE ***15*** *22:26:57.3±0.1, 46°.72N×10°.29E, h7km±2km, mb1.5/8, ml1.9/12, Error ellipse: s-maj=0.9km s-min=0.8km az=12.0 21 km WNW of Glorenza*

ZUR 15 22:26:57.2, 46°.73N×10°.28E, h4km±2km**, MLh1.8**/18**, 3C-8D, Error ellipse: s-maj=3879.6km s-min=888.3km az=248.0, Northern Italy**

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Code  Station Name      Δ°   AZ°     Phase ID              Time       Res
                                   Op       ISC         h  m  s     ISC
SCUC  Scuol-Clozza      0.07  12   Pg       Pg        22 26 59.0 +0.1
SCUC                               Sg       Sg        22 27 00.1 +0.2
SARD  Ardez Schule,     0.07 311 ⇑Pg       Pg        22 26 59.0 +0.1
STSP  Tschierv          0.11 161   Pg       Pg        22 26 59.9 +0.5
FUORN Ofenpass-Fuorn    0.11 187 ⇓Pg       Pg        22 26 59.9 +0.4
FUORN Ofenpass-Fuorn    0.11 187   P        Pg        22 26 59.9 +0.3
FUORN                              S        Sg        22 27 01.9 +0.8
FUORN                              AML      AML
          comp=E,548µm,1.6s
FUORN                              AML      AML
          comp=N,442µm,1.4s
FUORN                              AML      AML
          comp=E,423µm,0.4s
FUORN                              AML      AML
          comp=N,426µm,0.5s
SZER  Zernez            0.13 256 ⇑Pg       Pg        22 27 00.1 +0.2
MOSI  Grossmontoni      0.22 122 ⇓Pg       Pg        22 27 01.9 +0.4
MOSI  Grossmontoni      0.22 122 ⇓P        Pg        22 27 01.9 +0.5
MOSI                               AML      AML
          comp=E,314µm,1.0s
MOSI                               AML      AML
          comp=N,508µm,0.6s
MOSI                               AML      AML
          comp=N,508µm,0.6s
MOSI                               AML      AML
          comp=E,263µm,0.4s
BRMO  Bormio            0.26 166 ⇓Pg       Pg        22 27 02.4 +0.1
BRMO                               Sg       Sg        22 27 06.4 +0.7
BRMO  Bormio            0.26 166   P        Pg        22 27 02.5 +0.2
BRMO                               S        Sg        22 27 06.3 +0.6
BRMO                               AML      AML
          comp=E,175µm,1.0s
BRMO                               AML      AML
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	comp=N,146µm,0.7s						
BRMO				AML	AML		
	comp=E,149µm,0.2s						
BRMO				AML	AML		
	comp=N,97µm,0.2s						
DAVOX	**Davos/Dischmat**	**0.28**	**281**	⇑Pg	Pg	22 27 02.9	+0.2
DAVOX	**Davos/Dischmat**	**0.28**	**281**	P	Pg	22 27 02.9	+0.2
DAVOX				S	Sg	22 27 07.9	+1.4
DAVOX				AML	AML		
	comp=E,161µm,1.3s						
DAVOX				AML	AML		
	comp=N,290µm,0.3s						
DAVOX				AML	AML		
	comp=N,369µm,0.3s						
DAVOX				AML	AML		
	comp=N,290µm,0.3s						
DAVOX				AML	AML		
	comp=E,150µm,0.3s						
BERNI	**Berninapass**	**0.36**	**210**	⇓Pg	Pg	22 27 04.6	+0.3
BERNI	**Berninapass**	**0.36**	**210**	P	Pg	22 27 04.6	+0.3
BERNI				S	Sg	22 27 10.0	+0.9
BERNI				AML	AML		
	comp=E,85µm,0.5s						
BERNI				AML	AML		
	comp=N,112µm,0.6s						
BERNI				AML	AML		
	comp=E,59µm,0.2s						
CARE	**Lago del Cares**	**0.42**	**137**	⇓*e*Pg	Pg	22 27 05.5	+0.2
CARE				*e*Sg	Sg	22 27 11.4	+0.6
CARE	**Lago del Cares**	**0.42**	**137**	P	Pg	22 27 05.5	+0.2
CARE				S	Sg	22 27 11.4	+0.6
CARE				AML	AML		
	comp=E,97µm,1.0s						
CARE				AML	AML		
	comp=N,114µm,0.4s						
CARE				AML	AML		
	comp=E,97µm,1.0s						
CARE				AML	AML		
	comp=N,114µm,0.4s						
CARE				AML	AML		
	comp=N,97µm,0.5s						
FETA	**Feichten**	**0.42**	**46**	Pg	Pg	22 27 05.8	+0.3
FETA	**Feichten**	**0.42**	**46**	*i* Pg	Pg	22 27 05.7	+0.3
	comp=N,1.1nm,0.1s,SNR=7.5						
FETA				*e*Sg	Sg	22 27 11.6	+0.6
	comp=N,5.8nm,0.1s,SNR=7.6						
BRIZ2	**Brienz, Instab**	**0.48**	**264**	Pg	Pg	22 27 06.6	+0.2
A290A	**Bolzano, San N**	**0.48**	**117**	⇓Pg	Pg	22 27 06.7	+0.2
DAVA	**Damuels**	**0.62**	**334**	Pg	Pg	22 27 09.5	+0.4
DAVA	**Damuels**	**0.62**	**334**	*e*Pg	Pg	22 27 09.6	+0.5
	comp=N,1.9nm,0.1s,SNR=7.7						
DAVA				Sg	Sb	22 27 18.9	-1.0
	comp=N,3.3nm,0.2s						
OZOL	**Ozolo**	**0.62**	**121**	⇓*e*Pg	Pg	22 27 09.5	+0.3
OZOL				*e*Sg	Sg	22 27 18.5	+1.3
OZOL	**Ozolo**	**0.62**	**121**	P	Pg	22 27 09.4	+0.2
OZOL				S	Sg	22 27 18.5	+1.2
OZOL				AML	AML		
	comp=E,119µm,0.5s						
OZOL				AML	AML		
	comp=N,93µm,0.4s						
OZOL				AML	AML		
	comp=E,119µm,0.5s						
OZOL				AML	AML		
	comp=E,117µm,0.3s						
STRW	**Triesenberg, W**	**0.63**	**308**	Pg	Pg	22 27 09.6	+0.3
TUE	**Stuetta**	**0.69**	**249**	Pg	Pg	22 27 10.3	-0.2
TUE	**Stuetta**	**0.69**	**249**	P	Pg	22 27 10.5	0.0
TUE				AML	AML		
	comp=E,64µm,0.4s						
TUE				AML	AML		
	comp=N,45µm,1.6s						
RONC	**Roncone**	**0.79**	**162**	*e*Pg	Pg	22 27 12.4	+0.1
RONC				*e*Sg	Sg	22 27 22.8	+0.3
RONC	**Roncone**	**0.79**	**162**	P	Pg	22 27 12.5	+0.2
RONC				AML	AML		
	comp=E,116µm,0.5s						
RONC				AML	AML		
	comp=N,181µm,0.5s						
GAGG	**Gaggia**	**0.80**	**144**	P	Pg	22 27 12.8	+0.3
GAGG				AML	AML		
	comp=E,62µm,1.3s						
GAGG				AML	AML		
	comp=N,62µm,0.5s						
ROSI	**Rosskopf**	**0.80**	**75**	P	Pg	22 27 12.9	+0.3
ROSI				S	Sg	22 27 23.8	+0.8
ROSI				AML	AML		
	comp=E,66µm,0.6s						
ROSI				AML	AML		
	comp=N,62µm,0.3s						
ROSI				AML	AML		
	comp=E,66µm,0.6s						
ROSI				AML	AML		
	comp=N,62µm,0.3s						
ROSI				AML	AML		
	comp=E,66µm,1.4s						
SQTA	**Sankt Quirin**	**0.80**	**52**	*e*Pg	Pg	22 27 12.8	+0.2
	comp=E,1.3nm,0.1s						
RETA	**Reutte**	**0.83**	**23**	*e*Pg	Pg	22 27 13.3	+0.2
	comp=E,0.1nm,0.1s						
MOTA	**Moosalm**	**0.83**	**42**	*e*Pg	Pg	22 27 13.3	0.0
	comp=E,1.5nm,0.2s,SNR=5.5						
MOTA				*e*Sg	Sb	22 27 25.4	-0.6
	comp=E,5.2nm,0.3s,SNR=4.7						
LUSI	**Trento, Gardas**	**0.90**	**149**	P	Pg	22 27 14.3	-0.1
LUSI				AML	AML		
	comp=E,48µm,0.6s						
LUSI				AML	AML		
	comp=N,67µm,0.2s						
LUSI				AML	AML		
	comp=E,48µm,1.4s						
ZONE	**Zone**	**0.97**	**187**	AML	AML		
	comp=E,55µm,0.2s						
ZONE				AML	AML		
	comp=N,52µm,1.2s						
ZIAN	**Ziano**	**0.99**	**117**	P	Pg	22 27 16.5	+0.2
ZIAN				AML	AML		
	comp=E,27µm,0.3s						
ZIAN				AML	AML		
	comp=N,23µm,0.2s						
ZIAN				AML	AML		
	comp=N,23µm,1.8s						
DOSS	**Dosso del Somm**	**1.06**	**143**	AML	AML		
	comp=N,213µm,0.9s						
DOSS				AML	AML		
	comp=N,55µm,0.4s						
DOSS				AML	AML		
	comp=E,50µm,1.2s						
DOSS				AML	AML		
	comp=E,177µm,0.7s						
DOSS				AML	AML		
	comp=N,213µm,1.1s						
DOSS				AML	AML		
	comp=E,177µm,1.3s						
WTTA	**Wattenberg**	**1.07**	**60**	*e*Pg	Pb	22 27 18.1	-0.3
	comp=E,0.9nm,0.2s						
WATA	**Walderalm**	**1.07**	**55**	*e*Pg	Pb	22 27 18.3	-0.1
	comp=E,0.5nm,0.2s						
MBAL	**Monte Baldo -**	**1.11**	**159**	P	Pg	22 27 18.5	0.0
LESA	**Schwarzleotal**	**1.78**	**66**	*e*Pg	Pb	22 27 30.7	+0.3
	comp=E,0.9nm,0.2s						
LESA				*e*Sg	Sg	22 27 57.9	+3.6
	comp=E,2.2nm,0.2s						
HINF	**Hinteralfeld**	**2.58**	**296**	*e*Pn	Pn	22 27 41.1	+1.4
HINF	**Hinteralfeld**	**2.58**	**296**	*e*Pg	Pg	22 27 45.8	-0.8
HINF				*e*Sn	Sn	22 28 10.8	-0.7
	comp=E,5.3nm,0.5s						
CDF	**Champ du Feu**	**2.64**	**311**	*e*Pn	Pn	22 27 41.3	+0.6
CDF				*e*Sg	Sg	22 28 23.1	+1.1
	comp=E,7.5nm,0.6s						
HAU	**Haudompre**	**2.96**	**297**	*e*Pn	Pn	22 27 46.0	+1.0
HAU	**Haudompre**	**2.96**	**297**	*e*Pg	Pg	22 27 52.8	-1.2
HAU				*e*Sn	Sn	22 28 18.2	-2.8
HAU				*e*Sg	Sg	22 28 31.0	-1.3
	comp=E,2.9nm,0.3s						

WEL 15 22:32:48.4±0.7**, 32°S**±5°×**17°9E**±1°1**, h33^{km}, M4.3**/12**, mB5.0**/12**, ML4.9**/19**, MLv4.4**/9**, Mw(mB)4.3**/12**, Error ellipse: s-maj=14.9km s-min=4.5km az=110.6, confirmed, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.81**	**50**	S	Sn	22 34 29.3	+0.9
MXZ	**Matakaoa Point**	**5.79**	**184**	P	Pn	22 34 14.9	+2.9
MXZ				S	Sn	22 35 21.0	+3.7
HAZ	**Te Kaha**	**6.03**	**187**	P	Pn	22 34 17.0	+1.8
HAZ				S	Sn	22 35 26.7	+3.7
WMGZ	**Waiomatatini S**	**6.04**	**183**	P	Pn	22 34 16.7	+1.2
WMGZ				S	Sn	22 35 22.7	-0.7
ETAZ	**East Tamaki Re**	**6.06**	**210**	P	Pn	22 34 22.8	+7.0
PKGZ	**Pakihiroa**	**6.11**	**185**	P	Pn	22 34 19.0	+2.6
PKGZ				S	Sn	22 35 27.8	+2.7
RUGZ	**Raukumara Rang**	**6.25**	**188**	P	Pn	22 34 19.8	+1.5
RUGZ				S	Sn	22 35 30.0	+1.4
PUZ	**Puketiti**	**6.30**	**184**	S	Sn	22 35 30.8	+0.9
URZ	**Urewera**	**6.61**	**191**	P	Pn	22 34 23.2	-0.1
URZ				S	Sn	22 35 41.4	+3.9
MWZ	**Matawai**	**6.63**	**188**	P	Pn	22 34 24.9	+1.4
MWZ				S	Sn	22 35 39.8	+1.8
RAGZ	**Rawiri**	**6.80**	**189**	P	Pn	22 34 25.8	-0.2
RAGZ				S	Sn	22 35 43.3	+1.1
MUGZ	**Murupara**	**6.89**	**193**	P	Pn	22 34 27.6	+0.5
MUGZ				S	Sn	22 35 47.1	+2.8
RTZ	**Ruatahuna**	**6.98**	**191**	P	Pn	22 34 28.5	0.0
SNGZ	**Shannon Statio**	**7.09**	**189**	P	Pn	22 34 30.6	+0.7
SNGZ				S	Sn	22 35 51.1	+1.8
PRGZ	**Paritu Road**	**7.17**	**185**	P	Pn	22 34 29.6	-1.4
PRGZ				S	Sn	22 35 49.8	-1.6
MTHZ	**Maungataniwha**	**7.24**	**192**	P	Pn	22 34 30.1	-1.8
MTHZ				S	Sn	22 35 52.2	-0.8
RAHZ	**Arahi**	**7.26**	**190**	P	Pn	22 34 30.5	-1.7
RAHZ				S	Sn	22 35 52.9	-0.6
WHHZ	**Waihua**	**7.40**	**189**	P	Pn	22 34 34.0	0.0
WHHZ				S	Sn	22 35 56.4	-0.4
NMHZ	**Naumai**	**7.48**	**192**	P	Pn	22 34 34.5	-0.8
NMHZ				S	Sn	22 35 58.7	-0.3
BKZ	**Black Stump Fm**	**7.61**	**193**	P	Pn	22 34 35.2	-1.8
BKZ				S	Sn	22 36 02.0	-0.1
ARHZ	**Aropaoanui**	**7.61**	**190**	P	Pn	22 34 36.2	-0.8
ARHZ				S	Sn	22 36 00.4	-1.7
MCHZ	**McNeill Hill**	**7.84**	**192**	P	Pn	22 34 39.4	-0.7
MCHZ				S	Sn	22 36 06.9	-0.8
KWHZ	**Kaweka Forest**	**7.87**	**193**	P	Pn	22 34 39.2	-1.4
WHVZ	**Whangaehu Hut**	**7.93**	**198**	P	Pn	22 34 40.9	-0.7
TRVZ	**Turoa**	**7.95**	**198**	P	Pn	22 34 41.4	-0.5
PKVZ	**Pokaka**	**8.00**	**199**	P	Pn	22 34 41.5	-0.9
MOVZ	**Moawhango**	**8.00**	**197**	P	Pn	22 34 40.9	-1.6
KRHZ	**Kereru**	**8.09**	**193**	P	Pn	22 34 40.7	-3.0
KAHZ	**Kahuranaki**	**8.15**	**190**	P	Pn	22 34 41.0	-3.4
PXZ	**Pawanui**	**8.39**	**190**	P	Pn	22 34 44.4	-3.2
PNHZ	**Pukenui**	**8.39**	**194**	P	Pn	22 34 43.2	-4.5
PRHZ	**Porangahau**	**8.65**	**191**	P	Pn	22 34 47.5	-3.8
PRHZ				S	Sn	22 36 18.5	-9.2
DVHZ	**Dannevirke**	**8.77**	**193**	P	Pn	22 34 48.5	-4.3
ANWZ	**Angora Road**	**8.87**	**191**	P	Pn	22 34 50.2	-4.0
BFZ	**Birch Farm**	**9.12**	**192**	P	Pn	22 34 52.3	-5.4
TIWZ	**Tintock**	**9.28**	**194**	P	Pn	22 34 54.6	-5.4
TMWZ	**Te Maipa**	**9.60**	**193**	P	Pn	22 34 58.2	-6.0

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*AZER **15** 22:34:05.8, 38°.34N×47°.64E, h10^{km}, ml3.6*
*NSSP **15** 22:34:06.5, 38°.32N×47°.60E, h10^{km}, Ms3.5*
*TEH **15** 22:34:06.3, 38°.26N×47°.52E, h6^{km}±36^{km}*
ISC 15 22:34:05.8±1.2**, 38°.28N**±0°.02×**47°.56E**±0°.02**, h1**^{km}±11^{km}**, n72, σ1^{s}65**/118**, 3C-3D, Northwestern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IHRS	**Heris**	**0.41**	**276**	Pg	**Pb**	**22 34 15.1**	**-0.9**
IHRS				Sg	**Sb**	**22 34 21.9**	**-0.9**
LRK	**Lerik**	**0.71**	**59**	P	**Pg**	**22 34 19.1**	**-0.4**
LRK				S	**Sg**	**22 34 29.1**	**+0.2**
YRD	**Yardimli**	**0.83**	**40**	P	**Pg**	**22 34 21.3**	**-0.5**
YRD				S	**Sg**	**22 34 32.8**	**+0.2**
IHSH	**Hashtrud**	**1.00**	**194**	Pg	**Pn**	**22 34 26.0**	**-1.3**
IHSH				Sg	**Sn**	**22 34 40.8**	**-1.3**
ASTR	**Astara**	**1.01**	**74**	P	**Pg**	**22 34 24.7**	**-0.5**
ASTR				S	**Sg**	**22 34 39.0**	**+0.7**
LKRN	**Lenkeran, Azer**	**1.05**	**65**	P	**Pb**	**22 34 25.4**	**-1.5**
LKRN				S	**Sg**	**22 34 40.2**	**+0.5**
ITBZ	**Tabriz**	**1.11**	**268**	Pg	**Pn**	**22 34 27.6**	**-1.0**
GLBA	**Clilabad**	**1.16**	**34**	P	**Pb**	**22 34 28.4**	**-0.3**
GLBA				S	**Sn**	**22 34 45.3**	**-0.4**
QRD	**Qoradiz**	**1.20**	**351**	P	**Pn**	**22 34 28.5**	**-1.2**
QRD				S	**Sb**	**22 34 44.8**	**-0.4**
EGVZ	**Egvard**	**1.23**	**320**	*e*P	**Pn**	**22 34 29.4**	**-1.0**
IAZR	**Azarshahr**	**1.38**	**245**	Pg	**Pg**	**22 34 33.5**	**+1.2**
ORD	**Ordubad**	**1.38**	**298**	P	**Pb**	**22 34 31.9**	**-0.6**
ORD				S	**Sg**	**22 34 52.2**	**+1.9**
CSN1	**Caspian**	**1.41**	**120**	Pg	**Pg**	**22 34 33.5**	**+0.6**
BLQ	**Beylaqan**	**1.44**	**0**	P	**Pn**	**22 34 32.9**	**-0.1**
BLQ				S	**Sb**	**22 34 52.8**	**+0.6**
ISHB	**Shabestar**	**1.53**	**271**	Pg	**Pg**	**22 34 35.3**	**+0.2**
GRS	**Goris**	**1.55**	**322**	⇓*i*P	**Pg**	**22 34 37.0**	**+1.5**
GRS				⇑*i*S	**Sg**	**22 34 58.0**	**+2.4**
SAAT	**Saatly**	**1.72**	**23**	P	**Pn**	**22 34 36.6**	**-0.2**
SAAT				S	**Sb**	**22 35 00.8**	**+0.6**
NAX	**Nakhchivan**	**1.84**	**300**	P	**Pg**	**22 34 41.0**	**-0.2**
NAX				S	**Sg**	**22 35 05.7**	**+0.7**
AGDM	**Agdam**	**1.86**	**349**	P	**Pb**	**22 34 40.1**	**-0.5**
AGDM				S	**Sg**	**22 35 05.7**	**+0.1**
SBZ	**Shahbuz**	**1.92**	**306**	P	**Pb**	**22 34 41.9**	**+0.2**
SBZ				S	**Sg**	**22 35 07.9**	**+0.3**
ZRD	**Zardab**	**2.00**	**3**	P	**Pb**	**22 34 42.5**	**-0.5**
ZRD				S	**Sg**	**22 35 10.0**	**-0.1**
BRDA	**Brd**	**2.00**	**352**	P	**Pb**	**22 34 43.4**	**+0.4**
BRDA				S	**Sg**	**22 35 11.3**	**+1.1**
ALIB	**&Aumlli-Bayram**	**2.02**	**33**	P	**Pn**	**22 34 41.0**	**0.0**
ALIB				S	**Sb**	**22 35 09.4**	**+0.4**
MAHB	**Mahabad**	**2.11**	**225**	Pn	**Pb**	**22 34 44.9**	**0.0**
KDMR	**Kurdemir**	**2.15**	**13**	P	**Pn**	**22 34 43.7**	**+1.0**
KDMR				S	**Sb**	**22 35 13.8**	**+1.2**
VAYK	**Vayk**	**2.18**	**311**	⇓*e*P	**Pb**	**22 34 45.6**	**-0.5**
VAYK				⇓*e*S	**Sb**	**22 35 14.3**	**+0.6**
LHJ2	**Lahijan - Gila**	**2.28**	**118**	Pn	**Pb**	**22 34 47.0**	**-0.6**
AYRK	**Ayrk**	**2.29**	**324**	*e*P	**Pb**	**22 34 47.3**	**-0.8**
AYRK				*e*S	**Sb**	**22 35 17.4**	**+0.4**
JIR1	**Jirandeh**	**2.38**	**131**	Pn	**Pb**	**22 34 49.1**	**-0.5**
MAKU	**Maku**	**2.49**	**296**	Pn	**Pb**	**22 34 50.6**	**-0.9**
GBS	**Qobustan**	**2.50**	**25**	P	**Pn**	**22 34 49.0**	**+1.4**
GBS				S	**Sb**	**22 35 22.1**	**-0.6**
MNGR	**Mingechevir, A**	**2.52**	**352**	P	**Pn**	**22 34 49.6**	**+1.8**
MNGR				S	**Sb**	**22 35 24.3**	**+1.1**
GANJ	**Ganja**	**2.55**	**338**	P	**Pb**	**22 34 50.5**	**-1.8**
GANJ				S	**Sb**	**22 35 23.9**	**-0.3**
HYR	**Heyderabad**	**2.55**	**305**	P	**Pb**	**22 34 52.9**	**+0.5**
HYR				S	**Sg**	**22 35 28.0**	**+0.2**
IML	**Ismayilli**	**2.56**	**11**	P	**Pn**	**22 34 50.0**	**+1.6**
IML				S	**Sb**	**22 35 24.5**	**+0.1**
PQL	**Pirkuli**	**2.63**	**17**	P	**Pn**	**22 34 51.4**	**+1.9**
PQL				S	**Sb**	**22 35 26.0**	**-0.7**
QBL	**Gabala**	**2.67**	**5**	P	**Pb**	**22 34 52.8**	**-1.7**
QBL				S	**Sb**	**22 35 26.2**	**-1.6**
ATGJ	**Altiaghaj**	**2.79**	**22**	P	**Pb**	**22 34 57.2**	**+0.6**
ATGJ				S	**Sb**	**22 35 28.9**	**-2.3**
GDB	**GEDABAY**	**2.81**	**331**	P	**Pb**	**22 34 54.8**	**-2.1**
GDB				S	**Sb**	**22 35 32.3**	**+0.5**
NRKZ	**NAREK**	**2.83**	**308**	*e*P	**Pb**	**22 34 57.8**	**+0.5**
NRKZ				*e*S	**Sg**	**22 35 36.6**	**-0.3**
IGZV	**Ghazvin**	**2.84**	**131**	Pn	**Pb**	**22 34 55.9**	**-1.6**
GNI	**Garni**	**2.88**	**311**	⇑*i*P	**Pb**	**22 34 57.6**	**-0.4**
GNI				⇑*i*S	**Sg**	**22 35 36.8**	**-1.5**
GNI	**Garni**	**2.88**	**311**	Pn	**Pb**	**22 34 56.4**	**-1.6**
XNQ	**Khinaliq**	**2.92**	**9**	P	**Pn**	**22 34 55.1**	**+1.5**
XNQ				S	**Sb**	**22 35 33.9**	**-1.3**
SEKA	**Sheki**	**2.94**	**355**	P	**Pn**	**22 34 54.7**	**+1.0**
SEKA				S	**Sb**	**22 35 33.5**	**-2.0**
HGHA	**Hamedan- Ghaye**	**2.98**	**159**	Pn	**Pb**	**22 34 56.9**	**-2.8**
SIZA	**Siyzn**	**2.98**	**20**	P	**Pn**	**22 34 54.5**	**+0.2**
SIZA				S	**Sb**	**22 35 34.9**	**-1.7**
KAPZ	**Kaputan**	**3.01**	**314**	*e*P	**Pg**	**22 35 02.1**	**-1.5**
KAPZ				*e*S	**Sg**	**22 35 42.0**	**-0.7**
QABG	**Abgarm-Qazvin**	**3.04**	**147**	Pn	**Pb**	**22 34 58.1**	**-2.7**
QUBA	**Quba, Azerbaij**	**3.15**	**13**	P	**Pn**	**22 34 57.4**	**+0.7**
QUBA				S	**Sb**	**22 35 39.5**	**-2.2**
LSVT	**Lusahovit**	**3.21**	**326**	*e*P	**Pb**	**22 35 03.8**	**+0.2**
LSVT				*e*S	**Sb**	**22 35 45.3**	**+2.1**
QZX	**Qazax, Azerbai**	**3.25**	**329**	P	**Pb**	**22 35 02.0**	**-2.2**
QZX				S	**Sb**	**22 35 43.7**	**-0.5**
QSAR	**Qusar**	**3.28**	**9**	P	**Pn**	**22 35 01.4**	**+3.1**
QSAR				S	**Sb**	**22 35 42.6**	**-2.6**
KLST	**Kelardasht - M**	**3.30**	**121**	Pn	**Pn**	**22 35 01.7**	**+2.9**
AMBZ	**Amberd**	**3.31**	**311**	*e*P	**Pb**	**22 35 07.1**	**+1.6**
AMBZ				*e*S	**Sg**	**22 35 51.4**	**-0.9**
ARUZ	**Aruch**	**3.35**	**308**	*e*P	**Pb**	**22 35 08.0**	**+1.9**
ARUZ				*e*S	**Sg**	**22 35 52.9**	**-0.7**
SNQR	**Sonqor, Kerman**	**3.42**	**179**	Pn	**Pb**	**22 35 03.1**	**-4.2**
VNNZ	**Vanand**	**3.42**	**303**	*e*P	**Pg**	**22 35 10.1**	**-1.4**
VNNZ				*e*S	**Sg**	**22 35 55.8**	**-0.1**
ZKTA	**Zakatala**	**3.43**	**348**	P	**Pn**	**22 35 02.6**	**+2.2**
ZKTA				S	**Sb**	**22 35 47.0**	**-2.6**
HAGD	**Aghdareh**	**3.68**	**159**	Pn	**Pb**	**22 35 07.3**	**-4.4**
MZPU	**Pul - Mazandar**	**3.69**	**119**	Pn	**Pn**	**22 35 07.1**	**+2.9**
SRTK	**Saratovka**	**3.74**	**319**	*e*P	**Pb**	**22 35 13.8**	**+1.1**
SRTK				*e*S	**Sg**	**22 36 03.8**	**-2.1**
KMOZ	**Kamo**	**3.77**	**313**	*e*P	**Pb**	**22 35 15.3**	**+2.1**
KMOZ				*e*S	**Sg**	**22 36 06.3**	**-0.7**
HSAM	**Samen**	**4.15**	**168**	Pn	**Pn**	**22 35 13.4**	**+2.9**
IPRN	**Peran**	**4.32**	**117**	Pn	**Pn**	**22 35 15.9**	**+3.1**
IQOM	**Qom**	**4.45**	**139**	Pn	**Pn**	**22 35 17.5**	**+2.9**
IDMV	**Damavand**	**4.49**	**126**	Pn	**Pn**	**22 35 18.3**	**+3.1**
ILBA	**Ilam Banvizeh**	**4.77**	**194**	Pn	**Pn**	**22 35 22.4**	**+3.5**
ISFB	**Sefidab**	**5.45**	**135**	Pn	**Pn**	**22 35 31.8**	**+3.6**
QAMS	**Qamsar**	**5.50**	**144**	Pn	**Pn**	**22 35 32.5**	**+3.4**
KRSH	**Karshahi**	**5.68**	**138**	Pn	**Pn**	**22 35 34.6**	**+3.2**
ISFR	**Sfrayin**	**8.37**	**95**	Pn	**Pn**	**22 36 10.6**	**+2.0**

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*NEIC **15** 22:43:15.6±0.4, 19°.24N±0°.02×155°.52W±0°.02, h40^{km}±1^{km}, Error ellipse: s-maj=3.4km s-min=3.2km az=96.0*
HVO 15 22:43:16.8±0.8**, 19°.20N**±0°.01×**155°.51W**±0°.02**, h35**^{km}±2^{km}**, ML2.4**/22**, ML2.5**/41(NEIC)**, Error ellipse: s-maj=3.3km s-min=2.1km az=97.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHU	**Kahuku**	**0.11**	**297**		Pn	22 43 22.4	-1.1
HPO	**Honuapo**	**0.12**	**200**		Pn	22 43 22.9	-0.3
HTC	**Hot Caves**	**0.12**	**70**		Pn	22 43 22.5	-0.7
AIN	**Ainahou**	**0.18**	**17**		Pn	22 43 23.0	-0.8
HLP	**Hilina Pali**	**0.22**	**63**		Pn	22 43 23.2	-0.7
HLP					Sn	22 43 28.0	-0.9
HLP				IAML		22 43 29.4	
	comp=E,482nm,1.0s						
HLP				IAML		22 43 30.4	
	comp=N,472nm,0.7s						
SDHHI	**Sand Hill**	**0.28**	**47**		Pn	22 43 23.6	-1.1
SDHHI					Sn	22 43 28.7	-1.4
WRMHI	**West Rim**	**0.29**	**44**		Pn	22 43 23.6	-1.1
WRMHI					Sn	22 43 28.8	-1.4
MWH	**Mokuaweoweo**	**0.30**	**344**		Pn	22 43 23.8	-1.4
MWH	**Mokuaweoweo**	**0.30**	**344**		Sn	22 43 29.4	-1.7
RIM	**Rim**	**0.30**	**49**		Pn	22 43 23.7	-1.1
RIM					Sn	22 43 28.9	-1.6
UWE	**Uwekahuna**	**0.30**	**43**	Pn	Pn	22 43 23.9	-1.0
UWE				IAML		22 43 29.6	
	comp=N,477nm,0.7s						
UWE	**Uwekahuna**	**0.30**	**43**		Sn	22 43 29.2	-1.4
KKO	**Keanakako'i**	**0.31**	**49**		Pn	22 43 23.8	-1.1
KKO					Sn	22 43 29.3	-1.3
OBL	**Observatory Le**	**0.31**	**45**		Pn	22 43 23.8	-1.2
OBL					Sn	22 43 29.0	-1.6
UWB	**Uwekahuna Bluf**	**0.32**	**44**		Pn	22 43 23.8	-1.3
UWB					Sn	22 43 29.0	-1.7
MLH	**Mauna Loa**	**0.32**	**22**		Pn	22 43 24.1	-1.1
MLH				IAML		22 43 29.7	
	comp=E,370nm,0.3s						
MLH				IAML		22 43 30.0	
	comp=N,447nm,0.3s						
MLH	**Mauna Loa**	**0.32**	**22**		Sn	22 43 29.5	-1.6
BYL	**Byron's Ledge**	**0.32**	**48**	Pn	Pn	22 43 23.9	-1.2
BYL				IAML		22 43 34.5	
	comp=E,288nm,1.1s						
BYL	**Byron's Ledge**	**0.32**	**48**		Sn	22 43 29.1	-1.8
SBLHI	**Steaming Bluff**	**0.33**	**45**		Pn	22 43 23.8	-1.3
SBLHI					Sn	22 43 29.2	-1.7
HATHI	**Halemaʻumaʻu T**	**0.33**	**47**		Pn	22 43 23.9	-1.2
HATHI				IAML		22 43 36.6	
	comp=E,252nm,1.1s						
HATHI	**Halemaʻumaʻu T**	**0.33**	**47**		Sn	22 43 29.3	-1.7
PUH	**Pauahi**	**0.33**	**58**		Pn	22 43 24.0	-1.2
PUH				IAML		22 43 29.6	
	comp=E,368nm,0.3s						
PUH	**Pauahi**	**0.33**	**58**		Sn	22 43 29.3	-1.8
RSD	**Rainshed**	**0.34**	**40**		Pn	22 43 23.1	-2.3
RSD	**Rainshed**	**0.34**	**40**		Sn	22 43 29.9	-1.5
ALEP	**Alea Permanent**	**0.36**	**340**		Pn	22 43 24.3	-1.6
ALEP					Sn	22 43 30.0	-2.2
KNHH	**Kane Nui o Ham**	**0.37**	**61**		Pn	22 43 24.5	-1.2
HMH	**Humuʻula Sheep**	**0.40**	**4**		Pn	22 43 25.3	-1.0
HMH				IAML		22 43 32.2	
	comp=E,445nm,0.1s						
HMH	**Humuʻula Sheep**	**0.40**	**4**		Sn	22 43 31.5	-1.5
STCH	**Steam Cracks**	**0.41**	**63**		Pn	22 43 24.9	-1.3
STCH				IAML		22 43 31.6	
	comp=E,225nm,0.1s						
STCH	**Steam Cracks**	**0.41**	**63**		Sn	22 43 30.8	-1.9
NPOC	**North of Puʻu**	**0.43**	**63**		Pn	22 43 25.1	-1.4
NPOC					Sn	22 43 31.2	-2.0
JCUZ	**Jacuzzi**	**0.43**	**64**		Pn	22 43 25.3	-1.2
JCUZ					Sn	22 43 31.4	-1.8
CPH	**Captain Cook**	**0.48**	**307**		Pn	22 43 25.4	-1.8
JOKA	**Jonika Flow**	**0.53**	**64**		Pn	22 43 26.3	-1.6
JOKA				IAML		22 43 38.0	
	comp=N,231nm,0.9s						
JOKA	**Jonika Flow**	**0.53**	**64**		Sn	22 43 33.0	-2.7
POHA	**Pohakuloa**	**0.56**	**358**		Pn	22 43 26.6	-1.8
POHA	**Pohakuloa**	**0.56**	**358**		Sn	22 43 34.0	-2.6
HUH	**Hualalai**	**0.57**	**328**	Pn	Pn	22 43 27.1	-1.6
HUH					Sn	22 43 35.1	-1.9
HUH				IAML		22 43 35.6	
	comp=E,314nm,0.2s						
HUH				IAML		22 43 41.1	
	comp=N,311nm,0.2s						
KKH	**Kailua Kona**	**0.66**	**314**		Pn	22 43 27.8	-1.9
KKH					Sn	22 43 35.8	-3.0
HPAH	**Hawaii Prepara**	**0.85**	**348**		Pn	22 43 30.3	-2.0
HPAH	**Hawaii Prepara**	**0.85**	**348**		Sn	22 43 39.8	-3.7
MHA	**Mahukona**	**1.05**	**340**		Pn	22 43 33.2	-1.8
MHA					Sn	22 43 45.1	-3.3

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*PMR **15** 22:54:55.0, 31°.04S×177°.41W, h10^{km}*
*WEL **15** 22:54:55.7±0.9, 31°S±4°×17°7W±1°4, h33^{km}, M7.0/63, mB7.0/49, ML7.3/12, MLv7.5/15, Mw(mB)7.0/63, Error ellipse: s-maj=18.8km s-min=5.2km az=93.2, confirmed*
*BJI **15** 22:54:59.0, 30°.94S×178°.06W, h20^{km}, mB7.4/46, mb6.6/49, Ms7.3/94, Ms7 7.2/92*
*BGR **15** 22:55:01.6, 30°.04S×177°.47W, h33^{km}, Ms7.5*
*NOU **15** 22:55:02.9, 31°.01S×177°.77W, h47^{km}, ML7.1/203, Kermadec Islands Region*
*MOS **15** 22:55:02.5±0.8, 30°.65S×178°.20W, h47^{km}, mb6.8/58, MS7.2/70, Error ellipse: s-maj=8.3km s-min=6.6km az=107.1*
*IPGP **15** 22:55:02.0, 30°.82S×178°.08W, h37^{km}, Mw7.4, Fault plane solution: NP1:φ$_s$213.00000°, δ34.00000°, λ105.00000°. NP2:φ$_s$15.00000°, δ57.00000°, λ80.00000°.*
*NEIC **15** 22:55:04.3, 30°.95S×177°.87W, h50^{km}, Moment Tensor Solution. Duration: 42^{s}5 Moment tensor: Scale 10^{20}Nm; M$_{rr}$0.98; M$_{\theta\theta}$-0.09; M$_{\phi\phi}$-0.88; M$_{r\theta}$0.05; M$_{\theta\phi}$-0.28; M$_{\phi r}$0.30; Fault plane solution: M$_0$1.02000×10^{20} NP1: φ$_s$199.90000°, δ36.54000°, λ93.60000°. NP2:φ$_s$15.42000°, δ53.54000°, λ87.33000°. Principal axes: T 1.0236, Plg81.0000°, Azm273.0000°; N -0.0055, Plg2.0000°, Azm17.0000°; P -1.0180, Plg9.0000°, Azm107.0000°;*
*NEIC **15** 22:55:04.3, 30°.65S×178°.10W, h50^{km}*
*IDC **15** 22:55:04.8±1.7, 30°.58S×178°.14W, h56^{km}±14^{km}, mb5.8/18, mbtmp6.0/18, MS7.0/52, Error ellipse: s-maj=12.4km s-min=11.2km az=72.0*
*NEIC **15** 22:55:04.1±1.6, 30°.64S±0°.08×178°.1W±0°.1, h46^{km}±1^{km}, mb6.7/285, Ms_20 7.0/934, Mwb7.2/98, Mww7.3/113, Error ellipse: s-maj=14.9km s-min=12.8km az=98.0, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M$_{rr}$5.39; M$_{\theta\theta}$-0.25; M$_{\phi\phi}$-5.15; M$_{r\theta}$1.91; M$_{\theta\phi}$-1.62; M$_{\phi r}$4.86; Fault plane solution: M$_0$7.60000×10^{19} NP1:φ$_s$20.07000°, δ66.74000°, λ92.72000°. NP2:φ$_s$193.22000°, δ23.41000°, λ83.70000°. Principal axes: T 7.4832, Plg68.0000°, Azm295.0000°; N 0.2225, Plg2.0000°, Azm199.0000°; P -7.7057, Plg22.0000°, Azm108.0000°;*

NEIC **15** *22:55:04.2, 30°.65S×178°.10W, h47^{km}*

GCMT **15** *22:55:12.1±0.1, 30°.93S±0°.01×177°.79W, h48^{km}, MW7.3/176, Moment Tensor Solution. s176,c494; s176,c886; Duration: 10^{s}8 Moment tensor: Scale 10^{20} Nm; M_{rr}0.97±.00; $M_{\theta\theta}$-0.08±.00; $M_{\phi\phi}$-0.89±.00; $M_{r\theta}$0.07±.01; $M_{\theta\phi}$-0.27±.00; $M_{\phi r}$0.52±.01; Best double couple: $M_0$1.10100×10^{20} NP1:ϕ_s201.00000°, δ31.00000°, λ97.00000°. NP2:ϕ_s13.00000°, δ59.00000°, λ86.00000°. Principal axes: T 1.1030, Plg76.0000°, Azm271.0000°; N -0.0020, Plg4.0000°, Azm15.0000°; P -1.1000, Plg14.0000°, Azm106.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 15 22:55:02.5±0.1**, 30°.81S**±0°.03×**178°.03W**±0°.03**, h39^{km}**±1^{km}**, h39^{km}:pP-P, n2800, σ2^{s}15**/2829**, mb6.7**/264**, MS7.1**/617**, 207C-70D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.54	3	P	Pn	22 55 25.6	-1.9
GLKZ				S	Sn	22 55 43.2	-3.0
RAO	Raoul Island	1.55	3	P	Pn	22 55 26.4	-1.1
	33μm,0.3s,baz=99,slow=3.5,SNR=161						
RAO	Raoul Island	1.55	3	P	Pn	22 55 28.9	+1.3
RAO	Raoul Island	1.55	3	⇓P	Pn	22 55 26.1	-1.5
MXZ	Matakaoa Point	7.39	203		Pn	22 56 45.8	-2.0
MXZ	Matakaoa Point	7.39	203	P	Pn	22 56 47.4	-0.3
MXZ	Matakaoa Point	7.39	203	P	Pn	22 56 45.6	-2.1
MXZ				S	Sn	22 58 11.2	+0.9
WMGZ	Waiomatatini S	7.59	202	P	Pn	22 56 48.6	-1.9
WMGZ				S	Sn	22 58 16.9	+1.8
GRZ	Great Barrier	7.68	223	P	Pn	22 56 57.1	+5.3
PKGZ	Pakihiroa	7.74	204	P	Pn	22 56 51.0	-1.6
PKGZ				S	Sn	22 58 17.5	-1.5
HAZ	Te Kaha	7.75	205	P	Pn	22 56 50.8	-1.9
HAZ				S	Sn	22 58 21.6	+2.5
WSRZ	White Island S	7.78	209	P	Pn	22 56 56.0	+2.9
WSRZ				S	Sn	22 58 22.6	+2.6
WIZ	White Island	7.79	209	P	Pn	22 56 53.1	0.0
PUZ	Puketiti	7.87	202	P	Pn	22 56 50.9	-3.5
PUZ				S	Sn	22 58 20.8	-1.3
KUZ	Kuaotunu	7.88	220	P	Pn	22 56 57.3	+2.8
KUZ	Kuaotunu	7.88	220	P	Pn	22 56 58.3	+3.8
RUGZ	Raukumara Rang	7.97	205	P	Pn	22 56 53.2	-2.6
RUGZ				S	Sn	22 58 24.2	-0.6
MYRZ	Mayor Island	8.02	215	P	Pn	22 57 02.3	+6.0
TWGZ	Tauwhareparae	8.05	203	P	Pn	22 56 54.8	-2.2
TWGZ				S	Sn	22 58 26.9	+0.2
WHRZ	Whale Island	8.15	209	P	Pn	22 56 58.2	-0.1
WCZ	Waipu Caves	8.18	229	P	Pn	22 57 05.6	+7.0
CNGZ	Carnagh Statio	8.26	201	P	Pn	22 56 56.8	-2.9
OUZ	Omahuta	8.30	236	P	Pn	22 57 04.8	+4.6
OUZ	Omahuta	8.30	236	P	Pn	22 57 06.3	+6.1
OUZ	Omahuta	8.30	236	⇑P	Pn	22 57 05.4	+5.2
MWZ	Matawai	8.35	205	P	Pn	22 56 57.7	-3.3
TGRZ	Tauranga	8.37	213	P	Pn	22 57 03.4	+2.2
MARZ	Manawahe	8.39	210	P	Pn	22 57 01.3	-0.2
URZ	Urewera	8.45	207	P	Pn	22 56 59.2	-3.0
	185nm,0.3s,baz=353,slow=3.4,SNR=291						
URZ				S	Sn	22 58 35.2	-1.0
	13μm,0.9s,baz=235,slow=19,SNR=4.4						
URZ	Urewera	8.45	207	P	Pn	22 56 59.0	-3.2
EDRZ	Edgecumbe	8.46	209	P	Pn	22 57 02.3	-0.2
LIRZ	Lichensteins R	8.53	211	P	Pn	22 57 07.2	+3.8
RIGZ	Rimuhau	8.61	203	P	Pn	22 57 02.5	-1.9
MKRZ	Makatiti	8.61	210	P	Pn	22 57 10.4	+5.9
KARZ	Kaharoa	8.61	212	P	Pn	22 57 05.8	+1.3
KMRZ	Kaimai	8.61	214	P	Pn	22 57 07.6	+3.0
OMRZ	Omania	8.62	211	P	Pn	22 57 05.0	+0.3
NGRZ	Ngongotaha	8.70	212	P	Pn	22 57 10.3	+4.5
HLRZ	Highlands Stat	8.75	210	P	Pn	22 57 07.8	+1.3
RRRZ	Republican Roa	8.76	209	P	Pn	22 57 08.2	+1.7
RTZ	Ruatahuna	8.80	206	P	Pn	22 57 04.1	-3.1
HSRZ	Hossack Road	8.85	211	P	Pn	22 57 10.4	+2.6
HRRZ	Handcock Road	8.90	210	P	Pn	22 57 11.2	+2.8
GRRZ	Galatos Road	8.94	211	P	Pn	22 57 13.0	+3.9
PRRZ	Plateau Road	8.94	209	P	Pn	22 57 07.6	-1.5
MHGZ	Mahia Peninsul	8.97	201	P	Pn	22 57 05.5	-3.9
ALRZ	Allen Road	9.02	209	P	Pn	22 57 08.9	-1.1
RAHZ	Arahi	9.03	205	P	Pn	22 57 06.8	-3.5
WPRZ	Whakapapatarin	9.06	210	P	Pn	22 57 12.9	+2.3
MTHZ	Maungataniwha	9.06	206	P	Pn	22 57 07.9	-2.8
WHHZ	Waihua	9.12	204	P	Pn	22 57 08.3	-3.1
KUTZ	Kaahu Road	9.18	212	P	Pn	22 57 13.1	+0.7
TLZ	Tolley Road	9.19	214	P	Pn	22 57 15.5	+3.0
MRHZ	Matea Rd	9.21	208	P	Pn	22 57 10.2	-2.7
WHTZ	Whakaora	9.27	211	P	Pn	22 57 17.4	+3.8
NMHZ	Naumai	9.29	206	P	Pn	22 57 10.4	-3.5
ARHZ	Aropaoanui	9.37	204	P	Pn	22 57 11.1	-3.8
HATZ	Hinemaiaia	9.40	209	P	Pn	22 57 15.7	+0.4
WATZ	Wairara	9.40	211	P	Pn	22 57 16.0	+0.6
BKZ	Black Stump Fm	9.47	207	P	Pn	22 57 14.0	-2.3
BKZ	Black Stump Fm	9.47	207	S	Sn	22 59 01.3	-0.2
BKZ	Black Stump Fm	9.47	207	P	Pn	22 57 11.8	-4.5
RATZ	Rangitukua	9.52	211	P	Pn	22 57 17.4	+0.5
RITZ	Rihia Road	9.57	210	P	Pn	22 57 16.2	-1.5
MCHZ	McNeill Hill	9.64	205	P	Pn	22 57 15.6	-3.0
KATZ	Kakaramea	9.64	211	P	Pn	22 57 20.9	+2.2
HIZ	Hauiti	9.66	215	P	Pn	22 57 21.2	+2.3
CKHZ	Cape Kidnapper	9.69	203	P	Pn	22 57 14.8	-4.5
KWHZ	Kaweka Forest	9.72	206	P	Pn	22 57 15.9	-3.8
NTVZ	North Tongarir	9.75	210	P	Pn	22 57 20.5	+0.2
TMVZ	Te Maari	9.75	210	P	Pn	22 57 18.1	-2.1
KRVZ	Karewarewa	9.76	210	P	Pn	22 57 21.5	+1.1
ETVZ	East Tongariro	9.77	210	P	Pn	22 57 18.8	-1.7
WTVZ	West Tongariro	9.80	211	P	Pn	22 57 21.1	+0.2
NNVZ	North Ngauruho	9.80	210	P	Pn	22 57 21.2	+0.2
OTVZ	Oturere	9.81	210	P	Pn	22 57 21.0	-0.1
TWVZ	Taurewa	9.83	211	P	Pn	22 57 20.2	-1.2
SNVZ	South Ngauruho	9.84	210	P	Pn	22 57 21.8	+0.3
NGZ	Ngauruhoe	9.85	210	P	Pn	22 57 21.2	-0.4
KAHZ	Kahuranaki	9.88	204	P	Pn	22 57 16.9	-5.1
COVZ	Chateau Observ	9.89	210	P	Pn	22 57 23.0	+0.9
KRHZ	Kereru	9.93	206	P	Pn	22 57 17.8	-4.9
FWVZ	Far West T-bar	9.93	210	P	Pn	22 57 21.6	-1.2
MAVZ	Matarangi	9.94	210	P	Pn	22 57 20.8	-2.2
WHVZ	Whangaehu Hut	9.94	210	P	Pn	22 57 21.7	-1.2
TRVZ	Turoa	9.97	210	P	Pn	22 57 21.0	-2.3
WNVZ	Wahianoa	9.97	210	P	Pn	22 57 21.5	-1.8
MOVZ	Moawhango	9.97	209	P	Pn	22 57 19.9	-3.4
PKVZ	Pokaka	10.05	211	P	Pn	22 57 22.2	-2.1
MTVZ	Mangateitei	10.08	210	P	Pn	22 57 23.1	-1.5
PXZ	Pawanui	10.10	203	P	Pn	22 57 19.5	-5.4
VRZ	Vera Road	10.19	214	P	Pn	22 57 27.0	+0.9
PNHZ	Pukenui	10.23	206	P	Pn	22 57 20.5	-6.2
WPHZ	Waipukurau	10.28	205	P	Pn	22 57 23.1	-4.2
PRHZ	Porangahau	10.39	203	P	Pn	22 57 23.2	-5.7
TSZ	Takapari Road	10.45	206	P	Pn	22 57 25.5	-4.2
DREZ	Durham Road	10.51	215	P	Pn	22 57 33.9	+3.4
DVHZ	Dannevirke	10.58	205	P	Pn	22 57 26.2	-5.3
WAZ	Wanganui	10.59	211	P	Pn	22 57 29.7	-2.0
ANWZ	Angora Road	10.62	203	P	Pn	22 57 26.9	-5.1
PKE	Pukeiti	10.62	216	P	Pn	22 57 37.2	+5.2
LREZ	Lake Rotokare	10.62	214	P	Pn	22 57 33.0	+1.0
NEZ	North Egmont	10.62	215	P	Pn	22 57 33.8	+1.6
PREZ	Palmer Road	10.65	215	P	Pn	22 57 38.4	+6.0
KHEZ	Kahui Hut	10.68	215	P	Pn	22 57 32.4	-0.6
KHEZ	Kahui Hut	10.68	215	P	Pn	22 57 35.0	+2.0
NBEZ	Newall Road No	10.74	216	P	Pn	22 57 37.8	+4.2
POWZ	Post Office Ro	10.81	206	P	Pn	22 57 30.5	-4.1
OHWZ	Ohakea	10.83	208	P	Pn	22 57 32.1	-2.8
NMEZ	Namu Road	10.84	215	P	Pn	22 57 41.0	+6.0
PRWZ	Pori Road	10.88	205	P	Pn	22 57 31.5	-4.0
BFZ	Birch Farm	10.89	204	P	Pn	22 57 31.2	-4.5
BFZ	Birch Farm	10.89	204	S	Sn	22 59 31.7	-4.6
BFZ	Birch Farm	10.89	204	P	Pn	22 57 29.6	-6.1
TIWZ	Tintock	11.10	205	P	Pn	22 57 33.4	-5.3
CPWZ	Castlepoint	11.11	203	P	Pn	22 57 34.1	-4.6
MRZ	Mangatainoka R	11.12	206	P	Pn	22 57 32.2	-6.6
TRWZ	Traveller	11.72	204	P	Pn	22 57 40.5	-6.6
WEL	Wellington	11.96	207	P	Pn	22 57 44.9	-5.5
SNZO	South Karori	12.01	207	P	Pn	22 57 47.3	-3.7
NFK	Norfolk Island	12.30	275	⇓P	Pn	22 57 58.8	+3.7
NNZ	Nelson	12.49	211	P	Pn	22 57 50.4	-7.2
LKBA	Tubou, Lakemba	12.54	357	P	Pn	22 58 01.8	+3.4
CMWZ	Cape Campbell	12.58	208	P	Pn	22 57 55.8	-3.0
QRZ	Quartz Range	12.59	215	P	Pn	22 57 58.9	0.0
QRZ	Quartz Range	12.59	215	S	Sn	23 00 17.4	-0.3
QRZ	Quartz Range	12.59	215	P	Pn	22 57 53.0	-5.9
CTZ	Chatham Island	12.95	175	P	Pn	22 58 02.1	-1.7
CTZ	Chatham Island	12.95	175	P	Pn	22 58 01.2	-2.6
THZ	Tophouse	13.14	211	P	Pn	22 57 58.9	-7.7
KHZ	Kahutara	13.41	208	P	Pn	22 58 09.3	-0.8
KHZ	Kahutara	13.41	208	P	Pn	22 58 02.7	-7.4
MSVF	Nonsavu	13.50	344		Pn	22 58 11.4	-0.2
MSVF	Nonsavu	13.50	344	P	Pn	22 58 12.9	+1.4
	364nm,0.9s,baz=156,slow=11,SNR=54						
MSVF				LR	LR	23 02 41.8	
	comp=Z,1016μm,18.2s,baz=177,slow=34						
MSVF	Nonsavu	13.50	344	P	Pn	22 58 13.3	+1.7
MSVF	Nonsavu	13.50	344	*c i*P	Pn	22 58 13.2	+1.7
MSVF	Nonsavu	13.50	344	⇑P	Pn	22 58 13.0	+1.4
DSZ	Denniston Nort	13.64	214	P	Pn	22 58 06.4	-6.9
NIUE	Niue	13.79	34		Pn	22 58 10.4	-5.0
NIUE	Niue	13.79	34	P	Pn	22 58 15.9	+0.5
NIUE	Niue	13.79	34	P	Pn	22 58 08.6	-6.9
NIUE	Niue	13.79	34	⇓P	Pn	22 58 09.9	-5.5
GVZ	Greta Valley S	14.07	208	P	Pn	22 58 10.6	-8.6
TAVE	Taveuni	14.14	353	P	Pn	22 58 23.3	+3.1
LTZ	Lake Taylor	14.24	210	P	Pn	22 58 12.7	-8.8
AMCZ	Amberley	14.40	208	P	Pn	22 58 18.4	-5.3
INZ	Inchbonnie	14.57	212	P	Pn	22 58 19.0	-6.9
DGTI	Dogotuki	14.59	351	P	Pn	22 58 28.5	+2.2
YSA	Yasawairara	14.61	343	P	Pn	22 58 29.2	+2.7
MNZS	Menzies Bay Ba	14.66	207	P	Pn	22 58 18.7	-8.4
OXZ	Oxford	14.78	210	P	Pn	22 58 19.3	-9.4
MQZ	McQueen's Vall	14.85	207	P	Pn	22 58 19.2	-10
WVZ	Waitaha Valley	15.17	213	P	Pn	22 58 27.6	-6.2
PINNC	Pines Island,	15.32	299	P	P	22 58 40.6	+0.3
RPZ	Rata Peaks	15.52	211	P	Pn	22 58 30.5	-8.0
	42nm,0.4s,baz=28,slow=1.2,SNR=25						
RPZ				S	Sn	23 01 14.7	-14
	1μm,0.7s,baz=95,slow=20,SNR=15						
RPZ	Rata Peaks	15.52	211	P	Pn	22 58 37.1	-1.4
RPZ	Rata Peaks	15.52	211	P	Pn	22 58 31.1	-7.4
MARNC	Mare, Loyalty	15.58	303	P	P	22 58 45.7	+2.6
MARNC	Mare, Loyalty	15.58	303	⇓P	P	22 58 43.6	+0.5
OUENC	Ouen Island, N	15.89	298	P	P	22 58 48.5	+1.9
FOZ	Fox Glacier	15.95	214	P	Pn	22 58 38.1	-5.9
INH	Isangel	16.04	311	P	P	22 58 52.0	+3.7
YATNC	Mamie plateau,	16.06	299	P	P	22 58 50.6	+2.1
TMZ	Timaru	16.08	210	P	Pn	22 58 36.1	-10
ONTNC	Ouen Toro	16.25	298	P	P	22 58 51.4	+0.8
ONTNC	Ouen Toro	16.25	298	⇓P	P	22 58 51.0	+0.4
DZM	Mont Dzumac	16.39	298		P	22 58 51.6	-0.7
DZM	Mont Dzumac	16.39	298	*e*Pn	P	22 58 53.5	+1.2
	12μm,1.6s						
DZM				*e*LR	LR	23 02 38.8	
	5579μm,26.1s						
DZM	Mont Dzumac	16.39	298	P	P	22 58 54.1	+1.9
	601nm,1.1s,baz=125,slow=12,SNR=134						
DZM				LR	LR	23 03 54.5	
	comp=Z,2469μm,21.4s,baz=122,slow=33						
DZM	Mont Dzumac	16.39	298	P	P	22 58 54.7	+2.4
DZM	Mont Dzumac	16.39	298	⇓P	P	22 58 54.1	+1.9
FUTU	Fugatoga	16.42	360		Pn	22 58 49.1	-1.0
FUTU	Fugatoga	16.42	360	P	P	22 58 52.8	+0.3
LBZ	Lake Benmore	16.44	211	P	Pn	22 58 43.7	-6.4
ODZ	Otahua Downs	16.76	209	P	Pn	22 58 45.9	-8.3
JCZ	Jackson Bay	16.85	215	P	Pn	22 58 54.6	-0.9
JCZ	Jackson Bay	16.85	215	P	Pn	22 58 49.0	-6.5
WKZ	Wanaka	17.31	212	P	Pn	22 58 55.4	-5.7
HHSZ	Highcliff Hill	17.47	207	P	Pn	22 58 58.2	-4.9
EAZ	Earnscleugh	17.49	211	P	Pn	22 58 59.4	-3.8
MSZ	Milford Sound	17.71	215	P	Pn	22 59 03.8	-2.2
AFI	Afiamalu	17.78	20		Pn	22 58 59.9	-7.1
AFI	Afiamalu	17.78	20	P	Pn	22 59 06.8	-0.3
AFI	Afiamalu	17.78	20	P	Pn	22 58 59.9	-7.1
AFI				pmax	pmax		
	comp=Z,2μm,1.2s						
AFI	Afiamalu	17.78	20	P	Pn	22 58 60.0	-7.1
AFI	Afiamalu	17.78	20	⇑P	Pn	22 59 00.8	-6.3
TUZ	Tuapeka	17.92	209	P	Pn	22 59 06.4	-2.2
MLZ	Mavora Lakes	18.13	213	P	Pn	22 59 08.5	-2.7
SYZ	Scrubby Hill	18.59	209	P	Pn	22 59 17.2	+0.5
SYZ	Scrubby Hill	18.59	209	P	P	22 59 15.9	-0.3
WHZ	Wether Hill Ro	18.61	212	P	P	22 59 14.1	-2.3
DCZ	Deep Cove	18.66	214	P	P	22 59 14.5	-2.5
KOUNC	Koumac, New Ca	18.91	299	P	Pn	22 59 23.8	+3.0
RAR	Rarotonga	18.96	64	P	P	22 59 19.5	-1.0
RAR	Rarotonga	18.96	64	P	P	22 59 18.7	-1.8
	comp=Z,402nm,1.0s,baz=235,slow=5.8,SNR=25						
RAR				S	Sn	23 02 33.3	-20
	comp=Z,481nm,1.0s,baz=46,slow=14,SNR=3.1						
RAR				LR	LR	23 07 25.7	
	comp=Z,163μm,18.1s,baz=228,slow=39						
RAR	Rarotonga	18.96	64	P	P	22 59 19.0	-1.5
RAR	Rarotonga	18.96	64	P	P	22 59 19.5	-1.0
RAR				pmax	pmax		
	comp=Z,1μm,1.1s						
RAR	Rarotonga	18.96	64	⇓sP	P	22 59 20.1	-0.4
APZ	The Paps	19.31	210	P	P	22 59 21.7	-2.5
PYZ	Puysegur Point	19.40	213	P	P	22 59 24.4	-0.7
PYZ	Puysegur Point	19.40	213	P	P	22 59 22.6	-2.5
LHI	Lord Howe Isla	19.62	262	P	Pn	22 59 29.4	+0.2
LHI	Lord Howe Isla	19.62	262	⇑P	Pn	22 59 31.7	+2.5
VLAKA	Lakatoro	19.78	314	P	Pn	22 59 31.3	+0.2
SANVU	Saraoutou	20.42	315	P	P	22 59 36.0	-0.4
SANVU				IAMs_20	IAMs_20	23 07 02.0	
	comp=Z,700μm,18.0s						
SANVU	Saraoutou	20.42	315	P	Pn	22 59 41.8	+3.1
SANVU	Saraoutou	20.42	315	⇑P	P	22 59 35.8	-0.6
FUNA	Funafuti	22.32	353	P	P	22 59 53.8	-3.0
FUNA	Funafuti	22.32	353	P	P	22 59 57.9	+1.0
GC1S	Gold Coast 1 S	24.89	269	P	P	23 00 24.2	+2.5
LUES	Luesalemba Tem	24.99	320	P	P	23 00 24.6	+1.9
NTLH	Newcastle Hard	25.76	257	P	P	23 00 33.3	+3.7
ARMA	Armidale	26.08	263	P	P	23 00 33.9	+1.2
ARMA				IAmb	IAmb	23 00 45.5	
	comp=Z,7μm,2.0s						
ARMA	Armidale	26.08	263	P	P	23 00 36.7	+4.0
ARMA	Armidale	26.08	263	⇑P	P	23 00 36.1	+3.4
RIV	Riverview	26.17	255	P	P	23 00 34.2	+0.9
RIV	Riverview	26.17	255	P	P	23 00 36.9	+3.6
RIV				pmax	pmax		
	comp=Z,3μm,1.5s						
RIV	Riverview	26.17	255	⇑P	P	23 00 36.6	+3.3
MGCD	Mangrove Creek	26.24	257	P	P	23 00 35.1	+1.2
WOLH	Wollongong Har	26.39	254	P	P	23 00 37.6	+2.3
TBI	Tubuai	26.45	81	*e*P	P	23 00 38.5	+2.6
	comp=Z,2μm,1.3s						
TBI				*e*S	S	23 05 05.8	-1.3
	comp=Z,2530μm,32.8s						
TBI				*e*LQ	LQ	23 05 55.9	
	comp=Z,3908μm,29.0s						
TBI				*e*LR	LR	23 07 14.2	
	comp=Z,6877μm,29.2s						
TBI				*e*LR	LR	23 07 16.9	
	comp=Z,1628μm,30.8s						
SYDH	Sydney Hard Ro	26.52	255	P	P	23 00 38.7	+2.3
HURO	Huro Makira	27.52	313	P	P	23 00 46.3	+0.7
CNB	Canberra Magne	27.63	252	P	P	23 00 48.7	+2.2
EIDS	Eidsvold	27.74	274	P	P	23 00 48.0	+0.6
EIDS	Eidsvold	27.74	274	P	P	23 00 49.0	+1.5
EIDS	Eidsvold	27.74	274	⇑P	P	23 00 49.0	+1.5
NGOA	Tingoa Renbel	27.91	309	P	P	23 00 50.3	+1.3
CAN	Canberra	27.92	252	P	P	23 00 51.1	+2.0
CAN	Canberra	27.92	252	P	P	23 00 51.5	+2.4
CAN	Canberra	27.92	252	P	P	23 00 51.1	+2.0
CAN				pmax	pmax		
	comp=Z,879nm,0.9s						
CAN				MLR	MLR		
	comp=Z,1088μm,22.0s						
CAN	Canberra	27.92	252	⇑P	P	23 00 51.5	+2.4
GD1S	Gladstone Soft	28.17	277	P	P	23 00 53.4	+2.0
PAE	Paea	28.96	70	*e*P	P	23 00 58.8	+0.5
	comp=Z,679nm,1.6s						
PAE				*e*S	S	23 05 44.9	-1.8
	comp=Z,42μm,26.5s						
PAE				*e*LR	LR	23 08 22.5	
	comp=Z,190μm,27.3s						
PPT2	Papeete2	29.00	70	*e*P	P	23 01 00.2	+1.4
	comp=Z,799nm,1.3s						
PPT2				*e*S	S	23 05 47.6	+0.1
	comp=Z,360μm,30.2s						
PPT2				*e*LQ	LQ	23 06 52.5	
	comp=Z,778μm,28.0s						
PPT2				*e*LR	LR	23 08 21.1	
	comp=Z,1184μm,28.0s						
PPT2				*e*LR	LR	23 08 27.0	
	comp=Z,908μm,30.8s						
PPTF	Pamatai, Papee	29.01	70	P	P	23 00 57.5	-1.4
PPTF				IAmb	IAmb	23 01 19.8	
	comp=Z,2μm,1.4s						
PPTF	Pamatai, Papee	29.01	70	P	P	23 00 58.4	-0.5
PPT	Papeete	29.01	70	P	P	23 01 00.7	+1.9
	comp=Z,183nm,1.0s,baz=342,slow=3.2,SNR=8.2						
PPT				LR	LR	23 12 24.7	
	comp=Z,159μm,18.1s,baz=236,slow=36						
	comp=Z,183nm,1.0s						
TVO	Taravao	29.16	70	*e*P	P	23 01 02.6	+2.4
	comp=Z,413nm,1.3s						
TVO				*e*S	S	23 05 48.5	-1.5
	comp=Z,49μm,26.2s						
TVO				*e*LR	LR	23 08 28.8	
	comp=Z,128μm,25.4s						
GLAD	Gladstone	29.17	240	P	P	23 01 00.6	+0.6
RMQ	Roma	29.40	270	P	P	23 01 04.0	+1.7
HNR	Honiara	29.55	311	P	P	23 01 02.3	-1.3
HNR				IAmb	IAmb	23 01 31.2	
	comp=Z,2μm,1.2s						
HNR				IAMs_20	IAMs_20	23 10 42.8	
	comp=Z,391μm,22.0s						
HNR	Honiara	29.55	311	P	P	23 01 05.3	+1.7
HNR	Honiara	29.55	311	P	P	23 01 02.3	-1.3
HNR				pmax	pmax		
	comp=Z,2μm,1.2s						
HNR				MLR	MLR		
	comp=Z,391μm,22.0s						
HNR	Honiara	29.55	311	⇑P	P	23 01 02.2	-1.5
ALEG	Aligegeo Malai	29.59	313	P	P	23 01 06.3	+2.3
SAVO	Savo Central	29.85	312	P	P	23 01 09.0	+2.7
CORO	Coronation Par	29.89	239	P	P	23 01 07.1	+0.7
MOO	Moorlands	30.03	238	P	P	23 01 09.4	+1.7
TAU	Tasmania Unive	30.04	237	P	P	23 01 08.0	+0.3
TAU				IAmb	IAmb	23 01 13.5	
	comp=Z,2μm,1.5s						
TAU	Tasmania Unive	30.04	237	P	P	23 01 08.7	+1.0
TAU	Tasmania Unive	30.04	237	P	P	23 01 08.0	+0.3
TAU				pmax	pmax		
	comp=Z,2μm,1.5s						
TAU				MLR	MLR		
	comp=Z,1074μm,20.0s						
TAU	Tasmania Unive	30.04	237	⇑P	P	23 01 08.4	+0.7
TAU	Tasmania Unive	30.04	237	P	P	23 01 08.4	+0.7
TAU				PcP	PcP	23 04 09.2	+0.2
TAU				ScP	ScP	23 07 48.5	+0.3
TATA	Tatamba Isabel	30.43	313	P	P	23 01 13.4	+2.0
TOO	Toolangi	30.79	247	P	P	23 01 16.0	+1.6
TOO				IAMs_20	IAMs_20	23 11 02.9	
	comp=Z,465μm,22.0s						
TOO	Toolangi	30.79	247	P	P	23 01 16.0	+1.6
TOO				pmax	pmax		
	comp=Z,289nm,0.8s						
TOO				MLR	MLR		
	comp=Z,465μm,22.0s						
TOO	Toolangi	30.79	247	⇑P	P	23 01 16.1	+1.7
CMSA	Cobar Meteorol	30.97	259	P	P	23 01 18.4	+2.3
MLBS	Spotswood, Mel	31.27	247	P	P	23 01 19.8	+1.2
GEXS	Deakin Univers	31.75	246	P	P	23 01 24.1	+1.2
PMOR	Pomariorio Ree	31.77	67	*e*P	P	23 01 24.2	+1.0
	comp=Z,2μm,1.4s						
PMOR				*e*S	S	23 06 29.9	-0.9
	comp=Z,236μm,26.0s						
PMOR				*e*LR	LR	23 09 41.3	
	comp=Z,805μm,26.0s						
QLP	Quilpie	33.27	268	P	P	23 01 37.6	+1.3
QLP	Quilpie	33.27	268	⇑P	P	23 01 37.8	+1.5
ARPS	Mount Arapiles	33.70	249	P	P	23 01 41.5	+1.5
CTAO	Charters Tower	33.84	280	P	P	23 01 43.0	+1.6
CTAO	Charters Tower	33.84	280	P	P	23 01 43.3	+1.9
CTAO	Charters Tower	33.84	280	P	P	23 01 43.0	+1.6
CTAO				pmax	pmax		
	comp=Z,5μm,1.0s						
CTAO				MLR	MLR		
	comp=Z,1044μm,21.0s						
CTAO	Charters Tower	33.84	280	⇑P	P	23 01 43.1	+1.8
CTAO	Charters Tower	33.84	280	P	P	23 01 43.5	+2.1
CTAO				ScP	ScP	23 08 06.4	+4.9
STKA	Stephens Creek	34.37	258	P	P	23 01 47.4	+1.6
STKA	Stephens Creek	34.37	258	P	P	23 01 47.6	+1.8
	comp=Z,3μm,0.7s,baz=99,slow=9.9,SNR=1112						
STKA				LR	LR	23 14 40.8	
	comp=Z,843μm,19.0s,baz=91,slow=34						
STKA	Stephens Creek	34.37	258	P	P	23 01 47.7	+1.8
MGBR	Mount Gambier	34.69	247	P	P	23 01 49.5	+0.9
MTSU	Mount Surprise	36.35	281	P	P	23 02 04.8	+1.8
HTT	Hallett	36.37	254	P	P	23 02 04.2	+1.1
HTT	Hallett	36.37	254	P	P	23 02 04.5	+1.4
HTT	Hallett	36.37	254	⇑P	P	23 02 04.2	+1.1
GHSS	Government Hou	36.45	252	P	P	23 02 05.1	+1.4
PTPS	Port Pirie	37.17	255	P	P	23 02 11.1	+1.3
WHYH	Whyalla	37.55	255	P	P	23 02 14.1	+1.1
XMAS	Kiritimati	38.10	35	P	P	23 02 18.1	+0.3
XMAS				IAmb	IAmb	23 02 28.1	
	comp=Z,716nm,1.0s						
XMAS	Kiritimati	38.10	35	P	P	23 02 18.1	+0.3
XMAS	Kiritimati	38.10	35	⇑P	P	23 02 18.9	+1.1
RABL	Rabaul	38.60	307	P	P	23 02 20.3	-1.7
RABL				IAmb	IAmb	23 02 28.3	
	comp=Z,1μm,1.2s						
RABL	Rabaul	38.60	307	⇑P	P	23 02 20.0	-2.0
PMG	Port Moresby	38.76	296	P	P	23 02 22.8	-0.6
PMG				IAmb	IAmb	23 02 32.8	
	comp=Z,774nm,0.8s						
PMG	Port Moresby	38.76	296	LR	LR	23 16 15.3	
	comp=Z,342μm,21.2s,baz=128,slow=33						
PMG	Port Moresby	38.76	296	P	P	23 02 22.8	-0.6
PMG				pmax	pmax		
	comp=Z,774nm,0.9s						
PMG				MLR	MLR		
	comp=Z,416μm,18.0s						
PMG	Port Moresby	38.76	296	P	P	23 02 24.2	+0.8
PMG				PcP	PcP	23 04 37.9	+3.4
BBOO	Buckleboo	38.84	255	P	P	23 02 23.8	-0.2
BBOO				IAmb	IAmb	23 02 32.6	
	comp=Z,2μm,1.1s						
BBOO	Buckleboo	38.84	255	P	P	23 02 24.6	+0.7
QIS	Mount Isa	39.32	275	P	P	23 02 28.6	+0.5
COEN	Coen	39.36	286	P	P	23 02 28.3	-0.1
COEN	Coen	39.36	286	P	P	23 02 29.7	+1.3
COEN	Coen	39.36	286	⇑P	P	23 02 29.2	+0.8
TAOE	Nuku Hiva Isla	41.49	66	P	P	23 02 45.7	-0.5
TAOE				IAmb	IAmb	23 03 18.0	
	comp=Z,2μm,1.8s						
TAOE	Nuku Hiva Isla	41.49	66	*e*P	P	23 02 45.3	-0.8
	comp=Z,1μm,1.3s						
TAOE	Nuku Hiva Isla	41.49	66	*e*PP	PP	23 04 16.8	-5.7
	comp=Z,17μm,25.0s						
TAOE				*e*S	S	23 08 57.8	-1.5
	comp=Z,264μm,30.2s						
TAOE				*e*SS	SS	23 12 05.4	+0.7
	comp=Z,265μm,28.0s						
TAOE				*e*LR	LR	23 14 05.4	
	comp=Z,814μm,30.0s						
TAOE	Nuku Hiva Isla	41.49	66	P	P	23 02 44.6	-1.5
PTCN	Pitcairn Islan	42.48	94	IAMs_20	IAMs_20	23 15 33.7	
	comp=Z,302μm,21.0s						
AS01	Alice Springs	43.03	267	P	P	23 02 59.5	+0.9
AS31	Alice Springs	43.07	267	P	P	23 02 57.8	-1.1
ASAR	Alice Springs	43.07	267	P	P	23 02 58.6	-0.3
ASAR	Alice Springs	43.07	267	P	P	23 02 58.9	0.0
	comp=Z,2μm,0.9s,baz=105,slow=4.2,SNR=14						
ASAR				PcP	PcP	23 04 49.5	+1.0
	comp=Z,96nm,0.8s,baz=97,slow=3.6,SNR=1.0						
ASAR				ScP	ScP	23 08 34.3	-2.3
	comp=Z,90nm,0.8s,baz=108,slow=4.1,SNR=5.6						
ASAR				PKiKP	PKiKP	23 11 51.0	-1.0
	comp=Z,5.7nm,0.7s,baz=112,slow=1.5,SNR=2.4						
ASAR				LR	LR	23 20 44.7	
	comp=Z,780μm,18.3s,baz=116,slow=36						
ASAR				P3KP		23 33 48.0	
	comp=Z,1.9nm,0.9s,baz=323,slow=2.0,SNR=4.8						
ASAR				PKPPKP	P'P'df	23 34 52.6	-4.2
	comp=Z,8.4nm,1.0s,baz=244,slow=1.4,SNR=5.5						
ASAR				P4KPbc		23 40 57.2	
	comp=Z,1.0nm,0.7s,baz=102,slow=3.8,SNR=6.6						
	comp=Z,2μm,0.9s						
MANU	Manus Island	43.47	304	P	P	23 03 01.4	-0.7
MANU	Manus Island	43.47	304	⇑P	P	23 03 01.4	-0.7
DRV	Dumont d'Urvil	43.76	203	P	P	23 03 04.3	+0.6
DRV				ScP	ScP	23 08 38.2	-0.3
PATS	Pohnpei	43.76	325	P	P	23 03 02.4	-1.9
PATS				IAMs_20	IAMs_20	23 18 19.2	
	comp=Z,247μm,20.0s						
PATS	Pohnpei	43.76	325	P	P	23 03 05.6	+1.2

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WRAB  Tennant Creek      44.09 273c iP      P        23 03 06.8 -0.3
WRAB                                pmax    pmax
      comp=Z,2µm,0.9s
WRAB                                MLR     MLR
      comp=Z,200µm,16.0s
WRA   Warramunga Arr     44.09 273  P       P        23 03 06.8 -0.3
WRA   Warramunga Arr     44.09 273  P       P        23 03 06.9 -0.3
      comp=Z,416nm,0.3s,baz=111,slow=8.0,SNR=405
WRA                                 S       S        23 09 35.2 -2.1
      comp=Z,36nm,0.9s,baz=110,slow=15,SNR=4.2
WRA                                 PKiKP   PKiKP    23 11 52.6 -0.4
      comp=Z,6.4nm,0.6s,baz=83,slow=0.6,SNR=7.3
WRA                                 LR      LR       23 21 15.0
      comp=Z,693µm,18.4s,baz=111,slow=36
WRA                                 PKPPKP  P'P'df   23 34 52.9 -2.2
      comp=Z,6.0nm,0.9s,baz=271,slow=2.3,SNR=6.2
WRA                                 P4KPbc           23 41 01.5
      comp=Z,2.6nm,0.9s,baz=107,slow=4.0,SNR=13
WB0   Warramunga Arr     44.12 273  P       P        23 03 07.0 -0.4
FORT  Forrest            45.92 256  P       P        23 03 20.8 -0.8
FORT  Forrest            45.92 256  P       P        23 03 21.3 -0.2
FORT  Forrest            45.92 256 ⇑P       P        23 03 20.6 -0.9
SBA   Scott Base         47.63 184  P       P        23 03 36.9 +2.7
SBA   Scott Base         47.63 184  P       P        23 03 36.9 +2.7
SBA                                 pmax    pmax
      comp=Z,2µm,1.2s
SBA   Scott Base         47.63 184  P       P        23 03 38.2 +3.9
SBA                                 PcP     PcP      23 05 12.1 +8.8
VNDA  Vanda              47.69 186  P       P        23 03 36.6 +2.0
VNDA                                IAmb    IAmb     23 03 55.4
      comp=Z,729nm,1.2s
VNDA  Vanda              47.69 186  P       P        23 03 37.5 +2.8
      comp=Z,210nm,1.0s,baz=9.0,slow=7.9,SNR=60
VNDA                                LR      LR       23 20 16.9
      comp=Z,161µm,21.6s,baz=30,slow=32
VNDA                                P3KP             23 33 44.2
      comp=Z,2.1nm,0.9s,baz=148,slow=2.2,SNR=4.3
VNDA                                P4KPbc           23 41 17.5
      comp=Z,2.3nm,0.8s,baz=352,slow=2.7,SNR=7.0
      comp=Z,210nm,1.0s
VNDA  Vanda              47.69 186  P       P        23 03 37.3 +2.6
VNDA                                pP      pwP      23 03 50.8 +1.2
VNDA                                ScP     ScP      23 08 57.5 +2.7
JOHN  Johnston Islan     47.97  11  P       P        23 03 37.1 -0.3
JOHN  Johnston Islan     47.97  11  P       P        23 03 38.9 +1.5
JAY   Jayapura           48.07 298  P       P        23 03 37.7 -0.8
      comp=Z,433µmcomp=Z,23µmcomp=Z,1µm,1.1s
GENI  Genyem             48.43 297  P       P        23 03 42.2 +1.0
GENI  Genyem             48.43 297  P       P        23 03 41.2  0.0
      comp=Z,476µmcomp=Z,2µm,1.1s
GENI  Genyem             48.43 297 ⇑P       P        23 03 40.3 -0.9
KDU   Kakadu             48.97 280  P       P        23 03 45.7 +0.4
KDU   Kakadu             48.97 280 ⇑P       P        23 03 44.1 -1.3
SMPI  Sarmi              49.93 296  P       P        23 03 51.0 -1.7
      comp=Z,477µmcomp=Z,31µmcomp=Z,660nm,1.0s
MTN   Manton Dam         50.03 279  P       P        23 03 52.2 -1.2
MTN                                 IAmb    IAmb     23 03 57.6
      comp=Z,800nm,1.0s
MTN   Manton Dam         50.03 279  P       P        23 03 52.6 -0.8
MTN   Manton Dam         50.03 279 ⇑P       P        23 03 52.2 -1.2
KNRA  Kununurra          50.72 275  P       P        23 03 58.2 -0.4
KNRA                                IAmb    IAmb     23 04 07.4
      comp=Z,467nm,0.8s
KMBL  Kambalda           50.88 253  P       P        23 03 58.6 -1.2
H11S2 WAKE ISLAND Hy     51.17 341  P       P        23 04 01.0 -0.6
      baz=198,slow=74,SNR=21
H11S3 WAKE ISLAND Hy     51.18 341  P       P        23 04 01.1 -0.6
      baz=11,slow=74,SNR=14
H11S1 WAKE ISLAND Hy     51.19 341  P       P        23 04 01.1 -0.6
SRPI  Serui, Papua       51.92 295  P       P        23 04 06.6 -1.1
      comp=Z,18µmcomp=Z,525nm,0.9s
H11N3 WAKE ISLAND Hy     52.28 342  P       P        23 04 09.9  0.0
      baz=188,slow=8.9,SNR=42
H11N1 WAKE ISLAND Hy     52.28 342  P       P        23 04 09.9  0.0
      baz=188,slow=8.9,SNR=35
H11N2 WAKE ISLAND Hy     52.30 342  P       P        23 04 08.7 -1.3
      baz=188,slow=8.9,SNR=24
FITZ  Fitzroy Crossi     52.34 270  P       P        23 04 10.2 -0.6
FITZ  Fitzroy Crossi     52.34 270  LR      LR       23 25 19.6
      comp=Z,758µm,20.9s,baz=109,slow=35
FITZ                                PKP2bc           23 34 56.9
      comp=Z,14nm,1.2s,baz=336,slow=3.7,SNR=3.2
FITZ  Fitzroy Crossi     52.34 270  P       P        23 04 11.9 +1.1
FITZ  Fitzroy Crossi     52.34 270 ⇑P       P        23 04 10.2 -0.6
SAUI  Saumlaki           52.39 285  P       P        23 04 10.9 -0.3
SAUI  Saumlaki           52.39 285  P       P        23 04 12.9 +1.7
SAUI  Saumlaki           52.39 285  P       P        23 04 12.1 +0.9
      comp=Z,3µm,1.4s
SAUI  Saumlaki           52.39 285 ⇑P       P        23 04 11.3 +0.2
BAKI  Biak               52.45 295  P       P        23 04 13.4 +1.8
      comp=Z,494µmcomp=Z,44µmcomp=Z,861nm,0.9s
CCD   Concordia, Ant     52.55 196  P       P        23 04 12.9 +0.8
CCD                                 ScP     ScP      23 09 18.3 +2.2
KMPI  Kaimana, Papua     52.85 291  P       P        23 04 15.6 +1.0
      comp=Z,461µmcomp=Z,29µmcomp=Z,1µm,1.0s
RKPI  Ransiki, Papua     53.76 293  P       P        23 04 19.9 -1.4
      comp=Z,461µmcomp=Z,23µmcomp=Z,455nm,0.8s
KLBR  Kellerberrin       54.20 251  P       P        23 04 22.8 -1.5
KHU   Kahuku             54.23  26  P       P        23 04 24.0 -0.8
KHU                                 IAmb    IAmb     23 04 50.2
      comp=Z,2µm,1.7s
KHU   Kahuku             54.23  26  P       P        23 04 24.0 -0.8
KHU                                 pmax    pmax
      comp=Z,2µm,1.7s
KHU                                 MLR     MLR
      comp=Z,48µm,19.0s
NWAO  Narrogin (SRO)     54.23 250  P       P        23 04 22.6 -1.9
NWAO                                IAmb    IAmb     23 04 27.4
      comp=Z,1µm,1.4s
NWAO  Narrogin (SRO)     54.23 250  LR      LR       23 25 00.4
      comp=Z,324µm,20.5s,baz=106,slow=33
NWAO  Narrogin (SRO)     54.23 250  P       P        23 04 23.5 -1.1
NWAO                                S       S        23 11 53.4 -6.0
NWAO  Narrogin (SRO)     54.23 250  P       P        23 04 22.9 -1.6
NWAO  Narrogin (SRO)     54.23 250  P       P        23 04 23.5 -1.1
NWAO  Narrogin (SRO)     54.23 250  P       P        23 04 24.2 -0.4
NWAO  Narrogin (SRO)     54.23 250  P       P        23 04 22.6 -1.9
NWAO                                pmax    pmax
      comp=Z,1µm,1.5s
NWAO                                MLR     MLR
      comp=Z,425µm,22.0s
NWAO  Narrogin (SRO)     54.23 250  P       P        23 04 22.7 -1.8
NWAO                                pP      pP       23 04 35.8 +0.7
NWAO                                PcP     PcP      23 05 28.9 +0.3
FAKI  Fak Fak            54.46 291  P       P        23 04 25.1 -1.3
FAKI                                IAmb    IAmb     23 04 32.4
      comp=Z,793nm,1.1s
FAKI                                IAMs_20 IAMs_20  23 28 19.7
      comp=Z,198µm,22.0s
FAKI  Fak Fak            54.46 291  P       P        23 04 26.0 -0.4
FAKI  Fak Fak            54.46 291  P       P        23 04 25.8 -0.6
      comp=Z,491µmcomp=Z,28µmcomp=Z,651nm,1.0s
FAKI  Fak Fak            54.46 291 ⇑P       P        23 04 24.6 -1.8
PUH   Pauahi             54.50  27  P       P        23 04 26.3 -0.3
KNHH  Kane Nui o Ham     54.52  27  P       P        23 04 26.4 -0.4
POHA  Pohakuloa          54.73  26  P       P        23 04 28.7 +0.3
POHA                                IAmb    IAmb     23 04 42.7
      comp=Z,863nm,0.8s
POHA  Pohakuloa          54.73  26  P       P        23 04 28.8 +0.3
POHA  Pohakuloa          54.73  26 ⇑P       P        23 04 28.9 +0.5
POHA  Pohakuloa          54.73  26  P       P        23 04 28.6 +0.3
POHA                                pP      sP       23 04 41.6 -1.1
CASY  Casey              54.77 208  P       P        23 04 27.5 -0.4
CASY  Casey              54.77 208 ⇑P       P        23 04 27.2 -0.7
CASY  Casey              54.77 208  P       P        23 04 27.8 -0.1
CASY                                ScP     ScP      23 09 26.6 +1.2
MEEK  Meekatharra        55.07 257  P       P        23 04 29.5 -1.3
HON   Honolulu           55.29  23  P       P        23 04 32.0 -0.1
HON   Honolulu           55.29  23  P       P        23 04 32.0 -0.1
HON                                 pmax    pmax
      comp=Z,2µm,1.0s
MUN   Mundaring          55.34 250  P       P        23 04 31.3 -1.3
MUN   Mundaring          55.34 250  P       P        23 04 31.3 -1.3
BLDU  Ballidu            55.35 252  P       P        23 04 32.0 -0.7
KIP   Kipapa             55.38  23  P       P        23 04 32.3 -0.4
KIP   Kipapa             55.38  23  P       P        23 04 34.5 +1.8
KIP   Kipapa             55.38  23c iP      P        23 04 33.3 +0.6
KIP                                 pmax    pmax
      comp=Z,2µm,1.3s
KIP                                 MLR     MLR
      comp=Z,24µm,20.0s
KIP   Kipapa             55.38  23  P       P        23 04 33.5 +0.8
BNDI  Bandanaira         55.45 287  P       P        23 04 35.8 +2.3
BNDI  Bandanaira         55.45 287  P       P        23 04 32.7 -0.8
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BNDI  Bandanaira         55.45 287 ⇑P       P        23 04 32.2 -1.3
MTKN  Mount Kenneth      55.70 250  P       P        23 04 36.1 +0.9
PSA00 Pilbara Seismi     55.90 264  P       P        23 04 35.0 -1.7
PSA00                               IAmb    IAmb     23 04 44.3
      comp=Z,782nm,1.4s
PSA00 Pilbara Seismi     55.90 264  P       P        23 04 34.8 -1.9
PSA00                               IAmb    IAmb     23 04 40.9
      comp=Z,1µm,2.0s
PSA00 Pilbara Seismi     55.90 264  P       P        23 04 35.1 -1.7
H01W1 Cape Leeuwin H     56.14 246  P       P        23 04 36.8 -1.2
      baz=181,slow=74,SNR=6.4
H01W2 Cape Leeuwin H     56.15 246  P       P        23 04 36.9 -1.2
      baz=322,slow=74,SNR=8.0
H01W3 Cape Leeuwin H     56.15 246  P       P        23 04 36.9 -1.2
MBWA  Marble Bar         56.16 264  P       P        23 04 37.1 -1.5
MBWA                                IAmb    IAmb     23 04 41.9
      comp=Z,525nm,1.0s
MBWA  Marble Bar         56.16 264  P       P        23 04 37.9 -0.7
MBWA                                P       P        23 04 37.9 -0.7
MBWA                                S       S        23 12 25.5 +0.1
MBWA                                S       S        23 12 25.5 +0.1
MBWA  Marble Bar         56.16 264  P       P        23 04 37.2 -1.4
MBWA                                P       P        23 04 37.2 -1.4
MBWA  Marble Bar         56.16 264  P       P        23 04 38.2 -0.4
MBWA  Marble Bar         56.16 264 ⇑P       P        23 04 36.5 -2.1
MBWA  Marble Bar         56.16 264  P       P        23 04 37.1 -1.5
MORW  Morawa             56.39 254  P       P        23 04 38.5 -1.6
MORW                                IAmb    IAmb     23 04 42.6
      comp=Z,1µm,1.4s
MORW  Morawa             56.39 254  P       P        23 04 39.1 -1.1
MORW  Morawa             56.39 254 ⇑P       P        23 04 38.7 -1.5
SWI   Sorong             56.47 292  P       P        23 04 39.9 -0.9
      comp=Z,424µmcomp=Z,39µmcomp=Z,1µm,2.0s
GUMO  Guam               56.75 315  P       P        23 04 40.6 -2.1
GUMO  Guam               56.75 315  LR      LR       23 27 17.7
      comp=Z,109µm,19.5s,baz=140,slow=34
GUMO  Guam               56.75 315  P       P        23 04 42.8 +0.1
GUMO  Guam               56.75 315  P       P        23 04 40.6 -2.1
GUMO                                pmax    pmax
      comp=Z,2µm,1.3s
GUMO                                MLR     MLR
      comp=Z,237µm,22.0s
GUMO  Guam               56.75 315 ⇑P       P        23 04 40.9 -1.8
GUMO  Guam               56.75 315  P       P        23 04 41.0 -1.8
MSAI  Masohi             56.91 288  P       P        23 04 43.2 -0.8
      comp=Z,449µmcomp=Z,33µmcomp=Z,858nm,0.7s
AAI   Ambon              57.32 287  P       P        23 04 45.8 -1.1
SOEI  Soe                57.39 278  P       P        23 04 48.0 +0.5
SOEI  Soe                57.39 278  P       P        23 04 47.3 -0.2
SOEI  Soe                57.39 278  P       P        23 04 49.0 +1.5
SOEI  Soe                57.39 278  P       P        23 04 48.5 +1.0
      comp=Z,2µm,0.9s
SOEI  Soe                57.39 278 ⇑P       P        23 04 48.0 +0.5
BATI  Baumata            57.68 278  LR      LR       23 29 54.6
      comp=Z,969µm,19.6s,baz=139,slow=36
BATI  Baumata            57.68 278  P       P        23 04 49.8 +0.3
      comp=Z,439µmcomp=Z,32µmcomp=Z,827nm,1.2s
NLAI  Namlea             58.48 287  P       P        23 04 53.8 -1.2
      comp=Z,26µmcomp=Z,924nm,2.5s
MIDW  Midway             58.70   1  P       P        23 04 55.0 -1.1
MIDW                                IAmb    IAmb     23 05 10.7
      comp=Z,337nm,0.9s
MIDW                                IAMs_20 IAMs_20  23 24 51.4
      comp=Z,144µm,22.0s
MIDW  Midway             58.70   1  P       P        23 04 56.8 +0.7
MIDW  Midway             58.70   1 ⇑P       P        23 04 55.4 -0.8
MIDW  Midway             58.70   1  P       P        23 04 55.3 -0.8
MIDW                                pP      pwP      23 05 08.9 -1.4
VA02  Isla de Pascua     59.25 105  P       P        23 05 00.8 +0.5
QSPA  South Pole Qui     59.30 180  P       P        23 05 02.3 +2.1
QSPA  South Pole Qui     59.30 180  P       P        23 05 02.4 +2.2
      comp=Z,559nm,0.7s,baz=40,slow=2.1,SNR=366
QSPA                                S       S        23 13 08.9 +3.3
      comp=Z,49nm,1.0s,baz=181,slow=18,SNR=24
QSPA                                LR      LR       23 28 15.6
      comp=Z,266µm,19.6s,baz=38,slow=33
QSPA                                PKPPKP  P'P'df   23 34 30.1 -6.8
      comp=Z,27nm,1.1s,baz=142,slow=2.8,SNR=4.5
QSPA                                P4KPbc           23 42 07.5
      comp=Z,4.0nm,0.9s,baz=331,slow=1.1,SNR=5.6
      comp=Z,559nm,0.7s
QSPA  South Pole Qui     59.30 180  P       P        23 05 02.7 +2.6
MMRI  Maumere            59.68 278  P       P        23 05 01.8 -1.5
MMRI  Maumere            59.68 278  P       P        23 05 04.5 +1.1
MMRI  Maumere            59.68 278  P       P        23 05 02.0 -1.4
      comp=Z,477µmcomp=Z,33µmcomp=Z,1µm,1.0s
MMRI  Maumere            59.68 278 ⇑P       P        23 05 02.3 -1.1
SANI  Sanana             60.06 287  P       P        23 05 04.1 -1.9
SANI  Sanana             60.06 287  P       P        23 05 06.3 +0.4
SANI  Sanana             60.06 287  P       P        23 05 04.0 -1.9
SANI  Sanana             60.06 287 ⇑P       P        23 05 04.1 -1.9
EDFI  Ende, Flores       60.09 278  P       P        23 05 04.8 -1.5
      comp=Z,461µmcomp=Z,23µmcomp=Z,639nm,2.0s
GIRL  Giralia            60.25 260  P       P        23 05 06.0 -1.2
GIRL  Giralia            60.25 260  P       P        23 05 08.6 +1.4
BASI  Baing, Sumba       60.31 276  P       P        23 05 07.4 -0.3
TNTI  Ternate            60.56 291  P       P        23 05 07.9 -1.5
TNTI                                IAmb    IAmb     23 05 16.9
      comp=Z,681nm,1.3s
TNTI  Ternate            60.56 291  P       P        23 05 09.3 -0.1
TNTI  Ternate            60.56 291  P       P        23 05 07.6 -1.8
      comp=Z,462nm,1.5s
TNTI  Ternate            60.56 291 ⇑P       P        23 05 07.8 -1.5
WSI   Waingapu           60.82 276  P       P        23 05 10.6 -0.5
BBSI  Bau Bau            61.03 282  P       P        23 05 12.0 -0.6
      comp=Z,462µmcomp=Z,25µmcomp=Z,369nm,0.9s
WBSI  Waikabubak, Su     61.61 276  P       P        23 05 15.9 -0.7
      comp=Z,416µmcomp=Z,22µmcomp=Z,1µm,0.9s
BSSI  Bau Bau, Buton     62.45 280  P       P        23 05 20.1 -2.0
KMSI  Cibinong           63.20 288  P       P        23 05 26.0 -1.1
      comp=Z,431µmcomp=Z,22µmcomp=Z,585nm,0.6s
LUWI  Luwuk              63.28 286  P       P        23 05 26.1 -1.5
LUWI  Luwuk              63.28 286  P       P        23 05 26.1 -1.5
LUWI                                IAmb    IAmb     23 05 31.5
      comp=Z,791nm,1.2s
LUWI  Luwuk              63.28 286  P       P        23 05 28.3 +0.7
LUWI  Luwuk              63.28 286  P       P        23 05 26.2 -1.5
      comp=Z,446µmcomp=Z,22µmcomp=Z,620nm,1.0s
LUWI  Luwuk              63.28 286 ⇑P       P        23 05 26.5 -1.2
PLAI  Plampang           63.40 276  P       P        23 05 28.7 +0.3
PLAI  Plampang           63.40 276  P       P        23 05 27.8 -0.6
KAPI  Kappang            63.66 280  P       P        23 05 28.8 -1.3
KAPI                                IAmb    IAmb     23 05 54.3
      comp=Z,981nm,1.9s
KAPI  Kappang            63.66 280  LR      LR       23 34 27.6
      comp=Z,230µm,18.3s,baz=127,slow=37
KAPI  Kappang            63.66 280  P       P        23 05 30.5 +0.3
KAPI                                P       P        23 05 30.5 +0.3
KAPI                                S       S        23 14 01.5 -0.5
KAPI                                S       S        23 14 01.5 -0.5
KAPI  Kappang            63.66 280  P       P        23 05 29.7 -0.4
KAPI                                P       P        23 05 29.7 -0.4
KAPI  Kappang            63.66 280  P       P        23 05 30.4 +0.3
KAPI  Kappang            63.66 280c iP      P        23 05 29.2 -0.9
KAPI  Kappang            63.66 280 ⇑P       P        23 05 29.0 -1.2
KAPI  Kappang            63.66 280  P       P        23 05 29.2 -0.9
BNSI  Bone               63.68 281  P       P        23 05 27.6 -2.7
      comp=Z,390µmcomp=Z,22µmcomp=Z,585nm,1.5s
SGSI  Sangihe            63.77 292  P       P        23 05 30.0 -0.8
      comp=Z,414µmcomp=Z,25µmcomp=Z,954nm,1.0s
SPSI  Sidrap Palu        64.20 281  P       P        23 05 31.2 -2.5
APSI  Ampana             64.28 285  P       P        23 05 34.3 +0.1
      comp=Z,410nm,1.0s
TTSI  Tana Toraja        64.65 282  P       P        23 05 34.6 -2.0
MRSI  Marisa             64.82 287  P       P        23 05 35.0 -2.7
DNP   Denpasar           65.67 274  P       P        23 05 43.2 -0.1
DAV   Davao City (W)     65.78 295  P       P        23 05 42.6 -1.3
DAV   Davao City (W)     65.78 295  LR      LR       23 34 33.8
      comp=Z,50µm,20.0s,baz=137,slow=36
DAV   Davao City (W)     65.78 295  P       P        23 05 42.9 -1.0
DAV                                 S       S        23 14 27.2 -0.8
DAV   Davao City (W)     65.78 295  P       P        23 05 43.2 -0.7
DAV   Davao City (W)     65.78 295  P       P        23 05 47.0 +3.1
DAV   Davao City (W)     65.78 295  P       P        23 05 42.0 -1.9
PCI   Palu               65.79 284  P       P        23 05 43.4 -0.7
      comp=Z,31µmcomp=Z,2µm,1.1s
SRBI  Singaraja          65.96 275  P       P        23 05 43.9 -1.3
      comp=Z,386µmcomp=Z,38µmcomp=Z,2µm,1.5s
TOLI2 Tolitoli           66.13 287  P       P        23 05 43.3 -2.9
TOLI2                               IAmb    IAmb     23 05 50.1
      comp=Z,1µm,2.0s
TOLI2 Tolitoli           66.13 287  P       P        23 05 45.4 -0.8
MPSI  Mapaga             66.43 285  P       P        23 05 45.0 -3.1
      comp=Z,415µmcomp=Z,16µmcomp=Z,651nm,1.0s
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JAGI  Jajag, Banyuwa     66.68 274  P       P        23 05 47.7 -2.1
JAGI  Jajag, Banyuwa     66.68 274  P       P        23 05 48.6 -1.2
JAGI  Jajag, Banyuwa     66.68 274  P       P        23 05 47.9 -1.9
      comp=Z,397µmcomp=Z,28µmcomp=Z,2µm,1.0s
JAGI  Jajag, Banyuwa     66.68 274 ⇑P       P        23 05 47.8 -2.0
KMMI  Kalianget          67.55 275  P       P        23 05 55.0 -0.3
      comp=Z,381µmcomp=Z,36µmcomp=Z,2µm,1.6s
BKB   Balikpapan         68.06 282  P       P        23 05 58.7 +0.2
BKB   Balikpapan         68.06 282  P       P        23 06 00.8 +2.3
BKB   Balikpapan         68.06 282  P       P        23 05 59.3 +0.8
SMKI  Samarinda          68.24 283  P       P        23 06 00.4 +0.8
      comp=Z,29µmcomp=Z,990nm,1.0s
GRJI  Gresik             68.89 275  P       P        23 06 03.1 -0.6
      comp=Z,374µmcomp=Z,2µm,1.1s
JCJ   Chichijima         68.99 322  P       P        23 06 01.3 -2.6
JCJ                                 IAmb    IAmb     23 06 08.5
      comp=Z,1µm,1.0s
JCJ   Chichijima         68.99 322  LR      LR       23 32 39.1
      comp=Z,73µm,21.6s,baz=154,slow=33
JCJ   Chichijima         68.99 322  P       P        23 06 05.1 +1.1
JCJ   Chichijima         68.99 322 ⇑P       P        23 06 01.4 -2.5
SMAI  San Martin Ant     69.06 158  P       P        23 06 04.4 +0.5
SMAI                                IAmb    IAmb     23 06 15.1
      comp=Z,2µm,1.8s
PCJI  Pacitan            69.37 273  P       P        23 06 06.0 -0.7
BELA  Belgrano 2         69.38 172  P       P        23 06 05.7 -0.1
BELA                                IAmb    IAmb     23 06 14.8
      comp=Z,1µm,1.2s
TBJI  Tambak Boyo        69.48 274  P       P        23 06 07.1 -0.2
      comp=Z,378µmcomp=Z,35µmcomp=Z,1µm,1.1s
NGJI  Ngawi              69.54 274  P       P        23 06 07.7  0.0
      comp=Z,1µm,0.9s
WOJI  Wonogiri, Jawa     69.77 273  P       P        23 06 07.9 -1.2
UGM   Wanagama           70.07 273  P       P        23 06 09.7 -1.3
UGM                                 IAmb    IAmb     23 06 20.1
      comp=Z,1µm,1.2s
UGM   Wanagama           70.07 273  P       P        23 06 10.5 -0.6
UGM   Wanagama           70.07 273  P       P        23 06 10.7 -0.3
      comp=Z,340µmcomp=Z,26µmcomp=Z,898nm,1.1s
MYLDM Lahad Datu         70.31 289  P       P        23 06 12.0 -0.4
MYLDM Lahad Datu         70.31 289  P       P        23 06 13.9 +1.5
YOGI  Yogyakarta         70.32 273  P       P        23 06 12.2 -0.3
      comp=Z,17µmcomp=Z,1µm,1.2s
SMRI  Semarang           70.57 273  P       P        23 06 12.8 -1.3
SMRI                                IAmb    IAmb     23 06 39.3
      comp=Z,642nm,1.0s
SMRI  Semarang           70.57 273  P       P        23 06 15.6 +1.5
SMRI  Semarang           70.57 273  P       P        23 06 13.3 -0.7
      comp=Z,710nm,0.9s
SMRI  Semarang           70.57 273 ⇑P       P        23 06 13.4 -0.7
PMSA  Palmer Station     71.90 156  P       P        23 06 21.5 +0.3
PMSA                                IAmb    IAmb     23 06 43.2
      comp=Z,1µm,1.7s
PMSA  Palmer Station     71.90 156  LR      LR       23 31 08.7
      comp=Z,124µm,21.9s,baz=243,slow=30
PMSA  Palmer Station     71.90 156 ⇑P       P        23 06 22.6 +1.3
PMSA  Palmer Station     71.90 156  P       P        23 06 23.0 +1.8
PMSA                                pP      pwP      23 06 37.3 +0.7
MAW   Mawson             71.92 201  P       P        23 06 22.0 +0.7
      comp=Z,645nm,1.0s,baz=122,slow=7.4,SNR=188
MAW                                 PKPPKP  P'P'df   23 34 11.2 -3.9
      comp=Z,14nm,1.1s,baz=282,slow=8.4,SNR=4.9
MAW                                 LR      LR       23 36 47.3
      comp=Z,407µm,20.1s,baz=117,slow=35
      comp=Z,645nm,1.0s
MAW   Mawson             71.92 201  P       P        23 06 22.0 +0.7
KKM   Kota Kinabalu      72.66 288  P       P        23 06 25.4 -1.3
KKM                                 IAmb    IAmb     23 06 29.7
      comp=Z,892nm,1.3s
KKM   Kota Kinabalu      72.66 288  P       P        23 06 27.4 +0.7
JCJI  Jatiwangi          72.72 273  P       P        23 06 25.7 -1.3
      comp=Z,349µmcomp=Z,38µmcomp=Z,2µm,1.5s
BBJI  Bungbulang         72.77 272  P       P        23 06 26.7 -0.7
XMI   Christmas Isla     72.99 268  P       P        23 06 30.8 +2.2
XMIS  Christmas Isla     73.01 268  IAmb    IAmb     23 06 31.9
      comp=Z,1µm,1.0s
LEM   Lembang            73.11 272  LR      LR       23 38 34.8
      comp=Z,364µm,21.1s,baz=113,slow=36
CNJI  Cibinong           73.29 271  P       P        23 06 28.9 -1.5
      comp=Z,936nm,1.1s
STKI  Sintang            73.34 280  P       P        23 06 30.6 -0.1
      comp=Z,356µmcomp=Z,38µmcomp=Z,1µm,1.1s
TGY   Tagaytay City      73.69 298  P       P        23 06 32.0 -0.6
      comp=Z,3µm,1.0s,baz=280,slow=1.3,SNR=26
TGY                                 LR      LR       23 36 02.3
      comp=Z,53µm,21.9s,baz=136,slow=33
SKJI  Sukabumi           73.93 271  P       P        23 06 33.1 -1.1
      comp=Z,324µmcomp=Z,30µmcomp=Z,2µm,1.2s
TNG   Tangerang          74.27 272  P       P        23 06 37.9 +1.8
      comp=Z,26µmcomp=Z,2µm,1.5s
TNG                                 P       P        23 06 37.9 +1.8
      comp=Z,3µm,1.5s
JMZ   Minamidaito 2      74.34 314  P       P        23 06 36.4 +0.2
JMZ                                 IAmb    IAmb     23 06 54.1
      comp=Z,895nm,1.1s
SBJI  Serang             74.74 272  P       P        23 06 37.9 -0.9
      comp=Z,326µmcomp=Z,30µmcomp=Z,2µm,1.5s
CGJI  Cibinong           74.87 271  P       P        23 06 37.8 -1.8
      comp=Z,298µmcomp=Z,26µmcomp=Z,1µm,1.3s
JHJ2  Mitsune            75.04 324  P       P        23 06 39.1 -0.9
KSM   Kuching            75.08 281  P       P        23 06 39.5 -1.2
KSM                                 IAmb    IAmb     23 06 44.3
      comp=Z,881nm,1.0s
KSM                                 IAMs_20 IAMs_20  23 44 42.1
      comp=Z,103µm,20.0s
KSM   Kuching            75.08 281  P       P        23 06 39.6 -1.2
MG04  Isla Riesco        75.08 143  P       P        23 06 41.6 +1.5
TPI   Tanjungpandan      75.13 276  P       P        23 06 40.2 -0.9
      comp=Z,371µmcomp=Z,20µmcomp=Z,659nm,1.4s
MG05  Puerto Natales     75.20 142  P       P        23 06 41.5 +0.6
ESPZ  Base Esperanza     75.20 156  P       P        23 06 41.3 +0.6
GO09  Cerro Castillo     75.50 141  P       P        23 06 43.8 +1.1
GO09                                IAmb    IAmb     23 07 06.4
      comp=Z,2µm,1.7s
USHA  Ushuaia            75.60 146  LR      LR       23 33 28.1
      comp=Z,53µm,20.6s,baz=230,slow=30
BLSI  Bandar Lampung     75.88 272  P       P        23 06 44.1 -1.3
      comp=Z,16µmcomp=Z,933nm,1.3s
MG01  Puerto William     75.93 146  P       P        23 06 46.0 +1.1
MG01                                IAmb    IAmb     23 06 56.0
      comp=Z,938nm,1.3s
MG02  Cerro Sombrero     76.33 144  P       P        23 06 47.8 +0.5
SYO   Syowa Base         76.71 193⇑iP       P        23 06 49.5 +0.3
SYO   Syowa Base         76.71 193⇑iPcP     PcP      23 07 00.4  0.0
SYO   Syowa Base         76.71 193⇓ipP      pP       23 07 02.4 +2.5
JOW   Kunigami           76.92 312  P       P        23 06 49.9 -1.0
JOW                                 IAmb    IAmb     23 06 58.8
      comp=Z,468nm,1.0s
JOW   Kunigami           76.92 312  LR      LR       23 35 19.9
      comp=Z,122µm,21.2s,baz=142,slow=32
JOW   Kunigami           76.92 312  P       P        23 06 51.0 +0.1
JOW   Kunigami           76.92 312  P       P        23 06 50.2 -0.8
LWLI  Liwa               77.07 272  P       P        23 06 50.5 -1.8
JSG   Sagara             77.10 324  P       P        23 06 50.7 -1.0
JSG                                 IAmb    IAmb     23 07 01.2
      comp=Z,822nm,0.8s
JSG   Sagara             77.10 324  P       P        23 06 53.2 +1.5
JOD2  Odawara 2          77.12 325  P       P        23 06 50.0 -1.8
JAM   Amami Oshima       77.20 314  P       P        23 06 51.6 -0.8
MDSI  Maura Dua          77.24 272  P       P        23 06 50.4 -2.7
      comp=Z,339µmcomp=Z,29µmcomp=Z,2µm,1.0s
JYT   Yasato             77.36 326  P       P        23 06 53.3 +0.2
AY03  Cochrane           77.46 138  P       P        23 06 54.7 +0.9
AY03                                IAmb    IAmb     23 07 17.0
      comp=Z,1µm,1.6s
TROLL Troll, Antarti     77.47 180 ⇓P       P        23 06 55.1 +1.5
      comp=Z,96µm,0.9s
TROLL                              ⇓SKSac   S        23 16 39.9 -1.5
JMJ   Miyako jima 2      77.48 309  P       P        23 06 58.5 +4.4
PMBI  Palembang          77.52 274  P       P        23 06 52.8 -1.8
PMBI                                IAmb    IAmb     23 06 57.6
      comp=Z,1µm,1.3s
PMBI  Palembang          77.52 274  P       P        23 06 57.7 +3.1
PMBI  Palembang          77.52 274  P       P        23 06 56.8 +2.2
      comp=Z,341µmcomp=Z,20µmcomp=Z,621nm,1.4s
SNAA  Sanae              77.75 178 ⇓P       P        23 06 56.2 +1.1
      comp=Z,17µm,0.8s
SNAA                               ⇑SKSac   S        23 16 45.0 +0.7
SNAA  Sanae              77.75 178  P       P        23 06 55.4 +0.3
SNAA  Sanae              77.75 178  P       P        23 06 55.6 +0.6
      comp=Z,282nm,1.1s,baz=198,slow=5.6,SNR=121
SNAA                                S       S        23 16 43.5 -0.7
      comp=Z,18nm,0.9s,baz=236,slow=18,SNR=9.3
SNAA                                PKKPbc  PKKPbc   23 25 54.9 -2.9
      comp=Z,5.7nm,0.8s,baz=290,slow=1.5,SNR=10
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SNAA                              PKPPKP P'P'df    23 33 58.1  -6.8
       comp=Z,5.9nm,0.9s,baz=0.0,slow=2.0,SNR=5.7
SNAA                              LR     LR        23 38 19.1
       comp=Z,143µm,22.0s,baz=194,slow=33
       comp=Z,282nm,1.1s
SNAA   Sanae            77.75 178ceP     P         23 06 55.7  +0.6
SNAA                              pmax   pmax
       comp=Z,1µm,1.7s
JRY    Ryogami san      77.81 325  P     P         23 06 54.3  -1.4
VNA3   Neumayer Olymp   77.90 176 ⇓P     P         23 06 56.8  +1.0
       comp=Z,3µm,0.7s
VNA3                              ⇓SKSac S         23 16 43.5  -2.3
INU    Inuyama          78.22 324  P     P         23 06 56.3  -1.6
INU    Inuyama          78.22 324  P     P         23 06 57.4  -0.6
JGF    Kuroka           78.24 324  P     P         23 06 56.6  -1.5
JGF                                IAmb  IAmb      23 07 24.4
       comp=Z,973nm,1.7s
JGF    Kuroka           78.24 324  P     P         23 06 58.3  +0.1
JGF    Kuroka           78.24 324  P     P         23 06 56.4  -1.8
VNA2   Neumayer--Watz   78.33 177 ⇓P     P         23 06 59.6  +1.3
       comp=Z,2µm,0.6s,baz=178,slow=5.3
VNA2                              ⇓SKSac S         23 16 50.6  +0.1
       baz=201,slow=1.9
MNAI   Manna            78.35 272  P     P         23 06 57.3  -2.0
MNAI   Manna            78.35 272  P     P         23 07 01.6  +2.3
MNAI   Manna            78.35 272  P     P         23 07 01.3  +2.0
       comp=Z,341µmcomp=Z,32µmcomp=Z,955nm,1.2s
JMM    Marumori         78.41 328  P     P         23 07 01.4  +2.5
NVL    N'lazarevskaya   78.47 183 eP     P         23 07 04.1  +5.2
NVL                               e                23 07 13.3
NVL                               eS     sP        23 07 13.7  +0.2
NVL                               eSS    SS        23 22 02.8  +8.6
MJAR   Matsushiro Arr   78.56 325  P     P         23 06 58.1  -1.8
       comp=Z,75nm,0.9s,baz=166,slow=6.4,SNR=54
MJAR                               PKPPKP          23 33 58.8
       comp=Z,1.3nm,0.4s,baz=356,slow=0.7,SNR=5.7
MJAR                               LR    LR        23 39 40.1
       comp=Z,34µm,19.1s,baz=154,slow=34
       comp=Z,75nm,0.9s
VNA1   Neumayer--Stat   78.56 177 ⇓P     P         23 07 01.0  +1.5
       comp=Z,2µm,0.8s
MAJO   Matsushiro       78.57 325  P     P         23 06 58.2  -1.6
MAJO   Matsushiro       78.57 325  P     P         23 06 59.4  -0.5
MAJO   Matsushiro       78.57 325c iP    P         23 06 58.3  -1.6
MAJO                               pmax  pmax
       comp=Z,323nm,1.1s
MAJO                               MLR   MLR
       comp=Z,37µm,19.0s
MAT    Matsushiro       78.57 325  P     P         23 06 58.4  -1.5
JMN    Monobe           78.62 321  P     P         23 06 59.0  -1.3
JMN    Monobe           78.62 321  P     P         23 07 03.6  +3.3
JMN    Monobe           78.62 321  P     P         23 06 59.5  -0.8
COYC   Coyhaique        78.65 136  P     P         23 07 01.5  +1.0
JGN    Niukaw           78.75 325  P     P         23 07 00.3  -0.7
YOJ    Yonaguni jima    78.79 307  P     P         23 06 59.1  -2.3
YOJ                                IAmb  IAmb      23 07 04.7
       comp=Z,948nm,1.3s
YOJ                                IAMs_20 IAMs_20 23 40 43.1
       comp=Z,72µm,20.0s
YOJ    Yonaguni jima    78.79 307  P     P         23 07 02.5  +1.1
YOJ    Yonaguni jima    78.79 307  P     P         23 06 59.1  -2.3
YOJ                                pmax  pmax
       comp=Z,948nm,1.3s
YOJ                                MLR   MLR
       comp=Z,72µm,20.0s
JWT    Wachi            79.00 323  P     P         23 07 01.2  -1.0
GO07   Milladeo Hill,   79.00 134  P     P         23 07 03.6  +1.2
KSI    Kapahiang        79.02 272  P     P         23 07 01.4  -1.6
       comp=Z,357µmcomp=Z,30µmcomp=Z,1µm,1.1s
TWGBT  Beinan           79.07 305  P     P         23 07 01.7  -1.2
YULB   Yu-li            79.28 305  P     P         23 07 03.0  -1.1
JAD    Aida             79.39 322  P     P         23 07 03.5  -0.9
JYA    Atsumi           79.49 328  P     P         23 07 04.4  -0.5
JOM    Ohasama          79.49 329  P     P         23 07 04.0  -0.9
LL06   Loncomilla       79.50 133  P     P         23 07 05.7  +0.6
NACB   Ninganchiao      79.58 306  P     P         23 07 03.0  -2.7
NACB                               IAmb  IAmb      23 07 10.6
       comp=Z,756nm,1.2s
NACB   Ninganchiao      79.58 306  P     P         23 07 05.0  -0.7
TPUB   Ta-pu            79.69 305  P     P         23 07 03.6  -2.8
TPUB                               IAmb  IAmb      23 07 08.6
       comp=Z,781nm,0.9s
TPUB   Ta-pu            79.69 305  P     P         23 07 05.1  -1.3
JSD    Sado             79.73 326  P     P         23 07 08.9  +2.7
JSD    Sado             79.73 326  P     P         23 07 05.6  -0.5
COCO   West Island      79.74 262  P     P         23 07 05.1  -1.7
COCO                               IAmb  IAmb      23 07 15.1
       comp=Z,1µm,1.2s
COCO   West Island      79.74 262  P     P         23 07 06.4  -0.4
COCO                               P     P         23 07 06.4  -0.4
COCO                               S     S         23 17 02.1  -4.9
COCO                               S     S         23 17 02.1  -4.9
COCO   West Island      79.74 262  P     P         23 07 08.1  +1.3
COCO   West Island      79.74 262  P     P         23 07 05.1  -1.7
COCO                               pmax  pmax
       comp=Z,1µm,1.3s
COCO                               MLR   MLR
       comp=Z,493µm,20.0s
SSLB   Suanglung        79.78 305  P     P         23 07 04.0  -2.8
SSLB                               IAmb  IAmb      23 07 12.4
       comp=Z,704nm,0.8s
SSLB   Suanglung        79.78 305  P     P         23 07 05.3  -1.5
PAF    Port-aux-Franc   79.81 218  P     P         23 07 06.1  -0.5
PAF                                IAmb  IAmb      23 07 12.7
       comp=Z,2µm,1.2s
PAF    Port-aux-Franc   79.81 218  P     P         23 07 06.1  -0.5
PAF                                pmax  pmax
       comp=Z,2µm,1.2s
PAF                                MLR   MLR
       comp=Z,245µm,18.0s
JNU    Nakatsue         79.85 318  P     P         23 07 05.2  -1.8
JNU                                IAMs_20 IAMs_20 23 36 45.2
       comp=Z,100µm,21.0s
JNU    Nakatsue         79.85 318  LR    LR        23 40 47.6
       comp=Z,23µm,18.6s,baz=138,slow=34
JNU    Nakatsue         79.85 318  P     P         23 07 06.8  -0.2
JNU    Nakatsue         79.85 318  P     P         23 07 05.4  -1.6
JHS    Saijyo           80.00 321  P     P         23 07 07.1  -0.7
LL05   Los Muermos      80.03 132  P     P         23 07 08.2  +0.2
LL05                               IAmb  IAmb      23 07 28.4
       comp=Z,2µm,1.4s
YHNB   Yeheng           80.05 306  P     P         23 07 09.3  +0.9
LL01   San Ignacio de   80.17 134  P     P         23 07 09.4  +0.7
LL01                               IAmb  IAmb      23 07 36.3
       comp=Z,2µm,2.0s
TATO   Taipei           80.17 307  P     P         23 07 06.1  -2.8
TATO                               IAmb  IAmb      23 07 11.8
       comp=Z,904nm,1.1s
TATO   Taipei           80.17 307  P     P         23 07 08.6  -0.3
TATO                               P     P         23 07 08.6  -0.3
TATO                               S     S         23 17 11.1   0.0
TATO                               S     S         23 17 11.1   0.0
TATO   Taipei           80.17 307  P     P         23 07 08.6  -0.3
TATO                               P     P         23 07 08.6  -0.3
TATO   Taipei           80.17 307  P     P         23 07 10.1  +1.2
H03S2  Juan Fernandez   80.26 123  T     T         00 36 16.3
       baz=238,slow=74,SNR=486
H03S1  Juan Fernandez   80.27 124  T     T         00 36 23.3
       baz=238,slow=74,SNR=616
H03S3  Juan Fernandez   80.28 123  T     T         00 36 20.6
       baz=238,slow=74,SNR=698
VA04   Juan Fernndez    80.42 123  P     P         23 07 10.0  -0.3
VA04                               IAmb  IAmb      23 07 37.8
       comp=Z,906nm,1.6s
H03N3  Juan Fernandez   80.45 123  T     T         00 36 31.7
       baz=241,slow=72,SNR=158
H03N2  Juan Fernandez   80.45 123  T     T         00 36 33.7
       baz=241,slow=72,SNR=150
H03N1  Juan Fernandez   80.47 123  T     T         00 36 23.8
       baz=241,slow=72,SNR=394
JTM    Tenmabayashi     80.67 330  P     P         23 07 10.6  -0.5
JTM                                IAMs_20 IAMs_20 23 42 15.0
       comp=Z,86µm,20.0s
JTM    Tenmabayashi     80.67 330  P     P         23 07 12.5  +1.3
ERM    Erimo            80.81 332  P     P         23 07 12.6  +0.7
ERM    Erimo            80.81 332  IAMs_20 IAMs_20 23 37 37.5
       comp=Z,105µm,21.0s
ERM    Erimo            80.81 332  P     P         23 07 12.8  +0.9
ERM    Erimo            80.81 332c iP    P         23 07 11.8  -0.1
ERM                                pmax  pmax
       comp=Z,361nm,0.9s
ERM                                MLR   MLR
       comp=Z,58µm,19.0s
JEM    Erimo            80.81 332  P     P         23 07 12.7  +0.8
LL03   Petrohue         80.85 133  P     P         23 07 13.6  +1.1
LL03                               IAmb  IAmb      23 07 35.4
       comp=Z,585nm,0.9s
LR04   Corral           80.88 131  P     P         23 07 13.4  +0.8
LR04                               IAmb  IAmb      23 07 35.3
       comp=Z,2µm,1.8s
H06S1  SOCORRO T        81.08  62  P     P         23 07 14.5  +0.6
       SNR=14
YUK    Yuzh-Kuril'sk    81.47 335d iP    P         23 07 14.0  -1.3
YUK                               i                23 10 21.3
YUK                               i PPP  PPP       23 12 16.2
YUK                               i S    S         23 17 25.4  +1.6
YUK                                pmax  pmax
       comp=Z,703nm,1.0s
YUK                                pmax  pmax
       comp=N,299nm,1.1s
YUK                                pmax  pmax
       comp=E,395nm,0.6s
YUK                                pmax  pmax
       comp=Z,3µm,5.0s
JTU    Tsushima         81.71 318  P     P         23 07 18.4  +1.5
KUR    Kuril'sk         81.79 336c iP    P         23 07 16.2  -0.8
KUR                                pmax  pmax
       comp=Z,875nm,1.5s
AMKA   Amchitka         81.86 358  P     P         23 07 16.4  -0.8
AIS    Amsterdam Isla   81.87 231  P     P         23 07 17.4  -0.5
AIS                                IAmb  IAmb      23 07 22.4
       comp=Z,804nm,1.2s
KNMB   Chin-men Tao     82.02 304  P     P         23 07 18.1  -0.6
KNMB                               IAmb  IAmb      23 07 22.9
       comp=Z,545nm,1.2s
QZH    Quanzhou         82.17 305⇑iP     P         23 07 18.8  -0.7
QZH                                PP    PP        23 10 27.6  -0.8
QZH                                S     S         23 17 27.1  -4.8
QZH                                SS    SS        23 22 52.8   0.0
QZH                                pmax  pmax
       comp=Z,610nm,1.1s
QZH                                pmax  pmax
       comp=Z,41µm,14.9s
QZH                                LR    LR
       comp=Z,37µm,21.6s
QZH                                LR    LR
       comp=Z,68µm,21.0s
QZH                                LR    LR
       comp=Z,85µm,28.2s
PLCA   Paso Flores      82.25 133  P     P         23 07 21.4  +1.5
PLCA                               IAmb  IAmb      23 07 43.1
       comp=Z,2µm,1.6s
PLCA   Paso Flores      82.25 133  P     P         23 07 21.5  +1.5
       comp=Z,103nm,0.8s,baz=235,slow=5.5,SNR=78
PLCA                               PKKPbc PKKPbc   23 25 48.4  +1.2
       comp=Z,14nm,1.1s,baz=8.8,slow=4.8,SNR=6.3
PLCA                               PKPPKP P'P'df   23 33 53.5  -3.0
       comp=Z,22nm,0.9s,baz=66,slow=1.5,SNR=6.7
PLCA                               LR    LR        23 35 21.8
       comp=Z,245µm,21.4s,baz=253,slow=29
       comp=Z,103nm,0.8s
DLV     Lat             82.27 289  P     P         23 07 20.3  -0.2
DLV                                IAmb  IAmb      23 07 25.1
       comp=Z,1µm,1.2s
DLV     Lat             82.27 289  P     P         23 07 21.2  +0.7
KIWB   Kanaga Island    82.31   1  P     P         23 07 19.3  -0.3
ADK    Adak             82.34   1  P     P         23 07 19.4  -0.4
ADK    Adak             82.34   1  P     P         23 07 20.0  +0.3
ADK    Adak             82.34   1  P     P         23 07 19.4  -0.4
ADK                                pmax  pmax
       comp=Z,1µm,1.0s
ADK                                MLR   MLR
       comp=Z,120µm,21.0s
BKNI   Bangkinang       82.38 275  P     P         23 07 18.8  -2.1
BKNI   Bangkinang       82.38 275  P     P         23 07 18.7  -2.2
BKNI                               IAmb  IAmb      23 07 23.9
       comp=Z,1µm,1.0s
BKNI   Bangkinang       82.38 275  P     P         23 07 20.4  -0.5
BKNI   Bangkinang       82.38 275  P     P         23 07 19.1  -1.8
       comp=Z,332µmcomp=Z,26µmcomp=Z,1µm,1.1s
JMP    Maruseppu        82.40 333  P     P         23 07 20.4  +0.2
EFI    East Falkland    82.46 147  P     P         23 07 21.6  +0.9
EFI                                IAmb  IAmb      23 07 31.3
       comp=Z,1µm,1.4s
EFI    East Falkland    82.46 147  IAMs_20 IAMs_20 23 39 11.1
       comp=Z,90µm,20.0s
EFI    East Falkland    82.46 147c iP    P         23 07 21.4  +0.7
EFI                                pmax  pmax
       comp=Z,1µm,1.4s
EFI                                MLR   MLR
       comp=Z,67µm,17.0s
PPI    Padang Panjang   82.53 274  P     P         23 07 19.1  -2.6
GSTR   Great Sitkin T   82.56   1  P     P         23 07 20.3  -0.7
JSH    Shimam           82.63 330  P     P         23 07 21.5  +0.1
BI05   Punta Hualpn     82.72 128  P     P         23 07 23.5  +1.1
BI05                               IAmb  IAmb      23 07 45.1
       comp=Z,2µm,1.6s
ATKA   Atka Island      82.72   2  P     P         23 07 21.1  -0.6
ATKA                               IAMs_20 IAMs_20 23 39 02.3
       comp=Z,79µm,20.0s
ATKA   Atka Island      82.72   2  P     P         23 07 21.9  +0.2
JKA    Kamikawa-asahi   82.79 333  P     P         23 07 22.7  +0.4
JKA                                IAMs_20 IAMs_20 23 43 56.1
       comp=Z,68µm,20.0s
ASAJ   Asahikawa        82.79 333  LR    LR        23 36 24.9
       comp=Z,51µm,21.8s,baz=176,slow=30
ASAJ   Asahikawa        82.79 333  P     P         23 07 22.7  +0.4
ASAJ                               pmax  pmax
       comp=Z,368nm,1.0s
ASAJ                               MLR   MLR
       comp=Z,68µm,20.0s
ASAJ   Asahikawa        82.79 333  P     P         23 07 22.9  +0.6
SISI   Saibi            83.21 272  P     P         23 07 26.0  +0.8
       comp=Z,27µmcomp=Z,538nm,1.6s
SHEM   Shemya Is, Ala   83.47 355  P     P         23 07 24.9  -0.6
SHEM                               IAmb  IAmb      23 07 32.1
       comp=Z,1µm,1.1s
SHEM   Shemya Is, Ala   83.47 355  LR    LR        23 40 54.9
       comp=Z,120µm,19.4s,baz=190,slow=33
SMY    Shemya           83.47 355  P     P         23 07 24.7  -0.8
SMY                                IAmb  IAmb      23 07 32.1
       comp=Z,1µm,1.1s
SMY    Shemya           83.47 355  P     P         23 07 25.7  +0.2
SMY    Shemya           83.47 355  P     P         23 07 24.7  -0.8
SMY                                pmax  pmax
       comp=Z,1µm,1.1s
SMY                                MLR   MLR
       comp=Z,155µm,20.0s
HKC    Hong Kong Obse   83.76 300 ⇑P     P         23 07 28.0  +0.2
HKPS   Hong Kong Po S   83.77 300  P     P         23 07 27.5  -0.3
NIKH   Nikolski High    83.81   6  P     P         23 07 27.0  -0.3
NIKH   Nikolski High    83.81   6  P     P         23 07 27.4  +0.1
NIKH   Nikolski High    83.81   6  P     P         23 07 27.2  -0.1
       baz=187
NIKH                               S     S         23 17 48.1  +0.7
       baz=187
MNSI   Mandailing Nat   83.87 275  P     P         23 07 26.0  -2.6
       comp=Z,312µmcomp=Z,15µmcomp=Z,537nm,0.7s
BI02   San Fabin de     84.05 129  P     P         23 07 30.1  +0.7
BI02                               IAmb  IAmb      23 07 55.3
       comp=Z,607nm,1.1s
TJN    Taejon           84.19 319  P     P         23 07 29.0  -0.7
TJN    Taejon           84.19 319  P     P         23 07 29.6  -0.1
TJN    Taejon           84.19 319c iP    P         23 07 28.9  -0.8
SKR    Severo-Kuril's   84.30 344c iP    P         23 07 29.1  -0.7
SKR                               e                23 10 47.6
SKR                               i S    S         23 17 49.8  -2.5
SKR                                pmax  pmax
       comp=Z,453nm,1.2s
SKR                                pmax  pmax
       comp=Z,25µm,15.8s
SKR                                smax  smax
       comp=N,18µm,11.4s
SSE    Sheshan          84.36 311  P     P         23 07 29.8  -0.8
SSE                                S     S         23 17 59.4  +5.6
SSE                                pmax  pmax
       comp=N,5µm,12.3s
KSRS   Korea Array      84.64 320  P     P         23 07 31.7  -0.2
       comp=N,140nm,1.0s,baz=142,slow=5.4,SNR=51
KSRS                               PKKPbc PKKPbc   23 25 44.1  +1.2
       comp=N,3.9nm,1.0s,baz=306,slow=4.8,SNR=4.2
KSRS                               PKPPKP P'P'df   23 33 48.0  +3.4
       comp=N,2.5nm,0.9s,baz=298,slow=2.7,SNR=5.4
KSRS                               LR    LR        23 41 26.7
       comp=N,23206µm,21.7s,baz=125,slow=33
       comp=N,140nm,1.0s
KSAR   Wonju Array Be   84.66 320  P     P         23 07 31.6  -0.4
KSAR   Wonju Array Be   84.66 320  P     P         23 07 31.6  -0.4
KS19   Wonju Array Si   84.71 320  P     P         23 07 31.8  -0.5
LPIG   La Paz           84.77  58  LR    LR        23 38 40.1
       comp=N,44µm,18.5s,baz=246,slow=31
SLBS   Sierra La Lagu   84.79  59  P     P         23 07 33.7  +0.6
GZH    Guangzhou        84.84 301  P     P         23 07 33.6  +0.4
GZH                                pP    PcP       23 07 38.8  +2.2
GZH                                PP    PP        23 10 54.4  +4.1
GZH                                SKS   S         23 17 56.1  -2.8
GZH                                S     SKKSac    23 18 00.9  +0.1
GZH                                pmax  pmax
       comp=N,260nm,1.5s
GZH                                pmax  pmax
       comp=N,38µm,14.3s
GZH                                LR    LR
       comp=N,36µm,24.1s
GZH                                LR    LR
       comp=N,30µm,23.9s
GZH                                LR    LR
       comp=N,78µm,21.3s
UNV    Unalaska Valle   84.89   7  P     P         23 07 32.4  -0.3
UNV                                IAmb  IAmb      23 07 39.0
       comp=Z,463nm,0.8s
UNV    Unalaska Valle   84.89   7  P     P         23 07 32.7  -0.1
UNV    Unalaska Valle   84.89   7  P     P         23 07 32.6  -0.1
       baz=189
UNV                                S     S         23 18 01.6  +3.6
       baz=189
YSS    Yuzhno-Sakhali   85.10 334  P     P         23 07 33.8  -0.2
YSS                                IAmb  IAmb      23 07 40.8
       comp=Z,873nm,1.0s
YSS    Yuzhno-Sakhali   85.10 334  P     P         23 07 34.7  +0.8
YSS    Yuzhno-Sakhali   85.10 334α iP    P         23 07 34.8  +0.8
YSS                               e*SP   sP        23 07 55.2  +5.8
YSS                               eS     S         23 17 58.7  -1.8
YSS                               eSS    SS        23 23 26.9  -8.6
YSS                                pmax  pmax
       comp=N,7µm,5.8s
YSS                                pmax  pmax
       comp=Z,23µm,5.8s
YSS                                pmax  pmax
       comp=E,4µm,10.9s
YSS                                pmax  pmax
       comp=Z,820nm,1.0s
QIZ    Qiongzhong       85.15 295  P     P         23 07 34.3  -0.6
QIZ                                IAmb  IAmb      23 07 40.7
       comp=Z,1µm,1.9s
QIZ    Qiongzhong       85.15 295  IAMs_20 IAMs_20 23 52 28.3
       comp=Z,62µm,22.0s
QIZ    Qiongzhong       85.15 295  P     P         23 07 34.8  -0.1
QIZ                                PP    PP        23 10 52.4  -0.5
QIZ                                S     S         23 17 59.0  -3.2
QIZ                                pmax  pmax
       comp=Z,20µm,9.3s
QIZ                                LR    LR
       comp=Z,50µm,29.8s
QIZ                                LR    LR
       comp=Z,174µm,36.1s
QIZ    Qiongzhong       85.15 295  P     P         23 07 36.3  +1.4
LVA    Lava Point       85.25   7  P     P         23 07 34.4  -0.2
LVA                                IAmb  IAmb      23 07 40.9
       comp=Z,438nm,0.9s
AKUT   Akutan           85.25   7  P     P         23 07 34.0  -0.5
AKUT                               IAmb  IAmb      23 07 39.5
       comp=Z,486nm,1.0s
AKUT   Akutan           85.25   7  P     P         23 07 35.1  +0.6
SRIG   Santa Rosalia    85.33  54  P     P         23 07 36.1  +0.5
INCN   Inchon           85.39 319  P     P         23 07 34.6  -1.1
INCN   Inchon           85.39 319  P     P         23 07 35.7   0.0
INCN                               S     S         23 18 03.6  -0.2
INCN   Inchon           85.39 319  P     P         23 07 36.0  +0.3
INCN   Inchon           85.39 319  P     P         23 07 37.6  +1.9
INCN   Inchon           85.39 319  P     P         23 07 34.6  -1.1
INCN                               pmax  pmax
       comp=Z,204nm,1.0s
RPSI   Rantau Prapat    85.40 276  P     P         23 07 33.9  -2.5
RPSI                               IAmb  IAmb      23 07 38.9
       comp=Z,751nm,1.1s
BO02   Sierra Bellavi   85.44 128  P     P         23 07 36.7  +0.4
BO02                               IAmb  IAmb      23 07 58.9
       comp=Z,1µm,1.2s
PSI    Prapat           85.46 276  P     P         23 07 34.0  -2.7
       comp=Z,369nm,1.0s,baz=136,slow=4.9,SNR=79
PSI                                PP    PP        23 10 54.6  -0.9
       comp=Z,74nm,0.9s,baz=184,slow=7.1,SNR=5.2
PSI                                LR    LR        23 46 36.6
       comp=Z,258µm,20.4s,baz=136,slow=36
PSI    Prapat           85.46 276  P     P         23 07 34.4  -2.4
PSI    Prapat           85.46 276  P     P         23 07 33.9  -2.9
PSI                                pmax  pmax
       comp=Z,751nm,1.1s
PSI                                MLR   MLR
       comp=Z,250µm,20.0s
VA05   Santo Domingo    85.50 127  P     P         23 07 37.3  +0.8
CBX    Cerro Bola       85.52  48  P     P         23 07 37.6  +0.9
CBX                                IAmb  IAmb      23 08 01.2
       comp=Z,1µm,1.8s
PMPB   Monarch Peak     85.59  43  P     P         23 07 37.9  +1.1
SAO    San Andreas Ge   85.59  42  P     P         23 07 37.8  +1.1
SAO                                IAmb  IAmb      23 08 02.7
       comp=Z,576nm,1.6s
SAO                                IAMs_20 IAMs_20 23 46 24.9
       comp=Z,72µm,19.0s
SAO    San Andreas Ge   85.59  42  P     P         23 07 37.8  +1.1
SAO                                pmax  pmax
       comp=Z,576nm,1.6s
SAO                                MLR   MLR
       comp=Z,72µm,19.0s
MT01   Popeta           85.64 127  IAMs_20 IAMs_20 23 40 20.1
       comp=Z,73µm,19.0s
BBGB   Big Mountain B   85.70  43  P     P         23 07 38.8  +1.4
BBGB                               IAmb  IAmb      23 07 51.0
       comp=Z,1µm,1.3s
BBGB                               IAMs_20 IAMs_20 23 46 21.8
       comp=Z,58µm,18.0s
TKX    Tecate           85.72  48  P     P         23 07 38.3  +0.7
MCCM   Marconi Confer   85.74  40  P     P         23 07 37.9  +0.5
MCCM                               IAmb  IAmb      23 08 00.2
       comp=Z,569nm,1.2s
MCCM                               IAMs_20 IAMs_20 23 47 46.7
       comp=Z,61µm,18.0s
VA01   Torpederas       85.84 126  P     P         23 07 38.8  +0.5
GSI    Gunungsitoli     85.85 274  P     P         23 07 38.0  -0.6
GSI    Gunungsitoli     85.85 274  P     P         23 07 38.9  +0.3
GSI    Gunungsitoli     85.85 274  P     P         23 07 37.8  -0.8
MT09   Talagante        85.87 127  IAMs_20 IAMs_20 23 41 48.2
       comp=Z,67µm,19.0s
PET    Petropavlovsk    85.92 346  P     P         23 07 37.0  -0.9
PET                                IAmb  IAmb      23 07 43.5
       comp=Z,685nm,1.3s
PET                                IAMs_20 IAMs_20 23 41 07.6
       comp=Z,58µm,22.0s
PET    Petropavlovsk    85.92 346  P     P         23 07 38.0  +0.1
PET    Petropavlovsk    85.92 346c iP    P         23 07 36.8  -1.1
PET                                pmax  pmax
       comp=Z,533nm,2.5s
BO04   La Punta         86.01 127  P     P         23 07 39.3  +0.1
TEY    Ternei           86.03 330 eP     P         23 07 38.5  -0.2
MT02   Curacav          86.06 127  P     P         23 07 40.3  +1.0
MT02                               IAmb  IAmb      23 08 09.2
       comp=Z,514nm,1.1s
TSI    Tuntungan        86.12 276  P     P         23 07 38.3  -1.6
       comp=Z,274µmcomp=Z,18µmcomp=Z,781nm,1.2s
PEA0B  Petropavlovsk-   86.20 346c iP    P         23 07 38.8  -0.5
PETK   Petropavlovsk-   86.20 346  P     P         23 07 38.2  -1.2
       comp=Z,320nm,0.9s,baz=113,slow=7.2,SNR=111
PETK                               PKiKP PKiKP     23 12 46.6  -0.6
       comp=Z,11nm,0.8s,baz=110,slow=3.8,SNR=10
PETK                               PKPPKP P'P'df   23 33 45.8  +5.9
       comp=Z,8.0nm,1.0s,baz=24,slow=5.2,SNR=4.0
PETK                               LR    LR        23 38 55.8
       comp=Z,54µm,21.9s,baz=169,slow=31
       comp=Z,320nm,0.9s
YUH    Yuha Desert      86.22  48  IAMs_20 IAMs_20 23 41 37.9
       comp=Z,55µm,19.0s
FALS   False Pass       86.24   8  P     P         23 07 39.2  -0.2
FALS                               IAmb  IAmb      23 07 48.0
       comp=Z,349nm,0.8s
FALS   False Pass       86.24   8  P     P         23 07 40.4  +1.0
FALS   False Pass       86.24   8  P     P         23 07 39.3  -0.1
       baz=192
FALS                               S     S         23 18 14.5  +3.3
       baz=192
MT05   Renca            86.26 127  IAMs_20 IAMs_20 23 37 59.5
       comp=Z,84µm,21.0s
HJU    Haeju            86.29 319  P     P         23 07 39.5  -0.7
HJU                                S     S         23 18 16.3  +3.7
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HJU                                  AmB
       comp=Z,4µm,3.1s
HJU                                  AMS      AMS
       comp=Z,49µm,25.9s
VA06   Catapilco         86.34 126   P        P        23 07 41.5 +0.7
VA06                                 IAmb     IAmb     23 08 03.0
       comp=Z,600nm,1.2s
MT03   Universidad Ad    86.36 127   IAMs_20  IAMs_20  23 38 02.1
       comp=Z,79µm,21.0s
LMEL   Las Melosas       86.37 127   P        P        23 07 41.6 +0.5
LMEL                                 IAmb     IAmb     23 08 06.7
       comp=Z,574nm,1.2s
PEL    Peldehue          86.44 127   P        P        23 07 41.7 +0.4
PEL    Peldehue          86.44 127   P        P        23 07 41.7 +0.4
PEL                                  pmax     pmax
       comp=Z,873nm,1.0s
PEL                                  MLR      MLR
       comp=Z,140µm,22.0s
KCPM   Cahto Peak        86.45  39   IAMs_20  IAMs_20  23 42 33.3
       comp=Z,64µm,19.0s
NJ2    Nanjing           86.49 311⇑iP        P        23 07 41.0 -0.3
NJ2                                  PP       PP       23 11 01.4 -2.2
NJ2                                  SKS      SKSac    23 18 04.8  0.0
NJ2                                  S        S        23 18 18.6 +3.8
NJ2                                  pmax     pmax
       comp=Z,23µm,9.5s
NJ2                                  LR       LR
       comp=Z,67µm,23.1s
NJ2                                  LR       LR
       comp=Z,29µm,21.4s
NJ2                                  LR       LR
       comp=Z,123µm,25.0s
PFO    Pinyon Flats O    86.50  47   P        P        23 07 42.4 +1.0
PFO                                  IAmb     IAmb     23 08 06.0
       comp=Z,1µm,2.0s
PFO    Pinyon Flats O    86.50  47   IAMs_20  IAMs_20  23 41 44.4
       comp=Z,55µm,19.0s
PFO    Pinyon Flats O    86.50  47   LR       LR       23 42 24.9
       comp=Z,42µm,18.2s,baz=240,slow=33
PFO    Pinyon Flats O    86.50  47c iP        P        23 07 42.9 +1.4
PFO                                  pmax     pmax
       comp=Z,2µm,3.0s
PFO                                  MLR      MLR
       comp=Z,93µm,17.0s
CCAC   Calif City Air    86.54  45   IAMs_20  IAMs_20  23 51 46.3
       comp=Z,49µm,18.0s
UBPT   Khong Chiam       86.54 290   P        P        23 07 41.7 -0.2
UBPT   Khong Chiam       86.54 290   P        P        23 07 42.3 +0.4
HHU    Hamhung           86.62 321   P        P        23 07 41.0 -0.7
HHU                                  AMS      AMS
       comp=Z,102µm,26.0s
MSHR   Mys Shultsa       86.68 325c iP        P        23 07 41.3 -0.6
MSHR                                 pmax     pmax
       comp=Z,553nm,1.6s
KMPM   Mount Pierce      86.68  38   IAMs_20  IAMs_20  23 42 48.4
       comp=Z,58µm,20.0s
VLA    Vladivostok       86.73 326d iP        P        23 07 41.8 -0.3
VLA                                  pmax     pmax
       comp=Z,233nm,1.0s
VLA                                  MLR      MLR
       comp=Z,38µm,19.0s
CNBA   Chernabura Isl    86.75  11   IAMs_20  IAMs_20  23 41 27.3
       comp=Z,66µm,22.0s
CHNA   Chernabura Isl    86.76  11   P        P        23 07 42.0  0.0
CHNA   Chernabura Isl    86.76  11   P        P        23 07 42.4 +0.4
       baz=195
CHNA                                 S        S        23 18 20.1 +3.8
       baz=195
KMRM   Mail Ridge        86.76  39   IAMs_20  IAMs_20  23 42 42.2
       comp=Z,61µm,20.0s
PSTR   Posyet            86.91 325ceP         P        23 07 43.0  0.0
PYAG   Pyongyang         86.98 320   P        P        23 07 42.8 -0.6
PYAG                                 S        S        23 18 22.7 +3.6
PYAG                                 AmB
       comp=Z,11µm,6.0s
PYAG                                 AMS      AMS
       comp=Z,94µm,28.0s
JCC    Jacoby Creek,     87.02  38   IAMs_20  IAMs_20  23 49 02.2
       comp=Z,55µm,18.0s
SDPT   Sand Point        87.12  10   P        P        23 07 43.6 -0.1
SDPT   Sand Point        87.12  10   P        P        23 07 43.8 +0.1
SDPT   Sand Point        87.12  10   P        P        23 07 44.4 +0.7
       baz=194
SDPT                                 S        S        23 18 23.8 +4.0
       baz=194
UGL    Uglegorsk         87.13 335  eP        P        23 07 37.3 -6.6
UGL                                  pmax     pmax
       comp=Z,24µm,6.0s
UGL                                  pmax     pmax
       comp=Z,600nm,1.0s
CO06   Fray Jorge        87.16 124   P        P        23 07 45.2 +0.4
CO06                                 IAmb     IAmb     23 08 11.1
       comp=Z,371nm,1.1s
KHMM   Horse Mountain    87.22  38   IAMs_20  IAMs_20  23 49 34.5
       comp=Z,71µm,18.0s
S12K   Black Hills       87.24   9   P        P        23 07 44.2 -0.2
S12K                                 IAMs_20  IAMs_20  23 47 03.1
       comp=Z,52µm,20.0s
S12K   Black Hills       87.24   9   P        P        23 07 44.6 +0.2
       baz=193
S12K                                 S        S        23 18 25.7 +4.6
       baz=193
KRPM   Rodgers           87.27  38   IAMs_20  IAMs_20  23 43 16.8
       comp=Z,55µm,19.0s
HSIG                     87.27  54   P        P        23 07 45.5 +0.3
HSIG                                 IAmb     IAmb     23 08 11.9
       comp=Z,391nm,1.2s
P08K   Saint George I    87.36   5   P        P        23 07 45.9 +1.1
       baz=187
P08K                                 S        S        23 18 25.8 +3.8
       baz=187
AFDM   Forest Hills D    87.37  41   IAMs_20  IAMs_20  23 47 23.9
       comp=Z,58µm,18.0s
GSC    Goldstone, Bar    87.38  46   IAMs_20  IAMs_20  23 48 37.7
       comp=Z,66µm,18.0s
USA0B  Ussuriysk Arra    87.49 327   P        P        23 07 45.2 -0.6
USA0B                                IAmb     IAmb     23 08 14.9
       comp=Z,706nm,1.5s
USA0B  Ussuriysk Arra    87.49 327c iP        P        23 07 45.8  0.0
USRK   Ussuriysk Ar.     87.49 327   P        P        23 07 45.4 -0.4
USRK   Ussuriysk Ar.     87.49 327   P        P        23 07 45.6 -0.2
       comp=Z,92nm,0.8s,baz=142,slow=3.5,SNR=76
USRK                                 PKKPbc   PKKPbc   23 25 37.5 +1.2
       comp=Z,4.5nm,0.8s,baz=309,slow=2.8,SNR=4.3
USRK                                 PKPPKP   P'P'df   23 33 43.7 +4.9
       comp=Z,1.9nm,0.8s,baz=245,slow=2.7,SNR=1.8
USRK                                 LR       LR       23 41 20.8
       comp=Z,48µm,21.7s,baz=143,slow=32
       comp=Z,92nm,0.8s
KRMB   Red Mountain      87.59  38   IAMs_20  IAMs_20  23 43 36.3
       comp=Z,58µm,20.0s
113A   Mohawk Valley,    87.69  49   P        P        23 07 48.2 +1.2
113A                                 IAmb     IAmb     23 07 55.5
       comp=Z,521nm,1.5s
PAYG   Puerto Ayora      87.71  89   P        P        23 07 48.3 +0.6
CO03   El Pedregal       87.74 125   P        P        23 07 48.1 +0.4
QSM    Queen of Sheba    87.78  45   P        P        23 07 48.6 +1.2
QSM                                  IAmb     IAmb     23 08 14.0
       comp=Z,543nm,1.4s
QSM                                  IAMs_20  IAMs_20  23 49 09.1
       comp=Z,54µm,18.0s
KSXB   Camp Six Broad    87.82  37   IAMs_20  IAMs_20  23 43 24.5
       comp=Z,63µm,19.0s
SRIT   Nakonsritamara    87.86 281   P        P        23 07 47.7 -0.7
SRIT                                 IAmb     IAmb     23 07 52.7
       comp=Z,358nm,1.1s
SRIT   Nakonsritamara    87.86 281   P        P        23 07 48.9 +0.5
CO05   La Serena         87.87 124   P        P        23 07 48.2  0.0
SPIA   Saint Paul Isl    87.89   4   P        P        23 07 48.0 +0.6
SPIA                                 IAMs_20  IAMs_20  23 42 19.0
       comp=Z,72µm,21.0s
SPIA   Saint Paul Isl    87.89   4   P        P        23 07 48.5 +1.2
       baz=186,SNR=25
SPIA                                 S        S        23 18 32.7 +5.7
       baz=186
KBO    Bosley Butte      87.92  37   IAMs_20  IAMs_20  23 43 45.9
       comp=Z,59µm,20.0s
WAKR   Walker            87.94  42   IAMs_20  IAMs_20  23 38 10.1
       comp=Z,70µm,22.0s
GO04   Tololo Observa    88.04 124   P        P        23 07 49.3  0.0
GO04                                 IAmb     IAmb     23 08 14.6
       comp=Z,633nm,1.2s
GWY    Greenwater Val    88.05  45   IAMs_20  IAMs_20  23 48 44.1
       comp=Z,48µm,18.0s
MPK    Martis Peak       88.14  41   IAMs_20  IAMs_20  23 47 58.2
       comp=Z,66µm,18.0s
CNSH   ChangSha          88.15 304   P        P        23 07 48.3 -1.1
CNSH                                 S        S        23 18 30.5 -0.5
CNSH                                 LR       LR
       comp=Z,28µm,23.0s
CNSH                                 LR       LR
       comp=Z,30µm,21.6s
CNSH                                 LR       LR
       comp=Z,67µm,24.9s
GRAC   Grapevine Rang    88.16  44   IAMs_20  IAMs_20  23 50 49.9
       comp=Z,52µm,18.0s
S14K   Fog Glacier       88.16  10   P        P        23 07 49.8 +0.9
       baz=195
S14K                                 S        S        23 18 34.4 +4.4
       baz=195
L02F   Cave Junction     88.19  37   IAMs_20  IAMs_20  23 43 46.2
       comp=Z,62µm,20.0s
PNTR   Pine Nut          88.25  42   IAMs_20  IAMs_20  23 38 18.1
       comp=Z,71µm,22.0s
LHV    Little Huntoon    88.32  43   IAMs_20  IAMs_20  23 48 05.0
       comp=Z,62µm,19.0s
GULI   GuiLin            88.33 301   P        P        23 07 49.8 -0.5
GULI                                 PP       PP       23 11 19.8 +1.3
GULI                                 S        S        23 18 23.6 -9.1
GULI                                 LR       LR
       comp=Z,22µm,21.7s
GULI                                 LR       LR
       comp=Z,36µm,20.6s
GULI                                 LR       LR
       comp=Z,46µm,20.6s
KEBM   Edson Butte       88.33  36   IAMs_20  IAMs_20  23 43 59.0
       comp=Z,55µm,19.0s
CHGN   Chignik           88.36  11   P        P        23 07 50.2 +0.6
       baz=196
CHGN                                 S        S        23 18 34.6 +3.1
       baz=196
MLSI   Meulaboh, Aceh    88.36 276   P        P        23 07 49.6 -1.1
YBH    Yreka Blue Hor    88.37  38   LR       LR       23 38 22.1
       comp=Z,2µm,21.7s,baz=246,slow=29
CHIR   Chirikof Islan    88.38  12   P        P        23 07 49.7 -0.1
CHIR                                 IAMs_20  IAMs_20  23 42 43.5
       comp=Z,94µm,22.0s
CHIR   Chirikof Islan    88.38  12   P        P        23 07 50.0 +0.2
CHIR   Chirikof Islan    88.38  12   P        P        23 07 50.3 +0.6
       baz=199
CHIR                                 S        S        23 18 38.5 +6.6
       baz=199
LHMI   Lhok Sumawe       88.39 277   P        P        23 07 49.5 -1.4
LHMI   Lhok Sumawe       88.39 277   P        P        23 07 54.8 +3.9
LHMI   Lhok Sumawe       88.39 277   P        P        23 07 51.0 +0.1
       comp=Z,250µmcomp=Z,23µmcomp=Z,1µm,1.0s
HATC   Hat Creek Radi    88.40  39   IAMs_20  IAMs_20  23 43 57.9
       comp=Z,68µm,19.0s
SUJ    Sinuiju           88.41 320   P        P        23 07 49.7 -0.6
SUJ                                  S        S        23 18 36.1 +3.3
SUJ                                  AmB
       comp=Z,4µm,2.1s
SUJ                                  AMS      AMS
       comp=Z,68µm,26.9s
TYV    Tymovskoe         88.42 336  eP        P        23 07 51.0 +1.0
TYV                                 eS        S        23 18 32.1 -0.3
TYV                                  pmax     pmax
       comp=Z,467nm,1.1s
TYV                                  pmax     pmax
       comp=Z,8µm,5.9s
TYV                                  smax     smax
       comp=N,11µm,7.1s
TYV                                  smax     smax
       comp=E,8µm,7.1s
TYV                                  smax     smax
       comp=N,69nm,1.9s
TYV                                  smax     smax
       comp=E,55nm,1.9s
NVAR   Mina Array Bea    88.55  43   P        P        23 07 51.8 +0.5
NVAR   Mina Array Bea    88.55  43   P        P        23 07 52.1 +0.7
       comp=E,123nm,0.8s,baz=221,slow=7.2,SNR=225
NVAR                                 PKKPbc   PKKPbc   23 25 33.6 -0.2
       comp=E,7.7nm,0.7s,baz=101,slow=2.6,SNR=7.1
NVAR                                 PKPPKP   P'P'df   23 33 42.3 +4.3
       comp=E,16nm,0.9s,baz=71,slow=2.4,SNR=12
NVAR                                 LR       LR       23 41 50.2
       comp=E,30µm,19.9s,baz=228,slow=32
       comp=E,123nm,0.8s
WHN    Wuhan             88.58 307 ⇑P         P        23 07 51.3  0.0
WHN                                  sP       pP       23 07 59.9 -2.5
WHN                                  PP       PP       23 11 21.1 +0.7
WHN                                  SKS      SKSac    23 18 17.4 -0.1
WHN                                  S        S        23 18 37.4 +2.6
WHN                                  SS       SS       23 24 28.6 +1.7
WHN                                  pmax     pmax
       comp=E,2µm,1.6s
WHN                                  pmax     pmax
       comp=E,51µm,13.4s
WHN                                  LR       LR
       comp=E,62µm,17.3s
WHN                                  LR       LR
       comp=E,94µm,22.7s
WHN                                  LR       LR
       comp=E,239µm,26.5s
NV11   Mina Array Sit    88.64  43   P        P        23 07 52.2 +0.5
NV11                                 IAmb     IAmb     23 08 15.6
       comp=Z,259nm,1.1s
CO01   Juntas del Tor    88.65 124   P        P        23 07 52.8 +0.5
ZON    Zonda             88.74 126   P        P        23 07 53.2 +0.8
ZON    Zonda             88.74 126   P        P        23 07 53.2 +0.8
ZON                                  pmax     pmax
       comp=Z,2µm,1.6s
ZON                                  MLR      MLR
       comp=Z,165µm,21.0s
J01E   Myrtle Point      88.75  36   IAMs_20  IAMs_20  23 43 52.9
       comp=Z,50µm,20.0s
LCO    Las Campanas      88.77 123   P        P        23 07 53.0 +0.1
LCO                                  IAmb     IAmb     23 08 18.5
       comp=Z,576nm,1.1s
LCO    Las Campanas      88.77 123   P        P        23 07 53.0 +0.1
LCO                                  pmax     pmax
       comp=Z,576nm,1.1s
LCO                                  MLR      MLR
       comp=Z,260µm,22.0s
PAHR   Pah Rah Range     88.79  41   IAMs_20  IAMs_20  23 50 24.5
       comp=Z,62µm,18.0s
TPNV   Topopah Spring    88.80  45   P        P        23 07 53.2 +0.8
TPNV                                 IAmb     IAmb     23 08 23.5
       comp=Z,298nm,1.1s
TPNV   Topopah Spring    88.80  45   P        P        23 07 53.2 +0.8
TPNV                                 pmax     pmax
       comp=Z,298nm,1.1s
V12A   Nelson            88.87  47   IAMs_20  IAMs_20  23 50 23.1
       comp=Z,59µm,18.0s
Y14A   Wickenburg        88.92  49   IAMs_20  IAMs_20  23 49 21.6
       comp=Z,52µm,18.0s
MDJ    Mudanjiang        88.95 326   P        P        23 07 52.6 -0.1
MDJ                                  SKS      SKSac    23 18 17.3 -1.8
MDJ                                  S        S        23 18 37.1 -0.7
MDJ                                  pmax     pmax
       comp=Z,32µm,3.6s
MDJ                                  LR       LR
       comp=Z,65µm,23.5s
MDJ                                  LR       LR
       comp=Z,66µm,23.5s
MDJ                                  LR       LR
       comp=Z,199µm,24.9s
TPH    Tonopah           88.95  44   P        P        23 07 53.9 +0.7
TPH    Tonopah           88.95  44   P        P        23 07 53.9 +0.7
TPH                                  pmax     pmax
       comp=Z,2µm,1.3s
TPH                                  MLR      MLR
       comp=Z,162µm,21.0s
AC04   Llanos de Chal    88.96 122   P        P        23 07 53.9 +0.5
AC04                                 IAmb     IAmb     23 08 27.3
       comp=Z,430nm,1.4s
HOPE   Hope Point        88.98 159   P        P        23 07 53.3 +0.4
HOPE   Hope Point        88.98 159   P        P        23 07 53.3 +0.4
HOPE                                 pmax     pmax
       comp=Z,3µm,1.7s
HOPE                                 MLR      MLR
       comp=Z,130µm,18.0s
CFA    Coronel Fontan    89.01 127   LR       LR       23 38 48.6
       comp=Z,46µm,20.7s,baz=238,slow=29
TRQA   Tornquist         89.16 135   P        P        23 07 54.8 +0.6
TRQA   Tornquist         89.16 135   P        P        23 07 54.8 +0.6
TRQA                                 pmax     pmax
       comp=Z,1µm,1.9s
TRQA                                 MLR      MLR
       comp=Z,163µm,22.0s
MOIG   Morelia           89.19  67   P        P        23 07 55.1 +0.4
MOIG                                 IAmb     IAmb     23 08 23.8
       comp=Z,897nm,1.6s
MOIG                                 IAMs_20  IAMs_20  23 37 49.1
       comp=Z,83µm,22.0s
DL2    Dalian            89.23 317   P        P        23 07 52.4 -1.8
DL2                                  SKS      SKSac    23 18 18.9 -2.1
DL2                                  SS       SS       23 24 39.6 +3.3
DL2                                  pmax     pmax
       comp=Z,240nm,1.6s
DL2                                  pmax     pmax
       comp=Z,27µm,10.7s
DL2                                  LR       LR
       comp=Z,55µm,23.5s
DL2                                  LR       LR
       comp=Z,82µm,24.1s
DL2                                  LR       LR
       comp=Z,140µm,22.9s
SII    Sitkinak Islan    89.35  13   P        P        23 07 54.8 +0.5
SII    Sitkinak Islan    89.35  13   P        P        23 07 54.9 +0.6
       baz=200
SII                                  S        S        23 18 48.0 +7.0
       baz=200
TUC    Tucson            89.38  51   P        P        23 07 56.5 +1.3
TUC                                  IAmb     IAmb     23 08 22.9
       comp=Z,684nm,1.4s
TUC    Tucson            89.38  51   P        P        23 07 56.5 +1.3
TUC                                  pmax     pmax
       comp=Z,684nm,1.4s
TUC                                  MLR      MLR
       comp=Z,32µm,19.0s
I03D   Drain, OR         89.43  36   IAMs_20  IAMs_20  23 44 43.9
       comp=Z,49µm,20.0s
I02E   Swisshome, OR     89.47  36   IAMs_20  IAMs_20  23 44 53.9
       comp=Z,74µm,20.0s
Q09A   Carvers           89.48  43   IAMs_20  IAMs_20  23 48 52.8
       comp=Z,53µm,19.0s
K04D   Chiloquin, OR     89.50  38   P        P        23 07 56.2 +0.7
K04D                                 IAMs_20  IAMs_20  23 44 22.9
       comp=Z,48µm,19.0s
S11A   Rachel            89.56  45   IAMs_20  IAMs_20  23 51 35.0
       comp=Z,48µm,18.0s
R16K   Pilot Point       89.71  11   P        P        23 07 56.6 +0.7
       baz=197
R16K                                 S        S        23 18 49.8 +5.6
       baz=197
J04A   Umpqua Nationa    89.74  37   IAMs_20  IAMs_20  23 44 56.3
       comp=Z,52µm,20.0s
ZAIG   Zacatecas         89.81  63   P        P        23 07 58.9 +1.2
ZAIG                                 IAMs_20  IAMs_20  23 41 42.5
       comp=Z,47µm,19.0s
HPIG                     89.82  58   P        P        23 07 58.2 +0.7
HPIG                                 IAmb     IAmb     23 08 29.9
       comp=Z,416nm,1.6s
HPIG                                 IAMs_20  IAMs_20  23 44 07.3
       comp=Z,59µm,18.0s
GO03   Copiapo           89.91 122   P        P        23 07 58.9 +0.9
GO03                                 IAmb     IAmb     23 08 23.2
       comp=Z,257nm,1.1s
BSI    Banda Aceh        89.94 276   P        P        23 07 56.5 -1.7
       comp=Z,234µmcomp=Z,16µmcomp=Z,780nm,0.9s
AC06   Mina Casimiro     89.96 122   P        P        23 07 58.1 -0.1
AC06                                 IAmb     IAmb     23 08 24.3
       comp=Z,535nm,1.4s
BUCK   Buck Mountain     89.97  36   IAMs_20  IAMs_20  23 45 01.1
       comp=Z,55µm,20.0s
COR    Corvallis         90.08  36   P        P        23 07 58.8 +0.8
COR                                  IAmb     IAmb     23 08 21.0
       comp=Z,606nm,1.3s
COR    Corvallis         90.08  36   IAMs_20  IAMs_20  23 43 04.2
       comp=Z,69µm,20.0s
COR    Corvallis         90.08  36   P        P        23 07 58.8 +0.8
COR                                  pmax     pmax
       comp=Z,606nm,1.3s
COR                                  MLR      MLR
       comp=Z,69µm,20.0s
SNY    Shenyang          90.09 320 ⇑P         P        23 07 57.6 -0.5
SNY                                  pmax     pmax
       comp=Z,18µm,14.8s
SNY                                  LR       LR
       comp=Z,26µm,22.2s
SNY                                  LR       LR
       comp=Z,41µm,23.7s
SNY                                  LR       LR
       comp=Z,82µm,23.9s
OHAK   Old Harbor        90.15  13   IAMs_20  IAMs_20  23 43 36.1
       comp=Z,68µm,21.0s
OHAK   Old Harbor        90.15  13   P        P        23 07 58.4 +0.4
OHAK   Old Harbor        90.15  13   P        P        23 07 58.6 +0.7
       baz=200
OHAK                                 S        S        23 18 53.0 +4.7
       baz=200
TLIG   Tlapa             90.15  70   P        P        23 08 00.9 +1.8
J05D   Fort Rock, OR     90.23  38   IAMs_20  IAMs_20  23 45 14.3
       comp=Z,57µm,20.0s
TIA    Tai'an            90.23 313   P        P        23 07 59.0  0.0
TIA                                  PP       PP       23 11 31.8 -1.7
TIA                                  SS       SS       23 24 49.8 -1.1
TIA                                  pmax     pmax
       comp=Z,330nm,1.3s
TIA                                  pmax     pmax
       comp=Z,31µm,11.2s
TIA                                  LR       LR
       comp=Z,73µm,25.5s
TIA                                  LR       LR
       comp=Z,60µm,25.5s
TIA                                  LR       LR
       comp=Z,160µm,26.5s
R18K   Karluk            90.25  12   P        P        23 07 58.9 +0.5
       baz=200
R18K                                 S        S        23 18 55.4 +6.2
       baz=200
H04D   Lebanon           90.32  36   IAMs_20  IAMs_20  23 45 21.6
       comp=Z,58µm,20.0s
JRQG   Juriquilla Cam    90.33  66   P        P        23 08 01.3 +1.2
CN2    Changchun         90.45 323 ⇑P         P        23 07 59.3 -0.5
CN2                                  PP       PP       23 11 36.8 +1.7
CN2                                  SKS      SKSac    23 18 28.3 +0.4
CN2                                 eSS       SS       23 24 55.9 +2.1
CN2                                  pmax     pmax
       comp=Z,160nm,1.0s
CN2                                  pmax     pmax
       comp=Z,20µm,15.0s
CN2                                  LR       LR
       comp=Z,43µm,25.0s
CN2                                  LR       LR
       comp=Z,63µm,25.0s
CN2                                  LR       LR
       comp=Z,107µm,27.0s
AC01   Pan de Azucar     90.47 121   P        P        23 08 00.5 -0.1
AC01                                 IAmb     IAmb     23 08 24.1
       comp=Z,697nm,1.6s
H04S2  CROZET ISLANDS    90.55 212   P        P        23 08 01.5 +1.3
       baz=150,slow=5.4,SNR=23
H04S1  CROZET ISLANDS    90.55 212   P        P        23 08 03.1 +2.8
       baz=150,slow=5.4,SNR=16
H04S3  CROZET ISLANDS    90.56 212   P        P        23 08 01.2 +0.9
       baz=150,slow=5.4,SNR=15
UNM    Universidad Na    90.60  68   P        P        23 08 01.7 +0.3
UNM                                  IAMs_20  IAMs_20  23 38 33.8
       comp=Z,59µm,21.0s
UNM    Universidad Na    90.60  68   P        P        23 08 01.7 +0.3
UNM                                  pmax     pmax
       comp=Z,2µm,1.9s
UNM                                  MLR      MLR
       comp=Z,59µm,21.0s
GRNR   Gornyy            90.64 333⇑iP        P        23 08 01.1 +0.6
GRNR                                 pmax     pmax
       comp=Z,50nm,0.7s
Q17K   Contact Creek     90.65  11   P        P        23 08 00.4 -0.1
       baz=198,SNR=78
Q17K                                 S        S        23 18 57.9 +4.8
       baz=198
LCMT   Little Creek M    90.69  46            P        23 08 02.4 +1.2
LCMT                                 IAMs_20  IAMs_20  23 50 24.2
       comp=Z,57µm,18.0s
H04A   Detroit Lake      90.72  36   IAMs_20  IAMs_20  23 45 35.0
       comp=Z,57µm,19.0s
PINE   Pine Mountain     90.74  37   IAMs_20  IAMs_20  23 45 40.6
       comp=Z,53µm,20.0s
O14K   Tigyukauivet M    90.80   9   IAMs_20  IAMs_20  23 47 18.1
       comp=Z,55µm,20.0s
O14K   Tigyukauivet M    90.80   9   P        P        23 08 01.8 +0.8
       baz=194,SNR=30
O14K                                 S        S        23 18 59.4 +5.2
       baz=194
KDAK   Kodiak Island     90.81  13   P        P        23 08 01.5 +0.5
KDAK                                 IAmb     IAmb     23 08 23.5
       comp=Z,418nm,1.4s
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KDAK	**Kodiak Island**	**90.81**	**13**	IAMs_20	IAMs_20	23 43 55.7	
	comp=Z,77µm,21.0s						
KDAK	**Kodiak Island**	**90.81**	**13**	LR	LR	23 43 47.9	
	comp=Z,33µm,19.7s,baz=204,slow=32						
KDAK	**Kodiak Island**	**90.81**	**13***c*	*i*P	**P**	**23 08 01.4**	**+0.3**
KDAK				pmax	pmax		
	comp=Z,342nm,1.3s						
KDAK	**Kodiak Island**	**90.81**	**13**	P	**P**	**23 08 01.6**	**+0.5**
	baz=201						
KDAK				S	**S**	**23 18 59.2**	**+4.8**
	baz=201						
BNX	**BinXian**	**90.83**	**325**	⇑P	**P**	**23 08 00.1**	**-1.4**
BNX				PP	**PP**	**23 11 40.0**	**+1.9**
BNX				S	**S**	**23 18 57.6**	**+2.5**
BNX				pmax	pmax		
	comp=Z,320nm,0.9s						
BNX				pmax	pmax		
	comp=Z,15µm,9.2s						
BNX				LR	LR		
	comp=Z,28µm,26.0s						
BNX				LR	LR		
	comp=Z,55µm,24.9s						
BNX				LR	LR		
	comp=Z,106µm,27.1s						
O15K	**Ungalikthiuk R**	**90.92**	**9**	P	**P**	**23 08 01.9**	**+0.4**
	baz=195,SNR=19						
O15K				S	**S**	**23 19 01.8**	**+6.5**
	baz=195						
Q16K	**King Salmon**	**90.92**	**11**	P	**P**	**23 08 01.9**	**+0.4**
	baz=198,SNR=18						
Q16K				S	**S**	**23 19 01.1**	**+5.8**
	baz=198						
KNB	**Kanab**	**90.96**	**47**	IAMs_20	IAMs_20	23 50 40.3	
	comp=Z,48µm,18.0s						
P16K	**Nushagak River**	**91.04**	**10**	P	**P**	**23 08 01.9**	**-0.2**
	baz=197,SNR=14						
P16K				S	**S**	**23 19 01.1**	**+4.7**
	baz=197						
WVOR	**Wild Horse Val**	**91.05**	**40**	P	**P**	**23 08 03.8**	**+1.0**
WVOR				IAmb	IAmb	23 08 28.4	
	comp=Z,251nm,1.1s						
WVOR				IAMs_20	IAMs_20	23 45 34.0	
	comp=Z,63µm,19.0s						
WVOR	**Wild Horse Val**	**91.05**	**40**	P	**P**	**23 08 03.8**	**+1.0**
WVOR				pmax	pmax		
	comp=Z,251nm,1.2s						
WVOR				MLR	MLR		
	comp=Z,63µm,19.0s						
SLVN	**Son La**	**91.06**	**294**	P	**P**	**23 08 04.1**	**+0.8**
SLVN				IAmb	IAmb	23 08 10.0	
	comp=Z,543nm,1.7s						
SLVN	**Son La**	**91.06**	**294**	P	**P**	**23 08 03.9**	**+0.6**
H04N2	**CROZET ISLANDS**	**91.11**	**212**	P	**P**	**23 08 05.3**	**+2.6**
	baz=144,slow=5.6,SNR=5.8						
H04N3	**CROZET ISLANDS**	**91.11**	**212**	P	**P**	**23 08 05.3**	**+2.5**
	baz=144,slow=5.6,SNR=13						
H04N1	**CROZET ISLANDS**	**91.12**	**212**	P	**P**	**23 08 05.3**	**+2.4**
	baz=144,slow=5.6,SNR=6.0						
AC02	**Maricunga**	**91.15**	**122**	P	**P**	**23 08 05.2**	**+0.9**
Q18K	**Katmai Hardscr**	**91.17**	**12**	P	**P**	**23 08 03.1**	**+0.2**
	baz=199,SNR=67						
Q18K				S	**S**	**23 19 02.2**	**+4.3**
	baz=199						
PSUT	**Pine Spring**	**91.27**	**45**	IAMs_20	IAMs_20	23 50 40.5	
	comp=Z,54µm,18.0s						
SPR3	**Spring Creek 3**	**91.28**	**44**	IAMs_20	IAMs_20	23 52 13.6	
	comp=Z,54µm,19.0s						
KLR	**Kul'dur**	**91.38**	**330***c*	*i*P	**P**	**23 08 03.6**	**-0.3**
KLR				pmax	pmax		
	comp=Z,245nm,1.1s						
M11K	**Mekoryuk**	**91.38**	**6**	P	**P**	**23 08 05.2**	**+1.6**
	baz=190,SNR=37						
M11K				S	**S**	**23 19 07.9**	**+8.5**
	baz=190						
N14K	**Kuskokwak Cree**	**91.40**	**8**	P	**P**	**23 08 04.6**	**+0.8**
	baz=193,SNR=71						
N14K				S	**S**	**23 19 05.3**	**+5.7**
	baz=193						
HOOD	**Mount Hood Mea**	**91.43**	**36**	IAMs_20	IAMs_20	23 45 57.0	
	comp=Z,69µm,19.0s						
P17K	**Kvichak River**	**91.44**	**11**	P	**P**	**23 08 03.9**	**0.0**
	baz=198,SNR=25						
P17K				S	**S**	**23 19 04.8**	**+4.7**
	baz=198						
PB14	**IPOC Station P**	**91.48**	**120**	P	**P**	**23 08 05.9**	**+0.3**
PB14	**IPOC Station P**	**91.48**	**120**	P	**P**	**23 08 06.3**	**+0.7**
G05A	**Wamic**	**91.55**	**36**	IAMs_20	IAMs_20	23 46 02.0	
	comp=Z,55µm,19.0s						
O16K	**Kokwok River B**	**91.57**	**10**	P	**P**	**23 08 04.1**	**-0.5**
	baz=196,SNR=37						
O16K				S	**S**	**23 19 04.7**	**+3.6**
	baz=196						
Q20K	**Shuyak Island**	**91.62**	**13**	P	**P**	**23 08 05.2**	**+0.4**
	baz=201,SNR=18						
Q20K				S	**S**	**23 19 09.3**	**+7.6**
	baz=201						
SYI	**Shuyak Island**	**91.62**	**13**	IAMs_20	IAMs_20	23 44 24.0	
	comp=Z,66µm,21.0s						
Q19K	**Cape Douglas,**	**91.68**	**12**	IAMs_20	IAMs_20	23 44 49.6	
	comp=Z,88µm,22.0s						
Q19K	**Cape Douglas,**	**91.68**	**12**	P	**P**	**23 08 05.2**	**0.0**
	baz=200,SNR=36						
Q19K				S	**S**	**23 19 05.8**	**+3.5**
	baz=200						
M13K	**Dall Lake**	**91.69**	**7**	P	**P**	**23 08 06.4**	**+1.3**
	baz=192,SNR=24						
M13K				S	**S**	**23 19 10.5**	**+8.3**
	baz=192						
I07A	**Izee**	**91.69**	**38**	IAMs_20	IAMs_20	23 46 03.9	
	comp=Z,49µm,19.0s						
GYA	**Guiyang**	**91.73**	**300**	⇑P	**P**	**23 08 06.3**	**0.0**
GYA				pP	pP	23 08 15.5	-1.9
GYA				PP	**PP**	**23 11 47.8**	**+2.0**
GYA				SKS	**SKSac**	**23 18 35.3**	**-1.0**
GYA				S	**S**	**23 18 59.3**	**-5.2**
GYA				LR	LR		
	comp=Z,27µm,25.7s						
GYA				LR	LR		
	comp=Z,32µm,22.0s						
GYA				LR	LR		
	comp=Z,72µm,24.2s						
GO02	**Mina Guanaco**	**91.78**	**121**	P	**P**	**23 08 08.1**	**+1.1**
NLWA	**Neilton Lookou**	**91.81**	**33**	P	**P**	**23 08 07.0**	**+1.0**
NLWA				IAMs_20	IAMs_20	23 44 49.7	
	comp=Z,55µm,20.0s						
ENH	**Enshi**	**91.81**	**304**	P	**P**	**23 08 06.3**	**-0.2**
ENH	**Enshi**	**91.81**	**304**	P	**P**	**23 08 07.0**	**+0.5**
P18K	**Big Mountain,**	**91.83**	**11**	IAMs_20	IAMs_20	23 45 07.6	
	comp=Z,50µm,21.0s						
P18K	**Big Mountain,**	**91.83**	**11**	P	**P**	**23 08 05.5**	**-0.4**
	baz=199,SNR=27						
P18K				S	**S**	**23 19 07.8**	**+4.1**
	baz=199						
N15K	**Kwethluk River**	**91.84**	**9**	IAMs_20	IAMs_20	23 53 43.6	
	comp=Z,57µm,20.0s						
N15K	**Kwethluk River**	**91.84**	**9**	P	**P**	**23 08 06.8**	**+0.9**
	baz=195,SNR=131						
N15K				S	**S**	**23 19 11.1**	**+7.4**
	baz=195						
ELK	**Elko**	**91.86**	**43**	IAMs_20	IAMs_20	23 40 46.7	
	comp=Z,55µm,22.0s						
ELK	**Elko**	**91.86**	**43**	LR	LR	23 41 54.5	
	comp=Z,30µm,22.0s,baz=247,slow=31						
O17K	**Koliganek Bris**	**91.89**	**10**	P	**P**	**23 08 05.7**	**-0.4**
	baz=197,SNR=12						
O17K				S	**S**	**23 19 08.7**	**+4.7**
	baz=197						
PB10	**IPOC Station P**	**92.00**	**119**	P	**P**	**23 08 08.6**	**+0.9**
PB10				IAmb	IAmb	23 08 31.3	
	comp=Z,829nm,1.8s						
M14K	**Bethel**	**92.17**	**8**	IAMs_20	IAMs_20	23 47 52.4	
	comp=Z,49µm,21.0s						
M14K	**Bethel**	**92.17**	**8**	P	**P**	**23 08 07.9**	**+0.6**
	baz=193,SNR=37						
M14K				S	**S**	**23 19 13.3**	**+6.8**
	baz=193						
OZB	**Mount Ozzard**	**92.20**	**32**	P	**P**	**23 08 08.7**	**+0.9**
OZB				IAmb	IAmb	23 08 20.4	
	comp=Z,277nm,1.4s						
OZB				IAMs_20	IAMs_20	23 44 59.7	
	comp=Z,56µm,20.0s						
LYN	**LuoYang**	**92.24**	**309**	⇑*i*P	**P**	**23 08 08.5**	**+0.2**
LYN				pP	PcP	23 08 13.6	+4.5
LYN				SKS	**SKSac**	**23 18 42.0**	**+3.5**
LYN				S	**ScS**	**23 19 12.3**	**+1.6**
LYN				pmax	pmax		
	comp=Z,190nm,0.9s						
LYN				pmax	pmax		
	comp=Z,30µm,11.4s						
LYN				LR	LR		
	comp=Z,85µm,23.7s						
LYN				LR	LR		
	comp=Z,45µm,23.7s						
LYN				LR	LR		
	comp=Z,159µm,24.0s						
M15K	**Kasigluk River**	**92.27**	**8**	P	**P**	**23 08 08.3**	**+0.5**
	baz=194,SNR=155						
M15K				S	**S**	**23 19 14.4**	**+6.9**
	baz=194						
O18K	**Koktuh Hills**	**92.27**	**11**	IAMs_20	IAMs_20	23 46 04.3	
	comp=Z,55µm,21.0s						
O18K	**Koktuh Hills**	**92.27**	**11**	P	**P**	**23 08 07.7**	**-0.2**
	baz=199,SNR=93						
O18K				S	**S**	**23 19 11.1**	**+3.5**
	baz=199						
N16K	**Nishlik Lake**	**92.31**	**9**	P	**P**	**23 08 08.7**	**+0.6**
	baz=196,SNR=106						
N16K				S	**S**	**23 19 16.4**	**+8.5**
	baz=196						
P19K	**Oil Pt**	**92.43**	**12**	IAMs_20	IAMs_20	23 45 01.5	
	comp=Z,57µm,21.0s						
P19K	**Oil Pt**	**92.43**	**12**	P	**P**	**23 08 08.5**	**-0.1**
	baz=201,SNR=11						
P19K				S	**S**	**23 19 15.6**	**+6.5**
	baz=201						
HNS	**HongShan**	**92.49**	**313**	⇑P	**P**	**23 08 09.5**	**+0.1**
HNS				PP	**PP**	**23 11 50.1**	**-1.2**
HNS				S	**S**	**23 19 13.8**	**+3.3**
HNS				pmax	pmax		
	comp=Z,180nm,1.1s						
HNS				pmax	pmax		
	comp=Z,24µm,12.0s						
HNS				LR	LR		
	comp=Z,52µm,23.3s						
HNS				LR	LR		
	comp=Z,83µm,24.5s						
HNS				LR	LR		
	comp=Z,152µm,23.3s						
VHRN	**Van Horn**	**92.50**	**55**	P	**P**	**23 08 10.3**	**+0.5**
DIB	**Dawson Inlet,**	**92.56**	**25**	P	**P**	**23 08 09.7**	**+0.5**
DIB				IAmb	IAmb	23 08 19.8	
	comp=Z,236nm,1.1s						
H02S1	**DAWSON INLET T**	**92.56**	**25**	P	**P**	**23 08 09.7**	**+0.4**
	SNR=70						
N17K	**Nushagak Hills**	**92.60**	**10**	IAMs_20	IAMs_20	23 51 20.7	
	comp=Z,47µm,20.0s						
N17K	**Nushagak Hills**	**92.60**	**10**	P	**P**	**23 08 09.7**	**+0.4**
	baz=197,SNR=20						
N17K				S	**S**	**23 19 13.3**	**+2.8**
	baz=197						
TX31	**Lajitas Ar. Si**	**92.63**	**57**	P	**P**	**23 08 11.1**	**+0.7**
TX31				IAmb	IAmb	23 08 43.3	
	comp=Z,481nm,2.0s						
TXAR	**Lajitas Array**	**92.63**	**57**	P	**P**	**23 08 11.2**	**+0.8**
	comp=Z,49nm,1.0s,baz=209,slow=5.2,SNR=165						
TXAR				PKiKP	**PKiKP**	**23 13 00.2**	**+1.4**
	comp=Z,1.2nm,0.8s,baz=303,slow=2.2,SNR=0.8						
TXAR				PKKP	**PKKPdf**	**23 25 21.1**	**-0.2**
	comp=Z,2.9nm,0.8s,baz=124,slow=4.6,SNR=3.9						
TXAR				PKPPKP	**P'P'df**	**23 33 32.1**	**+0.2**
	comp=Z,3.1nm,0.9s,baz=77,slow=1.9,SNR=4.6						
TXAR				LR	LR	23 43 27.3	
	comp=Z,18µm,18.8s,baz=220,slow=31						
	comp=Z,49nm,1.0s						
PB05	**IPOC Station P**	**92.64**	**118**	P	**P**	**23 08 11.4**	**+0.6**
L14K	**Kuka Creek**	**92.67**	**7**	P	**P**	**23 08 10.2**	**+0.6**
	baz=193						
L14K				S	**S**	**23 19 14.3**	**+3.4**
	baz=193						
MOBC	**Moresby Island**	**92.70**	**26**	P	**P**	**23 08 10.5**	**+0.5**
MOBC				IAmb	IAmb	23 08 18.8	
	comp=Z,358nm,1.4s						
MOBC				IAMs_20	IAMs_20	23 45 45.6	
	comp=Z,44µm,19.0s						
F07A	**Phinny Hill Vi**	**92.70**	**36**	IAMs_20	IAMs_20	23 46 48.6	
	comp=Z,47µm,20.0s						
CLRS	**Cowichan Lake**	**92.71**	**32**	IAMs_20	IAMs_20	23 45 05.5	
	comp=Z,52µm,20.0s						
HOM	**Homer**	**92.74**	**13**	P	**P**	**23 08 09.7**	**-0.2**
HOM	**Homer**	**92.74**	**13**	P	**P**	**23 08 10.5**	**+0.6**
	baz=202						
HOM				S	**S**	**23 19 15.6**	**+4.0**
	baz=202						
O19K	**Port Alsworth**	**92.75**	**12**	IAMs_20	IAMs_20	23 45 34.8	
	comp=Z,62µm,21.0s						
O19K	**Port Alsworth**	**92.75**	**12**	P	**P**	**23 08 09.5**	**-0.4**
	baz=200,SNR=32						
O19K				S	**S**	**23 19 12.6**	**+0.9**
	baz=200						
ILSW	**Iliamna Southw**	**92.76**	**12**	IAMs_20	IAMs_20	23 45 23.1	
	comp=Z,67µm,22.0s						
M16K	**Timber Creek**	**92.82**	**9**	IAMs_20	IAMs_20	23 54 03.5	
	comp=Z,57µm,20.0s						
M16K	**Timber Creek**	**92.82**	**9**	P	**P**	**23 08 11.2**	**+0.9**
	baz=196,SNR=81						
M16K				S	**S**	**23 19 16.2**	**+3.9**
	baz=196						
PGC	**Sidney**	**92.91**	**33**	P	**P**	**23 08 11.6**	**+0.6**
DUG	**Dugway, Tooele**	**92.94**	**44**	IAMs_20	IAMs_20	23 56 20.6	
	comp=Z,62µm,18.0s						
N18K	**Kilae Creek**	**92.94**	**11**	IAMs_20	IAMs_20	23 48 27.0	
	comp=Z,49µm,21.0s						
N18K	**Kilae Creek**	**92.94**	**11**	P	**P**	**23 08 10.8**	**-0.1**
	baz=198,SNR=14						
N18K				S	**S**	**23 19 15.5**	**+1.9**
	baz=198						
O20K	**Slope Mountain**	**92.94**	**12**	P	**P**	**23 08 11.0**	**-0.1**
	baz=201						
O20K				S	**S**	**23 19 15.4**	**+1.7**
	baz=201						
BRLK	**Bradley Lake**	**92.98**	**13**	IAMs_20	IAMs_20	23 45 15.7	
	comp=Z,78µm,21.0s						
MXC	**Moxie City**	**92.99**	**36**	IAMs_20	IAMs_20	23 47 14.9	
	comp=Z,58µm,19.0s						
BRSE	**Bradley Lake S**	**92.99**	**13**	P	**P**	**23 08 11.5**	**+0.3**
	baz=203,SNR=34						
BRSE				S	**S**	**23 19 18.1**	**+4.1**
	baz=203						
Y22D	**IRIS PASSCAL I**	**93.03**	**52**	P	**P**	**23 08 13.8**	**+1.6**
	baz=234						
Y22D				S	**S**	**23 19 09.7**	**-6.1**
	baz=234						
Y22D				S	**ScS**	**23 19 14.2**	**-3.5**
	baz=234						
K13K	**Kusilvak Mount**	**93.05**	**6**	IAMs_20	IAMs_20	23 46 53.4	
	comp=Z,50µm,21.0s						
K13K	**Kusilvak Mount**	**93.05**	**6**	P	**P**	**23 08 12.1**	**+0.7**
	baz=191,SNR=46						
K13K				S	**S**	**23 19 19.3**	**+5.0**
	baz=191						
CRNM	**Carthage**	**93.09**	**52**	P	**P**	**23 08 13.2**	**+0.7**
L15K	**Ungalak Mounta**	**93.13**	**8**	P	**P**	**23 08 11.8**	**+0.1**
	baz=194,SNR=86						
L15K				S	**S**	**23 19 18.3**	**+3.3**
	baz=194						
BJT	**Baijiatuau**	**93.19**	**315**	P	**P**	**23 08 12.3**	**-0.3**
BJT	**Baijiatuau**	**93.19**	**315**	IAMs_20	IAMs_20	23 45 57.3	
	comp=Z,80µm,22.0s						
BJT	**Baijiatuau**	**93.19**	**315**	P	**P**	**23 08 12.9**	**+0.3**
BJT	**Baijiatuau**	**93.19**	**315**	P	**P**	**23 08 12.3**	**-0.3**
BJT				pmax	pmax		
	comp=Z,136nm,1.0s						
BJT				MLR	MLR		
	comp=Z,80µm,22.0s						
E07A	**Sunnyside**	**93.19**	**36**	IAMs_20	IAMs_20	23 48 24.5	
	comp=Z,70µm,19.0s						
BJI	**Beijing**	**93.20**	**315**	P	**P**	**23 08 12.1**	**-0.5**
BJI				pP	**pP**	**23 08 21.3**	**-2.4**
BJI				sP	**pwP**	**23 08 24.3**	**-2.9**
BJI				PP	**PP**	**23 11 59.3**	**+2.4**
BJI				SKS	**SKSac**	**23 18 44.9**	**+1.4**
BJI				SS	**SS**	**23 25 36.0**	**+2.6**
BJI				LR	LR		
	comp=Z,28µm,28.2s						
BJI				LR	LR		
	comp=Z,26µm,28.0s						
BJI				LR	LR		
	comp=Z,86µm,29.0s						
PB06	**IPOC Station P**	**93.20**	**119**	P	**P**	**23 08 13.8**	**+0.4**
HAWA	**Hanford**	**93.25**	**36**	P	**P**	**23 08 13.3**	**+0.7**
HAWA				IAmb	IAmb	23 08 35.2	
	comp=Z,248nm,1.1s						
HAWA				IAMs_20	IAMs_20	23 51 35.9	
	comp=Z,58µm,19.0s						
N19K	**Bonanza Creek**	**93.30**	**11**	IAMs_20	IAMs_20	23 48 29.4	
	comp=Z,63µm,20.0s						
N19K	**Bonanza Creek**	**93.30**	**11**	P	**P**	**23 08 12.0**	**-0.7**
	baz=200,SNR=39						
N19K				S	**S**	**23 19 18.3**	**+1.5**
	baz=200						
NNA	**Nana**	**93.33**	**106**	P	**P**	**23 08 14.8**	**+0.9**
NNA				IAmb	IAmb	23 09 03.0	
	comp=Z,490nm,1.5s						
NNA	**Nana**	**93.33**	**106**	LR	LR	23 41 00.4	
	comp=Z,151µm,21.9s,baz=228,slow=30						
NNA	**Nana**	**93.33**	**106***c*	*i*P	**P**	**23 08 14.7**	**+0.7**
NNA				pmax	pmax		
	comp=Z,676nm,2.0s						
NNA				MLR	MLR		
	comp=Z,43µm,18.0s						
TMUT	**Trail Mountain**	**93.36**	**46**	IAMs_20	IAMs_20	23 52 05.9	
	comp=Z,50µm,18.0s						
BMO	**Blue Mountains**	**93.38**	**38**	IAMs_20	IAMs_20	23 47 10.6	
	comp=Z,61µm,20.0s						
M17K	**Holitna River**	**93.39**	**10**	P	**P**	**23 08 14.2**	**+1.2**
	baz=197,SNR=72						
M17K				S	**S**	**23 19 25.2**	**+7.7**
	baz=197						
L16K	**Owhat River**	**93.41**	**9**	P	**P**	**23 08 13.7**	**+0.7**
	baz=195,SNR=82						
L16K				S	**S**	**23 19 24.0**	**+6.5**
	baz=195						
PB03	**IPOC Station P**	**93.44**	**118**	P	**P**	**23 08 15.2**	**+0.6**
PB03				IAmb	IAmb	23 08 40.6	
	comp=Z,399nm,1.2s						
BBB	**Bella Bella**	**93.47**	**28**	IAMs_20	IAMs_20	23 46 09.0	
	comp=Z,46µm,20.0s						
BBB	**Bella Bella**	**93.47**	**28**	LR	LR	23 46 19.4	
	comp=Z,34µm,18.7s,baz=235,slow=33						
CM31	**Chiang Mai Arr**	**93.52**	**289**	P	**P**	**23 08 14.0**	**-0.6**
CM31				IAmb	IAmb	23 08 21.0	
	comp=Z,283nm,1.5s						
CM31	**Chiang Mai Arr**	**93.52**	**289**	P	**P**	**23 08 15.3**	**+0.7**
	SNR=38						
CM31				P	**P**	**23 08 15.3**	**+0.7**
	SNR=38						
CM31				S	**SKSac**	**23 18 37.8**	**-8.5**
CM31				S	**SKSac**	**23 18 37.8**	**-8.5**
CMAR	**Chiang Mai Arr**	**93.52**	**289**	P	**P**	**23 08 14.4**	**-0.2**
CMAR	**Chiang Mai Arr**	**93.52**	**289**	P	**P**	**23 08 14.6**	**0.0**
	comp=Z,22nm,1.0s,baz=140,slow=2.4,SNR=60						
CMAR				PP	**PP**	**23 11 58.9**	**-0.9**
	comp=Z,26nm,1.0s,baz=118,slow=6.3,SNR=4.7						
CMAR				PKiKP	**PKiKP**	**23 13 01.2**	**+0.8**
	comp=Z,7.0nm,0.8s,baz=150,slow=2.0,SNR=4.5						
CMAR				PKKP	**PKKPbc**	**23 25 20.6**	**+0.8**
	comp=Z,2.9nm,0.4s,baz=291,slow=4.2,SNR=8.8						
CMAR				PKPPKP		23 33 32.1	
	comp=Z,2.1nm,0.9s,baz=274,slow=2.8,SNR=7.1						
CMAR				LR	LR	23 53 14.5	
	comp=Z,46µm,19.7s,baz=180,slow=37						
	comp=Z,22nm,1.0s						
CMAR	**Chiang Mai Arr**	**93.52**	**289**	*i* P	**P**	**23 08 15.6**	**+1.0**
CMAR				pmax	pmax		
	comp=Z,46nm,1.1s						
E08A	**Dider Farm, El**	**93.55**	**36**	IAMs_20	IAMs_20	23 45 16.0	
	comp=Z,50µm,20.0s						
SEW	**Seward**	**93.59**	**14**	IAMs_20	IAMs_20	23 45 39.1	
	comp=Z,56µm,20.0s						
SEW	**Seward**	**93.59**	**14**	P	**P**	**23 08 13.9**	**+0.1**
	baz=204						
SEW				S	**S**	**23 19 25.2**	**+6.1**
	baz=204						
Q23K	**Middleton Isla**	**93.66**	**16**	IAMs_20	IAMs_20	23 45 18.1	
	comp=Z,49µm,21.0s						
Q23K	**Middleton Isla**	**93.66**	**16**	P	**P**	**23 08 14.7**	**+0.6**
	baz=206						
Q23K				S	**S**	**23 19 24.2**	**+4.4**
	baz=206						
MA2	**Magadan**	**93.68**	**345**	P	**P**	**23 08 13.4**	**-0.9**
MA2	**Magadan**	**93.68**	**345**	LR	LR	23 46 03.0	
	comp=Z,90µm,21.2s,baz=164,slow=33						
MA2	**Magadan**	**93.68**	**345**	P	**P**	**23 08 14.1**	**-0.2**
MA2	**Magadan**	**93.68**	**345***c*	*i*P	**P**	**23 08 13.1**	**-1.2**
MA2				pmax	pmax		
	comp=Z,190nm,1.2s						
LPA	**La Plata**	**93.68**	**135**	*i* P	**P**	**23 08 12.8**	**-2.4**
LPA				PCP	**PcP**	**23 08 18.8**	**+3.1**
LPA				pP	**pP**	**23 08 26.4**	**+0.4**
LPA				sP	pwP	23 08 38.7	+8.1
LPA				PP	**PP**	**23 11 55.6**	**-4.2**
LPA				pPP		23 12 20.7	
LPA				PKIKP	**PKiKP**	**23 12 53.3**	**-7.2**
LPA				PPP	PPP	23 14 06.9	
LPA				SKIKP		23 16 46.4	
LPA				PKIKS		23 16 52.7	
LPA				SKS	**SKSac**	**23 18 49.8**	**+2.8**
LPA				S	**SKKSac**	**23 19 12.3**	**+5.4**
LPA				sS	**sS**	**23 19 37.9**	**-0.4**
LPA				PS	**PS**	**23 20 46.3**	**+6.9**
LPA				PPS	PPS	23 21 08.7	
LPA				PSP	PSP	23 21 18.0	
LPA				SS	SS	23 26 02.5	+24
LPA				SSS	SSS	23 29 35.8	
CHTO	**Chiang Mai**	**93.70**	**290**	P	**P**	**23 08 14.8**	**-0.6**
CHTO	**Chiang Mai**	**93.70**	**290**	P	**P**	**23 08 16.5**	**+1.1**
CHTO				S	**SKSac**	**23 18 39.9**	**-7.4**
CHTO	**Chiang Mai**	**93.70**	**290**	P	**P**	**23 08 15.6**	**+0.2**
CHTO	**Chiang Mai**	**93.70**	**290**	P	**P**	**23 08 15.8**	**+0.4**
CHTO	**Chiang Mai**	**93.70**	**290**	P	**P**	**23 08 14.8**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,116nm,1.0s						
CHTO				MLR	MLR		
	comp=Z,98µm,21.0s						
K15K	**Wolf Creek Mou**	**93.72**	**8**	P	**P**	**23 08 14.9**	**+0.4**
	baz=194,SNR=64						
K15K				S	**S**	**23 19 28.7**	**+8.4**
	baz=194						
M18K	**Stony River**	**93.72**	**10**	P	**P**	**23 08 14.8**	**+0.3**
	baz=198,SNR=56						
M18K				S	**S**	**23 19 26.0**	**+5.7**
	baz=198						
SLKM	**Skilak Lake**	**93.80**	**13**	P	**P**	**23 08 14.5**	**-0.4**
SLKM				IAmb	IAmb	23 08 24.9	
	comp=Z,422nm,1.1s						
SLKM				IAMs_20	IAMs_20	23 45 31.8	
	comp=Z,59µm,21.0s						
MVCO	**Mesa Verde**	**93.82**	**49**	P	**P**	**23 08 16.1**	**+0.2**
MVCO				IAMs_20	IAMs_20	23 55 10.2	
	comp=Z,42µm,18.0s						
PATCX	**Punta Patache**	**93.84**	**117**	P	**P**	**23 08 16.5**	**+0.2**
PATCX				IAmb	IAmb	23 08 42.2	
	comp=Z,464nm,1.1s						
ANMO	**Albuquerque**	**93.85**	**51**	P	**P**	**23 08 16.8**	**+0.8**
ANMO	**Albuquerque**	**93.85**	**51**	LR	LR	23 43 19.0	
	comp=Z,33µm,21.7s,baz=338,slow=31						
ANMO	**Albuquerque**	**93.85**	**51**	P	**P**	**23 08 16.8**	**+0.8**
ANMO				pmax	pmax		
	comp=Z,215nm,1.5s						
CAPN	**Captain Cook N**	**93.86**	**13**	P	**P**	**23 08 15.7**	**+0.6**
	baz=202						
CAPN				S	**S**	**23 19 27.8**	**+6.3**
	baz=202						
O22K	**Cooper Landing**	**93.88**	**14**	IAMs_20	IAMs_20	23 45 30.8	
	comp=Z,47µm,21.0s						
O22K	**Cooper Landing**	**93.88**	**14**	P	**P**	**23 08 15.4**	**+0.2**
	baz=204						
O22K				S	**S**	**23 19 25.9**	**+4.3**
	baz=204						
CTU	**Camp Tracy**	**93.89**	**44**	IAMs_20	IAMs_20	23 56 59.6	
	comp=Z,52µm,18.0s						
P23K	**Montague Islan**	**93.93**	**15**	IAMs_20	IAMs_20	23 45 54.2	
	comp=Z,68µm,21.0s						
P23K	**Montague Islan**	**93.93**	**15**	P	**P**	**23 08 15.6**	**+0.1**
	baz=205,SNR=6.7						
P23K				S	**S**	**23 19 26.7**	**+4.5**
	baz=205						
HVU	**Hansel Valley**	**93.95**	**43**	IAMs_20	IAMs_20	23 51 54.2	
	comp=Z,41µm,18.0s						
J14K	**Nanvaranak Lak**	**93.95**	**7**	IAMs_20	IAMs_20	23 49 53.4	
	comp=Z,56µm,20.0s						
J14K	**Nanvaranak Lak**	**93.95**	**7**	P	**P**	**23 08 15.7**	**+0.3**
	baz=192						
J14K				S	**S**	**23 19 29.1**	**+6.9**
	baz=192						
TA01	**Diego Aracena**	**93.96**	**117**	P	**P**	**23 08 16.8**	**0.0**
L17K	**Donlin**	**93.98**	**9**	P	**P**	**23 08 16.4**	**+0.7**
	baz=196,SNR=70						
L17K				S	**S**	**23 19 30.4**	**+7.9**
	baz=196						

KMI	**Kunming**	**93.99**	**297**	⇑P	**P**	**23 08 17.3**	**+0.4**
KMI				PP	**PP**	**23 12 07.3**	**+3.7**
KMI				S	**S**	**23 19 28.1**	**+3.3**
KMI				SS	**SS**	**23 25 51.6**	**+6.0**
KMI				pmax	pmax		
	comp=Z,150nm,2.7s						
KMI				LR	LR		
	comp=Z,77µm,17.5s						
KMI				LR	LR		
	comp=Z,48µm,19.0s						
KMI				LR	LR		
	comp=Z,104µm,20.5s						
D08A	**Wollman Farm,**	**94.00**	**36**	IAMs_20	IAMs_20	23 48 50.0	
	comp=Z,62µm,18.0s						
HEH	**HeiHe**	**94.04**	**328**	*e*P	**P**	**23 08 15.0**	**-1.2**
HEH				SKS	**SKSac**	**23 18 46.0**	**-1.7**
HEH				S	**ScS**	**23 19 25.9**	**+1.0**
HEH				pmax	pmax		
	comp=Z,13µm,10.3s						
HEH				LR	LR		
	comp=Z,48µm,20.3s						
HEH				LR	LR		
	comp=Z,44µm,22.3s						
HEH				LR	LR		
	comp=Z,91µm,20.6s						
N20K	**Mount Spurr**	**94.06**	**12**	P	**P**	**23 08 15.5**	**-0.7**
	baz=202						
N20K				S	**S**	**23 19 27.4**	**+4.0**
	baz=202						
SPCR	**Spurr Chakacha**	**94.06**	**12**	P	**P**	**23 08 15.3**	**-0.9**
	baz=202,SNR=16						
SPCR				S	**S**	**23 19 26.8**	**+3.3**
	baz=202						
AF01	**San Pedro de A**	**94.11**	**120**	P	**P**	**23 08 18.1**	**+0.4**
AF01				IAmb	IAmb	23 08 46.9	
	comp=Z,646nm,1.3s						
CRAG	**Craig**	**94.12**	**24**	P	**P**	**23 08 16.3**	**-0.1**
CRAG	**Craig**	**94.12**	**24**	P	**P**	**23 08 17.4**	**+1.0**
	baz=217,SNR=8.7						
CRAG				S	S	23 19 33.5	+9.4
	baz=217						
TIY	**Taiyuan**	**94.12**	**312**	*e*P	**P**	**23 08 17.0**	**0.0**
TIY				S	**S**	**23 19 18.6**	**-6.5**
TIY				SS	**SS**	**23 25 49.3**	**+2.4**
TIY				pmax	pmax		
	comp=Z,15µm,12.0s						
TIY				LR	LR		
	comp=Z,44µm,22.0s						
TIY				LR	LR		
	comp=Z,56µm,23.4s						
TIY				LR	LR		
	comp=Z,97µm,23.4s						
P18A	**Preston Nutter**	**94.16**	**46**	IAMs_20	IAMs_20	23 51 48.9	
	comp=Z,54µm,18.0s						
TA02	**Huaiquique**	**94.17**	**116**	P	**P**	**23 08 18.4**	**+0.8**
TA02				IAmb	IAmb	23 08 43.8	
	comp=Z,493nm,1.2s						
PB01	**IPOC Station P**	**94.22**	**117**	P	**P**	**23 08 18.1**	**0.0**
PB01				IAmb	IAmb	23 08 43.4	
	comp=Z,230nm,1.1s						
PLID	**Pearl Lake**	**94.23**	**39**	IAMs_20	IAMs_20	23 47 37.2	
	comp=Z,68µm,19.0s						
RUBB	**Prince Rupert**	**94.26**	**26**	IAMs_20	IAMs_20	23 47 00.9	
	comp=Z,50µm,20.0s						
L18K	**Granite Mounta**	**94.29**	**10**	P	**P**	**23 08 17.4**	**+0.4**
	baz=198,SNR=64						
L18K				S	**S**	**23 19 29.8**	**+4.6**
	baz=198						
XAN	**Xi'an**	**94.34**	**307**	P	**P**	**23 08 17.8**	**-0.3**
XAN				pP	PcP	23 08 22.9	+4.4
XAN				PP	**PP**	**23 12 04.0**	**-2.0**
XAN				SKS	**SKSac**	**23 18 51.8**	**+1.5**
XAN				S	**S**	**23 19 27.5**	**+0.4**
XAN				pmax	pmax		
	comp=Z,190nm,1.2s						
XAN				pmax	pmax		
	comp=Z,20µm,9.3s						
XAN				LR	LR		
	comp=Z,63µm,21.1s						
XAN				LR	LR		
	comp=Z,42µm,21.3s						
XAN				LR	LR		
	comp=Z,80µm,20.1s						
M19K	**Big River Lodg**	**94.34**	**11**	P	**P**	**23 08 17.3**	**-0.1**
	baz=200						
M19K				S	**S**	**23 19 32.0**	**+6.2**
	baz=200						
FIS	**Fire Island**	**94.39**	**13**	IAMs_20	IAMs_20	23 46 13.2	
	comp=Z,67µm,22.0s						
BSUT	**Blindstream Ca**	**94.39**	**45**	IAMs_20	IAMs_20	23 53 27.9	
	comp=Z,47µm,18.0s						
GAMB	**Gambell**	**94.40**	**3**	P	**P**	**23 08 17.5**	**+0.1**
GAMB				IAmb	IAmb	23 08 23.3	
	comp=Z,375nm,1.2s						
GAMB				IAMs_20	IAMs_20	23 46 09.0	
	comp=Z,81µm,21.0s						
GAMB	**Gambell**	**94.40**	**3**	P	**P**	**23 08 18.2**	**+0.8**
	baz=185						
GAMB				S	**S**	**23 19 31.3**	**+5.3**
	baz=185						
RC01	**Rabbit Creek A**	**94.43**	**13**	P	**P**	**23 08 17.5**	**-0.3**
RC01				IAmb	IAmb	23 08 27.9	
	comp=Z,258nm,1.2s						
RC01	**Rabbit Creek A**	**94.43**	**13**	P	**P**	**23 08 17.8**	**+0.1**
	baz=204,SNR=19						
RC01				S	**S**	**23 19 31.0**	**+4.4**
	baz=204						
HIN	**Hinchinbrook I**	**94.49**	**15**	IAMs_20	IAMs_20	23 45 60.0	
	comp=Z,68µm,21.0s						
PWL	**Port Wells**	**94.51**	**14**	P	**P**	**23 08 17.7**	**-0.4**
PWL				IAmb	IAmb	23 08 25.3	
	comp=Z,508nm,1.6s						
PWL				IAMs_20	IAMs_20	23 46 05.4	
	comp=Z,61µm,20.0s						
PWL	**Port Wells**	**94.51**	**14**	P	**P**	**23 08 18.2**	**+0.1**
	baz=205,SNR=11						
PWL				S	**S**	**23 19 31.9**	**+4.7**
	baz=205						
L19K	**White Mountain**	**94.53**	**11**	P	**P**	**23 08 18.3**	**+0.1**
	baz=199,SNR=81						
L19K				S	**S**	**23 19 31.5**	**+4.1**
	baz=199						
K17K	**Iditarod**	**94.53**	**9**	IAMs_20	IAMs_20	23 55 06.9	
	comp=Z,52µm,20.0s						
K17K	**Iditarod**	**94.53**	**9**	P	**P**	**23 08 18.7**	**+0.5**
	baz=196,SNR=36						
K17K				S	**S**	**23 19 32.9**	**+5.6**
	baz=196						
M20K	**Styx River**	**94.53**	**12**	IAMs_20	IAMs_20	23 49 08.1	
	comp=Z,62µm,20.0s						
M20K	**Styx River**	**94.53**	**12**	P	**P**	**23 08 17.5**	**-0.8**
	baz=201,SNR=30						
M20K				S	**S**	**23 19 31.5**	**+3.9**
	baz=201						
V35K	**Ketchikan**	**94.54**	**25**	P	**P**	**23 08 19.5**	**+1.2**
	baz=218,SNR=12						
V35K				S	**S**	**23 19 36.0**	**+8.3**
	baz=218						
KAIM	**Kayak Island**	**94.55**	**16**	IAMs_20	IAMs_20	23 45 35.8	
	comp=Z,62µm,22.0s						
KAIM	**Kayak Island**	**94.55**	**16**	P	**P**	**23 08 20.1**	**+1.8**
	baz=208						
KAIM				S	**S**	**23 19 35.8**	**+8.2**
	baz=208						
SUA	**Susitna One**	**94.58**	**13**	P	**P**	**23 08 18.4**	**-0.2**
	baz=203,SNR=24						
SUA				S	**S**	**23 19 32.3**	**+4.2**
	baz=203						
ATAH	**Atahualpa**	**94.59**	**101**	LR	LR	23 40 49.7	
	comp=Z,60µm,21.2s,baz=238,slow=29						
U33K	**Whale Pass**	**94.64**	**23**	P	**P**	**23 08 19.6**	**+0.8**
	baz=217,SNR=15						
U33K				S	**S**	**23 19 37.1**	**+8.6**
	baz=217						
SIT	**Sitka**	**94.67**	**22**	IAMs_20	IAMs_20	23 43 06.2	
	comp=Z,53µm,20.0s						
SIT	**Sitka**	**94.67**	**22**	P	**P**	**23 08 20.4**	**+1.5**
SIT	**Sitka**	**94.67**	**22**	P	**P**	**23 08 19.5**	**+0.6**
	baz=215						
SIT				S	S	23 19 38.6	+10
	baz=215						
MCRA	**Macar, Loja**	**94.70**	**98**	P	**P**	**23 08 21.3**	**+1.0**
	comp=Z,116µmcomp=Z,7µmcomp=Z,91nm,1.5s						
CCIG	**Comitan**	**94.75**	**74**	P	**P**	**23 08 20.5**	**0.0**
CCIG				IAMs_20	IAMs_20	23 45 11.0	
	comp=Z,56µm,19.0s						
HUEH	**Huehuetenango**	**94.79**	**75**	P	**P**	**23 08 20.9**	**+0.2**
GLI	**Glacier Island**	**94.79**	**15**	IAMs_20	IAMs_20	23 45 50.9	
	comp=Z,57µm,20.0s						
GLI	**Glacier Island**	**94.79**	**15**	P	**P**	**23 08 19.9**	**+0.5**
	baz=206,SNR=26						
GLI				S	**S**	**23 19 35.7**	**+6.0**
	baz=206						
EYAK	**Cordova Ski Ar**	**94.79**	**15**	IAMs_20	IAMs_20	23 46 08.1	
	comp=Z,78µm,21.0s						
EYAK	**Cordova Ski Ar**	**94.79**	**15**	P	**P**	**23 08 21.4**	**+2.0**
EYAK	**Cordova Ski Ar**	**94.79**	**15**	P	**P**	**23 08 19.6**	**+0.2**
	baz=207,SNR=11						
EYAK				S	**S**	**23 19 35.0**	**+5.4**
	baz=207						
J16K	**Anvik River**	**94.79**	**8**	P	**P**	**23 08 19.8**	**+0.5**
	baz=194,SNR=36						
J16K				S	**S**	**23 19 37.3**	**+7.7**
	baz=194						
FID	**Port Fidalgo**	**94.81**	**15**	P	**P**	**23 08 19.7**	**+0.2**
FID				IAmb	IAmb	23 08 29.3	
	comp=Z,321nm,1.4s						
FID				IAMs_20	IAMs_20	23 46 18.3	
	comp=Z,66µm,20.0s						
PB11	**IPOC Station P**	**94.82**	**116**	P	**P**	**23 08 21.2**	**+0.3**
PB11				IAmb	IAmb	23 08 46.1	
	comp=Z,341nm,1.1s						
SUCK	**Suckling Hills**	**94.84**	**16**	IAMs_20	IAMs_20	23 45 55.3	
	comp=Z,63µm,21.0s						
SKT	**Skwentna**	**94.91**	**12**	IAMs_20	IAMs_20	23 46 54.0	
	comp=Z,68µm,21.0s						
SKT	**Skwentna**	**94.91**	**12**	P	**P**	**23 08 18.6**	**-1.3**
	baz=202,SNR=25						
SKT				S	**S**	**23 19 33.8**	**+3.1**
	baz=202						
M22K	**Willow**	**94.96**	**13**	P	**P**	**23 08 20.0**	**-0.2**
	baz=203,SNR=13						
M22K				S	**S**	**23 19 37.2**	**+6.1**
	baz=203						
L20K	**Farewell, AK**	**94.97**	**11**	P	**P**	**23 08 19.7**	**-0.5**
	baz=200,SNR=35						
L20K				S	**S**	**23 19 37.9**	**+6.7**
	baz=200						
KNK	**Knik Glacier**	**94.98**	**14**	IAMs_20	IAMs_20	23 46 42.0	
	comp=Z,52µm,21.0s						
KNK	**Knik Glacier**	**94.98**	**14**	P	**P**	**23 08 20.5**	**+0.2**
	baz=205,SNR=19						
KNK				S	**S**	**23 19 37.2**	**+5.8**
	baz=205						
PB08	**IPOC Station P**	**94.99**	**117**	P	**P**	**23 08 24.3**	**+2.4**
BGLC	**Bering Glacier**	**95.00**	**17**	P	**P**	**23 08 19.0**	**-1.4**
	baz=209						
BGLC				S	**S**	**23 19 37.8**	**+6.4**
	baz=209						
PMR	**Palmer**	**95.01**	**13**	P	**P**	**23 08 22.0**	**+1.6**
PMR	**Palmer**	**95.01**	**13**	P	**P**	**23 08 20.4**	**0.0**
	baz=204,SNR=13						
PMR				S	**S**	**23 19 37.4**	**+5.9**
	baz=204						
LLLB	**Lillooet**	**95.01**	**32**	P	**P**	**23 08 20.5**	**-0.2**
LLLB				IAMs_20	IAMs_20	23 46 46.3	
	comp=Z,52µm,20.0s						
AP01	**Chacalluta**	**95.08**	**115**	P	**P**	**23 08 23.0**	**+1.2**
AP01				IAmb	IAmb	23 08 45.4	
	comp=Z,401nm,1.1s						
J17K	**VABM Dome**	**95.09**	**8**	IAMs_20	IAMs_20	23 49 51.5	
	comp=Z,49µm,20.0s						
J17K	**VABM Dome**	**95.09**	**8**	P	**P**	**23 08 21.1**	**+0.4**
	baz=196,SNR=34						
J17K				S	**S**	**23 19 38.0**	**+5.8**
	baz=196						
S31K	**Pelican**	**95.12**	**21**	IAMs_20	IAMs_20	23 48 38.2	
	comp=Z,56µm,20.0s						
S31K	**Pelican**	**95.12**	**21**	P	**P**	**23 08 21.8**	**+0.9**
	baz=214,SNR=8.7						
S31K				S	S	23 19 41.9	+9.4
	baz=214						
RDMU	**Red Mountain**	**95.13**	**45**	IAMs_20	IAMs_20	23 54 30.8	
	comp=Z,69µm,18.0s						
BERG	**Berg Lake**	**95.14**	**16**	P	**P**	**23 08 21.0**	**0.0**
BERG				IAMs_20	IAMs_20	23 46 05.3	
	comp=Z,74µm,21.0s						
WRAK	**Wrangell Islan**	**95.14**	**24**	P	**P**	**23 08 22.0**	**+0.9**
	baz=218,SNR=6.4						
WRAK				S	S	23 19 41.9	+9.0
	baz=218						
GO01	**Chusmiza**	**95.23**	**116**	P	**P**	**23 08 24.4**	**+1.2**
GO01				IAmb	IAmb	23 09 00.2	
	comp=Z,275nm,1.3s						
S32K	**Killisnoo**	**95.24**	**22**	IAMs_20	IAMs_20	23 43 34.4	
	comp=Z,61µm,20.0s						
S32K	**Killisnoo**	**95.24**	**22**	P	**P**	**23 08 22.3**	**+0.8**
	baz=216						
S32K				S	**S**	**23 19 41.8**	**+8.1**
	baz=216						
T33K	**Petersburg**	**95.25**	**23**	P	**P**	**23 08 22.9**	**+1.4**
	baz=217						
T33K				S	S	23 19 44.9	+11
	baz=217						
DIV	**Divide**	**95.31**	**15**	IAMs_20	IAMs_20	23 46 35.6	
	comp=Z,53µm,20.0s						
I17K	**Unalakleet**	**95.37**	**8**	P	**P**	**23 08 22.4**	**+0.5**
	baz=194,SNR=15						
I17K				S	**S**	**23 19 41.8**	**+7.3**
	baz=194						
SML	**Sawmill**	**95.37**	**14**	P	**P**	**23 08 22.4**	**+0.3**
	baz=205						
SML				S	**S**	**23 19 40.9**	**+6.1**
	baz=205						
MESA	**MESA**	**95.38**	**17**	IAMs_20	IAMs_20	23 51 44.9	
	comp=Z,51µm,19.0s						
MESA	**MESA**	**95.38**	**17**	P	**P**	**23 08 23.1**	**+0.7**
	baz=210,SNR=7.9						
MESA				S	**S**	**23 19 43.3**	**+8.0**
	baz=210						
WAX	**Waxell Ridge**	**95.39**	**17**	P	**P**	**23 08 23.1**	**+0.8**
WAX				IAmb	IAmb	23 08 48.4	
	comp=Z,277nm,1.3s						
WAX				IAMs_20	IAMs_20	23 46 54.0	
	comp=Z,61µm,20.0s						
YKU2	**Yakutat**	**95.42**	**19**	IAMs_20	IAMs_20	23 44 56.8	
	comp=Z,54µm,20.0s						
BMRM	**Bremner River**	**95.43**	**16**	P	**P**	**23 08 22.4**	**0.0**
BMRM				IAmb	IAmb	23 08 37.7	
	comp=Z,162nm,0.9s						
BMRM				IAMs_20	IAMs_20	23 46 26.9	
	comp=Z,66µm,21.0s						
BMRM	**Bremner River**	**95.43**	**16**	P	**P**	**23 08 22.6**	**+0.2**
	baz=208,SNR=22						
BMRM				S	**S**	**23 19 40.4**	**+5.1**
	baz=208						
J18K	**Innoko River**	**95.47**	**9**	IAMs_20	IAMs_20	23 47 00.6	
	comp=Z,59µm,22.0s						
J18K	**Innoko River**	**95.47**	**9**	P	**P**	**23 08 23.1**	**+0.7**
	baz=198,SNR=75						
J18K				S	**S**	**23 19 39.0**	**+3.5**
	baz=198						
PZH	**PanZhiHua**	**95.47**	**297**	⇑P	**P**	**23 08 22.8**	**-0.8**
PZH				sP	**pP**	**23 08 36.1**	**+1.4**
PZH				PP	**PP**	**23 12 16.5**	**+1.4**
PZH				S	**S**	**23 19 37.3**	**-0.2**
PZH				pmax	pmax		
	comp=Z,250nm,1.2s						
PZH				pmax	pmax		
	comp=Z,3µm,8.7s						
PZH				LR	LR		
	comp=Z,51µm,23.5s						
PZH				LR	LR		
	comp=Z,37µm,23.7s						
PZH				LR	LR		
	comp=Z,56µm,24.5s						
M23K	**Glacier View**	**95.48**	**14**	P	**P**	**23 08 22.6**	**+0.1**
	baz=205,SNR=18						
M23K				S	**S**	**23 19 41.4**	**+5.7**
	baz=205						
CUT	**Chulitna**	**95.53**	**13**	P	**P**	**23 08 22.5**	**-0.2**
CUT				IAmb	IAmb	23 08 53.4	
	comp=Z,414nm,1.2s						
CUT	**Chulitna**	**95.53**	**13**	P	**P**	**23 08 22.5**	**-0.2**
	baz=203,SNR=17						
CUT				S	**S**	**23 19 41.7**	**+5.7**
	baz=203						
AHID	**Auburn Hatcher**	**95.53**	**43**	P	**P**	**23 08 24.1**	**+0.6**
AHID				IAmb	IAmb	23 08 42.5	
	comp=Z,212nm,1.3s						
AHID				IAMs_20	IAMs_20	23 54 52.1	
	comp=Z,44µm,18.0s						
U35K	**Hyder**	**95.57**	**25**	P	**P**	**23 08 23.9**	**+0.9**
	baz=219						
U35K				S	**S**	**23 19 44.4**	**+7.8**
	baz=219						
ANM	**Nome**	**95.57**	**5**	IAMs_20	IAMs_20	23 47 40.2	
	comp=Z,72µm,22.0s						
ANM	**Nome**	**95.57**	**5**	P	**P**	**23 08 23.1**	**+0.2**
	baz=190						
ANM				S	**S**	**23 19 39.0**	**+2.7**
	baz=190						
CRQM	**Cirque**	**95.59**	**16**	IAMs_20	IAMs_20	23 46 20.5	
	comp=Z,74µm,22.0s						
KLU	**Klutina**	**95.59**	**15**	IAMs_20	IAMs_20	23 46 26.3	
	comp=Z,52µm,20.0s						
KLU	**Klutina**	**95.59**	**15**	P	**P**	**23 08 23.3**	**+0.1**
	baz=207,SNR=12						
KLU				S	**S**	**23 19 41.2**	**+4.4**
	baz=207						
YAH	**Yahtse**	**95.60**	**17**	IAMs_20	IAMs_20	23 42 38.3	
	comp=Z,62µm,22.0s						
CRQE	**Cirque**	**95.60**	**16**	P	**P**	**23 08 23.7**	**+0.4**
	baz=209,SNR=8.2						
CRQE				S	**S**	**23 19 44.9**	**+8.0**
	baz=209						
SCM	**Sheep Creek Mo**	**95.60**	**14**	P	**P**	**23 08 23.3**	**+0.1**
SCM				IAmb	IAmb	23 08 30.0	
	comp=Z,176nm,1.0s						
SCM				IAMs_20	IAMs_20	23 46 49.3	
	comp=Z,50µm,20.0s						
SCM	**Sheep Creek Mo**	**95.60**	**14**	P	**P**	**23 08 23.3**	**+0.1**
SCM				pmax	pmax		
	comp=Z,176nm,1.0s						
SCM				MLR	MLR		
	comp=Z,50µm,20.0s						
SCM	**Sheep Creek Mo**	**95.60**	**14**	P	**P**	**23 08 23.5**	**+0.3**
	baz=206,SNR=27						
SCM				S	**S**	**23 19 41.3**	**+4.4**
	baz=206						
PNL	**Peninsula**	**95.62**	**19**	P	**P**	**23 08 22.9**	**-0.4**
PNL	**Peninsula**	**95.62**	**19**	P	**P**	**23 08 23.9**	**+0.7**
	baz=212						
PNL				S	**S**	**23 19 44.9**	**+7.9**
	baz=212						
XLT	**XiLinHaoTe**	**95.63**	**318**	*e*P	**P**	**23 08 22.6**	**-1.2**
XLT				PP	**PP**	**23 12 15.6**	**-0.3**
XLT				S	**S**	**23 19 41.4**	**+3.4**
XLT				SS	**SS**	**23 26 08.3**	**+0.1**
XLT				LR	LR		
	comp=Z,69µm,23.0s						
XLT				LR	LR		
	comp=Z,95µm,23.4s						
R31K	**City Hall, Gus**	**95.64**	**21**	P	**P**	**23 08 23.8**	**+0.5**
	baz=215						
R31K				S	S	23 19 46.2	+9.1
	baz=215						
PPLA	**Purkeypile**	**95.64**	**12**	IAMs_20	IAMs_20	23 49 53.1	
	comp=Z,59µm,20.0s						
PPLA	**Purkeypile**	**95.64**	**12**	P	**P**	**23 08 22.5**	**-1.0**
	baz=202						
PPLA				S	**S**	**23 19 38.4**	**+1.1**
	baz=202						
ISLE	**Juniper Island**	**95.65**	**17**	IAMs_20	IAMs_20	23 43 02.9	
	comp=Z,64µm,22.0s						
TGL	**Tana Glacier**	**95.67**	**17**	IAMs_20	IAMs_20	23 46 23.2	
	comp=Z,70µm,21.0s						
NEW	**Newport**	**95.72**	**36**	IAMs_20	IAMs_20	23 46 40.2	
	comp=Z,54µm,20.0s						
NEW	**Newport**	**95.72**	**36**	LR	LR	23 48 05.4	
	comp=Z,43µm,18.1s,baz=221,slow=33						
PB16	**IPOC Station P**	**95.75**	**115**	P	**P**	**23 08 26.9**	**+1.3**
PB16				IAmb	IAmb	23 08 50.0	
	comp=Z,364nm,1.3s						
PCA	**Pinnacle**	**95.75**	**18**	IAMs_20	IAMs_20	23 47 27.7	
	comp=Z,53µm,20.0s						
PINM	**Pinnacle**	**95.75**	**18**	P	**P**	**23 08 24.1**	**+0.2**
	baz=211						
PINM				S	**S**	**23 19 44.3**	**+6.1**
	baz=211						
K20K	**Telida**	**95.76**	**11**	P	**P**	**23 08 24.1**	**+0.2**
	baz=200,SNR=29						
K20K				S	**S**	**23 19 44.1**	**+6.0**
	baz=200						
MCMT	**McKenzie Canyo**	**95.80**	**40**	P	**P**	**23 08 25.1**	**+0.4**
BCPM	**Bancas Point**	**95.80**	**18**	IAMs_20	IAMs_20	23 47 27.9	
	comp=Z,63µm,20.0s						
TABL	**Table Mountain**	**95.82**	**17**	IAMs_20	IAMs_20	23 42 45.3	
	comp=Z,60µm,22.0s						
MSTX	**Muleshoe**	**95.82**	**54**	P	**P**	**23 08 25.3**	**+0.3**
R32K	**Eaglecrest**	**95.91**	**21**	IAMs_20	IAMs_20	23 45 33.0	
	comp=Z,52µm,20.0s						
R32K	**Eaglecrest**	**95.91**	**21**	P	**P**	**23 08 25.4**	**+0.8**
	baz=216,SNR=5.5						
R32K				S	**S**	**23 19 46.7**	**+7.2**
	baz=216						
GRNC	**Granite Creek**	**95.91**	**17**	IAMs_20	IAMs_20	23 43 10.8	
	comp=Z,64µm,22.0s						
VRDI	**Verde Repeater**	**95.93**	**16**	IAMs_20	IAMs_20	23 46 42.1	
	comp=Z,60µm,21.0s						
KVTX	**Kingsville**	**95.94**	**62**	P	**P**	**23 08 26.2**	**+0.8**
KVTX				IAMs_20	IAMs_20	23 50 14.7	
	comp=Z,56µm,18.0s						
JIS	**Juneau Island**	**95.95**	**22**	P	**P**	**23 08 24.4**	**-0.3**
N25K	**Chitina, Valde**	**95.99**	**15**	IAMs_20	IAMs_20	23 47 07.8	
	comp=Z,49µm,20.0s						
N25K	**Chitina, Valde**	**95.99**	**15**	P	**P**	**23 08 25.3**	**+0.3**
	baz=208,SNR=25						
N25K				S	**S**	**23 19 48.0**	**+7.8**
	baz=208						
GLB	**Gilahina Butte**	**96.03**	**16**	IAMs_20	IAMs_20	23 46 45.8	
	comp=Z,45µm,21.0s						
BESE	**Bessie Mountai**	**96.05**	**21**	IAMs_20	IAMs_20	23 44 27.7	
	comp=Z,54µm,20.0s						
P29M	**Windy Craggy**	**96.05**	**19**	IAMs_20	IAMs_20	23 48 57.7	
	comp=Z,70µm,19.0s						
P29M	**Windy Craggy**	**96.05**	**19**	P	**P**	**23 08 26.2**	**+0.9**
	baz=213						
P29M				S	**S**	**23 19 48.7**	**+8.0**
	baz=213						
JCT	**Junction City**	**96.06**	**58**	P	**P**	**23 08 26.0**	**-0.1**
JCT				IAMs_20	IAMs_20	23 45 07.6	
	comp=Z,45µm,19.0s						
JCT	**Junction City**	**96.06**	**58**	P	**P**	**23 08 26.0**	**-0.1**
JCT				pmax	pmax		
	comp=Z,98nm,1.4s						
JCT				MLR	MLR		
	comp=Z,45µm,19.0s						
SDCO	**Great Sand Dun**	**96.08**	**50**	P	**P**	**23 08 26.2**	**0.0**
M24K	**Tolsona, Glenn**	**96.09**	**14**	P	**P**	**23 08 25.7**	**+0.3**
	baz=207,SNR=14						
M24K				S	**S**	**23 19 47.9**	**+6.9**
	baz=207						
G15K	**Niukluk**	**96.11**	**6**	P	**P**	**23 08 25.8**	**+0.5**
	baz=192						
G15K				S	**S**	**23 19 46.5**	**+5.6**
	baz=192						
MTO3	**Montecristo**	**96.11**	**77**	P	**P**	**23 08 26.8**	**0.0**
MTO3				IAMs_20	IAMs_20	23 40 38.2	
	comp=Z,53µm,21.0s						
J19K	**Poorman**	**96.13**	**10**	IAMs_20	IAMs_20	23 47 32.1	
	comp=Z,55µm,22.0s						
J19K	**Poorman**	**96.13**	**10**	P	**P**	**23 08 26.1**	**+0.6**
	baz=199,SNR=40						
J19K				S	**S**	**23 19 48.3**	**+7.1**
	baz=199						
CAST	**Castle Rocks**	**96.15**	**11**	P	**P**	**23 08 23.8**	**-1.7**
CAST				IAMs_20	IAMs_20	23 50 09.4	
	comp=Z,50µm,20.0s						
CAST	**Castle Rocks**	**96.15**	**11**	P	**P**	**23 08 24.0**	**-1.6**
	baz=202,SNR=103						
CAST				S	**S**	**23 19 44.5**	**+3.1**
	baz=202						
SNOW	**Snow King Moun**	**96.16**	**42**	IAMs_20	IAMs_20	23 55 39.5	
	comp=Z,41µm,18.0s						
MCARA	**McCarthy VSAT**	**96.17**	**16**	IAMs_20	IAMs_20	23 46 38.4	
	comp=Z,51µm,21.0s						
MCARA	**McCarthy VSAT**	**96.17**	**16**	P	**P**	**23 08 26.3**	**+0.6**
	baz=209,SNR=9.9						
MCARA				S	**S**	**23 19 46.2**	**+4.7**
	baz=209						
LOGN	**Logan Glacier**	**96.18**	**17**	IAMs_20	IAMs_20	23 43 29.9	
	comp=Z,59µm,22.0s						
WAT6	**Susitna Watana**	**96.19**	**14**	P	**P**	**23 08 25.8**	**-0.1**
	baz=205,SNR=25						
WAT6				S	**S**	**23 19 49.0**	**+6.9**
	baz=205						
ESQI	**Esquipulas**	**96.21**	**77**		**P**	**23 08 28.5**	**+1.4**
ESQI				IAmb	IAmb	23 08 58.7	
	comp=Z,681nm,2.5s						
CTG	**Chitna Glacier**	**96.22**	**17**	P	**P**	**23 08 26.7**	**+0.6**

	baz=210,SNR=11						
CTG				S	S	23 19 46.4	+4.1
	baz=210						
CTGM	Chitina Glacie	96.22	17	IAMs_20	IAMs_20	23 43 30.8	
	comp=Z,63µm,22.0s						
WAT1	Susitna Watana	96.25	13	P	P	23 08 26.1	0.0
	baz=205						
WAT1				S	S	23 19 47.4	+5.1
	baz=205						
COHC	Cochancay	96.27	97	P	P	23 08 28.4	+1.0
COHC	Cochancay	96.27	97	P	P	23 08 29.4	+2.0
	comp=Z,114µmcomp=Z,8µmcomp=Z,174nm,2.2s						
CD2	Chengdu	96.29	302	P	P	23 08 27.5	+0.4
CD2				PP	PP	23 12 22.1	+0.9
CD2				SKS	SKSac	23 19 01.3	+0.6
CD2				S	ScS	23 19 47.3	+2.6
CD2				SS	SS	23 26 21.4	+3.5
CD2				pmax	pmax		
	comp=Z,150nm,1.0s						
CD2				pmax	pmax		
	comp=Z,25µm,13.2s						
CD2				LR	LR		
	comp=Z,86µm,21.6s						
CD2				LR	LR		
	comp=Z,80µm,34.8s						
CD2				LR	LR		
	comp=Z,70µm,30.4s						
PLBC	Pleasant Camp	96.31	20	P	P	23 08 26.8	+0.5
	baz=214						
PLBC				S	S	23 19 52.4	+10
	baz=214						
T35M	Bob Quinn	96.31	24	P	P	23 08 27.5	+1.1
	baz=219						
T35M				S	S	23 19 54.1	+11
	baz=219						
LOHW	Long Hollow	96.33	42	IAMs_20	IAMs_20	23 53 39.3	
	comp=Z,41µm,18.0s						
O28M	Mount Upton	96.35	18	IAMs_20	IAMs_20	23 47 36.3	
	comp=Z,53µm,21.0s						
O28M	Mount Upton	96.35	18	P	P	23 08 27.4	+0.5
	baz=212,SNR=15						
O28M				S	S	23 19 50.8	+7.0
	baz=212						
SEY	Seymchan	96.37	347	LR	LR	23 47 07.1	
	comp=Z,76µm,21.6s,baz=166,slow=32						
SEY	Seymchan	96.37	347	*ce*P	P	23 08 25.8	-0.7
SEY				pmax	pmax		
	comp=Z,147nm,1.1s						
SEY				MLR	MLR		
	comp=Z,37µm,20.0s						
TNA	Tin City	96.37	4	IAMs_20	IAMs_20	23 47 23.3	
	comp=Z,50µm,20.0s						
TNA	Tin City	96.37	4	P	P	23 08 27.0	+0.5
	baz=188,SNR=15						
TNA				S	S	23 19 48.4	+5.2
	baz=188						
O29M	Mount Kennedy	96.38	19	IAMs_20	IAMs_20	23 45 28.3	
	comp=Z,56µm,20.0s						
O29M	Mount Kennedy	96.38	19	P	P	23 08 27.7	+0.8
	baz=213						
O29M				S	S	23 19 52.2	+8.4
	baz=213						
F14K	Arctic Creek	96.40	5	P	P	23 08 27.1	+0.4
	baz=190						
F14K				S	S	23 19 49.1	+5.7
	baz=190						
BW06	Boulder Array	96.44	44	P	P	23 08 27.7	0.0
PDAR	Pinedale Array	96.44	44	P	P	23 08 27.6	-0.1
	comp=Z,15nm,0.8s,baz=196,slow=2.8,SNR=65						
PDAR				PP	PP	23 12 22.1	-0.3
	comp=Z,7.6nm,1.0s,baz=220,slow=8.9,SNR=3.7						
PDAR				PKKP	PKKPdf	23 25 14.4	-0.8
	comp=Z,20nm,0.7s,baz=79,slow=3.8,SNR=14						
PDAR				PKPPKP	P'P'df	23 33 26.6	+3.1
	comp=Z,5.3nm,1.0s,baz=322,slow=0.9,SNR=6.9						
PDAR				LR	LR	23 44 33.8	
	comp=Z,20µm,22.0s,baz=226,slow=31						
	comp=Z,15nm,0.8s						
MSO	Missoula	96.45	38	IAMs_20	IAMs_20	23 49 05.9	
	comp=Z,73µm,20.0s						
BPMT	Black Pine Rid	96.47	39	P	P	23 08 27.5	-0.3
KTH	Kantishna Hill	96.47	12	P	P	23 08 25.8	-1.3
H17K	Granite Mounta	96.47	8	IAMs_20	IAMs_20	23 50 49.1	
	comp=Z,47µm,21.0s						
H17K	Granite Mounta	96.47	8	P	P	23 08 27.5	+0.5
	baz=195,SNR=31						
H17K				S	S	23 19 49.3	+5.2
	baz=195						
TRF	Thorofare Moun	96.49	12	P	P	23 08 27.0	-0.3
	baz=203,SNR=29						
TRF				S	S	23 19 47.3	+2.6
	baz=203						
HHC	Hu-ho-hao-te	96.50	314	*e*P	P	23 08 27.3	-0.6
HHC				SKS	SKSac	23 18 58.8	-2.7
HHC				S	S	23 19 44.4	-1.3
HHC				SS	SS	23 26 24.1	+3.4
HHC				pmax	pmax		
	comp=Z,31nm,0.9s						
HHC				pmax	pmax		
	comp=Z,4µm,6.7s						
HHC				LR	LR		
	comp=Z,35µm,20.1s						
HHC				LR	LR		
	comp=Z,43µm,20.1s						
HHC				LR	LR		
	comp=Z,85µm,22.1s						
J20K	Nowinta River	96.52	10	IAMs_20	IAMs_20	23 47 58.5	
	comp=Z,48µm,21.0s						
J20K	Nowinta River	96.52	10	P	P	23 08 27.1	-0.1
	baz=200						
J20K				S	S	23 19 49.4	+4.9
	baz=200						
CHUM	Lake Minchumin	96.54	11	P	P	23 08 26.9	-0.3
	baz=202						
CHUM				S	S	23 19 48.8	+4.1
	baz=202						
HARP	HAARP	96.57	15	P	P	23 08 28.0	+0.5
	baz=207,SNR=8.5						
HARP				S	S	23 19 52.6	+7.5
	baz=207						
ZEA	Zeya	96.59	331	*e*P	P	23 08 27.3	-0.5
ZEA				*e*		23 12 22.2	
ZEA				*e*		23 19 01.4	
ZEA				pmax	pmax		
	comp=N,700nm,7.5s						
ZEA				pmax	pmax		
	comp=Z,5µm,11.8s						
ZEA				pmax	pmax		
	comp=N,40nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,80nm,1.1s						
SKAG	Skagway	96.62	20	IAMs_20	IAMs_20	23 48 02.7	
	comp=Z,56µm,20.0s						
SKAG	Skagway	96.62	20	P	P	23 08 31.4	+3.7
SKAG	Skagway	96.62	20	P	P	23 08 28.9	+1.1
	baz=215,SNR=10.0						
SKAG				S	S	23 19 53.8	+8.3
	baz=215						
GCSA	Galena City Sc	96.67	9	P	P	23 08 28.3	+0.5
	baz=198,SNR=18						
GCSA				S	S	23 19 51.4	+5.7
	baz=198						
P30M	Million Dollar	96.68	19	P	P	23 08 29.1	+1.0
	baz=214						
P30M				S	S	23 19 54.7	+8.5
	baz=214						
735A	Kenedy	96.69	61	IAMs_20	IAMs_20	23 51 59.3	
	comp=Z,40µm,18.0s						
DHY	Denali Highway	96.71	14	P	P	23 08 28.1	-0.2
	baz=206,SNR=25						
DHY				S	S	23 19 52.0	+5.4
	baz=206						
S34M	Telegraph Cree	96.73	23	IAMs_20	IAMs_20	23 46 38.8	
	comp=Z,49µm,20.0s						
S34M	Telegraph Cree	96.73	23	P	P	23 08 29.1	+0.8
	baz=219,SNR=26						
S34M				S	S	23 19 57.3	+11
	baz=219						
F15K	North Star Dit	96.76	6	IAMs_20	IAMs_20	23 49 50.5	
	comp=Z,56µm,21.0s						
F15K	North Star Dit	96.76	6	P	P	23 08 28.6	+0.4
	baz=191						
F15K				S	S	23 19 50.7	+4.1
	baz=191						
H18K	Honhosa River	96.87	8	IAMs_20	IAMs_20	23 51 34.5	
	comp=Z,46µm,20.0s						
H18K	Honhosa River	96.87	8	P	P	23 08 28.8	0.0
	baz=196						
H18K				S	S	23 19 53.6	+6.1
	baz=196						
YUK8	Steele Glacier	96.89	18	P	P	23 08 29.8	+0.5
	baz=212,SNR=13						
YUK8				S	S	23 19 54.5	+6.1
	baz=212						
G17K	Kiwalik Mounta	96.94	7	P	P	23 08 29.6	+0.5
	baz=194						
G17K				S	S	23 19 50.1	+2.1
	baz=194						
PETF	Flores	96.94	75	P	P	23 08 30.0	-0.2
YNM	Yellowstone No	96.95	41		P	23 08 30.8	+0.8
YNM				IAmb	IAmb	23 09 06.2	
	comp=Z,220nm,1.5s						
YNM				IAMs_20	IAMs_20	23 57 08.3	
	comp=Z,43µm,18.0s						
YNR	Norris Junctio	96.95	42	IAMs_20	IAMs_20	23 57 08.5	
	comp=Z,43µm,18.0s						
BPAW	Bear Paw Mtn.	96.97	12	IAMs_20	IAMs_20	23 50 35.3	
	comp=Z,52µm,20.0s						
BPAW	Bear Paw Mtn.	96.97	12	P	P	23 08 28.6	-0.7
	baz=203,SNR=22						
BPAW				S	S	23 19 51.3	+2.9
	baz=203						
YUK6	Outpost Mounta	96.97	18	P	P	23 08 30.1	+0.5
	baz=213						
YUK6				S	S	23 19 53.6	+4.5
	baz=213						
MCK	McKinley	97.00	13	P	P	23 08 29.4	-0.1
	baz=204,SNR=30						
MCK				S	S	23 19 52.7	+3.9
	baz=204						
PAX	Paxson	97.01	14	IAMs_20	IAMs_20	23 47 55.6	
	comp=Z,61µm,21.0s						
PAX	Paxson	97.01	14	P	Pdif	23 08 29.7	0.0
	baz=207,SNR=22						
PAX				S	S	23 19 56.4	+7.5
	baz=207						
HIA	Hailar	97.04	324	P	P	23 08 28.4	-1.6
HIA	Hailar	97.04	324	IAMs_20	IAMs_20	23 51 03.0	
	comp=Z,69µm,22.0s						
HIA	Hailar	97.04	324	P	Pdif	23 08 30.9	+0.8
HIA	Hailar	97.04	324	*c i*P	P	23 08 28.7	-1.3
HIA				pmax	pmax		
	comp=Z,54nm,1.6s						
I20K	Naaghedeneel	97.06	10	IAMs_20	IAMs_20	23 48 11.6	
	comp=Z,59µm,22.0s						
I20K	Naaghedeneel	97.06	10	P	Pdif	23 08 30.3	+0.7
	baz=200,SNR=6.3						
I20K				S	S	23 19 56.9	+7.8
	baz=200						
M26K	Nabesna, AK	97.06	16	IAMs_20	IAMs_20	23 44 25.0	
	comp=Z,57µm,22.0s						
M26K	Nabesna, AK	97.06	16	P	Pdif	23 08 30.3	+0.4
	baz=209,SNR=36						
M26K				S	S	23 19 56.0	+6.6
	baz=209						
HYT	Haines Junctio	97.11	19	P	P	23 08 29.8	-0.4
HYT				IAMs_20	IAMs_20	23 48 57.6	
	comp=Z,53µm,19.0s						
HYT	Haines Junctio	97.11	19	P	Pdif	23 08 30.7	+0.5
	baz=214,SNR=13						
HYT				S	S	23 19 57.3	+7.3
	baz=214						
YUK3	Moose Creek	97.13	17	P	Pdif	23 08 30.9	+0.5
	baz=211,SNR=24						
YUK3				S	S	23 19 58.7	+8.4
	baz=211						
Q32M	Nakina River	97.17	22	IAMs_20	IAMs_20	23 44 35.4	
	comp=Z,62µm,20.0s						
Q32M	Nakina River	97.17	22	P	Pdif	23 08 31.5	+0.9
	baz=218,SNR=12						
Q32M				S	S	23 19 59.3	+8.5
	baz=218						
P32M	Atlin	97.21	21	IAMs_20	IAMs_20	23 45 13.5	
	comp=Z,53µm,21.0s						
P32M	Atlin	97.21	21	P	Pdif	23 08 31.5	+0.9
	baz=217						
P32M				S	S	23 20 01.4	+11
	baz=217						
CRIN	San Cristobal	97.22	80	P	Pdif	23 08 33.9	+2.1
CRIN				IAmb	IAmb	23 08 58.2	
	comp=Z,279nm,1.4s						
YUK4	Talbot Arm	97.23	18	P	Pdif	23 08 31.9	+1.0
	baz=213						
YMP	Mirror Lake Pl	97.27	42	IAMs_20	IAMs_20	23 52 08.9	
	comp=Z,53µm,19.0s						
M27K	Edge Creek, AK	97.28	16	IAMs_20	IAMs_20	23 47 37.0	
	comp=Z,53µm,21.0s						
M27K	Edge Creek, AK	97.28	16	P	Pdif	23 08 31.6	+0.6
	baz=210,SNR=44						
M27K				S	S	23 19 59.5	+8.0
	baz=210						
BTO	Baotou	97.32	313	*e*P	P	23 08 31.6	0.0
BTO				pP	Pdif	23 08 36.5	+4.8
BTO				PP	PP	23 12 33.3	+4.2
BTO				SKS	SKSac	23 19 07.6	+1.8
BTO				S	ScS	23 19 53.0	0.0
BTO				sS	pS	23 20 03.4	-3.9
BTO				pmax	pmax		
	comp=Z,21µm,10.1s						
BTO				LR	LR		
	comp=Z,112µm,24.1s						
BTO				LR	LR		
	comp=Z,127µm,23.5s						
BTO				LR	LR		
	comp=Z,279µm,24.7s						
HERN	Volcan Telica	97.36	80	P	Pdif	23 08 32.9	+0.6
HERN				IAmb	IAmb	23 11 51.1	
	comp=Z,346nm,1.1s						
MENT	Mentasta	97.36	15	IAMs_20	IAMs_20	23 47 43.0	
	comp=Z,55µm,20.0s						
MENT	Mentasta	97.36	15	P	Pdif	23 08 32.8	+1.6
CNGN	Cerro Negro	97.42	80	P	P	23 08 32.3	-0.2
O30N	Mendenhall	97.46	19	IAMs_20	IAMs_20	23 46 03.0	
	comp=Z,65µm,20.0s						
O30N	Mendenhall	97.46	19	P	Pdif	23 08 32.6	+0.9
	baz=215,SNR=7.5						
O30N				S	S	23 20 03.9	+11
	baz=215						
H19K	Roundabout Mou	97.47	9	IAMs_20	IAMs_20	23 54 37.5	
	comp=Z,48µm,20.0s						
H19K	Roundabout Mou	97.47	9	P	Pdif	23 08 32.1	+0.6
	baz=198,SNR=41						
H19K				S	S	23 20 00.0	+7.5
	baz=198						
DLBC	Dease Lake	97.50	23	P	Pdif	23 08 33.3	+1.4
	baz=220,SNR=20						
DLBC				S	S	23 20 03.3	+10
	baz=220						
L26K	Log Cabin Wild	97.52	15	IAMs_20	IAMs_20	23 47 48.2	
	comp=Z,67µm,21.0s						
L26K	Log Cabin Wild	97.52	15	P	Pdif	23 08 32.6	+0.7
	baz=209,SNR=31						
L26K				S	S	23 20 00.6	+7.3
	baz=209						
G18K	Tagagawik	97.55	8	IAMs_20	IAMs_20	23 54 45.4	
	comp=Z,47µm,21.0s						
G18K	Tagagawik	97.55	8	P	P	23 08 31.6	-0.2
	baz=196,SNR=25						
G18K				S	S	23 19 57.9	+4.6
	baz=196						
BVCY	Beaver Creek	97.58	16	P	Pdif	23 08 32.6	+0.4
	baz=211,SNR=24						
BVCY				S	S	23 19 58.9	+5.1
	baz=211						
H20K	Anotleneega Mo	97.65	10	P	Pdif	23 08 32.5	+0.1
	baz=199,SNR=34						
H20K				S	S	23 20 00.8	+6.6
	baz=199						
K24K	Donnelly Dome	97.68	14	IAMs_20	IAMs_20	23 48 26.4	
	comp=Z,69µm,22.0s						
K24K	Donnelly Dome	97.68	14	P	Pdif	23 08 32.8	+0.2
	baz=207,SNR=19						
K24K				S	S	23 19 59.5	+4.8
	baz=207						
TGUH	Tegucigalpa,Un	97.70	78	P	Pdif	23 08 36.0	+2.1
TGUH				IAMs_20	IAMs_20	23 41 39.2	
	comp=Z,73µm,22.0s						
WHY	Whitehorse	97.72	20	P	Pdif	23 08 33.4	+0.4
	baz=216,SNR=10						
WHY				S	S	23 20 02.5	+7.3
	baz=216						
N30M	Aishikik Lake	97.75	19	IAMs_20	IAMs_20	23 49 10.5	
	comp=Z,50µm,19.0s						
N30M	Aishikik Lake	97.75	19	P	Pdif	23 08 33.2	+0.2
	baz=214						
N30M				S	S	23 20 03.3	+8.0
	baz=214						
NEA2	Nenana	97.76	12	P	P	23 08 31.8	-1.0
	baz=204,SNR=21						
NEA2				S	S	23 19 57.3	+2.2
	baz=204						
JTS	Las Juntas de	97.81	83	P	Pdif	23 08 36.0	+1.7
JTS	Las Juntas de	97.81	83	LR	LR	23 42 05.0	
	comp=Z,37µm,21.5s,baz=232,slow=29						
JTS	Las Juntas de	97.81	83	P	Pdif	23 08 36.0	+1.7
JTS				pmax	pmax		
	comp=Z,156nm,1.5s						
JTS				MLR	MLR		
	comp=Z,40µm,22.0s						
RIDG	Independent Ri	97.82	14	P	P	23 08 33.0	-0.2
	baz=208,SNR=32						
RIDG				S	S	23 20 01.9	+6.1
	baz=208						
WRH	Wood River Hil	97.83	13	IAMs_20	IAMs_20	23 48 12.2	
	comp=Z,59µm,21.0s						
MLY	Manley	97.87	11	IAMs_20	IAMs_20	23 51 40.1	
	comp=Z,49µm,19.0s						
MLY	Manley	97.87	11	P	P	23 08 32.6	-0.8
	baz=203,SNR=43						
MLY				S	S	23 20 00.4	+4.2
	baz=203						
PIAT	Ana Tenorio	97.88	96	P	Pdif	23 08 38.4	+3.2
	comp=Z,114µmcomp=Z,6µmcomp=Z,43nm,1.9s						
L27K	Beaver Creek,	97.90	16	P	Pdif	23 08 33.9	+0.3
	baz=210,SNR=17						
L27K				S	S	23 20 02.2	+5.7
	baz=210						
DOT	Dot Lake	97.91	15	IAMs_20	IAMs_20	23 48 22.4	
	comp=Z,58µm,21.0s						
BCAR	Beaver Creek A	97.92	16	P	Pdif	23 08 33.9	+0.2
R33M	Jennings River	97.93	22	IAMs_20	IAMs_20	23 45 30.5	
	comp=Z,62µm,21.0s						
R33M	Jennings River	97.93	22	P	Pdif	23 08 34.6	+0.7
	baz=219,SNR=19						
R33M				S	S	23 20 01.4	+4.3
	baz=219						
G19K	Purcell Mounta	97.97	8	P	Pdif	23 08 34.0	+0.3
	baz=198,SNR=20						
G19K				S	S	23 20 02.9	+6.0
	baz=198						
P33M	Teslin, Yukon	97.98	21	IAMs_20	IAMs_20	23 45 28.8	
	comp=Z,49µm,20.0s						
P33M	Teslin, Yukon	97.98	21	P	Pdif	23 08 34.5	+0.4
	baz=217,SNR=9.0						
P33M				S	S	23 20 04.9	+7.5
	baz=217						
HDA	Harding Lake	97.99	13	IAMs_20	IAMs_20	23 54 14.5	
	comp=Z,50µm,20.0s						
HDA	Harding Lake	97.99	13	P	Pdif	23 08 34.1	+0.2
	baz=206,SNR=35						
HDA				S	S	23 20 01.5	+4.4
	baz=206						
LPAZ	La Paz	98.00	114	P	Pdif	23 08 36.6	+0.7
LPAZ				IAmb	IAmb	23 09 01.4	
	comp=Z,251nm,1.6s						
LPAZ	La Paz	98.00	114	P	Pdif	23 08 37.3	+1.3
	comp=Z,9.3nm,0.7s,baz=217,slow=2.7,SNR=18						
LPAZ				PKKP	PKKPdf	23 25 10.3	-0.1
	comp=Z,8.4nm,0.9s,baz=9.4,slow=6.5,SNR=5.9						
LPAZ				LR	LR	23 42 27.9	
	comp=Z,45µm,19.8s,baz=204,slow=29						
	comp=Z,9.3nm,0.7s						
ITQB	Itaqui	98.00	131	P	Pdif	23 08 35.3	+0.3
CCB	Clear Creek Bu	98.04	13	IAMs_20	IAMs_20	23 48 28.8	
	comp=Z,57µm,22.0s						
PAC1	Pacto, Paraso	98.07	95	P	Pdif	23 08 38.0	+2.2
	comp=Z,106µmcomp=Z,5µmcomp=Z,73nm,2.2s						
F18K	Selawik	98.11	7	P	P	23 08 34.0	-0.3
	baz=195						
F18K				S	S	23 20 01.7	+3.7
	baz=195						
H21K	Melozitna Rive	98.11	10	IAMs_20	IAMs_20	23 48 56.6	
	comp=Z,58µm,21.0s						
H21K	Melozitna Rive	98.11	10	P	Pdif	23 08 34.8	+0.3
	baz=201,SNR=20						
H21K				S	S	23 20 03.4	+5.3
	baz=201						
N31M	Braeburn, Yuko	98.13	19	IAMs_20	IAMs_20	23 48 51.7	
	comp=Z,55µm,20.0s						
N31M	Braeburn, Yuko	98.13	19	P	Pdif	23 08 35.3	+0.7
	baz=215						
N31M				S	S	23 20 06.2	+7.7
	baz=215						
SOCE	Pocosol	98.14	83	P	Pdif	23 08 36.8	+0.9
SOCE				IAmb	IAmb	23 09 09.3	
	comp=Z,567nm,2.6s						
K22A	Casper	98.20	45	IAMs_20	IAMs_20	23 55 15.9	
	comp=Z,66µm,18.0s						
M29M	Somme Creek	98.20	17	IAMs_20	IAMs_20	23 48 58.4	
	comp=Z,63µm,21.0s						
M29M	Somme Creek	98.20	17	P	Pdif	23 08 35.1	+0.1
	baz=213,SNR=11						
M29M				S	S	23 20 05.4	+6.1
	baz=213						
I23K	Minto, Yukon-K	98.21	12	P	P	23 08 34.7	-0.1
	baz=204,SNR=19						
I23K				S	S	23 20 03.2	+4.3
	baz=204						
SCRK	Sand Creek	98.21	14	IAMs_20	IAMs_20	23 48 31.4	
	comp=Z,62µm,22.0s						
SCRK	Sand Creek	98.21	14	P	Pdif	23 08 35.1	+0.1
	baz=208						
SCRK				S	S	23 20 06.8	+7.5
	baz=208						
COLA	College	98.24	13	P	P	23 08 34.4	-0.4
COLA	College	98.24	13	IAMs_20	IAMs_20	23 48 45.9	
	comp=Z,69µm,21.0s						
COLA	College	98.24	13	P	Pdif	23 08 35.1	+0.2
COLA	College	98.24	13	*c i*P	P	23 08 34.0	-0.9
COLA				pmax	pmax		
	comp=Z,280nm,2.1s						
COLA				MLR	MLR		
	comp=Z,39µm,18.0s						
COLA	College	98.24	13	P	P	23 08 34.5	-0.4
	baz=205						
COLA				S	S	23 20 05.8	+6.7
	baz=205						
BOAB	BOACO BROADBA	98.27	80	P	Pdif	23 08 37.0	+0.7
BOAB	BOACO BROADBA	98.27	80	P	Pdif	23 08 37.3	+1.0
BOAB				IAmb	IAmb	23 09 02.1	
	comp=Z,534nm,2.2s						
IMAR	Indian Mountai	98.28	10	P	P	23 08 35.0	-0.1
ILAR	Eielson Array	98.33	13	P	P	23 08 34.7	-0.7
ILAR	Eielson Array	98.33	13	P	P	23 08 34.5	-0.9
	comp=Z,14nm,0.8s,baz=222,slow=5.2,SNR=102						
ILAR				PP	PP	23 12 36.0	0.0
	comp=Z,33nm,1.0s,baz=215,slow=8.6,SNR=5.5						
ILAR				PKiKP	PKiKP	23 13 07.3	-0.2
	comp=Z,18nm,0.9s,baz=211,slow=2.9,SNR=9.2						
ILAR				S	SKSac	23 19 11.6	+2.0
	comp=Z,4.2nm,1.0s,baz=206,slow=5.2,SNR=5.5						
ILAR				PKKPbc	PKKPbc	23 25 07.8	-0.8
	comp=Z,4.3nm,0.7s,baz=346,slow=2.5,SNR=6.7						
ILAR				PKPPKP	P'P'df	23 33 22.7	+5.3
	comp=Z,2.0nm,0.9s,baz=328,slow=2.7,SNR=4.5						
ILAR				LR	LR	23 48 44.4	
	comp=Z,15µm,19.1s,baz=210,slow=33						
	comp=Z,14nm,0.8s						
ILAR	Eielson Array	98.33	13	P	P	23 08 34.7	-0.7
LCR2	La Lucha 2	98.34	84	P	Pdif	23 08 38.4	+1.4
OTAV	Otavalo	98.35	95	P	Pdif	23 08 38.0	+0.6
OTAV	Otavalo	98.35	95	IAMs_20	IAMs_20	23 42 37.3	
	comp=Z,71µm,22.0s						
OTAV	Otavalo	98.35	95	P	Pdif	23 08 38.0	+0.6
OTAV				pmax	pmax		
	comp=Z,255nm,2.0s						
OTAV				MLR	MLR		
	comp=Z,71µm,22.0s						
OTAV	Otavalo	98.35	95	P	Pdif	23 08 40.0	+2.6
	comp=Z,103µmcomp=Z,54nm,2.5s						
E17K	Hotham Inlet	98.36	6	P	Pdif	23 08 36.0	+0.6
	baz=194,SNR=30						
E17K				S	S	23 20 05.9	+5.9
	baz=194						
HDC	Heredia	98.38	83	P	Pdif	23 08 37.9	+0.8
HDC				IAmb	IAmb	23 08 58.5	
	comp=Z,417nm,1.7s						
PLTB	Pedras Altas	98.47	135	P	P	23 08 36.7	-0.4
J25K	Salcha River,	98.49	14	IAMs_20	IAMs_20	23 55 34.6	
	comp=Z,46µm,20.0s						
J25K	Salcha River,	98.49	14	P	P	23 08 36.1	-0.1
	baz=207,SNR=47						

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J25K                             S        S        23 20 06.2 +4.7
     baz=207
POKR Poker Plat Res  98.53  13  IAMs_20  IAMs_20  23 48 44.8
POKR Poker Plat Res  98.53  13  P        P        23 08 35.6 -0.7
     baz=206
POKR                             S        S        23 20 05.8 +4.1
     baz=206
F19K Shaleruckik Mo  98.55   8  P        P        23 08 36.2  0.0
     baz=197
F19K                             S        S        23 20 06.7 +5.0
     baz=197
H22K Ishtalitna Cre  98.56  11  P        Pdif     23 08 36.4  0.0
     baz=202,SNR=17
H22K                             S        S        23 20 06.6 +4.7
     baz=202
N32M Quiet Lake      98.65  20  IAMs_20  IAMs_20  23 50 22.5
     comp=Z,58µm,20.0s
N32M Quiet Lake      98.65  20  P        Pdif     23 08 37.4 +0.5
     baz=217
N32M                             S        S        23 20 08.5 +5.6
     baz=217
FW03 Perrin-Whitt E  98.66  57  IAMs_20  IAMs_20  23 50 31.2
     comp=Z,61µm,19.0s
K27K Chicken         98.68  15  IAMs_20  IAMs_20  23 48 23.8
     comp=Z,48µm,20.0s
K27K Chicken         98.68  15  P        Pdif     23 08 38.0 +1.0
     baz=210
K27K                             S        S        23 20 09.5 +6.5
     baz=210
HKT  Hockley         98.72  60  P        Pdif     23 08 38.8 +0.9
HKT  Hockley         98.72  60c iP       Pdif     23 08 39.1 +1.2
HKT                              pmax     pmax
     comp=Z,82nm,2.0s
J26L Joseph Creek    98.76  14  IAMs_20  IAMs_20  23 48 60.0
     comp=Z,69µm,22.0s
J26L Joseph Creek    98.76  14  P        Pdif     23 08 38.1 +0.6
     baz=209,SNR=224
J26L                             S        S        23 20 09.9 +6.1
     baz=209
H23K Yukon River     98.80  11  IAMs_20  IAMs_20  23 51 31.8
     comp=Z,54µm,20.0s
H23K Yukon River     98.80  11  P        P        23 08 37.4 -0.1
     baz=204
E18K Tukpahlearik C  98.81   7  P        Pdif     23 08 38.0 +0.5
     baz=194,SNR=47
G21K Allakaket       98.81  10  IAMs_20  IAMs_20  23 57 49.0
     comp=Z,53µm,19.0s
G21K Allakaket       98.81  10  P        Pdif     23 08 37.7 +0.2
     baz=201,SNR=36
L29M L29M            98.84  17  IAMs_20  IAMs_20  23 49 27.3
     comp=Z,52µm,21.0s
L29M L29M            98.84  17  P        Pdif     23 08 38.4 +0.6
     baz=213,SNR=26
L29M                             S        S        23 20 12.0 +7.5
     baz=213
D17K Noatak River    98.85   6  P        Pdif     23 08 38.0 +0.4
     baz=192,SNR=46
LZH  Lanzhou         98.95 307  eP       Pdif     23 08 39.5 +0.4
LZH                              pP       pP       23 08 46.4 -3.8
LZH                              SKS      SKSac    23 19 12.8 -1.6
LZH                              S        ScS      23 20 07.9 +1.0
LZH                              pmax     pmax
     comp=Z,78nm,1.3s
LZH                              pmax     pmax
     comp=Z,10µm,5.2s
LZH                              LR       LR
     comp=Z,38µm,19.4s
LZH                              LR       LR
     comp=Z,36µm,21.5s
LZH                              LR       LR
     comp=Z,70µm,22.7s
FW14 Alvarado        98.96  58  IAMs_20  IAMs_20  23 50 02.4
     comp=Z,40µm,19.0s
FW06 Azle            98.99  57  IAMs_20  IAMs_20  23 50 16.0
     comp=Z,65µm,19.0s
F20K Avaraart Lake   99.01   9  P        Pdif     23 08 38.6 +0.2
     baz=199,SNR=42
CZSB Cruzeiro do Su  99.04 105  P        Pdif     23 08 40.3 +0.4
H24K Noodor Dome     99.10  12  P        Pdif     23 08 37.7 -1.2
     baz=205
M31M Drury Creek, Y  99.10  19  IAMs_20  IAMs_20  23 49 51.5
     comp=Z,58µm,20.0s
M31M Drury Creek, Y  99.10  19  P        Pdif     23 08 39.3 +0.3
     baz=216
WTLY Watson Lake, Y  99.19  23  IAMs_20  IAMs_20  23 46 21.9
     comp=Z,57µm,21.0s
WTLY Watson Lake, Y  99.19  23  P        Pdif     23 08 40.4 +1.0
     baz=221
RDOG Red Dog Mine    99.21   6  P        Pdif     23 08 39.7 +0.4
RDOG Red Dog Mine    99.21   6  P        Pdif     23 08 39.9 +0.7
     baz=193
E19K Redstone River  99.21   8  IAMs_20  IAMs_20  23 56 04.5
     comp=Z,45µm,20.0s
E19K Redstone River  99.21   8  P        Pdif     23 08 39.5 +0.2
     baz=197,SNR=54
C16K Lisburne Hills  99.23   5  IAMs_20  IAMs_20  23 49 14.9
     comp=Z,46µm,20.0s
C16K Lisburne Hills  99.23   5  P        Pdif     23 08 39.6 +0.3
     baz=190,SNR=5.5
BILL Bilibino        99.25 354  P        Pdif     23 08 38.7 -0.7
BILL                             IAMs_20  IAMs_20  23 51 57.2
     comp=Z,50µm,21.0s
BILL Bilibino        99.25 354c eP       Pdif     23 08 38.8 -0.6
BILL                             pmax     pmax
     comp=Z,115nm,1.5s
PRP  Porcupine Dome  99.26  13  P        Pdif     23 08 39.6 -0.1
     baz=207,SNR=43
DAWY Dawson          99.33  16  P        Pdif     23 08 40.3 +0.4
     baz=212,SNR=14
Z35A Perchaven, San  99.39  57  IAMs_20  IAMs_20  23 50 37.6
     comp=Z,57µm,18.0s
FARO Faro, Yukon     99.42  20  IAMs_20  IAMs_20  23 51 23.8
     comp=Z,66µm,19.0s
FARO Faro, Yukon     99.42  20  P        Pdif     23 08 40.8 +0.4
     baz=217
EGMT Eagleton        99.43  39  P        Pdif     23 08 40.6 -0.3
EGMT                             IAMs_20  IAMs_20  23 50 42.9
     comp=Z,56µm,19.0s
F21K Alatna River    99.48   9  IAMs_20  IAMs_20  23 56 00.6
     comp=Z,54µm,20.0s
F21K Alatna River    99.48   9  P        Pdif     23 08 40.4 -0.1
     baz=201,SNR=20
G22K Bettles         99.49  10  P        Pdif     23 08 40.8 +0.4
     baz=202
TOAD Toad River Com  99.49  25  P        Pdif     23 08 41.4 +0.6
     baz=223
G23K Bananza Creek   99.53  11  IAMs_20  IAMs_20  23 50 15.0
     comp=Z,67µm,21.0s
G23K Bananza Creek   99.53  11  P        Pdif     23 08 41.2 +0.5
     baz=204,SNR=21
I26K Coal Creek Min  99.55  14  IAMs_20  IAMs_20  23 49 22.8
     comp=Z,55µm,21.0s
I26K Coal Creek Min  99.55  14  P        Pdif     23 08 41.2 +0.4
     baz=209,SNR=30
LIRD Liard River Hi  99.59  24  P        Pdif     23 08 41.6 +0.5
     baz=223
C17K DeLong Mountai  99.60   6  P        Pdif     23 08 41.4 +0.4
     baz=192,SNR=6.8
K29M Barlow Dome     99.61  17  IAMs_20  IAMs_20  23 48 27.5
     comp=Z,54µm,21.0s
K29M Barlow Dome     99.61  17  P        Pdif     23 08 41.9 +0.6
     baz=214,SNR=33
X34A Smith Ranch, M  99.62  56  IAMs_20  IAMs_20  23 53 15.6
     comp=Z,61µm,18.0s
CPUP Villa Florida   99.75 128  Pdif     Pdif     23 08 43.1 +0.3
CPUP Villa Florida   99.75 128  P        Pdif     23 08 44.1 +1.3
     comp=Z,7.2nm,1.1s,baz=314,slow=5.6,SNR=14
CPUP                             PKiKP    PKiKP    23 13 11.6 +0.2
     comp=Z,3.3nm,1.0s,baz=142,slow=3.9,SNR=2.9
CPUP                             PKKPbc   PKKPbc   23 25 01.6 -1.0
     comp=Z,5.3nm,0.9s,baz=90,slow=2.4,SNR=8.4
CPUP                             PKPPKP   P'P'df   23 33 19.9 -3.4
     comp=Z,2.0nm,1.0s,baz=72,slow=2.5,SNR=4.8
CPUP                             LR       LR       23 45 55.1
     comp=Z,20µm,21.3s,baz=90,slow=30
     comp=Z,7.2nm,1.1s
MAYO Mayo, Yukon     99.82  18  IAMs_20  IAMs_20  23 49 57.2
     comp=Z,65µm,20.0s
MAYO Mayo, Yukon     99.82  18  P        Pdif     23 08 42.1  0.0
     baz=215
H25L Birch Creek     99.87  13  P        Pdif     23 08 42.3 +0.1
     baz=207
F22K John River      99.93  10  P        Pdif     23 08 42.8 +0.2
     baz=202,SNR=23
C18K Utukok River    99.94   6  IAMs_20  IAMs_20  23 50 53.8
     comp=Z,66µm,21.0s
C18K Utukok River    99.94   6  P        Pdif     23 08 43.0 +0.5
     baz=194
J29N Klondike Camp   99.94  16  P        Pdif     23 08 43.7 +1.0
     baz=213
G24K Hadweenzic Riv  99.95  12  P        Pdif     23 08 42.7 +0.1
     baz=206,SNR=12
COLD Coldfoot        99.97  11  IAMs_20  IAMs_20  23 54 12.8
     comp=Z,41µm,19.0s
COLD Coldfoot        99.97  11  P        Pdif     23 08 43.7 +1.0
     baz=204,SNR=9.0
OGNE Ogallala       100.08  48  IAMs_20  IAMs_20  23 56 56.8
     comp=Z,42µm,18.0s
E20K Nigu River     100.10   8  P        Pdif     23 08 43.8 +0.5
     baz=198
D19K Kuna River     100.10   7  IAMs_20  IAMs_20  23 58 58.0
     comp=Z,47µm,21.0s
D19K Kuna River     100.10   7  P        Pdif     23 08 43.6 +0.3
     baz=197,SNR=15
I27K Kandik River   100.14  15  P        Pdif     23 08 43.8 +0.3
     baz=211,SNR=26
G25K Bearman Lake   100.26  12  P        Pdif     23 08 44.4 +0.5
     baz=207
FNO  Franklin       100.26  55  IAMs_20  IAMs_20  23 54 04.5
     comp=Z,43µm,18.0s
MMPY Sheldon Lake,  100.33  20  IAMs_20  IAMs_20  23 51 43.9
     comp=Z,63µm,19.0s
MMPY Sheldon Lake,  100.33  20  P        Pdif     23 08 44.9 +0.5
     baz=219
I28M Miner Creek    100.37  15  IAMs_20  IAMs_20  23 49 37.6
     comp=Z,60µm,21.0s
I28M Miner Creek    100.37  15  P        Pdif     23 08 44.6  0.0
     baz=212,SNR=22
TGTN Hyland Airport 100.42  22  P        Pdif     23 08 45.7 +0.8
     baz=221
D20K Etivluk River  100.48   8  P        Pdif     23 08 45.2 +0.3
     baz=198,SNR=38
BEAVL Fort Liard    100.51  24  P        Pdif     23 08 46.0 +0.8
     baz=224
J30M Hart River     100.51  17  IAMs_20  IAMs_20  23 52 16.3
     comp=Z,58µm,20.0s
J30M Hart River     100.51  17  P        Pdif     23 08 45.3  0.0
     baz=215,SNR=21
RSSD Black Hills    100.52  45  IAMs_20  IAMs_20  23 56 58.3
     comp=Z,58µm,18.0s
C19K Lookout Ridge  100.54   7  IAMs_20  IAMs_20  23 56 55.5
     comp=Z,56µm,19.0s
C19K Lookout Ridge  100.54   7  P        Pdif     23 08 45.8 +0.6
     baz=196,SNR=26
E21K Killik River   100.55   9  P        Pdif     23 08 45.5 +0.2
     baz=200,SNR=12
E22K Anaktuvuk Pass 100.57  10  IAMs_20  IAMs_20  23 58 44.7
     comp=Z,50µm,20.0s
E22K Anaktuvuk Pass 100.57  10  P        Pdif     23 08 45.9 +0.5
     baz=202
B18K Kokolik River  100.58   6  P        Pdif     23 08 46.0 +0.6
     baz=194,SNR=15
F24K Squaw Lake     100.62  11  P        Pdif     23 08 46.5 +0.9
     baz=206,SNR=33
I29M Ogilvie Camp,  100.67  16  IAMs_20  IAMs_20  23 49 34.9
     comp=Z,48µm,22.0s
I29M Ogilvie Camp,  100.67  16  P        Pdif     23 08 46.6 +0.8
     baz=213
H27K Steamboat Moun 100.69  14  IAMs_20  IAMs_20  23 50 10.0
     comp=Z,52µm,21.0s
H27K Steamboat Moun 100.69  14  P        Pdif     23 08 46.5 +0.6
     baz=211,SNR=42
E23K Chandalar      100.83  10  IAMs_20  IAMs_20  23 54 03.3
     comp=Z,55µm,20.0s
E23K Chandalar      100.83  10  P        Pdif     23 08 47.5 +1.0
     baz=204,SNR=43
KOTAN Kotaneelee Air 100.83 24  P        Pdif     23 08 47.4 +0.8
     baz=224
G26K Porcupine Rive 100.86  13  P        Pdif     23 08 47.2 +0.7
     baz=209
E24K Your Creek     101.02  11  P        Pdif     23 08 48.2 +0.8
     baz=205
I30M Mount Dempster 101.02  17  IAMs_20  IAMs_20  23 46 25.9
     comp=Z,54µm,22.0s
I30M Mount Dempster 101.02  17  P        Pdif     23 08 47.6 +0.1
     baz=215,SNR=23
POPC Popayan, Colom 101.05  94  P        Pdif     23 08 51.0 +1.9
     comp=Z,84µmcomp=Z,4µmcomp=Z,29nm,1.9s
F25K Christian Rive 101.08  12  P        Pdif     23 08 48.5 +0.9
     baz=207,SNR=19
C21K Knifeblade Rid 101.12   8  P        Pdif     23 08 48.7 +1.0
     baz=200,SNR=33
BMAR Burnt Mountain 101.13  13           Pdif     23 08 48.5 +0.7
D22K Ayikyak River  101.14   9  IAMs_20  IAMs_20  23 57 30.4
     comp=Z,47µm,20.0s
D22K Ayikyak River  101.14   9  P        Pdif     23 08 48.6 +0.8
     baz=202,SNR=25
G27K Doyon Strip    101.16  14  IAMs_20  IAMs_20  23 50 35.4
     comp=Z,56µm,21.0s
G27K Doyon Strip    101.16  14  P        Pdif     23 08 48.7 +0.7
     baz=211,SNR=12
TOLK Toolik Lake Re 101.37  10  IAMs_20  IAMs_20  23 55 08.5
     comp=Z,45µm,20.0s
TOLK Toolik Lake Re 101.37  10  P        Pdif     23 08 48.9  0.0
     baz=204,SNR=16
H29M Whitestone     101.38  15  IAMs_20  IAMs_20  23 50 08.1
     comp=Z,51µm,22.0s
H29M Whitestone     101.38  15  P        Pdif     23 08 49.4 +0.4
     baz=213,SNR=17
F26K Sheenjek River 101.44  13  IAMs_20  IAMs_20  23 50 33.7
     comp=Z,59µm,21.0s
F26K Sheenjek River 101.44  13  P        Pdif     23 08 50.7 +1.5
     baz=209,SNR=24
A19K Wainwright     101.46   6  P        Pdif     23 08 50.2 +1.0
     baz=194
D23K Nanushuk River 101.50  10  IAMs_20  IAMs_20  23 59 46.0
     comp=Z,49µm,20.0s
D23K Nanushuk River 101.50  10  P        Pdif     23 08 50.3 +0.9
     baz=203,SNR=29
E25K Arctic Village 101.56  12  P        Pdif     23 08 51.1 +1.3
     baz=208,SNR=24
B21K Ikpikpuk River 101.58   8  IAMs_20  IAMs_20  23 53 50.1
     comp=Z,61µm,21.0s
B21K Ikpikpuk River 101.58   8  P        Pdif     23 08 50.6 +0.9
     baz=200
YAK  Yakutsk        101.62 338  eP       Pdif     23 08 49.6 -0.4
YAK                              e                 23 12 56.9
YAK                              ePPP     PPP      23 15 09.0
YAK                              eS       SKSac    23 19 29.1 +3.3
YAK                              eSS      SS       23 27 44.5  +13
YAK                              pmax     pmax
     comp=Z,56nm,1.1s
YAK                              pmax     pmax
     comp=N,10.0nm,1.1s
YAK                              pmax     pmax
     comp=E,16nm,2.2s
YAK                              pmax     pmax
     comp=Z,3µm,4.0s
YAK                              pmax     pmax
     comp=E,771nm,4.4s
YAK                              pmax     pmax
     comp=N,785nm,3.8s
YAK                              smax     smax
     comp=N,912nm,5.5s
YAK                              smax     smax
     comp=E,253nm,3.3s
B20K Meade River    101.66   7  IAMs_20  IAMs_20  23 57 42.0
     comp=Z,42µm,20.0s
B20K Meade River    101.66   7  P        Pdif     23 08 50.8 +0.7
     baz=198,SNR=24
CIT  Chita          101.84 324  eP       Pdif     23 08 54.2 +2.8
CIT                              pmax     pmax
     comp=Z,217nm,4.0s
EPYK Eagle Plains   101.88  16  P        Pdif     23 08 51.6 +0.3
     baz=215
D24K Happy Valley   101.95  10  IAMs_20  IAMs_20  23 53 37.9
     comp=Z,53µm,20.0s
D24K Happy Valley   101.95  10  P        Pdif     23 08 52.4 +1.0
     baz=205
H31M Peel River     102.00  17  IAMs_20  IAMs_20  23 53 22.7
     comp=Z,45µm,20.0s
H31M Peel River     102.00  17  P        Pdif     23 08 52.3 +0.5
     baz=217
G29M Pine Creek     102.03  15  IAMs_20  IAMs_20  23 50 49.3
     comp=Z,64µm,22.0s
G29M Pine Creek     102.03  15  P        Pdif     23 08 52.7 +0.9
     baz=214,SNR=16
F28M Old Crow       102.22  14  IAMs_20  IAMs_20  23 50 17.2
     comp=Z,65µm,21.0s
F28M Old Crow       102.22  14  P        Pdif     23 08 53.1 +0.4
     baz=212,SNR=30
C23K Itkillik River 102.31   9  IAMs_20  IAMs_20  23 52 03.4
     comp=Z,52µm,21.0s
C23K Itkillik River 102.31   9  P        Pdif     23 08 53.5 +0.5
     baz=203,SNR=33
E27K Coleen River   102.36  13  P        Pdif     23 08 54.2 +0.9
     baz=211,SNR=17
B22K Teshekpuk Lake 102.40   8  IAMs_20  IAMs_20  23 54 35.9
     comp=Z,58µm,22.0s
B22K Teshekpuk Lake 102.40   8  P        Pdif     23 08 53.7 +0.3
     baz=201
C24K Franklin Bluff 102.48  10  IAMs_20  IAMs_20  00 00 17.2
     comp=Z,57µm,20.0s
C24K Franklin Bluff 102.48  10  P        Pdif     23 08 54.5 +0.7
     baz=205
D25K Kavik River    102.49  11  P        Pdif     23 08 54.3 +0.4
     baz=207
G30M tAoh Zraii Nji 102.49  16  P        Pdif     23 08 54.0  0.0
     baz=215,SNR=22
WLAR White Oak Lake 102.58  58  IAMs_20  IAMs_20  23 56 40.1
     comp=Z,51µm,18.0s
DGMT Dagmar         102.76  41  IAMs_20  IAMs_20  23 59 03.2
     comp=Z,48µm,18.0s
A22K Sinclair Lake  102.84   8  P        Pdif     23 08 56.0 +0.7
     baz=200
G31M Satah River    102.91  16  IAMs_20  IAMs_20  23 54 38.7
     comp=Z,42µm,19.0s
G31M Satah River    102.91  16  P        Pdif     23 08 56.2 +0.6
     baz=217
A21K Barrow         102.97   7  P        Pdif     23 08 56.2 +0.4
     baz=198
U38A Gravette       102.97  55  IAMs_20  IAMs_20  23 53 19.3
     comp=Z,38µm,19.0s
ULN  Ulaanbaatar    103.07 318  P        Pdif     23 08 57.0 -0.1
ULN  Ulaanbaatar    103.07 318  P        Pdif     23 08 56.5 -0.6
F30M Barrier River  103.10  15  IAMs_20  IAMs_20  23 51 11.8
     comp=Z,56µm,22.0s
F30M Barrier River  103.10  15  P        Pdif     23 08 57.0 +0.4
     baz=216
E28M Babbage River  103.12  14  IAMs_20  IAMs_20  23 51 55.1
     comp=Z,44µm,20.0s
E28M Babbage River  103.12  14  P        Pdif     23 08 57.4 +0.8
     baz=213,SNR=34
C27K Jago River     103.21  12  IAMs_20  IAMs_20  23 51 24.3
     comp=Z,63µm,21.0s
C27K Jago River     103.21  12  P        Pdif     23 08 57.6 +0.6
     baz=209
WRGLY Wrigley       103.21  22  IAMs_20  IAMs_20  23 48 36.1
     comp=Z,52µm,21.0s
WRGLY Wrigley       103.21  22  P        Pdif     23 08 57.3 +0.2
     baz=225
HHAR Hobbs          103.22  56  IAMs_20  IAMs_20  23 56 51.7
     comp=Z,42µm,18.0s
C26K Camden Bay     103.26  11  P        Pdif     23 08 58.1 +0.9
     baz=208
E29M Blow River     103.28  14  IAMs_20  IAMs_20  23 51 41.3
     comp=Z,67µm,20.0s
E29M Blow River     103.28  14  P        Pdif     23 08 57.5 +0.2
     baz=214
CBOC Ciudad Bolivar 103.29  91  P        Pdif     23 09 03.6 +4.7
PALK Pallekele      103.35 271  P        Pdif     23 08 58.1 -1.0
PALK Pallekele      103.35 271  P        Pdif     23 09 02.2 +3.1
D27M Malcolm River  103.38  13  IAMs_20  IAMs_20  23 59 26.9
     comp=Z,47µm,20.0s
D27M Malcolm River  103.38  13  P        Pdif     23 08 58.6 +0.7
     baz=212
SONM Songino Array  103.43 318  Pdiff    Pdif     23 08 59.8 +1.1
     comp=Z,9.8nm,0.9s,baz=152,slow=6.6,SNR=4.3
SONM                             PP       PP       23 13 14.3 -1.0
     comp=Z,22nm,1.0s,baz=130,slow=6.0,SNR=5.0
SONM                             PKKPbc   PKKPbc   23 24 53.9 +0.6
     comp=Z,15nm,1.0s,baz=270,slow=2.6,SNR=4.9
SONM                             PKPPKP            23 33 18.0
     comp=Z,2.3nm,0.4s,baz=336,slow=3.2,SNR=3.6
F31M Tsiigehtchic   103.44  16  IAMs_20  IAMs_20  00 01 14.9
     comp=Z,45µm,20.0s
F31M Tsiigehtchic   103.44  16  P        Pdif     23 08 58.7 +0.7
     baz=218
CCAR Cane Creek     103.67  59  IAMs_20  IAMs_20  23 53 15.0
     comp=Z,52µm,18.0s
D28M Stokes Point   103.88  13  P        Pdif     23 09 00.2 +0.3
     baz=214
WHAR Wooly Hollow   103.93  57  IAMs_20  IAMs_20  23 53 32.9
     comp=Z,47µm,18.0s
MALK Mahakanadarawa 104.04 271  P        Pdif     23 09 02.1  0.0
INK  Inuvik         104.18  16  IAMs_20  IAMs_20  23 55 03.2
     comp=Z,41µm,20.0s
INK  Inuvik         104.18  16  P        Pdif     23 09 01.5 +0.2
     baz=218
ROSC El Rosal       104.23  93  Pdiff    Pdif     23 09 07.6 +4.2
     comp=Z,4.6nm,0.5s,baz=249,slow=22,SNR=4.6
ROSC                             PP       PP       23 13 23.3 +1.3
     comp=Z,3.7nm,0.3s,baz=203,slow=12,SNR=3.7
ROSC                             PKKPbc   PKKPbc   23 24 50.4 +0.4
     comp=Z,12nm,0.5s,baz=80,slow=11,SNR=4.9
S39A Bolivar        104.31  55  IAMs_20  IAMs_20  23 56 31.0
     comp=Z,41µm,18.0s
FCAR Ozark Folk Cen 104.33  57  IAMs_20  IAMs_20  23 50 58.3
     comp=Z,56µm,20.0s
MGMO Mountain Grove 104.81  56  IAMs_20  IAMs_20  23 54 24.9
     comp=Z,48µm,18.0s
ECSD EROS Data Cent 104.95  48  IAMs_20  IAMs_20  23 58 52.7
     comp=Z,42µm,18.0s
MDND Maddock        105.09  43  IAMs_20  IAMs_20  23 59 07.0
     comp=Z,47µm,18.0s
LSA  Lhasa          105.19 296  IAMs_20  IAMs_20  00 05 58.6
     comp=Z,65µm,21.0s
LSA  Lhasa          105.19 296  P        Pdif     23 09 07.3 -0.1
LSA  Lhasa          105.19 296  P        Pdif     23 09 07.3 -0.1
R40A Maddies Statio 105.33  54  IAMs_20  IAMs_20  23 59 48.6
     comp=Z,47µm,18.0s
GOMU GeErMu         105.38 303  Pdif     Pdif     23 09 08.8 +0.9
GOMU                             PP       PP       23 13 28.8 -1.5
GOMU                             SKS      SKSac    23 19 42.3 -3.0
GOMU                             AMB      AMB
     comp=Z,31µm,7.4s
GOMU                             LR       LR
     comp=Z,25µm,18.6s
GOMU                             LR       LR
     comp=Z,23µm,18.4s
GOMU                             LR       LR
     comp=Z,44µm,18.5s
T42A Van Buren      105.59  56  IAMs_20  IAMs_20  23 58 07.6
     comp=Z,56µm,18.0s
OXF  Oxford         105.68  59  IAMs_20  IAMs_20  23 54 28.3
     comp=Z,49µm,19.0s
YKA  Yellowknife Ar 105.82  26  Pdiff    Pdif     23 09 09.3 +0.6
     comp=Z,2.2nm,0.9s,baz=249,slow=4.1,SNR=14
YKA                              PKiKP    PKiKP    23 13 21.2 +0.1
     comp=Z,5.0nm,0.6s,baz=266,slow=2.1,SNR=29
YKA                              PKKPbc   PKKPbc   23 24 43.0 -3.4
     comp=Z,24nm,0.8s,baz=27,slow=3.0,SNR=17
YKA                              PKPPKP   P'P'df   23 33 10.0 +6.1
     comp=Z,4.7nm,0.9s,baz=26,slow=2.3,SNR=9.7
CCM  Cathedral Cave 105.94  55  IAMs_20  IAMs_20  23 57 40.9
     comp=Z,39µm,18.0s
PBMO Poplar Bluff   105.95  57  IAMs_20  IAMs_20  23 51 47.3
     comp=Z,59µm,20.0s
F33A 5 Mile Ranch,  106.14  46  IAMs_20  IAMs_20  00 01 33.0
     comp=Z,38µm,19.0s
PVMO Portageville   106.31  57  IAMs_20  IAMs_20  23 54 46.0
     comp=Z,49µm,18.0s
LNXT Lenox          106.33  58  IAMs_20  IAMs_20  23 54 57.3
     comp=Z,35µm,19.0s
PARMO Parma         106.39  57  IAMs_20  IAMs_20  23 54 47.9
     comp=Z,53µm,18.0s
ZAK  Zakamensk      106.47 319  eP       Pdif     23 09 10.4 -1.7
ZAK                              pmax     pmax
     comp=Z,14nm,1.8s
FVM  French Village 106.49  55  IAMs_20  IAMs_20  23 57 48.3
     comp=Z,48µm,18.0s
GLAT Glass          106.55  57  IAMs_20  IAMs_20  23 55 12.2
     comp=Z,42µm,19.0s
HICK Hickman        106.71  57  IAMs_20  IAMs_20  23 59 01.5
     comp=Z,47µm,18.0s
CGM3 Cape Girardeau 106.73  56  IAMs_20  IAMs_20  23 57 54.0
     comp=Z,46µm,18.0s
IRK  Irkutsk        106.81 321  eP       Pdif     23 09 17.2 +3.8
IRK                              pmax     pmax
     comp=Z,46nm,2.3s
PLAL Pickwick Lake  106.87  59  IAMs_20  IAMs_20  23 59 31.9
     comp=Z,49µm,18.0s
UTMT University of  106.89  58  IAMs_20  IAMs_20  23 54 55.3
     comp=Z,43µm,20.0s
SLM  Saint Louis    106.91  55  IAMs_20  IAMs_20  00 03 08.5
     comp=Z,36µm,19.0s
FFC  Flin Flon      107.14  36  IAMs_20  IAMs_20  23 55 29.5
     comp=Z,37µm,19.0s
S44A Carbondale     107.20  56  IAMs_20  IAMs_20  23 59 15.2
     comp=Z,52µm,18.0s
SIUC Southern Illin 107.23  56  IAMs_20  IAMs_20  23 59 15.1
     comp=Z,54µm,19.0s
C36M Paulatuk       107.27  17  IAMs_20  IAMs_20  23 54 27.0
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	comp=Z,51µm,21.0s						
C36M	**Paulatuk**	**107.27**	**17**	P	**PKiKP**	**23 13 23.0**	**-0.7**
	baz=226						
T45A	**Paducah**	**107.34**	**57**	IAMs_20	IAMs_20	23 59 30.1	
	comp=Z,51µm,19.0s						
WVT	**Waverly**	**107.55**	**58**	IAMs_20	IAMs_20	00 00 26.7	
	comp=Z,42µm,19.0s						
P43A	**Skaggs, Pawnee**	**107.85**	**54**	IAMs_20	IAMs_20	00 00 27.2	
	comp=Z,44µm,18.0s						
Q44A	**Meyer Farm, Va**	**107.89**	**55**	IAMs_20	IAMs_20	23 56 28.3	
	comp=Z,40µm,20.0s						
MTDJ	**Mount Denham**	**107.90**	**79**	IAMs_20	IAMs_20	23 47 30.8	
	comp=Z,68µm,22.0s						
V48A	**Smith Brothers**	**108.12**	**59**	IAMs_20	IAMs_20	23 59 51.0	
	comp=Z,54µm,18.0s						
MOY	**Mondy**	**108.34**	**320**	*e*P	**Pdif**	**23 09 18.8**	**-1.6**
ULM	**Lac du Bonnet**	**108.38**	**42**	Pdiff	**Pdif**	**23 09 22.5**	**+2.1**
	comp=Z,4.6nm,1.0s,baz=258,slow=4.5,SNR=4.2						
ULM				PKiKP	**PKiKP**	**23 13 25.4**	**-0.9**
	comp=Z,20nm,1.0s,baz=253,slow=4.4,SNR=9.4						
ULM				PKKPbc	**PKKPbc**	**23 24 37.1**	**-0.7**
	comp=Z,8.4nm,0.6s,baz=85,slow=5.6,SNR=4.6						
ULM				PKPPKP	**P'P'df**	**23 33 04.0**	**+3.5**
	comp=Z,4.6nm,0.9s,baz=14,slow=1.6,SNR=3.9						
T47A	**Sharon Grove**	**108.44**	**58**	IAMs_20	IAMs_20	23 56 02.3	
	comp=Z,41µm,20.0s						
USIN	**University of**	**108.45**	**56**	IAMs_20	IAMs_20	00 00 03.4	
	comp=Z,49µm,18.0s						
OLIL	**Olney**	**108.46**	**56**	IAMs_20	IAMs_20	23 54 50.6	
	comp=Z,41µm,20.0s						
SWET	**Sewanee**	**108.56**	**60**	IAMs_20	IAMs_20	23 52 59.6	
	comp=Z,41µm,21.0s						
L42A	**Oliver, Polo**	**108.75**	**52**	IAMs_20	IAMs_20	00 00 55.7	
	comp=Z,45µm,18.0s						
A36M	**Sachs Harbour**	**108.81**	**15**	IAMs_20	IAMs_20	23 56 18.5	
	comp=Z,39µm,21.0s						
A36M	**Sachs Harbour**	**108.81**	**15**	P	**PKiKP**	**23 13 25.6**	**-0.9**
	baz=226						
W50A	**Signal Mountai**	**109.01**	**60**	IAMs_20	IAMs_20	00 00 34.7	
	comp=Z,44µm,18.0s						
EPLO	**Experimental L**	**109.39**	**43**	IAMs_20	IAMs_20	23 58 18.6	
	comp=Z,43µm,19.0s						
E38A	**The Farm, Brul**	**109.43**	**47**	IAMs_20	IAMs_20	00 01 22.2	
	comp=Z,41µm,19.0s						
P46A	**Rosedale**	**109.46**	**55**	IAMs_20	IAMs_20	23 59 32.0	
	comp=Z,48µm,18.0s						
WCI	**Wyandotte Cave**	**109.54**	**57**	IAMs_20	IAMs_20	23 56 45.4	
	comp=Z,53µm,19.0s						
CHIV	**Chivirico**	**109.63**	**78**	IAMs_20	IAMs_20	23 52 01.6	
	comp=Z,21µm,22.0s						
CPCT	**Cooper Cave**	**109.70**	**60**	IAMs_20	IAMs_20	23 54 04.0	
	comp=Z,43µm,21.0s						
G40A	**Rib Lake**	**109.74**	**49**	IAMs_20	IAMs_20	23 55 48.7	
	comp=Z,35µm,20.0s						
BLO	**Bloomington**	**109.76**	**56**	IAMs_20	IAMs_20	23 57 11.1	
	comp=Z,49µm,19.0s						
SFIN	**Lafayette**	**109.85**	**54**	IAMs_20	IAMs_20	00 00 26.1	
	comp=Z,41µm,18.0s						
K43A	**Burlington**	**109.94**	**52**	IAMs_20	IAMs_20	00 01 42.2	
	comp=Z,44µm,18.0s						
L44A	**Lake County Fo**	**110.01**	**52**	IAMs_20	IAMs_20	00 02 00.2	
	comp=Z,36µm,18.0s						
EYMN	**Ely**	**110.01**	**46**	IAMs_20	IAMs_20	23 54 50.5	
	comp=Z,40µm,21.0s						
HYB	**Hyderabad**	**110.02**	**279**	*e*pPdif	**pPdif**	**23 09 36.6**	**-3.1**
HYB				IVmB_BB		23 09 43.2	
	comp=E,458nm,13.0s						
HYB				*e*PP	**PP**	**23 14 03.6**	**-0.5**
HYB				*e*SP	SP	23 23 27.3	-1.7
HYB				*e*PS	**PS**	**23 23 32.9**	**-0.7**
HYB				IVMs_BB	IVMs_BB	23 30 34.7	
	comp=E,24µm,30.7s						
HYB				IAMs_20	IAMs_20	23 30 41.0	
	comp=E,123µm,31.2s						
HYB				IVMs_BB	IVMs_BB	00 01 13.7	
	comp=Z,40µm,19.5s						
R49A	**Shelbyville**	**110.38**	**57**	IAMs_20	IAMs_20	23 57 21.5	
	comp=Z,46µm,20.0s						
P48A	**Milroy**	**110.66**	**56**	IAMs_20	IAMs_20	23 57 55.8	
	comp=Z,50µm,19.0s						
COWI	**Conover**	**110.76**	**48**	IAMs_20	IAMs_20	23 58 17.5	
	comp=Z,40µm,20.0s						
TZTN	**Tazewell**	**110.87**	**59**	IAMs_20	IAMs_20	00 01 27.7	
	comp=Z,46µm,18.0s						
R50A	**Paris**	**110.98**	**57**	IAMs_20	IAMs_20	00 01 51.5	
	comp=Z,45µm,19.0s						
N47A	**Urbana**	**111.03**	**54**	IAMs_20	IAMs_20	00 00 38.3	
	comp=Z,38µm,18.0s						
L46A	**Eue Claire**	**111.05**	**53**	IAMs_20	IAMs_20	00 08 39.8	
	comp=Z,38µm,18.0s						
V53A	**Saluda**	**111.07**	**60**	IAMs_20	IAMs_20	23 58 32.2	
	comp=Z,39µm,19.0s						
NMDO	**Nuevo Mundo**	**111.09**	**78**	IAMs_20	IAMs_20	23 50 38.4	
	comp=Z,30µm,22.0s						
O48B	**Farmland**	**111.16**	**55**	IAMs_20	IAMs_20	00 00 43.0	
	comp=Z,52µm,18.0s						
TRIS	**Tristan da Cun**	**111.16**	**168**	IAMs_20	IAMs_20	23 58 39.4	
	comp=Z,59µm,20.0s						
F42A	**Maple Grove Fa**	**111.27**	**49**	IAMs_20	IAMs_20	23 59 17.1	
	comp=Z,38µm,19.0s						
TBO	**Thunder Bay**	**111.57**	**45**	IAMs_20	IAMs_20	00 03 02.7	
	comp=Z,53µm,20.0s						
O49A	**Covington**	**111.72**	**55**	IAMs_20	IAMs_20	23 58 47.7	
	comp=Z,51µm,20.0s						
I45A	**Fountain**	**111.86**	**51**	IAMs_20	IAMs_20	00 02 53.1	
	comp=Z,40µm,19.0s						
Q51A	**Peebles**	**111.98**	**57**	IAMs_20	IAMs_20	00 02 04.9	
	comp=Z,44µm,18.0s						
N49A	**Columbus Grove**	**112.10**	**55**	IAMs_20	IAMs_20	00 02 59.8	
	comp=Z,49µm,18.0s						
U54A	**Nelsons Funny**	**112.14**	**60**	IAMs_20	IAMs_20	00 02 19.5	
	comp=Z,43µm,18.0s						
VOI	**Vohitsoka**	**112.19**	**225**	P	**PKiKP**	**23 13 35.1**	**+0.4**
VOI	**Vohitsoka**	**112.19**	**225**	P	**Pdif**	**23 09 37.0**	**-1.4**
V55A	**Taylorsville**	**112.34**	**61**	IAMs_20	IAMs_20	23 59 12.8	
	comp=Z,41µm,19.0s						
P51A	**Williamsport**	**112.36**	**56**	IAMs_20	IAMs_20	23 58 23.8	
	comp=Z,51µm,20.0s						
ACSO	**Alum Creek Sta**	**112.69**	**56**	IAMs_20	IAMs_20	23 55 48.6	
	comp=Z,48µm,20.0s						
Q52A	**Bidwell**	**112.73**	**57**	IAMs_20	IAMs_20	00 02 46.9	
	comp=Z,43µm,18.0s						
AKL	**Akola**	**112.77**	**281**	*e*P	PKiKP	23 13 46.0	+10
FCC	**Fort Churchill**	**112.81**	**34**	IAMs_20	IAMs_20	23 53 20.0	
	comp=Z,46µm,21.0s						
AAM	**Ann Arbor**	**112.98**	**53**	IAMs_20	IAMs_20	00 06 09.8	
	comp=Z,36µm,18.0s						
M50A	**Fremont**	**113.08**	**55**	IAMs_20	IAMs_20	00 01 34.7	
	comp=Z,49µm,18.0s						
P52A	**Corning**	**113.08**	**57**	IAMs_20	IAMs_20	23 59 03.9	
	comp=Z,44µm,19.0s						
U56A	**King**	**113.15**	**60**	IAMs_20	IAMs_20	00 03 12.2	
	comp=Z,45µm,18.0s						
GLMI	**Grayling**	**113.23**	**51**	IAMs_20	IAMs_20	00 06 27.2	
	comp=Z,36µm,19.0s						
BDFB	**Brasilia**	**113.35**	**127**	Pdiff	**Pdif**	**23 09 50.2**	**+6.6**
	comp=Z,1.6nm,0.7s,baz=172,slow=11,SNR=3.2						
BDFB				PKiKP	**PKiKP**	**23 13 37.8**	**+0.8**
	comp=Z,18nm,0.9s,baz=208,slow=3.6,SNR=12						
BDFB				PKKPbc	**PKKPbc**	**23 24 21.4**	**+0.5**
	comp=Z,18nm,0.9s,baz=68,slow=3.4,SNR=9.9						
BLA	**Blacksburg**	**113.44**	**60**	IAMs_20	IAMs_20	00 06 20.8	
	comp=Z,33µm,19.0s						
WMQ	**Urumqi**	**113.46**	**308**	*e*PKP	**PKiKP**	**23 13 36.0**	**-0.2**
WMQ				PP	**PP**	**23 14 27.3**	**-1.1**
WMQ				SS	SS	23 30 12.8	+0.2
WMQ				AMB	AMB		
	comp=Z,8µm,8.1s						
WMQ				LR	LR		
	comp=Z,34µm,18.5s						
WMQ				LR	LR		
	comp=Z,30µm,18.1s						
WMQ				LR	LR		
	comp=Z,37µm,22.5s						
O52A	**Adamsville**	**113.47**	**56**	IAMs_20	IAMs_20	00 02 50.5	
	comp=Z,47µm,19.0s						
JHNI	**Jhansi**	**113.49**	**287**	*e*P	PKiKP	23 13 47.1	+10
NRDN	**NARMADA NAGAR**	**113.50**	**283**	*e*P	PKiKP	23 13 47.5	+11
BHPL	**Bhopal**	**113.50**	**284**	*e*P	PKiKP	23 13 47.3	+10
P53A	**Whipple**	**113.56**	**57**	IAMs_20	IAMs_20	23 59 11.7	
	comp=Z,49µm,19.0s						
KAD	**Karad**	**113.69**	**277**	*e*P	PKiKP	23 13 47.4	+10
PTH	**Pithoragarh**	**113.76**	**291**	*e*P	PKiKP	23 13 47.9	+11
Q54A	**Coxs Mills**	**113.78**	**58**	IAMs_20	IAMs_20	00 03 20.6	
	comp=Z,47µm,19.0s						
K50A	**Casco**	**113.86**	**53**	IAMs_20	IAMs_20	00 06 07.2	
	comp=Z,33µm,19.0s						
V58A	**Windy Hill, Pi**	**113.90**	**61**	IAMs_20	IAMs_20	00 03 43.1	
	comp=Z,30µm,18.0s						
O53A	**New Philadelph**	**113.96**	**56**	IAMs_20	IAMs_20	00 11 25.2	
	comp=Z,43µm,18.0s						
E46A	**Sault Ste Mari**	**113.97**	**49**	IAMs_20	IAMs_20	23 58 38.7	
	comp=Z,51µm,20.0s						
T57A	**Hurt**	**114.23**	**60**	IAMs_20	IAMs_20	00 03 43.8	
	comp=Z,47µm,18.0s						
M52A	**Chesterland**	**114.31**	**55**	IAMs_20	IAMs_20	00 02 39.3	
	comp=Z,49µm,18.0s						
N53A	**Lisbon**	**114.42**	**56**	IAMs_20	IAMs_20	00 07 34.4	
	comp=Z,43µm,20.0s						
KRAR	**Krasnoyarsk**	**114.46**	**322**	⇑*i*PKIKP	**PKiKP**	**23 13 37.9**	**+0.3**
O54A	**Avella**	**114.53**	**57**	IAMs_20	IAMs_20	23 56 55.5	
	comp=Z,39µm,20.0s						
JOSI	**Joshimath**	**114.67**	**292**	*e*P	PKiKP	23 13 49.4	+10
SUR	**Sutherland**	**114.67**	**197**	P	PKPdf	23 13 40.3	+1.0
SUR	**Sutherland**	**114.67**	**197**	P	**Pdif**	**23 09 48.0**	**-1.4**
Q56A	**Snyder Ridge,**	**115.00**	**58**	IAMs_20	IAMs_20	00 00 15.0	
	comp=Z,30µm,18.0s						
ALLY	**Alegheny Colle**	**115.20**	**55**	IAMs_20	IAMs_20	23 57 45.0	
	comp=Z,56µm,20.0s						
T59A	**Double "B" Far**	**115.49**	**61**		**PKPdf**	**23 13 39.6**	**-0.6**
T59A				IAMs_20	IAMs_20	00 06 04.3	
	comp=Z,34µm,18.0s						
POGA	**Pongola**	**115.58**	**209**		**PKiKP**	**23 13 40.2**	**-0.6**
R58B	**Mineral**	**115.59**	**60**	IAMs_20	IAMs_20	00 05 12.1	
	comp=Z,36µm,19.0s						
V61A	**Roper**	**115.82**	**62**	IAMs_20	IAMs_20	00 04 56.2	
	comp=Z,31µm,18.0s						
AYAN	**Aya Nagar**	**115.84**	**289**	*e*P	PKiKP	23 13 51.7	+11
NDI	**New Delhi**	**115.84**	**289**	*e*P	PKiKP	23 13 51.8	+11
NPLP	**NPLP New Delhi**	**115.86**	**289**	*e*P	PKiKP	23 13 51.8	+11
P57A	**Homestead Farm**	**116.01**	**58**	IAMs_20	IAMs_20	00 00 48.7	
	comp=Z,36µm,20.0s						
CBN	**Corbin Frederi**	**116.05**	**60**	IAMs_20	IAMs_20	00 03 37.9	
	comp=Z,38µm,18.0s						
KLP	**Kalpa**	**116.08**	**293**	*e*P	PKiKP	23 13 52.2	+10
KUDL	**Kundal**	**116.23**	**288**	*e*P	PKiKP	23 13 52.5	+11
SBV	**Sambava**	**116.28**	**234**	P	**PKiKP**	**23 13 43.5**	**+1.1**
	SNR=5.8						
SBV	**Sambava**	**116.28**	**234**	P	**Pdif**	**23 09 55.8**	**-0.7**
SSPA	**Standing Stone**	**116.48**	**57**		**PKPdf**	**23 13 41.2**	**-0.8**
SSPA	**Standing Stone**	**116.48**	**57**	IAMs_20	IAMs_20	00 01 19.9	
	comp=Z,47µm,19.0s						
ZSN	**Zaisan**	**116.52**	**311**	*e*PKIKP	**PKPdf**	**23 13 40.9**	**-1.0**
ZSN	**Zaisan**	**116.52**	**311**	*e*PKP	**PKPdf**	**23 13 40.9**	**-1.0**
WVNY	**West Valley, N**	**116.53**	**55**		**PKPdf**	**23 13 41.8**	**-0.3**
SMLA	**Simla**	**116.79**	**292**	*e*P	PKiKP	23 13 53.9	+11
AGPR	**Aguadilla, PR**	**116.87**	**84**	PKPdf	**PKPdf**	**23 13 43.3**	**-0.1**
MEDO	**Medina**	**116.88**	**54**	IAMs_20	IAMs_20	00 03 17.1	
	comp=Z,40µm,20.0s						
BOSA	**Boshof**	**116.88**	**203**	Pdiff	**Pdif**	**23 10 00.9**	**+1.8**
	comp=Z,5.7nm,0.7s,baz=164,slow=3.9,SNR=9.8						
BOSA				PKP	**PKiKP**	**23 13 43.9**	**+0.4**
	comp=Z,84nm,0.9s,baz=162,slow=2.2,SNR=49						
BOSA				PKKPbc	**PKKPbc**	**23 24 09.1**	**0.0**
	comp=Z,14nm,0.7s,baz=345,slow=3.3,SNR=14						
BOSA				PKPPKP	**P'P'df**	**23 32 47.4**	**-3.2**
	comp=Z,5.2nm,1.0s,baz=130,slow=2.6,SNR=3.8						
BUKO	**Buck Lake**	**116.92**	**51**		**PKPdf**	**23 13 42.0**	**-0.8**
AOPR	**Arecibo Observ**	**117.12**	**84**		**PKPdf**	**23 13 42.9**	**-1.0**
AOPR				IAMs_20	IAMs_20	00 02 40.5	
	comp=Z,35µm,18.0s						
S61A	**Accomac**	**117.14**	**61**	IAMs_20	IAMs_20	00 04 26.0	
	comp=Z,45µm,19.0s						
L56A	**Greenwood**	**117.19**	**55**	IAMs_20	IAMs_20	00 04 02.5	
	comp=Z,44µm,18.0s						
M57A	**Sunshine Farm,**	**117.25**	**56**	IAMs_20	IAMs_20	23 58 40.2	
	comp=Z,46µm,20.0s						
MVL	**Millersville**	**117.39**	**58**	IAMs_20	IAMs_20	00 01 40.2	
	comp=Z,46µm,20.0s						
MAL2	**Monte Alegre,**	**117.46**	**111**		**PKiKP**	**23 13 45.0**	**+0.2**
BHK	**Bhakra**	**117.49**	**292**	*e*P	PKiKP	23 13 53.8	+9.5
SJG	**San Juan**	**117.54**	**84**		**PKPdf**	**23 13 43.6**	**-1.1**
SJG	**San Juan**	**117.54**	**84**	IAMs_20	IAMs_20	23 53 21.6	
	comp=Z,30µm,19.0s						
SJG	**San Juan**	**117.54**	**84**	PKIKP	**PKPdf**	**23 13 43.6**	**-1.1**
SJG				MLR	MLR		
	comp=Z,30µm,19.0s						
R61A	**Willards**	**117.60**	**60**	IAMs_20	IAMs_20	00 05 27.1	
	comp=Z,40µm,18.0s						
RES	**Resolute Bay**	**117.64**	**17**	IAMs_20	IAMs_20	23 57 36.1	
	comp=Z,39µm,21.0s						
SDBA	**SAO DESIDERIO**	**117.76**	**126**	*e*P	**PKPdf**	**23 13 45.3**	**-0.1**
DELO	**Deloro Mine**	**117.86**	**53**	IAMs_20	IAMs_20	00 09 07.9	
	comp=Z,40µm,18.0s						
DHRM	**DHARAMSHALA**	**117.88**	**293**	*e*P	PKiKP	23 13 55.6	+10
MSEY	**Mahe Island**	**117.96**	**245**	PKPdf	**PKPdf**	**23 13 45.4**	**-0.4**
MSEY	**Mahe Island**	**117.96**	**245**	P	**PKiKP**	**23 13 46.8**	**+1.0**
MSEY	**Mahe Island**	**117.96**	**245**	P	**Pdif**	**23 10 02.9**	**-1.1**
MSEY	**Mahe Island**	**117.96**	**245**	PKIKP	**PKPdf**	**23 13 45.4**	**-0.4**
MSEY				MLR	MLR		
	comp=Z,142µm,20.0s						
MSEY	**Mahe Island**	**117.96**	**245**	P	**PKPdf**	**23 13 44.5**	**-1.3**
MK31	**Makanchi Array**	**118.02**	**310**	*i* PKIKP	**PKPdf**	**23 13 43.2**	**-1.6**
MKAR	**Makanchi Array**	**118.02**	**310**	Pdiff	**Pdif**	**23 10 05.4**	**+1.9**
	comp=Z,3.7nm,0.8s,baz=96,slow=5.5,SNR=12						
MKAR				PKP	**PKPdf**	**23 13 43.6**	**-1.2**
	comp=Z,80nm,0.9s,baz=155,slow=0.8,SNR=93						
MKAR				PKKPbc	**PKKPab**	**23 24 05.6**	**-0.4**
	comp=Z,10nm,0.8s,baz=276,slow=3.2,SNR=12						
MKAR				SKKPbc	SKKPbc	23 27 51.2	+0.5
	comp=Z,9.5nm,1.0s,baz=276,slow=3.5,SNR=3.6						
GUA01	**Guaratinga, BA**	**118.08**	**134**	*e*P	**PKiKP**	**23 13 46.9**	**+1.0**
K57A	**Scipio Center**	**118.10**	**55**	IAMs_20	IAMs_20	00 01 03.7	
	comp=Z,42µm,19.0s						
MAKZ	**Makanchi**	**118.23**	**310**		**PKPdf**	**23 13 43.5**	**-1.7**
MAKZ	**Makanchi**	**118.23**	**310**	PKIKP	**PKPdf**	**23 13 44.3**	**-0.9**
LUPA	**Lehigh Univers**	**118.29**	**58**	IAMs_20	IAMs_20	00 01 59.8	
	comp=Z,46µm,19.0s						
BINY	**Binghamton**	**118.32**	**56**	IAMs_20	IAMs_20	23 59 32.5	
	comp=Z,39µm,20.0s						
ZAA0	**Zalesovo Array**	**118.32**	**318**		**PKPdf**	**23 13 43.2**	**-1.9**
ZALV	**Zalesovo Beam**	**118.32**	**318**		**PKPdf**	**23 13 43.0**	**-2.1**
ZALV	**Zalesovo Beam**	**118.32**	**318**	Pdiff	**Pdif**	**23 10 05.2**	**+0.6**
	comp=Z,3.5nm,0.9s,baz=106,slow=3.2,SNR=6.9						
ZALV				PKP	**PKPdf**	**23 13 43.4**	**-1.7**
	comp=Z,28nm,0.6s,baz=168,slow=2.2,SNR=42						
BKNR	**BIKANER**	**118.82**	**287**	*e*P	PKiKP	23 13 57.5	+11
SHLS	**Shalkode**	**118.93**	**305**	*e*PKIKP	**PKPdf**	**23 13 45.1**	**-1.7**
SHLS				*e*		23 15 02.1	
SHLS	**Shalkode**	**118.93**	**305**	*e*PKP	**PKPdf**	**23 13 45.2**	**-1.7**
SHLS				*e*PP	**PP**	**23 15 02.1**	**-4.7**
PDGK	**Podgornoye**	**118.96**	**305**	PKIKP	**PKPdf**	**23 13 45.2**	**-1.7**
MOPA	**Mopani**	**119.06**	**211**	*i* P	**PKiKP**	**23 13 48.5**	**+0.7**
JMU	**Jammu**	**119.15**	**293**	*e*P	PKiKP	23 13 57.9	+10
UZB	**Uzynbulak**	**119.24**	**305**	*e*PKIKP	**PKPdf**	**23 13 46.2**	**-1.3**
UZB				*e*		23 15 06.1	
UZB	**Uzynbulak**	**119.24**	**305**	*e*PKP	**PKPdf**	**23 13 46.2**	**-1.3**
UZB				*e*PP	**PP**	**23 15 06.2**	**-2.8**
CPNY	**Central Park**	**119.37**	**58**	IAMs_20	IAMs_20	00 03 09.5	
	comp=Z,46µm,19.0s						
PAL	**Palisades**	**119.47**	**57**	IAMs_20	IAMs_20	00 02 55.1	
	comp=Z,44µm,18.0s						
PRZ	**Przheval'sk**	**119.49**	**304**		**PKPdf**	**23 13 47.2**	**-0.8**
PRZ	**Przheval'sk**	**119.49**	**304**	PKIKP	**PKPdf**	**23 13 47.2**	**-0.8**
KPKS	**Kokpek**	**119.56**	**305**	*e*PKIKP	**PKPdf**	**23 13 46.8**	**-1.2**
KPKS				*e*		23 15 08.4	
KPKS	**Kokpek**	**119.56**	**305**	*e*PKP	**PKPdf**	**23 13 46.8**	**-1.2**
KPKS				*e*PP	**PP**	**23 15 08.5**	**-2.6**
MAKGR	**Makgori**	**119.61**	**204**		**PKPdf**	**23 13 48.7**	**-0.2**
SATY	**Saty**	**119.65**	**305**	*e*PKIKP	**PKPdf**	**23 13 47.0**	**-1.2**
SATY				*e*		23 15 08.8	
SATY	**Saty**	**119.65**	**305**	*e*PKP	**PKPdf**	**23 13 47.1**	**-1.2**
SATY				*e*PP	**PP**	**23 15 08.9**	**-2.9**
N62A	**Caumsett State**	**119.77**	**58**	IAMs_20	IAMs_20	00 02 54.0	
	comp=Z,45µm,18.0s						
LONY	**Lake Ozonia**	**119.97**	**53**	IAMs_20	IAMs_20	00 14 55.9	
	comp=Z,35µm,18.0s						
BHUJ	**Bhuj**	**120.04**	**281**	*e*P	PKiKP	23 13 59.9	+10
LBTB	**Lobatse**	**120.06**	**205**		**PKPdf**	**23 13 49.2**	**-0.4**
LBTB	**Lobatse**	**120.06**	**205**	PKIKP	**PKPdf**	**23 13 49.3**	**-0.4**
LBTB	**Lobatse**	**120.06**	**205**	*i* P	**PKiKP**	**23 13 50.2**	**+0.4**
TDK	**Taldyqorghan**	**120.16**	**307**	*e*PKIKP	**PKPdf**	**23 13 47.8**	**-1.2**
TDK				*e*		23 15 12.4	
TDK	**Taldyqorghan**	**120.16**	**307**	*e*PKP	**PKPdf**	**23 13 47.9**	**-1.2**
TDK				*e*PP	**PP**	**23 15 12.4**	**-2.6**
TDK				LR	LR	00 08 05.5	
	comp=Z,36µm,19.7s						
KDJ	**Kajisay**	**120.27**	**304**		**PKPdf**	**23 13 48.1**	**-1.4**
KDJ				IAMs_20	IAMs_20	00 16 36.8	
	comp=Z,50µm,20.0s						
KDJ	**Kajisay**	**120.27**	**304**	PKIKP	**PKPdf**	**23 13 48.2**	**-1.4**
BIM	**Bigot**	**120.31**	**91**		**PKPdf**	**23 13 49.2**	**-1.0**
BIM				IAMs_20	IAMs_20	23 55 35.3	
	comp=Z,46µm,22.0s						
FDF	**Fort de France**	**120.34**	**90**		**PKPdf**	**23 13 49.7**	**-0.5**
FDF				IAMs_20	IAMs_20	23 55 34.1	
	comp=Z,42µm,21.0s						
FDF	**Fort de France**	**120.34**	**90**	PKIKP	**PKPdf**	**23 13 49.7**	**-0.5**
FDF				MLR	MLR		
	comp=Z,42µm,21.0s						
ARXS	**Arharly**	**120.36**	**306**	*i* PKIKP	**PKPdf**	**23 13 48.1**	**-1.4**
SVN	**Savane Anatole**	**120.37**	**90**	PKPdf	**PKPdf**	**23 13 48.8**	**-1.5**
JASL	**Jaisalmer**	**120.38**	**285**	*e*P	PKiKP	23 14 00.2	+10
KSH	**Kashi**	**120.43**	**300**	PKP	**PKPdf**	**23 13 49.3**	**-0.5**
KSH				PP	**PP**	**23 15 17.8**	**+0.6**
KSH				SKKS		23 22 12.6	
KSH				SS	**SS**	**23 31 43.1**	**-0.7**
KSH				LR	LR		
	comp=Z,46µm,23.4s						
KSH				LR	LR		
	comp=Z,53µm,20.6s						
KSH				LR	LR		
	comp=Z,96µm,25.4s						
PHPEN	**Phepeng**	**120.57**	**202**		**PKPdf**	**23 13 50.4**	**-0.2**
PHPEN	**Phepeng**	**120.57**	**202**	*i* P	**PKiKP**	**23 13 51.4**	**+0.7**
ILAM	**Ilet Lapin Mar**	**120.59**	**90**	IAMs_20	IAMs_20	00 03 22.8	
	comp=Z,33µm,21.0s						
ILON	**Igloolik, Nuna**	**120.63**	**24**	IAMs_20	IAMs_20	00 01 29.7	
	comp=Z,38µm,20.0s						
FRNY	**Flat Rock**	**120.71**	**53**	IAMs_20	IAMs_20	00 12 48.5	
	comp=Z,39µm,18.0s						
AAA	**Alma-Ata**	**120.74**	**305**	*e*PKIKP	**PKPdf**	**23 13 49.1**	**-1.1**
AAA	**Alma-Ata**	**120.74**	**305**	*e*PKP	**PKPdf**	**23 13 49.1**	**-1.1**
AAA				LR	LR	00 08 21.5	
	comp=Z,43µm,23.6s						
L61B	**Northampton**	**120.75**	**56**	IAMs_20	IAMs_20	00 04 07.8	
	comp=Z,50µm,20.0s						
NIL	**Nilore**	**120.76**	**293**		**PKPdf**	**23 13 48.9**	**-1.7**
NIL	**Nilore**	**120.76**	**293**	P	**Pdif**	**23 10 15.7**	**-0.3**
NIL	**Nilore**	**120.76**	**293**	PKIKP	**PKPdf**	**23 13 48.9**	**-1.7**
MUSN	**Musina, Limpop**	**120.81**	**210**	*i* P	**PKiKP**	**23 13 52.0**	**+0.7**
MNTQ	**Montreal, Queb**	**120.85**	**53**	IAMs_20	IAMs_20	00 08 42.1	
	comp=Z,40µm,19.0s						
UCCT	**U. Connecticut**	**120.90**	**57**	IAMs_20	IAMs_20	00 03 29.0	
	comp=Z,47µm,19.0s						
ULHL	**Ulahol**	**120.97**	**304**	P	**PKPdf**	**23 13 50.9**	**-0.1**
	SNR=15						
J61A	**Chester**	**121.06**	**55**	IAMs_20	IAMs_20	00 06 02.1	
	comp=Z,45µm,19.0s						
SKOMA	**Sekoma**	**121.10**	**203**	*i* P	**PKiKP**	**23 13 52.5**	**+0.7**
K62A	**Royalston**	**121.12**	**56**	IAMs_20	IAMs_20	00 04 36.6	
	comp=Z,42µm,19.0s						
VT1	**Waterbury**	**121.17**	**54**		**PKPdf**	**23 13 50.7**	**-0.3**
VT1				IAMs_20	IAMs_20	00 06 22.6	
	comp=Z,41µm,18.0s						
BOOM	**Boomskoye usch**	**121.25**	**304**		**PKPdf**	**23 13 50.7**	**-0.7**
BOOM	**Boomskoye usch**	**121.25**	**304**	PKIKP	**PKPdf**	**23 13 50.7**	**-0.7**
KURK	**Kurchatov**	**121.31**	**314**		**PKPdf**	**23 13 49.9**	**-1.1**
KURK	**Kurchatov**	**121.31**	**314**	IAMs_20	IAMs_20	00 05 00.4	
	comp=Z,34µm,22.0s						
KURK	**Kurchatov**	**121.31**	**314**	P	**PKPdf**	**23 13 50.2**	**-0.8**
KURK	**Kurchatov**	**121.31**	**314**	P	**Pdif**	**23 10 18.1**	**+0.1**
KURK	**Kurchatov**	**121.31**	**314**	*c* *i*PKIKP	**PKPdf**	**23 13 49.5**	**-1.5**
KURK				MLR	MLR		
	comp=Z,42µm,22.0s						
KUU	**Kurty**	**121.32**	**305**	*e*PKIKP	**PKPdf**	**23 13 50.2**	**-1.0**
KUU	**Kurty**	**121.32**	**305**	*e*PKP	**PKPdf**	**23 13 50.3**	**-1.0**
KUU				LR	LR	00 09 12.3	
	comp=Z,35µm,22.8s						
KURBB	**Kurchatov Arra**	**121.35**	**313**	Pdiff	**Pdif**	**23 10 19.5**	**+1.4**
	comp=Z,0.8nm,0.8s,baz=94,slow=3.3,SNR=7.5						
KURBB				PKP	**PKPdf**	**23 13 49.8**	**-1.3**
	comp=Z,201nm,1.0s,baz=113,slow=1.9,SNR=150						
KURBB				PKKPbc	**PKKPbc**	**23 23 53.0**	**+0.2**
	comp=Z,6.0nm,0.9s,baz=279,slow=4.5,SNR=8.5						
KURBB				SKKP		23 27 58.4	
	comp=Z,13nm,1.0s,baz=275,slow=3.8,SNR=4.4						
KURBB	**Kurchatov Arra**	**121.35**	**313**	PKIKP	**PKPdf**	**23 13 49.3**	**-1.8**
LPHEP	**Lephephe**	**121.47**	**206**		**PKPdf**	**23 13 52.1**	**-0.3**
LPHEP	**Lephephe**	**121.47**	**206**	*i* P	**PKiKP**	**23 13 53.2**	**+0.6**
HRV	**Adam Dziewonsk**	**121.56**	**56**		**PKPdf**	**23 13 51.2**	**-0.5**
HRV	**Adam Dziewonsk**	**121.56**	**56**	PKIKP	**PKPdf**	**23 13 51.2**	**-0.5**
HRV				MLR	MLR		
	comp=Z,54µm,19.0s						
MREMI	**Moremi**	**121.57**	**208**		**PKPdf**	**23 13 52.5**	**-0.1**
MREMI	**Moremi**	**121.57**	**208**	*i* P	**PKiKP**	**23 13 53.5**	**+0.7**
TKM2	**Tokmak 2**	**121.60**	**304**	P	**PKPdf**	**23 13 50.9**	**-1.2**
	SNR=54						
TKM2	**Tokmak 2**	**121.60**	**304**	PKIKP	**PKPdf**	**23 13 50.7**	**-1.4**
LBNH	**Lisbon**	**121.72**	**54**		**PKPdf**	**23 13 51.6**	**-0.4**
LBNH				IAMs_20	IAMs_20	00 07 06.4	
	comp=Z,38µm,18.0s						
LBNH	**Lisbon**	**121.72**	**54**	PKIKP	**PKPdf**	**23 13 51.6**	**-0.4**
LBNH				MLR	MLR		
	comp=Z,38µm,18.0s						
KDWAN	**Kaudwane**	**121.89**	**205**		**PKiKP**	**23 13 53.4**	**0.0**
M65A	**Busby, Falmout**	**121.98**	**58**	P	**PKPdf**	**23 13 51.1**	**-1.4**
	baz=255						
KBK	**Karagaybulak**	**122.00**	**304**	P	**PKPdf**	**23 13 52.1**	**-0.7**
	SNR=49						
I62A	**Tamworth**	**122.05**	**55**	IAMs_20	IAMs_20	00 02 23.1	
	comp=Z,42µm,22.0s						
POIN	**Pond Inlet**	**122.09**	**20**		**PKPdf**	**23 13 50.0**	**-1.9**
UCH	**Uchtor**	**122.21**	**303**	P	**PKPdf**	**23 13 53.5**	**-0.1**
	SNR=26						
CHMS	**Chumysh**	**122.22**	**304**	P	**PKPdf**	**23 13 52.0**	**-1.1**
	SNR=96						
FRU1	**Bishkek**	**122.27**	**304**		**PKPdf**	**23 13 52.5**	**-0.7**
FRU1	**Bishkek**	**122.27**	**304**	PKIKP	**PKPdf**	**23 13 52.5**	**-0.7**
AAK	**Ala-Archa**	**122.32**	**304**	P	**PKPdf**	**23 13 52.6**	**-0.9**
	SNR=35						
AAK	**Ala-Archa**	**122.32**	**304**		**PKPdf**	**23 13 52.8**	**-0.6**
AAK	**Ala-Archa**	**122.32**	**304**	P	**PKiKP**	**23 13 53.8**	**+0.2**
AAK	**Ala-Archa**	**122.32**	**304**	P	**Pdif**	**23 10 22.2**	**-0.6**
AAK	**Ala-Archa**	**122.32**	**304**	*c* *i*PKIKP	**PKPdf**	**23 13 52.5**	**-0.9**
AAK				MLR	MLR		
	comp=Z,121µm,25.0s						
AAK	**Ala-Archa**	**122.32**	**304**	P	**PKPdf**	**23 13 52.5**	**-1.0**
H62A	**Milan**	**122.34**	**54**	IAMs_20	IAMs_20	00 13 49.6	
	comp=Z,35µm,19.0s						
LKGWB	**Lokgwabe**	**122.36**	**201**		**PKPdf**	**23 13 54.1**	**-0.1**
SGDS	**Sogindy**	**122.42**	**305**	*e*PKP	**PKPdf**	**23 13 52.2**	**-1.3**
SGDS				*e*PP	**PP**	**23 15 27.9**	**-2.7**
USP	**Ospenovka**	**122.47**	**304**	P	**PKPdf**	**23 13 52.5**	**-1.0**
	SNR=58						
I63A	**Otisfield**	**122.62**	**55**	IAMs_20	IAMs_20	00 07 18.2	
	comp=Z,42µm,18.0s						
AML	**Almayashu**	**122.78**	**303**	P	**PKPdf**	**23 13 54.2**	**-0.4**
	SNR=61						
EKS2	**Erkin-Say**	**122.84**	**303**	P	**PKPdf**	**23 13 53.9**	**-0.5**
	SNR=45						
BROLN	**Tlhalogang**	**122.93**	**208**	*i* P	**PKiKP**	**23 13 55.6**	**+0.2**
LDAQ	**Lac Daran**	**122.98**	**50**	IAMs_20	IAMs_20	00 11 32.1	
	comp=Z,40µm,18.0s						
BTLS	**Baital**	**123.17**	**306**	*e*PKIKP	**PKPdf**	**23 13 53.6**	**-1.1**
BTLS				*e*		23 15 33.0	
BTLS	**Baital**	**123.17**	**306**	*e*PKP	**PKPdf**	**23 13 53.7**	**-1.1**
BTLS				*e*PP	**PP**	**23 15 33.0**	**-2.5**
KGCAE	**Kacgae**	**123.22**	**202**	PKPdf	**PKiKP**	**23 13 56.3**	**+0.3**
KGCAE	**Kacgae**	**123.22**	**202**	*i* P	**PKiKP**	**23 13 56.2**	**+0.1**
BLWY	**Bulawayo**	**123.24**	**210**	*i* P	**PKiKP**	**23 13 56.6**	**+0.4**
WVL	**Waterville**	**123.38**	**54**	IAMs_20	IAMs_20	00 07 41.2	
	comp=Z,35µm,18.0s						
LMQ	**La Malbaie**	**123.51**	**51**	IAMs_20	IAMs_20	00 02 40.2	
	comp=Z,36µm,21.0s						
KOOLE	**Kule**	**123.72**	**200**		**PKPdf**	**23 13 56.5**	**-0.3**
KOOLE	**Kule**	**123.72**	**200**	*i* P	**PKiKP**	**23 13 57.8**	**+0.7**
PKME	**Peaks-Kenny Pk**	**123.78**	**54**		**PKPdf**	**23 13 55.8**	**-0.1**
SOOWA	**Sowa**	**123.86**	**208**	*i* P	**PKiKP**	**23 13 58.2**	**+0.9**
BBSR	**BB Station**	**124.05**	**70**		**PKPdf**	**23 13 56.5**	**-0.3**
TULEG	**Thule**	**124.18**	**16**		**PKPdf**	**23 13 55.0**	**-0.8**
TULEG				IAMs_20	IAMs_20	00 07 30.6	
	comp=Z,32µm,20.0s						
TULEG	**Thule**	**124.18**	**16**	*i* P	**PKPdf**	**23 13 52.4**	**-3.4**
D62A	**Allapoint, All**	**124.28**	**51**	IAMs_20	IAMs_20	00 04 11.7	
	comp=Z,33µm,21.0s						
KBU	**Kabul Universi**	**124.28**	**293**	PKP	**PKPdf**	**23 13 56.5**	**-1.0**
KBU				PKP	**PKiKP**	**23 13 57.3**	**-0.5**
KBL	**Kabul**	**124.36**	**293**		**PKPdf**	**23 13 56.9**	**-0.7**
KBL	**Kabul**	**124.36**	**293**	P	**PKPdf**	**23 13 57.2**	**-0.4**
	SNR=117						
KBL	**Kabul**	**124.36**	**293**	P	**Pdif**	**23 10 31.4**	**-0.8**
KBL	**Kabul**	**124.36**	**293**	PKIKP	**PKPdf**	**23 13 56.9**	**-0.7**
BTK	**Batken**	**124.41**	**300**		**PKPdf**	**23 13 56.1**	**-1.3**
BTK	**Batken**	**124.41**	**300**	PKIKP	**PKPdf**	**23 13 56.1**	**-1.3**
F64A	**Sherman**	**124.54**	**53**	IAMs_20	IAMs_20	00 17 43.8	

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      comp=Z,43µm,18.0s
DZA   Taraz             124.65 303  ePKIKP   PKPdf    23 13 56.6 -1.1
DZA   Taraz             124.65 303  ePKP     PKPdf    23 13 56.6 -1.1
PHDHD Phuduhudu         124.85 206           PKPdf    23 13 58.5 -0.5
PHDHD Phuduhudu         124.85 206  i P      PKiKP    23 13 59.9 +0.6
OTUK  Ortayu            124.91 310   PKIKP   PKPdf    23 13 56.3 -1.7
GRTLG Ghanzi            124.94 202           PKPdf    23 13 59.0 -0.1
GRTLG Ghanzi            124.94 202  i P      PKiKP    23 13 59.9 +0.4
BRZS  Berezniki         124.94 312  ePKIKP   PKPdf    23 13 56.8 -1.2
BRZS                                e                 23 15 44.8
BRZS  Berezniki         124.94 312  ePKP     PKPdf    23 13 56.9 -1.1
BRZS                                ePP      PP       23 15 44.8 -2.5
EMMW  East Machias      124.95  55   IAMs_20 IAMs_20  00 13 48.8
      comp=Z,40µm,19.0s
WIN   Windhoek          124.98 197   PKPdf   PKiKP    23 14 00.3 +0.7
WIN   Windhoek          124.98 197   PKIKP   PKiKP    23 14 00.3 +0.7
KK31  Karatay Array     125.28 303           PKPdf    23 13 57.9 -1.0
KK31  Karatay Array     125.28 303   PKIKP   PKPdf    23 13 57.9 -1.0
KKAR  Karatay Array     125.28 303   PKPdf   PKPdf    23 13 57.6 -1.3
KKAR  Karatay Array     125.28 303   PKIKP   PKPdf    23 13 57.6 -1.3
IUG   Iuzhnay           125.44 302  ePKIKP   PKPdf    23 13 58.1 -1.2
IUG   Iuzhnay           125.44 302  ePKP     PKPdf    23 13 58.1 -1.2
SIMJ  Simiganj          125.44 298           PKPdf    23 13 58.0 -1.6
SIMJ                                 IAMs_20 IAMs_20  00 12 19.3
      comp=Z,50µm,22.0s
KRI   Karoi             125.68 213  i P      PKiKP    23 14 02.1 +1.0
FRB   Frobisher Bay     125.74  31   PKP     PKPdf    23 13 58.2 -0.9
      comp=Z,132nm,1.1s,baz=277,slow=2.2,SNR=24
FRB                                  PKKPbc  PKKPbc   23 23 41.6 +5.6
      comp=Z,6.7nm,0.7s,baz=49,slow=4.7,SNR=4.0
FRB                                  SKKPbc  SKKPbc   23 27 22.2 -4.1
      comp=Z,23nm,1.1s,baz=64,slow=1.9,SNR=3.8
BRLS  Borolday          125.75 303  ePKIKP   PKPdf    23 13 58.7 -1.1
BRLS  Borolday          125.75 303  ePKP     PKPdf    23 13 58.8 -1.1
CHM   Chimkent          125.78 302  ePKIKP   PKPdf    23 13 58.6 -1.3
CHM   Chimkent          125.78 302  ePKP     PKPdf    23 13 58.6 -1.3
CHM                                  LR      LR       00 12 04.3
      comp=Z,29µm,24.8s
KUQ   Kuujjuuaa         125.82  38           PKPdf    23 13 58.1 -1.3
KUQ                                  IAMs_20 IAMs_20  00 12 03.5
      comp=Z,37µm,20.0s
ICQ   Pointe Anglais    125.82  49           PKPdf    23 13 58.5 -1.1
ICQ                                  IAMs_20 IAMs_20  00 12 10.0
      comp=Z,42µm,18.0s
NBPB  Pedra_Branca-C    126.30 125  eP       PKiKP    23 14 03.3 +1.1
BATG  Bathurst New B    126.33  52           PKPdf    23 14 00.3 -0.4
BATG                                 IAMs_20 IAMs_20  00 15 27.8
      comp=Z,35µm,19.0s
GMARE Gumare            126.45 204   PKPdf   PKPdf    23 14 02.0 -0.1
GMARE Gumare            126.45 204  i P      PKiKP    23 14 02.9 +0.4
SCHQ  Schefferville     126.56  42   PKP     PKPdf    23 14 00.1 -0.8
      comp=Z,157nm,1.0s,baz=317,slow=1.8,SNR=56
SCHQ                                 SKKPbc  SKKPbc   23 27 22.1 -0.9
      comp=Z,25nm,1.0s,baz=98,slow=5.4,SNR=6.2
QNGWA Qangwa            126.66 203           PKPdf    23 14 02.2 -0.2
BVA0  Borovoye Array    126.68 316  i PKIKP  PKPdf    23 13 58.8 -2.4
BVAR  Borovoye Array    126.68 316   Pdiff   Pdif     23 10 46.6 +4.9
      comp=Z,0.9nm,0.5s,baz=90,slow=7.6,SNR=4.4
BVAR                                 PKhKP   PKPpre   23 13 49.2
      comp=Z,2.8nm,0.5s,baz=114,slow=1.9,SNR=7.5
BVAR                                 PKP     PKPdf    23 13 59.4 -1.8
      comp=Z,203nm,0.8s,baz=99,slow=1.5,SNR=49
BRVK  Borovoye          126.75 316           PKPdf    23 14 00.1 -1.3
BRVK  Borovoye          126.75 316   IAMs_20 IAMs_20  00 17 46.0
      comp=Z,34µm,20.0s
BRVK  Borovoye          126.75 316   P       PKPdf    23 14 01.2 -0.1
BRVK  Borovoye          126.75 316   P       Pdif     23 10 42.3 +0.2
BRVK  Borovoye          126.75 316c iPKIKP   PKPdf    23 14 00.2 -1.1
KSANE Kasane            126.77 208           PKPdf    23 14 02.4 -0.3
KSANE Kasane            126.77 208  i P      PKiKP    23 14 03.5 +0.3
LMN   Caledonia Moun    126.98  54   IAMs_20 IAMs_20  00 05 14.5
      comp=Z,40µm,22.0s
SAM   Samarkand         127.22 299   PKHKP   PKPpre   23 13 48.8
SAM                                  MLR     MLR
      comp=Z,30µm,21.0s
KULLO Kullorsuaq        127.51  17  i P      PKPdf    23 13 59.4 -2.8
XAUDM Khaudum           127.52 203           PKPdf    23 14 04.0 -0.1
NEEM  North Greenlan    127.62  13  i P      PKPdf    23 13 59.4 -3.4
HAL   Halifax           127.66  55           PKPdf    23 14 03.1 -0.2
HAL   Halifax           127.66  55   PKIKP   PKPdf    23 14 03.1 -0.2
HAL                                  MLR     MLR
      comp=Z,46µm,18.0s
LSZ   Lusaka            127.70 213           PKPdf    23 14 04.7 +0.2
LSZ   Lusaka            127.70 213   PP      PP       23 16 06.2 +1.3
      comp=Z,336nm,1.3s,baz=166,slow=6.3,SNR=6.3
LSZ                                  SKKPbc  SKKPbc   23 27 12.5 -2.0
      comp=Z,13nm,1.1s,baz=36,slow=1.8,SNR=3.4
LSZ   Lusaka            127.70 213   P       PKPdf    23 14 03.2 -1.4
LSZ   Lusaka            127.70 213   PKIKP   PKPdf    23 14 04.7 +0.2
LSZ   Lusaka            127.70 213  i P      PKiKP    23 14 05.9 +0.8
NGCH  Negor - Chabah    128.03 280   P       PKiKP    23 14 06.6 +1.4
      SNR=8.0
NGCH  Negor - Chabah    128.03 280   P       Pdif     23 10 46.3 -2.1
TSUM  Tsumeb            128.06 199   PKPdf   PKPdf    23 14 04.8 -0.4
TSUM  Tsumeb            128.06 199   PP      PP       23 16 08.3 +1.4
      comp=Z,47nm,0.7s,baz=164,slow=7.5,SNR=8.1
TSUM  Tsumeb            128.06 199  i P      PKPdf    23 14 03.3 -1.9
NBCL  Cascavel-CE       128.13 125  eP       PKPdf    23 14 05.3 +0.1
JLN   Jalan Bani Buh    128.34 275   P       PKiKP    23 14 06.0  0.0
      SNR=20
UPNV  Upernavik         128.45  19  i P      PKPdf    23 14 02.4 -1.6
NOR   Nord              128.61   3  i P      PKPdf    23 14 03.4 -0.8
RCBR  Riachuelo         128.63 129           PKPdf    23 14 06.2  0.0
RCBR  Riachuelo         128.63 129   PKIKP   PKPdf    23 14 06.3  0.0
RCBR  Riachuelo         128.63 129  eP       PKiKP    23 14 06.6 -0.3
DQM   DQM               129.08 272   P       PKPdf    23 14 06.0 -0.8
      SNR=8.8
DQM   DQM               129.08 272   P       Pdif     23 10 52.5 -0.7
MHTO  MHTO              129.13 273   P       PKPdf    23 14 07.0 +0.1
      SNR=26
MHTO  MHTO              129.13 273   P       Pdif     23 10 52.4 -1.1
GBN   Guysborough       129.22  54           PKPdf    23 14 06.3  0.0
JMDO  Jabal Madar       129.55 275   P       PKPdf    23 14 07.6 -0.1
      SNR=12
JMDO                                 P       PKiKP    23 14 08.0 -0.4
      SNR=20
JMDO  Jabal Madar       129.55 275   P       Pdif     23 10 53.6 -1.6
HRA   Herat             129.75 291   PKPdf   PKPdf    23 14 06.0 -1.9
NUUG  Nuugaatsiaq       129.76  20  i P      PKPdf    23 14 06.1 -0.5
SMDO  Samad             129.85 275   P       PKiKP    23 14 09.3 +0.2
      SNR=32
BIDO  Bidbid            129.95 276   P       PKiKP    23 14 09.0 -0.2
      SNR=28
DMTO  DMTO              130.39 268   P       PKiKP    23 14 10.2  0.0
      SNR=15
DMTO  DMTO              130.39 268   P       Pdif     23 10 58.1 -1.0
UMMG  Uummannaq         130.43  21  i P      PKPdf    23 14 06.3 -1.5
BSY   Bisya             130.46 275   P       PKiKP    23 14 09.9 -0.3
      SNR=29
BSY   Bisya             130.46 275   P       Pdif     23 10 58.6 -0.8
HOQ   Hoqain            130.67 276   P       PKPdf    23 14 10.1 +0.4
      SNR=39
RBK   Rabkut            130.94 267   P       PKiKP    23 14 11.2 -0.2
      SNR=18
ARQ   Araqi             131.26 275   P       PKPdf    23 14 11.0 +0.1
      SNR=27
ILULI Ilulissat         131.34  22           PKPdf    23 14 08.0 -1.6
ILULI Ilulissat         131.34  22   PKIKP   PKPdf    23 14 08.0 -1.6
ILULI                                MLR     MLR
      comp=Z,62µm,20.0s
ILULI Ilulissat         131.34  22  i P      PKPdf    23 14 08.3 -1.2
DOK   Doka              131.48 268   P       PKPdf    23 14 10.6 -0.7
      SNR=12
WHFO  Wadi Hawf         131.49 267   P       PKPdf    23 14 11.0 -0.5
      SNR=11
WHFO  Wadi Hawf         131.49 267   P       Pdif     23 11 06.0 +1.9
SOHO  SOHO              131.53 276   P       PKiKP    23 14 11.8 -0.5
SOHO  SOHO              131.53 276   P       PKPdf    23 14 10.9 -0.4
KBS   Kingsbay          131.59 357           PKPdf    23 14 09.7 -0.2
KBS                                  IAMs_20 IAMs_20  00 08 25.9
      comp=Z,46µm,22.0s
KBS   Kingsbay          131.59 357   PKIKP   PKPdf    23 14 09.7 -0.2
KBS   Kingsbay          131.59 357  ePKPdf   PKPdf    23 14 09.8 -0.2
KBS                                  IVmB_BB          23 14 20.3
      comp=Z,3µm,2.3s
KBS                                 ePP      PP       23 16 29.2 -0.7
KBS                                 eSS      SS       23 34 02.7 +1.9
KBS                                  IVMs_BB IVMs_BB  23 58 11.1
      comp=Z,16µm,34.4s
KBS   Kingsbay          131.59 357  i P      PKPdf    23 14 09.6 -0.3
ABTO  Aybut             131.65 266   P       PKPdf    23 14 12.2 +0.4
      SNR=7.5
ABTO  Aybut             131.65 266   P       Pdif     23 11 04.3 -0.5
UOSS  Minazif           132.09 277   PKPdf   PKPdf    23 14 10.1 -2.3
UOSS  Minazif           132.09 277   P       PKPdf    23 14 12.7 +0.3
UOSS  Minazif           132.09 277   P       PKPdf    23 14 11.2 -1.2
SPA0  Spitsbergen Ar    132.11 356  ePKPdf   PKPdf    23 14 10.2 -0.7
SPA0                                ePP      PP       23 16 34.9 +1.7
SPA0                                e                 23 17 35.7
SPA0                                eSS      SS       23 34 10.3 +3.1
SPITS Spitsbergen Ar    132.11 356   PKhKP   PKPpre   23 13 56.2
      comp=Z,8.1nm,0.6s,baz=85,slow=3.5,SNR=8.4
SPITS                                PKP     PKPdf    23 14 10.3 -0.7
      comp=Z,148nm,0.7s,baz=106,slow=6.2,SNR=47
SPITS Spitsbergen Ar    132.11 356   PKIKP   PKPdf    23 14 10.4 -0.5
SPB2  Spitsbergen Ar    132.11 356           PKPdf    23 14 10.9 +0.1
HATD  Hatta, Dubai      132.11 277   P       PKPdf    23 14 12.6 +0.2
      SNR=73
HATD  Hatta, Dubai      132.11 277  i P      PKiKP    23 14 13.0 -0.5
      SNR=37
ASHO  Ashiyiah          132.13 277   P       PKPdf    23 14 12.0 -0.6
      SNR=45
ASHO  Ashiyiah          132.13 277  i P      PKPdf    23 14 13.0 +0.4
      SNR=28
MDH   Madha             132.13 277   P       PKiKP    23 14 13.0 -0.5
      SNR=27
MDH   Madha             132.13 277   P       Pdif     23 11 08.7 +2.0
MDH   Madha             132.13 277  i P      PKPdf    23 14 12.2 -0.3
      SNR=29
ALNE  Al Ain            132.17 276   P       PKPdf    23 14 11.8 -0.7
      SNR=45
ALNE  Al Ain            132.17 276  i P      PKiKP    23 14 13.4 -0.2
      SNR=16
SVE   Sverdlovsk        132.20 321d iPKIKP   PKPdf    23 14 10.9 -0.7
SVE                                  pmax    pmax
      comp=Z,371nm,1.4s
SVE                                  MLR     MLR
      comp=Z,64µm,24.0s
UMZA  Um Al Zommool     132.20 274   P       PKPdf    23 14 12.5 -0.2
MSFE  Esma-Masafi       132.27 278  i P      PKPdf    23 14 11.9 -0.8
      SNR=19
MASF  Masafi            132.27 278   P       PKPdf    23 14 12.0 -0.7
      SNR=44
SFJD  Kangerlussuaq     132.38  25   PKP     PKPdf    23 14 11.0 -0.6
      comp=Z,42nm,0.6s,baz=350,slow=1.4,SNR=13
SFJD                                 SKKPbc  SKKPbc   23 26 59.3 -3.6
      comp=Z,29nm,0.8s,baz=105,slow=4.6,SNR=5.5
SFJD  Kangerlussuaq     132.38  25   PKIKP   PKPdf    23 14 11.0 -0.6
SFJD  Kangerlussuaq     132.38  25  i P      PKPdf    23 14 10.0 -1.6
KIBK  Kibwezi           132.39 233   PKP     PKPdf    23 14 14.0 +0.5
KIBK  Kibwezi           132.39 233   PKPdf   PKPdf    23 14 13.2 -0.2
KIBK  Kibwezi           132.39 233   P       PKiKP    23 14 14.5 -0.1
      SNR=30
KIBK  Kibwezi           132.39 233   P       Pdif     23 11 07.9 -0.4
SHME  Shamm             132.51 278   P       PKPdf    23 14 13.0 -0.1
      SNR=19
SHME  Shamm             132.51 278  i P      PKPdf    23 14 13.5 +0.4
      SNR=18
FAQ   Al Faqa, Dubai    132.55 276   P       PKPdf    23 14 13.5 +0.3
      SNR=26
FAQ   Al Faqa, Dubai    132.55 276  i P      PKPdf    23 14 11.9 -1.4
      SNR=19
NAZ   Nazwa, Dubai      132.57 277   P       PKiKP    23 14 14.0 -0.4
      SNR=53
NAZ   Nazwa, Dubai      132.57 277  i P      PKPdf    23 14 12.1 -1.2
      SNR=31
ASUD  Al Ashush, Dub    132.73 276   P       PKPdf    23 14 14.0 +0.4
      SNR=38
ASUD  Al Ashush, Dub    132.73 276   P       Pdif     23 11 07.9 -1.5
ASUD  Al Ashush, Dub    132.73 276  i P      PKPdf    23 14 13.0 -0.6
      SNR=18
UMQ   Umm Al-Quwin      132.75 278   P       PKiKP    23 14 15.2 +0.5
      SNR=31
UMQ   Umm Al-Quwin      132.75 278  i P      PKPdf    23 14 13.2 -0.4
      SNR=30
SHEL  Horse Pasture     132.91 170   PKPdf   PKPdf    23 14 14.5 +0.2
SHEL  Horse Pasture     132.91 170   PKIKP   PKPdf    23 14 14.5 +0.2
NUUK  Nuuk              132.94  29  i P      PKPdf    23 14 12.7 -0.1
HOPEN Hopen             132.94 353  ePKPdf   PKPdf    23 14 12.9 +0.4
HOPEN                                IVmB_BB          23 14 19.5
      comp=Z,4µm,2.6s
HOPEN                               ePP      PP       23 16 38.3 -0.3
HOPEN                               eSS      SS       23 34 17.7 +0.5
HOPEN                                IVMs_BB IVMs_BB  23 58 46.9
      comp=Z,17µm,33.3s
DAG   Danmarks Havn     132.95   6   PKP     PKPdf    23 14 10.3 -2.2
DAG   Danmarks Havn     132.95   6  i P      PKPdf    23 14 10.2 -2.3
AJN   Ajban             133.00 276   P       PKPdf    23 14 14.6 +0.5
      SNR=26
AJN   Ajban             133.00 276  i P      PKPdf    23 14 12.8 -1.3
      SNR=20
SUMG  Summit            133.10  16   PKP     PKPdf    23 14 12.1 -1.3
SUMG  Summit            133.10  16           PKPdf    23 14 13.7 +0.3
SUMG                                 IAMs_20 IAMs_20  00 13 58.3
      comp=Z,45µm,22.0s
SUMG  Summit            133.10  16   PKIKP   PKPdf    23 14 13.7 +0.3
SUMG                                 MLR     MLR
      comp=Z,45µm,22.0s
SUMG  Summit            133.10  16  i P      PKPdf    23 14 12.2 -1.1
AB31  Akbulak array     133.16 310  i PKIKP  PKPdf    23 14 11.5 -2.1
ABKAR Akbulak array     133.16 310           PKPdf    23 14 12.4 -1.3
HSPB  Hornsund (broa    133.29 356  ePKP     PKPdf    23 14 12.4 -0.7
HSPB                                ePP      PP       23 16 37.5 -3.3
HSPB                                eSKS     SKPab    23 17 39.7 -0.5
HSPB                                ePPP     PPP      23 19 40.8
HSPB                                eSS      SS       23 34 26.9 +5.5
HSPB                                eL       L        23 58 39.5
      comp=Z,81µm,34.6s
ARTI  Arti              133.49 320           PKPdf    23 14 13.7 -0.3
ARTI  Arti              133.49 320   PKhKP   PKPpre   23 13 57.3
      comp=Z,2.4nm,0.5s,baz=168,slow=1.4,SNR=2.9
ARTI                                 PKP     PKPdf    23 14 13.3 -0.7
      comp=Z,267nm,0.9s,baz=119,slow=1.5,SNR=30
ARTI                                 SKPab   SKPbc    23 17 40.1 +0.7
      comp=Z,133nm,0.8s,baz=28,slow=0.6,SNR=6.2
ARTI  Arti              133.49 320  i PKIKP  PKPdf    23 14 13.2 -0.8
ARTI                                                  23 16 38.2
ARTI                                 PPP     PPP      23 19 35.3
ARTI                                 SS      SS       23 34 15.7  -10
ARTI                                 SSS     SSS      23 39 17.7
ARTI                                 MLR     MLR
      comp=Z,91µm,22.0s
MZR   Muzera            133.75 273   P       PKiKP    23 14 17.1 +0.3
      SNR=27
MZR   Muzera            133.75 273  i P      PKPdf    23 14 14.8 -0.8
      SNR=20
AKTO  Aktyubinsk        134.36 312   SKPab   SKPbc    23 17 43.8 +1.3
      comp=Z,88nm,0.9s,baz=64,slow=6.2,SNR=9.3
AKTO  Aktyubinsk        134.36 312   PKHKP   PKPpre   23 14 02.2
ICESG Greenland Ices    134.96  20  i P      PKPdf    23 14 14.9 -2.0
JRN   Qarnain Island    134.96 276   P       PKiKP    23 14 19.2  0.0
      SNR=17
DBG   Daneborg          135.01   8  i P      PKPdf    23 14 14.9 -1.5
BJO1  Bjornoya          135.40 354   IVMs_BB IVMs_BB  23 59 02.0
      comp=Z,17µm,30.2s
IVI   Ivigtut           135.47  32           PKPdf    23 14 16.7 -0.8
IVI                                  IAMs_20 IAMs_20  00 11 49.8
      comp=Z,41µm,21.0s
IVI   Ivigtut           135.47  32  i P      PKPdf    23 14 15.7 -1.8
TRNA  Turayna           136.29 275   P       PKPdf    23 14 17.9 -2.4
      SNR=21
SMRA  Abu-Samra         136.63 274   P       PKPdf    23 14 16.5 -4.4
      SNR=31
SMRA  Abu-Samra         136.63 274   P       Pdif     23 11 25.8 -0.8
NRS   Narsarsuaq        136.73  31  i P      PKPdf    23 14 17.4 -2.5
SHMA  Al-Shehemyia      136.87 276   P       PKPdf    23 14 19.9 -1.4
      SNR=9.5
SHMA  Al-Shehemyia      136.87 276   P       Pdif     23 11 26.0 -1.7
ISOG  Isortoq, Green    137.21  24  i P      PKPdf    23 14 19.4 -1.2
SAKB  Bahrain           137.27 276   P       PKPdf    23 14 20.7 -1.3
ANGG  Ammassalik, Gr    137.63  23⇓iP       PKPdf    23 14 18.6 -2.8
ATD   Arta Tunnel       137.63 252   PKPdf   PKPdf    23 14 21.5 -1.6
ATD   Arta Tunnel       137.63 252   P       PKPdf    23 14 22.3 -0.8
      SNR=16
ATD   Arta Tunnel       137.63 252   P       Pdif     23 11 29.5 -2.0
KIRV  Kirov             137.64 325   PKhKP   PKPpre   23 14 10.8
      comp=Z,14nm,0.6s,baz=78,slow=2.5,SNR=12
KIRV                                 PKP     PKPdf    23 14 20.9 -0.7
      comp=Z,122nm,0.5s,baz=85,slow=1.1,SNR=30
KIRV                                 PP      PP       23 17 08.8 +0.1
      comp=Z,56nm,0.8s,baz=72,slow=4.8,SNR=4.3
KIRV  Kirov             137.64 325c iPKIKP   PKPdf    23 14 20.3 -1.3
VADS  Vadso             137.75 346  ePKPdf   PKPdf    23 14 22.5 +0.9
VADS                                 IVmB_BB          23 14 29.8
      comp=Z,5µm,4.4s
VADS                                ePP      PP       23 17 09.2 +0.3
VADS                                eSS      SS       23 35 23.1 +8.2
VADS                                 IVMs_BB IVMs_BB  00 15 04.7
      comp=Z,18µm,22.2s
SCO   Scoresbysund      138.10  12   PKPdf   PKPdf    23 14 22.4 +0.2
SCO   Scoresbysund      138.10  12   PKIKP   PKPdf    23 14 22.4 +0.2
SCO                                  MLR     MLR
      comp=Z,52µm,22.0s
LVZ   Lovozero          138.23 342c iPKIKP   PKPdf    23 14 22.0 -0.6
HAMF  Hammerfest        138.33 349  ePKPdf   PKPdf    23 14 23.6 +0.9
HAMF                                 IVmB_BB          23 14 29.5
      comp=Z,4µm,2.8s
HAMF                                ePP      PP       23 17 14.0 +1.5
HAMF                                eSS      SS       23 35 27.4 +5.7
HAMF                                 IVMs_BB IVMs_BB  00 03 52.2
      comp=Z,21µm,35.4s
LODK  Lodwar            138.36 236   PKPdf   PKPdf    23 14 23.1 -1.5
LODK  Lodwar            138.36 236   P       PKPdf    23 14 23.1 -1.5
      SNR=57
MBAR  Mbarara           138.49 227   PKPdf   PKPdf    23 14 23.4 -1.5
MBAR  Mbarara           138.49 227   P       PKPdf    23 14 23.9 -1.0
MBAR  Mbarara           138.49 227   P       Pdif     23 11 34.0 -1.6
MBAR  Mbarara           138.49 227   PKIKP   PKPdf    23 14 23.4 -1.5
APA   Apatity           138.79 342⇓iPKIKP   PKPdf    23 14 20.0 -3.6
APA                                 i                 23 14 32.9
APA                                 i                 23 21 28.0
APA                                  pmax    pmax
      comp=Z,92nm,0.8s
ARA0  ARCESS Array S    138.98 348  ePKPdf   PKPdf    23 14 15.9 -8.0
ARA0                                ePKPdf   PKPpre   23 14 15.8
ARA0                                e                 23 14 18.2
ARA0                                 IVmB_BB          23 14 28.0
      comp=Z,5µm,2.9s
ARA0                                ePP      PP       23 17 09.5 -7.1
ARA0                                eSS      SS       23 35 34.5 +5.0
ARA0                                 IVMs_BB IVMs_BB  00 02 27.9
      comp=Z,22µm,39.6s
ARCES ARCESS Array B    138.98 348           PKPdf    23 14 23.4 -0.5
ARCES ARCESS Array B    138.98 348   PKhKP   PKPpre   23 14 14.8
      comp=Z,36nm,0.6s,baz=45,slow=2.2,SNR=107
ARCES                                SKP              23 17 54.3
      comp=Z,58nm,0.9s,baz=31,slow=2.8,SNR=4.0
ARCES                                PKKP    PKKPdf   23 23 56.6 +2.5
      comp=Z,2.8nm,0.6s,baz=225,slow=2.3,SNR=5.3
ARCES ARCESS Array B    138.98 348   PKIKP   PKPdf    23 14 23.4 -0.5
JMIC  Jan Mayen         139.36   5   PKP     PKPdf    23 14 22.8 -1.7
      comp=Z,99nm,0.8s,baz=99,slow=2.2,SNR=9.1
JMIC  Jan Mayen         139.36   5  ePKPdf   PKPdf    23 14 25.2 +0.7
JNE   Jan Mayen East    139.37   5  ePKPdf   PKPdf    23 14 20.6 -3.9
JNE                                 ePKPdf   PKiKP    23 14 25.2 -1.6
JNE                                  IVmB_BB          23 14 33.5
      comp=Z,5µm,2.3s
JNE                                 ePP      PP       23 17 19.4 +0.6
JNE                                 eSS      SS       23 35 40.7 +6.9
JMI   Jan Mayen         139.40   5   IVmB_BB          23 14 29.8
      comp=Z,4µm,2.6s
JMI                                 ePKPdf   PKPpre   23 14 19.6
JMI                                 ePP      PP       23 17 18.1 -0.9
JMI                                 eSS      SS       23 35 44.2  +10
JMI                                  IVMs_BB IVMs_BB  00 03 14.5
      comp=Z,8µm,34.4s
JETT  Jettan, Norway    139.81 350  ePP      PP       23 17 22.4 +0.7
JETT                                ePKPdf   PKPpre   23 14 18.7
TRO   Tromso            139.95 351  ePKPdf   PKPdf    23 14 26.5 +0.9
TRO                                 ePKPdf   PKPpre   23 14 12.5
TRO                                  IVmB_BB          23 14 29.5
      comp=Z,4µm,1.9s
TRO                                 ePP      PP       23 17 22.0 -0.5
TRO                                 eSS      SS       23 35 42.4 +1.7
TRO                                  IVMs_BB IVMs_BB  00 16 08.1
      comp=Z,18µm,24.2s
BELG  Belogornoye       140.47 316   PKhKP   PKPpre   23 14 17.8
      comp=Z,220nm,0.9s,baz=235,slow=1.3,SNR=19
BELG                                 PKP     PKPdf    23 14 27.3 +0.3
      comp=Z,1µm,1.0s,baz=8.1,slow=0.4,SNR=29
BELG                                 SKPab   SKPab    23 18 09.1 -3.5
      comp=Z,345nm,0.9s,baz=7.3,slow=6.3,SNR=6.1
BELG  Belogornoye       140.47 316c iPKIKP   PKPdf    23 14 25.8 -1.2
BELG                                 MLR     MLR
      comp=Z,15µm,24.0s
KBD   Kabd              140.58 280   P       PKPpre   23 14 22.0
RAYN  Ar Rayn           140.79 270           PKPdf    23 14 27.8 -0.9
RAYN  Ar Rayn           140.79 270   P       PKPpre   23 14 23.4
RAYN  Ar Rayn           140.79 270   PKIKP   PKPdf    23 14 27.8 -0.9
RAYN                                 MLR     MLR
      comp=Z,76µm,20.0s
RAYN  Ar Rayn           140.79 270  i P      PKPpre   23 14 20.8
      SNR=29
KLMR  Klimovskoe        141.11 332  ePKIKP   PKPdf    23 14 25.2 -2.7
KLMR                                e                 23 17 27.3
KLMR                                 SS      SS       23 35 55.5 +0.6
KLMR                                 pmax    pmax
      comp=Z,737nm,1.0s
AKT   Akhty             141.94 299  ePKHKP   PKPpre   23 14 21.3
AKT                                  pmax    pmax
      comp=Z,294nm,1.2s
AKT                                  pmax    pmax
      comp=N,97nm,0.7s
AKT                                  pmax    pmax
      comp=E,110nm,0.9s
LOF   Lofoten           142.03 353  ePKPdf   PKPdf    23 14 30.2 +0.8
LOF                                 ePKPdf   PKPpre   23 14 24.4
LOF                                 ePP      PP       23 17 36.4 +1.3
LOF                                 eSS      SS       23 36 11.4 +6.6
LOF                                  IVMs_BB IVMs_BB  00 04 13.5
      comp=Z,14µm,31.5s
STEI  Steigen           142.03 352  ePP      PP       23 17 36.0 +0.9
STEI                                ePKPdf   PKPpre   23 14 17.6
STEI                                eSS      SS       23 36 07.3 +2.4
STEI                                 IVMs_BB IVMs_BB  00 19 57.5
      comp=Z,18µm,20.5s
MAK   Makhachkala       142.05 302  ePKIKP   PKPdf    23 14 27.2 -3.0
MAK                                 e                 23 17 32.7
MAK                                 ePPP     PPP      23 20 39.7
MAK                                 eSS      SS       23 36 11.1 +3.6
MAK                                 eSSS     SSS      23 41 30.0
MAK                                  pmax    pmax
      comp=Z,419nm,0.9s
FAUS  Fauske            142.54 352  ePKPdf   PKPdf    23 14 30.9 +0.6
FAUS                                e        PKPpre   23 14 23.2
FAUS                                ePP      PP       23 17 36.1 -2.1
FAUS                                eSS      SS       23 36 14.2 +3.3
FAUS                                 IVMs_BB IVMs_BB  00 05 00.1
      comp=Z,19µm,29.4s
BORG  Borgarnes         143.07  16           PKPdf    23 14 31.6 +0.3
BORG  Borgarnes         143.07  16   IAMs_20 IAMs_20  00 18 39.8
      comp=Z,41µm,21.0s
BORG  Borgarnes         143.07  16   PKP     PKPbc    23 14 28.9 +0.6
      comp=Z,34nm,0.7s,baz=356,slow=3.5,SNR=14
BORG  Borgarnes         143.07  16   PKIKP   PKPdf    23 14 31.6 +0.3
BORG                                 MLR     MLR
      comp=Z,41µm,21.0s
VAGH  Vaagaholmen       143.41 352  ePKPdf   PKPab    23 14 25.7 -2.3
VAGH                                 IVmB_BB          23 14 36.5
      comp=Z,8µm,5.2s
VAGH                                ePP      PP       23 17 43.9 +0.5
VAGH                                eSS      SS       23 36 21.3 +0.5
VAGH                                 IVMs_BB IVMs_BB  00 09 04.7
      comp=Z,16µm,28.1s
KONS  Konsvik           143.65 352  ePKPdf   PKPbc    23 14 29.7 -0.1
KONS                                 IVmB_BB          23 14 37.1
      comp=Z,8µm,4.5s
MOR8  Moi Rana          143.80 351  ePKPdf   PKPab    23 14 26.7 -2.9
MOR8                                eSS      SS       23 36 27.4 +1.9
MOR8                                 IVMs_BB IVMs_BB  00 05 14.2
      comp=Z,18µm,30.1s
STOK  Stokkvaagen       143.82 352  ePKPdf   PKPab    23 14 29.2 -0.4
STOK                                 IVmB_BB          23 14 38.0
      comp=Z,9µm,5.4s
STOK                                ePP      PP       23 17 47.2 +1.4
STOK                                eSS      SS       23 36 30.8 +5.2
STOK                                 IVMs_BB IVMs_BB  00 05 19.3
      comp=Z,18µm,34.6s
LEIR  Leirfjorden       144.02 352  ePKPdf   PKPab    23 14 28.1 -2.3
LEIR                                 IVmB_BB          23 14 34.8
      comp=Z,10µm,2.3s
LEIR                                ePP      PP       23 17 47.8 +0.7
LEIR                                eSS      SS       23 36 31.6 +3.7
LEIR                                 IVMs_BB IVMs_BB  00 05 23.1
      comp=Z,18µm,37.0s
GNI   Garni             144.24 297   PKPdf   PKPab    23 14 31.8 -0.5
GNI   Garni             144.24 297   P       PKPab    23 14 31.7 -0.7
GNI   Garni             144.24 297c iPKIKP   PKPab    23 14 31.6 -0.7
GNI   Garni             144.24 297   P       PKPab    23 14 31.6 -0.7
VRH   Novokhopyorsk     144.32 316  ePKIKP   PKPdf    23 14 35.6 +1.7
VRH                                  pmax    pmax
      comp=Z,540nm,0.9s
MOS   Moscow            144.66 325  i PKHKP  PKPpre   23 14 27.5
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MOS                                   pmax      pmax
      comp=Z,1µm,1.2s
MOS                                   pmax      pmax
      comp=N,476nm,1.2s
MOS                                   MLR       MLR
      comp=N,28µm,22.0s
MOS                                   MLR       MLR
      comp=E,62µm,22.0s
MOS                                   MLR       MLR
      comp=Z,70µm,22.0s
NCK   Nalchik           144.85 303c iPKIKP   PKPab     23 14 33.1 -1.2
GOF   Gofitskoye        145.01 306c iPKIKP   PKPbc     23 14 33.5 -1.3
KBZ   Khabaz            145.32 303   PKPbc   PKPbc     23 14 34.9 -0.8
      comp=Z,292nm,1.0s,baz=88,slow=3.2,SNR=146
KBZ   Khabaz            145.32 303c iPKIKP   PKPbc     23 14 34.7 -1.1
PUL   Pulkovo           145.36 335c iPKIKP   PKPbc     23 14 34.3 -1.1
PUL                                   MLR       MLR
      comp=Z,72µm,22.0s
KVAR  Kislovodsk Arr    145.43 304   PKPbc   PKPdf     23 14 34.9 -1.4
      comp=Z,16nm,0.7s,baz=90,slow=20,SNR=18
KIV   Kislovodsk        145.44 304           PKPdf     23 14 35.1 -1.1
KIV   Kislovodsk        145.44 304   P       PKPdf     23 14 36.3  0.0
KIV   Kislovodsk        145.44 304   P       PKPdf     23 14 36.0 -0.3
KIV   Kislovodsk        145.44 304  ⇑P       PKPdf     23 14 35.6 -0.7
KIV   Kislovodsk        145.44 304  i PKIKP  PKPdf     23 14 34.9 -1.4
KIV                                 e                  23 17 50.8
KIV                                 e                  23 21 35.5
KIV                                 eSS      SS        23 36 38.3 -8.3
KIV                                 eSSS     SSS       23 42 10.0
KIV                                   pmax      pmax
      comp=Z,406nm,1.1s
KIV   Kislovodsk        145.44 304  i P      PKPdf     23 14 35.2 -1.1
      SNR=150
SHA1  Shidzhatmaz       145.49 303c iPKIKP   PKPdf     23 14 35.5 -1.0
OBN   Obninsk           145.49 325   PKPbc   PKPdf     23 14 34.9 -0.9
      comp=Z,2µm,1.0s,baz=358,slow=2.2,SNR=249
OBN   Obninsk           145.49 325  ⇑P       PKPdf     23 14 35.4 -0.4
OBN   Obninsk           145.49 325c iPKIKP   PKPdf     23 14 34.7 -1.1
OBN                                 e                  23 14 45.2
OBN                                 e                  23 17 55.8
OBN                                 ePPP     PPP       23 21 09.3
OBN                                 e                  23 21 36.4
OBN                                 eSS      SS        23 36 47.0 +1.3
OBN                                   pmax      pmax
      comp=Z,6µm,2.0s
OBN                                   MLR       MLR
      comp=Z,69µm,21.0s
FIA1  FINESS Array S    145.52 340           PKPdf     23 14 34.7 -1.0
FINES FINESS Array B    145.52 340           PKPdf     23 14 34.6 -1.1
FINES FINESS Array B    145.52 340   PKPbc   PKPdf     23 14 34.8 -0.9
      comp=Z,3µm,1.0s,baz=60,slow=3.5,SNR=2837
FINES FINESS Array B    145.52 340   PKIKP   PKPdf     23 14 34.6 -1.1
GEVA  Gevas             145.57 294           PKPdf     23 14 36.0 -0.8
VORR  Voronezh          145.62 318  ePKIKP   PKPdf     23 14 35.2 -1.0
VORR                                  pmax      pmax
      comp=Z,2µm,1.0s
VORR                                  MLR       MLR
      comp=Z,78µm,21.0s
NSS   Namsos            145.68 352  ePKPdf   PKPdf     23 14 35.3 -0.6
NSS                                   IVmB_BB          23 14 40.2
      comp=Z,35µm,3.2s
NSS                                 eSS      SS        23 36 51.0 +4.2
NSS                                   IVMs_BB IVMs_BB  00 06 28.3
      comp=Z,21µm,30.1s
VSR   Storozhevoye      145.82 317  ePKIKP   PKPdf     23 14 34.8 -1.7
VSR                                 e                  23 17 54.3
VSR                                   pmax      pmax
      comp=Z,2µm,1.0s
VORD  Divnogorie        145.84 317  ePKP2    PKPdf     23 14 36.3 -0.2
VORD                                  pmax      pmax
      comp=Z,2µm,1.0s
GURO  Guroymak-BITLI    146.37 294           PKPdf     23 14 38.0  0.0
ERBR  Yeremizino-Bor    146.65 307  i PKP2   PKPbc     23 14 39.5 -0.3
ERBR                                  pmax      pmax
      comp=Z,673nm,0.9s
LABN  Labinsk           146.71 306  i PKP2   PKPab     23 14 40.8 -0.4
LABN                                  pmax      pmax
      comp=Z,478nm,0.9s
MARD  Mardin            147.37 292           PKPdf     23 14 38.8 -1.0
VSLR  Vesyoloye         147.42 304c iPKIKP   PKPdf     23 14 38.4 -1.1
VSLR                                  MLR       MLR
      comp=Z,61µm,24.0s
VSU   Vasula            147.59 336c iPKIKP   PKPdf     23 14 37.0 -2.2
VSU                                   MLR       MLR
      comp=Z,63µm,22.0s
SOC   Sochi             147.62 304  ePKIKP   PKPdf     23 14 37.6 -2.2
SOC                                 ePPP     PPP       23 21 25.0
SOC                                 eSS      SS        23 37 01.7 -9.4
SOC                                                    00 12 19.3
SOC                                   pmax      pmax
      comp=Z,427nm,1.0s
MOL   Molde             148.02 355  ePKPdf   PKPdf     23 14 40.8 +0.9
MOL                                   IVmB_BB          23 14 50.1
      comp=Z,15µm,2.6s
MOL                                 ePP      PP        23 18 11.7 +1.0
MOL                                 eSS      SS        23 37 18.6 +5.3
MOL                                   IVMs_BB IVMs_BB  00 08 37.6
      comp=Z,23µm,30.9s
DOMB  Dombas            148.42 354  ePKPdf   PKPdf     23 14 41.0 +0.4
DOMB                                  IVmB_BB          23 14 51.3
      comp=Z,16µm,3.1s
DOMB                                eSS      SS        23 37 18.4 +0.6
DOMB                                  IVMs_BB IVMs_BB  00 11 11.3
      comp=Z,23µm,26.4s
AKN   Aaknes            148.45 355  ePKPdf   PKPdf     23 14 40.3 -0.3
AKN                                 ePKPbc   PKPbc     23 14 44.7 +0.5
AKN                                 eSS      SS        23 37 28.5  +10
AKN                                   IVMs_BB IVMs_BB  00 12 10.2
      comp=Z,18µm,25.6s
ANN   Anapa             148.96 307  i PKP2   PKPbc     23 14 44.8 -1.2
ANN                                 e                  23 18 14.0
ANN                                   pmax      pmax
      comp=Z,1µm,1.0s
NC204 NORSAR Array S    148.98 352           PKPdf     23 14 40.9 -0.7
FOO   Floro             149.14 357  ePKPdf   PKPdf     23 14 41.9 +0.2
FOO                                 ePKPbc   PKPbc     23 14 46.4 +0.5
FOO                                   IVmB_BB          23 14 53.0
      comp=Z,21µm,2.7s
FOO                                 i                  23 28 38.4
FOO                                 eSS      SS        23 37 30.9 +5.1
NB2   NORSAR Subarra149.15 351       PKP     PKPbc     23 14 45.3 -0.8
      comp=Z,2µm,1.2s,baz=17,slow=2.6
NB2   NORSAR Subarra149.15 351       PKP     PKPbc     23 14 45.3 -0.8
      baz=17,slow=2.6
NOA   NORSAR Array B 149.15 351      PKP     PKPdf     23 14 41.0 -0.9
      comp=Z,74nm,0.9s,baz=37,slow=1.6,SNR=208
NOA                                   PKPbc   PKPbc    23 14 45.2 -0.8
      comp=Z,120nm,1.0s,baz=59,slow=1.5,SNR=58
NC602 NORSAR Array S 149.40 351     ePKPbc   PKPbc     23 14 46.6  0.0
HYA   Hoyanger          149.51 356  ePKPdf   PKPdf     23 14 41.9 -0.4
HYA                                 ePKPbc   PKPbc     23 14 47.2 +0.4
HYA                                   IVmB_BB          23 14 51.6
      comp=Z,18µm,2.2s
HYA                                 eSS      SS        23 37 37.1 +7.2
HYA                                   IVMs_BB IVMs_BB  00 09 08.0
      comp=Z,19µm,27.8s
HFS   Hagfors           149.64 348   PKP     PKPdf     23 14 41.3 -1.2
      comp=Z,156nm,0.9s,baz=135,slow=0.8,SNR=66
HFS                                   PKPbc   PKPbc    23 14 46.0 -1.2
      comp=Z,497nm,0.9s,baz=72,slow=4.8,SNR=60
HFS   Hagfors           149.64 348   PKP2    PKPbc     23 14 46.0 -1.2
SUE   Sulen             149.69 357  ePKPdf   PKPdf     23 14 42.1 -0.4
SUE                                 ePKPbc   PKPbc     23 14 47.5 +0.2
SUE                                 ePKSdf   PP        23 18 16.9 -3.5
SUE                                 eSS      SS        23 37 36.7 +4.8
SKAR  Skarslia          149.83 354  ePKPdf   PKPdf     23 14 42.5 -0.4
SKAR                                ePKPbc   PKPbc     23 14 48.0 +0.3
SKAR                                  IVmB_BB          23 14 52.8
      comp=Z,19µm,2.2s
SKAR                                i                  23 28 40.2
SKAR                                eSS      SS        23 37 37.0 +3.3
SKAR                                  IVMs_BB IVMs_BB  00 08 08.9
      comp=Z,24µm,34.7s
MNK   Minsk             149.92 329  i PKP    PKPdf     23 14 42.9 -0.3
      comp=Z,571nm,1.1s,baz=49
MNK                                 i PKP    PKPbc     23 14 44.1 -4.0
      comp=E,167nm,1.1s
MNK                                 i PKP    PKPbc     23 14 44.1 -4.0
      comp=N,100nm,1.2s
MNK                                 i PKiKP  PKiKP     23 14 50.1 +1.1
MNK                                 i PP     PP        23 18 22.9 +0.6
MNK                                 i PPP    PPP       23 21 45.2
MNK                                 i SKS    SKSdf     23 21 48.1 +0.2
MNK                                 i SKKS   SKKSdf    23 30 41.8 -0.6
MNK                                 i SS     SS        23 37 38.0 +2.5
MNK                                 i SSS    SSS       23 43 21.5
MNK   Minsk             149.92 329  i PKHKP  PKPpre    23 14 42.8
MNK                                 i                  23 14 50.0
MNK                                 i                  23 18 22.8
MNK                                 i PPP    PPP       23 21 45.1
MNK                                 i                  23 21 48.0
MNK                                 i SS     SS        23 37 37.9 +2.4
MNK                                   pmax      pmax
      comp=Z,571nm,1.1s
MNK                                   pmax      pmax
      comp=N,100nm,1.2s
MNK                                   pmax      pmax
      comp=E,167nm,1.1s
MNK                                   MLR       MLR
      comp=N,34µm,23.0s
MNK                                   MLR       MLR
      comp=Z,92µm,23.0s
MNK                                   MLR       MLR
      comp=E,51µm,22.0s
NACGM Naroch            150.12 331    LRM     MLR      00 20 10.1
      comp=Z,29µm,21.6s
GAZ   Gaziantep         150.22 292           PKPdf     23 14 43.5 -0.9
ASK   Askoy             150.24 357  ePKPbc   PKPbc     23 14 48.9 +0.3
ASK                                   IVmB_BB          23 14 53.7
      comp=Z,15µm,2.1s
ASK                                 ePP      PP        23 18 25.1 +1.5
ASK                                   IVMs_BB IVMs_BB  00 11 38.7
      comp=Z,17µm,27.8s
OSL   Oslo              150.28 351  ePKPdf   PKPdf     23 14 43.7 +0.2
OSL                                 ePKPbc   PKiKP     23 14 49.3 -0.2
OSL                                 ePKSdf   PP        23 18 17.7 -6.2
OSL                                 eSS      SS        23 37 38.9 +0.3
OSL                                   IVMs_BB IVMs_BB  00 09 27.6
      comp=Z,21µm,31.7s
BER   Bergen            150.34 357  ePKPbc   PKPbc     23 14 49.0 +0.1
BER                                   IVmB_BB          23 14 53.8
      comp=Z,15µm,2.3s
BER                                 ePP      PP        23 18 25.6 +1.5
BER                                 eSS      SS        23 37 48.2 +9.1
BER                                   IVMs_BB IVMs_BB  00 11 39.3
      comp=Z,13µm,31.4s
LRW   Lerwick           150.59   3  eP       PKPdf     23 14 44.3 +0.2
LRW                                   IAMs_20 IAMs_20  00 38 15.0
      comp=Z,81µm,26.0s
KONO  Kongsberg         150.70 352           PKPdf     23 14 43.4 -0.8
KONO  Kongsberg         150.70 352   PKIKP   PKPdf     23 14 44.9 +0.7
KONO  Kongsberg         150.70 352  ePKPdf   PKPdf     23 14 43.6 -0.6
KONO                                ePKPbc   PKPbc     23 14 50.0 +0.2
KONO                                ePKSdf   PP        23 18 21.9 -4.4
KONO                                eSS      SS        23 37 46.3 +3.0
KONO                                  IVMs_BB IVMs_BB  00 10 55.5
      comp=Z,19µm,28.6s
ODD1  Odda              150.73 355  ePKPdf   PKPdf     23 14 43.0 -1.3
ODD1                                ePKPbc   PKiKP     23 14 50.3 -0.2
ODD1                                eSS      SS        23 37 46.6 +3.0
ODD1                                  IVMs_BB IVMs_BB  00 08 32.1
      comp=Z,16µm,38.4s
PABE  Paberze           150.81 334           PKPdf     23 14 43.7 -0.8
BEIL  Beino             151.05 287  eP       PKPdf     23 14 44.7 -0.9
STRU  Stroemstad        151.09 350  i P      PKPdf     23 14 43.7 -1.1
SIM   Simferopol'       151.18 308cePKIKP    PKPdf     23 14 44.7 -0.8
SIM                                                    23 14 54.5
SIM                                 e                  23 18 27.0
SIM                                   pmax      pmax
      comp=Z,834nm,0.9s
SIM                                   pmax      pmax
      comp=Z,11µm,15.8s
DIKM  Dikmen            151.22 301  ⇑P       PKPdf     23 14 45.1 -0.6
BLS5  Blasjo            151.22 355  ePKPdf   PKPdf     23 14 45.2 +0.1
BLS5                                  IVmBBB           23 14 59.0
      comp=Z,19µm,3.4s
BLS5                                ePP      PP        23 18 31.2 +1.8
BLS5                                eSS      SS        23 37 54.1 +5.0
BLS5                                  IVMs_BB IVMs_BB  00 23 25.5
      comp=Z,20µm,25.9s
HWQ   Hawqa             151.23 286  eP       PKPdf     23 14 44.9 -1.2
ZAHL  Zahle             151.26 285  eP       PKPdf     23 14 45.5 -0.7
RCY   Rachaya           151.28 284  eP       PKPdf     23 14 45.7 -0.5
GHAJ  Ghor Haditha      151.28 280           PKPdf     23 14 45.0 -1.0
SHBL  Chebaa            151.34 284  eP       PKPdf     23 14 45.9 -0.4
QRWL  Qaraoun           151.41 284  eP       PKPdf     23 14 45.5 -0.8
BHL   Bhannes           151.46 285  eP       PKPdf     23 14 45.5 -0.8
KMY   Karmoy            151.51 356  ePKPdf   PKPdf     23 14 46.2 +0.7
KMY                                 eSS      SS        23 37 56.6 +4.5
KMY                                   IVMs_BB IVMs_BB  00 12 14.7
      comp=Z,16µm,25.4s
DQRL  Deir Qamar        151.51 285  eP       PKPdf     23 14 46.0 -0.5
MMAI  Mount Meron Ar    151.60 283   PKP     PKPdf     23 14 46.0 -0.6
      comp=Z,6.3nm,0.8s,baz=86,slow=2.0,SNR=19
MMAI                                  PKPbc   PKPbc    23 14 53.0 +0.2
      comp=Z,1µm,1.0s,baz=80,slow=5.2,SNR=79
MMAI                                  PKPab   PKPab    23 15 00.4 -1.2
      comp=Z,820nm,0.8s,baz=82,slow=6.1,SNR=24
AKASG Malin Array Be    151.61 322   PKP     PKPdf     23 14 44.2 -1.7
      comp=Z,15nm,0.8s,baz=39,slow=1.1,SNR=73
AKASG                                 PKPbc   PKPbc    23 14 51.5 -0.6
      comp=Z,909nm,0.9s,baz=48,slow=3.0,SNR=91
AKBB  Malin Array Si    151.61 322           PKPdf     23 14 44.4 -1.6
AKBB  Malin Array Si    151.61 322c iPKIKP   PKPdf     23 14 44.3 -1.6
KIEV  Kiev              151.62 322           PKPdf     23 14 44.3 -1.6
KIEV  Kiev              151.62 322  ⇑P       PKPdf     23 14 44.9 -1.1
KIEV  Kiev              151.62 322   PKIKP   PKPdf     23 14 44.8 -1.1
KIEV  Kiev              151.62 322  i P      PKPdf     23 14 44.4 -1.6
      SNR=59
SACV  Santiago Islan    151.75 118   PKPdf   PKPdf     23 14 46.6 -0.6
SACV  Santiago Islan    151.75 118   IAMs_20 IAMs_20   00 33 02.7
      comp=Z,32µm,20.0s
LEWI  Lewis, Hebride    152.00  10  eP       PKPdf     23 14 47.5 +1.3
BIGH  Upper Bighouse    152.03   7  eP       PKPdf     23 14 47.8 +1.6
BIGH                                  IAMs_20 IAMs_20  00 37 23.6
      comp=Z,61µm,22.8s
BZK   Bozkurt           152.07 302  ⇑P       PKPdf     23 14 45.9 -1.0
BORU  Boraas            152.16 348  i P      PKPdf     23 14 45.2 -1.3
HOMB  Homborsund        152.18 353  ePKPdf   PKPdf     23 14 46.9 +0.4
HOMB                                  IVmB_BB          23 14 60.0
      comp=Z,17µm,1.4s
HOMB                                eSS      SS        23 37 54.4 -5.1
HOMB                                  IVMs_BB IVMs_BB  00 07 47.3
      comp=Z,13µm,34.9s
HOMB  Homborsund        152.18 353  i P      PKPdf     23 14 45.2 -1.3
LINV  Loch Inver, As    152.22   8  eP       PKPdf     23 14 47.5 +1.0
LINV                                  IAMs_20 IAMs_20  00 37 29.5
      comp=Z,53µm,22.5s
SUW   Suwalki           152.23 333  ePKP     PKPdf     23 14 45.9 -0.8
SUW                                 ePP      PP        23 18 35.1 -0.3
SUW                                 eSS      SS        23 37 42.5  -18
SUW                                 eL       L         00 11 53.1
      comp=Z,99µm,31.3s
SUW   Suwalki           152.23 333           PKPdf     23 14 45.9 -0.8
SUW   Suwalki           152.23 333   PKIKP   PKPdf     23 14 45.9 -0.8
SNART Snartemo          152.24 354  ePKPdf   PKPdf     23 14 45.8 -0.8
ONAU  Onsala            152.53 348  i P      PKPdf     23 14 45.8 -1.3
KIRS  Kirsehir-Merke    152.65 296  ⇑P       PKPdf     23 14 47.2 -0.8
BLEU  Blekinge          152.72 343  i P      PKPdf     23 14 45.8 -1.6
FABU  Falkenberg        152.76 347  i P      PKPdf     23 14 46.5 -0.9
BR131 Keskin Array S    152.77 298   PKPdf   PKPdf     23 14 46.6 -1.6
BR131 Keskin Array S    152.77 298   P       PKPdf     23 14 46.9 -1.4
      SNR=351
BR131 Keskin Array S    152.77 298   P       PKPdf     23 14 47.9 -0.3
      SNR=351
BR131 Keskin Array S    152.77 298   PKIKP   PKPdf     23 14 46.7 -1.6
BRTR  Keskin Array B    152.77 298   PKP     PKPdf     23 14 46.5 -1.7
      comp=Z,29nm,1.1s,baz=132,slow=1.8,SNR=37
BRTR                                  PKPbc   PKPbc    23 14 54.6 -0.8
      comp=Z,263nm,1.0s,baz=140,slow=4.4,SNR=34
CIDE  Kastamonu/Cide    152.85 303  ⇑P       PKPdf     23 14 47.1 -0.9
OVD   Ostervraa, Den    152.89 350  i P      PKPdf     23 14 46.7 -0.8
KPL   Plockton          152.95   9  eP       PKPdf     23 14 48.6 +1.0
KPL                                   IAMs_20 IAMs_20  00 29 09.3
      comp=Z,50µm,22.9s
DEL   Delary            153.02 345  i P      PKPdf     23 14 46.5 -1.3
PURM  Purcari           153.34 314  ⇑P       PKPdf     23 14 47.6 -1.0
ANTO  Ankara            153.39 298   P       PKPdf     23 14 47.9 -1.1
ANTO  Ankara            153.39 298   P       PKPdf     23 14 49.0 -0.1
ANTO  Ankara            153.39 298  ⇑P       PKPdf     23 14 48.5 -0.5
ANTO  Ankara            153.39 298   PKIKP   PKPdf     23 14 48.5 -0.5
CSS   Mathiatis         153.40 287           PKPdf     23 14 47.7 -1.5
SORM  Soroca            153.47 318  ⇑P       PKPdf     23 14 47.4 -1.3
SORM  Soroca            153.47 318   PKIKP   PKPdf     23 14 47.4 -1.3
PCED  Cedros            153.69  64  ePKP     PKPbc     23 14 56.2 -1.0
PCED  Cedros            153.69  64  ePKP     PKPbc     23 14 56.2 -1.0
CALA  Caldeira          153.70  64  ePKP     PKPdf     23 14 52.4 +2.8
CALA  Caldeira          153.70  64  ePKP     PKPdf     23 14 52.4 +2.8
DRUM  Mains of Drumt    153.72   6  eP       PKPdf     23 14 48.9 +0.1
DRUM                                  IAMs_20 IAMs_20  00 33 50.6
      comp=Z,84µm,25.5s
KIS   Kishinev          153.77 316⇑iPKP      PKPdf     23 14 47.0 -2.2
      comp=Z,720nm,1.2s
KIS   Kishinev          153.77 316  ePP      PP        23 18 42.0 -2.6
KIS   Kishinev          153.77 316  i PPS    PPS       23 29 00.0
KIS                                 eL       L         00 11 31.0
KIS                                   LRM     MLR      00 27 10.0
      comp=Z,7µm,22.0s
KIS   Kishinev          153.77 316  ⇑P       PKPdf     23 14 47.8 -1.4
KIS   Kishinev          153.77 316  i PKIKP  PKPdf     23 14 47.0 -2.2
KIS                                 i                  23 14 57.0
KIS                                 e                  23 18 42.0
MILM  Milestii Mici     153.81 315  i PKHKP  PKPpre    23 14 46.8
MILM  Milestii Mici     153.81 315    PKPM             23 14 53.0
      comp=Z,10µm,9.4s
MILM  Milestii Mici     153.81 315  i PKiKP  PKPbc     23 14 56.8 -0.4
MILM  Milestii Mici     153.81 315  i PP     PP        23 18 41.0 -3.9
MILM  Milestii Mici     153.81 315  i PPS    PPS       23 28 57.0
MILM                                eL       L         00 01 24.0
MILM                                  LRM     MLR      00 27 14.0
      comp=Z,22µm,21.5s
MILM  Milestii Mici     153.81 315  ⇑P       PKPdf     23 14 48.1 -1.1
MILM  Milestii Mici     153.81 315  i PKIKP  PKPdf     23 14 46.8 -2.5
MILM                                i                  23 14 56.8
MILM                                i                  23 18 41.0
MILM                                  pmax      pmax
      comp=Z,10µm,9.4s
PCAN  Candelaria        153.88  65  ePKP     PKPbc     23 14 56.3 -1.4
PCAN  Candelaria        153.88  65  ePKP     PKPbc     23 14 56.3 -1.4
LUNU  Lund              153.89 345  i P      PKPdf     23 14 48.2 -0.8
PICO  Pico              153.93  65  ePKP     PKPdf     23 14 48.9 -0.9
PICO  Pico              153.93  65  ePKP     PKPdf     23 14 48.9 -0.9
LAWE  Loch Awe, Argy    154.03   9  eP       PKPdf     23 14 47.0 -2.3
LAWE                                  IAMs_20 IAMs_20  00 18 18.9
      comp=Z,71µm,25.0s
ROSA  Rosais            154.04  64  ePKP     PKiKP     23 14 58.0  0.0
ROSA  Rosais            154.04  64  ePKP     PKiKP     23 14 58.0  0.0
INVG  Invergeldie, C    154.04   8  eP       PKPdf     23 14 50.8 +1.5
INVG                                  IAMs_20 IAMs_20  00 35 50.0
      comp=Z,32µm,21.5s
COP   Copenhagen        154.05 346  i P      PKPdf     23 14 48.6 -0.7
PPNO  Prainha do Nor    154.06  65  ePKP     PKPbc     23 14 56.3 -1.8
PPNO  Prainha do Nor    154.06  65  ePKP     PKPbc     23 14 56.3 -1.8
PMAN  Manadas           154.17  64  ePKP     PKPdf     23 14 48.3 -1.7
PMAN  Manadas           154.17  64  ePKP     PKPdf     23 14 48.3 -1.7
R9F13 Warsaw-Wawer      154.39 332  ePKPdfc            23 14 49.3
R9F13                               ePKiKP   PKiKP     23 15 01.7 +3.4
R9F13                               eSKS     SKSdf     23 22 00.8 +7.4
IASR  Iasi              154.42 317  ⇓P       PKPdf     23 14 49.7 -0.4
DRBR  Darabani          154.42 320  ⇓P       PKPdf     23 14 48.9 -1.2
MDUB  Mudurnu           154.47 300           PKPdf     23 14 48.6 -1.9
VASR  Vaslui            154.56 316  ⇑P       PKPdf     23 14 48.9 -1.5
TLCR                    154.59 312  ⇓P       PKPdf     23 14 50.7 +0.2
TLCR                    154.59 312   PKIKP   PKPdf     23 14 50.6 +0.2
PGBU  Glenifferbraes    154.59   9  eP       PKPdf     23 14 48.6 -1.4
PGBU                                  IAMs_20 IAMs_20  00 32 00.1
      comp=Z,205µm,31.2s
EDI   Edinburgh         154.63   7  eP       PKPdf     23 14 50.8 +0.7
EDI                                   IAMs_20 IAMs_20  00 32 46.9
      comp=Z,90µm,23.4s
SAHE  Sakarya_HENDEK154.63 301      ⇑P       PKPdf     23 14 49.4 -1.3
ESY   Stoneypath        154.69   6  eP       PKPdf     23 14 49.5 -0.8
JURR  Jurilovca         154.72 311  ⇓P       PKPdf     23 14 50.4 -0.2
PSBA  Serra de Santa    154.74  64  ePKP     PKPbc     23 14 56.8 -2.7
PSBA  Serra de Santa    154.74  64  ePKP     PKPbc     23 14 56.8 -2.7
SSRD  Sdr. Stenderup    154.75 350  i P      PKPdf     23 14 48.8 -1.5
VLDR  Vladesti          154.76 314  ⇑P       PKPdf     23 14 50.1 -0.5
IDGL  Inch Island, C    154.82  13  eP       PKPdf     23 14 51.9 +1.5
IDGL  Inch Island, C    154.82  13   PKP     PKPdf     23 14 49.4 -1.0
BEL   Belsk             154.82 332  ePKP     PKPdf     23 14 49.9 -0.7
BEL                                 ePP      PP        23 18 48.2 -1.9
BEL                                 eSS      SS        23 38 47.4  +18
BEL                                 eL       L         00 18 31.9
      comp=Z,5µm,26.4s
GIUM  Giurgiulesti      154.84 313  ⇓P       PKPdf     23 14 51.1 +0.4
PAGU  Agualva, Azore    154.85  64  ePKP     PKPdf     23 14 54.9 +3.9
PAGU  Agualva, Azore    154.85  64  ePKP     PKPdf     23 14 54.9 +3.9
VARL  Varlezi           154.88 314  ⇑P       PKPdf     23 14 50.6 -0.2
ACRG  Accra             154.88 175   PKPdf   PKPdf     23 14 51.0 -0.8
SCTR  Scanteiesti       154.89 314  ⇓P       PKPdf     23 14 49.7 -1.1
TATR  Tatarca           154.89 313  ⇑P       PKPdf     23 14 50.6 -0.2
RGN   Rugen             154.91 344   PKPdf   PKPdf     23 14 50.5  0.0
RGN   Rugen             154.91 344  ePP      PP        23 18 48.5 -1.7
      baz=22,slow=5.4
GKP   Gorka Klasztor    154.96 338  ePKP     PKPdf     23 14 50.3 -0.4
GKP                                 ePP      PP        23 18 48.6 -2.1
GKP                                 eSS      SS        23 38 44.8  +14
GKP                                 eL       L         00 19 07.2
      comp=Z,101µm,26.6s
TPGR  Topolog           154.98 312  ⇓P       PKPdf     23 14 50.4 -0.7
NEGRR Negrea            155.03 313  ⇑P       PKPdf     23 14 50.1 -0.9
CLGH  Cloghs, Cushen    155.06  11  eP       PKPdf     23 14 51.1 +0.3
CLGH                                  IAMs_20 IAMs_20  00 32 07.4
      comp=Z,621nm,23.3s
SCHL  Schela            155.07 313  ⇑P       PKPdf     23 14 50.3 -0.8
SCHLR Schela            155.08 313  ⇑P       PKPdf     23 14 50.4 -0.7
IZVR  Izvoarele         155.09 313  ⇑P       PKPdf     23 14 50.4 -0.7
PRAR  RASCA             155.10 318  ⇑P       PKPdf     23 14 50.1 -1.0
TUDR                    155.13 314  ⇑P       PKPdf     23 14 50.4 -0.8
DBIC  Dimbokro          155.15 164   PKPdf   PKPdf     23 14 51.5 -0.6
DBIC  Dimbokro          155.15 164   PKP     PKPdf     23 14 52.5 +0.3
      comp=Z,62nm,0.9s,baz=183,slow=1.0,SNR=32
DBIC  Dimbokro          155.15 164   PKIKP   PKPdf     23 14 52.6 +0.4
TIRR  Tirgusor          155.15 311           PKPdf     23 14 49.9 -1.3
TIRR  Tirgusor          155.15 311  ⇑P       PKPdf     23 14 50.6 -0.6
TIRR  Tirgusor          155.15 311   PKIKP   PKPdf     23 14 50.6 -0.6
EFOR  EFORIE            155.16 310  ⇑P       PKPdf     23 14 49.7 -1.5
EKB   Eskdalemuir       155.21   7           PKPdf     23 14 50.1 -0.8
EKA   Eskdalemuir Ar    155.22   7   PKP     PKPdf     23 14 50.3 -0.7
      comp=Z,20nm,0.8s,baz=300,slow=1.3,SNR=26
EKA                                   PKPab   sPKPbc   23 15 15.5 +0.3
      comp=Z,95nm,0.7s,baz=332,slow=2.8,SNR=13
COSR  Cosmesti PH       155.23 314  ⇑P       PKPdf     23 14 51.3 +0.1
ESK   Eskdalemuir       155.23   7           PKPdf     23 14 50.4 -0.6
ESK   Eskdalemuir       155.23   7  eP       PKPdf     23 14 52.5 +1.5
ESK                                   IAMs_20 IAMs_20  00 32 15.5
      comp=Z,108µm,48.6s
ESK   Eskdalemuir       155.23   7   PKIKP   PKPdf     23 14 50.4 -0.6
MFTR  Murfatlar         155.26 310  ⇓P       PKPdf     23 14 51.0 -0.3
MANR  Mangalia          155.29 309  ⇓P       PKPdf     23 14 51.1 -0.3
NEWG  New Galloway      155.30   9  eP       PKPdf     23 14 50.8 -0.2
NEWG                                  IAMs_20 IAMs_20  00 32 04.2
      comp=Z,70µm,23.6s
TESR  Tescani           155.30 316  ⇑P       PKPdf     23 14 50.2 -1.2
PANC  Panciu            155.32 315  ⇑P       PKPdf     23 14 51.3 -0.1
TLBR  Topalu            155.35 311  ⇓P       PKPdf     23 14 50.4 -1.1
ODBI  Odobesti          155.43 314  ⇑P       PKPdf     23 14 51.6 +0.1
SILT  Sile              155.44 302  ⇑P       PKPdf     23 14 50.8 -0.9
CVDA  Cernavoda         155.45 311  ⇑P       PKPdf     23 14 51.4 -0.2
ISP   Isparta           155.47 294   PKPdf   PKPdf     23 14 50.0 -2.0
ISP   Isparta           155.47 294   PKIKP   PKPdf     23 14 50.0 -2.0
GAL1  Galloway          155.48   9  eP       PKPdf     23 14 51.4 +0.1
GAL1                                  IAMs_20 IAMs_20  00 32 29.1
      comp=Z,73µm,23.6s
BURAR Bucovina Array    155.53 320  ⇑P       PKPdf     23 14 51.5 -0.3
BURAR Bucovina Array    155.53 320   PKIKP   PKPdf     23 14 51.4 -0.3
ONER  Baraj Valea Uz    155.54 316  ⇓P       PKPdf     23 14 51.9 +0.2
KWP   Kalwaria Pacla    155.56 326  ePKP     PKPdf     23 14 50.8 -0.9
KWP                                 ePP      PP        23 18 53.8 -0.6
KWP                                 ePPP     PPP       23 22 28.4
KWP                                 eSS      SS        23 38 50.9  +13
KWP                                 eL       L         00 23 39.7
      comp=Z,131µm,25.5s
VRI   Vrincioaia        155.58 315  ⇑P       PKPdf     23 14 51.4 -0.5
VRI   Vrincioaia        155.58 315   PKIKP   PKPdf     23 14 51.3 -0.5
PLOR  Plostina          155.63 315  ⇓P       PKPdf     23 14 51.1 -0.9
PLOR  Plostina          155.63 315   PKIKP   PKPdf     23 14 51.0 -0.9
GRER                    155.66 314  ⇑P       PKPdf     23 14 51.6 -0.3
ICOR  Ion Corvin        155.69 310  ⇑P       PKPdf     23 14 52.0  0.0
BISRR Bisoca            155.75 314  ⇑P       PKPdf     23 14 51.4 -0.7
AMRR  Amara             155.78 312  ⇑P       PKPdf     23 14 51.7 -0.3
AMRR  Amara             155.78 312   PKIKP   PKPdf     23 14 51.7 -0.3
EDMD  Edmundbyers       155.82   6  eP       PKPdf     23 14 53.0 +1.2
EDMD                                  IAMs_20 IAMs_20  00 45 31.7
      comp=Z,80µm,21.2s
KLYT  Kilyos            155.85 303  ⇑P       PKPdf     23 14 51.2 -1.1
PGOR  Pogoanele         155.87 313  ⇑P       PKPdf     23 14 51.9 -0.2
ISK   Istanbul-Kandi    155.89 303   P       PKPdf     23 14 50.5 -1.9
TURR  Turia             155.91 316  ⇓P       PKPdf     23 14 51.4 -0.9
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IGLA  Glengowla, Co    155.95  17 eP       PKPdf    23 14 53.5 +1.6
IGLA  Glengowla, Co    155.95  17  PKP     PKPdf    23 14 51.3 -0.7
OZUR                   156.03 316 ⇑P       PKPdf    23 14 52.0 -0.4
ILTH  Belurgan, Co L   156.03  12 eP       PKPdf    23 14 51.6 -0.4
ILTH  Belurgan, Co L   156.03  12  PKP     PKPdf    23 14 50.9 -1.1
ISR   Istrita          156.05 314 ⇑P       PKPdf    23 14 52.2 -0.3
ISR   Istrita          156.05 314  PKIKP   PKPdf    23 14 52.2 -0.3
NEHR  Nehoiu           156.06 314 ⇓P       PKPdf    23 14 51.4 -1.1
IOMK  Kirk Michael     156.09   9 eP       PKPdf    23 14 53.8 +1.7
IOMK                               IAMs_20 IAMs_20  00 34 56.2
      comp=Z,41µm,25.3s
BSEG  Bad Segeberg     156.11 348 ePKPdf   PKPdf    23 14 51.5 -0.7
      baz=26,slow=1.1
BSEG                              ePKPab   PKPab    23 15 23.1 +3.3
BSEG                              ePP      PP       23 18 55.2 -1.7
      baz=22,slow=5.4
BOSR  Bodos            156.12 316 ⇑P       PKPdf    23 14 52.0 -0.6
PSET  Sete Cidades     156.13  65 ePKP     PKPdf    23 14 52.5 -0.3
PSET  Sete Cidades     156.13  65 ePKP     PKPdf    23 14 52.5 -0.3
CICN  Ciocanesti       156.16 311 ⇓P       PKPdf    23 14 51.7 -0.9
LEHL  Lehliu           156.18 312 ⇓P       PKPdf    23 14 51.6 -1.0
MLR   Muntele Rosu     156.24 315  PKP     PKPdf    23 14 51.1 -1.7
      comp=Z,36nm,1.2s,baz=351,slow=2.8,SNR=28
MLR   Muntele Rosu     156.24 315 ⇓P       PKPdf    23 14 51.7 -1.2
MLR   Muntele Rosu     156.24 315  PKIKP   PKPdf    23 14 51.6 -1.2
KOLS  Kolonicke sedl   156.24 325 ePKIKP   PKPdf    23 14 52.1 -0.5
KOLS                              e                 23 15 06.5
KOLS  Kolonicke sedl   156.24 325 ePKP     PKPdf    23 14 52.1 -0.5
KOLS                              e                 23 15 06.5
KOLS                              e                 23 15 23.0
HLG   Helgoland        156.25 351 ePP      PP       23 18 56.3 -1.3
      baz=22,slow=5.4
CMLA  Cha da Macela    156.30  66 ePKP     PKPdf    23 14 54.8 +1.8
CMLA  Cha da Macela    156.30  66 ePKP     PKPdf    23 14 54.8 +1.8
ARCR  ARCALIA          156.31 320 ⇓P       PKPdf    23 14 52.8 +0.1
DOPR  Dopca            156.33 316 ⇑P       PKPdf    23 14 52.2 -0.6
STHS  Stebnicka Huta   156.40 327 ePKP     PKPdf    23 14 51.4 -1.4
STHS                              e                 23 15 05.8
STHS                              e                 23 15 24.1
PGRON Lagoa das Cont   156.41  65 ePKP     PKPdf    23 14 56.1 +2.9
PGRON Lagoa das Cont   156.41  65 ePKP     PKPdf    23 14 56.1 +2.9
BMR   Baia Mare        156.43 322 ⇓P       PKPdf    23 14 52.1 -0.7
BMR   Baia Mare        156.43 322  PKIKP   PKPdf    23 14 52.1 -0.7
SULR                   156.44 313 ⇑P       PKPdf    23 14 52.0 -0.9
OJC   Ojcow            156.46 331 ePKP     PKPdf    23 14 51.6 -1.1
OJC                               ePP      PP       23 18 54.7 -4.5
OJC                               ePPP     PPP      23 22 34.2
OJC                               eSS      SS       23 39 01.7 +15
OJC                               eL       L        00 18 03.4
      comp=Z,85µm,29.4s
PLAR  PLOIESTI         156.47 313 ⇑P       PKPdf    23 14 52.0 -0.9
TGMR  Targu Mures      156.53 318 ⇑P       PKPdf    23 14 51.9 -1.2
BART  Pico Bartolome   156.57  65 ePKP     PKPdf    23 14 48.4 -5.0
BART  Pico Bartolome   156.57  65 ePKP     PKPdf    23 14 48.4 -5.0
RUE   Ruedersdorf      156.68 342 ePKPdf   PKPdf    23 14 52.4 -0.5
      baz=26,slow=1.1
RUE                               ePKPab   PKPab    23 15 25.4 +3.1
RUE                               ePP      PP       23 18 57.6 -2.5
      baz=22,slow=5.4
HPK   Haverah Park     156.72   5 eP       PKPdf    23 14 54.6 +1.7
HPK                                IAMs_20 IAMs_20  00 34 22.3
      comp=Z,97µm,27.3s
PSMN  Pico do Norte,   156.76  67 ePKP     PKPdf    23 14 55.3 +1.7
PSMN  Pico do Norte,   156.76  67 ePKP     PKPdf    23 14 55.3 +1.7
DSB   Dublin           156.77  13  PKP     PKPdf    23 14 52.3 -0.8
DSB   Dublin           156.77  13  PKPdf   PKPdf    23 14 52.2 -0.8
DSB                                IAMs_20 IAMs_20  00 41 55.8
      comp=Z,31µm,20.0s
DSB   Dublin           156.77  13  PKP     PKPdf    23 14 51.9 -1.2
BAND  Balkesir-Ban     156.79 301 ⇓P       PKPdf    23 14 52.0 -1.6
KULA  Kula-Manisa      156.80 297  P       PKPdf    23 14 52.5 -1.2
GORT1 Trebel           156.81 346 ePKPdf   PKPdf    23 14 52.7 -0.4
      baz=26,slow=1.1
PHSR  Pinarhisar       156.81 305 ⇓P       PKPdf    23 14 52.6 -0.9
VOIR                   156.81 316 ⇑P       PKPdf    23 14 52.8 -0.7
VOIR                   156.81 316  PKIKP   PKPdf    23 14 52.8 -0.7
SGRR  Singureni        156.83 312 ⇑P       PKPdf    23 14 52.0 -1.5
NIE   Niedzica         156.83 329 ePKP     PKPdf    23 14 53.5 +0.1
NIE                               ePP      PP       23 18 59.5 -1.9
NIE                               eSS      SS       23 39 09.4 +18
NIE                               eL       L        00 26 40.2
      comp=Z,56µm,23.7s
MDB   Medias           156.83 318 ⇑P       PKPdf    23 14 52.6 -0.8
MDB   Medias           156.83 318  PKIKP   PKPdf    23 14 52.6 -0.8
WPS   Cemaes, Angles   156.94  10 eP       PKPdf    23 14 54.6 +1.4
WPS                                IAMs_20 IAMs_20  00 34 45.9
      comp=Z,102µm,27.6s
CBBR  Cluj-Babes-Bol   156.94 320 ⇑P       PKPdf    23 14 53.3 -0.2
CEI   Carei            156.97 323 ⇓P       PKPdf    23 14 53.5  0.0
CEI   Carei            156.97 323  PKIKP   PKPdf    23 14 53.5  0.0
WME   Myndd Eilian     156.97  10 eP       PKPdf    23 14 53.0 -0.3
MESR  Meseseni         157.04 321 ⇓P       PKPdf    23 14 52.4 -1.2
VAL   Valentia         157.04  20  PKP     PKPdf    23 14 53.4  0.0
VAL   Valentia         157.04  20  PKP     PKPdf    23 14 52.7 -0.7
WLF1  Llynfaes         157.06  10 eP       PKPdf    23 14 54.6 +1.2
WLF1                               IAMs_20 IAMs_20  00 41 46.3
      comp=Z,153µm,21.4s
ARR   Arges            157.10 316 ⇓P       PKPdf    23 14 53.6 -0.3
TNR   Turnu Rosu       157.16 317 ⇓P       PKPdf    23 14 53.2 -0.7
TNR   Turnu Rosu       157.16 317  PKIKP   PKPdf    23 14 53.2 -0.7
JMB   Yambol           157.19 308  P       PKPdf    23 14 52.7 -1.2
MARR  Marisel-Cluj     157.24 320 ⇑P       PKPdf    23 14 53.2 -0.8
LBWR  Ladybower, Pea   157.26   6 eP       PKPdf    23 14 53.5 -0.2
LBWR                               IAMs_20 IAMs_20  00 31 54.6
      comp=Z,82µm,24.8s
EDRB  Edirne           157.28 306  P       PKPdf    23 14 52.2 -1.9
LMK   Market Rasen     157.31   4 eP       PKPdf    23 14 54.1 +0.4
HUMR  Humele           157.31 314 ⇑P       PKPdf    23 14 52.9 -1.1
KSP   Ksiaz            157.32 336 ePKP     PKPdf    23 14 53.4 -0.5
KSP                               ePP      PP       23 18 57.9 -5.9
KSP                               eSS      SS       23 39 10.6 +15
KSP                               eL       L        00 25 50.2
      comp=Z,89µm,27.1s
COPA  Copaceanca       157.35 312 ⇑P       PKPdf    23 14 52.8 -1.3
DRGR                   157.39 321 ⇑P       PKPdf    23 14 53.4 -0.8
DRGR                   157.39 321  PKIKP   PKPdf    23 14 53.4 -0.8
LANS  Liptovska Anna   157.40 329 ePKIKP   PKPdf    23 14 54.0 -0.1
LANS                              e                 23 15 09.1
LANS  Liptovska Anna   157.40 329 ePKP     PKPdf    23 14 54.0 -0.1
LANS                              e                 23 15 09.1
KECS  Kecovo           157.41 327 ePKIKP   PKPdf    23 14 53.3 -0.8
KECS  Kecovo           157.41 327 ePKP     PKPdf    23 14 53.3 -0.8
KECS                              e                 23 15 29.0
RETH  Rethem/Aller,    157.43 348 ePKPdf   PKPdf    23 14 53.0 -0.9
      baz=26,slow=1.1
RETH                              ePKPab   PKPab    23 15 28.6 +3.1
OKC   Ostrava-Krasne   157.43 332 ePKPDF   PKPdf    23 14 54.3 +0.3
OKC                                AMS     AMS      00 35 10.0
      comp=Z,46µm,19.6s
OKC   Ostrava-Krasne   157.43 332 ePKIKP   PKPdf    23 14 54.3 +0.3
OKC                                MLR     MLR
      comp=Z,46µm,19.6s
FLTG  Flechtingen      157.44 345 ePKPdf   PKPdf    23 14 52.7 -1.2
      baz=26,slow=1.1
FLTG                              ePKPab   PKPab    23 15 28.2 +2.6
FLTG                              ePP      PP       23 19 01.5 -2.7
      baz=22,slow=5.4
STEB  Steborice        157.51 333 ePKPDF   PKPdf    23 14 54.6 +0.5
IWEX  Carrickbyrne,    157.51  14 eP       PKPdf    23 14 54.4 +0.3
IWEX  Carrickbyrne,    157.51  14  PKP     PKPdf    23 14 53.4 -0.6
NRDL  Niedersach Rie   157.52 347 ePKPdf   PKPdf    23 14 53.3 -0.7
      baz=26,slow=1.1
NRDL                              ePKPab   PKPab    23 15 29.5 +3.6
NRDL                              ePP      PP       23 19 02.7 -1.9
      baz=22,slow=5.4
STNC  Stoke            157.53   7 eP       PKPdf    23 14 54.1 +0.1
ARG   Arkhangelos      157.57 291  PKPdf   PKPdf    23 14 53.7 -1.0
ARG   Arkhangelos      157.57 291  P       PKPdf    23 14 53.4 -1.2
ARG   Arkhangelos      157.57 291  PKIKP   PKPdf    23 14 53.7 -1.0
LOT   Lotru            157.57 317 ⇓P       PKPdf    23 14 53.3 -1.2
OSTC  Ostas            157.58 336 ePKPDF   PKPdf    23 14 53.9 -0.3
OSTC                               AMS     AMS      00 37 30.0
      comp=Z,73µm,22.0s
OSTC  Ostas            157.58 336 ePKIKP   PKPdf    23 14 53.9 -0.3
OSTC                               MLR     MLR
      comp=Z,73µm,22.0s
FOEL  Foel Wylfa       157.61   8 eP       PKPdf    23 14 55.2 +1.0
FOEL                               IAMs_20 IAMs_20  00 34 10.0
      comp=Z,62µm,23.8s
CHVC  Chvalec          157.61 336  AMS     AMS      00 37 20.0
      comp=Z,82µm,21.5s
UPC   Upice            157.70 336 ePKPDF   PKPdf    23 14 54.2 -0.2
UPC                                AMS     AMS      00 37 30.0
      comp=Z,90µm,22.0s
UPC   Upice            157.70 336 ePKIKP   PKPdf    23 14 54.2 -0.2
UPC                                MLR     MLR
      comp=Z,90µm,22.0s
BORR  Bors             157.70 322 ⇑P       PKPdf    23 14 54.3 -0.2
DPC   Dobruska-Polom   157.72 335 ePKPDF   PKPdf    23 14 53.9 -0.6
DPC                                AMS     AMS      00 25 30.0
      comp=Z,103µm,24.2s
DPC   Dobruska-Polom   157.72 335 ePKIKP   PKPdf    23 14 53.9 -0.6
DPC                                MLR     MLR
      comp=Z,103µm,24.2s
MORC  Moravsky Berou   157.72 333          PKPdf    23 14 53.2 -1.3
MORC  Moravsky Berou   157.72 333 ePKP     PKPdf    23 14 53.7 -0.8
MORC                              e                 23 15 26.8
MORC                              ePP      PP       23 19 04.0 -2.2
MORC  Moravsky Berou   157.72 333 ⇑P       PKPdf    23 14 53.1 -1.4
MORC  Moravsky Berou   157.72 333  PKIKP   PKPdf    23 14 53.2 -1.3
ASSE  Asse, Remlinge   157.75 346 ePKPdf   PKPdf    23 14 53.4 -0.9
      baz=26,slow=1.1
ASSE                              ePP      PP       23 19 03.7 -2.2
      baz=22,slow=5.4
KRLC  Kraliky          157.77 334 ePKPDF   PKPdf    23 14 54.7 +0.2
KRLC                               AMS     AMS      00 26 00.0
      comp=Z,95µm,23.5s
KRLC  Kraliky          157.77 334 ePKIKP   PKPdf    23 14 54.7 +0.2
KRLC                               MLR     MLR
      comp=Z,95µm,23.5s
DEV   Deva             157.83 319 ⇓P       PKPdf    23 14 53.6 -1.1
DEV   Deva             157.83 319  PKIKP   PKPdf    23 14 53.5 -1.1
PVL   Pavlikeni        157.84 310  P       PKPdf    23 14 53.0 -1.8
MAUC  Maruska          157.93 332 ePKPDF   PKPdf    23 14 55.0 +0.3
VLAD  Vladila          157.93 313 ⇑P       PKPdf    23 14 54.2 -0.6
CLL   Collm            157.94 341          PKPdf    23 14 53.7 -0.9
CLL   Collm            157.94 341  PKIKP   PKPdf    23 14 53.7 -0.9
CLL   Collm            157.94 341 ePKPdf   PKPdf    23 14 53.4 -1.2
      baz=26,slow=1.1
CLL                               ePKPab   PKPab    23 15 30.9 +3.0
CLL                               ePP      PP       23 19 04.8 -2.3
      baz=22,slow=5.4
CLL   Collm            157.94 341⇑iPKPdf   PKPdf    23 14 53.6 -1.0
      comp=Z,826nm,2.7s
CLL                               i PKPdf(2)        23 14 58.3
      comp=Z,1µm,2.4s
CLL                               ePKPlp            23 15 00.0
      comp=Z,21µm,24.8s
CLL                               i PKPdif sPKPdf   23 15 08.9 -1.0
      comp=Z,195nm,1.1s
CLL                               i PKPdif2         23 15 12.8
      comp=Z,214nm,0.8s
CLL                               i PKPab  PKPab    23 15 28.4 +0.6
      comp=Z,451nm,1.1s
CLL                               i PKPab(2)        23 15 32.2
      comp=Z,805nm,1.4s
CLL                               ePP      PP       23 19 09.0 +1.9
      comp=Z,28µm,25.9s
CLL                               esPP              23 19 26.0
CLL                               ePPP     PPP      23 22 47.0
CLL                               ePPPP             23 25 14.0
CLL                               ePPPrev           23 27 54.0
CLL                               ePSKS             23 29 31.0
CLL                               eSKKSdf  SKKSdf   23 30 31.0 +4.4
CLL                               ePPS     PPS      23 32 26.0
CLL                               ex       x        23 34 10.0
CLL                               ex       x        23 35 33.0
CLL                               eSS      SS       23 38 58.0 -4.3
CLL                               ePSPS             23 40 35.0
CLL                               eSSS     SSS      23 45 06.0
CLL                               eSSSS             23 49 18.0
CLL                                AMS     AMS      00 40 00.0
      comp=Z,71µm,21.6s
CLL                                AMS     AMS      00 41 00.0
CWF   Charnwood Fore   157.96   5 eP       PKPdf    23 14 56.0 +1.4
HLM1  Long Mynd        158.02   8 eP       PKPdf    23 14 56.0 +1.3
HLM1                               IAMs_20 IAMs_20  00 31 17.0
      comp=Z,80µm,25.4s
BRG   Berggiesshubel   158.06 339 ePKPdf   PKPdf    23 14 53.7 -1.1
      baz=26,slow=1.1
BRG                               ePKPab   PKPab    23 15 31.4 +3.1
BRG                               ePP      PP       23 19 05.4 -2.4
      baz=22,slow=5.4
BRG   Berggiesshubel   158.06 339  P       PKPdf    23 14 58.1 +3.3
BRG                                Amp              23 15 01.0
      comp=Z,384nm,1.4s
BRG                                PKPab   PKPab    23 15 31.4 +3.1
BRG                                Amp              23 15 33.8
      comp=Z,306nm,1.0s
BRG   Berggiesshubel   158.06 339  PP      PP       23 19 08.0 +0.2
BLCB  Balcova          158.07 297  P       PKPdf    23 14 53.6 -1.5
WACR  West Acre        158.08   2 eP       PKPdf    23 14 55.2 +0.5
CAVK  Edirne/Enez-Ca   158.09 303 ⇑P       PKPdf    23 14 53.8 -1.4
PSZ   Piszkesteto      158.09 326          PKPdf    23 14 53.2 -1.9
PSZ   Piszkesteto      158.09 326 ⇑P       PKPdf    23 14 54.0 -1.1
PSZ   Piszkesteto      158.09 326  PKIKP   PKPdf    23 14 53.9 -1.1
IBBN  Ibbenburen       158.10 350 ePKPdf   PKPdf    23 14 53.9 -0.8
      baz=26,slow=1.1
IBBN                              ePKPab   PKPab    23 15 31.4 +3.0
IBBN                              ePP      PP       23 19 05.7 -2.1
      baz=22,slow=5.4
BODT  Bodrum           158.11 293  P       PKPdf    23 14 53.2 -2.1
ALN   Alexandroupoli   158.11 304          PKPdf    23 14 52.9 -2.2
ALN   Alexandroupoli   158.11 304  P       PKPdf    23 14 52.6 -2.5
ALN   Alexandroupoli   158.11 304  PKIKP   PKPdf    23 14 52.9 -2.2
VYHS  Vyhne            158.16 329 ePKP     PKPdf    23 14 53.7 -1.3
VYHS                              e                 23 15 28.0
VYHS                              ePP      PP       23 19 04.6 -4.1
VYHS                              eSSS     SSS      23 46 02.6
PVCC  Panska Ves       158.16 338 ePKPDF   PKPdf    23 14 54.9  0.0
PVCC                               AMS     AMS      00 37 30.0
      comp=Z,62µm,21.6s
PVCC  Panska Ves       158.16 338 ePKIKP   PKPdf    23 14 54.9  0.0
PVCC                               MLR     MLR
      comp=Z,62µm,21.6s
GZR   Gura Zlata       158.18 318 ⇑P       PKPdf    23 14 54.4 -0.8
GZR   Gura Zlata       158.18 318  PKIKP   PKPdf    23 14 54.4 -0.8
EZN   Ezine            158.24 301  P       PKPdf    23 14 53.8 -1.6
EZN   Ezine            158.24 301 ⇓P       PKPdf    23 14 54.0 -1.3
EZN   Ezine            158.24 301  PKIKP   PKPdf    23 14 54.0 -1.3
RSBS  Rosebush, Pemb   158.30  11 eP       PKPdf    23 14 56.3 +1.2
RICC  Richard          158.30 339 ePKPDF   PKPdf    23 14 55.2 +0.1
KDZ   Kurdzhali        158.34 306  P       PKPdf    23 14 53.8 -1.7
SURR  Surduc           158.34 319 ⇓P       PKPdf    23 14 54.4 -0.9
NEUB  Neuenburg        158.36 343 ePKPdf   PKPdf    23 14 54.0 -1.1
      baz=26,slow=1.1
NEUB                              ePKPab   PKPab    23 15 33.0 +3.4
NEUB                              ePP      PP       23 19 07.0 -2.4
      baz=22,slow=5.4
RDO   Rodhopi          158.38 305          PKPdf    23 14 53.3 -2.1
RDO   Rodhopi          158.38 305  P       PKPdf    23 14 53.4 -2.0
JAVC  Velka Javorina   158.39 331 ePKP     PKPdf    23 14 55.5 +0.2
JAVC                              e                 23 15 30.6
JAVC                              ePP      PP       23 19 09.3 -0.6
KARP  Karpathos        158.42 289  PKPdf   PKPdf    23 14 54.4 -1.4
KARP  Karpathos        158.42 289  P       PKPdf    23 14 54.1 -1.7
PRK   Paraskevi        158.44 300  P       PKPdf    23 14 54.0 -1.6
GTTG  Gottingen        158.45 346 ePKPdf   PKPdf    23 14 54.0 -1.2
      baz=26,slow=1.1
GTTG                              ePKPab   PKPab    23 15 33.4 +3.4
GTTG                              ePP      PP       23 19 07.7 -2.1
      baz=22,slow=5.4
VRAC  Vranov           158.47 333  PKP     PKPdf    23 14 54.4 -0.9
      comp=Z,23nm,0.9s,baz=141,slow=0.5,SNR=49
VRAC                               PKPab   PKPab    23 15 29.5 -0.7
      comp=Z,136nm,1.0s,baz=27,slow=3.2,SNR=9.1
VRAC  Vranov           158.47 333 ePKP     PKPdf    23 14 54.2 -1.2
VRAC                              e                 23 15 30.5
VRAC                              ePP      PP       23 19 09.4 -0.8
VRAC  Vranov           158.47 333 ⇑P       PKPdf    23 14 54.5 -0.9
MCH1  Michaelchurch    158.51   8 eP       PKPdf    23 14 54.4 -0.9
MCH1                               IAMs_20 IAMs_20  00 28 48.9
      comp=Z,81µm,25.5s
PLD   Plovdiv          158.54 308  P       PKPdf    23 14 53.3 -2.3
PRA   Prague           158.60 338 ePKPDF   PKPdf    23 14 55.4 -0.1
PRA                                AMS     AMS      00 37 40.0
      comp=Z,74µm,21.0s
PRA   Prague           158.60 338 ePKIKP   PKPdf    23 14 55.4 -0.1
PRA                                MLR     MLR
      comp=Z,74µm,21.0s
GOPC  GO Pecny, Ondr   158.62 337  AMS     AMS      00 29 20.0
      comp=Z,67µm,22.4s
PRU   Pruhonice        158.64 337 ePKPDF   PKPdf    23 14 55.2 -0.3
PRU                               eSKP              00 18 29.1
PRU                                AMS     AMS      00 24 30.0
PRU   Pruhonice        158.64 337 ePKIKP   PKPdf    23 14 55.2 -0.3
PRU                                MLR     MLR
      comp=N,55µm,24.3s
MPEP  Malo Peshtene    158.66 312  P       PKPdf    23 14 54.5 -1.3
HERR  Herculane        158.68 317 ⇓P       PKPdf    23 14 54.5 -1.3
MONM  Monmouth         158.69   8 eP       PKPdf    23 14 55.2 -0.3
MONM                               IAMs_20 IAMs_20  00 37 29.0
      comp=Z,80µm,22.4s
VALD  Valchedram       158.69 313  P       PKPdf    23 14 54.5 -1.3
PUNG  Punghina         158.70 315 ⇑P       PKPdf    23 14 54.5 -1.3
BZS   Buzias           158.71 319 ⇓P       PKPdf    23 14 55.1 -0.7
BZS   Buzias           158.71 319  PKIKP   PKPdf    23 14 55.0 -0.7
ELMS  Elmsett, Ipswi   158.72   2 eP       PKPdf    23 14 56.8 +1.3
RZN   Rozhen           158.73 307  P       PKPdf    23 14 54.3 -1.9
KRUC  Moravsky         158.74 333 ePKP     PKPdf    23 14 54.7 -1.0
KRUC                              e                 23 15 30.5
KRUC                              ePP      PP       23 19 09.9 -1.8
SIGR  SIGRI            158.76 300  P       PKPdf    23 14 54.4 -1.6
PGB   Panagyurishte    158.77 310  P       PKPdf    23 14 54.0 -2.0
CHOS  Chios island     158.82 297  P       PKPdf    23 14 54.8 -1.4
STRD  Stroud           158.83   7 eP       PKPdf    23 14 56.8 +1.2
STRD                               IAMs_20 IAMs_20  00 30 43.7
      comp=Z,98µm,27.3s
TREC  Trest            158.90 335 ePKPDF   PKPdf    23 14 55.1 -0.8
TREC                               AMS     AMS      00 26 30.0
      comp=Z,111µm,23.5s
TREC  Trest            158.90 335 ePKIKP   PKPdf    23 14 55.1 -0.8
TREC                               MLR     MLR
      comp=Z,111µm,23.5s
OLDB  Oldbury-Upon-S   158.90   8 eP       PKPdf    23 14 55.2 -0.5
TANN  Tannenbergstha   158.90 341 ePKPdf   PKPdf    23 14 54.4 -1.5
      baz=26,slow=1.1
TANN                              ePKPab   PKPab    23 15 35.7 +3.6
TANN                              ePP      PP       23 19 10.1 -2.3
      baz=22,slow=5.4
SRO   Srobarova        158.90 328 ePKP     PKPdf    23 14 55.7 -0.2
SRO                               e                 23 15 35.6
MOX   Moxa             158.91 343 ePKPdf   PKPdf    23 14 54.4 -1.4
      baz=26,slow=1.1
MOX                               ePKPab   PKPab    23 15 35.2 +3.2
MOX                               ePP      PP       23 19 10.2 -2.2
      baz=22,slow=5.4
MOX                               eL       L        00 49 29.0
      comp=Z,62µm,19.2s
MODS  Modra-Piesok     158.93 331 ePKP     PKPdf    23 14 54.9 -1.0
MODS                              ePP      PP       23 19 10.5 -2.3
MODS                              eSS      SS       23 39 36.9 +24
MODS                              eSSS     SSS      23 45 35.3
BUG   Bochum--Univer   159.02 351 ePKPdf   PKPdf    23 14 54.9 -1.0
      baz=26,slow=1.1
BUG                               ePP      PP       23 19 10.9 -1.9
      baz=22,slow=5.4
LIA   Limnos Island    159.06 302  P       PKPdf    23 14 54.3 -2.0
KASTN Kahler Asten     159.07 349 ePKPdf   PKPdf    23 14 55.0 -1.1
      baz=26,slow=1.1
KASTN                             ePP      PP       23 19 11.2 -2.0
      baz=22,slow=5.4
BANR  Banloc           159.12 320 ⇑P       PKPdf    23 14 55.9 -0.3
SWN1  Swindon          159.12   7 eP       PKPdf    23 14 56.5 +0.5
UBBA  Unterbreizbach   159.13 346 ePKPdf   PKPdf    23 14 54.8 -1.1
      baz=26,slow=1.1
UBBA                              ePP      PP       23 19 11.3 -2.1
      baz=22,slow=5.4
MDVR  Moldovita        159.15 317 ⇑P       PKPdf    23 14 55.3 -1.0
THAS  Thassos island   159.15 304  P       PKPdf    23 14 54.5 -1.9
KAVA  Kavala           159.16 305  P       PKPdf    23 14 54.6 -1.8
ZVC   Zvikov           159.23 337 ePKPDF   PKPdf    23 14 55.7 -0.5
ZVC                                AMS     AMS      00 36 20.0
      comp=Z,80µm,23.5s
HTL   Hartland         159.27  12 eP       PKPdf    23 14 57.9 +1.7
PLNA  Plana            159.28 310  P       PKPdf    23 14 55.0 -1.7
VTS   Vitosha          159.34 311  P       PKPdf    23 14 54.5 -2.3
VTS   Vitosha          159.34 311  P       PKPdf    23 14 55.4 -1.4
WOL   Wolverton        159.38   6 eP       PKPdf    23 14 57.4 +1.1
MANZ  Manzenberg       159.38 341 ePKPdf   PKPdf    23 14 55.1 -1.4
      baz=26,slow=1.1
MANZ                              ePKPab   PKPab    23 15 38.2 +4.0
MANZ                              ePP      PP       23 19 12.6 -2.4
      baz=22,slow=5.4
MMB   Musomishta       159.47 307  P       PKPdf    23 14 54.5 -2.3
MMB   Musomishta       159.47 307  P       PKPdf    23 14 54.4 -2.5
APE   Apeiranthos      159.51 294  P       PKPdf    23 14 55.0 -2.0
APE   Apeiranthos      159.51 294 ⇑P       PKPdf    23 14 55.4 -1.6
APE   Apeiranthos      159.51 294  PKIKP   PKPdf    23 14 55.4 -1.6
ROTZ  Rotzenmuhle      159.55 341 ePKPdf   PKPdf    23 14 55.1 -1.5
      baz=26,slow=1.1
ROTZ                              ePP      PP       23 19 13.6 -2.3
      baz=22,slow=5.4
KHC   Kasperske Hory   159.70 338 ePKPDF   PKPdf    23 14 56.1 -0.7
KHC                               eSKP              23 18 32.6
KHC                                AMS     AMS      00 23 10.0
      comp=Z,93µm,25.1s
KHC   Kasperske Hory   159.70 338 ePKIKP   PKPdf    23 14 56.1 -0.7
KHC                                MLR     MLR
      comp=Z,93µm,25.1s
CMBO  Columbo, Santo   159.71 292  P       PKPdf    23 14 55.4 -1.8
CKRC  Cesky Krumlov    159.72 336 ePKPDF   PKPdf    23 14 55.7 -1.1
CKRC                               AMS     AMS      00 38 00.0
      comp=Z,90µm,23.2s
CKRC  Cesky Krumlov    159.72 336 ePKIKP   PKPdf    23 14 55.7 -1.1
CKRC                               MLR     MLR
      comp=Z,90µm,23.2s
SRS   Serrai           159.75 306  P       PKPdf    23 14 54.4 -2.8
KKB   Krupnik          159.76 309  P       PKPdf    23 14 54.8 -2.3
KKB   Krupnik          159.76 309  P       PKPdf    23 14 55.2 -1.9
OUR   Ouranopolis      159.78 304  P       PKPdf    23 14 54.7 -2.4
BOVS  Bovan            159.79 315 ⇑P       PKPdf    23 14 56.0 -1.0
SKY   Skiros Island    159.83 300  P       PKPdf    23 14 55.5 -1.8
BEBN  Eben Emael       159.84 353 dPKPdf   PKPdf    23 14 56.1 -0.8
CONA  Conrad Observa   159.87 332 i PKP    PKPdf    23 14 55.9 -1.3
      comp=Z,4µm,3.4s,SNR=94
CONA                              ePKP     PKPab    23 15 38.1 +1.7
      comp=Z,8µm,5.4s
CONA                              ePP      PP       23 19 19.0 +1.0
      comp=Z,18µm,12.2s
RONA  Rosalia, Austr   159.87 331 i PKP    PKPdf    23 14 55.6 -1.4
      comp=Z,6µm,5.3s,SNR=117
RONA                              i PKP    PKPab    23 15 38.8 +2.4
      comp=Z,3µm,3.2s
RONA                              ePP      PP       23 19 18.0 +0.1
      comp=Z,14µm,11.4s
GRF   Grafenberg Arr   159.89 342 ePKPdf   PKPdf    23 14 55.7 -1.3
      baz=26,slow=1.1
GRF                               ePKPab   PKPab    23 15 39.5 +3.2
GRF                               ePP      PP       23 19 15.4 -2.4
      baz=22,slow=5.4
GRF                               eL       L        00 39 14.3
      comp=Z,69µm,21.8s
GRFO  Grafenberg       159.89 342          PKPdf    23 14 55.6 -1.4
GRFO  Grafenberg       159.89 342  PKIKP   PKPdf    23 14 55.6 -1.4
MORH  Mrgy, Hungar     159.90 325 ⇑P       PKPdf    23 14 56.4 -0.7
DYA   Yadsworthy       159.90  11 eP       PKPdf    23 14 58.5 +1.5
DYA                                IAMs_20 IAMs_20  00 33 59.2
      comp=Z,68µm,23.2s
CCA1  Carnmenellis     159.90  14 eP       PKPdf    23 14 57.4 +0.4
CCA1                               IAMs_20 IAMs_20  00 33 07.7
      comp=Z,75µm,20.6s
GEC2  GERESS Array S   159.90 337          PKPdf    23 14 55.4 -1.8
GEC2  GERESS Array S   159.90 337 ePKPdf   PKPdf    23 14 55.8 -1.3
      baz=26,slow=1.1
GEC2                              ePKPab   PKPab    23 15 40.0 +3.5
GEC2                              ePP      PP       23 19 15.9 -2.1
      baz=22,slow=5.4
GERES GERESS Array B   159.90 337  PKP     PKPdf    23 14 56.4 -0.8
      comp=Z,39nm,0.9s,baz=89,slow=0.3,SNR=46
GERES                              PKPab   PKPab    23 15 35.6 -0.9
      comp=Z,30nm,0.6s,baz=35,slow=4.9,SNR=3.7
WET   Wettzell         159.91 339 ePKPdf   PKPdf    23 14 55.6 -1.4
      baz=26,slow=1.1
WET                               ePKPab   PKPab    23 15 39.5 +3.0
WET                               ePP      PP       23 19 15.7 -2.2
      baz=22,slow=5.4
HMNX  Herstmonceux     159.92   3 eP       PKPdf    23 14 58.7 +1.8
HMNX                               IAMs_20 IAMs_20  00 29 46.4
      comp=Z,89µm,25.0s
UCC   Uccle            159.95 356          PKPdf    23 14 55.4 -1.6
UCC   Uccle            159.95 356  PKIKP   PKPdf    23 14 55.4 -1.6
UCC   Uccle            159.95 356 dPKPdf   PKPdf    23 14 56.4 -0.6
UCC                               dPKP     PKPab    23 15 35.2 -1.3
MEM   Membach          159.99 352 dPKPdf   PKPdf    23 14 56.2 -0.9
MEM                               dPKP     PKPab    23 15 36.0 -0.7
FRGS  Fruska Gora      159.99 321⇑iP       PKPdf    23 14 55.7 -1.6
BTNL  Ternell          160.00 352 dPKPdf   PKPdf    23 14 56.2 -0.9
BTNL                              dPKP     PKPab    23 15 34.2 -2.5
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TNS	Taunus Mts	160.01	348	ePKPdf	PKPdf	23 14 56.0	-1.2
	baz=26,slow=1.1						
TNS				ePKPab	PKPab	23 15 40.1	+3.2
TNS				ePP	PP	23 19 16.0	-2.3
	baz=22,slow=5.4						
BSTI	Sart Tilman	160.06	353	dPKPdf	PKPdf	23 14 56.5	-0.6
BSTI				dPKP	PKPab	23 15 36.2	-0.8
PAIG	Paliouri	160.14	303	P	PKPdf	23 14 55.2	-2.4
PLG	Polygyros	160.14	305	P	PKPdf	23 14 55.3	-2.3
KARY	Karystos	160.15	297	P	PKPdf	23 14 55.2	-2.5
KNT	Kendrikon	160.21	307	P	PKPdf	23 14 55.2	-2.4
KYMI	Kymi, Euboea I	160.24	299	P	PKPdf	23 14 55.4	-2.3
AOS	Alonnisos	160.24	301	P	PKPdf	23 14 55.4	-2.3
BCLA	Clavier	160.25	354	dPKPdf	PKPdf	23 14 56.3	-1.1
BCLA				dPKP	PKPab	23 15 37.1	-0.7
IDI	Anoyia	160.29	289	PKP	PKPdf	23 14 57.2	-0.8
IDI	Anoyia	160.29	289		PKPdf	23 14 56.2	-1.8
IDI	Anoyia	160.29	289	P	PKPdf	23 14 56.8	-1.1
HORT	Hortiatis	160.30	306	P	PKPdf	23 14 54.7	-3.2
BGES	Gesves	160.31	354	dPKPdf	PKPdf	23 14 56.7	-0.7
BGES				dPKP	PKPab	23 15 37.2	-0.8
VAY	Valandovo	160.37	308	i Pn	PKPdf	23 14 55.8	-2.0
THE	Thessaloniki	160.38	306	P	PKPdf	23 14 55.5	-2.3
BMRD	Maredsous	160.41	355	dPKPdf	PKPdf	23 14 56.8	-0.7
BMRD				dPKP	PKPab	23 15 37.5	-1.0
MHLO	Agia Marina, M	160.47	293	P	PKPdf	23 14 56.0	-2.0
TEKS	Tekeris	160.53	320	⇑iP	PKPdf	23 14 56.3	-1.6
ARSA	Arzberg	160.55	331		PKPdf	23 14 55.8	-2.0
ARSA	Arzberg	160.55	331	i PKP	PKPdf	23 14 56.2	-1.7
	comp=Z,3µm,3.1s,SNR=87						
ARSA				i PKP	PKPab	23 15 40.2	+0.8
	comp=Z,2µm,4.0s						
ARSA				ePP	PP	23 19 22.3	+0.7
	comp=Z,35µm,19.7s						
MOA	Molln	160.55	334	i PKP	PKPdf	23 14 56.2	-1.6
	comp=Z,7µm,5.4s,SNR=58						
MOA				i PKP	PKPab	23 15 40.2	+0.9
	comp=Z,5µm,4.6s						
MOA				ePP	PP	23 19 22.3	+0.8
	comp=Z,14µm,9.9s						
PTL	Penteli	160.58	298	P	PKPdf	23 14 55.6	-2.6
BEHE	Becsehely	160.60	328		PKPdf	23 14 56.0	-1.9
DOU	Dourbes	160.63	355	dPKPdf	PKPdf	23 14 56.6	-1.2
DOU				dPKP	PKPab	23 15 38.6	-0.9
ATHU	Athens Univers	160.66	298	P	PKPdf	23 14 55.9	-2.3
NEO	Neokhori	160.68	302	P	PKPdf	23 14 55.8	-2.4
VLY	Voula,Athens	160.68	297	P	PKPdf	23 14 49.8	-8.4
ATH	Athens Observa	160.71	298	P	PKPdf	23 14 56.0	-2.2
SKO	Skopje	160.82	311	i Pn	PKPdf	23 14 57.9	-0.4
WLF	Walferdange	160.90	352	PKP	PKPdf	23 14 57.8	-0.3
WLF	Walferdange	160.90	352		PKPdf	23 14 57.1	-1.0
WLF	Walferdange	160.90	352	PKIKP	PKPdf	23 14 57.1	-1.0
WLF	Walferdange	160.90	352	dPKPdf	PKPdf	23 14 57.8	-0.3
WLF	Walferdange	160.90	352	ePKPdf	PKPdf	23 14 57.4	-0.7
	baz=26,slow=1.1						
WLF				ePKPab	PKPab	23 15 44.0	+3.3
WLF				ePP	PP	23 19 21.4	-1.6
	baz=22,slow=5.4						
BIOA	Bad Ischl, Aus	160.91	335	i PKP	PKPdf	23 14 56.4	-1.8
	comp=Z,7µm,5.4s,SNR=56						
BIOA				i PKP	PKPab	23 15 41.2	+0.4
	comp=Z,3µm,3.2s						
BIOA				ePP	PP	23 19 23.5	0.0
	comp=Z,16µm,10.5s						
CHAN	Chania	160.95	290	P	PKPdf	23 14 57.7	-0.9
VILL	Villia	160.97	298	P	PKPdf	23 14 56.3	-2.3
GVD	Gavdhos	160.99	288	P	PKPdf	23 14 57.2	-1.5
IMMV	Iera Moni Meta	161.01	290	P	PKPdf	23 14 57.8	-0.9
BBLS	Lazi&#263i	161.03	318	⇑iP	PKPdf	23 14 57.2	-1.3
SJES	Sjenica	161.05	316	⇑iP	PKPdf	23 14 57.6	-1.0
LKR	Lokris	161.06	300	P	PKPdf	23 14 56.5	-2.1
KTI	Kastanea	161.07	306	P	PKPdf	23 14 57.4	-1.4
HAPS	Han Pijesak,Bl	161.15	319	⇑iP	PKPdf	23 14 57.6	-1.1
RJOB	Jochberg	161.17	337	ePKPdf	PKPdf	23 14 56.6	-2.0
	baz=26,slow=1.1						
RJOB				ePKPab	PKPab	23 15 45.3	+3.2
RJOB				ePP	PP	23 19 23.3	-1.5
	baz=22,slow=5.4						
RUDO	Rudo	161.20	318	⇑iP	PKPdf	23 14 57.1	-1.5
SOKA	Soboth	161.21	331	i PKP	PKPdf	23 14 57.0	-1.6
	comp=Z,3µm,2.9s,SNR=166						
SOKA				ePKP	PKPab	23 15 42.1	-0.2
	comp=Z,3µm,3.6s						
SOKA				ePP	PP	23 19 25.2	0.0
	comp=Z,28µm,16.9s						
STU	Stuttgart	161.24	345		PKPdf	23 14 56.8	-1.7
STU	Stuttgart	161.24	345	PKIKP	PKPdf	23 14 56.8	-1.7
STU	Stuttgart	161.24	345	ePKPdf	PKPdf	23 14 57.5	-1.0
	baz=26,slow=1.1						
STU				ePKPab	PKPab	23 15 45.0	+2.8
STU				ePP	PP	23 19 22.6	-2.3
	baz=22,slow=5.4						
TYRN	Tyrnavos	161.25	304	P	PKPdf	23 14 56.8	-1.9
FUR	Furstenfeldbru	161.26	340	ePKPdf	PKPdf	23 14 56.7	-1.9
	baz=26,slow=1.1						
FUR				ePKPab	PKPab	23 15 45.7	+3.3
FUR				ePP	PP	23 19 23.2	-2.0
	baz=22,slow=5.4						
LTK	Loutraki	161.27	298	P	PKPdf	23 14 56.8	-2.1
AXAR	Agios Charalam	161.27	301	P	PKPdf	23 14 57.2	-1.7
KNDR	Palaiochora Ch	161.28	289	P	PKPdf	23 14 58.0	-1.0
IVA	Berane	161.32	315	⇑iPKP	PKPdf	23 14 57.3	-1.6
KZN	Kozani	161.35	306	P	PKPdf	23 14 57.0	-1.9
PLE	Pljevlja	161.36	317	⇑iPKP	PKPdf	23 14 57.6	-1.4
JSA	Saint Aubin	161.38	9	eP	PKPdf	23 14 59.8	+1.3
JSA				IAMs_20	IAMs_20	00 33 18.3	
	comp=Z,85µm,23.6s						
AGG	Agios Georgios	161.43	302	P	PKPdf	23 14 57.0	-2.0
THL	Klokotos Trika	161.47	304	P	PKPdf	23 14 56.9	-2.1
LESA	Schwarzleotal	161.48	337	i PKP	PKPdf	23 14 57.3	-1.6
	comp=Z,3µm,2.9s,SNR=113						
LESA				i PKP	PKPab	23 15 45.7	+2.2
	comp=Z,3µm,3.1s						
LESA				PP	PP	23 19 26.1	-0.3
	comp=Z,12µm,9.7s						
ANKY	Antikythira Is	161.49	291	P	PKPdf	23 14 58.4	-0.8
BCI	Bajram Curri	161.49	314	P	PKPdf	23 14 57.4	-1.6
OBKA	Obir	161.54	332	⇑iP	PKPdf	23 14 57.2	-1.8
OBKA	Obir	161.54	332	i PKP	PKPdf	23 14 57.4	-1.6
	comp=Z,5µm,4.6s,SNR=53						
OBKA				i PKP	PKPab	23 15 43.4	-0.3
	comp=Z,4µm,4.2s						
OBKA				ePP	PP	23 19 26.2	-0.7
	comp=Z,25µm,17.3s						
KOME	Kolasin	161.56	316	⇑iPKP	PKPdf	23 14 57.8	-1.3
MAKR	Makrakomi, Fth	161.58	302	P	PKPdf	23 14 58.1	-1.1
A051A	Mrakovica	161.61	325	⇑iP	PKPdf	23 14 57.6	-1.5
KTHA	Kythira Island	161.61	293	P	PKPdf	23 14 58.3	-1.0
VLI	Veliai	161.62	294	P	PKPdf	23 14 57.5	-1.8
BLY	Banja Luka	161.65	324	⇑iP	PKPdf	23 14 57.8	-1.2
OHR	Ohrid	161.65	309	i Pn	PKPdf	23 14 58.2	-1.0
CRES	Cresnjevec Ost	161.69	329	⇑iP	PKPdf	23 14 57.7	-1.4
UPM	Unac-Piva	161.72	317	⇑iP	PKPdf	23 14 57.5	-1.9
UPM	Unac-Piva	161.72	317	⇑iPKP	PKPdf	23 14 57.6	-1.9
GUR	Goura	161.76	298	P	PKPdf	23 14 58.1	-1.5
PUK	Puka	161.77	313	P	PKPdf	23 14 57.6	-1.8
KPRO	Kipourio	161.78	305	P	PKPdf	23 14 58.1	-1.4
KALE	Kalithea	161.78	300	P	PKPdf	23 14 57.9	-1.6
NEST	Nestorio	161.80	307	P	PKPdf	23 14 58.4	-1.1
MYKA	Terra Mystica	161.80	334	i PKP	PKPdf	23 14 57.5	-1.7
	comp=Z,6µm,5.5s,SNR=42						
MYKA				ePKP	PKPab	23 15 45.5	+0.6
	comp=Z,1µm,3.4s						
MYKA				ePP	PP	23 19 27.2	-1.1
	comp=Z,6µm,6.5s						
VNDS	Vrh nad Dolski	161.80	331	ePKPdf	PKPdf	23 14 58.3	-0.9
PENT	Pentalofos	161.83	306	P	PKPdf	23 14 58.4	-1.1
SERG	Sergoula	161.83	300	P	PKPdf	23 14 58.3	-1.2
BFO	Black Forest	161.84	346		PKPdf	23 14 57.3	-1.9
BFO	Black Forest	161.84	346	PKIKP	PKPdf	23 14 57.3	-1.9
BFO	Black Forest	161.84	346	ePKPdf	PKPdf	23 14 57.6	-1.6
	baz=26,slow=1.1						
BFO				ePKPab	PKPab	23 15 47.6	+2.8
BFO				ePP	PP	23 19 25.8	-2.4
	baz=22,slow=5.4						
EVR	Evrytania	161.85	302	P	PKPdf	23 15 00.0	+0.5
ANX	Ano Chora	161.88	301	P	PKPdf	23 14 58.9	-0.7
KLV	Kalavryta, Ach	161.88	299	P	PKPdf	23 14 58.3	-1.3
KBN	Korca	161.89	308	P	PKPdf	23 14 58.5	-1.0
VLX	Vlachokerasia	161.89	297	P	PKPdf	23 14 58.3	-1.4
WATA	Walderalm	161.91	339	i PKP	PKPdf	23 14 57.8	-1.6
	comp=Z,4µm,3.3s,SNR=79						
WATA				i PKP	PKPab	23 15 46.2	+0.8
	comp=Z,3µm,3.0s						
WATA				ePP	PP	23 19 28.5	-0.4
	comp=Z,14µm,10.4s						
LJU	Ljubljana	161.92	331	ePKPdf	PKPdf	23 14 58.3	-1.0
LJU				ePP	PP	23 19 30.6	+1.7
EFP	Efpalio	161.94	300	P	PKPdf	23 14 58.8	-0.7
PDG	Podgorica	161.96	315		PKPdf	23 14 57.7	-1.7
PDG	Podgorica	161.96	315	⇑iP	PKPdf	23 14 57.5	-1.9
PDG	Podgorica	161.96	315	⇑P	PKPdf	23 14 58.2	-1.3
PDG	Podgorica	161.96	315	⇑iPKP	PKPdf	23 14 58.1	-1.3
WTTA	Wattenberg	161.96	338	i PKP	PKPdf	23 14 58.1	-1.4
	comp=Z,4µm,3.0s,SNR=80						
WTTA				i PKP	PKPab	23 15 46.2	+0.6
	comp=Z,4µm,3.5s						
WTTA				ePP	PP	23 19 28.3	-0.8
	comp=Z,7µm,6.4s						
RETA	Reutte	162.03	340	i PKP	PKPdf	23 14 58.0	-1.4
	comp=Z,6µm,5.3s,SNR=25						
RETA				i PKP	PKPab	23 15 47.3	+1.5
	comp=Z,1µm,1.4s						
RETA				ePP	PP	23 19 29.2	-0.1
	comp=Z,15µm,12.5s						
UBR	Ueberruh	162.03	342	ePKPdf	PKPdf	23 14 57.8	-1.7
	baz=26,slow=1.1						
UBR				ePKPab	PKPab	23 15 49.2	+3.4
UBR				ePP	PP	23 19 26.9	-2.4
	baz=22,slow=5.4						
GBAS	Gorenja Brezov	162.04	331	i PKPdf	PKPdf	23 14 58.1	-1.3
GBAS				ePP	PP	23 19 28.8	-0.8
MOTA	Moosalm	162.05	340	i PKP	PKPdf	23 14 57.9	-1.7
	comp=Z,6µm,5.0s,SNR=67						
MOTA				i PKP	PKPab	23 15 46.3	+0.3
	comp=Z,1µm,1.7s						
MOTA				ePP	PP	23 19 28.6	-1.0
CEME	Cevo	162.10	316	⇑iPKP	PKPdf	23 14 58.0	-1.7
BRY	Bratogost	162.11	317	⇑iP	PKPdf	23 14 58.1	-1.7
BRY	Bratogost	162.11	317	⇑iPKP	PKPdf	23 14 58.0	-1.7
ABTA	Abfaltersbach	162.12	336	i PKP	PKPdf	23 14 57.4	-2.1
	comp=Z,3µm,2.9s,SNR=102						
ABTA				i PKP	PKPab	23 15 47.5	+1.2
	comp=Z,3µm,5.2s						
ABTA				ePP	PP	23 19 28.9	-1.0
	comp=Z,12µm,9.5s						
SQTA	Sankt Quirin	162.13	339	i PKP	PKPdf	23 14 58.1	-1.5
	comp=Z,6µm,4.7s,SNR=50						
SQTA				i PKP	PKPab	23 15 47.0	+0.7
	comp=Z,3µm,3.4s						
SQTA				ePP	PP	23 19 29.6	-0.3
	comp=Z,16µm,10.8s						
DRME	Dracevica, Mon	162.14	314	⇑iP	PKPdf	23 14 58.3	-1.3
DRME	Dracevica, Mon	162.14	314	⇑iPKP	PKPdf	23 14 58.5	-1.1
TIR	Tirane	162.15	311		PKPdf	23 14 58.4	-1.3
TIR	Tirane	162.15	311	⇑P	PKPdf	23 14 58.6	-1.1
TIR	Tirane	162.15	311	PKIKP	PKPdf	23 14 58.6	-1.1
PVO	Paravola	162.16	301	P	PKPdf	23 14 59.1	-0.7
A050A	Klekovaca	162.17	324	⇑iP	PKPdf	23 14 58.1	-1.6
CEY	Cerknica	162.21	330	⇑iP	PKPdf	23 14 58.1	-1.5
ULC	Ulcinj	162.22	314	⇑iPKP	PKPdf	23 14 58.2	-1.6
DRO	Drossia	162.24	299	P	PKPdf	23 14 59.6	-0.3
BUM	Brajici-Budva	162.25	315	⇑iPKP	PKPdf	23 14 58.3	-1.5
JAN	Janina	162.26	305	P	PKPdf	23 14 58.9	-1.0
AMPL	Ampelaki	162.28	302	P	PKPdf	23 14 59.0	-0.9
ITM	Ithomi	162.29	296		PKPdf	23 14 58.4	-1.5
ITM	Ithomi	162.29	296	P	PKPdf	23 14 58.5	-1.5
TREB	Trebinje	162.33	317	⇑iP	PKPdf	23 15 01.3	+1.5
SABO	M.te Sabotino	162.35	332		PKPdf	23 14 58.3	-1.4
RLS	Riolos of Patr	162.39	299	P	PKPdf	23 14 59.0	-1.0
HCY	Herceg Novi	162.41	316	⇑iPKP	PKPdf	23 14 58.1	-1.8
KRES	Krestena	162.41	298	P	PKPdf	23 14 59.2	-0.8
AXS	Araxos	162.41	300	P	PKPdf	23 14 59.2	-0.8
TOA0	Torodi Ar. Sit	162.42	179	P	PKPdf	23 15 01.2	+0.5
	SNR=28						
TOA0	Torodi Ar. Sit	162.42	179	P	PKPdf	23 15 00.5	-0.2
	SNR=28						
TORD	Torodi Ar. Bea	162.42	179		PKPdf	23 14 59.9	-0.9
TORD	Torodi Ar. Bea	162.42	179	PKP	PKPdf	23 15 00.2	-0.5
	comp=Z,148nm,1.2s,baz=342,slow=1.9,SNR=23						
TORD				PKPab	PKPab	23 15 49.2	+1.1
	comp=Z,198nm,1.0s,baz=168,slow=2.0,SNR=11						
TORD				PP	PP	23 19 32.4	+1.3
	comp=Z,53nm,1.0s,baz=134,slow=7.5,SNR=6.0						
DAVA	Damuels	162.45	342	i PKP	PKPdf	23 14 58.9	-1.1
	comp=Z,9µm,6.1s,SNR=50						
DAVA				i PKP	PKPab	23 15 48.3	+0.5
	comp=Z,2µm,2.5s						
DAVA				ePP	PP	23 19 30.7	-0.9
	comp=Z,9µm,9.9s						
FETA	Feichten	162.46	340	i PKP	PKPdf	23 14 58.8	-1.2
	comp=Z,3µm,3.2s,SNR=70						
FETA				ePKP	PKPab	23 15 48.4	+0.6
	comp=Z,767nm,1.5s						
FETA				ePP	PP	23 19 31.4	-0.3
	comp=Z,10µm,9.6s						
STAL	STALIGIAL	162.46	335		PKPdf	23 14 57.8	-2.1
PYL	PYLOS	162.51	296	P	PKPdf	23 14 58.5	-1.7
ANDM	Andravida	162.56	299	P	PKPdf	23 14 59.5	-0.6
STON	Ston	162.62	318	⇑iP	PKPdf	23 14 58.1	-1.9
KTLO	Katakolo	162.62	298	P	PKPdf	23 14 59.5	-0.7
IGT	Igoumenitsa	162.67	305	P	PKPdf	23 14 58.8	-1.5
TSLK	Tsoukalades, L	162.72	303	P	PKPdf	23 14 59.0	-1.3
NYDR	Nydri-Lefkada	162.73	302	P	PKPdf	23 14 58.9	-1.4
LKD2	Lefkada island	162.73	303	P	PKPdf	23 14 59.5	-0.9
SRN	Sarande	162.76	307	P	PKPdf	23 14 58.8	-1.5
EVGI	Lefkada island	162.79	302	P	PKPdf	23 14 59.3	-1.1
CLF	Chambon-Foret	162.80	359		PKPdf	23 14 59.3	-0.8
VLO	Vlora	162.83	309	P	PKPdf	23 14 59.7	-0.6
RTZL	Ratzakli, Kefa	162.90	300	P	PKPdf	23 14 59.6	-0.9
DAVOX	Davos/Dischmat	162.92	341	PKP	PKPdf	23 14 59.6	-0.9
	comp=Z,66nm,1.0s,baz=352,slow=0.6,SNR=45						
DAVOX				PKPab	PKPab	23 15 49.3	-0.6
	comp=Z,343nm,1.0s,baz=232,slow=1.6,SNR=17						
FSK	Fiskardo	162.92	302	P	PKPdf	23 14 59.0	-1.5
FUORN	Ofenpass-Fuorn	162.96	340		PKPdf	23 14 58.9	-1.7
KEK	Kerkira	162.97	306	P	PKPdf	23 15 01.2	+0.6
LTHK	Lithakia	162.97	299	P	PKPdf	23 14 59.0	-1.6
VLS	Valsamata	163.00	301	P	PKPdf	23 14 59.1	-1.5
PSDA	Pessada-Kefalo	163.03	300	P	PKPdf	23 14 59.0	-1.6
DMLN	Damoulianata-K	163.14	301	P	PKPdf	23 14 59.6	-1.1
PMOZ	Porto Moniz, M	163.58	78	PKP	PKPdf	23 15 02.8	+1.4
PMOZ	Porto Moniz, M	163.58	78	ePKPdf	PKPdf	23 15 02.7	+1.2
PMOZ				ePP	PP	23 19 43.2	+4.0
PMOZ				eSS	SS	23 39 52.9	-12
PMOZ				eLR	LR	00 10 36.8	
PMOZ				i AMs_20		00 38 15.9	
	comp=Z,49µm,22.0s						
PMAR	Madeira	163.82	78	ePKPdf	PKPdf	23 15 02.9	+1.1
PMAR				ePP	PP	23 19 42.4	+1.8
PMPST	Porto Santo, M	164.29	77	ePKPdf	PKPdf	23 15 03.2	+1.3
PMPST				ePP	PP	23 19 46.1	+3.3
EOSO	Osorio	164.49	96	PKP	PKPdf	23 15 03.3	+0.9
MATE	Matera	164.54	313	⇑P	PKPdf	23 15 01.4	-0.5
MURB	Monte Urbino	165.00	329		PKPdf	23 15 00.3	-2.1
VLC	Villacollemand	165.11	336	PKP	PKPdf	23 15 00.3	-2.0
AQU	L'Aquila	165.28	325	PKP	PKPdf	23 15 01.5	-1.1
TIP	Timpagrande	165.30	309	⇑P	PKPdf	23 15 02.6	-0.2
SSB	Saint Sauveur	165.41	353		PKPdf	23 15 01.6	-1.0
SSB	Saint Sauveur	165.41	353	PKIKP	PKPdf	23 15 01.6	-1.0
PGAV	Gavieira, Arco	166.16	34	ePKPdf	PKPdf	23 15 04.0	+0.6
PGAV				ePP	PP	23 19 54.5	+3.1
PGAV				eSS	SS	23 40 32.5	+3.9
PGAV				eLR	LR	00 12 55.1	
PGAV				i AMs_20		00 39 19.0	
	comp=Z,83µm,22.0s						
PCAB	Cabril	166.47	34	ePKPdf	PKPdf	23 15 04.2	+0.7
POLO	Lamas de Olo	166.84	34	ePKPdf	PKPdf	23 15 04.7	+0.8
POLO				ePP	PP	23 19 56.3	+1.4
ECAL	Calabor	166.87	30	PKP	PKPdf	23 15 04.2	+0.2
PVRL	Vila Real	166.95	34	ePKPdf	PKPdf	23 15 04.4	+0.5
PVIS	Viseu	167.28	36	ePKPdf	PKPdf	23 15 04.9	+0.6
PVIS				ePP	PP	23 19 58.9	+1.6
MVO	Moncorvo	167.36	33	ePKPdf	PKPdf	23 15 05.0	+0.7
MVO				ePP	PP	23 19 59.5	+1.9
MVO				eSS	SS	23 40 43.9	+3.1
MVO				eLR	LR	00 13 34.0	
MVO				i AMs_20		00 29 24.1	
	comp=Z,82µm,22.0s						
COI	Coimbra	167.38	39		PKPdf	23 15 03.3	-0.9
COI	Coimbra	167.38	39	ePKPdf	PKPdf	23 15 04.7	+0.5
COI				ePP	PP	23 19 59.5	+1.8
COI	Coimbra	167.38	39	PKIKP	PKPdf	23 15 03.3	-0.9
PCAS	Casmilo, Conde	167.44	40	ePKPdf	PKPdf	23 15 05.0	+0.7
PCAS				ePP	PP	23 20 00.7	+2.6
PSBE	So Bento	167.64	42	ePKPdf	PKPdf	23 15 05.0	+0.5
PSBE				ePP	PP	23 20 02.2	+3.0
MTE	Manteigas	167.70	36		PKPdf	23 15 04.2	-0.4
MTE	Manteigas	167.70	36	ePKPdf	PKPdf	23 15 05.0	+0.4
MTE				ePP	PP	23 20 01.9	+2.5
MTE				eSS	SS	23 40 52.9	+8.5
MTE				eLR	LR	00 14 01.9	
MTE				i AMs_20		00 29 32.8	
	comp=Z,85µm,22.0s						
PMAFR	Mafra	167.70	46	PKP	PKPdf	23 15 05.4	+0.8
LIS	Lisbon	167.93	46	ePKPdf	PKPdf	23 15 05.5	+0.9
LIS				ePP	PP	23 20 02.2	+1.5
LIS				eSS	SS	23 40 50.2	+3.1
LIS				IAMs_20	IAMs_20	00 25 14.7	
	comp=Z,109µm,29.0s						
LIS	Lisbon	167.93	46	ePKPdf	PKPdf	23 15 05.1	+0.4
LIS				ePP	PP	23 20 03.4	+2.6
PSARD	Sardoal	167.94	41	ePKPdf	PKPdf	23 15 05.0	+0.3
PSARD				ePP	PP	23 20 03.7	+3.0
PCBR	Castelo Branco	168.14	38	ePKPdf	PKPdf	23 15 05.5	+0.7
CEST	Esterri de Car	168.22	3		PKPdf	23 15 04.0	-0.9
PMTG	Montargil	168.26	43	ePKPdf	PKPdf	23 15 05.8	+0.9
PMTG				ePP	PP	23 20 04.3	+2.0
EJON	La Jonquera	168.36	357	PKP	PKPdf	23 15 04.7	-0.2
PMRV	Marv??o	168.48	39	ePKPdf	PKPdf	23 15 05.8	+0.7
PMRV				ePP	PP	23 20 06.5	+3.1
PMRV				eSS	SS	23 41 02.1	+10
PMRV				eLR	LR	00 14 02.8	
PMRV				i AMs_20		00 30 21.1	
	comp=Z,88µm,20.0s						
EVO	Evora	168.74	44	PKP	PKPdf	23 15 06.2	+1.0
EVO	Evora	168.74	44	ePKPdf	PKPdf	23 15 06.2	+1.0
EVO				ePP	PP	23 20 07.8	+3.0
PESTR	Estremoz	168.76	42	PKP	PKPdf	23 15 05.8	+0.5
PESTR	Estremoz	168.76	42	ePKPdf	PKPdf	23 15 06.2	+1.0
PESTR				ePP	PP	23 20 07.2	+2.3
PTEO	Sao Teotonio	168.88	50	ePKPdf	PKPdf	23 15 06.5	+1.2
PTEO				ePP	PP	23 20 09.1	+3.3
MESJ	Messejana	169.04	47	ePKPdf	PKPdf	23 15 06.4	+0.9
MESJ				ePP	PP	23 20 08.1	+1.6
MESJ				eSS	SS	23 41 01.2	+2.8
MESJ				IAMs_20	IAMs_20	00 28 54.3	
	comp=Z,116µm,24.3s						
MESJ	Messejana	169.04	47	ePKPdf	PKPdf	23 15 06.5	+1.1
MESJ				ePP	PP	23 20 10.3	+3.9
PFVI	Vila Bisbo	169.04	52	PKP	PKPdf	23 15 06.8	+1.3
PFVI	Vila Bisbo	169.04	52	ePKPdf	PKPdf	23 15 06.7	+1.2
PFVI				ePP	PP	23 20 09.7	+3.1
MORF	Marmelete	169.06	51	ePKPdf	PKPdf	23 15 06.5	+1.0
MORF				ePP	PP	23 20 08.3	+1.6
MORF				eSS	SS	23 41 01.7	+2.8
MORF				IAMs_20	IAMs_20	00 25 42.8	
	comp=Z,102µm,23.2s						
MORF	Marmelete	169.06	51	ePKPdf	PKPdf	23 15 06.8	+1.3
MORF				ePP	PP	23 20 09.7	+2.9
PBEJ	Beja	169.15	46	ePKPdf	PKPdf	23 15 06.4	+0.9
EBAD	Badajoz	169.17	41	PKP	PKPdf	23 15 06.1	+0.6
PCVE	Castro Verde	169.28	48	PKP	PKPdf	23 15 06.8	+1.1
PCVE	Castro Verde	169.28	48	ePKPdf	PKPdf	23 15 06.7	+1.1
PCVE				ePP	PP	23 20 10.3	+2.6
VSL	Villasalto	169.43	327		PKPdf	23 15 04.8	-0.8
PBAR	Barrancos	169.55	43	PKP	PKPdf	23 15 06.6	+0.8
PBAR	Barrancos	169.55	43	ePKPdf	PKPdf	23 15 06.5	+0.8
PBAR				ePP	PP	23 20 12.2	+3.4
PBDV	Barranco-do-Ve	169.58	49	ePKPdf	PKPdf	23 15 07.0	+1.2
PBDV				ePP	PP	23 20 12.9	+3.6
UCM	Universidad Co	169.62	23	PKP	PKPdf	23 15 07.1	+1.3
PVAQ	Vaqueiros	169.62	48	PKP	PKPdf	23 15 07.0	+1.1
PVAQ	Vaqueiros	169.62	48	ePKPdf	PKPdf	23 15 06.7	+0.9
PVAQ				ePP	PP	23 20 13.2	+3.8
PVAQ				eLR	LR	00 14 13.1	
PVAQ				i AMs_20		00 29 44.1	
	comp=Z,71µm,20.0s						
EGRO	El Granado	169.69	47	PKP	PKPdf	23 15 06.9	+1.1
PAB	San Pablo	169.87	29		PKPdf	23 15 06.1	+0.1
PAB	San Pablo	169.87	29	PKIKP	PKPdf	23 15 06.9	+0.9
ESBB	Sonseca Array	169.91	27		PKPdf	23 15 05.7	-0.3
ESDC	Sonseca Array	169.91	27		PKPdf	23 15 05.7	-0.3
ESDC	Sonseca Array	169.91	27	PKP	PKPdf	23 15 06.6	+0.6
	comp=Z,125nm,1.1s,baz=344,slow=2.5,SNR=151						
ESDC				PKPab	PKPab	23 16 20.6	-0.2
	comp=Z,26nm,0.8s,baz=327,slow=3.9,SNR=5.3						
ESDC				PP	PP	23 20 10.3	0.0
	comp=Z,14nm,1.0s,baz=340,slow=5.5,SNR=4.5						
EMIN	Mina Concepcio	170.04	44	PKP	PKPdf	23 15 07.1	+1.1
ECAB	El Cabril	170.53	38	PKP	PKPdf	23 15 07.2	+0.9
MAHO	Mahon	170.74	349	PKP	PKPdf	23 15 06.7	+0.3
EADA	Adamuz	170.88	35	PKP	PKPdf	23 15 07.4	+0.8
ECHE	Chera	170.91	15	PKP	PKPdf	23 15 07.5	+1.0
ETOS	Mallorca	171.03	356	PKP	PKPdf	23 15 07.0	+0.5
ESPR	Espera	171.12	45	PKP	PKPdf	23 15 08.3	+1.6
SFS	San Fernando	171.15	48	PKP	PKPdf	23 15 08.7	+2.1
CNIL	Conil	171.31	48	PKP	PKPdf	23 15 08.7	+2.0
AVE	Averroes	171.65	70	PKP	PKPdf	23 15 07.9	+0.9
EIBI	Ibiza	171.78	3	PKP	PKPdf	23 15 07.8	+0.9
RTC	Rabat Centre	171.89	65	PKP	PKPdf	23 15 08.0	+0.9
EGOR	Sierra Gorda,	171.94	37	PKP	PKPdf	23 15 07.0	-0.3
EMIJ	Mijas	171.97	43	PKP	PKPdf	23 15 06.7	-0.4
EMAL	Malaga-Limoner	172.02	40	PKP	PKPdf	23 15 07.1	0.0
ECEU	Ceuta	172.03	49	PKP	PKPdf	23 15 08.0	+0.9
CEU	Ceuta	172.03	48	PKP	PKPdf	23 15 07.7	+0.6
TIO	Tiouine	172.06	87	PKP	PKPdf	23 15 08.2	+0.7
KEST	Kesra	172.12	310		PKPdf	23 15 06.8	-0.5
KEST	Kesra	172.12	310	PKP	PKPdf	23 15 07.4	+0.1
	comp=Z,81nm,1.0s,baz=332,slow=1.4,SNR=42						
KEST				PKPab	PKPab	23 16 30.6	-0.2
	comp=Z,116nm,1.0s,baz=16,slow=1.3,SNR=6.3						
KEST				PP	PP	23 20 22.2	+0.2
	comp=Z,21nm,0.9s,baz=359,slow=7.7,SNR=3.5						
KEST	Kesra	172.12	310	P	PKPdf	23 15 07.8	+0.6
	SNR=80						
KEST	Kesra	172.12	310	P	PKPdf	23 15 07.5	+0.1
	SNR=80						
EQTA	Presa de Quent	172.19	34	PKP	PKPdf	23 15 07.1	-0.2
TLOR	Lorca, Murcia	172.53	23	PKP	PKPdf	23 15 08.0	+0.7
CMAH	Djebel Manchou	172.64	323	P	PKPdf	23 15 07.3	-0.2
CAEH	'Ain El Ouahch	172.79	327	P	PKPdf	23 15 07.0	-0.5
CART	Cartagena	172.80	19	PKP	PKPdf	23 15 07.2	-0.2
ENIJ	Nijar	172.94	28	PKP	PKPdf	23 15 07.9	+0.3
CKFL	Kef-Lekhel	173.16	326	P	PKPdf	23 15 07.4	-0.4
CASM	Ain Smara	173.38	326	P	PKPdf	23 15 07.1	-0.7
IFR	Ifrane	173.40	64	PKP	PKPdf	23 15 09.4	+1.4
DFRA	Djebel Bou Aff	173.42	331	P	PKPdf	23 15 08.1	+0.2
CTEI	Djebel Teioual	173.58	326	P	PKPdf	23 15 07.3	-0.7
EMLI	Melilla	173.91	41	PKP	PKPdf	23 15 08.5	+0.6
SET	Setif	173.91	333	P	PKPdf	23 15 10.0	+2.0
CKHR	Kef el Ahmar	174.02	331	P	PKPdf	23 15 07.6	-0.5
MDT	Midelt	174.05	69	PKP	PKPdf	23 15 08.9	+0.7
	comp=Z,128nm,1.1s,baz=299,slow=0.3,SNR=47						
MDT				PP	PP	23 20 36.5	+4.4
	comp=Z,10nm,1.0s,baz=32,slow=9.5,SNR=16						
USTO	Oran	174.65	23	P	PKPdf	23 15 14.0	+5.9
OKGL	Djebel Kef Gue	174.67	12	P	PKPdf	23 15 13.0	+4.8
ODJA	Bouhanifia	175.15	21	P	PKPdf	23 15 12.0	+3.6
OJGS	Djebel Guires	175.21	12	P	PKPdf	23 15 10.0	+1.6

IDC ***15*** *23:04:05.3±9.8, 30°.58S×178°.23W, h32^{km}±61^{km}, mb4.7/4, mbtmp4.9/4, Error ellipse: s-maj=80.9km s-min=23.4km az=135.0*

NEIC ***15*** *23:04:06.6±1.4, 30°.52S±0°.09×178°.2W±0°.2, h35^{km}±2^{km}, mb5.2/6, Error ellipse: s-maj=31.5km s-min=13.3km az=101.0*

ISC 15 23:04:03.0±0.9**, 30°.86S**±0°.07×**177°.9W**±0°.2**, h46**^{km}**, n40, σ2^{s}.39**/41**, mb5.0**/8**, 1D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	1.59	359	P	Pn	23 04 26.8	-1.9
GLKZ				S	Sn	23 04 43.2	-5.0
RAO	Raoul Island	1.60	359	Pn	Pn	23 04 27.9	-1.1
RAO				Sn	Sn	23 04 44.9	-3.6
RAO	Raoul Island	1.60	359	Pn	Pn	23 04 27.7	-1.2
	541nm,0.3s,baz=85,slow=13,SNR=8.2						
RAO				Sn	Sn	23 04 44.1	-4.3
	1µm,0.3s,baz=142,slow=21,SNR=9.6						
URZ	Urewera	8.46	208	Pn	Pn	23 06 01.5	-1.4
	9.0nm,0.3s,baz=27,slow=2.3,SNR=1.5						
URZ				Sn	Sn	23 07 35.5	-1.5
	10nm,0.3s,baz=162,slow=20,SNR=7.4						
SNGZ	Shannon Statio	8.83	205	P	Pn	23 06 03.5	-4.5
SNGZ				S	Sn	23 07 45.7	-0.4

RAHZ	Arahi	9.04	206	S	Sn	23 07 47.8	-3.6
WHHZ	Waihua	9.12	205	S	Sn	23 07 53.6	+0.2
NMHZ	Naumai	9.30	207	S	Sn	23 07 56.4	-1.4
ARHZ	Aropaoanui	9.38	205	S	Sn	23 07 57.5	-2.0
BKZ	Black Stump Fm	9.48	208	S	Sn	23 08 00.2	-2.1
MCHZ	McNeill Hill	9.65	206	S	Sn	23 08 04.7	-1.5
CKHZ	Cape Kidnapper	9.70	204	S	Sn	23 08 04.8	-2.6
KWHZ	Kaweka Forest	9.73	207	S	Sn	23 08 07.3	-1.1
MOVZ	Moawhango	9.99	210	S	Sn	23 08 09.6	-5.2
CTAO	Charters Tower	33.98	280	P	P	23 10 43.5	+1.1
CTAO				IAmb	IAmb	23 10 45.9	
	comp=Z,24nm,0.9s						
CTAO	Charters Tower	33.98	280	P	P	23 10 44.8	+2.4
STKA	Stephens Creek	34.48	258	P	P	23 10 49.0	+2.3
STKA	Stephens Creek	34.48	258	P	P	23 10 49.6	+2.9
	comp=Z,23nm,0.7s,baz=90,slow=12,SNR=3.1						
	comp=Z,23nm,0.7s						
XMAS	Kiritimati	38.07	34	P	P	23 11 17.0	-0.3
AS31	Alice Springs	43.19	267	P	P	23 12 00.5	+0.8
ASAR	Alice Springs	43.20	267	P	P	23 12 00.6	+0.9
ASAR	Alice Springs	43.20	267	P	P	23 11 59.8	+0.1
	comp=Z,8.8nm,0.8s,baz=114,slow=7.8,SNR=3.4						
	comp=Z,8.8nm,0.8s						
WRA	Warramunga Arr	44.23	273	P	P	23 12 08.8	+0.8
	comp=Z,8.1nm,0.6s,baz=112,slow=7.2,SNR=5.9						
	comp=Z,8.1nm,0.6s						
WB0	Warramunga Arr	44.25	273	P	P	23 12 08.9	+0.7
WB0				IAmb	IAmb	23 12 11.3	
	comp=Z,29nm,0.8s						
FORT	Forrest	46.04	256	P	P	23 12 23.9	+1.7
FORT				IAmb	IAmb	23 12 33.8	
	comp=Z,116nm,0.9s						
MBWA	Marble Bar	56.28	264	P	P	23 13 38.3	-0.9
MIDW	Midway	58.75	1	P	P	23 13 59.1	+2.9
BELA	Belgrano 2	69.31	172	P	P	23 15 12.5	+7.4
SYO	Syowa Base	76.69	193	⇓iP	P	23 15 54.2	+5.4
SNAA	Sanae	77.69	178	P	P	23 16 01.7	+7.2
SNAA				IAmb	IAmb	23 16 07.1	
	comp=Z,12nm,1.1s						
PETK	Petropavlovsk-	86.28	346	P	P	23 16 43.3	+3.9
	comp=Z,6.8nm,0.8s,baz=155,slow=5.4,SNR=4.7						
	comp=Z,6.8nm,0.8s						
KURBB	Kurchatov Arra	121.48	313	PKP	PKiKP	23 22 55.0	+3.9
	comp=Z,1.8nm,0.8s,baz=122,slow=2.0,SNR=4.2						
FIA1	FINESS Array S	145.61	340		PKPab	23 23 36.4	+0.2
FINES	FINESS Array B	145.61	340	PKPbc	PKPab	23 23 36.4	+0.3
	comp=Z,6.9nm,0.5s,baz=15,slow=4.5,SNR=8.9						
NC303	NORSAR Array S	149.02	351		PKPab	23 23 47.1	-2.5
NOA	NORSAR Array B	149.22	351	PKPbc	PKPab	23 23 49.0	-1.5
	comp=Z,1.0nm,0.6s,baz=13,slow=2.5,SNR=1.3						
AKASG	Malin Array Be	151.73	322	PKPbc	PKiKP	23 23 54.7	+2.2
	comp=Z,5.5nm,0.7s,baz=49,slow=3.0,SNR=5.1						
MMAI	Mount Meron Ar	151.74	283	PKPbc	PKiKP	23 23 55.2	+2.0
	comp=Z,4.7nm,0.6s,baz=76,slow=6.1,SNR=6.0						
BRTR	Keskin Array B	152.91	298	PKPbc	PKiKP	23 23 56.9	+1.4
	comp=Z,4.8nm,1.1s,baz=153,slow=3.4,SNR=1.3						
CSS	Mathiatis	153.54	287		PKiKP	23 23 57.2	+0.4

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*MOS **15** 23:07:24.4±1.2, 30°.65S×178°.18W, h40^{km}, mb5.6/9, Error ellipse: s-maj=14.0km s-min=11.7km az=87.1*

*NEIC **15** 23:07:25.2±1.4, 30°.62S±0°.08×178°.0W±0°.1, h39^{km}±5^{km}, mb5.3/43, Error ellipse: s-maj=18.1km s-min=11.1km az=88.0*

*IDC **15** 23:07:25.7±1.7, 30°.56S×178°.07W, h50^{km}±14^{km}, mb4.6/9, mbtmp4.9/9, Error ellipse: s-maj=24.4km s-min=13.6km az=91.0*

ISC 15 23:07:25.3±0.3**, 30°.79S**±0°.04×**178°.14W**±0°.08**, h46^{km}, n193, σ1^{s}89**/215**, mb5.2**/39**, 4C-10D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	1.53	7	P	Pn	23 07 47.7	-2.4
GLKZ				S	Sn	23 08 03.4	-5.4
RAO	Raoul Island	1.54	7	P	Pn	23 07 47.8	-2.5
	2µm,0.3s,baz=90,slow=20,SNR=11						
RAO				S	Sn	23 08 04.0	-5.1
	6µm,0.3s,baz=153,slow=22,SNR=14						
RIZ	Raoul Island	1.55	7	P	Pn	23 07 47.7	-2.6
RIZ				S	Sn	23 08 06.8	-2.5
WMGZ	Waiomatatini S	7.57	201	P	Pn	23 09 10.2	-2.8
WMGZ				S	Sn	23 10 32.3	-5.2
PKGZ	Pakihiroa	7.72	203	P	Pn	23 09 10.2	-4.9
PKGZ				S	Sn	23 10 41.2	0.0
RUGZ	Raukumara Rang	7.95	205	P	Pn	23 09 15.2	-3.2
RUGZ				S	Sn	23 10 46.2	-0.8
TWGZ	Tauwhareparae	8.04	202	P	Pn	23 09 16.2	-3.3
TWGZ				S	Sn	23 10 45.2	-3.8
WCZ	Waipu Caves	8.12	229	P	Pn	23 09 27.4	+6.8
OUZ	Omahuta	8.23	235	P	Pn	23 09 28.7	+6.6
CNGZ	Carnagh Statio	8.25	200	P	Pn	23 09 18.2	-4.1
CNGZ				S	Sn	23 10 49.5	-4.6
TKGZ	Te Karaka	8.32	202	P	Pn	23 09 19.5	-3.8
TKGZ				S	Sn	23 10 51.4	-4.4
URZ	Urewera	8.42	206	P	Pn	23 09 20.9	-3.8
	70nm,0.8s,baz=338,slow=3.0,SNR=6.0						
URZ				S	Sn	23 10 56.5	-1.8
	220nm,0.4s,baz=262,slow=21,SNR=18						
RAGZ	Rawiri	8.52	204	P	Pn	23 09 21.5	-4.6
RAGZ				S	Sn	23 10 59.4	-1.5
RIGZ	Rimuhau	8.59	202	P	Pn	23 09 23.8	-3.3
RIGZ				S	Sn	23 10 58.7	-3.9
MUGZ	Murupara	8.74	207	P	Pn	23 09 24.7	-4.3
MUGZ				S	Sn	23 11 04.3	-2.0
PRGZ	Paritu Road	8.75	201	P	Pn	23 09 24.4	-4.8
PRGZ				S	Sn	23 11 03.3	-3.2
SNGZ	Shannon Statio	8.80	204	P	Pn	23 09 21.5	-8.4
SNGZ				S	Sn	23 11 06.6	-1.1
MHGZ	Mahia Peninsul	8.95	200	P	Pn	23 09 27.7	-4.3
MHGZ				S	Sn	23 11 07.6	-3.9
RAHZ	Arahi	9.01	205	P	Pn	23 09 30.7	-2.1
RAHZ				S	Sn	23 11 11.9	-1.0
WHHZ	Waihua	9.10	203	P	Pn	23 09 28.7	-5.3
WHHZ				S	Sn	23 11 12.2	-2.8
NMHZ	Naumai	9.27	205	P	Pn	23 09 32.1	-4.2
NMHZ				S	Sn	23 11 17.5	-1.8
ARHZ	Aropaoanui	9.35	204	P	Pn	23 09 32.2	-5.1
ARHZ				S	Sn	23 11 16.8	-4.4
BKZ	Black Stump Fm	9.45	206	P	Pn	23 09 33.6	-5.2
BKZ				S	Sn	23 11 22.0	-1.6
MCHZ	McNeill Hill	9.62	205	P	Pn	23 09 40.0	-1.1
MCHZ				S	Sn	23 11 24.5	-3.2
CKHZ	Cape Kidnapper	9.68	203	P	Pn	23 09 33.8	-8.1
CKHZ				S	Sn	23 11 24.3	-4.8
KWHZ	Kaweka Forest	9.70	206	P	Pn	23 09 37.5	-4.8
KWHZ				S	Sn	23 11 27.1	-2.7
TMVZ	Te Maari	9.72	210	P	Pn	23 09 34.3	-8.3
TMVZ				S	Sn	23 11 29.1	-1.4
KRHZ	Kereru	9.91	205	P	Pn	23 09 37.9	-7.2
KRHZ				S	Sn	23 11 31.3	-3.6
MOVZ	Moawhango	9.95	209	P	Pn	23 09 41.6	-4.1
MOVZ				S	Sn	23 11 31.3	-4.6
NFK	Norfolk Island	12.20	275	P	P	23 10 23.9	-3.9
MSVF	Nonsavu	13.45	344	P	Pn	23 10 35.4	+1.8
	14nm,0.8s,baz=143,slow=18,SNR=3.0						
RPZ	Rata Peaks	15.49	211	P	Pn	23 10 59.9	-0.7
	60nm,1.0s,baz=83,slow=8.1,SNR=4.5						
RPZ				S	Sn	23 13 34.4	-17
	43nm,0.6s,baz=314,slow=17,SNR=8.5						
DZM	Mont Dzumac	16.30	299	P	P	23 11 14.3	+0.8
DZM	Mont Dzumac	16.30	299	P	P	23 11 17.6	+4.1
	35nm,1.0s,baz=92,slow=17,SNR=6.4						
ARMA	Armidale	25.99	263	P	P	23 12 55.7	+1.7
EIDS	Eidsvold	27.64	274	P	P	23 13 09.4	+0.7
CAN	Canberra	27.84	252	P	P	23 13 11.6	+1.1
CAN	Canberra	27.84	252	P	P	23 13 11.6	+1.1
CAN				pmax	pmax		
	comp=Z,2.0nm,0.3s						
TOO	Toolangi	30.70	247	P	P	23 13 37.5	+1.6
TOO	Toolangi	30.70	247	P	P	23 13 37.5	+1.6
TOO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CMSA	Cobar Meteorol	30.88	259	P	P	23 13 39.6	+2.2
CTAO	Charters Tower	33.74	280	P	P	23 14 04.6	+2.0
CTAO				IAmb	IAmb	23 14 05.9	
	comp=Z,40nm,0.8s						
CTAO	Charters Tower	33.74	280	P	P	23 14 04.6	+2.0
CTAO				pmax	pmax		
	comp=Z,40nm,0.8s						
CTAO	Charters Tower	33.74	280	P	P	23 14 04.8	+2.2
CTAO				pP	pP	23 14 15.7	+1.0
CTAO				sP	sP	23 14 20.5	+0.4
MTSU	Mount Surprise	36.25	281	P	P	23 14 26.1	+1.8
	comp=Z,32nm,0.8s						
BBOO	Buckleboo	38.75	255	P	P	23 14 46.0	+0.7
BBOO				IAmb	IAmb	23 15 07.7	
	comp=Z,58nm,1.2s						
COEN	Coen	39.26	286	P	P	23 14 51.1	+1.4
COEN				IAmb	IAmb	23 14 57.8	
	comp=Z,64nm,1.4s						
AS31	Alice Springs	42.97	267		P	23 15 20.7	+0.5
AS31	Alice Springs	42.97	267	P	P	23 15 20.0	-0.1
ASAR	Alice Springs	42.97	267	P	P	23 15 20.8	+0.6
	comp=Z,25nm,0.7s,baz=105,slow=7.0,SNR=27						
ASAR				ScP	ScP	23 20 55.8	-1.6
	comp=Z,2.7nm,1.1s,baz=120,slow=4.3,SNR=4.2						
	comp=Z,25nm,0.7s						
DRV	Dumont d'Urvil	43.74	203	P	P	23 15 26.1	+0.4
WR0	Warramunga Arr	43.81	273	P	P	23 15 27.4	+0.4
WR0				IAmb	IAmb	23 15 29.2	
	comp=Z,36nm,1.0s						
WRAB	Tennant Creek	43.99	273	⇑eP	P	23 15 29.1	+0.7
WRAB				pmax	pmax		
	comp=Z,29nm,0.6s						
WRA	Warramunga Arr	43.99	273	P	P	23 15 28.8	+0.4
WRA	Warramunga Arr	43.99	273	P	P	23 15 28.9	+0.4
	comp=Z,21nm,0.3s,baz=111,slow=8.1,SNR=71						
WRA				ScP	ScP	23 21 01.1	-0.4
	comp=Z,2.2nm,1.1s,baz=113,slow=4.2,SNR=4.1						
	comp=Z,21nm,0.3s						
WRA	Warramunga Arr	43.99	273	eP	P	23 15 29.1	+0.7
WRA				pmax	pmax		
	comp=Z,28nm,0.4s						
FORT	Forrest	45.83	256	P	P	23 15 43.0	+0.1
SBA	Scott Base	47.64	184	P	P	23 15 59.2	+2.8
SBA				IAmb	IAmb	23 16 25.1	
	comp=Z,76nm,1.7s						
SBA	Scott Base	47.64	184	P	P	23 15 59.2	+2.8
SBA				pmax	pmax		
	comp=Z,76nm,1.7s						
VNDA	Vanda	47.70	186	P	P	23 15 59.6	+2.8
VNDA				IAmb	IAmb	23 16 29.8	
	comp=Z,38nm,1.4s						
VNDA	Vanda	47.70	186	P	P	23 15 59.6	+2.8
VNDA				pmax	pmax		
	comp=Z,38nm,1.5s						
MTN	Manton Dam	49.93	279	P	P	23 16 14.8	+0.1
KNRA	Kununurra	50.62	275	P	P	23 16 20.3	+0.4
FITZ	Fitzroy Crossi	52.24	270	P	P	23 16 32.4	+0.4
CCD	Concordia, Ant	52.55	196	P	P	23 16 36.3	+2.3
FAKI	Fak Fak	54.36	291	P	P	23 16 46.9	-0.8
FAKI				IAmb	IAmb	23 17 13.1	
	comp=Z,40nm,1.3s						
CASY	Casey	54.74	208	P	P	23 16 49.6	-0.1
CASY				IAmb	IAmb	23 16 55.6	
	comp=Z,80nm,1.6s						
CASY	Casey	54.74	208	P	P	23 16 49.7	-0.1
CASY				pP	pP	23 17 00.9	-0.8
MORW	Morawa	56.31	254	P	P	23 17 01.2	-0.4
MORW				IAmb	IAmb	23 17 23.5	
	comp=Z,59nm,1.4s						
QSPA	South Pole Qui	59.33	180	P	P	23 17 23.9	+1.6
QSPA	South Pole Qui	59.33	180	P	P	23 17 24.5	+2.2
	comp=Z,31nm,1.1s,baz=300,slow=0.7,SNR=7.8						
	comp=Z,31nm,1.1s						
QSPA	South Pole Qui	59.33	180	P	P	23 17 24.4	+2.1
TNTI	Ternate	60.47	291	P	P	23 17 28.3	-2.4
TNTI				IAmb	IAmb	23 17 29.8	
	comp=Z,24nm,0.7s						
SMAI	San Martin Ant	69.11	158	P	P	23 18 26.9	+0.7
SMAI				IAmb	IAmb	23 18 28.3	
	comp=Z,25nm,1.2s						
MAW	Mawson	71.91	201	P	P	23 18 44.4	+1.2
	comp=Z,5.3nm,0.7s,baz=117,slow=12,SNR=3.3						
	comp=Z,5.3nm,0.7s						
KKM	Kota Kinabalu	72.56	288	P	P	23 18 47.2	-0.9
KKM				IAmb	IAmb	23 18 52.2	
	comp=Z,20nm,1.1s						
SNAA	Sanae	77.77	178	P	P	23 19 17.6	+0.4
SNAA				IAmb	IAmb	23 19 24.6	
	comp=Z,24nm,1.2s						
SNAA	Sanae	77.77	178	P	P	23 19 17.5	+0.4
	comp=Z,8.4nm,0.9s,baz=226,slow=4.6,SNR=14						
	comp=Z,8.4nm,0.9s						
SNAA	Sanae	77.77	178	⇓eP	P	23 19 18.6	+1.4
JGF	Kuroka	78.17	324	P	P	23 19 18.1	-1.6
JGF				IAmb	IAmb	23 19 32.3	
	comp=Z,84nm,1.7s						
MJAR	Matsushiro Arr	78.49	325	P	P	23 19 19.8	-1.6
	comp=Z,2.4nm,0.8s,baz=155,slow=5.8,SNR=2.6						
	comp=Z,2.4nm,0.8s						
COYC	Coyhaique	78.74	137	P	P	23 19 23.3	+0.5
COYC				IAmb	IAmb	23 19 25.3	
	comp=Z,28nm,1.0s						
LL02	Futaleuf	80.17	135	P	P	23 19 29.9	-0.8
LL02				IAmb	IAmb	23 19 33.0	
	comp=Z,25nm,1.2s						
H03S2	Juan Fernandez	80.35	124	T	T	00 48 34.5	
	baz=238,slow=75,SNR=22						
H03S1	Juan Fernandez	80.36	124	T	T	00 48 37.1	
	baz=238,slow=75,SNR=19						
H03S3	Juan Fernandez	80.37	124	T	T	00 48 34.1	
	baz=238,slow=75,SNR=18						
KIWB	Kanaga Island	82.29	1	P	P	23 19 40.5	-0.9
ADK	Adak	82.32	1	P	P	23 19 40.4	-1.2
ADK				IAmb	IAmb	23 19 45.8	
	comp=Z,43nm,0.9s						
ADK	Adak	82.32	1	P	P	23 19 40.4	-1.2
ADK				pmax	pmax		
	comp=Z,43nm,1.0s						
PLCA	Paso Flores	82.33	133	P	P	23 19 42.7	+0.4
PLCA	Paso Flores	82.33	133	P	P	23 19 43.5	+1.2
	comp=Z,9.9nm,1.0s,baz=219,slow=5.2,SNR=5.3						
	comp=Z,9.9nm,1.0s						
JKA	Kamikawa-asahi	82.72	333	P	P	23 19 43.4	-0.5
ASAJ	Asahikawa	82.73	333	P	P	23 19 43.4	-0.5
ASAJ				pmax	pmax		
	comp=Z,94nm,1.5s						
KSRS	Korea Array	84.56	320	P	P	23 19 53.4	-0.1
	comp=Z,1.3nm,0.7s,baz=139,slow=7.9,SNR=2.3						
	comp=Z,1.3nm,0.7s						
BO02	Sierra Bellavi	85.53	128	P	P	23 19 58.9	+0.2
BO02				IAmb	IAmb	23 20 00.5	
	comp=Z,34nm,1.3s						
CBX	Cerro Bola	85.58	48	P	P	23 19 58.4	-0.5
CBX				IAmb	IAmb	23 20 23.2	
	comp=Z,19nm,1.3s						
MT01	Popeta	85.73	127	P	P	23 19 59.7	0.0
MT01				IAmb	IAmb	23 20 01.2	
	comp=Z,36nm,1.1s						
GSI	Gunungsitoli	85.75	274	P	P	23 20 00.2	+0.2
MT09	Talagante	85.96	127	P	P	23 20 00.4	-0.6
MT02	Curacav	86.15	127	P	P	23 20 02.3	+0.5
MT02				IAmb	IAmb	23 20 15.4	
	comp=Z,42nm,1.6s						
PEA0B	Petropavlovsk-	86.16	346	P	P	23 20 01.7	+0.7
PEA0B	Petropavlovsk-	86.16	346	P	P	23 20 01.7	+0.7
PEA0B				pmax	pmax		
	comp=Z,62nm,1.4s						
PETK	Petropavlovsk-	86.16	346	P	P	23 20 00.8	-0.2
	comp=Z,13nm,0.8s,baz=160,slow=5.6,SNR=9.1						
	comp=Z,13nm,0.8s						
PETK	Petropavlovsk-	86.16	346	eP	P	23 20 03.8	+2.8
PETK				pmax	pmax		
	comp=Z,14nm,0.9s						
MSHR	Mys Shultsa	86.61	325	⇓eP	P	23 20 02.1	-1.4
MSHR				pmax	pmax		
	comp=Z,125nm,1.5s						
VLA	Vladivostok	86.65	326	⇓eP	P	23 20 05.9	+2.2
VLA				pmax	pmax		
	comp=Z,63nm,0.7s						
CMB	Columbia Colle	87.13	42	P	P	23 20 05.8	-0.4
CMB				IAmb	IAmb	23 20 26.8	
	comp=Z,22nm,1.6s						
CMB	Columbia Colle	87.13	42	P	P	23 20 05.9	-0.4
CMB				pmax	pmax		
	comp=Z,22nm,1.6s						
CO02	Combarbal	87.41	125	P	P	23 20 08.2	+0.1
GMN	Gold Mountain	88.47	44	P	P	23 20 12.7	-0.2
TPH	Tonopah	89.00	44	P	P	23 20 15.0	-0.4
TPH	Tonopah	89.00	44	P	P	23 20 15.0	-0.4
TPH				pmax	pmax		
	comp=Z,80nm,1.5s						
BNX	BinXian	90.76	325	⇓P	P	23 20 25.3	+2.2
BNX				pmax	pmax		
	comp=Z,17nm,1.6s						
KLR	Kul'dur	91.31	330	⇓eP	P	23 20 28.4	+2.8
HHC	Hu-ho-hao-te	96.42	314	eP	P	23 20 47.1	-2.3
WMQ	Urumqi	113.37	308	ePKP	PKiKP	23 25 59.0	+1.1
WMQ				LR	LR		
	comp=N,29µm,17.3s						
WMQ				LR	LR		
	comp=E,14µm,16.3s						
WMQ				LR	LR		
	comp=Z,27µm,18.9s						
ZSN	Zaisan	116.44	311	ePKIKP	PKiKP	23 26 05.1	+1.4
ZSN	Zaisan	116.44	311	ePKP	PKiKP	23 26 05.1	+1.4
MKAR	Makanchi Array	117.93	310	PKP	PKPdf	23 26 04.2	-2.3
	comp=Z,2.9nm,0.7s,baz=85,slow=3.6,SNR=1.6						
SHLS	Shalkode	118.84	305	ePKIKP	PKiKP	23 26 09.0	+0.4
SHLS				e		23 27 26.1	
SHLS	Shalkode	118.84	305	ePKP	PKiKP	23 26 09.0	+0.4
SHLS				ePP	PP	23 27 26.1	-2.0
UZB	Uzynbulak	119.14	305	ePKIKP	PKiKP	23 26 10.2	+1.0
UZB				e		23 27 30.5	
UZB	Uzynbulak	119.14	305	ePKP	PKiKP	23 26 10.3	+1.0
UZB				ePP	PP	23 27 30.5	+0.2
KPKS	Kokpek	119.47	305	ePKIKP	PKiKP	23 26 10.9	+1.1
KPKS	Kokpek	119.47	305	ePKP	PKiKP	23 26 10.9	+1.1
SATY	Saty	119.56	305	ePKIKP	PKiKP	23 26 10.9	+0.9
SATY				e		23 27 33.4	
SATY	Saty	119.56	305	ePKP	PKiKP	23 26 10.1	+0.1
SATY				ePP	PP	23 27 33.4	+0.3
TDK	Taldyqorghan	120.07	307	ePKIKP	PKiKP	23 26 12.0	+1.2
TDK	Taldyqorghan	120.07	307	ePKP	PKiKP	23 26 12.1	+1.2
KURK	Kurchatov	121.23	314	⇑iPKIKP	PKiKP	23 26 13.6	+0.8
KURBB	Kurchatov Arra	121.27	314	PKP	PKPdf	23 26 11.5	-1.2
	comp=Z,5.3nm,0.7s,baz=112,slow=1.7,SNR=7.0						
BTLS	Baital	123.08	306	ePKIKP	PKiKP	23 26 17.8	+1.1
BTLS	Baital	123.08	306	ePKP	PKiKP	23 26 17.8	+1.1
DZA	Taraz	124.56	303	ePKIKP	PKiKP	23 26 20.6	+0.9
DZA	Taraz	124.56	303	ePKP	PKiKP	23 26 20.6	+0.9
BRZS	Berezniki	124.86	312	ePKIKP	PKiKP	23 26 21.2	+1.1
BRZS	Berezniki	124.86	312	ePKP	PKiKP	23 26 21.2	+1.1
IUG	Iuzhnay	125.34	302	ePKIKP	PKiKP	23 26 22.0	+0.6
IUG	Iuzhnay	125.34	302	ePKP	PKiKP	23 26 22.1	+0.6
BRLS	Borolday	125.66	303	ePKIKP	PKiKP	23 26 22.7	+0.8
BRLS	Borolday	125.66	303	ePKP	PKiKP	23 26 22.8	+0.8
CHM	Chimkent	125.69	302	ePKIKP	PKiKP	23 26 22.6	+0.6
CHM	Chimkent	125.69	302	ePKP	PKiKP	23 26 22.7	+0.7
BVAR	Borovoye Array	126.60	316	PKP	PKPdf	23 26 22.6	-0.4
	comp=Z,6.9nm,0.7s,baz=135,slow=1.0,SNR=7.5						
TSUM	Tsumeb	128.05	199	PKP	PKiKP	23 26 28.2	+0.6
	comp=Z,6.6nm,0.8s,baz=117,slow=9.0,SNR=2.7						
SPITS	Spitsbergen Ar	132.08	356	PKP	PKPdf	23 26 31.3	-1.5
	comp=Z,9.9nm,0.8s,baz=318,slow=3.9,SNR=1.8						
SPB2	Spitsbergen Ar	132.08	356	PKPdf	PKiKP	23 26 33.4	-0.4
DAG	Danmarks Havn	132.94	6	e	PKiKP	23 26 39.3	+3.8
ARTI	Arti	133.41	320	PKP	PKPdf	23 26 35.6	-0.2
	comp=Z,15nm,1.0s,baz=124,slow=7.3,SNR=2.0						
AKTO	Aktyubinsk	134.27	312	PKP	PKPdf	23 26 38.0	+0.4
	comp=Z,5.5nm,0.7s,baz=105,slow=3.7,SNR=1.9						
AKTO	Aktyubinsk	134.27	312	PKIKP	PKPdf	23 26 38.0	+0.4
KIRV	Kirov	137.57	325	PKP	PKiKP	23 26 44.8	-0.6
	comp=Z,12nm,0.7s,baz=336,slow=0.5,SNR=1.4						
ARCES	ARCESS Array B	138.94	348	PKP	PKPdf	23 26 45.3	-0.4
	comp=Z,7.9nm,0.8s,baz=21,slow=1.8,SNR=1.4						
AKT	Akhty	141.84	299	ePKIKP	PKiKP	23 26 57.1	+2.2
AKT				e		23 30 03.7	
AKT				e		23 33 56.4	
AKT				pmax	pmax		
	comp=Z,32nm,1.4s						
KBZ	Khabaz	145.23	303	PKPbc	PKPbc	23 26 57.3	0.0
	comp=Z,9.1nm,0.9s,baz=53,slow=0.9,SNR=5.5						
KBZ	Khabaz	145.23	303	ePKIKP	PKiKP	23 27 00.6	-0.9
KBZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KIV	Kislovodsk	145.34	304	ePKIKP	PKiKP	23 27 02.1	+0.2
KIV				pmax	pmax		
	comp=Z,19nm,1.0s						
SHA1	Shidzhatmaz	145.40	303	⇓iPKIKP	PKiKP	23 27 02.2	0.0
OBN	Obninsk	145.42	325	ePKIKP	PKPdf	23 26 57.6	0.0
OBN				pmax	pmax		
	comp=Z,26nm,0.9s						
OBN	Obninsk	145.42	325	PKP	PKPdf	23 26 56.6	-1.0
FIA1	FINESS Array S	145.46	340	PKPbc	PKPdf	23 26 56.6	-0.9
FINES	FINESS Array B	145.47	340	PKPbc	PKPdf	23 26 56.5	-0.9
	comp=Z,22nm,0.5s,baz=60,slow=3.6,SNR=37						
GEVA	Gevas	145.47	294	PKPdf	PKPdf	23 26 58.3	-0.2
GURO	Guroymak-BITLI	146.28	294	PKPdf	PKPdf	23 26 59.9	+0.1
VSLR	Vesyoloye	147.32	304	c iPKP2	PKiKP	23 27 06.5	+0.6
VSU	Vasula	147.53	336	⇓ePKIKP	PKPdf	23 27 01.9	+0.9
NC303	NORSAR Array S	148.91	351		PKPbc	23 27 06.5	-0.8
NC204	NORSAR Array S	148.94	352	PKPbc	PKPbc	23 27 07.2	-0.3
NB201	NORSAR Array S	149.09	351	PKPbc	PKPbc	23 27 07.0	-0.8
NB2	NORSAR Subarra	149.11	351	PKP	PKPbc	23 27 07.2	-0.7
	comp=Z,6.8nm,0.7s,baz=17,slow=2.6						
NOA	NORSAR Array B	149.11	351	PKPbc	PKPbc	23 27 07.1	-0.7
	comp=Z,7.6nm,0.7s,baz=15,slow=4.2,SNR=11						
NAO01	NORSAR Array S	149.35	351	PKPbc	PKPbc	23 27 08.7	+0.3
HFS	Hagfors	149.60	348	PKPbc	PKPbc	23 27 07.9	-1.1
	comp=Z,19nm,0.8s,baz=107,slow=1.0,SNR=16						
MNK	Minsk	149.86	329	i PKiKP	PKiKP	23 27 12.1	+1.4
	comp=Z,41nm,0.8s,baz=49						
MNK				i PP	PP	23 30 45.7	+1.9
MNK				i PP	PP	23 30 45.7	+1.9
MNK				i PPP	PPP	23 34 06.6	
MNK				i SKS	SKSdf	23 34 10.7	+1.8
MNK				i SKKS	SKKSdf	23 43 01.2	-2.5
MNK				i SS	SS	23 50 01.6	+5.6
MNK				i SSS	SSS	23 55 47.2	
MNK				i LQ	LQ	00 26 47.6	
MNK				i LR	LR	00 37 34.8	
MNK	Minsk	149.86	329	i PKP2	PKiKP	23 27 12.1	+1.4
MNK				i		23 30 45.7	
MNK				i PPP	PPP	23 34 06.6	
MNK				i		23 34 10.6	
MNK				i SS	SS	23 50 01.6	+5.6
MNK				pmax	pmax		
	comp=Z,41nm,0.8s						
NACGM	Naroch	150.06	331	ePKiKP	PKiKP	23 27 13.6	+2.5
	comp=Z,37nm,0.9s,baz=47						
PABE	Paberze	150.75	334	PKPbc	PKPbc	23 27 11.4	-0.5
MMAI	Mount Meron Ar	151.50	283	PKPbc	PKPbc	23 27 14.9	+0.4
	comp=Z,12nm,0.5s,baz=81,slow=5.2,SNR=20						
AKASG	Malin Array Be	151.53	322		PKPbc	23 27 13.0	-0.9
AKASG	Malin Array Be	151.53	322	PKPbc	PKPbc	23 27 12.8	-1.0
	comp=Z,23nm,0.7s,baz=52,slow=2.8,SNR=27						
AKBB	Malin Array Si	151.53	322	PKPbc	PKPbc	23 27 13.2	-0.7
AKBB	Malin Array Si	151.53	322	⇓ePKIKP	PKPbc	23 27 13.1	-0.7
BR131	Keskin Array S	152.68	298	⇑ePKIKP	PKPdf	23 27 09.3	-0.7
BRTR	Keskin Array B	152.68	298	PKPbc	PKPbc	23 27 16.1	-0.9
	comp=Z,4.2nm,0.6s,baz=136,slow=4.8,SNR=9.7						
EKA	Eskdalemuir Ar	155.21	7	PKPab	PKPab	23 27 36.6	-1.2
	comp=Z,2.2nm,0.6s,baz=336,slow=2.9,SNR=4.5						
CLL	Collm	157.89	341	i PKPdf	PKPdf	23 27 17.2	+0.8
	comp=Z,92nm,2.2s						
CLL				i (PKPdif)		23 27 35.6	
CLL				i PKPab	PKPab	23 27 48.7	-0.8
	comp=Z,113nm,2.2s						
BRG	Berggiesshubel	158.00	339	ePKP	PKPab	23 27 52.5	+2.5
BRG				Amp		23 27 53.4	
	comp=Z,11nm,1.1s						
GERES	GERESS Array B	159.84	337	PKPab	PKPab	23 27 58.1	-0.1
	comp=Z,600nm,0.8s,baz=11,slow=4.8,SNR=32						
BMRD	Maredsous	160.38	354	dPKP	PKPdf	23 27 20.0	+0.6
DOU	Dourbes	160.60	355	dPKPdf	PKPdf	23 27 18.9	-0.7
TORD	Torodi Ar. Bea	162.44	179	PKPab	PKPab	23 28 10.2	0.0
	comp=Z,5.1nm,0.8s,baz=172,slow=2.7,SNR=2.4						
DAVOX	Davos/Dischmat	162.87	341	PKPab	PKPab	23 28 10.0	-1.6
	comp=Z,6.9nm,0.7s,baz=59,slow=4.9,SNR=3.9						
DAVOX	Davos/Dischmat	162.87	341	PKP2	PKPab	23 28 10.0	-1.6

IDC 15 23:11:12.3±6.5**, 31°.41S**×**177°.77W, h0^{km}, mb3.9**/2**, mbtmp3.9**/2**, Error ellipse: s-maj=275.7km s-min=62.4km az=157.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.26	268	P	P	23 19 16.1	+0.3
	1.2nm,0.6s,baz=113,slow=8.3,SNR=2.4						
	1.2nm,0.6s						
WRA	Warramunga Arr	44.34	273	P	P	23 19 24.0	-0.5
	0.8nm,0.4s,baz=115,slow=7.9,SNR=2.0						
	0.8nm,0.4s						
FINES	FINESS Array B	146.16	340	PKPbc	PKPdf	23 30 52.8	0.0
	1.7nm,0.4s,baz=39,slow=3.8,SNR=5.0						

IDC 15 23:11:47.7±6.8**, 30°.82S**×**178°.50W, h0^{km}, mb4.2**/2**,**

mbtmp4.2/2, Error ellipse: s-maj=285.3km s-min=55.0km az=156.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.66	268	P	P	23 19 46.2	-0.1
	2.0nm,0.5s,baz=106,slow=7.1,SNR=6.6						
	2.0nm,0.5s						
WRA	Warramunga Arr	43.69	273	P	P	23 19 54.3	-0.3
	1.7nm,0.4s,baz=111,slow=8.0,SNR=7.4						
	1.7nm,0.4s						
FINES	FINESS Array B	145.39	339	PKPbc	PKPbc	23 31 26.0	-0.8
	1.6nm,0.4s,baz=48,slow=4.1,SNR=12						

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*NEIC **15** 23:13:39.1±0.8, 30°.56S±0°.10×178°.2W±0°.2, h41^{km}±10^{km}, mb4.0/5, Error ellipse: s-maj=29.8km s-min=13.6km az=96.0*

*IDC **15** 23:13:40.1±3.9, 30°.54S×178°.12W, h56^{km}±29^{km}, mb4.1/4, mbtmp4.4/4, Error ellipse: s-maj=45.9km s-min=20.6km az=133.0*

ISC 15 23:13:38.5±0.9, 30°.66S±0°.08×178°.2W±0°.2, h46^{km}, n26, σ1^{s}.45/29, mb4.1/6, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.43	11	Pn	Pn	23 14 01.2	-0.8
RAO				Sn	Sn	23 14 18.1	-1.5
RAO	Raoul Island	1.43	11	P	Pn	23 14 01.4	-0.6
	439nm,0.3s,baz=312,slow=23,SNR=6.6						
RAO				S	Sn	23 14 18.2	-1.4
	2µm,0.3s,baz=208,slow=22,SNR=9.3						
URZ	Urewera	8.50	206	P	Pn	23 15 35.8	-3.1
	11nm,0.6s,baz=343,slow=14,SNR=1.7						
URZ				S	Sn	23 17 10.5	-2.9
	11nm,0.6s,baz=28,slow=20,SNR=1.5						
DZM	Mont Dzumac	16.17	298		P	23 17 25.2	0.0
STKA	Stephens Creek	34.22	257	P	P	23 20 21.4	+1.6
STKA				IAmb	IAmb	23 20 41.0	
	comp=Z,5.2nm,0.8s						
STKA	Stephens Creek	34.22	257	P	P	23 20 22.5	+2.6
	comp=Z,6.4nm,0.8s,baz=99,slow=11,SNR=5.7						
	comp=Z,6.4nm,0.8s						
BBOO	Buckleboo	38.70	255	P	P	23 20 58.6	+0.6
COEN	Coen	39.15	286	P	P	23 21 01.7	-0.2
COEN				IAmb	IAmb	23 21 20.4	
	comp=Z,1.5nm,0.7s						
AS31	Alice Springs	42.89	267	P	P	23 21 33.0	+0.3
AS31				IAmb	IAmb	23 21 52.3	
	comp=Z,1.8nm,1.1s						
ASAR	Alice Springs	42.89	267	P	P	23 21 33.5	+0.7
	comp=Z,2.5nm,0.7s,baz=107,slow=7.7,SNR=9.3						
	comp=Z,2.5nm,0.7s						
WR8	Warramunga Arr	43.76	273	P	P	23 21 40.1	+0.4
WRA	Warramunga Arr	43.91	273	P	P	23 21 41.8	+0.9
	comp=Z,2.8nm,0.4s,baz=111,slow=8.1,SNR=16						
	comp=Z,2.8nm,0.4s						
WB0	Warramunga Arr	43.93	273	P	P	23 21 41.4	+0.4
FITZ	Fitzroy Crossi	52.16	270	P	P	23 22 45.4	+0.8
MAW	Mawson	71.99	201	P	P	23 24 58.2	+1.3
	comp=Z,2.1nm,0.9s,baz=90,slow=8.1,SNR=1.5						
	comp=Z,2.1nm,0.9s						
SNAA	Sanae	77.90	179	P	P	23 25 34.4	+3.4
KURBB	Kurchatov Arra	121.12	314	PKP	PKPdf	23 32 24.1	-1.6
	comp=Z,0.6nm,0.6s,baz=105,slow=1.7,SNR=4.4						
FIA1	FINESS Array S	145.32	340	PKPbc	PKPbc	23 33 09.5	-0.8
FINES	FINESS Array B	145.32	340	PKPbc	PKPbc	23 33 09.4	-0.9
FINES	FINESS Array B	145.32	340	PKPbc	PKPbc	23 33 09.2	-1.1
	comp=Z,2.6nm,0.4s,baz=53,slow=4.1,SNR=22						
NB2	NORSAR Subarra	148.98	351	PKP	PKPbc	23 33 20.2	-0.5
	comp=Z,0.5nm,0.5s,baz=19,slow=4.3						
NOA	NORSAR Array B	148.98	351	PKPbc	PKPbc	23 33 20.5	-0.2
	comp=Z,1.1nm,0.7s,baz=17,slow=4.3,SNR=5.1						
HFS	Hagfors	149.46	348	PKPbc	PKPbc	23 33 21.4	-0.4
	comp=Z,1.5nm,0.7s,baz=66,slow=3.3,SNR=6.6						
AKASG	Malin Array Be	151.38	322	PKPbc	PKiKP	23 33 27.4	+0.2
	comp=Z,3.2nm,0.8s,baz=52,slow=3.2,SNR=13						
MMAI	Mount Meron Ar	151.40	284	PKPbc	PKiKP	23 33 28.4	+0.5
	comp=Z,1.1nm,0.4s,baz=90,slow=5.3,SNR=7.3						
BRTR	Keskin Array B	152.54	298	PKPbc	PKPbc	23 33 30.4	+0.5
	comp=Z,0.4nm,0.5s,baz=146,slow=4.7,SNR=4.8						

IDC 15 23:16:10.6±7.0, 30°.45S×178°.19W, h59^{km}±49^{km}, mb3.2/2, mbtmp3.5/2, Error ellipse: s-maj=98.4km s-min=42.7km az=133.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.21	11	P	Pn	23 16 32.8	+1.4
	300nm,0.4s,baz=270,slow=19,SNR=1.8						
RAO				S	Sn	23 16 46.6	-0.4
	442nm,0.3s,baz=48,slow=22,SNR=2.8						
ASAR	Alice Springs	42.94	267	P	P	23 24 03.9	-0.1
	0.5nm,0.9s,baz=114,slow=7.7,SNR=2.4						
	0.5nm,0.9s						
WRA	Warramunga Arr	43.94	272	P	P	23 24 12.1	0.0
	0.3nm,0.3s,baz=114,slow=7.9,SNR=2.7						
	0.3nm,0.3s						
FINES	FINESS Array B	145.13	340	PKPbc	PKPbc	23 35 38.8	-1.6
	0.4nm,0.4s,baz=48,slow=4.1,SNR=3.7						

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*CNRM **15** 23:19:28.3, 35°.28N×4°.65W, h108^{km}*

*SFS **15** 23:19:28.1, 35°.65N×4°.73W, h64^{km}, ML3.4/8, ML2.5/14, MLv2.1/14*

*MDD **15** 23:19:29.5±0.4, 35°.75N×4°.75W, h40^{km}, mb_Lg2.8/6, Error ellipse: s-maj=6.2km s-min=2.0km az=60.0*

*INMG **15** 23:19:29.8±1.1, 35°.82N×4°.73W, h75^{km}±5^{km}, Error ellipse: s-maj=3.3km s-min=2.7km az=109.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Alboran*

ISC 15 23:19:28.0±1.2, 35°.74N±0°.03×4°.76W±0°.04, h59^{km}, n47, σ1^{s}.64/59, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHEFC	Chefchaouen	0.79	217	P	Pn	23 19 46.0	+2.6
CHEFC	Chefchaouen	0.79	217	S	Sn	23 19 59.9	+5.2
EMIJ	Mijas	0.82	359	Pn	Pn	23 19 44.8	+1.0
EMIJ				Sn	Sn	23 19 57.3	+1.9
EMIJ	Mijas	0.82	359	Pg	Pn	23 19 44.8	+1.0
EMIJ				Sg	Sn	23 19 57.3	+1.9
EMIJ				*i* IVmb_Lg		23 19 58.5	
PALE	Palemas	0.85	128	P	Pn	23 19 45.4	+1.3
PALE	Palemas	0.85	128	S	Sn	23 19 58.2	+2.3
EMAL	Malaga-Limoner	1.05	14	Sn	Sn	23 20 01.8	+1.2
AKLM	AKL	1.43	149	P	Pn	23 19 48.8	-3.0
AKLM	AKL	1.43	149	S	Sn	23 20 03.4	-6.3
LCRM	LCR	2.05	182	P	Pn	23 19 58.1	-2.2
LCRM	LCR	2.05	182	S	Sn	23 20 20.9	-4.0
IFR	Ifrane	2.24	188	Pn	Pn	23 20 01.2	-1.7
IFR				Sn	Sn	23 20 25.2	-4.3
ECAB	El Cabril	2.39	347	Pn	Pn	23 20 05.5	+0.6
ECAB				Sn	Sn	23 20 32.8	-0.2
ECAB	El Cabril	2.39	347	Pg	Pn	23 20 05.4	+0.5
ECAB				*i* IVmb_Lg		23 20 27.4	
ECAB				Sg	Sn	23 20 31.4	-1.6
EADA	Adamuz	2.43	3	Pn	Pn	23 20 06.3	+0.9
EADA				Sn	Sn	23 20 34.4	+0.5
EADA	Adamuz	2.43	3	Pg	Pn	23 20 06.5	+1.1
EADA				Sg	Sn	23 20 31.8	-2.1
EADA				*i* IVmb_Lg		23 21 22.0	
EQES	Quesada	2.46	33	Pg	Pn	23 20 07.3	+1.4
EQES				Sg	Sn	23 20 33.9	-1.0
EQES				*i* IVmb_Lg		23 21 01.0	
EMIN	Mina Concepcio	2.54	323	Pn	Pn	23 20 07.6	+0.7
EMIN				Sn	Sn	23 20 35.6	-1.0
EMIN	Mina Concepcio	2.54	323	Pg	Pn	23 20 07.6	+0.7
EMIN				Sg	Sn	23 20 35.4	-1.3
EMIN				*i* IVmb_Lg		23 20 36.0	
ZHG	ZHG	2.77	215	P	Pn	23 20 08.9	-1.1
ZHG	ZHG	2.77	215	S	Sn	23 20 40.3	-2.0
EGRO	El Granado	2.83	310	Pn	Pn	23 20 11.5	+0.7
MD31	MD31	2.87	180	P	Pn	23 20 06.8	-4.6
MD31	MD31	2.87	180	S	Sn	23 20 36.7	-8.0
PVAQ	Vaqueiros	2.91	306	Pn	Pn	23 20 12.4	+0.6
PVAQ	Vaqueiros	2.91	306	*e*P	Pn	23 20 12.5	+0.7
PVAQ				*e*S	Sn	23 20 45.6	0.0
MDT	Midelt	2.92	178	P	Pn	23 20 07.4	-4.7
MDT	Midelt	2.92	178	S	Sn	23 20 38.5	-7.5
PBDV	Barranco-do-Ve	2.97	301	*e*P	Pn	23 20 13.4	+0.7
PBDV				*e*S	Sn	23 20 47.5	+0.4
PBAR	Barrancos	3.04	324	Pn	Pn	23 20 14.5	+0.8
PBAR				Sn	Sn	23 20 48.0	-0.9
PBAR	Barrancos	3.04	324	*e*P	Pn	23 20 14.7	+1.0
PBAR				*e*S	Sn	23 20 48.5	-0.3
TLOR	Lorca, Murcia	3.12	51	Sn	Sn	23 20 48.7	-2.1
PSIM	Granatula de C	3.18	14	Pg	Pn	23 20 15.7	+0.1
PSIM				Sg	Sn	23 20 50.2	-2.1
PCVE	Castro Verde	3.25	307	Pn	Pn	23 20 17.2	+0.8
PCVE	Castro Verde	3.25	307	*e*P	Pn	23 20 17.2	+0.8
PCVE				*e*S	Sn	23 20 53.7	-0.1
MESJ	Messejana	3.48	308	*e*P	Pn	23 20 20.6	+0.9
EBAD	Badajoz	3.51	330	Pn	Pn	23 20 20.9	+0.8
EBAD				Sn	Sn	23 20 59.5	-0.8
EBAD	Badajoz	3.51	330	*i* IVmb_Lg		23 20 19.6	
EBAD				Pg	Pn	23 20 20.9	+0.8
EBAD				Sg	Sn	23 20 59.1	-1.3
EVO	Evora	3.81	318	Sn	Sn	23 21 06.9	-0.9
EVO	Evora	3.81	318	*e*S	Sn	23 21 07.1	-0.7
PAB	San Pablo	3.81	5	Sg	Sn	23 21 05.0	-2.9
PESTR	Estremoz	3.85	325	Sn	Sn	23 21 07.3	-1.5
PESTR	Estremoz	3.85	325	*e*S	Sn	23 21 08.1	-0.8
PMRV	Marv??o	4.24	331	*e*P	Pn	23 20 31.1	+1.1
PMRV				*e*S	Sn	23 21 16.4	-1.8
PMTG	Montargil	4.32	321	*e*P	Pn	23 20 32.2	+1.0
PMTG				*e*S	Sn	23 21 19.5	-0.8
PARRA	Arraiolos	4.59	313	*e*P	Pn	23 20 28.1	-6.9
PARRA				*e*S	Sn	23 21 12.0	-15
PSARD	Sardoal	4.71	326	*e*P	Pn	23 20 37.4	+0.9
PSARD				*e*S	Sn	23 21 27.7	-2.0

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*IDC **15** 23:21:49.1±1.6, 31°.10S×178°.42W, h0^{km}, mb4.2/2, mbtmp4.2/3, ML3.3/1, Error ellipse: s-maj=54.9km s-min=26.4km az=132.0*

ISC 15 23:21:54.6±1.8, 30°.9S±0°.2×178°.5W±0°.4, h35^{km}, n10, σ0^{s}.66/10, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.69	17	Pn	Pn	23 22 21.3	-0.4
	44nm,0.3s,baz=246,slow=23,SNR=1.7						
RAO				Sn	Sn	23 22 42.5	+0.5
	196nm,0.3s,baz=109,slow=19,SNR=6.2						
URZ	Urewera	8.21	205	Pn	Pn	23 23 44.9	-6.3
	0.4nm,0.3s,baz=6.3,slow=15,SNR=1.5						
URZ				Sn	Sn	23 25 13.3	-10
	1.5nm,0.3s,baz=284,slow=22,SNR=9.7						
	10.0nm,1.0s						
ASAR	Alice Springs	42.67	268	P	P	23 29 48.3	+0.1
	1.9nm,0.6s,baz=104,slow=7.2,SNR=17						
	1.9nm,0.6s						
WRA	Warramunga Arr	43.70	273	P	P	23 29 56.5	-0.1
	3.5nm,0.7s,baz=114,slow=8.2,SNR=14						
	3.5nm,0.7s						
FINES	FINESS Array B	145.44	339	PKPbc	PKPbc	23 41 26.9	-1.3
	2.9nm,0.6s,baz=46,slow=4.4,SNR=22						
NB2	NORSAR Subarra	149.15	351	PKP	PKiKP	23 41 40.5	+0.6
	comp=Z,0.2nm,0.4s,baz=17,slow=2.6						
NOA	NORSAR Array B	149.15	351	PKPbc	PKiKP	23 41 39.9	0.0
	comp=Z,0.6nm,0.7s,baz=17,slow=4.2,SNR=3.8						
HFS	Hagfors	149.62	348	PKPbc	PKiKP	23 41 41.0	+0.2
	comp=Z,1.9nm,0.8s,baz=85,slow=3.7,SNR=5.4						
AKASG	Malin Array Be	151.42	322	PKPbc	PKiKP	23 41 45.1	+0.3
	comp=Z,0.2nm,0.4s,baz=55,slow=2.9,SNR=4.8						
BRTR	Keskin Array B	152.45	298	PKPbc	PKiKP	23 41 48.1	+0.6
	comp=Z,0.4nm,0.6s,baz=150,slow=3.3,SNR=4.4						

IDC 15 23:22:44.5±6.4, 30°.48S×177°.92W, h0^{km}, mb3.8/2, mbtmp3.8/2, Error ellipse: s-maj=254.4km s-min=61.6km az=155.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.23	0	Sn	Sn	23 23 28.1	+1.9
	136nm,0.3s,baz=139,slow=21,SNR=1.8						
ASAR	Alice Springs	43.17	267	P	P	23 30 47.1	-0.2
	0.5nm,0.5s,baz=110,slow=7.6,SNR=1.9						
	0.5nm,0.5s						
WRA	Warramunga Arr	44.17	272	P	P	23 30 55.3	0.0
	0.6nm,0.3s,baz=113,slow=7.9,SNR=6.6						
	0.6nm,0.3s						
FINES	FINESS Array B	145.25	340	PKPbc	PKPbc	23 42 22.1	-1.0
	1.1nm,0.6s,baz=62,slow=4.6,SNR=4.4						

IDC 15 23:23:22.5±6.6, 31°.08S×177°.85W, h0^{km}, mb3.7/2, mbtmp3.7/2, Error ellipse: s-maj=273.0km s-min=62.4km az=156.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.27	209	Sn	Sn	23 26 55.9	-1.9
	1.5nm,0.3s,baz=86,slow=20,SNR=2.5						
ASAR	Alice Springs	43.20	268	P	P	23 31 25.5	0.0
	0.4nm,0.5s,baz=112,slow=8.0,SNR=1.7						
	0.4nm,0.5s						
WRA	Warramunga Arr	44.25	273	P	P	23 31 33.8	-0.2
	0.6nm,0.4s,baz=114,slow=7.9,SNR=2.5						
	0.6nm,0.4s						
FINES	FINESS Array B	145.83	340	PKPbc	PKPdf	23 43 02.0	-0.4
	0.7nm,0.4s,baz=48,slow=3.8,SNR=4.9						

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*IDC **15** 23:23:44.9±3.9, 30°.54S×178°.08W, h52^{km}±41^{km}, mb3.6/3, mbtmp3.9/3, Error ellipse: s-maj=45.0km s-min=31.1km az=94.0*

ISC 15 23:23:44.1±1.5, 30°.6S±0°.1×178°.1W±0°.3, h46^{km}, n6, σ0^{s}.79/6, mb3.8/3, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.34	6	P	Pn	23 24 07.0	+0.6
	324nm,0.2s,baz=131,slow=19,SNR=1.3						
RAO				S	Sn	23 24 22.6	-0.4
	1µm,0.3s,baz=69,slow=23,SNR=5.6						
URZ	Urewera	8.62	206	S	Sn	23 27 13.6	-8.3
	7.5nm,0.4s,baz=35,slow=19,SNR=2.1						
ASAR	Alice Springs	43.02	267	P	P	23 31 40.1	+0.7
	0.8nm,0.5s,baz=112,slow=7.8,SNR=4.5						
	0.8nm,0.5s						
WRA	Warramunga Arr	44.03	272	P	P	23 31 47.0	-0.5
	0.9nm,0.3s,baz=111,slow=8.1,SNR=6.6						
	0.9nm,0.3s						
VNDA	Vanda	47.90	186	P	P	23 32 17.2	0.0
	0.6nm,0.6s,baz=22,slow=5.4,SNR=3.5						
	0.6nm,0.6s						
FINES	FINESS Array B	145.30	340	PKPbc	PKPbc	23 43 15.1	-0.7
	0.7nm,0.4s,baz=62,slow=3.8,SNR=5.9						

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*UCR **15** 23:24:08.3±1.2, 10°.56N×86°.05W, h0^{km}±5^{km}, MW4.1*

*CATAC **15** 23:24:09.5±0.6, 11°N±2°×8°6W±°, h19^{km}±5^{km}, M3.8/21, MLv3.8/21, Error ellipse: s-maj=5.9km s-min=3.4km az=59.7, confirmed*

ISC 15 23:24:08.6±1.4, 10°.52N±0°.03×86°.08W±0°.04, h14^{km}±10^{km}, n92, σ0^{s}.54/105, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALIBA	Liberia Airpor	0.53	82	*e*P	Pb	23 24 20.5	+0.7
ALIBA				*e*S	Sn	23 24 30.2	-0.4
ELI1	Hacienda Flor	0.54	77	*e*P	Pb	23 24 20.8	+1.0
SACU	Santa Cruz	0.55	117	*e*P	Pb	23 24 20.1	0.0
SACU				*e*S	Sb	23 24 28.7	+0.8
ERIA	Liberia	0.64	80	*e*P	Pb	23 24 22.3	+0.6
LAPC	Finca la Perla	0.69	69	*e*P	Pg	23 24 22.1	+0.1
LCRUZ	La Cruz	0.71	39	*e*P	Pb	23 24 23.1	+0.2
PLVR	Palo Verde	0.74	103	*e*P	Pg	23 24 23.3	+0.2
GPS3	Bodega del ICE	0.74	72	*e*P	Pn	23 24 25.4	+0.6
PG27	Guanacaste Pro	0.75	65	*e*P	Pb	23 24 23.4	-0.2
VRLE	La Escondida,	0.76	69	*e*P	Pg	23 24 23.4	0.0
VORI	VORI	0.78	68	*e*P	Pg	23 24 23.9	0.0
BAGA	Bagaces	0.81	89	*e*P	Pb	23 24 24.6	+0.1
BUAI	Buenos Aires	0.82	64	*e*P	Pb	23 24 24.8	+0.1
PEJA	Penjamo Buenos	0.84	64	*e*P	Pb	23 24 25.2	+0.1
CARN	Rivas	0.86	40	*e*P	Pb	23 24 25.7	+0.3
CARN	Rivas	0.86	40	P	Pb	23 24 25.7	+0.3
CARN				S	Sn	23 24 38.9	+0.2
INDI	Punta indio, G	0.86	139	P	Pb	23 24 25.9	+0.5
INDI	Punta indio, G	0.86	139	S	Sn	23 24 38.5	-0.3
COLC	Colonia	0.88	80	*e*P	Pg	23 24 25.6	-0.1
MESS	Mesas	0.90	76	*e*P	Pg	23 24 26.1	-0.1
HORNC	Hornillas	0.91	78	*e*P	Pg	23 24 26.0	-0.3
CUI	Cuipilapa	0.91	81	*e*P	Pg	23 24 26.1	-0.2
ARIN	Rivas	0.96	15	P	Pg	23 24 27.2	0.0
ARIN	Rivas	0.96	15	S	Sn	23 24 40.7	-0.4
NYURE	Nandayure	0.97	122	*e*P	Pb	23 24 26.7	-0.5
CNAS	Canas	0.98	95	*e*P	Pb	23 24 27.4	+0.1
INVE	Universidad In	1.00	92	*e*P	Pb	23 24 27.6	-0.2
MOTZ	Rio Naranjo	1.01	80	*e*P	Pb	23 24 27.8	-0.1
TIMP	Tierras Morena	1.05	86	*e*P	Pb	23 24 28.4	-0.2
JAPN	Al SSO del Vol	1.08	22	*e*P	Pn	23 24 29.8	+0.6
JAPN	Al SSO del Vol	1.08	22	P	Pn	23 24 29.9	+0.6
JAPN				S	Sg	23 24 43.6	+0.1
TILA	Tilaran	1.10	93	*e*P	Pb	23 24 29.0	-0.4
TENO	El Achiote	1.10	80	*e*P	Pb	23 24 28.5	-1.0
MORN	Al O del Volca	1.11	23	P	Pb	23 24 29.7	+0.1
MORN				S	Sn	23 24 44.6	-0.2
UPAL	Upala	1.12	70	*e*P	Pb	23 24 29.8	0.0
JUNT	Juntas	1.13	102	*e*P	Pb	23 24 29.1	-0.9
JTS	Las Juntas de	1.14	101	*e*P	Pb	23 24 29.1	-1.0
QUEB	Quebradon, Cot	1.17	85	*e*P	Pb	23 24 30.5	-0.2
NADN	Granada	1.22	2	*e*P	Pn	23 24 30.8	-0.5
NADN	Granada	1.22	2	P	Pn	23 24 31.3	0.0
NADN				S	Sn	23 24 47.8	+0.1
MTEVE	Monteverde	1.25	99	*e*P	Pn	23 24 31.7	-0.2
TABAC	Tabacon	1.29	91	*e*P	Pn	23 24 32.7	+0.3
ARE1	Arenal 1	1.34	92	*e*P	Pb	23 24 33.5	-0.1
VARE2	V. Arenal	1.34	92	*e*P	Pb	23 24 33.8	+0.1
CBL1	Cabuya	1.34	133	*e*P	Pg	23 24 35.0	+0.4
CEDE	Laguna Cedeo	1.36	91	*e*P	Pn	23 24 33.5	+0.2
VACR	Volcan Arenal	1.38	92	*e*P	Pb	23 24 34.4	+0.1
NANN	Nandasmo	1.41	358	S	Sb	23 24 52.5	-0.1
NANN	Nandasmo	1.41	358	P	Pn	23 24 34.3	+0.4
SABN	Sabanita	1.43	357	P	Pn	23 24 33.9	-0.3
LCHIL	Los Chiles	1.44	69	*e*P	Pn	23 24 33.9	-0.4
SOCE	Pocosol	1.45	95	*e*P	Pn	23 24 34.9	+0.4
SOCE	Pocosol	1.45	95	P	Pn	23 24 34.8	+0.4
SOCE	Pocosol	1.45	95	S	Sb	23 24 53.9	+0.2
MASN	Masaya	1.46	357	*e*P	Pg	23 24 36.5	-0.3
MASN	Masaya	1.46	357	P	Pn	23 24 35.0	+0.4
MASN				S	Sb	23 24 54.0	-0.1
MAS3	Al N del Volca	1.50	357	P	Pn	23 24 35.3	+0.2
MAS3				S	Sn	23 24 54.2	-0.3
UNAN	Cigeo UNAN	1.59	353	P	Pb	23 24 37.2	-0.7
UNAN				S	Sb	23 24 57.5	-0.3
ABCN	Banco Central	1.61	352	S	Sn	23 24 57.3	+0.2
ABCN	Banco Central	1.61	352	P	Pn	23 24 36.8	+0.1
TISN	Laguna Tiscapa	1.62	354	P	Pn	23 24 37.3	+0.5
MGAN	Managua	1.62	354	P	Pn	23 24 37.1	+0.2
MGAN	Managua	1.62	354	S	Sn	23 24 58.0	+0.4
WILN	Americas 2	1.63	356	P	Pn	23 24 37.2	+0.2
WILN				S	Sn	23 24 58.3	+0.5
SRA1	San Ramn	1.64	105	*e*P	Pn	23 24 37.9	+0.8
RAMO	San Ramon	1.65	105	*e*P	Pn	23 24 37.9	+0.6
COVE	Coope Vega, Sa	1.67	83	P	Pn	23 24 37.8	+0.4
APQ2	Apoyeque	1.68	352	P	Pn	23 24 37.6	-0.1
ACON	Acoyapa	1.69	32	*e*P	Pn	23 24 37.7	-0.1
ACON	Acoyapa	1.69	32	P	Pn	23 24 37.5	-0.2
ACON	Acoyapa	1.69	32	S	Sb	23 25 00.7	0.0
ZARE	Zarcero	1.70	101	*e*P	Pb	23 24 40.4	+0.6
COPN	Copaltepe	1.72	343	*e*P	Pn	23 24 38.4	+0.2
COPN	Copaltepe	1.72	343	P	Pn	23 24 38.2	0.0
APQ3	Volcan Apoyequ	1.76	351	P	Pn	23 24 39.0	+0.2
APQ3				S	Sn	23 25 01.1	0.0
POAS	San Pedro de P	1.86	104	*e*P	Pn	23 24 37.8	-2.5
MOMN	Momotombo	1.93	347	P	Pn	23 24 41.4	+0.3
MOMN				S	Sn	23 25 04.7	-0.5
MOM2	El Cardon	1.95	348	P	Pn	23 24 42.2	+0.9
MOM2				S	Sn	23 25 05.3	-0.2
ACOS	Acosta	2.02	111	*e*P	Pb	23 24 44.3	-1.0
PAR1A	Puntarenas Pro	2.02	117	*e*P	Pb	23 24 45.1	-0.1
CNGN	Cerro Negro	2.06	343	*e*P	Pn	23 24 44.1	+1.2
LCR2	La Lucha 2	2.19	111	*e*P	Pb	23 24 47.1	-1.0
VICA	Volcano Irazu	2.27	103	*e*P	Pb	23 24 49.1	-0.5
PIEC	Cerro El Cedra	2.27	113	*e*P	Pb	23 24 48.1	-1.5
PILE	Guapiles	2.28	97	*e*P	Pb	23 24 48.9	-0.6
VTLA	Turrialba Volc	2.33	103	*e*P	Pb	23 24 49.9	-0.7
CVTQ	Turrialba Volc	2.34	102	*e*P	Pb	23 24 49.5	-1.3
VTR0	Volcan Turrial	2.34	102	*e*P	Pb	23 24 51.2	+0.4
VTCV	VTCV, Calle Va	2.38	103	*e*P	Pb	23 24 51.2	-0.2
ESPN	Las Esperanzas	2.42	46	*e*P	Pn	23 24 47.7	0.0
OCHAL	Ojochal	2.79	120	P	Pn	23 24 53.6	+0.7
CDITO	Canoas	3.71	121	P	Pn	23 25 06.0	+0.4

GCG 15 23:27:53.7±0.5, 13°.07N×89°.55W, h56^{km}±7^{km}, MD3.8, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	0.59	9	*i* P	Pn	23 28 06.4	-0.3
JAYA				*i* S	Sn	23 28 16.2	+0.2
NUBE	Las Nubes	0.86	345	*i* P	Pn	23 28 10.5	+0.5
NUBE				*i* S	Sn	23 28 23.2	+1.2
MTO3	Montecristo	1.34	8	*i* P	Pn	23 28 16.7	+0.3
MTO3				*i* S	Sn	23 28 35.2	+1.9

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*NEIC **15** 23:30:04.0±1.6, 30°.63S±0°.08×178°.0W±0°.2, h35^{km}±1^{km}, mb4.5/8, Error ellipse: s-maj=30.1km s-min=12.9km az=90.0*

*IDC **15** 23:30:05.5±3.2, 30°.55S×177°.98W, h56^{km}±31^{km}, mb3.8/5, mbtmp4.1/5, Error ellipse: s-maj=31.3km s-min=26.5km az=115.0*

ISC 15 23:30:04.2±1.0, 30°.70S±0°.08×178°.1W±0°.2, h46^{km}, n17, σ1^{s}.81/18, mb4.3/8, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.44	5	P	Pn	23 30 26.6	-1.2
	380nm,0.4s,baz=84,slow=14,SNR=6.6						
RAO				S	Sn	23 30 43.8	-1.8
	541nm,0.3s,baz=122,slow=21,SNR=5.3						
URZ	Urewera	8.54	207	P	Pn	23 32 00.5	-4.7
	5.3nm,0.8s,baz=56,slow=13,SNR=1.8						
URZ				S	Sn	23 33 34.8	-5.3
	5.2nm,0.3s,baz=160,slow=24,SNR=6.8						
CTAO	Charters Tower	33.80	280	P	P	23 36 42.8	+0.8
CTAO				IAmb	IAmb	23 36 45.0	
	comp=Z,10nm,0.9s						
STKA	Stephens Creek	34.37	257	P	P	23 36 48.2	+1.3
STKA	Stephens Creek	34.37	257	P	P	23 36 49.0	+2.1
	comp=Z,5.4nm,0.7s,baz=80,slow=11,SNR=4.6						
	comp=Z,5.4nm,0.7s						
BBOO	Buckleboo	38.85	255	P	P	23 37 24.4	-0.6
BBOO				IAmb	IAmb	23 37 51.1	
	comp=Z,16nm,1.1s						
ASAR	Alice Springs	43.05	267	P	P	23 37 59.9	+0.2
	comp=Z,0.9nm,0.7s,baz=102,slow=6.9,SNR=8.6						
	comp=Z,0.9nm,0.7s						
WR8	Warramunga Arr	43.92	273	P	P	23 38 06.2	-0.6
WR8				IAmb	IAmb	23 38 13.1	
	comp=Z,3.6nm,1.1s						
WRA	Warramunga Arr	44.07	272	P	P	23 38 07.8	-0.1
WRA	Warramunga Arr	44.07	272	P	P	23 38 08.0	+0.1
	comp=Z,1.5nm,0.4s,baz=111,slow=8.0,SNR=14						
	comp=Z,1.5nm,0.4s						
FORT	Forrest	45.93	255	P	P	23 38 23.4	+0.9
FITZ	Fitzroy Crossi	52.32	270	P	P	23 39 12.2	+0.7
QSPA	South Pole Qui	59.42	180	P	P	23 40 03.6	+1.8
QSPA				IAmb	IAmb	23 40 10.3	
	comp=Z,5.1nm,1.0s						
QSPA	South Pole Qui	59.42	180	P	P	23 40 03.6	+1.8
	comp=Z,1.7nm,0.7s,baz=90,slow=0.3,SNR=1.9						
	comp=Z,1.7nm,0.7s						
SNAA	Sanae	77.86	178	P	P	23 41 56.8	+0.2
	comp=Z,0.8nm,0.8s,baz=192,slow=9.3,SNR=2.1						
	comp=Z,0.8nm,0.8s						
FINES	FINESS Array B	145.41	340	PKPbc	PKPbc	23 49 35.4	-1.0
	comp=Z,1.6nm,0.5s,baz=52,slow=4.4,SNR=25						
HFS	Hagfors	149.52	348	PKPbc	PKPbc	23 49 47.0	-0.7
	comp=Z,1.1nm,0.7s,baz=355,slow=1.7,SNR=2.4						

DJA 15 23:31:12.3±1.1, 4°N±9°×12°7E±°, h70^{km}±5^{km}, M4.2/7, mb4.6/2, MLv4.0/7, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.18	243	P	Pn	23 31 32.7	-0.5
SGSI				S	Sn	23 31 48.6	-0.1
MRSI	Marisa	5.95	231	P	Pn	23 32 37.7	-0.1
	0.7nm27nm,1.1s						
LUWI	Luwuk	6.47	216	P	Pn	23 32 46.4	+1.4

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*ASRS **15** 23:31:19.0±0.5, 53°.80N×88°.17E, h0^{km}, M3.1, The* *earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

NNC 15 23:31:23.7±2.9, 53°.69N×88°.10E, h0km, mb3.5, mpv3.2, 6C-5D, Error ellipse: s-maj=22.2km s-min=14.1km az=59.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.96	279	⇓P	Pn	23 31 57.0	-1.2
	1.3nm,0.3s						
ZAA0				⇑S	Sb	23 32 25.2	-0.1
	4.8nm,0.6s						
KURK	Kurchatov	6.54	247	⇑Pn	Pn	23 33 02.2	+1.2
	4.1nm,1.4s						
KURK				⇓Sn	Sn	23 34 16.6	+0.3
	0.9nm,0.8s						
KURK				⇑Lg	Lg	23 34 49.0	
	4.2nm,1.0s						
KURBB	Kurchatov Arra	6.64	246	⇓Pn	Pn	23 33 02.8	+0.4
	2.4nm,0.3s						
KURBB				⇓Sn	Sn	23 34 18.2	-0.4
	8.4nm,0.7s						
KURBB				⇓Lg	Lg	23 34 56.4	
	11nm,0.8s						
MK31	Makanchi Array	7.84	211	⇑Pn	Pn	23 33 20.5	+1.6
	0.7nm,0.6s,baz=30,slow=13,SNR=12						
MK31				⇑Sn	Sn	23 34 50.5	+2.3
	1.5nm,0.7s						
MK31				⇑Lg	Lg	23 35 30.6	
	2.4nm,0.8s						

NOU 15 23:34:08.4, 16°.53S×166°.81E, h23km, MLv4.4/10, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLAKA	Lakatoro	0.72	54	P	Pn	23 34 23.1	-0.1
VLAKA	Lakatoro	0.72	54	S	Sn	23 34 33.1	-0.5
SANVU	Saraoutou	1.14	19	P	Pb	23 34 29.3	-0.2
SANVU	Saraoutou	1.14	19	S	Sn	23 34 43.9	0.0
YATNC	Mamie plateau,	5.50	179	P	Pn	23 35 27.7	-1.3
DZM	Mont Dzumac	5.52	184	P	Pn	23 35 29.4	0.0
OUENC	Ouen Island, N	5.86	180	P	Pn	23 35 35.0	+1.1

TRN 15 23:34:26.8, 15°.34N×61°.30W, h14km, MD3.5, Dominica., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRTD	Roseau, Domini	0.09	245	*e*P	Pg	23 34 31.4	+1.7
DRTD				*e*S	Sg	23 34 33.5	+1.7
MDN	Morne-Daniel	0.09	260	*e*P	Pg	23 34 31.2	+1.4
MDN				*e*S	Sg	23 34 32.9	+1.1
DSLB	Salisbury	0.16	311	*e*P	Pb	23 34 32.5	+0.9
DSLB				*e*S	Sb	23 34 34.9	+0.3
DWS	Wesley	0.23	357	*e*P	Pb	23 34 34.3	+1.5
DWS				*e*S	Sb	23 34 37.8	+1.0
SVN	Savane Anatole	0.51	166	*e*P	Pn	23 34 39.5	-0.1
SVN				*e*S	Sn	23 34 47.5	-0.7
TBG	Guadaloupe-3	0.61	327	*e*P	Pn	23 34 41.0	-0.1
ILAM	Ilet Lapin Mar	0.69	144	*e*P	Pn	23 34 42.2	0.0
ILAM				*e*S	Sn	23 34 52.1	-0.6
BIM	Bigot	0.84	165	*e*P	Pn	23 34 45.2	+0.9
BIM				*e*S	Sn	23 34 57.3	+0.8
SLBI	Saint Lucia, B	1.34	166	*e*P	Pg	23 34 53.5	+0.9
SLBI				*e*S	Sg	23 35 11.0	+1.0
SLAC	Saint Lucia, A	1.48	165	*e*P	Pg	23 34 55.7	+0.4
SLAC				*e*S	Sg	23 35 16.2	+1.7
MLYT	Lee's Yard	1.62	328	*e*P	Pg	23 34 57.5	-0.5
MLYT				*e*S	Sg	23 35 19.5	+0.4
MBFL	Flemmings, Mon	1.66	328	*e*P	Pb	23 34 57.6	+0.5
MBFL				*e*S	Sg	23 35 19.7	-0.4
ANBD	Bethesda, Anti	1.76	345	*e*P	Pg	23 35 00.1	-0.5
ANBD				*e*S	Sg	23 35 22.5	-1.0

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*NEIC **15** 23:36:01.7±1.1, 30°.69S±0°.08×178°.1W±0°.2, h35km±2km, mb4.4/7, Error ellipse: s-maj=34.1km s-min=13.5km az=95.0*

*IDC **15** 23:36:03.7±6.7, 30°.62S×178°.00W, h54km±47km, mb4.0/3, mbtmp4.2/3, Error ellipse: s-maj=76.6km s-min=29.6km az=129.0*

ISC 15 23:36:01.5±1.0, 30°.78S±0°.08×178°.1W±0°.2, h46km, n16, σ1s.93/19, mb4.3/8, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.54	7	Pn	Pn	23 36 25.3	-1.2
RAO				Sn	Sn	23 36 43.1	-2.2
RAO	Raoul Island	1.54	7	P	Pn	23 36 26.0	-0.4
	209nm,0.3s,baz=122,slow=14,SNR=3.8						
RAO				S	Sn	23 36 43.5	-1.7
	292nm,0.3s,baz=82,slow=23,SNR=4.1						
URZ	Urewera	8.43	206	P	Pn	23 37 58.6	-2.3
	2.5nm,0.3s,baz=8.5,slow=6.5,SNR=6.1						
URZ				S	Sn	23 39 30.7	-4.0
	5.1nm,0.3s,baz=141,slow=23,SNR=8.2						
STKA	Stephens Creek	34.28	258	P	P	23 42 43.8	+0.4
STKA	Stephens Creek	34.28	258	P	P	23 42 47.0	+3.6
	6.3nm,0.8s,baz=100,slow=11,SNR=12						
	6.3nm,0.8s						
BBOO	Buckleboo	38.75	255	P	P	23 43 21.6	0.0
BBOO				IAmb	IAmb	23 43 43.5	
	comp=Z,40nm,1.4s						
AS31	Alice Springs	42.97	267	P	P	23 43 57.4	+1.0
AS31				IAmb	IAmb	23 44 07.7	
	comp=Z,2.7nm,1.3s						
ASAR	Alice Springs	42.97	267	P	P	23 43 57.4	+1.0
ASAR	Alice Springs	42.97	267	P	P	23 43 58.2	+1.8
	comp=Z,1.0nm,0.6s,baz=106,slow=7.0,SNR=9.5						
	comp=Z,1.0nm,0.6s						
WR8	Warramunga Arr	43.85	273	P	P	23 44 04.9	+1.4
WR8				IAmb	IAmb	23 44 08.6	
	comp=Z,3.4nm,0.8s						
WRA	Warramunga Arr	44.00	273	P	P	23 44 05.0	+0.3
WRA	Warramunga Arr	44.00	273	P	P	23 44 06.4	+1.7
	comp=Z,1.4nm,0.3s,baz=114,slow=7.5,SNR=22						
	comp=Z,1.4nm,0.3s						
QSPA	South Pole Qui	59.33	180	P	P	23 46 00.8	+2.2
QSPA				IAmb	IAmb	23 46 07.6	
	comp=Z,5.0nm,0.8s						
SNAA	Sanae	77.78	178	P	P	23 47 54.4	+1.0
SNAA				IAmb	IAmb	23 48 02.0	
	comp=Z,3.9nm,1.2s						
FIA1	FINESS Array S	145.46	340	PKPbc	PKPab	23 55 34.1	0.0
FINES	FINESS Array B	145.46	340	PKPbc	PKPab	23 55 34.0	-0.1
	comp=Z,2.1nm,0.6s,baz=66,slow=4.3,SNR=21						

IDC 15 23:38:34.9±7.2, 30°.74S×178°.13W, h45km±55km, mb3.4/2, mbtmp3.6/2, Error ellipse: s-maj=81.1km s-min=35.3km az=128.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.50	7	P	Pn	23 38 59.2	-0.1
	110nm,0.2s,baz=180,slow=20,SNR=1.6						
RAO				S	Sn	23 39 17.6	0.0
	213nm,0.3s,baz=54,slow=23,SNR=2.5						
URZ	Urewera	8.46	206	P	Pn	23 40 31.1	-3.8
	5.0nm,0.7s,baz=45,slow=1.4,SNR=1.2						
URZ				S	Sn	23 42 03.3	-5.7
	4.5nm,0.5s,baz=163,slow=21,SNR=6.0						
ASAR	Alice Springs	42.98	267	P	P	23 46 29.9	-0.1
	0.5nm,0.7s,baz=107,slow=7.2,SNR=4.3						
	0.5nm,0.7s						
WRA	Warramunga Arr	44.00	273	P	P	23 46 37.9	-0.3
	0.5nm,0.4s,baz=112,slow=8.1,SNR=5.3						
	0.5nm,0.4s						
FINES	FINESS Array B	145.43	340	PKPbc	PKPdf	23 58 06.4	-0.7
	0.8nm,0.4s,baz=49,slow=4.2,SNR=5.9						

IDC 15 23:44:54.3±8.7, 30°.95S×177°.51W, h0km, mb3.2/2, mbtmp3.2/2, Error ellipse: s-maj=379.2km s-min=61.4km az=156.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.54	210	Sn	Sn	23 48 34.3	-1.8
	0.1nm,0.3s,baz=240,slow=20,SNR=1.4						
ASAR	Alice Springs	43.50	267	P	P	23 53 00.6	+0.8
	0.1nm,0.5s,baz=110,slow=7.6,SNR=1.4						
	0.1nm,0.5s						
WRA	Warramunga Arr	44.54	272	P	P	23 53 07.0	-1.1
	0.3nm,0.7s,baz=114,slow=7.5,SNR=2.0						
	0.3nm,0.7s						
FINES	FINESS Array B	145.80	340	PKPbc	PKPdf	00 04 33.9	-0.3
	2.4nm,1.0s,baz=37,slow=3.5,SNR=5.9						

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*NEIC **15** 23:58:50.5±1.5, 30°.72S±0°.09×177°.9W±0°.2, h41km±6km, mb4.4/13, Error ellipse: s-maj=23.8km s-min=10.6km az=68.0*

*IDC **15** 23:58:52.7±2.8, 30°.56S×178°.03W, h64km±23km, mb4.0/4, mbtmp4.2/4, Error ellipse: s-maj=34.6km s-min=24.5km az=141.0*

ISC 15 23:58:50.3±0.9, 30°.66S±0°.08×177°.9W±0°.2, h46km, n29, σ0s.99/30, mb4.5/10, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.41	358		Pn	23 59 14.8	+1.2
RAO				Sn	Sn	23 59 31.4	+0.5
RAO	Raoul Island	1.41	358	P	Pn	23 59 14.7	+1.2
	464nm,0.3s,baz=124,slow=18,SNR=8.9						
RAO				S	Sn	23 59 28.9	-2.0
	2µm,0.3s,baz=47,slow=21,SNR=16						
URZ	Urewera	8.64	207	P	Pn	00 00 46.0	-6.6
	5.0nm,0.7s,baz=2.0,slow=5.5,SNR=8.4						
DZM	Mont Dzumac	16.45	298		P	00 02 41.4	+1.2
ARMA	Armidale	26.25	263	P	P	00 04 22.3	+1.0
ARMA				IAmb	IAmb	00 04 32.9	
	comp=Z,23nm,1.5s						
CTAO	Charters Tower	33.96	280	P	P	00 05 30.3	+0.8
CTAO				IAmb	IAmb	00 05 35.5	
	comp=Z,9.7nm,1.1s						
STKA	Stephens Creek	34.54	257	P	P	00 05 34.9	+0.5
STKA	Stephens Creek	34.54	257	P	P	00 05 34.7	+0.3
	comp=Z,8.2nm,0.8s,baz=93,slow=9.2,SNR=14						
	comp=Z,8.2nm,0.8s						
BBOO	Buckleboo	39.02	254	P	P	00 06 11.7	-0.7
COEN	Coen	39.46	286	P	P	00 06 16.7	+0.4
COEN				IAmb	IAmb	00 06 17.6	
	comp=Z,14nm,1.1s						
AS31	Alice Springs	43.22	267	P	P	00 06 46.3	-0.9
ASAR	Alice Springs	43.22	267	P	P	00 06 45.5	-1.7
ASAR	Alice Springs	43.22	267	P	P	00 06 46.0	-1.1
	comp=Z,1.7nm,0.7s,baz=104,slow=7.0,SNR=20						
	comp=Z,1.7nm,0.7s						
WR8	Warramunga Arr	44.09	272	P	P	00 06 53.4	-0.7
WR8				IAmb	IAmb	00 06 57.6	
	comp=Z,2.3nm,0.8s						
WRA	Warramunga Arr	44.23	272	P	P	00 06 54.6	-0.6
WRA	Warramunga Arr	44.23	272	P	P	00 06 54.4	-0.9
	comp=Z,1.3nm,0.3s,baz=111,slow=8.0,SNR=28						
	comp=Z,1.3nm,0.3s						
FORT	Forrest	46.10	255	P	P	00 07 08.4	-1.5
FITZ	Fitzroy Crossi	52.48	270	P	P	00 07 58.5	-0.3
FITZ				IAmb	IAmb	00 08 26.9	
	comp=Z,2.0nm,1.4s						
QSPA	South Pole Qui	59.45	180	P	P	00 08 49.1	+0.9
QSPA				IAmb	IAmb	00 08 56.1	
	comp=Z,6.1nm,0.9s						
QSPA	South Pole Qui	59.45	180	P	P	00 08 49.2	+1.1
	comp=Z,2.0nm,0.9s,baz=41,slow=1.3,SNR=5.7						
	comp=Z,2.0nm,0.9s						
SNAA	Sanae	77.89	178	P	P	00 10 43.1	+0.3
SNAA				IAmb	IAmb	00 11 07.9	
	comp=Z,6.0nm,1.5s						
KURBB	Kurchatov Arra	121.36	314	PKP	PKPdf	00 17 36.7	-1.3
	comp=Z,0.5nm,0.7s,baz=98,slow=1.7,SNR=3.1						
FIA1	FINESS Array S	145.43	340	PKPdf	PKPdf	00 18 21.8	-0.6
FINES	FINESS Array B	145.44	340	PKPdf	PKPdf	00 18 21.9	-0.5
FINES	FINESS Array B	145.44	340	PKPbc	PKPdf	00 18 21.8	-0.6
	comp=Z,3.9nm,0.7s,baz=57,slow=4.1,SNR=30						
NOA	NORSAR Array B	149.03	351	PKPbc	PKPbc	00 18 32.5	-0.2
	comp=Z,0.7nm,0.7s,baz=16,slow=4.2,SNR=4.9						
HFS	Hagfors	149.53	349	PKPbc	PKPbc	00 18 33.6	-0.2
	comp=Z,0.9nm,0.7s,baz=22,slow=8.1,SNR=2.5						
AKASG	Malin Array Be	151.58	323	PKPbc	PKPbc	00 18 38.1	-0.9
	comp=Z,0.6nm,0.4s,baz=48,slow=3.8,SNR=2.3						
MMAI	Mount Meron Ar	151.71	284	PKPbc	PKPbc	00 18 39.7	-0.3
	comp=Z,0.2nm,0.4s,baz=86,slow=7.4,SNR=3.6						

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*NOU **15** 23:59:45.5, 30°.78S×175°.45W, h8km, mb4.9/37, Kermadec Islands Region*

*MOS **16** 00:00:04.8±1.3, 30°.81S×178°.10W, h34km, mb5.2/9, Error ellipse: s-maj=13.7km s-min=11.2km az=83.6*

*NEIC **16** 00:00:07.0±1.2, 30°.64S±0°.08×178°.0W±0°.1, h39km±4km, mb5.0/32, Error ellipse: s-maj=16.8km s-min=10.9km az=109.0*

*IDC **16** 00:00:08.0±1.5, 30°.54S×178°.07W, h56km±12km, mb4.1/13, mbtmp4.4/14, Error ellipse: s-maj=17.8km s-min=11.6km az=100.0*

ISC 16 00:00:05.5±0.3, 30°.80S±0°.04×177°.91W±0°.07, h35km, n276, σ1s.71/270, mb5.0/47, 13C-6D, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.53	360	P	Pn	00 00 29.3	-1.1
GLKZ				S	Sn	00 00 45.3	-3.7
RAO	Raoul Island	1.54	360	P	Pn	00 00 29.9	-0.6
	4µm,0.4s,baz=241,slow=19,SNR=14						
RAO				S	Sn	00 00 45.8	-3.5
	16µm,0.2s,baz=160,slow=21,SNR=16						
RAO	Raoul Island	1.54	360	P	Pn	00 00 29.3	-1.2
RAO	Raoul Island	1.54	360	P	Pn	00 00 30.0	-0.6
RIZ	Raoul Island	1.55	359	P	Pn	00 00 29.4	-1.2
RIZ				S	Sn	00 00 44.6	-4.9
MXZ	Matakaoa Point	7.44	204	P	Pn	00 01 49.4	-2.1
WMGZ	Waiomatatini S	7.63	202	P	Pn	00 01 52.8	-1.4
WMGZ				S	Sn	00 03 17.9	-1.5
PKGZ	Pakihiroa	7.79	204	P	Pn	00 01 55.1	-1.3
PKGZ				S	Sn	00 03 21.2	-2.1
HAZ	Te Kaha	7.80	206	P	Pn	00 01 55.6	-0.9
HAZ				S	Sn	00 03 23.3	-0.2
PUZ	Puketiti	7.91	203	P	Pn	00 01 56.1	-1.9
PUZ				S	Sn	00 03 24.2	-2.2
KUZ	Kuaotunu	7.95	220	P	Pn	00 02 02.3	+3.7
RUGZ	Raukumara Rang	8.02	206	P	Pn	00 01 57.4	-2.2
TWGZ	Tauwhareparae	8.10	204	P	Pn	00 01 58.8	-1.9
TWGZ				S	Sn	00 03 30.3	-0.8
WHRZ	Whale Island	8.21	210	P	Pn	00 02 03.1	+0.9
WHRZ				S	Sn	00 03 34.6	+0.9
CNGZ	Carnagh Statio	8.30	202	P	Pn	00 02 01.8	-1.7
OUZ	Omahuta	8.38	236	P	Pn	00 02 11.0	+6.5
OUZ	Omahuta	8.38	236	P	Pn	00 02 11.0	+6.5
TKGZ	Te Karaka	8.38	203	P	Pn	00 02 01.5	-2.9
TKGZ				S	Sn	00 03 35.3	-2.6
MWZ	Matawai	8.40	205	P	Pn	00 02 02.3	-2.5
MWZ				S	Sn	00 03 36.6	-1.8
URZ	Urewera	8.50	208	P	Pn	00 02 03.7	-2.4
	10nm,0.3s,baz=0.0,slow=4.0,SNR=14						
URZ				S	Sn	00 03 40.7	0.0
	92nm,0.3s,baz=301,slow=22,SNR=15						
URZ	Urewera	8.50	208	P	Pn	00 02 03.9	-2.2
URZ	Urewera	8.50	208	P	Pn	00 02 03.7	-2.3
URZ				S	Sn	00 03 40.3	-0.4
RAGZ	Rawiri	8.59	205	S	Sn	00 03 40.7	-2.3
RIGZ	Rimuhau	8.65	203	P	Pn	00 02 05.6	-2.6
RIGZ				S	Sn	00 03 42.8	-1.8
PRGZ	Paritu Road	8.81	202	P	Pn	00 02 07.1	-3.3
PRGZ				S	Sn	00 03 47.2	-1.2
MUGZ	Murupara	8.82	208	P	Pn	00 02 07.1	-3.5
MUGZ				S	Sn	00 03 46.5	-2.2
SNGZ	Shannon Statio	8.87	205	P	Pn	00 02 09.1	-2.0
SNGZ				S	Sn	00 03 46.7	-3.2
KNZ	Kokohu	8.97	203	P	Pn	00 02 08.1	-4.4
MHGZ	Mahia Peninsul	9.01	201	P	Pn	00 02 09.8	-3.3
MHGZ				S	Sn	00 03 49.2	-4.1
ALRZ	Allen Road	9.07	210	P	Pn	00 02 12.9	-1.0
ALRZ				S	Sn	00 03 53.6	-1.2
MTHZ	Maungataniwha	9.12	207	P	Pn	00 02 12.4	-2.2
MTHZ				S	Sn	00 03 55.3	-0.7
WHHZ	Waihua	9.17	204	P	Pn	00 02 13.8	-1.4
WHHZ				S	Sn	00 03 56.4	-0.8
NMHZ	Naumai	9.34	206	P	Pn	00 02 14.7	-3.0
NMHZ				S	Sn	00 04 00.4	-1.1
ARHZ	Aropaoanui	9.42	205	P	Pn	00 02 16.3	-2.3
ARHZ				S	Sn	00 04 00.8	-2.4
BKZ	Black Stump Fm	9.52	207	P	Pn	00 02 17.7	-2.5
BKZ	Black Stump Fm	9.52	207	P	Pn	00 02 16.5	-3.7
BKZ				S	Sn	00 04 01.6	-4.3
MCHZ	McNeill Hill	9.69	206	P	Pn	00 02 18.7	-3.7
MCHZ				S	Sn	00 04 07.3	-2.6
HIZ	Hauiti	9.73	216	P	Pn	00 02 24.8	+1.9
HIZ	Hauiti	9.73	216	P	Pn	00 02 25.8	+2.9
CKHZ	Cape Kidnapper	9.74	203	P	Pn	00 02 15.3	-7.8
CKHZ				S	Sn	00 04 04.9	-6.3
KWHZ	Kaweka Forest	9.77	207	P	Pn	00 02 20.2	-3.4
KWHZ				S	Sn	00 04 09.8	-2.3
TMVZ	Te Maari	9.81	211	P	Pn	00 02 25.2	+1.0
TMVZ				S	Sn	00 04 11.3	-1.8
KAHZ	Kahuranaki	9.93	204	P	Pn	00 02 21.1	-4.6
KAHZ				S	Sn	00 04 14.2	-1.8
KRHZ	Kereru	9.98	206	P	Pn	00 02 25.0	-1.5
KRHZ				S	Sn	00 04 10.4	-6.8
FWVZ	Far West T-bar	9.99	211	P	Pn	00 02 26.5	-0.2
FWVZ				S	Sn	00 04 15.7	-1.9
TRVZ	Turoa	10.03	211	P	Pn	00 02 23.9	-3.3
TRVZ				S	Sn	00 04 16.0	-2.6
MOVZ	Moawhango	10.03	209	P	Pn	00 02 21.5	-5.7
MOVZ				S	Sn	00 04 13.6	-4.9
PKVZ	Pokaka	10.11	211	P	Pn	00 02 30.9	+2.7
PXZ	Pawanui	10.15	203	P	Pn	00 02 25.3	-3.3
PXZ				S	Sn	00 04 15.5	-5.6
PNHZ	Pukenui	10.28	206	P	Pn	00 02 25.6	-5.0
PNHZ				S	Sn	00 04 19.6	-5.0
WPHZ	Waipukurau	10.32	205	P	Pn	00 02 26.5	-4.6
WPHZ				S	Sn	00 04 20.5	-5.0
WAZ	Wanganui	10.65	211	P	Pn	00 02 32.7	-2.9
WAZ				S	Sn	00 04 30.5	-3.1
BFZ	Birch Farm	10.94	204	P	Pn	00 02 35.9	-3.6
BFZ	Birch Farm	10.94	204	P	Pn	00 02 33.9	-5.6
MRZ	Mangatainoka R	11.17	206	P	Pn	00 02 36.9	-5.7
TMWZ	Te Maipa	11.44	204	P	Pn	00 02 39.8	-6.6
SNZO	South Karori	12.06	208	P	Pn	00 02 52.8	-2.1
CTZ	Chatham Island	12.95	176	P	Pn	00 02 49.4	-18
KHZ	Kahutara	13.46	208	P	Pn	00 03 12.5	-1.5
MSVF	Nonsavu	13.52	343	P	Pn	00 03 16.3	+1.3
	7.6nm,0.6s,baz=170,slow=23,SNR=4.9						
MSVF	Nonsavu	13.52	343	P	Pn	00 03 07.6	-7.3
MSVF	Nonsavu	13.52	343	⇑*e*P	Pn	00 03 18.1	+3.2
MSVF				pmax	pmax		
	comp=Z,70nm,1.9s						
RPZ	Rata Peaks	15.58	211	P	Pn	00 03 36.8	-5.6
	comp=Z,3.2nm,0.3s,baz=12,slow=7.8,SNR=1.4						
RPZ				S	Sn	00 06 18.9	-15
	comp=Z,14nm,0.4s,baz=21,slow=17,SNR=7.3						
RPZ	Rata Peaks	15.58	211	P	Pn	00 03 40.9	-1.6
OUENC	Ouen Island, N	15.97	298	P	P	00 03 54.6	+3.8
YATNC	Mamie plateau,	16.14	299	P	P	00 03 56.2	+3.5
DZM	Mont Dzumac	16.48	298		P	00 03 55.3	-1.1
DZM	Mont Dzumac	16.48	298	P	P	00 03 58.1	+1.6
	comp=Z,16nm,1.2s,baz=138,slow=11,SNR=8.3						
DZM	Mont Dzumac	16.48	298	P	P	00 03 59.8	+3.3
ODZ	Otahua Downs	16.82	209	P	Pn	00 03 56.0	-2.2
JCZ	Jackson Bay	16.92	215	P	Pn	00 03 58.4	-1.1
RAR	Rarotonga	18.87	64	P	Pn	00 04 25.6	+2.1
	comp=Z,16nm,0.5s,baz=284,slow=14,SNR=1.8						
LHI	Lord Howe Isla	19.72	262	P	Pn	00 04 35.5	+1.9
	comp=Z,30nm,0.7s						
ARMA	Armidale	26.18	263	P	P	00 05 37.1	+0.1
ARMA	Armidale	26.18	263	P	P	00 05 40.0	+3.0
CNB	Canberra Magne	27.72	252	P	P	00 05 52.6	+1.9
EIDS	Eidsvold	27.83	273	P	P	00 05 50.9	-0.8
CAN	Canberra	28.02	252	P	P	00 05 53.9	+0.5
CAN				IAmb	IAmb	00 05 56.2	
	comp=Z,22nm,1.2s						
CAN	Canberra	28.02	252	P	P	00 05 55.5	+2.1
CAN	Canberra	28.02	252	P	P	00 05 53.9	+0.5
CAN				pmax	pmax		
	comp=Z,22nm,1.2s						
GLAD	Gladstone	29.26	240	P	P	00 06 04.5	+0.3
TAU	Tasmania Unive	30.12	237	P	P	00 06 10.6	-1.3
TAU				IAmb	IAmb	00 06 53.5	
	comp=Z,59nm,1.4s						
TAU	Tasmania Unive	30.12	237	P	P	00 06 10.6	-1.3
TAU				pmax	pmax		
	comp=Z,59nm,1.4s						
TOO	Toolangi	30.88	247	P	P	00 06 19.2	+0.5
TOO	Toolangi	30.88	247	P	P	00 06 19.8	+1.1
	comp=Z,6.6nm,1.5s						
TOO	Toolangi	30.88	247	P	P	00 06 19.2	+0.5
TOO				pmax	pmax		
	comp=Z,16nm,1.6s						
CMSA	Cobar Meteorol	31.06	259	P	P	00 06 21.6	+1.2
	comp=Z,69nm,0.8s						
CMSA	Cobar Meteorol	31.06	259	P	P	00 06 22.3	+2.0
QLP	Quilpie	33.37	268	P	P	00 06 41.0	+0.4
	comp=Z,54nm,1.3s						
QLP	Quilpie	33.37	268	P	P	00 06 42.2	+1.6
ARPS	Mount Arapiles	33.80	249	P	P	00 06 44.7	+0.5
	comp=Z,14nm,0.8s						
ARPS	Mount Arapiles	33.80	249	P	P	00 06 45.3	+1.1
CTAO	Charters Tower	33.94	280		P	00 06 46.0	+0.4
CTAO	Charters Tower	33.94	280	P	P	00 06 47.1	+1.5
CTAO	Charters Tower	33.94	280	P	P	00 06 46.0	+0.4
CTAO				pmax	pmax		
	comp=Z,37nm,0.8s						
CTAO	Charters Tower	33.94	280	P	P	00 06 46.3	+0.7
STKA	Stephens Creek	34.46	257		P	00 06 51.1	+1.1
STKA	Stephens Creek	34.46	257	P	P	00 06 50.9	+0.9
	comp=Z,476nm,0.8s						
STKA	Stephens Creek	34.46	257	P	P	00 06 51.4	+1.3
	comp=Z,78nm,0.8s,baz=98,slow=9.9,SNR=88						
STKA	Stephens Creek	34.46	257	P	P	00 06 51.6	+1.5
STKA	Stephens Creek	34.46	257	*c i*P	P	00 06 51.2	+1.1
MGBR	Mount Gambier	34.78	247	P	P	00 06 51.9	-0.8
MTSU	Mount Surprise	36.45	281	P	P	00 07 08.0	+0.7
	comp=Z,24nm,0.9s						
HTT	Hallett	36.47	254	P	P	00 07 07.4	+0.1
	comp=Z,11nm,0.7s						
HTT	Hallett	36.47	254	P	P	00 07 07.8	+0.5
BBOO	Buckleboo	38.94	255		P	00 07 27.5	-0.7
BBOO				IAmb	IAmb	00 07 30.7	
	comp=Z,22nm,0.7s						
BBOO	Buckleboo	38.94	255	P	P	00 07 27.7	-0.4
	comp=Z,35nm,0.6s						
BBOO	Buckleboo	38.94	255	P	P	00 07 27.7	-0.4
QIS	Mount Isa	39.42	275	P	P	00 07 31.9	-0.5
	comp=Z,13nm,0.5s						
QIS	Mount Isa	39.42	275	P	P	00 07 33.1	+0.8
COEN	Coen	39.45	286	P	P	00 07 32.4	-0.2
COEN				IAmb	IAmb	00 07 33.4	
	comp=Z,50nm,1.6s						
COEN	Coen	39.45	286	P	P	00 07 32.9	+0.3
COEN	Coen	39.45	286	P	P	00 07 33.2	+0.6
AS01	Alice Springs	43.12	267	P	P	00 08 02.7	-0.1
AS31	Alice Springs	43.16	267		P	00 08 02.4	-0.7
ASAR	Alice Springs	43.16	267		P	00 08 01.6	-1.5
ASAR	Alice Springs	43.16	267	P	P	00 08 02.3	-0.8
	comp=Z,6.7nm,0.5s,baz=102,slow=7.5,SNR=37						
ASAR				PcP	PcP	00 09 52.0	-0.3
	comp=Z,0.7nm,0.6s,baz=111,slow=4.0,SNR=1.4						
ASAR				ScP	ScP	00 13 38.2	-2.7
	comp=Z,0.6nm,0.7s,baz=98,slow=4.1,SNR=4.4						
	comp=Z,6.7nm,0.5s						
ASAR	Alice Springs	43.16	267	P	P	00 08 01.6	-1.5
WR8	Warramunga Arr	44.05	273		P	00 08 09.5	-0.7
WR8				IAmb	IAmb	00 08 10.7	
	comp=Z,15nm,0.8s						
WRAB	Tennant Creek	44.18	273	⇑*e*P	P	00 08 10.6	-0.7
WRAB				pmax	pmax		
	comp=Z,15nm,0.6s						
WRA	Warramunga Arr	44.19	273		P	00 08 09.4	-1.9
WRA	Warramunga Arr	44.19	273	P	P	00 08 10.4	-0.9
	comp=Z,16nm,0.3s,baz=111,slow=8.0,SNR=103						
WRA				ScP	ScP	00 13 42.4	-2.7
	comp=Z,0.2nm,0.8s,baz=108,slow=3.2,SNR=1.7						
WRA	Warramunga Arr	44.19	273	P	P	00 08 09.5	-1.9
WB0	Warramunga Arr	44.21	273		P	00 08 10.4	-1.1
WB0				IAmb	IAmb	00 08 11.5	
	comp=Z,25nm,0.6s						
FORT	Forrest	46.02	255		P	00 08 24.2	-1.5
FORT	Forrest	46.02	255	P	P	00 08 25.4	-0.3
SBA	Scott Base	47.65	184		P	00 08 41.1	+3.3
SBA				IAmb	IAmb	00 08 43.6	
	comp=Z,14nm,1.1s						
SBA	Scott Base	47.65	184	P	P	00 08 41.1	+3.3
SBA				pmax	pmax		
	comp=Z,14nm,1.2s						
SBA	Scott Base	47.65	184	P	P	00 08 42.1	+4.4
VNDA	Vanda	47.71	186	P	P	00 08 40.4	+2.1
VNDA	Vanda	47.71	186	P	P	00 08 40.5	+2.3
	comp=Z,1.5nm,0.7s,baz=17,slow=7.1,SNR=4.2						

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             comp=Z,1.5nm,0.7s
VNDA  Vanda              47.71 186   P        P          00 08 40.4 +2.1
VNDA                                 pmax     pmax
             comp=Z,13nm,1.8s
VNDA  Vanda              47.71 186   P        P          00 08 41.1 +2.8
KNRA  Kununurra          50.81 275   P        P          00 09 01.8 -1.0
KNRA                                 IAmb     IAmb       00 09 19.1
             comp=Z,35nm,1.7s
FITZ  Fitzroy Crossi     52.44 270            P          00 09 14.0 -0.9
FITZ  Fitzroy Crossi     52.44 270   P        P          00 09 13.7 -1.2
CCD   Concordia, Ant     52.59 196   P        P          00 09 16.5 +0.7
CASY  Casey              54.82 208   P        P          00 09 31.5 -0.2
CASY                                 IAmb     IAmb       00 09 32.5
             comp=Z,23nm,0.9s
CASY  Casey              54.82 208   P        P          00 09 31.4 -0.2
MEEK  Meekatharra        55.17 257   P        P          00 09 33.6 -1.3
BLDU  Ballidu            55.44 252   P        P          00 09 35.0 -1.8
MBWA  Marble Bar         56.26 264   P        P          00 09 40.9 -1.8
MORW  Morawa             56.49 254   P        P          00 09 42.8 -1.5
MORW                                 IAmb     IAmb       00 10 21.2
             comp=Z,54nm,1.8s
MORW  Morawa             56.49 254   P        P          00 09 43.1 -1.2
QSPA  South Pole Qui     59.31 180            P          00 10 06.2 +2.5
QSPA  South Pole Qui     59.31 180   P        P          00 10 06.3 +2.7
             comp=Z,7.9nm,0.7s,baz=25,slow=3.6,SNR=14
             comp=Z,7.9nm,0.7s
QSPA  South Pole Qui     59.31 180   P        P          00 10 06.4 +2.7
MAW   Mawson             71.96 201   P        P          00 11 25.6 +0.6
             comp=Z,4.8nm,0.7s,baz=129,slow=7.9,SNR=9.1
             comp=Z,4.8nm,0.7s
TROLL Troll, Antarti     77.47 180 ⇑P       P          00 11 58.2 +1.1
             comp=Z,572nm,0.8s
SNAA  Sanae              77.75 178 ⇑P       P          00 11 59.4 +0.8
             comp=Z,183nm,0.7s
SNAA  Sanae              77.75 178            P          00 11 59.6 +1.1
SNAA                                 IAmb     IAmb       00 12 05.8
             comp=Z,9.5nm,0.8s
SNAA  Sanae              77.75 178   P        P          00 11 59.3 +0.7
             comp=Z,2.7nm,0.6s,baz=201,slow=8.8,SNR=19
             comp=Z,2.7nm,0.6s
SNAA  Sanae              77.75 178⇓eP       P          00 12 00.0 +1.4
VNA3  Neumayer Olymp     77.90 176 ⇑P       P          00 12 00.2 +0.9
             comp=Z,30nm,0.6s
VNA2  Neumayer--Watz     78.34 177 ⇑P       P          00 12 03.0 +1.3
             comp=Z,17nm,0.5s,baz=175,slow=5.8
VNA1  Neumayer--Stat     78.57 176 ⇑P       P          00 12 04.3 +1.4
             comp=Z,11nm,0.6s
MJA0  Matsu Arr-Jizo     78.59 325  eP        P          00 12 06.1 +2.5
MJA0                                 pmax     pmax
             comp=Z,2.0nm,0.7s
MJAR  Matsushiro Arr     78.61 325   P        P          00 12 02.9 -0.7
             comp=Z,2.4nm,0.7s,baz=156,slow=6.7,SNR=4.6
             comp=Z,2.4nm,0.7s
MJAR  Matsushiro Arr     78.61 325  eP        P          00 12 06.1 +2.5
MJAR                                 pmax     pmax
             comp=Z,2.0nm,0.7s
H03S2 Juan Fernandez     80.18 123   T        T          01 41 20.4
             baz=238,slow=74,SNR=149
H03S1 Juan Fernandez     80.19 123   T        T          01 41 21.6
             baz=238,slow=74,SNR=78
H03S3 Juan Fernandez     80.20 123   T        T          01 41 20.4
             baz=238,slow=74,SNR=71
H03N3 Juan Fernandez     80.38 123   T        T          01 41 34.3
             baz=315,slow=71,SNR=57
H03N2 Juan Fernandez     80.38 123   T        T          01 41 32.6
             baz=315,slow=71,SNR=55
H03N1 Juan Fernandez     80.39 123   T        T          01 41 37.7
             baz=315,slow=71,SNR=75
PLCA  Paso Flores        82.18 133   P        P          00 12 24.7 +1.7
             comp=Z,5.3nm,1.1s,baz=216,slow=7.3,SNR=3.8
             comp=Z,5.3nm,1.1s
KSRS  Korea Array        84.70 320   P        P          00 12 35.6 -0.1
             comp=Z,1.5nm,0.8s,baz=155,slow=7.7,SNR=2.9
             comp=Z,1.5nm,0.8s
TEY   Ternei             86.08 330  eP        P          00 12 47.6 +5.3
PETK  Petropavlovsk-     86.22 346   P        P          00 12 41.6 -1.2
             comp=Z,4.9nm,0.8s,baz=142,slow=3.4,SNR=8.1
             comp=Z,4.9nm,0.8s
PETK  Petropavlovsk-     86.22 346  eP        P          00 12 44.0 +1.1
PETK                                 pmax     pmax
             comp=Z,5.0nm,0.7s
ISA   Isabella, Lake     86.53  45   P        P          00 12 45.8 +0.8
ISA                                  IAmb     IAmb       00 13 04.3
             comp=Z,17nm,1.1s
ISA   Isabella, Lake     86.53  45   P        P          00 12 45.8 +0.8
ISA                                  pmax     pmax
             comp=Z,17nm,1.1s
NJ2   Nanjing            86.56 311  eP        P          00 12 46.9 +1.8
NJ2                                  pmax     pmax
             comp=Z,8.0nm,0.6s
GSC   Goldstone, Bar     87.31  46   P        P          00 12 49.5 +0.7
GSC   Goldstone, Bar     87.31  46   P        P          00 12 49.5 +0.7
GSC                                  pmax     pmax
             comp=Z,27nm,1.4s
USRK  Ussuriysk Ar.      87.53 326   P        P          00 12 48.3 -1.2
             comp=Z,2.2nm,0.8s,baz=87,slow=16,SNR=1.6
             comp=Z,2.2nm,0.8s
QSM   Queen of Sheba     87.70  45   P        P          00 12 51.2 +0.6
QSM                                  IAmb     IAmb       00 13 10.3
             comp=Z,9.7nm,1.2s
NVAR  Mina Array Bea     88.48  43   P        P          00 12 54.8 +0.4
NVAR  Mina Array Bea     88.48  43   P        P          00 12 55.5 +1.0
             comp=Z,1.3nm,0.7s,baz=220,slow=8.8,SNR=8.5
             comp=Z,1.3nm,0.7s
TUC   Tucson             89.30  51   P        P          00 12 58.8 +0.5
TUC                                  IAmb     IAmb       00 13 18.5
             comp=Z,21nm,1.4s
TUC   Tucson             89.30  51   P        P          00 12 58.8 +0.5
TUC                                  pmax     pmax
             comp=Z,21nm,1.4s
TIA   Tai'an             90.30 313   P        P          00 13 02.4 -0.3
TIA                                  pmax     pmax
             comp=Z,7.0nm,0.7s
PINE  Pine Mountain      90.67  37            P          00 13 04.9 +0.4
TXAR  Lajitas Array      92.54  57   P        P          00 13 15.1 +1.6
             comp=Z,0.6nm,1.1s,baz=205,slow=2.3,SNR=2.8
             comp=Z,0.6nm,1.1s
K15K  Wolf Creek Mou     93.70   8   P        P          00 13 18.0 +0.1
HLID  Hailey             94.06  41   P        P          00 13 20.8 +0.6
HLID                                 IAmb     IAmb       00 13 39.0
             comp=Z,3.6nm,1.1s
PLID  Pearl Lake         94.16  39   P        P          00 13 19.7 -1.0
PLID                                 IAmb     IAmb       00 13 38.8
             comp=Z,6.7nm,1.1s
PZH   PanZhiHua          95.56 297   P        P          00 13 28.0 +0.6
PDAR  Pinedale Array     96.37  44   PKKPbc   PKKPbc     00 30 16.1 -0.9
             comp=Z,0.4nm,0.6s,baz=57,slow=5.5,SNR=3.9
HHC   Hu-ho-hao-te       96.56 314  eP        P          00 13 33.8 +2.2
HHC                                  pmax     pmax
             comp=Z,9.0nm,0.8s
ILAR  Eielson Array      98.30  13   P        P          00 13 37.5 -1.2
             comp=Z,0.3nm,0.8s,baz=231,slow=5.7,SNR=2.2
             comp=Z,0.3nm,0.8s
LZH   Lanzhou            99.02 307  eP        Pdif       00 13 50.5 +7.6
LZH                                  pP       sP         00 14 01.8 +5.3
LZH                                  pmax     pmax
             comp=Z,47nm,0.9s
YKA   Yellowknife Ar    105.77  26   PKKPbc   PKKPbc     00 29 47.9 -2.0
             comp=Z,0.5nm,0.6s,baz=32,slow=3.2,SNR=5.7
WMQ   Urumqi            113.53 308  ePKP      PKiKP      00 18 39.8 -0.1
WMQ                                  LR       LR
             comp=N,16µm,17.7s
WMQ                                  LR       LR
             comp=E,27µm,24.1s
WMQ                                  LR       LR
             comp=Z,30µm,22.1s
MK31  Makanchi Array    118.09 310⇓iPKIKP   PKiKP      00 18 49.8 +1.3
MKAR  Makanchi Array    118.09 310   PKP      PKPdf      00 18 46.5 -1.9
             comp=Z,0.4nm,0.4s,baz=93,slow=3.3,SNR=6.8
ZALV  Zalesovo Beam     118.38 318   PKP      PKPdf      00 18 46.5 -2.3
             comp=Z,0.4nm,0.3s,baz=105,slow=11,SNR=1.8
KURK  Kurchatov         121.38 314⇑iPKIKP   PKPdf      00 18 52.9 -1.7
KURBB Kurchatov Arra    121.42 313   PKP      PKPdf      00 18 52.9 -1.8
             comp=Z,1.7nm,0.6s,baz=111,slow=1.9,SNR=16
KK31  Karatay Array     125.36 303            PKPdf      00 19 01.4 -1.1
KK31  Karatay Array     125.36 303   PKIKP    PKPdf      00 19 01.4 -1.1
KKAR  Karatay Array     125.36 303            PKPdf      00 19 01.5 -1.0
KKAR  Karatay Array     125.36 303   PKIKP    PKPdf      00 19 01.5 -1.0
BVAR  Borovoye Array    126.74 316   PKP      PKPdf      00 19 03.5 -1.4
             comp=Z,1.7nm,0.5s,baz=124,slow=2.7,SNR=7.0
BRVK  Borovoye          126.81 316⇑ePKIKP   PKPdf      00 19 04.3 -0.6
SPITS Spitsbergen Ar    132.10 356   PKP      PKPdf      00 19 14.3 -0.1
             comp=Z,5.8nm,0.7s,baz=51,slow=9.6,SNR=2.3
ARTI  Arti              133.55 320   PKPdf    PKPdf      00 19 17.5 -0.2
ARTI  Arti              133.55 320  i PKIKP   PKPdf      00 19 17.3 -0.3
ARTI                                                     00 21 43.3
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KIRV  Kirov             137.69 325⇓ePKIKP   PKPdf      00 19 25.9 +0.7
ARCES ARCESS Array B    139.00 348   PKhKP    PKPpre     00 19 19.1
             comp=Z,2.6nm,0.7s,baz=59,slow=2.0,SNR=10
GNI   Garni             144.32 297  ePKIKP    PKPdf      00 19 39.4 +1.4
GNI   Garni             144.32 297   PKP      PKPbc      00 19 37.5 +1.0
VRH   Novokhopyorsk     144.38 316  ePKIKP    PKPab      00 19 34.9 -0.8
VRH                                  pmax     pmax
             comp=Z,6.0nm,0.5s
NCK   Nalchik           144.92 303⇓iPKIKP   PKPab      00 19 37.3 -0.8
GOF   Gofitskoye        145.09 306ce PKIKP  PKPab      00 19 38.4 -0.2
PUL   Pulkovo           145.39 335⇓ePKIKP   PKPdf      00 19 41.1 +2.1
KBZ   Khabaz            145.40 303   PKPbc    PKPbc      00 19 38.3 -1.2
             comp=Z,3.3nm,0.7s,baz=165,slow=1.5,SNR=5.9
KBZ   Khabaz            145.40 303  ePKP2     PKPbc      00 19 38.6 -0.9
KBZ                                  pmax     pmax
             comp=Z,3.0nm,0.7s
KIV   Kislovodsk        145.51 304   PKPbc    PKPbc      00 19 38.6 -1.4
KIV   Kislovodsk        145.51 304  ePKIKP    PKPab      00 19 41.3 +1.0
KIV                                  pmax     pmax
             comp=Z,6.0nm,1.1s
KIV   Kislovodsk        145.51 304   PKP      PKPbc      00 19 38.5 -1.5
OBN   Obninsk           145.54 325            PKPbc      00 19 37.8 -1.7
OBN   Obninsk           145.54 325⇑ePKP2    PKPbc      00 19 37.9 -1.7
OBN                                 e                    00 23 02.5
OBN                                  pmax     pmax
             comp=Z,51nm,1.9s
OBN                                  MLR      MLR
             comp=Z,3µm,17.0s
FIA1  FINESS Array S    145.54 340            PKPbc      00 19 37.8 -1.6
FINES FINESS Array B    145.54 340   PKPbc    PKPbc      00 19 37.9 -1.5
             comp=Z,24nm,0.8s,baz=64,slow=4.4,SNR=48
SHA1  Shidzhatmaz       145.57 304⇑ePKP2    PKPbc      00 19 38.6 -1.8
KARS  Kars              145.57 298            PKPbc      00 19 38.6 -1.8
KARS  Kars              145.57 298   PKP2     PKPbc      00 19 38.6 -1.8
GEVA  Gevas             145.66 294            PKPdf      00 19 39.1 -1.3
VORR  Voronezh          145.68 318  ePKIKP    PKPdf      00 19 37.9 -1.9
VORR                                 pmax     pmax
             comp=Z,30nm,0.5s
VSR   Storozhevoye      145.88 317  ePKHKP    PKPpre     00 19 37.2
VSR                                  pmax     pmax
             comp=Z,20nm,0.8s
VORD  Divnogorie        145.90 317  ePKIKP    PKPdf      00 19 38.2 -1.9
VORD                                 pmax     pmax
             comp=Z,10.0nm,0.4s
GURO  Guroymak-BITLI    146.46 294            PKPdf      00 19 41.5 -0.2
MARD  Mardin            147.46 292            PKPdf      00 19 43.3 -0.1
VSU   Vasula            147.62 336⇓iPKIKP   PKPdf      00 19 43.7 +0.9
NB2   NORSAR Subarra    149.16 351   PKP      PKPbc      00 19 48.8 -0.8
             comp=Z,3.1nm,0.7s,baz=15,slow=2.6
NOA   NORSAR Array B    149.16 351   PKPbc    PKPdf      00 19 48.2 +2.9
             comp=Z,4.1nm,0.7s,baz=14,slow=4.2,SNR=20
HFS   Hagfors           149.65 349   PKPbc    PKPdf      00 19 49.3 +3.3
             comp=Z,7.2nm,0.7s,baz=56,slow=0.5,SNR=15
MNK   Minsk             149.97 330  i PKiKP   PKPbc      00 19 50.9 -0.8
             comp=E,7.0nm,0.9s
MNK                                 i PKiKP   PKPbc      00 19 50.9 -0.8
             comp=N,5.0nm,0.7s
MNK                                 i PKiKP   PKPbc      00 19 50.9 -0.8
             comp=Z,14nm,0.8s,baz=49
MNK                                 i PP      PP         00 23 24.6 -1.4
MNK                                 i PPP     PPP        00 26 46.3
MNK                                 i SKS     SKSdf      00 26 49.6 -2.1
MNK                                 i SS      SS         00 42 40.6 +0.9
MNK                                 i SSS     SSS        00 48 21.2
MNK                                 i LR      LR         01 31 48.4
MNK   Minsk             149.97 330  i PKHKP   PKPpre     00 19 50.8
MNK                                 i                    00 23 24.6
MNK                                 i PPP     PPP        00 26 46.2
MNK                                 i                    00 26 49.6
MNK                                 i SS      SS         00 42 40.6 +0.9
MNK                                 i SSS     SSS        00 48 21.2
MNK                                  pmax     pmax
             comp=E,7.0nm,0.9s
MNK                                  pmax     pmax
             comp=Z,14nm,0.8s
MNK                                  pmax     pmax
             comp=N,5.0nm,0.7s
NACGM Naroch            150.16 331  ePKP      PKPdf      00 19 47.3 +0.2
             baz=47
GAZ   Gaziantep         150.31 292            PKPdf      00 19 47.4 -0.5
PABE  Paberze           150.84 334   PKPbc    PKPbc      00 19 53.0 -0.6
STRU  Stroemstad        151.10 350  eP        PKPbc      00 19 53.2 -1.0
BNN   Bunyan            151.27 295            PKPbc      00 19 53.9 -1.6
AKASG Malin Array Be    151.66 322            PKPbc      00 19 54.1 -1.7
AKASG Malin Array Be    151.66 322   PKPbc    PKPbc      00 19 54.5 -1.3
             comp=N,6.5nm,0.7s,baz=50,slow=2.8,SNR=18
AKASG Malin Array Be    151.66 322   PKIKP    PKPbc      00 19 54.1 -1.7
AKBB  Malin Array Si    151.66 322            PKPbc      00 19 54.0 -1.8
AKBB  Malin Array Si    151.66 322   PKIKP    PKPbc      00 19 54.0 -1.8
MMAI  Mount Meron Ar    151.70 283   PKPbc    PKPbc      00 19 56.0 -0.5
             comp=N,1.7nm,0.4s,baz=72,slow=5.4,SNR=12
BZK   Bozkurt           152.15 302   PKP      PKPdf      00 19 49.5 -1.0
BORU  Boraas            152.17 348  eP        PKPbc      00 19 56.0 -0.7
HOMB  Homborsund        152.18 353  eP        PKPbc      00 19 56.6  0.0
SNART Snartemo          152.24 354  eP        PKPbc      00 19 56.4 -0.5
SUW   Suwalki           152.27 333   PKPbc    PKPbc      00 19 56.2 -0.8
SUW   Suwalki           152.27 333   PKIKP    PKPbc      00 19 56.2 -0.8
MI28  Mi28,Pidlybu      152.33 324   PKP      PKPdf      00 19 49.8 -0.7
ONAU  Onsala            152.55 348  eP        PKPbc      00 19 56.8 -0.8
FABU  Falkenberg        152.78 347  eP        PKPbc      00 19 57.3 -0.7
BR131 Keskin Array S    152.85 298            PKPbc      00 19 57.1 -2.0
BR131 Keskin Array S    152.85 298   PKIKP    PKPbc      00 19 57.1 -2.0
BRTR  Keskin Array B    152.85 298            PKPbc      00 19 57.3 -1.7
BRTR  Keskin Array B    152.85 298   PKPbc    PKPbc      00 19 57.5 -1.5
             comp=N,0.9nm,0.5s,baz=142,slow=3.9,SNR=7.3
BRTR  Keskin Array B    152.85 298   PKIKP    PKPbc      00 19 57.3 -1.7
DEL   Delary            153.04 346  i P       PKPbc      00 19 57.0 -1.7
EKA   Eskdalemuir Ar    155.19   7   PKP      PKPdf      00 19 52.7 -1.7
             comp=N,0.9nm,0.8s,baz=356,slow=2.6,SNR=2.1
EKA                                  PKPab    pPKPbc     00 20 15.8 +2.3
             comp=N,0.7nm,0.6s,baz=358,slow=2.8,SNR=4.7
LANS  Liptovska Anna    157.44 329  ePKP2     PKPab      00 20 29.4 +0.1
LANS  Liptovska Anna    157.44 329  ePKP      PKPab      00 20 29.4 +0.1
CLL   Collm             157.97 342  ePKP2     PKPab      00 20 31.0 -0.4
CLL   Collm             157.97 342  ePKPab    PKPab      00 20 31.0 -0.4
VYHS  Vyhne             158.21 329  ePKP      PKPab      00 20 31.6 -1.0
MODS  Modra-Piesok      158.97 331  ePKP      PKPab      00 20 36.3 +0.4
GERES GERESS Array B    159.93 337   PKPab    PKPab      00 20 37.5 -2.7
             comp=N,0.2nm,0.3s,baz=33,slow=5.7,SNR=2.9
TORD  Torodi Ar. Bea    162.43 179   PKP      PKPdf      00 20 04.7 +0.5
             comp=N,0.6nm,0.3s,baz=128,slow=1.9,SNR=5.4
TORD                                 PKPab    PKPab      00 20 52.1 +0.4
             comp=N,2.3nm,0.7s,baz=163,slow=2.3,SNR=4.4
ESDC  Sonseca Array     169.86  28   PKP      PKPdf      00 20 10.0 +0.5
             comp=N,0.1nm,0.5s,baz=17,slow=1.3,SNR=4.9
ESDC                                 PKPab    PKPab      00 21 23.1 -0.9
             comp=N,0.1nm,0.3s,baz=274,slow=1.2,SNR=1.6
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*NEIC **16** 00:07:58.1±1.4, 30°.60S±0°.04×178°.1W±0°.2, h35^{km}±2^{km}, mb4.5/9, Error ellipse: s-maj=31.5km s-min=5.4km az=95.0*

*IDC **16** 00:08:00.5±2.4, 30°.51S×178°.07W, h63^{km}±25^{km}, mb3.8/5, mbtmp4.1/5, Error ellipse: s-maj=26.0km s-min=24.0km az=80.0*

ISC 16 00:07:58.3±0.8**, 30°.63S**±0°.08×**178°.3W**±0°.2**, h35**^{km}**, n34,** σ**1^{s}.89**/29**, mb4.4**/10**, 4C, Kermadec Islands**

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Code  Station Name        Δ°   AZ°    Phase ID              Time      Res
                                     Op       ISC        h  m  s     ISC
RAO   Raoul Island        1.42  15   Pn       Pn         00 08 21.1 -0.6
RAO                                  Sn       Sn         00 08 37.3 -1.8
RAO   Raoul Island        1.42  15   P        Pn         00 08 21.0 -0.7
             264nm,0.3s,baz=217,slow=21,SNR=8.0
RAO                                  S        Sn         00 08 38.2 -0.9
             830nm,0.2s,baz=142,slow=19,SNR=9.6
URZ   Urewera             8.49 205   P        Pn         00 09 53.9 -4.9
             8.1nm,0.9s,baz=351,slow=4.5,SNR=9.7
URZ                                  S        Sn         00 11 29.5 -3.8
             6.6nm,0.4s,baz=0.0,slow=20,SNR=6.6
BSWZ  Blackbirch Sta     12.72 207   Pn       Pn         00 10 55.1 -1.6
CTAO  Charters Tower     33.55 280   P        P          00 14 36.0 +0.9
CTAO                                 IAmb     IAmb       00 14 39.1
             comp=Z,8.3nm,1.1s
STKA  Stephens Creek     34.15 257   P        P          00 14 41.5 +1.4
STKA  Stephens Creek     34.15 257   P        P          00 14 42.3 +2.2
             comp=Z,3.8nm,0.6s,baz=106,slow=9.6,SNR=9.9
             comp=Z,3.8nm,0.6s
BBOO  Buckleboo          38.63 255   P        P          00 15 18.1 -0.3
BBOO                                 IAmb     IAmb       00 15 43.7
             comp=Z,34nm,1.5s
AS31  Alice Springs      42.81 267   P        P          00 15 53.8 +0.7
ASAR  Alice Springs      42.81 267   P        P          00 15 53.3 +0.3
ASAR  Alice Springs      42.81 267   P        P          00 15 53.8 +0.8
             comp=Z,0.6nm,0.4s,baz=106,slow=7.3,SNR=13
             comp=Z,0.6nm,0.4s
WR8   Warramunga Arr     43.68 273   P        P          00 16 00.4 +0.3
WR8                                  IAmb     IAmb       00 16 18.3
             comp=Z,8.4nm,1.4s
WRA   Warramunga Arr     43.82 273   P        P          00 16 01.5 +0.3
WRA   Warramunga Arr     43.82 273   P        P          00 16 01.9 +0.7
             comp=Z,1.7nm,0.3s,baz=111,slow=8.1,SNR=32
             comp=Z,1.7nm,0.3s
FORT  Forrest            45.71 255   P        P          00 16 15.9 -0.3
QSPA  South Pole Qui     59.48 180   P        P          00 17 57.5 -0.1
QSPA                                 IAmb     IAmb       00 18 03.5
             comp=Z,4.1nm,0.8s
QSPA  South Pole Qui     59.48 180   P        P          00 17 56.8 -0.8
             comp=Z,1.0nm,0.8s,baz=347,slow=1.4,SNR=12
             comp=Z,1.0nm,0.8s
TROLL Troll, Antarti     77.64 180 ⇑P       P          00 19 54.7 +3.9
             comp=Z,31nm,0.3s
SNAA  Sanae              77.93 179 ⇑P       P          00 19 56.1 +3.7
             comp=Z,11nm,0.3s
SNAA  Sanae              77.93 179   P        P          00 19 53.5 +1.1
SNAA                                 IAmb     IAmb       00 19 58.7
             comp=Z,3.4nm,1.3s
SNAA  Sanae              77.93 179   P        P          00 19 53.1 +0.7
             comp=Z,0.9nm,0.7s,baz=193,slow=4.7,SNR=20
             comp=Z,0.9nm,0.7s
VNA3  Neumayer Olymp     78.09 176 ⇑P       P          00 19 57.5 +4.2
             comp=Z,3.2nm,0.6s
VNA2  Neumayer--Watz     78.53 177 ⇑P       P          00 20 00.3 +4.7
             comp=Z,3.0nm,0.6s,baz=187,slow=3.5
H03S2 Juan Fernandez     80.58 124   T        T          01 49 14.2
             baz=241,slow=74
H03S1 Juan Fernandez     80.59 124   T        T          01 49 18.1
             baz=241,slow=74
H03S3 Juan Fernandez     80.59 124   T        T          01 49 16.7
             baz=241
H03N3 Juan Fernandez     80.77 123   T        T          01 49 25.7
             baz=232
H03N2 Juan Fernandez     80.77 123   T        T          01 49 22.9
             baz=232
H03N1 Juan Fernandez     80.78 123   T        T          01 49 18.9
             baz=232
FIA1  FINESS Array S    145.26 340   PKPbc    PKPbc      00 27 29.5 -1.8
FINES FINESS Array B    145.26 340   PKPbc    PKPbc      00 27 29.5 -1.8
FINES FINESS Array B    145.26 340   PKPbc    PKPbc      00 27 29.3 -2.0
             comp=Z,1.5nm,0.6s,baz=50,slow=3.7,SNR=19
HFS   Hagfors           149.41 348   PKPbc    PKPdf      00 27 39.7 +1.2
             comp=Z,0.9nm,0.8s,baz=26,slow=11,SNR=1.7
MMAI  Mount Meron Ar    151.31 284   PKPbc    PKPbc      00 27 47.9 -0.6
             comp=Z,0.2nm,0.3s,baz=81,slow=8.9,SNR=1.6
```

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*NEIC **16** 00:12:50.8±0.9, 30°.90S±0°.07×178°.1W±0°.2, h35^{km}±2^{km}, mb4.6/17, Error ellipse: s-maj=26.5km s-min=11.7km az=89.0*

*IDC **16** 00:12:54.2±1.8, 30°.58S×178°.19W, h67^{km}±16^{km}, mb4.4/7, mbtmp4.7/7, Error ellipse: s-maj=22.7km s-min=16.9km az=113.0*

ISC 16 00:12:50.2±0.6**, 30°.93S**±0°.05×**178°.1W**±0°.1**, h35**^{km}**, n91,** σ**1^{s}.64**/93**, mb4.8**/19**, 5C, Kermadec Islands**

```
Code  Station Name        Δ°   AZ°    Phase ID              Time      Res
                                     Op       ISC        h  m  s     ISC
GLKZ  Green Lake          1.67   4   P        Pn         00 13 15.8 -1.1
GLKZ                                 S        Sn         00 13 34.1 -3.0
RAO   Raoul Island        1.68   4   Pn       Pn         00 13 17.0 -0.1
RAO                                  Sn       Sn         00 13 35.2 -2.2
RAO   Raoul Island        1.68   4   P        Pn         00 13 17.4 +0.3
             1µm,0.2s,baz=180,slow=20,SNR=20
RAO                                  S        Sn         00 13 33.9 -3.4
             4µm,0.3s,baz=200,slow=17,SNR=13
RIZ   Raoul Island        1.69   4   P        Pn         00 13 17.1 -0.1
RIZ                                  S        Sn         00 13 34.1 -3.4
WMGZ  Waiomatatini S      7.46 202   P        Pn         00 14 35.5 -1.0
WMGZ                                 S        Sn         00 16 00.8 +1.0
PKGZ  Pakihiroa           7.61 204   P        Pn         00 14 37.3 -1.3
PKGZ                                 S        Sn         00 16 01.8 -1.8
HAZ   Te Kaha             7.62 206   P        Pn         00 14 37.7 -1.0
HAZ                                  S        Sn         00 16 05.1 +1.2
PUZ   Puketiti            7.74 202   P        Pn         00 14 38.5 -1.9
PUZ                                  S        Sn         00 16 04.4 -2.4
RUGZ  Raukumara Rang      7.85 205   P        Pn         00 14 41.8 -0.1
RUGZ                                 S        Sn         00 16 10.2 +0.6
TWGZ  Tauwhareparae       7.93 203   S        Sn         00 16 08.8 -2.6
WCZ   Waipu Caves         8.07 230   P        Pn         00 14 52.1 +7.2
CNGZ  Carnagh Statio      8.13 201   P        Pn         00 14 44.6 -1.1
CNGZ                                 S        Sn         00 16 15.8 -0.6
OUZ   Omahuta             8.20 236   P        Pn         00 14 52.1 +5.5
TKGZ  Te Karaka           8.21 203   S        Sn         00 16 15.8 -2.5
MWZ   Matawai             8.23 205   P        Pn         00 14 45.5 -1.6
MWZ                                  S        Sn         00 16 16.4 -2.4
URZ   Urewera             8.32 207   P        Pn         00 14 45.9 -2.3
             4.5nm,0.4s,baz=349,slow=5.2,SNR=7.6
URZ                                  S        Sn         00 16 20.3 -0.7
             16nm,0.3s,baz=308,slow=19,SNR=16
URZ   Urewera             8.32 207   P        Pn         00 14 46.5 -1.7
URZ                                  S        Sn         00 16 20.2 -0.8
RIGZ  Rimuhau             8.48 203   P        Pn         00 14 47.7 -2.8
RIGZ                                 S        Sn         00 16 20.2 -4.8
PRGZ  Paritu Road         8.64 202   S        Sn         00 16 26.5 -2.4
SNGZ  Shannon Statio      8.69 204   P        Pn         00 14 52.3 -1.1
SNGZ                                 S        Sn         00 16 29.0 -1.2
MHGZ  Mahia Peninsul      8.84 201   P        Pn         00 14 52.1 -3.3
MHGZ                                 S        Sn         00 16 30.9 -2.9
MTHZ  Maungataniwha       8.94 206   P        Pn         00 14 57.0 +0.2
MTHZ                                 S        Sn         00 16 35.3 -1.0
NMHZ  Naumai              9.16 206   P        Pn         00 14 58.5 -1.5
BKZ   Black Stump Fm      9.34 207   P        Pn         00 14 59.7 -2.7
ETVZ  East Tongariro      9.64 210   P        Pn         00 15 12.9 +6.4
KAHZ  Kahuranaki          9.76 204   P        Pn         00 15 03.9 -4.2
CTZ   Chatham Island     12.83 175   Pn       Pn         00 15 49.0 -1.0
MSVF  Nonsavu            13.61 344   P        Pn         00 16 02.4 +1.6
             2.7nm,0.6s,baz=218,slow=19,SNR=1.7
DZM   Mont Dzumac        16.42 299            P          00 16 40.9 +0.3
DZM   Mont Dzumac        16.42 299   P        P          00 16 40.0 -0.6
             6.5nm,0.9s,baz=100,slow=18,SNR=4.0
ARMA  Armidale           26.03 263   P        P          00 18 20.9 +0.6
ARMA                                 IAmb     IAmb       00 18 44.1
             comp=Z,15nm,1.4s
EIDS  Eidsvold           27.71 274   P        P          00 18 35.0 -0.3
EIDS                                 IAmb     IAmb       00 18 54.4
             comp=Z,6.2nm,1.1s
CTAO  Charters Tower     33.83 280   P        P          00 19 30.1 +0.8
CTAO                                 IAmb     IAmb       00 19 34.7
             comp=Z,8.0nm,0.7s
STKA  Stephens Creek     34.30 258   P        P          00 19 33.2 -0.1
STKA  Stephens Creek     34.30 258   P        P          00 19 34.8 +1.4
             comp=Z,11nm,0.9s,baz=103,slow=11,SNR=14
             comp=Z,11nm,0.9s
BBOO  Buckleboo          38.77 255   P        P          00 20 10.6 -0.8
COEN  Coen               39.36 287   P        P          00 20 16.4 -0.1
COEN                                 IAmb     IAmb       00 20 31.3
             comp=Z,10nm,1.1s
AS31  Alice Springs      43.02 268   P        P          00 20 46.2 -0.4
ASAR  Alice Springs      43.02 268   P        P          00 20 45.6 -1.0
ASAR  Alice Springs      43.02 268   P        P          00 20 46.5 -0.1
             comp=Z,8.8nm,0.8s,baz=106,slow=7.6,SNR=53
             comp=Z,8.8nm,0.8s
WR8   Warramunga Arr     43.92 273   P        P          00 20 53.0 -0.8
WR8                                  IAmb     IAmb       00 20 56.0
             comp=Z,7.5nm,0.8s
WRA   Warramunga Arr     44.06 273   P        P          00 20 54.7 -0.3
WRA   Warramunga Arr     44.06 273   P        P          00 20 54.6 -0.3
             comp=Z,7.7nm,0.6s,baz=113,slow=7.7,SNR=15
             comp=Z,7.7nm,0.6s
FORT  Forrest            45.86 256   P        P          00 21 09.1  0.0
KNRA  Kununurra          50.69 275   P        P          00 21 45.9 -0.6
KNRA                                 IAmb     IAmb       00 22 06.4
             comp=Z,8.8nm,1.1s
FITZ  Fitzroy Crossi     52.30 270   P        P          00 21 57.8 -0.7
FITZ  Fitzroy Crossi     52.30 270   P        P          00 21 57.1 -1.5
             comp=Z,4.1nm,0.7s,baz=167,slow=9.6,SNR=3.7
             comp=Z,4.1nm,0.7s
CASY  Casey              54.64 208   P        P          00 22 14.7 -0.3
CASY                                 IAmb     IAmb       00 22 15.9
             comp=Z,23nm,1.3s
QSPA  South Pole Qui     59.18 180   P        P          00 22 49.5 +2.1
QSPA                                 IAmb     IAmb       00 22 57.0
             comp=Z,9.0nm,0.8s
QSPA  South Pole Qui     59.18 180   P        P          00 22 50.2 +2.8
             comp=Z,7.9nm,0.8s,baz=44,slow=1.7,SNR=16
             comp=Z,7.9nm,0.8s
KKM   Kota Kinabalu      72.67 288   P        P          00 24 16.8 +1.9
```

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TROLL Troll, Antarti     77.34 180 ⇑P       P        00 24 42.7 +1.7
      comp=Z,328nm,0.8s
SNAA  Sanae              77.63 178 ⇑P       P        00 24 48.3 +5.8
      comp=Z,106nm,0.9s
SNAA  Sanae              77.63 178  P       P        00 24 43.5 +0.9
SNAA                                IAmb    IAmb     00 24 49.6
      comp=Z,6.1nm,1.0s
SNAA  Sanae              77.63 178  P       P        00 24 45.3 +2.8
      comp=Z,4.0nm,0.8s,baz=177,slow=14,SNR=18
      comp=Z,4.0nm,0.8s
VNA3  Neumayer Olymp     77.78 176 ⇑P       P        00 24 50.1 +6.8
      comp=Z,21nm,0.7s
VNA2  Neumayer--Watz     78.21 177 ⇑P       P        00 24 52.3 +6.6
      comp=Z,12nm,0.7s,baz=169,slow=5.2
VNA1  Neumayer--Stat     78.44 177 ⇑P       P        00 24 54.0 +7.1
      comp=Z,12nm,0.9s
H03S2 Juan Fernandez     80.22 123  T       T        01 53 59.6
      baz=238,slow=74,SNR=6.6
H03S1 Juan Fernandez     80.23 124  T       T        01 54 00.4
      baz=238,slow=74,SNR=6.2
H03S3 Juan Fernandez     80.24 123  T       T        01 53 59.7
      baz=238,slow=74,SNR=6.2
H03N3 Juan Fernandez     80.42 123  T       T        01 54 13.7
      baz=242,slow=73,SNR=4.0
H03N2 Juan Fernandez     80.42 123  T       T        01 54 11.8
      baz=242,slow=73,SNR=4.4
H03N1 Juan Fernandez     80.43 123  T       T        01 54 12.3
      baz=242,slow=73,SNR=3.7
PETK  Petropavlovsk-     86.31 346  P       P        00 25 27.8 -0.2
      comp=Z,3.6nm,0.6s,baz=165,slow=5.1,SNR=2.6
      comp=Z,3.6nm,0.6s
NJ2   Nanjing            86.55 311 eP       P        00 25 31.5 +1.9
NJ2                                 pmax    pmax
      comp=Z,7.0nm,0.5s
PZH   PanZhiHua          95.50 297  P       P        00 26 13.8 +2.0
HHC   Hu-ho-hao-te       96.56 314 eP       P        00 26 18.6 +2.3
HHC                                 pmax    pmax
      comp=Z,8.0nm,0.8s
MKAR  Makanchi Array    118.07 310  PKP     PKPdf    00 31 31.1 -2.0
      comp=Z,0.4nm,0.6s,baz=178,slow=1.2,SNR=2.7
ZALV  Zalesovo Beam     118.39 318  PKP     PKPdf    00 31 31.9 -1.5
      comp=Z,0.3nm,0.3s,baz=57,slow=10,SNR=1.5
KURBB Kurchatov Arra    121.41 313  PKP     PKPdf    00 31 37.8 -1.5
      comp=Z,1.2nm,0.6s,baz=117,slow=1.7,SNR=8.3
BVAR  Borovoye Array    126.74 315  PKP     PKPdf    00 31 48.4 -1.1
      comp=Z,0.8nm,0.5s,baz=162,slow=1.4,SNR=4.8
ARCES ARCESS Array B    139.09 348  PKhKP   PKPpre   00 32 07.1
      comp=Z,3.3nm,0.8s,baz=328,slow=1.9,SNR=5.1
KBZ   Khabaz            145.35 303  PKPbc   PKPbc    00 32 22.8 -1.2
      comp=Z,1.3nm,0.7s,baz=90,slow=5.1,SNR=4.3
OBN   Obninsk           145.57 325  PKPdf   PKPdf    00 32 23.5 -0.6
FIA1  FINESS Array S    145.62 340  PKPdf   PKPdf    00 32 23.2 -0.8
FINES FINESS Array B    145.62 340  PKPdf   PKPdf    00 32 23.2 -0.8
FINES FINESS Array B    145.62 340  PKPbc   PKPdf    00 32 23.1 -1.0
      comp=Z,15nm,0.6s,baz=59,slow=3.6,SNR=88
MARD  Mardin            147.38 292  PKPbc   PKPdf    00 32 29.7 +1.7
NC303 NORSAR Array S    149.07 351  PKPbc   PKPbc    00 32 33.1 -0.8
NB2   NORSAR Subarra    149.27 351  PKP     PKPbc    00 32 33.8 -0.7
      comp=Z,2.4nm,0.7s,baz=15,slow=4.1
NOA   NORSAR Array B    149.27 351  PKPbc   PKPbc    00 32 33.6 -0.9
      comp=Z,2.3nm,0.6s,baz=13,slow=4.1,SNR=13
HFS   Hagfors           149.75 348  PKPbc   PKPbc    00 32 34.6 -1.1
      comp=Z,2.6nm,0.5s,baz=343,slow=4.5,SNR=14
BNN   Bunyan            151.21 295  PKPbc   PKPbc    00 32 39.4 -0.6
MMAI  Mount Meron Ar    151.60 283  PKPbc   PKPbc    00 32 41.0  0.0
      comp=Z,4.6nm,0.8s,baz=80,slow=6.4,SNR=12
AKASG Malin Array Be    151.68 322  PKPbc   PKPbc    00 32 39.0 -1.5
AKASG Malin Array Be    151.68 322  PKPbc   PKPbc    00 32 39.4 -1.1
      comp=Z,4.1nm,0.6s,baz=53,slow=2.5,SNR=15
KIEV  Kiev              151.70 322  PKPbc   PKPbc    00 32 39.2 -1.3
BR131 Keskin Array S    152.80 298  PKPbc   PKPbc    00 32 42.1 -1.5
BRTR  Keskin Array B    152.80 298  PKPbc   PKPbc    00 32 42.6 -1.0
      comp=Z,0.9nm,0.6s,baz=132,slow=4.1,SNR=6.1
TORD  Torodi Ar. Bea    162.30 179  PKPab   PKPab    00 33 36.3 +0.6
      comp=Z,4.9nm,0.9s,baz=166,slow=2.4,SNR=1.0
```

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*IDC **16** 00:13:50.5±1.6, 8°.33S×128°.72E, h0^{km}, mb3.6/2, mbtmp3.7/6, ML3.7/4, Error ellipse: s-maj=38.7km s-min=25.6km az=83.0*

ISC 16 00:13:56.1±1.4, 8°.59S±0°.10×128°.7E±0°.1, h35^{km}, n6, σ1ˢ.89/10, Timor Sea

```
Code  Station Name         Δ°  AZ°   Phase ID           Time     Res
                                    Op      ISC       h  m  s    ISC
BATI  Baumata             5.26 252  Pn      Pn       00 15 13.3 +1.0
      3.5nm,0.3s,baz=87,slow=19,SNR=1.6
BATI                                Sn      Sn       00 16 12.8 +1.0
      4.1nm,0.3s,baz=22,slow=19,SNR=1.5
      10nm,0.3s
FITZ  Fitzroy Crossi      9.92 197  Pn      Pn       00 16 17.1 +0.7
      0.4nm,0.3s,baz=21,slow=11,SNR=16
FITZ                                Sn      Sn       00 18 03.4 -3.1
      1.8nm,0.3s,baz=302,slow=19,SNR=12
      0.9nm,0.3s
WRA   Warramunga Arr     12.53 155  Pn      Pn       00 16 53.5 +1.6
      0.6nm,0.3s,baz=328,slow=13,SNR=12
WRA                                 Sn      Sn       00 19 11.1 +0.7
      1.2nm,0.3s,baz=330,slow=22,SNR=11
      1.1nm,0.5s
ASAR  Alice Springs      15.79 162  Pn      Pn       00 17 37.7 +1.7
      0.2nm,0.3s,baz=340,slow=9.6,SNR=9.2
ASAR                                Sn      Sn       00 20 28.6 -1.4
      0.3nm,0.3s,baz=352,slow=25,SNR=4.8
      0.5nm,0.5s
MKAR  Makanchi Array     68.87 328  P       P        00 24 55.7 -1.6
      0.2nm,0.5s,baz=127,slow=7.7,SNR=2.1
      0.2nm,0.5s
KURBB Kurchatov Arra     73.21 329  P       P        00 25 21.9 -1.6
      0.6nm,0.6s,baz=136,slow=4.5,SNR=7.8
      0.6nm,0.6s
```

IDC 16 00:31:05.8±9.9, 31°.49S×178°.63W, h0^{km}, mb3.2/2, mbtmp3.2/2, Error ellipse: s-maj=440.3km s-min=62.0km az=158.0, Kermadec Islands region

```
Code  Station Name         Δ°  AZ°   Phase ID           Time     Res
                                    Op      ISC       h  m  s    ISC
ASAR  Alice Springs      42.52 268  P       P        00 39 02.9 -0.5
      0.2nm,0.7s,baz=97,slow=7.9,SNR=1.7
      0.2nm,0.7s
WRA   Warramunga Arr     43.61 274  P       P        00 39 12.4 +0.2
      0.2nm,0.5s,baz=115,slow=8.1,SNR=1.8
      0.2nm,0.5s
FINES FINESS Array B    145.97 339  PKPbc   PKPdf    00 50 45.9 -0.1
      1.7nm,0.9s,baz=28,slow=6.5,SNR=5.7
```

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*IDC **16** 00:34:58.1±1.8, 2°.24N×127°.29E, h0^{km}, mb3.7/4, mbtmp3.8/4, Error ellipse: s-maj=96.0km s-min=26.0km az=70.0*

*DJA **16** 00:35:09.3±1.0, 2°N±2°×12°7E±°, h22^{km}±9^{km}, M4.3/13, mB5.5/2, mb4.4/7, MLv4.2/13, Mw(mB)5.0/2*

ISC 16 00:35:07.5±1.1, 2°.24N±0°.07×127°.03E±0°.08, h63^{km}, n13, σ2ˢ.16/17, mb3.7/3, Northern Molucca Sea

```
Code  Station Name         Δ°  AZ°   Phase ID           Time     Res
                                    Op      ISC       h  m  s    ISC
TNTI  Ternate             1.49 167  P       Pn       00 35 35.2 +3.0
TNTI                                S       Sn       00 35 54.9 +4.2
SGSI  Sangihe             2.08 314  P       Pn       00 35 41.6 +1.5
SGSI                                S       Sn       00 36 06.5 +1.6
KMSI  Cibinong            3.46 242  P       Pn       00 36 00.1 +1.1
KMSI                                S       Sn       00 36 39.3 +0.5
SANI  Sanana              4.38 194  P       Pn       00 36 11.6 +0.1
LUWI  Luwuk               5.36 233  P       Pn       00 36 26.8 +1.9
      0.4nm4μm33nm,0.6s
MRSI  Marisa              5.38 251  P       Pn       00 36 26.5 +1.3
NLAI  Namlea              5.44 179  P       Pn       00 36 26.7 +0.7
      25nm,0.4s
APSI  Ampana              6.22 240  P       Pn       00 36 36.9 +0.2
      0.2nm41nm,1.2s
MPSI  Mapaga              7.37 255  P       Pn       00 36 54.7 +2.2
FITZ  Fitzroy Crossi     20.25 184  P       P        00 39 35.5 -2.3
      1.6nm,0.4s,baz=8.6,slow=8.8,SNR=13
      1.6nm,0.4s
WRA   Warramunga Arr     23.18 162  P       P        00 40 06.3 -2.7
      3.4nm,0.5s,baz=343,slow=11,SNR=37
      3.4nm,0.5s
ASAR  Alice Springs      26.60 166  P       P        00 40 37.8 -2.3
      0.7nm,0.6s,baz=351,slow=14,SNR=17
ASAR                                PcP     PcP      00 44 01.4 -1.8
      0.2nm,0.5s,baz=333,slow=2.3,SNR=2.0
      0.7nm,0.6s
MKAR  Makanchi Array     58.95 326  P       P        00 45 01.0 +0.6
      0.5nm,0.9s,baz=119,slow=6.8,SNR=3.0
      0.5nm,0.9s
```

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*IDC **16** 00:35:42.2±1.4, 29°.85N×142°.73E, h0^{km}, mb3.7/7, mbtmp3.6/8, ML2.6/1, Error ellipse: s-maj=54.9km s-min=30.6km az=70.0*

ISC 16 00:35:50.9±1.4, 30°.4N±0°.3×142°.8E±0°.3, h45^{km}, n8, σ1ˢ.10/8, mb3.7/7, Southeast of Honshu

```
Code  Station Name         Δ°  AZ°   Phase ID           Time     Res
                                    Op      ISC       h  m  s    ISC
MJAR  Matsushiro Arr      7.26 329  Pn      Pn       00 37 33.6 -0.8
      0.1nm,0.3s,baz=159,slow=11,SNR=4.5
MJAR                                Sn      Sn       00 38 56.1 +0.5
      baz=158,slow=13,SNR=1.3
      1.3nm,0.5s
MKAR  Makanchi Array     48.87 307  P       P        00 44 31.6 -0.5
      0.4nm,0.7s,baz=91,slow=6.3,SNR=3.0
      0.4nm,0.7s
WRA   Warramunga Arr     50.67 190  P       P        00 44 39.2 -6.7
      0.4nm,0.6s,baz=9.4,slow=7.8,SNR=2.9
      0.4nm,0.6s
BVAR  Borovoye Array     56.05 316  P       P        00 45 26.9 +1.9
      0.3nm,0.4s,baz=75,slow=6.8,SNR=2.9
      0.3nm,0.4s
FINES FINESS Array B     75.27 334  P       P        00 47 28.8  0.0
      0.8nm,0.9s,baz=36,slow=6.3,SNR=1.3
      0.8nm,0.9s
HFS   Hagfors            80.65 337  P       P        00 47 57.7 -0.9
      1.1nm,0.8s,baz=62,slow=6.7,SNR=1.8
      1.1nm,0.8s
BRTR  Keskin Array B     84.19 313  P       P        00 48 17.1 -0.6
      0.3nm,0.6s,baz=64,slow=3.4,SNR=3.6
      0.3nm,0.6s
TXAR  Lajitas Array      93.22  53  P       P        00 49 01.3 +0.3
      0.4nm,0.8s,baz=313,slow=4.6,SNR=4.2
      0.4nm,0.8s
```

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*NEIC **16** 00:38:23.4±1.3, 36°.56N±0°.01×115°.20W±0°.01, h5^{km}±1^{km}, Error ellipse: s-maj=2.8km s-min=2.3km az=182.0*

REN 16 00:38:23.9±1.2, 36°.563N±0°.007×115°.23W±0°.02, h8^{km}±4^{km}, ML2.7/30, ML2.5/62(NEIC), Error ellipse: s-maj=2.1km s-min=1.0km az=80.0, California-Nevada border region

```
Code  Station Name         Δ°  AZ°   Phase ID           Time     Res
                                    Op      ISC       h  m  s    ISC
SHPR  Sheep Range         0.08 135          Pg       00 38 26.6 +0.5
SHPR                                Sg      Sg       00 38 28.4 +0.7
SHPR                                IAML             00 38 28.5
      comp=N,2μm,0.5s
SHPR                                IAML             00 38 28.6
      comp=E,3μm,0.2s
MCY   Mercury             0.60 280          Pg       00 38 35.6 +0.1
MCY                                         Sb       00 38 44.5 -1.0
CPY   CP-1                0.76 299          Pg       00 38 38.6 +0.1
NSP   Numbskull Pass      0.81 282          Pg       00 38 39.5  0.0
NSP                                         Sb       00 38 51.3 -0.1
AMDNV Amargosa            0.85 263          Pg       00 38 40.2 -0.1
AMDNV                                       Sg       00 38 51.8 +0.3
PRN   Pahroc Range        0.85  10          Pg       00 38 40.2 -0.2
PRN                                 IAML             00 38 54.9
      comp=E,186nm,0.5s
PRN                                 IAML             00 38 56.5
      comp=N,219nm,0.5s
V12A  Nelson              0.89 160          Pg       00 38 40.5 -0.5
V12A                                Sg      Sg       00 38 52.0 -0.6
V12A                                IAML             00 38 55.5
      comp=N,290nm,0.3s
SDH   Striped Hills       0.90 276          Pg       00 38 41.0 -0.1
TPNV  Topopah Spring      0.91 296          Pg       00 38 41.2 -0.1
TPNV                                Sg      Sg       00 38 53.6 +0.5
S11A  Rachel              1.16 339          Pg       00 38 45.5 -0.7
S11A                                Sg      Sg       00 39 01.2  0.0
GWY   Greenwater Val      1.22 252          Pg       00 38 47.2 -0.2
GWY                                 Sg      Sg       00 39 02.8 -0.4
GWY                                 IAML             00 39 06.2
      comp=N,179nm,0.4s
GWY                                 IAML             00 39 07.0
      comp=E,166nm,0.5s
TUQ   Turquoise Moun      1.26 207          Pn       00 38 47.5 -0.5
QSM   Queen of Sheba      1.45 246          Pn       00 38 50.5 -0.1
QSM                                 IAML             00 39 12.2
      comp=E,71nm,0.2s
QSM                                 IAML             00 39 12.7
      comp=N,98nm,0.4s
SGV   South Grapevin      1.51 287          Pb       00 38 52.0 -0.3
LCMT  Little Creek M      1.66  74          Pn       00 38 53.1 -0.4
LCMT                                IAML             00 39 15.1
      comp=N,48nm,0.5s
LCMT                                IAML             00 39 15.2
      comp=E,48nm,0.5s
GRAC  Grapevine Rang      1.77 285          Pb       00 38 56.4 -0.3
GMN   Gold Mountain       1.79 295          Pn       00 38 56.0 +0.7
GMN                                 IAML             00 39 22.2
      comp=N,52nm,0.5s
GMN                                 IAML             00 39 23.8
      comp=E,42nm,0.3s
GSC   Goldstone, Bar      1.79 226          Pn       00 38 55.4 +0.1
GSC                                 IAML             00 39 25.3
      comp=N,34nm,2.5s
GSC                                 IAML             00 39 26.3
      comp=E,39nm,0.7s
R11B  Troy Canyon, C      1.81 351          Pn       00 38 55.4 -0.2
R11B                                IAML             00 39 21.4
      comp=E,32nm,1.0s
GMRC  Granite Mounta      1.81 191          Pn       00 38 54.5 -1.1
W13A  Hualapai Mount      1.82 143          Pn       00 38 54.6 -1.3
W13A                                IAML             00 39 22.1
      comp=E,37nm,0.6s
TPH   Tonopah             2.19 314          Pn       00 39 00.8 -0.1
PSUT  Pine Spring         2.25  29          Pn       00 39 01.2 -0.6
DSP   Deep Springs        2.34 291          Pn       00 39 03.1 +0.4
U15A  North Rim           2.37  92          Pn       00 39 03.6 +0.2
U15A                                IAML             00 39 38.0
      comp=N,22nm,0.7s
U15A                                IAML             00 39 42.4
      comp=E,30nm,1.0s
NV11  Mina Array Sit      2.98 310          Pn       00 39 11.5 -0.2
NV08  Mina Array Sit      3.07 308          Pn       00 39 13.2 +0.3
NVAR  Mina Array Bea      3.07 308          Pn       00 39 13.1 +0.1
MVU   Marysvale           3.08  50          Pn       00 39 13.3 +0.1
MVU                                 IAML             00 40 03.9
      comp=E,14nm,1.6s
MVU                                 IAML             00 40 05.0
      comp=N,14nm,0.4s
NV09  Mina Array Sit      3.10 308          Pn       00 39 13.6 +0.3
LHV   Little Huntoon      3.10 304          Pn       00 39 13.4 +0.2
LHV                                 IAML             00 40 09.5
      comp=N,18nm,0.5s
LHV                                 IAML             00 40 12.7
      comp=E,24nm,0.6s
PFO   Pinyon Flats O      3.11 199  Pn      Pn       00 39 13.2 -0.3
Y14A  Wickenburg          3.19 145          Pn       00 39 15.6 +1.1
Y14A                                IAML             00 40 11.0
      comp=N,13nm,0.6s
HMU   Henry Mountain      3.83  68  Pn      Pn       00 39 24.2 +0.7
113A  Mohawk Valley,      3.97 162  Pn      Pn       00 39 24.6 -0.5
```

CATAC 16 00:38:25.7±0.6, 13°N±5°×8°7W±°, h146^{km}±4^{km}, M2.5/19, MLv2.5/19, Error ellipse: s-maj=12.1km s-min=5.9km az=42.3, confirmed, Near coast of Nicaragua

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Code  Station Name         Δ°  AZ°   Phase ID           Time     Res
                                    Op      ISC       h  m  s    ISC
POLN  Al Sur del Vol      0.29 122  P       Pn       00 38 47.2 +1.4
QUEN  Al S del Volca      0.30 135  P       Pn       00 38 47.4 +1.5
HERN  Volcan Telica       0.30 130  P       Pn       00 38 46.0 +0.1
HOYN  Al Sur del Vol      0.31 131  P       Pn       00 38 46.2 +0.3
TEL3  Telica 3            0.32 137  P       Pn       00 38 47.3 +1.4
CNGN  Cerro Negro         0.47 130  P       Pn       00 38 48.4 +1.8
POTN  Potosi Cosigui      0.47 294  P       Pn       00 38 46.3 -0.2
CNGA  Al SSO del Vol      0.47 131  P       Pn       00 38 48.8 +2.2
CSGN  Cosiguina Volc      0.51 290  P       Pn       00 38 46.2 -0.6
MOMN  Momotombo           0.65 127  P       Pn       00 38 49.2 +1.7
MOM2  El Cardon           0.68 123  P       Pn       00 38 49.1 +1.4
MOM2                                S       Sn       00 39 06.5 +2.2
LIMN  Finca el Limon      0.73  69  P       Pn       00 38 49.4 +1.3
LIMN  Finca el Limon      0.73  69  S       Sn       00 39 08.8 +3.6
COPN  Copaltepe           0.78 143  P       Pn       00 38 49.9 +1.5
APQ3  Volcan Apoyequ      0.86 128  P       Pn       00 38 49.8 +0.8
APQ3                                S       Sn       00 39 07.2 +0.5
CNCH  Conchagua           0.88 302  P       Pn       00 38 49.0 -0.3
CNCH  Conchagua           0.88 302  S       Sn       00 39 06.4 -0.8
SAPS  Ciudad Sandino      0.90 134  S       Sn       00 39 07.6 +0.2
SAPS  Ciudad Sandino      0.90 134  P       Pn       00 38 50.1 +0.7
TGUH  Tegucigalpa,Un      1.26 351  P       Pn       00 38 52.1 -0.6
TGUH                                S       Sn       00 39 13.5  0.0
PACA  Pacayal             1.39 299  P       Pn       00 38 53.1 -0.9
BOAB  BOACO BROADBAN1.41 104        P       Pn       00 38 55.7 +1.6
MORN  Al O del Volca      1.87 132  P       Pn       00 39 00.6 +1.4
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*WEL **16** 00:39:28.4±1.0, 32°S±5°×17°8W±1°8, h33^{km}, M4.6/7, mB5.1/3, ML5.0/9, MLv4.6/7, Mw(mB)4.5/3, Error ellipse: s-maj=24.8km s-min=3.0km az=105.0, confirmed*

*IDC **16** 00:39:29.0±0.7, 31°.81S×177°.97W, h0^{km}, mb4.1/6, mbtmp4.1/7, ML4.1/1, Error ellipse: s-maj=27.3km s-min=20.5km az=88.0*

*NEIC **16** 00:39:31.2±1.7, 31°.81S±0°.09×177°.9W±0°.2, h10^{km}±1^{km}, mb4.5/13, Error ellipse: s-maj=29.4km s-min=15.0km az=89.0*

ISC 16 00:39:32.5±0.6, 31°.94S±0°.06×178°.1W±0°.1, h24^{km}, n65, σ2ˢ.24/78, mb4.3/14, 4C, Kermadec Islands region

```
Code  Station Name         Δ°  AZ°   Phase ID           Time     Res
                                    Op      ISC       h  m  s    ISC
GLKZ  Green Lake          2.68   3  P       Pn       00 40 11.3 -2.8
GLKZ                                S       Sn       00 40 42.9 -2.9
RAO   Raoul Island        2.69   3  Pn      Pn       00 40 12.1 -2.1
      40nm,0.3s,baz=232,slow=19,SNR=1.7
RAO                                 Sn      Sn       00 40 43.4 -2.6
      62nm,0.3s,baz=86,slow=23,SNR=2.0
      116nm,0.3s
RIZ   Raoul Island        2.69   3  P       Pn       00 40 11.5 -2.8
RIZ                                 S       Sn       00 40 44.4 -1.7
MXZ   Matakaoa Point      6.34 207  S       Sn       00 42 15.8 -0.3
WMGZ  Waiomatatini S      6.53 205  P       Pn       00 41 03.2 -3.9
WMGZ                                S       Sn       00 42 14.8 -5.9
PKGZ  Pakihiroa           6.70 207  P       Pn       00 41 03.8 -5.6
PKGZ                                S       Sn       00 42 23.9 -1.0
HAZ   Te Kaha             6.72 209  P       Pn       00 41 08.3 -1.4
HAZ                                 S       Sn       00 42 27.0 +1.5
PUZ   Puketiti            6.81 205  P       Pn       00 41 07.2 -3.7
PUZ                                 S       Sn       00 42 26.8 -1.0
RUGZ  Raukumara Rang      6.94 209  P       Pn       00 41 07.7 -5.2
RUGZ                                S       Sn       00 42 27.8 -3.4
TWGZ  Tauwhareparae       7.01 206  P       Pn       00 41 09.6 -4.0
TWGZ                                S       Sn       00 42 31.6 -0.9
CNGZ  Carnagh Statio      7.20 204  P       Pn       00 41 09.6 -6.6
CNGZ                                S       Sn       00 42 34.2 -3.0
TKGZ  Te Karaka           7.29 206  S       Sn       00 42 36.1 -3.2
MWZ   Matawai             7.32 208  P       Pn       00 41 14.8 -3.2
MWZ                                 S       Sn       00 42 39.6 -0.6
URZ   Urewera             7.43 211  Pn      Pn       00 41 18.1 -1.3
      0.7nm,0.3s,baz=30,slow=23,SNR=1.3
URZ                                 Sn      Sn       00 42 40.8 -2.1
      6.0nm,0.3s,baz=32,slow=18,SNR=12
URZ   Urewera             7.43 211  P       Pn       00 41 17.0 -2.3
URZ                                 S       Sn       00 42 41.4 -1.5
RIGZ  Rimuhau             7.55 206  S       Sn       00 42 43.9 -2.1
OUZ   Omahuta             7.67 243  P       Pn       00 41 29.7 +7.0
PRGZ  Paritu Road         7.70 204  S       Sn       00 42 47.1 -2.5
KNZ   Kokohu              7.86 205  S       Sn       00 42 50.2 -3.4
MTHZ  Maungataniwha       8.04 210  P       Pn       00 41 24.6 -3.3
MTHZ                                P       Sn       00 42 56.8 -1.2
WHHZ  Waihua              8.08 207  S       Sn       00 42 56.8 -2.0
BKZ   Black Stump Fm      8.45 210  P       Pn       00 41 33.3 -0.2
BKZ                                 S       Sn       00 43 05.8 -2.3
MCHZ  McNeill Hill        8.60 208  S       Sn       00 43 10.1 -1.7
KAHZ  Kahuranaki          8.84 206  P       Sn       00 43 13.4 -4.2
MOVZ  Moawhango           8.98 212  P       Pn       00 41 38.0 -2.7
MOVZ                                S       Sn       00 43 17.2 -3.8
PXZ   Pawanui             9.05 205  S       Sn       00 43 17.6 -5.0
PNHZ  Pukenui             9.20 209  S       Sn       00 43 21.6 -4.9
ARMA  Armidale           25.92 265  P       P        00 45 05.9 +2.9
ARMA                                IAmb    IAmb     00 45 31.9
      comp=Z,14nm,1.2s
EIDS  Eidsvold           27.78 276  P       P        00 45 21.4 +1.8
EIDS                                IAmb    IAmb     00 45 21.9
      comp=Z,10nm,1.5s
CTAO  Charters Tower     34.01 282  P       P        00 46 16.0 +1.4
BBOO  Buckleboo          38.51 256  P       P        00 46 54.0 +1.0
AS31  Alice Springs      42.98 269  P       P        00 47 30.9 +0.9
ASAR  Alice Springs      42.98 269  P       P        00 47 31.1 +1.0
      comp=Z,1.3nm,0.5s,baz=105,slow=7.1,SNR=28
      comp=Z,1.3nm,0.5s
WR8   Warramunga Arr     43.96 274  P       P        00 47 38.3 +0.3
WR8                                 IAmb    IAmb     00 48 07.5
      comp=Z,4.3nm,0.9s
WRA   Warramunga Arr     44.11 274  P       P        00 47 39.2 +0.1
WRA   Warramunga Arr     44.11 274  P       P        00 47 39.8 +0.7
      comp=Z,1.9nm,0.4s,baz=114,slow=7.7,SNR=28
      comp=Z,1.9nm,0.4s
WB0   Warramunga Arr     44.13 274  P       P        00 47 40.2 +0.8
WB0                                 IAmb    IAmb     00 47 59.9
      comp=Z,7.3nm,1.1s
VNDA  Vanda              46.56 186  P       P        00 48 01.5 +3.7
      comp=Z,0.3nm,0.4s,baz=335,slow=12,SNR=1.7
KNRA  Kununurra          50.77 276  P       P        00 48 32.7 +1.7
KNRA                                IAmb    IAmb     00 48 35.0
      comp=Z,12nm,1.4s
FITZ  Fitzroy Crossi     52.30 271  P       P        00 48 43.3 +0.9
FITZ  Fitzroy Crossi     52.30 271  P       P        00 48 43.5 +1.1
      comp=Z,3.6nm,1.0s,baz=63,slow=15,SNR=2.6
      comp=Z,3.6nm,1.0s
CASY  Casey              53.75 208  P       P        00 48 54.3 +1.9
QSPA  South Pole Qui     58.17 180  P       P        00 49 26.1 +1.9
QSPA                                IAmb    IAmb     00 49 49.6
      comp=Z,5.9nm,0.9s
QSPA  South Pole Qui     58.17 180  P       P        00 49 26.5 +2.2
      comp=Z,1.2nm,0.6s,baz=71,slow=2.0,SNR=11
      comp=Z,1.2nm,0.6s
TROLL Troll, Antarti     76.33 180 ⇑P       P        00 51 20.7 +1.4
      comp=Z,133nm,0.9s
SNAA  Sanae              76.62 178 ⇑P       P        00 51 21.4 +0.7
      comp=Z,22nm,0.7s
SNAA  Sanae              76.62 178  P       P        00 51 21.3 +0.5
SNAA                                IAmb    IAmb     00 51 36.4
      comp=Z,7.6nm,1.3s
SNAA  Sanae              76.62 178  P       P        00 51 21.5 +0.7
      comp=Z,1.0nm,0.7s,baz=169,slow=13,SNR=7.2
      comp=Z,1.0nm,0.7s
VNA3  Neumayer Olymp     76.78 176 ⇑P       P        00 51 21.2 -0.3
      comp=Z,5.8nm,0.7s
VNA2  Neumayer--Watz     77.21 177 ⇑P       P        00 51 24.8 +0.8
      comp=Z,4.3nm,0.6s,baz=173,slow=4.9
NVAR  Mina Array Bea     89.42  43  P       P        00 52 27.8 +0.3
      comp=Z,1.1nm,0.9s,baz=234,slow=5.1,SNR=4.0
      comp=Z,1.1nm,0.9s
KURBB Kurchatov Arra    122.09 313  PKP     PKPdf    00 58 24.1 -0.5
      comp=Z,0.4nm,0.3s,baz=112,slow=1.8,SNR=1.2
BVAR  Borovoye Array    127.45 315  PKP     PKiKP    00 58 34.8 -0.5
      comp=Z,0.3nm,0.5s,baz=11,slow=1.5,SNR=3.6
KBZ   Khabaz            145.89 302  PKPbc   PKPab    00 59 09.5 -0.7
      comp=Z,4.2nm,1.2s,baz=72,slow=3.2,SNR=3.8
FIA1  FINESS Array S    146.56 339  PKPdf   PKPbc    00 59 10.9 -0.2
FINES FINESS Array B    146.56 339  PKPdf   PKPbc    00 59 10.7 -0.4
FINES FINESS Array B    146.56 339  PKPbc   PKPbc    00 59 10.8 -0.3
      comp=Z,3.9nm,0.7s,baz=59,slow=2.9,SNR=19
NOA   NORSAR Array B    150.26 351  PKPbc   PKiKP    00 59 21.1 -0.6
      comp=Z,0.7nm,0.8s,baz=16,slow=4.2,SNR=3.6
ASF   Jabal al Asfar    150.43 280  PKPbc   PKPbc    00 59 21.4 -0.9
      comp=Z,1.3nm,0.8s,baz=56,slow=3.6,SNR=4.1
HFS   Hagfors           150.74 348  PKPbc   PKPbc    00 59 20.5 -1.5
      comp=Z,2.3nm,0.8s,baz=299,slow=3.0,SNR=4.5
MMAI  Mount Meron Ar    151.79 281  PKPbc   PKiKP    00 59 26.5 +0.7
      comp=Z,1.7nm,0.6s,baz=106,slow=2.7,SNR=7.9
AKASG Malin Array Be    152.47 321  PKPbc   PKiKP    00 59 28.2 +1.8
      comp=Z,0.1nm,0.3s,baz=83,slow=2.3,SNR=2.0
ILGA  Ilgaz             152.99 299  PKPbc   PKPbc    00 59 27.5 -0.5
BRTR  Keskin Array B    153.24 296  PKPbc   PKiKP    00 59 28.4 -0.3
      comp=Z,0.1nm,0.4s,baz=359,slow=8.9,SNR=2.4
BRTR                                PKPab   PKPab    00 59 41.0 +0.6
      comp=Z,0.3nm,0.4s,baz=139,slow=4.7,SNR=4.4
TORD  Torodi Ar. Bea    161.29 179  PKPab   PKPab    01 00 14.4 -0.9
      comp=Z,2.8nm,1.0s,baz=174,slow=2.3,SNR=2.3
```

IDC 16 00:45:31.3±1.5, 3°.04S×134°.92E, h0^{km}, mb3.5/2, mbtmp3.6/5, ML3.2/3, Error ellipse: s-maj=30.3km s-min=28.0km az=97.0, Irian Jaya region

```
Code  Station Name         Δ°  AZ°   Phase ID           Time     Res
                                    Op      ISC       h  m  s    ISC
JAY   Jayapura            5.81  85  Pn      Pn       00 46 59.3 +0.4
      2.0nm,0.3s,baz=242,slow=9.1,SNR=9.9
```

JAY				Sn	Sn	00 48 08.2	+2.0
	0.6nm,0.3s,baz=319,slow=19,SNR=1.6						
	4.9nm,0.4s						
WRA	Warramunga Arr	16.81	182	Pn	Pn	00 49 28.4	0.0
	baz=4.4,slow=12,SNR=1.6						
WRA				Sn	Sn	00 52 22.8	-13
	0.1nm,0.3s,baz=6.3,slow=24,SNR=2.0						
	0.4nm,0.6s						
FITZ	Fitzroy Crossi	17.51	211	P	Pn	00 49 36.6	-0.5
	0.1nm,0.3s,baz=31,slow=13,SNR=0.8						
	0.9nm,0.6s						
ASAR	Alice Springs	20.53	183	P	P	00 50 11.7	+0.1
	0.7nm,0.6s,baz=9.6,slow=11,SNR=10.0						
ASAR				S	S	00 53 53.9	-8.3
	0.3nm,0.8s,baz=2.3,slow=25,SNR=1.3						
	0.7nm,0.6s						
MKAR	Makanchi Array	67.78	324	P	P	00 56 31.0	-0.1
	0.5nm,0.5s,baz=125,slow=7.2,SNR=6.8						
	0.5nm,0.5s						

*THE **16** 00:52:31.4,37°N±2°×2°1E±°,h0km±1km,M3.1/23, MLh3.1/23*

*ATH **16** 00:52:33.8,37°.33N×20°.61E,h18km±1km,ML3.1/12, Manual Solution by F.Xalaris First location: 2019/06/16 00:53:31, This location: 2021/06/14 07:47:51 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*IDC **16** 00:52:33.0±1.4,37°.74N×20°.90E,h0km,mb3.5/5, mbtmp3.4/7,ML0.9/2,Error ellipse: s-maj=29.2km s-min=24.7km az=107.0*

ISC 16 00:52:33.5±1.3,**37°.32N**±0°.03×**20°.65E**±0°.03,**h8**km±9km, **n53**,σ**1s.52**/72,**mb3.4**/4,**Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LTHK	Lithakia	0.42	21	P	Pb	00 52 42.6	-0.7
LTHK				S	Sb	00 52 52.0	+2.3
LTHK	Lithakia	0.42	21	P	Pb	00 52 42.5	-0.7
LTHK				S	Sg	00 52 48.4	+1.2
ORTH	Orthonies,Zaky	0.54	4	P	Pb	00 52 44.6	-0.6
ORTH				S	Sb	00 52 52.1	-1.0
KTLO	Katakolo	0.63	58	P	Pb	00 52 46.8	+0.1
KTLO				S	Sn	00 52 58.8	-0.1
KTLO	Katakolo	0.63	58	P	Pb	00 52 46.9	+0.1
KTLO				S	Sb	00 52 55.6	0.0
CLEM	Kyllini,Ilia,G	0.69	34	P	Pb	00 52 47.5	-0.3
CLEM				S	Sb	00 52 57.0	-0.5
RTZL	Ratzakli, Kefa	0.76	7	P	Pb	00 52 48.9	-0.2
RTZL				S	Sn	00 53 02.4	0.0
PSDA	Pessada-Kefalo	0.80	356	P	Pb	00 52 49.0	-0.6
PSDA				S	Sn	00 53 02.6	-0.6
PSDA	Pessada-Kefalo	0.80	356	P	Pb	00 52 48.9	-0.8
PSDA				S	Sg	00 52 59.4	+0.2
KRES	Krestena	0.82	70	P	Pb	00 52 50.2	+0.1
KRES	Krestena	0.82	70	P	Pb	00 52 50.4	+0.4
ANDM	Andravida	0.83	36	P	Pg	00 52 49.5	+0.1
VLS	Valsamata	0.86	357	P	Pg	00 52 49.5	-0.5
VLS	Valsamata	0.86	357	P	Pg	00 52 49.7	-0.3
AMT	Artemida-Makis	0.87	75	P	Pb	00 52 50.9	0.0
DMLN	Damoulianata-K	0.95	347	P	Pb	00 52 52.0	-0.2
DMLN				S	Sn	00 53 06.6	-0.3
DMLN	Damoulianata-K	0.95	347	P	Pb	00 52 51.9	-0.3
PYL	PYLOS	0.97	115	P	Pg	00 52 49.8	-2.3
PYL				S	Sg	00 53 05.1	+0.4
RLS	Riolos of Patr	0.98	41	P	Pg	00 52 52.4	0.0
RLS	Riolos of Patr	0.98	41	P	Pg	00 52 52.6	+0.2
ITM	Ithomi	1.03	97	P	Pg	00 52 52.1	-1.1
ITM				S	Sb	00 53 08.5	+1.2
AXS	Araxos	1.05	33	P	Pg	00 52 53.7	0.0
AXS	Araxos	1.05	33	P	Pg	00 52 53.5	-0.2
DRO	Drossia	1.05	53	P	Pg	00 52 53.6	-0.1
DRO	Drossia	1.05	53	P	Pg	00 52 53.5	-0.2
FSK	Fiskardo	1.14	357	P	Pg	00 52 54.7	-0.7
FSK				S	Sn	00 53 14.4	+2.6
FSK	Fiskardo	1.14	357	P	Pg	00 52 55.0	-0.4
EVGI	Lefkada island	1.30	0	P	Pg	00 52 57.7	-0.8
EVGI	Lefkada island	1.30	0	P	Pg	00 52 57.4	-1.1
VLX	Vlachokerasia	1.38	87	P	Pn	00 52 59.6	+0.4
VLX				S	Sn	00 53 21.0	+3.3
KLV	Kalavryta, Ach	1.40	58	P	Pn	00 52 59.5	+0.1
KLV	Kalavryta, Ach	1.40	58	P	Pn	00 52 58.9	-0.5
NYDR	Nydri-Lefkada	1.40	2	P	Pb	00 53 00.1	+0.3
NYDR				S	Sn	00 53 20.5	+2.6
NYDR	Nydri-Lefkada	1.40	2	P	Pn	00 52 58.8	-0.5
GUR	Goura	1.48	65	P	Pn	00 53 00.5	-0.1
GUR	Goura	1.48	65	P	Pn	00 53 00.5	-0.1
EFP	Efpalio	1.49	42	P	Pb	00 53 01.7	+0.3
EFP	Efpalio	1.49	42	P	Pn	00 53 00.8	+0.2
TSLK	Tsoukalades, L	1.50	0	P	Pb	00 53 01.5	-0.2
TSLK	Tsoukalades, L	1.50	0	P	Pn	00 53 00.2	-0.6
SERG	Sergoula	1.56	45	P	Pn	00 53 02.4	+0.8
ANX	Ano Chora	1.62	38	P	Pb	00 53 03.8	0.0
VLI	Veliai	1.93	107	P	Pn	00 53 06.9	+0.3
VLI				S	Sn	00 53 32.5	+1.4
LTK	Loutraki	1.97	68	P	Pn	00 53 07.6	+0.4
OHR	Ohrid	3.79	2	i Pn	Pn	00 53 33.5	+1.2
OHR				i Sn	Sn	00 54 18.4	+1.3
IDI	Anoyia	3.98	119	Pn	Pn	00 53 36.8	+1.9
	0.1nm,0.3s,baz=302,slow=8.3,SNR=3.3						
IDI				Sn	Sn	00 54 19.4	-2.4
	0.7nm,0.3s,baz=315,slow=22,SNR=5.5						
	2.2nm,0.7s						
VAY	Valandovo	4.27	20	i Pn	Pn	00 53 40.9	+2.1
VAE	Valguarnera	4.97	274	Pn	Pn	00 53 52.4	+3.9
	0.6nm,0.3s,baz=64,slow=16,SNR=1.5						
VAE				Sn	Sn	00 54 42.3	-3.9
	1.1nm,0.3s,baz=98,slow=15,SNR=4.6						
	2.4nm,0.4s						
HFS	Hagfors	23.27	351	P	P	00 57 37.9	-3.3
	1.0nm,0.7s,baz=157,slow=16,SNR=2.0						
	1.0nm,0.7s						
FINES	FINESS Array B	24.39	6	P	P	00 57 48.0	-4.0
	0.7nm,0.9s,baz=176,slow=7.8,SNR=4.0						
	0.7nm,0.9s						
NOA	NORSAR Array B	24.48	349	P	P	00 57 50.9	-2.1
	0.5nm,0.7s,baz=163,slow=9.0,SNR=3.5						
	0.5nm,0.7s						
TORD	Torodi Ar. Bea	29.43	220	P	P	00 58 42.3	+4.5
	0.6nm,0.2s,baz=35,slow=10,SNR=3.8						
	0.6nm,0.2s						
MKAR	Makanchi Array	45.67	58	P	P	01 00 51.9	-2.8
	0.4nm,0.8s,baz=269,slow=8.6,SNR=2.2						
	0.4nm,0.8s						

IDC 16 00:52:45.0±6.7,**30°.30S**×**178°.16W,h75**km±42km,**mb3.0**/2, **mbtmp3.3**/2,**Error ellipse: s-maj=109.7km s-min=46.4km az=142.0,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.06	11	P	Pn	00 53 04.3	-0.2
	100nm,0.3s,baz=258,slow=22,SNR=1.7						
RAO				S	Sn	00 53 19.3	+0.3
	169nm,0.3s,baz=151,slow=19,SNR=2.7						
ASAR	Alice Springs	42.98	267	P	P	01 00 36.7	-0.2
	0.2nm,0.7s,baz=109,slow=8.0,SNR=2.1						
	0.2nm,0.7s						
WRA	Warramunga Arr	43.96	272	P	P	01 00 44.8	0.0
	0.2nm,0.3s,baz=111,slow=7.9,SNR=3.4						
	0.2nm,0.3s						
FINES	FINESS Array B	145.00	340	PKPbc	PKPbc	01 12 11.5	-0.8
	1.2nm,0.8s,baz=62,slow=3.3,SNR=4.6						

*GCG **16** 00:53:30.6±0.7,13°.56N×89°.98W,h61km±8km,MD3.9*

*SNET **16** 00:53:30.9±0.8,13°.53N×90°.00W,h51km±7km,ML2.5*

ISC 16 00:53:29.6±4.6,**13°.4N**±0°.2×**90°.1W**±0°.2,**h53**km±29km,**n12**, σ**0s.25**/18,**Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NUBE	Las Nubes	0.55	30	eP	Pn	00 53 41.7	-0.2
NUBE				IAML		00 53 52.5	
	comp=Z,129nm,0.1s						
NUBE	Las Nubes	0.55	30	i P	Pn	00 53 41.8	0.0
NUBE				i S	Sn	00 53 50.9	+0.2
CEVE	Cerro Verde	0.59	46	eP	Pn	00 53 42.4	0.0
CEVE				eS	Sn	00 53 51.8	+0.2
CEVE				IAML		00 53 54.3	
	comp=Z,1μm,0.2s						
SBLS	San Blas	0.60	46	eP	Pn	00 53 42.3	-0.2
SBLS				eP		00 53 42.3	
SBLS				eS	Sn	00 53 51.5	-0.2
SNJE	San Jose	0.63	45	i P	Pn	00 53 42.7	-0.1
SNJE				i P	Pn	00 53 42.7	-0.1
SNJE				eS	Sn	00 53 52.6	+0.3
SNJE				IAML		00 53 53.3	
	comp=Z,124nm,0.2s						
JAYA	Jayaque - finc	0.64	68	eP	Pn	00 53 42.6	-0.2
JAYA				eS	Sn	00 53 52.1	-0.4
JAYA	Jayaque - finc	0.64	68	i P	Pn	00 53 42.7	-0.2
JAYA				i S	Sn	00 53 52.9	+0.4
SLOZ	Alcaldia de Sa	0.66	24	eP	Pn	00 53 43.3	+0.2
LOMA	Loma Larga	0.90	75	eP	Pn	00 53 46.5	+0.3
FG16	Alotenango, Sa	0.95	333	i P	Pn	00 53 52.4	+5.4
FG16				i S	Sn	00 54 09.6	+10
MTO3	Montecristo	1.19	35	i P	Pn	00 53 50.0	-0.2
MTO3	Montecristo	1.19	35	i P	Pn	00 53 50.0	-0.2

*NEIC **16** 00:53:59.2±0.6,30°.65S±0°.06×177°.9W±0°.2,h39km±11km, mb4.6/7,Error ellipse: s-maj=29.0km s-min=7.9km az=96.0*

*IDC **16** 00:54:01.2±2.6,30°.49S×177°.91W,h63km±21km,mb3.7/5, mbtmp4.0/5,Error ellipse: s-maj=29.8km s-min=20.4km az=127.0*

ISC 16 00:54:00.6±0.7,**30°.51S**±0°.08×**178°.1W**±0°.1,**h46**km,**n38**, σ**1s.98**/31,**mb4.3**/13,**4C,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.27	9		Pn	00 54 22.8	+0.9
RAO				Sn	Sn	00 54 39.0	+1.1
RAO	Raoul Island	1.27	9	P	Pn	00 54 22.8	+0.9
	522nm,0.2s,baz=204,slow=20,SNR=9.5						
RAO				S	Sn	00 54 38.3	+0.5
	2μm,0.3s,baz=90,slow=20,SNR=9.9						
URZ	Urewera	8.67	206	P	Pn	00 55 55.7	-7.7
	6.6nm,0.5s,baz=44,slow=18,SNR=6.1						
URZ				S	Sn	00 57 28.0	-12
	12nm,0.3s,baz=303,slow=22,SNR=9.4						
MRNZ	Matariki Terra	13.12	212	Pn	Pn	00 57 02.4	-1.9
RPZ	Rata Peaks	15.73	210	P	Pn	00 57 36.3	-2.7
	5.0nm,0.6s,baz=132,slow=10.0,SNR=1.5						
CTAO	Charters Tower	33.70	279	P	P	01 00 39.4	+1.8
CTAO				IAmb	IAmb	01 00 58.6	
	comp=Z,17nm,1.4s						
STKA	Stephens Creek	34.34	257	P	P	01 00 43.9	+0.8
STKA	Stephens Creek	34.34	257	P	P	01 00 44.0	+1.0
	comp=Z,3.4nm,0.7s,baz=103,slow=10,SNR=7.4						
	comp=Z,3.4nm,0.7s						
BBOO	Buckleboo	38.83	254	P	P	01 01 20.1	-1.2
BBOO				IAmb	IAmb	01 01 22.2	
	comp=Z,28nm,1.4s						
ASAR	Alice Springs	42.99	267	P	P	01 01 55.6	0.0
	comp=Z,1.2nm,0.7s,baz=103,slow=7.3,SNR=14						
	comp=Z,1.2nm,0.7s						
WR8	Warramunga Arr	43.84	272	P	P	01 02 02.5	0.0
WR8				IAmb	IAmb	01 02 03.9	
	comp=Z,9.6nm,1.5s						
WRA	Warramunga Arr	43.99	272	P	P	01 02 03.8	+0.1
WRA	Warramunga Arr	43.99	272	P	P	01 02 03.9	+0.1
	comp=Z,1.4nm,0.5s,baz=111,slow=8.1,SNR=21						
	comp=Z,1.4nm,0.5s						
VNDA	Vanda	47.97	186	P	P	01 02 37.9	+3.6
	comp=Z,0.6nm,0.8s,baz=313,slow=4.3,SNR=1.8						
FITZ	Fitzroy Crossi	52.24	270	P	P	01 03 09.2	+1.8
FITZ				IAmb	IAmb	01 03 24.6	
	comp=Z,3.4nm,1.4s						
QSPA	South Pole Qui	59.60	180	P	P	01 03 58.2	-1.4
QSPA				IAmb	IAmb	01 04 17.5	
	comp=Z,7.2nm,1.4s						
QSPA	South Pole Qui	59.60	180	P	P	01 03 58.2	-1.4
	comp=Z,1.2nm,0.8s,baz=9.5,slow=0.8,SNR=9.3						
	comp=Z,1.2nm,0.8s						
TROLL	Troll, Antarti	77.76	180	⇑P	P	01 05 56.0	+3.5
	comp=Z,92nm,0.8s						
SNAA	Sanae	78.05	178	⇑P	P	01 05 57.8	+3.7
	comp=Z,7.5nm,0.3s						
SNAA	Sanae	78.05	178	P	P	01 05 57.5	+3.5
	comp=Z,0.6nm,0.8s,baz=206,slow=7.0,SNR=7.8						
VNA3	Neumayer Olymp	78.20	176	⇑P	P	01 05 59.2	+4.3
	comp=Z,2.8nm,0.4s						
VNA2	Neumayer--Watz	78.64	177	⇑P	P	01 06 02.1	+4.8
	comp=Z,2.7nm,0.7s,baz=177,slow=5.5						
H03S2	Juan Fernandez	80.50	124	T	T	02 35 14.0	
	baz=236,slow=74						
H03S1	Juan Fernandez	80.51	124	T	T	02 35 22.2	
	baz=236						
H03S3	Juan Fernandez	80.52	124	T	T	02 35 20.6	
	baz=236,slow=74						
H03N3	Juan Fernandez	80.69	123	T	T	02 35 22.9	
	baz=236						
H03N2	Juan Fernandez	80.69	123	T	T	02 35 31.2	
	baz=236						
H03N1	Juan Fernandez	80.71	123	T	T	02 35 22.9	
	baz=236						
NVAR	Mina Array Bea	88.40	43	P	P	01 06 45.7	-2.2
	comp=Z,0.2nm,0.4s,baz=236,slow=5.4,SNR=1.6						
	comp=Z,0.2nm,0.4s						
BVAR	Borovoye Array	126.40	316	PKP	PKPdf	01 12 56.7	-1.3
	comp=Z,0.3nm,0.4s,baz=132,slow=2.2,SNR=2.0						
FIA1	FINESS Array S	145.21	340	PKPbc	PKPbc	01 13 31.0	-1.1
FINES	FINESS Array B	145.21	340	PKPbc	PKPbc	01 13 31.0	-1.1
	comp=Z,2.0nm,0.6s,baz=54,slow=4.0,SNR=21						
NB2	NORSAR Subarra	148.84	351	PKP	PKPbc	01 13 41.7	-0.8
	comp=Z,0.5nm,0.6s,baz=14,slow=2.6						
NOA	NORSAR Array B	148.84	351	PKPbc	PKPbc	01 13 40.9	-1.7
	comp=Z,1.0nm,0.8s,baz=14,slow=4.1,SNR=4.4						
HFS	Hagfors	149.33	348	PKPbc	PKPbc	01 13 42.1	-1.6
	comp=Z,1.7nm,0.8s,baz=76,slow=6.3,SNR=3.6						
AKASG	Malin Array Be	151.32	322	PKPbc	PKPbc	01 13 45.6	-3.2
	comp=Z,0.1nm,0.3s,baz=74,slow=1.6,SNR=1.8						
MMAI	Mount Meron Ar	151.44	284	PKPbc	PKPbc	01 13 48.1	-1.6
	comp=Z,0.1nm,0.3s,baz=105,slow=6.4,SNR=3.7						
BRTR	Keskin Array B	152.55	298	PKPbc	PKPbc	01 13 50.5	-1.7
	comp=Z,0.4nm,0.7s,baz=96,slow=2.9,SNR=1.3						

*SJA **16** 00:58:42.0±1.0,31°.47S×72°.55W,h10km,ML3.8,MW3.5*

*NEIC **16** 00:58:43.5±1.5,31°.46S±0°.04×72°.62W±0°.06,h10km±1km, mb4.5/11,ML4.0(GUC),Error ellipse: s-maj=8.6km s-min=7.5km az=284.0*

*IDC **16** 00:58:43.1±0.9,31°.51S×72°.65W,h0km,mb4.4/7, mbtmp4.2/11,ML3.8/5,Error ellipse: s-maj=30.1km s-min=18.2km az=108.0*

*GUC **16** 00:58:45.1±0.7,31°.51S×72°.49W,h20km,ML4.0*

ISC 16 00:58:42.9±1.0,**31°.48S**±0°.04×**72°.56W**±0°.05,**h6**km±5km, **n106**,σ**1s.27**/118,**mb4.4**/12,**8C-8D,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	1.13	45		Pb	00 59 04.8	0.0
CO06				Sg	Sg	00 59 19.2	0.0
CO06	Fray Jorge	1.13	45	⇑iP	Pb	00 59 04.8	0.0
CO06				eS	Sg	00 59 19.0	-0.2
CO06				IAML		00 59 20.1	
	comp=N,3μm,0.5s						
CO02	Combarbal	1.36	79		Pb	00 59 08.7	-0.2
CO02				Sg	Sb	00 59 26.2	-0.4
CO02	Combarbal	1.36	79	⇑iP	Pb	00 59 08.8	-0.2
CO02				eS	Sb	00 59 25.6	-1.0
CO02				IAML		00 59 27.0	
	comp=N,14μm,0.3s						
VA06	Catapilco	1.52	136		Pn	00 59 10.6	-0.1
VA06	Catapilco	1.52	136	⇓iP	Pn	00 59 10.6	-0.1
VA06				eS	Sn	00 59 28.2	-2.6
VA06				IAML		00 59 30.0	
	comp=E,3μm,0.6s						
VA01	Torpederas	1.72	154		Pn	00 59 13.2	-0.3
CO03	El Pedregal	1.73	69		Pn	00 59 14.1	+0.4
CO03	El Pedregal	1.73	69	⇑iP	Pn	00 59 14.0	+0.4
CO03				eS	Sn	00 59 35.7	-0.4
CO03				IAML		00 59 36.8	
	comp=E,5μm,0.3s						
CO05	La Serena	1.93	37		Pn	00 59 16.0	-0.3
CO05	La Serena	1.93	37	eP	Pn	00 59 16.0	-0.3
CO05				IAML		00 59 41.8	
	comp=E,2μm,0.4s						
ROCH	El Roble	1.98	139	⇓iP	Pn	00 59 17.5	+0.2
ROCH				⇓iP	Pn	00 59 17.4	+0.2
ROCH				IAML		00 59 45.1	
	comp=N,2μm,0.5s						
GO04	Tololo Observa	2.00	50		Pn	00 59 17.8	+0.2
GO04	Tololo Observa	2.00	50	⇑iP	Pn	00 59 17.7	+0.2
VA03	San Esteban	2.13	127		Pn	00 59 20.1	+0.8
VA03	San Esteban	2.13	127	⇓iP	Pn	00 59 20.0	+0.8
VA03				IAML		00 59 56.8	
	comp=E,2μm,0.4s						
VA03	San Esteban	2.13	127	eP	Pn	00 59 20.0	+0.8
VA03				eS	Sn	00 59 46.2	+0.1
VA03				IAML		00 59 52.0	
	comp=Z,777nm,0.5s						
MT02	Curacav	2.14	146		Pn	00 59 19.5	+0.2
MT02	Curacav	2.14	146	⇓iP	Pn	00 59 19.4	+0.1
PEL	Peldehue	2.29	137		Pn	00 59 22.0	+0.6
PEL	Peldehue	2.29	137	⇓iP	Pn	00 59 22.1	+0.6
PEL				IAML		00 59 50.6	
	comp=N,648nm,0.3s						
VA05	Santo Domingo	2.31	160		Pn	00 59 21.3	-0.3
VA05	Santo Domingo	2.31	160	eP	Pn	00 59 21.1	-0.4
VA05				IAML		00 59 48.8	
	comp=N,2μm,0.3s						
MT05	Renca	2.45	142		Pn	00 59 24.2	+0.6
MT05	Renca	2.45	142	eP	Pn	00 59 24.1	+0.6
MT05				IAML		00 59 56.0	
	comp=E,931nm,0.4s						
MT10	Hacienda Santa	2.48	137	⇓iP	Pn	00 59 24.8	+0.8
MT10				IAML		00 59 56.0	
	comp=N,2μm,0.3s						
MT14	Cerro Cal¡n	2.56	139	eP	Pn	00 59 25.9	+0.7
MT14				IAML		00 59 58.7	
	comp=E,630nm,0.2s						
MT16	CCHEN	2.59	139		Pn	00 59 26.0	+0.5
CO01	Juntas del Tor	2.60	55		Pn	00 59 27.0	+1.3
CO01	Juntas del Tor	2.60	55	eP	Pn	00 59 27.1	+1.3
CO01				IAML		01 00 01.7	
	comp=N,374nm,0.5s						
MT01	Popeta	2.62	155		Pn	00 59 25.6	-0.2
MT01	Popeta	2.62	155	i P	Pn	00 59 25.6	-0.2
MT01				IAML		01 00 02.0	
	comp=E,406nm,0.3s						
MT09	Talagante	2.65	150		Pn	00 59 26.9	+0.5
MT09	Talagante	2.65	150	eP	Pn	00 59 26.7	+0.4
MT09				IAML		01 00 00.7	
	comp=N,550nm,0.3s						
MT03	Universidad Ad	2.65	140		Pn	00 59 26.8	+0.5
MT03	Universidad Ad	2.65	140	eP	Pn	00 59 27.2	+0.8
MT03				IAML		01 00 01.1	
	comp=N,1μm,0.1s						
FCH	Farellones	2.66	134	⇓iP	Pn	00 59 27.4	+0.8
FCH				IAML		01 00 00.6	
	comp=E,342nm,0.2s						
MT15	Las Vizcachas	2.73	141	eP	Pn	00 59 28.2	+0.7
MT15				IAML		01 00 02.5	
	comp=N,1μm,0.3s						
AUSP	Uspallata	2.80	106	eP	Pb	00 59 32.3	-1.2
AUSP				eS	Sb	01 00 06.6	-1.6
MT04	Ro Olivares	2.81	134	eP	Pn	00 59 29.6	+1.0
MT12	Pirque	2.81	143	eP	Pn	00 59 29.5	+0.9
MT12				IAML		01 00 06.8	
	comp=N,804nm,0.3s						
MT08	Bocatoma Ro	2.91	133		Pn	00 59 31.5	+1.5
MT08	Bocatoma Ro	2.91	133	eP	Pn	00 59 31.6	+1.5
LCO	Las Campanas	2.94	34		Pn	00 59 30.5	+0.1
LCO	Las Campanas	2.94	34	i P	Pn	00 59 30.3	-0.2
LCO				IAML		01 00 08.8	
	comp=N,2μm,0.3s						
BO04	La Punta	2.99	147		Pn	00 59 32.1	+1.1
LMEL	Las Melosas	3.09	141		Pn	00 59 33.7	+1.3
LMEL	Las Melosas	3.09	141	eP	Pn	00 59 33.5	+1.1
LMEL				IAML		01 00 12.8	
	comp=N,492nm,0.2s						
ACCO	Cerro Coronel	3.13	74	eP	Pg	00 59 42.3	-0.6
ACCO				eS	Sg	01 00 21.9	-1.5
BO01	Tunca	3.16	157		Pn	00 59 33.3	0.0
ZON	Zonda	3.31	92		Pb	00 59 38.9	-3.3
ARCO	CERRO ARCO	3.36	115	eP	Pb	00 59 40.9	-2.2
ARCO				IAML		01 00 40.3	
	comp=Z,138nm,0.6s						
RTLL	Cerro Villicun	3.50	89	eP	Pb	00 59 42.5	-2.8
RTLL				eS	Sn	01 00 21.4	+1.7
AC04	Llanos de Chal	3.51	22		Pn	00 59 37.1	-0.9
AAGR	Agrelo	3.54	118	eP	Pb	00 59 43.3	-2.8
AAGR				IAML		01 01 09.1	
	comp=Z,121nm,1.7s						
BO02	Sierra Bellavi	3.62	156		Pn	00 59 40.3	+0.6
CFA	Coronel Fontan	3.69	93	Pn	Pn	00 59 44.3	+3.7
	comp=Z,2.3nm,0.3s,baz=264,slow=4.4,SNR=56						
CFA				Sn	Sn	01 00 27.7	+3.2
	comp=Z,30nm,0.3s,baz=352,slow=18,SNR=10						
	comp=Z,3.9nm,0.3s						
AGUA	GUANDACOL	4.03	62	eP	Pb	00 59 50.1	-4.4
AGUA				IAML		01 01 04.0	
	comp=Z,140nm,0.8s						
GO03	Copiapo	4.37	28		Pn	00 59 49.5	-0.4
ML02	Panimavida	4.38	168		Pn	00 59 50.1	+0.1
AC06	Mina Casimiro	4.54	26		Pn	00 59 51.7	-0.5
ACHE	Chepes	5.05	88	eP	Pn	00 59 54.0	-5.5
ACLC	CERRO LA CRUZ	5.26	69	eP	Pn	01 00 05.0	+2.7
ACLC				eS	Sn	01 01 04.6	+1.3
ACLC				IAML		01 01 06.0	
	comp=Z,86nm,1.1s						
BI02	San Fabin de	5.28	169		Pn	01 00 02.7	+0.2
BI05	Punta Hualpn	5.28	186		Pn	01 00 01.0	-1.4
AC02	Maricunga	5.51	34		Pn	01 00 06.5	+0.4
H03N1	Juan Fernandez	5.71	248	T	T	01 07 14.3	
	baz=81,slow=73,SNR=5.9						
H03N3	Juan Fernandez	5.73	248	T	T	01 07 12.8	
	baz=81,slow=73,SNR=5.2						
H03N2	Juan Fernandez	5.73	248	T	T	01 07 17.4	
	baz=81,slow=73,SNR=6.5						
CYA	Choya	6.60	64	eP	Pn	01 00 22.2	+1.7
CYA				IAML		01 02 29.8	
	comp=Z,23nm,1.2s						
LR04	Corral	8.41	185	Pn	Pn	01 00 44.1	-1.2
PLCA	Paso Flores	9.38	171	Pn	Pn	01 00 58.4	-0.3
PLCA	Paso Flores	9.38	171	Pn	Pn	01 00 58.6	-0.1
	comp=Z,0.7nm,0.3s,baz=343,slow=11,SNR=11						
PLCA				Sn	Sn	01 02 43.5	-0.9
	comp=Z,0.1nm,0.3s,baz=300,slow=6.5,SNR=1.2						
	comp=Z,1.6nm,0.3s						
TRQA	Tornquist	10.89	130	Pn	Pn	01 01 19.8	+0.4
GO01	Chusmiza	12.15	15	Pn	Pn	01 01 35.1	-1.9
CPUP	Villa Florida	14.29	73	Pn	P	01 02 09.9	-3.3
	baz=297,slow=17,SNR=1.4						
LPAZ	La Paz	15.65	16		Pn	01 02 24.4	-0.3
LPAZ	La Paz	15.65	16	Pn	Pn	01 02 26.5	+1.7
	comp=Z,0.2nm,0.3s,baz=189,slow=8.7,SNR=15						
	comp=Z,4.7nm,0.8s						
SIV	San Ignacio	18.64	37	P	Pn	01 03 02.6	+0.8
	comp=Z,0.1nm,0.3s,baz=211,slow=11,SNR=14						
	comp=Z,1.8nm,0.5s						
VILB	Vilhena	21.66	34	P	P	01 03 32.6	-1.8
VILB				IAmb	IAmb	01 04 01.1	
	comp=Z,13nm,0.9s						
EFI	East Falkland	22.83	156	P	P	01 03 46.6	+0.1
BDFB	Brasilia	27.38	60	P	P	01 04 28.1	-1.2
BDFB				IAmb	IAmb	01 04 42.6	
	comp=Z,11nm,1.1s						
BDFB	Brasilia	27.38	60	P	P	01 04 30.8	+1.4
	comp=Z,3.5nm,0.9s,baz=204,slow=9.1,SNR=4.4						
	comp=Z,3.5nm,0.9s						
RUSC	La Rusia	37.16	359	P	P	01 05 54.7	-0.7
RUSC				IAmb	IAmb	01 06 10.7	
	comp=Z,14nm,1.3s						
VNA3	Neumayer Olymp	51.85	159	⇑P	P	01 07 53.0	+1.4
	comp=Z,1.6nm,0.5s						
VNA2	Neumayer--Watz	52.50	158	⇑P	P	01 07 57.4	+0.9
	comp=Z,1.9nm,0.6s,baz=281,slow=8.1						
SNAA	Sanae	54.08	159	⇑P	P	01 08 09.2	+1.1
	comp=Z,44nm,0.7s						
SNAA	Sanae	54.08	159	P	P	01 08 08.4	+0.3
SNAA	Sanae	54.08	159	P	P	01 08 09.0	+0.9
	comp=Z,1.4nm,0.7s,baz=274,slow=9.6,SNR=11						
	comp=Z,1.4nm,0.7s						
TROLL	Troll, Antarti	55.79	159	⇑P	P	01 08 21.8	+1.2
	comp=Z,84nm,0.6s						
QSPA	South Pole Qui	58.75	180	P	P	01 08 42.6	+1.1
QSPA				IAmb	IAmb	01 08 44.1	
	comp=Z,4.2nm,0.7s						
QSPA	South Pole Qui	58.75	180	P	P	01 08 42.9	+1.4
	comp=Z,3.7nm,0.6s,baz=158,slow=1.3,SNR=33						
	comp=Z,3.7nm,0.6s						
DBIC	Dimbokro	74.81	72	P	P	01 10 25.0	+0.5
DBIC	Dimbokro	74.81	72	P	P	01 10 25.6	+1.0
	comp=Z,3.8nm,0.6s,baz=223,slow=6.0,SNR=5.4						
	comp=Z,3.8nm,0.6s						

MAW	Mawson	75.72	164	P	P	01 10 30.0	+1.1
	comp=Z,4.0nm,1.1s,baz=194,slow=8.4,SNR=2.5						
	comp=Z,4.0nm,1.1s						
BOSA	Boshof	81.64	118	P	P	01 11 02.6	+0.2
BOSA				IAmb	IAmb	01 11 08.8	
	comp=Z,3.7nm,1.1s						
BOSA	Boshof	81.64	118	P	P	01 11 03.4	+1.0
	comp=Z,3.2nm,0.9s,baz=299,slow=6.7,SNR=3.8						
	comp=Z,3.2nm,0.9s						
LBTB	Lobatse	83.77	115	P	P	01 11 14.0	+0.5
LBTB				IAmb	IAmb	01 11 18.6	
	comp=Z,4.9nm,1.1s						
TORD	Torodi Ar. Bea	83.78	71	P	P	01 11 14.1	+0.6
TORD				IAmb	IAmb	01 11 15.3	
	comp=Z,3.0nm,0.6s						
TORD	Torodi Ar. Bea	83.78	71	P	P	01 11 14.3	+0.8
	comp=Z,3.2nm,0.6s,baz=233,slow=4.3,SNR=7.4						
	comp=Z,3.2nm,0.6s						
BVAR	Borovoye Array	145.69	40	PKPbc	PKPab	01 18 23.8	+1.2
	comp=Z,1.7nm,0.4s,baz=301,slow=3.2,SNR=12						
KURBB	Kurchatov Arra	151.28	40	PKPbc	PKiKP	01 18 37.7	+0.2
	comp=Z,3.2nm,0.6s,baz=301,slow=3.1,SNR=12						
KURBB				PKPab	sPKPab	01 18 47.6	+2.4
	comp=Z,0.8nm,0.3s,baz=305,slow=3.3,SNR=5.1						
ZALV	Zalesovo Beam	152.29	29	PKPbc	PKiKP	01 18 40.1	+0.6
	comp=Z,6.3nm,0.5s,baz=301,slow=3.9,SNR=30						
ZALV				PKPab	pPKPab	01 18 50.2	+1.0
	comp=Z,2.9nm,0.6s,baz=316,slow=4.1,SNR=6.0						
KSH	Kashi	153.26	64	PKPbc	PKPdf	01 18 35.0	+0.5
MKAR	Makanchi Array	155.36	44	PKP	PKPdf	01 18 36.6	-0.6
	comp=Z,0.1nm,0.5s,baz=292,slow=3.1,SNR=1.6						
MKAR				PKPbc	pPKPbc	01 18 46.8	+0.5
	comp=Z,0.4nm,0.5s,baz=273,slow=2.3,SNR=3.8						
PZH	PanZhiHua	172.97	133	PKP	PKPdf	01 18 52.8	-0.8

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*NEIC **16** 01:05:28.9±1.4, 28°.959N±0°.010×97°.99W±0°.01, h2^{km}±2^{km}, Error ellipse: s-maj=1.8km s-min=1.5km az=74.0*

*NEIC **16** 01:05:29.7±1.4, 28°.96N±0°.02×97°.99W±0°.02, h5^{km}±1^{km}, mb_Lg2.9/16, ML2.8/6, ML2.5/17, Error ellipse: s-maj=3.6km s-min=2.1km az=139.0*

TXNET 16 01:05:28.9, 29°.0N±0°.8×**98°.0W**±0°.9, **h2**^{km}±1^{km}, **ML2.8**/19, **1C-1D, Error ellipse: s-maj=1.5km s-min=1.0km az=132.1, final, Near coast of Texas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EF03	Hobson	0.01	152	⇓P	Pg	01 05 29.2	-0.2
EF03				S	Sg	01 05 30.8	+1.1
EF73	North Karnes	0.08	74	P	Pg	01 05 30.5	-0.1
EF61	Poth	0.17	1	P	Pg	01 05 31.9	-0.2
EF61				S	Sg	01 05 35.5	+1.2
EF53	Gillett	0.19	59	P	Pg	01 05 32.6	0.0
EF53				S	Sg	01 05 37.0	+2.1
735A	Kenedy	0.19	123		Pg	01 05 32.5	0.0
735A				IAML		01 05 38.7	
	2µm,0.8s						
735A				IAML		01 05 39.2	
	2µm,0.6s						
735A	Kenedy	0.19	123	P	Pg	01 05 32.5	0.0
EF68	Kenedy	0.19	179	P	Pg	01 05 32.6	0.0
EF68				S	Sg	01 05 37.0	+2.0
EF52	Campbellton	0.22	239	P	Pg	01 05 33.1	0.0
EF52				S	Sg	01 05 38.1	+2.1
EF75	Tulsita	0.30	153	P	Pg	01 05 34.9	+0.3
EF04	Eagle Ford 04	0.30	35		Pg	01 05 34.7	0.0
EF04					Sg	01 05 39.9	+1.2
EF04	Eagle Ford 04	0.30	35	P	Pg	01 05 34.7	0.0
EF04				S	Sg	01 05 39.9	+1.2
EF71	Pawnee	0.33	189	P	Pg	01 05 35.4	+0.1
EF71				S	Sb	01 05 42.2	-1.1
EF72	Nordheim	0.36	106	P	Pg	01 05 36.6	+0.8
EF54	Nixon	0.37	58	P	Pg	01 05 36.7	+0.6
EF59	Coughran	0.38	269	P	Pg	01 05 36.7	+0.5
EF59				S	Sb	01 05 43.4	-1.2
EF01	Eagle Ford 01	0.38	296		Pg	01 05 36.1	-0.2
EF01	Eagle Ford 01	0.38	296	⇑P	Pg	01 05 36.1	-0.2
EF05	Yorktown	0.41	86	P	Pg	01 05 37.0	+0.1
EF69	Whitsett	0.41	218	P	Pg	01 05 37.3	+0.4
EF76	Three Rivers	0.47	203	P	Pg	01 05 38.5	+0.5
EF51	Christine	0.48	249	P	Pg	01 05 38.2	+0.1
EF51				S	Sb	01 05 47.0	-0.5
EF62	Nixon	0.48	33	P	Pg	01 05 38.0	-0.2
EF62				S	Sg	01 05 45.6	+1.1
EF02	Christine	0.51	249	P	Pg	01 05 39.5	+0.8
EF02				S	Sb	01 05 47.8	-0.6
EF67	Cuero	0.57	72	P	Pb	01 05 41.7	+0.2
EF67				S	Sb	01 05 50.6	+0.5
EF74	Calliham	0.65	217	P	Pb	01 05 42.3	-0.5
EF74				S	Sb	01 05 53.3	+1.0
EF58	Charlotte	0.66	259	P	Pg	01 05 41.9	+0.4
EF58				S	Sb	01 05 52.4	-0.2
EF63	Gonzales	0.77	37	P	Pg	01 05 42.8	-0.8
EF63				S	Sb	01 05 54.8	-1.0
EF66	Yoakum	0.85	62	P	Pg	01 05 45.7	+0.5
EF66				S	Sn	01 05 59.9	-1.0
EF56	Moulton	0.93	48	S	Sb	01 06 00.9	+0.3
EF64	Waelder	0.98	37	S	Sb	01 06 01.1	-0.7
MLDN	Muldoon	1.15	44		Sn	01 06 08.0	-0.3
MLDN	Muldoon	1.15	44	S	Sn	01 06 07.8	-0.4
HNDO	Hondo	1.27	297		Pg	01 05 51.2	-1.9
HNDO					Sg	01 06 09.5	-0.1
HNDO				IAML		01 06 20.3	
	148nm,0.8s						
HNDO	Hondo	1.27	297	P	Pg	01 05 51.0	-2.1
HNDO				S	Sg	01 06 09.3	-0.3
833A	Chaparral WMA,	1.39	243		Pn	01 05 54.1	-1.1
833A					Sg	01 06 12.8	-0.7
833A	Chaparral WMA,	1.39	243	P	Pn	01 05 54.1	-1.2
833A	Chaparral WMA,	1.39	243	S	Sg	01 06 12.9	-0.6
KVTX	Kingsville	1.41	177		Pn	01 05 55.3	-0.2
KVTX	Kingsville	1.41	177	P	Pn	01 05 55.2	-0.4
KVTX				S	Sn	01 06 18.3	+3.6
435B	Jarrell	1.85	11		Pn	01 06 01.8	+0.1
435B					Sb	01 06 27.0	-0.1
435B	Jarrell	1.85	11	S	Sb	01 06 26.6	-0.4
435B	Jarrell	1.85	11	P	Pn	01 06 01.7	+0.1
JCT	Junction City	2.19	314		Pn	01 06 06.2	-0.1
JCT				IAmb_Lg		01 06 39.6	
	comp=Z,42nm,0.8s						
JCT	Junction City	2.19	314	P	Pn	01 06 06.0	-0.3
JCT				S	Sn	01 06 35.4	+1.4
DRIO	Del Rio	2.35	282		Pn	01 06 08.4	-0.1
DRIO	Del Rio	2.35	282	P	Pn	01 06 08.4	-0.1
BRDY	Brady	2.48	340		Pn	01 06 10.4	+0.1
BRDY	Brady	2.48	340	P	Pn	01 06 10.4	+0.1
OZNA	Ozona	3.35	306		Pn	01 06 21.6	-0.7
FW13	Cleburne	3.42	8	IAmb_Lg		01 07 26.5	
	comp=Z,34nm,1.3s						
SN05	Snyder 5	4.63	328	IAmb_Lg		01 07 57.8	
	comp=Z,22nm,0.8s						
APMT	Aspermont	4.72	338		Pn	01 06 41.4	+0.2
SN07	Snyder 07	4.81	330	IAmb_Lg		01 08 15.3	
	comp=Z,23nm,0.8s						
AMTX	Amarillo	6.69	333	IAmb_Lg		01 09 10.1	
	comp=Z,22nm,0.7s						
MNTX	Cornudas Mount	6.95	295	IAmb_Lg		01 09 25.9	
	comp=Z,13nm,0.9s						

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*TXNET **16** 01:07:17.8, 29°.0N±0°.8×98°.0W±0°.9, h2^{km}±1^{km}, ML3.6/19, Error ellipse: s-maj=1.5km s-min=1.0km az=128.8, final*

*NEIC **16** 01:07:17.8±2.4, 28°.96N±0°.02×97°.99W±0°.02, h2^{km}±3^{km}, Error ellipse: s-maj=2.7km s-min=1.8km az=149.0*

*NEIC **16** 01:07:18.0±2.6, 28°.95N±0°.02×97°.98W±0°.02, h5^{km}±1^{km}, mb_Lg3.6/48, ML3.7/6, ML3.3/19, Error ellipse: s-maj=3.5km s-min=2.1km az=149.0*

ISC 16 01:07:17.9±0.9, **28°.97N**±0°.02×**98°.00W**±0°.02, **h3**^{km}±6^{km}, **n75**, σ**1^{s}.02**/95, **5C-1D, Near coast of Texas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EF03	Hobson	0.03	149	⇓P	Pg	01 07 18.1	-0.5
EF03				S	Sg	01 07 19.7	+0.6
EF73	North Karnes	0.09	82	P	Pg	01 07 19.4	-0.3
EF61	Poth	0.15	4	⇑P	Pg	01 07 20.8	-0.1
EF61				S	Sg	01 07 24.5	+1.5
EF53	Gillett	0.19	63	P	Pg	01 07 21.4	-0.2
735A	Kenedy	0.20	125	Pg	Pg	01 07 21.4	-0.4
735A				IAML		01 07 27.1	
	15µm,1.0s						
735A	Kenedy	0.20	125	⇑P	Pg	01 07 21.4	-0.4
735A				S	Sg	01 07 25.9	+1.4
EF68	Kenedy	0.20	177	⇑P	Pg	01 07 21.4	-0.4
EF68				S	Sg	01 07 25.9	+1.4
EF52	Campbellton	0.22	235	P	Pg	01 07 22.0	-0.2
EF04	Eagle Ford 04	0.30	37		Pg	01 07 23.6	-0.1
EF04					Sg	01 07 28.9	+1.3
EF04	Eagle Ford 04	0.30	37	P	Pg	01 07 23.6	-0.1
EF04				S	Sg	01 07 28.9	+1.3
EF75	Tulsita	0.31	152	P	Pg	01 07 23.6	-0.3
EF71	Pawnee	0.34	187	P	Pg	01 07 24.3	-0.3
EF01	Eagle Ford 01	0.37	295		Pg	01 07 25.0	-0.1
EF01	Eagle Ford 01	0.37	295	⇑P	Pg	01 07 25.0	-0.1
EF54	Nixon	0.37	60	P	Pg	01 07 25.3	+0.2
EF59	Coughran	0.37	267	⇑P	Pg	01 07 25.6	+0.5
EF59				S	Sb	01 07 32.3	-1.0
EF72	Nordheim	0.37	107	P	Pg	01 07 25.2	+0.1
EF72				S	Sb	01 07 32.5	-0.9
EF69	Whitsett	0.42	217	P	Pg	01 07 25.9	0.0
EF05	Yorktown	0.42	87	P	Pg	01 07 26.1	+0.1
EF51	Christine	0.47	248	P	Pg	01 07 27.6	+0.6
EF51				S	Sb	01 07 35.8	-0.6
EF62	Nixon	0.48	35	P	Pg	01 07 26.5	-0.6
EF62				S	Sg	01 07 34.2	+0.9
EF76	Three Rivers	0.48	201	P	Pg	01 07 27.7	+0.5
EF02	Christine	0.51	248	S	Sb	01 07 36.7	-0.6
EF67	Cuero	0.57	74	P	Pb	01 07 29.7	-0.9
EF67				S	Sb	01 07 39.4	+0.3
EF55	Cheapside	0.59	60	P	Pg	01 07 29.8	+0.6
EF55				S	Sb	01 07 39.6	0.0
EF74	Calliham	0.65	215	P	Pb	01 07 31.4	-0.5
EF74				S	Sb	01 07 42.2	+0.8
EF58	Charlotte	0.65	258	P	Pg	01 07 30.8	+0.4
EF58				S	Sb	01 07 40.9	-0.5
EF63	Gonzales	0.76	38	P	Pg	01 07 32.2	-0.4
EF63				S	Sg	01 07 43.6	+1.1
EF66	Yoakum	0.85	63	P	Pb	01 07 35.1	-0.3
EF66				S	Sn	01 07 48.6	-1.3
EF56	Moulton	0.93	49	P	Pb	01 07 36.6	-0.2
EF56				S	Sb	01 07 49.6	0.0
EF64	Waelder	0.97	38	P	Pg	01 07 36.5	0.0
EF64				S	Sg	01 07 50.0	+0.8
EF65	Schulenburg	1.13	52	P	Pg	01 07 39.5	-0.1
MLDN	Muldoon	1.15	45		Pg	01 07 38.0	-1.9
MLDN				Sg	Sb	01 07 56.3	+0.6
MLDN				IAmb_Lg		01 07 56.5	
	comp=Z,319nm,0.7s						
MLDN				IAML		01 07 57.7	
	comp=Z,2µm,0.8s						
MLDN				IAML		01 08 09.7	
	comp=Z,1µm,0.7s						
MLDN	Muldoon	1.15	45	P	Pg	01 07 39.8	-0.1
MLDN				S	Sn	01 07 56.7	-0.4
HNDO	Hondo	1.25	297	Pg	Pg	01 07 39.7	-2.2
HNDO				Sg	Sg	01 07 58.7	+0.5
HNDO				IAmb_Lg		01 07 58.8	
	comp=Z,379nm,1.1s						
HNDO	Hondo	1.25	297	P	Pg	01 07 40.0	-2.0
833A	Chaparral WMA,	1.39	243		Pn	01 07 42.6	-1.6
833A					Sg	01 08 01.9	-0.6
833A	Chaparral WMA,	1.39	243	P	Pn	01 07 42.8	-1.4
833A	Chaparral WMA,	1.39	243	S	Sg	01 08 01.9	-0.6
KVTX	Kingsville	1.42	176		Pb	01 07 44.6	-0.5
KVTX					Sn	01 08 07.0	+3.1
KVTX	Kingsville	1.42	176	P	Pg	01 07 44.9	-0.3
KVTX				S	Sn	01 08 07.0	+3.1
435B	Jarrell	1.84	11		Pn	01 07 49.4	-1.1
435B					Sb	01 08 15.2	-0.5
435B				IAmb_Lg		01 08 18.1	
	comp=Z,380nm,0.9s						
435B	Jarrell	1.84	11	P	Pn	01 07 50.0	-0.5
435B	Jarrell	1.84	11	S	Sb	01 08 15.2	-0.5
HBVL	Hebbronville	1.99	198		Pn	01 07 51.9	-0.6
HBVL	Hebbronville	1.99	198	P	Pb	01 07 54.9	+0.1
HKT	Hockley	2.12	62		Pn	01 07 52.9	-1.4
HKT	Hockley	2.12	62		Pn	01 07 52.7	-1.6
HKT	Hockley	2.12	62	P	Pn	01 07 52.1	-2.2
JCT	Junction City	2.17	314	Pn	Pn	01 07 54.3	-0.9
JCT					Sn	01 08 23.9	+1.3
JCT				IAmb_Lg		01 08 28.6	
	comp=Z,309nm,0.8s						
JCT	Junction City	2.17	314	P	Pn	01 07 54.8	-0.3
JCT				Pg	Pb	01 07 59.0	+1.0
JCT				S	Sn	01 08 23.9	+1.3
DRIO	Del Rio	2.34	282	Pn	Pn	01 07 55.5	-1.8
DRIO	Del Rio	2.34	282	P	Pn	01 07 57.0	-0.3
BRDY	Brady	2.47	340	Pn	Pn	01 07 57.6	-1.5
BRDY				Pg	Pb	01 08 03.9	+1.0
BRDY				Sg	Sb	01 08 33.6	-0.2
BRDY				IAmb_Lg		01 08 38.0	
	comp=Z,315nm,0.7s						
BRDY	Brady	2.47	340	P	Pn	01 07 59.0	-0.1
BRDY				Pg	Pb	01 08 03.9	+1.0
BRDY				Sg	Sb	01 08 33.6	-0.2
WHTX	Lake Whitney,	3.05	9		Pn	01 08 06.7	-0.4
WHTX				IAmb_Lg		01 09 00.9	
	comp=Z,135nm,1.1s						
WHTX	Lake Whitney,	3.05	9	P	Pn	01 08 07.6	+0.6
OZNA	Ozona	3.34	306	Pn	Pn	01 08 10.2	-1.0
FW13	Cleburne	3.41	8	Pn	Pn	01 08 11.5	-0.5
FW13					Pb	01 08 20.6	+1.6
FW14	Alvarado	3.49	11	Pn	Pn	01 08 12.1	-1.0
FW14				IAmb_Lg		01 09 12.2	
	comp=Z,118nm,0.9s						
237A	Washetta, Mont	3.56	31	Pn	Pn	01 08 12.7	-1.4
FW16	Waxahatchie	3.63	15	IAmb_Lg		01 09 22.4	
	comp=Z,162nm,1.0s						
PLPT	Palo Pinto	3.84	356	IAmb_Lg		01 09 25.3	
	comp=Z,154nm,0.9s						
FW03	Perrin-Whitt E	4.06	359	IAmb_Lg		01 09 37.6	
	comp=Z,141nm,0.8s						
Z35A	Perchaven, San	4.39	8	IAmb_Lg		01 09 47.5	
	comp=Z,155nm,1.1s						
MNHN	Monahans	4.75	301	IAmb_Lg		01 09 52.5	
	comp=Z,140nm,0.7s						
ODSA	Odessa	5.03	310	IAmb_Lg		01 10 07.9	
	comp=Z,90nm,1.0s						
POST	Post	5.07	324	IAmb_Lg		01 10 09.7	
	comp=Z,144nm,0.9s						
ALPN	Alpine	5.11	287	IAmb_Lg		01 10 12.0	
	comp=Z,84nm,0.8s						
X34A	Smith Ranch, M	5.62	1	IAmb_Lg		01 10 20.3	
	comp=Z,77nm,0.8s						
WMOK	Wichita Mounta	5.79	354	IAmb_Lg		01 10 23.4	
	comp=Z,82nm,0.9s						
MSTX	Muleshoe	6.44	322	IAmb_Lg		01 10 49.4	
	comp=Z,55nm,0.8s						
OK029	Liberty Lake	6.82	4	IAmb_Lg		01 10 55.5	
	comp=Z,45nm,0.7s						
TUL3	Leonard	7.17	14	IAmb_Lg		01 11 20.9	
	comp=Z,50nm,1.2s						
T42A	Van Buren	9.91	34		Pn	01 09 39.7	-1.5

IDC 16 01:11:12.0±5.9, **29°.95S**×**178°.81W**, **h0**^{km}, **mb3.5**/2, **mbtmp3.5**/2, **Error ellipse: s-maj=357.2km s-min=78.8km az=166.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	42.44	267	P	P	01 19 08.6	-0.2
	0.3nm,0.4s,baz=103,slow=7.4,SNR=6.1						
	0.3nm,0.4s						
WRA	Warramunga Arr	43.38	272	P	P	01 19 16.5	0.0
	0.3nm,0.3s,baz=113,slow=8.3,SNR=2.8						
	0.3nm,0.3s						
FINES	FINESS Array B	144.48	340	PKP	PKPdf	01 30 49.0	-0.7
	0.3nm,0.5s,baz=79,slow=4.5,SNR=4.2						

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*IDC **16** 01:22:23.0±2.9, 31°.14S×177°.99W, h0^{km}, mb4.2/2, mbtmp4.0/3, Error ellipse: s-maj=69.8km s-min=44.6km az=126.0*

ISC 16 01:22:27.9±2.8, **31°.3S**±0°.2×**178°.0W**±0°.4, **h35**^{km}, **n7**, σ**0^{s}.30**/5, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	8.01	209	Pn	Pn	01 24 21.6	-0.2
	2.1nm,0.7s,baz=3.6,slow=22,SNR=0.8						
URZ				Sn	Sn	01 25 51.4	+0.2
	0.9nm,0.3s,baz=262,slow=20,SNR=8.0						
ASAR	Alice Springs	43.10	268	P	P	01 30 25.1	+0.1
	2.0nm,0.6s,baz=105,slow=7.4,SNR=31						
	2.0nm,0.6s						
WRA	Warramunga Arr	44.17	273	P	P	01 30 33.5	-0.1
	1.6nm,0.4s,baz=111,slow=8.0,SNR=20						
	1.6nm,0.4s						
H03S2	Juan Fernandez	79.92	123	T	T	03 03 31.7	
	baz=238						
H03S1	Juan Fernandez	79.94	123	T	T	03 03 54.5	
	baz=238						
H03S3	Juan Fernandez	79.94	123	T	T	03 03 51.8	
	baz=238						
FINES	FINESS Array B	146.03	339	PKPbc	PKPdf	01 42 02.6	+0.2
	0.7nm,0.4s,baz=42,slow=4.2,SNR=15						

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*NOU **16** 01:29:19.9, 31°.14S×174°.88W, h36^{km}, mb5.2/22, Kermadec Islands Region*

*IDC **16** 01:29:35.2±0.5, 30°.66S×178°.03W, h0^{km}, mb4.5/11, mbtmp4.5/12, ML5.0/1, Error ellipse: s-maj=21.0km s-min=13.6km az=95.0*

*MOS **16** 01:29:40.0±1.1, 30°.62S×178°.15W, h36^{km}, mb5.0/8, Error ellipse: s-maj=14.5km s-min=11.2km az=88.2*

*NEIC **16** 01:29:42.1±1.9, 30°.61S±0°.06×178°.08W±0°.07, h35^{km}±1^{km}, mb5.1/25, Error ellipse: s-maj=10.9km s-min=10.2km az=113.0*

ISC 16 01:29:41.0±0.3, **30°.77S**±0°.04×**178°.05W**±0°.08, **h35**^{km}, **n248**, σ**1^{s}.84**/236, **mb4.9**/46, **10C-6D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	1.51	4	P	Pn	01 30 04.6	-0.9
GLKZ				S	Sn	01 30 20.9	-3.1
RAO	Raoul Island	1.52	4	Pn	Pn	01 30 04.9	-0.8
RAO				Sn	Sn	01 30 22.1	-2.2
RAO	Raoul Island	1.52	4	Pn	Pn	01 30 04.2	-1.5
	282nm,0.3s,baz=176,slow=21,SNR=8.9						
RAO				Sn	Sn	01 30 22.3	-1.9
	911nm,0.3s,baz=83,slow=22,SNR=8.0						
RIZ	Raoul Island	1.53	4	P	Pn	01 30 05.1	-0.7
RIZ				S	Sn	01 30 21.3	-3.1
MXZ	Matakaoa Point	7.41	203	P	Pn	01 31 22.4	-4.3
MXZ	Matakaoa Point	7.41	203	P	Pn	01 31 23.4	-3.3
MXZ				S	Sn	01 32 45.5	-4.0
WMGZ	Waiomatatini S	7.61	202	P	Pn	01 31 26.7	-2.7
WMGZ				S	Sn	01 32 51.8	-2.6
PKGZ	Pakihiroa	7.76	203	P	Pn	01 31 29.1	-2.5
PKGZ				S	Sn	01 32 55.4	-2.8
HAZ	Te Kaha	7.77	205	P	Pn	01 31 29.3	-2.2
HAZ				S	Sn	01 32 57.2	-1.1
PUZ	Puketiti	7.89	202	P	Pn	01 31 29.8	-3.5
PUZ				S	Sn	01 32 58.1	-3.2
RUGZ	Raukumara Rang	8.00	205	P	Pn	01 31 31.6	-3.1
RUGZ				S	Sn	01 32 58.1	-5.9
TWGZ	Tauwhareparae	8.08	203	P	Pn	01 31 32.9	-2.9
TWGZ				S	Sn	01 33 03.5	-2.5
WCZ	Waipu Caves	8.18	229	P	Pn	01 31 44.6	+7.4
CNGZ	Carnagh Statio	8.29	201	P	Pn	01 31 35.4	-3.2
OUZ	Omahuta	8.30	236	P	Pn	01 31 45.2	+6.4
OUZ	Omahuta	8.30	236	P	Pn	01 31 45.3	+6.5
TKGZ	Te Karaka	8.36	203	P	Pn	01 31 35.0	-4.7
MWZ	Matawai	8.38	205	P	Pn	01 31 37.2	-2.7
MWZ				S	Sn	01 33 11.7	-1.5
URZ	Urewera	8.47	207	Pn	Pn	01 31 38.1	-3.0
	2.9nm,0.3s,baz=333,slow=2.0,SNR=14						
URZ				Sn	Sn	01 33 11.8	-3.6
	15nm,0.3s,baz=309,slow=2.6,SNR=13						
URZ	Urewera	8.47	207	P	Pn	01 31 37.6	-3.5
RAGZ	Rawiri	8.56	205	S	Sn	01 33 16.3	-1.6
RIGZ	Rimuhau	8.63	202	P	Pn	01 31 40.6	-2.8
RIGZ				S	Sn	01 33 16.1	-3.4
TOZ	Tahuroa Road	8.75	216	Pn	Pn	01 31 48.2	+3.2
MUGZ	Murupara	8.79	208	S	Sn	01 33 21.9	-1.5
PRGZ	Paritu Road	8.79	201	P	Pn	01 31 40.6	-4.9
PRGZ				S	Sn	01 33 19.9	-3.5
RTZ	Ruatahuna	8.83	206	P	Pn	01 31 42.6	-3.5
SNGZ	Shannon Statio	8.84	204	P	Pn	01 31 41.8	-4.4
SNGZ				S	Sn	01 33 21.4	-3.3
MHGZ	Mahia Peninsul	8.99	201	P	Pn	01 31 43.0	-5.3
MHGZ				S	Sn	01 33 26.3	-2.0
MTHZ	Maungataniwha	9.09	206	P	Pn	01 31 46.1	-3.6
MTHZ				S	Sn	01 33 26.7	-4.0
BKZ	Black Stump Fm	9.49	207	P	Pn	01 31 50.7	-4.5
BKZ	Black Stump Fm	9.49	207	P	Pn	01 31 50.5	-4.8
BKZ				S	Sn	01 33 36.2	-4.5
HIZ	Hauiti	9.68	215	P	Pn	01 31 55.4	-2.3
BFZ	Birch Farm	10.92	204	P	Pn	01 32 09.4	-5.3
CTZ	Chatham Island	12.99	175	P	Pn	01 32 42.1	-0.9
KHZ	Kahutara	13.43	208	P	Pn	01 32 42.6	-6.4
KHZ	Kahutara	13.43	208	P	Pn	01 32 42.1	-6.9
MSVF	Nonsavu	13.46	344	Pn	Pn	01 32 47.8	-1.8
	0.3nm,0.3s,baz=250,slow=21,SNR=4.4						
	8.9nm,0.3s						
RPZ	Rata Peaks	15.54	211	Pn	Pn	01 33 13.3	-4.1
	2.1nm,0.3s,baz=354,slow=2.7,SNR=7.3						
RPZ				Sn	Sn	01 35 53.3	-15
	2.6nm,0.3s,baz=135,slow=24,SNR=8.1						
RPZ	Rata Peaks	15.54	211	P	Pn	01 33 13.2	-4.2
OUENC	Ouen Island, N	15.86	298	P	P	01 33 33.4	+8.4
DZM	Mont Dzumac	16.36	298	P	P	01 33 38.2	+7.6
JCZ	Jackson Bay	16.87	214	P	Pn	01 33 31.0	-3.4
VLAKA	Lakatoro	19.74	314	P	Pn	01 34 09.3	-0.1
SANVU	Saraoutou	20.38	315	P	Pn	01 34 19.1	+2.1
ARMA	Armidale	26.07	263	P	P	01 35 14.8	+3.4
	comp=Z,20nm,0.7s						
EIDS	Eidsvold	27.71	274	P	P	01 35 27.7	+1.6
	comp=Z,9.6nm,1.1s						
EIDS	Eidsvold	27.71	274	P	P	01 35 27.8	+1.6
CAN	Canberra	27.91	252	P	P	01 35 29.8	+1.9
	comp=Z,27nm,1.2s						
CAN	Canberra	27.91	252	P	P	01 35 29.8	+1.9
YNG	Young	28.43	254	P	P	01 35 28.7	-3.8
TAU	Tasmania Unive	30.04	237	P	P	01 35 47.7	+1.1
TAU				IAmb	IAmb	01 36 16.4	
	comp=Z,25nm,1.1s						
TAU	Tasmania Unive	30.04	237	P	P	01 35 47.7	+1.1
TAU				pmax	pmax		
	comp=Z,25nm,1.2s						
TOO	Toolangi	30.78	247	P	P	01 35 54.9	+1.6
TOO	Toolangi	30.78	247	P	P	01 35 54.3	+1.1
	comp=Z,6.5nm,0.7s						
TOO	Toolangi	30.78	247	P	P	01 35 54.9	+1.6
TOO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CMSA	Cobar Meteorol	30.95	259	P	P	01 35 56.6	+1.8
	comp=Z,82nm,0.8s						
CMSA	Cobar Meteorol	30.95	259	P	P	01 35 56.7	+1.9
QLP	Quilpie	33.25	268	P	P	01 36 15.9	+0.9
	comp=Z,34nm,0.8s						
QLP	Quilpie	33.25	268	P	P	01 36 16.3	+1.3
ARPS	Mount Arapiles	33.70	249	P	P	01 36 19.6	+0.8
	comp=Z,17nm,0.8s						
ARPS	Mount Arapiles	33.70	249	P	P	01 36 19.7	+0.9
TV1H	Townsville Har	33.72	282	P	P	01 36 20.6	+1.4
CTAO	Charters Tower	33.82	280	P	P	01 36 21.9	+1.9
CTAO				IAmb	IAmb	01 36 22.4	
	comp=Z,37nm,0.7s						
CTAO	Charters Tower	33.82	280	P	P	01 36 21.6	+1.5
CTAO	Charters Tower	33.82	280	P	P	01 36 21.9	+1.9
CTAO				pmax	pmax		
	comp=Z,37nm,0.7s						
CTAO	Charters Tower	33.82	280	P	P	01 36 21.5	+1.5
STKA	Stephens Creek	34.35	257		P	01 36 26.2	+1.6
STKA	Stephens Creek	34.35	257	P	P	01 36 26.0	+1.4
	comp=Z,477nm,0.8s						
STKA	Stephens Creek	34.35	257	P	P	01 36 26.1	+1.4
	comp=Z,77nm,0.7s,baz=98,slow=10,SNR=147						
STKA	Stephens Creek	34.35	257	P	P	01 36 26.0	+1.4
STKA	Stephens Creek	34.35	257	*e*P	P	01 36 26.4	+1.8
STKA				pmax	pmax		
	comp=Z,77nm,0.7s						
MTSU	Mount Surprise	36.32	281	P	P	01 36 43.0	+1.3
	comp=Z,18nm,0.7s						
MTSU	Mount Surprise	36.32	281	P	P	01 36 43.3	+1.6
HTT	Hallett	36.36	254	P	P	01 36 42.4	+0.6
	comp=Z,9.4nm,0.9s						
HTT	Hallett	36.36	254	P	P	01 36 42.6	+0.7
WHYH	Whyalla	37.53	255	P	P	01 36 52.6	+0.8
BBOO	Buckleboo	38.83	255	P	P	01 37 02.7	0.0
BBOO				IAmb	IAmb	01 37 03.3	
	comp=Z,32nm,1.0s						
BBOO	Buckleboo	38.83	255	P	P	01 37 02.3	-0.4
	comp=Z,27nm,0.6s						
BBOO	Buckleboo	38.83	255	P	P	01 37 02.7	0.0

QIS	Mount Isa	39.30	275	P	P	01 37 06.8	0.0
	comp=Z,8.7nm,0.5s						
QIS	Mount Isa	39.30	275	P	P	01 37 07.2	+0.4
COEN	Coen	39.33	286		P	01 37 08.1	+1.1
COEN				IAmb	IAmb	01 37 09.9	
	comp=Z,32nm,1.4s						
COEN	Coen	39.33	286	P	P	01 37 07.6	+0.5
	comp=Z,16nm,1.0s						
AS01	Alice Springs	43.01	267	P	P	01 37 37.0	-0.3
AS31	Alice Springs	43.05	267		P	01 37 37.7	+0.1
AS31	Alice Springs	43.05	267	P	P	01 37 36.8	-0.8
	comp=Z,4.0nm,0.5s						
ASAR	Alice Springs	43.05	267	P	P	01 37 37.1	-0.5
	comp=Z,8.1nm,0.6s,baz=103,slow=7.2,SNR=152						
ASAR				ScP	ScP	01 43 20.7	+4.8
	comp=Z,0.9nm,0.8s,baz=108,slow=4.0,SNR=4.9						
	comp=Z,8.1nm,0.6s						
DRV	Dumont d'Urvil	43.78	203	P	P	01 37 41.9	-1.0
WR8	Warramunga Arr	43.93	273		P	01 37 44.3	-0.4
WR8				IAmb	IAmb	01 37 46.2	
	comp=Z,20nm,0.7s						
WRAB	Tennant Creek	44.06	273	*de*P	P	01 37 44.8	-1.0
WRAB				pmax	pmax		
	comp=Z,22nm,0.8s						
WRA	Warramunga Arr	44.07	273	P	P	01 37 45.2	-0.6
	comp=Z,23nm,0.6s,baz=112,slow=7.7,SNR=187						
	comp=Z,23nm,0.6s						
WRA	Warramunga Arr	44.07	273	*e*P	P	01 37 45.2	-0.6
WRA				pmax	pmax		
	comp=Z,17nm,0.4s						
WB0	Warramunga Arr	44.09	273		P	01 37 45.5	-0.5
WB0				IAmb	IAmb	01 37 47.5	
	comp=Z,26nm,0.8s						
FORT	Forrest	45.91	255	P	P	01 37 60.0	-0.4
FORT				IAmb	IAmb	01 38 02.1	
	comp=Z,26nm,0.7s						
FORT	Forrest	45.91	255	P	P	01 37 59.0	-1.4
	comp=Z,43nm,0.7s						
SBA	Scott Base	47.66	184	P	P	01 38 16.9	+3.6
SBA	Scott Base	47.66	184	P	P	01 38 16.9	+3.6
SBA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SBA	Scott Base	47.66	184	P	P	01 38 16.6	+3.2
VNDA	Vanda	47.72	186	P	P	01 38 16.1	+2.3
VNDA	Vanda	47.72	186	P	P	01 38 15.4	+1.6
	comp=Z,1.1nm,0.6s,baz=3.3,slow=7.3,SNR=11						
	comp=Z,1.1nm,0.6s						
VNDA	Vanda	47.72	186	P	P	01 38 16.1	+2.3
VNDA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
VNDA	Vanda	47.72	186	P	P	01 38 15.8	+2.0
MTN	Manton Dam	50.00	279	P	P	01 38 32.1	0.0
MTN				IAmb	IAmb	01 38 32.5	
	comp=Z,14nm,0.7s						
MTN	Manton Dam	50.00	279	P	P	01 38 31.7	-0.4
KNRA	Kununurra	50.69	275	P	P	01 38 37.1	-0.3
KNRA				IAmb	IAmb	01 38 38.1	
	comp=Z,18nm,1.2s						
FITZ	Fitzroy Crossi	52.32	270		P	01 38 49.4	-0.1
CCD	Concordia, Ant	52.58	196	P	P	01 38 51.2	0.0
CCD				pP	pP	01 39 00.5	-0.4
CASY	Casey	54.79	208	P	P	01 39 05.9	-1.1
CASY				pP	pP	01 39 15.5	-1.1
QSPA	South Pole Qui	59.34	180		P	01 39 40.9	+1.6
QSPA	South Pole Qui	59.34	180	P	P	01 39 40.7	+1.4
	comp=Z,8.2nm,0.7s,baz=57,slow=3.4,SNR=28						
	comp=Z,8.2nm,0.7s						
QSPA	South Pole Qui	59.34	180	P	P	01 39 40.7	+1.4
GIRL	Giralia	60.24	260	P	P	01 39 45.9	-0.1
UGM	Wanagama	70.05	273	P	P	01 40 48.4	-1.4
MAW	Mawson	71.94	201	P	P	01 41 00.2	-0.2
	comp=Z,5.2nm,0.8s,baz=133,slow=7.1,SNR=7.4						
	comp=Z,5.2nm,0.8s						
JHJ2	Mitsune	75.00	324	P	P	01 41 19.2	+0.5
GO09	Cerro Castillo	75.54	141	P	P	01 41 23.6	+1.8
GO09				IAmb	IAmb	01 41 46.7	
	comp=Z,38nm,1.3s						
SYO	Syowa Base	76.74	193	⇓*e*P	P	01 41 28.7	+0.4
SYO	Syowa Base	76.74	193	⇑*e*PcP	PcP	01 41 41.9	+2.4
TROLL	Troll, Antarti	77.50	180	⇑P	P	01 41 32.8	+0.1
	comp=Z,609nm,0.6s						
SNAA	Sanae	77.78	178	⇑P	P	01 41 34.0	-0.2
	comp=Z,184nm,0.8s						
SNAA	Sanae	77.78	178	P	P	01 41 33.8	-0.4
	comp=Z,3.8nm,0.7s,baz=163,slow=2.9,SNR=12						
	comp=Z,3.8nm,0.7s						
SNAA	Sanae	77.78	178	*e*P	P	01 41 35.7	+1.5
VNA3	Neumayer Olymp	77.94	176	⇑P	P	01 41 34.6	-0.3
	comp=Z,46nm,0.7s						
VNA2	Neumayer--Watz	78.37	177	⇑P	P	01 41 37.4	+0.1
	comp=Z,22nm,0.6s,baz=167,slow=5.9						
MAJO	Matsushiro	78.53	325	⇑*e*P	P	01 41 40.1	+1.5
MAJO				pmax	pmax		
	comp=Z,52nm,2.4s						
VNA1	Neumayer--Stat	78.60	177	⇑P	P	01 41 38.2	-0.3
	comp=Z,27nm,1.0s						
H03S2	Juan Fernandez	80.30	124	T	T	03 10 49.2	
	baz=238,slow=74,SNR=78						
H03S1	Juan Fernandez	80.31	124	T	T	03 10 50.5	
	baz=238,slow=74,SNR=67						
H03S3	Juan Fernandez	80.31	124	T	T	03 10 49.4	
	baz=238,slow=74,SNR=62						
H03N3	Juan Fernandez	80.49	123	T	T	03 11 08.6	
	baz=241,slow=72,SNR=36						
H03N2	Juan Fernandez	80.49	123	T	T	03 11 02.3	
	baz=241,slow=72,SNR=28						
H03N1	Juan Fernandez	80.50	123	T	T	03 11 05.0	
	baz=241,slow=72,SNR=62						
PLCA	Paso Flores	82.28	133	P	P	01 41 59.8	+0.7
	comp=Z,3.0nm,1.0s,baz=208,slow=6.2,SNR=3.7						
	comp=Z,3.0nm,1.0s						
PLCA	Paso Flores	82.28	133	*e*P	P	01 42 00.6	+1.5
PLCA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MT01	Popeta	85.68	127	P	P	01 42 16.9	+0.5
MT01				IAmb	IAmb	01 42 28.2	
	comp=Z,11nm,1.2s						
GSI	Gunungsitoli	85.82	274		P	01 42 16.4	-1.0
PETK	Petropavlovsk-	86.16	346	P	P	01 42 18.6	+0.6
	comp=Z,6.2nm,0.8s,baz=121,slow=5.8,SNR=6.6						
	comp=Z,6.2nm,0.8s						
NJ2	Nanjing	86.45	311	*e*P	P	01 42 21.6	+1.6
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
USRK	Ussuriysk Ar.	87.45	327	P	P	01 42 24.8	+0.3
	comp=Z,2.3nm,0.8s,baz=116,slow=3.4,SNR=4.0						
	comp=Z,2.3nm,0.8s						
USRK	Ussuriysk Ar.	87.45	327	*e*P	P	01 42 25.5	+1.0
USRK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NVAR	Mina Array Bea	88.54	43	P	P	01 42 30.5	+0.3
	comp=Z,1.9nm,0.7s,baz=221,slow=8.0,SNR=13						
	comp=Z,1.9nm,0.7s						
TPH	Tonopah	88.94	44	P	P	01 42 33.1	+1.0
TPH				IAmb	IAmb	01 42 33.3	
	comp=Z,11nm,0.7s						
TPH	Tonopah	88.94	44	P	P	01 42 33.1	+1.0
TPH				pmax	pmax		
	comp=Z,11nm,0.7s						
X16A	Lo Mia Camp, P	90.23	49		P	01 42 39.4	+1.2
X16A				IAmb	IAmb	01 42 40.6	
	comp=Z,5.0nm,0.9s						
BNX	BinXian	90.79	325	⇑P	P	01 42 39.1	-1.1
BNX				pmax	pmax		
	comp=Z,6.0nm,0.9s						
U15A	North Rim	90.92	47	P	P	01 42 42.5	+1.1
KLR	Kul'dur	91.33	330	*i* P	P	01 42 41.3	-1.4
KLR				pmax	pmax		
	comp=Z,9.0nm,1.5s						
TXAR	Lajitas Array	92.62	57	P	P	01 42 49.7	+0.4
	comp=Z,0.3nm,0.7s,baz=160,slow=4.0,SNR=3.4						
	comp=Z,0.3nm,0.7s						
PZH	PanZhiHua	95.44	297	P	P	01 43 03.5	+1.2
HHC	Hu-ho-hao-te	96.46	314	*e*P	P	01 43 09.8	+3.2
HHC				pmax	pmax		
	comp=Z,16nm,0.6s						
WMQ	Urumqi	113.42	308	*e*PKP	PKiKP	01 48 16.0	+0.9
MKAR	Makanchi Array	117.98	310	PKP	PKPdf	01 48 21.4	-2.3
	comp=Z,0.5nm,0.4s,baz=228,slow=2.4,SNR=5.5						
MKAR	Makanchi Array	117.98	310	*e*PKIKP	PKPdf	01 48 21.8	-1.9
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	Zalesovo Beam	118.28	318	PKP	PKPdf	01 48 21.7	-2.3
	comp=Z,0.6nm,0.5s,baz=126,slow=2.5,SNR=2.0						
KURK	Kurchatov	121.28	314	*d i*PKIKP	PKPdf	01 48 28.0	-1.9
KURBB	Kurchatov Arra	121.31	314	PKP	PKPdf	01 48 27.9	-2.1
	comp=Z,2.5nm,0.6s,baz=110,slow=1.8,SNR=20						
AAK	Ala-Archa	122.28	304	*d i*PKIKP	PKiKP	01 48 35.9	+3.4
KOOLE	Kule	123.75	200		PKPdf	01 48 35.8	0.0
KK31	Karatay Array	125.24	303		PKPdf	01 48 36.7	-1.1
KK31	Karatay Array	125.24	303	PKIKP	PKPdf	01 48 36.7	-1.1
KKAR	Karatay Array	125.24	303		PKPdf	01 48 36.6	-1.2
KKAR	Karatay Array	125.24	303		PKPdf	01 48 36.5	-1.3
KKAR	Karatay Array	125.24	303	PKIKP	PKPdf	01 48 36.5	-1.3
BVAR	Borovoye Array	126.64	316	PKP	PKPdf	01 48 39.0	-1.1
	comp=Z,2.2nm,0.5s,baz=157,slow=1.7,SNR=15						
BVAR	Borovoye Array	126.64	316	PKIKP	PKPdf	01 48 39.0	-1.1
BRVK	Borovoye	126.71	316	⇓*e*PKIKP	PKPdf	01 48 39.0	-1.2
SPITS	Spitsbergen Ar	132.07	356	PKP	PKPdf	01 48 49.4	-0.4
	comp=Z,5.2nm,0.8s,baz=93,slow=1.8,SNR=4.8						
ARTI	Arti	133.45	320	*i* PKIKP	PKPdf	01 48 51.5	-1.4
ARTI						01 51 16.4	
ARTI				SS	SS	02 09 03.1	-0.8
ARCES	ARCESS Array B	138.94	348	PKhKP	PKPpre	01 48 52.8	
	comp=Z,6.8nm,1.0s,baz=60,slow=2.4,SNR=5.5						
BELG	Belogornoye	140.43	317	⇓*e*PKIKP	PKPdf	01 49 04.6	-1.3
VRH	Novokhopyorsk	144.28	316	*e*PKIKP	PKPab	01 49 09.7	-1.1
VRH				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KBZ	Khabaz	145.28	303	PKPbc	PKPbc	01 49 14.0	-0.6
	comp=Z,4.4nm,0.8s,baz=287,slow=1.9,SNR=7.8						
KBZ	Khabaz	145.28	303	*e*PKIKP	PKPdf	01 49 15.7	+0.9
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KIV	Kislovodsk	145.40	304		PKPbc	01 49 15.3	+0.1
KIV	Kislovodsk	145.40	304	*e*PKP2	PKPbc	01 49 13.7	-1.4
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV	Kislovodsk	145.40	304	PKP	PKPbc	01 49 14.0	-1.1
OBN	Obninsk	145.45	325	*ce*PKP2	PKPbc	01 49 12.8	-1.9
OBN				*e*		01 52 36.3	
OBN				pmax	pmax		
	comp=Z,24nm,0.9s						
SHA1	Shidzhatmaz	145.45	304	*i* PKIKP	PKPbc	01 49 15.4	-0.1
FINES	FINESS Array B	145.48	340		PKPbc	01 49 13.2	-1.4
FINES	FINESS Array B	145.48	340	PKPbc	PKPbc	01 49 13.0	-1.7
	comp=Z,18nm,0.5s,baz=60,slow=3.9,SNR=352						
VORR	Voronezh	145.58	318	*e*PKP2	PKPdf	01 49 12.9	-2.2
VORR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NSS	Namsos	145.64	352	*e*PKPbc	PKPdf	01 49 13.6	-1.1
VSR	Storozhevoye	145.78	317	*e*PKIKP	PKPdf	01 49 12.6	-2.8
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VORD	Divnogorie	145.80	317	*e*PKIKP	PKPdf	01 49 13.4	-2.0
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSU	Vasula	147.55	336	*c i*PKIKP	PKPdf	01 49 18.3	+0.2
DOMB	Dombas	148.38	354	*e*PKPdf	PKPdf	01 49 20.5	+1.0
AKN	Aaknes	148.41	355	*e*PKPdf	PKPdf	01 49 20.5	+1.0
NC303	NORSAR Array S	148.91	351		PKPbc	01 49 23.4	-1.0
NC405	NORSAR Array S	148.97	351		PKPbc	01 49 24.1	-0.4
FOO	Floro	149.10	357	*e*PKPdf	PKPdf	01 49 21.7	+1.1
NB2	NORSAR Subarra	149.11	351	PKP	PKPdf	01 49 23.2	+2.5
	comp=Z,3.3nm,0.6s,baz=14,slow=2.6						
NB2	NORSAR Subarra	149.11	351	PKPab	PKPdf	01 49 23.2	+2.5
	baz=14,slow=2.6						
NOA	NORSAR Array B	149.11	351	PKPbc	PKPdf	01 49 23.6	+2.9
	comp=Z,5.1nm,0.7s,baz=15,slow=4.2,SNR=32						
NC602	NORSAR Array S	149.36	351	*e*PKPdf	PKPdf	01 49 23.6	+2.5
HYA	Hoyanger	149.47	356	*e*PKPdf	PKPdf	01 49 24.2	+3.0
HFS	Hagfors	149.60	348	PKPbc	PKPdf	01 49 24.6	+3.1
	comp=Z,9.3nm,0.7s,baz=64,slow=3.4,SNR=25						
SUE	Sulen	149.65	357	*e*PKPbc	PKPbc	01 49 24.9	-1.2
SKAR	Skarslia	149.79	354	*e*PKPbc	PKPbc	01 49 25.6	-1.0
MNK	Minsk	149.88	329	*i* PKP	PKPdf	01 49 24.5	+2.4
	comp=E,8.0nm,0.9s						
MNK				*i* PKP	PKPdf	01 49 24.5	+2.4
	comp=N,6.0nm,0.7s,baz=49						
MNK				*i* PKP	PKPdf	01 49 24.5	+2.4
	comp=Z,10.0nm,0.8s						
MNK				*i* PKiKP	PKPab	01 49 30.9	-1.6
MNK				*i* PP	PP	01 53 03.6	+2.7
MNK				*i* PPP	PPP	01 56 24.9	
MNK				*i* SKS	SKSdf	01 56 29.9	+2.8
MNK				*i* SS	SS	02 12 18.2	+4.0
MNK				*i* SSS	SSS	02 17 58.1	
MNK				*i* LR	LR	03 00 43.7	
MNK	Minsk	149.88	329	*i* PKHKP	PKPpre	01 49 24.4	
MNK				*i*		01 49 30.9	
MNK				*i*		01 53 03.6	
MNK				*i* PPP	PPP	01 56 24.8	
MNK				*i*		01 56 29.8	
MNK				*i* SS	SS	02 12 18.1	+3.9
MNK				*i* SSS	SSS	02 17 58.0	
MNK				pmax	pmax		
	comp=E,8.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,6.0nm,0.7s						
MNK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NACGM	Naroch	150.08	331	*e*PKiKP	PKPbc	01 49 26.5	-0.9
	comp=Z,15nm,1.0s,baz=46						
ASK	Askoy	150.21	357	*e*PKPbc	PKPbc	01 49 26.0	-1.5
KONO	Kongsberg	150.66	352	*e*PKPbc	PKPbc	01 49 27.1	-1.6
ODD1	Odda	150.69	355	*e*PKPbc	PKPbc	01 49 28.6	-0.2
STRU	Stroemstad	151.05	350	*e*P	PKPbc	01 49 28.4	-1.1
BLS5	Blasjo	151.19	355	*e*PKPbc	PKPbc	01 49 29.1	-0.8
KMY	Karmoy	151.47	356	*e*PKPbc	PKPbc	01 49 30.1	-0.5
AKASG	Malin Array Be	151.57	322	PKPbc	PKPbc	01 49 29.3	-1.7
	comp=Z,4.4nm,0.5s,baz=50,slow=2.7,SNR=37						
MMAI	Mount Meron Ar	151.57	283	PKPbc	PKPbc	01 49 31.3	-0.5
	comp=Z,5.1nm,0.6s,baz=86,slow=5.1,SNR=15						
BORU	Boraas	152.12	348	*e*P	PKPbc	01 49 30.4	-1.6
HOMB	Homborsund	152.14	353	*e*PKPbc	PKPbc	01 49 31.3	-0.7
HOMB	Homborsund	152.14	353	*i* P	PKPbc	01 49 31.3	-0.7
SNART	Snartemo	152.20	354	*e*PKPbc	PKPbc	01 49 31.6	-0.7
SNART	Snartemo	152.20	354	*e*P	PKPbc	01 49 31.5	-0.7
ONAU	Onsala	152.50	348	*e*P	PKPbc	01 49 31.5	-1.4
FABU	Falkenberg	152.72	347	*e*P	PKPbc	01 49 32.6	-0.8
BRTR	Keskin Array B	152.74	298		PKPbc	01 49 32.5	-1.7
BRTR	Keskin Array B	152.74	298	PKPbc	PKPbc	01 49 32.4	-1.9
	comp=Z,2.1nm,0.7s,baz=119,slow=4.4,SNR=9.6						
BR106	Keskin Array S	152.75	298	PKP	PKPdf	01 49 26.8	-0.3
RNPP9	Sopachiv	152.82	326	PKP	PKPdf	01 49 26.7	+0.1
DEL	Delary	152.98	345	*i* P	PKPbc	01 49 32.9	-1.1
ANTO	Ankara	153.35	298	PKPbc	PKPbc	01 49 34.5	-1.0
ANTO	Ankara	153.35	298	PKIKP	PKPbc	01 49 34.5	-1.0
BURAR	Bucovina Array	155.49	320		PKPab	01 49 56.8	+0.3
BURAR	Bucovina Array	155.49	320	PKP2	PKPab	01 49 56.8	+0.3
CLL	Collm	157.90	341	*i* PKP2	PKPab	01 50 04.8	-1.8
CLL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CLL	Collm	157.90	341	*i* PKPab	PKPab	01 50 04.8	-1.8
	comp=Z,3.0nm,0.8s						
CLL				*i* x	x	01 50 09.5	
BRG	Berggiesshubel	158.02	339	*e*PKP	PKPab	01 50 05.8	-1.3
BRG				Amp		01 50 06.1	
	comp=Z,2.2nm,0.8s						
VYHS	Vyhne	158.12	329	*e*PKP	PKPab	01 50 05.7	-2.0
CONA	Conrad Observa	159.82	332	*i* PKP	PKPab	01 50 17.9	+2.7
	comp=Z,2.5nm,1.1s						
RONA	Rosalia, Austr	159.83	331	*i* PKP	PKPab	01 50 14.6	-0.5
	comp=Z,2.8nm,0.9s						
GERES	GERESS Array B	159.86	337	PKPab	PKPab	01 50 13.0	-2.3
	comp=Z,55nm,0.3s,baz=20,slow=5.8,SNR=11						
ARSA	Arzberg	160.50	331	*e*PKP	PKPab	01 50 19.8	+1.7
	comp=Z,2.9nm,1.3s						
MOA	Molln	160.51	334	*i* PKP	PKPab	01 50 18.2	+0.1
	comp=Z,2.6nm,1.1s						
BIOA	Bad Ischl, Aus	160.87	335	*e*PKP	PKPab	01 50 19.6	0.0
	comp=Z,4.6nm,1.2s						
SOKA	Soboth	161.16	331	*i* PKP	PKPab	01 50 19.0	-2.1
	comp=Z,2.6nm,1.3s						
LESA	Schwarzleotal	161.44	337	*i* PKP	PKPab	01 50 21.4	-0.8
	comp=Z,3.1nm,1.2s						
OBKA	Obir	161.50	332	*e*PKP	PKPab	01 50 21.4	-1.2
	comp=Z,0.8nm,0.5s						
MYKA	Terra Mystica	161.76	334	*e*PKP	PKPab	01 50 22.2	-1.4
	comp=Z,2.4nm,0.7s						
WATA	Walderalm	161.88	339	*e*PKP	PKPab	01 50 20.7	-3.5
	comp=Z,0.8nm,0.5s						
WTTA	Wattenberg	161.92	338	*e*PKP	PKPab	01 50 19.1	-5.3
	comp=Z,4.0nm,1.1s						
RETA	Reutte	161.99	340	*i* PKP	PKPab	01 50 19.1	-5.4
	comp=Z,4.6nm,1.4s						
MOTA	Moosalm	162.01	339	*e*PKP	PKPab	01 50 22.9	-1.9
	comp=Z,2.3nm,0.8s						
ABTA	Abfaltersbach	162.08	336	*i* PKP	PKPab	01 50 21.2	-3.8
	comp=Z,1.4nm,0.8s						
DAVA	Damuels	162.41	342	*i* PKP	PKPab	01 50 26.6	+0.1
	comp=Z,3.2nm,1.0s						
FETA	Feichten	162.42	340	*i* PKP	PKPab	01 50 28.4	+1.9
	comp=Z,4.5nm,1.2s						
TORD	Torodi Ar. Bea	162.46	179	PKPab	PKPab	01 50 27.2	-0.1
	comp=Z,2.9nm,0.7s,baz=163,slow=2.4,SNR=5.5						
ESDC	Sonseca Array	169.89	27	PKP	PKPdf	01 49 44.9	0.0
	comp=Z,0.6nm,0.8s,baz=0.9,slow=2.4,SNR=5.0						
ESDC				PKPab	PKPab	01 50 58.8	-0.8
	comp=Z,0.5nm,0.9s,baz=308,slow=3.8,SNR=4.8						

IDC 16 01:37:11.7±8.7, 31°.13S×177°.62W, h0km, mb3.6/2, mbtmp3.6/2, Error ellipse: s-maj=387.1km s-min=57.6km az=157.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.41	268	P	P	01 45 16.4	0.0
	0.4nm,0.6s,baz=113,slow=8.1,SNR=5.4						
	0.4nm,0.6s						
WRA	Warramunga Arr	44.46	273	P	P	01 45 24.5	-0.3
	0.5nm,0.4s,baz=112,slow=8.2,SNR=5.9						
	0.5nm,0.4s						
FINES	FINESS Array B	145.94	340	PKPbc	PKPdf	01 56 51.6	-0.2
	0.7nm,0.5s,baz=41,slow=4.1,SNR=7.4						

IDC 16 01:46:45.4±1.8, 29°.77S×177°.95W, h0km, mb4.3/4, mbtmp4.3/4, Error ellipse: s-maj=49.6km s-min=33.1km az=32.0

NEIC 16 01:46:49.1±0.9, 30°.69S±0°.08×177°.7W±0°.2, h35km±2km, mb4.5/12, Error ellipse: s-maj=30.1km s-min=9.3km az=69.0

ISC 16 01:46:49.8±0.9, 30°.79S±0°.07×177°.9W±0°.2, h35km, n22, σ1s.24/21, mb4.4/8, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.53	359		Pn	01 47 14.9	+0.3
RAO				Sn	Sn	01 47 31.2	-2.0
MXZ	Matakaoa Point	7.46	204	Pn	Pn	01 48 34.2	-1.8
BKZ	Black Stump Fm	9.54	207	Pn	Pn	01 49 01.5	-3.3
CTAO	Charters Tower	33.96	280	P	P	01 53 31.0	+1.0
CTAO				IAmb	IAmb	01 54 11.2	
	comp=Z,16nm,1.5s						
STKA	Stephens Creek	34.49	257	P	P	01 53 36.4	+1.9
STKA	Stephens Creek	34.49	257	P	P	01 53 36.9	+2.4
	comp=Z,7.8nm,0.7s,baz=100,slow=10,SNR=11						
	comp=Z,7.8nm,0.7s						
RABL	Rabaul	38.68	307	P	P	01 54 09.4	-0.9
BBOO	Buckleboo	38.96	255	P	P	01 54 12.9	+0.4
ASAR	Alice Springs	43.19	267	P	P	01 54 47.3	-0.2
ASAR	Alice Springs	43.19	267	P	P	01 54 47.8	+0.3
	comp=Z,1.4nm,0.8s,baz=103,slow=7.3,SNR=20						
	comp=Z,1.4nm,0.8s						
WR0	Warramunga Arr	44.03	273	P	P	01 54 54.6	+0.3
WR0				IAmb	IAmb	01 55 27.3	
	comp=Z,6.9nm,1.4s						
WRA	Warramunga Arr	44.21	272	P	P	01 54 55.5	-0.3
WRA	Warramunga Arr	44.21	272	P	P	01 54 56.1	+0.3
	comp=Z,2.1nm,0.4s,baz=112,slow=7.9,SNR=25						
	comp=Z,2.1nm,0.4s						
FITZ	Fitzroy Crossi	52.46	270	P	P	01 55 59.1	-0.3
FITZ				IAmb	IAmb	01 56 09.9	
	comp=Z,4.4nm,1.5s						
CASY	Casey	54.84	208	P	P	01 56 16.3	+0.2
PSA00	Pilbara Seismi	56.02	263	P	P	01 56 24.2	-1.1
PSA00				IAmb	IAmb	01 56 32.4	
	comp=Z,4.5nm,0.9s						
QSPA	South Pole Qui	59.33	180	P	P	01 56 50.3	+2.3
QSPA				IAmb	IAmb	01 56 57.7	
	comp=Z,4.3nm,0.8s						
QSPA	South Pole Qui	59.33	180	P	P	01 56 55.8	+7.8
	comp=Z,4.4nm,0.8s,baz=48,slow=1.5,SNR=11						
	comp=Z,4.4nm,0.8s						
BELA	Belgrano 2	69.39	172	P	P	01 57 53.3	-0.2
SNAA	Sanae	77.77	178	P	P	01 58 42.6	-0.3
FINES	FINESS Array B	145.54	340	PKP	PKPab	02 06 23.4	-0.5
	comp=Z,1.6nm,0.5s,baz=56,slow=3.5,SNR=27						
AKASG	Malin Array Be	151.66	322	PKPbc	PKPbc	02 06 38.7	-1.3
	comp=Z,0.7nm,0.6s,baz=62,slow=1.1,SNR=5.4						

NEIC 16 01:48:52.8±2.2, 36°.09N±0°.02×117°.68W±0°.02, h4km±4km, Error ellipse: s-maj=2.9km s-min=2.3km az=209.0

PAS 16 01:48:53.3±2.1, 36°.11N±0°.01×117°.67W±0°.02, h2km±5km, ML3.3/262, ML3.1/116(NEIC), Error ellipse: s-maj=2.5km s-min=2.1km az=84.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WCSM	Coso Springs S	0.12	221		Pg	01 48 55.8	+0.2
WCSM					Sg	01 48 57.6	+0.4
MFS	McCloud Flat S	0.15	271		Pg	01 48 56.3	+0.1
MFS					Sg	01 48 58.9	+0.7
MPMC	Manual Prospec	0.16	111		Pg	01 48 56.6	+0.1
MPMC					Sg	01 48 59.0	+0.5
JRC2	Joshua Ridge	0.17	220		Pg	01 48 56.8	+0.2
JRC2					Sg	01 48 59.3	+0.4
WVPM	Volcano Peak E	0.20	215		Pg	01 48 57.2	+0.1
WVPM					Sg	01 49 00.3	+0.4
WRVM	Rose V. Centra	0.20	239		Pg	01 48 57.4	+0.1
WRVM					Sg	01 49 00.5	+0.5
CLC	China Lake	0.30	168		Sg	01 49 02.9	-0.2
TOW	Tower One	0.31	194		Pg	01 48 59.9	+0.6
TOW					Sg	01 49 05.0	+1.6
WNMM	Nine Mile Cany	0.33	215		Pn	01 49 04.6	-0.4
SRTC	Snort	0.43	188		Pg	01 49 01.9	+0.4
SRTC					Sg	01 49 08.6	+1.6
CGO	Cerro Gordo	0.45	346		Pg	01 49 01.6	-0.3
CGO					Sg	01 49 09.0	+1.2
CWC	Cottonwood Cre	0.46	315		Pg	01 49 02.2	0.0
CWC					Sg	01 49 08.3	+0.1
WORM	Onyx Ranch	0.62	228		Pg	01 49 04.9	-0.3
WORM					Sg	01 49 13.3	0.0
LRMC	Laurel Mtn Rad	0.63	181		Sg	01 49 14.1	+0.5
CCCA	Chr Cany lake	0.64	157		Pg	01 49 05.6	+0.1
CCCA					Sg	01 49 14.8	+1.0
QSM	Queen of Sheba	0.67	103		Pg	01 49 05.9	-0.2
QSM					Sg	01 49 14.8	+0.1
QSM				IAML		01 49 15.9	
	comp=E,1μm,0.1s						
QSM				IAML		01 49 19.5	
	comp=N,1μm,0.5s						
WBSM	Bird Springs	0.69	213		Sg	01 49 15.7	+0.3
WHFM	Hanning Flat	0.69	233		Pg	01 49 06.2	-0.3
WHFM					Sg	01 49 15.3	-0.1
FURC	Furnace Creek,	0.74	61		Pg	01 49 07.7	+0.1
FURC					Sg	01 49 17.9	+0.7
ISA	Isabella, Lake	0.79	236		Sg	01 49 18.9	+0.2
ISA	Isabella, Lake	0.79	236		Pg	01 49 08.2	-0.3
ISA				IAML		01 49 19.1	
	comp=N,385nm,0.5s						
WASM	Alta Sierra Ca	0.81	243		Pg	01 49 08.5	-0.3
WASM					Sg	01 49 19.2	-0.1
GWY	Greenwater Val	0.82	85		Pg	01 49 08.8	-0.2
GWY					Sg	01 49 19.9	+0.4
GWY				IAML		01 49 23.3	
	comp=E,1μm,0.7s						
GWY				IAML		01 49 24.1	
	comp=N,939nm,0.4s						
DTP	Desert Tortois	0.86	189		Pg	01 49 09.2	-0.5
DTP					Sg	01 49 20.8	+0.1
SPG2	Springville 2	0.89	276		Sg	01 49 21.3	-0.5
GRAC	Grapevine Rang	0.91	16		Sg	01 49 23.3	+0.7
GRAC	Grapevine Rang	0.91	16		Pg	01 49 10.4	-0.4
CCAC	Calif City Air	1.00	196		Sg	01 49 25.5	+0.1
CCAC	Calif City Air	1.00	196		Pg	01 49 12.1	-0.4
CCAC				IAML		01 49 29.1	
	comp=E,881nm,0.5s						
SGV	South Grapevin	1.01	31		Pg	01 49 12.2	-0.3
SGV					Sg	01 49 25.4	-0.3
TIN	Tinemaha, Big	1.04	335		Pg	01 49 12.4	-0.8
GSC	Goldstone, Bar	1.07	139		Sg	01 49 27.5	-0.3
GSC	Goldstone, Bar	1.07	139		Pg	01 49 13.3	-0.6
GSC				IAML		01 49 29.6	
	comp=N,541nm,0.4s						
GSC				IAML		01 49 32.9	
	comp=E,616nm,0.7s						
DSP	Deep Springs	1.28	349		Sg	01 49 33.9	-0.4
DSP	Deep Springs	1.28	349		Pg	01 49 16.5	-1.2
VOG	Valley Oaks Go	1.40	279		Pn	01 49 19.3	-0.4

TPNV	**Topopah Spring**	**1.42**	**54**		Pn	01 49 19.4	-0.8
TPNV				IAML		01 49 41.8	
	comp=E,487nm,0.5s						
TUQ	**Turquoise Moun**	**1.57**	**115**		Pn	01 49 21.0	-1.3
MZP	**Montezuma Peak**	**1.60**	**8**		Pn	01 49 22.1	-0.7
MZP				IAML		01 49 48.9	
	comp=E,112nm,0.4s						
BENR	**Benton**	**1.75**	**336**		Pn	01 49 25.6	+0.6
BCW	**Bitter Crk WRg**	**1.84**	**231**		Pn	01 49 26.3	+0.4
BCW				IAML		01 50 00.9	
	comp=E,219nm,0.9s						
BCW				IAML		01 50 05.7	
	comp=N,213nm,1.0s						
MDPB	**Devils Postpil**	**1.89**	**324**		Pn	01 49 27.4	+0.7
MDPB				IAML		01 49 53.5	
	comp=N,294nm,0.4s						
MDPB				IAML		01 49 54.5	
	comp=E,252nm,0.4s						
PKEM	**Kettleman Hill**	**1.97**	**269**		Pb	01 49 29.7	-0.2
PASC	**Pasadena Art C**	**1.98**	**192**	Pn	Pn	01 49 27.9	+0.1
PASC					Pb	01 49 30.2	+0.1
TPH	**Tonopah**	**1.99**	**10**		Pn	01 49 27.8	-0.3
TPH				Pg	Pb	01 49 30.5	+0.2
SHPR	**Sheep Range**	**2.07**	**78**		Pn	01 49 28.7	-0.5
GMRC	**Granite Mounta**	**2.11**	**128**		Pn	01 49 27.9	-1.8
LHV	**Little Huntoon**	**2.23**	**343**		Pn	01 49 31.6	+0.3
LHV				IAML		01 50 12.4	
	comp=N,61nm,0.7s						
LHV				IAML		01 50 12.9	
	comp=E,77nm,0.6s						
V12A	**Nelson**	**2.32**	**99**		Pn	01 49 31.6	-0.9
V12A				Pg	Pb	01 49 36.2	+0.3
V12A				IAML		01 50 09.9	
	comp=N,73nm,0.5s						
V12A				IAML		01 50 13.0	
	comp=E,65nm,0.3s						
NV11	**Mina Array Sit**	**2.34**	**351**		Pn	01 49 32.6	-0.4
NV11				Pg	Pb	01 49 37.3	+1.0
NVAR	**Mina Array Bea**	**2.37**	**348**		Pn	01 49 33.0	-0.3
NVAR				Pg	Pb	01 49 37.2	+0.5
ELS	**Elsinore Mount**	**2.47**	**175**		Pn	01 49 34.2	-0.4
ELS				Pg	Pb	01 49 39.0	+0.7
PRN	**Pahroc Range**	**2.47**	**58**		Pn	01 49 34.2	-0.4
PMPB	**Monarch Peak**	**2.53**	**273**		Pn	01 49 37.1	+1.7
PMPB				IAML		01 50 22.4	
	comp=N,113nm,1.1s						
PMPB				IAML		01 50 24.2	
	comp=E,155nm,0.9s						
RYN	**Ryan**	**2.60**	**345**		Pn	01 49 36.4	0.0
RAMR	**Ramage Ranch**	**2.64**	**261**		Pn	01 49 38.5	+1.7
PFO	**Pinyon Flats O**	**2.69**	**158**		Pn	01 49 36.8	-0.8
Q09A	**Carvers**	**2.74**	**8**		Pg	01 49 45.9	+0.1
BBGB	**Big Mountain B**	**2.76**	**281**		Pn	01 49 39.1	+0.6
WAKR	**Walker**	**2.77**	**330**		Pb	01 49 44.7	+1.1
WAKR				IAML		01 50 30.1	
	comp=E,36nm,1.1s						
R11B	**Troy Canyon, C**	**2.78**	**36**		Pb	01 49 45.0	+1.2
R11B				IAML		01 50 23.8	
	comp=N,51nm,1.0s						
R11B				IAML		01 50 23.9	
	comp=E,71nm,0.8s						
CMB	**Columbia Colle**	**2.90**	**312**		Pn	01 49 42.2	+1.8
CMB				IAML		01 50 24.2	
	comp=N,77nm,0.9s						
CMB				IAML		01 50 25.1	
	comp=E,67nm,0.5s						
SAO	**San Andreas Ge**	**3.11**	**283**		Pn	01 49 42.6	-0.7
W13A	**Hualapai Mount**	**3.25**	**107**	Pn	Pn	01 49 45.0	-0.4
W13A				IAML		01 50 39.9	
	comp=N,47nm,0.9s						
W13A				IAML		01 50 40.7	
	comp=E,42nm,0.8s						
PNTR	**Pine Nut**	**3.34**	**333**	Pn	Pn	01 49 46.5	-0.2
PNTR				IAML		01 50 50.2	
	comp=N,25nm,0.8s						
PNTR				IAML		01 51 17.0	
	comp=E,29nm,1.2s						
BLYC	**Blythe**	**3.50**	**131**	Pn	Pn	01 49 47.6	-1.0
BLYC				IAML		01 50 46.7	
	comp=E,31nm,0.7s						
BLYC				IAML		01 50 52.1	
	comp=N,39nm,0.6s						
LCMT	**Little Creek M**	**3.68**	**75**		Pn	01 49 50.8	-0.4
YUH	**Yuha Desert**	**3.75**	**157**	Pn	Pn	01 49 51.7	-0.4
PAHR	**Pah Rah Range**	**3.83**	**340**		Pn	01 49 52.5	-0.8
PAHR				Pg	Pg	01 50 04.3	-2.4
CBX	**Cerro Bola**	**3.88**	**167**	Pn	Pn	01 49 53.2	-0.8
CBX				IAML		01 51 01.0	
	comp=N,50nm,0.7s						
PSUT	**Pine Spring**	**3.88**	**50**		Pg	01 50 05.7	-2.0
PSUT				IAML		01 51 01.3	
	comp=N,47nm,1.0s						
SPR3	**Spring Creek 3**	**3.92**	**42**		Pg	01 50 08.6	+0.3
SPR3				IAML		01 50 59.1	
	comp=N,25nm,0.9s						
SPR3				IAML		01 51 00.3	
	comp=E,36nm,0.7s						
KNB	**Kanab**	**4.01**	**76**		Pn	01 49 56.1	+0.3
BEKR	**Beckworth**	**4.30**	**331**	IAML		01 51 20.3	
	comp=E,35nm,0.7s						
BEKR				IAML		01 51 20.4	
	comp=N,16nm,0.6s						
ESJX	**Sierra Juarez**	**4.34**	**160**	IAML		01 51 17.4	
	comp=E,12nm,1.6s						
U15A	**North Rim**	**4.36**	**84**	IAML		01 51 18.5	
	comp=E,12nm,0.9s						
U15A				IAML		01 51 21.1	
	comp=N,11nm,1.0s						
Y14A	**Wickenburg**	**4.40**	**118**	IAML		01 51 16.5	
	comp=E,27nm,1.1s						
113A	**Mohawk Valley,**	**4.64**	**135**	IAML		01 51 32.2	
	comp=E,8.8nm,1.6s						
113A				IAML		01 51 38.5	
	comp=N,9.1nm,1.4s						
ELK	**Elko**	**5.00**	**22**	IAML		01 51 36.4	
	comp=N,8.1nm,0.5s						
ELK				IAML		01 51 36.5	
	comp=N,9.9nm,0.7s						
WUAZ	**Wupatki**	**5.15**	**95**	IAML		01 51 38.9	
	comp=N,16nm,1.6s						
WUAZ				IAML		01 51 42.6	
	comp=N,14nm,1.8s						

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*IDC **16** 01:51:00.9±1.1, 30°.56S×177°.97W, h0^{km}, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=41.8km s-min=36.9km az=168.0*

ISC 16 01:51:07.6±1.2, **30°.9S**±0°.1×**178°.3W**±0°.3, **h35**^{km}**, n12,** σ**1^{s}.56**/13, **mb3.9**/3, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.23**	**206**	Pn	**Pn**	**01 53 02.8**	**-1.7**
	0.3nm,0.3s,baz=265,slow=14,SNR=1.8						
URZ				Sn	**Sn**	**01 54 37.2**	**+1.0**
	1.0nm,0.3s,baz=282,slow=22,SNR=6.9						
ASAR	**Alice Springs**	**42.82**	**268**	P	**P**	**01 59 03.1**	**+0.8**
	1.7nm,0.8s,baz=112,slow=7.8,SNR=14						
	1.7nm,0.8s						
WRA	**Warramunga Arr**	**43.85**	**273**	P	**P**	**01 59 11.2**	**+0.5**
	1.3nm,0.6s,baz=110,slow=8.1,SNR=8.7						
	1.3nm,0.6s						
QSPA	**South Pole Qui**	**59.18**	**180**	P	**P**	**02 01 05.9**	**+1.0**
	1.6nm,0.9s,baz=28,slow=5.0,SNR=3.8						
	1.6nm,0.9s						
BVAR	**Borovoye Array**	**126.59**	**315**	PKP	**PKPdf**	**02 10 07.0**	**+0.4**
	1.0nm,0.8s,baz=180,slow=1.4,SNR=3.9						
FINES	**FINESS Array B**	**145.55**	**339**	PKPbc	**PKPdf**	**02 10 39.0**	**-2.3**
	2.7nm,0.7s,baz=49,slow=3.4,SNR=12						
NB2	**NORSAR Subarra**	**149.23**	**351**	PKP	**PKPdf**	**02 10 49.4**	**+1.9**
	comp=Z,2.4nm,1.0s,baz=18,slow=4.4						
NOA	**NORSAR Array B**	**149.23**	**351**	PKPbc	**PKPdf**	**02 10 49.1**	**+1.6**
	comp=Z,0.7nm,0.8s,baz=16,slow=2.7,SNR=3.7						
HFS	**Hagfors**	**149.71**	**348**	PKPbc	**PKPdf**	**02 10 49.8**	**+1.6**
	comp=Z,1.7nm,0.9s,baz=70,slow=1.7,SNR=3.6						
MMAI	**Mount Meron Ar**	**151.39**	**283**	PKPbc	**PKPbc**	**02 10 57.3**	**-0.6**
	comp=Z,1.4nm,0.7s,baz=25,slow=2.8,SNR=6.3						
AKASG	**Malin Array Be**	**151.55**	**322**	PKPbc	**PKPbc**	**02 10 55.5**	**-2.1**
	comp=Z,2.8nm,0.8s,baz=58,slow=2.2,SNR=9.2						
BRTR	**Keskin Array B**	**152.61**	**297**	PKPbc	**PKPbc**	**02 11 00.5**	**-0.1**
	comp=Z,0.9nm,0.9s,baz=262,slow=1.9,SNR=5.3						

IDC 16 01:58:36.1±8.1, **30°.27S**×**178°.06W, h0**^{km}**, mb3.6**/2, **mbtmp3.6**/2, **Error ellipse: s-maj=345.6km s-min=56.5km az=156.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.07**	**267**	P	P	02 06 37.9	-0.2
	0.2nm,0.3s,baz=105,slow=7.1,SNR=5.8						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**44.05**	**272**	P	P	02 06 45.8	-0.1
	0.6nm,0.3s,baz=111,slow=8.1,SNR=9.2						
	0.6nm,0.3s						
FINES	**FINESS Array B**	**145.01**	**340**	PKPbc	PKPbc	02 18 13.2	-0.8
	1.8nm,0.9s,baz=25,slow=3.3,SNR=8.1						

IDC 16 02:02:19.9±4.6, **30°.04S**×**178°.31W, h0**^{km}**, mb4.0**/2, **mbtmp4.0**/2, **Error ellipse: s-maj=247.5km s-min=68.4km az=166.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.86**	**267**	P	P	02 10 20.1	-0.1
	1.1nm,0.6s,baz=104,slow=7.5,SNR=17						
	1.1nm,0.6s						
WRA	**Warramunga Arr**	**43.82**	**272**	P	P	02 10 27.8	-0.1
	1.2nm,0.5s,baz=113,slow=7.9,SNR=7.5						
	1.2nm,0.5s						
FINES	**FINESS Array B**	**144.72**	**340**	PKP	PKPbc	02 21 57.3	+0.4
	1.3nm,0.5s,baz=34,slow=3.6,SNR=14						

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*NEIC **16** 02:06:25.8±1.3, 3°.69S±0°.05×152°.2E±0°.1, h271^{km}±7^{km}, mb4.4/21, Error ellipse: s-maj=17.9km s-min=6.1km az=76.0*

*IDC **16** 02:06:26.0±3.0, 3°.66S×152°.12E, h276^{km}±29^{km}, mb3.5/9, mbtmp4.2/11, Error ellipse: s-maj=23.5km s-min=14.0km az=76.0*

ISC 16 02:06:25.4±0.6, **3°.69S**±0°.07×**152°.19E**±0°.10, **h271**^{km}**, n38,** σ**0^{s}.71**/38, **mb4.2**/18, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**0.50**	**183**		**Pn**	**02 07 00.9**	**+0.1**
MANU	**Manus Island**	**5.08**	**289**		**Pn**	**02 07 43.7**	**+0.8**
PMG	**Port Moresby**	**7.57**	**221**	Pn	**Pn**	**02 08 13.3**	**-0.2**
PMG	**Port Moresby**	**7.57**	**221**	P	**Pn**	**02 08 13.4**	**-0.1**
	8.2nm,0.4s,baz=37,slow=16,SNR=5.9						
JAY	**Jayapura**	**11.53**	**275**	P	**Pn**	**02 09 02.8**	**0.0**
	4.0nm,0.4s,baz=188,slow=11,SNR=5.8						
COEN	**Coen**	**13.54**	**221**	P	**P**	**02 09 29.6**	**+1.5**
CTAO	**Charters Tower**	**17.30**	**199**	P	**Pn**	**02 10 11.3**	**-0.7**
CTAO				IAmb	IAmb	02 10 16.2	
	comp=Z,11nm,1.3s						
FAKI	**Fak Fak**	**19.92**	**272**	P	**P**	**02 10 38.3**	**+0.8**
MTN	**Manton Dam**	**22.71**	**245**	P	**P**	**02 11 04.6**	**+0.2**
MTN				IAmb	IAmb	02 11 05.6	
	comp=Z,8.8nm,0.4s						
DZM	**Mont Dzumac**	**22.92**	**144**	P	**P**	**02 11 07.4**	**+1.1**
DZM				IAmb	IAmb	02 11 10.0	
	comp=Z,15nm,1.2s						
DZM	**Mont Dzumac**	**22.92**	**144**	P	**P**	**02 11 07.1**	**+0.7**
	comp=Z,5.4nm,0.6s,baz=246,slow=9.2,SNR=13						
	comp=Z,5.4nm,0.6s						
WB0	**Warramunga Arr**	**23.60**	**226**		**P**	**02 11 12.5**	**0.0**
WB0				IAmb	IAmb	02 11 13.9	
	comp=Z,18nm,0.8s						
WR8	**Warramunga Arr**	**23.64**	**225**		**P**	**02 11 13.2**	**+0.3**
WRA	**Warramunga Arr**	**23.75**	**226**	P	**P**	**02 11 13.9**	**+0.1**
	comp=Z,26nm,0.6s,baz=48,slow=9.7,SNR=178						
AS31	**Alice Springs**	**26.58**	**220**		**P**	**02 11 38.9**	**-0.3**
ASAR	**Alice Springs**	**26.58**	**220**	P	**P**	**02 11 39.2**	**0.0**
	comp=Z,0.8nm,0.4s,baz=55,slow=8.7,SNR=18						
	comp=Z,0.8nm,0.4s						
FITZ	**Fitzroy Crossi**	**29.68**	**239**	P	**P**	**02 12 05.2**	**-1.4**
STKA	**Stephens Creek**	**29.76**	**198**	P	**P**	**02 12 07.4**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=27,slow=9.8,SNR=3.3						
	comp=Z,1.0nm,0.5s						
KAPI	**Kappang**	**32.37**	**266**	P	**P**	**02 12 29.9**	**-0.3**
KAPI				IAmb	IAmb	02 13 09.4	
	comp=Z,17nm,1.2s						
BBOO	**Buckleboo**	**32.67**	**206**	P	**P**	**02 12 32.5**	**-0.2**
BBOO				IAmb	IAmb	02 12 45.2	
	comp=Z,21nm,1.2s						
FORT	**Forrest**	**35.28**	**218**	P	**P**	**02 12 53.5**	**-1.5**
MBWA	**Marble Bar**	**36.01**	**238**	P	**P**	**02 13 00.3**	**-1.0**
PSA00	**Pilbara Seismi**	**36.09**	**238**	P	**P**	**02 13 01.8**	**-0.2**
SSLB	**Suanglung**	**40.88**	**313**	P	**P**	**02 13 42.2**	**+0.4**
SSLB				IAmb	IAmb	02 14 11.0	
	comp=Z,34nm,1.5s						
JNU	**Nakatsue**	**41.80**	**333**	P	**P**	**02 13 49.0**	**-0.1**
JNU				IAmb	IAmb	02 13 50.0	
	comp=Z,29nm,1.0s						
MORW	**Morawa**	**42.58**	**230**	P	**P**	**02 13 54.3**	**-1.0**
MORW				IAmb	IAmb	02 13 55.0	
	comp=Z,12nm,1.0s						
KSRS	**Korea Array**	**46.74**	**333**	P	**P**	**02 14 27.8**	**0.0**
	comp=Z,0.8nm,0.4s,baz=145,slow=8.0,SNR=5.0						
	comp=Z,0.8nm,0.4s						
PETK	**Petropavlovsk-**	**56.77**	**4**	P	**P**	**02 15 41.5**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=144,slow=6.0,SNR=4.2						
	comp=Z,1.6nm,0.6s						
VNDA	**Vanda**	**73.96**	**178**	P	**P**	**02 17 31.6**	**+0.8**
VNDA	**Vanda**	**73.96**	**178**	P	**P**	**02 17 31.4**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=177,slow=5.0,SNR=8.1						
	comp=Z,0.8nm,0.6s						
MKAR	**Makanchi Array**	**79.09**	**319**	P	**P**	**02 17 59.9**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=100,slow=7.0,SNR=5.4						
	comp=Z,0.6nm,0.6s						
MAKZ	**Makanchi**	**79.30**	**319**	P	**P**	**02 18 01.4**	**+0.2**
MAKZ				IAmb	IAmb	02 18 02.1	
	comp=Z,4.7nm,1.4s						
J25K	**Salcha River,**	**81.87**	**23**	P	**P**	**02 18 13.5**	**-1.0**
D23K	**Nanushuk River**	**82.18**	**18**	P	**P**	**02 18 16.6**	**+0.7**
QSPA	**South Pole Qui**	**86.27**	**180**	P	**P**	**02 18 36.1**	**-0.5**
QSPA				IAmb	IAmb	02 18 37.3	
	comp=Z,2.7nm,0.8s						
QSPA	**South Pole Qui**	**86.27**	**180**	P	**P**	**02 18 36.7**	**+0.1**
	comp=Z,3.4nm,0.8s,baz=261,slow=0.5,SNR=13						
	comp=Z,3.4nm,0.8s						
KKAR	**Karatay Array**	**86.43**	**313**	P	**P**	**02 18 36.8**	**-0.9**
BVAR	**Borovoye Array**	**87.99**	**323**	P	**P**	**02 18 43.9**	**-1.0**
	comp=Z,2.0nm,0.6s,baz=101,slow=7.7,SNR=9.8						
	comp=Z,2.0nm,0.6s						

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*IDC **16** 02:30:09.1±1.9, 30°.61S×177°.96W, h0^{km}, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=49.2km s-min=29.6km az=48.0*

ISC 16 02:30:16.8±1.5, **31°.0S**±0°.1×**178°.2W**±0°.2, **h46**^{km}**, n10,** σ**1^{s}.91**/8, **mb3.8**/5, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.24**	**207**	Pn	**Pn**	**02 32 11.0**	**-2.8**
	0.5nm,0.3s,baz=347,slow=4.1,SNR=6.1						
URZ				Sn	**Sn**	**02 33 46.7**	**+1.2**
	0.8nm,0.3s,baz=285,slow=20,SNR=8.0						
STKA	**Stephens Creek**	**34.18**	**258**	P	**P**	**02 36 59.1**	**+1.3**
	2.4nm,0.7s,baz=113,slow=9.8,SNR=4.8						
	2.4nm,0.7s						
ASAR	**Alice Springs**	**42.91**	**268**	P	**P**	**02 38 11.3**	**+0.1**
	0.3nm,0.6s,baz=102,slow=7.4,SNR=6.4						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**43.94**	**273**	P	**P**	**02 38 19.3**	**-0.2**
	0.6nm,0.4s,baz=111,slow=8.0,SNR=8.7						
	0.6nm,0.4s						
VNDA	**Vanda**	**47.53**	**186**	P	**P**	**02 38 47.4**	**+0.4**
	0.3nm,0.3s,baz=61,slow=8.8,SNR=6.1						
	0.3nm,0.3s						
QSPA	**South Pole Qui**	**59.16**	**180**	P	**P**	**02 40 14.5**	**+1.8**
	0.6nm,0.7s,baz=18,slow=6.4,SNR=7.1						
	0.6nm,0.7s						
H03S2	**Juan Fernandez**	**80.31**	**124**	T	T	04 11 55.1	
	baz=242						
H03S1	**Juan Fernandez**	**80.32**	**124**	T	T	04 11 41.1	
	baz=242,slow=74						
H03S3	**Juan Fernandez**	**80.33**	**124**	T	T	04 11 58.8	
	baz=242,slow=74						
FINES	**FINESS Array B**	**145.60**	**340**	PKPbc	**PKPdf**	**02 49 47.2**	**-2.0**
	2.0nm,0.7s,baz=50,slow=4.3,SNR=18						

IDC 16 02:37:57.5±2.9, **30°.01S**×**178°.09W, h0**^{km}**, mb3.7**/3, **mbtmp3.7**/3, **Error ellipse: s-maj=83.7km s-min=37.5km az=39.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.05**	**267**	P	P	02 45 59.1	-0.1
	0.6nm,0.7s,baz=101,slow=7.4,SNR=7.6						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**44.00**	**272**	P	P	02 46 06.8	-0.2
	0.6nm,0.4s,baz=111,slow=8.0,SNR=8.6						
	0.6nm,0.4s						
QSPA	**South Pole Qui**	**60.10**	**180**	P	P	02 48 06.4	0.0
	1.0nm,0.9s,baz=45,slow=2.2,SNR=6.5						
	1.0nm,0.9s						
FINES	**FINESS Array B**	**144.75**	**340**	PKP	PKPbc	02 57 35.0	+0.5
	1.4nm,0.8s,baz=33,slow=3.3,SNR=6.8						

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*LDG **16** 02:49:00.4±0.1, 48°.25N×7°.28E, h2^{km}, Md1.5/1, Ml1.4/1, Error ellipse: s-maj=3.1km s-min=2.2km az=113.0*

STR 16 02:49:00.4±0.5, **48°N**±3°×°±°, **h2**^{km}**, MLv0.6**/5, **Error ellipse: s-maj=0.0km s-min=0.0km az=113.4, preliminary, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECH	**Echery**	**0.08**	**245**	Pg	Pg	02 49 02.0	-0.1
ECH				Sg	Sg	02 49 03.3	+0.1
CDF	**Champ du Feu**	**0.16**	**1**	*e*Pg	Pg	02 49 03.5	-0.1
CDF				*e*Sg	Sg	02 49 05.6	-0.2
	1.4nm,0.2s						
WLS	**Welschbruch**	**0.17**	**18**	Pg	Pg	02 49 03.1	-0.7
WLS				Sg	Sg	02 49 06.3	+0.3
WALT	**Westhalten**	**0.29**	**179**	Pg	Pg	02 49 05.9	0.0
WALT				Sg	Sg	02 49 09.8	+0.2
VOGT	**Vogtsburg - To**	**0.32**	**122**	Pg	Pg	02 49 06.7	+0.2
VOGT				Sg	Sg	02 49 10.8	+0.2
HOHE	**HOHENGOEFT**	**0.43**	**19**	Pg	Pg	02 49 09.3	+0.6
HOHE				Sg	Sg	02 49 14.5	+0.2
HINF	**Hinteralfeld**	**0.52**	**213**	*e*Pg	Pg	02 49 09.6	-0.8
HAU	**Haudompre**	**0.67**	**249**	*e*Pg	Pg	02 49 12.8	-0.4
RONF	**Ronchamp**	**0.68**	**218**	Pg	Pg	02 49 13.6	0.0
PAGF	**Fort de Pagny**	**1.07**	**287**	*e*Sg	Sg	02 49 35.6	+0.6
	0.5nm,0.1s						

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*IDC **16** 03:02:32.8±0.4, 30°.53S×178°.15W, h0^{km}, mb5.2/22, mbtmp5.1/23, ML3.6/1, MS4.8/33, Error ellipse: s-maj=15.7km s-min=14.6km az=114.0*

*BJI **16** 03:02:32.7, 30°.37S×177°.56W, h8^{km}, mB5.5/4, mb5.2/24, Ms5.1/6, Ms7 4.9/5*

*MOS **16** 03:02:38.8±1.0, 30°.58S×178°.14W, h45^{km}, mb5.6/35, Error ellipse: s-maj=9.3km s-min=7.5km az=81.8*

*NEIC **16** 03:02:39.3±1.4, 30°.64S±0°.06×178°.04W±0°.10, h35^{km}±1^{km}, mb5.5/327, Ms_20 4.9/65, Error ellipse: s-maj=14.2km s-min=9.8km az=101.0*

*NOU **16** 03:02:42.1, 31°.01S×177°.86W, h68^{km}, mb5.4/78, Kermadec Islands Region*

ISC 16 03:02:38.8±0.3, **30°.85S**±0°.03×**178°.02W**±0°.04, **h41**^{km}±2^{km}, **h41**^{km}**:pP-P, n942,** σ**1^{s}.49**/919, **mb5.5**/226, **MS4.9**/66, **52C-50D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.58**	**3**	P	**Pn**	**03 03 01.0**	**-3.4**
GLKZ				S	**Sn**	**03 03 17.5**	**-6.1**
RAO	**Raoul Island**	**1.59**	**3**		**Pn**	**03 03 01.8**	**-2.7**
RAO	**Raoul Island**	**1.59**	**3**	P	**Pn**	**03 03 01.8**	**-2.7**
RIZ	**Raoul Island**	**1.60**	**3**	P	**Pn**	**03 03 01.5**	**-3.1**
RIZ				S	**Sn**	**03 03 20.1**	**-3.9**
WMGZ	**Waiomatatini S**	**7.55**	**202**	P	**Pn**	**03 04 25.1**	**-1.3**
WMGZ				S	**Sn**	**03 05 53.7**	**+3.0**
PKGZ	**Pakihiroa**	**7.71**	**204**	P	**Pn**	**03 04 26.9**	**-1.6**
PKGZ				S	**Sn**	**03 05 57.8**	**+3.3**
HAZ	**Te Kaha**	**7.72**	**206**	P	**Pn**	**03 04 28.0**	**-0.6**
HAZ				S	**Sn**	**03 05 57.2**	**+2.6**
PUZ	**Puketiti**	**7.83**	**202**	P	**Pn**	**03 04 28.7**	**-1.6**
PUZ				S	**Sn**	**03 05 55.9**	**-1.7**
KUZ	**Kuaotunu**	**7.86**	**220**	P	**Pn**	**03 04 33.8**	**+3.3**
KUZ	**Kuaotunu**	**7.86**	**220**	P	Pn	03 04 36.4	+5.8
RUGZ	**Raukumara Rang**	**7.94**	**205**	P	**Pn**	**03 04 30.3**	**-1.5**
RUGZ				S	**Sn**	**03 06 03.9**	**+3.5**
TWGZ	**Tauwhareparae**	**8.02**	**203**	P	**Pn**	**03 04 33.0**	**+0.2**
TWGZ				S	**Sn**	**03 06 04.7**	**+2.4**
WHRZ	**Whale Island**	**8.12**	**209**	P	**Pn**	**03 04 35.2**	**+1.0**
WHRZ				S	**Sn**	**03 06 07.5**	**+2.8**
WCZ	**Waipu Caves**	**8.15**	**229**	P	Pn	03 04 42.3	+7.7
CNGZ	**Carnagh Statio**	**8.23**	**201**	P	**Pn**	**03 04 34.1**	**-1.5**
CNGZ				S	**Sn**	**03 06 10.7**	**+3.5**
OUZ	**Omahuta**	**8.28**	**236**	P	Pn	03 04 42.0	+5.7
OUZ	**Omahuta**	**8.28**	**236**	P	Pn	03 04 43.7	+7.4
TKGZ	**Te Karaka**	**8.30**	**203**	P	**Pn**	**03 04 35.4**	**-1.3**
TKGZ				S	**Sn**	**03 06 11.8**	**+2.7**
MWZ	**Matawai**	**8.32**	**205**	P	**Pn**	**03 04 35.9**	**-1.1**
MWZ				S	**Sn**	**03 06 09.5**	**-0.1**
URZ	**Urewera**	**8.41**	**207**	Pn	**Pn**	**03 04 36.4**	**-1.8**
	7.0nm,0.3s,baz=351,slow=5.0,SNR=61						
URZ				Sn	**Sn**	**03 06 06.8**	**-5.0**
	83nm,0.3s,baz=339,slow=2.3,SNR=6.4						
URZ	**Urewera**	**8.41**	**207**	P	**Pn**	**03 04 37.7**	**-0.4**
URZ	**Urewera**	**8.41**	**207**	P	**Pn**	**03 04 36.4**	**-1.8**
URZ				S	**Sn**	**03 06 13.0**	**+1.3**
MKAZ	**Moumakai**	**8.42**	**220**	P	**Pn**	**03 04 42.4**	**+4.1**
RAGZ	**Rawiri**	**8.51**	**205**	P	**Pn**	**03 04 39.2**	**-0.3**
RAGZ				S	**Sn**	**03 06 15.2**	**+1.0**
RIGZ	**Rimuhau**	**8.57**	**203**	P	**Pn**	**03 04 38.7**	**-1.7**
RIGZ				S	**Sn**	**03 06 17.4**	**+1.6**
NGRZ	**Ngongotaha**	**8.67**	**212**	P	Pn	03 04 47.0	+5.2
AWAZ	**Awhitu Peninsu**	**8.69**	**223**	P	Pn	03 04 52.8	+11
TOZ	**Tahuroa Road**	**8.71**	**216**	Pn	**Pn**	**03 04 43.8**	**+1.6**
PRGZ	**Paritu Road**	**8.73**	**202**	P	**Pn**	**03 04 39.6**	**-3.0**
PRGZ				S	**Sn**	**03 06 17.2**	**-2.4**
MUGZ	**Murupara**	**8.74**	**208**	P	**Pn**	**03 04 40.3**	**-2.3**
MUGZ				S	**Sn**	**03 06 19.0**	**-0.8**
RTZ	**Ruatahuna**	**8.77**	**207**	P	**Pn**	**03 04 41.6**	**-1.6**
SNGZ	**Shannon Statio**	**8.79**	**204**	P	**Pn**	**03 04 41.5**	**-1.8**
SNGZ				S	**Sn**	**03 06 22.6**	**+1.6**
KNZ	**Kokohu**	**8.89**	**202**	P	Pn	03 04 41.6	-3.1
KNZ				S	**Sn**	**03 06 22.9**	**-0.5**
PRRZ	**Plateau Road**	**8.91**	**210**	P	**Pn**	**03 04 42.4**	**-2.6**
PRRZ				S	**Sn**	**03 06 24.7**	**+0.7**
MHGZ	**Mahia Peninsul**	**8.93**	**201**	P	**Pn**	**03 04 42.7**	**-2.6**
MHGZ				S	**Sn**	**03 06 24.7**	**+0.1**
ALRZ	**Allen Road**	**8.98**	**210**	P	**Pn**	**03 04 46.3**	**+0.3**
ALRZ				S	**Sn**	**03 06 26.3**	**+0.5**
RAHZ	**Arahi**	**9.00**	**205**	P	**Pn**	**03 04 44.3**	**-1.8**
RAHZ				S	**Sn**	**03 06 25.7**	**-0.5**
MTHZ	**Maungataniwha**	**9.03**	**206**	P	**Pn**	**03 04 44.9**	**-1.8**
MTHZ				S	**Sn**	**03 06 26.6**	**-0.5**
WHHZ	**Waihua**	**9.09**	**204**	P	**Pn**	**03 04 46.9**	**-0.4**
WHHZ				S	**Sn**	**03 06 30.0**	**+1.7**
MRHZ	**Matea Rd**	**9.18**	**208**	P	**Pn**	**03 04 48.1**	**-0.7**
MRHZ				S	**Sn**	**03 06 29.8**	**-1.0**
NMHZ	**Naumai**	**9.26**	**206**	P	**Pn**	**03 04 47.7**	**-2.1**
NMHZ				S	**Sn**	**03 06 33.1**	**+0.4**
ARHZ	**Aropaoanui**	**9.34**	**205**	P	**Pn**	**03 04 48.6**	**-2.2**
ARHZ				S	**Sn**	**03 06 34.3**	**-0.1**
BKZ	**Black Stump Fm**	**9.44**	**207**	P	**Pn**	**03 04 51.7**	**-0.6**
BKZ	**Black Stump Fm**	**9.44**	**207**	S	**Sn**	**03 06 38.4**	**+1.3**
BKZ	**Black Stump Fm**	**9.44**	**207**	P	Pn	03 04 48.9	-3.3
BKZ				S	**Sn**	**03 06 37.6**	**+0.5**
RITZ	**Rihia Road**	**9.54**	**210**	P	**Pn**	**03 04 55.2**	**+1.6**
RITZ				S	**Sn**	**03 06 40.6**	**+1.1**
MCHZ	**McNeill Hill**	**9.60**	**205**	P	**Pn**	**03 04 52.7**	**-1.8**
MCHZ				S	**Sn**	**03 06 41.4**	**+0.4**
HIZ	**Hauiti**	**9.63**	**216**	P	**Pn**	**03 04 58.3**	**+3.4**
HIZ	**Hauiti**	**9.63**	**216**	P	**Pn**	**03 04 58.9**	**+4.0**
CKHZ	**Cape Kidnapper**	**9.66**	**203**	P	Pn	03 04 52.2	-3.0
CKHZ				S	**Sn**	**03 06 41.2**	**-1.2**
KWHZ	**Kaweka Forest**	**9.69**	**206**	P	**Pn**	**03 04 54.1**	**-1.6**
KWHZ				S	**Sn**	**03 06 43.5**	**+0.2**
TMVZ	**Te Maari**	**9.72**	**210**	P	**Pn**	**03 04 56.6**	**+0.4**
ETVZ	**East Tongariro**	**9.73**	**210**	P	**Pn**	**03 04 55.3**	**-1.1**
WTVZ	**West Tongariro**	**9.77**	**211**	P	**Pn**	**03 04 59.3**	**+2.4**
NNVZ	**North Ngauruho**	**9.77**	**211**	P	**Pn**	**03 04 57.1**	**+0.1**
TWVZ	**Taurewa**	**9.80**	**211**	P	**Pn**	**03 04 59.6**	**+2.3**
NGZ	**Ngauruhoe**	**9.81**	**210**	P	**Pn**	**03 04 57.3**	**-0.2**
KAHZ	**Kahuranaki**	**9.85**	**204**	P	Pn	03 04 53.6	-4.3
KRHZ	**Kereru**	**9.90**	**206**	P	Pn	03 04 54.5	-4.0
KRHZ				S	**Sn**	**03 06 47.3**	**-1.1**
FWVZ	**Far West T-bar**	**9.90**	**210**	P	**Pn**	**03 04 58.3**	**-0.5**
MAVZ	**Matarangi**	**9.91**	**210**	P	**Pn**	**03 05 00.2**	**+1.2**
WHVZ	**Whangaehu Hut**	**9.91**	**210**	P	**Pn**	**03 04 59.4**	**+0.5**
TRVZ	**Turoa**	**9.94**	**210**	P	**Pn**	**03 05 00.5**	**+1.2**
WNVZ	**Wahianoa**	**9.94**	**210**	P	**Pn**	**03 04 58.4**	**-0.9**

MOVZ	**Moawhango**	**9.94**	**209**	P	**Pn**	**03 04 57.3**	**-1.9**
MOVZ				S	**Sn**	**03 06 47.1**	**-2.4**
PKVZ	**Pokaka**	**10.02**	**211**	P	**Pn**	**03 05 00.9**	**+0.7**
MTVZ	**Mangateitei**	**10.04**	**210**	P	**Pn**	**03 05 00.2**	**-0.4**
PXZ	**Pawanui**	**10.07**	**203**	P	Pn	03 04 57.0	-3.8
PXZ				S	**Sn**	**03 06 49.7**	**-2.7**
PNHZ	**Pukenui**	**10.20**	**206**	P	Pn	03 04 58.5	-4.2
PNHZ				S	**Sn**	**03 06 52.9**	**-2.8**
WPHZ	**Waipukurau**	**10.24**	**205**	P	**Pn**	**03 05 00.6**	**-2.6**
PRHZ	**Porangahau**	**10.36**	**203**	P	Pn	03 05 01.0	-3.7
PRHZ				S	**Sn**	**03 06 57.2**	**-2.3**
ANWZ	**Angora Road**	**10.58**	**203**	P	Pn	03 05 04.5	-3.3
PRWZ	**Pori Road**	**10.85**	**205**	P	**Pn**	**03 05 08.7**	**-2.8**
BFZ	**Birch Farm**	**10.86**	**204**	P	Pn	03 05 06.7	-4.9
BFZ				S	**Sn**	**03 07 07.6**	**-4.2**
TIWZ	**Tintock**	**11.07**	**205**	P	Pn	03 05 10.8	-3.8
MRZ	**Mangatainoka R**	**11.08**	**206**	P	Pn	03 05 09.7	-5.0
MRZ				S	**Sn**	**03 07 12.3**	**-5.0**
TMWZ	**Te Maipa**	**11.36**	**204**	P	Pn	03 05 14.2	-4.3
NFK	**Norfolk Island**	**12.31**	**275**	P	**Pn**	**03 05 34.2**	**+2.7**
	comp=Z,528nm,1.4s						
QRZ	**Quartz Range**	**12.56**	**215**	P	**Pn**	**03 05 36.9**	**+2.0**
QRZ	**Quartz Range**	**12.56**	**215**	S	**Sn**	**03 07 52.8**	**-0.5**
LKBA	**Tubou, Lakemba**	**12.58**	**357**	P	**P**	**03 05 42.8**	**-3.1**
CTZ	**Chatham Island**	**12.91**	**175**		**Pn**	**03 05 40.1**	**+0.4**
CTZ	**Chatham Island**	**12.91**	**175**	P	**Pn**	**03 05 40.8**	**+1.1**
CTZ	**Chatham Island**	**12.91**	**175**	P	**Pn**	**03 05 37.6**	**-2.1**
KHZ	**Kahutara**	**13.38**	**208**	P	**Pn**	**03 05 46.1**	**+0.1**
MSVF	**Nonsavu**	**13.53**	**344**	Pn	**Pn**	**03 05 46.9**	**-1.5**
	comp=Z,1.0nm,0.3s,baz=147,slow=12,SNR=9.4						
MSVF				LR	LR	03 10 09.3	
	comp=Z,6µm,20.3s,baz=184,slow=35						
MSVF	**Nonsavu**	**13.53**	**344**	P	**Pn**	**03 05 50.5**	**+2.1**
TAVE	**Taveuni**	**14.18**	**353**	P	**P**	**03 06 04.4**	**+0.7**
DGTI	**Dogotuki**	**14.62**	**351**	P	**P**	**03 06 06.2**	**-2.5**
PINNC	**Pines Island,**	**15.34**	**299**	P	**P**	**03 06 16.7**	**0.0**
RPZ	**Rata Peaks**	**15.49**	**211**	Pn	**Pn**	**03 06 11.6**	**-2.7**
	comp=Z,2.9nm,0.3s,baz=258,slow=1.9,SNR=9.6						
RPZ				Sn	Sn	03 08 53.4	-11
	comp=Z,13nm,0.3s,baz=44,slow=16,SNR=12						
RPZ	**Rata Peaks**	**15.49**	**211**	P	**Pn**	**03 06 15.0**	**+0.6**
OUENC	**Ouen Island, N**	**15.91**	**298**	P	**P**	**03 06 24.3**	**+1.3**
YATNC	**Mamie plateau,**	**16.08**	**299**	P	**P**	**03 06 26.5**	**+1.6**
ONTNC	**Ouen Toro**	**16.27**	**298**	P	**P**	**03 06 27.5**	**+0.5**
DZM	**Mont Dzumac**	**16.41**	**298**	P	**P**	**03 06 28.9**	**+0.3**
DZM	**Mont Dzumac**	**16.41**	**298**	*e*P	**P**	**03 06 29.1**	**+0.4**
	comp=Z,416nm,1.5s						
DZM				*e*LR	LR	03 10 14.9	
	comp=Z,13µm,25.4s						
DZM	**Mont Dzumac**	**16.41**	**298**	Pn	**P**	**03 06 29.3**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=108,slow=14,SNR=30						
DZM				LR	LR	03 11 41.3	
	comp=Z,7µm,18.2s,baz=134,slow=34						
DZM	**Mont Dzumac**	**16.41**	**298**	P	**P**	**03 06 30.3**	**+1.6**
ODZ	**Otahua Downs**	**16.73**	**209**	P	**P**	**03 06 31.9**	**0.0**
JCZ	**Jackson Bay**	**16.82**	**215**	P	**P**	**03 06 33.1**	**0.0**
EAZ	**Earnscleugh**	**17.45**	**211**	P	**Pn**	**03 06 38.0**	**-1.1**
EAZ				S	Sn	03 09 36.5	-16
AFI	**Afiamalu**	**17.81**	**20**		**Pn**	**03 06 41.6**	**-2.1**
AFI	**Afiamalu**	**17.81**	**20**	P	**P**	**03 06 44.5**	**+0.4**
AFI	**Afiamalu**	**17.81**	**20**	P	**Pn**	**03 06 41.6**	**-2.1**
AFI				pmax	pmax		
	comp=Z,166nm,1.2s						
RAR	**Rarotonga**	**18.98**	**64**	P	**P**	**03 06 55.5**	**-1.3**
RAR	**Rarotonga**	**18.98**	**64**	P	**P**	**03 06 56.9**	**+0.1**
	comp=Z,1.7nm,0.3s,baz=234,slow=4.9,SNR=9.4						
RAR				S	Sn	03 10 11.7	-18
	comp=Z,39nm,0.8s,baz=90,slow=19,SNR=3.6						
RAR				LR	LR	03 13 40.7	
	comp=Z,1µm,19.6s,baz=258,slow=35						
	comp=Z,71nm,0.8s						
RAR	**Rarotonga**	**18.98**	**64**	P	**Pn**	**03 06 58.5**	**+0.7**
LHI	**Lord Howe Isla**	**19.61**	**262**	P	**Pn**	**03 07 04.9**	**-0.5**
LHI	**Lord Howe Isla**	**19.61**	**262**	P	**Pn**	**03 07 08.2**	**+2.8**
	comp=Z,124nm,0.6s						
SANVU	**Saraoutou**	**20.45**	**315**		Pn	03 07 14.0	-1.2
GC1S	**Gold Coast 1 S**	**24.89**	**269**	P	**P**	**03 08 02.6**	**+4.7**
NTLH	**Newcastle Hard**	**25.75**	**257**	P	**P**	**03 08 09.9**	**+4.3**
ARMA	**Armidale**	**26.08**	**263**		**P**	**03 08 11.1**	**+2.3**
ARMA				IAMs_20	IAMs_20	03 16 03.4	
	comp=Z,3µm,20.0s						
ARMA	**Armidale**	**26.08**	**263**	P	**P**	**03 08 12.4**	**+3.6**
ARMA	**Armidale**	**26.08**	**263**	P	**P**	**03 08 13.1**	**+4.3**
MGCD	**Mangrove Creek**	**26.23**	**257**	P	**P**	**03 08 13.1**	**+3.1**
	comp=Z,97nm,0.7s						
MGCD	**Mangrove Creek**	**26.23**	**257**	P	**P**	**03 08 13.9**	**+3.9**
TBI	**Tubuai**	**26.45**	**81**	*e*S	**S**	**03 12 41.9**	**-1.1**
	comp=Z,12µm,28.2s						
TBI				*e*LR	LR	03 14 48.8	
	comp=Z,23µm,26.5s						
TBI				*e*LR	LR	03 14 51.2	
	comp=Z,6µm,27.5s						
SYDH	**Sydney Hard Ro**	**26.51**	**255**	P	**P**	**03 08 15.6**	**+3.1**
CNB	**Canberra Magne**	**27.62**	**252**	P	**P**	**03 08 22.7**	**+0.2**
	comp=Z,35nm,0.6s						
CNB	**Canberra Magne**	**27.62**	**252**	P	**P**	**03 08 25.7**	**+3.2**
EIDS	**Eidsvold**	**27.74**	**274**		**P**	**03 08 23.7**	**+0.1**
EIDS				IAMs_20	IAMs_20	03 17 14.9	
	comp=Z,4µm,22.0s						
EIDS	**Eidsvold**	**27.74**	**274**	P	**P**	**03 08 24.8**	**+1.1**
	comp=Z,36nm,1.7s						
EIDS	**Eidsvold**	**27.74**	**274**	P	**P**	**03 08 25.5**	**+1.9**
MILA	**Mila**	**27.83**	**248**	P	**P**	**03 08 26.9**	**+2.4**
	comp=Z,20nm,0.9s						
CAN	**Canberra**	**27.91**	**252**		**P**	**03 08 27.9**	**+2.7**
CAN	**Canberra**	**27.91**	**252**	P	**P**	**03 08 27.5**	**+2.3**
	comp=Z,36nm,1.2s						
CAN	**Canberra**	**27.91**	**252**	P	**P**	**03 08 28.0**	**+2.8**
CAN	**Canberra**	**27.91**	**252**	P	**P**	**03 08 27.9**	**+2.7**
CAN				pmax	pmax		
	comp=Z,24nm,0.7s						
CAN				MLR	MLR		
	comp=Z,2µm,19.0s						
GD1S	**Gladstone Soft**	**28.18**	**277**	P	**P**	**03 08 30.8**	**+3.3**
YNG	**Young**	**28.43**	**254**	P	**P**	**03 08 32.4**	**+2.6**
	comp=Z,0.0nmcomp=Z,38nm,0.9s						
PPT2	**Papeete2**	**29.01**	**70**	*e*S	S	03 13 08.1	-16
	comp=Z,2µm,29.8s						
PPT2				*e*LQ	LQ	03 14 38.6	
	comp=Z,2µm,24.2s						
PPT2				*e*LR	LR	03 15 52.6	
	comp=Z,6µm,28.8s						
PPT2				*e*LR	LR	03 16 01.3	
	comp=Z,3µm,27.8s						
PPT	**Papeete**	**29.02**	**69**	P	**P**	**03 08 36.2**	**+1.1**
	comp=Z,101nm,1.1s,baz=261,slow=11,SNR=3.4						
PPT				LR	LR	03 20 08.0	
	comp=Z,734nm,18.1s,baz=241,slow=36						
	comp=Z,101nm,1.1s						
GLAD	**Gladstone**	**29.15**	**240**	P	**P**	**03 08 38.0**	**+2.0**
CORO	**Coronation Par**	**29.87**	**240**	P	**P**	**03 08 44.9**	**+2.5**
MOO	**Moorlands**	**30.02**	**238**	P	**P**	**03 08 44.6**	**+0.9**
	comp=Z,0.0nmcomp=Z,43nm,1.3s						
TAU	**Tasmania Unive**	**30.02**	**237**	P	**P**	**03 08 45.2**	**+1.6**
TAU	**Tasmania Unive**	**30.02**	**237**	P	**P**	**03 08 45.2**	**+1.6**
TAU				pmax	pmax		
	comp=Z,42nm,0.9s						
TAU	**Tasmania Unive**	**30.02**	**237**	P	**P**	**03 08 44.9**	**+1.2**
TAU				pP	**sP**	**03 08 59.0**	**+0.3**
TAU				sP	pwP	03 09 06.1	+8.4
TOO	**Toolangi**	**30.77**	**247**		**P**	**03 08 52.4**	**+2.0**
TOO	**Toolangi**	**30.77**	**247**	P	**P**	**03 08 52.0**	**+1.6**
	comp=Z,16nm,1.0s						
TOO	**Toolangi**	**30.77**	**247**	P	**P**	**03 08 52.4**	**+2.0**
TOO				pmax	pmax		
	comp=Z,12nm,1.0s						
CMSA	**Cobar Meteorol**	**30.96**	**259**	P	**P**	**03 08 54.1**	**+2.0**
	comp=Z,134nm,0.6s						
CMSA	**Cobar Meteorol**	**30.96**	**259**	P	**P**	**03 08 54.0**	**+1.9**
MLBS	**Spotswood, Mel**	**31.25**	**247**	P	**P**	**03 08 57.0**	**+2.4**
GEXS	**Deakin Univers**	**31.74**	**246**	P	**P**	**03 09 02.4**	**+3.5**
QLP	**Quilpie**	**33.27**	**268**	P	**P**	**03 09 12.6**	**+0.1**
	comp=Z,103nm,0.7s						
QLP	**Quilpie**	**33.27**	**268**	P	**P**	**03 09 13.4**	**+1.0**
ARPS	**Mount Arapiles**	**33.69**	**249**	P	**P**	**03 09 17.1**	**+1.1**
	comp=Z,53nm,0.8s						
ARPS	**Mount Arapiles**	**33.69**	**249**	P	**P**	**03 09 17.5**	**+1.5**
TV1H	**Townsville Har**	**33.76**	**282**	P	**P**	**03 09 18.3**	**+1.6**
CTAO	**Charters Tower**	**33.85**	**280**		**P**	**03 09 18.9**	**+1.3**
CTAO	**Charters Tower**	**33.85**	**280**	IAMs_20	IAMs_20	03 20 52.4	
	comp=Z,3µm,20.0s						
CTAO	**Charters Tower**	**33.85**	**280**	P	**P**	**03 09 19.1**	**+1.5**
CTAO	**Charters Tower**	**33.85**	**280**	P	**P**	**03 09 18.9**	**+1.3**
CTAO				pmax	pmax		
	comp=Z,79nm,0.6s						
CTAO	**Charters Tower**	**33.85**	**280**	P	**P**	**03 09 18.9**	**+1.3**
STKA	**Stephens Creek**	**34.36**	**258**		**P**	**03 09 23.7**	**+1.8**
STKA	**Stephens Creek**	**34.36**	**258**	P	**P**	**03 09 23.3**	**+1.4**
	comp=Z,672nm,0.6s						
STKA	**Stephens Creek**	**34.36**	**258**	P	**P**	**03 09 23.0**	**+1.1**
	comp=Z,123nm,0.6s,baz=101,slow=9.9,SNR=365						
STKA				LR	LR	03 22 13.0	
	comp=Z,2µm,20.4s,baz=99,slow=34						
	comp=Z,123nm,0.6s						
STKA	**Stephens Creek**	**34.36**	**258**	P	**P**	**03 09 23.7**	**+1.8**
STKA	**Stephens Creek**	**34.36**	**258**	*c i*P	**P**	**03 09 23.6**	**+1.7**
MGBR	**Mount Gambier**	**34.68**	**247**		**P**	**03 09 26.0**	**+1.5**
HTT	**Hallett**	**36.36**	**254**	P	**P**	**03 09 39.3**	**+0.1**
	comp=Z,17nm,0.8s						
HTT	**Hallett**	**36.36**	**254**	P	**P**	**03 09 40.5**	**+1.4**
MTSU	**Mount Surprise**	**36.36**	**281**	P	**P**	**03 09 40.2**	**+1.0**
	comp=Z,45nm,0.6s						
MTSU	**Mount Surprise**	**36.36**	**281**	P	**P**	**03 09 40.7**	**+1.5**
PTPS	**Port Pirie**	**37.17**	**255**	P	**P**	**03 09 48.1**	**+2.2**
WHYH	**Whyalla**	**37.54**	**255**	P	**P**	**03 09 50.3**	**+1.3**
PMG	**Port Moresby**	**38.78**	**296**	P	**P**	**03 10 00.2**	**+0.5**
PMG	**Port Moresby**	**38.78**	**296**	LR	LR	03 23 34.5	
	comp=Z,1µm,21.5s,baz=152,slow=33						
PMG	**Port Moresby**	**38.78**	**296**	P	**P**	**03 10 00.2**	**+0.5**
PMG				pmax	pmax		
	comp=Z,20nm,0.7s						
PMG	**Port Moresby**	**38.78**	**296**	P	**P**	**03 09 59.8**	**+0.1**
PMG				PcP	**PcP**	**03 12 12.6**	**+2.0**
BBOO	**Buckleboo**	**38.83**	**255**	IAmb	IAmb	03 10 03.6	
	comp=Z,74nm,0.7s						
BBOO	**Buckleboo**	**38.83**	**255**	P	**P**	**03 09 60.0**	**0.0**
	comp=Z,137nm,0.7s						
BBOO	**Buckleboo**	**38.83**	**255**	P	**P**	**03 10 00.9**	**+0.9**
QIS	**Mount Isa**	**39.33**	**275**	P	**P**	**03 10 04.0**	**-0.2**
	comp=Z,44nm,0.8s						
QIS	**Mount Isa**	**39.33**	**275**	P	**P**	**03 10 04.5**	**+0.2**
COEN	**Coen**	**39.38**	**286**		**P**	**03 10 05.5**	**+0.8**
COEN	**Coen**	**39.38**	**286**	P	**P**	**03 10 05.6**	**+0.9**
	comp=Z,35nm,0.8s						
COEN	**Coen**	**39.38**	**286**	P	**P**	**03 10 05.6**	**+0.9**
TAOE	**Nuku Hiva Isla**	**41.50**	**66**	*e*LR	LR	03 21 36.9	
	comp=Z,3µm,28.3s						
AS01	**Alice Springs**	**43.03**	**267**	P	**P**	**03 10 34.3**	**-0.4**
AS31	**Alice Springs**	**43.07**	**267**		**P**	**03 10 35.1**	**+0.1**
AS31	**Alice Springs**	**43.07**	**267**	P	**P**	**03 10 34.6**	**-0.4**
	comp=Z,18nm,0.7s						
ASAR	**Alice Springs**	**43.07**	**267**		**P**	**03 10 34.8**	**-0.2**
ASAR	**Alice Springs**	**43.07**	**267**	P	**P**	**03 10 34.6**	**-0.4**
	comp=Z,17nm,0.5s,baz=104,slow=7.4,SNR=242						
ASAR				ScP	**ScP**	**03 16 12.8**	**+0.3**
	comp=Z,4.8nm,0.9s,baz=116,slow=4.6,SNR=6.8						
ASAR				LR	LR	03 28 24.8	
	comp=Z,2µm,18.5s,baz=128,slow=36						
	comp=Z,17nm,0.5s						
ASAR	**Alice Springs**	**43.07**	**267**	P	**P**	**03 10 34.8**	**-0.2**
DRV	**Dumont d'Urvil**	**43.72**	**203**	P	**P**	**03 10 40.5**	**+0.9**
DRV				sP	**sP**	**03 11 00.6**	**+5.9**
WR8	**Warramunga Arr**	**43.95**	**273**		**P**	**03 10 41.8**	**-0.3**
WR8				IAmb	IAmb	03 10 45.6	
	comp=Z,61nm,1.0s						
WRAB	**Tennant Creek**	**44.09**	**273**	IAMs_20	IAMs_20	03 29 15.5	
	comp=Z,2µm,18.0s						
WRAB	**Tennant Creek**	**44.09**	**273**	*ce*P	**P**	**03 10 42.2**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,104nm,1.3s						
WRA	**Warramunga Arr**	**44.10**	**273**	P	**P**	**03 10 42.8**	**-0.5**
	comp=Z,48nm,0.5s,baz=112,slow=8.0,SNR=383						
WRA				LR	LR	03 28 36.4	
	comp=Z,2µm,18.1s,baz=138,slow=36						
	comp=Z,48nm,0.5s						
WB0	**Warramunga Arr**	**44.12**	**273**		**P**	**03 10 43.2**	**-0.3**
WB0				IAmb	IAmb	03 10 45.1	
	comp=Z,62nm,0.6s						
FORT	**Forrest**	**45.91**	**256**		**P**	**03 10 57.2**	**-0.4**
FORT	**Forrest**	**45.91**	**256**	P	**P**	**03 10 56.9**	**-0.7**
	comp=Z,168nm,0.6s						
FORT	**Forrest**	**45.91**	**256**	P	**P**	**03 10 57.5**	**-0.1**
SBA	**Scott Base**	**47.59**	**184**	P	**P**	**03 11 13.8**	**+3.8**
SBA				IAmb	IAmb	03 11 17.3	
	comp=Z,58nm,1.0s						
SBA	**Scott Base**	**47.59**	**184**	P	**P**	**03 11 13.8**	**+3.8**
SBA				pmax	pmax		
	comp=Z,58nm,1.0s						
SBA	**Scott Base**	**47.59**	**184**	P	P	03 11 14.8	+4.8
SBA				pP	sP	03 11 30.0	+5.0
SBA				ScP	**ScP**	**03 16 36.9**	**+6.8**
VNDA	**Vanda**	**47.65**	**186**		**P**	**03 11 13.5**	**+3.0**
VNDA	**Vanda**	**47.65**	**186**	P	**P**	**03 11 14.1**	**+3.6**
	comp=Z,8.7nm,0.8s,baz=8.0,slow=6.9,SNR=7.9						
	comp=Z,8.7nm,0.8s						
VNDA	**Vanda**	**47.65**	**186**	P	**P**	**03 11 13.9**	**+3.5**
VNDA				PcP	**PcP**	**03 12 41.6**	**+2.2**
VNDA				ScP	**ScP**	**03 16 34.1**	**+3.8**
JAY	**Jayapura**	**48.09**	**298**	LR	LR	03 30 08.3	
	comp=Z,361nm,21.8s,baz=174,slow=35						
GENI	**Genyem**	**48.45**	**297**	P	**P**	**03 11 17.9**	**+0.5**
KDU	**Kakadu**	**48.98**	**280**	P	**P**	**03 11 20.6**	**-0.9**
	comp=Z,16nm,0.6s						
MTN	**Manton Dam**	**50.03**	**279**		**P**	**03 11 28.9**	**-0.7**
MTN				IAmb	IAmb	03 11 29.9	
	comp=Z,23nm,0.6s						
MTN	**Manton Dam**	**50.03**	**279**	P	**P**	**03 11 26.8**	**-2.8**
MTN	**Manton Dam**	**50.03**	**279**	P	**P**	**03 11 28.4**	**-1.2**
KNRA	**Kununurra**	**50.72**	**275**	IAmb	IAmb	03 11 53.0	
	comp=Z,56nm,1.4s						
KNRA	**Kununurra**	**50.72**	**275**	P	**P**	**03 11 34.7**	**-0.1**
	comp=Z,30nm,0.6s						
KMBL	**Kambalda**	**50.87**	**253**	P	**P**	**03 11 34.7**	**-1.1**
	comp=Z,42nm,1.3s						
KMBL	**Kambalda**	**50.87**	**253**	P	**P**	**03 11 37.0**	**+1.2**
FITZ	**Fitzroy Crossi**	**52.34**	**270**	LR	LR	03 33 00.4	
	comp=Z,2µm,20.0s,baz=98,slow=35						
FITZ	**Fitzroy Crossi**	**52.34**	**270**	P	**P**	**03 11 47.1**	**+0.2**
CCD	**Concordia, Ant**	**52.52**	**196**	P	**P**	**03 11 49.3**	**+1.4**
CCD				pP	**sP**	**03 12 04.3**	**+1.4**
CCD				ScP	**ScP**	**03 16 54.5**	**+2.7**
KLBR	**Kellerberrin**	**54.19**	**251**	P	**P**	**03 11 58.0**	**-2.3**
KLBR	**Kellerberrin**	**54.19**	**251**	P	**P**	**03 11 59.7**	**-0.6**
NWAO	**Narrogin (SRO)**	**54.22**	**250**	P	**P**	**03 11 59.1**	**-1.5**
NWAO				IAmb	IAmb	03 12 45.4	
	comp=Z,79nm,1.5s						
NWAO	**Narrogin (SRO)**	**54.22**	**250**	LR	LR	03 33 11.2	
	comp=Z,787nm,19.6s,baz=78,slow=34						
NWAO	**Narrogin (SRO)**	**54.22**	**250**	P	**P**	**03 11 59.1**	**-1.5**
NWAO				pmax	pmax		
	comp=Z,79nm,1.5s						
FAKI	**Fak Fak**	**54.48**	**291**	P	**P**	**03 12 01.8**	**-0.8**
FAKI				IAmb	IAmb	03 12 15.1	
	comp=Z,40nm,1.0s						
HATHI	**Halema‘uma‘u T**	**54.56**	**27**	IAMs_20	IAMs_20	03 27 49.4	
	comp=Z,1µm,19.0s						
CASY	**Casey**	**54.74**	**208**	P	**P**	**03 12 04.2**	**+0.5**
CASY	**Casey**	**54.74**	**208**	P	**P**	**03 12 04.2**	**+0.5**
POHA	**Pohakuloa**	**54.76**	**26**	P	**P**	**03 12 03.1**	**-1.6**
POHA	**Pohakuloa**	**54.76**	**26**	P	**P**	**03 12 06.1**	**+1.4**
POHA	**Pohakuloa**	**54.76**	**26**	P	**P**	**03 12 06.1**	**+1.4**
POHA				pP	**sP**	**03 12 21.1**	**+1.1**
POHA				ScP	**ScP**	**03 17 02.1**	**+0.1**
HPAH	**Hawaii Prepara**	**54.95**	**26**	P	**P**	**03 12 05.4**	**-0.4**
MEEK	**Meekatharra**	**55.07**	**257**	P	**P**	**03 12 05.2**	**-1.6**
	comp=Z,27nm,1.1s						
MEEK	**Meekatharra**	**55.07**	**257**	P	**P**	**03 12 07.3**	**+0.5**
MUN	**Mundaring**	**55.33**	**250**	P	**P**	**03 12 06.4**	**-2.2**
KIP	**Kipapa**	**55.41**	**23**	P	**P**	**03 12 08.7**	**-0.4**
KIP	**Kipapa**	**55.41**	**23**	P	**P**	**03 12 10.1**	**+1.0**
KIP	**Kipapa**	**55.41**	**23**	P	**P**	**03 12 10.2**	**+1.1**
KIP	**Kipapa**	**55.41**	**23**	P	**P**	**03 12 08.7**	**-0.4**
KIP				pmax	pmax		
	comp=Z,111nm,1.0s						
KIP	**Kipapa**	**55.41**	**23**	P	**P**	**03 12 09.7**	**+0.6**
KIP				pP	**sP**	**03 12 25.4**	**+1.1**
PSA00	**Pilbara Seismi**	**55.90**	**264**	P	**P**	**03 12 11.3**	**-1.5**
PSA00				IAmb	IAmb	03 12 26.9	
	comp=Z,44nm,1.4s						
MBWA	**Marble Bar**	**56.16**	**264**	P	**P**	**03 12 13.7**	**-1.0**
MBWA	**Marble Bar**	**56.16**	**264**	P	**P**	**03 12 13.1**	**-1.5**
MBWA				pP	**pwP**	**03 12 28.9**	**-0.3**
MORW	**Morawa**	**56.39**	**254**	IAmb	IAmb	03 12 17.6	
	comp=Z,119nm,1.8s						
MORW	**Morawa**	**56.39**	**254**	P	**P**	**03 12 15.5**	**-0.7**
GUMO	**Guam**	**56.78**	**315**	LR	LR	03 33 01.1	
	comp=Z,570nm,21.2s,baz=138,slow=32						
SOEI	**Soe**	**57.40**	**278**	P	**P**	**03 12 25.9**	**+2.2**
BATI	**Baumata**	**57.69**	**278**	LR	LR	03 37 24.2	
	comp=Z,3µm,19.3s,baz=118,slow=36						
QSPA	**South Pole Qui**	**59.27**	**180**	P	**P**	**03 12 39.0**	**+3.0**
QSPA	**South Pole Qui**	**59.27**	**180**	P	**P**	**03 12 39.0**	**+3.0**
	comp=Z,81nm,0.9s,baz=31,slow=1.6,SNR=188						
QSPA				LR	LR	03 37 07.2	
	comp=Z,666nm,18.4s,baz=3.5,slow=35						
	comp=Z,81nm,0.9s						
QSPA	**South Pole Qui**	**59.27**	**180**	P	**P**	**03 12 39.0**	**+3.0**
QSPA				PcP	**PcP**	**03 13 27.2**	**+3.4**
EDFI	**Ende, Flores**	**60.10**	**278**	P	**P**	**03 12 42.5**	**+0.1**
	comp=Z,19nm,0.6s						
GIRL	**Giralia**	**60.25**	**260**	P	**P**	**03 12 43.5**	**+0.3**
KAPI	**Kappang**	**63.67**	**280**	P	**P**	**03 13 05.8**	**-0.5**
KAPI	**Kappang**	**63.67**	**280**	LR	LR	03 40 01.0	
	comp=Z,426nm,21.9s,baz=76,slow=35						
KAPI	**Kappang**	**63.67**	**280**	P	**P**	**03 13 05.8**	**-0.5**
KAPI				pmax	pmax		
	comp=Z,19nm,1.2s						
TOLI2	**Tolitoli**	**66.14**	**287**	P	**P**	**03 13 22.3**	**-0.1**
MPSI	**Mapaga**	**66.44**	**285**	P	**P**	**03 13 23.1**	**-1.2**
	comp=Z,4µmcomp=Z,13nm,0.6s						
JAGI	**Jajag, Banyuwa**	**66.69**	**274**	P	**P**	**03 13 24.5**	**-1.4**
JAGI				IAmb	IAmb	03 13 26.2	
	comp=Z,89nm,1.4s						
JAGI	**Jajag, Banyuwa**	**66.69**	**274**	P	**P**	**03 13 25.8**	**-0.1**
GMJI	**Gumukmas**	**67.39**	**274**	P	**P**	**03 13 29.9**	**-0.4**
	comp=Z,69nm,1.0s						
SMAI	**San Martin Ant**	**69.02**	**158**	IAmb	IAmb	03 14 00.1	
	comp=Z,73nm,1.0s						
BELA	**Belgrano 2**	**69.35**	**172**	P	**P**	**03 13 43.0**	**+1.3**
PCJI	**Pacitan**	**69.38**	**273**	P	**P**	**03 13 42.8**	**0.0**
UGM	**Wanagama**	**70.08**	**273**	P	**P**	**03 13 47.1**	**0.0**
PMSA	**Palmer Station**	**71.87**	**156**	LR	LR	03 38 34.8	
	comp=Z,421nm,21.7s,baz=282,slow=30						
MAW	**Mawson**	**71.89**	**201**	P	**P**	**03 13 58.3**	**+1.1**
	comp=Z,16nm,0.6s,baz=134,slow=7.8,SNR=44						
MAW				LR	LR	03 44 13.6	
	comp=Z,899nm,21.0s,baz=136,slow=35						
	comp=Z,16nm,0.6s						
LEM	**Lembang**	**73.11**	**272**	LR	LR	03 47 40.8	
	comp=Z,640nm,19.1s,baz=118,slow=37						
KSM	**Kuching**	**75.09**	**281**	P	**P**	**03 14 16.0**	**-0.9**
MG05	**Puerto Natales**	**75.17**	**142**	P	**P**	**03 14 18.7**	**+1.9**
GO09	**Cerro Castillo**	**75.47**	**141**	IAmb	IAmb	03 14 39.2	
	comp=Z,71nm,1.1s						
MG02	**Cerro Sombrero**	**76.30**	**144**	P	**P**	**03 14 25.4**	**+2.2**
SYO	**Syowa Base**	**76.68**	**193**	⇑*i*P	**P**	**03 14 26.0**	**+1.0**
SYO	**Syowa Base**	**76.68**	**193**	⇓*i*pP	pP	03 14 37.6	+1.3
SYO	**Syowa Base**	**76.68**	**193**	⇓*e*sP	sP	03 14 41.0	+0.4
JOW	**Kunigami**	**76.95**	**312**	P	**P**	**03 14 26.6**	**-0.6**
TROLL	**Troll, Antarti**	**77.43**	**180**	⇑P	**P**	**03 14 31.0**	**+1.6**
	comp=Z,4µm,0.9s						
SNAA	**Sanae**	**77.71**	**178**	⇑P	**P**	**03 14 32.1**	**+1.2**
	comp=Z,624nm,0.7s						
SNAA	**Sanae**	**77.71**	**178**	P	**P**	**03 14 32.6**	**+1.6**
SNAA	**Sanae**	**77.71**	**178**	P	**P**	**03 14 32.1**	**+1.2**
	comp=Z,46nm,1.1s,baz=203,slow=9.4,SNR=90						
SNAA				LR	LR	03 45 56.2	
	comp=Z,366nm,21.0s,baz=113,slow=33						
	comp=Z,46nm,1.1s						
VNA3	**Neumayer Olymp**	**77.86**	**176**	⇑P	**P**	**03 14 32.8**	**+1.1**
	comp=Z,76nm,0.6s						
INU	**Inuyama**	**78.25**	**324**	P	**P**	**03 14 32.5**	**-1.7**
INU				IAmb	IAmb	03 15 39.7	
	comp=Z,105nm,1.7s						
JGF	**Kuroka**	**78.28**	**324**	P	**P**	**03 14 32.4**	**-2.0**
JGF				IAmb	IAmb	03 14 43.4	
	comp=Z,150nm,2.0s						
VNA2	**Neumayer--Watz**	**78.30**	**177**	⇑P	**P**	**03 14 35.5**	**+1.4**
	comp=Z,50nm,0.5s,baz=185,slow=4.6						
NVL	**N'lazarevskaya**	**78.43**	**183**	*e*P	**P**	**03 14 36.0**	**+1.2**
NVL				pmax	pmax		
	comp=Z,11nm,1.0s						
VNA1	**Neumayer--Stat**	**78.53**	**177**	⇑P	**P**	**03 14 36.8**	**+1.5**
	comp=Z,88nm,1.0s						
MJAR	**Matsushiro Arr**	**78.60**	**325**	P	**P**	**03 14 33.7**	**-2.4**
	comp=Z,6.5nm,0.9s,baz=144,slow=5.3,SNR=9.1						
MJAR				LR	LR	03 44 38.7	
	comp=Z,258nm,19.0s,baz=144,slow=32						
	comp=Z,6.5nm,0.9s						
MAJO	**Matsushiro**	**78.60**	**325**	*ce*P	**P**	**03 14 36.5**	**+0.4**
MJB9	**Matsu-Tunnel**	**78.60**	**325**	P	**P**	**03 14 36.2**	**+0.1**
TWG	**Pinlang**	**79.10**	**305**	P	**P**	**03 14 37.1**	**-2.0**
YULB	**Yu-li**	**79.31**	**305**	P	**P**	**03 14 38.2**	**-2.1**
TPUB	**Ta-pu**	**79.72**	**305**	IAmb	IAmb	03 14 44.0	
	comp=Z,45nm,0.8s						
TPUB	**Ta-pu**	**79.72**	**305**	P	**P**	**03 14 43.4**	**+0.8**
COCO	**West Island**	**79.73**	**262**	*i* P	**P**	**03 14 43.5**	**+0.6**
SSLB	**Suanglung**	**79.80**	**305**	IAmb	IAmb	03 14 44.4	
	comp=Z,23nm,0.7s						
SSLB	**Suanglung**	**79.80**	**305**	P	**P**	**03 14 41.4**	**-1.6**
JNU	**Nakatsue**	**79.88**	**318**	LR	LR	03 44 45.5	
	comp=Z,339nm,21.2s,baz=127,slow=32						
H03S2	**Juan Fernandez**	**80.23**	**123**	T	T	04 43 52.1	
	baz=238,slow=74,SNR=326						
H03S1	**Juan Fernandez**	**80.25**	**124**	T	T	04 43 53.4	
	baz=238,slow=74,SNR=297						
H03S3	**Juan Fernandez**	**80.25**	**123**	T	T	04 43 52.3	
	baz=238,slow=74,SNR=358						
H03N3	**Juan Fernandez**	**80.43**	**123**	T	T	04 44 12.1	
	baz=242,slow=73,SNR=226						
H03N2	**Juan Fernandez**	**80.43**	**123**	T	T	04 44 05.0	
	baz=242,slow=73,SNR=268						
H03N1	**Juan Fernandez**	**80.45**	**123**	T	T	04 44 01.4	
	baz=242,slow=73,SNR=247						
JTM	**Tenmabayashi**	**80.70**	**330**	P	**P**	**03 14 47.6**	**+0.1**
AMKA	**Amchitka**	**81.90**	**358**	P	**P**	**03 14 53.2**	**-0.3**
PLCA	**Paso Flores**	**82.22**	**133**	IAmb	IAmb	03 15 16.9	
	comp=Z,62nm,1.0s						
PLCA	**Paso Flores**	**82.22**	**133**	P	**P**	**03 14 57.9**	**+2.0**
	comp=Z,50nm,1.1s,baz=223,slow=4.9,SNR=43						
PLCA				LR	LR	03 43 08.7	
	comp=Z,796nm,21.9s,baz=286,slow=30						
	comp=Z,50nm,1.1s						
DLV	**Lat**	**82.28**	**289**	P	**P**	**03 14 57.0**	**+0.4**
KIWB	**Kanaga Island**	**82.35**	**1**	P	**P**	**03 14 55.1**	**-0.7**
ADK	**Adak**	**82.38**	**1**	P	**P**	**03 14 54.8**	**-1.2**
ADK				IAmb	IAmb	03 15 14.5	
	comp=Z,58nm,0.8s						
ADK	**Adak**	**82.38**	**1**	P	**P**	**03 14 55.3**	**-0.7**
ADK	**Adak**	**82.38**	**1**	P	**P**	**03 14 54.8**	**-1.2**
ADK				pmax	pmax		
	comp=Z,58nm,0.8s						
EFI	**East Falkland**	**82.43**	**147**	⇓*e*P	**P**	**03 14 59.0**	**+2.4**
EFI				pmax	pmax		
	comp=Z,211nm,1.9s						
BI05	**Punta Hualpn**	**82.70**	**128**	P	**P**	**03 14 59.4**	**+1.0**
BI05				IAmb	IAmb	03 15 02.5	
	comp=Z,56nm,1.1s						
ATKA	**Atka Island**	**82.76**	**2**	P	**P**	**03 14 56.6**	**-1.3**
JKA	**Kamikawa-asahi**	**82.82**	**333**	P	**P**	**03 14 59.2**	**+0.7**
ASAJ	**Asahikawa**	**82.83**	**333**	P	**P**	**03 14 58.4**	**-0.1**
	comp=Z,9.3nm,0.7s,baz=202,slow=3.3,SNR=7.1						
ASAJ				LR	LR	03 49 53.2	
	comp=Z,340nm,18.6s,baz=171,slow=34						
	comp=Z,9.3nm,0.7s						
ASAJ	**Asahikawa**	**82.83**	**333**	P	**P**	**03 14 59.3**	**+0.8**
ASAJ				pmax	pmax		
	comp=Z,319nm,2.0s						
SHEM	**Shemya Is, Ala**	**83.50**	**355**	LR	LR	03 47 27.0	
	comp=Z,705nm,20.1s,baz=115,slow=32						
KSRS	**Korea Array**	**84.67**	**320**	P	**P**	**03 15 07.7**	**-0.5**
	comp=Z,2.9nm,0.7s,baz=149,slow=4.7,SNR=9.4						
KSRS				LR	LR	03 49 06.9	
	comp=Z,96µm,21.6s,baz=140,slow=33						
	comp=Z,2.9nm,0.7s						
LPIG	**La Paz**	**84.79**	**58**	LR	LR	03 48 25.2	
	comp=Z,304nm,18.1s,baz=248,slow=32						
SLBS	**Sierra La Lagu**	**84.80**	**59**	P	**P**	**03 15 09.0**	**-0.3**
SLBS				IAmb	IAmb	03 15 29.0	
	comp=Z,37nm,1.1s						
UNV	**Unalaska Valle**	**84.93**	**7**	P	**P**	**03 15 08.4**	**-0.6**
YSS	**Yuzhno-Sakhali**	**85.14**	**334**	*e*P	**P**	**03 15 12.6**	**+2.4**
YSS				*e*		03 15 26.6	
YSS				MLR	MLR		
	comp=Z,800nm,16.0s						
QIZ	**Qiongzhong**	**85.17**	**295**	P	**P**	**03 15 12.8**	**+1.7**
QIZ				S	**S**	**03 25 44.6**	**+6.4**
QIZ				LR	LR		
	comp=Z,310nm,21.1s						
QIZ				LR	LR		
	comp=Z,760nm,29.8s						
RPSI	**Rantau Prapat**	**85.41**	**276**	P	**P**	**03 15 10.7**	**-1.8**
BO01	**Tunca**	**85.43**	**127**	IAmb	IAmb	03 15 32.4	
	comp=Z,70nm,1.4s						

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PSI   Prapat            85.46 276   LR       LR       03 53 45.6
      comp=Z,802nm,20.9s,baz=101,slow=36
PSI   Prapat            85.46 276   P        P        03 15 11.5 -1.4
PSI   Prapat            85.46 276   P        P        03 15 10.7 -2.2
PSI                                 pmax     pmax
      comp=Z,21nm,1.2s
CBX   Cerro Bola        85.55  48   IAmb     IAmb     03 15 16.4
      comp=Z,47nm,1.3s
MT01  Popeta            85.61 127   P        P        03 15 13.5 +0.2
BBGB  Big Mountain B    85.73  43   P        P        03 15 14.1 +0.5
BBGB                                IAmb     IAmb     03 15 36.0
      comp=Z,51nm,1.1s
TKX   Tecate            85.75  48   P        P        03 15 14.5 +0.8
TKX                                 IAmb     IAmb     03 15 33.0
      comp=Z,34nm,1.1s
MCCM  Marconi Confer    85.77  40   P        P        03 15 14.3 +0.7
ESJX  Sierra Juarez     85.81  49   P        P        03 15 14.4 +0.2
ESJX                                IAmb     IAmb     03 15 34.0
      comp=Z,38nm,1.1s
PASC  Pasadena Art C    85.81  46   P        P        03 15 13.9  0.0
PASC                                IAmb     IAmb     03 15 33.4
      comp=Z,38nm,1.1s
GSI   Gunungsitoli      85.85 274   P        P        03 15 14.4 -0.3
GSI   Gunungsitoli      85.85 274   P        P        03 15 14.9 +0.2
GSI   Gunungsitoli      85.85 274   P        P        03 15 14.5 -0.2
      comp=Z,69nm,1.0s
SFX   San Felipe        85.91  50   P        P        03 15 14.9 +0.4
SFX                                 IAmb     IAmb     03 15 33.5
      comp=Z,30nm,1.0s
ELS   Elsinore Mount    85.94  47   P        P        03 15 15.0 +0.4
ELS                                 IAmb     IAmb     03 15 34.0
      comp=Z,34nm,1.1s
PET   Petropavlovsk     85.96 346   P        P        03 15 13.1 -1.0
PET                                 IAmb     IAmb     03 15 17.5
      comp=Z,16nm,0.6s
PET   Petropavlovsk     85.96 346   P        P        03 15 17.3 +3.2
PET   Petropavlovsk     85.96 346  eP        P        03 15 13.3 -0.8
PET                                 pmax     pmax
      comp=Z,25nm,0.6s
BO04  La Punta          85.98 127   P        P        03 15 15.8 +0.7
BO04                                IAmb     IAmb     03 15 34.3
      comp=Z,39nm,1.1s
MT05  Renca             86.23 127   P        P        03 15 17.6 +1.2
PEA0B Petropavlovsk-    86.24 346   P        P        03 15 15.4 -0.2
PEA0B                               IAmb     IAmb     03 15 20.1
      comp=Z,34nm,0.7s
PEA0B Petropavlovsk-    86.24 346⇓eP        P        03 15 16.9 +1.3
PETK  Petropavlovsk-    86.24 346   P        P        03 15 14.6 -1.0
PETK  Petropavlovsk-    86.24 346   P        P        03 15 14.8 -0.8
      comp=Z,25nm,0.6s,baz=110,slow=6.5,SNR=24
      comp=Z,25nm,0.6s
YUH   Yuha Desert       86.24  48   P        P        03 15 16.1  0.0
YUH                                 IAmb     IAmb     03 15 35.6
      comp=Z,28nm,1.1s
HOPS  Hopland Field     86.26  40   P        P        03 15 14.8 -1.2
GDXM  Geysers           86.28  40   P        P        03 15 17.1 +0.9
GDXM                                IAmb     IAmb     03 15 35.7
      comp=Z,30nm,1.0s
MT03  Universidad Ad    86.33 127   P        P        03 15 16.9  0.0
LMEL  Las Melosas       86.34 127   P        P        03 15 17.6 +0.5
MT16  CCHEN             86.36 127   P        P        03 15 17.7 +0.7
PEL   Peldehue          86.41 127   P        P        03 15 18.4 +1.1
PEL   Peldehue          86.41 127   P        P        03 15 18.4 +1.1
PEL                                 pmax     pmax
      comp=Z,108nm,1.0s
CPBX  Cerro Prieto      86.49  49   IAMs_20  IAMs_20  03 42 37.7
      comp=Z,532nm,21.0s
NJ2   Nanjing           86.52 311  eP        P        03 15 20.3 +2.9
NJ2                                 pmax     pmax
      comp=Z,9.0nm,0.7s
NJ2                                 LR       LR
      comp=Z,360nm,21.5s
NJ2                                 LR       LR
      comp=Z,300nm,19.7s
NJ2                                 LR       LR
      comp=Z,670nm,18.6s
PFO   Pinyon Flats O    86.52  47   P        P        03 15 17.5 -0.1
PFO                                 IAmb     IAmb     03 15 37.1
      comp=Z,26nm,1.1s
PFO   Pinyon Flats O    86.52  47c iP        P        03 15 19.1 +1.5
PFO                                 pmax     pmax
      comp=Z,43nm,1.3s
UBPT  Khong Chiam       86.56 290   P        P        03 15 18.3 +0.3
CCAC  Calif City Air    86.57  45   P        P        03 15 18.4 +0.7
CCAC                                IAmb     IAmb     03 15 38.2
      comp=Z,32nm,1.1s
ISA   Isabella, Lake    86.63  45   P        P        03 15 18.5 +0.5
ISA   Isabella, Lake    86.63  45   P        P        03 15 18.5 +0.5
ISA                                 pmax     pmax
      comp=Z,59nm,1.1s
MT08  Bocatoma Ro       86.70 127   P        P        03 15 20.2 +1.3
KMPM  Mount Pierce      86.71  38   P        P        03 15 18.8 +0.5
VA03  San Esteban       86.72 126   P        P        03 15 19.4 +0.6
VA03                                IAmb     IAmb     03 15 47.0
      comp=Z,33nm,0.9s
CNBA  Chernabura Isl    86.78  11   P        P        03 15 19.2 +1.0
KMRM  Mail Ridge        86.79  39   P        P        03 15 19.3 +0.6
KMRM                                IAmb     IAmb     03 15 38.6
      comp=Z,50nm,1.1s
CMB   Columbia Colle    87.11  42   IAmb     IAmb     03 15 38.9
      comp=Z,30nm,0.9s
SDPT  Sand Point        87.16  10   P        P        03 15 18.8 -1.2
GLA   Glamis            87.20  49   IAmb     IAmb     03 15 40.9
      comp=Z,54nm,1.1s
KHMM  Horse Mountain    87.25  38   P        P        03 15 21.9 +0.9
KHMM                                IAmb     IAmb     03 15 40.3
      comp=Z,51nm,1.1s
AFDM  Forest Hills D    87.40  41   IAMs_20  IAMs_20  03 56 04.1
      comp=Z,619nm,20.0s
GSC   Goldstone, Bar    87.41  46   P        P        03 15 22.7 +0.8
GSC                                 IAmb     IAmb     03 15 41.2
      comp=Z,49nm,1.0s
GSC   Goldstone, Bar    87.41  46   P        P        03 15 22.7 +0.8
GSC                                 pmax     pmax
      comp=Z,49nm,1.0s
USA0B Ussuriysk Arra    87.52 327⇑eP        P        03 15 20.8 -1.2
USRK  Ussuriysk Ar.     87.52 327   P        P        03 15 21.2 -0.8
      comp=Z,3.8nm,0.8s,baz=96,slow=3.3,SNR=5.6
      comp=Z,3.8nm,0.8s
113A  Mohawk Valley,    87.71  49   P        P        03 15 24.6 +1.4
113A                                IAmb     IAmb     03 15 43.0
      comp=Z,29nm,1.2s
QSM   Queen of Sheba    87.81  45   IAmb     IAmb     03 15 42.8
      comp=Z,39nm,1.1s
214A  Organ Pipe Nat    87.83  51   IAmb     IAmb     03 15 43.2
      comp=Z,19nm,1.0s
BLYC  Blythe            87.84  48   IAmb     IAmb     03 15 43.7
      comp=Z,28nm,1.0s
WAKR  Walker            87.97  42   IAmb     IAmb     03 15 43.7
      comp=Z,26nm,1.0s
GWY   Greenwater Val    88.07  45   IAmb     IAmb     03 15 44.0
      comp=Z,28nm,1.0s
GRAC  Grapevine Rang    88.18  44   IAmb     IAmb     03 15 44.9
      comp=Z,49nm,1.1s
PNTR  Pine Nut          88.28  42   IAmb     IAmb     03 15 44.8
      comp=Z,39nm,0.8s
LHV   Little Huntoon    88.34  43   IAmb     IAmb     03 15 45.3
      comp=Z,44nm,1.0s
KEBM  Edson Butte       88.36  36   IAMs_20  IAMs_20  03 50 18.2
      comp=Z,570nm,19.0s
BEKR  Beckworth         88.38  41   IAMs_20  IAMs_20  03 44 17.9
      comp=Z,572nm,21.0s
YBH   Yreka Blue Hor    88.39  38   LR       LR       03 47 41.1
      comp=Z,16nm,20.8s,baz=204,slow=31
HATC  Hat Creek Radi    88.42  39   IAmb     IAmb     03 15 45.8
      comp=Z,39nm,0.9s
GMN   Gold Mountain     88.45  44   IAmb     IAmb     03 15 30.2
      comp=Z,26nm,1.3s
TYV   Tymovskoe         88.45 336  eP        P        03 15 29.1 +2.8
TYV                                 pmax     pmax
      comp=Z,300nm,3.7s
TYV                                 pmax     pmax
      comp=Z,21nm,0.7s
NVAR  Mina Array Bea    88.58  43   P        P        03 15 28.2 +0.7
      comp=Z,8.5nm,0.8s,baz=222,slow=7.7,SNR=37
NVAR                                LR       LR       03 46 38.1
      comp=Z,528nm,21.2s,baz=214,slow=30
      comp=Z,8.5nm,0.8s
RYN   Ryan              88.58  42   IAmb     IAmb     03 15 46.2
      comp=Z,16nm,1.0s
RYN                                 IAMs_20  IAMs_20  03 50 39.6
      comp=Z,416nm,18.0s
CO01  Juntas del Tor    88.63 124   P        P        03 15 28.8 +0.5
CO01                                IAmb     IAmb     03 15 49.7
      comp=Z,20nm,0.9s
NV11  Mina Array Sit    88.67  43   IAmb     IAmb     03 15 46.6
      comp=Z,28nm,1.1s
ZON   Zonda             88.72 126   P        P        03 15 29.9 +1.5
ZON   Zonda             88.72 126   P        P        03 15 29.9 +1.5
ZON                                 pmax     pmax
      comp=Z,65nm,1.3s
LCO   Las Campanas      88.75 123   P        P        03 15 30.0 +1.2
LCO                                 IAmb     IAmb     03 15 49.9
      comp=Z,28nm,0.8s
LCO   Las Campanas      88.75 123   P        P        03 15 30.0 +1.2
LCO                                 pmax     pmax
      comp=Z,28nm,0.9s
PAHR  Pah Rah Range     88.82  41   P        P        03 15 27.9 -0.6
PAHR                                IAmb     IAmb     03 15 47.1
      comp=Z,21nm,1.0s
TPNV  Topopah Spring    88.83  45   P        P        03 15 27.8 -0.8
TPNV                                IAmb     IAmb     03 15 47.5
      comp=Z,22nm,0.9s
TPNV  Topopah Spring    88.83  45   P        P        03 15 27.8 -0.8
TPNV                                pmax     pmax
      comp=Z,22nm,0.9s
V12A  Nelson            88.90  47   P        P        03 15 29.5 +0.5
V12A                                IAmb     IAmb     03 15 48.5
      comp=Z,29nm,1.2s
L04D  Klamath Falls     88.95  38   IAmb     IAmb     03 15 47.7
      comp=Z,37nm,1.0s
W13A  Hualapai Mount    89.11  48   IAmb     IAmb     03 15 50.3
      comp=Z,43nm,1.1s
TRQA  Tornquist         89.13 135   P        P        03 15 30.9 +0.7
TRQA                                IAmb     IAmb     03 15 34.0
      comp=Z,42nm,1.2s
TRQA  Tornquist         89.13 135   P        P        03 15 30.9 +0.7
TRQA                                pmax     pmax
      comp=Z,42nm,1.2s
BBOR  Butler Butte      89.23  37   P        P        03 15 30.6 +0.2
BBOR                                IAmb     IAmb     03 15 52.4
      comp=Z,19nm,1.2s
TUC   Tucson            89.41  51   P        P        03 15 31.8 +0.4
TUC                                 IAmb     IAmb     03 15 51.7
      comp=Z,51nm,1.1s
TUC   Tucson            89.41  51   P        P        03 15 31.8 +0.4
TUC                                 pmax     pmax
      comp=Z,51nm,1.2s
I03D  Drain, OR         89.46  36   P        P        03 15 30.9 -0.3
K04D  Chiloquin, OR     89.53  38   P        P        03 15 31.5 -0.2
K04D                                IAmb     IAmb     03 15 50.4
      comp=Z,34nm,1.0s
S11A  Rachel            89.58  45   P        P        03 15 32.8 +0.7
S11A                                IAmb     IAmb     03 15 51.2
      comp=Z,44nm,1.3s
J04A  Umpqua Nationa    89.77  37   P        P        03 15 33.6 +0.6
ZAIG  Zacatecas         89.83  63   P        P        03 15 34.5 +0.7
PRN   Pahroc Range      89.85  45   P        P        03 15 34.2 +0.9
PRN                                 IAmb     IAmb     03 15 53.2
      comp=Z,31nm,1.1s
319A  Douglas           89.86  53   P        P        03 15 34.8 +1.2
319A                                IAmb     IAmb     03 15 53.6
      comp=Z,42nm,1.0s
BUCK  Buck Mountain     90.00  36   P        P        03 15 33.3 -0.5
I04A  Tendick Farm,     90.00  37   P        P        03 15 34.2 +0.3
I04A                                IAmb     IAmb     03 15 52.2
      comp=Z,38nm,1.0s
R11B  Troy Canyon, C    90.13  44   P        P        03 15 34.7 -0.1
TLIG  Tlapa             90.17  70   P        P        03 15 34.4 -0.9
TLIG                                IAmb     IAmb     03 15 56.0
      comp=Z,29nm,1.1s
OHAK  Old Harbor        90.18  13   P        P        03 15 34.9 +0.7
X16A  Lo Mia Camp, P    90.26  49   P        P        03 15 35.7 +0.3
TIA   Tai'an            90.26 313   P        P        03 15 34.8 -0.4
TIA                                 pmax     pmax
      comp=Z,14nm,0.7s
J05D  Fort Rock, OR     90.26  38   P        P        03 15 35.5 +0.4
J05D                                IAmb     IAmb     03 15 54.1
      comp=Z,40nm,1.2s
JRQG  Juriquilla Cam    90.35  66   P        P        03 15 36.9 +0.6
H04D  Lebanon           90.35  36   P        P        03 15 36.0 +0.6
CN2   Changchun         90.48 323 ⇑P        P        03 15 35.3 -0.7
CN2                                eSP       PcP      03 15 42.0 +4.9
CN2                                eS        S        03 26 28.9 +1.0
CN2                                 pmax     pmax
      comp=Z,10.0nm,0.6s
CN2                                 pmax     pmax
      comp=Z,200nm,5.0s
DUN6  Lazy B Ranch      90.69  52   P        P        03 15 38.5 +1.1
LCMT  Little Creek M    90.71  46   P        P        03 15 37.3 -0.1
LCMT                                IAmb     IAmb     03 15 57.0
      comp=Z,18nm,0.9s
H04A  Detroit Lake      90.75  36   P        P        03 15 37.3  0.0
PINE  Pine Mountain     90.77  37   P        P        03 15 37.6 +0.1
KDAK  Kodiak Island     90.84  13   P        P        03 15 37.2 -0.1
      comp=Z,11nm,1.1s,baz=163,slow=2.3,SNR=2.5
KDAK                                LR       LR       03 49 28.7
      comp=Z,248nm,20.9s,baz=150,slow=31
      comp=Z,11nm,1.1s
BNX   BinXian           90.86 325 ⇓P        P        03 15 36.8 -0.9
BNX                                 pmax     pmax
      comp=Z,16nm,1.4s
I05D  Terrebonne, OR    90.94  37   P        P        03 15 38.2  0.0
F03A  Seaside           90.94  35   P        P        03 15 38.8 +0.7
U15A  North Rim         90.95  47   P        P        03 15 39.4 +0.7
U15A                                IAmb     IAmb     03 15 58.5
      comp=Z,38nm,1.0s
G04A  Mulino            90.97  36   P        P        03 15 39.0 +0.8
WUAZ  Wupatki           90.97  49   P        P        03 15 39.5 +0.8
WUAZ                                IAmb     IAmb     03 15 58.5
      comp=Z,38nm,1.0s
KNB   Kanab             90.98  47   P        P        03 15 39.4 +0.7
KNB                                 IAmb     IAmb     03 15 58.4
      comp=Z,34nm,1.0s
KNB   Kanab             90.98  47   P        P        03 15 39.4 +0.7
KNB                                 pmax     pmax
      comp=Z,34nm,1.0s
WVOR  Wild Horse Val    91.07  40   P        P        03 15 39.0  0.0
WVOR                                IAmb     IAmb     03 15 57.7
      comp=Z,23nm,1.1s
WVOR  Wild Horse Val    91.07  40   P        P        03 15 39.0  0.0
WVOR                                pmax     pmax
      comp=Z,23nm,1.1s
AC02  Maricunga         91.13 122   P        P        03 15 40.7 +0.4
AC02                                IAmb     IAmb     03 15 46.1
      comp=Z,28nm,1.2s
PSUT  Pine Spring       91.30  45   P        P        03 15 40.4 +0.2
PSUT                                IAmb     IAmb     03 15 59.2
      comp=Z,13nm,0.8s
X18A  Snowflake         91.30  50   P        P        03 15 40.8 +0.5
X18A                                IAmb     IAmb     03 16 00.2
      comp=Z,33nm,1.0s
SPR3  Spring Creek 3    91.30  44   IAmb     IAmb     03 15 58.8
      comp=Z,18nm,1.1s
F04D  Rainier, OR       91.32  35   P        P        03 15 40.5 +0.7
E03A  Lebam             91.38  34   P        P        03 15 40.4 +0.3
KLR   Kul'dur           91.41 330   P        P        03 15 39.8 -0.4
      comp=Z,8.2nm,0.7s,baz=145,slow=4.8,SNR=16
      comp=Z,8.2nm,0.7s
KLR   Kul'dur           91.41 330⇓eP        P        03 15 39.5 -0.6
KLR                                 pmax     pmax
      comp=Z,12nm,0.8s
N14K  Kuskokwak Cree    91.44   8   P        P        03 15 40.7 +0.7
N14K                                IAmb     IAmb     03 15 43.5
      comp=Z,40nm,1.1s
PB14  IPOC Station P    91.46 120   P        P        03 15 40.3 -1.3
HOOD  Mount Hood Mea    91.46  36   P        P        03 15 40.7  0.0
HOOD                                IAmb     IAmb     03 15 59.1
      comp=Z,35nm,1.1s
O16K  Kokwok River B    91.60  10   P        P        03 15 40.2 -0.6
WISH  Wishkah           91.69  34   P        P        03 15 41.0 -0.4
WISH                                IAmb     IAmb     03 16 41.9
      comp=Z,44nm,1.2s
Q19K  Cape Douglas,     91.71  12   P        P        03 15 41.1 -0.3
I07A  Izee              91.72  38   IAmb     IAmb     03 16 01.2
      comp=Z,25nm,0.9s
GYA   Guiyang           91.75 300 ⇑P        P        03 15 40.3 -2.2
GYA                                 pmax     pmax
      comp=Z,34nm,1.0s
GO02  Mina Guanaco      91.76 121   P        P        03 15 43.6 +0.7
GO02                                IAmb     IAmb     03 15 46.7
      comp=Z,29nm,1.0s
J08A  Circle Bar Ran    91.78  39   P        P        03 15 43.0 +0.8
J08A                                IAmb     IAmb     03 16 00.9
      comp=Z,36nm,1.1s
W18A  Petrified Fore    91.80  50   P        P        03 15 43.5 +0.9
W18A                                IAmb     IAmb     03 16 02.2
      comp=Z,36nm,1.2s
ENH   Enshi             91.84 304   P        P        03 15 43.7 +1.0
P18K  Big Mountain,     91.87  11   P        P        03 15 41.3 -0.8
P18K                                IAmb     IAmb     03 15 42.1
      comp=Z,12nm,0.7s
N15K  Kwethluk River    91.88   9   IAmb     IAmb     03 15 60.0
      comp=Z,21nm,0.7s
ELK   Elko              91.88  43   IAmb     IAmb     03 16 01.5
      comp=Z,13nm,1.0s
EPT   El Paso           92.01  54   IAMs_20  IAMs_20  03 46 24.3
      comp=Z,412nm,22.0s
M14K  Bethel            92.21   8   IAmb     IAmb     03 15 46.6
      comp=Z,19nm,1.2s
LYN   LuoYang           92.27 309   P        P        03 15 44.8 +0.3
LYN                                 pmax     pmax
      comp=Z,22nm,0.8s
MVU   Marysvale         92.28  46   P        P        03 15 44.5 -0.3
MVU                                 IAmb     IAmb     03 16 05.1
      comp=Z,19nm,1.2s
O18K  Koktuh Hills      92.31  11   IAmb     IAmb     03 16 01.1
      comp=Z,27nm,0.8s
HOLB  Holberg           92.33  29   P        P        03 15 43.9 -0.5
HG4B  Hotspring         92.36  27   P        P        03 15 44.9 +0.5
GNW   Green Mountain    92.46  34   P        P        03 15 45.0  0.0
GNW                                 IAmb     IAmb     03 16 03.7
      comp=Z,19nm,1.0s
VHRN  Van Horn          92.52  55   P        P        03 15 45.8 -0.1
DIB   Dawson Inlet,     92.59  25   P        P        03 15 46.1 +0.7
DIB                                 IAmb     IAmb     03 16 04.6
      comp=Z,34nm,1.1s
D05A  Enumclaw          92.60  34   P        P        03 15 45.6 -0.1
D05A                                IAmb     IAmb     03 16 04.8
      comp=Z,35nm,1.0s
PB05  IPOC Station P    92.62 118   P        P        03 15 47.1 +0.4
N17K  Nushagak Hills    92.63  10   P        P        03 15 46.2 +0.7
N17K                                IAmb     IAmb     03 17 50.7
      comp=Z,25nm,1.8s
TX31  Lajitas Ar. Si    92.64  57   IAmb     IAmb     03 16 06.0
      comp=Z,17nm,1.1s
TXAR  Lajitas Array     92.64  57   P        P        03 15 46.4 -0.1
TXAR  Lajitas Array     92.64  57   P        P        03 15 47.4 +0.9
      comp=Z,12nm,1.3s,baz=212,slow=4.4,SNR=25
TXAR                                PP       PP       03 19 30.7 +1.7
      comp=Z,1.7nm,1.1s,baz=223,slow=5.1,SNR=4.1
      comp=Z,12nm,1.3s
L14K  Kuka Creek        92.70   7   P        P        03 15 45.9 +0.1
CNPM  China Poot        92.73  13   P        P        03 15 46.8 +0.7
F07A  Phinny Hill Vi    92.73  36   P        P        03 15 46.6 +0.2
F07A                                IAmb     IAmb     03 16 05.0
      comp=Z,21nm,1.2s
CLRS  Cowichan Lake     92.75  32   P        P        03 15 46.9 +0.6
CLRS                                IAmb     IAmb     03 15 55.8
      comp=Z,34nm,1.4s
CLRS                                IAMs_20  IAMs_20  03 48 31.6
      comp=Z,457nm,21.0s
MNTX  Cornudas Mount    92.75  55   P        P        03 15 45.7 -1.1
ILSW  Iliamna Southw    92.79  12   IAmb     IAmb     03 16 03.6
      comp=Z,24nm,1.0s
HMU   Henry Mountain    92.85  47   P        P        03 15 47.7 +0.2
HMU                                 IAmb     IAmb     03 15 50.5
      comp=Z,16nm,1.3s
M16K  Timber Creek      92.85   9   IAmb     IAmb     03 15 52.9
      comp=Z,19nm,1.2s
DUG   Dugway, Tooele    92.97  44   P        P        03 15 48.2 +0.4
DUG   Dugway, Tooele    92.97  44   P        P        03 15 48.2 +0.4
DUG                                 pmax     pmax
      comp=Z,10.0nm,1.2s
MXC   Moxie City        93.02  36   P        P        03 15 48.1 +0.4
MXC                                 IAmb     IAmb     03 16 06.2
      comp=Z,12nm,1.0s
BRLK  Bradley Lake      93.02  13   P        P        03 15 47.5 +0.2
LENM  Lemitar           93.07  52   P        P        03 15 48.4 -0.1
K13K  Kusilvak Mount    93.08   6   P        P        03 15 47.9 +0.3
K13K                                IAmb     IAmb     03 15 50.7
      comp=Z,41nm,1.7s
CRNM  Carthage          93.11  52   P        P        03 15 49.8 +1.1
Q16A  Castle Valley     93.18  46   P        P        03 15 50.0 +1.2
Q16A                                IAmb     IAmb     03 15 52.8
      comp=Z,22nm,1.7s
PB06  IPOC Station P    93.18 119   P        P        03 15 50.5 +1.2
PB06                                IAmb     IAmb     03 15 53.2
      comp=Z,30nm,1.2s
E07A  Sunnyside         93.22  36   P        P        03 15 48.8 +0.1
E07A                                IAmb     IAmb     03 16 07.4
      comp=Z,26nm,1.2s
BJI   Beijing           93.23 315   P        P        03 15 51.8 +3.0
BJI                                 pmax     pmax
      comp=Z,3.0nm,0.8s
BJI                                 pmax     pmax
      comp=Z,37nm,4.5s
BJI                                 LR       LR
      comp=Z,140nm,14.8s
BJI                                 LR       LR
      comp=Z,190nm,14.0s
BJI                                 LR       LR
      comp=Z,310nm,20.6s
ALPN  Alpine            93.25  56   P        P        03 15 49.1 -0.2
ALPN                                IAmb     IAmb     03 16 08.2
      comp=Z,12nm,0.8s
MFID  Camas Ranch       93.27  40   IAmb     IAmb     03 16 07.6
      comp=Z,22nm,0.9s
HAWA  Hanford           93.27  36   IAmb     IAmb     03 16 07.5
      comp=Z,22nm,1.0s
BGU   Big Grassy Mou    93.29  43   P        P        03 15 50.1 +0.8
BNM   Barren Site       93.30  52   P        P        03 15 50.2 +0.6
NNA   Nana              93.32 106   LR       LR       03 48 43.0
      comp=Z,370nm,20.3s,baz=204,slow=30
TMUT  Trail Mountain    93.39  46   P        P        03 15 50.3 +0.3
TMUT                                IAmb     IAmb     03 16 09.2
      comp=Z,12nm,0.8s
PB03  IPOC Station P    93.42 118   P        P        03 15 51.0 +0.5
M17K  Holitna River     93.43  10   P        P        03 15 49.2  0.0
M17K                                IAmb     IAmb     03 15 51.2
      comp=Z,33nm,1.4s
BBB   Bella Bella       93.50  28   P        P        03 15 50.3 +0.6
BBB                                 IAmb     IAmb     03 16 09.0
      comp=Z,27nm,1.1s
BBB   Bella Bella       93.50  28   P        P        03 15 49.1 -0.6
      comp=Z,11nm,1.1s,baz=248,slow=5.4,SNR=3.0
      comp=Z,11nm,1.1s
WAH2  Wahluke Slope     93.50  36   P        P        03 15 50.6 +0.7
WAH2                                IAmb     IAmb     03 16 08.4
      comp=Z,13nm,1.0s
LNOR  Lincton Mounta    93.56  37   P        P        03 15 50.8 +0.5
MPU   Maple Canyon      93.57  45   P        P        03 15 50.4 -0.3
PECS  Pecos             93.64  56   P        P        03 15 51.0  0.0
SRU   San Rafael Swe    93.70  46   P        P        03 15 51.5 +0.3
SRU                                 IAmb     IAmb     03 16 10.0
      comp=Z,12nm,0.9s
SRU   San Rafael Swe    93.70  46   P        P        03 15 51.6 +0.3
SRU                                 pmax     pmax
      comp=Z,12nm,0.9s
K15K  Wolf Creek Mou    93.76   8   P        P        03 15 50.6 -0.1
K15K                                IAmb     IAmb     03 15 54.4
      comp=Z,17nm,0.9s
SLKM  Skilak Lake       93.84  13   IAmb     IAmb     03 15 53.5
      comp=Z,44nm,1.4s
ANMO  Albuquerque       93.87  51   P        P        03 15 52.2 +0.1
ANMO  Albuquerque       93.87  51   P        P        03 15 52.1 -0.1
ANMO                                IAmb     IAmb     03 16 11.2
      comp=Z,12nm,1.1s
ANMO  Albuquerque       93.87  51   LR       LR       03 49 19.0
      comp=Z,250nm,21.3s,baz=24,slow=30
ANMO  Albuquerque       93.87  51deP        P        03 15 52.7 +0.5
TA01  Diego Aracena     93.94 117   P        P        03 15 52.3 -0.4
PV05  Paradox Valley    93.97  48   P        P        03 15 53.3 +0.7
PV05                                IAmb     IAmb     03 16 11.7
      comp=Z,12nm,1.0s
HVU   Hansel Valley     93.97  43   IAmb     IAmb     03 16 11.1
      comp=Z,31nm,1.0s
D08A  Wollman Farm,     94.03  36   P        P        03 15 52.8 +0.5
D08A                                IAmb     IAmb     03 16 10.8
      comp=Z,17nm,0.8s
JLU   Jordanelle        94.04  44   P        P        03 15 53.0 +0.1
E09A  Wood Farm, Sta    94.07  37   P        P        03 15 53.1 +0.6
E09A                                IAmb     IAmb     03 16 10.6
      comp=Z,15nm,0.8s
SAND  Sanderson         94.11  58   P        P        03 15 53.5 +0.4
TA02  Huaiquique        94.15 116   P        P        03 15 53.4 -0.2
HLID  Hailey            94.16  41   IAmb     IAmb     03 16 12.0
      comp=Z,15nm,0.9s
PV17  East Wray Mesa    94.18  47   P        P        03 15 54.3 +0.7
P18A  Preston Nutter    94.18  46   P        P        03 15 53.8 +0.2
PV19  Morning Glory     94.18  47   P        P        03 15 53.7 +0.1
PV19                                IAmb     IAmb     03 15 55.7
      comp=Z,27nm,1.4s
PV10  Paradox Valley    94.19  47   P        P        03 15 53.5 -0.1
PV10                                IAmb     IAmb     03 16 11.9
      comp=Z,18nm,1.1s
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PV18	Skein Mesa, Pa	94.19	48	P	P	03 15 53.6	0.0
PV18				IAmb	IAmb	03 16 15.9	
	comp=Z,10nm,0.8s						
PV20	West Nyswonger	94.21	47	P	P	03 15 54.3	+0.6
PV16	Nyswonger Mesa	94.23	47	P	P	03 15 54.2	+0.4
PV03	Paradox Valley	94.23	48	P	P	03 15 53.5	-0.3
PV03				IAmb	IAmb	03 16 11.6	
	comp=Z,26nm,2.0s						
PV11	David Mesa, Pa	94.25	48	P	P	03 15 53.8	0.0
PV11				IAmb	IAmb	03 15 56.6	
	comp=Z,16nm,1.3s						
PV23	Carpenter Ridg	94.25	47	P	P	03 15 54.0	+0.1
PV23				IAmb	IAmb	03 16 12.4	
	comp=Z,12nm,1.0s						
PLID	Pearl Lake	94.26	39	IAmb	IAmb	03 16 11.9	
	comp=Z,22nm,1.1s						
PV02	Paradox Valley	94.28	48	P	P	03 15 53.3	-0.7
PV02				IAmb	IAmb	03 16 12.4	
	comp=Z,13nm,0.9s						
PV04	Paradox Valley	94.28	47	P	P	03 15 53.7	-0.2
PV12	Saucer Basin,	94.30	48	P	P	03 15 53.8	-0.3
PV12				IAmb	IAmb	03 16 13.3	
	comp=Z,21nm,1.1s						
L18K	Granite Mounta	94.32	10	IAmb	IAmb	03 16 25.0	
	comp=Z,14nm,1.1s						
PV21	Cone Mtn., Par	94.34	47	P	P	03 15 53.8	-0.5
TCUT	Toone Canyon	94.38	44	P	P	03 15 54.7	+0.3
TCUT				IAmb	IAmb	03 16 14.2	
	comp=Z,9.6nm,0.7s						
TCUT				IAMs_20	IAMs_20	03 48 48.9	
	comp=Z,488nm,21.0s						
MNHN	Monahans	94.41	56	P	P	03 15 54.8	+0.2
BSUT	Blindstream Ca	94.41	45	P	P	03 15 54.7	0.0
BSUT				IAmb	IAmb	03 16 13.5	
	comp=Z,21nm,1.2s						
PV22	Blue Mesa, Par	94.44	47	P	P	03 15 53.9	-0.8
PV07	Paradox Valley	94.47	47	P	P	03 15 55.2	+0.3
L19K	White Mountain	94.57	11	IAmb	IAmb	03 15 57.8	
	comp=Z,35nm,1.5s						
SUA	Susitna One	94.61	13	IAmb	IAmb	03 18 39.6	
	comp=Z,56nm,1.7s						
B08A	Colville Reser	94.71	35	P	P	03 15 54.8	-0.6
CCIG	Comitan	94.75	74	IAMs_20	IAMs_20	03 51 56.8	
	comp=Z,416nm,19.0s						
PZH	PanZhiHua	95.49	297	P	P	03 16 01.8	+2.1
AHID	Auburn Hatcher	95.56	43	IAmb	IAmb	03 16 18.9	
	comp=Z,18nm,1.1s						
NEW	Newport	95.75	36	LR	LR	03 50 32.2	
	comp=Z,438nm,21.6s,baz=130,slow=30						
K20K	Telida	95.80	11	IAmb	IAmb	03 16 13.6	
	comp=Z,22nm,1.6s						
TPAW	Teton Pass	96.09	42	IAmb	IAmb	03 16 20.9	
	comp=Z,15nm,1.2s						
CAST	Castle Rocks	96.18	11	IAmb	IAmb	03 16 02.9	
	comp=Z,36nm,1.9s						
SNOW	Snow King Moun	96.18	42	P	P	03 16 03.0	+0.3
SNOW				IAmb	IAmb	03 16 21.8	
	comp=Z,17nm,1.0s						
MCARA	McCarthy VSAT	96.20	16	P	P	03 16 02.5	+0.6
MCARA				IAmb	IAmb	03 16 21.2	
	comp=Z,27nm,1.0s						
DLMT	Dillon	96.30	40	IAmb	IAmb	03 16 22.2	
	comp=Z,14nm,1.1s						
CD2	Chengdu	96.31	302	P	P	03 16 03.0	-0.2
SEY	Seymchan	96.41	347	LR	LR	03 54 44.1	
	comp=Z,358nm,21.7s,baz=175,slow=33						
SEY	Seymchan	96.41	347	⇑eP	P	03 16 01.5	-1.3
SEY				pmax	pmax		
	comp=Z,12nm,1.6s						
PDAR	Pinedale Array	96.47	44	P	P	03 16 03.1	-0.8
PDAR	Pinedale Array	96.47	44	P	P	03 16 02.6	-1.3
	comp=Z,1.2nm,0.9s,baz=209,slow=1.5,SNR=7.5						
PDAR				PP	PP	03 19 57.0	-1.8
	comp=Z,0.3nm,0.5s,baz=262,slow=3.0,SNR=4.1						
PDAR				PKKP	PKKPbc	03 32 48.7	-0.6
	comp=Z,1.5nm,0.5s,baz=86,slow=4.2,SNR=13						
	comp=Z,1.2nm,0.9s						
KTH	Kantishna Hill	96.51	12	IAMs_20	IAMs_20	03 59 38.8	
	comp=Z,503nm,21.0s						
TRF	Thorofare Moun	96.53	12	IAmb	IAmb	03 16 25.1	
	comp=Z,11nm,0.9s						
HHC	Hu-ho-hao-te	96.53	314	eP	P	03 16 06.8	+2.8
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
RND	Reindeer	96.75	13	IAmb	IAmb	03 16 24.8	
	comp=Z,14nm,1.0s						
YHL	Hebgen Lake	96.78	41	P	P	03 16 05.8	+0.5
YHL				IAmb	IAmb	03 16 25.3	
	comp=Z,14nm,1.1s						
YHH	Holmes Hill	96.93	41	P	P	03 16 07.1	+1.1
BPAW	Bear Paw Mtn.	97.00	12	P	P	03 16 05.7	+0.2
MCK	McKinley	97.03	13	P	P	03 16 05.7	0.0
MCK				IAmb	IAmb	03 16 25.5	
	comp=Z,9.5nm,0.9s						
MCK	McKinley	97.03	13	P	P	03 16 05.7	0.0
MCK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BRDY	Brady	97.09	58	P	Pdif	03 16 07.0	+0.2
OVMT	Ovando	97.13	39	P	P	03 16 06.5	-0.2
M27K	Edge Creek, AK	97.32	16	P	Pdif	03 16 08.0	+0.8
M27K				IAmb	IAmb	03 16 26.2	
	comp=Z,13nm,1.1s						
HERN	Volcan Telica	97.36	80	IAMs_20	IAMs_20	03 55 07.4	
	comp=Z,507nm,20.0s						
K24K	Donnelly Dome	97.72	14	P	Pdif	03 16 09.7	+0.8
K24K				IAmb	IAmb	03 16 26.7	
	comp=Z,22nm,1.3s						
JTS	Las Juntas de	97.81	83	LR	LR	03 53 21.0	
	comp=Z,257nm,19.0s,baz=338,slow=31						
RIDG	Independent Ri	97.86	14	P	P	03 16 09.1	-0.3
LPAZ	La Paz	97.98	114	P	Pdif	03 16 13.0	+1.1
	comp=Z,1.3nm,0.6s,baz=338,slow=5.9,SNR=7.8						
	comp=Z,1.3nm,0.6s						
HDA	Harding Lake	98.03	13	P	P	03 16 09.4	-0.7
CCB	Clear Creek Bu	98.08	13	P	P	03 16 09.3	-1.0
K22A	Casper	98.22	45	IAMs_20	IAMs_20	03 54 47.8	
	comp=Z,466nm,20.0s						
COLA	College	98.27	13	P	Pdif	03 16 14.2	+3.1
COLA	College	98.27	13	⇑eP	P	03 16 10.1	-1.0
COLA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
OTAV	Otavalo	98.34	95	P	P	03 16 08.0	-5.4
OTAV				pmax	pmax		
	comp=Z,19nm,1.0s						
LCR2	La Lucha 2	98.35	84	IAMs_20	IAMs_20	03 50 28.8	
	comp=Z,378nm,19.0s						
ILAR	Eielson Array	98.36	13	P	P	03 16 10.5	-1.1
ILAR	Eielson Array	98.36	13	P	P	03 16 10.3	-1.3
	comp=Z,0.9nm,0.7s,baz=220,slow=5.2,SNR=24						
ILAR				PKiKP	PKiKP	03 20 42.5	-1.1
	comp=Z,0.5nm,0.6s,baz=306,slow=3.0,SNR=11						
	comp=Z,0.9nm,0.7s						
ILAR	Eielson Array	98.36	13	P	P	03 16 10.5	-1.1
ACON	Acoyapa	98.45	81	P	P	03 16 12.4	-0.7
ACON				IAmb	IAmb	03 18 59.3	
	comp=Z,21nm,1.1s						
J26L	Joseph Creek	98.80	14	IAmb	IAmb	03 16 32.6	
	comp=Z,16nm,1.1s						
G21K	Allakaket	98.85	10	IAmb	IAmb	03 16 18.5	
	comp=Z,22nm,1.9s						
LZH	Lanzhou	98.97	307	eP	Pdif	03 16 15.3	+0.1
LZH				sP	pP	03 16 24.9	-2.1
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
FW06	Azle	99.01	57	IAMs_20	IAMs_20	03 54 35.9	
	comp=Z,357nm,19.0s						
BILL	Bilibino	99.28	354	⇓eP	Pdif	03 16 15.4	-0.2
BILL				pmax	pmax		
	comp=Z,5.0nm,1.6s						
ELIS	Ellis County	99.28	54	IAMs_20	IAMs_20	04 00 05.8	
	comp=Z,408nm,22.0s						
CPUP	Villa Florida	99.72	128	P	Pdif	03 16 21.1	+2.3
	comp=Z,1.4nm,1.0s,baz=99,slow=3.0,SNR=5.7						
OK052	Battle Ridge R	101.07	55	IAMs_20	IAMs_20	03 52 14.3	
	comp=Z,390nm,20.0s						
G30M	tAoh Zraii Nji	102.53	16		Pdif	03 16 31.1	+0.9
YKA	Yellowknife Ar	105.85	26	PP	PP	03 21 05.5	-3.3
	comp=Z,0.3nm,0.6s,baz=237,slow=6.9,SNR=4.2						
HALT	Halls	106.37	58	IAMs_20	IAMs_20	03 50 21.9	
	comp=Z,403nm,22.0s						
USIN	University of	108.47	56	IAMs_20	IAMs_20	03 58 47.2	
	comp=Z,384nm,21.0s						
I42A	Draeger Farm,	110.05	50	IAMs_20	IAMs_20	04 16 28.3	
	comp=Z,291nm,20.0s						
COWI	Conover	110.78	48	IAMs_20	IAMs_20	04 06 41.4	
	comp=Z,490nm,22.0s						
H43A	Windswept, Lux	111.03	50	IAMs_20	IAMs_20	03 54 17.3	
	comp=Z,442nm,18.0s						
Q52A	Bidwell	112.75	57	IAMs_20	IAMs_20	04 10 11.8	
	comp=Z,386nm,21.0s						
WMQ	Urumqi	113.48	308	ePKP	PKiKP	03 21 11.4	-0.9
ZSN	Zaisan	116.55	311	ePKIKP	PKPdf	03 21 16.8	-1.2
ZSN	Zaisan	116.55	311	ePKP	PKPdf	03 21 16.9	-1.2
BOSA	Boshof	116.84	203	PKP	PKPdf	03 21 19.1	-0.4
	comp=Z,3.7nm,0.6s,baz=118,slow=2.0,SNR=12						
BOSA				PKKP	PKKPdf	03 32 06.8	-4.1
	comp=Z,4.4nm,1.1s,baz=86,slow=8.1,SNR=3.4						
OBIP	Obispado Ponce	117.12	84	IAMs_20	IAMs_20	04 11 21.4	
	comp=Z,395nm,19.0s						
RES	Resolute Bay	117.68	17	PKP	PKPdf	03 21 17.9	-1.5
	comp=Z,6.8nm,1.0s,baz=238,slow=4.4,SNR=11						
MK31	Makanchi Array	118.04	310	d iPKIKP	PKPdf	03 21 19.1	-1.8
MKAR	Makanchi Array	118.04	310	PKP	PKPdf	03 21 19.2	-1.7
	comp=Z,3.0nm,0.6s,baz=217,slow=1.4,SNR=26						
MKAR				PKKPab	PKKPab	03 31 44.4	+2.5
	comp=Z,0.6nm,0.6s,baz=283,slow=4.5,SNR=5.9						
MAKZ	Makanchi	118.25	310	PKIKP	PKPdf	03 21 19.4	-1.9
ZALV	Zalesovo Beam	118.35	318		PKPdf	03 21 19.7	-1.5
ZALV	Zalesovo Beam	118.35	318	PKP	PKPdf	03 21 19.5	-1.7
	comp=Z,1.6nm,0.4s,baz=336,slow=0.8,SNR=7.4						
ZALV	Zalesovo Beam	118.35	318	PKIKP	PKPdf	03 21 19.7	-1.5
SHLS	Shalkode	118.95	305	ePKIKP	PKPdf	03 21 20.9	-2.0
SHLS	Shalkode	118.95	305	ePKP	PKPdf	03 21 20.9	-2.0
UZB	Uzynbulak	119.26	305	ePKIKP	PKPdf	03 21 22.0	-1.5
UZB	Uzynbulak	119.26	305	ePKP	PKPdf	03 21 22.1	-1.5
KPKS	Kokpek	119.58	305	ePKIKP	PKPdf	03 21 22.7	-1.4
KPKS				e		03 22 44.4	
KPKS	Kokpek	119.58	305	ePKP	PKPdf	03 21 22.7	-1.4
KPKS				ePP	PP	03 22 44.5	-2.9
SATY	Saty	119.67	305	ePKIKP	PKPdf	03 21 22.8	-1.5
SATY	Saty	119.67	305	ePKP	PKPdf	03 21 22.9	-1.5
TDK	Taldyqorghan	120.18	307	ePKIKP	PKPdf	03 21 23.7	-1.3
TDK	Taldyqorghan	120.18	307	ePKP	PKPdf	03 21 23.8	-1.3
PHPEN	Phepeng	120.54	202	i P	PKiKP	03 21 27.4	+0.6
SKOMA	Sekoma	121.07	203	i P	PKiKP	03 21 28.6	+0.8
KURK	Kurchatov	121.34	314		PKPdf	03 21 25.6	-1.4
KURK	Kurchatov	121.34	314	d iPKIKP	PKPdf	03 21 25.4	-1.7
KURK				pmax	pmax		
	comp=Z,13nm,0.8s						
KURBB	Kurchatov Arra	121.38	313	PKP	PKPdf	03 21 25.7	-1.5
	comp=Z,11nm,0.6s,baz=109,slow=1.9,SNR=35						
LPHEP	Lephephe	121.44	206	i P	PKiKP	03 21 29.2	+0.7
MREMI	Moremi	121.53	208	i P	PKiKP	03 21 29.3	+0.6
TKM2	Tokmak 2	121.62	304	P	PKPdf	03 21 27.0	-1.2
	SNR=9.1						
KDWAN	Kaudwane	121.86	205		PKiKP	03 21 29.6	+0.2
CHMS	Chumysh	122.25	304	P	PKPdf	03 21 27.9	-1.2
	SNR=10						
AAK	Ala-Archa	122.34	304	P	PKPdf	03 21 28.6	-0.9
	SNR=6.5						
AAK	Ala-Archa	122.34	304		PKPdf	03 21 28.7	-0.8
AAK	Ala-Archa	122.34	304	d iPKIKP	PKPdf	03 21 29.1	-0.4
AAK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SGDS	Sogindy	122.44	305	ePKP	PKPdf	03 21 28.2	-1.4
USP	Ospenovka	122.49	304	P	PKPdf	03 21 28.6	-1.0
	SNR=11						
AML	Almayashu	122.80	303	P	PKPdf	03 21 30.1	-0.6
	SNR=15						
BROLN	Tlhalogang	122.90	208	i P	PKiKP	03 21 31.7	+0.3
KGCAE	Kacgae	123.19	202	i P	PKiKP	03 21 32.8	+0.8
BTLS	Baital	123.20	306	ePKIKP	PKPdf	03 21 29.5	-1.3
BTLS				e		03 23 09.2	
BTLS	Baital	123.20	306	ePKP	PKPdf	03 21 29.6	-1.3
BTLS				ePP	PP	03 23 09.3	-2.5
SOOWA	Sowa	123.83	208	i P	PKiKP	03 21 33.9	+0.6
KBL	Kabul	124.38	293		PKPdf	03 21 33.1	-0.6
KBL	Kabul	124.38	293	PKIKP	PKPdf	03 21 33.1	-0.6
DZA	Taraz	124.67	303	ePKIKP	PKPdf	03 21 32.3	-1.5
DZA	Taraz	124.67	303	ePKP	PKPdf	03 21 32.4	-1.5
GRTLG	Ghanzi	124.90	202	i P	PKiKP	03 21 36.0	+0.5
WIN	Windhoek	124.94	197		PKiKP	03 21 37.0	+1.4
WIN	Windhoek	124.94	197	PKIKP	PKiKP	03 21 37.0	+1.4
KKAR	Karatay Array	125.30	303		PKPdf	03 21 34.2	-0.8
KKAR	Karatay Array	125.30	303	PKIKP	PKPdf	03 21 34.2	-0.8
IUG	Iuzhnay	125.46	302	ePKIKP	PKPdf	03 21 33.9	-1.5
IUG	Iuzhnay	125.46	302	ePKP	PKPdf	03 21 33.9	-1.5
SIMJ	Simiganj	125.46	298		PKPdf	03 21 35.3	-0.3
BRLS	Borolday	125.77	303	ePKIKP	PKPdf	03 21 34.5	-1.4
BRLS	Borolday	125.77	303	ePKP	PKPdf	03 21 34.6	-1.4
CHM	Chimkent	125.81	302	ePKIKP	PKPdf	03 21 34.5	-1.4
CHM	Chimkent	125.81	302	ePKP	PKPdf	03 21 34.6	-1.4
BATG	Bathurst New B	126.35	52		PKPdf	03 21 36.1	-0.7
GMARE	Gumare	126.42	204	PKPdf	PKiKP	03 21 39.1	+0.7
SCHQ	Schefferville	126.58	42	PKP	PKPdf	03 21 35.7	-1.4
	comp=Z,20nm,1.2s,baz=320,slow=1.5,SNR=7.6						
BVAR	Borovoye Array	126.71	316	PKP	PKPdf	03 21 36.2	-1.1
	comp=Z,12nm,0.6s,baz=98,slow=1.5,SNR=38						
KSANE	Kasane	126.74	208	i P	PKiKP	03 21 40.1	+0.9
BRVK	Borovoye	126.78	316		PKPdf	03 21 35.7	-1.7
BRVK	Borovoye	126.78	316	dePKIKP	PKPdf	03 21 36.0	-1.4
LMN	Caledonia Moun	127.00	54	pPKPdf	pPKPdf	03 21 53.0	+3.1
XAUDM	Khaudum	127.49	203	PKPdf	PKiKP	03 21 41.2	+0.6
KULLO	Kullorsuaq	127.55	17	i P	PKPdf	03 21 38.0	-0.3
NEEM	North Greenlan	127.66	13	i P	PKPdf	03 21 38.3	-0.6
NEEM				IAmb	IAmb	03 21 39.7	
	comp=Z,15nm,0.7s						
LSZ	Lusaka	127.67	213	PKPdf	PKiKP	03 21 41.1	0.0
LSZ	Lusaka	127.67	213	PKIKP	PKiKP	03 21 41.1	0.0
HAL	Halifax	127.68	55	pPKPdf	pPKPdf	03 21 54.0	+2.8
TSUM	Tsumeb	128.03	199		PKiKP	03 21 42.5	+0.8
UPNV	Upernavik	128.49	19	i P	PKPdf	03 21 39.3	-0.8
ILULI	Ilulissat	131.38	22	i P	PKPdf	03 21 45.5	-0.2
ILULI				IAmb	IAmb	03 21 46.6	
	comp=Z,14nm,0.7s						
SPITS	Spitsbergen Ar	132.15	356	PKP	PKPdf	03 21 45.8	-1.2
	comp=Z,11nm,0.7s,baz=64,slow=3.8,SNR=7.1						
SPITS	Spitsbergen Ar	132.15	356	PKIKP	PKPdf	03 21 47.0	0.0
SVE	Sverdlovsk	132.23	321	ePKIKP	PKPdf	03 21 47.8	+0.1
DAG	Danmarks Havn	132.99	6	i P	PKPdf	03 21 45.9	-2.7
DAG				IAmb	IAmb	03 21 48.5	
	comp=Z,4.8nm,0.8s						
SUMG	Summit	133.13	16	i P	PKPdf	03 21 49.8	+0.3
SUMG				IAmb	IAmb	03 21 51.7	
	comp=Z,8.0nm,0.8s						
ARTI	Arti	133.52	320		PKPdf	03 21 49.2	-0.9
ARTI	Arti	133.52	320	i PKIKP	PKPdf	03 21 50.0	-0.1
ARTI						03 24 18.0	
ARTI						03 28 57.0	
ARTI				SS	SS	03 41 54.2	-7.2
ICESG	Greenland Ices	134.99	20	i P	PKPdf	03 21 52.7	-0.2
ICESG				IAmb	IAmb	03 21 54.2	
	comp=Z,11nm,0.6s						
KIRV	Kirov	137.67	325	⇓ePKIKP	PKiKP	03 21 58.7	-1.0
APA	Apatity	138.83	342	⇓iPKIKP	PKPdf	03 21 59.8	+0.1
APA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ARA0	ARCESS Array S	139.02	348	ePKPdf	PKPdf	03 21 59.7	-0.3
ARCES	ARCESS Array B	139.02	348	PKhKP	PKPpre	03 21 51.9	
	comp=Z,1.8nm,0.4s,baz=70,slow=2.5,SNR=14						
ARCES				PKP	PKPdf	03 21 59.0	-1.0
	comp=Z,9.1nm,0.6s,baz=50,slow=1.9,SNR=8.5						
BELG	Belogornoye	140.50	316	d iPKIKP	PKPdf	03 22 03.0	-0.1
RAYN	Ar Rayn	140.79	270	PKIKP	PKPdf	03 22 00.0	-4.7
KLMR	Klimovskoe	141.14	332	ePKIKP	PKPdf	03 22 03.0	-1.0
KLMR				e		03 22 15.4	
KLMR				PPP	PPP	03 28 10.4	
KLMR				pmax	pmax		
	comp=Z,31nm,1.5s						
AKT	Akhty	141.96	299	ePKHKP	PKPpre	03 22 01.1	
AKT				pmax	pmax		
	comp=Z,13nm,0.9s						
VAGH	Vaagaholmen	143.44	352	ePKPdf	PKPbc	03 22 05.2	-0.1
KONS	Konsvik	143.69	352	ePKPdf	PKPbc	03 22 06.4	+0.4
MOR8	Moi Rana	143.84	351	ePKPdf	PKPbc	03 22 05.8	-0.7
STOK	Stokkvaagen	143.86	352	ePKPdf	PKPbc	03 22 06.2	-0.3
LEIR	Leirfjorden	144.06	352	ePKPdf	PKPbc	03 22 07.1	0.0
GNI	Garni	144.26	297		PKPdf	03 22 09.5	-0.9
GNI	Garni	144.26	297	dePKIKP	PKPdf	03 22 09.3	-1.2
GNI	Garni	144.26	297	PKP	PKPdf	03 22 09.8	-0.7
VRH	Novokhopyorsk	144.35	316	ePKIKP	PKPab	03 22 07.6	-0.6
VRH				pmax	pmax		
	comp=Z,20nm,0.6s						
MOS	Moscow	144.69	325	i PKIKP	PKPab	03 22 07.6	-1.7
MOS				pmax	pmax		
	comp=Z,38nm,0.7s						
NCK	Nalchik	144.87	303	⇓ePKIKP	PKPab	03 22 09.8	-0.6
GOF	Gofitskoye	145.04	306	cePKIKP	PKPbc	03 22 10.4	-0.5
KBZ	Khabaz	145.34	303	PKPbc	PKPbc	03 22 10.7	-1.2
	comp=Z,14nm,0.7s,baz=204,slow=3.3,SNR=22						
KBZ	Khabaz	145.34	303	c iPKIKP	PKPbc	03 22 10.9	-1.0
PUL	Pulkovo	145.39	335	dePKP2	PKPbc	03 22 10.0	-1.5
KIV	Kislovodsk	145.46	304	⇑P	PKPdf	03 22 12.0	-0.3
KIV	Kislovodsk	145.46	304	ePKP2	PKPbc	03 22 10.4	-2.0
KIV				pmax	pmax		
	comp=Z,27nm,1.0s						
SHA1	Shidzhatmaz	145.51	303	c iPKIKP	PKPbc	03 22 11.9	-0.9
OBN	Obninsk	145.52	325	⇑P	PKPdf	03 22 11.3	-0.6
OBN	Obninsk	145.52	325	cePKP2	PKPdf	03 22 09.8	-2.1
OBN				ePPP	PPP	03 28 50.5	
OBN				e		03 29 16.7	
OBN				pmax	pmax		
	comp=Z,73nm,0.7s						
FINES	FINESS Array B	145.56	340	PKPbc	PKPdf	03 22 10.3	-1.5
	comp=Z,61nm,0.5s,baz=54,slow=3.3,SNR=505						
VORR	Voronezh	145.65	318	ePKP2	PKPdf	03 22 10.4	-1.8
VORR				pmax	pmax		
	comp=Z,40nm,0.9s						
NSS	Namsos	145.72	352	ePKPbc	PKPdf	03 22 11.1	-0.9
VSR	Storozhevoye	145.85	317	ePKIKP	PKPdf	03 22 11.2	-1.4
VSR				pmax	pmax		
	comp=Z,40nm,0.9s						
VORD	Divnogorie	145.87	317	ePKIKP	PKPdf	03 22 11.2	-1.4
VORD				pmax	pmax		
	comp=Z,30nm,0.8s						
ERBR	Yeremizino-Bor	146.68	307	i PKP2	PKPab	03 22 16.0	-1.1
ERBR				pmax	pmax		
	comp=Z,180nm,1.6s						
LABN	Labinsk	146.73	305	i PKP2	PKPbc	03 22 15.4	-0.7
LABN				pmax	pmax		
	comp=Z,27nm,0.8s						
VSLR	Vesyoloye	147.44	303	dePKP2	PKPbc	03 22 17.0	-1.1
VSU	Vasula	147.62	336	dePKIKP	PKPdf	03 22 15.6	+0.3
SOC	Sochi	147.64	304	ePKIKP	PKPdf	03 22 14.4	-1.5
SOC				e		03 25 41.6	
SOC				eSS	SS	03 44 47.6	+0.4
SOC				pmax	pmax		
	comp=Z,27nm,0.7s						
MOL	Molde	148.06	355	ePKPdf	PKPbc	03 22 18.0	-1.2
DOMB	Dombas	148.45	354	ePKPdf	PKPbc	03 22 18.5	-1.7
AKN	Aaknes	148.49	355	ePKPbc	PKPbc	03 22 19.3	-1.0
ANN	Anapa	148.99	307	ePKIKP	PKPbc	03 22 20.4	-1.7
FOO	Floro	149.17	357	ePKPbc	PKPbc	03 22 21.3	-0.7
NB2	NORSAR Subarra	149.19	351	PKP	PKPbc	03 22 21.0	-1.2
	comp=Z,129nm,1.4s,baz=13,slow=2.7						
NB2	NORSAR Subarra	149.19	351	PKPab	PKPbc	03 22 21.0	-1.2
	baz=13,slow=2.7						
NOA	NORSAR Array B	149.19	351	PKPbc	PKPbc	03 22 20.7	-1.5
	comp=Z,15nm,0.6s,baz=14,slow=4.2,SNR=118						
NC602	NORSAR Array S	149.44	351	ePKPbc	PKPbc	03 22 21.4	-1.4
HYA	Hoyanger	149.55	356	ePKPbc	PKPbc	03 22 22.4	-0.6
HFS	Hagfors	149.68	348	PKP	PKPdf	03 22 17.8	-0.8
	comp=Z,25nm,0.6s,baz=90,slow=1.5,SNR=22						
HFS				PKPbc	PKPbc	03 22 21.7	-1.7
	comp=Z,25nm,0.6s,baz=83,slow=4.6,SNR=68						
SUE	Sulen	149.73	357	ePKPbc	PKPbc	03 22 22.7	-0.7
SKAR	Skarslia	149.87	354	ePKPbc	PKPbc	03 22 23.3	-0.6
MNK	Minsk	149.96	329	i PKiKP	PKPbc	03 22 23.6	-0.6
	comp=E,24nm,1.0s						
MNK				i PKiKP	PKPbc	03 22 23.6	-0.6
	comp=N,15nm,0.9s						
MNK				i PKiKP	PKPbc	03 22 23.6	-0.6
	comp=Z,66nm,1.0s,baz=49						
MNK				i PP	PP	03 25 56.8	-1.8
MNK				i PPP	PPP	03 29 18.2	
MNK				i SKS	SKSdf	03 29 22.5	-1.2
MNK				i SS	SS	03 45 12.0	+0.3
MNK				i SSS	SSS	03 50 52.2	
MNK				i LQ	LQ	04 22 50.4	
MNK				i LR	LR	04 32 17.2	
MNK	Minsk	149.96	329	i PKP2	PKPbc	03 22 23.6	-0.6
MNK				i		03 25 56.7	
MNK				i PPP	PPP	03 29 18.1	
MNK				i		03 29 22.4	
MNK				i SS	SS	03 45 11.9	+0.2
MNK				i SSS	SSS	03 50 52.1	
MNK				pmax	pmax		
	comp=N,15nm,0.9s						
MNK				pmax	pmax		
	comp=E,24nm,1.0s						
MNK				pmax	pmax		
	comp=Z,66nm,1.0s						
NACGM	Naroch	150.16	331	ePKP	PKPbc	03 22 23.1	-1.5
	comp=Z,61nm,1.0s,baz=46						
ASK	Askoy	150.28	357	ePKPbc	PKPbc	03 22 23.7	-1.1
OSL	Oslo	150.32	351	ePKPbc	PKiKP	03 22 25.0	-0.6
BER	Bergen	150.37	357	ePKPbc	PKPbc	03 22 24.6	-0.4
KONO	Kongsberg	150.74	352		PKPbc	03 22 25.1	-0.8
KONO	Kongsberg	150.74	352	⇓PKIKP	PKPdf	03 22 20.2	-0.1
KONO	Kongsberg	150.74	352	ePKPbc	PKPbc	03 22 25.4	-0.5
ODD1	Odda	150.76	355	ePKPbc	PKPbc	03 22 25.8	-0.3
STRU	Stroemstad	151.12	350	i P	PKPbc	03 22 25.7	-1.1
SIM	Simferopol'	151.21	308	ePKIKP	PKPbc	03 22 26.7	-0.8
SIM				pmax	pmax		
	comp=Z,34nm,0.8s						
DIKM	Dikmen	151.24	301	⇓P	PKPbc	03 22 26.4	-1.3
BLS5	Blasjo	151.26	355	ePKPbc	PKPbc	03 22 26.9	-0.3
GHAJ	Ghor Haditha	151.29	280		PKPbc	03 22 27.1	-0.9
KMY	Karmoy	151.55	356	ePKPbc	PKPbc	03 22 27.6	-0.2
MMAI	Mount Meron Ar	151.61	283	PKPbc	PKiKP	03 22 29.1	-0.2
	comp=Z,28nm,0.6s,baz=74,slow=4.4,SNR=34						
AKASG	Malin Array Be	151.64	322	PKPbc	PKPbc	03 22 27.3	-1.0
AKASG	Malin Array Be	151.64	322	PKPbc	PKPbc	03 22 26.5	-1.8
	comp=Z,21nm,0.6s,baz=49,slow=2.8,SNR=36						
KIEV	Kiev	151.65	322	PKPbc	PKPbc	03 22 27.1	-1.1
KIEV	Kiev	151.65	322	⇓P	PKPbc	03 22 27.5	-0.7
KIEV	Kiev	151.65	322	PKIKP	PKPdf	03 22 22.4	+0.4
BZK	Bozkurt	152.09	302	⇑P	PKPbc	03 22 26.2	-3.4
BORU	Boraas	152.19	348	i P	PKPbc	03 22 27.8	-1.5
HOMB	Homborsund	152.21	353	ePKPbc	PKPbc	03 22 29.1	-0.2
HOMB	Homborsund	152.21	353	i P	PKPbc	03 22 29.1	-0.2
SUW	Suwalki	152.26	333	ePKP	PKPbc	03 22 28.3	-1.3
SNART	Snartemo	152.28	354	ePKPbc	PKPbc	03 22 29.1	-0.3
SNART	Snartemo	152.28	354	i P	PKPbc	03 22 28.7	-0.8
ONAU	Onsala	152.57	348	i P	PKPbc	03 22 29.3	-0.9
KIRS	Kirsehir-Merke	152.66	296	⇓P	PKPbc	03 22 30.3	-0.9
BLEU	Blekinge	152.75	343	i P	PKPbc	03 22 29.4	-1.1
BRTR	Keskin Array B	152.79	298	PKP	PKPdf	03 22 23.2	-1.0
	comp=Z,1.4nm,1.0s,baz=207,slow=1.4,SNR=6.3						
BRTR				PKPbc	PKPbc	03 22 30.2	-1.3
	comp=Z,5.6nm,0.5s,baz=140,slow=4.0,SNR=44						
FABU	Falkenberg	152.80	347	i P	PKPbc	03 22 29.7	-1.0
CIDE	Kastamonu/Cide	152.88	303	⇓P	PKPbc	03 22 30.6	-0.7
OVD	Ostervraa, Den	152.92	350	i P	PKPbc	03 22 29.7	-1.2
DEL	Delary	153.06	345	i P	PKPbc	03 22 30.4	-0.8
ANTO	Ankara	153.41	298		PKPbc	03 22 31.9	-0.8
ANTO	Ankara	153.41	298	⇑P	PKPdf	03 22 25.2	+0.1
ANTO	Ankara	153.41	298	⇑PKIKP	PKPdf	03 22 25.2	+0.1
SORM	Soroca	153.50	318	⇑P	PKPdf	03 22 27.2	+2.4
SORM	Soroca	153.50	318	⇑PKIKP	PKPdf	03 22 27.2	+2.4
MILM	Milestii Mici	153.84	315	i PKP	PKPbc	03 22 31.0	-2.3
	comp=Z,36nm,0.7s						
MILM	Milestii Mici	153.84	315	⇑P	PKPdf	03 22 28.8	+3.5
MILM	Milestii Mici	153.84	315	⇑PKIKP	PKPdf	03 22 28.8	+3.5
LUNU	Lund	153.92	345	i P	PKPbc	03 22 32.0	-1.2
VLDR	Vladesti	154.78	314	⇑P	PKPdf	03 22 30.2	+3.5
BEL	Belsk	154.86	332	ePKP	PKiKP	03 22 35.0	-0.2
GKP	Gorka Klasztor	155.00	338	ePKP	PKiKP	03 22 36.5	+0.9
TPGR	Topolog	155.01	311	⇑P	PKPdf	03 22 27.4	+0.3
DBIC	Dimbokro	155.11	164	PKP	PKPdf	03 22 28.4	+0.2
	comp=Z,7.0nm,0.5s,baz=170,slow=1.6,SNR=22						
DBIC	Dimbokro	155.11	164	⇑PKIKP	PKPdf	03 22 29.4	+1.3
EKA	Eskdalemuir Ar	155.25	7	PKP	PKPdf	03 22 26.3	-0.7
	comp=Z,0.4nm,0.4s,baz=360,slow=2.2,SNR=5.1						
ESK	Eskdalemuir	155.26	7		PKPab	03 22 49.7	-2.5
ESK	Eskdalemuir	155.26	7	PKP2	PKPab	03 22 49.7	-2.5
TESR	Tescani	155.33	316	⇑P	PKPdf	03 22 30.8	+3.3
HARR	Harsova	155.39	311	⇑P	PKPdf	03 22 30.3	+2.7
HARR	Harsova	155.39	311	⇑PKIKP	PKPdf	03 22 30.3	+2.7
BURAR	Bucovina Array	155.56	320	⇓P	PKPdf	03 22 30.4	+2.6
BURAR	Bucovina Array	155.56	320	⇓PKIKP	PKPdf	03 22 30.4	+2.6
ONER	Baraj Valea Uz	155.57	316	⇓P	PKPdf	03 22 30.9	+3.1
KWP	Kalwaria Pacla	155.59	326	ePKP	PKPab	03 22 52.7	-1.1
VRI	Vrincioaia	155.61	315	⇑P	PKPdf	03 22 29.8	+1.9
VRI	Vrincioaia	155.61	315	⇑PKIKP	PKPdf	03 22 29.8	+1.9
PLOR	Plostina	155.66	315	⇓P	PKPdf	03 22 29.3	+1.3
PLOR	Plostina	155.66	315	⇓PKIKP	PKPdf	03 22 29.3	+1.3
NEHR	Nehoiu	156.09	314	⇓P	PKPdf	03 22 29.4	+0.9
BOSR	Bodos	156.14	316	⇑P	PKPdf	03 22 29.4	+0.8
MLR	Muntele Rosu	156.27	315	⇑P	PKPdf	03 22 29.9	+1.0
MLR	Muntele Rosu	156.27	315	⇑PKIKP	PKPdf	03 22 29.9	+1.0

KOLS	Kolonicke sedl	156.28	325	ePKIKP	PKPdf	03 22 29.5	+0.8
KOLS				e		03 22 42.5	
KOLS	Kolonicke sedl	156.28	325	ePKP	PKPdf	03 22 29.4	+0.8
KOLS				e		03 22 42.5	
DOPR	Dopca	156.36	316	⇓P	PKPdf	03 22 29.3	+0.5
STHS	Stebnicka Huta	156.43	327	ePKP	PKPab	03 22 59.1	+1.6
BMR	Baia Mare	156.46	322	⇓P	PKPdf	03 22 29.5	+0.6
BMR	Baia Mare	156.46	322	⇓PKIKP	PKPdf	03 22 29.5	+0.6
OJC	Ojcow	156.49	330	ePKP	PKPdf	03 22 28.5	-0.3
VOIR		156.84	315	⇑P	PKPdf	03 22 31.4	+1.8
VOIR		156.84	315	⇑PKIKP	PKPdf	03 22 31.4	+1.8
GORT1	Trebel	156.85	346	ePKPdf	PKPdf	03 22 29.0	-0.1
	baz=33,slow=1.2						
NIE	Niedzica	156.86	329	ePKP	PKPdf	03 22 30.9	+1.4
ARR	Arges	157.13	316	⇓P	PKPdf	03 22 31.5	+1.6
MARR	Marisel-Cluj	157.27	320	⇑P	PKPdf	03 22 29.7	-0.4
KSP	Ksiaz	157.35	336	ePKP	PKPdf	03 22 30.8	+0.9
DRGR		157.42	321	⇑P	PKPdf	03 22 31.3	+1.0
DRGR		157.42	321	⇑PKIKP	PKPdf	03 22 31.3	+1.0
LANS	Liptovska Anna	157.43	329	ePKP	PKPdf	03 22 44.7	+15
STEB	Steborice	157.54	333	ePKPAB	PKPab	03 23 02.9	+0.7
LOT	Lotru	157.60	317	⇑P	PKPdf	03 22 29.9	-0.7
OSTC	Ostas	157.62	336	ePKPDF	PKPdf	03 22 29.4	-0.9
OSTC				ePKPAB	PKPab	03 23 06.9	+4.3
OSTC	Ostas	157.62	336	ePKIKP	PKPdf	03 22 29.4	-0.9
DPC	Dobruska-Polom	157.75	335	ePKPAB	PKPab	03 23 03.2	0.0
DPC	Dobruska-Polom	157.75	335	ePKP2	PKPab	03 23 03.2	0.0
MORC	Moravsky Berou	157.76	333	ePKP	PKPdf	03 22 30.9	+0.3
CLL	Collm	157.98	341	ePKIKP	PKPdf	03 22 30.0	-0.7
CLL				i		03 22 41.6	
CLL				i		03 23 02.3	
CLL				pmax	pmax		
	comp=Z,15nm,0.7s						
CLL	Collm	157.98	341	ePKPdf	PKPdf	03 22 30.0	-0.7
CLL				i PKPdif	pPKPdf	03 22 41.6	-1.1
CLL				i PKPab	PKPab	03 23 02.3	-1.7
	comp=Z,15nm,0.7s						
PSZ	Piszkesteto	158.12	326	IAMs_20	IAMs_20	04 14 51.2	
	comp=Z,196nm,19.0s						
IBBN	Ibbenburen	158.14	350	ePKPdf	PKPdf	03 22 31.2	+0.4
	baz=33,slow=1.2						
IBBN				ePKPab	PKPab	03 23 03.9	-0.7
	baz=13,slow=4.2						
VYHS	Vyhne	158.20	329	ePKP	PKPdf	03 22 31.1	0.0
VYHS				e		03 22 41.6	
VYHS				e		03 23 04.1	
PVCC	Panska Ves	158.20	338	ePKPAB	PKPab	03 23 05.8	+0.8
PVCC	Panska Ves	158.20	338	ePKP2	PKPab	03 23 05.8	+0.8
GZR	Gura Zlata	158.21	318	⇑P	PKPdf	03 22 31.4	+0.1
GZR	Gura Zlata	158.21	318	⇑PKIKP	PKPdf	03 22 31.4	+0.1
SURR	Surduc	158.37	319	⇑P	PKPdf	03 22 30.8	-0.5
JAVC	Velka Javorina	158.42	331	ePKP	PKPdf	03 22 32.4	+1.0
VRAC	Vranov	158.50	333	ePKP	PKPdf	03 22 31.5	+0.1
PRU	Pruhonice	158.67	337	ePKPAB	PKPab	03 23 08.6	+1.5
PRU	Pruhonice	158.67	337	ePKP2	PKPab	03 23 08.6	+1.5
BZS	Buzias	158.74	319	⇓P	PKPdf	03 22 31.9	+0.1
BZS	Buzias	158.74	319	⇓PKIKP	PKPdf	03 22 31.9	+0.1
KRUC	Moravsky	158.78	333	ePKP	PKPdf	03 22 31.6	-0.1
TANN	Tannenbergstha	158.93	341	ePKPdf	PKPdf	03 22 31.6	-0.3
	baz=33,slow=1.2						
TANN				ePKPab	PKPab	03 23 09.1	+0.8
	baz=13,slow=4.2						
SRO	Srobarova	158.94	328	ePKP	PKPab	03 23 10.1	+1.8
MODS	Modra-Piesok	158.97	331	ePKP	PKPdf	03 22 32.3	+0.3
MODS				e		03 23 10.8	
BUG	Bochum--Univer	159.05	351	ePKPdf	PKPdf	03 22 32.1	+0.1
	baz=33,slow=1.2						
KASTN	Kahler Asten	159.11	349	ePKPdf	PKPdf	03 22 31.8	-0.3
	baz=33,slow=1.2						
MDVR	Moldovita	159.18	317	⇑P	PKPdf	03 22 32.6	+0.2
ZVC	Zvikov	159.26	337	ePKPAB	PKPab	03 23 08.8	-0.9
MANZ	Manzenberg	159.42	341	ePKPdf	PKPdf	03 22 31.9	-0.6
	baz=33,slow=1.2						
ROTZ	Rotzenmuhle	159.59	341	ePKPab	PKPab	03 23 12.0	+0.9
	baz=13,slow=4.2						
KHC	Kasperske Hory	159.73	338	ePKPDF	PKPdf	03 22 32.2	-0.7
KHC				ePKPAB	PKPab	03 23 10.7	-1.1
KHC	Kasperske Hory	159.73	338	ePKIKP	PKPdf	03 22 32.2	-0.7
KHC				e		03 23 10.7	
CKRC	Cesky Krumlov	159.75	336	ePKPDF	PKPdf	03 22 32.7	-0.2
CKRC				ePKPAB	PKPab	03 23 09.4	-2.4
CKRC	Cesky Krumlov	159.75	336	ePKIKP	PKPdf	03 22 32.7	-0.2
CKRC				e		03 23 09.4	
CONA	Conrad Observa	159.90	332	i PKP	PKPdf	03 22 32.5	-0.7
	comp=Z,2.4nm,0.9s						
CONA				i PKP	PKPab	03 23 13.4	+0.8
	comp=Z,5.7nm,0.7s						
RONA	Rosalia, Austr	159.90	331	ePKP	PKPdf	03 22 33.2	0.0
	comp=Z,5.2nm,1.5s						
RONA				ePKP	PKPab	03 23 13.0	+0.4
	comp=Z,0.9nm,0.5s						
MORH	Mrgy, Hungar	159.93	325	⇑P	PKPdf	03 22 33.1	0.0
GERES	GERESS Array B	159.94	337	PKP	PKPdf	03 22 31.8	-1.4
	comp=Z,0.3nm,0.6s,baz=73,slow=3.4,SNR=5.6						
WET	Wettzell	159.94	339	ePKPdf	PKPdf	03 22 31.6	-1.5
	baz=33,slow=1.2						
UCC	Uccle	159.99	356	dPKPdf	PKPdf	03 22 33.8	+0.8
UCC				dPKP	PKPab	03 23 11.4	-1.3
MEM	Membach	160.03	352	dPKP	PKPab	03 23 12.9	0.0
BTNL	Ternell	160.04	352	dPKPdf	PKPdf	03 22 33.3	+0.1
BTNL				dPKP	PKPab	03 23 13.2	+0.2
BSTI	Sart Tilman	160.10	353	dPKP	PKPab	03 23 12.4	-0.8
BCLA	Clavier	160.29	354	dPKPdf	PKPdf	03 22 33.1	-0.3
BCLA				dPKP	PKPab	03 23 12.5	-1.5
BGES	Gesves	160.34	354	dPKPdf	PKPdf	03 22 33.9	+0.4
BGES				dPKP	PKPab	03 23 12.0	-2.3
BMRD	Maredsous	160.45	355	dPKP	PKPab	03 23 13.5	-1.3
ARSA	Arzberg	160.58	331	i PKP	PKPdf	03 22 33.3	-0.6
	comp=Z,3.1nm,0.9s						
ARSA				i PKP	PKPab	03 23 15.2	-0.3
	comp=Z,0.4nm,0.3s						
MOA	Molln	160.58	334	i PKP	PKPdf	03 22 34.0	+0.1
	comp=Z,5.6nm,1.4s						
MOA				i PKP	PKPab	03 23 16.3	+0.7
	comp=Z,8.4nm,1.2s						
WLF	Walferdange	160.94	352	dPKPdf	PKPdf	03 22 35.5	+1.4
WLF				dPKP	PKPab	03 23 16.1	-0.8
WLF	Walferdange	160.94	352	ePKPab	PKPab	03 23 16.4	-0.5
	baz=13,slow=4.2						
BIOA	Bad Ischl, Aus	160.95	335	i PKP	PKPdf	03 22 34.6	+0.3
	comp=Z,4.8nm,1.1s						
BIOA				ePKP	PKPab	03 23 15.3	-1.8
	comp=Z,4.8nm,0.8s						
RJOB	Jochberg	161.20	337	ePKPab	PKPab	03 23 20.3	+2.1
	baz=13,slow=4.2						
SOKA	Soboth	161.24	331	ePKP	PKPdf	03 22 35.3	+0.5
	comp=Z,6.5nm,1.2s						
SOKA				ePKP	PKPab	03 23 19.1	+0.7
	comp=Z,4.7nm,1.0s						
STU	Stuttgart	161.27	345	ePKPdf	PKPdf	03 22 34.5	-0.1
	baz=33,slow=1.2						
LESA	Schwarzleotal	161.51	337	i PKP	PKPdf	03 22 34.0	-1.0
	comp=Z,12nm,1.6s						
LESA				i PKP	PKPab	03 23 20.9	+1.3
	comp=Z,5.5nm,0.6s						
OBKA	Obir	161.57	332	ePKP	PKPdf	03 22 34.2	-0.8
	comp=Z,0.2nm,0.4s						
OBKA				ePKP	PKPab	03 23 19.8	-0.1
	comp=Z,2.9nm,0.8s						
MYKA	Terra Mystica	161.84	333	ePKP	PKPdf	03 22 35.6	+0.3
	comp=Z,2.3nm,0.5s						
MYKA				i PKP	PKPab	03 23 20.4	-0.7
	comp=Z,1.8nm,0.4s						
BFO	Black Forest	161.88	346		PKPab	03 23 18.6	-2.5
BFO	Black Forest	161.88	346	PKP2	PKPab	03 23 18.6	-2.5
BFO	Black Forest	161.88	346	ePKPab	PKPab	03 23 19.3	-1.8
	baz=13,slow=4.2						
WATA	Walderalm	161.95	339	i PKP	PKPdf	03 22 35.3	-0.3
	comp=Z,8.9nm,1.5s						
WATA				ePKP	PKPab	03 23 20.3	-1.4
	comp=Z,6.8nm,1.2s						
PDG	Podgorica	161.99	315	⇑P	PKPdf	03 22 35.6	+0.1
WTTA	Wattenberg	162.00	338	i PKP	PKPdf	03 22 36.4	+0.8
	comp=Z,4.6nm,0.8s						
WTTA				ePKP	PKPab	03 23 21.4	-0.5
	comp=Z,2.3nm,0.8s						
RETA	Reutte	162.06	340	i PKP	PKPdf	03 22 34.1	-1.4
	comp=Z,2.3nm,1.1s						
RETA				ePKP	PKPab	03 23 20.4	-1.6
	comp=Z,8.8nm,0.9s						
MOTA	Moosalm	162.09	339	ePKP	PKPdf	03 22 35.7	0.0
	comp=Z,5.8nm,1.0s						
MOTA				i PKP	PKPab	03 23 23.5	+1.2
	comp=Z,13nm,0.9s						
ABTA	Abfaltersbach	162.15	336	i PKP	PKPdf	03 22 35.8	+0.2
	comp=Z,6.3nm,0.8s						
ABTA				i PKP	PKPab	03 23 22.9	+0.5
	comp=Z,5.8nm,1.2s						
SQTA	Sankt Quirin	162.17	339	i PKP	PKPdf	03 22 36.6	+0.9
	comp=Z,6.0nm,0.9s						
SQTA				i PKP	PKPab	03 23 22.8	+0.3
	comp=Z,7.0nm,0.6s						
BERGE	Lenzkirch (DE)	162.34	346	ePKPdf	PKPdf	03 22 34.9	-0.9
	baz=33,slow=1.2						
TORD	Torodi Ar. Bea	162.38	179		PKPdf	03 22 36.8	0.0
TORD	Torodi Ar. Bea	162.38	179	PKP	PKPdf	03 22 36.9	+0.2
	comp=Z,5.8nm,0.9s,baz=6.0,slow=2.1,SNR=9.6						
DAVA	Damuels	162.49	342	ePKP	PKPdf	03 22 35.7	-0.4
	comp=Z,4.7nm,1.4s						
DAVA				ePKP	PKPab	03 23 22.9	-1.1
	comp=Z,0.3nm,0.3s						
FETA	Feichten	162.49	340	i PKP	PKPdf	03 22 35.8	-0.3
	comp=Z,2.5nm,0.7s						
FETA				i PKP	PKPab	03 23 24.0	0.0
	comp=Z,10nm,1.5s						
SENIN	Lac Senin/Sane	163.96	347	PKPdf	PKPdf	03 22 38.8	+1.2
NRCA	Norcia	165.10	326	PKPdf	PKPdf	03 22 39.1	+0.5
PGAV	Gavieira, Arco	166.19	34	ePKPdf	PKPdf	03 22 40.0	+0.5
PGAV				etx	tx	03 22 57.6	
PCAB	Cabril	166.50	34	ePKPdf	PKPdf	03 22 40.6	+0.9
PCAB				etx	tx	03 22 57.5	
PCAB				ePKPab	PKPab	03 23 42.6	+0.9
PCAB				esPKPab	sPKPab	03 23 58.5	+1.0
POLO	Lamas de Olo	166.87	34	ePKPdf	PKPdf	03 22 41.1	+1.1
POLO				etx	tx	03 22 57.5	
POLO				ePKPab	PKPab	03 23 44.1	+0.7
POLO				esPKPab	sPKPab	03 24 00.1	+1.0
PVRL	Vila Real	166.98	34	ePKPdf	PKPdf	03 22 41.7	+1.6
PVRL				etx	tx	03 22 56.1	
PVRL				esPKPab	sPKPab	03 24 00.4	+0.8
PVIS	Viseu	167.31	36	ePKPdf	PKPdf	03 22 41.9	+1.6
PVIS				etx	tx	03 22 58.5	
PVIS				esPKPab	sPKPab	03 24 01.6	+0.5
MVO	Moncorvo	167.39	33	ePKPdf	PKPdf	03 22 41.4	+1.0
MVO				etx	tx	03 22 58.6	
MVO				ePKPab	PKPab	03 23 45.3	-0.4
MVO				esPKPab	sPKPab	03 24 02.4	+1.0
PCAS	Casmilo, Conde	167.47	40	esPKPab	sPKPab	03 24 02.6	+0.9
PSBE	So Bento	167.66	43	ePKPdf	PKPdf	03 22 44.0	+3.4
PSBE				esPKPab	sPKPab	03 24 03.6	+0.9
MTE	Manteigas	167.73	36	ePKPdf	PKPdf	03 22 42.1	+1.5
LIS	Lisbon	167.95	46	ePKIKP	PKPdf	03 22 42.9	+2.2
PSARD	Sardoal	167.97	41	ePKPdf	PKPdf	03 22 42.1	+1.3
PSARD				etx	tx	03 22 58.6	
PSARD				ePKPab	PKPab	03 23 47.8	-0.5
PSARD				esPKPab	sPKPab	03 24 03.3	-0.7
PCBR	Castelo Branco	168.17	38	ePKPdf	PKPdf	03 22 41.9	+1.0
PCBR				etx	tx	03 22 59.5	
PCBR				esPKPab	sPKPab	03 24 04.3	-0.5
PMTG	Montargil	168.29	43	ePKPab	PKPab	03 23 48.8	-0.8
PMTG				esPKPab	pPKPab	03 24 04.7	+3.5
PMRV	Marv??o	168.51	39	ePKPab	PKPab	03 23 50.0	-0.7
PMRV				esPKPab	sPKPab	03 24 07.4	+1.0
EVO	Evora	168.76	44	ePKPdf	PKPdf	03 22 42.4	+1.1
EVO				etx	tx	03 22 59.7	
PESTR	Estremoz	168.79	42	ePKPdf	PKPdf	03 22 42.9	+1.6
PESTR				etx	tx	03 22 59.7	
PESTR				ePKPab	PKPab	03 23 51.3	-0.6
PESTR				esPKPab	sPKPab	03 24 08.0	+0.3
MESJ	Messejana	169.06	48	ePKPdf	PKPdf	03 22 42.6	+1.1
MESJ				etx	tx	03 23 00.4	
MESJ				ePKPab	PKPab	03 23 53.9	+0.8
MESJ				esPKPab	sPKPab	03 24 09.4	+0.4
MESJ	Messejana	169.06	48	ePKIKP	PKPdf	03 22 42.9	+1.4
PBEJ	Beja	169.17	46	ePKPdf	PKPdf	03 22 43.4	+1.8
PBEJ				etx	tx	03 23 00.4	
PBEJ				ePKPab	PKPab	03 23 52.8	-0.9
PCVE	Castro Verde	169.30	48	ePKPdf	PKPdf	03 22 44.0	+2.3
PCVE				etx	tx	03 23 00.5	
PBAR	Barrancos	169.57	43	ePKPdf	PKPdf	03 22 42.9	+1.1
PBAR				etx	tx	03 23 00.5	
PBAR				esPKPab	sPKPab	03 24 11.9	+0.8
PBDV	Barranco-do-Ve	169.60	50	ePKPdf	PKPdf	03 22 43.0	+1.1
PBDV				etx	tx	03 23 01.0	
PVAQ	Vaqueiros	169.64	48	ePKPdf	PKPdf	03 22 42.9	+1.1
PVAQ				etx	tx	03 23 00.1	
PAB	San Pablo	169.90	29	⇑PKIKP	PKPdf	03 22 40.6	-1.5
ESDC	Sonseca Array	169.94	27	PKP	PKPdf	03 22 42.6	+0.5
	comp=Z,8.4nm,1.2s,baz=344,slow=2.7,SNR=26						
ESDC				PKPab	PKPab	03 23 57.0	0.0
	comp=Z,1.9nm,0.7s,baz=317,slow=4.2,SNR=8.9						
ESDC				PP	PP	03 27 46.2	-0.3
	comp=Z,2.7nm,1.2s,baz=354,slow=2.6,SNR=7.0						

*IDC **16** 03:10:25.6±0.6, 30°.50S×178°.03W, h0^{km}, mb4.6/8, mbtmp4.6/8, Error ellipse: s-maj=24.6km s-min=23.0km az=47.0*

*NEIC **16** 03:10:31.5±2.7, 30°.7S±0°.1×177°.9W±0°.2, h35^{km}±2^{km}, mb4.7/17, Error ellipse: s-maj=27.9km s-min=17.3km az=85.0*

ISC 16 03:10:32.0±0.5, **30°.75S**±0°.06×**178°.1W**±0°.1, **h46**^{km}, **n72**, σ**2^{s}24**/75, **mb4.7**/19, **5C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.49	7	P	Pn	03 10 54.3	-2.0
GLKZ				S	Sn	03 11 10.1	-4.4
RAO	Raoul Island	1.50	7		Pn	03 10 54.8	-1.7
RAO	Raoul Island	1.50	7	P	Pn	03 10 55.2	-1.2
RIZ	Raoul Island	1.50	6	P	Pn	03 10 54.8	-1.7
RIZ				S	Sn	03 11 11.2	-3.7
WMGZ	Waiomatatini S	7.62	201	P	Pn	03 12 18.4	-1.9
WMGZ				S	Sn	03 13 46.2	+0.9
PKGZ	Pakihiroa	7.77	203	P	Pn	03 12 19.6	-2.9
PKGZ				S	Sn	03 13 48.2	-0.8
TWGZ	Tauwhareparae	8.08	202	P	Pn	03 12 24.4	-2.4
TWGZ				S	Sn	03 13 55.4	-1.5
CNGZ	Carnagh Statio	8.29	200	P	Pn	03 12 26.7	-2.9
OPRZ	Ohinepanea	8.34	210	P	Pn	03 12 30.4	+0.1
URZ	Urewera	8.46	206	Pn	Pn	03 12 27.1	-4.8
	7.4nm,0.3s,baz=3.6,slow=3.8,SNR=8.3						
URZ				Sn	Sn	03 14 06.0	-0.1
	15nm,0.3s,baz=12,slow=12,SNR=12						
RAHZ	Arahi	9.05	204	P	Pn	03 12 36.7	-3.3
RAHZ				S	Sn	03 14 17.8	-2.8
MTHZ	Maungataniwha	9.09	206	P	Pn	03 12 37.8	-2.7
MTHZ				S	Sn	03 14 20.8	-0.6
NMHZ	Naumai	9.31	205	P	Pn	03 12 39.4	-4.2
NMHZ				S	Sn	03 14 25.9	-1.2
ARHZ	Aropaoanui	9.39	204	P	Pn	03 12 40.4	-4.3
ARHZ				S	Sn	03 14 27.2	-1.7
MCHZ	McNeill Hill	9.66	205	P	Pn	03 12 44.5	-3.9
MCHZ				S	Sn	03 14 32.8	-2.7
WPHZ	Waipukurau	10.30	204	S	Sn	03 14 46.7	-4.5
BFZ	Birch Farm	10.92	203	P	Pn	03 12 59.3	-6.2
BFZ				S	Sn	03 14 58.6	-7.7
NIUE	Niue	13.78	34	Pn	Pn	03 13 36.7	-8.1
RPZ	Rata Peaks	15.54	211	Pn	Pn	03 14 02.9	-5.0
	0.6nm,0.3s,baz=109,slow=15,SNR=1.5						
RPZ				Sn	Sn	03 16 44.4	-14
	1.9nm,0.3s,baz=152,slow=23,SNR=10						
ARMA	Armidale	26.01	263	P	P	03 16 04.3	+3.4
ARMA				IAmb	IAmb	03 16 06.2	
	comp=Z,20nm,1.3s						
EIDS	Eidsvold	27.65	274	P	P	03 16 18.0	+2.4
EIDS				IAmb	IAmb	03 16 44.0	
	comp=Z,7.3nm,1.1s						
TOO	Toolangi	30.73	247	P	P	03 16 45.1	+2.3
CTAO	Charters Tower	33.75	280	P	P	03 17 12.1	+2.6
STKA	Stephens Creek	34.30	257	P	P	03 17 16.7	+2.6
STKA	Stephens Creek	34.30	257	P	P	03 17 16.1	+2.1
	comp=Z,28nm,0.7s,baz=103,slow=11,SNR=47						
	comp=Z,28nm,0.7s						
BBOO	Buckleboo	38.78	255	P	P	03 17 53.1	+0.9
BBOO				IAmb	IAmb	03 17 54.9	
	comp=Z,13nm,0.7s						
COEN	Coen	39.27	286	P	P	03 17 58.0	+1.5
COEN				IAmb	IAmb	03 18 00.2	
	comp=Z,12nm,1.1s						
AS31	Alice Springs	42.99	267	P	P	03 18 27.3	+0.3
ASAR	Alice Springs	42.99	267	P	P	03 18 27.4	+0.4
	comp=Z,2.2nm,0.4s,baz=105,slow=7.5,SNR=37						
	comp=Z,2.2nm,0.4s						
WR8	Warramunga Arr	43.87	273	P	P	03 18 34.5	+0.4
WR8				IAmb	IAmb	03 18 35.9	
	comp=Z,9.3nm,1.0s						
WRA	Warramunga Arr	44.01	273	P	P	03 18 34.8	-0.5
WRA	Warramunga Arr	44.01	273	P	P	03 18 35.6	+0.4
	comp=Z,9.8nm,0.3s,baz=111,slow=8.0,SNR=94						
	comp=Z,9.8nm,0.3s						
KNRA	Kununurra	50.63	275	P	P	03 19 27.1	+0.3
KNRA				IAmb	IAmb	03 19 59.1	
	comp=Z,18nm,1.2s						
FITZ	Fitzroy Crossi	52.26	270	P	P	03 19 38.7	-0.2
CASY	Casey	54.79	208	P	P	03 19 55.1	-1.6
MORW	Morawa	56.33	254	P	P	03 20 07.8	-0.7
MORW				IAmb	IAmb	03 20 11.1	
	comp=Z,18nm,1.2s						
QSPA	South Pole Qui	59.37	180	P	P	03 20 31.8	+2.5
QSPA	South Pole Qui	59.37	180	P	P	03 20 31.5	+2.2
	comp=Z,6.1nm,1.0s,baz=179,slow=2.8,SNR=22						
	comp=Z,6.1nm,1.0s						
BELA	Belgrano 2	69.46	172	P	P	03 21 35.6	+0.7
BELA				IAmb	IAmb	03 21 53.6	
	comp=Z,10nm,1.2s						
MAW	Mawson	71.95	201	P	P	03 21 50.3	+0.1
	comp=Z,2.2nm,0.7s,baz=71,slow=9.9,SNR=2.6						
	comp=Z,2.2nm,0.7s						
TROLL	Troll, Antarti	77.53	180	⇑P	P	03 22 23.8	+1.2
	comp=Z,563nm,0.9s						
SNAA	Sanae	77.81	178	⇑P	P	03 22 24.9	+0.8
	comp=Z,62nm,0.6s						
SNAA	Sanae	77.81	178	P	P	03 22 25.1	+1.0
SNAA				IAmb	IAmb	03 22 30.8	
	comp=Z,7.2nm,1.1s						
SNAA	Sanae	77.81	178	P	P	03 22 25.8	+1.6
	comp=Z,4.3nm,0.9s,baz=254,slow=3.6,SNR=18						
	comp=Z,4.3nm,0.9s						
VNA3	Neumayer Olymp	77.97	176	⇑P	P	03 22 26.9	+1.9
	comp=Z,10nm,0.4s						
VNA2	Neumayer--Watz	78.40	177	⇑P	P	03 22 28.7	+1.4
	comp=Z,8.9nm,0.4s,baz=189,slow=6.5						
VNA1	Neumayer--Stat	78.63	177	⇑P	P	03 22 30.0	+1.5
	comp=Z,5.8nm,0.5s						
H03S2	Juan Fernandez	80.36	124	T	T	04 51 40.2	
	baz=238						
H03S1	Juan Fernandez	80.37	124	T	T	04 51 42.4	
	baz=238						
H03S3	Juan Fernandez	80.38	124	T	T	04 51 42.2	
	baz=238						
H03N3	Juan Fernandez	80.56	123	T	T	04 51 59.4	
	baz=241						
H03N2	Juan Fernandez	80.56	123	T	T	04 52 00.1	
	baz=241						
H03N1	Juan Fernandez	80.57	123	T	T	04 51 56.3	
	baz=241						
PLCA	Paso Flores	82.35	133	P	P	03 22 51.0	+1.9
	comp=Z,4.2nm,1.2s,baz=231,slow=7.8,SNR=3.2						
	comp=Z,4.2nm,1.2s						
NVAR	Mina Array Bea	88.56	43	P	P	03 23 21.0	+1.0
	comp=Z,0.7nm,0.8s,baz=223,slow=7.4,SNR=4.0						
	comp=Z,0.7nm,0.8s						
KURBB	Kurchatov Arra	121.25	314	PKP	PKPdf	03 29 19.5	0.0
	comp=Z,0.8nm,0.6s,baz=107,slow=2.0,SNR=4.8						
BVAR	Borovoye Array	126.58	316	PKP	PKPdf	03 29 29.4	-0.3
	comp=Z,0.6nm,0.4s,baz=46,slow=4.3,SNR=4.6						
ARCES	ARCESS Array B	138.90	348	PKP	PKPdf	03 29 52.4	0.0
	comp=Z,1.9nm,0.8s,baz=42,slow=1.5,SNR=4.3						
KBZ	Khabaz	145.22	303	PKPbc	PKPdf	03 30 06.1	+1.8
	comp=Z,0.7nm,0.4s,baz=222,slow=8.5,SNR=3.7						
FIA1	FINESS Array S	145.43	340		PKPdf	03 30 03.1	-1.1
FINES	FINESS Array B	145.43	340	PKPbc	PKPdf	03 30 02.9	-1.3
	comp=Z,4.6nm,0.5s,baz=55,slow=4.1,SNR=66						
NC303	NORSAR Array S	148.88	351		PKPbc	03 30 13.6	-0.4
NB2	NORSAR Subarra	149.07	351	PKP	PKPbc	03 30 14.0	-0.5
	comp=Z,2.0nm,0.7s,baz=26,slow=3.1						
NOA	NORSAR Array B	149.07	351	PKPbc	PKPbc	03 30 14.2	-0.3
	comp=Z,0.8nm,0.5s,baz=14,slow=4.1,SNR=7.5						
HFS	Hagfors	149.56	348	PKPbc	PKPbc	03 30 14.8	-0.9
	comp=Z,1.9nm,0.5s,baz=132,slow=2.2,SNR=16						
NACGM	Naroch	150.03	331	ePKiKP	PKPab	03 30 24.7	+1.9
	comp=Z,12nm,0.8s,baz=46						
AKASG	Malin Array Be	151.51	322		PKiKP	03 30 20.9	-0.1
AKASG	Malin Array Be	151.51	322	PKPbc	PKPbc	03 30 19.8	-0.8
	comp=Z,1.7nm,0.6s,baz=47,slow=3.0,SNR=8.9						
MMAI	Mount Meron Ar	151.51	283	PKPbc	PKPbc	03 30 21.1	-0.1
	comp=Z,1.9nm,0.4s,baz=72,slow=5.4,SNR=11						
ILGA	Ilgaz	152.37	301	PKPbc	PKiKP	03 30 23.3	-0.1
BRTR	Keskin Array B	152.67	298	PKPbc	PKPbc	03 30 22.8	-1.0
	comp=Z,1.3nm,0.4s,baz=140,slow=4.1,SNR=14						
CLL	Collm	157.86	341	ePKPab	PKPab	03 30 57.0	+0.9

*SDD **16** 03:12:29.2±1.2, 19°.33N×69°.88W, h12^{km}±23^{km}, MD3.1, ML2.1, MW2.7*

*OSPL **16** 03:12:31.3±1.4, 19°.41N×69°.74W, h25^{km}±14^{km}, ML2.5*

ISC 16 03:12:27.3±1.0, **19°.33N**±0°.05×**69°.82W**±0°.03, **h7**^{km}±8^{km}, **n10**, σ**1^{s}17**/19, **1D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LONA1	Toro Cenizo, N	0.07	321	i P	Pg	03 12 28.1	-1.0
LONA1				IAML		03 12 31.1	
	comp=Z,718nm,0.9s						
LONA1				eS	Sg	03 12 31.4	+1.0
DR08	Loma La Naviza	0.41	208	⇓ePg	Pb	03 12 36.5	-0.4
DR08				eSg	Sb	03 12 42.7	-0.7
DR08				IAML		03 12 43.8	
	comp=N,1µm,0.1s						
SMDR	Samana, DR	0.60	93	ePg	Pn	03 12 41.3	-0.9
SMDR				eSg	Sn	03 12 50.7	-1.4
SMDR				IAML		03 12 53.5	
	comp=N,77nm,0.9s						
HATOM	Hato Mayor del	0.68	142	ePg	Pn	03 12 42.0	-1.4
HATOM				eSg	Sb	03 12 52.0	+1.0
HATOM				IAML		03 12 54.7	
	comp=N,23nm,1.2s						
SC01	Santiago de lo	0.86	277	i P	Pn	03 12 48.0	+2.2
SC01				eS	Sn	03 12 58.6	-0.1
ABDR	Alto Bandera	0.92	236	ePg	Pg	03 12 44.3	-0.7
ABDR				eSg	Sg	03 12 57.3	+0.3
ABDR				IAML		03 13 02.0	
	comp=N,37nm,0.8s						
BANI	BANI	1.06	209	ePg	Pg	03 12 47.6	0.0
BANI				eSg	Sg	03 13 01.8	+0.4
HIDR	Higuey Centro	1.27	125	ePg	Pg	03 12 52.8	+1.1
HIDR				eSg	Sg	03 13 10.4	+2.2
HIDR				IAML		03 13 12.1	
	comp=N,38nm,0.2s						
SDDR	Presa de Saban	1.43	256	ePg	Pg	03 12 54.6	-0.1
SDDR				eSg	Sn	03 13 11.9	-0.9
SDDR				IAML		03 13 15.2	
	comp=N,18nm,1.3s						
LODU1	El Espartillar	1.84	239	i P	Pb	03 13 01.3	0.0

*IDC **16** 03:14:37.0±1.1, 30°.06S×178°.22W, h0^{km}, mb4.1/3, mbtmp4.1/3, Error ellipse: s-maj=39.5km s-min=36.5km az=46.0*

ISC 16 03:14:43.8±1.2, **30°.0S**±0°.3×**178°.2W**±0°.3, **h50**^{km}, **n9**, σ**0^{s}64**/9, **mb4.0**/3, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.92	267	P	P	03 22 37.5	-0.4
	1.7nm,0.8s,baz=109,slow=7.8,SNR=6.4						
	1.7nm,0.8s						
WRA	Warramunga Arr	43.88	272	P	P	03 22 45.8	+0.2
	2.2nm,0.6s,baz=113,slow=7.8,SNR=8.4						
	2.2nm,0.6s						
QSPA	South Pole Qui	60.07	180	P	P	03 24 45.6	0.0
	1.2nm,0.5s,baz=238,slow=2.0,SNR=8.7						
	1.2nm,0.5s						
FINES	FINESS Array B	144.73	340	PKP	PKPdf	03 34 14.1	-0.2
	3.9nm,0.5s,baz=54,slow=3.9,SNR=20						
NB2	NORSAR Subarra	148.36	351	PKP	PKiKP	03 34 25.2	-0.4
	comp=Z,0.5nm,0.5s,baz=17,slow=2.6						
NOA	NORSAR Array B	148.36	351	PKPbc	PKiKP	03 34 24.7	-0.8
	comp=Z,0.9nm,0.6s,baz=14,slow=4.2,SNR=6.0						
HFS	Hagfors	148.84	348	PKPbc	PKPbc	03 34 25.4	+0.2
	comp=Z,2.3nm,0.7s,baz=80,slow=3.5,SNR=6.0						
AKASG	Malin Array Be	150.88	323	PKPbc	PKPbc	03 34 30.3	-0.1
	comp=Z,1.6nm,0.6s,baz=54,slow=2.6,SNR=8.5						
BRTR	Keskin Array B	152.24	299	PKPbc	PKiKP	03 34 35.5	+1.1
	comp=Z,0.6nm,0.6s,baz=136,slow=4.3,SNR=4.9						

*IDC **16** 03:21:47.8±1.2, 29°.83S×178°.17W, h0^{km}, mb4.1/4, mbtmp4.1/4, Error ellipse: s-maj=39.1km s-min=33.4km az=2.0*

ISC 16 03:21:49.0±1.7, 31°.0S±0°.2×177°.7W±0°.3, h27^{km}, n12, σ0^s.75/9, mb4.2/4, Kermadec Islands region

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Code   Station Name        Δ°   AZ°   Phase ID          Time       Res
                                      Op      ISC       h  m  s    ISC
URZ    Urewera            8.43 209    Pn      Pn        03 23 49.9 +0.5
       0.3nm,0.3s,baz=346,slow=4.0,SNR=6.1
URZ                                   Sn      Sn        03 25 22.8 -0.8
       2.1nm,0.3s,baz=170,slow=21,SNR=11
STKA   Stephens Creek    34.64 258    P       P         03 28 37.2 +1.1
       3.1nm,0.5s,baz=96,slow=10,SNR=9.2
       3.1nm,0.5s
ASAR   Alice Springs     43.38 267    P       P         03 29 48.8 -0.6
       0.4nm,0.5s,baz=108,slow=8.5,SNR=6.2
       0.4nm,0.5s
WRA    Warramunga Arr    44.43 273    P       P         03 29 57.0 -0.8
       1.0nm,0.3s,baz=111,slow=8.1,SNR=18
       1.0nm,0.3s
QSPA   South Pole Qui    59.11 180    P       P         03 31 58.0 +11
       2.1nm,0.9s,baz=94,slow=3.5,SNR=7.5
       2.1nm,0.9s
H10N3  ASCENSION HYDR138.14 155       T       T         06 16 38.1
       baz=203,slow=75,SNR=15
H10N1  ASCENSION HYDR138.14 155       T       T         06 16 38.1
       baz=203,slow=75,SNR=16
H10N2  ASCENSION HYDR138.16 155       T       T         06 16 38.9
       baz=203,slow=75,SNR=16
FINES  FINESS Array B   145.81 340    PKP     PKPdf     03 41 24.2 -0.1
       1.9nm,0.5s,baz=60,slow=3.8,SNR=38
NOA    NORSAR Array B   149.39 352    PKPbc   PKPbc     03 41 35.1 +0.3
       0.5nm,0.6s,baz=16,slow=4.3,SNR=3.4
HFS    Hagfors          149.89 349    PKPbc   PKPbc     03 41 35.5 -0.5
       0.7nm,0.6s,baz=108,slow=3.9,SNR=5.3
AKASG  Malin Array Be   151.96 322    PKPbc   PKPbc     03 41 41.1 -0.1
       0.5nm,0.5s,baz=70,slow=1.6,SNR=2.2
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*NEIC **16** 03:33:00.6±2.4, 15°.98S±0°.07×172°.39W±0°.07, h10^{km}±1^{km}, mb4.6/10, Error ellipse: s-maj=13.9km s-min=8.5km az=141.0*

*IDC **16** 03:33:06.4±1.7, 15°.07S×173°.98W, h0^{km}, mb3.9/6, mbtmp3.9/6, Error ellipse: s-maj=100.1km s-min=21.5km az=145.0*

ISC 16 03:33:05.0±1.2, 15°.7S±0°.2×172°.8W±0°.3, h29^{km}, n23, σ1^s.39/17, mb4.5/12, Samoa Islands region

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Code   Station Name        Δ°   AZ°   Phase ID          Time       Res
                                      Op      ISC       h  m  s    ISC
AFI    Afiamalu           2.07  29            Pn        03 33 35.9 -2.0
NIUE   Niue               4.32 141            Pn        03 34 00.0 -8.7
RTZ    Ruatahuna         24.50 200    P       P         03 38 22.6 +0.7
RTZ                                   IAmb    IAmb      03 38 46.5
       comp=Z,16nm,1.0s
ARMA   Armidale          35.66 240    P       P         03 39 58.6 -2.2
ARMA                                  IAmb    IAmb      03 40 08.7
       comp=Z,12nm,1.1s
KEKH   Kekaha            39.62  19    P       P         03 40 35.0 +0.8
COEN   Coen              42.52 266    P       P         03 40 59.9 +1.6
COEN                                  IAmb    IAmb      03 41 21.0
       comp=Z,17nm,1.4s
TOO    Toolangi          42.70 231    P       P         03 40 58.8 -0.7
STKA   Stephens Creek    44.36 240    P       P         03 41 12.2 -0.7
STKA   Stephens Creek    44.36 240    P       P         03 41 11.8 -1.1
       comp=Z,2.0nm,0.6s,baz=92,slow=13,SNR=7.5
       comp=Z,2.0nm,0.6s
WR8    Warramunga Arr    50.16 257    P       P         03 41 57.7 -0.6
WR8                                   IAmb    IAmb      03 42 39.8
       comp=Z,13nm,1.4s
WRA    Warramunga Arr    50.32 257    P       P         03 41 59.0 -0.5
WRA    Warramunga Arr    50.32 257    P       P         03 41 59.5 -0.1
       comp=Z,1.1nm,0.7s,baz=94,slow=6.4,SNR=16
       comp=Z,1.1nm,0.7s
ASAR   Alice Springs     50.54 252    P       P         03 41 59.5 -1.7
ASAR   Alice Springs     50.54 252    P       P         03 42 00.4 -0.8
       comp=Z,3.3nm,0.5s,baz=87,slow=8.2,SNR=54
       comp=Z,3.3nm,0.5s
NVAR   Mina Array Bea    74.20  42    P       P         03 44 47.8 +8.3
       comp=Z,0.5nm,0.7s,baz=244,slow=6.9,SNR=4.0
       comp=Z,0.5nm,0.7s
TXAR   Lajitas Array     80.33  56    P       P         03 45 23.6 +10
       comp=Z,0.3nm,0.8s,baz=239,slow=3.9,SNR=2.8
       comp=Z,0.3nm,0.8s
WRH    Wood River Hil    82.17  11    P       P         03 45 23.2 +0.5
WRH                                   IAmb    IAmb      03 45 37.8
       comp=Z,6.6nm,1.0s
CCB    Clear Creek Bu    82.38  11    P       P         03 45 25.1 +1.3
CCB                                   IAmb    IAmb      03 45 37.8
       comp=Z,3.3nm,0.8s
ILAR   Eielson Array     82.66  11    P       P         03 45 27.6 +2.3
       comp=Z,0.3nm,0.6s,baz=226,slow=6.3,SNR=15
       comp=Z,0.3nm,0.6s
H03N2  Juan Fernandez    84.65 123    T       T         05 20 14.1
       baz=248,slow=72,SNR=20
H03N3  Juan Fernandez    84.65 123    T       T         05 20 14.4
       baz=248,slow=72,SNR=16
H03N1  Juan Fernandez    84.67 123    T       T         05 20 13.7
       baz=248,slow=72,SNR=11
BRTR   Keskin Array B   146.76 321    PKPbc   PKiKP     03 52 48.1 +0.7
       comp=Z,0.6nm,0.7s,baz=79,slow=2.6,SNR=3.9
```

IDC 16 03:39:45.3±5.7, 30°.24S×177°.97W, h0^{km}, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=216.8km s-min=55.3km az=150.0, Kermadec Islands

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Code   Station Name        Δ°   AZ°   Phase ID          Time       Res
                                      Op      ISC       h  m  s    ISC
STKA   Stephens Creek    34.54 257    P       P         03 46 35.5  0.0
       1.5nm,0.8s,baz=117,slow=14,SNR=3.8
       1.5nm,0.8s
ASAR   Alice Springs     43.14 267    P       P         03 47 48.4 +0.5
       0.3nm,0.6s,baz=94,slow=7.2,SNR=2.3
       0.3nm,0.6s
WRA    Warramunga Arr    44.12 272    P       P         03 47 54.8 -0.9
       0.3nm,0.4s,baz=114,slow=7.9,SNR=5.0
       0.3nm,0.4s
H03S2  Juan Fernandez    80.53 124    T       T         05 20 05.9
       baz=243,slow=75,SNR=39
H03S1  Juan Fernandez    80.55 124    T       T         05 20 07.0
       baz=243,slow=75,SNR=35
H03S3  Juan Fernandez    80.55 124    T       T         05 20 04.9
       baz=243,slow=75,SNR=39
H10S3  ASCENSION HYDR137.86 155       T       T         06 32 46.8
       baz=203,slow=74,SNR=24
H10S2  ASCENSION HYDR137.86 155       T       T         06 32 46.9
       baz=17,slow=74,SNR=30
H10N3  ASCENSION HYDR138.95 155       T       T         06 34 09.6
       baz=202,slow=75,SNR=34
H10N1  ASCENSION HYDR138.95 155       T       T         06 34 10.8
       baz=202,slow=75,SNR=22
H10N2  ASCENSION HYDR138.96 155       T       T         06 34 11.3
       baz=202,slow=75,SNR=25
FINES  FINESS Array B   145.00 340    PKPbc   PKPbc     03 59 22.5 -0.6
       0.7nm,0.7s,baz=62,slow=5.5,SNR=4.6
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GCG 16 03:42:53.6±1.3, 16°.11N×90°.89W, h22^{km}±31^{km}, MD3.9, Mexico-Guatemala border region

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Code   Station Name        Δ°   AZ°   Phase ID          Time       Res
                                      Op      ISC       h  m  s    ISC
CCIG   Comitan            1.22 278  i P     Pb          03 43 15.7 -0.3
CCIG                                i S     Sb          03 43 33.2 +1.8
PETF   Flores             1.27  50  i P     Pn          03 43 15.3 -0.7
PETF                                i S     Sb          03 43 33.5 +0.8
STG0   El Palmar, Qui     1.73 195  i P     Pn          03 43 19.3 -3.2
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*LDG **16** 03:44:42.5±0.1, 42°.29N×1°.56E, h2^{km}, Ml2.5/19, Error ellipse: s-maj=1.2km s-min=1.0km az=168.0*

*MDD **16** 03:44:42.7±0.2, 42°.27N×1°.55E, h0^{km}, mb_Lg2.3/22, Error ellipse: s-maj=1.8km s-min=1.4km az=3.0*

*STR **16** 03:44:43.2±0.5, 42°N±3°×°±°, h5^{km}, MLv2.0/6, Error ellipse: s-maj=0.0km s-min=0.0km az=178.1, preliminary*

MRB 16 03:44:42.5±0.5, 42°.28N×1°.55E, h4^{km}±2^{km}, ML1.8/36, 7C-4D, Error ellipse: s-maj=1.1km s-min=1.1km az=224.0, Pyrenees

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Code   Station Name        Δ°   AZ°   Phase ID          Time       Res
                                      Op      ISC       h  m  s    ISC
ARBS   La Rabassa         0.16 359    P       Pg        03 44 45.6 -0.2
ARBS                                  S       Sg        03 44 47.8 -0.2
       227nm,0.2s
CORG   Organya            0.18 253  ⇑P       Pg        03 44 45.9 -0.2
CORG                                  S       Sg        03 44 49.1 +0.7
PAND   Andorre            0.24 359  ⇑P       Pg        03 44 47.5 +0.3
PAND                                  S       Sg        03 44 50.9 +0.5
       117nm,0.4s
PAND   Andorre            0.24 359    Pg      Pg        03 44 46.9 -0.3
PAND                                  Sg      Sg        03 44 50.5 +0.1
CSOR   Sort               0.32 287    P       Pg        03 44 48.4 -0.4
CSOR                                  S       Sg        03 44 53.8 +0.7
       135nm,0.4s
CLLI   Llivia             0.37  58  ⇑P       Pg        03 44 49.3 -0.4
CLLI                                  S       Sg        03 44 54.4 -0.1
VALC   Valcebollere       0.38  75  ⇑P       Pg        03 44 49.4 -0.4
VALC                                  S       Sg        03 44 55.2 +0.4
       531nm,0.2s
VALC   Valcebollere       0.38  75    Pg      Pg        03 44 49.5 -0.4
VALC                                  Sg      Sg        03 44 55.2 +0.4
CEST   Esterri de Car     0.39 325    P       Pg        03 44 49.7 -0.3
CEST                                  S       Sg        03 44 55.3 +0.3
       46nm,0.3s
CBRU   Bruguera           0.47  89  ⇓P       Pg        03 44 51.1 -0.4
CBRU                                  S       Sg        03 44 58.0 +0.4
       57nm,0.3s
CORI   Orista             0.48 130  ⇓P       Pg        03 44 51.6 -0.1
CORI                                  S       Sg        03 44 58.5 +0.5
       20nm,0.3s
GENF   Genat              0.54   2  ⇓P       Pg        03 44 52.6 -0.3
GENF                                  S       Sg        03 44 59.8 -0.1
SALF   Salau              0.55 331    P       Pg        03 44 53.1 +0.1
SALF                                  S       Sg        03 45 00.2  0.0
       19nm,0.1s
SALF   Salau              0.55 331    Pg      Pg        03 44 52.8 -0.2
SALF                                  Sg      Sg        03 44 59.9 -0.3
CTRE   Tremp              0.58 274  ⇑P       Pg        03 44 53.3 -0.3
CTRE                                  S       Sg        03 45 02.0 +0.8
       20nm,0.2s
CARF   Carcanieres        0.60  43    P       Pg        03 44 54.0  0.0
CARF                                  S       Sg        03 45 02.2 +0.4
       38nm,0.4s
CARF   Carcanieres        0.60  43    Pg      Pg        03 44 53.5 -0.4
CARF                                  Sg      Sg        03 45 01.6 -0.1
CARA   Val d’Aran         0.69 308    P       Pg        03 44 55.9 +0.2
CARA                                  S       Sg        03 45 05.2 +0.5
       26nm,0.3s
VIER   Vielha - Casau     0.71 307    S       Sg        03 45 05.6 +0.3
       33nm,0.2s
CAVN   Les Avellanes      0.72 236  ⇓P       Pg        03 44 56.0 -0.3
CAVN                                  S       Sg        03 45 05.3 -0.2
       30nm,0.4s
FNEB   Nbias              0.74  33    P       Pg        03 44 56.9 +0.1
FNEB                                  S       Sg        03 45 07.0 +0.5
       12nm,0.4s
FNEB   Nbias              0.74  33    Pg      Pg        03 44 56.3 -0.5
FNEB                                  Sg      Sg        03 45 06.0 -0.4
MLS    Moulis             0.75 334    P       Pg        03 44 57.0  0.0
MLS                                   S       Sg        03 45 07.4 +0.6
       9.0nm,0.3s
MLS    Moulis             0.75 334    Pg      Pg        03 44 56.7 -0.2
MLS                                   Sg      Sg        03 45 06.1 -0.6
DUNF   Dun                0.77  14    Pg      Pg        03 44 57.3 +0.1
DUNF                                  Sg      Sg        03 45 06.2 -0.9
FILF   Fillols            0.80  69  ⇑P       Pg        03 44 55.7 -2.1
FILF                                  S       Sg        03 45 05.3 -2.8
       16nm,0.3s
FILF   Fillols            0.80  69    Pg      Pg        03 44 55.6 -2.2
FILF                                  Sg      Sg        03 45 04.6 -3.5
MELF   Melles             0.83 315    Pg      Pg        03 44 57.9 -0.5
MELF                                  Sg      Sg        03 45 09.7 +0.5
CBEU   Beuda              0.84  91    P       Pg        03 44 58.2 -0.4
CBEU                                  S       Sg        03 45 09.9 +0.6
       22nm,0.3s
CFON   Fontmartina        0.84 128  ⇑P       Pg        03 44 58.0 -0.6
CFON                                  S       Sg        03 45 10.1 +0.6
       42nm,0.1s
EPOB   Poblet             0.99 201    Pg      Pg        03 45 01.0 -0.6
EPOB                                  Sg      Sg        03 45 13.9 -0.5
EPOB                                i IVmb_Lg           03 45 17.6
EPOB   Poblet             0.99 201    P       Pg        03 45 01.0 -0.6
EPOB                                  S       Sg        03 45 14.1 -0.3
       28nm,0.3s
EJON   La Jonquera        1.00  80    Pg      Pg        03 45 01.0 -0.8
EJON                                  Sg      Sg        03 45 14.7 -0.1
EJON                                i IVmb_Lg           03 45 18.2
SJAF   Saint Jean de      1.01  78    P       Pg        03 45 01.1 -0.7
SJAF                                  S       Sg        03 45 15.0 +0.1
       20nm,0.3s
SJAF   Saint Jean de      1.01  78    Pg      Pg        03 45 01.4 -0.4
SJAF                                  Sg      Sg        03 45 15.3 +0.5
CGAR   Garraf             1.02 165    P       Pg        03 45 02.1 -0.1
CGAR                                  S       Sg        03 45 15.2 -0.2
       14nm,0.4s
RESF   Ens                1.04 301    P       Pg        03 45 01.7 -0.7
RESF                                  S       Sg        03 45 16.0 +0.1
       19nm,0.3s
ECHI   Chisagues Biel     1.07 291    Pg      Pg        03 45 02.3 -0.8
ECHI                                  Sg      Sg        03 45 17.3 +0.3
ECHI                                i IVmb_Lg           03 45 23.7
ECHI   Chisagues Biel     1.07 291    P       Pg        03 45 02.3 -0.8
ECHI                                  S       Sg        03 45 17.4 +0.4
       12nm,0.1s
ECHI   Chisagues Biel     1.07 291    Pg      Pg        03 45 02.3 -0.8
ECHI   Chisagues Biel     1.07 291    Sg      Sb        03 45 18.1  0.0
CCAS   Cassa de la Se     1.08 111    P       Pg        03 45 02.8 -0.5
CCAS                                  S       Sb        03 45 17.8 -0.5
       14nm,0.4s
MTLF   Montolieu          1.17  25   ePg      Pg        03 45 04.7 -0.2
MTLF                                 eSg      Sg        03 45 19.1 -0.9
       25nm,0.3s
MTLF   Montolieu          1.17  25    Pg      Pg        03 45 04.5 -0.3
CPAL   Palau Saverder     1.20  88    P       Pg        03 45 05.0 -0.5
CPAL                                  S       Sg        03 45 20.8 -0.2
       14nm,0.3s
VIEF   Viey               1.28 299    P       Pg        03 45 06.1 -0.9
VIEF                                  S       Sg        03 45 23.3 -0.2
       13nm,0.3s
VIEF   Viey               1.28 299    Pg      Pg        03 45 06.2 -0.8
VIEF                                  Sg      Sb        03 45 24.3 +0.3
LABF   Labassere          1.33 306    Pg      Pn        03 45 07.4 -0.5
LABF                                  Sg      Sb        03 45 25.6 +0.1
CLAF   Gruissan           1.42  53    P       Pn        03 45 08.3 -0.8
CLAF                                  S       Sb        03 45 27.4 -0.5
       5.2nm,0.2s
CLAF   Gruissan           1.42  53    Pg      Pn        03 45 08.4 -0.6
CLAF                                  Sg      Sb        03 45 27.2 -0.7
VAN2   Vandellos 2        1.44 202    P       Pn        03 45 09.1 -0.2
VAN2                                  S       Sb        03 45 27.9 -0.5
       37nm,0.3s
CRAS   Crastes            1.56 338    Pn      Pn        03 45 10.3 -0.7
CRAS                                  Sn      Sn        03 45 31.2 -0.4
CANF   Canfranc           1.60 288    Pn      Pn        03 45 11.4 -0.3
CANF                                  Sn      Sb        03 45 33.3 -0.1
ESAC   San Caprasio       1.61 250    Pg      Pb        03 45 12.7  0.0
ESAC                                  Sg      Sg        03 45 34.2 +0.1
ESAC   San Caprasio       1.61 250    P       Pn        03 45 12.0 +0.3
ESAC                                  S       Sb        03 45 33.5  0.0
       45nm,0.2s
ERTA   Horta de San J     1.61 215    Pg      Pn        03 45 11.5 -0.3
ERTA                                  Sg      Sb        03 45 33.6 +0.2
ERTA                                i IVmb_Lg           03 45 40.0
ERTA   Horta de San J     1.61 215    P       Pn        03 45 11.6 -0.2
ERTA                                  S       Sn        03 45 32.2 -0.7
       15nm,0.6s
REYF   Montagne du Re     1.64 299    Pn      Pn        03 45 11.9 -0.2
REYF                                  Sn      Sn        03 45 33.6  0.0
EBR    Ebro Roquetas      1.66 209    S       Sb        03 45 34.8 -0.1
       35nm,0.3s
ETSF   Etsaut             1.68 292   ePg      Pb        03 45 13.5 -0.4
ETSF                                 eSg      Sg        03 45 36.0 -0.3
       16nm,0.4s
CMAS   Mas de Barbera     1.81 211    P       Pn        03 45 14.1 -0.4
CMAS                                  S       Sn        03 45 38.5 +0.5
       12nm,0.3s
ATE    Arette             1.84 297    Pg      Pb        03 45 16.9 +0.1
ATE                                   S       Sn        03 45 39.0 +0.3
       6.6nm,0.4s
ATE                                   Sg      Sg        03 45 42.4 +0.7
ATE    Arette             1.84 297    Pn      Pn        03 45 14.8 -0.2
ATE                                   Sn      Sn        03 45 38.6 -0.1
ALCN   Alcanar            1.91 205    S       Sn        03 45 40.1 -0.1
       13nm,0.3s
ALCN                                  Sg      Sg        03 45 43.4 -0.4
ORDF   Ordiarp            2.05 298    Pn      Pn        03 45 17.5 -0.3
ORDF                                  Sn      Sn        03 45 44.0 +0.1
LAJAS  L’Hospitalet-d     2.08  35    Pn      Pn        03 45 17.7 -0.5
LAJAS                                 Sn      Sn        03 45 44.2 -0.4
MONQ   Montcuq            2.10 353    Pn      Pn        03 45 17.7 -0.7
MONQ                                  Sn      Sn        03 45 44.6 -0.4
SJPF   Ste Jean           2.21 293   ePg      Pb        03 45 23.8 +0.8
SJPF                                 eSg      Sb        03 45 51.7 +1.0
ALCX   Castello           2.24 206    Sg      Sg        03 45 54.5  0.0
OSSF   Osses              2.29 296    Pg      Pb        03 45 24.6 +0.3
OSSF                                  S       Sn        03 45 50.1 +0.4
       2.6nm,0.3s
OSSF                                  Sg      Sg        03 45 55.8 -0.2
OSSF   Osses              2.29 296    Pn      Pn        03 45 20.9 -0.2
OSSF                                  Sn      Sn        03 45 49.5 -0.2
EALK   Alkurruntz         2.44 294    Pg      Pb        03 45 27.7 +0.7
EALK                                  Sg      Sg        03 46 01.3 +0.4
EALK                                i IVmb_Lg           03 46 06.7
EALK   Alkurruntz         2.44 294    Pn      Pn        03 45 22.5 -0.7
EMOS   Mosqueruela        2.45 219    Pg      Pb        03 45 25.5 -1.7
EMOS                                  Sg      Sb        03 45 59.4 +1.6
EMOS   Mosqueruela        2.45 219    S       Sn        03 45 54.3 +0.4
       2.8nm,0.5s
EMOS                                  Sg      Sg        03 46 00.9 -0.2
LASF   Ste Croix          2.46  42   eP       Pn        03 45 22.7 -0.7
LASF   Ste Croix          2.46  42   ePg      Pb        03 45 27.5 +0.2
LASF                                 eSg      Sb        03 45 59.1 +1.1
       2.7nm,0.2s
LEUC   Leucamp            2.58  16    Pn      Pn        03 45 24.7 -0.4
CAF    Calviac            2.67   8   eP       Pn        03 45 26.5 +0.2
CAF    Calviac            2.67   8   ePg      Pb        03 45 32.1 +1.3
CAF                                  eSg      Sb        03 46 05.6 +1.6
       6.3nm,0.2s
LFF    La Frestale        2.72 348   eSg      Sb        03 46 07.1 +1.7
RJF    Les Rejaudoux      3.02 360   eP       Pn        03 45 31.7 +0.6
RJF                                  eSg      Sb        03 46 16.4 +2.3
       6.5nm,0.3s
VIVF   Saint-Julien-l     3.43  40   ePg      Pb        03 45 45.7 +1.9
VIVF                                 eSg      Sg        03 46 29.5 -3.1
       1.3nm,0.2s
LMR    La Mourre          3.80  72   eP       Pn        03 45 41.0 -0.7
LMR                                  eSn      Sn        03 46 23.7 -3.1
       0.7nm,0.2s
TCF    Toulx Ste Croi     4.03   7   eP       Pn        03 45 44.2 -0.8
TCF                                  eSg      Sg        03 46 48.6 -3.4
       1.5nm,0.2s
BGF    Bois d'Agland      4.37  12   ePg      Pg        03 46 04.1 -2.2
BGF                                  eSg      Sg        03 46 59.4 -3.5
       9.0nm,0.3s
MFF    Saint Martin d     4.49 345   eSn      Sn        03 46 39.1 -4.7
SMF    Signal de Mont     4.66  20   eSg      Sg        03 47 07.7 -4.4
       2.0nm,0.4s
AVF    Avril sur Loir     4.69  15   eSg      Sg        03 47 07.8 -5.2
       1.0nm,0.2s
SSF    Saint Saulge       4.98  16   eSg      Sg        03 47 18.0 -4.3
       0.6nm,0.3s
LOR    Lormes             5.25  17   eSg      Sg        03 47 27.5 -3.5
       0.4nm,0.4s
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*NNC **16** 03:54:19.2±0.9, 41°.88N×78°.57E, h0^{km}, mb2.6, mpv3.0, Error ellipse: s-maj=6.7km s-min=3.2km az=157.0, Suspected Mining explosion.*

*KRNET **16** 03:54:19.6±0.1, 41°.88N×78°.57E, h15^{km}, mb2.6*

*SOME **16** 03:54:20.1, 41°.90N×78°.53E, h10^{km}*

ISC 16 03:54:19.6±1.2, 41°.86N±0°.05×78°.57E±0°.04, h0^{km}, n30, σ1^s.04/44, 14C-6D, Kyrgyzstan-Xinjiang border region

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Code   Station Name        Δ°   AZ°   Phase ID          Time       Res
                                      Op      ISC       h  m  s    ISC
TARG   Taragay, Kyrgy     0.59 258 ⇓iP        Pg        03 54 31.0 +0.2
TARG                               ⇓iS        Sg        03 54 39.5 +1.1
PRZ    Przheval'sk        0.64 349 ⇑iP        Pg        03 54 31.7 -0.2
PRZ                                ⇑iS        Sg        03 54 40.4 +0.2
KDJ    Kajisay            1.07 285 ⇑iP        Pg        03 54 39.6 -0.6
KDJ                                ⇑iS        Sg        03 54 54.1  0.0
SATY   Saty               1.21 354    P       Pg        03 54 42.6 -0.2
       3.8nm,0.1s
SATY                                  S       Sg        03 54 58.5  0.0
       20nm,0.1s
UZB    Uzynbulak          1.33  14    P       Pg        03 54 44.1 -1.1
       5.5nm,0.2s
UZB                                   S       Sg        03 55 01.5 -1.0
       7.4nm,0.1s
UZB    Uzynbulak          1.33  14   eP       Pg        03 54 44.0 -1.1
UZB                                  eS       Sg        03 55 01.5 -1.0
SHLS   Shalkode           1.46  27   eP       Pb        03 54 50.1 +2.4
       3.4nm,0.1s
SHLS                                 eS       Sn        03 55 11.7 +4.4
       3.9nm,0.1s
KPKS   Kokpek             1.61   3    S       Sn        03 55 10.5 -0.5
       15nm,0.1s
PDGK   Podgornoye         1.62  24  ⇓Pn       Pn        03 54 48.7 -0.9
       1.3nm,0.7s
PDGK                                ⇓Sn       Sn        03 55 10.5 -0.7
       14nm,0.5s
KOTS   Kotyrbulak         1.75 322   eP       Pn        03 54 51.8 +0.4
       3.0nm,0.3s
KOTS                                 eS       Sn        03 55 14.7 +0.3
       22nm,0.3s
ULHL   Ulahol             1.78 283 ⇑iP        Pn        03 54 52.2 +0.4
ULHL                               ⇑iS        Sb        03 55 16.0 -0.1
NRN    Naryn              1.97 259 ⇑iP        Pb        03 54 55.9 -0.7
NRN                                ⇑iS        Sb        03 55 22.3 +0.5
MTBS   Maitube            2.03 310    Pg      Pb        03 54 57.3 -0.2
       7.5nm,0.2s
MTBS                                  Lg      Lg        03 55 23.9
       16nm,0.2s
MTBS   Maitube            2.03 310   eP       Pb        03 54 57.3 -0.2
       7.5nm,0.2s
MTBS                                 eS       Sb        03 55 23.9 +0.5
       16nm,0.2s
BOOM   Boomskoye usch     2.06 289 ⇑iP        Pb        03 54 56.6 -1.3
BOOM                               ⇑iS        Sb        03 55 23.5 -0.6
KTMS   Ketmen             2.06  39    Pg      Pb        03 54 57.5 -0.5
       4.8nm,0.2s
KTMS                                  Lg      Lg        03 55 25.0
       13nm,0.3s
KTMS   Ketmen             2.06  39   eP       Pb        03 54 57.5 -0.5
       4.8nm,0.2s
KTMS                                 eS       Sg        03 55 25.0 -0.9
       13nm,0.3s
BLB    Baldybastay        2.24 358    Pg      Pb        03 55 00.8 -0.3
       13nm,0.2s
BLB                                   Lg      Lg        03 55 29.8
       13nm,0.2s
KST    Kastek             2.27 302    Lg      Lg        03 55 31.0
       15nm,0.6s
KST    Kastek             2.27 302   eP       Pb        03 55 01.1 -0.4
       2.9nm,0.2s
KST                                  eS       Sb        03 55 31.0 +0.9
       15nm,0.6s
KTBS   Karatobe           2.32 324    Lg      Lg        03 55 32.2
       24nm,0.2s
ARXS   Arharly            2.42 347    Lg      Lg        03 55 34.3
       22nm,0.2s
TKM2   Tokmak 2           2.45 297  ⇑Pn       Pn        03 55 00.4 -0.6
       1.6nm,0.4s
TKM2                                ⇓Sn       Sn        03 55 31.7  0.0
       8.7nm,0.4s
TKM2   Tokmak 2           2.45 297 ⇑iP        Pn        03 55 02.0 +1.0
TKM2                               ⇑iS        Sn        03 55 32.9 +1.2
KNOS   Konyrlen           2.54  10    Lg      Lg        03 55 37.7
       10.0nm,0.1s
KUU    Kurty              2.62 322    Lg      Lg        03 55 41.0
       14nm,0.4s
KUU    Kurty              2.62 322   eP       Pb        03 55 07.3 -0.1
       1.4nm,0.1s
KUU                                  eS       Sb        03 55 41.0 +1.0
       14nm,0.4s
DJR    Jarkent            2.63  19    Lg      Lg        03 55 41.7
       28nm,0.3s
DJR    Jarkent            2.63  19   eP       Pb        03 55 07.8 +0.1
       2.2nm,0.1s
DJR                                  eS       Sb        03 55 41.7 +1.1
       28nm,0.3s
AAK    Ala-Archa          3.13 286  ⇑Pn       Pn        03 55 09.8 -0.5
       0.3nm,0.8s
AAK                                 ⇓Sn       Sn        03 55 48.4  0.0
       1.3nm,0.7s
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IDC 16 04:03:07.3±8.6, 30°.42S×178°.11W, h0^{km}, mb3.2/2, mbtmp3.2/2, Error ellipse: s-maj=362.0km s-min=62.7km az=155.0, Kermadec Islands

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Code   Station Name        Δ°   AZ°   Phase ID          Time       Res
                                      Op      ISC       h  m  s    ISC
ASAR   Alice Springs     43.02 267    P       P         04 11 08.5 -0.3
       0.1nm,0.4s,baz=99,slow=7.8,SNR=4.8
       0.1nm,0.4s
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Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.01	272	P	P	04 11 16.8	0.0
	0.2nm,0.3s,baz=111,slow=8.1,SNR=4.7						
	0.2nm,0.3s						
H03S2	Juan Fernandez	80.53	124	T	T	05 42 59.2	
	baz=243,slow=75,SNR=30						
H03S1	Juan Fernandez	80.54	124	T	T	05 43 00.2	
	baz=243,slow=75,SNR=22						
H03S3	Juan Fernandez	80.55	124	T	T	05 42 59.0	
	baz=243,slow=75,SNR=23						
H03N3	Juan Fernandez	80.72	123	T	T	05 43 09.2	
	baz=248,slow=72,SNR=12						
H03N2	Juan Fernandez	80.72	123	T	T	05 43 06.5	
	baz=248,slow=72,SNR=12						
H03N1	Juan Fernandez	80.74	123	T	T	05 43 09.5	
	baz=248,slow=72,SNR=12						
FINES	FINESS Array B	145.14	340	PKPbc	PKPbc	04 22 44.8	-0.8
	0.7nm,0.8s,baz=56,slow=6.0,SNR=3.8						

*NEIC **16** 04:36:41.7±2.0, 15°.82N±0°.08×144°.99E±0°.05, h10km±1km, mb4.5/8, Error ellipse: s-maj=14.4km s-min=8.0km az=7.0*
*IDC **16** 04:36:41.3±0.9, 15°.77N×144°.49E, h0km, mb4.1/17, mbtmp4.1/18, ML3.8/1, Error ellipse: s-maj=32.0km s-min=14.2km az=85.0*
ISC 16 04:36:46.0±0.7**, 15°.72N**±0°.07×**144°.7E**±0°.2**, h35km, n37, σ1s.03**/32**, mb4.2**/21**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	2.13	174	Pn	Pn	04 37 17.7	-1.4
GUMO	Guam	2.13	174	Pn	Pn	04 37 18.4	-0.7
	28nm,0.3s,baz=16,slow=5.8,SNR=14						
GUMO				Sn	Sn	04 37 43.9	-0.4
	17nm,0.3s,baz=348,slow=7.6,SNR=4.3						
	65nm,0.3s						
H11S3	WAKE ISLAND Hy	21.24	79	T	T	05 03 17.2	
	baz=265,slow=75,SNR=6.5						
H11S1	WAKE ISLAND Hy	21.25	79	T	T	05 03 19.3	
	baz=265,slow=75,SNR=8.9						
H11S2	WAKE ISLAND Hy	21.25	79	T	T	05 03 18.4	
	baz=265,slow=75,SNR=8.2						
JNU	Nakatsue	21.35	327	P	P	04 41 29.5	-0.8
JNU				IAmb	IAmb	04 41 36.0	
	comp=Z,23nm,1.0s						
JNU	Nakatsue	21.35	327	P	P	04 41 29.6	-0.7
	comp=Z,14nm,1.0s,baz=127,slow=5.4,SNR=4.2						
	comp=Z,14nm,1.0s						
MJAR	Matsushiro Arr	21.52	346	P	P	04 41 32.0	-0.1
	comp=Z,2.9nm,0.8s,baz=166,slow=10,SNR=4.7						
	comp=Z,2.9nm,0.8s						
H11N1	WAKE ISLAND Hy	21.55	76	T	T	05 03 51.3	
	baz=264,slow=74,SNR=59						
H11N2	WAKE ISLAND Hy	21.55	76	T	T	05 03 46.9	
	baz=264,slow=74,SNR=43						
H11N3	WAKE ISLAND Hy	21.56	76	T	T	05 03 44.3	
	baz=264,slow=74,SNR=66						
FAKI	Fak Fak	22.22	215	P	P	04 41 41.8	+2.1
KSRS	Korea Array	26.23	329	P	P	04 42 17.1	-0.7
	comp=Z,7.7nm,1.0s,baz=139,slow=10,SNR=11						
	comp=Z,7.7nm,1.0s						
KNRA	Kununurra	34.92	207	P	P	04 43 34.9	+0.3
KNRA				IAmb	IAmb	04 43 36.9	
	comp=Z,8.1nm,0.9s						
WB0	Warramunga Arr	36.68	196	P	P	04 43 50.7	+1.0
WB0				IAmb	IAmb	04 44 03.6	
	comp=Z,8.9nm,1.1s						
WRA	Warramunga Arr	36.86	196	P	P	04 43 51.9	+0.6
WRA	Warramunga Arr	36.86	196	P	P	04 43 51.8	+0.5
	comp=Z,3.6nm,0.9s,baz=17,slow=9.2,SNR=16						
	comp=Z,3.6nm,0.9s						
FITZ	Fitzroy Crossi	38.47	210	P	P	04 44 05.4	+0.5
	comp=Z,3.4nm,0.8s,baz=20,slow=12,SNR=3.7						
	comp=Z,3.4nm,0.8s						
ASAR	Alice Springs	40.53	195	P	P	04 44 22.6	+0.5
	comp=Z,0.3nm,0.6s,baz=8.8,slow=7.1,SNR=4.8						
	comp=Z,0.3nm,0.6s						
CMAR	Chiang Mai Arr	43.69	280	P	P	04 44 48.2	+0.2
	comp=Z,1.5nm,0.6s,baz=85,slow=8.0,SNR=3.6						
	comp=Z,1.5nm,0.6s						
SONM	Songino Array	44.89	324	P	P	04 44 58.1	+0.7
	comp=Z,1.5nm,0.6s,baz=134,slow=12,SNR=2.0						
	comp=Z,1.5nm,0.6s						
GTA	Gaotai	45.63	310	*e*P	P	04 45 04.3	+1.0
GTA				sP	sP	04 45 14.3	-2.0
GTA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
ZALV	Zalesovo Beam	59.79	324	P	P	04 46 46.7	-0.9
	comp=Z,0.7nm,0.3s,baz=103,slow=6.5,SNR=4.7						
	comp=Z,0.7nm,0.3s						
MKAR	Makanchi Array	59.83	315	P	P	04 46 47.9	-0.2
MKAR	Makanchi Array	59.83	315	P	P	04 46 47.4	-0.7
	comp=Z,0.7nm,0.6s,baz=100,slow=10.0,SNR=6.7						
	comp=Z,0.7nm,0.6s						
KURK	Kurchatov	62.84	319	P	P	04 47 07.3	-0.9
KURBB	Kurchatov Arra	62.88	319	P	P	04 47 08.3	-0.3
	comp=Z,3.6nm,0.8s,baz=99,slow=6.7,SNR=24						
	comp=Z,3.6nm,0.8s						
ILAR	Eielson Array	66.75	26	P	P	04 47 36.2	+2.7
	comp=Z,0.6nm,0.9s,baz=266,slow=4.9,SNR=5.2						
	comp=Z,0.6nm,0.9s						
KKAR	Karatay Array	67.91	311	P	P	04 47 41.9	+0.6
BVAR	Borovoye Array	68.14	321	P	P	04 47 42.1	-0.5
	comp=Z,2.7nm,0.7s,baz=91,slow=6.1,SNR=14						
	comp=Z,2.7nm,0.7s						
HYT	Haines Junctio	70.48	31	P	P	04 47 56.9	-0.1
HYT				IAmb	IAmb	04 48 15.3	
	comp=Z,6.9nm,1.3s						
ABKAR	Akbulak array	74.84	317	P	P	04 48 21.8	-1.1
ABKAR	Akbulak array	74.84	317	P	P	04 48 22.5	-0.5
ABKAR				IAmb	IAmb	04 48 23.5	
	comp=Z,2.9nm,0.8s						
YKA	Yellowknife Ar	81.08	28	P	P	04 48 58.1	+0.8
	comp=Z,0.4nm,0.9s,baz=293,slow=6.2,SNR=2.5						
	comp=Z,0.4nm,0.9s						
ARCES	ARCESS Array B	85.00	342	P	P	04 49 16.6	-1.0
	comp=Z,5.0nm,0.9s,baz=63,slow=6.2,SNR=6.5						
	comp=Z,5.0nm,0.9s						
FINES	FINESS Array B	89.15	335	P	P	04 49 36.1	-1.7
	comp=Z,1.1nm,0.6s,baz=59,slow=5.4,SNR=7.1						
	comp=Z,1.1nm,0.6s						
BRTR	Keskin Array B	95.45	314	P	P	04 50 06.0	-1.6
	comp=Z,0.8nm,0.8s,baz=72,slow=4.0,SNR=4.3						
	comp=Z,0.8nm,0.8s						

NNC 16 04:37:30.9±5.7**, 36°.89N×69°.87E, h0km, mb3.6, mpv3.3, 4C, Error ellipse: s-maj=47.2km s-min=35.8km az=162.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.22	4	⇑P	Pn	04 39 04.4	+0.4
	3.7nm,0.3s,baz=184,slow=13,SNR=96						
KK31				⇑S	Sn	04 40 17.9	+2.0
	3.0nm,0.5s,baz=188,slow=25						
AAK	Ala-Archa	6.75	30	⇑P	Pn	04 39 11.1	-0.3
	0.3nm,0.6s						
AAK				⇑S	Sn	04 40 28.9	-0.2
	1.8nm,0.7s						
AB31	Akbulak array	14.31	333	P	Pn	04 40 54.9	+0.2
	0.4nm,0.3s,baz=154,slow=12,SNR=22						

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*NEIC **16** 04:39:13.0±2.1, 31°.42S±0°.08×177°.47W±0°.05, h10km±2km, mb4.3/9, Error ellipse: s-maj=14.4km s-min=7.3km az=174.0*
*IDC **16** 04:39:14.9±1.1, 30°.73S×178°.05W, h0km, mb4.2/5, mbtmp4.2/5, Error ellipse: s-maj=34.7km s-min=30.3km az=2.0*
ISC 16 04:39:10.8±1.2**, 31°.4S**±0°.1×**176°.7W**±0°.2**, h35km, n25, σ1s.55**/24**, mb4.3**/10**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.41	334		Pn	04 39 48.4	+0.7
BFZ	Birch Farm	10.83	210		Pn	04 41 43.4	+0.1
CTAO	Charters Tower	35.05	280	P	P	04 46 00.7	+0.3
CTAO				IAmb	IAmb	04 46 41.0	
	comp=Z,10nm,1.2s						
STKA	Stephens Creek	35.32	258	P	P	04 46 03.4	+0.7
STKA	Stephens Creek	35.32	258	P	P	04 46 04.3	+1.6
	comp=Z,3.0nm,0.6s,baz=96,slow=9.6,SNR=6.1						
	comp=Z,3.0nm,0.6s						
BBOO	Buckleboo	39.75	255	P	P	04 46 40.9	+0.7
AS31	Alice Springs	44.15	267	P	P	04 47 16.2	-0.1
AS31				IAmb	IAmb	04 47 16.8	
	comp=Z,0.8nm,0.6s						
ASAR	Alice Springs	44.15	267	P	P	04 47 15.8	-0.5
ASAR	Alice Springs	44.15	267	P	P	04 47 16.3	0.0
	comp=Z,2.3nm,0.6s,baz=104,slow=7.0,SNR=38						
	comp=Z,2.3nm,0.6s						
WR8	Warramunga Arr	45.09	273	P	P	04 47 23.2	-0.5
WR8				IAmb	IAmb	04 47 26.7	
	comp=Z,11nm,1.5s						
WRA	Warramunga Arr	45.23	272	P	P	04 47 24.6	-0.3
WRA	Warramunga Arr	45.23	272	P	P	04 47 24.2	-0.7
	comp=Z,2.2nm,0.3s,baz=112,slow=7.8,SNR=34						
	comp=Z,2.2nm,0.3s						
KNRA	Kununurra	51.88	274	P	P	04 48 15.4	-0.6
KNRA				IAmb	IAmb	04 48 55.9	
	comp=Z,5.0nm,1.0s						
FITZ	Fitzroy Crossi	53.45	270	P	P	04 48 27.2	-0.5
FITZ	Fitzroy Crossi	53.45	270	P	P	04 48 28.3	+0.6
	comp=Z,2.6nm,1.1s,baz=135,slow=7.1,SNR=1.4						
	comp=Z,2.6nm,1.1s						
QSPA	South Pole Qui	58.68	180	P	P	04 49 18.6	+14
	comp=Z,1.8nm,0.8s,baz=71,slow=3.6,SNR=14						
	comp=Z,1.8nm,0.8s						
SNAA	Sanae	77.09	178	P	P	04 51 00.1	+0.1
SNAA				IAmb	IAmb	04 51 26.3	
	comp=Z,3.0nm,1.2s						
FIA1	FINESS Array S	146.49	340		PKiKP	04 58 52.6	+2.2
FINES	FINESS Array B	146.49	340		PKiKP	04 58 52.4	+2.0
FINES	FINESS Array B	146.49	340	PKPbc	PKiKP	04 58 52.8	+2.3
	comp=Z,2.1nm,0.5s,baz=50,slow=4.4,SNR=24						
NB2	NORSAR Subarra	149.93	352	PKP	PKPab	04 59 03.3	+0.9
	comp=Z,0.7nm,0.7s,baz=16,slow=4.1						
NOA	NORSAR Array B	149.93	352	PKPbc	PKPab	04 59 02.7	+0.3
	comp=Z,0.5nm,0.7s,baz=26,slow=3.7,SNR=4.0						
HFS	Hagfors	150.47	349	PKPbc	PKPab	04 59 04.4	-0.2
	comp=Z,0.6nm,0.5s,baz=253,slow=4.0,SNR=5.2						
AKASG	Malin Array Be	152.79	323	PKPbc	PKPab	04 59 12.4	-2.2
	comp=Z,0.8nm,0.6s,baz=58,slow=2.0,SNR=3.1						
BRTR	Keskin Array B	154.05	297	PKPbc	PKPab	04 59 15.6	-4.9
	comp=Z,0.7nm,0.8s,baz=124,slow=2.6,SNR=4.2						

ZUR 16 04:52:04.4, 46°.18N×9°.05E, h14km, MLh1.3/4**, 1C-4D, Error ellipse: s-maj=2040.1km s-min=1205.6km az=184.0, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PREO2	Preonzo, Alpe	0.09	328	⇓Pg	Pg	04 52 07.8	+0.2
PREO2				Sg	Sg	04 52 09.8	+0.1
PREO4	Preonzo, Alpe	0.09	328	⇓Pg	Pg	04 52 07.7	+0.2
PREO4				Sg	Sg	04 52 09.8	+0.1
PREO5	Alpe di Roscio	0.09	328	⇓Pg	Pg	04 52 07.7	+0.2
PREO5				Sg	Sg	04 52 09.8	+0.1
MUGIO	Muggio	0.26	181	Pg	Pg	04 52 10.1	+0.2
MUGIO				Sg	Sg	04 52 13.8	+0.2
TUE	Stuetta	0.36	35	⇑Pg	Pg	04 52 12.0	+0.2
TUE				Sg	Sg	04 52 16.7	-0.2
FUSIO	Fusio	0.38	316	⇓Pg	Pg	04 52 12.0	-0.2
VDL	Val di Lei	0.41	42	Pg	Pg	04 52 12.9	+0.1
VDL				Sg	Sg	04 52 18.1	-0.3

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*IDC **16** 05:10:12.8±0.7, 30°.71S×177°.92W, h0km, mb4.1/8, mbtmp4.1/9, ML3.5/1, Error ellipse: s-maj=23.5km s-min=23.0km az=35.0*
*NEIC **16** 05:10:17.3±0.4, 31°.08S±0°.09×177°.81W±0°.09, h35km±2km, mb4.4/20, Error ellipse: s-maj=19.6km s-min=4.3km az=42.0*
ISC 16 05:10:17.7±0.6**, 31°.14S**±0°.05×**178°.0W**±0°.1**, h35km, n70, σ1s.72**/60**, mb4.5**/19**, 4C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.87	3	P	Pn	05 10 44.7	-2.5
GLKZ				S	Sn	05 11 06.0	-3.5
RAO	Raoul Island	1.88	3		Pn	05 10 45.5	-1.9
RIZ	Raoul Island	1.89	3	P	Pn	05 10 45.6	-1.9
MXZ	Matakaoa Point	7.09	204	Pn	Pn	05 11 56.6	-2.3
MXZ	Matakaoa Point	7.09	204	P	Pn	05 11 56.1	-2.8
MXZ				S	Sn	05 13 17.5	-0.7
HAZ	Te Kaha	7.45	206	P	Pn	05 12 01.9	-2.0
HAZ				S	Sn	05 13 28.7	+1.6
PUZ	Puketiti	7.56	203	P	Pn	05 12 02.8	-2.6
PUZ				S	Sn	05 13 28.3	-1.7
WCZ	Waipu Caves	7.96	231	P	Pn	05 12 18.7	+7.8
MWZ	Matawai	8.05	206	P	Pn	05 12 09.6	-2.6
MWZ				S	Sn	05 13 41.0	-1.0
OUZ	Omahuta	8.11	238	P	Pn	05 12 19.7	+6.7
URZ	Urewera	8.15	208	Pn	Pn	05 12 09.9	-3.5
	1.7nm,0.3s,baz=346,slow=4.7,SNR=9.3						
URZ				Sn	Sn	05 13 44.3	-0.1
	7.4nm,0.3s,baz=122,slow=23,SNR=14						
URZ	Urewera	8.15	208	P	Pn	05 12 11.0	-2.5
URZ				S	Sn	05 13 45.1	+0.7
KNZ	Kokohu	8.62	203	P	Pn	05 12 15.4	-4.5
KNZ				S	Sn	05 13 52.9	-2.9
BKZ	Black Stump Fm	9.18	208	P	Pn	05 12 24.2	-3.4
BKZ				S	Sn	05 14 06.3	-3.4
BFZ	Birch Farm	10.59	204	P	Pn	05 12 44.7	-2.2
BFZ				S	Sn	05 14 38.3	-5.9
MRZ	Mangatainoka R	10.82	207	P	Pn	05 12 45.2	-4.8
MSWZ	Moikau Station	11.60	206	P	Pn	05 12 56.9	-3.8
TCW	Tory Channel	11.81	210	P	Pn	05 12 60.0	-3.6
TUWZ	Tuamarina	12.13	210	P	Pn	05 13 03.6	-4.5
DZM	Mont Dzumac	16.55	299		Pn	05 14 08.0	+0.8
DZM				IAmb	IAmb	05 14 26.5	
	comp=Z,11nm,0.8s						
DZM	Mont Dzumac	16.55	299	Pn	Pn	05 14 06.7	-0.5
	comp=Z,0.2nm,0.3s,baz=133,slow=17,SNR=3.9						
	comp=Z,2.4nm,0.9s						
ARMA	Armidale	26.04	264	P	P	05 15 48.5	+0.7
ARMA				IAmb	IAmb	05 15 52.7	
	comp=Z,9.5nm,1.1s						
EIDS	Eidsvold	27.75	274	P	P	05 16 03.5	+0.3
EIDS				IAmb	IAmb	05 16 06.9	
	comp=Z,7.5nm,0.9s						
TAU	Tasmania Unive	29.85	237	P	P	05 16 21.7	+0.1
TAU				IAmb	IAmb	05 16 31.9	
	comp=Z,12nm,1.0s						
TOO	Toolangi	30.65	248	P	P	05 16 29.2	+0.3
CTAO	Charters Tower	33.90	280		P	05 16 57.6	+0.2
STKA	Stephens Creek	34.29	258	P	P	05 17 01.5	+0.8
STKA	Stephens Creek	34.29	258	P	P	05 17 02.3	+1.6
	comp=Z,5.7nm,0.7s,baz=94,slow=9.2,SNR=11						
	comp=Z,5.7nm,0.7s						
BBOO	Buckleboo	38.75	255	P	P	05 17 38.8	0.0
BBOO				IAmb	IAmb	05 17 49.8	
	comp=Z,7.4nm,0.8s						
COEN	Coen	39.45	287	P	P	05 17 46.2	+1.4
COEN				IAmb	IAmb	05 17 48.9	
	comp=Z,13nm,1.1s						
AS31	Alice Springs	43.05	268		P	05 18 15.6	+1.3
AS31				IAmb	IAmb	05 18 15.9	
	comp=Z,2.3nm,0.6s						
ASAR	Alice Springs	43.05	268	P	P	05 18 15.0	+0.7
ASAR	Alice Springs	43.05	268	P	P	05 18 15.5	+1.2
	comp=Z,6.3nm,0.6s,baz=104,slow=7.3,SNR=96						
	comp=Z,6.3nm,0.6s						
WRA	Warramunga Arr	44.10	273	P	P	05 18 23.3	+0.5
WRA	Warramunga Arr	44.10	273	P	P	05 18 23.9	+1.1
	comp=Z,4.9nm,0.5s,baz=112,slow=7.9,SNR=28						
	comp=Z,4.9nm,0.5s						
SBA	Scott Base	47.30	184	P	P	05 18 47.2	-0.1
VNDA	Vanda	47.36	186	P	P	05 18 46.0	-1.7
VNDA	Vanda	47.36	186	P	P	05 18 52.5	+4.8
	comp=Z,0.5nm,0.7s,baz=8.4,slow=11,SNR=1.2						
	comp=Z,0.5nm,0.7s						
MTN	Manton Dam	50.07	280	P	P	05 19 09.4	0.0
KNRA	Kununurra	50.74	275	P	P	05 19 14.3	-0.1
KNRA				IAmb	IAmb	05 19 17.9	
	comp=Z,8.8nm,1.1s						
FITZ	Fitzroy Crossi	52.33	270	P	P	05 19 26.5	+0.1
FITZ	Fitzroy Crossi	52.33	270	P	P	05 19 27.3	+0.9
	comp=Z,2.7nm,0.7s,baz=117,slow=2.2,SNR=2.4						
	comp=Z,2.7nm,0.7s						
CASY	Casey	54.48	208	P	P	05 19 41.7	+0.3
CASY				IAmb	IAmb	05 19 42.5	
	comp=Z,5.1nm,0.8s						
QSPA	South Pole Qui	58.98	180	P	P	05 20 13.6	+0.1
QSPA	South Pole Qui	58.98	180	P	P	05 20 17.0	+3.5
	comp=Z,0.7nm,0.6s,baz=67,slow=7.7,SNR=8.3						
	comp=Z,0.7nm,0.6s						
BELA	Belgrano 2	69.06	172	P	P	05 21 19.3	-0.1
BELA				IAmb	IAmb	05 21 29.5	
	comp=Z,2.8nm,0.9s						
TROLL	Troll, Antarti	77.14	180	⇑P	P	05 22 12.0	+4.7
	comp=Z,209nm,1.0s						
SNAA	Sanae	77.42	178	⇑P	P	05 22 14.9	+6.0
	comp=Z,19nm,0.4s						
SNAA	Sanae	77.42	178	P	P	05 22 11.4	+2.5
	comp=Z,0.4nm,0.7s,baz=180,slow=10,SNR=10						
	comp=Z,0.4nm,0.7s						
VNA3	Neumayer Olymp	77.57	176	⇑P	P	05 22 16.0	+6.3
	comp=Z,7.8nm,0.8s						
VNA2	Neumayer--Watz	78.01	177	⇑P	P	05 22 17.5	+5.5
	comp=Z,4.8nm,0.6s,baz=177,slow=5.8						
H03S2	Juan Fernandez	80.08	123	T	T	06 51 28.1	
	baz=237						
H03S1	Juan Fernandez	80.09	123	T	T	06 51 27.6	
	baz=237						
H03S3	Juan Fernandez	80.10	123	T	T	06 51 26.5	
	baz=237						
H03N3	Juan Fernandez	80.28	123	T	T	06 51 40.4	
	baz=237						
H03N2	Juan Fernandez	80.28	123	T	T	06 51 41.2	
	baz=237						
H03N1	Juan Fernandez	80.30	123	T	T	06 51 40.9	
	baz=237						
NVAR	Mina Array Bea	88.80	43	P	P	05 23 08.2	+0.1
	comp=Z,1.0nm,0.8s,baz=220,slow=9.1,SNR=7.9						
	comp=Z,1.0nm,0.8s						
MKAR	Makanchi Array	118.22	310	PKP	PKPdf	05 28 59.7	-1.2
	comp=Z,0.6nm,0.6s,baz=90,slow=1.2,SNR=5.5						
KURBB	Kurchatov Arra	121.57	313	PKP	PKPdf	05 29 06.3	-0.8
	comp=Z,2.8nm,0.7s,baz=107,slow=2.0,SNR=20						
BVAR	Borovoye Array	126.91	315	PKP	PKPdf	05 29 17.2	-0.1
	comp=Z,3.4nm,0.8s,baz=77,slow=3.2,SNR=12						
ARCES	ARCESS Array B	139.30	348	PKP	PKPdf	05 29 39.1	-1.0
	comp=Z,2.6nm,0.8s,baz=190,slow=0.5,SNR=4.9						
KBZ	Khabaz	145.49	303	PKPbc	PKPbc	05 29 52.1	+0.1
	comp=Z,2.1nm,0.9s,baz=102,slow=6.1,SNR=4.2						
FINES	FINESS Array B	145.82	340	PKPbc	PKPdf	05 29 51.7	-0.2
	comp=Z,18nm,0.8s,baz=59,slow=4.9,SNR=56						
NB2	NORSAR Subarra	149.47	351	PKP	PKPbc	05 30 02.3	-0.2
	comp=Z,2.6nm,0.8s,baz=15,slow=2.6						
NOA	NORSAR Array B	149.47	351	PKPbc	PKPbc	05 30 02.1	-0.4
	comp=Z,4.2nm,0.8s,baz=14,slow=4.2,SNR=19						
HFS	Hagfors	149.96	348	PKPbc	PKPbc	05 30 03.0	-0.7
	comp=Z,8.0nm,0.8s,baz=329,slow=1.7,SNR=16						
MMAI	Mount Meron Ar	151.67	283	PKPbc	PKiKP	05 30 09.8	+0.7
	comp=Z,3.7nm,0.5s,baz=79,slow=4.3,SNR=11						
AKASG	Malin Array Be	151.86	322	PKPbc	PKPbc	05 30 07.9	-0.5
	comp=Z,5.9nm,0.7s,baz=54,slow=2.7,SNR=41						
BRTR	Keskin Array B	152.92	297	PKPbc	PKPbc	05 30 11.0	-0.4
	comp=Z,1.4nm,0.8s,baz=121,slow=3.4,SNR=7.5						

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*IDC **16** 05:12:39.6±0.8, 4°.07N×126°.69E, h0km, mb4.0/11, mbtmp4.0/11, Error ellipse: s-maj=44.4km s-min=16.2km az=70.0*
*DJA **16** 05:12:44.6±0.7, 4°N±5°×12°7E±°, h21km±2km, M4.4/12, mB5.0/2, mb4.5/6, MLv4.3/12, Mw(mB)4.3/2*
*NEIC **16** 05:12:50.1±1.7, 4°.15N±0°.09×126°.3E±0°.1, h100km±9km, mb4.3/22, Error ellipse: s-maj=18.5km s-min=12.7km az=67.0*
ISC 16 05:12:44.4±0.5**, 4°.19N**±0°.06×**126°.78E**±0°.07**, h36km, n45, σ1s.70**/48**, mb4.2**/21**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.34	248	P	Pn	05 13 07.6	+1.0
SGSI				S	Sn	05 13 25.2	+2.0
TNTI	Ternate	3.45	170	Pn	Pn	05 13 42.6	+7.0
TNTI	Ternate	3.45	170	P	Pn	05 13 36.9	+1.3
TNTI				S	Sn	05 14 17.4	+2.2
KMSI	Cibinong	4.55	218	P	Pn	05 13 53.1	+2.3
KMSI				S	Sn	05 14 44.5	+2.1
MRSI	Marisa	6.08	233	P	Pn	05 14 13.6	+1.8
SANI	Sanana	6.25	187	P	Pn	05 14 14.8	+0.7
LUWI	Luwuk	6.56	218	Pn	Pn	05 14 20.4	+2.0
TOLI2	Tolitoli	6.72	243		Pn	05 14 21.2	+0.5
SWI	Sorong	6.73	138	P	Pn	05 14 22.1	+1.4
	0.1nm29nm,1.1s						
APSI	Ampana	7.21	225	P	Pn	05 14 28.9	+1.6
KSM	Kuching	16.66	261		Pn	05 16 32.4	-2.9
YULB	Yu-li	19.81	345	P	P	05 17 10.8	-1.1
YULB				IAmb	IAmb	05 17 38.6	
	comp=Z,8.4nm,0.9s						
KNRA	Kununurra	19.84	174	P	P	05 17 11.4	-0.9
KNRA				IAmb	IAmb	05 17 27.4	
	comp=Z,8.3nm,1.1s						
TPUB	Ta-pu	19.91	343	P	P	05 17 13.1	+0.1
TPUB				IAmb	IAmb	05 17 40.7	
	comp=Z,8.9nm,0.6s						
YOJ	Yonaguni jima	20.48	350	P	P	05 17 20.1	+0.9
FITZ	Fitzroy Crossi	22.18	183	P	P	05 17 37.7	+0.2
FITZ	Fitzroy Crossi	22.18	183	P	P	05 17 37.0	-0.5
	comp=Z,1.6nm,0.7s,baz=14,slow=7.9,SNR=12						
	comp=Z,1.6nm,0.7s						
WB0	Warramunga Arr	24.96	163		P	05 18 04.2	-0.5
WB0				IAmb	IAmb	05 18 25.1	
	comp=Z,18nm,1.1s						
WRA	Warramunga Arr	25.11	163		P	05 18 05.6	-0.4
WRA	Warramunga Arr	25.11	163	P	P	05 18 05.3	-0.7
	comp=Z,3.8nm,0.8s,baz=343,slow=10,SNR=20						
	comp=Z,3.8nm,0.8s						
WB2	Warramunga Arr	25.11	163	P	P	05 18 05.7	-0.3
WB2				IAmb	IAmb	05 18 25.0	
	comp=Z,20nm,1.1s						
WR8	Warramunga Arr	25.17	163		P	05 18 06.3	-0.3
WR8				IAmb	IAmb	05 18 24.3	
	comp=Z,9.2nm,0.8s						
WR0	Warramunga Arr	25.18	163	P	P	05 18 06.8	+0.1
WR0				IAmb	IAmb	05 18 30.7	
	comp=Z,9.3nm,1.1s						
CMAR	Chiang Mai Arr	30.68	300	P	P	05 18 57.0	+1.0
	comp=Z,0.9nm,0.3s,baz=114,slow=8.2,SNR=7.1						
	comp=Z,0.9nm,0.3s						
KSRS	Korea Array	33.12	2	P	P	05 19 19.9	+2.8
	comp=Z,1.2nm,0.7s,baz=182,slow=10.0,SNR=2.8						
	comp=Z,1.2nm,0.7s						
MAJO	Matsushiro	33.87	17	P	P	05 19 24.5	+0.8
XAN	Xi'an	34.03	333	P	P	05 19 26.3	+1.1
XAN				pmax	pmax		
	comp=Z,17nm,0.7s						
MORW	Morawa	34.64	197	P	P	05 19 26.9	-3.6
EIDS	Eidsvold	37.69	142	P	P	05 19 57.2	+0.6
EIDS				IAmb	IAmb	05 20 03.0	
	comp=Z,3.0nm,0.8s						
BBOO	Buckleboo	37.84	167	P	P	05 19 56.3	-1.5
BBOO				IAmb	IAmb	05 20 12.2	
	comp=Z,5.4nm,1.1s						
NWAO	Narrogin (SRO)	38.01	193	P	P	05 19 56.1	-3.0
STKA	Stephens Creek	38.54	160	P	P	05 20 03.1	-0.5
STKA	Stephens Creek	38.54	160	P	P	05 20 03.2	-0.5
	comp=Z,2.5nm,0.6s,baz=340,slow=9.0,SNR=4.6						
	comp=Z,2.5nm,0.6s						
ARMA	Armidale	41.83	147	P	P	05 20 31.2	+0.2
ARMA				IAmb	IAmb	05 20 42.4	
	comp=Z,5.0nm,0.9s						
ULN	Ulaanbaatar	46.70	342	P	P	05 21 07.3	-2.6
ULN				IAmb	IAmb	05 21 12.4	
	comp=Z,2.0nm,0.5s						
MKAR	Makanchi Array	57.20	325	P	P	05 22 29.1	+1.0
	comp=Z,0.9nm,0.5s,baz=117,slow=9.2,SNR=9.1						
MKAR				PcP	PcP	05 23 24.1	+1.9
	comp=Z,1.2nm,0.7s,baz=115,slow=3.8,SNR=6.3						
	comp=Z,0.9nm,0.5s						
KURBB	Kurchatov Arra	61.38	327	P	P	05 22 57.6	+0.9
	comp=Z,1.0nm,0.6s,baz=127,slow=5.8,SNR=10.0						
	comp=Z,1.0nm,0.6s						
BVAR	Borovoye Array	66.96	327	P	P	05 23 33.5	+0.2
	comp=Z,1.0nm,0.6s,baz=117,slow=8.7,SNR=5.1						
	comp=Z,1.0nm,0.6s						
CASY	Casey	71.28	187	P	P	05 23 58.8	-1.0
CASY				IAmb	IAmb	05 24 11.1	
	comp=Z,5.1nm,1.1s						
AB31	Akbulak array	71.82	321	P	P	05 23 59.5	-4.0
ABKAR	Akbulak array	71.82	321	P	P	05 23 59.9	-3.6
VNDA	Vanda	83.88	173	P	P	05 25 11.4	+1.5
ILAR	Eielson Array	84.67	25	P	P	05 25 15.9	+1.7
	comp=Z,0.4nm,0.8s,baz=269,slow=7.5,SNR=4.1						
	comp=Z,0.4nm,0.8s						
FINES	FINESS Array B	91.45	332	P	P	05 25 47.0	+0.3
	comp=Z,1.0nm,0.8s,baz=42,slow=6.3,SNR=4.1						
	comp=Z,1.0nm,0.8s						
AKASG	Malin Array Be	91.56	321	P	P	05 25 47.8	+0.2
	comp=Z,0.6nm,0.6s,baz=71,slow=4.3,SNR=4.6						
	comp=Z,0.6nm,0.6s						

GCG 16 05:16:39.0±0.3**, 13°.14N**×**89°.47W, h68**^{km}±3^{km}**, MD3.7, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	0.51	2	*i* P	Pn	05 16 51.8	-0.2
JAYA				*i* S	Sn	05 17 01.6	+0.1
NUBE	Las Nubes	0.82	338	*i* P	Pn	05 16 55.7	+0.4
NUBE				*i* S	Sn	05 17 08.7	+1.4
MTO3	Montecristo	1.26	5	*i* P	Pn	05 17 01.5	+0.5
MTO3				*i* S	Sn	05 17 19.2	+1.8

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*IDC **16** 05:17:10.3±0.3, 31°.07S×177°.98W, h0^{km}, mb5.3/21, mbtmp5.2/23, ML5.8/1, MS6.0/52, Error ellipse: s-maj=11.9km s-min=10.9km az=56.0*

*BJI **16** 05:17:14.5, 30°.90S×178°.00W, h30^{km}, mB6.5/70, mb5.7/61, Ms6.3/96, Ms7 6.1/94*

*NEIC **16** 05:17:14.7, 31°.07S×178°.07W, h21^{km}*

*NEIC **16** 05:17:14.9±1.9, 31°.00S±0°.08×178°.1W±0°.1, h21^{km}±1^{km}, mb5.7/389, Ms_20 6.3/762, Mwb6.2/72, Mww6.3/43, Error ellipse: s-maj=17.4km s-min=13.1km az=92.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}2.53; $M_{\theta\theta}$-1.02; $M_{\phi\phi}$-1.51; $M_{r\theta}$0.29; $M_{\theta\phi}$-0.65; $M_{\phi r}$1.44; Fault plane solution: $M_0$2.73000×10^{18} NP1:ϕ_s23.24000°, δ61.38000°, λ81.77000°. NP2:ϕ_s220.05000°, δ29.69000°, λ104.70000°. Principal axes: T 2.9912, Plg72.0000°, Azm274.0000°; N -0.6450, Plg7.0000°, Azm27.0000°; P -2.3462, Plg16.0000°, Azm119.0000°;*

*NEIC **16** 05:17:15.3, 31°.07S×178°.08W, h40^{km}*

*MOS **16** 05:17:15.7±1.0, 30°.97S×178°.21W, h36^{km}, mb5.9/39, MS6.2/26, Error ellipse: s-maj=8.4km s-min=6.5km az=95.0*

*NEIC **16** 05:17:15.3, 31°.17S×177°.50W, h40^{km}, Moment Tensor Solution. Duration: 6^{s}2 Moment tensor: Scale 10^{18}Nm; M_{rr}3.34; $M_{\theta\theta}$-0.51; $M_{\phi\phi}$-2.84; $M_{r\theta}$0.27; $M_{\theta\phi}$-0.79; $M_{\phi r}$1.48; Fault plane solution: $M_0$3.56000×10^{18} NP1: ϕ_s199.53000°, δ32.56000°, λ94.40000°. NP2:ϕ_s14.32000°, δ57.55000°, λ87.20000°. Principal axes: T 3.6831, Plg77.0000°, Azm275.0000°; N -0.2694, Plg2.0000°, Azm16.0000°; P -3.4138, Plg13.0000°, Azm106.0000°;*

*IPGP **16** 05:17:16.0, 31°.06S×178°.02W, h25^{km}, Mw6.4, Fault plane solution: NP1:ϕ_s198.00000°, δ31.00000°, λ96.00000°. NP2:ϕ_s11.00000°, δ59.00000°, λ86.00000°.*

*BGR **16** 05:17:17.1, 29°.53S×177°.51W, h27^{km}, Ms6.5*

*NOU **16** 05:17:18.6, 31°.40S×177°.84W, h50^{km}, ML6.2/135, Kermadec Islands Region*

*GCMT **16** 05:17:19.9±0.1, 31°.07S×177°.79W, h35^{km}, MW6.3/175, Moment Tensor Solution. s169,c416; s175,c478; Duration: 3^{s}6 Moment tensor: Scale 10^{18}Nm; M_{rr}3.20±.03; $M_{\theta\theta}$-0.14±.02; $M_{\phi\phi}$-3.06±.02; $M_{r\theta}$0.43±.03; $M_{\theta\phi}$-0.93±.01; $M_{\phi r}$2.47±.03; Best double couple: $M_0$4.11800×10^{18} NP1:ϕ_s201.00000°, δ26.00000°, λ97.00000°. NP2:ϕ_s12.00000°, δ64.00000°, λ86.00000°. Principal axes: T 4.0590, Plg71.0000°, Azm274.0000°; N 0.1120, Plg3.0000°, Azm14.0000°; P -4.1760, Plg19.0000°, Azm105.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 16 05:17:15.4±0.4**, 31°.13S**±0°.03×**177°.93W**±0°.03**, h31**^{km}±2^{km}**, h31**^{km}**:pP-P, n2222,** σ**2**^{s}**07**/2040**, mb5.7**/268**, MS6.3**/506**, 153C-71D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.86	0	P	Pn	05 17 42.6	-2.5
GLKZ				S	Sn	05 18 05.6	-2.0
RAO	Raoul Island	1.87	0		Pn	05 17 42.9	-2.5
RAO	Raoul Island	1.87	0	P	Pn	05 17 43.2	-2.1
RAO	Raoul Island	1.87	0	⇓P	Pn	05 17 43.3	-2.1
RIZ	Raoul Island	1.88	0	P	Pn	05 17 43.9	-1.6
MXZ	Matakaoa Point	7.13	205		Pn	05 18 58.2	+0.6
MXZ	Matakaoa Point	7.13	205	P	Pn	05 18 58.0	+0.5
MXZ	Matakaoa Point	7.13	205	P	Pn	05 18 55.3	-2.3
MXZ				S	Sn	05 20 17.8	+0.3
WMGZ	Waiomatatini S	7.32	203	P	Pn	05 18 57.6	-2.6
WMGZ				S	Sn	05 20 23.0	+0.8
PKGZ	Pakihiroa	7.48	205	P	Pn	05 18 59.1	-3.4
PKGZ				S	Sn	05 20 26.6	+0.4
HAZ	Te Kaha	7.50	207	P	Pn	05 19 00.0	-2.6
HAZ				S	Sn	05 20 28.3	+1.8
PUZ	Puketiti	7.60	203	P	Pn	05 19 00.8	-3.3
PUZ				S	Sn	05 20 26.0	-3.2
KUZ	Kuaotunu	7.69	222	P	Pn	05 19 05.4	+0.2
RUGZ	Raukumara Rang	7.72	207	P	Pn	05 19 02.9	-2.9
RUGZ				S	Sn	05 20 31.1	-1.1
TWGZ	Tauwhareparae	7.79	204	P	Pn	05 19 04.4	-2.3
TWGZ				S	Sn	05 20 35.6	+1.7
MYRZ	Mayor Island	7.80	217	P	Pn	05 19 10.1	+3.2
WHRZ	Whale Island	7.92	211	P	Pn	05 19 07.8	-0.6
WHRZ				S	Sn	05 20 38.3	+1.5
CNGZ	Carnagh Statio	7.99	202	P	Pn	05 19 06.2	-3.2
CNGZ				S	Sn	05 20 39.7	+1.0
WCZ	Waipu Caves	8.03	231	P	Pn	05 19 16.0	+6.0
WIAZ	Waiheke Island	8.06	224	P	Pn	05 19 13.4	+3.0
TKGZ	Te Karaka	8.07	204	P	Pn	05 19 06.9	-3.6
TKGZ				S	Sn	05 20 38.4	-2.3
OPRZ	Ohinepanea	8.10	213	P	Pn	05 19 10.0	-0.8
OPRZ				S	Sn	05 20 42.2	+0.9
MWZ	Matawai	8.10	206	P	Pn	05 19 07.6	-3.3
MWZ				S	Sn	05 20 40.1	-1.3
ABAZ	Army Bay	8.12	226	P	Pn	05 19 17.4	+6.2
TGRZ	Tauranga	8.14	214	P	Pn	05 19 12.3	+0.9
MARZ	Manawahe	8.15	212	P	Pn	05 19 13.0	+1.3
MARZ				S	Sn	05 20 44.9	+2.1
OUZ	Omahuta	8.19	238	P	Pn	05 19 17.5	+5.4
OUZ	Omahuta	8.19	238	⇑P	Pn	05 19 16.9	+4.8
MBAZ	Motutapu North	8.19	225	P	Pn	05 19 17.0	+5.0
URZ	Urewera	8.20	208	Pn	Pn	05 19 08.2	-4.0
	8.3nm,0.3s,baz=349,slow=4.0,SNR=52						
URZ				Sn	Sn	05 20 36.1	-7.6
	79nm,0.3s,baz=167,slow=5.7,SNR=4.5						
URZ	Urewera	8.20	208	P	Pn	05 19 12.3	+0.1
URZ	Urewera	8.20	208	P	Pn	05 19 08.3	-4.0
URZ				S	Sn	05 20 42.5	-1.3
URZ	Urewera	8.20	208	⇑P	Pn	05 19 08.4	-3.8
EDRZ	Edgecumbe	8.23	211	P	Pn	05 19 12.2	-0.5
EDRZ				S	Sn	05 20 47.7	+3.1
MKAZ	Moumakai	8.26	222	P	Pn	05 19 15.7	+2.6
RAGZ	Rawiri	8.28	206	P	Pn	05 19 11.8	-1.7
RAGZ				S	Sn	05 20 44.3	-1.6
ETAZ	East Tamaki Re	8.29	224	P	Pn	05 19 19.7	+6.2
RIGZ	Rimuhau	8.34	204	P	Pn	05 19 10.6	-3.7
RIGZ				S	Sn	05 20 46.1	-1.3
KARZ	Kaharoa	8.38	213	P	Pn	05 19 18.2	+3.4
OMRZ	Omania	8.39	212	P	Pn	05 19 19.2	+4.3
OMRZ				S	Sn	05 20 51.1	+2.5
TARZ	Mount Tarawera	8.44	211	P	Pn	05 19 16.2	+0.6
TARZ				S	Sn	05 20 47.4	-2.4
PRGZ	Paritu Road	8.50	203	P	Pn	05 19 12.6	-3.8
PRGZ				S	Sn	05 20 49.8	-1.4
RRRZ	Republican Roa	8.52	211	P	Pn	05 19 17.7	+1.0
HLRZ	Highlands Stat	8.52	212	P	Pn	05 19 17.8	+1.1
MUGZ	Murupara	8.52	209	P	Pn	05 19 14.4	-2.3
TOZ	Tahuroa Road	8.53	218		Pn	05 19 19.7	+3.0
TOZ	Tahuroa Road	8.53	218	P	Pn	05 19 20.6	+3.9
RTZ	Ruatahuna	8.55	208		Pn	05 19 14.6	-2.6
RTZ	Ruatahuna	8.55	208	P	Pn	05 19 14.5	-2.7
SNGZ	Shannon Statio	8.56	206	P	Pn	05 19 14.1	-3.1
KNZ	Kokohu	8.66	203	P	Pn	05 19 14.5	-4.0
HRRZ	Handcock Road	8.66	212	P	Pn	05 19 20.7	+2.0
MHGZ	Mahia Peninsul	8.70	202	P	Pn	05 19 15.1	-4.0
PRRZ	Plateau Road	8.70	211	P	Pn	05 19 19.1	-0.1
RAHZ	Arahi	8.77	206	P	Pn	05 19 17.8	-2.4
ALRZ	Allen Road	8.78	211	P	Pn	05 19 19.1	-1.1
MTHZ	Maungataniwha	8.81	208	P	Pn	05 19 18.0	-2.7
WPRZ	Whakapapatarin	8.82	212	P	Pn	05 19 25.3	+4.4
WHHZ	Waihua	8.86	205	P	Pn	05 19 19.4	-1.9
KUTZ	Kaahu Road	8.96	213	P	Pn	05 19 25.3	+2.6
MRHZ	Matea Rd	8.97	210	P	Pn	05 19 21.0	-1.9
NMHZ	Naumai	9.04	207	P	Pn	05 19 20.5	-3.4
ARHZ	Aropaoanui	9.11	206	P	Pn	05 19 21.6	-3.1
WATZ	Wairara	9.17	213	P	Pn	05 19 27.7	+2.1
BKZ	Black Stump Fm	9.22	208		Pn	05 19 24.1	-2.3
BKZ	Black Stump Fm	9.22	208	P	Pn	05 19 25.5	-0.8
BKZ	Black Stump Fm	9.22	208	S	Sn	05 21 07.2	-1.8
BKZ	Black Stump Fm	9.22	208	P	Pn	05 19 22.1	-4.2
RATZ	Rangitukua	9.28	212	P	Pn	05 19 27.5	+0.3
RITZ	Rihia Road	9.33	211	P	Pn	05 19 26.8	-1.0
MCHZ	McNeill Hill	9.38	206	P	Pn	05 19 24.7	-3.8
CKHZ	Cape Kidnapper	9.43	204	P	Pn	05 19 24.9	-4.2
HIZ	Hauiti	9.45	217		Pn	05 19 31.8	+2.4
HIZ	Hauiti	9.45	217	P	Pn	05 19 30.5	+1.1
KWHZ	Kaweka Forest	9.47	208	P	Pn	05 19 27.1	-2.6
NTVZ	North Tongarir	9.52	212	P	Pn	05 19 30.8	+0.4
TMVZ	Te Maari	9.52	211	P	Pn	05 19 27.8	-2.6
KRVZ	Karewarewa	9.53	212	P	Pn	05 19 31.0	+0.4
ETVZ	East Tongariro	9.53	211	P	Pn	05 19 28.9	-1.7
WTVZ	West Tongariro	9.57	212	P	Pn	05 19 32.2	+1.1
NNVZ	North Ngauruho	9.57	212	P	Pn	05 19 31.0	-0.2
OTVZ	Oturere	9.57	211	P	Pn	05 19 31.0	-0.2
TWVZ	Taurewa	9.60	213	P	Pn	05 19 32.4	+0.8
SNVZ	South Ngauruho	9.60	211	P	Pn	05 19 31.1	-0.6
NGZ	Ngauruhoe	9.61	212	P	Pn	05 19 30.8	-0.9
KAHZ	Kahuranaki	9.62	205	P	Pn	05 19 26.6	-5.2
COVZ	Chateau Observ	9.66	212	P	Pn	05 19 33.7	+1.4
TUVZ	Tukino	9.66	211	P	Pn	05 19 31.8	-0.7
KRHZ	Kereru	9.68	207	P	Pn	05 19 27.8	-4.7
FWVZ	Far West T-bar	9.70	212	P	Pn	05 19 31.7	-1.3
WHVZ	Whangaehu Hut	9.70	211	P	Pn	05 19 31.1	-2.0
MAVZ	Matarangi	9.71	211	P	Pn	05 19 32.4	-0.7
MOVZ	Moawhango	9.73	210	P	Pn	05 19 30.2	-3.1
TRVZ	Turoa	9.74	211	P	Pn	05 19 32.0	-1.5
WNVZ	Wahianoa	9.74	211	P	Pn	05 19 31.9	-1.6
PKVZ	Pokaka	9.82	212	P	Pn	05 19 34.2	-0.3
PXZ	Pawanui	9.84	204	P	Pn	05 19 29.9	-4.8
VRZ	Vera Road	9.97	215	P	Pn	05 19 40.0	+3.5
WPHZ	Waipukurau	10.02	206	P	Pn	05 19 32.7	-4.5
PRHZ	Porangahau	10.13	204	P	Pn	05 19 33.7	-5.0
DVHZ	Dannevirke	10.33	206	P	Pn	05 19 36.6	-4.8
ANWZ	Angora Road	10.36	204	P	Pn	05 19 37.9	-3.9
WAZ	Wanganui	10.36	212	P	Pn	05 19 39.8	-2.1
LREZ	Lake Rotokare	10.40	215	P	Pn	05 19 41.1	-1.4
NEZ	North Egmont	10.41	217	P	Pn	05 19 49.2	+6.5
KHEZ	Kahui Hut	10.47	217	P	Pn	05 19 46.1	+2.7
POWZ	Post Office Ro	10.56	207	P	Pn	05 19 41.7	-2.9
PRWZ	Pori Road	10.62	206	P	Pn	05 19 42.6	-2.8
BFZ	Birch Farm	10.63	205		Pn	05 19 43.8	-1.8
BFZ	Birch Farm	10.63	205	P	Pn	05 19 45.2	-0.4
BFZ	Birch Farm	10.63	205	P	Pn	05 19 39.3	-6.3
TIWZ	Tintock	10.85	206	P	Pn	05 19 43.9	-4.7
MRZ	Mangatainoka R	10.86	207		Pn	05 19 45.3	-3.4
HOWZ	Holdsworth Sta	11.09	207	P	Pn	05 19 45.4	-6.5
TMWZ	Te Maipa	11.13	205	P	Pn	05 19 46.1	-6.4
KIW	Kapiti Island	11.30	209	P	Pn	05 19 49.2	-5.5
MTW	Mount Morrison	11.32	206	P	Pn	05 19 48.6	-6.4
TRWZ	Traveller	11.46	205	P	Pn	05 19 50.0	-6.9
PAWZ	Paruwai Farm	11.54	206	P	Pn	05 19 51.5	-6.6
MSWZ	Moikau Station	11.64	206		Pn	05 19 56.7	-2.7
MSWZ	Moikau Station	11.64	206	P	Pn	05 19 53.5	-5.9
WEL	Wellington	11.72	208	P	Pn	05 19 57.8	-2.6
WEL	Wellington	11.72	208	P	Pn	05 19 57.8	-2.6
PLWZ	Palliser	11.77	206		Pn	05 20 00.4	-0.8
TCW	Tory Channel	11.86	210		Pn	05 19 56.5	-5.9
TUWZ	Tuamarina	12.18	210		Pn	05 20 02.8	-3.9
TKNZ	Takaka Hill	12.32	214		Pn	05 20 07.2	-1.5
QRZ	Quartz Range	12.37	216	P	Pn	05 20 09.4	0.0
NFK	Norfolk Island	12.41	276	P	P	05 20 15.8	-5.8
	comp=Z,687nm,0.4s,comp=Z,0.0nm						
NFK	Norfolk Island	12.41	276	⇓P	Pn	05 20 13.8	+3.8
BSWZ	Blackbirch Sta	12.45	210		Pn	05 20 14.6	+4.3
CTZ	Chatham Island	12.63	176	P	Pn	05 20 11.9	-0.9
CTZ	Chatham Island	12.63	176	S	Sn	05 22 25.2	-7.1
MRNZ	Matariki Terra	12.70	214		Pn	05 20 15.2	+1.4
LKBA	Tubou, Lakemba	12.87	356	P	P	05 20 23.6	-3.0
THZ	Tophouse	12.91	212		Pn	05 20 18.8	+2.0
KHZ	Kahutara	13.17	209		Pn	05 20 15.7	-4.5
KHZ	Kahutara	13.17	209	P	Pn	05 20 18.1	-2.1
DSZ	Denniston Nort	13.42	215		Pn	05 20 27.4	+3.6
DSZ					Sn	05 22 42.6	-9.2
MSVF	Nonsavu	13.83	344		Pn	05 20 26.6	-2.8
MSVF	Nonsavu	13.83	344	Pn	Pn	05 20 28.0	-1.4
	comp=Z,1.7nm,0.3s,baz=132,slow=20,SNR=16						
MSVF				LR	LR	05 24 59.9	
	comp=Z,186µm,19.0s,baz=180,slow=34						
	comp=Z,13nm,0.9s						
MSVF	Nonsavu	13.83	344	P	P	05 20 34.7	-2.7
MSVF	Nonsavu	13.83	344	*c i*P	Pn	05 20 29.3	-0.1
MSVF	Nonsavu	13.83	344	⇑P	Pn	05 20 30.5	+1.1
LTZ	Lake Taylor	14.01	211		Pn	05 20 31.1	-0.7
AMCZ	Amberley	14.16	209		Pn	05 20 34.6	+0.8
AMCZ	Amberley	14.16	209	P	Pn	05 20 32.2	-1.6
INZ	Inchbonnie	14.34	213		Pn	05 20 34.2	-2.1
OKCZ	Okains Bay	14.45	207	P	Pn	05 20 31.7	-6.1
TAVE	Taveuni	14.47	352	P	P	05 20 44.9	+0.4
OXZ	Oxford	14.54	210		Pn	05 20 35.0	-4.0
OXZ	Oxford	14.54	210	P	Pn	05 20 33.6	-5.4
MQZ	McQueen's Vall	14.60	208		Pn	05 20 37.5	-2.2
AKCZ	Akaroa Harbour	14.63	207	P	Pn	05 20 34.3	-6.0
RACZ	Rakaia	14.83	209	P	Pn	05 20 37.9	-4.9
DGTI	Dogotuki	14.91	351	P	P	05 20 50.6	+1.2
MHCZ	Mount Hutt	14.91	211	P	Pn	05 20 42.1	-2.0
YSA	Yasawairara	14.94	343	P	P	05 20 51.0	+1.3
RPZ	Rata Peaks	15.29	212		Pn	05 20 45.3	-3.6
RPZ	Rata Peaks	15.29	212	Pn	Pn	05 20 45.0	-3.9
	comp=Z,5.3nm,0.3s,baz=64,slow=0.5,SNR=12						
RPZ				Sn	Sn	05 23 23.0	-14
	comp=Z,24nm,0.3s,baz=194,slow=23,SNR=15						
RPZ	Rata Peaks	15.29	212	P	Pn	05 20 48.6	-0.4
RPZ	Rata Peaks	15.29	212	P	Pn	05 20 44.8	-4.1
PINNC	Pines Island,	15.55	300	P	P	05 20 57.2	+0.8
FOZ	Fox Glacier	15.73	215		Pn	05 20 54.9	+0.2
MARNC	Mare, Loyalty	15.82	304	P	P	05 21 00.6	+1.1
OUENC	Ouen Island, N	16.11	299	P	P	05 21 04.3	+1.6
LBZ	Lake Benmore	16.20	212		Pn	05 21 00.8	+0.1
YATNC	Mamie plateau,	16.29	300	P	P	05 21 06.9	+2.2
INH	Isangel	16.32	312	P	P	05 21 07.7	+2.7
ONTNC	Ouen Toro	16.47	298	P	P	05 21 08.7	+2.0
ODZ	Otahua Downs	16.52	210		Pn	05 21 03.6	-1.1
ODZ	Otahua Downs	16.52	210	P	Pn	05 21 03.8	-1.0
DZM	Mont Dzumac	16.62	299		P	05 21 08.5	+0.1
DZM	Mont Dzumac	16.62	299	*e*Pn	P	05 21 09.0	+0.6
	comp=Z,2µm,1.6s						
DZM				*e*LR	LR	05 24 54.1	
	comp=Z,320µm,24.8s						
DZM	Mont Dzumac	16.62	299	Pn	P	05 21 10.1	+1.7
	comp=Z,0.9nm,0.3s,baz=116,slow=14,SNR=53						
DZM				LR	LR	05 26 19.7	
	comp=Z,190µm,19.5s,baz=134,slow=33						
DZM	Mont Dzumac	16.62	299	P	P	05 21 10.8	+2.4
JCZ	Jackson Bay	16.64	215	P	Pn	05 21 06.8	+0.5
WKZ	Wanaka	17.08	213	P	P	05 21 12.7	-0.6
HHSZ	Highcliff Hill	17.22	208	P	Pn	05 21 13.1	-0.5
EAZ	Earnscleugh	17.25	212	P	Pn	05 21 11.5	-2.5
MSZ	Milford Sound	17.49	215	P	Pn	05 21 16.8	-0.2
TUZ	Tuapeka	17.68	210	P	Pn	05 21 19.1	0.0
MLZ	Mavora Lakes	17.91	214		Pn	05 21 20.4	-1.7
AFI	Afiamalu	18.05	20		Pn	05 21 20.4	-3.6
AFI				IAmb	IAmb	05 21 30.6	
	comp=Z,918nm,1.7s						
AFI	Afiamalu	18.05	20	P	P	05 21 27.3	+3.0
AFI	Afiamalu	18.05	20	P	Pn	05 21 23.3	-0.7
AFI				pmax	pmax		
	comp=Z,285nm,0.8s						
AFI	Afiamalu	18.05	20	⇑P	Pn	05 21 23.4	-0.7
SYZ	Scrubby Hill	18.35	209	P	Pn	05 21 27.4	0.0
SYZ	Scrubby Hill	18.35	209	P	Pn	05 21 28.3	+0.9
WHZ	Wether Hill Ro	18.38	213		P	05 21 25.5	-2.1
DCZ	Deep Cove	18.44	215		Pn	05 21 29.6	+1.1
DCZ	Deep Cove	18.44	215	P	Pn	05 21 29.3	+0.8
RAR	Rarotonga	19.04	63		P	05 21 29.6	-5.4
RAR	Rarotonga	19.04	63	P	P	05 21 34.5	-0.5
	comp=Z,64nm,0.7s,baz=180,slow=0.7,SNR=7.6						
RAR				S	Sn	05 24 49.1	-19
	comp=Z,45nm,0.4s,baz=223,slow=6.1,SNR=3.6						
RAR				LR	LR	05 28 28.2	
	comp=Z,23µm,19.3s,baz=231,slow=36						
RAR	Rarotonga	19.04	63	P	Pn	05 21 37.3	+1.4
RAR	Rarotonga	19.04	63	P	Pn	05 21 37.3	+1.4
RAR				pmax	pmax		
	comp=Z,278nm,1.8s						
RAR	Rarotonga	19.04	63	⇓P	P	05 21 35.3	+0.3
APZ	The Paps	19.07	211	P	P	05 21 35.5	+0.2
KOUNC	Koumac, New Ca	19.13	299	P	Pn	05 21 39.8	+2.7
LHI	Lord Howe Isla	19.65	263	P	Pn	05 21 44.1	+0.9
LHI	Lord Howe Isla	19.65	263	P	Pn	05 21 44.8	+1.6
	comp=Z,279nm,0.9s,comp=Z,0.0nm						
LHI	Lord Howe Isla	19.65	263	⇑P	Pn	05 21 45.2	+2.0
VLAKA	Lakatoro	20.06	315	P	Pn	05 21 50.8	+2.7
SANVU	Saraoutou	20.70	316		P	05 21 51.8	-1.4
SANVU	Saraoutou	20.70	316	P	Pn	05 21 55.1	-0.5
SANVU	Saraoutou	20.70	316	⇑P	P	05 21 52.2	-0.9
GC1S	Gold Coast 1 S	24.96	270	P	P	05 22 38.8	+2.6
NTLH	Newcastle Hard	25.77	258	P	P	05 22 46.1	+2.7
ARMA	Armidale	26.12	264		P	05 22 50.0	+3.1
ARMA				IAmb	IAmb	05 23 04.3	
	comp=Z,206nm,1.1s						
ARMA				IAMs_20	IAMs_20	05 30 57.0	
	comp=Z,64µm,21.0s						
ARMA	Armidale	26.12	264	P	P	05 22 49.3	+2.5
	comp=Z,0.0nmcomp=Z,181nm,1.6s						
ARMA	Armidale	26.12	264	P	P	05 22 48.6	+1.7
ARMA	Armidale	26.12	264	⇑P	P	05 22 49.9	+3.1
RIV	Riverview	26.16	256	P	P	05 22 50.1	+3.0
	comp=Z,0.0nmcomp=Z,249nm,1.6s						
RIV	Riverview	26.16	256	P	P	05 22 49.4	+2.4
RIV	Riverview	26.16	256	P	P	05 22 51.0	+4.0
RIV				pmax	pmax		
	comp=Z,249nm,1.5s						
RIV	Riverview	26.16	256	⇑P	P	05 22 49.2	+2.2
MGCD	Mangrove Creek	26.24	257	P	P	05 22 50.0	+2.3
	comp=Z,270nm,0.8s						
MGCD	Mangrove Creek	26.24	257	P	P	05 22 50.1	+2.3
WOLH	Wollongong Har	26.38	255	P	P	05 22 51.5	+2.5
TBI	Tubuai	26.42	80	*e*P	P	05 22 49.3	-0.2
	comp=Z,607nm,1.3s						
TBI				*e*S	S	05 27 17.1	-4.0
	comp=Z,113µm,30.5s						
TBI				*e*LQ	LQ	05 28 15.1	
	comp=Z,206µm,24.0s						
TBI				*e*LR	LR	05 29 22.5	
	comp=Z,122µm,26.5s						
TBI				*e*LR	LR	05 29 28.3	
	comp=Z,575µm,27.8s						
SYDH	Sydney Hard Ro	26.52	256	P	P	05 22 52.1	+1.9
CNB	Canberra Magne	27.60	252	P	P	05 23 02.0	+1.9
	comp=Z,0.0nmcomp=Z,124nm,1.6s						
CNB	Canberra Magne	27.60	252	P	P	05 23 01.7	+1.6
HURO	Huro Makira	27.80	313	P	P	05 23 05.7	+3.9
MILA	Mila	27.80	249	P	P	05 23 03.5	+1.7
	comp=Z,0.0nmcomp=Z,75nm,1.7s						
MILA	Mila	27.80	249	⇑P	P	05 23 03.8	+2.0
EIDS	Eidsvold	27.84	274		P	05 23 03.3	+1.2
EIDS				IAMs_20	IAMs_20	05 32 18.3	
	comp=Z,85µm,20.0s						
EIDS	Eidsvold	27.84	274	P	P	05 23 02.9	+0.8
	comp=Z,0.0nmcomp=Z,216nm,1.9s						
EIDS	Eidsvold	27.84	274	P	P	05 23 04.3	+2.1
EIDS	Eidsvold	27.84	274	⇑P	P	05 23 03.4	+1.2
CAN	Canberra	27.90	252		P	05 23 02.5	-0.2
CAN				IAmb	IAmb	05 23 09.6	
	comp=Z,153nm,1.1s						
CAN				IAMs_20	IAMs_20	05 31 48.4	
	comp=Z,70µm,21.0s						
CAN	Canberra	27.90	252	P	P	05 23 04.1	+1.3
	comp=Z,168nm,1.2s						
CAN	Canberra	27.90	252	P	P	05 23 04.0	+1.3
CAN	Canberra	27.90	252	P	P	05 23 02.5	-0.2
CAN				pmax	pmax		
	comp=Z,153nm,1.1s						
CAN	Canberra	27.90	252	⇑P	P	05 23 04.4	+1.7
NGOA	Tingoa Renbel	28.17	309	P	P	05 23 06.7	+1.5
GD1S	Gladstone Soft	28.29	277	P	P	05 23 08.5	+2.3
YNG	Young	28.43	255	P	P	05 23 09.2	+1.7
	comp=Z,141nm,2.0s						
PAE	Paea	29.00	69	*e*P	P	05 23 18.5	+6.0
	comp=Z,108nm,1.5s						
PAE				*e*S	S	05 28 00.3	-1.4
	comp=Z,3µm,24.2s						
PAE				*e*LR	LR	05 30 41.9	
	comp=Z,15µm,24.8s						
PPT2	Papeete2	29.04	69	*e*P	P	05 23 13.0	0.0
	comp=Z,174nm,1.4s						
PPT2				*e*S	S	05 27 58.5	-4.1
	comp=Z,18µm,26.0s						
PPT2				*e*LQ	LQ	05 29 13.8	
	comp=Z,45µm,24.0s						
PPT2				*e*LR	LR	05 30 36.3	
	comp=Z,113µm,26.5s						
PPT2				*e*LR	LR	05 30 36.6	
	comp=Z,65µm,25.5s						
PPT	Papeete	29.05	69	P	P	05 23 12.9	-0.1
	comp=Z,52nm,1.0s,baz=249,slow=8.6,SNR=2.3						
PPT				LR	LR	05 31 47.5	
	comp=Z,24µm,21.2s,baz=242,slow=30						
	comp=Z,52nm,1.0s						
GLAD	Gladstone	29.08	241	P	P	05 23 13.6	+0.5
TVO	Taravao	29.20	70	*e*LR	LR	05 30 48.7	
	comp=Z,16µm,24.9s						
RMQ	Roma	29.48	271	P	P	05 23 19.8	+3.0
	comp=Z,140nm,1.9s						
RMQ	Roma	29.48	271	P	P	05 23 19.2	+2.4
CORO	Coronation Par	29.80	240	P	P	05 23 20.3	+0.9
HNR	Honiara	29.82	312	P	P	05 23 18.8	-1.0
HNR	Honiara	29.82	312	P	P	05 23 18.8	-1.0
HNR				pmax	pmax		
	comp=Z,475nm,1.1s						
ALEG	Aligegeo Malai	29.87	314	P	P	05 23 21.7	+1.4
TAU	Tasmania Unive	29.93	237		P	05 23 19.8	-0.7
TAU				IAmb	IAmb	05 23 24.9	
	comp=Z,104nm,1.0s						
TAU	Tasmania Unive	29.93	237	IAMs_20	IAMs_20	05 34 11.4	
	comp=Z,64µm,19.0s						
TAU	Tasmania Unive	29.93	237	P	P	05 23 21.2	+0.7
TAU	Tasmania Unive	29.93	237	P	P	05 23 20.9	+0.4
TAU				pmax	pmax		
	comp=Z,127nm,1.5s						
TAU	Tasmania Unive	29.93	237	⇑P	P	05 23 20.7	+0.1
MOO	Moorlands	29.93	238	P	P	05 23 21.0	+0.4
	comp=Z,135nm,1.2s						
MOO	Moorlands	29.93	238	P	P	05 23 21.4	+0.8
TOO	Toolangi	30.73	248		P	05 23 28.6	+0.8
TOO	Toolangi	30.73	248	P	P	05 23 28.5	+0.6
	comp=Z,44nm,0.9s						
TOO	Toolangi	30.73	248	P	P	05 23 28.6	+0.8
TOO				pmax	pmax		
	comp=Z,96nm,1.4s						
TOO	Toolangi	30.73	248	⇑P	P	05 23 29.0	+1.2
CMSA	Cobar Meteorol	30.98	260	P	P	05 23 31.3	+1.3
	comp=Z,0.0nmcomp=Z,372nm,0.8s						
CMSA	Cobar Meteorol	30.98	260	P	P	05 23 31.6	+1.6
MLBS	Spotswood, Mel	31.21	247	P	P	05 23 33.3	+1.3
GEXS	Deakin Univers	31.70	247	P	P	05 23 38.5	+2.3
PMOR	Pomariorio Ree	31.82	67	*e*P	P	05 23 31.1	-6.4
	comp=Z,221nm,1.2s						
PMOR				*e*S	S	05 28 46.7	+0.6
	comp=Z,15µm,23.4s						
PMOR				*e*LR	LR	05 32 02.7	
	comp=Z,78µm,24.1s						
QLP	Quilpie	33.34	268	P	P	05 23 51.4	+0.7
	comp=Z,0.0nmcomp=Z,866nm,1.7s						
QLP	Quilpie	33.34	268	P	P	05 23 52.3	+1.6
QLP	Quilpie	33.34	268	⇑P	P	05 23 51.6	+0.9
ARPS	Mount Arapiles	33.66	249	P	P	05 23 53.9	+0.4
	comp=Z,213nm,1.1s						
ARPS	Mount Arapiles	33.66	249	P	P	05 23 54.5	+1.0
TV1H	Townsville Har	33.89	282	P	P	05 23 57.0	+1.4
CTAO	Charters Tower	33.98	280		P	05 23 57.5	+1.1
CTAO	Charters Tower	33.98	280	IAMs_20	IAMs_20	05 35 26.9	
	comp=Z,67µm,21.0s						
CTAO	Charters Tower	33.98	280	P	P	05 23 58.3	+1.9
CTAO	Charters Tower	33.98	280	P	P	05 23 57.5	+1.1
CTAO				pmax	pmax		
	comp=Z,3µm,1.8s						
CTAO	Charters Tower	33.98	280	⇑P	P	05 23 57.8	+1.4
STKA	Stephens Creek	34.38	258		P	05 24 01.3	+1.6
STKA	Stephens Creek	34.38	258	P	P	05 24 00.8	+1.1
	comp=Z,2µm,1.9s						
STKA	Stephens Creek	34.38	258	P	P	05 24 00.5	+0.8
	comp=Z,285nm,0.8s,baz=100,slow=9.9,SNR=105						
STKA				S	S	05 29 21.9	-3.7
	comp=Z,4.5nm,0.9s,baz=216,slow=21,SNR=1.2						
STKA				LR	LR	05 36 43.4	
	comp=Z,42µm,18.7s,baz=98,slow=34						
	comp=Z,285nm,0.8s						
STKA	Stephens Creek	34.38	258	P	P	05 24 01.6	+1.9
STKA	Stephens Creek	34.38	258	*c i*P	P	05 24 00.9	+1.2
MGBR	Mount Gambier	34.64	248		P	05 24 01.0	-0.9
HTT	Hallett	36.36	255	P	P	05 24 17.1	+0.2
	comp=Z,92nm,0.9s						
HTT	Hallett	36.36	255	P	P	05 24 18.0	+1.2

HTT	Hallett	36.36	255	P	P	05 24 17.4	+0.6
HTT	Hallett	36.36	255	⇑P	P	05 24 17.2	+0.3
MTSU	Mount Surprise	36.49	282	P	P	05 24 18.9	+0.8
	comp=Z,124nm,1.0s						
MTSU	Mount Surprise	36.49	282	P	P	05 24 19.8	+1.7
PTPS	Port Pirie	37.17	255	P	P	05 24 25.1	+1.5
WHYH	Whyalla	37.54	255	P	P	05 24 27.8	+1.1
BBOO	Buckleboo	38.83	255		P	05 24 37.1	-0.6
BBOO				IAmb	IAmb	05 24 41.4	
	comp=Z,198nm,0.7s						
BBOO				IAMs_20	IAMs_20	05 38 37.6	
	comp=Z,43µm,21.0s						
BBOO	Buckleboo	38.83	255	P	P	05 24 36.5	-1.1
	comp=Z,0.0nmcomp=Z,338nm,0.7s						
BBOO	Buckleboo	38.83	255	P	P	05 24 38.7	+1.0
PMG	Port Moresby	38.97	296	LR	LR	05 38 20.7	
	comp=Z,19µm,20.7s,baz=131,slow=33						
PMG	Port Moresby	38.97	296	P	P	05 24 40.0	+1.0
PMG	Port Moresby	38.97	296	P	P	05 24 40.2	+1.2
QIS	Mount Isa	39.43	275	P	P	05 24 42.6	-0.2
	comp=Z,0.0nmcomp=Z,168nm,2.6s						
QIS	Mount Isa	39.43	275	P	P	05 24 43.5	+0.7
COEN	Coen	39.53	287		P	05 24 43.8	+0.2
COEN				IAmb	IAmb	05 24 50.2	
	comp=Z,119nm,0.8s						
COEN	Coen	39.53	287	P	P	05 24 44.2	+0.5
	comp=Z,217nm,1.4s						
COEN	Coen	39.53	287	P	P	05 24 45.9	+2.2
COEN	Coen	39.53	287	⇑P	P	05 24 44.4	+0.7
TAOE	Nuku Hiva Isla	41.55	66	*e*P	P	05 24 56.2	-4.2
	comp=Z,2µm,26.3s						
TAOE				*e*S	S	05 31 09.7	-4.9
	comp=Z,17µm,26.2s						
TAOE				*e*SS	SS	05 34 19.9	-0.2
	comp=Z,13µm,25.6s						
TAOE				*e*LR	LR	05 36 21.8	
	comp=Z,70µm,27.0s						
AS01	Alice Springs	43.09	268	P	P	05 25 13.9	+1.0
AS31	Alice Springs	43.13	268		P	05 25 12.7	-0.6
AS31				IAmb	IAmb	05 25 17.4	
	comp=Z,122nm,0.7s						
ASAR	Alice Springs	43.13	268	P	P	05 25 12.5	-0.7
	comp=Z,368nm,0.8s,baz=107,slow=6.7,SNR=314						
ASAR				ScP	ScP	05 30 52.2	+0.6
	comp=Z,22nm,0.9s,baz=106,slow=3.9,SNR=12						
ASAR				S	S	05 31 41.6	+3.9
	comp=Z,13nm,1.0s,baz=116,slow=15,SNR=5.6						
ASAR				LR	LR	05 42 57.8	
	comp=Z,53µm,18.1s,baz=110,slow=36						
DRV	Dumont d’Urvil	43.49	203	P	P	05 25 15.9	+0.4
MANU	Manus Island	43.72	305	P	P	05 25 17.0	-1.0
MANU				IAmb	IAmb	05 25 38.0	
	comp=Z,244nm,1.8s						
WR0	Warramunga Arr	44.01	273	P	P	05 25 19.3	-1.0
WR8	Warramunga Arr	44.04	273		P	05 25 19.7	-0.9
PATS	Pohnpei	44.07	325	P	P	05 25 18.7	-2.0
PATS				IAmb	IAmb	05 25 52.9	
	comp=Z,136nm,1.2s						
PATS				IAMs_20	IAMs_20	05 39 22.7	
	comp=Z,28µm,21.0s						
WB2	Warramunga Arr	44.17	273	P	P	05 25 20.5	-1.1
WRAB	Tennant Creek	44.18	273	P	P	05 25 21.1	-0.6
WRAB	Tennant Creek	44.18	273	*c i*P	P	05 25 20.8	-0.9
WRAB				pmax	pmax		
	comp=Z,919nm,1.8s						
WRAB				MLR	MLR		
	comp=Z,24µm,15.0s						
WRA	Warramunga Arr	44.19	273	P	P	05 25 20.6	-1.1
WRA	Warramunga Arr	44.19	273	P	P	05 25 20.9	-0.8
	comp=Z,420nm,0.9s,baz=111,slow=8.1,SNR=144						
WRA				ScP	ScP	05 30 56.1	+0.2
	comp=Z,37nm,1.1s,baz=114,slow=4.3,SNR=8.3						
WRA				S	S	05 31 49.9	-3.3
	comp=Z,33nm,1.2s,baz=111,slow=15,SNR=8.7						
WRA				PKiKP	PKiKP	05 34 08.0	+1.0
	comp=Z,0.6nm,0.3s,baz=98,slow=0.6,SNR=5.8						
WRA				LR	LR	05 43 01.2	
	comp=Z,45µm,18.4s,baz=106,slow=35						
WB0	Warramunga Arr	44.21	273		P	05 25 20.9	-1.0
FORT	Forrest	45.92	256		P	05 25 33.7	-1.6
FORT				IAMs_20	IAMs_20	05 43 28.3	
	comp=Z,44µm,20.0s						
FORT	Forrest	45.92	256	P	P	05 25 36.4	+1.0
FORT	Forrest	45.92	256	⇑P	P	05 25 33.9	-1.5
SBA	Scott Base	47.32	184	P	P	05 25 48.5	+2.8
SBA	Scott Base	47.32	184	P	P	05 25 48.5	+2.8
SBA				pmax	pmax		
	comp=Z,410nm,1.5s						
VNDA	Vanda	47.38	186	P	P	05 25 47.3	+1.2
VNDA				IAmb	IAmb	05 26 16.3	
	comp=Z,96nm,1.4s						
VNDA	Vanda	47.38	186	P	P	05 25 47.4	+1.3
	comp=Z,14nm,0.7s,baz=16,slow=6.7,SNR=43						
VNDA				ScP	ScP	05 31 11.5	+3.3
	comp=Z,1.8nm,0.9s,baz=14,slow=2.7,SNR=1.1						
VNDA				LR	LR	05 42 53.2	
	comp=Z,4µm,19.4s,baz=26,slow=32						
VNDA				PKP2ab		05 57 59.0	
	comp=Z,0.5nm,0.3s,baz=98,slow=3.9,SNR=7.7						
	comp=Z,14nm,0.7s						
JAY	Jayapura	48.28	298	P	P	05 25 53.1	-0.9
	comp=Z,34nm,0.9s,baz=141,slow=7.8,SNR=20						
	comp=Z,34nm,0.9s						
JAY	Jayapura	48.28	298	P	P	05 25 53.6	-0.4
GENI	Genyem	48.64	297	P	P	05 25 58.3	+1.6
GENI	Genyem	48.64	297	P	P	05 25 58.0	+1.3
KDU	Kakadu	49.10	281	P	P	05 26 00.5	+0.3
KDU	Kakadu	49.10	281	⇑P	P	05 25 58.7	-1.6
MTN	Manton Dam	50.16	280	P	P	05 26 07.2	-1.1
MTN	Manton Dam	50.16	280	P	P	05 26 08.8	+0.5
MTN	Manton Dam	50.16	280	⇑P	P	05 26 07.2	-1.1
KNRA	Kununurra	50.82	275	P	P	05 26 12.4	-0.9
KMBL	Kambalda	50.86	253	P	P	05 26 15.5	+2.0
FITZ	Fitzroy Crossi	52.42	270	P	P	05 26 24.5	-0.7
FITZ				IAmb	IAmb	05 26 27.7	
	comp=Z,187nm,1.9s						
FITZ	Fitzroy Crossi	52.42	270	P	P	05 26 24.1	-1.1
	comp=Z,16nm,0.4s,baz=171,slow=3.6,SNR=55						
FITZ				LR	LR	05 47 42.3	
	comp=Z,51µm,20.3s,baz=110,slow=35						
	comp=Z,16nm,0.4s						
FITZ	Fitzroy Crossi	52.42	270	P	P	05 26 27.1	+1.9
SAUI	Saumlaki	52.54	285	P	P	05 26 26.7	+0.5
KLBR	Kellerberrin	54.17	252	P	P	05 26 38.4	+0.4
NWAO	Narrogin (SRO)	54.20	250	P	P	05 26 37.0	-1.2
NWAO				IAmb	IAmb	05 26 53.4	
	comp=Z,134nm,1.4s						
NWAO	Narrogin (SRO)	54.20	250	IAMs_20	IAMs_20	05 47 29.4	
	comp=Z,23µm,21.0s						
NWAO	Narrogin (SRO)	54.20	250	LR	LR	05 47 40.8	
	comp=Z,23µm,21.0s,baz=101,slow=34						
NWAO	Narrogin (SRO)	54.20	250	P	P	05 26 36.7	-1.5
NWAO				P	P	05 26 36.7	-1.5
NWAO	Narrogin (SRO)	54.20	250	P	P	05 26 38.6	+0.4
NWAO	Narrogin (SRO)	54.20	250	P	P	05 26 38.7	+0.5
NWAO	Narrogin (SRO)	54.20	250	P	P	05 26 37.0	-1.2
NWAO				pmax	pmax		
	comp=Z,134nm,1.4s						
CASY	Casey	54.52	208	P	P	05 26 39.0	-1.0
CASY	Casey	54.52	208	⇑P	P	05 26 39.5	-0.5
FAKI	Fak Fak	54.65	291	P	P	05 26 39.7	-1.9
FAKI	Fak Fak	54.65	291	⇑P	P	05 26 40.3	-1.4
KNHH	Kane Nui o Ham	54.77	27	P	P	05 26 42.3	-0.1
HATHI	Halema‘uma‘u T	54.78	26	P	P	05 26 43.6	+1.1
POHA	Pohakuloa	54.98	26	P	P	05 26 47.0	+2.9
MEEK	Meekatharra	55.08	258	P	P	05 26 45.3	+0.6
MHA	Mahukona	55.24	25	P	P	05 26 46.9	+1.3
MHA	Mahukona	55.24	25	P	P	05 26 46.9	+1.3
MUN	Mundaring	55.31	251	P	P	05 26 46.3	+0.1
MUN	Mundaring	55.31	251	P	P	05 26 43.9	-2.3
BLDU	Ballidu	55.32	252	P	P	05 26 48.2	+1.8
HON	Honolulu	55.55	23	P	P	05 26 53.0	+5.1
KIP	Kipapa	55.64	23	P	P	05 26 49.3	+0.7
KIP	Kipapa	55.64	23	P	P	05 26 52.2	+3.7
KIP	Kipapa	55.64	23	P	P	05 26 52.3	+3.7
KIP	Kipapa	55.64	23	⇑*e*P	P	05 26 49.9	+1.4
KIP				pmax	pmax		
	comp=Z,306nm,1.4s						
PSA00	Pilbara Seismi	55.94	264	P	P	05 26 49.0	-1.9
PSA00				IAmb	IAmb	05 26 57.4	
	comp=Z,88nm,1.6s						
PSA00	Pilbara Seismi	55.94	264	P	P	05 26 49.6	-1.3
PSA00				IAmb	IAmb	05 26 52.2	
	comp=Z,509nm,2.0s						
PSA00	Pilbara Seismi	55.94	264	P	P	05 26 52.3	+1.4
MBWA	Marble Bar	56.20	264	P	P	05 26 51.1	-1.7
MBWA				IAmb	IAmb	05 26 52.9	
	comp=Z,288nm,2.0s						
MBWA	Marble Bar	56.20	264	P	P	05 26 50.8	-1.9
MBWA				P	P	05 26 50.8	-1.9
MBWA				S	S	05 34 38.8	-1.7
MBWA				S	S	05 34 38.8	-1.7
MBWA	Marble Bar	56.20	264	P	P	05 26 53.2	+0.4
MBWA	Marble Bar	56.20	264	⇑P	P	05 26 51.1	-1.7
MORW	Morawa	56.38	254	P	P	05 26 52.4	-1.6
MORW				IAmb	IAmb	05 26 54.1	
	comp=Z,315nm,2.0s						
MORW	Morawa	56.38	254	P	P	05 26 54.9	+0.9
MORW	Morawa	56.38	254	⇑P	P	05 26 52.4	-1.6
GUMO	Guam	57.04	316	P	P	05 26 56.6	-2.0
GUMO	Guam	57.04	316	IAMs_20	IAMs_20	05 47 17.5	
	comp=Z,20µm,22.0s						
GUMO	Guam	57.04	316	P	P	05 26 57.2	-1.4
	comp=Z,66nm,0.8s,baz=122,slow=9.5,SNR=3.7						
GUMO				LR	LR	05 47 39.1	
	comp=Z,18µm,21.9s,baz=121,slow=32						
	comp=Z,66nm,0.8s						
SOEI	Soe	57.52	279	P	P	05 27 01.8	-0.5
SOEI	Soe	57.52	279	P	P	05 27 00.8	-1.5
SOEI	Soe	57.52	279	P	P	05 27 04.5	+2.2
SOEI	Soe	57.52	279	⇑P	P	05 27 02.6	+0.3
BATI	Baumata	57.80	278	LR	LR	05 52 45.9	
	comp=Z,58µm,18.4s,baz=150,slow=37						
QSPA	South Pole Qui	58.98	180	P	P	05 27 13.5	+1.6
QSPA	South Pole Qui	58.98	180	P	P	05 27 13.9	+2.0
	comp=Z,70nm,0.8s,baz=32,slow=1.0,SNR=105						
QSPA				S	S	05 35 19.5	+3.5
	comp=Z,2.8nm,1.0s,baz=173,slow=22,SNR=6.8						
QSPA				LR	LR	05 48 20.3	
	comp=Z,9µm,21.8s,baz=36,slow=32						
	comp=Z,70nm,0.8s						
QSPA	South Pole Qui	58.98	180	⇑P	P	05 27 13.8	+2.0
MIDW	Midway	59.02	1	P	P	05 27 12.0	-0.2
MIDW				IAMs_20	IAMs_20	05 47 20.3	
	comp=Z,26µm,22.0s						
VA02	Isla de Pascua	59.09	105	IAMs_20	IAMs_20	05 45 58.2	
	comp=Z,22µm,22.0s						
RPN	Rapa Nui	59.19	105	IAMs_20	IAMs_20	05 46 10.7	
	comp=Z,19µm,21.0s						
MMRI	Maumere	59.81	278	P	P	05 27 16.6	-1.5
MMRI	Maumere	59.81	278	P	P	05 27 20.4	+2.3
SANI	Sanana	60.23	287	P	P	05 27 19.1	-1.8
SANI	Sanana	60.23	287	P	P	05 27 23.5	+2.5
TNTI	Ternate	60.75	291	P	P	05 27 22.8	-1.8
TNTI				IAmb	IAmb	05 27 46.3	
	comp=Z,110nm,1.4s						
LUWI	Luwuk	63.44	286	P	P	05 27 41.1	-1.5
LUWI	Luwuk	63.44	286	P	P	05 27 40.8	-1.9
LUWI	Luwuk	63.44	286	P	P	05 27 44.8	+2.2
PLAI	Plampang	63.51	276	P	P	05 27 44.9	+1.8
KAPI	Kappang	63.80	281	P	P	05 27 43.5	-1.4
KAPI				IAmb	IAmb	05 28 13.7	
	comp=Z,130nm,1.6s						
KAPI	Kappang	63.80	281	IAMs_20	IAMs_20	05 57 12.5	
	comp=Z,16µm,18.0s						
KAPI	Kappang	63.80	281	LR	LR	05 55 06.9	
	comp=Z,13µm,20.1s,baz=126,slow=36						
KAPI	Kappang	63.80	281	P	P	05 27 43.0	-2.0
KAPI				P	P	05 27 43.0	-2.0
KAPI				S	S	05 36 15.7	-2.5
KAPI				S	S	05 36 15.7	-2.5
KAPI	Kappang	63.80	281	P	P	05 27 47.1	+2.1
KAPI	Kappang	63.80	281	*c i*P	P	05 27 43.2	-1.8
KAPI	Kappang	63.80	281	⇑P	P	05 27 43.6	-1.3
DAV	Davao City (W)	65.98	295	P	P	05 27 56.9	-2.3
DAV	Davao City (W)	65.98	295	P	P	05 27 57.0	-2.2
TOLI2	Tolitoli	66.30	287	P	P	05 27 58.5	-2.7
TOLI2				IAmb	IAmb	05 28 01.9	
	comp=Z,140nm,1.6s						
TOLI2	Tolitoli	66.30	287	P	P	05 28 02.6	+1.4
JAGI	Jajag, Banyuwa	66.78	274	P	P	05 28 01.6	-2.8
JAGI				IAMs_20	IAMs_20	05 56 33.7	
	comp=Z,22µm,19.0s						
JAGI	Jajag, Banyuwa	66.78	274	P	P	05 28 06.5	+2.2
JAGI	Jajag, Banyuwa	66.78	274	⇑P	P	05 28 02.2	-2.2
SMAI	San Martin Ant	68.73	158	IAmb	IAmb	05 28 36.2	
	comp=Z,124nm,1.3s						
BELA	Belgrano 2	69.06	172	P	P	05 28 17.7	0.0
UGM	Wanagama	70.17	273	IAMs_20	IAMs_20	05 57 35.4	
	comp=Z,16µm,22.0s						
MYLDM	Lahad Datu	70.48	289	P	P	05 28 26.4	-1.0
MYLDM				IAmb	IAmb	05 29 01.7	
	comp=Z,86nm,1.2s						
MYLDM	Lahad Datu	70.48	289	P	P	05 28 29.7	+2.3
PMSA	Palmer Station	71.58	156	LR	LR	05 56 35.7	
	comp=Z,6µm,18.1s,baz=244,slow=33						
MAW	Mawson	71.65	201	P	P	05 28 34.2	+0.6
	comp=Z,130nm,1.2s,baz=119,slow=7.1,SNR=21						
MAW				LR	LR	05 59 03.0	
	comp=Z,20µm,19.9s,baz=116,slow=35						
	comp=Z,130nm,1.2s						
KKM	Kota Kinabalu	72.84	288	P	P	05 28 39.9	-1.8
KKM				IAmb	IAmb	05 28 56.8	
	comp=Z,172nm,1.5s						
BBJI	Bungbulang	72.85	272	P	P	05 28 43.1	+1.3
LEM	Lembang	73.20	272	P	P	05 28 43.0	-1.0
	comp=Z,64nm,0.8s,baz=133,slow=5.4,SNR=15						
LEM				LR	LR	06 00 57.7	
	comp=Z,22µm,20.6s,baz=113,slow=36						
	comp=Z,64nm,0.8s						
TGY	Tagaytay City	73.91	298	LR	LR	05 58 51.2	
	comp=Z,3µm,21.7s,baz=132,slow=34						
ESPZ	Base Esperanza	74.88	156	IAMs_20	IAMs_20	06 00 27.5	
	comp=Z,11µm,18.0s						
KSM	Kuching	75.21	281	P	P	05 28 53.7	-1.8
KSM				IAmb	IAmb	05 29 10.7	
	comp=Z,134nm,1.4s						
KSM	Kuching	75.21	281	P	P	05 28 56.2	+0.7
USHA	Ushuaia	75.29	146	LR	LR	05 55 50.3	
	comp=Z,4µm,19.2s,baz=230,slow=31						
SYO	Syowa Base	76.42	193	⇑*i*P	P	05 29 01.6	+0.2
SYO	Syowa Base	76.42	193	⇑*i*pP	pP	05 29 09.0	-0.8
SYO	Syowa Base	76.42	193	⇓*i*sP	sP	05 29 12.0	-0.9
TROLL	Troll, Antarti	77.14	180	⇑P	P	05 29 06.7	+0.9
	comp=Z,6µm,0.7s						
TROLL				⇑S	S	05 38 56.3	+3.8
AY03	Cochrane	77.17	138	P	P	05 29 07.7	+1.6
AY03				IAmb	IAmb	05 29 35.1	
	comp=Z,107nm,1.2s						
AY03				IAMs_20	IAMs_20	05 54 15.8	
	comp=Z,17µm,22.0s						
JOW	Kunigami	77.19	312	P	P	05 29 05.4	-1.0
JOW				IAmb	IAmb	05 29 12.7	
	comp=Z,59nm,1.1s						
JOW	Kunigami	77.19	312	LR	LR	05 57 36.6	
	comp=Z,12µm,21.6s,baz=130,slow=32						
JOW	Kunigami	77.19	312	P	P	05 29 08.5	+2.1
SNAA	Sanae	77.43	178	⇑P	P	05 29 07.8	+0.6
	comp=Z,2µm,0.8s						
SNAA				⇑S	S	05 38 57.8	+2.4
SNAA	Sanae	77.43	178	P	P	05 29 07.8	+0.6
SNAA	Sanae	77.43	178	P	P	05 29 07.7	+0.6
	comp=Z,16nm,0.7s,baz=168,slow=5.8,SNR=44						
SNAA				S	S	05 38 57.4	+2.0
	comp=Z,1.7nm,0.8s,baz=1.2,slow=20,SNR=8.2						
SNAA				PKPPKP	P'P'df	05 56 14.4	-5.4
	comp=Z,2.5nm,1.2s,baz=287,slow=1.7,SNR=3.4						
SNAA				LR	LR	05 59 59.6	
	comp=Z,8µm,21.9s,baz=194,slow=33						
	comp=Z,16nm,0.7s						
SNAA	Sanae	77.43	178	*c i*P	P	05 29 07.6	+0.4
SNAA	Sanae	77.43	178	⇑P	P	05 29 07.6	+0.4
VNA3	Neumayer Olymp	77.58	176	⇑P	P	05 29 08.4	+0.4
	comp=Z,418nm,0.8s						
VNA3				⇑S	S	05 38 58.6	+1.7
VNA2	Neumayer--Watz	78.01	177	⇑P	P	05 29 11.2	+0.8
	comp=Z,203nm,0.6s,baz=171,slow=4.6						
VNA2				⇑S	S	05 39 03.3	+1.7
	baz=241,slow=34						
JRY	Ryogami san	78.12	325	P	P	05 29 11.3	-0.1
NVL	N'lazarevskaya	78.15	183	*e*P	P	05 29 19.6	+8.5
NVL				*e*		05 29 35.1	
NVL				*e*		05 32 08.5	
NVL				*e*S	S	05 38 57.0	-6.1
NVL				pmax	pmax		
	comp=Z,22nm,0.8s						
NVL				smax	smax		
	comp=N,5µm,15.9s						
VNA1	Neumayer--Stat	78.24	176	⇑P	P	05 29 12.5	+0.9
	comp=Z,190nm,0.8s						
COYC	Coyhaique	78.37	136	IAmb	IAmb	05 29 27.9	
	comp=Z,92nm,1.0s						
COYC	Coyhaique	78.37	136	⇑P	P	05 29 15.7	+2.8
MNAI	Manna	78.44	272	IAMs_20	IAMs_20	06 03 32.2	
	comp=Z,12µm,20.0s						
INU	Inuyama	78.52	324	IAMs_20	IAMs_20	06 00 11.5	
	comp=Z,10µm,20.0s						
INU	Inuyama	78.52	324	P	P	05 29 15.3	+1.7
JGF	Kuroka	78.55	324	P	P	05 29 12.3	-1.5
JGF				IAmb	IAmb	05 30 22.9	
	comp=Z,283nm,2.0s						
JGF	Kuroka	78.55	324	⇑P	P	05 29 13.5	-0.3
GO07	Milladeo Hill,	78.72	134	IAMs_20	IAMs_20	05 55 08.3	
	comp=Z,16µm,20.0s						
MJAR	Matsushiro Arr	78.87	325	P	P	05 29 13.8	-1.7
	comp=Z,10nm,0.9s,baz=166,slow=5.1,SNR=13						
MJAR				LR	LR	05 59 09.1	
	comp=Z,6µm,22.0s,baz=136,slow=32						
	comp=Z,10nm,0.9s						
MAJO	Matsushiro	78.87	325	P	P	05 29 14.5	-1.1
MAJO	Matsushiro	78.87	325	P	P	05 29 15.7	+0.2
MAJO	Matsushiro	78.87	325	*c i*P	P	05 29 14.6	-0.9
MAJO				pmax	pmax		
	comp=Z,123nm,2.4s						
MAJO				MLR	MLR		
	comp=Z,3µm,17.0s						
MAT	Matsushiro	78.87	325	P	P	05 29 16.1	+0.6
LL07	Hotel Espejo d	78.99	133	IAMs_20	IAMs_20	05 55 16.3	
	comp=Z,13µm,21.0s						
JWT	Wachi	79.30	323	P	P	05 29 18.8	+0.9
TWGBT	Beinan	79.32	305	P	P	05 29 18.8	+0.6
TWG	Pinlang	79.32	305	IAmb	IAmb	05 29 44.4	
	comp=Z,141nm,1.5s						
YULB	Yu-li	79.53	305	P	P	05 29 21.3	+1.9
PAF	Port-aux-Franc	79.60	218	IAMs_20	IAMs_20	06 00 58.5	
	comp=Z,16µm,19.0s						
LL05	Los Muermos	79.75	132	IAMs_20	IAMs_20	05 56 01.7	
	comp=Z,16µm,21.0s						
COCO	West Island	79.77	262	P	P	05 29 20.9	0.0
NACB	Ninganchiao	79.83	306	IAmb	IAmb	05 29 39.2	
	comp=Z,124nm,1.4s						
NACB	Ninganchiao	79.83	306	P	P	05 29 24.4	+3.4
LL01	San Ignacio de	79.90	134	IAmb	IAmb	05 29 40.7	
	comp=Z,168nm,1.6s						
LL01				IAMs_20	IAMs_20	05 55 55.3	
	comp=Z,13µm,22.0s						
TPUB	Ta-pu	79.94	305	IAmb	IAmb	05 29 34.2	
	comp=Z,267nm,1.7s						
TPUB	Ta-pu	79.94	305	P	P	05 29 24.2	+2.5
H03S2	Juan Fernandez	80.02	123	T	T	06 58 23.5	
	baz=238,slow=74,SNR=105						
H03S1	Juan Fernandez	80.03	123	T	T	06 58 24.7	
	baz=238,slow=74,SNR=21						
SSLB	Suanglung	80.03	305	P	P	05 29 20.0	-2.2
SSLB				IAmb	IAmb	05 29 30.2	
	comp=Z,53nm,0.8s						
SSLB	Suanglung	80.03	305	P	P	05 29 22.6	+0.5
H03S3	Juan Fernandez	80.03	123	T	T	06 58 23.6	
	baz=238,slow=74,SNR=22						
JNU	Nakatsue	80.14	318	IAmb	IAmb	05 29 43.4	
	comp=Z,98nm,1.2s						
JNU	Nakatsue	80.14	318	LR	LR	06 00 19.2	
	comp=Z,8µm,22.0s,baz=146,slow=32						
JNU	Nakatsue	80.14	318	P	P	05 29 25.3	+2.8
JNU	Nakatsue	80.14	318	P	P	05 29 22.8	+0.3
VA04	Juan Fernndez	80.18	123	IAMs_20	IAMs_20	05 56 32.8	
	comp=Z,11µm,22.0s						
H03N3	Juan Fernandez	80.21	123	T	T	06 58 41.3	
	baz=241,slow=72,SNR=163						
H03N2	Juan Fernandez	80.21	123	T	T	06 58 43.1	
	baz=241,slow=72,SNR=102						
H03N1	Juan Fernandez	80.23	123	T	T	06 58 26.4	
	baz=241,slow=72,SNR=237						
JHS	Saijyo	80.29	321	P	P	05 29 24.1	+0.8
YHNB	Yeheng	80.31	306	P	P	05 29 23.4	-0.3
TATO	Taipei	80.43	307	P	P	05 29 21.7	-2.5
TATO				P	P	05 29 21.7	-2.5
LL03	Petrohue	80.58	132	IAMs_20	IAMs_20	05 56 28.4	
	comp=Z,16µm,22.0s						
LR04	Corral	80.61	131	IAMs_20	IAMs_20	05 55 54.3	
	comp=Z,14µm,22.0s						
LR05	Currie	81.33	132	IAMs_20	IAMs_20	05 56 28.4	
	comp=Z,13µm,21.0s						
LR03	Panguipulli	81.44	131	IAmb	IAmb	05 29 49.5	
	comp=Z,200nm,1.4s						
LR03				IAMs_20	IAMs_20	05 56 32.3	
	comp=Z,14µm,21.0s						
YUK	Yuzh-Kuril'sk	81.79	335	*e*P	P	05 29 23.8	-7.2
YUK				*e*		05 32 35.8	
YUK				*e*PPP	PPP	05 34 27.0	
YUK				*e*S	S	05 39 36.0	-5.8
YUK				*e*SSS	SSS	05 48 18.6	
PLCA	Paso Flores	81.97	133	P	P	05 29 34.5	+2.1
	comp=Z,16nm,1.0s,baz=229,slow=5.8,SNR=24						
PLCA				S	S	05 39 44.8	+0.2
	comp=Z,1.7nm,1.0s,baz=294,slow=3.4,SNR=1.9						
PLCA				PKPPKP	P'P'df	05 56 06.7	-4.6
	comp=Z,3.7nm,1.0s,baz=32,slow=4.4,SNR=4.5						
PLCA				LR	LR	05 57 34.0	
	comp=Z,13µm,21.4s,baz=246,slow=30						
	comp=Z,16nm,1.0s						
PLCA	Paso Flores	81.97	133	*e*P	P	05 29 34.4	+2.0
PLCA				*e*S	SKSac	05 39 53.2	+2.5
KUR	Kuril'sk	82.12	336	*e*P	P	05 29 32.7	+0.1
KUR				S	S	05 39 47.1	+2.0
KUR				pmax	pmax		
	comp=Z,4µm,5.1s						
KUR				MLR	MLR		
	comp=Z,5µm,20.0s						
QZH	Quanzhou	82.42	305	⇑*i*P	P	05 29 34.9	+0.2
QZH				PP	PP	05 32 44.8	+0.5
QZH				S	S	05 39 44.5	-4.6
QZH				sS	sS	05 40 01.6	-1.8
QZH				SS	SS	05 45 05.1	-5.9
QZH				pmax	pmax		
	comp=Z,4µm,4.8s						
QZH				LR	LR		
	comp=Z,3µm,18.2s						
QZH				LR	LR		
	comp=Z,7µm,21.1s						
QZH				LR	LR		
	comp=Z,6µm,19.9s						
DLV	Lat	82.45	289	P	P	05 29 34.5	-0.9
DLV	Lat	82.45	289	P	P	05 29 37.1	+1.7
BI05	Punta Hualpn	82.46	128	IAMs_20	IAMs_20	05 57 17.7	
	comp=Z,12µm,22.0s						
BKNI	Bangkinang	82.48	275	P	P	05 29 33.1	-2.3
KIWB	Kanaga Island	82.63	0	P	P	05 29 35.3	+0.1
ADK	Adak	82.66	1	P	P	05 29 35.5	+0.1
ADK	Adak	82.66	1	P	P	05 29 37.0	+1.7
ADK	Adak	82.66	1	P	P	05 29 35.5	+0.1
ADK				pmax	pmax		
	comp=Z,220nm,0.9s						
ATKA	Atka Island	83.04	2	IAMs_20	IAMs_20	06 01 30.2	
	comp=Z,11µm,20.0s						
ATKA	Atka Island	83.04	2	P	P	05 29 40.3	+3.0
ASAJ	Asahikawa	83.11	333	LR	LR	06 04 18.7	
	comp=Z,11µm,19.1s,baz=175,slow=34						
BI02	San Fabin de	83.79	129	IAmb	IAmb	05 30 03.7	
	comp=Z,85nm,1.2s						
BI02				IAMs_20	IAMs_20	05 58 41.8	
	comp=Z,9µm,20.0s						
SHEM	Shemya Is, Ala	83.79	355	LR	LR	06 03 20.8	
	comp=Z,18µm,19.5s,baz=174,slow=33						
NIKH	Nikolski High	84.12	6	P	P	05 29 44.8	+2.0
NIKH	Nikolski High	84.12	6	P	P	05 29 42.8	0.0
	baz=188						
NIKH				S	SKSac	05 40 04.9	+1.5
	baz=188						
ML02	Panimavida	84.20	128	IAMs_20	IAMs_20	05 58 20.7	
	comp=Z,10µm,21.0s						
TJN	Taejon	84.48	319	P	P	05 29 46.1	+1.0
TJN	Taejon	84.48	319	*c i*P	P	05 29 45.1	0.0
SKR	Severo-Kuril’s	84.63	344	*e*P	P	05 29 44.0	-1.4
SKR				*e*S	SKSac	05 40 08.5	+1.7
SKR				pmax	pmax		
	comp=Z,3µm,6.2s						
SSE	Sheshan	84.63	311	P	P	05 29 46.4	+0.5
SSE				S	S	05 40 15.1	+4.0
SSE				pmax	pmax		
	comp=Z,15nm,0.8s						
SSE				pmax	pmax		
	comp=Z,2µm,12.0s						
SSE				LR	LR		
	comp=Z,2µm,21.8s						

SSE				LR	LR		
	comp=Z,1µm,21.6s						
LPIG	**La Paz**	**84.87**	**58**	LR	LR	06 02 32.2	
	comp=Z,17µm,18.0s,baz=236,slow=32						
SLBS	**Sierra La Lagu**	**84.89**	**59**	P	**P**	**05 29 48.6**	**+1.0**
KSRS	**Korea Array**	**84.94**	**320**	P	**P**	**05 29 47.0**	**-0.4**
	comp=Z,9.6nm,0.8s,baz=142,slow=5.7,SNR=18						
KSRS				LR	LR	06 05 26.1	
	comp=Z,1718µm,19.6s,baz=125,slow=34						
	comp=Z,9.6nm,0.8s						
KSRS	**Korea Array**	**84.94**	**320**	P	**P**	**05 29 47.0**	**-0.4**
KSAR	**Wonju Array Be**	**84.95**	**320**	P	**P**	**05 29 46.6**	**-0.8**
KSAR	**Wonju Array Be**	**84.95**	**320**	P	**P**	**05 29 46.6**	**-0.8**
KS19	**Wonju Array Si**	**85.00**	**320**	IAmb	IAmb	05 30 38.1	
	comp=Z,129nm,1.8s						
GZH	**Guangzhou**	**85.07**	**301**	P	**P**	**05 29 48.1**	**-0.2**
GZH				pP	**pP**	**05 29 57.9**	**+0.9**
GZH				PP	**PP**	**05 33 09.0**	**+3.0**
GZH				S	**SKSac**	**05 40 11.8**	**+0.9**
GZH				pmax	pmax		
	comp=Z,4µm,5.6s						
GZH				LR	LR		
	comp=Z,3µm,23.4s						
GZH				LR	LR		
	comp=Z,2µm,21.4s						
GZH				LR	LR		
	comp=Z,5µm,19.7s						
BO02	**Sierra Bellavi**	**85.18**	**128**	IAMs_20	IAMs_20	05 58 28.6	
	comp=Z,11µm,22.0s						
BO01	**Tunca**	**85.20**	**127**	IAMs_20	IAMs_20	05 58 28.2	
	comp=Z,12µm,22.0s						
UNV	**Unalaska Valle**	**85.20**	**7**	IAmb	IAmb	05 29 51.1	
	comp=Z,57nm,0.9s						
UNV	**Unalaska Valle**	**85.20**	**7**	P	**P**	**05 29 50.3**	**+2.1**
UNV	**Unalaska Valle**	**85.20**	**7**	P	**P**	**05 29 48.3**	**+0.1**
	baz=190						
UNV				S	**S**	**05 40 19.3**	**+3.6**
	baz=190						
QIZ	**Qiongzhong**	**85.36**	**295**	P	**P**	**05 29 49.3**	**-0.6**
QIZ				S	**SKSac**	**05 40 12.5**	**-0.5**
QIZ				pmax	pmax		
	comp=Z,56nm,2.5s						
QIZ				pmax	pmax		
	comp=Z,3µm,7.3s						
QIZ				LR	LR		
	comp=Z,3µm,27.7s						
QIZ				LR	LR		
	comp=Z,7µm,28.8s						
YSS	**Yuzhno-Sakhali**	**85.43**	**334**	P	**P**	**05 29 50.6**	**+1.0**
YSS				IAMs_20	IAMs_20	06 02 18.4	
	comp=Z,16µm,21.0s						
YSS	**Yuzhno-Sakhali**	**85.43**	**334**	P	**P**	**05 29 51.7**	**+2.2**
YSS	**Yuzhno-Sakhali**	**85.43**	**334**	*e*P	**P**	**05 29 50.0**	**+0.5**
YSS				e*SP	**sP**	**05 30 01.4**	**+0.1**
YSS				*e*		05 33 07.7	
YSS				*e*S	**S**	**05 40 18.0**	**-0.3**
YSS				*e*PS	**PnS**	**05 41 07.7**	**-10**
YSS				*e*PPS	PPS	05 41 39.5	
YSS				pmax	pmax		
	comp=Z,4µm,5.6s						
YSS				smax	smax		
	comp=N,4µm,10.6s						
RPSI	**Rantau Prapat**	**85.51**	**276**	P	**P**	**05 29 48.1**	**-2.7**
AKUT	**Akutan**	**85.56**	**7**	P	**P**	**05 29 50.6**	**+0.6**
PSI	**Prapat**	**85.57**	**276**	LR	LR	06 08 21.2	
	comp=N,17µm,20.9s,baz=127,slow=36						
PSI	**Prapat**	**85.57**	**276**	P	**P**	**05 29 51.2**	**-0.1**
PSI	**Prapat**	**85.57**	**276**	P	**P**	**05 29 48.1**	**-3.2**
PSI				pmax	pmax		
	comp=Z,186nm,1.6s						
PSI				MLR	MLR		
	comp=Z,18µm,20.0s						
MT09	**Talagante**	**85.61**	**127**	IAmb	IAmb	05 30 11.2	
	comp=Z,91nm,1.2s						
INCN	**Inchon**	**85.68**	**319**	P	**P**	**05 29 50.4**	**-0.7**
INCN				S	**SKSac**	**05 40 15.7**	**+1.4**
BCW	**Bitter Crk WRg**	**85.72**	**45**	IAmb	IAmb	05 30 31.0	
	comp=Z,99nm,1.2s						
BO04	**La Punta**	**85.75**	**127**	IAMs_20	IAMs_20	05 58 45.9	
	comp=Z,10µm,22.0s						
PMPB	**Monarch Peak**	**85.77**	**43**	P	**P**	**05 29 52.5**	**+0.8**
SAO	**San Andreas Ge**	**85.78**	**42**	IAMs_20	IAMs_20	06 01 34.2	
	comp=Z,11µm,20.0s						
SAO	**San Andreas Ge**	**85.78**	**42**	P	**P**	**05 29 53.8**	**+2.2**
MT02	**Curacav**	**85.80**	**126**	IAmb	IAmb	05 30 29.2	
	comp=Z,82nm,1.4s						
TKX	**Tecate**	**85.88**	**48**	IAmb	IAmb	05 30 10.2	
	comp=Z,73nm,1.3s						
ESJX	**Sierra Juarez**	**85.94**	**49**	IAmb	IAmb	05 30 11.1	
	comp=Z,45nm,1.1s						
MCCM	**Marconi Confer**	**85.94**	**40**	IAMs_20	IAMs_20	06 04 02.3	
	comp=Z,14µm,19.0s						
GSI	**Gunungsitoli**	**85.95**	**274**	P	**P**	**05 29 51.7**	**-1.4**
GSI	**Gunungsitoli**	**85.95**	**274**	P	**P**	**05 29 54.7**	**+1.7**
PASC	**Pasadena Art C**	**85.95**	**46**	IAmb	IAmb	05 30 30.3	
	comp=Z,50nm,1.3s						
PASC				IAMs_20	IAMs_20	06 07 24.2	
	comp=Z,11µm,18.0s						
ELS	**Elsinore Mount**	**86.08**	**47**	IAmb	IAmb	05 30 11.2	
	comp=Z,47nm,1.2s						
LMEL	**Las Melosas**	**86.11**	**127**	IAmb	IAmb	05 30 17.8	
	comp=Z,45nm,1.1s						
LMEL				IAMs_20	IAMs_20	05 58 57.2	
	comp=Z,12µm,22.0s						
PEL	**Peldehue**	**86.18**	**127**	P	**P**	**05 29 54.9**	**+0.9**
PEL	**Peldehue**	**86.18**	**127**	P	**P**	**05 29 54.9**	**+0.9**
PEL				pmax	pmax		
	comp=Z,205nm,1.4s						
PET	**Petropavlovsk**	**86.25**	**346**	P	**P**	**05 29 52.7**	**-0.7**
PET				IAmb	IAmb	05 29 55.8	
	comp=Z,159nm,1.6s						
PET				IAMs_20	IAMs_20	06 01 27.4	
	comp=Z,13µm,22.0s						
PET	**Petropavlovsk**	**86.25**	**346**	P	**P**	**05 29 55.3**	**+1.8**
PET	**Petropavlovsk**	**86.25**	**346**	*d i*P	P	05 29 44.4	-9.1
PET				*e*S	**SKSac**	**05 40 19.3**	**+2.4**
PET				pmax	pmax		
	comp=Z,59nm,1.6s						
PET				pmax	pmax		
	comp=Z,3µm,15.4s						
PET				pmax	pmax		
	comp=Z,3µm,15.8s						
TEY	**Ternei**	**86.35**	**330**	*de*P	**P**	**05 29 52.9**	**-1.3**
TEY				*e*		05 40 11.3	
TEY				pmax	pmax		
	comp=Z,300nm,7.5s						
TEY				pmax	pmax		
	comp=E,100nm,6.5s						
TEY				pmax	pmax		
	comp=N,100nm,4.0s						
YUH	**Yuha Desert**	**86.37**	**48**	IAmb	IAmb	05 30 12.8	
	comp=Z,56nm,1.3s						
GDXM	**Geysers**	**86.45**	**40**	IAmb	IAmb	05 30 20.0	
	comp=Z,132nm,1.8s						
MT08	**Bocatoma Ro**	**86.47**	**127**	IAmb	IAmb	05 30 18.3	
	comp=Z,88nm,1.5s						
MT08				IAMs_20	IAMs_20	05 59 08.8	
	comp=Z,11µm,22.0s						
VA03	**San Esteban**	**86.49**	**126**	IAmb	IAmb	05 30 14.1	
	comp=Z,110nm,1.4s						
VA03				IAMs_20	IAMs_20	05 58 16.5	
	comp=Z,8µm,20.0s						
PEA0B	**Petropavlovsk-**	**86.53**	**346**	P	**P**	**05 29 54.4**	**-0.5**
PEA0B	**Petropavlovsk-**	**86.53**	**346**	*c i*P	**P**	**05 29 54.2**	**-0.7**
PETK	**Petropavlovsk-**	**86.53**	**346**	P	**P**	**05 29 54.3**	**-0.6**
	comp=Z,50nm,0.9s,baz=114,slow=5.4,SNR=32						
PETK				LR	LR	06 06 26.7	
	comp=Z,7µm,19.0s,baz=165,slow=34						
	comp=Z,50nm,0.9s						
FALS	**False Pass**	**86.54**	**8**	IAMs_20	IAMs_20	06 10 06.3	
	comp=Z,8µm,19.0s						
FALS	**False Pass**	**86.54**	**8**	P	**P**	**05 29 55.3**	**+0.4**
	baz=192						
FALS				S	**S**	**05 40 28.6**	**-0.3**
	baz=192						
PFO	**Pinyon Flats O**	**86.66**	**47**	P	**P**	**05 29 57.2**	**+1.0**
PFO				IAmb	IAmb	05 30 20.5	
	comp=Z,63nm,1.3s						
PFO	**Pinyon Flats O**	**86.66**	**47**	LR	LR	06 03 50.8	
	comp=Z,9µm,18.2s,baz=239,slow=32						
PFO	**Pinyon Flats O**	**86.66**	**47**	*c i*P	**P**	**05 29 57.4**	**+1.2**
PFO				pmax	pmax		
	comp=Z,89nm,1.4s						
PFO				MLR	MLR		
	comp=Z,12µm,17.0s						
NJ2	**Nanjing**	**86.76**	**311**	⇑*i*P	**P**	**05 29 56.4**	**-0.1**
NJ2				PP	**PP**	**05 33 17.1**	**-2.5**
NJ2				SKS	**SKSac**	**05 40 21.3**	**+0.2**
NJ2				S	**ScS**	**05 40 36.1**	**-3.8**
NJ2				SS	**SS**	**05 46 17.5**	**+2.6**
NJ2				pmax	pmax		
	comp=Z,34nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,3µm,4.4s						
NJ2				LR	LR		
	comp=Z,5µm,24.3s						
NJ2				LR	LR		
	comp=Z,2µm,20.6s						
NJ2				LR	LR		
	comp=Z,8µm,24.7s						
ISA	**Isabella, Lake**	**86.78**	**45**	P	**P**	**05 29 57.9**	**+1.2**
ISA				IAmb	IAmb	05 30 28.8	
	comp=Z,67nm,1.1s						
ISA	**Isabella, Lake**	**86.78**	**45**	P	**P**	**05 29 57.9**	**+1.2**
ISA				pmax	pmax		
	comp=Z,67nm,1.2s						
CO06	**Fray Jorge**	**86.92**	**124**	IAMs_20	IAMs_20	05 59 11.0	
	comp=Z,14µm,22.0s						
MSHR	**Mys Shultsa**	**86.99**	**325**	*c i*P	**P**	**05 29 57.3**	**-0.1**
MSHR				pmax	pmax		
	comp=Z,83nm,1.2s						
MSHR				MLR	MLR		
	comp=Z,2µm,17.0s						
VLA	**Vladivostok**	**87.04**	**326**	*d i*P	**P**	**05 29 58.1**	**+0.5**
VLA				pmax	pmax		
	comp=Z,54nm,0.7s						
CNBA	**Chernabura Isl**	**87.05**	**11**	IAMs_20	IAMs_20	06 03 21.0	
	comp=Z,12µm,22.0s						
CHNA	**Chernabura Isl**	**87.06**	**11**	P	**P**	**05 30 00.0**	**+2.6**
CHNA	**Chernabura Isl**	**87.06**	**11**	P	**P**	**05 29 58.3**	**+1.0**
	baz=196						
CHNA				S	**S**	**05 40 36.0**	**+2.2**
	baz=196						
CO02	**Combarbal**	**87.07**	**125**	IAmb	IAmb	05 30 20.1	
	comp=Z,99nm,1.1s						
CO02				IAMs_20	IAMs_20	05 59 13.9	
	comp=Z,10µm,22.0s						
PSTR	**Posyet**	**87.21**	**325**	*de*P	**P**	**05 29 59.9**	**+1.5**
JCC	**Jacoby Creek,**	**87.22**	**38**	IAMs_20	IAMs_20	06 09 40.1	
	comp=Z,10µm,18.0s						
CMB	**Columbia Colle**	**87.27**	**42**	IAmb	IAmb	05 30 18.2	
	comp=Z,40nm,1.1s						
CMB				IAMs_20	IAMs_20	06 11 02.6	
	comp=Z,10µm,18.0s						
CMB	**Columbia Colle**	**87.27**	**42**	P	**P**	**05 29 59.3**	**+0.4**
GLA	**Glamis**	**87.33**	**49**	P	**P**	**05 30 01.0**	**+1.6**
GLA	**Glamis**	**87.33**	**49**	P	**P**	**05 30 01.0**	**+1.6**
GLA				pmax	pmax		
	comp=Z,273nm,2.0s						
HSIG		**87.40**	**54**	IAmb	IAmb	05 30 17.5	
	comp=Z,98nm,1.6s						
SDPT	**Sand Point**	**87.42**	**10**	P	**P**	**05 30 01.9**	**+2.8**
SDPT	**Sand Point**	**87.42**	**10**	P	**P**	**05 29 59.0**	**-0.1**
	baz=195						
SDPT				S	**S**	**05 40 37.1**	**-0.3**
	baz=195						
UGL	**Uglegorsk**	**87.46**	**335**	*e*P	P	05 29 52.8	-6.6
CO03	**El Pedregal**	**87.49**	**125**	IAmb	IAmb	05 30 21.9	
	comp=Z,98nm,1.1s						
CO03				IAMs_20	IAMs_20	05 58 46.2	
	comp=Z,11µm,22.0s						
S12K	**Black Hills**	**87.55**	**9**	P	**P**	**05 30 00.2**	**+0.4**
	baz=194						
S12K				S	**S**	**05 40 39.8**	**+1.2**
	baz=194						
GSC	**Goldstone, Bar**	**87.55**	**46**	IAmb	IAmb	05 30 20.5	
	comp=Z,88nm,1.2s						
AFDM	**Forest Hills D**	**87.56**	**41**	IAmb	IAmb	05 30 19.5	
	comp=Z,59nm,1.4s						
CO05	**La Serena**	**87.63**	**124**	IAMs_20	IAMs_20	05 59 20.9	
	comp=Z,15µm,22.0s						
PAYG	**Puerto Ayora**	**87.64**	**89**	IAMs_20	IAMs_20	05 59 38.7	
	comp=Z,10µm,22.0s						
P08K	**Saint George I**	**87.67**	**5**	IAMs_20	IAMs_20	06 03 55.9	
	comp=Z,9µm,21.0s						
P08K	**Saint George I**	**87.67**	**5**	P	**P**	**05 30 00.4**	**+0.2**
	baz=187						
P08K				S	**S**	**05 40 42.5**	**+2.8**
	baz=187						
ORV	**Oroville**	**87.69**	**40**	IAmb	IAmb	05 30 19.5	
	comp=Z,50nm,1.4s						
ORV				IAMs_20	IAMs_20	06 04 57.8	
	comp=Z,11µm,19.0s						
GO04	**Tololo Observa**	**87.80**	**124**	IAMs_20	IAMs_20	05 59 36.3	
	comp=Z,13µm,22.0s						
USRK	**Ussuriysk Ar.**	**87.80**	**326**	P	**P**	**05 30 01.7**	**+0.4**
	comp=Z,16nm,0.8s,baz=102,slow=3.0,SNR=15						
USRK				LR	LR	06 03 38.4	
	comp=Z,7µm,21.7s,baz=145,slow=32						
	comp=Z,16nm,0.8s						
USA0B	**Ussuriysk Arra**	**87.80**	**326**	P	**P**	**05 30 00.3**	**-0.9**
USA0B	**Ussuriysk Arra**	**87.80**	**326**	*c i*P	**P**	**05 30 02.0**	**+0.8**
113A	**Mohawk Valley,**	**87.84**	**49**	IAmb	IAmb	05 30 24.2	
	comp=Z,97nm,1.5s						
SRIT	**Nakonsritamara**	**88.00**	**281**	P	**P**	**05 30 04.9**	**+1.9**
WAKR	**Walker**	**88.13**	**42**	IAmb	IAmb	05 30 23.1	
	comp=Z,116nm,1.5s						
SPIA	**Saint Paul Isl**	**88.20**	**4**	IAMs_20	IAMs_20	06 04 33.8	
	comp=Z,12µm,20.0s						
SPIA	**Saint Paul Isl**	**88.20**	**4**	P	**P**	**05 30 03.6**	**+0.8**
	baz=187						
SPIA				S	**S**	**05 40 46.4**	**+1.7**
	baz=187						
GWY	**Greenwater Val**	**88.22**	**45**	IAmb	IAmb	05 30 13.6	
	comp=Z,42nm,1.2s						
DSP	**Deep Springs**	**88.22**	**44**	IAmb	IAmb	05 30 13.5	
	comp=Z,66nm,1.5s						
MPK	**Martis Peak**	**88.33**	**41**	IAmb	IAmb	05 30 24.3	
	comp=Z,64nm,1.2s						
CNSH	**ChangSha**	**88.40**	**304**	P	**P**	**05 30 03.1**	**-1.4**
CNSH				LR	LR		
	comp=Z,2µm,22.9s						
CNSH				LR	LR		
	comp=Z,3µm,23.0s						
CNSH				LR	LR		
	comp=Z,4µm,23.7s						
CO01	**Juntas del Tor**	**88.41**	**124**	IAMs_20	IAMs_20	05 59 56.5	
	comp=Z,13µm,22.0s						
PNTR	**Pine Nut**	**88.44**	**42**	IAmb	IAmb	05 30 26.6	
	comp=Z,45nm,1.0s						
S14K	**Fog Glacier**	**88.47**	**10**	P	**P**	**05 30 05.3**	**+1.1**
	baz=196						
S14K				S	**S**	**05 40 47.7**	**+0.2**
	baz=196						
ZON	**Zonda**	**88.49**	**126**	P	**P**	**05 30 07.0**	**+1.8**
ZON				pmax	pmax		
	comp=Z,21nm,1.1s						
LHV	**Little Huntoon**	**88.50**	**43**	IAmb	IAmb	05 30 24.6	
	comp=Z,62nm,1.1s						
LCO	**Las Campanas**	**88.53**	**123**	P	**P**	**05 30 06.6**	**+0.9**
LCO				IAmb	IAmb	05 30 22.9	
	comp=Z,64nm,1.3s						
LCO	**Las Campanas**	**88.53**	**123**	P	**P**	**05 30 06.6**	**+0.9**
LCO				pmax	pmax		
	comp=Z,64nm,1.3s						
BEKR	**Beckworth**	**88.54**	**41**	IAmb	IAmb	05 30 14.6	
	comp=Z,43nm,1.4s						
GULI	**GuiLin**	**88.56**	**301**	P	**P**	**05 30 06.6**	**+1.3**
GULI				PP	**PP**	**05 33 37.3**	**+3.1**
GULI				S	**S**	**05 40 44.0**	**-5.6**
GULI				pmax	pmax		
	comp=Z,30nm,2.6s						
GULI				LR	LR		
	comp=Z,2µm,21.0s						
GULI				LR	LR		
	comp=Z,3µm,19.4s						
GULI				LR	LR		
	comp=Z,7µm,22.1s						
YBH	**Yreka Blue Hor**	**88.57**	**38**	IAmb	IAmb	05 30 15.2	
	comp=Z,112nm,2.0s						
YBH	**Yreka Blue Hor**	**88.57**	**38**	LR	LR	06 02 15.3	
	comp=Z,655nm,21.7s,baz=246,slow=30						
HATC	**Hat Creek Radi**	**88.59**	**39**	IAmb	IAmb	05 30 46.0	
	comp=Z,112nm,1.4s						
GMN	**Gold Mountain**	**88.60**	**44**	IAmb	IAmb	05 30 16.3	
	comp=Z,92nm,1.8s						
HOPE	**Hope Point**	**88.65**	**159**	IAMs_20	IAMs_20	06 11 28.6	
	comp=Z,8µm,18.0s						
CHGN	**Chignik**	**88.66**	**11**	S	**S**	**05 40 50.4**	**+1.3**
	baz=197						
CHIR	**Chirikof Islan**	**88.68**	**12**	P	**P**	**05 30 06.0**	**+0.9**
	baz=199						
CHIR				S	**S**	**05 40 53.0**	**+3.7**
	baz=199						
AC04	**Llanos de Chal**	**88.72**	**122**	IAMs_20	IAMs_20	05 59 51.9	
	comp=Z,12µm,22.0s						
NVAR	**Mina Array Bea**	**88.73**	**43**	P	**P**	**05 30 06.7**	**+0.5**
NVAR	**Mina Array Bea**	**88.73**	**43**	P	**P**	**05 30 06.9**	**+0.8**
	comp=Z,7.9nm,0.8s,baz=222,slow=7.8,SNR=36						
NVAR				PKKPbc	**PKKPbc**	**05 47 48.5**	**+1.2**
	comp=Z,2.4nm,0.9s,baz=39,slow=4.2,SNR=8.1						
NVAR				PKPPKP	**P'P'df**	**05 55 57.2**	**+5.8**
	comp=Z,1.4nm,0.9s,baz=72,slow=3.3,SNR=6.9						
NVAR				LR	LR	06 03 23.7	
	comp=Z,10µm,20.4s,baz=230,slow=31						
	comp=Z,7.9nm,0.8s						
RYN	**Ryan**	**88.74**	**42**	IAmb	IAmb	05 30 45.0	
	comp=Z,42nm,1.3s						
TYV	**Tymovskoe**	**88.74**	**336**	*e*P	**P**	**05 30 06.3**	**+0.8**
TYV				*e*S	**S**	**05 40 49.4**	**-0.7**
TYV				pmax	pmax		
	comp=Z,68nm,1.3s						
TYV				pmax	pmax		
	comp=Z,1µm,4.6s						
TYV				smax	smax		
	comp=N,31nm,1.9s						
TYV				smax	smax		
	comp=E,26nm,1.9s						
TYV				smax	smax		
	comp=N,700nm,5.3s						
TYV				smax	smax		
	comp=E,600nm,5.3s						
CFA	**Coronel Fontan**	**88.76**	**127**	LR	LR	06 00 50.4	
	comp=E,3µm,21.2s,baz=226,slow=30						
NV11	**Mina Array Sit**	**88.82**	**43**	IAmb	IAmb	05 30 26.0	
	comp=Z,46nm,1.2s						
WHN	**Wuhan**	**88.83**	**307**	⇑*i*P	**P**	**05 30 06.1**	**-0.4**
WHN				SKS	**SKSac**	**05 40 25.4**	**-8.3**
WHN				S	**ScS**	**05 40 55.8**	**-1.4**
WHN				pmax	pmax		
	comp=Z,990nm,2.3s						
WHN				pmax	pmax		
	comp=Z,6µm,4.5s						
WHN				LR	LR		
	comp=Z,7µm,17.6s						
WHN				LR	LR		
	comp=Z,7µm,17.7s						
WHN				LR	LR		
	comp=Z,12µm,21.0s						
TRQA	**Tornquist**	**88.88**	**135**	P	**P**	**05 30 08.1**	**+1.2**
TRQA				IAmb	IAmb	05 30 25.9	
	comp=Z,138nm,1.8s						
TRQA	**Tornquist**	**88.88**	**135**	P	**P**	**05 30 08.1**	**+1.2**
TRQA				pmax	pmax		
	comp=Z,138nm,1.8s						
TPNV	**Topopah Spring**	**88.97**	**45**	IAmb	IAmb	05 30 27.4	
	comp=Z,76nm,1.4s						
TPNV				IAMs_20	IAMs_20	06 12 42.0	
	comp=Z,7µm,18.0s						
V12A	**Nelson**	**89.04**	**47**	IAmb	IAmb	05 30 27.8	
	comp=Z,49nm,1.2s						
Y14A	**Wickenburg**	**89.07**	**49**	IAmb	IAmb	05 30 30.1	
	comp=Z,81nm,1.4s						
L04D	**Klamath Falls**	**89.13**	**38**	IAmb	IAmb	05 30 27.0	
	comp=Z,78nm,1.2s						
W13A	**Hualapai Mount**	**89.24**	**48**	IAmb	IAmb	05 30 29.0	
	comp=Z,57nm,1.2s						
MDJ	**Mudanjiang**	**89.26**	**325**	P	**P**	**05 30 08.9**	**+0.8**
MDJ				pmax	pmax		
	comp=Z,48nm,2.1s						
MDJ				pmax	pmax		
	comp=Z,4µm,11.1s						
MDJ				LR	LR		
	comp=Z,6µm,22.0s						
MDJ				LR	LR		
	comp=Z,6µm,24.7s						
MDJ				LR	LR		
	comp=Z,15µm,23.5s						
SHPR	**Sheep Range**	**89.35**	**46**	IAmb	IAmb	05 30 48.6	
	comp=Z,67nm,1.8s						
TUC	**Tucson**	**89.52**	**51**	P	**P**	**05 30 11.3**	**+1.5**
TUC				IAmb	IAmb	05 30 32.8	
	comp=Z,90nm,1.2s						
TUC	**Tucson**	**89.52**	**51**	IAMs_20	IAMs_20	06 01 04.1	
	comp=Z,9µm,22.0s						
TUC	**Tucson**	**89.52**	**51**	P	**P**	**05 30 11.3**	**+1.5**
TUC				pmax	pmax		
	comp=Z,90nm,1.2s						
DL2	**Dalian**	**89.52**	**317**	P	**P**	**05 30 05.3**	**-4.2**
DL2				SKS	**SKSac**	**05 40 35.4**	**-2.0**
DL2				S	**ScS**	**05 41 00.8**	**-1.7**
DL2				pmax	pmax		
	comp=Z,40nm,1.2s						
DL2				pmax	pmax		
	comp=Z,2µm,8.6s						
DL2				LR	LR		
	comp=Z,7µm,22.8s						
DL2				LR	LR		
	comp=Z,8µm,22.8s						
DL2				LR	LR		
	comp=Z,14µm,22.9s						
I03D	**Drain, OR**	**89.64**	**36**	IAmb	IAmb	05 30 29.5	
	comp=Z,100nm,1.3s						
SII	**Sitkinak Islan**	**89.65**	**13**	P	**P**	**05 30 12.0**	**+2.3**
SII	**Sitkinak Islan**	**89.65**	**13**	P	**P**	**05 30 10.7**	**+1.0**
	baz=200						
SII				S	**S**	**05 41 01.1**	**+2.6**
	baz=200						
GO03	**Copiapo**	**89.68**	**122**	IAMs_20	IAMs_20	06 01 01.3	
	comp=Z,10µm,21.0s						
K04D	**Chiloquin, OR**	**89.70**	**38**	IAmb	IAmb	05 30 42.1	
	comp=Z,48nm,1.0s						
AC06	**Mina Casimiro**	**89.72**	**122**	IAMs_20	IAMs_20	06 01 01.6	
	comp=Z,11µm,21.0s						
S11A	**Rachel**	**89.73**	**45**	IAmb	IAmb	05 30 51.8	
	comp=Z,74nm,1.3s						
ZAIG	**Zacatecas**	**89.89**	**63**	P	**P**	**05 30 12.1**	**+0.1**
ZAIG				IAmb	IAmb	05 30 30.9	
	comp=Z,78nm,1.8s						
HPIG		**89.92**	**58**	IAmb	IAmb	05 30 29.8	
	comp=Z,84nm,1.7s						
J04A	**Umpqua Nationa**	**89.95**	**37**	IAmb	IAmb	05 30 31.2	
	comp=Z,99nm,1.1s						
319A	**Douglas**	**89.97**	**53**	IAmb	IAmb	05 30 30.6	
	comp=Z,42nm,1.0s						
PRN	**Pahroc Range**	**90.00**	**45**	IAmb	IAmb	05 30 44.6	
	comp=Z,64nm,1.2s						
R16K	**Pilot Point**	**90.01**	**11**	P	**P**	**05 30 11.9**	**+0.7**
	baz=197						
R16K				S	**S**	**05 41 04.5**	**+2.9**
	baz=197						
I04A	**Tendick Farm,**	**90.19**	**37**	IAmb	IAmb	05 30 31.5	
	comp=Z,135nm,1.5s						
TLIG	**Tlapa**	**90.19**	**70**	IAMs_20	IAMs_20	06 00 23.8	
	comp=Z,9µm,22.0s						
R11B	**Troy Canyon, C**	**90.28**	**44**	P	**P**	**05 30 13.5**	**+0.2**
X16A	**Lo Mia Camp, P**	**90.38**	**49**	IAmb	IAmb	05 30 36.6	
	comp=Z,60nm,1.1s						
SNY	**Shenyang**	**90.39**	**320**	⇑P	**P**	**05 30 12.3**	**-1.2**
SNY				pmax	pmax		
	comp=Z,19nm,1.3s						
SNY				pmax	pmax		
	comp=Z,2µm,6.3s						
SNY				LR	LR		
	comp=Z,3µm,22.9s						
SNY				LR	LR		
	comp=Z,4µm,23.7s						
SNY				LR	LR		
	comp=Z,9µm,24.2s						
JRQG	**Juriquilla Cam**	**90.39**	**66**	IAmb	IAmb	05 30 33.6	
	comp=Z,58nm,1.8s						
J05D	**Fort Rock, OR**	**90.44**	**38**	IAmb	IAmb	05 30 32.6	
	comp=Z,88nm,1.3s						
OHAK	**Old Harbor**	**90.44**	**13**	IAmb	IAmb	05 30 17.2	
	comp=Z,64nm,1.1s						
OHAK	**Old Harbor**	**90.44**	**13**	P	**P**	**05 30 14.0**	**+0.7**
OHAK	**Old Harbor**	**90.44**	**13**	P	**P**	**05 30 13.8**	**+0.5**
	baz=201						
OHAK				S	**S**	**05 41 08.7**	**+3.0**
	baz=201						
TIA	**Tai'an**	**90.51**	**313**	P	**P**	**05 30 14.0**	**-0.2**
TIA				PP	**PP**	**05 33 46.3**	**-3.3**
TIA				SKS	**SKSac**	**05 40 38.1**	**-5.3**
TIA				S	**SKKSac**	**05 40 59.8**	**+2.3**
TIA				pmax	pmax		
	comp=Z,61nm,1.2s						
TIA				pmax	pmax		
	comp=Z,4µm,5.5s						
TIA				LR	LR		
	comp=Z,6µm,22.0s						

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TIA                                 LR        LR
      comp=Z,5µm,21.3s
TIA                                 LR        LR
      comp=Z,12µm,23.4s
R18K  Karluk           90.55  12    P         P         05 30 14.4 +0.7
      baz=200
R18K                                S         S         05 41 09.9 +3.3
      baz=200
UNM   Universidad Na   90.65  68    IAMs_20   IAMs_20   06 04 34.1
      comp=Z,10µm,19.0s
CN2   Changchun        90.76 323 ⇑P         P         05 30 14.8  -0.3
CN2                               esP       sP        05 30 27.0   0.0
CN2                               eS        S         05 40 59.3   -10
CN2                                 pmax      pmax
      comp=Z,20nm,1.1s
CN2                                 pmax      pmax
      comp=Z,2µm,6.0s
CN2                                 LR        LR
      comp=Z,2µm,18.0s
CN2                                 LR        LR
      comp=Z,1µm,18.0s
CN2                                 LR        LR
      comp=Z,1µm,18.0s
LCMT  Little Creek M   90.85  46    IAmb      IAmb      05 30 36.1
      comp=Z,31nm,1.1s
AC02  Maricunga        90.92 122    IAmb      IAmb      05 30 36.0
      comp=Z,69nm,1.4s
AC02                                IAMs_20   IAMs_20   06 01 51.6
      comp=Z,11µm,21.0s
H04A  Detroit Lake     90.93  36    P         P         05 30 16.3 +0.3
H04A                                IAmb      IAmb      05 30 38.5
      comp=Z,100nm,1.4s
PINE  Pine Mountain    90.94  37    P         P         05 30 17.2 +0.9
Q17K  Contact Creek    90.95  11    P         P         05 30 16.3 +0.5
      baz=199
Q17K                                S         S         05 41 12.8 +2.2
      baz=199
GRNR  Gornyy           90.96 333⇑iP         P         05 30 16.0 +0.1
GRNR                                pmax      pmax
      comp=Z,10.0nm,1.2s
U15A  North Rim        91.08  47    IAmb      IAmb      05 30 49.8
      comp=Z,45nm,1.0s
KDAK  Kodiak Island    91.10  13    P         P         05 30 17.0 +0.6
KDAK                                IAmb      IAmb      05 30 20.2
      comp=Z,68nm,1.3s
KDAK  Kodiak Island    91.10  13    LR        LR        06 06 15.0
      comp=Z,8µm,19.8s,baz=215,slow=32
KDAK  Kodiak Island    91.10  13c iP        P         05 30 17.8 +1.4
KDAK                                pmax      pmax
      comp=Z,125nm,2.0s
KDAK  Kodiak Island    91.10  13    P         P         05 30 17.4 +1.0
      baz=202
KDAK                                S         S         05 41 14.6 +2.9
      baz=202
WUAZ  Wupatki          91.10  48    IAmb      IAmb      05 30 37.5
      comp=Z,43nm,1.1s
WUAZ                                IAMs_20   IAMs_20   06 06 55.9
      comp=Z,8µm,19.0s
O14K  Tigyukauivet M   91.11   8    IAmb      IAmb      05 30 21.1
      comp=Z,114nm,1.6s
O14K                                IAMs_20   IAMs_20   06 09 45.9
      comp=Z,10µm,20.0s
O14K  Tigyukauivet M   91.11   8    P         P         05 30 17.4 +1.0
      baz=194
O14K                                S         S         05 41 12.1 +0.4
      baz=194
KNB   Kanab            91.12  47    IAmb      IAmb      05 30 49.7
      comp=Z,57nm,1.1s
BNX   BinXian          91.14 325 ⇓P         P         05 30 15.8  -1.1
BNX                                 PP        PP        05 33 52.3  -2.1
BNX                                 S         S         05 41 12.9 +0.3
BNX                                 sS        pS        05 41 24.3 +0.5
BNX                                 pmax      pmax
      comp=Z,35nm,0.9s
BNX                                 pmax      pmax
      comp=Z,1µm,8.7s
BNX                                 LR        LR
      comp=Z,3µm,19.0s
BNX                                 LR        LR
      comp=Z,3µm,18.4s
BNX                                 LR        LR
      comp=Z,9µm,20.1s
Q16K  King Salmon      91.22  11    P         P         05 30 17.4 +0.6
      baz=198
Q16K                                S         S         05 41 15.1 +2.5
      baz=198
O15K  Ungalikthiuk R   91.22   9    P         P         05 30 17.2 +0.3
      baz=196
O15K                                S         S         05 41 14.7 +2.0
      baz=196
WVOR  Wild Horse Val   91.24  40    IAmb      IAmb      05 30 36.3
      comp=Z,41nm,1.3s
WVOR  Wild Horse Val   91.24  40    P         P         05 30 18.5 +0.9
WVOR                                pmax      pmax
      comp=Z,28nm,1.7s
PB14  IPOC Station P   91.25 120    P         P         05 30 29.1   +11
PB14  IPOC Station P   91.25 120    IAMs_20   IAMs_20   06 01 23.8
      comp=Z,9µm,22.0s
SLVN  Son La           91.26 294    IAmb      IAmb      05 30 23.3
      comp=Z,68nm,1.7s
SLVN                                IAMs_20   IAMs_20   06 19 04.5
      comp=Z,9µm,20.0s
SLVN  Son La           91.26 294    P         P         05 30 20.3 +2.2
P16K  Nushagak River   91.34  10    IAmb      IAmb      05 30 27.5
      comp=Z,39nm,0.8s
P16K                                IAMs_20   IAMs_20   06 13 09.4
      comp=Z,9µm,19.0s
P16K  Nushagak River   91.34  10    P         P         05 30 17.6 +0.1
      baz=197
P16K                                S         S         05 41 15.7 +1.9
      baz=197
X18A  Snowflake        91.42  50    IAmb      IAmb      05 30 41.2
      comp=Z,40nm,1.1s
PSUT  Pine Spring      91.44  45    IAmb      IAmb      05 30 45.4
      comp=Z,36nm,1.4s
Q18K  Katmai Hardscr   91.47  12    P         P         05 30 18.6 +0.3
      baz=200
Q18K                                S         S         05 41 17.3 +2.1
      baz=200
GO02  Mina Guanaco     91.55 121    IAMs_20   IAMs_20   06 01 31.6
      comp=Z,9µm,22.0s
E03A  Lebam            91.57  34    IAmb      IAmb      05 30 46.2
      comp=Z,67nm,1.1s
HOOD  Mount Hood Mea   91.65  36    IAmb      IAmb      05 30 43.7
      comp=Z,55nm,1.2s
M11K  Mekoryuk         91.69   6    P         P         05 30 19.7 +0.7
      baz=190
M11K                                S         S         05 41 22.2 +5.4
      baz=190
KLR   Kul'dur          91.69 330    LR        LR        06 05 38.3
      comp=Z,8µm,22.0s,baz=146,slow=32
KLR   Kul'dur          91.69 330c iP        P         05 30 19.6 +0.2
KLR                                 pmax      pmax
      comp=Z,21nm,0.9s
N14K  Kuskokwak Cree   91.70   8    P         P         05 30 19.8 +0.7
      baz=194,SNR=11
N14K                                S         S         05 41 20.5 +3.5
      baz=194
P17K  Kvichak River    91.74  11    P         P         05 30 19.1  -0.3
      baz=198
P17K                                S         S         05 41 17.9 +0.5
      baz=198
PB10  IPOC Station P   91.78 119    IAMs_20   IAMs_20   06 02 01.7
      comp=Z,11µm,21.0s
O16K  Kokwok River B   91.87  10    IAmb      IAmb      05 31 08.4
      comp=Z,36nm,1.4s
O16K                                IAMs_20   IAMs_20   06 13 15.2
      comp=Z,8µm,19.0s
O16K  Kokwok River B   91.87  10    P         P         05 30 20.0 +0.1
      baz=197
O16K                                S         S         05 41 19.2 +0.6
      baz=197
I07A  Izee             91.90  38    IAmb      IAmb      05 30 39.2
      comp=Z,38nm,1.3s
Q20K  Shuyak Island    91.91  13    P         P         05 30 20.4 +0.3
      baz=202
Q20K                                S         S         05 41 22.9 +4.0
      baz=202
SYI   Shuyak Island    91.91  13    IAMs_20   IAMs_20   06 06 40.6
      comp=Z,12µm,21.0s
W18A  Petrified Fore   91.92  50    IAmb      IAmb      05 30 43.3
      comp=Z,55nm,1.2s
J08A  Circle Bar Ran   91.95  39    IAmb      IAmb      05 30 51.9
      comp=Z,45nm,1.3s
GYA   Guiyang          91.96 300 ⇓P         P         05 30 23.0 +1.6
GYA                                 pP        pP        05 30 30.8 +0.7
GYA                                 PP        PP        05 34 00.3  -1.1
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GYA                                 SKS       SKSac     05 40 51.5  -0.8
GYA                                 S         S         05 41 21.6 +0.4
GYA                                 pmax      pmax
      comp=Z,2µm,13.6s
GYA                                 LR        LR
      comp=Z,2µm,20.6s
GYA                                 LR        LR
      comp=Z,3µm,22.0s
GYA                                 LR        LR
      comp=Z,6µm,23.1s
Q19K  Cape Douglas,    91.97  12    P         P         05 30 21.0 +0.5
      baz=201
Q19K                                S         S         05 41 21.8 +2.1
      baz=201
M13K  Dall Lake        91.99   7    P         P         05 30 21.6 +1.1
      baz=192
M13K                                S         S         05 41 24.0 +4.4
      baz=192
NLWA  Neilton Lookou   92.04  33    IAmb      IAmb      05 30 27.1
      comp=Z,26nm,1.1s
NLWA                                IAMs_20   IAMs_20   06 07 25.9
      comp=Z,10µm,19.0s
ELK   Elko             92.04  42    IAMs_20   IAMs_20   06 05 15.0
      comp=Z,9µm,20.0s
ELK   Elko             92.04  42    LR        LR        06 05 56.7
      comp=Z,8µm,20.0s,baz=240,slow=32
ELK   Elko             92.04  42    P         P         05 30 22.0 +0.5
ENH   Enshi            92.06 304    P         P         05 30 22.3 +0.7
EPT   El Paso          92.12  54    IAMs_20   IAMs_20   06 08 04.3
      comp=Z,10µm,19.0s
P18K  Big Mountain,    92.13  11    IAmb      IAmb      05 30 23.9
      comp=Z,42nm,1.0s
P18K                                IAMs_20   IAMs_20   06 06 53.3
      comp=Z,8µm,20.0s
P18K  Big Mountain,    92.13  11    P         P         05 30 21.5 +0.3
      baz=199
P18K                                S         S         05 41 22.2 +1.1
      baz=199
N15K  Kwethluk River   92.14   9    IAMs_20   IAMs_20   06 10 27.4
      comp=Z,9µm,20.0s
N15K  Kwethluk River   92.14   9    P         P         05 30 22.3 +1.1
      baz=195,SNR=24
N15K                                S         S         05 41 24.3 +3.3
      baz=195
O17K  Koliganek Bris   92.19  10    P         P         05 30 21.7 +0.3
      baz=198
O17K                                S         S         05 41 22.8 +1.4
      baz=198
PB05  IPOC Station P   92.42 118    IAMs_20   IAMs_20   06 03 03.8
      comp=Z,10µm,21.0s
M14K  Bethel           92.48   8    IAmb      IAmb      05 30 27.6
      comp=Z,62nm,1.3s
M14K  Bethel           92.48   8    P         P         05 30 23.4 +0.8
      baz=194,SNR=5.6
M14K                                S         S         05 41 28.0 +4.1
      baz=194
LYN   LuoYang          92.50 309 ⇑P         P         05 30 23.6 +0.1
LYN                                 PP        PP        05 34 02.6  -2.8
LYN                                 SKS       SKSac     05 40 54.4  -0.3
LYN                                 S         S         05 41 25.8 +0.4
LYN                                 pmax      pmax
      comp=Z,54nm,1.0s
LYN                                 pmax      pmax
      comp=Z,3µm,8.9s
LYN                                 LR        LR
      comp=Z,6µm,22.7s
LYN                                 LR        LR
      comp=Z,5µm,22.0s
LYN                                 LR        LR
      comp=Z,13µm,22.0s
HOLB  Holberg          92.54  29    IAmb      IAmb      05 30 33.6
      comp=Z,42nm,0.9s
O18K  Koktuh Hills     92.57  11    IAMs_20   IAMs_20   06 06 56.9
      comp=Z,8µm,21.0s
O18K  Koktuh Hills     92.57  11    P         P         05 30 23.5 +0.3
      baz=199
O18K                                S         S         05 41 26.7 +1.7
      baz=199
M15K  Kasigluk River   92.58   8    P         P         05 30 24.1 +0.9
      baz=195,SNR=11
M15K                                S         S         05 41 28.1 +3.3
      baz=195
VHRN  Van Horn         92.61  55    IAmb      IAmb      05 30 49.3
      comp=Z,54nm,1.9s
N16K  Nishlik Lake     92.62   9    P         P         05 30 24.4 +1.0
      baz=196,SNR=8.4
N16K                                S         S         05 41 29.4 +4.0
      baz=196
P19K  Oil Pt           92.73  12    IAMs_20   IAMs_20   06 07 30.1
      comp=Z,10µm,20.0s
P19K  Oil Pt           92.73  12    P         P         05 30 24.6 +0.6
      baz=201
P19K                                S         S         05 41 28.5 +2.1
      baz=201
TX31  Lajitas Ar. Si   92.73  57    IAmb      IAmb      05 30 42.9
      comp=Z,58nm,1.7s
TXAR  Lajitas Array    92.73  57    P         P         05 30 25.3 +0.5
TXAR  Lajitas Array    92.73  57    P         P         05 30 26.0 +1.2
      comp=Z,1.7nm,1.0s,baz=220,slow=3.3,SNR=14
TXAR                                S         SKSac     05 41 00.3 +3.8
      comp=Z,0.1nm,0.3s,baz=1.2,slow=14,SNR=4.1
TXAR                                PKKPbc    PKKPbc    05 47 37.9 +1.5
      comp=Z,0.4nm,0.5s,baz=60,slow=4.0,SNR=6.1
TXAR                                PKPPKP    P'P'df    05 55 45.4  -0.1
      comp=Z,0.8nm,1.0s,baz=18,slow=1.7,SNR=3.5
TXAR                                LR        LR        06 07 28.3
      comp=Z,7µm,18.0s,baz=228,slow=32
      comp=Z,1.7nm,1.0s
TXAR  Lajitas Array    92.73  57    P         P         05 30 25.3 +0.5
HNS   HongShan         92.76 313 ⇓P         P         05 30 25.3 +0.7
HNS                                 PP        PP        05 34 04.9  -2.5
HNS                                 SKS       SKSac     05 40 49.0  -7.0
HNS                                 S         S         05 41 23.4  -4.2
HNS                                 sS        sS        05 41 45.8 +3.6
HNS                                 pmax      pmax
      comp=Z,34nm,2.1s
HNS                                 pmax      pmax
      comp=Z,2µm,8.7s
HNS                                 LR        LR
      comp=Z,4µm,23.5s
HNS                                 LR        LR
      comp=Z,6µm,24.7s
HNS                                 LR        LR
      comp=Z,12µm,24.1s
N17K  Nushagak Hills   92.90  10    IAMs_20   IAMs_20   06 13 57.4
      comp=Z,8µm,20.0s
N17K  Nushagak Hills   92.90  10    P         P         05 30 24.8 +0.1
      baz=198
N17K                                S         S         05 41 29.9 +2.2
      baz=198
L14K  Kuka Creek       92.97   7    IAmb      IAmb      05 30 28.6
      comp=Z,37nm,1.0s
L14K  Kuka Creek       92.97   7    P         P         05 30 25.4 +0.4
      baz=193,SNR=10
L14K                                S         S         05 41 32.1 +3.8
      baz=193
PB06  IPOC Station P   92.98 119    IAMs_20   IAMs_20   06 02 48.6
      comp=Z,10µm,22.0s
CNPM  China Poot       92.99  13    IAmb      IAmb      05 30 30.4
      comp=Z,56nm,1.2s
HMU   Henry Mountain   92.99  47    IAmb      IAmb      05 30 47.7
      comp=Z,42nm,1.6s
G08A  Pilot Rock       93.00  37    IAmb      IAmb      05 30 44.1
      comp=Z,72nm,1.4s
HOM   Homer            93.03  13    P         P         05 30 25.7 +0.5
      baz=202
HOM                                 S         S         05 41 31.3 +2.3
      baz=202
O19K  Port Alsworth    93.05  12    IAmb      IAmb      05 30 28.1
      comp=Z,51nm,0.9s
O19K                                IAMs_20   IAMs_20   06 08 14.5
      comp=Z,9µm,21.0s
O19K  Port Alsworth    93.05  12    P         P         05 30 24.9  -0.4
      baz=200
O19K                                S         S         05 41 29.6 +0.6
      baz=200
ILSW  Iliamna Southw   93.05  12    IAmb      IAmb      05 30 35.5
      comp=Z,34nm,0.8s
DUG   Dugway, Tooele   93.12  44    IAMs_20   IAMs_20   06 05 53.7
      comp=Z,7µm,20.0s
DUG   Dugway, Tooele   93.12  44    P         P         05 30 27.6 +1.2
DUG                                 pmax      pmax
      comp=Z,11nm,2.1s
M16K  Timber Creek     93.12   9    IAmb      IAmb      05 30 37.0
      comp=Z,43nm,1.1s
M16K                                IAMs_20   IAMs_20   06 16 32.2
      comp=Z,7µm,19.0s
M16K  Timber Creek     93.12   9    P         P         05 30 26.8 +1.1
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      baz=196,SNR=12
M16K                                S         S         05 41 34.2 +4.5
      baz=196
NNA   Nana             93.17 106    IAMs_20   IAMs_20   06 02 05.5
      comp=Z,11µm,22.0s
NNA   Nana             93.17 106    LR        LR        06 02 40.4
      comp=Z,12µm,21.9s,baz=232,slow=29
Y22D  IRIS PASSCAL I   93.17  52    IAMs_20   IAMs_20   06 11 14.0
      comp=Z,9µm,18.0s
Y22D  IRIS PASSCAL I   93.17  52    S         S         05 41 39.9 +8.2
      baz=234
MXC   Moxie City       93.20  36    IAmb      IAmb      05 30 44.2
      comp=Z,30nm,1.3s
O20K  Slope Mountain   93.24  12    P         P         05 30 27.3 +0.9
      baz=202
O20K                                S         S         05 41 31.9 +0.9
      baz=202
N18K  Kilae Creek      93.25  11    P         P         05 30 26.7 +0.4
      baz=199
N18K                                S         S         05 41 31.5 +0.7
      baz=199
CBB   Campbell River   93.27  31    IAmb      IAmb      05 30 46.2
      comp=Z,48nm,1.5s
BRSE  Bradley Lake S   93.28  13    P         P         05 30 26.8 +0.3
      baz=203
BRSE                                S         S         05 41 33.9 +2.6
      baz=203
ALPN  Alpine           93.34  56    IAmb      IAmb      05 30 52.1
      comp=Z,42nm,1.5s
K13K  Kusilvak Mount   93.36   6    IAmb      IAmb      05 30 32.8
      comp=Z,48nm,1.2s
K13K  Kusilvak Mount   93.36   6    P         P         05 30 27.4 +0.7
      baz=191
K13K                                S         S         05 41 35.9 +4.3
      baz=191
E07A  Sunnyside        93.41  36    IAmb      IAmb      05 30 46.0
      comp=Z,58nm,1.4s
L15K  Ungalak Mounta   93.44   8    P         P         05 30 27.7 +0.6
      baz=194
L15K                                S         S         05 41 36.3 +3.9
      baz=194
HAWA  Hanford          93.46  36    IAmb      IAmb      05 30 46.1
      comp=Z,51nm,1.4s
BJT   Baijiatuau       93.47 315    P         P         05 30 27.1  -0.7
BJT   Baijiatuau       93.47 315    IAMs_20   IAMs_20   06 08 23.8
      comp=Z,9µm,21.0s
BJT   Baijiatuau       93.47 315    P         P         05 30 30.7 +2.9
BJT   Baijiatuau       93.47 315    P         P         05 30 27.1  -0.7
BJT                                 pmax      pmax
      comp=Z,27nm,1.3s
BJI   Beijing          93.48 315    P         P         05 30 28.4 +0.6
BJI                                 sP        pwP       05 30 43.4 +1.8
BJI                                 SS        SS        05 47 51.6  -0.3
BJI                                 pmax      pmax
      comp=Z,870nm,11.4s
BJI                                 LR        LR
      comp=Z,2µm,22.4s
BJI                                 LR        LR
      comp=Z,3µm,22.0s
BJI                                 LR        LR
      comp=Z,5µm,21.8s
RED   Redoubt Volcan   93.53  12    IAmb      IAmb      05 30 40.3
      comp=Z,26nm,1.0s
TMUT  Trail Mountain   93.53  46    IAmb      IAmb      05 30 48.5
      comp=Z,48nm,1.3s
BMO   Blue Mountains   93.58  38    IAmb      IAmb      05 30 37.5
      comp=Z,57nm,2.0s
N19K  Bonanza Creek    93.60  11    IAMs_20   IAMs_20   06 07 39.1
      comp=Z,10µm,21.0s
N19K  Bonanza Creek    93.60  11    P         P         05 30 28.0   0.0
      baz=200
N19K                                S         S         05 41 34.2 +0.1
      baz=200
PATCX Punta Patache    93.62 117    IAMs_20   IAMs_20   06 03 34.8
      comp=Z,9µm,21.0s
WAH2  Wahluke Slope    93.69  36    IAmb      IAmb      05 30 47.0
      comp=Z,86nm,1.8s
CMAR  Chiang Mai Arr   93.69 289    P         P         05 30 29.9 +0.5
      comp=Z,2.4nm,0.6s,baz=143,slow=3.7,SNR=16
CMAR                                LR        LR        06 13 18.9
      comp=Z,3µm,21.7s,baz=175,slow=36
      comp=Z,2.4nm,0.6s
M17K  Holitna River    93.70  10    IAmb      IAmb      05 30 32.5
      comp=Z,61nm,1.2s
M17K  Holitna River    93.70  10    P         P         05 30 29.6 +1.3
      baz=198,SNR=9.8
M17K                                S         S         05 41 38.6 +3.8
      baz=198
BBB   Bella Bella      93.71  28    IAmb      IAmb      05 30 38.1
      comp=Z,87nm,1.8s
BBB   Bella Bella      93.71  28    LR        LR        06 04 35.5
      comp=Z,9µm,21.8s,baz=230,slow=30
L16K  Owhat River      93.72   9    IAmb      IAmb      05 30 35.1
      comp=Z,32nm,1.1s
L16K                                IAMs_20   IAMs_20   06 14 56.9
      comp=Z,8µm,20.0s
L16K  Owhat River      93.72   9    P         P         05 30 29.2 +0.9
      baz=196,SNR=15
L16K                                S         S         05 41 38.0 +3.1
      baz=196
TA01  Diego Aracena    93.75 117    IAMs_20   IAMs_20   06 03 38.1
      comp=Z,12µm,22.0s
PB09  IPOC Station P   93.76 118    IAMs_20   IAMs_20   06 02 53.1
      comp=Z,9µm,22.0s
CHTO  Chiang Mai       93.88 290    P         P         05 30 29.6  -0.5
CHTO  Chiang Mai       93.88 290    P         P         05 30 28.9  -1.3
CHTO                                P         P         05 30 28.9  -1.3
CHTO                                S         SKSac     05 40 59.6  -3.5
CHTO                                S         SKSac     05 40 59.6  -3.5
CHTO  Chiang Mai       93.88 290    P         P         05 30 33.3 +3.1
CHTO  Chiang Mai       93.88 290    P         P         05 30 29.7  -0.5
SEW   Seward           93.88  14    IAMs_20   IAMs_20   06 07 55.7
      comp=Z,13µm,20.0s
SEW   Seward           93.88  14    P         P         05 30 29.8 +0.7
      baz=204
SEW                                 S         S         05 41 39.1 +2.7
      baz=204
AF01  San Pedro de A   93.88 120    IAMs_20   IAMs_20   06 03 09.4
      comp=Z,11µm,22.0s
Q23K  Middleton Isla   93.94  16    IAMs_20   IAMs_20   06 07 34.6
      comp=Z,10µm,19.0s
Q23K  Middleton Isla   93.94  16    P         P         05 30 29.8 +0.4
      baz=207
TA02  Huaiquique       93.95 116    IAMs_20   IAMs_20   06 03 02.6
      comp=Z,13µm,21.0s
MVCO  Mesa Verde       93.97  49    P         P         05 30 30.4  -0.2
MVCO                                IAMs_20   IAMs_20   06 08 46.8
      comp=Z,11µm,19.0s
ANMO  Albuquerque      93.99  51    P         P         05 30 31.3 +0.7
ANMO  Albuquerque      93.99  51    IAMs_20   IAMs_20   06 06 42.6
      comp=Z,9µm,20.0s
ANMO  Albuquerque      93.99  51    LR        LR        06 07 41.6
      comp=Z,11µm,18.4s,baz=328,slow=32
ANMO  Albuquerque      93.99  51    P         P         05 30 31.3 +0.7
ANMO                                pmax      pmax
      comp=Z,15nm,1.3s
PB01  IPOC Station P   94.00 117    IAMs_20   IAMs_20   06 01 58.8
      comp=Z,9µm,22.0s
MA2   Magadan          94.01 345    IAMs_20   IAMs_20   06 08 50.5
      comp=Z,11µm,21.0s
MA2   Magadan          94.01 345    LR        LR        06 09 02.3
      comp=Z,9µm,20.6s,baz=162,slow=33
MA2   Magadan          94.01 345  i P         P         05 30 30.1 +0.3
MA2                                 pmax      pmax
      comp=Z,37nm,1.1s
M18K  Stony River      94.03  10    P         P         05 30 30.6 +0.8
      baz=199,SNR=12
M18K                                S         S         05 41 39.4 +1.8
      baz=199
K15K  Wolf Creek Mou   94.03   8    P         P         05 30 31.0 +1.2
      baz=194,SNR=13
K15K                                S         S         05 41 41.5 +3.9
      baz=194
SLKM  Skilak Lake      94.09  13    IAmb      IAmb      05 30 35.1
      comp=Z,42nm,1.1s
SLKM                                IAMs_20   IAMs_20   06 07 59.4
      comp=Z,13µm,21.0s
HVU   Hansel Valley    94.13  43    IAmb      IAmb      05 30 50.3
      comp=Z,34nm,1.2s
CAPN  Captain Cook N   94.15  13    P         P         05 30 31.4 +1.1
      baz=203
CAPN                                S         S         05 41 43.9 +5.2
      baz=203
O22K  Cooper Landing   94.17  14    IAMs_20   IAMs_20   06 08 28.3
      comp=Z,11µm,20.0s
O22K  Cooper Landing   94.17  14    P         P         05 30 30.7 +0.2
      baz=204
O22K                                S         S         05 41 41.8 +2.9
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	baz=204						
JLU	Jordanelle	94.19	44	IAmb	IAmb	05 31 10.2	
	comp=Z,46nm,1.8s						
KMI	Kunming	94.20	297	⇑P	P	05 30 32.3	+0.5
KMI				PP	PP	05 34 21.1	+2.0
KMI				SKS	SKSac	05 41 03.8	-1.2
KMI				S	ScS	05 41 43.5	+0.9
KMI				pmax	pmax		
	comp=Z,30nm,1.5s						
KMI				pmax	pmax		
	comp=Z,1µm,13.4s						
KMI				LR	LR		
	comp=Z,6µm,20.5s						
KMI				LR	LR		
	comp=Z,4µm,20.3s						
KMI				LR	LR		
	comp=Z,7µm,20.3s						
P23K	Montague Islan	94.22	15	P	P	05 30 31.3	+0.5
	baz=206						
P23K				S	S	05 41 42.8	+3.4
	baz=206						
J14K	Nanvaranak Lak	94.26	7	P	P	05 30 31.5	+0.6
	baz=192						
J14K				S	S	05 41 41.9	+2.3
	baz=192						
L17K	Donlin	94.28	9	P	P	05 30 31.7	+0.7
	baz=197,SNR=9.8						
L17K				S	S	05 41 43.7	+3.9
	baz=197						
PV19	Morning Glory	94.32	47	IAmb	IAmb	05 30 55.4	
	comp=Z,30nm,1.2s						
PV10	Paradox Valley	94.32	47	IAmb	IAmb	05 31 13.5	
	comp=Z,25nm,1.1s						
PV18	Skein Mesa, Pa	94.33	48	IAmb	IAmb	05 31 02.7	
	comp=Z,32nm,1.2s						
HEH	HeiHe	94.36	328	*e*P	P	05 30 29.8	-1.8
HEH				sP	pwP	05 30 45.3	-0.1
HEH				SKS	SKSac	05 40 58.8	-5.3
HEH				S	S	05 41 38.4	-2.6
HEH				pmax	pmax		
	comp=Z,12nm,1.2s						
HEH				pmax	pmax		
	comp=Z,2µm,6.9s						
HEH				LR	LR		
	comp=Z,6µm,18.8s						
HEH				LR	LR		
	comp=Z,3µm,19.0s						
HEH				LR	LR		
	comp=Z,10µm,19.4s						
N20K	Mount Spurr	94.36	12	P	P	05 30 31.8	+0.3
	baz=202						
N20K				S	S	05 41 40.5	-0.2
	baz=202						
SPCR	Spurr Chakacha	94.36	12	P	P	05 30 31.8	+0.3
	baz=202						
SPCR				S	S	05 41 40.9	+0.2
	baz=202						
CRAG	Craig	94.39	24	P	P	05 30 32.1	+0.6
	baz=217						
CRAG				S	S	05 41 49.9	+9.0
	baz=217						
PV23	Carpenter Ridg	94.39	47	IAmb	IAmb	05 32 32.0	
	comp=Z,37nm,1.4s						
TIY	Taiyuan	94.40	312	*e*P	P	05 30 32.3	+0.1
TIY				PP	PP	05 34 17.0	-3.3
TIY				SKS	SKSac	05 41 03.3	-1.9
TIY				S	S	05 41 36.8	-5.3
TIY				pmax	pmax		
	comp=Z,1µm,5.4s						
TIY				LR	LR		
	comp=Z,5µm,22.0s						
TIY				LR	LR		
	comp=Z,4µm,20.6s						
TIY				LR	LR		
	comp=Z,9µm,24.7s						
PV02	Paradox Valley	94.41	48	IAmb	IAmb	05 31 03.1	
	comp=Z,44nm,1.5s						
PLID	Pearl Lake	94.43	39	IAmb	IAmb	05 30 51.1	
	comp=Z,55nm,1.4s						
PV12	Saucer Basin,	94.44	47	IAmb	IAmb	05 30 59.7	
	comp=Z,42nm,1.3s						
ATAH	Atahualpa	94.45	101	LR	LR	06 03 55.5	
	comp=Z,4µm,21.1s,baz=245,slow=30						
PV21	Cone Mtn., Par	94.47	47	IAmb	IAmb	05 30 42.4	
	comp=Z,66nm,1.9s						
TCUT	Toone Canyon	94.53	44	IAmb	IAmb	05 30 42.5	
	comp=Z,45nm,1.4s						
L18K	Granite Mounta	94.59	10	P	P	05 30 33.1	+0.7
	baz=198						
L18K				S	S	05 41 44.4	+1.9
	baz=198						
XAN	Xi'an	94.60	307	P	P	05 30 33.3	+0.1
XAN				sP	pwP	05 30 48.6	+1.7
XAN				SKS	SKSac	05 41 05.8	-0.6
XAN				S	S	05 41 43.5	-0.5
XAN				pmax	pmax		
	comp=Z,26nm,1.5s						
XAN				pmax	pmax		
	comp=Z,3µm,5.7s						
XAN				LR	LR		
	comp=Z,4µm,17.9s						
XAN				LR	LR		
	comp=Z,4µm,16.8s						
XAN				LR	LR		
	comp=Z,8µm,19.2s						
PB11	IPOC Station P	94.61	116	IAMs_20	IAMs_20	06 03 20.0	
	comp=Z,12µm,22.0s						
M19K	Big River Lodg	94.64	11	IAMs_20	IAMs_20	06 08 09.7	
	comp=Z,8µm,22.0s						
M19K	Big River Lodg	94.64	11	P	P	05 30 33.0	+0.3
	baz=200						
M19K				S	S	05 41 44.0	+0.9
	baz=200						
FIS	Fire Island	94.68	13	IAMs_20	IAMs_20	06 08 39.8	
	comp=Z,13µm,20.0s						
STLK	Strandline Lak	94.70	12	IAmb	IAmb	05 33 22.7	
	comp=Z,15nm,0.5s						
GAMB	Gambell	94.71	3	IAMs_20	IAMs_20	06 08 46.9	
	comp=Z,10µm,20.0s						
GAMB	Gambell	94.71	3	P	P	05 30 33.6	+0.7
	baz=185						
GAMB				S	S	05 41 46.4	+2.9
	baz=185						
RC01	Rabbit Creek A	94.72	13	IAMs_20	IAMs_20	06 08 18.0	
	comp=Z,10µm,20.0s						
RC01	Rabbit Creek A	94.72	13	P	P	05 30 34.3	+1.2
	baz=204						
RC01				S	S	05 41 45.8	+2.0
	baz=204						
HWUT	Hardware Ranch	94.73	44	IAMs_20	IAMs_20	06 07 04.5	
	comp=Z,9µm,20.0s						
HIN	Hinchinbrook I	94.78	15	IAMs_20	IAMs_20	06 08 16.5	
	comp=Z,14µm,21.0s						
PB08	IPOC Station P	94.78	117	P	P	05 30 45.0	+10
PB08	IPOC Station P	94.78	117	IAMs_20	IAMs_20	06 04 30.5	
	comp=Z,10µm,20.0s						
PWL	Port Wells	94.80	14	P	P	05 30 34.6	+1.2
	baz=205						
PWL				S	S	05 41 46.1	+1.6
	baz=205						
V35K	Ketchikan	94.80	25	P	P	05 30 34.8	+1.3
	baz=218						
V35K				S	S	05 41 54.0	+9.4
	baz=218						
L19K	White Mountain	94.83	11	IAmb	IAmb	05 30 40.0	
	comp=Z,42nm,1.1s						
L19K				IAMs_20	IAMs_20	06 15 06.6	
	comp=Z,8µm,19.0s						
L19K	White Mountain	94.83	11	P	P	05 30 34.1	+0.5
	baz=200,SNR=23						
L19K				S	S	05 41 47.3	+2.6
	baz=200						
M20K	Styx River	94.83	12	IAMs_20	IAMs_20	06 08 17.7	
	comp=Z,12µm,22.0s						
M20K	Styx River	94.83	12	P	P	05 30 33.7	+0.1
	baz=201						
M20K				S	S	05 41 44.1	-0.8
	baz=201						
K17K	Iditarod	94.84	9	IAmb	IAmb	05 30 52.3	
	comp=Z,27nm,1.2s						
K17K				IAMs_20	IAMs_20	06 15 31.6	
	comp=Z,8µm,19.0s						
K17K	Iditarod	94.84	9	P	P	05 30 34.3	+0.8
	baz=197						
K17K				S	S	05 41 47.7	+3.0
	baz=197						
KAIM	Kayak Island	94.84	16	IAMs_20	IAMs_20	06 08 23.3	
	comp=Z,10µm,19.0s						
KAIM	Kayak Island	94.84	16	P	P	05 30 35.1	+1.5
	baz=208						
KAIM				S	S	05 41 50.9	+6.1
	baz=208						
SUA	Susitna One	94.87	13	P	P	05 30 34.9	+1.0
	baz=203						
SUA				S	S	05 41 46.8	+1.5
	baz=203						
AP01	Chacalluta	94.88	115	IAMs_20	IAMs_20	06 04 28.1	
	comp=Z,9µm,22.0s						
U33K	Whale Pass	94.90	23	P	P	05 30 36.1	+2.2
	baz=217						
U33K				S	S	05 41 53.3	+7.9
	baz=217						
SIT	Sitka	94.94	22	P	P	05 30 35.2	+1.2
	baz=216						
SIT				S	S	05 41 53.1	+7.5
	baz=216						
GO01	Chusmiza	95.02	116	IAMs_20	IAMs_20	06 03 55.8	
	comp=Z,11µm,20.0s						
GLI	Glacier Island	95.08	15	IAmb	IAmb	05 30 37.8	
	comp=Z,27nm,0.9s						
GLI	Glacier Island	95.08	15	P	P	05 30 35.2	+0.5
	baz=206						
GLI				S	S	05 41 48.8	+1.9
	baz=206						
EYAK	Cordova Ski Ar	95.08	15	P	P	05 30 34.6	0.0
	baz=207						
EYAK				S	S	05 41 51.7	+4.8
	baz=207						
J16K	Anvik River	95.10	8	IAmb	IAmb	05 30 55.8	
	comp=Z,28nm,0.9s						
J16K	Anvik River	95.10	8	P	P	05 30 35.4	+0.7
	baz=195						
J16K				S	S	05 41 49.6	+2.7
	baz=195						
SUCK	Suckling Hills	95.12	16	IAMs_20	IAMs_20	06 08 21.8	
	comp=Z,10µm,20.0s						
SKT	Skwentna	95.21	12	IAMs_20	IAMs_20	06 09 21.6	
	comp=Z,12µm,21.0s						
SKT	Skwentna	95.21	12	P	P	05 30 34.7	-0.5
	baz=203						
SKT				S	S	05 41 47.6	-0.4
	baz=203						
M22K	Willow	95.26	13	IAmb	IAmb	05 31 07.1	
	comp=Z,75nm,1.2s						
M22K	Willow	95.26	13	P	P	05 30 35.4	0.0
	baz=204						
M22K				S	S	05 41 49.6	+1.3
	baz=204						
L20K	Farewell, AK	95.27	11	P	P	05 30 35.8	+0.2
	baz=201						
L20K				S	S	05 41 49.6	+1.1
	baz=201						
KNK	Knik Glacier	95.28	14	IAmb	IAmb	05 30 39.0	
	comp=Z,22nm,1.0s						
KNK				IAMs_20	IAMs_20	06 09 09.6	
	comp=Z,12µm,20.0s						
KNK	Knik Glacier	95.28	14	P	P	05 30 35.7	+0.1
	baz=205						
KNK				S	S	05 41 50.4	+1.8
	baz=205						
BGLC	Bering Glacier	95.28	17	P	P	05 30 35.9	+0.3
	baz=209						
BGLC				S	S	05 41 53.6	+5.1
	baz=209						
PMR	Palmer	95.30	13	P	P	05 30 38.1	+2.4
PMR	Palmer	95.30	13	P	P	05 30 34.6	-1.1
PMR	Palmer	95.30	13	P	P	05 30 35.7	+0.1
	baz=205						
PMR				S	S	05 41 49.8	+1.1
	baz=205						
S22A	4UR Ranch, Cre	95.36	49	IAMs_20	IAMs_20	06 08 48.7	
	comp=Z,10µm,19.0s						
S31K	Pelican	95.39	21	P	P	05 30 36.1	0.0
	baz=215						
S31K				S	S	05 41 57.3	+7.7
	baz=215						
J17K	VABM Dome	95.39	8	IAmb	IAmb	05 30 42.8	
	comp=Z,31nm,1.4s						
J17K				IAMs_20	IAMs_20	06 12 19.3	
	comp=Z,8µm,20.0s						
J17K	VABM Dome	95.39	8	P	P	05 30 36.5	+0.4
	baz=196						
J17K				S	S	05 41 52.7	+3.2
	baz=196						
WRAK	Wrangell Islan	95.41	23	P	P	05 30 36.7	+0.4
	baz=218						
WRAK				S	S	05 41 57.8	+8.0
	baz=218						
S32K	Killisnoo	95.51	22	IAMs_20	IAMs_20	06 06 23.5	
	comp=Z,9µm,20.0s						
S32K	Killisnoo	95.51	22	P	P	05 30 37.0	+0.3
	baz=216						
S32K				S	S	05 41 57.5	+6.9
	baz=216						
GHO	Glory Hole Cre	95.51	13	IAmb	IAmb	05 30 40.0	
	comp=Z,25nm,0.9s						
T33K	Petersburg	95.51	23	P	P	05 30 37.9	+1.2
	baz=218						
T33K				S	S	05 41 59.3	+8.6
	baz=218						
DIV	Divide	95.59	15	IAMs_20	IAMs_20	06 08 53.1	
	comp=Z,10µm,20.0s						
SML	Sawmill	95.66	14	IAMs_20	IAMs_20	06 09 22.8	
	comp=Z,10µm,20.0s						
SML	Sawmill	95.66	14	P	P	05 30 37.5	+0.1
	baz=205						
SML				S	S	05 41 55.0	+3.0
	baz=205						
MESA	MESA	95.67	17	IAMs_20	IAMs_20	06 14 03.3	
	comp=Z,11µm,19.0s						
MESA	MESA	95.67	17	P	P	05 30 37.5	-0.2
	baz=210						
MESA				S	S	05 41 57.9	+5.5
	baz=210						
I17K	Unalakleet	95.67	8	P	P	05 30 37.8	+0.6
	baz=195						
I17K				S	S	05 41 54.3	+2.5
	baz=195						
WAX	Waxell Ridge	95.68	17	IAMs_20	IAMs_20	06 05 11.5	
	comp=Z,13µm,22.0s						
PZH	PanZhiHua	95.69	297	P	P	05 30 39.0	+0.5
PZH				PP	PP	05 34 32.0	+1.4
PZH				SKS	SKSac	05 41 05.5	-7.2
PZH				S	ScS	05 41 59.0	+4.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,1µm,7.1s						
PZH				LR	LR		
	comp=Z,3µm,21.1s						
PZH				LR	LR		
	comp=Z,3µm,21.6s						
PZH				LR	LR		
	comp=Z,6µm,21.0s						
BMRM	Bremner River	95.72	16	IAmb	IAmb	05 30 43.3	
	comp=Z,26nm,1.0s						
BMRM				IAMs_20	IAMs_20	06 08 33.4	
	comp=Z,10µm,20.0s						
BMRM	Bremner River	95.72	16	P	P	05 30 38.5	+0.8
	baz=208						
BMRM				S	S	05 41 55.9	+3.5
	baz=208						
AHID	Auburn Hatcher	95.72	43	IAmb	IAmb	05 31 16.8	
	comp=Z,32nm,1.3s						
AHID				IAMs_20	IAMs_20	06 05 18.4	
	comp=Z,8µm,22.0s						
M23K	Glacier View	95.77	14	P	P	05 30 38.6	+0.8
	baz=206						
M23K				S	S	05 41 55.8	+3.0
	baz=206						
J18K	Innoko River	95.77	9	IAmb	IAmb	05 30 43.4	
	comp=Z,80nm,1.9s						
J18K	Innoko River	95.77	9	P	P	05 30 38.0	+0.1
	baz=198,SNR=16						
J18K				S	S	05 41 54.4	+1.6
	baz=198						
U35K	Hyder	95.83	25	IAMs_20	IAMs_20	06 10 37.3	
	comp=Z,7µm,20.0s						
U35K	Hyder	95.83	25	P	P	05 30 39.0	+0.8
	baz=220						
U35K				S	S	05 42 01.8	+8.3
	baz=220						
CUT	Chulitna	95.83	13	P	P	05 30 38.5	+0.4
	baz=204						
CUT				S	S	05 41 55.4	+2.2
	baz=204						
YAH	Yahtse	95.88	17	IAMs_20	IAMs_20	06 05 27.7	
	comp=Z,12µm,22.0s						
CRQE	Cirque	95.88	16	P	P	05 30 39.1	+0.6
	baz=210						
CRQE				S	S	05 41 58.1	+4.0
	baz=210						
KLU	Klutina	95.88	15	IAMs_20	IAMs_20	06 09 03.8	
	comp=Z,11µm,20.0s						
KLU	Klutina	95.88	15	P	P	05 30 38.9	+0.5
	baz=207						
KLU				S	S	05 41 56.7	+2.7
	baz=207						
ANM	Nome	95.89	5	IAMs_20	IAMs_20	06 09 23.0	
	comp=Z,10µm,21.0s						
ANM	Nome	95.89	5	P	P	05 30 39.2	+1.0
	baz=191						
ANM				S	S	05 41 57.4	+3.7
	baz=191						
SCM	Sheep Creek Mo	95.89	14	IAmb	IAmb	05 30 41.8	
	comp=Z,23nm,0.9s						
SCM				IAMs_20	IAMs_20	06 09 06.8	
	comp=Z,11µm,20.0s						
SCM	Sheep Creek Mo	95.89	14	P	P	05 30 39.5	+1.0
	baz=206						
SCM				S	S	05 41 56.4	+2.3
	baz=206						
PNL	Peninsula	95.90	19	P	P	05 30 39.6	+1.1
	baz=212						
PNL				S	S	05 41 59.6	+5.5
	baz=212						
R31K	City Hall, Gus	95.91	21	P	P	05 30 39.1	+0.6
	baz=215						
R31K				S	S	05 42 01.1	+7.0
	baz=215						
XLT	XiLinHaoTe	95.92	318	*e*P	P	05 30 38.6	-0.5
XLT				sP	sP	05 30 51.3	+0.6
XLT				SKS	SKSac	05 41 11.8	-1.2
XLT				S	ScS	05 41 57.3	+1.5
XLT				pmax	pmax		
	comp=Z,5.0nm,1.2s						
XLT				pmax	pmax		
	comp=Z,980nm,12.0s						
XLT				LR	LR		
	comp=Z,6µm,22.2s						
XLT				LR	LR		
	comp=Z,7µm,22.2s						
NEW	Newport	95.93	36	LR	LR	06 09 56.4	
	comp=Z,11µm,18.6s,baz=226,slow=33						
ISLE	Juniper Island	95.94	17	IAMs_20	IAMs_20	06 05 31.4	
	comp=Z,12µm,21.0s						
PPLA	Purkeypile	95.94	12	IAMs_20	IAMs_20	06 09 14.0	
	comp=Z,11µm,21.0s						
PPLA	Purkeypile	95.94	12	P	P	05 30 38.8	+0.1
	baz=202						
PPLA				S	S	05 41 52.3	-2.2
	baz=202						
MSTX	Muleshoe	95.95	54	IAMs_20	IAMs_20	06 10 45.7	
	comp=Z,9µm,19.0s						
TGL	Tana Glacier	95.95	16	IAMs_20	IAMs_20	06 08 38.6	
	comp=Z,12µm,21.0s						
DGPR	DIGLIPUR	95.97	282	*e*P	P	05 30 39.9	+0.1
PB18	Visviri	95.99	115	IAMs_20	IAMs_20	06 03 32.7	
	comp=Z,8µm,22.0s						
PCA	Pinnacle	96.03	18	IAMs_20	IAMs_20	06 06 47.1	
	comp=Z,10µm,20.0s						
PINM	Pinnacle	96.03	18	P	P	05 30 39.6	+0.4
	baz=212						
PINM				S	S	05 42 01.0	+5.6
	baz=212						
K20K	Telida	96.06	11	IAmb	IAmb	05 30 45.3	
	comp=Z,61nm,1.8s						
K20K				IAMs_20	IAMs_20	06 16 05.2	
	comp=Z,7µm,20.0s						
K20K	Telida	96.06	11	P	P	05 30 39.6	+0.5
	baz=200						
K20K				S	S	05 41 56.1	+0.7
	baz=200						
BCPM	Bancas Point	96.08	18	IAMs_20	IAMs_20	06 06 16.2	
	comp=Z,10µm,21.0s						
TABL	Table Mountain	96.10	17	IAMs_20	IAMs_20	06 05 45.7	
	comp=Z,11µm,21.0s						
MTO3	Montecristo	96.11	77	IAMs_20	IAMs_20	06 03 31.0	
	comp=Z,9µm,22.0s						
COHC	Cochancay	96.16	97	P	P	05 30 41.2	+0.4
R32K	Eaglecrest	96.18	21	IAMs_20	IAMs_20	06 06 03.2	
	comp=Z,7µm,21.0s						
R32K	Eaglecrest	96.18	21	P	P	05 30 40.6	+0.8
	baz=216						
GRNC	Granite Creek	96.19	17	IAMs_20	IAMs_20	06 05 38.2	
	comp=Z,12µm,22.0s						
VRDI	Verde Repeater	96.21	16	IAMs_20	IAMs_20	06 09 08.6	
	comp=Z,9µm,20.0s						
SDCO	Great Sand Dun	96.22	49	IAMs_20	IAMs_20	06 09 42.6	
	comp=Z,7µm,19.0s						
TPAW	Teton Pass	96.24	42	IAmb	IAmb	05 31 19.5	
	comp=Z,30nm,1.5s						
TPAW				IAMs_20	IAMs_20	06 05 46.2	
	comp=Z,8µm,22.0s						
N25K	Chitina, Valde	96.28	15	IAMs_20	IAMs_20	06 09 24.3	
	comp=Z,9µm,20.0s						
N25K	Chitina, Valde	96.28	15	P	P	05 30 41.5	+1.2
	baz=208						
N25K				S	S	05 42 00.3	+2.8
	baz=208						
FXWY	Fox Creek	96.29	42	IAMs_20	IAMs_20	06 05 35.5	
	comp=Z,8µm,22.0s						
GLB	Gilahina Butte	96.32	16	IAMs_20	IAMs_20	06 09 02.3	
	comp=Z,7µm,20.0s						
P29M	Windy Craggy	96.33	19	IAMs_20	IAMs_20	06 10 11.0	
	comp=Z,9µm,20.0s						
P29M	Windy Craggy	96.33	19	P	P	05 30 41.7	+1.3
	baz=214						
P29M				S	S	05 42 05.5	+7.7
	baz=214						
SNOW	Snow King Moun	96.34	42	IAMs_20	IAMs_20	06 10 27.8	
	comp=Z,8µm,19.0s						
M24K	Tolsona, Glenn	96.38	14	IAMs_20	IAMs_20	06 09 19.8	
	comp=Z,9µm,20.0s						
M24K	Tolsona, Glenn	96.38	14	P	P	05 30 42.3	+1.6
	baz=207						
M24K				S	S	05 42 01.8	+3.6
	baz=207						
G15K	Niukluk	96.42	6	P	P	05 30 41.5	+0.8
	baz=192						
G15K				S	S	05 42 01.2	+3.0
	baz=192						
J19K	Poorman	96.43	10	IAmb	IAmb	05 30 44.4	
	comp=Z,51nm,1.9s						
J19K	Poorman	96.43	10	P	P	05 30 41.8	+1.0
	baz=199						
J19K				S	S	05 42 00.9	+2.5
	baz=199						
CAST	Castle Rocks	96.45	11	IAMs_20	IAMs_20	06 18 03.3	
	comp=Z,9µm,19.0s						
CAST	Castle Rocks	96.45	11	P	P	05 30 40.5	-0.4
	baz=202						
CAST				S	S	05 41 57.4	-1.2
	baz=202						
MCARA	McCarthy VSAT	96.45	16	IAmb	IAmb	05 31 12.8	
	comp=Z,34nm,1.2s						
MCARA				IAMs_20	IAMs_20	06 09 04.9	
	comp=Z,8µm,21.0s						
MCARA	McCarthy VSAT	96.45	16	P	P	05 30 42.1	+1.2
	baz=210						
MCARA				S	S	05 42 01.7	+3.0
	baz=210						
DLMT	Dillon	96.46	40	IAmb	IAmb	05 31 00.7	
	comp=Z,37nm,1.6s						
DLMT				IAMs_20	IAMs_20	06 08 40.8	
	comp=Z,8µm,21.0s						
LOGN	Logan Glacier	96.46	17	IAMs_20	IAMs_20	06 05 46.3	
	comp=Z,12µm,21.0s						
WAT6	Susitna Watana	96.48	14	P	P	05 30 41.5	+0.2
	baz=206						
WAT6				S	S	05 42 00.4	+1.2
	baz=206						
CTG	Chitna Glacier	96.50	17	P	P	05 30 41.2	-0.1
	baz=211						
CTG				S	S	05 42 04.8	+5.4
	baz=211						
BARN	Barnard Glacie	96.50	17	IAMs_20	IAMs_20	06 05 59.3	
	comp=Z,10µm,22.0s						
CTGM	Chitina Glacie	96.50	17	IAMs_20	IAMs_20	06 05 48.3	
	comp=Z,11µm,22.0s						
LOHW	Long Hollow	96.52	42	IAMs_20	IAMs_20	06 05 42.6	
	comp=Z,8µm,22.0s						
CD2	Chengdu	96.52	302	P	P	05 30 41.8	-0.3
CD2				pP	sP	05 30 52.3	-1.4

CD2				PP	**PP**	**05 34 36.0**	**-0.9**
CD2				SKS	**SKSac**	**05 41 15.1**	**-1.6**
CD2				S	**S**	**05 41 55.8**	**-5.1**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,2µm,7.5s						
CD2				LR	LR		
	comp=Z,5µm,20.6s						
CD2				LR	LR		
	comp=Z,5µm,24.0s						
CD2				LR	LR		
	comp=Z,6µm,20.6s						
WAT1	**Susitna Watana**	**96.55**	**13**	P	**P**	**05 30 41.7**	**+0.3**
	baz=205						
WAT1				S	**S**	**05 42 00.7**	**+1.2**
	baz=205						
T35M	**Bob Quinn**	**96.57**	**24**	IAMs_20	IAMs_20	06 08 23.8	
	comp=Z,7µm,20.0s						
T35M	**Bob Quinn**	**96.57**	**24**	P	**P**	**05 30 44.2**	**+2.6**
	baz=220						
T35M				S	**S**	**05 42 07.3**	**+7.3**
	baz=220						
PLBC	**Pleasant Camp**	**96.58**	**20**	P	**P**	**05 30 42.7**	**+1.2**
	baz=215						
PLBC				S	**S**	**05 42 07.3**	**+7.4**
	baz=215						
BW06	**Boulder Array**	**96.62**	**44**	IAMs_20	IAMs_20	06 06 01.4	
	comp=Z,9µm,22.0s						
PDAR	**Pinedale Array**	**96.62**	**44**	P	**P**	**05 30 42.6**	**+0.1**
PDAR	**Pinedale Array**	**96.62**	**44**	P	**P**	**05 30 42.5**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=197,slow=4.6,SNR=5.3						
PDAR				PP	**PP**	**05 34 40.0**	**+2.3**
	comp=Z,7.2nm,1.3s,baz=255,slow=7.7,SNR=5.6						
PDAR				PKKPbc	**PKKPbc**	**05 47 26.2**	**-0.6**
	comp=Z,3.2nm,0.7s,baz=82,slow=4.3,SNR=22						
PDAR				PKPPKP	P'P'df	05 55 44.6	+7.7
	comp=Z,1.1nm,1.0s,baz=90,slow=3.6,SNR=4.9						
PDAR				LR	LR	06 10 12.8	
	comp=Z,5µm,18.5s,baz=222,slow=33						
	comp=Z,0.6nm,0.6s						
O28M	**Mount Upton**	**96.63**	**18**	IAMs_20	IAMs_20	06 06 24.7	
	comp=Z,11µm,21.0s						
O28M	**Mount Upton**	**96.63**	**18**	P	**P**	**05 30 43.4**	**+1.3**
	baz=212						
O28M				S	**S**	**05 42 06.1**	**+5.2**
	baz=212						
O29M	**Mount Kennedy**	**96.66**	**19**	IAMs_20	IAMs_20	06 11 08.6	
	comp=Z,10µm,20.0s						
O29M	**Mount Kennedy**	**96.66**	**19**	P	**P**	**05 30 43.2**	**+1.1**
	baz=213						
O29M				S	**S**	**05 42 07.0**	**+6.1**
	baz=213						
TNA	**Tin City**	**96.69**	**4**	IAMs_20	IAMs_20	06 10 48.2	
	comp=Z,8µm,20.0s						
TNA	**Tin City**	**96.69**	**4**	P	**P**	**05 30 42.8**	**+1.0**
	baz=189						
TNA				S	**S**	**05 42 02.8**	**+2.3**
	baz=189						
SEY	**Seymchan**	**96.70**	**347**	LR	LR	06 11 28.3	
	comp=Z,9µm,19.8s,baz=156,slow=34						
SEY	**Seymchan**	**96.70**	**347**	*c i*P	**P**	**05 30 42.0**	**0.0**
SEY				pmax	pmax		
	comp=Z,40nm,1.4s						
735A	**Kenedy**	**96.78**	**60**	IAMs_20	IAMs_20	06 11 27.3	
	comp=Z,8µm,18.0s						
HHC	**Hu-ho-hao-te**	**96.78**	**314**	*e*P	**P**	**05 30 45.6**	**+2.5**
HHC				SKS	**SKSac**	**05 41 13.5**	**-4.2**
HHC				S	**ScS**	**05 42 03.5**	**+0.4**
HHC				SS	**SS**	**05 48 33.0**	**-6.1**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,1µm,12.4s						
HHC				LR	LR		
	comp=Z,3µm,24.7s						
HHC				LR	LR		
	comp=Z,5µm,24.7s						
HHC				LR	LR		
	comp=Z,8µm,28.2s						
H17K	**Granite Mounta**	**96.78**	**8**	IAmb	IAmb	05 30 45.4	
	comp=Z,51nm,1.9s						
H17K	**Granite Mounta**	**96.78**	**8**	P	**P**	**05 30 43.3**	**+0.9**
	baz=196						
H17K				S	**S**	**05 42 03.6**	**+2.1**
	baz=196						
TRF	**Thorofare Moun**	**96.79**	**12**	IAmb	IAmb	05 30 47.5	
	comp=Z,30nm,1.3s						
TRF	**Thorofare Moun**	**96.79**	**12**	P	**P**	**05 30 43.0**	**+0.3**
	baz=204						
TRF				S	**S**	**05 42 02.5**	**+0.6**
	baz=204						
J20K	**Nowinta River**	**96.82**	**10**	P	**P**	**05 30 43.3**	**+0.8**
	baz=200						
J20K				S	**S**	**05 42 04.1**	**+2.3**
	baz=200						
CHUM	**Lake Minchumin**	**96.84**	**11**	P	**P**	**05 30 43.1**	**+0.5**
	baz=202						
CHUM				S	**S**	**05 42 02.0**	**+0.1**
	baz=202						
HARP	**HAARP**	**96.86**	**15**	P	**P**	**05 30 43.3**	**+0.5**
	baz=208						
HARP				S	**S**	**05 42 06.4**	**+4.2**
	baz=208						
SKAG	**Skagway**	**96.89**	**20**	P	**P**	**05 30 46.0**	**+3.1**
SKAG	**Skagway**	**96.89**	**20**	P	**P**	**05 30 44.6**	**+1.6**
	baz=216						
SKAG				S	**S**	**05 42 10.9**	**+8.3**
	baz=216						
ZEA	**Zeya**	**96.91**	**331**	*e*P	**P**	**05 30 42.0**	**-1.2**
ZEA				*e*		05 30 55.6	
ZEA				*e*		05 41 16.4	
ZEA				*e*		05 42 07.0	
ZEA				*e*SP	SP	05 43 36.7	+13
ZEA				*e*SS	**SS**	**05 48 45.0**	**+4.9**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZEA				pmax	pmax		
	comp=E,200nm,7.4s						
ZEA				pmax	pmax		
	comp=Z,500nm,11.0s						
ZEA				pmax	pmax		
	comp=E,200nm,10.2s						
ZEA				pmax	pmax		
	comp=N,200nm,5.3s						
ZEA				pmax	pmax		
	comp=Z,500nm,10.8s						
YHL	**Hebgen Lake**	**96.94**	**41**	IAmb	IAmb	05 31 03.8	
	comp=Z,22nm,1.2s						
P30M	**Million Dollar**	**96.96**	**19**	P	**P**	**05 30 44.3**	**+1.0**
	baz=215						
P30M				S	**S**	**05 42 10.8**	**+7.5**
	baz=215						
G16K	**Koyuk River**	**96.97**	**7**	P	**P**	**05 30 43.6**	**+0.5**
	baz=194						
G16K				S	**S**	**05 42 05.8**	**+2.9**
	baz=194						
GCSA	**Galena City Sc**	**96.97**	**9**	P	**P**	**05 30 43.8**	**+0.6**
	baz=198						
GCSA				S	**S**	**05 42 05.8**	**+2.9**
	baz=198						
S34M	**Telegraph Cree**	**96.99**	**23**	IAMs_20	IAMs_20	06 09 06.8	
	comp=Z,8µm,20.0s						
S34M	**Telegraph Cree**	**96.99**	**23**	P	**P**	**05 30 44.7**	**+1.2**
	baz=219						
S34M				S	S	05 42 12.8	+9.4
	baz=219						
DHY	**Denali Highway**	**97.00**	**13**	IAMs_20	IAMs_20	06 11 48.2	
	comp=Z,7µm,20.0s						
DHY	**Denali Highway**	**97.00**	**13**	P	Pdif	05 30 43.6	-0.1
	baz=206						
DHY				S	**S**	**05 42 04.6**	**+0.9**
	baz=206						
RND	**Reindeer**	**97.01**	**13**	IAmb	IAmb	05 30 49.5	
	comp=Z,24nm,1.0s						
F15K	**North Star Dit**	**97.07**	**5**	P	Pdif	05 30 44.3	+0.6
	baz=192						
F15K				S	**S**	**05 42 06.8**	**+2.9**
	baz=192						
Q24A	**Divide**	**97.14**	**49**	IAMs_20	IAMs_20	06 10 42.8	
	comp=Z,8µm,19.0s						
H18K	**Honhosa River**	**97.17**	**8**	IAMs_20	IAMs_20	06 14 12.3	
	comp=Z,8µm,20.0s						
H18K	**Honhosa River**	**97.17**	**8**	P	Pdif	05 30 44.7	+0.5
	baz=197						
H18K				S	**S**	**05 42 08.7**	**+3.9**
	baz=197						
YUK8	**Steele Glacier**	**97.17**	**18**	P	Pdif	05 30 45.3	+0.6
	baz=212						
YUK8				S	**S**	**05 42 09.8**	**+4.3**
	baz=212						
AMTX	**Amarillo**	**97.20**	**54**	IAMs_20	IAMs_20	06 11 43.9	
	comp=Z,10µm,19.0s						
G17K	**Kiwalik Mounta**	**97.25**	**7**	P	Pdif	05 30 45.0	+0.5
	baz=195						
G17K				S	**S**	**05 42 09.5**	**+4.2**
	baz=195						
YUK6	**Outpost Mounta**	**97.25**	**18**	P	Pdif	05 30 46.1	+1.1
	baz=214						
YUK6				S	**S**	**05 42 12.1**	**+5.9**
	baz=214						
BPAW	**Bear Paw Mtn.**	**97.26**	**12**	IAMs_20	IAMs_20	06 16 44.0	
	comp=Z,9µm,19.0s						
BPAW	**Bear Paw Mtn.**	**97.26**	**12**	P	**P**	**05 30 44.2**	**-0.4**
	baz=203						
BPAW				S	**S**	**05 42 07.7**	**+2.0**
	baz=203						
MCK	**McKinley**	**97.30**	**13**	IAmb	IAmb	05 31 09.9	
	comp=Z,24nm,1.2s						
MCK	**McKinley**	**97.30**	**13**	P	**P**	**05 30 44.7**	**-0.1**
	baz=205						
MCK				S	**S**	**05 42 07.8**	**+1.9**
	baz=205						
PAX	**Paxson**	**97.30**	**14**	P	Pdif	05 30 45.0	+0.1
	baz=208						
PAX				S	**S**	**05 42 08.7**	**+2.5**
	baz=208						
ISCO	**Idaho Springs**	**97.32**	**48**	IAMs_20	IAMs_20	06 05 47.3	
	comp=Z,8µm,22.0s						
HERN	**Volcan Telica**	**97.34**	**80**	IAMs_20	IAMs_20	06 07 51.6	
	comp=Z,6µm,18.0s						
HIA	**Hailar**	**97.34**	**324**	IAMs_20	IAMs_20	06 13 16.7	
	comp=Z,8µm,20.0s						
M26K	**Nabesna, AK**	**97.34**	**16**	IAMs_20	IAMs_20	06 09 58.5	
	comp=Z,7µm,20.0s						
M26K	**Nabesna, AK**	**97.34**	**16**	P	Pdif	05 30 45.8	+0.7
	baz=210						
M26K				S	**S**	**05 42 10.5**	**+4.1**
	baz=210						
I20K	**Naaghedeneel**	**97.36**	**10**	IAmb	IAmb	05 30 55.1	
	comp=Z,24nm,1.2s						
I20K	**Naaghedeneel**	**97.36**	**10**	P	Pdif	05 30 45.5	+0.5
	baz=200						
I20K				S	**S**	**05 42 09.5**	**+3.2**
	baz=200						
HYT	**Haines Junctio**	**97.39**	**19**	P	Pdif	05 30 46.3	+0.9
	baz=214						
HYT				S	**S**	**05 42 13.8**	**+6.7**
	baz=214						
TNCH	**TengChong**	**97.41**	**295**	⇑P	**P**	**05 30 46.3**	**-0.1**
TNCH				PP	**PP**	**05 34 42.5**	**-1.5**
TNCH				SKS	**SKSac**	**05 41 21.1**	**-0.8**
TNCH				S	**S**	**05 42 04.8**	**-4.2**
TNCH				SS	**SS**	**05 48 47.8**	**-0.9**
TNCH				pmax	pmax		
	comp=Z,840nm,8.1s						
TNCH				LR	LR		
	comp=Z,2µm,19.7s						
TNCH				LR	LR		
	comp=Z,2µm,23.8s						
TNCH				LR	LR		
	comp=Z,7µm,24.9s						
YUK3	**Moose Creek**	**97.42**	**17**	P	Pdif	05 30 46.5	+0.8
	baz=212						
YUK3				S	**S**	**05 42 12.5**	**+5.1**
	baz=212						
Q32M	**Nakina River**	**97.44**	**22**	IAMs_20	IAMs_20	06 07 33.5	
	comp=Z,9µm,20.0s						
Q32M	**Nakina River**	**97.44**	**22**	P	Pdif	05 30 46.2	+0.4
	baz=218						
Q32M				S	**S**	**05 42 15.9**	**+8.2**
	baz=218						
P32M	**Atlin**	**97.48**	**21**	P	Pdif	05 30 46.1	+0.3
	baz=217						
P32M				S	S	05 42 16.7	+8.9
	baz=217						
YUK4	**Talbot Arm**	**97.52**	**18**	P	Pdif	05 30 47.6	+1.5
	baz=213						
M27K	**Edge Creek, AK**	**97.57**	**16**	IAmb	IAmb	05 31 10.4	
	comp=Z,26nm,1.2s						
M27K				IAMs_20	IAMs_20	06 09 53.4	
	comp=Z,9µm,20.0s						
M27K	**Edge Creek, AK**	**97.57**	**16**	P	Pdif	05 30 46.8	+0.6
	baz=211						
M27K				S	**S**	**05 42 13.8**	**+5.2**
	baz=211						
BTO	**Baotou**	**97.60**	**313**	*e*P	Pdif	05 30 50.5	+3.6
BTO				pP	sP	05 30 58.5	+0.1
BTO				sP	pwP	05 31 01.9	+1.3
BTO				SKS	**SKSac**	**05 41 22.3**	**+0.4**
BTO				S	**ScS**	**05 42 13.6**	**+3.6**
BTO				sS	sS	05 42 26.4	+1.9
BTO				pmax	pmax		
	comp=Z,15nm,0.7s						
BTO				pmax	pmax		
	comp=Z,3µm,11.0s						
BTO				LR	LR		
	comp=Z,10µm,23.5s						
BTO				LR	LR		
	comp=Z,13µm,23.5s						
BTO				LR	LR		
	comp=Z,26µm,22.8s						
MENT	**Mentasta**	**97.65**	**15**	P	Pdif	05 30 48.8	+2.4
TGUH	**Tegucigalpa,Un**	**97.69**	**78**	IAMs_20	IAMs_20	06 04 19.8	
	comp=Z,10µm,22.0s						
O30N	**Mendenhall**	**97.74**	**19**	IAMs_20	IAMs_20	06 11 24.3	
	comp=Z,10µm,19.0s						
O30N	**Mendenhall**	**97.74**	**19**	P	Pdif	05 30 47.9	+1.0
	baz=215						
O30N				S	**S**	**05 42 17.3**	**+7.4**
	baz=215						
DLBC	**Dease Lake**	**97.77**	**23**	LR	LR	06 07 14.9	
	comp=Z,8µm,22.0s,baz=231,slow=31						
DLBC	**Dease Lake**	**97.77**	**23**	P	Pdif	05 30 48.1	+1.0
	baz=220						
DLBC				S	S	05 42 20.1	+10
	baz=220						
JTS	**Las Juntas de**	**97.77**	**83**	LR	LR	06 04 55.3	
	comp=Z,7µm,22.0s,baz=234,slow=29						
H19K	**Roundabout Mou**	**97.78**	**9**	IAMs_20	IAMs_20	06 17 23.3	
	comp=Z,7µm,19.0s						
H19K	**Roundabout Mou**	**97.78**	**9**	P	Pdif	05 30 47.7	+0.9
	baz=199						
H19K				S	**S**	**05 42 13.5**	**+3.7**
	baz=199						
LPAZ	**La Paz**	**97.80**	**114**	P	Pdif	05 30 49.2	+0.2
LPAZ	**La Paz**	**97.80**	**114**	P	Pdif	05 30 49.3	+0.3
	comp=Z,1.6nm,0.6s,baz=228,slow=3.7,SNR=12						
LPAZ				LR	LR	06 06 46.9	
	comp=Z,3µm,21.6s,baz=213,slow=30						
	comp=Z,1.6nm,0.6s						
LPAZ	**La Paz**	**97.80**	**114**	*e*P	Pdif	05 30 50.1	+1.1
L26K	**Log Cabin Wild**	**97.81**	**15**	IAMs_20	IAMs_20	06 10 14.7	
	comp=Z,11µm,20.0s						
L26K	**Log Cabin Wild**	**97.81**	**15**	P	Pdif	05 30 47.3	+0.2
	baz=210						
L26K				S	**S**	**05 42 14.3**	**+3.9**
	baz=210						
G18K	**Tagagawik**	**97.85**	**8**	IAMs_20	IAMs_20	06 13 57.2	
	comp=Z,7µm,20.0s						
G18K	**Tagagawik**	**97.85**	**8**	P	**P**	**05 30 47.1**	**-0.1**
	baz=197						
G18K				S	**S**	**05 42 13.1**	**+2.5**
	baz=197						
BVCY	**Beaver Creek**	**97.86**	**16**	P	Pdif	05 30 47.9	+0.5
	baz=212						
BVCY				S	**S**	**05 42 15.6**	**+4.8**
	baz=212						
H20K	**Anotleneega Mo**	**97.96**	**9**	P	Pdif	05 30 48.4	+0.7
	baz=200						
H20K				S	**S**	**05 42 14.6**	**+3.1**
	baz=200						
K24K	**Donnelly Dome**	**97.98**	**14**	IAmb	IAmb	05 30 51.3	
	comp=Z,24nm,0.9s						
K24K				IAMs_20	IAMs_20	06 10 33.0	
	comp=Z,12µm,20.0s						
K24K	**Donnelly Dome**	**97.98**	**14**	P	Pdif	05 30 49.4	+1.5
	baz=208,SNR=6.4						
K24K				S	**S**	**05 42 15.6**	**+3.8**
	baz=208						
WHY	**Whitehorse**	**98.00**	**20**	P	Pdif	05 30 49.3	+1.1
	baz=216						
WHY				S	**S**	**05 42 19.2**	**+7.0**
	baz=216						
N30M	**Aishikik Lake**	**98.03**	**18**	IAMs_20	IAMs_20	06 07 40.8	
	comp=Z,9µm,21.0s						
N30M	**Aishikik Lake**	**98.03**	**18**	P	Pdif	05 30 49.1	+0.9
	baz=215						
N30M				S	**S**	**05 42 18.5**	**+6.2**
	baz=215						
NEA2	**Nenana**	**98.06**	**12**	IAmb	IAmb	05 34 46.1	
	comp=Z,28nm,1.7s						
NEA2	**Nenana**	**98.06**	**12**	P	Pdif	05 30 48.7	+0.6
	baz=205						
NEA2				S	**S**	**05 42 11.5**	**-0.8**
	baz=205						
F17K	**Baldwin Pennin**	**98.10**	**7**	Pdiff	Pdif	05 30 48.7	+0.4
	baz=194						
F17K				S	**S**	**05 42 15.8**	**+3.3**
	baz=194						
RIDG	**Independent Ri**	**98.11**	**14**	Pdiff	Pdif	05 30 48.9	+0.4
	baz=208						
RIDG				S	**S**	**05 42 16.2**	**+3.2**
	baz=208						
WRH	**Wood River Hil**	**98.12**	**13**	IAmb	IAmb	05 30 52.9	
	comp=Z,29nm,1.1s						
MLY	**Manley**	**98.17**	**11**	IAMs_20	IAMs_20	06 17 21.8	
	comp=Z,9µm,20.0s						
MLY	**Manley**	**98.17**	**11**	Pdiff	Pdif	05 30 49.1	+0.4
	baz=203						
MLY				S	**S**	**05 42 13.6**	**+0.3**
	baz=203						
L27K	**Beaver Creek,**	**98.19**	**16**	IAMs_20	IAMs_20	06 16 07.8	
	comp=Z,7µm,19.0s						
L27K	**Beaver Creek,**	**98.19**	**16**	Pdiff	Pdif	05 30 49.3	+0.5
	baz=211						
L27K				S	**S**	**05 42 19.0**	**+5.4**
	baz=211						
RLMT	**Red Lodge**	**98.19**	**42**	IAMs_20	IAMs_20	06 06 37.7	
	comp=Z,8µm,22.0s						
R33M	**Jennings River**	**98.20**	**22**	IAMs_20	IAMs_20	06 08 08.7	
	comp=Z,9µm,20.0s						
R33M	**Jennings River**	**98.20**	**22**	Pdiff	Pdif	05 30 50.1	+1.1
	baz=219						
R33M				S	**S**	**05 42 22.6**	**+8.6**
	baz=219						
DOT	**Dot Lake**	**98.20**	**15**	IAMs_20	IAMs_20	06 10 28.9	
	comp=Z,12µm,20.0s						
BOAB	**BOACO BROADBAN**	**98.24**	**80**	P	Pdif	05 30 57.7	+7.6
P33M	**Teslin, Yukon**	**98.25**	**21**	Pdiff	Pdif	05 30 50.4	+1.2
	baz=218						
P33M				S	**S**	**05 42 22.3**	**+7.9**
	baz=218						
G19K	**Purcell Mounta**	**98.28**	**8**	IAmb	IAmb	05 31 06.8	
	comp=Z,39nm,1.7s						
G19K	**Purcell Mounta**	**98.28**	**8**	Pdiff	Pdif	05 30 50.1	+1.0
	baz=198						
G19K				S	**S**	**05 42 16.9**	**+2.7**
	baz=198						
HDA	**Harding Lake**	**98.28**	**13**	IAMs_20	IAMs_20	06 10 40.1	
	comp=Z,10µm,21.0s						
HDA	**Harding Lake**	**98.28**	**13**	Pdiff	Pdif	05 30 49.8	+0.7
	baz=207						
HDA				S	**S**	**05 42 14.4**	**+0.1**
	baz=207						
CCB	**Clear Creek Bu**	**98.34**	**13**	P	**P**	**05 30 49.0**	**-0.3**
CCB				IAMs_20	IAMs_20	06 10 46.4	
	comp=Z,10µm,20.0s						
HDC	**Heredia**	**98.34**	**83**	IAMs_20	IAMs_20	06 04 51.3	
	comp=Z,7µm,22.0s						
K22A	**Casper**	**98.37**	**45**	IAMs_20	IAMs_20	06 15 44.9	
	comp=Z,10µm,18.0s						
N31M	**Braeburn, Yuko**	**98.41**	**19**	IAMs_20	IAMs_20	06 12 05.0	
	comp=Z,8µm,20.0s						
N31M	**Braeburn, Yuko**	**98.41**	**19**	Pdiff	Pdif	05 30 50.7	+0.9
	baz=216						
N31M				S	**S**	**05 42 22.4**	**+6.9**
	baz=216						
H21K	**Melozitna Rive**	**98.42**	**10**	IAmb	IAmb	05 34 48.8	
	comp=Z,59nm,2.0s						
H21K				IAMs_20	IAMs_20	06 11 14.3	
	comp=Z,7µm,20.0s						
H21K	**Melozitna Rive**	**98.42**	**10**	Pdiff	Pdif	05 30 50.5	+0.8
	baz=202						
H21K				S	**S**	**05 42 16.7**	**+1.3**
	baz=202						
F18K	**Selawik**	**98.42**	**7**	Pdiff	Pdif	05 30 50.5	+0.9
	baz=196						
F18K				S	**S**	**05 42 18.0**	**+2.8**
	baz=196						
M29M	**Somme Creek**	**98.48**	**17**	IAMs_20	IAMs_20	06 07 45.8	
	comp=Z,9µm,20.0s						
M29M	**Somme Creek**	**98.48**	**17**	Pdiff	Pdif	05 30 51.3	+1.0
	baz=214						
M29M				S	**S**	**05 42 21.4**	**+5.1**
	baz=214						
SCRK	**Sand Creek**	**98.50**	**14**	IAMs_20	IAMs_20	06 10 38.0	
	comp=Z,12µm,20.0s						
SCRK	**Sand Creek**	**98.50**	**14**	Pdiff	Pdif	05 30 50.9	+0.6
	baz=209						
SCRK				S	**S**	**05 42 19.0**	**+2.6**
	baz=209						
I23K	**Minto, Yukon-K**	**98.51**	**12**	Pdiff	**P**	**05 30 49.8**	**-0.3**
	baz=205						
I23K				S	**S**	**05 42 16.5**	**+0.4**
	baz=205						
COLA	**College**	**98.53**	**12**	P	**P**	**05 30 50.1**	**-0.1**
COLA				IAmb	IAmb	05 31 11.1	
	comp=Z,14nm,0.8s						
COLA	**College**	**98.53**	**12**	P	Pdif	05 30 51.3	+1.1
COLA	**College**	**98.53**	**12**	*c i*P	Pdif	05 30 50.4	+0.2
COLA				pmax	pmax		
	comp=Z,25nm,1.2s						
COLA	**College**	**98.53**	**12**	Pdiff	Pdif	05 30 50.7	+0.5
	baz=206						
COLA				S	**S**	**05 42 16.6**	**+0.4**
	baz=206						
IMAR	**Indian Mountai**	**98.58**	**10**	P	**P**	**05 30 50.0**	**-0.4**
IL31		**98.62**	**13**	P	Pdif	05 30 51.8	+1.2
ILAR	**Eielson Array**	**98.62**	**13**	P	**P**	**05 30 49.5**	**-1.2**
ILAR	**Eielson Array**	**98.62**	**13**	P	**P**	**05 30 49.8**	**-0.9**
	comp=Z,3.1nm,0.7s,baz=219,slow=5.1,SNR=29						
ILAR				S	**SKSac**	**05 41 27.8**	**+2.0**
	comp=Z,1.1nm,1.1s,baz=205,slow=7.3,SNR=4.3						
ILAR				PKKPbc	**PKKPbc**	**05 47 21.2**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=355,slow=3.1,SNR=7.2						
ILAR				PKPPKP	P'P'df	05 55 40.7	+10
	comp=Z,0.4nm,0.9s,baz=3.0,slow=2.4,SNR=4.6						
ILAR				LR	LR	06 10 32.4	
	comp=Z,4µm,20.1s,baz=195,slow=32						
	comp=Z,3.1nm,0.7s						
ILAR	**Eielson Array**	**98.62**	**13**	P	**P**	**05 30 49.5**	**-1.2**
E17K	**Hotham Inlet**	**98.67**	**6**	Pdiff	Pdif	05 30 51.5	+0.7
	baz=194						
E17K				S	**S**	**05 42 20.0**	**+2.6**
	baz=194						
J25K	**Salcha River,**	**98.78**	**14**	IAMs_20	IAMs_20	06 12 43.2	
	comp=Z,7µm,20.0s						
J25K	**Salcha River,**	**98.78**	**14**	Pdiff	Pdif	05 30 52.0	+0.6
	baz=208						
J25K				S	**S**	**05 42 18.8**	**+0.2**
	baz=208						
HKT	**Hockley**	**98.81**	**60**	IAMs_20	IAMs_20	06 15 50.4	
	comp=Z,7µm,18.0s						
POKR	**Poker Plat Res**	**98.83**	**13**	Pdiff	Pdif	05 30 51.8	+0.2
	baz=206						
POKR				S	**S**	**05 42 18.5**	**-0.4**
	baz=206						
H22K	**Ishtalitna Cre**	**98.86**	**11**	Pdiff	Pdif	05 30 52.7	+1.0
	baz=203						
H22K				S	**S**	**05 42 20.5**	**+1.4**
	baz=203						
N32M	**Quiet Lake**	**98.92**	**20**	Pdiff	Pdif	05 30 53.6	+1.4
	baz=218						
K27K	**Chicken**	**98.97**	**15**	IAMs_20	IAMs_20	06 10 41.3	
	comp=Z,9µm,20.0s						
K27K	**Chicken**	**98.97**	**15**	Pdiff	Pdif	05 30 53.8	+1.6
	baz=211						
J26L	**Joseph Creek**	**99.05**	**14**	IAmb	IAmb	05 30 56.7	
	comp=Z,19nm,0.9s						
J26L	**Joseph Creek**	**99.05**	**14**	Pdiff	**Pdif**	**05 30 53.9**	**+1.2**
	baz=209						
H23K	**Yukon River**	**99.10**	**11**	Pdiff	**Pdif**	**05 30 53.8**	**+1.0**
	baz=204						
G21K	**Allakaket**	**99.11**	**10**	IAmb	IAmb	05 30 59.3	
	comp=Z,30nm,1.5s						
G21K	**Allakaket**	**99.11**	**10**	Pdiff	**Pdif**	**05 30 53.7**	**+0.9**
	baz=201						
E18K	**Tukpahlearik C**	**99.12**	**7**	Pdiff	**Pdif**	**05 30 53.5**	**+0.7**
	baz=195						
L29M	**L29M**	**99.13**	**17**	IAMs_20	IAMs_20	06 13 19.7	
	comp=Z,10µm,20.0s						
L29M	**L29M**	**99.13**	**17**	Pdiff	**Pdif**	**05 30 54.5**	**+1.5**
	baz=214						

WMOK	**Wichita Mounta**	**99.14**	**55**	IAMs_20	IAMs_20	06 12 33.5	
	comp=Z,8μm,18.0s						
D17K	**Noatak River**	**99.16**	**6**	Pdiff	**Pdif**	**05 30 53.7**	**+0.7**
	baz=193						
LZH	**Lanzhou**	**99.20**	**307**	⇑P	**Pdif**	**05 30 53.6**	**-0.6**
LZH				sP	pwP	05 31 09.9	+2.0
LZH				SKS	**SKSac**	**05 41 31.1**	**+0.7**
LZH				S	**S**	**05 42 16.8**	**-6.9**
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
LZH				pmax	pmax		
	comp=Z,1μm,5.0s						
LZH				LR	LR		
	comp=Z,4μm,19.6s						
LZH				LR	LR		
	comp=Z,1μm,19.8s						
LZH				LR	LR		
	comp=Z,6μm,21.1s						
ESPN	**Las Esperanzas**	**99.27**	**81**	IAMs_20	IAMs_20	06 09 44.9	
	comp=Z,6μm,18.0s						
F20K	**Avaraart Lake**	**99.32**	**9**	IAMs_20	IAMs_20	06 10 60.0	
	comp=Z,7μm,21.0s						
F20K	**Avaraart Lake**	**99.32**	**9**	Pdiff	**Pdif**	**05 30 55.1**	**+1.4**
	baz=199						
M31M	**Drury Creek, Y**	**99.38**	**19**	IAMs_20	IAMs_20	06 12 54.6	
	comp=Z,9μm,19.0s						
M31M	**Drury Creek, Y**	**99.38**	**19**	Pdiff	**Pdif**	**05 30 54.8**	**+0.7**
	baz=217						
H24K	**Noodor Dome**	**99.40**	**12**	Pdiff	**Pdif**	**05 30 55.0**	**+0.8**
	baz=206						
WTLY	**Watson Lake, Y**	**99.46**	**23**	Pdiff	**Pdif**	**05 30 55.5**	**+1.0**
	baz=221						
CPUP	**Villa Florida**	**99.49**	**128**	LR	LR	06 07 57.1	
	comp=Z,1μm,21.2s,baz=92,slow=31						
E19K	**Redstone River**	**99.52**	**8**	IAMs_20	IAMs_20	06 18 32.3	
	comp=Z,7μm,19.0s						
E19K	**Redstone River**	**99.52**	**8**	Pdiff	**Pdif**	**05 30 55.3**	**+0.7**
	baz=198						
RDOG	**Red Dog Mine**	**99.52**	**6**	IAMs_20	IAMs_20	06 12 23.1	
	comp=Z,9μm,22.0s						
RDOG	**Red Dog Mine**	**99.52**	**6**	Pdiff	**Pdif**	**05 30 55.7**	**+1.1**
	baz=193						
C16K	**Lisburne Hills**	**99.55**	**5**	IAMs_20	IAMs_20	06 12 58.8	
	comp=Z,9μm,20.0s						
C16K	**Lisburne Hills**	**99.55**	**5**	Pdiff	**Pdif**	**05 30 55.5**	**+0.8**
	baz=191						
PRP	**Porcupine Dome**	**99.55**	**13**	Pdiff	**Pdif**	**05 30 55.6**	**+0.6**
	baz=208						
BILL	**Bilibino**	**99.57**	**354**	P	**Pdif**	**05 30 54.4**	**-0.4**
BILL				IAmb	IAmb	05 30 57.7	
	comp=Z,28nm,1.3s						
BILL				IAMs_20	IAMs_20	06 13 53.1	
	comp=Z,11μm,20.0s						
BILL	**Bilibino**	**99.57**	**354***c*	*i*P	**Pdif**	**05 30 54.4**	**-0.4**
BILL				pmax	pmax		
	comp=Z,27nm,1.5s						
BILL				MLR	MLR		
	comp=Z,3μm,21.0s						
DAWY	**Dawson**	**99.62**	**16**	Pdiff	**Pdif**	**05 30 55.9**	**+0.7**
	baz=213						
FARO	**Faro, Yukon**	**99.70**	**19**	Pdiff	**Pdif**	**05 30 56.6**	**+1.0**
	baz=218						
TOAD	**Toad River Com**	**99.75**	**25**	Pdiff	**Pdif**	**05 30 56.6**	**+0.7**
	baz=224						
F21K	**Alatna River**	**99.78**	**9**	IAMs_20	IAMs_20	06 18 26.3	
	comp=Z,7μm,20.0s						
F21K	**Alatna River**	**99.78**	**9**	Pdiff	**Pdif**	**05 30 57.1**	**+1.3**
	baz=201						
G22K	**Bettles**	**99.79**	**10**	Pdiff	**Pdif**	**05 30 56.4**	**+0.6**
	baz=203						
G23K	**Bananza Creek**	**99.83**	**11**	IAMs_20	IAMs_20	06 12 33.7	
	comp=Z,9μm,21.0s						
G23K	**Bananza Creek**	**99.83**	**11**	Pdiff	**Pdif**	**05 30 57.2**	**+1.2**
	baz=204						
I26K	**Coal Creek Min**	**99.84**	**14**	IAMs_20	IAMs_20	06 11 50.4	
	comp=Z,11μm,20.0s						
I26K	**Coal Creek Min**	**99.84**	**14**	Pdiff	**Pdif**	**05 30 57.9**	**+1.8**
	baz=210						
LIRD	**Liard River Hi**	**99.85**	**24**	Pdiff	**Pdif**	**05 30 57.9**	**+1.7**
	baz=223						
K29M	**Barlow Dome**	**99.89**	**17**	IAMs_20	IAMs_20	06 12 16.9	
	comp=Z,9μm,20.0s						
K29M	**Barlow Dome**	**99.89**	**17**	Pdiff	**Pdif**	**05 30 57.5**	**+1.0**
	baz=214						
C17K	**DeLong Mountai**	**99.91**	**5**	Pdiff	**Pdif**	**05 30 57.2**	**+0.9**
	baz=193						
OK038	**West end E0370**	**100.07**	**54**	IAMs_20	IAMs_20	06 13 43.9	
	comp=Z,11μm,18.0s						
MAYO	**Mayo, Yukon**	**100.10**	**18**	Pdiff	**Pdif**	**05 30 58.2**	**+0.9**
	baz=216						
H25L	**Birch Creek**	**100.16**	**13**	Pdiff	**Pdif**	**05 30 58.4**	**+0.9**
	baz=208						
J29N	**Klondike Camp**	**100.23**	**16**	IAMs_20	IAMs_20	06 08 19.7	
	comp=Z,8μm,22.0s						
J29N	**Klondike Camp**	**100.23**	**16**	Pdiff	**Pdif**	**05 30 59.0**	**+1.1**
	baz=214						
F22K	**John River**	**100.23**	**10**	Pdiff	**Pdif**	**05 30 59.0**	**+1.2**
	baz=202						
G24K	**Hadweenzic Riv**	**100.25**	**12**	Pdiff	**Pdif**	**05 30 59.0**	**+1.1**
	baz=206						
C18K	**Utukok River**	**100.25**	**6**	IAMs_20	IAMs_20	06 16 02.5	
	comp=Z,8μm,20.0s						
C18K	**Utukok River**	**100.25**	**6**	Pdiff	**Pdif**	**05 30 59.1**	**+1.2**
	baz=195						
COLD	**Coldfoot**	**100.28**	**11**	IAMs_20	IAMs_20	06 17 16.5	
	comp=Z,6μm,19.0s						
COLD	**Coldfoot**	**100.28**	**11**	Pdiff	**Pdif**	**05 30 59.1**	**+1.1**
	baz=204						
E20K	**Nigu River**	**100.41**	**8**	Pdiff	**Pdif**	**05 30 59.3**	**+0.7**
	baz=199						
D19K	**Kuna River**	**100.41**	**7**	IAMs_20	IAMs_20	06 21 28.8	
	comp=Z,6μm,20.0s						
D19K	**Kuna River**	**100.41**	**7**	Pdiff	**Pdif**	**05 30 59.7**	**+1.1**
	baz=197						
I27K	**Kandik River**	**100.43**	**14**	Pdiff	**Pdif**	**05 31 00.2**	**+1.5**
	baz=211						
FYU	**Fort Yukon**	**100.54**	**13**	IAMs_20	IAMs_20	06 11 22.6	
	comp=Z,9μm,21.0s						
G25K	**Bearman Lake**	**100.55**	**12**	Pdiff	**Pdif**	**05 31 00.1**	**+0.9**
	baz=208						
CBKS	**Cedar Bluff**	**100.61**	**51**	IAMs_20	IAMs_20	06 07 47.8	
	comp=Z,11μm,22.0s						
MMPY	**Sheldon Lake,**	**100.61**	**20**	Pdiff	**Pdif**	**05 31 00.2**	**+0.6**
	baz=219						
OK029	**Liberty Lake**	**100.62**	**55**	IAMs_20	IAMs_20	06 14 07.5	
	comp=Z,9μm,18.0s						
I28M	**Miner Creek**	**100.66**	**15**	IAMs_20	IAMs_20	06 17 29.1	
	comp=Z,9μm,19.0s						
I28M	**Miner Creek**	**100.66**	**15**	Pdiff	**Pdif**	**05 31 00.5**	**+0.6**
	baz=213						
TGTN	**Hyland Airport**	**100.69**	**22**	Pdiff	**Pdif**	**05 31 00.6**	**+0.6**
	baz=222						
RSSD	**Black Hills**	**100.70**	**45**	IAMs_20	IAMs_20	06 10 51.4	
	comp=Z,9μm,20.0s						
RSSD	**Black Hills**	**100.70**	**45**	P	**Pdif**	**05 31 01.0**	**+0.3**
RSSD				pmax	pmax		
	comp=Z,13nm,1.3s						
BEAVL	**Fort Liard**	**100.77**	**24**	Pdiff	**Pdif**	**05 31 01.4**	**+1.1**
	baz=224						
D20K	**Etivluk River**	**100.79**	**8**		**Pdif**	**05 31 02.1**	**+1.9**
D20K				IAMs_20	IAMs_20	06 12 53.9	
	comp=Z,7μm,21.0s						
D20K	**Etivluk River**	**100.79**	**8**	Pdiff	**Pdif**	**05 31 01.1**	**+0.9**
	baz=199						
J30M	**Hart River**	**100.79**	**17**	Pdiff	**Pdif**	**05 31 01.9**	**+1.5**
	baz=216						
C19K	**Lookout Ridge**	**100.85**	**7**	IAMs_20	IAMs_20	06 19 22.3	
	comp=Z,9μm,20.0s						
C19K	**Lookout Ridge**	**100.85**	**7**	Pdiff	**Pdif**	**05 31 01.6**	**+1.1**
	baz=196						
E21K	**Killik River**	**100.86**	**9**	Pdiff	**Pdif**	**05 31 01.8**	**+1.2**
	baz=201						
E22K	**Anaktuvuk Pass**	**100.87**	**10**	IAMs_20	IAMs_20	06 19 11.1	
	comp=Z,8μm,20.0s						
E22K	**Anaktuvuk Pass**	**100.87**	**10**	Pdiff	**Pdif**	**05 31 02.3**	**+1.6**
	baz=203						
B18K	**Kokolik River**	**100.89**	**6**	Pdiff	**Pdif**	**05 31 02.1**	**+1.5**
	baz=194						
IMP	**Imphal**	**100.91**	**292**	*e*P	**Pdif**	**05 31 01.4**	**-0.6**
F24K	**Squaw Lake**	**100.92**	**11**	Pdiff	**Pdif**	**05 31 02.8**	**+2.0**
	baz=206						
I29M	**Ogilvie Camp,**	**100.96**	**16**	IAMs_20	IAMs_20	06 12 01.1	
	comp=Z,7μm,20.0s						
I29M	**Ogilvie Camp,**	**100.96**	**16**	Pdiff	**Pdif**	**05 31 02.2**	**+1.1**
	baz=214						
H27K	**Steamboat Moun**	**100.98**	**14**	IAMs_20	IAMs_20	06 12 35.5	
	comp=Z,9μm,20.0s						
H27K	**Steamboat Moun**	**100.98**	**14**	Pdiff	**Pdif**	**05 31 02.6**	**+1.4**
	baz=211						
KOTAN	**Kotaneelee Air**	**101.09**	**24**	Pdiff	**Pdif**	**05 31 03.2**	**+1.4**
	baz=225						
R32A	**Long Quarter,**	**101.09**	**52**	IAMs_20	IAMs_20	06 14 24.5	
	comp=Z,10μm,19.0s						
E23K	**Chandalar**	**101.13**	**10**	Pdiff	**Pdif**	**05 31 02.7**	**+0.9**
	baz=205						
G26K	**Porcupine Rive**	**101.15**	**13**	Pdiff	**Pdif**	**05 31 02.9**	**+1.0**
	baz=209						
OK052	**Battle Ridge R**	**101.17**	**55**	IAMs_20	IAMs_20	06 14 06.9	
	comp=Z,9μm,18.0s						
441A	**DeRidder**	**101.19**	**61**	IAMs_20	IAMs_20	06 09 41.8	
	comp=Z,7μm,22.0s						
I30M	**Mount Dempster**	**101.31**	**17**	IAMs_20	IAMs_20	06 08 53.4	
	comp=Z,9μm,22.0s						
I30M	**Mount Dempster**	**101.31**	**17**	Pdiff	**Pdif**	**05 31 03.8**	**+1.0**
	baz=216						
E24K	**Your Creek**	**101.32**	**11**	IAMs_20	IAMs_20	06 13 09.2	
	comp=Z,12μm,21.0s						
E24K	**Your Creek**	**101.32**	**11**	Pdiff	**Pdif**	**05 31 04.0**	**+1.4**
	baz=206						
F25K	**Christian Rive**	**101.37**	**12**	Pdiff	**Pdif**	**05 31 04.7**	**+1.8**
	baz=208						
AZL	**Aizawl**	**101.38**	**291**	*e*P	**Pdif**	**05 31 03.5**	**-0.5**
OK051	**E0350 and S346**	**101.41**	**54**	IAMs_20	IAMs_20	06 14 49.0	
	comp=Z,9μm,19.0s						
C21K	**Knifeblade Rid**	**101.43**	**8**	Pdiff	**Pdif**	**05 31 04.4**	**+1.3**
	baz=200						
D22K	**Ayikyak River**	**101.44**	**9**	Pdiff	**Pdif**	**05 31 04.9**	**+1.8**
	baz=202						
G27K	**Doyon Strip**	**101.45**	**14**	IAMs_20	IAMs_20	06 12 12.9	
	comp=Z,10μm,21.0s						
G27K	**Doyon Strip**	**101.45**	**14**	Pdiff	**Pdif**	**05 31 05.0**	**+1.7**
	baz=211						
BCIP	**Isla Barro Col**	**101.58**	**86**	IAMs_20	IAMs_20	06 12 05.1	
	comp=Z,7μm,18.0s						
H29M	**Whitestone**	**101.66**	**15**	IAMs_20	IAMs_20	06 11 44.6	
	comp=Z,7μm,21.0s						
H29M	**Whitestone**	**101.66**	**15**	Pdiff	**Pdif**	**05 31 05.3**	**+1.2**
	baz=214						
TOLK	**Toolik Lake Re**	**101.67**	**10**	Pdiff	**Pdif**	**05 31 05.9**	**+1.7**
	baz=205						
F26K	**Sheenjek River**	**101.74**	**13**	IAMs_20	IAMs_20	06 13 02.3	
	comp=Z,11μm,20.0s						
F26K	**Sheenjek River**	**101.74**	**13**	Pdiff	**Pdif**	**05 31 06.3**	**+1.8**
	baz=209						
A19K	**Wainwright**	**101.78**	**6**	Pdiff	**Pdif**	**05 31 05.9**	**+1.4**
	baz=195						
D23K	**Nanushuk River**	**101.80**	**10**	IAMs_20	IAMs_20	06 13 20.7	
	comp=Z,7μm,20.0s						
D23K	**Nanushuk River**	**101.80**	**10**	Pdiff	**Pdif**	**05 31 06.0**	**+1.3**
	baz=204						
T35A	**Sooner Cattle**	**101.84**	**54**	IAMs_20	IAMs_20	06 15 01.4	
	comp=Z,8μm,19.0s						
B21K	**Ikpikpuk River**	**101.89**	**8**	IAMs_20	IAMs_20	06 19 58.9	
	comp=Z,11μm,19.0s						
B21K	**Ikpikpuk River**	**101.89**	**8**	Pdiff	**Pdif**	**05 31 06.2**	**+1.1**
	baz=200						
YAK	**Yakutsk**	**101.94**	**338**	IAMs_20	IAMs_20	06 10 17.1	
	comp=Z,10μm,21.0s						
YAK	**Yakutsk**	**101.94**	**338**	*e*P	**Pdif**	**05 31 05.4**	**0.0**
YAK				*e*PPP	PPP	05 37 24.0	
YAK				*e*S	**SKSac**	**05 41 43.7**	**+1.6**
YAK				*e*SP	**SP**	**05 44 19.9**	**+1.9**
YAK				*e*SS	**SS**	**05 49 50.5**	**+0.4**
YAK				*e*SSS	SSS	05 53 43.2	
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.0s						
YAK				smax	smax		
	comp=E,168nm,4.0s						
YAK				smax	smax		
	comp=N,144nm,3.3s						
B20K	**Meade River**	**101.96**	**7**	IAMs_20	IAMs_20	06 20 17.8	
	comp=Z,7μm,20.0s						
B20K	**Meade River**	**101.96**	**7**	Pdiff	**Pdif**	**05 31 07.1**	**+1.7**
	baz=198						
EPYK	**Eagle Plains**	**102.17**	**16**	Pdiff	**Pdif**	**05 31 07.5**	**+1.0**
	baz=215						
D24K	**Happy Valley**	**102.25**	**10**	IAMs_20	IAMs_20	06 19 59.6	
	comp=Z,7μm,19.0s						
D24K	**Happy Valley**	**102.25**	**10**	Pdiff	**Pdif**	**05 31 08.3**	**+1.6**
	baz=205						
ITAB	**Concordia**	**102.27**	**132**	IAMs_20	IAMs_20	06 09 42.1	
	comp=Z,7μm,22.0s						
H31M	**Peel River**	**102.28**	**17**	IAMs_20	IAMs_20	06 15 48.1	
	comp=Z,9μm,20.0s						
H31M	**Peel River**	**102.28**	**17**	Pdiff	**Pdif**	**05 31 07.5**	**+0.5**
	baz=217						
ZIRO	**ZIRO**	**102.29**	**295**	*e*P	**Pdif**	**05 31 09.0**	**+0.9**
G29M	**Pine Creek**	**102.32**	**15**	IAMs_20	IAMs_20	06 13 06.9	
	comp=Z,12μm,21.0s						
G29M	**Pine Creek**	**102.32**	**15**	Pdiff	**Pdif**	**05 31 08.1**	**+1.0**
	baz=214						
ROCAM	**Rodrigues Isla**	**102.41**	**238**	IAMs_20	IAMs_20	06 09 17.0	
	comp=Z,9μm,20.0s						
F28M	**Old Crow**	**102.51**	**14**	Pdiff	**Pdif**	**05 31 09.1**	**+1.1**
	baz=213						
AGT	**Agartala**	**102.61**	**290**	*e*P	**Pdif**	**05 31 08.6**	**-0.7**
C23K	**Itkillik River**	**102.61**	**9**	IAMs_20	IAMs_20	06 14 00.1	
	comp=Z,9μm,20.0s						
C23K	**Itkillik River**	**102.61**	**9**	Pdiff	**Pdif**	**05 31 10.1**	**+1.8**
	baz=204						
E27K	**Coleen River**	**102.65**	**13**	Pdiff	**Pdif**	**05 31 09.8**	**+1.2**
	baz=211						
K30B	**Basset**	**102.67**	**48**	IAMs_20	IAMs_20	06 14 41.0	
	comp=Z,9μm,19.0s						
TEZP	**TEZPUR**	**102.67**	**293**	*e*P	**Pdif**	**05 31 09.7**	**+0.1**
B22K	**Teshekpuk Lake**	**102.71**	**8**	IAMs_20	IAMs_20	06 17 11.6	
	comp=Z,7μm,20.0s						
B22K	**Teshekpuk Lake**	**102.71**	**8**	Pdiff	**Pdif**	**05 31 10.5**	**+1.8**
	baz=202						
MIAR	**Mount Ida**	**102.75**	**57**	IAMs_20	IAMs_20	06 11 28.0	
	comp=Z,8μm,20.0s						
C24K	**Franklin Bluff**	**102.78**	**10**	IAMs_20	IAMs_20	06 20 45.7	
	comp=Z,7μm,19.0s						
C24K	**Franklin Bluff**	**102.78**	**10**	Pdiff	**Pdif**	**05 31 10.2**	**+1.1**
	baz=206						
G30M	**tAoh Zraii Nji**	**102.78**	**16**	Pdiff	**Pdif**	**05 31 09.8**	**+0.6**
	baz=216						
D25K	**Kavik River**	**102.79**	**11**	Pdiff	**Pdif**	**05 31 09.8**	**+0.7**
	baz=208						
KSU1	**Kansas State U**	**102.86**	**52**	IAMs_20	IAMs_20	06 12 25.1	
	comp=Z,6μm,20.0s						
DGMT	**Dagmar**	**102.95**	**41**	IAMs_20	IAMs_20	06 22 32.7	
	comp=Z,7μm,18.0s						
U38A	**Gravette**	**103.09**	**55**	IAMs_20	IAMs_20	06 17 54.7	
	comp=Z,10μm,18.0s						
A22K	**Sinclair Lake**	**103.15**	**8**	Pdiff	**Pdif**	**05 31 11.5**	**+0.9**
	baz=200						
G31M	**Satah River**	**103.19**	**16**	IAMs_20	IAMs_20	06 16 28.1	
	comp=Z,9μm,20.0s						
G31M	**Satah River**	**103.19**	**16**	Pdiff	**Pdif**	**05 31 11.6**	**+0.7**
	baz=218						
A21K	**Barrow**	**103.28**	**7**	Pdiff	**Pdif**	**05 31 12.5**	**+1.4**
	baz=199						
ULN	**Ulaanbaatar**	**103.36**	**318**	IAMs_20	IAMs_20	06 13 42.9	
	comp=Z,10μm,22.0s						
ULN	**Ulaanbaatar**	**103.36**	**318**	P	**Pdif**	**05 31 10.9**	**-1.4**
ULN				S	**SKSac**	**05 41 48.0**	**-1.8**
F30M	**Barrier River**	**103.39**	**15**	IAMs_20	IAMs_20	06 13 29.3	
	comp=Z,8μm,21.0s						
F30M	**Barrier River**	**103.39**	**15**	Pdiff	**Pdif**	**05 31 12.9**	**+1.0**
	baz=216						
E28M	**Babbage River**	**103.41**	**14**	IAMs_20	IAMs_20	06 14 21.6	
	comp=Z,8μm,20.0s						
E28M	**Babbage River**	**103.41**	**14**	Pdiff	**Pdif**	**05 31 12.8**	**+0.9**
	baz=213						
143A	**Socs Landing,**	**103.47**	**60**	IAMs_20	IAMs_20	06 13 42.0	
	comp=Z,8μm,20.0s						
WRGLY	**Wrigley**	**103.47**	**22**	Pdiff	**Pdif**	**05 31 13.4**	**+1.1**
	baz=226						
C27K	**Jago River**	**103.51**	**12**	Pdiff	**Pdif**	**05 31 13.8**	**+1.5**
	baz=210						
C26K	**Camden Bay**	**103.56**	**11**	Pdiff	**Pdif**	**05 31 14.0**	**+1.6**
	baz=209						
E29M	**Blow River**	**103.57**	**14**	Pdiff	**Pdif**	**05 31 13.3**	**+0.7**
	baz=215						
D27M	**Malcolm River**	**103.67**	**13**	Pdiff	**Pdif**	**05 31 14.1**	**+1.0**
	baz=212						
F31M	**Tsiigehtchic**	**103.73**	**16**	IAMs_20	IAMs_20	06 10 30.3	
	comp=Z,8μm,22.0s						
F31M	**Tsiigehtchic**	**103.73**	**16**	Pdiff	**Pdif**	**05 31 14.2**	**+1.0**
	baz=218						
TAWA	**Tawang**	**103.87**	**294**	*e*P	**Pdif**	**05 31 14.6**	**-0.8**
E28A	**Huff**	**103.99**	**44**	IAMs_20	IAMs_20	06 16 59.4	
	comp=Z,8μm,18.0s						
MALK	**Mahakanadarawa**	**104.13**	**271**	P	**Pdif**	**05 31 15.2**	**-1.2**
D28M	**Stokes Point**	**104.18**	**13**	Pdiff	**Pdif**	**05 31 16.0**	**+0.8**
	baz=214						
N35A	**Tabor**	**104.36**	**51**	IAMs_20	IAMs_20	06 16 52.9	
	comp=Z,10μm,18.0s						
L34A	**Svendsen Farm,**	**104.41**	**50**	IAMs_20	IAMs_20	06 13 43.0	
	comp=Z,6μm,20.0s						
INK	**Inuvik**	**104.47**	**16**	Pdiff	**Pdif**	**05 31 17.9**	**+1.4**
	baz=218						
TRCB	**Terra Rica**	**105.02**	**129**	IAMs_20	IAMs_20	06 12 33.3	
	comp=Z,10μm,21.0s						
ECSD	**EROS Data Cent**	**105.10**	**48**	IAMs_20	IAMs_20	06 15 29.3	
	comp=Z,10μm,19.0s						
146A	**Union**	**105.19**	**61**	IAMs_20	IAMs_20	06 11 21.6	
	comp=Z,9μm,22.0s						
P38A	**Dawn**	**105.20**	**53**	IAMs_20	IAMs_20	06 16 27.2	
	comp=Z,9μm,18.0s						
MDND	**Maddock**	**105.27**	**43**	IAMs_20	IAMs_20	06 18 07.2	
	comp=Z,8μm,18.0s						
GOMU	**GeErMu**	**105.62**	**303**	Pdif	**Pdif**	**05 31 25.3**	**+2.3**
GOMU				AMB	AMB		
	comp=Z,1μm,6.9s						
GOMU				LR	LR		
	comp=Z,2μm,18.5s						
GOMU				LR	LR		
	comp=Z,4μm,18.6s						
GOMU				LR	LR		
	comp=Z,5μm,18.6s						
JPG	**JALPAIGURI**	**105.88**	**292**	*e*P	**Pdif**	**05 31 25.7**	**+1.8**
N38A	**Joes South For**	**105.94**	**52**	IAMs_20	IAMs_20	06 17 26.8	
	comp=Z,10μm,18.0s						
YKA	**Yellowknife Ar**	**106.08**	**26**	Pdiff	**Pdif**	**05 31 25.5**	**+1.7**
	comp=Z,0.4nm,0.7s,baz=251,slow=3.8,SNR=3.6						
YKA				PKKPbc	**PKKPbc**	**05 46 57.2**	**-2.2**
	comp=Z,4.0nm,0.9s,baz=33,slow=3.6,SNR=14						
Z47A	**Carrollton**	**106.18**	**61**	IAMs_20	IAMs_20	06 15 50.9	
	comp=Z,6μm,19.0s						
F33A	**5 Mile Ranch,**	**106.30**	**46**	IAMs_20	IAMs_20	06 13 34.8	
	comp=Z,7μm,21.0s						
GTK	**Tadong**	**106.32**	**292**	*e*P	**Pdif**	**05 31 25.3**	**-0.7**
SCIA	**State Center**	**106.46**	**51**	IAMs_20	IAMs_20	06 15 48.5	
	comp=Z,8μm,20.0s						
MDRS	**Chennai**	**106.66**	**275**	*e*P	**Pdif**	**05 31 25.8**	**-1.8**
MDRS	**Chennai**	**106.66**	**275**	*e*P		05 33 02.1	
RAGD	**RAYAGADA**	**106.85**	**283**	*e*P	**Pdif**	**05 31 27.1**	**-1.3**
RAGD	**RAYAGADA**	**106.85**	**283**	*e*P		05 33 00.7	
LRAL	**Lakeview Retre**	**106.91**	**61**	IAMs_20	IAMs_20	06 17 05.4	
	comp=Z,6μm,19.0s						
KNTI	**KHUNTI**	**107.07**	**287**	*e*P	**Pdif**	**05 31 30.0**	**+0.6**
KNTI	**KHUNTI**	**107.07**	**287**	*e*P		05 33 04.4	
TRD	**Trivandrum**	**107.26**	**270**	*e*P	**Pdif**	**05 31 28.9**	**-1.4**
I37A	**Lemond, Waseca**	**107.29**	**49**	IAMs_20	IAMs_20	06 15 32.5	
	comp=Z,7μm,19.0s						
N41A	**Harden Midland**	**107.52**	**53**	IAMs_20	IAMs_20	06 17 47.9	
	comp=Z,8μm,19.0s						
C36M	**Paulatuk**	**107.55**	**17**	IAMs_20	IAMs_20	06 17 03.4	
	comp=Z,9μm,20.0s						
C36M	**Paulatuk**	**107.55**	**17**	PKiKP	**PKiKP**	**05 35 38.3**	**+0.2**
	baz=227						
WVT	**Waverly**	**107.65**	**58**	IAMs_20	IAMs_20	06 18 13.1	
	comp=Z,6μm,18.0s						
KOD	**Kodaikanal**	**107.67**	**271**	*e*P	**Pdif**	**05 31 34.0**	**+1.5**
KOD	**Kodaikanal**	**107.67**	**271**	*e*P		05 33 08.9	
AGMN	**Agassiz Nation**	**107.70**	**44**	IAMs_20	IAMs_20	06 18 45.5	
	comp=Z,9μm,19.0s						
SPB	**Sao Paulo**	**107.83**	**133**	IAMs_20	IAMs_20	06 13 30.0	
	comp=Z,10μm,22.0s						
L40A	**Anamosa**	**107.86**	**51**	IAMs_20	IAMs_20	06 22 07.8	
	comp=Z,10μm,18.0s						
MTDJ	**Mount Denham**	**107.88**	**79**	IAMs_20	IAMs_20	06 10 12.2	
	comp=Z,12μm,22.0s						
VJD	**Vijayawada**	**107.95**	**279**	*e*P	**Pdif**	**05 31 32.3**	**-1.0**
VJD	**Vijayawada**	**107.95**	**279**	*e*P		05 33 08.8	
VAO	**Valinhos**	**108.55**	**133**	IAMs_20	IAMs_20	06 14 01.0	
	comp=Z,9μm,21.0s						
JFWS	**Jewell Farm**	**108.88**	**51**	IAMs_20	IAMs_20	06 19 42.7	
	comp=Z,9μm,18.0s						
L42A	**Oliver, Polo**	**108.88**	**52**	IAMs_20	IAMs_20	06 17 14.9	
	comp=Z,9μm,19.0s						
I40A	**Norwalk**	**109.05**	**50**	IAMs_20	IAMs_20	06 17 49.0	
	comp=Z,6μm,19.0s						
A36M	**Sachs Harbour**	**109.10**	**15**	PKiKP	**PKiKP**	**05 35 41.4**	**+0.5**
	baz=226						
BLSP	**Bilaspur**	**109.26**	**285**	*e*P	**Pdif**	**05 31 38.4**	**-0.7**
BLSP	**Bilaspur**	**109.26**	**285**	IAmb	IAmb	05 32 52.0	
	comp=Z,11nm,0.6s						
BLSP				*e*P		05 33 14.8	
U49A	**Red Boiling Sp**	**109.31**	**59**	IAMs_20	IAMs_20	06 22 39.1	
	comp=Z,8μm,18.0s						
SDV	**Santo Domingo**	**109.33**	**91**	IAMs_20	IAMs_20	06 12 59.5	
	comp=Z,8μm,22.0s						
Y52A	**Lilburn**	**109.48**	**62**	IAMs_20	IAMs_20	06 14 39.9	
	comp=Z,7μm,22.0s						
FOMA	**Nahampoana Res**	**109.58**	**223**	IAMs_20	IAMs_20	06 16 54.2	
	comp=Z,9μm,18.0s						
E38A	**The Farm, Brul**	**109.59**	**47**	IAMs_20	IAMs_20	06 16 44.0	
	comp=Z,10μm,20.0s						
CHIV	**Chivirico**	**109.62**	**78**	IAMs_20	IAMs_20	06 18 50.2	
	comp=Z,2μm,19.0s						
M44A	**Midewin, Midew**	**109.73**	**53**	IAMs_20	IAMs_20	06 22 43.5	
	comp=Z,5μm,18.0s						
GOGA	**Godfrey**	**109.74**	**62**	IAMs_20	IAMs_20	06 15 24.9	
	comp=Z,7μm,22.0s						
G40A	**Rib Lake**	**109.89**	**49**	IAMs_20	IAMs_20	06 20 13.3	
	comp=Z,6μm,19.0s						
VAR	**Varanasi**	**109.92**	**288**	*e*P	**Pdif**	**05 31 42.5**	**+0.6**
VAR	**Varanasi**	**109.92**	**288**	*e*P		05 33 17.2	
HQIL	**Hanson Quary C**	**110.03**	**53**	IAMs_20	IAMs_20	06 16 24.4	
	comp=Z,8μm,20.0s						
W52A	**Murphy**	**110.09**	**61**	IAMs_20	IAMs_20	06 19 14.0	
	comp=Z,9μm,18.0s						
HYB	**Hyderabad**	**110.14**	**279**	*e*Pdif	**Pdif**	**05 31 43.7**	**+0.6**
HYB				*e*PP	**PP**	**05 36 20.0**	**+1.1**
HYB				*e*PKSdf	**PKSdf**	**05 39 22.2**	**+0.7**
HYB				*e*SKSac	**SKSac**	**05 42 20.8**	**0.0**
HYB				*e*SP	**SP**	**05 45 44.4**	**-0.5**
HYB				*e*SS	**SS**	**05 51 45.0**	**+1.3**
HYB				IVMs_BB	IVMs_BB	06 22 59.0	
	comp=Z,3μm,18.5s						
L44A	**Lake County Fo**	**110.14**	**52**	IAMs_20	IAMs_20	06 19 47.3	
	comp=Z,8μm,18.0s						
I42A	**Draeger Farm,**	**110.17**	**50**	IAMs_20	IAMs_20	06 13 59.8	
	comp=Z,7μm,22.0s						
EYMN	**Ely**	**110.18**	**46**	IAMs_20	IAMs_20	06 16 53.5	
	comp=Z,7μm,20.0s						
ALBI	**Allahabad**	**110.91**	**288**	*e*P	**PKiKP**	**05 35 47.3**	**+1.5**
ALBI	**Allahabad**	**110.91**	**288**	*e*P		05 37 20.6	
ALBI				IAmb	IAmb	05 37 37.1	
	comp=Z,15nm,1.0s						
COWI	**Conover**	**110.91**	**48**	IAMs_20	IAMs_20	06 17 10.1	
	comp=Z,8μm,20.0s						
NMDO	**Nuevo Mundo**	**111.08**	**78**	IAMs_20	IAMs_20	06 16 42.7	
	comp=Z,4μm,21.0s						
H43A	**Windswept, Lux**	**111.16**	**50**	IAMs_20	IAMs_20	06 14 39.8	
	comp=Z,7μm,22.0s						
L46A	**Eue Claire**	**111.18**	**53**	IAMs_20	IAMs_20	06 20 37.8	
	comp=Z,5μm,19.0s						
S51A	**Beattyville**	**111.37**	**58**	IAMs_20	IAMs_20	06 19 40.5	
	comp=Z,8μm,18.0s						
NGP	**Nagpur**	**111.40**	**282**	*e*P	**PKiKP**	**05 35 46.5**	**-0.4**
F42A	**Maple Grove Fa**	**111.42**	**49**	IAMs_20	IAMs_20	06 19 22.7	
	comp=Z,7μm,19.0s						
I45A	**Fountain**	**112.00**	**51**	IAMs_20	IAMs_20	06 24 11.4	
	comp=Z,8μm,18.0s						
VOI	**Vohitsoka**	**112.02**	**225**	IAMs_20	IAMs_20	06 16 48.0	
	comp=Z,10μm,20.0s						
KMSC	**Kings Mountain**	**112.06**	**61**	IAMs_20	IAMs_20	06 20 12.1	
	comp=Z,8μm,19.0s						
N49A	**Columbus Grove**	**112.22**	**55**	IAMs_20	IAMs_20	06 20 38.6	
	comp=Z,9μm,19.0s						
LKN	**LUCKNOW**	**112.28**	**289**	*e*P	**PKiKP**	**05 35 47.5**	**-0.9**
Y57A	**Sumter**	**112.33**	**63**	IAMs_20	IAMs_20	06 19 31.5	
	comp=Z,6μm,19.0s						
J47A	**Sunmer**	**112.66**	**52**	IAMs_20	IAMs_20	06 17 44.8	
	comp=Z,7μm,20.0s						
AKL	**Akola**	**112.91**	**281**	*e*P	**PKiKP**	**05 35 49.6**	**-0.2**
AKL	**Akola**	**112.91**	**281**	*e*P		05 37 24.5	
AKL				IAmb	IAmb	05 37 34.9	
	comp=Z,285nm,2.9s						
W57A	**Gilead**	**113.08**	**62**	IAMs_20	IAMs_20	06 20 56.1	
	comp=Z,7μm,19.0s						
S54A	**Dingess, Beckl**	**113.10**	**59**	IAMs_20	IAMs_20	06 23 16.3	
	comp=Z,8μm,18.0s						
AAM	**Ann Arbor**	**113.10**	**54**	IAMs_20	IAMs_20	06 24 37.8	
	comp=Z,7μm,18.0s						

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GLMI  Grayling          113.37  51  IAMs_20  IAMs_20  06 22 06.6
            comp=Z,7µm,18.0s
FRKB  FARRUKHABAD       113.60 289 eP        PKiKP    05 35 48.5 -2.3
BHPL  Bhopal            113.66 284 eP        PKiKP    05 35 51.6 +0.4
BHPL  Bhopal            113.66 284 eP                 05 37 27.3
BHPL                                IAmb     IAmb     05 37 34.6
            comp=Z,54nm,0.1s
JHNI  Jhansi            113.66 286 eP        PKiKP    05 35 49.9 -1.2
JHNI  Jhansi            113.66 286 eP                 05 37 26.3
WMQ   Urumqi            113.72 308  PKP      PKiKP    05 35 52.1 +1.4
WMQ                                 PP       PP       05 36 41.6 -2.5
WMQ                                 SS       SS       05 52 30.8 +0.2
WMQ                                 AMB      AMB
            comp=Z,1µm,5.1s
WMQ                                 LR       LR
            comp=Z,2µm,24.7s
WMQ                                 LR       LR
            comp=Z,3µm,22.7s
WMQ                                 LR       LR
            comp=Z,4µm,24.3s
KAD   Karad             113.81 276 eP                 05 37 26.4
PTH   Pithoragarh       113.94 291 eP        PKiKP    05 35 51.8 +0.1
PTH   Pithoragarh       113.94 291 eP                 05 37 25.2
K50A  Casco             113.99  53  IAMs_20  IAMs_20  06 25 14.2
            comp=Z,6µm,18.0s
Y60A  Bolivia           113.99  64  IAMs_20  IAMs_20  06 20 43.9
            comp=Z,6µm,19.0s
E46A  Sault Ste Mari    114.12  49  IAMs_20  IAMs_20  06 16 25.2
            comp=Z,9µm,22.0s
R55A  Marlinton         114.15  59  IAMs_20  IAMs_20  06 21 38.2
            comp=Z,5µm,19.0s
W59A  Clinton           114.26  62  IAMs_20  IAMs_20  06 22 02.7
            comp=Z,5µm,19.0s
I49A  Point Hope        114.26  52  IAMs_20  IAMs_20  06 22 32.2
            comp=Z,9µm,19.0s
GUNA  GUNA              114.32 285 eP        PKPdf    05 35 52.1 -0.2
GUNA  GUNA              114.32 285 eP                 05 37 27.6
POO   Poona             114.64 277 eP        PKPdf    05 35 52.5 -0.7
POO   Poona             114.64 277 eP                 05 37 30.6
JOSI  Joshimath         114.86 292 eP        PKiKP    05 35 55.4 +1.9
JOSI  Joshimath         114.86 292 eP                 05 37 26.5
TKRD  Thakurdwara       114.88 290 eP        PKPdf    05 35 52.7 -0.6
TKRD  Thakurdwara       114.88 290 eP                 05 37 28.2
Q56A  Snyder Ridge,     115.10  58  IAMs_20  IAMs_20  06 21 12.3
            comp=Z,8µm,19.0s
UGON  Onchagaon         115.32 289 eP        PKiKP    05 35 54.5 +0.3
UGON  Onchagaon         115.32 289 eP                 05 37 28.2
ERPA  Erie              115.59  55  IAMs_20  IAMs_20  06 24 41.8
            comp=Z,5µm,18.0s
ASOR  Ausora            115.60 289 eP                 05 37 29.6
MERT  Meerut            115.72 290 eP        PKPdf    05 35 53.9 -1.0
V61A  Roper             115.90  62  IAMs_20  IAMs_20  06 22 50.3
            comp=Z,8µm,18.0s
JMIU  JAMIA UNIVERSI    115.92 289 eP        PKPdf    05 35 55.1 -0.2
JMIU  JAMIA UNIVERSI    115.92 289 eP                 05 37 30.8
SONA  Sohna             115.96 289 eP        PKiKP    05 35 55.5 +0.1
SONA  Sohna             115.96 289 eP                 05 37 31.2
DDI   Dehra Dun         115.97 291 eP        PKPdf    05 35 54.4 -1.0
DDI   Dehra Dun         115.97 291 eP                 05 37 30.1
DDI                                 IAML              05 37 33.8
            comp=Z,55nm,0.1s
LDR   Lodi Road         115.98 289 eP        PKiKP    05 35 55.8 +0.4
NDI   New Delhi         116.02 289 eP        PKiKP    05 35 55.5  0.0
NDI   New Delhi         116.02 289 eP                 05 37 29.3
NPLP  NPLP New Delhi    116.04 289 eP        PKPdf    05 35 53.2 -2.3
HNLY  HANLEY            116.16 294 eP        PKPdf    05 35 56.1 -0.3
HNLY  HANLEY            116.16 294 eP                 05 37 32.2
KLP   Kalpa             116.27 292 eP        PKPdf    05 35 54.8 -1.6
KLP   Kalpa             116.27 292 eP                 05 37 29.8
GNR   GANAUR            116.36 289 eP        PKPdf    05 35 54.3 -1.9
GNR   GANAUR            116.36 289  IAmb     IAmb     05 33 02.8
            comp=Z,4µm,0.2s
GNR                                eP                 05 37 30.2
KUDL  Kundal            116.41 288 eP        PKiKP    05 35 57.5 +1.3
KUDL  Kundal            116.41 288 eP                 05 37 32.1
BOSA  Boshof            116.61 203           PKiKP    05 35 59.4 +2.4
BOSA  Boshof            116.61 203  PKP      PKiKP    05 35 58.2 +1.2
            comp=Z,12nm,0.9s,baz=180,slow=3.6,SNR=7.6
BOSA                                PKPPKP P'P'df     05 55 02.0 -3.5
            comp=Z,1.2nm,0.6s,baz=3.1,slow=2.6,SNR=3.7
CRPR  Cabo Rojo, PR     116.63  84  IAMs_20  IAMs_20  06 15 31.7
            comp=Z,7µm,22.0s
ZSN   Zaisan            116.79 311 ePKIKP    PKPdf    05 35 54.8 -1.6
ZSN   Zaisan            116.79 311 ePKP      PKPdf    05 35 54.9 -1.6
AGPR  Aguadilla, PR     116.83  84  IAMs_20  IAMs_20  06 21 31.0
            comp=Z,5µm,18.0s
KKR   Kurukshetra       116.83 290 eP        PKPdf    05 35 56.9 -0.1
KKR   Kurukshetra       116.83 290 eP                 05 37 32.0
SMLA  Simla             116.98 292 eP        PKiKP    05 35 57.6 +0.4
SMLA  Simla             116.98 292 eP                 05 37 32.3
AOPR  Arecibo Observ    117.08  84  IAMs_20  IAMs_20  06 27 55.7
            comp=Z,6µm,21.0s
S61A  Accomac           117.23  61  IAMs_20  IAMs_20  06 22 43.0
            comp=Z,8µm,18.0s
MAL2  Monte Alegre,     117.27 111  IAMs_20  IAMs_20  06 20 20.9
            comp=Z,6µm,22.0s
EMPR  Esperanza - Ma    117.33  84  IAMs_20  IAMs_20  06 16 21.3
            comp=Z,6µm,21.0s
SJG   San Juan          117.49  85  IAMs_20  IAMs_20  06 15 26.6
            comp=Z,5µm,21.0s
GCPR  Guaynabo City     117.64  84  IAMs_20  IAMs_20  06 16 11.4
            comp=Z,6µm,22.0s
MSEY  Mahe Island       117.89 245  IAMs_20  IAMs_20  06 18 15.4
            comp=Z,8µm,20.0s
RES   Resolute Bay      117.92  17           PKPdf    05 35 56.8 -1.0
RES   Resolute Bay      117.92  17  PKIKP    PKPdf    05 35 56.8 -1.0
DHRM  DHARAMSHALA       118.08 292  IAmb     IAmb     05 36 07.3
            comp=Z,36nm,0.7s
DHRM                               eP                 05 37 36.3
MK31  Makanchi Array    118.28 310c iPKIKP   PKPdf    05 35 57.9 -1.4
MKAR  Makanchi Array    118.28 310           PKPdf    05 35 57.9 -1.5
MKAR  Makanchi Array    118.28 310  PKP      PKPdf    05 35 58.0 -1.4
            comp=Z,26nm,1.1s,baz=107,slow=1.3,SNR=37
MKAR                                SKP               05 39 33.0
            comp=Z,8.2nm,1.1s,baz=66,slow=1.5,SNR=7.2
MKAR                                PKKPbc   PKKPab   05 46 20.3 +1.5
            comp=Z,1.1nm,0.6s,baz=287,slow=3.9,SNR=7.6
MKAR  Makanchi Array    118.28 310  PKIKP    PKPdf    05 35 58.0 -1.4
MAKZ  Makanchi          118.49 310           PKPdf    05 35 58.2 -1.5
MAKZ  Makanchi          118.49 310  PKIKP    PKPdf    05 35 58.2 -1.5
MAKZ                                MLR      MLR
            comp=Z,4µm,21.0s
P61A  Hammonton         118.53  59  IAMs_20  IAMs_20  06 24 02.1
            comp=Z,5µm,19.0s
THN   Thein Dam         118.60 292 eP        PKPdf    05 35 59.5 -0.9
THN   Thein Dam         118.60 292 eP                 05 37 35.9
ZAA0  Zalesovo Array    118.61 318           PKPdf    05 35 59.2 -0.5
ZALV  Zalesovo Beam     118.61 318           PKPdf    05 35 57.8 -1.9
ZALV  Zalesovo Beam     118.61 318  PKP      PKPdf    05 35 58.0 -1.7
            comp=Z,7.2nm,0.8s,baz=270,slow=0.1,SNR=16
SHLS  Shalkode          119.18 305 ePKIKP    PKPdf    05 35 58.8 -2.5
SHLS                               e                  05 37 17.3
SHLS  Shalkode          119.18 305 ePKP      PKPdf    05 35 58.9 -2.5
SHLS                               ePP       PP       05 37 17.3 -5.1
SRGN  SRI GANGA NAGA119.18 289 eP        PKiKP    05 36 01.9 +0.3
SRGN  SRI GANGA NAGA119.18 289 eP                 05 37 36.9
PDGK  Podgornoye        119.21 305  PKIKP    PKPdf    05 35 59.8 -1.6
JMU   Jammu             119.35 292 eP        PKiKP    05 36 02.3 +0.5
JMU   Jammu             119.35 292 eP                 05 37 36.6
UZB   Uzynbulak         119.48 305 ePKIKP    PKPdf    05 36 00.0 -1.9
UZB                                e                  05 37 21.4
UZB   Uzynbulak         119.48 305 ePKP      PKPdf    05 36 00.0 -1.9
UZB                                ePP       PP       05 37 21.5 -3.1
SABA  Saba              119.76  86  IAMs_20  IAMs_20  06 17 36.8
            comp=Z,7µm,21.0s
SRNI  Srinagar          119.85 294 eP        PKiKP    05 36 03.0 +0.2
SRNI  Srinagar          119.85 294 eP                 05 37 39.0
SATY  Saty              119.89 305 ePKIKP    PKPdf    05 36 00.8 -1.9
SATY                               e                  05 37 24.2
SATY  Saty              119.89 305 ePKP      PKPdf    05 36 00.9 -1.9
SATY                               ePP       PP       05 37 24.3 -3.1
SEUS  St. Eustatius     119.93  87  IAMs_20  IAMs_20  06 17 11.3
            comp=Z,7µm,22.0s
TARG  Taragay, Kyrgy    119.95 303  PKIKP    PKiKP    05 36 03.2 -0.1
LONY  Lake Ozonia       120.10  53  IAMs_20  IAMs_20  06 26 19.9
            comp=Z,6µm,19.0s
TDK   Taldyqorghan      120.41 307 ePKIKP    PKPdf    05 36 01.9 -1.6
TDK   Taldyqorghan      120.41 307 ePKP      PKPdf    05 36 01.9 -1.6
TDK                                 LR       LR       06 30 31.4
            comp=Z,2µm,19.6s
ARXS  Arharly           120.61 306 i PKIKP   PKPdf    05 36 02.3 -1.7
KSH   Kashi             120.66 300  PKP      PKiKP    05 36 04.8 +0.4
KSH                                 sPKP              05 36 16.8
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KSH                                 PP       PP       05 37 38.5 +5.8
KSH                                 SKKS              05 44 24.8
KSH                                 SS       SS       05 54 04.9 +3.6
KSH                                 LR       LR
            comp=Z,3µm,22.0s
KSH                                 LR       LR
            comp=Z,3µm,21.0s
KSH                                 LR       LR
            comp=Z,6µm,24.0s
SKOMA Sekoma            120.84 203 i P       PKiKP    05 36 05.8 +0.5
BBGH  Gun Hill          120.88  93  IAMs_20  IAMs_20  06 24 59.4
            comp=Z,6µm,22.0s
NIL   Nilore            120.96 293           PKPdf    05 36 03.9 -1.0
NIL   Nilore            120.96 293  P        PKPdf    05 36 04.5 -0.4
NIL   Nilore            120.96 293  PKIKP    PKPdf    05 36 03.9 -1.0
NIL                                 MLR      MLR
            comp=Z,5µm,22.0s
AAA   Alma-Ata          120.99 305 ePKIKP    PKPdf    05 36 03.0 -1.7
AAA   Alma-Ata          120.99 305 ePKP      PKPdf    05 36 03.0 -1.7
AAA                                 LR       LR       06 30 41.7
            comp=Z,9µm,19.7s
NRN   Naryn             121.17 302  IAMs_20  IAMs_20  06 35 16.6
            comp=Z,8µm,21.0s
ULHL  Ulahol            121.21 303  P        PKiKP    05 36 08.6 +3.1
            SNR=11
LPHEP Lephephe          121.21 206 i P       PKPdf    05 36 03.4 -2.5
MREMI Moremi            121.32 208 i P       PKiKP    05 36 06.4 +0.1
HNH   Hanover           121.46  55  IAMs_20  IAMs_20  06 26 48.2
            comp=Z,8µm,18.0s
KURK  Kurchatov         121.59 313           PKPdf    05 36 04.4 -1.1
KURK  Kurchatov         121.59 313  P        PKPdf    05 36 04.3 -1.1
KURK  Kurchatov         121.59 313c iPKIKP   PKPdf    05 36 04.2 -1.3
KURK                                pmax     pmax
            comp=Z,109nm,1.7s
KURBB Kurchatov Arra    121.63 313  PKP      PKPdf    05 36 04.3 -1.3
            comp=Z,28nm,0.9s,baz=104,slow=2.0,SNR=72
KURBB                               SKP               05 39 39.6
            comp=Z,6.2nm,1.1s,baz=115,slow=1.7,SNR=7.1
TKM2  Tokmak 2          121.85 304  P        PKPdf    05 36 05.7 -0.9
            SNR=23
TKM2  Tokmak 2          121.85 304  PKIKP    PKPdf    05 36 04.2 -2.4
LKGWB Lokgwabe          122.09 201           PKiKP    05 36 07.9 +0.1
M65A  Busby, Falmout    122.09  58  PKiKP    PKPdf    05 36 06.2 -0.6
            baz=255
I62A  Tamworth          122.17  55  IAMs_20  IAMs_20  06 24 15.9
            comp=Z,8µm,20.0s
KBK   Karagaybulak      122.24 304  P        PKPdf    05 36 06.7 -0.6
            SNR=15
CHMS  Chumysh           122.47 304  P        PKPdf    05 36 06.6 -0.9
            SNR=13
FRU1  Bishkek           122.51 304  IAMs_20  IAMs_20  06 36 01.5
            comp=Z,6µm,22.0s
AAK   Ala-Archa         122.56 303  P        PKPdf    05 36 07.3 -0.6
            SNR=15
AAK   Ala-Archa         122.56 303           PKPdf    05 36 07.2 -0.6
AAK   Ala-Archa         122.56 303  IAMs_20  IAMs_20  06 35 35.9
            comp=Z,6µm,21.0s
AAK   Ala-Archa         122.56 303  P        PKPdf    05 36 07.1 -0.8
AAK   Ala-Archa         122.56 303c iPKIKP   PKPdf    05 36 07.1 -0.8
AAK                                 pmax     pmax
            comp=Z,49nm,1.7s
AAK                                 MLR      MLR
            comp=Z,7µm,25.0s
AAK   Ala-Archa         122.56 303 i PKPdf   PKPdf    05 36 07.3 -0.6
            SNR=16
SGDS  Sogindy           122.66 304 ePKP      PKPdf    05 36 06.1 -1.8
SGDS                               ePP       PP       05 37 43.2 -2.9
BROLN Tlhalogang        122.68 208 i P       PKiKP    05 36 10.2 +1.2
USP   Ospenovka         122.71 304  P        PKPdf    05 36 07.0 -1.0
            SNR=22
KGCAE Kacgae            122.95 202           PKiKP    05 36 10.1 +0.6
KGCAE Kacgae            122.95 202 i P       PKiKP    05 36 11.0 +1.5
AML   Almayashu         123.02 303  P        PKPdf    05 36 08.6 -0.5
            SNR=9.2
G62A  West of Eustis    123.04  54  IAMs_20  IAMs_20  06 28 10.7
            comp=Z,8µm,18.0s
EKS2  Erkin-Say         123.08 303  P        PKPdf    05 36 08.4 -0.5
            SNR=16
BTLS  Baital            123.43 306 ePKIKP    PKPdf    05 36 07.6 -1.6
BTLS                               e                  05 37 48.3
BTLS  Baital            123.43 306 ePKP      PKPdf    05 36 07.7 -1.6
BTLS                               ePP       PP       05 37 48.3 -2.9
SOOWA Sowa              123.61 207 i P       PKiKP    05 36 12.6 +1.8
DRK   Karamyk           123.76 299  IAMs_20  IAMs_20  06 35 18.6
            comp=Z,6µm,21.0s
E62A  Clayton Lake      124.01  52  IAMs_20  IAMs_20  06 24 55.3
            comp=Z,8µm,20.0s
D62A  Allapoint, All    124.42  52           PKiKP    05 36 13.6 +2.2
TULEG Thule             124.46  16  IAMs_20  IAMs_20  06 29 48.1
            comp=Z,5µm,20.0s
KBU   Kabul Universi    124.48 293  PKP      PKPdf    05 36 08.5 -3.4
KBL   Kabul             124.56 293           PKPdf    05 36 12.0  0.0
KBL   Kabul             124.56 293  P        PKPdf    05 36 11.5 -0.5
            SNR=25
KBL   Kabul             124.56 293  PKIKP    PKPdf    05 36 12.0  0.0
GRTLG Ghanzi            124.67 202 i P       PKiKP    05 36 14.4 +1.4
F64A  Sherman           124.67  53  IAMs_20  IAMs_20  06 31 49.8
            comp=Z,7µm,18.0s
WIN   Windhoek          124.70 197           PKiKP    05 36 13.6 +0.6
WIN   Windhoek          124.70 197  PKIKP    PKiKP    05 36 13.6 +0.6
DZA   Taraz             124.89 303 ePKIKP    PKPdf    05 36 10.4 -1.7
DZA   Taraz             124.89 303 ePKP      PKPdf    05 36 10.5 -1.7
G65A  Princeton         125.09  54  IAMs_20  IAMs_20  06 27 42.0
            comp=Z,5µm,19.0s
BRZS  Berezniki         125.22 312 ePKIKP    PKPdf    05 36 11.0 -1.5
BRZS                               e                  05 38 00.3
BRZS  Berezniki         125.22 312 ePKP      PKPdf    05 36 11.1 -1.5
BRZS                               ePP       PP       05 38 00.3 -2.7
KK31  Karatay Array     125.52 303 i PKIKP   PKPdf    05 36 12.0 -1.4
KKAR  Karatay Array     125.52 303           PKPdf    05 36 12.2 -1.1
KKAR  Karatay Array     125.52 303  PKIKP    PKPdf    05 36 12.2 -1.1
SIMJ  Simiganj          125.66 298           PKPdf    05 36 13.0 -0.9
SIMJ                                IAMs_20  IAMs_20  06 37 40.2
            comp=Z,5µm,20.0s
IUG   Iuzhnay           125.67 302 ePKIKP    PKPdf    05 36 11.8 -2.0
IUG                                e                  05 38 03.2
IUG   Iuzhnay           125.67 302 ePKP      PKPdf    05 36 11.9 -2.0
IUG                                ePP       PP       05 38 03.2 -3.2
DZET  Dzherino          125.83 298  PKIKP    PKPdf    05 36 13.7 -0.5
BRLS  Borolday          125.99 303 ePKIKP    PKPdf    05 36 12.6 -1.7
BRLS                               e                  05 38 05.8
BRLS  Borolday          125.99 303 ePKP      PKPdf    05 36 12.6 -1.7
BRLS                               ePP       PP       05 38 05.9 -2.6
SCHQ  Schefferville     126.74  42  PKP      PKPdf    05 36 15.0 -0.3
            comp=Z,11nm,0.9s,baz=238,slow=1.2,SNR=9.5
BVA0  Borovoye Array    126.96 315 i PKIKP   PKPdf    05 36 14.6 -1.2
BVAR  Borovoye Array    126.96 315  PKP      PKPdf    05 36 14.9 -0.8
            comp=Z,53nm,0.9s,baz=114,slow=1.8,SNR=60
BRVK  Borovoye          127.03 315           PKPdf    05 36 15.0 -0.9
BRVK  Borovoye          127.03 315  IAMs_20  IAMs_20  06 33 18.6
            comp=Z,5µm,20.0s
BRVK  Borovoye          127.03 315  P        PKPdf    05 36 15.0 -0.9
BRVK  Borovoye          127.03 315c iPKIKP   PKPdf    05 36 14.7 -1.2
BRVK                                MLR      MLR
            comp=Z,5µm,19.0s
LMN   Caledonia Moun    127.11  54           PKPdf    05 36 13.5 -2.8
LSZ   Lusaka            127.47 212           PKiKP    05 36 19.0 +0.4
LSZ   Lusaka            127.47 212  IAMs_20  IAMs_20  06 27 41.9
            comp=Z,7µm,19.0s
LSZ   Lusaka            127.47 212  P        PKiKP    05 36 19.3 +0.6
LSZ   Lusaka            127.47 212  PKIKP    PKiKP    05 36 19.0 +0.4
TSUM  Tsumeb            127.78 199           PKiKP    05 36 20.5 +1.3
TSUM  Tsumeb            127.78 199  IAMs_20  IAMs_20  06 38 00.9
            comp=Z,6µm,18.0s
KULLO Kullorsuaq        127.80  17 i P       PKPdf    05 36 13.4 -3.3
NEEM  North Greenlan    127.92  13 i P       PKPdf    05 36 16.4 -0.9
NGCH  Negor - Chabah    128.16 279  P        PKPdf    05 36 18.8  0.0
RCBR  Riachuelo         128.37 129  IAMs_20  IAMs_20  06 31 16.2
            comp=Z,6µm,19.0s
JLN   Jalan Bani Buh    128.45 275  P        PKiKP    05 36 19.8 -0.4
UPNV  Upernavik         128.73  19⇓iP        PKPdf    05 36 16.4 -2.1
NOR   Nord              128.92   3  PKIKP    PKPdf    05 36 17.9 -0.9
NOR   Nord              128.92   3⇓iP        PKPdf    05 36 17.4 -1.3
DQM   DQM               129.17 271  P        PKiKP    05 36 21.6  0.0
MHTO  MHTO              129.23 273  P        PKPdf    05 36 20.5 -0.6
            SNR=5.4
JMDO  Jabal Madar       129.65 274  P        PKiKP    05 36 22.3 -0.3
SMDO  Samad             129.96 275  P        PKPdf    05 36 22.8 +0.3
            SNR=5.4
NUUG  Nuugaatsiaq       130.04  20 i P       PKPdf    05 36 18.4 -2.6
BIDO  Bidbid            130.06 276  P        PKiKP    05 36 23.8 +0.4
            SNR=5.5
DMTO  DMTO              130.46 267  P        PKiKP    05 36 25.0 +0.7
BSY   Bisya             130.56 274  P        PKPdf    05 36 23.6  0.0
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            SNR=5.3
UMMG  Uummannaq         130.70  21 i P       PKPdf    05 36 21.4 -0.9
HOQ   Hoqain            130.78 275  P        PKPdf    05 36 24.1 +0.2
            SNR=8.6
RBK   Rabkut            131.00 267  P        PKiKP    05 36 25.9 +0.5
ARQ   Araqi             131.36 275  P        PKiKP    05 36 26.4 +0.4
            SNR=6.1
DOK   Doka              131.54 268  P        PKiKP    05 36 26.5  0.0
WHFO  Wadi Hawf         131.55 267  P        PKiKP    05 36 26.8 +0.3
SOHO  SOHO              131.64 276  P        PKPdf    05 36 25.6 +0.1
SOHO  SOHO              131.64 276 i PKiKP   PKPdf    05 36 25.8 +0.2
            SNR=7.8
ABTO  Aybut             131.71 266  P        PKiKP    05 36 27.2 +0.3
KBS   Kingsbay          131.92 357           PKiKP    05 36 26.5 +1.0
KBS                                 IAMs_20  IAMs_20  06 30 00.8
            comp=Z,6µm,21.0s
KBS   Kingsbay          131.92 357  PKIKP    PKiKP    05 36 26.5 +1.0
KBS   Kingsbay          131.92 357 ePKPdf    PKiKP    05 36 26.0 +0.5
KBS                                 IVmB_BB           05 36 29.8
            comp=Z,614nm,3.6s
KBS                                ePP       PP       05 38 43.8 -2.0
KBS                                 IVMs_BB  IVMs_BB  06 30 30.3
            comp=Z,2µm,21.3s
UOSS  Minazif           132.21 277           PKPdf    05 36 26.4 -0.2
UOSS  Minazif           132.21 277  P        PKPdf    05 36 25.8 -0.8
UOSS  Minazif           132.21 277 i PKPdf   PKPdf    05 36 25.3 -1.3
            SNR=8.9
HATD  Hatta, Dubai      132.23 276  P        PKPdf    05 36 26.9 +0.2
            SNR=15
HATD  Hatta, Dubai      132.23 276 i PKiKP   PKiKP    05 36 27.3 -0.4
            SNR=8.7
ASHO  Ashiyiah          132.24 276  P        PKPdf    05 36 27.1 +0.4
            SNR=8.9
ASHO  Ashiyiah          132.24 276 i PKPdf   PKPdf    05 36 26.3 -0.5
            SNR=7.6
MDH   Madha             132.25 277  P        PKPdf    05 36 26.7 +0.1
            SNR=6.8
MDH   Madha             132.25 277 i PKPdf   PKPdf    05 36 25.6 -1.1
            SNR=9.8
KIBK  Kibwezi           132.26 232  PKP      PKiKP    05 36 27.9 -0.3
KIBK  Kibwezi           132.26 232  IAMs_20  IAMs_20  06 31 40.4
            comp=Z,7µm,20.0s
KIBK  Kibwezi           132.26 232  P        PKiKP    05 36 29.6 +1.4
            SNR=6.2
ALNE  Al Ain            132.28 275  P        PKiKP    05 36 27.7 -0.2
            SNR=9.3
MSFE  Esma-Masafi       132.39 277 i PKPdf   PKPdf    05 36 24.3 -2.7
            SNR=7.3
MASF  Masafi            132.39 277  P        PKiKP    05 36 27.7 -0.4
            SNR=8.6
SPA0  Spitsbergen Ar    132.43 356 ePKPdf    PKiKP    05 36 26.8 +0.1
SPA0                               ePP       PP       05 38 48.5 -0.7
SPA0                               e                  05 39 50.1
SPA0                                IVMs_BB  IVMs_BB  06 33 10.6
            comp=Z,2µm,22.7s
SPITS Spitsbergen Ar    132.43 356  PKP      PKPdf    05 36 24.7 -0.8
            comp=Z,37nm,0.8s,baz=59,slow=5.6,SNR=12
BANOM Banah             132.46 278  PKPdf    PKPdf    05 36 24.9 -2.2
SVE   Sverdlovsk        132.50 320 i PKIKP   PKPdf    05 36 26.1  0.0
SVE                                 pmax     pmax
            comp=Z,102nm,2.0s
SVE                                 MLR      MLR
            comp=Z,4µm,22.0s
SVE                                 MLR      MLR
            comp=E,4µm,22.0s
SHME  Shamm             132.63 278  P        PKiKP    05 36 28.1 -0.4
SHME  Shamm             132.63 278  PKPdf    PKPdf    05 36 25.6 -1.8
SFJD  Kangerlussuaq     132.63  25  IAMs_20  IAMs_20  06 34 01.2
            comp=Z,7µm,19.0s
SFJD  Kangerlussuaq     132.63  25  PKP      PKiKP    05 36 27.1 -0.1
            comp=Z,5.4nm,0.5s,baz=311,slow=3.1,SNR=4.6
SFJD  Kangerlussuaq     132.63  25 i P       PKPdf    05 36 25.4 -0.7
NAZ   Nazwa, Dubai      132.68 276  P        PKiKP    05 36 29.0 +0.3
            SNR=8.8
NAZ   Nazwa, Dubai      132.68 276 i PKPdf   PKPdf    05 36 27.1 -0.4
            SNR=6.0
ASUD  Al Ashush, Dub    132.84 276  P        PKiKP    05 36 28.7 -0.2
UMQ   Umm Al-Quwin      132.87 277 i PKPdf   PKPdf    05 36 26.9 -0.9
            SNR=5.0
AJN   Ajban             133.11 276  PKPdf    PKPdf    05 36 27.8 -0.5
NUUK  Nuuk              133.18  29 i P       PKPdf    05 36 26.4 -0.8
DAG   Danmarks Havn     133.26   6  PKP      PKPdf    05 36 26.0 -1.0
DAG   Danmarks Havn     133.26   6  PKIKP    PKPdf    05 36 25.2 -1.9
DAG   Danmarks Havn     133.26   6 i P       PKPdf    05 36 24.4 -2.6
HOPEN Hopen             133.27 353 ePKPdf    PKiKP    05 36 27.8 -0.5
HOPEN                               IVmB_BB           05 36 31.7
            comp=Z,841nm,3.7s
HOPEN                              ePP       PP       05 38 55.8 +1.3
HOPEN                              eSS       SS       05 56 37.2 +1.4
HOPEN                               IVMs_BB  IVMs_BB  06 33 13.4
            comp=Z,2µm,20.5s
SUMG  Summit            133.39  16  PKP      PKPdf    05 36 27.0 -0.9
SUMG  Summit            133.39  16           PKiKP    05 36 29.6 +0.5
SUMG  Summit            133.39  16  PKIKP    PKiKP    05 36 29.6 +0.5
SUMG                                MLR      MLR
            comp=Z,8µm,20.0s
SUMG  Summit            133.39  16 i P       PKPdf    05 36 27.4 -0.5
AB31  Akbulak array     133.42 310 i PKIKP   PKPdf    05 36 27.8 -0.3
ABKAR Akbulak array     133.42 310           PKPpre   05 36 19.8
ARTI  Arti              133.79 320           PKPdf    05 36 26.9 -1.7
ARTI                                IAMs_20  IAMs_20  06 34 48.7
            comp=Z,8µm,22.0s
ARTI  Arti              133.79 320 i PKIKP   PKPdf    05 36 27.8 -0.8
ARTI                                                  05 38 55.7
ARTI                                SS       SS       05 56 39.4 -4.0
ARTI                                SSS      SSS      06 01 42.6
ARTI                                MLR      MLR
            comp=Z,8µm,22.0s
MZR   Muzera            133.84 273  P        PKiKP    05 36 30.7 -0.4
            SNR=10.0
MZR   Muzera            133.84 273 i PKPdf   PKPdf    05 36 28.7 -1.0
            SNR=7.4
GHWR  Ruwais            134.71 274  P        PKiKP    05 36 32.1 -0.6
JRN   Qarnain Island    135.07 275  P        PKPdf    05 36 32.4 +0.4
ICESG Greenland Ices    135.23  20 i P       PKPdf    05 36 28.4 -3.0
DBG   Daneborg          135.31   8 i P       PKPdf    05 36 28.4 -2.6
IVI   Ivigtut           135.70  32  IAMs_20  IAMs_20  06 32 11.2
            comp=Z,7µm,20.0s
IVI   Ivigtut           135.70  32 i P       PKPdf    05 36 30.4 -1.6
SLWR  Sila              135.76 274  P        PKPdf    05 36 33.3  0.0
TRNA  Turayna           136.40 274  P        PKPdf    05 36 35.0 +0.6
SMRA  Abu-Samra         136.73 274  P        PKiKP    05 36 35.9 -1.0
            SNR=5.2
NRS   Narsarsuaq        136.96  32  PKIKP    PKPdf    05 36 34.4 +0.1
NRS   Narsarsuaq        136.96  32 i P       PKPdf    05 36 31.4 -2.9
SHMA  Al-Shehemyia      136.98 276  P        PKPdf    05 36 36.2 +0.7
SAKB  Bahrain           137.38 276  P        PKiKP    05 36 37.6 -0.6
ATD   Arta Tunnel       137.61 252  P        PKiKP    05 36 39.3 +0.3
ANGG  Ammassalik, Gr    137.89  23  IAMs_20  IAMs_20  06 36 04.9
            comp=Z,6µm,20.0s
KIRV  Kirov             137.95 325  PKP      PKPdf    05 36 35.5 -0.7
            comp=Z,20nm,0.4s,baz=24,slow=1.5,SNR=15
KIRV                                SKP               05 40 10.9
            comp=Z,15nm,0.4s,baz=294,slow=2.1,SNR=4.7
VADS  Vadso             138.08 346 ePKPdf    PKPdf    05 36 36.3 +0.1
VADS                               ePP       PP       05 39 22.8 -2.1
VADS                               eSS       SS       05 57 35.2 +1.8
VADS                                IVMs_BB  IVMs_BB  06 37 11.8
            comp=Z,2µm,20.8s
LODK  Lodwar            138.25 235  IAMs_20  IAMs_20  06 31 05.5
            comp=Z,5µm,20.0s
LODK  Lodwar            138.25 235  P        PKiKP    05 36 39.6 -0.8
MBAR  Mbarara           138.33 226  P        PKiKP    05 36 40.0 -0.7
MBAR  Mbarara           138.33 226  PKIKP    PKiKP    05 36 40.7  0.0
SCO   Scoresbysund      138.40  12  IAMs_20  IAMs_20  06 36 19.8
            comp=Z,6µm,20.0s
SCO   Scoresbysund      138.40  12  PKIKP    PKiKP    05 36 37.9 -0.9
SCO   Scoresbysund      138.40  12 i P       PKPdf    05 36 34.4 -2.4
LVZ   Lovozero          138.56 342c iPKIKP   PKPdf    05 36 36.7 -0.5
HAMF  Hammerfest        138.66 349 ePKPdf    PKPdf    05 36 29.6 -7.6
HAMF                               ePP       PP       05 39 25.8 -2.7
HAMF                               eSS       SS       05 57 39.6 -0.6
HAMF                                IVMs_BB  IVMs_BB  06 34 00.5
            comp=Z,2µm,22.2s
KEV   Kevo              138.84 347           PKiKP    05 36 39.6 -0.1
KEV                                 IAMs_20  IAMs_20  06 39 12.2
            comp=Z,7µm,21.0s
KEV   Kevo              138.84 347  PKIKP    PKiKP    05 36 39.6 -0.1
KEV                                 MLR      MLR
            comp=Z,7µm,21.0s
APA   Apatity           139.12 342⇓iPKHKP    PKPpre   05 36 29.7
APA                                i                  05 36 37.2
APA                                 pmax     pmax
            comp=Z,27µm,0.9s
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ARA0   ARCESS Array S 139.31 348 eP        PKPdf     05 36 33.0 -5.4
ARA0                             ePKPdf    PKiKP     05 36 39.2 -1.6
ARA0                              IVmB_BB            05 36 43.7
       comp=Z,882nm,2.3s
ARA0                             ePP       PP        05 39 32.5  0.0
ARA0                             ePP       PP        05 39 33.4 +0.8
ARA0                             eSS       SS        05 57 47.5 -0.5
ARA0                              IVMs_BB  IVMs_BB   06 36 24.7
       comp=Z,3µm,26.5s
ARCES  ARCESS Array B 139.31 348           PKPpre    05 36 31.7
ARCES  ARCESS Array B 139.31 348  PKhKP    PKPpre    05 36 31.2
       comp=Z,18nm,0.9s,baz=52,slow=2.7,SNR=20
ARCES                             SKPbc    SKPbc     05 40 12.2 +0.8
       comp=Z,29nm,1.0s,baz=5.2,slow=2.7,SNR=8.4
ARCES  ARCESS Array B 139.31 348  PKHKP    PKPpre    05 36 31.7
JMIC   Jan Mayen      139.67   5 ePKPdf    PKPdf     05 36 37.0 -2.1
JMIC                             ePP       PP        05 39 32.6 -2.0
JMIC                              IVMs_BB  IVMs_BB   06 34 57.1
       comp=Z,1µm,17.9s
JNE    Jan Mayen East 139.68   5 ePKPdf    PKPdf     05 36 39.7 +0.7
JNE                               IVmB_BB            05 36 45.4
       comp=Z,904nm,3.5s
JNE                              ePP       PP        05 39 34.9 +0.3
JNE                              eSS       SS        05 57 55.7 +3.6
JMI    Jan Mayen      139.71   5 ePKPdf    PKPdf     05 36 40.0 +0.9
JMI                               IVmB_BB            05 36 41.2
       comp=Z,1000nm,3.1s
JMI                              ePP       PP        05 39 35.6 +0.8
JMI                              eSS       SS        05 57 54.0 +1.6
JETT   Jettan, Norway 140.14 350 ePKPdf    PKPdf     05 36 38.3 -1.7
TRO    Tromso         140.28 351  PKIKP    PKPdf     05 36 38.1 -2.1
TRO    Tromso         140.28 351 ePKPdf    PKPdf     05 36 35.4 -4.8
TRO                               IVmB_BB            05 36 45.3
       comp=Z,815nm,2.5s
TRO                              ePP       PP        05 39 38.2 -0.2
TRO                              eSS       SS        05 57 59.2  0.0
TRO                               IVMs_BB  IVMs_BB   06 36 18.7
       comp=Z,2µm,23.1s
KBD    Kabd           140.71 279  P        PKPdf     05 36 42.9 +0.6
BELG   Belogornoye    140.76 316⇓ePKIKP    PKPdf     05 36 42.1 +0.6
RAYN   Ar Rayn        140.87 270           PKPdf     05 36 38.6 -4.2
RAYN   Ar Rayn        140.87 270  IAMs_20  IAMs_20   06 32 41.8
       comp=Z,5µm,22.0s
RAYN   Ar Rayn        140.87 270  P        PKPdf     05 36 43.4 +0.6
RAYN   Ar Rayn        140.87 270⇑PKIKP     PKPdf     05 36 41.4 -1.4
RAYN   Ar Rayn        140.87 270 i PKPdf   PKPdf     05 36 41.6 -1.2
       SNR=8.6
KLMR   Klimovskoe     141.43 331 ePKIKP    PKPdf     05 36 40.2 -2.3
KLMR                              SS       SS        05 58 13.6 +0.3
KLMR                              SSS      SSS       06 03 30.7
KLMR                              pmax     pmax
       comp=Z,145nm,1.4s
KLMR                              MLR      MLR
       comp=Z,9µm,22.0s
MSF    Maaselka       141.52 343  PKIKP    PKPdf     05 36 39.7 -2.9
AKT    Akhty          142.16 299 ePKHKP    PKPpre    05 36 37.9
AKT                              e                   05 39 47.3
AKT                              ePPP      PPP       05 42 56.8
AKT                               pmax     pmax
       comp=Z,104nm,1.5s
MAK    Makhachkala    142.28 301 ePKHKP    PKPpre    05 36 35.9
MAK                              ePPP      PPP       05 42 57.7
MAK                              e                   05 43 47.6
MAK                              eSS       SS        05 58 25.7 +0.9
MAK                              eSSS      SSS       06 03 45.0
MAK                               pmax     pmax
       comp=Z,115nm,0.9s
LOF    Lofoten        142.35 353 ePKPdf    PKPdf     05 36 36.1 -7.9
LOF                               IVmB_BB            05 36 44.1
       comp=Z,709nm,5.2s
LOF                              ePP       PP        05 39 50.1 -0.9
LOF                              eSS       SS        05 58 24.0 +0.7
LOF                               IVMs_BB  IVMs_BB   06 32 14.3
       comp=Z,1µm,25.0s
STEI   Steigen        142.36 352 ePKPdf    PKPdf     05 36 39.4 -4.6
STEI                              IVmB_BB            05 36 43.9
       comp=Z,823nm,4.3s
STEI                             ePP       PP        05 39 51.8 +0.8
STEI                             eSS       SS        05 58 26.1 +2.8
STEI                              IVMs_BB  IVMs_BB   06 37 52.0
       comp=Z,2µm,22.4s
FAUS   Fauske         142.87 352 ePKPdf    PKPdf     05 36 38.0 -6.9
FAUS                              IVmB_BB            05 36 45.4
       comp=Z,991nm,4.5s
FAUS                             ePP       PP        05 39 53.7 -0.4
FAUS                             eSS       SS        05 58 32.4 +3.2
FAUS                              IVMs_BB  IVMs_BB   06 40 28.9
       comp=Z,2µm,22.2s
OUL    Oulu           142.97 343  PKIKP    PKPdf     05 36 41.5 -3.6
VAGH   Vaagaholmen    143.74 353 ePKPdf    PKPbc     05 36 44.1  0.0
VAGH                              IVmB_BB            05 36 47.8
       comp=Z,2µm,2.7s
VAGH                             ePP       PP        05 39 59.1 -0.2
VAGH                             eSS       SS        05 58 45.2 +6.0
KONS   Konsvik        143.97 352 ePKPdf    PKPab     05 36 44.3 +0.1
MOR8   Moi Rana       144.13 351 ePKPdf    PKPab     05 36 44.2 -0.6
MOR8                              IVmB_BB            05 36 45.1
       comp=Z,1µm,2.6s
MOR8                             ePP       PP        05 40 00.8 -1.0
MOR8                             eSS       SS        05 58 45.0 +1.2
MOR8                              IVMs_BB  IVMs_BB   06 35 34.6
       comp=Z,2µm,24.5s
STOK   Stokkvaagen    144.15 352 ePKPdf    PKPab     05 36 42.8 -2.1
STOK                              IVmB_BB            05 36 46.2
       comp=Z,2µm,2.8s
STOK                             ePP       PP        05 40 02.8 +1.0
STOK                             eSS       SS        05 58 47.0 +3.0
STOK                              IVMs_BB  IVMs_BB   06 30 11.6
       comp=Z,2µm,24.9s
LEIR   Leirfjorden    144.35 352 ePKPdf    PKPab     05 36 43.9 -1.7
LEIR                              IVmB_BB            05 36 46.6
       comp=Z,3µm,2.7s
LEIR                             ePP       PP        05 40 02.7 -0.3
LEIR                             eSS       SS        05 58 50.9 +4.6
GNI    Garni          144.45 297  P        PKPab     05 36 47.0 -0.1
GNI    Garni          144.45 297ciPKIKP    PKPab     05 36 46.5 -0.6
GNI    Garni          144.45 297  PKPdf    PKPab     05 36 46.1 -1.0
VRH    Novokhopyorsk  144.61 316 ePKIKP    PKPbc     05 36 47.6 +0.4
VRH                               pmax     pmax
       comp=Z,55nm,0.6s
MOS    Moscow         144.97 325 i PKIKP   PKPab     05 36 46.8 -1.4
MOS                              e                   05 40 15.3
MOS                               pmax     pmax
       comp=Z,3µm,4.5s
MOS                               pmax     pmax
       comp=Z,233nm,1.4s
MOS                               pmax     pmax
       comp=N,2µm,4.3s
MOS                               pmax     pmax
       comp=E,900nm,4.5s
MOS                               MLR      MLR
       comp=E,4µm,22.0s
MOS                               MLR      MLR
       comp=Z,6µm,22.0s
MOS                               MLR      MLR
       comp=N,4µm,21.0s
NCK    Nalchik        145.09 303⇑ePKIKP    PKPbc     05 36 48.2 -0.9
GOF    Gofitskoye     145.26 305ciPKIKP    PKPbc     05 36 48.7 -0.9
KBZ    Khabaz         145.56 303  PKPbc    PKPdf     05 36 49.6 -0.7
       comp=N,46nm,1.1s,baz=94,slow=3.6,SNR=44
KBZ    Khabaz         145.56 303ciPKP2     PKPdf     05 36 49.1 -1.2
PUL    Pulkovo        145.68 335cePKIKP    PKPdf     05 36 49.5 -0.5
KIV    Kislovodsk     145.68 303           PKPdf     05 36 50.0 -0.7
KIV    Kislovodsk     145.68 303  P        PKPdf     05 36 50.0 -0.7
KIV    Kislovodsk     145.68 303 ePKHKP    PKPpre    05 36 45.1
KIV                              i                   05 36 49.7
KIV                              e                   05 40 06.6
KIV                              eSS       SS        05 58 55.4 -8.6
KIV                               pmax     pmax
       comp=Z,70nm,1.1s
KIV    Kislovodsk     145.68 303 i PKPdf   PKPdf     05 36 49.2 -1.5
       SNR=77
SHA1   Shidzhatmaz    145.73 303ciPKIKP    PKPdf     05 36 50.3 -0.6
OBN    Obninsk        145.80 325           PKPdf     05 36 49.9 -0.5
OBN    Obninsk        145.80 325⇓P         PKPdf     05 36 50.2 -0.1
OBN    Obninsk        145.80 325ciPKIKP    PKPdf     05 36 49.4 -0.9
OBN                              e                   05 40 10.7
OBN                              e                   05 43 33.5
OBN                              eSS       SS        05 58 59.5 -4.4
FINES  FINESS Array B 145.85 340           PKPdf     05 36 50.0 -0.3
FINES  FINESS Array B 145.85 340  PKPbc    PKPdf     05 36 49.8 -0.5
       comp=Z,273nm,0.9s,baz=55,slow=3.4,SNR=188
VORR   Voronezh       145.91 318 ePKIKP    PKPdf     05 36 49.1 -1.6
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VORR                              pmax     pmax
       comp=Z,160nm,0.9s
NSS    Namsos         146.01 352 ePKPdf    PKPdf     05 36 49.6 -0.8
NSS                               IVmB_BB            05 36 52.3
       comp=Z,7µm,2.6s
NSS                               IVMs_BB  IVMs_BB   06 31 16.2
       comp=Z,2µm,25.6s
VSR    Storozhevoye   146.11 317 ePKIKP    PKPdf     05 36 49.3 -1.7
VSR                               pmax     pmax
       comp=Z,100nm,0.9s
VORD   Divnogorie     146.13 317 ePKIKP    PKPdf     05 36 49.7 -1.3
VORD                              pmax     pmax
       comp=Z,110nm,1.0s
ERBR   Yeremizino-Bor 146.91 307cePKIKP    PKPdf     05 36 51.8 -0.8
ERBR                             i                   05 36 55.7
ERBR                             e                   05 37 05.8
ERBR                              pmax     pmax
       comp=Z,228nm,1.6s
LABN   Labinsk        146.96 305 i PKIKP   PKPdf     05 36 52.7  0.0
LABN                             e                   05 37 06.7
LABN                             e                   05 40 15.5
LABN                              pmax     pmax
       comp=Z,113nm,1.6s
LABN                              MLR      MLR
       comp=Z,6µm,25.0s
VSLR   Vesyoloye      147.66 303cePKIKP    PKPdf     05 36 54.3 +0.4
SOC    Sochi          147.86 303ciPKIKP    PKPdf     05 36 52.5 -1.7
SOC                              e                   05 40 22.4
SOC                              ePPP      PPP       05 43 44.7
SOC                              eSS       SS        05 59 20.2 -8.3
SOC                               pmax     pmax
       comp=Z,100nm,1.4s
VSU    Vasula         147.91 336ciPKHKP    PKPpre    05 36 51.5
MOL    Molde          148.35 355 ePKPdf    PKPdf     05 36 55.3 +0.9
MOL                               IVmB_BB            05 36 59.4
       comp=Z,3µm,3.3s
DOMB   Dombas         148.74 354 ePKPdf    PKPdf     05 36 55.7 +0.6
DOMB                             eSS       SS        05 59 39.4 +3.3
DOMB                              IVMs_BB  IVMs_BB   06 33 43.2
       comp=Z,2µm,18.0s
AKN    Aaknes         148.78 356 ePKPbc    PKPbc     05 36 59.1 +0.1
AKN                               IVmB_BB            05 37 00.9
       comp=Z,5µm,2.1s
AKN                              eSKPdf    SKPdf     05 40 24.9 -1.7
AKN                              eSS       SS        05 59 37.5 +1.0
ANN    Anapa          149.22 306ciPKHKP    PKPpre    05 36 55.1
ANN                              i                   05 37 00.8
ANN                              e                   05 40 30.8
ANN                               pmax     pmax
       comp=Z,81nm,1.3s
ANN                               pmax     pmax
       comp=Z,219nm,1.1s
ANN                               MLR      MLR
       comp=Z,2µm,23.0s
FOO    Floro          149.46 357 ePKPdf    PKPdf     05 36 56.9 +0.7
FOO                              ePKPbc    PKPbc     05 37 00.4 -0.3
FOO                               IVmB_BB            05 37 05.2
       comp=Z,5µm,3.3s
FOO                              ePP       PP        05 40 33.8 +0.7
FOO                              eSS       SS        05 59 45.8 +1.8
NB2    NORSAR Subarra149.48 351  PKP      PKPdf     05 36 55.6 -0.8
       comp=Z,2µm,2.5s,baz=17,slow=2.6
NB2    NORSAR Subarra149.48 351  PKPab    PKPdf     05 36 55.6 -0.8
       baz=17,slow=2.6
NOA    NORSAR Array B149.48 351  PKP      PKPdf     05 36 56.7 +0.4
       comp=Z,5.6nm,0.5s,baz=44,slow=2.2,SNR=44
NOA                               PKPbc    PKPbc     05 37 00.4 -0.4
       comp=Z,20nm,0.7s,baz=62,slow=1.9,SNR=25
NC602  NORSAR Array S 149.73 351 ePKPbc    PKPbc     05 37 00.7 -0.7
HYA    Hoyanger       149.83 356 ePKPdf    PKPdf     05 36 57.4 +0.6
HYA                              eSS       SS        05 59 52.5 +4.3
HFS    Hagfors        149.97 348  PKP      PKPdf     05 36 57.9 +0.8
       comp=Z,41nm,0.6s,baz=101,slow=3.2,SNR=44
HFS                               PKPbc    PKPbc     05 37 01.4 -0.6
       comp=Z,100nm,0.9s,baz=116,slow=3.4,SNR=41
SUE    Sulen          150.01 357 ePKPbc    PKPbc     05 37 02.2 +0.2
SUE                               IVmB_BB            05 37 03.7
       comp=Z,4µm,2.3s
SUE                              eSS       SS        05 59 51.4 +1.2
SKAR   Skarslia       150.15 354 ePKPdf    PKPdf     05 36 58.0 +0.5
SKAR                             ePKPbc    PKPbc     05 37 02.5 -0.1
SKAR                             eSS       SS        05 59 54.8 +2.8
MNK    Minsk          150.24 329 i PKiKP   PKPbc     05 37 02.4 -0.5
       comp=E,71nm,1.0s
MNK                              i PKiKP   PKPbc     05 37 02.4 -0.5
       comp=N,59nm,1.1s
MNK                              i PKiKP   PKPbc     05 37 02.4 -0.5
       comp=Z,166nm,0.9s,baz=49
MNK                              i PP      PP        05 40 36.6 -1.4
MNK                              i PPP     PPP       05 43 58.6
MNK                              i SKS     SKSdf     05 44 01.0 -2.0
MNK                              i SS      SS        05 59 53.3 -0.2
MNK                              i SSS     SSS       06 05 34.4
MNK                              i LRM     MLR       06 41 43.0
       comp=N,5µm,21.9s
MNK                              i LRM     MLR       06 41 58.0
       comp=Z,9µm,21.8s
MNK                              i LRM     MLR       06 41 58.5
       comp=E,6µm,22.1s
MNK    Minsk          150.24 329 i PKP2    PKPbc     05 37 02.3 -0.5
MNK                              i                   05 40 36.6
MNK                              i PPP     PPP       05 43 58.5
MNK                              i                   05 44 01.0
MNK                              i SS      SS        05 59 53.3 -0.3
MNK                              i SSS     SSS       06 05 34.4
MNK                               pmax     pmax
       comp=N,59nm,1.1s
MNK                               pmax     pmax
       comp=Z,166nm,0.9s
MNK                               pmax     pmax
       comp=E,71nm,1.0s
MNK                               MLR      MLR
       comp=N,5µm,22.0s
MNK                               MLR      MLR
       comp=Z,9µm,22.0s
MNK                               MLR      MLR
       comp=E,6µm,22.0s
GAZ    Gaziantep      150.41 291           PKPdf     05 36 58.2 -0.4
NACGM  Naroch         150.44 331⇓iPKiKP    PKiKP     05 37 03.9 -0.1
       comp=Z,261nm,1.0s,baz=46
ASK    Askoy          150.57 357 ePKPdf    PKPdf     05 36 58.6 +0.6
ASK                              ePKPbc    PKPbc     05 37 03.5 +0.1
ASK                               IVmB_BB            05 37 06.4
       comp=Z,4µm,4.3s
ASK                              eSS       SS        05 59 58.4 +2.1
OSL    Oslo           150.61 351 ePKPdf    PKPdf     05 36 58.1 +0.1
OSL                               IVmB_BB            05 37 04.8
       comp=Z,3µm,2.8s
OSL                              eSS       SS        05 59 59.2 +2.4
BER    Bergen         150.66 357  PKIKP    PKPbc     05 37 03.6  0.0
BER    Bergen         150.66 357 ePKPdf    PKPdf     05 36 58.4 +0.3
BER                              ePKPbc    PKiKP     05 37 04.4 +0.1
BER                               IVmB_BB            05 37 06.5
       comp=Z,3µm,4.5s
BER                              ePP       PP        05 40 40.1 +0.1
BER                              eSS       SS        05 59 59.7 +2.4
LRW    Lerwick        150.91   3 eP        PKPdf     05 36 57.9 -0.6
LRW                               IAMs_20  IAMs_20   06 37 36.9
       comp=Z,6µm,25.9s
KONO   Kongsberg      151.03 352           PKPdf     05 36 58.3 -0.4
KONO   Kongsberg      151.03 352  IAMs_20  IAMs_20   06 45 52.5
       comp=Z,5µm,21.0s
KONO   Kongsberg      151.03 352  PKIKP    PKPdf     05 36 58.3 -0.4
KONO   Kongsberg      151.03 352 ePKPdf    PKPdf     05 36 58.5 -0.3
KONO                             ePKPbc    PKiKP     05 37 05.2 +0.1
KONO                              IVmB_BB            05 37 09.7
       comp=Z,4µm,5.3s
KONO                             ePP       PP        05 40 43.1 +1.0
KONO                             eSS       SS        06 00 04.6 +3.1
KONO                              IVMs_BB  IVMs_BB   06 35 28.4
       comp=Z,2µm,27.5s
ODD1   Odda           151.05 355 ePKPdf    PKPdf     05 36 59.3 +0.4
ODD1                              IVmB_BB            05 37 06.5
       comp=Z,4µm,2.4s
BEIL   Beino          151.21 286 eP        PKPdf     05 36 59.1 -0.8
HWQ    Hawqa          151.39 285 eP        PKPdf     05 36 59.7 -0.6
STRU   Stroemstad     151.42 350 i P       PKPdf     05 36 59.0 -0.3
SIM    Simferopol'    151.44 308 ePKIKP    PKPdf     05 37 01.1 +1.2
SIM                               pmax     pmax
       comp=Z,122nm,0.9s
DIKM   Dikmen         151.45 301⇓P         PKPdf     05 36 59.2 -0.8
SHBL   Chebaa         151.50 283 eP        PKPdf     05 36 59.6 -1.0
SACV   Santiago Islan 151.53 119  IAMs_20  IAMs_20   07 01 09.1
       comp=Z,3µm,19.0s
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BLS5   Blasjo         151.55 355 ePKPdf    PKPdf     05 37 00.9 +1.3
BLS5                             ePKPbc    PKiKP     05 37 06.5 +0.3
BLS5                             ePP       PP        05 40 46.0 +0.9
BLS5                             eSS       SS        06 00 10.0 +2.6
BHL    Bhannes        151.61 285 eP        PKPdf     05 36 59.9 -0.7
MMAI   Mount Meron Ar 151.75 283  PKP      PKPdf     05 37 02.5 +1.6
       comp=Z,36nm,0.9s,baz=177,slow=2.9,SNR=6.9
MMAI                              PKPbc    PKiKP     05 37 07.8 +0.2
       comp=Z,89nm,0.8s,baz=83,slow=2.7,SNR=56
KMY    Karmoy         151.84 357 ePKPdf    PKPdf     05 36 59.8 -0.1
KMY                              ePKPbc    PKiKP     05 37 07.4 +0.6
KMY                               IVmB_BB            05 37 08.1
       comp=Z,3µm,2.2s
KMY                              ePP       PP        05 40 47.7 +1.0
KMY                              eSS       SS        06 00 13.7 +3.4
AK03   Malin Array Si 151.90 322  PKP      PKPdf     05 36 59.2 -1.1
AKASG  Malin Array Be 151.91 322           PKPdf     05 36 59.5 -0.9
AKASG  Malin Array Be 151.91 322  PKP      PKPdf     05 36 58.6 -1.7
       comp=Z,5.0nm,0.8s,baz=48,slow=1.6,SNR=26
AKASG                             PKPbc    PKPbc     05 37 05.8 -1.0
       comp=Z,119nm,0.9s,baz=51,slow=2.8,SNR=64
AKBB   Malin Array Si 151.91 322  PKP      PKPdf     05 36 59.6 -0.8
KIEV   Kiev           151.92 322           PKPdf     05 36 59.6 -0.8
KIEV   Kiev           151.92 322⇑P         PKPdf     05 36 58.9 -1.5
KIEV   Kiev           151.92 322⇑PKIKP     PKPdf     05 36 58.9 -1.5
KIEV   Kiev           151.92 322 i PKPdf   PKPdf     05 37 00.7 +0.4
       SNR=31
BZK    Bozkurt        152.31 302⇑P         PKPdf     05 37 00.8 -0.4
BORU   Boraas         152.49 348 i P       PKPdf     05 37 00.2 -0.8
HOMB   Homborsund     152.50 353 ePKPdf    PKPdf     05 37 01.7 +0.8
HOMB                              IVmB_BB            05 37 09.2
       comp=Z,4µm,3.6s
HOMB                             eSS       SS        06 00 20.0 +2.3
HOMB   Homborsund     152.50 353 i P       PKPdf     05 37 02.0 +1.1
SUW    Suwalki        152.55 333 ePKP      PKPdf     05 37 00.3 -0.9
SUW                              ePP       PP        05 40 46.8 -4.3
SUW                              eL        L         06 44 45.4
       comp=Z,11µm,22.3s
SUW    Suwalki        152.55 333  PKIKP    PKPdf     05 37 01.1 -0.1
SNART  Snartemo       152.57 354 ePKPdf    PKPdf     05 37 01.1 +0.1
SNART                            ePKPbc    PKPbc     05 37 07.6 -0.5
SNART                             IVmB_BB            05 37 09.6
       comp=Z,4µm,2.9s
SNART                            eSKPdf    SKPdf     05 40 31.0 -1.0
SNART  Snartemo       152.57 354 i P       PKPdf     05 37 02.0 +0.9
KIRS   Kirsehir-Merke 152.86 296⇓P         PKPdf     05 37 00.8 -1.4
ONAU   Onsala         152.87 348 i P       PKPdf     05 37 01.4 -0.1
BR131  Keskin Array S 152.99 297  P        PKPdf     05 37 00.7 -1.8
       SNR=54
BRTR   Keskin Array B 152.99 297           PKPdf     05 37 01.6 -1.0
BRTR   Keskin Array B 152.99 297  PKP      PKPdf     05 37 01.4 -1.1
       comp=Z,9.0nm,1.1s,baz=116,slow=2.9,SNR=21
BRTR                              PKPbc    PKPbc     05 37 08.6 -1.3
       comp=Z,34nm,1.0s,baz=138,slow=2.2,SNR=27
BLEU   Blekinge       153.05 343 i P       PKPdf     05 37 00.8 -1.0
CIDE   Kastamonu/Cide 153.09 302⇓P         PKPdf     05 37 00.4 -2.0
FABU   Falkenberg     153.09 347 i P       PKPdf     05 36 59.6 -2.2
RNPP9  Sopachiv       153.17 326  PKP      PKPdf     05 37 00.1 -2.1
OVD    Ostervraa, Den 153.22 350 i P       PKPdf     05 37 00.2 -1.8
KPL    Plockton       153.25   9 eP        PKPdf     05 37 01.2 -0.9
KPL                               IAMs_20  IAMs_20   06 46 35.8
       comp=Z,6µm,20.0s
MCD    Coleburn Disti 153.30   6 eP        PKPdf     05 37 00.6 -1.6
MCD                               IAMs_20  IAMs_20   06 49 13.2
       comp=Z,5µm,20.0s
DEL    Delary         153.35 345 i P       PKPdf     05 37 02.0 -0.3
ANTO   Ankara         153.61 298           PKPdf     05 37 02.6 -0.7
ANTO   Ankara         153.61 298  P        PKPdf     05 37 02.4 -0.9
ANTO   Ankara         153.61 298⇑P         PKPdf     05 37 01.2 -2.1
ANTO   Ankara         153.61 298⇑PKIKP     PKPdf     05 37 01.2 -2.1
SORM   Soroca         153.76 318⇓P         PKPdf     05 37 03.8 +0.6
SORM   Soroca         153.76 318⇓PKIKP     PKPdf     05 37 03.8 +0.6
DRUM   Mains of Drumt 154.03   6 eP        PKPdf     05 37 01.2 -2.1
DRUM                              IAMs_20  IAMs_20   06 45 49.9
       comp=Z,4µm,19.8s
KIS    Kishinev       154.05 315 ePKP      PKPdf     05 37 02.0 -1.6
       comp=Z,600nm,9.4s
KIS    Kishinev       154.05 315 ePKIKP    PKPdf     05 37 02.0 -1.6
KIS                              i                   05 37 11.0
KIS                               pmax     pmax
       comp=Z,600nm,9.4s
MILM   Milestii Mici  154.09 315 i PKHKP   PKPpre    05 37 01.0
MILM   Milestii Mici  154.09 315  PKPM               05 37 04.0
       comp=Z,1µm,7.4s
MILM   Milestii Mici  154.09 315 i PKiKP   PKiKP     05 37 12.0 +0.2
MILM                              MPKiK              05 37 22.0
       comp=Z,700nm,3.1s
MILM   Milestii Mici  154.09 315⇓P         PKPdf     05 37 05.2 +1.6
MILM   Milestii Mici  154.09 315ciPKIKP    PKPdf     05 37 01.0 -2.6
MILM                              pmax     pmax
       comp=Z,1µm,7.4s
LUNU   Lund           154.22 345 i P       PKPdf     05 37 02.6 -0.9
HORU   Horodok        154.24 322  PKIKP    PKPdf     05 37 06.1 +2.3
LAWE   Loch Awe, Argy 154.34  10 eP        PKPdf     05 37 02.9 -0.8
LAWE                              IAMs_20  IAMs_20   06 40 56.8
       comp=Z,7µm,23.3s
INVG   Invergeldie, C 154.35   8 eP        PKPdf     05 37 02.6 -1.1
COP    Copenhagen     154.38 346 i P       PKPdf     05 37 03.8 +0.1
R9F13  Warsaw-Wawer   154.71 332 ePKPdf    PKPdf     05 37 05.8 +1.5
R9F13                            eSKS      SKSdf     05 44 12.4 +3.9
DBIC   Dimbokro       154.82 164  PKP      PKPdf     05 37 07.2 +1.5
       comp=Z,11nm,0.8s,baz=158,slow=3.0,SNR=6.0
DBIC   Dimbokro       154.82 164⇓PKIKP     PKPdf     05 37 05.7  0.0
VASR   Vaslui         154.84 315⇓P         PKPbc     05 37 13.2 -0.2
SAHE   Sakarya_HENDEK154.86 301⇓P         PKPdf     05 37 06.9 +1.9
PGBU   Glenifferbraes 154.90   9 eP        PKPdf     05 37 03.6 -0.9
PGBU                              IAMs_20  IAMs_20   06 41 49.0
       comp=Z,14µm,22.6s
EDI    Edinburgh      154.94   7 eP        PKPdf     05 37 03.6 -0.9
EDI                               IAMs_20  IAMs_20   06 47 52.3
       comp=Z,6µm,20.4s
VLDR   Vladesti       155.03 313⇑P         PKPdf     05 37 05.8 +0.8
SSRD   Sdr. Stenderup 155.08 350 i P       PKPdf     05 37 04.4 -0.3
LVV    L'vov          155.10 325  PKIKP    PKPdf     05 37 05.5 +0.5
BEL    Belsk          155.14 332 ePKP      PKPdf     05 37 04.9  0.0
BEL                              ePP       PP        05 41 01.2 -4.6
BEL                              eL        L         06 39 21.5
       comp=Z,468nm,26.3s
SCTR   Scanteiesti    155.17 313⇓P         PKPdf     05 37 13.9 +8.7
RGN    Rugen          155.25 344 ePP       PP        05 41 01.8 -4.2
       baz=21,slow=5.5
TPGR   Topolog        155.25 311⇓P         PKPdf     05 37 08.7 +3.3
GKP    Gorka Klasztor 155.29 338 ePKP      PKPdf     05 37 04.3 -0.8
GKP                              ePP       PP        05 41 00.8 -5.6
GKP                              eL        L         06 36 36.1
       comp=Z,7µm,28.5s
CFR    Carcaliu       155.30 312⇑P         PKPdf     05 37 06.9 +1.6
CFR    Carcaliu       155.30 312⇑PKIKP     PKPdf     05 37 06.9 +1.6
SCHLR  Schela         155.36 313⇑P         PKPdf     05 37 03.4 -2.0
BORA   Eskisehir      155.38 299           PKPdf     05 37 05.1 -0.7
TIRR   Tirgusor       155.42 310⇓P         PKPdf     05 37 15.4  +10
KSV    Kosov          155.50 321  PKIKP    PKPdf     05 37 06.2 +0.6
EKA    Eskdalemuir Ar 155.52   7  PKP      PKPdf     05 37 05.1 -0.2
       comp=Z,1.7nm,0.8s,baz=357,slow=1.7,SNR=3.8
ESK    Eskdalemuir    155.53   7 eP        PKPdf     05 37 04.2 -1.2
ESK                               IAMs_20  IAMs_20   06 43 16.7
       comp=Z,6µm,20.1s
TESR   Tescani        155.59 316⇑P         PKPdf     05 37 06.2 +0.4
PANC   Panciu         155.60 314⇑P         PKPdf     05 37 04.5 -1.3
NEWG   New Galloway   155.61   9 eP        PKPdf     05 37 04.2 -1.2
NEWG                              IAMs_20  IAMs_20   06 47 30.4
       comp=Z,6µm,19.9s
TLBR   Topalu         155.62 311⇑P         PKPdf     05 37 05.8  0.0
BURAR  Bucovina Array 155.82 319           PKPdf     05 37 05.0 -1.1
BURAR  Bucovina Array 155.82 319⇑P         PKPdf     05 37 07.9 +1.7
BURAR  Bucovina Array 155.82 319⇑PKIKP     PKPdf     05 37 07.9 +1.7
VRI    Vrincioaia     155.86 315⇑P         PKPab     05 37 21.9  -11
KWP    Kalwaria Pacla 155.87 326 ePKP      PKPdf     05 37 05.2 -0.9
KWP                              ePP       PP        05 41 10.2 +0.2
KWP                              eSKS      SKSdf     05 44 11.9 +2.0
KWP                              eL        L         06 46 11.4
       comp=Z,9µm,23.2s
MBO    M'Bour         155.87 129  IAMs_20  IAMs_20   07 01 18.1
       comp=Z,6µm,20.0s
PLOR   Plostina       155.91 315⇓P         PKPdf     05 37 08.0 +1.7
PLOR   Plostina       155.91 315⇓PKIKP     PKPdf     05 37 08.0 +1.7
ICOR   Ion Corvin     155.96 310⇑P         PKPdf     05 37 14.3 +8.0
AMRR   Amara          156.05 311⇑P         PKPdf     05 37 08.4 +2.0
AMRR   Amara          156.05 311⇑PKIKP     PKPdf     05 37 08.4 +2.0
ISK    Istanbul-Kandi 156.12 302  P        PKPdf     05 37 04.7 -2.0
TURR   Turia          156.20 316⇑P         PKPdf     05 37 16.6  +10
ISR    Istrita        156.33 313⇓P         PKPdf     05 36 59.6 -7.2
ISR    Istrita        156.33 313⇓PKIKP     PKPdf     05 36 59.6 -7.2
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IOMK	Kirk Michael	156.40	10	eP	PKPdf	05 37 04.5	-2.1
IOMK				IAMs_20	IAMs_20	06 47 45.5	
	comp=Z,3µm,20.0s						
BSEG	Bad Segeberg	156.44	348	PKIKP	PKPdf	05 37 06.0	-0.6
BSEG	Bad Segeberg	156.44	348	ePP	PP	05 41 08.8	-3.8
	baz=21,slow=5.5						
MLR	Muntele Rosu	156.52	314	⇓P	PKPdf	05 37 05.0	-2.2
MLR	Muntele Rosu	156.52	314	⇓PKIKP	PKPdf	05 37 05.0	-2.2
KOLS	Kolonicke sedl	156.55	325	ePKIKP	PKPdf	05 37 06.5	-0.5
KOLS				e		05 37 19.3	
KOLS	Kolonicke sedl	156.55	325	ePKP	PKPdf	05 37 06.5	-0.5
KOLS				e		05 37 19.3	
HLG	Helgoland	156.58	351	ePP	PP	05 41 09.6	-3.8
	baz=21,slow=5.5						
PRD	Provadia	156.60	308	P	PKPdf	05 37 07.0	-0.2
ARCR	ARCALIA	156.61	319	⇑P	PKPdf	05 37 07.8	+0.8
DOPR	Dopca	156.62	316	⇓P	PKPdf	05 37 08.0	+0.8
GDLE	Glaisdale, N Y	156.63	4	eP	PKPdf	05 37 07.0	+0.1
GDLE				IAMs_20	IAMs_20	06 54 21.8	
	comp=Z,7µm,21.0s						
STHS	Stebnicka Huta	156.71	327	ePKP	PKPdf	05 37 07.8	+0.6
STHS				e		05 37 19.3	
STHS				e		05 37 36.9	
SULR		156.72	312	⇓P	PKPab	05 37 36.8	+0.1
BMR	Baia Mare	156.73	321	⇓P	PKPdf	05 37 07.6	+0.4
BMR	Baia Mare	156.73	321	⇓PKIKP	PKPdf	05 37 07.6	+0.4
OJC	Ojcow	156.77	330	ePKP	PKPdf	05 37 05.6	-1.6
OJC				ePP	PP	05 41 04.2	-11
OJC				eSS	SS	06 01 13.8	+8.9
OJC				eL	L	06 40 34.5	
	comp=Z,7µm,28.6s						
OJC	Ojcow	156.77	330	PKIKP	PKPdf	05 37 07.0	-0.2
RUE	Ruedersdorf	157.01	341	ePP	PP	05 41 11.1	-4.8
	baz=21,slow=5.5						
KULA	Kula-Manisa	157.01	296	P	PKPdf	05 37 06.8	-1.2
BAND	Balkesir-Ban	157.02	301	⇓P	PKPdf	05 37 07.2	-0.6
HPK	Haverah Park	157.03	6	eP	PKPdf	05 37 06.5	-0.9
HPK				IAMs_20	IAMs_20	06 44 06.6	
	comp=Z,6µm,20.6s						
DSB	Dublin	157.06	13	PKP	PKPdf	05 37 07.9	+0.4
DSB	Dublin	157.06	13	IAMs_20	IAMs_20	06 47 04.4	
	comp=Z,5µm,20.0s						
VOIR		157.09	315	⇓P	PKPdf	05 37 08.6	+0.7
VOIR		157.09	315	⇓PKIKP	PKPdf	05 37 08.6	+0.7
GORT1	Trebel	157.14	346	ePP	PP	05 41 12.3	-4.2
	baz=21,slow=5.5						
NIE	Niedzica	157.14	328	ePKP	PKPdf	05 37 07.1	-0.7
NIE				ePP	PP	05 40 56.1	-21
NIE				eSS	SS	06 01 10.7	+1.6
NIE				eL	L	06 47 11.0	
	comp=Z,4µm,23.2s						
NIE	Niedzica	157.14	328	PKIKP	PKPdf	05 37 07.9	+0.2
WPS	Cemaes, Angles	157.24	10	eP	PKPdf	05 37 06.2	-1.4
WPS				IAMs_20	IAMs_20	06 44 21.6	
	comp=Z,5µm,20.9s						
VAL	Valentia	157.32	20	PKP	PKPdf	05 37 08.5	+0.7
WLF1	Llynfaes	157.36	10	eP	PKPdf	05 37 06.0	-1.8
WLF1				IAMs_20	IAMs_20	06 54 49.2	
	comp=Z,11µm,19.7s						
ARR	Arges	157.38	315	⇑P	PKPdf	05 37 07.3	-1.0
TNR	Turnu Rosu	157.45	316	⇓P	PKPdf	05 37 09.7	+1.5
TNR	Turnu Rosu	157.45	316	⇓PKIKP	PKPdf	05 37 09.7	+1.5
JMB	Yambol	157.45	307	P	PKPdf	05 37 08.0	-0.3
JMB	Yambol	157.45	307	P	PKPdf	05 37 07.0	-1.3
EDRB	Edirne	157.53	305	P	PKPdf	05 37 06.8	-1.6
MARR	Marisel-Cluj	157.53	320	⇑P	PKPdf	05 37 06.9	-1.5
LBWR	Ladybower, Pea	157.57	6	eP	PKPdf	05 37 07.0	-1.1
LBWR				IAMs_20	IAMs_20	06 48 38.2	
	comp=Z,6µm,19.8s						
HUMR	Humele	157.59	313	⇑P	PKPdf	05 37 10.6	+2.2
COPA	Copaceanca	157.63	312	⇓P	PKPdf	05 37 10.4	+1.9
KSP	Ksiaz	157.64	336	ePKP	PKPdf	05 37 07.4	-0.9
KSP				ePP	PP	05 41 00.8	-19
KSP				ePPP	PPP	05 44 53.2	
KSP				eSS	SS	06 01 12.8	-1.1
KSP				eL	L	06 39 45.7	
	comp=Z,5µm,27.0s						
KSP	Ksiaz	157.64	336	PKIKP	PKPdf	05 37 07.7	-0.6
DRGR		157.69	320	⇑P	PKPdf	05 37 08.1	-0.5
DRGR		157.69	320	⇑PKIKP	PKPdf	05 37 08.1	-0.5
LANS	Liptovska Anna	157.71	329	ePKIKP	PKPdf	05 37 09.3	+0.8
LANS	Liptovska Anna	157.71	329	ePKP	PKPdf	05 37 09.3	+0.8
OKC	Ostrava-Krasne	157.75	332	AMS	AMS	06 57 50.0	
	comp=Z,5µm,18.7s						
ARG	Arkhangelos	157.76	290	P	PKPdf	05 37 08.0	-0.9
RETH	Rethem/Aller,	157.76	348	ePKPdf	PKPdf	05 37 07.2	-1.1
	baz=22,slow=1.1						
RETH				ePKPab	PKPab	05 37 40.3	-0.6
	baz=14,slow=4.4						
RETH				ePP	PP	05 41 15.8	-4.0
	baz=21,slow=5.5						
FLTG	Flechtingen	157.77	345	ePKPdf	PKPdf	05 37 07.6	-0.8
	baz=22,slow=1.1						
FLTG				ePP	PP	05 41 15.4	-4.7
	baz=21,slow=5.5						
STEB	Steborice	157.83	332	ePKPDF	PKPdf	05 37 10.1	+1.6
STEB				ePKPAB	PKPab	05 37 44.2	+2.8
STNC	Stoke	157.83	7	eP	PKPdf	05 37 07.0	-1.4
STNC				IAMs_20	IAMs_20	06 48 14.0	
	comp=Z,7µm,19.7s						
NRDL	Niedersach Rie	157.85	347	ePKPdf	PKPdf	05 37 08.5	+0.2
	baz=22,slow=1.1						
NRDL				ePP	PP	05 41 16.3	-4.1
	baz=21,slow=5.5						
OSTC	Ostas	157.91	336	ePKPDF	PKPdf	05 37 10.9	+2.3
OSTC				AMS	AMS	06 47 30.0	
	comp=Z,9µm,22.5s						
OSTC	Ostas	157.91	336	ePKIKP	PKPdf	05 37 10.9	+2.3
OSTC				MLR	MLR		
	comp=Z,9µm,22.5s						
CHVC	Chvalec	157.94	336	ePKPAB	PKPab	05 37 41.3	-0.5
CHVC				AMS	AMS	06 48 40.0	
	comp=Z,7µm,22.0s						
CHVC	Chvalec	157.94	336	ePKP2	PKPab	05 37 41.3	-0.5
CHVC				MLR	MLR		
	comp=Z,7µm,22.0s						
BORR	Bors	158.00	322	⇑P	PKPdf	05 37 07.8	-1.0
UPC	Upice	158.02	336	AMS	AMS	06 47 50.0	
	comp=Z,8µm,22.3s						
DPC	Dobruska-Polom	158.04	335	ePKPAB	PKPab	05 37 44.1	+1.8
DPC				AMS	AMS	06 47 50.0	
	comp=Z,9µm,21.8s						
DPC	Dobruska-Polom	158.04	335	ePKP2	PKPab	05 37 44.1	+1.8
DPC				MLR	MLR		
	comp=Z,9µm,21.8s						
MORC	Moravsky Berou	158.04	332	ePKP	PKPdf	05 37 07.8	-1.1
MORC	Moravsky Berou	158.04	332	⇓P	PKPdf	05 37 08.7	-0.2
MORC	Moravsky Berou	158.04	332	⇓PKIKP	PKPdf	05 37 08.7	-0.2
ASSE	Asse, Remlinge	158.08	346	ePKPdf	PKPdf	05 37 09.5	+0.8
	baz=22,slow=1.1						
ASSE				ePP	PP	05 41 17.4	-4.2
	baz=21,slow=5.5						
KRLC	Kraliky	158.10	334	ePKPAB	PKPab	05 37 46.1	+3.5
KRLC				AMS	AMS	06 48 00.0	
	comp=Z,8µm,22.2s						
KRLC	Kraliky	158.10	334	PKIKP	PKPdf	05 37 09.1	+0.2
MAUC	Maruska	158.25	331	ePKPDF	PKPdf	05 37 11.1	+2.0
CLL	Collm	158.27	341	IAMs_20	IAMs_20	07 00 49.0	
	comp=Z,5µm,20.0s						
CLL	Collm	158.27	341	i PKIKP	PKPdf	05 37 08.7	-0.3
CLL				i		05 37 22.9	
CLL				i		05 37 41.7	
CLL				e		05 41 21.0	
CLL				pmax	pmax		
	comp=Z,190nm,2.2s						
CLL				pmax	pmax		
	comp=Z,120nm,1.5s						
CLL				MLR	MLR		
	comp=Z,5µm,19.7s						
CLL	Collm	158.27	341	ePKPdf	PKPdf	05 37 10.2	+1.2
	baz=22,slow=1.1						
CLL				ePP	PP	05 41 17.9	-4.9
	baz=21,slow=5.5						
CLL	Collm	158.27	341	i PKPdf	PKPdf	05 37 08.7	-0.3
	comp=Z,190nm,2.2s						
CLL				i PKPdif	sPKPdf	05 37 22.9	+2.0
	comp=Z,52nm,1.4s						
CLL				i x	x	05 37 25.9	
CLL				i x	x	05 37 41.7	
CLL				i PKPab	PKPab	05 37 44.4	+1.2
	comp=Z,120nm,1.5s						
CLL				e(sPKPab)		05 37 54.0	
CLL				ePP	PP	05 41 21.0	-1.9
CLL				ePPP	PPP	05 44 57.0	
CLL				ePPPP		05 47 28.0	
CLL				ePPPrev		05 50 06.0	
CLL				ePSKS		05 51 44.0	
CLL				ePPS	PPS	05 54 37.0	
CLL				ex	x	05 56 24.0	
CLL				ex	x	05 57 32.0	
CLL				eSS	SS	06 01 14.0	-6.4
CLL				eSSS	SSS	06 07 12.0	
CLL				ex	x	06 09 48.0	
CLL				ex	x	06 11 18.0	
CLL				AMS	AMS	06 50 00.0	
CLL				AMS	AMS	07 00 00.0	
	comp=Z,5µm,19.7s						
BLCB	Balcova	158.28	296	P	PKPdf	05 37 07.8	-1.7
BODT	Bodrum	158.30	293	P	PKPdf	05 37 08.1	-1.5
HLM1	Long Mynd	158.32	8	eP	PKPdf	05 37 08.1	-1.0
HLM1				IAMs_20	IAMs_20	06 41 42.9	
	comp=Z,6µm,24.7s						
ALN	Alexandroupoli	158.35	303	P	PKPdf	05 37 07.1	-2.3
BRG	Berggiesshubel	158.39	339	PKIKP	PKPdf	05 37 08.3	-0.9
BRG	Berggiesshubel	158.39	339	ePKPdf	PKPdf	05 37 08.9	-0.3
	baz=22,slow=1.1						
BRG				ePP	PP	05 41 18.8	-4.7
	baz=21,slow=5.5						
BRG	Berggiesshubel	158.39	339	PP	PP	05 41 24.0	+0.5
BRG	Berggiesshubel	158.39	339	⇓ePKPf	PKPdf	05 37 08.2	-1.0
BRG	Berggiesshubel	158.39	339	Amp		05 37 12.6	
	comp=Z,142nm,1.8s						
PSZ	Piszkesteto	158.40	326		PKPdf	05 37 08.2	-1.2
PSZ				PKPab	PKPab	05 37 44.2	+0.2
PSZ	Piszkesteto	158.40	326	⇓P	PKPdf	05 37 08.5	-0.9
PSZ	Piszkesteto	158.40	326	PKIKP	PKPdf	05 37 08.2	-1.2
PSZ						05 37 44.2	
IBBN	Ibbenburen	158.43	350	ePKPab	PKPab	05 37 41.4	-2.4
	baz=14,slow=4.4						
IBBN				ePP	PP	05 41 19.2	-4.4
	baz=21,slow=5.5						
GZR	Gura Zlata	158.47	317	⇑P	PKPdf	05 37 09.2	-0.4
GZR	Gura Zlata	158.47	317	⇑PKIKP	PKPdf	05 37 09.2	-0.4
EZN	Ezine	158.47	300	P	PKPdf	05 37 07.9	-1.8
EZN	Ezine	158.47	300	⇑P	PKPdf	05 37 08.8	-0.8
EZN	Ezine	158.47	300	⇑PKIKP	PKPdf	05 37 08.8	-0.8
VYHS	Vyhne	158.48	328	ePKP	PKPdf	05 37 08.7	-0.7
VYHS				e		05 37 44.6	
PVCC	Panska Ves	158.49	338	AMS	AMS	06 46 40.0	
	comp=Z,8µm,22.3s						
PVCC	Panska Ves	158.49	338	PKIKP	PKPdf	05 37 09.6	+0.3
KDZ	Kurdzhali	158.59	306	P	PKPdf	05 37 08.1	-1.7
KARP	Karpathos	158.60	289	P	PKPdf	05 37 09.4	-0.6
RSBS	Rosebush, Pemb	158.60	12	eP	PKPdf	05 37 07.8	-1.6
RICC	Richard	158.63	339	ePKPAB	PKPab	05 37 45.9	+1.1
RDO	Rodhopi	158.63	304	P	PKPdf	05 37 07.8	-2.0
SURR	Surduc	158.64	319	⇑P	PKPdf	05 37 09.4	-0.2
NEUB	Neuenburg	158.69	343	ePP	PP	05 41 20.3	-4.8
	baz=21,slow=5.5						
JAVC	Velka Javorina	158.71	331	ePKP	PKPdf	05 37 09.8	+0.1
GTTG	Gottingen	158.78	346	ePKPab	PKPab	05 37 44.5	-0.9
	baz=14,slow=4.4						
GTTG				ePP	PP	05 41 21.4	-4.2
	baz=21,slow=5.5						
VRAC	Vranov	158.79	333	ePKP	PKPdf	05 37 08.1	-1.6
VRAC	Vranov	158.79	333	⇑P	PKPab	05 37 43.2	-2.4
VRAC	Vranov	158.79	333	⇑PKP2	PKPab	05 37 43.2	-2.4
PLD	Plovdiv	158.80	308	P	PKPdf	05 37 07.7	-2.3
MCH1	Michaelchurch	158.82	9	eP	PKPdf	05 37 08.3	-1.4
MCH1				IAMs_20	IAMs_20	06 42 47.3	
	comp=Z,7µm,23.5s						
PRA	Prague	158.93	337	AMS	AMS	06 53 00.0	
	comp=Z,8µm,20.8s						
MPEP	Malo Peshtene	158.94	311	P	PKPdf	05 37 10.0	-0.1
GOPC	GO Pecny, Ondr	158.95	337	AMS	AMS	06 51 40.0	
	comp=Z,8µm,21.0s						
PRU	Pruhonice	158.97	337	AMS	AMS	06 53 00.0	
	comp=Z,8µm,21.0s						
PRU	Pruhonice	158.97	337	PKIKP	PKPdf	05 37 09.7	-0.2
PUNG	Punghina	158.98	314	⇑P	PKPdf	05 37 08.4	-1.7
RZN	Rozhen	158.99	306	P	PKPdf	05 37 09.0	-1.4
RZN	Rozhen	158.99	306	P	PKPdf	05 37 08.3	-2.2
SIGR	SIGRI	158.99	299	P	PKPdf	05 37 08.2	-2.1
MONM	Monmouth	159.00	8	eP	PKPdf	05 37 08.8	-1.1
MONM				IAMs_20	IAMs_20	06 50 35.3	
	comp=Z,5µm,20.6s						
BZS	Buzias	159.00	319	⇑P	PKPdf	05 37 09.1	-1.0
BZS	Buzias	159.00	319	⇑PKIKP	PKPdf	05 37 09.1	-1.0
PGB	Panagyurishte	159.03	309	P	PKPdf	05 37 08.0	-2.3
CHOS	Chios island	159.04	297	P	PKPdf	05 37 09.6	-0.9
ELMS	Elmsett, Ipswi	159.04	2	eP	PKPdf	05 37 09.3	-0.6
ELMS				IAMs_20	IAMs_20	06 44 45.6	
	comp=Z,6µm,23.2s						
KRUC	Moravsky	159.06	333	ePKP	PKPdf	05 37 08.4	-1.6
KRUC	Moravsky	159.06	333	PKIKP	PKPdf	05 37 08.9	-1.1
BUD	Budapest	159.12	326	PKIKP	PKPdf	05 37 09.9	-0.2
OLDB	Oldbury-Upon-S	159.21	8	eP	PKPdf	05 37 08.2	-1.8
OLDB				IAMs_20	IAMs_20	06 54 15.9	
	comp=Z,6µm,18.3s						
SRO	Srobarova	159.22	328	ePKP	PKPdf	05 37 11.0	+0.8
SRO				e		05 37 47.8	
TREC	Trest	159.22	335	AMS	AMS	06 49 00.0	
	comp=Z,11µm,22.0s						
TREC	Trest	159.22	335	PKIKP	PKPdf	05 37 09.4	-0.9
TANN	Tannenbergstha	159.23	341	ePKPdf	PKPdf	05 37 10.8	+0.5
	baz=22,slow=1.1						
TANN				ePP	PP	05 41 23.5	-4.7
	baz=21,slow=5.5						
MOX	Moxa	159.24	343	PKIKP	PKPdf	05 37 09.5	-0.7
MOX	Moxa	159.24	343	ePKPdf	PKPdf	05 37 10.9	+0.6
	baz=22,slow=1.1						
MOX				ePKPab	PKPab	05 37 46.1	-1.4
	baz=14,slow=4.4						
MOX				ePP	PP	05 41 23.5	-4.6
	baz=21,slow=5.5						
MOX				eL	L	06 51 25.2	
	comp=Z,9µm,21.9s						
MODS	Modra-Piesok	159.25	330	ePKP	PKPdf	05 37 10.2	-0.1
MODS				e		05 37 47.8	
LIA	Limnos Island	159.29	301	P	PKPdf	05 37 08.4	-2.2
BUG	Bochum--Univer	159.34	351	PKIKP	PKPdf	05 37 10.1	-0.1
BUG	Bochum--Univer	159.34	351	ePP	PP	05 41 24.5	-4.0
	baz=21,slow=5.5						
THAS	Thassos island	159.40	304	P	PKPdf	05 37 08.6	-2.1
KASTN	Kahler Asten	159.40	349	ePKPdf	PKPdf	05 37 10.9	+0.5
	baz=22,slow=1.1						
KASTN				ePP	PP	05 41 24.9	-4.0
	baz=21,slow=5.5						
KAVA	Kavala	159.40	305	P	PKPdf	05 37 08.8	-1.9
BANR	Banloc	159.41	319	⇓P	PKPdf	05 37 09.5	-1.0
SWN1	Swindon	159.43	7	eP	PKPdf	05 37 10.8	+0.4
SWN1				IAMs_20	IAMs_20	06 43 12.8	
	comp=Z,8µm,23.3s						
MDVR	Moldovita	159.44	317	⇑P	PKPdf	05 36 59.9	-11
UBBA	Unterbreizbach	159.46	346	ePP	PP	05 41 24.6	-4.6
	baz=21,slow=5.5						
ZVC	Zvikov	159.55	337	ePKPDF	PKPdf	05 37 11.6	+1.0
ZVC				ePKPAB	PKPab	05 37 49.1	+0.3
ZVC				AMS	AMS	06 52 30.0	
	comp=Z,8µm,20.6s						
HTL	Hartland	159.56	12	eP	PKPdf	05 37 09.8	-0.7
HTL				IAMs_20	IAMs_20	06 48 29.7	
	comp=Z,7µm,20.6s						
VTS	Vitosha	159.61	310	P	PKPdf	05 37 09.0	-2.1
VTS	Vitosha	159.61	310	P	PKPdf	05 37 09.6	-1.5
APE	Apeiranthos	159.71	293	P	PKPdf	05 37 09.4	-1.8
MANZ	Manzenberg	159.71	341	ePP	PP	05 41 26.4	-4.4
	baz=21,slow=5.5						
MMB	Musomishta	159.72	307	P	PKPdf	05 37 08.5	-2.6
MMB	Musomishta	159.72	307	P	PKPdf	05 37 08.4	-2.7
ROTZ	Rotzenmuhle	159.88	341	ePKPdf	PKPdf	05 37 10.4	-0.5
	baz=22,slow=1.1						
ROTZ				ePP	PP	05 41 27.4	-4.2
	baz=21,slow=5.5						
SRS	Serrai	160.00	306	P	PKPdf	05 37 08.6	-2.8
SRS	Serrai	160.00	306	PKIKP	PKPdf	05 37 11.1	-0.3
OUR	Ouranopolis	160.02	303	P	PKPdf	05 37 09.4	-2.0
KHC	Kasperske Hory	160.02	337	ePKPDF	PKPdf	05 37 11.3	+0.1
KHC				ePKPAB	PKPab	05 37 50.4	-0.5
KHC				AMS	AMS	06 49 10.0	
	comp=Z,10µm,22.5s						
KHC	Kasperske Hory	160.02	337	ePKIKP	PKPdf	05 37 11.3	+0.1
KHC				e		05 37 50.4	
KHC				MLR	MLR		
	comp=Z,10µm,22.5s						
KKB	Krupnik	160.02	308	P	PKPdf	05 37 10.0	-1.4
KKB	Krupnik	160.02	308	P	PKPdf	05 37 09.4	-2.0
CKRC	Cesky Krumlov	160.04	336	ePKPDF	PKPdf	05 37 09.8	-1.4
CKRC				ePKPAB	PKPab	05 37 52.2	+1.2
CKRC				AMS	AMS	06 49 30.0	
	comp=Z,9µm,21.7s						
CKRC	Cesky Krumlov	160.04	336	ePKIKP	PKPdf	05 37 09.8	-1.4
CKRC				MLR	MLR		
	comp=Z,9µm,21.7s						
BOVS	Bovan	160.07	314	⇑P	PKPdf	05 37 10.8	-0.6
BEBN	Eben Emael	160.17	353	dPKP	PKPab	05 37 50.9	-0.5
CONA	Conrad Observa	160.19	332	i PKP	PKPdf	05 37 10.9	-0.6
	comp=Z,29nm,1.9s,SNR=16						
RONA	Rosalia, Austr	160.19	331	i PKP	PKPdf	05 37 10.8	-0.6
	comp=Z,30nm,1.7s,SNR=8.1						
CCA1	Carnmenellis	160.19	14	eP	PKPdf	05 37 10.7	-0.6
CCA1				IAMs_20	IAMs_20	06 43 01.3	
	comp=Z,9µm,22.4s						
DYA	Yadsworthy	160.20	11	eP	PKPdf	05 37 10.7	-0.6
DYA				IAMs_20	IAMs_20	06 44 32.3	
	comp=Z,7µm,22.5s						
MORH	Mrgy, Hungar	160.20	324	⇑P	PKPdf	05 37 10.3	-1.1
GRF	Grafenberg Arr	160.22	342	PKIKP	PKPdf	05 37 10.4	-1.0
GRF	Grafenberg Arr	160.22	342	ePP	PP	05 41 29.1	-4.4
	baz=21,slow=5.5						
GRF				eL	L	06 51 43.7	
	comp=Z,7µm,21.8s						
GRFO	Grafenberg	160.22	342		PKPdf	05 37 10.5	-0.9
GRFO					PKPab	05 37 50.6	-1.1
GRFO	Grafenberg	160.22	342	PKIKP	PKPdf	05 37 10.5	-0.9
GRFO						05 37 50.6	
GEC2	GERESS Array S	160.23	337	PKIKP	PKPdf	05 37 10.1	-1.4
GEC2	GERESS Array S	160.23	337	ePKPdf	PKPdf	05 37 10.7	-0.8
	baz=22,slow=1.1						
GEC2				ePP	PP	05 41 29.7	-4.1
	baz=21,slow=5.5						
GERES	GERESS Array B	160.23	337	PKP	PKPdf	05 37 09.5	-2.0
	comp=Z,0.2nm,0.4s,baz=54,slow=1.7,SNR=9.5						
WET	Wettzell	160.24	339	PKIKP	PKPdf	05 37 11.3	-0.1
WET	Wettzell	160.24	339	ePKPdf	PKPdf	05 37 10.9	-0.6
	baz=22,slow=1.1						
WET				ePP	PP	05 41 29.6	-4.1
	baz=21,slow=5.5						
UCC	Uccle	160.28	356	PKPdf	PKPdf	05 37 11.0	-0.3
UCC					PKPab	05 37 51.7	-0.2
UCC	Uccle	160.28	356	PKIKP	PKPdf	05 37 11.0	-0.3
UCC						05 37 51.7	
UCC	Uccle	160.28	356	dPKPdf	PKPdf	05 37 11.1	-0.2
UCC				dPKP	PKPab	05 37 51.2	-0.6
MEM	Membach	160.32	353	PKIKP	PKPdf	05 37 11.5	+0.1
MEM	Membach	160.32	353	dPKPdf	PKPdf	05 37 10.9	-0.5
MEM				dPKP	PKPab	05 37 51.2	-0.9
BTNL	Ternell	160.33	352	dPKPdf	PKPdf	05 37 11.8	+0.3
BTNL				dPKP	PKPab	05 37 51.2	-1.0
TNS	Taunus Mts	160.34	348	PKIKP	PKPdf	05 37 12.2	+0.7
TNS	Taunus Mts	160.34	348	ePKPdf	PKPdf	05 37 11.5	-0.1
	baz=22,slow=1.1						
TNS				ePP	PP	05 41 29.6	-4.4
	baz=21,slow=5.5						
KARY	Karystos	160.36	297	P	PKPdf	05 37 10.0	-1.9
PAIG	Paliouri	160.38	302	P	PKPdf	05 37 09.4	-2.4
PLG	Polygyros	160.39	304	P	PKPdf	05 37 09.6	-2.3
BSTI	Sart Tilman	160.39	353	dPKPdf	PKPdf	05 37 12.0	+0.5
BSTI				dPKP	PKPab	05 37 51.5	-0.9
KYMI	Kymi, Euboea I	160.46	299	P	PKPdf	05 37 10.0	-2.0
KNT	Kendrikon	160.47	307	P	PKPdf	05 37 09.3	-2.6
KNT	Kendrikon	160.47	307	PKIKP	PKPdf	05 37 10.6	-1.3
IDI	Anoyia	160.47	288	PKP	PKPdf	05 37 11.7	-0.5
IDI	Anoyia	160.47	288	P	PKPdf	05 37 10.8	-1.3
AOS	Alonnisos	160.47	300	P	PKPdf	05 37 09.2	-2.8
HORT	Hortiatis	160.55	305	P	PKPdf	05 37 09.4	-2.7
BCLA	Clavier	160.58	354	dPKPdf	PKPdf	05 37 12.0	+0.3
BCLA				dPKP	PKPab	05 37 52.0	-1.2
VAY	Valandovo	160.62	307	i P	PKPdf	05 37 12.1	0.0
THE	Thessaloniki	160.63	305	P	PKPdf	05 37 08.4	-3.7
THE	Thessaloniki	160.63	305	PKIKP	PKPdf	05 37 10.8	-1.3
BGES	Gesves	160.63	354	dPKPdf	PKPdf	05 37 12.2	+0.4
BGES				dPKP	PKPab	05 37 52.3	-1.1
BMRD	Maredsous	160.74	355	dPKPdf	PKPdf	05 37 11.3	-0.6
BMRD				dPKP	PKPab	05 37 53.1	-0.8
PTL	Penteli	160.79	297	P	PKPdf	05 37 10.2	-2.2
ARSA	Arzberg	160.86	331	i PKP	PKPdf	05 37 11.1	-1.1
	comp=Z,28nm,1.9s,SNR=16						
MOA	Molln	160.87	334	i PKP	PKPdf	05 37 11.7	-0.5
	comp=Z,14nm,2.0s,SNR=7.1						
ATHU	Athens Univers	160.88	297	P	PKPdf	05 37 10.0	-2.4
NEO	Neokhori	160.91	301	P	PKPdf	05 37 10.3	-2.2
ATH	Athens Observa	160.93	297	P	PKPdf	05 37 09.9	-2.6
DOU	Dourbes	160.96	355	dPKPdf	PKPdf	05 37 11.6	-0.5
DOU				dPKP	PKPab	05 37 56.2	+1.3
SKO	Skopje	161.09	310	i P	PKPdf	05 37 11.8	-0.7
CHAN	Chania	161.13	289	P	PKPdf	05 37 12.2	-0.6
GVD	Gavdhos	161.17	287	P	PKPdf	05 37 11.6	-1.3
VILL	Villia	161.19	298	P	PKPdf	05 37 10.2	-2.6
IMMV	Iera Moni Meta	161.19	289	P	PKPdf	05 37 12.1	-0.8
WLF	Walferdange	161.23	352	PKP	PKPdf	05 37 12.4	0.0
WLF	Walferdange	161.23	352	dPKPdf	PKPdf	05 37 12.2	-0.2
WLF				dPKP	PKPab	05 37 55.3	-0.8
WLF	Walferdange	161.23	352	ePKPab	PKPab	05 37 54.0	-2.1
	baz=14,slow=4.4						
WLF				ePP	PP	05 41 35.1	-3.6
	baz=21,slow=5.5						
BIOA	Bad Ischl, Aus	161.24	335	i PKP	PKPdf	05 37 12.6	0.0
	comp=Z,26nm,1.7s,SNR=7.8						
LKR	Lokris	161.28	299	P	PKPdf	05 37 10.1	-2.7
LTK	Loutraki	161.49	297	P	PKPdf	05 37 10.9	-2.2
RJOB	Jochberg	161.49	337	ePP	PP	05 41 37.5	-3.0
	baz=21,slow=5.5						
TYRN	Tyrnavos	161.50	303	P	PKPdf	05 37 10.7	-2.3
AXAR	Agios Charalam	161.50	300	P	PKPdf	05 37 11.5	-1.7
SOKA	Soboth	161.52	331	i PKP	PKPdf	05 37 11.8	-1.2
	comp=Z,23nm,2.0s,SNR=22						
STU	Stuttgart	161.57	345	PKIKP	PKPdf	05 37 12.7	-0.1
STU	Stuttgart	161.57	345	ePP	PP	05 41 35.9	-4.8
	baz=21,slow=5.5						
FUR	Furstenfeldbru	161.59	340	PKIKP	PKPdf	05 37 12.4	-0.5
FUR	Furstenfeldbru	161.59	340	ePP	PP	05 41 36.7	-4.2
	baz=21,slow=5.5						
KZN	Kozani	161.60	305	P	PKPdf	05 37 10.9	-2.3
AGG	Agios Georgios	161.66	301	P	PKPdf	05 37 11.8	-1.5
ANKY	Antikythira Is	161.68	291	P	PKPdf	05 37 11.7	-1.7
JSA	Saint Aubin	161.68	9	eP	PKPdf	05 37 11.5	-1.4
JSA				IAMs_20	IAMs_20	06 41 59.3	
	comp=Z,9µm,25.0s						
THL	Klokotos Trika	161.71	303	P	PKPdf	05 37 11.4	-1.9
LESA	Schwarzleotal	161.80	336	i PKP	PKPdf	05 37 12.3	-1.0
	comp=Z,26nm,1.7s,SNR=18						
KTHA	Kythira Island	161.81	292	P	PKPdf	05 37 12.1	-1.4
MAKR	Makrakomi, Fth	161.81	301	P	PKPdf	05 37 12.4	-1.1
VLI	Veliai	161.82	293	P	PKPdf	05 37 11.6	-1.9
OBKA	Obir	161.86	331	i PKP	PKPdf	05 37 12.6	-0.7
	comp=Z,8.7nm,1.2s,SNR=6.1						
OHR	Ohrid	161.92	309	P	PKPdf	05 37 12.5	-1.0
OHR	Ohrid	161.92	309	i P	PKPdf	05 37 13.3	-0.2
GUR	Goura	161.98	298	P	PKPdf	05 37 11.8	-2.0
KALE	Kalithea	162.00	299	P	PKPdf	05 37 12.5	-1.2
KPRO	Kipourio	162.02	305	P	PKPdf	05 37 12.1	-1.6
PUK	Puka	162.05	312	P	PKPdf	05 37 12.0	-1.7
NEST	Nestorio	162.05	306	P	PKPdf	05 37 13.0	-0.7
SERG	Sergoula	162.06	299	P	PKPdf	05 37 12.5	-1.2
EVR	Evrytania	162.08	301	P	PKPdf	05 37 13.3	-0.5
PENT	Pentalofos	162.08	306	P	PKPdf	05 37 12.2	-1.6
KLV	Kalavryta, Ach	162.10	298	P	PKPdf	05 37 12.5	-1.3
TORD	Torodi Ar. Bea	162.10	179		PKPdf	05 37 13.8	-0.5
TORD				PKPab	PKPab	05 38 02.0	+1.3
TORD	Torodi Ar. Bea	162.10	179	PKP	PKPdf	05 37 15.0	+0.6
	comp=Z,11nm,0.7s,baz=11,slow=1.5,SNR=5.6						
VLX	Vlachokerasia	162.10	296	P	PKPdf	05 37 12.4	-1.5
ANX	Ano Chora	162.10	300	P	PKPdf	05 37 12.8	-1.0
MYKA	Terra Mystica	162.12	333	ePKP	PKPdf	05 37 13.0	-0.5
	comp=Z,25nm,1.6s,SNR=8.9						
KBN	Korca	162.14	307	P	PKPdf	05 37 12.7	-1.1
EFP	Efpalio	162.17	299	P	PKPdf	05 37 12.6	-1.2
BFO	Black Forest	162.17	346		PKPdf	05 37 15.3	+1.8
BFO	Black Forest	162.17	346	PKIKP	PKPdf	05 37 15.3	+1.8
BFO	Black Forest	162.17	346	ePKPab	PKPab	05 37 59.6	-0.7
	baz=14,slow=4.4						
BFO				ePP	PP	05 41 38.9	-4.9
	baz=21,slow=5.5						
PDG	Podgorica	162.24	314	⇓P	PKPdf	05 37 13.0	-0.7
LJU	Ljubljana	162.24	330	ePKPdf	PKPdf	05 37 12.5	-1.1
LJU				ePKPab	PKPab	05 38 00.8	+0.1
LJU				ePP	PP	05 41 40.9	-3.7
WATA	Walderalm	162.24	338	i PKP	PKPdf	05 37 12.7	-1.0
	comp=Z,28nm,1.8s,SNR=8.8						

WTTA	Wattenberg	162.29	338	PKIKP	PKPdf	05 37 13.3	-0.6
WTTA	Wattenberg	162.29	338	*i* PKP	PKPdf	05 37 14.0	+0.1
	comp=Z,34nm,1.5s,SNR=12						
CRNS	Crni Vrh	162.32	331	*e*PKPdf	PKPdf	05 37 12.4	-1.4
CRNS				*e*PP	PP	05 41 40.7	-4.4
BOJS	Bojanci	162.34	328	*e*PKPdf	PKPdf	05 37 12.7	-1.0
RETA	Reutte	162.35	340	*e*PKP	PKPdf	05 37 14.0	+0.2
	comp=Z,17nm,1.5s,SNR=11						
UBR	Ueberruh	162.36	342	*e*PKPdf	PKPdf	05 37 13.0	-0.7
	baz=22,slow=1.1						
UBR				*e*PP	PP	05 41 40.6	-4.4
	baz=21,slow=5.5						
MOTA	Moosalm	162.38	339	*i* PKP	PKPdf	05 37 12.2	-1.7
	comp=Z,25nm,1.6s,SNR=7.8						
PVO	Paravola	162.39	300	P	PKPdf	05 37 13.7	-0.3
TIR	Tirane	162.42	310	PKIKP	PKPdf	05 37 13.7	-0.2
ABTA	Abfaltersbach	162.44	336	*e*PKP	PKPdf	05 37 13.1	-0.8
	comp=Z,20nm,1.4s,SNR=15						
DRO	Drossia	162.46	298	P	PKPdf	05 37 13.5	-0.6
SQTA	Sankt Quirin	162.46	339	*e*PKP	PKPdf	05 37 13.3	-0.6
	comp=Z,24nm,1.5s,SNR=6.9						
ECH	Echery	162.50	349	PKIKP	PKPdf	05 37 12.0	-1.8
ITM	Ithomi	162.50	296	P	PKPdf	05 37 12.5	-1.7
JAN	Janina	162.50	304	P	PKPdf	05 37 12.6	-1.5
AMPL	Ampelaki	162.52	302	P	PKPdf	05 37 12.7	-1.4
VOJS	Vojsko	162.52	332	*e*PKPdf	PKPdf	05 37 12.6	-1.4
VOJS				*e*PP	PP	05 41 41.5	-4.6
RLS	Riolos of Patr	162.61	299	P	PKPdf	05 37 13.5	-0.7
AXS	Araxos	162.64	299	P	PKPdf	05 37 13.1	-1.1
SLE	Schleitheim	162.67	345	PKIKP	PKPdf	05 37 12.8	-1.2
PYL	PYLOS	162.71	295	P	PKPdf	05 37 12.0	-2.4
DAVA	Damuels	162.78	342	*i* PKP	PKPdf	05 37 13.0	-1.3
	comp=Z,9.9nm,1.3s,SNR=7.0						
FETA	Feichten	162.78	340	*i* PKP	PKPdf	05 37 13.5	-0.9
	comp=Z,27nm,1.2s,SNR=14						
IGT	Igoumenitsa	162.92	304	P	PKPdf	05 37 12.7	-1.8
LKD2	Lefkada island	162.97	302	P	PKPdf	05 37 13.5	-1.1
SRN	Sarande	163.01	306	P	PKPdf	05 37 13.1	-1.4
EVGI	Lefkada island	163.03	301	P	PKPdf	05 37 13.2	-1.4
RTZL	Ratzakli, Kefa	163.13	299	P	PKPdf	05 37 13.5	-1.2
FSK	Fiskardo	163.16	301	P	PKPdf	05 37 13.1	-1.6
LTHK	Lithakia	163.19	298	P	PKPdf	05 37 13.1	-1.7
KEK	Kerkira	163.22	306	P	PKPdf	05 37 15.4	+0.6
VLS	Valsamata	163.23	300	P	PKPdf	05 37 13.5	-1.3
PSDA	Pessada-Kefalo	163.25	300	P	PKPdf	05 37 13.4	-1.4
PMOZ	Porto Moniz, M	163.56	79	PKP	PKPdf	05 37 18.2	+2.8
PMOZ	Porto Moniz, M	163.56	79	*e*PKPdf	PKPdf	05 37 18.5	+3.0
PMOZ				*e*SS	SS	06 02 20.1	+0.9
PMOZ				*e*LR	LR	06 33 13.4	
PMOZ				*i* AMs_20		06 49 39.1	
	comp=Z,4µm,20.0s						
PMAR	Madeira	163.81	79	*e*PKPdf	PKPdf	05 37 18.7	+2.9
PMAR				*e*PP	PP	05 42 03.6	+9.2
FUL	Funchal	163.82	80	*e*PKPdf	PKPdf	05 37 16.9	+1.3
LOR	Lormes	163.82	356	PKIKP	PKPdf	05 37 15.7	+0.6
PMPST	Porto Santo, M	164.28	78	⇑*i*PKPdf	PKPdf	05 37 17.3	+1.3
EOSO	Osorio	164.37	97	PKP	PKPdf	05 37 17.5	+1.2
MATE	Matera	164.82	313	⇑P	PKPdf	05 37 15.6	-0.6
VLC	Villacollemand	165.43	336	PKP	PKPdf	05 37 15.3	-1.4
TIP	Timpagrande	165.56	308	⇑P	PKPdf	05 37 15.5	-1.5
AQU	L'Aquila	165.59	324	PKP	PKPdf	05 37 15.9	-1.0
BNI	Bardonecchia	165.64	347	PKIKP	PKPdf	05 37 17.4	+0.5
PGAV	Gavieira, Arco	166.38	35	⇑*i*PKPdf	PKPdf	05 37 18.5	+0.9
PGAV				*e*PKPab	PKPab	05 38 19.9	+0.8
PGAV				*e*PP	PP	05 42 07.6	+1.1
PGAV				*e*LR	LR	06 35 51.6	
PGAV				*i* AMs_20		06 45 53.0	
	comp=Z,5µm,22.0s						
PCAB	Cabril	166.69	35	⇑*e*PKPdf	PKPdf	05 37 19.7	+2.0
PCAB				*e*PKPab	PKPab	05 38 21.7	+1.3
PCAB				*e*PP	PP	05 42 09.4	+1.4
POLO	Lamas de Olo	167.06	35	⇑*i*PKPdf	PKPdf	05 37 18.6	+0.5
POLO				*e*PKPab	PKPab	05 38 22.7	+0.5
POLO				*e*PP	PP	05 42 10.6	+0.6
ECAL	Calabor	167.10	31	PKP	PKPdf	05 37 18.6	+0.4
PVRL	Vila Real	167.17	35	*e*PKPdf	PKPdf	05 37 20.5	+2.4
PVRL				*e*PKPab	PKPab	05 38 23.2	+0.6
PVRL				*e*PP	PP	05 42 09.9	-0.6
PVIS	Viseu	167.49	37	⇑*i*PKPdf	PKPdf	05 37 19.1	+0.7
PVIS				*e*PKPab	PKPab	05 38 24.5	+0.5
PVIS				*e*PP	PP	05 42 12.9	+0.7
COI	Coimbra	167.57	40	⇑*i*PKPdf	PKPdf	05 37 18.4	0.0
COI				*e*PKPab	pPKPab	05 38 32.9	-0.2
COI				*e*PP	PP	05 42 12.3	-0.4
MVO	Moncorvo	167.59	34	⇑*i*PKPdf	PKPdf	05 37 18.9	+0.4
MVO				*e*PKPab	PKPab	05 38 23.9	-0.5
MVO				*e*PP	PP	05 42 13.8	+1.2
MVO				*e*SS	SS	06 03 04.7	+6.9
MVO				*e*LQ	LQ	06 34 43.7	
MVO				*e*LR	LR	06 35 56.0	
MVO				*i* AMs_20		06 59 27.3	
	comp=Z,7µm,18.0s						
PCAS	Casmilo, Conde	167.63	41	⇑*i*PKPdf	PKPdf	05 37 19.0	+0.6
PCAS				*e*PKPab	PKPab	05 38 25.4	+0.8
PCAS				*e*PP	PP	05 42 12.9	-0.1
PSBE	So Bento	167.82	44	⇑*i*PKPdf	PKPdf	05 37 19.6	+1.0
PSBE				*e*PP	PP	05 42 15.2	+1.1
PMAFR	Mafra	167.87	47	PKP	PKPdf	05 37 19.2	+0.6
MTE	Manteigas	167.91	37	⇑*i*PKPdf	PKPdf	05 37 18.8	+0.1
MTE				*e*PKPab	PKPab	05 38 25.7	-0.2
MTE				*e*PP	PP	05 42 13.9	-0.5
MTE				*e*SS	SS	06 03 12.0	+11
MTE				*e*LQ	LQ	06 37 06.4	
MTE				*e*LR	LR	06 38 22.8	
MTE				*i* AMs_20		06 51 50.1	
	comp=Z,8µm,18.0s						
LIS	Lisbon	168.09	48	*e*PKPdf	PKPdf	05 37 18.9	+0.1
LIS				*e*PP	PP	05 42 16.2	+0.7
LIS				*e*SS	SS	06 03 04.5	+1.1
LIS				IAMs_20	IAMs_20	07 04 28.7	
	comp=Z,10µm,30.2s						
LIS	Lisbon	168.09	48	⇑*i*PKPdf	PKPdf	05 37 19.5	+0.8
LIS				*e*PP	PP	05 42 16.4	+0.8
LIS	Lisbon	168.09	48	PKIKP	PKPdf	05 37 19.7	+0.9
PSARD	Sardoal	168.13	42	⇑*i*PKPdf	PKPdf	05 37 19.7	+0.9
PSARD				*e*PKPab	PKPab	05 38 26.6	-0.3
PSARD				*e*PP	PP	05 42 15.7	+0.1
PCBR	Castelo Branco	168.34	39	*e*PKPdf	PKPdf	05 37 21.1	+2.2
PCBR				*e*PKPab	PKPab	05 38 30.1	+2.3
PCBR				*e*PP	PP	05 42 16.6	0.0
PMTG	Montargil	168.44	44	⇑*i*PKPdf	PKPdf	05 37 20.0	+0.9
PMTG				*e*PKPab	PKPab	05 38 28.8	+0.5
PMTG				*e*PP	PP	05 42 15.4	-1.8
PMRV	Marv??o	168.68	40	⇑*i*PKPdf	PKPdf	05 37 19.9	+0.8
PMRV				*e*PKPab	PKPab	05 38 29.1	-0.2
PMRV				*e*PP	PP	05 42 16.5	-1.9
PMRV				*e*SS	SS	06 03 16.5	+7.5
PMRV				*e*LQ	LQ	06 36 11.4	
PMRV				*e*LR	LR	06 36 28.3	
PMRV				*i* AMs_20		06 51 49.6	
	comp=Z,6µm,20.0s						
EJON	La Jonquera	168.68	357	PKP	PKPdf	05 37 18.8	-0.3
EVO	Evora	168.91	46	PKP	PKPdf	05 37 20.4	+1.0
EVO	Evora	168.91	46	⇑*i*PKPdf	PKPdf	05 37 19.8	+0.4
EVO				*e*PKPab	PKPab	05 38 31.2	+0.8
EVO				*e*PP	PP	05 42 20.1	+0.4
PESTR	Estremoz	168.95	43	PKP	PKPdf	05 37 20.3	+0.9
PESTR	Estremoz	168.95	43		PKPdf	05 37 18.4	-1.0
PESTR	Estremoz	168.95	43	⇑*i*PKPdf	PKPdf	05 37 19.2	-0.2
PESTR				*e*PKPab	PKPab	05 38 30.9	+0.4
PESTR				*e*PP	PP	05 42 18.2	-1.6
PTEO	Sao Teotonio	169.03	51	⇑*i*PKPdf	PKPdf	05 37 19.3	-0.1
PTEO				*e*PP	PP	05 42 21.8	+1.3
PFVI	Vila Bisbo	169.17	54	PKP	PKPdf	05 37 20.7	+1.1
PFVI	Vila Bisbo	169.17	54	⇑*i*PKPdf	PKPdf	05 37 19.7	+0.1
PFVI				*e*PP	PP	05 42 23.6	+2.3
MESJ	Messejana	169.20	49	*e*PKPdf	PKPdf	05 37 19.6	+0.1
MESJ				*e*PP	PP	05 42 21.8	+0.5
MESJ				*e*SS	SS	06 03 15.6	+1.0
MESJ				IAMs_20	IAMs_20	06 51 17.0	
	comp=Z,8µm,23.6s						
MESJ	Messejana	169.20	49	⇑*i*PKPdf	PKPdf	05 37 19.9	+0.3
MESJ				*e*PP	PP	05 42 22.3	+1.1
MORF	Marmelete	169.20	52	*e*PKPdf	PKPdf	05 37 19.6	0.0
MORF				*e*PP	PP	05 42 21.9	+0.4
MORF				*e*SS	SS	06 03 15.8	+0.8
MORF				IAMs_20	IAMs_20	06 52 10.9	
	comp=Z,6µm,20.9s						
MORF	Marmelete	169.20	52	⇑*i*PKPdf	PKPdf	05 37 20.1	+0.5
MORF				*e*PKPab	PKPab	05 38 31.8	0.0
MORF				*e*PP	PP	05 42 21.3	-0.1
MORF	Marmelete	169.20	52	*e*PKIKP	PKPdf	05 37 20.5	+0.9
PBEJ	Beja	169.31	47	*e*PKPdf	PKPdf	05 37 22.3	+2.7
PBEJ				*e*PP	PP	05 42 24.2	+2.4
EBAD	Badajoz	169.36	42	PKP	PKPdf	05 37 20.5	+0.9
PCVE	Castro Verde	169.43	49	PKP	PKPdf	05 37 20.8	+1.1
PCVE	Castro Verde	169.43	49	⇑*i*PKPdf	PKPdf	05 37 20.7	+1.0
PCVE				*e*PP	PP	05 42 23.7	+1.3
PBDV	Barranco-do-Ve	169.72	51	⇑*i*PKPdf	PKPdf	05 37 21.7	+1.8
PBDV				*e*PKPab	PKPab	05 38 35.2	+1.1
PBDV				*e*PP	PP	05 42 26.2	+2.2
PBAR	Barrancos	169.73	44	PKP	PKPdf	05 37 20.7	+0.8
PBAR	Barrancos	169.73	44	⇑*i*PKPdf	PKPdf	05 37 20.4	+0.6
PBAR				*e*PKPab	PKPab	05 38 35.0	+1.0
PBAR				*e*PP	PP	05 42 23.9	+0.1
PVAQ	Vaqueiros	169.77	50	PKP	PKPdf	05 37 20.9	+1.0
PVAQ	Vaqueiros	169.77	50	⇑*i*PKPdf	PKPdf	05 37 20.7	+0.8
PVAQ				*e*PKPab	PKPab	05 38 35.0	+0.8
PVAQ				*e*PP	PP	05 42 25.9	+1.7
PVAQ				*e*LR	LR	06 37 44.5	
PVAQ				*i* AMs_20		06 59 51.4	
	comp=Z,6µm,20.0s						
EGRO	El Granado	169.85	48	PKP	PKPdf	05 37 21.5	+1.6
UCM	Universidad Co	169.88	24	PKP	PKPdf	05 37 20.9	+1.0
PAB	San Pablo	170.11	30		PKPdf	05 37 21.4	+1.2
PAB	San Pablo	170.11	30	⇓PKIKP	PKPdf	05 37 21.3	+1.2
ESBB	Sonseca Array	170.16	28		PKPdf	05 37 20.6	+0.4
ESDC	Sonseca Array	170.16	28		PKPdf	05 37 19.8	-0.4
ESDC	Sonseca Array	170.16	28	PKP	PKPdf	05 37 20.4	+0.3
	comp=Z,4.4nm,1.1s,baz=340,slow=2.2,SNR=22						
ESDC				PP	PP	05 42 27.8	+2.3
	comp=Z,4.1nm,1.2s,baz=350,slow=6.1,SNR=4.5						
EMIN	Mina Concepcio	170.21	45	PKP	PKPdf	05 37 21.2	+1.0
ECAB	El Cabril	170.73	40	PKP	PKPdf	05 37 21.6	+1.1
MAHO	Mahon	171.07	349	PKP	PKPdf	05 37 20.4	-0.1
EADA	Adamuz	171.10	36	PKP	PKPdf	05 37 21.4	+0.8
TAM	Tamanrasset	171.14	201	PKIKP	PKPdf	05 37 22.1	+0.8
ECHE	Chera	171.20	16	PKP	PKPdf	05 37 21.7	+1.0
ESPR	Espera	171.28	47	PKP	PKPdf	05 37 22.6	+1.8
SFS	San Fernando	171.30	50	PKP	PKPdf	05 37 21.7	+1.0
ETOS	Mallorca	171.36	356	PKP	PKPdf	05 37 21.6	+0.9
AVE	Averroes	171.68	72	PKP	PKPdf	05 37 22.7	+1.6
TIO	Tiouine	171.99	89	PKP	PKPdf	05 37 22.2	+0.8
TIO				PKP	PKPdf	05 37 23.1	+1.6
EIBI	Ibiza	172.10	4	PKP	PKPdf	05 37 22.6	+1.6
EGOR	Sierra Gorda,	172.14	39	PKP	PKPdf	05 37 21.5	+0.1
EMIJ	Mijas	172.14	45	PKP	PKPdf	05 37 21.3	+0.1
ECEU	Ceuta	172.18	51	PKP	PKPdf	05 37 21.6	+0.4
CEU	Ceuta	172.18	51	PKP	PKPdf	05 37 21.8	+0.7
EMAL	Malaga-Limoner	172.21	42	PKP	PKPdf	05 37 21.4	+0.2
KEST	Kesra	172.38	309	PKP	PKPdf	05 37 21.6	+0.2
	comp=Z,4.9nm,1.0s,baz=252,slow=0.9,SNR=12						
KEST	Kesra	172.38	309	P	PKPdf	05 37 21.4	0.0
	SNR=7.7						
EQTA	Presa de Quent	172.41	35	PKP	PKPdf	05 37 21.4	0.0
CART	Cartagena	173.08	21	PKP	PKPdf	05 37 22.2	+0.7
ENIJ	Nijar	173.18	30	PKP	PKPdf	05 37 21.7	+0.1
IFR	Ifrane	173.46	67	PKP	PKPdf	05 37 23.4	+1.4
EMLI	Melilla	174.09	44	PKP	PKPdf	05 37 24.8	+2.8
EMLI				PKP	PKPdf	05 37 23.2	+1.2
MDT	Midelt	174.09	72	PKP	PKPdf	05 37 23.7	+1.5
	comp=Z,5.0nm,0.8s,baz=352,slow=1.9,SNR=16						

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*IDC **16** 05:29:38.2±1.2, 18°.30S×167°.74E, h0^{km}, mb4.1/6, mbtmp4.1/7, ML4.0/1, Error ellipse: s-maj=39.7km s-min=24.2km az=138.0*

*NEIC **16** 05:29:40.1±0.8, 18°.33S±0°.04×168°.0E±0°.2, h10^{km}±2^{km}, mb4.5/13, Error ellipse: s-maj=28.8km s-min=7.1km az=94.0*

*NOU **16** 05:29:40.6, 18°.31S×167°.60E, h0^{km}, MLv4.8/12, Vanuatu Islands*

ISC 16 05:29:42.8±0.7,**18°.35S**±0°.05×**167°.73E**±0°.07,**h25**^{km},**n41**, σ**1ˢ.02**/42,**mb4.4**/11,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INH	Isangel	1.89	129	P	Pb	05 30 15.5	-1.0
INH	Isangel	1.89	129	P	Pb	05 30 15.0	-1.5
INH	Isangel	1.89	129	S	Sb	05 30 40.4	+0.7
VLAKA	Lakatoro	2.25	352	P	Pn	05 30 18.4	0.0
VLAKA	Lakatoro	2.25	352	P	Pn	05 30 18.8	+0.4
SANVU	Saraoutou	2.93	350		Pn	05 30 26.8	-1.0
SANVU	Saraoutou	2.93	350	P	Pn	05 30 27.2	-0.6
SANVU	Saraoutou	2.93	350	P	Pn	05 30 27.8	0.0
MARNC	Mare, Loyalty	3.13	175	P	Pn	05 30 32.4	+1.9
YATNC	Mamie plateau,	3.77	192	P	Pn	05 30 39.6	+0.2
YATNC	Mamie plateau,	3.77	192	P	Pn	05 30 39.4	0.0
DZM	Mont Dzumac	3.90	198		Pn	05 30 41.3	+0.1
DZM				Sn	Sn	05 31 25.1	-1.0
DZM	Mont Dzumac	3.90	198	Pn	Pn	05 30 41.1	0.0
	11nm,0.3s,baz=43,slow=18,SNR=44						
DZM				Sn	Sn	05 31 23.3	-2.9
	36nm,0.3s,baz=131,slow=20,SNR=15						
	23nm,0.3s						
DZM	Mont Dzumac	3.90	198	P	Pn	05 30 41.6	+0.5
DZM	Mont Dzumac	3.90	198	P	Pn	05 30 40.8	-0.3
KOUNC	Koumac, New Ca	3.92	235	P	Pn	05 30 40.7	-0.7
KOUNC	Koumac, New Ca	3.92	235	P	Pn	05 30 41.6	+0.2
ONTNC	Ouen Toro	4.12	197	P	Pn	05 30 44.8	+0.7
OUENC	Ouen Island, N	4.13	191	P	Pn	05 30 45.4	+1.1
OUENC	Ouen Island, N	4.13	191	P	Pn	05 30 45.6	+1.3
LUES	Luesalemba Tem	7.84	347	P	Pn	05 31 35.2	-0.1
EIDS	Eidsvold	16.95	243	P	Pn	05 33 38.6	+0.3
ARMA	Armidale	18.93	228	P	P	05 34 02.8	+0.7
CTAO	Charters Tower	20.35	262		Pn	05 34 19.9	+0.2
CTAO				IAmb	IAmb	05 34 35.3	
	comp=Z,26nm,1.1s						
PMG	Port Moresby	21.84	291	P	P	05 34 34.2	+0.6
PMG				IAmb	IAmb	05 34 45.2	
	comp=Z,28nm,1.1s						
CAN	Canberra	23.70	221	P	P	05 34 53.9	+1.1
CAN				IAmb	IAmb	05 35 21.8	
	comp=Z,21nm,1.1s						
STKA	Stephens Creek	27.14	235	P	P	05 35 24.6	+0.5
	comp=Z,4.9nm,0.8s,baz=58,slow=8.9,SNR=7.5						
	comp=Z,4.9nm,0.8s						
WR8	Warramunga Arr	31.40	262	P	P	05 36 02.8	+0.7
WR8				IAmb	IAmb	05 36 21.6	
	comp=Z,9.2nm,1.1s						
WB0	Warramunga Arr	31.51	262	P	P	05 36 03.6	+0.5
WB0				IAmb	IAmb	05 36 16.4	
	comp=Z,6.0nm,1.1s						
WRA	Warramunga Arr	31.56	262	P	P	05 36 02.1	-1.3
	comp=Z,1.6nm,0.8s,baz=85,slow=8.2,SNR=7.2						
	comp=Z,1.6nm,0.8s						
BBOO	Buckleboo	31.85	237	P	P	05 36 07.0	+1.1
AS31	Alice Springs	31.97	255	P	P	05 36 07.9	+0.8
ASAR	Alice Springs	31.97	255	P	P	05 36 08.2	+1.1
ASAR	Alice Springs	31.97	255	P	P	05 36 06.5	-0.5
	comp=Z,2.6nm,0.5s,baz=82,slow=8.4,SNR=33						
	comp=Z,2.6nm,0.5s						
KNRA	Kununurra	37.31	268	P	P	05 36 53.7	+0.5
FITZ	Fitzroy Crossi	39.91	264	P	P	05 37 16.8	+1.6
FITZ				IAmb	IAmb	05 37 31.6	
	comp=Z,8.6nm,1.1s						
MORW	Morawa	48.19	247	P	P	05 38 22.0	+0.6
QSPA	South Pole Qui	71.70	180	P	P	05 41 02.4	-0.1
QSPA				IAmb	IAmb	05 41 25.7	
	comp=Z,5.2nm,1.0s						
QSPA	South Pole Qui	71.70	180	P	P	05 41 00.4	-2.1
	comp=Z,1.4nm,1.1s,baz=17,slow=11,SNR=3.7						
	comp=Z,1.4nm,1.1s						
NVAR	Mina Array Bea	89.29	49	P	P	05 42 38.1	+0.8
	comp=Z,0.4nm,0.6s,baz=224,slow=8.6,SNR=4.9						
	comp=Z,0.4nm,0.6s						
ILAR	Eielson Array	89.82	18	P	P	05 42 37.8	-1.1
	comp=Z,0.5nm,0.5s,baz=235,slow=5.3,SNR=7.3						
	comp=Z,0.5nm,0.5s						

IDC 16 05:34:07.8±2.9,**30°.31S**×**177°.76W**,**h0**^{km},**mb4.1**/3, **mbtmp4.0**/4,**ML2.9**/1,**Error ellipse: s-maj=70.6km s-min=42.6km az=128.0**,**Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.99	207	Pn	Pn	05 36 18.4	-0.5
	0.1nm,0.3s,baz=49,slow=18,SNR=1.3						
URZ				Sn	Sn	05 37 47.7	-13
	0.8nm,0.3s,baz=289,slow=16,SNR=1.9						
	6.5nm,0.8s						
STKA	Stephens Creek	34.70	257	P	P	05 41 00.2	+0.8
	4.4nm,0.8s,baz=95,slow=10,SNR=9.0						
	4.4nm,0.8s						
ASAR	Alice Springs	43.33	267	P	P	05 42 11.2	-0.7
	0.7nm,0.7s,baz=98,slow=7.6,SNR=6.9						
	0.7nm,0.7s						
WRA	Warramunga Arr	44.30	272	P	P	05 42 19.3	-0.4
	1.3nm,0.4s,baz=111,slow=8.0,SNR=23						
	1.3nm,0.4s						
FINES	FINESS Array B	145.13	340	PKPbc	PKPbc	05 53 45.3	-0.7
	1.3nm,0.6s,baz=40,slow=3.2,SNR=14						

IDC 16 05:40:56.0±6.9,**30°.96S**×**178°.02W**,**h0**^{km},**mb3.9**/2, **mbtmp3.9**/2,**Error ellipse: s-maj=288.4km s-min=57.5km az=156.0**,**Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.06	268	P	P	05 48 57.6	-0.2
	0.8nm,0.5s,baz=106,slow=7.3,SNR=17						
	0.8nm,0.5s						
WRA	Warramunga Arr	44.10	273	P	P	05 49 06.1	-0.1
	0.8nm,0.4s,baz=111,slow=8.0,SNR=13						
	0.8nm,0.4s						
FINES	FINESS Array B	145.66	340	PKPbc	PKPdf	06 00 35.1	-0.5
	0.8nm,0.7s,baz=68,slow=5.9,SNR=5.3						

GCG 16 05:41:49.0±0.3,**13°.08N**×**89°.58W**,**h63**^{km}±6^{km},**MD3.8**,**El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	0.59	12	*i* P	Pn	05 42 02.1	-0.3
JAYA				*i* S	Sn	05 42 12.3	+0.2
NUBE	Las Nubes	0.84	347	*i* P	Pn	05 42 05.8	+0.4
NUBE				*i* S	Sn	05 42 18.8	+1.4
MTO3	Montecristo	1.33	9	*i* P	Pn	05 42 12.4	+0.6

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*IDC **16** 05:45:08.5±2.4, 0°.72S×130°.97E, h0^{km}, mb3.7/3, mbtmp3.6/5, ML3.5/2, Error ellipse: s-maj=132.1km s-min=22.7km az=75.0*

*DJA **16** 05:45:10.6±0.3, 1°S±3°×13°1E±°, h10^{km}, M3.8/6, MLv3.8/6*

ISC 16 05:45:09.8±1.2,**0°.61S**±0°.08×**131°.16E**±0°.06,**h10**^{km},**n9**, σ**1ˢ.08**/13,**mb3.9**/3,**Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SWI	Sorong	0.27	158	P	Pg	05 45 15.9	+0.5
SWI				S	Sg	05 45 20.0	+0.9
FAKI	Fak Fak	2.54	155	P	Pn	05 45 51.0	-0.2
FAKI				S	Sn	05 46 22.0	-0.2
RKPI	Ransiki, Papua	3.15	107	P	Pn	05 45 59.6	+0.1
RKPI				S	Sn	05 46 38.5	+1.3
MSAI	Masohi	3.52	219	P	Pn	05 46 05.5	+0.9
MSAI				S	Sn	05 46 47.0	+0.7
FITZ	Fitzroy Crossi	18.21	197	P	Pn	05 49 20.5	-2.4
	0.1nm,0.3s,baz=47,slow=11,SNR=1.2						
FITZ				S	Sn	05 52 28.1	-18
	2.2nm,0.9s,baz=43,slow=19,SNR=1.7						
	0.3nm,0.3s						
WRA	Warramunga Arr	19.47	171	P	P	05 49 36.0	-1.0
	0.2nm,0.3s,baz=351,slow=11,SNR=5.9						
WRA				S	Sn	05 52 57.9	-19
	0.2nm,0.7s,baz=346,slow=24,SNR=4.5						
	0.4nm,0.5s						
ASAR	Alice Springs	23.08	174	P	P	05 50 15.3	-0.5
	0.6nm,0.5s,baz=354,slow=11,SNR=8.3						
	0.6nm,0.5s						
MKAR	Makanchi Array	63.62	325	P	P	05 55 41.8	+0.7
	0.5nm,0.6s,baz=114,slow=8.4,SNR=1.7						
	0.5nm,0.6s						
KURBB	Kurchatov Arra	67.76	327	P	P	05 56 07.5	-0.2
	0.7nm,0.6s,baz=121,slow=6.0,SNR=5.0						
	0.7nm,0.6s						

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*IDC **16** 05:55:05.1±2.9, 31°.50S×178°.97W, h0^{km}, mb3.5/2, mbtmp3.6/3, ML3.5/1, Error ellipse: s-maj=67.6km s-min=45.1km az=111.0*

*WEL **16** 05:55:16.0±0.7, 32°S±14°×17°9W±3°7, h33^{km}, M4.5/6, mB4.8/2, ML4.7/6, MLv4.5/6, Mw(mB)4.1/2, Error ellipse: s-maj=51.4km s-min=3.3km az=110.5, confirmed*

ISC 16 05:55:16.3±1.1,**32°.1S**±0°.1×**178°.9W**±0°.2,**h96**^{km},**n26**, σ**1ˢ.41**/36,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.95	17	P	Pn	05 56 02.3	+1.0
GLKZ				S	Sn	05 56 36.0	0.0
RIZ	Raoul Island	2.97	16	S	Sn	05 56 34.9	-1.5
PKGZ	Pakihiroa	6.26	203	P	Pn	05 56 46.8	+0.6
PKGZ				S	Sn	05 57 59.5	+3.2
HAZ	Te Kaha	6.27	205	P	Pn	05 56 47.2	+1.1
HAZ				S	Sn	05 57 59.9	+3.7
PUZ	Puketiti	6.40	201	P	Pn	05 56 47.7	-0.3
PUZ				S	Sn	05 57 57.5	-2.0
RUGZ	Raukumara Rang	6.49	205	P	Pn	05 56 50.0	+0.7
RUGZ				S	Sn	05 58 00.4	-1.5
CNGZ	Carnagh Statio	6.79	200	P	Pn	05 56 53.6	+0.3
CNGZ				S	Sn	05 58 08.1	-1.1
MWZ	Matawai	6.87	204	P	Pn	05 56 54.3	-0.2
MWZ				S	Sn	05 58 13.3	+2.2
URZ	Urewera	6.96	207	Pn	Pn	05 56 55.2	-0.3
	0.7nm,0.3s,baz=355,slow=4.7,SNR=38						
URZ				Sn	Sn	05 58 13.4	+0.2
	2.3nm,0.3s,baz=229,slow=16,SNR=12						
	3.2nm,0.4s						
URZ	Urewera	6.96	207	P	Pn	05 56 55.2	-0.3
URZ				S	Sn	05 58 15.5	+2.3
RIGZ	Rimuhau	7.13	202	P	Pn	05 56 58.1	+0.2
RIGZ				S	Sn	05 58 17.8	+0.4
MUGZ	Murupara	7.28	208	P	Pn	05 56 59.8	-0.2
MUGZ				S	Sn	05 58 21.7	+0.7
SNGZ	Shannon Statio	7.34	204	P	Pn	05 57 00.3	-0.5
SNGZ				S	Sn	05 58 22.8	+0.4
MHGZ	Mahia Peninsul	7.50	199	P	Pn	05 57 02.1	-0.8
MHGZ				S	Sn	05 58 23.5	-2.8
RAHZ	Arahi	7.55	205	P	Pn	05 57 03.0	-0.5
RAHZ				S	Sn	05 58 27.3	-0.2
NMHZ	Naumai	7.81	205	P	Pn	05 57 06.5	-0.7
NMHZ				S	Sn	05 58 33.6	-0.3
BKZ	Black Stump Fm	7.99	207	P	Pn	05 57 07.9	-1.7
BKZ				S	Sn	05 58 36.8	-1.5
ASAR	Alice Springs	42.29	269	P	P	06 03 00.1	-0.6
	0.2nm,0.3s,baz=107,slow=7.5,SNR=4.8						
	0.2nm,0.3s						
WRA	Warramunga Arr	43.44	274	P	P	06 03 09.1	-0.8
	0.3nm,0.4s,baz=112,slow=8.0,SNR=8.4						
	0.3nm,0.4s						
H03S2	Juan Fernandez	80.16	124	T	T	07 37 23.8	
	baz=242,slow=74,SNR=8.8						
H03S1	Juan Fernandez	80.17	124	T	T	07 37 24.8	
	baz=242,slow=74,SNR=7.9						
H03S3	Juan Fernandez	80.17	124	T	T	07 37 22.6	
	baz=242,slow=74,SNR=4.9						
H03N3	Juan Fernandez	80.36	123	T	T	07 37 33.9	
	baz=248,slow=72,SNR=4.6						
H03N2	Juan Fernandez	80.36	123	T	T	07 37 32.3	
	baz=248,slow=72,SNR=4.7						
H03N1	Juan Fernandez	80.38	123	T	T	07 37 33.1	
	baz=248,slow=72,SNR=5.3						
FINES	FINESS Array B	146.46	338	PKPbc	PKPdf	06 14 45.0	+1.0
	0.7nm,0.5s,baz=42,slow=4.3,SNR=6.7						

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*OSUNB **16** 05:56:42.4±0.3, 14°.25S×51°.06W, h0^{km}, mR2.4/4, Error ellipse: s-maj=2.6km s-min=2.5km az=0.0*

*VAO **16** 05:56:44.8±0.3, 14°.51S×50°.97W, h0^{km}, mbR2.7*

ISC 16 05:56:45.1±1.0,**14°.40S**±0°.04×**51°.04W**±0°.05,**h10**^{km},**n13**, σ**2ˢ.41**/23,**Brazil**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARAG	Araguaiana, MT	1.50	210	P	Pn	05 57 10.6	-1.5
ARAG				S	Sg	05 57 34.2	+0.8
SNDB	Serra Nova Dou	2.42	354	P	Pn	05 57 22.1	-2.7
SNDB				S	Sn	05 57 51.7	-2.7
CAN3	Cana Brava	2.97	65	S	Sn	05 58 04.1	-3.9
SSV2	Sao Salvador	3.15	61	P	Pn	05 57 32.2	-2.6
BDFB	Brasilia	3.17	113	P	Pn	05 57 36.4	+1.1
BDFB				S	Sn	05 58 15.0	+1.7
IPMB	Ipameri, GO	4.48	143	*e*P	Pn	05 57 51.5	-1.7
IPMB				*e*S	Sn	05 58 44.0	-1.5

SALV	Santo Antonio	4.74	251	P	Pn	05 57 55.9	-0.7
SALV				S	Sn	05 58 50.2	-1.4
SALV	Santo Antonio	4.74	251	eP	Pn	05 57 57.3	+0.7
CLDB	Colider	5.81	306	eP	Pn	05 58 14.1	+2.6
CLDB				eS	Sn	05 59 23.9	+5.6
PMNB	Patos De Minas	6.04	134	eP	Pn	05 58 13.2	-1.3
PMNB				eS	Sn	05 59 22.6	-1.3
SDBA	SAO DESIDERIO	6.29	72	eP	Pn	05 58 18.2	+0.2
SDBA				eS	Sn	05 59 31.5	+1.4
SMTB	Santa Maria do	6.46	32	eP	Pn	05 58 21.5	+1.2
SMTB				eS	Sn	05 59 38.4	+4.3
JANB	Januaria	6.54	97	eP	Pn	05 58 21.6	0.0
JANB				eS	Sn	05 59 35.8	-0.5

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*MEX **16** 05:59:27.2±0.7, 13°.85N×93°.27W, h14km±158km, MD4.1*
*GCG **16** 05:59:31.8±2.1, 14°.10N×92°.93W, h35km±999km, MD4.3, ML3.4*
ISC 16 05:59:20.2±2.0**, 13°.8N**±0°.1×**93°.36W**±0°.04**, h8**km±15km**, n16, σ1ˢ.44**/27**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.56	43	eP	Pn	05 59 48.9	+0.8
THIG				eS	Sn	06 00 05.1	-3.4
THIG		1.56	43	iP	Pn	05 59 49.2	+1.1
THIG				IAML		06 00 10.4	
	comp=N,897nm,0.4s						
PATR	El Naranjo	1.73	39	eP	Pn	05 59 51.8	+1.0
PATR				eS	Sn	06 00 11.4	-1.8
RTAL	Retalhuleu	1.78	65	eP	Pg	05 59 54.9	+0.5
RTAL				eS	Sn	06 00 14.3	+0.2
PAVE	Pavencul	1.83	39	eP	Pn	05 59 53.3	+1.2
PAVE				eS	Sn	06 00 13.4	-2.1
PCIG		1.94	4	eP	Pn	05 59 55.4	+2.0
PCIG				eS	Sn	06 00 18.2	+0.2
STG0	El Palmar, Qui	2.06	71	iP	Pn	05 59 55.9	+0.7
STG0				IAML		06 00 22.4	
	comp=E,594nm,0.5s						
STG8	El Palmar, Qui	2.06	70	iP	Pn	05 59 55.8	+0.4
STG8				IAML		06 00 25.2	
	comp=E,447nm,0.4s						
HUEH	Huehuetenango	2.37	49	eP	Pn	06 00 01.3	+1.7
HUEH				eS	Sn	06 00 30.1	+1.1
CCIG	Comitan	2.77	25	eP	Pb	06 00 09.8	-0.3
CCIG				eS	Sn	06 00 39.8	+1.1
CCIG	Comitan	2.77	25	iP	Pb	06 00 09.8	-0.3
CCIG				IAML		06 00 47.7	
	comp=N,170nm,0.8s						
TGIG		3.01	4	eP	Pb	06 00 12.4	-1.6
TGIG				eS	Sn	06 00 45.4	+0.9
TGIG		3.01	4	iP	Pb	06 00 12.2	-1.9
TGIG				iS	Sn	06 00 44.0	-0.5
HUIG	Huatulco	3.33	307	eP	Pb	06 00 18.9	-0.5
HUIG				eS	Sn	06 00 53.2	+0.9
PEIG	Puerto Escondi	4.29	302	eP	Pb	06 00 34.5	-1.3
PEIG				eS	Sn	06 01 17.6	+1.6
YOIG	Yosondua	5.08	308	eP	Pn	06 00 35.8	-1.1

IDC 16 06:07:02.1±3.0**, 31°.64S**×**177°.66W, h0**km**, mb3.6**/2**, mbtmp3.7**/3**, ML2.9**/1**, Error ellipse: s-maj=71.3km s-min=36.8km az=118.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.87	212	Pn	Pn	06 08 57.7	-0.2
	0.2nm,0.3s,baz=15,slow=18,SNR=1.8						
URZ				Sn	Sn	06 10 28.8	+1.1
	0.2nm,0.3s,baz=188,slow=17,SNR=1.8						
	5.1nm,0.9s						
ASAR	Alice Springs	43.35	268	P	P	06 15 06.3	0.0
	0.6nm,0.8s,baz=108,slow=7.8,SNR=7.9						
	0.6nm,0.8s						
WRA	Warramunga Arr	44.45	273	P	P	06 15 15.0	-0.2
	0.7nm,0.6s,baz=111,slow=8.0,SNR=16						
	0.7nm,0.6s						
H03S2	Juan Fernandez	79.54	123	T	T	07 48 25.7	
	baz=242,slow=74,SNR=69						
H03S1	Juan Fernandez	79.55	123	T	T	07 48 26.7	
	baz=242,slow=74,SNR=47						
H03S3	Juan Fernandez	79.56	123	T	T	07 48 29.6	
	baz=242,slow=74,SNR=41						
H03N3	Juan Fernandez	79.73	123	T	T	07 48 34.9	
	baz=248,slow=72,SNR=19						
H03N2	Juan Fernandez	79.74	123	T	T	07 48 33.2	
	baz=248,slow=72,SNR=17						
H03N1	Juan Fernandez	79.75	123	T	T	07 48 36.5	
	baz=248,slow=72,SNR=19						
FINES	FINESS Array B	146.41	340	PKPbc	PKPdf	06 26 43.5	+0.5
	0.7nm,0.6s,baz=62,slow=3.0,SNR=9.2						

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*IDC **16** 06:10:44.0±1.3, 30°.67S×177°.72W, h0km, mb4.4/4, mbtmp4.3/5, ML3.9/1, Error ellipse: s-maj=43.7km s-min=28.6km az=138.0*
*NEIC **16** 06:10:48.6±1.6, 30°.55S±0°.05×177°.7W±0°.1, h35km±2km, mb4.4/17, Error ellipse: s-maj=22.0km s-min=8.1km az=81.0*
ISC 16 06:10:47.2±0.6**, 30°.75S**±0°.05×**177°.69W**±0°.09**, h27**km**, n68, σ2ˢ.39**/82**, mb4.5**/15**, 4C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.50	352	P	Pn	06 11 14.3	+2.1
GLKZ				S	Sn	06 11 30.1	-0.8
RAO	Raoul Island	1.50	352		Pn	06 11 10.9	-1.6
RIZ	Raoul Island	1.51	352	P	Pn	06 11 14.7	+2.2
RIZ				S	Sn	06 11 31.0	-0.3
WMGZ	Waiomatatini S	7.75	204	P	Pn	06 12 38.0	-0.3
WMGZ				S	Sn	06 14 07.2	+2.0
PKGZ	Pakihiroa	7.92	205	P	Pn	06 12 39.8	-0.7
PKGZ				S	Sn	06 14 07.7	-1.5
HAZ	Te Kaha	7.93	207	P	Pn	06 12 40.5	-0.2
HAZ				S	Sn	06 14 11.0	+1.5
PUZ	Puketiti	8.04	204	P	Pn	06 12 40.5	-1.7
PUZ				S	Sn	06 14 09.0	-3.2
RUGZ	Raukumara Rang	8.15	207	P	Pn	06 12 42.7	-1.2
RUGZ				S	Sn	06 14 15.8	+0.6
TWGZ	Tauwhareparae	8.23	205	P	Pn	06 12 44.0	-0.8
TWGZ				S	Sn	06 14 15.1	-1.8
CNGZ	Carnagh Statio	8.42	203	P	Pn	06 12 46.6	-0.8
CNGZ				S	Sn	06 14 22.3	+0.7
WCZ	Waipu Caves	8.44	230	P	Pn	06 12 55.7	+8.1
TKGZ	Te Karaka	8.51	204	P	Pn	06 12 46.9	-1.7
TKGZ				S	Sn	06 14 21.3	-2.4
MWZ	Matawai	8.53	206	P	Pn	06 12 47.5	-1.5
MWZ				S	Sn	06 14 23.8	-0.6
OUZ	Omahuta	8.57	236	P	Pn	06 12 56.2	+6.8
OUZ				S	Sn	06 14 30.6	+5.4
URZ	Urewera	8.63	208	Pn	Pn	06 12 48.7	-1.6
	1.3nm,0.3s,baz=331,slow=3.6,SNR=16						
URZ				Sn	Sn	06 14 22.2	-4.6
	5.2nm,0.3s,baz=173,slow=21,SNR=12						
	2.7nm,0.3s						
URZ	Urewera	8.63	208	P	Pn	06 12 48.6	-1.7
URZ				S	Sn	06 14 24.3	-2.5
PRGZ	Paritu Road	8.93	203	P	Pn	06 12 52.1	-2.4
PRGZ				S	Sn	06 14 27.8	-6.3
MUGZ	Murupara	8.96	209	P	Pn	06 12 52.9	-1.9
MUGZ				S	Sn	06 14 33.1	-1.7
SNGZ	Shannon Statio	8.99	206	P	Pn	06 12 54.0	-1.3
SNGZ				S	Sn	06 14 34.9	-0.8
MTHZ	Maungataniwha	9.25	208	P	Pn	06 12 57.4	-1.4
MTHZ				S	Sn	06 14 39.0	-3.0
NMHZ	Naumai	9.47	207	P	Pn	06 13 00.1	-1.9
NMHZ				S	Sn	06 14 46.2	-1.4
BKZ	Black Stump Fm	9.66	208	P	Pn	06 13 01.0	-3.5
BKZ				S	Sn	06 14 50.4	-1.7
MCHZ	McNeill Hill	9.82	206	P	Pn	06 13 03.0	-3.6
PNHZ	Pukenui	10.41	207	P	Pn	06 13 14.0	-0.8
PNHZ				S	Sn	06 15 04.0	-6.6
BFZ	Birch Farm	11.07	205	P	Pn	06 13 19.5	-4.1
BFZ				S	Sn	06 15 18.7	-7.8
MSWZ	Moikau Station	12.07	206	P	Pn	06 13 40.3	+2.9
MSWZ				S	Sn	06 15 39.5	-12
THZ	Tophouse	13.35	212	P	Pn	06 13 53.2	-1.7
THZ				S	Sn	06 16 11.9	-10
NIUE	Niue	13.58	33	Pn	Pn	06 13 55.9	-2.3
FUTU	Fugatoga	16.37	359	Pn	Pn	06 14 32.2	-3.0
JCZ	Jackson Bay	17.07	215	P	Pn	06 14 43.8	-0.2
RAR	Rarotonga	18.68	64	P	P	06 15 02.6	-0.7
ARMA	Armidale	26.38	263	P	P	06 16 21.0	-0.5
ARMA				IAmb	IAmb	06 16 43.7	
	comp=Z,7.4nm,1.1s						
EIDS	Eidsvold	28.02	273	P	P	06 16 34.4	-1.8
CAN	Canberra	28.22	252	P	P	06 16 36.9	-1.0
CAN				IAmb	IAmb	06 16 59.9	
	comp=Z,8.9nm,1.1s						
TOO	Toolangi	31.07	247	P	P	06 17 03.1	0.0
CTAO	Charters Tower	34.12	280	P	P	06 17 29.4	-0.5
CTAO				IAmb	IAmb	06 17 32.8	
	comp=Z,4.3nm,0.7s						
STKA	Stephens Creek	34.66	257	P	P	06 17 34.5	0.0
STKA	Stephens Creek	34.66	257	P	P	06 17 36.1	+1.6
	comp=Z,13nm,0.8s,baz=102,slow=10,SNR=22						
	comp=Z,13nm,0.8s						
MGBR	Mount Gambier	34.98	247	P	P	06 17 37.5	+0.3
BBOO	Buckleboo	39.13	255	P	P	06 18 12.9	+0.3
BBOO				IAmb	IAmb	06 18 42.2	
	comp=Z,11nm,1.1s						
COEN	Coen	39.62	286	P	P	06 18 13.9	-2.9
COEN				IAmb	IAmb	06 18 18.5	
	comp=Z,5.5nm,0.9s						
AS31	Alice Springs	43.36	267	P	P	06 18 46.5	-0.9
ASAR	Alice Springs	43.36	267	P	P	06 18 45.8	-1.6
ASAR	Alice Springs	43.36	267	P	P	06 18 47.6	+0.2
	comp=Z,0.7nm,0.3s,baz=105,slow=7.1,SNR=14						
	comp=Z,0.7nm,0.3s						
WR8	Warramunga Arr	44.24	272	P	P	06 18 54.5	0.0
WR8				IAmb	IAmb	06 19 14.8	
	comp=Z,1.9nm,0.7s						
WRA	Warramunga Arr	44.38	272	P	P	06 18 55.7	+0.1
	comp=Z,2.8nm,0.3s,baz=111,slow=8.1,SNR=50						
	comp=Z,2.8nm,0.3s						
WB0	Warramunga Arr	44.40	273	P	P	06 18 55.4	-0.4
WB0				IAmb	IAmb	06 18 56.8	
	comp=Z,3.7nm,0.6s						
SBA	Scott Base	47.71	184	P	P	06 19 22.8	+1.8
KNRA	Kununurra	51.00	274	P	P	06 19 46.8	-0.2
KNRA				IAmb	IAmb	06 19 52.7	
	comp=Z,6.2nm,1.1s						
CASY	Casey	54.96	208	P	P	06 20 15.8	+0.3
CASY				IAmb	IAmb	06 20 29.7	
	comp=Z,7.5nm,1.1s						
QSPA	South Pole Qui	59.36	180	P	P	06 20 49.3	+2.5
MAW	Mawson	72.08	201	P	P	06 22 11.0	+2.4
	comp=Z,1.7nm,0.9s,baz=194,slow=4.2,SNR=1.8						
	comp=Z,1.7nm,0.9s						
TROLL	Troll, Antarti	77.53	180	⇑P	P	06 22 43.9	+3.7
	comp=Z,121nm,0.7s						
SNAA	Sanae	77.80	178	⇑P	P	06 22 45.4	+3.7
	comp=Z,15nm,0.4s						
VNA3	Neumayer Olymp	77.94	176	⇑P	P	06 22 45.7	+3.3
	comp=Z,7.1nm,0.8s						
VNA2	Neumayer--Watz	78.38	177	⇑P	P	06 22 48.3	+3.5
	comp=Z,3.8nm,0.6s,baz=160,slow=5.4						
H03S2	Juan Fernandez	80.05	123	T	T	07 52 11.2	
	baz=238,slow=74						
H03S1	Juan Fernandez	80.06	123	T	T	07 52 11.6	
	baz=238,slow=74						
H03S3	Juan Fernandez	80.07	123	T	T	07 52 06.7	
	baz=238,slow=74						
H03N3	Juan Fernandez	80.24	123	T	T	07 52 22.1	
	baz=242						
H03N2	Juan Fernandez	80.24	123	T	T	07 52 23.2	
	baz=242						
H03N1	Juan Fernandez	80.26	123	T	T	07 52 16.5	
	baz=242						
FINES	FINESS Array B	145.56	340	PKPbc	PKPab	06 30 23.4	+0.7
	comp=Z,2.5nm,0.4s,baz=51,slow=4.0,SNR=42						
NB2	NORSAR Subarra	149.13	352	PKP	PKiKP	06 30 34.2	+0.6
	comp=Z,0.4nm,0.5s,baz=13,slow=2.6						
NOA	NORSAR Array B	149.13	352	PKPbc	PKiKP	06 30 33.6	0.0
	comp=Z,0.7nm,0.6s,baz=15,slow=2.5,SNR=4.2						
HFS	Hagfors	149.64	349	PKPbc	PKPbc	06 30 32.1	-1.5
	comp=Z,2.1nm,0.8s,baz=274,slow=3.8,SNR=4.1						
AKASG	Malin Array Be	151.74	323	PKPbc	PKiKP	06 30 39.9	+0.6
	comp=Z,0.4nm,0.4s,baz=49,slow=2.7,SNR=7.3						
BRTR	Keskin Array B	153.00	298	PKPbc	PKiKP	06 30 43.1	+0.6
	comp=Z,0.3nm,0.4s,baz=142,slow=3.5,SNR=3.6						

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*IDC **16** 06:18:21.6±2.8, 30°.98S×177°.78W, h0km, mb4.1/3, mbtmp4.0/4, ML3.3/1, Error ellipse: s-maj=64.6km s-min=34.5km az=117.0*
*NEIC **16** 06:18:29.5±1.2, 30°.6S±0°.1×178°.2W±0°.2, h35km±2km, mb4.1/10, Error ellipse: s-maj=31.2km s-min=18.3km az=96.0*
ISC 16 06:18:30.0±1.2**, 30°.5S**±0°.1×**178°.2W**±0°.2**, h46**km**, n23, σ0ˢ.70**/16**, mb4.1**/9**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.27	12	Pn	Pn	06 18 51.4	0.0
URZ	Urewera	8.64	205	Pn	Pn	06 20 24.6	-7.9
	0.4nm,0.3s,baz=352,slow=4.7,SNR=10						
URZ				Sn	Sn	06 21 59.6	-9.0
	1.5nm,0.3s,baz=238,slow=22,SNR=10.0						
	3.7nm,0.7s						
CTAO	Charters Tower	33.63	280	P	P	06 25 07.0	+0.6
CTAO				IAmb	IAmb	06 25 12.8	
	comp=Z,3.4nm,0.9s						
STKA	Stephens Creek	34.27	257	P	P	06 25 10.8	-1.0
STKA	Stephens Creek	34.27	257	P	P	06 25 12.5	+0.7
	comp=Z,3.1nm,0.7s,baz=101,slow=10,SNR=7.5						
	comp=Z,3.1nm,0.7s						
BBOO	Buckleboo	38.76	254	P	P	06 25 50.1	0.0
BBOO				IAmb	IAmb	06 26 15.6	
	comp=Z,8.3nm,1.1s						
AS31	Alice Springs	42.92	267	P	P	06 26 24.4	-0.1
ASAR	Alice Springs	42.92	267	P	P	06 26 22.9	-1.6
ASAR	Alice Springs	42.92	267	P	P	06 26 24.9	+0.4
	comp=Z,0.8nm,0.6s,baz=106,slow=7.5,SNR=13						
	comp=Z,0.8nm,0.6s						
WR8	Warramunga Arr	43.77	272	P	P	06 26 31.9	+0.5
WR8				IAmb	IAmb	06 26 36.1	
	comp=Z,1.2nm,0.8s						
WRA	Warramunga Arr	43.92	272	P	P	06 26 32.2	-0.3
WRA	Warramunga Arr	43.92	272	P	P	06 26 33.0	+0.5
	comp=Z,1.2nm,0.3s,baz=111,slow=8.1,SNR=38						
	comp=Z,1.2nm,0.3s						
WB0	Warramunga Arr	43.94	273	P	P	06 26 32.5	-0.3
WB0				IAmb	IAmb	06 26 36.1	
	comp=Z,2.4nm,1.0s						
KNRA	Kununurra	50.53	275	P	P	06 27 23.8	-0.2
CASY	Casey	54.96	208	P	P	06 27 55.4	-0.6
CASY				IAmb	IAmb	06 27 57.9	
	comp=Z,4.7nm,1.1s						
QSPA	South Pole Qui	59.61	180	P	P	06 28 29.6	+0.6
QSPA				IAmb	IAmb	06 28 42.9	
	comp=Z,0.5nm,0.8s						
H03S2	Juan Fernandez	80.56	124	T	T	07 58 22.3	
	baz=242,slow=74,SNR=57						
H03S1	Juan Fernandez	80.57	124	T	T	07 58 23.4	
	baz=242,slow=74,SNR=48						
H03S3	Juan Fernandez	80.58	124	T	T	07 58 22.2	
	baz=242,slow=74,SNR=43						
H03N3	Juan Fernandez	80.75	123	T	T	07 58 28.4	
	baz=242,slow=74						
H03N2	Juan Fernandez	80.76	123	T	T	07 58 31.8	
	baz=242,slow=74						
H03N1	Juan Fernandez	80.77	123	T	T	07 58 39.6	
	baz=242						
FINES	FINESS Array B	145.18	340	PKPbc	PKPbc	06 38 00.9	-0.5
	comp=Z,1.1nm,0.3s,baz=48,slow=3.3,SNR=19						

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*SJA **16** 06:19:12.2±0.7, 30°.03S×72°.54W, h13km±12km, ML3.8, MW3.9*
*GUC **16** 06:19:16.9±0.7, 30°.06S×71°.99W, h35km±6km, ML3.8*
*IDC **16** 06:19:17.8±1.3, 30°.22S×71°.14W, h0km, mb3.8/4, mbtmp3.7/6, ML3.7/2, Error ellipse: s-maj=44.3km s-min=25.7km az=89.0*
ISC 16 06:19:15.6±1.7**, 30°.06S**±0°.03×**72°.06W**±0°.06**, h6**km±10km**, n34, σ1ˢ.69**/52**, mb3.8**/4**, 3C-4D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.71	149	⇓iP	Pg	06 19 30.4	+1.1
CO06				iS	Sg	06 19 39.1	+0.6
CO05	La Serena	0.73	79	⇓iP	Pb	06 19 30.8	+0.2
CO05				eS	Sb	06 19 40.5	-0.2
CO05				IAML		06 19 42.3	
	comp=E,6µm,0.4s						
GO04	Tololo Observa	1.10	96	iP	Pb	06 19 36.8	-0.3
GO04				iS	Sn	06 19 52.8	-0.4
GO04				IAML		06 19 57.5	
	comp=N,7µm,0.5s						
CO03	El Pedregal	1.41	124	⇓iP	Pn	06 19 41.7	-0.2
CO03				iS	Sg	06 20 00.6	-0.5
CO03				IAML		06 20 05.4	
	comp=E,2µm,0.5s						
CO02	Combarbal	1.46	142	⇓iP	Pn	06 19 42.8	+0.2
CO02				iS	Sb	06 20 01.9	-0.1
CO02				IAML		06 20 06.9	
	comp=N,4µm,0.3s						
LCO	Las Campanas	1.58	49	⇑iP	Pn	06 19 44.0	-0.3
CO01	Juntas del Tor	1.71	88	⇑iP	Pb	06 19 46.6	-0.9
CO01				iS	Sg	06 20 09.1	-1.3
VA06	Catapilco	2.58	166	⇑iP	Pn	06 19 57.8	0.0
ACCO	Cerro Coronel	2.64	102	eP	Pg	06 20 08.0	+1.8
ACCO				eS	Sg	06 20 42.0	+1.5
DOCA	Reserva Natura	2.72	110	eP	Pb	06 20 04.7	-0.1
DOCA				eS	Sb	06 20 39.0	+0.5
DOCA				IAML		06 20 46.4	
	comp=Z,180nm,0.6s						
GO03	Copiapo	2.93	34	eP	Pn	06 20 04.8	+2.0
GO03				eS	Sb	06 20 43.5	-0.9
RTLS	Leoncito	2.94	127	eP	Pb	06 20 07.0	-1.5
RTLS				eS	Sb	06 20 46.5	+1.7
RTLS				IAML		06 20 55.1	
	comp=Z,545nm,0.5s						
VA03	San Esteban	2.99	155	eP	Pn	06 20 04.9	+1.3
VA03				eS	Sb	06 20 45.5	-0.5
VA03				IAML		06 20 54.5	
	comp=Z,165nm,0.5s						
AUSP	Uspallata	3.15	134	eP	Pb	06 20 09.7	-2.3
AUSP				eS	Sb	06 20 49.5	-1.3
AGUA	GUANDACOL	3.15	80	eP	Pb	06 20 10.0	-2.1
AGUA				eS	Sg	06 20 57.5	+0.6
AGUA				IAML		06 21 07.7	
	comp=Z,218nm,1.0s						
ZON	Zonda	3.26	118	eP	Pb	06 20 11.8	-2.1
ZON				eS	Sb	06 20 56.0	+2.1
ZON				eS	Sg	06 20 58.5	-1.9
ZON				IAML		06 21 11.9	
	comp=Z,98nm,0.6s						
PEL	Peldehue	3.29	159	eP	Pn	06 20 08.6	+1.0
PEL				eS	Sn	06 20 47.5	+0.4
PEL				IAML		06 21 05.6	
	comp=E,226nm,0.7s						
RTLL	Cerro Villicun	3.34	113	eP	Pb	06 20 12.7	-2.5
RTLL				eS	Sb	06 20 58.5	+2.5
MT16	CCHEN	3.60	159	eP	Pn	06 20 12.8	+0.8
MT16				eS	Sn	06 20 54.4	-0.5
VCA	Vinchina	3.61	70	eP	Pb	06 20 16.7	-3.2
VCA				eP	Pn	06 20 17.0	+4.8
VCA				eS	Sb	06 21 04.0	-0.1
VCA				IAML		06 21 18.7	
	comp=Z,265nm,0.9s						
ARCO	CERRO ARCO	3.85	137	eP	Pn	06 20 19.2	+3.7
ARCO				eS	Sg	06 21 15.0	-4.3
ARCO				IAML		06 21 30.8	
	comp=Z,94nm,1.2s						
AVFE	Valle Fertil	4.02	100	eP	Pn	06 20 15.0	-2.8
AVFE				eP	Pb	06 20 20.5	-6.4
AVFE				eS	Sb	06 21 17.0	+1.2
AVFE				IAML		06 21 27.5	
	comp=Z,114nm,0.5s						
AAGR	Agrelo	4.08	138	eP	Pn	06 20 18.5	-0.2
AAGR				IAML		06 21 37.9	
	comp=Z,99nm,2.4s						
AC02	Maricunga	4.12	39	eP	Pn	06 20 20.2	+0.8
AC02				eS	Sg	06 21 24.0	-4.0
AC02				IAML		06 21 28.8	
	comp=Z,60nm,1.2s						
H03N1	Juan Fernandez	6.74	238	T	T	06 28 08.9	
	baz=70,slow=72,SNR=155						
H03N2	Juan Fernandez	6.75	238	T	T	06 28 06.3	
	baz=70,slow=72,SNR=152						
H03N3	Juan Fernandez	6.75	238	T	T	06 28 07.5	
	baz=70,slow=72,SNR=147						
PLCA	Paso Flores	10.72	174	Pn	Pn	06 21 49.4	-0.3
	comp=Z,0.1nm,0.3s,baz=337,slow=13,SNR=8.6						
	comp=Z,0.6nm,0.4s						
LPAZ	La Paz	14.18	16	Pn	Pn	06 22 39.4	+1.9
	comp=Z,0.2nm,0.3s,baz=188,slow=11,SNR=10						
	comp=Z,1.1nm,0.5s						
BDFB	Brasilia	26.32	62	P	P	06 24 50.5	-1.8
	comp=Z,0.9nm,0.6s,baz=258,slow=14,SNR=1.5						
	comp=Z,0.9nm,0.6s						
SNAA	Sanae	55.24	159	P	P	06 28 49.5	+0.4
	comp=Z,0.9nm,0.8s,baz=280,slow=6.3,SNR=8.7						
	comp=Z,0.9nm,0.8s						
TXAR	Lajitas Array	66.31	330	P	P	06 30 12.9	+8.0
	comp=Z,0.1nm,0.5s,baz=136,slow=5.8,SNR=2.0						
	comp=Z,0.1nm,0.5s						
DBIC	Dimbokro	73.97	72	P	P	06 30 51.8	-0.4
	comp=Z,2.4nm,0.5s,baz=231,slow=7.9,SNR=1.6						
	comp=Z,2.4nm,0.5s						
ZALV	Zalesovo Beam	150.84	28	PKPbc	PKPbc	06 39 08.6	+0.2
	comp=Z,1.4nm,0.4s,baz=320,slow=3.1,SNR=5.9						

IDC 16 06:20:18.0±4.8**, 30°.35S**×**179°.78E, h0**km**, mb3.8**/3**, mbtmp3.8**/3**, Error ellipse: s-maj=181.0km s-min=74.2km az=160.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.19	195	Sn	Sn	06 23 34.3	-17
	1.5nm,0.3s,baz=339,slow=5.4,SNR=15						
STKA	Stephens Creek	32.62	257	P	P	06 26 51.5	0.0
	0.7nm,0.4s,baz=90,slow=6.1,SNR=3.5						
	0.7nm,0.4s						
ASAR	Alice Springs	41.19	268	P	P	06 28 04.3	-0.3
	0.7nm,0.5s,baz=96,slow=8.9,SNR=9.8						
	0.7nm,0.5s						
WRA	Warramunga Arr	42.18	273	P	P	06 28 12.7	+0.1
	0.6nm,0.3s,baz=114,slow=7.9,SNR=5.9						
	0.6nm,0.3s						
FINES	FINESS Array B	144.42	339	PKP	PKPdf	06 39 54.8	-0.7
	0.8nm,0.7s,baz=22,slow=7.1,SNR=3.9						

IDC 16 06:27:28.9±3.0**, 32°.95S**×**178°.52W, h0**km**, mb3.5**/2**, mbtmp3.5**/3**, ML3.5**/1**, Error ellipse: s-maj=72.0km s-min=36.0km az=116.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.38	213	Pn	Pn	06 29 04.9	+0.7
	1.1nm,0.3s,baz=354,slow=3.4,SNR=9.6						
URZ				Sn	Sn	06 30 16.1	-1.6
	0.7nm,0.3s,baz=170,slow=23,SNR=6.9						
	2.2nm,0.3s						
ASAR	Alice Springs	42.60	270	P	P	06 35 27.1	+0.2
	0.3nm,0.7s,baz=101,slow=7.9,SNR=4.4						
	0.3nm,0.7s						
WRA	Warramunga Arr	43.81	275	P	P	06 35 36.6	-0.2
	0.4nm,0.3s,baz=116,slow=8.1,SNR=6.6						
	0.4nm,0.3s						
H03S2	Juan Fernandez	79.43	123	T	T	08 06 14.8	
	baz=242,slow=75,SNR=14						
H03S1	Juan Fernandez	79.44	123	T	T	08 06 11.2	
	baz=242,slow=75,SNR=14						
H03S3	Juan Fernandez	79.45	123	T	T	08 06 17.2	
	baz=242,slow=75,SNR=14						
H03N3	Juan Fernandez	79.64	123	T	T	08 06 11.5	
	baz=242						
H03N2	Juan Fernandez	79.64	123	T	T	08 06 07.1	
	baz=242						
H03N1	Juan Fernandez	79.65	123	T	T	08 06 10.8	
	baz=242						
FINES	FINESS Array B	147.36	338	PKPbc	PKPbc	06 47 12.8	-0.9
	0.4nm,0.4s,baz=44,slow=4.2,SNR=7.4						

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*IDC **16** 06:30:19.0±0.5, 44°.72S×35°.57E, h0km, mb4.5/19, mbtmp4.5/19, MS4.5/3, Error ellipse: s-maj=19.7km s-min=13.5km az=61.0*
*MOS **16** 06:30:19.3±0.9, 44°.73S×35°.42E, h10km, mb5.0/21, Error ellipse: s-maj=20.5km s-min=9.7km az=95.6*
*NEIC **16** 06:30:21.2±1.2, 44°.69S±0°.07×35°.4E±0°.2, h10km±1km, mb5.0/55, Error ellipse: s-maj=20.0km s-min=11.8km az=80.0*
ISC 16 06:30:20.9±0.3**, 44°.68S**±0°.06×**35°.36E**±0°.08**, h10**km**, n175, σ1ˢ.06**/164**, mb4.9**/72**, MS4.7**/3**, 8C, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRHM	**Grahamstown, E**	**13.35**	**325**		**Pn**	**06 33 26.7**	**-3.7**
SUR	**Sutherland**	**16.71**	**312**	Pn	**Pn**	**06 34 13.1**	**-2.2**
POGA	**Pongola**	**17.54**	**349**		**Pn**	**06 34 23.9**	**-1.6**
POGA				IAmb	IAmb	06 34 28.0	
	comp=Z,82nm,0.9s						
BOSA	**Boshof**	**17.94**	**330**		**Pn**	**06 34 27.6**	**-3.0**
BOSA	**Boshof**	**17.94**	**330**	P	**Pn**	**06 34 27.4**	**-3.2**
	comp=Z,20nm,0.9s,baz=152,slow=12,SNR=24						
BOSA				LR	LR	06 39 40.1	
	comp=Z,2µm,20.6s,baz=138,slow=31						
BOSA	**Boshof**	**17.94**	**330**	P	**Pn**	**06 34 27.6**	**-3.0**
BOSA				pmax	pmax		
	comp=Z,47nm,1.0s						
MAKGR	**Makgori**	**20.67**	**332**	P	**P**	**06 35 01.0**	**-0.1**
MAKGR				IAmb	IAmb	06 35 12.8	
	comp=Z,126nm,1.1s						
LBTB	**Lobatse**	**21.16**	**335**		**P**	**06 35 06.2**	**-0.1**
LBTB				IAmb	IAmb	06 35 15.4	
	comp=Z,80nm,1.1s						
LBTB	**Lobatse**	**21.16**	**335**	P	**P**	**06 35 05.5**	**-0.8**
	comp=Z,46nm,1.0s,baz=163,slow=10,SNR=39						
LBTB				S	S	06 38 48.5	-13
	comp=Z,6.6nm,0.9s,baz=61,slow=22,SNR=3.6						
	comp=Z,46nm,1.0s						
LBTB	**Lobatse**	**21.16**	**335**	P	**P**	**06 35 06.2**	**-0.1**
LBTB				pmax	pmax		
	comp=Z,81nm,1.1s						
PHPEN	**Phepeng**	**21.67**	**328**	P	**P**	**06 35 11.9**	**+0.1**
PHPEN				IAmb	IAmb	06 35 24.6	
	comp=Z,58nm,0.9s						
PHPEN	**Phepeng**	**21.67**	**328**	*i* P	**P**	**06 35 13.0**	**+1.2**
SKOMA	**Sekoma**	**22.16**	**331**	*i* P	**P**	**06 35 17.2**	**+0.1**
LPHEP	**Lephephe**	**22.64**	**337**	P	**P**	**06 35 21.2**	**-1.0**
LPHEP	**Lephephe**	**22.64**	**337**	*i* P	**P**	**06 35 21.8**	**-0.4**
KDWAN	**Kaudwane**	**22.98**	**334**		**P**	**06 35 24.9**	**-0.9**
LKGWB	**Lokgwabe**	**23.54**	**326**	P	**P**	**06 35 29.4**	**-2.0**
KGCAE	**Kacgae**	**24.30**	**329**		**P**	**06 35 38.7**	**0.0**
KGCAE				IAmb	IAmb	06 35 52.6	
	comp=Z,64nm,1.0s						
KGCAE	**Kacgae**	**24.30**	**329**	*i* P	**P**	**06 35 39.2**	**+0.6**
BROLN	**Tlhalogang**	**24.44**	**342**	*i* P	**P**	**06 35 39.2**	**-0.7**
SYO	**Syowa Base**	**24.49**	**176**	⇑*e*P	**P**	**06 35 39.2**	**-0.6**
SYO	**Syowa Base**	**24.49**	**176**	⇑*e*pP	pP	06 35 43.6	+2.1
VOI	**Vohitsoka**	**24.59**	**26**	P	**P**	**06 35 41.9**	**+0.7**
VOI				IAmb	IAmb	06 35 53.4	
	comp=Z,37nm,1.1s						
KOOLE	**Kule**	**24.95**	**325**	P	**P**	**06 35 44.7**	**+0.1**
PHDHD	**Phuduhudu**	**26.02**	**336**	P	**P**	**06 35 54.7**	**+0.5**
PHDHD				IAmb	IAmb	06 36 19.2	
	comp=Z,39nm,1.0s						
GRTLG	**Ghanzi**	**26.03**	**329**	P	**P**	**06 35 53.2**	**-1.1**
GRTLG				IAmb	IAmb	06 36 03.5	
	comp=Z,30nm,1.1s						
WIN	**Windhoek**	**26.67**	**320**	P	**P**	**06 36 00.5**	**+0.3**
WIN				IAmb	IAmb	06 36 30.6	
	comp=Z,24nm,1.1s						
WIN	**Windhoek**	**26.67**	**320**	P	**P**	**06 36 00.5**	**+0.3**
WIN				pmax	pmax		
	comp=Z,24nm,1.1s						
MAW	**Mawson**	**27.16**	**157**	P	**P**	**06 36 03.2**	**-0.8**
	comp=Z,6.5nm,0.8s,baz=347,slow=6.6,SNR=9.7						
MAW				LR	LR	06 44 42.1	
	comp=Z,661nm,19.6s,baz=342,slow=32						
	comp=Z,6.5nm,0.8s						
QNGWA	**Qangwa**	**27.72**	**330**	P	**P**	**06 36 09.2**	**-0.4**
KSANE	**Kasane**	**28.13**	**339**	P	**P**	**06 36 12.6**	**-0.6**
KSANE				IAmb	IAmb	06 37 08.6	
	comp=Z,53nm,1.5s						
XAUDM	**Khaudum**	**28.58**	**331**	P	**P**	**06 36 16.8**	**-0.5**
TSUM	**Tsumeb**	**29.41**	**324**		**P**	**06 36 24.6**	**0.0**
TSUM				IAmb	IAmb	06 36 34.0	
	comp=Z,36nm,1.4s						
LSZ	**Lusaka**	**29.93**	**346**		**P**	**06 36 29.0**	**-0.2**
LSZ				IAmb	IAmb	06 36 38.2	
	comp=Z,45nm,1.4s						
LSZ	**Lusaka**	**29.93**	**346**	P	**P**	**06 36 29.0**	**-0.2**
LSZ				pmax	pmax		
	comp=Z,45nm,1.4s						
TROLL	**Troll, Antarti**	**31.54**	**199**	⇑P	**P**	**06 36 42.3**	**-0.6**
	comp=Z,443nm,0.9s						
SNAA	**Sanae**	**32.64**	**201**	⇑P	**P**	**06 36 52.3**	**-0.2**
	comp=Z,127nm,0.7s						
SNAA	**Sanae**	**32.64**	**201**		**P**	**06 36 52.3**	**-0.2**
SNAA				IAmb	IAmb	06 37 02.9	
	comp=Z,14nm,1.1s						
SNAA	**Sanae**	**32.64**	**201**	P	**P**	**06 36 52.1**	**-0.4**
	comp=Z,3.9nm,0.8s,baz=79,slow=6.1,SNR=28						
	comp=Z,3.9nm,0.8s						
SNAA	**Sanae**	**32.64**	**201**	*i* P	**P**	**06 36 50.6**	**-1.9**
SNAA				pmax	pmax		
	comp=Z,295nm,1.0s						
VNA2	**Neumayer--Watz**	**33.49**	**204**	⇑P	**P**	**06 36 59.9**	**-0.1**
	comp=Z,9.2nm,0.7s,baz=65,slow=9.3						
VNA1	**Neumayer--Stat**	**33.61**	**205**	⇑P	**P**	**06 37 05.6**	**+4.7**
	comp=Z,17nm,1.0s						
VNA3	**Neumayer Olymp**	**34.29**	**204**	⇑P	**P**	**06 37 06.3**	**-0.7**
	comp=Z,5.8nm,0.7s						
KIBK	**Kibwezi**	**42.23**	**4**	P	**P**	**06 38 14.4**	**+0.2**
BELA	**Belgrano 2**	**42.57**	**197**	P	**P**	**06 38 16.2**	**-0.1**
MBAR	**Mbarara**	**44.08**	**353**	P	**P**	**06 38 29.4**	**+0.1**
MBAR				IAmb	IAmb	06 38 41.3	
	comp=Z,21nm,1.4s						
MBAR	**Mbarara**	**44.08**	**353**	*i* P	**P**	**06 38 29.5**	**+0.1**
MBAR				pmax	pmax		
	comp=Z,11nm,1.3s						
QSPA	**South Pole Qui**	**45.54**	**180**		**P**	**06 38 39.7**	**-0.8**
QSPA	**South Pole Qui**	**45.54**	**180**	P	**P**	**06 38 38.8**	**-1.7**
	comp=Z,6.4nm,0.6s,baz=259,slow=3.1,SNR=61						
	comp=Z,6.4nm,0.6s						
SMAI	**San Martin Ant**	**53.70**	**207**	P	**P**	**06 39 42.6**	**+0.2**
SMAI				IAmb	IAmb	06 39 52.8	
	comp=Z,19nm,0.8s						
VNDA	**Vanda**	**53.73**	**167**		**P**	**06 39 42.5**	**0.0**
VNDA	**Vanda**	**53.73**	**167**	P	**P**	**06 39 41.9**	**-0.6**
	comp=Z,3.9nm,0.9s,baz=243,slow=6.5,SNR=18						
VNDA				LR	LR	07 01 41.6	
	comp=Z,583nm,18.3s,baz=252,slow=35						
	comp=Z,3.9nm,0.9s						
VNDA	**Vanda**	**53.73**	**167**	P	**P**	**06 39 42.5**	**0.0**
VNDA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SBA	**Scott Base**	**54.20**	**169**	P	**P**	**06 39 46.5**	**+0.5**
SBA				IAmb	IAmb	06 40 04.8	
	comp=Z,22nm,1.2s						
SBA	**Scott Base**	**54.20**	**169**	P	**P**	**06 39 46.5**	**+0.5**
SBA				pmax	pmax		
	comp=Z,22nm,1.2s						
H10S2	**ASCENSION HYDR**	**55.85**	**294**	T	T	07 40 44.3	
	baz=137,slow=74,SNR=157						
H10S3	**ASCENSION HYDR**	**55.87**	**294**	T	T	07 40 45.7	
	baz=83,slow=74,SNR=151						
H10N1	**ASCENSION HYDR**	**56.58**	**295**	T	T	07 42 05.6	
	baz=202,slow=75,SNR=28						
H10N2	**ASCENSION HYDR**	**56.59**	**295**	T	T	07 41 41.3	
	baz=202,slow=75,SNR=28						
H10N3	**ASCENSION HYDR**	**56.59**	**295**	T	T	07 41 40.2	
	baz=202,slow=75,SNR=26						
DBIC	**Dimbokro**	**62.60**	**314**	P	**P**	**06 40 45.3**	**0.0**
DBIC				IAmb	IAmb	06 40 53.3	
	comp=Z,20nm,1.1s						
DBIC	**Dimbokro**	**62.60**	**314**	P	**P**	**06 40 45.5**	**+0.2**
	comp=Z,7.1nm,0.8s,baz=136,slow=8.4,SNR=5.5						
	comp=Z,7.1nm,0.8s						
MORW	**Morawa**	**63.90**	**106**	P	**P**	**06 40 53.8**	**-0.2**
TORD	**Torodi Ar. Bea**	**65.17**	**323**	P	**P**	**06 41 02.9**	**+0.7**
	comp=Z,5.9nm,0.7s,baz=157,slow=4.8,SNR=4.4						
	comp=Z,5.9nm,0.7s						
PALK	**Pallekele**	**65.83**	**51**	*i* P	**P**	**06 41 08.0**	**+1.4**
PALK				pmax	pmax		
	comp=Z,26nm,1.0s						
RAYN	**Ar Rayn**	**68.50**	**10**	P	**P**	**06 41 22.3**	**-1.0**
RAYN	**Ar Rayn**	**68.50**	**10**	P	**P**	**06 41 22.3**	**-1.0**
RAYN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
VAO	**Valinhos**	**68.90**	**258**	P	**P**	**06 41 26.8**	**+0.6**
TRQA	**Tornquist**	**69.01**	**237**	P	**P**	**06 41 26.4**	**-0.1**
TRQA				IAmb	IAmb	06 41 36.1	
	comp=Z,12nm,1.1s						
TRQA	**Tornquist**	**69.01**	**237**	P	**P**	**06 41 26.4**	**-0.1**
TRQA				pmax	pmax		
	comp=Z,12nm,1.1s						
ITQB	**Itaqui**	**71.12**	**247**	P	**P**	**06 41 40.2**	**+0.7**
HYB	**Hyderabad**	**73.25**	**43**	*e*P	**P**	**06 41 52.6**	**+0.3**
HYB				*e*PcP	**PcP**	**06 42 09.1**	**+0.3**
HYB				*e*PP	**PP**	**06 44 35.4**	**-0.5**
HYB				*e*S	**S**	**06 51 21.4**	**+0.7**
CPUP	**Villa Florida**	**73.80**	**249**	P	**P**	**06 41 55.7**	**+0.1**
CPUP	**Villa Florida**	**73.80**	**249**	P	**P**	**06 41 55.7**	**+0.1**
	comp=Z,1.4nm,1.1s,baz=329,slow=5.9,SNR=4.9						
	comp=Z,1.4nm,1.1s						
CPUP	**Villa Florida**	**73.80**	**249**	P	**P**	**06 41 55.7**	**+0.1**
CPUP				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BDFB	**Brasilia**	**74.51**	**263**	P	**P**	**06 42 01.6**	**+1.6**
	comp=Z,2.1nm,1.0s,baz=86,slow=11,SNR=2.1						
	comp=Z,2.1nm,1.0s						
AQDB	**Aquidauana**	**76.63**	**254**	P	**P**	**06 42 12.4**	**+0.5**
AQDB				IAmb	IAmb	06 42 21.9	
	comp=Z,18nm,1.2s						
TOO	**Toolangi**	**76.68**	**130**	P	**P**	**06 42 12.4**	**+0.3**
TOO	**Toolangi**	**76.68**	**130**	P	**P**	**06 42 12.4**	**+0.3**
TOO				pmax	pmax		
	comp=Z,15nm,1.8s						
FITZ	**Fitzroy Crossi**	**77.70**	**103**	P	**P**	**06 42 18.2**	**+0.2**
FITZ	**Fitzroy Crossi**	**77.70**	**103**	P	**P**	**06 42 17.6**	**-0.4**
	comp=Z,32nm,1.1s,baz=213,slow=7.4,SNR=21						
	comp=Z,32nm,1.1s						
STKA	**Stephens Creek**	**78.55**	**124**	P	**P**	**06 42 21.3**	**-1.2**
	comp=Z,11nm,1.0s,baz=236,slow=5.1,SNR=10						
	comp=Z,11nm,1.0s						
STKA	**Stephens Creek**	**78.55**	**124**	*i* P	**P**	**06 42 22.1**	**-0.4**
CO03	**El Pedregal**	**79.18**	**237**	P	**P**	**06 42 26.7**	**+0.5**
CO03				IAmb	IAmb	06 42 35.5	
	comp=Z,32nm,1.2s						
CO01	**Juntas del Tor**	**79.43**	**238**	P	**P**	**06 42 27.6**	**-0.2**
CO01				IAmb	IAmb	06 42 38.8	
	comp=Z,16nm,0.9s						
ASAR	**Alice Springs**	**79.48**	**113**	P	**P**	**06 42 27.0**	**-0.9**
ASAR	**Alice Springs**	**79.48**	**113**	P	**P**	**06 42 26.4**	**-1.4**
	comp=Z,9.0nm,1.0s,baz=224,slow=5.4,SNR=52						
	comp=Z,9.0nm,1.0s						
ASAR	**Alice Springs**	**79.48**	**113**	P	**P**	**06 42 27.0**	**-0.9**
AS31	**Alice Springs**	**79.48**	**113**	P	**P**	**06 42 26.9**	**-0.9**
WRA	**Warramunga Arr**	**82.36**	**110**	P	**P**	**06 42 42.4**	**-0.8**
WRA	**Warramunga Arr**	**82.36**	**110**	P	**P**	**06 42 42.1**	**-1.1**
	comp=Z,9.9nm,0.9s,baz=220,slow=4.4,SNR=54						
	comp=Z,9.9nm,0.9s						
WRAB	**Tennant Creek**	**82.38**	**110**	P	**P**	**06 42 42.7**	**-0.7**
WRAB				IAmb	IAmb	06 42 43.5	
	comp=Z,21nm,1.1s						
WRAB	**Tennant Creek**	**82.38**	**110**	*i* P	**P**	**06 42 42.3**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,16nm,1.0s						
HRA	**Herat**	**82.40**	**22**		**P**	**06 42 43.3**	**+0.2**
HRA				IAmb	IAmb	06 42 44.0	
	comp=Z,14nm,0.9s						
PTLB	**Pontes e Lacer**	**82.44**	**256**		**P**	**06 42 43.7**	**+0.1**
PTLB				IAmb	IAmb	06 42 54.0	
	comp=Z,8.4nm,0.9s						
WR8	**Warramunga Arr**	**82.46**	**110**	IAmb	IAmb	06 42 43.9	
	comp=Z,14nm,1.1s						
KAPI	**Kappang**	**82.51**	**90**	*i* P	**P**	**06 42 42.4**	**-1.6**
KAPI				pmax	pmax		
	comp=Z,16nm,1.2s						
WB0	**Warramunga Arr**	**82.52**	**110**		**P**	**06 42 43.0**	**-1.1**
GEVA	**Gevas**	**82.90**	**6**	P	**P**	**06 42 46.1**	**+0.5**
GEVA				IAmb	IAmb	06 42 48.6	
	comp=Z,26nm,1.4s						
BNN	**Bunyan**	**83.15**	**0**	P	**P**	**06 42 47.4**	**+0.6**
KEST	**Kesra**	**83.44**	**339**	P	**P**	**06 42 50.1**	**+1.8**
	comp=Z,3.7nm,0.9s,baz=266,slow=0.9,SNR=3.7						
	comp=Z,3.7nm,0.9s						
BR131	**Keskin Array S**	**84.04**	**359**	IAmb	IAmb	06 42 52.2	
	comp=Z,5.4nm,0.9s						
BR131	**Keskin Array S**	**84.04**	**359*c***	*i*P	**P**	**06 42 51.5**	**+0.1**
BRTR	**Keskin Array B**	**84.04**	**359**	P	**P**	**06 42 51.5**	**+0.1**
BRTR	**Keskin Array B**	**84.04**	**359**	P	**P**	**06 42 51.0**	**-0.4**
	comp=Z,2.8nm,0.8s,baz=172,slow=7.2,SNR=18						
	comp=Z,2.8nm,0.8s						
BRTR	**Keskin Array B**	**84.04**	**359**	*i* P	**P**	**06 42 51.5**	**+0.1**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GNI	**Garni**	**84.87**	**7**	*i* P	**P**	**06 42 56.5**	**+0.9**
GNI				pmax	pmax		
	comp=Z,9.0nm,1.5s						
NIL	**Nilore**	**85.23**	**31**	P	**P**	**06 42 57.9**	**+0.5**
NIL	**Nilore**	**85.23**	**31**	P	**P**	**06 42 57.9**	**+0.5**
NIL				pmax	pmax		
	comp=Z,35nm,1.3s						
CMAR	**Chiang Mai Arr**	**85.36**	**59**	P	**P**	**06 42 57.5**	**-0.9**
	comp=Z,4.1nm,0.9s,baz=235,slow=5.2,SNR=14						
	comp=Z,4.1nm,0.9s						
CHTO	**Chiang Mai**	**85.64**	**58**	P	**P**	**06 42 59.1**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KNT	**Kendrikon**	**86.19**	**351**	P	**P**	**06 43 02.9**	**+1.0**
AKT	**Akhty**	**86.49**	**9**	*e*P	**P**	**06 43 03.5**	**0.0**
AKT				pmax	pmax		
	comp=Z,26nm,1.4s						
LPAZ	**La Paz**	**87.97**	**249**	P	**P**	**06 43 12.8**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=185,slow=8.5,SNR=3.7						
	comp=Z,0.2nm,0.3s						
SHA1	**Shidzhatmaz**	**88.27**	**5**	*i* P	**P**	**06 43 12.8**	**+0.6**
KBZ	**Khabaz**	**88.28**	**5**	P	**P**	**06 43 11.9**	**0.0**
	comp=Z,2.1nm,0.7s,baz=150,slow=4.7,SNR=6.2						
	comp=Z,2.1nm,0.7s						
KBZ	**Khabaz**	**88.28**	**5**	*i* P	**P**	**06 43 12.8**	**+0.9**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KIV	**Kislovodsk**	**88.49**	**5**	*e*P	**P**	**06 43 14.2**	**+1.1**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV	**Kislovodsk**	**88.49**	**5**	P	**P**	**06 43 12.1**	**-1.0**
	comp=Z,8.6nm,0.4s						
AQU	**L'Aquila**	**88.85**	**344**	P	**P**	**06 43 14.0**	**-0.8**
	comp=Z,6.5nm,0.8s						
VRI	**Vrincioaia**	**90.48**	**354**	P	**P**	**06 43 22.4**	**+0.1**
VRI				pmax	pmax		
	comp=Z,22nm,1.1s						
ESDC	**Sonseca Array**	**91.13**	**331**	P	**P**	**06 43 25.6**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=173,slow=4.2,SNR=8.1						
	comp=Z,0.8nm,0.8s						
BURAR	**Bucovina Array**	**92.34**	**353**		**P**	**06 43 31.7**	**+0.7**
BURAR				IAmb	IAmb	06 43 33.4	
	comp=Z,4.6nm,0.9s						
BURAR	**Bucovina Array**	**92.34**	**353**	P	**P**	**06 43 31.8**	**+0.8**
BURAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BUR08	**Bucovina Ar. S**	**92.37**	**353**	IAmb	IAmb	06 43 33.2	
	comp=Z,8.0nm,1.1s						
OBKA	**Obir**	**92.65**	**346**	*i* P	**P**	**06 43 34.0**	**+1.6**
	comp=Z,7.3nm,1.0s						
SOKA	**Soboth**	**92.73**	**346**	*i* P	**P**	**06 43 34.3**	**+1.5**
	comp=Z,6.9nm,1.2s						
PZH	**PanZhiHua**	**93.14**	**55**	P	**P**	**06 43 37.8**	**+2.5**
KMPD	**K-Podol'skiy**	**93.19**	**354**	P	**P**	**06 43 32.8**	**-1.9**
ARSA	**Arzberg**	**93.20**	**347**	*i* P	**P**	**06 43 36.4**	**+1.5**
	comp=Z,6.2nm,1.1s						
BERU	**Beregovo**	**93.20**	**352**	P	**P**	**06 43 34.1**	**-0.6**
PSZ	**Piszkesteto**	**93.21**	**350**	P	**P**	**06 43 34.6**	**-0.3**
PSZ	**Piszkesteto**	**93.21**	**350**	P	**P**	**06 43 34.6**	**-0.3**
PSZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ABTA	**Abfaltersbach**	**93.25**	**344**	*e*P	**P**	**06 43 37.5**	**+2.4**
	comp=Z,6.4nm,1.2s						
RONA	**Rosalia, Austr**	**93.51**	**347**	*e*P	**P**	**06 43 37.8**	**+1.6**
	comp=Z,1.5nm,0.5s						
CONA	**Conrad Observa**	**93.80**	**347**	*e*P	**P**	**06 43 38.3**	**+0.6**
	comp=Z,2.7nm,0.9s						
FETA	**Feichten**	**93.86**	**343**	*i* P	**P**	**06 43 39.3**	**+1.2**
	comp=Z,3.9nm,1.1s						
LESA	**Schwarzleotal**	**93.87**	**345**	*i* P	**P**	**06 43 39.8**	**+1.8**
	comp=Z,2.5nm,1.0s						
WTTA	**Wattenberg**	**93.91**	**344**	*e*P	**P**	**06 43 39.6**	**+1.3**
	comp=Z,6.0nm,1.2s						
BIOA	**Bad Ischl, Aus**	**93.95**	**345**	*e*P	**P**	**06 43 39.8**	**+1.5**
	comp=Z,1.4nm,0.7s						
SQTA	**Sankt Quirin**	**93.96**	**344**	*i* P	**P**	**06 43 40.0**	**+1.6**
	comp=Z,4.7nm,0.9s						
MOA	**Molln**	**93.99**	**346**	*i* P	**P**	**06 43 39.8**	**+1.4**
	comp=Z,4.1nm,1.2s						
WATA	**Walderalm**	**93.99**	**344**	*i* P	**P**	**06 43 39.4**	**+0.7**
	comp=Z,3.9nm,0.8s						
MOTA	**Moosalm**	**94.10**	**344**	*e*P	**P**	**06 43 39.9**	**+0.8**
	comp=Z,4.5nm,0.8s						
DAVA	**Damuels**	**94.29**	**343**	*e*P	**P**	**06 43 41.6**	**+1.5**
	comp=Z,2.9nm,1.1s						
BELG	**Belogornoye**	**97.27**	**8**	*i* P	Pdif	06 43 53.5	+0.2
BELG				pmax	pmax		
	comp=Z,1.0nm,1.1s						
CLL	**Collm**	**97.55**	**346**	*e*PP	**PP**	**06 47 53.0**	**+0.4**
CLL				*e*x	x	06 48 04.0	
NACGM	**Naroch**	**99.48**	**355**	*e*P	**Pdif**	**06 44 04.5**	**+1.4**
	comp=Z,5.0nm,0.6s,baz=174						
WMQ	**Urumqi**	**99.67**	**36**	*e*P	**Pdif**	**06 44 04.6**	**+0.2**
WMQ				pmax	pmax		
	comp=Z,18nm,0.9s						
WMQ				LR	LR		
	comp=Z,2µm,24.1s						
BRVK	**Borovoye**	**101.86**	**21**	*i* P	**Pdif**	**06 44 13.6**	**-0.2**
CRIN	**San Cristobal**	**121.75**	**256**		**PKPdf**	**06 49 14.8**	**-0.7**
KLR	**Kul'dur**	**125.53**	**53**	*i* PKIKP	**PKiKP**	**06 49 23.3**	**+1.4**
KLR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TXAR	**Lajitas Array**	**144.28**	**259**	PKP	PKPbc	06 49 55.7	+0.2
	comp=Z,2.4nm,0.8s,baz=148,slow=6.3,SNR=24						
TX31	**Lajitas Ar. Si**	**144.28**	**259**		PKPbc	06 49 55.6	+0.1
SN05	**Snyder 5**	**144.32**	**266**	PKPdf	PKPbc	06 49 55.3	-0.1
SN07	**Snyder 07**	**144.43**	**266**	PKPdf	PKPbc	06 49 55.6	-0.1
EPLO	**Experimental L**	**145.58**	**297**		**PKPdf**	**06 49 58.6**	**-0.1**
BILL	**Bilibino**	**145.59**	**30**		**PKPbc**	**06 49 58.3**	**0.0**
BILL	**Bilibino**	**145.59**	**30**	*i* PKP2	**PKPdf**	**06 49 57.8**	**-0.3**
BILL				pmax	pmax		
	comp=Z,20nm,1.1s						
ECSD	**EROS Data Cent**	**145.96**	**286**	PKPdf	**PKPdf**	**06 49 58.7**	**-0.8**
BLKN	**Baker Lake**	**146.74**	**323**	PKPdf	**PKPbc**	**06 50 02.2**	**+0.3**
ULM	**Lac du Bonnet**	**147.05**	**297**	PKPbc	**PKPbc**	**06 50 02.6**	**-0.6**
	comp=Z,5.2nm,0.6s,baz=91,slow=3.6,SNR=15						
ULM	**Lac du Bonnet**	**147.05**	**297**	*e*PKIKP	**PKPdf**	**06 50 00.7**	**-0.4**
ULM				pmax	pmax		
	comp=Z,5.0nm,0.6s						
FFC	**Flin Flon**	**151.06**	**306**		**PKPbc**	**06 50 13.1**	**-0.1**
FFC	**Flin Flon**	**151.06**	**306**	PKIKP	**PKPbc**	**06 50 13.1**	**-0.1**
RSSD	**Black Hills**	**151.19**	**283**		**PKPbc**	**06 50 14.2**	**0.0**
RSSD	**Black Hills**	**151.19**	**283**	PKIKP	**PKPbc**	**06 50 14.2**	**0.0**
MVCO	**Mesa Verde**	**151.88**	**267**		**PKiKP**	**06 50 16.5**	**+0.1**
PDAR	**Pinedale Array**	**154.69**	**278**	PKP	**PKPdf**	**06 50 12.7**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=69,slow=4.2,SNR=4.8						
D19K	**Kuna River**	**155.12**	**12**		PKPdf	06 50 22.6	+10
YKA	**Yellowknife Ar**	**155.15**	**326**	PKP	**PKPdf**	**06 50 11.8**	**-1.2**
	comp=Z,0.3nm,0.8s,baz=51,slow=4.0,SNR=3.5						
YKA				PKPab	**PKPab**	**06 50 38.4**	**+0.4**
	comp=Z,3.1nm,1.1s,baz=39,slow=4.3,SNR=12						
E22K	**Anaktuvuk Pass**	**156.19**	**7**		**PKPab**	**06 50 42.8**	**+0.5**
G27K	**Doyon Strip**	**157.76**	**357**		**PKPab**	**06 50 49.8**	**+0.7**
NVAR	**Mina Array Bea**	**159.38**	**262**	PKPab	**PKPab**	**06 50 57.7**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=97,slow=1.9,SNR=4.1						
ILAR	**Eielson Array**	**159.82**	**3**	PKPab	**PKPab**	**06 50 57.2**	**-0.8**
	comp=Z,1.2nm,0.9s,baz=333,slow=3.0,SNR=11						

TIF ***16*** *06:36:25.2, 42.°84N×45.°79E, h5*^{km}*±1*^{km}
MOS ***16*** *06:36:25.2, 42.°79N×45.°83E, h9*^{km}*, MPVA3.9*
DRS ***16*** *06:36:25.6, 42.°81N×45.°81E, h18*^{km}
NORS ***16*** *06:36:25.5, 42.°81N×45.°86E, h8*^{km}*, MPVA3.8*
ISC 16 06:36:27.1±1.0, **42.°82N**±0.°03×**45.°85E**±0.°02, **h9**^{km}±9^{km},
n29, σ**0.**^{s}**86**/55, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTLR	**Botlikh**	**0.32**	**119**	*e*Pg	**Pg**	**06 36 33.4**	**0.0**
BTLR				*e*Sg	**Sb**	**06 36 39.2**	**-1.1**
GROC	**Groznyy**	**0.39**	**354**	*i* Pg	**Pg**	**06 36 34.7**	**+0.1**
GROC				*e*Sg	**Sb**	**06 36 41.6**	**-0.6**
SHTL	**Shatili**	**0.54**	**253**	P	**Pg**	**06 36 35.9**	**-1.6**
SHTL				S	**Sg**	**06 36 43.2**	**-1.3**
DLMR	**Dylym**	**0.63**	**66**	*e*Pg	**Pg**	**06 36 38.7**	**-0.5**
DLMR				*e*Sg	**Sb**	**06 36 48.4**	**-0.7**
XNZR	**Khunzakh**	**0.69**	**113**	*e*Pg	**Pg**	**06 36 40.7**	**+0.3**
XNZR				*e*Sg	**Sb**	**06 36 51.3**	**+0.2**
UNCR	**Uncukul**	**0.71**	**98**	*e*Pg	**Pg**	**06 36 40.2**	**-0.4**
UNCR				*e*Sg	**Sb**	**06 36 51.7**	**+0.3**
KMGR	**Komgaron**	**0.76**	**289**	*e*Pg	**Pg**	**06 36 40.6**	**-1.1**
KMGR				*e*Sg	**Sg**	**06 36 52.1**	**+0.6**
KRNR	**Karanay**	**0.78**	**89**	*e*Pg	**Pg**	**06 36 41.3**	**-0.8**
KRNR				*e*Sg	**Sb**	**06 36 53.3**	**-0.3**
ARKR	**Arakani**	**0.87**	**104**	*e*Pg	**Pg**	**06 36 43.4**	**-0.4**
ARKR				*e*Sg	**Sn**	**06 36 57.6**	**-0.9**
VLKR	**Vladikavkaz**	**0.89**	**285**	*e*Pg	**Pb**	**06 36 45.0**	**+0.3**
VLKR				*e*Sg	**Sn**	**06 36 58.7**	**-0.2**
BUJR	**Buynaksk**	**0.93**	**89**	*e*Pg	**Pb**	**06 36 44.9**	**-0.4**
BUJR				*i* Sg	**Sn**	**06 37 00.0**	**+0.2**
GNBR	**Gunib**	**0.93**	**117**	*e*Pg	**Pb**	**06 36 45.0**	**-0.4**
GNBR				*e*Sg	**Sn**	**06 36 58.6**	**-1.3**
GUDG	**Gudauri**	**1.07**	**251**	*e*Pg	**Pb**	**06 36 46.2**	**-1.7**
GUDG				*e*Sg	**Sb**	**06 37 01.9**	**-0.2**
BTKR	**Batakoyurt**	**1.10**	**301**	*e*Pg	**Pb**	**06 36 48.2**	**-0.2**
BTKR				*e*Sg	**Sn**	**06 37 05.7**	**+1.5**
LACR	**Lac**	**1.14**	**271**	*e*Pg	**Pb**	**06 36 48.4**	**-0.6**
LACR				*e*Sg	**Sb**	**06 37 03.8**	**-0.2**
KMKR	**Kumukh**	**1.15**	**126**	*e*Pg	**Pb**	**06 36 49.1**	**-0.2**
KMKR				*e*Sg	**Sg**	**06 37 04.2**	**0.0**
TRKR	**Terskaya**	**1.22**	**318**	*e*Pg	**Pg**	**06 36 50.4**	**0.0**
TRKR				*e*Sg	**Sg**	**06 37 07.7**	**+1.5**
KORR	**Kora**	**1.33**	**282**	*e*Pg	**Pn**	**06 36 51.4**	**-0.5**
KORR				*e*Sg	**Sg**	**06 37 11.2**	**+1.3**
TBLG	**Delisi**	**1.36**	**217**	P	**Pn**	**06 36 52.3**	**0.0**
DGRG	**David-gareji**	**1.41**	**195**	P	**Pb**	**06 36 54.3**	**+0.7**
STDR	**Stavd-Durt**	**1.42**	**293**	*e*Pg	**Pg**	**06 36 54.5**	**+0.2**
STDR				*e*Sg	**Sg**	**06 37 14.8**	**+2.2**
URKR	**Urkarakh**	**1.47**	**116**	*e*Pg	**Pb**	**06 36 54.7**	**0.0**
URKR				*e*Sg	**Sg**	**06 37 16.5**	**+2.0**
PRTR	**Priterechnaya**	**1.48**	**310**	*e*Pg	**Pn**	**06 36 53.6**	**-0.2**
PRTR				*e*Sg	**Sg**	**06 37 15.6**	**+1.1**
LSNR	**Lesken**	**1.55**	**288**	*e*Pg	**Pn**	**06 36 55.0**	**+0.1**
LSNR				*e*Sg	**Sg**	**06 37 17.3**	**+0.4**
VSHL	**Vashlovani**	**1.64**	**165**	P	**Pg**	**06 36 58.9**	**+0.4**
DIGR	**Digorskoe uzhe**	**1.67**	**274**	*e*Pg	**Pn**	**06 36 56.2**	**-0.5**
DIGR				*e*Sg	**Sb**	**06 37 19.1**	**-0.2**
NCK	**Nalchik**	**1.78**	**293**	*e*Pg	**Pb**	**06 36 59.0**	**-0.9**
NCK				*e*Sg	**Sb**	**06 37 22.8**	**+0.4**
KZRT	**Kazreti**	**1.79**	**217**	P	**Pn**	**06 36 57.9**	**-0.3**
KZRT				S	**Sn**	**06 37 22.1**	**+1.0**
TRLG	**Trialeti**	**1.82**	**226**	P	**Pn**	**06 36 59.5**	**+0.8**
TRLG				S	**Sb**	**06 37 24.8**	**+1.1**

AEIC ***16*** *06:37:51.5±0.5, 52.°95N±0.°09×162.°6W±0.°1, h5*^{km}*±9*^{km}*,*
Error ellipse: s-maj=15.2km s-min=7.7km az=150.0
NEIC 16 06:37:47.7±1.1, **52.°95N**±0.°07×**162.°62W**±0.°09, **h10**^{km}±2^{km},
ML2.6/12, **ML2.6**(AEIC), **Error ellipse: s-maj=12.2km**
s-min=9.0km az=158.0, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISLZ	**Isanotski Laza**	**1.89**	**340**		Pn	06 38 19.8	-0.3
ISLZ					Sn	06 38 42.3	-1.7
WESE	**West Dahl East**	**1.92**	**323**		Pn	06 38 20.4	-0.1
SSLS	**Shishaldin Sou**	**1.94**	**336**		Pn	06 38 20.9	+0.1
SSLS					Sn	06 38 43.9	-1.4
FALS	**False Pass**	**1.97**	**346**		Pn	06 38 20.5	-0.5
FALS				Sn	Sn	06 38 44.9	-0.8
SSBA	**Shishaldin**	**2.03**	**335**		Pn	06 38 21.7	-0.3
SSBA					Sn	06 38 46.6	-0.9
WECS	**Westdahl Cape**	**2.04**	**322**		Pn	06 38 22.1	0.0
WEBT	**Westdahl Beart**	**2.08**	**323**		Pn	06 38 23.2	+0.6
AKUT	**Akutan**	**2.22**	**304**	Pn	Pn	06 38 24.6	0.0
AKUT					Pb	06 38 24.7	-3.2
AKUT				Sn	Sn	06 38 49.9	-2.2
AKUT				IAML		06 38 52.0	
	comp=N,35nm,1.0s						
AKUT				IAML		06 38 55.2	
	comp=E,38nm,0.9s						
AHB	**Akutan Harbor**	**2.24**	**303**		Pn	06 38 24.9	+0.1
AHB					Sn	06 38 50.9	-1.6
ZRO	**Akutan Zero**	**2.31**	**301**		Pn	06 38 26.0	+0.2
AKMO	**Akutan Morgan**	**2.33**	**301**		Pn	06 38 26.2	+0.2
UNV	**Unalaska Valle**	**2.49**	**293**		Pn	06 38 28.2	0.0
UNV				Sn	Sn	06 38 56.4	-2.3
PS1A	**Pavlof South-1**	**2.53**	**11**		Pn	06 38 29.0	+0.2
CNBA	**Chernabura Isl**	**2.59**	**43**		Pn	06 38 29.0	-0.6
CNBA				IAML		06 39 04.2	
	comp=N,16nm,0.8s						
MTBL	**Makushin Table**	**2.63**	**294**		Pn	06 38 30.8	+0.5
SDPT	**Sand Point**	**2.71**	**27**	Pn	Pn	06 38 30.8	-0.5
SDPT				IAML		06 39 07.6	
	comp=N,23nm,1.1s						
SDPT				IAML		06 39 15.6	
	comp=E,25nm,1.2s						
MAPS	**Pakushin South**	**2.73**	**290**		Pn	06 38 31.7	+0.2
S12K	**Black Hills**	**2.78**	**7**	Pn	Pn	06 38 32.6	+0.4
S12K				IAML		06 39 06.5	
	comp=N,23nm,1.0s						

OKTU	Okmok Mt. Tuli	3.29	280		Pn	06 38 39.5	+0.2
OKSP	Okmok Steeple	3.43	277		Pn	06 38 41.2	0.0

IDC 16 06:38:12.9±7.9**,30°.27S**×**178°.08W,h0^{km},mb3.4**/2**,
mbtmp3.4**/2**,Error ellipse: s-maj=327.8km
s-min=63.6km az=155.0,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.04	267	P	P	06 46 15.2	+0.5
	0.4nm,0.8s,baz=104,slow=7.8,SNR=4.2						
	0.4nm,0.8s						
WRA	Warramunga Arr	44.02	272	P	P	06 46 21.8	-0.7
	0.4nm,0.6s,baz=113,slow=7.9,SNR=4.2						
	0.4nm,0.6s						
FINES	FINESS Array B	145.00	340	PKPbc	PKPbc	06 57 49.8	-0.9
	1.1nm,0.9s,baz=22,slow=4.5,SNR=3.5						

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*IDC **16** 06:41:27.3±1.2, 18°.23S×167°.75E, h0^{km}, mb4.0/6,
mbtmp4.0/7, ML3.9/1, Error ellipse: s-maj=39.6km
s-min=25.1km az=139.0*

*NEIC **16** 06:41:28.9±0.8, 18°.34S±0°.04×168°.2E±0°.2, h28^{km}±9^{km},
mb4.2/10, Error ellipse: s-maj=31.4km s-min=5.8km
az=91.0*

*NOU **16** 06:41:30.2, 18°.29S×167°.65E, h21^{km}, MLv4.5/15,
Vanuatu Islands*

ISC 16 06:41:30.1±0.6**,18°.34S**±0°.04×**167°.81E**±0°.08**,h29^{km},n37,
σ1^{s}43**/35**,mb4.2**/14**,3C,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INH	Isangel	1.84	131	P	Pb	06 42 02.8	-0.3
VLAKA	Lakatoro	2.25	351	P	Pn	06 42 05.9	+0.5
VLAKA	Lakatoro	2.25	351	S	Sn	06 42 31.7	-0.5
SANVU	Saraoutou	2.93	349		Pn	06 42 14.6	-0.2
SANVU	Saraoutou	2.93	349	P	Pn	06 42 14.8	0.0
SANVU	Saraoutou	2.93	349	S	Sn	06 42 48.9	-0.2
MARNC	Mare, Loyalty	3.13	176	P	Pn	06 42 19.0	+1.4
YATNC	Mamie plateau,	3.80	193	P	Pn	06 42 27.0	+0.2
DZM	Mont Dzumac	3.93	199		Pn	06 42 28.8	+0.2
DZM	Mont Dzumac	3.93	199	Pn	Pn	06 42 29.0	+0.3
	7.4nm,0.3s,baz=320,slow=22,SNR=48						
DZM				Sn	Sn	06 43 10.9	-2.9
	18nm,0.3s,baz=284,slow=21,SNR=15						
	16nm,0.3s						
DZM	Mont Dzumac	3.93	199	P	Pn	06 42 28.9	+0.3
KOUNC	Koumac, New Ca	3.98	236	P	Pn	06 42 29.4	+0.1
KOUNC	Koumac, New Ca	3.98	236	S	Sn	06 43 15.1	+0.1
ONTNC	Ouen Toro	4.15	198	P	Pn	06 42 32.5	+1.0
OUENC	Ouen Island, N	4.16	192	P	Pn	06 42 33.3	+1.6
ARMA	Armidale	18.99	228	P	Pn	06 45 51.1	+0.6
CTAO	Charters Tower	20.43	262	P	Pn	06 46 06.8	-0.7
CTAO				IAmb	IAmb	06 46 24.3	
	comp=Z,7.6nm,0.8s						
CAN	Canberra	23.76	221	P	P	06 46 38.5	-1.6
CAN				IAmb	IAmb	06 47 03.9	
	comp=Z,7.0nm,1.0s						
STKA	Stephens Creek	27.21	235	P	P	06 47 13.8	+2.3
	comp=Z,5.8nm,1.0s,baz=83,slow=8.8,SNR=5.9						
	comp=Z,5.8nm,1.0s						
MGBR	Mount Gambier	30.66	225	P	P	06 47 42.3	+0.2
WR8	Warramunga Arr	31.48	262	P	P	06 47 50.5	+0.9
WR8				IAmb	IAmb	06 47 53.9	
	comp=Z,2.4nm,1.0s						
WB0	Warramunga Arr	31.59	262	P	P	06 47 51.7	+1.2
WB0				IAmb	IAmb	06 48 03.6	
	comp=Z,4.2nm,1.1s						
WRA	Warramunga Arr	31.63	262	P	P	06 47 51.3	+0.4
WRA	Warramunga Arr	31.63	262	P	P	06 47 51.6	+0.7
	comp=Z,0.7nm,0.8s,baz=94,slow=8.4,SNR=7.9						
	comp=Z,0.7nm,0.8s						
AS31	Alice Springs	32.04	255	P	P	06 47 56.1	+1.6
AS31				IAmb	IAmb	06 48 08.4	
	comp=Z,1.6nm,0.5s						
ASAR	Alice Springs	32.04	255	P	P	06 47 55.5	+0.9
ASAR	Alice Springs	32.04	255	P	P	06 47 55.6	+1.1
	comp=Z,2.3nm,0.5s,baz=82,slow=8.7,SNR=56						
	comp=Z,2.3nm,0.5s						
KNRA	Kununurra	37.38	268	P	P	06 48 42.2	+1.6
PETK	Petropavlovsk-	71.69	354	P	P	06 52 48.6	-0.4
QSPA	South Pole Qui	71.71	180	P	P	06 52 48.5	-0.8
QSPA	South Pole Qui	71.71	180	P	P	06 52 52.1	+2.8
	comp=Z,2.2nm,1.0s,baz=11,slow=2.8,SNR=3.9						
	comp=Z,2.2nm,1.0s						
SONM	Songino Array	85.69	324	P	P	06 54 04.5	-1.9
SONM				IAmb	IAmb	06 54 24.6	
	comp=Z,2.2nm,1.2s						
NVAR	Mina Array Bea	89.23	49	P	P	06 54 25.6	+1.8
	comp=Z,0.4nm,0.6s,baz=251,slow=3.8,SNR=4.1						
	comp=Z,0.4nm,0.6s						
ILAR	Eielson Array	89.79	18	P	P	06 54 26.5	+1.1
	comp=Z,0.3nm,0.7s,baz=232,slow=5.2,SNR=4.9						
	comp=Z,0.3nm,0.7s						
VNA3	Neumayer Olymp	90.63	181	⇑P	P	06 54 24.1	-5.5
	comp=Z,3.9nm,0.1s						
VNA2	Neumayer--Watz	90.91	182	⇑P	P	06 54 26.9	-3.9
	comp=Z,4.4nm,0.2s,baz=317,slow=5.4						
VNA1	Neumayer--Stat	91.20	181	⇑P	P	06 54 21.8	-10
	comp=Z,9.7nm,0.2s						

IDC 16 06:45:25.2±7.3**,30°.52S**×**178°.06W,h0^{km},mb3.6**/2**,
mbtmp3.6**/2**,Error ellipse: s-maj=304.2km
s-min=58.4km az=155.0,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.05	267	P	P	06 53 26.7	-0.3
	0.8nm,0.7s,baz=105,slow=7.2,SNR=10						
	0.8nm,0.7s						
WRA	Warramunga Arr	44.05	272	P	P	06 53 35.0	-0.1
	0.3nm,0.3s,baz=111,slow=8.0,SNR=8.2						
	0.3nm,0.3s						
H03S2	Juan Fernandez	80.44	124	T	T	08 25 21.8	
	baz=243,slow=75,SNR=39						
H03S1	Juan Fernandez	80.45	124	T	T	08 25 23.0	
	baz=243,slow=75,SNR=38						
H03S3	Juan Fernandez	80.46	124	T	T	08 25 21.8	
	baz=243,slow=75,SNR=56						
H03N3	Juan Fernandez	80.63	123	T	T	08 25 54.2	
	baz=258,slow=73,SNR=23						
H03N2	Juan Fernandez	80.64	123	T	T	08 25 57.4	
	baz=258,slow=73,SNR=33						
H03N1	Juan Fernandez	80.65	123	T	T	08 25 35.4	
	baz=258,slow=73,SNR=24						
FINES	FINESS Array B	145.24	340	PKPbc	PKPbc	07 05 03.0	-0.8
	0.4nm,0.3s,baz=28,slow=3.9,SNR=5.2						

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*NOU **16** 06:52:09.7, 39°.93S×173°.82E, h220^{km}, MLv3.8/19, Off W.
Coast of N. Island, N.Z.*

*WEL **16** 06:52:12.6±0.9, 40°S±5°×17°4E±°, h205^{km}±6^{km}, M3.3/18,
ML3.2/8, MLv3.3/18, Error ellipse: s-maj=8.5km
s-min=5.2km az=126.5, confirmed*

ISC 16 06:52:07.1±1.7**,39°.89S**±0°.05×**173°.75E**±0°.05**,
h245^{km}**±10^{km}**,n133,**σ**1^{s}63**/147**,Off west coast of North
Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NBEZ	Newall Road No	0.63	8	P	Pn	06 52 41.6	+1.8
KHEZ	Kahui Hut	0.63	19	P	Pn	06 52 41.5	+1.5
KHEZ	Kahui Hut	0.63	19	P	Pn	06 52 41.7	+1.7
KHEZ				S	S	06 53 05.0	-0.7
PREZ	Palmer Road	0.63	30	P	Pn	06 52 41.6	+1.7
PREZ				S	S	06 53 04.8	-0.8
LREZ	Lake Rotokare	0.66	50	P	Pn	06 52 41.7	+1.7
LREZ				S	S	06 53 04.9	-0.8
NEZ	North Egmont	0.67	23	P	Pn	06 52 41.8	+1.7
PKE	Pukeiti	0.72	15	P	Pn	06 52 42.3	+2.1
DREZ	Durham Road	0.78	26	P	Pn	06 52 42.4	+1.9
DUWZ	D'Urville Isla	0.92	172	P	Pn	06 52 42.8	+1.8
DUWZ				S	S	06 53 06.5	-1.4
WAZ	Wanganui	0.96	82	P	Pn	06 52 43.6	+2.3
WAZ				S	S	06 53 07.8	-0.3
VRZ	Vera Road	1.09	46	P	Pn	06 52 43.2	+1.1
VRZ				S	S	06 53 07.6	-1.9
OHWZ	Ohakea	1.24	105	P	Pn	06 52 45.1	+2.1
OHWZ				S	S	06 53 10.1	-1.1
TKNZ	Takaka Hill	1.29	208	P	Pn	06 52 45.0	+1.7
KIW	Kapiti Island	1.31	138	P	Pn	06 52 44.9	+1.5
QRZ	Quartz Range	1.32	225	P	Pn	06 52 44.9	+1.4
QRZ	Quartz Range	1.32	225	P	Pn	06 52 45.1	+1.6
QRZ				S	S	06 53 10.3	-1.9
NNZ	Nelson	1.36	192	P	Pn	06 52 45.5	+1.8
NNZ				S	S	06 53 10.9	-1.8
PKVZ	Pokaka	1.37	64	P	Pn	06 52 45.5	+1.5
PKVZ				S	S	06 53 10.3	-2.6
TCW	Tory Channel	1.38	163	P	Pn	06 52 45.7	+1.9
TCW				S	S	06 53 10.9	-2.1
MTVZ	Mangateitei	1.42	70	P	Pn	06 52 45.9	+1.6
MTVZ				S	S	06 53 11.4	-2.2
OGWZ	Otaki Gorge	1.42	131	P	Pn	06 52 45.9	+1.6
OGWZ				S	S	06 53 12.6	-0.9
TRVZ	Turoa	1.51	67	P	Pn	06 52 46.8	+1.5
TRVZ				S	S	06 53 12.0	-3.1
FWVZ	Far West T-bar	1.53	66	P	Pn	06 52 46.8	+1.5
MAVZ	Matarangi	1.53	67	P	Pn	06 52 47.1	+1.6
WNVZ	Wahianoa	1.53	69	P	Pn	06 52 47.0	+1.7
TWVZ	Taurewa	1.54	58	P	Pn	06 52 46.5	+1.2
WHVZ	Whangaehu Hut	1.54	67	P	Pn	06 52 47.4	+1.9
TUWZ	Tuamarina	1.54	175	P	Pn	06 52 47.8	+2.7
COVZ	Chateau Observ	1.54	64	P	Pn	06 52 46.8	+1.4
CAW	Cannon Point	1.57	141	P	Pn	06 52 46.9	+1.6
SNZO	South Karori	1.59	153	P	Pn	06 52 46.6	+1.1
SNZO	South Karori	1.59	153	S	S	06 53 13.9	-1.9
WEL	Wellington	1.59	151	P	Pn	06 52 47.0	+1.5
MRZ	Mangatainoka R	1.59	119	P	Pn	06 52 47.1	+1.5
NGZ	Ngauruhoe	1.60	64	P	Pn	06 52 47.5	+1.6
MOVZ	Moawhango	1.62	73	P	Pn	06 52 47.2	+1.3
WTVZ	West Tongariro	1.62	62	P	Pn	06 52 47.5	+1.5
HIZ	Hauiti	1.62	32	P	Pn	06 52 46.7	+0.8
HIZ	Hauiti	1.62	32	S	S	06 53 14.6	-1.7
HIZ	Hauiti	1.62	32	P	Pn	06 52 46.9	+1.1
POWZ	Post Office Ro	1.62	109	P	Pn	06 52 47.4	+1.6
NNVZ	North Ngauruho	1.63	63	P	Pn	06 52 47.7	+1.6
HOWZ	Holdsworth Sta	1.68	127	P	Pn	06 52 47.7	+1.5
MRNZ	Matariki Terra	1.69	206	P	Pn	06 52 48.0	+1.7
ETVZ	East Tongariro	1.69	64	P	Pn	06 52 48.5	+1.9
TMVZ	Te Maari	1.69	63	P	Pn	06 52 48.6	+2.0
TSZ	Takapari Road	1.70	96	P	Pn	06 52 48.1	+1.6
BHW	Baring Head	1.74	151	P	Pn	06 52 48.0	+1.3
PRWZ	Pori Road	1.82	112	P	Pn	06 52 49.5	+2.1
BSWZ	Blackbirch Sta	1.82	177	P	Pn	06 52 49.4	+1.9
MTW	Mount Morrison	1.84	134	P	Pn	06 52 49.1	+1.5
TIWZ	Tintock	1.85	119	P	Pn	06 52 49.5	+1.7
RATZ	Rangitukua	1.87	57	P	Pn	06 52 49.6	+1.6
PNHZ	Pukenui	1.88	91	P	Pn	06 52 49.8	+1.7
CMWZ	Cape Campbell	1.89	170	P	Pn	06 52 50.1	+2.1
DVHZ	Dannevirke	1.90	103	P	Pn	06 52 49.8	+1.7
MSWZ	Moikau Station	1.90	144	P	Pn	06 52 49.5	+1.3
WATZ	Wairara	1.94	53	P	Pn	06 52 50.2	+1.7
PAWZ	Paruwai Farm	1.96	140	P	Pn	06 52 50.1	+1.4
THZ	Tophouse	1.98	199	P	Pn	06 52 50.7	+1.8
PLWZ	Palliser	2.03	146	P	Pn	06 52 50.7	+1.4
KRHZ	Kereru	2.03	84	P	Pn	06 52 51.1	+1.7
TMWZ	Te Maipa	2.03	127	P	Pn	06 52 51.0	+1.7
BFZ	Birch Farm	2.06	113	P	Pn	06 52 51.1	+1.5
BFZ	Birch Farm	2.06	113	S	S	06 53 21.4	-1.8
BFZ	Birch Farm	2.06	113	P	Pn	06 52 51.4	+1.7
WPHZ	Waipukurau	2.07	96	P	Pn	06 52 51.9	+2.2
TRWZ	Traveller	2.10	136	P	Pn	06 52 51.8	+1.7
CPWZ	Castlepoint	2.13	119	P	Pn	06 52 52.5	+2.3
ANWZ	Angora Road	2.16	106	P	Pn	06 52 51.4	+0.9
BKZ	Black Stump Fm	2.24	72	P	Pn	06 52 52.5	+1.1
BKZ	Black Stump Fm	2.24	72	P	S	06 53 23.5	-2.8
BKZ	Black Stump Fm	2.24	72	P	Pn	06 52 52.7	+1.3
PRHZ	Porangahau	2.24	101	P	Pn	06 52 53.6	+2.2
MCHZ	McNeill Hill	2.31	80	P	Pn	06 52 54.6	+2.5
MRHZ	Matea Rd	2.32	64	P	Pn	06 52 53.1	+0.9
DSZ	Denniston Nort	2.37	218	P	Pn	06 52 54.5	+1.9
PXZ	Pawanui	2.39	94	P	Pn	06 52 55.0	+2.2
KAHZ	Kahuranaki	2.41	89	P	Pn	06 52 55.4	+2.4
NMHZ	Naumai	2.49	72	P	Pn	06 52 56.4	+2.5
KHZ	Kahutara	2.53	184	P	Pn	06 52 55.3	+1.2
KHZ	Kahutara	2.53	184	S	S	06 53 29.8	-1.5
KHZ	Kahutara	2.53	184	P	Pn	06 52 55.6	+1.5
CKHZ	Cape Kidnapper	2.57	86	P	Pn	06 52 57.0	+2.4
ARHZ	Aropaoanui	2.58	77	P	Pn	06 52 57.1	+2.3
MTHZ	Maungataniwha	2.61	68	P	Pn	06 52 56.5	+1.4
RAHZ	Arahi	2.76	70	P	Pn	06 52 58.6	+2.0
RTZ	Ruatahuna	2.81	64	P	Pn	06 52 58.3	+1.0
WHHZ	Waihua	2.81	74	P	Pn	06 52 59.3	+2.1
MKAZ	Moumakai	2.99	22	P	Pn	06 53 01.3	+2.1
SNGZ	Shannon Statio	2.99	69	P	Pn	06 53 01.1	+1.9
URZ	Urewera	3.08	59	P	Pn	06 53 00.3	+0.2
URZ	Urewera	3.08	59	P	Pn	06 53 00.5	+0.4
LTZ	Lake Taylor	3.10	201	P	Pn	06 53 01.7	+1.5
GVZ	Greta Valley S	3.12	190	P	Pn	06 53 01.7	+1.3
KNZ	Kokohu	3.16	75	P	Pn	06 53 02.6	+1.7
MHGZ	Mahia Peninsul	3.29	78	P	Pn	06 53 04.7	+2.3
MWZ	Matawai	3.32	63	P	Pn	06 53 03.7	+0.8
INZ	Inchbonnie	3.32	211	P	Pn	06 53 04.2	+1.5
RIGZ	Rimuhau	3.33	70	P	Pn	06 53 04.5	+1.6
PRGZ	Paritu Road	3.34	74	P	Pn	06 53 04.8	+1.8
AMCZ	Amberley	3.39	194	P	Pn	06 53 04.7	+1.3
TKGZ	Te Karaka	3.50	67	P	Pn	06 53 06.2	+1.5
RUGZ	Raukumara Rang	3.61	59	P	Pn	06 53 06.2	-0.1
OXZ	Oxford	3.67	200	P	Pn	06 53 07.6	+1.0
TWGZ	Tauwhareparae	3.71	64	P	Pn	06 53 09.1	+1.8
CNGZ	Carnagh Statio	3.73	69	P	Pn	06 53 09.4	+1.9
HAZ	Te Kaha	3.80	57	P	Pn	06 53 08.3	+0.1
OKCZ	Okains Bay	3.87	187	P	Pn	06 53 09.8	+0.9
MQZ	McQueen's Vall	3.90	192	P	Pn	06 53 09.5	+0.2
WVZ	Waitaha Valley	3.91	214	P	Pn	06 53 10.8	+1.4
PKGZ	Pakihiroa	3.94	60	P	Pn	06 53 10.5	+0.6
PUZ	Puketiti	3.95	64	P	Pn	06 53 10.9	+0.8
MHCZ	Mount Hutt	3.99	204	P	Pn	06 53 11.6	+1.2
RACZ	Rakaia	4.02	197	P	Pn	06 53 11.9	+1.2
AKCZ	Akaroa Harbour	4.03	189	P	Pn	06 53 11.8	+0.9
WMGZ	Waiomatatini S	4.18	62	P	Pn	06 53 13.4	+0.6
MXZ	Matakaoa Point	4.25	58	P	Pn	06 53 14.5	+0.9
MXZ	Matakaoa Point	4.25	58	P	Pn	06 53 14.4	+0.8
GCSZ	Gaunt Creek Bo	4.28	216	P	Pn	06 53 15.1	+1.2
WACZ	Wakanui South	4.29	199	P	Pn	06 53 15.4	+1.5
RPZ	Rata Peaks	4.32	207	P	Pn	06 53 15.9	+1.5
RPZ	Rata Peaks	4.32	207	P	Pn	06 53 15.8	+1.4
ARCZ	Arundel	4.49	205	P	Pn	06 53 17.6	+1.2
FOZ	Fox Glacier	4.68	218	P	Pn	06 53 19.5	+0.8
TMZ	Timaru	4.93	204	P	Pn	06 53 23.3	+1.5
LBZ	Lake Benmore	5.22	209	P	Pn	06 53 26.2	+0.9
JCZ	Jackson Bay	5.58	220	P	Pn	06 53 30.4	+0.6
JCZ	Jackson Bay	5.58	220	P	Pn	06 53 30.5	+0.6
ODZ	Otahua Downs	5.64	203	P	Pn	06 53 31.9	+1.4
ODZ	Otahua Downs	5.64	203	P	Pn	06 53 32.0	+1.6
WKZ	Wanaka	6.05	214	P	Pn	06 53 36.3	+0.6
MSZ	Milford Sound	6.44	220	P	Pn	06 53 41.2	+0.7

DJA 16 06:57:01.4±0.9**,9°S**±4°×**11°2E**±°**,h30^{km}**±12^{km}**,M3.8**/13**,
mb4.1**/1**,MLv3.6**/13**,Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GMJI	Gumukmas	1.12	57	P	Pn	06 57 20.8	-0.3
GMJI				S	Sn	06 57 34.8	-0.8
PCJI	Pacitan	1.47	298	P	Pn	06 57 25.5	-0.4
PCJI				S	Sn	06 57 43.4	-0.7
JAGI	Jajag, Banyuwa	1.69	76	P	Pn	06 57 28.5	-0.5
JAGI				S	Sn	06 57 48.1	-1.6
WOJI	Wonogiri, Jawa	1.87	304	P	Pn	06 57 31.3	-0.1
GRJI	Gresik	1.96	360	P	Pn	06 57 32.6	-0.1
UGM	Wanagama	2.17	296	P	Pn	06 57 35.4	-0.2
KMMI	Kalianget	2.34	39	P	Pn	06 57 36.6	-1.3
KMMI				S	Sn	06 58 06.3	+0.7
SRBI	Singaraja	2.81	74	P	Pn	06 57 45.0	+0.7
SRBI				S	Sn	06 58 18.2	+1.0
TWSI	Taliwang, Sumb	4.34	88	P	Pn	06 58 04.8	-0.6
JCJI	Jatiwangi	4.81	299	P	Pn	06 58 09.8	-2.1
PLAI	Plampang	5.22	90	P	Pn	06 58 19.7	+2.2

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*GCG **16** 06:57:31.4±3.5, 15°.11N×94°.48W, h36^{km}±999^{km}, MD4.3,
ML3.2*

*MEX **16** 06:57:34.1±0.5, 15°.25N×94°.42W, h26^{km}±23^{km}, MD4.0*

ISC 16 06:57:26.4±1.4**,15°.26N**±0°.06×**94°.44W**±0°.02**,h18^{km}**±5^{km}**,
n23,**σ**2^{s}13**/43**,Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.26	69	*e*P	Pg	06 57 53.3	+2.5
PCIG				*e*S	Sg	06 58 07.6	+0.3
HUIG	Huatulco	1.69	288	*e*P	Pg	06 58 00.1	+1.2
HUIG				*e*S	Sb	06 58 18.5	+0.7
HUIG	Huatulco	1.69	288	*i* P	Pg	06 58 00.1	+1.2
HUIG				*i* S	Sb	06 58 18.3	+0.5
HUIG				IAML		06 58 19.3	
	comp=N,118nm,0.1s						
TGIG		1.97	40	*e*P	Pg	06 58 04.1	-0.2
TGIG				*e*S	Sb	06 58 26.4	+0.3
TGIG		1.97	40	*i* P	Pg	06 58 04.2	-0.2
TGIG				*i* S	Sg	06 58 29.1	-0.9
TGIG				IAML		06 58 31.1	
	comp=E,163nm,0.2s						
THIG		2.13	99	*e*P	Pb	06 58 05.5	+1.0
THIG				*e*S	Sn	06 58 28.5	+1.4
PATR	El Naranjo	2.13	94	*e*P	Pb	06 58 05.5	+0.8
PATR				*e*S	Sn	06 58 26.6	-1.0
PAVE	Pavencul	2.19	91	*e*P	Pb	06 58 06.7	+1.1
PAVE				*e*S	Sn	06 58 29.1	+0.3
CCIG	Comitan	2.44	65	*e*P	Pg	06 58 11.6	-1.7
CCIG				*e*S	Sb	06 58 40.3	+0.6
CCIG	Comitan	2.44	65	*i* P	Pg	06 58 12.3	-1.0
CCIG				*i* S	Sg	06 58 43.6	-1.4
CCIG				IAML		06 58 47.2	
	comp=N,104nm,0.3s						
PEIG	Puerto Escondi	2.71	286	*e*P	Pb	06 58 14.4	+0.1
PEIG				*e*S	Sn	06 58 42.1	+0.6
VHO	Vista Hermosa	2.85	310	*e*P	Pn	06 58 12.1	+0.9
VHO				*e*S	Sn	06 58 46.3	+1.2
STG8	El Palmar, Qui	3.09	105	*i* P	Pn	06 58 15.3	+0.7
STG8				*i* S	Sn	06 58 46.5	-4.7
STG8				IAML		06 58 46.8	
	comp=N,145nm,0.3s						
STG0	El Palmar, Qui	3.11	105	*i* P	Pn	06 58 15.7	+0.9
STG0				*i* S	Sn	06 58 49.0	-2.5
STG0				IAML		06 58 51.8	
	comp=E,164nm,0.2s						
YOIG	Yosondua	3.38	298	*e*P	Pb	06 58 23.5	-2.5
YOIG				*e*S	Sn	06 58 58.8	+0.4
PNIG	Pinotepa	3.72	288	*e*P	Pb	06 58 29.1	-2.6
PNIG				*e*S	Sn	06 59 06.6	+0.1
TXIG	Tlaxiaco	3.76	302	*e*P	Pb	06 58 29.5	-3.0
TXIG				*e*S	Sn	06 59 11.2	+3.5
TOIG	Toxpalan	3.78	319	*e*P	Pb	06 58 33.0	+0.3
TOIG				*e*S	Sn	06 59 10.3	+2.3
HLIG	Huajuapan de L	4.12	309	*e*S	Sn	06 59 21.1	+4.6
FTIG	Fresnillo de T	4.41	307	*e*P	Pb	06 58 41.0	-2.5
FTIG				*e*S	Sn	06 59 18.7	-4.9
MGIG	Malinaltepec	4.48	297	*e*P	Pb	06 58 41.1	-3.6
MGIG				*e*S	Sn	06 59 28.9	+3.5
CRIG	Cruz Grande	4.74	289	*e*P	Pn	06 58 43.0	+6.0
CRIG				*e*S	Sn	06 59 29.8	-1.8
CAIG	El Cayaco	5.87	288	*e*P	Pn	06 58 59.3	+6.7
CAIG				*e*S	Sn	06 59 57.9	-1.6

IDC 16 07:04:08.6±2.1**,32°.55S**×**178°.53W,h0^{km},mb3.7**/3**,
mbtmp3.7**/4**,ML3.2**/1**,Error ellipse: s-maj=50.0km
s-min=37.7km az=67.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.72	211	Pn	Pn	07 05 46.8	-1.7
	0.5nm,0.3s,baz=353,slow=4.2,SNR=6.5						
	3.7nm,0.6s						
ASAR	Alice Springs	42.59	270	P	P	07 12 06.9	+0.2
	0.8nm,0.8s,baz=111,slow=7.8,SNR=6.8						
	0.8nm,0.8s						
WRA	Warramunga Arr	43.78	275	P	P	07 12 16.2	0.0
	0.7nm,0.7s,baz=113,slow=8.0,SNR=5.9						
	0.7nm,0.7s						
QSPA	South Pole Qui	57.57	180	P	P	07 14 00.2	+0.3
	1.1nm,1.0s,baz=12,slow=2.8,SNR=2.1						
	1.1nm,1.0s						
FINES	FINESS Array B	146.99	338	PKPbc	PKPdf	07 23 51.3	+0.9
	0.8nm,0.7s,baz=34,slow=3.5,SNR=5.1						

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*IDC **16** 07:04:49.4±1.1, 33°.79S×179°.25W, h0^{km}, mb3.7/4,
mbtmp3.7/5, ML3.8/1, Error ellipse: s-maj=38.1km
s-min=28.6km az=80.0*

ISC 16 07:04:57.4±1.3**,34°.0S**±0°.1×**179°.5W**±0°.2**,h53^{km},n9,
σ1^{s}48**/10**,mb3.6**/4**,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	5.04	212	Pn	Pn	07 06 08.3	-2.2
	3.3nm,0.3s,baz=340,slow=4.8,SNR=18						
URZ				Sn	Sn	07 07 08.4	+0.9
	2.6nm,0.3s,baz=52,slow=14,SNR=1.8						
	12nm,0.5s						
ASAR	Alice Springs	41.76	272	P	P	07 12 42.6	+0.9
	0.6nm,0.7s,baz=118,slow=8.1,SNR=4.9						
	0.6nm,0.7s						
WRA	Warramunga Arr	43.07	277	P	P	07 12 53.4	+1.0
	0.2nm,0.4s,baz=116,slow=7.9,SNR=1.8						
	0.2nm,0.4s						
QSPA	South Pole Qui	56.12	180	P	P	07 14 33.1	+1.8
	2.4nm,1.2s,baz=14,slow=1.8,SNR=6.0						
	2.4nm,1.2s						
SNAA	Sanae	74.60	179	P	P	07 16 30.4	0.0
	1.2nm,1.1s,baz=178,slow=17,SNR=5.8						
	1.2nm,1.1s						
FINES	FINESS Array B	148.00	337	PKPbc	PKPbc	07 24 35.1	-0.9
	1.6nm,0.5s,baz=37,slow=4.7,SNR=16						
NB2	NORSAR Subarra	152.06	349	PKP	PKPbc	07 24 44.9	-1.1
	comp=Z,0.5nm,0.5s,baz=15,slow=2.5						
NOA	NORSAR Array B	152.06	349	PKPbc	PKPbc	07 24 45.3	-0.8
	comp=Z,0.4nm,0.6s,baz=17,slow=2.5,SNR=5.5						
HFS	Hagfors	152.45	346	PKPbc	PKPbc	07 24 45.5	-1.4
	comp=Z,1.5nm,0.9s,baz=318,slow=4.1,SNR=4.3						

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*SJA **16** 07:11:42.5±1.0, 28°.22S×71°.79W, h30^{km}, ML3.7, MW4.1*

*GUC **16** 07:11:47.9±0.9, 28°.36S×71°.20W, h36^{km}±3^{km}, ML3.7*

ISC 16 07:11:45.7±2.0**,28°.30S**±0°.03×**71°.47W**±0°.07**,h13^{km}**±12^{km}**,
n23,**σ**1^{s}91**/47**,1C-2D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AC04	Llanos de Chal	0.36	74	⇑*i*P	Pb	07 11 54.4	+0.5
AC04				*i* S	Sg	07 11 58.8	+1.0
AC04				IAML		07 11 59.1	
	comp=E,26µm,0.1s						
LCO	Las Campanas	0.97	137	*i* P	Pb	07 12 02.5	-2.1
LCO				*i* S	Sb	07 12 13.8	-3.7
GO03	Copiapo	1.30	57	⇓*i*P	Pn	07 12 08.4	-1.2
GO03				*i* S	Sn	07 12 23.3	-3.5
GO03				IAML		07 12 26.8	
	comp=N,3µm,0.3s						
AC06	Mina Casimiro	1.36	47	⇓*i*P	Pn	07 12 10.1	-0.3
AC06				*i* S	Sn	07 12 25.6	-2.7
AC06				IAML		07 12 30.2	
	comp=E,2µm,0.4s						
CO05	La Serena	1.62	173	*e*P	Pn	07 12 14.2	+0.3
CO05				*e*S	Sn	07 12 34.2	-0.6
CO05				IAML		07 12 38.6	
	comp=E,902nm,0.4s						
GO04	Tololo Observa	1.95	163	*i* P	Pn	07 12 19.0	+0.3
GO04				*i* S	Sn	07 12 42.8	-0.5
GO04				IAML		07 12 53.8	
	comp=N,2µm,0.4s						
CO01	Juntas del Tor	2.06	145	*e*P	Pn	07 12 19.9	-0.2
CO01				*e*S	Sn	07 12 44.5	-1.3
CO06	Fray Jorge	2.37	184	*e*P	Pn	07 12 23.9	-0.4
AC02	Maricunga	2.54	55	*e*P	Pb	07 12 33.0	+1.6
AC02				*e*S	Sb	07 13 01.5	-1.1
AC02				IAML		07 13 07.6	
	comp=Z,185nm,0.3s						
CO03	El Pedregal	2.62	165	*e*P	Pn	07 12 28.1	+0.3
CO03				*e*S	Sn	07 12 59.2	-0.2
CO03				IAML		07 13 10.3	
	comp=E,311nm,0.5s						
AGUA	GUANDACOL	2.86	115	*e*P	Pn	07 12 33.0	+1.9
AGUA				*e*P	Pb	07 12 33.7	-2.9
AGUA				*e*S	Sb	07 13 11.0	-0.7
AGUA				IAML		07 13 15.7	
	comp=Z,137nm,0.5s						
VCA	Vinchina	2.90	99	*e*P	Pn	07 12 33.0	+1.3
VCA				*e*P	Pb	07 12 34.7	-2.7
VCA				*e*S	Sn	07 13 11.0	+4.5
VCA				IAML		07 13 20.5	
	comp=Z,171nm,0.5s						
CO02	Combarbal	2.92	172	*e*P	Pn	07 12 31.9	-0.1
ACCO	Cerro Coronel	3.09	138	*e*P	Pn	07 12 37.0	+2.5

ACCO				eS	Sb	07 13 17.5	-1.1
GO02	Mina Guanaco	3.55	29	eP	Pn	07 12 41.1	+0.4
GO02				eS	Sb	07 13 33.5	+1.9
RTLS	Leoncito	3.96	152	eP	Pn	07 12 44.5	-1.9
RTLS				eP	Pb	07 12 49.2	-6.3
RTLS				eS	Sn	07 13 36.5	+3.6
RTLS				IAML		07 13 53.0	
	comp=Z,294nm,0.6s						
RTLL	Cerro Villicun	3.98	140	eP	Pn	07 12 48.7	+2.2
RTLL				eS	Sg	07 13 54.3	+0.8
ACLC	CERRO LA CRUZ	4.11	107	eP	Pn	07 12 49.5	+1.1
ACLC				eS	Sn	07 13 37.0	+0.5
ACLC				IAML		07 13 44.5	
	comp=Z,50nm,0.5s						
AVFE	Valle Fertil	4.21	125	eP	Pn	07 12 50.4	+0.7
AVFE				eS	Sn	07 13 39.5	+0.7
AVFE				IAML		07 13 45.9	
	comp=Z,57nm,0.8s						
AUSP	Uspallata	4.30	156	eP	Pn	07 12 53.4	+2.3
AUSP				eS	Sn	07 13 44.5	+3.2
VA03	San Esteban	4.52	170	eP	Pn	07 12 54.6	+0.8
VA03				eS	Sb	07 13 59.5	+0.2
VA03				IAML		07 14 07.7	
	comp=Z,92nm,1.2s						
CYA	Choya	4.99	93	eP	Pn	07 13 00.6	+0.3
CYA				eP	Pn	07 13 00.7	+0.3
CYA				eS	Sn	07 13 57.9	-0.1
CYA				IAML		07 14 02.4	
	comp=Z,37nm,1.0s						
ARCO	CERRO ARCO	5.03	155	eP	Pn	07 13 03.0	+2.1
ARCO				eS	Sn	07 14 02.5	+3.6
ARCO				IAML		07 14 25.8	
	comp=Z,62nm,0.6s						

IDC 16 07:23:36.4±3.1, 30°.58S×177°.84W, h0^{km}, mb3.8/3, mbtmp3.8/4, ML3.1/1, Error ellipse: s-maj=72.0km s-min=45.0km az=123.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.72	207	Pn	Pn	07 25 43.3	-0.5
	0.2nm,0.3s,baz=357,slow=2.9,SNR=2.1						
URZ				Sn	Sn	07 27 15.5	-7.4
	0.2nm,0.3s,baz=258,slow=20,SNR=2.3						
	5.7nm,0.8s						
STKA	Stephens Creek	34.58	257	P	P	07 30 28.2	+1.2
	2.1nm,0.7s,baz=91,slow=9.9,SNR=6.0						
	2.1nm,0.7s						
ASAR	Alice Springs	43.24	267	P	P	07 31 39.1	-0.7
	0.4nm,0.5s,baz=106,slow=7.2,SNR=6.7						
	0.4nm,0.5s						
WRA	Warramunga Arr	44.25	272	P	P	07 31 47.3	-0.5
	0.6nm,0.4s,baz=114,slow=7.9,SNR=15						
	0.6nm,0.4s						
FINES	FINESS Array B	145.36	340	PKPbc	PKPbc	07 43 14.6	-0.8
	1.0nm,0.7s,baz=36,slow=5.2,SNR=5.6						

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*IDC **16** 07:31:35.8±0.6, 12°.89S×45°.40E, h0^{km}, mb4.0/13, mbtmp4.1/15, ML4.9/3, Error ellipse: s-maj=19.8km s-min=17.2km az=95.0*

*NEIC **16** 07:31:37.7±1.7, 12°.77S±0°.06×45°.41E±0°.08, h10^{km}±1^{km}, mb4.6/35, Error ellipse: s-maj=14.8km s-min=8.1km az=302.0*

ISC 16 07:31:36.9±0.4, 12°.91S±0°.05×45°.50E±0°.06, h10^{km}, n102, σ1^{s}.84/108, mb4.5/49, 3C-1D, Northwest of Madagascar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBV	Sambava	4.34	98	P	Pn	07 32 42.9	0.0
SBV				S	Sn	07 33 28.5	-5.1
OPO	Ambohidratompo	5.86	164	Pn	Pn	07 33 04.4	+0.4
	18nm,0.3s,baz=334,slow=12,SNR=1274						
OPO				Sn	Sn	07 34 06.0	-5.3
	9.5nm,0.3s,baz=219,slow=22,SNR=11						
OPO	Ambohidratompo	5.86	164	P	Pn	07 33 04.9	+0.9
FIRM	Firavahana	5.91	167	P	Pn	07 33 05.6	+0.9
FIRM				S	Sn	07 34 07.4	-5.2
ATG	Ambohiby	5.97	174	P	Pn	07 33 05.8	+0.2
ATG				S	Sn	07 34 10.7	-3.5
ABPO	Ambohimpanom	6.29	165		Pn	07 33 10.5	+0.5
ABPO	Ambohimpanom	6.29	165	P	Pn	07 33 10.4	+0.5
ABPO				S	Sn	07 34 16.2	-5.9
AVY	Angavokely	6.36	161	P	Pn	07 33 11.2	+0.3
AVY				S	Sn	07 34 19.4	-4.4
DGRM	Ambatolahisoa	6.37	172	P	Pn	07 33 11.5	+0.4
DGRM				S	Sn	07 34 18.5	-5.6
ABM	Ambohimiarambe	7.06	166	P	Pn	07 33 21.1	+0.5
VOI	Vohitsoka	9.03	172		Pn	07 33 47.8	+0.2
FOMA	Nahampoana Res	12.08	174	Pn	Pn	07 34 29.4	+0.2
RER	Riviere de l'E	12.77	131		Pn	07 34 38.6	-0.2
MSEY	Mahe Island	12.81	51	Pn	Pn	07 34 37.4	-1.8
KIBK	Kibwezi	12.84	324		Pn	07 34 35.3	-4.4
LSZ	Lusaka	16.96	260		Pn	07 35 32.7	-1.9
LSZ				IAmb	IAmb	07 35 38.2	
	comp=Z,71nm,0.9s						
LSZ	Lusaka	16.96	260	Pn	Pn	07 35 31.6	-3.0
	comp=Z,1.3nm,0.3s,baz=83,slow=9.2,SNR=32						
LSZ				Sn	Sn	07 38 28.4	-15
	comp=Z,0.3nm,0.3s,baz=25,slow=19,SNR=1.8						
	comp=Z,22nm,0.6s						
MATP	Matopo	17.91	243	P	Pn	07 35 45.6	-0.9
	comp=Z,0.4nm,0.3s,baz=66,slow=13,SNR=44						
	comp=Z,9.2nm,0.8s						
MBAR	Mbarara	19.07	309	P	P	07 35 58.6	-1.3
LODK	Lodwar	19.10	328	P	P	07 35 57.5	-2.6
BROLN	Tlhalogang	19.18	242	i P	P	07 36 00.9	0.0
POGA	Pongola	19.31	220	P	Pn	07 36 04.4	+1.1
POGA				IAmb	IAmb	07 36 06.2	
	comp=Z,30nm,1.0s						
MREMI	Moremi	19.68	238	P	P	07 36 06.5	+0.1
MREMI				IAmb	IAmb	07 36 14.0	
	comp=Z,27nm,0.8s						
MREMI	Moremi	19.68	238	i P	P	07 36 07.1	+0.6
SOOWA	Sowa	19.96	245	i P	P	07 36 10.0	+0.5
KSANE	Kasane	20.20	254	P	P	07 36 11.8	-0.5
KSANE				IAmb	IAmb	07 36 32.8	
	comp=Z,35nm,1.2s						
LPHEP	Lephephe	21.34	238	P	P	07 36 24.8	+0.3
LPHEP	Lephephe	21.34	238	i P	P	07 36 24.7	+0.3
PHDHD	Phuduhudu	21.35	247	P	P	07 36 24.2	-0.4
LBTB	Lobatse	22.31	234		P	07 36 34.7	-0.2
LBTB				IAmb	IAmb	07 36 38.0	
	comp=Z,19nm,0.9s						
KDWAN	Kaudwane	22.35	239		P	07 36 35.2	-0.1
MAKGR	Makgori	23.33	234	P	P	07 36 45.0	-0.6
MAKGR				IAmb	IAmb	07 36 46.7	
	comp=Z,14nm,0.9s						
KGCAE	Kacgae	24.24	243		P	07 36 54.2	-0.2
KGCAE	Kacgae	24.24	243	i P	P	07 36 54.3	-0.2
QNGWA	Qangwa	24.25	251		P	07 36 55.2	+0.6
QNGWA				IAmb	IAmb	07 36 56.8	
	comp=Z,13nm,1.0s						
BOSA	Boshof	24.49	227		P	07 36 56.0	-0.6
BOSA	Boshof	24.49	227	P	P	07 36 55.8	-0.7
	comp=Z,4.4nm,0.8s,baz=61,slow=8.3,SNR=7.0						
	comp=Z,4.4nm,0.8s						
GRTLG	Ghanzi	24.66	247	P	P	07 36 57.2	-1.0
GRTLG				IAmb	IAmb	07 37 00.8	
	comp=Z,14nm,0.9s						
PHPEN	Phepeng	24.72	236	P	P	07 36 58.6	-0.1
PHPEN				IAmb	IAmb	07 37 00.6	
	comp=Z,20nm,0.9s						
LKGWB	Lokgwabe	25.54	241	P	P	07 37 01.0	-5.1
TSUM	Tsumeb	27.53	253	P	P	07 37 23.4	-0.7
SUR	Sutherland	29.78	225	P	P	07 37 44.9	+0.7
SUR				IAmb	IAmb	07 37 46.6	
	comp=Z,15nm,0.9s						
CSS	Mathiatis	48.99	347	P	P	07 40 23.0	-0.8
CSS				IAmb	IAmb	07 40 59.5	
	comp=Z,7.2nm,1.2s						
TORD	Torodi Ar. Bea	50.56	299	P	P	07 40 35.7	-0.4
	comp=Z,1.0nm,0.3s,baz=151,slow=7.2,SNR=2.2						
	comp=Z,1.0nm,0.3s						
KARS	Kars	53.31	358	P	P	07 40 55.0	-1.3
NIL	Nilore	53.32	29	P	P	07 40 54.8	-1.6
NIL				IAmb	IAmb	07 41 06.2	
	comp=Z,9.1nm,1.1s						
BRTR	Keskin Array B	53.52	349	P	P	07 40 59.2	+1.3
	comp=Z,0.3nm,0.4s,baz=168,slow=7.4,SNR=7.3						
	comp=Z,0.3nm,0.4s						
KSH	Kashi	59.38	27	P	P	07 41 40.3	+0.7
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KK31	Karatay Array	60.26	21	P	P	07 41 45.1	-0.4
KK31				IAmb	IAmb	07 41 52.2	
	comp=Z,4.5nm,0.9s						
KKAR	Karatay Array	60.26	21	P	P	07 41 44.9	-0.6
KKAR				IAmb	IAmb	07 41 52.2	
	comp=Z,4.7nm,0.9s						
CM31	Chiang Mai Arr	61.22	60	P	P	07 41 52.6	+0.1
CM31				IAmb	IAmb	07 41 53.7	
	comp=Z,10nm,1.3s						
CMAR	Chiang Mai Arr	61.22	60	P	P	07 41 53.7	+1.2
	comp=Z,0.8nm,0.3s,baz=254,slow=5.7,SNR=1.5						
	comp=Z,0.8nm,0.3s						
AB31	Akbulak array	63.20	11	P	P	07 42 05.5	+0.4
AB31				IAmb	IAmb	07 42 11.6	
	comp=Z,5.5nm,0.8s						
ABKAR	Akbulak array	63.20	11		P	07 42 05.1	0.0
ABKAR	Akbulak array	63.20	11	P	P	07 42 05.4	+0.3
ABKAR				IAmb	IAmb	07 42 11.6	
	comp=Z,5.5nm,0.8s						
TROLL	Troll, Antarti	64.36	194	⇑P	P	07 42 15.7	+3.0
	comp=Z,321nm,1.1s						
SOKA	Soboth	65.31	337	eP	P	07 42 19.7	+0.5
	comp=Z,4.5nm,1.4s						
OBKA	Obir	65.36	337	eP	P	07 42 20.1	+0.6
	comp=Z,4.4nm,1.2s						
SNAA	Sanae	65.44	195	P	P	07 42 21.3	+1.6
SNAA				IAmb	IAmb	07 42 48.6	
	comp=Z,4.7nm,1.3s						
VYHS	Vyhne	65.55	341	eP	P	07 42 21.7	+1.1
ARSA	Arzberg	65.62	338	eP	P	07 42 21.8	+0.7
	comp=Z,3.3nm,1.1s						
RONA	Rosalia, Austr	65.72	339	i P	P	07 42 21.0	-0.7
	comp=Z,5.0nm,0.7s						
CONA	Conrad Observa	66.07	339	eP	P	07 42 22.0	-2.0
	comp=Z,7.7nm,1.9s						
VNA2	Neumayer--Watz	66.23	197	⇑P	P	07 42 26.9	+2.2
	comp=Z,1.6nm,0.6s,baz=35,slow=6.4						
ABTA	Abfaltersbach	66.35	336	eP	P	07 42 26.2	+0.4
	comp=Z,0.6nm,0.4s						
MOA	Molln	66.58	338	i P	P	07 42 26.7	-0.6
	comp=Z,5.3nm,1.3s						
BIOA	Bad Ischl, Aus	66.69	337	eP	P	07 42 27.7	-0.2
	comp=Z,3.3nm,0.8s						
LESA	Schwarzleotal	66.83	336	eP	P	07 42 29.3	+0.3
	comp=Z,1.4nm,0.9s						
VNA3	Neumayer Olymp	67.03	197	⇑P	P	07 42 31.7	+1.8
	comp=Z,4.2nm,0.9s						
WTTA	Wattenberg	67.12	336	eP	P	07 42 33.1	+2.2
	comp=Z,2.6nm,0.8s						
WATA	Walderalm	67.20	336	eP	P	07 42 34.4	+3.0
	comp=Z,1.5nm,0.8s						
PZH	PanZhiHua	67.23	54	P	P	07 42 35.4	+3.4
FETA	Feichten	67.29	335	eP	P	07 42 31.0	-0.9
	comp=Z,3.7nm,1.2s						
MOTA	Moosalm	67.40	335	i P	P	07 42 31.5	-1.2
	comp=Z,2.5nm,0.8s						
GERES	GERESS Array B	67.62	338	P	P	07 42 33.8	-0.1
	comp=Z,0.9nm,0.8s,baz=160,slow=6.0,SNR=5.4						
MAKZ	Makanchi	67.84	26	P	P	07 42 36.0	+0.7
MAKZ				IAmb	IAmb	07 42 42.7	
	comp=Z,5.4nm,1.1s						
DAVA	Damuels	67.85	335	i P	P	07 42 36.7	+1.2
	comp=Z,3.9nm,1.1s						
MKAR	Makanchi Array	67.96	26	P	P	07 42 36.1	+0.1
MKAR	Makanchi Array	67.96	26	P	P	07 42 35.8	-0.3
	comp=Z,0.8nm,0.8s,baz=222,slow=6.5,SNR=5.8						
	comp=Z,0.8nm,0.8s						
BVAR	Borovoye Array	69.06	16	P	P	07 42 43.4	+0.6
	comp=Z,1.1nm,0.7s,baz=202,slow=11,SNR=4.3						
	comp=Z,1.1nm,0.7s						
NACGM	Naroch	69.38	349	eP	P	07 42 42.4	-2.3
	comp=Z,8.0nm,0.8s,baz=161						
KURBB	Kurchatov Arra	69.54	22	P	P	07 42 45.9	+0.1
	comp=Z,0.2nm,0.5s,baz=221,slow=7.2,SNR=4.7						
	comp=Z,0.2nm,0.5s						
ESDC	Sonseca Array	69.64	321	P	P	07 42 47.4	+0.6
ESDC	Sonseca Array	69.64	321	P	P	07 42 47.3	+0.6
	comp=Z,1.5nm,0.8s,baz=130,slow=5.6,SNR=15						
	comp=Z,1.5nm,0.8s						
MEM	Membach	72.04	335	dP	P	07 43 01.1	+0.1
ZALV	Zalesovo Beam	74.52	23	P	P	07 43 15.7	+0.1
	comp=Z,0.8nm,0.6s,baz=191,slow=6.0,SNR=5.6						
	comp=Z,0.8nm,0.6s						
BELA	Belgrano 2	75.39	192	P	P	07 43 22.4	+2.0
SOEI	Soe	77.02	97	P	P	07 43 30.5	-0.4
HFS	Hagfors	77.14	344	P	P	07 43 30.3	-0.1
	comp=Z,0.9nm,0.6s,baz=153,slow=9.7,SNR=6.2						
	comp=Z,0.9nm,0.6s						
QSPA	South Pole Qui	77.19	180	P	P	07 43 31.9	+1.0
	comp=Z,4.4nm,1.1s,baz=285,slow=3.7,SNR=6.9						
	comp=Z,4.4nm,1.1s						
HHC	Hu-ho-hao-te	81.05	45	eP	P	07 43 54.8	+2.3
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VNDA	Vanda	82.96	169	P	P	07 44 04.1	+2.3
NJ2	Nanjing	83.11	55	eP	P	07 44 03.6	+0.3
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
ASAR	Alice Springs	83.48	113	P	P	07 44 06.7	+1.1
	comp=Z,1.8nm,0.7s,baz=260,slow=4.8,SNR=34						
	comp=Z,1.8nm,0.7s						
AS31	Alice Springs	83.48	113	P	P	07 44 06.8	+1.3
WRA	Warramunga Arr	84.61	109	P	P	07 44 12.4	+1.1
	comp=Z,1.6nm,0.7s,baz=260,slow=3.3,SNR=15						
	comp=Z,1.6nm,0.7s						
WB0	Warramunga Arr	84.70	109	P	P	07 44 12.6	+0.8
WB0				IAmb	IAmb	07 44 22.4	
	comp=Z,5.7nm,0.9s						
XLT	XiLinHaoTe	85.35	43	eP	P	07 44 24.6	+10
XLT				pmax	pmax		
	comp=Z,7.0nm,1.1s						
YKA	Yellowknife Ar	128.49	348	PKP	PKiKP	07 50 44.8	+0.5
	comp=Z,0.4nm,0.9s,baz=31,slow=3.0,SNR=3.0						
PDAR	Pinedale Array	143.25	329	PKP	PKPdf	07 51 12.5	+0.5
	comp=Z,0.7nm,0.9s,baz=82,slow=2.1,SNR=5.5						
TXAR	Lajitas Array	147.07	305	PKPbc	PKPbc	07 51 20.7	-0.2
	comp=Z,0.8nm,0.8s,baz=86,slow=4.1,SNR=9.6						
NVAR	Mina Array Bea	150.79	333	PKP	PKPdf	07 51 26.1	+1.4
	comp=Z,0.7nm,0.8s,baz=45,slow=2.5,SNR=4.9						

IDC 16 07:36:15.3±3.1, 30°.64S×177°.30W, h0^{km}, mb3.3/2, mbtmp3.5/3, ML2.9/1, Error ellipse: s-maj=76.2km s-min=45.9km az=125.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.89	210	Pn	Pn	07 38 25.1	+0.1
	0.1nm,0.3s,baz=26,slow=2.5,SNR=1.8						
URZ				Sn	Sn	07 40 02.3	-3.7
	0.4nm,0.3s,baz=35,slow=6.9,SNR=3.2						
	6.4nm,0.9s						
ASAR	Alice Springs	43.70	267	P	P	07 44 22.1	-0.2
	0.3nm,0.7s,baz=111,slow=7.7,SNR=15						
	0.3nm,0.7s						
WRA	Warramunga Arr	44.71	272	P	P	07 44 30.3	-0.2
	0.2nm,0.3s,baz=113,slow=7.1,SNR=6.7						
	0.2nm,0.3s						
FINES	FINESS Array B	145.57	340	PKPbc	PKPdf	07 55 54.2	-0.6
	0.3nm,0.3s,baz=55,slow=5.0,SNR=8.3						

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*GCG **16** 07:37:10.9±1.9, 15°.70N×88°.85W, h3^{km}±12^{km}, MD4.8*

*CATAC **16** 07:37:12.6±0.3, 16°N±2°×8°9W±°, h3^{km}±2^{km}, M4.0/25, MLv4.0/25, Error ellipse: s-maj=4.3km s-min=3.3km az=59.2, confirmed*

*SNET **16** 07:37:17.4±0.9, 15°.46N×89°.08W, h13^{km}±5^{km}, ML3.4*

ISC 16 07:37:11.0±1.1, 15°.69N±0°.03×88°.92W±0°.03, h4^{km}±10^{km}, n73, σ0^{s}.89/84, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IZABA	Izabal, Puerto	0.33	83	P	Pg	07 37 16.7	-0.6
IZABA				S	Sg	07 37 21.8	+0.2
ESQI	Esquipulas	1.19	200	eP	Pb	07 37 34.1	-0.2
ESQI				eS	Sb	07 37 48.2	-2.0
ESQI	Esquipulas	1.19	200	S	Sn	07 37 52.1	+0.8
ESQI	Esquipulas	1.19	200	P	Pg	07 37 35.7	+1.8
MTO3	Montecristo	1.35	198	i P	Pn	07 37 36.1	-0.8
MTO3	Montecristo	1.35	198	P	Pg	07 37 37.4	+0.5
AVCB	Coban	1.45	262	i P	Pb	07 37 37.9	-0.7
LLGN	La Laguna	1.52	181	P	Pb	07 37 40.1	+0.4
LLGN	La Laguna	1.52	181	S	Sg	07 38 00.5	+0.7
PETF	Flores	1.52	323	i P	Pg	07 37 39.7	-0.4
PETF				i S	Sg	07 38 00.0	+0.1
PETF	Flores	1.52	323	P	Pg	07 37 39.8	-0.4
PETF	Flores	1.52	323	S	Sg	07 38 01.3	+1.4
UNIC	Universidad Ca	1.80	200	eP	Pb	07 37 44.0	-0.7
UNIC	Universidad Ca	1.80	200	P	Pb	07 37 44.5	-0.2
SLOZ	Alcaldia de Sa	1.85	207	eP	Pb	07 37 45.1	-0.4
SLOZ				eS	Sn	07 38 05.8	-1.7
SLOZ	Alcaldia de Sa	1.85	207	S	Sg	07 38 11.4	+0.9
SLOZ	Alcaldia de Sa	1.85	207	P	Pb	07 37 45.2	-0.2
LOAL	Lomas de Alarc	1.88	206	P	Pg	07 37 46.6	-0.3
LOAL	Lomas de Alarc	1.88	206	S	Sg	07 38 12.2	+0.9
SNJE	San Jose	1.93	200	eP	Pb	07 37 46.4	-0.4
CEDA	San Andres	1.93	194	eP	Pb	07 37 46.5	-0.3
CEDA				eS	Sn	07 38 08.4	-1.1
CEDA	San Andres	1.93	194	S	Sg	07 38 13.0	0.0
CEDA	San Andres	1.93	194	P	Pb	07 37 47.4	+0.6
LFU	La Fuente	1.94	186	eP	Pb	07 37 46.9	0.0
LBRS	Las Brisas	1.94	184	eP	Pb	07 37 47.2	+0.1
SBLS	San Blas	1.96	200	eP	Pb	07 37 46.8	-0.6
NUBE	Las Nubes	1.96	205	eP	Pb	07 37 46.4	-1.0
NUBE				eS	Sn	07 38 08.7	-1.7
NUBE	Las Nubes	1.96	205	i P	Pn	07 37 45.0	-0.3
NUBE				i S	Sb	07 38 12.9	+0.6
NUBE	Las Nubes	1.96	205	P	Pb	07 37 46.9	-0.5
NUBE	Las Nubes	1.96	205	S	Sg	07 38 14.2	+0.2
PAVA	Las Pavas	1.96	180	eP	Pb	07 37 46.7	-0.8
PAVA	Las Pavas	1.96	180	P	Pb	07 37 47.5	+0.1
PAVA	Las Pavas	1.96	180	S	Sb	07 38 13.2	+0.9
CEVE	Cerro Verde	1.97	200	eP	Pb	07 37 47.4	-0.3
CEVE	Cerro Verde	1.97	200	P	Pb	07 37 47.8	+0.2
CEVE	Cerro Verde	1.97	200	S	Sg	07 38 14.3	-0.1
SCLA	Alcaldia de Sa	1.98	175	P	Pb	07 37 46.8	-1.0
SCLA	Alcaldia de Sa	1.98	175	S	Sb	07 38 13.5	+0.6
UEES	Universidad Ev	1.98	189	eP	Pb	07 37 47.3	-0.5
UEES	Universidad Ev	1.98	189	S	Sg	07 38 14.2	-0.6
UEES	Universidad Ev	1.98	189	P	Pb	07 37 47.6	-0.1
SEMO	Seminario San	2.00	188	P	Pb	07 37 48.2	+0.3
PMON	Piamonte	2.00	191	eP	Pb	07 37 47.5	-0.5
PMON	Piamonte	2.00	191	P	Pb	07 37 47.8	-0.3
PMON	Piamonte	2.00	191	S	Sg	07 38 14.6	-0.8
CAHU	Cacacuatique	2.03	160	eP	Pg	07 37 49.7	-0.1
UESV	Universidad de	2.04	176	S	Sb	07 38 15.0	+0.4
UESV	Universidad de	2.04	176	P	Pb	07 37 47.9	-0.9
LOMA	Loma Larga	2.05	187	eP	Pb	07 37 47.9	-1.0
LOMA	Loma Larga	2.05	187	P	Pb	07 37 48.1	-0.7
LOMA	Loma Larga	2.05	187	S	Sb	07 38 15.5	+0.7
LFRS	El Faro	2.06	184	eP	Pb	07 37 48.4	-0.6
PQSS	Presa 15 de Se	2.08	170	S	Sb	07 38 15.8	+0.2
PQSS	Presa 15 de Se	2.08	170	P	Pb	07 37 48.3	-1.0
JAYA	Jayaque - finc	2.09	194	eP	Pb	07 37 48.7	-0.9
JAYA				eS	Sn	07 38 11.8	-1.7
JAYA				IAML		07 38 23.0	
	comp=Z,336nm,0.2s						
JAYA	Jayaque - finc	2.09	194	i P	Pb	07 37 48.5	-1.0
JAYA				i S	Sb	07 38 15.5	-0.4
JAYA	Jayaque - finc	2.09	194	P	Pb	07 37 48.7	-0.9
JAYA	Jayaque - finc	2.09	194	S	Sg	07 38 17.1	-1.0
FAME	Alcaldia de Sa	2.12	210	P	Pb	07 37 49.8	-0.2
FAME	Alcaldia de Sa	2.12	210	S	Sg	07 38 18.6	-0.5
TECO	Alcaldia de Te	2.14	176	eP	Pb	07 37 49.1	-1.3
TECO	Alcaldia de Te	2.14	176	S	Sb	07 38 17.6	+0.2
TECO	Alcaldia de Te	2.14	176	P	Pb	07 37 49.4	-1.0
TECA	Tecapa	2.22	169	eP	Pb	07 37 51.2	-0.6
PACA	Pacayal	2.28	165	S	Sb	07 38 20.8	-0.7
PACA	Pacayal	2.28	165	P	Pb	07 37 51.5	-1.4
BLLM	Bellamira	2.33	163	eP	Pb	07 37 53.1	-0.5
ALJI	Alcalda de J	2.37	172	eP	Pb	07 37 53.1	-1.2
ALJI				eS	Sn	07 38 20.9	+0.5
LCND	La Caada	2.57	157	eP	Pb	07 37 56.5	-1.1
LCND	La Caada	2.57	157	P	Pb	07 37 55.8	-1.9
CNCH	Conchagua	2.62	156	P	Pn	07 37 56.0	+1.8
POTN	Potosi Cosigui	3.00	153	P	Pn	07 38 01.0	+1.6
POTN				S	Sn	07 38 37.9	+2.0
CCIG	Comitan	3.15	281	i P	Pn	07 38 03.0	+1.4

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*THE **16** 07:41:14.9, 38°N±3°×2°9E±°, h0^{km}, M3.0/4, MLh3.0/4*

*ISK **16** 07:41:14.4, 37°.83N×29°.30E, h5^{km}, ML3.2/27*

*IDC **16** 07:41:15.2±1.7, 37°.91N×29°.38E, h0^{km}, mb3.8/3, mbtmp3.7/5, ML3.6/2, Error ellipse: s-maj=50.3km s-min=21.9km az=144.0*

*AFAD **16** 07:41:15.5, 37°.82N×29°.27E, h7^{km}±2^{km}, MW3.3*

ISC 16 07:41:15.9±1.0, 37°.85N±0°.02×29°.34E±0°.02, h8^{km}±8^{km}, n51, σ0^{s}.84/73, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INCE	Denizli-Bozkur	0.23	127	P	Pg	07 41 20.9	+0.4
INCE				S	Sg	07 41 25.6	+1.9
DNIZ	Denizli-Tavas-	0.33	227	P	Pg	07 41 22.0	-0.3
DNIZ				S	Sg	07 41 26.7	+0.1
APMY	Acipayam-Deniz	0.38	185	Pg	Pg	07 41 22.9	-0.4
APMY				Sg	Sg	07 41 28.8	+0.6
KHL	Karahalli	0.50	17	Pg	Pb	07 41 25.5	-1.4
TAVA	DENIZLI_Tavas	0.51	222	P	Pg	07 41 24.9	-0.8
TAVA				S	Sg	07 41 31.9	-0.5
BASM	Basmaki-Afyon	0.57	83	Pg	Pb	07 41 26.9	-1.2
DNZT	Denizli-Tavas-	0.62	204	P	Pg	07 41 27.2	-0.6
DNZT				S	Sg	07 41 35.6	-0.3
ESEN	Aydn-Nazilli	0.79	267	P	Pg	07 41 30.4	-0.7
ESEN				S	Sg	07 41 40.4	-0.9
NAZL	Nazilli-Aydin	0.84	278	Pg	Pg	07 41 31.4	-0.6
NAZL				Sg	Sg	07 41 43.5	+0.6
KULA	Kula-Manisa	0.85	321	Pg	Pg	07 41 31.9	-0.4
KULA	Kula-Manisa	0.85	321	P	Pg	07 41 31.8	-0.5
KULA				S	Sb	07 41 44.5	-0.2
CAME	Cameli-Denizli	0.90	182	Pg	Pg	07 41 32.0	-1.2
ISP	Isparta	0.94	91	Pg	Pb	07 41 33.6	-0.8
ISP				Sg	Sn	07 41 48.6	-0.4
MULA	Mugla, Merkez-	1.00	234	P	Pg	07 41 33.8	-1.3
MULA				S	Sg	07 41 47.6	-0.5
BCK	Bucak	1.06	111	Pn	Pn	07 41 36.7	-0.4
SABU	Mula-Dalaman	1.06	196	P	Pg	07 41 35.1	-1.2
SABU				S	Sg	07 41 50.0	-0.1
ODEM	Odemis-Izmir	1.09	294	Pg	Pg	07 41 35.9	-0.8
ODEM				Sg	Sb	07 41 51.7	+0.4
AYDB	Zeytinkoy-Aydi	1.15	275	Pn	Pg	07 41 36.9	-1.1
DALY	Dalyan (Mula)	1.17	208	Pn	Pg	07 41 37.3	-0.9
KORT	Korkueli	1.17	136	Pn	Pn	07 41 38.6	0.0
SHAP	Saphane-Kutahy	1.18	356	Pn	Pb	07 41 38.1	-0.4
SHUT	Suhut-Afyon	1.19	53	Pn	Pn	07 41 38.7	-0.2
ELL	Elmali	1.19	157	Pn	Pb	07 41 38.2	-0.5
GEDZ	Gediz	1.20	3	Pn	Pn	07 41 38.9	-0.1
FETY	Fethiye	1.23	190	Pn	Pg	07 41 38.5	-0.9
FETY	Fethiye	1.23	190	P	Pn	07 41 39.9	+0.6
SIMA	Simav-Kutahya	1.27	347	Pn	Pn	07 41 39.7	-0.2
SMAA	Simav-Kutahya	1.28	347	Pn	Pb	07 41 40.4	+0.1
MLSB	Milas	1.36	247	Pn	Pn	07 41 40.7	-0.5
TURN	Turunc	1.38	220	Pn	Pn	07 41 41.2	-0.2
TURN	Turunc	1.38	220	P	Pn	07 41 40.7	-0.7
TURN				S	Sb	07 42 00.2	+0.6
GORD	Gordes-Manisa	1.40	320	Pn	Pn	07 41 41.8	+0.1
ANTB	Antalya	1.41	132	Pn	Pg	07 41 42.7	-0.2
AKAS	Kas	1.63	172	Pn	Pg	07 41 46.4	-0.6
GCAM	G?zelcaml?	1.68	266	Pn	Pn	07 41 45.8	+0.3
GCAM	G?zelcaml?	1.68	266	P	Pb	07 41 46.6	-0.3
GCAM				S	Sb	07 42 09.0	+0.9
BDRM	Kayabasi	1.70	243	P	Pn	07 41 46.2	+0.4
BDRM				S	Sn	07 42 08.0	+0.3
DDIM	Aydin, Didim	1.71	257	P	Pb	07 41 48.0	+0.5
DDIM				S	Sb	07 42 10.4	+1.2
DAT	Datca	1.79	232	Pn	Pn	07 41 47.3	+0.1
BODT	Bodrum	1.80	245	Pn	Pn	07 41 47.3	+0.2
BODT	Bodrum	1.80	245	P	Pn	07 41 47.0	-0.1
BODT				S	Sb	07 42 12.5	+0.9
ARG	Arkhangelos	1.90	211	Pn	Pn	07 41 49.1	+0.6
ARG	Arkhangelos	1.90	211	P	Pb	07 41 50.0	-0.7
ARG				S	Sb	07 42 14.5	0.0
YAZI	Mula-Dat§a-	1.90	233	P	Pn	07 41 48.0	-0.6
YAZI				S	Sn	07 42 11.7	-1.1
CHOS	Chios island	2.65	283	P	Pn	07 41 59.7	+0.8
KARP	Karpathos	2.89	218	P	Pn	07 42 02.7	+0.5
KARP				S	Sn	07 42 39.7	+2.6
BRTR	Keskin Array B	3.85	60	Pn	Pn	07 42 16.5	+1.0
	1.2nm,0.3s,baz=245,slow=14,SNR=24						
BRTR				Sn	Sn	07 43 01.0	0.0
	1.0nm,0.3s,baz=228,slow=24,SNR=8.7						
	3.5nm,0.5s						
MMAI	Mount Meron Ar	6.91	132	Pn	Pn	07 42 58.0	+0.5
	3.7nm,0.3s,baz=315,slow=14,SNR=5.8						
MMAI				Sn	Sn	07 44 13.2	-3.1
	3.9nm,0.3s,baz=304,slow=31,SNR=2.1						

	2.2nm,0.3s						
TORD	Torodi Ar. Bea	34.79	232	P	P	07 48 07.8	+0.8
	1.2nm,0.3s,baz=28,slow=10,SNR=2.0						
	1.2nm,0.3s						
KURBB	Kurchatov Arra	36.82	54	P	P	07 48 24.4	+0.3
	0.5nm,0.5s,baz=273,slow=8.4,SNR=5.0						
	0.5nm,0.5s						
MKAR	Makanchi Array	39.50	60	P	P	07 48 47.2	+0.4
	0.2nm,0.5s,baz=264,slow=8.0,SNR=2.3						
	0.2nm,0.5s						

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*IDC **16** 07:43:01.9±1.2, 30°.39S×177°.77W, h0km, mb4.1/5, mbtmp4.1/5, MS4.5/1, Error ellipse: s-maj=36.5km s-min=28.3km az=37.0*

*NEIC **16** 07:43:08.0±1.0, 30°.89S±0°.07×177°.8W±0°.2, h35km±2km, mb4.1/13, Error ellipse: s-maj=22.3km s-min=10.8km az=81.0*

ISC 16 07:43:09.4±0.9, **30°.82S**±0°.08×**178°.0W**±0°.2, **h46**km, **n30**, σ**1ˢ.36**/30, **mb4.1**/13, **4C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.56	1		Pn	07 43 34.0	-0.7
MXZ	Matakaoa Point	7.41	204	Pn	Pn	07 44 53.3	-1.6
URZ	Urewera	8.47	207	Pn	Pn	07 45 06.7	-2.7
	0.2nm,0.3s,baz=336,slow=4.7,SNR=2.0						
URZ				Sn	Sn	07 46 42.1	-1.4
	1.2nm,0.3s,baz=286,slow=21,SNR=14						
TOO	Toolangi	30.84	247	P	P	07 49 23.0	+1.9
TOO				IAmb	IAmb	07 49 44.0	
	comp=Z,1.4nm,1.1s						
CTAO	Charters Tower	33.91	280	P	P	07 49 49.7	+1.6
STKA	Stephens Creek	34.43	258	P	P	07 49 53.9	+1.4
	comp=Z,7.8nm,0.7s,baz=93,slow=9.6,SNR=16						
	comp=Z,7.8nm,0.7s						
BBOO	Buckleboo	38.90	255	P	P	07 50 31.6	+1.0
COEN	Coen	39.43	286	P	P	07 50 35.9	+0.7
COEN				IAmb	IAmb	07 51 04.0	
	comp=Z,8.9nm,1.1s						
AS31	Alice Springs	43.13	267	P	P	07 51 05.2	-0.3
ASAR	Alice Springs	43.13	267	P	P	07 51 05.1	-0.5
ASAR	Alice Springs	43.13	267	P	P	07 51 05.2	-0.4
	comp=Z,0.5nm,0.4s,baz=104,slow=7.6,SNR=12						
	comp=Z,0.5nm,0.4s						
WR8	Warramunga Arr	44.01	273	P	P	07 51 12.4	-0.3
WR8				IAmb	IAmb	07 51 13.2	
	comp=Z,3.3nm,0.9s						
WRA	Warramunga Arr	44.16	273	P	P	07 51 13.2	-0.6
WRA	Warramunga Arr	44.16	273	P	P	07 51 13.3	-0.6
	comp=Z,1.6nm,0.3s,baz=111,slow=8.1,SNR=34						
	comp=Z,1.6nm,0.3s						
WB0	Warramunga Arr	44.18	273	P	P	07 51 13.6	-0.4
WB0				IAmb	IAmb	07 51 15.0	
	comp=Z,2.0nm,0.7s						
KNRA	Kununurra	50.78	275	P	P	07 52 05.1	-0.2
KNRA				IAmb	IAmb	07 52 11.0	
	comp=Z,2.2nm,1.1s						
FITZ	Fitzroy Crossi	52.40	270	P	P	07 52 17.6	+0.2
FITZ	Fitzroy Crossi	52.40	270	LR	LR	08 13 06.0	
	comp=Z,494nm,21.0s,baz=288,slow=34						
CASY	Casey	54.79	208	P	P	07 52 34.1	-0.1
CASY				IAmb	IAmb	07 53 01.3	
	comp=Z,4.4nm,1.0s						
QSPA	South Pole Qui	59.29	180	P	P	07 53 07.9	+1.6
QSPA	South Pole Qui	59.29	180	P	P	07 53 08.9	+2.6
	comp=Z,1.5nm,0.9s,baz=65,slow=3.2,SNR=6.1						
	comp=Z,1.5nm,0.9s						
TROLL	Troll, Antarti	77.46	180	⇑P	P	07 55 00.0	+0.4
	comp=Z,95nm,0.7s						
SNAA	Sanae	77.74	178	⇑P	P	07 55 02.7	+1.6
	comp=Z,22nm,0.8s						
SNAA	Sanae	77.74	178	P	P	07 55 00.6	-0.5
SNAA				IAmb	IAmb	07 55 07.2	
	comp=Z,0.7nm,0.8s						
SNAA	Sanae	77.74	178	P	P	07 55 02.0	+0.9
	comp=Z,1.3nm,0.9s,baz=199,slow=14,SNR=9.8						
	comp=Z,1.3nm,0.9s						
VNA3	Neumayer Olymp	77.89	176	⇑P	P	07 55 03.4	+1.5
	comp=Z,2.6nm,0.8s						
VNA2	Neumayer--Watz	78.32	177	⇑P	P	07 55 05.6	+1.4
	comp=Z,1.3nm,0.5s,baz=174,slow=5.1						
FINES	FINESS Array B	145.55	340	PKPbc	PKPdf	08 02 40.3	-1.5
	comp=Z,1.4nm,0.4s,baz=53,slow=3.7,SNR=23						
HFS	Hagfors	149.66	348	PKPbc	PKPbc	08 02 51.2	-2.1
	comp=Z,1.2nm,0.7s,baz=69,slow=9.7,SNR=2.4						
AKASG	Malin Array Be	151.66	322	PKPbc	PKPbc	08 02 56.7	-1.6
	comp=Z,0.2nm,0.4s,baz=50,slow=3.4,SNR=5.6						

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*NEIC **16** 07:55:22.7±1.1, 22°.2S±0°.1×170°.35E±0°.08, h10km±1km, mb4.6/22, Error ellipse: s-maj=18.2km s-min=12.1km az=165.0*

*IDC **16** 07:55:27.8±2.5, 22°.10S×170°.40E, h71km±20km, mb3.9/9, mbtmp4.3/10, Error ellipse: s-maj=22.1km s-min=16.8km az=177.0*

*NOU **16** 07:55:29.8, 21°.93S×170°.26E, h57km, MLv5.3/21, Southeast of Loyalty Islands*

ISC 16 07:55:26.8±0.5, **22°.00S**±0°.06×**170°.36E**±0°.05, **h51**km, **n64**, σ**1ˢ.67**/66, **mb4.4**/17, **Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	2.23	283	P	Pn	07 56 02.6	+1.3
MARNC	Mare, Loyalty	2.23	283	S	Sn	07 56 29.7	+2.1
INH	Isangel	2.65	337	P	Pn	07 56 09.1	+2.1
PINNC	Pines Island,	2.77	257	P	Pn	07 56 10.6	+2.0
PINNC	Pines Island,	2.77	257	S	Sn	07 56 42.3	+1.5
YATNC	Mamie plateau,	3.22	268	P	Pn	07 56 16.0	+1.1
YATNC	Mamie plateau,	3.22	268	S	Sn	07 56 52.9	+0.9
OUENC	Ouen Island, N	3.29	262	P	Pn	07 56 17.8	+2.0
OUENC	Ouen Island, N	3.29	262	S	Sn	07 56 54.9	+1.2
DZM	Mont Dzumac	3.63	268		Pn	07 56 23.2	+2.5
DZM	Mont Dzumac	3.63	268	P	Pn	07 56 22.9	+2.2
	531nm,0.4s,baz=185,slow=19,SNR=2195						
DZM				S	Sn	07 57 03.9	+1.5
	2µm,0.5s,baz=102,slow=20,SNR=29						
DZM	Mont Dzumac	3.63	268	P	Pn	07 56 22.7	+2.0
DZM	Mont Dzumac	3.63	268	S	Sn	07 57 03.9	+1.5
ONTNC	Ouen Toro	3.63	264	P	Pn	07 56 21.2	+0.6
ONTNC	Ouen Toro	3.63	264	S	Sn	07 57 03.3	+1.1
KOUNC	Koumac, New Ca	5.85	283	P	Pn	07 56 54.3	+3.4
VLAKA	Lakatoro	6.49	334	P	Pn	07 57 00.3	+0.5
SANVU	Saraoutou	7.17	335	Pn	Pn	07 57 08.7	-0.5
MSVF	Nonsavu	8.39	61		Pn	07 57 26.7	+0.8
MSVF	Nonsavu	8.39	61	P	Pn	07 57 28.2	+2.3
	41nm,1.1s,baz=230,slow=11,SNR=9.4						
MSVF	Nonsavu	8.39	61	P	Pn	07 57 29.1	+3.2
OUZ	Omahuta	13.47	169	P	Pn	07 58 39.9	+4.7
LHI	Lord Howe Isla	13.84	224	Pn	Pn	07 58 36.7	-3.5
EIDS	Eidsvold	17.97	255		Pn	07 59 30.6	-2.4
NIUE	Niue	18.69	85	P	P	07 59 41.7	+0.7
ARMA	Armidale	18.76	240	P	P	07 59 40.0	-1.8
ARMA				IAmb	IAmb	07 59 53.0	
	comp=Z,32nm,1.4s						
CTAO	Charters Tower	22.57	270	P	P	08 00 23.2	+0.2
CTAO				IAmb	IAmb	08 00 34.1	
	comp=Z,8.0nm,1.1s						
CNB	Canberra Magne	22.64	230	P	P	08 00 25.6	+1.9
CAN	Canberra	22.90	230	P	P	08 00 25.1	-1.3
CAN				IAmb	IAmb	08 00 29.2	
	comp=Z,33nm,1.4s						
CMSA	Cobar Meteorol	23.94	241	P	P	08 00 37.9	+1.6
MTSU	Mount Surprise	24.75	274	P	P	08 00 45.6	+1.8
PMG	Port Moresby	25.56	296	P	P	08 00 48.9	-2.2
PMG	Port Moresby	25.56	296	P	P	08 00 50.8	-0.3
	comp=Z,16nm,0.8s,baz=73,slow=2.9,SNR=3.1						
	comp=Z,16nm,0.8s						
TOO	Toolangi	26.47	229	P	P	08 00 58.6	-0.6
COEN	Coen	27.04	283		P	08 01 04.5	0.0
COEN				IAmb	IAmb	08 01 07.0	
	comp=Z,29nm,1.4s						
STKA	Stephens Creek	27.39	243	P	P	08 01 08.4	+0.9
	comp=Z,3.8nm,0.7s,baz=81,slow=12,SNR=9.9						
	comp=Z,3.8nm,0.7s						
BBOO	Buckleboo	32.17	243	P	P	08 01 49.9	0.0
WR8	Warramunga Arr	33.50	267		P	08 01 59.9	-1.7
WR8				IAmb	IAmb	08 02 05.2	
	comp=Z,6.9nm,0.9s						
AS31	Alice Springs	33.58	260	P	P	08 02 02.1	-0.3
ASAR	Alice Springs	33.59	260	P	P	08 02 01.5	-0.9
ASAR	Alice Springs	33.59	260	P	P	08 02 02.1	-0.2
	comp=Z,1.6nm,0.6s,baz=90,slow=8.7,SNR=18						
	comp=Z,1.6nm,0.6s						
WB0	Warramunga Arr	33.63	267		P	08 02 02.4	-0.4
WB0				IAmb	IAmb	08 02 03.0	
	comp=Z,12nm,1.1s						
WRA	Warramunga Arr	33.65	267		P	08 02 02.3	-0.7
WRA	Warramunga Arr	33.65	267	P	P	08 02 02.0	-0.9
	comp=Z,4.9nm,0.9s,baz=100,slow=8.0,SNR=24						
	comp=Z,4.9nm,0.9s						
MTN	Manton Dam	38.43	277		P	08 02 43.7	-0.1
MTN				IAmb	IAmb	08 02 44.4	
	comp=Z,12nm,0.6s						
KNRA	Kununurra	39.78	272		P	08 02 55.3	+0.2
KNRA				IAmb	IAmb	08 02 55.6	
	comp=Z,15nm,0.8s						
FAKI	Fak Fak	41.57	292	P	P	08 03 09.6	-0.4
FITZ	Fitzroy Crossi	42.08	267		P	08 03 14.9	+0.9
MBWA	Marble Bar	46.91	261	P	P	08 03 52.5	0.0
VNDA	Vanda	55.72	182	P	P	08 04 57.5	-0.2
VNDA				IAmb	IAmb	08 05 01.8	
	comp=Z,4.0nm,1.4s						
VNDA	Vanda	55.72	182	P	P	08 04 55.5	-2.2
	comp=Z,0.4nm,0.5s,baz=28,slow=15,SNR=9.2						
	comp=Z,0.4nm,0.5s						
SBA	Scott Base	55.93	181	P	P	08 04 59.9	+0.8
SBA				IAmb	IAmb	08 05 22.9	
	comp=Z,11nm,1.5s						
KSM	Kuching	63.02	284	P	P	08 05 49.4	+0.3
MJAR	Matsushiro Arr	65.67	332	P	P	08 06 04.2	-1.7
	comp=Z,1.6nm,0.7s,baz=140,slow=6.3,SNR=1.5						
	comp=Z,1.6nm,0.7s						
QSPA	South Pole Qui	68.06	180	P	P	08 06 19.6	-1.3
QSPA				IAmb	IAmb	08 06 45.9	
	comp=Z,8.3nm,1.4s						
QSPA	South Pole Qui	68.06	180	P	P	08 06 19.0	-2.0
	comp=Z,1.6nm,0.9s,baz=27,slow=2.3,SNR=3.6						
	comp=Z,1.6nm,0.9s						
CMAR	Chiang Mai Arr	80.59	294	P	P	08 07 35.3	+0.9
	comp=Z,1.3nm,0.3s,baz=117,slow=5.2,SNR=2.2						
	comp=Z,1.3nm,0.3s						
SNAA	Sanae	86.46	182	P	P	08 08 00.7	-2.9
	comp=Z,1.0nm,0.8s,baz=199,slow=3.1,SNR=6.0						
	comp=Z,1.0nm,0.8s						
JAVC	Velka Javorina	145.51	328	*e*PKP	PKPdf	08 15 00.0	+0.8
BRG	Berggiesshubel	145.80	333	*e*P	PKPdf	08 14 59.2	-0.4
BRG				Amp		08 15 00.8	
	comp=Z,4.0nm,0.9s						
CLL	Collm	145.85	335	*e*PKPbc	PKPdf	08 14 59.0	-0.6
CLL				*i* PKiKP	PKPab	08 15 03.2	+2.5
KRUC	Moravsky	146.00	329	*e*PKP	PKPdf	08 15 00.1	+0.1
EKA	Eskdalemuir Ar	146.36	353	PKPbc	PKPdf	08 14 58.7	-1.7
	comp=Z,0.4nm,0.4s,baz=11,slow=2.3,SNR=4.6						
GERES	GERESS Array B	147.41	331	PKPbc	PKPdf	08 15 03.2	+0.7
	comp=Z,17nm,0.5s,baz=35,slow=3.6,SNR=15						

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*IDC **16** 08:03:22.4±0.9, 21°.09N×145°.22E, h0km, mb3.7/7, mbtmp3.7/7, Error ellipse: s-maj=47.9km s-min=22.3km az=107.0*

ISC 16 08:03:32.9±1.0, **21°.0N**±0°.2×**145°.2E**±0°.3, **h83**km, **n7**, σ**1ˢ.08**/7, **mb3.7**/7, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	42.08	195	P	P	08 11 16.6	-0.2
	0.5nm,0.7s,baz=8.7,slow=8.6,SNR=5.3						
	0.5nm,0.7s						
ASAR	Alice Springs	45.76	195	P	P	08 11 46.2	-0.1
	0.4nm,0.7s,baz=14,slow=6.2,SNR=5.5						
	0.4nm,0.7s						
ILAR	Eielson Array	61.78	27	P	P	08 13 41.0	-1.7
	0.7nm,0.8s,baz=260,slow=6.6,SNR=6.5						
	0.7nm,0.8s						
BVAR	Borovoye Array	64.41	320	P	P	08 14 00.6	+0.4
	0.7nm,0.5s,baz=86,slow=8.8,SNR=2.8						
	0.7nm,0.5s						
YKA	Yellowknife Ar	76.17	28	P	P	08 15 12.8	+1.0
	0.5nm,0.7s,baz=297,slow=6.3,SNR=5.5						
	0.5nm,0.7s						
NVAR	Mina Array Bea	82.08	52	P	P	08 15 45.5	+0.7
	0.8nm,0.7s,baz=267,slow=5.5,SNR=6.7						
	0.8nm,0.7s						
FINES	FINESS Array B	84.59	335	P	P	08 15 56.7	-0.2
	0.5nm,0.5s,baz=46,slow=8.2,SNR=5.5						
	0.5nm,0.5s						

GCG 16 08:08:28.9±1.4, **15°.99N**×**90°.85W**, **h13**km±21km, **MD3.8, ML2.5, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCIG	Comitan	1.27	283	*i* P	Pn	08 08 51.5	-1.1
CCIG				*i* S	Sb	08 09 09.0	-0.2
CCIG				IAML		08 09 11.9	
	comp=N,53nm,0.4s						
PETF	Flores	1.32	45	*i* P	Pn	08 08 51.8	-1.3
PETF				*i* S	Sb	08 09 09.7	-0.6
PETF				IAML		08 09 12.0	
	comp=E,311nm,0.3s						
STG8	El Palmar, Qui	1.60	198	*i* P	Pn	08 08 54.5	-2.7
STG8				*i* S	Sn	08 09 14.0	-3.9
STG8				IAML		08 09 17.5	
	comp=N,69nm,0.2s						
STG0	El Palmar, Qui	1.62	197	*i* P	Pn	08 08 54.9	-2.5
STG0				IAML		08 09 19.9	
	comp=E,96nm,0.2s						
TGIG		2.32	290	*i* P	Pn	08 09 07.9	+1.0
TGIG				IAML		08 09 42.4	
	comp=E,7.8nm,0.4s						

IDC 16 08:22:38.8±6.2, **3°.92S**×**136°.64E**, **h75**km±81km, **mb3.4**/1, **mbtmp3.8**/5, **ML3.6**/4, **Error ellipse: s-maj=78.3km s-min=25.5km az=109.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	4.29	71	P	Pn	08 23 41.6	-0.1
	2.1nm,0.3s,baz=228,slow=13,SNR=11						
JAY				S	Sn	08 24 21.1	-10
	15nm,0.5s,baz=265,slow=22,SNR=6.3						
	28nm,0.7s						
WRA	Warramunga Arr	16.09	188	P	Pn	08 26 19.3	-1.2
	0.5nm,0.3s,baz=8.5,slow=12,SNR=29						
	2.0nm,0.4s						
FITZ	Fitzroy Crossi	17.74	217	P	Pn	08 26 42.0	+1.1
	0.1nm,0.3s,baz=49,slow=9.3,SNR=1.7						
	1.8nm,0.9s						
ASAR	Alice Springs	19.81	187	P	P	08 27 03.5	0.0
	0.4nm,0.3s,baz=15,slow=10,SNR=29						
	0.9nm,0.5s						
MKAR	Makanchi Array	69.50	323	P	P	08 33 39.4	-0.1
	0.5nm,0.6s,baz=118,slow=5.8,SNR=3.8						
	0.5nm,0.6s						

IDC 16 08:33:32.4±3.3, **33°.12S**×**178°.66W**, **h0**km, **mb3.3**/2, **mbtmp3.4**/3, **ML3.3**/1, **Error ellipse: s-maj=77.0km s-min=37.2km az=113.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.18	213	Pn	Pn	08 35 05.6	+0.7
	0.7nm,0.3s,baz=354,slow=3.6,SNR=7.9						
URZ				Sn	Sn	08 36 14.6	-1.7
	0.8nm,0.3s,baz=258,slow=23,SNR=7.1						
	2.0nm,0.3s						
ASAR	Alice Springs	42.48	270	P	P	08 41 29.6	0.0
	0.3nm,0.7s,baz=109,slow=8.4,SNR=7.2						
	0.3nm,0.7s						
WRA	Warramunga Arr	43.72	275	P	P	08 41 39.6	0.0
	0.4nm,0.8s,baz=116,slow=7.9,SNR=2.6						
	0.4nm,0.8s						
FINES	FINESS Array B	147.47	338	PKPbc	PKPbc	08 53 16.5	-1.1
	1.0nm,0.8s,baz=48,slow=2.1,SNR=3.5						

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*RSPR **16** 08:41:07.8, 19°.64N×65°.35W, h66km±12km, MD3.6/10*

NEIC 16 08:41:05.3±0.6, **19°.57N**±0°.04×**65°.34W**±0°.10, **h10**km±2km, **ML2.4**/26, **Md3.6**/10(RSPR), **5C-7D, Error ellipse: s-maj=16.6km s-min=4.2km az=114.0, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GCPR	Guaynabo City	1.44	209		Pn	08 41 30.8	-0.7
GCPR					Sn	08 41 50.4	-0.1
GCPR	Guaynabo City	1.44	209	⇑*e*P	Pn	08 41 31.4	-0.1
GCPR	Guaynabo City	1.44	209	*e*S	Sb	08 41 51.2	+0.5
HUMP	Col San Antoni	1.50	199		Pn	08 41 32.6	+0.2
HUMP				IAML		08 41 53.9	
	comp=N,27nm,0.4s						
HUMP	Col San Antoni	1.50	199	⇓*e*P	Pb	08 41 32.9	-0.4
HUMP	Col San Antoni	1.50	199	*e*S	Sb	08 41 52.5	0.0
EMPR	Esperanza - Ma	1.57	226	Pn	Pn	08 41 33.5	+0.2
EMPR				IAML		08 42 04.3	
	comp=E,94nm,1.5s						
ECPR	Experimental S	1.58	218	⇓*e*P	Pn	08 41 33.3	-0.1
ECPR	Experimental S	1.58	218	*e*S	Sn	08 41 54.0	+0.1
SJG	San Juan	1.65	208		Pn	08 41 34.4	+0.1
SJG				IAML		08 42 03.1	
	comp=E,23nm,0.6s						
SJG	San Juan	1.65	208	⇓*e*P	Pn	08 41 34.7	+0.4
SJG	San Juan	1.65	208	*e*S	Sn	08 41 55.9	+0.4
PDPR	Patillas Dam,	1.68	203	Pn	Pn	08 41 34.6	-0.1
PDPR	Patillas Dam,	1.68	203	⇓*e*P	Pb	08 41 35.6	-0.7
PDPR	Patillas Dam,	1.68	203	*e*S	Sn	08 41 56.3	0.0
IGPR	InterUniversit	1.76	205	Pn	Pn	08 41 35.4	-0.4
IGPR					Sn	08 41 57.7	-0.6
IGPR				IAML		08 42 02.4	
	comp=E,42nm,0.2s						
IGPR				IAML		08 42 04.9	
	comp=N,60nm,0.3s						
IGPR	InterUniversit	1.76	205	*e*S	Sn	08 41 57.8	-0.5
AOPR	Arecibo Observ	1.81	228	Pn	Pn	08 41 36.1	-0.5
AOPR	Arecibo Observ	1.81	228	*e*S	Sn	08 41 59.5	-0.2
UUPR	Utuado, UPR, P	1.85	225		Pn	08 41 37.0	-0.2
UUPR	Utuado, UPR, P	1.85	225	⇑*e*P	Pn	08 41 37.1	-0.1
UUPR	Utuado, UPR, P	1.85	225	*e*S	Sn	08 42 00.2	-0.5
CELP	Cerrillos	1.90	219		Pn	08 41 37.7	-0.1
CELP				IAML		08 42 20.5	
	comp=N,19nm,2.4s						
CELP				IAML		08 42 49.7	
	comp=E,20nm,2.7s						
CELP	Cerrillos	1.90	219	⇓*e*P	Pn	08 41 37.9	+0.1
CELP	Cerrillos	1.90	219	*e*S	Sn	08 42 01.2	-0.6
OBIP	Obispado Ponce	1.94	219		Pn	08 41 38.1	-0.2
OBIP				IAML		08 41 50.7	
	comp=N,21nm,2.9s						
OBIP				IAML		08 41 58.6	
	comp=E,18nm,2.5s						
OBIP					Sn	08 42 02.8	0.0
OBIP	Obispado Ponce	1.94	219	⇑*e*P	Pb	08 41 39.6	-1.2
OBIP	Obispado Ponce	1.94	219	*e*S	Sn	08 42 02.6	-0.2
AGPR	Aguadilla, PR	2.01	237		Pn	08 41 38.6	-0.7
AGPR				IAML		08 42 23.3	
	comp=E,71nm,2.2s						
AGPR	Aguadilla, PR	2.01	237	⇑*e*P	Pn	08 41 39.5	+0.2
AGPR	Aguadilla, PR	2.01	237	*e*S	Sn	08 42 03.2	-1.2
LSP	Las Mesas	2.16	230		Pn	08 41 41.2	-0.3
LSP					Sn	08 42 08.3	-0.1
LSP	Las Mesas	2.16	230	⇑*e*P	Pn	08 41 41.2	-0.3
LSP	Las Mesas	2.16	230	*e*S	Sn	08 42 08.3	-0.1
PRSN	Puerto Rico Se	2.18	232	Pn	Pn	08 41 41.8	+0.2
PRSN				IAML		08 42 17.7	
	comp=N,36nm,0.7s						
PRSN				IAML		08 42 18.5	
	comp=E,34nm,0.2s						
MLPR	Magueyes Islan	2.27	226	⇓*e*P	Pn	08 41 43.4	+0.5
MLPR	Magueyes Islan	2.27	226	*e*S	Sn	08 42 10.4	-0.6
CRPR	Cabo Rojo, PR	2.29	227		Pn	08 41 43.3	+0.1
CRPR				IAML		08 42 41.1	
	comp=E,30nm,2.1s						
CRPR				IAML		08 42 56.0	
	comp=N,31nm,1.7s						
CRPR	Cabo Rojo, PR	2.29	227	⇓*e*P	Pn	08 41 43.8	+0.6
CRPR	Cabo Rojo, PR	2.29	227	*e*S	Sn	08 42 11.2	-0.3

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*JMA **16** 08:44:15.0±0.3, 43°.7N±0°.9×14°7E±°, h24km±4km, MV3.7/34, E OFF HOKKAIDO*

*SKHL **16** 08:44:16.1±0.6, 43°.90N×147°.20E, h35km±2km, mb4.6/4*

ISC 16 08:44:13.6±2.0, **43°.80N**±0°.09×**147°.37E**±0°.10, **h35**km, **n18**, σ**1ˢ.22**/31, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHO	Shikotan	0.40	281	*i* P	Pn	08 44 23.4	+0.6
SHO				AMB	AMB	08 44 23.6	
	280nm,0.3s						
SHO				*e*S	Sn	08 44 28.5	-0.6
SHO				A	A	08 44 28.9	
	1µm,0.3s						
SHO				A	A	08 44 28.9	
	1µm,0.3s						
YUK	Yuzh-Kuril'sk	1.11	283	*i* P	Pn	08 44 32.2	-0.5
YUK				AMB	AMB	08 44 32.8	
	210nm,0.2s						
YUK				*e*S	Sn	08 44 44.1	-2.7
YUK				A	A	08 44 46.1	
	1µm,0.3s						
YUK				A	A	08 44 46.1	
	1µm,0.3s						
NEM2	Nemuro 2	1.26	251	P	Pn	08 44 34.4	-0.2
NEM2				S	Sn	08 44 48.7	-1.6
NMR	Nemuro--Hokkai	1.27	251	*i* P	Pn	08 44 34.4	-0.4
NMR				*e*S	Sn	08 44 48.2	-2.3
GLVR	Golovnino	1.34	268	*e*P	Pn	08 44 36.1	+0.3
GLVR				AMB	AMB	08 44 36.9	
	790nm,0.3s						
GLVR				*e*S	Sn	08 44 51.8	-0.6
GLVR				A	A	08 44 52.9	
	2µm,0.4s						
GLVR				A	A	08 44 52.9	
	2µm,0.4s						
KUR	Kuril'sk	1.48	14	*e*P	Pn	08 44 38.2	+0.5
KUR				AMB	AMB	08 44 39.0	
	70nm,0.2s						
KUR				*e*S	Sn	08 44 54.7	-1.1
KUR				A	A	08 44 56.8	
	210nm,0.2s						
KUR				A	A	08 44 56.8	
	310nm,0.2s						
JRA	Rausu	1.63	276	P	Pn	08 44 40.3	+0.5
JNSB	Nemuroshibetsu	1.71	270	*e*P	Pn	08 44 41.6	+0.7
JNSB				*e*S	Sn	08 45 00.9	-0.7
JKHN	Kushirohamanak	1.76	247	*e*S	Sn	08 45 01.1	-1.6
JNK	Nakash	1.93	265	P	Pn	08 44 44.5	+0.5
JNK				*e*S	Sn	08 45 06.2	-0.8
AKK	Akkeshi	2.00	248	*e*P	Pn	08 44 45.0	+0.2
JAK	Akkeshi	2.11	249	*e*P	Pn	08 44 46.7	+0.4
JAK				S	Sn	08 45 09.8	-1.5
JTKR	Abashiri--Toko	2.51	275	P	Pn	08 44 53.2	+1.3
JAR	Ashorobuto	2.66	260	P	Pn	08 44 55.4	+1.4
JAR				*e*S	Sn	08 45 25.2	+0.2
JOB	Onbets	2.73	252	*e*P	Pn	08 44 56.0	+1.1
JOB				*e*S	Sn	08 45 26.8	+0.1
JMP	Maruseppu	2.91	276	*e*P	Pn	08 44 58.9	+1.5
JCH	Churui	3.16	249	*e*P	Pn	08 45 02.0	+1.2
JCH				S	Sn	08 45 37.0	-0.2
JFR	Furan	3.53	261	*e*P	Pn	08 45 08.5	+2.5
JFR				*e*S	Sn	08 45 47.2	+0.7

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*IDC **16** 08:52:14.3±2.0, 30°.58S×177°.95W, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=53.7km s-min=34.2km az=38.0*

*WEL **16** 08:52:18.3±1.4, 31°S±16°×17°8W±5°5, h33km, mB4.7/2, ML5.0/6, MLv4.7/5, Mw(mB)3.9/2, Error ellipse: s-maj=75.4km s-min=3.4km az=106.2, confirmed*

*NEIC **16** 08:52:18.3±1.1, 30°.43S±0°.05×178°.0W±0°.2, h35km±2km, mb4.0/10, Error ellipse: s-maj=32.3km s-min=7.9km az=90.0*

ISC 16 08:52:20.3±0.8, **30°.92S**±0°.07×**178°.4W**±0°.2, **h35**km, **n30**, σ**1ˢ.69**/36, **mb4.0**/10, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	1.69	13	P	Pn	08 52 47.2	-0.2
GLKZ				S	Sn	08 53 06.3	-1.5
RAO	Raoul Island	1.70	13	Pn	Pn	08 52 38.4	-9.1
RIZ	Raoul Island	1.71	13	P	Pn	08 52 47.8	+0.2
RIZ				S	Sn	08 53 06.7	-1.6
HAZ	Te Kaha	7.53	204	P	Pn	08 54 06.7	-0.9
HAZ				S	Sn	08 55 31.0	-0.7
PKGZ	Pakihiroa	7.53	202	P	Pn	08 54 05.9	-1.7
PKGZ				S	Sn	08 55 31.0	-0.7
PUZ	Puketiti	7.66	200	P	Pn	08 54 07.1	-2.4
PUZ				S	Sn	08 55 32.3	-2.7
RUGZ	Raukumara Rang	7.75	204	P	Pn	08 54 09.6	-1.2
RUGZ				S	Sn	08 55 39.2	+1.8

WCZ	Waipu Caves	7.89	229	P	Pn	08 54 21.8	+9.4
OUZ	Omahuta	7.99	235	P	Pn	08 54 23.6	+10
TKGZ	Te Karaka	8.13	202	S	Sn	08 55 46.7	+0.4
MWZ	Matawai	8.14	203	P	Pn	08 54 13.3	-2.7
MWZ				S	Sn	08 55 45.5	-1.2
URZ	Urewera	8.22	206	Pn	Pn	08 54 14.7	-2.3
	0.2nm,0.3s,baz=5.9,slow=4.1,SNR=12						
URZ				Sn	Sn	08 55 45.8	-2.9
	3.9nm,0.3s,baz=148,slow=24,SNR=17						
URZ	Urewera	8.22	206	P	Pn	08 54 14.8	-2.3
URZ				S	Sn	08 55 47.3	-1.3
ARMA	Armidale	25.78	263	P	P	08 57 48.4	+0.3
ARMA				IAmb	IAmb	08 58 03.1	
	comp=Z,6.0nm,1.1s						
CAN	Canberra	27.61	252	P	P	08 58 05.6	+1.1
CAN				IAmb	IAmb	08 58 31.2	
	comp=Z,4.5nm,1.0s						
STKA	Stephens Creek	34.06	258	P	P	08 59 04.8	+3.5
	comp=Z,1.6nm,0.9s,baz=99,slow=13,SNR=4.1						
	comp=Z,1.6nm,0.9s						
BBOO	Buckleboo	38.53	255	P	P	08 59 40.5	+0.9
AS31	Alice Springs	42.77	268	P	P	09 00 14.4	-0.3
ASAR	Alice Springs	42.77	268	P	P	09 00 14.1	-0.6
ASAR	Alice Springs	42.77	268	P	P	09 00 16.6	+1.9
	comp=Z,1.1nm,0.7s,baz=105,slow=7.3,SNR=11						
	comp=Z,1.1nm,0.7s						
WR8	Warramunga Arr	43.66	273	P	P	09 00 23.2	+1.3
WR8				IAmb	IAmb	09 00 44.3	
	comp=Z,2.3nm,1.1s						
WRAB	Tennant Creek	43.80	273	P	P	09 00 21.3	-1.7
WRAB				IAmb	IAmb	09 00 23.9	
	comp=Z,4.0nm,0.9s						
WRA	Warramunga Arr	43.80	273	P	P	09 00 24.0	+1.0
WRA	Warramunga Arr	43.80	273	P	P	09 00 24.3	+1.2
	comp=Z,1.2nm,0.7s,baz=111,slow=8.1,SNR=17						
	comp=Z,1.2nm,0.7s						
WB0	Warramunga Arr	43.83	273	P	P	09 00 23.2	-0.1
WB0				IAmb	IAmb	09 00 32.6	
	comp=Z,3.5nm,1.1s						
SBA	Scott Base	47.50	184	P	P	09 00 53.4	+1.9
SBA				IAmb	IAmb	09 01 10.2	
	comp=Z,0.4nm,0.7s						
CASY	Casey	54.54	208	P	P	09 01 45.0	+0.5
QSPA	South Pole Qui	59.20	180	P	P	09 02 19.1	+1.5
QSPA	South Pole Qui	59.20	180	P	P	09 02 19.2	+1.5
	comp=Z,1.0nm,0.7s,baz=54,slow=0.7,SNR=9.4						
	comp=Z,1.0nm,0.7s						
FINES	FINESS Array B	145.52	339	PKPbc	PKPab	09 11 52.6	-1.8
	comp=Z,1.1nm,0.6s,baz=64,slow=3.0,SNR=7.2						

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*NOU **16** 08:59:32.8, 41°.15S×172°.73E, h104km, MLv3.9/11, South Island, New Zealand*

*WEL **16** 08:59:32.8±0.9, 41°S±5°×17°3E±°, h93km±6km, M2.5/9, ML2.8/8, MLv2.5/9, Error ellipse: s-maj=6.3km s-min=4.0km az=171.4, confirmed*

ISC 16 08:59:31.3±1.3, 41°.29S±0°.04×173°.14E±0°.04, h114km±7km, n63, σ0ˢ.86/78, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNZ	Nelson	0.19	67	P	Pn	08 59 47.6	+0.4
NNZ				S	Sn	08 59 58.8	-0.2
MOTS	Motueka DOC wo	0.20	329	P	Pn	08 59 45.9	-1.2
MOTS				S	Sn	08 59 58.0	-1.0
TKNZ	Takaka Hill	0.29	332	P	Pn	08 59 47.6	0.0
TKNZ				S	Sn	08 59 58.6	-1.2
MRNZ	Matariki Terra	0.31	250	P	Pn	08 59 47.9	+0.3
MRNZ				S	Sn	08 59 59.2	-0.7
THZ	Tophouse	0.50	201	P	Pn	08 59 49.5	+0.8
THZ				S	Sn	09 00 02.0	+0.2
TUWZ	Tuamarina	0.62	103	P	Pn	08 59 51.0	+1.7
TUWZ				S	Sn	09 00 04.2	+1.2
QRZ	Quartz Range	0.66	315	P	Pn	08 59 50.0	+0.3
QRZ	Quartz Range	0.66	315	P	Pn	08 59 49.9	+0.2
QRZ				S	Sn	09 00 02.2	-1.4
BSWZ	Blackbirch Sta	0.69	128	P	Pn	08 59 51.0	+1.0
BSWZ				S	Sn	09 00 05.3	+1.1
DUWZ	D'Urville Isla	0.77	51	P	Pn	08 59 51.5	+0.9
DUWZ				S	Sn	09 00 05.0	-0.2
TCW	Tory Channel	0.86	85	P	Pn	08 59 52.3	+0.9
TCW				S	Sn	09 00 06.0	-0.6
DSZ	Denniston Nort	1.10	245	P	Pn	08 59 54.5	+0.6
DSZ				S	Sn	09 00 10.1	-0.9
KHZ	Kahutara	1.16	165	P	Pn	08 59 55.6	+1.2
KHZ				S	Sn	09 00 11.8	-0.2
WEL	Wellington	1.23	90	P	Pn	08 59 55.5	+0.4
WEL				S	Sn	09 00 11.7	-1.5
BHW	Baring Head	1.31	96	P	Pn	08 59 56.2	+0.2
BHW				S	Sn	09 00 13.5	-1.4
KIW	Kapiti Island	1.40	73	P	Pn	08 59 57.7	+0.5
KIW				S	Sn	09 00 16.1	-0.8
CAW	Cannon Point	1.46	83	P	Pn	08 59 58.0	+0.1
CAW				S	Sn	09 00 16.9	-1.2
MSWZ	Moikau Station	1.59	95	P	Pn	08 59 59.4	0.0
OGWZ	Otaki Gorge	1.61	73	P	Pn	08 59 59.8	+0.3
PLWZ	Palliser	1.61	101	P	Pn	08 59 59.7	+0.1
LTZ	Lake Taylor	1.62	203	P	Pn	09 00 00.7	+0.9
LTZ				S	Sn	09 00 21.3	-0.3
GVZ	Greta Valley S	1.68	183	P	Pn	09 00 01.3	+0.9
PAWZ	Paruwai Farm	1.72	94	P	Pn	09 00 00.9	-0.1
MTW	Mount Morrison	1.79	86	P	Pn	09 00 01.5	-0.3
INZ	Inchbonnie	1.91	221	P	Pn	09 00 04.2	+0.9
AMCZ	Amberley	1.92	191	P	Pn	09 00 04.4	+1.1
MRZ	Mangatainoka R	1.95	72	P	Pn	09 00 03.3	-0.5
LREZ	Lake Rotokare	2.07	28	P	Pn	09 00 07.0	+1.7
WAZ	Wanganui	2.08	43	P	Pn	09 00 07.2	+1.7
NBEZ	Newall Road No	2.10	16	P	Pn	09 00 06.7	+1.1
KHEZ	Kahui Hut	2.10	19	P	Pn	09 00 06.8	+1.0
KHEZ	Kahui Hut	2.10	19	S	Sn	09 00 32.8	+0.5
KHEZ	Kahui Hut	2.10	19	P	Pn	09 00 07.0	+1.1
TIWZ	Tintock	2.14	77	P	Pn	09 00 05.8	-0.4
OXZ	Oxford	2.19	202	P	Pn	09 00 07.0	+0.1
PKE	Pukeiti	2.19	17	P	Pn	09 00 08.4	+1.4
DREZ	Durham Road	2.25	21	P	Pn	09 00 08.4	+0.8
OKCZ	Okains Bay	2.43	181	P	Pn	09 00 10.5	+0.6
MQZ	McQueen's Vall	2.44	188	P	Pn	09 00 09.7	-0.3
VRZ	Vera Road	2.49	30	P	Pn	09 00 11.9	+1.2
MHCZ	Mount Hutt	2.52	207	P	Pn	09 00 11.2	+0.1
WVZ	Waitaha Valley	2.52	224	P	Pn	09 00 11.7	+0.6
RACZ	Rakaia	2.54	197	P	Pn	09 00 11.4	0.0
AKCZ	Akaroa Harbour	2.58	184	P	Pn	09 00 12.2	+0.3
PKVZ	Pokaka	2.62	41	P	Pn	09 00 13.4	+1.1
PNHZ	Pukenui	2.71	60	P	Pn	09 00 20.5	+7.0
WACZ	Wakanui South	2.82	200	P	Pn	09 00 15.3	+0.4
RPZ	Rata Peaks	2.87	212	P	Pn	09 00 17.1	+1.4
RPZ	Rata Peaks	2.87	212	S	Sn	09 00 49.8	-0.1
RPZ	Rata Peaks	2.87	212	P	Pn	09 00 16.8	+1.1
GCSZ	Gaunt Creek Bo	2.91	225	P	Pn	09 00 16.6	+0.5
ARCZ	Arundel	3.02	208	P	Pn	09 00 18.2	+0.6
HIZ	Hauiti	3.07	26	P	Pn	09 00 18.9	+0.6
HIZ	Hauiti	3.07	26	P	Pn	09 00 18.8	+0.5
FOZ	Fox Glacier	3.33	227	P	Pn	09 00 21.6	0.0
BKZ	Black Stump Fm	3.33	51	P	Pn	09 00 26.4	+4.6
BKZ	Black Stump Fm	3.33	51	P	Pn	09 00 20.8	-1.0
TMZ	Timaru	3.47	206	P	Pn	09 00 23.5	0.0
ODZ	Otahua Downs	4.17	205	P	Pn	09 00 34.3	+1.4
ODZ	Otahua Downs	4.17	205	P	Pn	09 00 33.2	+0.3
JCZ	Jackson Bay	4.25	228	P	Pn	09 00 34.1	+0.1
JCZ	Jackson Bay	4.25	228	S	Sn	09 01 21.3	-1.4
JCZ	Jackson Bay	4.25	228	P	Pn	09 00 34.1	+0.1

IDC 16 09:01:55.1±2.1, 18°.23S×167°.68E, h0km, mb3.8/4, mbtmp3.7/5, ML3.5/1, Error ellipse: s-maj=58.7km s-min=31.7km az=128.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.00	197	Pn	Pn	09 02 56.6	-1.2
	2.9nm,0.3s,baz=323,slow=7.2,SNR=30						
DZM				Sn	Sn	09 03 39.1	-6.3
	12nm,0.3s,baz=129,slow=19,SNR=17						
	5.0nm,0.3s						
STKA	Stephens Creek	27.18	235	P	P	09 07 41.5	+1.0
	2.0nm,0.9s,baz=56,slow=9.6,SNR=3.7						
	2.0nm,0.9s						
WRA	Warramunga Arr	31.53	261	P	P	09 08 18.6	-0.7
	0.5nm,0.9s,baz=88,slow=8.2,SNR=4.5						
	0.5nm,0.9s						
ASAR	Alice Springs	31.96	254	P	P	09 08 23.1	0.0
	0.9nm,0.5s,baz=82,slow=8.6,SNR=32						
	0.9nm,0.5s						
ILAR	Eielson Array	89.71	18	P	P	09 14 54.8	0.0
	0.3nm,0.7s,baz=234,slow=5.1,SNR=5.5						
	0.3nm,0.7s						

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*MEX **16** 09:06:55.2±0.6, 14°.31N×92°.63W, h72km±66km, MD3.7*

*GCG **16** 09:06:55.9±0.3, 14°.98N×91°.53W, h130km±61km, MD3.9, ML2.9*

ISC 16 09:06:52.6±2.8, 14°.2N±0°.2×92°.7W±0°.1, h59km±43km, n10, σ1ˢ.67/15, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.81	29	eP	Pn	09 07 04.7	-3.5
THIG				eS	Sn	09 07 19.1	-0.5
RTAL	Retalhuleu	1.00	71	eP	Pn	09 07 12.5	+1.9
RTAL				eS	Sn	09 07 25.1	+1.1
PATR	El Naranjo	1.01	25	eP	Pn	09 07 11.2	+0.2
PATR				eS	Sn	09 07 23.5	-1.0
PAVE	Pavencul	1.10	26	eP	Pn	09 07 12.1	-0.1
PAVE				eS	Sn	09 07 26.0	-0.7
STG8	El Palmar, Qui	1.30	79	i P	Pn	09 07 14.7	-0.2
STG8				IAML		09 07 32.0	
	comp=N,278nm,0.2s						
STG0	El Palmar, Qui	1.31	80	i P	Pn	09 07 14.6	-0.2
STG0				i S	Sn	09 07 29.1	-2.3
STG0				IAML		09 07 32.8	
	comp=N,253nm,0.2s						
PCIG		1.59	341	eP	Pn	09 07 19.1	+0.5
PCIG				eS	Sn	09 07 37.1	-1.0
CCIG	Comitan	2.14	14	eP	Pn	09 07 29.3	+3.1
CCIG				eS	Sn	09 07 53.5	+1.8
TGIG		2.61	350	eP	Pn	09 07 34.2	+1.8
TGIG				eS	Sn	09 07 59.7	-3.2
TGIG		2.61	350	i P	Pn	09 07 34.9	+2.5

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*JMA **16** 09:13:58.3±0.1, 42°.7N±0°.3×144°.9E±0°.5, h52km±1km, MV3.7/37, OFF NEMURO PENINSULA*

*SKHL **16** 09:13:59.9±0.6, 42°.70N×144°.90E, h42km±7km, mb4.6/3*

ISC 16 09:13:58.9±1.8, 42°.66N±0°.10×144°.94E±0°.05, h43km±15km, n14, σ0ˢ.65/24, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKK	Akkeshi	0.36	348	eP	Pn	09 14 07.9	-0.2
JAK	Akkeshi	0.38	332	P	Pn	09 14 08.0	-0.3
JAK				eS	Sn	09 14 15.5	+0.6
JKHN	Kushirohamanak	0.45	21	P	Pn	09 14 09.3	+0.2
JOB	Onbets	0.85	287	P	Pn	09 14 14.0	-0.4
JOB				S	Sn	09 14 25.9	+0.1
NMR	Nemuro--Hokkai	0.91	39	i P	Pn	09 14 14.9	-0.3
NMR				eS	Sn	09 14 26.7	-0.5
NEM2	Nemuro 2	0.92	39	P	Pn	09 14 14.8	-0.5
NEM2				S	Sn	09 14 26.8	-0.5
JNK	Nakash	0.94	350	P	Pn	09 14 15.0	-0.6
JNK				eS	Sn	09 14 27.1	-0.8
JAR	Ashorobuto	1.07	307	P	Pn	09 14 16.8	-0.7
JCH	Churui	1.17	268	P	Pn	09 14 18.3	-0.4
JCH				eS	Sn	09 14 33.9	+0.4
JRA	Rausu	1.28	6	P	Pn	09 14 19.9	-0.4
JTKR	Abashiri--Toko	1.51	330	eP	Pn	09 14 23.8	+0.4
JTKR				eS	Sn	09 14 43.3	+1.4
YUK	Yuzh-Kuril'sk	1.53	26	eP	Pn	09 14 23.5	-0.1
YUK				AMB	AMB	09 14 24.2	
	280nm,0.2s						
YUK				i S	Sn	09 14 41.7	-0.6
YUK				A	A	09 14 43.7	
	810nm,0.3s						
YUK				A	A	09 14 43.7	
	620nm,0.3s						
SHO	Shikotan	1.83	48	i P	Pn	09 14 28.2	+0.4
SHO				AMB	AMB	09 14 29.3	
	70nm,0.2s						
SHO				eS	Sn	09 14 49.2	-0.6
SHO				A	A	09 14 51.2	
	630nm,0.3s						
SHO				A	A	09 14 51.2	
	800nm,0.3s						
KUR	Kuril'sk	3.33	38	eP	Pn	09 14 49.7	+1.4
KUR				AMB	AMB	09 14 50.3	
	70nm,0.4s						
KUR				eS	Sn	09 15 26.8	+0.2
KUR				A	A	09 15 31.9	
	110nm,0.4s						
KUR				A	A	09 15 31.9	
	80nm,0.4s						

IDC 16 09:18:12.6±3.0, 31°.29S×177°.49W, h0km, mb3.8/2, mbtmp3.8/3, ML3.2/1, MS3.3/1, Error ellipse: s-maj=74.9km s-min=46.1km az=127.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.25	211	Pn	Pn	09 20 13.4	-0.1
	0.3nm,0.3s,baz=92,slow=16,SNR=1.7						
URZ				Sn	Sn	09 21 44.9	-2.6
	1.4nm,0.3s,baz=246,slow=22,SNR=10						
	5.3nm,0.8s						
ASAR	Alice Springs	43.51	268	P	P	09 26 18.1	0.0
	0.4nm,0.4s,baz=112,slow=7.9,SNR=13						
	0.4nm,0.4s						
WRA	Warramunga Arr	44.58	273	P	P	09 26 26.4	-0.2
	1.0nm,0.4s,baz=112,slow=8.0,SNR=26						
	1.0nm,0.4s						
QSPA	South Pole Qui	58.83	180	LR	LR	09 50 13.6	
	comp=Z,28nm,20.0s,baz=347,slow=33						
FINES	FINESS Array B	146.13	340	PKPbc	PKPdf	09 37 53.1	+0.1
	1.2nm,0.7s,baz=45,slow=4.1,SNR=7.9						

IDC 16 09:19:19.0±13.0, 30°.46S×178°.09W, h183km±141km, mb3.0/2, mbtmp3.6/3, Error ellipse: s-maj=123.3km s-min=55.8km az=177.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.73	206	P	Pn	09 21 21.2	-0.6
	7.1nm,0.9s,baz=236,slow=22,SNR=1.8						
URZ				S	Sn	09 23 01.1	+1.7
	5.9nm,0.6s,baz=348,slow=23,SNR=6.5						
ASAR	Alice Springs	43.02	267	P	P	09 27 00.6	-0.2
	0.2nm,0.4s,baz=108,slow=7.4,SNR=1.4						
	0.2nm,0.4s						
WRA	Warramunga Arr	44.02	272	P	P	09 27 08.3	-0.4
	0.4nm,0.4s,baz=113,slow=6.7,SNR=6.5						
	0.4nm,0.4s						
FINES	FINESS Array B	145.17	340	PKPbc	PKPdf	09 38 33.4	-0.5
	0.6nm,0.3s,baz=60,slow=4.9,SNR=6.0						

IDC 16 09:39:12.5±9.2, 31°.68S×176°.61W, h0km, mb3.2/2, mbtmp3.2/2, Error ellipse: s-maj=428.7km s-min=63.2km az=158.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	44.24	268	P	P	09 47 23.1	-0.7
	0.2nm,0.8s,baz=112,slow=8.6,SNR=1.9						
	0.2nm,0.8s						
WRA	Warramunga Arr	45.34	273	P	P	09 47 33.1	+0.4
	0.2nm,0.6s,baz=115,slow=7.9,SNR=4.5						
	0.2nm,0.6s						
FINES	FINESS Array B	146.75	340	PKPbc	PKPdf	09 58 54.8	+0.8
	1.1nm,0.9s,baz=61,slow=4.3,SNR=4.0						

IDC 16 09:41:21.1±3.3, 32°.89S×178°.21W, h0km, mb3.3/2, mbtmp3.4/3, ML3.4/1, Error ellipse: s-maj=78.8km s-min=47.7km az=121.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.58	214	Pn	Pn	09 42 58.2	-0.8
	0.8nm,0.3s,baz=340,slow=5.9,SNR=7.4						
URZ				Sn	Sn	09 44 10.8	-3.9
	1.6nm,0.3s,baz=7.6,slow=22,SNR=8.9						
	3.5nm,0.5s						
ASAR	Alice Springs	42.86	270	P	P	09 49 20.9	-0.4
	0.3nm,0.7s,baz=106,slow=7.5,SNR=4.3						
	0.3nm,0.7s						
WRA	Warramunga Arr	44.07	275	P	P	09 49 31.4	+0.3
	0.2nm,0.3s,baz=113,slow=7.8,SNR=6.3						
	0.2nm,0.3s						
FINES	FINESS Array B	147.40	338	PKPbc	PKPbc	10 01 05.3	-0.7
	1.5nm,0.8s,baz=26,slow=5.9,SNR=3.7						

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*HEL **16** 09:44:15.6±0.3, 67°.62N×20°.95E, h0km, ML1.4, Suspected explosion*

*IDC **16** 09:44:16.1±2.4, 67°.59N×21°.25E, h0km, mbtmp2.4/2, ML1.5/2, Error ellipse: s-maj=32.9km s-min=10.7km az=97.0*

ISC 16 09:44:13.7±0.9, 67°.58N±0°.02×20°.78E±0°.04, h0km, n21, σ1ˢ.13/33, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LANU	Lannavaara	0.66	44	PG	Pg	09 44 26.8	+0.5
LANU				SG	Sg	09 44 34.4	-0.4
SALU	Saltoluokta	0.90	258	eP	Pn	09 44 34.1	+0.4
PAJU	Pajala	1.06	121	PG	Pg	09 44 34.1	+0.1
	baz=304						
PAJU				SG	Sg	09 44 47.8	0.0
ERTU	Ertsjaerv	1.17	151	PG	Pb	09 44 36.8	0.0
ERTU				SB	Sn	09 44 53.5	-0.5
KLF	Kolari	1.28	104	PG	Pg	09 44 38.0	-0.2
KLF				MSG		09 44 52.7	
	comp=Z,1.4nm,0.2s						
KLF				SB	Sg	09 44 53.9	-0.8
HEF	Hetta	1.36	51	PG	Pg	09 44 38.7	-1.2
	baz=234						
HEF				MSG		09 44 54.8	
	comp=Z,2.5nm,0.2s						
HEF				SG	Sg	09 44 55.2	-2.3
KIF	Kilpisjarvi	1.43	0	PG	Pb	09 44 41.3	+0.1
KIF				MSG		09 44 58.6	
	comp=Z,7.7nm,0.2s						
KIF				SG	Sg	09 44 59.6	0.0
I37NO	I37NO	1.70	333	I	I	09 55 10.0	
	comp=Z,0.1nm,0.8s,baz=149,slow=323,SNR=9.8						
KALU	Kalix	2.01	148	PG	Pg	09 44 51.7	-0.5
	baz=328						
KALU				SG	Sg	09 45 18.0	-0.1
TOF	Tornio	2.06	135	PG	Pb	09 44 52.0	+0.1
TOF				MSG		09 45 16.2	
	comp=Z,1.3nm,0.2s						
TOF				SG	Sg	09 45 18.6	-1.2
TRO	Tromso	2.17	343	SG	Sg	09 45 23.1	-0.2
RNF	Rovaniemi	2.27	113	PG	Pb	09 44 54.7	-0.8
RNF				SG	Sb	09 45 23.5	-0.5
ARA0	ARCESS Array S	2.62	39	PG	Pb	09 45 01.3	-0.2
ARA0				SB	Sn	09 45 30.9	+1.3
ARCES	ARCESS Array B	2.62	39	Pn	Pn	09 44 58.1	+0.9
	comp=Z,0.1nm,0.3s,baz=221,slow=13,SNR=4.5						
ARCES				Sn	Sn	09 45 30.1	+0.5
	comp=Z,0.4nm,0.3s,baz=220,slow=25,SNR=14						
	comp=Z,0.6nm,0.4s						
RANF	Ranua	2.85	121	SG	Sb	09 45 41.0	+0.2
RAJF	Raja-Jooseppi	2.97	69	SB	Sb	09 45 42.3	-1.9
BURU	Burvik	3.02	175	PB	Pb	09 45 06.7	-1.6
BURU				SB	Sb	09 45 43.8	-1.9
KEV	Kevo	3.15	43	SN	Sn	09 45 42.7	-0.1
KEV				MSG		09 45 46.3	
	comp=Z,0.7nm,0.2s						
OUL	Oulu	3.25	138	SG	Sb	09 45 53.6	+1.5
VRF	Varrio	3.37	83	SG	Sb	09 45 55.4	-0.5
FINES	FINESS Array B	6.57	157	Pn	Pn	09 45 55.0	+3.6
	baz=340,slow=9.4,SNR=1.3						
FINES				Sn	Sn	09 47 06.3	-0.6
	comp=Z,0.1nm,0.3s,baz=353,slow=22,SNR=1.9						
FINES				Lg	Lg	09 47 38.2	
	comp=Z,0.1nm,0.3s,baz=354,slow=25,SNR=2.1						
	comp=Z,0.5nm,0.7s						

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*CATAC **16** 09:46:44.4±0.9, 13°N±5°×9°0W±°, h16km±6km, M2.4/12, MLv2.4/12, Error ellipse: s-maj=11.1km s-min=6.7km az=8.0, confirmed*

*SNET **16** 09:46:45.7±0.5, 13°.11N×89°.50W, h53km±11km, ML2.4*

*GCG **16** 09:46:45.8±0.4, 13°.11N×89°.61W, h47km±6km, MD3.8*

ISC 16 09:46:44.8±3.8, 13°.0N±0°.2×89°.57W±0°.09, h43km, n27, σ0ˢ.52/31, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.53	27	P	Pn	09 46 54.5	-1.6
JAYA	Jayaque - finc	0.65	10	eP	Pn	09 46 57.6	-0.2
JAYA				eP		09 46 57.7	
JAYA				IAML		09 47 07.6	
	comp=Z,521nm,0.2s						
JAYA	Jayaque - finc	0.65	10	i P	Pn	09 46 57.6	-0.2
JAYA				i S	Sn	09 47 06.6	-0.6
JAYA	Jayaque - finc	0.65	10	P	Pn	09 46 57.5	-0.3
LOMA	Loma Larga	0.74	31	S	Sn	09 47 08.8	-0.4
LOMA	Loma Larga	0.74	31	P	Pn	09 46 58.2	-0.8
PMON	Piamonte	0.74	19	eP	Pn	09 46 58.8	-0.3
PMON	Piamonte	0.74	19	P	Pn	09 46 58.7	-0.3
PMON	Piamonte	0.74	19	S	Sn	09 47 08.8	-0.4
UEES	Universidad Ev	0.77	24	P	Pn	09 46 59.6	+0.2
IGN	Direccin Gen	0.80	29	P	Pn	09 46 59.5	-0.2
CEVE	Cerro Verde	0.82	356	P	Pn	09 46 59.7	-0.4
NUBE	Las Nubes	0.91	347	eP	Pn	09 47 01.4	0.0
NUBE				IAML		09 47 14.1	
	comp=Z,40nm,0.2s						
NUBE	Las Nubes	0.91	347	i P	Pn	09 47 01.4	0.0
NUBE				i S	Sn	09 47 13.4	-0.1
NUBE	Las Nubes	0.91	347	P	Pn	09 47 01.4	0.0
TECO	Alcaldia de Te	0.93	55	P	Pn	09 47 01.1	-0.4
TECO	Alcaldia de Te	0.93	55	S	Sn	09 47 13.7	0.0
PAVA	Las Pavas	0.93	41	eP	Pn	09 47 01.6	0.0
PAVA				eS	Sn	09 47 13.8	-0.1
PAVA				IAML		09 47 15.3	
	comp=Z,116nm,0.3s						
PAVA	Las Pavas	0.93	41	S	Sn	09 47 14.5	+0.6
PAVA	Las Pavas	0.93	41	P	Pn	09 47 02.1	+0.5
UESV	Universidad de	0.98	51	S	Sn	09 47 15.6	+0.6
UESV	Universidad de	0.98	51	P	Pn	09 47 02.1	-0.1
SCLA	Alcaldia de Sa	1.07	50	P	Pn	09 47 04.0	+0.6
MTO3	Montecristo	1.40	8	i P	Pn	09 47 08.2	+0.2
MTO3	Montecristo	1.40	8	i P	Pn	09 47 08.2	+0.2
MTO3				i S	Sn	09 47 26.1	+0.6
MTO3	Montecristo	1.40	8	P	Pn	09 47 08.3	+0.3
ESQI	Esquipulas	1.56	8	P	Pn	09 47 11.1	+0.9

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*NEIC **16** 09:57:01.0±1.9, 4°.90S±0°.08×151°.63E±0°.08, h30km±5km, mb4.3/19, Error ellipse: s-maj=15.1km s-min=5.9km az=137.0*

*IDC **16** 09:57:05.2±4.5, 4°.99S×151°.33E, h61km±38km, mb3.8/10, mbtmp4.2/12, ML3.0/2, MS3.4/12, Error ellipse: s-maj=34.8km s-min=18.2km az=98.0*

ISC 16 09:57:01.5±0.6, 4°.93S±0°.07×151°.59E±0°.09, h35km, n44, σ1ˢ.31/39, mb4.2/17, MS3.4/9, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	0.93	38		Pn	09 57 17.9	-0.2
RABL				Sn	Sn	09 57 28.8	-1.5
MANU	Manus Island	5.09	304		Pn	09 58 16.3	+0.9
PMG	Port Moresby	6.25	224		Pn	09 58 32.1	+0.8
PMG	Port Moresby	6.25	224	P	Pn	09 58 31.1	-0.2
	9.3nm,0.3s,baz=49,slow=8.0,SNR=21						
PMG				S	Sn	09 59 42.5	+0.9
	51nm,0.5s,baz=274,slow=23,SNR=6.8						
PMG				LR	LR	10 01 04.1	
	comp=Z,402nm,19.8s,baz=140,slow=40						
	101nm,0.7s						
JAY	Jayapura	11.12	282	P	Pn	09 59 37.2	-0.9
	0.4nm,0.3s,baz=130,slow=17,SNR=2.2						
JAY				LR	LR	10 02 59.9	
	comp=Z,246nm,21.1s,baz=66,slow=33						
	17nm,1.0s						
COEN	Coen	12.21	222	Pn	Pn	09 59 53.2	+0.1
CTAO	Charters Tower	15.94	199	P	P	10 00 46.9	+0.4
GUMO	Guam	19.57	340	P	P	10 01 26.3	-0.2
GUMO	Guam	19.57	340	LR	LR	10 09 40.8	
	comp=Z,49nm,18.4s,baz=162,slow=39						
EIDS	Eidsvold	20.33	181	P	P	10 01 34.1	-0.7
EIDS				IAmb	IAmb	10 01 48.0	
	comp=Z,6.3nm,0.8s						
MTN	Manton Dam	21.67	247	P	P	10 01 46.5	-2.8
MTN				IAmb	IAmb	10 01 54.6	
	comp=Z,6.3nm,0.9s						
WB0	Warramunga Arr	22.31	227		P	10 01 56.0	-0.2

WB0				IAmb	IAmb	10 02 21.2	
	comp=Z,8.8nm,0.8s						
WR8	Warramunga Arr	22.36	227	P	P	10 01 56.7	0.0
WR8				IAmb	IAmb	10 02 25.6	
	comp=Z,8.7nm,0.8s						
WRA	Warramunga Arr	22.46	227	P	P	10 01 55.4	-2.4
WRA	Warramunga Arr	22.46	227	P	P	10 01 56.1	-1.8
	comp=Z,3.0nm,0.7s,baz=51,slow=10,SNR=21						
WRA				LR	LR	10 09 55.4	
	comp=Z,137nm,21.1s,baz=45,slow=35						
	comp=Z,3.0nm,0.7s						
KNRA	Kununurra	24.83	243	P	P	10 02 21.0	+0.3
KNRA				IAmb	IAmb	10 02 32.7	
	comp=Z,8.1nm,0.7s						
AS31	Alice Springs	25.25	221		P	10 02 23.9	-0.6
ASAR	Alice Springs	25.25	221		P	10 02 23.9	-0.6
ASAR	Alice Springs	25.25	221	P	P	10 02 23.5	-1.0
	comp=Z,3.3nm,0.7s,baz=54,slow=8.7,SNR=47						
ASAR				LR	LR	10 13 25.9	
	comp=Z,85nm,18.7s,baz=68,slow=39						
	comp=Z,3.3nm,0.7s						
STKA	Stephens Creek	28.40	198	P	P	10 02 53.1	+0.3
STKA				IAmb	IAmb	10 03 21.1	
	comp=Z,18nm,0.9s						
STKA	Stephens Creek	28.40	198	P	P	10 02 52.9	+0.2
	comp=Z,2.1nm,0.7s,baz=355,slow=13,SNR=5.5						
STKA				LR	LR	10 14 11.6	
	comp=Z,167nm,18.7s,baz=22,slow=36						
	comp=Z,2.1nm,0.7s						
FITZ	Fitzroy Crossi	28.54	241	P	P	10 02 52.6	-1.6
FITZ	Fitzroy Crossi	28.54	241	P	P	10 02 52.1	-2.0
	comp=Z,2.4nm,0.7s,baz=63,slow=8.9,SNR=9.0						
	comp=Z,2.4nm,0.7s						
DAV	Davao City (W)	28.56	294	LR	LR	10 13 38.8	
	comp=Z,65nm,18.1s,baz=143,slow=35						
LUWI	Luwuk	29.03	277	P	P	10 02 56.9	-1.6
FORT	Forrest	33.93	218	P	P	10 03 39.9	-1.6
MJAR	Matsushiro Arr	43.11	344	LR	LR	10 22 17.1	
	comp=Z,24nm,18.7s,baz=157,slow=35						
USRK	Ussuriysk Ar.	51.99	342	P	P	10 06 08.8	+1.6
	comp=Z,3.4nm,0.9s,baz=193,slow=7.8,SNR=4.7						
	comp=Z,3.4nm,0.9s						
CM31	Chiang Mai Arr	56.84	296	P	P	10 06 43.8	+0.8
CM31				IAmb	IAmb	10 06 54.3	
	comp=Z,6.5nm,1.1s						
CMAR	Chiang Mai Arr	56.84	296	P	P	10 06 43.9	+0.8
	comp=Z,0.7nm,0.3s,baz=105,slow=6.8,SNR=2.7						
	comp=Z,0.7nm,0.3s						
CHTO	Chiang Mai	56.95	296	P	P	10 06 44.5	+0.7
CHTO				IAmb	IAmb	10 06 56.2	
	comp=Z,2.9nm,0.9s						
PETK	Petropavlovsk-	58.05	4	LR	LR	10 28 40.2	
	comp=Z,30nm,21.3s,baz=158,slow=33						
MA2	Magadan	64.31	360	LR	LR	10 35 42.8	
	comp=Z,28nm,18.9s,baz=246,slow=36						
ULN	Ulaanbaatar	65.47	329	P	P	10 07 42.7	+1.5
ULN				IAmb	IAmb	10 07 45.1	
	comp=Z,2.1nm,0.5s						
SONM	Songino Array	65.79	328	P	P	10 07 44.7	+1.4
SONM				IAmb	IAmb	10 07 52.8	
	comp=Z,1.9nm,1.2s						
SONM	Songino Array	65.79	328	P	P	10 07 43.1	-0.2
	comp=Z,0.8nm,0.7s,baz=164,slow=6.0,SNR=4.8						
	comp=Z,0.8nm,0.7s						
SEY	Seymchan	67.67	0	LR	LR	10 37 15.9	
	comp=Z,17nm,19.1s,baz=241,slow=36						
ILAR	Eielson Array	82.73	22	P	P	10 09 21.5	+0.1
	comp=Z,0.3nm,0.6s,baz=260,slow=5.5,SNR=3.6						
	comp=Z,0.3nm,0.6s						
QSPA	South Pole Qui	85.03	180	P	P	10 09 33.2	-0.1
QSPA				IAmb	IAmb	10 09 44.3	
	comp=Z,1.8nm,0.9s						
QSPA	South Pole Qui	85.03	180	P	P	10 09 33.8	+0.4
	comp=Z,1.7nm,0.8s,baz=332,slow=1.2,SNR=9.4						
	comp=Z,1.7nm,0.8s						
DLBC	Dease Lake	88.11	31	LR	LR	10 45 01.0	
	comp=Z,48nm,18.8s,baz=253,slow=33						
NVAR	Mina Array Bea	93.11	52	P	P	10 10 14.7	+2.2
	comp=Z,0.8nm,0.8s,baz=260,slow=3.5,SNR=5.1						
	comp=Z,0.8nm,0.8s						
PDAR	Pinedale Array	99.83	48	P	Pdif	10 10 46.1	+3.3
	comp=Z,0.2nm,0.3s,baz=244,slow=4.2,SNR=2.0						
TORD	Torodi Ar. Bea	149.19	287	PKPbc	PKPbc	10 16 46.9	-0.5
	comp=Z,2.3nm,0.3s,baz=82,slow=3.2,SNR=1.5						

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*IDC **16** 10:18:24.8±1.1, 24°.27N×121°.39E, h0^{km}, mb3.5/6, mbtmp3.6/7, ML3.4/1, Error ellipse: s-maj=51.1km s-min=21.0km az=71.0*

*ASIES **16** 10:18:25.8, 24°.87N×122°.46E, h4^{km}, ML3.6, Mw3.5, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M$_{rr}$0.27; M$_{\theta\theta}$0.94; M$_{\phi\phi}$-1.22; M$_{r\theta}$-1.02; M$_{\theta\phi}$-1.68; M$_{\phi r}$0.43; Fault plane solution: M$_0$2.29289×10^{21} NP1: ϕ_s347.07000°, δ68.83000°, λ17.75000°. NP2: ϕ_s250.48000°, δ73.49000°, λ157.87000°. Principal axes: T Plg27.1540°, Azm207.8810°; N Plg62.6380°, Azm35.5170°; P Plg3.1150°, Azm299.4810°;*

*TAP **16** 10:18:25.8, 24°.87N×122°.46E, h4^{km}±1^{km}, ML3.6, C*

*JMA **16** 10:18:26.8±0.2, 25°N±1°×122°.5E±0°.6, h22^{km}±3^{km}, MV2.9/11, NW OFF ISHIGAKIJIMA IS*

ISC 16 10:18:26.0±1.1**, 24°.87N**±0°.03×**122°.49E**±0°.02**, h10**^{km}±8^{km}**, n132, σ0^{s}93**/141**, mb3.5**/6**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.47	287	P	Pb	10 18 35.6	-0.8
TWB1				eS	Sb	10 18 42.5	-0.9
EGS		0.51	267	P	Pb	10 18 36.5	-0.5
EOS2	EOS2	0.51	207	iP	Pb	10 18 37.3	+0.3
JYNG	Yonagunijimaku	0.59	135	P	Pg	10 18 37.5	0.0
JYNG				eS	Sg	10 18 45.4	0.0
SXI1	Grass Mountain	0.60	292	P	Pb	10 18 38.1	-0.5
EOS3	EOS3	0.60	195	P	Pb	10 18 39.0	+0.4
TIPB	Shuangxi	0.61	279	P	Pb	10 18 38.4	-0.4
TIPB				eS	Sb	10 18 47.7	+0.3
YOJ	Yonaguni jima	0.63	131	P	Pg	10 18 38.5	+0.2
YOJ	Yonaguni jima	0.63	131	S	Sg	10 18 47.0	+0.5
YOJ	Yonaguni jima	0.63	131	P	Pg	10 18 38.4	+0.2
YOJ	Yonaguni jima	0.63	131	P	Pg	10 18 38.3	+0.1
YOJ				eS	Sg	10 18 45.8	-0.7
YOJ	Yonaguni jima	0.63	131	P	Pg	10 18 38.2	-0.1
YOJ				eS	Sg	10 18 46.8	+0.3
TWC	Suao	0.64	246	P	Pb	10 18 38.2	-1.0
ESAO	Su ao	0.66	243	P	Pb	10 18 38.9	-0.6
NWF	Wu-fen Shan	0.67	287	P	Pb	10 18 39.7	-0.1
WFSB	Wu-fen Shan	0.67	287	P	Pb	10 18 40.0	+0.1
WFSB				eS	Sb	10 18 49.8	+0.6
TNOU	National Taiwa	0.70	293	P	Pb	10 18 40.3	-0.1
NDS	Dongshan	0.74	251	P	Pg	10 18 39.7	-0.7
TWE	Neicheng	0.76	259	P	Pb	10 18 40.8	-0.6
EOS4	EOS4	0.77	192	P	Pb	10 18 41.8	+0.6
EOS4				eS	Sb	10 18 53.2	+1.7
EWUT	Wuta	0.77	237	P	Pb	10 18 41.0	-0.5
ENA	Nanau	0.81	237	P	Pb	10 18 41.7	-0.5
ENA				eS	Sb	10 18 54.0	+0.8
FUSB	Fushanzhiwuyua	0.83	262	P	Pb	10 18 42.2	-0.3
TWA	Mucha	0.83	278	P	Pb	10 18 41.9	-0.6
PCYT	Pengchaiyu	0.84	333	P	Pg	10 18 41.7	-0.6
EAHA	Aohua	0.87	232	P	Pb	10 18 42.9	-0.3
ENTT	Nioudou	0.87	255	P	Pb	10 18 42.9	-0.3
YM08	YM08	0.87	291	P	Pb	10 18 43.3	0.0
YM01	YM01	0.88	288	P	Pb	10 18 42.7	-0.7
NHDH	Xindian Distri	0.88	276	eP	Pb	10 18 43.3	0.0
NWLT	Wulai	0.90	264	P	Pb	10 18 44.1	+0.4
ZUZH	Zhuzihu	0.90	289	P	Pb	10 18 44.0	+0.2
TAP	Taipei	0.91	281	P	Pn	10 18 44.8	0.0
TATO	Taipei	0.91	277	P	Pb	10 18 43.6	-0.3
TATO	Taipei	0.91	277	S	Sb	10 18 56.4	+0.3
TATO	Taipei	0.91	277	P	Pb	10 18 43.7	-0.2
TATO	Taipei	0.91	277	S	Sn	10 18 57.1	-1.0
ANP	Anpu	0.93	290	P	Pb	10 18 44.6	+0.3
LATG	Datong	0.94	249	⇑iP	Pb	10 18 43.9	-0.6
LATG				eS	Sn	10 18 57.9	-0.9
NTST	Danshui	0.99	287	P	Pn	10 18 46.5	+0.6
TWS1	Kuangyinshan	1.00	283	P	Pn	10 18 46.4	+0.4
YHNB	Yeheng	1.03	259	P	Pb	10 18 46.0	0.0
YHNB	Yeheng	1.03	259	P	Pb	10 18 45.8	-0.2
NSK	Sanguang	1.05	259	P	Pb	10 18 45.9	-0.3
ETL	Fush Village	1.06	228	eP	Pb	10 18 46.6	+0.1
NACB	Ninganchiao	1.07	230	P	Pg	10 18 46.1	-0.5
NACB	Ninganchiao	1.07	230	S	Sn	10 19 02.0	0.0
NACB	Ninganchiao	1.07	230	P	Pb	10 18 46.2	-0.4
NACB	Ninganchiao	1.07	230	P	Pg	10 18 45.8	-0.8
NNSB	Datong	1.10	246	P	Pb	10 18 46.8	-0.4
NNS	Nan Shan	1.10	247	P	Pb	10 18 46.9	-0.4
ETLH	Xiulin Townshi	1.13	234	P	Pb	10 18 47.7	-0.1
ETLH				eS	Sn	10 19 04.0	+0.4
TWD	Chiawan	1.13	226	P	Pb	10 18 47.7	0.0
KSHI	Guanxi Townshi	1.20	266	eP	Pn	10 18 49.8	+1.0
IRIF	Iriomote-Funau	1.25	115	eP	Pg	10 18 48.8	-1.3
NFF	Wufeng Townshi	1.27	259	P	Pg	10 18 49.5	-0.9
ETM	Tongmen	1.28	225	eP	Pn	10 18 50.3	+0.4
TEYL	Yanliau Villag	1.29	219	eP	Pb	10 18 50.2	-0.2
FUSS	Fushou	1.29	241	P	Pn	10 18 50.7	+0.4
WHF	Hehuan Shan	1.33	237	P	Pn	10 18 51.3	+0.3
TWT	Tachien	1.34	243	eP	Pb	10 18 52.2	+0.8
LIOB	Emei	1.36	261	eP	Pn	10 18 51.0	0.0
TDCB	Techi	1.36	243	P	Pb	10 18 51.5	-0.1
SHUL	Shoufeng	1.37	218	P	Pg	10 18 51.8	-0.6
NSTT	Nanjuang	1.37	260	eP	Pg	10 18 53.4	+1.0
ESL	Shilin	1.43	223	eP	Pg	10 18 53.3	-0.1
HATJ	Hateruma jima	1.45	124	eP	Pn	10 18 52.0	-0.3
OWD	Renai	1.51	233	eP	Pb	10 18 53.6	-0.5
JKRS	Kuro-shima	1.52	114	eP	Pn	10 18 52.4	-0.9
WHP	Taichung City	1.52	247	eP	Pb	10 18 54.1	-0.3
WUSB	Renai	1.53	235	P	Pb	10 18 54.1	-0.4
WARBT	Fenglin Townsh	1.53	221	eP	Pn	10 18 53.5	+0.1
NMLH	Miaoli	1.58	258	eP	Pg	10 18 55.8	-0.5
JIJ	Ishigaki jima	1.59	108	eP	Pn	10 18 54.1	-0.1
WCS	Beigang Elemen	1.65	241	eP	Pb	10 18 56.2	-0.3
VWDT	VWDT	1.66	228	eP	Pn	10 18 55.8	+0.7
JISG	Ishigakijimahi	1.68	99	eP	Pn	10 18 54.9	-0.5
HGSD	Ruisui	1.68	215	eP	Pn	10 18 55.5	0.0
EHYH	Wanrong	1.73	217	eP	Pn	10 18 55.2	-0.8
EHY	Hungye	1.73	218	eP	Pn	10 18 55.5	-0.6
SMLT	Sun Moon Lake	1.75	236	eP	Pb	10 18 58.4	+0.1
SSLB	Suanglung	1.77	233	P	Pb	10 18 58.0	-0.6
SSLB	Suanglung	1.77	233	P	Pg	10 18 59.0	-1.0
SSLB	Suanglung	1.77	233	eP	Pn	10 18 57.5	+0.8
TYC	Yuchr	1.77	237	eP	Pb	10 18 58.2	-0.4
TCU	Taichung	1.80	247	eP	Pg	10 18 59.4	-1.3
YULB	Yu-li	1.83	217	P	Pb	10 18 59.3	-0.3
YULB	Yu-li	1.83	217	eP	Pn	10 18 58.4	+0.9
TWF1	Yuli	1.86	216	eP	Pn	10 18 57.9	-0.1
WHYT	Xinyi Township	1.90	232	eP	Pb	10 19 00.0	-0.7
WJS	Zhushan	1.92	237	eP	Pb	10 19 00.7	-0.3
CHKH	Chenggong	1.95	211	eP	Pn	10 18 59.2	+0.1
FULB	Fuli	1.99	213	eP	Pn	10 19 00.4	+0.6
CHKT	Chengkung	2.04	210	eP	Pn	10 19 01.2	+0.7
ALS	Alishan	2.05	229	eP	Pn	10 19 01.9	+1.0
EHD	Haiduan	2.08	215	eP	Pn	10 19 01.7	+0.8
CHN5	Tsauling	2.08	233	eP	Pb	10 19 03.0	-1.0
WDLH	Douliu	2.13	237	eP	Pb	10 19 03.5	-1.2
ELDTW	Lidau	2.15	219	eP	Pn	10 19 02.3	+0.3
EDH	Donghe	2.18	210	eP	Pn	10 19 02.2	-0.1
WTK	Tuku	2.25	239	eP	Pn	10 19 04.6	+1.3
STYH	Taoyuan	2.31	223	eP	Pn	10 19 05.5	+1.4
TPUB	Ta-pu	2.31	228	P	Pn	10 19 05.5	+1.3
TPUB	Ta-pu	2.31	228	eP	Pn	10 19 05.5	+1.3
LONT	Longtian	2.32	213	eP	Pn	10 19 05.3	+1.0
WTP	Ta-pu	2.36	227	eP	Pn	10 19 05.8	+1.0
LDUT	Ludao	2.38	203	eP	Pn	10 19 05.9	+0.9
TWGBT	Beinan	2.42	212	P	Pn	10 19 07.7	+2.1
TWGBT	Beinan	2.42	212	eP	Pn	10 19 07.1	+1.4
TWG	Pinlang	2.42	213	eP	Pn	10 19 07.0	+1.3
TWK	Hsinying	2.43	229	eP	Pn	10 19 07.5	+1.7
WSL	Shuilin Townsh	2.46	237	eP	Pn	10 19 07.5	+1.3
MATB	Ma-tsu	2.63	300	eP	Pn	10 19 10.1	+1.7
ECL	Taimali	2.67	212	eP	Pn	10 19 09.6	+0.6
SSD	Sandimen	2.71	219	eP	Pn	10 19 11.7	+2.0
VWUC	VWUC	2.76	273	eP	Pn	10 19 10.9	+0.6
MASBT	Mashibuluo	2.82	217	eP	Pn	10 19 12.8	+1.6
EAST	Anshuo	2.90	212	eP	Pn	10 19 14.0	+1.7
XPSS	Dashiqiu	2.91	315	eP	Pn	10 19 14.2	+1.8
TAWH	Dawu Township	2.92	211	eP	Pn	10 19 14.4	+2.0
SCZT	Fangliau	3.02	215	eP	Pn	10 19 15.8	+1.9
PTMZ	Houxiangcun	3.06	274	eP	Pn	10 19 14.8	+0.4
SLIU	Shizi	3.07	211	eP	Pn	10 19 16.3	+1.7
MHZQ	Yeshan	3.35	292	eP	Pn	10 19 20.5	+2.0
AXDP	Jialang	4.10	271	eP	Pn	10 19 28.6	-0.2
KSRS	Korea Array	13.37	19	Pn	P	10 21 48.5	+3.0
	0.2nm,0.3s,baz=198,slow=12,SNR=8.8						
	2.4nm,0.8s						
SONM	Songino Array	26.22	335	P	P	10 24 02.9	+1.8
	0.5nm,0.6s,baz=140,slow=9.2,SNR=3.6						
	0.5nm,0.6s						
KURBB	Kurchatov Arra	42.36	319	P	P	10 26 18.8	-1.4
	0.6nm,0.8s,baz=108,slow=7.9,SNR=4.1						
	0.6nm,0.8s						
WRA	Warramunga Arr	46.02	164	P	P	10 26 49.0	-0.8
	0.9nm,0.9s,baz=343,slow=7.6,SNR=5.3						
	0.9nm,0.9s						
BVAR	Borovoye Array	47.90	320	P	P	10 27 03.3	-0.9
	0.7nm,0.7s,baz=116,slow=6.7,SNR=3.7						
	0.7nm,0.7s						
ASAR	Alice Springs	49.51	166	P	P	10 27 13.4	-3.5
	0.5nm,0.8s,baz=338,slow=7.7,SNR=4.2						
	0.5nm,0.8s						
ILAR	Eielson Array	68.06	28	P	P	10 29 32.0	+6.5
	0.3nm,0.8s,baz=284,slow=3.6,SNR=2.9						
	0.3nm,0.8s						

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*NEIC **16** 10:28:56.5±1.4, 34°.9N±0°.1×22°.6E±0°.1, h29^{km}±12^{km}, mb4.1/8, Error ellipse: s-maj=17.5km s-min=14.2km az=159.0*

*HLW **16** 10:29:00.2, 35°.03N×23°.12E, h30^{km}±23^{km}, Md3.5, Ml3.7*

*ATH **16** 10:29:01.7, 35°.08N×22°.90E, h69^{km}±10^{km}, ML3.5/7, Manual Solution by A.Moschou First location: 2019/06/16 10:30:05, This location: 2019/06/16 11:15:08 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*

*THE **16** 10:29:01.8, 35°N±6°×2°3E±°, h71^{km}±6^{km}, M3.2/13, MLh3.2/13*

*ISK **16** 10:29:01.5, 35°.22N×23°.03E, h76^{km}, ML3.3/17*

*IDC **16** 10:29:02.0±1.5, 35°.24N×22°.86E, h60^{km}±15^{km}, mb3.8/10, mbtmp3.9/15, MS3.8/1, Error ellipse: s-maj=24.3km s-min=10.3km az=5.0*

*NAO **16** 10:29:03.7, 35°.66N×22°.52E, h10^{km}, mb3.2*

*AFAD **16** 10:29:08.0, 35°.04N×23°.60E, h44^{km}, MW3.8*

*BEO **16** 10:29:16.0±1.2, 36°.56N×22°.43E, h0^{km}, ML3.6/8*

ISC 16 10:29:01.4±0.8**, 35°.08N**±0°.05×**22°.97E**±0°.04**, h68**^{km}±8^{km}**, n149, σ2^{s}06**/187**, mb4.0**/14**, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNDR	Palaiochora Ch	0.60	75	Pg	Pn	10 29 15.2	+0.1
KNDR	Palaiochora Ch	0.60	75	P	Pn	10 29 14.7	-0.3
KNDR				S	Sn	10 29 26.0	+0.9
KNDR	Palaiochora Ch	0.60	75	P	Pn	10 29 14.7	-0.3
KNDR				S	Sn	10 29 26.2	+1.1
ANKY	Antikythira Is	0.83	19	P	Pn	10 29 17.4	-0.2
ANKY				S	Sn	10 29 30.4	+0.8
ANKY	Antikythira Is	0.83	19	P	Pn	10 29 17.5	-0.2
ANKY				S	Sn	10 29 30.4	+0.8
IMMV	Iera Moni Meta	0.91	65	Pg	Pn	10 29 18.8	+0.2
IMMV				Sg	Sn	10 29 31.3	-0.1
IMMV	Iera Moni Meta	0.91	65	P	Pn	10 29 19.1	+0.5
IMMV				S	Sn	10 29 32.2	+0.8
IMMV	Iera Moni Meta	0.91	65	P	Pn	10 29 19.3	+0.7
IMMV				S	Sn	10 29 31.9	+0.5
GVD	Gavdhos	0.95	105	Pg	Pn	10 29 19.4	+0.3
GVD				Sg	Sn	10 29 34.2	+2.0
GVD	Gavdhos	0.95	105	P	Pn	10 29 19.3	+0.1
GVD				S	Sn	10 29 33.9	+1.6
GVD	Gavdhos	0.95	105	P	Pn	10 29 19.7	+0.6
GVD				S	Sn	10 29 33.5	+1.2
CHAN	Chania	0.98	63	P	Pn	10 29 20.2	+0.7
CHAN	Chania	0.98	63	P	Pn	10 29 20.0	+0.5
CHAN				S	Sn	10 29 34.8	+1.9
CHNB	Souda	0.98	65	P	Pn	10 29 20.7	+1.2
CHNB				S	Sn	10 29 35.4	+2.4
KTHA	Kythira Island	1.17	3	P	Pn	10 29 22.4	+0.3
KTHA	Kythira Island	1.17	3	P	Pn	10 29 23.6	+1.5
IDI	Anoyia	1.58	82	Pn	Pn	10 29 28.4	+0.9
IDI				Sn	Sn	10 29 47.3	+0.2
IDI	Anoyia	1.58	82	Pn	Pn	10 29 28.3	+0.9
IDI				Sn	Sn	10 29 48.8	+1.7
IDI	Anoyia	1.58	82	P	Pn	10 29 28.8	+1.4
IDI	Anoyia	1.58	82	P	Pn	10 29 28.4	+0.9
	32nm,0.4s,baz=270,slow=8.1,SNR=57						
IDI				S	Sn	10 29 49.4	+2.3
	63nm,0.4s,baz=338,slow=23,SNR=13						
IDI	Anoyia	1.58	82	P	Pn	10 29 28.7	+1.2
IDI				S	Sn	10 29 49.1	+2.0
VLI	Veliai	1.63	359	P	Pn	10 29 29.1	+1.1
VLI	Veliai	1.63	359	P	Pn	10 29 29.8	+1.7
VLI				S	Sn	10 29 47.9	-0.3
MHLO	Agia Marina, M	1.98	35	P	Pn	10 29 33.6	+0.9
MHLO	Agia Marina, M	1.98	35	P	Pn	10 29 33.8	+1.1
MHLO				S	Sn	10 29 58.0	+1.5
ITM	Ithomi	2.26	338	Pn	Pn	10 29 36.8	+0.3
ITM	Ithomi	2.26	338	Pn	Pn	10 29 36.0	-0.6
ITM	Ithomi	2.26	338	P	Pn	10 29 36.2	-0.3
THR5	Thira Island,	2.34	55	P	Pn	10 29 38.0	+0.3
THR6	Thira Island,	2.34	57	P	Pn	10 29 38.4	+0.8
SAP3	Santorini-Thir	2.35	54	P	Pn	10 29 38.1	+0.3
THR3	Thira Island,	2.38	55	P	Pn	10 29 38.5	+0.4
CMBO	Columbo, Santo	2.41	54	P	Pn	10 29 39.0	+0.4
CMBO	Columbo, Santo	2.41	54	P	Pn	10 29 38.8	+0.2
CMBO				S	Sn	10 30 08.6	+1.5
THR8	Santorini-Mono	2.43	56	P	Pn	10 29 39.3	+0.5
MET5	Makryloggos,Me	2.55	7	P	Pn	10 29 41.5	+0.9
MET4	Agioi Theodoro	2.56	8	P	Pn	10 29 41.1	+0.5
MET4				S	Sn	10 30 10.3	-0.3
AMT	Artemida-Makis	2.65	338	P	Pn	10 29 42.2	+0.4
AMT				S	Sn	10 30 12.4	-0.4
ZKR	Zakros	2.66	88	Pn	Pn	10 29 43.2	+1.2
APE	Apeiranthos	2.87	46	Pn	Pn	10 29 44.0	-0.8
APE	Apeiranthos	2.87	46	P	Pn	10 29 44.6	-0.2
APE				S	Sn	10 30 18.1	-0.1
APE	Apeiranthos	2.87	46	P	Pn	10 29 44.4	-0.4
APE				S	Sn	10 30 18.3	+0.1
GUR	Goura	2.89	350	P	Pn	10 29 46.1	+0.8
GUR	Goura	2.89	350	P	Pn	10 29 46.3	+1.1
GUR				S	Sn	10 30 18.1	-0.8
ATH	Athens Observa	2.94	12	P	Pn	10 29 46.7	+0.9
PTL	Penteli	3.04	13	P	Pn	10 29 47.6	+0.4
KARP	Karpathos	3.46	81	Pn	Pn	10 29 54.1	+1.3
KARP	Karpathos	3.46	81	Pn	Pn	10 29 53.1	+0.2
KYMI	Kymi, Euboea I	3.66	14	P	Pn	10 29 55.9	+0.4
AGG	Agios Georgios	3.96	353	Pn	Pn	10 29 59.9	+0.1
YAZI	Mula-Dat§a-	3.97	65	P	Pn	10 30 00.3	+0.5
YAZI				S	Sn	10 30 40.4	-4.7
BODT	Bodrum	4.03	59	Pn	Pn	10 30 01.2	+0.5
SLUM	Salum	4.04	152	P	Pn	10 29 58.8	-2.1
DAT	Datca	4.08	65	Pn	Pn	10 30 02.0	+0.5
CHOS	Chios island	4.12	36	Pn	Pn	10 30 01.7	-0.3
ARG	Arkhangelos	4.34	73	Pn	Pn	10 30 05.9	+1.0
ARG	Arkhangelos	4.34	73	Pn	Pn	10 30 04.8	-0.2
URLA	Izmir	4.38	41	Pn	Pn	10 30 05.3	-0.1
TURN	Turunc	4.60	67	Pn	Pn	10 30 09.3	+0.9
TURN	Turunc	4.60	67	P	Pn	10 30 09.2	+0.8
TURN				S	Sn	10 30 57.4	-3.1
MULA	Mugla, Merkez-	4.84	62	P	Pn	10 30 13.6	+1.8
MULA				S	Sn	10 31 07.1	+0.5
AYDB	Zeytinkoy-Aydi	4.88	53	Pn	Pn	10 30 12.7	+0.3
IGT	Igoumenitsa	4.91	335	ePn	Pn	10 30 10.7	-2.0
IGT				eSg	Sn	10 31 03.9	-4.4
DALY	Dalyan (Mula)	4.92	68	Pn	Pn	10 30 13.4	+0.6
SABU	Mula-Dalaman	5.16	69	P	Pn	10 30 17.1	+0.9
SABU				S	Sn	10 31 10.7	-3.7
FETY	Fethiye	5.20	71	P	Pn	10 30 20.3	+3.7
FETY				S	Sn	10 31 13.9	-1.3
IZZE	Mula-Seydike	5.26	73	P	Pn	10 30 17.2	-0.3
IZZE				S	Sn	10 31 13.0	-3.8
KEK	Kerkira	5.27	332	Pn	Pn	10 30 16.6	-1.0
TAVA	DENIZLI_Tavas	5.35	62	P	Pn	10 30 19.1	+0.3
TAVA				S	Sn	10 31 16.6	-2.6
DNZT	Denizli-Tavas-	5.36	64	P	Pn	10 30 21.3	+2.4
DNZT				S	Sn	10 31 16.1	-3.3
AKAS	Kas	5.52	76	Pn	Pn	10 30 21.8	+0.7
AKAS	Kas	5.52	76	P	Pn	10 30 21.5	+0.3
AKAS				S	Sn	10 31 18.2	-5.1
MANT	Manisa	5.62	51		Pn	10 30 23.8	+1.1
KNIK	Mula-Seydike	5.63	70	P	Pn	10 30 23.8	+1.1
KNIK				S	Sn	10 31 20.5	-5.6
GOLH	Golhisar	5.75	66	P	Pn	10 30 25.3	+1.1
GOLH				S	Sn	10 31 25.4	-3.4
ELL	Elmali	5.87	72	Pn	Pn	10 30 26.2	+0.3
AKUM	Antalya-Kumluc	6.12	76	P	Pn	10 30 28.7	-0.5
AKUM				S	Sn	10 31 34.2	-3.7
SCTE	Santa Cesarea	6.13	326	Pn	Pn	10 30 26.4	-2.9
DB3	El Dabaa	6.18	129	P	Pn	10 30 27.3	-2.7
DB3				S	Sn	10 31 31.2	-8.0
SWA2		6.19	159	P	Pn	10 30 29.0	-1.2
SWA2				S	Sn	10 31 33.0	-6.6
ALN	Alexandroupoli	6.29	22	Pn	Pn	10 30 30.4	-1.1
RDO	Rodhopi	6.38	18	Pn	Pn	10 30 32.1	-0.7
TIP	Timpagrande	6.43	311		Pn	10 30 28.8	-4.7
CEL	Celeste	6.51	301	Pn	Pn	10 30 30.5	-4.1
BUCA	Burdur, Bucak-	6.53	68	P	Pn	10 30 35.3	+0.4
BUCA				S	Sn	10 31 43.4	-4.6
VAE	Valguarnera	7.32	292	P	Pn	10 30 45.0	-0.6
	4.8nm,0.4s,baz=162,slow=6.4,SNR=2.5						
VAE				S	Sn	10 32 04.3	-2.9
	9.7nm,0.6s,baz=113,slow=17,SNR=1.9						
CUC	Castrocucco	7.50	313		Pn	10 30 44.5	-3.7
DRME	Dracevica, Mon	7.69	338	ePn	Pn	10 30 47.6	-3.0
BARS	Barje	7.77	354	ePn	Pn	10 30 48.8	-3.0
PDG	Podgorica	7.89	340	Pn	Pn	10 30 51.4	-1.9
ACER	Acerenza	7.95	318		Pn	10 30 51.1	-3.2
BEY	Berane	8.14	344	ePn	Pn	10 30 51.9	-5.0
SELS	Selova	8.25	351	ePn	Pn	10 30 55.8	-2.6
TREB	Trebinje	8.43	336	ePn	Pn	10 30 57.4	-3.4
HNAT	Natroun	8.44	128	P	Pn	10 31 00.0	-1.1
HMYD	Mayadein	8.46	126	P	Pn	10 31 00.5	-0.7
SJES	Sjenica	8.49	345	ePn	Pn	10 30 59.5	-2.2
RYAN	Fayoum	8.61	132	P	Pn	10 31 02.0	-1.3
GOCS	Kraljevo Serbi	8.62	350	ePn	Pn	10 30 58.2	-5.3
ZAGS	Zajecar	8.74	356	ePn	Pn	10 31 01.9	-3.0
SGRT	San Giovanni R	8.75	322	Pn	Pn	10 31 02.1	-3.1
IVAS	Ivanjica	8.76	346	ePn	Pn	10 31 02.2	-3.1
STON	Ston	8.79	334	ePn	Pn	10 31 01.3	-4.4
GRUS	Gruza	8.96	349	ePn	Pn	10 31 04.8	-3.3
KOT	Kottamia	9.07	122	P	Pn	10 31 08.7	-0.9
HFRF	Wahat Farafira	9.13	149	P	Pn	10 31 08.7	-1.8
BBLS	Lazi&#263i	9.19	344	ePn	Pn	10 31 08.3	-3.0
HHAG	Hagoal	9.25	121	P	Pn	10 31 10.5	-1.5
HHAG				S	Sn	10 32 46.1	-8.4
DIVS	Divibare	9.29	347	ePn	Pn	10 31 09.0	-3.6
HAPS	Han Pijesak,Bl	9.51	342	ePn	Pn	10 31 12.5	-3.1
BRTR	Keskin Array B	9.66	58	P	Pn	10 31 19.4	+1.6
	1.2nm,0.8s,baz=228,slow=14,SNR=7.8						
TEKS	Tekeris	9.82	345	ePn	Pn	10 31 16.1	-3.6
TAMRE	El Minia	10.02	135	P	Pn	10 31 21.6	-1.0
ZNM	Zenema	10.13	121	P	Pn	10 31 22.9	-1.1
MMAI	Mount Meron Ar	10.52	98	P	Pn	10 31 31.0	+1.6
	0.5nm,0.3s,baz=287,slow=12,SNR=1.9						
MMAI				S	Sn	10 33 16.9	-8.6
	1.1nm,0.3s,baz=291,slow=24,SNR=2.9						
NRCA	Norcia	10.89	318	Pn	Pn	10 31 32.5	-2.0
HDK1	Dakhla	11.01	148	P	Pn	10 31 34.8	-1.3
EIL	Elat	11.47	115	P	Pn	10 31 39.3	-3.0
	2.8nm,0.5s,baz=294,slow=19,SNR=11						
EIL				S	Sn	10 33 38.0	-11
	3.2nm,0.4s,baz=256,slow=8.3,SNR=7.0						
ASF	Jabal al Asfar	11.96	100	S	Sn	10 33 54.5	-6.4
	1.4nm,0.4s,baz=252,slow=19,SNR=2.3						
CTI	Castel Tesino	13.91	325	Pn	Pn	10 32 14.4	-1.0
GERES	GERESS Array B	15.37	336	P	Pn	10 32 34.2	0.0
	0.1nm,0.3s,baz=142,slow=8.2,SNR=1.6						
KIEV	Kiev	16.25	14	Pn	Pn	10 32 45.7	+0.5
AKASG	Malin Array Be	16.26	14	Pn	Pn	10 32 44.9	-0.5
AKASG	Malin Array Be	16.26	14	P	Pn	10 32 46.2	+0.9
	0.2nm,0.2s,baz=206,slow=10,SNR=7.6						
AKBB	Malin Array Si	16.26	14	Pn	Pn	10 32 46.1	+0.8
AKBB				IAmb	IAmb	10 33 07.0	
	comp=Z,6.5nm,1.5s						
KBZ	Khabaz	17.62	55	P	P	10 33 04.1	+1.8
	comp=Z,1.3nm,0.6s,baz=252,slow=3.2,SNR=5.1						
SUW	Suwalki	18.93	0	P	P	10 33 16.6	0.0
PABE	Paberze	20.43	2	P	P	10 33 32.0	-1.0
ESDC	Sonseca Array	21.86	290	P	P	10 33 47.3	-1.2
	comp=Z,0.2nm,0.5s,baz=91,slow=13,SNR=4.4						
HFS	Hagfors	25.78	349	P	P	10 34 25.9	+0.2
	comp=Z,1.6nm,0.4s,baz=159,slow=10,SNR=16						
	comp=Z,1.6nm,0.4s						
FINES	FINESS Array B	26.45	3	P	P	10 34 31.2	-0.5
FINES	FINESS Array B	26.45	3	P	P	10 34 31.6	-0.2
	comp=Z,0.4nm,0.4s,baz=183,slow=9.0,SNR=3.7						
	comp=Z,0.4nm,0.4s						

NAO01	NORSAR Array S	26.93	347	P	P	10 34 35.7	-0.3
NAO01				IAmb	IAmb	10 34 59.0	
	comp=Z,12nm,1.4s						
NB2	NORSAR Subarra	27.05	347	P	P	10 34 39.6	+2.4
	comp=Z,0.1nm,0.3s,baz=159,slow=9.3						
NOA	NORSAR Array B	27.05	347	P	P	10 34 36.2	-1.0
	comp=Z,0.3nm,0.7s,baz=152,slow=11,SNR=4.6						
	comp=Z,0.3nm,0.7s						
EKA	Eskdalemuir Ar	27.09	326	P	P	10 34 40.4	+2.9
	comp=Z,0.7nm,0.6s,baz=123,slow=9.6,SNR=4.3						
TORD	Torodi Ar. Bea	29.10	227	P	P	10 34 58.6	+2.8
	comp=Z,2.4nm,0.3s,baz=39,slow=9.2,SNR=1.7						
	comp=Z,2.4nm,0.3s						
ARCES	ARCESS Array B	34.53	2	P	P	10 35 43.2	+0.2
	comp=Z,1.7nm,0.9s,baz=184,slow=8.8,SNR=4.2						
	comp=Z,1.7nm,0.9s						
KK31	Karatay Array	37.34	63		P	10 36 07.9	+0.7
KK31				IAmb	IAmb	10 36 09.8	
	comp=Z,2.4nm,0.5s						
KKAR	Karatay Array	37.34	63	P	P	10 36 08.3	+1.1
BVAR	Borovoye Array	37.70	47	P	P	10 36 09.8	-0.3
	comp=Z,0.8nm,0.6s,baz=256,slow=5.8,SNR=3.0						
	comp=Z,0.8nm,0.6s						
ARSB	Arslanbob	39.34	66	P	P	10 36 25.8	+1.5
ARSB				IAmb	IAmb	10 36 33.2	
	comp=Z,7.0nm,1.4s						
BOOM	Boomskoye usch	41.37	63	P	P	10 36 43.0	+2.0
KURBB	Kurchatov Arra	42.56	51	P	P	10 36 50.8	+0.4
	comp=Z,1.4nm,0.5s,baz=271,slow=7.6,SNR=16						
	comp=Z,1.4nm,0.5s						
SPITS	Spitsbergen Ar	43.29	358	P	P	10 36 56.8	+0.8
	comp=Z,6.2nm,0.8s,baz=156,slow=14,SNR=1.3						
	comp=Z,6.2nm,0.8s						
MKAR	Makanchi Array	45.31	56	P	P	10 37 13.4	+0.9
MKAR	Makanchi Array	45.31	56	P	P	10 37 13.3	+0.8
	comp=Z,0.8nm,0.3s,baz=274,slow=8.2,SNR=25						
	comp=Z,0.8nm,0.3s						
ZALV	Zalesovo Beam	46.35	46	P	P	10 37 21.3	+0.8
	comp=Z,2.6nm,0.5s,baz=269,slow=10,SNR=4.7						
	comp=Z,2.6nm,0.5s						
TSUM	Tsumeb	54.23	186	LR	LR	11 02 19.2	
	comp=Z,75nm,18.9s,baz=156,slow=37						

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*AEIC **16** 10:31:00.9±0.7, 55°.2N±0°.2×163°.5W±0°.2, h175^{km}±4^{km}, Error ellipse: s-maj=27.6km s-min=7.0km az=154.0*

NEIC 16 10:30:59.4±0.9**, 55°.3N**±0°.2×**163°.6W**±0°.2**, h181**^{km}±5^{km}**, ML2.6**(AEIC)**, Error ellipse: s-maj=30.4km s-min=7.0km az=148.0, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FALS	False Pass	0.42	169		Pn	10 31 23.5	-0.4
FALS					Sn	10 31 41.8	-0.9
ISNN	Isanotski Nort	0.45	197		Pn	10 31 24.0	-0.2
ISNN					Sn	10 31 42.8	-0.3
ISLZ	Isanotski Laza	0.55	190		Pn	10 31 24.4	-0.1
ISLZ					Sn	10 31 43.6	-0.3
SSBA	Shishaldin	0.59	214		Pn	10 31 24.6	-0.2
SSBA					Sn	10 31 43.1	-1.1
SSLS	Shishaldin Sou	0.61	205		Pn	10 31 24.4	-0.4
SSLS					Sn	10 31 43.8	-0.6
HAG	Hague Volcano	0.95	86		Pn	10 31 27.2	+0.4
S12K	Black Hills	0.96	62		Pn	10 31 26.6	-0.3
S12K	Black Hills	0.96	62		Sn	10 31 47.2	-0.9
WEBT	Westdahl Beart	0.97	226		Pn	10 31 26.9	0.0
PS4A	Pavlof South-4	0.97	84		Pn	10 31 27.3	+0.3
PVV	Pavlof Volcano	1.01	83		Pn	10 31 27.5	+0.3
WECS	Westdahl Cape	1.02	224		Pn	10 31 27.3	0.0
PS1A	Pavlof South-1	1.05	81		Pn	10 31 27.6	+0.2
AKUT	Akutan	1.71	230	Pn	Pn	10 31 32.7	-0.7
AHB	Akutan Harbor	1.75	230		Pn	10 31 33.9	+0.1
SDPT	Sand Point	1.76	86		Pn	10 31 33.9	0.0
SDPT					Sn	10 31 59.2	-1.5
AKGG	Akutan Green G	1.77	234		Pn	10 31 34.0	0.0
AKV	Akutan Volcano	1.80	232		Pn	10 31 34.6	+0.1
AKBBA	Akutan Broad B	1.81	231		Pn	10 31 34.8	+0.3
LVA	Lava Point	1.81	233	Pn	Pn	10 31 34.5	-0.1
ZRO	Akutan Zero	1.83	231		Pn	10 31 35.0	+0.2
AKRB	Akutan Reef Bi	1.85	233		Pn	10 31 35.3	+0.4
UNV	Unalaska Valle	2.23	232		Pn	10 31 38.5	-0.4
MTBL	Makushin Table	2.23	236		Pn	10 31 39.7	+0.6
CNBA	Chernabura Isl	2.33	99		Pn	10 31 39.5	-0.5
MREP	Makushin Rep’t	2.36	233		Pn	10 31 40.5	-0.1
MGOD	Makushin Gods	2.43	234		Pn	10 31 41.4	0.0
MAPS	Pakushin South	2.45	235		Pn	10 31 41.6	0.0
OKTU	Okmok Mt. Tuli	3.23	236		Pn	10 31 51.7	+0.7

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*SDD **16** 10:43:04.6±1.7, 19°.97N×68°.19W, h52^{km}±393^{km}, MD3.3, ML2.4, MW3.8*

*NEIC **16** 10:43:05.9±0.3, 19°.93N±0°.08×67°.56W±0°.10, h10^{km}±2^{km}, ML2.4/6, Md2.6/4(RSPR), Error ellipse: s-maj=15.8km s-min=12.6km az=296.0*

*RSPR **16** 10:43:11.4, 19°.67N×68°.06W, h17^{km}±29^{km}, MD2.6/4*

ISC 16 10:43:09.5±4.7**, 20°.0N**±0°.2×**67°.4W**±0°.3**, h35**^{km}**, n19, σ0^{s}.80**/19**, 6C-4D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	1.49	170		Sn	10 43 52.2	+0.1
AGPR	Aguadilla, PR	1.49	170		Pn	10 43 32.7	-1.1
AGPR				IAML		10 43 53.2	
	comp=E,46nm,1.2s						
AGPR				IAML		10 44 07.8	
	comp=N,36nm,0.9s						
AGPR	Aguadilla, PR	1.49	170	⇓*e*P	Pn	10 43 34.4	+0.6
AGPR	Aguadilla, PR	1.49	170	*e*S	Sn	10 43 52.2	+0.1
AGPR	Aguadilla, PR	1.49	170	⇑*e*Sg	Sn	10 43 52.0	0.0
AGPR				IAML		10 44 03.1	
	comp=N,67nm,1.9s						
EMPR	Esperanza - Ma	1.67	151	Pn	Pn	10 43 36.1	0.0
EMPR				IAML		10 44 34.6	
	comp=N,70nm,1.0s						
LSP	Las Mesas	1.78	171		Pn	10 43 38.0	+0.2
LSP					Sn	10 43 59.9	+0.6
LSP	Las Mesas	1.78	171	⇓*e*P	Pn	10 43 38.0	+0.2
LSP	Las Mesas	1.78	171	*e*S	Sn	10 43 59.9	+0.6
MIDR	Miches	1.85	239	⇑*e*Sg	Sn	10 43 40.5	-20
MIDR				IAML		10 44 04.9	
	comp=N,24nm,2.4s						
CRPR	Cabo Rojo, PR	1.94	173		Sn	10 44 03.6	+0.4
CRPR	Cabo Rojo, PR	1.94	173		Pn	10 43 39.1	-0.9
CRPR				IAML		10 44 52.1	
	comp=N,21nm,1.4s						
CRPR	Cabo Rojo, PR	1.94	173	⇓*e*P	Pn	10 43 41.2	+1.2
CRPR	Cabo Rojo, PR	1.94	173	*e*S	Sn	10 44 03.6	+0.4
CRPR	Cabo Rojo, PR	1.94	173	⇑*e*Pg	Pn	10 43 38.8	-1.3
CRPR				⇑*e*Sg	Sn	10 44 03.0	-0.2
CRPR				IAML		10 44 07.4	
	comp=N,33nm,1.7s						
MLPR	Magueyes Islan	1.99	171	⇓*e*P	Pn	10 43 41.9	+1.2
MLPR	Magueyes Islan	1.99	171	*e*S	Sn	10 44 03.5	-0.8
MLPR	Magueyes Islan	1.99	171	⇑*e*Sg	Sn	10 44 03.0	-1.3
MLPR				IAML		10 44 06.3	
	comp=N,7.4nm,1.9s						
REDR	Restauracion	3.87	259	⇑*e*Pg	Pn	10 43 53.2	-13
REDR				IAML		10 44 48.8	
	comp=N,12nm,2.6s						

TRN 16 10:46:33.4, 18°.36N×62°.27W, h27^{km}, MD3.7, North-west of Anguilla., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANWB	Willy Bob	0.82	146	*e*P	Pn	10 46 50.5	+1.2
SKI	Saint Kitts	1.11	204	*e*P	Pb	10 46 54.6	+0.5
ANBD	Bethesda, Anti	1.39	160	*e*P	Pb	10 46 58.3	-0.4
ANBD				*e*S	Sb	10 47 16.3	+0.3
MBFL	Flemmings, Mon	1.60	178	*e*P	Pb	10 47 02.7	+0.3

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*IDC **16** 10:55:19.6±1.5, 9°.20S×67°.13E, h0^{km}, mb3.9/9, mbtmp3.9/9, MS3.5/9, Error ellipse: s-maj=44.2km s-min=22.3km az=49.0*

ISC 16 10:55:22.5±1.4**, 9°.1S**±0°.2×**67°.31E**±0°.10**, h13**^{km}**, n24, σ0^{s}.93**/17**, mb4.1**/9**, MS3.5**/9**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	5.31	75	Pn	Pn	10 56 41.7	+0.3
	baz=275,slow=14						
H08S1				Sn	Sn	10 57 41.4	-0.9
	baz=192,slow=77						
H08S1				T	T	11 02 25.5	
	baz=244,slow=74						
H08S3	Diego Garcia H	5.32	74	Pn	Pn	10 56 41.9	+0.3
	baz=275,slow=14						
H08S3				Sn	Sn	10 57 41.8	-0.9
	baz=192,slow=77						
H08S3				T	T	11 02 26.4	
	baz=244,slow=74						
H08S2	Diego Garcia H	5.33	75	Pn	Pn	10 56 41.9	+0.3
	baz=275,slow=14						
H08S2				Sn	Sn	10 57 41.8	-0.9
	baz=192,slow=77						
H08S2				T	T	11 02 29.5	
	baz=244,slow=74						
PALK	Pallekele	21.04	40	LR	LR	11 06 01.9	
	comp=Z,86nm,21.2s,baz=214,slow=30						
PSI	Prapat	33.65	71	LR	LR	11 13 01.7	
	comp=Z,133nm,18.5s,baz=243,slow=31						
LEM	Lembang	39.97	90	LR	LR	11 15 29.1	
	comp=Z,66nm,20.1s,baz=190,slow=30						
CMAR	Chiang Mai Arr	41.52	49	P	P	11 03 12.2	+2.2
	1.3nm,0.9s,baz=222,slow=7.4,SNR=5.6						
	1.3nm,0.9s						
LBTB	Lobatse	42.70	243	LR	LR	11 18 25.2	
	comp=Z,50nm,19.5s,baz=89,slow=33						
H01W3	Cape Leeuwin H	49.83	128	T	T	11 57 33.2	
	baz=290,slow=75,SNR=54						
H01W2	Cape Leeuwin H	49.83	128	T	T	11 57 51.5	
	baz=290,slow=75,SNR=51						
H01W1	Cape Leeuwin H	49.85	128	T	T	11 57 54.8	
	baz=290,slow=75,SNR=43						
FITZ	Fitzroy Crossi	57.20	106	LR	LR	11 26 37.0	
	comp=Z,40nm,21.5s,baz=281,slow=33						
MKAR	Makanchi Array	57.23	12	P	P	11 05 08.6	-1.0
	0.6nm,0.6s,baz=198,slow=8.7,SNR=6.3						
	0.6nm,0.6s						
BRTR	Keskin Array B	57.74	330	P	P	11 05 12.8	-0.6
	0.5nm,0.8s,baz=144,slow=5.4,SNR=2.6						
	0.5nm,0.8s						
KURBB	Kurchatov Arra	60.28	8	P	P	11 05 30.5	-0.1
	1.2nm,0.8s,baz=206,slow=7.1,SNR=6.1						
	1.2nm,0.8s						
BVAR	Borovoye Array	61.94	2	P	P	11 05 41.5	-0.4
	1.5nm,0.6s,baz=163,slow=10,SNR=8.1						
BVAR				LR	LR	11 31 25.4	
	comp=Z,22nm,19.3s,baz=178,slow=35						
	1.5nm,0.6s						
ZALV	Zalesovo Beam	64.54	11	P	P	11 05 58.0	-1.1
	0.5nm,0.4s,baz=217,slow=6.9,SNR=1.9						
	0.5nm,0.4s						
ASAR	Alice Springs	65.01	112	P	P	11 06 02.7	-0.2
	1.2nm,0.8s,baz=266,slow=6.6,SNR=15						
	1.2nm,0.8s						
WRA	Warramunga Arr	65.42	108	P	P	11 06 05.6	0.0
	1.2nm,0.9s,baz=279,slow=6.2,SNR=9.1						
	1.2nm,0.9s						
SONM	Songino Array	66.40	28	P	P	11 06 12.2	+0.7
	0.9nm,0.6s,baz=224,slow=6.0,SNR=4.4						
SONM				LR	LR	11 34 25.8	
	comp=Z,48nm,21.1s,baz=236,slow=35						
	0.9nm,0.6s						
KLR	Kul'dur	80.76	37	LR	LR	11 46 34.2	
	comp=Z,29nm,18.3s,baz=195,slow=38						
HFS	Hagfors	80.96	336	LR	LR	11 43 20.0	
	comp=Z,20nm,21.1s,baz=164,slow=36						
PDAR	Pinedale Array	146.36	356	PKPbc	PKPbc	11 15 03.7	-0.1
	0.2nm,0.3s,baz=333,slow=1.2,SNR=2.0						
NVAR	Mina Array Bea	150.37	9	PKPbc	PKPbc	11 15 13.5	-1.0
	0.3nm,0.7s,baz=335,slow=2.4,SNR=2.6						

TAP 16 10:55:56.8, 23°.48N×121°.46E, h31^{km}, ML1.4, 3D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HGSD	Ruisui	0.04	293	⇓*e*P	Pb	10 56 02.2	+0.2
HGSD				*e*S	Sb	10 56 07.2	+1.7
EHYH	Wanrong	0.11	279	*e*P	Pn	10 56 02.9	+0.4
EHYH				S	Sn	10 56 05.5	-0.4
EHY	Hungye	0.13	283	*e*P	Pn	10 56 03.4	+0.6
EHY				S	Sb	10 56 06.2	-0.2
ECBN	Changbin	0.16	184	P	Pb	10 56 02.4	-0.3
ECBN				S	Sn	10 56 07.4	+0.4
YULB	Yu-li	0.17	241	P	Pb	10 56 02.8	-0.1
YULB				*e*S	Sb	10 56 06.1	-0.9
EGFH	Guangfu	0.19	350	*e*P	Pb	10 56 03.0	-0.1
EGFH				S	Sb	10 56 07.3	0.0
TWF1	Yuli	0.20	231	P	Pb	10 56 02.5	-0.6
TWF1				S	Sb	10 56 06.6	-0.7
TEGC	Jichi Village	0.24	17	*i* P	Pb	10 56 03.4	-0.2
TEGC				S	Sb	10 56 07.9	-0.3
WARBT	Fenglin Townsh	0.25	344	*i* P	Pb	10 56 03.2	-0.5
WARBT				*e*S	Sb	10 56 07.5	-0.9
CHKH	Chenggong	0.29	192	*e*P	Pb	10 56 04.0	-0.2
CHKH				*i* S	Sb	10 56 09.2	0.0
FULB	Fuli	0.32	209	P	Pb	10 56 04.3	-0.3
FULB				*e*S	Sb	10 56 10.3	+0.5
SHUL	Shoufeng	0.32	16	P	Pb	10 56 04.8	+0.2
SHUL				*e*S	Sn	10 56 11.7	+0.6
ESL	Shilin	0.34	355	*e*P	Pb	10 56 04.0	-0.8
ESL				*e*S	Sb	10 56 09.7	-0.6
CHKT	Chengkung	0.39	193	*i* P	Pb	10 56 05.1	-0.4
CHKT				*i* S	Sb	10 56 11.7	+0.2
EHD	Haiduan	0.40	216	*e*P	Pb	10 56 04.2	-1.6
VWDT	VWDT	0.40	313	P	Pb	10 56 05.9	+0.1
VWDT				*e*S	Sn	10 56 12.6	-0.5
ETM	Tongmen	0.49	3	P	Pb	10 56 06.6	-0.5
ETM				*e*S	Sb	10 56 14.3	+0.2
EDH	Donghe	0.52	196	*e*P	Pb	10 56 06.3	-1.3
EDH				S	Sb	10 56 14.9	-0.1
OWD	Renai	0.54	331	P	Pb	10 56 07.9	-0.1
OWD				*e*S	Sb	10 56 15.3	-0.5
WHYT	Xinyi Township	0.60	291	⇓*e*P	Pb	10 56 08.7	-0.2
WUSB	Renai	0.60	328	*e*P	Pb	10 56 08.8	-0.3
WUSB				*e*S	Sb	10 56 17.1	-0.3
ALS	Alishan	0.60	273	*e*S	Sb	10 56 17.9	+0.3
LONT	Longtian	0.65	208	P	Pb	10 56 08.6	-1.1
LONT				S	Sb	10 56 18.4	0.0
WHF	Hehuan Shan	0.69	345	⇓P	Pb	10 56 09.6	-1.1
WHF				S	Sb	10 56 19.4	-0.8
EAHA	Aohua	0.89	17	*e*P	Pb	10 56 13.5	-0.1
EAHA				S	Sb	10 56 25.1	0.0

TAP 16 10:56:01.9, 23°.29N×120°.67E, h12^{km}, ML1.5, 6D, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPUB	Ta-pu	0.04	291	⇓*i*P	Pg	10 56 04.6	+0.5
TPUB				*i* S	Sg	10 56 06.4	+0.6
WTP	Ta-pu	0.07	235	⇓P	Pg	10 56 04.9	+0.6
WTP				*i* S	Sg	10 56 06.8	+0.7
STYT	Tauyuan	0.14	148	P	Pb	10 56 06.2	-0.4
STYT				S	Sg	10 56 09.1	+1.4
STYH	Taoyuan	0.15	141	*i* P	Pg	10 56 05.9	+0.6
STYH				*i* S	Sg	10 56 08.9	+1.2
WCKO	Fanlu	0.17	337	⇓*i*P	Pg	10 56 06.3	+0.6
WCKO				S	Sg	10 56 09.6	+1.2
CHN1	Nanshi	0.17	233	⇓*i*P	Pb	10 56 06.3	-0.6
CHN1				S	Sg	10 56 09.9	+1.6
TWK	Hsinying	0.17	264	⇓*i*P	Pg	10 56 06.3	+0.5
TWK				*i* S	Sg	10 56 09.6	+1.1
SNST	Tainan City	0.17	248	⇓P	Pg	10 56 06.3	+0.5
SNST				S	Sg	10 56 09.6	+1.1
SGST	Jiashian	0.22	203	P	Pg	10 56 07.0	+0.5
SGST				S	Sg	10 56 10.9	+1.2
ALS	Alishan	0.26	28	P	Pb	10 56 08.1	-0.5
ALS				S	Sb	10 56 12.8	-0.3
CHN5	Tsauling	0.31	1	*i* P	Pb	10 56 09.0	-0.5
CHN5				S	Sb	10 56 14.4	-0.1
CHY	Chiayi	0.31	313	P	Pb	10 56 09.1	-0.3
CHY				*e*S	Sb	10 56 14.7	+0.2
YUS	Yu-Shan	0.33	51	*e*P	Pg	10 56 02.0	-6.7
YUS				*e*S	Sg	10 56 09.0	-4.2
ELDTW	Lidau	0.33	107	*e*P	Pg	10 56 05.6	-2.9
ELDTW				*e*S	Sg	10 56 12.3	-0.7
ELDTW	Lidau	0.33	107	*e*P	Pg	10 56 05.8	-2.7
ELDTW				*e*S	Sg	10 56 12.5	-0.5
ICHU	Yijhu	0.37	282	P	Pb	10 56 10.0	-0.4
ICHU				*e*S	Sb	10 56 16.7	+0.6
WDLH	Douliu	0.42	343	*i* P	Pb	10 56 10.9	-0.3
WDLH				*i* S	Sb	10 56 17.6	0.0
CHN8	Yiju	0.43	278	P	Pg	10 56 10.6	+0.3
CHN8				S	Sb	10 56 17.6	-0.2
WHYT	Xinyi Township	0.44	22	*i* P	Pb	10 56 11.2	-0.4
WHYT				*e*S	Sb	10 56 17.5	-0.8
EHD	Haiduan	0.51	105	P	Pb	10 56 12.8	0.0
EHD				S	Sb	10 56 20.5	+0.3
TSCK	Chigu Township	0.56	256	P	Pb	10 56 13.8	+0.2
TSCK				S	Sb	10 56 22.2	+0.7
TWGBT	Beinan	0.60	141	P	Pb	10 56 14.2	0.0
TWGBT				*i* S	Sb	10 56 23.1	+0.4

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*IDC **16** 11:12:21.6±2.0, 31°.42S×177°.44W, h0^{km}, mb3.8/3, mbtmp3.8/4, ML2.9/1, Error ellipse: s-maj=60.4km s-min=31.9km az=132.0*

ISC 16 11:12:25.8±1.9**, 31°.4S**±0°.2×**177°.5W**±0°.3**, h26**^{km}**, n7, σ1^{s}.15**/8**, mb3.9**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.14	212	Pn	Pn	11 14 21.2	-1.0
	0.1nm,0.3s,baz=22,slow=5.4,SNR=0.9						
URZ				Sn	Sn	11 15 54.5	+1.1
	2.2nm,0.3s,baz=256,slow=23,SNR=14						
	3.6nm,0.9s						
STKA	Stephens Creek	34.69	258	P	P	11 19 13.4	-0.1
	0.9nm,0.6s,baz=96,slow=9.2,SNR=2.1						
	0.9nm,0.6s						
ASAR	Alice Springs	43.50	268	P	P	11 20 27.7	+0.4
	0.7nm,0.7s,baz=109,slow=8.1,SNR=15						
	0.7nm,0.7s						
WRA	Warramunga Arr	44.58	273	P	P	11 20 35.4	-0.5
	1.0nm,0.4s,baz=113,slow=8.3,SNR=18						
	1.0nm,0.4s						
FINES	FINESS Array B	146.25	340	PKPbc	PKPdf	11 32 02.0	-0.1
	0.5nm,0.5s,baz=38,slow=2.5,SNR=9.0						
AKASG	Malin Array Be	152.37	322	PKPbc	PKPbc	11 32 18.3	-0.8
	0.5nm,0.5s,baz=57,slow=2.7,SNR=4.4						
BRTR	Keskin Array B	153.46	297	PKPbc	PKiKP	11 32 24.0	+1.8
	0.2nm,0.5s,baz=72,slow=4.7,SNR=1.9						

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*IDC **16** 11:15:22.7±1.0, 30°.17S×72°.11W, h0^{km}, mb3.9/4, mbtmp3.7/7, ML3.5/3, MS2.9/2, Error ellipse: s-maj=33.6km s-min=23.2km az=98.0*

*GUC **16** 11:15:24.6±0.6, 30°.09S×72°.06W, h36^{km}±3^{km}, ML3.9*

ISC 16 11:15:26.3±0.8**, 30°.14S**±0°.05×**71°.97W**±0°.07**, h25**^{km}**, n34, σ1^{s}.21**/31**, mb4.0**/3**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.61	151	*e*P	Pb	11 15 37.2	-1.1
CO06				*e*S	Sn	11 15 47.2	-1.2
CO06				IAML		11 15 49.5	
	comp=E,5µm,0.2s						
CO05	La Serena	0.68	71	*i* P	Pn	11 15 38.5	-1.7
GO04	Tololo Observa	1.02	92	*e*P	Pn	11 15 44.2	-1.0
CO03	El Pedregal	1.31	122	*e*P	Pb	11 15 48.9	-1.4
CO03				*e*S	Sb	11 16 06.9	+0.2
CO03				IAML		11 16 09.7	
	comp=E,2µm,0.3s						
CO02	Combarbal	1.35	142	*e*P	Pb	11 15 49.5	-1.5
CO02				*e*S	Sb	11 16 08.6	+0.6
CO02				IAML		11 16 14.3	
	comp=N,5µm,0.4s						
LCO	Las Campanas	1.58	45	*e*P	Pn	11 15 52.1	-0.9
CO01	Juntas del Tor	1.64	85	*e*P	Pb	11 15 54.2	-1.8
AC04	Llanos de Chal	2.08	22	*e*P	Pn	11 15 57.5	-2.2
VA06	Catapilco	2.48	167	*e*P	Pn	11 16 04.7	-0.5
VA03	San Esteban	2.88	155	*e*P	Pn	11 16 11.3	+0.5
VA03				IAML		11 17 02.2	
	comp=E,427nm,0.3s						
ROCH	El Roble	2.94	164	*e*P	Pn	11 16 11.7	0.0
ROCH				IAML		11 17 07.1	
	comp=N,182nm,0.4s						
GO03	Copiapo	2.96	31	*e*P	Pn	11 16 10.6	-1.2
GO03				IAML		11 17 06.1	
	comp=E,246nm,0.5s						
AC06	Mina Casimiro	3.12	28	*e*P	Pn	11 16 12.7	-1.2
AC06				IAML		11 17 09.2	
PEL	Peldehue	3.19	160	*e*P	Pn	11 16 15.3	+0.4
PEL				IAML		11 17 11.8	
	comp=N,211nm,0.5s						
FCH	Farellones	3.49	156	*e*P	Pn	11 16 20.3	+1.1
FCH				IAML		11 17 20.1	
	comp=E,100nm,0.3s						
VA05	Santo Domingo	3.52	175	*e*P	Pn	11 16 19.1	-0.3
VA05				IAML		11 17 27.2	
	comp=N,352nm,0.1s						
MT09	Talagante	3.72	167	*e*P	Pn	11 16 22.4	+0.1
AC02	Maricunga	4.14	38	*e*P	Pn	11 16 27.6	-0.7
H03N1	Juan Fernandez	6.76	239	Pn	Pn	11 17 00.4	-3.3
	baz=113,slow=19						
H03N1				Sn	Sn	11 18 05.9	-14
H03N1				T	T	11 24 11.6	
	baz=70,slow=72,SNR=223						
H03N2	Juan Fernandez	6.78	239	Pn	Pn	11 17 00.4	-3.5
	baz=113,slow=19						
H03N2				Sn	Sn	11 18 06.0	-14
H03N2				T	T	11 24 14.9	
	baz=70,slow=72,SNR=214						
H03N3	Juan Fernandez	6.78	239	Pn	Pn	11 17 00.2	-3.8
	baz=113,slow=19						
H03N3				Sn	Sn	11 18 05.6	-15
H03N3				T	T	11 24 09.6	
	baz=70,slow=72,SNR=200						
PLCA	Paso Flores	10.63	174	Pn	Pn	11 17 56.0	-1.1
	comp=N,0.1nm,0.3s,baz=341,slow=14,SNR=5.5						
	comp=N,1.1nm,0.9s						
CPUP	Villa Florida	13.46	77	Pn	Pn	11 18 36.0	+0.3
	baz=259,slow=16,SNR=1.8						
CPUP				LR	LR	11 24 08.7	
	comp=N,18nm,20.9s,baz=108,slow=39						
	comp=N,0.3nm,0.8s						
LPAZ	La Paz	14.23	15	Pn	Pn	11 18 47.9	+1.0
	comp=N,0.1nm,0.3s,baz=187,slow=8.1,SNR=5.2						
	comp=N,1.2nm,0.7s						
SNAA	Sanae	55.14	159	P	P	11 24 56.6	+0.4
	comp=N,2.1nm,0.8s,baz=275,slow=7.8,SNR=9.8						
	comp=N,2.1nm,0.8s						
QSPA	South Pole Qui	60.08	180	P	P	11 25 32.1	+0.9
	comp=N,1.2nm,0.9s,baz=142,slow=17,SNR=3.2						
	comp=N,1.2nm,0.9s						
TKL	Tuckaleechee C	66.39	350	LR	LR	11 55 25.8	
	comp=N,24nm,18.6s,baz=287,slow=36						
TXAR	Lajitas Array	66.42	330	P	P	11 26 14.2	+0.7
	comp=N,0.1nm,0.6s,baz=153,slow=5.6,SNR=1.6						
	comp=N,0.1nm,0.6s						
TORD	Torodi Ar. Bea	82.86	70	P	P	11 27 49.8	+0.8
	comp=N,1.5nm,0.3s,baz=243,slow=5.9,SNR=1.4						
	comp=N,1.5nm,0.3s						
H11S2	WAKE ISLAND Hy	125.79	272	T	T	13 53 19.9	
	baz=116						
H11S1	WAKE ISLAND Hy	125.80	272	T	T	13 53 25.6	
	baz=116						
H11S3	WAKE ISLAND Hy	125.81	272	T	T	13 53 25.3	
	baz=116						
KURBB	Kurchatov Arra	149.93	39	PKPbc	PKiKP	11 35 14.6	-0.3
	comp=N,0.4nm,0.5s,baz=303,slow=3.8,SNR=3.2						
ZALV	Zalesovo Beam	150.88	29	PKPbc	PKPbc	11 35 15.9	-0.3
	comp=N,1.8nm,0.4s,baz=298,slow=3.1,SNR=6.6						

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*SOME **16** 11:17:38.1, 40°.58N×77°.78E, h10^{km}*

KRNET 16 11:17:38.7±0.1**, 40°.58N×77°.60E, h26**^{km}**, mb2.9, 16C-2D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.16	8	⇑*i*P	Pb	11 18 00.3	-0.1
TARG				⇑*i*S	Sb	11 18 16.0	+0.7
NRN	Naryn	1.48	306	⇑*i*P	Pb	11 18 06.1	+0.3
NRN				⇑*i*S	Sb	11 18 26.0	+1.7
KDJ	Kajisay	1.58	349	⇑*i*P	Pb	11 18 07.7	+0.2
KDJ				⇑*i*S	Sb	11 18 28.7	+1.5
ULHL	Ulahol	1.96	329	⇓*i*P	Pb	11 18 13.5	-0.3
ULHL				⇓*i*S	Sb	11 18 39.0	+1.1
PRZ	Przheval'sk	2.00	17	⇑*i*P	Pb	11 18 14.3	-0.2
PRZ				⇑*i*S	Sb	11 18 40.0	+0.9
BOOM	Boomskoye usch	2.28	327	⇑*i*P	Pb	11 18 18.2	-1.1
BOOM				⇑*i*S	Sb	11 18 46.7	-0.5
SATY	Saty	2.56	13	Lg	Lg	11 18 59.6	
	13nm,0.2s						
KOTS	Kotyrbulak	2.68	352	Pg	Pb	11 18 27.4	+1.3
	2.4nm,0.3s						

KOTS				Lg	Lg	11 19 04.1	
	30nm,0.3s						
KOTS	Kotyrbulak	2.68	352	eP	Pb	11 18 27.4	+1.2
	2.4nm,0.3s						
KOTS				eS	Sb	11 19 03.1	+4.4
	30nm,0.3s						
MTBS	Maitube	2.70	341	Pg	Pb	11 18 28.3	+1.9
	6.3nm,0.2s						
MTBS				Lg	Lg	11 19 05.0	
	9.0nm,0.2s						
MTBS	Maitube	2.70	341	eP	Pb	11 18 28.3	+1.9
	6.3nm,0.2s						
MTBS				eS	Sb	11 19 04.6	+5.5
	9.0nm,0.2s						
KST	Kastek	2.75	334	Pg	Pb	11 18 29.5	+2.2
	3.0nm,0.3s						
KST				Lg	Lg	11 19 06.5	
	11nm,0.3s						
KST	Kastek	2.75	334	eP	Pb	11 18 29.5	+2.1
	3.0nm,0.3s						
KST				eS	Sb	11 19 06.5	+5.8
	11nm,0.3s						
UZB	Uzynbulak	2.78	22	Pg	Pb	11 18 28.7	+0.9
	2.8nm,0.2s						
UZB				Lg	Lg	11 19 05.0	
	8.3nm,0.7s						
TKM2	Tokmak 2	2.78	328	⇑iP	Pb	11 18 25.2	-2.7
TKM2				⇑iS	Sb	11 18 58.8	-2.8
ARLS	Aral	2.79	299	⇑eP	Pn	11 18 24.5	+2.7
ARLS				⇑eS	Sb	11 18 58.5	-3.1
KURS	Kuram	2.94	8	Pg	Pb	11 18 32.0	+1.5
	2.9nm,0.3s						
KURS				Lg	Lg	11 19 10.7	
	4.4nm,0.5s						
KPKS	Kokpek	3.00	15	Pg	Pb	11 18 32.6	+1.1
	0.7nm,0.3s						
KPKS				Lg	Lg	11 19 11.6	
	9.2nm,0.3s						
KTBS	Karatobe	3.21	348	Pg	Pb	11 18 37.1	+2.1
	1.1nm,0.4s						
KTBS				Lg	Lg	11 19 19.5	
	14nm,0.4s						
AML	Almayashu	3.33	299	⇑iP	Pn	11 18 32.6	+3.2
AML				⇑iS	Sn	11 19 11.9	+3.6
KUU	Kurty	3.44	345	Pg	Pb	11 18 41.2	+2.1
	1.6nm,0.1s						
KUU				Lg	Lg	11 19 26.4	
	7.8nm,0.2s						
KUU	Kurty	3.44	345	eP	Pb	11 18 41.2	+2.1
	1.6nm,0.1s						
KUU				eS	Sb	11 19 26.4	+6.0
	7.8nm,0.2s						
ARXS	Arharly	3.64	3	Lg	Lg	11 19 32.4	
	8.1nm,0.4s						
DJR	Jarkent	4.09	23	Pg	Pb	11 18 52.5	+2.4
	1.5nm,0.1s						
DJR				Lg	Lg	11 19 46.1	
	2.8nm,0.2s						
DJR	Jarkent	4.09	23	eP	Pb	11 18 52.5	+2.4
	1.5nm,0.1s						
DJR				eS	Sb	11 19 46.1	+7.1
	2.8nm,0.2s						

NNC 16 11:19:33.2±2.5,**44°.62N**×**82°.42E, h0^{km}, mb3.3, mpv3.0, 3C-1D, Error ellipse: s-maj=21.3km s-min=20.3km az=34.0, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	Makanchi Array	2.18	358	⇓Pn	Pn	11 20 10.3	-0.5
	0.1nm,0.2s,baz=177,slow=16,SNR=24						
MK31				⇑Lg	Lg	11 20 43.2	
	0.2nm,0.2s,baz=178,slow=22						
MAKZ	Makanchi	2.21	352	⇑Pn	Pn	11 20 11.7	+0.5
	0.7nm,0.8s						
MAKZ				⇑Lg	Lg	11 20 43.0	
	0.6nm,0.9s						

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*TAP **16** 11:28:16.7, 24°.89N×122°.50E, h13^{km}, ML3.1, D*
*JMA **16** 11:28:17.5±0.2, 25°N±1°×122°.5E±0°.5, h4^{km}, MV2.7/7, NW OFF ISHIGAKIJIMA IS*
ISC 16 11:28:17.3±1.2,**24°.85N**±0°.03×**122°.48E**±0°.03,**h11**^{km}±10^{km}, **n51**, σ**0^{s}.46**/70, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.47	289	iP	Pg	11 28 26.8	+0.2
TWB1				eS	Sb	11 28 33.9	-0.7
EOS2	EOS2	0.49	208	iP	Pb	11 28 28.1	+0.3
EOS2				eS	Sb	11 28 37.0	+2.1
EGS		0.50	269	eP	Pg	11 28 27.4	+0.4
JYNG	Yonagunijimaku	0.58	133	eP	Pg	11 28 28.4	-0.2
EOS3	EOS3	0.58	195	eP	Pb	11 28 29.8	+0.4
SXI1	Grass Mountain	0.60	294	P	Pb	11 28 29.5	-0.4
TIPB	Shuangxi	0.61	281	eP	Pg	11 28 29.3	+0.2
YOJ	Yonaguni jima	0.62	129	P	Pg	11 28 29.2	-0.1
YOJ	Yonaguni jima	0.62	129	P	Pg	11 28 29.3	-0.1
YOJ	Yonaguni jima	0.62	129	P	Pg	11 28 28.9	-0.5
TWC	Suao	0.62	247	eP	Pg	11 28 29.6	+0.2
TWC				eS	Sg	11 28 37.9	+0.2
ESAO	Su ao	0.64	245	eP	Pg	11 28 29.6	-0.2
NWF	Wu-fen Shan	0.67	289	eP	Pg	11 28 30.7	+0.3
WFSB	Wu-fen Shan	0.67	289	eP	Pb	11 28 31.0	0.0
TNOU	National Taiwa	0.71	295	eP	Pb	11 28 31.5	-0.1
NDS	Dongshan	0.73	253	eP	Pg	11 28 30.5	-0.9
NDS				eS	Sb	11 28 41.7	-0.2
EOS4	EOS4	0.74	192	eP	Pb	11 28 32.6	+0.6
TWE	Neicheng	0.75	260	eP	Pg	11 28 31.9	+0.1
TWE				eS	Sb	11 28 42.9	+0.3
EWUT	Wuta	0.76	238	P	Pg	11 28 32.1	+0.2
EWUT				eS	Sb	11 28 42.8	0.0
ENA	Nanau	0.80	238	eP	Pg	11 28 32.4	-0.3
ENA				eS	Sb	11 28 43.7	-0.2
FUSB	Fushanzhiwuyua	0.82	264	eP	Pg	11 28 32.9	-0.2
EAHA	Aohua	0.85	232	eP	Pb	11 28 34.4	+0.3
EAHA				eS	Sb	11 28 45.4	-0.2
PCYT	Pengchaiyu	0.86	334	eP	Pg	11 28 33.8	-0.1
ENTT	Nioudou	0.86	256	eP	Pg	11 28 33.8	0.0
ENTT				eS	Sb	11 28 46.2	+0.5
YM08	YM08	0.87	293	eP	Pg	11 28 34.3	+0.1
YM01	YM01	0.88	290	P	Pb	11 28 34.7	+0.2
TWY	Chenhua	0.90	298	eP	Pg	11 28 34.9	+0.1
ZUZH	Zhuzihu	0.90	290	eP	Pb	11 28 35.2	+0.2
TATO	Taipei	0.91	278	P	Pb	11 28 35.3	+0.2
LATG	Datong	0.92	250	P	Pb	11 28 35.3	-0.1
LATG				eS	Sb	11 28 47.8	+0.1
YHNB	Yeheng	1.02	260	P	Pg	11 28 37.0	0.0
YHNB	Yeheng	1.02	260	P	Pg	11 28 37.0	0.0
YHNB				eS	Sg	11 28 50.3	+0.1
NSK	Sanguang	1.04	260	eP	Pg	11 28 36.9	-0.4
NSK				eS	Sb	11 28 51.5	+0.7
NACB	Ninganchiao	1.05	230	P	Pb	11 28 37.5	0.0
NACB	Ninganchiao	1.05	230	S	Sn	11 28 52.2	-0.4
NACB	Ninganchiao	1.05	230	P	Pg	11 28 37.1	-0.5
NACB				eS	Sb	11 28 51.5	+0.2
NNSB	Datong	1.08	247	P	Pg	11 28 37.6	-0.5
NNSB				eS	Sb	11 28 52.9	+0.6
NNS	Nan Shan	1.09	248	eP	Pn	11 28 38.6	+0.1
NNS				eS	Sb	11 28 53.1	+0.6
ETLH	Xiulin Townshi	1.11	235	P	Pg	11 28 38.2	-0.5
ETLH				eS	Sb	11 28 53.5	+0.3
IRIF	Iriomote-Funau	1.25	114	eP	Pg	11 28 41.3	0.0
NFF	Wufeng Townshi	1.26	260	eP	Pn	11 28 40.8	-0.1
FUSS	Fushou	1.28	242	eP	Pb	11 28 41.5	0.0
FUSS				eS	Sg	11 28 58.5	-0.1
WHF	Hehuan Shan	1.31	238	eP	Pn	11 28 42.2	+0.2
WHF				eS	Sn	11 28 59.9	+0.2
OWD	Renai	1.49	233	eP	Pb	11 28 45.0	0.0
WARBT	Fenglin Townsh	1.51	222	eP	Pn	11 28 44.4	+0.2
WHP	Taichung City	1.51	248	eP	Pg	11 28 46.4	+0.1
WUSB	Renai	1.51	236	eP	Pb	11 28 45.7	+0.3
WUSB				eS	Sg	11 29 05.5	-0.4
HGSD	Ruisui	1.66	216	eP	Pn	11 28 45.1	-1.3
SSLB	Suanglung	1.75	233	S	Sg	11 29 13.2	-0.4
SSLB	Suanglung	1.75	233	P	Pg	11 28 50.2	-0.7
YULB	Yu-li	1.81	217	P	Pb	11 28 50.8	+0.3

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*CATAC **16** 11:36:17.5±0.6, 13°N±4°×8°9W±°, h29^{km}±3^{km}, M3.1/19, MLv3.1/19, Error ellipse: s-maj=8.9km s-min=3.7km az=20.7, confirmed*
*SNET **16** 11:36:18.0±0.9, 13°.16N×89°.28W, h50^{km}±9^{km}, ML3.2*
*GCG **16** 11:36:19.0±0.6, 13°.24N×89°.29W, h52^{km}±5^{km}, MD3.5*
ISC 16 11:36:17.9±1.8,**13°.09N**±0°.10×**89°.31W**±0°.05,**h42**^{km}±17^{km}, **n56**, σ**0^{s}.36**/63, **El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.40	359	eP	Pn	11 36 27.6	+0.1
LALI	Alcalda de L	0.40	359	iS	Sn	11 36 34.4	+0.1
LALI	Alcalda de L	0.40	359	P	Pn	11 36 27.4	-0.1
PANCS	Alcalda de	0.54	14	P	Pn	11 36 29.1	-0.2
LOMA	Loma Larga	0.57	14	eP	Pn	11 36 29.6	-0.2
LOMA				eS	Sn	11 36 38.0	-0.2
LOMA				IAML		11 36 40.0	
	comp=Z,849nm,0.1s						
LOMA	Loma Larga	0.57	14	P	Pn	11 36 29.7	-0.2
JAYA	Jayaque - finc	0.58	347	eP	Pn	11 36 29.7	-0.2
JAYA				eS	Sn	11 36 37.7	-0.8
JAYA				IAML		11 36 39.1	
	comp=Z,2µm,0.1s						
JAYA	Jayaque - finc	0.58	347	iP	Pn	11 36 29.7	-0.2
JAYA				iS	Sn	11 36 38.3	-0.2
JAYA	Jayaque - finc	0.58	347	P	Pn	11 36 29.8	-0.2
ITCA	Escuela Especi	0.58	3	eP	Pn	11 36 29.9	-0.2
ITCA	Escuela Especi	0.58	3	S	Sn	11 36 39.0	+0.5
ITCA	Escuela Especi	0.58	3	P	Pn	11 36 29.8	-0.2
LFRS	El Faro	0.59	25	eP	Pn	11 36 29.3	-0.7
PMON	Piamonte	0.62	360	eP	Pn	11 36 30.3	-0.2
PMON				eS	Sn	11 36 40.0	+0.5
PMON	Piamonte	0.62	360	P	Pn	11 36 30.3	-0.2
UEES	Universidad Ev	0.63	7	S	Sn	11 36 40.1	+0.5
UEES	Universidad Ev	0.63	7	P	Pn	11 36 30.3	-0.3
IGN	Direccin Gen	0.64	13	P	Pn	11 36 30.4	-0.3
BOQS	Boqueron	0.64	3	eP	Pn	11 36 30.9	0.0
PIC2	El Picacho	0.65	5	eP	Pn	11 36 31.1	0.0
PIC2				eS	Sn	11 36 41.4	+0.9
TECO	Alcaldia de Te	0.69	49	P	Pn	11 36 31.2	-0.1
CEDA	San Andres	0.71	354	P	Pn	11 36 31.6	-0.1
CEDA	San Andres	0.71	354	S	Sn	11 36 42.2	+0.6
PAVA	Las Pavas	0.72	31	eP	Pn	11 36 31.5	-0.4
PAVA				eS	Sn	11 36 41.8	-0.1
PAVA	Las Pavas	0.72	31	P	Pn	11 36 31.5	-0.4
UESV	Universidad de	0.75	43	P	Pn	11 36 32.0	-0.1
ALJI	Alcalda de J	0.76	72	S	Sn	11 36 42.9	+0.3
ALJI	Alcalda de J	0.76	72	P	Pn	11 36 32.3	0.0
CEVE	Cerro Verde	0.79	338	eP	Pn	11 36 32.6	-0.4
CEVE	Cerro Verde	0.79	338	P	Pn	11 36 33.0	0.0
CEVE	Cerro Verde	0.79	338	S	Sn	11 36 44.2	+0.4
SBLS	San Blas	0.80	338	eP	Pn	11 36 32.9	-0.2
SNJE	San Jose	0.82	340	eP	Pn	11 36 33.4	0.0
SNJE				eS	Sn	11 36 45.1	+0.6
SCLA	Alcaldia de Sa	0.83	43	eP	Pn	11 36 32.8	-0.5
SCLA	Alcaldia de Sa	0.83	43	S	Sn	11 36 45.1	+0.6
SCLA	Alcaldia de Sa	0.83	43	P	Pn	11 36 33.2	-0.1
PQSS	Presa 15 de Se	0.91	54	P	Pn	11 36 33.7	-0.5
PQSS	Presa 15 de Se	0.91	54	S	Sn	11 36 46.3	+0.1
UNIC	Universidad Ca	0.92	346	P	Pn	11 36 34.3	-0.1
NUBE	Las Nubes	0.93	331	eS	Sn	11 36 47.0	+0.1
NUBE	Las Nubes	0.93	331	iS	Sn	11 36 46.8	-0.1
LOAL	Lomas de Alarc	1.01	333	P	Pn	11 36 35.6	-0.2
FAME	Alcaldia de Sa	1.01	318	S	Sn	11 36 48.5	-0.3
FAME	Alcaldia de Sa	1.01	318	P	Pn	11 36 35.7	-0.1
PACA	Pacayal	1.04	68	P	Pn	11 36 35.9	-0.2
PACA	Pacayal	1.04	68	S	Sn	11 36 49.9	+0.3
SLOZ	Alcaldia de Sa	1.04	334	eP	Pn	11 36 36.1	+0.1
SLOZ	Alcaldia de Sa	1.04	334	P	Pn	11 36 36.2	+0.1
SLOZ	Alcaldia de Sa	1.04	334	S	Sn	11 36 50.2	+0.7
RANC	El Ranchito	1.06	71	P	Pn	11 36 35.9	-0.6
MTO3	Montecristo	1.30	358	iP	Pn	11 36 39.5	-0.4
MTO3	Montecristo	1.30	358	iP	Pn	11 36 39.5	-0.4
MTO3	Montecristo	1.30	358	P	Pn	11 36 39.6	-0.4
CNCH	Conchagua	1.45	82	S	Sn	11 37 00.2	+0.4
CNCH	Conchagua	1.45	82	P	Pn	11 36 41.8	0.0
HERN	Volcan Telica	2.47	101	P	Pn	11 36 55.5	-0.2

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*IDC **16** 12:02:34.0±1.5, 31°.38S×177°.40W, h0^{km}, mb3.7/4, mbtmp3.8/5, ML3.1/1, MS3.3/1, Error ellipse: s-maj=35.2km s-min=30.2km az=88.0*
ISC 16 12:02:37.5±1.5,**31°.4S**±0°.1×**177°.4W**±0°.2,**h26**^{km}, **n8**, σ**0^{s}.82**/8, **mb3.9**/4, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.25	212	Pn	Pn	12 04 34.3	-1.2
	0.2nm,0.3s,baz=48,slow=12,SNR=1.7						
URZ				Sn	Sn	12 06 08.9	+1.1
	0.6nm,0.3s,baz=289,slow=22,SNR=6.7						
	7.3nm,0.9s						
DZM	Mont Dzumac	17.17	299	LR	LR	12 11 52.7	
	comp=Z,104nm,18.8s,baz=264,slow=33						
STKA	Stephens Creek	34.82	258	P	P	12 09 26.6	+0.3
	0.7nm,0.5s,baz=106,slow=7.4,SNR=3.6						
	0.7nm,0.5s						
ASAR	Alice Springs	43.62	268	P	P	12 10 40.0	+0.1
	0.6nm,0.7s,baz=106,slow=7.2,SNR=16						
	0.6nm,0.7s						
WRA	Warramunga Arr	44.70	273	P	P	12 10 48.0	-0.6
	0.6nm,0.4s,baz=112,slow=7.9,SNR=10						
	0.6nm,0.4s						
QSPA	South Pole Qui	58.75	180	P	P	12 12 33.1	+0.1
	0.9nm,1.0s,baz=27,slow=4.5,SNR=10						
	0.9nm,1.0s						
FINES	FINESS Array B	146.24	340	PKPbc	PKPbc	12 22 15.1	+0.2
	2.0nm,0.7s,baz=65,slow=4.7,SNR=12						
AKASG	Malin Array Be	152.40	322	PKPbc	PKiKP	12 22 31.5	+0.5
	0.1nm,0.2s,baz=57,slow=1.1,SNR=4.2						

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*OSPL **16** 12:17:22.8±0.3, 19°.22N×69°.69W, h11^{km}±4^{km}, ML2.6*
*SDD **16** 12:17:25.0±1.9, 19°.30N×69°.90W, h17^{km}±10^{km}, MD2.9, ML2.3, MW2.7*
ISC 16 12:17:23.8±1.0,**19°.27N**±0°.06×**69°.85W**±0°.05,**h19**^{km}±4^{km}, **n9**, σ**1^{s}.09**/14, **7C-2D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NADR	Nagua	0.08	354	⇑ePg	Pg	12 17 27.3	-0.2
NADR				⇑eSg	Sb	12 17 30.6	+0.7
NADR				IAML		12 17 30.8	
	comp=N,4µm,0.2s						
LONA1	Toro Cenizo, N	0.11	351	iP	Pg	12 17 27.0	-0.7
LONA1				eS	Sg	12 17 30.3	-0.1
LONA1				IAML		12 17 30.5	
	comp=Z,2µm,0.4s						
DR08	Loma La Naviza	0.35	208	⇓ePg	Pg	12 17 31.8	+0.5
DR08				IAML		12 20 04.1	
	comp=N,785nm,0.2s						
CADR	Cabrera	0.40	347	⇑eSg	Sg	12 17 36.8	-1.0
CADR				IAML		12 17 37.4	
	comp=N,597nm,0.3s						
SMDR	Samana, DR	0.62	88	eSg	Sn	12 17 47.3	+0.3
SMDR				IAML		12 17 49.5	
	comp=N,116nm,0.7s						
HATOM	Hato Mayor del	0.65	138	⇑ePg	Pb	12 17 37.1	+0.6
HATOM				⇑eSg	Sn	12 17 46.9	-0.9
HATOM				IAML		12 17 49.7	
	comp=N,26nm,1.4s						
SC01	Santiago de lo	0.84	281	eS	Sg	12 17 53.4	+1.8
ABDR	Alto Bandera	0.87	238	⇑ePg	Pg	12 17 38.9	-2.0
ABDR				⇑eSg	Sg	12 17 51.7	-0.8
ABDR				IAML		12 17 52.7	
	comp=N,44nm,0.6s						
SDDR	Presa de Saban	1.39	258	ePg	Pn	12 17 48.2	0.0
SDDR				⇓eSg	Sn	12 18 06.9	+0.8
SDDR				IAML		12 18 12.7	
	comp=N,22nm,0.2s						

IDC 16 12:28:14.5±3.2,**31°.17S**×**177°.46W, h0^{km}, mb3.5**/2, **mbtmp3.6**/3, **ML2.9**/1, **Error ellipse: s-maj=75.4km s-min=38.0km az=115.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.37	211	Pn	Pn	12 30 17.0	0.0
	0.2nm,0.3s,baz=38,slow=18,SNR=1.9						
URZ				Sn	Sn	12 31 52.9	+0.8
	baz=23,slow=18						
	8.5nm,1.0s						
ASAR	Alice Springs	43.54	267	P	P	12 36 20.1	-0.1
	0.3nm,0.6s,baz=106,slow=7.2,SNR=9.5						
	0.3nm,0.6s						
WRA	Warramunga Arr	44.60	273	P	P	12 36 28.6	-0.2
	0.4nm,0.4s,baz=111,slow=8.0,SNR=7.9						
	0.4nm,0.4s						
FINES	FINESS Array B	146.03	340	PKPbc	PKPdf	12 47 54.7	0.0
	0.5nm,0.4s,baz=63,slow=4.1,SNR=4.7						

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*NEIC **16** 12:35:47.8±1.6, 15°.12S±0°.09×174°.58W±0°.07, h10^{km}±1^{km}, mb4.9/51, Error ellipse: s-maj=15.9km s-min=10.8km az=171.0*
*IDC **16** 12:35:50.0±0.5, 15°.59S×174°.67W, h0^{km}, mb4.4/16, mbtmp4.3/18, ML4.6/2, MS4.2/49, Error ellipse: s-maj=23.6km s-min=14.2km az=133.0*
*GCMT **16** 12:35:55.8±0.3, 15°.18S±0°.02×174°.51W±0°.01, h13^{km}±1^{km}, MW5.0/104, Moment Tensor Solution. s25,c28; s104,c152; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.80±.15; $M_{\theta\theta}$2.48±.17; $M_{\phi\phi}$-1.68±.13; $M_{r\theta}$0.13±.33; $M_{\theta\phi}$3.79±.13; $M_{\phi r}$0.54±.33; Best double couple: $M_0$4.36200×10^{16} NP1:ϕ_s104.00000°,δ82.00000°, λ-2.00000°. NP2:ϕ_s195.00000°,δ88.00000°, λ-172.00000°. Principal axes: T 4.7510, Plg4.0000°, Azm329.0000°; N -0.7730, Plg82.0000°, Azm210.0000°; P -3.9730, Plg7.0000°, Azm60.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 16 12:35:55.0±0.3,**15°.71S**±0°.06×**174°.81W**±0°.06,**h35**^{km}, **n461**, σ**1^{s}.59**/391, **mb4.7**/48, **MS4.4**/55, **5C-4D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.44	59		Pn	12 36 35.0	-11
FUTU	Fugatoga	3.49	293	Pn	Pn	12 36 42.7	-4.1
NIUE	Niue	5.74	126	Pn	Pn	12 37 15.8	-2.0
MSVF	Nonsavu	7.13	253		Pn	12 37 39.9	+3.0
MSVF	Nonsavu	7.13	253	Pn	Pn	12 37 39.4	+2.5
	1.1nm,0.3s,baz=129,slow=18,SNR=8.8						
MSVF				LR	LR	12 40 09.3	
	comp=Z,6µm,18.6s,baz=58,slow=36						
	4.8nm,0.8s						
RAR	Rarotonga	15.28	113	LR	LR	12 44 05.6	
	comp=Z,550nm,19.7s,baz=296,slow=33						
DZM	Mont Dzumac	18.82	247	P	P	12 40 10.8	-1.1
DZM	Mont Dzumac	18.82	247	eP	Pn	12 40 17.2	+4.5
	114nm,1.3s						
DZM				eLR	LR	12 44 36.7	
	3µm,25.4s						
DZM	Mont Dzumac	18.82	247	P	Pn	12 40 15.3	+2.6
	0.3nm,0.3s,baz=135,slow=13,SNR=4.5						
DZM				LR	LR	12 46 24.8	
	comp=Z,2µm,20.0s,baz=64,slow=33						
	9.1nm,1.0s						
TOZ	Tahuroa Road	23.55	200		P	12 41 03.8	+1.6
TOZ				IAmb	IAmb	12 41 15.5	
	comp=Z,53nm,1.4s						
URZ	Urewera	23.57	196	P	P	12 41 03.6	+1.3
	comp=Z,10nm,0.8s,baz=133,slow=5.6,SNR=4.3						
	comp=Z,10nm,0.8s						
RTZ	Ruatahuna	23.94	196	P	P	12 41 07.8	+1.9
RTZ				IAmb	IAmb	12 41 19.4	
	comp=Z,29nm,1.1s						
PPT	Papeete	24.25	98	LR	LR	12 47 46.3	
	comp=Z,202nm,21.5s,baz=273,slow=30						
PPT2	Papeete2	24.25	98	eP	P	12 41 12.5	+3.5
	comp=Z,74nm,24.2s						
PPT2				eS	S	12 45 23.1	-2.5
	comp=Z,3µm,25.8s						
PPT2				eLR	LR	12 46 54.9	
	comp=Z,367nm,23.8s						
PPT2				eLR	LR	12 46 56.0	
	comp=Z,377nm,28.0s						
TBI	Tubuai	25.05	112	eS	S	12 45 40.8	+2.6
	comp=Z,11µm,26.8s						
TBI				eLR	LR	12 47 25.8	
	comp=Z,1µm,22.2s						
TBI				eLR	LR	12 47 29.1	
	comp=Z,816nm,26.5s						
HNR	Honiara	25.40	281	P	P	12 41 16.0	-3.4
LHI	Lord Howe Isla	28.54	232	P	P	12 41 47.2	-0.3
ARMA	Armidale	34.02	239	P	P	12 42 37.1	+1.2
ARMA				IAmb	IAmb	12 42 46.6	
	comp=Z,15nm,1.1s						
TAOE	Nuku Hiva Isla	34.51	83	eLR	LR	12 51 33.5	
	comp=Z,892nm,23.9s						
H11S2	WAKE ISLAND Hy	38.55	331	T	T	13 23 44.1	
	baz=150,slow=76						
H11S3	WAKE ISLAND Hy	38.56	331	T	T	13 23 44.4	
	baz=150,slow=76						
H11S1	WAKE ISLAND Hy	38.57	331	T	T	13 23 45.4	
	baz=150,slow=76						
H11N3	WAKE ISLAND Hy	39.53	332	T	T	13 24 59.9	
	baz=151,slow=76,SNR=218						
H11N1	WAKE ISLAND Hy	39.53	332	T	T	13 25 03.7	
	baz=151,slow=76,SNR=286						
H11N2	WAKE ISLAND Hy	39.54	332	T	T	13 25 00.8	
	baz=151,slow=76,SNR=199						
TOO	Toolangi	41.22	230		P	12 43 35.9	-0.8
STKA	Stephens Creek	42.70	240		P	12 43 47.5	-1.3
STKA	Stephens Creek	42.70	240	P	P	12 43 49.4	+0.6
	comp=Z,4.9nm,1.0s,baz=62,slow=7.6,SNR=6.2						
STKA				LR	LR	12 59 35.9	
	comp=Z,379nm,20.3s,baz=58,slow=33						
	comp=Z,4.9nm,1.0s						
MGBR	Mount Gambier	44.96	232	P	P	12 44 06.7	-0.2
JAY	Jayapura	45.72	282	LR	LR	13 01 15.2	
	comp=Z,161nm,18.9s,baz=96,slow=33						
WR8	Warramunga Arr	48.30	257	P	P	12 44 30.3	-3.0
WR8				IAmb	IAmb	12 44 50.1	
	comp=Z,11nm,1.4s						
WB0	Warramunga Arr	48.41	257	P	P	12 44 31.5	-2.6
WRA	Warramunga Arr	48.45	257	P	P	12 44 32.8	-1.7
WRA	Warramunga Arr	48.45	257	P	P	12 44 34.9	+0.5
	comp=Z,1.6nm,1.0s,baz=90,slow=6.6,SNR=16						
WRA				PcP	PcP	12 46 01.3	+0.8
	comp=Z,2.1nm,1.0s,baz=86,slow=3.6,SNR=5.2						
WRA				LR	LR	13 03 44.7	
	comp=Z,234nm,20.7s,baz=77,slow=34						
	comp=Z,1.6nm,1.0s						
AS31	Alice Springs	48.72	252		P	12 44 35.4	-1.2
ASAR	Alice Springs	48.72	252		P	12 44 35.3	-1.2
ASAR	Alice Springs	48.72	252	P	P	12 44 37.2	+0.7
	comp=Z,5.7nm,1.0s,baz=84,slow=8.2,SNR=28						
ASAR				PcP	PcP	12 46 01.2	-0.1
	comp=Z,1.0nm,0.8s,baz=100,slow=3.3,SNR=4.1						
ASAR				LR	LR	13 03 38.3	
	comp=Z,437nm,20.9s,baz=86,slow=34						
	comp=Z,5.7nm,1.0s						
GUMO	Guam	49.37	304	LR	LR	13 02 17.8	
	comp=Z,239nm,19.5s,baz=134,slow=32						
FORT	Forrest	54.06	243	P	P	12 45 15.2	-1.2
FORT				IAmb	IAmb	12 45 45.0	
	comp=Z,18nm,1.1s						
FITZ	Fitzroy Crossi	56.81	258	LR	LR	13 08 26.0	
	comp=Z,274nm,20.2s,baz=110,slow=34						
BATI	Baumata	60.04	267	LR	LR	13 10 38.0	
	comp=Z,328nm,18.1s,baz=126,slow=35						
SBA	Scott Base	62.84	184	P	P	12 46 16.7	-0.1
VNDA	Vanda	62.94	186		P	12 46 18.6	+1.2
VNDA	Vanda	62.94	186	P	P	12 46 18.9	+1.5
	comp=Z,2.0nm,0.9s,baz=346,slow=5.9,SNR=5.1						
VNDA				LR	LR	13 07 51.9	
	comp=Z,110nm,21.7s,baz=18,slow=30						
	comp=Z,2.0nm,0.9s						
DAV	Davao City (W)	63.21	286	LR	LR	13 12 42.1	
	comp=Z,236nm,18.0s,baz=120,slow=35						
NWAO	Narrogin (SRO)	63.28	241	LR	LR	13 12 05.2	
	comp=Z,424nm,20.7s,baz=148,slow=34						
MORW	Morawa	64.52	245	P	P	12 46 28.2	-0.6
KAPI	Kappang	65.02	272	LR	LR	13 14 46.5	
	comp=Z,70nm,18.6s,baz=97,slow=36						
MJAR	Matsushiro Arr	68.30	321	P	P	12 46 53.1	+0.4
	comp=Z,1.8nm,0.8s,baz=164,slow=5.2,SNR=4.0						
	comp=Z,1.8nm,0.8s						
NIKH	Nikolski High	68.59	4	P	P	12 46 54.5	+0.5
	baz=186						
SHEM	Shemya Is, Ala	68.82	353	LR	LR	13 10 57.6	
	comp=Z,351nm,20.4s,baz=108,slow=31						
CASY	Casey	69.56	205	P	P	12 46 59.6	-0.4
CASY				IAmb	IAmb	12 47 15.9	
	comp=Z,21nm,1.4s						
UNV	Unalaska Valle	69.64	5	P	P	12 47 01.4	+0.8
	baz=188						
FALS	False Pass	70.95	7	P	P	12 47 09.6	+1.1
	baz=192						
CHNA	Chernabura Isl	71.44	9	P	P	12 47 12.0	+0.5
	baz=195						

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SDPT  Sand Point       71.81   9 P     P     12 47 14.4 +0.7
      baz=194
S12K  Black Hills      71.94   8 P     P     12 47 15.2 +0.7
      baz=193
P08K  Saint George I   72.17   3 P     P     12 47 17.4 +1.6
      baz=185
PETK  Petropavlovsk-   72.52 343 P     P     12 47 18.6 +0.6
      comp=Z,3.9nm,0.8s,baz=137,slow=11,SNR=4.6
PETK                             LR    LR    13 12 40.4
      comp=Z,100nm,21.1s,baz=160,slow=30
      comp=Z,3.9nm,0.8s
SPIA  Saint Paul Isl   72.71   3 P     P     12 47 20.2 +1.1
      baz=184
S14K  Fog Glacier      72.85   9 P     P     12 47 21.3 +1.2
      baz=195
ELS   Elsinore Mount   73.46  47 P     P     12 47 16.9  -7.3
ELS                              IAmb  IAmb  12 47 27.8
      comp=Z,7.2nm,1.0s
ESJX  Sierra Juarez    73.67  49       P     12 47 18.0  -7.6
CMB   Columbia Colle   73.90  42 P     P     12 47 18.5  -8.1
CMB                              IAmb  IAmb  12 47 30.9
      comp=Z,8.7nm,1.1s
YUH   Yuha Desert      74.02  49 P     P     12 47 20.3  -7.1
YUH                              IAmb  IAmb  12 47 31.5
      comp=Z,9.4nm,1.2s
SII   Sitkinak Islan   74.04  12 P     P     12 47 28.3 +1.4
      baz=201
AFDM  Forest Hills D   74.06  41       P     12 47 19.9  -7.7
AFDM                             IAmb  IAmb  12 47 31.6
      comp=Z,9.7nm,1.1s
PFO   Pinyon Flats O   74.13  48 LR    LR    13 13 48.4
      comp=Z,224nm,18.0s,baz=261,slow=31
QSPA  South Pole Qui   74.34 180 P     P     12 47 30.2 +1.4
      comp=Z,4.5nm,1.0s,baz=350,slow=1.5,SNR=18
QSPA                             LR    LR    13 14 57.0
      comp=Z,237nm,21.5s,baz=46,slow=32
      comp=Z,4.5nm,1.0s
LPIG  La Paz           74.36  59 LR    LR    13 13 56.1
      comp=Z,176nm,18.1s,baz=199,slow=31
R16K  Pilot Point      74.39  10 P     P     12 47 30.4 +1.5
      baz=197
YBH   Yreka Blue Hor   74.67  38 LR    LR    13 12 33.6
      comp=Z,9.4nm,21.2s,baz=254,slow=30
GSC   Goldstone, Bar   74.78  46 P     P     12 47 23.8  -8.0
OHAK  Old Harbor       74.83  12 P     P     12 47 26.5  -5.0
OHAK                             IAmb  IAmb  12 47 34.0
      comp=Z,11nm,1.0s
OHAK  Old Harbor       74.83  12 P     P     12 47 33.0 +1.4
      baz=201
R18K  Karluk           74.93  11 P     P     12 47 33.5 +1.5
      baz=200
BEKR  Beckworth        74.98  40 P     P     12 47 25.4  -7.6
BEKR                             IAmb  IAmb  12 47 36.7
      comp=Z,13nm,1.3s
PNTR  Pine Nut         75.01  41 P     P     12 47 24.4  -8.9
PNTR                             IAmb  IAmb  12 47 37.7
      comp=Z,17nm,1.0s
GLA   Glamis           75.01  49 P     P     12 47 25.7  -7.5
GLA                              IAmb  IAmb  12 47 37.2
      comp=Z,15nm,1.3s
QSM   Queen of Sheba   75.09  45       P     12 47 24.9  -8.6
QSM                              IAmb  IAmb  12 47 37.1
      comp=Z,11nm,1.0s
Q17K  Contact Creek    75.33  10 P     P     12 47 36.1 +1.5
      baz=199
GWY   Greenwater Val   75.34  45       P     12 47 26.9  -8.3
NVAR  Mina Array Bea   75.47  43 P     P     12 47 35.1  -0.9
      comp=Z,6.1nm,0.9s,baz=227,slow=9.2,SNR=27
NVAR                             LR    LR    13 15 27.9
      comp=Z,158nm,18.6s,baz=228,slow=32
      comp=Z,6.1nm,0.9s
KDAK  Kodiak Island    75.50  12 LR    LR    13 16 50.6
      comp=Z,127nm,18.6s,baz=204,slow=33
KDAK  Kodiak Island    75.50  12 P     P     12 47 37.2 +1.9
      baz=202
O14K  Tigyukauivet M   75.51   7 P     P     12 47 36.9 +1.5
      baz=193
Q16K  King Salmon      75.60  10 P     P     12 47 37.6 +1.7
      baz=198
O15K  Ungalikthiuk R   75.61   8 P     P     12 47 37.4 +1.4
      baz=195
P16K  Nushagak River   75.73   9 P     P     12 47 37.8 +1.1
      baz=197
Q18K  Katmai Hardscr   75.85  11 P     P     12 47 38.6 +1.0
      baz=200
N14K  Kuskokwak Cree   76.11   7 P     P     12 47 40.2 +1.4
      baz=193
P17K  Kvichak River    76.13  10 P     P     12 47 39.8 +0.9
      baz=198
M11K  Mekoryuk         76.14   4 P     P     12 47 39.6 +0.7
      baz=188
LEM   Lembang          76.25 267 LR    LR    13 20 34.5
      comp=Z,161nm,20.3s,baz=154,slow=35
O16K  Kokwok River B   76.26   9       P     12 47 33.6  -6.0
O16K                             IAmb  IAmb  12 47 41.8
      comp=Z,13nm,1.1s
O16K  Kokwok River B   76.26   9 P     P     12 47 40.4 +0.8
      baz=196,SNR=7.0
Q20K  Shuyak Island    76.30  12 P     P     12 47 40.7 +0.7
      baz=202
Q19K  Cape Douglas,    76.36  11 P     P     12 47 41.6 +1.2
      baz=201
M13K  Dall Lake        76.42   6 P     P     12 47 41.5 +1.0
      baz=191
P18K  Big Mountain,    76.52  10 P     P     12 47 41.8 +0.6
      baz=199,SNR=9.3
N15K  Kwethluk River   76.54   8 P     P     12 47 42.6 +1.3
      baz=194
O17K  Koliganek Bris   76.58   9 P     P     12 47 43.1 +1.7
      baz=198,SNR=8.0
S11A  Rachel           76.74  44 P     P     12 47 35.2  -7.9
S11A                             IAmb  IAmb  12 47 46.7
      comp=Z,13nm,1.0s
USRK  Ussuriysk Ar.    76.82 324 LR    LR    13 15 04.5
      comp=Z,464nm,21.4s,baz=139,slow=31
M14K  Bethel           76.89   6 P     P     12 47 44.9 +1.8
      baz=193,SNR=8.7
O18K  Koktuh Hills     76.96  10 P     P     12 47 45.3 +1.6
      baz=199,SNR=7.2
PINE  Pine Mountain    76.96  37       P     12 47 37.4  -6.8
PINE                             IAmb  IAmb  12 47 48.2
      comp=Z,11nm,0.9s
M15K  Kasigluk River   76.98   7 P     P     12 47 45.8 +2.1
      baz=194,SNR=10
N16K  Nishlik Lake     77.01   8 P     P     12 47 45.2 +1.3
      baz=196
P19K  Oil Pt           77.11  11 P     P     12 47 45.8 +1.2
      baz=201
N17K  Nushagak Hills   77.29   9 P     P     12 47 47.1 +1.7
      baz=197
L14K  Kuka Creek       77.40   6 P     P     12 47 47.9 +1.9
      baz=192
HOM   Homer            77.42  12 P     P     12 47 47.0 +0.8
      baz=203
O19K  Port Alsworth    77.43  10 P     P     12 47 47.1 +0.9
      baz=200
M16K  Timber Creek     77.52   8 P     P     12 47 47.7 +1.0
      baz=196,SNR=6.3
O20K  Slope Mountain   77.63  11 P     P     12 47 48.1 +0.6
      baz=202
N18K  Kilae Creek      77.63   9 P     P     12 47 48.0 +0.6
      baz=199,SNR=5.2
BRSE  Bradley Lake S   77.68  12 P     P     12 47 48.4 +0.7
      baz=204
K13K  Kusilvak Mount   77.80   5 P     P     12 47 48.1  -0.2
      baz=190
L15K  Ungalak Mounta   77.85   6 P     P     12 47 48.7 +0.1
      baz=193,SNR=6.0
N19K  Bonanza Creek    77.98  10 P     P     12 47 48.8  -0.6
      baz=200,SNR=6.0
M17K  Holitna River    78.09   8 P     P     12 47 50.0 +0.1
      baz=197,SNR=7.7
L16K  Owhat River      78.11   7 P     P     12 47 50.5 +0.5
      baz=195,SNR=9.9
SEW   Seward           78.28  13 P     P     12 47 50.9  -0.1
      baz=205
Q23K  Middleton Isla   78.37  14 P     P     12 47 51.5  0.0
      baz=208
M18K  Stony River      78.41   9 P     P     12 47 51.7 +0.1
      baz=199,SNR=6.7
K15K  Wolf Creek Mou   78.45   6 P     P     12 47 52.4 +0.6
      baz=193,SNR=7.6
O22K  Cooper Landing   78.57  12 P     P     12 47 52.9 +0.4
      baz=204
CBB   Campbell River   78.57  30       P     12 47 45.0  -7.8
CBB                              IAmb  IAmb  12 47 56.1
      comp=Z,7.2nm,1.0s
P23K  Montague Islan   78.63  14 P     P     12 47 53.5 +0.6
      baz=207
L17K  Donlin           78.67   8 P     P     12 47 53.5 +0.4
      baz=196,SNR=13
J14K  Nanvaranak Lak   78.70   5 P     P     12 47 53.4 +0.2
      baz=191
WUAZ  Wupatki          78.71  48       P     12 47 47.1  -7.1
WUAZ                             IAmb  IAmb  12 47 58.5
      comp=Z,12nm,1.0s
N20K  Mount Spurr      78.75  11 P     P     12 47 53.6  -0.1
      baz=202
BBB   Bella Bella      78.77  27 LR    LR    13 19 45.7
      comp=Z,50nm,18.1s,baz=234,slow=34
L18K  Granite Mounta   78.98   9 P     P     12 47 54.6  -0.2
      baz=198,SNR=8.3
M19K  Big River Lodg   79.03  10 P     P     12 47 55.1  0.0
      baz=200
RC01  Rabbit Creek A   79.12  12 P     P     12 47 55.7 +0.1
      baz=204
CRAG  Craig            79.14  23 P     P     12 47 55.7  -0.1
      baz=221
PWL   Port Wells       79.20  13 P     P     12 47 56.3 +0.2
      baz=206
L19K  White Mountain   79.22   9 P     P     12 47 56.3 +0.1
      baz=200
M20K  Styx River       79.22  10 P     P     12 47 56.3  0.0
      baz=201
K17K  Iditarod         79.23   8 P     P     12 47 56.6 +0.4
      baz=196,SNR=7.2
SUA   Susitna One      79.26  11 P     P     12 47 56.3  -0.3
      baz=204,SNR=6.6
GAMB  Gambell          79.27   1 P     P     12 47 56.8 +0.5
      baz=183
NJ2   Nanjing          79.27 308 eP    P     12 47 59.3 +2.3
NJ2                              pmax  pmax
      comp=Z,8.0nm,0.6s
KAIM  Kayak Island     79.28  15 P     P     12 47 56.7 +0.2
      baz=210
GLI   Glacier Island   79.49  13 P     P     12 47 58.4 +0.8
      baz=207
EYAK  Cordova Ski Ar   79.50  14 P     P     12 47 58.6 +0.9
      baz=208
J16K  Anvik River      79.51   6 P     P     12 47 58.4 +0.7
      baz=194,SNR=11
SIT   Sitka            79.58  21 P     P     12 47 58.8 +0.7
      baz=218
SKT   Skwentna         79.59  11 P     P     12 47 58.8 +0.7
      baz=203
V35K  Ketchikan        79.60  23 P     P     12 47 58.7 +0.3
      baz=222
U33K  Whale Pass       79.63  22 P     P     12 47 59.2 +0.7
      baz=221
M22K  Willow           79.65  12 P     P     12 47 58.2  -0.2
      baz=204,SNR=8.4
L20K  Farewell, AK     79.65  10 P     P     12 47 58.5  0.0
      baz=200,SNR=9.8
KNK   Knik Glacier     79.68  13 P     P     12 47 58.5  -0.2
      baz=206
PMR   Palmer           79.70  12 P     P     12 48 00.7 +2.0
      baz=205,SNR=6.3
J17K  VABM Dome        79.80   7 P     P     12 48 00.6 +1.3
      baz=195,SNR=8.8
S31K  Pelican          80.00  20 P     P     12 48 01.4 +1.0
      baz=218
KLR   Kul'dur          80.04 328 LR    LR    13 18 15.0
      comp=Z,136nm,21.5s,baz=136,slow=32
SML   Sawmill          80.06  12 P     P     12 48 01.5 +0.7
      baz=206
I17K  Unalakleet       80.09   6 P     P     12 48 02.0 +1.3
      baz=194
MESA  MESA             80.14  16 P     P     12 48 00.9  -0.5
      baz=212
BMRM  Bremner River    80.14  14 P     P     12 48 01.7 +0.4
      baz=209
WRAK  Wrangell Islan   80.15  22 P     P     12 48 02.7 +1.5
      baz=221
S32K  Killisnoo        80.16  21 P     P     12 48 01.9 +0.6
      baz=219
J18K  Innoko River     80.17   8 P     P     12 48 01.6 +0.4
      baz=198,SNR=16
M23K  Glacier View     80.17  13 P     P     12 48 01.8 +0.5
      baz=206
CUT   Chulitna         80.22  11 P     P     12 48 02.5 +1.0
      baz=204
T33K  Petersburg       80.23  22 P     P     12 48 02.0 +0.4
      baz=221
SCM   Sheep Creek Mo   80.29  13 P     P     12 48 02.7 +0.7
      baz=207,SNR=6.9
KLU   Klutina          80.30  14 P     P     12 47 56.3  -5.8
KLU                              IAmb  IAmb  12 48 05.7
      comp=Z,13nm,1.0s
KLU   Klutina          80.30  14 P     P     12 48 02.3 +0.2
      baz=208
CRQM  Cirque           80.32  15 P     P     12 47 56.0  -6.3
PPLA  Purkeypile       80.33  10 P     P     12 48 02.9 +0.6
      baz=202
CRQE  Cirque           80.33  15 P     P     12 48 02.2  -0.1
      baz=211,SNR=5.6
ANM   Nome             80.35   4 P     P     12 48 03.1 +0.9
      baz=189
PNL   Peninsula        80.41  17 P     P     12 48 03.9 +1.2
      baz=214
K20K  Telida           80.45   9 P     P     12 48 04.3 +1.5
      baz=200,SNR=6.7
N25K  Chitina, Valde   80.70  14 P     P     12 48 05.2 +1.0
      baz=209,SNR=8.1
M24K  Tolsona, Glenn   80.79  13 P     P     12 48 06.1 +1.5
      baz=208,SNR=6.8
R32K  Eaglecrest       80.81  20 P     P     12 48 06.6 +1.8
      baz=219
J19K  Poorman          80.82   8 P     P     12 48 06.6 +1.9
      baz=199
CAST  Castle Rocks     80.83  10 P     P     12 48 05.6 +0.8
      baz=202,SNR=5.6
P29M  Windy Craggy     80.87  18 P     P     12 48 06.2 +1.0
      baz=216
G15K  Niukluk          80.87   5 P     P     12 48 06.7 +1.7
      baz=190
WAT6  Susitna Watana   80.88  12 P     P     12 48 06.5 +1.2
      baz=206,SNR=11
MCARA McCarthy VSAT    80.89  15 P     P     12 48 06.3 +1.2
      baz=211
WAT1  Susitna Watana   80.94  12 P     P     12 48 06.5 +1.1
      baz=206
CTG   Chitna Glacier   80.96  16 P     P     12 48 06.9 +1.2
      baz=212
O28M  Mount Upton      81.11  16 P     P     12 48 07.6 +0.9
      baz=214
PLBC  Pleasant Camp    81.14  19 P     P     12 48 08.2 +1.7
      baz=217
O29M  Mount Kennedy    81.17  17 P     P     12 48 08.1 +1.3
      baz=215
TRF   Thorofare Moun   81.17  11 P     P     12 48 08.2 +1.4
      baz=204,SNR=11
F14K  Arctic Creek     81.19   4 P     P     12 48 08.6 +1.9
      baz=188
H17K  Granite Mounta   81.20   6 P     P     12 48 08.3 +1.5
      baz=194
J20K  Nowinta River    81.21   9 P     P     12 48 08.4 +1.6
      baz=200,SNR=11
CHUM  Lake Minchumin   81.22  10 P     P     12 48 08.3 +1.5
      baz=202,SNR=5.7
HARP  HAARP            81.27  13 P     P     12 48 08.9 +1.7
      baz=209
T35M  Bob Quinn        81.34  23 P     P     12 48 09.1 +1.4
      baz=223
GCSA  Galena City Sc   81.37   8 P     P     12 48 09.5 +1.9
      baz=197,SNR=5.8
DHY   Denali Highway   81.40  12 P     P     12 48 09.3 +1.2
      baz=207,SNR=5.2
G16K  Koyuk River      81.41   5 P     P     12 48 09.5 +1.7
      baz=192
SKAG  Skagway          81.47  19 P     P     12 48 09.9 +1.7
      baz=218
P30M  Million Dollar   81.50  18 P     P     12 48 09.8 +1.3
      baz=217
F15K  North Star Dit   81.53   4 P     P     12 48 10.5 +2.0
      baz=190
H18K  Honhosa River    81.58   7 P     P     12 48 09.7 +0.9
      baz=196
BPAW  Bear Paw Mtn.    81.65  10 P     P     12 48 10.1 +1.0
      baz=203
YUK8  Steele Glacier   81.65  16 P     P     12 48 10.3 +0.8
      baz=214
G17K  Kiwalik Mounta   81.67   6 P     P     12 48 10.6 +1.4
      baz=194
MCK   McKinley         81.68  11 P     P     12 48 10.3 +1.0
      baz=205,SNR=13
PAX   Paxson           81.70  13 P     P     12 48 11.0 +1.4
      baz=208
S34M  Telegraph Cree   81.70  22 P     P     12 48 11.0 +1.5
      baz=222
NEW   Newport          81.73  35 LR    LR    13 20 34.4
      comp=Z,85nm,18.2s,baz=253,slow=33
I20K  Naaghedeneel     81.75   9 P     P     12 48 11.1 +1.6
      baz=200
YUK6  Outpost Mounta   81.76  17 P     P     12 48 10.6 +0.6
      baz=215
M26K  Nabesna, AK      81.77  14 P     P     12 48 11.1 +1.2
      baz=211,SNR=21
YUK3  Moose Creek      81.88  16 P     P     12 48 12.2 +1.5
      baz=213,SNR=6.4
HYT   Haines Junctio   81.91  17       P     12 48 03.4  -7.3
HYT                              IAmb  IAmb  12 48 14.7
      comp=Z,12nm,1.1s
HYT   Haines Junctio   81.91  17 P     P     12 48 12.2 +1.5
      baz=216,SNR=6.3
TXAR  Lajitas Array    81.92  57 P     P     12 48 11.3  -0.2
      comp=Z,6.8nm,1.0s,baz=229,slow=7.9,SNR=30
TXAR                             LR    LR    13 16 23.3
      comp=Z,114nm,20.9s,baz=263,slow=30
      comp=Z,6.8nm,1.0s
PV01  Paradox Valley   81.92  47 P     P     12 48 04.9  -6.6
PV01                             IAmb  IAmb  12 48 15.2
      comp=Z,10nm,1.1s
YUK4  Talbot Arm       82.01  17 P     P     12 48 13.4 +2.1
      baz=215
M27K  Edge Creek, AK   82.01  15 P     P     12 48 12.1 +0.9
      baz=212,SNR=17
ANMO  Albuquerque      82.04  50       P     12 48 05.3  -6.8
ANMO  Albuquerque      82.04  50       P     12 48 05.2  -6.9
ANMO                             IAmb  IAmb  12 48 17.6
      comp=Z,6.1nm,1.0s
ANMO  Albuquerque      82.04  50 LR    LR    13 18 56.5
      comp=Z,239nm,18.5s,baz=349,slow=32
P32M  Atlin            82.09  20 P     P     12 48 13.4 +1.8
      baz=220
Q32M  Nakina River     82.09  21 P     P     12 48 12.9 +1.1
      baz=221
H19K  Roundabout Mou   82.17   8 P     P     12 48 13.9 +2.1
      baz=198,SNR=6.1
L26K  Log Cabin Wild   82.23  14 P     P     12 48 14.1 +1.8
      baz=210,SNR=8.0
G18K  Tagagawik        82.26   7 P     P     12 48 14.2 +1.8
      baz=196
O30N  Mendenhall       82.28  18 P     P     12 48 14.6 +2.0
      baz=217,SNR=7.1
BVCY  Beaver Creek     82.31  15 P     P     12 48 14.8 +2.1
      baz=213,SNR=8.9
H20K  Anotleneega Mo   82.35   8 P     P     12 48 15.1 +2.3
      baz=199,SNR=9.7
K24K  Donnelly Dome    82.38  13 P     P     12 48 14.9 +1.9
      baz=208,SNR=8.3
NEA2  Nenana           82.44  11 P     P     12 48 15.6 +2.3
      baz=205,SNR=7.8
SEY   Seymchan         82.47 346 LR    LR    13 21 37.1
      comp=Z,214nm,19.6s,baz=146,slow=33
DLBC  Dease Lake       82.49  22 LR    LR    13 20 31.7
      comp=Z,97nm,18.3s,baz=230,slow=33
DLBC  Dease Lake       82.49  22 P     P     12 48 15.0 +1.2
      baz=223
RIDG  Independent Ri   82.52  13 P     P     12 48 14.9 +1.1
      baz=209,SNR=9.1
F17K  Baldwin Pennin   82.53   5 P     P     12 48 15.6 +1.9
      baz=193
N30M  Aishikik Lake    82.54  17 P     P     12 48 15.4 +1.5
      baz=216
MLY   Manley           82.55  10 P     P     12 48 14.4 +0.5
      baz=203,SNR=11
WHY   Whitehorse       82.56  19 P     P     12 48 15.5 +1.4
      baz=218,SNR=5.8
L27K  Beaver Creek,    82.62  14 P     P     12 48 15.1 +0.8
      baz=212
HDA   Harding Lake     82.68  12 P     P     12 48 15.1 +0.6
      baz=207,SNR=17
G19K  Purcell Mounta   82.68   7 P     P     12 48 15.6 +1.1
      baz=197,SNR=5.1
H21K  Melozitna Rive   82.80   9 P     P     12 48 16.3 +1.1
      baz=201,SNR=6.7
F18K  Selawik          82.84   6 P     P     12 48 17.1 +1.8
      baz=195
P33M  Teslin, Yukon    82.86  20 P     P     12 48 17.0 +1.4
      baz=220
R33M  Jennings River   82.86  21 P     P     12 48 17.3 +1.5
      baz=222
I23K  Minto, Yukon-K   82.89  11 P     P     12 48 17.2 +1.6
      baz=205,SNR=7.8
SCRK  Sand Creek       82.91  13 P     P     12 48 17.5 +1.6
      baz=210,SNR=16
COLA  College          82.92  11 P     P     12 48 10.7  -5.0
N31M  Braeburn, Yuko   82.94  18 P     P     12 48 17.5 +1.6
      baz=218
M29M  Somme Creek      82.96  16 P     P     12 48 17.8 +1.6
      baz=215,SNR=7.2
S22A  4UR Ranch, Cre   82.98  48 P     P     12 48 09.8  -7.3
ILAR  Eielson Array    83.01  12 P     P     12 48 15.2  -1.1
      comp=Z,4.6nm,0.9s,baz=228,slow=6.8,SNR=27
ILAR                             LR    LR    13 17 54.3
      comp=Z,78nm,21.2s,baz=215,slow=30
      comp=Z,4.6nm,0.9s
E17K  Hotham Inlet     83.11   5 P     P     12 48 18.6 +1.9
      baz=192,SNR=6.4
J25K  Salcha River,    83.18  12 P     P     12 48 18.6 +1.4
      baz=208,SNR=13
POKR  Poker Plat Res   83.22  11 P     P     12 48 18.8 +1.5
      baz=206
H22K  Ishtalitna Cre   83.24   9 P     P     12 48 19.3 +1.9
      baz=203,SNR=9.4
F19K  Shaleruckik Mo   83.27   7 P     P     12 48 19.0 +1.5
      baz=196
K27K  Chicken          83.39  14 P     P     12 48 19.8 +1.6
      baz=212
BW06  Boulder Array    83.40  42 P     P     12 48 11.9  -7.2
BW06                             IAmb  IAmb  12 48 22.2
      comp=Z,8.6nm,0.9s
PDAR  Pinedale Array   83.41  42 P     P     12 48 18.1  -1.0
      comp=Z,5.6nm,0.8s,baz=233,slow=2.4,SNR=28
PDAR                             LR    LR    13 20 58.3
      comp=Z,63nm,18.4s,baz=253,slow=32
      comp=Z,5.6nm,0.8s
J26L  Joseph Creek     83.46  13 P     P     12 48 19.8 +1.2
      baz=210,SNR=11
H23K  Yukon River      83.48  10 P     P     12 48 20.1 +1.4
      baz=204
N32M  Quiet Lake       83.49  19 P     P     12 48 20.2 +1.3
      baz=220
G21K  Allakaket        83.51   8 P     P     12 48 20.4 +1.7
      baz=201,SNR=8.2
E18K  Tukpahlearik C   83.55   5 P     P     12 48 20.9 +2.0
      baz=194,SNR=6.5
L29M  L29M             83.59  16 P     P     12 48 20.9 +1.6
      baz=215,SNR=12
D17K  Noatak River     83.61   4 P     P     12 48 21.0 +1.8
      baz=191,SNR=5.3
F20K  Avaraart Lake    83.72   7 P     P     12 48 22.0 +2.2
      baz=198,SNR=7.4
H24K  Noodor Dome      83.78  11 P     P     12 48 21.6 +1.4
      baz=206
BELA  Belgrano 2       83.88 172 P     P     12 48 20.3  -0.5
BELA                             IAmb  IAmb  12 48 30.3
      comp=Z,7.3nm,1.1s
M31M  Drury Creek, Y   83.91  18 P     P     12 48 22.3 +1.4
      baz=219
E19K  Redstone River   83.93   7 P     P     12 48 22.4 +1.5
      baz=197
PRP   Porcupine Dome   83.94  12       P     12 48 15.5  -5.7
PRP   Porcupine Dome   83.94  12 P     P     12 48 22.4 +1.2
      baz=208,SNR=8.5
C16K  Lisburne Hills   84.03   4 P     P     12 48 23.2 +1.8
      baz=189
DAWY  Dawson           84.06  15 P     P     12 48 23.1 +1.4
      baz=214,SNR=14
WTLY  Watson Lake, Y   84.14  21 P     P     12 48 23.1 +0.9
      baz=224
F21K  Alatna River     84.17   8 P     P     12 48 23.4 +1.2
      baz=201
G22K  Bettles          84.18   9 P     P     12 48 23.4 +1.3
      baz=202
G23K  Bananza Creek    84.21  10 P     P     12 48 23.8 +1.4
      baz=204,SNR=9.3
FARO  Faro, Yukon      84.24  18 P     P     12 48 24.0 +1.3
      baz=220
I26K  Coal Creek Min   84.25  13 P     P     12 48 23.9 +1.4
      baz=210,SNR=8.5
K29M  Barlow Dome      84.35  16 P     P     12 48 24.6 +1.3
      baz=216,SNR=13
C17K  DeLong Mountai   84.37   4 P     P     12 48 25.1 +1.9
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               baz=191
MSTX  Muleshoe          84.42  53           P        12 48 17.9  -6.4
PMSA  Palmer Station    84.45 156  LR       LR       13 17 33.2
               comp=Z,210nm,21.6s,baz=262,slow=30
H25L  Birch Creek       84.55  11  P        P        12 48 24.9 +0.9
               baz=208
TOAD  Toad River Com    84.56  23  P        P        12 48 25.4 +1.1
               baz=227,SNR=15
MAYO  Mayo, Yukon       84.58  16  P        P        12 48 25.0 +0.7
               baz=217
LIRD  Liard River Hi    84.62  23  P        P        12 48 25.0 +0.5
               baz=227
F22K  John River        84.62   9  P        P        12 48 25.2 +0.7
               baz=202
HNS   HongShan          84.63 311 ⇑P        P        12 48 31.3 +6.2
HNS                                pmax     pmax
               comp=Z,5.0nm,1.0s
HNS                                LR       LR
               comp=N,200nm,16.8s
HNS                                LR       LR
               comp=E,250nm,17.9s
HNS                                LR       LR
               comp=Z,260nm,19.2s
G24K  Hadweenzic Riv    84.64  11  P        P        12 48 25.9 +1.4
               baz=206
COLD  Coldfoot          84.66   9  P        P        12 48 25.8 +1.2
               baz=204,SNR=17
J29N  Klondike Camp     84.67  15  P        P        12 48 26.1 +1.2
               baz=215
C18K  Utukok River      84.69   5  P        P        12 48 25.9 +1.1
               baz=193
E20K  Nigu River        84.81   7  P        P        12 48 26.7 +1.3
               baz=198,SNR=13
D19K  Kuna River        84.83   6  P        P        12 48 26.3 +0.7
               baz=196
I27K  Kandik River      84.84  13  P        P        12 48 26.1 +0.5
               baz=212,SNR=8.1
G25K  Bearman Lake      84.94  11  P        P        12 48 27.1 +1.1
               baz=208
I28M  Miner Creek       85.08  14  P        P        12 48 27.4 +0.5
               baz=214,SNR=9.8
MMPY  Sheldon Lake,     85.17  19  P        P        12 48 27.8 +0.5
               baz=222,SNR=7.0
D20K  Etivluk River     85.20   7  P        P        12 48 27.9 +0.5
               baz=198,SNR=12
J30M  Hart River        85.25  16  P        P        12 48 28.6 +0.8
               baz=217,SNR=7.7
E21K  Killik River      85.26   8  P        P        12 48 28.8 +1.2
               baz=200
E22K  Anaktuvuk Pass    85.26   8  P        P        12 48 28.9 +1.3
               baz=202,SNR=12
C19K  Lookout Ridge     85.28   5  P        P        12 48 28.6 +0.8
               baz=195,SNR=9.1
F24K  Squaw Lake        85.30  10  P        P        12 48 28.2 +0.3
               baz=206,SNR=6.8
TGTN  Hyland Airport    85.33  20  P        P        12 48 28.9 +0.7
               baz=224
B18K  Kokolik River     85.35   5  P        P        12 48 29.1 +1.1
               baz=192
H27K  Steamboat Moun    85.39  13  P        P        12 48 29.5 +1.2
               baz=212,SNR=9.2
I29M  Ogilvie Camp,     85.39  14  P        P        12 48 29.3 +1.0
               baz=215,SNR=6.7
E23K  Chandalar         85.51   9  P        P        12 48 29.7 +0.7
               baz=204,SNR=8.2
BEAVL Fort Liard        85.52  22  P        P        12 48 30.1 +1.0
               baz=227
G26K  Porcupine Rive    85.55  12  P        P        12 48 29.7 +0.7
               baz=210,SNR=16
E24K  Your Creek        85.71  10  P        P        12 48 30.8 +0.9
               baz=205
I30M  Mount Dempster    85.76  15  P        P        12 48 30.9 +0.6
               baz=217,SNR=18
F25K  Christian Rive    85.76  11  P        P        12 48 30.8 +0.6
               baz=208,SNR=9.7
C21K  Knifeblade Rid    85.83   7  P        P        12 48 31.1 +0.6
               baz=199,SNR=7.6
D22K  Ayikyak River     85.84   8  P        P        12 48 30.5  0.0
               baz=201,SNR=9.3
G27K  Doyon Strip       85.86  13  P        P        12 48 32.0 +1.3
               baz=212,SNR=7.4
KOTAN Kotaneelee Air    85.87  23  P        P        12 48 30.9 +0.1
               baz=228
TOLK  Toolik Lake Re    86.05   9  P        P        12 48 32.7 +1.1
               baz=204,SNR=5.8
H29M  Whitestone        86.09  14  P        P        12 48 33.1 +1.3
               baz=215,SNR=14
F26K  Sheenjek River    86.13  11  P        P        12 48 33.5 +1.6
               baz=209,SNR=9.7
D23K  Nanushuk River    86.19   9  P        P        12 48 33.4 +1.2
               baz=203,SNR=7.1
A19K  Wainwright        86.23   5  P        P        12 48 33.7 +1.4
               baz=193
E25K  Arctic Village    86.24  11  P        P        12 48 33.5 +1.0
               baz=208,SNR=7.2
B21K  Ikpikpuk River    86.30   7  P        P        12 48 34.2 +1.5
               baz=199
B20K  Meade River       86.39   6  P        P        12 48 34.5 +1.4
               baz=197
XLT   XiLinHaoTe        86.42 317 eP        P        12 48 24.8  -9.2
USHA  Ushuaia           86.43 146  LR       LR       13 17 38.8
               comp=Z,260nm,21.7s,baz=210,slow=29
EPYK  Eagle Plains      86.60  14  P        P        12 48 35.4 +1.0
               baz=216,SNR=6.1
D24K  Happy Valley      86.64   9  P        P        12 48 36.4 +2.0
               baz=205
G29M  Pine Creek        86.73  14  P        P        12 48 36.4 +1.4
               baz=215,SNR=8.2
H31M  Peel River        86.74  16  P        P        12 48 35.8 +0.8
               baz=219
F28M  Old Crow          86.91  13  P        P        12 48 36.5 +0.7
               baz=214,SNR=6.2
C23K  Itkillik River    87.00   8  P        P        12 48 36.9 +0.8
               baz=203
E27K  Coleen River      87.04  12  P        P        12 48 37.3 +0.8
               baz=212,SNR=5.6
MAW   Mawson            87.06 199  LR       LR       13 25 49.4
               comp=Z,145nm,18.6s,baz=118,slow=34
B22K  Teshekpuk Lake    87.11   7  P        P        12 48 38.2 +1.6
               baz=200
C24K  Franklin Bluff    87.17   9  P        P        12 48 38.4 +1.4
               baz=205
D25K  Kavik River       87.17  10  P        P        12 48 38.7 +1.7
               baz=207
G30M  tAoh Zraii Nji    87.21  14  P        P        12 48 38.1 +0.8
               baz=217,SNR=9.6
A22K  Sinclair Lake     87.57   6  P        P        12 48 40.2 +1.4
               baz=199
G31M  Satah River       87.64  15  P        P        12 48 40.2 +1.0
               baz=219,SNR=9.6
A21K  Barrow            87.70   6  P        P        12 48 41.1 +1.6
               baz=197
XAN   Xi'an             87.71 306  P        P        12 48 45.3 +4.8
XAN                                pmax     pmax
               comp=Z,14nm,0.8s
E28M  Babbage River     87.81  12  P        P        12 48 41.2 +1.1
               baz=214
F30M  Barrier River     87.81  14  P        P        12 48 41.2 +1.0
               baz=217
C27K  Jago River        87.89  10  P        P        12 48 41.5 +1.0
               baz=210
C26K  Camden Bay        87.94  10  P        P        12 48 42.4 +1.7
               baz=209,SNR=5.4
E29M  Blow River        87.97  13  P        P        12 48 42.2 +1.3
               baz=215
D27M  Malcolm River     88.06  11  P        P        12 48 42.3 +0.9
               baz=212
F31M  Tsiigehtchic      88.17  15  P        P        12 48 43.2 +1.4
               baz=219,SNR=11
HHC   Hu-ho-hao-te      88.24 313 eP        P        12 48 44.8 +1.9
HHC                                pmax     pmax
               comp=Z,14nm,0.8s
D28M  Stokes Point      88.57  12  P        P        12 48 45.0 +1.4
               baz=214
YAK   Yakutsk           88.86 337  LR       LR       13 21 35.5
               comp=Z,98nm,21.9s,baz=124,slow=31
INK   Inuvik            88.89  14  LR       LR       13 20 23.0
               comp=Z,41nm,20.8s,baz=242,slow=30
INK   Inuvik            88.89  14  P        P        12 48 46.0 +0.9
               baz=219
PLCA  Paso Flores       90.31 133  LR       LR       13 19 55.2
               comp=Z,182nm,21.6s,baz=232,slow=29
YKA   Yellowknife Ar    90.92  24  P        P        12 48 54.0  -0.8
               comp=Z,0.6nm,0.8s,baz=247,slow=4.6,SNR=6.0
YKA                                LR       LR       13 25 10.7
               comp=Z,73nm,18.4s,baz=250,slow=33
               comp=Z,0.6nm,0.8s
PZH   PanZhiHua         91.20 297  P        P        12 48 59.5 +2.4
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CMAR  Chiang Mai Arr    91.42 289           P        12 48 54.1  -4.0
CMAR  Chiang Mai Arr    91.42 289  P        P        12 48 58.7 +0.6
               comp=Z,0.4nm,0.3s,baz=124,slow=2.7,SNR=5.8
CMAR                               LR       LR       13 25 02.4
               comp=Z,117nm,21.7s,baz=105,slow=32
               comp=Z,0.4nm,0.3s
C36M  Paulatuk          92.02  16  P        P        12 49 00.6 +0.9
               baz=228
TROLL Troll, Antarti    92.48 179 ⇑P        P        12 49 02.9 +0.7
               comp=Z,149nm,1.2s
JTS   Las Juntas de     92.60  80  LR       LR       13 21 07.8
               comp=Z,140nm,20.3s,baz=270,slow=29
SNAA  Sanae             92.67 177 ⇑P        P        12 49 02.5  -0.5
               comp=Z,38nm,0.9s
SNAA  Sanae             92.67 177  LR       LR       13 25 09.5
               comp=Z,152nm,21.8s,baz=174,slow=32
VNA3  Neumayer Olymp    92.67 175 ⇑P        P        12 49 04.1 +1.1
               comp=Z,2.2nm,0.9s
VNA2  Neumayer--Watz    93.15 176 ⇑P        P        12 49 04.6  -0.6
               comp=Z,2.2nm,0.7s,baz=193,slow=2.7
A36M  Sachs Harbour     93.52  14  P        P        12 49 06.1  -0.5
               baz=227
MGMO  Mountain Grove    93.55  53  P        P        12 49 01.0  -6.6
R40A  Maddies Statio    93.88  51  P        P        12 49 02.2  -6.9
SONM  Songino Array     94.17 318  P        P        12 49 11.1 +0.7
               comp=Z,0.5nm,0.6s,baz=102,slow=6.1,SNR=1.8
SONM                               LR       LR       13 25 43.2
               comp=Z,142nm,21.8s,baz=87,slow=32
               comp=Z,0.5nm,0.6s
ATAH  Atahualpa         94.22  99  LR       LR       13 21 15.3
               comp=Z,118nm,20.2s,baz=265,slow=29
P40A  Paris             94.40  50           P        12 49 03.2  -8.2
P40A                               IAmb     IAmb     12 49 14.5
               comp=Z,7.0nm,1.0s
TIXI  Tiksi             94.93 345  LR       LR       13 29 44.7
               comp=Z,122nm,19.1s,baz=146,slow=34
ULM   Lac du Bonnet     95.03  39  P        P        12 49 13.1  -1.0
               comp=Z,2.0nm,0.8s,baz=179,slow=6.6,SNR=3.6
ULM                                LR       LR       13 25 30.1
               comp=Z,124nm,20.7s,baz=268,slow=31
               comp=Z,2.0nm,0.8s
L40A  Anamosa           95.71  48           P        12 49 08.7  -8.6
BRDH  Bariadhala        99.10 291  LR       LR       13 32 45.9
               comp=Z,88nm,18.1s,baz=118,slow=34
TKL   Tuckaleechee C    99.81  56  LR       LR       13 30 55.0
               comp=Z,115nm,18.1s,baz=276,slow=33
MKAR  Makanchi Array   110.07 315  PKiKP    PKiKP    12 54 25.4 +2.4
               comp=Z,0.5nm,0.6s,baz=61,slow=1.0,SNR=5.4
KURBB Kurchatov Arra   112.53 319  PKiKP    PKiKP    12 54 30.1 +2.6
               comp=Z,0.5nm,0.7s,baz=96,slow=1.6,SNR=5.9
BVAR  Borovoye Array   117.29 322  PKP      PKiKP    12 54 38.8 +2.2
               comp=Z,1.6nm,0.7s,baz=64,slow=3.4,SNR=6.8
MNK   Minsk            137.46 341 i PKP     PKiKP    12 55 14.9  -1.8
               comp=E,9.0nm,0.8s
MNK                               i PKP     PKiKP    12 55 14.9  -1.8
               comp=N,4.0nm,0.5s
MNK                               i PKP     PKiKP    12 55 14.9  -1.8
               comp=Z,8.0nm,0.7s,baz=33
MNK                               i PP      PP       12 58 00.8 +0.7
MNK                               i PPP     PPP      13 01 00.1
MNK                               i SKS     SKSdf    13 02 25.6 +2.8
MNK                               i PS      PS       13 08 27.2  -0.9
MNK                               i SS      SS       13 16 09.8 +4.9
MNK                               i SSS     SSS      13 21 16.0
NACGM Naroch           137.46 342 ePKiKP    PKiKP    12 55 20.9 +4.1
               comp=Z,7.0nm,0.8s,baz=31
AKASG Malin Array Be   140.08 336  PKP      PKiKP    12 55 20.1  -2.2
               comp=Z,0.1nm,0.2s,baz=32,slow=2.7,SNR=6.2
CLL   Collm            143.94 352 ePKiKP    PKPdf    12 55 26.0  -0.6
CLL                               i x       x        12 55 31.2
               comp=Z,4.0nm,1.0s
CLL                                AMS      AMS      14 03 00.0
               comp=Z,100nm,19.6s
OSTC  Ostas            144.12 348 ePKP      PKiKP    12 55 30.6  0.0
DPC   Dobruska-Polom   144.29 348 ePKP      PKiKP    12 55 29.8  -1.2
DPC                                AMS      AMS      13 57 10.0
               comp=Z,200nm,25.4s
STEB  Steborice        144.36 346 ePKP      PKPdf    12 55 26.9  -0.6
OKC   Ostrava-Krasne   144.37 346  AMS      AMS      13 55 40.0
               comp=Z,200nm,23.6s
MORC  Moravsky Berou   144.56 346 ePKP      PKPdf    12 55 25.9  -2.0
LANS  Liptovska Anna   144.66 344 ePKP      PKiKP    12 55 31.7  -0.1
MAUC  Maruska          144.88 346 ePKP      PKiKP    12 55 30.7  -1.5
TANN  Tannenbergstha   144.88 352 ePKP      PKiKP    12 55 30.1  -2.1
PRU   Pruhonice        144.97 349 ePKP      PKiKP    12 55 31.2  -1.1
PRU                                AMS      AMS      13 58 50.0
               comp=Z,200nm,22.3s
MEM   Membach          145.18 359 dPKP      PKiKP    12 55 32.7  0.0
VRAC  Vranov           145.22 347 ePKP      PKPdf    12 55 28.0  -1.0
MANZ  Manzenberg       145.35 352 ePKP      PKiKP    12 55 30.5  -2.6
JAVC  Velka Javorina   145.39 345 ePKP      PKPdf    12 55 29.7 +0.4
VYHS  Vyhne            145.43 344 ePKP      PKiKP    12 55 33.2  -0.1
BMRD  Maredsous        145.49   0 dPKP      PKiKP    12 55 32.7  -0.6
KRUC  Moravsky         145.49 347 ePKP      PKPab    12 55 28.7  -1.0
BR131 Keskin Array S   145.52 320           PKPdf    12 55 25.2  -4.8
BRTR  Keskin Array B   145.52 320  PKPbc    PKPab    12 55 29.6  -0.7
               comp=Z,5.7nm,0.9s,baz=58,slow=3.6,SNR=17
ROTZ  Rotzenmuhle      145.55 352 ePKP      PKiKP    12 55 30.8  -2.7
ZVC   Zvikov           145.56 350  AMS      AMS      13 57 10.0
               comp=Z,200nm,24.5s
PSZ   Piszkesteto      145.66 342           PKPdf    12 55 23.1  -6.8
DOU   Dourbes          145.70   1 dPKP      PKiKP    12 55 34.8 +1.0
GRF   Grafenberg Arr   145.75 353 ePKP      PKiKP    12 55 32.6  -1.3
MODS  Modra-Piesok     145.94 346 ePKP      PKiKP    12 55 33.5  -0.9
KHC   Kasperske Hory   145.97 350 ePKP      PKiKP    12 55 31.6  -2.9
KHC                                AMS      AMS      13 59 50.0
               comp=Z,200nm,21.9s
WET   Wettzell         146.06 351 ePKP      PKiKP    12 55 33.7  -1.0
WLF   Walferdange      146.12 359 dPKP      PKiKP    12 55 32.3  -2.4
WLF   Walferdange      146.12 359 ePKP      PKiKP    12 55 32.3  -2.4
CKRC  Cesky Krumlov    146.14 349 ePKP      PKiKP    12 55 33.6  -1.2
CKRC                               AMS      AMS      13 56 50.0
               comp=Z,100nm,19.7s
GEC2  GERESS Array S   146.22 350 ePKP      PKiKP    12 55 33.9  -1.2
GERES GERESS Array B   146.22 350  PKPbc    PKPab    12 55 31.4  -1.2
               comp=Z,2.4nm,0.8s,baz=22,slow=4.8,SNR=4.2
CONA  Conrad Observa   146.68 347 ePKiKP    PKiKP    12 55 36.7 +0.7
               comp=Z,14nm,0.9s,SNR=10
RONA  Rosalia, Austr   146.80 346 i PKiKP   PKiKP    12 55 37.5 +1.3
               comp=Z,15nm,0.9s,SNR=5.0
MOA   Molln            147.08 349 i PKiKP   PKiKP    12 55 37.6 +0.8
               comp=Z,6.2nm,0.8s
BIOA  Bad Ischl, Aus   147.35 349 i PKiKP   PKiKP    12 55 38.8 +1.5
               comp=Z,7.9nm,0.8s
BFO   Black Forest     147.37 356 ePKP      PKiKP    12 55 35.6  -1.7
ARSA  Arzberg          147.40 347 i PKiKP   PKiKP    12 55 39.2 +1.8
               comp=Z,4.7nm,0.8s
RJOB  Jochberg         147.45 350 ePKP      PKiKP    12 55 35.8  -1.8
MMAI  Mount Meron Ar   147.69 308  PKPbc    PKPab    12 55 37.6  -1.2
               comp=Z,2.2nm,0.5s,baz=81,slow=6.0,SNR=6.7
LESA  Schwarzleotal    147.77 350 i PKP     PKPab    12 55 39.0 +0.3
               comp=Z,7.2nm,1.3s
RETA  Reutte           147.98 353 i PKiKP   PKPab    12 55 40.6 +1.1
               comp=Z,13nm,1.0s
WATA  Walderalm        148.02 352 i PKiKP   PKPab    12 55 40.4 +0.7
               comp=Z,5.0nm,0.8s
SOKA  Soboth           148.05 347 i PKiKP   PKPab    12 55 38.9  -0.9
               comp=Z,6.0nm,0.9s,SNR=7.5
MOTA  Moosalm          148.07 352 i PKP     PKPab    12 55 40.6 +0.6
               comp=Z,11nm,1.0s
WTTA  Wattenberg       148.08 352 i PKP     PKPab    12 55 40.6 +0.6
               comp=Z,11nm,0.8s,SNR=5.1
SQTA  Sankt Quirin     148.18 352 i PKP     PKPab    12 55 40.4 +0.1
               comp=Z,7.5nm,0.8s
DAVA  Damuels          148.27 354 i PKiKP   PKPab    12 55 40.5  -0.3
               comp=Z,14nm,1.0s
OBKA  Obir             148.31 348 i PKP     PKPab    12 55 40.9 +0.1
               comp=Z,4.9nm,0.8s
MYKA  Terra Mystica    148.37 349 i PKiKP   PKPab    12 55 39.8  -1.2
               comp=Z,6.6nm,0.7s
BALST Balsthal         148.39 357 ePKP      PKPab    12 55 39.4  -1.7
FETA  Feichten         148.44 353 i PKP     PKPab    12 55 42.0 +0.6
               comp=Z,7.2nm,0.9s
ABTA  Abfaltersbach    148.46 350 i PKiKP   PKPab    12 55 41.0  -0.4
               comp=Z,16nm,0.9s,SNR=10
PLONS Plons/SG         148.56 354 ePKP      PKPab    12 55 41.2  -0.6
PCAB  Cabril           151.69  21 ePKP      PKPab    12 55 49.9  -4.8
POLO  Lamas de Olo     152.07  21 ePKP      PKPab    12 55 50.7  -5.8
PVRL  Vila Real        152.18  21 ePKP      PKPab    12 55 51.2  -5.6
MVO   Moncorvo         152.51  20 ePKP      PKPab    12 55 52.0  -6.3
MTE   Manteigas        153.02  22 ePKP      PKiKP    12 55 50.4 +1.1
PCBR  Castelo Branco   153.53  22 ePKP      PKiKP    12 55 54.1 +3.8
PMTG  Montargil        153.92  24 ePKP      PKPab    12 55 55.9  -8.3
PMRV  Marv??o          153.93  23 ePKP      PKiKP    12 55 54.9 +3.8
PMPS  Porto Santo      153.96  45 ePKP      PKPbc    12 55 47.0  -4.3
ESDC  Sonseca Array    154.82  17  PKP      PKPdf    12 55 45.2 +0.9
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               comp=Z,0.1nm,0.4s,baz=337,slow=4.6,SNR=4.3
ESDC                               PKPbc    pPKPdf   12 55 54.9  -0.2
               comp=Z,0.7nm,0.8s,baz=328,slow=2.4,SNR=7.1
```

BJI ***16*** *12:39:05.5, 34°.74N×72°.14E, h14^{km}, mB4.5/7, mb4.6/31, ML4.5/1, Ms4.1/16, Ms7 3.8/15*
NDI ***16*** *12:39:05.6±4.3, 34°.63N×71°.54E, h27^{km}±63^{km}, ML4.4, MW4.5, mb4.6(NEIC)*
MOS ***16*** *12:39:10.0±1.1, 34°.77N×72°.27E, h41^{km}, mb4.7/29, Error ellipse: s-maj=6.1km s-min=3.4km az=92.1*
NEIC ***16*** *12:39:10.2±2.0, 34°.61N±0°.06×72°.28E±0°.07, h31^{km}±4^{km}, mb4.6/44, Error ellipse: s-maj=10.3km s-min=6.9km az=223.0*
NNC ***16*** *12:39:10.8±2.8, 35°.04N×71°.48E, h0^{km}, mb5.0, mpv4.9, Error ellipse: s-maj=30.7km s-min=21.4km az=122.0*
IDC ***16*** *12:39:12.7±2.9, 34°.73N×72°.14E, h60^{km}±26^{km}, mb4.1/25, mbtmp4.5/29, ML4.3/4, MS3.6/26, Error ellipse: s-maj=12.8km s-min=10.8km az=11.0*
ISC 16 12:39:09.9±0.6**, 34°.71N**±0°.04×**72°.17E**±0°.04**, h32^{km}**±4^{km}**, h31^{km}:pP-P, n314,** σ1s**95**/342**, mb4.5**/96**, MS3.5**/30**, 26C-13D, Pakistan**

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Code  Station Name       Δ°   AZ°     Phase ID          Time      Res
                                   Op       ISC       h  m  s     ISC
NIL   Nilore             1.39 139           Pn       12 39 32.0  -1.2
NIL   Nilore             1.39 139  P        Pn       12 39 32.0  -1.2
SRNI  Srinagar           2.30 105 eP        Pb       12 39 49.0  -1.8
SRNI                              eS        Sb       12 40 19.3 +0.5
SRNI                               IAML              12 40 22.8
               comp=E,5µm,0.1s
SRNI                               IAML              12 40 24.4
               comp=N,6µm,0.6s
KBL   Kabul              2.58 267           Pn       12 39 52.6 +2.9
KBL   Kabul              2.58 267  P        Pn       12 39 52.6 +2.9
THN   Thein Dam          3.74 127 eP        Pn       12 40 08.3 +2.9
THN                               eS        Sn       12 40 54.1 +5.8
THN                                IAML              12 40 54.7
               comp=E,2µm,1.0s
THN                                IAML              12 40 55.6
               comp=N,1µm,0.5s
DHRM  DHARAMSHALA        4.24 124 eP        Pn       12 40 15.2 +2.7
DHRM                              eS        Sn       12 41 05.2 +4.1
DHRM                               IAML              12 41 07.0
               comp=N,2µm,0.8s
DHRM                               IAML              12 41 07.8
               comp=E,1µm,0.4s
GAR   Garm               4.53 341           Pn       12 40 19.3 +2.9
SIMJ  Simiganj           4.68 328           Pn       12 40 20.9 +2.4
BHK   Bhakra             4.85 131 eP        Pn       12 40 22.3 +1.5
BHK                               eS        Sn       12 41 20.2 +4.4
BHK                                IAML              12 41 22.2
               comp=N,239nm,0.9s
BHK                                IAML              12 41 24.8
               comp=E,246nm,0.8s
DZET  Dzherino           4.88 328  P        Pn       12 40 24.1 +2.8
DZET                               pmax     pmax
               comp=Z,96nm,0.6s
BTK   Batken             5.44 349  Pn       Pn       12 40 32.3 +3.4
BTK   Batken             5.44 349  P        Pn       12 40 32.3 +3.4
SMLA  Simla              5.52 129 eP        Pn       12 40 31.2 +1.4
SMLA                              eS        Sn       12 41 34.0 +1.7
SMLA                               IAML              12 41 36.8
               comp=N,345nm,0.8s
SMLA                               IAML              12 41 39.0
               comp=E,353nm,0.6s
KSH   Kashi              5.68  31  Pn       Pn       12 40 30.3  -1.9
KSH                                Sn       Sn       12 41 31.5  -4.8
KSH                                smax     smax
               comp=N,400nm,0.9s
KSH                                smax     smax
               comp=E,370nm,0.9s
KLP   Kalpa              6.01 120 eP        Pn       12 40 37.4 +0.5
KLP                               eS        Sn       12 41 45.3 +0.5
KLP                                IAML              12 41 49.0
               comp=N,274nm,0.9s
KLP                                IAML              12 41 52.2
               comp=E,267nm,0.6s
DDI   Dehra Dun          6.63 130 eP        Pn       12 40 46.5 +1.4
DDI                               eS        Sn       12 41 59.5  -0.1
DDI                                IAML              12 42 03.0
               comp=N,356nm,0.3s
DDI                                IAML              12 42 03.5
               comp=E,368nm,0.8s
ARSB  Arslanbob          6.63   5           Pn       12 40 45.8 +0.5
ARSB  Arslanbob          6.63   5  P        Pn       12 40 45.8 +0.5
TRKS  Terek-Say          6.85 354  P        Pn       12 40 50.0 +1.7
TRKS                               pmax     pmax
               comp=Z,22nm,0.9s
NRN   Naryn              7.36  23           Pn       12 40 57.4 +2.0
NRN   Naryn              7.36  23  P        Pn       12 40 57.4 +2.0
NDI   New Delhi          7.39 143 eP        Pn       12 40 55.8 +0.2
NDI                               eS        Sn       12 42 15.8  -2.6
NDI                                IAML              12 42 17.9
               comp=E,503nm,1.6s
NDI                                IAML              12 42 21.4
               comp=N,483nm,1.6s
JOSI  Joshimath          7.49 122 eP        Pn       12 40 57.6 +0.5
JOSI                              eS        Sn       12 42 20.0  -1.0
JOSI                               IAML              12 42 26.0
               comp=N,310nm,1.1s
JOSI                               IAML              12 42 33.1
               comp=E,298nm,0.3s
AML   Almayashu          7.50   9  P        Pn       12 40 59.7 +2.3
               SNR=76
KUDL  Kundal             7.52 149 eP        Pn       12 40 56.2  -1.1
KUDL                              eS        Sn       12 42 13.9  -7.6
KUDL                               IAML              12 42 18.8
               comp=E,240nm,0.6s
KUDL                               IAML              12 42 19.9
               comp=N,272nm,0.4s
IUG   Iuzhnay            7.61 348 eP        Pn       12 40 59.6 +1.0
IUG                               eS        Sn       12 42 26.9 +3.1
IUG   Iuzhnay            7.61 348 eP        Pn       12 40 59.7 +1.0
IUG                               eS        Sn       12 42 27.0 +3.1
UCH   Uchtor             7.72  13  P        Pn       12 41 04.1 +3.5
               SNR=24
EKS2  Erkin-Say          8.04   9  P        Pn       12 41 09.2 +4.7
               SNR=50
AAK   Ala-Archa          8.12  12  P        Pn       12 41 08.2 +2.5
               SNR=52
AAK   Ala-Archa          8.12  12           Pn       12 41 08.4 +2.7
AAK   Ala-Archa          8.12  12  P        Pn       12 41 08.0 +2.3
               comp=N,9.4nm,0.3s,baz=183,slow=6.5,SNR=35
AAK                                S        Sn       12 42 38.8 +2.4
               comp=N,77nm,0.9s,baz=21,slow=20,SNR=7.5
AAK                                LR       LR       12 44 26.9
               comp=N,703nm,20.4s,baz=203,slow=39
               comp=N,50nm,0.5s
AAK   Ala-Archa          8.12  12 ⇑P        Pn       12 41 08.2 +2.5
               comp=N,12nm,0.6s
AAK                               ⇑S        Sn       12 42 38.8 +2.4
               comp=N,36nm,0.9s
AAK   Ala-Archa          8.12  12 i P       Pn       12 41 08.0 +2.3
ULHL  Ulahol             8.17  22  P        Pn       12 41 06.8 +0.4
               SNR=7.0
DZA   Taraz              8.19 356 eP        Pn       12 41 07.8 +1.2
DZA                               eS        Sn       12 42 41.3 +3.3
DZA   Taraz              8.19 356 eP        Pn       12 41 07.8 +1.2
DZA                               eS        Sn       12 42 41.3 +3.3
KBK   Karagaybulak       8.22  14  P        Pn       12 41 10.9 +3.8
               SNR=12
TARG  Taragay, Kyrgy     8.29  31           Pn       12 41 10.6 +2.4
TARG  Taragay, Kyrgy     8.29  31  P        Pn       12 41 10.6 +2.4
BOOM  Boomskoye usch     8.31  20           Pn       12 41 10.8 +2.5
BOOM  Boomskoye usch     8.31  20  P        Pn       12 41 10.8 +2.5
FRU1  Bishkek            8.31  13  Pn       Pn       12 41 10.7 +2.5
FRU1  Bishkek            8.31  13  P        Pn       12 41 10.7 +2.5
KDJ   Kajisay            8.38  26           Pn       12 41 11.2 +1.9
KDJ   Kajisay            8.38  26  P        Pn       12 41 11.3 +1.9
KK31  Karatay Array      8.48 352           Pn       12 41 12.1 +1.6
KK31  Karatay Array      8.48 352  P        Pn       12 41 10.1  -0.4
               comp=N,98nm,0.5s,baz=179,slow=13,SNR=483
KK31                              ⇑S        Sn       12 42 44.6  -0.4
               comp=N,138nm,0.8s,baz=178,slow=22
KK31  Karatay Array      8.48 352  P        Pn       12 41 12.1 +1.6
KKAR  Karatay Array      8.48 352           Pn       12 41 12.1 +1.6
KKAR  Karatay Array      8.48 352           Pn       12 41 12.1 +1.6
KKAR  Karatay Array      8.48 352  P        Pn       12 41 12.1 +1.6
AJM   Ajmer              8.48 165 eP        Pn       12 41 09.6  -1.0
AJM                               eS        Sn       12 42 36.6  -8.7
AJM                                IAML              12 42 43.1
               comp=N,154nm,1.6s
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AJM                               IAML               12 42 46.3
      comp=E,150nm,1.5s
BRLS  Borolday           8.50 348 eP      Pn         12 41 08.9 -1.9
BRLS  Borolday           8.50 348 eP      Pn         12 41 08.9 -1.9
CHMS  Chumysh            8.52  13  P      Pn         12 41 14.1 +3.1
      SNR=39
CHMS  Chumysh            8.52  13 ⇑P      Pn         12 41 13.2 +2.2
      comp=E,86nm,0.8s
CHMS                              ⇓S      Sn         12 42 48.4 +2.4
      comp=E,77nm,1.1s
CHMS  Chumysh            8.52  13  P      Pn         12 41 13.2 +2.2
CHMS                               S      Sn         12 42 48.4 +2.4
PTH   Pithoragarh        8.55 125 eP      Pn         12 41 12.0 +0.4
PTH                               eS      Sn         12 42 44.8 -2.4
PTH                                IAML              12 42 50.5
      comp=N,158nm,0.9s
PTH                                IAML              12 42 52.3
      comp=E,154nm,0.6s
TKM2  Tokmak 2           8.62  17  P      Pn         12 41 14.9 +2.2
      SNR=32
TKM2  Tokmak 2           8.62  17 ⇓P      Pn         12 41 14.6 +2.0
      comp=E,25nm,0.7s
TKM2                              ⇓S      Sn         12 42 52.6 +3.8
      comp=E,42nm,1.0s
TKM2  Tokmak 2           8.62  17  P      Pn         12 41 14.6 +2.0
TKM2                               S      Sn         12 42 52.6 +3.8
LGTI  Lohaghat           8.63 125 eP      Pn         12 41 12.1 -0.5
LGTI                              eS      Sn         12 42 45.9 -3.0
LGTI                               IAML              12 42 49.1
      comp=N,172nm,0.5s
LGTI                               IAML              12 42 49.6
      comp=E,191nm,0.7s
USP   Ospenovka          8.73  11  P      Pn         12 41 15.9 +1.9
      SNR=30
SGDS  Sogindy            8.93  12 eP      Pn         12 41 17.7 +1.0
PRZ   Przheval'sk        9.16  30         Pn         12 41 22.6 +2.6
PRZ   Przheval'sk        9.16  30  P      Pn         12 41 22.6 +2.6
AAA   Alma-Ata           9.25  22 eP      Pn         12 41 21.9 +0.8
AAA   Alma-Ata           9.25  22 eP      Pn         12 41 21.9 +0.8
SATY  Saty               9.64  28 eP      Pn         12 41 27.4 +0.8
SATY  Saty               9.64  28 eP      Pn         12 41 27.5 +0.8
UZB   Uzynbulak          9.97  30 eP      Pn         12 41 31.7 +0.7
UZB   Uzynbulak          9.97  30 eP      Pn         12 41 31.7 +0.7
KPKS  Kokpek            10.10  28 eP      Pn         12 41 33.0 +0.3
KPKS  Kokpek            10.10  28 eP      Pn         12 41 33.1 +0.3
SHLS  Shalkode          10.16  32 eP      Pn         12 41 37.1 +3.4
SHLS  Shalkode          10.16  32 eP      Pn         12 41 37.1 +3.4
BTLS  Baital            10.41   7 eP      Pn         12 41 37.4 +0.4
BTLS  Baital            10.41   7 eP      Pn         12 41 37.4 +0.4
JHNI  Jhansi            10.74 147 eP      Pn         12 41 39.2 -2.3
JHNI                              eS      Sn         12 43 33.0 -7.7
JHNI                               IAML              12 43 37.1
      comp=N,131nm,0.4s
JHNI                               IAML              12 43 38.7
      comp=E,132nm,0.4s
GUNA  GUNA              10.99 155 eP      Pn         12 41 41.5 -3.4
GUNA                              eS      Sn         12 43 37.2  -10
GUNA                               IAML              12 43 41.1
      comp=N,117nm,0.6s
GUNA                               IAML              12 43 43.4
      comp=E,176nm,0.8s
TDK   Taldyqorghan      11.33  23 eP      Pn         12 41 50.3 +0.7
TDK   Taldyqorghan      11.33  23 eP      Pn         12 41 50.3 +0.7
MK31  Makanchi Array    14.28  29  P      P          12 42 33.9 -2.8
      comp=E,7.7nm,0.9s,baz=206,slow=12,SNR=105
MK31  Makanchi Array    14.28  29ceP      Pn         12 42 30.2 +0.3
MKAR  Makanchi Array    14.28  29         Pn         12 42 29.3 -0.6
MKAR  Makanchi Array    14.28  29  P      Pn         12 42 30.3 +0.4
      comp=E,0.4nm,0.3s,baz=212,slow=11,SNR=42
MKAR                               LR     LR         12 48 32.7
      comp=E,670nm,19.1s,baz=202,slow=39
      comp=E,5.4nm,0.8s
MKAR  Makanchi Array    14.28  29ceP      Pn         12 42 30.6 +0.7
MKAR                               pmax   pmax
      comp=Z,5.0nm,0.8s
WMQ   Urumqi            15.06  48 eP      Pn         12 42 34.3 -6.1
WMQ                                pmax   pmax
      comp=Z,42nm,1.1s
WMQ                                LR     LR
      comp=N,440nm,12.5s
WMQ                                LR     LR
      comp=E,230nm,8.3s
WMQ                                LR     LR
      comp=Z,100nm,12.5s
WMQ   Urumqi            15.06  48 eP      P          12 42 44.0 -1.4
WMQ                                LR     LR
      comp=Z,360nm,6.5s
WMQ                                LR     LR
      comp=Z,240nm,14.7s
ZSN   Zaisan            15.90  33 eP      Pn         12 42 52.0 +0.8
ZSN   Zaisan            15.90  33 eP      Pn         12 42 52.0 +0.8
KURBB Kurchatov Arra    16.56  14  P      Pn         12 42 56.9 -2.7
      comp=Z,6.5nm,1.0s,baz=205,slow=12,SNR=22
KURBB                              S      Sn         12 45 57.9 -4.5
      comp=Z,0.8nm,0.9s,baz=201,slow=20,SNR=1.4
KURBB                              LR     LR         12 49 29.0
      comp=Z,461nm,18.1s,baz=175,slow=37
KURBB Kurchatov Arra    16.56  14  P      Pn         12 43 00.5 +0.8
KURBB Kurchatov Arra    16.56  14  P      Pn         12 43 00.4 +0.8
KURK  Kurchatov         16.67  14         Pn         12 42 58.2 -2.7
KURK  Kurchatov         16.67  14ceP      Pn         12 42 58.6 -2.4
KURK                               pmax   pmax
      comp=Z,13nm,1.0s
AB31  Akbulak array     17.10 332         Pn         12 43 05.0 -1.4
AB31  Akbulak array     17.10 332  P      Pn         12 43 05.0 -1.4
      comp=Z,29nm,1.1s,baz=150,slow=12,SNR=158
AB31  Akbulak array     17.10 332  P      Pn         12 43 05.0 -1.4
ABKAR Akbulak array     17.10 332         Pn         12 43 05.0 -1.4
ABKAR Akbulak array     17.10 332         Pn         12 43 04.9 -1.5
HYB   Hyderabad         18.15 160 eP      Pn         12 43 19.1 -0.5
HYB                               esP     sP         12 43 40.0 +7.7
HYB                               eS      S          12 46 44.7 -1.3
BVA0  Borovoye Array    18.35 357  P      Pn         12 43 22.5 +0.7
BVA0  Borovoye Array    18.35 357  P      Pn         12 43 22.5 +0.7
BVAR  Borovoye Array    18.35 357  P      P          12 43 20.3 -1.3
      comp=Z,0.4nm,0.3s,baz=165,slow=12,SNR=82
BVAR                               S      Sn         12 46 40.5 -5.2
      comp=Z,14nm,1.0s,baz=170,slow=25,SNR=9.4
BVAR                               LR     LR         12 50 42.8
      comp=Z,446nm,20.7s,baz=180,slow=38
      comp=Z,35nm,1.0s
BRVK  Borovoye          18.39 356         P          12 43 21.5 -0.5
BRVK                               IAmb   IAmb       12 43 23.6
      comp=Z,40nm,1.0s
BRVK  Borovoye          18.39 356  P      Pn         12 43 22.9 +0.6
BRVK  Borovoye          18.39 356ceP      P          12 43 21.9 -0.1
BRVK                               pmax   pmax
      comp=Z,58nm,1.3s
AKTO  Aktyubinsk        18.80 331  P      P          12 43 26.9 +0.3
      comp=Z,4.4nm,0.3s,baz=143,slow=8.6,SNR=52
AKTO                               S      Sn         12 46 48.8 -7.8
      comp=Z,11nm,0.8s,baz=240,slow=23,SNR=7.3
AKTO                               LR     LR         12 50 41.8
      comp=Z,127nm,21.7s,baz=108,slow=37
      comp=Z,15nm,0.5s
LKRN  Lenkeran, Azer    19.16 289  P      Pn         12 43 34.4 +2.8
AKT   Akhty             20.35 297 eP      Pn         12 43 46.9 +1.1
AKT                               ePPP    PPP        12 44 12.3
AKT                                pmax   pmax
      comp=Z,20nm,1.4s
AKT                                MLR    MLR
      comp=Z,74nm,13.0s
SEKA  Sheki             20.69 296  P      Pn         12 43 50.1 +0.3
MNGR  Mingechevir, A    20.70 294  P      Pn         12 43 51.0 +1.2
BRDH  Bariadhala        20.83 120  LR     LR         12 54 23.2
      comp=Z,239nm,18.0s,baz=296,slow=44
MAK   Makhachkala       20.85 301 eP      P          12 43 43.3 -5.6
MAK                               eS      S          12 47 34.7 -5.0
MAK                                pmax   pmax
      comp=Z,145nm,1.3s
MAK                                MLR    MLR
      comp=Z,162nm,12.0s
KOHI  KOHIMA            20.94 109 eP      P          12 43 50.9 +0.6
ZALV  Zalesovo Beam     21.19  21         P          12 43 51.6 -0.9
ZALV  Zalesovo Beam     21.19  21  P      P          12 43 52.0 -0.6
      comp=Z,60nm,0.8s,baz=216,slow=9.1,SNR=95
ZALV                               S      S          12 47 45.0 -1.4
      comp=Z,1.4nm,0.6s,baz=207,slow=18,SNR=2.4
ZALV                               LR     LR         12 52 28.3
      comp=Z,239nm,21.8s,baz=82,slow=38
      comp=Z,60nm,0.8s
ZALV  Zalesovo Beam     21.19  21 i P     P          12 43 52.0 -0.6
ZALV                               pmax   pmax
      comp=Z,60nm,0.9s
GANJ  Ganja             21.26 294  P      P          12 43 57.1 +3.7
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IMP   Imphal            21.28 112⇓eP      P          12 43 55.2 +1.3
NAX   Nakhchivan        21.74 290  P      P          12 44 02.4 +3.7
GNI   Garni             22.40 292 i P     P          12 44 07.9 +2.1
GNI                                pmax   pmax
      comp=Z,42nm,0.9s
GNI   Garni             22.40 292  P      P          12 44 08.1 +2.3
      comp=Z,383nmcomp=Z,50nm,1.2s
GTA   Gaotai            22.52  70  P      P          12 44 07.3 +0.2
GTA                                pmax   pmax
      comp=Z,8.0nm,1.3s
GTA                                LR     LR
      comp=Z,130nm,14.7s
GTA                                LR     LR
      comp=Z,210nm,17.1s
GTA                                LR     LR
      comp=Z,340nm,22.3s
SVE   Sverdlovsk        23.47 344 eP      P          12 44 17.2 +0.7
ARTI  Arti              23.64 341         P          12 44 18.2 +0.1
ARTI  Arti              23.64 341  LR     LR         12 54 18.7
      comp=Z,250nm,18.2s,baz=146,slow=38
ARTI  Arti              23.64 341c iP     P          12 44 19.2 +1.1
ARTI                                                 12 44 49.2
ARTI                               pmax   pmax
      comp=Z,45nm,1.7s
ARTI                               MLR    MLR
      comp=Z,219nm,18.0s
KBZ   Khabaz            24.29 301  P      P          12 44 23.9 -0.4
      comp=Z,5.3nm,1.1s,baz=80,slow=8.5,SNR=9.4
KBZ                                LR     LR         12 55 46.9
      comp=Z,82nm,21.0s,baz=100,slow=41
      comp=Z,5.3nm,1.1s
KBZ   Khabaz            24.29 301 i P     P          12 44 25.5 +1.2
KBZ                                pmax   pmax
      comp=Z,7.0nm,1.2s
GURO  Guroymak-BITLI    24.43 288  P      P          12 44 26.4 +0.5
SHA1  Shidzhatmaz       24.47 300 i P     P          12 44 27.7 +1.5
KIV   Kislovodsk        24.49 301 eP      P          12 44 26.9 +0.6
KIV                                pmax   pmax
      comp=Z,9.0nm,1.0s
KIV                                MLR    MLR
      comp=Z,51nm,15.0s
BELG  Belogornoye       24.88 323  LR     LR         12 55 55.8
      comp=Z,77nm,19.6s,baz=63,slow=40
BELG  Belogornoye       24.88 323 i P     P          12 44 29.9 +0.4
BELG                               pmax   pmax
      comp=Z,6.0nm,1.0s
MARD  Mardin            25.46 285         P          12 44 35.7 +0.6
KOPT  Kop Dagi          25.64 291         P          12 44 38.5 +1.5
KOPT                               IAmb   IAmb       12 44 42.3
      comp=Z,22nm,1.3s
RAYN  Ar Rayn           25.75 251         P          12 44 38.6 +0.8
RAYN                               IAmb   IAmb       12 44 41.4
      comp=Z,12nm,1.2s
RAYN  Ar Rayn           25.75 251  P      P          12 44 38.6 +0.8
RAYN                               pmax   pmax
      comp=Z,12nm,1.2s
PZH   PanZhiHua         26.67 100  P      P          12 44 46.4 +0.2
PZH                                pmax   pmax
      comp=Z,10.0nm,0.9s
MOY   Mondy             26.75  42 eP      P          12 44 51.6 +5.0
MOY                                pmax   pmax
      comp=Z,14nm,1.4s
ZAK   Zakamensk         27.50  46 eP      P          12 44 53.7 +0.3
ZAK                                pmax   pmax
      comp=Z,4.0nm,1.3s
KIRV  Kirov             28.26 335  LR     LR         12 57 10.2
      comp=Z,65nm,19.5s,baz=146,slow=38
KIRV  Kirov             28.26 335ceP      P          12 45 00.6 +0.7
PALK  Pallekele         28.42 162  LR     LR         12 56 35.3
      comp=Z,246nm,18.2s,baz=352,slow=37
CHTO  Chiang Mai        28.55 117  P      P          12 45 04.7 +1.7
CHTO                               pmax   pmax
      comp=Z,10.0nm,0.8s
SONM  Songino Array     28.62  52         P          12 45 04.2 +0.7
SONM  Songino Array     28.62  52  P      P          12 45 04.2 +0.7
      comp=Z,5.4nm,0.8s,baz=257,slow=9.6,SNR=25
SONM                               LR     LR         12 58 11.8
      comp=Z,159nm,18.5s,baz=240,slow=40
      comp=Z,5.4nm,0.8s
SONM  Songino Array     28.62  52  P      P          12 45 04.2 +0.7
SONM                               pmax   pmax
      comp=Z,6.0nm,1.0s
CMAR  Chiang Mai Arr    28.78 117         P          12 45 04.4 -0.6
CMAR  Chiang Mai Arr    28.78 117  P      P          12 45 05.2 +0.3
      comp=Z,4.2nm,0.8s,baz=293,slow=8.6,SNR=17
CMAR                               LR     LR         12 59 00.4
      comp=Z,71nm,18.7s,baz=320,slow=41
      comp=Z,4.2nm,0.8s
ULN   Ulaanbaatar       29.06  52         P          12 45 07.9 +0.5
ULN   Ulaanbaatar       29.06  52 i P     P          12 45 09.0 +1.6
ULN                                pmax   pmax
      comp=Z,4.0nm,1.0s
BTO   Baotou            30.37  68 eP      P          12 45 18.5 -0.5
BTO                                pP     pP         12 45 23.0 -5.5
BTO                                sP     sP         12 45 25.6 -6.9
BTO                                PP     PnPn       12 46 16.4 -1.4
BTO                                S      S          12 50 14.6 -3.0
BTO                                pmax   pmax
      comp=Z,21nm,0.9s
BTO                                pmax   pmax
      comp=Z,260nm,3.7s
BTO                                LR     LR
      comp=Z,940nm,12.6s
BTO                                LR     LR
      comp=Z,1μm,13.1s
BTO                                LR     LR
      comp=Z,610nm,8.4s
MMAI  Mount Meron Ar    30.47 277  LR     LR         12 59 37.6
      comp=Z,58nm,20.9s,baz=100,slow=40
KIRS  Kirsehir-Merke    30.74 290 ⇑P      P          12 45 24.5 +2.2
SLVN  Son La            30.89 107         P          12 45 23.0 -0.7
SLVN                               IAmb   IAmb       12 45 25.9
      comp=Z,11nm,1.0s
BR104 Keskin Array S    30.92 291  P      P          12 45 24.8 +0.9
      comp=Z,53nmcomp=Z,6.4nm,1.0s
BR104                              pP     pP         12 45 30.1 -3.3
      comp=Z,53nmcomp=Z,6.4nm,1.0s
BR131 Keskin Array S    30.92 291         P          12 45 24.0 +0.1
BR131                              IAmb   IAmb       12 45 27.1
      comp=Z,11nm,1.2s
BR131 Keskin Array S    30.92 291  P      P          12 45 24.0 +0.1
BR131                              pmax   pmax
      comp=Z,11nm,1.2s
BRTR  Keskin Array B    30.92 291         P          12 45 25.0 +1.1
BRTR  Keskin Array B    30.92 291  P      P          12 45 24.9 +0.9
      comp=Z,6.6nm,1.1s,baz=101,slow=6.5,SNR=25
      comp=Z,6.6nm,1.1s
BR106 Keskin Array S    30.93 291  P      P          12 45 26.1 +2.0
      comp=Z,49nmcomp=Z,5.5nm,1.1s
BR105 Keskin Array S    30.94 291  P      P          12 45 26.1 +2.0
      comp=Z,63nmcomp=Z,7.7nm,1.1s
OBN   Obninsk           31.91 321  LR     LR         12 59 08.2
      comp=Z,101nm,22.0s,baz=350,slow=38
OBN   Obninsk           31.91 321ceP      P          12 45 33.0 +0.7
OBN                               e                  12 46 34.2
OBN                                pmax   pmax
      comp=Z,10.0nm,0.9s
OBN                                MLR    MLR
      comp=Z,84nm,16.0s
YLV   Yalova            34.13 293  P      P          12 45 53.6 +1.7
      comp=Z,14nm,1.0s
YLV                                pP     pP         12 45 58.5 -3.0
      comp=Z,14nm,1.0s
TPGR  Topolog           34.74 300 ⇑P      P          12 45 57.6 +0.6
AKASG Malin Array Be    34.81 311  P      P          12 45 57.3 -0.3
      comp=Z,1.8nm,0.6s,baz=94,slow=6.8,SNR=19
AKASG                              LR     LR         13 01 47.8
      comp=Z,46nm,18.6s,baz=105,slow=39
      comp=Z,1.8nm,0.6s
AKASG Malin Array Be    34.81 311ceP      P          12 45 57.2 -0.4
AKASG                              pmax   pmax
      comp=Z,2.0nm,0.5s
AKBB  Malin Array Si    34.81 311 i P     P          12 45 58.7 +1.1
AKBB                               pmax   pmax
      comp=Z,5.0nm,0.9s
KIEV  Kiev              34.82 311         P          12 45 58.0 +0.3
KIEV                               IAmb   IAmb       12 45 59.5
      comp=Z,4.9nm,0.7s
KIEV  Kiev              34.82 311 ⇑P      P          12 45 56.6 -1.1
KIEV  Kiev              34.82 311  P      P          12 45 58.0 +0.3
KIEV                               pmax   pmax
      comp=Z,5.0nm,0.7s
XLT   XiLinHaoTe        34.85  61 eP      P          12 45 56.4 -1.7
XLT                                pmax   pmax
      comp=Z,7.0nm,1.0s
XLT                                LR     LR
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      comp=Z,44nm,10.0s
XLT                                LR     LR
      comp=Z,380nm,11.5s
XLT                                LR     LR
      comp=Z,190nm,7.0s
CFR   Carcaliu          34.95 301 ⇑P      P          12 45 58.6 -0.2
ODBI  Odobesti          35.73 302  P      P          12 46 07.2 +1.7
      comp=Z,12nm,1.0s
VRI   Vrincioaia        35.96 302 ⇓P      P          12 46 09.9 +2.3
VRI   Vrincioaia        35.96 302 ⇓P      P          12 46 09.9 +2.3
VRI   Vrincioaia        35.96 302  P      P          12 46 09.2 +1.6
      comp=Z,13nm,1.3s
PLOR  Plostina          36.01 302 ⇑P      P          12 46 10.7 +2.7
PLOR  Plostina          36.01 302 ⇑P      P          12 46 10.7 +2.7
TESR  Tescani           36.04 303 ⇑P      P          12 46 09.2 +1.0
ISR   Istrita           36.07 301  P      P          12 46 11.0 +2.4
      comp=Z,21nm,1.4s
HORU  Horodok           36.39 308  P      P          12 46 12.4 +1.2
MNK   Minsk             36.44 317 i P     P          12 46 10.9 -0.7
      comp=E,17nm,0.8s
MNK                               i P     P          12 46 10.9 -0.7
      comp=N,13nm,1.0s
MNK                               i P     P          12 46 10.9 -0.7
      comp=Z,7.0nm,0.8s,baz=104
MNK                               i PP    PnPn       12 47 33.4 -0.9
MNK                               i PPP   PPP        12 47 48.0
MNK                               i S     S          12 51 53.7 +2.7
MNK                               i SS    SnSn       12 54 23.5 +3.0
MNK                               i SSS   SSS        12 54 40.0
MNK                               i LQ    LQ         12 58 24.8
MNK                               i LR    LR         13 01 11.4
MNK                               i LRM   MLR        13 02 31.2
      comp=N,65nm,21.9s
MNK                               i LRM   MLR        13 02 36.4
      comp=E,94nm,17.4s
MNK                               i LRM   MLR        13 02 36.4
      comp=Z,96nm,23.0s
MNK   Minsk             36.44 317 i P     P          12 46 10.8 -0.7
MNK                               i                  12 47 33.4
MNK                               i                  12 48 34.4
MNK                               i S     S          12 51 53.7 +2.7
MNK                               i SS    SnSn       12 54 23.5 +3.0
MNK                               i                  12 56 27.5
MNK                                pmax   pmax
      comp=E,17nm,0.8s
MNK                                pmax   pmax
      comp=Z,7.0nm,0.8s
MNK                                pmax   pmax
      comp=N,13nm,1.0s
MNK                                MLR    MLR
      comp=N,65nm,22.0s
MNK                                MLR    MLR
      comp=E,94nm,17.0s
MNK                                MLR    MLR
      comp=Z,96nm,23.0s
MLR   Muntele Rosu      36.50 301         P          12 46 13.3 +1.0
MLR   Muntele Rosu      36.50 301 ⇓P      P          12 46 14.6 +2.3
MLR   Muntele Rosu      36.50 301 ⇓P      P          12 46 14.6 +2.3
MLR   Muntele Rosu      36.50 301  P      P          12 46 14.1 +1.8
QIZ   Qiongzhong        36.82 105  P      P          12 46 15.8 +0.7
QIZ                                S      S          12 51 56.9 -0.6
QIZ                                LR     LR
      comp=Z,440nm,10.6s
QIZ                                LR     LR
      comp=Z,340nm,8.7s
DOPR  Dopca             36.90 302 ⇓P      P          12 46 17.1 +1.5
RNPP5 Staryi Chortor    36.98 311  P      P          12 46 17.7 +1.5
BURAR Bucovina Array    37.07 305         P          12 46 17.5 +0.4
VOIR                    37.13 301 ⇑P      P          12 46 19.0 +1.4
VOIR                    37.13 301  P      P          12 46 19.0 +1.4
KSV   Kosov             37.21 306  P      P          12 46 16.6 -1.6
HIA   Hailar            37.59  52 i P     P          12 46 27.3 +5.9
HIA                                pmax   pmax
      comp=Z,4.0nm,0.8s
VSU   Vasula            38.17 323 i P     P          12 46 27.1 +1.0
VSU                                pmax   pmax
      comp=Z,7.0nm,0.9s
IDI   Anoyia            38.44 285  LR     LR         13 05 52.8
      comp=Z,64nm,21.3s,baz=58,slow=42
MARR  Marisel-Cluj      38.47 303 ⇓P      P          12 46 30.7 +1.7
DRGR                    38.76 303 ⇓P      P          12 46 31.6 +0.3
DRGR                    38.76 303 ⇓P      P          12 46 31.6 +0.3
SURR  Surduc            39.18 302 ⇑P      P          12 46 35.9 +1.2
FINES FINESS Array B    39.49 327  P      P          12 46 36.9 -0.2
FINES FINESS Array B    39.49 327  P      P          12 46 36.6 -0.6
      comp=Z,1.7nm,0.6s,baz=109,slow=9.2,SNR=18
FINES                              LR     LR         13 02 59.6
      comp=Z,75nm,21.8s,baz=92,slow=36
      comp=Z,1.7nm,0.6s
FINES FINESS Array B    39.49 327ceP      P          12 46 37.7 +0.5
FINES                              pmax   pmax
      comp=Z,2.0nm,0.6s
MDVR  Moldovita         39.51 300 ⇓P      P          12 46 35.8 -1.8
BZS   Buzias            39.54 302 ⇑P      P          12 46 39.4 +1.6
BZS   Buzias            39.54 302 ⇑P      P          12 46 39.4 +1.6
BOVS  Bovan             39.59 299 ⇑P      P          12 46 35.7 -2.6
PSI   Prapat            40.34 136  LR     LR         13 03 28.7
      comp=Z,97nm,20.2s,baz=290,slow=36
LANS  Liptovska Anna    40.94 307 eP      P          12 46 52.4 +3.0
LANS  Liptovska Anna    40.94 307 eP      P          12 46 52.4 +3.0
MORH  Mrgy, Hungar      41.58 303 ⇑P      P          12 46 53.5 -1.1
MODS  Modra-Piesok      42.40 306 eP      P          12 47 03.4 +2.0
HEH   HeiHe             42.60  51 eP      P          12 47 03.6 +0.7
HEH                                pmax   pmax
      comp=Z,9.0nm,1.3s
ZEA   Zeya              42.60  46 eP      P          12 47 05.0 +2.2
VRAC  Vranov            42.83 307  LR     LR         13 06 48.1
      comp=Z,23nm,20.8s,baz=74,slow=39
RONA  Rosalia, Austr    43.09 305 eP      P          12 47 08.5 +1.5
      comp=Z,0.9nm,0.5s
ARCES ARCESS Array B    43.15 338  P      P          12 47 07.2 +0.1
      comp=Z,5.2nm,0.7s,baz=113,slow=8.0,SNR=25
ARCES                              LR     LR         13 06 23.5
      comp=Z,134nm,19.2s,baz=121,slow=38
      comp=Z,5.2nm,0.7s
CONA  Conrad Observa    43.37 305 eP      P          12 47 10.5 +1.2
      comp=Z,7.6nm,1.0s
ARSA  Arzberg           43.65 304 i P     P          12 47 12.0 +0.5
      comp=Z,4.9nm,1.4s
SOKA  Soboth            44.03 304 eP      P          12 47 15.2 +0.5
      comp=Z,10nm,1.1s
TWG   Pinlang           44.09  92         P          12 47 14.3 -1.0
OBKA  Obir              44.38 304 i P     P          12 47 19.5 +2.1
      comp=Z,5.2nm,1.2s
MOA   Molln             44.45 305 i P     P          12 47 18.1 +0.2
      comp=Z,7.6nm,1.2s
CUC   Castrocucco       44.47 294  P      P          12 47 18.2 +0.1
CUC                                IAmb   IAmb       12 47 20.9
      comp=Z,7.5nm,0.8s
BRG   Berggiesshubel    44.48 310 eP      P          12 47 18.0  0.0
      comp=Z,6.8nm,1.2s,baz=85,slow=8.5
BRG   Berggiesshubel    44.48 310 eP      P          12 47 18.2 +0.2
BRG                                Amp               12 47 19.8
      comp=Z,2.9nm,0.7s
KSRS  Korea Array       44.59  70  P      P          12 47 19.2 +0.2
      comp=Z,2.9nm,0.8s,baz=273,slow=7.1,SNR=10.0
      comp=Z,2.9nm,0.8s
GERES GERESS Array B    44.75 307  P      P          12 47 20.9 +0.6
      comp=Z,5.0nm,0.4s,baz=77,slow=8.6,SNR=3.3
      comp=Z,5.0nm,0.4s
BIOA  Bad Ischl, Aus    44.88 305 eP      P          12 47 22.7 +1.4
      comp=Z,5.3nm,1.4s
YAK   Yakutsk           44.88  34 eP      P          12 47 23.7 +2.6
YAK                               e                  12 49 04.6
YAK                               e                  12 49 06.6
YAK                               ePPP    PPP        12 49 46.8
YAK                               eS      S          12 54 02.1 +5.6
YAK                               e*SS    pS         12 54 08.2 +0.3
YAK                               eSSS    SSS        12 58 10.4
YAK                                pmax   pmax
      comp=Z,13nm,1.0s
YAK                                pmax   pmax
      comp=N,2.0nm,1.4s
YAK                                pmax   pmax
      comp=Z,84nm,4.1s
YAK                                smax   smax
      comp=E,37nm,2.8s
YAK                                smax   smax
      comp=N,32nm,2.5s
YAK                                MLR    MLR
      comp=Z,197nm,20.0s
YAK                                MLR    MLR
      comp=N,65nm,25.0s
YAK                                MLR    MLR
      comp=E,138nm,21.0s
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MYKA	**Terra Mystica**	**44.99**	**304**	*e*P	**P**	**12 47 23.6**	**+1.3**
	comp=E,5.8nm,1.0s						
HFS	**Hagfors**	**45.06**	**323**	P	**P**	**12 47 22.3**	**-0.2**
	comp=E,3.4nm,0.6s,baz=98,slow=11,SNR=15						
HFS				LR	LR	13 06 27.9	
	comp=E,67nm,20.1s,baz=102,slow=36						
	comp=E,3.4nm,0.6s						
CLL	**Collm**	**45.06**	**310**	*e*P	**P**	**12 47 23.0**	**+0.4**
CLL	**Collm**	**45.06**	**310**	*e*P	**P**	**12 47 23.0**	**+0.4**
PRED	**Cave del Predi**	**45.06**	**304**		**P**	**12 47 23.7**	**+0.8**
PRED				IAmb	IAmb	12 47 36.5	
	comp=Z,7.3nm,1.2s						
SABO	**M.te Sabotino**	**45.10**	**303**	P	**P**	**12 47 23.6**	**+0.5**
KLR	**Kul'dur**	**45.45**	**52**	*i* P	P	12 47 31.4	+5.6
KLR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
LESA	**Schwarzleotal**	**45.56**	**305**	*e*P	**P**	**12 47 27.0**	**+0.2**
	comp=Z,7.1nm,1.0s						
ABTA	**Abfaltersbach**	**45.75**	**304**	*e*P	**P**	**12 47 29.1**	**+0.8**
	comp=Z,4.9nm,1.4s						
MOX	**Moxa**	**45.97**	**310**	*e*P	**P**	**12 47 30.1**	**+0.2**
	comp=Z,3.7nm,1.1s,baz=85,slow=8.5						
FLTG	**Flechtingen**	**46.11**	**312**	*e*P	**P**	**12 47 30.3**	**-0.6**
	comp=Z,5.8nm,0.7s,baz=85,slow=8.5						
WTTA	**Wattenberg**	**46.28**	**305**	*i* P	**P**	**12 47 32.2**	**-0.4**
	comp=Z,7.5nm,1.2s						
GRF	**Grafenberg Arr**	**46.30**	**308**	*e*P	**P**	**12 47 34.1**	**+1.6**
	comp=Z,3.3nm,0.9s,baz=85,slow=8.5						
WATA	**Walderalm**	**46.31**	**305**	*e*P	**P**	**12 47 33.1**	**+0.3**
	comp=Z,3.7nm,1.0s						
NB2	**NORSAR Subarra**	**46.38**	**324**	P	**P**	**12 47 32.3**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=100,slow=7.9						
NB2	**NORSAR Subarra**	**46.38**	**324**	P	**P**	**12 47 32.4**	**-0.6**
NOA	**NORSAR Array B**	**46.38**	**324**	P	**P**	**12 47 31.8**	**-1.2**
	comp=Z,1.4nm,0.6s,baz=97,slow=7.7,SNR=14						
NOA				LR	LR	13 09 26.3	
	comp=Z,36nm,18.6s,baz=110,slow=39						
	comp=Z,1.4nm,0.6s						
SQTA	**Sankt Quirin**	**46.58**	**305**	*i* P	**P**	**12 47 36.1**	**+1.3**
	comp=Z,4.5nm,0.6s						
MOTA	**Moosalm**	**46.63**	**305**	*e*P	**P**	**12 47 35.8**	**+0.5**
	comp=Z,6.9nm,1.1s						
RETA	**Reutte**	**46.84**	**305**	*e*P	**P**	**12 47 38.5**	**+1.7**
	comp=Z,1.0nm,0.5s						
FETA	**Feichten**	**46.93**	**305**	*i* P	**P**	**12 47 38.7**	**+1.1**
	comp=Z,6.8nm,1.0s						
GTTG	**Gottingen**	**46.95**	**311**	*e*P	**P**	**12 47 39.0**	**+1.5**
	comp=Z,7.7nm,0.9s,baz=85,slow=8.5						
UBR	**Ueberruh**	**47.26**	**306**	*e*P	**P**	**12 47 39.8**	**-0.2**
	comp=Z,7.7nm,0.9s,baz=85,slow=8.5						
DAVA	**Damuels**	**47.46**	**305**	*i* P	**P**	**12 47 41.3**	**-0.5**
	comp=Z,2.6nm,0.6s						
BFO	**Black Forest**	**48.35**	**307**	P	**P**	**12 47 50.0**	**+1.5**
BFO				IAmb	IAmb	12 47 50.7	
	comp=Z,13nm,1.5s						
BFO	**Black Forest**	**48.35**	**307**	P	**P**	**12 47 50.0**	**+1.5**
BFO				pmax	pmax		
	comp=Z,13nm,1.5s						
BFO	**Black Forest**	**48.35**	**307**	*e*P	**P**	**12 47 50.0**	**+1.5**
	comp=Z,11nm,1.4s,baz=85,slow=8.5						
BUG	**Bochum--Univer**	**48.63**	**311**	*e*P	**P**	**12 47 52.9**	**+2.4**
	comp=Z,5.8nm,0.8s,baz=85,slow=8.5						
SPITS	**Spitsbergen Ar**	**49.44**	**347**	P	**P**	**12 47 57.1**	**+0.7**
	comp=Z,8.6nm,0.6s,baz=110,slow=9.8,SNR=20						
SPITS				LR	LR	13 11 26.9	
	comp=Z,71nm,20.6s,baz=88,slow=39						
	comp=Z,8.6nm,0.6s						
BNI	**Bardonecchia**	**50.05**	**303**	P	**P**	**12 48 02.8**	**+1.2**
BNI	**Bardonecchia**	**50.05**	**303**	P	**P**	**12 48 02.8**	**+1.2**
BNI				pmax	pmax		
	comp=Z,16nm,1.4s						
KEST	**Kesra**	**50.52**	**290**	P	**P**	**12 48 04.9**	**-0.4**
	comp=Z,3.1nm,0.7s,baz=71,slow=10,SNR=3.6						
	comp=Z,3.1nm,0.7s						
MJAR	**Matsushiro Arr**	**52.74**	**68**	P	**P**	**12 48 22.1**	**+0.3**
	comp=Z,4.3nm,1.0s,baz=292,slow=11,SNR=5.9						
	comp=Z,4.3nm,1.0s						
EKA	**Eskdalemuir Ar**	**54.23**	**317**	P	**P**	**12 48 30.8**	**-1.6**
	comp=Z,1.1nm,0.6s,baz=79,slow=7.4,SNR=2.9						
	comp=Z,1.1nm,0.6s						
DAG	**Danmarks Havn**	**56.71**	**344**	P	**P**	**12 48 49.8**	**-0.1**
DAG				pmax	pmax		
	comp=Z,7.0nm,1.2s						
DAG	**Danmarks Havn**	**56.71**	**344**	*i* P	**P**	**12 48 49.0**	**-0.9**
ESDC	**Sonseca Array**	**59.14**	**299**	P	**P**	**12 49 06.3**	**-1.3**
	comp=Z,1.9nm,0.9s,baz=62,slow=7.5,SNR=14						
	comp=Z,1.9nm,0.9s						
BILL	**Bilibino**	**59.80**	**26**		**P**	**12 49 12.8**	**+1.2**
BILL	**Bilibino**	**59.80**	**26**	*i* P	**P**	**12 49 13.3**	**+1.7**
BILL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SUMG	**Summit**	**63.05**	**342**		**P**	**12 49 34.4**	**+0.4**
SUMG				IAmb	IAmb	12 49 37.3	
	comp=Z,6.0nm,1.0s						
SUMG	**Summit**	**63.05**	**342**	P	**P**	**12 49 34.4**	**+0.4**
SUMG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TORD	**Torodi Ar. Bea**	**66.65**	**270**	P	**P**	**12 49 56.7**	**-1.1**
	comp=Z,7.8nm,0.8s,baz=40,slow=7.1,SNR=9.0						
	comp=Z,7.8nm,0.8s						
C19K	**Lookout Ridge**	**69.75**	**17**		**P**	**12 50 16.0**	**-0.5**
TOLK	**Toolik Lake Re**	**72.41**	**15**	P	**P**	**12 50 32.1**	**-0.5**
TOLK				IAmb	IAmb	12 50 34.9	
	comp=Z,3.9nm,0.8s						
D25K	**Kavik River**	**72.48**	**13**	P	**P**	**12 50 32.6**	**-0.4**
D25K				IAmb	IAmb	12 50 36.7	
	comp=Z,5.0nm,1.0s						
KDWAN	**Kaudwane**	**73.28**	**225**	P	**P**	**12 50 37.4**	**-1.0**
KDWAN				IAmb	IAmb	12 51 20.6	
	comp=Z,13nm,1.4s						
COLD	**Coldfoot**	**73.43**	**16**	P	**P**	**12 50 38.6**	**+0.1**
COLD				IAmb	IAmb	12 50 42.9	
	comp=Z,4.9nm,1.0s						
J19K	**Poorman**	**74.64**	**20**		**P**	**12 50 46.5**	**+0.8**
J19K				IAmb	IAmb	12 50 50.4	
	comp=Z,7.1nm,1.1s						
MAKGR	**Makgori**	**75.08**	**223**	P	**P**	**12 50 48.8**	**-0.1**
MAKGR				IAmb	IAmb	12 50 49.8	
	comp=Z,5.9nm,0.7s						
INK	**Inuvik**	**75.51**	**10**		**P**	**12 50 50.3**	**-0.3**
INK				IAmb	IAmb	12 50 54.5	
	comp=Z,15nm,1.4s						
INK	**Inuvik**	**75.51**	**10**	P	**P**	**12 50 50.3**	**-0.3**
INK				pmax	pmax		
	comp=Z,15nm,1.5s						
G27K	**Doyon Strip**	**75.55**	**13**	P	**P**	**12 50 51.0**	**+0.1**
DBIC	**Dimbokro**	**75.57**	**268**		**P**	**12 50 51.7**	**-0.2**
DBIC	**Dimbokro**	**75.57**	**268**	P	**P**	**12 50 51.1**	**-0.8**
	comp=Z,5.2nm,0.9s,baz=59,slow=5.9,SNR=4.1						
DBIC				LR	LR	13 29 38.6	
	comp=Z,48nm,18.2s,baz=141,slow=40						
	comp=Z,5.2nm,0.9s						
DBIC	**Dimbokro**	**75.57**	**268**	P	**P**	**12 50 51.7**	**-0.2**
DBIC				pmax	pmax		
	comp=Z,24nm,1.4s						
K20K	**Telida**	**75.58**	**20**	P	**P**	**12 50 51.4**	**+0.2**
K20K				IAmb	IAmb	12 50 54.8	
	comp=Z,5.5nm,1.0s						
ILAR	**Eielson Array**	**76.23**	**16**	P	**P**	**12 50 53.8**	**-1.1**
	comp=Z,1.6nm,1.0s,baz=320,slow=5.1,SNR=7.1						
	comp=Z,1.6nm,1.0s						
G30M	**tAoh Zraii Nji**	**76.34**	**11**	P	**P**	**12 50 56.4**	**+0.9**
G30M				IAmb	IAmb	12 50 57.9	
	comp=Z,8.0nm,1.2s						
BOSA	**Boshof**	**77.01**	**221**	P	**P**	**12 50 59.0**	**-0.8**
	comp=Z,2.8nm,0.7s,baz=35,slow=6.5,SNR=9.2						
	comp=Z,2.8nm,0.7s						
BOSA	**Boshof**	**77.01**	**221**	P	**P**	**12 50 59.0**	**-0.8**
O18K	**Koktuh Hills**	**78.01**	**22**		**P**	**12 51 05.4**	**+0.5**
O18K				IAmb	IAmb	12 51 10.0	
	comp=Z,8.6nm,0.9s						
WRA	**Warramunga Arr**	**80.24**	**122**		**P**	**12 51 16.6**	**-1.0**
WRA	**Warramunga Arr**	**80.24**	**122**	P	**P**	**12 51 17.4**	**-0.3**
	comp=Z,4.0nm,0.8s,baz=324,slow=5.3,SNR=39						
	comp=Z,4.0nm,0.8s						
WR8	**Warramunga Arr**	**80.36**	**122**		**P**	**12 51 17.6**	**-0.7**
WR8				IAmb	IAmb	12 51 18.8	
	comp=Z,9.0nm,1.0s						
RAGM	**Ragged Mountai**	**80.53**	**18**	P	**P**	**12 51 18.1**	**-0.6**
AS31	**Alice Springs**	**82.45**	**125**		**P**	**12 51 29.1**	**-0.2**
ASAR	**Alice Springs**	**82.45**	**125**	P	**P**	**12 51 29.3**	**0.0**
ASAR	**Alice Springs**	**82.45**	**125**	P	**P**	**12 51 28.9**	**-0.5**
	comp=Z,3.9nm,0.7s,baz=309,slow=5.2,SNR=68						
	comp=Z,3.9nm,0.7s						
ASAR	**Alice Springs**	**82.45**	**125**	P	**P**	**12 51 29.3**	**0.0**
YKA	**Yellowknife Ar**	**82.98**	**3**	P	**P**	**12 51 31.1**	**-0.4**
YKA	**Yellowknife Ar**	**82.98**	**3**	P	**P**	**12 51 31.0**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=350,slow=5.8,SNR=12						
	comp=Z,1.9nm,0.7s						
YKA	**Yellowknife Ar**	**82.98**	**3**	P	**P**	**12 51 31.1**	**-0.4**
SCHQ	**Schefferville**	**84.11**	**338**	P	**P**	**12 51 37.3**	**-0.1**
	comp=Z,5.2nm,0.8s,baz=60,slow=9.4,SNR=4.7						
	comp=Z,5.2nm,0.8s						
QSPA	**South Pole Qui**	**124.51**	**180**	PKP	**PKPdf**	**12 58 03.1**	**-1.9**
	comp=Z,0.9nm,0.8s,baz=226,slow=0.6,SNR=6.0						
LPAZ	**La Paz**	**140.06**	**287**	PKP	**PKPdf**	**12 58 36.2**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=348,slow=7.1,SNR=4.0						
PLCA	**Paso Flores**	**150.06**	**247**	PKPbc	**PKPbc**	**12 58 56.0**	**-1.3**
	comp=Z,1.5nm,0.8s,baz=73,slow=7.7,SNR=4.6						

IDC ***16*** *12:51:13.4±0.7, 33°.47N×103°.98E, h0^{km}, mb3.9/15, mbtmp3.9/18, ML3.5/3, MS3.3/4, Error ellipse: s-maj=24.9km s-min=14.3km az=47.0*

ISC 16 12:51:18.4±0.8**, 33°.5N**±0°.1×**104°.0E**±0°.1**, h35^{km}, n20, σ0^{s}.58**/19**, mb4.0**/15**, MS3.3**/4**, Gansu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	**14.46**	**6**	Pn	**Pn**	**12 54 40.7**	**+0.1**
	0.1nm,0.3s,baz=187,slow=14,SNR=7.3						
	1.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**15.62**	**198**	Pn	**Pn**	**12 54 55.9**	**-0.1**
	0.1nm,0.3s,baz=8.3,slow=9.0,SNR=5.7						
	0.9nm,0.9s						
WMQ	**Urumqi**	**16.38**	**314**	*e*P	**Pn**	**12 55 06.9**	**+1.2**
WMQ				LR	LR		
	comp=N,460nm,11.5s						
WMQ				LR	LR		
	comp=E,410nm,13.9s						
KSRS	**Korea Array**	**19.87**	**72**	P	**P**	**12 55 46.2**	**-0.3**
	comp=E,0.1nm,0.3s,baz=264,slow=8.8,SNR=5.7						
	comp=E,1.0nm,0.8s						
MKAR	**Makanchi Array**	**21.19**	**315**	P	**P**	**12 56 00.6**	**-0.2**
	comp=E,5.5nm,0.8s,baz=114,slow=12,SNR=32						
MKAR				LR	LR	13 03 54.0	
	comp=E,49nm,18.6s,baz=85,slow=36						
	comp=E,5.5nm,0.8s						
USRK	**Ussuriysk Ar.**	**24.18**	**55**	P	**P**	**12 56 32.4**	**+1.0**
	comp=E,1.5nm,0.7s,baz=262,slow=9.9,SNR=3.1						
	comp=E,1.5nm,0.7s						
ZALV	**Zalesovo Beam**	**24.58**	**332**	P	**P**	**12 56 35.5**	**+0.5**
	comp=E,2.9nm,0.6s,baz=128,slow=9.6,SNR=11						
ZALV				LR	LR	13 06 41.6	
	comp=E,72nm,18.2s,baz=20,slow=38						
	comp=E,2.9nm,0.6s						
AAK	**Ala-Archa**	**24.88**	**300**	P	**P**	**12 56 37.5**	**-0.4**
	comp=E,2.1nm,0.4s,baz=144,slow=5.4,SNR=5.1						
AAK				LR	LR	13 06 56.0	
	comp=E,102nm,19.9s,baz=126,slow=38						
	comp=E,2.1nm,0.4s						
KURBB	**Kurchatov Arra**	**25.34**	**320**	P	**P**	**12 56 42.0**	**+0.1**
	comp=E,5.0nm,0.7s,baz=124,slow=11,SNR=36						
	comp=E,5.0nm,0.7s						
BVAR	**Borovoye Array**	**30.92**	**319**	P	**P**	**12 57 31.7**	**0.0**
	comp=E,0.8nm,0.6s,baz=112,slow=11,SNR=4.3						
	comp=E,0.8nm,0.6s						
KIRV	**Kirov**	**43.84**	**322**	LR	LR	13 18 06.4	
	comp=E,50nm,20.7s,baz=315,slow=37						
KBZ	**Khabaz**	**47.87**	**301**	P	**P**	**12 59 53.5**	**+0.7**
	comp=E,0.8nm,0.4s,baz=208,slow=3.8,SNR=3.8						
	comp=E,0.8nm,0.4s						
ARCES	**ARCESS Array B**	**55.08**	**335**	P	**P**	**13 00 45.6**	**-0.9**
	comp=E,4.5nm,0.9s,baz=84,slow=9.2,SNR=2.2						
	comp=E,4.5nm,0.9s						
BRTR	**Keskin Array B**	**55.53**	**298**	P	**P**	**13 00 50.2**	**-0.1**
	comp=E,0.8nm,0.8s,baz=81,slow=7.6,SNR=4.6						
	comp=E,0.8nm,0.8s						
FINES	**FINESS Array B**	**55.57**	**325**	P	**P**	**13 00 49.8**	**-0.3**
	comp=E,0.9nm,0.6s,baz=117,slow=6.8,SNR=4.9						
	comp=E,0.9nm,0.6s						
AKASG	**Malin Array Be**	**55.73**	**312**	P	**P**	**13 00 50.8**	**-0.5**
	comp=E,0.8nm,0.7s,baz=69,slow=6.5,SNR=2.5						
	comp=E,0.8nm,0.7s						
WRA	**Warramunga Arr**	**60.49**	**147**	P	**P**	**13 01 25.5**	**+0.5**
	comp=E,2.9nm,0.8s,baz=338,slow=7.5,SNR=17						
	comp=E,2.9nm,0.8s						
NOA	**NORSAR Array B**	**62.63**	**327**	P	**P**	**13 01 38.8**	**-0.3**
	comp=E,1.2nm,1.0s,baz=70,slow=6.2,SNR=3.3						
	comp=E,1.2nm,1.0s						
ASAR	**Alice Springs**	**63.55**	**149**	P	**P**	**13 01 45.8**	**+0.3**
	comp=E,1.3nm,0.8s,baz=327,slow=5.4,SNR=13						
	comp=E,1.3nm,0.8s						
ILAR	**Eielson Array**	**67.75**	**26**	P	**P**	**13 02 11.5**	**-0.6**
	comp=E,0.2nm,0.6s,baz=284,slow=6.6,SNR=1.7						
	comp=E,0.2nm,0.6s						

ATH ***16*** *13:17:45.4, 37°.57N×20°.60E, h9^{km}±1^{km}, ML3.4/30, Manual Solution by G.Panopoulou First location: 2019/06/16 13:18:43, This location: 2020/10/15 15:44:50 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*

THE ***16*** *13:17:46.1, 38°N±1°×2°1E±°, h4^{km}±2^{km}, M3.3/23, MLh3.3/23*

PDG ***16*** *13:17:47.3±0.3, 37°.62N×20°.66E, h12^{km}, ML3.5/8, Error ellipse: s-maj=0.8km s-min=0.9km az=0.0*

ISC 16 13:17:46.3±1.2**, 37°.59N**±0°.03×**20°.63E**±0°.03**, h9^{km}**±7^{km}**, n83, σ0^{s}.70**/136**, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRI1	**kERI**	**0.16**	**64**	P	**Pg**	**13 17 49.8**	**+0.1**
KRI1				S	**Sg**	**13 17 52.4**	**+0.3**
LTHK	**Lithakia**	**0.20**	**53**	P	**Pg**	**13 17 50.3**	**-0.1**
LTHK				S	**Sg**	**13 17 52.8**	**-0.4**
LTHK	**Lithakia**	**0.20**	**53**	P	**Pg**	**13 17 50.3**	**-0.1**
LTHK				S	**Sg**	**13 17 52.7**	**-0.5**
ORTH	**Orthonies,Zaky**	**0.27**	**11**	P	**Pg**	**13 17 51.8**	**+0.2**
ORTH				S	**Sg**	**13 17 55.5**	**+0.3**
RTZL	**Ratzakli, Kefa**	**0.50**	**13**	P	**Pg**	**13 17 55.6**	**-0.3**
RTZL				S	**Sg**	**13 18 03.5**	**+1.0**
PSDA	**Pessada-Kefalo**	**0.53**	**356**	P	**Pg**	**13 17 56.3**	**-0.2**
PSDA				S	**Sg**	**13 18 04.2**	**+0.9**
PSDA	**Pessada-Kefalo**	**0.53**	**356**	P	**Pg**	**13 17 56.3**	**-0.2**
PSDA				S	**Sg**	**13 18 04.3**	**+0.9**
KTLO	**Katakolo**	**0.55**	**84**	P	**Pb**	**13 17 57.4**	**-0.6**
KTLO	**Katakolo**	**0.55**	**84**	P	**Pb**	**13 17 57.5**	**-0.6**
KTLO				S	**Sg**	**13 18 04.6**	**+0.5**
VLS	**Valsamata**	**0.59**	**357**	P	**Pg**	**13 17 57.3**	**-0.4**
VLS				S	**Sg**	**13 18 06.2**	**+0.8**
VLS	**Valsamata**	**0.59**	**357**	P	**Pg**	**13 17 57.2**	**-0.4**
VLS				S	**Sg**	**13 18 06.0**	**+0.6**
ARG2	**Argostoli**	**0.60**	**349**	P	**Pg**	**13 17 57.2**	**-0.6**
ARG2				S	**Sg**	**13 18 06.4**	**+0.7**
LCHA	**Lechaina**	**0.61**	**55**	P	**Pg**	**13 17 57.8**	**-0.3**
LCHA				S	**Sg**	**13 18 06.9**	**+0.9**
ANDM	**Andravida**	**0.64**	**52**	P	**Pg**	**13 17 58.3**	**-0.4**
ANDM				S	**Sb**	**13 18 08.6**	**-0.1**
ANDM	**Andravida**	**0.64**	**52**	P	**Pg**	**13 17 58.3**	**-0.4**
ANDM				S	**Sg**	**13 18 06.1**	**-1.0**
SMHA	**Samh**	**0.66**	**1**	P	**Pg**	**13 17 57.5**	**-1.5**
SMHA				S	**Sg**	**13 18 07.6**	**-0.1**
DMLN	**Damoulianata-K**	**0.68**	**342**	P	**Pg**	**13 17 59.3**	**-0.1**
DMLN				S	**Sb**	**13 18 09.9**	**0.0**
DMLN	**Damoulianata-K**	**0.68**	**342**	P	**Pg**	**13 17 59.3**	**-0.1**
DMLN				S	**Sg**	**13 18 09.0**	**+0.7**
YRMI	**Loutra Irminis**	**0.76**	**48**	P	**Pg**	**13 18 00.6**	**-0.4**
YRMI				S	**Sg**	**13 18 11.6**	**+0.6**
KRES	**Krestena**	**0.79**	**89**	P	**Pg**	**13 18 01.5**	**+0.1**
RLS	**Riolos of Patr**	**0.81**	**54**	P	**Pg**	**13 18 01.2**	**-0.6**
RLS				S	**Sb**	**13 18 13.8**	**+0.3**
RLS	**Riolos of Patr**	**0.81**	**54**	P	**Pg**	**13 18 01.4**	**-0.5**
RLS				S	**Sg**	**13 18 12.6**	**+0.3**
ZARO	**Zacharo**	**0.81**	**97**	P	**Pb**	**13 18 02.3**	**-0.2**
ZARO				S	**Sb**	**13 18 13.4**	**-0.2**
AXS	**Araxos**	**0.84**	**44**	P	**Pg**	**13 18 01.7**	**-0.7**
AXS				S	**Sg**	**13 18 14.1**	**+0.6**
AXS	**Araxos**	**0.84**	**44**	P	**Pg**	**13 18 01.8**	**-0.7**
AXS				S	**Sb**	**13 18 14.5**	**0.0**
AMT	**Artemida-Makis**	**0.86**	**94**	P	**Pg**	**13 18 02.6**	**-0.1**
AMT				S	**Sb**	**13 18 14.6**	**-0.3**
FSK	**Fiskardo**	**0.87**	**356**	P	**Pg**	**13 18 02.1**	**-0.9**
FSK				S	**Sb**	**13 18 15.8**	**+0.5**
FSK	**Fiskardo**	**0.87**	**356**	P	**Pg**	**13 18 02.1**	**-0.9**
FSK				S	**Sb**	**13 18 15.5**	**+0.2**
DRO	**Drossia**	**0.93**	**67**	P	**Pg**	**13 18 03.7**	**-0.4**
DRO	**Drossia**	**0.93**	**67**	P	**Pg**	**13 18 03.7**	**-0.4**
DRO				S	**Sb**	**13 18 17.2**	**+0.3**
EVGI	**Lefkada island**	**1.03**	**1**	P	**Pg**	**13 18 05.0**	**-1.1**
EVGI				S	**Sn**	**13 18 20.8**	**-0.7**
EVGI	**Lefkada island**	**1.03**	**1**	P	**Pg**	**13 18 05.0**	**-1.1**
EVGI				S	**Sb**	**13 18 19.9**	**0.0**
DRAG	**Dragano-Lefkad**	**1.09**	**358**	P	**Pg**	**13 18 07.3**	**0.0**
DRAG				S	**Sb**	**13 18 22.1**	**+0.3**
ITM	**Ithomi**	**1.11**	**111**	P	**Pg**	**13 18 06.9**	**-0.6**
ITM	**Ithomi**	**1.11**	**111**	P	**Pg**	**13 18 06.9**	**-0.6**
ITM				S	**Sb**	**13 18 22.6**	**+0.4**
NYDR	**Nydri-Lefkada**	**1.12**	**3**	P	**Pb**	**13 18 06.4**	**-1.5**
NYDR				S	**Sb**	**13 18 23.2**	**+0.6**
NYDR	**Nydri-Lefkada**	**1.12**	**3**	P	**Pb**	**13 18 06.5**	**-1.4**
NYDR				S	**Sg**	**13 18 22.6**	**+0.2**
PYL	**PYLOS**	**1.12**	**128**	P	**Pg**	**13 18 07.2**	**-0.7**
PYL				S	**Sn**	**13 18 23.5**	**-0.2**
PYL	**PYLOS**	**1.12**	**128**	P	**Pg**	**13 18 07.3**	**-0.5**
PYL				S	**Sn**	**13 18 23.2**	**-0.5**
UPR	**University Cam**	**1.15**	**52**	P	**Pb**	**13 18 07.6**	**-0.6**
UPR				S	**Sn**	**13 18 24.1**	**-0.2**
LKD2	**Lefkada island**	**1.20**	**1**	P	**Pb**	**13 18 08.0**	**-1.2**
LKD2				S	**Sn**	**13 18 27.0**	**+1.4**
LKD2	**Lefkada island**	**1.20**	**1**	P	**Pb**	**13 18 07.7**	**-1.4**
LKD2				S	**Sg**	**13 18 25.2**	**+0.3**
TSLK	**Tsoukalades, L**	**1.23**	**1**	P	**Pn**	**13 18 08.8**	**-0.9**
TSLK				S	**Sn**	**13 18 27.4**	**+0.9**
TSLK	**Tsoukalades, L**	**1.23**	**1**	P	**Pn**	**13 18 08.8**	**-0.9**
PVO	**Paravola**	**1.24**	**34**	P	**Pn**	**13 18 09.4**	**-0.4**
PVO				S	**Sn**	**13 18 28.0**	**+1.3**
PVO	**Paravola**	**1.24**	**34**	P	**Pn**	**13 18 09.4**	**-0.4**
PVO				S	**Sg**	**13 18 26.4**	**+0.1**
KLV1	**Kalavrita**	**1.25**	**69**	P	**Pb**	**13 18 10.0**	**0.0**
EFP	**Efpalio**	**1.31**	**50**	P	**Pn**	**13 18 10.1**	**-0.6**
EFP	**Efpalio**	**1.31**	**50**	P	**Pn**	**13 18 09.7**	**-1.0**
EFP				S	**Sb**	**13 18 27.6**	**-0.2**
SERG	**Sergoula**	**1.39**	**53**	P	**Pn**	**13 18 11.2**	**-0.7**
SERG				S	**Sb**	**13 18 30.0**	**-0.3**
GUR	**Goura**	**1.40**	**75**	P	**Pn**	**13 18 11.4**	**-0.7**
GUR	**Goura**	**1.40**	**75**	P	**Pn**	**13 18 11.7**	**-0.3**
VLX	**Vlachokerasia**	**1.41**	**98**	P	**Pn**	**13 18 12.1**	**-0.1**
VLX	**Vlachokerasia**	**1.41**	**98**	P	**Pn**	**13 18 12.1**	**-0.1**
VLX				S	**Sb**	**13 18 30.3**	**-0.5**
AMPL	**Ampelaki**	**1.41**	**19**	P	**Pn**	**13 18 11.8**	**-0.3**
ANX	**Ano Chora**	**1.43**	**45**	P	**Pb**	**13 18 12.8**	**-0.3**
ANX				S	**Sn**	**13 18 31.5**	**+0.1**
KALE	**Kalithea**	**1.43**	**56**	P	**Pn**	**13 18 12.0**	**-0.5**
KALE	**Kalithea**	**1.43**	**56**	P	**Pn**	**13 18 12.0**	**-0.5**
EVR	**Evrytania**	**1.62**	**35**	P	**Pn**	**13 18 15.2**	**+0.1**
TETR	**Tetrakomo, Epi**	**1.82**	**16**	P	**Pn**	**13 18 18.5**	**+0.7**
MAKR	**Makrakomi, Fth**	**1.85**	**39**	P	**Pb**	**13 18 19.3**	**-0.9**
LOUT	**Loutraki**	**1.90**	**77**	P	**Pn**	**13 18 19.6**	**+0.7**
IGT	**Igoumenitsa**	**1.95**	**353**	P	**Pn**	**13 18 20.2**	**+0.6**
AGG	**Agios Georgios**	**1.96**	**43**	P	**Pb**	**13 18 20.9**	**-1.1**
AXAR	**Agios Charalam**	**1.98**	**53**	P	**Pn**	**13 18 20.8**	**+0.8**
VLI	**Veliai**	**2.04**	**115**	P	**Pn**	**13 18 21.4**	**+0.7**
LKR	**Lokris**	**2.15**	**60**	P	**Pn**	**13 18 22.9**	**+0.7**
VIL2	**Platees**	**2.17**	**73**	P	**Pn**	**13 18 23.5**	**+0.9**
KEK	**Kerkira**	**2.22**	**343**	P	**Pn**	**13 18 22.8**	**-0.5**
THL	**Klokotos Trika**	**2.25**	**28**	P	**Pn**	**13 18 24.5**	**+0.8**
OHR	**Ohrid**	**3.52**	**2**	*i* Pn	**Pg**	**13 18 54.0**	**+0.3**
ULC	**Ulcinj**	**4.50**	**347**	*e*Pn	**Pn**	**13 18 56.4**	**+1.8**
ULC				*i* Sn	**Sn**	**13 19 47.1**	**+0.1**
DRME	**Dracevica, Mon**	**4.72**	**347**	*e*Pn	**Pn**	**13 18 58.7**	**+1.0**
DRME				*i* Sn	**Sn**	**13 19 52.4**	**-0.2**
BUM	**Brajici-Budva**	**4.89**	**345**	*e*Pn	**Pn**	**13 19 01.2**	**+1.2**
BUM				*i* Sn	**Sn**	**13 19 56.5**	**-0.3**
PDG	**Podgorica**	**4.95**	**348**	*e*Pn	**Pn**	**13 19 01.9**	**+1.2**
PDG				*i* Sn	**Sn**	**13 19 57.9**	**-0.2**
CEME	**Cevo**	**5.12**	**346**	*e*Pn	**Pn**	**13 19 04.3**	**+1.1**
CEME				*i* Sn	**Sn**	**13 20 01.9**	**-0.6**
IVA	**Berane**	**5.31**	**354**	*e*Pn	**Pn**	**13 19 06.8**	**+1.1**
IVA				*i* Sn	**Sn**	**13 20 06.3**	**-0.7**
KOME	**Kolasin**	**5.32**	**351**	*e*Pn	**Pn**	**13 19 07.1**	**+1.1**
KOME				*i* Sn	**Sn**	**13 20 07.0**	**-0.5**
BRY	**Bratogost**	**5.54**	**344**	*e*Pn	**Pn**	**13 19 09.8**	**+0.8**
BRY				*i* Sn	**Sn**	**13 20 11.9**	**-1.0**
SOKA	**Soboth**	**9.98**	**337**	*e*Pn	**Pn**	**13 20 11.0**	**+1.1**
	0.6nm,0.5s						
OBKA	**Obir**	**9.99**	**335**	*e*Pn	**Pn**	**13 20 10.9**	**+0.9**
	2.0nm,0.7s						
MOA	**Molln**	**11.27**	**338**	*e*Pn	**Pn**	**13 20 28.7**	**+1.3**
	1.5nm,0.6s						
LESA	**Schwarzleotal**	**11.44**	**332**	*i* Pn	**Pn**	**13 20 31.0**	**+1.2**
	1.0nm,0.5s						

STR ***16*** *13:40:52.0±1.1, 46°N±6°×1°4E±°, h10^{km}, MLv3.8/15, Error ellipse: s-maj=0.0km s-min=0.0km az=88.0, preliminary*

ROM ***16*** *13:40:55.0±0.0, 46°.397N±0°.002×12°.997E±0°.003, h8^{km}, ML3.1/150, Error ellipse: s-maj=0.2km s-min=0.0km az=217.0*

VIE ***16*** *13:40:55.3±0.1, 46°.41N×12°.97E, h3^{km}±4^{km}, mb2.7/20, ml3.3/20, Error ellipse: s-maj=1.3km s-min=0.8km az=16.0 4 km W of Tolmezzo*

LDG ***16*** *13:40:55.5±0.2, 46°.38N×12°.97E, h5^{km}, Ml3.0/30, Error ellipse: s-maj=4.5km s-min=3.4km az=35.0*

PRU ***16*** *13:40:56.8, 46°.41N×12°.96E, h1^{km}*

RHSSO ***16*** *13:40:58.0±0.8, 46°.48N×13°.10E, h6^{km}±3^{km}, ML3.0/8*

BGR ***16*** *13:40:59.0±0.3, 46°.42N×13°.04E, h10^{km}, ML3.2/23, Error ellipse: s-maj=10.0km s-min=4.4km az=5.0*

ISC 16 13:40:56.0±0.8**, 46°.39N**±0°.01×**12°.98E**±0°.01**, h5^{km}**±4^{km}**, n221, σ2^{s}.12**/351**, 9C-22D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUSE	**Fusea**	**0.03**	**40**	⇑*e*Pg	**Pg**	**13 40 56.5**	**-0.6**
FUSE	**Fusea**	**0.03**	**40**	⇓P	**Pg**	**13 40 56.5**	**-0.6**
FUSE				S	**Sg**	**13 40 57.1**	**-0.9**
CLUD	**Cludinico**	**0.09**	**315**	⇓*e*Pg	**Pg**	**13 40 57.9**	**-0.1**
CLUD				*e*Sg	**Sg**	**13 40 59.6**	**+0.2**
CLUD	**Cludinico**	**0.09**	**315**	⇓P	**Pg**	**13 40 57.9**	**-0.1**
CLUD				S	**Sg**	**13 40 59.6**	**+0.2**
CLUD				AML	AML		
	comp=N,23150μm,0.3s						
CLUD				AML	AML		
	comp=E,17850μm,1.4s						
CLUD				AML	AML		
	comp=E,17750μm,1.4s						
CLUD				AML	AML		
	comp=N,25850μm,0.3s						
CLUD				AML	AML		
	comp=E,16679μm,0.3s						
CLUD				AML	AML		
	comp=N,25849μm,0.3s						
CLUD				AML	AML		
	comp=N,23170μm,0.3s						
CLUD				AML	AML		
	comp=E,16470μm,0.3s						
CLUD				AML	AML		
	comp=N,25849μm,1.7s						
CLUD				AML	AML		
	comp=N,23170μm,1.7s						
BOO	**Bordano**	**0.11**	**130**	⇑*e*Pg	**Pg**	**13 40 58.0**	**-0.3**
BOO				*e*Sg	**Sg**	**13 40 59.8**	**-0.1**
BOO	**Bordano**	**0.11**	**130**	⇓P	**Pg**	**13 40 58.0**	**-0.3**
BOO				S	**Sg**	**13 40 59.9**	**-0.1**
MPRI	**Monte Prat**	**0.15**	**176**	⇓*e*Pg	**Pg**	**13 40 58.9**	**-0.1**
MPRI				*e*Sg	**Sg**	**13 41 01.5**	**+0.5**
MPRI	**Monte Prat**	**0.15**	**176**	⇓P	**Pg**	**13 40 58.9**	**-0.1**
MPRI				S	**Sg**	**13 41 01.7**	**+0.6**
MPRI				AML	AML		
	comp=E,5380μm,1.0s						
MPRI				AML	AML		
	comp=N,19600μm,0.8s						
MPRI				AML	AML		
	comp=E,5375μm,1.0s						
MPRI				AML	AML		
	comp=N,14750μm,0.8s						
MPRI				AML	AML		
	comp=E,7085μm,1.0s						
MPRI				AML	AML		
	comp=E,6860μm,0.3s						
MPRI				AML	AML		
	comp=E,5218μm,0.3s						
MPRI				AML	AML		
	comp=N,16266μm,0.3s						
MPRI				AML	AML		
	comp=N,12422μm,0.3s						
DST2	**Trieste**	**0.15**	**193**	⇓P	**Pg**	**13 40 59.0**	**0.0**
DST2				S	**Sg**	**13 41 01.8**	**+0.8**
DST2				AML	AML		
	comp=E,20450μm,0.6s						
DST2				AML	AML		

	comp=N,21650µm,1.0s						
DST2				AML	AML		
	comp=E,19659µm,0.3s						
DST2				AML	AML		
	comp=N,18766µm,0.1s						
GEPF	**Gemona**	**0.16**	**136**	⇓P	**Pg**	**13 40 58.9**	**-0.3**
GEPF				S	**Sg**	**13 41 01.7**	**+0.3**
GEPF				AML	AML		
	comp=E,5000µm,0.7s						
GEPF				AML	AML		
	comp=N,9585µm,0.9s						
GEPF				AML	AML		
	comp=E,4380µm,0.2s						
GEPF				AML	AML		
	comp=N,9530µm,0.5s						
ZOU	**Zoufplan**	**0.16**	**360**	⇓*e*Pg	**Pg**	**13 40 59.2**	**-0.1**
ZOU				*e*Sg	**Sg**	**13 41 01.9**	**+0.3**
ZOU	**Zoufplan**	**0.16**	**360**	⇓P	**Pg**	**13 40 59.2**	**-0.1**
ZOU				S	**Sg**	**13 41 02.0**	**+0.5**
ZOU				AML	AML		
	comp=N,9755µm,1.4s						
ZOU				AML	AML		
	comp=E,10065µm,0.3s						
ZOU				AML	AML		
	comp=N,9760µm,1.4s						
ZOU				AML	AML		
	comp=E,10215µm,0.3s						
ZOU				AML	AML		
	comp=N,9730µm,1.4s						
ZOU				AML	AML		
	comp=E,9223µm,0.2s						
ZOU				AML	AML		
	comp=E,9234µm,0.2s						
ZOU				AML	AML		
	comp=N,9172µm,0.4s						
ZOU				AML	AML		
	comp=N,9268µm,0.4s						
PLRO	**Paularo**	**0.20**	**37**	⇓*e*Pg	**Pg**	**13 40 59.5**	**-0.4**
PLRO				*e*Sg	**Sg**	**13 41 02.6**	**+0.1**
PLRO	**Paularo**	**0.20**	**37**	⇓P	**Pg**	**13 40 59.5**	**-0.4**
PLRO				S	**Sg**	**13 41 02.6**	**+0.1**
BUA	**Buia**	**0.20**	**149**	⇑*e*Pg	**Pg**	**13 40 59.8**	**-0.2**
BUA				*e*Sg	**Sg**	**13 41 03.1**	**+0.5**
STAL	**STALIGIAL**	**0.23**	**234**	⇓P	**Pg**	**13 41 00.3**	**-0.1**
STAL				S	**Sg**	**13 41 05.0**	**+1.6**
STAL				AML	AML		
	comp=E,7175µm,0.3s						
STAL				AML	AML		
	comp=N,5515µm,0.7s						
STAL				AML	AML		
	comp=E,6145µm,0.3s						
STAL				AML	AML		
	comp=N,5515µm,0.7s						
STAL				AML	AML		
	comp=N,3895µm,1.1s						
STAL				AML	AML		
	comp=E,6144µm,0.3s						
STAL				AML	AML		
	comp=E,7174µm,0.3s						
STAL				AML	AML		
	comp=N,5213µm,0.2s						
STAL				AML	AML		
	comp=N,3199µm,0.2s						
BAD	**Bernadia**	**0.24**	**130**	⇓*e*Pg	**Pg**	**13 41 00.3**	**-0.4**
BAD				*e*Sg	**Sg**	**13 41 04.1**	**+0.2**
BAD	**Bernadia**	**0.24**	**130**	⇓P	**Pg**	**13 41 00.3**	**-0.4**
BAD				S	**Sg**	**13 41 04.2**	**+0.2**
FVI	**Forni Avoltri**	**0.24**	**327**	⇓P	**Pg**	**13 41 00.5**	**-0.2**
FVI				S	**Sg**	**13 41 04.6**	**+0.6**
FVI				AML	AML		
	comp=E,5655µm,1.2s						
FVI				AML	AML		
	comp=N,5725µm,0.4s						
FVI				AML	AML		
	comp=E,5211µm,0.2s						
FVI				AML	AML		
	comp=N,5354µm,0.3s						
VINO	**Villanova**	**0.25**	**123**	⇓*e*Pg	**Pg**	**13 41 00.4**	**-0.5**
VINO				*e*Sg	**Sg**	**13 41 04.3**	**+0.2**
VINO	**Villanova**	**0.25**	**123**	⇓P	**Pg**	**13 41 00.4**	**-0.5**
VINO				S	**Sg**	**13 41 04.4**	**+0.2**
VINO				AML	AML		
	comp=E,6550µm,0.5s						
VINO				AML	AML		
	comp=N,5070µm,0.4s						
VINO				AML	AML		
	comp=E,5436µm,0.2s						
VINO				AML	AML		
	comp=N,4284µm,0.3s						
CSMI	**Casera Mimoias**	**0.25**	**298**	⇓*e*Pg	**Pg**	**13 41 00.9**	**0.0**
CSMI				*e*Sg	**Sg**	**13 41 05.2**	**+0.8**
PTCC	**Patocco-Chiusa**	**0.26**	**87**	⇓P	**Pg**	**13 41 00.6**	**-0.5**
PTCC				S	**Sg**	**13 41 05.5**	**+0.9**
PTCC				AML	AML		
	comp=N,4725µm,0.2s						
PTCC				AML	AML		
	comp=E,4430µm,1.5s						
PTCC				AML	AML		
	comp=E,4337µm,0.2s						
PTCC				AML	AML		
	comp=N,4724µm,0.2s						
MLNI	**Malnisio**	**0.35**	**226**	*e*Pg	**Pg**	**13 41 02.6**	**-0.2**
MLNI				*e*Sg	**Sg**	**13 41 08.0**	**+0.6**
CIMO	**Cimolais**	**0.38**	**258**	*e*Pg	**Pg**	**13 41 02.9**	**-0.5**
CIMO				*e*Sg	**Sg**	**13 41 08.8**	**+0.5**
CIMO	**Cimolais**	**0.38**	**258**	P	**Pg**	**13 41 02.8**	**-0.5**
CIMO				AML	AML		
	comp=E,552µm,1.6s						
CIMO				AML	AML		
	comp=N,946µm,0.3s						
CIMO				AML	AML		
	comp=E,542µm,1.6s						
CIMO				AML	AML		
	comp=N,946µm,0.3s						
CIMO				AML	AML		
	comp=E,468µm,0.3s						
CIMO				AML	AML		
	comp=N,947µm,0.3s						
CIMO				AML	AML		
	comp=E,464µm,0.2s						
CIMO				AML	AML		
	comp=N,944µm,0.3s						
CIMO				AML	AML		
	comp=N,944µm,1.7s						
CIMO				AML	AML		
	comp=N,947µm,1.7s						
CIMO				AML	AML		
	comp=E,464µm,1.8s						
COLI	**Coloredo**	**0.38**	**133**	⇓*e*Pg	**Pg**	**13 41 03.0**	**-0.3**
COLI				*e*Sg	**Sg**	**13 41 08.7**	**+0.4**
LSR	**Lussari**	**0.39**	**78**	⇑*e*Pg	**Pg**	**13 41 03.2**	**-0.4**
LSR				*e*Sg	**Sg**	**13 41 08.9**	**+0.1**
ROBS	**Robic**	**0.40**	**112**	*i* Pg	**Pg**	**13 41 02.7**	**-0.9**
ROBS				*e*Sg	**Sg**	**13 41 09.1**	**+0.2**
ROBS				IAML		13 41 13.2	
	comp=Z,92nm,0.1s						
ACOM	**Acomizza, Ital**	**0.40**	**67**	⇑*e*Pg	**Pg**	**13 41 03.7**	**-0.1**
ACOM				*e*Sg	**Sg**	**13 41 09.5**	**+0.4**
ACOM	**Acomizza, Ital**	**0.40**	**67**	P	**Pg**	**13 41 03.7**	**-0.1**
ACOM				S	**Sg**	**13 41 10.1**	**+1.0**
ACOM				AML	AML		
	comp=N,7205µm,0.8s						
ACOM				AML	AML		
	comp=E,6725µm,0.8s						
ACOM				AML	AML		
	comp=E,6695µm,0.7s						
ACOM				AML	AML		
	comp=N,6805µm,0.7s						
ACOM				AML	AML		
	comp=E,5684µm,0.2s						
ACOM				AML	AML		
	comp=E,5594µm,0.2s						
ACOM				AML	AML		
	comp=N,6064µm,0.2s						
ACOM				AML	AML		
	comp=N,5870µm,0.2s						
PRED	**Cave del Predi**	**0.41**	**83**	⇑*e*Pg	**Pg**	**13 41 03.4**	**-0.5**
PRED				*e*Sg	**Sg**	**13 41 09.7**	**+0.4**
PRED	**Cave del Predi**	**0.41**	**83**	⇑P	**Pg**	**13 41 03.4**	**-0.5**
PRED				S	**Sg**	**13 41 10.0**	**+0.7**
CSO	**Casso**	**0.47**	**255**	*e*Pg	**Pg**	**13 41 04.5**	**-0.4**
CSO				*e*Sg	**Sg**	**13 41 11.6**	**+0.6**
ABTA	**Abfaltersbach**	**0.48**	**318**	*e*Pg	**Pg**	**13 41 04.8**	**-0.3**
	comp=N,15nm,0.2s,SNR=90						
ABTA				*i* Sg	**Sg**	**13 41 10.4**	**-1.0**
	comp=N,140nm,0.2s						
APGO	**Alpago**	**0.49**	**241**	⇑*e*Pg	**Pg**	**13 41 05.0**	**-0.3**
APGO				*e*Sg	**Sb**	**13 41 13.2**	**-1.2**
POLC	**Polcenigo**	**0.49**	**222**	P	**Pg**	**13 41 05.5**	**+0.1**
DRE	**Drenchia**	**0.51**	**115**	*e*Pg	**Pg**	**13 41 05.1**	**-0.8**
DRE	**Drenchia**	**0.51**	**115**	⇓P	**Pg**	**13 41 04.9**	**-0.9**
MYKA	**Terra Mystica**	**0.52**	**62**	*e*Pg	**Pg**	**13 41 05.4**	**-0.6**
	comp=N,3.0nm,0.1s,SNR=55						
MYKA				*e*Sg	**Sg**	**13 41 12.0**	**-0.7**
	comp=N,84nm,0.3s						
CAE	**Caneva**	**0.54**	**224**	*e*Pg	**Pg**	**13 41 06.1**	**-0.2**
CAE	**Caneva**	**0.54**	**224**	P	**Pg**	**13 41 06.0**	**-0.3**
CADS	**Cadrg**	**0.55**	**107**	*i* Pg	**Pg**	**13 41 05.3**	**-1.3**
CADS				*e*Sg	**Sg**	**13 41 14.6**	**+0.8**
CADS				IAML		13 41 18.7	
	comp=Z,265nm,0.2s						
AFL	**Alpe Faloria**	**0.57**	**284**	*e*Pg	**Pg**	**13 41 07.1**	**+0.2**
AFL				*e*Sg	**Sg**	**13 41 15.3**	**+1.0**
FRE8	**Fregona**	**0.57**	**229**	P	**Pg**	**13 41 07.3**	**+0.3**
SABO	**M.te Sabotino**	**0.60**	**133**	*e*Pg	**Pg**	**13 41 07.0**	**-0.4**
SABO	**M.te Sabotino**	**0.60**	**133**	P	**Pg**	**13 41 06.8**	**-0.6**
SABO				AML	AML		
	comp=N,8905µm,0.5s						
SABO				AML	AML		
	comp=E,2210µm,0.6s						
SABO				AML	AML		
	comp=N,2460µm,0.5s						
SABO				AML	AML		
	comp=E,9330µm,0.5s						
SABO				AML	AML		
	comp=N,2460µm,0.5s						
SABO				AML	AML		
	comp=N,8905µm,0.5s						
SABO				AML	AML		
	comp=E,2146µm,0.5s						
SABO				AML	AML		
	comp=E,9337µm,0.5s						
GORS	**Gorjuse**	**0.71**	**96**	*i* Pg	**Pg**	**13 41 08.4**	**-1.2**
GORS				*e*Sg	**Sg**	**13 41 19.9**	**+1.1**
GORS				IAML		13 41 20.3	
	comp=Z,280nm,0.3s						
VARN	**Col Varnada, M**	**0.72**	**237**	*e*Pg	**Pg**	**13 41 09.7**	**-0.1**
VARN	**Col Varnada, M**	**0.72**	**237**	P	**Pg**	**13 41 08.7**	**-1.2**
VARN				AML	AML		
	comp=E,1445µm,1.5s						
VARN				AML	AML		
	comp=N,1575µm,0.3s						
VARN				AML	AML		
	comp=E,1480µm,1.5s						
VARN				AML	AML		
	comp=N,1615µm,0.3s						
VARN				AML	AML		
	comp=N,1574µm,0.3s						
VARN				AML	AML		
	comp=N,1613µm,0.3s						
VARN				AML	AML		
	comp=E,1327µm,0.4s						
VARN				AML	AML		
	comp=E,1351µm,0.4s						
VOJS	**Vojsko**	**0.73**	**119**	*i* Pg	**Pg**	**13 41 08.6**	**-1.3**
VOJS				*e*Sg	**Sg**	**13 41 20.5**	**+1.1**
VOJS				IAML		13 41 23.3	
	comp=Z,71nm,0.1s						
ED06	**Collalto TV**	**0.76**	**225**	*e*Pg	**Pg**	**13 41 10.8**	**+0.4**
CRND	**Cornuda**	**0.84**	**228**	P	**Pb**	**13 41 13.4**	**+0.5**
MTLO	**Montello**	**0.84**	**227**	*e*Pg	**Pg**	**13 41 12.4**	**+0.3**
TRI	**Trieste**	**0.88**	**141**	*e*Pg	**Pg**	**13 41 12.3**	**-0.4**
TRI	**Trieste**	**0.88**	**141**	AML	AML		
	comp=N,315µm,0.2s						
TRI				AML	AML		
	comp=N,341µm,1.5s						
TRI				AML	AML		
	comp=E,874µm,0.1s						
TRI				AML	AML		
	comp=E,874µm,0.1s						
JAVS	**Javornik**	**0.91**	**123**	*i* Pg	**Pg**	**13 41 11.7**	**-1.7**
JAVS				*e*Sg	**Sb**	**13 41 26.4**	**-0.2**
JAVS				IAML		13 41 33.0	
	comp=Z,52nm,0.1s						
BRES	**Bressanone**	**0.91**	**290**	P	**Pg**	**13 41 13.3**	**-0.1**
CRNS	**Crni Vrh**	**0.95**	**109**	*i* Pg	**Pg**	**13 41 12.6**	**-1.5**
CRNS				*e*Sg	**Sb**	**13 41 28.4**	**+0.7**
CRNS				IAML		13 41 34.9	
	comp=Z,129nm,0.2s						
ASOL	**Asolo**	**0.95**	**232**	P	**Pb**	**13 41 14.9**	**0.0**
CGRP	**Cima Grappa**	**0.96**	**238**	P	**Pg**	**13 41 14.9**	**+0.5**
CGRP				AML	AML		
	comp=N,1006µm,0.8s						
CGRP				AML	AML		
	comp=E,1445µm,1.4s						
CGRP				AML	AML		
	comp=N,1010µm,0.8s						
CGRP				AML	AML		
	comp=E,1395µm,1.3s						
CGRP				AML	AML		
	comp=N,929µm,0.8s						
CGRP				AML	AML		
	comp=N,872µm,0.5s						
CGRP				AML	AML		
	comp=E,1287µm,0.3s						
CGRP				AML	AML		
	comp=E,1310µm,0.3s						
CGRP				AML	AML		
	comp=N,852µm,0.5s						
CTI	**Castel Tesino**	**0.98**	**250**	P	**Pb**	**13 41 15.3**	**-0.2**
CTI				AML	AML		
	comp=N,3270µm,0.3s						
CTI				AML	AML		
	comp=E,3055µm,0.2s						
CTI				AML	AML		
	comp=N,3268µm,0.3s						
CTI				AML	AML		
	comp=E,3058µm,0.2s						
ZIAN	**Ziano**	**0.98**	**264**	P	**Pg**	**13 41 15.1**	**+0.2**
ZIAN				AML	AML		
	comp=E,714µm,0.5s						
ZIAN				AML	AML		
	comp=E,670µm,0.8s						
ZIAN				AML	AML		
	comp=E,714µm,0.5s						
ZIAN				AML	AML		
	comp=N,655µm,0.8s						
ZIAN				AML	AML		
	comp=N,726µm,0.5s						
ZIAN				AML	AML		
	comp=E,670µm,0.3s						
ZIAN				AML	AML		
	comp=N,726µm,0.5s						
ZIAN				AML	AML		
	comp=E,714µm,0.5s						
ZIAN				AML	AML		
	comp=N,638µm,0.2s						
ZIAN				AML	AML		
	comp=N,726µm,1.5s						
ZIAN				AML	AML		
	comp=E,714µm,1.5s						
MOZS	**Mozjanca**	**1.02**	**95**	*i* Pg	**Pg**	**13 41 14.7**	**-0.8**
MOZS				*e*Sg	**Sb**	**13 41 30.7**	**+0.9**
MOZS				IAML		13 41 35.9	
	comp=Z,33nm,0.1s						
LESA	**Schwarzleotal**	**1.05**	**349**	*e*Pg	**Pg**	**13 41 15.3**	**-0.9**
	comp=Z,14nm,0.1s,SNR=57						
LESA				Sg	**Sg**	**13 41 30.0**	**+0.2**
	comp=Z,112nm,0.3s						
OBKA	**Obir**	**1.09**	**83**	*e*Pg	**Pg**	**13 41 15.7**	**-1.2**
OBKA				*e*Sg	**Sg**	**13 41 29.6**	**-1.5**
OBKA	**Obir**	**1.09**	**83**	*e*Pg	**Pg**	**13 41 16.3**	**-0.6**
	comp=Z,6.8nm,0.1s,SNR=24						
OBKA				*e*Sg	**Sb**	**13 41 31.8**	**-0.2**
	comp=Z,155nm,0.4s						
OBKA	**Obir**	**1.09**	**83**	*e*Pn	**Pg**	**13 41 15.9**	**-1.1**
OBKA				*e*Sg	**Sb**	**13 41 31.9**	**-0.1**
SKDS	**Skadanscina**	**1.11**	**139**	*i* Pg	**Pg**	**13 41 15.1**	**-2.2**
SKDS				*e*Sg	**Sb**	**13 41 32.6**	**+0.1**
SKDS				IAML		13 41 37.6	
	comp=Z,136nm,0.2s						
GBAS	**Gorenja Brezov**	**1.12**	**114**	*i* Pg	**Pg**	**13 41 15.6**	**-1.8**
GBAS				*e*Sg	**Sb**	**13 41 33.3**	**+0.7**
GBAS				IAML		13 41 37.2	
	comp=Z,110nm,0.3s						
LJU	**Ljubljana**	**1.13**	**107**	*i* Pg	**Pg**	**13 41 17.0**	**-0.7**
LJU				*e*Sg	**Sn**	**13 41 34.5**	**+0.2**
LJU				IAML		13 41 38.6	
	comp=Z,112nm,0.1s						
CEY	**Cerknica**	**1.20**	**122**	*e*Pg	**Pn**	**13 41 19.8**	**+0.4**
CEY				*e*Sg	**Sb**	**13 41 35.6**	**+0.5**
VNDS	**Vrh nad Dolski**	**1.23**	**103**	*i* Pg	**Pg**	**13 41 18.2**	**-1.4**
VNDS				*e*Sg	**Sn**	**13 41 37.7**	**+0.8**
VNDS				IAML		13 41 40.2	
	comp=Z,59nm,0.2s						
WTTA	**Wattenberg**	**1.27**	**314**	*e*Pg	**Pg**	**13 41 19.5**	**-0.7**
	comp=Z,30nm,0.2s,SNR=32						
WTTA				*e*Sg	**Sg**	**13 41 36.3**	**-0.3**
	comp=Z,39nm,0.3s						
WTTA	**Wattenberg**	**1.27**	**314**	*e*Pn	**Pg**	**13 41 19.6**	**-0.7**
WTTA				*e*Sg	**Sg**	**13 41 36.1**	**-0.5**
KNDS	**Knezji Dol**	**1.31**	**131**	*i* Pg	**Pn**	**13 41 19.2**	**-1.7**
KNDS				*e*Sg	**Sn**	**13 41 40.9**	**+2.2**
KNDS				IAML		13 41 47.2	
	comp=Z,57nm,0.2s						
WATA	**Walderalm**	**1.35**	**315**	*e*Pg	**Pn**	**13 41 21.1**	**-0.4**
	comp=Z,13nm,0.2s,SNR=29						
WATA				*i* Sg	**Sb**	**13 41 39.5**	**+0.2**
	comp=Z,37nm,0.2s						
RJOB	**Jochberg**	**1.35**	**355**	*e*Pn	**Pn**	**13 41 21.0**	**-0.5**
RJOB				*e*Sg	**Sn**	**13 41 41.1**	**+1.3**
BIOA	**Bad Ischl, Aus**	**1.38**	**19**	Pg	**Pn**	**13 41 21.5**	**-0.3**
	comp=Z,15nm,0.2s,SNR=45						
BIOA				*e*Sg	**Sb**	**13 41 40.2**	**+0.1**
	comp=Z,219nm,0.5s						
ZAVS	**Zavodnje**	**1.42**	**88**	*i* Pg	**Pn**	**13 41 21.6**	**-0.8**
ZAVS				*e*Sg	**Sg**	**13 41 42.8**	**+1.2**
ZAVS				IAML		13 41 47.7	
	comp=Z,60nm,0.2s						
VISS	**Visnje**	**1.43**	**114**	*i* Pg	**Pn**	**13 41 22.0**	**-0.5**
VISS				*e*Sg	**Sg**	**13 41 43.5**	**+1.8**
VISS				IAML		13 41 45.3	
	comp=Z,119nm,0.4s						
PDKS	**Podkum**	**1.44**	**103**	*e*Pg	**Pn**	**13 41 22.2**	**-0.5**
PDKS				IAML		13 41 48.0	
	comp=Z,69nm,0.2s						
SOKA	**Soboth**	**1.45**	**78**	*e*Pg	**Pn**	**13 41 22.5**	**-0.4**
	comp=Z,4.6nm,0.2s,SNR=25						
SOKA				*e*Sg	**Sg**	**13 41 42.8**	**+0.3**
	comp=Z,28nm,0.3s						
SQTA	**Sankt Quirin**	**1.47**	**305**	*e*Pg	**Pn**	**13 41 23.3**	**+0.2**
	comp=Z,27nm,0.2s,SNR=29						
SQTA				*e*Sg	**Sg**	**13 41 43.4**	**+0.2**
	comp=Z,79nm,0.3s						
PERS	**Pernice**	**1.50**	**80**	*i* Pg	**Pn**	**13 41 23.1**	**-0.4**
PERS				*e*Sg	**Sn**	**13 41 43.2**	**-0.2**
PERS				IAML		13 41 48.5	
	comp=Z,52nm,0.2s						
GBRS	**Gornja Briga**	**1.54**	**123**	*e*Pg	**Pn**	**13 41 24.2**	**+0.1**
GBRS				*e*Sg	**Sg**	**13 41 46.4**	**+0.9**
GBRS				IAML		13 41 50.3	
	comp=Z,48nm,0.1s						
MOTA	**Moosalm**	**1.60**	**307**	*i* Pg	**Pn**	**13 41 25.7**	**+0.7**
	comp=Z,30nm,0.2s,SNR=17						
MOTA				*e*Sg	**Sg**	**13 41 47.4**	**+0.1**
	comp=Z,66nm,0.2s						
FETA	**Feichten**	**1.67**	**293**	*e*Pg	**Pb**	**13 41 26.8**	**-0.4**
	comp=Z,7.8nm,0.2s,SNR=14						
FETA				*e*Sg	**Sg**	**13 41 49.8**	**+0.2**
	comp=Z,24nm,0.4s						
PART	**Garmisch-Parte**	**1.69**	**312**	*e*Sg	**Sg**	**13 41 53.4**	**+3.2**
LEGS	**Legarje**	**1.69**	**104**	*i* Pg	**Pn**	**13 41 26.0**	**-0.1**
LEGS				*e*Sg	**Sg**	**13 41 50.3**	**+0.2**
MOA	**Molln**	**1.70**	**31**	*e*Pg	**Pb**	**13 41 27.9**	**+0.2**
	comp=Z,5.3nm,0.1s,SNR=24						
MOA				*e*Sg	**Sg**	**13 41 51.3**	**+0.6**
	comp=Z,47nm,0.3s						
MOA	**Molln**	**1.70**	**31**	*e*Pn	**Pb**	**13 41 28.3**	**+0.5**
MOA				*e*Sg	**Sg**	**13 41 52.0**	**+1.3**
MABI	**Malga Bissina**	**1.74**	**260**	AML	AML		
	comp=N,357µm,0.5s						
MABI				AML	AML		
	comp=E,1060µm,1.1s						
CRES	**Cresnjevec Ost**	**1.82**	**107**	*e*Pn	**Pn**	**13 41 28.0**	**+0.2**
CRES				*e*Sn	**Sn**	**13 41 51.8**	**+0.6**
CRES	**Cresnjevec Ost**	**1.82**	**107**	*i* Pg	**Pn**	**13 41 28.2**	**+0.3**
CRES				*e*Sg	**Sb**	**13 41 53.3**	**+0.6**
CRES				IAML		13 42 02.7	
	comp=Z,32nm,0.3s						
BOJS	**Bojanci**	**1.82**	**118**	*i* Pg	**Pn**	**13 41 28.5**	**+0.6**
BOJS				Sg	**Sb**	**13 41 53.4**	**+0.6**
BOJS				IAML		13 42 01.1	
	comp=Z,49nm,0.3s						
RETA	**Reutte**	**1.87**	**307**	*e*Pg	**Pb**	**13 41 31.3**	**+0.7**
	comp=Z,11nm,0.2s,SNR=38						
RETA				*e*Sg	**Sg**	**13 41 55.5**	**-0.6**
	comp=Z,50nm,0.3s						
GOLS	**Golise**	**1.88**	**101**	*i* Pg	**Pn**	**13 41 29.7**	**+1.0**
GOLS				*e*Sg	**Sb**	**13 41 55.5**	**+1.0**
GOLS				IAML		13 42 02.8	
	comp=Z,26nm,0.2s						
ARSA	**Arzberg**	**1.95**	**63**	⇑*i*Pn	**Pn**	**13 41 30.1**	**+0.4**
ARSA				*e*Sn	**Sn**	**13 41 53.2**	**-1.3**
ARSA	**Arzberg**	**1.95**	**63**	*i* Pn	**Pn**	**13 41 30.3**	**+0.6**
	comp=Z,10nm,0.3s,SNR=17						
ARSA				*e*Sg	**Sg**	**13 41 59.2**	**+0.6**
	comp=Z,19nm,0.4s						
ARSA	**Arzberg**	**1.95**	**63**	*e*Pn	**Pn**	**13 41 30.3**	**+0.6**
ARSA				*e*Sg	**Sg**	**13 41 58.6**	**0.0**
BERNI	**Berninapass**	**2.04**	**272**	AML	AML		
	comp=E,116µm,1.0s						
BERNI				AML	AML		
	comp=N,160µm,0.7s						
ZONE	**Zone**	**2.09**	**253**	AML	AML		
	comp=E,238µm,1.2s						
ZONE				AML	AML		
	comp=N,336µm,0.7s						
ZONE				AML	AML		
	comp=N,288µm,0.5s						
ZONE				AML	AML		
	comp=N,134µm,0.8s						
ZONE				AML	AML		
	comp=E,221µm,0.4s						
ZONE				AML	AML		
	comp=N,288µm,1.5s						
ZONE				AML	AML		
	comp=E,109µm,0.8s						
ZONE				AML	AML		
	comp=N,134µm,1.2s						
OBER	**Oberstdorf**	**2.10**	**300**	*e*Pn	**Pb**	**13 41 35.0**	**+0.5**
OBER				*e*Sg	**Sg**	**13 42 04.9**	**+1.5**
FUR	**Furstenfeldbru**	**2.12**	**328**	*e*Sg	**Sg**	**13 42 04.6**	**+0.6**
DAVA	**Damuels**	**2.31**	**294**	*e*Pg	**Pb**	**13 41 37.8**	**-0.3**
	comp=N,8.6nm,0.2s,SNR=14						
DAVA				*e*Sg	**Sg**	**13 42 10.7**	**+0.7**
	comp=N,169nm,0.5s						
DAVA	**Damuels**	**2.31**	**294**	*e*Pn	**Pb**	**13 41 37.8**	**-0.3**
DAVA				*e*Sg	**Sg**	**13 42 12.1**	**+2.1**
UBR	**Ueberruh**	**2.35**	**304**	*e*Pn	**Pb**	**13 41 38.0**	**-0.8**
UBR				*e*Sg	**Sg**	**13 42 11.3**	**0.0**
CONA	**Conrad Observa**	**2.50**	**51**	*i* Pn	**Pn**	**13 41 38.4**	**+1.1**
	comp=N,4.2nm,0.4s,SNR=11						
CONA				*e*Sn	**Sn**	**13 42 09.0**	**+0.9**
	comp=N,29nm,0.6s						
GEC2	**GERESS Array S**	**2.50**	**11**	*e*Pn	**Pn**	**13 41 38.5**	**+1.2**
CKRC	**Cesky Krumlov**	**2.59**	**20**	*e*SN	**Sn**	**13 42 12.2**	**+1.9**
RONA	**Rosalia, Austr**	**2.62**	**59**	*e*Pn	**Pn**	**13 41 39.5**	**+0.6**
	comp=N,3.8nm,0.2s						
RONA				Sn	**Sn**	**13 42 12.1**	**+1.0**
	comp=N,4.0nm,0.2s						
BEHE	**Becsehely**	**2.63**	**87**	*e*Pn	**Pn**	**13 41 40.3**	**+1.3**
BEHE				*e*Sn	**Sn**	**13 42 11.5**	**+0.3**
WET	**Wettzell**	**2.75**	**359**	*e*Pn	**Pn**	**13 41 41.7**	**+1.0**
KHC	**Kasperske Hory**	**2.77**	**8**	*e*PN	**Pn**	**13 41 41.7**	**+0.7**
KHC				*e*PG	**Pg**	**13 41 51.0**	**+2.0**
KHC				*e*SN	**Sn**	**13 42 16.4**	**+1.6**
KHC				*e*SG	**Sg**	**13 42 24.7**	**-0.2**
	comp=N,47nm,0.6s						
NORI	**Noerdlinger Ri**	**2.82**	**327**	*e*Pn	**Pn**	**13 41 43.4**	**+1.8**
WILA	**Wila**	**2.97**	**292**	*e*Pn	**Pn**	**13 41 46.3**	**+2.5**
A051A	**Mrakovica**	**3.08**	**115**	*e*Pn	**Pn**	**13 41 46.5**	**+1.2**
A051A				*e*Sn	**Sn**	**13 42 22.8**	**+0.3**
GUT	**Gutenstein**	**3.12**	**304**	P	**Pn**	**13 41 47.8**	**+2.1**
GUT	**Gutenstein**	**3.12**	**304**	S	**Sn**	**13 42 26.4**	**+3.0**
A050A	**Klekovaca**	**3.15**	**126**	*e*Pn	**Pn**	**13 41 47.3**	**+1.1**
A050A				*e*Sn	**Sn**	**13 42 25.6**	**+1.4**
ZVC	**Zvikov**	**3.16**	**15**	*e*PN	**Pn**	**13 41 47.7**	**+1.5**
ZVC				*e*SG	**Sg**	**13 42 36.2**	**-1.1**
	comp=N,28nm,0.5s						
SLE	**Schleitheim**	**3.36**	**296**	P	**Pn**	**13 41 51.0**	**+2.0**
SLE	**Schleitheim**	**3.36**	**296**	S	**Sn**	**13 42 31.3**	**+2.1**
SLE	**Schleitheim**	**3.36**	**296**	*e*Pn	**Pn**	**13 41 50.7**	**+1.6**
TREC	**Trest**	**3.36**	**29**	*e*PN	**Pn**	**13 41 50.2**	**+1.1**
BLY	**Banja Luka**	**3.38**	**118**	*e*Pn	**Pn**	**13 41 51.2**	**+1.9**
BLY				*e*Sn	**Sn**	**13 42 29.9**	**+0.1**
ROTZ	**Rotzenmuhle**	**3.42**	**352**	*e*Pn	**Pn**	**13 41 50.1**	**+0.3**
RNCA	**Ronca, Sant'Ol**	**3.42**	**237**	AML	AML		

	comp=E,36µm,1.3s						
RNCA				AML	AML		
	comp=N,37µm,1.4s						
STU	**Stuttgart**	**3.49**	**314**	*e*Pn	**Pn**	**13 41 52.9**	**+2.1**
GRF	**Grafenberg Arr**	**3.50**	**341**	*e*Pn	**Pn**	**13 41 52.0**	**+1.0**
GRF				*e*Sn	**Sn**	**13 42 34.3**	**+1.5**
SULZ	**Cheisacher**	**3.52**	**291**	P	**Pn**	**13 41 53.3**	**+2.0**
KRUC	**Moravsky**	**3.53**	**40**	*e*PN	**Pn**	**13 41 50.8**	**-0.6**
KRUC				*e*SN	**Sn**	**13 42 32.7**	**-0.8**
MODS	**Modra-Piesok**	**3.53**	**54**	*e*PN	**Pn**	**13 41 52.0**	**+0.6**
MODS				*e*PG	**Pg**	**13 42 02.2**	**-1.4**
MODS				*e*SG	**Sg**	**13 42 48.8**	**-0.5**
PCP	**Piancastagn**	**3.62**	**241**	AML	AML		
	comp=E,45µm,1.3s						
PCP				AML	AML		
	comp=N,62µm,1.2s						
PCP				AML	AML		
	comp=E,42µm,1.0s						
PCP				AML	AML		
	comp=N,50µm,0.5s						
PCP				AML	AML		
	comp=N,50µm,1.5s						
PCP				AML	AML		
	comp=E,42µm,1.0s						
MANZ	**Manzenberg**	**3.64**	**351**	*e*Pn	**Pn**	**13 41 53.6**	**+0.7**
MANZ				*e*Sn	**Sn**	**13 42 36.5**	**+0.2**
BFO	**Black Forest**	**3.71**	**303**	*e*Pn	**Pn**	**13 41 55.5**	**+1.7**
BFO				*e*Sn	**Sn**	**13 42 40.2**	**+2.4**
GOPC	**GO Pecny, Ondr**	**3.73**	**18**	*e*PN	**Pn**	**13 41 55.3**	**+1.2**
BALST	**Balsthal**	**3.74**	**287**	P	**Pn**	**13 41 56.4**	**+2.1**
BALST	**Balsthal**	**3.74**	**287**	S	**Sn**	**13 42 39.6**	**+0.8**
BALST	**Balsthal**	**3.74**	**287**	*e*Pn	**Pn**	**13 41 56.2**	**+1.9**
PRU	**Pruhonice**	**3.75**	**16**	*e*SG	**Sg**	**13 42 54.3**	**-2.0**
	comp=E,39nm,0.5s						
KIZ	**Kirchzarten**	**3.79**	**296**	P	**Pn**	**13 41 56.4**	**+1.5**
VRAC	**Vranov**	**3.80**	**39**	*e*PN	**Pn**	**13 41 54.6**	**-0.5**
VRAC				*e*SN	**Sn**	**13 42 37.9**	**-2.2**
PRA	**Prague**	**3.81**	**14**	*e*SG	**Sg**	**13 42 56.5**	**-1.7**
ENDD	**Endenburg**	**3.82**	**292**	P	**Pn**	**13 41 56.8**	**+1.5**
ENDD	**Endenburg**	**3.82**	**292**	S	**Sn**	**13 42 42.0**	**+1.4**
QLNO	**Quiliano**	**3.86**	**239**	AML	AML		
	comp=N,40µm,0.7s						
QLNO				AML	AML		
	comp=E,50µm,0.5s						
QLNO				AML	AML		
	comp=N,47µm,1.1s						
QLNO				AML	AML		
	comp=E,50µm,0.5s						
OPP	**Oppenau**	**3.87**	**305**	P	**Pn**	**13 41 58.2**	**+2.1**
DIX	**Grande Dixence**	**3.88**	**267**	P	**Pn**	**13 42 00.0**	**+3.7**
DIX	**Grande Dixence**	**3.88**	**267**	S	**Sb**	**13 42 48.7**	**-3.5**
DIX	**Grande Dixence**	**3.88**	**267**	AML	AML		
	comp=E,80µm,0.7s						
DIX				AML	AML		
	comp=E,82µm,1.4s						
DIX				AML	AML		
	comp=N,82µm,1.1s						
DIX				AML	AML		
	comp=N,82µm,1.1s						
RM33	**Pellescritta (**	**3.89**	**177**	AML	AML		
	comp=E,179µm,0.8s						
RM33				AML	AML		
	comp=E,59µm,1.5s						
RM33				AML	AML		
	comp=N,56µm,0.9s						
RM33				AML	AML		
	comp=E,56µm,0.3s						
RM33				AML	AML		
	comp=N,51µm,0.3s						
RM33				AML	AML		
	comp=N,51µm,1.7s						
RM33				AML	AML		
	comp=N,161µm,0.8s						
BABA	**Baden-Baden-Ne**	**3.99**	**307**	S	**Sn**	**13 42 47.4**	**+2.6**
BABA	**Baden-Baden-Ne**	**3.99**	**307**	P	**Pn**	**13 41 59.3**	**+1.6**
VOGT	**Vogtsburg - To**	**3.99**	**297**	P	**Pn**	**13 41 59.5**	**+1.8**
VOGT	**Vogtsburg - To**	**3.99**	**297**	S	**Sn**	**13 42 48.8**	**+4.0**
BOURR	**Bourrignon**	**4.06**	**286**	P	**Pn**	**13 42 00.6**	**+1.8**
BOURR	**Bourrignon**	**4.06**	**286**	S	**Sn**	**13 42 49.5**	**+2.8**
AIGLE	**Aigle**	**4.17**	**271**	P	**Pn**	**13 42 02.9**	**+2.6**
RICC	**Richard**	**4.22**	**10**	*e*SG	**Sg**	**13 43 11.4**	**0.0**
	comp=N,24nm,0.4s						
WLS	**Welschbruch**	**4.32**	**300**	P	**Pn**	**13 42 04.1**	**+1.8**
MOX	**Moxa**	**4.35**	**349**	*e*Pn	**Pn**	**13 42 03.1**	**+0.4**
MOX				*e*Sn	**Sn**	**13 42 53.0**	**-0.7**
ECH	**Echery**	**4.36**	**297**	P	**Pn**	**13 42 04.4**	**+1.6**
ECH				S	**Sn**	**13 42 56.5**	**+2.6**
CDF	**Champ du Feu**	**4.37**	**300**	*e*P	**Pn**	**13 42 04.3**	**+1.4**
CDF	**Champ du Feu**	**4.37**	**300**	*e*Pg	**Pb**	**13 42 16.3**	**+3.2**
CDF				*e*Sn	**Sn**	**13 42 48.6**	**-5.6**
	comp=N,1.3nm,0.3s						
CDF				*e*Sg	**Sg**	**13 43 12.1**	**-4.0**
	comp=N,5.2nm,0.3s						
LEMB	**Lembach**	**4.40**	**309**	P	**Pn**	**13 42 05.3**	**+1.9**
LEMB				S	**Sn**	**13 42 57.7**	**+2.8**
HINF	**Hinteralfeld**	**4.42**	**291**	*e*P	**Pn**	**13 42 05.0**	**+1.4**
HINF				*e*Sn	**Sn**	**13 42 55.2**	**-0.2**
	comp=N,14nm,0.4s						
CHMF	**Charmoille**	**4.42**	**283**	P	**Pn**	**13 42 05.2**	**+1.5**
CHMF				S	**Sn**	**13 42 57.2**	**+1.6**
LPL	**La Plagne**	**4.44**	**261**	*e*P	**Pn**	**13 42 04.7**	**+0.6**
LPL				*e*Sn	**Sn**	**13 42 51.3**	**-4.9**
VYHS	**Vyhne**	**4.50**	**60**	*e*PN	**Pn**	**13 42 04.5**	**-0.2**
VYHS				*e*PG	**Pg**	**13 42 21.3**	**-0.8**
VYHS				*e*SN	**Sn**	**13 42 57.2**	**-0.1**
VYHS				*e*SG	**Sg**	**13 43 25.8**	**+5.5**
BRANT	**Les Verrieres**	**4.51**	**279**	P	**Pn**	**13 42 07.0**	**+2.1**
BRANT	**Les Verrieres**	**4.51**	**279**	S	**Sn**	**13 42 58.4**	**+0.6**
RONF	**Ronchamp**	**4.52**	**289**	P	**Pn**	**13 42 06.6**	**+1.6**
RONF				S	**Sn**	**13 43 01.0**	**+3.1**
BRG	**Berggiesshubel**	**4.53**	**8**	Pn	**Pn**	**13 42 05.9**	**+0.8**
BRG				Pg	**Pg**	**13 42 21.3**	**-1.4**
BRG				Sn	**Sn**	**13 42 58.5**	**+0.4**
BRG				Sg	**Sg**	**13 43 16.8**	**-4.6**
BRG				Amp		13 43 25.4	
	comp=Z,24nm,0.7s						
MORC	**Moravsky Berou**	**4.56**	**40**	*e*PN	**Pn**	**13 42 05.5**	**-0.1**
MORC				*e*SN	**Sn**	**13 42 54.4**	**-4.6**
MBDF	**Montbardon**	**4.66**	**251**	*e*P	**Pn**	**13 42 07.5**	**+0.4**
MBDF				*e*Sn	**Sn**	**13 42 54.7**	**-6.9**
	comp=Z,1.7nm,0.3s						
CABF	**La Chapelle**	**4.76**	**275**	*e*P	**Pn**	**13 42 10.2**	**+1.8**
CABF				*e*Sn	**Sn**	**13 43 02.4**	**-1.5**
	comp=Z,3.9nm,0.4s						
XAFF	**Xaffevillers**	**4.76**	**297**	P	**Pn**	**13 42 10.9**	**+2.6**
XAFF				S	**Sn**	**13 43 05.0**	**+1.2**
PGF	**Pioggiola**	**4.78**	**218**	*e*Pn	**Pn**	**13 42 07.6**	**-1.1**
PGF				*e*Sn	**Sn**	**13 42 59.4**	**-5.1**
	comp=Z,2.0nm,0.2s						
HAU	**Haudompre**	**4.80**	**292**	*e*P	**Pn**	**13 42 10.4**	**+1.6**
HAU				*e*Sn	**Sn**	**13 43 01.6**	**-3.1**
	comp=Z,56nm,0.7s						
HAPS	**Han Pijesak,Bl**	**4.81**	**117**	*e*Pn	**Pn**	**13 42 10.2**	**+1.1**
STON	**Ston**	**4.87**	**135**	*e*Pn	**Pn**	**13 42 11.9**	**+2.1**
STON				*e*Sn	**Sn**	**13 43 06.8**	**+0.3**
RIVEL	**MONT RIVEL**	**4.88**	**277**	P	**Pn**	**13 42 11.7**	**+1.7**
RIVEL				S	**Sn**	**13 43 06.8**	**+0.1**
TNS	**Taunus Mts**	**4.88**	**323**	*e*Pn	**Pn**	**13 42 12.3**	**+2.4**
TNS				*e*Sn	**Sn**	**13 43 07.6**	**+0.8**
CLL	**Collm**	**4.92**	**0**	*i* Pn	**Pn**	**13 42 11.8**	**+1.4**
CLL				*e*Pg	**Pg**	**13 42 30.0**	**-0.1**
CLL				*e*x	x	13 42 35.0	
CLL				*e*Sg	**Sg**	**13 43 32.0**	**-1.8**
	comp=Z,32nm,0.8s						
CALF	**Calern**	**5.03**	**241**	P	**Pn**	**13 42 13.3**	**+1.2**
CALF				S	**Sn**	**13 43 10.3**	**-0.4**
ABH	**Alteburg**	**5.04**	**316**	P	**Pn**	**13 42 14.4**	**+2.3**
ABH	**Alteburg**	**5.04**	**316**	S	**Sn**	**13 43 11.7**	**+1.0**
ETNF	**Estrennes**	**5.07**	**294**	P	**Pn**	**13 42 15.6**	**+3.1**
SALSA	**La sagne**	**5.11**	**243**	P	**Pn**	**13 42 14.8**	**+1.6**
ORIF	**Oris-en-Rattie**	**5.19**	**256**	*e*P	**Pn**	**13 42 16.9**	**+2.7**
ORIF	**Oris-en-Rattie**	**5.19**	**256**	P	**Pn**	**13 42 18.5**	**+4.2**
TREB	**Trebinje**	**5.32**	**132**	*e*Pn	**Pn**	**13 42 16.5**	**+0.6**
MANO	**Manonville**	**5.36**	**300**	P	**Pn**	**13 42 19.3**	**+2.9**
PAGF	**Fort de Pagny**	**5.37**	**296**	*e*P	**Pn**	**13 42 19.3**	**+2.6**
PAGF				*e*Sn	**Sn**	**13 43 12.0**	**-6.8**
	comp=Z,3.2nm,0.5s						
LMR	**La Mourre**	**5.52**	**239**	*e*P	**Pn**	**13 42 18.4**	**-0.3**
LMR				*e*Sn	**Sn**	**13 43 15.4**	**-7.1**
	comp=Z,6.9nm,0.6s						
NEUF	**Neufchef**	**5.52**	**305**	P	**Pn**	**13 42 22.7**	**+4.0**
WLF	**Walferdange**	**5.63**	**308**	*e*Pn	**Pn**	**13 42 23.6**	**+3.5**
SFTF	**Sexfontaines**	**5.70**	**291**	*e*P	**Pn**	**13 42 24.7**	**+3.6**
SFTF				*e*Sn	**Sn**	**13 43 20.0**	**-6.8**
	comp=Z,4.7nm,0.4s						
SMRF	**Simiane la Rot**	**5.76**	**248**	*e*P	**Pn**	**13 42 24.3**	**+2.2**
SMRF				*e*Sn	**Sn**	**13 43 21.1**	**-7.4**
	comp=Z,2.3nm,0.4s						
SAVF	**Savonnieres en**	**5.76**	**296**	*e*P	**Pn**	**13 42 24.9**	**+2.8**
SAVF	**Savonnieres en**	**5.76**	**296**	*e*P	**Pn**	**13 42 25.1**	**+3.0**
SAVF				*e*Sn	**Sn**	**13 43 23.2**	**-5.3**
	comp=Z,1.2nm,0.3s						
MEZF	**Maizieres J'vi**	**5.77**	**294**	*e*P	**Pn**	**13 42 25.0**	**+2.8**
MEZF				*e*Sn	**Sn**	**13 43 22.3**	**-6.4**
	comp=Z,2.0nm,0.3s						
VIVF	**Saint-Julien-l**	**6.02**	**258**	*e*P	**Pn**	**13 42 26.5**	**+0.9**
VIVF				*e*Sn	**Sn**	**13 43 29.8**	**-5.1**
	comp=Z,1.3nm,0.3s						
SMF	**Signal de Mont**	**6.31**	**276**	*e*P	**Pn**	**13 42 30.7**	**+1.1**
SMF				*e*Sn	**Sn**	**13 43 35.5**	**-6.4**
	comp=Z,7.6nm,0.6s						
LOR	**Lormes**	**6.32**	**281**	*e*P	**Pn**	**13 42 30.8**	**+1.1**
	baz=96						
LOR				*e*Sn	**Sn**	**13 43 34.8**	**-7.3**
	comp=Z,41nm,1.3s						
SSF	**Saint Saulge**	**6.54**	**279**	*e*P	**Pn**	**13 42 34.9**	**+2.1**
SSF				*e*Sn	**Sn**	**13 43 41.4**	**-6.3**
	comp=Z,3.6nm,0.6s						
GIVF	**Givet**	**6.59**	**307**	*e*P	**Pn**	**13 42 36.8**	**+3.5**
GIVF				*e*Sn	**Sn**	**13 43 41.2**	**-7.5**
	comp=Z,2.1nm,0.3s						
AVF	**Avril sur Loir**	**6.64**	**277**	*e*P	**Pn**	**13 42 35.5**	**+1.4**
AVF				*e*Sn	**Sn**	**13 43 44.6**	**-5.5**
	comp=Z,1.5nm,0.2s						
LASF	**Ste Croix**	**6.84**	**253**	*e*Pn	**Pn**	**13 42 33.1**	**-3.8**
LASF				*e*Sn	Sn	13 43 46.1	-9.0
	comp=Z,4.3nm,0.4s						
BAIF	**Baives**	**6.91**	**305**	*e*P	**Pn**	**13 42 41.2**	**+3.4**
BAIF				*e*Sn	**Sn**	**13 43 48.5**	**-8.2**
	comp=Z,0.9nm,0.3s						
BGF	**Bois d'Agland**	**7.00**	**275**	*e*P	**Pn**	**13 42 39.7**	**+0.7**
BGF				*e*Sn	**Sn**	**13 43 52.0**	**-6.9**
	comp=Z,12nm,0.5s						
TCF	**Toulx Ste Croi**	**7.45**	**273**	*e*P	**Pn**	**13 42 46.9**	**+1.6**
TCF				*e*Sn	**Sn**	**13 44 01.5**	**-8.6**
	comp=Z,1.6nm,0.3s						
CAF	**Calviac**	**7.78**	**263**	*e*P	**Pn**	**13 42 51.5**	**+1.7**
RJF	**Les Rejaudoux**	**8.07**	**266**	*e*P	**Pn**	**13 42 57.3**	**+3.5**
MFF	**Saint Martin d**	**9.06**	**276**	*e*P	**Pn**	**13 43 08.7**	**+1.5**
MFF	**Saint Martin d**	**9.06**	**276**	*e*P	**Pn**	**13 43 08.8**	**+1.5**
MFF				*e*Sn	Sn	13 44 40.2	-9.3
	comp=Z,0.1nm,0.2s						
LDF	**La Druitiere**	**9.14**	**289**	*e*P	**Pn**	**13 43 10.7**	**+2.4**
FLN	**La Foliniere**	**9.40**	**289**	*e*P	**Pn**	**13 43 14.1**	**+2.2**
GRR	**Gorron**	**9.60**	**287**	*e*P	**Pn**	**13 43 17.4**	**+2.8**

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*NEIC **16** 14:05:31.7±0.7, 41°.094N±0°.008×111°.692W±0°.009, h1^{km}±1^{km}, Error ellipse: s-maj=1.2km s-min=0.9km az=218.0*

UUSS 16 14:05:32.3±0.7**, 41°.097N**±0°.007×**111°.69W**±0°.01**, h-0**^{km}±1^{km}**, ML2.2**/13**, ML2.3**/84(NEIC)**, Error ellipse: s-maj=1.3km s-min=0.9km az=57.0, Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FPU	**Francis Peak**	**0.13**	**238**		Pg	14 05 35.5	+0.7
WBC	**Weber Canyon**	**0.16**	**285**		Pg	14 05 35.9	+0.4
WBC					Sg	14 05 38.6	+1.0
TCUT	**Toone Canyon**	**0.21**	**84**		Pg	14 05 36.8	+0.4
TCUT					Sg	14 05 40.7	+1.5
TCUT	**Toone Canyon**	**0.21**	**84**		Pg	14 05 36.9	+0.5
TCUT	**Toone Canyon**	**0.21**	**84**	IAML		14 05 40.8	
	comp=E,5µm,0.5s						
TCUT				IAML		14 05 42.5	
	comp=N,4µm,0.4s						
N16A	**Rees Ranch, Co**	**0.28**	**137**		Pg	14 05 38.4	+0.6
RBU	**Red Butte Cany**	**0.33**	**196**		Sg	14 05 44.1	+1.3
RBU	**Red Butte Cany**	**0.33**	**196**		Pg	14 05 38.7	+0.1
HRU	**Hogsback Ridge**	**0.34**	**205**		Pg	14 05 39.1	+0.2
CTU	**Camp Tracy**	**0.41**	**186**		Pg	14 05 40.3	+0.2
NAIU	**Northern Antel**	**0.41**	**259**		Pg	14 05 40.5	+0.2
MHD	**Mile High Driv**	**0.44**	**191**		Pg	14 05 41.0	+0.2
SAIU	**Southern Antel**	**0.44**	**237**		Pg	14 05 41.0	+0.2
RCJ	**Ross Creek**	**0.48**	**156**		Pg	14 05 41.9	+0.4
HWUT	**Hardware Ranch**	**0.52**	**10**		Pg	14 05 42.1	-0.2
HWUT				IAML		14 05 50.0	
	comp=N,261nm,0.4s						
HWUT				IAML		14 05 50.9	
	comp=N,246nm,0.8s						
GMU	**Granite Mounta**	**0.52**	**186**		Pg	14 05 42.6	+0.3
JLU	**Jordanelle**	**0.53**	**160**		Pg	14 05 42.3	-0.1
HLJ	**Hailstone**	**0.53**	**155**		Pg	14 05 43.0	+0.5
NOQ	**North Oquirrh**	**0.55**	**216**		Pg	14 05 43.0	+0.2
WVUT	**Wellsville**	**0.55**	**339**		Pg	14 05 43.2	+0.3
HTU	**Hoyt Peak**	**0.55**	**140**		Pg	14 05 43.3	+0.4
LHUT	**Little Humpy P**	**0.56**	**111**		Pg	14 05 44.0	+0.8
LTU	**Little Mountai**	**0.65**	**320**		Pg	14 05 45.0	+0.3
SNUT	**Stansbury Nort**	**0.65**	**251**		Pg	14 05 45.3	+0.4
WTU	**Western Traver**	**0.67**	**197**		Pg	14 05 45.4	+0.2
DAU	**Daniels Canyon**	**0.76**	**154**		Pg	14 05 47.2	+0.4
BSUT	**Blindstream Ca**	**0.90**	**128**		Pg	14 05 49.1	-0.5
MLI	**Malad Range**	**0.98**	**341**		Pg	14 05 51.1	-0.1
BGU	**Big Grassy Mou**	**1.03**	**261**		Pg	14 05 51.7	-0.4
BGU				IAML		14 06 07.4	
	comp=N,58nm,0.2s						
BGU				IAML		14 06 07.7	
	comp=E,65nm,0.5s						
HVU	**Hansel Valley**	**1.06**	**310**		Pg	14 05 52.3	-0.4
HVU				IAML		14 06 09.2	
	comp=N,122nm,0.3s						
HVU				IAML		14 06 12.5	
	comp=E,56nm,0.4s						
MPU	**Maple Canyon**	**1.08**	**178**		Pg	14 05 53.0	-0.1
DUG	**Dugway, Tooele**	**1.24**	**224**		Pg	14 05 55.2	-0.9
DUG				IAML		14 06 14.8	
	comp=E,52nm,0.4s						
DUG				IAML		14 06 18.1	
	comp=E,32nm,0.7s						
AHID	**Auburn Hatcher**	**1.73**	**15**		Pn	14 06 03.5	-0.3
AHID				IAML		14 06 29.6	
	comp=E,56nm,0.8s						
TMUT	**Trail Mountain**	**1.84**	**168**		Pn	14 06 04.8	-0.6
TMUT				IAML		14 06 37.5	
	comp=E,14nm,0.7s						
SRU	**San Rafael Swe**	**2.18**	**155**	IAML		14 06 45.2	
	comp=N,9.5nm,0.4s						
SRU				IAML		14 06 46.1	
	comp=E,11nm,0.6s						
BW06	**Boulder Array**	**2.31**	**43**	IAML		14 06 44.8	
	comp=E,14nm,0.5s						
BW06				IAML		14 06 44.8	
	comp=E,14nm,0.6s						
TPAW	**Teton Pass**	**2.45**	**13**	IAML		14 06 50.6	
	comp=E,16nm,0.5s						
SNOW	**Snow King Moun**	**2.46**	**16**	IAML		14 06 55.3	
	comp=E,16nm,0.7s						
SNOW				IAML		14 06 57.5	
	comp=E,19nm,0.8s						
MVU	**Marysvale**	**2.62**	**189**	IAML		14 07 04.7	
	comp=E,6.3nm,1.2s						
LOHW	**Long Hollow**	**2.64**	**17**	IAML		14 06 58.4	
	comp=E,8.7nm,1.4s						
SPR3	**Spring Creek 3**	**2.92**	**225**	IAML		14 07 13.6	
	comp=N,5.6nm,1.0s						
PSUT	**Pine Spring**	**3.05**	**214**	IAML		14 07 11.8	
	comp=E,6.3nm,0.8s						
PSUT				IAML		14 07 13.6	
	comp=N,7.6nm,0.7s						
HMU	**Henry Mountain**	**3.24**	**167**	IAML		14 07 19.7	
	comp=N,7.4nm,0.5s						
HMU				IAML		14 07 20.9	
	comp=E,9.5nm,0.6s						
PV21	**Cone Mtn., Par**	**3.28**	**140**	IAML		14 07 18.8	
	comp=N,15nm,1.0s						
PV19	**Morning Glory**	**3.48**	**142**	IAML		14 07 22.4	
	comp=E,11nm,0.7s						
PV16	**Nyswonger Mesa**	**3.51**	**142**	IAML		14 07 30.2	
	comp=E,12nm,0.8s						
PV17	**East Wray Mesa**	**3.52**	**142**	IAML		14 07 25.5	
	comp=E,6.6nm,0.8s						
PV17				IAML		14 07 33.9	
	comp=N,10nm,0.6s						
PV18	**Skein Mesa, Pa**	**3.56**	**142**	IAML		14 07 29.6	
	comp=N,10nm,0.8s						
PV18				IAML		14 07 31.7	
	comp=E,12nm,0.6s						
PV03	**Paradox Valley**	**3.59**	**141**	IAML		14 07 34.4	
	comp=N,6.9nm,0.8s						
PV03				IAML		14 07 36.2	
	comp=E,6.7nm,0.8s						
PV13	**Radium Mtn., P**	**3.68**	**142**	IAML		14 07 34.4	
	comp=E,10nm,1.6s						
PV13				IAML		14 07 36.7	
	comp=N,9.3nm,2.5s						
YHL	**Hebgen Lake**	**3.77**	**6**	IAML		14 07 00.8	
	comp=E,8.2nm,0.1s						
PV01	**Paradox Valley**	**3.82**	**140**	IAML		14 07 34.7	
	comp=E,8.1nm,2.1s						
PV01				IAML		14 07 37.0	
	comp=N,6.0nm,1.6s						

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*IDC **16** 14:19:15.6±3.3, 48°.25N×146°.43E, h484^{km}±37^{km}, mb2.8/8, mbtmp3.7/11, Error ellipse: s-maj=30.9km s-min=15.5km az=92.0*

ISC 16 14:19:16.8±1.0**, 48°.2N**±0°.2×**146°.4E**±0°.1**, h500**^{km}**, n12,** σ**0ˢ.49**/12**, mb3.2**/8**, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLR	**Kul'dur**	**9.70**	**281**	P	**P**	**14 21 30.8**	**-0.1**
	3.0nm,0.5s,baz=90,slow=10,SNR=10						
USRK	**Ussuriysk Ar.**	**10.73**	**253**	P	**P**	**14 21 41.0**	**-0.8**
	6.6nm,0.7s,baz=66,slow=11,SNR=13						
KSRS	**Korea Array**	**17.23**	**238**	P	**P**	**14 22 49.8**	**-0.2**
	0.9nm,0.8s,baz=44,slow=12,SNR=1.9						
MKAR	**Makanchi Array**	**42.16**	**293**	P	**P**	**14 26 25.0**	**+0.4**
	0.2nm,0.5s,baz=69,slow=7.1,SNR=2.2						
	0.2nm,0.5s						
YKA	**Yellowknife Ar**	**52.43**	**35**	P	**P**	**14 27 41.1**	**-0.6**
	0.8nm,0.9s,baz=309,slow=7.5,SNR=2.7						
	0.8nm,0.9s						
FINES	**FINESS Array B**	**60.65**	**332**	P	**P**	**14 28 38.3**	**0.0**
	0.7nm,0.5s,baz=35,slow=7.0,SNR=7.8						
	0.7nm,0.5s						
NB2	**NORSAR Subarra**	**65.24**	**338**	P	**P**	**14 29 08.1**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**65.24**	**338**	P	**P**	**14 29 08.2**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=31,slow=6.7,SNR=5.6						
	comp=Z,0.3nm,0.5s						
HFS	**Hagfors**	**65.36**	**336**	P	**P**	**14 29 08.7**	**0.0**
	comp=Z,0.6nm,0.3s,baz=47,slow=6.5,SNR=6.0						
	comp=Z,0.6nm,0.3s						
WRA	**Warramunga Arr**	**68.70**	**192**	P	**P**	**14 29 29.4**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=6.7,slow=6.6,SNR=5.0						
	comp=Z,0.3nm,0.5s						
ASAR	**Alice Springs**	**72.42**	**192**	P	**P**	**14 29 52.8**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=7.2,slow=5.5,SNR=22						
	comp=Z,0.7nm,0.6s						
TXAR	**Lajitas Array**	**80.63**	**56**	P	**P**	**14 30 37.3**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=319,slow=5.0,SNR=3.7						
	comp=Z,0.2nm,0.6s						

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*TEH **16** 14:44:47.5, 28°.20N×52°.41E, h9^{km}±75^{km}*

*DSN **16** 14:44:51.8±1.6, 28°.67N×53°.65E, h10^{km}, ML3.1/7, Error ellipse: s-maj=19.5km s-min=13.7km az=31.0*

*IDC **16** 14:44:55.6±13.0, 29°.75N×52°.53E, h0^{km}, mb3.6/5, mbtmp3.6/6, ML3.2/1, MS2.8/3, Error ellipse: s-maj=268.4km s-min=33.5km az=2.0*

ISC 16 14:44:46.4±0.8**, 28°.15N**±0°.05×**52°.31E**±0°.06**, h15**^{km}**, n25,** σ**1ˢ.80**/23**, mb3.6**/5**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DSBU	**Dashti - Bushe**	**0.95**	**283**	Pg	**Pn**	**14 45 06.8**	**+1.5**
LMD1	**Lamerd**	**1.11**	**137**	Pg	**Pg**	**14 45 08.6**	**+0.9**
JHRM	**Jahrom**	**1.17**	**72**	Pg	**Pb**	**14 45 07.7**	**-0.7**
KAZ2	**Kazeron-Fars-I**	**1.56**	**339**	Pg	**Pg**	**14 45 17.0**	**+0.5**
LAR1	**LAR**	**1.89**	**104**	Pn	**Pg**	**14 45 22.5**	**-0.1**
KLNJ	**Kolanjah**	**2.92**	**348**	Pn	**Pb**	**14 45 36.2**	**-2.1**
IMEH	**Mehriz**	**3.80**	**31**	Pn	**Pn**	**14 45 47.2**	**+2.5**
SHME	**Shamm**	**4.00**	**121**	P	**Pn**	**14 45 44.3**	**-2.9**
KRBR	**Kerman**	**4.30**	**64**	Pn	**Pn**	**14 45 54.1**	**+2.5**
NAZ	**Nazwa, Dubai**	**4.35**	**136**	P	**Pn**	**14 45 54.4**	**+2.4**
MSFE	**Esma-Masafi**	**4.42**	**128**	P	**Pn**	**14 45 54.7**	**+1.7**
ICHK	**Chekchek**	**4.46**	**23**	Pn	**Pn**	**14 45 55.9**	**+2.1**
UOSS	**Minazif**	**4.73**	**132**	P	**Pn**	**14 45 58.4**	**+1.2**
HATD	**Hatta, Dubai**	**4.76**	**133**	P	**Pn**	**14 45 59.7**	**+2.0**
ASHO	**Ashiyiah**	**4.82**	**135**	P	**Pn**	**14 46 00.3**	**+1.8**
ASHO				S	**Sn**	**14 46 54.3**	**+0.3**
SOHO	**SOHO**	**5.51**	**136**	P	**Pn**	**14 46 09.1**	**+1.2**
ASF	**Jabal al Asfar**	**13.92**	**290**	LR	LR	14 54 19.3	
	comp=Z,30nm,18.8s,baz=238,slow=41						
EIL	**Elat**	**15.28**	**280**	LR	LR	14 55 18.0	
	comp=Z,32nm,19.8s,baz=58,slow=41						
BRTR	**Keskin Array B**	**19.28**	**312**	P	**Pn**	**14 49 12.2**	**+0.5**
	0.1nm,0.3s,baz=136,slow=11,SNR=6.3						
	0.9nm,0.7s						
BVAR	**Borovoye Array**	**28.23**	**23**	P	**P**	**14 50 35.3**	**-3.2**
	0.3nm,0.5s,baz=220,slow=8.8,SNR=1.7						
	0.3nm,0.5s						
ARTI	**Arti**	**28.55**	**7**	LR	LR	15 04 42.4	
	comp=Z,35nm,18.1s,slow=44						
MKAR	**Makanchi Array**	**29.94**	**43**	P	**P**	**14 50 54.7**	**+0.8**
	0.3nm,0.6s,baz=227,slow=9.7,SNR=2.0						
	0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**35.04**	**34**	P	**P**	**14 51 37.6**	**-0.8**
	0.7nm,0.4s,baz=253,slow=8.9,SNR=1.7						
	0.7nm,0.4s						
FINES	**FINESS Array B**	**37.61**	**340**	P	**P**	**14 52 00.5**	**+0.3**
	0.9nm,0.7s,baz=140,slow=10.0,SNR=4.5						
	0.9nm,0.7s						
HFS	**Hagfors**	**41.27**	**332**	P	**P**	**14 52 30.9**	**+0.1**
	0.8nm,0.7s,baz=140,slow=7.6,SNR=5.6						
	0.8nm,0.7s						

IDC 16 14:48:16.3±3.2**, 32°.88S**×**178°.33W, h0**^{km}**, mb3.4**/2**, mbtmp3.4**/3**, ML3.3**/1**, Error ellipse: s-maj=77.7km s-min=48.4km az=125.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.53**	**213**	Pn	Pn	14 49 53.5	-0.1
	0.7nm,0.3s,baz=51,slow=6.5,SNR=1.5						
URZ				Sn	Sn	14 51 05.5	-3.3
	1.5nm,0.3s,baz=305,slow=22,SNR=6.0						
	5.0nm,0.7s						
ASAR	**Alice Springs**	**42.76**	**270**	P	P	14 56 15.6	-0.2
	0.2nm,0.7s,baz=109,slow=6.9,SNR=5.8						
	0.2nm,0.7s						
WRA	**Warramunga Arr**	**43.97**	**275**	P	P	14 56 25.4	-0.1
	0.3nm,0.4s,baz=115,slow=7.6,SNR=6.6						
	0.3nm,0.4s						
FINES	**FINESS Array B**	**147.35**	**338**	PKPbc	PKPbc	15 08 00.4	-0.7
	0.8nm,0.9s,baz=61,slow=5.5,SNR=4.8						

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*IDC **16** 14:49:11.2±1.1, 13°.52N×125°.11E, h0^{km}, mb3.6/7, mbtmp3.7/8, Error ellipse: s-maj=49.0km s-min=19.4km az=65.0*

ISC 16 14:49:16.2±1.0**, 13°.4N**±0°.2×**124°.8E**±0°.1**, h33**^{km}**, n14,** σ**1ˢ.37**/9**, mb3.8**/7**, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**3.85**	**281**	Pn	**Pn**	**14 50 13.5**	**+0.3**
	174nm,0.8s,baz=295,slow=18,SNR=5.2						
TGY				Sn	**Sn**	**14 50 56.5**	**-0.9**
	35nm,0.3s,baz=357,slow=18,SNR=3.2						
WRA	**Warramunga Arr**	**34.44**	**164**	P	**P**	**14 56 01.9**	**+1.0**
	0.3nm,0.8s,baz=355,slow=7.0,SNR=2.2						
	0.3nm,0.8s						
SONM	**Songino Array**	**37.60**	**340**	P	**P**	**14 56 29.6**	**+1.8**
	0.9nm,0.6s,baz=167,slow=8.4,SNR=2.1						
	0.9nm,0.6s						
ASAR	**Alice Springs**	**37.91**	**166**	P	**P**	**14 56 30.3**	**-0.2**
	0.2nm,0.7s,baz=345,slow=6.4,SNR=9.4						
	0.2nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**40.49**	**77**	T	T	15 40 51.0	
	baz=269,slow=75						
H11S1	**WAKE ISLAND Hy**	**40.50**	**77**	T	T	15 40 53.9	
	baz=269,slow=75						
H11S2	**WAKE ISLAND Hy**	**40.51**	**77**	T	T	15 40 54.2	
	baz=269,slow=75						
H11N1	**WAKE ISLAND Hy**	**40.71**	**75**	T	T	15 41 04.7	
	baz=267,slow=75,SNR=131						
H11N2	**WAKE ISLAND Hy**	**40.72**	**75**	T	T	15 41 05.0	
	baz=267,slow=75,SNR=140						
H11N3	**WAKE ISLAND Hy**	**40.73**	**75**	T	T	15 41 05.9	
	baz=267,slow=75,SNR=136						
MKAR	**Makanchi Array**	**48.70**	**322**	P	**P**	**14 57 57.8**	**+0.4**
	0.9nm,0.8s,baz=118,slow=9.6,SNR=9.9						

	0.9nm,0.8s						
KURBB	Kurchatov Arra	52.71	325	P	P	14 58 28.8	+1.2
	1.6nm,0.6s,baz=121,slow=7.8,SNR=9.9						
	1.6nm,0.6s						
BVAR	Borovoye Array	58.30	325	P	P	14 59 07.2	-0.5
	0.3nm,0.5s,baz=120,slow=8.5,SNR=1.8						
	0.3nm,0.5s						
YKA	Yellowknife Ar	91.46	24	P	P	15 02 16.9	-2.1
	0.6nm,0.7s,baz=315,slow=3.2,SNR=2.0						
	0.6nm,0.7s						

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*NEIC **16** 14:59:16.3±2.6, 17°.5S±0°.1×178°.6W±0°.2, h559km±11km, mb4.3/15, Error ellipse: s-maj=22.1km s-min=16.5km az=65.0*

*IDC **16** 14:59:18.5±2.2, 17°.22S×178°.90W, h552km±19km, mb2.9/4, mbtmp3.8/5, Error ellipse: s-maj=143.4km s-min=27.0km az=156.0*

ISC 16 14:59:16.1±0.7**, 17°.5S**±0°.1×**178°.7W**±0°.1**, h550**km**, n24, σ1s.51**/24**, mb4.1**/12**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.11	265	P	P	15 00 33.2	+1.2
MSVF	Nonsavu	3.11	265	P	P	15 00 33.6	+1.6
	32nm,0.7s,baz=117,slow=22,SNR=16						
FUTU	Fugatoga	3.19	10	P	P	15 00 32.3	-0.1
NIUE	Niue	8.49	102	P	P	15 01 17.9	-0.9
BFZ	Birch Farm	23.54	190	P	P	15 03 43.0	-0.8
ARMA	Armidale	29.93	239	P	P	15 04 41.9	+1.7
ARMA				IAmb	IAmb	15 05 13.7	
	comp=Z,8.3nm,1.2s						
RABL	Rabaul	31.44	291	P	P	15 04 51.0	-2.2
MANU	Manus Island	36.68	291	P	P	15 05 35.3	-1.8
MANU				IAmb	IAmb	15 05 54.8	
	comp=Z,53nm,1.4s						
STKA	Stephens Creek	38.60	241	P	P	15 05 54.3	+1.7
STKA				IAmb	IAmb	15 05 55.1	
	comp=Z,31nm,1.4s						
STKA	Stephens Creek	38.60	241	P	P	15 05 54.3	+1.7
	comp=Z,1.2nm,0.7s,baz=49,slow=9.3,SNR=2.9						
	comp=Z,1.2nm,0.7s						
BBOO	Buckleboo	43.38	241	P	P	15 06 31.6	+1.1
BBOO				IAmb	IAmb	15 07 07.2	
	comp=Z,19nm,1.4s						
WB0	Warramunga Arr	44.41	259	P	P	15 06 36.8	-1.8
WB0				IAmb	IAmb	15 06 47.3	
	comp=Z,8.2nm,1.4s						
WRA	Warramunga Arr	44.44	259	P	P	15 06 37.0	-1.9
WRA	Warramunga Arr	44.44	259	P	P	15 06 39.7	+0.9
	comp=Z,0.2nm,0.3s,baz=87,slow=7.8,SNR=8.3						
	comp=Z,0.2nm,0.3s						
AS31	Alice Springs	44.64	254	P	P	15 06 41.4	+1.0
ASAR	Alice Springs	44.65	254	P	P	15 06 41.1	+0.6
ASAR	Alice Springs	44.65	254	P	P	15 06 41.7	+1.3
	comp=Z,4.6nm,0.7s,baz=89,slow=7.9,SNR=154						
	comp=Z,4.6nm,0.7s						
KNRA	Kununurra	50.26	264	P	P	15 07 21.1	-1.5
KNRA				IAmb	IAmb	15 07 57.3	
	comp=Z,8.7nm,1.2s						
PSA00	Pilbara Seismi	57.75	255	P	P	15 08 14.4	-0.9
PSA00				IAmb	IAmb	15 08 31.2	
	comp=Z,25nm,1.3s						
QSPA	South Pole Qui	72.59	180	P	P	15 09 46.1	-1.6
YSS	Yuzhno-Sakhali	72.90	333	P	P	15 09 49.5	0.0
CAST	Castle Rocks	83.25	12	P	P	15 10 46.1	+1.3
CAST				IAmb	IAmb	15 10 52.7	
	comp=Z,3.7nm,1.3s						
H19K	Roundabout Mou	84.44	9	P	P	15 10 51.5	+1.0
H19K				IAmb	IAmb	15 11 24.2	
	comp=Z,3.6nm,1.4s						
TXAR	Lajitas Array	86.00	58	P	P	15 11 01.2	+2.2
	comp=Z,0.3nm,0.7s,baz=216,slow=6.2,SNR=4.8						
	comp=Z,0.3nm,0.7s						

IDC 16 14:59:37.2±6.8**, 30°.28S**×**178°.10W, h0**km**, mb3.4**/2**, mbtmp3.4**/2**, Error ellipse: s-maj=276.0km s-min=59.6km az=155.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.03	267	P	P	15 07 38.7	-0.2
	0.3nm,0.5s,baz=105,slow=7.4,SNR=6.4						
	0.3nm,0.5s						
WRA	Warramunga Arr	44.01	272	P	P	15 07 46.5	-0.3
	0.3nm,0.4s,baz=112,slow=8.0,SNR=5.9						
	0.3nm,0.4s						
FINES	FINESS Array B	145.00	340	PKPbc	PKPbc	15 19 14.5	-0.6
	1.3nm,0.8s,baz=64,slow=3.2,SNR=4.9						

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*IDC **16** 15:22:26.1±1.7, 30°.35S×178°.10W, h0km, mb3.7/4, mbtmp3.8/5, ML3.4/1, Error ellipse: s-maj=41.8km s-min=32.4km az=54.0*

ISC 16 15:22:32.6±1.7**, 30°.4S**±0°.2×**178°.2W**±0°.3**, h46**km**, n7, σ0s.70**/7**, mb3.7**/4**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.72	205	Pn	Pn	15 24 35.9	-0.2
	0.5nm,0.3s,baz=9.5,slow=6.1,SNR=2.2						
	9.0nm,0.9s						
STKA	Stephens Creek	34.30	257	P	P	15 29 14.0	-0.7
	0.8nm,0.8s,baz=101,slow=16,SNR=2.9						
	0.8nm,0.8s						
ASAR	Alice Springs	42.93	267	P	P	15 30 27.9	+0.8
	0.5nm,0.6s,baz=104,slow=7.5,SNR=12						
	0.5nm,0.6s						
WRA	Warramunga Arr	43.92	272	P	P	15 30 35.7	+0.6
	0.6nm,0.4s,baz=112,slow=7.8,SNR=9.6						
	0.6nm,0.4s						
QSPA	South Pole Qui	59.69	180	P	P	15 32 32.5	+0.4
	1.1nm,0.7s,baz=46,slow=9.4,SNR=11						
	1.1nm,0.7s						
MKAR	Makanchi Array	117.65	310	PKP	PKiKP	15 41 12.8	-0.6
	0.4nm,0.9s,baz=120,slow=2.3,SNR=2.0						
FINES	FINESS Array B	145.11	340	PKPbc	PKPdf	15 42 04.0	-0.1
	0.9nm,0.7s,baz=64,slow=4.4,SNR=5.7						

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*NOU **16** 15:23:33.8, 31°.36S×176°.35W, h42km, ML4.4/22, Kermadec Islands Region*

*NEIC **16** 15:23:38.9±1.2, 31°.10S±0°.09×177°.9W±0°.2, h6km±4km, mb4.9/25, Error ellipse: s-maj=20.1km s-min=13.6km az=86.0*

*IDC **16** 15:23:38.2±0.6, 31°.06S×178°.00W, h0km, mb4.4/11, mbtmp4.4/15, ML4.5/4, MS3.7/12, Error ellipse: s-maj=22.0km s-min=17.4km az=85.0*

ISC 16 15:23:43.9±0.4**, 31°.16S**±0°.04×**177°.84W**±0°.08**, h46**km**, n149, σ2s.23**/138**, mb4.9**/29**, MS3.7**/9**, 5C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.89	358	P	Pn	15 24 10.4	-3.3
GLKZ				S	Sn	15 24 32.4	-3.9
RAO	Raoul Island	1.90	358		Pn	15 24 11.2	-2.6
RAO	Raoul Island	1.90	358	P	Pn	15 24 11.7	-2.2
RAO	Raoul Island	1.90	358	P	Pn	15 24 10.8	-3.0
RIZ	Raoul Island	1.91	358	P	Pn	15 24 11.3	-2.6
RIZ				S	Sn	15 24 33.3	-3.4
MXZ	Matakaoa Point	7.14	205	Pn	Pn	15 25 21.6	-4.1
MXZ	Matakaoa Point	7.14	205	P	Pn	15 25 22.7	-3.0
MXZ	Matakaoa Point	7.14	205	P	Pn	15 25 21.8	-3.9
MXZ				S	Sn	15 26 43.2	-2.3
WMGZ	Waiomatatini S	7.33	204	P	Pn	15 25 25.1	-3.2
WMGZ				S	Sn	15 26 49.1	-1.0
PKGZ	Pakihiroa	7.49	206	P	Pn	15 25 26.9	-3.7
HAZ	Te Kaha	7.51	208	P	Pn	15 25 27.6	-3.2
HAZ				S	Sn	15 26 53.3	-1.3
GRZ	Great Barrier	7.55	226	P	Pn	15 25 33.5	+2.2
PUZ	Puketiti	7.61	204	P	Pn	15 25 27.3	-4.9
PUZ				S	Sn	15 26 53.1	-4.0
KUZ	Kuaotunu	7.72	222	P	Pn	15 25 35.3	+1.6
KUZ	Kuaotunu	7.72	222	P	Pn	15 25 33.7	-0.1
RUGZ	Raukumara Rang	7.73	207	P	Pn	15 25 30.4	-3.6
RUGZ				S	Sn	15 26 56.7	-3.6
TWGZ	Tauwhareparae	7.80	205	P	Pn	15 25 31.7	-3.1
TWGZ				S	Sn	15 26 59.5	-2.4
CNGZ	Carnagh Statio	8.00	203	P	Pn	15 25 33.3	-4.2
WCZ	Waipu Caves	8.08	232	P	Pn	15 25 42.5	+3.8
TKGZ	Te Karaka	8.08	205	P	Pn	15 25 36.5	-2.1
MWZ	Matawai	8.11	207	P	Pn	15 25 34.3	-4.8
OPRZ	Ohinepanea	8.12	213	P	Pn	15 25 36.1	-3.0
URZ	Urewera	8.21	209	Pn	Pn	15 25 36.8	-3.7
	3.9nm,0.3s,baz=23,slow=4.4,SNR=15						
URZ				Sn	Sn	15 27 07.6	-4.2
	24nm,0.3s,baz=288,slow=19,SNR=22						
	8.4nm,0.3s						
URZ	Urewera	8.21	209	P	Pn	15 25 36.0	-4.4
URZ	Urewera	8.21	209	P	Pn	15 25 36.1	-4.3
OUZ	Omahuta	8.24	238	P	Pn	15 25 43.9	+3.1
OUZ	Omahuta	8.24	238	P	Pn	15 25 44.1	+3.3
RAGZ	Rawiri	8.29	207	P	Pn	15 25 37.8	-3.8
RIGZ	Rimuhau	8.35	204	P	Pn	15 25 38.4	-4.0
PRGZ	Paritu Road	8.50	203	P	Pn	15 25 40.1	-4.3
MUGZ	Murupara	8.54	210	P	Pn	15 25 39.9	-5.0
TOZ	Tahuroa Road	8.56	218	P	Pn	15 25 42.4	-2.7
RTZ	Ruatahuna	8.57	208		Pn	15 25 43.9	-1.5
SNGZ	Shannon Statio	8.57	206	P	Pn	15 25 40.9	-4.4
MHGZ	Mahia Peninsul	8.70	202	P	Pn	15 25 41.6	-5.6
BKZ	Black Stump Fm	9.24	209		Pn	15 25 49.4	-5.1
BKZ					Sn	15 27 33.6	-3.5
BKZ	Black Stump Fm	9.24	209	P	Pn	15 25 51.2	-3.3
HIZ	Hauiti	9.48	217	P	Pn	15 25 57.3	-0.5
BFZ	Birch Farm	10.64	205		Pn	15 26 16.3	+2.6
QRZ	Quartz Range	12.40	216	Pn	Pn	15 26 31.0	-6.7
QRZ	Quartz Range	12.40	216	P	Pn	15 26 36.6	-1.1
CTZ	Chatham Island	12.59	176	P	Pn	15 26 27.4	-13
CTZ	Chatham Island	12.59	176	P	Pn	15 26 37.6	-2.6
KHZ	Kahutara	13.18	209	P	Pn	15 26 42.8	-5.5
MSVF	Nonsavu	13.88	343	Pn	Pn	15 26 56.1	-2.0
	0.4nm,0.3s,baz=117,slow=8.7,SNR=3.9						
MSVF				LR	LR	15 31 26.9	
	comp=Z,356nm,18.5s,baz=183,slow=34						
	8.0nm,1.1s						
NIUE	Niue	13.99	33	P	Pn	15 26 52.7	-6.8
RPZ	Rata Peaks	15.31	212	Pn	Pn	15 27 13.6	-3.2
	1.7nm,0.3s,baz=38,slow=19,SNR=7.3						
RPZ				Sn	Sn	15 29 49.7	-15
	3.2nm,0.3s,baz=11,slow=21,SNR=10.0						
	15nm,0.8s						
RPZ	Rata Peaks	15.31	212	P	Pn	15 27 14.9	-1.9
ODZ	Otahua Downs	16.54	210	P	Pn	15 27 29.3	-3.2
JCZ	Jackson Bay	16.66	216	P	Pn	15 27 30.4	-3.7
DZM	Mont Dzumac	16.70	299		Pn	15 27 35.5	+0.7
DZM	Mont Dzumac	16.70	299	Pn	Pn	15 27 32.4	-2.3
	0.3nm,0.3s,baz=106,slow=16,SNR=5.8						
DZM				LR	LR	15 32 54.7	
	comp=Z,617nm,18.4s,baz=173,slow=34						
	4.4nm,0.8s						
DZM	Mont Dzumac	16.70	299	P	P	15 27 40.7	+4.2
RAR	Rarotonga	18.97	63	LR	LR	15 33 46.8	
	comp=Z,192nm,21.7s,baz=252,slow=32						
KOUNC	Koumac, New Ca	19.22	299	P	Pn	15 28 07.8	+2.3
ARMA	Armidale	26.20	264	P	P	15 29 17.7	+3.2
EIDS	Eidsvold	27.92	274	P	P	15 29 30.3	+0.4
EIDS				IAmb	IAmb	15 29 51.8	
	comp=Z,30nm,1.6s						
CAN	Canberra	27.97	253	P	P	15 29 31.0	+0.7
CAN				IAmb	IAmb	15 29 52.6	
	comp=Z,33nm,1.7s						
PPTF	Pamatai, Papee	28.98	69	P	P	15 29 38.5	-0.9
PPT	Papeete	28.98	69	LR	LR	15 40 52.0	
	comp=Z,74nm,18.8s,baz=266,slow=36						
HNR	Honiara	29.90	312	P	P	15 29 45.8	-1.7
TAU	Tasmania Unive	29.98	237	P	P	15 29 47.2	-0.7
TAU				IAmb	IAmb	15 29 59.0	
	comp=Z,31nm,1.2s						
TOO	Toolangi	30.80	248	P	P	15 29 55.7	+0.4
CMSA	Cobar Meteorol	31.06	260	P	P	15 29 58.3	+0.7
	comp=Z,27nm,0.8s						
QLP	Quilpie	33.42	268	P	P	15 30 18.3	0.0
CTAO	Charters Tower	34.06	280		P	15 30 24.5	+0.5
CTAO	Charters Tower	34.06	280	P	P	15 30 24.9	+0.9
STKA	Stephens Creek	34.45	258		P	15 30 27.9	+0.6
STKA	Stephens Creek	34.45	258	P	P	15 30 27.8	+0.6
	comp=Z,107nm,0.9s						
STKA	Stephens Creek	34.45	258	P	P	15 30 26.9	-0.3
	comp=Z,16nm,0.7s,baz=103,slow=10,SNR=43						
	comp=Z,16nm,0.7s						
HTT	Hallett	36.43	255	P	P	15 30 44.2	-0.1
	comp=Z,5.5nm,0.9s						
HTT	Hallett	36.43	255	P	P	15 30 44.3	-0.1
MTSU	Mount Surprise	36.58	282	P	P	15 30 46.3	+0.7
	comp=Z,13nm,0.8s						
BBOO	Buckleboo	38.90	255		P	15 31 04.0	-1.2
BBOO				IAmb	IAmb	15 31 05.0	
	comp=Z,22nm,0.9s						
BBOO	Buckleboo	38.90	255	P	P	15 31 03.5	-1.6
	comp=Z,31nm,0.9s						
BBOO	Buckleboo	38.90	255	P	P	15 31 04.6	-0.5
PMG	Port Moresby	39.06	296	LR	LR	15 44 05.0	
	comp=Z,108nm,20.7s,baz=132,slow=32						
QIS	Mount Isa	39.51	275	P	P	15 31 09.5	-0.9
	comp=Z,11nm,2.5s						
QIS	Mount Isa	39.51	275	P	P	15 31 11.5	+1.1
COEN	Coen	39.62	287	P	P	15 31 11.3	+0.1
COEN	Coen	39.62	287	P	P	15 31 12.2	+1.0
AS01	Alice Springs	43.17	268	P	P	15 31 40.0	-0.4
AS12	Alice Springs	43.21	268	P	P	15 31 39.9	-0.8
	comp=Z,28nm,0.8s						
AS31	Alice Springs	43.21	268		P	15 31 39.9	-0.8
AS31	Alice Springs	43.21	268	P	P	15 31 39.7	-1.1
	comp=Z,8.8nm,0.7s						
ASAR	Alice Springs	43.21	268		P	15 31 39.6	-1.1
ASAR	Alice Springs	43.21	268	P	P	15 31 39.9	-0.8
	comp=Z,18nm,0.7s,baz=105,slow=7.5,SNR=173						
	comp=Z,18nm,0.7s						
WR8	Warramunga Arr	44.13	273		P	15 31 47.3	-0.8
WR8				IAmb	IAmb	15 31 50.0	
	comp=Z,21nm,0.8s						
WB2	Warramunga Arr	44.26	273	P	P	15 31 48.0	-1.1
WRAB	Tennant Creek	44.26	273	P	P	15 31 48.4	-0.8
WRAB				IAmb	IAmb	15 31 51.0	
	comp=Z,20nm,0.8s						
WRA	Warramunga Arr	44.27	273	P	P	15 31 47.9	-1.3
	comp=Z,20nm,0.7s,baz=114,slow=7.7,SNR=31						
	comp=Z,20nm,0.7s						
WB0	Warramunga Arr	44.30	273		P	15 31 48.6	-0.8
FORT	Forrest	45.99	256	P	P	15 32 01.5	-1.2
FORT				IAmb	IAmb	15 32 16.8	
	comp=Z,18nm,0.8s						
FORT	Forrest	45.99	256	P	P	15 32 01.8	-0.9
VNDA	Vanda	47.36	186	P	P	15 32 15.4	+2.6
	comp=Z,0.6nm,0.6s,baz=350,slow=5.6,SNR=4.0						
VNDA				LR	LR	15 49 03.9	
	comp=Z,49nm,20.7s,baz=15,slow=32						
	comp=Z,0.6nm,0.6s						
JAY	Jayapura	48.37	298	LR	LR	15 51 14.8	
	comp=Z,72nm,20.3s,baz=237,slow=34						
MTN	Manton Dam	50.24	279	P	P	15 32 34.0	-1.7
MTN				IAmb	IAmb	15 32 43.5	
	comp=Z,16nm,1.2s						
KNRA	Kununurra	50.90	275	P	P	15 32 39.5	-1.2
FITZ	Fitzroy Crossi	52.50	270	P	P	15 32 50.8	-1.8
CASY	Casey	54.54	208		P	15 33 06.5	-0.4
CASY				IAmb	IAmb	15 33 07.8	
	comp=Z,9.5nm,0.7s						
QSPA	South Pole Qui	58.95	180	P	P	15 33 41.2	+2.8
QSPA	South Pole Qui	58.95	180	P	P	15 33 40.3	+1.9
	comp=Z,4.2nm,0.6s,baz=25,slow=1.2,SNR=35						
	comp=Z,4.2nm,0.6s						
BELA	Belgrano 2	69.02	172	P	P	15 34 45.4	+1.3
BELA				IAmb	IAmb	15 35 00.5	
	comp=Z,6.1nm,0.9s						
MAW	Mawson	71.65	201	P	P	15 35 01.4	+1.1
	comp=Z,4.3nm,1.0s,baz=103,slow=9.1,SNR=4.2						
	comp=Z,4.3nm,1.0s						
TROLL	Troll, Antarti	77.12	180	⇑P	P	15 35 34.3	+2.2
	comp=Z,459nm,0.9s						
JOW	Kunigami	77.27	312	P	P	15 35 33.3	-0.2
SNAA	Sanae	77.40	178	⇑P	P	15 35 34.6	+0.9
	comp=Z,131nm,0.7s						
SNAA	Sanae	77.40	178	P	P	15 35 34.9	+1.3
SNAA				IAmb	IAmb	15 35 42.6	
	comp=Z,8.7nm,0.9s						
SNAA	Sanae	77.40	178	P	P	15 35 34.6	+0.9
	comp=Z,0.9nm,0.6s,baz=173,slow=17,SNR=5.5						
	comp=Z,0.9nm,0.6s						
VNA3	Neumayer Olymp	77.54	176	⇑P	P	15 35 35.6	+1.2
	comp=Z,22nm,0.7s						
VNA2	Neumayer--Watz	77.98	177	⇑P	P	15 35 38.2	+1.3
	comp=Z,15nm,0.8s,baz=172,slow=5.1						
VNA1	Neumayer--Stat	78.21	176	⇑P	P	15 35 40.4	+2.3
	comp=Z,16nm,1.0s						
H03S2	Juan Fernandez	79.93	123	T	T	17 04 49.2	
	baz=238,slow=74,SNR=6.8						
H03S1	Juan Fernandez	79.94	123	T	T	17 04 48.5	
	baz=238,slow=74,SNR=7.1						
H03S3	Juan Fernandez	79.95	123	T	T	17 04 47.5	
	baz=238,slow=74,SNR=7.9						
H03N3	Juan Fernandez	80.13	123	T	T	17 05 00.6	
	baz=241,slow=72,SNR=12						
H03N2	Juan Fernandez	80.13	123	T	T	17 05 02.2	
	baz=241,slow=72,SNR=7.7						
H03N1	Juan Fernandez	80.14	123	T	T	17 05 01.8	
	baz=241,slow=72,SNR=20						
PLCA	Paso Flores	81.89	133	P	P	15 36 00.9	+2.2
	comp=Z,1.6nm,0.9s,baz=226,slow=11,SNR=3.1						
	comp=Z,1.6nm,0.9s						
ASAJ	Asahikawa	83.17	332	LR	LR	16 08 32.3	
	comp=Z,41nm,19.3s,baz=167,slow=32						
SHEM	Shemya Is, Ala	83.83	355	LR	LR	16 09 55.2	
	comp=Z,46nm,19.1s,baz=314,slow=33						
PETK	Petropavlovsk-	86.58	346	P	P	15 36 22.2	+0.4
	comp=Z,2.0nm,0.6s,baz=100,slow=6.6,SNR=3.8						
PETK				LR	LR	16 08 37.4	
	comp=Z,42nm,20.7s,baz=182,slow=31						
	comp=Z,2.0nm,0.6s						
NVAR	Mina Array Bea	88.70	43	P	P	15 36 33.0	+0.4
	comp=Z,0.6nm,0.7s,baz=211,slow=8.3,SNR=3.8						
	comp=Z,0.6nm,0.7s						
KLR	Kul'dur	91.76	330	LR	LR	16 11 41.6	
	comp=Z,23nm,21.1s,baz=168,slow=32						
CMAR	Chiang Mai Arr	93.78	289	P	P	15 36 57.8	+1.5
	comp=Z,0.4nm,0.7s,baz=113,slow=7.2,SNR=1.6						
	comp=Z,0.4nm,0.7s						
MA2	Magadan	94.06	345	LR	LR	16 15 28.1	
	comp=Z,25nm,20.4s,baz=138,slow=33						
MKAR	Makanchi Array	118.36	310	PKhKP	PKPpre	15 42 23.6	
	comp=Z,0.6nm,0.5s,baz=96,slow=1.4,SNR=4.7						
MKAR				PKP	PKiKP	15 42 27.6	+1.5
	comp=Z,0.3nm,0.5s,baz=73,slow=4.2,SNR=3.6						
KURK	Kurchatov	121.67	313		PKPdf	15 42 31.9	-0.2
KURBB	Kurchatov Arra	121.71	313	PKhKP	PKPpre	15 42 31.4	
	comp=Z,1.7nm,0.6s,baz=104,slow=2.0,SNR=15						
KURBB				PKP	PKiKP	15 42 34.8	+2.4
	comp=Z,1.7nm,0.6s,baz=108,slow=1.9,SNR=12						
PHDHD	Phuduhudu	124.60	206		PKPpre	15 42 28.1	
KKAR	Karatay Array	125.61	303		PKPdf	15 42 39.7	-0.3
BVAR	Borovoye Array	127.04	315	PKhKP	PKPpre	15 42 41.4	
	comp=Z,1.9nm,0.6s,baz=64,slow=3.4,SNR=8.3						
BVAR				PKP	PKiKP	15 42 45.0	+2.1
	comp=Z,2.3nm,0.6s,baz=113,slow=3.4,SNR=12						
BRVK	Borovoye	127.11	315		PKPdf	15 42 42.6	+0.1
ARCES	ARCESS Array B	139.36	348	PKP	PKPdf	15 43 06.0	+0.9
	comp=Z,1.8nm,0.7s,baz=153,slow=0.5,SNR=3.8						
KBZ	Khabaz	145.64	303	PKPbc	PKPdf	15 43 17.0	0.0
	comp=Z,1.2nm,0.5s,baz=308,slow=2.7,SNR=1.8						
GEVA	Gevas	145.86	293		PKPbc	15 43 18.5	+0.1
FIA1	FINESS Array S	145.90	340		PKPdf	15 43 16.9	0.0
FINES	FINESS Array B	145.90	340		PKPdf	15 43 16.9	0.0
FINES	FINESS Array B	145.90	340	PKPbc	PKPdf	15 43 16.8	-0.1
	comp=Z,10.0nm,0.6s,baz=52,slow=3.4,SNR=27						
KOPT	Kop Dagi	147.80	297		PKPab	15 43 26.4	-0.2
NB2	NORSAR Subarra	149.52	351	PKP	PKPbc	15 43 27.2	-0.2
	comp=Z,1.7nm,0.6s,baz=17,slow=2.6						
NOA	NORSAR Array B	149.52	351	PKPbc	PKPbc	15 43 27.3	-0.2
	comp=Z,2.7nm,0.7s,baz=14,slow=4.1,SNR=21						
HFS	Hagfors	150.01	348	PKPbc	PKPbc	15 43 28.1	-0.5
	comp=Z,4.2nm,0.6s,baz=132,slow=2.2,SNR=13						
NACGM	Naroch	150.51	331	*e*PKiKP	PKPdf	15 43 19.8	-4.8
	comp=Z,7.0nm,1.0s,baz=46						
MMAI	Mount Meron Ar	151.84	283	PKPbc	PKiKP	15 43 34.6	+0.3
	comp=Z,3.1nm,0.6s,baz=79,slow=6.0,SNR=7.4						
MMAI				PKPab	sPKPdf	15 43 45.0	+0.4
	comp=Z,2.8nm,0.5s,baz=93,slow=4.4,SNR=7.1						
AKASG	Malin Array Be	151.98	322		PKPbc	15 43 33.4	-0.1
AKASG	Malin Array Be	151.98	322	PKPbc	PKPbc	15 43 33.2	-0.3
	comp=Z,3.9nm,0.6s,baz=55,slow=2.7,SNR=18						
AKASG				PKPab	PKPab	15 43 43.4	+0.4
	comp=Z,3.5nm,0.6s,baz=54,slow=2.6,SNR=6.3						
BRTR	Keskin Array B	153.07	297	PKPbc	PKPbc	15 43 36.2	-0.3
	comp=Z,1.1nm,0.8s,baz=145,slow=4.5,SNR=6.4						
BRTR				PKPab	PKPab	15 43 48.4	+0.2
	comp=Z,2.4nm,0.8s,baz=114,slow=4.0,SNR=6.4						
ESDC	Sonseca Array	170.15	29	PKP	PKPdf	15 43 49.5	+2.9
	comp=Z,0.6nm,0.9s,baz=337,slow=2.0,SNR=5.0						

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*GCG **16** 15:30:34.8±1.4, 17°.24N×94°.64W, h130km±19km, MD4.8, ML4.0*

*NEIC **16** 15:30:35.8±1.4, 17°.21N±0°.07×94°.64W±0°.05, h140km±9km, mb4.5/4, Md4.3/127(MEX), Error ellipse: s-maj=11.1km s-min=6.4km az=197.0*

*MEX **16** 15:30:36.9±0.8, 17°.24N×94°.65W, h140km±7km, MD4.4*

ISC 16 15:30:35.0±0.8**, 17°.22N**±0°.04×**94°.65W**±0°.03**, h148**km±7km**, n111, σ2s.26**/199**, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIHL	Minatitlan	0.77	7	*e*P	Pn	15 30 57.1	-0.7
MIHL				*e*S	Sn	15 31 13.4	-1.9
TUIG	Tuzandepetl	0.84	15	*i* P	Pn	15 30 57.4	-1.0
TUIG				*e*S	Sn	15 31 14.0	-2.2
TGIG		1.52	107		Pn	15 31 04.8	0.0
TGIG					Sn	15 31 26.1	-1.4
TGIG		1.52	107	*i* P	Pn	15 31 04.8	0.0
TGIG				*e*S	Sn	15 31 26.1	-1.4
TGIG		1.52	107	*e*P	Pn	15 31 04.4	-0.4
TGIG				*e*S	Sn	15 31 26.1	-1.4
TGIG				IAML		15 31 26.8	
	comp=N,2μm,0.3s						
TGBT	Tuxtla Gutierr	1.55	106		Pn	15 31 05.1	+0.1
TGBT					Sn	15 31 26.3	-1.6
TGBT	Tuxtla Gutierr	1.55	106	*i* P	Pn	15 31 05.1	+0.1
TGBT				*e*S	Sn	15 31 26.3	-1.6
VHSA	Villahermosa	1.80	65	*e*P	Pn	15 31 06.9	-0.8
VHSA				*e*S	Sn	15 31 31.4	-1.3
OXLC	Oaxaca	1.97	266	*e*P	Pn	15 31 10.2	+0.2
OXLC				*e*S	Sn	15 31 37.4	+0.7
OXBJ	Oaxaca	1.99	266		Pn	15 31 10.4	+0.2
OXBJ					Sn	15 31 37.1	0.0
OXBJ	Oaxaca	1.99	266	*e*P	Pn	15 31 10.4	+0.2
OXBJ				*e*S	Sn	15 31 37.1	0.0
OXIG	Oaxaca	2.00	266		Pn	15 31 10.8	+0.6
OXIG					Sn	15 31 38.3	+1.0
VHO	Vista Hermosa	2.00	266	*e*P	Pn	15 31 10.8	+0.6
VHO				*e*S	Sn	15 31 38.3	+1.0
HUIG	Huatulco	2.01	224		Pn	15 31 09.1	-1.1
HUIG					Sn	15 31 37.0	-0.2
HUIG	Huatulco	2.01	224	*e*P	Pn	15 31 09.1	-1.1
HUIG				*e*S	Sn	15 31 37.0	-0.2
HUIG	Huatulco	2.01	224	*i* P	Pn	15 31 08.9	-1.3
HUIG				*e*S	Sn	15 31 37.2	-0.1
HUIG				IAML		15 31 39.8	
	comp=N,526nm,0.2s						
PCIG		2.04	138		Pn	15 31 11.3	+0.8
PCIG					Sn	15 31 38.1	+0.4
PCIG		2.04	138	*e*P	Pn	15 31 11.3	+0.8
PCIG				*e*S	Sn	15 31 38.1	+0.4
PANG	Puerto Angel	2.34	229		Pn	15 31 13.1	-1.0
PANG					Sn	15 31 44.4	+0.2
PANG	Puerto Angel	2.34	229	*i* P	Pn	15 31 13.1	-1.0
PANG				*e*S	Sn	15 31 44.4	+0.2
TOIG	Toxpalan	2.46	291		Pn	15 31 15.8	+0.1
TOIG					Sn	15 31 45.9	-1.2
TOIG	Toxpalan	2.46	291	*e*P	Pn	15 31 15.8	+0.1
TOIG				*e*S	Sn	15 31 45.9	-1.2
CCIG	Comitan	2.58	111		Pn	15 31 17.2	0.0
CCIG	Comitan	2.58	111	*e*P	Pn	15 31 17.2	0.0
CCIG				*e*S	Sn	15 31 48.1	-1.6
CCIG	Comitan	2.58	111	*e*P	Pn	15 31 17.4	+0.1
CCIG				*e*S	Sn	15 31 48.8	-0.9
CCIG				IAML		15 31 53.1	
	comp=N,490nm,0.4s						
PEIG	Puerto Escondi	2.69	243		Pn	15 31 16.7	-1.8
PEIG					Sn	15 31 51.4	-0.6
PEIG	Puerto Escondi	2.69	243	*e*P	Pn	15 31 16.7	-1.8
PEIG				*e*S	Sn	15 31 51.4	-0.6
YOIG	Yosondua	2.80	263		Pn	15 31 19.8	-0.3
YOIG					Sn	15 31 52.3	-2.5
YOIG	Yosondua	2.80	263	*e*P	Pn	15 31 19.8	-0.3
YOIG				*e*S	Sn	15 31 52.3	-2.5
TPIG	Tehuac#an	2.85	295		Pn	15 31 20.6	0.0
TPIG					Sn	15 31 52.7	-3.1
TPIG	Tehuac#an	2.85	295	*e*P	Pn	15 31 20.6	0.0
TPIG				*e*S	Sn	15 31 52.7	-3.1
THEZ	Tehuacan	2.89	296	*e*P	Pn	15 31 21.6	+0.5
THEZ				*e*S	Sn	15 31 55.2	-1.6
TXIG	Tlaxiaco	2.98	271		Pn	15 31 22.6	+0.2

TXIG					Sn	15 31 54.3	-4.7
TXIG	Tlaxiaco	2.98	271	eP	Pn	15 31 22.6	+0.2
TXIG				eS	Sn	15 31 54.3	-4.7
HLIG	Huajuapan de L	3.07	282		Pn	15 31 23.7	+0.2
HLIG					Sn	15 32 00.1	-0.8
HLIG	Huajuapan de L	3.07	282	eP	Pn	15 31 23.7	+0.2
HLIG				eS	Sn	15 32 00.1	-0.8
PAVE	Pavencul	3.11	130	eP	Pn	15 31 24.8	+0.8
PAVE				eS	Sn	15 32 01.6	-0.2
PATR	El Naranjo	3.12	132	eP	Pn	15 31 24.9	+0.7
PATR				eS	Sn	15 32 02.2	+0.2
THIG		3.24	135		Pn	15 31 25.4	0.0
THIG					Sn	15 32 03.5	-1.0
THIG		3.24	135	eP	Pn	15 31 25.4	0.0
THIG				eS	Sn	15 32 03.5	-1.0
FTIG	Fresnillo de T	3.40	282		Pn	15 31 27.8	+0.3
FTIG					Sn	15 32 05.7	-2.4
FTIG	Fresnillo de T	3.40	282	eP	Pn	15 31 27.8	+0.3
FTIG				eS	Sn	15 32 05.7	-2.4
PNIG	Pinotepa	3.44	257		Pn	15 31 26.4	-1.6
PNIG					Sn	15 32 03.1	-5.8
PNIG	Pinotepa	3.44	257	eP	Pn	15 31 26.4	-1.6
PNIG				eS	Sn	15 32 03.1	-5.8
HUEH	Huehuetenango	3.56	122	Pn	Pn	15 31 29.5	-0.3
HUEH	Huehuetenango	3.56	122	eP	Pn	15 31 29.6	-0.3
HUEH				eS	Sn	15 32 08.4	-3.8
TLIG	Tlapa	3.76	276		Pn	15 31 32.4	+0.1
TLIG	Tlapa	3.76	276	eP	Pn	15 31 32.4	+0.1
TLIG				eS	Sn	15 32 15.9	-0.7
HMTT	Tlapaneco	3.78	279		Pn	15 31 32.3	-0.2
HMTT					Sn	15 32 16.6	-0.4
HMTT	Tlapaneco	3.78	279	eP	Pn	15 31 32.3	-0.2
HMTT				eS	Sn	15 32 16.6	-0.4
MGIG	Malinaltepec	3.81	271		Pn	15 31 32.6	-0.4
MGIG					Sn	15 32 16.9	-1.0
MGIG	Malinaltepec	3.81	271	eP	Pn	15 31 32.6	-0.4
MGIG				eS	Sn	15 32 16.9	-1.0
RTAL	Retalhuleu	3.91	133		Pn	15 31 34.6	+0.6
RTAL	Retalhuleu	3.91	133	eP	Pn	15 31 34.8	+0.8
RTAL				eS	Sn	15 32 20.4	+0.5
CXUV	Coxquihui	4.05	317	eP	Pn	15 31 35.1	-0.9
CXUV				eS	Sn	15 32 22.1	-1.3
PBCV	Popocatepetl	4.11	296	eP	Pn	15 31 38.7	+1.6
PBCV				eS	Sn	15 32 20.7	-4.5
PBPN	Popocatepetl	4.20	296	eP	Pn	15 31 39.3	+1.0
PBPN				eP		15 31 39.5	
PBPN				eS	Sn	15 32 25.5	-2.0
PBPN				eS		15 32 28.8	
STG8	El Palmar, Qui	4.20	131	eP	Pn	15 31 34.0	-4.2
STG8				eS	Sn	15 32 21.4	-5.7
PPM	Popocatepetl	4.21	296	eP	Pn	15 31 40.2	+1.8
PPM				eS	Sn	15 32 18.1	-10
PBXN	Popocatepetl	4.21	296	eP	Pn	15 31 39.5	+1.1
PBXN				eS	Sn	15 32 26.1	-1.6
PPIG	Popocatepetl	4.21	296		Pn	15 31 40.2	+1.8
PPIG					Sn	15 32 18.1	-10
STG0	El Palmar, Qui	4.22	131	eP	Pn	15 31 34.5	-3.9
STG0				eS	Sn	15 32 20.5	-7.0
CRIG	Cruz Grande	4.32	264		Pn	15 31 37.7	-1.8
CRIG					Sn	15 32 26.1	-3.4
CRIG	Cruz Grande	4.32	264	eP	Pn	15 31 37.7	-1.8
CRIG				eS	Sn	15 32 26.1	-3.4
YAIG	Yautepec	4.51	292		Pn	15 31 42.8	+0.6
YAIG					Sn	15 32 34.0	-0.3
YAIG	Yautepec	4.51	292	eP	Pn	15 31 42.8	+0.6
YAIG				eS	Sn	15 32 34.0	-0.3
PETF	Flores	4.58	93	eP	Pn	15 31 42.6	-0.3
PETF				eS	Sn	15 32 31.3	-4.4
MPVM	San Francisco	4.59	296	eP	Pn	15 31 40.9	-2.3
MPVM				eS	Sn	15 32 35.3	-1.1
VTVM	Tizayuca	4.67	304		Pn	15 31 43.6	-0.8
VTVM					Sn	15 32 35.8	-2.4
VTVM	Tizayuca	4.67	304	eP	Pn	15 31 43.6	-0.8
VTVM				eS	Sn	15 32 35.8	-2.4
TLVM	San Miguel Top	4.72	295	eP	Pn	15 31 43.7	-1.3
TLVM				eS	Sn	15 32 38.0	-1.5
PBVM	Pinon	4.76	298		Pn	15 31 44.5	-0.7
PBVM	Pinon	4.76	298	eP	Pn	15 31 44.5	-0.7
PLIG	Platanillo	4.77	285		Pn	15 31 46.2	+0.7
PLIG					Sn	15 32 37.6	-2.8
PLIG	Platanillo	4.77	285	eP	Pn	15 31 46.2	+0.7
PLIG				eS	Sn	15 32 37.6	-2.8
DAIG	Los Arroyos	4.79	268		Pn	15 31 44.7	-1.0
DAIG					Sn	15 32 38.6	-2.1
DAIG	Los Arroyos	4.79	268	eP	Pn	15 31 44.7	-1.0
DAIG				eS	Sn	15 32 38.6	-2.1
MEIG	Mezcala	4.80	279		Pn	15 31 45.8	0.0
MEIG					Sn	15 32 35.7	-5.3
MEIG	Mezcala	4.80	279	eP	Pn	15 31 45.8	0.0
MEIG				eS	Sn	15 32 35.7	-5.3
AOVM	Tlapan	4.89	295		Pn	15 31 46.4	-1.0
AOVM					Sn	15 32 46.8	+3.1
AOVM	Tlapan	4.89	295	eP	Pn	15 31 46.4	-1.0
AOVM				eS	Sn	15 32 46.8	+3.1
ZUVM	ZUMPANGO	4.94	302		Pn	15 31 44.0	-3.9
ZUVM					Sn	15 32 44.1	-0.6
ZUVM	ZUMPANGO	4.94	302	eP	Pn	15 31 44.0	-3.9
ZUVM				eS	Sn	15 32 44.1	-0.6
INVM	La Marquesa	4.95	295	eP	Pn	15 31 49.2	+1.0
INVM				eS	Sn	15 32 42.6	-2.4
AZVM	Cuida Lopez Ma	4.99	299		Sn	15 32 50.4	+4.5
AZVM	Cuida Lopez Ma	4.99	299	eS	Sn	15 32 50.4	+4.5
DHIG	Demacu	5.17	307		Pn	15 31 52.0	+1.2
DHIG					Sn	15 32 41.6	-8.3
DEIG	Demacu	5.17	307	eP	Pn	15 31 52.0	+1.1
DEIG				eS	Sn	15 32 41.6	-8.4
CAIG	El Cayaco	5.38	269		Pn	15 31 52.5	-0.9
CAIG					Sn	15 32 47.3	-7.4
CAIG	El Cayaco	5.38	269	eP	Pn	15 31 52.5	-0.9
CAIG				eS	Sn	15 32 47.3	-7.4
CTUV	Llano Grande	5.49	321	eP	Pn	15 31 53.0	-1.9
ARIG	Puente Sto Nin	5.54	282		Pn	15 31 56.8	+1.2
ARIG					Sn	15 32 57.7	-0.7
ARIG	Puente Sto Nin	5.54	282	eP	Pn	15 31 56.8	+1.2
ARIG				eS	Sn	15 32 57.7	-0.7
MTO3	Montecristo	5.81	118		Pn	15 31 58.3	-1.1
ZIIG	Zihuatanejo	6.52	274		Pn	15 32 08.2	-0.5
ZIIG					Sn	15 33 21.4	-0.7
ZIIG	Zihuatanejo	6.52	274	eP	Pn	15 32 08.2	-0.5
ZIIG				eS	Sn	15 33 21.4	-0.7
TEIG	Tepich	6.74	63		Pn	15 32 08.7	-2.9
MMIG	Aquila	8.36	279		Pn	15 32 33.2	0.0
MMIG	Aquila	8.36	279	eP	Pn	15 32 33.2	0.0
INCO	Volcan de Coli	8.81	286	eP	Pn	15 32 41.9	+2.2
INCO				eS	Sn	15 34 21.4	+3.7
MNGA	Volcan de Coli	8.81	286	eP	Pn	15 32 42.3	+2.8
SOMAC	Volcano de Col	8.83	286	eP	Pn	15 32 42.3	+2.4
SOMAC				eS	Sn	15 34 17.2	-1.0
CEGR	Campo Tres	9.01	285	eP	Pn	15 32 43.3	+1.1
CEGR				eS	Sn	15 34 25.1	+2.8
CDAR	Ciudad de Arme	9.07	282	eP	Pn	15 32 41.9	-0.9
CDAR				eS	Sn	15 34 18.6	-4.8
CJM	Chamela	10.13	285	eP	Pn	15 32 59.9	+3.0
BRDY	Brady	14.55	345	Pn	Pn	15 33 54.6	+0.6
FW06	Azle	15.90	351		P	15 34 11.7	+0.4
FW06				IAmb	IAmb	15 34 17.2	
	comp=Z,17nm,0.7s						
PDPR	Patillas Dam,	27.28	84	P	P	15 36 06.6	+0.8
PDPR				IAmb	IAmb	15 36 49.0	
	comp=Z,14nm,1.0s						
BBSR	BB Station	30.96	55	P	P	15 36 39.5	+1.3
LPAZ	La Paz	42.33	140	P	P	15 38 16.2	+0.9
BCAR	Beaver Creek A	56.08	336	P	P	15 39 59.7	+1.2

IDC 16 15:37:08.9±3.0**,29°.96S**×**178°.06W,h0^{km},mb3.6**/3**,**
mbtmp3.6/3**,Error ellipse: s-maj=85.1km s-min=37.9km az=38.0,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.08	266	P	P	15 45 10.8	-0.2
	0.3nm,0.6s,baz=106,slow=7.4,SNR=14 0.3nm,0.6s						
WRA	Warramunga Arr	44.03	272	P	P	15 45 18.6	-0.1
	0.3nm,0.3s,baz=111,slow=8.0,SNR=5.7 0.3nm,0.3s						
QSPA	South Pole Qui	60.15	180	P	P	15 47 18.3	+0.1
	0.9nm,0.7s,baz=46,slow=7.6,SNR=6.0 0.9nm,0.7s						

H03S2	Juan Fernandez	80.75	124	T	T	17 20 01.8	
	baz=242,slow=75,SNR=185						
H03S1	Juan Fernandez	80.76	124	T	T	17 20 02.9	
	baz=242,slow=75,SNR=182						
H03S3	Juan Fernandez	80.77	124	T	T	17 20 00.5	
	baz=242,slow=75,SNR=224						
H03N3	Juan Fernandez	80.94	123	T	T	17 20 11.3	
	baz=248,slow=72						
H03N2	Juan Fernandez	80.94	123	T	T	17 20 08.5	
	baz=248,slow=72						
H03N1	Juan Fernandez	80.96	123	T	T	17 20 09.5	
	baz=248,slow=72						
FINES	FINESS Array B	144.71	340	PKP	PKPbc	15 56 46.2	+0.4
	1.9nm,1.0s,baz=48,slow=5.4,SNR=5.6						

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*IDC **16** 15:42:34.9±1.6, 8°.55S×127°.86E, h0^{km}, mb3.8/1, mbtmp3.6/5, ML3.5/4, MS3.5/1, Error ellipse: s-maj=32.2km s-min=21.5km az=96.0*

*NEIC **16** 15:42:36.4±0.8, 8°.6S±0°.1×127°.92E±0°.02, h10^{km}±2^{km}, mb4.2/5, Error ellipse: s-maj=17.8km s-min=3.1km az=351.0*

ISC 16 15:42:39.1±0.8**,8°.50S**±0°.07×**127°.95E**±0°.07**,h35^{km},n21,**
σ1ˢ.33/24**,mb3.9**/3**,Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.35	81	Pn	Pn	15 43 29.2	+0.2
SOEI	Soe	3.85	251	Pn	Pn	15 43 35.1	-0.9
BATI	Baumata	4.56	248	Pn	Pn	15 43 43.1	-2.6
	4.8nm,0.3s,baz=51,slow=6.5,SNR=4.2						
BATI				Sn	Sn	15 44 39.0	+1.5
	2.0nm,0.3s,baz=66,slow=20,SNR=1.6 10nm,0.4s						
MTN	Manton Dam	5.33	144	Pn	Pn	15 43 54.2	-2.0
KNRA	Kununurra	7.18	174		Pn	15 44 22.9	+1.3
FITZ	Fitzroy Crossi	9.80	193	Pn	Pn	15 44 57.2	-0.4
FITZ	Fitzroy Crossi	9.80	193	Pn	Pn	15 44 57.4	-0.3
	0.3nm,0.3s,baz=16,slow=11,SNR=12						
FITZ				Sn	Sn	15 46 47.4	+0.8
	0.1nm,0.3s,baz=0.0,slow=20,SNR=1.8 1.7nm,0.9s						
TOLI2	Tolitoli	11.93	323	Pn	Pn	15 45 26.8	0.0
WB0	Warramunga Arr	12.82	152	Pn	Pn	15 45 38.0	-1.0
WRA	Warramunga Arr	12.95	152	Pn	Pn	15 45 38.5	-2.2
WRA	Warramunga Arr	12.95	152	Pn	Pn	15 45 40.5	-0.2
	0.3nm,0.3s,baz=325,slow=13,SNR=7.8						
WRA				Sn	Sn	15 48 06.1	+2.4
	0.3nm,0.3s,baz=329,slow=22,SNR=5.8 0.5nm,0.4s						
WR8	Warramunga Arr	13.03	152	Pn	Pn	15 45 41.3	-0.6
AS31	Alice Springs	16.12	160	Pn	Pn	15 46 21.5	-1.7
ASAR	Alice Springs	16.12	160	Pn	Pn	15 46 21.9	-1.4
ASAR	Alice Springs	16.12	160	Pn	Pn	15 46 22.8	-0.4
	0.1nm,0.3s,baz=336,slow=10,SNR=12						
ASAR				Sn	Sn	15 49 22.0	+0.9
	0.1nm,0.3s,baz=329,slow=23,SNR=5.3 0.4nm,0.5s						
PMG	Port Moresby	19.00	94	P	P	15 46 57.6	-0.3
PMG				IAmb	IAmb	15 47 22.8	
	comp=Z,26nm,1.2s						
NWAO	Narrogin (SRO)	26.26	201	P	P	15 48 10.5	-0.6
MJAR	Matsushiro Arr	45.83	12	P	P	15 50 59.1	+1.4
	comp=Z,0.9nm,0.6s,baz=188,slow=12,SNR=8.8 comp=Z,0.9nm,0.6s						
SONM	Songino Array	59.25	343	LR	LR	16 21 59.5	
	comp=Z,42nm,19.1s,baz=228,slow=40						
VNDA	Vanda	71.22	173	P	P	15 53 54.6	+0.5
VNDA				IAmb	IAmb	15 54 31.2	
	comp=Z,1.4nm,1.1s						
SBA	Scott Base	72.14	172	P	P	15 53 59.2	-0.4
SBA				IAmb	IAmb	15 54 05.9	
	comp=Z,2.5nm,1.3s						

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*IDC **16** 15:51:40.5±1.6, 31°.01S×177°.84W, h0^{km}, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=48.7km s-min=40.8km az=27.0*

ISC 16 15:51:46.4±1.5**,31°.3S**±0°.1×**178°.1W**±0°.3**,h35^{km},n6,**
σ1ˢ.33/7**,mb3.9**/3**,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.97	208	Pn	Pn	15 53 38.6	-1.1
	0.1nm,0.3s,baz=75,slow=20,SNR=2.3						
URZ				Sn	Sn	15 55 08.6	+0.1
	0.4nm,0.3s,baz=16,slow=18,SNR=6.2						
ASAR	Alice Springs	43.00	268	P	P	15 59 43.1	+0.5
	0.7nm,0.6s,baz=102,slow=7.4,SNR=14 0.7nm,0.6s						
WRA	Warramunga Arr	44.08	273	P	P	15 59 52.2	+0.9
	1.7nm,0.8s,baz=114,slow=7.5,SNR=8.7 1.7nm,0.8s						
QSPA	South Pole Qui	58.79	180	P	P	16 01 42.4	+1.5
	1.0nm,1.0s,baz=43,slow=4.9,SNR=1.7 1.0nm,1.0s						
FINES	FINESS Array B	145.99	339	PKPbc	PKPdf	16 11 19.8	-1.0
	0.6nm,0.5s,baz=35,slow=4.3,SNR=6.4						
HFS	Hagfors	150.13	348	PKPbc	PKPbc	16 11 31.6	-1.2
	1.6nm,0.9s,baz=34,slow=14,SNR=2.1						

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*IDC **16** 15:58:46.6±6.3, 12°.01S×166°.56E, h179^{km}±59^{km}, mb3.2/5, mbtmp3.6/6, Error ellipse: s-maj=41.8km s-min=33.2km az=156.0*

ISC 16 15:58:43.7±1.2**,11°.9S**±0°.1×**166°.5E**±0°.3**,h150^{km},n12,**
σ0ˢ.95/6**,mb3.4**/5**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.14	180	P	Pn	16 01 06.4	+0.8
	1.2nm,0.6s,baz=357,slow=13,SNR=1.1						
WRA	Warramunga Arr	31.94	251	P	P	16 04 55.4	-0.1
	0.4nm,0.9s,baz=77,slow=9.1,SNR=2.3 0.4nm,0.9s						
ASAR	Alice Springs	33.13	245	P	P	16 05 05.6	-0.2
	0.3nm,0.7s,baz=70,slow=8.9,SNR=6.4 0.3nm,0.7s						
QSPA	South Pole Qui	78.13	180	P	P	16 10 24.8	-1.3
	0.8nm,0.9s,baz=11,slow=14,SNR=1.6 0.8nm,0.9s						
ILAR	Eielson Array	84.05	18	P	P	16 10 57.1	+0.1
	0.8nm,1.1s,baz=218,slow=5.6,SNR=4.9 0.8nm,1.1s						
MKAR	Makanchi Array	94.65	317	P	P	16 11 48.4	+0.7
	0.6nm,0.8s,baz=86,slow=4.1,SNR=4.6 0.6nm,0.8s						
H03S2	Juan Fernandez	103.01	129	T	T	18 07 39.7	
	baz=242,slow=74,SNR=37						
H03S1	Juan Fernandez	103.02	129	T	T	18 07 39.0	
	baz=242,slow=74,SNR=38						
H03S3	Juan Fernandez	103.02	129	T	T	18 07 35.9	
	baz=242,slow=74,SNR=40						
H03N2	Juan Fernandez	103.16	129	T	T	18 07 44.0	
	baz=248,slow=72,SNR=14						
H03N3	Juan Fernandez	103.16	129	T	T	18 07 47.3	
	baz=248,slow=72,SNR=12						
H03N1	Juan Fernandez	103.18	129	T	T	18 07 47.9	
	baz=248,slow=72,SNR=13						

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*IDC **16** 16:09:58.2±1.2, 7°.53S×121°.52E, h577^{km}±18^{km}, mb2.6/2, mbtmp3.5/7, Error ellipse: s-maj=118.7km s-min=18.8km az=57.0*

ISC 16 16:09:57.8±1.2**,7°.0S**±0°.3×**122°.6E**±0°.6**,h550^{km},n7,**
σ1ˢ.96/8**,Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	3.38	161	P	P	16 11 16.9	+1.6
	16nm,0.3s,baz=302,slow=13,SNR=12						
BATI				S	S	16 12 18.2	-0.4
	18nm,0.5s,baz=224,slow=19,SNR=5.9						
KAPI	Kappang	3.41	305	P	P	16 11 17.0	+1.4
	5.1nm,0.3s,baz=124,slow=3.6,SNR=4.5						
FITZ	Fitzroy Crossi	11.45	165	P	P	16 12 28.6	-2.0
	0.9nm,0.3s,baz=351,slow=7.3,SNR=10						
WRA	Warramunga Arr	17.22	140	P	P	16 13 30.6	+2.0
	0.7nm,0.7s,baz=316,slow=10,SNR=9.6						
ASAR	Alice Springs	19.85	148	P	P	16 13 52.7	+0.1
	0.2nm,0.3s,baz=321,slow=8.9,SNR=7.6						
STKA	Stephens Creek	30.48	147	P	P	16 15 27.1	+0.7
	0.4nm,0.3s,baz=319,slow=11,SNR=1.8 0.4nm,0.3s						
MKAR	Makanchi Array	64.37	330	P	P	16 19 37.4	-2.5
	0.3nm,0.5s,baz=142,slow=7.1,SNR=2.0 0.3nm,0.5s						

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*SEA **16** 16:12:49.5±0.9, 46°.830N±0°.010×119°.74W±0°.01, h2^{km}±7^{km}, ML3.2/16, ML3.1/52(NEIC), Mwr3.0/13(SLM), Error ellipse: s-maj=1.5km s-min=1.4km az=139.0*

*NEIC **16** 16:12:49, 46°.83N×119°.74W, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M_{rr}2.33; $M_{\theta\theta}$-2.37; $M_{\phi\phi}$0.05; $M_{r\theta}$3.63; $M_{\theta\phi}$-0.80; $M_{\phi r}$-0.36; Fault plane solution: $M_0$4.42000×10^{13} NP1:ϕ_s92.00000°, δ74.00000°, λ102.00000°. NP2:ϕ_s235.00000°, δ20.00000°, λ55.00000°. Principal axes: T 4.4132, Plg60.0000°, Azm18.0000°; N -0.0027, Plg11.0000°, Azm268.0000°; P -4.4105, Plg28.0000°, Azm172.0000°;*

*PGC **16** 16:12:49.5, 46°.83N×119°.74W, h2^{km}, ML3.0/13, ML3.2(SEA), 80km southeast of Wenatchee, Wa Washington*

*NEIC **16** 16:12:50.0±1.0, 46°.85N±0°.01×119°.72W±0°.01, h5^{km}±2^{km}, Error ellipse: s-maj=3.0km s-min=1.8km az=134.0*

ISC 16 16:12:49.6±0.9**,46°.83N**±0°.02×**119°.74W**±0°.02**,h8^{km}**±7^{km}**,**
n78,σ0ˢ.84/85**,Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BVW	Beverly	0.10	259		Pg	16 12 51.9	-0.1
WAH2	Wahluke Slope	0.14	122		Sg	16 12 55.0	+0.3
WAH2	Wahluke Slope	0.14	122	Pg	Pg	16 12 52.7	0.0
WAH2				IAML		16 12 55.1	
	comp=E,17µm,0.5s						
WAH2				IAML		16 12 55.3	
	comp=N,26µm,0.2s						
FHE	Frenchman Hill	0.20	53		Pg	16 12 54.0	+0.2
MDW	Midway	0.22	184		Pg	16 12 54.3	+0.3
MDW					Sg	16 12 58.1	+1.1
VT2	Vantage 2	0.23	307		Pg	16 12 54.5	+0.3
GBB	Gable Butte	0.23	161		Pg	16 12 54.6	+0.3
LOCW	Locke Island	0.24	118		Pg	16 12 54.7	+0.3
CRF	Corfu	0.24	91		Pg	16 12 54.8	+0.3
E07A	Sunnyside	0.28	197		Pg	16 12 55.6	+0.3
GBL	Gable Mountain	0.30	140		Pg	16 12 56.0	+0.4
BENWA	Benson Ranch	0.31	177		Pg	16 12 56.3	+0.5
SNIWA	Snively Ranch	0.37	172		Pg	16 12 57.5	+0.6
MJ2	May Junction 2	0.38	136		Pg	16 12 57.5	+0.5
OT3	Othello 3	0.38	115		Pg	16 12 57.6	+0.5
OT3					Sb	16 13 04.3	-0.4
BRVW	Black Rock Val	0.39	207		Pg	16 12 57.9	+0.7
BRVW					Sg	16 12 58.0	-4.3
RSW	Rattlesnake Hi	0.45	167		Pb	16 12 59.1	-0.7
MXC	Moxie City	0.46	237		Pb	16 12 59.4	-0.6
MXC	Moxie City	0.46	237		Sb	16 13 07.2	+0.2
HAWA	Hanford	0.46	162		Pg	16 12 59.2	+0.7
HAWA				IAML		16 13 01.4	
	comp=N,1µm,0.9s						
HAWA				IAML		16 13 09.0	
	comp=N,2µm,0.7s						
H2OWA	Water	0.48	153		Pb	16 12 59.9	-0.6
WIW	Wooded Island	0.51	142		Pb	16 13 00.5	-0.3
WIW	Wooded Island	0.51	142		Pb	16 13 00.4	-0.3
EBG	Ellensburg	0.57	278		Pb	16 13 01.8	-0.2
E08A	Dider Farm, El	0.58	126		Pg	16 13 01.2	+0.4
E08A				IAML		16 13 14.3	
	comp=N,1µm,0.5s						
E08A				IAML		16 13 15.6	
	comp=E,1µm,0.7s						
D08A	Wollman Farm,	0.60	68		Pg	16 13 01.5	+0.2
D08A				IAML		16 13 14.6	
	comp=E,959nm,0.1s						
D08A				IAML		16 13 15.5	
	comp=N,2µm,0.8s						
PRW	Prosser	0.62	177		Pb	16 13 02.6	-0.1
YA2	Yakima	0.62	241		Pb	16 13 02.7	-0.1
TBM	Table Mountain	0.68	300		Pg	16 13 03.3	+0.6
NAC	Naches	0.75	263		Pb	16 13 04.9	-0.1
TRW	Toppenish Ridg	0.77	226		Pb	16 13 05.5	+0.2
ETW	Entiat	0.87	333		Pg	16 13 06.0	-0.5
WTV	Waterville	0.88	350		Pg	16 13 06.4	-0.2
OD2	Odessa Site #2	0.90	51		Pg	16 13 06.5	-0.4
SAW	Saint Andrews	0.90	15		Pg	16 13 06.5	-0.5
F07A	Phinny Hill Vi	0.94	188		Pg	16 13 08.0	+0.3
F07A				IAML		16 13 29.4	
	comp=N,758nm,0.4s						
YPT	Yellepit	0.95	145		Pg	16 13 07.6	-0.3
YPT				IAML		16 13 30.2	
	comp=E,500nm,0.6s						
BLTW	Bickleton	0.96	199		Pb	16 13 08.5	-0.1
SLFW	Sugar Loaf	1.07	330		Pg	16 13 09.4	-0.8
E09A	Wood Farm, Sta	1.14	106		Pg	16 13 10.8	-0.7
E09A				IAML		16 13 30.4	
	comp=N,618nm,0.2s						
FMW	Mount Fremont	1.33	275		Pg	16 13 14.4	-0.8
RCS	Mount Rainier-	1.37	272		Pg	16 13 14.9	-1.0
LNOR	Lincton Mounta	1.39	133		Pn	16 13 14.7	-0.7
LNOR				IAML		16 13 37.2	
	comp=E,367nm,0.5s						
D05A	Enumclaw	1.58	284		Pn	16 13 18.2	+0.2
D05A				IAML		16 13 41.6	
	comp=E,273nm,0.3s						
GPW	Glacier Peak	1.60	324		Pn	16 13 18.3	-0.2
G08A	Pilot Rock	1.63	160		Pn	16 13 18.5	-0.3
G08A				IAML		16 13 43.0	
	comp=N,336nm,0.4s						
G08A				IAML		16 13 44.7	
	comp=E,326nm,0.5s						
HTW	Haystack Looko	1.69	306		Pn	16 13 19.6	0.0
G06A	Carlson Farm,	1.71	202		Pn	16 13 19.7	-0.2
G06A				IAML		16 13 47.6	
	comp=E,294nm,0.4s						
G06A				IAML		16 13 50.4	
	comp=N,210nm,0.5s						
MTMW	Mount Mitchell	1.89	246		Pn	16 13 22.9	+0.5
G05A	Wamic	1.93	215		Pn	16 13 23.4	+0.6
G05A				IAML		16 13 56.2	
	comp=N,128nm,0.6s						
G05A				IAML		16 14 20.1	
	comp=E,147nm,1.1s						
HOOD	Mount Hood Mea	2.01	222	IAML		16 13 59.3	
	comp=N,106nm,0.3s						
HOOD				IAML		16 14 32.8	
	comp=E,147nm,1.4s						
NEW	Newport	2.28	50	IAML		16 14 03.7	
	comp=E,155nm,0.5s						
VGZ	Gonzales	2.90	304	P	Pn	16 13 36.5	+0.4
VGZ				S	Sn	16 14 12.1	+1.1
SNB	Saturna Island	3.02	311	P	Pn	16 13 39.3	+1.5
SNB				S	Sn	16 14 15.2	+1.0
B011	North Saanich	3.10	307	P	Pn	16 13 39.5	+0.8
B011				S	Sn	16 14 17.2	+1.3
B009	North Saanich	3.10	307	P	Pn	16 13 39.5	+0.7
B009				S	Sn	16 14 17.3	+1.4
B010	North Saanich	3.10	307	P	Pn	16 13 39.4	+0.6
B010				S	Sn	16 14 17.1	+1.1
PGC	Sidney	3.10	307	P	Pn	16 13 39.4	+0.6
PGC				S	Sn	16 14 16.8	+0.9
SYMB	Survey Mountai	3.24	304	P	Pn	16 13 41.5	+0.6
GOBB	Galiano Island	3.31	311	P	Pn	16 13 42.3	+0.6
B926	Mesachie Lake	3.57	306	P	Pn	16 13 45.5	+0.2
B926				S	Sn	16 14 28.0	+0.5
CLRS	Cowichan Lake	3.57	306	P	Pn	16 13 46.4	+1.1
CLRS				S	Sn	16 14 27.8	+0.3
WPB	Watts Point	3.66	322	P	Pn	16 13 46.7	+0.2
NLLB	Nanaimo Lost L	3.73	312	P	Pn	16 13 48.0	+0.6
WSLR	Whistler	3.92	328	P	Pn	16 13 51.3	+1.1
LLLB	Lillooet	4.04	340	P	Pn	16 13 53.0	+1.2
B928	Bamfield	4.15	301	S	Sn	16 14 41.1	-0.7
B927	Port Alberni	4.16	307	P	Pn	16 13 54.9	+1.5
B927				S	Sn	16 14 41.5	-0.7
TXB	Texada	4.25	314	P	Pn	16 13 55.9	+1.2
MFID	Camas Ranch	4.39	140	IAML		16 15 16.2	
	comp=E,16nm,1.1s						
MFID				IAML		16 15 22.9	
	comp=E,16nm,1.1s						
WVOR	Wild Horse Val	4.46	169	IAML		16 15 34.9	
	comp=E,14nm,1.8s						
CBB	Campbell River	4.93	313	P	Pn	16 14 05.1	+1.1
HLID	Hailey	4.98	129	IAML		16 15 37.2	
	comp=E,9.1nm,1.2s						
WOSB	Woss	5.63	309	P	Pn	16 14 14.4	+0.7
MAYB	Maynard	6.09	309	P	Pn	16 14 20.8	+0.8
PACB	Port Alice, BC	6.28	308	P	Pn	16 14 23.3	+0.9
BPEB	Brooks Peninsu	6.29	305	P	Pn	16 14 24.3	+1.6
HOLB	Holberg	6.73	308	P	Pn	16 14 29.0	+0.2

*IDC **16** 16:18:34.7±0.7, 6°.76N×72°.94W, h154^{km}±6^{km}, mb3.7/12, mbtmp4.3/19, Error ellipse: s-maj=10.9km s-min=9.5km az=117.0*

*NEIC **16** 16:18:35.2±1.2, 6°.75N±0°.06×72°.97W±0°.08, h155^{km}±7^{km}, mb4.2/80, Error ellipse: s-maj=11.2km s-min=9.1km az=96.0*

*VAO **16** 16:18:35.3±0.7, 6°.68N×72°.98W, h151^{km}±7^{km}, mb4.6*

*RSNC **16** 16:18:36.3±0.0, 6°.82N×73°.15W, h143^{km}±1^{km}, M4.4, mB5.2, mb4.9, ML4.1, MLv4.8, Mw(mB)4.6*

ISC 16 16:18:34.4±0.5**, 6°.79N**±0°.03×**73°.05W**±0°.04**, h153**^{km}±4^{km}**, n197, σ1^{s}.14**/225**, mb4.2**/49**, 4C, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.24	214	P	Pn	16 18 55.7	+0.2
BARC				S	Sn	16 19 10.7	-0.8
PAMC	Pamplona, Colo	0.65	32	P	Pn	16 18 58.6	+1.1
PAMC				S	Sn	16 19 15.4	+0.3
BRJC	Barrancabermej	0.71	285	P	Pn	16 18 57.5	+0.2
BRJC				S	Sn	16 19 14.3	-0.5
RUSC	La Rusia	0.89	182		Pn	16 18 59.1	-0.1
RUSC	La Rusia	0.89	182	P	Pn	16 18 59.6	+0.4
RUSC				S	Sn	16 19 18.1	-0.1
TAMC	Tame, Arauca	1.30	106	P	Pn	16 19 04.0	+1.8
TAMC				S	Sn	16 19 25.4	+1.9
PTBC	PUERTO BERRIO,	1.42	260	P	Pn	16 19 02.4	-1.0
PTBC				S	Sn	16 19 23.1	-2.5
OCAC	Ocana	1.46	349	P	Pn	16 19 04.1	+0.1
OCAC				S	Sn	16 19 26.0	-0.8
SPBC	San Pablo de B	1.52	222	P	Pn	16 19 04.7	+0.1
SPBC				S	Sn	16 19 27.1	-0.6
ZARC	Zaragoza, Cauc	1.93	291	P	Pn	16 19 08.5	-0.4
ZARC				S	Sn	16 19 35.0	-0.4
NORC	Norcasia	2.18	236	P	Pn	16 19 12.2	+0.3
NORC				S	Sn	16 19 39.4	-1.4
CHIC	Chingaza	2.25	198	P	Pn	16 19 13.6	+0.5
CHIC				S	Sn	16 19 43.0	+0.1
ROSC	El Rosal	2.31	213		Pn	16 19 15.4	+1.6
ROSC	El Rosal	2.31	213	P	Pn	16 19 15.7	+1.8
	577nm,0.4s,baz=72,slow=10,SNR=183						
ROSC				S	Sn	16 19 43.4	-0.8
	2μm,0.4s,baz=81,slow=16,SNR=17						
ROSC	El Rosal	2.31	213	P	Pn	16 19 15.5	+1.6
ROSC				S	Sn	16 19 44.3	+0.1
CVER	Cruz Verde, Cu	2.47	204	P	Pn	16 19 17.2	+1.3
CVER				S	Sn	16 19 48.0	+0.2
UREC	San Jos de Ur	2.64	291	P	Pn	16 19 16.0	-1.5
UREC				S	Sn	16 19 47.8	-2.9
PTGC	Puerto Gaitan,	2.73	160	P	Pn	16 19 18.8	+0.2
PTGC				S	Sn	16 19 51.5	-1.2
VILC	Villavicencio,	2.74	194	P	Pn	16 19 19.1	+0.3
VILC				S	Sn	16 19 53.3	+0.2
GUY2C	Guyana, Caldas	2.78	236	P	Pn	16 19 20.8	+1.2
GUY2C				S	Sn	16 19 52.9	-1.6
NIZA	Niza - Manizal	2.96	235	P	Pn	16 19 23.4	+1.7
NIZA				S	Sn	16 20 00.4	+2.1
CBOC	Ciudad Bolivar	3.09	253	P	Pn	16 19 23.5	+0.3
CBOC				S	Sn	16 19 59.3	-1.6
DBBC	Dabeiba	3.15	274	P	Pn	16 19 23.7	-0.1
DBBC				S	Sn	16 19 59.3	-2.8
SDV	Santo Domingo	3.17	49		Pn	16 19 25.1	+0.9
SDV	Santo Domingo	3.17	49	P	Pn	16 19 25.4	+1.1
	207nm,0.3s,baz=234,slow=11,SNR=99						
SDV				S	Sn	16 20 01.9	-1.0
	1μm,0.4s,baz=258,slow=20,SNR=34						
SDV	Santo Domingo	3.17	49	*e*P	Pn	16 19 25.4	+1.1
SDV	Santo Domingo	3.17	49	P	Pn	16 19 25.2	+0.9
ARGC	Ariguani, Magd	3.27	339	P	Pn	16 19 26.0	+0.6
PRAC	Prado	3.56	211	P	Pn	16 19 28.8	-0.4
ORTC	Ortega, Tolima	3.60	218	P	Pn	16 19 29.9	+0.2
APAC	Apartado, Choc	3.67	288	P	Pn	16 19 30.3	-0.2
PLMC	San Jos del P	3.72	240	P	Pn	16 19 31.8	+0.6
SJCC	San Jacinto, C	3.74	326	P	Pn	16 19 30.2	-1.2
URMC	La Uribe, Meta	3.76	201	P	Pn	16 19 32.3	+0.5
LCBC	Los crdobas,	3.88	302	P	Pn	16 19 32.1	-1.1
CRJC	Cerrejon, Guaj	4.21	2	P	Pn	16 19 36.3	-1.3
GUVC	San Jose del G	4.24	174	P	Pn	16 19 37.8	-0.1
YOTC	Yotoco, Valle	4.31	230	P	Pn	16 19 38.3	-0.6
SOLC	Bahia Solano	4.37	263	P	Pn	16 19 39.9	+0.3
SMRC	Santa Marta, M	4.50	345		Pn	16 19 40.1	-1.2
SMRC	Santa Marta, M	4.50	345	P	Pn	16 19 40.3	-1.0
CAPC	Capurgana	4.64	294	P	Pn	16 19 40.4	-2.8
MACC	Macarena, Meta	4.68	190	P	Pn	16 19 42.7	-1.1
MACC				S	Sn	16 20 32.9	-5.0
BETC	Betania	4.73	210	P	Pn	16 19 44.3	-0.1
BETC				S	Sn	16 20 37.2	-1.7
PTAC	Punta Ardita,	4.74	275	P	Pn	16 19 43.2	-1.3
URIC	Uribia, Colomb	4.99	12	P	Pn	16 19 46.4	-1.4
JAMC	Jamundi, Valle	5.07	226	P	Pn	16 19 49.1	+0.1
	0.5nm2μm73nm,0.5s						
MALC	Bahia Malaga	5.08	237	P	Pn	16 19 50.3	+1.3
	1.1nm405nm,0.7s						
BAUV	El Baul	5.40	66		Pn	16 19 51.9	-1.4
POPC	Popayan, Colom	5.56	221	P	Pn	16 19 55.5	0.0
	793nm72nm,0.8s						
FLOC	Florencia	5.79	207		Pn	16 19 57.9	-0.5
FLOC	Florencia	5.79	207	P	Pn	16 19 58.1	-0.3
	2μm171nm,1.1s						
BBAC	Balboa, Cauca	6.32	222	P	Pn	16 20 06.7	+1.0
GR1C	Gorgona, Isla	6.34	234	P	Pn	16 20 05.5	-0.2
CRUC	La Cruz	6.49	217	P	Pn	16 20 12.1	+4.1
	22μm1μm,1.0s						
GCUF	Volcan Galeras	6.99	218	P	Pn	16 20 17.0	+2.1
	1μm103nm,0.5s						
BCIP	Isla Barro Col	7.13	290	Pn	Pn	16 20 13.9	-2.2
BCIP	Isla Barro Col	7.13	290	P	Pn	16 20 13.8	-2.4
	48nm,0.9s						
AZU	Azuero	7.24	278	P	Pn	16 20 16.7	-1.0
	81nm,0.9s						
BONI	La Bonita	7.72	216	P	Pn	16 20 25.5	+1.1
	907nm65nm,0.8s						
OTAV	Otavalo	8.45	220		Pn	16 20 33.5	-0.7
OTAV	Otavalo	8.45	220	*e*P	Pn	16 20 34.0	-0.3
OTAV	Otavalo	8.45	220	P	Pn	16 20 33.6	-0.7
	20nm,0.7s						
PCRV	Puerto La Cruz	8.97	67	P	Pn	16 20 40.2	-0.7
	14nm,0.4s,baz=275,slow=2.1,SNR=57						
PCRV				S	Sn	16 22 20.6	0.0
	69nm,0.6s,baz=177,slow=17,SNR=8.9						
SLOR	San Lorenzo -	9.24	216		Pn	16 20 45.8	+1.0
BRU2	Volcan	9.76	282	Pn	Pn	16 20 52.2	+0.8
LCR2	La Lucha 2	11.23	286		Pn	16 21 11.5	+0.6
BANI	BANI	11.83	13	Pn	Pn	16 21 18.5	0.0
MTDJ	Mount Denham	12.18	339		Pn	16 21 24.3	+1.3
MTDJ	Mount Denham	12.18	339	P	Pn	16 21 25.3	+2.2
	2μm104nm,0.4s						
SDDR	Presa de Saban	12.24	8	P	Pn	16 21 27.3	+3.5
JTS	Las Juntas de	12.28	287		Pn	16 21 25.8	+1.6
JTS	Las Juntas de	12.28	287	P	Pn	16 21 26.0	+1.8
	13nm,0.9s,baz=42,slow=5.9,SNR=7.8						
CELP	Cerrillos	12.87	29	Pn	Pn	16 21 30.7	-1.1
UUPR	Utuado, UPR, P	12.96	28	Pn	Pn	16 21 31.6	-1.3
IGPR	InterUniversit	13.01	31	Pn	Pn	16 21 32.7	-0.9
PDPR	Patillas Dam,	13.10	31	Pn	Pn	16 21 32.4	-2.4
SJG	San Juan	13.11	30	Pn	Pn	16 21 34.0	-0.9
SJG	San Juan	13.11	30	P	Pn	16 21 34.3	-0.6
	17nm,0.4s,baz=195,slow=13,SNR=3.2						
SJG				S	Sn	16 23 48.4	-12
	5.2nm,0.6s,baz=37,slow=15,SNR=1.5						
BOAV	Boa Vista	13.22	109		Pn	16 21 34.7	-1.8
BOAV	Boa Vista	13.22	109	*e*P	Pn	16 21 35.4	-1.1
TEFE	Tefe	13.24	140	*e*P	Pn	16 21 37.0	+0.4
GCPR	Guaynabo City	13.31	30	Pn	Pn	16 21 36.8	-0.7
NMDO	Nuevo Mundo	13.82	352	Pn	Pn	16 21 44.1	+0.2
CZSB	Cruzeiro do Su	14.43	179	P	P	16 21 53.9	-0.3
CZSB	Cruzeiro do Su	14.43	179	*e*P	Pn	16 21 52.0	+0.4
BBGH	Gun Hill	14.70	64	Pn	Pn	16 21 54.2	-0.9
ATAH	Atahualpa	14.83	201	P	Pn	16 21 58.1	+1.1
	4.9nm,0.5s,baz=29,slow=19,SNR=9.4						
MTO3	Montecristo	17.72	297	IAmb	IAmb	16 22 35.1	
	comp=Z,15nm,0.7s						
NNA	Nana	19.03	191	P	P	16 22 45.1	+0.3
	comp=Z,8.7nm,0.4s,baz=348,slow=12,SNR=4.0						
TEIG	Tepich	19.91	314	P	P	16 22 55.6	+1.3
MDP	Montagnes des	20.37	94	P	P	16 22 58.4	-0.9
	comp=Z,16nm,1.3s,baz=261,slow=8.5,SNR=5.1						
MDP				pP	pP	16 23 23.6	-2.6
	comp=Z,6.1nm,0.6s,baz=281,slow=14,SNR=3.1						
	comp=Z,16nm,1.3s						
ITTB	Itaituba	20.53	122	*e*P	P	16 23 02.1	+1.1
NPGB	Novo Progresso	22.37	128	*e*P	P	16 23 20.2	0.0
VILB	Vilhena	23.40	147	P	P	16 23 30.0	+0.3
VILB	Vilhena	23.40	147	*e*P	P	16 23 29.8	+0.1
LPAZ	La Paz	23.44	168		P	16 23 30.2	-0.5
LPAZ				IAmb	IAmb	16 23 34.0	
	comp=Z,7.4nm,0.8s						
LPAZ	La Paz	23.44	168	P	P	16 23 30.1	-0.5
	comp=Z,7.1nm,0.8s,baz=303,slow=2.4,SNR=18						
	comp=Z,7.1nm,0.8s						
LPAZ	La Paz	23.44	168	*e*P	P	16 23 30.2	-0.5
PDRB	Porto dos Gac	24.45	138	*e*P	P	16 23 38.9	-0.4
BBSD	Serra de San D	26.81	153	*e*P	P	16 23 58.1	-2.4
SALV	Santo Antonio	28.35	143	*e*P	P	16 24 14.3	+0.1
SMTB	Santa Maria do	29.76	121	*e*P	P	16 24 27.5	+0.7
HKT	Hockley	31.46	320	P	P	16 24 41.6	+0.1
HKT				IAmb	IAmb	16 25 24.6	
	comp=Z,8.7nm,1.1s						
V48A	Smith Brothers	31.46	338	P	P	16 24 42.9	+1.4
V48A				IAmb	IAmb	16 24 45.0	
	comp=Z,6.9nm,1.0s						
HBVL	Hebbronville	31.61	313	P	P	16 24 43.6	+0.7
AQDB	Aquidauana	32.02	148	P	P	16 24 45.7	-0.8
WVT	Waverly	32.19	337	P	P	16 24 47.8	0.0
WVT				IAmb	IAmb	16 24 50.0	
	comp=Z,8.0nm,1.2s						
GLAT	Glass	32.89	335	P	P	16 24 55.0	+1.0
X40A	Basin Creek Fa	33.06	329	P	P	16 24 55.8	+0.3
BDFB	Brasilia	33.34	132	P	P	16 24 58.5	+0.2
BDFB	Brasilia	33.34	132	P	P	16 24 58.7	+0.5
	comp=Z,5.0nm,0.6s,baz=290,slow=9.8,SNR=9.8						
	comp=Z,5.0nm,0.6s						
WHAR	Wooly Hollow	33.43	331	P	P	16 24 59.7	+1.0
WHAR				IAmb	IAmb	16 25 01.3	
	comp=Z,6.6nm,1.2s						
HNDO	Hondo	33.49	316	P	P	16 25 00.0	+0.7
HNDO				IAmb	IAmb	16 25 00.2	
	comp=Z,3.8nm,0.8s						
FCAR	Ozark Folk Cen	33.83	332	P	P	16 25 02.5	+0.3
FCAR				IAmb	IAmb	16 25 03.3	
	comp=Z,3.8nm,0.6s						
T42A	Van Buren	34.30	334	P	P	16 25 06.7	+0.5
T42A				IAmb	IAmb	16 25 09.1	
	comp=Z,3.4nm,0.8s						
BRDY	Brady	34.39	318	P	P	16 25 07.4	+0.3
BRDY				IAmb	IAmb	16 25 08.5	
	comp=Z,12nm,1.4s						
PLPT	Palo Pinto	34.95	321	P	P	16 25 12.7	+0.8
CCM	Cathedral Cave	35.23	335	P	P	16 25 14.6	+0.5
RLO	Rose Lookout	35.49	329	P	P	16 25 16.6	+0.2
RLO				IAmb	IAmb	16 25 17.0	
	comp=Z,6.0nm,0.8s						
SAND	Sanderson	35.75	314	IAmb	IAmb	16 25 21.1	
	comp=Z,5.1nm,1.2s						
R40A	Maddies Statio	35.87	334	P	P	16 25 20.3	+0.7
R40A				IAmb	IAmb	16 25 54.7	
	comp=Z,2.5nm,0.7s						
SGCY	Sterling City	36.20	317	P	P	16 25 23.5	+0.9
PMNB	Patos De Minas	36.36	134	*e*P	P	16 25 23.9	-0.3
TXAR	Lajitas Array	36.54	312	P	P	16 25 25.7	+0.2
TXAR	Lajitas Array	36.54	312	P	P	16 25 26.4	+0.9
	comp=Z,2.3nm,0.6s,baz=127,slow=9.2,SNR=38						
TXAR				PcP	PcP	16 27 47.8	+1.9
	comp=Z,0.2nm,0.4s,baz=148,slow=4.1,SNR=4.4						
	comp=Z,2.3nm,0.6s						
TX31	Lajitas Ar. Si	36.54	312	P	P	16 25 26.1	+0.6
TX31				IAmb	IAmb	16 25 27.3	
	comp=Z,3.0nm,0.8s						
WMOK	Wichita Mounta	36.55	323	P	P	16 25 25.2	-0.2
CO01	Juntas del Tor	36.67	176	P	P	16 25 26.6	-0.2
CO01				IAmb	IAmb	16 26 02.8	
	comp=Z,6.0nm,1.2s						
P38A	Dawn	37.52	334	IAmb	IAmb	16 25 34.5	
	comp=Z,5.0nm,0.6s						
VHRN	Van Horn	38.27	313	P	P	16 25 40.7	+0.5
MNTX	Cornudas Mount	39.04	314	P	P	16 25 47.3	+0.8
MNTX				IAmb	IAmb	16 25 49.0	
	comp=Z,5.8nm,0.8s						
VAO	Valinhos	39.08	140	P	P	16 25 45.7	-1.2
RTBA	Rita Blanca	40.08	322	P	P	16 25 55.8	+0.7
RTBA				IAmb	IAmb	16 25 57.6	
	comp=Z,2.4nm,0.6s						
BATG	Bathurst New B	40.78	7	P	P	16 26 01.9	+1.4
ECSD	EROS Data Cent	42.21	334	P	P	16 26 12.5	+0.3
S22A	4UR Ranch, Cre	43.45	320	IAmb	IAmb	16 26 25.6	
	comp=Z,6.9nm,1.4s						
EYMN	Ely	43.92	342	P	P	16 26 26.1	+0.2
EYMN				IAmb	IAmb	16 26 28.2	
	comp=Z,4.9nm,0.8s						
214A	Organ Pipe Nat	44.70	309	P	P	16 26 33.0	+0.6
PV02	Paradox Valley	44.95	319	P	P	16 26 35.5	+1.0
PV13	Radium Mtn., P	44.97	319	P	P	16 26 35.6	+0.9
PV13				IAmb	IAmb	16 26 36.8	
	comp=Z,4.6nm,0.5s						
PV12	Saucer Basin,	45.05	320	P	P	16 26 36.2	+0.9
PV12				IAmb	IAmb	16 26 37.9	
	comp=Z,4.6nm,0.7s						
PV23	Carpenter Ridg	45.26	320	P	P	16 26 38.0	+1.0
PV23				IAmb	IAmb	16 26 40.5	
	comp=Z,3.8nm,0.5s						
SRU	San Rafael Swe	46.61	319	P	P	16 26 48.2	+0.7
ULM	Lac du Bonnet	47.34	340	P	P	16 26 53.2	+0.6
ULM	Lac du Bonnet	47.34	340	P	P	16 26 52.8	+0.1
	comp=Z,1.9nm,0.4s,baz=150,slow=5.9,SNR=6.5						
	comp=Z,1.9nm,0.4s						
PLCA	Paso Flores	47.34	177	P	P	16 26 51.2	-1.7
	comp=Z,1.4nm,0.8s,baz=1.8,slow=9.7,SNR=4.6						
	comp=Z,1.4nm,0.8s						
V12A	Nelson	47.88	313		P	16 26 58.1	+0.8
V12A				IAmb	IAmb	16 26 59.5	
	comp=Z,4.9nm,0.9s						
PDAR	Pinedale Array	48.15	324	P	P	16 26 59.7	+0.4
PDAR	Pinedale Array	48.15	324	P	P	16 27 00.2	+0.9
	comp=Z,0.9nm,0.6s,baz=131,slow=8.3,SNR=8.8						
	comp=Z,0.9nm,0.6s						
SCHQ	Schefferville	48.16	5	P	P	16 26 59.2	+0.3
	comp=Z,5.5nm,0.8s,baz=176,slow=4.1,SNR=6.7						
	comp=Z,5.5nm,0.8s						
SPR3	Spring Creek 3	49.07	317		P	16 27 07.2	+0.6
BGU	Big Grassy Mou	49.21	320	P	P	16 27 08.1	+0.7
BGU				IAmb	IAmb	16 27 08.9	
	comp=Z,4.1nm,0.6s						
TPNV	Topopah Spring	49.44	314		P	16 27 10.2	+0.9
R11B	Troy Canyon, C	49.62	316		P	16 27 11.7	+1.2
DSP	Deep Springs	50.86	314	P	P	16 27 21.2	+1.6
MCMT	McKenzie Canyo	51.29	324	P	P	16 27 24.7	+1.7
HLID	Hailey	51.51	322		P	16 27 25.2	+0.6
NVAR	Mina Array Bea	51.55	315	P	P	16 27 26.1	+1.0
	comp=Z,1.0nm,0.6s,baz=131,slow=6.3,SNR=6.9						
NVAR				PcP	PcP	16 28 37.9	+0.8
	comp=Z,0.3nm,0.5s,baz=97,slow=2.7,SNR=2.1						
	comp=Z,1.0nm,0.6s						
MFID	Camas Ranch	52.30	321		P	16 27 31.1	+0.7
MFID				IAmb	IAmb	16 27 33.5	
	comp=Z,3.6nm,1.0s						
BEKR	Beckworth	53.62	315	P	P	16 27 41.0	+0.7
I07A	Izee	54.94	320	P	P	16 27 50.0	+0.3
G08A	Pilot Rock	55.18	322		P	16 27 51.6	+0.3
G08A				IAmb	IAmb	16 27 53.2	
	comp=Z,3.2nm,0.6s						
YBH	Yreka Blue Hor	56.01	317	P	P	16 27 56.4	-0.9
KSXB	Camp Six Broad	56.85	316	P	P	16 28 03.5	+0.2
MG05	Puerto Natales	58.24	180	P	P	16 28 11.8	-0.7
BLKN	Baker Lake	59.72	349	P	P	16 28 22.8	+0.3
BLKN				IAmb	IAmb	16 29 00.8	
	comp=Z,4.6nm,1.2s						
YKA	Yellowknife Ar	63.32	340	P	P	16 28 47.3	+0.6
	comp=Z,0.8nm,0.6s,baz=78,slow=15,SNR=4.0						
YKA				pP	pP	16 29 24.2	+0.9
	comp=Z,1.7nm,0.7s,baz=131,slow=6.6,SNR=5.4						
	comp=Z,0.8nm,0.6s						
BARN	Barnard Glacie	73.81	332	P	P	16 29 53.0	+0.9
BARN				IAmb	IAmb	16 30 23.2	
	comp=Z,9.6nm,1.2s						
H29M	Whitestone	74.01	337	P	P	16 29 53.8	+0.8
M27K	Edge Creek, AK	74.27	333	P	P	16 29 54.9	+0.3
M27K				IAmb	IAmb	16 30 36.1	
	comp=Z,4.3nm,1.1s						
BCAR	Beaver Creek A	74.42	334	P	P	16 29 56.4	+1.0
SMAI	San Martin Ant	74.86	178	P	P	16 29 57.5	-0.2
E28M	Babbage River	75.25	340	P	P	16 30 00.4	+0.4
DOT	Dot Lake	75.56	334	P	P	16 30 03.4	+1.4
DOT				IAmb	IAmb	16 30 41.1	
	comp=Z,2.8nm,0.8s						
BMAR	Burnt Mountain	76.72	338	P	P	16 30 09.6	+1.2
ILAR	Eielson Array	77.02	335	P	P	16 30 11.0	+0.9
	comp=Z,0.2nm,0.7s,baz=100,slow=7.7,SNR=2.4						
ILAR				pP	pP	16 30 48.1	+0.1
	comp=Z,0.7nm,0.8s,baz=97,slow=5.2,SNR=5.1						
	comp=Z,0.2nm,0.7s						
SUA	Susitna One	78.19	331	P	P	16 30 18.1	+1.3
SUA				IAmb	IAmb	16 30 45.0	
	comp=Z,9.2nm,1.2s						
KTH	Kantishna Hill	78.56	333	P	P	16 30 20.0	+1.3
KTH				IAmb	IAmb	16 30 59.4	
	comp=Z,6.7nm,1.2s						
PPLA	Purkeypile	79.04	333	P	P	16 30 22.1	+0.7
PPLA				IAmb	IAmb	16 30 33.4	
	comp=Z,9.6nm,1.4s						
IMAR	Indian Mountai	80.05	336	P	P	16 30 27.3	+0.7
N18K	Kilae Creek	80.61	330	P	P	16 30 30.4	+0.6
N18K				IAmb	IAmb	16 30 54.8	
	comp=Z,11nm,1.5s						
B21K	Ikpikpuk River	80.73	339	P	P	16 30 31.0	+0.8
L18K	Granite Mounta	81.07	332	P	P	16 30 32.7	+0.5
L18K				IAmb	IAmb	16 30 42.9	
	comp=Z,6.0nm,1.4s						
C18K	Utukok River	83.05	338	P	P	16 30 43.7	+1.3
C18K				IAmb	IAmb	16 31 24.4	
	comp=Z,3.9nm,1.1s						
N14K	Kuskokwak Cree	83.49	330	P	P	16 30 46.0	+1.2
BELA	Belgrano 2	87.15	172	P	P	16 31 01.4	-1.2
BELA				IAmb	IAmb	16 31 11.1	
	comp=Z,3.4nm,1.3s						
VNA3	Neumayer Olymp	88.12	163	⇑P	P	16 31 05.8	-1.5
	comp=Z,4.5nm,0.6s						
VNA2	Neumayer--Watz	88.64	163	⇑P	P	16 31 09.0	-0.8
	comp=Z,3.1nm,0.5s,baz=296,slow=4.5						
SNAA	Sanae	90.29	163	⇑P	P	16 31 16.4	-1.1
	comp=Z,23nm,0.4s						
TROLL	Troll, Antarti	91.99	162	⇑P	P	16 31 25.1	-0.4
	comp=Z,183nm,0.5s						
QSPA	South Pole Qui	96.80	180	P	P	16 31 46.9	-0.7
	comp=Z,1.3nm,0.8s,baz=162,slow=3.8,SNR=6.3						
	comp=Z,1.3nm,0.8s						
MKAR	Makanchi Array	122.33	20	PKP	PKPdf	16 37 11.4	-0.1
	comp=Z,0.2nm,0.4s,baz=287,slow=3.4,SNR=6.3						
PZH	PanZhiHua	146.52	8	PKPbc	PKPdf	16 37 55.4	-1.6
ASAR	Alice Springs	149.15	234	PKP	PKPdf	16 38 01.5	+0.2
	comp=Z,3.4nm,0.7s,baz=110,slow=1.6,SNR=46						
ASAR				PKPbc	PKPbc	16 38 05.2	-0.4
	comp=Z,3.4nm,0.5s,baz=117,slow=3.5,SNR=27						
WRA	Warramunga Arr	150.38	241	PKP	PKPdf	16 38 03.3	0.0
	comp=Z,3.2nm,0.5s,baz=110,slow=2.4,SNR=39						
WRA				PKPbc	PKPbc	16 38 08.4	-0.3
	comp=Z,3.1nm,0.5s,baz=110,slow=2.4,SNR=21						
CMAR	Chiang Mai Arr	153.70	17	PKPbc	PKPbc	16 38 16.7	+0.5
	comp=Z,0.8nm,0.6s,baz=321,slow=3.9,SNR=6.1						

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*IDC **16** 16:19:44.2±11.0, 36°.36N×141°.43E, h0^{km}, mb3.6/4, mbtmp3.5/5, ML2.5/1, Error ellipse: s-maj=211.4km s-min=67.2km az=150.0*

*JMA **16** 16:19:54.7±0.2, 36°.0N±0°.4×140°.6E±0°.7, h61^{km}±1^{km}, MV2.7/39, SOUTHERN IBARAKI PREF*

ISC 16 16:19:54.7±1.1**, 36°.06N**±0°.05×**140°.72E**±0°.08**, h62**^{km}±6^{km}**, n20, σ0^{s}.83**/26**, mb3.6**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIHU	Itakohorinouch	0.18	240	*i* P	Pn	16 20 04.3	0.0
JIHU				*e*S	Sn	16 20 11.7	+0.5
JHYU	Hitachinakayam	0.30	339	P	Pn	16 20 05.0	0.0
JHYU				S	Sn	16 20 12.9	+0.4
JYT	Yasato	0.46	292	*i* P	Pn	16 20 05.9	-0.4
JYT				S	Sn	16 20 14.3	-0.6
JSMT	Sammumatsuo	0.47	208	P	Pn	16 20 06.8	+0.3
JSMT				*e*S	Sn	16 20 16.3	+1.3
JHO	Hitachi	0.57	347	*i* P	Pn	16 20 07.8	+0.2
JHO				S	Sn	16 20 17.3	+0.4
JAG	Ashikaga	1.09	290	*i* P	Pn	16 20 13.5	-0.4
BSO3	Boso 3	1.26	188	P	Pn	16 20 15.7	-0.3
JFK	Kawauchi	1.31	5	P	Pn	16 20 17.1	+0.1
JFK				S	Sn	16 20 33.9	+0.3
JKT	Katashina	1.38	301	P	Pn	16 20 18.1	+0.2
JRY	Ryogami san	1.48	269	*i* P	Pn	16 20 18.8	-0.3
JMM	Marumori	1.81	2	P	Pn	16 20 24.4	+0.9
JMM	Marumori	1.81	2	S	Sn	16 20 46.8	+1.4
MJAR	Matsushiro Arr	2.09	284	Pn	Pn	16 20 26.9	-0.4
	1.0nm,0.3s,baz=90,slow=8.4,SNR=20						
	7.4nm,0.5s						
MAJO	Matsushiro	2.09	284	P	Pn	16 20 28.2	+0.8
JGF	Kuroka	2.77	262	P	Pn	16 20 38.7	+2.0
INU	Inuyama	3.10	258	P	Pn	16 20 42.3	+1.2
SONM	Songino Array	27.88	306	P	P	16 25 39.1	+0.4
	0.2nm,0.4s,baz=108,slow=9.3,SNR=1.6						
	0.2nm,0.4s						
MKAR	Makanchi Array	44.17	303	P	P	16 27 57.3	+0.1
	0.4nm,0.5s,baz=83,slow=9.6,SNR=4.5						
	0.4nm,0.5s						
KURBB	Kurchatov Arra	46.17	309	P	P	16 28 12.3	-0.6
	0.5nm,0.5s,baz=84,slow=8.2,SNR=6.0						
	0.5nm,0.5s						
BVAR	Borovoye Array	50.82	313	P	P	16 28 47.3	-1.4
	0.3nm,0.4s,baz=64,slow=6.6,SNR=2.0						
	0.3nm,0.4s						

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*IDC **16** 16:41:29.7±0.7, 30°.65S×177°.50W, h0^{km}, mb4.2/6, mbtmp4.2/6, MS3.8/7, Error ellipse: s-maj=28.9km s-min=25.6km az=150.0*

*NEIC **16** 16:41:32.1±1.6, 30°.7S±0°.1×177°.4W±0°.1, h9^{km}±4^{km}, mb4.6/20, Error ellipse: s-maj=18.5km s-min=14.2km az=73.0*

ISC 16 16:41:35.0±0.5**, 30°.7S**±0°.1×**177°.4W**±0°.1**, h33**^{km}**, n51, σ1^{s}.09**/51**, mb4.5**/16**, MS3.7**/5**, 4C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.53	343		Pn	16 41 59.7	-0.3
URZ	Urewera	8.77	210	Pn	Pn	16 43 33.4	-6.1
	1.1nm,0.3s,baz=2.5,slow=15,SNR=6.2						
URZ				Sn	Sn	16 45 07.3	-10
	2.2nm,0.3s,baz=319,slow=23,SNR=12						
TUWZ	Tuamarina	12.76	211	Pn	Pn	16 44 27.0	-7.1
KHZ	Kahutara	13.74	209	Pn	Pn	16 44 39.1	-8.4
DZM	Mont Dzumac	16.82	297	P	P	16 45 30.6	+0.6
DZM	Mont Dzumac	16.82	297	P	P	16 45 33.0	+3.0
	8.0nm,0.9s,baz=139,slow=15,SNR=4.3						
DZM				LR	LR	16 50 56.7	
	comp=Z,510nm,18.1s,baz=164,slow=34						
RAR	Rarotonga	18.45	63	LR	LR	16 52 20.5	
	comp=Z,112nm,18.3s,baz=211,slow=35						
ARMA	Armidale	26.62	263	P	P	16 47 11.8	+1.1
ARMA				IAmb	IAmb	16 47 14.8	
	comp=Z,19nm,1.2s						
EIDS	Eidsvold	28.26	273	P	P	16 47 26.4	+1.2
EIDS				IAmb	IAmb	16 47 43.7	
	comp=Z,9.4nm,1.2s						
PPTF	Pamatai, Papee	28.48	69	P	P	16 47 27.5	+0.1
CTAO	Charters Tower	34.35	279	P	P	16 48 18.4	-0.6
CTAO				IAmb	IAmb	16 48 22.2	
	comp=Z,20nm,1.4s						
STKA	Stephens Creek	34.90	257	P	P	16 48 24.1	+0.4
STKA	Stephens Creek	34.90	257	P	P	16 48 24.0	+0.4
	comp=Z,4.6nm,0.7s,baz=95,slow=10,SNR=8.8						
STKA				LR	LR	17 02 02.3	
	comp=Z,127nm,18.3s,baz=43,slow=35						
	comp=Z,4.6nm,0.7s						
BBOO	Buckleboo	39.37	254	P	P	16 49 00.6	-0.9
BBOO				IAmb	IAmb	16 49 19.9	
	comp=Z,11nm,1.0s						
AS31	Alice Springs	43.60	267	P	P	16 49 35.8	-0.5
ASAR	Alice Springs	43.60	267	P	P	16 49 35.7	-0.7
ASAR	Alice Springs	43.60	267	P	P	16 49 34.8	-1.6
	comp=Z,1.5nm,0.5s,baz=106,slow=7.2,SNR=56						
ASAR				PcP	PcP	16 51 23.4	-0.1
	comp=Z,0.4nm,0.6s,baz=124,slow=4.4,SNR=4.3						
ASAR				ScP	ScP	16 55 15.7	+3.0
	comp=Z,0.6nm,1.0s,baz=97,slow=3.1,SNR=3.9						
ASAR				LR	LR	17 07 38.8	
	comp=Z,177nm,18.3s,baz=124,slow=36						
	comp=Z,1.5nm,0.5s						
WR8	Warramunga Arr	44.47	272	P	P	16 49 42.8	-0.6
WRA	Warramunga Arr	44.62	272	P	P	16 49 44.0	-0.5
WRA	Warramunga Arr	44.62	272	P	P	16 49 43.7	-0.8
	comp=Z,4.5nm,0.7s,baz=112,slow=7.8,SNR=31						
	comp=Z,4.5nm,0.7s						
WB0	Warramunga Arr	44.64	272	P	P	16 49 44.0	-0.7
WB0				IAmb	IAmb	16 49 45.5	
	comp=Z,6.2nm,0.8s						
FORT	Forrest	46.45	255	P	P	16 49 58.0	-0.9

KNRA	Kununurra	51.23	274	P	P	16 50 35.9	+0.2
KNRA				IAmb	IAmb	16 50 59.1	
	comp=Z,7.1nm,1.2s						
FITZ	Fitzroy Crossi	52.86	270	P	P	16 50 47.1	-0.8
FITZ	Fitzroy Crossi	52.86	270	LR	LR	17 13 52.9	
	comp=Z,145nm,18.4s,baz=118,slow=37						
NWAO	Narrogin (SRO)	54.76	249	LR	LR	17 10 18.0	
	comp=Z,77nm,21.6s,baz=66,slow=32						
CASY	Casey	55.09	208	P	P	16 51 02.7	-0.8
CASY				IAmb	IAmb	16 51 13.0	
	comp=Z,5.4nm,1.0s						
MORW	Morawa	56.92	253	P	P	16 51 17.7	+0.6
MORW				IAmb	IAmb	16 51 57.6	
	comp=Z,23nm,1.4s						
QSPA	South Pole Qui	59.39	180	P	P	16 51 35.1	+1.1
QSPA				IAmb	IAmb	16 51 46.7	
	comp=Z,5.5nm,0.7s						
QSPA	South Pole Qui	59.39	180	P	P	16 51 34.8	+0.8
	comp=Z,3.3nm,1.1s,baz=71,slow=2.1,SNR=4.5						
	comp=Z,3.3nm,1.1s						
DAV	Davao City (W)	66.22	295	LR	LR	17 21 22.3	
	comp=Z,20nm,18.7s,baz=334,slow=36						
SMAI	San Martin Ant	68.94	158	P	P	16 52 37.8	+1.4
TROLL	Troll, Antarti	77.55	180	⇑P	P	16 53 26.9	-0.4
	comp=Z,141nm,0.8s						
SNAA	Sanae	77.82	178	⇑P	P	16 53 28.8	+0.1
	comp=Z,43nm,0.7s						
SNAA	Sanae	77.82	178	P	P	16 53 28.5	-0.2
SNAA				IAmb	IAmb	16 53 46.7	
	comp=Z,9.7nm,1.4s						
SNAA	Sanae	77.82	178	P	P	16 53 28.5	-0.2
	comp=Z,1.0nm,0.8s,baz=196,slow=7.7,SNR=5.6						
	comp=Z,1.0nm,0.8s						
VNA3	Neumayer Olymp	77.95	176	⇑P	P	16 53 29.1	-0.3
	comp=Z,3.7nm,0.7s						
VNA2	Neumayer--Watz	78.39	177	⇑P	P	16 53 32.0	+0.2
	comp=Z,2.3nm,0.6s,baz=175,slow=4.3						
KHMM	Horse Mountain	86.82	38	P	P	16 54 18.0	+1.8
NVAR	Mina Array Bea	88.13	42	P	P	16 54 24.1	+1.5
	comp=Z,0.6nm,0.7s,baz=216,slow=7.3,SNR=3.6						
	comp=Z,0.6nm,0.7s						
MKAR	Makanchi Array	118.36	310	PKP	PKPdf	17 00 18.0	-0.8
	comp=Z,0.1nm,0.5s,baz=64,slow=5.0,SNR=1.9						
MKAR				PKKPbc	PKKPbc	17 10 34.6	-2.6
	comp=Z,0.7nm,1.0s,baz=225,slow=1.8,SNR=4.1						
KURBB	Kurchatov Arra	121.67	313	PKP	PKPdf	17 00 24.6	-0.4
	comp=Z,0.3nm,0.7s,baz=108,slow=1.7,SNR=2.8						
BVAR	Borovoye Array	126.99	316	PKP	PKiKP	17 00 35.6	0.0
	comp=Z,0.3nm,0.5s,baz=72,slow=4.7,SNR=2.9						
FINES	FINESS Array B	145.62	340	PKPbc	PKPdf	17 01 08.0	-1.1
	comp=Z,3.0nm,0.5s,baz=45,slow=4.5,SNR=35						
KBZ	Khabaz	145.71	304	PKPbc	PKPdf	17 01 09.1	-0.7
	comp=Z,2.4nm,0.8s,baz=103,slow=5.8,SNR=4.8						
NB2	NORSAR Subarra	149.14	352	PKP	PKPbc	17 01 19.4	+0.1
	comp=Z,0.4nm,0.6s,baz=18,slow=2.6						
NOA	NORSAR Array B	149.14	352	PKPbc	PKPbc	17 01 18.0	-1.4
	comp=Z,0.8nm,0.7s,baz=14,slow=4.3,SNR=4.9						
HFS	Hagfors	149.66	349	PKPbc	PKPbc	17 01 20.4	-0.1
	comp=Z,2.1nm,0.8s,baz=11,slow=9.2,SNR=4.0						
HFS				PKPab	PKPab	17 01 25.5	-0.3
	comp=Z,2.1nm,0.6s,baz=117,slow=2.0,SNR=4.8						
AKASG	Malin Array Be	151.86	323	PKPbc	PKPbc	17 01 25.6	-0.4
	comp=Z,0.7nm,0.5s,baz=54,slow=2.3,SNR=7.0						
AKASG				PKPab	PKPab	17 01 34.9	-0.4
	comp=Z,1.1nm,0.7s,baz=58,slow=2.2,SNR=5.5						
MMAI	Mount Meron Ar	152.10	283	PKPbc	PKPbc	17 01 25.5	-1.8
	comp=Z,2.1nm,0.6s,baz=95,slow=4.2,SNR=7.2						
MMAI				PKPab	pPKPbc	17 01 36.1	-0.4
	comp=Z,1.3nm,0.5s,baz=79,slow=4.3,SNR=4.8						
BRTR	Keskin Array B	153.20	298	PKPbc	PKPbc	17 01 28.8	-0.8
	comp=Z,1.2nm,1.0s,baz=0.0,slow=1.4,SNR=6.4						
BRTR				PKPab	pPKPbc	17 01 39.9	+1.0
	comp=Z,1.2nm,0.7s,baz=137,slow=5.2,SNR=6.7						

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*IDC **16** 16:51:28.8±1.9, 14°.89S×166°.90E, h0^{km}, mb3.4/3, mbtmp3.4/4, ML3.4/1, Error ellipse: s-maj=54.1km s-min=34.8km az=124.0*

*NOU **16** 16:51:32.5, 15°.03S×166°.91E, h4^{km}, MLv4.5/15, Vanuatu Islands*

ISC 16 16:51:35.0±1.1, **15°.05S**±0°.08×**167°.0E**±0°.1, **h57**^{km}, **n14**, σ**1^{s}93**/15, **mb3.2**/3, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.46	150	P	Pn	16 51 43.0	-3.3
SANVU	Saraoutou	0.46	150	S	Sn	16 51 50.0	-4.4
VLAKA	Lakatoro	1.14	157	P	Pn	16 51 53.9	-0.9
VLAKA	Lakatoro	1.14	157	S	Sn	16 52 10.2	+0.7
LUES	Luesalemba Tem	4.48	347	P	Pn	16 52 41.1	+0.7
KOUNC	Koumac, New Ca	6.04	205	P	Pn	16 53 02.9	+1.2
YATNC	Mamie plateau,	6.97	181	P	Pn	16 53 15.7	+1.1
DZM	Mont Dzumac	7.00	184	Pn	Pn	16 53 14.7	-0.4
	0.7nm,0.3s,baz=17,slow=19,SNR=16						
DZM				Sn	Sn	16 54 32.1	-1.3
	0.5nm,0.3s,baz=283,slow=23,SNR=2.1						
	1.8nm,0.3s						
DZM	Mont Dzumac	7.00	184	P	Pn	16 53 15.7	+0.7
PINNC	Pines Island,	7.54	177	P	Pn	16 53 24.4	+2.1
NGOA	Tingoa Renbel	7.56	297	P	Pn	16 53 22.3	-0.4
WRA	Warramunga Arr	31.46	256	P	P	16 57 52.0	+0.6
	0.3nm,0.9s,baz=78,slow=13,SNR=1.3						
	0.3nm,0.9s						
ASAR	Alice Springs	32.28	249	P	P	16 57 59.7	+1.0
	0.3nm,0.7s,baz=77,slow=9.4,SNR=4.9						
	0.3nm,0.7s						
ILAR	Eielson Array	86.92	18	P	P	17 04 14.6	+1.2
	0.2nm,0.4s,baz=228,slow=5.0,SNR=4.5						
	0.2nm,0.4s						

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*JMA **16** 16:51:36.6±0.2, 25°N±1°×122°.5E±0°.6, h4^{km}±4^{km}, NW OFF ISHIGAKIJIMA IS*

*TAP **16** 16:51:36.3, 24°.90N×122°.50E, h19^{km}±1^{km}, ML2.5, D*

ISC 16 16:51:36.1±1.1, **24°.90N**±0°.04×**122°.49E**±0°.02, **h12**^{km}±10^{km}, **n36**, σ**0^{s}48**/54, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.47	284	P	Pg	16 51 46.3	+0.9
TWB1				eS	Sb	16 51 53.3	+0.1
EGS		0.51	264	eP	Pb	16 51 47.2	+0.2
EOS2	EOS2	0.53	206	P	Pb	16 51 47.7	+0.4
EOS2				eS	Sb	16 51 55.9	+1.1
SXI1	Grass Mountain	0.59	290	P	Pb	16 51 48.7	+0.2
SXI1				eS	Sg	16 51 54.5	-1.0
JYNG	Yonagunijimaku	0.60	137	P	Pg	16 51 47.9	0.0
JYNG				S	Sg	16 51 55.9	0.0
TIPB	Shuangxi	0.61	277	eP	Pg	16 51 48.5	+0.5
EOS3	EOS3	0.63	195	P	Pb	16 51 49.3	+0.4
EOS3				eS	Sb	16 51 58.0	+0.4
YOJ	Yonaguni jima	0.64	132	P	Pg	16 51 48.7	+0.1
YOJ				S	Sg	16 51 56.9	-0.2
YOJ	Yonaguni jima	0.64	132	i P	Pg	16 51 48.5	-0.1
YOJ				i S	Sg	16 51 57.0	-0.1
TWC	Suao	0.65	244	P	Pg	16 51 48.7	0.0
TWC				eS	Sg	16 51 56.8	-0.5
NDS	Dongshan	0.75	250	eP	Pg	16 51 50.3	-0.4
NDS				eS	Sg	16 51 59.6	-1.0
TWE	Neicheng	0.77	257	P	Pg	16 51 51.3	+0.2
EOS4	EOS4	0.79	192	P	Pb	16 51 51.7	+0.2
EWUT	Wuta	0.79	235	P	Pg	16 51 51.4	0.0
EWUT				eS	Sg	16 52 01.8	+0.1
ENA	Nanau	0.83	236	P	Pg	16 51 52.1	0.0
ENA				eS	Sg	16 52 02.7	-0.2
FUSB	Fushanzhiwuyua	0.83	261	P	Pg	16 51 52.5	+0.3
YM01	YM01	0.87	287	eP	Pg	16 51 53.5	+0.5
ENTT	Nioudou	0.88	253	eP	Pg	16 51 53.3	+0.2
ENTT				eS	Sg	16 52 04.5	-0.1
ZUZH	Zhuzihu	0.90	287	eP	Pg	16 51 53.8	+0.3
LATG	Datong	0.95	248	P	Pg	16 51 54.3	-0.1
YHNB	Yeheng	1.04	258	P	Pb	16 51 56.4	+0.3
NSK	Sanguang	1.05	258	P	Pb	16 51 56.5	+0.2
NACB	Ninganchiao	1.09	229	P	Pb	16 51 56.3	-0.6
NACB				eS	Sb	16 52 10.6	-0.4
NNSB	Datong	1.11	245	P	Pb	16 51 57.5	+0.2
NNSB				eS	Sg	16 52 12.4	+0.3
NNS	Nan Shan	1.11	246	eP	Pg	16 51 57.8	+0.2
NNS				eS	Sn	16 52 13.0	0.0
ETLH	Xiulin Townshi	1.15	233	P	Pb	16 51 57.7	-0.2
ETLH				eS	Sb	16 52 12.7	-0.1
FUSS	Fushou	1.31	241	eP	Pg	16 52 01.3	+0.1
WHF	Hehuan Shan	1.34	236	P	Pb	16 52 01.7	+0.2
WHF				eS	Sb	16 52 18.7	-0.2
LIOB	Emei	1.36	260	eP	Pg	16 52 03.9	+1.5
SBCB	Hsinchu	1.37	266	P	Pn	16 51 59.8	-1.3
ESL	Shilin	1.45	222	eP	Pg	16 52 03.9	-0.1
OWD	Renai	1.52	232	eP	Pb	16 52 04.6	+0.2
WUSB	Renai	1.54	235	P	Pb	16 52 04.9	+0.1
WARBT	Fenglin Townsh	1.55	221	eP	Pn	16 52 04.1	+0.6
JIJ	Ishigaki jima	1.59	109	eP	Pb	16 52 05.4	-0.2
JIJ				eS	Sg	16 52 27.7	+0.3
VWDT	VWDT	1.68	228	eP	Pb	16 52 07.2	+0.3

IDC 16 16:55:49.6±2.3, **5°.23N**×**126°.61E**, **h0**^{km}, **mb3.4**/4, **mbtmp3.4**/4, **MS3.2**/4, **Error ellipse: s-maj=221.2km s-min=23.5km az=67.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.15	163	P	P	17 01 24.1	-1.7
	0.3nm,0.6s,baz=342,slow=9.1,SNR=3.2						
	0.3nm,0.6s						
JCJ	Chichijima	26.33	33	LR	LR	17 13 59.9	
	comp=Z,52nm,18.1s,baz=45,slow=41						
ASAR	Alice Springs	29.59	166	P	P	17 01 58.0	+1.3
	0.2nm,0.8s,baz=354,slow=7.8,SNR=5.9						
	0.2nm,0.8s						
MJAR	Matsushiro Arr	32.93	17	LR	LR	17 14 01.2	
	comp=Z,31nm,20.6s,baz=149,slow=33						
KLR	Kul'dur	44.06	5	LR	LR	17 21 21.5	
	comp=Z,26nm,21.2s,baz=169,slow=35						
MKAR	Makanchi Array	56.26	325	P	P	17 05 31.8	-0.2
	0.2nm,0.6s,baz=117,slow=8.3,SNR=2.0						
	0.2nm,0.6s						
YAK	Yakutsk	56.72	2	LR	LR	17 26 60.0	
	comp=Z,23nm,22.0s,baz=142,slow=33						
KURBB	Kurchatov Arra	60.42	327	P	P	17 06 01.0	+0.1
	0.6nm,0.7s,baz=124,slow=6.0,SNR=6.7						
	0.6nm,0.7s						

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*JMA **16** 17:15:02.2±0.2, 25°N±1°×122°.5E±0°.6, h4^{km}, MV2.5/8, NW OFF ISHIGAKIJIMA IS*

*TAP **16** 17:15:02.1, 24°.90N×122°.46E, h11^{km}, ML3.0, C*

ISC 16 17:15:02.1±1.1, **24°.87N**±0°.02×**122°.48E**±0°.02, **h9**^{km}±9^{km}, **n86**, σ**0^{s}64**/160, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.46	287	i P	Pg	17 15 11.7	+0.5
TWB1				eS	Sg	17 15 18.0	+0.7
EGS		0.50	267	eP	Pb	17 15 12.9	0.0
EGS				eS	Sb	17 15 20.3	0.0
EOS2	EOS2	0.50	206	i P	Pb	17 15 13.0	0.0
EOS2				S	Sb	17 15 21.7	+1.3
SXI1	Grass Mountain	0.59	292	eP	Pb	17 15 14.2	-0.5
SXI1				S	Sb	17 15 23.1	0.0
JYNG	Yonagunijimaku	0.60	134	eP	Pg	17 15 13.7	0.0
JYNG				eS	Sg	17 15 21.4	-0.1
TIPB	Shuangxi	0.60	280	P	Pb	17 15 14.4	-0.4
TIPB				eS	Sb	17 15 23.7	+0.3
EOS3	EOS3	0.60	194	i P	Pb	17 15 14.9	+0.3
EOS3				eS	Sn	17 15 25.4	-1.0
TWC	Suao	0.63	246	eP	Pg	17 15 14.3	+0.1
TWC				eS	Sb	17 15 23.9	-0.2
YOJ	Yonaguni jima	0.64	130	P	Pg	17 15 14.2	-0.2
YOJ	Yonaguni jima	0.64	130	P	Pg	17 15 14.4	0.0
YOJ				eS	Sg	17 15 22.4	-0.3
YOJ	Yonaguni jima	0.64	130	eP	Pg	17 15 14.5	+0.1
YOJ				eS	Sg	17 15 22.7	0.0
ESAO	Su ao	0.65	243	eP	Pb	17 15 15.1	-0.5
ESAO				eS	Sg	17 15 23.4	+0.4
NWF	Wu-fen Shan	0.66	288	eP	Pg	17 15 14.8	-0.1
NWF				eS	Sb	17 15 25.4	+0.2
WFSB	Wu-fen Shan	0.66	288	eP	Pb	17 15 15.9	+0.1
WFSB				S	Sb	17 15 24.2	-0.9
TNOU	National Taiwa	0.70	294	eP	Pb	17 15 16.2	-0.2
TNOU				i S	Sb	17 15 25.8	-0.2
NDS	Dongshan	0.73	251	eP	Pg	17 15 15.8	-0.5
NDS				eS	Sb	17 15 26.2	-0.9
TWE	Neicheng	0.75	259	i P	Pg	17 15 16.8	+0.2
TWE				i S	Sb	17 15 27.6	0.0
EOS4	EOS4	0.76	191	P	Pb	17 15 17.7	+0.4
EOS4				S	Sn	17 15 29.5	-0.6
EWUT	Wuta	0.76	236	P	Pg	17 15 17.1	+0.3
EWUT				i S	Sn	17 15 29.4	-1.3
ENA	Nanau	0.80	237	eP	Pg	17 15 17.4	-0.2
ENA				i S	Sb	17 15 29.8	+0.7
FUSB	Fushanzhiwuyua	0.82	262	i P	Pb	17 15 18.2	-0.3
FUSB				S	Sb	17 15 30.1	+0.5
TWA	Mucha	0.82	278	eP	Pb	17 15 18.2	-0.3
TWA				eS	Sn	17 15 32.2	+0.1
PCYT	Pengchaiyu	0.84	334	eP	Pg	17 15 18.7	+0.4
PCYT				S	Sb	17 15 30.0	-0.2
ENTT	Nioudou	0.86	255	i P	Pg	17 15 18.8	+0.2
ENTT				i S	Sn	17 15 32.2	-0.8
EAHA	Aohua	0.86	231	eP	Pb	17 15 18.9	-0.3
EAHA				eS	Sb	17 15 31.6	+0.8
YM08	YM08	0.86	292	eP	Pb	17 15 19.5	+0.2
YM08				S	Sg	17 15 30.3	+0.3
YM01	YM01	0.87	289	i P	Pg	17 15 18.8	-0.1
YM01				S	Sb	17 15 30.9	-0.2
NHDH	Xindian Distri	0.87	276	P	Pb	17 15 19.4	+0.1
NHDH				S	Sb	17 15 31.0	-0.1
NWLT	Wulai	0.89	264	P	Pg	17 15 19.1	-0.2
NWLT				S	Sb	17 15 31.6	-0.1
TWY	Chenhua	0.89	297	P	Pb	17 15 19.8	+0.1
TWY				eS	Sn	17 15 33.2	-0.6
ZUZH	Zhuzihu	0.89	289	eP	Pb	17 15 19.6	-0.2
TATO	Taipei	0.90	277	P	Pg	17 15 19.4	-0.1
ANP	Anpu	0.92	290	eP	Pg	17 15 16.5	-3.4
ANP				eS	Sb	17 15 33.1	+0.4
LATG	Datong	0.93	249	P	Pb	17 15 20.2	-0.2
LATG				i S	Sb	17 15 33.3	+0.5
NTST	Danshui	0.98	288	eS	Sn	17 15 36.4	+0.5
TWS1	Kuangyinshan	0.99	284	eP	Pn	17 15 23.2	+1.1
TWS1				eS	Sn	17 15 36.6	+0.5
YHNB	Yeheng	1.02	259	P	Pg	17 15 21.6	-0.2
YHNB	Yeheng	1.02	259	eP	Pb	17 15 22.0	0.0
YHNB				S	Sb	17 15 35.8	+0.2
NSK	Sanguang	1.04	259	eP	Pg	17 15 21.4	-0.7
NSK				S	Sb	17 15 36.3	+0.3
ETL	Fush Village	1.05	228	P	Pg	17 15 22.2	-0.2
ETL				S	Sn	17 15 37.9	0.0
NACB	Ninganchiao	1.06	229	P	Pg	17 15 21.9	-0.6
NACB	Ninganchiao	1.06	229	eP	Pg	17 15 21.9	-0.6
NACB				i S	Sn	17 15 37.8	-0.2
NNSB	Datong	1.09	246	eP	Pg	17 15 22.8	-0.3
NNSB				S	Sn	17 15 38.2	-0.6
NNSH	Datong	1.09	246	P	Pg	17 15 22.9	-0.2
NNSH				S	Sn	17 15 38.5	-0.3
NNS	Nan Shan	1.09	247	eP	Pb	17 15 23.4	+0.2
NNS				S	Sn	17 15 38.5	-0.5
ETLH	Xiulin Townshi	1.12	234	i P	Pg	17 15 23.5	-0.1
ETLH				eS	Sn	17 15 40.1	+0.4
TWD	Chiawan	1.12	226	eP	Pg	17 15 23.6	-0.1
TWD				S	Sn	17 15 39.9	+0.4
NCU	National Centr	1.18	275	P	Pg	17 15 23.6	-1.1
NCU				S	Sg	17 15 39.4	-0.5
KSHI	Guanxi Townshi	1.19	266	eP	Pn	17 15 26.6	+1.8
KSHI				S	Sn	17 15 41.1	0.0
NFF	Wufeng Townshi	1.26	259	eP	Pn	17 15 25.5	-0.4
IRIF	Iriomote-Funau	1.26	115	eP	Pn	17 15 26.2	+0.3
ETM	Tongmen	1.27	225	P	Pg	17 15 26.3	-0.2
ETM				S	Sn	17 15 43.5	+0.3
FUSS	Fushou	1.28	241	P	Pg	17 15 27.0	+0.3
FUSS				S	Sn	17 15 43.7	-0.1
WHF	Hehuan Shan	1.32	237	P	Pg	17 15 27.5	0.0
WHF				S	Sb	17 15 44.5	0.0
LIOB	Emei	1.35	261	eP	Pg	17 15 29.3	+1.3
LIOB				S	Sb	17 15 44.4	-0.5
TDCB	Techi	1.35	243	P	Pg	17 15 28.0	0.0
TDCB				S	Sb	17 15 45.0	-0.1
SBCB	Hsinchu	1.36	267	eP	Pg	17 15 28.0	-0.1
SBCB				S	Sb	17 15 44.6	-0.5
NSTT	Nanjuang	1.36	260	eP	Pg	17 15 30.0	+1.7
NSTT				S	Sb	17 15 45.1	-0.2
SHUL	Shoufeng	1.36	218	eP	Pg	17 15 29.6	+1.3
SHUL				S	Sg	17 15 45.9	-0.1
ESL	Shilin	1.42	222	eP	Pg	17 15 29.4	0.0
ESL				S	Sg	17 15 48.2	+0.4
OWD	Renai	1.50	233	P	Pb	17 15 29.8	-0.3
OWD				S	Sb	17 15 49.3	0.0
WUSB	Renai	1.52	235	eP	Pb	17 15 30.6	+0.1
WUSB				S	Sn	17 15 49.2	-0.3
WARBT	Fenglin Townsh	1.52	221	P	Pn	17 15 29.7	+0.2
WARBT				S	Sb	17 15 49.7	-0.2
NSY	Sanyi	1.63	254	eP	Pg	17 15 35.3	+2.0
NSY				eS	Sg	17 15 54.6	+0.2
TWQ1	Liyutan	1.64	252	eP	Pg	17 15 35.3	+1.8
TWQ1				S	Sn	17 15 52.6	+0.4
DPDB	Guoxing	1.64	240	eP	Pb	17 15 32.8	+0.2
DPDB				S	Sn	17 15 51.9	-0.6
WCS	Beigang Elemen	1.64	241	P	Pn	17 15 31.4	+0.3
WCS				S	Sn	17 15 51.5	-0.8
VWDT	VWDT	1.65	228	eP	Pg	17 15 33.2	-0.6
VWDT				S	Sb	17 15 53.3	-0.2
HGSD	Ruisui	1.68	215	P	Pn	17 15 31.5	-0.1
HGSD				S	Sb	17 15 53.9	-0.4
EHYH	Wanrong	1.72	217	P	Pn	17 15 32.4	+0.2
EHYH				S	Sn	17 15 54.3	+0.1
EHY	Hungye	1.72	218	P	Pn	17 15 31.5	-0.7
EHY				S	Sb	17 15 55.3	-0.3
SMLT	Sun Moon Lake	1.74	236	eP	Pb	17 15 34.5	+0.2
SMLT				S	Sn	17 15 55.1	+0.1
SSLB	Suanglung	1.76	232	P	Pg	17 15 35.2	-0.7
SSLB	Suanglung	1.76	232	eP	Pg	17 15 35.7	-0.2
SSLB				eS	Sn	17 15 54.5	-0.8
TYC	Yuchr	1.76	237	eP	Pb	17 15 34.7	+0.1
TYC				eS	Sn	17 15 53.8	-1.5
YULB	Yu-li	1.82	216	P	Pb	17 15 35.2	-0.5
YULB	Yu-li	1.82	216	eP	Pn	17 15 32.3	-1.4
YULB				S	Sn	17 15 57.7	+0.8
TWF1	Yuli	1.86	216	eP	Pn	17 15 33.2	-0.9
TWF1				S	Sn	17 15 57.7	0.0
WNT	Mingjian	1.91	239	eP	Pg	17 15 38.8	0.0
WNT				eS	Sg	17 16 03.0	-0.6
WCH1	Changhua City	1.93	246	P	Pn	17 15 35.0	-0.1
WCH1				S	Sn	17 15 59.5	0.0
CHKH	Chenggong	1.94	211	P	Pn	17 15 35.3	0.0
CHKH				S	Sn	17 16 00.8	+1.0
FULB	Fuli	1.99	213	P	Pn	17 15 36.6	+0.7
FULB				S	Sn	17 16 01.3	+0.4
ALS	Alishan	2.04	229	eP	Pb	17 15 38.5	-1.1
ALS				S	Sn	17 16 02.6	-0.1
EHD	Haiduan	2.07	214	P	Pn	17 15 37.5	+0.4
EHD				S	Sn	17 16 03.8	+0.8
CHN5	Tsauling	2.08	233	P	Pn	17 15 38.0	+0.8
TPUB	Ta-pu	2.30	228	P	Pb	17 15 42.3	-1.5

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*JMA **16** 17:19:51.7±0.2, 25°N±1°×122°.5E±0°.6, h7^{km}, MV2.3/7, NW OFF ISHIGAKIJIMA IS*

*TAP **16** 17:19:51.7, 24°.85N×122°.50E, h2^{km}, ML2.6, D*

ISC 16 17:19:50.8±1.1, **24°.83N**±0°.03×**122°.52E**±0°.03, **h13**^{km}±8^{km}, **n53**, σ**0^{s}76**/94, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS2	EOS2	0.48	213	P	Pg	17 20 00.6	+0.3
EOS2				eS	Sn	17 20 11.1	-0.3
TWB1	Santiao Chiao	0.52	291	i P	Pg	17 20 00.9	-0.1
TWB1				eS	Sg	17 20 06.7	-1.2
JYNG	Yonagunijimaku	0.54	134	eP	Pn	17 20 02.9	-1.2
JYNG				eS	Sb	17 20 10.4	+0.8
EGS		0.54	272	P	Pg	17 20 01.6	+0.3
EGS				eS	Sb	17 20 09.8	+0.1
EOS3	EOS3	0.57	199	P	Pn	17 20 03.6	-0.8
YOJ	Yonaguni jima	0.57	129	eP	Pn	17 20 03.5	-1.1
YOJ				eS	Sb	17 20 11.6	+0.9
YOJ	Yonaguni jima	0.57	129	eP	Pn	17 20 03.5	-1.1
YOJ				eS	Sb	17 20 11.2	+0.5
SXI1	Grass Mountain	0.65	295	i P	Pg	17 20 03.4	0.0
SXI1				eS	Sg	17 20 11.0	-1.0
TWC	Suao	0.65	251	P	Pb	17 20 04.0	+0.1
TWC				S	Sb	17 20 13.2	+0.3
TIPB	Shuangxi	0.65	283	i P	Pg	17 20 03.7	+0.2
TIPB				eS	Sg	17 20 10.3	-1.8
ESAO	Su ao	0.67	248	P	Pb	17 20 04.3	+0.1
ESAO				S	Sb	17 20 13.5	+0.1
ILA	Ilan	0.71	265	eP	Pg	17 20 03.3	-1.2
ILA				S	Sb	17 20 15.0	+0.5
WFSB	Wu-fen Shan	0.72	290	P	Pb	17 20 05.0	-0.1
WFSB				S	Sb	17 20 15.5	+0.6
EOS4	EOS4	0.73	195	eP	Pg	17 20 03.5	-1.3
EOS4				eS	Sn	17 20 17.6	+0.5
NDS	Dongshan	0.76	256	P	Pg	17 20 05.4	-0.1
NDS				eS	Sg	17 20 14.2	-1.2
EWUT	Wuta	0.78	241	P	Pb	17 20 06.4	+0.3
EWUT				S	Sb	17 20 17.1	+0.5
TWE	Neicheng	0.79	263	P	Pb	17 20 06.5	+0.2
TWE				S	Sg	17 20 16.5	+0.2
ENA	Nanau	0.81	241	P	Pg	17 20 07.0	+0.4
ENA				S	Sb	17 20 17.7	+0.1
FUSB	Fushanzhiwuyua	0.85	266	P	Pn	17 20 08.3	-0.2
FUSB				S	Sb	17 20 18.7	-0.1
TWA	Mucha	0.87	280	P	Pb	17 20 07.2	-0.4
TWA				S	Sg	17 20 19.8	+0.8
EAHA	Aohua	0.87	235	eP	Pn	17 20 08.3	-0.3
ENTT	Nioudou	0.89	258	eP	Pn	17 20 09.7	+0.8
ENTT				eS	Sn	17 20 21.2	-0.5
PCYT	Pengchaiyu	0.90	333	P	Pb	17 20 07.7	-0.5
PCYT				eS	Sn	17 20 21.4	-0.5
YM08	YM08	0.92	293	P	Pb	17 20 08.3	-0.3
YM08				S	Sg	17 20 21.1	+0.5
YM01	YM01	0.92	290	P	Pn	17 20 09.0	-0.4
ZUZH	Zhuzihu	0.95	291	P	Pb	17 20 09.0	-0.1
TWY	Chenhua	0.95	298	P	Pb	17 20 08.9	-0.1
TWY				S	Sg	17 20 22.1	+0.5
LATG	Datong	0.95	253	eP	Pn	17 20 09.9	0.0
LATG				S	Sn	17 20 22.7	-0.7
ANP	Anpu	0.98	292	P	Pn	17 20 10.1	-0.2
ANP				S	Sg	17 20 23.1	+0.5
YHNB	Yeheng	1.05	262	P	Pg	17 20 12.1	+1.0
YHNB				S	Sn	17 20 26.1	+0.2
NACB	Ninganchiao	1.07	233	P	Pg	17 20 11.6	+0.2
NACB				eS	Sb	17 20 24.0	-0.9
NSK	Sanguang	1.07	262	i P	Pg	17 20 11.5	+0.1
NSK				S	Sg	17 20 25.8	+0.4
NNSB	Datong	1.11	249	P	Pg	17 20 12.6	+0.4
NNSB				eS	Sn	17 20 27.1	-0.2
NNS	Nan Shan	1.11	250	P	Pg	17 20 12.2	-0.1
NNS				S	Sn	17 20 27.5	+0.1
TWD	Chiawan	1.12	229	P	Pg	17 20 12.6	+0.1
TWD				i S	Sg	17 20 28.3	+1.2
ETLH	Xiulin Townshi	1.13	237	eP	Pg	17 20 12.8	+0.2
ETLH				S	Sg	17 20 28.3	+1.0
IRIF	Iriomote-Funau	1.20	114	eP	Pg	17 20 15.5	+1.5
ETM	Tongmen	1.27	228	eP	Pn	17 20 13.5	-0.7
NFF	Wufeng Townshi	1.29	262	eP	Pg	17 20 17.1	+1.4
FUSS	Fushou	1.30	244	P	Pg	17 20 15.9	+0.1
FUSS				S	Sg	17 20 32.6	-0.1
WHF	Hehuan Shan	1.33	240	i P	Pg	17 20 16.6	+0.1
WHF				i S	Sg	17 20 34.0	+0.2
SHUL	Shoufeng	1.35	220	eP	Pn	17 20 14.1	-1.2
TDCB	Techi	1.37	246	P	Pg	17 20 17.4	+0.3
TDCB				S	Sg	17 20 35.7	+0.8
LIOB	Emei	1.38	263	eP	Pg	17 20 19.0	+1.6
NSTT	Nanjuang	1.40	262	eP	Pg	17 20 19.1	+1.4
NSTT				eS	Sg	17 20 38.3	+2.4
OWD	Renai	1.50	235	eP	Pb	17 20 18.1	-0.5
OWD				eS	Sn	17 20 37.2	+0.1
WARBT	Fenglin Townsh	1.51	223	P	Pg	17 20 20.2	+0.3
WARBT				S	Sg	17 20 39.1	-0.4
WUSB	Renai	1.53	237	eP	Pb	17 20 18.3	-0.7
WUSB				eS	Sn	17 20 37.0	-0.7
WHP	Taichung City	1.54	250	eP	Pg	17 20 20.9	+0.6
WHP				i S	Sg	17 20 40.7	+0.4
VWDT	VWDT	1.65	230	eP	Pg	17 20 23.6	+1.1
TWQ1	Liyutan	1.66	254	eP	Pg	17 20 23.4	+0.7
TWQ1				eS	Sg	17 20 46.0	+1.6
SMLT	Sun Moon Lake	1.75	238	eP	Pg	17 20 24.7	+0.2
YULB	Yu-li	1.81	218	eP	Pn	17 20 21.3	-0.4

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*NEIC **16** 17:25:23.1±2.7, 18°.57N±0°.04×101°.77W±0°.04, h61^{km}±5^{km}, mb5.1/641, Md5.0/199(MEX), Error ellipse: s-maj=6.1km s-min=4.8km az=60.0*

*IDC **16** 17:25:23.0±1.5, 18°.84N×101°.48W, h60^{km}±12^{km}, mb4.7/27, mbtmp4.9/30, MS4.0/56, Error ellipse: s-maj=18.5km s-min=9.3km az=60.0*

GCMT **16** 17:25:24.1±0.3, 18.°71N±0.°02×101.°74W±0.°01, h72^{km}±1^{km}, MW5.0/99, Moment Tensor Solution. s76,c105; s99,c159; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.37±.12; $M_{\theta\theta}$4.79±.10; $M_{\phi\phi}$-1.42±.11; $M_{r\theta}$2.38±.09; $M_{\theta\phi}$0.14±.12; $M_{\phi r}$0.23±.08; Best double couple: $M_0$4.73300×10^{16} NP1:ϕ_s93.00000°,δ30.00000°, λ-83.00000°. NP2:ϕ_s265.00000°,δ60.00000°, λ-94.00000°. Principal axes: T 5.4390, Plg15.0000°, Azm358.0000°; N -1.4130, Plg3.0000°, Azm267.0000°; P -4.0260, Plg74.0000°, Azm165.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

MEX **16** 17:25:25.0±0.8, 18.°52N×101.°75W, h65^{km}±8^{km}, MD5.0

MOS **16** 17:25:26.7±1.1, 18.°87N×101.°54W, h64^{km}, mb5.1/31, Error ellipse: s-maj=9.2km s-min=5.4km az=89.4

ISC 16 17:25:22.6±0.3**, 18.°53N**±0.°03×**101.°78W**±0.°03**, h65**^{km}±2^{km}**, h65**^{km}**:pP-P, n1127, σ1.^{s}96**/1016**, mb5.0**/337**, 41C-12D, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UON	La Union	0.56	184	⇑iP	Pn	17 25 36.0	+0.4
UON				i S	Sn	17 25 46.3	+1.2
URUA	Uruapan	0.93	342		Pn	17 25 40.3	+0.2
URUA					Sn	17 25 52.7	-0.4
URUA	Uruapan	0.93	342	⇑eP	Pn	17 25 40.3	+0.2
URUA				eS	Sn	17 25 52.7	-0.4
ZIIG	Zihuatanejo	0.97	162		Pn	17 25 40.6	+0.2
ZIIG					Sn	17 25 53.9	+0.3
ZIIG	Zihuatanejo	0.97	162	⇑eP	Pn	17 25 40.6	+0.2
ZIIG				eS	Sn	17 25 53.9	+0.3
PET2	Petatlan	1.11	154	⇑iP	Pn	17 25 42.4	+0.2
PET2				i S	Sn	17 25 56.5	-0.4
MOIG	Morelia	1.27	26		Pn	17 25 44.0	-0.6
MOIG	Morelia	1.27	26	⇑eP	Pn	17 25 44.6	0.0
MOIG				eS	Sn	17 26 00.6	-0.4
ARIG	Puente Sto Nin	1.38	100		Pn	17 25 46.5	+0.6
ARIG					Sn	17 26 02.8	-0.5
ARIG	Puente Sto Nin	1.38	100	⇑eP	Pn	17 25 46.5	+0.6
ARIG				eS	Sn	17 26 02.8	-0.5
MMIG	Aquila	1.51	261		Pn	17 25 47.4	-0.1
MMIG					Sn	17 26 05.5	-0.7
MMIG	Aquila	1.51	261	eP	Pn	17 25 47.4	-0.1
MMIG				eS	Sn	17 26 05.5	-0.7
ACAM	Acambaro	1.81	34		Pn	17 25 52.0	+0.3
ACAM					Sn	17 26 11.2	-2.6
ACAM	Acambaro	1.81	34	⇑eP	Pn	17 25 52.0	+0.3
ACAM				eS	Sn	17 26 11.2	-2.6
ATYC	Atoyac	1.83	135	i P	Pn	17 25 52.6	+0.7
ATYC				eS	Sn	17 26 09.4	-4.7
MNGA	Volcan de Coli	1.98	298	eP	Pn	17 25 56.1	+2.1
MNGA				eS	Sn	17 26 20.0	+2.1
INCO	Volcan de Coli	1.99	300	⇑eP	Pn	17 25 56.3	+2.0
INCO				eS	Sn	17 26 23.6	+5.1
SOMAC	Volcano de Col	2.01	300	⇑eP	Pn	17 25 56.5	+1.8
SOMAC				eS	Sn	17 26 21.5	+2.5
COMA	Comala	2.04	293	eP	Pn	17 25 56.0	+1.4
COMA				eS	Sn	17 26 21.2	+2.0
CAIG	El Cayaco	2.06	135		Pn	17 25 55.5	+0.6
CAIG	El Cayaco	2.06	135	⇑eP	Pn	17 25 55.5	+0.6
CAIG				eS	Sn	17 26 20.0	+0.4
MEIG	Mezcala	2.14	106		Pn	17 25 56.7	+0.7
MEIG					Sn	17 26 14.1	-7.5
MEIG	Mezcala	2.14	106	eP	Pn	17 25 56.7	+0.7
MEIG				eS	Sn	17 26 14.1	-7.5
CEGR	Campo Tres	2.15	294	eP	Pn	17 25 57.5	+1.3
CEGR				eS	Sn	17 26 22.6	+0.7
CDAR	Ciudad de Arme	2.15	281	eP	Pn	17 25 56.5	+0.3
CDAR				eS	Sn	17 26 23.6	+1.7
PLIG	Platanillo	2.17	93		Pn	17 25 57.9	+1.5
PLIG					Sn	17 26 14.6	-7.7
PLIG	Platanillo	2.17	93	eP	Pn	17 25 57.9	+1.5
PLIG				eS	Sn	17 26 14.6	-7.7
ATVM	ATLACOMULCO	2.20	56		Pn	17 25 58.1	+1.0
ATVM					Sn	17 26 24.9	+1.4
ATVM	ATLACOMULCO	2.20	56	⇑eP	Pn	17 25 58.1	+1.0
ATVM				eS	Sn	17 26 24.9	+1.4
IGIG	Irapuato, Guan	2.25	11		Pn	17 25 58.0	+0.3
IGIG					Sn	17 26 31.8	+7.3
IGIG	Irapuato, Guan	2.25	11	⇑eP	Pn	17 25 58.0	+0.3
IGIG				eS	Sn	17 26 31.8	+7.3
ACIG	Acambay	2.30	51		Pn	17 25 59.3	+1.0
ACIG					Sn	17 26 20.4	-5.4
ACIG	Acambay	2.30	51	⇑eP	Pn	17 25 59.3	+1.0
ACIG				eS	Sn	17 26 20.4	-5.4
INVM	La Marquesa	2.39	71	eP	Pn	17 26 01.0	+1.2
INVM				eS	Sn	17 26 29.8	+1.5
AOVM	Tlapan	2.44	72		Pn	17 26 02.1	+1.6
AOVM					Sn	17 26 24.9	-4.6
AOVM	Tlapan	2.44	72	⇑eP	Pn	17 26 02.1	+1.6
AOVM				eS	Sn	17 26 24.9	-4.6
ACP2	Acapulco	2.44	132		Pn	17 25 59.9	-0.3
ACP2					Sn	17 26 27.4	-1.5
ACP2	Acapulco	2.44	132	eP	Pn	17 25 59.9	-0.3
ACP2				eS	Sn	17 26 27.4	-1.5
VNTA	La Mica	2.46	130	eP	Pn	17 25 59.9	-0.6
VNTA				eS	Sn	17 26 28.4	-1.0
TON2	Tonala	2.49	327	eP	Pn	17 25 60.0	-1.0
TON2				eS	Sn	17 26 33.9	+3.5
JRQG	Juriquilla Cam	2.50	30		Pn	17 26 01.8	+0.7
JRQG	Juriquilla Cam	2.50	30	⇑eP	Pn	17 26 01.8	+0.7
JRQG				eS	Sn	17 26 37.8	+7.1
CJVM	Cuajimalpa	2.50	70	eP	Pn	17 26 02.0	+0.8
CJVM				eS	Sn	17 26 26.8	-3.9
DAIG	Los Arroyos	2.52	126		Pn	17 26 01.9	+0.7
DAIG					Sn	17 26 32.1	+1.2
DAIG	Los Arroyos	2.52	126	⇑eP	Pn	17 26 01.9	+0.7
DAIG				eS	Sn	17 26 32.1	+1.2
TLVM	San Miguel Top	2.58	74	eP	Pn	17 26 03.2	+1.0
TLVM				eS	Sn	17 26 30.6	-2.1
AZVM	Cuida Lopez Ma	2.58	66		Pn	17 26 04.0	+1.7
AZVM					Sn	17 26 33.6	+0.8
AZVM	Cuida Lopez Ma	2.58	66	eP	Pn	17 26 04.0	+1.7
AZVM				eS	Sn	17 26 33.6	+0.8
CUP5	Mexico City	2.58	72	eP	Pn	17 26 05.4	+3.1
CUP5				eS	Sn	17 26 33.5	+0.7
UNM	Universidad Na	2.59	72		Pn	17 26 04.4	+2.1
UNM	Universidad Na	2.59	72	eP	Pn	17 26 04.2	+1.9
UNM				eS	Sn	17 26 32.3	-0.5
UNM	Universidad Na	2.59	72	P	Pn	17 26 04.4	+2.1
YAIG	Yautepec	2.59	82		Pn	17 26 03.2	+0.9
YAIG					Sn	17 26 34.2	+1.4
YAIG	Yautepec	2.59	82	eP	Pn	17 26 03.2	+0.9
YAIG				eS	Sn	17 26 34.2	+1.4
BJVM	Benito Juarez	2.61	71	eP	Pn	17 26 02.2	-0.5
BJVM				eS	Sn	17 26 29.7	-3.7
COVM	Coyoacan	2.61	71	eP	Pn	17 26 04.2	+1.5
XCVM	Xochimilco	2.62	74	eP	Pn	17 26 04.6	+1.8
XCVM				eS	Sn	17 26 32.0	-1.6
CTVM	Cuauhtemoc	2.63	69	eP	Pn	17 26 03.5	+0.6
CTVM				eS	Sn	17 26 32.2	-1.8
SCT2	Benito Juarez	2.63	71	eP	Pn	17 26 07.2	+4.2
SCT2				eS	Sn	17 26 34.7	+0.7
GDLP	Chapalita	2.65	324	eP	Pn	17 26 03.2	0.0
GDLP				eS	Sn	17 26 36.0	+1.6
VRVM	Mexico City	2.67	70	eP	Pn	17 26 05.4	+1.9
VRVM				eS	Sn	17 26 33.6	-1.2
MPVM	San Francisco	2.70	75	eP	Pn	17 26 04.8	+0.9
MPVM				eS	Sn	17 26 34.5	-1.2
PBVM	Pinon	2.71	70		Pn	17 26 05.6	+1.9
PBVM					Sn	17 26 38.1	+2.8
PBVM	Pinon	2.71	70	eP	Pn	17 26 05.6	+1.9
PBVM				eS	Sn	17 26 38.1	+2.8
ZUVM	ZUMPANGO	2.86	63		Pn	17 26 06.8	+0.7
ZUVM					Sn	17 26 41.2	+1.7
ZUVM	ZUMPANGO	2.86	63	eP	Pn	17 26 06.8	+0.7
ZUVM				eS	Sn	17 26 41.2	+1.7
CIHU	Emiliano Zapat	2.89	285	eP	Pn	17 26 06.4	+0.1
CIHU				eS	Sn	17 26 46.6	+6.6
AMVM	AMECAMECA	2.90	78		Pn	17 26 09.7	+3.1
AMVM					Sn	17 26 35.9	-4.5
AMVM	AMECAMECA	2.90	78	eP	Pn	17 26 09.7	+3.1
AMVM				eS	Sn	17 26 35.9	-4.5
PPIG	Popocatepetl	3.03	79		Pn	17 26 10.2	+1.6
PPIG					Sn	17 26 44.5	+0.5
PPM	Popocatepetl	3.03	79	eP	Pn	17 26 10.2	+1.6
PPM				eS	Sn	17 26 44.5	+0.5
CRIG	Cruz Grande	3.09	125		Pn	17 26 10.1	+1.1
CRIG					Sn	17 26 43.8	-1.0
CRIG	Cruz Grande	3.09	125	⇑eP	Pn	17 26 10.1	+1.1
CRIG				eS	Sn	17 26 43.8	-1.0
VTVM	Tizayuca	3.10	66		Pn	17 26 10.9	+1.6
VTVM					Sn	17 26 47.5	+2.2
VTVM	Tizayuca	3.10	66	eP	Pn	17 26 10.9	+1.6
VTVM				eS	Sn	17 26 47.5	+2.2
DEIG	Demacu	3.13	55	⇑eP	Pn	17 26 10.7	+0.9
DEIG				eS	Sn	17 26 43.6	-2.5
DHIG	Demacu	3.13	55		Pn	17 26 10.7	+0.9
DHIG					Sn	17 26 43.6	-2.5
HMTT	Tlapaneco	3.15	103		Pn	17 26 12.2	+2.4
HMTT					Sn	17 26 45.8	-0.4
HMTT	Tlapaneco	3.15	103	eP	Pn	17 26 12.2	+2.4
HMTT				eS	Sn	17 26 45.8	-0.4
TLIG	Tlapa	3.20	107		Pn	17 26 12.6	+1.9
TLIG	Tlapa	3.20	107	⇑eP	Pn	17 26 12.6	+1.9
TLIG				eS	Sn	17 26 46.1	-1.7
CJM	Chamela	3.24	288	eP	Pn	17 26 11.6	+0.6
CJM				eS	Sn	17 26 51.4	+3.1
MGIG	Malinaltepec	3.26	113		Pn	17 26 13.5	+2.0
MGIG					Sn	17 26 48.1	-1.1
MGIG	Malinaltepec	3.26	113	⇑eP	Pn	17 26 13.5	+2.0
MGIG				eS	Sn	17 26 48.1	-1.1
PHPU	Puebla	3.46	81		Pn	17 26 18.8	+4.6
PHPU					Sn	17 26 58.6	+4.5
PHPU	Puebla	3.46	81	eP	Pn	17 26 18.8	+4.6
PHPU				eS	Sn	17 26 58.6	+4.5
AAIG	Aguscalientes	3.46	351		Pn	17 26 15.1	+0.8
AAIG					Sn	17 27 02.3	+8.0
AAIG	Aguscalientes	3.46	351	⇑eP	Pn	17 26 15.1	+0.8
AAIG				eS	Sn	17 27 02.3	+8.0
FTIG	Fresnillo de T	3.52	100		Pn	17 26 17.0	+2.1
FTIG					Sn	17 26 54.0	-1.5
FTIG	Fresnillo de T	3.52	100	⇑eP	Pn	17 26 17.0	+2.1
FTIG				eS	Sn	17 26 54.0	-1.5
ANIG	Ahuacatlan	3.60	315		Pn	17 26 17.1	+1.0
ANIG					Sn	17 27 01.6	+4.2
ANIG	Ahuacatlan	3.60	315	⇑eP	Pn	17 26 17.1	+1.0
ANIG				eS	Sn	17 27 01.6	+4.2
RPIG	Rio Verde	3.74	27		Pn	17 26 19.3	+1.4
RPIG					Sn	17 27 06.6	+5.8
RPIG	Rio Verde	3.74	27	⇑eP	Pn	17 26 19.3	+1.4
RPIG				eS	Sn	17 27 06.6	+5.8
HLIG	Huajuapan de L	3.84	100		Pn	17 26 21.7	+2.2
HLIG					Sn	17 27 00.4	-3.2
HLIG	Huajuapan de L	3.84	100	⇑eP	Pn	17 26 21.7	+2.2
HLIG				eS	Sn	17 27 00.4	-3.2
PUVA	Puert Vallarta	3.85	303		Pn	17 26 21.8	+2.4
PUVA					Sn	17 27 06.4	+2.9
PUVA	Puert Vallarta	3.85	303	eP	Pn	17 26 21.8	+2.4
PUVA				eS	Sn	17 27 06.4	+2.9
TXIG	Tlaxiaco	4.03	108		Pn	17 26 24.5	+2.5
TXIG					Sn	17 27 06.8	-1.3
TXIG	Tlaxiaco	4.03	108	eP	Pn	17 26 24.5	+2.5
TXIG				eS	Sn	17 27 06.8	-1.3
PNIG	Pinotepa	4.08	121		Pn	17 26 24.0	+1.4
PNIG					Sn	17 27 09.0	-0.1
PNIG	Pinotepa	4.08	121	⇑eP	Pn	17 26 24.0	+1.4
PNIG				eS	Sn	17 27 09.0	-0.1
THEZ	Tehuacan	4.17	90	i P	Pn	17 26 26.4	+2.4
THEZ				eS	Sn	17 27 12.5	+1.0
TPIG	Tehuac#an	4.19	91		Pn	17 26 25.9	+1.6
TPIG					Sn	17 27 14.6	+2.5
TPIG	Tehuac#an	4.19	91	eP	Pn	17 26 25.9	+1.6
TPIG				eS	Sn	17 27 14.6	+2.5
CXUV	Coxquihui	4.28	67	⇑eP	Pn	17 26 27.3	+2.0
CXUV				eS	Sn	17 27 15.3	+1.4
ZAIG	Zacatecas	4.28	350		Pn	17 26 26.1	+0.6
ZAIG	Zacatecas	4.28	350	⇑eP	Pn	17 26 26.1	+0.6
ZAIG				eS	Sn	17 27 15.4	+1.0
CTUV	Llano Grande	4.35	47	⇑eP	Pn	17 26 27.7	+1.5
CTUV				eS	Sn	17 27 08.0	-7.6
YOIG	Yosondua	4.37	112		Pn	17 26 29.2	+2.5
YOIG					Sn	17 27 15.7	-0.7
YOIG	Yosondua	4.37	112	⇑eP	Pn	17 26 29.2	+2.5
YOIG				eS	Sn	17 27 15.7	-0.7
TOIG	Toxpalan	4.50	95		Pn	17 26 30.8	+2.5
TOIG					Sn	17 27 22.5	+3.1
TOIG	Toxpalan	4.50	95	⇓eP	Pn	17 26 30.8	+2.5
TOIG				eS	Sn	17 27 22.5	+3.1
OXIG	Oaxaca	5.02	106		Pn	17 26 38.6	+3.0
OXIG					Sn	17 27 31.7	-0.7
VHO	Vista Hermosa	5.02	106	⇓eP	Pn	17 26 38.6	+3.0
VHO				eS	Sn	17 27 31.7	-0.7
OXBJ	Oaxaca	5.03	106		Pn	17 26 36.6	+0.9
OXBJ					Sn	17 27 30.3	-2.3
OXBJ	Oaxaca	5.03	106	eP	Pn	17 26 36.6	+0.9
OXBJ				eS	Sn	17 27 30.3	-2.3
OXLC	Oaxaca	5.05	106	eP	Pn	17 26 36.4	+0.4
OXLC				eS	Sn	17 27 32.2	-0.9
PEIG	Puerto Escondi	5.09	119		Pn	17 26 38.2	+1.8
PEIG					Sn	17 27 30.3	-3.6
PEIG	Puerto Escondi	5.09	119	eP	Pn	17 26 38.2	+1.8
PEIG				eS	Sn	17 27 30.3	-3.6
GTIG	Gomez Farias	5.13	28		Pn	17 26 38.1	+1.2
GTIG					Sn	17 27 30.9	-3.9
GTIG	Gomez Farias	5.13	28	⇑eP	Pn	17 26 38.1	+1.2
GTIG				eS	Sn	17 27 30.9	-3.9
HUIG	Huatulco	6.08	116		Pn	17 26 52.5	+2.6
HUIG					Sn	17 27 55.5	-2.6
HUIG	Huatulco	6.08	116	eP	Pn	17 26 52.5	+2.6
HUIG				eS	Sn	17 27 55.5	-2.6
MAIG	Mazatlaan	6.35	318		Pn	17 26 55.3	+1.7
MAIG					Sn	17 28 07.8	+3.1
MAIG	Mazatlaan	6.35	318	eP	Pn	17 26 55.3	+1.7
MAIG				eS	Sn	17 28 07.8	+3.1
LNIG	Linares	6.69	18	⇑eP	Pn	17 26 59.2	+1.0
LNIG				eS	Sn	17 28 19.5	+6.5
MIHL	Minatitlan	6.89	93	eP	Pn	17 27 07.3	+6.2
TUIG	Tuzandepetl	7.01	93	eP	Pn	17 27 02.4	-0.1
TUIG				eS	Sn	17 28 21.3	+0.5
MNIG	Monterrey	7.18	11		Pn	17 27 07.1	+2.1
MNIG					Sn	17 28 32.9	+7.8
MNIG	Monterrey	7.18	11	⇑eP	Pn	17 27 07.1	+2.1
MNIG				eS	Sn	17 28 32.9	+7.8
PDIG	Papasquiaro	7.30	333		Pn	17 27 08.5	+1.8
PDIG					Sn	17 28 35.8	+7.5
PDIG	Papasquiaro	7.30	333	⇑eP	Pn	17 27 08.5	+1.8
PDIG				eS	Sn	17 28 35.8	+7.5
SSIG	Sanalona	8.00	322		Pn	17 27 18.8	+2.6
SSIG					Sn	17 28 45.6	+0.5
SSIG	Sanalona	8.00	322	⇑eP	Pn	17 27 18.8	+2.6
SSIG				eS	Sn	17 28 45.6	+0.5
TGIG		8.44	101		Pn	17 27 24.4	+2.3
TGIG					Sn	17 28 52.7	-3.3
TGIG		8.44	101	⇓eP	Pn	17 27 24.4	+2.3
TGIG				eS	Sn	17 28 52.7	-3.3
PCIG		8.65	108		Pn	17 27 28.4	+3.3
PCIG					Sn	17 28 54.4	-6.9
PCIG		8.65	108	⇓eP	Pn	17 27 28.4	+3.3
PCIG				eS	Sn	17 28 54.4	-6.9
HBVL	Hebbronville	8.96	18		Pn	17 27 30.7	+1.4
HPIG		9.10	337		Pn	17 27 33.9	+2.5
HPIG		9.10	337	eP	Pn	17 27 33.6	+2.3
HPIG				eS	Sn	17 29 17.9	+5.5
SLBS	Sierra La Lagu	9.19	305		Pn	17 27 35.9	+3.5
SLBS	Sierra La Lagu	9.19	305	eP	Pn	17 27 33.9	+1.5
MCIG	Muzquiz	9.31	2		Pn	17 27 34.4	+0.4
MCIG					Sn	17 29 10.9	-6.3
MCIG	Muzquiz	9.31	2	eP	Pn	17 27 34.4	+0.4
MCIG				eS	Sn	17 29 10.9	-6.3
CCIG	Comitan	9.47	102		Pn	17 27 39.2	+2.8
CCIG	Comitan	9.47	102	eP	Pn	17 27 38.6	+2.1
CCIG				eS	Sn	17 29 21.8	+0.3
BCIG	La Boquilla	9.57	340		Pn	17 27 40.6	+2.9
BCIG					Sn	17 29 29.2	+5.3
BCIG	La Boquilla	9.57	340	⇑eP	Pn	17 27 40.6	+2.9
BCIG				eS	Sn	17 29 29.2	+5.3
LPIG	La Paz	9.69	306		Pn	17 27 41.7	+2.5
LPIG					Sn	17 29 29.0	+2.5
LPIG	La Paz	9.69	306	P	Pn	17 27 42.1	+2.8
	18nm,0.4s,baz=136,slow=6.6,SNR=5.7						
LPIG				LR	LR	17 31 22.2	
	comp=Z,707nm,19.3s,baz=128,slow=37						
LPIG	La Paz	9.69	306	eP	Pn	17 27 41.7	+2.5
LPIG				eS	Sn	17 29 29.0	+2.5
TSIG	Topolobambo	9.73	318		Pn	17 27 39.8	0.0
TSIG					Sn	17 29 22.2	-5.4
TSIG	Topolobambo	9.73	318	eP	Pn	17 27 39.8	0.0
TSIG				eS	Sn	17 29 22.2	-5.4
PATR	El Naranjo	9.75	109	⇓eP	Pn	17 27 43.9	+3.5
PATR				eS	Sn	17 29 24.7	-3.7
PAVE	Pavencul	9.77	108	eP	Pn	17 27 45.0	+4.4
PAVE				eS	Sn	17 29 30.6	+1.6
THIG		9.80	110		Pn	17 27 39.3	-1.5
THIG					Sn	17 29 30.2	+0.9
THIG		9.80	110	eP	Pn	17 27 39.3	-1.5
THIG				eS	Sn	17 29 30.2	+0.9
833A	Chaparral WMA,	9.99	12		Pn	17 27 42.9	-0.4
CSIG	Choix	10.26	325		Pn	17 27 50.1	+3.1
CSIG					Sn	17 29 43.3	+2.9
CSIG	Choix	10.26	325	eP	Pn	17 27 50.1	+3.1
CSIG				eS	Sn	17 29 43.3	+2.9
RTAL	Retalhuleu	10.46	111		Pn	17 27 54.5	+4.7
TX31	Lajitas Ar. Si	10.89	351		Pn	17 27 58.7	+3.0
TXAR	Lajitas Array	10.89	351		Pn	17 27 58.5	+2.8
TXAR	Lajitas Array	10.89	351	P	Pn	17 27 58.3	+2.5
	49nm,0.8s,baz=167,slow=15,SNR=427						
TXAR				LR	LR	17 32 47.5	
	comp=Z,1µm,18.6s,baz=162,slow=42						
TXAR	Lajitas Array	10.89	351	P	Pn	17 27 58.5	+2.8
HNDO	Hondo	11.18	11		Pn	17 28 01.8	+2.2
SAND	Sanderson	11.38	358		Pn	17 28 05.8	+3.5
ALPN	Alpine	11.91	352		Pn	17 28 12.7	+3.0
JCT	Junction City	12.03	8		Pn	17 28 12.5	+1.3
JCT	Junction City	12.03	8	P	Pn	17 28 12.5	+1.3
OZNA	Ozona	12.35	3		Pn	17 28 19.1	+3.5
GUYB	Guaymas	12.52	320	eP	Pn	17 28 18.0	+0.1
VHRN	Van Horn	12.54	347		Pn	17 28 20.6	+2.3
HKT	Hockley	12.59	24	i P	Pn	17 28 17.1	-1.7
MTO3	Montecristo	12.60	107		Pn	17 28 21.4	+2.2
TEIG	Tepich	12.85	80		Pn	17 28 23.0	+0.5
TEIG	Tepich	12.85	80	P	Pn	17 28 21.7	-0.7
	0.9nm,1.1s,baz=210,slow=6.4,SNR=3.3						
SRIG	Santa Rosalia	13.01	314	eP	Pn	17 28 23.8	-0.8
HSIG		13.39	323	eP	Pn	17 28 31.4	+1.7
HSIG				eS	Sn	17 31 03.4	+6.6
NZIG	Nacozari, Sono	13.74	331		Pn	17 28 35.6	+1.0
NZIG	Nacozari, Sono	13.74	331	eP	Pn	17 28 35.6	+1.0
NZIG				eS	Sn	17 31 13.1	+7.4
NATX	Nacogdoches	14.65	25		Pn	17 28 45.6	-0.8
APMT	Aspermont	14.81	5		Pn	17 28 48.5	+0.1
BAHB	Baha de los	14.95	316		Pn	17 28 46.6	-3.6
BAHB	Baha de los	14.95	316	eP	Pn	17 28 46.6	-3.6
CRNM	Carthage	15.98	345		Pn	17 29 04.1	+0.5
SBM	South Baldy	16.12	344		P	17 29 08.0	+0.4
BNM	Barren Site	16.15	345		P	17 29 07.7	-0.1
Y22D	IRIS PASSCAL I	16.15	344	IAmb	IAmb	17 29 14.8	
	comp=Z,146nm,1.1s						
Y22D	IRIS PASSCAL I	16.15	344	P	P	17 29 06.9	-0.8
	baz=162						
LENM	Lemitar	16.25	344		P	17 29 09.1	+0.3
AMTX	Amarillo	16.29	0	Pn	Pn	17 29 07.2	0.0
AMTX				IAmb	IAmb	17 29 08.5	
	comp=Z,178nm,1.1s						
WMOK	Wichita Mounta	16.36	9	Pn	Pn	17 29 06.6	-1.5
WMOK				IAmb	IAmb	17 29 10.5	
	comp=Z,90nm,0.8s						
WMOK	Wichita Mounta	16.36	9	P	Pn	17 29 06.6	-1.5
WMOK				pmax	pmax		
	comp=Z,90nm,0.8s						
BOAB	BOACO BROADBAN	16.66	109	IAmb	IAmb	17 29 17.7	
	comp=Z,260nm,1.1s						
Z41A	Richland Creek	16.73	27	IAmb	IAmb	17 29 13.8	
	comp=Z,118nm,0.9s						
ANMO	Albuquerque	16.87	347	P	P	17 29 17.2	+1.4
ANMO	Albuquerque	16.87	347	P	Pn	17 29 14.3	-0.3
	comp=Z,51nm,1.2s,baz=250,slow=12,SNR=32						
ANMO				LR	LR	17 36 13.8	
	comp=Z,3µm,18.7s,baz=261,slow=39						
ANMO	Albuquerque	16.87	347	i P	Pn	17 29 14.8	+0.2
ANMO				pmax	pmax		
	comp=Z,37nm,1.0s						
143A	Socs Landing,	16.91	31	IAmb	IAmb	17 29 17.8	
	comp=Z,249nm,1.1s						
346A	Big Creek Wild	16.96	39	IAmb	IAmb	17 29 17.8	
	comp=Z,72nm,0.8s						
WLAR	White Oak Lake	16.97	25	IAmb	IAmb	17 29 26.2	
	comp=Z,140nm,1.1s						
VBMS	Vicksburg	16.99	35	IAmb	IAmb	17 29 16.2	
	comp=Z,134nm,1.1s						
OKCSW	OKLAHOMA CITY	17.24	12	IAmb	IAmb	17 29 20.5	
	comp=Z,141nm,1.0s						
ACON	Acoyapa	17.29	110	P	P	17 29 23.2	+2.9
	comp=Z,2µmcomp=Z,71nm,1.4s						
X18A	Snowflake	17.52	337	IAmb	IAmb	17 29 33.7	
	comp=Z,65nm,0.8s						
MIAR	Mount Ida	17.54	23	P	Pn	17 29 21.0	-1.7
MIAR				pmax	pmax		
	comp=Z,82nm,1.0s						
SPIG	San Pedro Mart	17.57	318	eP	P	17 29 25.7	+1.9
ELIS	Ellis County	17.59	6	IAmb	IAmb	17 29 32.4	
	comp=Z,93nm,1.0s						
CCAR	Cane Creek	17.74	28	IAmb	IAmb	17 29 27.4	
	comp=Z,118nm,0.9s						
RTBA	Rita Blanca	17.86	357	IAmb	IAmb	17 29 30.4	
	comp=Z,227nm,0.9s						
OK052	Battle Ridge R	17.94	13	IAmb	IAmb	17 29 30.8	
	comp=Z,196nm,0.9s						
W18A	Petrified Fore	17.97	338	P	P	17 29 27.5	-0.4
W18A				IAmb	IAmb	17 29 32.7	
	comp=Z,176nm,1.9s						
TUL3	Leonard	18.10	16	P	P	17 29 28.1	-1.0
TUL3				IAmb	IAmb	17 29 30.4	
	comp=Z,123nm,0.9s						
146A	Union	18.11	37	IAmb	IAmb	17 29 36.1	
	comp=Z,113nm,0.9s						
QUOK	Quay	18.13	13	IAmb	IAmb	17 29 30.1	
	comp=Z,233nm,0.9s						
CROK	Carrier	18.21	10	IAmb	IAmb	17 29 32.7	
	comp=Z,172nm,1.3s						
JTS	Las Juntas de	18.23	114	P	Pn	17 29 32.6	+1.3
	comp=Z,21nm,0.9s,baz=307,slow=11,SNR=15						
JTS				LR	LR	17 36 11.2	
	comp=Z,367nm,20.7s,baz=306,slow=36						
BRAL	Brewton	18.33	44	P	P	17 29 28.5	-3.1
RLO	Rose Lookout	18.55	17	P	P	17 29 33.7	-0.3
RLO				IAmb	IAmb	17 29 35.5	
	comp=Z,84nm,0.9s						
KAN14	Manchester OK	18.66	10	IAmb	IAmb	17 29 36.5	
	comp=Z,136nm,1.0s						
T25A	Trinidad	18.68	353	P	P	17 29 34.2	-1.5
T25A				IAmb	IAmb	17 29 43.1	
	comp=Z,55nm,0.7s						
WHAR	Wooly Hollow	18.70	25	IAmb	IAmb	17 29 36.8	
	comp=Z,139nm,0.9s						
KAN17	Caldwell West	18.78	10	IAmb	IAmb	17 29 39.9	
	comp=Z,110nm,0.9s						
Y45A	Yeager Farm, C	18.78	33	IAmb	IAmb	17 29 37.5	
	comp=Z,162nm,0.8s						
KAN13	South Haven SW	18.80	11	IAmb	IAmb	17 29 38.1	
	comp=Z,232nm,1.0s						
KAN05	Bluff City Nor	18.82	10	IAmb	IAmb	17 29 37.6	
	comp=Z,106nm,0.7s						
KAN01	Argonia South	18.89	10	IAmb	IAmb	17 29 41.0	
	comp=Z,121nm,0.8s						
KAN09	Caldwell North	18.89	10	IAmb	IAmb	17 29 41.1	
	comp=Z,88nm,0.8s						
T35A	Sooner Cattle	18.89	13	P	P	17 29 36.3	-1.5
T35A				IAmb	IAmb	17 29 39.0	
	comp=Z,150nm,0.9s						
WUAZ	Wupatki	18.93	335	IAmb	IAmb	17 29 43.9	
	comp=Z,110nm,1.1s						
YUH	Yuha Desert	18.95	321	P	Pn	17 29 39.8	+0.1
Z47A	Carrollton	19.09	37	IAmb	IAmb	17 29 41.9	
	comp=Z,118nm,1.0s						
HDC	Heredia	19.09	114	eP	Pn	17 29 42.1	+0.4
CBX	Cerro Bola	19.18	319	P	P	17 29 41.7	+0.6
TJIG	Tijuana	19.27	319	eP	Pn	17 29 44.3	+0.7
FCAR	Ozark Folk Cen	19.28	24	IAmb	IAmb	17 29 42.3	
	comp=Z,87nm,0.9s						
OXF	Oxford	19.36	32	IAmb	IAmb	17 29 42.8	
	comp=Z,243nm,1.4s						
250A	Grady	19.36	43	P	P	17 29 40.4	-2.6
SDCO	Great Sand Dun	19.42	351	IAmb	IAmb	17 29 46.9	
	comp=Z,82nm,1.0s						
MVCO	Mesa Verde	19.52	344	IAmb	IAmb	17 29 51.2	
	comp=Z,191nm,1.6s						
LRAL	Lakeview Retre	19.61	40	IAmb	IAmb	17 29 48.4	
	comp=Z,218nm,1.8s						
LCAR	Lake Charles	19.83	26	IAmb	IAmb	17 29 48.0	
	comp=Z,69nm,1.0s						
PFO	Pinyon Flats O	19.95	322	P	P	17 29 48.0	-1.5

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PFO   Pinyon Flats O   19.95 322   P      P      17 29 50.1 +0.6
      comp=Z,28nm,0.9s,baz=127,slow=7.6,SNR=23
PFO                                LR     LR     17 37 45.7
      comp=Z,269nm,19.1s,baz=144,slow=37
PFO   Pinyon Flats O   19.95 322 i P      Pn     17 29 50.6 -1.1
PFO                                pmax   pmax
      comp=Z,99nm,1.3s
352A  Blakely          19.95  47   P      P      17 29 48.2 -1.1
352A                               IAmb   IAmb   17 29 52.1
      comp=Z,168nm,1.1s
MGMO  Mountain Grove   20.34  22   IAmb   IAmb   17 29 53.4
      comp=Z,97nm,1.4s
PLAL  Pickwick Lake    20.41  34   IAmb   IAmb   17 29 58.3
      comp=Z,190nm,1.1s
KSCO  Kaye Shedlock’   20.42 358   P      P      17 29 52.9 -1.7
PV02  Paradox Valley   20.52 344   IAmb   IAmb   17 30 13.8
      comp=Z,71nm,1.0s
Y49A  Blount Mountai   20.53  39   IAmb   IAmb   17 29 59.2
      comp=Z,124nm,0.9s
X48A  Hartselle        20.58  37   IAmb   IAmb   17 29 59.4
      comp=Z,76nm,0.9s
PV15  Paradox Valley   20.59 345   IAmb   IAmb   17 29 58.6
      comp=Z,73nm,0.8s
PV18  Skein Mesa, Pa   20.61 344   IAmb   IAmb   17 29 59.9
      comp=Z,69nm,0.9s
PV12  Saucer Basin,    20.64 344   IAmb   IAmb   17 29 58.8
      comp=Z,62nm,0.8s
PV17  East Wray Mesa   20.65 344   IAmb   IAmb   17 29 58.9
      comp=Z,134nm,1.7s
V12A  Nelson           20.67 329   P      Pn     17 29 58.9 -1.2
T42A  Van Buren        20.68  25   IAmb   IAmb   17 30 16.3
      comp=Z,172nm,1.4s
PV19  Morning Glory    20.68 344   IAmb   IAmb   17 30 14.7
      comp=Z,67nm,1.1s
PV20  West Nyswonger   20.71 344   IAmb   IAmb   17 30 16.5
      comp=Z,52nm,0.9s
PV07  Paradox Valley   20.72 345   P      P      17 29 58.3 +0.4
PV07                               IAmb   IAmb   17 29 59.8
      comp=Z,52nm,0.9s
PBMO  Poplar Bluff     20.74  26   IAmb   IAmb   17 30 17.3
      comp=Z,135nm,1.1s
PV10  Paradox Valley   20.76 344   IAmb   IAmb   17 30 04.4
      comp=Z,83nm,1.0s
PV23  Carpenter Ridg   20.83 344   IAmb   IAmb   17 30 15.5
      comp=Z,66nm,0.8s
PV22  Blue Mesa, Par   20.85 344   IAmb   IAmb   17 30 00.8
      comp=Z,56nm,0.9s
HMU   Henry Mountain   20.86 340   IAmb   IAmb   17 30 01.9
      comp=Z,165nm,1.0s
KSU1  Kansas State U   20.98  11   IAmb   IAmb   17 30 19.5
      comp=Z,136nm,0.8s
LCMT  Little Creek M   20.99 334   P      P      17 30 01.6 +0.9
R40A  Maddies Statio   21.36  21   IAmb   IAmb   17 30 24.7
      comp=Z,159nm,1.3s
WVT   Waverly          21.42  32   P      P      17 30 02.7 -2.5
WVT                                IAmb   IAmb   17 30 26.1
      comp=Z,57nm,0.9s
WVT   Waverly          21.42  32   P      P      17 30 02.7 -2.5
WVT                                pmax   pmax
      comp=Z,57nm,0.9s
CGM3  Cape Girardeau   21.51  27   IAmb   IAmb   17 30 26.3
      comp=Z,123nm,1.1s
CCM   Cathedral Cave   21.52  23   P      P      17 30 04.2 -2.0
CCM                                IAmb   IAmb   17 30 26.1
      comp=Z,81nm,1.1s
CCM   Cathedral Cave   21.52  23   P      P      17 30 04.2 -2.0
CCM                                pmax   pmax
      comp=Z,81nm,1.1s
V48A  Smith Brothers   21.65  35   IAmb   IAmb   17 30 12.2
      comp=Z,59nm,0.8s
SWET  Sewanee          21.77  37   IAmb   IAmb   17 30 13.2
      comp=Z,45nm,0.8s
154A  Montrose         21.87  47   IAmb   IAmb   17 30 30.7
      comp=Z,76nm,0.9s
MVU   Marysvale        21.88 338   IAmb   IAmb   17 30 31.1
      comp=Z,79nm,1.4s
Q16A  Castle Valley    21.89 340   IAmb   IAmb   17 30 31.6
      comp=Z,59nm,1.0s
QSM   Queen of Sheba   21.89 326   IAmb   IAmb   17 30 14.2
      comp=Z,41nm,0.8s
CCAC  Calif City Air   21.95 322   IAmb   IAmb   17 30 14.1
      comp=Z,60nm,0.7s
X51A  Calhoun          21.95  40   IAmb   IAmb   17 30 25.0
      comp=Z,72nm,1.3s
S44A  Carbondale       22.01  27   IAmb   IAmb   17 30 32.2
      comp=Z,147nm,1.0s
SIUC  Southern Illin   22.05  27   IAmb   IAmb   17 30 32.5
      comp=Z,148nm,1.1s
GOGA  Godfrey          22.10  44   IAmb   IAmb   17 30 35.1
      comp=Z,44nm,0.9s
GOGA  Godfrey          22.10  44   P      P      17 30 10.5 -1.9
GOGA                               pmax   pmax
      comp=Z,65nm,0.9s
PRN   Pahroc Range     22.11 331   IAmb   IAmb   17 30 38.1
      comp=Z,55nm,1.2s
W50A  Signal Mountai   22.11  38   IAmb   IAmb   17 30 32.5
      comp=Z,48nm,0.9s
P38A  Dawn             22.20  17   IAmb   IAmb   17 30 35.5
      comp=Z,159nm,1.6s
O20A  White River Ci   22.24 347   IAmb   IAmb   17 30 16.2
      comp=Z,44nm,0.9s
T47A  Sharon Grove     22.46  32   IAmb   IAmb   17 30 17.2
      comp=Z,103nm,0.8s
P40A  Paris            22.56  20   IAmb   IAmb   17 30 23.6
      comp=Z,54nm,0.9s
S11A  Rachel           22.63 330   IAmb   IAmb   17 30 21.1
      comp=Z,84nm,1.3s
BCW   Bitter Crk WRg   22.64 320   P      P      17 30 19.6 +1.2
GMAL  Guarumal, Vera   22.66 115   P      P      17 30 22.2 +3.5
      comp=Z,10µmcomp=Z,91nm,1.4s
N35A  Tabor            22.87  12   IAmb   IAmb   17 30 43.3
      comp=Z,132nm,0.9s
CACAO El Cacao, Vera   23.19 116   P      P      17 30 27.5 +3.5
HODGE Hodges           23.39  44   P      P      17 30 24.2 -1.5
DUG   Dugway, Tooele   23.59 339   P      P      17 30 28.0 +0.3
DUG                                pmax   pmax
      comp=Z,27nm,1.0s
T50A  Nancy            23.68  36   IAmb   IAmb   17 30 28.8
      comp=Z,69nm,1.2s
TPH   Tonopah          23.68 328   IAmb   IAmb   17 30 30.2
      comp=Z,93nm,0.8s
WCI   Wyandotte Cave   23.82  31   P      P      17 30 27.5 -2.1
WCI   Wyandotte Cave   23.82  31   P      P      17 30 27.5 -2.1
WCI                                pmax   pmax
      comp=Z,115nm,0.9s
V53A  Saluda           23.94  41   P      P      17 30 28.5 -2.2
V53A                               IAmb   IAmb   17 30 53.5
      comp=Z,43nm,1.0s
N41A  Harden Midland   24.01  21   IAmb   IAmb   17 30 30.1
      comp=Z,93nm,0.9s
PAULI Pauline          24.04  44   IAmb   IAmb   17 30 51.4
      comp=Z,37nm,0.9s
TZTN  Tazewell         24.07  38   IAmb   IAmb   17 30 34.1
      comp=Z,85nm,1.4s
NHSC  New Hope         24.19  49   IAmb   IAmb   17 30 55.3
      comp=Z,71nm,0.9s
PMPB  Monarch Peak     24.33 320   P      P      17 30 35.7 +1.4
NV11  Mina Array Sit   24.43 328   IAmb   IAmb   17 30 37.5
      comp=Z,39nm,0.8s
R49A  Shelbyville      24.44  33   IAmb   IAmb   17 30 36.0
      comp=Z,75nm,1.2s
BLO   Bloomington      24.46  30   IAmb   IAmb   17 30 36.1
      comp=Z,64nm,0.7s
HWUT  Hardware Ranch   24.47 342   IAmb   IAmb   17 30 39.9
      comp=Z,30nm,0.8s
NVAR  Mina Array Bea   24.50 327   P      P      17 30 37.1 +1.0
NVAR  Mina Array Bea   24.50 327   P      P      17 30 36.6 +0.6
      comp=Z,50nm,0.7s,baz=151,slow=9.4,SNR=200
NVAR                               PcP    PcP    17 34 14.9 +1.8
      comp=Z,2.1nm,0.7s,baz=138,slow=2.8,SNR=4.2
NVAR                               ScP    ScP    17 37 48.1 +1.7
      comp=Z,0.5nm,0.8s,baz=144,slow=1.5,SNR=4.0
NVAR                               LR     LR     17 40 56.2
      comp=Z,242nm,18.9s,baz=148,slow=38
      comp=Z,50nm,0.7s
P46A  Rosedale         24.50  28   IAmb   IAmb   17 30 35.8
      comp=Z,68nm,1.1s
KMSC  Kings Mountain   24.55  44   IAmb   IAmb   17 31 02.6
      comp=Z,50nm,0.9s
BBGB  Big Mountain B   24.71 321   IAmb   IAmb   17 30 42.2
      comp=Z,37nm,0.9s
RYN   Ryan             24.77 327   IAmb   IAmb   17 30 42.4
      comp=Z,37nm,0.8s
S51A  Beattyville      24.81  36   IAmb   IAmb   17 30 59.1
      comp=Z,43nm,0.8s
ELK   Elko             24.98 335   LR     LR     17 41 23.2
      comp=Z,576nm,21.6s,baz=152,slow=39
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ELK   Elko             24.98 335   P      P      17 30 40.5 +0.1
BW06  Boulder Array    25.04 346   IAmb   IAmb   17 30 43.0
      comp=Z,48nm,0.8s
PD31  Pinedale Array   25.04 346   IAmb   IAmb   17 30 43.0
      comp=Z,50nm,0.8s
PDAR  Pinedale Array   25.04 346   P      P      17 30 40.0 -0.9
PDAR  Pinedale Array   25.04 346   P      P      17 30 40.2 -0.7
      comp=Z,36nm,0.8s,baz=153,slow=10.0,SNR=86
PDAR                               PcP    PcP    17 34 14.9 +0.7
      comp=Z,4.5nm,0.9s,baz=126,slow=2.6,SNR=5.1
PDAR                               ScP    ScP    17 37 50.1 +2.4
      comp=Z,1.8nm,1.1s,baz=107,slow=1.5,SNR=4.6
PDAR                               LR     LR     17 41 26.2
      comp=Z,410nm,21.0s,baz=164,slow=39
      comp=Z,36nm,0.8s
V55A  Taylorsville     25.06  42   IAmb   IAmb   17 31 07.2
      comp=Z,42nm,0.9s
SAO   San Andreas Ge   25.08 320   P      P      17 30 41.6 +0.5
SAO   San Andreas Ge   25.08 320   P      P      17 30 41.6 +0.5
SAO                                pmax   pmax
      comp=Z,14nm,1.0s
U54A  Nelsons Funny    25.10  40   IAmb   IAmb   17 30 42.8
      comp=Z,30nm,0.7s
P48A  Milroy           25.21  31   IAmb   IAmb   17 30 42.7
      comp=Z,138nm,1.4s
ECSD  EROS Data Cent   25.50   9   IAmb   IAmb   17 30 46.8
      comp=Z,65nm,0.7s
L42A  Oliver, Polo     25.57  21   IAmb   IAmb   17 30 47.4
      comp=Z,34nm,0.9s
RSSD  Black Hills      25.58 356   P      P      17 30 43.9 -1.9
RSSD  Black Hills      25.58 356   P      P      17 30 43.9 -1.9
RSSD                               pmax   pmax
      comp=Z,25nm,0.9s
M44A  Midewin, Midew   25.63  24   IAmb   IAmb   17 30 47.0
      comp=Z,57nm,1.1s
PNTR  Pine Nut         25.67 327   IAmb   IAmb   17 30 49.0
      comp=Z,32nm,0.8s
SSFO  Shawnee State    25.78  35   IAmb   IAmb   17 31 15.1
      comp=Z,38nm,0.9s
Q51A  Peebles          25.94  34   IAmb   IAmb   17 31 12.9
      comp=Z,62nm,0.8s
SNOW  Snow King Moun   25.98 345   IAmb   IAmb   17 30 52.9
      comp=Z,65nm,0.8s
TPAW  Teton Pass       26.06 345   IAmb   IAmb   17 30 53.7
      comp=Z,48nm,0.8s
HQIL  Hanson Quary C   26.06  24   IAmb   IAmb   17 30 51.5
      comp=Z,82nm,1.0s
LOHW  Long Hollow      26.09 345   IAmb   IAmb   17 30 53.7
      comp=Z,45nm,0.8s
JFWS  Jewell Farm      26.20  19   IAmb   IAmb   17 31 14.8
      comp=Z,30nm,0.7s
BLA   Blacksburg       26.40  41   P      P      17 30 51.9 -1.2
BLA                                IAmb   IAmb   17 31 13.1
      comp=Z,75nm,1.1s
BLA   Blacksburg       26.40  41   P      P      17 30 51.9 -1.2
BLA                                pmax   pmax
      comp=Z,75nm,1.2s
P51A  Williamsport     26.43  34   P      P      17 30 52.5 -0.7
P51A                               IAmb   IAmb   17 30 53.6
      comp=Z,99nm,1.5s
L46A  Eue Claire       26.87  26   IAmb   IAmb   17 30 59.5
      comp=Z,68nm,1.0s
N49A  Columbus Grove   26.94  30   IAmb   IAmb   17 31 01.2
      comp=Z,74nm,1.0s
I40A  Norwalk          26.97  18   IAmb   IAmb   17 30 57.6
      comp=Z,71nm,1.6s
ACSO  Alum Creek Sta   27.02  33   IAmb   IAmb   17 31 01.7
      comp=Z,46nm,0.8s
P52A  Corning          27.03  35   IAmb   IAmb   17 30 59.0
      comp=Z,36nm,0.9s
R55A  Marlinton        27.27  39   IAmb   IAmb   17 31 02.5
      comp=Z,35nm,0.9s
P53A  Whipple          27.34  36   IAmb   IAmb   17 31 02.1
      comp=Z,35nm,0.9s
I42A  Draeger Farm,    27.50  20   IAmb   IAmb   17 31 02.5
      comp=Z,45nm,1.4s
O52A  Adamsville       27.54  34   IAmb   IAmb   17 31 26.4
      comp=Z,36nm,1.0s
SPMN  Marine on St.    27.65  14   IAmb   IAmb   17 31 03.8
      comp=Z,45nm,1.2s
WVOR  Wild Horse Val   27.80 333   P      P      17 31 05.3 -0.3
N51A  Ashland          27.84  33   IAmb   IAmb   17 31 26.9
      comp=Z,33nm,0.9s
O53A  New Philadelph   27.97  35   IAmb   IAmb   17 31 41.5
      comp=Z,29nm,1.0s
E28A  Huff             27.98   2   IAmb   IAmb   17 31 06.8
      comp=Z,48nm,0.7s
CBOC  Ciudad Bolivar   28.10 113   P      P      17 31 12.8 +4.1
      comp=Z,747nmcomp=Z,39nm,1.6s
DLMT  Dillon           28.23 344   IAmb   IAmb   17 31 10.9
      comp=Z,55nm,0.9s
AAM   Ann Arbor        28.26  29   IAmb   IAmb   17 31 29.4
      comp=Z,33nm,0.8s
J08A  Circle Bar Ran   28.48 334   IAmb   IAmb   17 31 13.0
      comp=Z,66nm,1.5s
JAMC  Jamundi, Valle   28.91 119   P      P      17 31 19.2 +3.3
      comp=Z,460nmcomp=Z,37nm,1.1s
GUY2C Guyana, Caldas   28.98 114   P      P      17 31 20.9 +4.1
      comp=Z,492nmcomp=Z,28nm,1.8s
PLID  Pearl Lake       29.01 339   P      P      17 31 15.7 -0.9
PLID                                      PcP    17 34 25.8 +2.1
BBAC  Balboa, Cauca    29.11 121   P      P      17 31 21.7 +4.0
      comp=Z,1µmcomp=Z,962nmcomp=Z,59nm,1.6s
PTBC  PUERTO BERRIO,   29.16 111   P      P      17 31 21.6 +3.7
      comp=Z,269nmcomp=Z,34nm,0.9s
YBH   Yreka Blue Hor   29.22 327   LR     LR     17 43 34.0
      comp=Z,4.6nm,19.9s,baz=122,slow=38
E38A  The Farm, Brul   29.24  15   IAmb   IAmb   17 31 16.9
      comp=Z,38nm,1.1s
OTAV  Otavalo          29.25 126   P      P      17 31 22.1 +3.0
OTAV                               IAmb   IAmb   17 31 23.7
      comp=Z,33nm,1.1s
OTAV  Otavalo          29.25 126   P      P      17 31 22.1 +3.0
OTAV                               pmax   pmax
      comp=Z,33nm,1.1s
OTAV  Otavalo          29.25 126  eP      P      17 31 20.3 +1.2
OTAV  Otavalo          29.25 126   P      P      17 31 22.2 +3.0
      comp=Z,372nmcomp=Z,30nm,1.3s
POPC  Popayan, Colom   29.28 120   P      P      17 31 22.4 +3.2
      comp=Z,273nmcomp=Z,13nm,0.9s
MDND  Maddock          29.29   3   IAmb   IAmb   17 31 18.3
      comp=Z,69nm,0.9s
ALLY  Alegheny Colle   29.53  34   IAmb   IAmb   17 31 20.8
      comp=Z,36nm,0.9s
ORTC  Ortega, Tolima   29.74 116   P      P      17 31 27.2 +4.2
      comp=Z,700nmcomp=Z,50nm,1.4s
MSO   Missoula         29.94 343   IAmb   IAmb   17 31 25.2
      comp=Z,46nm,1.5s
J04A  Umpqua Nationa   30.02 330   IAmb   IAmb   17 31 27.4
      comp=Z,70nm,1.4s
ROSC  El Rosal         30.07 114   P      P      17 31 26.9 +0.5
      comp=Z,7.5nm,0.3s,baz=216,slow=5.3,SNR=5.6
ROSC                               LR     LR     17 43 49.2
      comp=Z,178nm,18.2s,baz=246,slow=37
      comp=Z,7.5nm,0.3s
SSPA  Standing Stone   30.10  38   P      P      17 31 23.7 -2.3
SSPA  Standing Stone   30.10  38   P      P      17 31 25.7 -0.3
SSPA                               pP     pP     17 31 40.9 -1.3
SSPA                               PcP    PcP    17 34 26.7 +0.5
PAMC  Pamplona, Colo   30.39 108   P      P      17 31 32.5 +3.2
EYMN  Ely              30.52  14   IAmb   IAmb   17 31 28.1
      comp=Z,25nm,0.9s
RUSC  La Rusia         30.67 111   IAmb   IAmb   17 31 35.2
      comp=Z,77nm,1.2s
I03D  Drain, OR        30.97 329   IAmb   IAmb   17 31 34.6
      comp=Z,19nm,0.7s
M57A  Sunshine Farm,   30.99  38   P      P      17 31 32.4 -1.4
M57A                               IAmb   IAmb   17 32 01.5
      comp=Z,55nm,1.6s
H04A  Detroit Lake     31.16 331   IAmb   IAmb   17 31 36.0
      comp=Z,29nm,1.0s
BUCK  Buck Mountain    31.16 330   IAmb   IAmb   17 31 36.7
      comp=Z,46nm,1.2s
H04D  Lebanon          31.29 330   IAmb   IAmb   17 32 00.9
      comp=Z,100nm,1.8s
HOOD  Mount Hood Mea   31.42 333   IAmb   IAmb   17 31 39.9
      comp=Z,38nm,0.8s
MMNY  Mt. Morris Dam   31.48  35   IAmb   IAmb   17 31 38.2
      comp=Z,21nm,0.9s
TAMC  Tame, Arauca     31.59 109   P      P      17 31 42.9 +3.5
      comp=Z,1µmcomp=Z,120nm,1.1s
TBO   Thunder Bay      31.67  16   IAmb   IAmb   17 31 39.3
      comp=Z,44nm,1.0s
SDV   Santo Domingo    31.69 103   LR     LR     17 45 38.4
      comp=Z,232nm,20.4s,baz=274,slow=39
SDV   Santo Domingo    31.69 103  eP      P      17 31 42.0 +1.5
SDV   Santo Domingo    31.69 103   P      P      17 31 42.7 +2.2
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      comp=Z,25nm,1.0s
G04A  Mulino           31.69 332   IAmb   IAmb   17 31 40.6
      comp=Z,26nm,0.8s
EPLO  Experimental L   31.74  10   IAmb   IAmb   17 31 39.5
      comp=Z,41nm,0.9s
MACC  Macarena, Meta   31.85 117   P      P      17 31 44.7 +3.0
      comp=Z,2µmcomp=Z,98nm,0.9s
J55A  Hilton           31.89  34   IAmb   IAmb   17 32 04.8
      comp=Z,20nm,0.9s
ULM   Lac du Bonnet    32.00   7   P      P      17 31 40.1 -2.4
ULM   Lac du Bonnet    32.00   7   P      P      17 31 39.6 -2.9
      comp=Z,52nm,0.9s,baz=193,slow=9.6,SNR=68
ULM                                PcP    PcP    17 34 31.1  0.0
      comp=Z,5.3nm,0.6s,baz=160,slow=5.1,SNR=3.3
ULM                                ScP    ScP    17 38 11.0 +2.0
      comp=Z,2.3nm,0.8s,baz=189,slow=5.2,SNR=3.3
ULM                                LR     LR     17 45 24.5
      comp=Z,778nm,18.1s,baz=189,slow=38
      comp=Z,52nm,0.9s
ULM   Lac du Bonnet    32.00   7   P      P      17 31 40.1 -2.4
ULM                                pmax   pmax
      comp=Z,76nm,1.1s
PTLC  Puerto Leguiza   32.17 122   P      P      17 31 49.7 +5.2
      comp=Z,2µmcomp=Z,180nm,1.0s
NEW   Newport          32.18 341   ScP    ScP    17 38 12.7 +2.9
      comp=Z,4.9nm,0.9s,baz=176,slow=11,SNR=4.1
NEW                                LR     LR     17 46 14.6
      comp=Z,608nm,19.2s,baz=162,slow=39
NEW   Newport          32.18 341   P      P      17 31 43.2 -1.0
BINY  Binghamton       32.20  37   IAmb   IAmb   17 31 45.0
      comp=Z,24nm,0.8s
K57A  Scipio Center    32.24  36   IAmb   IAmb   17 32 08.9
      comp=Z,25nm,1.2s
SADO  Sadowa           32.27  31   LR     LR     17 46 06.1
      comp=Z,133nm,19.1s,baz=281,slow=39
BUKO  Buck Lake        32.65  30   IAmb   IAmb   17 31 47.6
      comp=Z,19nm,0.8s
L59A  Walton           32.74  38   IAmb   IAmb   17 31 50.6
      comp=Z,30nm,0.9s
PECO  Prince Edward    32.78  34   IAmb   IAmb   17 31 49.5
      comp=Z,18nm,1.0s
J57A  Williamstown     32.97  36   IAmb   IAmb   17 31 51.3
      comp=Z,19nm,0.8s
B08A  Colville Reser   32.99 338   IAmb   IAmb   17 31 52.1
      comp=Z,69nm,1.9s
E03A  Lebam            33.21 332   IAmb   IAmb   17 31 55.3
      comp=Z,30nm,0.9s
CELP  Cerrillos        33.39  85   P      P      17 31 55.4 +0.3
CELP                               IAmb   IAmb   17 32 21.0
      comp=Z,66nm,1.5s
WISH  Wishkah          33.74 333   P      P      17 31 57.9 +0.2
SJG   San Juan         33.79  85   P      P      17 31 58.8 +0.3
SJG                                IAmb   IAmb   17 32 24.4
      comp=Z,43nm,1.1s
SJG   San Juan         33.79  85   LR     LR     17 45 56.1
      comp=Z,66nm,21.9s,baz=283,slow=37
SJG   San Juan         33.79  85   P      P      17 31 58.8 +0.3
SJG                                pmax   pmax
      comp=Z,43nm,1.1s
SJG   San Juan         33.79  85   P      P      17 31 59.4 +0.8
SJG                                pP     pP     17 32 15.1 +0.5
SJG                                sP     sP     17 32 21.9 -0.4
PDPR  Patillas Dam,    33.92  85   P      P      17 31 59.8 +0.1
PDPR                               IAmb   IAmb   17 32 37.6
      comp=Z,21nm,0.9s
NLWA  Neilton Lookou   33.99 333   IAmb   IAmb   17 32 01.4
      comp=Z,40nm,1.5s
BAUV  El Baul          34.07 102   IAmb   IAmb   17 32 02.8
      comp=Z,29nm,0.9s
ACCN  Adirondack Com   34.27  38   IAmb   IAmb   17 32 03.3
      comp=Z,15nm,0.9s
ATAH  Atahualpa        34.39 136   LR     LR     17 43 27.4
      comp=Z,256nm,21.7s,baz=311,slow=32
WBO   Williamsburg     34.41  34   IAmb   IAmb   17 32 03.4
      comp=Z,12nm,0.8s
PGC   Sidney           34.80 335   P      P      17 32 05.6 -1.2
PGC                                IAmb   IAmb   17 32 07.7
      comp=Z,13nm,0.8s
CLRS  Cowichan Lake    35.21 334   P      P      17 32 10.6 +0.2
CLRS                               IAmb   IAmb   17 32 11.6
      comp=Z,22nm,0.8s
TRQ   Mont Tremblant   35.60  33   IAmb   IAmb   17 32 37.7
      comp=Z,15nm,1.0s
LLLB  Lillooet         35.79 338   IAmb   IAmb   17 32 16.1
      comp=Z,25nm,1.1s
FFC   Flin Flon        36.13 360   P      P      17 32 16.5 -1.8
FFC   Flin Flon        36.13 360   P      P      17 32 16.5 -1.8
FFC                                pmax   pmax
      comp=Z,54nm,1.2s
FFC   Flin Flon        36.13 360   P      P      17 32 16.4 -1.8
FFC                                pP     pP     17 32 32.2 -2.3
CBB   Campbell River   36.66 334   P      P      17 32 22.8  0.0
CBB                                IAmb   IAmb   17 32 23.8
      comp=Z,17nm,0.6s
PCRV  Puerto La Cruz   36.87  98   LR     LR     17 49 07.2
      comp=Z,125nm,19.7s,slow=39
G62A  West of Eustis   37.17  37   IAmb   IAmb   17 32 28.8
      comp=Z,14nm,0.8s
HOLB  Holberg          38.28 333   IAmb   IAmb   17 32 37.7
      comp=Z,39nm,1.2s
TBTG  Tabatinga, AM    38.67 123  eP      P      17 32 41.5 +1.2
LMQ   La Malbaie       38.68  34   IAmb   IAmb   17 32 40.2
      comp=Z,16nm,0.8s
CZSB  Cruzeiro do Su   38.78 130  eP      P      17 32 43.2 +2.1
CZSB  Cruzeiro do Su   38.78 130   P      P      17 32 44.1 +3.0
NNA   Nana             39.05 139   LR     LR     17 45 46.1
      comp=Z,209nm,18.3s,baz=310,slow=31
NNA   Nana             39.05 139 i P      P      17 32 45.4 +2.0
NNA                                pmax   pmax
      comp=Z,28nm,0.9s
D62A  Allapoint, All   39.09  36   IAmb   IAmb   17 32 44.3
      comp=Z,15nm,0.7s
BBB   Bella Bella      39.42 335   LR     LR     17 49 26.8
      comp=Z,160nm,22.0s,baz=152,slow=37
FCC   Fort Churchill   40.57   6   P      P      17 32 53.4 -2.0
FCC   Fort Churchill   40.57   6   P      P      17 32 53.4 -2.0
FCC                                pmax   pmax
      comp=Z,17nm,1.1s
HG4B  Hotspring        40.81 333   P      P      17 32 57.6 +0.1
HG4B                               IAmb   IAmb   17 32 58.6
      comp=Z,41nm,1.3s
MOBC  Moresby Island   41.74 333   IAmb   IAmb   17 33 06.8
      comp=Z,31nm,0.8s
DIB   Dawson Inlet,    42.00 333   IAmb   IAmb   17 33 09.7
      comp=Z,18nm,0.8s
TEFE  Tefe             42.63 117  eP      P      17 33 13.4 +0.4
V35K  Ketchikan        43.15 335   IAmb   IAmb   17 33 18.0
      comp=Z,21nm,0.9s
V35K  Ketchikan        43.15 335   P      P      17 33 16.8 +0.3
      baz=136
BOAV  Boa Vista        43.47 107   P      P      17 33 20.3 +0.6
BOAV  Boa Vista        43.47 107  eP      P      17 33 20.2 +0.5
TOAD  Toad River Com   43.75 343   P      P      17 33 21.2 -0.2
      baz=147,SNR=11
CRAG  Craig            43.85 335   IAmb   IAmb   17 33 24.0
      comp=Z,36nm,0.9s
CRAG  Craig            43.85 335   P      P      17 33 23.1 +0.9
      baz=134
T35M  Bob Quinn        43.86 338   IAmb   IAmb   17 33 23.9
      comp=Z,26nm,0.8s
T35M  Bob Quinn        43.86 338   P      P      17 33 23.1 +0.8
      baz=139,SNR=18
WRAK  Wrangell Islan   44.22 336   P      P      17 33 25.2 +0.1
      baz=136
U33K  Whale Pass       44.31 335   P      P      17 33 26.2 +0.4
      baz=135
LIRD  Liard River Hi   44.47 343   P      P      17 33 27.0 -0.1
      baz=146
KOTAN Kotaneelee Air   44.52 344   P      P      17 33 27.4 -0.1
      baz=149,SNR=6.2
T33K  Petersburg       44.74 336   P      P      17 33 29.9 +0.6
      baz=136
YKAW1 Yellowknife Wh   44.79 352   IAmb   IAmb   17 33 29.5
      comp=Z,32nm,1.1s
YKA   Yellowknife Ar   44.82 352   P      P      17 33 26.7 -3.1
      comp=Z,14nm,1.0s,baz=164,slow=7.3,SNR=30
YKA                                LR     LR     17 53 45.6
      comp=Z,342nm,19.1s,baz=144,slow=38
      comp=Z,14nm,1.0s
BEAVL Fort Liard       44.83 344   P      P      17 33 30.1 +0.1
      baz=148,SNR=21
S34M  Telegraph Cree   44.88 338   P      P      17 33 31.1 +0.7
      baz=138
YKAW3 Yellowknife Wh   44.89 352   IAmb   IAmb   17 33 29.7
      comp=Z,32nm,1.3s
DLBC  Dease Lake       44.90 339   P      P      17 33 31.4 +0.8
DLBC                               IAmb   IAmb   17 33 32.6
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	comp=Z,31nm,0.8s						
DLBC	Dease Lake	44.90	339	LR	LR	17 54 02.5	
	comp=Z,767nm,19.9s,baz=134,slow=38						
DLBC	Dease Lake	44.90	339	P	P	17 33 31.6	+1.0
	baz=140,SNR=30						
SCHQ	Schefferville	44.96	28	P	P	17 33 27.3	-3.8
	comp=Z,12nm,1.0s,baz=227,slow=5.3,SNR=6.5						
SCHQ				PcP	PcP	17 35 11.4	+0.1
	comp=Z,11nm,0.9s,baz=210,slow=2.4,SNR=4.2						
SCHQ				LR	LR	17 52 57.8	
	comp=Z,142nm,21.0s,baz=230,slow=37						
	comp=Z,12nm,1.0s						
S32K	Killisnoo	45.83	336	P	P	17 33 38.2	+0.4
	baz=134						
WTLY	Watson Lake, Y	45.83	342	P	P	17 33 38.6	+0.7
	baz=143,SNR=9.1						
MACA	Manacapuru-AM	45.84	114	eP	P	17 33 38.7	+0.2
SIT	Sitka	45.84	335	P	P	17 33 38.4	+0.4
	baz=133						
BLKN	Baker Lake	45.92	4	P	P	17 33 36.4	-2.1
BLKN				IAmb	IAmb	17 33 37.2	
	comp=Z,24nm,0.9s						
R33M	Jennings River	45.95	340	IAmb	IAmb	17 33 40.6	
	comp=Z,19nm,0.7s						
R33M	Jennings River	45.95	340	P	P	17 33 39.8	+0.8
	baz=140,SNR=22						
Q32M	Nakina River	46.06	339	P	P	17 33 40.7	+0.7
	baz=138						
KUQ	Kuujjuuaa	46.50	24	P	P	17 33 42.3	-0.7
KUQ				IAmb	IAmb	17 33 43.9	
	comp=Z,37nm,1.1s						
TAOE	Nuku Hiva Isla	46.62	238	eLR	LR	17 46 58.5	
	comp=Z,301nm,25.7s						
S31K	Pelican	46.82	336	P	P	17 33 46.0	+0.4
	baz=132						
TGTN	Hyland Airport	46.83	343	P	P	17 33 46.4	+0.7
	baz=144,SNR=8.6						
P32M	Atlin	47.03	338	IAmb	IAmb	17 33 48.6	
	comp=Z,21nm,1.1s						
P32M	Atlin	47.03	338	P	P	17 33 47.7	+0.3
	baz=136,SNR=6.4						
P33M	Teslin, Yukon	47.19	339	P	P	17 33 48.9	+0.3
	baz=138						
SKAG	Skagway	47.51	337	P	P	17 33 51.5	+0.6
	baz=134						
PLBC	Pleasant Camp	47.89	337	P	P	17 33 54.4	+0.4
	baz=133						
LPAZ	La Paz	47.90	134	P	P	17 33 55.7	+0.5
LPAZ				IAmb	IAmb	17 33 57.5	
	comp=Z,58nm,1.7s						
LPAZ	La Paz	47.90	134	P	P	17 33 56.0	+0.7
	comp=Z,11nm,0.8s,baz=332,slow=6.2,SNR=29						
LPAZ				PcP	PcP	17 35 24.0	+1.0
	comp=Z,3.8nm,0.7s,baz=359,slow=5.4,SNR=2.1						
LPAZ				LR	LR	17 52 30.2	
	comp=Z,200nm,21.1s,baz=304,slow=34						
	comp=Z,11nm,0.8s						
LPAZ	La Paz	47.90	134	eP	P	17 33 55.7	+0.5
LPAZ	La Paz	47.90	134	eP	P	17 33 56.1	+0.9
LPAZ	La Paz	47.90	134	P	P	17 33 56.3	+1.1
LPAZ				PcP	PcP	17 35 24.8	+1.8
PB18	Visviri	47.93	137	P	P	17 33 57.3	+2.0
N32M	Quiet Lake	47.98	340	P	P	17 33 55.2	+0.5
	baz=138						
WHY	Whitehorse	48.21	339	P	P	17 33 56.8	+0.3
	baz=136,SNR=8.2						
PB16	IPOC Station P	48.45	137	IAmb	IAmb	17 34 02.8	
	comp=Z,34nm,0.9s						
P29M	Windy Craggy	48.52	337	IAmb	IAmb	17 34 00.5	
	comp=Z,12nm,0.8s						
P29M	Windy Craggy	48.52	337	P	P	17 33 59.5	+0.6
	baz=132						
MMPY	Sheldon Lake,	48.55	342	P	P	17 34 00.2	+1.2
	baz=141,SNR=47						
P30M	Million Dollar	48.57	337	P	P	17 33 59.9	+0.6
	baz=133						
O30N	Mendenhall	48.71	338	IAmb	IAmb	17 34 01.9	
	comp=Z,19nm,0.9s						
O30N	Mendenhall	48.71	338	P	P	17 34 00.9	+0.7
	baz=134,SNR=16						
FARO	Faro, Yukon	48.87	341	IAmb	IAmb	17 34 02.8	
	comp=Z,14nm,1.0s						
FARO	Faro, Yukon	48.87	341	P	P	17 34 02.4	+0.9
	baz=138,SNR=11						
N31M	Braeburn, Yuko	49.11	339	P	P	17 34 04.0	+0.7
	baz=135,SNR=9.9						
M31M	Drury Creek, Y	49.18	340	IAmb	IAmb	17 34 05.4	
	comp=Z,22nm,0.8s						
M31M	Drury Creek, Y	49.18	340	P	P	17 34 04.5	+0.6
	baz=137,SNR=28						
PNL	Peninsula	49.18	336	P	P	17 34 04.4	+0.4
	baz=130						
HYT	Haines Junctio	49.25	338	IAmb	IAmb	17 34 06.6	
	comp=Z,16nm,0.9s						
HYT	Haines Junctio	49.25	338	P	P	17 34 04.8	+0.3
	baz=133,SNR=11						
O29M	Mount Kennedy	49.29	337	IAmb	IAmb	17 34 06.3	
	comp=Z,18nm,1.1s						
O29M	Mount Kennedy	49.29	337	P	P	17 34 05.4	+0.6
	baz=131,SNR=6.0						
N30M	Aishikik Lake	49.54	339	IAmb	IAmb	17 34 08.6	
	comp=Z,14nm,0.9s						
N30M	Aishikik Lake	49.54	339	P	P	17 34 07.6	+1.0
	baz=134,SNR=11						
YUK6	Outpost Mounta	49.64	338	P	P	17 34 07.9	+0.3
	baz=132						
MPGF	Montagnes des	49.74	99	P	P	17 34 09.6	+0.9
MDP	Montagnes des	49.74	99	LR	LR	17 55 16.1	
	comp=Z,75nm,21.8s,baz=294,slow=36						
PINM	Pinnacle	49.79	336	P	P	17 34 09.0	+0.4
	baz=129						
PB08	IPOC Station P	50.01	139	P	P	17 34 11.0	-0.1
YUK4	Talbot Arm	50.01	338	P	P	17 34 11.5	+1.1
	baz=132						
O28M	Mount Upton	50.20	337	P	P	17 34 13.0	+1.1
	baz=130						
TABL	Table Mountain	50.35	336	IAmb	IAmb	17 34 14.8	
	comp=Z,26nm,0.8s						
YUK8	Steele Glacier	50.37	337	P	P	17 34 14.3	+1.1
	baz=130,SNR=26						
PB01	IPOC Station P	50.47	140	P	P	17 34 15.4	+1.2
FRB	Frobisher Bay	50.51	18	LR	LR	17 57 23.3	
	comp=Z,151nm,19.2s,baz=241,slow=38						
AIN	Ainahou	50.60	280	P	P	17 34 17.0	+1.5
POHA	Pohakuloa	50.62	281	P	P	17 34 17.8	+2.2
POHA				pP	pP	17 34 33.2	+0.5
POHA				sP	sP	17 34 40.0	-0.2
MAYO	Mayo, Yukon	50.67	341	P	P	17 34 16.1	+1.0
	baz=136						
M29M	Somme Creek	50.69	339	P	P	17 34 16.1	+0.7
M29M				IAmb	IAmb	17 34 17.2	
	comp=Z,22nm,0.8s						
M29M	Somme Creek	50.69	339	P	P	17 34 16.3	+0.9
	baz=133,SNR=28						
ITTB	Itaituba	50.74	112	eP	P	17 34 16.5	+0.1
CTGM	Chitina Glacie	50.75	336	IAmb	IAmb	17 34 35.1	
	comp=Z,9.8nm,0.8s						
CTG	Chitna Glacier	50.76	336	P	P	17 34 16.9	+1.0
	baz=128						
GRNC	Granite Creek	50.77	336	IAmb	IAmb	17 34 18.0	
	comp=Z,21nm,0.8s						
BARN	Barnard Glacie	50.94	336	IAmb	IAmb	17 34 20.3	
	comp=Z,14nm,0.9s						
YUK3	Moose Creek	50.95	338	P	P	17 34 18.0	+0.5
	baz=130,SNR=7.4						
L29M	L29M	51.03	340	P	P	17 34 18.4	+0.5
L29M	L29M	51.03	340	P	P	17 34 18.6	+0.8
	baz=133,SNR=75						
TGL	Tana Glacier	51.20	336	IAmb	IAmb	17 34 21.1	
	comp=Z,25nm,0.9s						
CRQE	Cirque	51.31	335	P	P	17 34 20.9	+0.8
	baz=126,SNR=5.3						
K29M	Barlow Dome	51.35	341	P	P	17 34 20.8	+0.4
	baz=134,SNR=49						
BVCY	Beaver Creek	51.51	338	P	P	17 34 21.9	+0.5
	baz=130,SNR=12						
J30M	Hart River	51.52	342	IAmb	IAmb	17 34 23.3	
	comp=Z,11nm,0.7s						
J30M	Hart River	51.52	342	P	P	17 34 21.9	+0.3
	baz=136,SNR=17						
VILB	Vilhena	51.57	124	eP	P	17 34 23.0	+0.4
MCARA	McCarthy VSAT	51.66	336	IAmb	IAmb	17 34 25.2	
	comp=Z,25nm,0.8s						
MCARA	McCarthy VSAT	51.66	336	P	P	17 34 23.4	+0.9
	baz=127,SNR=6.3						
VRDI	Verde Repeater	51.73	336	IAmb	IAmb	17 34 24.6	
	comp=Z,11nm,0.7s						
M27K	Edge Creek, AK	51.83	338	IAmb	IAmb	17 34 25.7	
	comp=Z,16nm,0.9s						
M27K	Edge Creek, AK	51.83	338	P	P	17 34 24.6	+0.6
	baz=129,SNR=15						
H31M	Peel River	51.87	344	IAmb	IAmb	17 35 40.3	
	comp=Z,9.9nm,0.8s						
H31M	Peel River	51.87	344	P	P	17 34 24.0	0.0
	baz=139,SNR=7.8						
GLB	Gilahina Butte	52.00	336	IAmb	IAmb	17 34 26.9	
	comp=Z,27nm,0.8s						
I30M	Mount Dempster	52.00	342	IAmb	IAmb	17 34 26.1	
	comp=Z,14nm,0.8s						
I30M	Mount Dempster	52.00	342	P	P	17 34 25.3	+0.1
	baz=137,SNR=15						
BMRM	Bremner River	52.03	335	IAmb	IAmb	17 34 27.3	
	comp=Z,27nm,0.8s						
BMRM	Bremner River	52.03	335	P	P	17 34 26.3	+0.9
	baz=125,SNR=7.2						
DAWY	Dawson	52.10	340	IAmb	IAmb	17 34 27.4	
	comp=Z,9.8nm,0.6s						
DAWY	Dawson	52.10	340	P	P	17 34 25.8	-0.1
	baz=132,SNR=19						
BCAR	Beaver Creek A	52.25	338	P	P	17 34 26.9	-0.1
EYAK	Cordova Ski Ar	52.26	334	IAmb	IAmb	17 34 29.0	
	comp=Z,17nm,0.8s						
EYAK	Cordova Ski Ar	52.26	334	P	P	17 34 28.1	+1.1
	baz=123						
L27K	Beaver Creek,	52.26	338	IAmb	IAmb	17 34 28.5	
	comp=Z,14nm,0.8s						
L27K	Beaver Creek,	52.26	338	P	P	17 34 27.7	+0.7
	baz=129,SNR=17						
M26K	Nabesna, AK	52.27	337	IAmb	IAmb	17 34 28.7	
	comp=Z,18nm,0.8s						
M26K	Nabesna, AK	52.27	337	P	P	17 34 27.9	+0.7
	baz=128,SNR=17						
ILON	Igloolik, Nuna	52.30	9	P	P	17 34 25.4	-1.7
ILON				IAmb	IAmb	17 34 26.2	
	comp=Z,20nm,0.8s						
NPGB	Novo Progresso	52.36	115	eP	P	17 34 27.6	-0.8
N25K	Chitina, Valde	52.40	336	IAmb	IAmb	17 34 30.2	
	comp=Z,20nm,0.8s						
N25K	Chitina, Valde	52.40	336	P	P	17 34 28.8	+0.7
	baz=125,SNR=7.4						
DIV	Divide	52.59	335	IAmb	IAmb	17 34 31.2	
	comp=Z,19nm,0.9s						
C36M	Paulatuk	52.64	350	P	P	17 34 28.7	-1.0
C36M				IAmb	IAmb	17 34 29.7	
	comp=Z,12nm,0.8s						
C36M	Paulatuk	52.64	350	P	P	17 34 29.1	-0.5
	baz=153						
P23K	Montague Islan	52.66	333	P	P	17 34 30.2	+0.3
	baz=121						
I29M	Ogilvie Camp,	52.67	342	P	P	17 34 29.5	-0.5
	baz=134,SNR=12						
FID	Port Fidalgo	52.67	334	IAmb	IAmb	17 34 32.0	
	comp=Z,34nm,1.0s						
KIP	Kipapa	52.70	283	P	P	17 34 33.4	+2.6
G31M	Satah River	52.71	345	P	P	17 34 29.9	-0.3
	baz=140,SNR=38						
SIV	San Ignacio	52.75	128	P	P	17 34 31.6	+0.4
	comp=Z,33nm,1.0s,baz=294,slow=7.1,SNR=122						
SIV				PcP	PcP	17 35 41.2	+1.0
	comp=Z,12nm,0.9s,baz=306,slow=1.0,SNR=5.4						
	comp=Z,33nm,1.0s						
L26K	Log Cabin Wild	52.78	338	IAmb	IAmb	17 34 32.3	
	comp=Z,14nm,0.8s						
L26K	Log Cabin Wild	52.78	338	P	P	17 34 31.2	+0.3
	baz=128,SNR=18						
KLU	Klutina	52.86	335	IAmb	IAmb	17 34 41.1	
	comp=Z,16nm,0.8s						
KLU	Klutina	52.86	335	P	P	17 34 32.1	+0.6
	baz=124,SNR=8.5						
MENT	Mentasta	52.86	337	IAmb	IAmb	17 34 32.8	
	comp=Z,32nm,1.3s						
EPYK	Eagle Plains	52.94	343	IAmb	IAmb	17 34 32.3	
	comp=Z,15nm,0.8s						
EPYK	Eagle Plains	52.94	343	P	P	17 34 31.9	-0.1
	baz=137,SNR=9.8						
K27K	Chicken	52.97	339	P	P	17 34 33.1	+0.9
	baz=130						
F31M	Tsiigehtchic	52.98	345	IAmb	IAmb	17 34 32.1	
	comp=Z,18nm,0.8s						
F31M	Tsiigehtchic	52.98	345	P	P	17 34 31.6	-0.6
	baz=141,SNR=14						
GLI	Glacier Island	52.99	334	P	P	17 34 32.4	0.0
	baz=122,SNR=6.9						
HARP	HAARP	53.08	336	P	P	17 34 33.3	+0.3
	baz=125						
I28M	Miner Creek	53.22	341	P	P	17 34 33.5	-0.7
	baz=133,SNR=10						
G30M	tAoh Zraii Nji	53.26	344	P	P	17 34 34.0	-0.4
	baz=138						
H29M	Whitestone	53.30	342	IAmb	IAmb	17 34 35.4	
	comp=Z,25nm,0.8s						
H29M	Whitestone	53.30	342	P	P	17 34 34.3	-0.2
	baz=135,SNR=28						
M24K	Tolsona, Glenn	53.30	336	P	P	17 34 35.2	+0.5
	baz=124,SNR=7.7						
DOT	Dot Lake	53.42	338	IAmb	IAmb	17 34 37.0	
	comp=Z,45nm,1.4s						
PWL	Port Wells	53.50	334	P	P	17 34 36.2	+0.1
	baz=121						
PAX	Paxson	53.53	337	IAmb	IAmb	17 34 37.5	
	comp=Z,21nm,0.8s						
PAX	Paxson	53.53	337	P	P	17 34 36.6	+0.2
	baz=125,SNR=20						
PDRB	Porto dos Gac	53.59	120	eP	P	17 34 36.4	-1.0
SCRK	Sand Creek	53.59	338	IAmb	IAmb	17 34 38.5	
	comp=Z,13nm,0.8s						
SCRK	Sand Creek	53.59	338	P	P	17 34 37.3	+0.4
	baz=127,SNR=23						
SEW	Seward	53.60	333	P	P	17 34 37.0	+0.2
	baz=119						
SCM	Sheep Creek Mo	53.60	335	IAmb	IAmb	17 34 39.2	
	comp=Z,20nm,0.8s						
SCM	Sheep Creek Mo	53.60	335	P	P	17 34 37.1	+0.1
	baz=122,SNR=5.7						
INK	Inuvik	53.61	346	LR	LR	17 59 21.3	
	comp=Z,418nm,18.1s,baz=160,slow=38						
INK	Inuvik	53.61	346	P	P	17 34 36.2	-0.6
	baz=141,SNR=32						
F30M	Barrier River	53.62	345	P	P	17 34 36.6	-0.3
	baz=138,SNR=22						
G29M	Pine Creek	53.69	343	IAmb	IAmb	17 34 38.3	
	comp=Z,18nm,0.8s						
G29M	Pine Creek	53.69	343	P	P	17 34 37.3	-0.2
	baz=136,SNR=17						
M23K	Glacier View	53.74	335	P	P	17 34 38.3	+0.4
	baz=122,SNR=5.2						
RIDG	Independent Ri	53.75	338	P	P	17 34 38.6	+0.5
	baz=126,SNR=72						
J26L	Joseph Creek	53.77	339	P	P	17 34 39.0	+0.8
	baz=128,SNR=65						
KNK	Knik Glacier	53.84	334	IAmb	IAmb	17 34 39.4	
	comp=Z,20nm,1.1s						
KNK	Knik Glacier	53.84	334	P	P	17 34 38.7	+0.1
	baz=121						
I27K	Kandik River	53.84	341	P	P	17 34 38.3	-0.3
	baz=131,SNR=18						
BBSD	Serra de San D	53.85	129	eP	P	17 34 38.9	-0.4
PTLB	Pontes e Lacer	53.88	126	P	P	17 34 39.5	0.0
PTLB	Pontes e Lacer	53.88	126	eP	P	17 34 39.6	+0.1
CLDB	Colider	53.96	119	eP	P	17 34 39.8	-0.3
KDAK	Kodiak Island	53.99	329	P	P	17 34 40.0	+0.3
KDAK	Kodiak Island	53.99	329	LR	LR	17 58 05.4	
	comp=Z,141nm,18.4s,baz=113,slow=36						
KDAK	Kodiak Island	53.99	329	i P	P	17 34 40.1	+0.3
KDAK				pmax	pmax		
	comp=Z,25nm,1.1s						
KDAK	Kodiak Island	53.99	329	P	P	17 34 40.0	+0.3
	baz=114						
KDAK	Kodiak Island	53.99	329	P	P	17 34 40.2	+0.5
SML	Sawmill	53.99	335	IAmb	IAmb	17 34 40.9	
	comp=Z,35nm,1.0s						
SML	Sawmill	53.99	335	P	P	17 34 39.7	-0.1
	baz=121,SNR=8.8						
BRSE	Bradley Lake S	53.99	332	P	P	17 34 40.0	+0.2
	baz=118						
OHAK	Old Harbor	54.10	328	P	P	17 34 41.1	+0.5
	baz=113,SNR=7.6						
K24K	Donnelly Dome	54.12	338	P	P	17 34 41.1	+0.4
	baz=125,SNR=9.1						
I26K	Coal Creek Min	54.14	340	P	P	17 34 39.8	-1.0
I26K				IAmb	IAmb	17 34 41.6	
	comp=Z,16nm,0.9s						
I26K	Coal Creek Min	54.14	340	P	P	17 34 40.7	-0.1
	baz=129,SNR=22						
WAT6	Susitna Watana	54.17	336	P	P	17 34 41.5	+0.3
	baz=122,SNR=19						
RC01	Rabbit Creek A	54.21	334	P	P	17 34 41.4	+0.1
	baz=119						
PMR	Palmer	54.21	334	IAmb	IAmb	17 34 42.3	
	comp=Z,26nm,0.7s						
PMR	Palmer	54.21	334	P	P	17 34 41.2	0.0
	baz=120,SNR=11						
H27K	Steamboat Moun	54.23	341	IAmb	IAmb	17 34 43.2	
	comp=Z,19nm,0.7s						
H27K	Steamboat Moun	54.23	341	P	P	17 34 41.3	-0.2
	baz=131,SNR=35						
Q20K	Shuyak Island	54.25	330	P	P	17 34 41.9	+0.4
	baz=115						
SII	Sitkinak Islan	54.30	327	P	P	17 34 42.4	+0.3
	baz=112						
DHY	Denali Highway	54.30	336	IAmb	IAmb	17 34 43.0	
	comp=Z,9.6nm,0.8s						
DHY	Denali Highway	54.30	336	P	P	17 34 42.0	-0.2
	baz=123,SNR=13						
HOM	Homer	54.36	331	P	P	17 34 42.6	+0.2
	baz=116						
J25K	Salcha River,	54.46	339	IAmb	IAmb	17 34 45.7	
	comp=Z,15nm,0.8s						
J25K	Salcha River,	54.46	339	P	P	17 34 43.2	0.0
	baz=126,SNR=22						
WAT1	Susitna Watana	54.62	336	P	P	17 34 44.3	0.0
	baz=122						
G27K	Doyon Strip	54.66	342	IAmb	IAmb	17 34 45.1	
	comp=Z,24nm,0.7s						
G27K	Doyon Strip	54.66	342	P	P	17 34 44.3	-0.2
	baz=132,SNR=52						
M22K	Willow	54.70	334	P	P	17 34 44.9	+0.1
	baz=119,SNR=10						
F28M	Old Crow	54.70	343	P	P	17 34 44.8	0.0
	baz=134,SNR=58						
E29M	Blow River	54.73	344	IAmb	IAmb	17 34 45.8	
	comp=Z,24nm,1.1s						
E29M	Blow River	54.73	344	P	P	17 34 44.8	-0.2
	baz=136,SNR=21						
CHIR	Chirikof Islan	54.78	326	P	P	17 34 46.0	+0.5
	baz=110						
SUA	Susitna One	54.82	334	P	P	17 34 46.3	+0.4
	baz=119,SNR=28						
R18K	Karluk	54.82	328	P	P	17 34 45.9	+0.2
	baz=112						
AC06	Mina Casimiro	54.85	145	IAmb	IAmb	17 34 50.5	
	comp=Z,25nm,1.0s						
HDA	Harding Lake	54.90	338	P	P	17 34 46.0	-0.2
	baz=124,SNR=36						
Q19K	Cape Douglas,	54.97	330	P	P	17 34 46.8	-0.1
	baz=114						
O20K	Slope Mountain	54.99	332	P	P	17 34 47.3	+0.2
	baz=116						
PRP	Porcupine Dome	55.05	339	P	P	17 34 47.8	+0.2
	baz=127,SNR=48						
IL31		55.08	338	IAmb	IAmb	17 34 48.4	
	comp=Z,29nm,0.8s						
ILAR	Eielson Array	55.08	338	P	P	17 34 47.2	-0.4
	comp=Z,15nm,0.8s,baz=145,slow=6.1,SNR=172						
ILAR				PcP	PcP	17 35 48.9	+0.6
	comp=Z,3.3nm,0.6s,baz=157,slow=2.3,SNR=11						
ILAR				ScP	ScP	17 39 42.0	+0.6
	comp=Z,0.5nm,0.9s,baz=73,slow=3.1,SNR=2.5						
ILAR				LR	LR	17 59 27.4	
	comp=Z,177nm,22.0s,baz=104,slow=37						
ILAR				PKPPKP	P'P'df	18 04 57.1	0.0
	comp=Z,0.9nm,0.9s,baz=307,slow=3.5,SNR=7.6						
	comp=Z,15nm,0.8s						
CUT	Chulitna	55.08	335	P	P	17 34 47.7	+0.2
	baz=120,SNR=7.9						
P19K	Oil Pt	55.08	331	P	P	17 34 47.0	-0.7
	baz=115						
A36M	Sachs Harbour	55.18	351	P	P	17 34 46.7	-1.4
	baz=152,SNR=5.1						
SPU	Mount Spurr	55.24	333	IAmb	IAmb	17 34 49.8	
	comp=Z,28nm,0.8s						
MCK	McKinley	55.25	337	IAmb	IAmb	17 34 49.8	
	comp=Z,27nm,0.9s						
MCK	McKinley	55.25	337	P	P	17 34 48.9	+0.1
	baz=122,SNR=13						
STLK	Strandline Lak	55.29	333	IAmb	IAmb	17 34 50.3	
	comp=Z,19nm,0.7s						
E28M	Babbage River	55.31	344	IAmb	IAmb	17 34 49.5	
	comp=Z,20nm,0.9s						
E28M	Babbage River	55.31	344	P	P	17 34 48.5	-0.6
	baz=135,SNR=28						
N20K	Mount Spurr	55.31	333	P	P	17 34 49.3	-0.1
	baz=117						
SPCR	Spurr Chakacha	55.31	333	P	P	17 34 49.3	-0.1
	baz=117,SNR=7.3						
CCB	Clear Creek Bu	55.34	338	IAmb	IAmb	17 34 50.2	
	comp=Z,16nm,0.7s						
WRH	Wood River Hil	55.34	338	IAmb	IAmb	17 34 50.2	
	comp=Z,17nm,0.8s						
G26K	Porcupine Rive	55.39	341	IAmb	IAmb	17 34 50.9	
	comp=Z,21nm,0.7s						
G26K	Porcupine Rive	55.39	341	P	P	17 34 49.6	-0.1
	baz=129,SNR=16						
SKT	Skwentna	55.39	334	P	P	17 34 49.9	0.0
	baz=118,SNR=23						
POKR	Poker Plat Res	55.47	338	IAmb	IAmb	17 34 51.2	
	comp=Z,20nm,0.8s						
POKR	Poker Plat Res	55.47	338	P	P	17 34 50.2	-0.2
	baz=124,SNR=10						
COLA	College	55.48	338	i P	P	17 34 49.4	-1.0
COLA				pmax	pmax		
	comp=Z,17nm,1.0s						
COLA	College	55.48	338	P	P	17 34 50.4	0.0
	baz=124						
COLA	College	55.48	338	P	P	17 34 49.6	-0.8
COLA				PcP	PcP	17 35 50.6	+0.9
Q18K	Katmai Hardscr	55.51	329	P	P	17 34 50.6	-0.3
	baz=112,SNR=10						
E27K	Coleen River	55.57	343	IAmb	IAmb	17 34 52.0	
	comp=Z,22nm,1.0s						
E27K	Coleen River	55.57	343	P	P	17 34 51.0	0.0
	baz=132,SNR=21						
H25L	Birch Creek	55.60	340	P	P	17 34 51.7	+0.4
	baz=127,SNR=44						
TRF	Thorofare Moun	55.62	336	P	P	17 34 51.3	-0.4
	baz=120,SNR=64						
D28M	Stokes Point	55.63	345	P	P	17 34 50.6	-0.8
	baz=136						
NEA2	Nenana	55.76	337	IAmb	IAmb	17 34 54.1	
	comp=Z,9.7nm,0.7s						
NEA2	Nenana	55.76	337	P	P	17 34 52.1	-0.4
	baz=122,SNR=11						
Q17K	Contact Creek	55.79	329	P	P	17 34 52.9	0.0
	baz=111,SNR=11						
O19K	Port Alsworth	55.81	331	IAmb	IAmb	17 34 53.3	
	comp=Z,32nm,1.0s						
O19K	Port Alsworth	55.81	331	P	P	17 34 52.3	-0.5
	baz=114						
POIN	Pond Inlet	55.87	8	IAmb	IAmb	17 34 53.0	
	comp=Z,18nm,1.2s						
P18K	Big Mountain,	55.91	330	IAmb	IAmb	17 34 54.2	
	comp=Z,26nm,0.8s						
P18K	Big Mountain,	55.91	330	P	P	17 34 53.2	-0.4
	baz=113,SNR=10						
KTH	Kantishna Hill	55.92	336	IAmb	IAmb	17 34 53.8	
	comp=Z,16nm,0.7s						
BMAR	Burnt Mountain	55.93	342	P	P	17 34 53.4	-0.3
F26K	Sheenjek River	55.97	342	IAmb	IAmb	17 34 55.0	
	comp=Z,21nm,0.9s						
F26K	Sheenjek River	55.97	342	P	P	17 34 54.1	+0.1
	baz=129,SNR=34						
G25K	Bearman Lake	55.99	340	P	P	17 34 54.6	+0.5
	baz=127,SNR=32						
H24K	Noodor Dome	56.03	339	IAmb	IAmb	17 34 55.5	
	comp=Z,29nm,0.8s						
H24K	Noodor Dome	56.03	339	P	P	17 34 54.5	+0.1
	baz=124,SNR=40						
O18K	Koktuh Hills	56.08	331	P	P	17 34 54.6	-0.2
	baz=113,SNR=15						
H03N2	Juan Fernandez	56.09	157	T	T	18 35 14.8	
	baz=334,slow=78,SNR=13						
PPLA	Purkeypile	56.10	335	P	P	17 34 54.8	-0.3
PPLA	Purkeypile	56.10	335	P	P	17 34 54.9	-0.1
	baz=118,SNR=12						
H03N1	Juan Fernandez	56.10	157	T	T	18 35 16.1	
	baz=334,slow=78,SNR=20						
H03N3	Juan Fernandez	56.11	157	T	T	18 35 15.2	
	baz=334,slow=78,SNR=15						
D27M	Malcolm River	56.13	344	IAmb	IAmb	17 34 55.8	
	comp=Z,17nm,1.0s						
D27M	Malcolm River	56.13	344	P	P	17 34 54.8	-0.3
	baz=134,SNR=12						
N19K	Bonanza Creek	56.14	332	P	P	17 34 55.2	-0.2

	baz=114,SNR=26						
I23K	Minto, Yukon-K	56.17	338	P	P	17 34 55.5	+0.2
	baz=122,SNR=36						
BPAW	Bear Paw Mtn.	56.22	336	IAmb	IAmb	17 34 56.4	
	comp=Z,29nm,1.3s						
BPAW	Bear Paw Mtn.	56.22	336	P	P	17 34 55.2	-0.5
	baz=120,SNR=16						
RES	Resolute Bay	56.30	2	LR	LR	18 00 21.9	
	comp=Z,369nm,19.4s,baz=200,slow=38						
CAST	Castle Rocks	56.31	335	P	P	17 34 55.8	-0.6
	baz=118,SNR=47						
Q16K	King Salmon	56.32	329	P	P	17 34 56.7	+0.2
	baz=111						
F25K	Christian Rive	56.36	341	IAmb	IAmb	17 34 57.9	
	comp=Z,19nm,0.7s						
F25K	Christian Rive	56.36	341	P	P	17 34 57.0	+0.3
	baz=128,SNR=41						
G24K	Hadweenzic Riv	56.40	340	P	P	17 34 57.2	+0.2
	baz=125,SNR=74						
P17K	Kvichak River	56.41	330	P	P	17 34 57.1	0.0
	baz=111,SNR=5.4						
M19K	Big River Lodg	56.56	333	P	P	17 34 58.4	+0.2
	baz=115						
H23K	Yukon River	56.60	339	IAmb	IAmb	17 34 58.8	
	comp=Z,12nm,0.8s						
H23K	Yukon River	56.60	339	P	P	17 34 58.4	-0.1
	baz=122,SNR=20						
L20K	Farewell, AK	56.60	334	P	P	17 34 58.2	-0.3
	baz=116,SNR=33						
MLY	Manley	56.60	337	IAmb	IAmb	17 34 59.4	
	comp=Z,31nm,1.0s						
MLY	Manley	56.60	337	P	P	17 34 58.4	0.0
	baz=121,SNR=32						
E25K	Arctic Village	56.66	342	IAmb	IAmb	17 34 59.9	
	comp=Z,11nm,0.9s						
E25K	Arctic Village	56.66	342	P	P	17 34 58.9	0.0
	baz=128,SNR=14						
N18K	Kilae Creek	56.72	332	P	P	17 34 59.3	-0.1
	baz=113,SNR=24						
TMAB	Tom-Au,PA,Br	56.74	106	*e*P	P	17 35 00.8	+0.6
PRPB	Parauapebas	56.80	111	*e*P	P	17 35 01.3	+0.6
SALV	Santo Antonio	56.83	124	*e*P	P	17 35 01.1	+0.4
L19K	White Mountain	56.88	333	P	P	17 35 00.2	-0.3
	baz=115,SNR=40						
O17K	Koliganek Bris	56.93	330	P	P	17 35 00.9	+0.1
	baz=111,SNR=23						
F24K	Squaw Lake	57.00	341	P	P	17 35 01.2	-0.1
	baz=125,SNR=11						
M18K	Stony River	57.01	332	P	P	17 35 01.0	-0.4
	baz=113,SNR=21						
S14K	Fog Glacier	57.02	326	P	P	17 35 01.6	0.0
	baz=107						
K20K	Telida	57.07	335	P	P	17 35 01.4	-0.4
	baz=116,SNR=24						
CO01	Juntas del Tor	57.08	147	IAmb	IAmb	17 35 05.9	
	comp=Z,11nm,1.0s						
P16K	Nushagak River	57.09	329	P	P	17 35 01.8	-0.2
	baz=110						
C27K	Jago River	57.10	344	IAmb	IAmb	17 35 02.6	
	comp=Z,16nm,0.9s						
C27K	Jago River	57.10	344	P	P	17 35 01.7	-0.2
	baz=131,SNR=17						
G23K	Bananza Creek	57.24	339	IAmb	IAmb	17 35 04.0	
	comp=Z,22nm,0.8s						
G23K	Bananza Creek	57.24	339	P	P	17 35 03.0	0.0
	baz=122,SNR=37						
N17K	Nushagak Hills	57.25	331	IAmb	IAmb	17 35 04.2	
	comp=Z,26nm,0.9s						
N17K	Nushagak Hills	57.25	331	P	P	17 35 03.2	+0.2
	baz=112,SNR=13						
SDPT	Sand Point	57.26	325	P	P	17 35 02.9	-0.2
	baz=105						
H22K	Ishtalitna Cre	57.27	338	P	P	17 35 02.8	-0.4
	baz=120,SNR=33						
O16K	Kokwok River B	57.34	330	P	P	17 35 03.4	-0.3
	baz=110,SNR=23						
J20K	Nowinta River	57.47	336	P	P	17 35 04.2	-0.4
	baz=117,SNR=35						
E24K	Your Creek	57.51	341	IAmb	IAmb	17 35 05.9	
	comp=Z,12nm,0.8s						
E24K	Your Creek	57.51	341	P	P	17 35 04.9	0.0
	baz=125,SNR=17						
COLD	Coldfoot	57.58	340	IAmb	IAmb	17 35 06.7	
	comp=Z,19nm,0.7s						
COLD	Coldfoot	57.58	340	P	P	17 35 05.8	+0.5
	baz=122,SNR=31						
C26K	Camden Bay	57.61	344	P	P	17 35 04.9	-0.6
	baz=130,SNR=8.2						
D25K	Kavik River	57.64	343	IAmb	IAmb	17 35 06.4	
	comp=Z,26nm,0.9s						
D25K	Kavik River	57.64	343	P	P	17 35 05.2	-0.5
	baz=128,SNR=26						
H21K	Melozitna Rive	57.67	338	P	P	17 35 05.5	-0.5
	baz=119,SNR=43						
L18K	Granite Mounta	57.68	333	P	P	17 35 05.8	-0.2
	baz=113,SNR=24						
M17K	Holitna River	57.69	332	P	P	17 35 05.7	-0.5
	baz=112,SNR=16						
E23K	Chandalar	57.85	341	P	P	17 35 07.4	+0.1
	baz=124,SNR=34						
G22K	Bettles	57.85	339	P	P	17 35 06.9	-0.3
	baz=121						
I20K	Naaghedeneel	57.88	336	P	P	17 35 07.0	-0.4
	baz=117,SNR=8.8						
N16K	Nishlik Lake	57.96	331	P	P	17 35 08.1	0.0
	baz=110,SNR=31						
J19K	Poorman	57.97	335	P	P	17 35 07.5	-0.6
	baz=115,SNR=59						
O15K	Ungalikthiuk R	58.04	329	P	P	17 35 07.7	-0.9
	baz=108,SNR=12						
IMAR	Indian Mountai	58.16	338	P	P	17 35 08.2	-1.2
TOLK	Toolik Lake Re	58.17	341	P	P	17 35 09.1	-0.3
	baz=124,SNR=20						
J18K	Innoko River	58.19	334	P	P	17 35 09.0	-0.6
	baz=114,SNR=26						
S12K	Black Hills	58.22	325	P	P	17 35 09.7	-0.3
	baz=104,SNR=7.3						
D24K	Happy Valley	58.24	342	IAmb	IAmb	17 35 10.4	
	comp=Z,43nm,1.6s						
D24K	Happy Valley	58.24	342	P	P	17 35 09.3	-0.5
	baz=125,SNR=5.9						
M16K	Timber Creek	58.24	331	P	P	17 35 09.9	-0.2
	baz=110,SNR=15						
SNDB	Serra Nova Dou	58.29	117	*e*P	P	17 35 12.1	+1.0
G21K	Allakaket	58.34	338	IAmb	IAmb	17 35 11.1	
	comp=Z,9.4nm,0.9s						
G21K	Allakaket	58.34	338	P	P	17 35 10.0	-0.6
	baz=119						
L17K	Donlin	58.34	333	P	P	17 35 10.3	-0.4
	baz=111,SNR=24						
H20K	Anotleneega Mo	58.35	337	P	P	17 35 10.1	-0.7
	baz=117,SNR=34						
SFJD	Kangerlussuaq	58.37	21	LR	LR	18 01 21.4	
	comp=Z,118nm,18.9s,baz=234,slow=37						
F22K	John River	58.38	340	P	P	17 35 11.0	0.0
	baz=121,SNR=6.2						
N15K	Kwethluk River	58.48	330	P	P	17 35 11.3	-0.5
	baz=108						
C24K	Franklin Bluff	58.53	343	P	P	17 35 11.3	-0.6
	baz=125						
K17K	Iditarod	58.56	333	P	P	17 35 11.5	-0.8
	baz=112,SNR=20						
E22K	Anaktuvuk Pass	58.59	340	IAmb	IAmb	17 35 13.0	
	comp=Z,14nm,0.8s						
E22K	Anaktuvuk Pass	58.59	340	P	P	17 35 11.9	-0.5
	baz=121,SNR=19						
F21K	Alatna River	58.67	339	P	P	17 35 13.2	+0.2
	baz=119,SNR=44						
D23K	Nanushuk River	58.68	341	P	P	17 35 13.3	+0.4
	baz=123,SNR=24						
L16K	Owhat River	58.71	332	IAmb	IAmb	17 35 14.1	
	comp=Z,20nm,0.8s						
L16K	Owhat River	58.71	332	P	P	17 35 13.2	-0.1
	baz=110,SNR=17						
O14K	Tigyukauivet M	58.77	329	P	P	17 35 12.7	-0.9
	baz=107						
FALS	False Pass	58.78	323	P	P	17 35 13.2	-0.6
	baz=102						
GCSA	Galena City Sc	58.79	336	P	P	17 35 12.7	-1.0
	baz=114						
MURT	Porto Murtinho	58.86	131	*e*P	P	17 35 14.4	-0.5
M15K	Kasigluk River	58.93	331	P	P	17 35 14.3	-0.5
	baz=108,SNR=8.4						
H19K	Roundabout Mou	58.95	337	IAmb	IAmb	17 35 15.0	
	comp=Z,13nm,0.9s						
H19K	Roundabout Mou	58.95	337	P	P	17 35 13.9	-1.0
	baz=115,SNR=11						
PPT2	Papeete2	59.13	235	*e*LR	LR	17 52 40.7	
	comp=Z,191nm,24.8s						
PPT2				*e*LR	LR	17 52 46.8	
	comp=Z,328nm,26.5s						
C23K	Itkillik River	59.14	342	P	P	17 35 16.0	-0.2
	baz=123,SNR=36						
J17K	VABM Dome	59.15	334	IAmb	IAmb	17 35 16.4	
	comp=Z,12nm,0.9s						
J17K	VABM Dome	59.15	334	P	P	17 35 15.3	-0.9
	baz=111,SNR=9.3						
N14K	Kuskokwak Cree	59.17	330	P	P	17 35 15.6	-0.9
	baz=107						
D22K	Ayikyak River	59.25	341	P	P	17 35 17.1	+0.2
	baz=121,SNR=39						
CFA	Coronel Fontan	59.34	147	P	P	17 35 20.1	+2.0
	comp=Z,19nm,0.9s,baz=319,slow=6.6,SNR=47						
CFA				LR	LR	17 55 25.9	
	comp=Z,130nm,21.2s,baz=235,slow=30						
	comp=Z,19nm,0.9s						
PEL	Peldehue	59.35	150	P	P	17 35 20.7	+2.6
PEL				pmax	pmax		
	comp=Z,40nm,0.9s						
PEL	Peldehue	59.35	150	P	P	17 35 19.7	+1.5
F20K	Avaraart Lake	59.36	338	IAmb	IAmb	17 35 18.6	
	comp=Z,20nm,1.1s						
F20K	Avaraart Lake	59.36	338	P	P	17 35 17.6	-0.1
	baz=117,SNR=22						
E21K	Killik River	59.44	340	IAmb	IAmb	17 35 18.4	
	comp=Z,9.1nm,0.8s						
E21K	Killik River	59.44	340	P	P	17 35 17.9	-0.3
	baz=119,SNR=12						
G19K	Purcell Mounta	59.45	337	P	P	17 35 17.9	-0.5
	baz=115,SNR=27						
AQDB	Aquidauana	59.52	128	*e*P	P	17 35 20.0	+0.5
H18K	Honhosa River	59.53	336	IAmb	IAmb	17 35 19.5	
	comp=Z,12nm,1.0s						
H18K	Honhosa River	59.53	336	P	P	17 35 18.2	-0.7
	baz=113						
M14K	Bethel	59.54	330	P	P	17 35 18.9	-0.1
	baz=107,SNR=16						
L15K	Ungalak Mounta	59.61	331	P	P	17 35 19.4	0.0
	baz=108,SNR=18						
J16K	Anvik River	59.75	333	P	P	17 35 20.5	+0.1
	baz=110,SNR=12						
ARAG	Araguaiana, MT	59.81	121	*e*P	P	17 35 21.6	+0.1
K15K	Wolf Creek Mou	59.82	332	P	P	17 35 21.3	+0.3
	baz=108,SNR=16						
G18K	Tagagawik	59.94	337	P	P	17 35 21.2	-0.5
	baz=113						
SMTB	Santa Maria do	59.98	112	*e*P	P	17 35 23.9	+1.0
F19K	Shaleruckik Mo	59.99	338	IAmb	IAmb	17 35 22.8	
	comp=Z,21nm,0.9s						
F19K	Shaleruckik Mo	59.99	338	P	P	17 35 21.6	-0.4
	baz=114						
I17K	Unalakleet	59.99	334	IAmb	IAmb	17 35 23.6	
	comp=Z,31nm,1.1s						
I17K	Unalakleet	59.99	334	P	P	17 35 22.4	+0.3
	baz=110,SNR=8.3						
C21K	Knifeblade Rid	60.04	341	P	P	17 35 22.5	+0.1
	baz=119,SNR=58						
L14K	Kuka Creek	60.05	331	P	P	17 35 22.2	-0.3
	baz=107,SNR=19						
H17K	Granite Mounta	60.05	335	P	P	17 35 22.4	-0.1
	baz=111,SNR=20						
E19K	Redstone River	60.07	339	IAmb	IAmb	17 35 23.4	
	comp=Z,21nm,0.8s						
E19K	Redstone River	60.07	339	P	P	17 35 22.3	-0.3
	baz=115						
E20K	Nigu River	60.07	340	P	P	17 35 22.4	-0.2
	baz=117						
BO04	La Punta	60.08	150	IAmb	IAmb	17 35 34.3	
	comp=Z,24nm,1.1s						
M13K	Dall Lake	60.10	330	P	P	17 35 22.5	-0.3
	baz=106,SNR=7.4						
B21K	Ikpikpuk River	60.22	341	IAmb	IAmb	17 35 23.6	
	comp=Z,15nm,0.7s						
B21K	Ikpikpuk River	60.22	341	P	P	17 35 23.1	-0.4
	baz=119,SNR=17						
B22K	Teshekpuk Lake	60.23	342	IAmb	IAmb	17 35 23.8	
	comp=Z,25nm,0.9s						
B22K	Teshekpuk Lake	60.23	342	P	P	17 35 22.9	-0.7
	baz=121,SNR=19						
UNV	Unalaska Valle	60.36	322	P	P	17 35 24.6	-0.1
	baz=99,SNR=5.3						
D20K	Etivluk River	60.42	340	P	P	17 35 24.7	-0.3
	baz=117						
G17K	Kiwalik Mounta	60.55	336	P	P	17 35 26.1	+0.3
	baz=111,SNR=8.7						
F18K	Selawik	60.58	337	P	P	17 35 26.0	-0.1
	baz=112,SNR=14						
C2SB	Chapadao do Su	60.70	125	*e*P	P	17 35 28.9	+1.3
D19K	Kuna River	60.82	339	IAmb	IAmb	17 35 28.2	
	comp=Z,32nm,1.2s						
D19K	Kuna River	60.82	339	P	P	17 35 27.1	-0.6
	baz=115						
J14K	Nanvaranak Lak	60.86	332	P	P	17 35 28.4	+0.5
	baz=106,SNR=20						
H16K	Elim	60.88	335	P	P	17 35 28.2	0.0
	baz=109						
KULLO	Kullorsuaq	60.97	12	*i* P	P	17 35 25.9	-2.6
KULLO				IAmb	IAmb	17 35 27.6	
	comp=Z,17nm,1.1s						
A22K	Sinclair Lake	61.01	343	P	P	17 35 28.3	-0.6
	baz=120						
RPRD	Ribas do Rio P	61.02	127	*e*P	P	17 35 30.0	+0.2
F17K	Baldwin Pennin	61.12	337	IAmb	IAmb	17 35 30.6	
	comp=Z,15nm,0.9s						
F17K	Baldwin Pennin	61.12	337	P	P	17 35 29.4	-0.3
	baz=111						
K13K	Kusilvak Mount	61.12	331	P	P	17 35 29.6	-0.2
	baz=105						
G16K	Koyuk River	61.18	335	IAmb	IAmb	17 35 31.4	
	comp=Z,22nm,0.9s						
G16K	Koyuk River	61.18	335	P	P	17 35 30.2	+0.1
	baz=109						
B20K	Meade River	61.18	341	P	P	17 35 29.9	-0.2
	baz=117						
E18K	Tukpahlearik C	61.24	338	P	P	17 35 30.1	-0.5
	baz=112						
M11K	Mekoryuk	61.47	329	P	P	17 35 32.1	0.0
	baz=103						
C19K	Lookout Ridge	61.56	340	P	P	17 35 32.7	0.0
	baz=114,SNR=33						
E17K	Hotham Inlet	61.56	337	P	P	17 35 32.5	-0.2
	baz=110,SNR=37						
A21K	Barrow	61.63	343	P	P	17 35 33.4	+0.3
	baz=118						
NIKH	Nikolski High	61.63	321	P	P	17 35 33.0	-0.4
	baz=96						
G15K	Niukluk	61.73	335	P	P	17 35 33.9	+0.1
	baz=107						
C18K	Utukok River	61.92	339	IAmb	IAmb	17 35 35.4	
	comp=Z,21nm,0.8s						
C18K	Utukok River	61.92	339	P	P	17 35 34.5	-0.6
	baz=112,SNR=21						
SJPY	San Joaquin	62.04	133	*e*P	P	17 35 36.6	+0.1
CPUP	Villa Florida	62.06	135	P	P	17 35 37.0	+0.4
CPUP				IAmb	IAmb	17 35 38.2	
	comp=Z,11nm,0.8s						
CPUP	Villa Florida	62.06	135	P	P	17 35 37.2	+0.6
	comp=Z,9.6nm,0.8s,baz=181,slow=10,SNR=58						
CPUP				LR	LR	18 02 20.7	
	comp=Z,36nm,19.6s,baz=188,slow=36						
	comp=Z,9.6nm,0.8s						
CPUP	Villa Florida	62.06	135	*e*P	P	17 35 37.2	+0.6
CPUP	Villa Florida	62.06	135	P	P	17 35 37.0	+0.4
CPUP				pP	pP	17 35 53.6	-0.6
CPUP				sP	sP	17 36 00.6	-1.0
ANM	Nome	62.15	334	P	P	17 35 36.8	+0.1
	baz=106						
F15K	North Star Dit	62.19	335	P	P	17 35 37.2	+0.2
	baz=107,SNR=12						
D17K	Noatak River	62.23	338	P	P	17 35 36.9	-0.2
	baz=110,SNR=20						
RDOG	Red Dog Mine	62.29	338	P	P	17 35 37.2	-0.4
	baz=110						
B18K	Kokolik River	62.39	340	P	P	17 35 38.1	0.0
	baz=112						
TBI	Tubuai	62.45	230	*e*LR	LR	17 54 17.2	
	comp=Z,1µm,28.0s						
A19K	Wainwright	62.48	341	P	P	17 35 38.5	-0.3
	baz=113						
P08K	Saint George I	62.50	325	P	P	17 35 39.0	-0.1
	baz=98						
C17K	DeLong Mountai	62.53	339	P	P	17 35 38.7	-0.5
	baz=110,SNR=16						
F14K	Arctic Creek	62.79	335	P	P	17 35 41.1	+0.2
	baz=105						
BDFB	Brasilia	62.89	119	P	P	17 35 43.8	+1.3
BDFB				IAmb	IAmb	17 35 44.8	
	comp=Z,28nm,0.9s						
BDFB	Brasilia	62.89	119	P	P	17 35 43.8	+1.3
	comp=Z,21nm,0.8s,baz=294,slow=8.4,SNR=39						
BDFB				LR	LR	18 03 15.6	
	comp=Z,119nm,19.4s,baz=308,slow=36						
	comp=Z,21nm,0.8s						
BDFB	Brasilia	62.89	119	P	P	17 35 43.8	+1.3
BDFB				pmax	pmax		
	comp=Z,28nm,0.9s						
SPIA	Saint Paul Isl	62.96	325	P	P	17 35 42.0	-0.2
	baz=97						
ICESG	Greenland Ices	62.99	21	*i* P	P	17 35 40.1	-2.5
ICESG				IAmb	IAmb	17 35 42.1	
	comp=Z,11nm,0.7s						
ITRB	Iturama	63.16	124	*e*P	P	17 35 44.9	+0.8
TRCB	Terra Rica	63.19	129	*e*P	P	17 35 44.6	+0.3
C16K	Lisburne Hills	63.23	338	P	P	17 35 43.5	-0.3
	baz=108						
TNA	Tin City	63.45	335	P	P	17 35 45.4	+0.1
	baz=104						
PCMB	Pacaembu	63.53	127	*e*P	P	17 35 46.6	+0.1
NEEM	North Greenlan	63.91	11	*i* P	P	17 35 46.0	-2.5
NEEM				IAmb	IAmb	17 35 49.0	
	comp=Z,26nm,0.8s						
IPMB	Ipameri, GO	63.94	122	*e*P	P	17 35 49.7	+0.4
SDBA	SAO DESIDERIO	63.95	114	*e*P	P	17 35 49.9	+0.4
SUMG	Summit	64.56	17	IAmb	IAmb	17 36 18.6	
	comp=Z,18nm,1.1s						
SUMG	Summit	64.56	17	P	P	17 35 51.6	-1.4
SUMG				pmax	pmax		
	comp=Z,17nm,1.1s						
SUMG	Summit	64.56	17	*i* P	P	17 35 49.2	-3.7
LDASE	Londrina, Braz	64.67	128	*e*P	P	17 35 53.7	-0.3
GAMB	Gambell	64.68	333	P	P	17 35 53.0	-0.3
	baz=99						
ITQB	Itaqui	64.74	137	*e*P	P	17 35 54.9	+0.7
PTGB	Pitanga	64.75	130	*e*P	P	17 35 54.2	-0.3
PMNB	Patos De Minas	65.66	121	*e*P	P	17 36 01.1	+0.5
SOEG	Soedalen	65.67	23	*i* P	P	17 35 57.5	-2.2
SOEG				IAmb	IAmb	17 35 58.7	
	comp=Z,8.4nm,0.6s						
JANB	Januaria	65.71	117	*e*P	P	17 36 01.5	+0.7
PLCA	Paso Flores	65.72	154	P	P	17 36 02.1	+1.6
PLCA				IAmb	IAmb	17 36 03.5	
	comp=Z,28nm,1.1s						
PLCA	Paso Flores	65.72	154	P	P	17 36 02.3	+1.8
	comp=Z,16nm,1.0s,baz=325,slow=7.9,SNR=21						
PLCA				LR	LR	17 59 15.6	
	comp=Z,114nm,18.3s,baz=300,slow=31						
	comp=Z,16nm,1.0s						
PLCA	Paso Flores	65.72	154	*e*P	P	17 36 00.7	+0.2
PLCA	Paso Flores	65.72	154	P	P	17 36 02.1	+1.6
PLCA				sP	sP	17 36 25.2	-0.3
PLCA				PcP	PcP	17 36 32.5	+1.2
NBPB	Pedra_Branca-C	65.78	105	*e*P	P	17 36 01.4	+0.1
FRTB	Fartura	65.81	127	*e*P	P	17 36 01.5	+0.2
ITAB	Concordia	66.22	132	*e*P	P	17 36 04.7	+0.9
ADK	Adak	66.36	319	P	P	17 36 04.0	-0.4
ADK	Adak	66.36	319	P	P	17 36 04.0	-0.4
ADK				pmax	pmax		
	comp=Z,76nm,0.6s						
ADK	Adak	66.36	319	P	P	17 36 03.8	-0.6
ADK				pP	pP	17 36 19.5	-2.4
NBCL	Cascavel-CE	66.47	103	*e*P	P	17 36 07.0	+1.2
LL02	Futaleuf	67.30	157	IAmb	IAmb	17 36 13.5	
	comp=Z,30nm,0.8s						
CPSB	Cacapava Do Su	67.31	136	*e*P	P	17 36 11.4	+0.7
SPB	Sao Paulo	67.57	126	*e*P	P	17 36 13.3	+0.8
VAO	Valinhos	67.60	125	*e*P	P	17 36 13.8	+0.9
DIAM	Diamantina, MG	67.81	119	*e*P	P	17 36 15.1	+0.8
PET01	Itanhaem-SP	68.07	127	*e*P	P	17 36 16.6	+1.0
PLTB	Pedras Altas	68.07	137	P	P	17 36 16.6	+1.1
PLTB	Pedras Altas	68.07	137	*e*P	P	17 36 16.2	+0.6
BSCB	Bom Sucesso	68.27	122	*e*P	P	17 36 18.0	+1.0
CNLB	Canela	68.38	133	*e*P	P	17 36 18.2	+0.7
MAJ01	Sao Joao Batis	68.54	130	*e*P	P	17 36 19.5	+0.9
PARB	Paraibuna	68.82	125	*e*P	P	17 36 21.5	+1.0
RAR	Rarotonga	69.17	238	LR	LR	17 57 48.6	
	comp=Z,186nm,18.8s,baz=74,slow=28						
GDU01	Guandu, BA	69.17	113	*e*P	P	17 36 24.1	+1.4
SLP01	Ubatuba-SP	69.18	125	*e*P	P	17 36 23.6	+0.8
COYC	Coyhaique	69.27	158	P	P	17 36 24.9	+2.3
COYC				pP	pP	17 36 42.5	+2.2
RCBR	Riachuelo	69.27	104	*e*P	P	17 36 24.3	+0.9
RCBR	Riachuelo	69.27	104	P	P	17 36 25.2	+1.8
BORG	Borgarnes	69.34	27	LR	LR	18 07 42.6	
	comp=Z,130nm,18.1s,baz=296,slow=37						
MAN01	Angra dos Reis	69.87	124	*e*P	P	17 36 27.8	+0.9
CMC01	Camacan, BA	69.95	115	*e*P	P	17 36 28.6	+1.1
VAS01	Vassouras-RJ	69.99	123	*e*P	P	17 36 28.7	+1.0
SJMB	Sao Joao De Ma	70.07	119	*e*P	P	17 36 29.2	+1.1
GUA01	Guaratinga, BA	70.25	116	*e*P	P	17 36 30.4	+1.1
NBAN	Anadia - AL	70.42	108	*e*P	P	17 36 31.4	+1.0
DAG	Danmarks Havn	70.51	14	P	P	17 36 27.7	-2.2
DAG				pmax	pmax		
	comp=Z,8.0nm,2.2s						
DAG	Danmarks Havn	70.51	14	⇓*i*P	P	17 36 27.1	-2.9
DAG				IAmb	IAmb	17 36 28.5	
	comp=Z,4.3nm,0.6s						
DUB01	Friburgo-RJ	70.74	122	*e*P	P	17 36 33.3	+1.0
RIB01	Linhares ES	71.02	119	*e*P	P	17 36 35.0	+1.1
CAM01	Campos-RJ	71.19	122	*e*P	P	17 36 36.0	+1.1
SHEM	Shemya Is, Ala	71.95	320	LR	LR	18 04 53.2	
	comp=Z,24nm,20.7s,baz=68,slow=33						
JMIC	Jan Mayen	73.70	20	LR	LR	18 11 01.0	
	comp=Z,103nm,18.9s,baz=228,slow=37						
BILL	Bilibino	73.71	337	*i* P	P	17 36 49.0	-0.1
BILL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SPITS	Spitsbergen Ar	77.48	11	P	P	17 37 09.9	-0.7
	comp=Z,3.4nm,0.5s,baz=225,slow=0.2,SNR=12						
SPITS				LR	LR	18 13 02.8	
	comp=Z,236nm,18.7s,baz=278,slow=37						
	comp=Z,3.4nm,0.5s						
EKA	Eskdalemuir Ar	79.75	35	P	P	17 37 22.7	-0.7
	comp=Z,2.3nm,0.5s,baz=271,slow=4.7,SNR=9.9						
	comp=Z,2.3nm,0.5s						
SEY	Seymchan	80.65	334	P	P	17 37 28.5	+0.4
	comp=Z,5.5nm,0.5s,baz=72,slow=7.9,SNR=23						
SEY				LR	LR	18 16 49.4	
	comp=Z,83nm,18.6s,baz=62,slow=38						
	comp=Z,5.5nm,0.5s						
SEY	Seymchan	80.65	334	*ce*P	P	17 37 27.9	-0.2
SEY				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PSBE	So Bento	80.68	52	*e*P	P	17 37 28.9	+0.1
PCAS	Casmilo, Conde	80.75	51	*e*P	P	17 37 29.1	-0.1
POLO	Lamas de Olo	80.89	49	*e*P	P	17 37 29.7	-0.3
POLO				*i* Amb		17 37 30.8	
	comp=Z,10nm,1.2s						
PVRL	Vila Real	80.97	50	*e*P	P	17 37 30.2	-0.2
PVRL				*i* Amb		17 37 48.4	
	comp=Z,22nm,1.7s						
PET	Petropavlovsk	81.00	323	P	P	17 37 31.0	+0.9
PET	Petropavlovsk	81.00	323	*i* P	P	17 37 31.1	+0.9
PET				pmax	pmax		
	comp=Z,16nm,1.0s						
PVIS	Viseu	81.00	50	*e*P	P	17 37 30.3	-0.3
BBTS	Babate	81.05	78	LR	LR	18 07 48.3	
	comp=Z,91nm,21.4s,baz=173,slow=32						
PSARD	Sardoal	81.12	51	*e*P	P	17 37 31.1	-0.1
PSARD				*i* Amb		17 37 31.9	
	comp=Z,20nm,1.3s						
PMTG	Montargil	81.23	52	*e*P	P	17 37 31.6	-0.1
PMTG				*i* Amb		17 37 35.0	
	comp=Z,20nm,1.3s						
PTEO	Sao Teotonio	81.28	53	*e*P	P	17 37 32.5	+0.5
PFVI	Vila Bisbo	81.32	54	*e*P	P	17 37 32.7	+0.4
MTE	Manteigas	81.35	50	*e*P	P	17 37 32.3	-0.1
MTE				*i* Amb		17 37 50.1	
	comp=Z,22nm,1.4s						
MORF	Marmelete	81.41	54	*e*P	P	17 37 32.5	-0.2
MORF				IAmb	IAmb	17 37 33.4	
	comp=Z,8.2nm,0.8s						
MORF	Marmelete	81.41	54	*e*P	P	17 37 33.0	+0.3
MORF				*i* Amb		17 37 43.4	
	comp=Z,26nm,1.5s						
MORF	Marmelete	81.41	54	*e*P	P	17 37 32.5	-0.2
MVO	Moncorvo	81.50	50	*e*P	P	17 37 33.1	0.0
MVO				*i* Amb		17 37 35.5	
	comp=Z,24nm,1.9s						
PEA0B	Petropavlovsk-	81.51	323	*ce*P	P	17 37 34.1	+1.2
PETK	Petropavlovsk-	81.51	323	P	P	17 37 32.9	-0.1

PETK	**Petropavlovsk-**	**81.51**	**323**	P	**P**	**17 37 33.7**	**+0.8**
	comp=Z,22nm,0.6s,baz=80,slow=10,SNR=26						
PETK				LR	LR	18 11 08.4	
	comp=Z,16nm,21.9s,baz=75,slow=34						
	comp=Z,22nm,0.6s						
EVO	**Evora**	**81.54**	**52**	*e*P	**P**	**17 37 33.3**	**-0.1**
EVO				*i* Amb		17 37 34.4	
	comp=Z,16nm,1.1s						
PCBR	**Castelo Branco**	**81.56**	**51**	*e*P	**P**	**17 37 33.3**	**-0.1**
MESJ	**Messejana**	**81.58**	**53**	*e*P	**P**	**17 37 33.4**	**-0.2**
MESJ				IAmb	IAmb	17 37 34.7	
	comp=Z,9.1nm,0.9s						
MESJ	**Messejana**	**81.58**	**53**	*e*P	**P**	**17 37 34.0**	**+0.4**
MESJ				*i* Amb		17 37 55.1	
	comp=Z,26nm,1.7s						
MESJ	**Messejana**	**81.58**	**53**	*e*P	**P**	**17 37 33.4**	**-0.2**
PMRV	**Marv??o**	**81.74**	**51**	*e*P	**P**	**17 37 34.3**	**-0.1**
PMRV				*i* Amb		17 37 35.2	
	comp=Z,20nm,1.0s						
PESTR	**Estremoz**	**81.76**	**52**	*e*P	**P**	**17 37 34.4**	**-0.1**
PESTR				*i* Amb		17 37 46.3	
	comp=Z,12nm,1.6s						
PCVE	**Castro Verde**	**81.78**	**53**	*e*P	**P**	**17 37 35.0**	**+0.4**
PCVE				*i* Amb		17 37 36.6	
	comp=Z,23nm,1.5s						
PBEJ	**Beja**	**81.80**	**53**	*e*P	**P**	**17 37 35.1**	**+0.3**
PBEJ				*i* Amb		17 37 35.8	
	comp=Z,17nm,1.9s						
PBDV	**Barranco-do-Ve**	**81.98**	**54**	*e*P	**P**	**17 37 36.2**	**+0.5**
PBDV				*i* Amb		17 37 39.7	
	comp=Z,33nm,1.4s						
PVAQ	**Vaqueiros**	**82.09**	**53**	*e*P	**P**	**17 37 36.6**	**+0.4**
PVAQ				*i* Amb		17 37 37.7	
	comp=Z,18nm,1.4s						
PBAR	**Barrancos**	**82.38**	**52**	*e*P	**P**	**17 37 36.5**	**-1.3**
TIXI	**Tiksi**	**83.74**	**346**	LR	LR	18 17 56.9	
	comp=Z,99nm,21.8s,baz=54,slow=38						
PAB	**San Pablo**	**83.95**	**50**	P	**P**	**17 37 45.5**	**-0.4**
PAB				IAmb	IAmb	17 37 47.0	
	comp=Z,12nm,0.9s						
PAB	**San Pablo**	**83.95**	**50**	P	**P**	**17 37 45.5**	**-0.4**
PAB				pmax	pmax		
	comp=Z,12nm,1.0s						
ESDC	**Sonseca Array**	**84.19**	**50**	P	**P**	**17 37 47.0**	**-0.2**
	comp=Z,4.6nm,0.8s,baz=302,slow=5.4,SNR=39						
	comp=Z,4.6nm,0.8s						
NB2	**NORSAR Subarra**	**84.51**	**27**	P	**P**	**17 37 48.1**	**-0.2**
	comp=Z,27nm,2.0s,baz=299,slow=4.6						
NB2	**NORSAR Subarra**	**84.51**	**27**	P	**P**	**17 37 49.6**	**+1.3**
NB2	**NORSAR Subarra**	**84.51**	**27**	P	**P**	**17 37 48.1**	**-0.2**
	baz=299,slow=4.6						
NOA	**NORSAR Array B**	**84.51**	**27**	P	**P**	**17 37 48.2**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=298,slow=4.6,SNR=11						
NOA				LR	LR	18 16 21.5	
	comp=Z,70nm,20.1s,baz=300,slow=36						
	comp=Z,1.3nm,0.7s						
ARCES	**ARCESS Array B**	**84.63**	**16**	P	**P**	**17 37 48.4**	**-0.3**
ARCES	**ARCESS Array B**	**84.63**	**16**	P	**P**	**17 37 48.1**	**-0.6**
	comp=Z,7.3nm,0.8s,baz=314,slow=5.7,SNR=20						
ARCES				LR	LR	18 15 57.2	
	comp=Z,141nm,21.9s,baz=305,slow=36						
	comp=Z,7.3nm,0.8s						
ARCES	**ARCESS Array B**	**84.63**	**16**	P	**P**	**17 37 48.4**	**-0.3**
ARCES				pmax	pmax		
	comp=Z,85nm,1.9s						
UCC	**Uccle**	**85.59**	**38**	*d*P	**P**	**17 37 53.1**	**-0.7**
MDT	**Midelt**	**85.95**	**57**	LR	LR	18 16 12.9	
	comp=Z,20nm,18.9s,baz=240,slow=36						
DOU	**Dourbes**	**86.02**	**38**	*d*P	**P**	**17 37 55.6**	**-0.3**
HFS	**Hagfors**	**86.03**	**27**	P	**P**	**17 37 53.9**	**-1.9**
	comp=Z,2.6nm,0.8s,baz=202,slow=7.4,SNR=4.3						
HFS				LR	LR	18 18 07.1	
	comp=Z,79nm,19.4s,baz=312,slow=37						
	comp=Z,2.6nm,0.8s						
BGES	**Gesves**	**86.19**	**38**	*d*P	**P**	**17 37 57.0**	**+0.2**
	comp=Z,7.1nm,1.0s						
MEM	**Membach**	**86.63**	**37**	*d*P	**P**	**17 37 59.2**	**+0.2**
MSVF	**Nonsavu**	**86.63**	**250**	P	**P**	**17 38 03.4**	**+3.8**
	comp=Z,48nm,0.9s,baz=129,slow=8.6,SNR=18						
MSVF				LR	LR	18 07 44.6	
	comp=Z,80nm,21.3s,baz=165,slow=29						
	comp=Z,48nm,0.9s						
IBBN	**Ibbenburen**	**86.87**	**35**	*e*P	**P**	**17 38 00.1**	**0.0**
	comp=Z,9.7nm,0.7s,baz=299,slow=4.6						
WLF	**Walferdange**	**87.11**	**38**	P	**P**	**17 38 01.6**	**+0.3**
WLF				IAmb	IAmb	17 38 02.6	
	comp=Z,15nm,1.0s						
WLF	**Walferdange**	**87.11**	**38**	P	**P**	**17 38 01.7**	**+0.3**
WLF				pmax	pmax		
	comp=Z,15nm,1.0s						
WLF	**Walferdange**	**87.11**	**38**	*d*P	**P**	**17 38 01.4**	**+0.1**
	comp=Z,10.0nm,1.0s						
WLF	**Walferdange**	**87.11**	**38**	*e*P	**P**	**17 38 01.6**	**+0.3**
	comp=Z,15nm,1.0s,baz=299,slow=4.6						
BSEG	**Bad Segeberg**	**87.49**	**33**	*e*P	**P**	**17 38 02.9**	**-0.1**
	comp=Z,14nm,1.1s,baz=299,slow=4.6						
RETH	**Rethem/Aller,**	**87.55**	**35**	*e*P	**P**	**17 38 03.3**	**0.0**
	comp=Z,10nm,1.1s,baz=299,slow=4.6						
KASTN	**Kahler Asten**	**87.74**	**36**	*e*P	**P**	**17 38 03.9**	**-0.5**
	comp=Z,7.0nm,0.9s,baz=299,slow=4.6						
PMSA	**Palmer Station**	**87.93**	**165**	LR	LR	18 09 47.4	
	comp=Z,132nm,18.5s,baz=118,slow=30						
NRDL	**Niedersach Rie**	**88.07**	**35**	*e*P	**P**	**17 38 05.8**	**+0.1**
	comp=Z,11nm,0.9s,baz=299,slow=4.6						
TNS	**Taunus Mts**	**88.20**	**37**	*e*P	**P**	**17 38 05.9**	**-0.7**
	comp=Z,10nm,0.8s,baz=299,slow=4.6						
GTTG	**Gottingen**	**88.44**	**35**	*e*P	**P**	**17 38 07.7**	**+0.1**
	comp=Z,10nm,1.0s,baz=299,slow=4.6						
ASSE	**Asse, Remlinge**	**88.55**	**35**	*e*P	**P**	**17 38 07.7**	**-0.3**
	comp=Z,9.9nm,0.9s,baz=299,slow=4.6						
FLTG	**Flechtingen**	**88.75**	**34**	*e*P	**P**	**17 38 08.7**	**-0.4**
	comp=Z,19nm,1.6s,baz=299,slow=4.6						
UBBA	**Unterbreizbach**	**88.80**	**36**	*e*P	**P**	**17 38 09.2**	**0.0**
	comp=Z,2.5nm,0.8s,baz=299,slow=4.6						
BFO	**Black Forest**	**88.99**	**39**	*e*P	**P**	**17 38 09.6**	**-0.8**
	comp=Z,2.5nm,0.9s,baz=299,slow=4.6						
NEUB	**Neuenburg**	**89.59**	**35**	*e*P	**P**	**17 38 12.9**	**-0.2**
	comp=Z,6.6nm,0.7s,baz=299,slow=4.6						
MOX	**Moxa**	**89.78**	**36**	*e*P	**P**	**17 38 13.5**	**-0.5**
	comp=Z,5.2nm,1.1s,baz=299,slow=4.6						
MOX				*e*L	L	18 18 44.7	
	comp=Z,68nm,21.6s						
YAK	**Yakutsk**	**90.01**	**338**	P	**P**	**17 38 15.0**	**+0.3**
YAK	**Yakutsk**	**90.01**	**338**	P	**P**	**17 38 15.2**	**+0.5**
	comp=Z,58nm,0.8s,baz=29,slow=0.2,SNR=37						
YAK				LR	LR	18 24 09.0	
	comp=Z,120nm,18.4s,baz=38,slow=39						
	comp=Z,58nm,0.8s						
YAK	**Yakutsk**	**90.01**	**338**	*e*P	**P**	**17 38 15.1**	**+0.3**
YAK				e*PP	**sP**	**17 38 40.3**	**+0.2**
YAK				*e*		17 41 52.2	
YAK				*e*S	**SKSac**	**17 48 35.6**	**-4.2**
YAK				*e*		17 49 03.5	
YAK				*e*SS	**SS**	**17 54 56.8**	**-3.7**
YAK				pmax	pmax		
	comp=Z,65nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,108nm,4.8s						
YAK				pmax	pmax		
	comp=E,67nm,4.3s						
YAK				smax	smax		
	comp=N,167nm,4.3s						
YAK				smax	smax		
	comp=E,98nm,4.6s						
GRF	**Grafenberg Arr**	**90.03**	**37**	*e*P	**P**	**17 38 15.2**	**0.0**
	comp=E,12nm,1.1s,baz=299,slow=4.6						
GRF				*e*L	L	18 20 30.7	
	comp=E,50nm,21.0s						
FINES	**FINESS Array B**	**90.16**	**22**	P	**P**	**17 38 13.6**	**-1.8**
	comp=E,2.4nm,0.9s,baz=331,slow=3.2,SNR=7.9						
FINES				LR	LR	18 18 48.0	
	comp=E,97nm,21.1s,baz=315,slow=36						
	comp=E,2.4nm,0.9s						
CLL	**Collm**	**90.21**	**35**	*i* P	**P**	**17 38 15.1**	**-0.8**
CLL				*e*		17 48 39.0	
CLL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CLL	**Collm**	**90.21**	**35**	*e*P	**P**	**17 38 15.1**	**-0.8**
	comp=Z,3.8nm,0.8s,baz=299,slow=4.6						
CLL	**Collm**	**90.21**	**35**	*i* P	**P**	**17 38 15.1**	**-0.8**
	comp=Z,5.0nm,0.9s						
CLL				*e*SKSac	**SKSac**	**17 48 39.0**	**-2.4**
CLL				*e*S	**ScS**	**17 49 08.0**	**-0.4**
CLL				*e*PS	**PS**	**17 50 15.0**	**-4.1**
CLL				*e*SS	**SS**	**17 55 06.0**	**+1.8**
CLL				*e*SSS	SSS	17 58 30.0	
CLL				*e*SSSS		18 01 54.0	
UBR	**Ueberruh**	**90.35**	**39**	*e*P	**P**	**17 38 16.3**	**-0.5**
	comp=Z,7.9nm,1.4s,baz=299,slow=4.6						
TANN	**Tannenbergstha**	**90.37**	**36**	*e*P	**P**	**17 38 16.5**	**-0.3**
	comp=Z,7.6nm,1.2s,baz=299,slow=4.6						
MANZ	**Manzenberg**	**90.38**	**36**	*e*P	**P**	**17 38 16.8**	**-0.1**
	comp=Z,0.8nm,0.9s,baz=299,slow=4.6						
DAVA	**Damuels**	**90.40**	**39**	*i* P	**P**	**17 38 16.9**	**-0.2**
	comp=Z,6.8nm,0.7s						
ROTZ	**Rotzenmuhle**	**90.55**	**36**	*e*P	**P**	**17 38 17.4**	**-0.2**
	comp=Z,1.5nm,1.2s,baz=299,slow=4.6						
DAVOX	**Davos/Dischmat**	**90.64**	**40**	LR	LR	18 20 23.3	
	comp=Z,91nm,19.3s,baz=263,slow=37						
RETA	**Reutte**	**90.83**	**39**	*i* P	**P**	**17 38 18.5**	**-0.6**
	comp=Z,3.3nm,0.8s						
BRG	**Berggiesshubel**	**90.94**	**35**	*e*P	**P**	**17 38 18.3**	**-1.0**
	comp=Z,4.6nm,0.8s,baz=299,slow=4.6						
BRG	**Berggiesshubel**	**90.94**	**35**	*e*P	**P**	**17 38 18.5**	**-0.8**
BRG				Amp		17 38 19.7	
	comp=Z,4.6nm,0.8s						
BRG	**Berggiesshubel**	**90.94**	**35**	S	**S**	**17 49 15.0**	**+3.6**
BRG	**Berggiesshubel**	**90.94**	**35**	SP	SP	17 50 19.0	+0.5
FUORN	**Ofenpass-Fuorn**	**90.95**	**40**	P	**P**	**17 38 18.3**	**-1.5**
FUORN				IAmb	IAmb	17 38 20.5	
	comp=Z,5.2nm,0.8s						
FETA	**Feichten**	**91.04**	**39**	*e*P	**P**	**17 38 20.1**	**0.0**
	comp=Z,2.3nm,0.6s						
MOTA	**Moosalm**	**91.10**	**39**	*e*P	**P**	**17 38 19.7**	**-0.7**
	comp=Z,6.5nm,0.7s						
SQTA	**Sankt Quirin**	**91.23**	**39**	*i* P	**P**	**17 38 20.7**	**-0.2**
	comp=Z,3.4nm,0.8s						
WET	**Wettzell**	**91.24**	**37**	*e*P	**P**	**17 38 20.7**	**-0.2**
	comp=Z,4.9nm,0.9s,baz=299,slow=4.6						
WATA	**Walderalm**	**91.39**	**39**	*e*P	**P**	**17 38 21.6**	**-0.1**
	comp=Z,5.4nm,0.8s						
WTTA	**Wattenberg**	**91.46**	**39**	*e*P	**P**	**17 38 21.2**	**-0.9**
	comp=Z,2.0nm,0.6s						
KHC	**Kasperske Hory**	**91.64**	**36**	*e*P	**P**	**17 38 22.0**	**-0.7**
KHC				AMS	AMS	18 18 30.0	
	comp=Z,100nm,20.0s						
KHC	**Kasperske Hory**	**91.64**	**36**	*ce*P	**P**	**17 38 23.1**	**+0.4**
KHC				pmax	pmax		
	comp=Z,17nm,2.5s						
PRU	**Pruhonice**	**91.73**	**35**	AMS	AMS	18 18 40.0	
	comp=Z,100nm,17.4s						
ZVC	**Zvikov**	**91.83**	**36**	*e*P	**P**	**17 38 25.2**	**+1.7**
ZVC				AMS	AMS	18 19 00.0	
	comp=Z,100nm,21.5s						
GEC2	**GERESS Array S**	**91.86**	**37**	*e*P	**P**	**17 38 23.1**	**-0.7**
	comp=Z,3.8nm,0.8s,baz=299,slow=4.6						
GERES	**GERESS Array B**	**91.86**	**37**	P	**P**	**17 38 23.4**	**-0.4**
	comp=Z,5.2nm,0.4s,baz=323,slow=3.3,SNR=2.9						
GERES				LR	LR	18 19 45.6	
	comp=Z,64nm,20.3s,baz=242,slow=36						
	comp=Z,5.2nm,0.4s						
LESA	**Schwarzleotal**	**91.99**	**38**	*i* P	**P**	**17 38 23.6**	**-0.9**
	comp=Z,2.1nm,0.8s						
CKRC	**Cesky Krumlov**	**92.22**	**36**	AMS	AMS	18 16 50.0	
	comp=Z,100nm,16.7s						
CHVC	**Chvalec**	**92.23**	**34**	*e*P	**P**	**17 38 25.3**	**-0.1**
CHVC	**Chvalec**	**92.23**	**34**	*e*P	**P**	**17 38 25.3**	**-0.1**
ABTA	**Abfaltersbach**	**92.24**	**39**	*i* P	**P**	**17 38 24.1**	**-1.5**
	comp=Z,5.8nm,0.7s						
OSTC	**Ostas**	**92.34**	**34**	*e*P	**P**	**17 38 25.3**	**-0.6**
OSTC	**Ostas**	**92.34**	**34**	*e*P	**P**	**17 38 25.3**	**-0.6**
VSU	**Vasula**	**92.39**	**24**	*i* P	**P**	**17 38 26.0**	**+0.1**
BIOA	**Bad Ischl, Aus**	**92.42**	**38**	*i* P	**P**	**17 38 26.0**	**-0.4**
	comp=Z,2.2nm,0.6s						
DPC	**Dobruska-Polom**	**92.51**	**34**	*e*P	**P**	**17 38 26.2**	**-0.5**
DPC	**Dobruska-Polom**	**92.51**	**34**	*e*P	**P**	**17 38 26.2**	**-0.5**
MOA	**Molln**	**92.70**	**37**	*i* P	**P**	**17 38 27.0**	**-0.6**
	comp=Z,3.0nm,0.9s						
VRAC	**Vranov**	**93.22**	**35**	LR	LR	18 22 19.7	
	comp=Z,54nm,19.3s,baz=302,slow=37						
VRAC	**Vranov**	**93.22**	**35**	*e*P	**P**	**17 38 29.5**	**-0.5**
KRUC	**Moravsky**	**93.25**	**36**	*e*P	**P**	**17 38 29.2**	**-0.9**
MORC	**Moravsky Berou**	**93.48**	**34**	*e*P	**P**	**17 38 30.6**	**-0.6**
OBKA	**Obir**	**93.56**	**38**	*i* P	**P**	**17 38 30.8**	**-0.9**
	comp=Z,3.7nm,1.0s						
CONA	**Conrad Observa**	**93.57**	**37**	*i* P	**P**	**17 38 31.3**	**-0.4**
	comp=Z,3.4nm,0.9s						
ARSA	**Arzberg**	**93.74**	**37**	*i* P	**P**	**17 38 30.8**	**-1.6**
	comp=Z,1.7nm,0.9s						
SOKA	**Soboth**	**93.76**	**38**	*e*P	**P**	**17 38 31.7**	**-0.9**
	comp=Z,4.9nm,1.1s						
RONA	**Rosalia, Austr**	**93.94**	**37**	*i* P	**P**	**17 38 30.8**	**-2.6**
	comp=Z,2.9nm,0.6s						
JAVC	**Velka Javorina**	**94.06**	**35**	*e*P	**P**	**17 38 34.4**	**+0.5**
MODS	**Modra-Piesok**	**94.12**	**36**	*e*P	**P**	**17 38 34.0**	**-0.1**
URZ	**Urewera**	**94.55**	**231**	LR	LR	18 11 20.8	
	comp=Z,76nm,20.8s,baz=52,slow=29						
LANS	**Liptovska Anna**	**94.87**	**34**	*e*P	**P**	**17 38 36.8**	**-0.8**
LANS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LANS	**Liptovska Anna**	**94.87**	**34**	*e*P	**P**	**17 38 36.8**	**-0.8**
VYHS	**Vyhne**	**94.91**	**35**	*e*P	**P**	**17 38 37.7**	**0.0**
KLMR	**Klimovskoe**	**94.99**	**18**	*e*P	**P**	**17 38 34.5**	**-3.3**
KLMR				*e*		17 42 22.2	
KLMR				pmax	pmax		
	comp=Z,14nm,1.4s						
SRO	**Srobarova**	**95.01**	**36**	*e*P	**P**	**17 38 38.9**	**+0.8**
KEST	**Kesra**	**95.42**	**50**	P	**P**	**17 38 41.0**	**+0.5**
	comp=Z,4.8nm,0.8s,baz=11,slow=1.2,SNR=5.6						
	comp=Z,4.8nm,0.8s						
MNK	**Minsk**	**95.54**	**27**	*i* P	**P**	**17 38 35.8**	**-4.6**
MNK				i *PP	**pP**	**17 38 59.8**	**+1.0**
MNK				*i*		17 42 26.4	
MNK				*i* S	**SKSac**	**17 49 02.8**	**-8.0**
MNK				i *SS	**S**	**17 49 46.4**	**-5.4**
MNK				*i* PS	**PS**	**17 51 12.9**	**-4.7**
MNK				*i* SS	**SS**	**17 56 12.7**	**-7.3**
MNK				*i* SSS	SSS	17 59 56.2	
MNK				pmax	pmax		
	comp=N,11nm,0.8s						
MNK				pmax	pmax		
	comp=E,9.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MNK				MLR	MLR		
	comp=N,65nm,22.0s						
MNK				MLR	MLR		
	comp=Z,73nm,19.0s						
MNK				MLR	MLR		
	comp=E,44nm,20.0s						
ZEA	**Zeya**	**96.63**	**333**	*i* P	**P**	**17 38 45.9**	**+0.5**
RNPP8	**Varash**	**96.74**	**30**	P	**P**	**17 38 44.7**	**-1.2**
KLR	**Kul'dur**	**97.54**	**328**	*i* P	**P**	**17 38 49.4**	**-0.2**
KLR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
DZM	**Mont Dzumac**	**98.36**	**250**	*e*LR	LR	18 11 11.2	
	comp=Z,234nm,25.7s						
OBN	**Obninsk**	**98.55**	**23**	*de*P	**P**	**17 38 52.5**	**-1.5**
OBN				*e*		17 42 51.9	
OBN				*i* S	SKSac	17 49 13.7	-13
OBN				*e*SS	**SS**	**17 56 53.6**	**-8.6**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,178nm,21.0s						
AKASG	**Malin Array Be**	**98.75**	**29**	P	**P**	**17 38 53.2**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=291,slow=3.7,SNR=7.8						
AKASG				LR	LR	18 25 29.8	
	comp=Z,44nm,19.1s,baz=327,slow=37						
	comp=Z,0.2nm,0.3s						
AKBB	**Malin Array Si**	**98.75**	**29**	*ce*P	**P**	**17 38 52.5**	**-2.5**
AKBB				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIRV	**Kirov**	**99.58**	**15**	LR	LR	18 24 59.7	
	comp=Z,102nm,21.1s,baz=339,slow=36						
KIRV	**Kirov**	**99.58**	**15**	*ce*P	**Pdif**	**17 38 56.5**	**-2.0**
BVAR	**Borovoye Array**	**108.42**	**5**	PKKP	**PKKPdf**	**17 55 07.4**	**-1.3**
	comp=Z,0.7nm,0.7s,baz=186,slow=3.0,SNR=4.1						
BRTR	**Keskin Array B**	**108.67**	**35**	PKKPbc	PKKPbc	17 54 54.6	+0.1
	comp=Z,0.8nm,0.9s,baz=151,slow=2.8,SNR=4.1						
SONM	**Songino Array**	**109.27**	**340**	PKKPbc	PKKPbc	17 54 51.7	-1.2
	comp=Z,0.2nm,0.5s,baz=194,slow=3.7,SNR=3.5						
KURK	**Kurchatov**	**111.06**	**360**	*i* PKIKP	**PKiKP**	**17 43 48.9**	**+0.3**
KURBB	**Kurchatov Arra**	**111.15**	**360**	PKiKP	**PKiKP**	**17 43 48.9**	**+0.1**
	comp=Z,0.1nm,0.4s,baz=321,slow=2.7,SNR=4.1						
KURBB				PKKPbc	**PKKPbc**	**17 54 45.8**	**-1.0**
	comp=Z,0.8nm,0.8s,baz=204,slow=2.7,SNR=5.8						
HHC	**Hu-ho-hao-te**	**113.29**	**333**	*e*P	**PKiKP**	**17 43 51.3**	**-2.0**
MKAR	**Makanchi Array**	**114.88**	**357**	PKP	**PKiKP**	**17 43 55.5**	**-0.6**
	comp=Z,1.0nm,0.9s,baz=9.5,slow=1.2,SNR=6.9						
MKAR				PKKPbc	**PKKPbc**	**17 54 31.6**	**-2.7**
	comp=Z,1.8nm,1.0s,baz=197,slow=2.5,SNR=8.0						
MKAR				PKKP	**PKKPdf**	**17 54 56.9**	**+0.3**
	comp=Z,1.1nm,1.0s,baz=141,slow=5.9,SNR=4.2						
NJ2	**Nanjing**	**116.40**	**322**	*e*P	**PKiKP**	**17 44 00.3**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WMQ	**Urumqi**	**117.35**	**352**	*e*PKP	**PKPdf**	**17 43 59.6**	**-1.4**
WMQ				sPKP		17 44 33.0	
WMQ				LR	LR		
	comp=Z,210nm,24.0s						
GTA	**Gaotai**	**118.93**	**341**	P	**PKiKP**	**17 44 04.6**	**+0.3**
GTA				pP	PKPdf	17 44 10.6	+6.4
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
STKA	**Stephens Creek**	**121.86**	**244**	PKP	**PKiKP**	**17 44 10.5**	**+0.6**
	comp=Z,9.9nm,0.8s,baz=64,slow=3.3,SNR=20						
KSH	**Kashi**	**122.22**	**2**	PKP	**PKiKP**	**17 44 11.8**	**+1.1**
ENH	**Enshi**	**122.90**	**328**		**PKiKP**	**17 44 12.5**	**+0.3**
WRA	**Warramunga Arr**	**127.21**	**259**	PKP	**PKPdf**	**17 44 20.5**	**+0.1**
	comp=Z,10nm,0.8s,baz=79,slow=2.3,SNR=44						
AS31	**Alice Springs**	**128.06**	**254**		**PKiKP**	**17 44 22.9**	**+0.3**
ASAR	**Alice Springs**	**128.06**	**254**	PKP	**PKiKP**	**17 44 22.5**	**-0.1**
	comp=Z,7.6nm,0.8s,baz=84,slow=1.7,SNR=60						
PZH	**PanZhiHua**	**129.74**	**332**	PKP	**PKPdf**	**17 44 25.0**	**-0.3**
MAW	**Mawson**	**129.97**	**172**	PKP	**PKiKP**	**17 44 25.3**	**+0.3**
	comp=Z,12nm,0.9s,baz=270,slow=5.4,SNR=13						
BOSA	**Boshof**	**130.76**	**112**	PKP	**PKPdf**	**17 44 27.2**	**+0.1**
	comp=Z,10nm,0.8s,baz=259,slow=1.6,SNR=19						
CMAR	**Chiang Mai Arr**	**137.98**	**330**	PKP	**PKPdf**	**17 44 41.6**	**+0.9**
	comp=Z,3.2nm,0.7s,baz=329,slow=1.7,SNR=14						
CMAR				SKP	**SKPbc**	**17 48 09.8**	**+0.4**
	comp=Z,1.1nm,1.1s,baz=47,slow=2.5,SNR=4.5						
MORW	**Morawa**	**143.98**	**246**		PKPbc	17 44 49.5	+0.2
HYB	**Hyderabad**	**144.28**	**359**	*e*PKiKP	**PKiKP**	**17 44 55.7**	**0.0**
HYB				*e*pPKiKP	**pPKiKP**	**17 45 14.0**	**-0.7**

IDC 16 17:36:58.4±2.9, 30°.02S×178°.10W, h0km, mb3.8/3, mbtmp3.8/3, MS3.3/1, Error ellipse: s-maj=83.6km s-min=35.7km az=40.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**9.12**	**205**	Pn	Pn	17 39 02.7	-8.6
	0.7nm,0.3s,baz=52,slow=12,SNR=1.5						
URZ				Sn	Sn	17 40 27.0	-28
	1.6nm,0.3s,baz=288,slow=20,SNR=8.7						
RPZ	**Rata Peaks**	**16.17**	**209**	LR	LR	17 46 33.0	
	comp=Z,120nm,19.9s,baz=141,slow=36						
ASAR	**Alice Springs**	**43.05**	**267**	P	P	17 45 00.0	-0.1
	0.6nm,0.8s,baz=108,slow=7.7,SNR=7.9						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**44.00**	**272**	P	P	17 45 07.8	0.0
	0.7nm,0.3s,baz=115,slow=7.9,SNR=6.5						
	0.7nm,0.3s						
QSPA	**South Pole Qui**	**60.09**	**180**	P	P	17 47 07.5	+0.3
	0.7nm,0.5s,baz=27,slow=2.3,SNR=12						
	0.7nm,0.5s						
H03S2	**Juan Fernandez**	**80.74**	**124**	T	T	19 19 04.4	
	baz=242,slow=75,SNR=67						
H03S1	**Juan Fernandez**	**80.75**	**124**	T	T	19 19 03.4	
	baz=242,slow=75,SNR=3.1						
H03S3	**Juan Fernandez**	**80.76**	**124**	T	T	19 19 04.3	
	baz=242,slow=75,SNR=66						
H03N3	**Juan Fernandez**	**80.93**	**123**	T	T	19 19 03.2	
	baz=242						
H03N2	**Juan Fernandez**	**80.94**	**123**	T	T	19 19 03.2	
	baz=242						
H03N1	**Juan Fernandez**	**80.95**	**123**	T	T	19 19 03.2	
	baz=242						
H10S3	**ASCENSION HYDR**	**138.10**	**155**	T	T	20 29 15.2	
	baz=203,slow=74,SNR=5.3						
H10S2	**ASCENSION HYDR**	**138.10**	**155**	T	T	20 29 11.9	
	baz=17,slow=74,SNR=2.6						
H10N3	**ASCENSION HYDR**	**139.19**	**155**	T	T	20 30 30.6	
	baz=203						
H10N1	**ASCENSION HYDR**	**139.19**	**155**	T	T	20 30 34.8	
	baz=203						
H10N2	**ASCENSION HYDR**	**139.20**	**155**	T	T	20 30 36.6	
	baz=203						
FINES	**FINESS Array B**	**144.76**	**340**	PKP	PKPab	17 56 34.7	-0.6
	1.0nm,0.7s,baz=32,slow=1.3,SNR=4.9						

IDC 16 17:39:28.6±1.5, 30°.15S×178°.08W, h0km, mb3.9/5, mbtmp3.9/5, Error ellipse: s-maj=48.9km s-min=30.3km az=36.0

ISC 16 17:39:34.3±1.5, 30°.2S±0°.3×178°.2W±0°.3, h35km, n14, σ0s.58/8, mb3.8/5, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.95**	**205**	Pn	Pn	17 41 28.6	-12
	0.2nm,0.3s,baz=29,slow=19,SNR=1.4						
URZ				Sn	Sn	17 42 57.4	-23
	1.6nm,0.3s,baz=279,slow=19,SNR=5.8						
STKA	**Stephens Creek**	**34.37**	**257**	P	**P**	**17 46 17.8**	**-0.3**
	0.5nm,0.4s,baz=108,slow=13,SNR=1.4						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**42.96**	**267**	P	**P**	**17 47 30.0**	**-0.2**
	0.9nm,0.7s,baz=105,slow=7.5,SNR=12						
	0.9nm,0.7s						
WRA	**Warramunga Arr**	**43.93**	**272**	P	**P**	**17 47 38.8**	**+0.8**
	1.0nm,0.4s,baz=111,slow=8.0,SNR=13						
	1.0nm,0.4s						
QSPA	**South Pole Qui**	**59.93**	**180**	P	**P**	**17 49 36.3**	**-0.4**
	2.2nm,0.9s,baz=22,slow=19,SNR=8.5						
	2.2nm,0.9s						
SNAA	**Sanae**	**78.38**	**178**	P	**P**	**17 51 31.5**	**+0.7**
	0.9nm,1.0s,baz=212,slow=9.5,SNR=1.7						
	0.9nm,1.0s						
H10S3	**ASCENSION HYDR**	**137.99**	**155**	T	T	20 33 39.6	
	baz=17						
H10S2	**ASCENSION HYDR**	**137.99**	**155**	T	T	20 33 39.6	
	baz=203						
H10N3	**ASCENSION HYDR**	**139.08**	**155**	T	T	20 35 09.1	
	baz=202						
H10N1	**ASCENSION HYDR**	**139.08**	**155**	T	T	20 35 09.1	
	baz=202						
H10N2	**ASCENSION HYDR**	**139.09**	**155**	T	T	20 35 09.1	
	baz=202						
FINES	**FINESS Array B**	**144.88**	**340**	PKP	**PKPab**	**17 59 06.3**	**+0.2**
	1.0nm,0.4s,baz=56,slow=3.5,SNR=12						
AKASG	**Malin Array Be**	**151.03**	**323**	PKPbc	**PKPbc**	**17 59 22.7**	**-0.4**
	1.0nm,0.8s,baz=83,slow=1.1,SNR=1.3						
MMAI	**Mount Meron Ar**	**151.32**	**284**	PKPbc	**PKPbc**	**17 59 24.1**	**-0.4**
	0.9nm,0.5s,baz=111,slow=4.0,SNR=4.0						

IDC 16 17:52:29.6±2.5, 20°.25S×178°.18W, h533km±26km, mb3.0/5, mbtmp3.8/7, Error ellipse: s-maj=40.2km s-min=24.7km az=152.0

ISC 16 17:52:30.8±1.2, 20°.1S±0°.2×178°.3W±0°.2, h550km, n7, σ1s.31/7, mb3.4/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.17**	**304**	P	**P**	**17 53 53.0**	**-1.1**
	2.8nm,0.4s,baz=90,slow=20,SNR=5.7						
DZM	**Mont Dzumac**	**14.33**	**260**	P	**P**	**17 55 33.4**	**0.0**
	4.8nm,0.9s,baz=96,slow=19,SNR=6.3						
ASAR	**Alice Springs**	**44.29**	**256**	P	**P**	**17 59 52.0**	**-0.3**
	0.4nm,0.4s,baz=93,slow=7.6,SNR=34						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**44.33**	**262**	P	**P**	**17 59 54.9**	**+2.2**
	0.7nm,0.3s,baz=96,slow=8.3,SNR=17						
	0.7nm,0.3s						
QSPA	**South Pole Qui**	**69.93**	**180**	P	**P**	**18 02 46.2**	**-0.6**
	1.2nm,1.0s,baz=11,slow=6.1,SNR=2.5						
	1.2nm,1.0s						
NVAR	**Mina Array Bea**	**80.98**	**44**	P	**P**	**18 03 49.3**	**+0.6**
	0.6nm,0.8s,baz=228,slow=5.7,SNR=4.1						
	0.6nm,0.8s						
SONM	**Songino Array**	**95.27**	**319**	P	**P**	**18 04 55.8**	**-0.3**
	0.3nm,0.7s,baz=111,slow=5.5,SNR=1.7						
	0.3nm,0.7s						

IDC 16 17:55:05.9±2.1, 30°.87S×177°.78W, h0km, mb3.6/3, mbtmp3.6/3, MS3.5/3, Error ellipse: s-maj=61.3km s-min=41.9km az=40.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.27**	**267**	P	P	18 03 09.3	-0.2
	0.4nm,0.5s,baz=106,slow=7.6,SNR=9.1						

	0.4nm,0.5s						
WRA	**Warramunga Arr**	**44.30**	**273**	P	P	18 03 17.8	0.0
	0.4nm,0.4s,baz=112,slow=8.0,SNR=5.6 0.4nm,0.4s						
VNDA	**Vanda**	**47.65**	**186**	LR	LR	18 19 55.6	
	comp=Z,65nm,21.2s,baz=139,slow=31						
QSPA	**South Pole Qui**	**59.24**	**180**	P	P	18 05 08.9	0.0
	0.7nm,0.9s,baz=18,slow=1.0,SNR=3.2 0.7nm,0.9s						
MAW	**Mawson**	**71.94**	**201**	LR	LR	18 34 51.4	
	comp=Z,49nm,20.4s,baz=246,slow=33						
CMAR	**Chiang Mai Arr**	**93.73**	**289**	LR	LR	18 52 26.1	
	comp=Z,12nm,18.6s,baz=35,slow=37						
H10S3	**ASCENSION HYDR**	**37.22**	**155**	T	T	20 46 50.1	
	baz=203,slow=74,SNR=14						
H10S2	**ASCENSION HYDR**	**37.22**	**155**	T	T	20 46 50.2	
	baz=17,slow=74,SNR=9.7						
H10N3	**ASCENSION HYDR**	**38.31**	**155**	T	T	20 48 08.4	
	baz=202,slow=75,SNR=11						
H10N1	**ASCENSION HYDR**	**38.31**	**155**	T	T	20 48 13.2	
	baz=202,slow=75,SNR=9.5						
H10N2	**ASCENSION HYDR**	**38.32**	**155**	T	T	20 48 12.1	
	baz=202,slow=75,SNR=12						
FINES	**FINESS Array B**	**145.65**	**340**	PKPbc	PKPdf	18 14 44.9	-0.6
	1.1nm,0.8s,baz=50,slow=4.6,SNR=5.8						

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*ISU **16** 17:59:29, 40°.41N×66°.61E, h5^{km}*

ISC 16 17:59:31.4±0.9**, 40°.32N**±0°.05×**66°.70E**±0°.05**, h10**^{km}**, n8, σ2^{s}48**/11**, 3C, Southeastern Uzbekistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NUT	**Nurota**	**0.81**	**287**	P	**Pg**	**17 59 46.0**	**-1.1**
NUT				S	**Sg**	**17 59 56.8**	**-0.9**
AGL	**Agalyk**	**0.81**	**170**	P	**Pg**	**17 59 46.7**	**-0.4**
AGL				S	**Sn**	**18 00 00.4**	**-0.8**
BXML	**Bakhmal**	**1.20**	**121**	P	Pb	17 59 49.3	-5.0
BXML				S	**Sb**	**18 00 05.7**	**-4.3**
TMD	**Tamdy-Bulak**	**2.11**	**313**	P	**Pn**	**18 00 08.6**	**+1.8**
TMD				S	**Sn**	**18 00 34.7**	**+1.6**
ZRB	**Zarabog**	**2.25**	**188**	S	**Sg**	**18 00 47.0**	**+3.4**
CHMG	**Chimgan**	**2.79**	**63**	S	**Sn**	**18 00 52.6**	**+2.5**
KK31	**Karatay Array**	**3.98**	**44**	⇑Pn	**Pn**	**18 00 33.5**	**+1.0**
	0.9nm,0.5s,baz=227,slow=12,SNR=4.9						
KK31				⇑Lg	Lg	18 01 39.1	
	0.6nm,0.2s,baz=226,slow=27						
AB31	**Akbulak array**	**10.14**	**334**	⇑P	**Pn**	**18 01 55.2**	**-1.8**
	0.1nm,0.3s,baz=226,slow=27,SNR=5.3						

IDC 16 18:02:13.2±3.1**, 30°.79S**×**177°.86W, h0**^{km}**, mb3.3**/2**, mbtmp3.5**/3**, ML3.1**/1**, MS4.2**/1**, Error ellipse: s-maj=75.9km s-min=37.5km az=112.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.53**	**208**	Pn	Pn	18 04 17.8	-0.1
	0.2nm,0.3s,baz=56,slow=18,SNR=1.8						
URZ				Sn	Sn	18 05 55.8	+1.0
	0.3nm,0.3s,baz=50,slow=22,SNR=1.4 7.5nm,0.9s						
ASAR	**Alice Springs**	**43.21**	**267**	P	P	18 10 17.1	+0.8
	0.3nm,0.8s,baz=102,slow=6.7,SNR=5.0 0.3nm,0.8s						
WRA	**Warramunga Arr**	**44.23**	**272**	P	P	18 10 23.1	-1.3
	0.3nm,0.6s,baz=113,slow=7.5,SNR=2.0 0.3nm,0.6s						
BATI	**Baumata**	**57.82**	**278**	LR	LR	18 37 16.5	
	comp=Z,166nm,18.0s,baz=207,slow=36						
FINES	**FINESS Array B**	**145.54**	**340**	PKPbc	PKPdf	18 21 51.9	-0.7
	1.7nm,0.9s,baz=37,slow=2.5,SNR=5.9						

IDC 16 18:15:45.8±2.2**, 30°.26S**×**178°.03W, h0**^{km}**, mb3.5**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=62.7km s-min=42.6km az=40.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.09**	**267**	P	P	18 23 46.6	-1.3
	0.3nm,0.8s,baz=105,slow=7.5,SNR=7.8 0.3nm,0.8s						
WRA	**Warramunga Arr**	**44.06**	**272**	P	P	18 23 54.9	-0.9
	0.3nm,0.4s,baz=112,slow=8.0,SNR=5.0 0.3nm,0.4s						
QSPA	**South Pole Qui**	**59.85**	**180**	P	P	18 25 54.1	+1.1
	0.6nm,0.8s,baz=63,slow=4.7,SNR=2.0 0.6nm,0.8s						
FINES	**FINESS Array B**	**145.00**	**340**	PKPbc	PKPbc	18 35 22.1	-1.5
	0.4nm,0.6s,baz=43,slow=3.4,SNR=4.7						

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*IDC **16** 18:21:29.8±2.4, 20°.50S×178°.53W, h618^{km}±24^{km}, mb2.9/4, mbtmp3.8/5, Error ellipse: s-maj=39.9km s-min=28.0km az=142.0*

ISC 16 18:21:27.4±1.2**, 20°.7S**±0°.2×**178°.3W**±0°.2**, h587**^{km}**, n8, σ1^{s}95**/8**, mb3.5**/4**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.55**	**310**	P	**P**	**18 22 58.1**	**+1.9**
	17nm,0.7s,baz=142,slow=8.2,SNR=8.9						
ASAR	**Alice Springs**	**44.21**	**257**	P	**P**	**18 28 45.0**	**-0.8**
	2.2nm,0.8s,baz=89,slow=8.0,SNR=44 2.2nm,0.8s						
WRA	**Warramunga Arr**	**44.30**	**262**	P	**P**	**18 28 45.4**	**-1.2**
	1.1nm,0.5s,baz=98,slow=8.3,SNR=18 1.1nm,0.5s						
QSPA	**South Pole Qui**	**69.36**	**180**	P	**P**	**18 31 38.1**	**+1.2**
	0.6nm,0.6s,baz=72,slow=3.2,SNR=1.6 0.6nm,0.6s						
ILAR	**Eielson Array**	**88.58**	**13**	P	**P**	**18 33 17.9**	**-0.1**
	0.2nm,0.6s,baz=204,slow=5.2,SNR=2.7 0.2nm,0.6s						
BVAR	**Borovoye Array**	**119.07**	**320**	PKP	**PKPdf**	**18 39 08.8**	**-1.2**
	0.3nm,0.5s,baz=95,slow=3.0,SNR=2.2						
AKASG	**Malin Array Be**	**143.07**	**331**	PKP	**PKPdf**	**18 39 52.1**	**-2.9**
	1.0nm,0.4s,baz=45,slow=4.2,SNR=15						
MMAI	**Mount Meron Ar**	**147.68**	**299**	PKPbc	**PKPdf**	**18 40 05.0**	**+1.5**
	0.3nm,0.3s,baz=78,slow=2.6,SNR=1.8						

ROM 16 18:32:13.8±0.0**, 38°.491N**±0°.003×**16°.142E**±0°.002**, h10**^{km}**, ML1.7**/9**, Error ellipse: s-maj=0.3km s-min=0.2km az=345.0, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOPP	**Joppolo**	**0.23**	**300**	P	Pg	18 32 19.4	+0.8
JOPP				S	Sg	18 32 23.4	+1.5
JOPP				AML	AML		
	comp=E,900µm,1.0s						
JOPP				AML	AML		
	comp=N,778µm,0.4s						
JOPP				AML	AML		
	comp=N,274µm,0.5s						
JOPP				AML	AML		
	comp=E,301µm,1.0s						
PLAC	**Placanica**	**0.24**	**100**	P	Pg	18 32 19.5	+0.8
PLAC				S	Sg	18 32 23.5	+1.6
PLAC				AML	AML		
	comp=E,838µm,0.2s						
PLAC				AML	AML		
	comp=N,440µm,1.6s						
PLAC				AML	AML		
	comp=N,238µm,1.6s						
PLAC				AML	AML		
	comp=E,208µm,0.9s						
PLAC				AML	AML		
	comp=E,451µm,0.6s						
PLAC				AML	AML		
	comp=N,414µm,0.6s						
CEL	**Celeste**	**0.30**	**220**	P	Pg	18 32 20.6	+0.7
CEL				S	Sb	18 32 25.6	-0.8
CEL				AML	AML		
	comp=E,592µm,0.4s						
CEL				AML	AML		
	comp=N,298µm,1.5s						
CEL				AML	AML		
	comp=E,587µm,0.4s						
CEL				AML	AML		
	comp=N,284µm,0.2s						
CEL				AML	AML		
	comp=E,200µm,0.4s						
CEL				AML	AML		
	comp=N,117µm,0.2s						
CEL				AML	AML		
	comp=E,213µm,0.4s						
GRI	**Girifalco**	**0.40**	**33**	P	Pg	18 32 21.9	+0.3
GRI				AML	AML		
	comp=E,418µm,0.6s						
GRI				AML	AML		
	comp=N,344µm,0.8s						
GMB	**Gambarie**	**0.41**	**217**	P	Pg	18 32 22.2	+0.4
GMB				S	Sb	18 32 28.4	-1.0
GMB				AML	AML		
	comp=E,1098µm,0.5s						
GMB				AML	AML		
	comp=N,1520µm,0.5s						
SOI	**Samo**	**0.42**	**189**	P	Pg	18 32 22.5	+0.4
SOI				S	Sb	18 32 28.9	-0.9
SOI				AML	AML		
	comp=E,171µm,1.2s						
SOI				AML	AML		
	comp=N,134µm,0.2s						

ROM 16 18:32:31.3±0.2**, 38°.494N**±0°.004×**16°.146E**±0°.005**, h11**^{km}±1^{km}**, ML2.0**/16**, 4C-1D, Error ellipse: s-maj=0.4km s-min=0.0km az=314.0, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOPP	**Joppolo**	**0.23**	**299**	⇑P	Pg	18 32 36.8	+0.6
JOPP				S	Sg	18 32 40.7	+1.3
JOPP				AML	AML		
	comp=E,900µm,1.0s						
JOPP				AML	AML		
	comp=N,778µm,0.4s						
JOPP				AML	AML		
	comp=E,816µm,0.1s						
JOPP				AML	AML		
	comp=N,703µm,0.2s						
JOPP				AML	AML		
	comp=N,703µm,1.8s						
PLAC	**Placanica**	**0.23**	**101**	⇑P	Pg	18 32 36.8	+0.7
PLAC				S	Sg	18 32 41.0	+1.5
PLAC				AML	AML		
	comp=N,440µm,1.6s						
PLAC				AML	AML		
	comp=E,838µm,0.2s						
PLAC				AML	AML		
	comp=N,779µm,0.2s						
PLAC				AML	AML		
	comp=E,838µm,0.2s						
PLAC				AML	AML		
	comp=N,359µm,0.2s						
PLAC				AML	AML		
	comp=E,304µm,0.2s						
CEL	**Celeste**	**0.31**	**220**	⇑P	Pg	18 32 37.9	+0.4
CEL				S	Sb	18 32 43.1	-0.9
CEL				AML	AML		
	comp=E,592µm,0.4s						
CEL				AML	AML		
	comp=N,298µm,1.5s						
CEL				AML	AML		
	comp=E,587µm,0.4s						
CEL				AML	AML		
	comp=N,284µm,0.2s						
CEL				AML	AML		
	comp=E,587µm,0.4s						
CEL				AML	AML		
	comp=N,284µm,0.2s						
CEL				AML	AML		
	comp=E,592µm,0.4s						
CEL				AML	AML		
	comp=N,265µm,0.2s						
GRI	**Girifalco**	**0.39**	**33**	⇓P	Pg	18 32 39.1	+0.1
GRI				S	Sg	18 32 45.1	+0.8
GRI				AML	AML		
	comp=E,418µm,0.6s						
GRI				AML	AML		
	comp=N,344µm,0.8s						
GRI				AML	AML		
	comp=E,291µm,0.3s						
GRI				AML	AML		
	comp=N,310µm,0.2s						
SICLA	**Scilla**	**0.41**	**235**	P	Pg	18 32 39.7	+0.3
SICLA				S	Sb	18 32 46.3	-0.7
SOI	**Samo**	**0.43**	**190**	⇑P	Pg	18 32 39.9	+0.2
SOI				S	Sg	18 32 46.2	+0.8
SOI				AML	AML		
	comp=E,171µm,1.2s						
SOI				AML	AML		
	comp=N,134µm,0.2s						
SOI				AML	AML		
	comp=N,134µm,0.1s						
SOI				AML	AML		
	comp=E,164µm,0.4s						
MSRU	**Castanea**	**0.55**	**245**	P	Pg	18 32 42.4	+0.3
MSRU				AML	AML		
	comp=E,306µm,0.3s						
MSRU				AML	AML		
	comp=N,178µm,0.4s						
MSRU				AML	AML		
	comp=E,307µm,0.3s						
MSRU				AML	AML		
	comp=N,149µm,0.2s						
CAR1	**CAROLEI**	**0.76**	**4**	P	Pg	18 32 46.1	+0.1
CAR1				S	Sg	18 32 56.3	+0.4
CELI	**Celico**	**0.95**	**17**	AML	AML		
	comp=E,55µm,0.3s						
CELI				AML	AML		
	comp=N,104µm,0.3s						

RSPR 16 18:32:35.5, 19°.38N×**65°.48W, h13**^{km}±27^{km}**, 4C-3D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUMP	**Col San Antoni**	**1.28**	**196**	⇑*e*P	Pn	18 32 55.5	-3.5
HUMP	**Col San Antoni**	**1.28**	**196**	*e*S	Sb	18 33 12.0	-3.9
HUMP	**Col San Antoni**	**1.28**	**196**	⇓*e*P	Pn	18 32 56.6	-2.4
HUMP	**Col San Antoni**	**1.28**	**196**	*e*S	Sb	18 33 11.8	-4.0
PDPR	**Patillas Dam,**	**1.45**	**201**	⇑*e*P	Pn	18 32 58.7	-2.7
PDPR	**Patillas Dam,**	**1.45**	**201**	*e*S	Sn	18 33 16.2	-4.0
PDPR	**Patillas Dam,**	**1.45**	**201**	⇑*e*P	Pn	18 32 58.7	-2.7
PDPR	**Patillas Dam,**	**1.45**	**201**	*e*S	Sn	18 33 16.2	-4.1
AOPR	**Arecibo Observ**	**1.58**	**230**	⇓*e*P	Pn	18 32 59.5	-3.8
AOPR	**Arecibo Observ**	**1.58**	**230**	*e*S	Sn	18 33 20.7	-3.0
AOPR	**Arecibo Observ**	**1.58**	**230**	⇑*e*P	Pn	18 32 59.5	-3.8
AOPR	**Arecibo Observ**	**1.58**	**230**	*e*S	Sn	18 33 20.0	-3.7
UUPR	**Utuado, UPR, P**	**1.62**	**227**	*e*S	Sn	18 33 22.6	-2.0
UUPR	**Utuado, UPR, P**	**1.62**	**227**	*e*S	Sn	18 33 21.0	-3.6
CELP	**Cerrillos**	**1.66**	**219**	⇓*e*P	Pn	18 33 01.4	-3.0

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*AFAD **16** 18:35:21.0, 36°.83N×36°.66E, h11^{km}±2^{km}, ML2.4*

*ISK **16** 18:35:22.0, 36°.80N×36°.78E, h11^{km}, ML2.5/19*

ISC 16 18:35:22.3±1.1**, 36°.88N**±0°.03×**36°.71E**±0°.02**, h9**^{km}±9^{km}**, n29, σ0^{s}91**/43**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAMA	**Osmaniye**	**0.30**	**353**	P	**Pg**	**18 35 28.4**	**0.0**
KAMA				S	**Sg**	**18 35 33.3**	**+0.9**
KUZU	**Kuzuini**	**0.31**	**110**	P	**Pg**	**18 35 27.6**	**-0.8**
KUZU				S	**Sg**	**18 35 32.9**	**+0.3**
GAZ	**Gaziantep**	**0.49**	**54**	Pg	**Pb**	**18 35 32.2**	**-1.0**
GAZ				Sg	**Sb**	**18 35 39.6**	**-1.0**
KHMN	**Narli-Kahraman**	**0.62**	**35**	Pg	**Pb**	**18 35 35.5**	**+0.1**
KMRS	**Kahramanmaras**	**0.64**	**14**	Pg	**Pb**	**18 35 36.4**	**+0.7**
KMRS				Sg	**Sn**	**18 35 46.7**	**-1.3**
TAHT	**Tahtakopru-Hat**	**0.66**	**220**	Pg	**Pg**	**18 35 35.2**	**+0.2**
TAHT				Sg	**Sb**	**18 35 44.4**	**-0.9**
CEYT	**Ceyhan**	**0.78**	**280**	Pg	**Pn**	**18 35 39.0**	**-0.5**
CEYT				Sg	**Sn**	**18 35 51.1**	**-0.3**
NZIP	**Nizip/Gaziante**	**0.79**	**78**	P	**Pb**	**18 35 37.5**	**-0.7**
NZIP				S	**Sb**	**18 35 48.9**	**-0.1**
NZIP				*i* IAML		18 35 51.0	
	comp=N,114nm,0.5s						
NZIP				*i* IAML		18 35 53.0	
	comp=E,117nm,0.2s						
GZT	**Gaziantep**	**0.83**	**55**	P	**Pb**	**18 35 39.2**	**+0.3**
GZT				S	**Sn**	**18 35 52.3**	**-0.5**
GZT				*i* IAML		18 35 53.0	
	comp=N,123nm,0.4s						
GZT				*i* IAML		18 35 53.0	
	comp=E,122nm,0.4s						
KOZT	**Kozan**	**0.93**	**310**	Pg	**Pn**	**18 35 41.8**	**+0.3**
AKCA	**Adyaman/G¶l**	**1.20**	**40**	P	**Pn**	**18 35 45.5**	**+0.1**
AKCA				S	**Sn**	**18 36 02.7**	**+0.9**
AKCA				*i* IAML		18 36 05.0	
	comp=E,112nm,0.5s						
AKCA				*i* IAML		18 36 06.0	
	comp=N,92nm,0.5s						
KARA	**Karaisali**	**1.38**	**286**	Pn	**Pg**	**18 35 48.6**	**-0.1**
SURC	**SANLIURFA_SURC**	**1.52**	**90**	P	**Pn**	**18 35 49.7**	**0.0**
SURC				S	**Sn**	**18 36 09.6**	**-0.2**
SURC				*i* IAML		18 36 13.0	
	comp=N,79nm,0.5s						
SURC				*i* IAML		18 36 13.0	
	comp=E,79nm,0.6s						
AZEY	**Adyaman-Merk**	**1.54**	**52**	P	**Pb**	**18 35 50.6**	**-0.4**
AZEY				S	**Sg**	**18 36 12.2**	**+0.6**
AZEY				*i* IAML		18 36 20.0	
	comp=N,28nm,0.4s						
AZEY				*i* IAML		18 36 20.0	
	comp=E,39nm,0.5s						
CMRD	**Camardi-Nigde**	**1.58**	**300**	Pn	**Pg**	**18 35 51.9**	**-0.7**
MERS	**Mersin**	**1.76**	**270**	Pn	**Pb**	**18 35 53.9**	**-0.8**
DARE	**Darende-Malaty**	**1.79**	**20**	Pn	**Pb**	**18 35 54.8**	**-0.6**
SANL	**SANLIURFA_Merk**	**1.84**	**80**	P	**Pg**	**18 35 60.0**	**+2.3**
SANL				S	**Sb**	**18 36 19.8**	**+0.4**
SANL				*i* IAML		18 36 31.0	
	comp=N,32nm,0.6s						
SANL				*i* IAML		18 36 31.0	
	comp=E,42nm,0.5s						
HANM	**anlurfa/Hi**	**1.87**	**67**	P	**Pb**	**18 35 55.9**	**-0.7**
HANM				S	**Sg**	**18 36 21.3**	**-1.0**
HANM				*i* IAML		18 36 30.0	
	comp=N,36nm,0.8s						
HANM				*i* IAML		18 36 34.0	
	comp=E,25nm,0.8s						
NARI	**Adyaman-Kaht**	**1.91**	**58**	P	**Pn**	**18 35 54.7**	**-0.5**
NARI				S	**Sg**	**18 36 23.4**	**-0.4**
NARI				*i* IAML		18 36 31.0	
	comp=N,19nm,0.6s						
BNN	**Bunyan**	**2.08**	**341**	Pn	**Pb**	**18 35 59.3**	**-1.0**
KIZK	**Mersin**	**2.10**	**260**	Pn	**Pn**	**18 35 58.9**	**+1.2**
KEBE	**Keben-Mersin**	**2.45**	**261**	Pn	**Pn**	**18 36 03.9**	**+1.4**
IKL	**Isikli**	**2.52**	**256**	Pn	**Pn**	**18 36 03.9**	**+0.5**
YESY	**Yesilyurt**	**2.53**	**292**	Pn	**Pn**	**18 36 05.3**	**+1.6**
AKKU	**Akkuyu-Mersin**	**2.65**	**255**	Pn	**Pn**	**18 36 06.7**	**+1.6**
TEVE	**Tevekalti-Mers**	**2.67**	**261**	Pn	**Pn**	**18 36 06.4**	**+0.9**
BERE	**Bereket-Mersin**	**2.86**	**260**	Pn	**Pn**	**18 36 09.4**	**+1.2**
TEKE	**Tekeli-Mersin**	**2.99**	**257**	Pn	**Pn**	**18 36 11.5**	**+1.6**

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*AUST **16** 18:37:36.2±0.2, 33°S±2°×13°9E±°, h2^{km}±1^{km}, mb3.6/6, ML3.0/9, Error ellipse: s-maj=5.0km s-min=2.6km az=57.7*

*IDC **16** 18:37:42.4±5.3, 32°.54S×139°.03E, h0^{km}, mbtmp3.2/3, ML3.3/3, Error ellipse: s-maj=57.7km s-min=18.3km az=16.0*

ISC 16 18:37:35.1±0.9**, 33°.31S**±0°.03×**138°.96E**±0°.03**, h12**^{km}±7^{km}**, n29, σ2^{s}32**/39**, 1D, Near coast of South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HTT	**Hallett**	**0.12**	**193**	P	**Pg**	**18 37 38.1**	**-0.1**
HTT				S	**Sg**	**18 37 39.1**	**-1.4**
NAPP	**Napperby**	**0.69**	**281**	⇓P	**Pg**	**18 37 48.7**	**+0.3**
PTPS	**Port Pirie**	**0.82**	**280**	P	**Pg**	**18 37 50.9**	**+0.1**
WHYH	**Whyalla**	**1.19**	**283**	P	**Pb**	**18 37 57.5**	**-0.1**
WHYH				S	**Sg**	**18 38 12.7**	**-0.7**
SDAN	**Sedan**	**1.23**	**165**	P	**Pb**	**18 37 58.3**	**0.0**
SDAN				S	**Sg**	**18 38 14.3**	**-0.5**
YAPP	**Yappala Statio**	**1.54**	**339**	P	**Pn**	**18 38 04.5**	**+2.1**
YAPP				S	**Sg**	**18 38 25.8**	**+1.1**
GHSS	**Government Hou**	**1.63**	**190**	P	**Pb**	**18 38 05.1**	**+0.1**
AUMBR	**Murray Bridge**	**1.84**	**171**	P	**Pb**	**18 38 08.9**	**+0.3**
AUMBR	**Murray Bridge**	**1.84**	**171**	S	**Sb**	**18 38 32.4**	**+0.9**
BBOO	**Buckleboo**	**2.48**	**281**	P	**Pn**	**18 38 17.3**	**+2.0**
BBOO	**Buckleboo**	**2.48**	**281**	S	**Sn**	**18 38 47.7**	**+2.1**
STKA	**Stephens Creek**	**2.65**	**58**	P	**Pb**	**18 38 21.6**	**-0.9**
STKA	**Stephens Creek**	**2.65**	**58**	S	**Sb**	**18 38 57.4**	**+2.4**
STKA	**Stephens Creek**	**2.65**	**58**	Pn	**Pn**	**18 38 21.2**	**+3.5**
	3.4nm,0.3s,baz=238,slow=13,SNR=73						
STKA				Sn	**Sn**	**18 38 47.5**	**-2.2**
	8.9nm,0.3s,baz=233,slow=16,SNR=5.4						
STKA				Lg	Lg	18 38 55.1	
	14nm,0.3s,baz=256,slow=19,SNR=6.2 11nm,0.3s						
LCRK	**Leigh Creek**	**2.93**	**347**	P	**Pn**	**18 38 24.5**	**+3.0**
LCRK				S	**Sn**	**18 38 59.7**	**+3.2**
KELC	**Kelly Hill Cav**	**3.15**	**212**	P	**Pn**	**18 38 27.1**	**+2.6**
ARPS	**Mount Arapiles**	**4.18**	**146**	P	**Pn**	**18 38 39.6**	**+0.9**
ARPS	**Mount Arapiles**	**4.18**	**146**	S	**Sn**	**18 39 26.4**	**-1.0**
MGBR	**Mount Gambier**	**4.60**	**164**	P	**Pn**	**18 38 48.5**	**+4.1**
MULG	**Mulgathing**	**5.15**	**305**	P	**Pn**	**18 38 53.3**	**+1.3**
	comp=Z,5.9nm,1.1s,comp=Z,0.1nm						
MULG				S	**Sn**	**18 39 50.5**	**-0.8**
INKA	**Innaminka**	**5.77**	**16**	P	**Pn**	**18 39 03.7**	**+3.2**
	comp=Z,5.4nm,1.0s,comp=Z,0.0nm						
INKA				S	**Sn**	**18 40 08.7**	**+2.1**
CMSA	**Cobar Meteorol**	**5.96**	**75**	P	**Pn**	**18 39 05.5**	**+2.3**
	comp=Z,6.3nm,1.3s,comp=Z,0.0nm						
CMSA	**Cobar Meteorol**	**5.96**	**75**	S	**Sn**	**18 40 11.8**	**+0.3**
TOO	**Toolangi**	**6.82**	**130**	P	**Pn**	**18 39 16.5**	**+1.5**
	comp=Z,2.9nm,1.5s,comp=Z,0.0nm						
QLP	**Quilpie**	**8.12**	**36**	P	**Pn**	**18 39 35.6**	**+2.8**
	comp=Z,14nm,2.8s,comp=Z,0.1nm						
CAN	**Canberra**	**8.55**	**106**	P	**Pn**	**18 39 38.9**	**+0.2**
FORT	**Forrest**	**9.59**	**282**	P	**Pn**	**18 39 53.4**	**+0.5**
	comp=Z,21nm,1.2s,comp=Z,0.1nm						
ASAR	**Alice Springs**	**10.59**	**334**	Pn	**Pn**	**18 40 06.6**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=174,slow=8.4,SNR=29						
ASAR				Sn	**Sn**	**18 42 00.1**	**-5.1**
	comp=Z,0.5nm,0.3s,baz=155,slow=21,SNR=9.1						
ASAR				Lg	Lg	18 42 59.4	
	baz=147,slow=24 comp=Z,0.3nm,0.4s						
WRA	**Warramunga Arr**	**13.94**	**342**	Pn	**Pn**	**18 40 50.5**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=164,slow=11,SNR=5.5						
WRA				Sn	**Sn**	**18 43 21.1**	**-6.1**
	comp=Z,0.2nm,0.3s,baz=162,slow=25,SNR=4.4 comp=Z,0.2nm,0.4s						

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*NEIC **16** 18:52:32.7±1.7, 19°.50N±0°.06×65°.43W±0°.08, h10^{km}±2^{km}, ML2.5/20, Md3.2/1(RSPR), Error ellipse: s-maj=14.5km s-min=9.2km az=58.0*

*RSPR **16** 18:52:36.5, 19°.41N×65°.58W, h98^{km}±18^{km}*

ISC 16 18:52:33.3±2.8**, 19°.5N**±0°.1×**65°.4W**±0°.1**, h16**^{km}**, n29, σ0^{s}55**/30**, 3C-5D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GCPR	**Guaynabo City**	**1.32**	**207**		**Sg**	**18 53 16.3**	**+0.1**
GCPR	**Guaynabo City**	**1.32**	**207**		**Pn**	**18 52 56.8**	**-0.4**
GCPR	**Guaynabo City**	**1.32**	**207**	⇓*e*P	**Pb**	**18 52 58.1**	**+0.2**
GCPR	**Guaynabo City**	**1.32**	**207**	*e*S	**Sg**	**18 53 16.3**	**+0.1**
HUMP	**Col San Antoni**	**1.40**	**196**		**Pb**	**18 52 59.1**	**0.0**
HUMP					**Sb**	**18 53 16.9**	**+0.3**
HUMP	**Col San Antoni**	**1.40**	**196**	⇑*e*P	**Pb**	**18 52 59.1**	**0.0**
HUMP	**Col San Antoni**	**1.40**	**196**	*e*S	**Sb**	**18 53 16.9**	**+0.3**
SJG	**San Juan**	**1.53**	**206**		**Pn**	**18 53 00.3**	**+0.3**
SJG				IAML		18 53 26.8	
	54nm,0.8s						
SJG				IAML		18 53 35.7	
	53nm,1.3s						
PDPR	**Patillas Dam,**	**1.56**	**201**		**Pn**	**18 53 00.6**	**+0.1**
PDPR				IAML		18 53 25.1	
	comp=E,39nm,0.9s						
PDPR	**Patillas Dam,**	**1.56**	**201**	⇑*e*P	**Pn**	**18 53 01.1**	**+0.6**
PDPR	**Patillas Dam,**	**1.56**	**201**	*e*S	**Sb**	**18 53 21.5**	**+0.1**
IGPR	**InterUniversit**	**1.64**	**203**		**Sn**	**18 53 21.6**	**-0.7**
IGPR	**InterUniversit**	**1.64**	**203**		**Pb**	**18 53 02.7**	**-0.5**
IGPR				IAML		18 53 28.5	
	comp=E,61nm,0.3s						
IGPR	**InterUniversit**	**1.64**	**203**	⇓*e*P	**Pb**	**18 53 03.4**	**+0.2**
IGPR	**InterUniversit**	**1.64**	**203**	*e*S	**Sn**	**18 53 21.6**	**-0.7**
AOPR	**Arecibo Observ**	**1.68**	**228**		**Pn**	**18 53 02.9**	**+0.7**
AOPR					**Sn**	**18 53 23.9**	**+0.4**
AOPR	**Arecibo Observ**	**1.68**	**228**	⇓*e*P	**Pn**	**18 53 02.9**	**+0.7**
AOPR	**Arecibo Observ**	**1.68**	**228**	*e*S	**Sn**	**18 53 23.9**	**+0.4**
UUPR	**Utuado, UPR, P**	**1.73**	**225**		**Pn**	**18 53 03.1**	**+0.4**
UUPR	**Utuado, UPR, P**	**1.73**	**225**	⇑*e*P	**Pn**	**18 53 03.1**	**+0.4**
CELP	**Cerrillos**	**1.77**	**218**		**Pb**	**18 53 04.5**	**-1.0**
CELP					**Sn**	**18 53 25.1**	**-0.6**
CELP	**Cerrillos**	**1.77**	**218**	IAML		18 53 38.6	
	comp=E,39nm,1.3s						
CELP				IAML		18 53 43.5	

	comp=N,37nm,1.1s						
CELP	Cerrillos	1.77	218⇓	*e*P	Pb	18 53 04.5	-1.0
CELP	Cerrillos	1.77	218	*e*S	Sn	18 53 25.1	-0.6
OBIP	Obispado Ponce	1.81	218	Pn	Pn	18 53 03.9	-0.1
OBIP				IAML		18 53 33.2	
	comp=E,38nm,1.0s						
OBIP				IAML		18 53 56.2	
	comp=N,43nm,1.8s						
CRPR	Cabo Rojo, PR	2.16	227		Pn	18 53 09.7	+0.9
CRPR	Cabo Rojo, PR	2.16	227	IAML		18 53 47.8	
	comp=N,38nm,1.9s						
CRPR				IAML		18 53 53.0	
	comp=E,31nm,2.4s						
CRPR	Cabo Rojo, PR	2.16	227⇓	*e*P	Pn	18 53 09.7	+0.9
SDDR	Presa de Saban	5.55	266	Pn	Pn	18 53 55.3	0.0

IDC ***16*** *19:01:38.4±1.4, 34°.07S×178°.27W, h0^{km}, mb3.8/4, mbtmp3.7/5, ML3.4/1, Error ellipse: s-maj=38.4km s-min=30.6km az=131.0*

ISC 16 19:01:43.8±1.1**, 34°.1S**±0°.2×**178°.3W**±0°.2**, h37^{km}, n7, σ0^{s}.78**/8**, mb3.7**/4**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	5.56	220	Pn	Pn	19 03 02.7	-1.2
	1.0nm,0.3s,baz=350,slow=5.1,SNR=15						
URZ				Sn	Sn	19 04 07.2	+0.7
	4.9nm,0.3s,baz=49,slow=20,SNR=14						
	9.5nm,0.8s						
ASAR	Alice Springs	42.78	271	P	P	19 09 38.5	+0.5
	0.5nm,0.6s,baz=114,slow=7.5,SNR=12						
	0.5nm,0.6s						
WRA	Warramunga Arr	44.10	276	P	P	19 09 48.9	+0.3
	0.4nm,0.5s,baz=116,slow=8.0,SNR=5.6						
	0.4nm,0.5s						
QSPA	South Pole Qui	56.02	180	P	P	19 11 19.3	+0.8
	1.1nm,0.9s,baz=348,slow=1.9,SNR=1.9						
	1.1nm,0.9s						
PDAR	Pinedale Array	98.98	44	P	P	19 15 20.2	-0.4
	0.2nm,0.4s,baz=217,slow=5.2,SNR=1.5						
	0.2nm,0.4s						
FINES	FINESS Array B	148.49	338	PKPbc	PKPbc	19 21 25.6	-0.1
	0.3nm,0.4s,baz=46,slow=6.0,SNR=2.4						
MMAI	Mount Meron Ar	151.95	277	PKPbc	PKPbc	19 21 35.0	0.0
	0.2nm,0.3s,baz=95,slow=8.7,SNR=1.9						

IDC ***16*** *19:06:37.7±0.8, 30°.99S×177°.79W, h0^{km}, mb4.1/6, mbtmp4.1/6, MS3.3/2, Error ellipse: s-maj=30.0km s-min=27.5km az=67.0*

ISC 16 19:06:44.6±0.9**, 31°.2S**±0°.1×**178°.0W**±0°.2**, h46^{km}, n25, σ1^{s}.15**/17**, mb4.1**/6**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.11	208	Pn	Pn	19 08 34.1	-5.6
	0.5nm,0.3s,baz=29,slow=21,SNR=1.7						
URZ				Sn	Sn	19 10 08.1	-1.9
	2.2nm,0.3s,baz=54,slow=19,SNR=12						
RPZ	Rata Peaks	15.20	212	LR	LR	19 15 30.9	
	comp=Z,100nm,19.0s,baz=357,slow=34						
DZM	Mont Dzumac	16.60	299	LR	LR	19 15 02.6	
	comp=Z,96nm,19.1s,baz=162,slow=30						
STKA	Stephens Creek	34.31	258	P	P	19 13 27.9	+1.1
	1.0nm,0.4s,baz=115,slow=16,SNR=4.4						
	1.0nm,0.4s						
ASAR	Alice Springs	43.07	268	P	P	19 14 41.1	+0.8
	3.1nm,0.7s,baz=106,slow=7.3,SNR=34						
	3.1nm,0.7s						
WRA	Warramunga Arr	44.13	273	P	P	19 14 49.4	+0.5
	2.5nm,0.5s,baz=113,slow=7.8,SNR=26						
	2.5nm,0.5s						
QSPA	South Pole Qui	58.91	180	P	P	19 16 40.2	+1.4
	1.0nm,0.9s,baz=45,slow=2.9,SNR=7.9						
	1.0nm,0.9s						
SNAA	Sanae	77.35	178	P	P	19 18 35.0	+0.9
	1.4nm,1.0s,baz=180,slow=13,SNR=7.9						
	1.4nm,1.0s						
H03S2	Juan Fernandez	80.02	123	T	T	20 48 20.7	
	baz=242,slow=74,SNR=22						
H03S1	Juan Fernandez	80.03	123	T	T	20 48 13.2	
	baz=242,slow=74,SNR=58						
H03S3	Juan Fernandez	80.04	123	T	T	20 48 12.5	
	baz=242,slow=74,SNR=54						
H03N3	Juan Fernandez	80.22	123	T	T	20 48 30.1	
	baz=248,slow=72,SNR=5.5						
H03N2	Juan Fernandez	80.22	123	T	T	20 48 25.6	
	baz=248,slow=72,SNR=5.5						
H03N1	Juan Fernandez	80.23	123	T	T	20 48 22.6	
	baz=248,slow=72,SNR=5.9						
PETK	Petropavlovsk-	86.59	346	P	P	19 19 22.4	-0.2
	3.5nm,1.0s,baz=120,slow=8.9,SNR=1.3						
	3.5nm,1.0s						
MKAR	Makanchi Array	118.29	310	PKP	PKPdf	19 25 25.0	-1.6
	0.3nm,0.7s,baz=128,slow=2.4,SNR=3.0						
KURBB	Kurchatov Arra	121.64	313	PKP	PKPdf	19 25 31.4	-1.5
	0.5nm,0.7s,baz=120,slow=1.7,SNR=6.0						
BVAR	Borovoye Array	126.98	315	PKP	PKiKP	19 25 43.4	-0.1
	2.6nm,0.8s,baz=68,slow=3.1,SNR=2.8						
FINES	FINESS Array B	145.90	340	PKPbc	PKPdf	19 26 17.5	-0.1
	3.2nm,0.4s,baz=53,slow=4.0,SNR=53						
NB2	NORSAR Subarra	149.54	351	PKP	PKPbc	19 26 28.0	-0.3
	comp=Z,0.6nm,0.7s,baz=17,slow=2.6						
NOA	NORSAR Array B	149.54	351	PKPbc	PKPbc	19 26 28.1	-0.1
	comp=Z,0.8nm,0.7s,baz=15,slow=4.2,SNR=4.9						
HFS	Hagfors	150.03	348	PKPbc	PKPbc	19 26 28.7	-0.7
	comp=Z,0.5nm,0.4s,baz=35,slow=3.5,SNR=1.6						
MMAI	Mount Meron Ar	151.71	283	PKPbc	PKiKP	19 26 35.5	+0.7
	comp=Z,1.4nm,0.4s,baz=88,slow=5.9,SNR=12						
AKASG	Malin Array Be	151.93	322	PKPbc	PKPbc	19 26 33.9	-0.3
	comp=Z,1.5nm,0.6s,baz=56,slow=2.6,SNR=6.5						
BRTR	Keskin Array B	152.97	297	PKPbc	PKPbc	19 26 35.0	-2.0
	comp=Z,0.6nm,0.8s,baz=145,slow=5.3,SNR=3.5						

GCG ***16*** *19:08:55.1±1.0, 14°.33N×91°.75W, h64^{km}±9^{km}, MD4.0, ML3.8*

MEX ***16*** *19:08:55.6±0.8, 14°.12N×92°.08W, h12^{km}±62^{km}, MD4.0*

CATAC ***16*** *19:08:56.0±0.8, 14°N±4°×9°2W±°, h16^{km}±3^{km}, M3.4/7, MLv3.4/7, Error ellipse: s-maj=10.2km s-min=5.2km az=41.1, confirmed*

ISC 16 19:08:47.5±1.8**, 13°.83N**±0°.07×**92°.04W**±0°.06**, h26^{km}**±14^{km}**, n33, σ2^{s}.29**/51**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTAL	Retalhuleu	0.76	26	*e*P	Pn	19 09 05.0	+2.3
RTAL				*i* S	Sn	19 09 12.3	-1.0
RTAL	Retalhuleu	0.76	26	P	Pn	19 09 05.0	+2.3
RTAL				S	Sn	19 09 13.9	+0.6
STG0	El Palmar, Qui	0.90	49	*e*P	Pn	19 09 07.1	+2.5
STG0				*e*S	Sn	19 09 16.4	-0.5
STG0				IAML		19 09 17.2	
	comp=E,6µm,0.4s						
STG8	El Palmar, Qui	0.91	47	*e*P	Pn	19 09 07.4	+2.6
STG8				*e*S	Sn	19 09 17.3	+0.1
STG8				IAML		19 09 18.0	
	comp=N,8µm,0.2s						
THIG		1.09	348	*e*P	Pb	19 09 09.2	+1.5
THIG				*e*S	Sn	19 09 21.1	-0.3
SOKI	Kika Raxquin	1.16	32	*e*P	Pb	19 09 09.8	+0.6
SOKI				*e*S	Sn	19 09 21.7	-1.9
PATR	El Naranjo	1.29	352	*e*P	Pb	19 09 11.7	+0.4
PATR				*e*S	Sn	19 09 24.3	-2.4
ESSG	Sabana Grande	1.29	65	*e*P	Pb	19 09 12.2	+0.9
ESSG				*e*S	Sn	19 09 25.6	-0.9
ESSG				IAML		19 09 29.7	
	comp=N,537nm,0.2s						
PAVE	Pavencul	1.36	354	*e*P	Pb	19 09 12.8	+0.3
PAVE				*e*S	Sn	19 09 25.9	-2.5
FG8	Yepocapa, Chim	1.49	73	*e*P	Pn	19 09 11.2	-1.6
FG8				*e*S	Sn	19 09 24.2	-7.3
FG16	Alotenango, Sa	1.54	73	*e*P	Pn	19 09 12.5	-1.1
FG16				*e*S	Sn	19 09 26.4	-6.5
FG16				IAML		19 09 30.6	
	comp=E,9µm,0.2s						
HUEH	Huehuetenango	1.56	19	*e*P	Pb	19 09 16.9	+0.9
HUEH				*e*S	Sn	19 09 32.8	-0.7
FAME	Alcaldia de Sa	1.96	89	P	Sn	19 09 44.0	+1.0
FAME				S	Sb	19 09 47.8	+1.0
PCIG		2.18	329	*e*P	Pb	19 09 25.4	-0.9
PCIG				*e*S	Sn	19 09 47.0	-1.4
NUBE	Las Nubes	2.19	88	*e*P	Pb	19 09 27.5	+0.8
NUBE				*e*S	Sn	19 09 49.9	+1.0
NUBE	Las Nubes	2.19	88	P	Sn	19 09 50.0	+1.2
NUBE				S	Sb	19 09 52.3	-1.2
SLOZ	Alcaldia de Sa	2.20	85	S	Sb	19 09 56.6	+3.1
SLOZ	Alcaldia de Sa	2.20	85	P	Sn	19 09 50.0	+1.2
LOAL	Lomas de Alarc	2.20	85	P	Pb	19 09 27.2	+0.6
CEVE	Cerro Verde	2.34	90	S	Sb	19 09 55.7	-2.2
CEVE	Cerro Verde	2.34	90	P	Pb	19 09 29.6	+0.3
CCIG	Comitan	2.44	358	*e*P	Pn	19 09 27.6	+1.8
CCIG				*e*S	Sn	19 09 55.5	+0.6
CCIG	Comitan	2.44	358	P	Pb	19 09 33.5	+2.7
CCIG	Comitan	2.44	358	S	Sb	19 09 58.8	-1.7
JAYA	Jayaque - finc	2.52	94	*e*P	Pb	19 09 31.7	-0.5
JAYA				*e*S	Sn	19 09 58.8	+1.8
JAYA	Jayaque - finc	2.52	94	S	Sn	19 09 59.3	+2.3
JAYA	Jayaque - finc	2.52	94	P	Pb	19 09 32.3	0.0
PMON	Piamonte	2.65	92	S	Sb	19 10 04.6	-1.9
MTO3	Montecristo	2.66	77	P	Pb	19 09 34.9	+0.3
MTO3	Montecristo	2.66	77	S	Sb	19 10 03.5	-3.3
TGIG		3.11	340	*e*P	Pn	19 09 28.4	-6.6
TGIG				*e*S	Sn	19 10 08.5	-2.9
TECO	Alcaldia de Te	3.18	95	S	Sb	19 10 17.7	-4.0
RANC	El Ranchito	3.67	96	S	Sn	19 10 28.5	+3.3

IDC 16 19:14:40.6±2.0**, 6°.28S**×**145°.20E, h0^{km}, mb3.5**/2**, mbtmp3.5**/4**, ML3.6**/1**, Error ellipse: s-maj=49.2km s-min=27.0km az=70.0, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.66	148	Pn	Pn	19 15 37.2	-1.4
	5.1nm,0.3s,baz=331,slow=10,SNR=9.8						
PMG				Sn	Sn	19 16 21.9	-0.6
	6.7nm,0.3s,baz=299,slow=10,SNR=11						
WRA	Warramunga Arr	17.20	217	P	Pn	19 18 42.9	+0.3
	0.2nm,0.3s,baz=39,slow=11,SNR=6.7						
	0.9nm,0.7s						
ASAR	Alice Springs	20.42	211	P	P	19 19 20.1	+0.4
	0.6nm,0.3s,baz=26,slow=12,SNR=6.2						
	0.6nm,0.3s						
SONM	Songino Array	63.79	332	P	P	19 25 15.1	+0.3
	0.3nm,0.5s,baz=134,slow=6.2,SNR=2.2						
	0.3nm,0.5s						

IDC ***16*** *19:22:29.4±1.2, 2°.38N×126°.99E, h0^{km}, mb3.5/6, mbtmp3.6/7, ML3.9/1, Error ellipse: s-maj=62.1km s-min=18.6km az=66.0*

ISC 16 19:22:37.0±1.2**, 2°.5N**±0°.2×**127°.3E**±0°.2**, h64^{km}, n7, σ0^{s}.83**/7**, mb3.5**/5**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	14.27	110	Pn	Pn	19 25 55.7	-0.2
	0.5nm,0.3s,baz=314,slow=7.7,SNR=1.4						
	1.3nm,0.5s						
FITZ	Fitzroy Crossi	20.48	185	P	P	19 27 08.9	-0.9
	2.2nm,0.9s,baz=7.5,slow=11,SNR=6.0						
	2.2nm,0.9s						
WRA	Warramunga Arr	23.30	163	P	P	19 27 38.8	-0.7
	1.2nm,0.6s,baz=339,slow=11,SNR=9.1						
	1.2nm,0.6s						
ASAR	Alice Springs	26.74	166	P	P	19 28 11.1	+0.3
	0.2nm,0.6s,baz=342,slow=9.0,SNR=8.9						
	0.2nm,0.6s						
STKA	Stephens Creek	36.73	159	P	P	19 29 39.1	+0.9
	1.3nm,0.6s,baz=319,slow=10.0,SNR=5.0						
	1.3nm,0.6s						
MKAR	Makanchi Array	58.93	325	P	P	19 32 29.2	-0.5
	0.1nm,0.3s,baz=116,slow=8.3,SNR=6.3						
	0.1nm,0.3s						
KURBB	Kurchatov Arra	63.13	328	P	P	19 32 58.4	+0.4
	0.6nm,0.8s,baz=130,slow=6.2,SNR=5.3						
	0.6nm,0.8s						

IDC ***16*** *19:25:24.3±0.6, 31°.08S×177°.72W, h0^{km}, mb4.3/9, mbtmp4.2/10, ML3.2/1, MS3.9/17, Error ellipse: s-maj=25.6km s-min=21.4km az=168.0*

NEIC ***16*** *19:25:27.0±1.3, 31°.0S±0°.1×177°.7W±0°.2, h10^{km}±1^{km}, mb4.8/13, Error ellipse: s-maj=30.3km s-min=18.5km az=82.0*

ISC 16 19:25:29.2±0.6**, 31°.21S**±0°.05×**177°.8W**±0°.1**, h35^{km}, n90, σ2^{s}.02**/96**, mb4.6**/17**, MS4.0**/15**, 4C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.94	357	P	Pn	19 25 57.0	-2.6
GLKZ				S	Sn	19 26 21.0	-1.8
RAO	Raoul Island	1.95	357		Pn	19 25 58.1	-1.7
RIZ	Raoul Island	1.96	356	P	Pn	19 25 57.4	-2.5
RIZ				S	Sn	19 26 20.9	-2.3
MXZ	Matakaoa Point	7.12	206	P	Pn	19 27 06.9	-3.9
MXZ				S	Sn	19 28 30.8	+0.4
WMGZ	Waiomatatini S	7.30	204	P	Pn	19 27 10.8	-2.6
WMGZ				S	Sn	19 28 36.0	+1.0
PKGZ	Pakihiroa	7.47	206	P	Pn	19 27 13.8	-1.8
PKGZ				S	Sn	19 28 38.9	-0.2
HAZ	Te Kaha	7.49	208	P	Pn	19 27 13.7	-2.2
HAZ				S	Sn	19 28 41.0	+1.5
PUZ	Puketiti	7.58	204	P	Pn	19 27 14.2	-3.1
PUZ				S	Sn	19 28 41.4	-0.6
RUGZ	Raukumara Rang	7.71	208	P	Pn	19 27 16.7	-2.3
RUGZ				S	Sn	19 28 46.1	+0.9
TWGZ	Tauwhareparae	7.78	205	P	Pn	19 27 18.0	-1.9
CNGZ	Carnagh Statio	7.97	203	P	Pn	19 27 19.4	-3.2
CNGZ				S	Sn	19 28 49.3	-2.2
WCZ	Waipu Caves	8.08	232	P	Pn	19 27 29.5	+5.4
MWZ	Matawai	8.09	207	P	Pn	19 27 21.1	-3.1
MWZ				S	Sn	19 28 54.0	-0.4
URZ	Urewera	8.19	209	Pn	Pn	19 27 21.0	-4.6
	2.7nm,0.3s,baz=9.5,slow=12,SNR=11						
URZ				Sn	Sn	19 28 55.6	-1.3
	4.6nm,0.3s,baz=90,slow=20,SNR=3.5						
URZ	Urewera	8.19	209	P	Pn	19 27 22.5	-3.1
URZ				S	Sn	19 28 55.4	-1.4
OUZ	Omahuta	8.25	239	P	Pn	19 27 33.9	+7.5
RAGZ	Rawiri	8.27	207	S	Sn	19 28 58.0	-1.0
RIGZ	Rimuhau	8.32	205	P	Pn	19 27 24.3	-3.1
RIGZ				S	Sn	19 29 00.8	+0.6
HBAZ	Herne Bay Bore	8.38	226	P	Pn	19 27 26.8	-1.3
PRGZ	Paritu Road	8.48	204	P	Pn	19 27 25.0	-4.5
PRGZ				S	Sn	19 29 02.6	-1.3
MUGZ	Murupara	8.52	210	P	Pn	19 27 28.0	-2.1
MUGZ				S	Sn	19 29 02.6	-2.4
RTZ	Ruatahuna	8.55	209	Pn	Pn	19 27 27.4	-3.2
RTZ	Ruatahuna	8.55	209	P	Pn	19 27 30.5	0.0
RTZ				S	Sn	19 29 04.0	-1.7
SNGZ	Shannon Statio	8.55	207	P	Pn	19 27 29.1	-1.3
SNGZ				S	Sn	19 29 05.0	-0.7
KNZ	Kokohu	8.64	204	P	Pn	19 27 26.5	-5.1
KNZ				S	Sn	19 29 04.3	-3.5
MHGZ	Mahia Peninsul	8.68	203	P	Pn	19 27 27.0	-5.2
MHGZ				S	Sn	19 29 07.3	-1.5
BKZ	Black Stump Fm	9.22	209	Pn	Pn	19 27 35.9	-3.8
BKZ	Black Stump Fm	9.22	209	P	Pn	19 27 36.3	-3.3
BKZ				S	Sn	19 29 19.5	-2.6
NGZ	Ngauruhoe	9.61	212	S	Sn	19 29 31.2	-0.9
BFZ	Birch Farm	10.62	205	Pn	Pn	19 27 55.8	-3.0
GVZ	Greta Valley S	13.83	209	Pn	Pn	19 28 42.0	-0.7
MSVF	Nonsavu	13.93	343	LR	LR	19 33 17.4	
	comp=Z,595nm,18.3s,baz=178,slow=34						
LTZ	Lake Taylor	14.01	212	Pn	Pn	19 28 43.6	-1.5
RPZ	Rata Peaks	15.29	212	Pn	Pn	19 28 57.4	-5.0
	0.9nm,0.3s,baz=16,slow=18,SNR=1.7						
FOZ	Fox Glacier	15.74	215	Pn	Pn	19 29 06.1	-2.1
FOZ				IAmb	IAmb	19 29 13.6	
	comp=Z,48nm,1.1s						
DZM	Mont Dzumac	16.76	299	Pn	Pn	19 29 19.7	-1.8
	comp=Z,0.1nm,0.3s,baz=37,slow=20,SNR=1.9						
DZM				LR	LR	19 34 50.5	
	comp=Z,1µm,18.3s,baz=160,slow=34						
	comp=Z,6.0nm,1.0s						
CAN	Canberra	28.00	253	P	P	19 31 17.9	+1.0
PPT	Papeete	28.96	69	LR	LR	19 42 26.1	
	comp=Z,83nm,19.2s,baz=252,slow=35						
CTAO	Charters Tower	34.11	280		P	19 32 13.4	+2.6
CTAO				IAmb	IAmb	19 32 15.8	
	comp=Z,13nm,0.7s						
STKA	Stephens Creek	34.48	258		P	19 32 16.1	+2.2
STKA	Stephens Creek	34.48	258	P	P	19 32 13.2	-0.6
	comp=Z,2.9nm,0.7s,baz=99,slow=11,SNR=6.9						
STKA				LR	LR	19 45 33.2	
	comp=Z,236nm,18.2s,baz=45,slow=35						
	comp=Z,2.9nm,0.7s						
BBOO	Buckleboo	38.93	255	P	P	19 32 52.1	+0.3
BBOO				IAmb	IAmb	19 34 12.3	
	comp=Z,27nm,1.3s						
PMG	Port Moresby	39.12	296	LR	LR	19 45 49.4	
	comp=Z,114nm,21.8s,baz=116,slow=31						
AS31	Alice Springs	43.25	268	P	P	19 33 28.1	+0.6
ASAR	Alice Springs	43.25	268	P	P	19 33 27.9	+0.4
ASAR	Alice Springs	43.25	268	P	P	19 33 28.8	+1.3
	comp=Z,6.2nm,0.6s,baz=104,slow=7.1,SNR=107						
ASAR				PcP	PcP	19 35 16.9	+0.6
	comp=Z,1.8nm,0.9s,baz=116,slow=4.3,SNR=2.5						
ASAR				ScP	ScP	19 39 09.2	+4.3
	comp=Z,1.9nm,0.9s,baz=133,slow=4.8,SNR=8.2						
ASAR				LR	LR	19 51 09.7	
	comp=Z,262nm,18.0s,baz=107,slow=36						
	comp=Z,6.2nm,0.6s						
WR8	Warramunga Arr	44.17	273		P	19 33 36.1	+1.3
WR8				IAmb	IAmb	19 33 37.1	
	comp=Z,7.9nm,0.8s						
WRA	Warramunga Arr	44.31	273		P	19 33 36.5	+0.5
WRA	Warramunga Arr	44.31	273	P	P	19 33 36.7	+0.7
	comp=Z,6.3nm,0.4s,baz=113,slow=7.8,SNR=93						
WRA				PcP	PcP	19 35 20.7	+0.8
	comp=Z,1.5nm,1.0s,baz=109,slow=3.6,SNR=2.2						
WRA				ScP	ScP	19 39 13.9	+4.6
	comp=Z,2.5nm,1.2s,baz=103,slow=3.9,SNR=5.7						
WRA				LR	LR	19 51 50.1	
	comp=Z,291nm,18.1s,baz=6.5,slow=36						
	comp=Z,6.3nm,0.4s						
WB0	Warramunga Arr	44.34	273		P	19 33 36.3	+0.1
WB0				IAmb	IAmb	19 33 48.5	
	comp=Z,17nm,1.1s						
KNRA	Kununurra	50.95	275	P	P	19 34 28.3	+0.8
KNRA				IAmb	IAmb	19 34 50.4	
	comp=Z,23nm,1.5s						
FITZ	Fitzroy Crossi	52.54	270	P	P	19 34 39.9	+0.5
FITZ	Fitzroy Crossi	52.54	270	P	P	19 34 40.5	+1.1
	comp=Z,3.3nm,0.6s,baz=160,slow=5.7,SNR=17						
FITZ				LR	LR	19 56 34.1	
	comp=Z,220nm,18.7s,baz=128,slow=36						
	comp=Z,3.3nm,0.6s						
NWAO	Narrogin (SRO)	54.29	250	LR	LR	19 56 02.9	
	comp=Z,132nm,19.4s,baz=68,slow=34						
CASY	Casey	54.52	208	P	P	19 34 54.3	+1.2
CASY				IAmb	IAmb	19 35 07.3	
	comp=Z,16nm,0.9s						
GUMO	Guam	57.18	315	LR	LR	19 57 17.3	
	comp=Z,57nm,21.1s,baz=138,slow=34						
QSPA	South Pole Qui	58.91	180	P	P	19 35 27.4	+2.8
QSPA	South Pole Qui	58.91	180	P	P	19 35 26.1	+1.5
	comp=Z,4.2nm,0.9s,baz=353,slow=1.7,SNR=8.3						
	comp=Z,4.2nm,0.9s						
TROLL	Troll, Antarti	77.07	180	⇑P	P	19 37 18.9	+0.4
	comp=Z,288nm,0.9s						
SNAA	Sanae	77.35	178	⇑P	P	19 37 21.0	+1.1
	comp=Z,41nm,0.7s						
SNAA	Sanae	77.35	178	P	P	19 37 21.0	+1.1
	comp=Z,1.3nm,0.8s,baz=204,slow=12,SNR=8.3						
	comp=Z,1.3nm,0.8s						
VNA3	Neumayer Olymp	77.49	176	⇑P	P	19 37 21.4	+0.7
	comp=Z,9.0nm,0.6s						
VNA2	Neumayer--Watz	77.93	177	⇑P	P	19 37 24.4	+1.2
	comp=Z,3.4nm,0.5s,baz=5.1,slow=10						
H03S2	Juan Fernandez	79.87	123	T	T	21 06 58.8	
	baz=243,slow=74,SNR=5.8						
H03S1	Juan Fernandez	79.88	123	T	T	21 06 58.8	
	baz=243,slow=74,SNR=5.8						
H03S3	Juan Fernandez	79.89	123	T	T	21 06 58.8	
	baz=243,slow=74,SNR=5.9						
LPIG	La Paz	84.81	58	LR	LR	20 11 26.4	
	comp=Z,108nm,18.1s,baz=208,slow=33						
PFO	Pinyon Flats O	86.62	47	LR	LR	20 11 27.4	
	comp=Z,112nm,18.1s,baz=230,slow=32						
NVAR	Mina Array Bea	88.70	43	P	P	19 38 20.4	+1.2
	comp=Z,0.5nm,0.6s,baz=193,slow=9.1,SNR=3.1						
	comp=Z,0.5nm,0.6s						
TXAR	Lajitas Array	92.67	57	P	P	19 38 37.0	-0.7
	comp=Z,0.3nm,0.9s,baz=255,slow=2.3,SNR=2.3						
	comp=Z,0.3nm,0.9s						
NNA	Nana	93.03	106	LR	LR	20 10 49.6	
	comp=Z,44nm,21.9s,baz=206,slow=29						
ANMO	Albuquerque	93.94	51	LR	LR	20 17 12.6	
	comp=Z,98nm,18.2s,baz=334,slow=33						
ATAH	Atahualpa	94.31	101	LR	LR	20 15 35.6	
	comp=Z,25nm,18.3s,baz=248,slow=32						
NEW	Newport	95.92	36	LR	LR	20 15 25.5	
	comp=Z,90nm,20.1s,baz=202,slow=31						
ILAR	Eielson Array	98.67	13	P	P	19 39 02.3	-1.7
	comp=Z,0.3nm,0.8s,baz=193,slow=3.6,SNR=2.4						
	comp=Z,0.3nm,0.8s						
CPUP	Villa Florida	99.34	128	LR	LR	20 15 54.5	
	comp=Z,12nm,20.2s,baz=81,slow=30						
MKAR	Makanchi Array	118.43	310	PKP	PKiKP	19 44 12.8	-0.1
	comp=Z,0.6nm,0.7s,baz=180,slow=0.4,SNR=5.5						
KURBB	Kurchatov Arra	121.77	313	PKP	PKiKP	19 44 18.8	-0.4
	comp=Z,0.8nm,0.5s,baz=113,slow=2.0,SNR=14						
BVAR	Borovoye Array	127.11	315	PKP	PKiKP	19 44 30.1	+0.4
	comp=Z,0.9nm,0.4s,baz=128,slow=2.1,SNR=8.6						
SPITS	Spitsbergen Ar	132.52	356	PKP	PKiKP	19 44 40.4	+0.5
	comp=Z,11nm,1.1s,baz=333,slow=0.9,SNR=1.3						
KBZ	Khabaz	145.71	303	PKPbc	PKPab	19 45 03.8	-0.8
	comp=Z,3.6nm,0.9s,baz=126,slow=5.9,SNR=7.0						
FINES	FINESS Array B	145.96	340	PKPbc	PKPab	19 45 04.4	-0.5
	comp=Z,7.0nm,0.6s,baz=57,slow=3.0,SNR=52						
NB2	NORSAR Subarra	149.57	351	PKP	PKiKP	19 45 14.6	-0.7
	comp=Z,0.8nm,0.7s,baz=17,slow=2.6						
NOA	NORSAR Array B	149.57	351	PKPbc	PKiKP	19 45 14.2	-1.1
	comp=Z,1.9nm,0.8s,baz=14,slow=4.1,SNR=6.1						
HFS	Hagfors	150.07	348	PKPbc	PKiKP	19 45 15.3	-1.0
	comp=Z,3.0nm,0.8s,baz=18,slow=4.5,SNR=5.8						
NACGM	Naroch	150.57	331	*e*PKiKP	PKiKP	19 45 18.5	+1.0
	comp=Z,5.0nm,1.0s,baz=46						
MMAI	Mount Meron Ar	151.89	283	PKPbc	PKiKP	19 45 22.6	+1.5
	comp=Z,2.6nm,0.4s,baz=78,slow=6.1,SNR=19						
AKASG	Malin Array Be	152.05	322	PKPbc	PKiKP	19 45 20.5	-0.1
	comp=Z,0.6nm,0.3s,baz=52,slow=2.8,SNR=13						
BRTR	Keskin Array B	153.13	297	PKPbc	PKiKP	19 45 23.6	+0.1
	comp=Z,2.1nm,0.8s,baz=142,slow=2.8,SNR=11						
BRTR				PKPab	sPKPbc	19 45 35.8	-0.6
	comp=Z,2.1nm,0.9s,baz=126,slow=5.0,SNR=6.3						
GERES	GERESS Array B	160.35	337	PKPab	PKPab	19 46 05.7	+0.1
	comp=Z,0.5nm,0.6s,baz=38,slow=6.8,SNR=3.7						

IDC ***16*** *19:27:48.7±4.4, 19°.16N×64°.06W, h0^{km}, mb3.6/2, mbtmp4.0/3, ML3.6/1, MS3.0/4, Error ellipse: s-maj=101.2km s-min=49.8km az=90.0*

TRN ***16*** *19:27:50.5, 19°.23N×64°.20W, h35^{km}, MD0.0*

NEIC ***16*** *19:27:52.7±1.2, 19°.09N±0°.07×64°.29W±0°.04, h35^{km}±2^{km}, mb3.9/1, ML3.9/40, Md3.5/20(RSPR), Error ellipse: s-maj=13.1km s-min=5.8km az=196.0*

RSPR ***16*** *19:27:54.2, 19°.00N×64°.31W, h59^{km}±12^{km}, MD3.5/20*

ISC 16 19:27:53.7±0.8**, 19°.06N**±0°.07×**64°.29W**±0°.03**, h42^{km}, n101, σ1^{s}.05**/110**, 11C-12D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMRT	St. Maarten	1.53	131		Pn	19 28 18.0	-0.5
SMRT					Sn	19 28 37.0	-0.1
SMRT	St. Maarten	1.53	131	IAML		19 28 39.8	
	comp=E,3µm,0.2s						
SMRT	St. Maarten	1.53	131⇓	*e*P	Pn	19 28 18.0	-0.5
SMRT	St. Maarten	1.53	131	*e*S	Sn	19 28 37.0	-0.1
HUMP	Col San Antoni	1.74	239		Pn	19 28 20.4	-1.0
HUMP					Sn	19 28 41.4	-1.0
HUMP	Col San Antoni	1.74	239	IAML		19 28 47.7	
	comp=E,2µm,0.2s						
HUMP				IAML		19 28 49.3	
	comp=N,935nm,0.4s						
HUMP	Col San Antoni	1.74	239⇑	*e*P	Pn	19 28 20.4	-1.0
HUMP	Col San Antoni	1.74	239	*e*S	Sn	19 28 41.4	-1.0
SABA	Saba	1.74	145		Pn	19 28 19.9	-1.6
SABA					Sn	19 28 41.9	-0.6
SABA	Saba	1.74	145	IAML		19 28 47.5	
	comp=N,1µm,0.4s						
SABA	Saba	1.74	145⇓	*e*P	Pn	19 28 19.9	-1.6
SABA	Saba	1.74	145	*e*S	Sn	19 28 41.9	-0.6
GCPR	Guaynabo City	1.86	247		Sn	19 28 43.5	-1.8
GCPR	Guaynabo City	1.86	247		Pn	19 28 21.9	-1.1
GCPR	Guaynabo City	1.86	247⇑	*e*P	Pn	19 28 22.1	-0.9
GCPR	Guaynabo City	1.86	247	*e*S	Sn	19 28 43.5	-1.8
PDPR	Patillas Dam,	1.94	238		Pn	19 28 23.3	-0.9
PDPR				IAML		19 28 51.8	

	comp=E,924nm,0.3s						
PDPR				IAML		19 28 55.6	
	comp=N,669nm,0.6s						
PDPR	**Patillas Dam,**	**1.94**	**238**	⇓*e*P	**Pn**	**19 28 23.3**	**-0.9**
PDPR	**Patillas Dam,**	**1.94**	**238**	*e*S	**Sn**	**19 28 46.3**	**-1.1**
SEUS	**St. Eustatius**	**1.99**	**141**	Pn	**Pn**	**19 28 23.9**	**-1.0**
SEUS				IAML		19 28 57.2	
	comp=E,604nm,0.3s						
SEUS				IAML		19 29 04.9	
	comp=N,934nm,0.5s						
SJG	**San Juan**	**2.00**	**242**		**Pn**	**19 28 24.1**	**-0.9**
SJG	**San Juan**	**2.00**	**242**	IAML		19 28 55.0	
	comp=N,795nm,0.4s						
SJG				IAML		19 28 58.2	
	comp=N,772nm,0.5s						
SJG	**San Juan**	**2.00**	**242**	LR	LR	19 29 19.3	
	comp=N,208nm,18.6s,baz=74,slow=40						
SJG	**San Juan**	**2.00**	**242**	⇑*e*P	**Pn**	**19 28 24.1**	**-0.9**
SJG	**San Juan**	**2.00**	**242**	*e*S	**Sn**	**19 28 48.1**	**-0.7**
IGPR	**InterUniversit**	**2.04**	**238**		**Pn**	**19 28 24.8**	**-0.8**
IGPR					**Sn**	**19 28 48.5**	**-1.3**
IGPR	**InterUniversit**	**2.04**	**238**	IAML		19 28 55.0	
	comp=E,1µm,0.2s						
IGPR				IAML		19 28 59.6	
	comp=N,1µm,0.3s						
IGPR	**InterUniversit**	**2.04**	**238**	⇓*e*P	**Pn**	**19 28 24.8**	**-0.8**
IGPR	**InterUniversit**	**2.04**	**238**	*e*S	**Sn**	**19 28 48.5**	**-1.3**
ECPR	**Experimental S**	**2.10**	**250**	⇑*e*P	**Pn**	**19 28 25.5**	**-0.9**
ECPR	**Experimental S**	**2.10**	**250**	*e*S	**Sn**	**19 28 49.5**	**-1.8**
EMPR	**Esperanza - Ma**	**2.20**	**255**		**Pn**	**19 28 27.8**	**0.0**
EMPR					**Sn**	**19 28 53.9**	**+0.1**
EMPR	**Esperanza - Ma**	**2.20**	**255**	IAML		19 28 58.4	
	comp=N,780nm,0.5s						
EMPR				IAML		19 29 01.0	
	comp=E,852nm,0.5s						
EMPR	**Esperanza - Ma**	**2.20**	**255**	⇓*e*P	**Pn**	**19 28 27.8**	**0.0**
EMPR	**Esperanza - Ma**	**2.20**	**255**	*e*S	**Sn**	**19 28 53.9**	**+0.1**
SKI	**Saint Kitts**	**2.26**	**139**	*e*P	**Pn**	**19 28 28.3**	**-0.3**
SKI				*e*S	**Sn**	**19 28 55.0**	**-0.3**
SKOC	**St. Kitts, UWI**	**2.30**	**140**	*e*P	**Pn**	**19 28 28.6**	**-0.5**
SKOC				*e*S	**Sn**	**19 28 55.5**	**-0.6**
CELP	**Cerrillos**	**2.38**	**246**		**Pn**	**19 28 29.9**	**-0.4**
CELP					**Sn**	**19 28 56.3**	**-2.0**
CELP	**Cerrillos**	**2.38**	**246**	IAML		19 29 02.8	
	comp=N,468nm,0.5s						
CELP	**Cerrillos**	**2.38**	**246**	⇑*e*P	**Pn**	**19 28 29.9**	**-0.4**
CELP	**Cerrillos**	**2.38**	**246**	*e*S	**Sn**	**19 28 56.3**	**-2.0**
OBIP	**Obispado Ponce**	**2.42**	**246**		**Pn**	**19 28 30.7**	**0.0**
OBIP					**Sn**	**19 28 59.1**	**-0.1**
OBIP	**Obispado Ponce**	**2.42**	**246**	IAML		19 29 02.9	
	comp=E,451nm,0.5s						
OBIP	**Obispado Ponce**	**2.42**	**246**	⇑*e*P	**Pn**	**19 28 30.7**	**0.0**
OBIP	**Obispado Ponce**	**2.42**	**246**	*e*S	**Sn**	**19 28 59.1**	**-0.1**
UUPR	**Utuado, UPR, P**	**2.44**	**251**		**Pn**	**19 28 30.8**	**-0.3**
UUPR					**Sn**	**19 28 58.2**	**-1.5**
UUPR	**Utuado, UPR, P**	**2.44**	**251**	⇓*e*P	**Pn**	**19 28 30.8**	**-0.3**
UUPR	**Utuado, UPR, P**	**2.44**	**251**	*e*S	**Sn**	**19 28 58.2**	**-1.5**
AOPR	**Arecibo Observ**	**2.44**	**254**		**Pn**	**19 28 30.9**	**-0.2**
AOPR					**Sn**	**19 28 59.0**	**-0.8**
AOPR	**Arecibo Observ**	**2.44**	**254**	⇓*e*P	**Pn**	**19 28 30.9**	**-0.2**
AOPR	**Arecibo Observ**	**2.44**	**254**	*e*S	**Sn**	**19 28 59.0**	**-0.8**
AOPR	**Arecibo Observ**	**2.44**	**254**	*e*P	**Pn**	**19 28 30.6**	**-0.5**
GBPR	**Guanica, Bosqu**	**2.69**	**247**		**Pn**	**19 28 35.1**	**+0.7**
GBPR	**Guanica, Bosqu**	**2.69**	**247**	⇑*e*P	**Pn**	**19 28 35.1**	**+0.7**
AGPR	**Aguadilla, PR**	**2.74**	**258**		**Pn**	**19 28 34.9**	**-0.3**
AGPR					**Sn**	**19 29 06.0**	**-1.0**
AGPR	**Aguadilla, PR**	**2.74**	**258**	IAML		19 29 18.3	
	comp=N,556nm,0.5s						
AGPR				IAML		19 29 27.8	
	comp=E,358nm,0.4s						
AGPR	**Aguadilla, PR**	**2.74**	**258**	⇓*e*P	**Pn**	**19 28 34.9**	**-0.3**
AGPR	**Aguadilla, PR**	**2.74**	**258**	*e*S	**Sn**	**19 29 06.0**	**-1.0**
ANWB	**Willy Bob**	**2.75**	**120**	Pn	**Pn**	**19 28 33.3**	**-2.0**
ANWB	**Willy Bob**	**2.75**	**120**	*e*P	**Pn**	**19 28 32.9**	**-2.4**
ANWB				*e*S	**Sn**	**19 29 06.0**	**-1.2**
LSP	**Las Mesas**	**2.80**	**252**		**Pn**	**19 28 36.1**	**+0.2**
LSP					**Sn**	**19 29 06.7**	**-1.8**
LSP	**Las Mesas**	**2.80**	**252**	⇓*e*P	**Pn**	**19 28 36.1**	**+0.2**
LSP	**Las Mesas**	**2.80**	**252**	*e*S	**Sn**	**19 29 06.7**	**-1.8**
MLPR	**Magueyes Islan**	**2.83**	**248**	⇑*e*P	**Pn**	**19 28 36.6**	**+0.2**
MLPR	**Magueyes Islan**	**2.83**	**248**	*e*S	**Sn**	**19 29 09.8**	**+0.5**
PRSN	**Puerto Rico Se**	**2.84**	**253**		**Pn**	**19 28 36.6**	**+0.1**
PRSN					**Sn**	**19 29 08.9**	**-0.5**
PRSN	**Puerto Rico Se**	**2.84**	**253**	⇓*e*P	**Pn**	**19 28 36.6**	**+0.1**
PRSN	**Puerto Rico Se**	**2.84**	**253**	*e*S	**Sn**	**19 29 08.9**	**-0.5**
CRPR	**Cabo Rojo, PR**	**2.88**	**249**		**Pn**	**19 28 37.5**	**+0.4**
CRPR					**Sn**	**19 29 08.5**	**-1.9**
CRPR	**Cabo Rojo, PR**	**2.88**	**249**	⇓*e*P	**Pn**	**19 28 37.5**	**+0.4**
CRPR	**Cabo Rojo, PR**	**2.88**	**249**	*e*S	**Sn**	**19 29 08.5**	**-1.9**
MBFL	**Flemmings, Mon**	**3.03**	**139**	*e*P	**Pn**	**19 28 39.1**	**0.0**
MLYT	**Lee's Yard**	**3.06**	**139**	*e*P	**Pn**	**19 28 39.3**	**-0.4**
MLYT				*e*S	**Sn**	**19 29 15.0**	**-0.1**
IDE	**Isla Desecheo**	**3.09**	**258**		**Pn**	**19 28 39.6**	**-0.4**
IDE					**Sn**	**19 29 14.4**	**-1.4**
IDE	**Isla Desecheo**	**3.09**	**258**	⇑*e*P	**Pn**	**19 28 39.6**	**-0.4**
IDE	**Isla Desecheo**	**3.09**	**258**	*e*S	**Sn**	**19 29 14.4**	**-1.4**
ANBD	**Bethesda, Anti**	**3.12**	**129**	*e*P	**Pn**	**19 28 38.8**	**-1.7**
ANBD				*e*S	**Sn**	**19 29 14.6**	**-1.9**
ABD	**La Joyeuse, An**	**3.70**	**134**	Pn	**Pn**	**19 28 47.8**	**-0.6**
ABD				IAML		19 29 45.3	
	comp=E,213nm,1.6s						
ABD				IAML		19 29 49.5	
	comp=N,176nm,1.3s						
ABD	**La Joyeuse, An**	**3.70**	**134**	⇑*e*P	**Pn**	**19 28 47.0**	**-1.4**
ABD	**La Joyeuse, An**	**3.70**	**134**	*e*S	**Sn**	**19 29 30.9**	**+0.1**
CBE	**Ff, Capester**	**3.92**	**139**		**Pn**	**19 28 52.2**	**+0.8**
CBE					**Sn**	**19 29 35.4**	**-0.9**
CBE	**Ff, Capester**	**3.92**	**139**	⇑*e*P	**Pn**	**19 28 52.2**	**+0.8**
CBE	**Ff, Capester**	**3.92**	**139**	*e*S	**Sn**	**19 29 35.4**	**-0.9**
TBG	**Guadaloupe-3**	**4.07**	**141**	*e*P	**Pn**	**19 28 53.2**	**-0.2**
GDSD	**La Dsirade Is**	**4.11**	**131**	Pn	**Pn**	**19 28 53.5**	**-0.5**
MAGL	**Barre de l’ile**	**4.22**	**137**	*e*P	**Pn**	**19 28 55.6**	**+0.1**
DSLB	**Salisbury**	**4.52**	**142**	*e*P	**Pn**	**19 28 59.5**	**-0.2**
DSLB				*e*S	**Sn**	**19 29 50.9**	**-0.2**
DR12	**Loma Pena Alta**	**4.83**	**268**		**Pn**	**19 29 03.5**	**-0.4**
BIM	**Bigot**	**5.47**	**145**	*e*P	**Pn**	**19 29 11.4**	**-1.3**
SDDR	**Presa de Saban**	**6.62**	**270**		**Pn**	**19 29 28.6**	**+0.1**
SDDR	**Presa de Saban**	**6.62**	**270**	⇓*e*P	**Pn**	**19 29 28.6**	**+0.1**
SDDR	**Presa de Saban**	**6.62**	**270**	*e*S	**Sn**	**19 30 44.6**	**+1.7**
GRTK	**Grand Turk**	**6.87**	**292**	Pn	**Pn**	**19 29 30.5**	**-1.4**
PCRV	**Puerto La Cruz**	**8.84**	**182**	LR	LR	19 33 40.2	
	comp=N,42nm,19.3s,slow=39						
SDV	**Santo Domingo**	**11.84**	**212**	LR	LR	19 36 36.8	
	comp=N,28nm,19.5s,baz=86,slow=44						
BBSR	**BB Station**	**13.26**	**358**	Pn	**Pn**	**19 30 57.1**	**-2.3**
RUSC	**La Rusia**	**15.64**	**214**	Pn	**Pn**	**19 31 30.8**	**-1.0**
RUSC				IAmb	IAmb	19 31 36.2	
	comp=Z,8.2nm,0.9s						
ROSC	**El Rosal**	**17.19**	**216**	P	**P**	**19 31 53.4**	**+0.9**
	comp=Z,3.8nm,0.3s,baz=52,slow=17,SNR=5.6						
	comp=Z,11nm,0.4s						
TXAR	**Lajitas Array**	**37.20**	**294**	P	**P**	**19 35 03.2**	**+2.1**
	comp=Z,0.5nm,0.6s,baz=118,slow=9.9,SNR=8.6						
TXAR				PcP	**PcP**	**19 37 22.3**	**+1.7**
	comp=Z,0.1nm,0.4s,baz=129,slow=3.8,SNR=4.1						
	comp=Z,0.5nm,0.6s						
PDAR	**Pinedale Array**	**44.78**	**312**	P	**P**	**19 36 05.0**	**+1.4**
	comp=Z,0.6nm,0.6s,baz=114,slow=8.8,SNR=4.8						
	comp=Z,0.6nm,0.6s						
PLCA	**Paso Flores**	**59.77**	**186**	LR	LR	20 05 13.1	
	comp=Z,93nm,18.4s,baz=234,slow=38						

IDC 16 19:37:47.3±6.2**,30°.99S**×**178°.88W,h335**^{km}±54^{km}**,**
mb3.0/3**,mbtmp3.7**/4**,Error ellipse: s-maj=56.0km**
s-min=29.7km az=40.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.97**	**203**	P	Pn	19 39 41.1	+0.4
	3.8nm,0.6s,baz=31,slow=4.5,SNR=1.1						
URZ				S	S	19 41 13.1	+0.1
	17nm,0.5s,baz=319,slow=20,SNR=8.8						
ASAR	**Alice Springs**	**42.33**	**268**	P	P	19 45 09.4	-0.2
	0.3nm,0.6s,baz=106,slow=7.2,SNR=9.9						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**43.37**	**273**	P	P	19 45 17.8	-0.1
	0.6nm,0.4s,baz=112,slow=7.9,SNR=9.8						
	0.6nm,0.4s						
QSPA	**South Pole Qui**	**59.12**	**180**	P	P	19 47 13.1	-0.2
	1.4nm,1.0s,baz=63,slow=4.5,SNR=1.9						
	1.4nm,1.0s						
FINES	**FINESS Array B**	**145.43**	**339**	PKPbc	PKPdf	19 56 44.8	-0.1
	0.7nm,0.5s,baz=66,slow=3.5,SNR=7.5						

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*IDC **16** 19:37:44.1±1.2, 30°.14S×178°.06W, h0^{km}, mb3.9/5,*
mbtmp4.0/6, ML3.8/1, MS3.7/2, Error ellipse: s-maj=35.8km
s-min=27.8km az=50.0
ISC 16 19:37:51.5±1.2**,30°.2S**±0°.2×**178°.2W**±0°.2**,h50**^{km}**,n13,**
σ**0**^{s}**95**/11**,mb3.9**/5**,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.89**	**204**	Pn	**Pn**	**19 39 57.1**	**-0.2**
	1.1nm,0.3s,baz=39,slow=6.5,SNR=1.7						
	7.0nm,0.4s						
DZM	**Mont Dzumac**	**15.96**	**297**	LR	LR	19 46 02.0	
	comp=Z,58nm,19.3s,baz=204,slow=31						
STKA	**Stephens Creek**	**34.32**	**257**	P	**P**	**19 44 32.7**	**-0.6**
	0.7nm,0.5s,baz=111,slow=19,SNR=3.1						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**42.91**	**267**	P	**P**	**19 45 45.9**	**+0.3**
	1.1nm,0.5s,baz=104,slow=7.5,SNR=15						
	1.1nm,0.5s						
WRA	**Warramunga Arr**	**43.89**	**272**	P	**P**	**19 45 54.4**	**+1.0**
	1.0nm,0.4s,baz=112,slow=7.9,SNR=16						
	1.0nm,0.4s						
QSPA	**South Pole Qui**	**59.89**	**180**	P	**P**	**19 47 51.5**	**-0.5**
	1.6nm,0.5s,baz=324,slow=0.5,SNR=14						
	1.6nm,0.5s						
USHA	**Ushuaia**	**76.18**	**146**	LR	LR	20 17 59.7	
	comp=Z,168nm,19.6s,baz=193,slow=32						
SNAA	**Sanae**	**78.34**	**179**	P	**P**	**19 49 47.1**	**+1.1**
	0.4nm,0.7s,baz=207,slow=12,SNR=5.6						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**117.50**	**310**	PKP	**PKPdf**	**19 56 29.6**	**-1.9**
	0.2nm,0.6s,baz=49,slow=4.8,SNR=2.0						
KURBB	**Kurchatov Arra**	**120.82**	**314**	PKP	**PKiKP**	**19 56 38.2**	**+0.5**
	0.8nm,0.8s,baz=94,slow=2.4,SNR=2.9						
FINES	**FINESS Array B**	**144.91**	**340**	PKP	**PKPab**	**19 57 21.1**	**-0.4**
	0.9nm,0.4s,baz=57,slow=3.4,SNR=6.7						
AKASG	**Malin Array Be**	**151.03**	**323**	PKPbc	**PKiKP**	**19 57 39.7**	**+0.7**
	0.8nm,0.6s,baz=51,slow=3.2,SNR=6.1						
MMAI	**Mount Meron Ar**	**151.29**	**284**	PKPbc	**PKPbc**	**19 57 39.8**	**0.0**
	0.2nm,0.2s,baz=15,slow=11,SNR=3.9						

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*REN **16** 19:40:47.0±2.1, 39°.15N±0°.05×116°.41W±0°.01, h0^{km}±2^{km},*
Error ellipse: s-maj=6.7km s-min=1.2km az=173.0
NEIC 16 19:40:45.7±2.4**,39°.03N**±0°.04×**116°.37W**±0°.01**,h7**^{km}±5^{km}**,**
ML2.3/56**,ML2.7**/6(REN)**,Error ellipse: s-maj=6.4km**
s-min=1.3km az=172.0,Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
Q09A	**Carvers**	**0.66**	**253**		Pg	19 40 57.9	-0.5
Q09A				IAML		19 41 11.6	
	comp=E,149nm,0.3s						
Q09A	**Carvers**	**0.66**	**253**		Sb	19 41 08.9	-0.1
R11B	**Troy Canyon, C**	**0.91**	**137**		Pg	19 41 02.6	-0.6
TPH	**Tonopah**	**1.16**	**215**		Pg	19 41 07.8	-0.1
Q12A	**Willow Creek R**	**1.20**	**89**		Pn	19 41 10.0	+1.0
Q12A					Sn	19 41 27.3	+1.7
S11A	**Rachel**	**1.46**	**160**		Pn	19 41 12.2	-0.4
NV11	**Mina Array Sit**	**1.52**	**248**		Pn	19 41 13.2	-0.1
NV11				IAML		19 41 38.4	
	comp=N,20nm,0.3s						
MZP	**Montezuma Peak**	**1.54**	**211**		Pn	19 41 13.7	-0.1
MZP				IAML		19 41 35.9	
	comp=N,25nm,0.3s						
MZP				IAML		19 41 36.5	
	comp=E,31nm,0.3s						
SPR3	**Spring Creek 3**	**1.59**	**90**		Pb	19 41 15.2	-0.4
SPR3					Sg	19 41 36.5	-0.3
SPR3				IAML		19 41 39.0	
	comp=N,47nm,0.4s						
SPR3				IAML		19 41 40.4	
	comp=E,43nm,0.4s						
NVAR	**Mina Array Bea**	**1.62**	**249**		Pn	19 41 15.3	+0.4
NV08	**Mina Array Sit**	**1.65**	**248**		Pn	19 41 15.6	+0.5
NV09	**Mina Array Sit**	**1.65**	**250**		Pb	19 41 16.8	+0.3
RYN	**Ryan**	**1.73**	**257**		Pb	19 41 17.4	-0.4
LHV	**Little Huntoon**	**1.84**	**246**		Pb	19 41 18.8	-0.9
GMN	**Gold Mountain**	**1.86**	**202**		Pn	19 41 18.1	0.0
GMN				IAML		19 41 46.7	
	comp=E,20nm,0.5s						
GMN				IAML		19 41 47.4	
	comp=N,22nm,0.4s						
PRN	**Pahroc Range**	**1.92**	**147**		Pb	19 41 20.5	-0.6
PRN				IAML		19 41 54.6	
	comp=E,31nm,0.7s						
ELK	**Elko**	**1.93**	**27**		Pb	19 41 20.6	-0.7
PSUT	**Pine Spring**	**2.03**	**103**		Pn	19 41 20.6	+0.2
PSUT				IAML		19 41 51.4	
	comp=E,31nm,0.5s						
TPNV	**Topopah Spring**	**2.08**	**177**		Pn	19 41 20.8	-0.3
TPNV				IAML		19 41 51.1	
	comp=E,30nm,0.3s						
DSP	**Deep Springs**	**2.08**	**218**		Pb	19 41 23.6	-0.1
CPY	**CP-1**	**2.10**	**173**		Pb	19 41 23.4	-0.8
SGV	**South Grapevin**	**2.11**	**195**		Pb	19 41 24.3	0.0
NSP	**Numbskull Pass**	**2.30**	**177**		Pb	19 41 27.1	-0.3
SDH	**Striped Hills**	**2.38**	**179**		Pb	19 41 29.3	+0.5
MCY	**Mercury**	**2.38**	**172**		Pb	19 41 28.6	-0.3
PAHR	**Pah Rah Range**	**2.43**	**287**		Pn	19 41 25.6	-0.4
PAHR				IAML		19 42 06.3	
	comp=E,13nm,0.8s						
WAKR	**Walker**	**2.45**	**259**		Pn	19 41 26.8	+0.5
WAKR				IAML		19 42 05.8	
	comp=N,14nm,0.4s						
WAKR				IAML		19 42 06.7	
	comp=E,14nm,0.4s						
PNTR	**Pine Nut**	**2.52**	**272**		Pn	19 41 28.1	+1.0
PNTR				IAML		19 42 11.8	
	comp=N,15nm,0.6s						
SHPR	**Sheep Range**	**2.69**	**159**		Pn	19 41 30.4	+0.8
GWY	**Greenwater Val**	**2.84**	**185**		Pn	19 41 32.4	+0.8
GWY				IAML		19 42 16.3	
	comp=N,13nm,0.7s						
DUG	**Dugway, Tooele**	**2.99**	**66**		Pn	19 41 35.3	+1.8
DUG				IAML		19 42 23.9	
	comp=N,7.2nm,0.7s						
QSM	**Queen of Sheba**	**3.08**	**188**		Pn	19 41 34.7	-0.1
QSM				IAML		19 42 23.8	
	comp=E,5.6nm,0.6s						
QSM				IAML		19 42 24.0	
	comp=N,4.8nm,0.8s						
LCMT	**Little Creek M**	**3.18**	**128**		Pn	19 41 36.4	+0.1
BEKR	**Beckworth**	**3.20**	**286**		Pn	19 41 37.1	+0.6
BEKR				IAML		19 42 29.6	
	comp=N,3.9nm,0.7s						
U15A	**North Rim**	**4.14**	**127**		Pn	19 41 49.8	+0.2
U15A				IAML		19 42 41.9	
	comp=N,3.0nm,3.9s						
U15A				IAML		19 43 53.4	
	comp=E,3.1nm,4.2s						

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*IDC **16** 19:45:45.9±0.8, 17°.27S×173°.84W, h0^{km}, mb4.0/8,*
mbtmp4.0/8, MS3.2/3, Error ellipse: s-maj=40.3km
s-min=20.1km az=143.0
*NEIC **16** 19:45:49.8±1.5, 17°.5S±0°.1×173°.50W±0°.08, h35^{km}±2^{km},*
mb4.4/5, Error ellipse: s-maj=20.8km s-min=12.4km
az=8.0
ISC 16 19:45:50.0±0.6**,17°.51S**±0°.10×**173°.48W**±0°.09**,h35**^{km}**,n29,**
σ**1**^{s}**92**/22**,mb4.0**/10**,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	**Niue**	**3.71**	**115**		**Pn**	**19 46 45.2**	**+0.3**
NIUE				Sn	**Sn**	**19 47 23.2**	**-4.3**
AFI	**Afiamalu**	**3.94**	**25**	Pn	**Pn**	**19 46 47.1**	**-1.0**
MSVF	**Nonsavu**	**8.09**	**267**	LR	LR	19 50 34.1	
	comp=Z,254nm,19.7s,baz=91,slow=37						
RAR	**Rarotonga**	**13.44**	**108**	LR	LR	19 53 02.9	
	comp=Z,128nm,19.5s,baz=281,slow=32						
DZM	**Mont Dzumac**	**19.43**	**253**	LR	LR	19 57 04.7	
	comp=Z,33nm,19.2s,baz=136,slow=35						
STKA	**Stephens Creek**	**42.95**	**242**	P	**P**	**19 53 44.0**	**-1.9**
	1.5nm,0.8s,baz=47,slow=3.4,SNR=3.3						
	1.5nm,0.8s						
BBOO	**Buckleboo**	**47.72**	**241**	P	**P**	**19 54 23.2**	**-0.4**
WB0	**Warramunga Arr**	**49.29**	**259**	P	**P**	**19 54 33.5**	**-2.4**
WB0				IAmb	IAmb	19 54 35.3	
	comp=Z,2.5nm,0.8s						
WRA	**Warramunga Arr**	**49.32**	**259**	P	**P**	**19 54 34.6**	**-1.6**
WRA	**Warramunga Arr**	**49.32**	**259**	P	**P**	**19 54 34.8**	**-1.4**
	comp=Z,1.4nm,0.8s,baz=98,slow=6.7,SNR=12						
	comp=Z,1.4nm,0.8s						
AS31	**Alice Springs**	**49.42**	**254**	P	**P**	**19 54 35.4**	**-1.5**
AS31				IAmb	IAmb	19 54 37.2	
	comp=Z,3.5nm,0.7s						
ASAR	**Alice Springs**	**49.42**	**254**	P	**P**	**19 54 35.0**	**-1.9**
ASAR	**Alice Springs**	**49.42**	**254**	P	**P**	**19 54 36.1**	**-0.8**
	comp=Z,12nm,0.7s,baz=89,slow=8.5,SNR=183						
ASAR				PcP	**PcP**	**19 56 00.1**	**+1.1**
	comp=Z,1.1nm,0.8s,baz=95,slow=4.6,SNR=4.7						
	comp=Z,12nm,0.7s						
QSPA	**South Pole Qui**	**72.55**	**180**	P	**P**	**19 57 16.0**	**+2.6**
QSPA				IAmb	IAmb	19 57 31.7	
	comp=Z,5.0nm,1.0s						
QSPA	**South Pole Qui**	**72.55**	**180**	P	**P**	**19 57 16.2**	**+2.8**
	comp=Z,1.3nm,0.8s,baz=8.3,slow=0.8,SNR=9.8						
	comp=Z,1.3nm,0.8s						
NVAR	**Mina Array Bea**	**75.94**	**42**	P	**P**	**19 57 35.4**	**+1.7**
	comp=Z,0.9nm,0.7s,baz=218,slow=8.5,SNR=5.3						
	comp=Z,0.9nm,0.7s						
TXAR	**Lajitas Array**	**81.84**	**56**	P	**P**	**19 58 08.9**	**+2.8**
	comp=Z,1.1nm,1.1s,baz=224,slow=3.5,SNR=5.7						
	comp=Z,1.1nm,1.1s						
PDAR	**Pinedale Array**	**83.88**	**42**	P	**P**	**19 58 17.0**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=225,slow=4.0,SNR=4.9						
	comp=Z,0.5nm,0.7s						
H03S2	**Juan Fernandez**	**84.10**	**123**	T	T	21 31 36.0	
	baz=244,slow=74						
H03S1	**Juan Fernandez**	**84.12**	**123**	T	T	21 31 37.3	
	baz=244,slow=74						
H03S3	**Juan Fernandez**	**84.12**	**123**	T	T	21 31 35.8	
	baz=244,slow=74						
H03N2	**Juan Fernandez**	**84.21**	**123**	T	T	21 31 46.7	
	baz=259,slow=72						
H03N3	**Juan Fernandez**	**84.22**	**123**	T	T	21 31 46.8	
	baz=259,slow=72						
H03N1	**Juan Fernandez**	**84.23**	**123**	T	T	21 31 50.8	
	baz=259,slow=72						
ILAR	**Eielson Array**	**84.52**	**11**	P	**P**	**19 58 18.4**	**-0.5**
	comp=Z,0.7nm,1.1s,baz=231,slow=6.7,SNR=4.1						
	comp=Z,0.7nm,1.1s						
BVAR	**Borovoye Array**	**119.49**	**321**	PKP	**PKiKP**	**20 04 36.7**	**+0.8**
	comp=Z,0.6nm,0.6s,baz=135,slow=7.8,SNR=4.4						
BRTR	**Keskin Array B**	**147.72**	**319**	PKPbc	**PKiKP**	**20 05 32.5**	**-1.0**
	comp=Z,1.5nm,0.9s,baz=90,slow=2.5,SNR=6.7						
GERES	**GERESS Array B**	**148.21**	**351**	PKPbc	**PKiKP**	**20 05 33.5**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=20,slow=5.0,SNR=3.5						
MMAI	**Mount Meron Ar**	**149.79**	**306**	PKPbc	**PKPbc**	**20 05 36.5**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=64,slow=7.5,SNR=3.9						

IDC 16 20:09:01.2±7.7**,30°.73S**×**177°.85W,h0**^{km}**,mb3.5**/2**,**
mbtmp3.5/2**,Error ellipse: s-maj=319.8km**
s-min=63.7km az=156.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.22**	**267**	P	P	20 17 04.3	-0.1
	0.2nm,0.3s,baz=104,slow=7.7,SNR=5.6						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**44.24**	**272**	P	P	20 17 12.5	-0.2
	0.3nm,0.4s,baz=112,slow=8.0,SNR=6.8						
	0.3nm,0.4s						
FINES	**FINESS Array B**	**145.50**	**340**	PKPbc	PKPdf	20 28 39.8	-0.7
	0.9nm,0.9s,baz=45,slow=2.2,SNR=1.1						

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*IDC **16** 20:13:31.0±1.0, 71°.91N×0°.34W, h0^{km}, mb3.4/6,*
mbtmp3.5/11, ML2.7/4, MS3.1/13, Error ellipse:
s-maj=22.5km s-min=16.9km az=60.0
*BER **16** 20:13:32.3±4.2, 72°.09N×0°.68W, h10^{km}, Mw4.3,*
ML3.8(NAO), Confirmed Earthquake
*NAO **16** 20:13:34.1±1.4, 71°.98N×0°.07W, h7^{km}±21^{km}, ML3.8*
*DNK **16** 20:13:38.4±8.8, 72°.39N×2°.94W, h0^{km}±204^{km}, ML2.4*
ISC 16 20:13:30.8±0.7**,72°.11N**±0°.06×**0°.35W**±0°.06**,h10**^{km}**,n65,**
σ**2**^{s}**17**/64**,mb3.4**/7**,MS2.9**/7**,1D,Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBG	**Daneborg**	**6.15**	**300**	*e*P	**Pn**	**20 14 58.9**	**-2.5**
DBG	**Daneborg**	**6.15**	**300**	*i* P	**Pn**	**20 14 58.4**	**-3.1**
LOF	**Lofoten**	**6.18**	**123**	Pn	**Pn**	**20 15 02.8**	**+0.8**
LOF				Sn	**Sn**	**20 16 07.8**	**-4.8**
LOF	**Lofoten**	**6.18**	**123**	*e*P	**Pn**	**20 15 03.0**	**+1.0**
LOF				IAML		20 15 10.2	
	comp=Z,12nm,0.4s						
LOF				*e*S	**Sn**	**20 16 07.8**	**-4.8**
DAG	**Danmarks Havn**	**6.76**	**322**	*e*P	**Pn**	**20 15 07.7**	**-2.1**
DAG				*e*S	Sn	20 16 15.5	-11
DAG	**Danmarks Havn**	**6.76**	**322**	*e*	**Pn**	**20 15 06.6**	**-3.2**
	baz=135,slow=14						
DAG				*i* P	**Pn**	**20 15 08.0**	**-1.8**
DAG				*i* S	Sn	20 16 08.6	-18
DAG				IAML		20 16 18.1	
	comp=Z,12nm,0.3s						
STEI	**Steigen**	**6.78**	**121**	Pn	**Pn**	**20 15 10.1**	**+0.1**
STEI				Sn	Sn	20 16 21.4	-5.7
STEI	**Steigen**	**6.78**	**121**	*e*P	**Pn**	**20 15 09.9**	**-0.1**
STEI				IAML		20 15 12.8	
	comp=Z,56nm,0.3s						
STEI				*e*S	Sn	20 16 19.8	-7.3
TRO	**Tromso**	**6.79**	**102**	Pn	**Pn**	**20 15 09.6**	**-0.6**
TRO				Sn	Sn	20 16 20.8	-6.6
TRO	**Tromso**	**6.79**	**102**	*e*P	**Pn**	**20 15 10.8**	**+0.6**
TRO				*e*S	Sn	20 16 20.9	-6.5
SCO	**Scoresbysund**	**7.12**	**267**	*i* P	**Pn**	**20 15 13.0**	**-1.7**
FAUS	**Fauske**	**7.19**	**124**	Pn	**Pn**	**20 15 16.1**	**+0.4**
FAUS	**Fauske**	**7.19**	**124**	*e*P	**Pn**	**20 15 16.4**	**+0.6**
FAUS				IAML		20 15 21.9	
	comp=Z,8.1nm,0.5s						
VAGH	**Vaagaholmen**	**7.21**	**132**	*e*P	**Pn**	**20 15 15.6**	**-0.3**
JETT	**Jettan, Norway**	**7.28**	**101**	Pn	**Pn**	**20 15 17.4**	**+0.5**
JETT				Sn	Sn	20 16 34.3	-5.2
JETT	**Jettan, Norway**	**7.28**	**101**	⇓*e*P	**Pn**	**20 15 17.0**	**+0.1**
JETT				*e*S	**Sn**	**20 16 34.6**	**-4.9**
KONS	**Konsvik**	**7.36**	**133**	*e*P	**Pn**	**20 15 17.8**	**-0.3**
KONS				IAML		20 15 20.0	
	comp=Z,3.1nm,0.3s						
SPA0	**Spitsbergen Ar**	**7.41**	**27**	Pn	**Pn**	**20 15 22.8**	**+4.0**
	baz=215,slow=14						
SPA0	**Spitsbergen Ar**	**7.41**	**27**	Pn	**Pn**	**20 15 22.8**	**+4.0**
	baz=215,slow=14						
SPITS	**Spitsbergen Ar**	**7.41**	**27**	Pn	**Pn**	**20 15 22.4**	**+3.6**
	comp=Z,3.0nm,0.3s,baz=204,slow=14,SNR=38						
STOK	**Stokkvaagen**	**7.48**	**134**	*e*P	**Pn**	**20 15 19.7**	**0.0**
KBS	**Kingsbay**	**7.48**	**18**	*e*P	**Pn**	**20 15 22.1**	**+2.3**
KBS	**Kingsbay**	**7.48**	**18**	*e*P	**Pn**	**20 15 22.0**	**+2.3**
KIF	**Kilpisjarvi**	**7.69**	**104**	Pn	**Pn**	**20 15 23.3**	**+0.8**
KIF				Sn	Sn	20 16 43.7	-5.8
KIF	**Kilpisjarvi**	**7.69**	**104**	*e*P	**Pn**	**20 15 23.7**	**+1.2**
KIF				Sn	Sn	20 16 43.7	-5.8
LEIR	**Leirfjorden**	**7.69**	**135**	*e*P	**Pn**	**20 15 23.0**	**+0.4**
LEIR				IAML		20 15 23.5	
	comp=Z,5.2nm,0.3s						
HAMF	**Hammerfest**	**7.80**	**89**	Pn	**Pn**	**20 15 23.0**	**-1.1**
HAMF	**Hammerfest**	**7.80**	**89**	Pn	**Pn**	**20 15 23.0**	**-1.1**
MOR8	**Moi Rana**	**7.94**	**131**	*e*P	**Pn**	**20 15 27.4**	**+1.4**
MOR8				IAML		20 15 30.3	
	comp=Z,4.2nm,0.5s						
SALU	**Saltoluokta**	**8.05**	**117**	*e*P	**Pn**	**20 15 28.8**	**+1.2**
ARA0	**ARCESS Array S**	**8.85**	**94**	Pn	**Pn**	**20 15 38.7**	**+0.2**
	baz=294,slow=11						
ARA0	**ARCESS Array S**	**8.85**	**94**	Pn	**Pn**	**20 15 38.7**	**+0.2**
	baz=294,slow=11						
ARCES	**ARCESS Array B**	**8.85**	**94**	Pn	**Pn**	**20 15 38.7**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=300,slow=12,SNR=35						
ARCES				Sn	**Sn**	**20 17 13.9**	**-4.2**
	baz=298,slow=24						
ARCES				LR	LR	20 18 48.0	
	comp=Z,91nm,19.3s,baz=291,slow=36						
	comp=Z,0.8nm,0.3s						
HEF	**Hetta**	**8.89**	**103**	Pn	**Pn**	**20 15 39.4**	**+0.3**
HEF	**Hetta**	**8.89**	**103**	*e*P	**Pn**	**20 15 39.3**	**+0.3**
NOR	**Nord**	**10.16**	**346**	*e*P	**Pn**	**20 15 59.5**	**+3.1**
NOR				*i* S	**Sn**	**20 17 42.6**	**-7.5**
AKN	**Aaknes**	**10.36**	**161**	Pn	**Pn**	**20 15 59.6**	**+0.4**
AKN				Sn	Sn	20 17 42.4	-13
AKN	**Aaknes**	**10.36**	**161**	Pn	**Pn**	**20 15 59.6**	**+0.4**
AKN				Sn	Sn	20 17 42.4	-13
BORG	**Borgarnes**	**10.62**	**236**	LR	LR	20 19 12.1	
	comp=Z,36nm,18.6s,baz=323,slow=32						
NC204	**NORSAR Array S**	**11.70**	**153**	*e*P	**Pn**	**20 16 18.6**	**+1.0**
NC303	**NORSAR Array S**	**11.84**	**151**	*e*P	**Pn**	**20 16 20.8**	**+1.4**
NOA	**NORSAR Array B**	**11.99**	**152**	Pn	**Pn**	**20 16 20.8**	**-0.8**
	baz=349,slow=14,SNR=3.3						
NOA				LR	LR	20 20 53.0	
	comp=Z,75nm,18.8s,baz=340,slow=37						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,0.5nm,0.7s						
NRA0	NORESS Array S	12.33	152	P	Pn	20 16 25.9	-0.2
	baz=343,slow=28						
NRA0	NORESS Array S	12.33	152	P	Pn	20 16 25.9	-0.2
	baz=343,slow=28						
HFS	Hagfors	13.24	148	P	Pn	20 16 38.5	-0.1
	baz=342,slow=14						
HFS	Hagfors	13.24	148	Pn	Pn	20 16 38.1	-0.4
	comp=Z,0.2nm,0.3s,baz=347,slow=12,SNR=6.8						
HFS				Sn	Sn	20 18 55.5	-10
	comp=Z,0.3nm,0.3s,baz=357,slow=22,SNR=5.3						
HFS				LR	LR	20 21 32.4	
	comp=Z,59nm,21.1s,baz=354,slow=37						
	comp=Z,2.9nm,0.8s						
HFS	Hagfors	13.24	148	P	Pn	20 16 38.5	-0.1
	baz=342,slow=14						
FIA0	FINESS Array S	14.75	123	P	Pn	20 16 58.8	-0.3
	baz=321,slow=14						
FIA0	FINESS Array S	14.75	123	P	Pn	20 16 58.8	-0.3
	baz=321,slow=14						
FINES	FINESS Array B	14.75	123	Pn	Pn	20 16 58.9	-0.3
	comp=Z,0.1nm,0.3s,baz=335,slow=13,SNR=6.6						
FINES				LR	LR	20 22 08.3	
	comp=Z,115nm,19.3s,baz=329,slow=35						
	comp=Z,1.1nm,0.6s						
EKA	Eskdalemuir Ar	16.89	186	Pn	P	20 17 29.4	+0.5
	baz=0.4,slow=11						
SFJD	Kangerlussuaq	17.80	279	LR	LR	20 23 37.1	
	comp=Z,96nm,18.1s,baz=44,slow=34						
KLMR	Klimovskoe	19.02	106	*e*P	P	20 17 53.2	+0.9
KIRV	Kirov	23.84	98	LR	LR	20 27 39.6	
	comp=Z,35nm,19.1s,baz=343,slow=36						
VRAC	Vranov	24.14	152	LR	LR	20 28 07.5	
	comp=Z,43nm,19.7s,baz=338,slow=37						
GERES	GERESS Array B	24.21	157	P	P	20 18 49.1	+1.9
	comp=Z,0.6nm,0.6s,baz=9.1,slow=13,SNR=5.4						
GERES				LR	LR	20 28 27.3	
	comp=Z,40nm,18.7s,baz=344,slow=37						
AKASG	Malin Array Be	25.19	132	P	P	20 18 56.1	+0.2
	comp=Z,0.8nm,0.5s,baz=342,slow=10,SNR=4.5						
AKASG				LR	LR	20 28 25.1	
	comp=Z,71nm,20.1s,baz=348,slow=36						
	comp=Z,0.8nm,0.5s						
DAVOX	Davos/Dischmat	25.86	164	LR	LR	20 28 38.3	
	comp=Z,28nm,19.0s,baz=79,slow=35						
ARTI	Arti	28.40	92	LR	LR	20 30 36.9	
	comp=Z,52nm,18.5s,baz=18,slow=36						
ESDC	Sonseca Array	32.56	185	P	P	20 20 02.2	+0.4
	comp=Z,0.4nm,0.7s,baz=4.9,slow=7.3,SNR=4.4						
	comp=Z,0.4nm,0.7s						
YKA	Yellowknife Ar	38.43	317	LR	LR	20 35 33.2	
	comp=Z,52nm,19.4s,baz=159,slow=34						
KURBB	Kurchatov Arra	39.55	79	P	P	20 21 02.3	+1.0
	comp=Z,0.3nm,0.7s,baz=325,slow=7.9,SNR=3.6						
	comp=Z,0.3nm,0.7s						
ILAR	Eielson Array	41.52	339	P	P	20 21 20.9	+3.4
	comp=Z,0.9nm,1.1s,baz=14,slow=7.0,SNR=7.2						
	comp=Z,0.9nm,1.1s						
MKAR	Makanchi Array	44.09	78	P	P	20 21 41.1	+2.5
	comp=Z,0.2nm,0.5s,baz=333,slow=6.1,SNR=4.1						
	comp=Z,0.2nm,0.5s						
TXAR	Lajitas Array	66.34	292	P	P	20 24 20.5	+1.2
	comp=Z,0.2nm,0.6s,baz=35,slow=7.0,SNR=2.4						
	comp=Z,0.2nm,0.6s						

IDC ***16*** *20:13:51.0±0.4, 10°.17S×119°.99E, h0^{km}, mb4.8/24, mbtmp4.8/27, ML4.7/3, MS4.3/33, Error ellipse: s-maj=15.5km s-min=10.6km az=62.0*

DJA ***16*** *20:13:53.8±0.1, 10°S±1°×12°0E±°, h10^{km}, M5.0/73, mb5.2/73, mB5.5/35, MLv5.4/21, Mw(mB)4.9/35, MwMwp4.7/10, Mwp5.1/10*

MOS ***16*** *20:13:55.5±1.0, 10°.17S×120°.20E, h53^{km}, mb5.1/44, Error ellipse: s-maj=12.9km s-min=5.5km az=116.4*

BJI ***16*** *20:13:55.7, 10°.40S×120°.10E, h47^{km}, mB5.1/18, mb4.8/67, Ms4.7/42, Ms7 4.5/45*

NEIC ***16*** *20:13:56.9±2.3, 10°.37S±0°.07×120°.03E±0°.07, h45^{km}±6^{km}, mb5.0/42, Error ellipse: s-maj=9.8km s-min=9.1km az=211.0*

GCMT ***16*** *20:13:56.9±0.2, 10°.21S±0°.02×119°.94E±0°.03, h27^{km}, MW5.0/93, Moment Tensor Solution. s57,c68; s93,c131; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.02±.14; $M_{\theta\theta}$2.89±.09; $M_{\phi\phi}$0.13±.09; $M_{r\theta}$1.58±.15; $M_{\theta\phi}$0.25±.06; $M_{\phi r}$-0.14±.19; Best double couple: $M_0$3.36300×10^{16} NP1:ϕ_s81.00000°,δ31.00000°,λ-98.00000°. NP2: ϕ_s270.00000°,δ59.00000°,λ-85.00000°. Principal axes: T 3.3000, Plg14.0000°, Azm356.0000°; N 0.1330, Plg4.0000°, Azm87.0000°; P -3.4270, Plg75.0000°, Azm193.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 20:13:56.6±0.3, **10°.31S**±0°.03×**120°.06E**±0°.04, **h41**^{km}±2^{km}, **h41^{km}:pP-P, n439,** σ1.^{s}**71**/449, **mb5.0**/123, **MS4.4**/47, **18C-2D, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BASI	Baing, Sumba	0.52	80	Pg	Pn	20 14 05.4	-2.3
BASI				Sg	Sn	20 14 12.5	-3.0
WSI	Waingapu	0.68	21	P	Pn	20 14 08.0	-1.8
WBSI	Waikabubak, Su	0.93	316	P	Pn	20 14 11.4	-1.9
EDFI	Ende, Flores	2.24	46	P	Pn	20 14 30.7	-0.6
PLAI	Plampang	2.69	303	P	Pn	20 14 37.5	+0.2
PLAI	Plampang	2.69	303	P	Pn	20 14 37.0	-0.3
MMRI	Maumere	2.72	52		Pn	20 14 38.2	+0.4
MMRI				Sn	Sn	20 15 10.1	+0.5
MMRI	Maumere	2.72	52	P	Pn	20 14 38.6	+0.8
MMRI	Maumere	2.72	52	P	Pn	20 14 37.9	+0.1
BATI	Baumata	3.55	89	Pn	Pn	20 14 50.6	+1.4
	50nm,0.3s,baz=241,slow=4.3,SNR=56						
BATI				Sn	Sn	20 15 31.2	+1.2
	91nm,0.3s,baz=6.4,slow=19,SNR=3.8						
	271nm,0.4s						
BATI	Baumata	3.55	89	P	Pn	20 14 50.4	+1.1
BSSI	Bau Bau, Buton	4.17	6	P	Pn	20 14 58.6	+0.9
SOEI	Soe	4.19	83		Pn	20 14 59.6	+1.5
SOEI	Soe	4.19	83	P	Pn	20 14 59.6	+1.5
SOEI	Soe	4.19	83	P	Pn	20 14 59.3	+1.3
DNP	Denpasar	5.05	288	P	Pn	20 15 10.5	+0.7
SRBI	Singaraja	5.27	294	P	Pn	20 15 13.2	+0.4
	3.2nm3μm359nm,0.9s						
KAPI	Kappang	5.27	357		Pn	20 15 13.7	+0.8
KAPI	Kappang	5.27	357	Pn	Pn	20 15 14.6	+1.7
	13nm,0.3s,baz=164,slow=9.2,SNR=29						
KAPI				Sn	Sn	20 16 10.4	-2.0
	5.3nm,0.3s,baz=168,slow=20,SNR=0.9						
KAPI				LR	LR	20 17 24.9	
	comp=Z,11μm,18.9s,baz=144,slow=42						
KAPI	Kappang	5.27	357	P	Pn	20 15 14.5	+1.7
KAPI	Kappang	5.27	357	*i* P	Pn	20 15 13.7	+0.8
BBSI	Bau Bau	5.40	28	P	Pn	20 15 16.3	+1.6
BNSI	Bone	5.87	1	P	Pn	20 15 24.0	+2.9
JAGI	Jajag, Banyuwa	6.11	287		Pn	20 15 23.5	-0.9
JAGI	Jajag, Banyuwa	6.11	287	P	Pn	20 15 22.9	-1.4
JAGI	Jajag, Banyuwa	6.11	287	P	Pn	20 15 21.1	-3.2
	2.2nm3μm6μm621nm,1.0s						
SPSI	Sidrap Palu	6.31	357	P	Pn	20 15 29.4	+2.2
	1.2nm4μm3μm414nm,0.9s						
GMJI	Gumukmas	6.83	287	P	Pn	20 15 31.2	-3.1
	1.3nm2μm297nm,0.9s						
KMMI	Kalianget	6.84	298	P	Pn	20 15 35.6	+1.3
	0.6nm117nm,1.0s						
TTSI	Tana Toraja	7.22	358	P	Pn	20 15 44.0	+4.3
NGJI	Ngawi	8.98	288	P	Pn	20 16 06.3	+2.5
	84nm,1.1s						
PCJI	Pacitan	9.01	283	P	Pn	20 16 03.9	-0.3
	3μm140nm,0.8s						
WOJI	Wonogiri, Jawa	9.35	285	P	Pn	20 16 08.6	-0.2
	116nm,0.9s						
PCI	Palu	9.35	359	P	Pn	20 16 12.1	+3.3
	4μm406nm,1.1s						
FITZ	Fitzroy Crossi	9.44	146	Pn	Pn	20 16 08.4	-1.7
FITZ	Fitzroy Crossi	9.44	146	Pn	Pn	20 16 07.9	-2.3
	5.2nm,0.3s,baz=333,slow=8.7,SNR=105						
FITZ				Sn	Sn	20 17 46.7	-8.4
	50nm,0.3s,baz=179,slow=18,SNR=14						
FITZ				LR	LR	20 20 17.4	
	comp=Z,2μm,21.0s,baz=318,slow=40						
APSI	Ampana	9.47	10	P	Pn	20 16 12.9	+2.4
	1μm102nm,0.9s						
BKB	Balikpapan	9.53	341	P	Pn	20 16 16.1	+4.8
LUWI	Luwuk	9.60	17		Pn	20 16 14.2	+1.9
LUWI	Luwuk	9.60	17	P	Pn	20 16 15.5	+3.2
LUWI	Luwuk	9.60	17	P	Pn	20 16 15.3	+3.0
UGM	Wanagama	9.71	283		Pn	20 16 13.7	-0.1
UGM	Wanagama	9.71	283	P	Pn	20 16 14.0	+0.2
	200nm,0.9s						
YOGI	Yogyakarta	9.95	284	P	Pn	20 16 19.0	+1.9
	160nm,1.4s						
KNRA	Kununurra	10.02	123		Pn	20 16 17.0	-1.0
KNRA	Kununurra	10.02	123	P	Pn	20 16 16.8	-1.2
	comp=Z,123nm,0.6s						
SMRI	Semarang	10.04	288		Pn	20 16 18.3	0.0
SMRI	Semarang	10.04	288	P	Pn	20 16 20.7	+2.3
SMRI	Semarang	10.04	288	P	Pn	20 16 19.0	+0.6
	comp=Z,116nm,0.8s						
SANI	Sanana	10.11	36	P	Pn	20 16 20.6	+1.4
SANI	Sanana	10.11	36	P	Pn	20 16 21.3	+2.1
	comp=Z,1μmcomp=Z,85nm,1.0s						
SMKI	Samarinda	10.20	344	P	Pn	20 16 20.5	0.0
	comp=Z,3μmcomp=Z,285nm,0.9s						
AAI	Ambon	10.42	51	P	Pn	20 16 25.4	+1.9
	comp=Z,2μmcomp=Z,84nm,1.2s						
MPSI	Mapaga	10.58	359	P	Pn	20 16 28.2	+2.5
MBWA	Marble Bar	10.79	182		Pn	20 16 26.0	-2.6
MBWA	Marble Bar	10.79	182	P	Pn	20 16 25.9	-2.6
	comp=Z,65nm,0.8s						
MBWA	Marble Bar	10.79	182	P	Pn	20 16 26.6	-2.0
MRSI	Marisa	10.88	10	P	Pn	20 16 32.6	+2.8
	comp=Z,978nmcomp=Z,133nm,1.0s						
MTN	Manton Dam	11.14	104		Pn	20 16 31.6	-1.8
MTN	Manton Dam	11.14	104	P	Pn	20 16 31.3	-2.1
MTN	Manton Dam	11.14	104	P	Pn	20 16 31.6	-1.8
PSA00	Pilbara Seismi	11.20	181		Pn	20 16 31.2	-2.9
PSA00	Pilbara Seismi	11.20	181		Pn	20 16 30.2	-3.9
PSA00	Pilbara Seismi	11.20	181	P	Pn	20 16 31.1	-3.1
	comp=Z,113nm,0.8s						
PSA00	Pilbara Seismi	11.20	181	P	Pn	20 16 31.6	-2.6
SAUI	Saumlaki	11.34	79	P	Pn	20 16 37.2	+1.1
TOLI2	Tolitoli	11.37	4	P	Pn	20 16 37.7	+1.2
KMSI	Cibinong	11.50	20	P	Pn	20 16 40.8	+2.5
	comp=Z,2μmcomp=Z,3μmcomp=Z,260nm,1.1s						
KDU	Kakadu	12.40	102	P	Pn	20 16 48.9	-1.6
KDU	Kakadu	12.40	102	P	Pn	20 16 48.4	-2.2
BBJI	Bungbulang	12.58	282	P	Pn	20 16 55.2	+2.1
LEM	Lembang	12.78	285	Pn	Pn	20 16 51.5	-4.4
	comp=Z,3.9nm,0.3s,baz=55,slow=10.0,SNR=11						
	comp=Z,33nm,0.8s						
LEM	Lembang	12.78	285	P	Pn	20 16 54.4	-1.5
	comp=Z,53nm,1.1s						
TNTI	Ternate	13.20	34	P	Pn	20 17 02.6	+1.1
GIRL	Giralia	13.47	204	Pn	Pn	20 17 03.3	-1.8
FAKI	Fak Fak	14.16	60		Pn	20 17 12.9	-1.7
FAKI	Fak Fak	14.16	60	P	Pn	20 17 13.7	-0.9
FAKI	Fak Fak	14.16	60	P	Pn	20 17 12.3	-2.3
	comp=Z,103nm,0.6s						
SWI	Sorong	14.57	51	P	Pn	20 17 19.9	-0.2
	comp=Z,1μmcomp=Z,143nm,0.9s						
SGSI	Sangihe	14.94	22	P	P	20 17 28.0	-2.0
	comp=Z,3μmcomp=Z,229nm,1.2s						
KSM	Kuching	15.21	320	P	Pn	20 17 30.4	+1.8
MEEK	Meekatharra	16.30	185	P	Pn	20 17 39.7	-2.9
	comp=Z,79nm,0.8s						
MEEK	Meekatharra	16.30	185	P	Pn	20 17 40.9	-1.7
KKM	Kota Kinabalu	16.69	347	P	P	20 17 49.6	0.0
KKM	Kota Kinabalu	16.69	347	P	P	20 17 50.6	+1.0
LWLI	Liwa	16.70	287	P	Pn	20 17 47.3	-0.5
	comp=Z,3μmcomp=Z,261nm,0.8s						
WB0	Warramunga Arr	16.72	126		Pn	20 17 44.5	-3.5
WRA	Warramunga Arr	16.77	126		Pn	20 17 45.0	-3.7
WRA	Warramunga Arr	16.77	126	Pn	Pn	20 17 44.9	-3.7
	comp=Z,2.6nm,0.3s,baz=295,slow=14,SNR=90						
WRA				Sn	Sn	20 20 39.1	-15
	comp=Z,3.3nm,0.3s,baz=301,slow=23,SNR=8.0						
WRA				LR	LR	20 25 14.7	
	comp=Z,2μm,19.1s,baz=314,slow=40						
WRA	Warramunga Arr	16.77	126	P	Pn	20 17 45.0	-3.7
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRAB	Tennant Creek	16.78	126		Pn	20 17 45.7	-3.0
WRAB	Tennant Creek	16.78	126	*i* P	Pn	20 17 46.0	-2.7
WRAB				pmax	pmax		
	comp=Z,40nm,1.0s						
WR8	Warramunga Arr	16.91	126		Pn	20 17 46.9	-3.4
WR8				IAmb	IAmb	20 17 57.6	
	comp=Z,83nm,0.8s						
DAV	Davao City (W)	18.12	18	LR	LR	20 25 42.7	
	comp=Z,990nm,19.7s,baz=206,slow=40						
BAKI	Biak	18.35	61	P	Pn	20 18 09.3	+1.2
	comp=Z,202nm,1.0s						
KSI	Kapahiang	18.54	290	P	P	20 18 08.2	-1.8
	comp=Z,227nm,0.7s						
AS31	Alice Springs	18.73	137	P	P	20 18 12.3	+0.3
AS31	Alice Springs	18.73	137	P	P	20 18 11.8	-0.2
	comp=Z,31nm,0.6s						
ASAR	Alice Springs	18.73	137	P	P	20 18 12.3	+0.3
	comp=Z,4.1nm,0.3s,baz=316,slow=12,SNR=338						
ASAR				S	Sn	20 21 27.9	-14
	comp=Z,19nm,0.8s,baz=314,slow=25,SNR=5.7						
ASAR				LR	LR	20 25 46.1	
	comp=Z,2μm,21.2s,baz=316,slow=38						
	comp=Z,46nm,0.8s						
AS01	Alice Springs	18.76	137	P	P	20 18 12.6	+0.2
MORW	Morawa	19.04	191	P	P	20 18 14.6	-0.6
MORW				IAmb	IAmb	20 18 21.5	
	comp=Z,46nm,0.6s						
MORW	Morawa	19.04	191	P	P	20 18 14.6	-0.6
	comp=Z,66nm,0.8s						
MORW	Morawa	19.04	191	P	Pn	20 18 15.9	-0.4
SMPI	Sarmi	20.29	67	P	P	20 18 28.7	-0.4
BLDU	Ballidu	20.44	188	P	P	20 18 30.5	-0.1
	comp=Z,132nm,1.0s						
BLDU	Ballidu	20.44	188	P	P	20 18 30.1	-0.4
KMBL	Kambalda	21.02	176	P	P	20 18 36.1	-0.7
	comp=Z,93nm,0.9s						
KMBL	Kambalda	21.02	176	P	P	20 18 36.9	+0.1
KLBR	Kellerberrin	21.28	185	P	P	20 18 39.1	-0.5
	comp=Z,160nm,0.9s						
KLBR	Kellerberrin	21.28	185	P	P	20 18 40.1	+0.5
GENI	Genyem	21.39	70	P	P	20 18 43.2	+2.3
GENI	Genyem	21.39	70	P	P	20 18 41.6	+0.7
	comp=Z,111nm,0.7s						
QIS	Mount Isa	21.40	121	P	P	20 18 41.4	+0.4
	comp=Z,103nm,0.9s						
QIS	Mount Isa	21.40	121	P	P	20 18 42.0	+1.0
BKNI	Bangkinang	21.67	298	P	P	20 18 45.9	+2.0
FORT	Forrest	21.68	161	P	P	20 18 42.4	-1.5
FORT				IAmb	IAmb	20 18 53.5	
	comp=Z,131nm,1.2s						
FORT	Forrest	21.68	161	P	P	20 18 43.7	-0.2
	comp=Z,86nm,0.8s						
FORT	Forrest	21.68	161	P	P	20 18 45.0	+1.1
MUN	Mundaring	21.85	189	P	P	20 18 44.9	-0.8
	comp=Z,86nm,0.8s						
MUN	Mundaring	21.85	189	P	P	20 18 46.2	+0.5
PPI	Padang Panjang	21.86	295	P	P	20 18 47.0	+1.0
JAY	Jayapura	21.92	71	P	P	20 18 47.0	+0.4
	comp=Z,8.1nm,0.5s,baz=242,slow=12,SNR=6.6						
	comp=Z,8.1nm,0.5s						
JAY	Jayapura	21.92	71	P	P	20 18 47.2	+0.5
	comp=Z,61nm,0.9s						
NWAO	Narrogin (SRO)	22.66	186	P	P	20 18 54.2	-0.1
NWAO	Narrogin (SRO)	22.66	186	P	P	20 18 53.9	-0.5
	comp=Z,228nm,0.7s						
NWAO	Narrogin (SRO)	22.66	186	LR	LR	20 27 55.1	
	comp=Z,1μm,20.3s,baz=26,slow=37						
NWAO	Narrogin (SRO)	22.66	186	P	P	20 18 54.4	+0.1
NWAO	Narrogin (SRO)	22.66	186	P	P	20 18 54.5	+0.1
NWAO	Narrogin (SRO)	22.66	186	P	P	20 18 54.2	-0.1
NWAO				pmax	pmax		
	comp=Z,90nm,0.6s						
SISI	Saibi	22.67	292	P	P	20 18 56.4	+1.8
	comp=Z,51nm,0.8s						
COEN	Coen	22.89	101	P	P	20 18 57.0	0.0
COEN				IAmb	IAmb	20 19 05.7	
	comp=Z,46nm,0.9s						
COEN	Coen	22.89	101	P	P	20 18 56.6	-0.3
	comp=Z,56nm,1.0s						
COEN	Coen	22.89	101	P	P	20 18 57.1	+0.2
TGY	Tagaytay City	24.27	2	LR	LR	20 28 27.8	
	comp=Z,852nm,21.8s,baz=160,slow=36						
RKGY	Rocky Gully	24.35	186	P	P	20 19 12.2	+1.5
	comp=Z,81nm,1.2s						
PSI	Prapat	24.75	301	LR	LR	20 30 52.6	
	comp=Z,1μm,20.7s,baz=130,slow=42						
PSI	Prapat	24.75	301	P	P	20 19 14.3	-0.3
PSI	Prapat	24.75	301	P	P	20 19 14.0	-0.6
PSI				pmax	pmax		
	comp=Z,36nm,0.9s						
MTSU	Mount Surprise	24.75	111	P	P	20 19 15.9	+1.3
	comp=Z,61nm,0.8s						
MTSU	Mount Surprise	24.75	111	P	P	20 19 16.0	+1.5
DLV	Lat	24.92	332	P	P	20 19 19.2	+3.0
GSI	Gunungsitoli	25.17	296	P	P	20 19 16.6	-1.7
GSI	Gunungsitoli	25.17	296	P	P	20 19 20.0	+1.6
PMG	Port Moresby	26.72	90	LR	LR	20 31 57.6	
	comp=Z,1μm,20.9s,baz=254,slow=41						
BBOO	Buckleboo	26.81	149	P	P	20 19 32.1	-0.9
BBOO				IAmb	IAmb	20 19 36.4	
	comp=Z,29nm,0.6s						
BBOO	Buckleboo	26.81	149	P	P	20 19 33.1	0.0
	comp=Z,50nm,0.7s						
BBOO	Buckleboo	26.81	149	P	P	20 19 33.6	+0.6
CTAO	Charters Tower	27.05	114	P	P	20 19 34.3	-1.0
CTAO	Charters Tower	27.05	114	P	P	20 19 36.5	+1.2
CTAO	Charters Tower	27.05	114	P	P	20 19 34.3	-1.0
CTAO				pmax	pmax		
	comp=Z,18nm,0.8s						
QLP	Quilpie	27.99	129	P	P	20 19 45.1	+1.5
HTT	Hallett	28.81	146	P	P	20 19 52.0	+1.0
STKA	Stephens Creek	29.28	140	P	P	20 19 54.1	-1.0
STKA	Stephens Creek	29.28	140	P	P	20 19 55.9	+0.7
	comp=Z,113nm,0.9s						
STKA	Stephens Creek	29.28	140	P	P	20 19 55.6	+0.4
	comp=Z,23nm,0.8s,baz=314,slow=9.5,SNR=46						
STKA				PcP	PcP	20 23 02.2	+0.9
	comp=Z,4.7nm,0.6s,baz=49,slow=1.3,SNR=3.2						
STKA				LR	LR	20 32 22.4	
	comp=Z,924nm,21.2s,baz=300,slow=38						
	comp=Z,23nm,0.8s						
STKA	Stephens Creek	29.28	140	P	P	20 19 55.8	+0.7
STKA	Stephens Creek	29.28	140	*i* P	P	20 19 55.1	0.0
QIZ	Qiongzhong	30.85	341	P	P	20 20 10.5	+1.5
QIZ				S	S	20 25 12.4	+2.3
QIZ				pmax	pmax		
	comp=Z,29nm,1.6s						
QIZ				LR	LR		
	comp=Z,420nm,14.8s						
QIZ				LR	LR		
	comp=Z,690nm,21.5s						
CMSA	Cobar Meteorol	31.78	135	P	P	20 20 18.0	+0.8
	comp=Z,17nm,0.9s						
CMSA	Cobar Meteorol	31.78	135	P	P	20 20 18.5	+1.3
ARPS	Mount Arapiles	32.89	147	P	P	20 20 27.3	+0.5
	comp=Z,37nm,0.6s						
ARPS	Mount Arapiles	32.89	147	P	P	20 20 28.2	+1.4
EIDS	Eidsvold	33.00	121	P	P	20 20 32.1	+4.1
YULB	Yu-li	33.52	2	P	P	20 20 35.5	+3.1
GUMO	Guam	34.21	47	LR	LR	20 35 38.9	
	comp=Z,72nm,20.6s,baz=226,slow=38						
SLVN	Son La	35.22	333	P	P	20 20 50.0	+2.7
YNG	Young	35.24	137	P	P	20 20 48.5	+1.2
	comp=Z,31nm,1.0s						
CM31	Chiang Mai Arr	35.37	324	P	P	20 20 47.6	-0.9
CM31				IAmb	IAmb	20 21 00.2	
	comp=Z,13nm,0.9s						
CMAR	Chiang Mai Arr	35.37	324	P	P	20 20 48.3	-0.3
CMAR	Chiang Mai Arr	35.37	324	P	P	20 20 48.5	0.0
	comp=Z,3.2nm,0.8s,baz=156,slow=7.1,SNR=23						
CMAR				PcP	PcP	20 23 20.0	+1.8
	comp=Z,3.4nm,1.0s,baz=179,slow=3.0,SNR=5.1						
	comp=Z,3.2nm,0.8s						
CMAR	Chiang Mai Arr	35.37	324	*ce*P	P	20 20 48.5	0.0
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TOO	Toolangi	35.50	144	P	P	20 20 49.6	+0.1
TOO	Toolangi	35.50	144	P	P	20 20 50.4	+0.8
	comp=Z,8.9nm,1.0s						
TOO	Toolangi	35.50	144	P	P	20 20 49.6	+0.1
TOO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ARMA	Armidale	35.53	129	IAmb	IAmb	20 20 53.5	
	comp=Z,17nm,0.8s						
ARMA	Armidale	35.53	129	P	P	20 20 52.3	+2.4
ARMA	Armidale	35.53	129	P	P	20 20 50.9	+0.9
CHTO	Chiang Mai	35.65	324	P	P	20 20 49.9	-1.1
CHTO				IAmb	IAmb	20 20 58.5	
	comp=Z,20nm,0.9s						
CHTO	Chiang Mai	35.65	324	P	P	20 20 51.6	+0.7
CHTO	Chiang Mai	35.65	324	P	P	20 20 49.9	-1.1
CHTO				pmax	pmax		
	comp=Z,21nm,1.0s						
CHTO	Chiang Mai	35.65	324	P	P	20 20 50.5	-0.4
GULI	GuiLin	36.63	345	P	P	20 21 00.6	+1.4
JOW	Kunigami	37.77	12	P	P	20 21 08.2	-0.6
JOW	Kunigami	37.77	12	LR	LR	20 37 03.7	
	comp=Z,164nm,20.6s,baz=190,slow=37						
GYA	Guiyang	38.80	341	⇑P	P	20 21 19.6	+1.9
GYA				pP	sP	20 21 33.8	0.0
GYA				PP	PnPn	20 22 50.9	+1.3
GYA				PcP	PcP	20 23 32.8	+4.2
GYA				S	S	20 27 11.4	-1.3
GYA				pmax	pmax		
	comp=Z,13nm,1.3s						
GYA				LR	LR		
	comp=Z,480nm,19.4s						
GYA				LR	LR		
	comp=Z,310nm,22.3s						
GYA				LR	LR		
	comp=Z,690nm,22.5s						
KMI	Kunming	39.06	335	P	P	20 21 20.3	+0.3
KMI				S	S	20 27 18.1	+1.3
KMI				pmax	pmax		
	comp=Z,13nm,0.9s						
KMI				LR	LR		
	comp=Z,380nm,23.6s						
KMI				LR	LR		
	comp=Z,350nm,16.1s						
KMI				LR	LR		
	comp=Z,460nm,17.0s						
ALEG	Aligegeo Malai	40.09	91	P	P	20 21 30.0	+1.5
PZH	PanZhiHua	40.69	334	P	P	20 21 32.4	-1.0
PZH				S	S	20 27 41.9	+0.8
PZH				pmax	pmax		
	comp=Z,20nm,0.9s						
PZH				LR	LR		
	comp=Z,240nm,16.4s						
PZH				LR	LR		
	comp=Z,460nm,19.8s						
PZH				LR	LR		
	comp=Z,330nm,22.6s						
TNCH	TengChong	40.92	329	P	P	20 21 35.1	-0.3
TNCH				pP	sP	20 21 52.0	+0.3
TNCH				S	S	20 27 40.8	-3.9
TNCH				SS	SS	20 30 45.5	-2.1
TNCH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TNCH				pmax	pmax		
	comp=Z,110nm,4.9s						
TNCH				LR	LR		
	comp=Z,220nm,12.6s						
TNCH				LR	LR		
	comp=Z,370nm,15.5s						
TNCH				LR	LR		
	comp=Z,680nm,20.4s						
WHN	Wuhan	40.99	352	P	P	20 21 36.3	+0.7
WHN				pmax	pmax		
	comp=Z,32nm,0.7s						
ENH	Enshi	41.61	346	IAmb	IAmb	20 21 48.1	
	comp=Z,31nm,0.7s						
ENH	Enshi	41.61	346	P	P	20 21 41.2	+0.4
ENH	Enshi	41.61	346	P	P	20 21 39.6	-1.2
NJ2	Nanjing	42.14	358	*e*P	P	20 21 48.9	+3.9
NJ2				pP	sP	20 22 01.3	-0.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PALK	Pallekele	42.90	292	P	P	20 21 51.1	-0.5
	comp=Z,19nm,1.0s,baz=130,slow=8.7,SNR=5.5						
PALK				LR	LR	20 39 49.7	
	comp=Z,507nm,21.7s,baz=110,slow=36						
	comp=Z,19nm,1.0s						
PALK	Pallekele	42.90	292	P	P	20 21 51.6	0.0
JCJ	Chichijima	42.94	30	LR	LR	20 39 09.8	
	comp=Z,59nm,19.8s,baz=135,slow=35						
KOUNC	Koumac, New Ca	43.71	109	P	P	20 21 59.1	+1.1
CD2	Chengdu	43.87	340	P	P	20 21 58.8	-0.4
CD2				S	S	20 28 28.4	+0.7
CD2				pmax	pmax		
	comp=Z,40nm,0.6s						
CD2				LR	LR		
	comp=Z,670nm,20.2s						
JNU	Nakatsue	44.41	13	LR	LR	20 41 24.4	
	comp=Z,151nm,19.6s,baz=162,slow=37						

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LYN   LuoYang           45.19 351 eP    P      20 22 08.6 -1.0
LYN                               pmax  pmax
      comp=Z,16nm,0.8s
LYN                               LR    LR
      comp=Z,320nm,18.2s
LYN                               LR    LR
      comp=Z,340nm,15.1s
LYN                               LR    LR
      comp=Z,440nm,20.3s
XAN   Xi'an             45.36 347 P     P      20 22 09.6 -1.4
XAN                               S     S      20 28 46.9 -2.3
XAN                               pmax  pmax
      comp=Z,19nm,0.7s
XAN                               pmax  pmax
      comp=Z,120nm,4.0s
XAN                               LR    LR
      comp=Z,780nm,16.8s
XAN                               LR    LR
      comp=Z,330nm,18.2s
XAN                               LR    LR
      comp=Z,1µm,17.9s
DZM   Mont Dzumac       45.89 111 eP    P      20 22 14.5 -1.0
      comp=Z,30nm,1.1s
DZM                               eS    S      20 28 54.5 -2.9
      comp=Z,174nm,30.4s
DZM                               eLR   LR     20 35 12.5
      comp=Z,1µm,21.7s
DZM   Mont Dzumac       45.89 111 P     P      20 22 16.8 +1.3
      comp=Z,6.8nm,0.8s,baz=286,slow=15,SNR=3.3
DZM                               LR    LR     20 43 01.6
      comp=Z,888nm,19.1s,baz=249,slow=38
      comp=Z,6.8nm,0.8s
DZM   Mont Dzumac       45.89 111 P     P      20 22 16.5 +1.0
SANVU Saraoutou         46.17 101 P     P      20 22 18.6 +0.9
H08S2 Diego Garcia H    47.02 269 T     T      21 12 41.0
      baz=96,slow=75,SNR=655
H08S3 Diego Garcia H    47.03 269 T     T      21 12 41.7
      baz=96,slow=75,SNR=683
H08S1 Diego Carcia H    47.04 269 T     T      21 12 39.1
      baz=96,slow=75,SNR=711
JHJ2  Mitsune           47.11  23 P     P      20 22 22.2 -2.5
HNS   HongShan          47.72 354 ⇑P    P      20 22 29.3  0.0
HNS                               S     S      20 29 27.4 +4.7
HNS                               pmax  pmax
      comp=Z,9.0nm,1.0s
HNS                               LR    LR
      comp=Z,260nm,14.8s
HNS                               LR    LR
      comp=Z,300nm,16.0s
HNS                               LR    LR
      comp=Z,350nm,14.7s
KSRS  Korea Array       48.08   8 P     P      20 22 32.9 +0.8
      comp=Z,3.9nm,0.8s,baz=179,slow=8.3,SNR=10
KSRS                              PcP   PcP    20 24 00.8 +1.4
      comp=Z,1.9nm,0.7s,baz=191,slow=3.4,SNR=5.6
KSRS                              LR    LR     20 43 08.5
      comp=Z,69µm,21.9s,baz=180,slow=37
      comp=Z,3.9nm,0.8s
LSA   Lhasa             48.56 326 IAmb  IAmb   20 22 51.9
      comp=Z,22nm,1.1s
LSA   Lhasa             48.56 326 P     P      20 22 36.5 -0.1
LSA                               pP    pP     20 22 48.1 -0.1
LZH   Lanzhou           48.62 342 eP    P      20 22 34.3 -2.2
LZH                               pP    pP     20 22 48.4 +0.3
LZH                               sP    sP     20 22 56.3 +3.4
LZH                               S     S      20 29 32.1 -3.7
LZH                               pmax  pmax
      comp=Z,16nm,1.1s
LZH                               LR    LR
      comp=Z,370nm,18.0s
LZH                               LR    LR
      comp=Z,440nm,16.3s
LZH                               LR    LR
      comp=Z,560nm,18.9s
HYB   Hyderabad         49.40 304 eP    P      20 22 43.3 +0.5
HYB                               esP   sP     20 23 00.3 +1.4
HYB                               ePP   PP     20 24 36.8 -0.4
HYB                               eS    S      20 29 46.8 -0.4
MAJO  Matsushiro        49.64  19 P     P      20 22 46.6 +2.4
MAJO  Matsushiro        49.64  19 P     P      20 22 42.0 -2.1
MJAR  Matsushiro Arr    49.64  19 P     P      20 22 42.2 -2.0
      comp=Z,12nm,1.1s,baz=196,slow=8.0,SNR=10
MJAR                              LR    LR     20 44 41.1
      comp=Z,166nm,19.3s,baz=180,slow=37
      comp=Z,12nm,1.1s
EVN   Everest           49.82 321 P     P      20 22 45.2 -1.3
BJT   Baijiatuau        50.20 356 IAmb  IAmb   20 23 02.7
      comp=Z,13nm,0.6s
BJT   Baijiatuau        50.20 356 P     P      20 22 48.0 -0.3
BJT   Baijiatuau        50.20 356 P     P      20 22 47.3 -1.0
BJI   Beijing           50.23 356 P     P      20 22 47.3 -1.2
BJI                               pmax  pmax
      comp=Z,8.0nm,1.2s
BJI                               pmax  pmax
      comp=Z,83nm,6.5s
BJI                               LR    LR
      comp=Z,150nm,24.4s
BJI                               LR    LR
      comp=Z,98nm,18.7s
BJI                               LR    LR
      comp=Z,130nm,22.7s
HHC   Hu-ho-hao-te      51.51 352 eP    P      20 23 02.3 +4.0
HHC                               pmax  pmax
      comp=Z,13nm,0.7s
GOMU  GeErMu            52.02 334 P     P      20 23 04.4 +1.9
GOMU                              S     S      20 30 18.4 -5.2
GOMU                              pmax  pmax
      comp=Z,6.0nm,0.5s
GOMU                              LR    LR
      comp=Z,460nm,13.3s
GOMU                              LR    LR
      comp=Z,270nm,13.7s
GOMU                              LR    LR
      comp=Z,500nm,13.4s
GTA   Gaotai            52.93 340 eP    P      20 23 09.3 +0.4
GTA                               pmax  pmax
      comp=Z,5.0nm,1.1s
GTA                               LR    LR
      comp=Z,360nm,18.3s
GTA                               LR    LR
      comp=Z,250nm,18.3s
GTA                               LR    LR
      comp=Z,480nm,19.5s
XLT   XiLinHaoTe        54.07 356 eP    P      20 23 16.0 -1.2
XLT                               pmax  pmax
      comp=Z,28nm,1.1s
CN2   Changchun         54.08   5 eP    P      20 23 20.3 +3.2
CN2                               pmax  pmax
      comp=Z,10.0nm,0.7s
WKZ   Wanaka            54.22 139 P     P      20 23 17.5 -0.7
RPZ   Rata Peaks        55.14 137 P     P      20 23 26.2 +1.3
      comp=Z,24nm,0.5s,baz=295,slow=3.7,SNR=20
      comp=Z,24nm,0.5s
RPZ   Rata Peaks        55.14 137 P     P      20 23 24.4 -0.6
USRK  Ussuriysk Ar.     55.33  10 P     P      20 23 25.1 -1.0
      comp=Z,5.2nm,0.6s,baz=187,slow=7.5,SNR=14
USRK                              LR    LR     20 48 41.4
      comp=Z,123nm,19.5s,baz=193,slow=38
      comp=Z,5.2nm,0.6s
MDJ   Mudanjiang        55.35   8 P     P      20 23 26.6 +0.3
MDJ                               pmax  pmax
      comp=Z,8.0nm,0.5s
CASY  Casey             56.27 185 P     P      20 23 31.4 -1.2
CASY                              IAmb  IAmb   20 23 35.0
      comp=Z,12nm,1.1s
CASY  Casey             56.27 185 P     P      20 23 33.0 +0.5
MSVF  Nonsavu           56.57 104 P     P      20 23 37.7 +2.0
MSVF                              pP    sP     20 23 49.9 -1.9
MSWZ  Moikau Station    57.34 133 P     P      20 23 38.4 -2.2
BKZ   Black Stump Fm    57.67 130 P     P      20 23 44.4 +1.3
DRV   Dumont d'Urvil    57.89 171 P     P      20 23 45.1 +1.1
ASAJ  Asahikawa         57.91  19 LR    LR     20 50 37.3
      comp=Z,145nm,19.1s,baz=183,slow=38
ASAJ  Asahikawa         57.91  19 P     P      20 23 43.8 -0.7
ASAJ                              pmax  pmax
      comp=Z,413nm,2.0s
JKA   Kamikawa-asahi    57.91  19 P     P      20 23 43.8 -0.6
ULN   Ulaanbaatar       59.06 350 i P   P      20 23 51.1 -1.5
ULN                               pmax  pmax
      comp=Z,15nm,1.0s
ULN   Ulaanbaatar       59.06 350 P     P      20 23 51.7 -1.0
SONM  Songino Array     59.15 349 P     P      20 23 52.6 -0.6
SONM                              IAmb  IAmb   20 23 58.7
      comp=Z,13nm,0.9s
SONM  Songino Array     59.15 349 P     P      20 23 52.5 -0.6
      comp=Z,10nm,0.8s,baz=171,slow=7.1,SNR=24
SONM                              ScP   ScP    20 28 42.8 +3.8
      comp=Z,1.0nm,0.9s,baz=186,slow=4.3,SNR=4.1
SONM                              LR    LR     20 51 59.9
      comp=Z,376nm,20.3s,baz=200,slow=39
      comp=Z,10nm,0.8s
SONM  Songino Array     59.15 349 P     P      20 23 52.6 -0.6
SONM                              pmax  pmax
      comp=Z,13nm,0.9s
KLR   Kul'dur           60.17   9 LR    LR     20 52 19.2
      comp=Z,115nm,19.0s,baz=213,slow=38
KLR   Kul'dur           60.17   9ceP    P      20 23 59.5 -0.6
KLR                               pmax  pmax
      comp=Z,3.0nm,1.0s
YSS   Yuzhno-Sakhali    60.51  18 eP    P      20 23 58.8 -3.6
YSS                               MLR   MLR
      comp=Z,700nm,16.0s
HEH   HeiHe             60.65   5 eP    P      20 24 01.6 -1.7
HEH                               pmax  pmax
      comp=Z,32nm,1.1s
WMQ   Urumqi            61.38 334 eP    P      20 24 08.4 -0.1
WMQ                               pmax  pmax
      comp=Z,27nm,0.8s
WMQ                               LR    LR
      comp=Z,430nm,22.9s
WMQ                               LR    LR
      comp=Z,240nm,21.5s
WMQ                               LR    LR
      comp=Z,240nm,24.9s
ZAK   Zakamensk         62.19 348 eP    P      20 24 12.3 -1.5
ZAK                               pmax  pmax
      comp=Z,7.0nm,1.1s
CIT   Chita             62.33 355 eP    P      20 24 13.6 -1.1
CIT                               e            20 24 37.4
CIT                               pmax  pmax
      comp=Z,24nm,1.5s
NIL   Nilore            62.37 317 P     P      20 24 13.5 -1.8
MOY   Mondy             63.89 347 eP    P      20 24 24.0 -1.1
MOY                               pmax  pmax
      comp=Z,12nm,1.5s
ZEA   Zeya              64.09   5 eP    P      20 24 25.1 -1.1
ZEA                               pmax  pmax
      comp=N,10.0nm,1.3s
ZEA                               pmax  pmax
      comp=Z,10.0nm,1.0s
KSH   Kashi             64.27 323 P     P      20 24 27.1 -0.8
KSH                               PcP   PcP    20 25 03.6 +1.2
KSH                               pmax  pmax
      comp=Z,20nm,0.9s
KSH                               LR    LR
      comp=Z,210nm,15.1s
KSH                               LR    LR
      comp=Z,260nm,17.2s
KSH                               LR    LR
      comp=Z,230nm,18.5s
TARG  Taragay, Kyrgy    64.70 326 IAmb  IAmb   20 24 50.9
      comp=Z,12nm,0.9s
CCD   Concordia, Ant    64.79 179 P     P      20 24 33.2 +2.1
CCD                               pP    sP     20 24 47.2 -0.1
SHLS  Shalkode          64.81 328 eP    P      20 24 28.7 -2.6
SHLS                              pmax  pmax
      comp=Z,8.0nm,0.8s
SHLS  Shalkode          64.81 328 eP    P      20 24 28.8 -2.6
      comp=Z,8.1nm,0.8s
UZB   Uzynbulak         65.03 328 eP    P      20 24 31.5 -1.3
UZB                               pmax  pmax
      comp=Z,8.0nm,1.2s
UZB   Uzynbulak         65.03 328 eP    P      20 24 31.5 -1.3
      comp=Z,7.9nm,1.2s
SATY  Saty              65.30 328 eP    P      20 24 33.1 -1.4
SATY                              pmax  pmax
      comp=Z,7.0nm,0.9s
SATY  Saty              65.30 328 eP    P      20 24 33.2 -1.4
      comp=Z,7.4nm,0.9s
KPKS  Kokpek            65.43 328 eP    P      20 24 34.0 -1.3
KPKS  Kokpek            65.43 328 eP    P      20 24 34.1 -1.3
ZSN   Zaisan            65.47 335 eP    P      20 24 34.4 -1.0
ZSN                               pmax  pmax
      comp=Z,6.0nm,0.9s
ZSN   Zaisan            65.47 335 eP    P      20 24 34.5 -1.0
      comp=Z,6.0nm,0.9s
NRN   Naryn             65.51 325 IAmb  IAmb   20 24 42.9
      comp=Z,10nm,0.8s
KBL   Kabul             65.75 315 P     P      20 24 37.5 -0.2
KBL                               pmax  pmax
      comp=Z,17nm,0.8s
MK31  Makanchi Array    66.09 333ceP    P      20 24 37.5 -1.9
MKAR  Makanchi Array    66.09 333       P      20 24 38.4 -1.1
MKAR  Makanchi Array    66.09 333 P     P      20 24 38.7 -0.8
      comp=Z,7.2nm,0.8s,baz=148,slow=7.8,SNR=48
      comp=Z,7.2nm,0.8s
AAA   Alma-Ata          66.19 327 eP    P      20 24 38.9 -1.3
AAA                               pmax  pmax
      comp=Z,15nm,1.0s
AAA   Alma-Ata          66.19 327 eP    P      20 24 39.0 -1.3
      comp=Z,15nm,1.0s
BOOM  Boomskoye usch    66.24 326 IAmb  IAmb   20 24 47.3
      comp=Z,13nm,0.8s
MAKZ  Makanchi          66.25 332 P     P      20 24 39.3 -1.1
ARXS  Arharly           66.40 328 i P   P      20 24 39.9 -1.6
TDK   Taldyqorghan      66.65 329 eP    P      20 24 42.0 -1.0
TDK                               pmax  pmax
      comp=Z,18nm,1.3s
TDK   Taldyqorghan      66.65 329 eP    P      20 24 42.0 -1.0
      comp=Z,18nm,1.3s
KBK   Karagaybulak      66.90 325 P     P      20 24 44.9 -0.1
      SNR=5.3
KUU   Kurty             66.96 327 eP    P      20 24 43.8 -1.3
KUU                               pmax  pmax
      comp=Z,9.0nm,1.1s
KUU   Kurty             66.96 327 eP    P      20 24 43.8 -1.3
      comp=Z,8.8nm,1.1s
AAK   Ala-Archa         67.15 325 P     P      20 24 45.8 -0.7
      SNR=8.0
AAK   Ala-Archa         67.15 325 LR    LR     20 59 54.4
      comp=Z,207nm,18.2s,baz=134,slow=41
AAK   Ala-Archa         67.15 325ceP    P      20 24 46.1 -0.3
AAK                               pmax  pmax
      comp=Z,15nm,1.3s
AAK   Ala-Archa         67.15 325 P     P      20 24 45.8 -0.7
AML   Almayashu         67.28 324 P     P      20 24 46.8 -0.8
      SNR=10
USP   Ospenovka         67.55 326 P     P      20 24 48.0 -0.8
      SNR=7.5
EKS2  Erkin-Say         67.57 325 P     P      20 24 48.9 -0.2
      SNR=8.3
H04N2 CROZET ISLANDS    67.59 224 T     T      21 38 41.5
      baz=81,slow=74
SGDS  Sogindy           67.60 326 eP    P      20 24 47.8 -1.3
H04N1 CROZET ISLANDS    67.60 224 T     T      21 38 39.0
      baz=81
H04N3 CROZET ISLANDS    67.60 224 T     T      21 38 37.1
      baz=81,slow=74
BTK   Batken            67.72 321 IAmb  IAmb   20 25 04.1
      comp=Z,15nm,1.1s
BOD   Bodaibo           68.07 357 eP    P      20 24 51.1 -0.6
BOD                               pmax  pmax
      comp=Z,17nm,1.0s
MAW   Mawson            68.37 200 P     P      20 24 54.4 +0.9
      comp=Z,5.9nm,1.0s
MAW   Mawson            68.37 200 P     P      20 24 55.3 +1.8
      comp=Z,19nm,0.7s,baz=71,slow=6.5,SNR=32
MAW                               LR    LR     20 52 33.3
      comp=Z,381nm,18.3s,baz=35,slow=34
      comp=Z,19nm,0.7s
WSAR  Wadi Sarin        68.70 300 P     P      20 24 56.2 -0.2
      comp=Z,0.1nm,0.8s,baz=163,slow=20,SNR=4.5
BTLS  Baital            68.95 327 eP    P      20 24 55.9 -1.6
BTLS  Baital            68.95 327 eP    P      20 24 55.9 -1.6
DZA   Taraz             69.12 324 eP    P      20 24 57.2 -1.4
DZA   Taraz             69.12 324 eP    P      20 24 57.2 -1.4
IUG   Iuzhnay           69.44 323 eP    P      20 24 59.3 -1.4
IUG                               pmax  pmax
      comp=Z,14nm,0.9s
IUG   Iuzhnay           69.44 323 eP    P      20 24 59.4 -1.4
      comp=Z,14nm,0.9s
KKAR  Karatay Array     69.72 324 P     P      20 25 02.3  0.0
KKAR  Karatay Array     69.72 324 P     P      20 25 02.3  0.0
CHM   Chimkent          69.79 322 eP    P      20 25 01.6 -1.2
CHM                               pmax  pmax
      comp=Z,7.0nm,0.5s
CHM   Chimkent          69.79 322 eP    P      20 25 01.6 -1.2
      comp=Z,7.2nm,0.5s
BRLS  Borolday          70.08 323 eP    P      20 25 02.8 -1.7
BRLS  Borolday          70.08 323 eP    P      20 25 02.8 -1.7
VNDA  Vanda             70.54 171 P     P      20 25 07.3 +0.5
      comp=Z,5.6nm,0.8s,baz=316,slow=5.5,SNR=10
      comp=Z,5.6nm,0.8s
VNDA  Vanda             70.54 171 P     P      20 25 07.7 +0.9
VNDA                              pP    pP     20 25 20.4 +1.8
KURBB Kurchatov Arra    70.60 333 P     P      20 25 06.1 -1.4
      comp=Z,3.2nm,1.0s,baz=144,slow=5.7,SNR=18
KURBB                             LR    LR     20 59 01.1
      comp=Z,351nm,21.8s,baz=169,slow=38
      comp=Z,3.2nm,1.0s
KURK  Kurchatov         70.63 334 P     P      20 25 06.0 -1.6
KURK                              IAmb  IAmb   20 25 18.5
      comp=Z,18nm,1.0s
KURK  Kurchatov         70.63 334ceP    P      20 25 07.2 -0.5
KURK                              pmax  pmax
      comp=Z,12nm,1.3s
KURK  Kurchatov         70.63 334 P     P      20 25 06.6 -1.1
ZAA0  Zalesovo Array    70.63 339 IAmb  IAmb   20 25 16.2
      comp=Z,16nm,0.9s
ZALV  Zalesovo Beam     70.63 339       P      20 25 05.7 -1.9
ZALV  Zalesovo Beam     70.63 339 P     P      20 25 05.9 -1.7
      comp=Z,7.5nm,0.6s,baz=132,slow=4.4,SNR=22
ZALV                              LR    LR     21 00 02.0
      comp=Z,116nm,18.4s,baz=148,slow=39
      comp=Z,7.5nm,0.6s
PETK  Petropavlovsk-    70.86  23 P     P      20 25 10.2 +1.2
      comp=Z,3.5nm,0.7s,baz=157,slow=1.3,SNR=5.4
      comp=Z,3.5nm,0.7s
SBA   Scott Base        71.53 171 P     P      20 25 15.9 +3.1
SBA                               pmax  pmax
      comp=Z,18nm,2.2s
SBA   Scott Base        71.53 171 P     P      20 25 15.3 +2.5
YAK   Yakutsk           72.51   5 LR    LR     21 01 22.5
      comp=Z,77nm,18.2s,baz=190,slow=39
YAK   Yakutsk           72.51   5 eP    P      20 25 17.5 -1.2
YAK                               e*PP  pP     20 25 31.3 +0.4
YAK                               e            20 25 33.9
YAK                               e            20 28 00.2
YAK                               eS    S      20 34 39.1 -0.7
YAK                               e*SS  sS     20 35 03.1 +2.7
YAK                               e            20 35 21.3
YAK                               eSS   SS     20 39 22.6 +3.1
YAK                               pmax  pmax
      comp=Z,23nm,1.2s
YAK                               pmax  pmax
      comp=N,16nm,1.4s
YAK                               pmax  pmax
      comp=E,5.0nm,1.4s
YAK                               pmax  pmax
      comp=Z,80nm,3.4s
YAK                               pmax  pmax
      comp=N,49nm,4.0s
YAK                               pmax  pmax
      comp=E,64nm,3.5s
YAK                               smax  smax
      comp=E,98nm,3.7s
YAK                               smax  smax
      comp=N,70nm,3.4s
BRZS  Berezniki         72.88 330 eP    P      20 25 20.3 -1.0
BRZS  Berezniki         72.88 330 eP    P      20 25 20.3 -1.0
MA2   Magadan           73.89  16 LR    LR     20 58 01.9
      comp=N,48nm,19.9s,baz=188,slow=36
BVAR  Borovoye Array    75.94 332 P     P      20 25 37.8 -1.2
      comp=N,3.6nm,1.0s,baz=141,slow=7.6,SNR=16
BVAR                              LR    LR     21 01 54.8
      comp=N,250nm,21.4s,baz=137,slow=38
      comp=N,3.6nm,1.0s
BRVK  Borovoye          76.01 332ceP    P      20 25 38.2 -1.1
BRVK                              pmax  pmax
      comp=Z,10.0nm,1.3s
SYO   Syowa Base        77.02 201⇓eP    P      20 25 44.2 -0.6
SYO   Syowa Base        77.02 201⇑ePcP  PcP    20 25 55.8 +0.1
SEY   Seymchan          77.16  15 i P   P      20 25 45.5 -0.1
SEY                               pmax  pmax
      comp=Z,14nm,0.9s
ABKAR Akbulak array     79.23 325 P     P      20 25 57.3 -0.1
QSPA  South Pole Qui    79.69 180 P     P      20 26 00.8 +1.0
      comp=Z,18nm,1.0s,baz=320,slow=3.6,SNR=17
      comp=Z,18nm,1.0s
TIXI  Tiksi             81.99   3 LR    LR     21 06 35.3
      comp=Z,106nm,18.6s,baz=212,slow=39
SVE   Sverdlovsk        82.72 332 eP    P      20 26 15.4 -0.4
SVE                               pmax  pmax
      comp=Z,15nm,1.1s
ARTI  Arti              83.58 330 LR    LR     21 07 53.3
      comp=Z,185nm,21.2s,baz=133,slow=39
ARTI  Arti              83.58 330c iP   P      20 26 19.5 -0.8
ARTI                                           20 29 27.9
ARTI                              S     S      20 36 37.3 -1.9
ARTI                              SS    SS     20 42 05.4 -1.0
ARTI                              pmax  pmax
      comp=Z,4.0nm,0.7s
AKT   Akhty             83.85 314 eP    P      20 26 19.3 -2.9
AKT                               e*SP  pP     20 26 33.4 -1.1
AKT                               e            20 29 36.6
AKT                               pmax  pmax
      comp=Z,10.0nm,1.2s
BILL  Bilibino          84.76  16 i P   P      20 26 26.3 +0.3
BILL                              pmax  pmax
      comp=Z,3.0nm,0.9s
GNI   Garni             85.58 312 i P   P      20 26 30.4 -0.6
GNI                               pmax  pmax
      comp=Z,18nm,1.3s
TBI   Tubuai            86.42 113 eLR   LR     20 53 54.6
      comp=Z,608nm,28.2s
PPT2  Papeete2          87.28 107 eS    S      20 37 17.8 +0.3
      comp=Z,43nm,20.8s
PPT2  Papeete2          87.28 107 eLR   LR     20 54 21.9
      comp=Z,190nm,24.0s
PPT2                              eLR   LR     20 54 22.1
      comp=Z,168nm,23.8s
BELG  Belogornoye       87.62 324 i P   P      20 26 40.0 -0.4
BELG                              pmax  pmax
      comp=Z,9.0nm,1.1s
KBZ   Khabaz            87.93 315 P     P      20 26 42.7 +0.5
      comp=Z,6.2nm,0.9s,baz=90,slow=4.4,SNR=11
      comp=Z,6.2nm,0.9s
SHA1  Shidzhatmaz       88.10 315 i P   P      20 26 41.6 -1.7
KIV   Kislovodsk        88.14 315 eP    P      20 26 43.0 -0.3
KIV                               pmax  pmax
      comp=Z,4.0nm,1.0s
GOF   Gofitskoye        88.21 316ceP    P      20 26 44.5 +1.1
TROLL Troll, Antarti    88.41 196 ⇑P    P      20 26 46.5 +2.4
      comp=Z,1µm,0.7s
KIRV  Kirov             88.89 330 i P   P      20 26 46.0 -0.3
BOSA  Boshof            89.29 241 P     P      20 26 50.4 +1.2
      comp=Z,7.9nm,0.8s,baz=98,slow=3.7,SNR=12
BOSA                              LR    LR     21 03 57.0
      comp=Z,111nm,18.5s,baz=118,slow=34
      comp=Z,7.9nm,0.8s
LABN  Labinsk           89.68 315 eP    P      20 26 50.3 -0.1
LABN                              pmax  pmax
      comp=Z,23nm,1.0s
LBTB  Lobatse           89.69 245 LR    LR     21 02 04.4
      comp=Z,300nm,19.4s,baz=114,slow=32
VSLR  Vesyoloye         89.87 314 i P   P      20 26 51.7 +0.4
VSLR                              pmax  pmax
      comp=Z,53nm,1.1s
SNAA  Sanae             90.02 195 ⇑P    P      20 26 53.8 +2.2
      comp=Z,414nm,0.7s
SNAA  Sanae             90.02 195       P      20 26 53.1 +1.5
SNAA  Sanae             90.02 195 P     P      20 26 53.6 +2.0
      comp=Z,28nm,1.0s,baz=145,slow=4.3,SNR=65
      comp=Z,28nm,1.0s
SNAA  Sanae             90.02 195ceP    P      20 26 51.9 +0.3
SNAA                              pmax  pmax
      comp=Z,31nm,1.0s
ERBR  Yeremizino-Bor    90.12 316 eP    P      20 26 49.5 -2.9
ERBR                              pmax  pmax
      comp=Z,9.0nm,0.8s
VRH   Novokhopyorsk     90.75 322 eP    P      20 26 55.3 +0.1
VRH                               pmax  pmax
      comp=Z,20nm,0.5s
BELA  Belgrano 2        90.81 185       P      20 26 55.9 +0.8
MMAI  Mount Meron Ar    91.11 303 P     P      20 26 59.2 +1.8
      comp=Z,14nm,0.8s,baz=106,slow=5.3,SNR=29
      comp=Z,14nm,0.8s
VNA2  Neumayer--Watz    91.65 195 ⇑P    P      20 27 00.7 +1.6
      comp=Z,20nm,0.6s,baz=124,slow=4.1
ANN   Anapa             92.00 315 eP    P      20 26 59.0 -2.1
ANN                               pmax  pmax
      comp=Z,16nm,0.8s
VNA3  Neumayer Olymp    92.02 194 ⇑P    P      20 27 02.6 +1.8
      comp=Z,13nm,0.8s
VNA1  Neumayer--Stat    92.05 195 ⇑P    P      20 27 02.3 +1.4
      comp=Z,21nm,1.0s
VORD  Divnogorie        92.17 321 eP    P      20 27 00.2 -1.6
VORD                              pmax  pmax
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	comp=Z,9.0nm,1.1s						
VSR	**Storozhevoye**	**92.31**	**322**	*e*P	**P**	**20 26 59.9**	**-2.5**
VSR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
VORR	**Voronezh**	**92.39**	**322**	*e*P	**P**	**20 27 01.7**	**-1.1**
VORR				pmax	pmax		
	comp=Z,50nm,0.5s						
LPSR	**Galich'ya Gora**	**92.77**	**323**	*e*P	**P**	**20 27 01.6**	**-2.9**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BRTR	**Keskin Array B**	**93.77**	**310**		**P**	**20 27 09.1**	**-0.6**
BRTR	**Keskin Array B**	**93.77**	**310**	P	**P**	**20 27 09.6**	**-0.1**
	comp=Z,6.9nm,0.9s,baz=120,slow=5.1,SNR=40						
	comp=Z,6.9nm,0.9s						
KLMR	**Klimovskoe**	**94.35**	**331**	*e*P	**P**	**20 27 08.7**	**-2.9**
KLMR				pmax	pmax		
	comp=Z,19nm,1.3s						
OBN	**Obninsk**	**94.67**	**325**	*de*P	**P**	**20 27 12.5**	**-0.7**
OBN				*e*		20 31 02.3	
OBN				*e*S	S	20 38 09.5	-14
OBN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,157nm,25.0s						
C18K	**Utukok River**	**95.46**	**21**	IAmb	IAmb	20 28 03.3	
	comp=Z,18nm,1.9s						
TAOE	**Nuku Hiva Isla**	**97.95**	**100**	*e*LR	LR	20 59 11.0	
	comp=Z,276nm,24.6s						
TSUM	**Tsumeb**	**98.20**	**249**	LR	LR	21 08 36.9	
	comp=Z,254nm,18.4s,baz=143,slow=34						
AK08	**Malin Array Si**	**98.39**	**320**	P	**P**	**20 27 29.1**	**-1.1**
AKASG	**Malin Array Be**	**98.41**	**320**	P	**P**	**20 27 28.8**	**-1.5**
	comp=Z,1.1nm,0.6s,baz=84,slow=4.2,SNR=8.5						
	comp=Z,1.1nm,0.6s						
AKASG	**Malin Array Be**	**98.41**	**320**	*i* P	**P**	**20 27 29.3**	**-1.0**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKBB	**Malin Array Si**	**98.41**	**320**	*ce*P	**P**	**20 27 29.0**	**-1.3**
AKBB				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AKBB	**Malin Array Si**	**98.41**	**320**	P	**P**	**20 27 29.3**	**-1.0**
MNK	**Minsk**	**99.57**	**324**	*i* P	**Pdif**	**20 27 34.1**	**-1.2**
	comp=E,8.0nm,0.8s						
MNK				*i* P	**Pdif**	**20 27 34.1**	**-1.2**
	comp=N,5.0nm,0.7s						
MNK				*i* P	**Pdif**	**20 27 34.1**	**-1.2**
	comp=Z,4.0nm,0.9s,baz=94						
MNK				*i* pP	**pP**	**20 27 48.9**	**+1.0**
MNK				*i* PP	**PP**	**20 31 38.8**	**-0.8**
MNK				*i* PPP	PPP	20 33 45.6	
MNK				*i* S	**SKSac**	**20 38 08.2**	**-2.3**
MNK				*i* sS	**SKKSac**	**20 38 34.5**	**-8.4**
MNK				*i* PS	**PS**	**20 40 38.4**	**+0.6**
MNK				*i* SS	**SS**	**20 45 57.2**	**+0.6**
MNK				*i* SSS	SSS	20 49 46.7	
MNK				*i* LQ	LQ	21 06 43.3	
MNK				*i* LR	LR	21 13 51.6	
MNK	**Minsk**	**99.57**	**324**	*i* P	**Pdif**	**20 27 34.1**	**-1.2**
MNK				*i* *PP	**pP**	**20 27 48.8**	**+1.0**
MNK				*i*		20 31 38.7	
MNK				*i* PPP	PPP	20 33 45.5	
MNK				*i* S	**SKSac**	**20 38 08.2**	**-2.3**
MNK				*i* PS	**PS**	**20 40 38.4**	**+0.6**
MNK				*i* SS	**SS**	**20 45 57.1**	**+0.6**
MNK				*i* SSS	SSS	20 49 46.7	
MNK				pmax	pmax		
	comp=N,5.0nm,0.7s						
MNK				pmax	pmax		
	comp=E,8.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MNK				MLR	MLR		
	comp=E,50nm,18.0s						
COLA	**College**	**100.15**	**26**	*i* P	**Pdif**	**20 27 36.4**	**-1.3**
COLA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ILAR	**Eielson Array**	**100.56**	**26**	P	**Pdif**	**20 27 37.7**	**-1.9**
	comp=Z,0.4nm,1.0s,baz=311,slow=5.7,SNR=4.1						
FINES	**FINESS Array B**	**100.88**	**331**	P	**Pdif**	**20 27 39.8**	**-1.2**
	comp=Z,0.2nm,0.4s,baz=102,slow=8.5,SNR=3.3						
TORD	**Torodi Ar. Bea**	**119.70**	**279**	PKP	**PKiKP**	**20 32 43.8**	**+0.5**
	comp=Z,114nm,0.3s,baz=89,slow=1.8,SNR=1.6						
NVAR	**Mina Array Bea**	**121.03**	**51**	PKP	**PKiKP**	**20 32 47.1**	**+1.6**
	comp=Z,0.5nm,0.7s,baz=333,slow=0.7,SNR=4.0						
ESDC	**Sonseca Array**	**122.55**	**311**	PKP	**PKiKP**	**20 32 48.6**	**+0.3**
	comp=Z,1.7nm,1.1s,baz=18,slow=2.8,SNR=6.4						
PDAR	**Pinedale Array**	**126.15**	**44**	PKP	**PKiKP**	**20 32 55.9**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=224,slow=4.1,SNR=4.0						
PLCA	**Paso Flores**	**128.27**	**170**	PKP	**PKiKP**	**20 33 01.1**	**+1.4**
	comp=Z,6.8nm,1.2s,baz=170,slow=6.4,SNR=5.5						
PLCA	**Paso Flores**	**128.27**	**170**	*e*P	**PKiKP**	**20 33 01.8**	**+2.0**
TXAR	**Lajitas Array**	**135.05**	**59**	PKhKP	PKPpre	20 33 07.6	
	comp=Z,0.3nm,0.7s,baz=278,slow=2.2,SNR=2.5						
SCHQ	**Schefferville**	**135.26**	**6**	PKP	**PKPdf**	**20 33 10.9**	**-0.8**
	comp=Z,1.9nm,0.7s,baz=75,slow=5.7,SNR=3.7						
PLTB	**Pedras Altas**	**137.72**	**188**	*e*P	**PKiKP**	**20 33 19.4**	**+0.3**
CNLB	**Canela**	**139.64**	**192**	*e*P	**PKPdf**	**20 33 21.2**	**+0.5**
ITQB	**Itaqui**	**140.12**	**185**	*e*P	**PKiKP**	**20 33 23.4**	**-0.5**
T42A	**Van Buren**	**141.32**	**41**		**PKPdf**	**20 33 20.6**	**-2.8**
CAM01	**Campos-RJ**	**143.36**	**209**	*e*P	**PKPdf**	**20 33 28.0**	**+0.6**
PET01	**Itanhaem-SP**	**143.45**	**200**	*e*P	**PKiKP**	**20 33 29.8**	**-1.1**
CPUP	**Villa Florida**	**143.49**	**184**	PKP	PKPbc	20 33 25.9	+1.1
	comp=Z,1.6nm,0.9s,baz=25,slow=2.3,SNR=6.7						
MAN01	**Angra dos Reis**	**143.50**	**205**	*e*P	**PKPdf**	**20 33 28.1**	**+0.4**
WCI	**Wyandotte Cave**	**143.52**	**36**		PKPbc	20 33 25.3	+0.7
WCI	**Wyandotte Cave**	**143.52**	**36**	PKIKP	PKPbc	20 33 25.3	+0.7
PTGB	**Pitanga**	**144.35**	**192**	*e*P	**PKPdf**	**20 33 30.3**	**+1.1**
VAO	**Valinhos**	**144.53**	**201**	*e*P	**PKPdf**	**20 33 31.2**	**+1.6**
SJPY	**San Joaquin**	**144.71**	**186**	*e*P	**PKPdf**	**20 33 29.9**	**+0.1**
FRTB	**Fartura**	**145.04**	**197**	*e*P	**PKPdf**	**20 33 30.6**	**+0.2**
LDASE	**Londrina, Braz**	**145.41**	**194**	*e*P	**PKPab**	**20 33 32.2**	**+1.1**
BSCB	**Bom Sucesso**	**145.50**	**206**	*e*P	**PKPab**	**20 33 32.6**	**+1.0**
SJMB	**Sao Joao De Ma**	**145.74**	**213**	*e*P	**PKPab**	**20 33 32.8**	**+0.4**
TRCB	**Terra Rica**	**146.33**	**192**	*e*P	**PKPab**	**20 33 35.2**	**+0.6**
GUA01	**Guaratinga, BA**	**146.67**	**217**	*e*P	**PKPbc**	**20 33 35.2**	**+0.3**
PCMB	**Pacaembu**	**147.15**	**195**	*e*P	**PKPbc**	**20 33 36.1**	**-0.1**
DIAM	**Diamantina, MG**	**147.35**	**210**	*e*P	**PKPbc**	**20 33 36.3**	**-0.6**
MURT	**Porto Murtinho**	**148.15**	**184**	*e*P	**PKPdf**	**20 33 37.1**	**+1.5**
PMNB	**Patos De Minas**	**148.39**	**205**	*e*P	**PKPbc**	**20 33 38.6**	**-1.1**
PB11	**IPOC Station P**	**148.62**	**162**		**PKiKP**	**20 33 42.0**	**+0.1**
ITRB	**Iturama**	**148.71**	**198**	*e*P	**PKPbc**	**20 33 38.7**	**-1.8**
RPRD	**Ribas do Rio P**	**148.79**	**191**	*e*P	**PKPbc**	**20 33 38.8**	**-1.7**
GO01	**Chusmiza**	**148.85**	**163**		**PKiKP**	**20 33 43.5**	**+0.8**
T59A	**Double "B" Far**	**149.06**	**28**		**PKiKP**	**20 33 41.8**	**-0.2**
AQDB	**Aquidauana**	**149.12**	**188**	*e*P	**PKPbc**	**20 33 39.2**	**-2.1**
NBAN	**Anadia - AL**	**149.20**	**231**	*e*P	**PKPdf**	**20 33 39.3**	**+1.8**
IPMB	**Ipameri, GO**	**149.59**	**202**	*e*P	**PKPdf**	**20 33 40.2**	**+2.1**
PB16	**IPOC Station P**	**150.01**	**162**		**PKiKP**	**20 33 46.9**	**+1.6**
JANB	**Januaria**	**150.41**	**212**	*e*P	**PKPdf**	**20 33 41.1**	**+1.7**
BDFB	**Brasilia**	**151.63**	**205**	PKP	**PKPdf**	**20 33 42.6**	**+1.1**
	comp=Z,4.8nm,0.7s,baz=87,slow=2.1,SNR=6.6						
BDFB				PKPbc	**PKiKP**	**20 33 48.7**	**+0.6**
	comp=Z,17nm,1.0s,baz=183,slow=2.5,SNR=17						
LPAZ	**La Paz**	**152.36**	**163**	PKPbc	**PKiKP**	**20 33 51.9**	**+1.7**
	comp=Z,16nm,1.1s,baz=117,slow=0.8,SNR=21						
LPAZ	**La Paz**	**152.36**	**163**	*e*P	**PKPdf**	**20 33 44.9**	**+1.8**
SDBA	**SAO DESIDERIO**	**152.93**	**214**	*e*P	**PKPdf**	**20 33 45.0**	**+1.7**
SMTB	**Santa Maria do**	**157.33**	**213**	*e*P	**PKPdf**	**20 33 50.4**	**+1.1**
OTAV	**Otavalo**	**159.05**	**117**	*e*P	**PKPdf**	**20 33 53.1**	**+1.1**

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*NEIC **16** 20:15:54.0±1.2, 56°.04S±0°.08×27°.7W±0°.2, h128^{km}±9^{km}, mb4.6/23, Error ellipse: s-maj=14.6km s-min=8.5km az=130.0*

*IDC **16** 20:15:55.3±4.6, 55°.96S×27°.63W, h138^{km}±41^{km}, mb4.0/8, mbtmp4.4/9, MS3.2/2, Error ellipse: s-maj=21.4km s-min=14.4km az=62.0*

ISC 16 20:15:52.3±0.4**, 55°.99S**±0°.08×**27°.62W**±0°.09**, h112**^{km}**, n165, σ0^{s}.79**/167**, mb4.6**/17**, 5C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.37**	**285**	Pn	**Pn**	**20 17 11.5**	**+1.5**
VNA1	**Neumayer--Stat**	**16.94**	**158**	⇑P	**P**	**20 19 43.7**	**+1.5**
	comp=Z,10nm,0.6s						
VNA3	**Neumayer Olymp**	**17.13**	**160**	⇑P	**Pn**	**20 19 45.2**	**+0.8**
	comp=Z,18nm,0.8s						
VNA2	**Neumayer--Watz**	**17.34**	**158**	⇑P	**Pn**	**20 19 47.4**	**+0.5**
	comp=Z,9.1nm,0.5s,baz=312,slow=12						
SNAA	**Sanae**	**18.89**	**156**	⇑P	**P**	**20 20 04.6**	**+0.9**
	comp=Z,538nm,0.9s						
SNAA	**Sanae**	**18.89**	**156**		**P**	**20 20 04.0**	**+0.3**
SNAA				IAmb	IAmb	20 20 09.0	
	comp=Z,16nm,0.8s						
SNAA	**Sanae**	**18.89**	**156**	P	**P**	**20 20 04.4**	**+0.8**
	comp=Z,17nm,0.8s,baz=313,slow=12,SNR=127						
SNAA				S	**S**	**20 23 28.6**	**-3.6**
	comp=Z,1.4nm,1.0s,baz=144,slow=19,SNR=2.1						
SNAA				PcP	**PcP**	**20 24 24.8**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=294,slow=6.0,SNR=2.7						
SNAA				LR	LR	20 26 23.2	
	comp=Z,53nm,18.7s,baz=260,slow=33						
TROLL	**Troll, Antarti**	**20.41**	**153**	⇑P	**P**	**20 20 20.7**	**+0.6**
	comp=Z,659nm,0.5s						
BELA	**Belgrano 2**	**22.12**	**184**		**P**	**20 20 37.3**	**-0.9**
BELA				IAmb	IAmb	20 20 40.0	
	comp=Z,14nm,0.9s						
TRQA	**Tornquist**	**29.08**	**294**	P	**P**	**20 21 41.4**	**-0.6**
TRQA				IAmb	IAmb	20 22 08.9	
	comp=Z,26nm,1.4s						
PLTB	**Pedras Altas**	**30.28**	**312**	P	**P**	**20 21 53.3**	**+0.6**
PLTB				IAmb	IAmb	20 22 30.2	
	comp=Z,8.8nm,1.2s						
PLCA	**Paso Flores**	**31.75**	**280**	LR	LR	20 33 59.7	
	comp=Z,45nm,20.9s,baz=252,slow=34						
LL07	**Hotel Espejo d**	**31.98**	**275**	P	**P**	**20 22 06.2**	**-1.2**
QSPA	**South Pole Qui**	**34.26**	**180**		**P**	**20 22 28.3**	**+1.1**
QSPA				IAmb	IAmb	20 22 28.8	
	comp=Z,5.6nm,0.9s						
QSPA	**South Pole Qui**	**34.26**	**180**	P	**P**	**20 22 28.1**	**+0.9**
	comp=Z,2.8nm,0.4s,baz=181,slow=2.9,SNR=42						
QSPA				PcP	**PcP**	**20 25 00.1**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=138,slow=0.9,SNR=3.4						
	comp=Z,2.8nm,0.4s						
CPUP	**Villa Florida**	**36.59**	**312**	P	**P**	**20 22 46.3**	**-1.1**
CPUP	**Villa Florida**	**36.59**	**312**	P	**P**	**20 22 46.9**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=187,slow=15,SNR=5.1						
CPUP				PcP	**PcP**	**20 25 07.7**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=106,slow=1.3,SNR=4.4						
	comp=Z,0.3nm,0.4s						
MT02	**Curacav**	**37.54**	**289**	P	**P**	**20 22 53.5**	**-1.8**
CO02	**Combarbal**	**39.07**	**291**	P	**P**	**20 23 07.5**	**-0.8**
CO01	**Juntas del Tor**	**39.57**	**293**	P	**P**	**20 23 12.4**	**-0.3**
MAW	**Mawson**	**40.34**	**144**	P	**P**	**20 23 18.7**	**+0.5**
	comp=Z,4.3nm,0.7s,baz=242,slow=6.4,SNR=7.9						
	comp=Z,4.3nm,0.7s						
BOSA	**Boshof**	**46.19**	**76**	P	**P**	**20 24 06.0**	**+0.2**
	comp=Z,3.5nm,0.9s,baz=232,slow=9.6,SNR=4.6						
BOSA				PcP	**PcP**	**20 25 40.1**	**+0.3**
	comp=Z,2.0nm,0.8s,baz=139,slow=2.7,SNR=4.3						
	comp=Z,3.5nm,0.9s						
VNDA	**Vanda**	**46.62**	**183**	P	**P**	**20 24 09.1**	**+0.6**
VNDA	**Vanda**	**46.62**	**183**	P	**P**	**20 24 09.6**	**+1.1**
	comp=Z,3.5nm,0.7s,baz=192,slow=5.9,SNR=13						
	comp=Z,3.5nm,0.7s						
PTLB	**Pontes e Lacer**	**47.09**	**316**	P	**P**	**20 24 12.1**	**-0.7**
PB08	**IPOC Station P**	**47.29**	**302**	P	**P**	**20 24 13.9**	**-0.8**
PB08				IAmb	IAmb	20 24 37.4	
	comp=Z,14nm,1.3s						
GO01	**Chusmiza**	**47.71**	**302**	P	**P**	**20 24 17.3**	**-0.9**
GO01				IAmb	IAmb	20 24 54.2	
	comp=Z,13nm,1.4s						
PB11	**IPOC Station P**	**47.85**	**302**	P	**P**	**20 24 17.8**	**-1.1**
KOOLE	**Kule**	**48.01**	**67**		**P**	**20 24 19.4**	**-0.7**
KOOLE				IAmb	IAmb	20 24 21.4	
	comp=Z,14nm,0.8s						
KGCAE	**Kacgae**	**49.17**	**69**		**P**	**20 24 29.5**	**+0.6**
LBTB	**Lobatse**	**49.22**	**74**		**P**	**20 24 29.6**	**+0.4**
LBTB				IAmb	IAmb	20 24 30.7	
	comp=Z,8.3nm,0.8s						
GRTLG	**Ghanzi**	**49.88**	**67**		**P**	**20 24 34.4**	**+0.1**
GRTLG				IAmb	IAmb	20 24 35.7	
	comp=Z,8.5nm,1.1s						
LPAZ	**La Paz**	**50.15**	**306**		**P**	**20 24 37.3**	**+0.5**
LPAZ	**La Paz**	**50.15**	**306**	P	**P**	**20 24 37.4**	**+0.5**
	comp=Z,2.1nm,0.3s,baz=131,slow=3.0,SNR=25						
LPAZ				pP	**pwP**	**20 25 08.9**	**+3.5**
	comp=Z,3.8nm,1.0s,baz=135,slow=9.5,SNR=3.8						
LPAZ				PcP	**PcP**	**20 25 54.9**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=155,slow=4.3,SNR=2.0						
	comp=Z,2.1nm,0.3s						
CASY	**Casey**	**54.04**	**161**	P	**P**	**20 25 04.6**	**+0.2**
CASY				IAmb	IAmb	20 25 06.4	
	comp=Z,10nm,1.0s						
DBIC	**Dimbokro**	**65.21**	**25**	P	**P**	**20 26 21.5**	**-0.1**
DBIC				IAmb	IAmb	20 26 23.0	
	comp=Z,10.0nm,0.9s						
DBIC	**Dimbokro**	**65.21**	**25**	P	**P**	**20 26 21.8**	**+0.3**
	comp=Z,7.2nm,0.8s,baz=213,slow=8.2,SNR=6.0						
	comp=Z,7.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**73.12**	**30**		**P**	**20 27 11.0**	**+0.7**
TORD				IAmb	IAmb	20 27 12.0	
	comp=Z,11nm,0.8s						
TORD	**Torodi Ar. Bea**	**73.12**	**30**	P	**P**	**20 27 11.0**	**+0.7**
	comp=Z,188nm,0.6s,baz=199,slow=6.2,SNR=1.4						
ASAR	**Alice Springs**	**99.12**	**163**	P	**Pdif**	**20 29 20.0**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=190,slow=2.7,SNR=4.8						
	comp=Z,1.1nm,0.7s						
WRA	**Warramunga Arr**	**102.83**	**163**	PKKPbc	PKKPbc	20 45 33.2	+1.0
	comp=Z,0.2nm,0.3s,baz=356,slow=2.9,SNR=8.2						
FINES	**FINESS Array B**	**124.44**	**28**	PKP	**PKPdf**	**20 34 35.4**	**-1.2**
	comp=Z,0.9nm,0.5s,baz=297,slow=3.9,SNR=8.1						
CMAR	**Chiang Mai Arr**	**125.31**	**111**	PKP	**PKPdf**	**20 34 39.5**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=242,slow=3.7,SNR=7.8						
ARCES	**ARCESS Array B**	**130.98**	**22**	PKP	**PKPdf**	**20 34 48.2**	**-0.7**
	comp=Z,3.9nm,1.0s,baz=224,slow=2.8,SNR=8.7						
BVAR	**Borovoye Array**	**134.95**	**58**	PKP	**PKPdf**	**20 34 56.3**	**-0.5**
	comp=Z,1.4nm,0.7s,baz=219,slow=1.9,SNR=7.0						
YKA	**Yellowknife Ar**	**135.97**	**318**	PKP	**PKPdf**	**20 34 58.0**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=101,slow=1.3,SNR=3.5						
KURBB	**Kurchatov Arra**	**137.50**	**65**	PKhKP	PKPpre	20 34 51.8	
	comp=Z,0.2nm,0.5s,baz=225,slow=2.9,SNR=2.2						
ZALV	**Zalesovo Beam**	**142.56**	**64**	PKhKP	PKPpre	20 35 04.9	
	comp=Z,0.4nm,0.3s,baz=231,slow=0.9,SNR=2.5						
HYT	**Haines Junctio**	**144.56**	**307**	P	PKPbc	20 35 13.5	+0.2
	baz=114						
N30M	**Aishikik Lake**	**144.64**	**309**	P	PKPbc	20 35 13.5	+0.1
	baz=114						
H31M	**Peel River**	**145.12**	**316**	P	**PKPbc**	**20 35 14.3**	**-0.5**
	baz=110,SNR=8.5						
F31M	**Tsiigehtchic**	**145.42**	**319**	P	**PKPdf**	**20 35 14.5**	**-0.8**
	baz=108						
G31M	**Satah River**	**145.46**	**318**	P	**PKPdf**	**20 35 15.2**	**-0.2**
	baz=108,SNR=34						
J30M	**Hart River**	**145.49**	**314**	P	**PKPbc**	**20 35 15.7**	**-0.3**
	baz=110						
INK	**Inuvik**	**145.61**	**321**	P	**PKPdf**	**20 35 15.5**	**-0.1**
	baz=107						
M29M	**Somme Creek**	**145.62**	**310**	P	**PKPbc**	**20 35 16.4**	**-0.1**
	baz=112						
L29M	**L29M**	**145.72**	**311**	P	**PKPbc**	**20 35 16.5**	**-0.2**
	baz=111						
K29M	**Barlow Dome**	**145.72**	**312**	P	**PKPdf**	**20 35 16.1**	**0.0**
	baz=110						
I30M	**Mount Dempster**	**145.72**	**315**	P	**PKPdf**	**20 35 16.2**	**+0.1**
	baz=109,SNR=32						
G30M	**tAoh Zraii Nji**	**146.21**	**318**	P	**PKPbc**	**20 35 17.3**	**-0.8**
	baz=107						
EPYK	**Eagle Plains**	**146.22**	**317**	P	**PKPbc**	**20 35 17.4**	**-0.7**
	baz=108						
F30M	**Barrier River**	**146.22**	**319**	P	**PKPbc**	**20 35 17.5**	**-0.6**
	baz=106,SNR=5.5						
I29M	**Ogilvie Camp,**	**146.54**	**315**	P	**PKPbc**	**20 35 18.3**	**-0.8**
	baz=108						
DAWY	**Dawson**	**146.57**	**312**	P	**PKPbc**	**20 35 18.4**	**-0.8**
	baz=109						
BVCY	**Beaver Creek**	**146.65**	**309**	P	**PKPbc**	**20 35 18.9**	**-0.5**
	baz=110						
H29M	**Whitestone**	**146.81**	**316**	P	**PKPbc**	**20 35 19.3**	**-0.4**
	baz=106						
G29M	**Pine Creek**	**146.87**	**317**	P	**PKPbc**	**20 35 19.5**	**-0.4**
	baz=106						
M27K	**Edge Creek, AK**	**147.08**	**309**	P	**PKPbc**	**20 35 20.2**	**-0.6**
	baz=110						
E29M	**Blow River**	**147.19**	**320**	P	**PKPbc**	**20 35 19.8**	**-1.0**
	baz=104						
I28M	**Miner Creek**	**147.21**	**314**	P	**PKPbc**	**20 35 20.2**	**-0.8**
	baz=106,SNR=35						
L27K	**Beaver Creek,**	**147.29**	**310**	P	**PKPbc**	**20 35 20.7**	**-0.5**
	baz=109						
K27K	**Chicken**	**147.69**	**311**	P	**PKPbc**	**20 35 22.2**	**0.0**
	baz=107						
D28M	**Stokes Point**	**147.69**	**322**	P	**PKPbc**	**20 35 22.3**	**+0.3**
	baz=102						
F28M	**Old Crow**	**147.74**	**318**	P	**PKPbc**	**20 35 21.9**	**-0.4**
	baz=103,SNR=18						
E28M	**Babbage River**	**147.83**	**320**	P	**PKPbc**	**20 35 21.6**	**-0.9**
	baz=102						
I27K	**Kandik River**	**147.93**	**314**	P	**PKPbc**	**20 35 22.7**	**-0.2**
	baz=105,SNR=7.8						
L26K	**Log Cabin Wild**	**147.93**	**309**	P	**PKPbc**	**20 35 22.5**	**-0.4**
	baz=108						
H27K	**Steamboat Moun**	**148.05**	**316**	P	**PKPbc**	**20 35 23.0**	**-0.2**
	baz=104,SNR=23						
G27K	**Doyon Strip**	**148.24**	**317**	P	**PKPbc**	**20 35 23.1**	**-0.6**
	baz=103						
J26L	**Joseph Creek**	**148.44**	**312**	P	**PKPbc**	**20 35 24.1**	**-0.2**
	baz=105						
D27M	**Malcolm River**	**148.46**	**321**	P	**PKPbc**	**20 35 24.4**	**+0.2**
	baz=100						
I26K	**Coal Creek Min**	**148.48**	**314**	P	**PKPbc**	**20 35 23.9**	**-0.3**
	baz=104						
SCRK	**Sand Creek**	**148.48**	**311**	P	**PKPbc**	**20 35 24.3**	**-0.2**
	baz=106						
E27K	**Coleen River**	**148.50**	**319**	P	**PKPbc**	**20 35 23.7**	**-0.5**
	baz=101						
KLU	**Klutina**	**148.61**	**306**	P	**PKPbc**	**20 35 25.3**	**+0.5**
	baz=108						
RIDG	**Independent Ri**	**148.78**	**310**	P	**PKPbc**	**20 35 25.3**	**+0.2**
	baz=106						
PAX	**Paxson**	**148.84**	**309**	P	**PKPbc**	**20 35 24.9**	**-0.4**
	baz=106						
G26K	**Porcupine Rive**	**149.09**	**317**	P	**PKPbc**	**20 35 25.5**	**-0.2**
	baz=101						
K24K	**Donnelly Dome**	**149.20**	**310**	P	**PKPbc**	**20 35 25.8**	**-0.4**
	baz=105						
J25K	**Salcha River,**	**149.23**	**312**	P	**PKPbc**	**20 35 26.0**	**-0.2**
	baz=104						
SCM	**Sheep Creek Mo**	**149.35**	**306**	P	**PKPbc**	**20 35 26.3**	**-0.3**
	baz=107						
F26K	**Sheenjek River**	**149.36**	**318**	P	**PKPbc**	**20 35 26.6**	**+0.1**
	baz=100						
C27K	**Jago River**	**149.47**	**322**	P	**PKPbc**	**20 35 26.6**	**0.0**
	baz=97						
PRP	**Porcupine Dome**	**149.49**	**313**	P	**PKPbc**	**20 35 26.6**	**-0.4**
	baz=102						
DHY	**Denali Highway**	**149.71**	**308**	P	**PKPbc**	**20 35 27.6**	**0.0**
	baz=105						
WAT6	**Susitna Watana**	**149.74**	**307**	P	**PKPbc**	**20 35 27.2**	**-0.5**
	baz=106						
H25L	**Birch Creek**	**149.76**	**315**	P	**PKPbc**	**20 35 26.4**	**-0.9**
	baz=101						
SML	**Sawmill**	**149.80**	**306**	P	**PKPbc**	**20 35 27.2**	**-0.5**
	baz=106						
HDA	**Harding Lake**	**149.84**	**311**	P	**PKPbc**	**20 35 27.1**	**-0.5**
	baz=103						
ILAR	**Eielson Array**	**149.90**	**312**	PKP	**PKPdf**	**20 35 19.8**	**-3.1**
	comp=Z,0.5nm,0.8s,baz=41,slow=0.1,SNR=5.3						
ILAR				PKPbc	**PKPbc**	**20 35 27.1**	**-0.6**
	comp=Z,14nm,0.8s,baz=132,slow=1.6,SNR=82						
ILAR				pPKP	**pPKPbc**	**20 35 59.6**	**+2.0**
	comp=Z,3.4nm,1.0s,baz=113,slow=1.1,SNR=3.1						
F25K	**Christian Rive**	**149.91**	**318**	P	**PKPbc**	**20 35 28.1**	**+0.2**
	baz=99						
C26K	**Camden Bay**	**149.92**	**322**	P	**PKPbc**	**20 35 27.6**	**-0.1**
	baz=95						
E25K	**Arctic Village**	**149.95**	**319**	P	**PKPbc**	**20 35 27.5**	**-0.4**
	baz=98						
G25K	**Bearman Lake**	**149.96**	**316**	P	**PKiKP**	**20 35 28.3**	**-0.4**
	baz=100						
PMR	**Palmer**	**150.11**	**305**	P	**PKPbc**	**20 35 27.9**	**-0.5**
	baz=106						
WAT1	**Susitna Watana**	**150.17**	**308**	P	**PKPbc**	**20 35 27.8**	**-0.8**
	baz=104						
RC01	**Rabbit Creek A**	**150.25**	**304**	P	**PKPbc**	**20 35 28.4**	**-0.3**
	baz=107						
BRSE	**Bradley Lake S**	**150.32**	**301**	P	**PKPbc**	**20 35 28.4**	**-0.6**
	baz=108						
D25K	**Kavik River**	**150.38**	**321**	P	**PKPbc**	**20 35 28.1**	**-0.8**
	baz=95						
G24K	**Hadweenzic Riv**	**150.49**	**316**	P	**PKPbc**	**20 35 29.1**	**-0.1**
	baz=99						
H24K	**Noodor Dome**	**150.51**	**314**	P	**PKPbc**	**20 35 28.7**	**-0.6**
	baz=100						
MCK	**McKinley**	**150.55**	**309**	P	**PKPbc**	**20 35 29.3**	**-0.1**
	baz=103						
KDAK	**Kodiak Island**	**150.58**	**297**	P	**PKPbc**	**20 35 29.6**	**+0.1**
	baz=111						
M22K	**Willow**	**150.60**	**305**	P	**PKPbc**	**20 35 29.6**	**+0.1**
	baz=105						
F24K	**Squaw Lake**	**150.75**	**317**	P	**PKPbc**	**20 35 29.6**	**-0.3**
	baz=97						
NEA2	**Nenana**	**150.78**	**311**	P	**PKPbc**	**20 35 28.7**	**-1.2**
	baz=101						
SUA	**Susitna One**	**150.82**	**304**	P	**PKPbc**	**20 35 29.8**	**-0.4**
	baz=105						
SONM	**Songino Array**	**150.96**	**87**	PKPbc	**PKPbc**	**20 35 30.6**	**-0.5**
	comp=Z,5.9nm,0.5s,baz=225,slow=3.5,SNR=35						
I23K	**Minto, Yukon-K**	**151.00**	**312**	P	**PKPbc**	**20 35 28.8**	**-1.6**
	baz=100						
E24K	**Your Creek**	**151.04**	**318**	P	**PKPbc**	**20 35 30.0**	**-0.5**
	baz=95						
TRF	**Thorofare Moun**	**151.08**	**309**	P	**PKPbc**	**20 35 30.1**	**-0.7**
	baz=102						
H23K	**Yukon River**	**151.19**	**314**	P	**PKPbc**	**20 35 30.2**	**-0.6**
	baz=98						
D24K	**Happy Valley**	**151.24**	**320**	P	**PKPbc**	**20 35 30.4**	**-0.4**
	baz=93						
SKT	**Skwentna**	**151.31**	**305**	P	**PKPbc**	**20 35 30.6**	**-0.6**
	baz=104						
E23K	**Chandalar**	**151.46**	**318**	P	**PKPbc**	**20 35 30.5**	**-1.0**
	baz=94						
TOLK	**Toolik Lake Re**	**151.48**	**319**	P	**PKPbc**	**20 35 31.0**	**-0.5**
	baz=93						
G23K	**Bananza Creek**	**151.49**	**315**	P	**PKPbc**	**20 35 31.5**	**0.0**
	baz=96						
BPAW	**Bear Paw Mtn.**	**151.51**	**310**	P	**PKPbc**	**20 35 31.0**	**-0.7**
	baz=100						
MLY	**Manley**	**151.56**	**312**	P	**PKPbc**	**20 35 30.8**	**-0.9**
	baz=99						
COLD	**Coldfoot**	**151.61**	**316**	P	**PKPbc**	**20 35 30.9**	**-0.8**
	baz=95						
PPLA	**Purkeypile**	**151.81**	**307**	P	**PKPbc**	**20 35 31.9**	**-0.6**
	baz=102						
CAST	**Castle Rocks**	**151.87**	**308**	P	**PKPbc**	**20 35 31.3**	**-1.2**
	baz=101						
C23K	**Itkillik River**	**151.88**	**322**	P	**PKPbc**	**20 35 32.1**	**-0.2**
	baz=90						
D23K	**Nanushuk River**	**151.90**	**320**	P	**PKiKP**	**20 35 32.4**	**-0.3**
	baz=92						
H22K	**Ishtalitna Cre**	**151.94**	**313**	P	**PKPbc**	**20 35 31.7**	**-0.8**
	baz=97						
M20K	**Styx River**	**152.02**	**305**	P	**PKPbc**	**20 35 32.1**	**-0.8**
	baz=103						
G22K	**Bettles**	**152.10**	**316**	P	**PKPbc**	**20 35 32.7**	**-0.1**
	baz=95						
E22K	**Anaktuvuk Pass**	**152.29**	**318**	P	**PKPbc**	**20 35 32.8**	**-0.5**
	baz=92						
F22K	**John River**	**152.40**	**317**	P	**PKiKP**	**20 35 33.6**	**-0.1**
	baz=93						
N19K	**Bonanza Creek**	**152.41**	**302**	P	**PKPbc**	**20 35 33.3**	**-0.5**
	baz=104						
L20K	**Farewell, AK**	**152.49**	**306**	P	**PKPbc**	**20 35 33.6**	**-0.3**
	baz=101						
H21K	**Melozitna Rive**	**152.50**	**313**	P	**PKPbc**	**20 35 33.6**	**-0.2**
	baz=96						
O18K	**Koktuh Hills**	**152.51**	**300**	P	**PKPbc**	**20 35 33.4**	**-0.6**
	baz=106						
D22K	**Ayikyak River**	**152.62**	**320**	P	**PKiKP**	**20 35 34.3**	**+0.1**
	baz=90						
K20K	**Telida**	**152.73**	**308**	P	**PKPbc**	**20 35 33.5**	**-0.9**
	baz=100						
B22K	**Teshekpuk Lake**	**152.83**	**323**	P	**PKPbc**	**20 35 34.2**	**-0.1**
	baz=86						
G21K	**Allakaket**	**152.86**	**315**	P	**PKPbc**	**20 35 34.2**	**-0.4**
	baz=94						
F21K	**Alatna River**	**152.89**	**316**	P	**PKPbc**	**20 35 34.5**	**-0.2**
	baz=93						
E21K	**Killik River**	**153.09**	**319**	P	**PKPbc**	**20 35 33.3**	**-1.8**
	baz=90						
B21K	**Ikpikpuk River**	**153.28**	**322**	P	**PKPbc**	**20 35 35.1**	**-0.2**
	baz=87						
A22K	**Sinclair Lake**	**153.28**	**325**	P	**PKiKP**	**20 35 35.2**	**-0.2**
	baz=84						
H20K	**Anotleneega Mo**	**153.34**	**312**	P	**PKPbc**	**20 35 34.7**	**-1.0**
	baz=95						
C21K	**Knifeblade Rid**	**153.37**	**320**	P	**PKiKP**	**20 35 36.5**	**+0.8**
	baz=88						
J19K	**Poorman**	**153.51**	**309**	P	**PKPbc**	**20 35 35.9**	**-0.2**
	baz=97						
L18K	**Granite Mounta**	**153.73**	**305**	P	**PKiKP**	**20 35 36.9**	**+0.2**
	baz=100						
E20K	**Nigu River**	**153.92**	**319**	P	**PKPbc**	**20 35 36.5**	**-0.3**
	baz=88						
J18K	**Innoko River**	**153.93**	**308**	P	**PKPbc**	**20 35 36.5**	**-0.4**
	baz=97						
D20K	**Etivluk River**	**154.05**	**320**	P	**PKiKP**	**20 35 37.3**	**+0.1**
	baz=87						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
B20K	Meade River	154.13	323	P	PKiKP	20 35 37.6	+0.4
	baz=83						
G19K	Purcell Mounta	154.29	314	P	PKPbc	20 35 37.3	-0.3
	baz=92						
K17K	Iditarod	154.55	306	P	PKiKP	20 35 38.6	+0.3
	baz=98						
F19K	Shaleruckik Mo	154.56	315	P	PKPbc	20 35 37.4	-0.8
	baz=90						
H18K	Honhosa River	154.78	311	P	PKiKP	20 35 38.8	+0.1
	baz=92						
J17K	VABM Dome	154.98	307	P	PKiKP	20 35 39.5	+0.3
	baz=96						
C19K	Lookout Ridge	155.09	321	P	PKPdf	20 35 38.6	+8.2
	baz=83						

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*NOU **16** 20:24:25.3, 34°.88S×179°.52E, h274km, MLv4.6/8, South of Kermadec Islands*

*WEL **16** 20:24:48.5±1.0, 36°S±12°×17°8E±1°0, h15km±18km, M3.9/18, ML4.3/18, MLv3.9/18, Error ellipse: s-maj=18.1km s-min=7.3km az=37.5, confirmed*

ISC 16 20:24:39.4±3.1**, 35°.8S**±0°.1×**178°.8E**±0°.1**, h215**km±13km**,**
n95, σ**2ˢ05**/117**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.78	191	P	Pn	20 25 17.8	+1.0
MXZ	Matakaoa Point	1.78	191	P	Pn	20 25 18.0	+1.2
MXZ				S	S	20 25 42.8	-3.2
WMGZ	Waiomatatini S	2.02	188	P	Pn	20 25 21.8	+2.6
WMGZ				S	S	20 25 47.5	-2.5
HAZ	Te Kaha	2.09	202	P	Pn	20 25 21.1	+1.3
PKGZ	Pakihiroa	2.12	194	P	Pn	20 25 22.5	+2.4
PKGZ				S	S	20 25 50.4	-1.5
PUZ	Puketiti	2.29	190	P	Pn	20 25 24.2	+2.3
PUZ				S	S	20 25 51.8	-3.2
RUGZ	Raukumara Rang	2.31	202	P	Pn	20 25 23.7	+1.4
RUGZ				S	S	20 25 52.5	-3.1
TWGZ	Tauwhareparae	2.44	194	P	Pn	20 25 26.5	+3.0
TWGZ				S	S	20 25 57.7	-0.2
KUZ	Kuaotunu	2.62	248	P	Pn	20 25 25.6	+0.2
OPRZ	Ohinepanea	2.68	220	P	Pn	20 25 27.8	+1.6
MWZ	Matawai	2.70	201	P	Pn	20 25 28.4	+2.0
MWZ				S	S	20 26 01.6	-1.4
CNGZ	Carnagh Statio	2.70	189	P	Pn	20 25 29.3	+3.0
CNGZ				S	S	20 26 03.9	+1.0
TKGZ	Te Karaka	2.72	195	P	Pn	20 25 29.2	+2.7
TKGZ				S	S	20 26 00.8	-2.4
URZ	Urewera	2.77	208	P	Pn	20 25 29.0	+1.9
URZ	Urewera	2.77	208	P	Pn	20 25 28.8	+1.7
URZ				S	S	20 26 02.4	-1.9
RAGZ	Rawiri	2.88	201	P	Pn	20 25 31.1	+2.6
RAGZ				S	S	20 26 06.0	-0.7
KARZ	Kaharoa	2.98	222	P	Pn	20 25 32.1	+2.6
KMRZ	Kaimai	3.03	227	P	Pn	20 25 32.2	+2.1
WIAZ	Waiheke Island	3.08	250	P	Pn	20 25 31.4	+0.7
MUGZ	Murupara	3.09	210	P	Pn	20 25 32.9	+2.1
MUGZ				S	S	20 26 09.5	-1.4
HLRZ	Highlands Stat	3.10	218	P	Pn	20 25 34.9	+4.0
RTZ	Ruatahuna	3.13	206	P	Pn	20 25 33.2	+1.8
RTZ				S	S	20 26 09.6	-2.3
MKAZ	Moumakai	3.17	245	P	Pn	20 25 33.2	+1.5
SNGZ	Shannon Statio	3.17	200	P	Pn	20 25 34.1	+2.4
SNGZ				S	S	20 26 11.2	-1.4
PRGZ	Paritu Road	3.18	192	P	Pn	20 25 34.2	+2.4
PRGZ				S	S	20 26 11.4	-1.4
MBAZ	Motutapu North	3.25	252	S	Pn	20 25 33.6	+0.9
KNZ	Kokohu	3.31	195	P	Pn	20 25 35.4	+2.0
ALRZ	Allen Road	3.35	214	P	Pn	20 25 36.5	+2.7
RAHZ	Arahi	3.37	203	P	Pn	20 25 36.4	+2.3
RAHZ				S	S	20 26 16.3	-0.4
MTHZ	Maungataniwha	3.39	206	P	Pn	20 25 36.2	+1.8
MTHZ				S	S	20 26 16.8	-0.6
MHGZ	Mahia Peninsul	3.40	191	P	Pn	20 25 37.0	+2.6
MHGZ				S	S	20 26 15.4	-2.0
WHHZ	Waihua	3.47	200	P	Pn	20 25 37.7	+2.4
WHHZ				S	S	20 26 18.1	-0.8
MRHZ	Matea Rd	3.54	211	P	Pn	20 25 37.4	+1.2
KUTZ	Kaahu Road	3.55	220	P	Pn	20 25 39.8	+3.6
TLZ	Tolley Road	3.59	225	P	Pn	20 25 40.2	+3.4
NMHZ	Naumai	3.62	205	P	Pn	20 25 39.7	+2.5
ARHZ	Aropaoanui	3.71	202	P	Pn	20 25 40.3	+2.2
ARHZ				S	S	20 26 23.2	-1.0
WATZ	Wairara	3.76	219	P	Pn	20 25 42.1	+3.3
BKZ	Black Stump Fm	3.80	208	P	Pn	20 25 41.1	+1.9
BKZ	Black Stump Fm	3.80	208	P	Pn	20 25 41.1	+1.9
RATZ	Rangitukua	3.86	217	P	Pn	20 25 43.3	+3.3
RITZ	Rihia Road	3.91	215	P	Pn	20 25 43.5	+3.0
MCHZ	McNeill Hill	3.97	204	P	Pn	20 25 43.3	+2.0
MCHZ				S	S	20 26 29.0	-0.8
KWHZ	Kaweka Forest	4.05	206	P	Pn	20 25 46.1	+3.7
KWHZ				S	S	20 26 31.2	-0.4
CKHZ	Cape Kidnapper	4.06	199	P	Pn	20 25 44.1	+1.8
CKHZ				S	S	20 26 29.7	-2.0
TMVZ	Te Maari	4.09	215	P	Pn	20 25 45.5	+2.6
ETVZ	East Tongariro	4.10	215	P	Pn	20 25 45.6	+2.6
HIZ	Hauiti	4.11	228	P	Pn	20 25 47.6	+4.5
WTVZ	West Tongariro	4.14	216	P	Pn	20 25 46.3	+2.8
NNVZ	North Ngauruho	4.14	216	P	Pn	20 25 46.6	+3.0
OTVZ	Oturere	4.14	215	P	Pn	20 25 46.4	+2.8
TWVZ	Taurewa	4.18	218	P	Pn	20 25 47.0	+2.9
NGZ	Ngauruhoe	4.18	216	P	Pn	20 25 46.8	+2.7
COVZ	Chateau Observ	4.23	216	P	Pn	20 25 44.5	-0.1
OUZ	Omahuta	4.25	277	P	Pn	20 25 45.8	+1.1
KRHZ	Kereru	4.26	206	P	Pn	20 25 46.1	+1.3
FWVZ	Far West T-bar	4.27	216	P	Pn	20 25 47.5	+2.3
WHVZ	Whangaehu Hut	4.28	215	P	Pn	20 25 47.6	+2.3
MAVZ	Matarangi	4.28	215	P	Pn	20 25 47.9	+2.5
MOVZ	Moawhango	4.30	213	P	Pn	20 25 47.0	+1.5
WNVZ	Wahianoa	4.31	215	P	Pn	20 25 47.7	+2.0
TRVZ	Turoa	4.31	215	P	Pn	20 25 47.9	+2.2
PKVZ	Pokaka	4.40	217	P	Pn	20 25 49.1	+2.5
PXZ	Pawanui	4.46	199	P	Pn	20 25 48.6	+1.3
VRZ	Vera Road	4.58	223	P	Pn	20 25 52.8	+4.0
WPHZ	Waipukurau	4.62	203	P	Pn	20 25 51.2	+1.9
PRHZ	Porangahau	4.75	200	P	Pn	20 25 52.1	+1.2
TSZ	Takapari Road	4.78	207	P	Pn	20 25 52.5	+1.2
WAZ	Wanganui	4.93	216	P	Pn	20 25 55.6	+2.4
ANWZ	Angora Road	4.97	200	P	Pn	20 25 54.6	+0.9
NEZ	North Egmont	5.06	226	P	Pn	20 26 03.5	+8.6
PRWZ	Pori Road	5.21	204	P	Pn	20 25 58.8	+2.0
BFZ	Birch Farm	5.24	201	P	Pn	20 25 57.9	+0.8
BFZ	Birch Farm	5.24	201	P	Pn	20 25 58.1	+0.9
TIWZ	Tintock	5.44	204	P	Pn	20 26 01.0	+1.3
MRZ	Mangatainoka R	5.44	206	P	Pn	20 26 00.2	+0.5
OGWZ	Otaki Gorge	5.73	208	P	Pn	20 26 03.8	+0.5
KIW	Kapiti Island	5.87	210	P	Pn	20 26 05.6	+0.5
MTW	Mount Morrison	5.91	205	P	Pn	20 26 05.9	+0.2
TRWZ	Traveller	6.07	202	P	Pn	20 26 08.1	+0.4
PAWZ	Paruwai Farm	6.14	204	P	Pn	20 26 08.5	0.0
MSWZ	Moikau Station	6.23	205	P	Pn	20 26 09.5	-0.2
DUWZ	D'Urville Isla	6.26	216	P	Pn	20 26 10.6	+0.4
SNZO	South Karori	6.33	209	P	Pn	20 26 10.9	-0.1
BHW	Baring Head	6.36	207	P	Pn	20 26 11.3	0.0
PLWZ	Palliser	6.36	204	P	Pn	20 26 11.3	-0.2
TCW	Tory Channel	6.43	212	P	Pn	20 26 12.0	-0.2
TUWZ	Tuamarina	6.75	212	P	Pn	20 26 17.1	+0.7
QRZ	Quartz Range	6.99	222	P	Pn	20 26 20.3	+0.7
QRZ	Quartz Range	6.99	222	P	Pn	20 26 19.9	+0.3
MRNZ	Matariki Terra	7.29	218	P	Pn	20 26 23.9	+0.6
THZ	Tophouse	7.49	216	P	Pn	20 26 26.7	+0.7
KHZ	Kahutara	7.73	210	P	Pn	20 26 29.6	+0.5
KHZ	Kahutara	7.73	210	P	Pn	20 26 29.5	+0.4
GVZ	Greta Valley S	8.40	210	P	Pn	20 26 38.0	+0.3

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*IDC **16** 20:26:13.0±0.8, 2°.39N×126°.84E, h0km, mb3.8/11, mbtmp3.9/11, Error ellipse: s-maj=43.2km s-min=14.1km az=72.0*

*DJA **16** 20:26:18.4±0.2, 2°N±2°×12°7E±°, h10km, M4.2/12, mb4.4/7, MLv4.2/12*

ISC 16 20:26:20.2±0.7**, 2°.47N**±0°.06×**126°.98E**±0°.08**, h53**km**, n22,**
σ**1ˢ17**/26**, mb3.8**/10**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.73	167	P	Pn	20 26 47.3	-0.6
TNTI				S	Sn	20 27 11.7	+2.9
SGSI	Sangihe	1.89	310	P	Pn	20 26 48.9	-1.1
SGSI				S	Sn	20 27 13.6	+0.9
KMSI	Cibinong	3.54	238	P	Pn	20 27 13.9	+1.2
KMSI				S	Sn	20 27 54.0	+0.7
MRSI	Marisa	5.41	249	P	Pn	20 27 39.3	+0.9
LUWI	Luwuk	5.46	230	P	Pn	20 27 39.2	+0.1
	0.5nm68nm,0.9s						
NLAI	Namlea	5.67	179	P	Pn	20 27 40.9	-1.0
	0.1nm26nm,1.5s						
FAKI	Fak Fak	7.51	135	P	Pn	20 28 08.9	+1.8
	34nm,1.4s						
TTSI	Tana Toraja	9.01	233	P	Pn	20 28 26.5	-1.2
	8.8nm,0.5s						
BBSI	Bau Bau	9.05	209	P	Pn	20 28 27.9	-0.3
	27nm,0.9s						
SPSI	Sidrap Palu	9.63	228	P	Pn	20 28 36.1	-0.1
BNSI	Bone	9.68	225	P	Pn	20 28 35.3	-1.6
FITZ	Fitzroy Crossi	20.48	184	P	P	20 30 52.5	-1.3
	1.9nm,0.7s,baz=16,slow=8.5,SNR=6.6						
	1.9nm,0.7s						
WRA	Warramunga Arr	23.41	162	P	P	20 31 22.8	-1.9
	2.1nm,0.6s,baz=339,slow=11,SNR=20						
	2.1nm,0.6s						
ASAR	Alice Springs	26.84	166	P	P	20 31 54.6	-1.2
	0.7nm,0.5s,baz=342,slow=7.4,SNR=10						
ASAR				PcP	PcP	20 35 18.0	+0.4
	0.3nm,0.7s,baz=342,slow=2.0,SNR=2.2						
	0.7nm,0.5s						
CMAR	Chiang Mai Arr	31.73	302	P	P	20 32 39.0	-0.4
	0.7nm,0.8s,baz=76,slow=5.0,SNR=5.5						
	0.7nm,0.8s						
KSRS	Korea Array	34.83	1	P	P	20 33 06.0	0.0
	0.5nm,0.4s,baz=179,slow=10,SNR=4.6						
	0.5nm,0.4s						
MJAR	Matsushiro Arr	35.46	16	P	P	20 33 12.8	+1.3
	1.0nm,0.7s,baz=187,slow=9.4,SNR=1.5						
	1.0nm,0.7s						
STKA	Stephens Creek	36.87	159	P	P	20 33 23.4	-0.2
	2.7nm,0.7s,baz=326,slow=7.4,SNR=6.3						
	2.7nm,0.7s						
SONM	Songino Array	48.57	342	P	P	20 34 59.0	+0.7
	0.3nm,0.4s,baz=147,slow=5.6,SNR=2.2						
	0.3nm,0.4s						
MKAR	Makanchi Array	58.73	326	P	P	20 36 12.2	-0.4
	0.5nm,0.3s,baz=125,slow=7.3,SNR=7.8						
	0.5nm,0.3s						
KURBB	Kurchatov Arra	62.93	328	P	P	20 36 40.6	-0.4
	1.1nm,0.5s,baz=128,slow=6.1,SNR=27						
	1.1nm,0.5s						
BVAR	Borovoye Array	68.51	327	P	P	20 37 16.8	-0.2
	0.4nm,0.4s,baz=145,slow=5.3,SNR=3.6						
	0.4nm,0.4s						

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*GCG **16** 20:38:39.5±1.4, 15°.68N×92°.67W, h179km±19km, MD3.8*

*MEX **16** 20:38:41.1±0.7, 15°.73N×92°.55W, h181km±7km, MD4.1*

ISC 16 20:38:38.9±1.8**, 15°.58N**±0°.07×**92°.62W**±0°.07**,**
h180km±11km**, n30,** σ**2ˢ77**/49**, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAVE	Pavencul	0.57	132	*e*P	Pn	20 39 05.9	+1.5
PAVE				*e*S	Sn	20 39 24.5	+0.6
PCIG		0.59	282	*e*P	Pn	20 39 05.4	+1.3
PCIG				*e*S	Sn	20 39 23.9	+0.3
PATR	El Naranjo	0.59	141	*e*P	Pn	20 39 05.6	+1.1
PATR				*e*S	Sn	20 39 24.6	+0.5
THIG		0.75	153	*e*P	Pn	20 39 07.0	+2.0
THIG				*e*S	Sn	20 39 27.1	+1.9
CCIG	Comitan	0.84	34	*e*P	Pn	20 39 05.3	-0.5
CCIG				*e*S	Sn	20 39 23.6	-2.9
TGIG		1.28	338	*e*P	Pn	20 39 09.8	+0.7
TGIG				*e*S	Sn	20 39 31.4	-1.0
TGIG		1.28	338	*i* P	Pn	20 39 09.7	+0.7
TGIG				*e*P		20 39 09.8	
TGIG				*e*S	Sn	20 39 31.2	-1.2
STG8	El Palmar, Qui	1.66	132	*i* P	Pn	20 39 11.1	-1.7
STG8				*e*S	Sn	20 39 38.4	-0.6
STG0	El Palmar, Qui	1.69	133	*i* P	Pn	20 39 11.4	-1.5
HUIG	Huatulco	3.37	274	*e*P	Pn	20 39 33.1	+1.0
HUIG				*e*S	Sn	20 40 10.0	-3.6
VHO	Vista Hermosa	4.22	291	*e*P	Pn	20 39 46.3	+3.2
VHO				*e*S	Sn	20 40 31.7	-1.6
PEIG	Puerto Escondi	4.38	276	*e*P	Pn	20 39 46.6	+1.6
PEIG				*e*S	Sn	20 40 35.0	-1.6
YOIG	Yosondua	4.90	286	*e*P	Pn	20 39 52.2	+0.4
YOIG				*e*S	Sn	20 40 44.5	-4.6
TOIG	Toxpalan	4.94	301	*e*P	Pn	20 39 54.7	+2.5
TOIG				*e*S	Sn	20 40 46.5	-3.2
TXIG	Tlaxiaco	5.21	289	*e*P	Pn	20 39 56.7	+0.8
TXIG				*e*S	Sn	20 40 54.1	-2.3
TPIG	Tehuac#an	5.34	303	*e*P	Pn	20 39 59.2	+1.6
TPIG				*e*S	Sn	20 40 56.9	-2.4
PNIG	Pinotepa	5.36	279	*e*P	Pn	20 39 59.4	+1.8
PNIG				*e*S	Sn	20 40 55.6	-3.8
HLIG	Huajuapan de L	5.45	295	*e*P	Pn	20 40 02.2	+3.2
HLIG				*e*S	Sn	20 40 59.0	-2.8
FTIG	Fresnillo de T	5.77	294	*e*P	Pn	20 40 06.7	+3.6
FTIG				*e*S	Sn	20 41 04.7	-4.5
MGIG	Malinaltepec	6.00	287	*e*P	Pn	20 40 09.7	+3.6
MGIG				*e*S	Sn	20 41 13.5	-1.3
TLIG	Tlapa	6.03	290	*e*P	Pn	20 40 10.4	+3.9
TLIG				*e*S	Sn	20 41 14.9	-0.6
CRIG	Cruz Grande	6.36	281	*e*P	Pn	20 40 08.9	-1.8
CXUV	Coxquihui	6.58	315	*e*P	Pn	20 40 08.2	-5.4
PPM	Popocatepetl	6.70	302	*e*P	Pn	20 40 20.4	+4.8
DAIG	Los Arroyos	6.90	283	*e*P	Pn	20 40 20.4	+2.6
YAIG	Yautepec	6.97	299	*e*P	Pn	20 40 23.2	+4.3
MEIG	Mezcala	7.10	290	*e*P	Pn	20 40 24.8	+4.3
MEIG				*e*S	Sn	20 41 35.2	-5.5
PLIG	Platanillo	7.16	294	*e*P	Pn	20 40 25.6	+4.3
CAIG	El Cayaco	7.49	282	*e*P	Pn	20 40 29.0	+3.5
ZIIG	Zihuatanejo	8.72	285	*e*P	Pn	20 40 47.1	+5.4

IDC 16 20:39:10.2±7.8**, 30°.27S**×**178°.08W, h0**km**, mb3.2**/2**,**
mbtmp3.2/2**, Error ellipse: s-maj=329.0km**
s-min=61.9km az=155.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.04	267	P	P	20 47 12.1	+0.1
	0.2nm,0.7s,baz=115,slow=8.0,SNR=1.6						
	0.2nm,0.7s						
WRA	Warramunga Arr	44.02	272	P	P	20 47 19.9	+0.1
	0.2nm,0.5s,baz=113,slow=8.2,SNR=2.5						
	0.2nm,0.5s						
FINES	FINESS Array B	145.00	340	PKPbc	PKPbc	20 58 46.8	-1.3
	1.1nm,0.9s,baz=59,slow=3.7,SNR=5.4						

IDC 16 20:42:50.7±8.1**, 31°.16S**×**177°.71W, h0**km**, mb3.3**/2**,**
mbtmp3.3/2**, Error ellipse: s-maj=347.2km**
s-min=65.4km az=157.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.32	268	P	P	20 50 54.6	-0.1
	0.2nm,0.6s,baz=114,slow=7.8,SNR=1.8						
	0.2nm,0.6s						
WRA	Warramunga Arr	44.38	273	P	P	20 51 03.1	-0.2
	0.2nm,0.4s,baz=112,slow=8.0,SNR=5.0						
	0.2nm,0.4s						
FINES	FINESS Array B	145.94	340	PKPbc	PKPdf	21 02 30.7	-0.1
	0.9nm,0.8s,baz=27,slow=3.4,SNR=1.5						

CATAC 16 20:45:53.8±0.8**, 12°N**±6°×**8°7W**±°**, h123**km±5km**, M2.3**/8**,**
MLv2.3/8**, Error ellipse: s-maj=14.1km s-min=6.9km**
az=34.3, confirmed, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	Copaltepe	0.02	47	P	Pn	20 46 10.7	+0.3
SAPS	Ciudad Sandino	0.20	89	P	Pn	20 46 11.3	+0.6
SAPS	Ciudad Sandino	0.20	89	S	Sn	20 46 25.1	+1.7
MOMN	Momotombo	0.25	15	P	Pn	20 46 11.5	+0.5
MOMN				S	Sn	20 46 26.2	+2.3
MOM2	El Cardon	0.30	24	P	Pn	20 46 11.7	+0.7
MOM2				S	Sn	20 46 25.7	+1.6
CNGN	Cerro Negro	0.34	345	P	Pn	20 46 12.1	+0.8
CNGN	Cerro Negro	0.34	345	S	Sn	20 46 26.4	+1.9
MAS3	Al N del Volca	0.45	108	S	Sn	20 46 27.4	+2.1
NANN	Nandasmo	0.53	115	P	Pn	20 46 13.8	+1.6
NANN	Nandasmo	0.53	115	S	Sn	20 46 29.2	+3.1
PKGN	Cerro Pekin	0.62	324	P	Pn	20 46 13.9	+1.1
PKGN				S	Sn	20 46 29.8	+2.7
CRIN	San Cristobal	0.69	321	P	Pn	20 46 14.0	+0.6
CRIN	San Cristobal	0.69	321	S	Sn	20 46 30.8	+2.6
BOAB	BOACO BROADBAN	0.96	73	P	Pn	20 46 16.3	+0.6
BOAB	BOACO BROADBAN	0.96	73	S	Sn	20 46 32.9	+0.7
MATN	Matagalpa	1.01	41	S	Sn	20 46 34.1	+0.8

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*IDC **16** 20:54:46.8±2.1, 14°.34S×167°.30E, h163km±17km, mb3.7/10, mbtmp4.1/11, Error ellipse: s-maj=24.7km s-min=16.9km az=108.0*

ISC 16 20:54:47.5±0.7**, 14°.32S**±0°.08×**167°.3E**±0°.2**, h170**km**, n20,**
σ**0ˢ62**/23**, mb3.8**/10**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.76	186	P	Pn	20 56 38.7	+1.0
	4.9nm,0.7s,baz=71,slow=9.9,SNR=12						
DZM				S	Sn	20 58 04.7	-0.1
	2.2nm,0.3s,baz=125,slow=22,SNR=1.8						
STKA	Stephens Creek	29.29	229	P	P	21 00 34.5	+0.6
	2.8nm,0.4s,baz=49,slow=9.1,SNR=16						
	2.8nm,0.4s						
WRA	Warramunga Arr	31.96	255	P	P	21 00 56.7	-1.0
	0.3nm,0.4s,baz=83,slow=7.1,SNR=7.0						
	0.3nm,0.4s						
ASAR	Alice Springs	32.85	248	P	P	21 01 04.5	-1.0
	1.6nm,0.4s,baz=72,slow=9.7,SNR=58						
	1.6nm,0.4s						
PETK	Petropavlovsk-	67.66	354	P	P	21 05 26.5	+0.6
	4.1nm,0.7s,baz=154,slow=3.7,SNR=6.0						
	4.1nm,0.7s						
CMAR	Chiang Mai Arr	74.81	294	P	P	21 06 10.7	+1.0
	0.6nm,0.6s,baz=136,slow=5.5,SNR=5.4						
	0.6nm,0.6s						
QSPA	South Pole Qui	75.71	180	P	P	21 06 13.1	-1.0
	1.0nm,0.7s,baz=69,slow=0.8,SNR=7.1						
	1.0nm,0.7s						
SONM	Songino Array	82.19	324	P	P	21 06 49.4	-0.2
	0.5nm,0.6s,baz=106,slow=3.6,SNR=2.8						
	0.5nm,0.6s						
MAW	Mawson	82.28	202	P	P	21 06 49.3	-0.3
	1.3nm,0.6s,baz=45,slow=8.6,SNR=2.2						
	1.3nm,0.6s						
ILAR	Eielson Array	86.13	18	P	P	21 07 08.3	-0.6
	1.1nm,0.7s,baz=239,slow=5.2,SNR=14						
	1.1nm,0.7s						
MKAR	Makanchi Array	96.93	316	P	P	21 07 59.5	0.0
	0.8nm,0.7s,baz=98,slow=6.4,SNR=7.3						
	0.8nm,0.7s						
ARCES	ARCESS Array B	119.86	345	PKP	PKPdf	21 13 16.9	-0.1
	1.8nm,0.3s,baz=76,slow=1.9,SNR=62						
BOSA	Boshof	123.71	221	PKP	PKPdf	21 13 25.5	-0.3
	1.5nm,0.7s,baz=205,slow=5.5,SNR=2.8						
FINES	FINESS Array B	125.35	338	PKP	PKPdf	21 13 27.9	+0.1
	0.7nm,0.3s,baz=68,slow=2.6,SNR=16						
NOA	NORSAR Array B	130.24	345	PKP	PKPdf	21 13 37.5	+0.4
	0.3nm,0.5s,baz=43,slow=2.4,SNR=2.2						
NOA				SKPbc	SKPbc	21 16 44.9	+0.4
	0.6nm,0.8s,baz=347,slow=4.2,SNR=3.2						
HFS	Hagfors	130.34	343	PKP	PKPdf	21 13 36.6	-0.7
	1.3nm,0.8s,baz=130,slow=8.0,SNR=2.1						
AKASG	Malin Array Be	130.41	326	PKP	PKPdf	21 13 37.5	-0.2
	0.8nm,0.6s,baz=48,slow=1.2,SNR=3.0						
AKASG				SKPbc	SKPab	21 16 46.1	+0.7
	0.4nm,0.5s,baz=49,slow=3.9,SNR=4.7						
BRTR	Keskin Array B	132.26	311	PKP	PKPdf	21 13 41.5	-0.3
	0.4nm,0.5s,baz=134,slow=6.3,SNR=2.5						
KEST	Kesra	150.91	321	PKPbc	PKiKP	21 14 21.5	+0.4
	6.4nm,0.6s,baz=97,slow=2.9,SNR=17						
ESDC	Sonseca Array	153.60	345	PKPbc	PKiKP	21 14 26.8	+0.2
	0.5nm,0.8s,baz=52,slow=2.3,SNR=4.7						

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*NEIC **16** 20:56:13.0±1.4, 12°.56S±0°.09×166°.1E±0°.1, h10km±1km, mb4.6/34, Error ellipse: s-maj=21.7km s-min=12.3km az=60.0*

*IDC **16** 20:56:24.5±3.2, 12°.80S×165°.89E, h102km±27km, mb4.2/12, mbtmp4.5/15, Error ellipse: s-maj=21.1km s-min=16.2km az=74.0*

ISC 16 20:56:16.5±0.5**, 12°.63S**±0°.07×**166°.16E**±0°.09**, h40**km**, n88,**
σ**1ˢ17**/90**, mb4.6**/41**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	2.98	160	Pn	Pn	20 57 01.6	+0.3
HNR	Honiara	6.88	297	Pn	Pn	20 57 52.2	-2.7
DZM	Mont Dzumac	9.39	178	Pn	Pn	20 58 29.0	-0.5
DZM	Mont Dzumac	9.39	178	P	Pn	20 58 36.7	+7.3
	7.5nm,0.5s,baz=16,slow=13,SNR=3.1						
DZM				S	Sn	21 00 17.9	+4.1
	8.0nm,0.6s,baz=144,slow=22,SNR=1.3						
MSVF	Nonsavu	12.55	115	P	P	20 59 21.7	-1.8
	16nm,0.9s,baz=226,slow=4.6,SNR=5.0						
PMG	Port Moresby	18.92	278	P	Pn	21 00 35.5	+0.5
	31nm,1.0s,baz=34,slow=3.6,SNR=5.5						
CTAO	Charters Tower	20.47	246	P	Pn	21 00 49.9	-3.5
CTAO				IAmb	IAmb	21 01 05.2	
	comp=Z,40nm,1.2s						
PATS	Pohnpei	20.86	338	P	P	21 00 53.7	-1.5
ARMA	Armidale	22.22	215	P	P	21 01 10.7	+0.8
ARMA				IAmb	IAmb	21 01 12.3	
	comp=Z,14nm,0.8s						
COEN	Coen	22.40	264	P	P	21 01 10.7	-1.2
COEN				IAmb	IAmb	21 01 27.7	
	comp=Z,34nm,1.1s						
CAN	Canberra	27.41	212	P	P	21 01 57.9	-0.6
BKZ	Black Stump Fm	27.97	163	P	P	21 02 02.3	-1.2
STKA	Stephens Creek	29.60	226	P	P	21 02 17.3	-0.7
STKA	Stephens Creek	29.60	226	P	P	21 02 17.9	-0.1
	comp=Z,6.8nm,0.9s,baz=24,slow=10,SNR=12						
	comp=Z,6.8nm,0.9s						
WR0	Warramunga Arr	31.17	252	P	P	21 02 30.8	-1.2
WR0				IAmb	IAmb	21 02 49.6	
	comp=Z,9.4nm,1.2s						
WR8	Warramunga Arr	31.20	252	P	P	21 02 31.0	-1.3
WR8				IAmb	IAmb	21 03 08.6	
	comp=Z,12nm,1.4s						
WB0	Warramunga Arr	31.28	253	P	P	21 02 32.3	-0.7
WB0				IAmb	IAmb	21 02 44.5	
	comp=Z,7.8nm,0.9s						
WB2	Warramunga Arr	31.34	252	P	P	21 02 32.9	-0.6
WRA	Warramunga Arr	31.35	252	P	P	21 02 33.2	-0.4
WRA	Warramunga Arr	31.35	252	P	P	21 02 32.1	-1.5
	comp=Z,3.1nm,0.9s,baz=83,slow=8.7,SNR=13						
WRA				PcP	PcP	21 05 27.4	+0.4
	comp=Z,0.6nm,0.7s,baz=76,slow=2.8,SNR=2.9						
	comp=Z,3.1nm,0.9s						
AS31	Alice Springs	32.47	246	P	P	21 02 41.6	-1.9
ASAR	Alice Springs	32.47	246	P	P	21 02 42.4	-1.1
ASAR	Alice Springs	32.47	246	P	P	21 02 41.8	-1.7
	comp=Z,3.9nm,0.8s,baz=75,slow=9.5,SNR=25						
ASAR				PcP	PcP	21 05 30.2	+0.1
	comp=Z,1.3nm,1.0s,baz=83,slow=2.9,SNR=3.3						
	comp=Z,3.9nm,0.8s						
BBOO	Buckleboo	34.07	229	P	P	21 02 56.5	-0.8
KNRA	Kununurra	36.35	261		P	21 03 16.4	-0.7
FITZ	Fitzroy Crossi	39.38	257		P	21 03 42.1	-0.6
FORT	Forrest	39.49	237	P	P	21 03 43.2	-0.2
FORT				IAmb	IAmb	21 03 56.5	
	comp=Z,15nm,0.8s						
MJAR	Matsushiro Arr	55.56	333	P	P	21 05 48.0	0.0
	comp=Z,4.3nm,0.9s,baz=166,slow=9.5,SNR=8.0						
	comp=Z,4.3nm,0.9s						
KSRS	Korea Array	61.41	326	P	P	21 06 29.7	+1.0
	comp=Z,1.9nm,0.9s,baz=129,slow=7.4,SNR=4.6						
	comp=Z,1.9nm,0.9s						
NJ2	Nanjing	63.43	316	*e*P	P	21 06 43.3	+0.9
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
USRK	Ussuriysk Ar.	64.54	333	P	P	21 06 51.2	+1.8
	comp=Z,16nm,1.2s,baz=163,slow=7.4,SNR=7.8						
	comp=Z,16nm,1.2s						
MDJ	Mudanjiang	65.93	332	P	P	21 06 59.3	+0.8
MDJ				pmax	pmax		
	comp=Z,13nm,2.1s						
TIA	Tai'an	67.06	318	P	P	21 07 08.0	+2.1
TIA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BNX	BinXian	67.79	332	⇑P	P	21 07 11.3	+1.0
BNX				pmax	pmax		
	comp=Z,16nm,1.3s						
HEH	HeiHe	71.21	335	*e*P	P	21 07 32.3	+1.0
HEH				pmax	pmax		
	comp=Z,14nm,0.9s						
KMI	Kunming	72.29	302	P	P	21 07 43.9	+5.3

KMI				pmax	pmax		
	comp=Z,14nm,1.4s						
XLT	**XiLinHaoTe**	**72.38**	**324**	*e*P	**P**	**21 07 40.6**	**+2.0**
XLT				sP	sP	21 07 51.8	0.0
XLT				PcP	**pwP**	**21 08 00.6**	**+2.5**
XLT				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**73.11**	**294**	P	**P**	**21 07 45.0**	**+1.7**
	comp=Z,1.3nm,0.8s,baz=129,slow=5.5,SNR=8.0						
	comp=Z,1.3nm,0.8s						
HHC	**Hu-ho-hao-te**	**73.30**	**320**	*e*P	**P**	**21 07 45.3**	**+1.2**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
PZH	**PanZhiHua**	**73.66**	**303**	P	**P**	**21 07 46.3**	**-0.3**
LZH	**Lanzhou**	**76.12**	**312**	*e*P	**P**	**21 08 03.3**	**+2.7**
LZH				sP	pP	21 08 08.8	-1.5
LZH				PcP	**sP**	**21 08 15.0**	**+1.0**
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
QSPA	**South Pole Qui**	**77.38**	**180**	P	**P**	**21 08 07.0**	**-0.2**
	comp=Z,23nm,0.8s,baz=358,slow=1.1,SNR=84						
	comp=Z,23nm,0.8s						
SONM	**Songino Array**	**80.18**	**324**	P	**P**	**21 08 23.9**	**+1.0**
	comp=Z,2.0nm,0.8s,baz=131,slow=4.5,SNR=8.4						
	comp=Z,2.0nm,0.8s						
GTA	**Gaotai**	**80.44**	**314**	*e*P	**P**	**21 08 26.4**	**+1.9**
GTA				sP	sP	21 08 39.5	+1.7
GTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GTA				LR	LR		
	comp=N,220nm,16.3s						
GTA				LR	LR		
	comp=E,180nm,18.3s						
GTA				LR	LR		
	comp=Z,260nm,19.1s						
CAST	**Castle Rocks**	**82.33**	**18**	P	**P**	**21 08 33.5**	**-0.2**
PCA	**Pinnacle**	**84.13**	**24**	P	**P**	**21 08 41.0**	**-2.1**
E19K	**Redstone River**	**84.17**	**13**		**P**	**21 08 44.0**	**+0.8**
E19K				IAmb	IAmb	21 08 45.8	
	comp=Z,3.6nm,0.8s						
G21K	**Allakaket**	**84.31**	**15**	P	**P**	**21 08 45.0**	**+1.0**
C18K	**Utukok River**	**84.33**	**11**	P	**P**	**21 08 44.5**	**+0.4**
C18K				IAmb	IAmb	21 09 01.5	
	comp=Z,4.2nm,1.0s						
IL31		**84.88**	**18**	P	**P**	**21 08 45.8**	**-0.9**
IL31				IAmb	IAmb	21 08 47.0	
	comp=Z,3.3nm,0.8s						
ILAR	**Eielson Array**	**84.88**	**18**		**P**	**21 08 46.1**	**-0.7**
ILAR	**Eielson Array**	**84.88**	**18**	P	**P**	**21 08 45.4**	**-1.4**
	comp=Z,2.7nm,0.8s,baz=233,slow=5.9,SNR=21						
DOT	**Dot Lake**	**85.02**	**20**	P	**P**	**21 08 47.8**	**+0.3**
DOT				IAmb	IAmb	21 08 48.9	
	comp=Z,3.6nm,1.1s						
C19K	**Lookout Ridge**	**85.03**	**12**	P	**P**	**21 08 48.8**	**+1.3**
C19K				IAmb	IAmb	21 08 49.3	
	comp=Z,3.3nm,0.9s						
J25K	**Salcha River,**	**85.25**	**19**		**P**	**21 08 49.1**	**+0.3**
J25K				IAmb	IAmb	21 08 49.9	
	comp=Z,4.3nm,0.8s						
SCRK	**Sand Creek**	**85.27**	**20**	P	**P**	**21 08 49.5**	**+0.6**
G24K	**Hadweenzic Riv**	**86.07**	**17**		**P**	**21 08 53.5**	**+0.8**
G24K				IAmb	IAmb	21 09 37.7	
	comp=Z,6.8nm,1.2s						
B21K	**Ikpikpuk River**	**86.49**	**13**		**P**	**21 08 55.2**	**+0.6**
B21K				IAmb	IAmb	21 08 57.0	
	comp=Z,3.6nm,0.8s						
F24K	**Squaw Lake**	**86.54**	**16**	P	**P**	**21 08 56.6**	**+1.6**
F24K				IAmb	IAmb	21 09 21.5	
	comp=Z,6.0nm,1.4s						
NVAR	**Mina Array Bea**	**86.74**	**50**	pP	pP	21 09 24.6	+17
	comp=Z,0.3nm,0.3s,baz=232,slow=3.5,SNR=2.5						
D23K	**Nanushuk River**	**86.88**	**14**		**P**	**21 08 58.1**	**+1.4**
D23K				IAmb	IAmb	21 08 59.4	
	comp=Z,3.6nm,0.9s						
E25K	**Arctic Village**	**87.59**	**16**	P	**P**	**21 09 00.2**	**+0.1**
E25K				IAmb	IAmb	21 09 35.9	
	comp=Z,3.5nm,1.1s						
MK31	**Makanchi Array**	**94.95**	**317**	P	**P**	**21 09 35.5**	**+0.7**
MKAR	**Makanchi Array**	**94.95**	**317**		**P**	**21 09 35.7**	**+0.9**
MKAR	**Makanchi Array**	**94.95**	**317**	P	**P**	**21 09 35.1**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=96,slow=6.8,SNR=13						
	comp=Z,1.4nm,0.7s						
ZALV	**Zalesovo Beam**	**95.07**	**324**	P	**P**	**21 09 35.3**	**+0.1**
	comp=Z,2.2nm,0.8s,baz=108,slow=4.8,SNR=7.9						
	comp=Z,2.2nm,0.8s						
SNAA	**Sanae**	**95.56**	**183**	P	**P**	**21 09 35.6**	**-1.7**
	comp=Z,3.0nm,1.0s,baz=150,slow=3.7,SNR=4.4						
	comp=Z,3.0nm,1.0s						
ARCES	**ARCESS Array B**	**117.96**	**345**	PKP	**PKiKP**	**21 14 58.0**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=58,slow=2.3,SNR=9.1						
FINES	**FINESS Array B**	**123.39**	**338**	PKP	**PKiKP**	**21 15 08.7**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=49,slow=3.5,SNR=5.2						
NB2	**NORSAR Subarra**	**128.33**	**345**	PKPdf	**PKiKP**	**21 15 18.6**	**-0.6**
	comp=Z,2.3nm,1.0s,baz=31,slow=1.9						
NOA	**NORSAR Array B**	**128.33**	**345**	PKP	**PKPdf**	**21 15 17.8**	**-0.8**
	comp=Z,0.8nm,0.7s,baz=34,slow=2.0,SNR=5.1						
AKASG	**Malin Array Be**	**128.40**	**326**	PKP	**PKiKP**	**21 15 18.8**	**-0.7**
	comp=Z,2.6nm,0.9s,baz=59,slow=1.5,SNR=8.0						
BRTR	**Keskin Array B**	**130.32**	**312**	PKP	**PKiKP**	**21 15 22.6**	**-1.3**
	comp=Z,0.5nm,0.5s,baz=132,slow=1.8,SNR=5.3						
MMAI	**Mount Meron Ar**	**130.78**	**303**	PKP	**PKiKP**	**21 15 25.5**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=98,slow=4.3,SNR=5.0						
GERES	**GERESS Array B**	**137.30**	**333**	PKP	**PKiKP**	**21 15 36.4**	**-1.4**
	comp=Z,1.1nm,0.8s,baz=98,slow=3.0,SNR=5.6						
KEST	**Kesra**	**148.91**	**322**	PKPbc	**PKiKP**	**21 16 01.7**	**-0.3**
	comp=Z,26nm,0.8s,baz=318,slow=2.3,SNR=24						
POLO	**Lamas de Olo**	**150.88**	**351**	*e*PKPbc	**PKiKP**	**21 16 05.7**	**-0.1**
MVO	**Moncorvo**	**150.96**	**349**	*e*PKPbc	**PKiKP**	**21 16 06.1**	**+0.1**
PVRL	**Vila Real**	**150.97**	**350**	*e*PKPbc	**PKiKP**	**21 16 06.5**	**+0.5**
PVIS	**Viseu**	**151.54**	**350**	*e*PKPbc	**PKiKP**	**21 16 07.2**	**0.0**
ESDC	**Sonseca Array**	**151.69**	**344**	PKPbc	**PKiKP**	**21 16 07.1**	**-0.4**
	comp=Z,4.3nm,0.9s,baz=10,slow=2.5,SNR=34						
ESDC				PKPab	**pPKPbc**	**21 16 17.0**	**-0.7**
	comp=Z,1.8nm,0.6s,baz=16,slow=3.8,SNR=9.1						
MTE	**Manteigas**	**151.79**	**350**	*e*PKPbc	**PKiKP**	**21 16 08.2**	**+0.4**
PCAS	**Casmilo, Conde**	**152.28**	**351**	*e*PKPbc	**PKiKP**	**21 16 08.9**	**+0.2**
PCBR	**Castelo Branco**	**152.32**	**349**	*e*PKPbc	**PKiKP**	**21 16 09.2**	**+0.5**
PSARD	**Sardoal**	**152.67**	**350**	*e*PKPbc	**PKiKP**	**21 16 09.7**	**+0.1**
PMRV	**Marv??o**	**152.71**	**349**	*e*PKPbc	**PKiKP**	**21 16 09.8**	**+0.2**
PSBE	**So Bento**	**152.86**	**351**	*e*PKPbc	**PKiKP**	**21 16 10.5**	**+0.6**
PMTG	**Montargil**	**153.20**	**350**	*e*PKPbc	**PKiKP**	**21 16 10.9**	**+0.3**

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*WEL **16** 20:58:18.6±1.2,32°S±4°×17°7W±1°9,h33^{km},M5.4/14, mB5.7/14,ML6.2/12,MLv5.9/12,Mw(mB)5.2/14,Error ellipse: s-maj=25.6km s-min=3.8km az=98.0,confirmed*

*IDC **16** 20:58:20.0±0.4,31°.67S×177°.80W,h0^{km},mb4.9/20, mbtmp4.8/22,ML4.8/2,MS5.2/45,Error ellipse: s-maj=16.3km s-min=15.5km az=153.0*

*MOS **16** 20:58:21.4±0.9,31°.63S×177°.92W,h24^{km},mb5.6/25, MS5.3/24,Error ellipse: s-maj=11.6km s-min=8.2km az=102.9*

*BJI **16** 20:58:22.4,31°.47S×177°.33W,h31^{km},mB5.8/58, mb5.4/55,Ms5.5/76,Ms7 5.2/75*

*NEIC **16** 20:58:22.1±2.5,31°.66S±0°.04×177°.8W±0°.1,h10^{km}±1^{km}, mb5.5/184,Ms_20 5.5/951,Mww5.6/41,Error ellipse: s-maj=21.0km s-min=4.6km az=77.0*

*NOU **16** 20:58:24.0,32°.02S×177°.39W,h36^{km},mb5.4/68,South of Kermadec Islands*

*NEIC **16** 20:58:26.3,31°.64S×177°.85W,h22^{km}*

*GCMT **16** 20:58:26.1±0.1,31°.68S±0°.01×177°.47W±0°.01,h14^{km}, MW5.5/162,Moment Tensor Solution. s122,c227; s162,c307; Duration: $1^{s}5$ Moment tensor: Scale 10^{17} Nm; M_{rr}2.08±.03; $M_{\theta\theta}$-0.03±.02; $M_{\phi\phi}$-2.04±.02; $M_{r\theta}$0.24±.05; $M_{\theta\phi}$-0.44±.02; $M_{\phi r}$1.60±.06; Best double couple: $M_0$2.65600×10^{17} NP1:ϕ_s194.00000°,δ26.00000°, λ94.00000°. NP2:ϕ_s10.00000°,δ64.00000°,λ88.00000°. Principal axes: T 2.6310, Plg71.0000°, Azm276.0000°; N 0.0570, Plg2.0000°, Azm11.0000°; P -2.6820, Plg19.0000°, Azm101.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **16** 20:58:26.3,31°.84S×176°.91W,h22^{km},Moment Tensor Solution. Duration: $2^{s}9$ Moment tensor: Scale 10^{17}Nm; M_{rr}2.00; $M_{\theta\theta}$0.17; $M_{\phi\phi}$-2.17; $M_{r\theta}$0.18; $M_{\theta\phi}$-0.50; $M_{\phi r}$1.61; Fault plane solution: $M_0$2.69000×10^{17} NP1: ϕ_s195.77000°,δ26.63000°,λ96.74000°. NP2:ϕ_s8.24000°, δ63.57000°,λ86.63000°. Principal axes: T 2.5473, Plg71.0000°, Azm271.0000°; N 0.2670, Plg3.0000°, Azm10.0000°; P -2.8143, Plg19.0000°, Azm101.0000°;*

ISC 16 20:58:24.1±0.5,31°.80S±0°.04×177°.70W±0°.04,h28^{km}±2^{km}, h28^{km}:pP-P,n1192,σ$1^{s}59$/750,mb5.5/173,MS5.5/534, 78C-47D,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.54**	**356**	P	**Pn**	**20 58 59.4**	**-4.0**
GLKZ				S	**Sn**	**20 59 29.6**	**-3.7**
RAO	**Raoul Island**	**2.55**	**356**		**Pn**	**20 58 59.3**	**-4.2**
RAO	**Raoul Island**	**2.55**	**356**	P	**Pn**	**20 59 00.0**	**-3.5**
RIZ	**Raoul Island**	**2.55**	**355**	P	**Pn**	**20 58 59.7**	**-3.9**
RIZ				S	**Sn**	**20 59 30.9**	**-2.8**
MXZ	**Matakaoa Point**	**6.62**	**209**	P	**Pn**	**20 59 55.6**	**-3.9**
MXZ				S	**Sn**	**21 01 11.0**	**-3.0**
WMGZ	**Waiomatatini S**	**6.80**	**207**	P	**Pn**	**21 00 00.2**	**-1.7**
PKGZ	**Pakihiroa**	**6.98**	**209**	P	**Pn**	**21 00 00.7**	**-3.6**
PKGZ				S	**Sn**	**21 01 22.3**	**-0.4**
HAZ	**Te Kaha**	**7.01**	**211**	P	**Pn**	**21 00 03.0**	**-1.8**
HAZ				S	**Sn**	**21 01 22.9**	**-0.6**
PUZ	**Puketiti**	**7.08**	**207**	P	**Pn**	**21 00 02.1**	**-3.8**
PUZ				S	**Sn**	**21 01 23.4**	**-2.0**
RUGZ	**Raukumara Rang**	**7.23**	**210**	P	**Pn**	**21 00 04.3**	**-3.7**
TWGZ	**Tauwhareparae**	**7.28**	**208**	P	**Pn**	**21 00 05.1**	**-3.5**
TWGZ				S	**Sn**	**21 01 27.6**	**-2.7**
KUZ	**Kuaotunu**	**7.35**	**226**	P	**Pn**	**21 00 09.9**	**+0.5**
WHRZ	**Whale Island**	**7.46**	**214**	P	**Pn**	**21 00 09.6**	**-1.4**
CNGZ	**Carnagh Statio**	**7.46**	**206**	P	**Pn**	**21 00 06.6**	**-4.4**
TKGZ	**Te Karaka**	**7.56**	**208**	P	**Pn**	**21 00 10.0**	**-2.4**
URZ	**Urewera**	**7.72**	**212**	Pn	**Pn**	**21 00 11.1**	**-3.4**
	4.6nm,0.3s,baz=355,slow=4.4,SNR=14						
URZ				Sn	**Sn**	**21 01 38.2**	**-2.9**
	34nm,0.3s,baz=262,slow=18,SNR=14						
URZ	**Urewera**	**7.72**	**212**	P	**Pn**	**21 00 11.4**	**-3.2**
URZ	**Urewera**	**7.72**	**212**	S	**Sn**	**21 01 39.4**	**-1.7**
URZ	**Urewera**	**7.72**	**212**	P	**Pn**	**21 00 11.2**	**-3.4**
RAGZ	**Rawiri**	**7.79**	**210**	P	**Pn**	**21 00 13.1**	**-2.5**
RAGZ				S	**Sn**	**21 01 40.6**	**-2.1**
WCZ	**Waipu Caves**	**7.80**	**236**	P	**Pn**	**21 00 19.9**	**+4.3**
RIGZ	**Rimuhau**	**7.83**	**207**	P	**Pn**	**21 00 11.5**	**-4.5**
RIGZ				S	**Sn**	**21 01 41.5**	**-2.2**
MKAZ	**Moumakai**	**7.92**	**226**	P	**Pn**	**21 00 19.4**	**+2.1**
PRGZ	**Paritu Road**	**7.97**	**206**	P	**Pn**	**21 00 14.5**	**-3.6**
OUZ	**Omahuta**	**8.03**	**243**	P	**Pn**	**21 00 21.4**	**+2.6**
OUZ	**Omahuta**	**8.03**	**243**	P	**Pn**	**21 00 23.0**	**+4.2**
SNGZ	**Shannon Statio**	**8.06**	**209**	P	**Pn**	**21 00 14.7**	**-4.5**
RTZ	**Ruatahuna**	**8.07**	**211**		**Pn**	**21 00 17.3**	**-2.2**
RTZ	**Ruatahuna**	**8.07**	**211**	P	**Pn**	**21 00 17.6**	**-1.9**
KNZ	**Kokohu**	**8.13**	**206**	P	Pn	21 00 14.3	-6.0
KNZ				S	**Sn**	**21 01 48.7**	**-2.5**
TOZ	**Tahuroa Road**	**8.14**	**222**	Pn	**Pn**	**21 00 19.9**	**-0.4**
MHGZ	**Mahia Peninsul**	**8.16**	**205**	P	Pn	21 00 14.9	-5.7
MHGZ				S	**Sn**	**21 01 45.6**	**-6.4**
BKZ	**Black Stump Fm**	**8.74**	**211**	P	**Pn**	**21 00 26.3**	**-2.3**
BKZ	**Black Stump Fm**	**8.74**	**211**	S	**Sn**	**21 02 04.8**	**-1.4**
BKZ	**Black Stump Fm**	**8.74**	**211**	P	**Pn**	**21 00 24.4**	**-4.2**
PXZ	**Pawanui**	**9.32**	**207**	P	Pn	21 00 29.7	-6.8
TSZ	**Takapari Road**	**9.71**	**210**	P	**Pn**	**21 00 38.5**	**-3.3**
TUWZ	**Tuamarina**	**11.72**	**213**	Pn	**Pn**	**21 01 05.8**	**-3.5**
CTZ	**Chatham Island**	**11.95**	**176**	Pn	**Pn**	**21 01 09.6**	**-2.8**
CTZ	**Chatham Island**	**11.95**	**176**	P	**Pn**	**21 01 10.1**	**-2.3**
CTZ	**Chatham Island**	**11.95**	**176**	P	Pn	21 01 05.5	-6.9
QRZ	**Quartz Range**	**11.96**	**218**	P	**Pn**	**21 01 12.0**	**-0.6**
KHZ	**Kahutara**	**12.69**	**211**	Pn	Pn	21 01 16.5	-6.0
NFK	**Norfolk Island**	**12.70**	**279**	P	**P**	**21 01 31.3**	**-2.4**
LKBA	**Tubou, Lakemba**	**13.55**	**355**	P	**Pn**	**21 01 37.0**	**+2.6**
INZ	**Inchbonnie**	**13.90**	**215**	P	**Pn**	**21 01 38.0**	**-1.2**
MSVF	**Nonsavu**	**14.52**	**344**	Pn	**Pn**	**21 01 45.5**	**-2.3**
MSVF	**Nonsavu**	**14.52**	**344**	Pn	**Pn**	**21 01 46.1**	**-1.8**
	0.6nm,0.3s,baz=163,slow=12,SNR=12						
MSVF				LR	LR	21 07 13.1	
	comp=Z,17µm,18.1s,baz=172,slow=37						
	70nm,0.9s						
MSVF	**Nonsavu**	**14.52**	**344**	P	**Pn**	**21 01 49.4**	**+1.6**
RPZ	**Rata Peaks**	**14.84**	**214**	Pn	Pn	21 01 46.6	-5.2
	3.2nm,0.3s,baz=66,slow=4.1,SNR=8.1						
RPZ				Sn	Sn	21 04 18.4	-17
	2.3nm,0.3s,baz=304,slow=24,SNR=7.7						
DGTI	**Dogotuki**	**15.61**	**351**	P	**P**	**21 02 05.0**	**-1.1**
ODZ	**Otahua Downs**	**16.05**	**211**	P	**Pn**	**21 02 06.0**	**-1.7**
PINNC	**Pines Island,**	**16.06**	**301**	P	**P**	**21 02 11.5**	**+0.4**
MARNC	**Mare, Loyalty**	**16.36**	**305**	P	**P**	**21 02 16.5**	**+2.0**
OUENC	**Ouen Island, N**	**16.62**	**300**	P	**P**	**21 02 18.6**	**+1.3**
YATNC	**Mamie plateau,**	**16.80**	**301**	P	**P**	**21 02 20.9**	**+1.5**
DZM	**Mont Dzumac**	**17.12**	**301**	P	**P**	**21 02 23.3**	**+0.3**
DZM				IAmb	IAmb	21 02 28.2	
	comp=Z,523nm,1.4s						
DZM	**Mont Dzumac**	**17.12**	**301**	*e*P	**P**	**21 02 22.5**	**-0.5**
	comp=Z,807nm,1.4s						
DZM				*e*LR	LR	21 06 13.5	
	comp=Z,22µm,22.5s						
DZM	**Mont Dzumac**	**17.12**	**301**	Pn	**P**	**21 02 23.9**	**+0.9**
	comp=Z,0.7nm,0.3s,baz=115,slow=13,SNR=22						
DZM				LR	LR	21 08 11.4	
	comp=Z,34µm,18.1s,baz=146,slow=35						
AFI	**Afiamalu**	**18.62**	**18**	P	**P**	**21 02 39.2**	**-0.3**
AFI	**Afiamalu**	**18.62**	**18**	P	**P**	**21 02 38.6**	**-0.9**
AFI				pmax	pmax		
	comp=Z,271nm,1.3s						
RAR	**Rarotonga**	**19.17**	**61**	P	**P**	**21 02 43.5**	**-2.0**
	comp=Z,4.3nm,0.3s,baz=240,slow=6.2,SNR=5.1						
RAR				LR	LR	21 10 44.6	
	comp=Z,3µm,18.7s,baz=230,slow=39						
	comp=Z,24nm,0.4s						
RAR	**Rarotonga**	**19.17**	**61**	P	**P**	**21 02 44.0**	**-1.4**
RAR	**Rarotonga**	**19.17**	**61**	P	**P**	**21 02 44.4**	**-1.0**
RAR				pmax	pmax		
	comp=Z,215nm,2.3s						
GC1S	**Gold Coast 1 S**	**25.17**	**271**	P	**P**	**21 03 48.8**	**+1.8**
ARMA	**Armidale**	**26.26**	**265**	P	**P**	**21 03 58.8**	**+1.7**
ARMA				IAmb	IAmb	21 04 04.7	
	comp=Z,292nm,1.8s						
ARMA	**Armidale**	**26.26**	**265**	P	**P**	**21 04 00.2**	**+3.1**
ARMA	**Armidale**	**26.26**	**265**	P	**P**	**21 03 59.5**	**+2.4**
TBI	**Tubuai**	**26.35**	**78**	*e*P	P	21 03 49.1	-8.7
	comp=Z,2µm,32.5s						
TBI				*e*S	**S**	**21 08 31.0**	**+1.8**
	comp=Z,30µm,25.0s						
TBI				*e*LR	LR	21 10 25.4	
	comp=Z,7µm,29.8s						
TBI				*e*LR	LR	21 10 29.9	
	comp=Z,27µm,26.8s						
CNB	**Canberra Magne**	**27.60**	**254**	P	**P**	**21 04 11.4**	**+2.3**
	comp=Z,0.0nmcomp=Z,71nm,1.3s						
CNB	**Canberra Magne**	**27.60**	**254**	P	**P**	**21 04 11.1**	**+2.0**
MILA	**Mila**	**27.75**	**250**	P	**P**	**21 04 12.5**	**+2.1**
	comp=Z,37nm,1.4s						
CAN	**Canberra**	**27.90**	**254**	P	**P**	**21 04 12.7**	**+1.0**
CAN				IAmb	IAmb	21 04 27.4	
	comp=Z,87nm,1.2s						
CAN				IAMs_20	IAMs_20	21 14 22.6	
	comp=Z,13µm,18.0s						
CAN	**Canberra**	**27.90**	**254**	P	**P**	**21 04 13.7**	**+1.9**
	comp=Z,57nm,1.6s						
CAN	**Canberra**	**27.90**	**254**	P	**P**	**21 04 13.5**	**+1.8**
CAN	**Canberra**	**27.90**	**254**	P	**P**	**21 04 12.7**	**+1.0**
CAN				pmax	pmax		
	comp=Z,87nm,1.2s						
CAN				MLR	MLR		
	comp=Z,13µm,18.0s						
EIDS	**Eidsvold**	**28.09**	**275**	P	**P**	**21 04 13.8**	**+0.4**
EIDS				IAmb	IAmb	21 04 15.9	
	comp=Z,108nm,1.2s						
EIDS	**Eidsvold**	**28.09**	**275**	P	**P**	**21 04 14.5**	**+1.0**
	comp=Z,0.0nmcomp=Z,86nm,1.5s						
EIDS	**Eidsvold**	**28.09**	**275**	P	**P**	**21 04 14.7**	**+1.3**
YNG	**Young**	**28.45**	**256**	P	**P**	**21 04 18.6**	**+2.0**
	comp=Z,67nm,1.3s						
GLAD	**Gladstone**	**28.93**	**242**	P	**P**	**21 04 22.3**	**+1.5**
PPT2	**Papeete2**	**29.10**	**68**	*e*P	**P**	**21 04 21.4**	**-1.1**
	comp=Z,332nm,23.0s						
PPT2				*e*S	**S**	**21 09 13.1**	**+0.3**
	comp=Z,6µm,23.8s						
PPT2				*e*LR	LR	21 11 43.1	
	comp=Z,4µm,27.8s						
PPT2				*e*LR	LR	21 11 56.7	
	comp=Z,3µm,22.8s						
PPT	**Papeete**	**29.11**	**68**	LR	LR	21 15 23.6	
	comp=Z,2µm,18.1s,baz=245,slow=35						
RMQ	**Roma**	**29.70**	**272**	P	**P**	**21 04 30.3**	**+2.5**
	comp=Z,47nm,1.0s						
RMQ	**Roma**	**29.70**	**272**	P	**P**	**21 04 29.4**	**+1.7**
TAU	**Tasmania Unive**	**29.74**	**238**	IAMs_20	IAMs_20	21 15 42.4	
	comp=Z,14µm,18.0s						
TAU	**Tasmania Unive**	**29.74**	**238**	P	**P**	**21 04 28.6**	**+0.7**
MOO	**Moorlands**	**29.75**	**239**	P	P	21 04 20.7	-7.4
TOO	**Toolangi**	**30.68**	**249**	P	**P**	**21 04 37.2**	**+0.9**
TOO	**Toolangi**	**30.68**	**249**	P	**P**	**21 04 37.2**	**+0.9**
	comp=Z,23nm,1.7s						
TOO	**Toolangi**	**30.68**	**249**	P	**P**	**21 04 37.2**	**+0.9**
TOO				pmax	pmax		
	comp=Z,37nm,1.4s						
TOO				MLR	MLR		
	comp=Z,5µm,18.0s						
CMSA	**Cobar Meteorol**	**31.07**	**261**	P	**P**	**21 04 40.9**	**+1.1**
	comp=Z,107nm,1.1s						
CMSA	**Cobar Meteorol**	**31.07**	**261**	P	**P**	**21 04 41.3**	**+1.5**
GEXS	**Deakin Univers**	**31.62**	**248**	P	**P**	**21 04 46.0**	**+1.4**
QLP	**Quilpie**	**33.52**	**269**	P	**P**	**21 05 02.0**	**+0.7**
	comp=Z,257nm,1.6s						
QLP	**Quilpie**	**33.52**	**269**	P	**P**	**21 05 02.7**	**+1.4**
ARPS	**Mount Arapiles**	**33.62**	**250**	P	**P**	**21 05 02.6**	**+0.5**
	comp=Z,133nm,1.0s						
ARPS	**Mount Arapiles**	**33.62**	**250**	P	**P**	**21 05 03.4**	**+1.3**
CTAO	**Charters Tower**	**34.30**	**281**	P	**P**	**21 05 08.0**	**-0.2**
CTAO	**Charters Tower**	**34.30**	**281**	P	**P**	**21 05 09.6**	**+1.4**
CTAO	**Charters Tower**	**34.30**	**281**	P	**P**	**21 05 08.0**	**-0.2**
CTAO				pmax	pmax		
	comp=Z,239nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,12µm,18.0s						
STKA	**Stephens Creek**	**34.44**	**259**		**P**	**21 05 09.3**	**0.0**
STKA	**Stephens Creek**	**34.44**	**259**	P	**P**	**21 05 10.0**	**+0.7**
	comp=Z,0.0nmcomp=Z,339nm,1.9s						
STKA	**Stephens Creek**	**34.44**	**259**	P	**P**	**21 05 09.7**	**+0.5**
	comp=Z,27nm,0.9s,baz=100,slow=11,SNR=24						
STKA				PcP	**PcP**	**21 07 45.4**	**+1.0**
	comp=Z,6.2nm,0.8s,baz=137,slow=4.5,SNR=3.0						
STKA				LR	LR	21 18 50.8	
	comp=Z,10µm,18.7s,baz=95,slow=36						
	comp=Z,27nm,0.9s						
STKA	**Stephens Creek**	**34.44**	**259**	P	**P**	**21 05 10.5**	**+1.2**
STKA	**Stephens Creek**	**34.44**	**259**	*i* P	**P**	**21 05 09.0**	**-0.3**
MGBR	**Mount Gambier**	**34.57**	**248**	P	**P**	**21 05 10.8**	**+0.5**
HTT	**Hallett**	**36.38**	**256**	P	**P**	**21 05 25.8**	**-0.2**
	comp=Z,17nm,1.5s						
HTT	**Hallett**	**36.38**	**256**	P	**P**	**21 05 26.7**	**+0.7**
MTSU	**Mount Surprise**	**36.83**	**282**	P	**P**	**21 05 31.2**	**+1.2**
	comp=Z,46nm,1.3s						
MTSU	**Mount Surprise**	**36.83**	**282**	P	**P**	**21 05 31.4**	**+1.5**
WHYH	**Whyalla**	**37.56**	**256**	P	**P**	**21 05 37.1**	**+1.1**
BBOO	**Buckleboo**	**38.86**	**256**	P	**P**	**21 05 45.1**	**-1.8**
BBOO				IAmb	IAmb	21 05 47.5	
	comp=Z,76nm,1.0s						
BBOO	**Buckleboo**	**38.86**	**256**	P	**P**	**21 05 45.7**	**-1.2**
	comp=Z,80nm,1.1s						
BBOO	**Buckleboo**	**38.86**	**256**	P	**P**	**21 05 46.8**	**-0.1**
PMG	**Port Moresby**	**39.45**	**297**	P	**P**	**21 05 52.2**	**+0.3**
	comp=Z,8.2nm,0.7s,baz=91,slow=5.7,SNR=4.8						
PMG				PcP	**PcP**	**21 08 00.6**	**+0.9**
	comp=Z,47nm,1.1s,baz=194,slow=4.1,SNR=3.7						
PMG				LR	LR	21 20 26.7	
	comp=Z,2µm,18.2s,baz=128,slow=34						
	comp=Z,8.2nm,0.7s						
QIS	**Mount Isa**	**39.69**	**276**	P	**P**	**21 05 53.3**	**-0.7**
	comp=Z,0.0nmcomp=Z,66nm,1.7s						
QIS	**Mount Isa**	**39.69**	**276**	P	**P**	**21 05 54.7**	**+0.7**
COEN	**Coen**	**39.92**	**287**	P	**P**	**21 05 55.7**	**-0.2**
COEN				IAmb	IAmb	21 06 18.9	
	comp=Z,340nm,2.0s						
COEN				IAMs_20	IAMs_20	21 21 35.3	
	comp=Z,7µm,19.0s						
COEN	**Coen**	**39.92**	**287**	P	**P**	**21 05 56.4**	**+0.5**
	comp=Z,78nm,1.4s						
COEN	**Coen**	**39.92**	**287**	P	**P**	**21 05 57.7**	**+1.8**
TAOE	**Nuku Hiva Isla**	**41.64**	**65**	*e*P	**P**	**21 06 08.1**	**-2.1**
	comp=Z,256nm,24.0s						
TAOE				*e*S	**S**	**21 12 24.7**	**-0.5**
	comp=Z,948nm,24.4s						
TAOE				*e*SS	**SS**	**21 15 27.7**	**-3.4**
	comp=Z,3µm,26.8s						
TAOE				*e*LR	LR	21 17 28.8	
	comp=Z,3µm,28.6s						
AS01	**Alice Springs**	**43.27**	**268**	P	**P**	**21 06 23.8**	**+0.4**
AS31	**Alice Springs**	**43.31**	**268**		**P**	**21 06 22.5**	**-1.2**
AS31	**Alice Springs**	**43.31**	**268**	P	**P**	**21 06 22.7**	**-1.0**
	comp=Z,23nm,1.2s						
ASAR	**Alice Springs**	**43.31**	**268**	P	**P**	**21 06 22.0**	**-1.7**
ASAR	**Alice Springs**	**43.31**	**268**	P	**P**	**21 06 22.5**	**-1.2**
	comp=Z,43nm,0.9s,baz=114,slow=7.9,SNR=107						
ASAR				PcP	**PcP**	**21 08 13.1**	**+0.8**
	comp=Z,4.8nm,0.8s,baz=124,slow=4.3,SNR=1.7						
ASAR				ScP	**ScP**	**21 12 04.2**	**+2.5**
	comp=Z,3.5nm,0.9s,baz=113,slow=4.8,SNR=6.8						
ASAR				S	**S**	**21 12 45.0**	**-4.6**
	comp=Z,5.3nm,1.2s,baz=107,slow=16,SNR=5.6						
ASAR				LR	LR	21 24 56.5	
	comp=Z,5µm,18.0s,baz=114,slow=37						
	comp=Z,43nm,0.9s						
MANU	**Manus Island**	**44.26**	**305**	P	**P**	**21 06 31.0**	**-0.4**
WR8	**Warramunga Arr**	**44.28**	**273**		**P**	**21 06 30.2**	**-1.3**
WR8				IAmb	IAmb	21 06 56.2	
	comp=Z,90nm,1.0s						
WRAB	**Tennant Creek**	**44.42**	**273**	P	**P**	**21 06 31.3**	**-1.2**
WRAB				IAmb	IAmb	21 06 57.3	
	comp=Z,90nm,0.9s						
WRAB	**Tennant Creek**	**44.42**	**273**	*i* P	**P**	**21 06 31.4**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,100nm,1.3s						
WRA	**Warramunga Arr**	**44.42**	**273**	P	**P**	**21 06 31.1**	**-1.6**
WRA	**Warramunga Arr**	**44.42**	**273**	P	**P**	**21 06 31.5**	**-1.2**
	comp=Z,27nm,0.6s,baz=113,slow=7.9,SNR=134						
WRA				ScP	**ScP**	**21 12 08.1**	**+1.9**
	comp=Z,18nm,1.3s,baz=115,slow=3.9,SNR=12						
WRA				S	**S**	**21 12 59.7**	**-6.2**
	comp=Z,1.3nm,0.9s,baz=115,slow=15,SNR=6.1						
WRA				LR	LR	21 24 45.0	
	comp=Z,12µm,18.1s,baz=116,slow=36						
	comp=Z,27nm,0.6s						
PATS	**Pohnpei**	**44.73**	**325**	IAMs_20	IAMs_20	21 23 24.5	
	comp=Z,5µm,18.0s						
FORT	**Forrest**	**45.95**	**256**	P	**P**	**21 06 43.2**	**-1.4**
FORT	**Forrest**	**45.95**	**256**	P	**P**	**21 06 44.0**	**-0.7**
SBA	**Scott Base**	**46.67**	**184**	P	**P**	**21 06 52.5**	**+2.9**
SBA	**Scott Base**	**46.67**	**184**	IAMs_20	IAMs_20	21 24 19.6	
	comp=Z,4µm,19.0s						
SBA	**Scott Base**	**46.67**	**184**	P	**P**	**21 06 52.5**	**+2.9**
SBA				pmax	pmax		
	comp=Z,151nm,1.5s						
SBA				MLR	MLR		
	comp=Z,4µm,19.0s						
VNDA	**Vanda**	**46.73**	**186**	P	**P**	**21 06 52.7**	**+2.5**
VNDA	**Vanda**	**46.73**	**186**	P	**P**	**21 06 51.0**	**+0.9**
	comp=Z,1.5nm,0.7s,baz=17,slow=7.3,SNR=4.7						
VNDA				LR	LR	21 25 05.3	
	comp=Z,3µm,18.8s,baz=18,slow=34						
	comp=Z,1.5nm,0.7s						
VNDA	**Vanda**	**46.73**	**186**	P	**P**	**21 06 52.7**	**+2.5**
VNDA				pmax	pmax		
	comp=Z,30nm,1.4s						
JAY	**Jayapura**	**48.77**	**298**	LR	LR	21 25 32.3	
	comp=Z,1µm,21.4s,baz=117,slow=34						
JAY	**Jayapura**	**48.77**	**298**	P	**P**	**21 07 06.7**	**-0.1**
	comp=Z,1µmcomp=Z,55nm,1.8s						
GENI	**Genyem**	**49.13**	**298**	P	**P**	**21 07 10.9**	**+1.4**
GENI	**Genyem**	**49.13**	**298**	P	**P**	**21 07 09.3**	**-0.2**
	comp=Z,3µmcomp=Z,137nm,1.5s						
KDU	**Kakadu**	**49.42**	**281**	P	**P**	**21 07 11.3**	**-0.4**
	comp=Z,81nm,1.5s						
KDU	**Kakadu**	**49.42**	**281**	P	**P**	**21 07 11.9**	**+0.2**
MTN	**Manton Dam**	**50.47**	**280**	P	**P**	**21 07 18.6**	**-1.0**
	comp=Z,89nm,1.5s						
MTN	**Manton Dam**	**50.47**	**280**	P	**P**	**21 07 19.4**	**-0.3**
SMPI	**Sarmi**	**50.62**	**297**	P	**P**	**21 07 21.0**	**+0.2**
	comp=Z,1µmcomp=Z,59nm,1.8s						
KMBL	**Kambalda**	**50.86**	**254**	P	**P**	**21 07 20.8**	**-1.7**
KMBL	**Kambalda**	**50.86**	**254**	P	**P**	**21 07 21.5**	**-1.0**
KNRA	**Kununurra**	**51.08**	**275**	P	**P**	**21 07 23.6**	**-0.6**
	comp=Z,77nm,1.4s						
FITZ	**Fitzroy Crossi**	**52.63**	**271**	P	**P**	**21 07 35.0**	**-0.8**
	comp=Z,20nm,1.5s						
FITZ	**Fitzroy Crossi**	**52.63**	**271**	LR	LR	21 29 54.5	
	comp=Z,12µm,18.5s,baz=112,slow=36						
FITZ	**Fitzroy Crossi**	**52.63**	**271**	P	**P**	**21 07 35.4**	**-0.4**
CASY	**Casey**	**54.03**	**208**	P	**P**	**21 07 45.4**	**0.0**
CASY	**Casey**	**54.03**	**208**	IAMs_20	IAMs_20	21 30 14.8	
	comp=Z,4µm,18.0s						
KLBR	**Kellerberrin**	**54.15**	**252**	P	**P**	**21 07 44.7**	**-2.2**
KLBR	**Kellerberrin**	**54.15**	**252**	P	**P**	**21 07 45.6**	**-1.3**
NWAO	**Narrogin (SRO)**	**54.16**	**250**	LR	LR	21 27 26.7	
	comp=Z,1µm,21.1s,baz=89,slow=32						

FAKI	Fak Fak	55.07	291	P	P	21 07 54.9	+1.2
FAKI	Fak Fak	55.07	291	P	P	21 07 52.9	-0.8
	comp=Z,1µmcomp=Z,113nm,1.5s						
MEEK	Meekatharra	55.13	258	P	P	21 07 52.7	-1.4
MEEK	Meekatharra	55.13	258	P	P	21 07 53.0	-1.1
MUN	Mundaring	55.28	251	P	P	21 07 49.2	-5.8
PSA00	Pilbara Seismi	56.07	264	P	P	21 07 58.2	-2.7
PSA00	Pilbara Seismi	56.07	264	P	P	21 07 58.9	-2.0
PSA00	Pilbara Seismi	56.07	264	P	P	21 08 02.2	+1.4
MBWA	Marble Bar	56.34	264	P	P	21 08 00.2	-2.6
MBWA	Marble Bar	56.34	264	P	P	21 08 01.1	-1.6
MBWA	Marble Bar	56.34	264	P	P	21 08 01.1	-1.6
SWI	Sorong	57.10	292	P	P	21 08 08.1	-0.1
	comp=Z,2µmcomp=Z,82nm,1.7s						
GUMO	Guam	57.66	316	LR	LR	21 31 47.4	
	comp=Z,2µm,18.0s,baz=121,slow=35						
SOEI	Soe	57.82	279	P	P	21 08 13.4	0.0
SOEI	Soe	57.82	279	P	P	21 08 15.4	+2.0
BATI	Baumata	58.09	278	LR	LR	21 33 46.0	
	comp=Z,11µm,18.8s,baz=148,slow=37						
QSPA	South Pole Qui	58.31	180	P	P	21 08 18.5	+2.3
QSPA	South Pole Qui	58.31	180	IAMs_20	IAMs_20	21 30 38.7	
	comp=Z,4µm,20.0s						
QSPA	South Pole Qui	58.31	180	LR	LR	21 31 18.0	
	comp=Z,4µm,18.8s,baz=40,slow=34						
QSPA				PKPPKP		21 37 54.4	
	comp=Z,5.6nm,1.1s,baz=246,slow=1.4,SNR=5.5						
NLAI	Namlea	59.03	287	P	P	21 08 23.0	+1.3
	comp=Z,1µmcomp=Z,93nm,1.8s						
MIDW	Midway	59.68	0	IAMs_20	IAMs_20	21 32 17.5	
	comp=Z,3µm,21.0s						
MMRI	Maumere	60.11	279	P	P	21 08 27.3	-1.9
MMRI	Maumere	60.11	279	P	P	21 08 29.5	+0.3
SANI	Sanana	60.62	287	P	P	21 08 33.2	+0.5
	comp=Z,2µmcomp=Z,94nm,1.8s						
BBSI	Bau Bau	61.51	282	P	P	21 08 39.8	+1.1
	comp=Z,2µmcomp=Z,1µmcomp=Z,84nm,1.4s						
WBSI	Waikabubak, Su	61.99	276	P	P	21 08 41.5	-0.5
	comp=Z,1µmcomp=Z,74nm,1.3s						
PLAI	Plampang	63.77	276	P	P	21 08 53.9	0.0
LUWI	Luwuk	63.82	286	P	P	21 08 51.5	-2.7
KAPI	Kappang	64.11	281	P	P	21 08 55.2	-0.8
KAPI	Kappang	64.11	281	IAMs_20	IAMs_20	21 36 23.8	
	comp=Z,4µm,19.0s						
KAPI	Kappang	64.11	281	LR	LR	21 36 44.8	
	comp=Z,4µm,19.4s,baz=114,slow=36						
KAPI	Kappang	64.11	281	P	P	21 08 56.6	+0.5
KAPI	Kappang	64.11	281	*i* P	P	21 08 54.2	-1.9
KAPI				pmax	pmax		
	comp=Z,53nm,1.4s						
BNSI	Bone	64.15	281	P	P	21 08 56.1	-0.2
	comp=Z,1µmcomp=Z,96nm,1.5s						
APSI	Ampana	64.81	286	P	P	21 09 01.1	+0.4
	comp=Z,918nmcomp=Z,61nm,1.4s						
TTSI	Tana Toraja	65.13	283	P	P	21 09 03.3	+0.6
	comp=Z,780nmcomp=Z,46nm,1.5s						
MRSI	Marisa	65.37	287	P	P	21 09 04.2	-0.1
PCI	Palu	66.31	284	P	P	21 09 11.1	+0.8
SRBI	Singaraja	66.33	275	P	P	21 09 10.0	-0.4
	comp=Z,2µmcomp=Z,126nm,1.4s						
DAV	Davao City (W)	66.45	295	LR	LR	21 38 12.3	
	comp=Z,926nm,19.5s,baz=138,slow=36						
TOLI2	Tolitoli	66.68	287	P	P	21 09 14.7	+2.0
MPSI	Mapaga	66.96	286	P	P	21 09 15.2	+0.7
JAGI	Jajag, Banyuwa	67.03	274	P	P	21 09 12.8	-2.1
JAGI				IAMs_20	IAMs_20	21 38 18.7	
	comp=Z,4µm,19.0s						
JAGI	Jajag, Banyuwa	67.03	274	P	P	21 09 16.0	+1.0
JAGI	Jajag, Banyuwa	67.03	274	P	P	21 09 15.0	0.0
	comp=Z,101nm,1.4s						
GMJI	Gumukmas	67.73	274	P	P	21 09 18.6	-0.8
	comp=Z,1µmcomp=Z,103nm,1.4s						
KMMI	Kalianget	67.92	275	P	P	21 09 21.0	+0.5
	comp=Z,122nm,1.3s						
BELA	Belgrano 2	68.37	172	P	P	21 09 23.1	+0.7
PCJI	Pacitan	69.70	273	P	P	21 09 31.5	-0.1
JCJ	Chichijima	69.94	322	LR	LR	21 38 33.2	
	comp=Z,380nm,19.0s,baz=135,slow=35						
WOJI	Wonogiri, Jawa	70.10	273	P	P	21 09 34.0	-0.1
UGM	Wanagama	70.40	273	IAMs_20	IAMs_20	21 41 02.1	
	comp=Z,3µm,19.0s						
PMSA	Palmer Station	70.89	155	LR	LR	21 36 46.9	
	comp=Z,2µm,18.5s,baz=242,slow=32						
MAW	Mawson	71.09	201	P	P	21 09 41.0	+1.7
	comp=Z,6.9nm,1.3s						
MAW	Mawson	71.09	201	P	P	21 09 40.5	+1.3
	comp=Z,46nm,1.2s,baz=102,slow=7.4,SNR=18						
MAW				LR	LR	21 41 25.9	
	comp=Z,4µm,18.6s,baz=116,slow=36						
	comp=Z,46nm,1.2s						
BBJI	Bungbulang	73.07	272	P	P	21 09 52.0	-0.1
STKI	Sintang	73.79	280	P	P	21 09 56.3	0.0
TGY	Tagaytay City	74.40	298	LR	LR	21 41 25.7	
	comp=Z,538nm,20.0s,baz=121,slow=35						
USHA	Ushuaia	74.62	145	LR	LR	21 39 58.9	
	comp=Z,818nm,18.2s,baz=226,slow=33						
CGJI	Cibinong	75.17	271	P	P	21 10 03.8	-0.5
	comp=Z,57nm,1.2s						
KSM	Kuching	75.54	281	IAmb	IAmb	21 10 07.3	
	comp=Z,55nm,1.0s						
KSM	Kuching	75.54	281	P	P	21 10 06.4	0.0
SYO	Syowa Base	75.81	193	⇑*i*P	P	21 10 07.2	+0.2
SYO	Syowa Base	75.81	193	⇓*i*pP	P	21 10 10.6	+3.6
SYO	Syowa Base	75.81	193	⇑*i*sP	P	21 10 11.8	+4.8
TROLL	Troll, Antarti	76.48	180	⇑P	P	21 10 12.9	+1.9
	comp=Z,1µm,0.9s						
AY03	Cochrane	76.54	137	IAmb	IAmb	21 10 21.8	
	comp=Z,46nm,1.4s						
SNAA	Sanae	76.75	178	⇑P	P	21 10 14.0	+1.5
	comp=Z,625nm,1.2s						
SNAA	Sanae	76.75	178	P	P	21 10 12.7	+0.2
SNAA				IAMs_20	IAMs_20	21 42 53.9	
	comp=Z,2µm,19.0s						
SNAA	Sanae	76.75	178	P	P	21 10 13.4	+1.0
	comp=Z,11nm,1.0s,baz=204,slow=7.0,SNR=12						
SNAA				LR	LR	21 43 23.7	
	comp=Z,2µm,18.7s,baz=192,slow=35						
	comp=Z,11nm,1.0s						
SNAA	Sanae	76.75	178	*ce*P	P	21 10 12.6	+0.2
SNAA				pmax	pmax		
	comp=Z,65nm,2.5s						
VNA3	Neumayer Olymp	76.89	176	⇑P	P	21 10 13.9	+0.7
	comp=Z,42nm,0.8s						
VNA2	Neumayer--Watz	77.33	177	⇑P	P	21 10 16.8	+1.2
	comp=Z,32nm,0.8s,baz=175,slow=5.2						
MDSI	Maura Dua	77.56	272	P	P	21 10 15.8	-2.0
	comp=Z,57nm,1.2s						
VNA1	Neumayer--Stat	77.56	176	⇑P	P	21 10 18.2	+1.3
	comp=Z,66nm,1.1s						
COYC	Coyhaique	77.75	136	P	P	21 10 19.9	+1.5
COYC				IAmb	IAmb	21 10 24.9	
	comp=Z,64nm,1.4s						
COYC	Coyhaique	77.75	136	IAMs_20	IAMs_20	21 41 17.6	
	comp=Z,2µm,19.0s						
JOW	Kunigami	77.79	312	LR	LR	21 43 11.4	
	comp=Z,1µm,18.5s,baz=125,slow=35						
LL02	Futaleuf	79.19	134	P	P	21 10 27.2	+0.8
LL02				IAMs_20	IAMs_20	21 42 01.9	
	comp=Z,2µm,18.0s						
LL01	San Ignacio de	79.29	133	IAMs_20	IAMs_20	21 41 51.6	
	comp=Z,3µm,18.0s						
MJAR	Matsushiro Arr	79.53	325	P	P	21 10 26.0	-2.1
	comp=Z,15nm,1.1s,baz=163,slow=5.5,SNR=11						
	comp=Z,15nm,1.1s						
MAJO	Matsushiro	79.54	325	P	P	21 10 28.3	+0.1
LR04	Corral	80.02	131	IAMs_20	IAMs_20	21 41 19.9	
	comp=Z,2µm,18.0s						
LR05	Currie	80.73	132	IAMs_20	IAMs_20	21 41 09.9	
	comp=Z,1µm,18.0s						
JNU	Nakatsue	80.77	318	LR	LR	21 41 23.0	
	comp=Z,662nm,21.9s,baz=130,slow=32						
JNU	Nakatsue	80.77	318	P	P	21 10 35.2	+0.2
LR03	Panguipulli	80.85	131	IAMs_20	IAMs_20	21 41 04.9	
	comp=Z,2µm,19.0s						
PLCA	Paso Flores	81.37	133	P	P	21 10 39.8	+1.5
	comp=Z,12nm,1.1s,baz=257,slow=4.9,SNR=10.0						
PLCA				LR	LR	21 40 46.5	
	comp=Z,1µm,18.2s,baz=238,slow=31						
	comp=Z,12nm,1.1s						
BI05	Punta Hualpn	81.89	128	IAMs_20	IAMs_20	21 42 51.6	
	comp=Z,2µm,18.0s						
DLV	Lat	82.85	289	IAmb	IAmb	21 10 48.8	
	comp=Z,62nm,1.1s						
DLV	Lat	82.85	289	P	P	21 10 48.1	+1.6
QZH	Quanzhou	82.97	305	P	P	21 10 46.6	0.0
QZH				PP	PP	21 14 03.8	+6.0
QZH				S	S	21 20 59.8	-4.1
QZH				pmax	pmax		
	comp=Z,600nm,7.6s						
QZH				LR	LR		
	comp=Z,820nm,19.2s						
QZH				LR	LR		
	comp=Z,660nm,17.9s						
QZH				LR	LR		
	comp=Z,900nm,19.6s						
BI02	San Fabin de	83.21	129	P	P	21 10 49.0	+0.9
BI02				IAMs_20	IAMs_20	21 43 43.6	
	comp=Z,2µm,18.0s						
ADK	Adak	83.33	1	IAMs_20	IAMs_20	21 54 33.0	
	comp=Z,2µm,18.0s						
ML02	Panimavida	83.63	128	IAMs_20	IAMs_20	21 43 54.6	
	comp=Z,2µm,18.0s						
ATKA	Atka Island	83.70	2	P	P	21 10 50.0	+0.3
ASAJ	Asahikawa	83.80	332	LR	LR	21 47 19.9	
	comp=Z,923nm,18.6s,baz=173,slow=35						
SHEM	Shemya Is, Ala	84.48	355	LR	LR	21 45 57.5	
	comp=Z,1µm,18.6s,baz=134,slow=34						
SMY	Shemya	84.48	355	IAMs_20	IAMs_20	21 45 08.1	
	comp=Z,2µm,20.0s						
BO02	Sierra Bellavi	84.61	128	IAmb	IAmb	21 10 58.7	
	comp=Z,35nm,1.1s						
BO02				IAMs_20	IAMs_20	21 43 49.6	
	comp=Z,2µm,18.0s						
BO01	Tunca	84.63	127	IAMs_20	IAMs_20	21 43 49.3	
	comp=Z,2µm,18.0s						
MT09	Talagante	85.05	127	IAmb	IAmb	21 11 06.5	
	comp=Z,32nm,1.1s						
SLBS	Sierra La Lagu	85.06	58	P	P	21 10 57.7	+0.2
SLBS				IAmb	IAmb	21 11 13.8	
	comp=Z,52nm,1.3s						
SLBS	Sierra La Lagu	85.06	58	IAMs_20	IAMs_20	21 49 39.5	
	comp=Z,2µm,18.0s						
TJN	Taejon	85.12	318	P	P	21 10 58.0	+0.7
BO04	La Punta	85.19	127	IAMs_20	IAMs_20	21 44 26.0	
	comp=Z,1µm,18.0s						
SSE	Sheshan	85.22	311	P	P	21 10 57.5	-0.5
SSE				S	S	21 21 27.1	+0.8
SSE				pmax	pmax		
	comp=Z,7.0nm,1.4s						
SSE				pmax	pmax		
	comp=Z,200nm,10.2s						
SSE				LR	LR		
	comp=Z,190nm,20.8s						
SSE				LR	LR		
	comp=Z,180nm,21.0s						
MT02	Curacav	85.25	126	IAmb	IAmb	21 11 09.2	
	comp=Z,59nm,1.5s						
VA06	Catapilco	85.53	126	IAMs_20	IAMs_20	21 44 21.1	
	comp=Z,1µm,18.0s						
LMEL	Las Melosas	85.54	127	IAmb	IAmb	21 11 12.4	
	comp=Z,27nm,1.1s						
LMEL				IAMs_20	IAMs_20	21 44 54.2	
	comp=Z,2µm,18.0s						
KSRS	Korea Array	85.58	320	P	P	21 10 60.0	+0.4
	comp=Z,15nm,1.2s,baz=137,slow=5.7,SNR=18						
	comp=Z,15nm,1.2s						
KSRS	Korea Array	85.58	320	P	P	21 11 00.0	+0.4
KSAR	Wonju Array Be	85.59	320	P	P	21 10 59.8	+0.1
KSAR	Wonju Array Be	85.59	320	P	P	21 10 59.8	+0.1
KS19	Wonju Array Si	85.64	320	IAmb	IAmb	21 11 01.2	
	comp=Z,48nm,1.4s						
SRIG	Santa Rosalia	85.68	54	IAMs_20	IAMs_20	21 46 43.5	
	comp=Z,2µm,18.0s						
QIZ	Qiongzhong	85.82	295	P	P	21 11 02.3	+1.0
QIZ				PP	PP	21 14 20.4	-0.8
QIZ				S	SKSac	21 21 29.3	+4.1
QIZ				SS	SS	21 27 11.9	+1.2
QIZ				pmax	pmax		
	comp=Z,580nm,10.3s						
QIZ				LR	LR		
	comp=Z,580nm,17.5s						
QIZ				LR	LR		
	comp=Z,750nm,26.3s						
PSI	Prapat	85.83	276	LR	LR	21 53 32.2	
	comp=Z,4µm,18.0s,baz=133,slow=39						
PSI	Prapat	85.83	276	P	P	21 11 00.3	-1.4
UNV	Unalaska Valle	85.84	7	IAMs_20	IAMs_20	21 47 55.6	
	comp=Z,2µm,19.0s						
MT08	Bocatoma Ro	85.90	127	IAmb	IAmb	21 12 04.1	
	comp=Z,66nm,1.8s						
VA03	San Esteban	85.93	126	IAmb	IAmb	21 11 19.8	
	comp=Z,32nm,1.2s						
VA03				IAMs_20	IAMs_20	21 53 02.6	
	comp=Z,1µm,18.0s						
BCW	Bitter Crk WRg	86.06	44	IAmb	IAmb	21 11 06.4	
	comp=Z,41nm,1.1s						
YSS	Yuzhno-Sakhali	86.11	334	*e*P	P	21 11 02.6	+0.6
YSS				*e*S	S	21 21 33.5	-0.9
YSS				pmax	pmax		
	comp=Z,30nm,1.1s						
YSS				MLR	MLR		
	comp=N,1µm,16.0s						
YSS				MLR	MLR		
	comp=E,1µm,15.0s						
TKX	Tecate	86.18	48	IAMs_20	IAMs_20	21 54 35.0	
	comp=Z,2µm,18.0s						
GSI	Gunungsitoli	86.19	274	P	P	21 11 02.6	-0.7
GSI	Gunungsitoli	86.19	274	P	P	21 11 03.7	+0.4
GSI	Gunungsitoli	86.19	274	P	P	21 11 03.7	+0.4
	comp=Z,68nm,1.7s						
LVA	Lava Point	86.20	7	IAMs_20	IAMs_20	21 48 15.1	
	comp=Z,2µm,19.0s						
AKUT	Akutan	86.20	7	IAMs_20	IAMs_20	21 46 52.2	
	comp=Z,1µm,20.0s						
ESJX	Sierra Juarez	86.23	49	IAmb	IAmb	21 11 07.4	
	comp=Z,52nm,1.7s						
ESJX				IAMs_20	IAMs_20	21 52 12.3	
	comp=Z,2µm,18.0s						
SFX	San Felipe	86.30	50	IAMs_20	IAMs_20	21 52 14.4	
	comp=Z,2µm,18.0s						
MCCM	Marconi Confer	86.31	40	IAMs_20	IAMs_20	21 44 07.6	
	comp=Z,2µm,19.0s						
CO06	Fray Jorge	86.38	124	IAMs_20	IAMs_20	21 48 37.5	
	comp=Z,2µm,18.0s						
ELS	Elsinore Mount	86.39	47	IAMs_20	IAMs_20	21 48 42.3	
	comp=Z,2µm,18.0s						
CO02	Combarbal	86.52	125	IAmb	IAmb	21 11 14.1	
	comp=Z,27nm,1.0s						
CO02				IAMs_20	IAMs_20	21 45 38.2	
	comp=Z,1µm,18.0s						
YUH	Yuha Desert	86.67	48	IAmb	IAmb	21 11 18.9	
	comp=Z,42nm,1.6s						
YUH				IAMs_20	IAMs_20	21 52 50.8	
	comp=Z,2µm,18.0s						
CO03	El Pedregal	86.95	125	IAmb	IAmb	21 11 12.4	
	comp=Z,47nm,1.3s						
CO03				IAMs_20	IAMs_20	21 46 07.6	
	comp=Z,1µm,18.0s						
PET	Petropavlovsk	86.95	346	P	P	21 11 05.2	-0.8
PET				IAMs_20	IAMs_20	21 49 40.8	
	comp=Z,2µm,20.0s						
PET	Petropavlovsk	86.95	346	*e*P	P	21 11 06.0	+0.1
PET				*e*		21 21 35.0	
PET				*e*S	S	21 21 47.0	+4.8
PET				*e*PS	PnS	21 23 02.3	+18
PET				pmax	pmax		
	comp=Z,47nm,1.2s						
PET				pmax	pmax		
	comp=Z,500nm,7.1s						
PET				pmax	pmax		
	comp=Z,300nm,8.4s						
PET				MLR	MLR		
	comp=Z,900nm,16.0s						
PFO	Pinyon Flats O	86.96	47	P	P	21 11 07.3	+0.6
PFO	Pinyon Flats O	86.96	47	IAMs_20	IAMs_20	21 47 17.7	
	comp=Z,2µm,18.0s						
PFO	Pinyon Flats O	86.96	47	*i* P	P	21 11 07.0	+0.3
PFO				pmax	pmax		
	comp=Z,66nm,1.9s						
CCAC	Calif City Air	87.04	45	IAmb	IAmb	21 11 10.1	
	comp=Z,30nm,1.2s						
ISA	Isabella, Lake	87.11	44	IAmb	IAmb	21 11 11.2	
	comp=Z,47nm,1.3s						
ISA				IAMs_20	IAMs_20	21 48 51.2	
	comp=Z,2µm,18.0s						
UBPT	Khong Chiam	87.14	290	P	P	21 11 08.7	+0.9
FALS	False Pass	87.17	8	IAMs_20	IAMs_20	21 48 50.1	
	comp=Z,2µm,20.0s						
PEA0B	Petropavlovsk-	87.23	345		P	21 11 07.0	-0.4
PEA0B	Petropavlovsk-	87.23	345	*ce*P	P	21 11 07.5	+0.2
PETK	Petropavlovsk-	87.23	345	P	P	21 11 06.8	-0.6
PETK	Petropavlovsk-	87.23	345	P	P	21 11 07.2	-0.1
	comp=Z,50nm,1.1s,baz=101,slow=7.9,SNR=24						
PETK				LR	LR	21 47 06.0	
	comp=Z,782nm,19.1s,baz=160,slow=34						
	comp=Z,50nm,1.1s						
GO04	Tololo Observa	87.25	124	IAMs_20	IAMs_20	21 51 45.7	
	comp=Z,1µm,18.0s						
KMPM	Mount Pierce	87.29	38	IAMs_20	IAMs_20	21 46 01.1	
	comp=Z,2µm,19.0s						
NJ2	Nanjing	87.35	310	⇑P	P	21 11 08.4	0.0
NJ2				SKS	SKSac	21 21 34.4	+0.4
NJ2				S	SKKSac	21 21 42.3	-1.0
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,640nm,7.7s						
NJ2				LR	LR		
	comp=Z,400nm,19.0s						
NJ2				LR	LR		
	comp=Z,530nm,15.9s						
NJ2				LR	LR		
	comp=Z,700nm,19.1s						
PAYG	Puerto Ayora	87.45	89	IAMs_20	IAMs_20	21 46 32.0	
	comp=Z,1µm,18.0s						
JCC	Jacoby Creek,	87.63	38	IAMs_20	IAMs_20	21 46 12.1	
	comp=Z,2µm,18.0s						
HSIG		87.63	54	IAmb	IAmb	21 11 13.3	
	comp=Z,27nm,1.4s						
MSHR	Mys Shultsa	87.65	325	*i* P	P	21 11 08.8	-0.8
MSHR				pmax	pmax		
	comp=Z,57nm,1.3s						
MSHR				MLR	MLR		
	comp=Z,826nm,18.0s						
KHMM	Horse Mountain	87.82	38	IAMs_20	IAMs_20	21 46 27.3	
	comp=Z,2µm,20.0s						
CO01	Juntas del Tor	87.87	124	IAMs_20	IAMs_20	21 50 04.9	
	comp=Z,2µm,18.0s						
GSC	Goldstone, Bar	87.87	46	IAmb	IAmb	21 11 26.5	
	comp=Z,41nm,1.2s						
KRPM	Rodgers	87.88	38	IAMs_20	IAMs_20	21 46 08.7	
	comp=Z,2µm,18.0s						
AFDM	Forest Hills D	87.94	41	IAmb	IAmb	21 11 25.8	
	comp=Z,29nm,1.4s						
AFDM				IAMs_20	IAMs_20	21 46 14.7	
	comp=Z,2µm,19.0s						
LCO	Las Campanas	88.00	123	IAMs_20	IAMs_20	21 45 46.4	
	comp=Z,1µm,18.0s						
ORV	Oroville	88.07	40	IAmb	IAmb	21 11 32.2	
	comp=Z,44nm,1.8s						
ORV				IAMs_20	IAMs_20	21 46 01.2	
	comp=Z,2µm,20.0s						
113A	Mohawk Valley,	88.12	49	IAMs_20	IAMs_20	21 53 29.5	
	comp=Z,2µm,18.0s						
S12K	Black Hills	88.17	9		P	21 11 11.7	-0.1
S12K				IAMs_20	IAMs_20	21 49 32.5	
	comp=Z,1µm,20.0s						
AC04	Llanos de Chal	88.19	122	IAMs_20	IAMs_20	21 50 42.7	
	comp=Z,2µm,18.0s						
KRMB	Red Mountain	88.20	37	IAMs_20	IAMs_20	21 46 10.2	
	comp=Z,2µm,20.0s						
214A	Organ Pipe Nat	88.22	50	IAmb	IAmb	21 11 17.1	
	comp=Z,77nm,1.9s						
BLYC	Blythe	88.27	48	IAmb	IAmb	21 11 17.1	
	comp=Z,60nm,1.6s						
QSM	Queen of Sheba	88.28	45	IAmb	IAmb	21 11 28.1	
	comp=Z,46nm,1.4s						
KSXB	Camp Six Broad	88.44	37	IAMs_20	IAMs_20	21 46 45.5	
	comp=Z,2µm,19.0s						
USA0B	Ussuriysk Arra	88.47	326	*c i*P	P	21 11 14.0	+0.6
USRK	Ussuriysk Ar.	88.47	326	P	P	21 11 13.8	+0.4
	comp=Z,18nm,1.1s,baz=132,slow=2.8,SNR=22						
USRK				LR	LR	21 48 02.2	
	comp=Z,916nm,19.8s,baz=144,slow=34						
	comp=Z,18nm,1.1s						
WAKR	Walker	88.49	42	IAmb	IAmb	21 11 41.1	
	comp=Z,60nm,1.5s						
KBO	Bosley Butte	88.54	37	IAMs_20	IAMs_20	21 46 48.1	
	comp=Z,2µm,19.0s						
DSP	Deep Springs	88.57	43	IAmb	IAmb	21 11 17.9	
	comp=Z,39nm,1.5s						
LHMI	Lhok Sumawe	88.78	277	IAMs_20	IAMs_20	21 55 17.2	
	comp=Z,2µm,18.0s						
PNTR	Pine Nut	88.80	41	IAmb	IAmb	21 11 41.4	
	comp=Z,54nm,1.4s						
L02F	Cave Junction	88.81	37	IAMs_20	IAMs_20	21 46 37.3	
	comp=Z,2µm,19.0s						
LHV	Little Huntoon	88.85	43	IAmb	IAmb	21 11 24.1	
	comp=Z,56nm,1.6s						
BEKR	Beckworth	88.92	40	IAmb	IAmb	21 11 18.3	
	comp=Z,34nm,1.7s						
BEKR				IAMs_20	IAMs_20	21 46 18.6	
	comp=Z,2µm,20.0s						
GMN	Gold Mountain	88.94	44	IAmb	IAmb	21 11 32.2	
	comp=Z,38nm,1.5s						
KEBM	Edson Butte	88.97	36	IAMs_20	IAMs_20	21 42 38.3	
	comp=Z,2µm,20.0s						
YBH	Yreka Blue Hor	88.97	38	IAmb	IAmb	21 11 18.9	
	comp=Z,39nm,1.8s						
YBH				IAMs_20	IAMs_20	21 46 56.7	
	comp=Z,1µm,19.0s						
YBH	Yreka Blue Hor	88.97	38	LR	LR	21 43 36.3	
	comp=Z,88nm,21.0s,baz=242,slow=30						
GULI	GuiLin	89.07	301	P	P	21 11 17.3	+0.5
GULI				PP	PP	21 14 48.9	+1.6
GULI				S	S	21 21 53.8	-10
GULI				pmax	pmax		
	comp=Z,20nm,2.4s						
GULI				LR	LR		
	comp=Z,400nm,18.4s						
GULI				LR	LR		
	comp=Z,700nm,19.2s						
GULI				LR	LR		
	comp=Z,1µm,19.6s						
NVAR	Mina Array Bea	89.09	43	P	P	21 11 17.2	+0.4
	comp=Z,2.2nm,0.7s,baz=223,slow=6.5,SNR=18						
NVAR				LR	LR	21 47 36.9	
	comp=Z,2µm,18.0s,baz=216,slow=33						
	comp=Z,2.2nm,0.7s						
RYN	Ryan	89.10	42	IAmb	IAmb	21 11 31.7	
	comp=Z,38nm,1.6s						
GO03	Copiapo	89.15	122	IAMs_20	IAMs_20	21 45 36.0	
	comp=Z,2µm,18.0s						
NV11	Mina Array Sit	89.18	43	IAmb	IAmb	21 11 26.5	
	comp=Z,27nm,1.4s						
AC06	Mina Casimiro	89.20	122	IAMs_20	IAMs_20	21 45 37.4	
	comp=Z,2µm,19.0s						
CHIR	Chirikof Islan	89.29	12	IAMs_20	IAMs_20	21 48 16.3	
	comp=Z,2µm,20.0s						
TPNV	Topopah Spring	89.30	45	IAmb	IAmb	21 11 33.4	
	comp=Z,58nm,1.6s						
MOIG	Morelia	89.33	66	IAMs_20	IAMs_20	21 47 56.2	
	comp=Z,2µm,18.0s						
PAHR	Pah Rah Range	89.35	41	IAmb	IAmb	21 11 26.4	
	comp=Z,35nm,1.6s						
V12A	Nelson	89.35	46	IAmb	IAmb	21 11 33.7	
	comp=Z,27nm,1.2s						
Y14A	Wickenburg	89.36	49	IAmb	IAmb	21 11 21.3	
	comp=Z,35nm,1.4s						
J01E	Myrtle Point	89.38	36	IAMs_20	IAMs_20	21 47 13.3	
	comp=Z,2µm,19.0s						
WHN	Wuhan	89.39	307	P	P	21 11 18.8	+0.7
WHN				pmax	pmax		
	comp=Z,140nm,1.8s						
WHN				pmax	pmax		
	comp=Z,1µm,8.3s						
WHN				LR	LR		
	comp=Z,780nm,9.7s						
WHN				LR	LR		
	comp=Z,2µm,16.7s						
WHN				LR	LR		
	comp=Z,2µm,19.1s						
TYV	Tymovskoe	89.44	336	*e*P	P	21 11 19.5	+1.7
TYV				*e*S	S	21 22 10.2	+4.3
TYV				pmax	pmax		
	comp=Z,300nm,2.8s						
TYV				pmax	pmax		
	comp=Z,31nm,1.3s						
TYV				smax	smax		
	comp=N,200nm,4.7s						
TYV				smax	smax		
	comp=E,800nm,4.7s						
L04D	Klamath Falls	89.53	38	IAmb	IAmb	21 12 15.2	
	comp=Z,52nm,1.4s						
L04D				IAMs_20	IAMs_20	21 47 14.5	
	comp=Z,1µm,19.0s						
W13A	Hualapai Mount	89.55	47	IAmb	IAmb	21 11 34.8	
	comp=Z,30nm,1.3s						
SHPR	Sheep Range	89.67	46	IAMs_20	IAMs_20	21 50 39.1	
	comp=Z,2µm,18.0s						
TUC	Tucson	89.78	51	P	P	21 11 21.3	+1.2

TUC				IAmb	IAmb	21 11 36.2	
	comp=Z,39nm,1.3s						
TUC	**Tucson**	**89.78**	**51**	IAMs_20	IAMs_20	21 49 41.8	
	comp=Z,1µm,18.0s						
TUC	**Tucson**	**89.78**	**51**	P	**P**	**21 11 21.3**	**+1.2**
TUC				pmax	pmax		
	comp=Z,39nm,1.3s						
TUC				MLR	MLR		
	comp=Z,1µm,18.0s						
MDJ	**Mudanjiang**	**89.92**	**325**	P	**P**	**21 11 21.3**	**+1.0**
MDJ				PP	**PP**	**21 14 55.1**	**+1.3**
MDJ				SKS	**SKSac**	**21 21 49.8**	**+1.0**
MDJ				S	**S**	**21 22 12.6**	**+1.8**
MDJ				pmax	pmax		
	comp=Z,57nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,910nm,6.1s						
MDJ				LR	LR		
	comp=Z,1µm,16.5s						
MDJ				LR	LR		
	comp=Z,1µm,17.9s						
MDJ				LR	LR		
	comp=Z,2µm,17.9s						
I03D	**Drain, OR**	**90.06**	**36**	IAmb	IAmb	21 11 23.7	
	comp=Z,62nm,1.5s						
I03D				IAMs_20	IAMs_20	21 47 45.3	
	comp=Z,2µm,18.0s						
K04D	**Chiloquin, OR**	**90.11**	**38**	IAMs_20	IAMs_20	21 47 43.8	
	comp=Z,1µm,20.0s						
DL2	**Dalian**	**90.15**	**317**	P	**P**	**21 11 21.5**	**0.0**
DL2				SKS	**SKSac**	**21 21 48.6**	**-1.8**
DL2				S	**ScS**	**21 22 17.4**	**+0.4**
DL2				pmax	pmax		
	comp=Z,60nm,1.4s						
DL2				pmax	pmax		
	comp=Z,520nm,7.1s						
DL2				LR	LR		
	comp=Z,650nm,23.5s						
DL2				LR	LR		
	comp=Z,950nm,20.0s						
DL2				LR	LR		
	comp=Z,1µm,21.0s						
319A	**Douglas**	**90.22**	**53**	IAmb	IAmb	21 11 38.1	
	comp=Z,46nm,1.5s						
319A				IAMs_20	IAMs_20	21 50 08.4	
	comp=Z,2µm,19.0s						
SII	**Sitkinak Islan**	**90.25**	**13**	IAMs_20	IAMs_20	21 49 15.8	
	comp=Z,2µm,19.0s						
PRN	**Pahroc Range**	**90.33**	**45**	IAmb	IAmb	21 11 26.9	
	comp=Z,34nm,1.3s						
J04A	**Umpqua Nationa**	**90.36**	**37**	IAmb	IAmb	21 11 40.8	
	comp=Z,30nm,1.0s						
J04A				IAMs_20	IAMs_20	21 47 20.4	
	comp=Z,1µm,20.0s						
AC02	**Maricunga**	**90.39**	**122**	IAMs_20	IAMs_20	21 46 41.9	
	comp=Z,2µm,19.0s						
BUCK	**Buck Mountain**	**90.60**	**36**	IAMs_20	IAMs_20	21 48 02.6	
	comp=Z,2µm,19.0s						
I04A	**Tendick Farm,**	**90.60**	**37**	IAmb	IAmb	21 12 22.4	
	comp=Z,41nm,1.4s						
I04A				IAMs_20	IAMs_20	21 48 03.7	
	comp=Z,1µm,19.0s						
R16K	**Pilot Point**	**90.62**	**11**	IAMs_20	IAMs_20	21 53 46.0	
	comp=Z,1µm,18.0s						
X16A	**Lo Mia Camp, P**	**90.67**	**49**	IAMs_20	IAMs_20	21 54 33.9	
	comp=Z,1µm,18.0s						
J05D	**Fort Rock, OR**	**90.84**	**38**	IAmb	IAmb	21 12 22.9	
	comp=Z,32nm,1.4s						
J05D				IAMs_20	IAMs_20	21 47 58.2	
	comp=Z,2µm,18.0s						
HEBO	**Mount Hebo**	**90.96**	**35**	IAMs_20	IAMs_20	21 45 39.8	
	comp=Z,2µm,20.0s						
H04D	**Lebanon**	**90.96**	**36**	IAMs_20	IAMs_20	21 49 36.1	
	comp=Z,2µm,19.0s						
SNY	**Shenyang**	**91.03**	**320**	⇑P	**P**	**21 11 25.3**	**-0.2**
SNY				pmax	pmax		
	comp=Z,30nm,1.3s						
SNY				pmax	pmax		
	comp=Z,520nm,6.1s						
SNY				LR	LR		
	comp=Z,590nm,18.2s						
SNY				LR	LR		
	comp=Z,660nm,15.5s						
SNY				LR	LR		
	comp=Z,1µm,18.6s						
GO02	**Mina Guanaco**	**91.04**	**121**	IAmb	IAmb	21 11 55.0	
	comp=Z,60nm,1.8s						
OHAK	**Old Harbor**	**91.05**	**13**	IAMs_20	IAMs_20	21 49 50.9	
	comp=Z,2µm,19.0s						
TIA	**Tai'an**	**91.11**	**313**	P	**P**	**21 11 26.4**	**+0.4**
TIA				pmax	pmax		
	comp=Z,53nm,1.3s						
TIA				pmax	pmax		
	comp=Z,400nm,6.5s						
TIA				LR	LR		
	comp=Z,820nm,15.1s						
TIA				LR	LR		
	comp=Z,620nm,14.4s						
TIA				LR	LR		
	comp=Z,1µm,19.2s						
LCMT	**Little Creek M**	**91.17**	**46**	IAmb	IAmb	21 11 34.4	
	comp=Z,45nm,1.8s						
G03D	**McMinnville, O**	**91.19**	**35**	IAMs_20	IAMs_20	21 44 50.2	
	comp=Z,2µm,20.0s						
H04A	**Detroit Lake**	**91.35**	**36**	IAMs_20	IAMs_20	21 48 45.4	
	comp=Z,2µm,19.0s						
PINE	**Pine Mountain**	**91.35**	**37**	IAmb	IAmb	21 11 54.2	
	comp=Z,35nm,1.3s						
PINE				IAMs_20	IAMs_20	21 48 23.6	
	comp=Z,1µm,20.0s						
U15A	**North Rim**	**91.39**	**47**	IAmb	IAmb	21 11 43.6	
	comp=Z,28nm,1.2s						
WUAZ	**Wupatki**	**91.40**	**48**	IAmb	IAmb	21 11 43.3	
	comp=Z,27nm,1.2s						
WUAZ				IAMs_20	IAMs_20	21 55 06.1	
	comp=Z,2µm,18.0s						
CN2	**Changchun**	**91.41**	**323**	⇑P	**P**	**21 11 27.5**	**+0.3**
CN2				*e*sP	pwP	21 11 43.0	+0.9
CN2				*e*S	**S**	**21 22 22.1**	**-2.3**
CN2				pmax	pmax		
	comp=Z,40nm,1.3s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,300nm,15.0s						
CN2				LR	LR		
	comp=Z,300nm,15.0s						
CN2				LR	LR		
	comp=Z,400nm,17.0s						
KNB	**Kanab**	**91.43**	**46**	IAmb	IAmb	21 11 43.5	
	comp=Z,39nm,1.3s						
KNB				IAMs_20	IAMs_20	21 51 43.9	
	comp=Z,2µm,18.0s						
I05D	**Terrebonne, OR**	**91.53**	**37**	IAmb	IAmb	21 11 35.3	
	comp=Z,25nm,1.2s						
WVOR	**Wild Horse Val**	**91.63**	**39**	IAmb	IAmb	21 11 35.9	
	comp=Z,30nm,1.6s						
GRNR	**Gornyy**	**91.64**	**333**	⇑*i*P	**P**	**21 11 29.2**	**+1.0**
GRNR				pmax	pmax		
	comp=Z,30nm,1.2s						
X18A	**Snowflake**	**91.70**	**50**	IAmb	IAmb	21 11 35.8	
	comp=Z,49nm,1.9s						
X18A				IAMs_20	IAMs_20	21 55 40.4	
	comp=Z,1µm,18.0s						
KDAK	**Kodiak Island**	**91.71**	**13**	IAMs_20	IAMs_20	21 50 11.3	
	comp=Z,2µm,20.0s						
KDAK	**Kodiak Island**	**91.71**	**13**	LR	LR	21 49 45.7	
	comp=Z,832nm,18.4s,baz=215,slow=34						
O14K	**Tigyukauivet M**	**91.74**	**8**	IAMs_20	IAMs_20	21 53 30.7	
	comp=Z,1µm,19.0s						
BNX	**BinXian**	**91.80**	**325**	⇑P	**P**	**21 11 27.8**	**-1.2**
BNX				pP	**pP**	**21 11 37.1**	**+0.9**
BNX				sP	**sP**	**21 11 40.8**	**+2.1**
BNX				PP	**PP**	**21 15 08.3**	**-0.3**
BNX				S	**S**	**21 22 23.8**	**-4.1**
BNX				sS	**sS**	**21 22 39.1**	**-1.1**
BNX				pmax	pmax		
	comp=Z,44nm,1.3s						
BNX				pmax	pmax		
	comp=Z,460nm,6.5s						
BNX				LR	LR		
	comp=Z,340nm,14.1s						
BNX				LR	LR		
	comp=Z,760nm,17.6s						
BNX				LR	LR		
	comp=Z,1µm,18.4s						
E03A	**Lebam**	**92.01**	**34**	IAMs_20	IAMs_20	21 50 37.7	
	comp=Z,2µm,19.0s						
G05A	**Wamic**	**92.18**	**36**	IAMs_20	IAMs_20	21 49 58.4	
	comp=Z,2µm,19.0s						
I07A	**Izee**	**92.30**	**38**	IAmb	IAmb	21 11 34.1	
	comp=Z,30nm,1.7s						
I07A				IAMs_20	IAMs_20	21 49 24.8	
	comp=Z,1µm,19.0s						
J08A	**Circle Bar Ran**	**92.35**	**39**	IAmb	IAmb	21 11 37.6	
	comp=Z,23nm,1.3s						
KLR	**Kul'dur**	**92.37**	**330**	LR	LR	21 48 52.0	
	comp=Z,858nm,20.8s,baz=148,slow=33						
KLR	**Kul'dur**	**92.37**	**330**	*ce*P	**P**	**21 11 31.7**	**+0.2**
KLR				pmax	pmax		
	comp=Z,23nm,1.2s						
KLR				MLR	MLR		
	comp=Z,1µm,18.0s						
ELK	**Elko**	**92.40**	**42**	P	**P**	**21 11 32.9**	**+0.7**
	comp=Z,1.9nm,0.9s,baz=236,slow=4.9,SNR=9.6						
	comp=Z,1.9nm,0.9s						
GYA	**Guiyang**	**92.47**	**300**	⇓P	**P**	**21 11 33.0**	**+0.3**
GYA				PP	**PP**	**21 15 15.9**	**+1.5**
GYA				SKS	**SKSac**	**21 22 06.3**	**+1.8**
GYA				S	**S**	**21 22 30.6**	**-4.4**
GYA				SS	**SS**	**21 28 50.8**	**+3.4**
GYA				LR	LR		
	comp=Z,350nm,18.1s						
GYA				LR	LR		
	comp=Z,410nm,20.1s						
GYA				LR	LR		
	comp=Z,740nm,20.1s						
NLWA	**Neilton Lookou**	**92.48**	**33**	IAMs_20	IAMs_20	21 47 21.0	
	comp=Z,2µm,20.0s						
O16K	**Kokwok River B**	**92.49**	**10**	IAMs_20	IAMs_20	21 57 39.8	
	comp=Z,1µm,18.0s						
SYI	**Shuyak Island**	**92.52**	**13**	IAMs_20	IAMs_20	21 50 49.7	
	comp=Z,1µm,20.0s						
G06A	**Carlson Farm,**	**92.52**	**36**	IAmb	IAmb	21 11 39.6	
	comp=Z,53nm,1.6s						
G06A				IAMs_20	IAMs_20	21 49 14.4	
	comp=Z,1µm,19.0s						
Q19K	**Cape Douglas,**	**92.58**	**12**	IAMs_20	IAMs_20	21 50 44.4	
	comp=Z,2µm,20.0s						
M13K	**Dall Lake**	**92.63**	**7**	IAMs_20	IAMs_20	21 54 13.2	
	comp=Z,1µm,19.0s						
P18K	**Big Mountain,**	**92.75**	**11**	IAMs_20	IAMs_20	21 53 35.6	
	comp=Z,1µm,19.0s						
N15K	**Kwethluk River**	**92.77**	**9**	IAmb	IAmb	21 11 47.2	
	comp=Z,23nm,1.1s						
NNA	**Nana**	**92.79**	**106**	LR	LR	21 46 02.0	
	comp=Z,771nm,19.2s,baz=233,slow=31						
VHRN	**Van Horn**	**92.83**	**55**	IAmb	IAmb	21 11 41.7	
	comp=Z,31nm,2.0s						
OZB	**Mount Ozzard**	**92.89**	**31**	IAMs_20	IAMs_20	21 52 29.6	
	comp=Z,2µm,21.0s						
TX31	**Lajitas Ar. Si**	**92.93**	**57**	IAmb	IAmb	21 11 42.3	
	comp=Z,27nm,1.6s						
TXAR	**Lajitas Array**	**92.93**	**57**	P	**P**	**21 11 34.4**	**-0.4**
TXAR	**Lajitas Array**	**92.93**	**57**	P	**P**	**21 11 35.9**	**+1.1**
	comp=Z,3.3nm,1.1s,baz=212,slow=4.4,SNR=20						
TXAR				PKKP	**PKKPbc**	**21 28 47.6**	**+2.7**
	comp=Z,0.8nm,1.1s,baz=90,slow=3.8,SNR=5.4						
	comp=Z,3.3nm,1.1s						
HOLB	**Holberg**	**93.02**	**29**	IAMs_20	IAMs_20	21 48 16.8	
	comp=Z,1µm,19.0s						
LYN	**LuoYang**	**93.08**	**309**	⇑P	**P**	**21 11 35.5**	**+0.3**
LYN				SKS	**SKSac**	**21 22 07.8**	**+0.5**
LYN				S	**ScS**	**21 22 42.5**	**+0.9**
LYN				sS	sS	21 22 52.8	+0.7
LYN				pmax	pmax		
	comp=Z,57nm,0.8s						
LYN				pmax	pmax		
	comp=Z,640nm,6.5s						
LYN				LR	LR		
	comp=Z,590nm,17.9s						
LYN				LR	LR		
	comp=Z,940nm,16.5s						
LYN				LR	LR		
	comp=Z,1µm,16.5s						
HG4B	**Hotspring**	**93.09**	**26**	IAMs_20	IAMs_20	22 01 51.2	
	comp=Z,1µm,18.0s						
M14K	**Bethel**	**93.11**	**8**	IAMs_20	IAMs_20	21 54 36.0	
	comp=Z,1µm,20.0s						
O18K	**Koktuh Hills**	**93.19**	**11**	IAmb	IAmb	21 12 10.3	
	comp=Z,15nm,0.9s						
F07A	**Phinny Hill Vi**	**93.34**	**36**	IAMs_20	IAMs_20	21 51 12.0	
	comp=Z,2µm,19.0s						
P19K	**Oil Pt**	**93.34**	**12**	IAMs_20	IAMs_20	21 51 07.4	
	comp=Z,1µm,20.0s						
HNS	**HongShan**	**93.36**	**312**	⇑P	**P**	**21 11 37.0**	**+0.6**
HNS				SKS	**SKSac**	**21 22 05.8**	**-2.8**
HNS				S	**ScS**	**21 22 45.6**	**+1.8**
HNS				pmax	pmax		
	comp=Z,27nm,1.5s						
HNS				pmax	pmax		
	comp=Z,420nm,7.5s						
HNS				LR	LR		
	comp=Z,670nm,17.2s						
HNS				LR	LR		
	comp=Z,630nm,17.9s						
HNS				LR	LR		
	comp=Z,860nm,18.0s						
CLRS	**Cowichan Lake**	**93.40**	**32**	IAMs_20	IAMs_20	21 51 17.2	
	comp=Z,2µm,19.0s						
G08A	**Pilot Rock**	**93.41**	**37**	IAmb	IAmb	21 11 43.9	
	comp=Z,18nm,1.3s						
G08A				IAMs_20	IAMs_20	21 49 57.1	
	comp=Z,2µm,19.0s						
L14K	**Kuka Creek**	**93.61**	**7**	IAMs_20	IAMs_20	21 54 44.2	
	comp=Z,1µm,19.0s						
HOM	**Homer**	**93.64**	**13**	IAMs_20	IAMs_20	21 51 25.3	
	comp=Z,2µm,20.0s						
Q16A	**Castle Valley**	**93.64**	**46**	P	**P**	**21 11 36.8**	**-1.2**
Q16A				IAMs_20	IAMs_20	21 52 52.2	
	comp=Z,2µm,18.0s						
O19K	**Port Alsworth**	**93.66**	**11**	IAMs_20	IAMs_20	21 54 03.8	
	comp=Z,1µm,20.0s						
ILSW	**Iliamna Southw**	**93.66**	**12**	IAMs_20	IAMs_20	21 51 18.0	
	comp=Z,2µm,20.0s						
CBB	**Campbell River**	**93.74**	**31**	IAMs_20	IAMs_20	21 48 06.0	
	comp=Z,2µm,19.0s						
M16K	**Timber Creek**	**93.75**	**9**	IAMs_20	IAMs_20	21 52 55.9	
	comp=Z,1µm,20.0s						
MFID	**Camas Ranch**	**93.82**	**40**	IAMs_20	IAMs_20	21 53 41.2	
	comp=Z,1µm,18.0s						
TMUT	**Trail Mountain**	**93.85**	**45**	IAMs_20	IAMs_20	21 58 09.8	
	comp=Z,2µm,18.0s						
HAWA	**Hanford**	**93.88**	**36**	IAMs_20	IAMs_20	21 51 28.3	
	comp=Z,2µm,19.0s						
BRLK	**Bradley Lake**	**93.88**	**13**	IAMs_20	IAMs_20	21 51 39.4	
	comp=Z,2µm,19.0s						
BMO	**Blue Mountains**	**93.98**	**38**	IAMs_20	IAMs_20	21 50 03.2	
	comp=Z,2µm,19.0s						
K13K	**Kusilvak Mount**	**94.00**	**6**	IAMs_20	IAMs_20	21 53 11.3	
	comp=Z,1µm,20.0s						
BJT	**Baijiatuau**	**94.09**	**315**	IAmb	IAmb	21 11 41.1	
	comp=Z,24nm,1.3s						
BJT	**Baijiatuau**	**94.09**	**315**	P	**P**	**21 11 40.2**	**+0.5**
BJI	**Beijing**	**94.10**	**315**	P	**P**	**21 11 39.5**	**-0.2**
BJI				pmax	pmax		
	comp=Z,7.0nm,1.5s						
BJI				pmax	pmax		
	comp=Z,150nm,6.3s						
BJI				LR	LR		
	comp=Z,370nm,17.4s						
BJI				LR	LR		
	comp=Z,230nm,21.1s						
BJI				LR	LR		
	comp=Z,480nm,18.7s						
CMAR	**Chiang Mai Arr**	**94.10**	**289**	P	**P**	**21 11 39.2**	**-1.1**
CMAR	**Chiang Mai Arr**	**94.10**	**289**	P	**P**	**21 11 39.1**	**-1.2**
	comp=Z,2.7nm,1.1s,baz=149,slow=3.6,SNR=9.2						
CMAR				PP	**PP**	**21 15 28.1**	**+1.0**
	comp=Z,5.8nm,1.1s,baz=136,slow=6.0,SNR=10.0						
	comp=Z,2.7nm,1.1s						
CMAR	**Chiang Mai Arr**	**94.10**	**289**	*i* P	**P**	**21 11 40.0**	**-0.3**
CMAR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ATAH	**Atahualpa**	**94.12**	**101**	LR	LR	21 48 04.1	
	comp=Z,523nm,18.4s,baz=251,slow=32						
SRU	**San Rafael Swe**	**94.16**	**46**	IAMs_20	IAMs_20	21 53 24.9	
	comp=Z,2µm,18.0s						
E08A	**Dider Farm, El**	**94.18**	**36**	IAMs_20	IAMs_20	21 51 29.4	
	comp=Z,2µm,18.0s						
BBB	**Bella Bella**	**94.21**	**28**	IAMs_20	IAMs_20	21 53 38.0	
	comp=Z,1µm,18.0s						
BBB	**Bella Bella**	**94.21**	**28**	LR	LR	21 48 42.2	
	comp=Z,1µm,19.0s,baz=225,slow=32						
ANMO	**Albuquerque**	**94.25**	**51**	P	**P**	**21 11 41.8**	**+0.9**
ANMO	**Albuquerque**	**94.25**	**51**	IAMs_20	IAMs_20	21 52 47.0	
	comp=Z,2µm,18.0s						
ANMO	**Albuquerque**	**94.25**	**51**	P	**P**	**21 11 42.1**	**+1.3**
	comp=Z,2.3nm,0.9s,baz=253,slow=4.9,SNR=3.5						
	comp=Z,2.3nm,0.9s						
ANMO	**Albuquerque**	**94.25**	**51**	*i* P	**P**	**21 11 41.6**	**+0.8**
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.3s						
MVCO	**Mesa Verde**	**94.27**	**48**	IAMs_20	IAMs_20	21 56 57.0	
	comp=Z,2µm,18.0s						
M17K	**Holitna River**	**94.32**	**10**	IAmb	IAmb	21 12 23.5	
	comp=Z,23nm,1.3s						
SEW	**Seward**	**94.48**	**14**	IAMs_20	IAMs_20	21 51 44.7	
	comp=Z,1µm,20.0s						
HVU	**Hansel Valley**	**94.48**	**43**	IAmb	IAmb	21 11 57.1	
	comp=Z,22nm,1.4s						
Q23K	**Middleton Isla**	**94.53**	**15**	IAMs_20	IAMs_20	21 57 22.3	
	comp=Z,2µm,19.0s						
P18A	**Preston Nutter**	**94.64**	**46**	IAMs_20	IAMs_20	21 53 33.8	
	comp=Z,2µm,18.0s						
E09A	**Wood Farm, Sta**	**94.66**	**37**	IAMs_20	IAMs_20	21 52 24.1	
	comp=Z,1µm,19.0s						
K15K	**Wolf Creek Mou**	**94.67**	**8**	IAmb	IAmb	21 12 21.5	
	comp=Z,27nm,1.4s						
K15K				IAMs_20	IAMs_20	21 55 16.1	
	comp=Z,1µm,19.0s						
KMI	**Kunming**	**94.68**	**297**	P	**P**	**21 11 45.6**	**+2.5**
KMI				PP	**PP**	**21 15 32.8**	**+0.9**
KMI				SKS	**SKSac**	**21 22 17.8**	**+0.9**
KMI				S	**S**	**21 22 54.6**	**-0.2**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.6s						
KMI				pmax	pmax		
	comp=Z,210nm,11.0s						
KMI				LR	LR		
	comp=Z,460nm,20.6s						
KMI				LR	LR		
	comp=Z,680nm,18.9s						
KMI				LR	LR		
	comp=Z,580nm,16.1s						
HLID	**Hailey**	**94.69**	**41**	IAMs_20	IAMs_20	21 54 05.5	
	comp=Z,1µm,18.0s						
SLKM	**Skilak Lake**	**94.70**	**13**	IAMs_20	IAMs_20	21 52 06.5	
	comp=Z,1µm,20.0s						
MA2	**Magadan**	**94.71**	**345**	LR	LR	21 52 27.6	
	comp=Z,598nm,19.3s,baz=160,slow=34						
O22K	**Cooper Landing**	**94.77**	**13**	IAMs_20	IAMs_20	21 58 32.9	
	comp=Z,1µm,18.0s						
P23K	**Montague Islan**	**94.81**	**15**	IAMs_20	IAMs_20	21 52 17.6	
	comp=Z,2µm,19.0s						
PLID	**Pearl Lake**	**94.83**	**39**	IAmb	IAmb	21 11 59.2	
	comp=Z,21nm,1.5s						
BSUT	**Blindstream Ca**	**94.89**	**45**	IAMs_20	IAMs_20	21 54 11.2	
	comp=Z,2µm,18.0s						
J14K	**Nanvaranak Lak**	**94.90**	**6**	IAMs_20	IAMs_20	21 53 49.2	
	comp=Z,2µm,19.0s						
CRAG	**Craig**	**94.92**	**24**	IAMs_20	IAMs_20	21 56 48.2	
	comp=Z,1µm,18.0s						
TIY	**Taiyuan**	**94.99**	**312**	*e*P	**P**	**21 11 44.4**	**+0.4**
TIY				S	**S**	**21 22 57.6**	**+1.0**
TIY				pmax	pmax		
	comp=Z,250nm,6.0s						
TIY				LR	LR		
	comp=Z,190nm,10.3s						
TIY				LR	LR		
	comp=Z,500nm,19.2s						
TIY				LR	LR		
	comp=Z,550nm,18.6s						
HEH	**HeiHe**	**95.03**	**328**	*e*P	**P**	**21 11 42.9**	**-0.8**
HEH				pP	**pP**	**21 11 51.1**	**+0.1**
HEH				SKS	**SKSac**	**21 22 15.1**	**-2.0**
HEH				S	**ScS**	**21 22 58.3**	**+1.2**
HEH				pmax	pmax		
	comp=Z,23nm,1.2s						
HEH				pmax	pmax		
	comp=Z,310nm,8.4s						
HEH				LR	LR		
	comp=Z,920nm,19.7s						
HEH				LR	LR		
	comp=Z,370nm,16.4s						
HEH				LR	LR		
	comp=Z,1µm,18.6s						
XAN	**Xi'an**	**95.16**	**307**	P	**P**	**21 11 43.9**	**-0.9**
XAN				SKS	**SKSac**	**21 22 20.8**	**+2.1**
XAN				S	**S**	**21 22 57.3**	**-0.9**
XAN				pmax	pmax		
	comp=Z,430nm,7.6s						
XAN				LR	LR		
	comp=Z,520nm,17.9s						
XAN				LR	LR		
	comp=Z,830nm,19.2s						
XAN				LR	LR		
	comp=Z,1µm,18.9s						
L18K	**Granite Mounta**	**95.21**	**10**	IAmb	IAmb	21 12 32.7	
	comp=Z,26nm,1.6s						
M19K	**Big River Lodg**	**95.26**	**11**	IAMs_20	IAMs_20	21 56 41.5	
	comp=Z,1µm,19.0s						
FIS	**Fire Island**	**95.28**	**13**	IAMs_20	IAMs_20	21 52 18.9	
	comp=Z,1µm,20.0s						
V35K	**Ketchikan**	**95.33**	**24**	IAMs_20	IAMs_20	21 56 38.2	
	comp=Z,1µm,18.0s						
RC01	**Rabbit Creek A**	**95.33**	**13**	IAMs_20	IAMs_20	21 56 35.0	
	comp=Z,1µm,18.0s						
HIN	**Hinchinbrook I**	**95.37**	**15**	IAMs_20	IAMs_20	21 52 14.3	
	comp=Z,2µm,20.0s						
PWL	**Port Wells**	**95.40**	**14**	IAMs_20	IAMs_20	21 52 40.0	
	comp=Z,2µm,20.0s						
U33K	**Whale Pass**	**95.43**	**23**	IAMs_20	IAMs_20	21 59 39.9	
	comp=Z,1µm,18.0s						
PB18	**Visviri**	**95.53**	**114**	IAMs_20	IAMs_20	21 50 32.4	
	comp=Z,1µm,18.0s						
GLI	**Glacier Island**	**95.67**	**14**	IAMs_20	IAMs_20	21 52 26.4	
	comp=Z,1µm,20.0s						
FID	**Port Fidalgo**	**95.69**	**15**	IAMs_20	IAMs_20	21 52 43.6	
	comp=Z,2µm,19.0s						
SKT	**Skwentna**	**95.82**	**12**	IAMs_20	IAMs_20	21 55 22.9	
	comp=Z,1µm,20.0s						
KNK	**Knik Glacier**	**95.88**	**14**	IAMs_20	IAMs_20	21 59 14.6	
	comp=Z,1µm,18.0s						
PMR	**Palmer**	**95.91**	**13**	IAMs_20	IAMs_20	21 56 44.4	
	comp=Z,1µm,18.0s						
WRAK	**Wrangell Islan**	**95.94**	**23**	IAMs_20	IAMs_20	21 57 27.3	
	comp=Z,1µm,18.0s						
AHID	**Auburn Hatcher**	**96.07**	**43**	IAMs_20	IAMs_20	21 55 11.1	
	comp=Z,2µm,18.0s						
GHO	**Glory Hole Cre**	**96.11**	**13**	IAMs_20	IAMs_20	21 57 00.8	
	comp=Z,1µm,18.0s						
PZH	**PanZhiHua**	**96.18**	**297**	P	**P**	**21 11 49.8**	**0.0**
PZH				PP	**PP**	**21 15 43.1**	**-0.3**
PZH				SKS	**SKSac**	**21 22 25.0**	**+0.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,2.4s						
PZH				pmax	pmax		
	comp=Z,160nm,8.6s						
PZH				LR	LR		
	comp=Z,680nm,20.4s						
PZH				LR	LR		
	comp=Z,610nm,20.2s						
PZH				LR	LR		
	comp=Z,730nm,19.2s						
O20A	**White River Ci**	**96.18**	**46**	IAMs_20	IAMs_20	21 54 56.4	
	comp=Z,1µm,18.0s						
DIV	**Divide**	**96.19**	**15**	IAMs_20	IAMs_20	21 58 56.9	
	comp=Z,1µm,18.0s						
MESA	**MESA**	**96.25**	**17**	IAMs_20	IAMs_20	21 55 06.7	
	comp=Z,2µm,19.0s						
WAX	**Waxell Ridge**	**96.26**	**17**	IAMs_20	IAMs_20	21 58 16.0	
	comp=Z,2µm,19.0s						
SML	**Sawmill**	**96.26**	**14**	IAMs_20	IAMs_20	21 53 19.8	
	comp=Z,1µm,19.0s						
YKU2	**Yakutat**	**96.26**	**18**	IAMs_20	IAMs_20	21 55 39.3	
	comp=Z,2µm,19.0s						
BMRM	**Bremner River**	**96.30**	**16**	IAMs_20	IAMs_20	21 58 40.1	
	comp=Z,2µm,18.0s						
JCT	**Junction City**	**96.35**	**58**	IAMs_20	IAMs_20	21 54 18.4	
	comp=Z,2µm,18.0s						
U35K	**Hyder**	**96.35**	**25**	IAMs_20	IAMs_20	21 55 37.3	
	comp=Z,1µm,18.0s						
NEW	**Newport**	**96.35**	**36**	LR	LR	21 48 23.7	
	comp=Z,2µm,20.2s,baz=220,slow=31						
J18K	**Innoko River**	**96.40**	**9**	IAMs_20	IAMs_20	21 54 36.0	
	comp=Z,1µm,20.0s						
YAH	**Yahtse**	**96.46**	**17**	IAMs_20	IAMs_20	21 54 44.2	
	comp=Z,2µm,19.0s						
CRQM	**Cirque**	**96.46**	**16**	IAMs_20	IAMs_20	21 54 46.5	
	comp=Z,2µm,19.0s						
KLU	**Klutina**	**96.48**	**15**	IAMs_20	IAMs_20	21 53 10.6	
	comp=Z,1µm,19.0s						

ISLE	Juniper Island	96.52	17	IAMs_20	IAMs_20	21 58 24.9	
	comp=Z,2µm,19.0s						
ANM	Nome	96.53	5	IAMs_20	IAMs_20	21 58 27.2	
	comp=Z,1µm,19.0s						
TGL	Tana Glacier	96.53	16	IAMs_20	IAMs_20	21 54 57.2	
	comp=Z,2µm,19.0s						
PPLA	Purkeypile	96.56	11	IAMs_20	IAMs_20	21 54 21.4	
	comp=Z,1µm,20.0s						
XLT	XiLinHaoTe	96.56	318	*e*P	P	21 11 50.0	-1.0
XLT				pP	pP	21 11 59.1	+0.7
XLT				SKS	SKSac	21 22 21.1	-4.6
XLT				S	S	21 23 07.0	-2.9
XLT				pmax	pmax		
	comp=Z,7.0nm,1.3s						
XLT				pmax	pmax		
	comp=Z,230nm,7.0s						
XLT				LR	LR		
	comp=Z,520nm,15.6s						
XLT				LR	LR		
	comp=Z,690nm,19.8s						
PCA	Pinnacle	96.61	18	IAMs_20	IAMs_20	21 51 25.4	
	comp=Z,2µm,19.0s						
BCPM	Bancas Point	96.65	18	IAMs_20	IAMs_20	21 51 16.5	
	comp=Z,2µm,20.0s						
FXWY	Fox Creek	96.65	42	IAMs_20	IAMs_20	21 55 21.4	
	comp=Z,2µm,18.0s						
TABL	Table Mountain	96.68	17	IAMs_20	IAMs_20	21 55 12.1	
	comp=Z,2µm,19.0s						
GRNC	Granite Creek	96.78	17	IAMs_20	IAMs_20	21 58 41.7	
	comp=Z,1µm,19.0s						
VRDI	Verde Repeater	96.80	16	IAMs_20	IAMs_20	21 53 06.2	
	comp=Z,2µm,20.0s						
DLMT	Dillon	96.84	40	IAmb	IAmb	21 13 09.8	
	comp=Z,17nm,1.6s						
DLMT				IAMs_20	IAMs_20	21 50 58.3	
	comp=Z,2µm,20.0s						
N25K	Chitina, Valde	96.87	15	IAMs_20	IAMs_20	21 58 59.1	
	comp=Z,1µm,18.0s						
P29M	Windy Craggy	96.89	19	IAMs_20	IAMs_20	21 55 44.1	
	comp=Z,2µm,18.0s						
GLB	Gilahina Butte	96.91	16	IAMs_20	IAMs_20	21 53 11.0	
	comp=Z,1µm,20.0s						
BW06	Boulder Array	96.97	44	IAMs_20	IAMs_20	21 55 54.0	
	comp=Z,2µm,18.0s						
PDAR	Pinedale Array	96.97	44	P	P	21 11 53.5	+0.4
	comp=Z,0.5nm,0.7s,baz=186,slow=1.5,SNR=4.1						
PDAR				PKKP	PKKPbc	21 28 35.6	+0.8
	comp=Z,0.3nm,0.5s,baz=76,slow=6.3,SNR=4.0						
	comp=Z,0.5nm,0.7s						
M24K	Tolsona, Glenn	96.97	14	IAMs_20	IAMs_20	21 53 36.7	
	comp=Z,1µm,19.0s						
MCARA	McCarthy VSAT	97.04	16	IAMs_20	IAMs_20	21 53 12.5	
	comp=Z,1µm,20.0s						
LOGN	Logan Glacier	97.04	17	IAMs_20	IAMs_20	21 50 15.8	
	comp=Z,1µm,20.0s						
CD2	Chengdu	97.05	302	P	Pdif	21 11 55.0	+1.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CAST	Castle Rocks	97.06	11	IAMs_20	IAMs_20	21 57 49.7	
	comp=Z,1µm,19.0s						
CTGM	Chitina Glacie	97.08	17	IAMs_20	IAMs_20	21 56 13.7	
	comp=Z,1µm,19.0s						
BARN	Barnard Glacie	97.08	17	IAMs_20	IAMs_20	21 55 33.8	
	comp=Z,1µm,19.0s						
T35M	Bob Quinn	97.10	24	IAMs_20	IAMs_20	21 57 50.0	
	comp=Z,2µm,18.0s						
O28M	Mount Upton	97.20	18	IAMs_20	IAMs_20	21 50 30.1	
	comp=Z,1µm,20.0s						
O29M	Mount Kennedy	97.23	18	IAMs_20	IAMs_20	21 51 45.9	
	comp=Z,2µm,19.0s						
YHB	Horse Butte	97.24	41	IAMs_20	IAMs_20	21 55 49.9	
	comp=Z,1µm,18.0s						
HERN	Volcan Telica	97.26	80	IAMs_20	IAMs_20	21 50 50.6	
	comp=Z,693nm,20.0s						
LPAZ	La Paz	97.34	114	P	Pdif	21 11 57.6	+1.6
	comp=Z,0.8nm,0.7s,baz=179,slow=6.0,SNR=3.6						
LPAZ				LR	LR	21 49 46.5	
	comp=Z,320nm,18.1s,baz=213,slow=32						
	comp=Z,0.8nm,0.7s						
KTH	Kantishna Hill	97.38	12	IAMs_20	IAMs_20	21 56 23.2	
	comp=Z,2µm,20.0s						
HHC	Hu-ho-hao-te	97.39	314	*e*P	Pdif	21 11 57.3	+2.3
HHC				sP	pwP	21 12 12.3	+3.0
HHC				S	S	21 23 17.5	+0.2
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,150nm,5.9s						
HHC				LR	LR		
	comp=Z,530nm,17.7s						
HHC				LR	LR		
	comp=Z,470nm,20.2s						
HHC				LR	LR		
	comp=Z,1µm,16.8s						
SEY	Seymchan	97.39	347	LR	LR	21 55 39.5	
	comp=Z,930nm,18.3s,baz=164,slow=35						
SEY	Seymchan	97.39	347	*ce*P	P	21 11 53.5	-0.7
SEY				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TRF	Thorofare Moun	97.40	12	IAMs_20	IAMs_20	21 53 39.7	
	comp=Z,2µm,20.0s						
AMTX	Amarillo	97.44	54	IAMs_20	IAMs_20	21 54 31.7	
	comp=Z,2µm,18.0s						
YNM	Yellowstone No	97.50	41	IAMs_20	IAMs_20	21 55 50.9	
	comp=Z,2µm,18.0s						
YNR	Norris Junctio	97.51	41	IAMs_20	IAMs_20	21 55 51.1	
	comp=Z,1µm,18.0s						
S34M	Telegraph Cree	97.53	23	IAMs_20	IAMs_20	22 01 11.2	
	comp=Z,1µm,18.0s						
RTBA	Rita Blanca	97.58	52	IAmb	IAmb	21 11 58.3	
	comp=Z,20nm,1.7s						
ZEA	Zeya	97.59	331	*e*P	P	21 11 55.2	-0.1
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
DHY	Denali Highway	97.60	13	IAMs_20	IAMs_20	21 59 43.2	
	comp=Z,1µm,18.0s						
G16K	Koyuk River	97.61	6	IAMs_20	IAMs_20	21 55 32.8	
	comp=Z,2µm,19.0s						
RND	Reindeer	97.62	13	P	Pdif	21 11 55.4	0.0
RND				IAmb	IAmb	21 12 29.9	
	comp=Z,22nm,1.5s						
RND	Reindeer	97.62	13	P	Pdif	21 11 55.4	0.0
RND				pmax	pmax		
	comp=Z,22nm,1.5s						
RND				MLR	MLR		
	comp=Z,2µm,19.0s						
ABTX	Abilene, Hawle	97.62	56	IAMs_20	IAMs_20	21 55 17.0	
	comp=Z,2µm,18.0s						
JTS	Las Juntas de	97.66	83	LR	LR	21 48 40.7	
	comp=Z,783nm,18.9s,baz=260,slow=31						
F15K	North Star Dit	97.72	5	IAMs_20	IAMs_20	21 53 57.5	
	comp=Z,2µm,19.0s						
TNCH	TengChong	97.87	294	⇑P	P	21 11 56.8	-0.7
TNCH				pP	pP	21 12 04.8	-0.1
TNCH				PP	PP	21 15 55.1	-1.4
TNCH				S	S	21 23 10.4	-12
TNCH				pmax	pmax		
	comp=Z,13nm,2.1s						
TNCH				pmax	pmax		
	comp=Z,92nm,2.7s						
TNCH				LR	LR		
	comp=Z,260nm,15.4s						
TNCH				LR	LR		
	comp=Z,390nm,15.5s						
TNCH				LR	LR		
	comp=Z,750nm,18.6s						
BPAW	Bear Paw Mtn.	97.88	11	IAMs_20	IAMs_20	21 58 23.3	
	comp=Z,2µm,18.0s						
M26K	Nabesna, AK	97.93	16	IAMs_20	IAMs_20	21 59 43.2	
	comp=Z,2µm,19.0s						
HYT	Haines Junctio	97.96	19	IAMs_20	IAMs_20	21 56 35.2	
	comp=Z,2µm,18.0s						
Q32M	Nakina River	97.98	22	IAMs_20	IAMs_20	22 01 13.1	
	comp=Z,1µm,18.0s						
BOAB	BOACO BROADBAN	98.15	80	IAMs_20	IAMs_20	21 47 29.4	
	comp=Z,2µm,19.0s						
M27K	Edge Creek, AK	98.16	16	IAmb	IAmb	21 12 33.7	
	comp=Z,25nm,1.7s						
M27K				IAMs_20	IAMs_20	21 53 50.1	
	comp=Z,1µm,20.0s						
BTO	Baotou	98.20	313	*e*P	Pdif	21 12 01.3	+2.7
BTO				pP	pwP	21 12 11.8	-1.1
BTO				sP	sP	21 12 15.5	+7.2
BTO				SKS	SKSac	21 22 34.6	+0.3
BTO				S	ScS	21 23 24.9	+0.6
BTO				sS	sS	21 23 40.8	+4.3
BTO				SS	SS	21 30 12.1	+3.7
BTO				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BTO				pmax	pmax		
	comp=Z,430nm,6.7s						
BTO				LR	LR		
	comp=Z,1µm,19.3s						
BTO				LR	LR		
	comp=Z,1µm,18.4s						
BTO				LR	LR		
	comp=Z,2µm,24.1s						
MENT	Mentasta	98.24	15	IAMs_20	IAMs_20	21 54 17.3	
	comp=Z,2µm,19.0s						
DLBC	Dease Lake	98.30	23	IAMs_20	IAMs_20	22 01 10.8	
	comp=Z,1µm,18.0s						
DLBC	Dease Lake	98.30	23	LR	LR	21 48 32.9	
	comp=Z,482nm,20.8s,baz=254,slow=31						
O30N	Mendenhall	98.30	19	IAMs_20	IAMs_20	21 56 29.3	
	comp=Z,2µm,18.0s						
L26K	Log Cabin Wild	98.40	15	IAMs_20	IAMs_20	21 54 13.5	
	comp=Z,2µm,19.0s						
G18K	Tagagawik	98.49	8	IAMs_20	IAMs_20	21 57 44.1	
	comp=Z,1µm,20.0s						
RLMT	Red Lodge	98.55	42	IAMs_20	IAMs_20	21 56 33.7	
	comp=Z,2µm,18.0s						
K24K	Donnelly Dome	98.58	14	IAMs_20	IAMs_20	21 54 41.0	
	comp=Z,2µm,20.0s						
N30M	Aishikik Lake	98.60	18	IAMs_20	IAMs_20	21 52 49.1	
	comp=Z,2µm,19.0s						
RIDG	Independent Ri	98.71	14	IAMs_20	IAMs_20	21 54 25.6	
	comp=Z,2µm,19.0s						
WRH	Wood River Hil	98.73	13	P	P	21 11 59.4	-0.7
WRH				IAmb	IAmb	21 13 22.7	
	comp=Z,15nm,1.4s						
WRH				IAMs_20	IAMs_20	21 54 38.0	
	comp=Z,2µm,19.0s						
F17K	Baldwin Pennin	98.74	7	IAMs_20	IAMs_20	21 56 08.1	
	comp=Z,1µm,20.0s						
R33M	Jennings River	98.74	22	IAMs_20	IAMs_20	22 01 22.2	
	comp=Z,1µm,18.0s						
L27K	Beaver Creek,	98.78	16	IAMs_20	IAMs_20	21 54 02.5	
	comp=Z,1µm,20.0s						
MLY	Manley	98.78	11	IAMs_20	IAMs_20	21 58 51.1	
	comp=Z,1µm,19.0s						
DOT	Dot Lake	98.80	14	IAMs_20	IAMs_20	22 00 23.8	
	comp=Z,1µm,18.0s						
P33M	Teslin, Yukon	98.81	21	IAMs_20	IAMs_20	22 04 36.8	
	comp=Z,1µm,18.0s						
WHTX	Lake Whitney,	98.85	58	IAMs_20	IAMs_20	21 55 54.7	
	comp=Z,2µm,18.0s						
CPUP	Villa Florida	98.92	128	LR	LR	21 52 22.6	
	comp=Z,140nm,18.3s,baz=83,slow=33						
CCB	Clear Creek Bu	98.94	13	IAMs_20	IAMs_20	21 55 02.6	
	comp=Z,2µm,19.0s						
FW03	Perrin-Whitt E	98.97	57	IAMs_20	IAMs_20	21 51 20.6	
	comp=Z,1µm,20.0s						
M29M	Somme Creek	99.06	17	IAMs_20	IAMs_20	21 53 17.2	
	comp=Z,1µm,20.0s						
SCRK	Sand Creek	99.10	14	IAMs_20	IAMs_20	21 54 36.9	
	comp=Z,1µm,19.0s						
I23K	Minto, Yukon-K	99.12	12	IAMs_20	IAMs_20	21 54 54.2	
	comp=Z,2µm,20.0s						
COLA	College	99.14	12	IAMs_20	IAMs_20	21 54 31.7	
	comp=Z,2µm,20.0s						
ILAR	Eielson Array	99.23	13	P	Pdif	21 12 02.1	-0.3
	comp=Z,1.0nm,1.1s,baz=204,slow=3.8,SNR=3.8						
ILAR				PP	PP	21 16 05.7	-0.2
	comp=Z,2.3nm,1.1s,baz=206,slow=6.3,SNR=7.3						
ILAR				LR	LR	21 52 00.4	
	comp=Z,619nm,19.4s,baz=206,slow=32						
	comp=Z,1.0nm,1.1s						
FW14	Alvarado	99.25	58	IAMs_20	IAMs_20	21 56 04.3	
	comp=Z,2µm,18.0s						
J25K	Salcha River,	99.38	14	IAMs_20	IAMs_20	22 00 05.2	
	comp=Z,1µm,18.0s						
POKR	Poker Plat Res	99.44	12	IAMs_20	IAMs_20	21 54 41.7	
	comp=Z,2µm,20.0s						
N32M	Quiet Lake	99.48	20	IAMs_20	IAMs_20	21 54 30.9	
	comp=Z,1µm,19.0s						
F19K	Shaleruckik Mo	99.49	8	IAMs_20	IAMs_20	21 58 24.1	
	comp=Z,1µm,20.0s						
K27K	Chicken	99.56	15	IAMs_20	IAMs_20	21 54 48.6	
	comp=Z,2µm,20.0s						
ELIS	Ellis County	99.63	54	IAMs_20	IAMs_20	21 50 36.7	
	comp=Z,1µm,20.0s						
J26L	Joseph Creek	99.65	14	IAMs_20	IAMs_20	21 55 04.5	
	comp=Z,1µm,20.0s						
L29M	L29M	99.71	17	IAMs_20	IAMs_20	21 57 38.2	
	comp=Z,2µm,19.0s						
H23K	Yukon River	99.71	11	IAMs_20	IAMs_20	21 55 53.8	
	comp=Z,2µm,20.0s						
G21K	Allakaket	99.74	10	IAMs_20	IAMs_20	21 56 29.4	
	comp=Z,1µm,19.0s						
E18K	Tukpahlearik C	99.75	7	IAMs_20	IAMs_20	21 57 00.5	
	comp=Z,1µm,20.0s						
LZH	Lanzhou	99.76	306	*e*P	Pdif	21 12 05.8	+0.1
LZH				pP	sP	21 12 15.9	+0.4
LZH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LZH				pmax	pmax		
	comp=Z,220nm,4.6s						
LZH				LR	LR		
	comp=Z,250nm,17.7s						
LZH				LR	LR		
	comp=Z,610nm,17.9s						
LZH				LR	LR		
	comp=Z,720nm,18.7s						
M31M	Drury Creek, Y	99.95	19	IAMs_20	IAMs_20	21 57 31.7	
	comp=Z,2µm,18.0s						
WTLY	Watson Lake, Y	100.00	23	IAMs_20	IAMs_20	22 02 03.5	
	comp=Z,1µm,18.0s						
H24K	Noodor Dome	100.01	12	IAMs_20	IAMs_20	21 55 09.7	
	comp=Z,2µm,20.0s						
RDOG	Red Dog Mine	100.16	6	IAMs_20	IAMs_20	21 55 25.2	
	comp=Z,1µm,20.0s						
C16K	Lisburne Hills	100.20	5	IAMs_20	IAMs_20	21 52 29.0	
	comp=Z,1µm,21.0s						
DAWY	Dawson	100.20	16	IAMs_20	IAMs_20	21 56 46.2	
	comp=Z,1µm,19.0s						
BILL	Bilibino	100.26	354	IAMs_20	IAMs_20	21 57 36.2	
	comp=Z,2µm,19.0s						
BILL	Bilibino	100.26	354	*i* P	Pdif	21 12 07.9	+1.0
BILL				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,2µm,19.0s						
FARO	Faro, Yukon	100.26	19	IAMs_20	IAMs_20	21 57 33.1	
	comp=Z,2µm,18.0s						
F21K	Alatna River	100.41	9	IAMs_20	IAMs_20	22 02 39.0	
	comp=Z,1µm,19.0s						
I26K	Coal Creek Min	100.44	14	IAMs_20	IAMs_20	21 55 57.3	
	comp=Z,1µm,20.0s						
G23K	Bananza Creek	100.45	11	IAMs_20	IAMs_20	21 58 20.2	
	comp=Z,1µm,19.0s						
K29M	Barlow Dome	100.47	17	IAMs_20	IAMs_20	21 54 21.4	
	comp=Z,1µm,20.0s						
FNO	Franklin	100.60	55	IAMs_20	IAMs_20	21 57 38.6	
	comp=Z,1µm,18.0s						
MAYO	Mayo, Yukon	100.68	18	IAMs_20	IAMs_20	21 54 06.9	
	comp=Z,2µm,20.0s						
NATX	Nacogdoches	100.76	59	IAMs_20	IAMs_20	22 00 12.5	
	comp=Z,1µm,18.0s						
J29N	Klondike Camp	100.81	16	IAMs_20	IAMs_20	21 57 25.3	
	comp=Z,1µm,19.0s						
OK029	Liberty Lake	100.84	55	IAMs_20	IAMs_20	21 56 07.9	
	comp=Z,2µm,18.0s						
CROK	Carrier	100.84	54	IAMs_20	IAMs_20	21 57 01.9	
	comp=Z,1µm,18.0s						
G24K	Hadweenzic Riv	100.86	12	IAMs_20	IAMs_20	21 56 06.2	
	comp=Z,2µm,20.0s						
CBKS	Cedar Bluff	100.87	51	IAMs_20	IAMs_20	21 56 29.3	
	comp=Z,2µm,18.0s						
C18K	Utukok River	100.89	6	IAMs_20	IAMs_20	21 56 09.6	
	comp=Z,2µm,19.0s						
COLD	Coldfoot	100.89	11	IAMs_20	IAMs_20	21 56 58.9	
	comp=Z,1µm,20.0s						
D19K	Kuna River	101.05	7	IAMs_20	IAMs_20	21 59 39.2	
	comp=Z,1µm,19.0s						
FYU	Fort Yukon	101.15	13	IAMs_20	IAMs_20	21 56 02.8	
	comp=Z,1µm,19.0s						
MMPY	Sheldon Lake,	101.17	20	IAMs_20	IAMs_20	21 58 13.1	
	comp=Z,1µm,19.0s						
LAO	LASA Array	101.19	42	IAMs_20	IAMs_20	21 58 16.6	
	comp=Z,1µm,18.0s						
I28M	Miner Creek	101.25	15	IAMs_20	IAMs_20	22 01 58.9	
	comp=Z,1µm,18.0s						
441A	DeRidder	101.34	61	IAMs_20	IAMs_20	22 07 12.9	
	comp=Z,1µm,18.0s						
R32A	Long Quarter,	101.35	52	IAMs_20	IAMs_20	21 56 54.0	
	comp=Z,2µm,18.0s						
J30M	Hart River	101.37	17	IAMs_20	IAMs_20	21 58 41.2	
	comp=Z,2µm,19.0s						
OK052	Battle Ridge R	101.39	55	IAMs_20	IAMs_20	21 56 33.6	
	comp=Z,1µm,19.0s						
D20K	Etivluk River	101.42	8	IAMs_20	IAMs_20	21 59 47.8	
	comp=Z,1µm,19.0s						
C19K	Lookout Ridge	101.49	7	IAMs_20	IAMs_20	21 57 59.3	
	comp=Z,1µm,20.0s						
F24K	Squaw Lake	101.53	11	IAMs_20	IAMs_20	21 56 40.9	
	comp=Z,2µm,20.0s						
H27K	Steamboat Moun	101.58	14	IAMs_20	IAMs_20	21 56 34.5	
	comp=Z,1µm,19.0s						
OK051	E0350 and S346	101.63	54	IAMs_20	IAMs_20	21 57 25.9	
	comp=Z,1µm,18.0s						
E23K	Chandalar	101.75	10	IAMs_20	IAMs_20	21 57 25.5	
	comp=Z,1µm,19.0s						
I30M	Mount Dempster	101.89	17	IAMs_20	IAMs_20	21 55 29.9	
	comp=Z,1µm,19.0s						
E24K	Your Creek	101.94	11	IAMs_20	IAMs_20	22 03 44.6	
	comp=Z,2µm,18.0s						
F25K	Christian Rive	101.98	12	IAMs_20	IAMs_20	21 56 20.9	
	comp=Z,2µm,20.0s						
G27K	Doyon Strip	102.06	14	IAMs_20	IAMs_20	21 56 01.9	
	comp=Z,1µm,20.0s						
T35A	Sooner Cattle	102.07	54	IAMs_20	IAMs_20	21 57 22.4	
	comp=Z,2µm,18.0s						
D22K	Ayikyak River	102.07	9	IAMs_20	IAMs_20	21 57 57.9	
	comp=Z,2µm,20.0s						
H29M	Whitestone	102.25	15	IAMs_20	IAMs_20	22 02 11.4	
	comp=Z,1µm,18.0s						
TOLK	Toolik Lake Re	102.29	10	IAMs_20	IAMs_20	21 57 44.8	
	comp=Z,1µm,20.0s						
F26K	Sheenjek River	102.34	12	IAMs_20	IAMs_20	21 58 21.5	
	comp=Z,2µm,19.0s						
D23K	Nanushuk River	102.42	10	IAMs_20	IAMs_20	21 56 58.3	
	comp=Z,1µm,20.0s						
E25K	Arctic Village	102.47	12	IAMs_20	IAMs_20	21 56 57.7	
	comp=Z,2µm,20.0s						
B20K	Meade River	102.60	7	IAMs_20	IAMs_20	21 58 54.8	
	comp=Z,1µm,20.0s						
YAK	Yakutsk	102.64	337	IAMs_20	IAMs_20	22 03 07.5	
	comp=Z,1µm,18.0s						
YAK	Yakutsk	102.64	337	*i* P	Pdif	21 12 17.5	-0.1
YAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
EPYK	Eagle Plains	102.75	16	IAMs_20	IAMs_20	21 58 38.6	
	comp=Z,1µm,19.0s						
WLAR	White Oak Lake	102.86	58	IAMs_20	IAMs_20	21 57 34.8	
	comp=Z,2µm,18.0s						
H31M	Peel River	102.86	17	IAMs_20	IAMs_20	21 59 18.6	
	comp=Z,1µm,19.0s						
D24K	Happy Valley	102.87	10	IAMs_20	IAMs_20	21 58 31.1	
	comp=Z,2µm,19.0s						
G29M	Pine Creek	102.91	15	IAMs_20	IAMs_20	22 02 50.7	
	comp=Z,1µm,18.0s						
MIAR	Mount Ida	102.95	57	IAMs_20	IAMs_20	21 58 00.0	
	comp=Z,2µm,18.0s						
KSU1	Kansas State U	103.11	52	IAMs_20	IAMs_20	21 58 09.6	
	comp=Z,2µm,18.0s						
F28M	Old Crow	103.11	14	IAMs_20	IAMs_20	21 57 22.8	
	comp=Z,2µm,20.0s						
E27K	Coleen River	103.25	13	IAMs_20	IAMs_20	22 02 28.6	
	comp=Z,1µm,19.0s						
U38A	Gravette	103.31	55	IAMs_20	IAMs_20	21 59 04.3	
	comp=Z,1µm,18.0s						
C24K	Franklin Bluff	103.40	10	IAMs_20	IAMs_20	22 04 55.8	
	comp=Z,1µm,19.0s						
D25K	Kavik River	103.41	11	IAMs_20	IAMs_20	22 00 03.4	
	comp=Z,1µm,19.0s						
HHAR	Hobbs	103.54	56	IAMs_20	IAMs_20	21 59 10.6	
	comp=Z,2µm,18.0s						
PALK	Pallekele	103.64	270	IAMs_20	IAMs_20	22 00 19.1	
	comp=Z,2µm,19.0s						
G31M	Satah River	103.78	16	IAMs_20	IAMs_20	21 56 47.7	
	comp=Z,1µm,20.0s						
CCAR	Cane Creek	103.94	59	IAMs_20	IAMs_20	21 57 35.6	
	comp=Z,2µm,18.0s						
UALR	University of	103.94	58	IAMs_20	IAMs_20	21 57 49.5	
	comp=Z,1µm,18.0s						
F30M	Barrier River	103.98	15	IAMs_20	IAMs_20	22 03 25.1	
	comp=Z,1µm,18.0s						
E28M	Babbage River	104.01	14	IAMs_20	IAMs_20	22 02 43.7	
	comp=Z,2µm,18.0s						
C27K	Jago River	104.12	12	IAMs_20	IAMs_20	21 58 01.3	
	comp=Z,2µm,20.0s						
E29M	Blow River	104.17	14	IAMs_20	IAMs_20	21 57 46.8	
	comp=Z,2µm,20.0s						
SUSD	Miller	104.29	46	IAMs_20	IAMs_20	21 58 39.2	
	comp=Z,1µm,18.0s						
F31M	Tsiigehtchic	104.32	16	IAMs_20	IAMs_20	21 57 05.0	
	comp=Z,1µm,20.0s						
E28A	Huff	104.33	44	IAMs_20	IAMs_20	22 08 59.9	
	comp=Z,1µm,18.0s						
SONM	Songino Array	104.35	318	PKKPbc	PKKPbc	21 28 17.7	+4.2
	comp=Z,0.6nm,0.8s,baz=333,slow=1.7,SNR=4.0						
N35A	Tabor	104.63	51	IAMs_20	IAMs_20	22 03 27.6	
	comp=Z,1µm,18.0s						
S39A	Bolivar	104.66	55	IAMs_20	IAMs_20	21 58 35.1	
	comp=Z,2µm,18.0s						
L34A	Svendsen Farm,	104.69	50	IAMs_20	IAMs_20	22 03 25.1	
	comp=Z,1µm,18.0s						
INK	Inuvik	105.06	16	IAMs_20	IAMs_20	22 04 16.4	
	comp=Z,1µm,18.0s						
MGMO	Mountain Grove	105.14	56	IAMs_20	IAMs_20	21 58 24.8	
	comp=Z,1µm,18.0s						
ECSD	EROS Data Cent	105.40	48	IAMs_20	IAMs_20	22 04 21.8	
	comp=Z,2µm,18.0s						
LCAR	Lake Charles	105.42	57	IAMs_20	IAMs_20	22 00 38.4	
	comp=Z,2µm,18.0s						
P38A	Dawn	105.44	53	IAMs_20	IAMs_20	21 59 50.5	
	comp=Z,1µm,19.0s						
HBAR	Harrisburg	105.53	58	IAMs_20	IAMs_20	21 59 38.5	
	comp=Z,1µm,19.0s						
MDND	Maddock	105.62	43	IAMs_20	IAMs_20	21 57 41.9	
	comp=Z,1µm,18.0s						
R40A	Maddies Statio	105.68	55	IAMs_20	IAMs_20	21 59 07.0	
	comp=Z,1µm,18.0s						
MET	Memphis--Engin	105.85	58	IAMs_20	IAMs_20	21 58 42.1	
	comp=Z,1µm,18.0s						
OXF	Oxford	105.95	59	IAMs_20	IAMs_20	21 59 04.7	
	comp=Z,1µm,18.0s						
GOMU	GeErMu	106.15	303	Pdif	Pdif	21 12 34.6	+0.2
GOMU				AMB	AMB		
	comp=Z,320nm,9.0s						
GOMU				LR	LR		
	comp=Z,660nm,17.7s						
GOMU				LR	LR		
	comp=Z,370nm,17.5s						
GOMU				LR	LR		
	comp=Z,590nm,18.0s						
CCM	Cathedral Cave	106.28	55	IAMs_20	IAMs_20	22 01 12.0	
	comp=Z,1µm,18.0s						
P40A	Paris	106.41	54	IAMs_20	IAMs_20	22 02 59.2	
	comp=Z,1µm,18.0s						
F33A	5 Mile Ranch,	106.62	46	IAMs_20	IAMs_20	22 01 55.8	
	comp=Z,1µm,18.0s						
HALT	Halls	106.64	58	IAMs_20	IAMs_20	22 05 17.0	
	comp=Z,1µm,18.0s						
FVM	French Village	106.82	56	IAMs_20	IAMs_20	21 59 43.3	
	comp=Z,1µm,18.0s						
GLAT	Glass	106.84	58	IAMs_20	IAMs_20	22 01 15.3	
	comp=Z,1µm,18.0s						
HICK	Hickman	107.01	57	IAMs_20	IAMs_20	22 03 56.6	
	comp=Z,2µm,18.0s						
PLAL	Pickwick Lake	107.14	59	IAMs_20	IAMs_20	22 01 26.3	
	comp=Z,1µm,18.0s						
UTMT	University of	107.18	58	IAMs_20	IAMs_20	22 06 38.3	
	comp=Z,1µm,18.0s						
SPB	Sao Paulo	107.23	133	IAMs_20	IAMs_20	21 57 57.3	
	comp=Z,1µm,19.0s						
SLM	Saint Louis	107.25	55	IAMs_20	IAMs_20	21 59 48.7	
	comp=Z,1µm,18.0s						
I37A	Lemond, Waseca	107.58	49	IAMs_20	IAMs_20	22 02 04.6	
	comp=Z,1µm,18.0s						
N41A	Harden Midland	107.76	53	IAMs_20	IAMs_20	22 01 04.9	
	comp=Z,1µm,19.0s						
FFC	Flin Flon	107.78	36	IAMs_20	IAMs_20	21 55 08.0	
	comp=Z,1µm,20.0s						
MTDJ	Mount Denham	107.81	79	IAMs_20	IAMs_20	21 59 34.1	
	comp=Z,1µm,18.0s						
WVT	Waverly	107.83	58	IAMs_20	IAMs_20	22 00 51.5	
	comp=Z,1µm,18.0s						
VAO	Valinhos	107.95	133	IAMs_20	IAMs_20	21 59 46.3	
	comp=Z,1µm,18.0s						
L40A	Anamosa	108.12	51	IAMs_20	IAMs_20	22 01 23.3	
	comp=Z,1µm,18.0s						
C36M	Paulatuk	108.13	17	IAMs_20	IAMs_20	22 02 29.9	

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             comp=Z,1µm,19.0s
P43A   Skaggs, Pawnee   108.20  54   IAMs_20  IAMs_20  22 00 52.7
             comp=Z,1µm,18.0s
V48A   Smith Brothers   108.39  59   IAMs_20  IAMs_20  22 00 11.5
             comp=Z,1µm,18.0s
SPMN   Marine on St.    108.51  48   IAMs_20  IAMs_20  22 00 47.1
             comp=Z,1µm,19.0s
T47A   Sharon Grove     108.74  58   IAMs_20  IAMs_20  22 05 09.4
             comp=Z,1µm,18.0s
HDIL   Hopedale         108.76  54   IAMs_20  IAMs_20  22 02 03.4
             comp=Z,1µm,18.0s
OLIL   Olney            108.79  56   IAMs_20  IAMs_20  22 02 25.6
             comp=Z,1µm,18.0s
SWET   Sewanee          108.82  60   IAMs_20  IAMs_20  22 02 20.8
             comp=Z,1µm,18.0s
ULM    Lac du Bonnet    108.92  42   PKKP              21 28 13.3
             comp=Z,4.3nm,1.0s,baz=109,slow=4.5,SNR=5.2
L42A   Oliver, Polo     109.14  52   IAMs_20  IAMs_20  22 02 03.2
             comp=Z,1µm,18.0s
JFWS   Jewell Farm      109.14  51   IAMs_20  IAMs_20  22 02 07.3
             comp=Z,1µm,18.0s
W50A   Signal Mountai   109.27  60   IAMs_20  IAMs_20  22 03 02.7
             comp=Z,1µm,18.0s
I40A   Norwalk          109.33  50   IAMs_20  IAMs_20  22 06 25.5
             comp=Z,1µm,18.0s
U49A   Red Boiling Sp   109.49  59   IAMs_20  IAMs_20  22 00 35.5
             comp=Z,1µm,18.0s
Y52A   Lilburn          109.62  62   IAMs_20  IAMs_20  22 06 27.3
             comp=Z,883nm,18.0s
P46A   Rosedale         109.80  55   IAMs_20  IAMs_20  22 02 02.2
             comp=Z,1µm,18.0s
CPCT   Cooper Cave      109.96  60   IAMs_20  IAMs_20  22 03 07.0
             comp=Z,946nm,18.0s
SFIN   Lafayette        110.20  54   IAMs_20  IAMs_20  22 02 04.6
             comp=Z,1µm,18.0s
HQIL   Hanson Quary C   110.27  53   IAMs_20  IAMs_20  22 03 08.4
             comp=Z,2µm,19.0s
K43A   Burlington       110.33  52   IAMs_20  IAMs_20  22 06 54.8
             comp=Z,1µm,18.0s
L44A   Lake County Fo   110.39  52   IAMs_20  IAMs_20  22 02 34.5
             comp=Z,1µm,19.0s
HYB    Hyderabad        110.44 278  ePKiKP    PKiKP    21 16 55.1 +0.8
HYB                                 ePP       PP       21 17 29.5 -0.5
HYB                                 eSKSac    SKSac    21 23 32.6 +1.3
I42A   Draeger Farm,    110.44  50   IAMs_20  IAMs_20  22 06 52.5
             comp=Z,1µm,18.0s
EYMN   Ely              110.50  46   IAMs_20  IAMs_20  22 03 44.5
             comp=Z,1µm,18.0s
P48A   Milroy           110.98  56   IAMs_20  IAMs_20  22 03 33.6
             comp=Z,1µm,18.0s
NMDO   Nuevo Mundo      111.02  78   IAMs_20  IAMs_20  22 04 13.2
             comp=Z,549nm,18.0s
TZTN   Tazewell         111.13  59   IAMs_20  IAMs_20  22 02 14.0
             comp=Z,1µm,18.0s
R50A   Paris            111.28  57   IAMs_20  IAMs_20  21 58 43.7
             comp=Z,908nm,19.0s
V53A   Saluda           111.31  61   IAMs_20  IAMs_20  22 04 18.0
             comp=Z,990nm,18.0s
N47A   Urbana           111.38  54   IAMs_20  IAMs_20  22 03 17.8
             comp=Z,1µm,18.0s
H43A   Windswept, Lux   111.43  50   IAMs_20  IAMs_20  22 03 44.6
             comp=Z,1µm,18.0s
O48B   Farmland         111.50  55   IAMs_20  IAMs_20  22 05 49.2
             comp=Z,1µm,18.0s
S51A   Beattyville      111.55  58   IAMs_20  IAMs_20  22 01 39.9
             comp=Z,915nm,19.0s
F42A   Maple Grove Fa   111.71  49   IAMs_20  IAMs_20  22 08 07.9
             comp=Z,1µm,18.0s
O49A   Covington        112.05  56   IAMs_20  IAMs_20  22 02 28.7
             comp=Z,1µm,18.0s
I45A   Fountain         112.27  51   IAMs_20  IAMs_20  22 03 60.0
             comp=Z,1µm,18.0s
U54A   Nelsons Funny    112.39  60   IAMs_20  IAMs_20  22 02 13.5
             comp=Z,1µm,19.0s
J47A   Sunmer           112.90  52   IAMs_20  IAMs_20  22 08 53.0
             comp=Z,977nm,18.0s
S54A   Dingess, Beckl   113.27  59   IAMs_20  IAMs_20  22 02 53.6
             comp=Z,1µm,19.0s
AAM    Ann Arbor        113.34  54   IAMs_20  IAMs_20  22 04 10.7
             comp=Z,1µm,19.0s
U56A   King             113.39  61   IAMs_20  IAMs_20  22 02 49.0
             comp=Z,983nm,18.0s
M50A   Fremont          113.42  55   IAMs_20  IAMs_20  22 04 14.0
             comp=Z,1µm,18.0s
FCC    Fort Churchill   113.46  34   IAMs_20  IAMs_20  22 05 33.1
             comp=Z,1µm,18.0s
BLA    Blacksburg       113.70  60   IAMs_20  IAMs_20  22 04 03.0
             comp=Z,924nm,18.0s
V58A   Windy Hill, Pi   114.12  62   IAMs_20  IAMs_20  22 08 30.5
             comp=Z,900nm,18.0s
WMQ    Urumqi           114.29 308   PKP      PKiKP    21 17 01.6 +0.8
WMQ                                  AMB      AMB
             comp=Z,250nm,7.5s
WMQ                                  LR       LR
             comp=Z,300nm,21.1s
WMQ                                  LR       LR
             comp=Z,530nm,18.1s
WMQ                                  LR       LR
             comp=Z,370nm,18.9s
R55A   Marlinton        114.33  59   IAMs_20  IAMs_20  22 08 35.8
             comp=Z,1µm,18.0s
E46A   Sault Ste Mari   114.41  49   IAMs_20  IAMs_20  22 09 24.3
             comp=Z,1µm,18.0s
T57A   Hurt             114.48  60   IAMs_20  IAMs_20  22 04 47.7
             comp=Z,1µm,18.0s
I49A   Point Hope       114.51  52   IAMs_20  IAMs_20  22 05 30.5
             comp=Z,1µm,19.0s
POGA   Pongola          114.85 209   IAMs_20  IAMs_20  22 01 05.8
             comp=Z,2µm,20.0s
S57A   Dark Hollow, R   114.98  60   IAMs_20  IAMs_20  22 03 59.1
             comp=Z,940nm,18.0s
Q56A   Snyder Ridge,    115.28  58   IAMs_20  IAMs_20  22 08 47.8
             comp=Z,1µm,18.0s
T59A   Double "B" Far   115.73  61   IAMs_20  IAMs_20  22 10 28.0
             comp=Z,908nm,18.0s
ERPA   Erie             115.81  55   IAMs_20  IAMs_20  22 05 11.2
             comp=Z,863nm,18.0s
BOSA   Boshof           116.07 202   PKP      PKiKP    21 17 05.0  0.0
             comp=Z,2.3nm,1.0s,baz=225,slow=2.8,SNR=2.4
P57A   Homestead Farm   116.29  58   IAMs_20  IAMs_20  22 09 44.5
             comp=Z,1µm,18.0s
CBN    Corbin Frederi   116.31  60   IAMs_20  IAMs_20  22 04 49.1
             comp=Z,988nm,18.0s
WVNY   West Valley, N   116.87  55   IAMs_20  IAMs_20  22 05 53.4
             comp=Z,1µm,18.0s
ZSN    Zaisan           117.38 311  ePKIKP    PKPdf    21 17 05.8 -0.8
ZSN    Zaisan           117.38 311  ePKP      PKPdf    21 17 05.8 -0.8
S61A   Accomac          117.38  61   IAMs_20  IAMs_20  22 05 18.7
             comp=Z,965nm,19.0s
MVL    Millersville     117.67  58   IAMs_20  IAMs_20  22 07 18.1
             comp=Z,1µm,18.0s
R61A   Willards         117.85  60   IAMs_20  IAMs_20  22 05 22.1
             comp=Z,1µm,19.0s
DELO   Deloro Mine      118.23  53   IAMs_20  IAMs_20  22 12 04.0
             comp=Z,1µm,18.0s
RES    Resolute Bay     118.50  17   IAMs_20  IAMs_20  22 03 40.0
             comp=Z,1µm,20.0s
P61A   Hammonton        118.70  59   IAMs_20  IAMs_20  22 10 54.3
             comp=Z,842nm,18.0s
MAKGR  Makgori          118.81 203   PKPdf    PKiKP    21 17 11.4 +1.0
MK31   Makanchi Array   118.86 309c iPKIKP    PKPdf    21 17 08.6 -0.9
MKAR   Makanchi Array   118.86 309            PKPdf    21 17 08.3 -1.2
MKAR   Makanchi Array   118.86 309   PKP      PKPdf    21 17 08.7 -0.8
             comp=Z,2.0nm,0.6s,baz=207,slow=0.8,SNR=20
MKAR                                 PKKPbc   PKKPab   21 27 27.3 +2.0
             comp=Z,0.4nm,0.8s,baz=284,slow=4.9,SNR=3.8
MAKZ   Makanchi         119.07 309   PKPdf    PKPdf    21 17 09.1 -0.8
MAKZ   Makanchi         119.07 309   PKIKP    PKPdf    21 17 09.1 -0.8
MAKZ                                 MLR      MLR
             comp=Z,500nm,18.0s
ZALV   Zalesovo Beam    119.24 318   PKP      PKPdf    21 17 09.4 -0.5
             comp=Z,0.9nm,0.6s,baz=101,slow=3.0,SNR=4.7
CPNY   Central Park     119.66  58   IAMs_20  IAMs_20  22 13 43.5
             comp=Z,1µm,19.0s
SHLS   Shalkode         119.73 305  ePKIKP    PKPdf    21 17 09.7 -1.7
SHLS                                e                  21 18 30.8
SHLS   Shalkode         119.73 305  ePKP      PKPdf    21 17 09.8 -1.7
SHLS                                ePP       PP       21 18 30.8 -4.4
WBO    Williamsburg     119.97  53   IAMs_20  IAMs_20  22 20 14.0
             comp=Z,762nm,18.0s
UZB    Uzynbulak        120.03 305  ePKIKP    PKPdf    21 17 10.7 -1.3
UZB    Uzynbulak        120.03 305  ePKP      PKPdf    21 17 10.8 -1.3
ILAM   Ilet Lapin Mar   120.31  91   IAMs_20  IAMs_20  22 08 42.9
             comp=Z,917nm,19.0s
KPKS   Kokpek           120.36 305  ePKIKP    PKPdf    21 17 11.5 -1.1
KPKS                                e                  21 18 37.2
KPKS   Kokpek           120.36 305  ePKP      PKPdf    21 17 11.5 -1.1
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KPKS                                ePP       PP       21 18 37.2 -2.3
SATY   Saty             120.44 304  ePKIKP    PKPdf    21 17 11.6 -1.2
SATY                                e                  21 18 37.8
SATY   Saty             120.44 304  ePKP      PKPdf    21 17 11.7 -1.2
SATY                                ePP       PP       21 18 37.8 -2.3
TRQ    Mont Tremblant   120.79  52   IAMs_20  IAMs_20  22 10 57.5
             comp=Z,1µm,18.0s
TDK    Taldyqorghan     120.97 307  ePKIKP    PKPdf    21 17 12.6 -1.0
TDK    Taldyqorghan     120.97 307  ePKP      PKPdf    21 17 12.7 -1.0
SEM    Semipalatinsk    121.11 313  ePKIKP    PKPdf    21 17 12.6 -1.3
SEM    Semipalatinsk    121.11 313  ePKP      PKPdf    21 17 12.7 -1.3
ARXS   Arharly          121.16 306  i PKIKP   PKPdf    21 17 13.5 -0.6
KSH    Kashi            121.17 300   PKP      PKiKP    21 17 15.4 +1.0
KSH                                  LR       LR
             comp=Z,320nm,20.6s
KSH                                  LR       LR
             comp=Z,200nm,17.9s
KSH                                  LR       LR
             comp=Z,490nm,22.0s
MNTQ   Montreal, Queb   121.23  53   IAMs_20  IAMs_20  22 09 44.3
             comp=Z,1µm,19.0s
NIL    Nilore           121.40 293   PKPdf    PKPdf    21 17 14.3 -0.5
NIL    Nilore           121.40 293   P        PKPdf    21 17 14.3 -0.5
NIL    Nilore           121.40 293   PKIKP    PKPdf    21 17 14.3 -0.5
ILON   Igloolik, Nuna   121.42  24   IAMs_20  IAMs_20  22 03 17.9
             comp=Z,1µm,20.0s
AAA    Alma-Ata         121.53 304  ePKIKP    PKPdf    21 17 13.6 -1.2
AAA    Alma-Ata         121.53 304  ePKP      PKPdf    21 17 13.7 -1.1
KURK   Kurchatov        122.20 313   PKPdf    PKPdf    21 17 14.9 -0.8
KURK   Kurchatov        122.20 313   IAMs_20  IAMs_20  22 13 41.8
             comp=Z,845nm,19.0s
KURK   Kurchatov        122.20 313   P        PKPdf    21 17 15.6 -0.1
KURK                                 S        SKSac    21 24 14.1 +0.5
KURK   Kurchatov        122.20 313c iPKIKP    PKPdf    21 17 14.4 -1.3
KURK                                 pmax     pmax
             comp=Z,17nm,1.0s
KURBB  Kurchatov Arra   122.23 313   PKP      PKPdf    21 17 14.8 -1.0
             comp=Z,4.5nm,0.7s,baz=106,slow=1.9,SNR=24
I62A   Tamworth         122.39  55   IAMs_20  IAMs_20  22 09 20.4
             comp=Z,1µm,18.0s
FRU1   Bishkek          123.04 303   IAMs_20  IAMs_20  22 22 20.0
             comp=Z,858nm,19.0s
AAK    Ala-Archa        123.10 303   PKPdf    PKPdf    21 17 17.2 -0.8
AAK    Ala-Archa        123.10 303   IAMs_20  IAMs_20  22 20 07.4
             comp=Z,848nm,19.0s
AAK    Ala-Archa        123.10 303   P        PKPdf    21 17 17.4 -0.5
AAK                                  S        SKSac    21 24 19.6 +2.3
AAK    Ala-Archa        123.10 303c iPKIKP    PKiKP    21 17 18.2  0.0
AAK                                  pmax     pmax
             comp=Z,22nm,2.5s
SGDS   Sogindy          123.20 304  ePKP      PKPdf    21 17 16.8 -1.3
BTLS   Baital           123.98 306  ePKIKP    PKPdf    21 17 18.5 -0.8
BTLS   Baital           123.98 306  ePKP      PKPdf    21 17 18.5 -0.8
KBL    Kabul            125.00 292   P        PKiKP    21 17 22.4 +0.1
G65A   Princeton        125.32  54   IAMs_20  IAMs_20  22 12 00.7
             comp=Z,1µm,18.0s
DZA    Taraz            125.42 303  ePKIKP    PKPdf    21 17 21.1 -1.1
DZA    Taraz            125.42 303  ePKP      PKPdf    21 17 21.1 -1.1
KKAR   Karatay Array    126.05 303            PKPdf    21 17 23.2 -0.2
KKAR   Karatay Array    126.05 303   PKIKP    PKPdf    21 17 23.2 -0.2
SIMJ   Simiganj         126.15 297            PKPdf    21 17 23.5 -0.4
SIMJ                                 IAMs_20  IAMs_20  22 23 23.6
             comp=Z,805nm,19.0s
IUG    Iuzhnay          126.20 301  ePKIKP    PKPdf    21 17 22.7 -1.1
IUG    Iuzhnay          126.20 301  ePKP      PKPdf    21 17 22.8 -1.1
KUQ    Kuujjuuaa        126.42  39   IAMs_20  IAMs_20  22 24 07.3
             comp=Z,1µm,18.0s
BRLS   Borolday         126.52 303  ePKIKP    PKPdf    21 17 23.4 -0.9
BRLS   Borolday         126.52 303  ePKP      PKPdf    21 17 23.5 -0.9
BATG   Bathurst New B   126.72  52   IAMs_20  IAMs_20  22 12 29.4
             comp=Z,1µm,18.0s
SCHQ   Schefferville    127.10  43   PKP      PKPdf    21 17 24.6 -0.4
             comp=Z,11nm,1.2s,baz=316,slow=4.3,SNR=4.6
BVAR   Borovoye Array   127.58 315   PKP      PKPdf    21 17 25.6 -0.4
             comp=Z,4.8nm,0.7s,baz=119,slow=1.9,SNR=28
BRVK   Borovoye         127.64 315            PKPdf    21 17 25.6 -0.5
BRVK   Borovoye         127.64 315   P        PKPdf    21 17 24.5 -1.6
BRVK   Borovoye         127.64 315c iPKIKP    PKiKP    21 17 26.5 -0.2
BRVK                                 pmax     pmax
             comp=Z,15nm,1.0s
NEEM   North Greenlan   128.52  13  eP        PKPdf    21 17 26.4 -1.1
JLN    Jalan Bani Buh   128.70 274   P        PKPdf    21 17 28.3 -0.8
MHTO   MHTO             129.46 272   P        PKPdf    21 17 29.9 -0.7
JMDO   Jabal Madar      129.90 274   P        PKPdf    21 17 30.3 -1.1
SMDO   Samad            130.21 274   P        PKPdf    21 17 32.1 +0.1
HOQ    Hoqain           131.04 275   P        PKPdf    21 17 32.4 -1.1
ARQ    Araqi            131.62 274   P        PKiKP    21 17 35.4 -0.2
SOHO   SOHO             131.91 275   P        PKiKP    21 17 36.2 +0.1
HATD   Hatta, Dubai     132.50 276   P        PKiKP    21 17 37.1 -0.2
ASHO   Ashiyiah         132.51 276   P        PKPdf    21 17 35.5 -0.8
             SNR=6.2
UMZA   Um Al Zommool    132.53 273   P        PKiKP    21 17 37.3 -0.1
ALNE   Al Ain           132.54 275   P        PKPdf    21 17 36.2 -0.1
             SNR=5.4
KBS    Kingsbay         132.59 357   IAMs_20  IAMs_20  22 20 30.8
             comp=Z,726nm,19.0s
MASF   Masafi           132.67 276   P        PKPdf    21 17 34.3 -2.3
             SNR=5.2
FAQ    Al Faqa, Dubai   132.93 275   P        PKPdf    21 17 35.2 -1.8
             SNR=8.0
NAZ    Nazwa, Dubai     132.96 276   P        PKPdf    21 17 35.9 -1.2
             SNR=7.7
ASUD   Al Ashush, Dub   133.11 275   P        PKPdf    21 17 35.1 -2.2
SVE    Sverdlovsk       133.14 320  i PKIKP   PKPdf    21 17 36.6 +0.2
SVE                                  pmax     pmax
             comp=Z,35nm,2.6s
SFJD   Kangerlussuaq    133.15  25   IAMs_20  IAMs_20  22 14 02.2
             comp=Z,1µm,20.0s
KMBO   Kilima Mbogo     133.44 232   IAMs_20  IAMs_20  22 09 35.4
             comp=Z,1µm,19.0s
DAG    Danmarks Havn    133.90   7  i P       PKPdf    21 17 36.0 -1.3
SUMG   Summit           133.97  16   IAMs_20  IAMs_20  22 18 38.6
             comp=Z,964nm,19.0s
MZR    Muzera           134.07 272   P        PKPdf    21 17 38.6 -0.6
ARTI   Arti             134.43 320            PKPdf    21 17 38.5 -0.3
ARTI                                 IAMs_20  IAMs_20  22 21 38.8
             comp=Z,1µm,19.0s
ARTI   Arti             134.43 320  i PKIKP   PKPdf    21 17 39.1 +0.3
SLWR   Sila             136.00 273   P        PKPdf    21 17 43.6 +0.8
SMRA   Abu-Samra        136.97 273   P        PKiKP    21 17 45.7 -0.7
LODK   Lodwar           138.03 235   IAMs_20  IAMs_20  22 17 25.1
             comp=Z,971nm,19.0s
ANGG   Ammassalik, Gr   138.43  24   IAMs_20  IAMs_20  22 17 24.3
             comp=Z,1µm,18.0s
KIRV   Kirov            138.61 325c iPKIKP    PKPdf    21 17 46.7 +0.2
SCO    Scoresbysund     139.01  12   IAMs_20  IAMs_20  22 19 51.2
             comp=Z,651nm,19.0s
LVZ    Lovozero         139.25 342   IAMs_20  IAMs_20  22 22 52.2
             comp=Z,1µm,20.0s
APA    Apatity          139.82 342⇓iPKIKP     PKPdf    21 17 47.5 -1.0
APA                                  pmax     pmax
             comp=Z,8.0nm,1.0s
ARCES  ARCESS Array B   140.01 348   PKhKP    PKPpre   21 17 42.5
             comp=Z,1.8nm,0.7s,baz=29,slow=2.8,SNR=7.9
RAYN   Ar Rayn          141.06 269   P        PKPdf    21 17 48.5 -3.7
BELG   Belogornoye      141.38 316  i PKIKP   PKPdf    21 17 51.3 -0.4
KLMR   Klimovskoe       142.11 331  ePKIKP    PKPdf    21 17 50.8 -2.0
KLMR                                 pmax     pmax
             comp=Z,38nm,1.4s
AKT    Akhty            142.66 298  ePKIKP    PKPdf    21 17 50.5 -4.1
AKT                                 e                  21 20 57.3
AKT                                  pmax     pmax
             comp=Z,24nm,1.3s
MAK    Makhachkala      142.80 301  ePKIKP    PKPdf    21 17 51.7 -2.9
MAK                                 e                  21 21 00.0
MAK                                 ePPP      PPP      21 24 13.7
MAK                                 e                  21 24 59.1
MAK                                 eSS       SS       21 39 45.0 +4.9
MAK                                 eSSS      SSS      21 44 58.8
MAK                                  pmax     pmax
             comp=Z,86nm,1.2s
VAGH   Vaagaholmen      144.42 353  ePKPdf    PKPdf    21 17 58.4 +1.7
KONS   Konsvik          144.66 353  ePKPdf    PKPbc    21 17 56.3 +0.3
STOK   Stokkvaagen      144.84 353  ePKPbc    PKPab    21 17 55.3 -1.1
GNI    Garni            144.93 296            PKPdf    21 17 58.7  0.0
GNI    Garni            144.93 296   IAMs_20  IAMs_20  22 30 33.9
             comp=Z,695nm,19.0s
GNI    Garni            144.93 296   P        PKPab    21 17 57.3 -0.6
GNI    Garni            144.93 296  i PKIKP   PKPab    21 17 57.3 -0.6
LEIR   Leirfjorden      145.04 352  ePKPbc    PKPbc    21 17 55.1 -2.0
VRH    Novokhopyorsk    145.23 316  ePKIKP    PKPbc    21 17 57.8 -0.5
VRH                                  pmax     pmax
             comp=Z,147nm,1.7s
NCK    Nalchik          145.61 302c iPKIKP    PKPdf    21 17 58.9 -0.6
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NCK                                  pmax     pmax
             comp=Z,327nm,1.3s
MOS    Moscow           145.63 325  i PKP2    PKPdf    21 17 56.7 -2.4
MOS                                  pmax     pmax
             comp=Z,1µm,1.7s
MOS                                  pmax     pmax
             comp=N,300nm,1.5s
MOS                                  pmax     pmax
             comp=Z,765nm,1.4s
MOS                                  pmax     pmax
             comp=E,200nm,1.5s
MOS                                  pmax     pmax
             comp=N,202nm,1.2s
MOS                                  pmax     pmax
             comp=E,134nm,1.3s
GOF    Gofitskoye       145.81 305cePKIKP     PKPdf    21 17 59.8  0.0
KBZ    Khabaz           146.09 302   PKPbc    PKPab    21 18 01.5 -0.3
             comp=E,112nm,1.1s,baz=79,slow=3.6,SNR=135
KBZ    Khabaz           146.09 302c iPKP2     PKPdf    21 18 00.5 +0.3
KIV    Kislovodsk       146.21 303            PKPdf    21 18 00.9 +0.2
KIV                                  IAMs_20  IAMs_20  22 28 12.1
             comp=Z,756nm,20.0s
KIV    Kislovodsk       146.21 303 ⇑P         PKPbc    21 18 01.7 -0.1
KIV    Kislovodsk       146.21 303 i PKIKP    PKPdf    21 17 59.6 -1.0
KIV                                e                   21 21 33.4
KIV                                  pmax     pmax
             comp=Z,106nm,1.1s
SHA1   Shidzhatmaz      146.26 302 i PKIKP    PKPdf    21 18 00.0 -0.9
LPSR   Galich'ya Gora   146.34 319 ePKIKP     PKPdf    21 17 59.3 -1.1
LPSR                                 pmax     pmax
             comp=Z,240nm,1.1s
PUL    Pulkovo          146.37 335c iPKP2     PKPbc    21 18 01.2 -0.3
PUL                                  pmax     pmax
             comp=Z,558nm,1.3s
OBN    Obninsk          146.46 324            PKPdf    21 18 00.7 +0.2
OBN                                  IAMs_20  IAMs_20  22 29 08.5
             comp=Z,691nm,19.0s
OBN    Obninsk          146.46 324 ⇓P         PKPbc    21 18 01.5 -0.4
OBN    Obninsk          146.46 324c iPKP2     PKPdf    21 18 00.5  0.0
OBN                                e                   21 21 29.1
OBN                                ePPP       PPP      21 24 36.9
OBN                                  pmax     pmax
             comp=Z,383nm,1.3s
VORR   Voronezh         146.54 317 ePKP2      PKPbc    21 18 01.8 -0.5
VORR                                 pmax     pmax
             comp=Z,568nm,1.5s
FINES  FINESS Array B   146.54 339            PKPdf    21 18 00.2 -0.3
FINES  FINESS Array B   146.54 339   PKPbc    PKPdf    21 18 00.9 +0.5
             comp=Z,20nm,0.6s,baz=47,slow=3.2,SNR=149
FINES  FINESS Array B   146.54 339   PKP2     PKPdf    21 18 01.0 +0.5
NSS    Namsos           146.70 352 ePKPdf     PKPdf    21 18 01.4 +0.7
VSR    Storozhevoye     146.73 317 ePKIKP     PKPdf    21 17 59.3 -1.8
VSR                                  pmax     pmax
             comp=Z,190nm,1.2s
ERBR   Yeremizino-Bor   147.47 306 i PKIKP    PKPdf    21 18 02.5  0.0
ERBR                                 pmax     pmax
             comp=Z,290nm,1.2s
LABN   Labinsk          147.50 304 i PKP2     PKPbc    21 18 04.5 -0.8
LABN                                 pmax     pmax
             comp=Z,98nm,1.3s
SOC    Sochi            148.40 303 ePKIKP     PKPdf    21 18 03.2 -0.9
SOC                                e                   21 21 35.3
SOC                                eSS        SS       21 40 34.5 -9.3
SOC                                  pmax     pmax
             comp=Z,72nm,1.0s
VSU    Vasula           148.60 335c iPKIKP    PKPdf    21 18 05.5 +1.5
VSU                                  pmax     pmax
             comp=Z,318nm,2.5s
AKN    Aaknes           149.46 356 ePKPbc     PKPbc    21 18 09.6 -0.1
ANN    Anapa            149.77 306c iPKP2     PKPbc    21 18 10.5 -0.5
ANN                                e                   21 25 05.0
ANN                                  pmax     pmax
             comp=Z,158nm,1.3s
NB2    NORSAR Subarra150.17 351      PKP      PKPbc    21 18 11.3 -0.3
             comp=Z,159nm,1.7s,baz=16,slow=2.6
NB2    NORSAR Subarra150.17 351      PKPab    PKPbc    21 18 11.3 -0.3
             baz=16,slow=2.6
NOA    NORSAR Array B 150.17 351     PKPbc    PKPbc    21 18 11.3 -0.3
             comp=Z,13nm,1.0s,baz=14,slow=4.1,SNR=21
NC602  NORSAR Array S 150.42 351 ePKPbc       PKPbc    21 18 12.0 -0.1
HFS    Hagfors          150.66 348   PKPbc    PKPbc    21 18 12.4 -0.3
             comp=Z,12nm,0.9s,baz=77,slow=3.2,SNR=20
HFS                                  PKPab    PKPab    21 18 19.4 -0.2
             comp=Z,6.2nm,0.5s,baz=72,slow=4.8,SNR=26
SKAR   Skarslia         150.84 354 ePKPbc     PKiKP    21 18 14.2 +0.4
MNK    Minsk            150.91 329 i PKiKP    PKPbc    21 18 13.2 -0.3
             comp=E,26nm,1.3s
MNK                                i PKiKP    PKPbc    21 18 13.2 -0.3
             comp=N,15nm,0.9s
MNK                                i PKiKP    PKPbc    21 18 13.2 -0.3
             comp=Z,77nm,1.2s,baz=49
MNK                                i PP       PP       21 21 50.0 -1.0
MNK                                i SKS      SKSdf    21 25 11.3 -1.9
MNK                                i PPP      PPP      21 25 13.2
MNK                                i SS       SS       21 41 10.4  0.0
MNK                                i SSS      SSS      21 46 53.5
MNK                                i LQ       LQ       22 18 17.3
MNK                                i LR       LR       22 29 46.6
MNK                                i LRM      MLR      22 31 04.6
             comp=N,557nm,18.3s
MNK                                i LRM      MLR      22 31 04.6
             comp=Z,815nm,18.5s
MNK                                i LRM      MLR      22 31 26.9
             comp=E,437nm,19.6s
MNK    Minsk            150.91 329 i PKIKP    PKPbc    21 18 13.1 -0.3
MNK                                i                   21 21 49.9
MNK                                i                   21 25 11.3
MNK                                i PPP      PPP      21 25 13.2
MNK                                i SS       SS       21 41 10.3 -0.1
MNK                                i SSS      SSS      21 46 53.4
MNK                                  pmax     pmax
             comp=N,15nm,0.9s
MNK                                  pmax     pmax
             comp=Z,77nm,1.2s
MNK                                  pmax     pmax
             comp=E,26nm,1.3s
NACGM  Naroch           151.12 330⇑iPKP       PKPbc    21 18 13.8 -0.2
             comp=Z,53nm,1.0s,baz=47
BER    Bergen           151.34 357 ePKPdf     PKPdf    21 18 10.8 +2.6
BEIL   Beino            151.58 285 eP         PKiKP    21 18 16.7 +0.5
KONO   Kongsberg        151.72 352            PKiKP    21 18 15.5 -0.1
KONO   Kongsberg        151.72 352   IAMs_20  IAMs_20  22 27 29.8
             comp=Z,642nm,21.0s
KONO   Kongsberg        151.72 352 ⇑PKIKP     PKPbc    21 18 14.6 -0.6
KONO   Kongsberg        151.72 352 ePKPbc     PKiKP    21 18 15.8 +0.2
ODD1   Odda             151.73 355 ePKPbc     PKPbc    21 18 14.9 -0.3
HWQ    Hawqa            151.76 284 eP         PKPbc    21 18 16.4 +0.1
ZAHL   Zahle            151.77 283 eP         PKiKP    21 18 17.4 +0.6
RCY    Rachaya          151.78 283 eP         PKiKP    21 18 17.0 +0.2
SHBL   Chebaa           151.84 282 eP         PKiKP    21 18 17.4 +0.5
QRWL   Qaraoun          151.91 283 eP         PKiKP    21 18 17.8 +0.8
DIKM   Dikmen           151.96 300 ⇑P         PKiKP    21 18 17.0 +0.3
BHL    Bhannes          151.97 283 eP         PKiKP    21 18 16.9 -0.1
SIM    Simferopol'      152.01 307 ePKIKP     PKPbc    21 18 14.9 -1.4
SIM                                  pmax     pmax
             comp=Z,132nm,1.3s
DQRL   Deir Qamar       152.02 283 eP         PKiKP    21 18 17.9 +0.7
MMAI   Mount Meron Ar   152.09 281   PKPbc    PKiKP    21 18 18.2 +0.9
             comp=Z,41nm,0.7s,baz=80,slow=5.2,SNR=101
BLS5   Blasjo           152.23 355 ePKPbc     PKiKP    21 18 17.4 +0.8
AKASG  Malin Array Be   152.56 321   PKP      PKPdf    21 18 09.5 -0.9
             comp=Z,14nm,1.0s,baz=50,slow=1.9,SNR=5.9
AKASG                                PKPbc    PKPbc    21 18 17.2 -0.2
             comp=Z,8.7nm,0.8s,baz=50,slow=2.1,SNR=41
KIEV   Kiev             152.57 321            PKiKP    21 18 17.6  0.0
KIEV   Kiev             152.57 321   IAMs_20  IAMs_20  22 30 46.1
             comp=Z,703nm,20.0s
KIEV   Kiev             152.57 321 ⇑P         PKPbc    21 18 17.2 -0.2
KIEV   Kiev             152.57 321 ⇑PKIKP     PKPbc    21 18 17.2 -0.2
BZK    Bozkurt          152.82 301 ⇑P         PKiKP    21 18 18.6 +0.2
SUW    Suwalki          153.23 332 ePKP       PKPbc    21 18 18.1 -0.6
SUW    Suwalki          153.23 332   IAMs_20  IAMs_20  22 31 44.8
             comp=Z,847nm,20.0s
KIRS   Kirsehir-Merke   153.32 295 ⇑P         PKPbc    21 18 19.5 -0.1
BRTR   Keskin Array B   153.47 296   PKP      PKPdf    21 18 11.7 -0.6
             comp=Z,1.3nm,1.0s,baz=214,slow=1.3,SNR=6.8
BRTR                                 PKPbc    PKiKP    21 18 20.1 +0.1
             comp=Z,6.2nm,0.6s,baz=137,slow=2.5,SNR=30
CIDE   Kastamonu/Cide   153.61 301 ⇑P         PKiKP    21 18 20.9 +0.9
BLEU   Blekinge         153.74 343 eP         PKiKP    21 18 20.2 +0.3
FABU   Falkenberg       153.79 347 e          PKiKP    21 18 20.2 +0.3
DEL    Delary           154.05 345 i P        PKiKP    21 18 21.0 +0.5
ANTO   Ankara           154.09 297            PKiKP    21 18 21.9 +0.7
ANTO   Ankara           154.09 297   IAMs_20  IAMs_20  22 33 35.1
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	comp=Z,692nm,19.0s						
ANTO	Ankara	154.09	297	P	PKPdf	21 18 12.6	-0.5
ANTO	Ankara	154.09	297	⇑P	PKPdf	21 18 14.0	+0.9
ANTO	Ankara	154.09	297	⇑PKIKP	PKPdf	21 18 14.0	+0.9
DBIC	Dimbokro	154.12	164	PKPbc	PKiKP	21 18 23.0	+1.0
	comp=Z,13nm,1.0s,baz=234,slow=2.8,SNR=5.6						
DBIC	Dimbokro	154.12	164	⇑PKIKP	PKPdf	21 18 13.5	-0.3
PURM	Purcari	154.22	313	⇑P	PKiKP	21 18 22.1	+1.0
KIS	Kishinev	154.66	314	i PKP	PKPdf	21 18 10.0	-3.5
	comp=Z,180nm,10.5s						
KIS				eL	L	22 20 08.0	
KIS				LRM	MLR	22 46 49.0	
	comp=Z,300nm,17.0s						
KIS	Kishinev	154.66	314	i PKIKP	PKPdf	21 18 10.0	-3.5
KIS				pmax	pmax		
	comp=Z,180nm,10.4s						
MILM	Milestii Mici	154.70	314	ePKHKP	PKPpre	21 18 10.0	
MILM	Milestii Mici	154.70	314	i PKiKP	PKPbc	21 18 21.0	-1.1
MILM	Milestii Mici	154.70	314	⇓P	PKPbc	21 18 22.1	0.0
MILM	Milestii Mici	154.70	314	ePKIKP	PKPdf	21 18 10.0	-3.5
MILM				pmax	pmax		
	comp=Z,120nm,2.1s						
SAHE	Sakarya_HENDEK	155.37	300	⇓P	PKPdf	21 18 24.8	+10
VASR	Vaslui	155.45	314	⇑P	PKPab	21 18 40.9	+0.5
VLDR	Vladesti	155.64	313	⇓P	PKPab	21 18 41.5	+0.3
BEL	Belsk	155.82	331	ePKP	PKPab	21 18 41.7	0.0
TPGR	Topolog	155.84	310	⇑P	PKPdf	21 18 26.2	+11
BORA	Eskisehir	155.87	297	IAMs_20	IAMs_20	22 31 28.9	
	comp=Z,743nm,20.0s						
CFR	Carcaliu	155.89	311	⇓P	PKPdf	21 18 25.3	+10
RGN	Rugen	155.94	344	IAMs_20	IAMs_20	22 36 28.2	
	comp=Z,785nm,20.0s						
GKP	Gorka Klasztor	155.98	338	ePKP	PKPab	21 18 42.2	-0.1
TIRR	Tirgusor	156.00	309	IAMs_20	IAMs_20	22 34 55.1	
	comp=Z,864nm,19.0s						
TIRR	Tirgusor	156.00	309	⇓P	PKPab	21 18 40.5	-2.2
TIRR	Tirgusor	156.00	309	⇓PKP2	PKPab	21 18 40.5	-2.2
COSR	Cosmesti PH	156.11	313	⇑P	PKPab	21 18 43.9	+0.7
EKA	Eskdalemuir Ar	156.16	8	PKPab	PKPab	21 18 43.5	+0.6
	comp=Z,0.4nm,0.5s,baz=350,slow=3.1,SNR=1.6						
TESR	Tescani	156.21	315	⇓P	PKPab	21 18 43.4	-0.2
PANC	Panciu	156.21	313	⇓P	PKPab	21 18 45.2	+1.6
HARR	Harsova	156.22	310	⇓P	PKPab	21 18 43.5	-0.2
HARR	Harsova	156.22	310	⇓PKP2	PKPab	21 18 43.5	-0.2
BURAR	Bucovina Array	156.46	319	⇑P	PKPdf	21 18 29.4	+13
VRI	Vrincioaia	156.47	314	⇓P	PKPab	21 18 46.1	+1.3
VRI	Vrincioaia	156.47	314	⇓PKP2	PKPab	21 18 46.1	+1.3
PLOR	Plostina	156.52	314	⇓P	PKPab	21 18 45.4	+0.4
PLOR	Plostina	156.52	314	⇓PKP2	PKPab	21 18 45.4	+0.4
KWP	Kalwaria Pacla	156.54	325	ePKP	PKPab	21 18 44.8	-0.1
ICOR	Ion Corvin	156.54	309	⇓P	PKPab	21 18 46.0	+0.9
GRER		156.54	312	⇑P	PKPab	21 18 45.6	+0.6
BISRR	Bisoca	156.63	313	⇓P	PKPab	21 18 47.1	+1.6
TURR	Turia	156.81	315	⇑P	PKPab	21 18 34.6	-12
ISR	Istrita	156.93	312	⇑P	PKPab	21 18 47.1	+0.3
ISR	Istrita	156.93	312	⇑PKP2	PKPab	21 18 47.1	+0.3
OZUR		156.93	315	⇑P	PKPab	21 18 47.8	+1.1
MLR	Muntele Rosu	157.13	313	⇑P	PKPdf	21 18 17.2	+0.2
MLR	Muntele Rosu	157.13	313	⇑PKIKP	PKPdf	21 18 17.2	+0.2
BSEG	Bad Segeberg	157.14	348	ePKPab	PKPab	21 18 46.6	-0.6
	baz=24,slow=4.5						
PRD	Provadia	157.16	307	eP	PKPdf	21 18 17.3	+0.4
KOLS	Kolonicke sedl	157.21	324	ePKP	PKPab	21 18 36.4	-11
KOLS				e		21 18 47.8	
DOPR	Dopca	157.24	315	⇓P	PKPab	21 18 49.2	+1.1
ARCR	ARCALIA	157.24	318	⇓P	PKPab	21 18 48.1	+0.1
HLG	Helgoland	157.27	351	ePKPab	PKPab	21 18 47.3	-0.4
	baz=24,slow=4.5						
SULR		157.31	311	⇓P	PKPab	21 18 49.0	+0.6
BMR	Baia Mare	157.37	321	⇑P	PKPab	21 18 49.6	+1.1
BMR	Baia Mare	157.37	321	⇑PKP2	PKPab	21 18 49.6	+1.1
STHS	Stebnicka Huta	157.38	327	ePKP	PKPdf	21 18 17.8	+0.7
STHS				e		21 18 49.1	
OJC	Ojcow	157.45	330	ePKP	PKPab	21 18 46.6	-2.1
RUE	Ruedersdorf	157.70	341	ePKPab	PKPab	21 18 49.0	-0.7
	baz=24,slow=4.5						
VOIR		157.71	314	⇑P	PKPab	21 18 48.5	-1.7
VOIR		157.71	314	⇑PKP2	PKPab	21 18 48.5	-1.7
MTUR	Matau	157.80	314	⇑P	PKPab	21 18 50.3	-0.3
MTUR	Matau	157.80	314	⇑PKP2	PKPab	21 18 50.3	-0.3
NIE	Niedzica	157.82	328	ePKP	PKPab	21 18 47.7	-2.7
GORT1	Trebel	157.84	345	ePKPab	PKPab	21 18 48.4	-1.8
	baz=24,slow=4.5						
CJR	Cluj-Napoca	157.88	318	⇑P	PKPab	21 18 48.9	-1.9
CJR	Cluj-Napoca	157.88	318	⇑PKP2	PKPab	21 18 48.9	-1.9
JMB	Yambol	158.01	306	eP	PKPdf	21 18 17.7	-0.3
SZH	Strazhitsa	158.09	308	eP	PKPdf	21 18 18.3	+0.2
MARR	Marisel-Cluj	158.17	319	⇓P	PKPab	21 18 51.3	-0.8
HUMR	Humele	158.19	312	⇓P	PKPab	21 18 52.0	-0.2
COPA	Copaceanca	158.22	311	⇑P	PKPab	21 18 41.8	-10
DRGR		158.33	320	⇓P	PKPab	21 18 52.3	-0.5
DRGR		158.33	320	⇓PKP2	PKPab	21 18 52.3	-0.5
KSP	Ksiaz	158.33	335	ePKP	PKPab	21 18 52.3	-0.3
LANS	Liptovska Anna	158.39	328	ePKP2	PKPab	21 18 54.7	+1.8
LANS	Liptovska Anna	158.39	328	ePKP	PKPab	21 18 54.7	+1.8
KECS	Kecovo	158.39	326	ePKP2	PKPab	21 18 53.8	+0.9
KECS	Kecovo	158.39	326	ePKP	PKPab	21 18 53.8	+0.9
OKC	Ostrava-Krasne	158.43	331	AMS	AMS	22 50 50.0	
	comp=Z,600nm,16.9s						
RETH	Rethem/Aller,	158.45	348	ePKPab	PKPab	21 18 52.2	-0.7
	baz=24,slow=4.5						
FLTG	Flechtingen	158.47	345	ePKPab	PKPab	21 18 51.7	-1.3
	baz=24,slow=4.5						
LOT	Lotru	158.47	315	⇑P	PKPab	21 18 53.9	+0.4
STEB	Steborice	158.51	332	ePKPAB	PKPab	21 18 53.3	-0.1
NRDL	Niedersach Rie	158.55	347	ePKPab	PKPab	21 18 51.0	-2.3
	baz=24,slow=4.5						
OSTC	Ostas	158.60	335	AMS	AMS	22 51 10.0	
	comp=Z,700nm,16.4s						
CHVC	Chvalec	158.63	335	ePKPAB	PKPab	21 18 54.5	+0.6
CHVC	Chvalec	158.63	335	ePKP2	PKPab	21 18 54.5	+0.6
UPC	Upice	158.71	335	AMS	AMS	22 54 00.0	
	comp=Z,900nm,17.1s						
MORC	Moravsky Berou	158.73	332	IAMs_20	IAMs_20	22 32 42.2	
	comp=Z,666nm,21.0s						
MORC	Moravsky Berou	158.73	332	ePKP	PKPdf	21 18 18.6	-0.1
MORC				e		21 18 53.4	
MORC	Moravsky Berou	158.73	332	⇑P	PKPdf	21 18 27.6	+8.8
DPC	Dobruska-Polom	158.73	335	ePKPDF	PKPdf	21 18 17.9	-0.8
DPC				ePKPAB	PKPab	21 18 54.7	+0.3
DPC				ex	x	21 19 06.5	
DPC				AMS	AMS	22 53 00.0	
	comp=Z,700nm,16.1s						
DPC	Dobruska-Polom	158.73	335	ePKIKP	PKPdf	21 18 17.9	-0.8
DPC				e		21 18 54.7	
DPC				MLR	MLR		
	comp=Z,700nm,16.1s						
DEV	Deva	158.75	317	⇑P	PKPab	21 18 55.1	+0.6
DEV	Deva	158.75	317	⇑PKP2	PKPab	21 18 55.1	+0.6
ASSE	Asse, Remlinge	158.78	346	ePKPab	PKPab	21 18 53.7	-0.6
	baz=24,slow=4.5						
KRLC	Kraliky	158.78	334	ePKPAB	PKPab	21 18 54.3	-0.3
KRLC				ex	x	21 19 06.7	
KRLC				AMS	AMS	22 45 30.0	
	comp=Z,600nm,16.6s						
KRLC	Kraliky	158.78	334	ePKP2	PKPab	21 18 54.3	-0.3
KRLC				MLR	MLR		
	comp=Z,600nm,16.6s						
VLAD	Vladila	158.80	311	⇓P	PKPab	21 18 55.4	+0.6
CLL	Collm	158.97	341	IAMs_20	IAMs_20	22 44 16.3	
	comp=Z,646nm,20.0s						
CLL	Collm	158.97	341	ePKIKP	PKPdf	21 18 18.0	-0.9
CLL				i		21 18 54.6	
CLL				pmax	pmax		
	comp=Z,18nm,1.8s						
CLL				pmax	pmax		
	comp=Z,110nm,1.7s						
CLL				MLR	MLR		
	comp=Z,800nm,18.1s						
CLL	Collm	158.97	341	ePKPdf	PKPdf	21 18 18.0	-0.9
	comp=Z,18nm,1.8s						
CLL				i PKPab	PKPab	21 18 54.6	-0.7
	comp=Z,110nm,1.7s						
CLL				i pPKPab	sPKPab	21 19 06.8	+1.7
CLL				ex	x	21 21 12.0	
CLL				ePP	PP	21 22 39.0	+3.3
CLL				ex	x	21 24 29.0	
CLL				ePPP	PPP	21 26 18.0	
CLL				ex	x	21 27 27.0	
CLL				ePSKS		21 32 52.0	
CLL				ex	x	21 33 54.0	
CLL				ePPS	PPS	21 35 54.0	
CLL				eSS	SS	21 42 36.0	-1.1
CLL				ex	x	21 43 48.0	
CLL				ex	x	21 47 30.0	
CLL				eSSS	SSS	21 48 24.0	
CLL				ex	x	21 50 45.0	
CLL				ex	x	21 52 27.0	
CLL				eSSSS		21 52 54.0	
CLL				AMS	AMS	22 48 00.0	
	comp=Z,800nm,18.1s						
PSZ	Piszkesteto	159.07	325	⇑P	PKPab	21 18 56.6	+0.6
PSZ	Piszkesteto	159.07	325	⇑PKP2	PKPab	21 18 56.6	+0.6
BRG	Berggiesshubel	159.08	339	ePKPab	PKPab	21 18 54.9	-0.8
	baz=24,slow=4.5						
BRG	Berggiesshubel	159.08	339	⇓ePKPf	PKPdf	21 18 18.5	-0.6
BRG				Amp		21 18 20.1	
	comp=Z,2.7nm,1.1s						
BRG				PKPab	PKPab	21 18 55.8	0.0
BRG				Amp		21 18 57.4	
	comp=Z,62nm,1.3s						
BRG	Berggiesshubel	159.08	339	PP	PP	21 22 36.0	-0.4
IBBN	Ibbenburen	159.12	351	ePKPab	PKPab	21 18 55.1	-0.7
	baz=24,slow=4.5						
VYHS	Vyhne	159.15	328	ePKP	PKPdf	21 18 19.6	+0.4
VYHS				e		21 18 56.2	
RDO	Rodhopi	159.17	303	IAMs_20	IAMs_20	22 36 06.6	
	comp=Z,805nm,19.0s						
PVCC	Panska Ves	159.19	338	AMS	AMS	22 47 20.0	
	comp=Z,700nm,18.6s						
SURR	Surduc	159.27	318	⇑P	PKPab	21 18 56.8	0.0
NEUB	Neuenburg	159.38	343	ePKPab	PKPab	21 18 56.2	-0.9
	baz=24,slow=4.5						
JAVC	Velka Javorina	159.39	330	ePKP	PKPdf	21 18 19.9	+0.3
JAVC				e		21 18 56.9	
VRAC	Vranov	159.47	333	ePKP	PKPdf	21 18 18.9	-0.7
VRAC				e		21 18 56.9	
VRAC	Vranov	159.47	333	⇑P	PKPab	21 18 58.1	+0.5
VRAC	Vranov	159.47	333	⇑PKP2	PKPab	21 18 58.1	+0.5
GTTG	Gottingen	159.48	346	ePKPab	PKPab	21 18 56.7	-0.7
	baz=24,slow=4.5						
MPEP	Malo Peshtene	159.53	310	eP	PKPdf	21 18 19.8	0.0
RZN	Rozhen	159.54	305	eP	PKPdf	21 18 19.6	-0.5
HERR	Herculane	159.59	315	⇓P	PKPab	21 18 55.4	-2.8
PRA	Prague	159.62	337	ePKPDF	PKPdf	21 18 20.1	+0.4
PRA				AMS	AMS	22 38 20.0	
	comp=Z,800nm,18.9s						
PRA	Prague	159.62	337	ePKIKP	PKPdf	21 18 20.1	+0.4
PRA				MLR	MLR		
	comp=Z,800nm,18.9s						
BZS	Buzias	159.64	318	⇓P	PKPdf	21 18 20.0	+0.1
BZS	Buzias	159.64	318	⇓PKIKP	PKPdf	21 18 20.0	+0.1
GOPC	GO Pecny, Ondr	159.64	336	AMS	AMS	22 37 20.0	
	comp=Z,600nm,19.8s						
PRU	Pruhonice	159.66	337	ePKPDF	PKPdf	21 18 17.3	-2.4
PRU				ePKPAB	PKPab	21 18 58.7	+0.4
PRU				AMS	AMS	22 38 30.0	
	comp=Z,600nm,19.2s						
PRU	Pruhonice	159.66	337	ePKIKP	PKPdf	21 18 17.3	-2.4
PRU				MLR	MLR		
	comp=Z,600nm,19.2s						
KRUC	Moravsky	159.75	332	ePKP	PKPdf	21 18 19.0	-0.9
KRUC				e		21 18 57.9	
TREC	Trest	159.91	334	AMS	AMS	22 44 40.0	
	comp=Z,900nm,18.6s						
TANN	Tannenbergstha	159.92	341	ePKPab	PKPab	21 18 59.0	-0.5
	baz=24,slow=4.5						
MODS	Modra-Piesok	159.93	330	ePKP	PKPdf	21 18 20.5	+0.4
MODS				e		21 18 44.3	
MODS				e		21 18 59.6	
MOX	Moxa	159.94	343	ePKPab	PKPab	21 18 58.7	-0.8
	baz=24,slow=4.5						
MOX				eL	L	22 51 37.1	
	comp=Z,912nm,18.0s						
BUG	Bochum--Univer	160.04	351	ePKPab	PKPab	21 18 58.8	-1.0
	baz=24,slow=4.5						
MDVR	Moldovita	160.06	316	⇑P	PKPab	21 19 00.7	+0.3
KASTN	Kahler Asten	160.09	349	ePKPab	PKPab	21 18 59.2	-0.9
	baz=24,slow=4.5						
UBBA	Unterbreizbach	160.16	346	ePKPab	PKPab	21 18 59.5	-0.8
	baz=24,slow=4.5						
VTS	Vitosha	160.19	309	eP	PKPdf	21 18 20.7	-0.1
ZVC	Zvikov	160.25	337	ePKPDF	PKPdf	21 18 15.7	-4.7
ZVC				AMS	AMS	22 47 40.0	
	comp=Z,600nm,17.4s						
MMB	Musomishta	160.28	306	eP	PKPdf	21 18 20.0	-0.8
MANZ	Manzenberg	160.41	341	ePKPab	PKPab	21 19 01.1	-0.5
	baz=24,slow=4.5						
ROTZ	Rotzenmuhle	160.58	340	ePKPab	PKPab	21 19 02.2	-0.1
	baz=24,slow=4.5						
KKB	Krupnik	160.59	307	eP	PKPdf	21 18 20.6	-0.5
BOVS	Bovan	160.68	313	⇑P	PKPdf	21 18 21.5	+0.4
KHC	Kasperske Hory	160.72	337	ePKPDF	PKPdf	21 18 19.3	-1.7
KHC				ePKPAB	PKPab	21 19 03.0	0.0
KHC				ex	x	21 19 15.9	
KHC				AMS	AMS	22 39 30.0	
	comp=Z,1µm,18.9s						
KHC	Kasperske Hory	160.72	337	ePKIKP	PKPdf	21 18 19.3	-1.7
KHC				e		21 19 03.0	
KHC				MLR	MLR		
	comp=Z,1µm,18.9s						
CKRC	Cesky Krumlov	160.73	335	ePKPAB	PKPab	21 19 03.2	+0.1
CKRC				AMS	AMS	22 38 50.0	
	comp=Z,800nm,17.9s						
CKRC	Cesky Krumlov	160.73	335	ePKP2	PKPab	21 19 03.2	+0.1
CKRC				MLR	MLR		
	comp=Z,800nm,17.9s						
BEBN	Eben Emael	160.85	353	dPKP	PKPab	21 19 03.0	-0.4
MORH	Mrgy, Hungar	160.86	323	⇓P	PKPdf	21 18 21.1	-0.1
RONA	Rosalia, Austr	160.87	330	i PKP	PKPab	21 19 04.0	+0.2
	comp=Z,57nm,1.3s,SNR=7.5						
CONA	Conrad Observa	160.87	331	i PKP	PKPab	21 19 04.1	+0.3
	comp=Z,50nm,1.6s,SNR=8.4						
GRF	Grafenberg Arr	160.92	342	ePKPab	PKPab	21 19 03.6	-0.2
	baz=24,slow=4.5						
GRF				eL	L	22 39 00.7	
	comp=Z,808nm,18.3s						
GRFO	Grafenberg	160.92	342		PKPab	21 19 03.7	-0.1
GRFO	Grafenberg	160.92	342	PKP2	PKPab	21 19 03.7	-0.1
GEC2	GERESS Array S	160.92	336	ePKPab	PKPab	21 19 03.2	-0.8
	baz=24,slow=4.5						
WET	Wettzell	160.93	338	ePKPab	PKPab	21 19 03.6	-0.3
	baz=24,slow=4.5						
UCC	Uccle	160.96	356	dPKPdf	PKPdf	21 18 22.1	+1.0
UCC				dPKP	PKPab	21 19 04.1	+0.2
MEM	Membach	161.01	353	dPKP	PKPab	21 19 03.5	-0.6
BTNL	Ternell	161.01	352	dPKPdf	PKPdf	21 18 21.1	-0.1
BTNL				dPKP	PKPab	21 19 03.0	-1.2
BTNL				dpPKP	sPKPab	21 19 14.4	+0.3
TNS	Taunus Mts	161.03	348	ePKPab	PKPab	21 19 03.4	-1.0
	baz=24,slow=4.5						
BSTI	Sart Tilman	161.08	354	dPKP	PKPab	21 19 04.6	+0.2
VAY	Valandovo	161.19	306	i P	PKPab	21 19 04.4	-1.0
BCLA	Clavier	161.26	354	dPKP	PKPab	21 19 05.6	+0.4
BMRD	Maredsous	161.42	355	dPKP	PKPab	21 19 05.4	-0.6
TORD	Torodi Ar. Bea	161.43	178	PKP	PKPdf	21 18 23.1	+0.3
	comp=Z,87nm,0.3s,baz=19,slow=1.3,SNR=1.2						
TORD				PKPab	PKPab	21 19 07.6	+0.8
	comp=Z,90nm,0.3s,baz=170,slow=2.3,SNR=1.2						
ARSA	Arzberg	161.54	331	i PKP	PKPab	21 19 06.5	-0.2
	comp=Z,29nm,1.5s						
MOA	Molln	161.56	334	i PKP	PKPab	21 19 07.3	+0.5
	comp=Z,46nm,1.5s,SNR=8.2						
DOU	Dourbes	161.64	355	dPKPdf	PKPdf	21 18 22.9	+1.0
DOU				dPKP	PKPab	21 19 06.9	0.0
WLF	Walferdange	161.92	352	dPKPdf	PKPdf	21 18 24.5	+2.3
WLF				dPKP	PKPab	21 19 07.1	-1.0
WLF	Walferdange	161.92	352	ePKPab	PKPab	21 19 07.8	-0.3
	baz=24,slow=4.5						
BIOA	Bad Ischl, Aus	161.92	335	i PKP	PKPab	21 19 08.8	+0.5
	comp=Z,58nm,1.5s,SNR=9.7						
RJOB	Jochberg	162.18	336	ePKPab	PKPab	21 19 09.3	-0.2
	baz=24,slow=4.5						
SOKA	Soboth	162.20	330	i PKP	PKPab	21 19 09.6	-0.1
	comp=Z,38nm,1.4s						
STU	Stuttgart	162.26	345	ePKPab	PKPab	21 19 08.7	-1.0
	baz=24,slow=4.5						
FUR	Furstenfeldbru	162.29	340	ePKPab	PKPab	21 19 09.5	-0.4
	baz=24,slow=4.5						
LESA	Schwarzleotal	162.49	336	i PKP	PKPab	21 19 11.6	+0.7
	comp=Z,45nm,1.6s						
OBKA	Obir	162.54	331	i PKP	PKPab	21 19 10.5	-0.7
	comp=Z,9.8nm,1.1s						
MYKA	Terra Mystica	162.81	333	i PKP	PKPab	21 19 11.4	-0.8
	comp=Z,30nm,1.4s						
PDG	Podgorica	162.84	313	⇑P	PKPab	21 19 12.6	+0.1
BFO	Black Forest	162.87	346		PKPab	21 19 11.8	-0.6
BFO	Black Forest	162.87	346	PKP2	PKPab	21 19 11.8	-0.6
BFO	Black Forest	162.87	346	ePKPab	PKPab	21 19 11.3	-1.1
	baz=24,slow=4.5						
WATA	Walderalm	162.94	338	i PKP	PKPab	21 19 12.8	-0.1
	comp=Z,46nm,1.4s,SNR=8.7						
WTTA	Wattenberg	162.98	338	i PKP	PKPab	21 19 13.7	+0.5
	comp=Z,47nm,1.7s						
RETA	Reutte	163.05	340	i PKP	PKPab	21 19 13.6	+0.4
	comp=Z,50nm,1.3s,SNR=12						
UBR	Ueberruh	163.06	342	ePKPab	PKPab	21 19 12.6	-0.7
	baz=24,slow=4.5						
MOTA	Moosalm	163.08	339	i PKP	PKPab	21 19 13.7	+0.2
	comp=Z,58nm,1.2s,SNR=10						
ABTA	Abfaltersbach	163.13	335	i PKP	PKPab	21 19 13.2	-0.5
	comp=Z,34nm,1.3s,SNR=5.4						
SQTA	Sankt Quirin	163.15	339	i PKP	PKPab	21 19 14.0	+0.2
	comp=Z,41nm,1.2s,SNR=7.4						
DAVA	Damuels	163.48	342	i PKP	PKPab	21 19 15.3	0.0
	comp=Z,46nm,1.4s,SNR=7.4						
FETA	Feichten	163.48	339	i PKP	PKPab	21 19 15.7	+0.4
	comp=Z,39nm,1.2s,SNR=5.4						
PMOZ	Porto Moniz, M	163.48	81	i AMs_20		22 33 44.3	
	comp=Z,802nm,18.0s						
PGAV	Gavieira, Arco	166.80	37	ePKPdf	PKPdf	21 18 30.3	+3.3
PGAV				eLQ	LQ	22 22 41.7	
PGAV				eLR	LR	22 23 58.3	
PGAV				i AMs_20		22 36 23.8	
	comp=Z,1µm,18.0s						
CEL	Celeste	167.14	304		PKPab	21 19 30.0	-1.7
POLO	Lamas de Olo	167.47	37	ePKPdf	PKPdf	21 18 30.6	+3.1
PVRL	Vila Real	167.59	38	ePKPdf	PKPdf	21 18 31.9	+4.5
PVIS	Viseu	167.89	40	ePKPdf	PKPdf	21 18 30.4	+2.6
COI	Coimbra	167.94	43	ePKPdf	PKPdf	21 18 29.0	+1.3
COI	Coimbra	167.94	43	PKIKP	PKPdf	21 18 32.4	+4.7
PCAS	Casmilo, Conde	167.99	44	ePKPdf	PKPdf	21 18 29.5	+1.8
MVO	Moncorvo	168.02	36	ePKPdf	PKPdf	21 18 30.0	+2.2
MVO				eLR	LR	22 24 16.1	
MVO				eLQ	LQ	22 24 56.0	
MVO				i AMs_20		22 44 17.2	
	comp=Z,1µm,18.0s						
PSBE	So Bento	168.15	46	ePKPdf	PKPdf	21 18 26.1	-1.8
MTE	Manteigas	168.30	40	ePKPdf	PKPdf	21 18 29.5	+1.5
MTE				eLQ	LQ	22 21 41.8	
MTE				eLR	LR	22 23 11.0	
MTE				i AMs_20		22 35 44.5	
	comp=Z,1µm,18.0s						
PSARD	Sardoal	168.48	45	ePKPdf	PKPdf	21 18 31.3	+3.2
PCBR	Castelo Branco	168.72	42	ePKPdf	PKPdf	21 18 30.3	+2.1
PMTG	Montargil	168.77	47	ePKPdf	PKPdf	21 18 29.8	+1.6
PMRV	Marv??o	169.04	43	ePKPdf	PKPdf	21 18 30.2	+1.8
PMRV				eLR	LR	22 25 32.4	
PMRV				i AMs_20		22 44 13.7	
	comp=Z,922nm,18.0s						
EVO	Evora	169.22	49	ePKPdf	PKPdf	21 18 30.7	+2.1
PTEO	Sao Teotonio	169.27	55	ePKPdf	PKPdf	21 18 32.3	+3.7
PESTR	Estremoz	169.28	46	ePKPdf	PKPdf	21 18 31.3	+2.6
PFVI	Vila Bisbo	169.39	57	ePKPdf	PKPdf	21 18 32.1	+3.4
MORF	Marmelete	169.43	56	ePKPdf	PKPdf	21 18 29.6	+0.7
MORF				IAMs_20	IAMs_20	22 40 37.8	
	comp=Z,1µm,20.5s						
MORF	Marmelete	169.43	56	ePKIKP	PKPdf	21 18 29.5	+0.7
MESJ	Messejana	169.46	52	ePKPdf	PKPdf	21 18 29.5	+0.8
MESJ				IAMs_20	IAMs_20	22 36 21.6	
	comp=Z,1µm,14.8s						
MESJ	Messejana	169.46	52	ePKPdf	PKPdf	21 18 33.9	+5.2
MESJ	Messejana	169.46	52	ePKIKP	PKPdf	21 18 29.5	+0.8
PCVE	Castro Verde	169.69	53	ePKPdf	PKPdf	21 18 31.9	+2.9
PVAQ	Vaqueiros	170.03	53	ePKPdf	PKPdf	21 18 34.0	+4.9
PVAQ				eLR	LR	22 30 44.9	
PVAQ				i AMs_20		22 37 39.5	
	comp=Z,1µm,18.0s						
PBAR	Barrancos	170.05	48	ePKPdf	PKPdf	21 18 32.3	+3.2
PAB	San Pablo	170.57	33	⇑PKIKP	PKPdf	21 18 31.7	+2.2
ESDC	Sonseca Array	170.64	31	PKP	PKPdf	21 18 30.3	+0.9
	comp=Z,8.8nm,1.4s,baz=334,slow=3.8,SNR=11						
ESDC				PKPab	PKPab	21 19 47.1	+0.1
	comp=Z,1.7nm,1.0s,baz=332,slow=4.0,SNR=1.8						
ESDC				PP	PP	21 23 38.3	+1.3
	comp=Z,2.6nm,1.2s,baz=352,slow=5.3,SNR=4.9						

IDC 16 21:08:13.3±2.3, 30°.38S×178°.42W, h0^{km}, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=65.9km s-min=44.3km az=45.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.75	267	P	P	21 16 13.0	+0.3
	0.8nm,1.1s,baz=109,slow=8.4,SNR=2.3						
	0.8nm,1.1s						
WRA	Warramunga Arr	43.74	272	P	P	21 16 20.4	-0.2
	0.2nm,0.5s,baz=114,slow=8.2,SNR=1.9						
	0.2nm,0.5s						
QSPA	South Pole Qui	59.73	180	P	P	21 18 19.8	+0.1
	1.5nm,0.9s,baz=63,slow=2.3,SNR=2.2						
	1.5nm,0.9s						
FINES	FINESS Array B	145.00	340	PKPbc	PKPbc	21 27 49.8	-1.3
	1.2nm,0.8s,baz=29,slow=4.4,SNR=4.2						

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*IDC **16** 21:11:53.7±1.5, 31°.69S×177°.83W, h0^{km}, mb3.9/4, mbtmp3.9/5, ML3.3/1, Error ellipse: s-maj=38.4km s-min=34.2km az=64.0*

*NEIC **16** 21:11:54.1±1.7, 31°.59S±0°.04×177°.7W±0°.2, h10^{km}±2^{km}, mb4.4/10, Error ellipse: s-maj=33.9km s-min=6.6km az=82.0*

ISC 16 21:11:58.0±1.2, 31°.8S±0°.1×178°.0W±0°.2, h24^{km}, n24, σ0^{s}.78/24, mb4.1/10, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.57	2	Pn	Pn	21 12 33.1	-4.9
URZ	Urewera	7.55	210	Pn	Pn	21 13 46.3	-0.2
	0.4nm,0.3s,baz=105,slow=11,SNR=1.8						
URZ				Sn	Sn	21 15 10.8	-0.6
	2.3nm,0.3s,baz=238,slow=23,SNR=6.3						
	7.4nm,0.8s						
RTZ	Ruatahuna	7.91	210	Pn	Pn	21 13 52.0	+0.5
BKZ	Black Stump Fm	8.57	210	Pn	Pn	21 14 01.3	+0.7
MSWZ	Moikau Station	10.98	207	Pn	Pn	21 14 33.3	-0.3
MRNZ	Matariki Terra	12.08	215	Pn	Pn	21 14 49.4	+0.9
STKA	Stephens Creek	34.15	259	P	P	21 18 43.5	+2.3
	1.2nm,0.7s,baz=128,slow=12,SNR=3.3						
	1.2nm,0.7s						
BBOO	Buckleboo	38.57	256	P	P	21 19 18.4	-0.5
ASAR	Alice Springs	43.02	268	P	P	21 19 55.3	-0.5
ASAR	Alice Springs	43.02	268	P	P	21 19 56.2	+0.4
	1.9nm,0.9s,baz=109,slow=7.8,SNR=12						
	1.9nm,0.9s						
WR8	Warramunga Arr	44.00	274	P	P	21 20 02.5	-1.1
WR8				IAmb	IAmb	21 20 08.8	
	comp=Z,4.0nm,1.1s						
WRA	Warramunga Arr	44.14	274	P	P	21 20 04.7	-0.1
WRA	Warramunga Arr	44.14	274	P	P	21 20 05.3	+0.5
	comp=Z,1.3nm,0.6s,baz=113,slow=7.9,SNR=11						
	comp=Z,1.3nm,0.6s						
WB0	Warramunga Arr	44.17	274	P	P	21 20 05.2	+0.1
WB0				IAmb	IAmb	21 20 07.4	
	comp=Z,7.3nm,1.2s						
SBA	Scott Base	46.62	184	P	P	21 20 23.1	-0.5
SBA				IAmb	IAmb	21 20 32.8	
	comp=Z,3.7nm,0.9s						
KNRA	Kununurra	50.80	275	P	P	21 20 56.4	-0.3
KNRA				IAmb	IAmb	21 21 01.0	
	comp=Z,9.4nm,1.2s						
FITZ	Fitzroy Crossi	52.34	271	P	P	21 21 07.5	-0.7
CASY	Casey	53.87	208	P	P	21 21 18.9	+0.2
CASY				IAmb	IAmb	21 21 25.6	
	comp=Z,6.4nm,1.2s						
PSA00	Pilbara Seismi	55.78	264	P	P	21 21 31.8	-1.5
PSA00				IAmb	IAmb	21 21 38.3	
	comp=Z,2.7nm,1.3s						
QSPA	South Pole Qui	58.29	180	P	P	21 21 51.0	+0.5
QSPA	South Pole Qui	58.29	180	P	P	21 21 51.0	+0.5
	comp=Z,1.3nm,0.8s,baz=25,slow=4.6,SNR=5.8						
	comp=Z,1.3nm,0.8s						
KBZ	Khabaz	145.86	302	PKPbc	PKPdf	21 31 34.6	+0.3
	comp=Z,1.1nm,0.6s,baz=174,slow=4.5,SNR=2.6						
FINES	FINESS Array B	146.47	339	PKPbc	PKPdf	21 31 34.6	-0.3
	comp=Z,1.0nm,0.4s,baz=52,slow=3.8,SNR=22						
MMAI	Mount Meron Ar	151.81	281	PKPbc	PKPbc	21 31 51.3	+0.4
	comp=Z,0.5nm,0.4s,baz=108,slow=4.7,SNR=4.8						

*IDC **16** 21:12:45.4±1.2, 31°.73S×177°.78W, h0^{km}, mb4.2/4, mbtmp4.2/5, ML3.5/1, Error ellipse: s-maj=45.8km s-min=31.0km az=141.0*

*NEIC **16** 21:12:47.5±1.4, 31°.76S±0°.10×177°.9W±0°.2, h10^{km}±1^{km}, mb4.6/17, Error ellipse: s-maj=27.0km s-min=16.7km az=88.0*

ISC 16 21:12:49.2±0.6, **31°.84S**±0°.08×**177°.9W**±0°.1, **h24**^{km}, **n34**, σ**0^{s}.77**/34, **mb4.5**/13, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.58	360	Pn	Pn	21 13 27.9	-1.6
URZ	Urewera	7.59	211	Pn	Pn	21 14 38.2	-0.1
	0.8nm,0.3s,baz=54,slow=18,SNR=1.2						
URZ				Sn	Sn	21 16 02.8	-0.7
	5.0nm,0.3s,baz=273,slow=19,SNR=7.8						
	5.1nm,0.5s						
RTZ	Ruatahuna	7.94	210	Pn	Pn	21 14 42.8	-0.3
CTZ	Chatham Island	11.92	175	Pn	Pn	21 15 35.8	-1.7
DZM	Mont Dzumac	16.99	301	P	Pn	21 16 44.2	-1.1
STKA	Stephens Creek	34.25	259	P	P	21 19 35.0	+1.8
	1.0nm,0.5s,baz=107,slow=14,SNR=3.0						
	1.0nm,0.5s						
BBOO	Buckleboo	38.67	256	P	P	21 20 09.7	-1.3
BBOO				IAmb	IAmb	21 20 09.9	
	comp=Z,18nm,1.4s						
AS31	Alice Springs	43.12	268	P	P	21 20 48.4	+0.5
ASAR	Alice Springs	43.12	268	P	P	21 20 48.1	+0.3
	comp=Z,1.1nm,0.5s,baz=113,slow=8.6,SNR=5.8						
	comp=Z,1.1nm,0.5s						
WR0	Warramunga Arr	44.06	274	P	P	21 20 55.9	+0.5
WR0				IAmb	IAmb	21 21 01.3	
	comp=Z,12nm,1.4s						
WR8	Warramunga Arr	44.10	274		P	21 20 56.3	+0.5
WR8				IAmb	IAmb	21 21 02.1	
	comp=Z,5.1nm,0.9s						
WB2	Warramunga Arr	44.23	274	P	P	21 20 57.0	+0.2
WB2				IAmb	IAmb	21 20 58.1	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	44.24	274		P	21 20 56.6	-0.3
WRA	Warramunga Arr	44.24	274	P	P	21 20 57.3	+0.4
	comp=Z,2.2nm,0.4s,baz=114,slow=7.8,SNR=9.5						
	comp=Z,2.2nm,0.4s						
WB0	Warramunga Arr	44.27	274	P	P	21 20 56.9	-0.2
WB0				IAmb	IAmb	21 20 58.8	
	comp=Z,10nm,1.2s						
KNRA	Kununurra	50.90	275	P	P	21 21 48.0	-0.6
KNRA				IAmb	IAmb	21 21 54.3	
	comp=Z,10nm,1.4s						
FITZ	Fitzroy Crossi	52.44	271	P	P	21 22 00.1	0.0
CASY	Casey	53.91	208	P	P	21 22 10.4	+0.2
CASY				IAmb	IAmb	21 22 19.6	
	comp=Z,3.5nm,1.4s						
NWAO	Narrogin (SRO)	53.97	250	P	P	21 22 11.5	+0.2
PMSA	Palmer Station	70.92	156	P	P	21 24 04.3	+0.4
PEA0B	Petropavlovsk-	87.22	346	P	P	21 25 33.3	+0.3
PETK	Petropavlovsk-	87.22	346	P	P	21 25 32.6	-0.5
	comp=Z,4.5nm,0.9s,baz=148,slow=5.3,SNR=3.6						
	comp=Z,4.5nm,0.9s						
F03A	Seaside	91.71	35	P	P	21 25 55.2	+0.9
GLB	Gilahina Butte	97.00	16	P	P	21 26 19.1	+0.8
GLB				IAmb	IAmb	21 26 24.4	
	comp=Z,7.5nm,1.4s						
M24K	Tolsona, Glenn	97.06	14	P	Pdif	21 26 19.4	+0.8
M24K				IAmb	IAmb	21 26 22.5	
	comp=Z,5.8nm,0.9s						
P57A	Homestead Farm	116.47	58	PKPdf	PKiKP	21 31 31.4	+0.6
KBZ	Khabaz	145.96	302	PKPbc	PKPbc	21 32 26.6	0.0
	comp=Z,1.9nm,0.8s,baz=109,slow=3.0,SNR=3.6						
KARS	Kars	146.04	297	PKPdf	PKPdf	21 32 26.3	0.0
FINES	FINESS Array B	146.52	339	PKPbc	PKPdf	21 32 26.7	+0.6
	comp=Z,1.6nm,0.6s,baz=45,slow=4.3,SNR=8.8						
HFS	Hagfors	150.67	348	PKPbc	PKPbc	21 32 37.5	-1.0
	comp=Z,0.5nm,0.5s,baz=94,slow=5.9,SNR=4.4						
MMAI	Mount Meron Ar	151.92	281	PKPbc	PKiKP	21 32 43.5	+0.8
	comp=Z,1.4nm,0.5s,baz=87,slow=5.5,SNR=5.9						
AKASG	Malin Array Be	152.48	321	PKPbc	PKPbc	21 32 42.9	0.0
	comp=Z,0.4nm,0.5s,baz=46,slow=3.8,SNR=4.2						
BRTR	Keskin Array B	153.32	296	PKPbc	PKiKP	21 32 45.6	+0.1
	comp=Z,0.3nm,0.4s,baz=111,slow=3.6,SNR=2.7						
TORD	Torodi Ar. Bea	161.39	179	PKPab	PKPab	21 33 32.9	+0.5
	comp=Z,106nm,0.4s,baz=174,slow=3.4,SNR=1.2						

IDC 16 21:27:31.1±6.8, **31°.71S**×**177°.65W**, **h0**^{km}, **mb3.4**/2, **mbtmp3.4**/2, **Error ellipse: s-maj=293.6km s-min=63.2km az=158.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.82	212	Sn	Sn	21 30 48.4	-7.0
	1.3nm,0.3s,baz=72,slow=20,SNR=7.7						
ASAR	Alice Springs	43.35	268	P	P	21 35 35.8	+0.5
	0.2nm,0.6s,baz=113,slow=8.1,SNR=4.2						
	0.2nm,0.6s						
WRA	Warramunga Arr	44.46	273	P	P	21 35 43.5	-0.6
	0.4nm,0.4s,baz=115,slow=7.8,SNR=6.7						
	0.4nm,0.4s						
FINES	FINESS Array B	146.47	340	PKPbc	PKPdf	21 47 12.6	+0.5
	1.2nm,0.9s,baz=38,slow=2.5,SNR=3.5						

GCG 16 21:31:48.1±0.6, **14°.34N**×**91°.41W**, **h77**^{km}±17^{km}, **MD3.8, ML2.9, MW2.7, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG0	El Palmar, Qui	0.11	34	*i* P	Pn	21 32 01.5	+2.0
STG8	El Palmar, Qui	0.12	25	*i* P	Pn	21 32 02.0	+2.4
STG8				IAML		21 32 13.6	
	comp=N,811nm,0.1s						
STG8				IAML		21 32 13.8	
	comp=Z,398nm,0.1s						
ESSG	Sabana Grande	0.56	85	*i* P	Pn	21 32 02.8	+0.6
ESSG				IAML		21 32 14.3	
	comp=N,407nm,0.1s						
ESSG				IAML		21 32 18.0	
	comp=Z,158nm,1.5s						
FG8	Yepocapa, Chim	0.82	95	*i* P	Pn	21 32 01.9	-3.1
SMCA	Catarina	0.83	309	*i* P	Pn	21 32 05.0	0.0
SMCA				IAML		21 32 41.9	
	comp=Z,155nm,1.1s						
FG16	Alotenango, Sa	0.87	94	*i* P	Pn	21 32 02.8	-2.8
FG16				IAML		21 32 16.9	
	comp=E,2µm,0.2s						
FG16				IAML		21 32 17.8	
	comp=Z,474nm,0.1s						

IDC 16 21:45:11.7±3.3, **15°.44S**×**66°.86E**, **h0**^{km}, **mb3.7**/3, **mbtmp3.7**/3, **MS4.2**/2, **Error ellipse: s-maj=112.9km s-min=45.7km az=55.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	9.50	36	T	T	21 56 53.3	
	baz=214,slow=75,SNR=118						
H08S2	Diego Garcia H	9.51	36	T	T	21 56 50.2	
	baz=214,slow=75,SNR=123						
H08S3	Diego Garcia H	9.52	36	T	T	21 56 52.4	
	baz=214,slow=75,SNR=127						
H04N2	CROZET ISLANDS	33.13	199	T	T	22 27 07.1	
	baz=28,slow=75,SNR=21						
H04N1	CROZET ISLANDS	33.13	199	T	T	22 27 06.7	
	baz=28,slow=75,SNR=25						
H04N3	CROZET ISLANDS	33.15	199	T	T	22 27 05.6	
	baz=28,slow=75,SNR=25						
MATP	Matopo	36.78	256	LR	LR	22 06 54.0	
	comp=Z,497nm,18.1s,baz=142,slow=35						
LEM	Lembang	40.83	83	LR	LR	22 08 07.5	
	comp=Z,184nm,19.5s,baz=168,slow=34						
H01W3	Cape Leeuwin H	46.48	124	T	T	22 43 08.0	
	baz=282,slow=75,SNR=8.2						
H01W2	Cape Leeuwin H	46.48	124	T	T	22 43 08.0	
	baz=282,slow=75,SNR=12						
H01W1	Cape Leeuwin H	46.50	124	T	T	22 43 09.2	
	baz=282,slow=75,SNR=9.0						
WRA	Warramunga Arr	64.07	105	P	P	21 55 48.0	0.0
	1.0nm,0.9s,baz=257,slow=6.2,SNR=4.8						
	1.0nm,0.9s						
KURBB	Kurchatov Arra	66.57	8	P	P	21 56 03.3	-0.1
	0.4nm,0.7s,baz=211,slow=6.5,SNR=2.4						
	0.4nm,0.7s						
SONM	Songino Array	72.20	27	P	P	21 56 38.6	0.0
	0.9nm,0.8s,baz=224,slow=5.8,SNR=5.6						
	0.9nm,0.8s						
PDAR	Pinedale Array	152.59	354	PKPbc	PKiKP	22 05 10.8	-0.1
	0.2nm,0.5s,baz=42,slow=2.1,SNR=3.9						

IDC 16 21:53:01.7±3.6, **9°.62S**×**112°.52E**, **h0**^{km}, **mb3.3**/4, **mbtmp3.3**/4, **Error ellipse: s-maj=177.7km s-min=24.7km az=50.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.43	118	P	P	21 58 12.7	-0.2
	0.3nm,0.7s,baz=292,slow=9.6,SNR=1.5						
	0.3nm,0.7s						
ASAR	Alice Springs	24.75	127	P	P	21 58 25.4	+0.1
	0.5nm,0.7s,baz=297,slow=9.1,SNR=5.1						
	0.5nm,0.7s						
SONM	Songino Array	57.45	355	P	P	22 02 52.2	-0.4
	0.2nm,0.3s,baz=178,slow=8.7,SNR=2.2						
	0.2nm,0.3s						
MKAR	Makanchi Array	62.30	337	P	P	22 03 25.9	+0.1
	0.3nm,0.4s,baz=150,slow=7.1,SNR=9.1						
	0.3nm,0.4s						

*IDC **16** 21:55:59.7±0.9, 30°.35S×177°.96W, h0^{km}, mb4.3/7, mbtmp4.3/7, MS3.7/3, Error ellipse: s-maj=29.4km s-min=24.5km az=51.0*

*NEIC **16** 21:56:05.8±1.3, 30°.64S±0°.10×178°.0W±0°.2, h35^{km}±2^{km}, mb5.0/21, Error ellipse: s-maj=25.9km s-min=16.3km az=92.0*

ISC 16 21:56:06.4±0.5, **30°.69S**±0°.06×**178°.1W**±0°.1, **h46**^{km}, **n75**, σ**2^{s}.18**/86, **mb4.8**/16, **1D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.42	5	P	Pn	21 56 28.3	-1.4
GLKZ				S	Sn	21 56 43.6	-3.7
RAO	Raoul Island	1.43	5		Pn	21 56 28.6	-1.3
RIZ	Raoul Island	1.44	4	P	Pn	21 56 28.9	-1.1
RIZ				S	Sn	21 56 44.9	-2.8
MXZ	Matakaoa Point	7.49	203	Pn	Pn	21 57 50.8	-2.2
MXZ	Matakaoa Point	7.49	203	P	Pn	21 57 50.4	-2.6
MXZ				S	Sn	21 59 12.8	-3.8
WMGZ	Waiomatatini S	7.69	201	P	Pn	21 57 53.1	-2.7
WMGZ				S	Sn	21 59 19.5	-2.1
PKGZ	Pakihiroa	7.84	203	P	Pn	21 57 54.2	-3.7
PKGZ				S	Sn	21 59 24.2	-1.1
HAZ	Te Kaha	7.85	205	P	Pn	21 57 55.2	-2.8
HAZ				S	Sn	21 59 27.4	+2.0
PUZ	Puketiti	7.97	201	P	Pn	21 57 55.9	-3.8
PUZ				S	Sn	21 59 24.5	-4.0
RUGZ	Raukumara Rang	8.07	205	P	Pn	21 57 57.2	-3.9
RUGZ				S	Sn	21 59 30.4	-0.7
TWGZ	Tauwhareparae	8.16	203	S	Sn	21 59 32.8	-0.2
WCZ	Waipu Caves	8.24	229	P	Pn	21 58 09.8	+6.5
OUZ	Omahuta	8.35	235	P	Pn	21 58 10.6	+5.9
CNGZ	Carnagh Statio	8.37	201	P	Pn	21 58 01.9	-3.1
CNGZ				S	Sn	21 59 37.4	-0.7
TKGZ	Te Karaka	8.44	202	P	Pn	21 57 59.5	-6.5
TKGZ				S	Sn	21 59 38.9	-1.0
MWZ	Matawai	8.46	204	P	Pn	21 58 02.3	-3.9
MWZ				S	Sn	21 59 37.7	-2.7
URZ	Urewera	8.54	207	Pn	Pn	21 58 03.8	-3.7
	0.5nm,0.3s,baz=358,slow=5.8,SNR=7.0						
URZ				Sn	Sn	21 59 39.7	-2.7
	6.1nm,0.3s,baz=307,slow=20,SNR=20						
URZ				LR	LR	22 01 18.0	
	comp=Z,262nm,18.1s,baz=79,slow=36						
URZ	Urewera	8.54	207	P	Pn	21 58 03.7	-3.7
URZ				S	Sn	21 59 39.7	-2.7
RAGZ	Rawiri	8.64	204	S	Sn	21 59 44.0	-0.9
RIGZ	Rimuhau	8.71	202	S	Sn	21 59 43.8	-2.9
MUGZ	Murupara	8.87	207	S	Sn	21 59 49.0	-1.3
PRGZ	Paritu Road	8.87	201	S	Sn	21 59 46.7	-3.8
RTZ	Ruatahuna	8.90	206	Pn	Pn	21 58 10.9	-1.5
SNGZ	Shannon Statio	8.92	204	P	Pn	21 58 09.3	-3.3
SNGZ				S	Sn	21 59 48.3	-3.5
MHGZ	Mahia Peninsul	9.07	200	S	Sn	21 59 50.4	-5.1
RAHZ	Arahi	9.13	205	P	Pn	21 58 11.0	-4.5
RAHZ				S	Sn	21 59 54.1	-2.8
MRZ	Mangatainoka R	11.22	206	Pn	Pn	21 58 41.6	-2.4
MSWZ	Moikau Station	12.00	205	Pn	Pn	21 58 51.2	-3.5
GVZ	Greta Valley S	14.17	208	Pn	Pn	21 59 24.1	-0.2
WHZ	Wether Hill Ro	18.70	212	P	Pn	22 00 21.3	-0.2
WHZ				IAmb	IAmb	22 00 31.6	
	comp=Z,106nm,1.7s						
RAR	Rarotonga	18.93	64	LR	LR	22 05 57.0	
	comp=Z,174nm,21.8s,baz=244,slow=32						
CTAO	Charters Tower	33.80	280	P	P	22 02 45.3	+1.1
CTAO				IAmb	IAmb	22 02 47.3	
	comp=Z,8.5nm,0.8s						
CTAO	Charters Tower	33.80	280	P	P	22 02 46.6	+2.4
STKA	Stephens Creek	34.37	257	P	P	22 02 51.0	+2.0
STKA	Stephens Creek	34.37	257	P	P	22 02 49.4	+0.3
	comp=Z,22nm,0.8s,baz=91,slow=9.7,SNR=43						
	comp=Z,22nm,0.8s						
XMAS	Kiritimati	38.01	35	P	P	22 03 17.9	-2.3
BBOO	Buckleboo	38.85	255	P	P	22 03 27.3	+0.1
BBOO				IAmb	IAmb	22 03 29.6	
	comp=Z,44nm,1.4s						
COEN	Coen	39.31	286	P	P	22 03 33.2	+2.1
COEN				IAmb	IAmb	22 03 54.1	
	comp=Z,60nm,1.9s						
ASAR	Alice Springs	43.05	267	P	P	22 04 01.3	-0.6
ASAR	Alice Springs	43.05	267	P	P	22 04 02.1	+0.3
	comp=Z,1.6nm,0.7s,baz=109,slow=7.9,SNR=16						
	comp=Z,1.6nm,0.7s						
DRV	Dumont d'Urvil	43.86	203	P	P	22 04 08.2	+0.5
WR8	Warramunga Arr	43.92	273	P	P	22 04 09.0	+0.1
WB2	Warramunga Arr	44.05	272	P	P	22 04 10.4	+0.4
WRA	Warramunga Arr	44.06	272	P	P	22 04 09.5	-0.6
WRA	Warramunga Arr	44.06	272	P	P	22 04 10.2	+0.2
	comp=Z,3.1nm,0.3s,baz=111,slow=8.1,SNR=45						
WRA				PcP	PcP	22 05 56.4	+1.5
	comp=Z,0.3nm,0.6s,baz=112,slow=4.4,SNR=1.8						
	comp=Z,3.1nm,0.3s						
WB0	Warramunga Arr	44.09	273	P	P	22 04 10.9	+0.6
VNDA	Vanda	47.81	186	P	P	22 04 41.4	+2.7
VNDA	Vanda	47.81	186	P	P	22 04 42.5	+3.8
	comp=Z,1.0nm,0.6s,baz=34,slow=3.6,SNR=2.4						
VNDA				LR	LR	22 22 60.0	
	comp=Z,230nm,19.6s,baz=347,slow=34						
	comp=Z,1.0nm,0.6s						
MTN	Manton Dam	49.98	279	P	P	22 04 56.1	-0.1
MTN				IAmb	IAmb	22 05 10.6	
	comp=Z,58nm,2.0s						
FITZ	Fitzroy Crossi	52.32	270	P	P	22 05 13.8	+0.1
	comp=Z,3.0nm,0.6s,baz=149,slow=5.9,SNR=4.3						
	comp=Z,3.0nm,0.6s						
CCD	Concordia, Ant	52.67	196	P	P	22 05 17.0	+1.0
CASY	Casey	54.87	208	P	P	22 05 31.6	-0.1
CASY				IAmb	IAmb	22 05 32.9	
	comp=Z,12nm,0.9s						
CASY	Casey	54.87	208	P	P	22 05 31.7	0.0
QSPA	South Pole Qui	59.42	180	P	P	22 06 05.5	+1.4
QSPA				IAmb	IAmb	22 06 12.8	
	comp=Z,10nm,0.8s						
QSPA	South Pole Qui	59.42	180	P	P	22 06 06.2	+2.2
	comp=Z,2.8nm,0.8s,baz=56,slow=1.4,SNR=15						
	comp=Z,2.8nm,0.8s						
QSPA	South Pole Qui	59.42	180	P	P	22 06 06.3	+2.2
BELA	Belgrano 2	69.51	172	P	P	22 07 10.2	+0.6
BELA				IAmb	IAmb	22 07 11.2	
	comp=Z,20nm,1.9s						
SYO	Syowa Base	76.83	193⇓	*e*P	P	22 07 53.7	+0.8
SNAA	Sanae	77.87	178	P	P	22 07 59.8	+1.0
	comp=Z,1.2nm,0.8s,baz=180,slow=4.5,SNR=5.8						
	comp=Z,1.2nm,0.8s						
LVA	Lava Point	85.13	7	P	P	22 08 36.9	-0.1
ELS	Elsinore Mount	85.84	47	P	P	22 08 42.8	+1.7
ELS				IAmb	IAmb	22 10 58.9	
	comp=Z,6.0nm,0.8s						
GMN	Gold Mountain	88.35	44	P	P	22 08 52.9	-0.5
GMN				IAmb	IAmb	22 09 04.4	
	comp=Z,12nm,0.6s						
MOBC	Moresby Island	92.60	26	P	P	22 09 14.4	+1.8
RED	Redoubt Volcan	93.12	12	P	P	22 09 15.9	+1.0
BBB	Bella Bella	93.37	28	P	P	22 09 16.5	+0.4
PV03	Paradox Valley	94.14	48	P	P	22 09 19.4	-1.0
PV03				IAmb	IAmb	22 12 04.3	
	comp=Z,3.6nm,0.8s						
FIA1	FINESS Array S	145.40	340		PKPdf	22 15 37.8	-0.7
FINES	FINESS Array B	145.40	340		PKPdf	22 15 37.9	-0.5
FINES	FINESS Array B	145.40	340	PKPbc	PKPdf	22 15 37.5	-1.0
	comp=Z,6.5nm,0.8s,baz=51,slow=4.1,SNR=21						
NB2	NORSAR Subarra	149.03	351	PKP	PKPbc	22 15 48.0	-0.7
	comp=Z,3.3nm,1.0s,baz=16,slow=4.3						
NOA	NORSAR Array B	149.03	351	PKPbc	PKPbc	22 15 48.0	-0.7
	comp=Z,1.3nm,0.8s,baz=14,slow=4.2,SNR=6.2						
HFS	Hagfors	149.51	348	PKPbc	PKPbc	22 15 49.2	-0.7
	comp=Z,2.6nm,0.8s,baz=90,slow=1.5,SNR=5.9						
AKASG	Malin Array Be	151.50	322	PKPbc	PKPbc	22 15 54.4	-0.5
	comp=Z,3.4nm,1.0s,baz=53,slow=2.4,SNR=8.5						
MMAI	Mount Meron Ar	151.55	284	PKPbc	PKiKP	22 15 55.7	-0.5
	comp=Z,0.4nm,0.4s,baz=96,slow=2.9,SNR=4.0						
BRTR	Keskin Array B	152.69	298	PKPbc	PKPbc	22 15 57.4	-0.8
	comp=Z,0.8nm,0.9s,baz=250,slow=2.5,SNR=3.8						

IDC 16 22:03:34.5±10.0, **20°.92S**×**178°.55W**, **h499**^{km}±75^{km}, **mb2.4**/2, **mbtmp3.5**/3, **Error ellipse: s-maj=236.9km s-min=43.8km az=145.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.51	314	P	P	22 04 57.4	0.0
	16nm,0.5s,baz=129,slow=14,SNR=20						
ASAR	Alice Springs	43.92	257	P	P	22 10 57.1	+0.4
	0.4nm,0.8s,baz=83,slow=8.4,SNR=2.9						
ASAR				PcP	PcP	22 12 31.2	-0.8
	0.4nm,0.7s,baz=89,slow=5.2,SNR=4.3						
	0.4nm,0.8s						
WRA	Warramunga Arr	44.04	263	P	P	22 10 56.9	-0.8
	0.4nm,0.8s,baz=96,slow=8.3,SNR=4.9						
	0.4nm,0.8s						
AKASG	Malin Array Be	143.13	330	PKP	PKPab	22 22 08.4	-0.2
	1.3nm,0.5s,baz=43,slow=4.1,SNR=13						
MMAI	Mount Meron Ar	147.57	299	PKPbc	PKiKP	22 22 24.0	-0.4
	0.6nm,0.4s,baz=85,slow=3.5,SNR=5.3						

IDC 16 22:16:26.0±3.0, **29°.66S**×**177°.98W**, **h0**^{km}, **mb3.8**/4, **mbtmp3.8**/4, **Error ellipse: s-maj=82.4km s-min=41.4km az=33.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	34.67	256	P	P	22 23 17.2	-0.1
	2.1nm,0.7s,baz=90,slow=10,SNR=4.7						
	2.1nm,0.7s						
ASAR	Alice Springs	43.17	266	P	P	22 24 29.2	+0.5
	0.3nm,0.3s,baz=109,slow=8.4,SNR=4.1						
	0.3nm,0.3s						
WRA	Warramunga Arr	44.09	271	P	P	22 24 35.6	-0.6
	0.4nm,0.3s,baz=111,slow=8.0,SNR=6.9						
	0.4nm,0.3s						
QSPA	South Pole Qui	60.45	180	P	P	22 26 37.3	0.0
	1.3nm,1.1s,baz=123,slow=3.2,SNR=1.5						
	1.3nm,1.1s						
FINES	FINESS Array B	144.46	340	PKP	PKPdf	22 36 02.9	-0.7
	0.6nm,0.6s,baz=72,slow=6.2,SNR=5.6						

*IDC **16** 22:20:11.5±0.6, 30°.92S×177°.56W, h0^{km}, mb4.3/12, mbtmp4.3/13, ML3.3/1, Error ellipse: s-maj=22.0km s-min=20.9km az=64.0*

*GCMT **16** 22:20:17.6±0.4, 31°.14S±0°.03×177°.33W±0°.03, h29^{km}±1^{km}, MW5.0/66, Moment Tensor Solution. s30,c33; s66,c81; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.11±.28; $M_{\theta\theta}$2.16±.21; $M_{\phi\phi}$-4.27±.18; $M_{r\theta}$1.45±.39; $M_{\theta\phi}$0.09±.13; $M_{\phi r}$1.59±.25; Best double couple: $M_0$4.21000×10^{16} NP1:ϕ_s143.00000°, δ47.00000°, λ29.00000°. NP2: ϕ_s32.00000°, δ70.00000°, λ133.00000°. Principal axes: T 3.7650, Plg47.0000°, Azm347.0000°; N 0.8880, Plg40.0000°, Azm194.0000°; P -4.6540, Plg14.0000°, Azm92.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **16** 22:20:18.6±2.0, 30°.98S±0°.10×177°.8W±0°.2, h35^{km}±1^{km}, mb4.9/21 Error ellipse: s-maj=29.2km s-min=16.6km az=82.0*

ISC 16 22:20:18.9±0.4, **31°.14S**±0°.06×**177°.88W**±0°.07, **h46**^{km}, **n110**, σ**1^{s}.52**/116, **mb4.8**/28, **MS4.9**/3, **5C-1D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.89	359		Pn	22 20 45.7	-3.0
URZ	Urewera	8.21	209	Pn	Pn	22 22 08.9	-6.5
	1.9nm,0.3s,baz=355,slow=4.2,SNR=11						
URZ				Sn	Sn	22 23 42.4	-4.3
	7.3nm,0.3s,baz=213,slow=4.3,SNR=6.0						
BFZ	Birch Farm	10.64	205	Pn	Pn	22 22 44.8	-3.8
TUWZ	Tuamarina	12.19	210	Pn	Pn	22 23 08.7	-1.2
THZ	Tophouse	12.92	212	Pn	Pn	22 23 17.4	-2.6
OXZ	Oxford	14.55	211	P	Pn	22 23 40.4	-1.6
RPZ	Rata Peaks	15.30	212	Pn	Pn	22 23 44.2	-7.5
	1.0nm,0.3s,baz=324,slow=22,SNR=1.9						
RPZ				Sn	Sn	22 26 24.7	-15
	1.0nm,0.3s,baz=248,slow=20,SNR=2.1						
DZM	Mont Dzumac	16.66	299		Pn	22 24 04.2	-5.2
DZM	Mont Dzumac	16.66	299	*e*Pn	Pn	22 24 09.1	-0.2
	102nm,1.4s						
DZM				*e*S	Sn	22 27 13.6	+0.1
	1µm,27.9s						
DZM				*e*LR	LR	22 28 03.1	
	1µm,24.6s						
DZM	Mont Dzumac	16.66	299	Pn	Pn	22 24 08.3	-1.0
	0.1nm,0.3s,baz=108,slow=14,SNR=7.9						
	2.7nm,0.8s						
TBI	Tubuai	26.38	80	*e*S	S	22 30 21.1	-0.2
	2µm,26.0s						
TBI				*e*LR	LR	22 32 17.4	
	2µm,23.2s						
PPT2	Papeete2	29.00	69	*e*S	S	22 31 02.9	+0.1
	357nm,23.0s						
PPT2				*e*LR	LR	22 33 35.4	
	222nm,23.0s						
PPT2				*e*LR	LR	22 33 42.9	
	285nm,23.8s						
CTAO	Charters Tower	34.02	280		P	22 26 59.3	+0.6
CTAO				IAmb	IAmb	22 28 05.7	
	comp=Z,16nm,0.7s						
CTAO	Charters Tower	34.02	280	P	P	22 27 00.9	+2.2
STKA	Stephens Creek	34.41	258		P	22 27 02.1	+0.2
STKA	Stephens Creek	34.41	258	P	P	22 27 04.1	+2.1
	comp=Z,6.9nm,0.8s,baz=109,slow=11,SNR=9.6						
	comp=Z,6.9nm,0.8s						
TAOE	Nuku Hiva Isla	41.51	66	*e*LR	LR	22 39 13.5	
	comp=Z,164nm,25.4s						
AS31	Alice Springs	43.17	268		P	22 28 17.0	+1.6
ASAR	Alice Springs	43.17	268	P	P	22 28 16.5	+1.0
	comp=Z,9.1nm,0.7s,baz=110,slow=7.9,SNR=82						
ASAR				ScP	ScP	22 33 56.9	+5.0
	comp=Z,1.4nm,0.9s,baz=113,slow=4.6,SNR=5.3						
	comp=Z,9.1nm,0.7s						
DRV	Dumont d'Urvil	43.49	203	P	P	22 28 17.3	-0.1
WR8	Warramunga Arr	44.09	273		P	22 28 23.1	+0.3
WR8				IAmb	IAmb	22 29 41.3	
	comp=Z,17nm,1.0s						
WRA	Warramunga Arr	44.23	273		P	22 28 23.6	-0.4
WRA	Warramunga Arr	44.23	273	P	P	22 28 24.4	+0.5
	comp=Z,5.8nm,0.4s,baz=112,slow=7.9,SNR=70						
WRA				ScP	ScP	22 34 01.6	+5.4
	comp=Z,1.9nm,1.0s,baz=107,slow=4.7,SNR=7.0						
	comp=Z,5.8nm,0.4s						
WB0	Warramunga Arr	44.26	273		P	22 28 24.7	+0.5
WB0				IAmb	IAmb	22 28 35.2	
	comp=Z,19nm,0.9s						
SBA	Scott Base	47.30	184		P	22 28 49.3	+1.9
SBA				IAmb	IAmb	22 28 59.6	
	comp=Z,46nm,1.9s						
SBA	Scott Base	47.30	184	P	P	22 28 49.6	+2.2
VNDA	Vanda	47.37	186	P	P	22 28 50.4	+2.5
CCD	Concordia, Ant	52.27	196	P	P	22 29 26.2	+0.6
CASY	Casey	54.53	208		P	22 29 42.3	+0.5
CASY				IAmb	IAmb	22 30 53.7	
	comp=Z,12nm,0.8s						
CASY	Casey	54.53	208	P	P	22 29 41.6	-0.2
MBWA	Marble Bar	56.25	264	P	P	22 29 54.6	-0.3
QSPA	South Pole Qui	58.97	180	P	P	22 30 14.6	+1.1
QSPA	South Pole Qui	58.97	180	P	P	22 30 14.6	+1.1
	comp=Z,6.6nm,0.9s,baz=47,slow=3.4,SNR=16						
	comp=Z,6.6nm,0.9s						
QSPA	South Pole Qui	58.97	180	P	P	22 30 14.4	+0.9
BELA	Belgrano 2	69.04	172		P	22 31 19.8	+0.5
MAW	Mawson	71.65	201	P	P	22 31 36.2	+0.9
	comp=Z,6.5nm,1.1s,baz=111,slow=7.5,SNR=4.2						
	comp=Z,6.5nm,1.1s						
SYO	Syowa Base	76.42	193⇓	*e*P	P	22 32 03.2	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TROLL	Troll, Antarti	77.13	180	⇑P	P	22 32 07.6	+0.2
	comp=Z,272nm,0.9s						
SNAA	Sanae	77.41	178	⇑P	P	22 32 08.6	-0.2
	comp=Z,91nm,1.1s						
SNAA	Sanae	77.41	178		P	22 32 09.1	+0.3
SNAA				IAmb	IAmb	22 32 30.2	
	comp=Z,11nm,1.0s						
SNAA	Sanae	77.41	178	P	P	22 32 08.5	-0.2
	comp=Z,0.8nm,0.6s,baz=173,slow=4.7,SNR=3.9						
	comp=Z,0.8nm,0.6s						
VNA3	Neumayer Olymp	77.56	176	⇑P	P	22 32 09.2	-0.4
	comp=Z,14nm,0.6s						
VNA2	Neumayer--Watz	77.99	177	⇑P	P	22 32 11.9	0.0
	comp=Z,8.8nm,0.6s,baz=172,slow=4.5						
VNA1	Neumayer--Stat	78.22	176	⇑P	P	22 32 13.3	+0.1
	comp=Z,14nm,0.9s						
PLCA	Paso Flores	81.93	133	P	P	22 32 33.4	-0.5
	comp=Z,1.3nm,0.8s,baz=234,slow=4.4,SNR=2.9						
	comp=Z,1.3nm,0.8s						
KSRS	Korea Array	84.98	320	P	P	22 32 48.6	-0.6
	comp=Z,1.1nm,0.8s,baz=158,slow=7.6,SNR=4.3						
	comp=Z,1.1nm,0.8s						
PETK	Petropavlovsk-	86.56	346	P	P	22 32 55.5	-1.2
	comp=Z,7.0nm,1.1s,baz=182,slow=6.5,SNR=1.5						
	comp=Z,7.0nm,1.1s						
NJ2	Nanjing	86.80	311	*e*P	P	22 33 00.6	+2.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USRK	Ussuriysk Ar.	87.83	326	P	P	22 33 02.8	-0.2
	comp=Z,1.2nm,0.8s,baz=134,slow=4.2,SNR=4.1						
	comp=Z,1.2nm,0.8s						
NVAR	Mina Array Bea	88.72	43	P	P	22 33 05.6	-2.1
	comp=Z,1.3nm,0.9s,baz=227,slow=6.4,SNR=4.3						
	comp=Z,1.3nm,0.9s						
X16A	Lo Mia Camp, P	90.36	49	P	P	22 33 14.5	-1.0
J05D	Fort Rock, OR	90.42	38	P	P	22 33 14.7	-0.8
J05D				IAmb	IAmb	22 33 15.2	
	comp=Z,23nm,1.9s						
TIA	Tai'an	90.55	313	P	P	22 33 17.6	+1.6
TIA				pmax	pmax		
	comp=Z,4.0nm,0.4s						
U15A	North Rim	91.06	47		P	22 33 18.4	-0.4
U15A				IAmb	IAmb	22 33 39.8	
	comp=Z,3.9nm,0.6s						
KNB	Kanab	91.10	47	P	P	22 33 18.2	-0.6
KNB				IAmb	IAmb	22 33 32.2	
	comp=Z,4.8nm,1.1s						
TXAR	Lajitas Array	92.70	57	P	P	22 33 24.4	-2.0
	comp=Z,0.1nm,0.5s,baz=246,slow=1.5,SNR=1.3						
	comp=Z,0.1nm,0.5s						
L14K	Kuka Creek	92.98	7	P	P	22 33 26.5	-0.2
M17K	Holitna River	93.70	10	P	P	22 33 30.4	+0.5
BSUT	Blindstream Ca	94.54	45	P	P	22 33 34.5	-0.4
BSUT				IAmb	IAmb	22 33 50.1	
	comp=Z,7.1nm,1.5s						
L18K	Granite Mounta	94.59	10	P	P	22 33 36.0	+1.9
HHC	Hu-ho-hao-te	96.82	314	*e*P	P	22 33 47.4	+2.5
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LZH	Lanzhou	99.25	307	*e*P	Pdif	22 33 57.1	+1.1
LZH				sP	sP	22 34 11.1	-2.0
LZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
LZH				LR	LR		
	comp=N,240nm,17.4s						
LZH				LR	LR		
	comp=E,450nm,16.8s						
LZH				LR	LR		
	comp=Z,370nm,14.6s						
WMQ	Urumqi	113.76	308	*e*PKP	PKiKP	22 38 51.0	-1.3
WMQ				sPKP		22 39 09.3	
WMQ				LR	LR		
	comp=N,340nm,22.3s						
WMQ				LR	LR		
	comp=Z,200nm,21.1s						
KURBB	Kurchatov Arra	121.67	313	PKP	PKPdf	22 39 05.8	-1.4
	comp=Z,1.1nm,0.8s,baz=99,slow=1.8,SNR=9.1						
BVAR	Borovoye Array	127.00	315	PKP	PKPdf	22 39 16.1	-1.3
	comp=Z,1.1nm,0.7s,baz=147,slow=1.0,SNR=6.0						
ARTI	Arti	133.83	320	PKP	PKPdf	22 39 28.9	-1.3
	comp=Z,0.9nm,0.5s,baz=163,slow=13,SNR=2.2						
ARCES	ARCESS Array B	139.34	348	PKP	PKPdf	22 39 40.5	+0.5
	comp=Z,8.1nm,1.1s,baz=15,slow=5.0,SNR=4.0						
GNI	Garni	144.50	297		PKPdf	22 39 49.7	-0.7
KBZ	Khabaz	145.60	303	PKPbc	PKPdf	22 39 50.5	-1.4
	comp=Z,5.5nm,1.0s,baz=54,slow=3.2,SNR=12						
KARS	Kars	145.75	298		PKPdf	22 39 52.7	+0.1
GEVA	Gevas	145.81	293		PKPbc	22 39 53.2	-0.1
OBN	Obninsk	145.84	325		PKPdf	22 39 52.0	+0.1
FIA1	FINESS Array S	145.88	340		PKPdf	22 39 52.0	+0.2
FINES	FINESS Array B	145.88	340		PKPdf	22 39 51.9	0.0
FINES	FINESS Array B	145.88	340	PKPbc	PKPdf	22 39 51.0	-0.8
	comp=Z,14nm,0.8s,baz=64,slow=4.4,SNR=36						
MARD	Mardin	147.61	292	PKPdf	PKPdf	22 39 56.1	+0.4
KOPT	Kop Dagi	147.76	297		PKPbc	22 39 58.0	-1.0
NB2	NORSAR Subarra	149.50	351	PKP	PKPbc	22 40 01.4	-1.1
	comp=Z,6.0nm,1.1s,baz=16,slow=4.1						
NOA	NORSAR Array B	149.50	351	PKPbc	PKPbc	22 40 00.8	-1.7
	comp=Z,1.8nm,0.8s,baz=15,slow=4.2,SNR=6.7						
HFS	Hagfors	149.99	348	PKPbc	PKPbc	22 40 02.2	-1.4
	comp=Z,3.5nm,0.8s,baz=145,slow=5.4,SNR=7.1						
MNK	Minsk	150.27	329	*i* PKiKP	PKPbc	22 40 04.6	+0.2
	comp=E,11nm,1.3s						
MNK				*i* PKiKP	PKPbc	22 40 04.6	+0.2
	comp=N,6.0nm,1.1s						
MNK				*i* PKiKP	PKPbc	22 40 04.6	+0.2
	comp=Z,17nm,1.0s,baz=49						
MNK				*i* PP	PP	22 43 39.5	-0.4
MNK				*i* PPP	PPP	22 47 01.8	
MNK				*i* SKS	SKSdf	22 47 03.2	+0.1
MNK				*i* SS	SS	23 02 57.1	+2.7
MNK				*i* SSS	SSS	23 08 38.6	
MNK				*i* LRM	MLR	23 49 34.9	
	comp=E,69nm,16.6s						
MNK				*i* LRM	MLR	23 49 36.8	
	comp=N,83nm,17.9s						
MNK				*i* LRM	MLR	23 49 59.7	
	comp=Z,96nm,17.6s						
GAZ	Gaziantep	150.46	291	PKPdf	PKPdf	22 39 59.9	-0.4
NACGM	Naroch	150.47	331	*e*PKiKP	PKPbc	22 40 05.0	+0.1
	comp=Z,9.0nm,1.0s,baz=46						
BNN	Bunyan	151.44	295	PKPdf	PKPdf	22 40 01.1	-0.7
MMAI	Mount Meron Ar	151.80	283	PKPbc	PKiKP	22 40 09.4	+0.1
	comp=Z,4.5nm,0.6s,baz=78,slow=4.4,SNR=19						
AKASG	Malin Array Be	151.95	322		PKPdf	22 40 02.6	+0.7
AKASG	Malin Array Be	151.95	322	PKPbc	PKPbc	22 40 07.8	-0.7
	comp=Z,0.6nm,0.3s,baz=48,slow=2.8,SNR=18						
AKBB	Malin Array Si	151.95	322	PKPdf	PKPdf	22 40 02.7	+0.8
KIEV	Kiev	151.96	322	PKPdf	PKPdf	22 40 02.5	+0.5
SUW	Suwalki	152.58	333	*e*PKP	PKiKP	22 40 13.5	+3.5
ILGA	Ilgaz	152.75	300	PKPdf	PKPdf	22 40 04.2	+0.4
BR131	Keskin Array S	153.03	297	PKPdf	PKPdf	22 40 03.7	-0.4
BRTR	Keskin Array B	153.03	297		PKPdf	22 40 03.8	-0.4
BRTR	Keskin Array B	153.03	297	PKPbc	PKPbc	22 40 11.2	-0.3
	comp=Z,3.1nm,1.0s,baz=131,slow=3.0,SNR=14						
CLL	Collm	158.30	341	*i* PKPab	PKPab	22 40 44.0	-0.9
	comp=Z,10.0nm,1.6s						
RONA	Rosalia, Austr	160.22	331	*e*PKP	PKPab	22 40 52.9	-0.6
	comp=Z,3.7nm,1.0s						
GERES	GERESS Array B	160.26	337	PKPab	PKPab	22 40 52.9	-0.8
	comp=Z,88nm,0.3s,baz=170,slow=24,SNR=25						
ARSA	Arzberg	160.90	331	*i* PKP	PKPab	22 40 55.0	-1.4
	comp=Z,1.9nm,0.7s						
MOA	Molln	160.90	334	*i* PKP	PKPab	22 40 56.5	0.0
	comp=Z,4.2nm,1.5s						
BIOA	Bad Ischl, Aus	161.27	335	*i* PKP	PKPab	22 40 58.4	+0.4
	comp=Z,5.6nm,1.2s						
SOKA	Soboth	161.56	331	*i* PKP	PKPab	22 40 55.4	-4.0
	comp=Z,4.7nm,1.2s						
LESA	Schwarzleotal	161.83	336	*e*PKP	PKPab	22 41 00.9	+0.3
	comp=Z,6.2nm,1.8s						
WATA	Walderalm	162.27	338	*e*PKP	PKPab	22 41 02.5	-0.1
	comp=Z,0.1nm,0.3s						
WTTA	Wattenberg	162.32	338	*i* PKP	PKPab	22 41 02.7	-0.2
	comp=Z,4.9nm,0.9s						
RETA	Reutte	162.38	340	*i* PKP	PKPab	22 41 03.0	0.0
	comp=Z,2.7nm,1.1s						
MOTA	Moosalm	162.41	339	*i* PKP	PKPab	22 41 03.1	-0.1
	comp=Z,7.9nm,1.2s						
ABTA	Abfaltersbach	162.47	336	*e*PKP	PKPab	22 41 02.3	-1.1
	comp=Z,3.1nm,0.8s						
SQTA	Sankt Quirin	162.49	339	*i* PKP	PKPab	22 41 04.1	+0.6
	comp=Z,1.3nm,0.5s						
DAVA	Damuels	162.81	342	*i* PKP	PKPab	22 41 05.1	+0.2
	comp=Z,3.8nm,1.0s						
FETA	Feichten	162.81	340	*i* PKP	PKPab	22 41 04.5	-0.4
	comp=Z,5.7nm,1.3s						

IDC **16** *22:21:15.5±0.7, 31.°06S×177.°65W, h0^{km}, mb4.6/8, mbtmp4.5/9, Error ellipse: s-maj=27.0km s-min=24.4km az=2.0*

NEIC **16** *22:21:17.7±1.8, 31.°17S±0.°07×177.°6W±0.°2, h10^{km}±1^{km}, mb4.7/17, Error ellipse: s-maj=23.0km s-min=12.3km az=94.0*

ISC 16 22:21:22.0±0.5**, 31.°23S**±0.°07×**177.°8W**±0.°1**, h46**^{km}**, n52, σ1.^{s}36**/54**, mb4.7**/14**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.98	357	Pn	Pn	22 21 51.1	-1.9
URZ	Urewera	8.16	209	Pn	Pn	22 23 14.5	-3.3
	3.0nm,0.3s,baz=302,slow=19,SNR=1.6						
URZ				Sn	Sn	22 24 46.3	-2.4
	4.8nm,0.3s,baz=268,slow=22,SNR=1.4						
RTZ	Ruatahuna	8.52	209	Pn	Pn	22 23 23.5	+0.7
BKZ	Black Stump Fm	9.19	209	Pn	Pn	22 23 31.7	-0.2
RPZ	Rata Peaks	15.26	212	Pn	Pn	22 24 48.5	-5.9
	0.9nm,0.3s,baz=49,slow=16,SNR=1.5						
RPZ				Sn	Sn	22 27 27.2	-15
	1.0nm,0.3s,baz=23,slow=16,SNR=1.7						
DZM	Mont Dzumac	16.76	299	Pn	Pn	22 25 14.0	+0.4
	14nm,1.1s,baz=70,slow=13,SNR=1.8						
WKZ	Wanaka	17.05	214	Pn	Pn	22 25 16.8	-0.3
ARMA	Armidale	26.22	264	P	P	22 26 53.8	+1.1
EIDS	Eidsvold	27.95	274	P	P	22 27 08.8	+0.6
EIDS				IAmb	IAmb	22 27 11.5	
	comp=Z,9.8nm,0.9s						
CTAO	Charters Tower	34.10	280	P	P	22 28 03.5	+1.0
STKA	Stephens Creek	34.46	258	P	P	22 28 05.4	0.0
	comp=Z,2.9nm,0.6s,baz=90,slow=10,SNR=5.0						
	comp=Z,2.9nm,0.6s						
BBOO	Buckleboo	38.91	255	P	P	22 28 43.7	+0.4
BBOO				IAmb	IAmb	22 28 44.9	
	comp=Z,16nm,0.8s						
BBOO				PcP	PcP	22 30 53.2	-0.2
COEN	Coen	39.66	287	P	P	22 28 49.2	-0.5
COEN				IAmb	IAmb	22 28 53.7	
	comp=Z,22nm,1.1s						
ASAR	Alice Springs	43.23	268	P	P	22 29 19.9	+0.9
ASAR	Alice Springs	43.23	268	P	P	22 29 20.2	+1.2
	comp=Z,11nm,0.8s,baz=104,slow=7.2,SNR=7.3						
ASAR				PcP	PcP	22 31 08.1	+0.4
	comp=Z,0.9nm,0.4s,baz=129,slow=3.8,SNR=1.9						
	comp=Z,11nm,0.8s						
WR8	Warramunga Arr	44.16	273	P	P	22 29 27.2	+0.8
WRA	Warramunga Arr	44.30	273	P	P	22 29 28.1	+0.5
WRA	Warramunga Arr	44.30	273	P	P	22 29 28.6	+1.0
	comp=Z,9.7nm,0.6s,baz=112,slow=7.9,SNR=13						
WRA				PcP	PcP	22 31 11.2	-0.1
	comp=Z,2.2nm,1.0s,baz=106,slow=2.7,SNR=2.1						
	comp=Z,9.7nm,0.6s						
WB0	Warramunga Arr	44.33	273	P	P	22 29 28.7	+1.0
KNRA	Kununurra	50.94	275	P	P	22 30 18.7	-0.3
KNRA				IAmb	IAmb	22 30 27.3	
	comp=Z,11nm,1.2s						
FITZ	Fitzroy Crossi	52.53	270	P	P	22 30 31.5	+0.6
CASY	Casey	54.48	208	P	P	22 30 45.0	+0.4
QSPA	South Pole Qui	58.88	180	P	P	22 31 18.9	+2.9
QSPA	South Pole Qui	58.88	180	P	P	22 31 17.9	+1.9
	comp=Z,6.7nm,0.8s,baz=38,slow=10.0,SNR=1.2						
	comp=Z,6.7nm,0.8s						
TOLI2	Tolitoli	66.43	287	P	P	22 32 07.8	+0.9
TOLI2				IAmb	IAmb	22 32 12.1	
	comp=Z,7.3nm,0.9s						
BELA	Belgrano 2	68.94	172	P	P	22 32 22.9	+1.2
BELA				IAmb	IAmb	22 32 37.1	
	comp=Z,3.1nm,0.7s						
SNAA	Sanae	77.32	178	P	P	22 33 11.3	-0.1
SNAA				IAmb	IAmb	22 33 25.8	
	comp=Z,11nm,1.3s						
SNAA	Sanae	77.32	178	P	P	22 33 12.6	+1.2
	comp=Z,2.3nm,0.8s,baz=190,slow=5.0,SNR=1.4						
	comp=Z,2.3nm,0.8s						
LL02	Futaleuf	79.65	134	P	P	22 33 22.6	-2.1
LL02				IAmb	IAmb	22 33 26.6	
	comp=Z,5.3nm,0.8s						
PETK	Petropavlovsk-	86.66	346	P	P	22 34 00.2	0.0
	comp=Z,5.0nm,1.0s,baz=153,slow=5.3,SNR=5.5						
	comp=Z,5.0nm,1.0s						
NVAR	Mina Array Bea	88.74	43	P	P	22 34 10.7	-0.1
	comp=Z,2.0nm,0.9s,baz=241,slow=4.1,SNR=4.3						
	comp=Z,2.0nm,0.9s						
LPAZ	La Paz	97.66	114	P	Pdif	22 34 52.8	-0.3
	comp=Z,0.6nm,0.6s,baz=148,slow=4.5,SNR=1.8						
	comp=Z,0.6nm,0.6s						
MKAR	Makanchi Array	118.43	310	PKP	PKPdf	22 40 03.7	-0.6
	comp=Z,0.7nm,0.7s,baz=31,slow=3.4,SNR=2.6						
KURBB	Kurchatov Arra	121.78	313	PKP	PKiKP	22 40 10.2	-0.4
	comp=Z,1.2nm,0.6s,baz=113,slow=1.9,SNR=8.1						
BVAR	Borovoye Array	127.11	315	PKP	PKiKP	22 40 20.9	-0.3
	comp=Z,0.9nm,0.4s,baz=100,slow=0.3,SNR=7.4						
ARTI	Arti	133.94	320	PKP	PKPdf	22 40 33.1	-0.4
	comp=Z,2.1nm,0.7s,baz=160,slow=11,SNR=3.2						
ARCES	ARCESS Array B	139.43	348	PKP	PKPdf	22 40 42.9	-0.4
	comp=Z,3.6nm,0.9s,baz=32,slow=4.7,SNR=5.7						
FINES	FINESS Array B	145.98	340	PKPbc	PKPbc	22 40 55.5	-0.5
	comp=Z,12nm,0.6s,baz=62,slow=2.7,SNR=10						
MARD	Mardin	147.70	291	PKPbc	PKiKP	22 41 02.7	-1.1
NB2	NORSAR Subarra	149.59	351	PKP	PKPbc	22 41 05.1	-0.7
	comp=Z,3.7nm,0.8s,baz=16,slow=4.3						
NOA	NORSAR Array B	149.59	351	PKPbc	PKPbc	22 41 05.3	-0.4
	comp=Z,2.4nm,0.8s,baz=14,slow=4.2,SNR=5.3						
NC602	NORSAR Array S	149.85	351	PKPdf	PKPdf	22 41 02.0	+0.5
HFS	Hagfors	150.09	348	PKPbc	PKPbc	22 41 06.4	-0.6
	comp=Z,5.4nm,0.8s,baz=236,slow=1.1,SNR=5.2						
MMAI	Mount Meron Ar	151.88	282	PKPbc	PKiKP	22 41 13.8	+1.3
	comp=Z,7.8nm,0.7s,baz=82,slow=3.7,SNR=8.0						
AKASG	Malin Array Be	152.06	322	PKPbc	PKiKP	22 41 11.6	-0.5
	comp=Z,3.5nm,0.7s,baz=50,slow=3.2,SNR=6.2						
AKBB	Malin Array Si	152.06	322	PKPdf	PKPdf	22 41 06.2	+1.0
KIEV	Kiev	152.07	322	PKPdf	PKPdf	22 41 06.7	+1.5
BRTR	Keskin Array B	153.13	297	PKPbc	PKiKP	22 41 14.9	0.0
	comp=Z,2.6nm,0.8s,baz=136,slow=4.2,SNR=6.0						
BRG	Berggiesshubel	158.52	339	P	PKPdf	22 41 01.0	-13
BRG				Amp		22 41 01.4	
	comp=Z,4.2nm,1.1s						
BRG	Berggiesshubel	158.52	339	P	PKPab	22 41 48.9	-0.1
BRG				Amp		22 41 49.5	
	comp=Z,2.9nm,0.8s						
GERES	GERESS Array B	160.36	337	PKPab	PKPab	22 41 56.7	-0.6
	comp=Z,0.5nm,0.6s,baz=0.0,slow=1.3,SNR=1.3						
TORD	Torodi Ar. Bea	162.00	178	PKPab	PKPab	22 42 05.5	+0.5
	comp=Z,110nm,0.3s,baz=167,slow=3.7,SNR=1.5						

IDC **16** *22:26:39.6±5.7, 38.°79N×141.°96E, h0^{km}, mb3.6/5, mbtmp3.5/6, ML2.1/1, Error ellipse: s-maj=106.8km s-min=34.5km az=121.0*

JMA **16** *22:26:41.2±0.1, 38.°3N±0.°4×142.°1E±0.°8, h35^{km}±1^{km}, MV3.7/40, E OFF MIYAGI PREF*

ISC 16 22:26:37.1±1.9**, 38.°20N**±0.°04×**142.°20E**±0.°08**, h12**^{km}±9^{km}**, n19, σ0.^{s}82**/32**, mb3.6**/5**, 4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.59	281	⇓*i*P	Pn	22 26 51.5	+0.3
JIKH				⇓S	Sb	22 26 58.4	+0.9
JIO	Ouri	0.71	291	⇓*i*P	Pn	22 26 53.1	+0.2
JIO				⇓S	Sb	22 27 01.3	+0.1
JKMT	Kesennumamotoy	0.83	317	*i* P	Pn	22 26 54.6	0.0
JKMT				S	Sg	22 27 03.8	-0.3
OFUJ	Ofunato	0.97	335	*i* P	Pg	22 26 56.2	+0.4
OFUJ				*e*S	Sg	22 27 07.1	-1.4
JMK	Ichinoseki	1.07	315	*i* P	Pb	22 26 58.1	+0.5
JMK				S	Sb	22 27 09.9	-1.6
JMM	Marumori	1.16	254	*i* P	Pg	22 27 00.2	+0.9
JMM				S	Sg	22 27 14.3	-0.1
JOU	Okura	1.22	278	*i* P	Pg	22 27 01.2	+0.7
JOU				S	Sb	22 27 15.8	+0.1
JFK	Kawauchi	1.34	232	*i* P	Pg	22 27 03.0	+0.2
JFK				S	Sb	22 27 18.9	-0.3
JOM	Ohasama	1.45	331	*i* P	Pn	22 27 03.5	+0.4
JOM				S	Sn	22 27 20.1	-2.1
JOTO	OTAMA OYAMA	1.61	247	P	Pg	22 27 08.0	+0.1
JOTO				S	Sb	22 27 27.2	+0.3
JYK	Kaneyama	1.61	297	P	Pb	22 27 06.5	-0.2
JYK				S	Sn	22 27 25.3	-0.7
JYS	Shirataka	1.68	271	P	Pb	22 27 07.9	0.0
JYS				*e*S	Sn	22 27 27.5	-0.2
JRG	Rokugo	1.71	315	*e*P	Pn	22 27 07.7	+1.1
MJAR	Matsushiro Arr	3.58	244	Pn	Pb	22 27 38.5	-1.9
	0.2nm,0.3s,baz=53,slow=12,SNR=4.9						
MJAR				Sn	Sb	22 28 23.5	-0.3
	0.2nm,0.3s,baz=318,slow=32,SNR=4.0						
	1.6nm,0.6s						
SONM	Songino Array	27.67	302	P	P	22 32 24.7	-0.2
	0.4nm,0.6s,baz=92,slow=9.1,SNR=2.1						
	0.4nm,0.6s						
ZALV	Zalesovo Beam	41.60	311	P	P	22 34 24.6	0.0
	0.7nm,0.6s,baz=74,slow=5.8,SNR=2.5						
	0.7nm,0.6s						
MKAR	Makanchi Array	44.04	301	P	P	22 34 45.5	+1.0
	0.2nm,0.5s,baz=83,slow=8.7,SNR=4.9						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	45.78	307	P	P	22 34 58.7	+0.3
	0.6nm,0.3s,baz=82,slow=8.7,SNR=8.7						
	0.6nm,0.3s						
FINES	FINESS Array B	68.07	332	P	P	22 37 36.8	+0.6
	0.9nm,0.9s,baz=57,slow=5.9,SNR=1.7						
	0.9nm,0.9s						

IDC **16** *22:28:18.4±0.4, 31.°04S×177.°61W, h0^{km}, mb4.6/16, mbtmp4.5/18, ML4.4/2, MS4.3/12, Error ellipse: s-maj=15.6km s-min=14.1km az=11.0*

NEIC **16** *22:28:21.2±1.6, 31.°07S±0.°08×177.°6W±0.°2, h10^{km}±1^{km}, mb4.9/56, Error ellipse: s-maj=22.3km s-min=12.2km az=78.0*

GCMT **16** *22:28:25.2±0.3, 31.°16S±0.°03×177.°28W±0.°03, h31^{km}±1^{km}, MW5.0/71, Moment Tensor Solution. s34,c38; s71,c87; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.57±.27; M$_{\theta\theta}$0.61±.17; M$_{\phi\phi}$-4.18±.17; M$_{r\theta}$0.24±.26; M$_{\theta\phi}$0.07±.14; M$_{\phi r}$1.52±.18; Best double couple: M$_0$4.17200×10^{16} NP1:ϕ_s174.00000°,δ35.00000°,λ82.00000°. NP2: ϕ_s4.00000°,δ56.00000°,λ95.00000°. Principal axes: T 3.8770, Plg78.0000°, Azm293.0000°; N 0.5910, Plg4.0000°, Azm181.0000°; P -4.4680, Plg11.0000°, Azm90.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NOU **16** *22:28:48.1, 33.°31S×178.°64W, h0^{km}, mb4.9/7, South of Kermadec Islands*

ISC 16 22:28:23.4±0.3**, 31.°21S**±0.°04×**177.°62W**±0.°07**, h35**^{km}**, n288, σ1.^{s}79**/296**, mb4.9**/48**, MS4.5**/11**, 23C-14D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.96	352	P	Pn	22 28 50.9	-3.3
GLKZ				S	Sn	22 29 16.1	-1.5
RAO	Raoul Island	1.97	352		Pn	22 28 52.6	-1.7
RAO				Sn	Sn	22 29 14.9	-2.9
RIZ	Raoul Island	1.98	352	P	Pn	22 28 52.3	-2.2
RIZ				S	Sn	22 29 17.3	-0.7
MXZ	Matakaoa Point	7.17	207	P	Pn	22 30 02.7	-3.1
MXZ				S	Sn	22 31 24.4	-1.7
WMGZ	Waiomatatini S	7.36	205	P	Pn	22 30 00.9	-7.4
WMGZ				S	Sn	22 31 29.4	-1.2
PKGZ	Pakihiroa	7.53	207	P	Pn	22 30 07.6	-3.1
PKGZ				S	Sn	22 31 34.3	-0.5
HAZ	Te Kaha	7.55	209	P	Pn	22 30 07.8	-3.2
HAZ				S	Sn	22 31 34.2	-1.1
PUZ	Puketiti	7.64	205	P	Pn	22 30 09.2	-3.0
PUZ				S	Sn	22 31 34.9	-2.7
RUGZ	Raukumara Rang	7.77	209	P	Pn	22 30 10.8	-3.4
RUGZ				S	Sn	22 31 38.7	-2.3
TWGZ	Tauwhareparae	7.84	206	P	Pn	22 30 12.0	-2.9
TWGZ				S	Sn	22 31 40.4	-2.0
CNGZ	Carnagh Statio	8.03	204	P	Pn	22 30 13.8	-3.7
CNGZ				S	Sn	22 31 43.8	-3.2
TKGZ	Te Karaka	8.12	206	P	Pn	22 30 15.5	-3.2
TKGZ				S	Sn	22 31 45.5	-3.7
MWZ	Matawai	8.15	208	P	Pn	22 30 14.9	-4.3
MWZ				S	Sn	22 31 47.1	-3.1
WCZ	Waipu Caves	8.20	233	P	Pn	22 30 22.5	+2.7
URZ	Urewera	8.26	210	Pn	Pn	22 30 15.3	-5.4
	6.6nm,0.3s,baz=155,slow=5.4,SNR=12						
URZ				Sn	Sn	22 31 49.1	-3.6
	18nm,0.3s,baz=47,slow=23,SNR=13						
URZ	Urewera	8.26	210	P	Pn	22 30 17.4	-3.3
URZ	Urewera	8.26	210	P	Pn	22 30 16.8	-3.9
URZ				S	Sn	22 31 47.1	-5.7
RAGZ	Rawiri	8.33	208	P	Pn	22 30 19.4	-2.4
RAGZ				S	Sn	22 31 52.5	-2.2
OUZ	Omahuta	8.38	239	P	Pn	22 30 27.4	+5.1
OUZ	Omahuta	8.38	239	P	Pn	22 30 27.2	+4.8
RIGZ	Rimuhau	8.38	206	S	Sn	22 31 53.1	-2.7
MKAZ	Moumakai	8.39	224	P	Pn	22 30 21.8	-0.7
PRGZ	Paritu Road	8.53	204	P	Pn	22 30 20.0	-4.4
PRGZ				S	Sn	22 31 56.5	-3.0
MUGZ	Murupara	8.59	211	S	Sn	22 31 57.5	-3.4
SNGZ	Shannon Statio	8.61	207	P	Pn	22 30 22.9	-2.7
SNGZ				S	Sn	22 31 57.7	-3.7
RTZ	Ruatahuna	8.62	210	P	Pn	22 30 24.7	-0.9
RTZ				S	Sn	22 31 59.3	-2.3
TOZ	Tahuroa Road	8.63	219		Pn	22 30 27.6	+1.8
MHGZ	Mahia Peninsul	8.73	204	P	Pn	22 30 18.9	-8.3
MHGZ				S	Sn	22 32 01.2	-3.1
RAHZ	Arahi	8.83	208	P	Pn	22 30 25.1	-3.4
RAHZ				S	Sn	22 32 01.2	-5.5
MTHZ	Maungataniwha	8.87	209	P	Pn	22 30 27.5	-1.7
MTHZ				S	Sn	22 32 05.2	-2.7
NMHZ	Naumai	9.09	209	P	Pn	22 30 29.8	-2.4
NMHZ				S	Sn	22 32 10.1	-3.3
ARHZ	Aropaoanui	9.16	207	P	Pn	22 30 29.4	-3.7
ARHZ				S	Sn	22 32 09.3	-5.6
BKZ	Black Stump Fm	9.28	210	P	Pn	22 30 31.5	-3.3
KAHZ	Kahuranaki	9.67	206	P	Pn	22 30 34.9	-5.1
KAHZ				S	Sn	22 32 22.4	-4.9
NGZ	Ngauruhoe	9.69	213	S	Sn	22 32 23.1	-4.9
SNZO	South Karori	11.82	209	P	Pn	22 31 07.0	-2.5
TUWZ	Tuamarina	12.25	211		Pn	22 31 08.4	-7.0
QRZ	Quartz Range	12.47	217	P	Pn	22 31 17.9	-0.4
CTZ	Chatham Island	12.53	177		Pn	22 31 15.0	-4.1
MSVF	Nonsavu	13.98	343	Pn	Pn	22 31 36.0	-3.2
	0.2nm,0.3s,baz=58,slow=20,SNR=1.7						
MSVF				LR	LR	22 36 20.3	
	comp=Z,1µm,18.1s,baz=175,slow=35						
	8.7nm,0.9s						
LTZ	Lake Taylor	14.08	212	P	Pn	22 31 36.1	-4.3
RPZ	Rata Peaks	15.37	213	Pn	Pn	22 31 50.1	-7.5
	2.2nm,0.3s,baz=198,slow=1.0,SNR=9.0						
RPZ				Sn	Sn	22 34 29.5	-17
	3.8nm,0.3s,baz=26,slow=15,SNR=6.8						
RPZ	Rata Peaks	15.37	213	P	Pn	22 31 56.2	-1.4
DZM	Mont Dzumac	16.89	299		P	22 32 19.4	+0.4
DZM	Mont Dzumac	16.89	299	*e*Pn	P	22 32 19.2	+0.2
	139nm,1.4s						
DZM				*e*LR	LR	22 36 10.1	
	2µm,22.6s						
DZM	Mont Dzumac	16.89	299	Pn	P	22 32 17.2	-1.8
	0.3nm,0.3s,baz=142,slow=19,SNR=11						
DZM				LR	LR	22 37 53.1	
	comp=Z,2µm,18.2s,baz=148,slow=34						
	3.9nm,0.8s						
SYZ	Scrubby Hill	18.41	210	P	Pn	22 32 37.0	+1.3
RAR	Rarotonga	18.83	62	LR	LR	22 38 23.8	
	comp=Z,244nm,21.1s,baz=250,slow=32						
TBI	Tubuai	26.17	80	*e*S	S	22 38 24.1	-0.2
	2µm,27.0s						
TBI				*e*LR	LR	22 40 23.4	
	3µm,27.5s						
TBI				*e*LR	LR	22 40 23.9	
	986nm,26.2s						
EIDS	Eidsvold	28.11	274		P	22 34 13.0	+0.8
EIDS				IAmb	IAmb	22 34 14.4	
	comp=Z,22nm,0.9s						
PPT2	Papeete2	28.81	68	*e*S	S	22 39 06.3	+0.1
	comp=Z,481nm,25.0s						
PPT2				*e*LR	LR	22 41 36.7	
	comp=Z,329nm,27.0s						
PPT2				*e*LR	LR	22 41 45.1	
	comp=Z,481nm,25.2s						
PPT	Papeete	28.83	68	LR	LR	22 42 30.8	
	comp=Z,185nm,21.6s,baz=224,slow=30						
TOO	Toolangi	30.96	248		P	22 34 38.6	+1.3
CTAO	Charters Tower	34.26	280		P	22 35 06.6	+0.3
STKA	Stephens Creek	34.62	258	P	P	22 35 10.5	+1.1
STKA	Stephens Creek	34.62	258	P	P	22 35 10.4	+1.1
	comp=Z,9.4nm,0.8s,baz=98,slow=10,SNR=18						
STKA				PcP	PcP	22 37 43.9	+0.7

	comp=Z,5.6nm,0.8s,baz=52,slow=2.4,SNR=3.0						
STKA				LR	LR	22 47 47.5	
	comp=Z,498nm,19.0s,baz=76,slow=34						
	comp=Z,9.4nm,0.8s						
BBOO	Buckleboo	39.07	255	P	P	22 35 47.0	-0.2
BBOO				IAmb	IAmb	22 35 48.1	
	comp=Z,31nm,0.8s						
COEN	Coen	39.81	287		P	22 35 54.2	+0.7
COEN				IAmb	IAmb	22 35 56.1	
	comp=Z,21nm,0.9s						
TAOE	Nuku Hiva Isla	41.33	66	eLR	LR	22 47 20.8	
	comp=Z,239nm,25.8s						
AS31	Alice Springs	43.40	268		P	22 36 23.0	+0.1
ASAR	Alice Springs	43.40	268	P	P	22 36 23.1	+0.2
	comp=Z,24nm,0.8s,baz=107,slow=7.6,SNR=128						
ASAR				PcP	PcP	22 38 11.2	+0.2
	comp=Z,2.6nm,0.8s,baz=107,slow=4.0,SNR=2.5						
ASAR				ScP	ScP	22 42 03.5	+3.7
	comp=Z,2.5nm,0.9s,baz=106,slow=3.9,SNR=8.4						
ASAR				S	S	22 42 53.0	+4.2
	comp=Z,0.5nm,0.7s,baz=116,slow=14,SNR=2.2						
ASAR				LR	LR	22 54 11.7	
	comp=Z,558nm,18.0s,baz=99,slow=36						
	comp=Z,24nm,0.8s						
WR8	Warramunga Arr	44.32	273		P	22 36 29.5	-0.8
WR8				IAmb	IAmb	22 36 44.5	
	comp=Z,23nm,0.7s						
WRAB	Tennant Creek	44.46	273	P	P	22 36 31.1	-0.2
WRAB				IAmb	IAmb	22 36 45.2	
	comp=Z,27nm,0.8s						
WRA	Warramunga Arr	44.46	273	P	P	22 36 31.5	+0.1
	comp=Z,18nm,0.6s,baz=112,slow=8.0,SNR=102						
WRA				PcP	PP	22 38 14.6	-0.9
	comp=Z,3.1nm,0.8s,baz=105,slow=3.8,SNR=3.1						
WRA				ScP	ScP	22 42 07.7	+3.6
	comp=Z,3.1nm,1.1s,baz=109,slow=3.7,SNR=5.9						
WRA				S	S	22 43 08.6	+4.3
	comp=Z,0.9nm,0.9s,baz=113,slow=14,SNR=3.0						
WRA				LR	LR	22 54 25.8	
	comp=Z,558nm,18.0s,baz=122,slow=35						
	comp=Z,18nm,0.6s						
WB0	Warramunga Arr	44.49	273		P	22 36 31.4	-0.2
SBA	Scott Base	47.26	184		P	22 36 55.9	+3.3
SBA				IAmb	IAmb	22 37 21.0	
	comp=Z,22nm,1.2s						
VNDA	Vanda	47.32	186	P	P	22 36 55.3	+2.2
VNDA	Vanda	47.32	186	P	P	22 36 55.4	+2.2
	comp=Z,1.2nm,0.7s,baz=359,slow=5.6,SNR=4.7						
VNDA				LR	LR	22 53 13.7	
	comp=Z,133nm,21.0s,baz=9.5,slow=32						
	comp=Z,1.2nm,0.7s						
KNRA	Kununurra	51.10	275		P	22 37 22.6	-0.3
KNRA				IAmb	IAmb	22 37 28.4	
	comp=Z,11nm,0.9s						
FITZ	Fitzroy Crossi	52.69	270		P	22 37 34.3	-0.4
FITZ	Fitzroy Crossi	52.69	270	LR	LR	22 58 57.4	
	comp=Z,508nm,19.7s,baz=111,slow=35						
CASY	Casey	54.58	208		P	22 37 48.3	+0.4
BATI	Baumata	58.08	278	LR	LR	23 03 43.0	
	comp=Z,676nm,18.0s,baz=126,slow=37						
QSPA	South Pole Qui	58.90	180		P	22 38 21.0	+2.3
QSPA	South Pole Qui	58.90	180	P	P	22 38 21.0	+2.3
	comp=Z,13nm,0.8s,baz=42,slow=1.9,SNR=51						
QSPA				LR	LR	23 02 19.2	
	comp=Z,299nm,18.4s,baz=46,slow=34						
	comp=Z,13nm,0.8s						
BELA	Belgrano 2	68.94	172		P	22 39 25.1	+0.7
BELA				IAmb	IAmb	22 39 50.0	
	comp=Z,8.5nm,1.0s						
MAW	Mawson	71.67	201	P	P	22 39 42.3	+1.2
	comp=Z,7.7nm,0.9s,baz=108,slow=6.1,SNR=8.7						
	comp=Z,7.7nm,0.9s						
SYO	Syowa Base	76.40	193	⇑eP	P	22 40 09.6	+0.8
TROLL	Troll, Antarti	77.06	180	⇑P	P	22 40 14.0	+1.3
	comp=Z,434nm,0.8s						
SNAA	Sanae	77.34	178	⇑P	P	22 40 14.7	+0.6
	comp=Z,139nm,0.7s						
SNAA	Sanae	77.34	178		P	22 40 15.2	+1.1
SNAA				IAmb	IAmb	22 40 43.3	
	comp=Z,14nm,1.0s						
SNAA	Sanae	77.34	178	P	P	22 40 14.7	+0.6
	comp=Z,3.4nm,0.9s,baz=150,slow=2.0,SNR=8.9						
	comp=Z,3.4nm,0.9s						
VNA3	Neumayer Olymp	77.47	176	⇑P	P	22 40 15.3	+0.5
	comp=Z,34nm,0.7s						
VNA2	Neumayer--Watz	77.91	177	⇑P	P	22 40 18.2	+0.9
	comp=Z,15nm,0.6s,baz=167,slow=4.8						
COYC	Coyhaique	78.12	136		P	22 40 20.6	+1.7
COYC				IAmb	IAmb	22 40 22.2	
	comp=Z,17nm,0.9s						
VNA1	Neumayer--Stat	78.14	176	⇑P	P	22 40 19.6	+1.1
	comp=Z,2.5nm,0.2s						
MJAR	Matsushiro Arr	79.09	325	P	P	22 40 23.2	-1.0
	comp=Z,3.1nm,0.8s,baz=179,slow=4.0,SNR=5.2						
	comp=Z,3.1nm,0.8s						
LL02	Futaleuf	79.55	134		P	22 40 28.4	+1.6
LL02				IAmb	IAmb	22 40 29.8	
	comp=Z,9.5nm,0.8s						
H03S2	Juan Fernandez	79.74	123	T	T	00 09 36.8	
	baz=242						
H03S1	Juan Fernandez	79.75	123	T	T	00 09 42.2	
	baz=242						
H03S3	Juan Fernandez	79.76	123	T	T	00 09 36.2	
	baz=242						
H03N3	Juan Fernandez	79.94	123	T	T	00 10 02.5	
	baz=232						
H03N2	Juan Fernandez	79.94	123	T	T	00 10 14.2	
	baz=232						
H03N1	Juan Fernandez	79.95	123	T	T	00 09 51.2	
	baz=232						
PLCA	Paso Flores	81.71	133	P	P	22 40 39.8	+1.2
	comp=Z,3.8nm,0.9s,baz=209,slow=5.2,SNR=7.7						
	comp=Z,3.8nm,0.9s						
BI02	San Fabin de	83.53	129		P	22 40 49.6	+1.5
BI02				IAmb	IAmb	22 40 51.5	
	comp=Z,16nm,1.2s						
KSRS	Korea Array	85.18	319	P	P	22 40 56.1	+0.1
	comp=Z,2.3nm,0.8s,baz=147,slow=6.4,SNR=7.9						
	comp=Z,2.3nm,0.8s						
GSI	Gunungsitoli	86.22	274		P	22 41 02.2	+0.4
PETK	Petropavlovsk-	86.68	345	P	P	22 41 03.5	+0.4
	comp=Z,11nm,1.0s,baz=111,slow=7.0,SNR=5.3						
	comp=Z,11nm,1.0s						
NJ2	Nanjing	87.02	310	eP	P	22 41 06.3	+1.1
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NJ2				LR	LR		
	comp=N,280nm,17.0s						
NJ2				LR	LR		
	comp=E,390nm,19.8s						
NJ2				LR	LR		
	comp=Z,820nm,18.1s						
QSM	Queen of Sheba	87.81	45		P	22 41 10.5	+1.5
USRK	Ussuriysk Ar.	88.02	326	P	P	22 41 09.5	-0.2
	comp=Z,4.1nm,0.9s,baz=130,slow=2.7,SNR=9.5						
	comp=Z,4.1nm,0.9s						
GWY	Greenwater Val	88.08	45	P	P	22 41 11.6	+1.2
DSP	Deep Springs	88.09	43		P	22 41 11.9	+1.7
PNTR	Pine Nut	88.32	41		P	22 41 13.2	+1.6
PNTR				IAmb	IAmb	22 41 13.9	
	comp=Z,6.8nm,0.8s						
LHV	Little Huntoon	88.37	43	P	P	22 41 13.4	+1.9
LHV				IAmb	IAmb	22 41 14.3	
	comp=Z,7.0nm,1.0s						
YBH	Yreka Blue Hor	88.47	38	LR	LR	23 16 35.2	
	comp=Z,9.9nm,18.6s,baz=174,slow=33						
NVAR	Mina Array Bea	88.61	43	P	P	22 41 14.2	+1.3
NVAR	Mina Array Bea	88.61	43	P	P	22 41 12.2	-0.7
	comp=Z,2.3nm,0.7s,baz=219,slow=8.5,SNR=10						
	comp=Z,2.3nm,0.7s						
TPH	Tonopah	89.00	43	P	P	22 41 15.8	+0.9
W13A	Hualapai Mount	89.10	47		P	22 41 16.3	+1.0
W13A				IAmb	IAmb	22 41 18.4	
	comp=Z,4.9nm,1.0s						
SHPR	Sheep Range	89.21	46		P	22 41 16.4	+0.7
TUC	Tucson	89.36	51	P	P	22 41 16.9	+0.4
X16A	Lo Mia Camp, P	90.23	49		P	22 41 20.2	-0.4
X16A				IAmb	IAmb	22 41 23.9	
	comp=Z,5.4nm,0.9s						
LCMT	Little Creek M	90.71	46	P	P	22 41 23.2	+0.5
TIA	Tai'an	90.76	313	P	P	22 41 23.3	+0.5
TIA				pmax	pmax		
	comp=Z,11nm,0.8s						
PINE	Pine Mountain	90.84	37		P	22 41 24.0	+0.7
PINE				IAmb	IAmb	22 41 25.7	
	comp=Z,5.9nm,0.9s						
U15A	North Rim	90.94	47		P	22 41 24.6	+0.6
U15A				IAmb	IAmb	22 41 27.1	
	comp=Z,6.5nm,0.9s						
KNB	Kanab	90.98	46	P	P	22 41 25.1	+1.1
KNB				IAmb	IAmb	22 41 27.1	
	comp=Z,5.6nm,0.9s						
WVOR	Wild Horse Val	91.13	39	P	P	22 41 25.6	+1.1
WVOR				IAmb	IAmb	22 43 34.5	
	comp=Z,15nm,1.9s						
PSUT	Pine Spring	91.31	45	P	P	22 41 26.9	+1.3
PSUT				IAmb	IAmb	22 42 36.0	
	comp=Z,5.6nm,0.7s						
BNX	BinXian	91.36	325	⇓P	P	22 41 25.0	-0.3
BNX				pmax	pmax		
	comp=Z,9.0nm,0.8s						
I07A	Izee	91.79	38	P	P	22 41 28.3	+0.7
MVU	Marysvale	92.29	46	P	P	22 41 31.6	+1.4
MVU				IAmb	IAmb	22 41 45.7	
	comp=Z,5.8nm,1.3s						
TXAR	Lajitas Array	92.55	57	P	P	22 41 32.2	+0.8
	comp=Z,0.7nm,0.9s,baz=205,slow=5.5,SNR=5.0						
	comp=Z,0.7nm,0.9s						
NNA	Nana	92.88	106	LR	LR	23 17 18.7	
	comp=Z,122nm,18.1s,baz=295,slow=32						
G08A	Pilot Rock	92.90	37		P	22 41 32.4	-0.2
G08A				IAmb	IAmb	22 41 34.8	
	comp=Z,3.6nm,1.0s						
MFID	Camas Ranch	93.33	40		P	22 41 35.2	+0.6
MFID				IAmb	IAmb	22 41 36.6	
	comp=Z,3.7nm,0.8s						
SRU	San Rafael Swe	93.70	46	P	P	22 41 37.8	+1.3
SRU				IAmb	IAmb	22 41 56.7	
	comp=Z,6.8nm,1.1s						
CMAR	Chiang Mai Arr	93.98	289	P	P	22 41 37.9	-0.2
	comp=Z,1.2nm,0.8s,baz=153,slow=4.3,SNR=5.2						
	comp=Z,1.2nm,0.8s						
HLID	Hailey	94.20	41		P	22 41 39.5	+0.8
PLID	Pearl Lake	94.33	39	P	P	22 41 39.0	-0.4
PV01	Paradox Valley	94.33	48	P	P	22 41 40.5	+0.9
PV01				IAmb	IAmb	22 43 09.4	
	comp=Z,3.5nm,0.8s						
PZH	PanZhiHua	95.97	297	P	P	22 41 48.4	+1.2
PDAR	Pinedale Array	96.49	43	P	P	22 41 49.7	+0.4
	comp=Z,0.2nm,0.4s,baz=269,slow=5.9,SNR=6.4						
	comp=Z,0.2nm,0.4s						
HHC	Hu-ho-hao-te	97.03	314	eP	P	22 41 54.5	+2.8
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WRH	Wood River Hil	98.14	12	P	Pdif	22 41 56.0	0.0
GCMT	Greycliff	98.24	41	P	Pdif	22 41 56.3	-0.8
HDA	Harding Lake	98.30	13	P	Pdif	22 41 55.9	-0.7
I23K	Minto, Yukon-K	98.53	12	P	Pdif	22 42 00.4	+2.7
J25K	Salcha River,	98.80	13		Pdif	22 42 01.5	+2.6
H24K	Noodor Dome	99.42	12		Pdif	22 42 01.1	-0.6
PRP	Porcupine Dome	99.57	13		Pdif	22 42 01.6	-0.9
MKAR	Makanchi Array	118.55	310	PKP	PKiKP	22 47 06.8	-0.5
	comp=Z,1.1nm,0.7s,baz=218,slow=0.9,SNR=11						
ZALV	Zalesovo Beam	118.86	318	PKP	PKiKP	22 47 07.5	-0.1
	comp=Z,0.4nm,0.4s,baz=92,slow=3.6,SNR=2.3						
KSH	Kashi	120.93	300	PKP	PKiKP	22 47 13.3	+1.0
KSH				sPKP		22 47 25.0	
NRN	Naryn	121.44	302		PKiKP	22 47 13.5	0.0
KURK	Kurchatov	121.85	313		PKiKP	22 47 13.0	-0.5
KURBB	Kurchatov Arra	121.88	313	PKP	PKiKP	22 47 12.6	-1.0
	comp=Z,2.9nm,0.7s,baz=107,slow=1.8,SNR=32						
AAK	Ala-Archa	122.83	303		PKiKP	22 47 15.3	-0.7
KBL	Kabul	124.84	293		PKiKP	22 47 19.6	-0.7
GAR	Garm	125.03	298		PKiKP	22 47 20.0	-0.5
KK31	Karatay Array	125.79	303		PKiKP	22 47 20.5	-1.2
KKAR	Karatay Array	125.79	303		PKiKP	22 47 20.8	-0.9
KKAR	Karatay Array	125.79	303		PKiKP	22 47 20.4	-1.3
BVAR	Borovoye Array	127.21	315	PKP	PKiKP	22 47 23.7	-0.4
	comp=Z,2.8nm,0.8s,baz=102,slow=2.1,SNR=13						
ARTI	Arti	134.03	320		PKiKP	22 47 36.9	-0.9
ARTI	Arti	134.03	320	PKP	PKiKP	22 47 35.8	-2.0
	comp=Z,3.6nm,0.9s,baz=78,slow=1.2,SNR=4.2						
AKTO	Aktyubinsk	134.89	312	PKP	PKiKP	22 47 37.4	-2.4
	comp=Z,2.1nm,0.5s,baz=264,slow=1.2,SNR=5.9						
ARCES	ARCESS Array B	139.45	348	PKhKP	PKPpre	22 47 42.2	
	comp=Z,2.1nm,0.7s,baz=33,slow=3.1,SNR=1.6						
GNI	Garni	144.73	297		PKPdf	22 47 55.9	-0.8
KBZ	Khabaz	145.83	303	PKPbc	PKiKP	22 47 58.9	-3.4
	comp=Z,10nm,1.0s,baz=80,slow=3.9,SNR=17						
KIV	Kislovodsk	145.95	303		PKPab	22 47 58.6	-1.2
KIV	Kislovodsk	145.95	303	⇓P	PKiKP	22 47 59.7	-3.0
KARS	Kars	145.99	297		PKiKP	22 48 00.3	-2.6
FIA1	FINESS Array S	146.02	340		PKiKP	22 47 58.9	-3.2
FINES	FINESS Array B	146.02	340		PKiKP	22 47 58.5	-3.7
FINES	FINESS Array B	146.02	340	PKPbc	PKiKP	22 47 58.3	-3.8
	comp=Z,35nm,0.8s,baz=64,slow=4.4,SNR=88						
OBN	Obninsk	146.02	325		PKiKP	22 47 58.3	-4.0
OBN	Obninsk	146.02	325	⇓P	PKiKP	22 47 59.3	-3.0
GEVA	Gevas	146.05	293		PKPab	22 47 59.1	-1.4
MARD	Mardin	147.85	291		PKiKP	22 48 04.7	-2.2
KOPT	Kop Dagi	147.99	297		PKiKP	22 48 05.2	-2.1
NB201	NORSAR Array S	149.58	351		PKPab	22 48 12.3	-1.3
NB2	NORSAR Subarra	149.60	352	PKP	PKiKP	22 48 08.6	-1.0
	comp=Z,2.1nm,0.7s,baz=10,slow=2.6						
NOA	NORSAR Array B	149.60	352	PKPbc	PKiKP	22 48 08.2	-1.4
	comp=Z,4.1nm,0.8s,baz=13,slow=4.2,SNR=20						
HFS	Hagfors	150.10	349	PKPbc	PKiKP	22 48 09.3	-1.3
	comp=Z,8.7nm,0.8s,baz=27,slow=1.7,SNR=19						
MNK	Minsk	150.45	329	i PKiKP	PKiKP	22 48 11.6	+0.2
	comp=E,15nm,1.1s						
MNK				i PKiKP	PKiKP	22 48 11.6	+0.2
	comp=N,6.0nm,1.0s						
MNK				i PKiKP	PKiKP	22 48 11.6	+0.2
	comp=Z,32nm,0.9s,baz=48						
MNK				i PP	PP	22 51 46.6	0.0
MNK				i PPP	PPP	22 55 09.0	
MNK				i SKS	SKSdf	22 55 10.1	-0.1
MNK				i SS	SS	23 11 04.5	+1.5
MNK				i SSS	SSS	23 16 46.1	
NACGM	Naroch	150.65	331	⇑i PKiKP	PKiKP	22 48 09.8	-2.1
	comp=Z,22nm,0.9s,baz=46						
GAZ	Gaziantep	150.70	291	PKPbc	PKiKP	22 48 12.5	-0.2
PABE	Paberze	151.32	334		PKiKP	22 48 12.5	-0.7
BNN	Bunyan	151.68	295		PKiKP	22 48 14.9	+0.1
DIKM	Dikmen	151.73	301	⇓P	PKiKP	22 48 15.2	+0.6
MMAI	Mount Meron Ar	152.04	282	PKPbc	PKiKP	22 48 16.2	+0.7
	comp=Z,19nm,0.8s,baz=86,slow=3.4,SNR=48						
AKASG	Malin Array Be	152.14	322		PKiKP	22 48 14.8	-0.3
AKASG	Malin Array Be	152.14	322	PKPbc	PKiKP	22 48 14.6	-0.5
	comp=Z,7.9nm,0.8s,baz=50,slow=2.8,SNR=37						
AKBB	Malin Array Si	152.14	322		PKiKP	22 48 14.9	-0.2
AKBB	Malin Array Si	152.14	322	PKP	PKPdf	22 48 07.6	-0.5
KIEV	Kiev	152.16	322		PKiKP	22 48 14.1	-1.0
KIEV	Kiev	152.16	322	⇑P	PKiKP	22 48 14.3	-0.8
BZK	Bozkurt	152.58	302		PKiKP	22 48 16.5	+0.2
BZK	Bozkurt	152.58	302	⇓P	PKiKP	22 48 17.0	+0.8
SUW	Suwalki	152.75	333	ePKP	PKPab	22 48 25.1	-1.8
ILGA	Ilgaz	152.98	300		PKiKP	22 48 17.9	+0.4
KIRS	Kirsehir-Merke	153.14	296	⇑P	PKiKP	22 48 17.4	-0.3
BR131	Keskin Array S	153.27	297		PKiKP	22 48 18.2	+0.2
BRTR	Keskin Array B	153.27	297		PKiKP	22 48 17.9	-0.1
BRTR	Keskin Array B	153.27	297	PKPbc	PKiKP	22 48 17.6	-0.3
	comp=Z,5.7nm,0.9s,baz=126,slow=3.0,SNR=31						
CIDE	Kastamonu/Cide	153.37	302	⇑P	PKPab	22 48 28.1	-1.9
RNPP9	Sopachiv	153.39	326	PKP	PKPdf	22 48 09.6	-0.3
CSS	Mathiatis	153.86	287		PKiKP	22 48 18.4	-0.8
ANTO	Ankara	153.89	298	⇑P	PKiKP	22 48 19.8	+0.6
DBIC	Dimbokro	154.66	163	PKPbc	PKiKP	22 48 22.4	+1.0
	comp=Z,4.8nm,0.9s,baz=228,slow=5.8,SNR=3.8						
DBIC				PKPab	PKPab	22 48 36.7	+0.7
	comp=Z,6.2nm,1.1s,baz=41,slow=1.9,SNR=3.6						
TPGR	Topolog	155.51	311	⇑P	PKPab	22 48 39.6	+0.5
CFR	Carcaliu	155.55	312	⇑P	PKPdf	22 48 22.7	+10
EKA	Eskdalemuir Ar	155.57	8	PKPab	PKPab	22 48 38.8	0.0
	comp=Z,0.7nm,0.5s,baz=357,slow=2.4,SNR=2.0						
TUDR		155.66	313	⇓P	PKPab	22 48 42.7	+3.1
TESR	Tescani	155.84	316	⇑P	PKPab	22 48 40.3	0.0
HARR	Harsova	155.90	311	⇓P	PKPab	22 48 40.7	+0.1
BURAR	Bucovina Array	156.06	320	⇑P	PKPab	22 48 25.5	-16
KWP	Kalwaria Pacla	156.09	326	ePKP	PKPab	22 48 39.0	-2.4
VRI	Vrincioaia	156.11	315	⇓P	PKPab	22 48 43.0	+1.4
PLOR	Plostina	156.17	315	⇑P	PKPab	22 48 39.6	-2.3
TURR	Turia	156.45	316	⇑P	PKPab	22 48 43.3	+0.2
BSEG	Bad Segeberg	156.58	348	ePKPab	PKPab	22 48 43.1	0.0
	baz=23,slow=4.4						
KOLS	Kolonicke sedl	156.77	325	ePKP	PKPab	22 48 44.5	+0.2
MLR	Muntele Rosu	156.77	315	⇑P	PKPab	22 48 44.8	+0.2
DOPR	Dopca	156.87	316	⇑P	PKPab	22 48 45.7	+0.9
STHS	Stebnicka Huta	156.93	327	ePKP	PKPab	22 48 45.4	+0.4
NIE	Niedzica	157.36	329	ePKP	PKPab	22 48 46.7	-0.1
CBBR	Cluj-Babes-Bol	157.48	320	⇓P	PKPab	22 48 47.6	+0.1
MARR	Marisel-Cluj	157.77	320	⇓P	PKPab	22 48 48.6	-0.2
KSP	Ksiaz	157.83	336	ePKP	PKPab	22 48 49.0	+0.3
HUMR	Humele	157.84	313	⇓P	PKPab	22 48 48.2	-0.9
RETH	Rethem/Aller,	157.89	349	ePKPab	PKPab	22 48 49.0	+0.1
	baz=23,slow=4.4						
DRGR		157.93	321	⇑P	PKPab	22 48 49.7	+0.3
NRDL	Niedersach Rie	158.00	347	ePKPab	PKPab	22 48 49.2	-0.1
	baz=23,slow=4.4						
OSTC	Ostas	158.09	336	ePKPAB	PKPab	22 48 51.3	+1.4
CHVC	Chvalec	158.12	336	ePKPAB	PKPab	22 48 50.3	+0.2
ASSE	Asse, Remlinge	158.23	346	ePKPab	PKPab	22 48 50.1	-0.2
	baz=23,slow=4.4						
DPC	Dobruska-Polom	158.23	335	ePKPAB	PKPab	22 48 50.6	+0.1
MORC	Moravsky Berou	158.24	333	ePKP	PKPab	22 48 50.0	-0.6
KRLC	Kraliky	158.29	334	ePKPAB	PKPab	22 48 50.7	-0.1
CLL	Collm	158.44	342	ePKPab	PKPab	22 48 51.0	-0.3
	baz=23,slow=4.4						
CLL	Collm	158.44	342	i PKPab	PKPab	22 48 50.3	-1.0
	comp=Z,7.0nm,0.9s						
CLL				ex	x	22 49 00.0	
IBBN	Ibbenburen	158.56	351	ePKPab	PKPab	22 48 51.9	+0.1
	baz=23,slow=4.4						
BRG	Berggiesshubel	158.56	340	ePKPab	PKPab	22 48 51.3	-0.6
	baz=23,slow=4.4						
BRG	Berggiesshubel	158.56	340	ePKP	PKPab	22 48 40.4	-11
BRG				Amp		22 48 42.5	
	comp=Z,1.8nm,0.8s						
BRG	Berggiesshubel	158.56	340	P	PKPab	22 48 51.8	-0.1
BRG				Amp		22 48 52.5	
	comp=Z,5.4nm,0.8s						
BRG	Berggiesshubel	158.56	340	P	PKPab	22 48 59.7	+7.8
BRG				Amp		22 49 01.5	
	comp=Z,2.9nm,0.8s						
PSZ	Piszkesteto	158.62	326		PKPab	22 48 51.9	-0.5
PSZ	Piszkesteto	158.62	326	⇑P	PKPab	22 48 53.0	+0.6
PVCC	Panska Ves	158.67	338	ePKPAB	PKPab	22 48 53.0	+0.6
VYHS	Vyhne	158.69	329	ePKP	PKPab	22 48 53.0	+0.4
SURR	Surduc	158.88	319	⇓P	PKPab	22 48 53.6	+0.1
JAVC	Velka Javorina	158.91	331	ePKP	PKPab	22 48 53.5	-0.1
GTTG	Gottingen	158.93	347	ePKPab	PKPab	22 48 53.2	-0.2
	baz=23,slow=4.4						
VRAC	Vranov	158.99	333	ePKP	PKPab	22 48 53.6	-0.2
VRAC	Vranov	158.99	333	⇑P	PKPab	22 48 54.1	+0.3
HERR	Herculane	159.21	317	⇓P	PKPab	22 48 54.7	-0.3
BZS	Buzias	159.24	319	⇓P	PKPab	22 48 54.6	-0.5
KRUC	Moravsky	159.26	333	ePKP	PKPab	22 48 54.4	-0.6
TANN	Tannenbergstha	159.39	341	ePKPab	PKPab	22 48 55.6	0.0
	baz=23,slow=4.4						
MOX	Moxa	159.40	343	ePKPab	PKPab	22 48 55.2	-0.3
	baz=23,slow=4.4						
MODS	Modra-Piesok	159.45	331	ePKP	PKPab	22 48 56.1	+0.2
MDVR	Moldovita	159.68	317	⇑P	PKPab	22 48 57.2	+0.1
ZVC	Zvikov	159.73	337	ePKPAB	PKPab	22 48 56.9	-0.1
MANZ	Manzenberg	159.88	342	ePKPab	PKPab	22 48 58.2	+0.6
	baz=23,slow=4.4						
ROTZ	Rotzenmuhle	160.05	341	ePKPab	PKPab	22 48 58.5	+0.1
	baz=23,slow=4.4						
KHC	Kasperske Hory	160.20	338	ePKPAB	PKPab	22 48 59.4	+0.3
CKRC	Cesky Krumlov	160.23	336	ePKPAB	PKPab	22 48 59.3	+0.1
GRF	Grafenberg Arr	160.38	343	ePKPab	PKPab	22 48 59.5	-0.3
	baz=23,slow=4.4						
CONA	Conrad Observa	160.39	332	i PKP	PKPab	22 49 00.3	+0.3
	comp=Z,2.1nm,0.6s						
RONA	Rosalia, Austr	160.39	331	i PKP	PKPab	22 49 00.2	+0.2
	comp=Z,7.7nm,1.0s						
GEC2	GERESS Array S	160.41	337	ePKPab	PKPab	22 48 59.5	-0.6
	baz=23,slow=4.4						
GERES	GERESS Array B	160.41	337	PKPab	PKPab	22 48 59.8	-0.3
	comp=Z,1.8nm,0.7s,baz=46,slow=2.8,SNR=8.9						
WET	Wettzell	160.41	339	ePKPab	PKPab	22 48 59.4	-0.7
	baz=23,slow=4.4						
TNS	Taunus Mts	160.47	348	ePKPab	PKPab	22 49 00.0	-0.2
	baz=23,slow=4.4						
MOA	Molln	161.06	335	i PKP	PKPab	22 49 03.4	+0.5
	comp=Z,6.0nm,1.3s						
BIOA	Bad Ischl, Aus	161.42	336	ePKP	PKPab	22 49 04.6	+0.1
	comp=Z,4.3nm,0.7s						
RJOB	Jochberg	161.67	337	ePKPab	PKPab	22 49 05.4	-0.3
	baz=23,slow=4.4						
SOKA	Soboth	161.73	331	i PKP	PKPab	22 49 05.8	-0.2
	comp=Z,7.8nm,1.5s						
FUR	Furstenfeldbru	161.76	341	ePKPab	PKPab	22 49 06.0	0.0
	baz=23,slow=4.4						
LESA	Schwarzleotal	161.99	337	ePKP	PKPab	22 49 07.0	0.0
	comp=Z,4.8nm,1.0s						
TORD	Torodi Ar. Bea	162.01	178	PKP	PKPdf	22 48 22.1	+0.4
	comp=Z,162nm,0.4s,baz=128,slow=1.1,SNR=1.8						
TORD				PKPab	PKPab	22 49 08.5	+0.7
	comp=Z,94nm,0.3s,baz=177,slow=4.3,SNR=1.4						
OBKA	Obir	162.06	332	ePKP	PKPab	22 49 07.5	+0.1
	comp=Z,11nm,1.6s						
MYKA	Terra Mystica	162.32	334	i PKP	PKPab	22 49 07.8	-0.7
	comp=Z,8.2nm,1.0s						
WATA	Walderalm	162.42	339	i PKP	PKPab	22 49 08.8	-0.2
	comp=Z,3.9nm,0.7s						
WTTA	Wattenberg	162.46	339	i PKP	PKPab	22 49 09.3	+0.1
	comp=Z,7.8nm,0.9s						
RETA	Reutte	162.52	341	i PKP	PKPab	22 49 09.4	0.0
	comp=Z,6.2nm,0.8s						
UBR	Ueberruh	162.52	342	ePKPab	PKPab	22 49 09.0	-0.3
	baz=23,slow=4.4						
MOTA	Moosalm	162.55	340	i PKP	PKPab	22 49 09.7	+0.1
	comp=Z,12nm,1.0s						
ABTA	Abfaltersbach	162.63	336	i PKP	PKPab	22 49 09.3	-0.5
	comp=Z,4.9nm,1.2s						
SQTA	Sankt Quirin	162.63	339	i PKP	PKPab	22 49 10.5	+0.6
	comp=Z,9.0nm,0.9s						
DAVA	Damuels	162.94	342	ePKP	PKPab	22 49 10.9	-0.4
	comp=Z,4.8nm,0.8s						
FETA	Feichten	162.95	340	i PKP	PKPab	22 49 11.3	-0.1
	comp=Z,5.9nm,1.2s						
FUORN	Ofenpass-Fuorn	163.45	341		PKPab	22 49 13.7	0.0
ESDC	Sonseca Array	170.10	30	PKP	PKPdf	22 48 29.1	+1.6
	comp=Z,0.5nm,0.9s,baz=267,slow=0.4,SNR=4.6						
ESDC				PKPab	PKPab	22 49 43.1	+0.1
	comp=Z,0.9nm,0.9s,baz=310,slow=4.3,SNR=5.0						

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*VAO **16** 22:50:40.4±0.8, 24°.15S×67°.03W, h143^{km}±8^{km}, mb4.8*

*SJA **16** 22:50:44.1±0.7, 24°.14S×66°.92W, h220^{km}±10^{km}, ML5.1, MW4.8*

*NEIC **16** 22:50:45, 24°.15S×66°.81W, h190^{km}, Moment Tensor Solution. Duration: 1^{s}3 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.86; $M_{\theta\theta}$-0.20; $M_{\phi\phi}$2.06; $M_{r\theta}$0.41; $M_{\theta\phi}$0.56; $M_{\phi r}$-0.23; Fault plane solution: $M_0$2.10000×10^{16} NP1: ϕ_s208.01000°, δ45.16000°, λ-68.12000°. NP2: ϕ_s358.35000°, δ48.85000°, λ-110.54000°. Principal axes: T 2.1957, Plg2.0000°, Azm103.0000°; N -0.2080, Plg15.0000°, Azm12.0000°; P -1.9876, Plg75.0000°, Azm200.0000°;*

*NEIC **16** 22:50:45.1±1.5, 24°.14S±0°.06×66°.83W±0°.08, h184^{km}±4^{km}, mb4.7/287, Mww4.8/22, Mwr4.9(GUC) Error ellipse: s-maj=11.2km s-min=8.8km az=84.0*

*IDC **16** 22:50:45.1±1.6, 24°.08S×66°.76W, h184^{km}±14^{km}, mb4.3/15, mbtmp4.8/22, MS3.8/2, Error ellipse: s-maj=14.1km s-min=8.9km az=73.0*

*GUC **16** 22:50:45.5±0.7, 24°.25S×66°.87W, h204^{km}±7^{km}, ML5.1*

*NEIC **16** 22:50:45, 24°.15S×66°.81W, h190^{km}*

*GCMT **16** 22:50:49.0±0.4, 23°.93S±0°.03×66°.78W±0°.03, h221^{km}±3^{km}, MW5.1/78, Moment Tensor Solution. s27,c28; s78,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.78±.18; $M_{\theta\theta}$-1.65±.20; $M_{\phi\phi}$6.43±.26; $M_{r\theta}$0.05±.16; $M_{\theta\phi}$-1.11±.25; $M_{\phi r}$-0.35±.22; Best double couple: $M_0$5.69100×10^{16} NP1: ϕ_s172.00000°, δ43.00000°, λ-90.00000°. NP2: ϕ_s352.00000°, δ47.00000°, λ-90.00000°. Principal axes: T 6.5910, Plg2.0000°, Azm82.0000°; N -1.8000, Plg0.0000°, Azm352.0000°; P -4.7910, Plg88.0000°, Azm261.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 22:50:45.1±0.6**, 24°.13S**±0°.04×**66°.89W**±0°.04**, h188**^{km}±5^{km}**, n385,** σ1^{s}**19**/302**, mb4.7**/149**, 17C-6D, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALTA		0.52	101	⇓iP	Pn	22 51 14.2	+2.7
SALTA				eS	Sn	22 51 34.8	+2.9
AF01	San Pedro de A	1.66	314		Pn	22 51 21.9	+2.2
AF01	San Pedro de A	1.66	314	⇑iP	Pn	22 51 22.2	+2.6
AF01				eS	Sn	22 51 49.9	+3.5
AF01	San Pedro de A	1.66	314	eP	Pn	22 51 22.0	+2.4

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AF01                                 IAML              22 52 17.6
          comp=Z,7µm,0.7s
FSA    Cafayete           2.14 157  eP       Pn        22 51 26.3 +1.9
FSA                                 eS       Sn        22 51 55.9 +0.7
GO02   Mina Guanaco       2.66 247           Pn        22 51 31.6 +1.2
GO02   Mina Guanaco       2.66 247⇑iP        Pn        22 51 31.8 +1.4
GO02   Mina Guanaco       2.66 247  eP       Pn        22 51 31.9 +1.4
GO02                                eS       Sn        22 52 07.0 +1.2
PB06   IPOC Station P     2.84 299           Pn        22 51 33.6 +1.3
PB06   IPOC Station P     2.84 299⇑iP        Pn        22 51 33.8 +1.4
PB06   IPOC Station P     2.84 299  eP       Pn        22 51 33.8 +1.4
PB06                                eS       Sn        22 52 09.5 +0.2
PB06                                 IAML              22 52 10.6
          comp=Z,6µm,0.6s
PB09   IPOC Station P     3.17 317           Pn        22 51 38.0 +1.6
PB09   IPOC Station P     3.17 317⇑iP        Pn        22 51 38.0 +1.6
PB09   IPOC Station P     3.17 317  eP       Pn        22 51 37.4 +1.0
PB09                                eP                 22 51 38.0
PB09                                eS       Sn        22 52 16.9 +0.4
PB09                                 IAML              22 52 20.0
          comp=Z,4µm,0.5s
PB14   IPOC Station P     3.24 260           Pn        22 51 37.8 +0.5
PB14   IPOC Station P     3.24 260⇑iP        Pn        22 51 37.9 +0.5
PB14   IPOC Station P     3.24 260  eP       Pn        22 51 38.0 +0.7
PB14                                eS       Sn        22 52 17.1 -1.0
PB05   IPOC Station P     3.29 292           Pn        22 51 38.6 +0.8
PB05   IPOC Station P     3.29 292⇑iP        Pn        22 51 38.5 +0.7
PB05   IPOC Station P     3.29 292  eP       Pn        22 51 38.6 +0.8
PB05                                eS       Sn        22 52 18.4 -0.5
PB05                                 IAML              22 52 25.1
          comp=Z,3µm,1.3s
PB03   IPOC Station P     3.35 308⇑iP        Pn        22 51 39.3 +0.8
PB03   IPOC Station P     3.35 308  eP       Pn        22 51 38.7 +0.2
AC02   Maricunga          3.37 216           Pn        22 51 40.0 +0.9
AC02   Maricunga          3.37 216⇑iP        Pn        22 51 40.5 +1.4
AC02   Maricunga          3.37 216  eP       Pn        22 51 40.1 +0.9
PB10   IPOC Station P     3.41 280           Pn        22 51 39.8 +0.7
PB10   IPOC Station P     3.41 280⇑iP        Pn        22 51 40.0 +0.9
PB10   IPOC Station P     3.41 280  eP       Pn        22 51 40.0 +0.9
PB10                                eS       Sn        22 52 21.3  0.0
PB01   IPOC Station P     3.89 321           Pn        22 51 45.2  0.0
PB01   IPOC Station P     3.89 321⇑iP        Pn        22 51 45.6 +0.3
PB01   IPOC Station P     3.89 321  eP       Pn        22 51 45.0 -0.2
AC01   Pan de Azucar      3.92 238           Pn        22 51 45.0 -0.4
AC01   Pan de Azucar      3.92 238  eP       Pn        22 51 44.7 -0.7
AC01   Pan de Azucar      3.92 238  eP       Pn        22 51 44.3 -1.1
PATCX  Punta Patache      4.46 317   Pn      Pn        22 51 51.8 -0.6
AC06   Mina Casimiro      4.48 223           Pn        22 51 51.9 -0.7
AC06   Mina Casimiro      4.48 223⇑iP        Pn        22 51 51.9 -0.7
PB08   IPOC Station P     4.49 332           Pn        22 51 54.0 +1.0
PB08   IPOC Station P     4.49 332⇑iP        Pn        22 51 54.1 +1.0
GO03   Copiapo            4.58 220           Pn        22 51 53.1 -0.8
GO03   Copiapo            4.58 220⇑iP        Pn        22 51 53.0 -0.9
TA01   Diego Aracena      4.67 319           Pn        22 51 54.6 -0.5
TA01   Diego Aracena      4.67 319  i P      Pn        22 51 53.8 -1.2
HMBC   Humberstone        4.73 323           Pn        22 51 54.6 -1.3
HMBC   Humberstone        4.73 323⇑iP        Pn        22 51 54.9 -1.1
TA02   Huaiquique         4.87 321           Pn        22 51 56.3 -1.2
GO01   Chusmiza           4.92 334           Pn        22 51 59.0 +0.3
GO01   Chusmiza           4.92 334⇑iP        Pn        22 51 58.8  0.0
PB11   IPOC Station P     5.04 329           Pn        22 51 59.0 -1.0
PB11   IPOC Station P     5.04 329⇑iP        Pn        22 51 59.1 -0.9
AC04   Llanos de Chal     5.53 222           Pn        22 52 04.8 -1.2
AC04   Llanos de Chal     5.53 222  eP       Pn        22 52 04.5 -1.5
LCO    Las Campanas       5.94 214           Pn        22 52 10.4 -1.2
PB16   IPOC Station P     6.26 337           Pn        22 52 15.8 -0.3
CO01   Juntas del Tor     6.49 205           Pn        22 52 18.9 +0.1
AP01   Chacalluta         6.57 330           Pn        22 52 19.0 -0.6
PB18   Visviri            6.94 339           Pn        22 52 25.4 +0.4
GO04   Tololo Observa     6.96 209           Pn        22 52 23.2 -1.7
CO03   El Pedregal        7.49 206           Pn        22 52 30.0 -1.7
CFA    Coronel Fontan     7.54 189   P       Pn        22 52 31.4 -1.0
          comp=Z,8.8nm,0.3s,baz=255,slow=21,SNR=237
CFA                                  S       Sn        22 53 50.9 -6.6
          comp=Z,47nm,0.4s,baz=192,slow=17,SNR=22
CO06   Fray Jorge         7.76 212   Pn      Pn        22 52 32.5 -2.7
LPAZ   La Paz             7.88 351           Pn        22 52 37.6 +0.1
LPAZ   La Paz             7.88 351   P       Pn        22 52 38.1 +0.6
          comp=Z,23nm,0.4s,baz=124,slow=4.7,SNR=108
LPAZ                                 S       Sn        22 54 03.6 -3.0
          comp=Z,50nm,0.8s,baz=2.3,slow=20,SNR=5.2
CO02   Combarbal          7.93 206           Pn        22 52 35.4 -2.2
MURT   Porto Murtinho     8.90  76  eP       Pn        22 52 47.9 -2.3
CPUP   Villa Florida      8.93 106           Pn        22 52 49.1 -1.4
CPUP   Villa Florida      8.93 106   P       Pn        22 52 49.9 -0.7
          comp=Z,7.4nm,0.9s,baz=146,slow=12,SNR=40
VA03   San Esteban        9.19 200           Pn        22 52 53.5 -0.4
VA06   Catapilco          9.25 204           Pn        22 52 51.9 -2.8
MT08   Bocatoma Ro        9.68 196   Pn      Pn        22 52 59.9 -0.6
SIV    San Ignacio        9.77  35   P       Pn        22 53 00.4 -1.2
          comp=Z,11nm,0.3s,baz=213,slow=13,SNR=76
SIV                                  S       Sn        22 54 36.9  -14
          comp=Z,21nm,1.0s,baz=228,slow=14,SNR=6.5
MT16   CCHEN              9.80 198           Pn        22 53 01.0 -0.8
MT05   Renca              9.83 199           Pn        22 53 00.2 -2.1
MT02   Curacav            9.83 201           Pn        22 52 59.5 -2.7
MT03   Universidad Ad     9.86 198           Pn        22 53 01.2 -1.4
SJPY   San Joaquin        9.86  97  eP       Pn        22 53 01.2 -1.5
LMEL   Las Melosas       10.11 196           Pn        22 53 06.2 +0.2
MT09   Talagante         10.26 200           Pn        22 53 05.3 -2.7
BO04   La Punta          10.35 197           Pn        22 53 08.1 -0.9
MT01   Popeta            10.42 200           Pn        22 53 07.9 -2.0
ITQB   Itaqui            10.70 123           Pn        22 53 13.0 -0.5
BO01   Tunca             10.86 199           Pn        22 53 14.6 -1.0
AQDB   Aquidauana        10.98  73  eP       Pn        22 53 14.8 -2.5
BO02   Sierra Bellavi    11.15 197           Pn        22 53 19.2 -0.3
PTLB   Pontes e Lacer    11.30  42           Pn        22 53 20.7 -0.7
ML02   Panimavida        12.24 198           Pn        22 53 33.2 -0.1
RPRD   Ribas do Rio P    12.74  76  eP       Pn        22 53 37.4 -2.4
VILB   Vilhena           12.79  31   Pn      Pn        22 53 40.4 -0.1
VILB   Vilhena           12.79  31  eP       Pn        22 53 37.8 -2.7
BI02   San Fabin de      13.05 196           Pn        22 53 42.9 -0.7
TRCB   Terra Rica        13.16  87           Pn        22 53 44.3 -0.7
TRCB   Terra Rica        13.16  87  eP       Pn        22 53 43.1 -1.9
SALV   Santo Antonio     13.33  54  eP       Pn        22 53 44.5 -2.6
CPSB   Cacapava Do Su    13.50 121  eP       Pn        22 53 46.3 -2.9
PTGB   Pitanga           13.52  96  eP       Pn        22 53 48.5 -1.1
ITAB   Concordia         13.67 106           Pn        22 53 50.7 -0.6
ITAB   Concordia         13.67 106  eP       Pn        22 53 49.8 -1.5
BI05   Punta Hualpn      13.70 202           Pn        22 53 51.1 -0.5
PLTB   Pedras Altas      13.99 126           Pn        22 53 54.5 -0.7
PLTB   Pedras Altas      13.99 126  eP       Pn        22 53 53.4 -1.8
H03N1  Juan Fernandez    14.03 226   T       T         23 06 48.7
          baz=43,slow=72,SNR=27
H03N2  Juan Fernandez    14.04 226   T       T         23 06 39.2
          baz=43,slow=72,SNR=13
H03N3  Juan Fernandez    14.05 226   T       T         23 06 41.2
          baz=43,slow=72,SNR=6.3
PCMB   Pacaembu          14.63  83  eP       Pn        22 54 01.9 -1.4
CNLB   Canela            15.23 113  eP       Pn        22 54 09.5 -1.2
NNA    Nana              15.33 320           P         22 54 13.3 +0.9
NNA    Nana              15.33 320   P       P         22 54 12.7 +0.2
          comp=Z,63nm,0.9s,baz=151,slow=11,SNR=13
NNA                                  S       Sn        22 56 60.0 -3.6
          comp=Z,6.6nm,0.6s,baz=241,slow=5.0,SNR=1.7
PDRB   Porto dos Gac     15.75  40  eP       P         22 54 16.8 -0.4
FRTB   Fartura           15.89  91  eP       P         22 54 18.1 -0.6
ITRB   Iturama           15.96  77  eP       P         22 54 18.6 -0.8
LR03   Panguipulli       16.13 195           Pn        22 54 21.7 +0.2
MAJ01  Sao Joao Batis    16.43 105  eP       Pn        22 54 23.9 -1.3
ARAG   Araguaiana, MT    16.46  62  eP       Pn        22 54 25.0 -0.6
LR05   Currie            16.62 194           Pn        22 54 27.2 -0.1
LR04   Corral            16.65 198           Pn        22 54 26.9 -0.7
PLCA   Paso Flores       16.84 190   P       Pn        22 54 29.7 -0.3
          comp=Z,13nm,0.6s,baz=10.0,slow=13,SNR=39
PLCA                                 PcP     PcP       22 59 06.7 +0.9
          comp=Z,4.4nm,0.8s,baz=257,slow=22,SNR=4.7
PLCA   Paso Flores       16.84 190  eP       P         22 54 26.9 -2.0
CLDB   Colider           16.89  41  eP       Pn        22 54 29.4 -1.3
CZSB   Cruzeiro do Su    17.23 340   P       P         22 54 32.3 -1.0
CZSB   Cruzeiro do Su    17.23 340  eP       P         22 54 32.3 -1.0
SPB    Sao Paulo         17.81  92   P       Pn        22 54 39.5 -2.1
SPB    Sao Paulo         17.81  92  eP       Pn        22 54 39.9 -1.7
PET01  Itanhaem-SP       17.90  95  eP       Pn        22 54 40.7 -1.9
LL05   Los Muermos       18.09 196   P       P         22 54 42.6 +0.1
VAO    Valinhos          18.30  91           P         22 54 44.1 -1.1
VAO    Valinhos          18.30  91  eP       P         22 54 44.6 -0.6
IPMB   Ipameri, GO       18.47  74  eP       Pn        22 54 47.0 -2.4
LL01   San Ignacio de    18.77 193   P       P         22 54 50.2 +0.3
LL06   Loncomilla        18.89 196           P         22 54 51.5 +0.3
SNDB   Serra Nova Dou    19.11  53  eP       P         22 54 53.3 -0.5
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LL07   Hotel Espejo d    19.44 195   P       P         22 54 57.8 +0.7
LL02   Futaleuf          19.45 191           P         22 54 57.8 +0.6
BDFB   Brasilia          19.64  68           P         22 54 59.4 -0.3
BDFB   Brasilia          19.64  68   P       P         22 54 59.2 -0.5
          comp=Z,54nm,0.8s,baz=238,slow=11,SNR=89
GO07   Milladeo Hill,    19.75 195   P       P         22 55 00.5 +0.1
PMNB   Patos De Minas    19.84  78  eP       P         22 55 00.9 -0.9
SLP01  Ubatuba-SP        19.92  92  eP       P         22 55 01.1 -1.5
TBTG   Tabatinga, AM     20.04 351   P       P         22 55 04.3 +0.5
TBTG   Tabatinga, AM     20.04 351  eP       P         22 55 04.3 +0.5
ATAH   Atahualpa         20.18 325   P       P         22 55 06.8 +1.1
          comp=Z,2.0nm,0.4s,baz=294,slow=20,SNR=1.9
TEFE   Tefe              20.61   6  eP       P         22 55 09.3 -0.6
BSCB   Bom Sucesso       20.66  86  eP       P         22 55 09.8 -0.7
VAS01  Vassouras-RJ      21.63  90  eP       P         22 55 20.3 -0.3
COYC   Coyhaique         21.81 190           P         22 55 21.4 -0.8
ITTB   Itaituba          22.40  30  eP       P         22 55 26.0 -2.1
AY03   Cochrane          23.52 190           P         22 55 38.3 +0.3
AY03                                 IAmb    IAmb      22 55 39.9
          comp=Z,22nm,1.1s
COHC   Cochancay         24.63 329           P         22 55 48.8 +0.5
FLOC   Florencia         26.93 340           P         22 56 09.1  0.0
FLOC                                 IAmb    IAmb      22 56 10.9
          comp=Z,18nm,0.8s
ROSC   El Rosal          29.69 345   P       P         22 56 33.9  0.0
          comp=Z,4.9nm,0.5s,baz=123,slow=23,SNR=1.8
ROSC                                 LR      LR        23 12 12.5
          comp=Z,263nm,18.1s,baz=78,slow=43
          comp=Z,4.9nm,0.5s
RUSC   La Rusia          30.44 348           P         22 56 40.0 -0.6
RUSC                                 IAmb    IAmb      22 56 43.8
          comp=Z,11nm,0.9s
MG01   Puerto William    30.77 181   P       P         22 56 42.9 +0.3
MPGF   Montagnes des     32.21  27   P       P         22 56 54.9 -0.7
BAUV   El Baul           32.89 358           P         22 57 00.5 -1.0
SDV    Santo Domingo     33.01 353  eP       P         22 57 01.3 -1.5
LCR2   La Lucha 2        37.58 332   P       P         22 57 41.6 -0.2
LCR2                                 IAmb    IAmb      22 57 45.4
          comp=Z,12nm,0.7s
JTS    Las Juntas de     38.49 331   P       P         22 57 52.0 +2.8
SJG    San Juan          41.99   1   P       P         22 58 16.6 -1.2
SJG                                  IAmb    IAmb      22 58 17.1
          comp=Z,45nm,1.2s
SJG    San Juan          41.99   1   P       P         22 58 15.8 -2.0
SMAI   San Martin Ant    44.01 180   P       P         22 58 33.7 +0.2
SMAI                                 IAmb    IAmb      22 58 35.6
          comp=Z,22nm,0.8s
TEIG   Tepich            48.76 333   P       P         22 59 11.1 +0.1
SOR    Soroa             49.20 340           P         22 59 14.5 +0.3
SOR                                  IAmb    IAmb      22 59 15.6
          comp=Z,25nm,0.9s
BELA   Belgrano 2        55.90 172           P         23 00 03.1 +0.3
VNA3   Neumayer Olymp    57.00 161 ⇓P        P         23 00 11.6 +1.0
          comp=Z,35nm,0.7s
VNA1   Neumayer--Stat    57.20 160 ⇓P        P         23 00 13.5 +1.5
          comp=Z,25nm,0.9s
VNA2   Neumayer--Watz    57.57 160 ⇓P        P         23 00 15.7 +1.1
          comp=Z,35nm,0.7s,baz=280,slow=8.6
ZAIG   Zacatecas         58.09 321   P       P         23 00 19.6 +0.5
ZAIG                                 IAmb    IAmb      23 00 22.4
          comp=Z,13nm,1.2s
NHSC   New Hope          58.31 347           P         23 00 20.6 +0.5
154A   Montrose          58.51 344   P       P         23 00 21.5  0.0
250A   Grady             58.78 341   P       P         23 00 23.0 -0.4
250A                                 IAmb    IAmb      23 00 24.2
          comp=Z,18nm,0.8s
152A   Waverly Hall      58.98 342   P       P         23 00 24.6 -0.3
152A                                 IAmb    IAmb      23 00 25.4
          comp=Z,13nm,1.0s
SNAA   Sanae             59.20 161 ⇓P        P         23 00 26.7 +0.8
          comp=Z,430nm,0.6s
SNAA   Sanae             59.20 161           P         23 00 26.7 +0.8
SNAA   Sanae             59.20 161   P       P         23 00 26.8 +0.8
          comp=Z,18nm,0.7s,baz=284,slow=8.0,SNR=81
SNAA                                 PcP     PcP       23 01 12.8 +0.5
          comp=Z,6.0nm,0.5s,baz=290,slow=9.6,SNR=8.3
          comp=Z,18nm,0.7s
GOGA   Godfrey           59.36 344   P       P         23 00 27.5 +0.1
GOGA                                 IAmb    IAmb      23 00 28.1
          comp=Z,7.9nm,0.8s
JSC    Jenkinsville      59.67 346   P       P         23 00 29.9 +0.4
JSC                                  IAmb    IAmb      23 00 30.9
          comp=Z,15nm,0.8s
BIRD   Birdtown, Kers    59.85 347   P       P         23 00 31.3 +0.6
Y52A   Lilburn           59.94 344   P       P         23 00 31.4  0.0
Y52A                                 IAmb    IAmb      23 00 32.0
          comp=Z,11nm,0.7s
LRAL   Lakeview Retre    59.99 341           P         23 00 31.2 -0.5
LRAL                                 IAmb    IAmb      23 00 32.2
          comp=Z,11nm,1.0s
W57A   Gilead            60.25 348           P         23 00 33.4  0.0
W57A                                 IAmb    IAmb      23 00 34.7
          comp=Z,13nm,0.9s
PAULI  Pauline           60.31 346           P         23 00 34.4 +0.6
PAULI                                IAmb    IAmb      23 00 35.2
          comp=Z,8.1nm,0.8s
Z47A   Carrollton        60.47 340   P       P         23 00 34.6 -0.3
Z47A                                 IAmb    IAmb      23 00 35.5
          comp=Z,16nm,0.7s
KMSC   Kings Mountain    60.51 346   P       P         23 00 35.5 +0.2
KMSC                                 IAmb    IAmb      23 00 36.6
          comp=Z,12nm,1.0s
HKT    Hockley           60.52 331   P       P         23 00 35.9 +0.6
Y49A   Blount Mountai    60.58 341           P         23 00 35.7 -0.1
Y49A                                 IAmb    IAmb      23 00 36.2
          comp=Z,10nm,0.8s
X51A   Calhoun           60.81 343   P       P         23 00 37.2  0.0
833A   Chaparral WMA,    60.82 327   P       P         23 00 37.9 +0.4
TROLL  Troll, Antarti    60.91 161 ⇑P        P         23 00 36.3 -1.4
          comp=Z,1µm,0.6s
FPAL   Fort Paine        60.99 342   P       P         23 00 38.0 -0.5
W52A   Murphy            61.07 344   P       P         23 00 39.0  0.0
W52A                                 IAmb    IAmb      23 00 40.0
          comp=Z,9.5nm,1.0s
V55A   Taylorsville      61.17 347   P       P         23 00 40.5 +0.8
V55A                                 IAmb    IAmb      23 00 41.2
          comp=Z,18nm,0.9s
X48A   Hartselle         61.32 341           P         23 00 40.6  0.0
V53A   Saluda            61.35 345   P       P         23 00 41.1 +0.2
V53A                                 IAmb    IAmb      23 00 41.8
          comp=Z,8.0nm,0.8s
W50A   Signal Mountai    61.53 343   P       P         23 00 42.0 -0.1
CPCT   Cooper Cave       61.56 344           P         23 00 42.0 -0.3
CPCT                                 IAmb    IAmb      23 00 43.0
          comp=Z,10nm,0.9s
TKL    Tuckaleechee C    61.57 344   P       P         23 00 41.8 -0.6
TKL                                  IAmb    IAmb      23 00 42.9
          comp=Z,10nm,0.9s
PLAL   Pickwick Lake     62.12 340   IAmb    IAmb      23 00 46.2
          comp=Z,16nm,0.9s
DRIO   Del Rio           62.34 327   IAmb    IAmb      23 00 48.9
          comp=Z,16nm,1.3s
CLTN   Cedars of Leba    62.65 342   IAmb    IAmb      23 00 50.0
          comp=Z,9.1nm,0.8s
U49A   Red Boiling Sp    62.89 343   IAmb    IAmb      23 00 51.4
          comp=Z,8.3nm,0.9s
S54A   Dingess, Beckl    63.07 347   IAmb    IAmb      23 00 53.3
          comp=Z,13nm,0.8s
HPIG                     63.08 321   IAmb    IAmb      23 00 54.7
          comp=Z,8.5nm,1.0s
BRDY   Brady             63.09 329   IAmb    IAmb      23 00 53.7
          comp=Z,9.4nm,0.7s
WVT    Waverly           63.11 341           P         23 00 51.9 -0.7
WVT    Waverly           63.11 341   P       P         23 00 51.8 -0.7
T50A   Nancy             63.13 344   IAmb    IAmb      23 00 52.9
          comp=Z,6.0nm,0.7s
SLBS   Sierra La Lagu    63.27 316   P       P         23 00 55.8 +1.8
SLBS                                 PcP     PcP       23 01 30.9 +1.4
SAND   Sanderson         63.53 326   IAmb    IAmb      23 00 57.5
          comp=Z,17nm,1.0s
MIAR   Mount Ida         63.61 336   IAmb    IAmb      23 00 57.1
          comp=Z,12nm,0.9s
WHAR   Wooly Hollow      63.80 337   IAmb    IAmb      23 00 57.5
          comp=Z,8.6nm,1.0s
OZNA   Ozona             63.81 327   IAmb    IAmb      23 00 58.7
          comp=Z,9.7nm,0.8s
TXAR   Lajitas Array     63.84 324           P         23 00 58.1 +0.5
TXAR   Lajitas Array     63.84 324   P       P         23 00 58.4 +0.8
          comp=Z,3.0nm,0.8s,baz=152,slow=8.3,SNR=36
          comp=Z,3.0nm,0.8s
FW03   Perrin-Whitt E    64.15 331   IAmb    IAmb      23 01 00.9
          comp=Z,11nm,0.8s
FCAR   Ozark Folk Cen    64.28 337   IAmb    IAmb      23 01 00.8
          comp=Z,9.6nm,1.0s
SGCY   Sterling City     64.62 328   IAmb    IAmb      23 01 03.8
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          comp=Z,8.1nm,0.7s
WCI    Wyandotte Cave    64.64 343           P         23 01 01.6 -0.9
WCI    Wyandotte Cave    64.64 343   P       P         23 01 01.3 -1.2
ALPN   Alpine            64.64 325   IAmb    IAmb      23 01 04.6
          comp=Z,7.1nm,0.7s
CGM3   Cape Girardeau    64.75 340   IAmb    IAmb      23 01 03.1
          comp=Z,9.1nm,0.7s
S44A   Carbondale        64.99 341   IAmb    IAmb      23 01 04.6
          comp=Z,10.0nm,0.7s
SIUC   Southern Illin    65.00 341   IAmb    IAmb      23 01 05.1
          comp=Z,12nm,1.0s
P52A   Corning           65.01 347   IAmb    IAmb      23 01 05.4
          comp=Z,16nm,1.0s
HHAR   Hobbs             65.29 336   IAmb    IAmb      23 01 07.9
          comp=Z,17nm,0.9s
MGMO   Mountain Grove    65.47 338   IAmb    IAmb      23 01 08.9
          comp=Z,15nm,0.9s
ODSA   Odessa            65.49 327   IAmb    IAmb      23 01 09.4
          comp=Z,13nm,0.7s
VHRN   Van Horn          65.68 324   IAmb    IAmb      23 01 11.4
          comp=Z,14nm,0.8s
POST   Post              65.75 328   IAmb    IAmb      23 01 12.2
          comp=Z,9.8nm,0.9s
WMOK   Wichita Mounta    65.90 332   IAmb    IAmb      23 01 11.9
          comp=Z,18nm,1.8s
CCM    Cathedral Cave    65.95 339           P         23 01 11.1 +0.2
CCM    Cathedral Cave    65.95 339   P       P         23 01 10.5 -0.4
CCM                                  PcP     PcP       23 01 39.8 -0.3
DKNS   Dickens           65.97 329   IAmb    IAmb      23 01 12.3
          comp=Z,8.6nm,0.7s
O49A   Covington         66.02 345   IAmb    IAmb      23 01 12.1
          comp=Z,10nm,1.0s
QSPA   South Pole Qui    66.08 180           P         23 01 12.9 +1.3
QSPA   South Pole Qui    66.08 180   P       P         23 01 12.9 +1.3
          comp=Z,30nm,0.5s,baz=330,slow=0.7,SNR=355
          comp=Z,30nm,0.5s
QSPA   South Pole Qui    66.08 180   P       P         23 01 12.9 +1.3
O48B   Farmland          66.27 345   IAmb    IAmb      23 01 13.1
          comp=Z,15nm,0.9s
HRV    Adam Dziewonsk    66.44 356   P       P         23 01 14.2 +0.3
HRV                                  PcP     PcP       23 01 41.6 -0.3
BINY   Binghamton        66.52 353   IAmb    IAmb      23 01 16.3
          comp=Z,18nm,1.1s
OK051  E0350 and S346    66.60 334   IAmb    IAmb      23 01 16.5
          comp=Z,20nm,1.0s
MNTX   Cornudas Mount    66.61 325   IAmb    IAmb      23 01 16.4
          comp=Z,11nm,0.9s
N49A   Columbus Grove    66.68 346   IAmb    IAmb      23 01 16.0
          comp=Z,22nm,1.0s
T35A   Sooner Cattle     66.83 334   IAmb    IAmb      23 01 18.0
          comp=Z,14nm,1.1s
SFIN   Lafayette         66.88 343   IAmb    IAmb      23 01 16.4
          comp=Z,14nm,0.8s
N47A   Urbana            66.99 345   IAmb    IAmb      23 01 18.1
          comp=Z,23nm,1.1s
CROK   Carrier           67.07 333   IAmb    IAmb      23 01 18.7
          comp=Z,11nm,0.8s
KAN13  South Haven SW    67.30 334   IAmb    IAmb      23 01 21.0
          comp=Z,18nm,1.1s
AMTX   Amarillo          67.33 329   IAmb    IAmb      23 01 21.2
          comp=Z,16nm,1.3s
KAN09  Caldwell North    67.46 334   IAmb    IAmb      23 01 22.0
          comp=Z,23nm,1.2s
KAN01  Argonia South     67.53 334   IAmb    IAmb      23 01 22.6
          comp=Z,28nm,1.3s
J59A   Piesco            67.62 354   IAmb    IAmb      23 01 23.1
          comp=Z,27nm,1.4s
DBIC   Dimbokro          67.75  71   P       P         23 01 21.1 -1.6
          comp=Z,4.1nm,0.7s,baz=234,slow=5.6,SNR=7.0
          comp=Z,4.1nm,0.7s
DBIC   Dimbokro          67.75  71   P       P         23 01 21.6 -1.2
319A   Douglas           68.49 322   IAmb    IAmb      23 01 29.9
          comp=Z,13nm,0.7s
N38A   Joes South For    69.08 339   IAmb    IAmb      23 01 31.0
          comp=Z,19nm,0.9s
RTBA   Rita Blanca       69.09 330   IAmb    IAmb      23 01 34.0
          comp=Z,11nm,0.9s
ANMO   Albuquerque       69.70 326           P         23 01 35.8 +1.1
ANMO                                 IAmb    IAmb      23 01 37.3
          comp=Z,10nm,0.9s
ANMO   Albuquerque       69.70 326   P       P         23 01 36.1 +1.4
TUC    Tucson            70.04 321           P         23 01 37.5 +0.9
TUC    Tucson            70.04 321   P       P         23 01 38.0 +1.4
T25A   Trinidad          70.44 329   IAmb    IAmb      23 01 41.7
          comp=Z,8.6nm,0.7s
214A   Organ Pipe Nat    70.96 320   IAmb    IAmb      23 01 44.7
          comp=Z,17nm,0.9s
E46A   Sault Ste Mari    71.91 347   IAmb    IAmb      23 01 48.1
          comp=Z,18nm,0.8s
G40A   Rib Lake          72.26 343   IAmb    IAmb      23 01 50.7
          comp=Z,31nm,1.7s
WUAZ   Wupatki           72.74 323   IAmb    IAmb      23 01 56.0
          comp=Z,13nm,0.9s
ECSD   EROS Data Cent    72.83 338   IAmb    IAmb      23 01 54.1
          comp=Z,21nm,1.1s
SPMN   Marine on St.     72.95 341   IAmb    IAmb      23 01 54.3
          comp=Z,18nm,0.9s
BLYC   Blythe            73.25 320   IAmb    IAmb      23 01 58.7
          comp=Z,14nm,1.1s
SYO    Syowa Base        73.40 159⇓iP        P         23 01 57.1 +1.1
DRLN   Deer Lake         73.53   6   P       P         23 01 57.2 +0.4
SBA    Scott Base        73.59 190           P         23 01 58.1 +1.1
SBA                                  IAmb    IAmb      23 02 00.6
          comp=Z,27nm,1.5s
PV22   Blue Mesa, Par    73.67 327   IAmb    IAmb      23 02 00.9
          comp=Z,15nm,1.1s
U15A   North Rim         73.91 323   IAmb    IAmb      23 02 03.1
          comp=Z,10nm,0.9s
PFO    Pinyon Flats O    74.30 319           P         23 02 02.6 +0.6
VNDA   Vanda             74.59 190           P         23 02 03.7 +0.9
VNDA   Vanda             74.59 190   P       P         23 02 03.7 +0.9
          comp=Z,6.4nm,0.9s,baz=128,slow=5.8,SNR=15
          comp=Z,6.4nm,0.9s
O20A   White River Ci    74.64 328   IAmb    IAmb      23 02 06.5
          comp=Z,15nm,0.9s
V12A   Nelson            74.84 321   IAmb    IAmb      23 02 07.7
          comp=Z,11nm,1.0s
SRU    San Rafael Swe    74.98 326   IAmb    IAmb      23 02 08.2
          comp=Z,10nm,0.8s
EYMN   Ely               75.07 343   IAmb    IAmb      23 02 06.6
          comp=Z,12nm,0.9s
TBO    Thunder Bay       75.19 345   IAmb    IAmb      23 02 07.5
          comp=Z,19nm,1.0s
MVU    Marysvale         75.40 325   IAmb    IAmb      23 02 11.4
          comp=Z,11nm,0.9s
GSC    Goldstone, Bar    75.67 320   P       P         23 02 10.4 +0.7
K22A   Casper            75.83 331   IAmb    IAmb      23 02 13.2
          comp=Z,39nm,1.6s
RSSD   Black Hills       75.96 333           P         23 02 11.7 +0.4
BSUT   Blindstream Ca    76.18 327   IAmb    IAmb      23 02 15.7
          comp=Z,9.8nm,0.8s
GWY    Greenwater Val    76.21 321   IAmb    IAmb      23 02 15.4
          comp=Z,13nm,0.9s
CCAC   Calif City Air    76.29 319   IAmb    IAmb      23 02 15.9
          comp=Z,39nm,1.6s
TPNV   Topopah Spring    76.50 321   IAmb    IAmb      23 02 17.7
          comp=Z,19nm,1.2s
TORD   Torodi Ar. Bea    76.52  69           P         23 02 14.2 -0.7
TORD   Torodi Ar. Bea    76.52  69   P       P         23 02 14.2 -0.7
          comp=Z,104nm,0.4s,baz=250,slow=5.7,SNR=1.2
AGMN   Agassiz Nation    76.63 341   IAmb    IAmb      23 02 15.8
          comp=Z,11nm,0.8s
SPR3   Spring Creek 3    76.89 324   IAmb    IAmb      23 02 19.4
          comp=Z,26nm,1.5s
EPLO   Experimental L    77.25 343   IAmb    IAmb      23 02 19.1
          comp=Z,14nm,0.8s
PDAR   Pinedale Array    77.31 329           P         23 02 19.5 +0.6
PDAR   Pinedale Array    77.31 329   P       P         23 02 19.4 +0.5
          comp=Z,1.4nm,0.6s,baz=114,slow=7.3,SNR=15
          comp=Z,1.4nm,0.6s
AHID   Auburn Hatcher    78.03 328   IAmb    IAmb      23 02 25.2
          comp=Z,15nm,0.8s
ULM    Lac du Bonnet     78.38 341   IAmb    IAmb      23 02 24.9
          comp=Z,11nm,0.7s
ULM    Lac du Bonnet     78.38 341   P       P         23 02 24.3  0.0
          comp=Z,9.9nm,0.6s,baz=156,slow=6.6,SNR=21
          comp=Z,9.9nm,0.6s
TPAW   Teton Pass        78.51 329   IAmb    IAmb      23 02 47.4
          comp=Z,12nm,1.1s
SCHQ   Schefferville     78.63   0   P       P         23 02 25.7 +0.1
          comp=Z,4.0nm,0.6s,baz=163,slow=1.8,SNR=7.2
          comp=Z,4.0nm,0.6s
NVAR   Mina Array Bea    78.70 321   P       P         23 02 26.8 +0.2
NVAR   Mina Array Bea    78.70 321   P       P         23 02 27.4 +0.8
          comp=Z,2.6nm,0.8s,baz=158,slow=7.0,SNR=11
          comp=Z,2.6nm,0.8s
LAO    LASA Array        78.95 334   IAmb    IAmb      23 02 29.7
          comp=Z,21nm,1.0s
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RLMT	Red Lodge	79.00	331	IAmb	IAmb	23 02 30.1	
	comp=Z,8.5nm,0.8s						
WAKR	Walker	79.40	321	IAmb	IAmb	23 02 33.6	
	comp=Z,18nm,1.4s						
YHB	Horse Butte	79.59	330	IAmb	IAmb	23 02 34.2	
	comp=Z,9.9nm,0.8s						
PHPEN	Phepeng	79.78	113	IAmb	IAmb	23 05 04.2	
	comp=Z,34nm,1.9s						
PNTR	Pine Nut	79.89	321	IAmb	IAmb	23 02 36.0	
	comp=Z,18nm,0.8s						
GRTLG	Ghanzi	79.90	109	IAmb	IAmb	23 03 16.2	
	comp=Z,40nm,2.0s						
PAHR	Pah Rah Range	80.18	322	IAmb	IAmb	23 02 37.4	
	comp=Z,20nm,0.9s						
HLID	Hailey	80.25	327	IAmb	IAmb	23 02 37.9	
	comp=Z,17nm,0.8s						
BOSA	Boshof	80.59	117	IAmb	IAmb	23 02 38.3	
	comp=Z,14nm,1.1s						
BOSA	Boshof	80.59	117	P	P	23 02 36.7	-0.4
	comp=Z,10.0nm,0.8s,baz=259,slow=3.3,SNR=15						
	comp=Z,10.0nm,0.8s						
DLMT	Dillon	80.70	329	IAmb	IAmb	23 02 39.9	
	comp=Z,24nm,1.4s						
MAW	Mawson	81.29	163	P	P	23 02 41.1	+1.3
	comp=Z,39nm,0.8s,baz=216,slow=6.5,SNR=55						
	comp=Z,39nm,0.8s						
ORV	Oroville	81.30	320	IAmb	IAmb	23 02 42.9	
	comp=Z,15nm,1.1s						
EGMT	Eagleton	81.47	333	IAmb	IAmb	23 02 42.8	
	comp=Z,16nm,1.0s						
KDWAN	Kaudwane	82.09	112	IAmb	IAmb	23 02 49.1	
	comp=Z,16nm,1.3s						
PLID	Pearl Lake	82.14	327	IAmb	IAmb	23 02 47.1	
	comp=Z,18nm,0.8s						
J08A	Circle Bar Ran	82.18	325	IAmb	IAmb	23 02 47.5	
	comp=Z,14nm,0.9s						
LBTB	Lobatse	82.25	114	IAmb	IAmb	23 02 47.1	
	comp=Z,36nm,1.5s						
BMO	Blue Mountains	82.62	326	IAmb	IAmb	23 02 49.8	
	comp=Z,32nm,1.9s						
PCVE	Castro Verde	82.64	43	*e*P	P	23 02 48.6	+1.2
MESJ	Messejana	82.66	43	*e*P	P	23 02 48.4	+1.0
MESJ				IAmb	IAmb	23 02 49.2	
	comp=Z,9.5nm,1.0s						
MESJ	Messejana	82.66	43	*e*P	P	23 02 48.5	+1.2
PBEJ	Beja	82.99	43	*e*P	P	23 02 50.6	+1.4
LPHEP	Lephephe	83.11	112	P	P	23 02 50.0	-0.3
LPHEP				IAmb	IAmb	23 02 52.0	
	comp=Z,26nm,1.2s						
PHDHD	Phuduhudu	83.22	109		P	23 02 50.7	-0.2
PHDHD				IAmb	IAmb	23 02 52.6	
	comp=Z,7.6nm,0.7s						
PSBE	So Bento	83.34	41	*e*P	P	23 02 52.0	+1.1
PMTG	Montargil	83.41	42	*e*P	P	23 02 51.8	+0.6
PMTG				*i* Amb		23 02 55.2	
	comp=Z,14nm,1.6s						
PBAR	Barrancos	83.60	43	*e*P	P	23 02 53.2	+1.0
PBAR				*i* Amb		23 02 54.4	
	comp=Z,13nm,1.7s						
J05D	Fort Rock, OR	83.61	323	IAmb	IAmb	23 02 54.6	
	comp=Z,12nm,1.1s						
PESTR	Estremoz	83.68	42	*e*P	P	23 02 53.8	+1.2
PINE	Pine Mountain	83.79	324	IAmb	IAmb	23 02 56.0	
	comp=Z,17nm,0.9s						
PMRV	Marv??o	84.14	42	*e*P	P	23 02 56.2	+1.2
PCBR	Castelo Branco	84.34	42	*e*P	P	23 02 57.0	+1.1
TAM	Tamanrasset	84.37	62		P	23 02 56.6	-0.1
TAM				IAmb	IAmb	23 02 58.2	
	comp=Z,18nm,0.8s						
I05D	Terrebonne, OR	84.37	324	IAmb	IAmb	23 02 58.5	
	comp=Z,11nm,0.8s						
PVIS	Viseu	84.63	41	*e*P	P	23 02 58.1	+0.7
MTE	Manteigas	84.65	41	IAmb	IAmb	23 02 59.2	
	comp=Z,21nm,1.1s						
MTE	Manteigas	84.65	41	*e*P	P	23 02 58.6	+1.0
MTE				*i* Amb		23 02 59.8	
	comp=Z,22nm,1.5s						
KSANE	Kasane	84.70	107	P	P	23 02 58.1	-0.4
KSANE				IAmb	IAmb	23 03 00.5	
	comp=Z,14nm,0.9s						
HAWA	Hanford	84.81	326	IAmb	IAmb	23 03 00.4	
	comp=Z,13nm,1.1s						
WAH2	Wahluke Slope	85.08	327	IAmb	IAmb	23 03 01.0	
	comp=Z,9.3nm,0.8s						
PVRL	Vila Real	85.08	41	*e*P	P	23 03 00.7	+1.1
PVRL				*i* Amb		23 03 01.5	
	comp=Z,22nm,1.2s						
POLO	Lamas de Olo	85.09	40	*e*P	P	23 03 00.5	+0.7
PCAB	Cabril	85.17	40	*e*P	P	23 03 01.0	+0.9
PGAV	Gavieira, Arco	85.18	40	*e*P	P	23 03 00.7	+0.5
MVO	Moncorvo	85.42	41	*e*P	P	23 03 02.4	+1.0
MVO				*i* Amb		23 03 02.9	
	comp=Z,15nm,1.0s						
PAB	San Pablo	86.10	43		P	23 03 05.4	+0.6
PAB				IAmb	IAmb	23 03 06.6	
	comp=Z,12nm,0.9s						
ESDC	Sonseca Array	86.42	44		P	23 03 06.7	+0.4
ESDC	Sonseca Array	86.42	44	P	P	23 03 06.9	+0.6
	comp=Z,3.6nm,0.8s,baz=238,slow=4.7,SNR=34						
	comp=Z,3.6nm,0.8s						
ESBB	Sonseca Array	86.42	44	IAmb	IAmb	23 03 08.2	
	comp=Z,10nm,1.1s						
LSZ	Lusaka	88.38	106	P	P	23 03 16.3	-0.1
LSZ				IAmb	IAmb	23 03 19.5	
	comp=Z,17nm,1.0s						
LLLB	Lillooet	88.81	329	IAmb	IAmb	23 03 18.6	
	comp=Z,17nm,1.5s						
CBB	Campbell River	90.14	327	IAmb	IAmb	23 03 25.5	
	comp=Z,5.9nm,0.8s						
SFJD	Kangerlussuaq	91.66	6	LR	LR	23 48 28.6	
	comp=Z,31nm,18.5s,baz=322,slow=38						
KEST	Kesra	93.41	52	P	P	23 03 40.2	+1.0
	comp=Z,3.5nm,0.9s,baz=285,slow=19,SNR=3.6						
	comp=Z,3.5nm,0.9s						
YKA	Yellowknife Ar	94.28	340	P	P	23 03 42.8	+0.4
	comp=Z,3.5nm,0.7s,baz=132,slow=4.0,SNR=23						
	comp=Z,3.5nm,0.7s						
YKAW3	Yellowknife Wh	94.33	340	IAmb	IAmb	23 03 44.0	
	comp=Z,6.3nm,0.8s						
L29M	L29M	103.20	334		Pdif	23 04 22.6	+0.2
AKASG	Malin Array Be	112.06	43	PKiKP	PKiKP	23 08 56.8	-0.8
	comp=Z,0.4nm,0.3s,baz=270,slow=2.5,SNR=8.5						
FINES	FINESS Array B	112.28	31	PKiKP	PKiKP	23 08 57.9	+0.2
	comp=Z,1.3nm,1.0s,baz=61,slow=9.4,SNR=1.7						
BRTR	Keskin Array B	112.80	55	PKiKP	PKiKP	23 08 59.8	+0.1
	comp=Z,0.7nm,0.8s,baz=298,slow=3.1,SNR=5.7						
KBZ	Khabaz	120.28	52	PKP	PKiKP	23 09 13.8	+0.1
	comp=Z,3.1nm,0.8s,baz=91,slow=1.0,SNR=7.5						
ASAR	Alice Springs	128.38	205		PKPdf	23 09 29.6	-0.4
ASAR	Alice Springs	128.38	205	PKP	PKiKP	23 09 30.1	-0.5
	comp=Z,6.8nm,0.7s,baz=146,slow=2.2,SNR=38						
WRA	Warramunga Arr	131.56	207	PKP	PKiKP	23 09 36.3	-0.7
	comp=Z,4.6nm,0.6s,baz=161,slow=1.5,SNR=33						
PETK	Petropavlovsk-	135.77	323	PKP	PKPdf	23 09 43.3	+0.4
	comp=Z,3.5nm,0.8s,baz=130,slow=2.3,SNR=2.4						
ZALV	Zalesovo Beam	143.46	28	PKP	PKPdf	23 09 55.3	-1.5
	comp=Z,18nm,0.7s,baz=303,slow=4.5,SNR=9.3						
KSH	Kashi	145.19	55	PKPbc	PKPab	23 10 00.8	0.0
MKAR	Makanchi Array	146.56	40	PKPbc	PKPbc	23 10 03.3	-0.9
	comp=Z,29nm,0.8s,baz=321,slow=1.6,SNR=18						
ASAJ	Asahikawa	148.74	317	PKPbc	PKPbc	23 10 10.1	0.0
	comp=Z,14nm,0.9s,baz=168,slow=21,SNR=1.8						
KLR	Kul'dur	150.98	334	PKPbc	PKiKP	23 10 15.6	-0.2
	comp=Z,15nm,0.7s,baz=50,slow=3.0,SNR=21						
WMQ	Urumqi	151.38	40	*e*PKPbc	PKPdf	23 10 09.9	-0.4
WMQ				PKPab	PKPab	23 10 27.5	+2.1
WMQ				pPKP	pPKPdf	23 11 00.0	-0.9
HEH	HeiHe	151.64	340	*e*P	PKPbc	23 10 16.4	-0.4
HEH				pmax	pmax		
	comp=Z,21nm,0.8s						
USRK	Ussuriysk Ar.	154.71	327	PKP	PKPdf	23 10 14.8	-0.1
	comp=Z,1.1nm,0.6s,baz=107,slow=6.4,SNR=4.2						
USRK				PKPbc	PKiKP	23 10 24.2	+0.5
	comp=Z,3.5nm,0.8s,baz=43,slow=3.4,SNR=4.3						
MJAR	Matsushiro Arr	155.13	306	PKPab	PKPab	23 10 41.9	+0.4
	comp=Z,7.0nm,0.9s,baz=62,slow=2.7,SNR=6.7						
SONM	Songino Array	155.74	11	PKP	PKPdf	23 10 17.6	+1.2
	comp=Z,1.7nm,0.8s,baz=354,slow=3.0,SNR=3.7						
SONM				PKPab	PKPab	23 10 45.0	+1.2
	comp=Z,2.8nm,0.7s,baz=322,slow=3.7,SNR=5.2						
GTA	Gaotai	161.06	33	PKP	PKPdf	23 10 24.0	+0.9
GTA				PKPab	PKPab	23 11 07.3	+0.1
HHC	Hu-ho-hao-te	163.27	4	*e*P	PKPdf	23 10 27.6	+2.4
CMAR	Chiang Mai Arr	165.65	110	PKP	PKPdf	23 10 27.2	-0.6
	comp=Z,0.6nm,0.4s,baz=201,slow=30,SNR=1.7						
CMAR				PKPab	PKPab	23 11 27.2	-0.6
	comp=Z,1.7nm,0.6s,baz=115,slow=3.4,SNR=4.8						
TIA	Tai'an	167.47	345	PKP	PKPdf	23 10 29.6	+0.9
PZH	PanZhiHua	169.45	75	PKP	PKPdf	23 10 29.8	-0.7
KMI	Kunming	170.52	82	PKP	PKPdf	23 10 32.3	+1.0

*NEIC **16** 22:54:15.0±1.2, 19°.33N±0°.01×155°.117W±0°.009, h5^{km}±1^{km}, Error ellipse: s-maj=2.5km s-min=2.0km az=342.0*

HVO 16 22:54:15.0±1.1**, 19°.35N**±0°.01×**155°.134W**±0°.008**, h6**^{km}±1^{km}**, ML3.4**/50**, ML3.5**/44(NEIC)**, Error ellipse: s-maj=1.8km s-min=1.0km az=160.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STCH	Steam Cracks	0.03	15		Pg	22 54 16.9	+0.5
STCH				Sg	Sg	22 54 17.9	+0.5
KNHH	Kane Nui o Ham	0.04	309		Pg	22 54 17.0	+0.5
JCUZ	Jacuzzi	0.04	44		Pg	22 54 16.9	+0.4
JCUZ					Sg	22 54 18.1	+0.5
NPOC	North of Pu‘u	0.05	30		Pg	22 54 17.0	+0.5
NPOC					Sg	22 54 17.9	+0.3
PUH	Pauahi	0.08	285		Pg	22 54 17.5	+0.5
PUH				Sg	Sg	22 54 19.3	+0.9
PUH				IAML		22 54 19.6	
	comp=E,33µm,0.6s						
PUH				IAML		22 54 19.6	
	comp=N,25µm,0.4s						
BYL	Byron's Ledge	0.13	296		Pg	22 54 18.4	+0.5
KKO	Keanakako'i	0.13	290		Pg	22 54 18.4	+0.5
KKO					Sg	22 54 20.4	+0.7
HATHI	Halema‘uma‘u T	0.14	300		Pg	22 54 18.3	+0.3
HATHI				IAML		22 54 21.6	
	comp=N,15µm,0.3s						
HATHI				IAML		22 54 21.6	
	comp=E,11µm,0.4s						
RIM	Rim	0.14	288		Pg	22 54 18.5	+0.5
RIM					Sg	22 54 20.8	+0.9
JOKA	Jonika Flow	0.15	57		Pg	22 54 18.2	+0.2
SBLHI	Steaming Bluff	0.15	300		Pg	22 54 18.5	+0.4
SBLHI					Sg	22 54 20.6	+0.4
UWB	Uwekahuna Bluf	0.15	298		Pg	22 54 18.6	+0.3
UWB					Sg	22 54 20.9	+0.5
SDHHI	Sand Hill	0.15	284		Pg	22 54 18.6	+0.4
SDHHI					Sg	22 54 21.2	+0.7
UWE	Uwekahuna	0.17	294		Pg	22 54 18.8	+0.4
WRMHI	West Rim	0.17	289		Pg	22 54 18.8	+0.3
WRMHI					Sg	22 54 21.4	+0.7
HLP	Hilina Pali	0.17	251		Pg	22 54 19.1	+0.5
HLP				IAML		22 54 22.6	
	comp=E,11µm,0.3s						
HLP				IAML		22 54 22.6	
	comp=N,9µm,0.2s						
RSD	Rainshed	0.17	309		Pg	22 54 19.1	+0.4
RSD					Sg	22 54 21.6	+0.6
HTC	Hot Caves	0.27	245		Pg	22 54 20.9	+0.5
MLH	Mauna Loa	0.28	301		Pg	22 54 20.9	+0.3
MLH					Sg	22 54 24.9	+0.6
MLH	Mauna Loa	0.28	301	IAML		22 54 26.4	
	comp=E,3µm,0.4s						
MLH				IAML		22 54 29.9	
	comp=N,4µm,0.1s						
AIN	Ainahou	0.31	274		Pg	22 54 22.1	+0.9
AIN	Ainahou	0.31	274		Sg	22 54 25.7	+0.5
HMH	Humu‘ula Sheep	0.41	307		Pg	22 54 23.2	0.0
HMH					Sg	22 54 29.9	+1.3
HMH	Humu‘ula Sheep	0.41	307	IAML		22 54 30.8	
	comp=E,20µm,0.3s						
HMH				IAML		22 54 30.8	
	comp=N,19µm,0.2s						
MWH	Mokuaweoweo	0.46	287		Pg	22 54 23.8	-0.2
MWH					Sg	22 54 29.8	-0.2
MWH	Mokuaweoweo	0.46	287	IAML		22 54 32.0	
	comp=N,6µm,0.4s						
MWH				IAML		22 54 33.0	
	comp=E,6µm,0.7s						
KHU	Kahuku	0.47	257		Pg	22 54 23.9	-0.2
KHU					Sg	22 54 30.3	+0.1
KHU	Kahuku	0.47	257	IAML		22 54 32.1	
	comp=E,3µm,0.5s						
KHU				IAML		22 54 36.1	
	comp=N,4µm,0.8s						
HPO	Honuapo	0.48	237		Pg	22 54 24.1	-0.1
HPO					Sg	22 54 30.9	+0.5
ALEP	Alea Permanent	0.52	291		Pg	22 54 24.7	-0.4
ALEP					Sg	22 54 32.0	+0.1
POHA	Pohakuloa	0.55	317		Pg	22 54 25.2	-0.5
POHA					Sg	22 54 32.6	-0.4
POHA	Pohakuloa	0.55	317	IAML		22 54 34.1	
	comp=N,5µm,0.5s						
POHA				IAML		22 54 37.5	
	comp=N,4µm,0.4s						
HUH	Hualalai	0.74	297		Pg	22 54 28.4	-1.0
HUH					Sg	22 54 38.1	-0.8
CPH	Captain Cook	0.75	280		Pg	22 54 27.6	-1.9
HPAH	Hawaii Prepara	0.86	322		Pg	22 54 29.4	-2.1
HPAH					Sg	22 54 39.7	-3.0
HPAH	Hawaii Prepara	0.86	322	IAML		22 54 43.4	
	comp=N,2µm,0.3s						
HPAH				IAML		22 54 43.4	
	comp=E,2µm,0.2s						
KKH	Kailua Kona	0.89	290		Pg	22 54 29.6	-2.5
KKH					Sg	22 54 41.4	-2.2
MHA	Mahukona	1.10	319		Pg	22 54 32.9	-3.3
MHA					Sg	22 54 46.3	-4.3
HLK	Haleakala	1.75	323		Pn	22 54 41.6	-4.5
HLK					Sn	22 55 00.8	-8.1

*IDC **16** 22:54:39.5±2.7, 6°.20S×130°.76E, h107^{km}±29^{km}, mb3.7/4, mbtmp4.2/9, Error ellipse: s-maj=25.1km s-min=22.1km az=149.0*

*NEIC **16** 22:54:40.6±1.9, 6°.02S±0°.07×130°.8E±0°.1, h113^{km}±10^{km}, mb4.2/11, Error ellipse: s-maj=16.3km s-min=10.4km az=93.0*

ISC 16 22:54:39.3±0.5**, 6°.00S**±0°.05×**130°.79E**±0°.06**, h100**^{km}**, n48, σ1^{s}.93**/48**, mb3.9**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.71	329	P	Pn	22 55 12.9	+4.6
SAUI	Saumlaki	2.03	166	Pn	Pn	22 55 15.1	+2.7
SAUI					Sn	22 55 39.0	+1.4
SAUI	Saumlaki	2.03	166	P	Pn	22 55 15.5	+3.1
SAUI	Saumlaki	2.03	166	S	Sn	22 55 39.5	+1.9
FAKI	Fak Fak	3.39	25		Pn	22 55 30.9	+0.6
FAKI	Fak Fak	3.39	25	P	Pn	22 55 31.2	+0.9
FAKI	Fak Fak	3.39	25	S	Sn	22 56 09.3	-0.4
SANI	Sanana	6.19	309	P	Pn	22 56 12.6	+4.3
MTN	Manton Dam	6.81	177		Pn	22 56 17.4	+0.8
MTN	Manton Dam	6.81	177	P	Pn	22 56 18.1	+1.4
SOEI	Soe	7.46	240		Pn	22 56 27.0	+1.3
SOEI	Soe	7.46	240	P	Pn	22 56 29.6	+3.9
BATI	Baumata	8.20	239	P	Pn	22 56 35.5	-0.2
	53nm,0.4s,baz=144,slow=4.6,SNR=7.2						
BATI				S	Sn	22 58 03.8	-2.9
	24nm,0.2s,baz=310,slow=17,SNR=1.3						
KNRA	Kununurra	9.82	192		Pn	22 56 57.2	-0.4
JAY	Jayapura	10.47	71	P	Pn	22 57 07.5	+0.8
	3.2nm,0.3s,baz=249,slow=14,SNR=5.6						
TOLI2	Tolitoli	12.24	305	P	Pn	22 57 33.1	+2.8
FITZ	Fitzroy Crossi	13.03	202	Pn	Pn	22 57 37.8	-3.0
FITZ	Fitzroy Crossi	13.03	202	P	Pn	22 57 37.5	-3.2
	5.2nm,0.2s,baz=31,slow=11,SNR=51						
FITZ				S	Sn	22 59 49.8	-14
	19nm,0.5s,baz=36,slow=11,SNR=6.2						
PLAI	Plampang	13.21	257	P	Pn	22 57 45.4	+2.3
WB0	Warramunga Arr	14.13	166	P	Pn	22 57 51.2	-3.8
WRA	Warramunga Arr	14.28	166	P	Pn	22 57 51.8	-5.2
WRA	Warramunga Arr	14.28	166	P	Pn	22 57 52.6	-4.4
	2.7nm,0.5s,baz=344,slow=13,SNR=26						
WRA				S	Sn	23 00 22.4	-12
	7.0nm,0.6s,baz=352,slow=22,SNR=9.9						
WR8	Warramunga Arr	14.33	166	P	Pn	22 57 54.5	-3.1
COEN	Coen	14.53	124	Pn	Pn	22 57 58.8	-1.4
COEN	Coen	14.53	124	P	Pn	22 58 00.1	-0.1
QIS	Mount Isa	16.81	150	P	Pn	22 58 29.2	+0.5
AS31	Alice Springs	17.82	171	P	P	22 58 39.9	-0.4
AS31				IAmb	IAmb	22 58 56.3	
	comp=Z,2.8nm,0.3s						
ASAR	Alice Springs	17.82	171	P	P	22 58 40.9	+0.6
ASAR	Alice Springs	17.82	171	P	P	22 58 39.1	-1.2
	comp=Z,1.2nm,0.4s,baz=352,slow=10,SNR=23						
ASAR				S	Sn	23 01 44.4	-15
	comp=Z,2.4nm,0.7s,baz=351,slow=23,SNR=9.6						
AS01	Alice Springs	17.82	170	P	P	22 58 41.4	+1.0
MBWA	Marble Bar	18.49	214	P	P	22 58 48.3	+0.6
MBWA				IAmb	IAmb	22 58 54.4	
	comp=Z,24nm,1.3s						
PSA00	Pilbara Seismi	18.76	213		P	22 58 50.0	-0.7
PSA00				IAmb	IAmb	22 58 56.1	
	comp=Z,20nm,1.2s						
PSA00	Pilbara Seismi	18.76	213	P	P	22 58 48.9	-1.8
PSA00				IAmb	IAmb	22 58 56.2	
	comp=Z,4.2nm,1.1s						
PSA00	Pilbara Seismi	18.76	213	P	P	22 58 52.0	+1.4
KKM	Kota Kinabalu	18.84	309		P	22 58 51.1	-0.5
KKM				IAmb	IAmb	22 58 55.6	
	comp=Z,12nm,0.8s						
EVN	Everest	54.22	311	P	P	23 03 55.1	-0.6
SONM	Songino Array	57.76	341	P	P	23 04 20.7	+0.7
	comp=Z,0.6nm,0.6s,baz=156,slow=7.0,SNR=3.9						
	comp=Z,0.6nm,0.6s						
MKAR	Makanchi Array	67.83	326	P	P	23 05 26.9	+0.1
MKAR	Makanchi Array	67.83	326	P	P	23 05 27.5	+0.7
	comp=Z,2.8nm,0.6s,baz=115,slow=7.9,SNR=32						
	comp=Z,2.8nm,0.6s						
MAKZ	Makanchi	68.01	326	P	P	23 05 27.6	-0.3
MAKZ				IAmb	IAmb	23 05 28.9	
	comp=Z,2.9nm,0.6s						
ARSB	Arslanbob	70.68	318	P	P	23 05 44.6	-0.1
ARSB				IAmb	IAmb	23 05 46.4	
	comp=Z,2.9nm,0.7s						
KURBB	Kurchatov Arra	72.08	328	P	P	23 05 52.3	-0.3
	comp=Z,0.7nm,0.6s,baz=127,slow=5.1,SNR=7.9						
	comp=Z,0.7nm,0.6s						
KURK	Kurchatov	72.08	328	P	P	23 05 52.8	+0.2
KURK				IAmb	IAmb	23 05 53.0	
	comp=Z,2.7nm,1.3s						
NIKH	Nikolski High	77.59	33	P	P	23 06 23.1	-1.3
BVAR	Borovoye Array	77.64	327	P	P	23 06 25.1	+0.4
	comp=Z,0.7nm,0.5s,baz=76,slow=5.6,SNR=2.5						
	comp=Z,0.7nm,0.5s						
ABKAR	Akbulak array	82.22	321	P	P	23 06 48.2	-1.2
ABKAR	Akbulak array	82.22	321	P	P	23 06 48.0	-1.4
ABKAR				IAmb	IAmb	23 06 55.6	
	comp=Z,1.1nm,1.1s						
CPUP	Villa Florida	146.91	167	PKPbc	PKPdf	23 14 09.0	0.0
	comp=Z,0.2nm,0.6s,baz=74,slow=9.3,SNR=3.0						

*NEIC **16** 22:58:05.1±2.2, 21°.13S±0°.10×173°.9W±0°.1, h10^{km}±1^{km}, mb4.5/13, Error ellipse: s-maj=18.9km s-min=16.8km az=101.0*

*IDC **16** 22:58:06.8±0.9, 21°.39S×174°.51W, h0^{km}, mb4.1/7, mbtmp4.1/9, ML3.5/1, MS3.8/2, Error ellipse: s-maj=36.3km s-min=22.4km az=142.0*

ISC 16 22:58:04.5±0.5**, 21°.15S**±0°.08×**173°.84W**±0°.08**, h10**^{km}**, n40, σ2^{s}.18**/36**, mb4.4**/12**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.22	61	Pn	Pn	22 59 10.2	+1.3
NIUE				Sn	Sn	22 59 56.2	-2.0
AFI	Afiamalu	7.46	16	Pn	Pn	22 59 55.2	+1.7
AFI				Sn	Sn	23 01 13.1	-5.2
MSVF	Nonsavu	8.37	293	Pn	Pn	23 00 10.9	+4.9
	0.7nm,0.3s,baz=127,slow=13,SNR=16						
MSVF				LR	LR	23 02 58.1	
	comp=Z,1µm,18.7s,baz=178,slow=37						
RAR	Rarotonga	13.13	93	Pn	Pn	23 01 08.2	-2.8
DZM	Mont Dzumac	18.36	264	P	Pn	23 02 18.2	-1.2
DZM				IAmb	IAmb	23 02 28.5	
	comp=Z,7.4nm,0.8s						
DZM	Mont Dzumac	18.36	264	*e*LR	LR	23 05 37.7	
	comp=Z,205nm,20.7s						
DZM	Mont Dzumac	18.36	264	P	Pn	23 02 14.9	-4.5
	comp=Z,0.2nm,0.3s,baz=90,slow=18,SNR=4.2						
	comp=Z,3.9nm,0.9s						
URZ	Urewera	18.76	203	P	P	23 02 22.0	-1.7
	comp=Z,6.9nm,0.9s,baz=41,slow=19,SNR=1.5						
BKZ	Black Stump Fm	19.78	203	P	P	23 02 33.4	-1.5
BKZ				IAmb	IAmb	23 02 36.2	
	comp=Z,41nm,1.5s						
BFZ	Birch Farm	21.22	201	P	P	23 02 49.1	-1.3
TBI	Tubuai	22.67	100	*e*LR	LR	23 08 32.8	
	comp=Z,1µm,28.8s						
PPT2	Papeete2	23.16	85	*e*LR	LR	23 08 43.9	
	comp=Z,194nm,24.0s						
PPT2				*e*LR	LR	23 08 44.4	
	comp=Z,164nm,29.2s						
PPT	Papeete	23.16	85	LR	LR	23 11 16.2	
	comp=Z,105nm,18.2s,baz=221,slow=33						
LTZ	Lake Taylor	24.51	205	P	P	23 03 22.9	-1.2
LTZ				IAmb	IAmb	23 03 37.7	
	comp=Z,19nm,1.0s						
STKA	Stephens Creek	41.03	245	P	P	23 05 46.9	-1.3
	comp=Z,1.5nm,0.7s,baz=82,slow=16,SNR=3.1						
	comp=Z,1.5nm,0.7s						
AS31	Alice Springs	48.16	257	P	P	23 06 43.6	-1.7
AS31				IAmb	IAmb	23 06 44.3	
	comp=Z,1.2nm,0.8s						
ASAR	Alice Springs	48.16	257	P	P	23 06 42.8	-2.5
ASAR	Alice Springs	48.16	257	P	P	23 06 43.8	-1.4
	comp=Z,3.2nm,0.8s,baz=93,slow=8.1,SNR=14						
ASAR				PcP	PcP	23 08 14.9	+2.1
	comp=Z,1.4nm,0.9s,baz=84,slow=3.5,SNR=2.6						
	comp=Z,3.2nm,0.8s						
WR8	Warramunga Arr	48.21	262	P	P	23 06 45.2	-0.5
WR8				IAmb	IAmb	23 06 56.6	
	comp=Z,7.5nm,1.2s						
WB0	Warramunga Arr	48.34	262	P	P	23 06 45.6	-1.1
WB0				IAmb	IAmb	23 06 51.2	
	comp=Z,10nm,1.1s						
WRA	Warramunga Arr	48.36	262	P	P	23 06 45.4	-1.5
WRA	Warramunga Arr	48.36	262	P	P	23 06 44.7	-2.1
	comp=Z,3.4nm,0.9s,baz=100,slow=7.4,SNR=8.0						
WRA				PcP	PcP	23 08 15.7	+2.2
	comp=Z,1.2nm,0.9s,baz=94,slow=4.4,SNR=3.3						
	comp=Z,3.4nm,0.9s						
FITZ	Fitzroy Crossi	56.79	262	P	P	23 07 49.1	-0.2
FITZ	Fitzroy Crossi	56.79	262	P	P	23 07 48.8	-0.5
	comp=Z,1.3nm,0.5s,baz=146,slow=11,SNR=1.8						
	comp=Z,1.3nm,0.5s						
VNDA	Vanda	57.65	186	P	P	23 07 54.1	-0.3
MBWA	Marble Bar	61.50	257	P	P	23 08 20.6	-1.4
MORW	Morawa	63.17	247	P	P	23 08 33.0	-0.1
QSPA	South Pole Qui	68.93	180	P	P	23 09 10.7	+1.1
QSPA				IAmb	IAmb	23 09 16.3	
	comp=Z,5.6nm,1.2s						
QSPA	South Pole Qui	68.93	180	P	P	23 09 12.0	+2.4
	comp=Z,1.7nm,1.0s,baz=307,slow=1.9,SNR=2.9						
	comp=Z,1.7nm,1.0s						
NVAR	Mina Array Bea	78.88	41	P	P	23 10 15.6	+7.2
	comp=Z,1.6nm,0.7s,baz=226,slow=8.6,SNR=8.1						
	comp=Z,1.6nm,0.7s						
KSRS	Korea Array	79.99	317	P	P	23 10 17.6	+3.5
	comp=Z,0.8nm,0.3s,baz=121,slow=4.8,SNR=4.5						
	comp=Z,0.8nm,0.3s						
H03S2	Juan Fernandez	82.40	123	T	T	00 42 33.1	
	baz=243						
H03S1	Juan Fernandez	82.42	123	T	T	00 42 35.1	
	baz=243						
H03S3	Juan Fernandez	82.42	123	T	T	00 42 22.0	
	baz=243						
NJ2	Nanjing	83.31	308	*e*P	P	23 10 31.6	-0.2
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
AKASG	Malin Array Be	145.38	334	PKPbc	PKPdf	23 17 44.8	+2.2
	comp=Z,1.7nm,0.6s,baz=36,slow=3.9,SNR=12						
CLL	Collm	149.42	352	*i* PKPbc	PKPab	23 17 57.8	-0.6
	comp=Z,7.0nm,1.6s						
CLL				*i* PKPab	sPKPab	23 18 01.8	+1.5
CLL				*i* x	x	23 18 08.8	
	comp=Z,14nm,1.6s						
BRTR	Keskin Array B	150.11	314	PKPbc	PKiKP	23 17 58.0	+1.1
	comp=Z,1.9nm,1.0s,baz=107,slow=1.3,SNR=6.3						
MMAI	Mount Meron Ar	151.50	301	PKPbc	PKiKP	23 18 01.9	+2.2
	comp=Z,2.2nm,0.8s,baz=65,slow=5.9,SNR=5.1						
GERES	GERESS Array B	151.71	349	PKPbc	PKiKP	23 18 03.9	+4.1
	comp=Z,272nm,0.3s,baz=16,slow=2.8,SNR=37						

*BJI **16** 23:00:06.0, 36°.49N×140°.62E, h77^{km}, mB4.8/31, mb5.0/81, Ms4.3/40, Ms7 4.1/45*

*MOS **16** 23:00:07.8±0.9, 36°.68N×140°.53E, h73^{km}, mb5.4/73, Error ellipse: s-maj=5.6km s-min=3.5km az=106.9*

*NIED **16** 23:00:09.5, 36°.52N×140°.58E, h77^{km}, MW4.9, Moment*

Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.69; $M_{\theta\theta}$0.69; $M_{\phi\phi}$2.00; $M_{r\theta}$1.04; $M_{\theta\phi}$0.16; $M_{\phi r}$-1.23; Fault plane solution: $M_0$2.79000×10^{16} NP1: ϕ_s194.00000°,δ33.00000°,λ-65.00000°. NP2: ϕ_s345.00000°,δ61.00000°,λ-105.00000°.

*IDC **16** 23:00:09.3±0.7,$36\overset{\circ}{.}57$N×$140\overset{\circ}{.}53$E,h80^{km}±5^{km},mb4.7/36, mbtmp5.0/40,MS4.0/34 Error ellipse: s-maj=9.7km s-min=8.2km az=76.0*

*NEIC **16** 23:00:09.6,$36\overset{\circ}{.}52$N×$140\overset{\circ}{.}87$E,h80^{km},Moment Tensor Solution. Duration: $1\overset{s}{.}5$ Moment tensor: Scale 10^{16}Nm; M_{rr}-2.67; $M_{\theta\theta}$0.93; $M_{\phi\phi}$1.75; $M_{r\theta}$1.01; $M_{\theta\phi}$-0.36; $M_{\phi r}$-0.75; Fault plane solution: $M_0$2.69000×10^{16} NP1: ϕ_s163.61000°,δ32.56000°,λ-74.70000°. NP2: ϕ_s325.62000°,δ58.73000°,λ-99.57000°. Principal axes: T 2.1335, Plg13.0000°, Azm63.0000°; N 0.8898, Plg8.0000°, Azm331.0000°; P -3.0233, Plg74.0000°, Azm210.0000°;*

*NEIC **16** 23:00:09.9±1.7,$36\overset{\circ}{.}54$N±$0\overset{\circ}{.}05$×$140\overset{\circ}{.}74$E±$0\overset{\circ}{.}09$,h74^{km}±4^{km}, mb5.0/607,Mww4.9/15 Error ellipse: s-maj=10.4km s-min=7.0km az=109.0*

*JMA **16** 23:00:09.5±0.1,$36\overset{\circ}{.}5$N±$0\overset{\circ}{.}2$×$140\overset{\circ}{.}6$E±$0\overset{\circ}{.}5$,h77^{km},MD5.1/39, MW4.9/39,NORTHERN IBARAKI PREF*

JMA Felt IV J1 at NORTHERN IBARAKI PREF .

*NEIC **16** 23:00:09.6,$36\overset{\circ}{.}52$N×$140\overset{\circ}{.}75$E,h80^{km}*

*GCMT **16** 23:00:10.0±0.2,$36\overset{\circ}{.}52$N±$0\overset{\circ}{.}02$×$140\overset{\circ}{.}66$E±$0\overset{\circ}{.}02$,h74^{km}±1^{km}, MW4.9/122,Moment Tensor Solution. s60,c69; s122,c177; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.90±.11; $M_{\theta\theta}$0.23±.10; $M_{\phi\phi}$2.67±.09; $M_{r\theta}$1.30±.06; $M_{\theta\phi}$0.56±.09; $M_{\phi r}$-0.96±.07; Best double couple: $M_0$3.22200×10^{16} NP1:ϕ_s211.00000°,δ42.00000°, λ-57.00000°. NP2:ϕ_s350.00000°,δ56.00000°, λ-116.00000°. Principal axes: T 2.8810, Plg8.0000°, Azm98.0000°; N 0.6830, Plg21.0000°, Azm5.0000°; P -3.5630, Plg67.0000°, Azm207.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **16** 23:00:12.6,$37\overset{\circ}{.}00$N×$140\overset{\circ}{.}76$E,h75^{km}±1^{km},mb5.2*

ISC 16 23:00:08.9±0.3,**$36\overset{\circ}{.}59$N**±$0\overset{\circ}{.}03$×**$140\overset{\circ}{.}62$E**±$0\overset{\circ}{.}03$,**h76**^{km}±1^{km}, **h76^{km}:pP-P,n1645,**σ**$1\overset{s}{.}19$**/1658,**mb5.0**/461,**51C-90D,**
Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.04**	**297**	⇓P	**Pn**	**23 00 20.6**	**+0.8**
JHO				⇓*e*S	**Sn**	**23 00 28.8**	**+1.1**
JHO	**Hitachi**	**0.04**	**297**	A	A	23 00 20.6	
	comp=N,208nm,0.7s,comp=E,170nm,0.6s						
JHYU	**Hitachinakayam**	**0.25**	**186**	⇓*i*P	**Pn**	**23 00 21.0**	**+0.6**
JHYU				⇓S	**Sn**	**23 00 29.6**	**+0.7**
JHYU	**Hitachinakayam**	**0.25**	**186**	A	A	23 00 21.0	
	comp=N,500nm,1.9s,comp=E,658nm,0.6s						
JYT	**Yasato**	**0.50**	**223**	P	**Pn**	**23 00 22.4**	**+0.2**
JYT				S	**Sn**	**23 00 32.0**	**0.0**
JYT	**Yasato**	**0.50**	**223**	A	A	23 00 22.4	
	comp=N,470nm,0.4s,comp=E,523nm,0.5s						
JFFD	**Fukushimafurud**	**0.50**	**355**	A	A	23 00 23.8	
	comp=N,290nm,1.0s,comp=E,159nm,0.5s						
ONAJ	**Iwakimizuishiy**	**0.53**	**16**	A	A	23 00 24.1	
	comp=N,315nm,0.3s,comp=E,442nm,0.3s						
JIHU	**Itakohorinouch**	**0.63**	**187**	A	A	23 00 23.5	
	comp=N,407nm,1.0s,comp=E,211nm,0.3s						
JSB	**Shiboa**	**0.68**	**304**	A	A	23 00 25.1	
	comp=N,271nm,1.8s,comp=E,693nm,0.9s						
JFK	**Kawauchi**	**0.80**	**15**	⇓*i*P	**Pn**	**23 00 26.7**	**+1.3**
JFK				⇓S	**Sn**	**23 00 39.7**	**+2.1**
JFK	**Kawauchi**	**0.80**	**15**	A	A	23 00 26.7	
	comp=N,175nm,2.6s,comp=E,151nm,0.9s						
JAG	**Ashikaga**	**0.95**	**260**	*i* P	**Pn**	**23 00 27.5**	**+0.4**
JAG				*e*S	**Sn**	**23 00 41.0**	**+0.3**
JAG	**Ashikaga**	**0.95**	**260**	A	A	23 00 27.5	
	comp=N,88nm,1.7s,comp=E,102nm,1.5s						
JSMT	**Sammumatsuo**	**0.96**	**188**	A	A	23 00 27.1	
	comp=N,98nm,2.4s,comp=E,75nm,1.0s						
JOTO	**OTAMA OYAMA**	**0.99**	**347**	*i* P	**Pn**	**23 00 29.3**	**+1.7**
JOTO				*e*S	**Sn**	**23 00 44.2**	**+2.6**
JOTO	**OTAMA OYAMA**	**0.99**	**347**	A	A	23 00 29.3	
	comp=N,259nm,0.4s,comp=E,331nm,0.4s						
JFY	**Yanaizu**	**1.09**	**318**	P	**Pn**	**23 00 30.3**	**+1.4**
JFY				*e*S	**Sn**	**23 00 45.9**	**+2.1**
JFY	**Yanaizu**	**1.09**	**318**	A	A	23 00 30.3	
	comp=N,85nm,2.0s,comp=E,147nm,1.4s						
JKT	**Katashina**	**1.11**	**279**	P	**Pn**	**23 00 30.0**	**+0.8**
JKT				S	**Sn**	**23 00 45.9**	**+1.5**
JKT	**Katashina**	**1.11**	**279**	A	A	23 00 30.0	
	comp=N,76nm,0.7s,comp=E,111nm,0.3s						
TOK	**Tokyo**	**1.14**	**218**	A	A	23 00 29.3	
	comp=N,241nm,0.7s,comp=E,123nm,0.8s						
JMST	**Minamisoumatoc**	**1.15**	**11**	A	A	23 00 31.5	
	comp=N,293nm,0.6s,comp=E,198nm,0.6s						
JMM	**Marumori**	**1.28**	**6**		**Pn**	**23 00 31.7**	**+0.5**
JMM				Sn	**Sn**	**23 00 48.8**	**+0.9**
JMM	**Marumori**	**1.28**	**6**	P	**Pn**	**23 00 33.2**	**+2.0**
JMM	**Marumori**	**1.28**	**6**	⇓*i*P	**Pn**	**23 00 32.8**	**+1.6**
JMM				⇓S	**Sn**	**23 00 50.0**	**+2.0**
JMM	**Marumori**	**1.28**	**6**	A	A	23 00 32.8	
	comp=N,164nm,1.8s,comp=E,164nm,0.4s						
JYAR	**Yonezawaarcadi**	**1.37**	**344**	A	A	23 00 34.2	
	comp=N,102nm,1.1s,comp=E,83nm,1.3s						
JUON	**Uonuma**	**1.40**	**297**	*i* P	**Pn**	**23 00 33.7**	**+1.0**
JUON	**Uonuma**	**1.40**	**297**	A	A	23 00 33.7	
	comp=N,25nm,0.8s,comp=E,27nm,1.4s						
JKUC	**kamogawauchiur**	**1.47**	**194**	A	A	23 00 33.6	
	comp=N,42nm,0.9s,comp=E,36nm,3.8s						
JRY	**Ryogami san**	**1.50**	**248**	P	**Pn**	**23 00 34.4**	**+0.4**
JRY	**Ryogami san**	**1.50**	**248**	A	A	23 00 34.4	
	comp=N,24nm,1.5s,comp=E,21nm,1.2s						
JSGW	**Sagamiharawaka**	**1.51**	**230**	A	A	23 00 34.3	
	comp=N,24nm,1.2s,comp=E,30nm,1.4s						
JYO	**Yokosk**	**1.57**	**210**	A	A	23 00 34.9	
	comp=N,70nm,1.4s,comp=E,71nm,0.7s						
JGK	**Kuni**	**1.59**	**270**	A	A	23 00 36.0	
	comp=N,33nm,3.3s,comp=E,30nm,1.0s						
JNS	**Sasagawa**	**1.61**	**320**	A	A	23 00 37.1	
	comp=N,24nm,2.4s,comp=E,26nm,3.2s						
TATJ	**Tateyama 2**	**1.67**	**201**	A	A	23 00 36.2	
	comp=N,64nm,1.3s,comp=E,66nm,2.5s						
JYS	**Shirataka**	**1.69**	**345**	A	A	23 00 38.5	
	comp=N,121nm,1.9s,comp=E,151nm,1.4s						
JOU	**Okura**	**1.77**	**1**	A	A	23 00 39.8	
	comp=N,71nm,0.8s,comp=E,49nm,0.5s						
JIZZ	**Izumozaki**	**1.79**	**302**	A	A	23 00 39.3	
	comp=N,59nm,2.5s,comp=E,58nm,5.7s						
JOD2	**Odawara 2**	**1.82**	**224**	A	A	23 00 38.3	
	comp=N,31nm,1.8s,comp=E,26nm,1.8s						
JIKH	**Ishinomakikobu**	**1.84**	**21**	A	A	23 00 40.8	
	comp=N,41nm,0.6s,comp=E,39nm,0.6s						
MJAR	**Matsushiro Arr**	**1.94**	**269**	P	**Pn**	**23 00 40.0**	**+0.1**
	comp=E,2µm,0.6s,baz=86,slow=16,SNR=2619						
MJAR				S	**Sn**	**23 00 59.7**	**-3.8**
	comp=E,1µm,0.5s,baz=84,slow=14,SNR=7.7						
MJAR				LR	LR	23 01 26.9	
	comp=E,2µm,18.4s,baz=154,slow=41						
MJAR	**Matsushiro Arr**	**1.94**	**269**	P	**Pn**	**23 00 40.0**	**+0.1**
MAJO	**Matsushiro**	**1.94**	**269**		**Pn**	**23 00 41.0**	**+1.1**
MAJO	**Matsushiro**	**1.94**	**269**	P	**Pn**	**23 00 41.2**	**+1.3**
MAJO	**Matsushiro**	**1.94**	**269**	*i* P	**Pn**	**23 00 40.8**	**+0.9**
MJB9	**Matsu-Tunnel**	**1.94**	**269**		**Pn**	**23 00 43.5**	**+3.6**
JIO	**Ouri**	**1.95**	**17**	A	A	23 00 42.3	
	comp=N,22nm,0.4s,comp=E,36nm,0.3s						
JYN	**Shimob**	**2.00**	**238**	A	A	23 00 41.1	
	comp=N,33nm,2.4s,comp=E,42nm,2.0s						
JOFO	**Osakifurukawao**	**2.02**	**7**	A	A	23 00 43.2	
	comp=N,128nm,3.1s,comp=E,119nm,2.6s						
JJN	**Nakama**	**2.04**	**285**	A	A	23 00 42.3	
	comp=N,33nm,1.9s,comp=E,52nm,1.3s						
JNG	**Nsakai**	**2.04**	**266**	A	A	23 00 42.0	
	comp=N,11nm,4.3s,comp=E,13nm,3.0s						
JHTM	**Izuhatsuma**	**2.09**	**219**	A	A	23 00 42.1	
	comp=N,86nm,0.8s,comp=E,108nm,1.2s						
JFNN	**Fujinakano**	**2.10**	**229**	A	A	23 00 42.3	
	comp=N,27nm,3.1s,comp=E,26nm,3.1s						
JIM2	**Oshima 3**	**2.10**	**208**	A	A	23 00 42.2	
	comp=N,65nm,0.9s,comp=E,56nm,1.3s						
JYA	**Atsumi**	**2.12**	**341**	A	A	23 00 44.5	
	comp=N,42nm,0.8s,comp=E,48nm,0.8s						
JNT	**Takato**	**2.13**	**251**	A	A	23 00 43.0	
	comp=N,13nm,1.1s,comp=E,15nm,1.1s						
JAW	**Awa shima**	**2.16**	**330**	A	A	23 00 44.8	
	comp=N,13nm,4.4s,comp=E,17nm,3.7s						
JKMT	**Kesennumamotoy**	**2.32**	**17**	A	A	23 00 47.4	
	comp=N,23nm,0.4s,comp=E,40nm,0.7s						
JTHY	**Toshimahigashi**	**2.33**	**208**	A	A	23 00 45.3	
	comp=N,38nm,1.3s,comp=E,25nm,2.3s						
JYK	**Kaneyama**	**2.33**	**355**	A	A	23 00 47.5	
	comp=N,22nm,3.8s,comp=E,20nm,2.4s						
JIZS	**Izushimoda**	**2.34**	**218**	A	A	23 00 45.6	
	comp=N,33nm,0.9s,comp=E,48nm,1.1s						
JSD	**Sado**	**2.37**	**308**	P	**Pn**	**23 00 46.8**	**+1.2**
JSD	**Sado**	**2.37**	**308**	A	A	23 00 47.4	
	comp=N,12nm,1.3s,comp=E,11nm,2.4s						
JMK	**Ichinoseki**	**2.41**	**11**	A	A	23 00 48.6	
	comp=N,13nm,0.7s,comp=E,20nm,2.1s						
SHZ3	**Shizuoka 3**	**2.48**	**233**	A	A	23 00 47.6	
	comp=N,36nm,2.5s,comp=E,39nm,2.3s						
JYYZ	**Yamagatayuza**	**2.48**	**348**	A	A	23 00 49.5	
	comp=N,47nm,1.3s,comp=E,49nm,2.4s						
JNIO	**Niijimaoohara**	**2.48**	**207**	A	A	23 00 47.5	
	comp=N,34nm,2.5s,comp=E,30nm,1.6s						
JSKK	**Shikinejimakit**	**2.53**	**207**	A	A	23 00 48.1	
	comp=N,19nm,1.7s,comp=E,27nm,1.9s						
JNY	**Yasuok**	**2.55**	**242**	A	A	23 00 48.7	
	comp=N,24nm,1.0s,comp=E,18nm,0.8s						
OFUJ	**Ofunato**	**2.62**	**18**	A	A	23 00 51.6	
	comp=N,26nm,0.5s,comp=E,19nm,0.7s						
JTT	**Ttatey**	**2.64**	**271**	A	A	23 00 50.5	
	comp=N,13nm,4.6s,comp=E,17nm,1.8s						
JSZ	**Suzu**	**2.74**	**289**	A	A	23 00 52.2	
	comp=N,9.0nm,2.3s,comp=E,8.0nm,1.7s						
JSG	**Sagara**	**2.75**	**227**		**Pn**	**23 00 50.4**	**-0.4**
JSG	**Sagara**	**2.75**	**227**	P	**Pn**	**23 00 52.9**	**+2.1**
JSG	**Sagara**	**2.75**	**227**	A	A	23 00 51.3	
	comp=N,24nm,1.4s,comp=E,25nm,4.3s						
JRG	**Rokugo**	**2.80**	**0**	A	A	23 00 54.1	
	comp=N,21nm,1.9s,comp=E,17nm,0.7s						
JGF	**Kuroka**	**2.82**	**250**		**Pn**	**23 00 53.3**	**+1.5**
JGF	**Kuroka**	**2.82**	**250**	P	**Pn**	**23 00 53.6**	**+1.8**
JGF	**Kuroka**	**2.82**	**250**	A	A	23 00 52.5	
	comp=N,9.0nm,3.5s,comp=E,13nm,2.5s						
JMKN	**Mikurajimanish**	**2.82**	**198**	A	A	23 00 52.1	
	comp=N,13nm,4.4s,comp=E,11nm,1.9s						
JKKS	**Kakegawashinom**	**2.82**	**230**	A	A	23 00 52.3	
	comp=N,20nm,3.9s,comp=E,27nm,5.1s						
HMMJ	**Hamamatsu 2**	**2.92**	**235**	A	A	23 00 53.8	
	comp=N,9.0nm,1.4s,comp=E,6.0nm,1.4s						
JOM	**Ohasama**	**2.93**	**10**	A	A	23 00 55.8	
	comp=N,14nm,0.6s,comp=E,20nm,2.4s						
JYW	**Yuwa**	**2.96**	**354**	A	A	23 00 56.3	
	comp=N,33nm,2.6s,comp=E,28nm,1.2s						
JAO	**Obara**	**3.03**	**245**	A	A	23 00 55.4	
	comp=N,12nm,2.2s,comp=E,25nm,2.0s						
MIYJ	**Miyakonagasawa**	**3.13**	**17**	A	A	23 00 58.6	
	comp=N,14nm,2.7s,comp=E,15nm,1.5s						
JSZI	**Iwateshizukuis**	**3.16**	**5**	A	A	23 00 59.0	
	comp=N,31nm,1.7s,comp=E,30nm,3.1s						
INU	**Inuyama**	**3.17**	**248**		**Pn**	**23 00 56.8**	**+0.3**
INU	**Inuyama**	**3.17**	**248**	P	**Pn**	**23 00 58.0**	**+1.5**
JYTA	**Yamagatataniai**	**3.30**	**254**	A	A	23 00 59.2	
	comp=N,8.0nm,3.1s,comp=E,10.0nm,4.2s						
JICN	**Ichinomiyachia**	**3.32**	**248**	A	A	23 00 59.5	
	comp=N,20nm,1.9s,comp=E,20nm,3.1s						
TTO5	**TONANKAI O.B.S**	**3.33**	**226**	A	A	23 00 59.3	
	comp=N,24nm,2.3s,comp=E,22nm,2.3s						
JKZ	**Kuzumaki**	**3.43**	**9**	A	A	23 01 02.9	
	comp=N,10.0nm,1.2s,comp=E,11nm,0.9s						
JAA	**Atsumi**	**3.44**	**236**	A	A	23 01 01.0	
	comp=N,6.0nm,3.6s,comp=E,5.0nm,1.9s						
JTH	**Tanohata**	**3.48**	**16**	A	A	23 01 03.6	
	comp=N,8.0nm,0.7s,comp=E,14nm,2.0s						
JHJ2	**Mitsune**	**3.53**	**191**		**Pn**	**23 00 59.6**	**-1.8**
JAH	**Hinai**	**3.59**	**0**	A	A	23 01 05.1	
	comp=N,9.0nm,3.6s,comp=E,7.0nm,2.3s						
JKEN	**Kujiedanarisaw**	**3.71**	**13**	A	A	23 01 06.7	
	comp=N,39nm,0.6s,comp=E,30nm,1.3s						
JEG	**Eigenji**	**3.73**	**248**	A	A	23 01 05.1	
	comp=N,7.0nm,1.5s,comp=E,5.0nm,1.3s						
JANG	**Nango**	**3.84**	**10**	A	A	23 01 08.6	
	comp=N,10.0nm,1.1s,comp=E,9.0nm,1.0s						
JIE	**Ise**	**3.87**	**237**	A	A	23 01 07.0	
	comp=N,8.0nm,2.5s,comp=E,5.0nm,2.1s						
JFM	**Mihama**	**3.90**	**256**	A	A	23 01 07.7	
	comp=N,5.0nm,3.6s,comp=E,8.0nm,2.7s						
JTM	**Tenmabayashi**	**4.20**	**5**		**Pn**	**23 01 11.8**	**+1.3**
JTM	**Tenmabayashi**	**4.20**	**5**	P	**Pn**	**23 01 11.9**	**+1.3**
JARK	**Aomorirokkasho**	**4.45**	**7**	A	A	23 01 17.0	
	comp=N,9.0nm,0.9s,comp=E,7.0nm,1.5s						
JSI2	**Shiura 2**	**4.46**	**358**	A	A	23 01 17.2	
	comp=N,5.0nm,0.9s,comp=E,5.0nm,4.9s						
JKY	**Yasaka**	**4.57**	**259**	A	A	23 01 17.0	
	comp=N,6.0nm,1.4s,comp=E,6.0nm,2.4s						
JAHD	**Aomorihigashid**	**4.70**	**7**	A	A	23 01 20.5	
	comp=N,16nm,1.7s,comp=E,17nm,1.6s						
JOT	**Ohata**	**4.80**	**4**	A	A	23 01 21.9	
	comp=N,4.0nm,3.1s,comp=E,5.0nm,3.8s						
ERM	**Erimo**	**5.76**	**19**		**Pn**	**23 01 30.0**	**-1.8**
ERM	**Erimo**	**5.76**	**19**	*ce*P	**Pn**	**23 01 30.8**	**-1.0**
ERM				pmax	pmax		
	comp=Z,226nm,1.3s						
JMN	**Monobe**	**6.21**	**245**	Pn	**Pn**	**23 01 37.8**	**-0.2**
JMN	**Monobe**	**6.21**	**245**	P	**Pn**	**23 01 38.4**	**+0.4**
ASAJ	**Asahikawa**	**7.67**	**11**	P	**Pn**	**23 01 56.5**	**-1.3**
	comp=Z,119nm,0.4s,baz=217,slow=10.0,SNR=109						
ASAJ				S	**Sn**	**23 03 21.4**	**-1.7**
	comp=Z,47nm,0.4s,baz=74,slow=10,SNR=3.6						
ASAJ	**Asahikawa**	**7.67**	**11**	P	**Pn**	**23 01 55.6**	**-2.2**
JKA	**Kamikawa-asahi**	**7.67**	**11**	Pn	**Pn**	**23 01 55.6**	**-2.2**
NMR	**Nemuro--Hokkai**	**7.82**	**29**	*e*P	**Pn**	**23 01 56.9**	**-3.0**
NMR				*e*S	**Sn**	**23 03 19.1**	**-7.7**
GLVR	**Golovnino**	**8.06**	**26**	*e*P	**Pn**	**23 02 00.9**	**-2.3**
GLVR				*e*S	**Sn**	**23 03 26.8**	**-5.9**
GLVR				pmax	pmax		
	comp=N,214nm,0.6s						
GLVR				pmax	pmax		
	comp=Z,541nm,0.6s						
GLVR				pmax	pmax		
	comp=E,94nm,0.4s						
RUSJ	**Misakicho**	**8.29**	**24**	*e*P	**Pn**	**23 02 04.9**	**-1.4**
RUSJ				*e*S	**Sn**	**23 03 34.0**	**-4.3**
YUK	**Yuzh-Kuril'sk**	**8.44**	**27**	*e*P	**Pn**	**23 02 06.9**	**-1.4**
YUK				*e*S	**Sn**	**23 03 35.2**	**-6.8**
YUK				pmax	pmax		
	comp=E,321nm,0.2s						
YUK				pmax	pmax		
	comp=Z,596nm,0.2s						
SHO	**Shikotan**	**8.68**	**31**	*e*P	**Pn**	**23 02 09.8**	**-1.8**
SHO				*e*S	**Sn**	**23 03 39.7**	**-8.1**
SHO				pmax	pmax		
	comp=Z,97nm,0.3s						
SHO				pmax	pmax		
	comp=N,29nm,0.2s						
SHO				pmax	pmax		
	comp=E,37nm,0.4s						
JNU	**Nakatsue**	**8.72**	**249**	Pn	**Pn**	**23 02 12.1**	**-0.2**
JNU	**Nakatsue**	**8.72**	**249**	P	**Pn**	**23 02 13.0**	**+0.7**
	comp=E,106nm,1.1s,baz=73,slow=7.0,SNR=25						
JNU				LR	LR	23 05 50.9	
	comp=E,332nm,21.5s,baz=66,slow=40						
JNU	**Nakatsue**	**8.72**	**249**	P	**Pn**	**23 02 14.2**	**+1.9**
TEY	**Ternei**	**8.97**	**341**	⇑*e*P	**Pn**	**23 02 15.9**	**+0.4**
TEY				pmax	pmax		
	comp=N,40nm,0.9s						
TEY				pmax	pmax		
	comp=E,20nm,0.9s						
TEY				pmax	pmax		
	comp=Z,40nm,0.9s						
MSHR	**Mys Shultsa**	**9.44**	**312**	*i* P	**Pn**	**23 02 21.9**	**0.0**
JCJ	**Chichijima**	**9.56**	**172**	Pn	**Pn**	**23 02 19.4**	**-4.3**
JCJ	**Chichijima**	**9.56**	**172**	P	Pn	23 02 18.4	-5.3
	baz=180,slow=0.0						
JCJ				S	Sn	23 03 56.4	-13
	baz=0.0,slow=0.0						
JCJ	**Chichijima**	**9.56**	**172**	P	**Pn**	**23 02 27.0**	**+3.3**
PSTR	**Posyet**	**9.69**	**312**	*i* P	**Pn**	**23 02 25.3**	**-0.1**
USA0B	**Ussuriysk Arra**	**10.05**	**322**		**Pn**	**23 02 31.5**	**+1.2**
USA0B	**Ussuriysk Arra**	**10.05**	**322**	*i* P	**Pn**	**23 02 30.1**	**-0.2**
USRK	**Ussuriysk Ar.**	**10.05**	**322**	P	**Pn**	**23 02 31.3**	**+1.0**
	comp=Z,12nm,0.5s,baz=139,slow=12,SNR=20						
USRK				LR	LR	23 06 07.4	
	comp=Z,674nm,20.3s,baz=139,slow=36						
KSRS	**Korea Array**	**10.19**	**279**	P	**Pn**	**23 02 33.8**	**+1.5**
	comp=Z,21nm,0.6s,baz=94,slow=14,SNR=55						
KSRS				LR	LR	23 06 17.1	
	comp=Z,421µm,20.8s,baz=90,slow=36						
KSAR	**Wonju Array Be**	**10.22**	**279**	Pn	**Pn**	**23 02 32.6**	**0.0**
KSAR	**Wonju Array Be**	**10.22**	**279**	P	**Pn**	**23 02 32.7**	**0.0**
KUR	**Kuril'sk**	**10.22**	**30**	*e*P	**Pn**	**23 02 30.6**	**-2.0**
KUR				*i* S	**Sn**	**23 04 18.3**	**-7.1**
KUR				pmax	pmax		
	comp=Z,158nm,0.6s						
KUR				smax	smax		
	comp=E,982nm,0.7s						
KUR				smax	smax		
	comp=N,915nm,0.6s						
KS19	**Wonju Array Si**	**10.23**	**279**	Pn	**Pn**	**23 02 33.4**	**+0.5**
YSS	**Yuzhno-Sakhali**	**10.48**	**8**	Pn	**Pn**	**23 02 34.8**	**-1.3**
YSS	**Yuzhno-Sakhali**	**10.48**	**8**	P	**Pn**	**23 02 38.7**	**+2.6**
YSS	**Yuzhno-Sakhali**	**10.48**	**8**	*e*P	**Pn**	**23 02 34.7**	**-1.3**
YSS				*e*S	**Sn**	**23 04 25.7**	**-5.9**
YSS				pmax	pmax		
	comp=Z,210nm,0.8s						
YSS				pmax	pmax		
	comp=N,190nm,0.6s						
YSS				pmax	pmax		
	comp=E,60nm,0.9s						
YSS				smax	smax		
	comp=N,50nm,0.8s						
YSS				smax	smax		
	comp=E,20nm,0.6s						
YSS				MLR	MLR		
	comp=Z,900nm,12.0s						
YSS				MLR	MLR		
	comp=N,1µm,13.0s						
YSS				MLR	MLR		
	comp=E,1µm,15.0s						
TJN	**Taejon**	**10.68**	**273**		**Pn**	**23 02 39.9**	**+1.0**
TJN	**Taejon**	**10.68**	**273**	P	**Pn**	**23 02 41.3**	**+2.4**
TJN	**Taejon**	**10.68**	**273**	P	**Pn**	**23 02 39.9**	**+1.0**
MDJ	**Mudanjiang**	**11.59**	**317**	P	**Pn**	**23 02 54.8**	**+3.5**
MDJ				S	**Sn**	**23 04 58.8**	**0.0**
MDJ				pmax	pmax		
	comp=E,19nm,0.8s						
MDJ				pmax	pmax		
	comp=E,540nm,4.1s						
MDJ				LR	LR		
	comp=E,1µm,23.7s						
BNX	**BinXian**	**13.50**	**317**	⇓P	**Pn**	**23 03 16.4**	**-0.6**
BNX				S	**Sn**	**23 05 45.8**	**+0.6**
BNX				pmax	pmax		
	comp=E,26nm,1.0s						
BNX				pmax	pmax		
	comp=E,350nm,6.2s						
BNX				LR	LR		
	comp=E,220nm,13.3s						
BNX				LR	LR		
	comp=E,430nm,11.4s						
BNX				LR	LR		
	comp=E,500nm,16.8s						
CN2	**Changchun**	**13.64**	**307**	*e*P	**Pn**	**23 03 20.3**	**+1.4**
CN2				pmax	pmax		
	comp=E,10.0nm,0.5s						
KLR	**Kul'dur**	**14.19**	**336**	P	**Pn**	**23 03 24.6**	**-1.5**
	comp=E,3.8nm,0.5s,baz=146,slow=16,SNR=14						
KLR				LR	LR	23 08 50.4	
	comp=E,334nm,19.9s,baz=144,slow=37						
KLR	**Kul'dur**	**14.19**	**336**	*ce*P	**Pn**	**23 03 24.7**	**-1.3**
KLR				pmax	pmax		
	comp=Z,19nm,1.7s						
JOW	**Kunigami**	**14.31**	**231**		**Pn**	**23 03 26.3**	**-1.4**
JOW	**Kunigami**	**14.31**	**231**	P	**Pn**	**23 03 25.9**	**-1.8**
	comp=Z,12nm,0.8s,baz=8.6,slow=14,SNR=5.7						
JOW	**Kunigami**	**14.31**	**231**	P	**Pn**	**23 03 28.6**	**+0.9**
TYV	**Tymovskoe**	**14.34**	**5**	*e*P	**Pn**	**23 03 26.3**	**-1.7**
TYV				*e*S	**Sn**	**23 06 03.8**	**-1.8**
TYV				pmax	pmax		
	comp=Z,700nm,3.1s						
TYV				pmax	pmax		
	comp=Z,178nm,0.7s						
TYV				smax	smax		
	comp=N,600nm,2.6s						
TYV				smax	smax		
	comp=E,900nm,2.6s						
TYV				smax	smax		
	comp=N,27nm,2.0s						
TYV				smax	smax		
	comp=E,27nm,2.0s						
GRNR	**Gornyy**	**14.49**	**349**	⇓*i*P	**Pn**	**23 03 26.4**	**-3.6**
GRNR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,240nm,12.0s						
GRNR				MLR	MLR		
	comp=N,230nm,15.0s						
DL2	**Dalian**	**15.20**	**284**	P	**Pn**	**23 03 40.6**	**+1.4**
DL2				S	**Sn**	**23 06 28.1**	**+1.5**
DL2				pmax	pmax		
	comp=N,88nm,0.6s						
DL2				pmax	pmax		
	comp=N,440nm,10.0s						
DL2				LR	LR		
	comp=N,630nm,12.3s						
DL2				LR	LR		
	comp=N,640nm,11.9s						
DL2				LR	LR		
	comp=N,990nm,15.9s						
HEH	**HeiHe**	**16.65**	**329**	*e*P	**Pn**	**23 03 54.1**	**-3.2**
HEH				pmax	pmax		
	comp=N,14nm,0.7s						
NJ2	**Nanjing**	**18.53**	**262**	*e*P	**P**	**23 04 17.6**	**-1.7**
NJ2				pmax	pmax		
	comp=N,30nm,0.7s						
NJ2				LR	LR		
	comp=N,300nm,14.5s						
NJ2				LR	LR		
	comp=N,350nm,15.9s						
NJ2				LR	LR		
	comp=N,560nm,12.6s						
TIA	**Tai'an**	**18.91**	**276**	P	**P**	**23 04 22.1**	**-1.4**
TIA				pmax	pmax		
	comp=N,27nm,0.7s						
BJI	**Beijing**	**19.47**	**288**	P	**P**	**23 04 28.8**	**-0.7**
BJI				pmax	pmax		
	comp=N,27nm,0.6s						
BJI				pmax	pmax		
	comp=N,62nm,4.0s						
BJT	**Baijiatuau**	**19.48**	**288**	P	**P**	**23 04 29.1**	**-0.5**
BJT	**Baijiatuau**	**19.48**	**288**	P	**P**	**23 04 29.4**	**-0.2**
BJT	**Baijiatuau**	**19.48**	**288**	P	**P**	**23 04 29.1**	**-0.5**
ZEA	**Zeya**	**19.51**	**336**	*e*P	**P**	**23 04 27.5**	**-2.3**
ZEA				pmax	pmax		
	comp=N,40nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,60nm,0.6s						
ZEA				MLR	MLR		
	comp=Z,200nm,16.0s						
HIA	**Hailar**	**19.77**	**316**	P	**P**	**23 04 32.6**	**-0.2**
HIA	**Hailar**	**19.77**	**316**	*i* P	**P**	**23 04 33.3**	**+0.5**
HIA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
XLT	**XiLinHaoTe**	**20.06**	**299**	*e*P	**P**	**23 04 34.4**	**-1.6**
XLT				pP	pP	23 04 52.8	+1.2
XLT				PP	**sP**	**23 05 00.6**	**-0.7**
XLT				pmax	pmax		
	comp=Z,54nm,0.7s						
XLT				pmax	pmax		
	comp=Z,96nm,3.9s						
XLT				LR	LR		
	comp=Z,570nm,15.7s						
XLT				LR	LR		
	comp=Z,700nm,17.0s						
PEA0B	**Petropavlovsk-**	**20.39**	**31**	P	**P**	**23 04 37.9**	**-1.5**
PEA0B				IAmb	IAmb	23 04 44.3	
	comp=Z,80nm,1.4s						
PEA0B	**Petropavlovsk-**	**20.39**	**31**	*ce*P	Pn	23 04 41.4	-0.7
PETK	**Petropavlovsk-**	**20.39**	**31**	P	**P**	**23 04 39.2**	**-0.1**
PETK	**Petropavlovsk-**	**20.39**	**31**	P	**P**	**23 04 38.9**	**-0.5**
	comp=Z,20nm,1.0s,baz=250,slow=4.4,SNR=12						
	comp=Z,20nm,1.0s						
PETK	**Petropavlovsk-**	**20.39**	**31**	P	**P**	**23 04 39.3**	**-0.1**
HNS	**HongShan**	**20.70**	**280**	⇑P	**P**	**23 04 40.3**	**-2.5**
HNS				pP	**pP**	**23 04 56.3**	**-2.1**
HNS				sP	**sP**	**23 05 04.3**	**-3.6**
HNS				S	**S**	**23 08 30.3**	**+0.6**
HNS				sS	**sS**	**23 08 49.0**	**-6.3**
HNS				pmax	pmax		
	comp=Z,64nm,0.7s						
HNS				LR	LR		
	comp=Z,170nm,9.8s						
HNS				LR	LR		
	comp=Z,350nm,14.4s						
HNS				LR	LR		
	comp=Z,320nm,15.2s						
PET	**Petropavlovsk**	**20.73**	**32**	P	**P**	**23 04 41.0**	**-2.0**
PET				IAmb	IAmb	23 04 48.9	
	comp=Z,80nm,1.3s						

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PET   Petropavlovsk      20.73  32  P     Pn      23 04 44.9 -1.2
PET   Petropavlovsk      20.73  32 eP     Pn      23 04 44.7 -1.4
PET                                eS     S       23 08 25.1 -4.9
PET                                 pmax  pmax
      comp=Z,52nm,1.2s
PET                                 MLR   MLR
      comp=Z,200nm,20.0s
SSLB  Suanglung          21.20 238  P     P       23 04 47.1 -1.4
SSLB  Suanglung          21.20 238  P     P       23 04 48.5 +0.1
YULB  Yu-li              21.23 237        P       23 04 46.5 -2.3
YULB                                IAmb  IAmb    23 05 03.8
      comp=Z,89nm,1.6s
YULB  Yu-li              21.23 237  P     P       23 04 49.4 +0.7
TPUB  Ta-pu              21.75 238  P     P       23 04 53.5 -0.7
TPUB                                IAmb  IAmb    23 04 58.2
      comp=Z,42nm,0.6s
TPUB  Ta-pu              21.75 238  P     P       23 04 54.7 +0.5
TWGBT Beinan             21.77 236  P     P       23 04 54.7 +0.3
TWG   Pinlang            21.77 236  P     P       23 04 51.8 -2.6
TWG                                 IAmb  IAmb    23 04 55.2
      comp=Z,41nm,0.6s
QZH   Quanzhou           22.15 245  P     P       23 04 54.9 -3.6
QZH                                 pmax  pmax
      comp=Z,100nm,0.9s
TIY   Taiyuan            22.46 281  P     P       23 05 02.8 +0.9
TIY                                 S     S       23 09 01.1 -2.2
TIY                                 pmax  pmax
      comp=Z,26nm,0.8s
TIY                                 LR    LR
      comp=Z,250nm,13.1s
TIY                                 LR    LR
      comp=Z,380nm,16.5s
TIY                                 LR    LR
      comp=Z,460nm,15.8s
WHN   Wuhan              22.67 262  P     P       23 05 01.6 -2.4
WHN                                 sP    sP      23 05 28.8 -0.2
WHN                                 S     S       23 09 01.4 -5.2
WHN                                 pmax  pmax
      comp=Z,210nm,0.6s
WHN                                 LR    LR
      comp=Z,1µm,14.6s
LYN   LuoYang            22.96 273  P     P       23 05 04.8 -2.1
LYN                                 sP    sP      23 05 31.3 -0.9
LYN                                 PP    PnPn    23 05 37.9 +2.9
LYN                                 S     S       23 09 10.3 -0.9
LYN                                 pmax  pmax
      comp=Z,34nm,0.6s
LYN                                 pmax  pmax
      comp=Z,260nm,4.9s
LYN                                 LR    LR
      comp=Z,310nm,20.6s
LYN                                 LR    LR
      comp=Z,620nm,17.5s
LYN                                 LR    LR
      comp=Z,700nm,16.1s
HHC   Hu-ho-hao-te       23.01 290 eP     P       23 05 09.8 +2.2
HHC                                 pmax  pmax
      comp=Z,14nm,0.7s
HHC                                 pmax  pmax
      comp=Z,71nm,5.9s
HHC                                 LR    LR
      comp=Z,190nm,14.3s
HHC                                 LR    LR
      comp=Z,350nm,13.5s
HHC                                 LR    LR
      comp=Z,290nm,14.3s
MA2   Magadan            23.92  13  P     P       23 05 15.9 +0.3
MA2                                 IAmb  IAmb    23 05 23.2
      comp=Z,50nm,0.7s
MA2   Magadan            23.92  13  P     P       23 05 15.7 +0.1
      comp=Z,16nm,0.5s,baz=211,slow=11,SNR=11
MA2                                 LR    LR      23 14 49.2
      comp=Z,209nm,19.9s,baz=160,slow=37
      comp=Z,16nm,0.5s
MA2   Magadan            23.92  13  P     P       23 05 15.8 +0.3
MA2   Magadan            23.92  13 i P    P       23 05 16.4 +0.8
MA2                                 pmax  pmax
      comp=Z,30nm,1.0s
BTO   Baotou             24.18 289 eP     P       23 05 15.8 -2.5
BTO                                 pP    pP      23 05 36.8 +1.1
BTO                                 sP    sP      23 05 49.0 +4.2
BTO                                 PP    PnPn    23 05 55.0 +3.2
BTO                                 S     S       23 09 24.8 -6.4
BTO                                 sS    sS      23 10 01.3 -0.1
BTO                                 SS    SnSn    23 10 25.4 +5.1
BTO                                 pmax  pmax
      comp=Z,10.0nm,0.6s
BTO                                 pmax  pmax
      comp=Z,200nm,5.3s
BTO                                 LR    LR
      comp=Z,500nm,17.7s
BTO                                 LR    LR
      comp=Z,650nm,15.0s
BTO                                 LR    LR
      comp=Z,610nm,15.9s
CIT   Chita              24.56 317 eP     P       23 05 18.8 -2.7
CIT                                e              23 05 37.2
CIT                                e              23 05 41.8
CIT                                e              23 06 05.0
CNSH  ChangSha           24.77 258  P     P       23 05 23.3 -0.3
CNSH                                pmax  pmax
      comp=Z,120nm,1.0s
XAN   Xi'an              25.93 274 ⇑P     P       23 05 33.3 -0.8
XAN                                 pP    sP      23 05 56.4 -4.2
XAN                                 S     S       23 09 56.6 -2.3
XAN                                 pmax  pmax
      comp=Z,43nm,0.7s
XAN                                 pmax  pmax
      comp=Z,220nm,3.8s
XAN                                 LR    LR
      comp=Z,230nm,10.7s
XAN                                 LR    LR
      comp=Z,390nm,12.2s
XAN                                 LR    LR
      comp=Z,450nm,14.6s
YAK   Yakutsk            26.37 348        P       23 05 37.7  0.0
YAK                                 IAmb  IAmb    23 05 57.4
      comp=Z,70nm,0.8s
YAK   Yakutsk            26.37 348  P     P       23 05 37.7  0.0
      comp=Z,53nm,0.6s,baz=156,slow=2.1,SNR=13
YAK                                 LR    LR      23 16 14.5
      comp=Z,334nm,20.1s,baz=157,slow=37
      comp=Z,53nm,0.6s
YAK   Yakutsk            26.37 348 eP     P       23 05 37.5 -0.2
YAK                                e*PP   pP      23 05 54.5 -0.8
YAK                                e              23 06 20.8
YAK                                e              23 08 58.1
YAK                                eS     S       23 10 06.0 +0.9
YAK                                e*SS   sS      23 10 39.8 +4.1
YAK                                eSS    SnSn    23 11 09.5 -3.5
YAK                                e              23 16 26.9
YAK                                 pmax  pmax
      comp=Z,77nm,1.0s
YAK                                 pmax  pmax
      comp=N,28nm,1.3s
YAK                                 pmax  pmax
      comp=E,10.0nm,1.5s
YAK                                 pmax  pmax
      comp=Z,52nm,0.9s
YAK                                 pmax  pmax
      comp=N,34nm,1.0s
YAK                                 pmax  pmax
      comp=E,20nm,1.2s
YAK                                 smax  smax
      comp=E,90nm,2.5s
YAK                                 smax  smax
      comp=N,73nm,2.0s
ENH   Enshi              26.66 265  P     P       23 05 39.5 -1.2
ENH   Enshi              26.66 265  P     P       23 05 39.5 -1.2
ULN   Ulaanbaatar        27.08 305        P       23 05 44.3 -0.2
ULN                                 IAmb  IAmb    23 06 12.8
      comp=Z,42nm,1.1s
ULN   Ulaanbaatar        27.08 305  P     P       23 05 44.3 -0.2
ULN                                 pmax  pmax
      comp=Z,42nm,1.1s
SEY   Seymchan           27.35  12  P     P       23 05 46.8 +0.3
      comp=Z,16nm,0.6s,baz=214,slow=7.5,SNR=24
SEY                                 PcP   PcP     23 09 04.2 +0.4
      comp=Z,1.3nm,0.3s,baz=196,slow=2.5,SNR=1.5
      comp=Z,16nm,0.6s
SEY   Seymchan           27.35  12 i P    P       23 05 48.4 +1.9
SEY                                 pmax  pmax
      comp=Z,28nm,1.0s
SONM  Songino Array      27.51 305        P       23 05 48.0 -0.2
SONM                                IAmb  IAmb    23 06 16.8
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      comp=Z,47nm,1.1s
SONM  Songino Array      27.51 305  P     P       23 05 47.6 -0.7
      comp=Z,25nm,0.7s,baz=109,slow=9.2,SNR=122
SONM                                PcP   PcP     23 09 04.9 +0.3
      comp=Z,3.1nm,0.6s,baz=156,slow=2.1,SNR=3.9
SONM                                ScP   ScP     23 12 37.8 -0.6
      comp=Z,2.1nm,1.1s,baz=90,slow=2.2,SNR=4.6
SONM                                LR    LR      23 17 03.2
      comp=Z,431nm,18.9s,baz=74,slow=37
      comp=Z,25nm,0.7s
SONM  Songino Array      27.51 305  P     P       23 05 48.0 -0.2
SONM                                pmax  pmax
      comp=Z,47nm,1.1s
BOD   Bodaibo            27.57 329 eP     P       23 05 48.8 +0.3
BOD                                 pmax  pmax
      comp=Z,43nm,0.7s
H11N2 WAKE ISLAND Hy     28.48 119  T     T       23 36 01.5
      baz=313,slow=75,SNR=154
H11N1 WAKE ISLAND Hy     28.49 119  T     T       23 36 10.0
      baz=313,slow=75,SNR=186
H11N3 WAKE ISLAND Hy     28.50 119  T     T       23 36 10.7
      baz=313,slow=75,SNR=227
H11S1 WAKE ISLAND Hy     29.17 121  T     T       23 36 58.8
      baz=314,slow=76,SNR=670
H11S3 WAKE ISLAND Hy     29.17 121  T     T       23 37 00.9
      baz=314,slow=76,SNR=324
H11S2 WAKE ISLAND Hy     29.18 121  T     T       23 36 59.9
      baz=314,slow=76,SNR=313
LZH   Lanzhou            29.51 280 eP     P       23 06 05.8 -0.4
LZH                                 pP    pP      23 06 18.8 -5.2
LZH                                 sS    sS      23 11 23.1 -3.1
LZH                                 pmax  pmax
      comp=Z,39nm,1.0s
LZH                                 LR    LR
      comp=Z,230nm,16.0s
LZH                                 LR    LR
      comp=Z,450nm,15.6s
LZH                                 LR    LR
      comp=Z,370nm,16.0s
ZAK   Zakamensk          30.05 309 eP     P       23 06 06.0 -4.7
ZAK                                 pmax  pmax
      comp=Z,5.0nm,1.3s
GYA   Guiyang            30.52 260 ⇑P     P       23 06 13.8 -1.3
GYA                                 pP    pP      23 06 31.3 -1.7
GYA                                 pmax  pmax
      comp=Z,38nm,1.0s
GYA                                 LR    LR
      comp=Z,370nm,16.5s
CD2   Chengdu            31.04 270 eP     P       23 06 20.0 +0.4
CD2                                 pmax  pmax
      comp=Z,10.0nm,0.5s
MOY   Mondy              31.74 311 eP     P       23 06 25.1 -0.5
GTA   Gaotai             32.09 288  P     P       23 06 28.1 -0.7
GTA                                 sP    sP      23 06 54.8 -0.7
GTA                                 PcP   PcP     23 09 17.3 +0.7
GTA                                 pmax  pmax
      comp=Z,21nm,0.9s
DAV   Davao City (W)     32.44 209  LR    LR      23 17 10.4
      comp=Z,102nm,20.9s,baz=24,slow=32
KMI   Kunming            34.26 261  P     P       23 06 46.8 -1.2
KMI                                 pmax  pmax
      comp=Z,20nm,1.6s
KMI                                 pmax  pmax
      comp=Z,130nm,5.5s
KMI                                 LR    LR
      comp=Z,210nm,22.6s
KMI                                 LR    LR
      comp=Z,160nm,16.1s
KMI                                 LR    LR
      comp=Z,260nm,28.9s
PZH   PanZhiHua          34.42 264  P     P       23 06 47.5 -1.8
PZH                                 pmax  pmax
      comp=Z,30nm,0.6s
BILL  Bilibino           34.63  17  P     P       23 06 50.9 +0.5
BILL                                IAmb  IAmb    23 07 13.6
      comp=Z,9.8nm,0.7s
BILL  Bilibino           34.63  17ceP     P       23 06 51.5 +1.1
BILL                                pmax  pmax
      comp=Z,9.0nm,1.3s
BILL  Bilibino           34.63  17  P     P       23 06 51.1 +0.7
BILL                                pP    pP      23 07 09.3 +0.8
SLVN  Son La             35.30 255        P       23 06 55.7 -1.1
SLVN  Son La             35.30 255  P     P       23 06 56.4 -0.4
SGSI  Sangihe            35.57 207  P     P       23 06 58.8 -0.3
      comp=Z,174nm,0.6s
TIXI  Tiksi              35.66 354  LR    LR      23 23 20.9
      comp=Z,246nm,18.8s,baz=137,slow=39
GOMU  GeErMu             36.60 283  P     P       23 07 08.6 +0.4
GOMU                                pmax  pmax
      comp=Z,18nm,0.9s
TNCH  TengChong          37.68 264 ⇓P     P       23 07 16.3 -0.9
TNCH                                pP    pP      23 07 29.9 -5.4
TNCH                                PP    PP      23 08 43.3 -1.1
TNCH                                S     S       23 13 04.9 +2.9
TNCH                                pmax  pmax
      comp=Z,64nm,1.1s
TNCH                                LR    LR
      comp=Z,200nm,9.3s
TNCH                                LR    LR
      comp=Z,190nm,7.1s
TNCH                                LR    LR
      comp=Z,240nm,15.5s
TNTI  Ternate            37.70 202        P       23 07 16.6 -0.5
TNTI  Ternate            37.70 202  P     P       23 07 17.0 -0.1
TNTI  Ternate            37.70 202  P     P       23 07 16.8 -0.3
      comp=Z,2µmcomp=Z,81nm,0.9s
UBPT  Khong Chiam        37.76 245        P       23 07 17.1 -0.6
UBPT  Khong Chiam        37.76 245  P     P       23 07 16.6 -1.1
SWI   Sorong             38.27 195  P     P       23 07 22.2 +0.3
      comp=Z,978nmcomp=Z,91nm,1.1s
SPIA  Saint Paul Isl     38.32  42  P     P       23 07 21.7 -0.2
      baz=259
SMPI  Sarmi              38.42 183  P     P       23 07 24.1 +0.9
      comp=Z,4µmcomp=Z,78nm,1.7s
NIKH  Nikolski High      38.55  49  P     P       23 07 24.3 +0.4
      baz=265
P08K  Saint George I     38.59  43  P     P       23 07 25.1 +0.9
      baz=260
JAY   Jayapura           38.91 180  P     P       23 07 27.4 +0.1
GENI  Genyem             38.98 181  P     P       23 07 28.6 +0.7
GENI  Genyem             38.98 181  P     P       23 07 29.0 +1.1
      comp=Z,2µmcomp=Z,72nm,1.0s
KMSI  Cibinong           39.01 207  P     P       23 07 28.1 -0.1
GAMB  Gambell            39.42  31  P     P       23 07 31.9 +0.8
      baz=249
TOLI2 Tolitoli           39.79 212        P       23 07 33.1 -1.5
TOLI2 Tolitoli           39.79 212  P     P       23 07 34.5 -0.2
MRSI  Marisa             39.89 210  P     P       23 07 35.0 -0.4
      comp=Z,1µmcomp=Z,96nm,1.2s
FAKI  Fak Fak            40.08 193        P       23 07 36.2 -0.8
WMQ   Urumqi             40.47 297 eP     P       23 07 41.3 +1.2
WMQ                                 S     S       23 13 47.8 +4.5
WMQ                                 pmax  pmax
      comp=Z,57nm,1.1s
WMQ                                 pmax  pmax
      comp=Z,100nm,3.7s
WMQ                                 LR    LR
      comp=Z,340nm,23.1s
WMQ                                 LR    LR
      comp=Z,190nm,19.9s
WMQ   Urumqi             40.47 297  P     P       23 07 41.4 +1.2
WMQ                                 pP    pP      23 07 59.3 +0.8
CHTO  Chiang Mai         40.56 256        P       23 07 39.7 -1.4
CHTO  Chiang Mai         40.56 256  P     P       23 07 40.6 -0.5
CHTO  Chiang Mai         40.56 256  P     P       23 07 39.7 -1.4
CHTO                                pmax  pmax
      comp=Z,15nm,1.0s
CHTO  Chiang Mai         40.56 256  P     P       23 07 40.2 -0.9
CHTO                                sP    sP      23 08 06.3 -1.9
CHTO                                PcP   PcP     23 09 42.1  0.0
CMAR  Chiang Mai Arr     40.77 255  P     P       23 07 41.7 -1.1
CMAR  Chiang Mai Arr     40.77 255  P     P       23 07 41.1 -1.6
      comp=Z,3.5nm,0.5s,baz=46,slow=6.4,SNR=18
CMAR                                PcP   PcP     23 09 42.6 -0.1
      comp=Z,5.5nm,0.9s,baz=67,slow=2.8,SNR=7.3
CMAR                                LR    LR      23 26 14.6
      comp=Z,107nm,18.8s,baz=50,slow=38
      comp=Z,3.5nm,0.5s
CMAR  Chiang Mai Arr     40.77 255  P     P       23 07 41.7 -1.1
SANI  Sanana             40.79 203  P     P       23 07 42.3 -0.5
SANI  Sanana             40.79 203  P     P       23 07 41.5 -1.3
      comp=Z,2µmcomp=Z,273nm,0.8s
MPSI  Mapaga             40.87 213  P     P       23 07 43.3 -0.2
LUWI  Luwuk              40.95 208  P     P       23 07 41.6 -2.6
LUWI  Luwuk              40.95 208  P     P       23 07 44.6 +0.4
LUWI  Luwuk              40.95 208  P     P       23 07 44.1 -0.1
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      comp=Z,2µmcomp=Z,166nm,0.7s
M11K  Mekoryuk           41.00  37  P     P       23 07 44.6 +0.5
      baz=259
MSAI  Masohi             41.20 198  P     P       23 07 46.3  0.0
      comp=Z,3µmcomp=Z,258nm,1.3s
APSI  Ampana             41.27 210  P     P       23 07 46.2 -0.6
      comp=Z,2µmcomp=Z,215nm,1.0s
TNA   Tin City           41.55  29  P     P       23 07 47.5 -1.0
TNA                                 IAmb  IAmb    23 08 10.5
      comp=Z,24nm,0.9s
TNA   Tin City           41.55  29  P     P       23 07 48.9 +0.3
      baz=252
NLAI  Namlea             41.58 201  P     P       23 07 49.9 +0.5
      comp=Z,1µmcomp=Z,90nm,1.1s
LSA   Lhasa              41.61 275  P     P       23 07 51.0 +0.8
LSA                                 IAmb  IAmb    23 07 51.8
      comp=Z,20nm,0.9s
LSA   Lhasa              41.61 275  P     P       23 07 51.0 +0.8
LSA                                 pmax  pmax
      comp=Z,20nm,0.9s
LSA   Lhasa              41.61 275  P     P       23 07 50.6 +0.5
AAI   Ambon              41.72 199  P     P       23 07 52.0 +1.5
ZAA0  Zalesovo Array     41.74 313  P     P       23 07 50.6 +0.3
ZAA0                                IAmb  IAmb    23 07 52.5
      comp=Z,33nm,0.9s
ZALV  Zalesovo Beam      41.74 313  P     P       23 07 50.1 -0.2
ZALV  Zalesovo Beam      41.74 313  P     P       23 07 49.7 -0.6
      comp=Z,25nm,0.6s,baz=92,slow=6.8,SNR=80
ZALV                                PcP   PcP     23 09 45.3  0.0
      comp=Z,11nm,0.7s,baz=83,slow=2.7,SNR=3.8
ZALV                                LR    LR      23 25 54.9
      comp=Z,169nm,18.2s,baz=57,slow=37
      comp=Z,25nm,0.6s
ZALV  Zalesovo Beam      41.74 313  P     P       23 07 50.1 -0.2
FALS  False Pass         41.87  46  P     P       23 07 51.9 +0.6
      baz=268
PCI   Palu               42.01 212  P     P       23 07 52.6 -0.3
      comp=Z,113nm,1.1s
K13K  Kusilvak Mount     42.03  35  P     P       23 07 53.6 +1.1
K13K  Kusilvak Mount     42.03  35  P     P       23 07 53.8 +1.3
      baz=259
F14K  Arctic Creek       42.16  30  P     P       23 07 55.2 +1.6
      baz=253
ANM   Nome               42.30  31  P     P       23 07 55.9 +1.1
      baz=255
M13K  Dall Lake          42.40  38  P     P       23 07 56.3 +0.8
      baz=262
S12K  Black Hills        42.67  45  P     P       23 07 58.5 +0.7
      baz=268
J14K  Nanvaranak Lak     42.69  34  P     P       23 07 58.8 +0.9
      baz=259
L14K  Kuka Creek         42.86  36  P     P       23 08 00.7 +1.5
L14K  Kuka Creek         42.86  36  P     P       23 08 00.2 +0.9
      baz=261
F15K  North Star Dit     42.90  30  P     P       23 08 00.3 +0.8
      baz=255
G15K  Niukluk            42.97  31  P     P       23 08 00.8 +0.7
      baz=256
M14K  Bethel             43.13  37  P     P       23 08 01.9 +0.5
M14K                                IAmb  IAmb    23 08 10.8
      comp=Z,24nm,0.8s
M14K  Bethel             43.13  37  P     P       23 08 02.1 +0.7
      baz=263,SNR=11
N14K  Kuskokwak Cree     43.17  38  P     P       23 08 02.4 +0.6
      baz=264
O14K  Tigyukauivet M     43.31  39  P     P       23 08 04.4 +1.4
O14K  Tigyukauivet M     43.31  39  P     P       23 08 03.2 +0.3
      baz=265
C16K  Lisburne Hills     43.38  26  P     P       23 08 04.0 +0.6
C16K                                IAmb  IAmb    23 08 24.4
      comp=Z,17nm,0.8s
C16K  Lisburne Hills     43.38  26  P     P       23 08 04.0 +0.6
      baz=251,SNR=5.8
L15K  Ungalak Mounta     43.48  36  P     P       23 08 04.9 +0.7
      baz=262
K15K  Wolf Creek Mou     43.54  35  P     P       23 08 06.7 +1.9
K15K  Wolf Creek Mou     43.54  35  P     P       23 08 05.0 +0.2
      baz=261,SNR=6.2
SDPT  Sand Point         43.56  45  P     P       23 08 05.1 +0.1
      baz=270
H16K  Elim               43.64  32  P     P       23 08 05.6 +0.1
      baz=258
M15K  Kasigluk River     43.74  37  P     P       23 08 06.1 -0.3
      baz=264,SNR=9.6
G16K  Koyuk River        43.75  31  P     P       23 08 05.9 -0.4
      baz=257
MK31  Makanchi Array     43.81 302ceP     P       23 08 07.7 +0.5
MKAR  Makanchi Array     43.81 302  P     P       23 08 07.2 -0.1
      comp=Z,21nm,0.7s,baz=87,slow=8.8,SNR=113
MKAR                                PcP   PcP     23 09 52.5  0.0
      comp=Z,3.9nm,0.7s,baz=85,slow=4.7,SNR=2.1
MKAR                                S     S       23 14 30.5 -1.9
      comp=Z,1.1nm,0.9s,baz=89,slow=15,SNR=2.2
MKAR                                LR    LR      23 26 58.9
      comp=Z,380nm,18.7s,baz=131,slow=37
      comp=Z,21nm,0.7s
N15K  Kwethluk River     43.99  38  P     P       23 08 09.5 +1.1
N15K                                IAmb  IAmb    23 08 17.6
      comp=Z,14nm,0.7s
N15K  Kwethluk River     43.99  38  P     P       23 08 08.5 +0.1
      baz=265,SNR=12
MAKZ  Makanchi           44.02 302        P       23 08 09.3 +0.4
MAKZ                                IAmb  IAmb    23 08 11.0
      comp=Z,23nm,0.8s
MAKZ  Makanchi           44.02 302  P     P       23 08 09.3 +0.4
MAKZ                                pmax  pmax
      comp=Z,23nm,0.8s
MAKZ  Makanchi           44.02 302  P     P       23 08 09.3 +0.4
MAKZ                                pP    pP      23 08 27.9 +0.4
MAKZ                                sP    sP      23 08 36.8 +0.5
D17K  Noatak River       44.03  27  P     P       23 08 08.5  0.0
      baz=254,SNR=18
O15K  Ungalikthiuk R     44.05  40  P     P       23 08 10.2 +1.3
O15K                                IAmb  IAmb    23 08 17.9
      comp=Z,20nm,0.7s
O15K  Ungalikthiuk R     44.05  40  P     P       23 08 09.1 +0.2
      baz=266,SNR=9.2
CHNA  Chernabura Isl     44.08  46  P     P       23 08 08.4 -0.7
      baz=271
S14K  Fog Glacier        44.09  44  P     P       23 08 09.2 -0.1
      baz=270
J16K  Anvik River        44.11  34  P     P       23 08 11.8 +2.4
J16K  Anvik River        44.11  34  P     P       23 08 09.4 +0.1
      baz=261
I17K  Unalakleet         44.16  33  P     P       23 08 11.8 +2.1
I17K  Unalakleet         44.16  33  P     P       23 08 10.6 +0.9
      baz=261
RDOG  Red Dog Mine       44.19  27  P     P       23 08 10.5 +0.6
RDOG                                IAmb  IAmb    23 08 34.8
      comp=Z,42nm,1.5s
RDOG  Red Dog Mine       44.19  27  P     P       23 08 11.2 +1.3
      baz=254
C17K  DeLong Mountai     44.21  26  P     P       23 08 10.9 +0.8
      baz=253,SNR=7.4
BRDH  Bariadhala         44.32 266  LR    LR      23 29 35.2
      comp=Z,332nm,19.1s,baz=57,slow=40
E17K  Hotham Inlet       44.34  28  P     P       23 08 12.4 +1.3
      baz=256,SNR=6.4
F17K  Baldwin Pennin     44.42  29  P     P       23 08 12.9 +1.3
F17K                                      pP      23 08 32.4 +2.2
F17K                                IAmb  IAmb    23 08 33.8
      comp=Z,16nm,0.6s
F17K  Baldwin Pennin     44.42  29  P     P       23 08 12.7 +1.1
      baz=257
L16K  Owhat River        44.43  36  P     P       23 08 13.1 +1.2
L16K                                IAmb  IAmb    23 08 20.4
      comp=Z,13nm,0.7s
L16K  Owhat River        44.43  36  P     P       23 08 12.9 +1.0
      baz=264,SNR=9.3
G17K  Kiwalik Mounta     44.47  31  P     P       23 08 12.9 +0.8
      baz=259
M16K  Timber Creek       44.62  37  P     P       23 08 14.0 +0.6
M16K                                IAmb  IAmb    23 08 22.5
      comp=Z,17nm,0.8s
M16K  Timber Creek       44.62  37  P     P       23 08 13.5 +0.1
      baz=265,SNR=12
N16K  Nishlik Lake       44.67  38  P     P       23 08 13.9 +0.1
      baz=266,SNR=11
H17K  Granite Mounta     44.67  31  P     P       23 08 15.4 +1.6
H17K  Granite Mounta     44.67  31  P     P       23 08 13.8  0.0
      baz=260,SNR=9.3
KSM   Kuching            44.79 226        P       23 08 15.5 +0.2
KSM   Kuching            44.79 226  P     P       23 08 15.3 +0.1
SPSI  Sidrap Palu        44.80 210  P     P       23 08 13.7 -1.6
      comp=Z,78nm,1.0s
J17K  VABM Dome          44.81  34  P     P       23 08 16.2 +1.3
J17K  VABM Dome          44.81  34  P     P       23 08 14.4 -0.5
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      baz=263,SNR=8.3
E18K  Tukpahlearik C     44.88  28   P      P      23 08 17.1 +1.7
E18K                                 IAmb   IAmb   23 08 38.0
      comp=Z,17nm,0.8s
E18K  Tukpahlearik C     44.88  28   P      P      23 08 15.2 -0.2
      baz=257,SNR=14
B18K  Kokolik River      44.93  25   P      P      23 08 15.8  0.0
      baz=254,SNR=8.3
O16K  Kokwok River B     44.95  39   P      P      23 08 16.3 +0.3
O16K  Kokwok River B     44.95  39   P      P      23 08 15.4 -0.7
      baz=267
C18K  Utukok River       44.96  26          P      23 08 17.6 +1.5
C18K  Utukok River       44.96  26   P      P      23 08 16.3 +0.2
      baz=255,SNR=28
P16K  Nushagak River     44.99  40   P      P      23 08 16.1 -0.2
      baz=268
L17K  Donlin             45.03  36   P      P      23 08 16.8 +0.2
      baz=265,SNR=13
BNSI  Bone               45.06 210   P      P      23 08 17.0 -0.4
      comp=Z,1µmcomp=Z,133nm,1.1s
F18K  Selawik            45.08  29   P      P      23 08 17.1 +0.1
      baz=259,SNR=6.1
K17K  Iditarod           45.08  35   P      P      23 08 18.8 +1.8
K17K                                 IAmb   IAmb   23 08 26.5
      comp=Z,23nm,0.8s
K17K  Iditarod           45.08  35   P      P      23 08 17.2 +0.2
      baz=264,SNR=16
BBSI  Bau Bau            45.14 206   P      P      23 08 18.3 +0.3
      comp=Z,86nm,1.1s
R16K  Pilot Point        45.18  42   P      P      23 08 17.5 -0.4
      baz=270
STKI  Sintang            45.28 223   P      P      23 08 18.8 -0.4
      comp=Z,76nm,1.0s
G18K  Tagagawik          45.35  30   P      P      23 08 20.7 +1.5
G18K                                 IAmb   IAmb   23 08 27.8
      comp=Z,14nm,0.8s
G18K  Tagagawik          45.35  30   P      P      23 08 19.1 -0.1
      baz=261,SNR=15
H18K  Honhosa River      45.36  31   P      P      23 08 20.2 +1.0
H18K                                 IAmb   IAmb   23 08 41.8
      comp=Z,14nm,0.8s
H18K  Honhosa River      45.36  31   P      P      23 08 19.6 +0.4
      baz=262,SNR=12
M17K  Holitna River      45.38  37   P      P      23 08 21.4 +2.0
M17K                                 IAmb   IAmb   23 08 42.6
      comp=Z,22nm,0.8s
M17K  Holitna River      45.38  37   P      P      23 08 19.2 -0.2
      baz=266,SNR=13
A19K  Wainwright         45.41  24   P      P      23 08 19.5  0.0
      baz=254,SNR=6.7
N17K  Nushagak Hills     45.45  38   P      P      23 08 20.6 +0.6
N17K                                 IAmb   IAmb   23 08 43.4
      comp=Z,18nm,1.0s
N17K  Nushagak Hills     45.45  38   P      P      23 08 20.1 +0.1
      baz=267,SNR=10
O17K  Koliganek Bris     45.47  39   P      P      23 08 20.1  0.0
      baz=268
C19K  Lookout Ridge      45.63  26   P      P      23 08 23.3 +1.9
C19K                                 IAmb   IAmb   23 08 43.8
      comp=Z,31nm,0.9s
C19K  Lookout Ridge      45.63  26   P      P      23 08 21.5 +0.1
      baz=256,SNR=25
KURK  Kurchatov          45.70 308   P      P      23 08 22.1 -0.1
KURK  Kurchatov          45.70 308ceP       P      23 08 21.6 -0.5
KURK                                 pmax   pmax
      comp=Z,91nm,1.3s
KURK  Kurchatov          45.70 308   P      P      23 08 21.7 -0.4
KURK                                 pP     pP     23 08 40.0 -0.8
KURK                                 sP     sP     23 08 49.5 -0.1
KAPI  Kappang            45.76 210   P      P      23 08 22.1 -0.8
KAPI  Kappang            45.76 210   P      P      23 08 23.2 +0.3
KAPI  Kappang            45.76 210 i P      P      23 08 22.7 -0.2
KAPI  Kappang            45.76 210   P      P      23 08 22.7 -0.2
KURBB Kurchatov Arra     45.77 308   P      P      23 08 22.1 -0.5
      comp=Z,52nm,0.6s,baz=83,slow=7.8,SNR=212
KURBB                                PcP    PcP    23 09 58.4 -0.7
      comp=Z,3.4nm,0.6s,baz=89,slow=7.5,SNR=0.5
KURBB                                S      S      23 14 60.0 -0.5
      comp=Z,2.1nm,1.0s,baz=85,slow=12,SNR=4.2
KURBB                                LR     LR     23 28 05.2
      comp=Z,211nm,19.2s,baz=172,slow=37
      comp=Z,52nm,0.6s
L18K  Granite Mounta     45.79  36   P      P      23 08 23.7 +1.1
L18K  Granite Mounta     45.79  36   P      P      23 08 22.7  0.0
      baz=266,SNR=9.3
P17K  Kvichak River      45.79  40   P      P      23 08 22.2 -0.5
      baz=269
EVN   Everest            45.79 275          P      23 08 24.0 +0.1
F19K  Shaleruckik Mo     45.85  29   P      P      23 08 23.2 +0.1
      baz=260
J18K  Innoko River       45.87  34          P      23 08 24.8 +1.5
J18K  Innoko River       45.87  34   P      P      23 08 22.8 -0.5
      baz=265
GCSA  Galena City Sc     45.93  32   P      P      23 08 23.3 -0.4
      baz=263
G19K  Purcell Mounta     46.02  30   P      P      23 08 25.2 +0.8
G19K                                 IAmb   IAmb   23 10 02.5
      comp=Z,11nm,0.8s
G19K  Purcell Mounta     46.02  30   P      P      23 08 24.5  0.0
      baz=262,SNR=12
D19K  Kuna River         46.02  27   P      P      23 08 25.9 +1.5
D19K  Kuna River         46.02  27   P      P      23 08 24.4  0.0
      baz=259,SNR=22
Q17K  Contact Creek      46.08  41   P      P      23 08 24.6 -0.5
      baz=271
N18K  Kilae Creek        46.10  38   P      P      23 08 26.2 +1.1
N18K                                 IAmb   IAmb   23 08 48.5
      comp=Z,16nm,0.8s
N18K  Kilae Creek        46.10  38   P      P      23 08 24.9 -0.2
      baz=268,SNR=9.6
M18K  Stony River        46.16  37   P      P      23 08 25.4 -0.1
      baz=268,SNR=7.4
PMG   Port Moresby       46.16 171   P      P      23 08 24.9 -1.1
PMG                                  IAmb   IAmb   23 08 58.3
      comp=Z,34nm,1.2s
PMG   Port Moresby       46.16 171   P      P      23 08 24.9 -1.1
PMG                                  pmax   pmax
      comp=Z,34nm,1.2s
E19K  Redstone River     46.16  28   P      P      23 08 26.7 +1.2
E19K                                 IAmb   IAmb   23 08 34.6
      comp=Z,23nm,0.8s
E19K  Redstone River     46.16  28   P      P      23 08 25.8 +0.3
      baz=260,SNR=36
H19K  Roundabout Mou     46.20  31   P      P      23 08 26.9 +1.1
H19K                                 IAmb   IAmb   23 08 48.3
      comp=Z,16nm,0.7s
H19K  Roundabout Mou     46.20  31   P      P      23 08 26.1 +0.3
      baz=263,SNR=20
CHIR  Chirikof Islan     46.31  44   P      P      23 08 26.5 -0.3
      baz=273
ACHA  Angle Creek He     46.38  41   P      P      23 08 28.3 +0.9
J19K  Poorman            46.40  33   P      P      23 08 28.4 +1.0
J19K                                 IAmb   IAmb   23 08 36.0
      comp=Z,14nm,0.8s
J19K  Poorman            46.40  33   P      P      23 08 27.1 -0.4
      baz=265,SNR=18
P18K  Big Mountain,      46.41  39   P      P      23 08 27.8 +0.2
P18K                                 IAmb   IAmb   23 08 39.0
      comp=Z,21nm,1.1s
P18K  Big Mountain,      46.41  39   P      P      23 08 27.4 -0.2
      baz=270
O18K  Koktuh Hills       46.42  39   P      P      23 08 28.3 +0.7
O18K  Koktuh Hills       46.42  39   P      P      23 08 27.1 -0.5
      baz=270
SRIT  Nakonsritamara     46.48 244   P      P      23 08 28.8 +0.2
SRIT  Nakonsritamara     46.48 244   P      P      23 08 29.2 +0.6
SHLS  Shalkode           46.48 298  eP      P      23 08 25.4 -3.1
SHLS                                 pmax   pmax
      comp=Z,11nm,0.7s
SHLS  Shalkode           46.48 298  eP      P      23 08 25.5 -3.1
      comp=Z,11nm,0.7s
Q18K  Katmai Hardscr     46.53  41   P      P      23 08 28.5 -0.1
      baz=271
D20K  Etivluk River      46.61  27   P      P      23 08 29.9 +0.9
D20K                                 IAmb   IAmb   23 08 52.2
      comp=Z,20nm,0.9s
D20K  Etivluk River      46.61  27   P      P      23 08 29.7 +0.7
      baz=260,SNR=19
L19K  White Mountain     46.64  36   P      P      23 08 30.8 +1.5
L19K  White Mountain     46.64  36   P      P      23 08 29.9 +0.5
      baz=268
B20K  Meade River        46.66  25   P      P      23 08 31.0 +1.6
B20K  Meade River        46.66  25   P      P      23 08 30.3 +1.0
      baz=258
F20K  Avaraart Lake      46.68  29   P      P      23 08 30.9 +1.3
F20K  Avaraart Lake      46.68  29   P      P      23 08 29.8 +0.2
      baz=262,SNR=8.6
E20K  Nigu River         46.68  27   P      P      23 08 29.9 +0.2
      baz=261
N19K  Bonanza Creek      46.79  38   P      P      23 08 31.5 +0.9
N19K  Bonanza Creek      46.79  38   P      P      23 08 30.2 -0.4
      baz=269
UZB   Uzynbulak          46.79 298  eP      P      23 08 30.2 -0.8
UZB                                  pmax   pmax
      comp=Z,11nm,0.8s
UZB   Uzynbulak          46.79 298  eP      P      23 08 30.2 -0.8
      comp=Z,11nm,0.8s
TDK   Taldyqorghan       46.81 301  eP      P      23 08 30.3 -0.6
TDK                                  pmax   pmax
      comp=Z,8.0nm,0.5s
TDK   Taldyqorghan       46.81 301  eP      P      23 08 30.4 -0.6
      comp=Z,8.5nm,0.5s
H20K  Anotleneega Mo     46.85  31   P      P      23 08 31.0 +0.1
      baz=265,SNR=11
M19K  Big River Lodg     46.85  36   P      P      23 08 32.0 +1.0
M19K  Big River Lodg     46.85  36   P      P      23 08 30.4 -0.6
      baz=268
R18K  Karluk             46.86  42   P      P      23 08 30.8 -0.3
      baz=272
O19K  Port Alsworth      46.87  38   P      P      23 08 30.8 -0.3
O19K                                 IAmb   IAmb   23 09 10.1
      comp=Z,18nm,0.8s
O19K  Port Alsworth      46.87  38   P      P      23 08 30.6 -0.5
      baz=270
KPKS  Kokpek             46.96 298  eP      P      23 08 31.6 -0.6
KPKS  Kokpek             46.96 298  eP      P      23 08 31.6 -0.6
I20K  Naaghedeneel       46.96  32   P      P      23 08 30.9 -0.8
I20K                                 IAmb   IAmb   23 08 55.9
      comp=Z,20nm,0.9s
I20K  Naaghedeneel       46.96  32   P      P      23 08 31.3 -0.4
      baz=266
K20K  Telida             47.05  34   P      P      23 08 33.2 +0.7
K20K                                 IAmb   IAmb   23 08 55.0
      comp=Z,14nm,0.8s
K20K  Telida             47.05  34   P      P      23 08 32.2 -0.3
      baz=267,SNR=25
J20K  Nowinta River      47.06  33   P      P      23 08 33.2 +0.6
J20K  Nowinta River      47.06  33   P      P      23 08 32.9 +0.3
      baz=266,SNR=12
SII   Sitkinak Islan     47.06  43   P      P      23 08 32.0 -0.8
      baz=274
L20K  Farewell, AK       47.11  35   P      P      23 08 33.5 +0.5
      baz=268,SNR=7.9
Q19K  Cape Douglas,      47.24  40   P      P      23 08 35.0 +0.9
Q19K  Cape Douglas,      47.24  40   P      P      23 08 33.7 -0.4
      baz=272
SATY  Saty               47.25 298  eP      P      23 08 33.8 -0.7
SATY  Saty               47.25 298  eP      P      23 08 33.8 -0.7
C21K  Knifeblade Rid     47.33  26   P      P      23 08 34.9 +0.3
      baz=261,SNR=16
IMAR  Indian Mountai     47.36  30   P      P      23 08 36.7 +1.8
ARXS  Arharly            47.38 300 i P      P      23 08 34.8 -0.7
PRZ   Przheval'sk        47.40 297   P      P      23 08 37.2 +1.4
PRZ   Przheval'sk        47.40 297   P      P      23 08 37.2 +1.4
PRZ                                  pmax   pmax
      comp=Z,50nm,0.8s
P19K  Oil Pt             47.42  39   P      P      23 08 34.7 -0.8
      baz=272
M20K  Styx River         47.45  36   P      P      23 08 37.4 +1.6
M20K  Styx River         47.45  36   P      P      23 08 35.6 -0.1
      baz=270
B21K  Ikpikpuk River     47.46  25   P      P      23 08 37.3 +1.7
B21K  Ikpikpuk River     47.46  25   P      P      23 08 36.4 +0.8
      baz=261,SNR=40
G21K  Allakaket          47.50  30          P      23 08 37.4 +1.4
G21K  Allakaket          47.50  30   P      P      23 08 37.0 +1.0
      baz=265,SNR=12
OHAK  Old Harbor         47.51  42   P      P      23 08 35.6 -0.6
      baz=274
E21K  Killik River       47.52  27   P      P      23 08 37.3 +1.2
E21K                                 IAmb   IAmb   23 08 40.0
      comp=Z,16nm,0.8s
E21K  Killik River       47.52  27   P      P      23 08 36.9 +0.7
      baz=263,SNR=22
A22K  Sinclair Lake      47.57  24   P      P      23 08 37.4 +1.0
      baz=259,SNR=6.5
F21K  Alatna River       47.57  29          P      23 08 37.5 +1.0
F21K  Alatna River       47.57  29   P      P      23 08 37.1 +0.6
      baz=264,SNR=11
O20K  Slope Mountain     47.72  39   P      P      23 08 37.7 -0.2
      baz=272
H21K  Melozitna Rive     47.72  31   P      P      23 08 38.4 +0.7
H21K  Melozitna Rive     47.72  31   P      P      23 08 38.1 +0.4
      baz=266,SNR=13
KDAK  Kodiak Island      47.85  42          P      23 08 40.0 +1.2
KDAK  Kodiak Island      47.85  42   P      P      23 08 40.0 +1.2
KDAK                                 pmax   pmax
      comp=Z,33nm,0.8s
KDAK  Kodiak Island      47.85  42   P      P      23 08 38.7 -0.1
      baz=274
KDAK  Kodiak Island      47.85  42   P      P      23 08 40.5 +1.7
KDAK                                 pP     pP     23 08 59.2 +1.7
PPLA  Purkeypile         47.90  35   P      P      23 08 41.0 +1.8
PPLA                                 IAmb   IAmb   23 09 05.7
      comp=Z,58nm,1.8s
PPLA  Purkeypile         47.90  35   P      P      23 08 38.7 -0.5
      baz=269
SPCR  Spurr Chakacha     47.90  37   P      P      23 08 38.9 -0.3
      baz=271
N20K  Mount Spurr        47.90  37   P      P      23 08 39.4 +0.2
      baz=271
Q20K  Shuyak Island      47.90  40   P      P      23 08 38.8 -0.3
      baz=273
CAST  Castle Rocks       47.95  34          P      23 08 40.5 +1.0
CAST  Castle Rocks       47.95  34   P      P      23 08 39.6 +0.1
      baz=269,SNR=15
SPU   Mount Spurr        47.97  37   P      P      23 08 40.7 +0.9
B22K  Teshekpuk Lake     47.98  25          P      23 08 40.7 +1.2
B22K                                 IAmb   IAmb   23 09 24.7
      comp=Z,32nm,1.2s
B22K  Teshekpuk Lake     47.98  25   P      P      23 08 40.3 +0.7
      baz=262,SNR=13
D22K  Ayikyak River      48.05  27          P      23 08 42.1 +1.9
D22K                                 IAmb   IAmb   23 08 44.1
      comp=Z,21nm,0.8s
D22K  Ayikyak River      48.05  27   P      P      23 08 40.9 +0.7
      baz=264,SNR=37
STLK  Strandline Lak     48.07  37   P      P      23 08 42.2 +1.7
F22K  John River         48.10  28   P      P      23 08 41.5 +0.9
      baz=265,SNR=8.8
MMRI  Maumere            48.19 205   P      P      23 08 40.9 -0.9
SKT   Skwentna           48.20  36          P      23 08 43.1 +1.6
SKT   Skwentna           48.20  36   P      P      23 08 42.1 +0.6
      baz=271
HOM   Homer              48.23  39   P      P      23 08 41.7  0.0
      baz=273
AAA   Alma-Ata           48.27 299  eP      P      23 08 41.6 -0.7
AAA                                  pmax   pmax
      comp=Z,8.0nm,0.5s
AAA   Alma-Ata           48.27 299  eP      P      23 08 41.6 -0.7
      comp=Z,7.9nm,0.5s
E22K  Anaktuvuk Pass     48.29  28          P      23 08 44.0 +1.9
E22K                                 IAmb   IAmb   23 08 50.9
      comp=Z,19nm,0.8s
E22K  Anaktuvuk Pass     48.29  28   P      P      23 08 42.4 +0.3
      baz=265,SNR=38
H22K  Ishtalitna Cre     48.32  31   P      P      23 08 42.8 +0.5
      baz=268,SNR=14
G22K  Bettles            48.32  29   P      P      23 08 42.5 +0.3
      baz=266
KDJ   Kajisay            48.37 297   P      P      23 08 43.7 +0.5
KDJ   Kajisay            48.37 297   P      P      23 08 43.7 +0.5
KDJ                                  pmax   pmax
      comp=Z,32nm,0.9s
CAPN  Captain Cook N     48.42  38   P      P      23 08 43.3 +0.2
      baz=272
BPAW  Bear Paw Mtn.      48.44  33          P      23 08 44.9 +1.6
BPAW  Bear Paw Mtn.      48.44  33   P      P      23 08 43.6 +0.3
      baz=269
KTH   Kantishna Hill     48.47  34   P      P      23 08 45.0 +1.4
KTH                                  IAmb   IAmb   23 09 28.0
      comp=Z,15nm,0.9s
EDFI  Ende, Flores       48.48 205   P      P      23 08 42.9 -1.3
      comp=Z,910nmcomp=Z,63nm,1.3s
KUU   Kurty              48.50 300  eP      P      23 08 43.4 -0.6
KUU                                  pmax   pmax
      comp=Z,10.0nm,1.1s
KUU   Kurty              48.50 300  eP      P      23 08 43.4 -0.6
      comp=Z,10nm,1.1s
MLY   Manley             48.56  32          P      23 08 46.4 +2.2
MLY                                  IAmb   IAmb   23 08 50.7
      comp=Z,12nm,0.7s
MLY   Manley             48.56  32   P      P      23 08 44.4 +0.2
      baz=269,SNR=24
SUA   Susitna One        48.59  37   P      P      23 08 47.1 +2.5
SUA                                  IAmb   IAmb   23 08 54.1
      comp=Z,21nm,0.9s
SUA   Susitna One        48.59  37   P      P      23 08 44.7 +0.1
      baz=272
SOEI  Soe                48.60 202   P      P      23 08 44.0 -1.1
SOEI  Soe                48.60 202   P      P      23 08 45.5 +0.4
SOEI  Soe                48.60 202   P      P      23 08 45.3 +0.2
      comp=Z,2µmcomp=Z,143nm,0.9s
BRSE  Bradley Lake S     48.68  39   P      P      23 08 45.3 +0.1
      baz=274
TRF   Thorofare Moun     48.76  34          P      23 08 47.8 +1.9
TRF                                  IAmb   IAmb   23 09 25.6
      comp=Z,9.8nm,0.8s
TRF   Thorofare Moun     48.76  34   P      P      23 08 45.8 -0.1
      baz=271,SNR=8.5
D23K  Nanushuk River     48.77  27          P      23 08 47.4 +1.7
D23K                                 IAmb   IAmb   23 09 27.7
      comp=Z,13nm,1.1s
D23K  Nanushuk River     48.77  27   P      P      23 08 46.0 +0.3
      baz=265
CUT   Chulitna           48.79  35   P      P      23 08 45.8 -0.1
      baz=272
COLD  Coldfoot           48.85  29   P      P      23 08 47.9 +1.6
COLD  Coldfoot           48.85  29   P      P      23 08 46.2 -0.1
      baz=267
C23K  Itkillik River     48.87  25          P      23 08 47.9 +1.5
C23K                                 IAmb   IAmb   23 08 55.6
      comp=Z,18nm,0.8s
C23K  Itkillik River     48.87  25   P      P      23 08 47.1 +0.7
      baz=265,SNR=21
G23K  Bananza Creek      48.90  30          P      23 08 47.5 +0.7
G23K  Bananza Creek      48.90  30   P      P      23 08 47.0 +0.3
      baz=268,SNR=10
H23K  Yukon River        49.07  31   P      P      23 08 49.9 +1.8
H23K                                 IAmb   IAmb   23 09 31.4
      comp=Z,13nm,0.8s
H23K  Yukon River        49.07  31   P      P      23 08 48.8 +0.7
      baz=269,SNR=18
RC01  Rabbit Creek A     49.10  37   P      P      23 08 49.4 +1.1
RC01                                 IAmb   IAmb   23 09 10.2
      comp=Z,23nm,1.0s
RC01  Rabbit Creek A     49.10  37   P      P      23 08 48.2 -0.1
      baz=273
E23K  Chandalar          49.11  28          P      23 08 49.4 +1.0
E23K                                 IAmb   IAmb   23 09 26.2
      comp=Z,25nm,1.0s
E23K  Chandalar          49.11  28   P      P      23 08 48.8 +0.4
      baz=267,SNR=24
I23K  Minto, Yukon-K     49.15  32   P      P      23 08 50.3 +1.7
I23K                                 IAmb   IAmb   23 10 13.3
      comp=Z,14nm,0.8s
I23K  Minto, Yukon-K     49.15  32   P      P      23 08 48.9 +0.3
      baz=270
TOLK  Toolik Lake Re     49.16  27   P      P      23 08 49.7 +1.0
TOLK                                 IAmb   IAmb   23 09 27.4
      comp=Z,14nm,1.1s
TOLK  Toolik Lake Re     49.16  27   P      P      23 08 49.0 +0.3
      baz=267,SNR=7.8
BATI  Baumata            49.21 202   P      P      23 08 49.6  0.0
      comp=Z,57nm,0.9s
NEA2  Nenana             49.28  32   P      P      23 08 50.5 +0.9
NEA2                                 IAmb   IAmb   23 09 34.7
      comp=Z,14nm,1.0s
NEA2  Nenana             49.28  32   P      P      23 08 50.0 +0.4
      baz=271,SNR=11
SEW   Seward             49.30  38   P      P      23 08 49.5 -0.4
      baz=274
MCK   McKinley           49.35  34          P      23 08 51.5 +1.2
MCK                                         pP     23 09 12.6 +3.5
MCK                                  IAmb   IAmb   23 09 13.6
      comp=Z,16nm,0.9s
MCK   McKinley           49.35  34   P      P      23 08 51.5 +1.2
MCK                                  *PP    pP     23 09 12.6 +3.5
MCK                                  pmax   pmax
      comp=Z,16nm,0.9s
MCK   McKinley           49.35  34   P      P      23 08 50.8 +0.5
      baz=272,SNR=5.8
PMR   Palmer             49.36  36   P      P      23 08 50.9 +0.7
PMR                                  IAmb   IAmb   23 08 59.1
      comp=Z,14nm,0.8s
PMR   Palmer             49.36  36   P      P      23 08 51.9 +1.6
PMR   Palmer             49.36  36   P      P      23 08 50.9 +0.7
PMR                                  pmax   pmax
      comp=Z,14nm,0.8s
PMR   Palmer             49.36  36   P      P      23 08 50.4 +0.1
      baz=273
RND   Reindeer           49.40  34          P      23 08 52.0 +1.3
RND                                  IAmb   IAmb   23 08 58.3
      comp=Z,13nm,0.7s
RND   Reindeer           49.40  34   P      P      23 08 52.0 +1.3
RND                                  pmax   pmax
      comp=Z,13nm,0.7s
GHO   Glory Hole Cre     49.45  36   P      P      23 08 52.2 +1.2
GHO                                  IAmb   IAmb   23 08 59.4
      comp=Z,22nm,0.8s
D24K  Happy Valley       49.45  26          P      23 08 51.2 +0.3
D24K                                 IAmb   IAmb   23 09 31.2
      comp=Z,19nm,0.8s
D24K  Happy Valley       49.45  26   P      P      23 08 51.9 +1.0
      baz=267,SNR=8.3
C24K  Franklin Bluff     49.53  26   P      P      23 08 53.0 +1.5
C24K  Franklin Bluff     49.53  26   P      P      23 08 51.8 +0.3
      baz=267
E24K  Your Creek         49.53  28   P      P      23 08 52.7 +1.0
E24K                                 IAmb   IAmb   23 09 29.5
      comp=Z,13nm,0.9s
E24K  Your Creek         49.53  28   P      P      23 08 52.5 +0.9
      baz=268,SNR=20
WAT1  Susitna Watana     49.56  35   P      P      23 08 51.6 -0.3
      baz=273
BRZS  Berezniki          49.58 308  eP      P      23 08 51.6 -0.6
BRZS  Berezniki          49.58 308  eP      P      23 08 51.6 -0.6
KDU   Kakadu             49.61 190   P      P      23 08 53.1 +0.5
KNK   Knik Glacier       49.69  37   P      P      23 08 54.1 +1.2
KNK                                  IAmb   IAmb   23 09 25.2
      comp=Z,14nm,0.7s
KNK   Knik Glacier       49.69  37   P      P      23 08 52.4 -0.4
      baz=274
WRH   Wood River Hil     49.70  33   P      P      23 08 53.5 +0.6
WRH                                  IAmb   IAmb   23 10 14.6
      comp=Z,18nm,0.8s
SML   Sawmill            49.73  36   P      P      23 08 54.3 +1.1
SML   Sawmill            49.73  36   P      P      23 08 54.3 +1.1
SML                                  pmax   pmax
      comp=Z,23nm,0.7s
SML   Sawmill            49.73  36   P      P      23 08 52.7 -0.5
      baz=274,SNR=12
TPI   Tanjungpandan      49.75 225   P      P      23 08 53.7 -0.1
F24K  Squaw Lake         49.75  29          P      23 08 54.7 +1.5
F24K  Squaw Lake         49.75  29   P      P      23 08 52.7 -0.5
      baz=269,SNR=8.9
H24K  Noodor Dome        49.76  31          P      23 08 55.4 +2.0
H24K                                 IAmb   IAmb   23 09 00.0
      comp=Z,10nm,0.8s
H24K  Noodor Dome        49.76  31   P      P      23 08 52.5 -0.8
      baz=271,SNR=16
COLA  College            49.79  32   P      P      23 08 55.3 +1.8
COLA  College            49.79  32   P      P      23 08 54.6 +1.1
COLA  College            49.79  32 i P      P      23 08 55.3 +1.8
COLA                                 pmax   pmax
      comp=Z,9.0nm,0.8s
COLA  College            49.79  32   P      P      23 08 53.2 -0.3
      baz=272
COLA  College            49.79  32   P      P      23 08 55.7 +2.2
COLA                                 pP     pP     23 09 14.7 +2.4
PWL   Port Wells         49.80  37   P      P      23 08 55.5 +1.8
PWL                                  IAmb   IAmb   23 09 16.3
      comp=Z,19nm,1.0s
PWL   Port Wells         49.80  37   P      P      23 08 53.2 -0.4
      baz=275
BTLS  Baital             49.80 302  eP      P      23 08 53.3 -0.6
BTLS                                 pmax   pmax
      comp=Z,7.0nm,0.6s
BTLS  Baital             49.80 302  eP      P      23 08 53.4 -0.6
      comp=Z,7.4nm,0.6s
SGDS  Sogindy            49.82 299  eP      P      23 08 53.4 -0.7
      comp=Z,7.6nm,1.2s
CCB   Clear Creek Bu     49.82  32   P      P      23 08 54.5 +0.8
G24K  Hadweenzic Riv     49.91  30          P      23 08 56.2 +1.8
G24K                                 IAmb   IAmb   23 09 41.2
      comp=Z,10nm,0.8s
G24K  Hadweenzic Riv     49.91  30   P      P      23 08 55.0 +0.5
      baz=270,SNR=11
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WAT6  Susitna Watana   49.95  35  P      P      23 08 56.1 +1.1
      baz=274
POKR  Poker Plat Res   49.96  32  P      P      23 08 56.9 +2.1
POKR  Poker Plat Res   49.96  32  P      P      23 08 56.1 +1.3
      baz=272,SNR=50
MTN   Manton Dam       49.98 192  P      P      23 08 55.2 -0.2
MTN   Manton Dam       49.98 192  P      P      23 08 55.7 +0.3
KSH   Kashi            50.00 294  P      P      23 08 59.4 +3.7
KSH                               S      S      23 16 08.4 +7.5
KSH                               pmax   pmax
      comp=Z,23nm,0.9s
KSH                               LR     LR
      comp=Z,170nm,15.1s
KSH                               LR     LR
      comp=Z,220nm,16.2s
KSH                               LR     LR
      comp=Z,210nm,16.1s
M23K  Glacier View     50.01  36  P      P      23 08 56.0 +0.7
      baz=274
PLAI  Plampang         50.02 210  P      P      23 08 55.3 -0.5
DHY   Denali Highway   50.09  34  P      P      23 08 58.0 +2.0
DHY                               IAmb   IAmb   23 10 18.8
      comp=Z,11nm,0.8s
DHY   Denali Highway   50.09  34  P      P      23 08 56.3 +0.3
      baz=274
AAK   Ala-Archa        50.14 298  LR     LR     23 31 19.0
      comp=Z,377nm,18.9s,baz=72,slow=37
HDA   Harding Lake     50.20  33  P      P      23 08 57.4 +0.8
HDA                               IAmb   IAmb   23 09 04.4
      comp=Z,17nm,0.8s
HDA   Harding Lake     50.20  33  P      P      23 08 57.4 +0.8
      baz=273,SNR=12
SCM   Sheep Creek Mo   50.20  36  P      P      23 08 58.2 +1.5
SCM                                      pP     23 09 13.8 -1.8
SCM                               IAmb   IAmb   23 09 47.8
      comp=Z,18nm,0.9s
IL31                   50.21  32  P      P      23 08 57.5 +0.8
IL31                              IAmb   IAmb   23 09 18.8
      comp=Z,16nm,0.8s
ILAR  Eielson Array    50.21  32         P      23 08 57.7 +1.0
ILAR  Eielson Array    50.21  32  P      P      23 08 57.3 +0.6
      comp=Z,12nm,0.8s,baz=271,slow=6.4,SNR=155
      comp=Z,12nm,0.8s
ILAR  Eielson Array    50.21  32  P      P      23 08 57.7 +1.0
D25K  Kavik River      50.33  26  P      P      23 08 59.0 +1.4
D25K                              IAmb   IAmb   23 09 01.0
      comp=Z,15nm,0.7s
D25K  Kavik River      50.33  26  P      P      23 08 58.5 +0.9
      baz=269,SNR=27
COEN  Coen             50.33 177         P      23 08 57.9 -0.2
COEN  Coen             50.33 177  P      P      23 08 59.1 +1.0
P23K  Montague Islan   50.34  38  P      P      23 08 58.2 +0.5
      baz=276
GLI   Glacier Island   50.40  37  P      P      23 08 58.3 +0.1
      baz=276
BVAR  Borovoye Array   50.40 312  P      P      23 08 57.6 -0.8
      comp=Z,3.4nm,0.3s,baz=101,slow=8.8,SNR=29
BVAR                              PcP    PcP    23 10 15.9 +0.2
      comp=Z,11nm,0.7s,baz=83,slow=3.7,SNR=6.2
BVAR                              S      S      23 16 06.0 +0.2
      comp=Z,1.2nm,0.7s,baz=84,slow=15,SNR=3.1
BVAR                              LR     LR     23 31 05.0
      comp=Z,198nm,18.2s,baz=74,slow=37
      comp=Z,3.4nm,0.3s
BRVK  Borovoye         50.45 313         P      23 08 58.7  0.0
BRVK                              IAmb   IAmb   23 09 33.3
      comp=Z,12nm,0.8s
BRVK  Borovoye         50.45 313ceP      P      23 08 58.0 -0.7
BRVK                              pmax   pmax
      comp=Z,14nm,1.3s
BRVK  Borovoye         50.45 313  P      P      23 08 58.8 +0.1
BRVK                              pP     pP     23 09 18.2 +0.5
G25K  Bearman Lake     50.46  30  P      P      23 08 59.1 +0.6
      baz=272
H25L  Birch Creek      50.59  30  P      P      23 09 00.4 +0.9
      baz=272,SNR=7.9
F25K  Christian Rive   50.61  28  P      P      23 09 01.5 +1.8
F25K                              IAmb   IAmb   23 09 04.1
      comp=Z,9.2nm,0.8s
F25K  Christian Rive   50.61  28  P      P      23 09 01.0 +1.3
      baz=271,SNR=14
E25K  Arctic Village   50.63  28  P      P      23 09 01.8 +2.0
E25K                              IAmb   IAmb   23 09 56.2
      comp=Z,12nm,1.1s
E25K  Arctic Village   50.63  28  P      P      23 09 00.8 +1.0
      baz=271,SNR=10.0
M24K  Tolsona, Glenn   50.72  36  P      P      23 09 00.2 -0.5
      baz=275
PRP   Porcupine Dome   50.74  31         P      23 09 02.5 +1.6
PRP                               IAmb   IAmb   23 09 04.9
      comp=Z,10nm,0.8s
PRP   Porcupine Dome   50.74  31  P      P      23 09 01.4 +0.5
      baz=273,SNR=10.0
K24K  Donnelly Dome    50.75  33  P      P      23 09 02.0 +1.1
K24K  Donnelly Dome    50.75  33  P      P      23 09 01.3 +0.5
      baz=274,SNR=11
FYU   Fort Yukon       50.81  30  P      P      23 09 02.1 +1.0
FYU                               IAmb   IAmb   23 09 48.5
      comp=Z,12nm,0.9s
C26K  Camden Bay       50.84  25  P      P      23 09 01.8 +0.4
      baz=270
J25K  Salcha River,    50.87  32         P      23 09 02.6 +0.8
J25K  Salcha River,    50.87  32  P      P      23 09 02.2 +0.5
      baz=274,SNR=6.9
KLU   Klutina          50.90  36  P      P      23 09 03.1 +1.0
KLU                               IAmb   IAmb   23 09 10.8
      comp=Z,12nm,0.8s
KLU   Klutina          50.90  36  P      P      23 09 01.9 -0.2
      baz=276
Q23K  Middleton Isla   50.94  39  P      P      23 09 01.8 -0.4
      baz=277
PAX   Paxson           50.96  34  P      P      23 09 03.8 +1.3
PAX                               IAmb   IAmb   23 10 20.3
      comp=Z,9.8nm,0.7s
PAX   Paxson           50.96  34  P      P      23 09 03.8 +1.3
PAX                               pmax   pmax
      comp=Z,10.0nm,0.7s
PAX   Paxson           50.96  34  P      P      23 09 01.8 -0.7
      baz=275
PSI   Prapat           51.02 239  P      P      23 09 03.6  0.0
PSI   Prapat           51.02 239  P      P      23 09 02.6 -1.0
PSI                               pmax   pmax
      comp=Z,28nm,0.7s
BMAR  Burnt Mountain   51.03  29         P      23 09 04.7 +1.8
EYAK  Cordova Ski Ar   51.09  38  P      P      23 09 02.5 -0.9
      baz=277
RPSI  Rantau Prapat    51.09 239         P      23 09 02.6 -1.4
HARP  HAARP            51.16  35  P      P      23 09 03.4 -0.5
      baz=276
RIDG  Independent Ri   51.17  33  P      P      23 09 04.4 +0.4
RIDG                              IAmb   IAmb   23 10 20.5
      comp=Z,10nm,1.0s
RIDG  Independent Ri   51.17  33  P      P      23 09 03.3 -0.7
      baz=275
F26K  Sheenjek River   51.18  28  P      P      23 09 05.4 +1.4
F26K                              IAmb   IAmb   23 09 51.1
      comp=Z,18nm,0.9s
F26K  Sheenjek River   51.18  28  P      P      23 09 04.1  0.0
      baz=273,SNR=24
JAGI  Jajag, Banyuwa   51.25 214  P      P      23 09 04.1 -1.0
C27K  Jago River       51.27  26  P      P      23 09 05.6 +1.0
C27K                              IAmb   IAmb   23 09 26.8
      comp=Z,9.1nm,0.7s
C27K  Jago River       51.27  26  P      P      23 09 05.5 +1.0
      baz=271,SNR=11
G26K  Porcupine Rive   51.36  29         P      23 09 07.3 +2.0
G26K                              IAmb   IAmb   23 10 02.1
      comp=Z,13nm,1.1s
G26K  Porcupine Rive   51.36  29  P      P      23 09 04.8 -0.5
      baz=274
BKNI  Bangkinang       51.42 235         P      23 09 05.9 -0.5
BKNI  Bangkinang       51.42 235  P      P      23 09 07.5 +1.1
N25K  Chitina, Valde   51.52  36  P      P      23 09 06.5 -0.2
N25K  Chitina, Valde   51.52  36  P      P      23 09 05.9 -0.8
      baz=277
DOT   Dot Lake         51.53  33  P      P      23 09 07.9 +1.2
DOT                               IAmb   IAmb   23 09 14.9
      comp=Z,12nm,0.6s
SCRK  Sand Creek       51.53  33         P      23 09 07.8 +1.0
SCRK                              IAmb   IAmb   23 09 14.8
      comp=Z,11nm,0.7s
SCRK  Sand Creek       51.53  33  P      P      23 09 07.1 +0.4
      baz=276,SNR=17
BMRM  Bremner River    51.60  37  P      P      23 09 08.0 +0.7
BMRM                              IAmb   IAmb   23 09 43.9
      comp=Z,14nm,0.8s
BMRM  Bremner River    51.60  37  P      P      23 09 07.0 -0.2
      baz=278
J26L  Joseph Creek     51.66  32         P      23 09 08.5 +0.8
J26L  Joseph Creek     51.66  32  P      P      23 09 08.2 +0.6
      baz=276,SNR=6.2
I26K  Coal Creek Min   51.75  31         P      23 09 08.9 +0.7
I26K  Coal Creek Min   51.75  31  P      P      23 09 07.8 -0.4
      baz=275
MENT  Mentasta         51.76  34  P      P      23 09 10.4 +2.0
MENT  Mentasta         51.76  34  P      P      23 09 09.5 +1.1
KAIM  Kayak Island     51.84  38  P      P      23 09 08.6 -0.4
      baz=279
L26K  Log Cabin Wild   51.92  34  P      P      23 09 11.5 +1.9
L26K  Log Cabin Wild   51.92  34  P      P      23 09 10.5 +0.9
      baz=277,SNR=14
E27K  Coleen River     52.11  28         P      23 09 12.2 +1.2
E27K                              IAmb   IAmb   23 09 17.4
      comp=Z,9.6nm,0.7s
E27K  Coleen River     52.11  28  P      P      23 09 11.8 +0.8
      baz=274,SNR=16
BERG  Berg Lake        52.12  38  P      P      23 09 12.2 +1.1
BERG                              IAmb   IAmb   23 10 07.6
      comp=Z,26nm,1.0s
M26K  Nabesna, AK      52.16  35  P      P      23 09 11.7 +0.3
M26K                              IAmb   IAmb   23 09 35.8
      comp=Z,24nm,1.4s
M26K  Nabesna, AK      52.16  35  P      P      23 09 10.9 -0.5
      baz=278
G27K  Doyon Strip      52.21  29  P      P      23 09 13.2 +1.5
G27K  Doyon Strip      52.21  29  P      P      23 09 12.7 +1.0
      baz=276,SNR=8.0
D27M  Malcolm River    52.26  26         P      23 09 13.4 +1.4
D27M  Malcolm River    52.26  26  P      P      23 09 12.4 +0.4
      baz=274
MCARA McCarthy VSAT    52.30  36  P      P      23 09 13.5 +1.1
MCARA                             IAmb   IAmb   23 10 03.1
      comp=Z,24nm,1.0s
MCARA McCarthy VSAT    52.30  36  P      P      23 09 12.3  0.0
      baz=279
H27K  Steamboat Moun   52.32  30         P      23 09 14.0 +1.5
H27K                              IAmb   IAmb   23 09 37.5
      comp=Z,10nm,0.9s
H27K  Steamboat Moun   52.32  30  P      P      23 09 13.6 +1.1
      baz=276,SNR=18
CRQM  Cirque           52.34  37  P      P      23 09 13.9 +1.0
CRQM                              IAmb   IAmb   23 10 04.0
      comp=Z,28nm,1.1s
K27K  Chicken          52.36  33  P      P      23 09 14.8 +2.0
K27K                              IAmb   IAmb   23 09 21.6
      comp=Z,20nm,0.8s
K27K  Chicken          52.36  33  P      P      23 09 13.3 +0.5
      baz=277
I27K  Kandik River     52.36  31  P      P      23 09 13.2 +0.4
      baz=276,SNR=11
CRQE  Cirque           52.36  37  P      P      23 09 13.4 +0.4
      baz=279
BGLC  Bering Glacier   52.37  38  P      P      23 09 13.6 +0.7
      baz=279
TGL   Tana Glacier     52.49  37  P      P      23 09 14.4 +0.5
TGL                               IAmb   IAmb   23 10 10.3
      comp=Z,13nm,0.9s
UGM   Wanagama         52.51 219         P      23 09 13.2 -1.3
UGM   Wanagama         52.51 219  P      P      23 09 14.1 -0.4
L27K  Beaver Creek,    52.60  34         P      23 09 16.4 +1.8
L27K                              IAmb   IAmb   23 09 23.5
      comp=Z,18nm,0.7s
L27K  Beaver Creek,    52.60  34  P      P      23 09 15.6 +1.0
      baz=278,SNR=37
BCAR  Beaver Creek A   52.62  34         P      23 09 16.5 +1.8
M27K  Edge Creek, AK   52.68  35  P      P      23 09 17.1 +1.8
M27K                              IAmb   IAmb   23 09 24.5
      comp=Z,21nm,0.8s
M27K  Edge Creek, AK   52.68  35  P      P      23 09 16.6 +1.2
      baz=279,SNR=17
F28M  Old Crow         52.82  28  P      P      23 09 17.3 +1.2
F28M  Old Crow         52.82  28  P      P      23 09 17.4 +1.3
      baz=276,SNR=9.2
E28M  Babbage River    52.83  27         P      23 09 18.0 +1.8
E28M  Babbage River    52.83  27  P      P      23 09 17.5 +1.3
      baz=276,SNR=9.1
BARN  Barnard Glacie   53.00  37  P      P      23 09 18.7 +0.9
BARN                              IAmb   IAmb   23 09 26.6
      comp=Z,10.0nm,0.7s
GRNC  Granite Creek    53.01  37  P      P      23 09 18.5 +0.6
GRNC                              IAmb   IAmb   23 09 26.6
      comp=Z,12nm,0.7s
MESA  MESA             53.02  38  P      P      23 09 17.8 -0.2
      baz=280
GSI   Gunungsitoli     53.02 239         P      23 09 17.4 -1.0
GSI   Gunungsitoli     53.02 239  P      P      23 09 18.1 -0.2
D28M  Stokes Point     53.04  26  P      P      23 09 18.2 +0.5
      baz=276
I28M  Miner Creek      53.07  31         P      23 09 19.9 +1.8
I28M                              IAmb   IAmb   23 09 27.1
      comp=Z,14nm,0.7s
I28M  Miner Creek      53.07  31  P      P      23 09 19.5 +1.3
      baz=278,SNR=24
BVCY  Beaver Creek     53.14  35  P      P      23 09 18.8 +0.2
      baz=280
CTG   Chitna Glacier   53.17  37  P      P      23 09 19.2 +0.3
      baz=280
CTGM  Chitina Glacie   53.17  37  P      P      23 09 19.5 +0.5
CTGM                              IAmb   IAmb   23 09 27.4
      comp=Z,9.3nm,0.8s
KNRA  Kununurra        53.18 194         P      23 09 18.8 -0.4
IUG   Iuzhnay          53.44 299 eP      P      23 09 20.5 -0.6
IUG   Iuzhnay          53.44 299 eP      P      23 09 20.6 -0.6
YUK3  Moose Creek      53.44  36  P      P      23 09 21.6 +0.5
      baz=280,SNR=5.5
E29M  Blow River       53.46  27         P      23 09 22.4 +1.7
E29M                              IAmb   IAmb   23 10 24.3
      comp=Z,13nm,1.0s
E29M  Blow River       53.46  27  P      P      23 09 21.4 +0.6
      baz=278,SNR=13
DAWY  Dawson           53.52  33  P      P      23 09 22.5 +1.2
DAWY  Dawson           53.52  33  P      P      23 09 21.2 -0.1
      baz=280
H29M  Whitestone       53.59  30  P      P      23 09 23.4 +1.6
H29M                              IAmb   IAmb   23 10 07.3
      comp=Z,13nm,0.9s
H29M  Whitestone       53.59  30  P      P      23 09 22.6 +0.8
      baz=279,SNR=7.4
G29M  Pine Creek       53.62  29         P      23 09 24.4 +2.3
G29M                              IAmb   IAmb   23 09 47.6
      comp=Z,24nm,1.0s
G29M  Pine Creek       53.62  29  P      P      23 09 23.3 +1.2
      baz=279,SNR=24
O28M  Mount Upton      53.76  37  P      P      23 09 23.3 -0.2
      baz=281
I29M  Ogilvie Camp,    53.76  31  P      P      23 09 24.3 +1.3
I29M                              IAmb   IAmb   23 09 32.0
      comp=Z,20nm,0.9s
I29M  Ogilvie Camp,    53.76  31  P      P      23 09 24.2 +1.1
      baz=280,SNR=34
YUK8  Steele Glacier   53.86  36  P      P      23 09 23.9 -0.2
      baz=281
PINM  Pinnacle         53.87  38  P      P      23 09 23.9 -0.1
      baz=282
J29N  Klondike Camp    53.95  32  P      P      23 09 24.6  0.0
      baz=280
NIL   Nilore           54.15 288  P      P      23 09 26.8 +0.4
NIL   Nilore           54.15 288  P      P      23 09 26.8 +0.4
NIL                               pmax   pmax
      comp=Z,105nm,1.7s
EPYK  Eagle Plains     54.23  30  P      P      23 09 28.1 +1.6
EPYK  Eagle Plains     54.23  30  P      P      23 09 27.3 +0.9
      baz=280,SNR=28
M29M  Somme Creek      54.23  34  P      P      23 09 28.6 +2.0
M29M                              IAmb   IAmb   23 09 36.2
      comp=Z,15nm,0.8s
M29M  Somme Creek      54.23  34  P      P      23 09 27.1 +0.4
      baz=282,SNR=21
L29M  L29M             54.25  34         P      23 09 28.8 +2.0
L29M                              IAmb   IAmb   23 09 36.6
      comp=Z,20nm,0.8s
L29M  L29M             54.25  34  P      P      23 09 27.7 +1.0
      baz=281,SNR=19
G30M  tAoh Zraii Nji   54.31  29         P      23 09 28.4 +1.3
G30M                              IAmb   IAmb   23 09 51.9
      comp=Z,30nm,1.1s
G30M  tAoh Zraii Nji   54.31  29  P      P      23 09 28.2 +1.1
      baz=280,SNR=25
F30M  Barrier River    54.36  28         P      23 09 29.6 +2.2
F30M                              IAmb   IAmb   23 09 34.7
      comp=Z,20nm,0.7s
F30M  Barrier River    54.36  28  P      P      23 09 27.6 +0.1
      baz=280,SNR=15
K29M  Barlow Dome      54.37  33         P      23 09 29.4 +1.7
K29M                              IAmb   IAmb   23 09 52.4
      comp=Z,9.7nm,0.8s
K29M  Barlow Dome      54.37  33  P      P      23 09 28.0 +0.3
      baz=281,SNR=13
YUK4  Talbot Arm       54.38  36  P      P      23 09 27.9  0.0
      baz=282
PNL   Peninsula        54.38  38  P      P      23 09 27.4 -0.2
      baz=283
MTSU  Mount Surprise   54.54 176  P      P      23 09 31.2 +2.0
I30M  Mount Dempster   54.58  31         P      23 09 30.5 +1.3
I30M  Mount Dempster   54.58  31  P      P      23 09 30.0 +0.8
      baz=281,SNR=79
YUK6  Outpost Mounta   54.60  36  P      P      23 09 29.3 -0.2
      baz=283
O29M  Mount Kennedy    54.64  37  P      P      23 09 32.4 +2.8
O29M                              IAmb   IAmb   23 10 04.0
      comp=Z,18nm,1.0s
O29M  Mount Kennedy    54.64  37  P      P      23 09 30.3 +0.6
      baz=283,SNR=6.8
J30M  Hart River       54.73  32         P      23 09 31.8 +1.6
J30M  Hart River       54.73  32  P      P      23 09 31.3 +1.0
      baz=282
HYT   Haines Junctio   55.03  36         P      23 09 34.4 +1.9
HYT                               IAmb   IAmb   23 09 43.4
      comp=Z,14nm,0.7s
HYT   Haines Junctio   55.03  36  P      P      23 09 33.1 +0.6
      baz=283,SNR=14
SVE   Sverdlovsk       55.06 319 eP      P      23 09 32.5 -0.1
SVE                               pmax   pmax
      comp=Z,38nm,0.9s
INK   Inuvik           55.07  27         P      23 09 33.3 +0.9
INK                               IAmb   IAmb   23 09 34.9
      comp=Z,13nm,0.7s
INK   Inuvik           55.07  27  P      P      23 09 33.3 +0.9
INK                               pmax   pmax
      comp=Z,13nm,0.7s
INK   Inuvik           55.07  27  P      P      23 09 33.3 +0.9
      baz=282,SNR=11
G31M  Satah River      55.08  29         P      23 09 33.8 +1.3
G31M                              IAmb   IAmb   23 09 40.4
      comp=Z,12nm,0.7s
G31M  Satah River      55.08  29  P      P      23 09 33.0 +0.5
      baz=282,SNR=19
N30M  Aishikik Lake    55.08  35  P      P      23 09 33.2 +0.5
      baz=283
F31M  Tsiigehtchic     55.17  28         P      23 09 34.1 +1.0
F31M                              IAmb   IAmb   23 09 55.4
      comp=Z,9.7nm,0.7s
F31M  Tsiigehtchic     55.17  28  P      P      23 09 33.7 +0.5
      baz=282,SNR=10.0
P29M  Windy Craggy     55.21  38         P      23 09 36.1 +2.4
P29M  Windy Craggy     55.21  38  P      P      23 09 33.5 -0.1
      baz=284,SNR=8.9
H31M  Peel River       55.29  30         P      23 09 35.9 +1.7
H31M  Peel River       55.29  30  P      P      23 09 34.9 +0.7
      baz=283,SNR=28
SIMJ  Simiganj         55.39 295  P      P      23 09 35.2 -0.3
P30M  Million Dollar   55.47  37  P      P      23 09 35.6 +0.1
      baz=284
N31M  Braeburn, Yuko   55.68  35  P      P      23 09 38.9 +1.9
N31M                              IAmb   IAmb   23 10 19.6
      comp=Z,12nm,0.9s
N31M  Braeburn, Yuko   55.68  35  P      P      23 09 37.5 +0.4
      baz=284
O30N  Mendenhall       55.72  36  P      P      23 09 38.6 +1.3
O30N  Mendenhall       55.72  36  P      P      23 09 37.5 +0.1
      baz=285
PLBC  Pleasant Camp    55.93  38  P      P      23 09 39.7 +1.0
      baz=285,SNR=8.4
M31M  Drury Creek, Y   56.14  34  P      P      23 09 42.0 +1.8
M31M  Drury Creek, Y   56.14  34  P      P      23 09 40.8 +0.5
      baz=285,SNR=6.8
FITZ  Fitzroy Crossi   56.20 197         P      23 09 41.0 -0.1
FITZ                              IAmb   IAmb   23 09 42.3
      comp=Z,9.7nm,0.8s
FITZ  Fitzroy Crossi   56.20 197  P      P      23 09 41.0 -0.1
      comp=Z,37nm,0.7s,baz=22,slow=7.0,SNR=54
      comp=Z,37nm,0.7s
WHY   Whitehorse       56.32  36         P      23 09 42.9 +1.2
WHY                               IAmb   IAmb   23 09 51.1
      comp=Z,21nm,0.8s
WHY   Whitehorse       56.32  36  P      P      23 09 41.6 -0.1
      baz=286
WB0   Warramunga Arr   56.36 187  P      P      23 09 41.3 -0.9
ARTI  Arti             56.38 319         P      23 09 42.1 +0.1
ARTI  Arti             56.38 319  LR     LR     23 36 06.4
      comp=Z,202nm,18.5s,baz=66,slow=38
ARTI  Arti             56.38 319c iP     P      23 09 41.6 -0.4
ARTI                              *PP    pP     23 10 00.7 -0.7
ARTI                                            23 10 34.5
ARTI                              S      S      23 17 25.7 -0.9
ARTI                                            23 19 25.6
ARTI                              pmax   pmax
      comp=Z,48nm,0.7s
ARTI  Arti             56.38 319  P      P      23 09 41.9 -0.1
ARTI                              pP     pP     23 10 01.1 -0.3
S31K  Pelican          56.40  39  P      P      23 09 41.9 -0.3
      baz=286
SKAG  Skagway          56.44  38  P      P      23 09 43.8 +1.5
SKAG                              IAmb   IAmb   23 10 21.9
      comp=Z,9.4nm,0.9s
WRAB  Tennant Creek    56.53 187  P      P      23 09 42.6 -0.8
WRAB  Tennant Creek    56.53 187  P      P      23 09 42.6 -0.8
WRAB                              pmax   pmax
      comp=Z,69nm,0.9s
WR0   Warramunga Arr   56.54 187  P      P      23 09 42.9 -0.6
WR8   Warramunga Arr   56.54 187  P      P      23 09 42.7 -0.8
WB2   Warramunga Arr   56.54 187  P      P      23 09 42.6 -0.9
WRA   Warramunga Arr   56.54 187  P      P      23 09 41.9 -1.6
WRA   Warramunga Arr   56.54 187  P      P      23 09 42.3 -1.2
      comp=Z,70nm,0.7s,baz=4.0,slow=7.1,SNR=204
WRA                               PcP    PcP    23 10 39.0 -0.3
      comp=Z,7.3nm,0.6s,baz=0.2,slow=3.9,SNR=5.2
WRA                               S      S      23 17 25.3 -4.1
      comp=Z,1.2nm,1.1s,baz=359,slow=13,SNR=3.6
      comp=Z,70nm,0.7s
FARO  Faro, Yukon      56.60  34  P      P      23 09 44.9 +1.3
FARO                              IAmb   IAmb   23 10 41.4
      comp=Z,8.0nm,0.8s
CTAO  Charters Tower   56.62 174         P      23 09 43.2 -0.9
CTAO                              IAmb   IAmb   23 09 44.8
      comp=Z,25nm,1.2s
CTAO  Charters Tower   56.62 174  P      P      23 09 45.2 +1.1
CTAO  Charters Tower   56.62 174  P      P      23 09 43.2 -0.9
CTAO                              pmax   pmax
      comp=Z,25nm,1.2s
QIS   Mount Isa        56.85 181  P      P      23 09 45.4 -0.3
A36M  Sachs Harbour    56.91  22         P      23 09 46.0 +0.5
A36M  Sachs Harbour    56.91  22  P      P      23 09 46.0 +0.5
      baz=286
BESE  Bessie Mountai   56.92  38  P      P      23 09 47.0 +1.0
BESE                              IAmb   IAmb   23 10 25.8
      comp=Z,10nm,0.7s
N32M  Quiet Lake       57.03  35  P      P      23 09 46.5 -0.1
      baz=287
SIT   Sitka            57.14  40  P      P      23 09 47.3 -0.1
      baz=288
R32K  Eaglecrest       57.18  39  P      P      23 09 47.7  0.0
      baz=287
P32M  Atlin            57.19  37  P      P      23 09 47.3 -0.5
      baz=287
JIS   Juneau Island    57.25  39  P      P      23 09 49.5 +1.4
S32K  Killisnoo        57.40  40  P      P      23 09 48.2 -1.0
      baz=288
MMPY  Sheldon Lake,    57.42  33  P      P      23 09 50.4 +1.0
MMPY                              IAmb   IAmb   23 09 58.3
      comp=Z,6.5nm,0.7s
MMPY  Sheldon Lake,    57.42  33  P      P      23 09 49.3 -0.1
      baz=287
P33M  Teslin, Yukon    57.43  36         P      23 09 51.3 +1.8
P33M                              IAmb   IAmb   23 09 59.5
      comp=Z,16nm,1.0s
P33M  Teslin, Yukon    57.43  36  P      P      23 09 49.5 -0.1
      baz=288,SNR=10.0
SANVU Saraoutou        57.52 149         P      23 09 50.5  0.0
SANVU Saraoutou        57.52 149  P      P      23 09 51.7 +1.2
SANVU Saraoutou        57.52 149  P      P      23 09 50.9 +0.4
AB31  Akbulak array    57.74 310         P      23 09 51.6 -0.2
ABKAR Akbulak array    57.74 310  P      P      23 09 51.5 -0.3
ABKAR Akbulak array    57.74 310  IAmb   IAmb   23 09 52.4
      comp=Z,25nm,0.7s
Q32M  Nakina River     58.09  38  P      P      23 09 55.5 +1.2
Q32M                              IAmb   IAmb   23 10 04.0
      comp=Z,7.8nm,0.9s
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Q32M	Nakina River	58.09	38	P	P	23 09 53.8	-0.5
	baz=289						
C36M	Paulatuk	58.10	25		P	23 09 54.8	+0.9
C36M				IAmb	IAmb	23 09 56.1	
	comp=Z,14nm,0.8s						
C36M	Paulatuk	58.10	25	P	P	23 09 53.8	-0.1
	baz=289,SNR=5.9						
AKTO	Aktyubinsk	58.50	312	LR	LR	23 36 11.3	
	comp=Z,195nm,19.0s,baz=281,slow=37						
R33M	Jennings River	58.58	37	P	P	23 09 59.5	+1.9
R33M	Jennings River	58.58	37	P	P	23 09 57.0	-0.6
	baz=289						
U33K	Whale Pass	58.59	41	P	P	23 09 56.6	-1.0
	baz=290						
CRAG	Craig	58.82	42	P	P	23 09 58.2	-0.9
	baz=290						
WRAK	Wrangell Islan	58.90	40	P	P	23 09 59.1	-0.6
	baz=290						
S34M	Telegraph Cree	59.00	38		P	23 10 02.3	+1.9
S34M				IAmb	IAmb	23 10 04.3	
	comp=Z,7.7nm,0.8s						
S34M	Telegraph Cree	59.00	38	P	P	23 10 00.3	-0.1
	baz=290,SNR=5.3						
TGTN	Hyland Airport	59.10	34	P	P	23 10 00.9	-0.2
	baz=290						
DLBC	Dease Lake	59.37	38	P	P	23 10 05.1	+2.1
DLBC				IAmb	IAmb	23 10 08.6	
	comp=Z,9.4nm,0.8s						
DLBC	Dease Lake	59.37	38	P	P	23 10 02.7	-0.3
	baz=291,SNR=7.2						
V35K	Ketchikan	59.67	41	P	P	23 10 05.0	0.0
	baz=291						
T35M	Bob Quinn	59.78	39		P	23 10 07.3	+1.5
T35M				IAmb	IAmb	23 10 15.9	
	comp=Z,15nm,0.7s						
T35M	Bob Quinn	59.78	39	P	P	23 10 06.3	+0.5
	baz=291,SNR=8.1						
KIRV	Kirov	60.22	323	LR	LR	23 38 15.6	
	comp=Z,109nm,18.9s,baz=68,slow=38						
KIRV	Kirov	60.22	323	*ce*P	P	23 10 08.7	0.0
AS01	Alice Springs	60.26	187	P	P	23 10 09.3	-0.1
AS31	Alice Springs	60.27	187		P	23 10 08.8	-0.7
AS31				IAmb	IAmb	23 10 10.2	
	comp=Z,10nm,0.8s						
ASAR	Alice Springs	60.27	187		P	23 10 08.7	-0.7
ASAR	Alice Springs	60.27	187	P	P	23 10 08.6	-0.9
	comp=Z,37nm,0.8s,baz=12,slow=6.4,SNR=164						
ASAR				PcP	PcP	23 10 54.3	+0.3
	comp=Z,4.1nm,0.6s,baz=9.8,slow=6.8,SNR=1.4						
ASAR				PKP2bc		23 39 41.5	
	comp=Z,1.3nm,0.8s,baz=184,slow=2.8,SNR=8.7						
	comp=Z,37nm,0.8s						
ASAR	Alice Springs	60.27	187	P	P	23 10 08.7	-0.7
HOPEN	Hopen	60.31	346	*e*P	P	23 10 29.4	+20
WRGLY	Wrigley	60.56	31	P	P	23 10 12.7	+1.8
WRGLY	Wrigley	60.56	31	P	P	23 10 11.4	+0.5
	baz=293,SNR=5.9						
ALE	Alert	60.59	3	P	P	23 10 11.9	+1.0
ALE				pP	pP	23 10 31.1	+0.6
ALE				sP	sP	23 10 39.7	+0.7
MBWA	Marble Bar	60.73	202		P	23 10 12.1	-0.5
MBWA	Marble Bar	60.73	202	P	P	23 10 12.4	-0.2
MBWA	Marble Bar	60.73	202	P	P	23 10 11.9	-0.7
RUBB	Prince Rupert	60.78	42	P	P	23 10 14.7	+2.1
RUBB				IAmb	IAmb	23 10 39.7	
	comp=Z,13nm,1.0s						
SPB2	Spitsbergen Ar	60.83	349	P	P	23 10 12.2	-0.5
SPITS	Spitsbergen Ar	60.83	349	P	P	23 10 12.4	-0.2
	comp=Z,12nm,0.8s,baz=79,slow=8.6,SNR=8.9						
SPITS				LR	LR	23 37 46.2	
	comp=Z,107nm,19.0s,baz=3.5,slow=37						
	comp=Z,12nm,0.8s						
SPITS	Spitsbergen Ar	60.83	349	P	P	23 10 13.5	+0.8
SPITS				pmax	pmax		
	comp=Z,38nm,1.1s						
LIRD	Liard River Hi	60.89	36	P	P	23 10 13.6	+0.2
	baz=293,SNR=13						
KBS	Kingsbay	60.98	350	P	P	23 10 14.8	+1.2
KBS	Kingsbay	60.98	350	P	P	23 10 14.8	+1.2
KBS				pmax	pmax		
	comp=Z,54nm,0.8s						
KBS	Kingsbay	60.98	350	*e*P	P	23 10 34.1	+21
BEAVL	Fort Liard	61.06	35	P	P	23 10 15.0	+0.5
	baz=293						
PSA00	Pilbara Seismi	61.09	202	P	P	23 10 15.0	0.0
PSA00	Pilbara Seismi	61.09	202	P	P	23 10 14.0	-1.0
PSA00				IAmb	IAmb	23 10 15.4	
	comp=Z,21nm,0.7s						
PSA00	Pilbara Seismi	61.09	202	P	P	23 10 14.7	-0.3
NOR	Nord	61.45	356	*i* P	P	23 10 17.0	+0.2
NOR				*i*		23 10 35.7	
TOAD	Toad River Com	61.53	36	P	P	23 10 18.9	+1.2
	baz=294,SNR=20						
KOTAN	Kotaneelee Air	61.55	35	P	P	23 10 17.8	0.0
	baz=294						
PALK	Pallekele	61.65	257	P	P	23 10 18.9	-0.2
EIDS	Eidsvold	62.41	169		P	23 10 23.9	+0.1
EIDS	Eidsvold	62.41	169	P	P	23 10 24.5	+0.7
APA	Apatity	62.83	336	⇓*i*P	P	23 10 24.8	-1.3
APA				*i*		23 10 43.7	
APA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
APA				MLR	MLR		
	comp=Z,400nm,13.0s						
QLP	Quilpie	62.93	176	P	P	23 10 28.0	+0.8
RES	Resolute Bay	63.19	14		P	23 10 29.3	+0.9
RES				IAmb	IAmb	23 10 50.1	
	comp=Z,18nm,0.7s						
RES	Resolute Bay	63.19	14	P	P	23 10 29.3	+0.9
RES				pmax	pmax		
	comp=Z,18nm,0.7s						
NOUC	Port Laguerre	63.22	153	P	P	23 10 30.6	+1.3
DZM	Mont Dzumac	63.24	153		P	23 10 30.1	+0.6
DZM	Mont Dzumac	63.24	153	P	P	23 10 31.3	+1.8
DZM	Mont Dzumac	63.24	153	P	P	23 10 30.8	+1.3
KEV	Kevo	63.63	339	P	P	23 10 31.5	+0.1
KEV				pP	pP	23 10 50.8	-0.3
KEV				PcP	PcP	23 11 06.9	-0.2
BELG	Belogornoye	63.69	317	LR	LR	23 40 03.5	
	comp=Z,159nm,18.2s,baz=63,slow=38						
BELG	Belogornoye	63.69	317	*i* P	P	23 10 32.4	+0.3
BELG				pmax	pmax		
	comp=Z,11nm,0.9s						
OUENC	Ouen Island, N	63.70	153	P	P	23 10 34.9	+2.5
KLMR	Klimovskoe	63.79	328	*e*P	P	23 10 30.2	-2.4
KLMR				*e**PP	pP	23 10 50.6	-1.7
KLMR				pmax	pmax		
	comp=Z,21nm,0.7s						
HAMF	Hammerfest	64.02	341	*e*P	P	23 10 34.5	+0.5
ARA0	ARCESS Array S	64.19	339	*e*P	P	23 10 35.8	+0.7
ARCES	ARCESS Array B	64.19	339	P	P	23 10 35.4	+0.3
ARCES				IAmb	IAmb	23 10 56.2	
	comp=Z,23nm,0.9s						
ARCES	ARCESS Array B	64.19	339	P	P	23 10 35.6	+0.5
	comp=Z,9.7nm,0.7s,baz=55,slow=8.1,SNR=27						
ARCES				LR	LR	23 41 45.1	
	comp=Z,101nm,18.4s,baz=56,slow=39						
	comp=Z,9.7nm,0.7s						
YKAW3	Yellowknife Wh	64.47	30	P	P	23 10 37.9	+0.9
YKAW3				IAmb	IAmb	23 11 13.4	
	comp=Z,25nm,1.8s						
YKA	Yellowknife Ar	64.51	30	P	P	23 10 37.9	+0.6
	comp=Z,3.1nm,0.7s,baz=309,slow=7.5,SNR=22						
	comp=Z,3.1nm,0.7s						
YKA	Yellowknife Ar	64.51	30	*i* P	P	23 10 38.4	+1.1
YKA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
YKAW1	Yellowknife Wh	64.56	30	P	P	23 10 38.6	+1.0
YKAW1				IAmb	IAmb	23 10 40.7	
	comp=Z,6.3nm,0.8s						
MSVF	Nonsavu	64.57	140	P	P	23 10 39.4	+1.1
MSVF				IAmb	IAmb	23 10 41.9	
	comp=Z,33nm,1.1s						
MSVF	Nonsavu	64.57	140	P	P	23 10 39.4	+1.1
MSVF				pmax	pmax		
	comp=Z,33nm,1.1s						
JETT	Jettan, Norway	65.58	341	*e*P	P	23 10 43.9	-0.3
TRO	Tromso	65.92	341	*e*P	P	23 10 45.7	-0.6
NEEM	North Greenlan	66.00	3	*i* P	P	23 10 46.7	-0.4
NEEM				*i*		23 11 07.2	
JOF	Joensuu	66.05	332	*e*P	P	23 10 46.8	-0.4
DAG	Danmarks Havn	66.16	355	*i* P	P	23 10 47.0	-0.7
DAG				*i*		23 11 07.2	
MEEK	Meekatharra	66.22	201	P	P	23 10 49.3	+0.5
LLLB	Lillooet	67.01	43		P	23 10 54.5	+0.8
MOS	Moscow	67.22	323	*e*P	P	23 10 53.6	-1.2
MOS				*e**PP	pP	23 11 13.1	-1.6
MOS				*e**SP	PcP	23 11 21.4	-0.8
MOS				*e*S	S	23 19 40.1	-3.4
MOS				*e**SS	sS	23 20 13.9	-3.4
MOS				*e*		23 20 42.7	
MOS				pmax	pmax		
	comp=Z,100nm,1.5s						
MOS				pmax	pmax		
	comp=Z,37nm,1.1s						
ARMA	Armidale	67.45	170	P	P	23 10 56.9	+0.3
VRH	Novokhopyorsk	67.48	318	*e*P	P	23 10 55.5	-1.0
VRH				pmax	pmax		
	comp=Z,54nm,0.7s						
NLWA	Neilton Lookou	67.48	47	P	P	23 10 57.9	+1.2
NLWA				IAmb	IAmb	23 11 25.6	
	comp=Z,16nm,0.9s						
WISH	Wishkah	67.68	47	P	P	23 10 59.5	+1.7
WISH				IAmb	IAmb	23 11 37.1	
	comp=Z,29nm,1.0s						
POIN	Pond Inlet	67.78	12		P	23 10 58.7	+0.6
CMSA	Cobar Meteorol	67.94	175	P	P	23 11 00.4	+0.9
RADR	Rader Ridge	68.01	48	P	P	23 11 02.0	+2.0
FORT	Forrest	68.05	192	P	P	23 11 00.4	+0.3
FORT	Forrest	68.05	192	P	P	23 11 01.0	+0.8
OBN	Obninsk	68.07	323	LR	LR	23 44 19.6	
	comp=Z,97nm,18.3s,baz=12,slow=39						
OBN	Obninsk	68.07	323	*de*P	P	23 10 59.8	-0.3
OBN				*e*		23 13 32.1	
OBN				*e*PPP	PPP	23 15 10.5	
OBN				*e*S	S	23 20 13.7	+20
OBN				pmax	pmax		
	comp=Z,20nm,0.8s						
STEI	Steigen	68.07	341	*e*P	P	23 11 00.3	+0.4
E03A	Lebam	68.09	48	P	P	23 11 03.0	+2.6
E03A					pP	23 11 22.9	+2.7
E03A				IAmb	IAmb	23 11 30.1	
	comp=Z,30nm,1.1s						
STKA	Stephens Creek	68.12	179	P	P	23 11 00.7	+0.1
STKA	Stephens Creek	68.12	179	P	P	23 10 59.8	-0.8
	comp=Z,22nm,0.8s,baz=347,slow=7.0,SNR=35						
	comp=Z,22nm,0.8s						
STKA	Stephens Creek	68.12	179	P	P	23 11 01.0	+0.4
STKA	Stephens Creek	68.12	179	P	P	23 11 00.7	+0.1
STKA				pmax	pmax		
	comp=Z,99nm,0.9s						
LPSR	Galich'ya Gora	68.23	320	*e*P	P	23 11 01.1	-0.1
LPSR				*e**PP	pP	23 11 21.1	0.0
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
FAUS	Fauske	68.45	340	*e*P	P	23 11 02.9	+0.5
KULLO	Kullorsuaq	68.47	5	*i* P	P	23 11 01.7	-0.7
KULLO				*i*		23 11 22.6	
VORR	Voronezh	68.58	319	*e*P	P	23 11 03.3	-0.1
VORR				pmax	pmax		
	comp=Z,42nm,0.6s						
AKT	Akhty	68.83	306	*e*P	P	23 11 04.9	-0.4
AKT				*e**PP	pP	23 11 26.1	+0.9
AKT				*e*		23 11 29.2	
AKT				*e**SP	sP	23 11 35.0	+1.4
AKT				pmax	pmax		
	comp=Z,31nm,0.7s						
VSR	Storozhevoye	68.84	319	*e*P	P	23 11 02.6	-2.5
VSR				*e**PP	pP	23 11 22.8	-2.1
VSR				pmax	pmax		
	comp=Z,30nm,0.8s						
KEF	Keuruu	68.90	333	*e*P	P	23 11 05.1	-0.1
FINES	FINESS Array B	68.91	332	P	P	23 11 05.2	-0.1
FINES	FINESS Array B	68.91	332	P	P	23 11 04.5	-0.8
	comp=Z,22nm,0.8s,baz=43,slow=7.1,SNR=73						
FINES				LR	LR	23 42 56.3	
	comp=Z,87nm,18.9s,baz=58,slow=37						
	comp=Z,22nm,0.8s						
FINES	FINESS Array B	68.91	332	P	P	23 11 05.2	-0.1
VORD	Divnogorie	68.91	318	*e*P	P	23 11 02.9	-2.6
VORD				*e**PP	pP	23 11 23.6	-1.7
VORD				pmax	pmax		
	comp=Z,20nm,0.9s						
VAF	Ylistaro	69.12	334	*e*P	P	23 11 07.1	+0.5
BBOO	Buckleboo	69.17	184	P	P	23 11 07.5	+0.3
MORW	Morawa	69.28	203	P	P	23 11 07.8	-0.1
WHYH	Whyalla	69.32	183	P	P	23 11 08.4	+0.4
VAGH	Vaagaholmen	69.47	340	*e*P	P	23 11 08.9	+0.3
MOR8	Moi Rana	69.56	340	*e*P	P	23 11 08.5	-0.8
HTT	Hallett	69.68	182	P	P	23 11 10.1	-0.2
KONS	Konsvik	69.68	340	*e*P	P	23 11 10.9	+1.0
STOK	Stokkvaagen	69.83	340	*e*P	P	23 11 11.0	+0.2
ILON	Igloolik, Nuna	69.85	15	IAmb	IAmb	23 11 31.5	
	comp=Z,17nm,0.8s						
HOOD	Mount Hood Mea	69.86	48	IAmb	IAmb	23 11 47.8	
	comp=Z,22nm,0.9s						
GOF	Gofitskoye	69.91	312	*ce*P	P	23 11 11.3	-0.5
I04A	Tendick Farm,	70.21	50		pP	23 11 35.8	+2.2
MEF	Metsahovi	70.32	332	*e*P	P	23 11 14.1	+0.2
JMIC	Jan Mayen	70.47	350	LR	LR	23 43 20.0	
	comp=Z,63nm,18.7s,baz=30,slow=37						
VSU	Vasula	70.51	329	*ce*P	P	23 11 14.6	-0.5
VSU				pmax	pmax		
	comp=Z,44nm,0.8s						
VSU	Vasula	70.51	329	*e*P	P	23 11 14.8	-0.3
KBZ	Khabaz	70.70	310	P	P	23 11 16.4	-0.2
	comp=Z,21nm,0.8s,baz=34,slow=2.9,SNR=41						
KBZ				LR	LR	23 42 59.1	
	comp=Z,97nm,19.6s,baz=54,slow=36						
	comp=Z,21nm,0.8s						
KBZ	Khabaz	70.70	310	*ce*P	P	23 11 17.1	+0.5
KBZ				pmax	pmax		
	comp=Z,23nm,0.9s						
KVAR	Kislovodsk Arr	70.71	311	LR	LR	23 45 00.2	
	comp=Z,88nm,19.2s,baz=283,slow=38						
KIV	Kislovodsk	70.71	311	P	P	23 11 17.2	+0.4
KIV	Kislovodsk	70.71	311	⇓P	P	23 11 17.4	+0.6
KIV	Kislovodsk	70.71	311	*e*P	P	23 11 16.2	-0.6
KIV				pmax	pmax		
	comp=Z,66nm,1.1s						
KIV				MLR	MLR		
	comp=Z,73nm,18.0s						
KIV	Kislovodsk	70.71	311	*i* P	P	23 11 17.3	+0.4
	SNR=28						
KIV	Kislovodsk	70.71	311	P	P	23 11 17.0	+0.2
KIV				pP	pP	23 11 36.9	+0.1
KIV				sP	sP	23 11 46.0	+0.8
RAF	Rauma	70.78	333	*e*P	P	23 11 16.8	+0.1
SHME	Shamm	70.80	289	*i* P	P	23 11 17.5	+0.1
	SNR=18						
SHA1	Shidzhatmaz	70.85	311	*i* P	P	23 11 17.6	-0.2
ERBR	Yeremizino-Bor	71.08	313	*e*P	P	23 11 16.8	-2.1
ERBR				*e**PP	pP	23 11 38.9	0.0
ERBR				pmax	pmax		
	comp=Z,65nm,0.8s						
PINE	Pine Mountain	71.11	49	IAmb	IAmb	23 11 48.6	
	comp=Z,34nm,1.2s						
L04D	Klamath Falls	71.11	51		pP	23 11 41.6	+2.4
TRLG	Trialeti	71.12	308	P	P	23 11 19.7	+0.3
SUMG	Summit	71.12	360	*i* P	P	23 11 20.2	+1.0
KLBR	Kellerberrin	71.13	201	P	P	23 11 19.0	-0.1
MSFE	Esma-Masafi	71.15	288	P	P	23 11 19.9	+0.2
UOSS	Minazif	71.33	288	P	P	23 11 20.9	+0.1
UOSS				IAmb	IAmb	23 11 21.4	
	comp=Z,15nm,0.7s						
UOSS	Minazif	71.33	288	P	P	23 11 20.5	-0.3
UOSS	Minazif	71.33	288	P	P	23 11 20.5	-0.3
UOSS				PcP	PcP	23 11 39.2	-0.9
HATD	Hatta, Dubai	71.45	287	*i* P	P	23 11 21.9	+0.4
	SNR=12						
GNI	Garni	71.46	306	P	P	23 11 22.8	+1.3
GNI				IAmb	IAmb	23 11 30.9	
	comp=Z,25nm,0.8s						
GNI	Garni	71.46	306	LR	LR	23 45 29.8	
	comp=Z,88nm,18.1s,baz=58,slow=38						
GNI	Garni	71.46	306	*i* P	P	23 11 22.9	+1.4
GNI				pmax	pmax		
	comp=Z,33nm,1.1s						
GNI	Garni	71.46	306	P	P	23 11 22.4	+0.9
GNI				pP	pP	23 11 42.4	+0.9
NSS	Namsos	71.47	339	*e*P	P	23 11 21.1	+0.2
SOHO	SOHO	71.51	287	*i* P	P	23 11 21.5	-0.3
	SNR=9.9						
LABN	Labinsk	71.53	312	*e*P	P	23 11 20.6	-1.0
LABN				*e**PP	pP	23 11 41.4	-0.2
LABN				pmax	pmax		
	comp=Z,33nm,0.8s						
MTSE	Matsula	71.53	331	*e*P	P	23 11 21.9	+0.7
ASHO	Ashiyiah	71.58	287	*i* P	P	23 11 21.7	-0.6
	SNR=6.7						
NAZ	Nazwa, Dubai	71.73	288	*i* P	P	23 11 22.9	-0.2
	SNR=5.8						
O02D	Mt. Diablo Mer	71.91	53		pP	23 11 42.2	-1.8
CAN	Canberra	71.97	173	IAmb	IAmb	23 11 26.1	
	comp=Z,28nm,1.1s						
CAN	Canberra	71.97	173	P	P	23 11 24.9	+0.7
ALNE	Al Ain	72.16	287	*i* P	P	23 11 25.5	-0.3
	SNR=13						
ASUD	Al Ashush, Dub	72.18	288	*i* P	P	23 11 25.7	-0.1
	SNR=7.0						
KARS	Kars	72.27	308	P	P	23 11 27.0	+0.7
KARS	Kars	72.27	308	P	P	23 11 27.0	+0.7
KARS				pmax	pmax		
	comp=Z,47nm,0.7s						
SCO	Scoresbysund	72.49	354	P	P	23 11 28.1	+1.3
SCO				IAmb	IAmb	23 11 48.6	
	comp=Z,18nm,0.7s						
SCO					pP	23 11 48.0	+1.0
SCO	Scoresbysund	72.49	354	*i* P	P	23 11 27.0	+0.2
SCO				*i*		23 11 47.9	
IDID	Didziasalis	72.50	327	*e*P	P	23 11 25.2	-1.9
MNK	Minsk	72.50	326	*i* P	P	23 11 28.0	+0.8
	comp=E,24nm,1.1s						
MNK				*i* P	P	23 11 28.0	+0.8
	comp=N,21nm,1.0s						
MNK				*i* P	P	23 11 28.0	+0.8
	comp=Z,50nm,0.8s,baz=51						
MNK				*i* pP	pP	23 11 48.0	+0.7
MNK				*i* PP	PP	23 14 09.9	+1.2
MNK				*i* PPP	PPP	23 15 59.3	
MNK				*i* S	S	23 20 46.5	+1.1
MNK				*i* sS	SKSac	23 21 22.8	-2.3
MNK				*i* SS	SS	23 25 27.6	+3.2
MNK				*i* SSS	SSS	23 28 48.2	
MNK				*i* LQ	LQ	23 38 33.6	
MNK				*i* LR	LR	23 44 04.8	
MNK				*i* LRM	MLR	23 44 54.0	
	comp=Z,69nm,15.4s						
MNK				*i* LRM	MLR	23 44 56.0	
	comp=N,26nm,13.2s						
MNK				*i* LRM	MLR	23 45 08.4	
	comp=E,48nm,16.9s						
MNK	Minsk	72.50	326	*i* P	P	23 11 27.9	+0.8
MNK				*i* *PP	pP	23 11 47.9	+0.7
MNK				*i*		23 14 09.8	
MNK				*i* PPP	PPP	23 15 59.3	
MNK				*i* S	S	23 20 46.4	+1.1
MNK				*i* *SS	SKSac	23 21 22.8	-2.3
MNK				*i* SS	SS	23 25 27.5	+3.2
MNK				pmax	pmax		
	comp=Z,50nm,0.8s						
MNK				pmax	pmax		
	comp=N,21nm,1.0s						
MNK				pmax	pmax		
	comp=E,24nm,1.1s						
MNK				MLR	MLR		
	comp=Z,69nm,15.0s						
MNK				MLR	MLR		
	comp=N,26nm,13.0s						
MNK				MLR	MLR		
	comp=E,48nm,17.0s						
NWAO	Narrogin (SRO)	72.53	200	P	P	23 11 27.5	0.0
	comp=E,17nm,0.6s,baz=19,slow=6.0,SNR=18						
	comp=E,17nm,0.6s						
ISAL	Salakas	72.60	327	*e*P	P	23 11 28.7	+0.9
BMO	Blue Mountains	72.70	47	P	P	23 11 29.9	+1.3
BMO	Blue Mountains	72.70	47	P	P	23 11 30.0	+1.3
BMO				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SOC	Sochi	72.72	312	*e*P	P	23 11 27.7	-1.0
SOC				*e*		23 14 08.8	
SOC				*e*S	S	23 20 47.4	-0.7
SOC				*e*SS	SS	23 25 27.7	-0.5
SOC				pmax	pmax		
	comp=Z,18nm,0.7s						
NACGM	Naroch	72.74	326	⇓*i*P	P	23 11 28.9	+0.3
	comp=Z,28nm,0.9s,baz=50						
JTMT	Jette	72.75	43	P	P	23 11 30.5	+1.4
J08A	Circle Bar Ran	72.84	49	P	P	23 11 30.2	+0.6
J08A					pP	23 11 52.1	+2.5
SLIT	Slitere, Latvi	72.85	330	*e*P	P	23 11 29.1	-0.1
ARPS	Mount Arapiles	73.00	179	P	P	23 11 30.7	+0.5
ORV	Oroville	73.08	53	P	P	23 11 31.5	+0.6
ORV	Oroville	73.08	53	P	P	23 11 31.5	+0.6
ORV				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WVOR	Wild Horse Val	73.27	49	P	P	23 11 32.9	+0.7
WVOR				IAmb	IAmb	23 12 12.1	
	comp=Z,30nm,1.9s						
WVOR	Wild Horse Val	73.27	49	P	P	23 11 32.9	+0.7
WVOR				pmax	pmax		
	comp=Z,30nm,2.0s						
VSVD	Vaisvydziai	73.28	328	*e*P	P	23 11 32.0	+0.2
PLID	Pearl Lake	73.32	46	P	P	23 11 32.8	+0.2
ANN	Anapa	73.38	314	*e*P	P	23 11 29.1	-3.4
ANN				*e**PP	pP	23 11 51.6	-1.0
ANN				pmax	pmax		
	comp=Z,27nm,0.8s						
MSO	Missoula	73.48	44	P	P	23 11 33.9	+0.6
MSO					pP	23 11 55.4	+2.1
GEVA	Gevas	73.55	306	P	P	23 11 34.4	+0.4
GEVA				IAmb	IAmb	23 11 37.0	
	comp=Z,14nm,0.9s						
PABE	Paberze	73.58	328	P	P	23 11 33.9	+0.4
PABE	Paberze	73.58	328	*e*P	P	23 11 34.3	+0.8
BEKR	Beckworth	73.63	52	P	P	23 11 35.0	+0.6
AFDM	Forest Hills D	73.75	53	P	P	23 11 36.0	+1.0
OVMT	Ovando	73.86	43	P	P	23 11 36.1	+0.5
TOO	Toolangi	73.93	176	P	P	23 11 35.9	+0.2
TOO	Toolangi	73.93	176	P	P	23 11 35.9	+0.2
TOO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BPMT	Black Pine Rid	73.98	44	P	P	23 11 37.0	+0.5
PBUR	Paburge	74.08	329	*e*P	P	23 11 37.0	+0.5
NC405	NORSAR Array S	74.13	337	P	P	23 11 37.1	+0.4
ILULI	Ilulissat	74.15	4	P	P	23 11 37.9	+1.2
ILULI	Ilulissat	74.15	4	P	P	23 11 37.9	+1.2
ILULI				pmax	pmax		
	comp=Z,37nm,0.8s						
ILULI	Ilulissat	74.15	4	*i* P	P	23 11 37.6	+1.0
NC303	NORSAR Array S	74.16	337	P	P	23 11 37.5	+0.7
NC303				IAmb	IAmb	23 11 57.9	
	comp=Z,35nm,1.1s						
DOMB	Dombas	74.22	339	*e*P	P	23 11 37.8	+0.6
HFS	Hagfors	74.23	335	P	P	23 11 37.2	0.0
	comp=Z,20nm,0.9s,baz=45,slow=6.5,SNR=29						
HFS				LR	LR	23 46 53.0	
	comp=Z,122nm,20.6s,baz=34,slow=38						
	comp=Z,20nm,0.9s						
KOPT	Kop Dagi	74.25	308	P	P	23 11 39.0	+0.8
KOPT				IAmb	IAmb	23 11 40.2	
	comp=Z,15nm,1.1s						
MOL	Molde	74.25	339	*e*P	P	23 11 38.2	+0.9
AKASG	Malin Array Be	74.25	322	P	P	23 11 37.2	-0.4
AKASG	Malin Array Be	74.25	322	P	P	23 11 37.3	-0.3
	comp=Z,26nm,0.7s,baz=49,slow=5.9,SNR=180						
AKASG				LR	LR	23 46 58.7	
	comp=Z,203nm,19.6s,baz=44,slow=38						
	comp=Z,26nm,0.7s						
AKASG	Malin Array Be	74.25	322	*i* P	P	23 11 37.2	-0.4
AKASG				pmax	pmax		
	comp=Z,27nm,0.7s						
AKBB	Malin Array Si	74.25	322	*ce*P	P	23 11 37.2	-0.4
KIEV	Kiev	74.27	322	P	P	23 11 37.2	-0.5
KIEV	Kiev	74.27	322	⇓P	P	23 11 37.5	-0.2
KIEV	Kiev	74.27	322	P	P	23 11 37.4	-0.2
KIEV	Kiev	74.27	322	*i* P	P	23 11 37.3	-0.3
	SNR=41						
LYMT	Lyon Mountain	74.31	43	P	P	23 11 39.4	+1.1
PAHR	Pah Rah Range	74.34	52	P	P	23 11 39.2	+0.7
NB2	NORSAR Subarra	74.35	337	P	P	23 11 37.9	-0.1
	comp=Z,30nm,0.8s,baz=40,slow=6.2						
NB2	NORSAR Subarra	74.35	337	P	P	23 11 34.7	-3.3
NB2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NB2	NORSAR Subarra	74.35	337	P	P	23 11 37.9	-0.1
	baz=40,slow=6.2						
NOA	NORSAR Array B	74.35	337	P	P	23 11 37.9	-0.1
	comp=Z,21nm,0.8s,baz=39,slow=5.8,SNR=136						
NOA				LR	LR	23 47 59.0	
	comp=Z,66nm,19.3s,baz=30,slow=39						
	comp=Z,21nm,0.8s						
MFID	Camas Ranch	74.39	47	P	P	23 11 39.3	+0.6

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MFID                                IAmb    IAmb    23 12 01.5
       comp=Z,21nm,1.6s
FFC    Flin Flon         74.42  32  P       P       23 11 39.4 +0.9
FFC                                 IAmb    IAmb    23 11 40.3
       comp=Z,15nm,0.8s
FFC    Flin Flon         74.42  32  P       P       23 11 39.4 +0.9
FFC                                 pmax    pmax
       comp=Z,15nm,0.8s
NC602  NORSAR Array S    74.47 337  IAmb    IAmb    23 11 39.8
       comp=Z,54nm,1.6s
NC602  NORSAR Array S    74.47 337 eP       P       23 11 38.5 -0.2
NORES  NORESS Array B    74.47 337  P       P       23 11 38.6 -0.1
MZR    Muzera            74.48 287 i P      P       23 11 38.7 -0.7
       SNR=16
PNTR   Pine Nut          74.56  53  P       P       23 11 40.0 +0.2
NAO01  NORSAR Array S    74.60 337  IAmb    IAmb    23 11 40.5
       comp=Z,22nm,0.8s
CMB    Columbia Colle    74.64  54  P       P       23 11 40.8 +0.6
CMB    Columbia Colle    74.64  54  P       P       23 11 40.8 +0.6
CMB                                 pmax    pmax
       comp=Z,10.0nm,0.9s
FCC    Fort Churchill    74.68  26  IAmb    IAmb    23 12 01.4
       comp=Z,15nm,0.8s
HRY    Holter Researc    74.71  43  P       P       23 11 41.8 +1.3
AKN    Aaknes            74.71 339 eP       P       23 11 41.5 +1.4
SUW    Suwalki           74.92 327 eP       P       23 11 41.5 +0.1
SUW    Suwalki           74.92 327 eP       P       23 11 42.1 +0.8
WAKR   Walker            74.99  53  P       P       23 11 43.6 +1.2
WAKR                                        pP      23 12 05.2 +2.8
EGMT   Eagleton          75.02  41  P       P       23 11 42.9 +0.6
EGMT                                IAmb    IAmb    23 12 09.9
       comp=Z,28nm,0.9s
DLMT   Dillon            75.10  44  P       P       23 11 43.9 +1.0
DLMT                                IAmb    IAmb    23 12 10.9
       comp=Z,21nm,0.8s
HLID   Hailey            75.14  47  P       P       23 11 44.5 +1.4
SIM    Simferopol'       75.19 315 eP       P       23 11 41.4 -1.7
SIM                                 pmax    pmax
       comp=Z,36nm,0.8s
SOEG   Soedalen          75.35 357 i P      P       23 11 45.5 +1.9
RYN    Ryan              75.51  53  P       P       23 11 46.3 +1.0
SKAR   Skarslia          75.52 338 eP       P       23 11 45.8 +1.0
LHV    Little Huntoon    75.74  53  P       P       23 11 47.0 +0.6
LHV                                 IAmb    IAmb    23 12 16.1
       comp=Z,13nm,0.8s
HYA    Hoyanger          75.76 339 eP       P       23 11 46.6 +0.5
NVAR   Mina Array Bea    75.76  53  P       P       23 11 47.6 +0.7
NVAR   Mina Array Bea    75.76  53  P       P       23 11 46.4 -0.4
       comp=Z,6.0nm,0.7s,baz=294,slow=5.4,SNR=29
       comp=Z,6.0nm,0.7s
NV11   Mina Array Sit    75.86  53  P       P       23 11 48.2 +1.0
STRU   Stroemstad        75.90 336 i P      P       23 11 47.3 +0.4
KONO   Kongsberg         75.93 337  P       P       23 11 47.4 +0.3
KONO                                IAmb    IAmb    23 12 08.1
       comp=Z,20nm,1.0s
KONO   Kongsberg         75.93 337  P       P       23 11 47.4 +0.3
KONO                                pmax    pmax
       comp=Z,20nm,1.0s
YHL    Hebgen Lake       76.21  44  P       P       23 11 49.8 +0.4
YHB    Horse Butte       76.26  44  P       P       23 11 49.6 +0.1
YHB                                 IAmb    IAmb    23 12 17.8
       comp=Z,13nm,0.7s
BLEU   Blekinge          76.31 332 i P      P       23 11 48.5 -0.7
BLEU                                IAmb    IAmb    23 11 49.6
       comp=Z,14nm,0.7s
ELK    Elko              76.32  49  P       P       23 11 50.9 +0.9
ELK    Elko              76.32  49  P       P       23 11 50.9 +0.9
ELK                                 pmax    pmax
       comp=Z,5.0nm,0.7s
SORM   Soroca            76.33 320 ⇑P       P       23 11 49.0 -0.5
SORM   Soroca            76.33 320  P       P       23 11 49.0 -0.5
SFJD   Kangerlussuaq     76.38   5  P       P       23 11 50.5 +1.0
SFJD                                IAmb    IAmb    23 12 10.9
       comp=Z,31nm,0.9s
SFJD   Kangerlussuaq     76.38   5  P       P       23 11 50.5 +1.0
SFJD                                pmax    pmax
       comp=Z,31nm,1.0s
BORU   Boraas            76.42 334 i P      P       23 11 50.2 +0.3
YHH    Holmes Hill       76.43  44  P       P       23 11 51.9 +1.3
GCMT   Greycliff         76.46  43  P       P       23 11 51.9 +1.4
DIKM   Dikmen            76.52 312 ⇓P       P       23 11 51.6 +0.9
PURM   Purcari           76.55 318 ⇑P       P       23 11 50.5 -0.3
TOKA   Tokat             76.57 310  IAmb    IAmb    23 11 52.9
       comp=Z,44nm,1.5s
DSP    Deep Springs      76.59  53  P       P       23 11 52.3 +1.1
ASK    Askoy             76.60 339 eP       P       23 11 51.8 +1.0
BER    Bergen            76.64 339 eP       P       23 11 52.0 +0.9
YFT    Old Faithful      76.65  44  P       P       23 11 53.4 +1.6
YFT                                 IAmb    IAmb    23 12 16.0
       comp=Z,16nm,1.1s
TPH    Tonopah           76.66  52  P       P       23 11 53.0 +1.1
TPH    Tonopah           76.66  52  P       P       23 11 53.0 +1.1
TPH                                 pmax    pmax
       comp=Z,64nm,1.0s
YNE    Yellowstone No    76.77  43  P       P       23 11 52.6 +0.2
MZP    Montezuma Peak    76.78  53  P       P       23 11 53.8 +1.1
KIS    Kishinev          76.81 319 ⇓P       P       23 11 52.5 +0.2
KIS    Kishinev          76.81 319  P       P       23 11 52.5 +0.2
YMP    Mirror Lake Pl    76.85  44  P       P       23 11 54.0 +1.0
MILM   Milestii Mici     76.87 319⇓iP       P       23 11 51.5 -1.0
       comp=Z,40nm,1.0s
MILM                               i pP     pP      23 12 13.0 +0.2
MILM   Milestii Mici     76.87 319  LRM     MLR     23 48 21.0
       comp=Z,200nm,15.5s
MILM   Milestii Mici     76.87 319 ⇑P       P       23 11 51.7 -0.9
MILM   Milestii Mici     76.87 319  P       P       23 11 51.6 -1.0
MILM   Milestii Mici     76.87 319 ePP      PP      23 14 35.0  -11
ONAU   Onsala            76.90 334 i P      P       23 11 52.9 +0.3
DEL    Delary            76.91 333 i P      P       23 11 52.6 -0.1
DEL                                 IAmb    IAmb    23 11 53.4
       comp=Z,8.1nm,0.7s
FABU   Falkenberg        76.92 334 i P      P       23 11 52.6 -0.1
FABU                                IAmb    IAmb    23 11 53.2
       comp=Z,16nm,0.7s
FXWY   Fox Creek         77.05  45  P       P       23 11 55.8 +1.8
BCW    Bitter Crk WRg    77.06  56  P       P       23 11 55.2 +1.1
BCW                                 IAmb    IAmb    23 12 18.0
       comp=Z,12nm,0.8s
BZK    Bozkurt           77.07 313  P       P       23 11 54.2 +0.4
BZK    Bozkurt           77.07 313 ⇓P       P       23 11 54.6 +0.7
BLS5   Blasjo            77.09 338 eP       P       23 11 54.4 +0.8
GMN    Gold Mountain     77.09  53  P       P       23 11 55.7 +1.3
RLMT   Red Lodge         77.10  43  P       P       23 11 55.7 +1.4
DRBR   Darabani          77.17 321 ⇑P       P       23 11 53.8 -0.4
HVU    Hansel Valley     77.18  47  P       P       23 11 55.9 +1.2
HVU                                 IAmb    IAmb    23 11 57.4
       comp=Z,13nm,0.8s
HVU    Hansel Valley     77.18  47  P       P       23 11 55.9 +1.2
HVU                                 pmax    pmax
       comp=Z,13nm,0.8s
TPAW   Teton Pass        77.18  45  P       P       23 11 56.4 +1.6
GRAC   Grapevine Rang    77.20  53  P       P       23 11 55.7 +0.9
GRAC                                IAmb    IAmb    23 13 42.6
       comp=Z,15nm,0.6s
ISA    Isabella, Lake    77.26  55  P       P       23 11 55.6 +0.4
ISA    Isabella, Lake    77.26  55  P       P       23 11 55.6 +0.4
ISA                                 pmax    pmax
       comp=Z,6.0nm,0.8s
LOHW   Long Hollow       77.30  45  P       P       23 11 56.5 +1.1
SNOW   Snow King Moun    77.31  45  P       P       23 11 56.7 +1.2
IASR   Iasi              77.35 320 ⇓P       P       23 11 55.4 +0.1
FRB    Frobisher Bay     77.35  13  LR      LR      23 49 30.3
       comp=Z,74nm,18.6s,baz=304,slow=38
HOMB   Homborsund        77.37 336 i P      P       23 11 54.5 -0.6
HOMB                                IAmb    IAmb    23 11 56.4
       comp=Z,22nm,0.8s
BEL    Belsk             77.46 327 eP       P       23 11 57.0 +1.1
R11B   Troy Canyon, C    77.54  51  P       P       23 11 57.6 +0.8
AHID   Auburn Hatcher    77.55  46  P       P       23 11 58.1 +1.4
AHID                                IAmb    IAmb    23 12 19.4
       comp=Z,22nm,1.6s
BGU    Big Grassy Mou    77.55  48  P       P       23 11 58.0 +1.2
VASR   Vaslui            77.58 319 ⇓P       P       23 11 57.1 +0.5
LUNU   Lund              77.70 332 i P      P       23 11 57.2 +0.1
LAO    LASA Array        77.72  40  P       P       23 11 58.9 +1.4
LAO                                 IAmb    IAmb    23 12 24.3
       comp=Z,21nm,1.1s
SNART  Snartemo          77.73 337 eP       P       23 11 58.1 +1.0
SNART  Snartemo          77.73 337 i P      P       23 11 58.0 +0.8
ILGA   Ilgaz             77.80 312  P       P       23 11 59.2 +1.0
S11A   Rachel            77.86  52  P       P       23 11 59.6 +1.1
S11A                                IAmb    IAmb    23 12 27.1
       comp=Z,17nm,0.9s
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CCAC   Calif City Air    77.86  55  P       P       23 11 59.5 +1.0
CCAC                                IAmb    IAmb    23 12 21.5
       comp=Z,12nm,0.7s
BIR    Birlad            77.91 319 ⇓P       P       23 11 59.5 +1.0
BIR    Birlad            77.91 319  P       P       23 11 59.4 +1.0
PRAR   RASCA             77.92 321 ⇑P       P       23 11 59.0 +0.5
SPR3   Spring Creek 3    77.93  50  P       P       23 12 00.2 +1.1
VLDR   Vladesti          77.95 319 ⇑P       P       23 11 59.3 +0.6
TPNV   Topopah Spring    77.95  53  P       P       23 12 00.3 +1.2
TPNV                                IAmb    IAmb    23 12 22.5
       comp=Z,11nm,0.8s
TPNV   Topopah Spring    77.95  53  P       P       23 12 00.3 +1.2
TPNV                                pmax    pmax
       comp=Z,11nm,0.8s
GKP    Gorka Klasztor    77.96 329 eP       P       23 11 59.4 +0.8
TLCR                     77.98 318 ⇓P       P       23 11 59.3 +0.5
TLCR                     77.98 318  P       P       23 11 59.3 +0.5
GAZ    Gaziantep         77.99 307  P       P       23 11 59.8 +0.6
HWUT   Hardware Ranch    78.00  47  P       P       23 11 59.8 +0.5
BORG   Borgarnes         78.00 352  P       P       23 12 00.2 +1.6
BORG   Borgarnes         78.00 352  P       P       23 12 00.2 +1.6
BORG                                pmax    pmax
       comp=Z,37nm,0.8s
VARL   Varlezi           78.03 319 ⇓P       P       23 11 59.8 +0.6
SCTR   Scanteiesti       78.11 319 ⇑P       P       23 12 00.3 +0.8
ANGG   Ammassalik, Gr    78.11 359  P       P       23 11 59.7 +0.6
ANGG                                IAmb    IAmb    23 12 20.8
       comp=Z,16nm,0.9s
KWP    Kalwaria Pacla    78.11 324 eP       P       23 11 60.0 +0.4
KWP    Kalwaria Pacla    78.11 324  P       P       23 12 00.2 +0.7
DUG    Dugway, Tooele    78.13  49  P       P       23 12 01.5 +1.5
DUG                                 IAmb    IAmb    23 12 22.9
       comp=Z,11nm,0.8s
DUG    Dugway, Tooele    78.13  49  P       P       23 12 01.5 +1.5
DUG                                 pmax    pmax
       comp=Z,11nm,0.8s
GWY    Greenwater Val    78.14  54  P       P       23 12 00.9 +0.8
QSM    Queen of Sheba    78.14  54  P       P       23 12 00.6 +0.7
QSM                                 IAmb    IAmb    23 12 29.4
       comp=Z,13nm,0.8s
BUR08  Bucovina Ar. S    78.25 321  IAmb    IAmb    23 12 01.9
       comp=Z,21nm,0.8s
BURAR  Bucovina Array    78.26 321  P       P       23 12 00.9 +0.4
BURAR                               IAmb    IAmb    23 12 02.2
       comp=Z,23nm,0.7s
BURAR  Bucovina Array    78.26 321 ⇓P       P       23 12 01.1 +0.6
BURAR  Bucovina Array    78.26 321  P       P       23 12 01.1 +0.6
TESR   Tescani           78.26 320 ⇓P       P       23 12 00.9 +0.4
SCHL   Schela            78.31 319 ⇑P       P       23 12 01.2 +0.6
IZVR   Izvoarele         78.31 319 ⇑P       P       23 12 01.5 +0.8
SCHLR  Schela            78.33 319 ⇑P       P       23 12 01.4 +0.7
PASC   Pasadena Art C    78.33  56  P       P       23 12 00.5 -0.5
PASC                                IAmb    IAmb    23 12 17.2
       comp=Z,34nm,1.5s
CFR    Carcaliu          78.35 318 ⇓P       P       23 12 01.1 +0.2
CFR    Carcaliu          78.35 318  P       P       23 12 01.0 +0.2
TCUT   Toone Canyon      78.39  47  P       P       23 12 02.4 +0.8
TCUT                                IAmb    IAmb    23 12 29.4
       comp=Z,15nm,0.7s
TPGR   Topolog           78.41 318 ⇓P       P       23 12 01.8 +0.5
PANC   Panciu            78.42 319 ⇑P       P       23 12 02.8 +1.5
BW06   Boulder Array     78.43  45  P       P       23 12 02.3 +0.6
PD31   Pinedale Array    78.43  45  P       P       23 12 02.3 +0.6
PDAR   Pinedale Array    78.43  45  P       P       23 12 02.5 +0.8
PDAR   Pinedale Array    78.43  45  P       P       23 12 02.3 +0.6
       comp=Z,3.7nm,0.6s,baz=263,slow=2.2,SNR=29
       comp=Z,3.7nm,0.6s
PRN    Pahroc Range      78.44  52  P       P       23 12 02.3 +0.6
CTU    Camp Tracy        78.46  48  P       P       23 12 03.0 +1.2
PSUT   Pine Spring       78.51  50  P       P       23 12 03.1 +0.9
ONER   Baraj Valea Uz    78.51 320 ⇓P       P       23 12 02.6 +0.8
ODBI   Odobesti          78.54 319 ⇑P       P       23 12 03.3 +1.4
RGN    Rugen             78.56 332  P       P       23 12 02.6 +0.7
RGN    Rugen             78.56 332 eP       P       23 12 02.5 +0.7
       comp=Z,48nm,0.8s,baz=38,slow=5.2
RGN                                epP      pP      23 12 22.8 +0.6
       baz=38,slow=5.2
GSC    Goldstone, Bar    78.57  55  P       P       23 12 02.6 +0.1
GSC    Goldstone, Bar    78.57  55  P       P       23 12 02.6 +0.1
GSC                                 pmax    pmax
       comp=Z,6.0nm,1.1s
VRI    Vrincioaia        78.65 319 ⇓P       P       23 12 03.3 +0.7
VRI    Vrincioaia        78.65 319  P       P       23 12 03.2 +0.7
BR131  Keskin Array S    78.66 311  IAmb    IAmb    23 12 04.7
       comp=Z,14nm,0.8s
BRTR   Keskin Array B    78.67 311  P       P       23 12 02.8 -0.2
BRTR   Keskin Array B    78.67 311  P       P       23 12 03.0 +0.1
       comp=Z,9.3nm,0.8s,baz=103,slow=4.3,SNR=66
BRTR                                PKKPbc  PKKPbc  23 30 57.2 +1.0
       comp=Z,0.5nm,0.6s,baz=200,slow=2.5,SNR=4.6
       comp=Z,9.3nm,0.8s
TIRR   Tirgusor          78.67 317  IAmb    IAmb    23 12 03.7
       comp=Z,13nm,0.8s
TIRR   Tirgusor          78.67 317 ⇑P       P       23 12 02.6  0.0
TIRR   Tirgusor          78.67 317  P       P       23 12 02.6  0.0
JLU    Jordanelle        78.69  48  P       P       23 12 03.6 +0.4
PLOR   Plostina          78.70 319 ⇓P       P       23 12 03.6 +0.7
PLOR   Plostina          78.70 319  P       P       23 12 03.5 +0.7
HARR   Harsova           78.78 318 ⇑P       P       23 12 03.8 +0.5
HARR   Harsova           78.78 318  P       P       23 12 03.7 +0.5
KOLS   Kolonicke sedl    78.80 324 eP       P       23 12 04.1 +0.8
KOLS                                pmax    pmax
       comp=Z,16nm,0.8s
KOLS   Kolonicke sedl    78.80 324 eP       P       23 12 04.1 +0.8
TLBR   Topalu            78.81 318 ⇓P       P       23 12 03.8 +0.3
MFTR   Murfatlar         78.85 317 ⇓P       P       23 12 04.1 +0.5
KIRS   Kirsehir-Merke    78.86 311 ⇑P       P       23 12 04.4 +0.5
BISRR  Bisoca            78.87 319 ⇓P       P       23 12 05.0 +1.2
TURR   Turia             78.89 320 ⇑P       P       23 12 04.8 +0.9
SHPR   Sheep Range       78.92  53  P       P       23 12 04.2 -0.2
MPU    Maple Canyon      78.95  48  P       P       23 12 05.4 +0.9
MPU                                 IAmb    IAmb    23 12 27.4
       comp=Z,11nm,0.8s
STHS   Stebnicka Huta    78.95 325 eP       P       23 12 04.3 +0.1
STHS                               e                23 12 24.7
OZUR                     78.99 320 ⇓P       P       23 12 05.3 +0.9
MANR   Mangalia          78.99 317 ⇑P       P       23 12 05.4 +0.9
OJC    Ojcow             79.05 326 eP       P       23 12 05.3 +0.7
OJC    Ojcow             79.05 326  P       P       23 12 04.2 -0.4
OJC    Ojcow             79.05 326  P       P       23 12 04.2 -0.4
ARCR   ARCALIA           79.05 321 ⇑P       P       23 12 05.6 +0.8
BOSR   Bodos             79.06 320 ⇑P       P       23 12 06.4 +1.6
BMR    Baia Mare         79.08 322 ⇑P       P       23 12 06.1 +1.3
BMR    Baia Mare         79.08 322  P       P       23 12 06.1 +1.3
ANTO   Ankara            79.08 312  P       P       23 12 05.2 +0.1
ANTO                                IAmb    IAmb    23 12 06.5
       comp=Z,27nm,0.8s
ANTO   Ankara            79.08 312 ⇑P       P       23 12 06.0 +0.8
ANTO   Ankara            79.08 312  P       P       23 12 05.9 +0.8
BSUT   Blindstream Ca    79.14  47  P       P       23 12 06.5 +0.7
PGOR   Pogoanele         79.14 318 ⇓P       P       23 12 05.8 +0.6
ELS    Elsinore Mount    79.15  56  P       P       23 12 05.6  0.0
ICOR   Ion Corvin        79.23 317 ⇓P       P       23 12 06.7 +1.0
ISR    Istrita           79.24 319 ⇓P       P       23 12 06.9 +1.0
ISR    Istrita           79.24 319  P       P       23 12 06.8 +1.0
DOPR   Dopca             79.28 320 ⇑P       P       23 12 07.4 +1.4
MLR    Muntele Rosu      79.31 319  IAmb    IAmb    23 12 07.8
       comp=Z,21nm,1.4s
MLR    Muntele Rosu      79.31 319 ⇓P       P       23 12 06.7 +0.4
MLR    Muntele Rosu      79.31 319  P       P       23 12 06.7 +0.4
NIE    Niedzica          79.39 325 eP       P       23 12 07.6 +1.0
NIE    Niedzica          79.39 325  P       P       23 12 07.4 +0.8
MVU    Marysvale         79.54  50  P       P       23 12 08.6 +0.8
V12A   Nelson            79.59  53  P       P       23 12 09.0 +1.0
PLAR   PLOIESTI          79.65 319 ⇓P       P       23 12 09.0 +1.0
TMUT   Trail Mountain    79.65  49  P       P       23 12 09.4 +0.9
MDUB   Mudurnu           79.66 313  P       P       23 12 08.7 +0.5
CBBR   Cluj-Babes-Bol    79.67 322 ⇓P       P       23 12 09.5 +1.4
CJR    Cluj-Napoca       79.68 321 ⇑P       P       23 12 09.5 +1.2
CJR    Cluj-Napoca       79.68 321  P       P       23 12 09.4 +1.2
SULR                     79.69 319 ⇓P       P       23 12 09.1 +0.9
MESR   Meseseni          79.71 322 ⇓P       P       23 12 09.6 +1.3
VOIR                     79.81 320 ⇑P       P       23 12 09.5 +0.5
VOIR                     79.81 320  P       P       23 12 09.5 +0.5
PFO    Pinyon Flats O    79.81  56  P       P       23 12 09.1 -0.2
PFO    Pinyon Flats O    79.81  56  P       P       23 12 09.1 -0.2
PFO                                 pmax    pmax
       comp=Z,6.0nm,1.0s
LCMT   Little Creek M    79.82  51  P       P       23 12 09.9 +0.6
Q16A   Castle Valley     79.91  49  P       P       23 12 11.0 +1.1
MARR   Marisel-Cluj      79.95 322 ⇓P       P       23 12 10.5 +0.7
RUE    Ruedersdorf       79.95 330 eP       P       23 12 10.0 +0.5
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       comp=Z,42nm,1.1s,baz=38,slow=5.2
RUE                                epP      pP      23 12 30.3 +0.4
       baz=38,slow=5.2
LANS   Liptovska Anna    79.96 325 eP       P       23 12 11.0 +1.3
LANS                                pmax    pmax
       comp=Z,12nm,0.7s
LANS   Liptovska Anna    79.96 325 eP       P       23 12 11.0 +1.3
P18A   Preston Nutter    80.02  48  P       P       23 12 11.4 +0.9
P18A                                IAmb    IAmb    23 12 39.5
       comp=Z,13nm,0.7s
DRGR                     80.07 322 ⇑P       P       23 12 10.6 +0.2
DRGR                     80.07 322  P       P       23 12 10.6 +0.2
KNB    Kanab             80.08  51  P       P       23 12 11.6 +0.8
KNB    Kanab             80.08  51  P       P       23 12 11.6 +0.8
KNB                                 pmax    pmax
       comp=Z,12nm,0.9s
KSP    Ksiaz             80.14 328 eP       P       23 12 11.3 +0.7
KSP    Ksiaz             80.14 328  P       P       23 12 11.0 +0.5
SGRR   Singureni         80.14 318 ⇑P       P       23 12 11.1 +0.5
STEB   Steborice         80.16 327 eP       P       23 12 11.6 +0.9
STEB                               ex       x       23 12 32.0
BSEG   Bad Segeberg      80.16 333 eP       P       23 12 11.1 +0.6
       comp=Z,30nm,0.9s,baz=38,slow=5.2
BSEG                               epP      pP      23 12 31.3 +0.4
       baz=38,slow=5.2
SRU    San Rafael Swe    80.18  48  P       P       23 12 11.7 +0.4
SRU                                 IAmb    IAmb    23 12 33.8
       comp=Z,22nm,0.7s
SRU    San Rafael Swe    80.18  48  P       P       23 12 11.7 +0.4
SRU                                 pmax    pmax
       comp=Z,23nm,0.7s
K22A   Casper            80.21  44  P       P       23 12 11.9 +0.6
K22A                                IAmb    IAmb    23 12 50.3
       comp=Z,9.5nm,0.4s
ULM    Lac du Bonnet     80.22  33  P       P       23 12 11.2 +0.2
ULM                                 IAmb    IAmb    23 12 32.5
       comp=Z,14nm,0.9s
ULM    Lac du Bonnet     80.22  33  P       P       23 12 11.2 +0.2
       comp=Z,7.6nm,0.7s,baz=315,slow=6.1,SNR=14
       comp=Z,7.6nm,0.7s
ULM    Lac du Bonnet     80.22  33  P       P       23 12 11.3 +0.2
ULM                                 pmax    pmax
       comp=Z,14nm,1.0s
RAYN   Ar Rayn           80.23 292  P       P       23 12 11.6  0.0
RAYN                                IAmb    IAmb    23 12 12.4
       comp=Z,20nm,0.8s
RAYN   Ar Rayn           80.23 292  P       P       23 12 11.6  0.0
RAYN                                pmax    pmax
       comp=Z,20nm,0.8s
RAYN   Ar Rayn           80.23 292 i P      P       23 12 11.4 -0.1
       SNR=29
MORC   Moravsky Berou    80.38 327  IAmb    IAmb    23 12 13.5
       comp=Z,19nm,0.9s
MORC   Moravsky Berou    80.38 327 eP       P       23 12 12.5 +0.6
MORC   Moravsky Berou    80.38 327 ⇑P       P       23 12 12.9 +0.9
MORC   Moravsky Berou    80.38 327  P       P       23 12 12.8 +0.9
OSTC   Ostas             80.38 328 eP       P       23 12 12.7 +0.8
OSTC   Ostas             80.38 328 eP       P       23 12 12.7 +0.8
CHVC   Chvalec           80.43 328 eP       P       23 12 12.8 +0.6
CHVC   Chvalec           80.43 328 eP       P       23 12 12.8 +0.6
HUMR   Humele            80.46 319 ⇓P       P       23 12 12.8 +0.4
CBX    Cerro Bola        80.46  57  P       P       23 12 13.0 +0.2
CBX                                 IAmb    IAmb    23 12 14.9
       comp=Z,13nm,0.7s
LOT    Lotru             80.46 320 ⇑P       P       23 12 12.9 +0.4
BORA   Eskisehir         80.47 313  IAmb    IAmb    23 12 13.6
       comp=Z,16nm,0.9s
DPC    Dobruska-Polom    80.49 328 eP       P       23 12 13.7 +1.2
DPC    Dobruska-Polom    80.49 328 eP       P       23 12 13.7 +1.2
KRLC   Kraliky           80.49 327 eP       P       23 12 13.2 +0.7
KRLC   Kraliky           80.49 327 eP       P       23 12 13.2 +0.7
UPC    Upice             80.51 328 eP       P       23 12 13.3 +0.8
UPC    Upice             80.51 328 eP       P       23 12 13.3 +0.8
GORT1  Trebel            80.53 332 eP       P       23 12 13.3 +0.8
       comp=Z,34nm,1.1s,baz=38,slow=5.2
GORT1                              epP      pP      23 12 33.5 +0.6
       baz=38,slow=5.2
MAUC   Maruska           80.55 326 eP       P       23 12 13.7 +0.9
RSSD   Black Hills       80.58  41  P       P       23 12 13.5 +0.1
RSSD   Black Hills       80.58  41  P       P       23 12 13.5 +0.1
RSSD                                pmax    pmax
       comp=Z,5.0nm,0.6s
W13A   Hualapai Mount    80.59  53  P       P       23 12 13.8 +0.2
COPA   Copaceanca        80.60 319 ⇓P       P       23 12 13.5 +0.4
DEV    Deva              80.60 321 ⇓P       P       23 12 14.4 +1.2
DEV    Deva              80.60 321  P       P       23 12 14.3 +1.2
PSZ    Piszkesteto       80.64 324  IAmb    IAmb    23 12 15.2
       comp=Z,29nm,0.9s
PSZ    Piszkesteto       80.64 324 ⇓P       P       23 12 14.4 +1.0
PSZ    Piszkesteto       80.64 324  P       P       23 12 14.4 +1.0
PSZ    Piszkesteto       80.64 324 eP       P       23 12 14.4 +1.0
VYHS   Vyhne             80.72 325 eP       P       23 12 14.5 +0.7
VYHS                               e                23 12 34.2
YUH    Yuha Desert       80.76  56  P       P       23 12 15.0 +0.8
SZH    Strazhitsa        80.78 318  P       P       23 12 15.8 +1.7
U15A   North Rim         80.78  51  P       P       23 12 15.3 +0.7
HMU    Henry Mountain    80.79  49  P       P       23 12 15.5 +0.9
HMU                                 IAmb    IAmb    23 12 37.3
       comp=Z,24nm,0.7s
O20A   White River Ci    80.88  46  P       P       23 12 15.4 +0.4
JAVC   Velka Javorina    80.99 326 eP       P       23 12 16.9 +1.7
JMB    Yambol            81.00 317  P       P       23 12 16.1 +0.8
GZR    Gura Zlata        81.01 321 ⇑P       P       23 12 15.5 +0.1
GZR    Gura Zlata        81.01 321  P       P       23 12 15.5 +0.1
BLYC   Blythe            81.01  55  P       P       23 12 16.2 +0.7
PHSR   Pinarhisar        81.02 316 ⇑P       P       23 12 16.1 +0.7
FLTG   Flechtingen       81.07 331 eP       P       23 12 15.3 -0.2
       comp=Z,39nm,0.8s,baz=38,slow=5.2
FLTG                               epP      pP      23 12 35.5 -0.3
       baz=38,slow=5.2
SURR   Surduc            81.09 321 ⇑P       P       23 12 16.4 +0.7
BRG    Berggiesshubel    81.11 329 eP       P       23 12 15.8 +0.1
       comp=Z,18nm,0.8s,baz=38,slow=5.2
BRG                                epP      pP      23 12 36.1  0.0
       baz=38,slow=5.2
BRG    Berggiesshubel    81.11 329 eP       P       23 12 15.9 +0.1
BRG                                 Amp             23 12 16.9
       comp=Z,18nm,0.8s
BRG                                ⇑PP      PcP     23 12 21.8 -0.1
BRG                                 Amp             23 12 22.4
       comp=Z,5.9nm,0.7s
BRG                                 pP      pP      23 12 36.0 -0.2
BRG                                 Amp             23 12 36.8
       comp=Z,13nm,0.8s
BRG                                 sP      sP      23 12 44.1 -0.3
BRG                                 Amp             23 12 45.5
       comp=Z,4.1nm,0.7s
PVCC   Panska Ves        81.11 329 eP       P       23 12 16.6 +0.9
PVCC   Panska Ves        81.11 329 eP       P       23 12 16.6 +0.9
VLAD   Vladila           81.12 319 ⇓P       P       23 12 16.1 +0.1
ESJX   Sierra Juarez     81.13  57  P       P       23 12 17.2 +0.8
ESJX                                IAmb    IAmb    23 12 45.4
       comp=Z,14nm,0.9s
VRAC   Vranov            81.14 327  LR      LR      23 50 04.6
       comp=Z,91nm,19.4s,baz=46,slow=37
VRAC   Vranov            81.14 327 eP       P       23 12 16.6 +0.6
VRAC   Vranov            81.14 327 ⇓P       P       23 12 17.0 +1.0
VRAC   Vranov            81.14 327  P       P       23 12 16.9 +1.0
CLL    Collm             81.16 330⇓iP       P       23 12 16.0  0.0
CLL                                i *PP    pP      23 12 36.2 -0.2
CLL                                 pmax    pmax
       comp=Z,45nm,0.8s
CLL    Collm             81.16 330 eP       P       23 12 16.0  0.0
       comp=Z,40nm,0.8s,baz=38,slow=5.2
CLL                                epP      pP      23 12 36.3 -0.2
       baz=38,slow=5.2
CLL    Collm             81.16 330⇓iP       P       23 12 16.0  0.0
       comp=Z,45nm,0.8s
CLL                                i PcP    PcP     23 12 21.7 -0.4
CLL                                i pP     pP      23 12 36.2 -0.2
CLL                                i sP     sP      23 12 44.2 -0.5
GLA    Glamis            81.24  55  P       P       23 12 17.1 +0.3
GLA    Glamis            81.24  55  P       P       23 12 17.1 +0.3
GLA                                 pmax    pmax
       comp=Z,11nm,0.9s
BUD    Budapest          81.36 324  P       P       23 12 18.6 +1.5
NRDL   Niedersach Rie    81.37 332 eP       P       23 12 17.3 +0.3
       comp=Z,13nm,0.8s,baz=38,slow=5.2
NRDL                               epP      pP      23 12 37.6 +0.2
       baz=38,slow=5.2
KRUC   Moravsky          81.41 327 eP       P       23 12 17.9 +0.5
BZS    Buzias            81.44 322 ⇓P       P       23 12 17.8 +0.2
BZS    Buzias            81.44 322  P       P       23 12 17.7 +0.2
ASSE   Asse, Remlinge    81.44 331 eP       P       23 12 17.7 +0.3
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      comp=Z,16nm,1.0s,baz=38,slow=5.2
ASSE                             epP    pP     23 12 38.0 +0.2
      baz=38,slow=5.2
SRO   Srobarova        81.46 325 eP     P      23 12 18.7 +1.1
SRO                              e             23 12 38.8
RETH  Rethem/Aller,    81.46 332 eP     P      23 12 17.8 +0.3
      comp=Z,20nm,0.9s,baz=38,slow=5.2
RETH                             epP    pP     23 12 38.1 +0.2
      baz=38,slow=5.2
PV21  Cone Mtn., Par   81.46  48  P     P      23 12 18.1 -0.1
PV21                              IAmb  IAmb   23 13 59.0
      comp=Z,32nm,1.0s
GOPC  GO Pecny, Ondr   81.47 328 eP     P      23 12 18.4 +0.7
GOPC                             epP    pP     23 12 38.6 +0.4
GOPC  GO Pecny, Ondr   81.47 328 eP     P      23 12 18.4 +0.7
GOPC                             e             23 12 38.6
PRA   Prague           81.51 328 eP     P      23 12 18.7 +0.9
PRA   Prague           81.51 328 eP     P      23 12 18.7 +0.9
PV23  Carpenter Ridg   81.51  48  P     P      23 12 19.4 +0.9
PRU   Pruhonice        81.52 328 eP     P      23 12 18.5 +0.6
PRU   Pruhonice        81.52 328 eP     P      23 12 18.5 +0.6
MODS  Modra-Piesok     81.52 326 eP     P      23 12 18.3 +0.3
MODS                             e             23 12 38.8
BAND  Balkesir-Ban     81.53 314 ⇓P     P      23 12 18.8 +0.6
PV10  Paradox Valley   81.54  48  P     P      23 12 20.3 +1.6
HERR  Herculane        81.55 321 ⇓P     P      23 12 18.2  0.0
PV14  Lion Creek, Pa   81.56  48  P     P      23 12 19.4 +0.8
PV14                              IAmb  IAmb   23 12 21.1
      comp=Z,23nm,0.8s
EPLO  Experimental L   81.58  32  P     P      23 12 18.6 +0.3
EPLO                              IAmb  IAmb   23 12 39.6
      comp=Z,21nm,0.9s
PV22  Blue Mesa, Par   81.59  48  P     P      23 12 19.9 +1.1
PV22                              IAmb  IAmb   23 12 48.1
      comp=Z,13nm,0.7s
PV20  West Nyswonger   81.61  48  P     P      23 12 19.4 +0.5
PV04  Paradox Valley   81.61  48  P     P      23 12 20.2 +1.3
PV04                              IAmb  IAmb   23 12 21.6
      comp=Z,15nm,0.9s
PV17  East Wray Mesa   81.65  48  P     P      23 12 20.5 +1.4
PV17                              IAmb  IAmb   23 12 47.6
      comp=Z,24nm,0.7s
PV16  Nyswonger Mesa   81.66  48  P     P      23 12 20.6 +1.4
PV16                              IAmb  IAmb   23 12 47.5
      comp=Z,18nm,0.7s
PV11  David Mesa, Pa   81.69  48  P     P      23 12 20.5 +1.1
PV11                              IAmb  IAmb   23 12 52.6
      comp=Z,21nm,0.8s
MMAI  Mount Meron Ar   81.70 305  P     P      23 12 19.8 +0.5
      comp=Z,14nm,0.7s,baz=38,slow=5.5,SNR=37
      comp=Z,14nm,0.7s
PV05  Paradox Valley   81.70  48  P     P      23 12 20.7 +1.3
PV18  Skein Mesa, Pa   81.71  48  P     P      23 12 20.2 +0.8
PV18                              IAmb  IAmb   23 12 42.2
      comp=Z,30nm,0.8s
PV12  Saucer Basin,    81.72  48  P     P      23 12 20.1 +0.5
PV12                              IAmb  IAmb   23 12 52.3
      comp=Z,24nm,0.9s
NEUB  Neuenburg        81.73 330 eP     P      23 12 19.2 +0.2
      comp=Z,47nm,0.9s,baz=38,slow=5.2
NEUB                             epP    pP     23 12 39.5 +0.1
      baz=38,slow=5.2
PV03  Paradox Valley   81.74  48  P     P      23 12 20.2 +0.7
PV03                              IAmb  IAmb   23 12 47.9
      comp=Z,12nm,0.8s
PV07  Paradox Valley   81.74  48  P     P      23 12 20.4 +0.8
ISP   Isparta          81.75 311  IAmb  IAmb   23 12 20.0
      comp=Z,16nm,0.8s
ISP   Isparta          81.75 311  P     P      23 12 18.9 -0.6
URZ   Urewera          81.76 152  P     P      23 12 19.0 -0.1
      comp=Z,3.3nm,0.7s,baz=27,slow=6.8,SNR=1.1
      comp=Z,3.3nm,0.7s
PV13  Radium Mtn., P   81.82  48  P     P      23 12 20.8 +0.8
PV13                              IAmb  IAmb   23 12 49.0
      comp=Z,19nm,0.9s
CSS   Mathiatis        81.83 308  IAmb  IAmb   23 12 20.8
      comp=Z,23nm,0.7s
PV02  Paradox Valley   81.83  48  P     P      23 12 21.5 +1.4
Y14A  Wickenburg       81.88  54  P     P      23 12 21.3 +1.0
PV15  Paradox Valley   81.90  48  P     P      23 12 21.3 +0.8
MPEP  Malo Peshtene    81.92 319  P     P      23 12 20.9 +0.8
WUAZ  Wupatki          81.94  52  P     P      23 12 21.4 +0.8
MDVR  Moldovita        81.97 321 ⇓P     P      23 12 20.6 +0.1
PV01  Paradox Valley   81.98  48  P     P      23 12 21.4 +0.5
TANN  Tannenbergstha   82.06 329 eP     P      23 12 21.0 +0.2
      comp=Z,6.5nm,0.8s,baz=38,slow=5.2
TANN                             epP    pP     23 12 41.3  0.0
      baz=38,slow=5.2
ZVC   Zvikov           82.09 328 eP     P      23 12 21.4 +0.5
113A  Mohawk Valley,   82.11  55  P     P      23 12 21.4  0.0
GTTG  Gottingen        82.17 331 eP     P      23 12 21.7 +0.4
      comp=Z,23nm,0.8s,baz=38,slow=5.2
GTTG                             epP    pP     23 12 42.0 +0.2
      baz=38,slow=5.2
MOX   Moxa             82.23 330 eP     P      23 12 21.9 +0.2
      comp=Z,12nm,0.8s,baz=38,slow=5.2
MOX                              epP    pP     23 12 42.1  0.0
      baz=38,slow=5.2
KDZ   Kurdzhali        82.23 317  P     P      23 12 22.5 +0.7
IVI   Ivigtut          82.28   4  IAmb  IAmb   23 12 43.9
      comp=Z,35nm,1.1s
ALN   Alexandroupoli   82.33 316  P     P      23 12 23.0 +0.7
ALN                               IAmb  IAmb   23 12 23.6
      comp=Z,31nm,1.4s
ALN   Alexandroupoli   82.33 316  P     P      23 12 23.0 +0.7
ALN                               pmax  pmax
      comp=Z,31nm,1.4s
SOP   Sopron           82.36 326  P     P      23 12 23.8 +1.4
IBBN  Ibbenburen       82.40 333 eP     P      23 12 22.5 +0.1
      comp=Z,44nm,0.8s,baz=38,slow=5.2
IBBN                             epP    pP     23 12 42.8 -0.1
      baz=38,slow=5.2
RDO   Rodhopi          82.45 316  IAmb  IAmb   23 12 24.5
      comp=Z,25nm,1.2s
MORH  Mrgy, Hungar     82.46 324 ⇓P     P      23 12 23.1 +0.2
RONA  Rosalia, Austr   82.47 326 i P    P      23 12 24.0 +1.0
      comp=Z,15nm,0.7s,SNR=8.1
NRS   Narsarsuaq       82.47   3  P     P      23 12 25.6 +2.9
NRS   Narsarsuaq       82.47   3  P     P      23 12 25.6 +2.9
NRS                               pmax  pmax
      comp=Z,12nm,1.0s
CONA  Conrad Observa   82.49 326 eP     P      23 12 23.9 +0.7
      comp=Z,11nm,0.7s,SNR=9.4
MANT  Manisa           82.49 313  IAmb  IAmb   23 12 24.4
      comp=Z,18nm,0.9s
RZN   Rozhen           82.52 317  P     P      23 12 24.9 +1.3
MANZ  Manzenberg       82.54 329 eP     P      23 12 23.6 +0.3
      comp=Z,4.1nm,0.8s,baz=38,slow=5.2
MANZ                             epP    pP     23 12 43.9 +0.1
      baz=38,slow=5.2
KHC   Kasperske Hory   82.58 328 eP     P      23 12 23.9 +0.3
KHC                              epP    pP     23 12 44.3 +0.2
KHC   Kasperske Hory   82.58 328 eP     P      23 12 23.9 +0.3
KHC                              e             23 12 44.3
X16A  Lo Mia Camp, P   82.59  52  P     P      23 12 24.7 +0.6
MVCO  Mesa Verde       82.63  49  P     P      23 12 25.4 +1.1
GHAJ  Ghor Haditha     82.65 304  IAmb  IAmb   23 12 25.7
      comp=Z,25nm,0.8s
FRGS  Fruska Gora      82.66 322⇓iP     P      23 12 24.1 +0.1
ROTZ  Rotzenmuhle      82.67 329 eP     P      23 12 24.5 +0.6
      comp=Z,3.6nm,0.8s,baz=38,slow=5.2
ROTZ                             epP    pP     23 12 44.8 +0.4
      baz=38,slow=5.2
PLNA  Plana            82.69 318  P     P      23 12 25.6 +1.2
VTS   Vitosha          82.69 319  P     P      23 12 25.5 +1.1
UBBA  Unterbreizbach   82.73 331 eP     P      23 12 24.7 +0.6
      comp=Z,6.0nm,0.8s,baz=38,slow=5.2
UBBA                             epP    pP     23 12 45.0 +0.4
      baz=38,slow=5.2
GEC2  GERESS Array S   82.75 328  IAmb  IAmb   23 12 25.4
      comp=Z,11nm,0.8s
GEC2  GERESS Array S   82.75 328 eP     P      23 12 24.4 -0.1
      comp=Z,11nm,0.9s,baz=38,slow=5.2
GEC2                             epP    pP     23 12 44.7 -0.3
      baz=38,slow=5.2
GERES GERESS Array B   82.75 328  P     P      23 12 24.1 -0.4
      comp=Z,12nm,0.6s,baz=37,slow=6.4,SNR=9.3
      comp=Z,12nm,0.6s
BOVS  Bovan            82.78 320 ⇑P     P      23 12 24.6  0.0
TRAN  Tran             82.85 319  P     P      23 12 26.0 +0.9
WET   Wettzell         82.87 328 eP     P      23 12 25.5 +0.5
      comp=Z,12nm,0.9s,baz=38,slow=5.2
WET                              epP    pP     23 12 45.8 +0.2
      baz=38,slow=5.2
EZN   Ezine            82.90 315 ⇑P     P      23 12 25.8 +0.5
EZN   Ezine            82.90 315  P     P      23 12 25.8 +0.5
SUSD  Miller           82.98  38  P     P      23 12 26.6 +0.9
KASTN Kahler Asten     83.04 332 eP     P      23 12 25.9 +0.1
      comp=Z,11nm,0.8s,baz=38,slow=5.2
KASTN                            epP    pP     23 12 46.2 -0.1
      baz=38,slow=5.2
GRF   Grafenberg Arr   83.13 330 eP     P      23 12 27.1 +0.7
      comp=Z,51nm,0.8s,baz=38,slow=5.2
GRF                              epP    pP     23 12 47.4 +0.5
      baz=38,slow=5.2
GRFO  Grafenberg       83.13 330  P     P      23 12 27.2 +0.9
GRFO  Grafenberg       83.13 330  P     P      23 12 27.2 +0.9
GRFO                              pmax  pmax
      comp=Z,47nm,0.8s
ARSA  Arzberg          83.15 326  P     P      23 12 26.9 +0.3
ARSA  Arzberg          83.15 326 i P    P      23 12 27.1 +0.6
      comp=Z,11nm,1.1s,SNR=5.5
MMB   Musomishta       83.16 318  P     P      23 12 27.0 +0.3
TEKS  Tekeris          83.23 322⇓iP     P      23 12 26.7 -0.3
214A  Organ Pipe Nat   83.25  55  P     P      23 12 27.8 +0.5
MOA   Molln            83.26 327 i P    P      23 12 27.3 +0.3
      comp=Z,14nm,0.9s,SNR=6.6
F33A  5 Mile Ranch,    83.27  36  P     P      23 12 27.5 +0.4
F33A                              IAmb  IAmb   23 12 49.0
      comp=Z,21nm,1.0s
BUG   Bochum--Univer   83.27 333 eP     P      23 12 26.8 -0.1
      comp=Z,16nm,0.7s,baz=38,slow=5.2
BUG                              epP    pP     23 12 47.1 -0.4
      baz=38,slow=5.2
KKB   Krupnik          83.29 318  P     P      23 12 28.0 +0.7
EKA   Eskdalemuir Ar   83.33 340  P     P      23 12 26.8 -0.5
      comp=Z,7.2nm,0.6s,baz=30,slow=4.5,SNR=20
      comp=Z,7.2nm,0.6s
TCW   Tory Channel     83.34 155  P     P      23 12 28.2 +1.0
ESK   Eskdalemuir      83.36 340  P     P      23 12 28.0 +0.6
ESK                               IAmb  IAmb   23 14 00.3
      comp=Z,20nm,1.1s
ESK   Eskdalemuir      83.36 340  P     P      23 12 28.0 +0.6
ESK                               pmax  pmax
      comp=Z,20nm,1.2s
Q24A  Divide           83.44  46  P     P      23 12 29.3 +0.7
X18A  Snowflake        83.46  52  P     P      23 12 29.4 +0.8
BIOA  Bad Ischl, Aus   83.66 327 i P    P      23 12 29.6 +0.5
      comp=Z,14nm,0.7s,SNR=10
GROS  Grobnik          83.75 325 eP     P      23 12 29.3 -0.4
BBLS  Lazi&#263i       83.79 322⇓iP     P      23 12 30.4 +0.5
PERS  Pernice          83.80 326 e      P      23 12 29.9 +0.1
SOKA  Soboth           83.80 326 i P    P      23 12 30.3 +0.4
      comp=Z,23nm,0.8s,SNR=13
TNS   Taunus Mts       83.81 331 eP     P      23 12 30.0 +0.2
      comp=Z,9.3nm,0.7s,baz=38,slow=5.2
TNS                              epP    pP     23 12 50.3 -0.1
      baz=38,slow=5.2
EYMN  Ely              83.85  32  IAmb  IAmb   23 12 51.7
      comp=Z,18nm,0.9s
HAPS  Han Pijesak,Bl   83.86 322⇓iP     P      23 12 30.7 +0.4
K30B  Basset           83.91  40  P     P      23 12 31.4 +0.9
K30B                              IAmb  IAmb   23 12 32.3
      comp=Z,25nm,0.9s
SJES  Sjenica          83.94 321⇓iP     P      23 12 31.0 +0.3
VAY   Valandovo        83.95 318 i P    P      23 12 30.7  0.0
RJOB  Jochberg         83.99 328 eP     P      23 12 31.2 +0.4
      comp=Z,21nm,1.0s,baz=38,slow=5.2
RJOB                             epP    pP     23 12 51.7 +0.3
      baz=38,slow=5.2
RUDO  Rudo             83.99 321⇓iP     P      23 12 30.6 -0.2
SDCO  Great Sand Dun   84.06  47  P     P      23 12 32.7 +1.0
SKO   Skopje           84.10 319 i P    P      23 12 32.4 +1.0
OBKA  Obir             84.15 326⇓iP     P      23 12 30.8 -0.9
OBKA  Obir             84.15 326 i P    P      23 12 31.8 +0.1
      comp=Z,4.1nm,0.8s
A051A Mrakovica        84.17 324⇓iP     P      23 12 31.4 -0.4
TBO   Thunder Bay      84.19  31  IAmb  IAmb   23 12 53.9
      comp=Z,16nm,1.2s
BLY   Banja Luka       84.24 323⇓iP     P      23 12 32.0 -0.1
CRES  Cresnjevec Ost   84.25 325 e      P      23 12 31.8 -0.3
ARG   Arkhangelos      84.25 311  P     P      23 12 32.6 +0.3
ARG   Arkhangelos      84.25 311  P     P      23 12 32.6 +0.3
ARG                               pmax  pmax
      comp=Z,70nm,0.9s
LESA  Schwarzleotal    84.28 327 i P    P      23 12 32.6 +0.2
      comp=Z,12nm,0.7s,SNR=11
FUR   Furstenfeldbru   84.30 329 eP     P      23 12 32.7 +0.3
      comp=Z,50nm,0.7s,baz=38,slow=5.2
FUR                              epP    pP     23 12 53.0 +0.1
      baz=38,slow=5.2
TUC   Tucson           84.36  54  P     P      23 12 33.8 +0.8
TUC   Tucson           84.36  54  P     P      23 12 33.8 +0.8
TUC                               pmax  pmax
      comp=Z,6.0nm,0.8s
BEBN  Eben Emael       84.38 333 dP     P      23 12 32.5 -0.1
BTNL  Ternell          84.39 333 dP     P      23 12 32.8  0.0
      comp=Z,13nm,0.9s
BTNL                             dpP    pP     23 12 51.3 -2.0
MEM   Membach          84.42 333 dP     P      23 12 32.7 -0.1
      comp=Z,18nm,0.9s
MEM                              dpP    pP     23 12 52.7 -0.7
MYKA  Terra Mystica    84.46 326 i P    P      23 12 33.1 -0.2
      comp=Z,12nm,0.6s,SNR=6.5
BSTI  Sart Tilman      84.60 333 dP     P      23 12 34.4 +0.6
      comp=Z,3.7nm,0.7s
BSTI                             dpP    pP     23 12 54.9 +0.6
PRED  Cave del Predi   84.64 326  IAmb  IAmb   23 12 35.3
      comp=Z,13nm,0.8s
ECSD  EROS Data Cent   84.66  38  P     P      23 12 34.7 +0.4
ECSD                              IAmb  IAmb   23 12 36.6
      comp=Z,9.9nm,0.8s
STU   Stuttgart        84.67 330  P     P      23 12 34.8 +0.6
STU   Stuttgart        84.67 330 eP     P      23 12 34.4 +0.2
STU   Stuttgart        84.67 330 eP     P      23 12 34.4 +0.2
      comp=Z,83nm,0.8s,baz=38,slow=5.2
STU                              epP    pP     23 12 54.7  0.0
      baz=38,slow=5.2
A050A Klekovaca        84.75 323⇓iP     P      23 12 34.6 -0.2
CEY   Cerknica         84.79 325⇓iP     P      23 12 33.8 -1.1
WATA  Walderalm        84.82 328 i P    P      23 12 35.1 -0.1
      comp=Z,15nm,1.0s,SNR=6.7
BCLA  Clavier          84.83 333 dP     P      23 12 35.0  0.0
      comp=Z,10nm,0.8s
BCLA                             dpP    pP     23 12 54.7 -0.8
KSCO  Kaye Shedlock'   84.85  44  P     P      23 12 35.7 +0.3
KSCO                              IAmb  IAmb   23 13 03.4
      comp=Z,48nm,1.9s
WTTA  Wattenberg       84.85 328 i P    P      23 12 35.2 -0.2
      comp=Z,4.6nm,0.7s
UCC   Uccle            84.85 334  P     P      23 12 34.6 -0.4
UCC                               IAmb  IAmb   23 12 35.1
      comp=Z,14nm,1.1s
UCC   Uccle            84.85 334  P     P      23 12 34.6 -0.4
UCC                               pmax  pmax
      comp=Z,14nm,1.1s
E38A  The Farm, Brul   84.86  33  IAmb  IAmb   23 12 57.0
      comp=Z,15nm,0.8s
ABTA  Abfaltersbach    84.87 327 i P    P      23 12 34.8 -0.6
      comp=Z,12nm,1.2s
PDG   Podgorica        84.90 321⇓iP     P      23 12 35.4  0.0
PDG   Podgorica        84.90 321 ⇓P     P      23 12 35.9 +0.4
BGES  Gesves           84.94 333 dP     P      23 12 35.4 -0.1
      comp=Z,10nm,0.9s
BGES                             dpP    pP     23 12 53.4 -2.6
MOTA  Moosalm          85.01 328 i P    P      23 12 36.0 -0.1
      comp=Z,14nm,1.0s,SNR=6.4
WKZ   Wanaka           85.02 160  P     P      23 12 35.4 -0.3
OHR   Ohrid            85.05 319 i P    P      23 12 36.8 +0.5
RETA  Reutte           85.05 328 i P    P      23 12 36.4 +0.1
      comp=Z,18nm,0.7s,SNR=11
SQTA  Sankt Quirin     85.07 328 i P    P      23 12 36.6 +0.2
      comp=Z,7.6nm,0.7s
T25A  Trinidad         85.11  47  P     P      23 12 38.0 +1.1
T25A                              IAmb  IAmb   23 12 39.1
      comp=Z,15nm,0.7s
DRME  Dracevica, Mon   85.11 320 eP     P      23 12 36.7 +0.2
BMRD  Maredsous        85.12 333 dP     P      23 12 36.4  0.0
      comp=Z,22nm,0.9s
BMRD                             dpP    pP     23 12 55.6 -1.3
BMRD                             dsP    sP     23 13 01.0 -4.2
WLF   Walferdange      85.13 332  P     P      23 12 36.7 +0.2
WLF   Walferdange      85.13 332  P     P      23 12 36.7 +0.2
WLF                               pmax  pmax
      comp=Z,77nm,2.0s
WLF   Walferdange      85.13 332 dP     P      23 12 37.1 +0.7
WLF   Walferdange      85.13 332 eP     P      23 12 37.1 +0.7
      comp=Z,11nm,1.0s,baz=38,slow=5.2
TREB  Trebinje         85.15 321 eP     P      23 12 35.6 -1.1
UBR   Ueberruh         85.17 329 eP     P      23 12 36.6 -0.2
      comp=Z,3.8nm,0.9s,baz=38,slow=5.2
UBR                              epP    pP     23 12 57.0 -0.4
      baz=38,slow=5.2
APE   Apeiranthos      85.22 313 ⇓P     P      23 12 36.7 -0.6
APE   Apeiranthos      85.22 313  P     P      23 12 36.6 -0.6
KARP  Karpathos        85.28 311  P     P      23 12 38.3 +0.7
DUN6  Lazy B Ranch     85.29  53  P     P      23 12 38.3 +0.6
DOU   Dourbes          85.35 333 dP     P      23 12 37.6 +0.1
      comp=Z,7.0nm,1.0s
SPMN  Marine on St.    85.36  35  P     P      23 12 38.0 +0.4
ANMO  Albuquerque      85.36  49  P     P      23 12 38.8 +0.7
ANMO  Albuquerque      85.36  49  P     P      23 12 39.4 +1.3
ANMO                              IAmb  IAmb   23 12 40.8
      comp=Z,5.8nm,0.9s
ANMO  Albuquerque      85.36  49  P     P      23 12 39.1 +0.9
ANMO                              IAmb  IAmb   23 12 40.8
      comp=Z,5.5nm,0.9s
ANMO  Albuquerque      85.36  49  P     P      23 12 39.1 +0.9
ANMO                              pmax  pmax
      comp=Z,6.0nm,1.0s
STON  Ston             85.36 322⇓iP     P      23 12 36.5 -1.2
BFO   Black Forest     85.37 330  P     P      23 12 37.6 -0.2
BFO   Black Forest     85.37 330  P     P      23 12 37.6 -0.2
BFO                               pmax  pmax
      comp=Z,38nm,0.8s
BFO   Black Forest     85.37 330 eP     P      23 12 37.8  0.0
      comp=Z,35nm,0.8s,baz=38,slow=5.2
BFO                              epP    pP     23 12 58.1 -0.3
      baz=38,slow=5.2
FETA  Feichten         85.43 328 i P    P      23 12 37.9 -0.4
      comp=Z,10nm,0.7s
SBM   South Baldy      85.56  51  P     P      23 12 40.6 +1.2
LENM  Lemitar          85.56  50  P     P      23 12 39.1 -0.1
BGNE  Belgrade         85.57  40  P     P      23 12 38.9  0.0
DAVA  Damuels          85.57 329 i P    P      23 12 38.9 -0.1
      comp=Z,31nm,0.9s,SNR=9.9
BNM   Barren Site      85.78  50  P     P      23 12 41.4 +1.1
CTI   Castel Tesino    85.79 327  IAmb  IAmb   23 12 39.7
      comp=Z,9.2nm,0.7s
ECH   Echery           85.93 331  IAmb  IAmb   23 12 41.3
      comp=Z,23nm,0.8s
SCHQ  Schefferville    85.94  16  P     P      23 12 40.6 +0.2
      comp=Z,4.8nm,0.8s,baz=345,slow=4.6,SNR=4.5
      comp=Z,4.8nm,0.8s
DAVOX Davos/Dischmat   85.97 329  LR    LR     23 56 44.9
      comp=Z,67nm,19.2s,baz=353,slow=40
I37A  Lemond, Waseca   86.00  36  P     P      23 12 41.7 +0.8
DSB   Dublin           86.06 341  P     P      23 12 41.3 +0.3
L34A  Svendsen Farm,   86.07  39  IAmb  IAmb   23 13 08.9
      comp=Z,21nm,1.0s
TUE   Stuetta          86.44 329  IAmb  IAmb   23 12 46.8
      comp=Z,32nm,1.6s
G40A  Rib Lake         86.49  33  IAmb  IAmb   23 13 05.1
      comp=Z,16nm,1.1s
RTBA  Rita Blanca      86.56  46  P     P      23 12 44.3 +0.3
KEK   Kerkira          86.58 318  P     P      23 12 44.6 +0.8
KEK                               IAmb  IAmb   23 12 46.7
      comp=Z,17nm,0.9s
CBKS  Cedar Bluff      86.59  43  P     P      23 12 43.2 -0.7
CBKS                              IAmb  IAmb   23 13 05.3
      comp=Z,17nm,1.1s
CBKS  Cedar Bluff      86.59  43  P     P      23 12 43.3 -0.7
CBKS                              pmax  pmax
      comp=Z,17nm,1.1s
F42A  Maple Grove Fa   87.00  32  P     P      23 12 44.8 -1.0
N35A  Tabor            87.26  39  P     P      23 12 47.9 +0.7
I40A  Norwalk          87.38  34  P     P      23 12 47.6  0.0
I40A                              IAmb  IAmb   23 13 14.1
      comp=Z,33nm,1.8s
ZCCA  Zocca            87.42 326  IAmb  IAmb   23 12 60.0
      comp=Z,21nm,1.1s
MATE  Matera           87.51 321 ⇓P     P      23 12 48.1 -0.1
MATE  Matera           87.51 321 eP     P      23 12 47.9 -0.4
AQU   L'Aquila         87.85 324  P     P      23 12 50.1 +0.1
OSSC  Osservatorio P   87.94 326  IAmb  IAmb   23 12 50.5
      comp=Z,10nm,0.6s
CESX  Cesi             88.04 324  IAmb  IAmb   23 12 51.0
      comp=Z,9.5nm,0.8s
KSU1  Kansas State U   88.06  41  P     P      23 12 51.0  0.0
KSU1                              IAmb  IAmb   23 12 52.5
      comp=Z,15nm,0.7s
E46A  Sault Ste Mari   88.08  29  P     P      23 12 51.7 +0.8
E46A                              IAmb  IAmb   23 13 13.5
      comp=Z,25nm,1.1s
I42A  Draeger Farm,    88.14  33  P     P      23 12 51.1 -0.2
I42A                              IAmb  IAmb   23 13 13.8
      comp=Z,14nm,1.1s
MNTX  Cornudas Mount   88.20  51  P     P      23 12 52.6 +0.7
AMTX  Amarillo         88.26  47  P     P      23 12 51.4 -0.7
AMTX                              IAmb  IAmb   23 13 20.7
      comp=Z,9.1nm,0.8s
PAOL  Paolisi          88.29 322  IAmb  IAmb   23 12 52.0
      comp=Z,8.5nm,0.9s
L40A  Anamosa          88.52  36  IAmb  IAmb   23 12 54.2
      comp=Z,11nm,0.8s
N38A  Joes South For   88.52  38  P     P      23 12 53.0 -0.1
N38A                              IAmb  IAmb   23 13 21.0
      comp=Z,24nm,1.2s
TIP   Timpagrande      88.57 320  IAmb  IAmb   23 12 59.1
      comp=Z,9.6nm,0.8s
CLN7  Carlsbad 7       88.70  50  P     P      23 12 54.8 +0.5
ELIS  Ellis County     88.73  45  P     P      23 12 54.9 +0.7
ELIS                              IAmb  IAmb   23 12 56.4
      comp=Z,19nm,1.0s
OK038 West end E0370   88.81  44  P     P      23 12 55.2 +0.6
KAN05 Bluff City Nor   88.84  43  P     P      23 12 55.3 +0.6
KAN01 Argonia South    88.87  43  P     P      23 12 55.0 +0.2
KAN14 Manchester OK    88.90  43  P     P      23 12 54.7 -0.2
SMWD  Samnorwood       88.94  46  P     P      23 12 55.8 +0.5
SMWD                              IAmb  IAmb   23 13 25.7
      comp=Z,9.7nm,0.9s
VHRN  Van Horn         89.07  52  P     P      23 12 56.5 +0.4
VLDQ  Val d'Or         89.09  24  P     P      23 12 55.1 -0.5
GLMI  Grayling         89.22  30  P     P      23 12 57.4 +1.0
P38A  Dawn             89.26  39  P     P      23 12 56.9 +0.3
P38A                              IAmb  IAmb   23 13 34.9
      comp=Z,12nm,1.1s
PECS  Pecos            89.37  51  P     P      23 12 57.9 +0.5
PECS                              IAmb  IAmb   23 12 59.1
      comp=Z,4.8nm,0.7s
DKNS  Dickens          89.56  47  P     P      23 12 58.8 +0.6
T35A  Sooner Cattle    89.72  42  P     P      23 12 59.3 +0.5
T35A                              IAmb  IAmb   23 13 00.4
      comp=Z,8.7nm,0.7s
SN07  Snyder 07        89.99  48  P     P      23 13 00.9 +0.8
SN07                              IAmb  IAmb   23 13 53.2
      comp=Z,6.0nm,0.7s
OK029 Liberty Lake     90.02  44  P     P      23 13 01.1 +0.9
WMOK  Wichita Mounta   90.04  45  P     P      23 13 01.1 +0.7
WMOK  Wichita Mounta   90.04  45  P     P      23 13 01.1 +0.7
WMOK                              pmax  pmax
      comp=Z,4.0nm,1.0s
P40A  Paris            90.07  38  P     P      23 13 00.8 +0.5
P40A                              IAmb  IAmb   23 13 28.5
      comp=Z,12nm,1.0s
MNHN  Monahans         90.08  50  P     P      23 13 01.1 +0.4
MNHN                              IAmb  IAmb   23 13 32.4
      comp=Z,16nm,1.9s
QUOK  Quay             90.16  43  P     P      23 13 00.6 -0.3
QUOK                              IAmb  IAmb   23 13 38.7
      comp=Z,9.8nm,0.6s
ALPN  Alpine           90.20  51  P     P      23 13 01.9 +0.6
OK052 Battle Ridge R   90.24  43  P     P      23 13 00.6 -0.7
OK052                             IAmb  IAmb   23 13 28.9
      comp=Z,12nm,0.9s
APMT  Aspermont        90.28  47  P     P      23 13 01.9 +0.4
APMT                              IAmb  IAmb   23 13 03.1
      comp=Z,9.5nm,0.7s
J47A  Sunmer           90.43  31  P     P      23 13 03.0 +1.0
DEOK  Depew            90.52  43  P     P      23 13 02.7 +0.2
DEOK                              IAmb  IAmb   23 13 03.8
      comp=Z,10nm,0.7s
SGCY  Sterling City    90.67  49  P     P      23 13 03.9 +0.4
SGCY                              IAmb  IAmb   23 13 06.2
      comp=Z,11nm,0.8s
BUKO  Buck Lake        90.71  27  P     P      23 13 03.5 +0.2
BUKO                              IAmb  IAmb   23 13 25.2
      comp=Z,12nm,1.0s
TUL3  Leonard          90.85  43  P     P      23 13 04.0 -0.1
TX31  Lajitas Ar. Si   90.89  52  P     P      23 13 04.7 +0.1
TX31                              IAmb  IAmb   23 13 06.6
      comp=Z,6.3nm,0.7s
TXAR  Lajitas Array    90.90  52  P     P      23 13 05.4 +0.8
TXAR  Lajitas Array    90.90  52  P     P      23 13 05.5 +1.0
      comp=Z,5.2nm,0.6s,baz=301,slow=3.0,SNR=86
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TXAR				PKKPbc	PKKPbc	23 30 27.7	+0.1
	comp=Z,0.4nm,0.6s,baz=152,slow=5.8,SNR=6.7						
	comp=Z,5.2nm,0.6s						
R40A	Maddies Statio	90.91	39	P	P	23 13 04.7	+0.4
R40A				IAmb	IAmb	23 13 06.0	
	comp=Z,4.8nm,0.6s						
ABTX	Abilene, Hawle	91.06	47	P	P	23 13 05.2	0.0
ABTX				IAmb	IAmb	23 13 33.5	
	comp=Z,8.1nm,0.8s						
RLO	Rose Lookout	91.08	42	P	P	23 13 05.3	+0.2
RLO				IAmb	IAmb	23 13 26.7	
	comp=Z,6.3nm,0.7s						
LDAQ	Lac Daran	91.14	21	P	P	23 13 06.0	+0.6
LDAQ				IAmb	IAmb	23 13 27.3	
	comp=Z,8.9nm,0.8s						
U38A	Gravette	91.22	41	P	P	23 13 06.0	+0.2
U38A				IAmb	IAmb	23 13 06.9	
	comp=Z,8.2nm,0.7s						
HPIG		91.24	55	P	P	23 13 05.8	-0.5
HPIG				IAmb	IAmb	23 13 08.1	
	comp=Z,15nm,1.4s						
OZNA	Ozona	91.37	49	P	P	23 13 06.5	-0.2
OZNA				IAmb	IAmb	23 13 07.9	
	comp=Z,4.2nm,0.8s						
HHAR	Hobbs	91.57	41	P	P	23 13 07.2	-0.3
HHAR				IAmb	IAmb	23 13 08.4	
	comp=Z,5.9nm,0.8s						
CCM	Cathedral Cave	91.61	38	P	P	23 13 06.8	-0.8
CCM				IAmb	IAmb	23 13 35.4	
	comp=Z,6.7nm,1.1s						
CCM	Cathedral Cave	91.61	38	P	P	23 13 06.8	-0.8
CCM				pmax	pmax		
	comp=Z,7.0nm,1.1s						
FW03	Perrin-Whitt E	91.68	46	P	P	23 13 07.4	-0.6
TRQ	Mont Tremblant	91.70	24	P	P	23 13 08.1	+0.2
LMQ	La Malbaie	91.78	20	P	P	23 13 09.8	+1.6
MGMO	Mountain Grove	91.78	40	IAmb	IAmb	23 13 09.4	
	comp=Z,4.9nm,0.8s						
Z35A	Perchaven, San	91.93	45	P	P	23 13 09.9	+0.7
VSL	Villasalto	91.98	324	P	P	23 13 09.2	0.0
VSL				IAmb	IAmb	23 14 31.4	
	comp=Z,13nm,1.2s						
BRDY	Brady	92.39	48	P	P	23 13 12.3	+1.0
BRDY				IAmb	IAmb	23 13 39.3	
	comp=Z,6.8nm,1.1s						
T42A	Van Buren	92.47	39	IAmb	IAmb	23 13 12.3	
	comp=Z,3.0nm,0.7s						
O48B	Farmland	92.73	33	P	P	23 13 12.8	+0.1
O48B				IAmb	IAmb	23 13 34.6	
	comp=Z,11nm,1.1s						
DRIO	Del Rio	92.74	50	P	P	23 13 13.8	+0.8
DRIO				IAmb	IAmb	23 13 15.3	
	comp=Z,5.3nm,0.8s						
WCI	Wyandotte Cave	93.86	35	P	P	23 13 18.7	+0.8
WCI				IAmb	IAmb	23 13 19.2	
	comp=Z,6.6nm,0.8s						
WCI	Wyandotte Cave	93.86	35	P	P	23 13 18.7	+0.8
WCI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
H62A	Milan	94.24	22	P	P	23 13 20.9	+1.3
T47A	Sharon Grove	94.47	36	IAmb	IAmb	23 13 22.1	
	comp=Z,7.2nm,0.7s						
O54A	Avella	94.81	30	IAmb	IAmb	23 13 23.7	
	comp=Z,7.0nm,0.7s						
KEST	Kesra	94.98	322	P	P	23 13 22.2	-1.1
	comp=Z,2.4nm,0.5s,baz=75,slow=2.8,SNR=8.5						
	comp=Z,2.4nm,0.5s						
U49A	Red Boiling Sp	95.48	36	IAmb	IAmb	23 13 26.6	
	comp=Z,3.9nm,0.7s						
T50A	Nancy	95.51	35	IAmb	IAmb	23 13 26.7	
	comp=Z,5.7nm,0.8s						
ESBB	Sonseca Array	97.40	333	P	P	23 13 34.0	-0.1
ESBB				IAmb	IAmb	23 13 58.2	
	comp=Z,10nm,1.5s						
ESDC	Sonseca Array	97.40	333	P	P	23 13 34.1	0.0
ESDC	Sonseca Array	97.40	333	P	P	23 13 33.1	-1.0
	comp=Z,1.9nm,0.7s,baz=21,slow=3.2,SNR=26						
ESDC				PP	PP	23 17 30.6	-0.2
	comp=Z,0.6nm,0.8s,baz=30,slow=6.9,SNR=2.5						
ESDC				PKKP	PKKPdf	23 30 11.3	-0.3
	comp=Z,0.3nm,0.9s,baz=255,slow=2.7,SNR=4.6						
ESDC				LR	LR	00 02 28.1	
	comp=Z,129nm,18.3s,baz=1.5,slow=38						
	comp=Z,1.9nm,0.7s						
VNDA	Vanda	114.59	175	PKP	PKPdf	23 18 38.4	-0.7
	comp=Z,1.3nm,0.7s,baz=316,slow=6.3,SNR=4.6						
VNDA				pPKP	pPKiKP	23 19 01.9	+1.4
	comp=Z,0.4nm,0.5s,baz=272,slow=11,SNR=1.3						
TORD	Torodi Ar. Bea	117.18	314	PKP	PKPdf	23 18 45.2	-0.7
	comp=Z,139nm,0.5s,baz=15,slow=1.5,SNR=1.4						
TORD				PP	PP	23 19 55.0	-1.2
	comp=Z,132nm,0.3s,baz=36,slow=7.2,SNR=1.8						
MAW	Mawson	118.87	205	PKP	PKiKP	23 18 47.6	+0.1
	comp=Z,6.6nm,0.7s,baz=132,slow=1.8,SNR=14						
BOSA	Boshof	125.86	259	PKP	PKPdf	23 19 01.8	-0.5
	comp=Z,2.0nm,0.7s,baz=89,slow=2.0,SNR=9.0						
BOSA				pPKP	pPKPdf	23 19 23.9	+0.2
	comp=Z,1.3nm,0.6s,baz=92,slow=10,SNR=1.7						
SDV	Santo Domingo	126.07	39		PKPdf	23 19 03.3	+0.1
SDV	Santo Domingo	126.07	39	*e*P	PKiKP	23 19 05.3	+1.6
DBIC	Dimbokro	126.17	316	PKP	PKPdf	23 19 02.7	-0.5
	comp=Z,4.5nm,0.8s,baz=348,slow=1.7,SNR=6.3						
QSPA	South Pole Qui	126.33	180	PKP	PKPdf	23 19 01.7	-0.2
	comp=Z,7.0nm,0.7s,baz=278,slow=0.7,SNR=42						
QSPA				PP	PP	23 20 58.2	-0.2
	comp=Z,4.8nm,1.0s,baz=29,slow=2.9,SNR=3.4						
ROSC	El Rosal	127.42	46	PKP	PKiKP	23 19 07.0	+0.4
	comp=Z,6.1nm,0.5s,baz=80,slow=16,SNR=4.7						
OTAV	Otavalo	128.49	54	*e*P	PKiKP	23 19 09.1	+0.2
BOAV	Boa Vista	136.50	32	*e*P	PKiKP	23 19 23.8	-0.6
SNAA	Sanae	140.14	197	PKhKP	PKPpre	23 19 18.9	
	comp=Z,2.5nm,0.6s,baz=198,slow=4.0,SNR=19						
SNAA				PP	PP	23 22 26.1	-0.1
	comp=Z,4.7nm,1.1s,baz=123,slow=8.1,SNR=4.8						
ITTB	Itaituba	144.58	29	*e*P	PKPdf	23 19 36.8	-0.5
TMAB	Tom-Au,PA,Br	145.01	15	*e*P	PKPdf	23 19 39.4	+1.4
NPGB	Novo Progresso	147.17	30	*e*P	PKPbc	23 19 43.7	-0.3
LPAZ	La Paz	147.47	59	PKPbc	PKPbc	23 19 44.2	-1.2
	comp=Z,9.4nm,0.7s,baz=289,slow=2.4,SNR=28						
LPAZ				pPKPbc	pPKPbc	23 20 07.0	+0.4
	comp=Z,11nm,0.8s,baz=353,slow=7.4,SNR=5.9						
LPAZ	La Paz	147.47	59	*e*P	PKPdf	23 19 43.9	+1.0
H03N2	Juan Fernandez	147.61	96	T	T	02 05 01.0	
	baz=292,slow=76,SNR=55						
H03N3	Juan Fernandez	147.62	96	T	T	02 05 05.6	
	baz=292,slow=76,SNR=60						
H03N1	Juan Fernandez	147.63	96	T	T	02 05 02.3	
	baz=292,slow=76,SNR=58						
NBCL	Cascavel-CE	147.77	358	*e*P	PKPbc	23 19 45.3	-0.2
PRPB	Parauapebas	148.25	20	*e*P	PKPbc	23 19 47.0	+0.1
VILB	Vilhena	149.95	44	*e*P	PKPdf	23 19 48.5	+2.4
PLCA	Paso Flores	155.38	109	PKP	PKPdf	23 19 51.1	-2.3
	comp=Z,0.9nm,0.7s,baz=221,slow=8.3,SNR=1.7						
PLCA				PKPbc	pPKPdf	23 20 03.5	-12
	comp=Z,1.5nm,0.7s,baz=246,slow=4.5,SNR=5.4						
PLCA				PKPab	PKPab	23 20 20.6	+1.4
	comp=Z,4.9nm,0.9s,baz=234,slow=5.0,SNR=8.6						
PLCA	Paso Flores	155.38	109	*e*P	PKPdf	23 19 54.4	+0.9
SDBA	SAO DESIDERIO	155.41	13	*e*P	PKPdf	23 19 56.1	+1.9
GDU01	Guandu, BA	157.22	0	*e*P	PKPdf	23 19 56.1	-0.4
BDFB	Brasilia	157.76	22	PKPab	PKPab	23 20 27.8	-2.1
	comp=Z,3.4nm,0.8s,baz=302,slow=3.0,SNR=6.4						
CPUP	Villa Florida	161.62	61	PKP	PKPdf	23 20 01.3	+0.1
	comp=Z,0.6nm,0.8s,baz=324,slow=0.6,SNR=4.7						

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*IDC **16** 23:03:12.3±1.2, 31°.01S×178°.21W, h0^{km}, mb4.2/5, mbtmp4.1/6, ML3.6/1, Error ellipse: s-maj=35.9km s-min=29.0km az=74.0*

ISC 16 23:03:19.2±1.3**, 31°.3S**±0°.1×**178°.5W**±0°.2**, h35**^{km}**, n10, σ1^{s}36**/11**, mb4.1**/5**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	7.88	206	Pn	Pn	23 05 10.4	-0.8
	0.7nm,0.3s,baz=357,slow=4.0,SNR=7.7						
URZ				Sn	Sn	23 06 39.1	0.0
	2.5nm,0.3s,baz=274,slow=23,SNR=12						
	5.5nm,1.0s						
STKA	Stephens Creek	33.91	258	P	P	23 09 59.8	+0.9
	1.6nm,0.6s,baz=94,slow=13,SNR=3.1						
	1.6nm,0.6s						
ASAR	Alice Springs	42.68	268	P	P	23 11 12.8	0.0
	4.0nm,0.6s,baz=113,slow=8.5,SNR=6.5						
	4.0nm,0.6s						
WRA	Warramunga Arr	43.74	273	P	P	23 11 21.0	-0.4
	2.8nm,0.4s,baz=114,slow=7.8,SNR=5.9						
	2.8nm,0.4s						
QSPA	South Pole Qui	58.85	180	P	P	23 13 14.6	+0.4
	0.8nm,0.7s,baz=313,slow=0.4,SNR=19						
	0.8nm,0.7s						
MAW	Mawson	71.37	201	P	P	23 14 35.8	+0.7
	1.4nm,0.8s,baz=332,slow=12,SNR=2.0						
	1.4nm,0.8s						
FINES	FINESS Array B	145.81	339	PKPbc	PKPdf	23 22 50.5	-2.8
	1.2nm,0.5s,baz=35,slow=2.7,SNR=12						
NOA	NORSAR Array B	149.53	351	PKPbc	PKPdf	23 23 01.6	+2.0
	0.3nm,0.8s,baz=9.2,slow=3.6,SNR=1.5						
MMAI	Mount Meron Ar	151.34	283	PKPbc	PKPbc	23 23 08.6	-0.9
	0.4nm,0.4s,baz=119,slow=1.8,SNR=1.9						
BRTR	Keskin Array B	152.65	297	PKPbc	PKPbc	23 23 12.1	-0.2
	0.3nm,0.5s,baz=72,slow=4.7,SNR=3.0						

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*NNC **16** 23:06:58.7±7.2, 39°.07N×69°.22E, h0^{km}, mb4.1, mpv4.0, Error ellipse: s-maj=55.7km s-min=41.4km az=23.0*

*SOME **16** 23:07:01.3, 39°.62N×69°.87E, h5^{km}*

*ISU **16** 23:07:09, 39°.84N×69°.95E, h9^{km}*

*KRNET **16** 23:07:11.1±0.1, 39°.82N×69°.96E, h29^{km}, mb3.5*

ISC 16 23:07:10.8±1.1**, 39°.88N**±0°.03×**69°.91E**±0°.02**, h14**^{km}±9^{km}**, n50, σ1^{s}58**/86**, 26C-22D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTK	Batken	0.72	75	⇓*i*P	Pb	23 07 24.8	-0.4
BTK				⇓*i*S	Sb	23 07 34.4	-0.5
GAR	Garm	0.93	160	⇑*i*P	Pg	23 07 27.3	-1.6
GAR				⇑*i*S	Sg	23 07 39.1	-2.0
MINT	Mingtut	1.00	54	P	Pn	23 07 32.7	+2.2
CHMI	Chimion	1.30	72	P	Pg	23 07 37.4	+1.6
BXML	Bakhmal	1.46	263	P	Pg	23 07 39.6	+0.7
BXML				S	Sg	23 08 01.8	+3.9
DRK	Karamyk	1.51	105	⇑*i*P	Pn	23 07 37.7	0.0
DRK				⇑*i*S	Sn	23 07 57.3	-0.1
TAS	Tashkent	1.52	342	P	Pb	23 07 39.2	+0.5
TAS				S	Sg	23 07 59.7	0.0
FRG	Fergana	1.52	70	P	Pg	23 07 40.9	+0.9
TGS	TashGRES	1.57	349	P	Pb	23 07 39.8	+0.2
TGS				S	Sg	23 08 01.1	-0.3
DZI	Dzhizak	1.62	279	P	Pn	23 07 38.4	-0.6
DZI				S	Sn	23 08 00.7	+1.1
NAM	Namangan	1.73	50	S	Sg	23 08 11.2	+4.5
CHRV	Charvak	1.76	1	P	Pn	23 07 41.9	+1.0
CHRV				S	Sb	23 08 06.0	+1.2
KSNS	Kasansay	1.77	43	S	Sg	23 08 07.6	-0.2
TRKS	Terek-Say	1.90	29	⇑*i*P	Pn	23 07 43.8	+0.9
TRKS				⇑*i*S	Sn	23 08 07.5	+0.9
PSK	Pskem	2.07	10	P	Pg	23 07 49.6	-1.0
PSK				S	Sg	23 08 16.5	-1.0
IUG	Iuzhnay	2.27	2	Pg	Pb	23 07 52.0	+0.4
	131nm,0.1s						
IUG				Lg	Lg	23 08 22.9	
	530nm,0.4s						
SAM	Samarkand	2.29	265	S	Sb	23 08 19.4	-0.7
OHH	Osh	2.29	73	⇑*i*P	Pn	23 07 49.3	+1.0
OHH				⇑*i*S	Sn	23 08 16.8	+0.5
AGL	Agalyk	2.37	262	P	Pn	23 07 48.7	-0.6
AGL				S	Sn	23 08 18.0	-0.1
KTAB	Kitab	2.46	253	P	Pb	23 07 56.0	+1.2
ARK	Arkit	2.47	38	⇑*i*P	Pn	23 07 52.3	+1.6
ARK				⇑*i*S	Sn	23 08 22.4	+1.7
ARSB	Arslanbob	2.75	57	⇑*i*P	Pn	23 07 55.9	+1.3
ARSB				⇑*i*S	Sn	23 08 28.4	+0.8
SFK	Sufi-Kurgan	2.77	86	⇑*i*P	Pn	23 07 55.8	+0.9
SFK				⇑*i*S	Sn	23 08 28.1	-0.1
PKMR	Pachkamar	3.04	245	P	Pn	23 08 01.1	+2.6
BRLS	Borolday	3.15	359	Pg	Pb	23 08 03.8	-2.7
BRLS				Lg	Lg	23 08 43.4	
	170nm,0.3s						
BRLS	Borolday	3.15	359	*e*P	Pn	23 08 01.8	+1.8
	1.7nm,0.1s						
BRLS				*e*S	Sb	23 08 42.9	-1.9
	170nm,0.3s						
SALK	Salom-Alik	3.15	70	⇓*i*P	Pn	23 08 01.2	+1.1
SALK				⇓*i*S	Sn	23 08 37.7	+0.1
DZA	Taraz	3.19	19	*e*P	Pb	23 08 08.4	+1.1
	17nm,0.1s						
DZA				*e*S	Sg	23 08 52.5	-0.8
	94nm,0.1s						
KK31	Karatay Array	3.25	8	⇓Pn	Pn	23 08 03.1	+1.7
	3.6nm,0.2s,baz=195,slow=14,SNR=112						
KK31				⇓Sn	Sg	23 08 54.1	-1.2
	84nm,0.4s,baz=196,slow=24						
MNAS	Manas	3.26	36	⇑*i*P	Pn	23 08 03.4	+1.8
MNAS				⇑*i*S	Sn	23 08 41.5	+1.3
NUT	Nurota	3.31	283	P	Pn	23 08 01.4	-0.8
NUT				S	Sn	23 08 40.7	-0.6
ZRB	Zarabog	3.34	239	P	Pn	23 08 00.8	-1.8
AML	Almayashu	3.64	51	⇓*e*P	Pn	23 08 08.5	+1.4
AML				⇓*i*S	Sn	23 08 50.4	+0.4
MRKS	Merke	3.80	40	Pg	Pg	23 08 20.5	-3.1
	4.1nm,0.2s						
MRKS				Lg	Lg	23 09 11.3	
	36nm,0.4s						
MRKS	Merke	3.80	40	*e*P	Pb	23 08 17.4	-0.3
	4.1nm,0.2s						
MRKS				*e*S	Sg	23 09 11.3	-1.4
	36nm,0.4s						
ARLS	Aral	3.89	58	⇑*i*P	Pn	23 08 11.6	+1.4
ARLS				⇑*i*S	Sn	23 08 55.9	+0.1
EKS2	Erkin-Say	4.03	45	⇓*i*P	Pn	23 08 13.8	+1.7
EKS2				⇓*i*S	Sn	23 08 59.7	+0.6
UCH	Uchtor	4.20	55	⇓*i*P	Pn	23 08 16.3	+1.5
UCH				⇓*i*S	Sn	23 09 03.7	-0.1
TMD	Tamdy-Bulak	4.41	297	S	Sn	23 09 06.3	-2.2
AAK	Ala-Archa	4.42	50	⇓Pn	Pn	23 08 20.6	+3.1
	0.8nm,0.5s						
AAK				⇓Sn	Sb	23 09 22.1	+0.6
	6.1nm,0.8s						
AAK	Ala-Archa	4.42	50	⇓*i*P	Pn	23 08 19.1	+1.5
AAK				⇓*i*S	Sn	23 09 08.8	-0.1
KBK	Karagaybulak	4.70	52	⇑*i*P	Pn	23 08 22.9	+1.4
KBK				⇑*i*S	Sn	23 09 15.5	-0.4
CHMS	Chumysh	4.79	48	⇑*i*P	Pn	23 08 24.1	+1.6
CHMS				⇑*i*S	Sn	23 09 17.5	-0.3
USP	Ospenovka	4.83	44	⇑*i*P	Pn	23 08 24.7	+1.7
USP				⇑*i*S	Sn	23 09 18.4	-0.3
NRN	Naryn	4.88	70	⇓*i*P	Pn	23 08 24.9	+0.8
NRN				⇓*i*S	Sn	23 09 18.8	-1.8
BOOM	Boomskoye usch	5.24	58	⇓*e*P	Pn	23 08 30.5	+1.6
BOOM				⇓*i*S	Sn	23 09 28.1	-1.1
TKM2	Tokmak 2	5.25	53	⇓*i*P	Pn	23 08 30.4	+1.4
TKM2				⇓*i*S	Sn	23 09 28.4	-0.9
KDJ	Kajisay	5.94	65	⇑*e*P	Pn	23 08 40.0	+1.5
KDJ				⇑*i*S	Sn	23 09 44.7	-1.7
KUU	Kurty	6.25	48	Pg	Pg	23 09 06.5	-4.0
	7.8nm,0.4s						
KUU				Lg	Lg	23 10 28.5	
	9.7nm,0.3s						
KUU	Kurty	6.25	48	*e*P	Pb	23 09 02.7	+3.3
	7.8nm,0.4s						
KUU				*e*S	Sg	23 10 28.5	-2.8
	9.7nm,0.3s						

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*IDC **16** 23:19:56.3±0.4, 31°.88S×178°.14W, h0^{km}, mb4.7/15, mbtmp4.6/16, ML5.2/1, MS4.5/40, Error ellipse: s-maj=20.3km s-min=15.5km az=81.0*

*NEIC **16** 23:19:58.9, 31°.93S×177°.99W, h22^{km}*

*NEIC **16** 23:19:58.9±1.8, 31°.93S±0°.09×178°.0W±0°.1, h10^{km}±1^{km}, mb5.1/94, Mww5.0/13, Error ellipse: s-maj=20.7km s-min=15.7km az=80.0*

*NEIC **16** 23:19:58.9, 32°.03S×177°.40W, h22^{km}, Moment Tensor Solution. Duration: 1^{s}4 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.55; M$_{\theta\theta}$0.39; M$_{\phi\phi}$-2.94; M$_{r\theta}$0.09; M$_{\theta\phi}$-0.93; M$_{\phi r}$1.92; Fault plane solution: M$_{0}$3.49000×10^{16} NP1: φ$_{s}$204.88000°, δ29.05000°, λ106.08000°. NP2: φ$_{s}$6.64000°, δ62.19000°, λ81.26000°. Principal axes: T 3.1668, Plg71.0000°, Azm257.0000°; N 0.5804, Plg8.0000°, Azm11.0000°; P -3.7472, Plg17.0000°, Azm103.0000°;*

*WEL **16** 23:19:58.1±0.7, 32°S±4°×17°8W±1°2, h33^{km}, M5.0/20, mB5.4/18, ML5.6/20, MLv5.6/20, Mw(mB)4.8/18 Error ellipse: s-maj=16.8km s-min=2.9km az=107.1, confirmed*

*BJI **16** 23:20:00.1, 31°.49S×177°.50W, h30^{km}, mB5.3/2, mb5.2/20, Ms5.1/5, Ms7 4.8/6*

*GCMT **16** 23:20:01.9±0.2, 31°.99S±0°.02×177°.70W±0°.02, h20^{km}, MW5.1/100, Moment Tensor Solution. s65,c83; s100,c145; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.83±.17; M$_{\theta\theta}$-0.12±.12; M$_{\phi\phi}$-3.70±.12; M$_{r\theta}$0.71±.27; M$_{\theta\phi}$-1.02±.09; M$_{\phi r}$3.48±.26; Best double couple: M$_{0}$5.27600×10^{16} NP1: φ$_{s}$197.00000°, δ24.00000°, λ94.00000°. NP2: φ$_{s}$13.00000°, δ66.00000°, λ88.00000°. Principal axes: T 5.2090, Plg69.0000°, Azm279.0000°; N 0.1400, Plg2.0000°, Azm13.0000°; P -5.3430, Plg21.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **16** 23:20:01.5±1.0, 31°.90S×178°.19W, h35^{km}, mb5.3/21, MS4.7/7 Error ellipse: s-maj=13.1km s-min=9.7km az=91.5*

ISC 16 23:20:01.0±0.3**, 32°.09S**±0°.04×**178°.05W**±0°.06**, h35**^{km}**, n510, σ1^{s}72**/495**, mb5.1**/85**, MS4.6**/52**, 42C-8D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	2.82	2	P	Pn	23 20 39.1	-4.4
GLKZ				S	Sn	23 21 11.9	-4.4
RAO	Raoul Island	2.83	2		Pn	23 20 41.1	-2.6
RAO	Raoul Island	2.83	2	P	Pn	23 20 41.1	-2.6
RIZ	Raoul Island	2.84	2	P	Pn	23 20 41.0	-2.9
RIZ				S	Sn	23 21 16.4	-0.4
MXZ	Matakaoa Point	6.23	208		Pn	23 21 32.0	+1.6
MXZ	Matakaoa Point	6.23	208	P	Pn	23 21 28.9	-1.5
MXZ				S	Sn	23 22 40.0	-0.3
WMGZ	Waiomatatini S	6.41	206	P	Pn	23 21 31.8	-1.1
WMGZ				S	Sn	23 22 46.8	+1.9
PKGZ	Pakihiroa	6.58	208	P	Pn	23 21 33.0	-2.2
PKGZ				S	Sn	23 22 49.7	+0.7
HAZ	Te Kaha	6.61	210	P	Pn	23 21 34.2	-1.4
HAZ				S	Sn	23 22 51.6	+2.0
PUZ	Puketiti	6.69	206	P	Pn	23 21 34.9	-1.9
PUZ				S	Sn	23 22 51.2	-0.6
GRZ	Great Barrier	6.79	231	P	Pn	23 21 38.1	-0.1
RUGZ	Raukumara Rang	6.83	210	P	Pn	23 21 36.8	-2.0
RUGZ				S	Sn	23 22 56.9	+1.6
TWGZ	Tauwhareparae	6.89	207	S	Sn	23 22 56.9	+0.2
KUZ	Kuaotunu	6.93	226	P	Pn	23 21 40.4	+0.4
CNGZ	Carnagh Statio	7.08	205	P	Pn	23 21 39.5	-2.5
CNGZ				S	Sn	23 23 02.4	+1.2
TKGZ	Te Karaka	7.17	207	P	Pn	23 21 44.9	+1.6
TKGZ				S	Sn	23 23 01.6	-1.8
URZ	Urewera	7.32	211	Pn	Pn	23 21 42.3	-3.1
	3.8nm,0.3s,baz=73,slow=3.7,SNR=17						
URZ				Sn	Sn	23 23 05.3	-1.9
	51nm,0.3s,baz=331,slow=23,SNR=16						
URZ	Urewera	7.32	211	P	Pn	23 21 44.3	-1.1
URZ				S	Sn	23 23 03.4	-3.8
RAGZ	Rawiri	7.39	209	P	Pn	23 21 45.6	-0.9
RAGZ				S	Sn	23 23 07.3	-1.7
RIGZ	Rimuhau	7.43	206	P	Pn	23 21 44.8	-2.2
RIGZ				S	Sn	23 23 08.4	-1.7
MKAZ	Moumakai	7.51	226	P	Pn	23 21 50.3	+2.3
PRGZ	Paritu Road	7.58	205	P	Pn	23 21 45.6	-3.4
PRGZ				S	Sn	23 23 11.6	-2.1
OUZ	Omahuta	7.63	244	P	Pn	23 21 54.7	+5.0
MUGZ	Murupara	7.65	212	P	Pn	23 21 49.7	-0.2
MUGZ				S	Sn	23 23 14.6	-0.8
SNGZ	Shannon Statio	7.66	208	P	Pn	23 21 49.8	-0.3
SNGZ				S	Sn	23 23 15.4	-0.4
RTZ	Ruatahuna	7.67	211		Pn	23 21 50.0	-0.4
RTZ	Ruatahuna	7.67	211	P	Pn	23 21 49.9	-0.4
RTZ				S	Sn	23 23 11.2	-4.8
TOZ	Tahuroa Road	7.73	221		Pn	23 21 52.3	+1.3
TOZ	Tahuroa Road	7.73	221	P	Pn	23 21 53.6	+2.7
TOZ				S	Sn	23 23 21.8	+4.6
KNZ	Kokohu	7.75	206	P	Pn	23 21 48.5	-2.6
MHGZ	Mahia Peninsul	7.78	204	P	Pn	23 21 48.0	-3.6
MHGZ				S	Sn	23 23 15.6	-2.9
RAHZ	Arahi	7.88	209	P	Pn	23 21 54.7	+1.6
RAHZ				S	Sn	23 23 20.3	-0.8
MTHZ	Maungataniwha	7.93	210	P	Pn	23 21 53.7	-0.1
MTHZ				S	Sn	23 23 21.5	-0.8
WHHZ	Waihua	7.96	208	P	Pn	23 21 53.4	-0.7
WHHZ				S	Sn	23 23 22.4	-0.5
NMHZ	Naumai	8.15	209	P	Pn	23 21 55.6	-1.2
NMHZ				S	Sn	23 23 26.3	-1.5
ARHZ	Aropaoanui	8.21	208	P	Pn	23 21 55.2	-2.5
ARHZ				S	Sn	23 23 27.4	-1.8
BKZ	Black Stump Fm	8.34	211	Pn	Pn	23 22 01.1	+1.6
BKZ	Black Stump Fm	8.34	211	P	Pn	23 21 57.4	-2.0
BKZ				S	Sn	23 23 29.4	-3.0
KAHZ	Kahuranaki	8.72	207	P	Pn	23 22 01.4	-3.2
KAHZ				S	Sn	23 23 38.6	-3.0
NGZ	Ngauruhoe	8.76	214	P	Pn	23 22 04.6	-0.6
KRHZ	Kereru	8.79	209	P	Pn	23 22 03.4	-2.3
KRHZ				S	Sn	23 23 39.7	-3.7
FWVZ	Far West T-bar	8.84	214	P	Pn	23 22 06.6	+0.2
MOVZ	Moawhango	8.87	213	P	Pn	23 22 03.2	-3.5
WAZ	Wanganui	9.51	214	S	Sn	23 24 01.7	+0.8
OGWZ	Otaki Gorge	10.28	210	P	Pn	23 22 20.8	-5.1
OGWZ				S	Sn	23 24 13.0	-6.8
MRNZ	Matariki Terra	11.85	216	P	Pn	23 22 51.2	+3.7
MRNZ				S	Sn	23 24 50.2	-8.3
THZ	Tophouse	12.06	214	P	Pn	23 22 50.5	+0.2
THZ				S	Sn	23 24 54.7	-8.8
KHZ	Kahutara	12.29	211		Pn	23 22 54.3	+1.0
GVZ	Greta Valley S	12.95	211	P	Pn	23 23 01.1	-1.4
GVZ				S	Sn	23 25 13.7	-12
OXZ	Oxford	13.68	212		Pn	23 23 13.5	+1.1
OXZ	Oxford	13.68	212	P	Pn	23 23 13.1	+0.7
OXZ				S	Sn	23 25 29.8	-13
MHCZ	Mount Hutt	14.05	213	P	Pn	23 23 16.1	-1.4
MHCZ				S	Sn	23 25 37.7	-14
WVZ	Waitaha Valley	14.10	216	P	P	23 23 20.6	-4.7
WVZ				S	Sn	23 25 39.6	-14
RPZ	Rata Peaks	14.43	213		P	23 23 24.9	-4.2
RPZ	Rata Peaks	14.43	213	Pn	Pn	23 23 18.6	-4.1
	0.4nm,0.3s,baz=338,slow=11,SNR=3.3						
RPZ				Sn	Sn	23 25 48.2	-13
	3.0nm,0.3s,baz=323,slow=23,SNR=10						
RPZ	Rata Peaks	14.43	213	P	Pn	23 23 23.5	+0.8
RPZ				S	Sn	23 25 46.7	-15
ARCZ	Arundel	14.55	213	P	Pn	23 23 23.0	-1.3
ARCZ				S	Sn	23 25 49.5	-15
MSVF	Nonsavu	14.72	345		Pn	23 23 25.7	-1.1
MSVF	Nonsavu	14.72	345	Pn	Pn	23 23 23.2	-3.6
	0.5nm,0.3s,baz=139,slow=14,SNR=9.1						
MSVF				LR	LR	23 28 11.4	
	comp=Z,3μm,18.4s,baz=173,slow=34						
	25nm,0.9s						
MSVF	Nonsavu	14.72	345	P	Pn	23 23 25.7	-1.1
LBZ	Lake Benmore	15.35	214	P	P	23 23 36.2	-3.0
LBZ				S	Sn	23 26 08.3	-15
ODZ	Otahua Downs	15.65	211	P	Pn	23 23 38.4	-0.4
ODZ				S	Sn	23 26 13.1	-18
EAZ	Earnscleugh	16.39	213	P	P	23 23 50.8	-0.1
TUZ	Tuapeka	16.80	211	P	P	23 23 57.2	+1.9
DZM	Mont Dzumac	17.02	302		P	23 23 58.0	+0.1
DZM	Mont Dzumac	17.02	302	*e*Pn	P	23 23 59.7	+1.7
	179nm,1.1s						
DZM				*e*LR	LR	23 27 37.6	
	4μm,23.2s						
DZM	Mont Dzumac	17.02	302	Pn	P	23 23 59.6	+1.6
	0.9nm,0.3s,baz=121,slow=14,SNR=16						
DZM				LR	LR	23 29 29.6	
	comp=Z,5μm,18.4s,baz=155,slow=34						
MLZ	Mavora Lakes	17.06	215	P	P	23 23 58.8	+0.6
SYZ	Scrubby Hill	17.47	211	P	P	23 24 03.6	+0.9
ARMA	Armidale	25.94	266	P	P	23 25 31.6	+1.4
	comp=Z,41nm,1.1s						
MGCD	Mangrove Creek	25.95	259	P	P	23 25 34.1	+3.9
	comp=Z,110nm,0.8s						
TBI	Tubuai	26.70	78	*e*S	S	23 30 13.1	+2.9
	comp=Z,3μm,24.2s						
TBI				*e*LR	LR	23 32 15.2	
	comp=Z,6μm,29.2s						
TBI				*e*LR	LR	23 32 19.9	
	comp=Z,2μm,25.8s						
EIDS	Eidsvold	27.82	276	P	P	23 25 48.3	+1.2
EIDS	Eidsvold	27.82	276	P	P	23 25 48.9	+1.8
	comp=Z,26nm,0.9s						
YNG	Young	28.10	256	P	P	23 25 52.1	+2.6
	comp=Z,26nm,1.0s						
PPT2	Papeete2	29.48	68	*e*P	P	23 26 01.0	-1.0
	comp=Z,71nm,22.8s						

PPT2				*e*S	**S**	**23 30 57.3**	**+3.0**
	comp=Z,659nm,24.5s						
PPT2				*e*LR	LR	23 33 30.3	
	comp=Z,693nm,25.8s						
PPT2				*e*LR	LR	23 33 42.8	
	comp=Z,743nm,23.0s						
TOO	**Toolangi**	**30.30**	**249**		**P**	**23 26 10.3**	**+1.3**
TOO	**Toolangi**	**30.30**	**249**	P	**P**	**23 26 09.7**	**+0.7**
	comp=Z,5.1nm,2.1s						
TOO	**Toolangi**	**30.30**	**249**	P	**P**	**23 26 10.3**	**+1.3**
TOO				pmax	pmax		
	comp=Z,8.0nm,1.2s						
CMSA	**Cobar Meteorol**	**30.73**	**261**	P	**P**	**23 26 15.1**	**+2.3**
	comp=Z,84nm,0.8s						
QLP	**Quilpie**	**33.22**	**270**	P	**P**	**23 26 37.1**	**+2.4**
	comp=Z,63nm,1.1s						
ARPS	**Mount Arapiles**	**33.24**	**251**	P	**P**	**23 26 36.2**	**+1.3**
	comp=Z,96nm,0.9s						
CTAO	**Charters Tower**	**34.06**	**282**		**P**	**23 26 43.3**	**+1.2**
CTAO	**Charters Tower**	**34.06**	**282**	P	**P**	**23 26 43.3**	**+1.2**
CTAO				pmax	pmax		
	comp=Z,66nm,1.2s						
STKA	**Stephens Creek**	**34.09**	**259**	P	**P**	**23 26 44.0**	**+1.7**
STKA	**Stephens Creek**	**34.09**	**259**	P	**P**	**23 26 44.3**	**+2.0**
	comp=Z,131nm,1.0s						
STKA	**Stephens Creek**	**34.09**	**259**	P	**P**	**23 26 42.8**	**+0.5**
	comp=Z,12nm,0.8s,baz=94,slow=9.9,SNR=28						
STKA				ScP	**ScP**	**23 33 06.3**	**+4.8**
	comp=Z,3.6nm,0.9s,baz=56,slow=10.0,SNR=4.4						
	comp=Z,12nm,0.8s						
STKA	**Stephens Creek**	**34.09**	**259**	*i* P	**P**	**23 26 44.4**	**+2.1**
MGBR	**Mount Gambier**	**34.19**	**249**	P	**P**	**23 26 44.2**	**+1.1**
HTT	**Hallett**	**36.02**	**256**	P	**P**	**23 26 59.9**	**+1.0**
	comp=Z,10nm,0.9s						
MTSU	**Mount Surprise**	**36.60**	**283**	P	**P**	**23 27 05.6**	**+1.6**
	comp=Z,33nm,0.9s						
BBOO	**Buckleboo**	**38.50**	**256**		**P**	**23 27 19.3**	**-0.6**
BBOO				IAmb	IAmb	23 27 35.2	
	comp=Z,54nm,1.0s						
BBOO	**Buckleboo**	**38.50**	**256**	P	**P**	**23 27 19.2**	**-0.6**
PMG	**Port Moresby**	**39.31**	**297**	LR	LR	23 42 28.7	
	comp=Z,604nm,18.6s,baz=128,slow=34						
QIS	**Mount Isa**	**39.43**	**276**	P	**P**	**23 27 27.8**	**-0.1**
	comp=Z,23nm,0.9s						
COEN	**Coen**	**39.72**	**288**	P	**P**	**23 27 30.9**	**+0.6**
COEN				IAmb	IAmb	23 27 34.4	
	comp=Z,30nm,0.9s						
COEN	**Coen**	**39.72**	**288**	P	**P**	**23 27 31.1**	**+0.8**
	comp=Z,39nm,0.9s						
TAOE	**Nuku Hiva Isla**	**42.03**	**65**	*e*P	P	23 27 51.7	+2.2
	comp=Z,108nm,24.7s						
TAOE				*e*S	**S**	**23 34 04.4**	**-2.0**
	comp=Z,101nm,29.4s						
TAOE				*e*LR	LR	23 39 16.0	
	comp=Z,459nm,24.8s						
AS31	**Alice Springs**	**43.00**	**269**		**P**	**23 27 57.0**	**-0.2**
AS31	**Alice Springs**	**43.00**	**269**	P	**P**	**23 27 57.7**	**+0.5**
	comp=Z,16nm,0.9s						
ASAR	**Alice Springs**	**43.00**	**269**	P	**P**	**23 27 57.4**	**+0.2**
ASAR	**Alice Springs**	**43.00**	**269**	P	**P**	**23 27 57.1**	**-0.1**
	comp=Z,13nm,0.6s,baz=106,slow=7.3,SNR=74						
ASAR				PcP	**PcP**	**23 29 48.3**	**+1.1**
	comp=Z,2.5nm,0.9s,baz=124,slow=4.6,SNR=1.3						
ASAR				ScP	**ScP**	**23 33 40.2**	**+4.5**
	comp=Z,1.4nm,0.9s,baz=108,slow=4.9,SNR=4.4						
ASAR				S	**S**	**23 34 21.3**	**+0.8**
	comp=Z,2.2nm,0.9s,baz=104,slow=15,SNR=6.6						
ASAR				LR	LR	23 45 58.5	
	comp=Z,765nm,18.7s,baz=113,slow=36						
	comp=Z,13nm,0.6s						
ASAR	**Alice Springs**	**43.00**	**269**	P	**P**	**23 27 57.4**	**+0.2**
WR8	**Warramunga Arr**	**44.00**	**274**		**P**	**23 28 05.1**	**-0.2**
WB2	**Warramunga Arr**	**44.13**	**274**	P	**P**	**23 28 06.4**	**0.0**
	comp=Z,61nm,1.0s						
WRAB	**Tennant Creek**	**44.14**	**274**	P	**P**	**23 28 06.0**	**-0.4**
WRAB	**Tennant Creek**	**44.14**	**274**	*i* P	**P**	**23 28 06.0**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,36nm,1.0s						
WRA	**Warramunga Arr**	**44.14**	**274**		**P**	**23 28 06.4**	**-0.1**
WRA	**Warramunga Arr**	**44.14**	**274**	P	**P**	**23 28 06.2**	**-0.2**
	comp=Z,33nm,0.8s,baz=114,slow=7.6,SNR=80						
WRA				ScP	**ScP**	**23 33 43.2**	**+2.9**
	comp=Z,1.2nm,0.8s,baz=111,slow=3.6,SNR=5.4						
WRA				S	**S**	**23 34 36.2**	**-1.0**
	comp=Z,1.6nm,1.0s,baz=120,slow=15,SNR=3.6						
WRA				LR	LR	23 45 40.3	
	comp=Z,1µm,19.0s,baz=104,slow=35						
	comp=Z,33nm,0.8s						
WRA	**Warramunga Arr**	**44.14**	**274**	P	**P**	**23 28 06.4**	**-0.1**
WRA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WB0	**Warramunga Arr**	**44.17**	**274**		**P**	**23 28 05.8**	**-0.9**
FORT	**Forrest**	**45.60**	**257**		**P**	**23 28 17.1**	**-0.7**
FORT	**Forrest**	**45.60**	**257**	P	**P**	**23 28 17.2**	**-0.7**
SBA	**Scott Base**	**46.35**	**184**	P	P	23 28 25.7	+2.6
SBA				IAmb	IAmb	23 28 48.7	
	comp=Z,29nm,1.1s						
SBA	**Scott Base**	**46.35**	**184**	P	P	23 28 25.7	+2.5
SBA				pmax	pmax		
	comp=Z,29nm,1.1s						
VNDA	**Vanda**	**46.42**	**186**	P	P	23 28 26.7	+3.0
VNDA				IAmb	IAmb	23 28 36.4	
	comp=Z,35nm,1.9s						
VNDA	**Vanda**	**46.42**	**186**	P	P	23 28 27.2	+3.5
	comp=Z,2.4nm,0.7s,baz=24,slow=5.2,SNR=8.9						
VNDA				LR	LR	23 44 29.4	
	comp=Z,400nm,20.5s,baz=12,slow=32						
	comp=Z,2.4nm,0.7s						
JAY	**Jayapura**	**48.65**	**299**	LR	LR	23 47 51.9	
	comp=Z,287nm,20.4s,baz=109,slow=35						
KDU	**Kakadu**	**49.19**	**281**	P	**P**	**23 28 44.9**	**-1.0**
MTN	**Manton Dam**	**50.22**	**280**		**P**	**23 28 53.6**	**-0.3**
MTN				IAmb	IAmb	23 29 11.8	
	comp=Z,25nm,0.8s						
KNRA	**Kununurra**	**50.81**	**276**		**P**	**23 28 58.1**	**-0.2**
KNRA				IAmb	IAmb	23 28 59.8	
	comp=Z,22nm,0.9s						
KNRA	**Kununurra**	**50.81**	**276**	P	**P**	**23 28 57.9**	**-0.4**
	comp=Z,31nm,0.9s						
FITZ	**Fitzroy Crossi**	**52.33**	**271**	P	**P**	**23 29 09.9**	**+0.3**
FITZ	**Fitzroy Crossi**	**52.33**	**271**	LR	LR	23 50 58.4	
	comp=Z,2µm,19.0s,baz=112,slow=36						
CASY	**Casey**	**53.63**	**208**		**P**	**23 29 19.7**	**+1.1**
KLBR	**Kellerberrin**	**53.78**	**252**	P	**P**	**23 29 18.5**	**-1.7**
NWAO	**Narrogin (SRO)**	**53.78**	**250**	LR	LR	23 49 56.7	
	comp=Z,390nm,20.7s,baz=68,slow=34						
FAKI	**Fak Fak**	**54.90**	**291**	P	**P**	**23 29 27.9**	**-0.5**
MBWA	**Marble Bar**	**56.01**	**265**	P	**P**	**23 29 35.9**	**-0.5**
SOEI	**Soe**	**57.57**	**279**	P	**P**	**23 29 48.2**	**+0.5**
GUMO	**Guam**	**57.65**	**316**	LR	LR	23 52 59.8	
	comp=Z,324nm,19.6s,baz=112,slow=34						
BATI	**Baumata**	**57.84**	**278**	LR	LR	23 54 50.2	
	comp=Z,1µm,19.9s,baz=125,slow=36						
QSPA	**South Pole Qui**	**58.03**	**180**	P	P	23 29 53.1	+2.9
QSPA	**South Pole Qui**	**58.03**	**180**	P	P	23 29 52.4	+2.2
	comp=Z,11nm,0.9s,baz=12,slow=1.7,SNR=15						
	comp=Z,11nm,0.9s						
KAPI	**Kappang**	**63.88**	**281**	LR	LR	23 57 19.6	
	comp=Z,714nm,20.4s,baz=120,slow=35						
BELA	**Belgrano 2**	**68.12**	**172**		**P**	**23 30 58.0**	**+1.2**
MAW	**Mawson**	**70.72**	**201**	P	P	23 31 17.8	+4.9
MAW	**Mawson**	**70.72**	**201**	P	**P**	**23 31 13.8**	**+0.8**
	comp=Z,6.7nm,1.0s,baz=142,slow=6.9,SNR=9.8						
	comp=Z,6.7nm,1.0s						
PMSA	**Palmer Station**	**70.75**	**156**	LR	LR	23 56 31.1	
	comp=Z,367nm,19.6s,baz=261,slow=31						
LEM	**Lembang**	**73.14**	**272**	LR	LR	00 04 40.6	
	comp=Z,371nm,19.6s,baz=167,slow=37						
USHA	**Ushuaia**	**74.55**	**146**	LR	LR	23 56 46.4	
	comp=Z,180nm,19.2s,baz=192,slow=30						
SYO	**Syowa Base**	**75.47**	**193**	⇑*i*P	**P**	**23 31 42.5**	**+1.5**
SYO	**Syowa Base**	**75.47**	**193**	⇓*e*sP	sP	23 31 47.6	-5.9
TROLL	**Troll, Antarti**	**76.19**	**180**	⇑P	**P**	**23 31 46.9**	**+1.6**
	comp=Z,2µm,1.1s						
TROLL				⇑PcP	**sP**	**23 31 56.8**	**-1.1**
	comp=Z,2µm,1.1s						
SNAA	**Sanae**	**76.47**	**178**	⇑P	P	23 31 48.7	+1.9
	comp=Z,519nm,0.9s						
SNAA				⇑PcP	sP	23 31 57.0	-2.4
	comp=Z,519nm,0.9s						
SNAA	**Sanae**	**76.47**	**178**		P	23 31 48.8	+2.0
SNAA				IAmb	IAmb	23 32 01.7	
	comp=Z,23nm,0.9s						
SNAA	**Sanae**	**76.47**	**178**	P	P	23 31 48.5	+1.7
	comp=Z,9.6nm,1.0s,baz=150,slow=4.2,SNR=23						
SNAA				LR	LR	00 03 21.2	
	comp=Z,168nm,19.2s,baz=124,slow=34						
	comp=Z,9.6nm,1.0s						
SNAA	**Sanae**	**76.47**	**178**	P	P	23 31 48.8	+2.0
SNAA				pmax	pmax		
	comp=Z,23nm,0.9s						
VNA3	**Neumayer Olymp**	**76.63**	**176**	⇑P	**P**	**23 31 48.7**	**+1.1**
	comp=Z,82nm,0.7s						
VNA3				⇑PcP	**pwP**	**23 31 59.6**	**-4.4**
	comp=Z,82nm,0.7s						
VNA2	**Neumayer--Watz**	**77.06**	**177**	⇑P	**P**	**23 31 51.5**	**+1.5**
	comp=Z,44nm,0.8s,baz=166,slow=6.6						
VNA2				⇑PcP	**sP**	**23 32 00.9**	**-1.7**
	comp=Z,44nm,0.8s,baz=171,slow=4.8						
VNA1	**Neumayer--Stat**	**77.29**	**177**	⇑P	P	23 31 53.5	+2.2
	comp=Z,34nm,0.9s						
VNA1				⇑PcP	sP	23 32 02.5	-1.4
	comp=Z,52nm,1.0s						
COYC	**Coyhaique**	**77.74**	**136**	P	**P**	**23 31 55.2**	**+0.9**
COYC				IAmb	IAmb	23 31 58.3	
	comp=Z,12nm,0.9s						
LL02	**Futaleuf**	**79.20**	**134**		P	23 32 03.9	+1.5
MJAR	**Matsushiro Arr**	**79.60**	**326**	P	**P**	**23 32 02.9**	**-1.6**
	comp=Z,3.8nm,1.0s,baz=160,slow=5.1,SNR=4.2						
MJAR				LR	LR	00 02 09.0	
	comp=Z,130nm,18.8s,baz=134,slow=32						
	comp=Z,3.8nm,1.0s						
JNU	**Nakatsue**	**80.79**	**319**	LR	LR	00 02 37.7	
	comp=Z,158nm,21.7s,baz=142,slow=32						
PLCA	**Paso Flores**	**81.39**	**133**	P	P	23 32 15.4	+1.1
PLCA				IAmb	IAmb	23 32 21.1	
	comp=Z,35nm,1.9s						
PLCA	**Paso Flores**	**81.39**	**133**	P	P	23 32 15.8	+1.4
	comp=Z,3.0nm,0.9s,baz=225,slow=7.5,SNR=5.6						
PLCA				LR	LR	00 02 04.5	
	comp=Z,273nm,18.9s,baz=232,slow=31						
	comp=Z,3.0nm,0.9s						
BKNI	**Bangkinang**	**82.47**	**275**		**P**	**23 32 20.2**	**-0.1**
BKNI	**Bangkinang**	**82.47**	**275**	P	**P**	**23 32 18.1**	**-2.2**
ASAJ	**Asahikawa**	**83.92**	**333**	LR	LR	00 07 41.0	
	comp=Z,151nm,18.4s,baz=166,slow=34						
SHEM	**Shemya Is, Ala**	**84.74**	**355**	LR	LR	00 04 57.8	
	comp=Z,214nm,19.5s,baz=258,slow=32						
LPIG	**La Paz**	**85.46**	**58**	LR	LR	00 03 35.6	
	comp=Z,314nm,19.2s,baz=212,slow=31						
PSI	**Prapat**	**85.57**	**276**	LR	LR	00 14 19.2	
	comp=Z,400nm,18.1s,baz=128,slow=38						
KSRS	**Korea Array**	**85.60**	**320**	P	**P**	**23 32 36.4**	**+0.7**
	comp=Z,3.2nm,0.8s,baz=151,slow=5.2,SNR=8.9						
	comp=Z,3.2nm,0.8s						
YSS	**Yuzhno-Sakhali**	**86.25**	**334**	*e*P	**P**	**23 32 39.6**	**+1.0**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YSS				MLR	MLR		
	comp=Z,1µm,14.0s						
CO03	**El Pedregal**	**87.03**	**125**	P	**P**	**23 32 43.9**	**+0.6**
NJ2	**Nanjing**	**87.31**	**311**	*e*P	**P**	**23 32 46.8**	**+2.6**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
PFO	**Pinyon Flats O**	**87.38**	**47**		**P**	**23 32 45.2**	**+0.5**
PFO				IAmb	IAmb	23 33 01.9	
	comp=Z,18nm,1.4s						
PFO	**Pinyon Flats O**	**87.38**	**47**	LR	LR	00 08 58.1	
	comp=Z,253nm,18.1s,baz=230,slow=34						
PFO	**Pinyon Flats O**	**87.38**	**47**	P	**P**	**23 32 45.2**	**+0.5**
PFO				pmax	pmax		
	comp=Z,18nm,1.4s						
PETK	**Petropavlovsk-**	**87.43**	**346**	P	**P**	**23 32 44.7**	**+0.5**
PETK	**Petropavlovsk-**	**87.43**	**346**	P	**P**	**23 32 44.5**	**+0.3**
	comp=Z,11nm,0.7s,baz=187,slow=6.6,SNR=5.6						
PETK				LR	LR	00 05 28.4	
	comp=Z,139nm,21.3s,baz=176,slow=31						
	comp=Z,11nm,0.7s						
PETK	**Petropavlovsk-**	**87.43**	**346**	P	**P**	**23 32 44.7**	**+0.5**
CCAC	**Calif City Air**	**87.45**	**45**	P	**P**	**23 32 45.3**	**+0.4**
CCAC				IAmb	IAmb	23 33 02.0	
	comp=Z,21nm,1.5s						
MSHR	**Mys Shultsa**	**87.71**	**325**	*i* P	**P**	**23 32 46.8**	**+1.0**
MSHR				pmax	pmax		
	comp=Z,25nm,1.0s						
GLA	**Glamis**	**88.04**	**49**	P	**P**	**23 32 48.5**	**+0.8**
GLA				IAmb	IAmb	23 34 35.2	
	comp=Z,11nm,0.8s						
GLA	**Glamis**	**88.04**	**49**	P	**P**	**23 32 48.5**	**+0.8**
GLA				pmax	pmax		
	comp=Z,11nm,0.9s						
CMB	**Columbia Colle**	**88.04**	**42**		**P**	**23 32 48.5**	**+0.9**
CMB				IAmb	IAmb	23 33 04.2	
	comp=Z,12nm,1.2s						
CMB	**Columbia Colle**	**88.04**	**42**	P	**P**	**23 32 48.5**	**+0.9**
CMB				pmax	pmax		
	comp=Z,12nm,1.2s						
O02D	**Mt. Diablo Mer**	**88.23**	**39**	P	**P**	**23 32 49.2**	**+0.7**
GSC	**Goldstone, Bar**	**88.29**	**46**	P	**P**	**23 32 49.7**	**+0.8**
GSC				IAmb	IAmb	23 33 06.7	
	comp=Z,20nm,1.2s						
GSC	**Goldstone, Bar**	**88.29**	**46**	P	**P**	**23 32 49.7**	**+0.8**
GSC				pmax	pmax		
	comp=Z,20nm,1.3s						
AFDM	**Forest Hills D**	**88.35**	**41**		**P**	**23 32 49.4**	**+0.4**
AFDM				IAmb	IAmb	23 33 05.5	
	comp=Z,15nm,1.4s						
113A	**Mohawk Valley,**	**88.54**	**49**		P	23 32 51.3	+1.3
113A				IAmb	IAmb	23 33 07.4	
	comp=Z,14nm,1.3s						
USRK	**Ussuriysk Ar.**	**88.54**	**327**	P	**P**	**23 32 49.8**	**+0.1**
	comp=Z,8.9nm,0.8s,baz=121,slow=3.7,SNR=10						
USRK				LR	LR	00 07 26.4	
	comp=Z,112nm,19.5s,baz=131,slow=32						
	comp=Z,8.9nm,0.8s						
214A	**Organ Pipe Nat**	**88.64**	**51**	P	**P**	**23 32 50.4**	**-0.2**
214A				IAmb	IAmb	23 33 12.3	
	comp=Z,20nm,1.7s						
BLYC	**Blythe**	**88.69**	**48**	P	**P**	**23 32 51.6**	**+0.9**
BLYC				IAmb	IAmb	23 33 08.9	
	comp=Z,8.1nm,0.9s						
QSM	**Queen of Sheba**	**88.69**	**45**		**P**	**23 32 51.9**	**+1.2**
QSM				IAmb	IAmb	23 33 06.0	
	comp=Z,12nm,1.1s						
WAKR	**Walker**	**88.91**	**42**		**P**	**23 32 52.7**	**+0.8**
WAKR				IAmb	IAmb	23 33 09.7	
	comp=Z,21nm,1.2s						
GWY	**Greenwater Val**	**88.96**	**45**		**P**	**23 32 53.0**	**+0.9**
GWY				IAmb	IAmb	23 33 07.2	
	comp=Z,11nm,1.2s						
DSP	**Deep Springs**	**88.98**	**44**		P	23 32 53.7	+1.7
DSP				IAmb	IAmb	23 33 09.1	
	comp=Z,18nm,1.5s						
GRAC	**Grapevine Rang**	**89.08**	**44**	P	**P**	**23 32 52.9**	**+0.3**
PNTR	**Pine Nut**	**89.22**	**42**	P	**P**	**23 32 54.6**	**+1.3**
PNTR				IAmb	IAmb	23 33 17.8	
	comp=Z,16nm,1.2s						
LHV	**Little Huntoon**	**89.27**	**43**	P	P	23 32 55.3	+2.0
LHV				IAmb	IAmb	23 33 14.5	
	comp=Z,13nm,1.1s						
BEKR	**Beckworth**	**89.33**	**41**	P	**P**	**23 32 53.6**	**-0.3**
GMN	**Gold Mountain**	**89.35**	**44**	P	P	23 32 55.7	+1.7
GMN				IAmb	IAmb	23 33 10.8	
	comp=Z,19nm,1.8s						
YBH	**Yreka Blue Hor**	**89.39**	**38**	LR	LR	00 08 26.2	
	comp=Z,15nm,18.4s,baz=234,slow=33						
NVAR	**Mina Array Bea**	**89.50**	**43**	P	**P**	**23 32 55.4**	**+0.7**
NVAR	**Mina Array Bea**	**89.50**	**43**	P	**P**	**23 32 55.6**	**+0.8**
	comp=Z,2.6nm,0.9s,baz=215,slow=7.9,SNR=9.7						
NVAR				LR	LR	00 08 45.3	
	comp=Z,375nm,18.3s,baz=223,slow=33						
	comp=Z,2.6nm,0.9s						
RYN	**Ryan**	**89.51**	**42**	P	**P**	**23 32 55.6**	**+0.9**
RYN				IAmb	IAmb	23 33 11.3	
	comp=Z,18nm,1.7s						
MZP	**Montezuma Peak**	**89.55**	**44**	P	**P**	**23 32 55.9**	**+0.9**
NV11	**Mina Array Sit**	**89.59**	**43**	P	**P**	**23 32 56.2**	**+1.1**
TPNV	**Topopah Spring**	**89.72**	**45**	P	P	23 32 57.1	+1.4
TPNV				IAmb	IAmb	23 33 12.9	
	comp=Z,12nm,1.1s						
TPNV	**Topopah Spring**	**89.72**	**45**	P	P	23 32 57.1	+1.4
TPNV				pmax	pmax		
	comp=Z,12nm,1.2s						
PAHR	**Pah Rah Range**	**89.76**	**41**	P	**P**	**23 32 55.4**	**-0.4**
V12A	**Nelson**	**89.77**	**47**	P	**P**	**23 32 56.5**	**+0.6**
V12A				IAmb	IAmb	23 33 11.6	
	comp=Z,9.8nm,1.1s						
Y14A	**Wickenburg**	**89.77**	**49**	P	P	23 32 57.4	+1.5
Y14A				IAmb	IAmb	23 33 11.5	
	comp=Z,11nm,1.1s						
TPH	**Tonopah**	**89.89**	**44**	P	P	23 32 58.0	+1.4
TPH	**Tonopah**	**89.89**	**44**	P	P	23 32 58.0	+1.5
TPH				pmax	pmax		
	comp=Z,56nm,1.1s						
W13A	**Hualapai Mount**	**89.96**	**48**	P	**P**	**23 32 58.0**	**+1.0**
W13A				IAmb	IAmb	23 33 12.6	
	comp=Z,10nm,0.9s						
MDJ	**Mudanjiang**	**89.99**	**326**	P	**P**	**23 32 55.8**	**-0.7**
MDJ				pmax	pmax		
	comp=Z,12nm,1.6s						
SHPR	**Sheep Range**	**90.08**	**46**	P	P	23 32 59.3	+1.9
TUC	**Tucson**	**90.20**	**51**		**P**	**23 32 58.8**	**+0.9**
TUC				IAmb	IAmb	23 33 14.0	
	comp=Z,11nm,1.1s						
TUC	**Tucson**	**90.20**	**51**	P	**P**	**23 32 58.8**	**+0.9**
TUC				pmax	pmax		
	comp=Z,11nm,1.2s						
ZAIG	**Zacatecas**	**90.40**	**63**	P	**P**	**23 32 59.9**	**+0.5**
ZAIG				IAmb	IAmb	23 33 23.0	
	comp=Z,15nm,1.8s						
X16A	**Lo Mia Camp, P**	**91.08**	**49**		P	23 33 04.5	+2.4
X16A				IAmb	IAmb	23 33 18.1	
	comp=Z,11nm,0.9s						
TIA	**Tai'an**	**91.09**	**313**	P	**P**	**23 33 02.4**	**+0.5**
TIA				pmax	pmax		
	comp=Z,4.0nm,0.4s						
J05D	**Fort Rock, OR**	**91.25**	**38**	P	**P**	**23 33 02.9**	**+0.3**
J05D				IAmb	IAmb	23 33 17.8	
	comp=Z,27nm,1.8s						
CN2	**Changchun**	**91.46**	**323**	*e*P	P	23 33 07.5	+4.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
DUN6	**Lazy B Ranch**	**91.47**	**52**	P	**P**	**23 33 04.6**	**+0.7**
LCMT	**Little Creek M**	**91.58**	**46**	P	**P**	**23 33 05.1**	**+0.8**
H04A	**Detroit Lake**	**91.76**	**36**	P	**P**	**23 33 04.8**	**0.0**
H04A				IAmb	IAmb	23 33 20.3	
	comp=Z,24nm,1.7s						
PINE	**Pine Mountain**	**91.76**	**37**	P	**P**	**23 33 05.7**	**+0.6**
PINE				IAmb	IAmb	23 33 21.9	
	comp=Z,15nm,1.2s						
U15A	**North Rim**	**91.80**	**47**		**P**	**23 33 06.2**	**+0.7**
U15A				IAmb	IAmb	23 33 21.3	
	comp=Z,7.4nm,0.8s						
WUAZ	**Wupatki**	**91.81**	**49**	P	**P**	**23 33 06.2**	**+0.7**
WUAZ				IAmb	IAmb	23 33 21.1	
	comp=Z,8.9nm,0.9s						
KNB	**Kanab**	**91.85**	**47**		**P**	**23 33 06.6**	**+1.0**
KNB				IAmb	IAmb	23 33 23.1	
	comp=Z,12nm,1.1s						
KNB	**Kanab**	**91.85**	**47**	P	**P**	**23 33 06.6**	**+1.0**
KNB				pmax	pmax		
	comp=Z,12nm,1.1s						
BNX	**BinXian**	**91.87**	**325**	⇑P	**P**	**23 33 05.3**	**+0.1**
BNX				pmax	pmax		
	comp=Z,19nm,0.9s						
I05D	**Terrebonne, OR**	**91.94**	**37**	P	**P**	**23 33 06.0**	**+0.3**
I05D				IAmb	IAmb	23 33 16.1	
	comp=Z,13nm,1.3s						
G04A	**Mulino**	**91.98**	**36**	P	**P**	**23 33 06.4**	**+0.7**
WVOR	**Wild Horse Val**	**92.04**	**40**	P	**P**	**23 33 07.2**	**+0.9**
WVOR				pmax	pmax		
	comp=Z,5.0nm,1.7s						
KDAK	**Kodiak Island**	**92.06**	**13**	LR	LR	00 07 42.3	
	comp=Z,98nm,21.3s,baz=193,slow=31						
PSUT	**Pine Spring**	**92.19**	**45**	P	**P**	**23 33 07.3**	**+0.1**
SPR3	**Spring Creek 3**	**92.20**	**44**	P	**P**	**23 33 07.6**	**+0.2**
KLR	**Kul'dur**	**92.47**	**330**	LR	LR	00 13 41.6	
	comp=Z,205nm,18.1s,baz=146,slow=35						
KLR	**Kul'dur**	**92.47**	**330**	*ce*P	**P**	**23 33 08.6**	**+0.7**
KLR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
I07A	**Izee**	**92.71**	**38**	P	**P**	**23 33 10.1**	**+0.8**
J08A	**Circle Bar Ran**	**92.76**	**39**	P	**P**	**23 33 10.6**	**+1.0**
ELK	**Elko**	**92.81**	**43**	P	**P**	**23 33 11.1**	**+1.1**
ELK	**Elko**	**92.81**	**43**	P	**P**	**23 33 11.1**	**+1.1**
ELK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
NLWA	**Neilton Lookou**	**92.89**	**33**	P	**P**	**23 33 09.7**	**-0.2**
NLWA				IAmb	IAmb	23 34 41.8	
	comp=Z,9.6nm,1.1s						
Q19K	**Cape Douglas,**	**92.93**	**12**	P	**P**	**23 33 11.0**	**+1.1**
NNA	**Nana**	**93.00**	**106**	LR	LR	00 08 18.9	
	comp=Z,242nm,18.3s,baz=232,slow=31						
N15K	**Kwethluk River**	**93.10**	**9**	P	**P**	**23 33 11.7**	**+1.1**
MVU	**Marysvale**	**93.16**	**46**	P	**P**	**23 33 11.8**	**+0.1**
MVU				IAmb	IAmb	23 33 27.4	
	comp=Z,16nm,1.8s						
VHRN	**Van Horn**	**93.24**	**56**	P	P	23 33 13.4	+1.3
TXAR	**Lajitas Array**	**93.33**	**57**	P	**P**	**23 33 12.1**	**-0.5**
TXAR	**Lajitas Array**	**93.33**	**57**	P	P	23 33 14.3	+1.7
	comp=Z,0.5nm,0.9s,baz=280,slow=2.3,SNR=4.7						
TXAR				LR	LR	00 08 32.7	
	comp=Z,92nm,19.0s,baz=226,slow=31						
	comp=Z,0.5nm,0.9s						
G08A	**Pilot Rock**	**93.82**	**37**	P	**P**	**23 33 15.2**	**+0.7**
G08A				IAmb	IAmb	23 33 30.8	
	comp=Z,14nm,1.5s						
CMAR	**Chiang Mai Arr**	**93.92**	**289**	P	**P**	**23 33 14.6**	**-0.8**
CMAR	**Chiang Mai Arr**	**93.92**	**289**	P	**P**	**23 33 14.6**	**-0.8**
ATAH	**Atahualpa**	**94.36**	**101**	LR	LR	00 08 15.0	
	comp=Z,106nm,18.3s,baz=268,slow=31						
KMI	**Kunming**	**94.54**	**297**	P	**P**	**23 33 20.3**	**+1.9**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KMI				LR	LR		
	comp=Z,160nm,26.6s						
BBB	**Bella Bella**	**94.60**	**28**	LR	LR	00 14 50.9	
	comp=Z,121nm,18.0s,baz=221,slow=35						
ANMO	**Albuquerque**	**94.66**	**51**	LR	LR	00 08 43.2	
	comp=Z,217nm,19.7s,baz=332,slow=31						
MA2	**Magadan**	**94.91**	**345**	LR	LR	00 18 59.3	
	comp=Z,114nm,18.2s,baz=139,slow=37						
PLID	**Pearl Lake**	**95.24**	**39**	P	**P**	**23 33 21.4**	**+0.3**
PZH	**PanZhiHua**	**96.04**	**297**	P	**P**	**23 33 27.1**	**+2.0**
NEW	**Newport**	**96.76**	**36**	LR	LR	00 10 40.2	
	comp=Z,348nm,19.8s,baz=219,slow=32						
HHC	**Hu-ho-hao-te**	**97.37**	**314**	*e*P	Pdif	23 33 34.4	+3.6
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PDAR	**Pinedale Array**	**97.38**	**44**	LR	LR	00 11 35.4	
	comp=Z,160nm,19.2s,baz=238,slow=32						
LPAZ	**La Paz**	**97.49**	**114**	LR	LR	00 10 47.9	
	comp=Z,119nm,19.3s,baz=251,slow=31						
SEY	**Seymchan**	**97.61**	**347**	*i* P	Pdif	23 33 31.8	+0.7
SEY				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CPUP	**Villa Florida**	**98.97**	**129**	LR	LR	00 15 28.4	
	comp=Z,36nm,18.3s,baz=84,slow=34						
ILAR	**Eielson Array**	**99.58**	**13**	P	**Pdif**	**23 33 39.8**	**-0.1**
	comp=Z,0.4nm,0.9s,baz=218,slow=6.9,SNR=2.2						
ILAR				PP	**PP**	**23 37 43.5**	**-1.0**
	comp=Z,0.5nm,0.9s,baz=219,slow=8.1,SNR=3.2						
ILAR				LR	LR	00 16 11.6	
	comp=Z,60nm,18.4s,baz=215,slow=34						
	comp=Z,0.4nm,0.9s						
BILL	**Bilibino**	**100.51**	**354**	*i* P	**Pdif**	**23 33 46.5**	**+2.5**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
YAK	**Yakutsk**	**102.79**	**338**	*i* P	**Pdif**	**23 33 55.4**	**+1.2**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SONM	**Songino Array**	**104.36**	**318**	Pdiff	**Pdif**	**23 34 02.9**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=116,slow=3.4,SNR=4.5						
YKA	**Yellowknife Ar**	**106.98**	**26**	PKKPbc	PKKPbc	23 49 41.5	-0.1
	comp=Z,0.6nm,0.8s,baz=29,slow=3.5,SNR=3.8						
WMQ	**Urumqi**	**114.23**	**308**	*e*PKP	**PKiKP**	**23 38 38.8**	**+2.2**
BOSA	**Boshof**	**115.69**	**203**	PKP	**PKPdf**	**23 38 41.9**	**+1.7**
	comp=Z,3.5nm,1.2s,baz=358,slow=10.0,SNR=2.2						
ZSN	**Zaisan**	**117.34**	**311**	*e*PKIKP	**PKiKP**	**23 38 43.4**	**+1.0**
ZSN	**Zaisan**	**117.34**	**311**	*e*PKP	**PKiKP**	**23 38 43.4**	**+1.0**
MK31	**Makanchi Array**	**118.82**	**309**	*c i*PKIKP	**PKiKP**	**23 38 46.2**	**+0.8**
MKAR	**Makanchi Array**	**118.82**	**309**		**PKiKP**	**23 38 44.9**	**-0.5**
MKAR	**Makanchi Array**	**118.82**	**309**	PKP	**PKiKP**	**23 38 44.3**	**-1.1**
	comp=Z,2.2nm,0.8s,baz=69,slow=4.0,SNR=16						
MKAR				PKKPbc	**PKKPab**	**23 49 02.6**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=268,slow=4.6,SNR=4.0						
MKAR	**Makanchi Array**	**118.82**	**309**	PKIKP	**PKiKP**	**23 38 44.9**	**-0.5**
MAKZ	**Makanchi**	**119.03**	**309**		**PKiKP**	**23 38 45.5**	**-0.2**
MAKZ	**Makanchi**	**119.03**	**309**	PKIKP	**PKiKP**	**23 38 45.5**	**-0.2**
ZALV	**Zalesovo Beam**	**119.26**	**318**		**PKiKP**	**23 38 45.8**	**-0.2**
ZALV	**Zalesovo Beam**	**119.26**	**318**	PKP	**PKiKP**	**23 38 46.1**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=321,slow=1.9,SNR=5.2						
SHLS	**Shalkode**	**119.65**	**305**	*e*PKIKP	**PKiKP**	**23 38 47.1**	**-0.1**
SHLS	**Shalkode**	**119.65**	**305**	*e*PKP	**PKiKP**	**23 38 47.2**	**-0.1**
UZB	**Uzynbulak**	**119.95**	**305**	*e*PKIKP	**PKiKP**	**23 38 48.3**	**+0.5**
UZB	**Uzynbulak**	**119.95**	**305**	*e*PKP	**PKiKP**	**23 38 48.4**	**+0.5**
KPKS	**Kokpek**	**120.28**	**305**	*e*PKIKP	**PKiKP**	**23 38 49.0**	**+0.6**
KPKS	**Kokpek**	**120.28**	**305**	*e*PKP	**PKiKP**	**23 38 49.1**	**+0.6**

SATY	Saty	120.36	304	ePKIKP	PKiKP	23 38 49.2	+0.6
SATY				e		23 40 14.8	
SATY	Saty	120.36	304	ePKP	PKiKP	23 38 49.2	+0.6
SATY				ePP	PP	23 40 14.9	-0.6
TDK	Taldyqorghan	120.91	306	ePKIKP	PKiKP	23 38 50.3	+0.8
TDK	Taldyqorghan	120.91	306	ePKP	PKiKP	23 38 50.3	+0.8
KSH	Kashi	121.05	300	PKP	PKiKP	23 38 51.6	+1.5
KURK	Kurchatov	122.17	313		PKiKP	23 38 51.3	-0.5
KURK	Kurchatov	122.17	313	c iPKIKP	PKiKP	23 38 52.0	+0.3
KURK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KURBB	Kurchatov Arra	122.21	313	PKP	PKiKP	23 38 50.6	-1.2
	comp=Z,5.4nm,0.8s,baz=107,slow=1.9,SNR=36						
AAK	Ala-Archa	123.00	303		PKiKP	23 38 54.6	+0.7
AAK	Ala-Archa	123.00	303	c iPKIKP	PKiKP	23 38 55.1	+1.2
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SGDS	Sogindy	123.12	304	ePKP	PKiKP	23 38 54.6	+0.6
KBL	Kabul	124.83	292		PKiKP	23 38 58.9	+1.1
KBL	Kabul	124.83	292	PKIKP	PKiKP	23 38 58.9	+1.1
DZA	Taraz	125.33	303	ePKIKP	PKiKP	23 38 58.6	+0.3
DZA	Taraz	125.33	303	ePKP	PKiKP	23 38 58.6	+0.3
BRZS	Berezniki	125.78	311	ePKIKP	PKiKP	23 38 59.6	+0.7
BRZS	Berezniki	125.78	311	ePKP	PKiKP	23 38 59.6	+0.7
KKAR	Karatay Array	125.96	303		PKiKP	23 38 59.5	0.0
KKAR	Karatay Array	125.96	303	PKIKP	PKiKP	23 38 59.5	0.0
SIMJ	Simiganj	126.01	297	PKPdf	PKiKP	23 39 01.0	+1.0
IUG	Iuzhnay	126.09	301	ePKIKP	PKiKP	23 39 00.2	+0.3
IUG	Iuzhnay	126.09	301	ePKP	PKiKP	23 39 00.2	+0.3
BRLS	Borolday	126.43	302	ePKIKP	PKiKP	23 39 01.0	+0.5
BRLS				e		23 40 56.2	
BRLS	Borolday	126.43	302	ePKP	PKiKP	23 39 01.0	+0.5
BRLS				ePP	PP	23 40 56.2	-0.1
LSZ	Lusaka	126.61	212	PKPdf	PKiKP	23 39 03.9	+2.0
LSZ	Lusaka	126.61	212	PKIKP	PKiKP	23 39 03.9	+2.0
BVAR	Borovoye Array	127.57	315	PKP	PKiKP	23 39 01.4	-1.0
	comp=Z,5.0nm,0.8s,baz=90,slow=3.0,SNR=22						
BRVK	Borovoye	127.64	315		PKiKP	23 39 03.0	+0.5
BRVK	Borovoye	127.64	315	c iPKIKP	PKiKP	23 39 03.3	+0.8
BRVK				pmax	pmax		
	comp=Z,12nm,1.3s						
ABKAR	Akbulak array	133.96	309		PKiKP	23 39 15.3	-0.1
ARTI	Arti	134.46	320		PKiKP	23 39 16.2	0.0
ARTI	Arti	134.46	320	PKP	PKiKP	23 39 15.6	-0.6
	comp=Z,8.8nm,0.8s,baz=60,slow=2.4,SNR=9.6						
ARTI	Arti	134.46	320	i PKIKP	PKiKP	23 39 15.9	-0.3
ARTI						23 41 44.7	
ARTI				SS	SS	23 59 35.1	-1.0
AKTO	Aktyubinsk	135.19	311	PKP	PKiKP	23 39 16.8	-1.1
	comp=Z,4.4nm,0.8s,baz=300,slow=2.4,SNR=9.4						
KIRV	Kirov	138.67	324	i PKIKP	PKiKP	23 39 25.2	+0.6
HAMF	Hammerfest	139.58	349	eP	PKiKP	23 39 27.3	+1.1
ARCES	ARCESS Array B	140.22	347	PKhKP	PKPpre	23 39 19.6	
	comp=Z,3.1nm,0.8s,baz=48,slow=2.4,SNR=9.4						
BELG	Belogornoye	141.37	315	PKP	PKiKP	23 39 28.7	-1.7
	comp=Z,16nm,0.8s,baz=324,slow=3.6,SNR=4.8						
BELG	Belogornoye	141.37	315	i PKIKP	PKiKP	23 39 27.5	-2.9
KLMR	Klimovskoe	142.22	331	ePKIKP	PKiKP	23 39 29.7	-2.2
KLMR				pmax	pmax		
	comp=Z,19nm,1.4s						
AKT	Akhty	142.53	298	ePKIKP	PKPdf	23 39 28.2	-2.0
AKT				e		23 42 34.5	
AKT				pmax	pmax		
	comp=Z,13nm,1.1s						
GNI	Garni	144.78	295		PKiKP	23 39 35.3	-2.8
GNI	Garni	144.78	295	i PKIKP	PKiKP	23 39 33.7	-4.3
KONS	Konsvik	144.91	352	eP	PKiKP	23 39 34.3	-2.9
STOK	Stokkvaagen	145.08	352	eP	PKiKP	23 39 33.8	-3.8
VRH	Novokhopyorsk	145.22	315	ePKP2	PKiKP	23 39 34.2	-4.1
VRH				pmax	pmax		
	comp=Z,21nm,0.6s						
LEIR	Leirfjorden	145.28	352	eP	PKiKP	23 39 34.0	-4.0
NCK	Nalchik	145.51	301	i PKIKP	PKiKP	23 39 35.8	-3.4
MOS	Moscow	145.69	324	i PKP2	PKPab	23 39 34.5	-1.3
MOS				pmax	pmax		
	comp=Z,200nm,1.1s						
MOS				pmax	pmax		
	comp=Z,157nm,1.0s						
GOF	Gofitskoye	145.73	304	ce PKP2	PKiKP	23 39 36.2	-3.4
KBZ	Khabaz	145.99	302	PKPbc	PKiKP	23 39 37.1	-3.0
	comp=Z,25nm,1.0s,baz=130,slow=2.6,SNR=27						
KBZ	Khabaz	145.99	302	i PKP2	PKiKP	23 39 37.3	-2.8
KIV	Kislovodsk	146.12	302		PKiKP	23 39 37.6	-3.0
KIV	Kislovodsk	146.12	302	⇑P	PKiKP	23 39 38.0	-2.6
KIV	Kislovodsk	146.12	302	i PKP2	PKiKP	23 39 37.6	-3.0
KIV				pmax	pmax		
	comp=Z,17nm,1.1s						
SHA1	Shidzhatmaz	146.16	302	d iPKP2	PKiKP	23 39 38.2	-2.7
LPSR	Galich'ya Gora	146.36	319	ePKP2	PKiKP	23 39 37.6	-3.0
LPSR				pmax	pmax		
	comp=Z,120nm,0.9s						
PUL	Pulkovo	146.50	334	c iPKP2	PKiKP	23 39 38.8	-1.9
PUL				pmax	pmax		
	comp=Z,157nm,0.8s						
OBN	Obninsk	146.52	324		PKiKP	23 39 37.6	-3.2
OBN	Obninsk	146.52	324	⇑P	PKiKP	23 39 38.6	-2.3
OBN	Obninsk	146.52	324	⇑ePKIKP	PKPab	23 39 37.0	-2.0
OBN				e		23 43 01.8	
OBN				pmax	pmax		
	comp=Z,62nm,0.9s						
OBN				MLR	MLR		
	comp=Z,101nm,20.0s						
VORR	Voronezh	146.55	317	ePKP2	PKiKP	23 39 38.4	-2.6
VORR				pmax	pmax		
	comp=Z,174nm,1.0s						
FINES	FINESS Array B	146.71	339	PKPbc	PKiKP	23 39 38.2	-2.9
	comp=Z,28nm,0.7s,baz=53,slow=3.3,SNR=89						
VSR	Storozhevoye	146.74	316	ePKIKP	PKPab	23 39 37.9	-2.1
VSR				pmax	pmax		
	comp=Z,80nm,0.9s						
VORD	Divnogorie	146.75	316	ePKIKP	PKPab	23 39 38.2	-1.9
VORD				pmax	pmax		
	comp=Z,80nm,0.9s						
NSS	Namsos	146.94	352	eP	PKiKP	23 39 39.1	-2.3
ERBR	Yeremizino-Bor	147.40	306	i PKP2	PKPab	23 39 41.8	-1.0
ERBR				pmax	pmax		
	comp=Z,57nm,1.0s						
LABN	Labinsk	147.42	304	i PKP2	PKPab	23 39 41.2	-1.8
LABN				pmax	pmax		
	comp=Z,16nm,0.6s						
SOC	Sochi	148.30	302	ePKIKP	PKiKP	23 39 42.2	-2.7
SOC				e		23 43 19.3	
SOC				ePPP	PPP	23 46 30.3	
SOC				eSSS	SSS	00 07 46.1	
SOC				pmax	pmax		
	comp=Z,21nm,0.9s						
SOC				MLR	MLR		
	comp=Z,98nm,19.0s						
VSU	Vasula	148.74	335	c iPKP2	PKiKP	23 39 43.8	-1.5
VSU				pmax	pmax		
	comp=Z,87nm,1.3s						
DOMB	Dombas	149.68	353	eP	PKPab	23 39 46.7	-4.8
ANN	Anapa	149.69	305	i PKP2	PKiKP	23 39 47.1	-0.6
ANN				pmax	pmax		
	comp=Z,55nm,0.9s						
AKN	Aaknes	149.72	355	eP	PKiKP	23 39 44.5	-2.8
NB2	NORSAR Subarra	150.41	351	PKP	PKiKP	23 39 47.2	-1.6
	comp=Z,16nm,1.2s,baz=17,slow=4.3						
NB2	NORSAR Subarra	150.41	351	PKP	PKiKP	23 39 47.2	-1.6
	baz=17,slow=4.3						
NOA	NORSAR Array B	150.41	351	PKPbc	PKiKP	23 39 47.5	-1.3
	comp=Z,8.6nm,1.0s,baz=15,slow=4.2,SNR=28						
NC602	NORSAR Array S	150.66	350	eP	PKiKP	23 39 48.4	-0.8
HYA	Hoyanger	150.78	356	eP	PKiKP	23 39 49.3	-0.2
HFS	Hagfors	150.88	348	PKPbc	PKiKP	23 39 48.7	-1.0
	comp=Z,12nm,0.8s,baz=122,slow=1.9,SNR=20						
MNK	Minsk	151.01	328	i PKiKP	PKiKP	23 39 51.0	+0.9
	comp=E,12nm,0.9s						
MNK				i PKiKP	PKiKP	23 39 51.0	+0.9
	comp=N,10.0nm,0.9s						
MNK				i PKiKP	PKiKP	23 39 51.0	+0.9
	comp=Z,62nm,0.9s,baz=50						
MNK				i PP	PP	23 43 28.2	+0.8
MNK				i SKS	SKSdf	23 46 49.1	+0.6
MNK				i PPP	PPP	23 46 51.7	
MNK				i SS	SS	00 02 49.2	+2.5
MNK				i SSS	SSS	00 08 32.7	
MNK				i LQ	LQ	00 41 32.9	
MNK				i LR	LR	00 51 28.4	
MNK				i LRM	MLR	00 51 54.9	
	comp=N,46nm,15.9s						
MNK				i LRM	MLR	00 52 14.0	
	comp=E,57nm,17.2s						
MNK				i LRM	MLR	00 52 45.6	
	comp=Z,80nm,16.8s						
MNK	Minsk	151.01	328	i PKIKP	PKiKP	23 39 51.0	+0.9
MNK				i		23 43 28.2	
MNK				i		23 46 49.0	
MNK				i PPP	PPP	23 46 51.7	
MNK				i SS	SS	00 02 49.2	+2.5
MNK				i SSS	SSS	00 08 32.6	
MNK				pmax	pmax		
	comp=E,12nm,0.9s						
MNK				pmax	pmax		
	comp=N,10.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,62nm,0.9s						
SKAR	Skarslia	151.09	354	eP	PKiKP	23 39 50.7	+0.4
BEIL	Beino	151.37	284	eP	PKiKP	23 39 51.8	+0.2
GHAJ	Ghor Haditha	151.45	277		PKiKP	23 39 52.8	+1.0
ASK	Askoy	151.52	357	eP	PKiKP	23 39 50.4	-0.6
HWQ	Hawqa	151.54	284	eP	PKiKP	23 39 52.6	+0.5
ZAHL	Zahle	151.55	283	eP	PKiKP	23 39 52.6	+0.5
RCY	Rachaya	151.55	282	eP	PKiKP	23 39 53.0	+0.8
BER	Bergen	151.61	356	eP	PKiKP	23 39 51.9	+0.7
SHBL	Chebaa	151.61	282	eP	PKiKP	23 39 52.9	+0.6
QRWL	Qaraoun	151.68	282	eP	PKiKP	23 39 52.6	+0.3
BHL	Bhannes	151.74	283	eP	PKiKP	23 39 52.8	+0.2
DQRL	Deir Qamar	151.79	282	eP	PKiKP	23 39 52.9	+0.3
DIKM	Dikmen	151.84	299	⇑P	PKiKP	23 39 53.0	+0.7
MMAI	Mount Meron Ar	151.85	281	PKPbc	PKiKP	23 39 53.6	+0.9
	comp=Z,29nm,0.9s,baz=76,slow=3.5,SNR=41						
SIM	Simferopol'	151.94	307	ePKIKP	PKiKP	23 39 52.3	-0.1
SIM				pmax	pmax		
	comp=Z,35nm,1.1s						
KONO	Kongsberg	151.96	352		PKiKP	23 39 52.7	+0.7
KONO	Kongsberg	151.96	352	PKIKP	PKiKP	23 39 52.7	+0.7
KONO	Kongsberg	151.96	352	eP	PKiKP	23 39 50.0	-2.0
AKASG	Malin Array Be	152.59	321		PKiKP	23 39 54.2	+0.6
AKASG	Malin Array Be	152.59	321	PKPbc	PKiKP	23 39 53.5	-0.1
	comp=Z,15nm,1.0s,baz=59,slow=2.8,SNR=24						
KIEV	Kiev	152.61	321		PKiKP	23 39 53.9	+0.3
KIEV	Kiev	152.61	321	⇑P	PKiKP	23 39 53.5	0.0
KIEV	Kiev	152.61	321	PKIKP	PKiKP	23 39 53.9	+0.3
AK15	Malin Array Si	152.65	321	PKP	PKPdf	23 39 47.1	+0.7
BZK	Bozkurt	152.72	300	⇑P	PKiKP	23 39 55.1	+1.0
KIRS	Kirsehir-Merke	153.17	294	⇑P	PKiKP	23 39 55.6	+0.3
BRTR	Keskin Array B	153.33	296		PKiKP	23 39 56.0	+0.3
BRTR	Keskin Array B	153.33	296	PKPbc	PKiKP	23 39 55.6	0.0
	comp=Z,8.2nm,1.0s,baz=131,slow=3.4,SNR=27						
SUW	Suwalki	153.35	332	ePKP	PKiKP	23 39 56.1	+1.1
DBIC	Dimbokro	153.92	164	PKPbc	PKiKP	23 39 59.0	+1.6
	comp=Z,1.9nm,0.8s,baz=349,slow=16,SNR=1.1						
DBIC				PKPab	PKPab	23 40 11.6	+1.1
	comp=Z,5.3nm,0.9s,baz=258,slow=6.4,SNR=3.7						
ANTO	Ankara	153.95	296		PKiKP	23 39 57.4	+0.5
ANTO	Ankara	153.95	296	PKIKP	PKiKP	23 39 57.4	+0.5
RNPP5	Staryi Chortor	154.01	324	PKP	PKPdf	23 39 49.0	+0.7
SORM	Soroca	154.40	316	⇓P	PKiKP	23 39 57.9	+0.6
GKP	Gorka Klasztor	156.13	337	ePKP	PKPab	23 40 19.4	+0.5
TESR	Tescani	156.20	314	⇑P	PKPab	23 40 19.6	+0.1
VRI	Vrincioaia	156.45	313	⇑P	PKPab	23 40 13.5	-7.1
VRI	Vrincioaia	156.45	313	⇑PKP2	PKPab	23 40 13.5	-7.1
BURAR	Bucovina Array	156.48	318		PKPab	23 40 21.0	+0.3
BURAR	Bucovina Array	156.48	318	⇑P	PKPab	23 40 21.1	+0.3
BURAR	Bucovina Array	156.48	318	⇑PKP2	PKPab	23 40 21.1	+0.3
PLOR	Plostina	156.50	313	⇑P	PKPab	23 40 22.1	+1.2
PLOR	Plostina	156.50	313	⇑PKP2	PKPab	23 40 22.1	+1.2
KWP	Kalwaria Pacla	156.60	325	ePKP	PKPab	23 40 20.3	-0.8
TURR	Turia	156.80	314	⇓P	PKPab	23 40 23.8	+1.7
BSEG	Bad Segeberg	157.35	347	ePKPab	PKPab	23 40 24.5	+0.4
	baz=25,slow=4.5						
STHS	Stebnicka Huta	157.45	326	ePKP	PKPab	23 40 25.1	+0.3
OJC	Ojcow	157.55	329	ePKP	PKPab	23 40 25.9	+0.7
OJC	Ojcow	157.55	329	PKPdf	PKPdf	23 39 54.8	+1.7
OJC					PKPab	23 40 25.8	+0.7
OJC	Ojcow	157.55	329	PKIKP	PKPdf	23 39 54.8	+1.7
VOIR		157.69	313	⇑P	PKPab	23 40 25.3	-0.7
VOIR		157.69	313	⇑PKP2	PKPab	23 40 25.3	-0.7
RUE	Ruedersdorf	157.88	341	ePKPab	PKPab	23 40 26.9	+0.5
	baz=25,slow=4.5						
NIE	Niedzica	157.90	327	ePKP	PKPab	23 40 27.3	+0.6
MARR	Marisel-Cluj	158.19	318	⇑P	PKPab	23 40 28.0	-0.2
DRGR		158.35	319	⇓P	PKPab	23 40 29.4	+0.6
DRGR		158.35	319	⇓PKP2	PKPab	23 40 29.4	+0.6
KSP	Ksiaz	158.47	335	ePKP	PKPab	23 40 29.6	+0.5
LANS	Liptovska Anna	158.47	327	ePKP2	PKPab	23 40 30.5	+1.3
LANS	Liptovska Anna	158.47	327	ePKP	PKPab	23 40 30.5	+1.3
OKC	Ostrava-Krasne	158.54	330	AMS	AMS	00 53 20.0	
	comp=Z,100nm,18.6s						
FLTG	Flechtingen	158.67	344	ePKPab	PKPab	23 40 28.7	-1.1
	baz=25,slow=4.5						
RETH	Rethem/Aller,	158.67	348	ePKPab	PKPab	23 40 29.6	-0.2
	baz=25,slow=4.5						
OSTC	Ostas	158.73	334	ePKPAB	PKPab	23 40 31.5	+1.3
OSTC				AMS	AMS	00 52 20.0	
	comp=Z,200nm,23.4s						
OSTC	Ostas	158.73	334	ePKP2	PKPab	23 40 31.5	+1.3
OSTC				MLR	MLR		
	comp=Z,200nm,23.4s						
NRDL	Niedersach Rie	158.76	346	ePKPab	PKPab	23 40 30.3	+0.2
	baz=25,slow=4.5						
CHVC	Chvalec	158.76	335	ePKPAB	PKPab	23 40 30.7	+0.3
CHVC				AMS	AMS	00 52 50.0	
	comp=Z,200nm,22.5s						
CHVC	Chvalec	158.76	335	ePKP2	PKPab	23 40 30.7	+0.3
CHVC				MLR	MLR		
	comp=Z,200nm,22.5s						
MORC	Moravsky Berou	158.84	331	ePKP	PKPab	23 40 30.9	+0.1
UPC	Upice	158.85	335	AMS	AMS	00 51 40.0	
	comp=Z,200nm,19.1s						
DPC	Dobruska-Polom	158.86	334	ePKPAB	PKPab	23 40 31.1	+0.3
DPC	Dobruska-Polom	158.86	334	ePKP2	PKPab	23 40 31.1	+0.3
KRLC	Kraliky	158.91	333	ePKPAB	PKPab	23 40 29.6	-1.5
KRLC	Kraliky	158.91	333	ePKP2	PKPab	23 40 29.6	-1.5
ASSE	Asse, Remlinge	158.98	345	ePKPab	PKPab	23 40 31.4	+0.3
	baz=25,slow=4.5						
PSZ	Piszkesteto	159.13	324	⇑P	PKPab	23 40 33.1	+0.9
PSZ	Piszkesteto	159.13	324	⇑PKP2	PKPab	23 40 33.1	+0.9
CLL	Collm	159.14	340	i PKP2	PKPab	23 40 31.5	-0.5
CLL				pmax	pmax		
	comp=Z,15nm,0.8s						
CLL	Collm	159.14	340	ePKPab	PKPab	23 40 31.4	-0.5
	baz=25,slow=4.5						
CLL	Collm	159.14	340	i PKPab	PKPab	23 40 31.5	-0.5
	comp=Z,15nm,0.8s						
CLL				epPKPab	pPKPab	23 40 34.0	-7.4
CLL				AMS	AMS	00 54 00.0	
	comp=Z,200nm,21.7s						
VYHS	Vyhne	159.23	327	ePKP	PKPab	23 40 32.8	+0.3
BRG	Berggiesshubel	159.24	338	ePKPab	PKPab	23 40 32.6	+0.2
	baz=25,slow=4.5						
BRG	Berggiesshubel	159.24	338	ePKP	PKPab	23 40 32.3	-0.1
BRG				Amp		23 40 34.2	
	comp=Z,11nm,0.9s						
BRG	Berggiesshubel	159.24	338	P	PKPab	23 40 40.2	+7.9
BRG				Amp		23 40 41.2	
	comp=Z,4.1nm,0.9s						
SURR	Surduc	159.28	317	⇓P	PKPab	23 40 33.3	+0.6
IBBN	Ibbenburen	159.36	350	ePKPab	PKPab	23 40 32.8	0.0
	baz=25,slow=4.5						
JAVC	Velka Javorina	159.49	329	ePKP	PKPab	23 40 34.8	+1.2
NEUB	Neuenburg	159.57	342	ePKPab	PKPab	23 40 34.2	+0.4
	baz=25,slow=4.5						
HERR	Herculane	159.58	315	⇓P	PKPab	23 40 34.6	+0.5
VRAC	Vranov	159.59	332	ePKP	PKPab	23 40 34.3	+0.3
VRAC	Vranov	159.59	332	⇑P	PKPab	23 40 34.6	+0.6
VRAC	Vranov	159.59	332	⇑PKP2	PKPab	23 40 34.6	+0.6
GTTG	Gottingen	159.69	345	ePKPab	PKPab	23 40 33.2	-1.1
	baz=25,slow=4.5						
PRA	Prague	159.77	336	ePKPAB	PKPab	23 40 35.5	+0.8
PRA				AMS	AMS	00 56 10.0	
	comp=Z,200nm,15.9s						
PRA	Prague	159.77	336	ePKP2	PKPab	23 40 35.5	+0.8
PRA				MLR	MLR		
	comp=Z,200nm,15.9s						
GOPC	GO Pecny, Ondr	159.78	335	AMS	AMS	00 51 30.0	
	comp=Z,200nm,15.4s						
PRU	Pruhonice	159.80	336	ePKPAB	PKPab	23 40 34.8	-0.1
PRU				AMS	AMS	00 56 20.0	
	comp=Z,200nm,17.8s						
PRU	Pruhonice	159.80	336	ePKP2	PKPab	23 40 34.8	-0.1
PRU				MLR	MLR		
	comp=Z,200nm,17.8s						
KRUC	Moravsky	159.87	332	ePKP	PKPab	23 40 35.2	0.0
MODS	Modra-Piesok	160.03	329	ePKP	PKPab	23 40 35.8	-0.1
MDVR	Moldovita	160.06	315	⇑P	PKPab	23 40 36.6	+0.3
TANN	Tannenbergstha	160.09	340	ePKPab	PKPab	23 40 36.2	0.0
	baz=25,slow=4.5						
MOX	Moxa	160.12	342	ePKPab	PKPab	23 40 36.2	-0.1
	baz=25,slow=4.5						
MOX				eL	L	00 55 52.7	
	comp=Z,136nm,20.4s						
KASTN	Kahler Asten	160.31	348	ePKPab	PKPab	23 40 37.3	+0.2
	baz=25,slow=4.5						
ZVC	Zvikov	160.39	336	ePKPAB	PKPab	23 40 38.0	+0.6
ZVC				AMS	AMS	00 56 40.0	
	comp=Z,200nm,18.6s						
MANZ	Manzenberg	160.58	340	ePKPab	PKPab	23 40 38.6	+0.3
	baz=25,slow=4.5						
ROTZ	Rotzenmuhle	160.75	340	ePKPab	PKPab	23 40 40.0	+1.0
	baz=25,slow=4.5						
KHC	Kasperske Hory	160.86	336	ePKPAB	PKPab	23 40 38.9	-0.7
KHC				AMS	AMS	01 00 30.0	
	comp=Z,100nm,16.5s						
KHC	Kasperske Hory	160.86	336	ePKP2	PKPab	23 40 38.9	-0.7
KHC				MLR	MLR		
	comp=Z,100nm,16.5s						
CKRC	Cesky Krumlov	160.87	334	AMS	AMS	00 56 50.0	
	comp=Z,100nm,20.1s						
RONA	Rosalia, Austr	160.97	329	i PKP	PKPab	23 40 40.8	+0.8
	comp=Z,13nm,0.9s						
CONA	Conrad Observa	160.97	330	ePKP	PKPab	23 40 41.0	+0.8
	comp=Z,8.4nm,0.8s						
GEC2	GERESS Array S	161.06	336	PKPdf	PKPdf	23 39 59.1	+1.8
GEC2					PKPab	23 40 40.9	+0.4
GEC2	GERESS Array S	161.06	336	ePKPab	PKPab	23 40 40.6	+0.1
	baz=25,slow=4.5						
GERES	GERESS Array B	161.06	336	PKPab	PKPab	23 40 40.2	-0.3
	comp=Z,3.3nm,0.8s,baz=34,slow=2.6,SNR=2.9						
WET	Wettzell	161.09	337	ePKPab	PKPab	23 40 41.3	+0.8
	baz=25,slow=4.5						
GRF	Grafenberg Arr	161.10	341	ePKPab	PKPab	23 40 40.9	+0.4
	baz=25,slow=4.5						
GRF				eL	L	00 56 00.9	
	comp=Z,137nm,20.7s						
TORD	Torodi Ar. Bea	161.15	179	PKPab	PKPab	23 40 42.5	+1.0
	comp=Z,68nm,0.3s,baz=178,slow=3.3,SNR=1.1						
TNS	Taunus Mts	161.25	347	ePKPab	PKPab	23 40 41.5	+0.3
	baz=25,slow=4.5						
ARSA	Arzberg	161.65	329	ePKP	PKPab	23 40 44.2	+1.1
	comp=Z,6.2nm,1.2s						
MOA	Molln	161.68	333	ePKP	PKPab	23 40 43.7	+0.5
	comp=Z,6.0nm,1.4s						
BIOA	Bad Ischl, Aus	162.05	334	ePKP	PKPab	23 40 45.6	+0.8
	comp=Z,12nm,1.2s						
SOKA	Soboth	162.30	329	i PKP	PKPab	23 40 46.2	+0.2
	comp=Z,9.9nm,1.1s,SNR=4.4						
RJOB	Jochberg	162.32	335	ePKPab	PKPab	23 40 46.1	0.0
	baz=25,slow=4.5						
FUR	Furstenfeldbru	162.45	339	ePKPab	PKPab	23 40 46.9	+0.4
	baz=25,slow=4.5						
STU	Stuttgart	162.46	344	ePKPab	PKPab	23 40 46.9	+0.5
	baz=25,slow=4.5						
LESA	Schwarzleotal	162.63	335	ePKP	PKPab	23 40 46.9	-0.5
	comp=Z,12nm,1.3s						
OBKA	Obir	162.64	330	ePKP	PKPab	23 40 47.8	+0.3
	comp=Z,13nm,1.2s						
MYKA	Terra Mystica	162.92	332	ePKP	PKPab	23 40 48.2	-0.5
	comp=Z,2.3nm,0.5s						
BFO	Black Forest	163.07	345		PKPab	23 40 48.6	-0.6
BFO	Black Forest	163.07	345	PKP2	PKPab	23 40 48.6	-0.6
BFO	Black Forest	163.07	345	ePKPab	PKPab	23 40 49.2	0.0
	baz=25,slow=4.5						
WATA	Walderalm	163.09	337	i PKP	PKPab	23 40 49.2	-0.3
	comp=Z,5.0nm,0.8s						
WTTA	Wattenberg	163.13	337	ePKP	PKPab	23 40 50.4	+0.7
	comp=Z,7.4nm,0.8s						
RETA	Reutte	163.22	339	i PKP	PKPab	23 40 49.9	0.0
	comp=Z,14nm,1.0s,SNR=12						
UBR	Ueberruh	163.23	341	ePKPab	PKPab	23 40 50.8	+0.8
	baz=25,slow=4.5						
MOTA	Moosalm	163.24	338	i PKP	PKPab	23 40 49.8	-0.3
	comp=Z,15nm,1.0s						
ABTA	Abfaltersbach	163.26	334	i PKP	PKPab	23 40 50.4	+0.1
	comp=Z,13nm,1.1s						
SQTA	Sankt Quirin	163.31	338	ePKP	PKPab	23 40 50.7	+0.3
	comp=Z,7.8nm,0.8s						
FETA	Feichten	163.64	338	ePKP	PKPab	23 40 52.3	+0.4
	comp=Z,11nm,1.0s,SNR=7.6						
DAVA	Damuels	163.66	341	i PKP	PKPab	23 40 51.8	-0.2
	comp=Z,14nm,1.1s						
ESDC	Sonseca Array	171.04	31	PKP	PKPdf	23 40 06.2	+0.7
	comp=Z,0.6nm,1.1s,baz=343,slow=4.6,SNR=4.8						
ESDC				PKPab	PKPab	23 41 25.7	+1.0
	comp=Z,0.5nm,0.9s,baz=328,slow=4.2,SNR=1.8						

ASRS ***16*** *23:27:50.4±0.3, 49°N±1°×8°2E±°, h5^{km}, MLh3.1/11, Error ellipse: s-maj=3.8km s-min=2.5km az=130.6, confirmed*

NNC ***16*** *23:27:56.8±2.2, 48°.98N×82°.44E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=27.9km s-min=7.5km az=65.0, Suspected Mining explosion.*

ISC 16 23:27:54.5±0.9**, 48°.94N**±0°.03×**81°.99E**±0°.03**, h0^{km}, n22, σ1^{s}45**/38**, 7C-1D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEM	Semipalatinsk	1.85	323	Lg	Lg	23 28 54.2	
	83nm,0.3s						
MAKZ	Makanchi	2.13	180	⇑Pn	Pb	23 28 33.2	-0.7
	5.4nm,0.3s						
MAKZ				⇑Sn	Sg	23 29 02.9	0.0
	12nm,0.3s						
MAKZ	Makanchi	2.13	180	Pg	Pb	23 28 33.4	-0.5
MAKZ				Sg	Sg	23 29 02.7	-0.1
MK31	Makanchi Array	2.15	174	⇑Pn	Pb	23 28 33.8	-0.6
	4.2nm,0.4s,baz=359,slow=15,SNR=168						
MK31				⇑Sn	Sg	23 29 04.2	+0.6
	5.7nm,0.2s,baz=359,slow=27						
MKAR	Makanchi Array	2.15	174	Pg	Pb	23 28 33.7	-0.7
MKAR				Sg	Sg	23 29 03.7	+0.1
ZSN	Zaisan	2.43	127	Pg	Pn	23 28 36.3	+0.8
	16nm,0.5s						
KURBB	Kurchatov Arra	2.81	308	⇓Pn	Pb	23 28 44.9	-0.5
	3.3nm,0.3s,baz=115,slow=14						
KURBB				⇑Sn	Sg	23 29 25.2	+0.7
	82nm,0.7s						
KURK	Kurchatov	2.81	311	⇑Pn	Pb	23 28 45.5	0.0
	0.9nm,0.3s						
KURK				⇑Sn	Sg	23 29 23.7	-1.2
	9.2nm,0.4s						
KURK	Kurchatov	2.81	311	Pn	Pn	23 28 40.3	-0.4
KURK				Pg	Pb	23 28 45.6	0.0
KURK				Sg	Sg	23 29 23.3	-1.5
ELDR	Elanda	3.49	48	Pg	Pb	23 28 57.0	-0.2
ELDR				Sg	Sb	23 29 39.5	-0.6
DGZ	Jazzator, Alta	3.64	76	Pn	Pn	23 28 51.2	-1.0
DGZ				Pg	Pb	23 29 00.1	+0.3
DGZ				Sg	Sb	23 29 43.5	-1.1
CHBI	Chibit, Altay	3.84	67	Pn	Pn	23 28 54.1	-0.8
CHBI				Pg	Pb	23 29 02.6	-0.6
CHBI				Sg	Sb	23 29 49.7	-0.6
AKAR	Aktash	3.92	67	Pg	Pb	23 29 03.0	-1.4
AKAR				Sg	Sb	23 29 52.3	-0.1
GALT	Gorno-Altaysk,	3.94	38	Sg	Sb	23 29 53.5	+0.4
ULGR	Ulagan, Altay	4.22	64	Pn	Pn	23 28 59.0	-1.2
ULGR				Pg	Pb	23 29 07.8	-1.9
ULGR				Sg	Sb	23 30 02.0	+0.8
CUR	Chagan-Uzun	4.31	72	Pn	Pn	23 29 01.2	-0.2
CUR				Pg	Pb	23 29 10.1	-1.0
CUR				Sg	Sb	23 30 06.7	+3.0
ARTR	Artybash	4.44	48	Sg	Sb	23 30 08.8	+1.6
YALR	Yailyu, Altay	4.58	50	Pg	Pb	23 29 14.9	-0.9
YALR				Sg	Sb	23 30 14.0	+2.5
TDK	Taldyqorghan	4.64	213	Lg	Lg	23 30 25.3	
	17nm,0.2s						
DJR	Jarkent	4.85	199	Lg	Lg	23 30 29.7	
	2.0nm,0.1s						
ELT	Eltsovka	5.09	30	Sg	Sb	23 30 29.0	+3.0
TASR	Tashtagol	5.35	42	Sg	Sb	23 30 38.5	+5.1

AEIC ***16*** *23:43:56.2±1.5, 53°.92N±0°.04×163°.63W±0°.07, h25^{km}±7^{km}, Error ellipse: s-maj=6.7km s-min=4.7km az=134.0*

NEIC 16 23:43:56.8±1.1**, 53°.97N**±0°.07×**163°.65W**±0°.09**, h26**^{km}±11^{km}**, ML2.7**/14**, ML2.6**(AEIC)**, Error ellipse: s-maj=12.0km s-min=4.8km az=147.0, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESE	**West Dahl East**	**0.74**	**313**		Pb	23 44 11.1	-0.1
ISLZ	**Isanotski Laza**	**0.76**	**357**		Pb	23 44 10.9	-0.4
ISLZ					Sn	23 44 22.5	0.0
SSLS	**Shishaldin Sou**	**0.77**	**345**		Pb	23 44 11.7	+0.1
SSLS					Sn	23 44 22.7	-0.1
SSBA	**Shishaldin**	**0.85**	**341**		Pb	23 44 12.7	-0.2
ISNN	**Isanotski Nort**	**0.87**	**355**		Pn	23 44 13.3	0.0
WEBT	**Westdahl Beart**	**0.90**	**314**		Pb	23 44 13.5	-0.1
FALS	**False Pass**	**0.90**	**9**		Pn	23 44 13.0	-0.7
FALS					Sn	23 44 25.7	-0.1
AKUT	**Akutan**	**1.26**	**278**		Pn	23 44 18.2	-0.4
AKUT				Sn	Sn	23 44 34.5	-0.3
AKUT				IAML		23 44 36.6	
	comp=E,112nm,0.3s						
AKUT				IAML		23 44 37.6	
	comp=N,119nm,0.5s						
AHB	**Akutan Harbor**	**1.28**	**277**		Pn	23 44 18.7	-0.3
AKBBA	**Akutan Broad B**	**1.35**	**276**		Pn	23 44 19.6	-0.3
ZRO	**Akutan Zero**	**1.38**	**276**		Pn	23 44 20.0	-0.3
AKGG	**Akutan Green G**	**1.40**	**280**		Pn	23 44 20.5	-0.1
AKGG					Sn	23 44 38.5	+0.3
LVA	**Lava Point**	**1.42**	**279**	Pn	Pn	23 44 19.5	-1.4
LVA				IAML		23 44 45.0	
	comp=E,92nm,0.7s						
LVA				IAML		23 44 58.3	
	comp=N,140nm,0.8s						
HAG	**Hague Volcano**	**1.69**	**36**		Pn	23 44 24.4	-0.2
UNV	**Unalaska Valle**	**1.69**	**267**		Pn	23 44 23.4	-1.2
PS4A	**Pavlof South-4**	**1.73**	**36**		Pn	23 44 24.8	-0.3
MTBL	**Makushin Table**	**1.79**	**271**		Pn	23 44 25.4	-0.6
PS1A	**Pavlof South-1**	**1.83**	**37**		Pn	23 44 26.7	+0.2
MREP	**Makushin Rep’t**	**1.84**	**266**		Pn	23 44 25.9	-0.8
MGOD	**Makushin Gods**	**1.92**	**266**		Pn	23 44 27.3	-0.4
MAPS	**Pakushin South**	**1.95**	**267**		Pn	23 44 27.8	-0.4
S12K	**Black Hills**	**1.97**	**27**		Pn	23 44 27.6	-0.8
S12K				IAML		23 44 59.3	
	comp=N,88nm,0.3s						
SDPT	**Sand Point**	**2.31**	**52**		Pn	23 44 33.5	+0.5
SDPT				IAML		23 45 11.2	
	comp=N,64nm,0.7s						
SDPT				IAML		23 45 17.6	
	comp=E,60nm,1.3s						
CNBA	**Chernabura Isl**	**2.52**	**69**	Pn	Pn	23 44 34.2	-1.8
CNBA				IAML		23 45 31.4	
	comp=E,21nm,1.3s						
O14K	**Tigyukauivet M**	**5.46**	**13**	Pn	Pn	23 45 16.9	+0.6
O15K	**Ungalikthiuk R**	**5.63**	**20**	Pn	Pn	23 45 18.8	+0.1
O16K	**Kokwok River B**	**6.41**	**26**	Pn	Pn	23 45 29.5	+0.2
M13K	**Dall Lake**	**6.46**	**1**	Pn	Pn	23 45 31.0	+0.9
N15K	**Kwethluk River**	**6.51**	**16**	Pn	Pn	23 45 30.9	+0.1
M14K	**Bethel**	**6.86**	**7**	Pn	Pn	23 45 35.6	0.0
L14K	**Kuka Creek**	**7.41**	**4**	Pn	Pn	23 45 44.4	+1.4
N17K	**Nushagak Hills**	**7.45**	**25**	Pn	Pn	23 45 43.0	-0.6
O18K	**Koktuh Hills**	**7.49**	**35**	Pn	Pn	23 45 42.9	-1.3
M16K	**Timber Creek**	**7.51**	**18**	Pn	Pn	23 45 44.4	0.0
M17K	**Holitna River**	**8.16**	**22**	Pn	Pn	23 45 54.4	+1.0
K15K	**Wolf Creek Mou**	**8.42**	**7**	Pn	Pn	23 45 58.0	+1.1
J16K	**Anvik River**	**9.47**	**8**	Pn	Pn	23 46 11.4	0.0

IDC 16 23:45:03.6±2.0, 32°.21S×178°.95W, h0^{km}, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=63.2km s-min=33.1km az=46.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.24**	**269**	P	P	23 52 59.1	+0.4
	0.8nm,0.5s,baz=112,slow=7.8,SNR=7.1						
	0.8nm,0.5s						
WRA	**Warramunga Arr**	**43.39**	**275**	P	P	23 53 07.4	-0.7
	0.5nm,0.6s,baz=116,slow=8.1,SNR=3.6						
	0.5nm,0.6s						
QSPA	**South Pole Qui**	**57.90**	**180**	P	P	23 54 56.0	-1.2
	1.0nm,0.8s,baz=63,slow=4.5,SNR=6.0						
	1.0nm,0.8s						
SNAA	**Sanae**	**76.37**	**179**	P	P	23 56 56.0	+1.7
	0.4nm,0.4s,baz=193,slow=16,SNR=2.2						
	0.4nm,0.4s						
FINES	**FINESS Array B**	**146.55**	**338**	PKPbc	PKPdf	00 04 45.0	+0.4
	0.5nm,0.5s,baz=45,slow=4.1,SNR=5.7						

IDC 16 23:48:26.2±5.2, 29°.73S×178°.00W, h0^{km}, mb3.6/2, mbtmp3.6/2, Error ellipse: s-maj=285.8km s-min=76.0km az=166.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.15**	**266**	P	P	23 56 28.0	-0.9
	0.5nm,0.8s,baz=108,slow=8.1,SNR=1.7						
	0.5nm,0.8s						
WRA	**Warramunga Arr**	**44.08**	**271**	P	P	23 56 36.8	+0.4
	0.6nm,0.4s,baz=112,slow=7.9,SNR=7.9						
	0.6nm,0.4s						
FINES	**FINESS Array B**	**144.52**	**340**	PKP	PKPbc	00 08 03.2	+0.7
	1.2nm,0.7s,baz=47,slow=2.5,SNR=6.4						

IDC 17 00:03:06.1±3.3, 31°.75S×177°.56W, h0^{km}, mb3.8/2, mbtmp3.9/3, ML3.8/1, Error ellipse: s-maj=77.0km s-min=37.6km az=115.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.82**	**212**	Pn	Pn	00 04 59.7	-1.4
	1.4nm,0.3s,baz=322,slow=5.4,SNR=9.5						
URZ				Sn	Sn	00 06 33.6	+3.2
	0.7nm,0.3s,baz=270,slow=16,SNR=1.4						
	3.5nm,0.3s						
ASAR	**Alice Springs**	**43.42**	**268**	P	P	00 11 10.9	0.0
	0.7nm,0.4s,baz=103,slow=7.6,SNR=9.3						
	0.7nm,0.4s						
WRA	**Warramunga Arr**	**44.53**	**273**	P	P	00 11 19.7	-0.1
	0.7nm,0.5s,baz=113,slow=7.7,SNR=6.1						
	0.7nm,0.5s						
FINES	**FINESS Array B**	**146.54**	**340**	PKPbc	PKPbc	00 22 48.0	-0.7
	0.8nm,0.7s,baz=51,slow=2.6,SNR=3.8						

CATAC 17 00:08:27.7±0.8, 11°N±3°×8°7W±°, h26^{km}±11^{km}, M3.1/20, MLv3.1/20, Error ellipse: s-maj=8.4km s-min=5.6km az=54.2, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.87**	**35**	P	Pb	00 08 44.2	0.0
SAPS	**Ciudad Sandino**	**0.98**	**44**	S	Sn	00 08 59.3	+0.4
SAPS	**Ciudad Sandino**	**0.98**	**44**	P	Pn	00 08 45.4	-0.4
UNAN	**Cigeo UNAN**	**1.04**	**52**	P	Pn	00 08 46.5	-0.1
UNAN				S	Sb	00 09 00.8	+0.4
SABN	**Sabanita**	**1.05**	**62**	P	Pn	00 08 45.9	-0.8
TISN	**Laguna Tiscapa**	**1.06**	**50**	P	Pn	00 08 46.3	-0.6
MAS3	**Al N del Volca**	**1.07**	**58**	P	Pn	00 08 47.2	+0.2
MAS3				S	Sb	00 09 01.3	+0.1
MASN	**Masaya**	**1.07**	**61**	P	Pn	00 08 46.1	-1.0
MASN				S	Sb	00 09 01.2	-0.1
NANN	**Nandasmo**	**1.07**	**64**	S	Sb	00 09 03.1	+1.7
NANN	**Nandasmo**	**1.07**	**64**	P	Pb	00 08 48.2	+0.5
APQ3	**Volcan Apoyequ**	**1.08**	**42**	P	Pn	00 08 47.3	+0.1
APQ3				S	Sb	00 09 02.5	+1.1
MOMN	**Momotombo**	**1.09**	**30**	P	Pn	00 08 46.9	-0.5
MOMN				S	Sn	00 09 01.5	-0.1
CNGA	**Al SSO del Vol**	**1.10**	**21**	P	Pn	00 08 47.4	0.0
CNGA				S	Sb	00 09 02.1	0.0
CNGN	**Cerro Negro**	**1.10**	**21**	S	Sb	00 09 02.5	+0.3
CNGN	**Cerro Negro**	**1.10**	**21**	P	Pn	00 08 47.5	0.0
TEL3	**Telica 3**	**1.13**	**13**	P	Pn	00 08 47.7	-0.2
WILN	**Americas 2**	**1.14**	**52**	P	Pn	00 08 47.6	-0.3
WILN				S	Sb	00 09 03.3	+0.3
MOM2	**El Cardon**	**1.14**	**32**	P	Pn	00 08 47.6	-0.4
MOM2				S	Sn	00 09 03.0	+0.2
QUEN	**Al S del Volca**	**1.15**	**12**	P	Pn	00 08 48.1	-0.1
HOYN	**Al Sur del Vol**	**1.16**	**14**	P	Pn	00 08 48.4	+0.1
HOYN				S	Sb	00 09 06.0	+2.1
HERN	**Volcan Telica**	**1.17**	**13**	S	Sb	00 09 05.5	+1.3
HERN	**Volcan Telica**	**1.17**	**13**	P	Pn	00 08 48.4	0.0
ILCN	**San Idelfonso**	**1.18**	**20**	P	Pn	00 08 47.9	-0.6
ILCN				S	Sn	00 09 03.9	+0.3
PKGN	**Cerro Pekin**	**1.21**	**6**	P	Pn	00 08 48.5	-0.4
PKGN				S	Sb	00 09 05.1	0.0
POLN	**Al Sur del Vol**	**1.21**	**14**	P	Pn	00 08 49.0	0.0
JAPN	**Al SSO del Vol**	**1.40**	**87**	P	Pb	00 08 52.5	-0.7
JAPN				S	Sb	00 09 11.0	+0.3
MORN	**Al O del Volca**	**1.43**	**87**	P	Pn	00 08 52.1	+0.1
BOAB	**BOACO BROADBAN**	**1.72**	**55**	S	Sn	00 09 17.1	+0.1
BOAB	**BOACO BROADBAN**	**1.72**	**55**	P	Pn	00 08 55.5	-0.4
LIMN	**Finca el Limon**	**1.75**	**24**	P	Pn	00 08 56.2	-0.2
ACON	**Acoyapa**	**1.96**	**75**	P	Pn	00 08 59.1	-0.1
ACON	**Acoyapa**	**1.96**	**75**	S	Sn	00 09 23.3	+0.4
SCLA	**Alcaldia de Sa**	**2.73**	**325**	P	Pn	00 09 12.3	+2.4

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*IDC **17** 00:10:56.0±0.6, 31°.03S×177°.70W, h0^{km}, mb4.4/13, mbtmp4.4/16, ML4.5/3, MS4.2/41, Error ellipse: s-maj=22.4km s-min=17.4km az=93.0*

*NEIC **17** 00:11:02.0±1.1, 30°.88S±0°.09×177°.7W±0°.2, h35^{km}±2^{km}, mb4.9/27, Error ellipse: s-maj=22.2km s-min=15.0km az=279.0*

*GCMT **17** 00:11:03.0±0.3, 31°.11S±0°.02×177°.46W±0°.02, h22^{km}, MW5.0/87, Moment Tensor Solution. s48,c65; s87,c114; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.68±.19; $M_{\theta\theta}$0.36±.13; $M_{\phi\phi}$-4.04±.12; $M_{r\theta}$0.21±.27; $M_{\theta\phi}$-0.03±.10; $M_{\phi r}$1.88±.19; Best double couple: $M_0$4.29900×10^{16} NP1:ϕ_s177.00000°,δ32.00000°,λ85.00000°. NP2: ϕ_s3.00000°,δ58.00000°,λ93.00000°. Principal axes: T 4.1240, Plg77.0000°, Azm283.0000°; N 0.3500, Plg3.0000°, Azm182.0000°; P -4.4750, Plg13.0000°, Azm91.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 00:10:59.8±0.3, 31°.15S±0°.04×177°.67W±0°.07, h27^{km}, n176, σ2^{s}.13/170, mb4.8/34, MS4.3/41, 8C, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.89**	**353**	P	**Pn**	**00 11 28.4**	**-1.9**
GLKZ				S	**Sn**	**00 11 51.6**	**-1.7**
RAO	**Raoul Island**	**1.90**	**354**		**Pn**	**00 11 28.0**	**-2.4**
RIZ	**Raoul Island**	**1.91**	**353**	P	**Pn**	**00 11 29.4**	**-1.1**
RIZ				S	**Sn**	**00 11 55.8**	**+2.1**
MXZ	**Matakaoa Point**	**7.21**	**206**	P	**Pn**	**00 12 39.7**	**-3.7**
MXZ				S	**Sn**	**00 14 04.1**	**-0.2**
WMGZ	**Waiomatatini S**	**7.40**	**205**	P	**Pn**	**00 12 43.5**	**-2.5**
WMGZ				S	**Sn**	**00 14 07.4**	**-1.5**
PKGZ	**Pakihiroa**	**7.56**	**206**	P	**Pn**	**00 12 44.3**	**-3.9**
PKGZ				S	**Sn**	**00 14 10.0**	**-3.0**
HAZ	**Te Kaha**	**7.58**	**208**	P	**Pn**	**00 12 45.6**	**-2.9**
HAZ				S	**Sn**	**00 14 13.8**	**+0.3**
PUZ	**Puketiti**	**7.68**	**205**	P	**Pn**	**00 12 46.0**	**-3.8**
PUZ				S	**Sn**	**00 14 14.3**	**-1.7**
RUGZ	**Raukumara Rang**	**7.81**	**208**	P	**Pn**	**00 12 48.2**	**-3.5**
RUGZ				S	**Sn**	**00 14 17.8**	**-1.4**
TWGZ	**Tauwhareparae**	**7.87**	**206**	P	**Pn**	**00 12 50.0**	**-2.5**
TWGZ				S	**Sn**	**00 14 19.4**	**-1.4**
CNGZ	**Carnagh Statio**	**8.06**	**204**	P	**Pn**	**00 12 50.6**	**-4.5**
CNGZ				S	**Sn**	**00 14 20.7**	**-4.6**
TKGZ	**Te Karaka**	**8.15**	**206**	S	**Sn**	**00 14 25.6**	**-2.0**
MWZ	**Matawai**	**8.18**	**208**	P	**Pn**	**00 12 52.5**	**-4.3**
MWZ				S	**Sn**	**00 14 24.5**	**-3.8**
WCZ	**Waipu Caves**	**8.20**	**232**	P	Pn	00 13 05.3	+8.3
URZ	**Urewera**	**8.29**	**210**	Pn	**Pn**	**00 12 53.7**	**-4.5**
	2.5nm,0.3s,baz=351,slow=3.8,SNR=13						
URZ				Sn	**Sn**	**00 14 26.3**	**-4.6**
	6.5nm,0.3s,baz=344,slow=7.6,SNR=7.9						
URZ	**Urewera**	**8.29**	**210**	P	**Pn**	**00 12 53.7**	**-4.5**
URZ				S	**Sn**	**00 14 28.2**	**-2.8**
RAGZ	**Rawiri**	**8.37**	**208**	P	**Pn**	**00 12 55.8**	**-3.6**
RAGZ				S	**Sn**	**00 14 29.2**	**-3.7**
OUZ	**Omahuta**	**8.37**	**239**	P	Pn	00 13 05.2	+5.9
RIGZ	**Rimuhau**	**8.42**	**205**	S	**Sn**	**00 14 29.9**	**-4.2**
MUGZ	**Murupara**	**8.62**	**210**	P	Pn	00 12 57.7	-5.0
MUGZ				S	**Sn**	**00 14 36.0**	**-3.1**
SNGZ	**Shannon Statio**	**8.64**	**207**	P	**Pn**	**00 12 58.6**	**-4.5**
SNGZ				S	**Sn**	**00 14 36.7**	**-3.0**
MHGZ	**Mahia Peninsul**	**8.77**	**203**	P	Pn	00 12 58.9	-5.8
MHGZ				S	**Sn**	**00 14 38.0**	**-4.7**
BFZ	**Birch Farm**	**10.71**	**206**	P	Pn	00 13 23.2	-8.2
BFZ				S	**Sn**	**00 15 22.7**	**-7.6**
MSWZ	**Moikau Station**	**11.72**	**207**	P	Pn	00 13 36.2	-9.1
MSWZ				S	Sn	00 15 42.9	-12
MSVF	**Nonsavu**	**13.91**	**343**	Pn	**Pn**	**00 14 13.6**	**-1.7**
	0.2nm,0.3s,baz=196,slow=22,SNR=1.8						
MSVF				LR	LR	00 18 49.5	
	comp=Z,2μm,18.6s,baz=169,slow=34						
	6.5nm,0.9s						
RPZ	**Rata Peaks**	**15.39**	**212**	Pn	**Pn**	**00 14 35.9**	**+0.8**
	2.4nm,0.3s,baz=32,slow=7.0,SNR=7.2						
RPZ				Sn	Sn	00 17 10.2	-14
	0.7nm,0.3s,baz=14,slow=8.3,SNR=2.4						
	11nm,0.5s						
DZM	**Mont Dzumac**	**16.82**	**299**		**Pn**	**00 14 53.5**	**-0.1**
DZM	**Mont Dzumac**	**16.82**	**299**	*e*Pn	**P**	**00 14 57.4**	**+1.9**
	71nm,1.3s						
DZM				*e*LR	LR	00 18 48.8	
	2μm,22.8s						
DZM	**Mont Dzumac**	**16.82**	**299**	Pn	**Pn**	**00 14 52.6**	**-0.9**
	0.2nm,0.3s,baz=131,slow=11,SNR=6.3						
DZM				LR	LR	00 20 22.5	
	comp=Z,3μm,18.5s,baz=152,slow=34						
	2.4nm,0.8s						
RAR	**Rarotonga**	**18.84**	**63**	LR	LR	00 22 30.3	
	comp=Z,224nm,18.8s,baz=244,slow=37						
TBI	**Tubuai**	**26.20**	**80**	*e*P	**P**	**00 16 26.5**	**-5.9**
	710nm,44.0s						
TBI				*e*S	**S**	**00 21 04.6**	**+1.7**
	2μm,27.5s						
TBI				*e*LR	LR	00 22 57.2	
	850nm,23.5s						
TBI				*e*LR	LR	00 23 02.0	
	3μm,27.5s						
PPT2	**Papeete2**	**28.84**	**69**	*e*P	**P**	**00 16 54.4**	**-1.7**
	72nm,22.0s						
PPT2				*e*S	**S**	**00 21 45.6**	**+1.0**
	429nm,25.5s						
PPT2				*e*LR	LR	00 24 11.7	
	591nm,25.2s						
PPT2				*e*LR	LR	00 24 13.6	
	450nm,28.0s						
PPT	**Papeete**	**28.85**	**69**	LR	LR	00 25 41.4	
	comp=Z,230nm,19.4s,baz=228,slow=31						
CTAO	**Charters Tower**	**34.20**	**280**		**P**	**00 17 43.3**	**+0.1**
CTAO				IAmb	IAmb	00 17 57.4	
	comp=Z,18nm,0.8s						
CTAO	**Charters Tower**	**34.20**	**280**	P	**P**	**00 17 45.2**	**+2.0**
CTAO				pP	**pwP**	**00 17 56.3**	**+0.3**
STKA	**Stephens Creek**	**34.59**	**258**		**P**	**00 17 47.1**	**+0.6**
STKA	**Stephens Creek**	**34.59**	**258**	P	**P**	**00 17 46.5**	**+0.1**
	comp=Z,7.8nm,0.9s,baz=99,slow=10,SNR=8.1						
STKA				LR	LR	00 31 04.6	
	comp=Z,617nm,18.2s,baz=86,slow=35						
	comp=Z,7.8nm,0.9s						
TAOE	**Nuku Hiva Isla**	**41.35**	**66**	*e*S	**S**	**00 24 50.5**	**-6.4**
	comp=Z,135nm,25.3s						
TAOE				*e*LR	LR	00 29 57.8	
	comp=Z,247nm,27.1s						
AS31	**Alice Springs**	**43.35**	**268**		**P**	**00 19 00.1**	**+0.1**
ASAR	**Alice Springs**	**43.35**	**268**	P	**P**	**00 18 59.4**	**-0.5**
ASAR	**Alice Springs**	**43.35**	**268**	P	**P**	**00 19 00.6**	**+0.6**
	comp=Z,10nm,0.8s,baz=110,slow=8.0,SNR=74						
ASAR				PcP	**PcP**	**00 20 48.9**	**+0.5**
	comp=Z,1.3nm,0.5s,baz=103,slow=3.8,SNR=2.4						
ASAR				ScP	**ScP**	**00 24 38.8**	**+0.8**
	comp=Z,1.5nm,0.9s,baz=108,slow=5.2,SNR=6.6						
	comp=Z,10nm,0.8s						
DRV	**Dumont d’Urvil**	**43.56**	**203**	P	**P**	**00 19 02.9**	**+1.9**
DRV				pP	**pwP**	**00 19 13.8**	**-0.7**
WR8	**Warramunga Arr**	**44.27**	**273**		**P**	**00 19 07.2**	**-0.1**
WR8				IAmb	IAmb	00 19 27.5	
	comp=Z,18nm,0.8s						
WRAB	**Tennant Creek**	**44.41**	**273**	P	**P**	**00 19 08.1**	**-0.3**
WRAB				IAmb	IAmb	00 20 18.8	
	comp=Z,21nm,0.8s						
WRA	**Warramunga Arr**	**44.41**	**273**	P	**P**	**00 19 08.3**	**-0.1**
WRA	**Warramunga Arr**	**44.41**	**273**	P	**P**	**00 19 08.8**	**+0.4**
	comp=Z,7.0nm,0.5s,baz=112,slow=7.8,SNR=82						
WRA				PcP	**PP**	**00 20 51.9**	**-0.4**
	comp=Z,1.9nm,0.9s,baz=115,slow=3.3,SNR=2.5						
WRA				ScP	**ScP**	**00 24 44.6**	**+2.3**
	comp=Z,1.4nm,1.0s,baz=105,slow=4.1,SNR=4.9						
WRA				LR	LR	00 36 46.1	
	comp=Z,736nm,18.3s,baz=120,slow=35						
	comp=Z,7.0nm,0.5s						
WB0	**Warramunga Arr**	**44.44**	**273**		**P**	**00 19 08.4**	**-0.3**
WB0				IAmb	IAmb	00 19 28.8	
	comp=Z,21nm,0.9s						
FORT	**Forrest**	**46.13**	**256**	P	**P**	**00 19 21.6**	**-0.3**
SBA	**Scott Base**	**47.31**	**184**		**P**	**00 19 34.7**	**+4.2**
SBA				IAmb	IAmb	00 19 53.2	
	comp=Z,17nm,1.1s						
SBA	**Scott Base**	**47.31**	**184**	P	**P**	**00 19 34.6**	**+4.0**
SBA				pP	**pwP**	**00 19 45.7**	**+1.4**
VNDA	**Vanda**	**47.38**	**186**	P	**P**	**00 19 32.7**	**+1.6**
	comp=Z,0.5nm,0.5s,baz=265,slow=2.4,SNR=1.7						
VNDA				LR	LR	00 35 53.1	
	comp=Z,154nm,20.6s,baz=14,slow=32						
	comp=Z,0.5nm,0.5s						
JAY	**Jayapura**	**48.49**	**298**	LR	LR	00 37 49.6	
	comp=Z,141nm,21.6s,baz=123,slow=33						
CCD	**Concordia, Ant**	**52.31**	**196**	P	**P**	**00 20 10.4**	**+1.4**
CCD				pP	**pwP**	**00 20 21.7**	**-1.2**
CCD				sP	sP	00 20 26.3	+7.9
FITZ	**Fitzroy Crossi**	**52.64**	**270**	LR	LR	00 41 56.0	
	comp=Z,632nm,18.6s,baz=117,slow=35						
NWAO	**Narrogin (SRO)**	**54.40**	**250**	LR	LR	00 40 00.9	
	comp=Z,200nm,21.8s,baz=94,slow=32						
CASY	**Casey**	**54.61**	**208**	P	**P**	**00 20 25.9**	**+0.4**
CASY				IAmb	IAmb	00 20 38.7	
	comp=Z,17nm,0.9s						
CASY	**Casey**	**54.61**	**208**	P	**P**	**00 20 25.8**	**+0.3**
CASY				pP	**pwP**	**00 20 37.2**	**-1.7**
GUMO	**Guam**	**57.21**	**315**	LR	LR	00 43 08.7	
	comp=Z,171nm,20.0s,baz=104,slow=34						
BATI	**Baumata**	**58.03**	**278**	LR	LR	00 46 49.7	
	comp=Z,896nm,18.3s,baz=130,slow=37						
QSPA	**South Pole Qui**	**58.96**	**180**	P	**P**	**00 20 58.5**	**+1.9**
QSPA	**South Pole Qui**	**58.96**	**180**	P	**P**	**00 20 58.6**	**+1.9**
	comp=Z,5.9nm,0.9s,baz=60,slow=2.4,SNR=11						
QSPA				LR	LR	00 44 58.4	
	comp=Z,336nm,18.5s,baz=40,slow=35						
	comp=Z,5.9nm,0.9s						
QSPA	**South Pole Qui**	**58.96**	**180**	P	**P**	**00 20 58.6**	**+1.9**
KAPI	**Kappang**	**64.02**	**280**	LR	LR	00 49 00.5	
	comp=Z,181nm,19.7s,baz=116,slow=36						
DAV	**Davao City (W)**	**66.19**	**295**	LR	LR	00 51 32.1	
	comp=Z,53nm,18.9s,baz=162,slow=37						
BELA	**Belgrano 2**	**69.01**	**172**	P	**P**	**00 22 05.5**	**+3.1**
BELA				IAmb	IAmb	00 22 26.7	
	comp=Z,7.1nm,0.8s						
MAW	**Mawson**	**71.71**	**201**	P	**P**	**00 22 20.3**	**+1.4**
	comp=Z,4.2nm,0.6s,baz=283,slow=21,SNR=11						
MAW				LR	LR	00 53 19.7	
	comp=Z,244nm,18.9s,baz=109,slow=35						
	comp=Z,4.2nm,0.6s						
LEM	**Lembang**	**73.42**	**272**	LR	LR	00 54 51.0	
	comp=Z,273nm,20.0s,baz=115,slow=36						
SYO	**Syowa Base**	**76.45**	**193**	⇑*e*P	**P**	**00 22 48.0**	**+1.4**
TROLL	**Troll, Antarti**	**77.13**	**180**	⇑P	**P**	**00 22 51.3**	**+0.8**
	comp=Z,182nm,0.9s						
JOW	**Kunigami**	**77.37**	**312**	LR	LR	00 52 21.1	
	comp=Z,123nm,21.2s,baz=238,slow=32						
SNAA	**Sanae**	**77.40**	**178**	⇑P	**P**	**00 22 51.7**	**-0.4**
	comp=Z,20nm,0.6s						
SNAA	**Sanae**	**77.40**	**178**	P	**P**	**00 22 54.6**	**+2.6**
SNAA				IAmb	IAmb	00 23 18.5	
	comp=Z,10.0nm,1.0s						
SNAA	**Sanae**	**77.40**	**178**	P	**P**	**00 22 52.3**	**+0.3**
	comp=Z,3.2nm,1.1s,baz=182,slow=6.2,SNR=5.6						
SNAA				LR	LR	00 56 57.7	
	comp=Z,89nm,18.6s,baz=334,slow=36						
	comp=Z,3.2nm,1.1s						
VNA3	**Neumayer Olymp**	**77.54**	**176**	⇑P	**P**	**00 22 53.0**	**+0.3**
	comp=Z,2.9nm,0.6s						
VNA2	**Neumayer--Watz**	**77.98**	**177**	⇑P	**P**	**00 22 55.8**	**+0.7**
	comp=Z,2.1nm,0.5s,baz=176,slow=5.6						
COYC	**Coyhaique**	**78.20**	**136**	P	**P**	**00 22 58.8**	**+2.0**
COYC				IAmb	IAmb	00 23 58.5	
	comp=Z,30nm,1.7s						
VNA1	**Neumayer--Stat**	**78.21**	**176**	⇑P	**P**	**00 22 57.1**	**+0.7**
	comp=Z,4.4nm,0.8s						
MJAR	**Matsushiro Arr**	**79.02**	**325**	P	**P**	**00 23 00.1**	**-1.2**
	comp=Z,3.2nm,0.8s,baz=155,slow=4.9,SNR=4.3						
	comp=Z,3.2nm,0.8s						
JNU	**Nakatsue**	**80.30**	**318**	LR	LR	00 53 26.6	
	comp=Z,90nm,20.8s,baz=138,slow=32						
PLCA	**Paso Flores**	**81.79**	**133**	LR	LR	00 51 28.4	
	comp=Z,145nm,19.6s,baz=236,slow=30						
SHEM	**Shemya Is, Ala**	**83.83**	**355**	LR	LR	00 55 25.1	
	comp=Z,260nm,20.1s,baz=196,slow=32						
LPIG	**La Paz**	**84.69**	**58**	LR	LR	00 56 14.7	
	comp=Z,236nm,18.1s,baz=196,slow=32						
KSRS	**Korea Array**	**85.10**	**319**	P	**P**	**00 23 33.8**	**+0.7**
	comp=Z,0.8nm,0.4s,baz=142,slow=6.3,SNR=4.6						
	comp=Z,0.8nm,0.4s						
PSI	**Prapat**	**85.79**	**276**	LR	LR	01 02 05.5	
	comp=Z,211nm,20.4s,baz=116,slow=36						
PFO	**Pinyon Flats O**	**86.51**	**47**	LR	LR	00 57 09.2	
	comp=Z,206nm,18.3s,baz=230,slow=32						
PETK	**Petropavlovsk-**	**86.61**	**345**	P	**P**	**00 23 40.7**	**+0.5**
	comp=Z,10nm,1.0s,baz=134,slow=6.4,SNR=5.5						
PETK				LR	LR	00 55 47.2	
	comp=Z,131nm,22.0s,baz=162,slow=31						
	comp=Z,10nm,1.0s						
NJ2	**Nanjing**	**86.94**	**310**	*e*P	**P**	**00 23 43.9**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CMB	**Columbia Colle**	**87.13**	**42**	P	**P**	**00 23 43.0**	**-0.2**
GSC	**Goldstone, Bar**	**87.40**	**46**	P	**P**	**00 23 45.1**	**+0.4**
GSC				IAmb	IAmb	00 23 59.8	
	comp=Z,8.1nm,1.3s						
USRK	**Ussuriysk Ar.**	**87.94**	**326**	P	**P**	**00 23 47.6**	**+0.8**
	comp=Z,2.6nm,0.8s,baz=97,slow=10,SNR=3.4						
	comp=Z,2.6nm,0.8s						
YBH	**Yreka Blue Hor**	**88.45**	**38**	LR	LR	00 59 02.5	
	comp=Z,10nm,18.3s,baz=228,slow=33						
NVAR	**Mina Array Bea**	**88.60**	**43**	P	**P**	**00 23 50.7**	**+0.3**
NVAR	**Mina Array Bea**	**88.60**	**43**	P	**P**	**00 23 51.6**	**+1.1**
	comp=Z,2.1nm,0.9s,baz=210,slow=7.7,SNR=7.2						
NVAR				LR	LR	00 59 21.1	
	comp=Z,274nm,18.1s,baz=226,slow=33						
	comp=Z,2.1nm,0.9s						
TPNV	**Topopah Spring**	**88.83**	**45**	P	**P**	**00 23 51.1**	**-0.4**
TPNV				IAmb	IAmb	00 23 54.2	
	comp=Z,5.3nm,1.1s						
V12A	**Nelson**	**88.89**	**46**	P	**P**	**00 23 51.5**	**-0.2**
V12A				IAmb	IAmb	00 23 54.5	
	comp=Z,4.0nm,1.0s						
Y14A	**Wickenburg**	**88.91**	**49**	P	**P**	**00 23 51.1**	**-0.7**
X16A	**Lo Mia Camp, P**	**90.22**	**49**	P	**P**	**00 23 58.0**	**-0.1**
X16A				IAmb	IAmb	00 24 13.8	
	comp=Z,5.4nm,1.2s						
CN2	**Changchun**	**90.91**	**323**	P	P	00 23 55.6	-5.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
U15A	**North Rim**	**90.93**	**47**	P	**P**	**00 24 01.5**	**0.0**
WUAZ	**Wupatki**	**90.95**	**48**	P	**P**	**00 24 02.2**	**+0.8**
WUAZ				IAmb	IAmb	00 24 17.8	
	comp=Z,5.0nm,1.0s						
KDAK	**Kodiak Island**	**91.07**	**13**	LR	LR	00 59 10.9	
	comp=Z,54nm,19.1s,baz=204,slow=32						
BNX	**BinXian**	**91.28**	**325**	⇑P	**P**	**00 24 03.0**	**+0.5**
BNX				pmax	pmax		
	comp=Z,7.0nm,1.2s						
TXAR	**Lajitas Array**	**92.56**	**57**	P	**P**	**00 24 10.2**	**+1.3**
	comp=Z,0.5nm,0.9s,baz=199,slow=3.4,SNR=4.5						
TXAR				LR	LR	01 00 44.5	
	comp=Z,89nm,18.3s,baz=245,slow=32						
	comp=Z,0.5nm,0.9s						
NNA	**Nana**	**92.95**	**106**	LR	LR	00 58 43.9	
	comp=Z,70nm,19.4s,baz=225,slow=31						
TPB01	**Permian Basin**	**93.38**	**56**	P	**P**	**00 24 16.3**	**+3.6**
PECS	**Pecos**	**93.56**	**55**	P	**P**	**00 24 11.6**	**-1.9**
PECS	**Pecos**	**93.56**	**55**	P	**P**	**00 24 10.9**	**-2.6**
TPB10	**Southeast of T**	**93.59**	**56**	P	**P**	**00 24 10.0**	**-3.7**
BBB	**Bella Bella**	**93.62**	**28**	LR	LR	01 02 14.1	
	comp=Z,119nm,18.7s,baz=190,slow=33						
ANMO	**Albuquerque**	**93.82**	**51**	LR	LR	01 02 36.9	
	comp=Z,205nm,18.1s,baz=329,slow=33						
TPB16	**Coyonosa**	**93.86**	**56**	P	**P**	**00 24 15.8**	**+0.9**
TPB04	**Verhalen**	**93.88**	**56**	P	**P**	**00 24 12.3**	**-2.7**
CMAR	**Chiang Mai Arr**	**93.91**	**289**	LR	LR	01 10 11.6	
	comp=Z,27nm,18.9s,baz=150,slow=38						
MA2	**Magadan**	**94.09**	**345**	LR	LR	01 02 11.4	
	comp=Z,136nm,20.9s,baz=146,slow=33						
TPB06	**Permian Basin**	**94.17**	**55**	P	**P**	**00 24 12.4**	**-4.0**
HLID	**Hailey**	**94.19**	**41**	P	**P**	**00 24 16.6**	**+0.4**
ATAH	**Atahualpa**	**94.22**	**101**	LR	LR	01 01 48.7	
	comp=Z,51nm,18.3s,baz=237,slow=32						
MNHN	**Monahans**	**94.33**	**56**	P	**P**	**00 24 17.8**	**+0.7**
MNHN				IAmb	IAmb	00 24 37.2	
	comp=Z,5.2nm,0.9s						

NEW	**Newport**	**95.81**	**36**	LR	LR	01 00 47.9	
	comp=Z,195nm,20.2s,baz=216,slow=31						
PZH	**PanZhiHua**	**95.90**	**297**	P	**P**	**00 24 25.3**	**+0.9**
PDAR	**Pinedale Array**	**96.48**	**43**	LR	LR	01 05 09.6	
	comp=Z,154nm,18.0s,baz=226,slow=34						
SEY	**Seymchan**	**96.77**	**347**	LR	LR	01 02 40.8	
	comp=Z,85nm,21.6s,baz=170,slow=32						
HHC	**Hu-ho-hao-te**	**96.95**	**314**	*e*P	**P**	**00 24 30.5**	**+1.7**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,52nm,5.8s						
JTS	**Las Juntas de**	**97.55**	**83**	LR	LR	00 59 09.8	
	comp=Z,102nm,20.5s,baz=275,slow=30						
LPAZ	**La Paz**	**97.58**	**114**	LR	LR	01 01 00.0	
	comp=Z,30nm,19.1s,baz=198,slow=31						
CPUP	**Villa Florida**	**99.30**	**128**	LR	LR	01 05 43.7	
	comp=Z,26nm,18.0s,baz=80,slow=33						
MKAR	**Makanchi Array**	**118.47**	**310**	PKP	**PKPdf**	**00 29 43.9**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=108,slow=2.7,SNR=6.3						
KURBB	**Kurchatov Arra**	**121.81**	**313**	PKP	**PKPdf**	**00 29 50.5**	**-0.4**
	comp=Z,1.2nm,0.8s,baz=118,slow=2.1,SNR=12						
BVAR	**Borovoye Array**	**127.14**	**315**	PKP	**PKPdf**	**00 30 01.2**	**+0.2**
	comp=Z,3.2nm,0.9s,baz=90,slow=2.3,SNR=8.6						
ARCES	**ARCESS Array B**	**139.38**	**348**	PKhKP	PKPpre	00 30 18.6	
	comp=Z,4.7nm,1.0s,baz=54,slow=2.6,SNR=7.5						
KBZ	**Khabaz**	**145.76**	**303**	PKPbc	**PKPab**	**00 30 36.8**	**+0.3**
	comp=Z,5.0nm,0.9s,baz=92,slow=2.9,SNR=9.2						
FINES	**FINESS Array B**	**145.94**	**340**	PKPbc	**PKPdf**	**00 30 35.6**	**+0.3**
	comp=Z,24nm,0.9s,baz=40,slow=3.8,SNR=59						
NB2	**NORSAR Subarra**	**149.53**	**351**	PKP	**PKPbc**	**00 30 45.4**	**-0.6**
	comp=Z,48nm,2.5s,baz=13,slow=2.7						
NOA	**NORSAR Array B**	**149.53**	**351**	PKPbc	**PKPbc**	**00 30 45.6**	**-0.4**
	comp=Z,2.8nm,0.8s,baz=14,slow=4.2,SNR=14						
HFS	**Hagfors**	**150.03**	**349**	PKPbc	**PKPbc**	**00 30 46.7**	**-0.5**
	comp=Z,5.6nm,0.8s,baz=17,slow=1.5,SNR=9.7						
MNK	**Minsk**	**150.37**	**329**	*i* PKiKP	**PKPbc**	**00 30 48.3**	**+0.2**
	comp=Z,16nm,0.9s,baz=49						
MNK				*i* PP	**PP**	**00 34 22.4**	**-1.3**
MNK				*i* PPP	PPP	00 37 44.1	
MNK				*i* SKS	**SKSdf**	**00 37 46.9**	**-1.7**
MNK				*i* SKKS	**SKKSdf**	**00 46 39.2**	**-2.5**
MNK				*i* SS	**SS**	**00 53 35.1**	**-5.2**
MNK				*i* SSS	SSS	00 59 26.9	
MNK				*i* LR	LR	01 41 57.1	
NACGM	**Naroch**	**150.57**	**331**	⇑*i*PKiKP	**PKPbc**	**00 30 48.8**	**+0.2**
	comp=Z,12nm,0.9s,baz=47						
MMAI	**Mount Meron Ar**	**151.97**	**283**	PKPbc	**PKiKP**	**00 30 53.8**	**+0.8**
	comp=Z,8.7nm,0.7s,baz=80,slow=4.6,SNR=25						
AK03	**Malin Array Si**	**152.05**	**322**	PKP	**PKPdf**	**00 30 44.5**	**-1.0**
AKASG	**Malin Array Be**	**152.06**	**322**	PKPbc	**PKPbc**	**00 30 52.2**	**+0.1**
	comp=Z,9.8nm,0.9s,baz=52,slow=2.8,SNR=27						
BRTR	**Keskin Array B**	**153.20**	**297**	PKPbc	**PKPbc**	**00 30 55.2**	**-0.1**
	comp=Z,4.9nm,1.0s,baz=90,slow=2.3,SNR=21						
BR106	**Keskin Array S**	**153.21**	**297**	PKP	**PKPdf**	**00 30 46.6**	**-1.2**
RNPP8	**Varash**	**153.38**	**326**	PKP	**PKPdf**	**00 30 46.4**	**-1.1**
KMPD	**K-Podol'skiy**	**154.76**	**320**	PKP	**PKPdf**	**00 30 47.9**	**-1.6**
KWP	**Kalwaria Pacla**	**156.01**	**326**	*e*PKP	**PKPab**	**00 31 18.5**	**0.0**
STHS	**Stebnicka Huta**	**156.85**	**327**	*e*PKP	**PKPab**	**00 31 21.2**	**-1.0**
NIE	**Niedzica**	**157.28**	**329**	*e*PKP	**PKPab**	**00 31 25.0**	**+1.0**
KSP	**Ksiaz**	**157.75**	**336**	*e*PKP	**PKPab**	**00 31 26.4**	**+0.5**
CHVC	**Chvalec**	**158.05**	**336**	*e*PKPAB	**PKPab**	**00 31 27.7**	**+0.4**
UPC	**Upice**	**158.13**	**336**	*e*PKPAB	**PKPab**	**00 31 28.1**	**+0.5**
DPC	**Dobruska-Polom**	**158.15**	**335**	*e*PKPAB	**PKPab**	**00 31 27.6**	**-0.2**
KRLC	**Kraliky**	**158.21**	**334**	*e*PKPAB	**PKPab**	**00 31 27.2**	**-0.8**
CLL	**Collm**	**158.36**	**342**	*e*PKPdf	**PKPdf**	**00 30 56.0**	**+1.9**
CLL				*i* PKPab	**PKPab**	**00 31 28.4**	**-0.1**
	comp=Z,10.0nm,1.3s						
CLL				*i* x	x	00 31 40.2	
CLL				AMS	AMS	01 52 00.0	
	comp=Z,100nm,18.6s						
BRG	**Berggiesshubel**	**158.48**	**340**	*e*PKP	**PKPab**	**00 31 29.1**	**0.0**
BRG				Amp		00 31 29.8	
	comp=Z,5.9nm,1.1s						
VYHS	**Vyhne**	**158.61**	**329**	*e*PKP	**PKPab**	**00 31 30.3**	**+0.5**
VRAC	**Vranov**	**158.91**	**333**	*e*PKP	**PKPab**	**00 31 31.4**	**+0.4**
PRU	**Pruhonice**	**159.07**	**338**	AMS	AMS	01 53 50.0	
	comp=Z,100nm,13.8s						
KRUC	**Moravsky**	**159.18**	**333**	*e*PKP	**PKPab**	**00 31 31.9**	**-0.3**
KHC	**Kasperske Hory**	**160.12**	**338**	*e*PKPAB	**PKPab**	**00 31 36.4**	**+0.1**
KHC				AMS	AMS	01 57 10.0	
	comp=Z,100nm,16.6s						
CKRC	**Cesky Krumlov**	**160.15**	**336**	*e*PKPAB	**PKPab**	**00 31 36.9**	**+0.5**
CKRC				AMS	AMS	02 00 10.0	
	comp=Z,100nm,20.2s						
CONA	**Conrad Observa**	**160.31**	**332**	*e*PKP	**PKPab**	**00 31 38.3**	**+1.0**
	comp=Z,3.8nm,1.3s						
RONA	**Rosalia, Austr**	**160.31**	**331**	*e*PKP	**PKPab**	**00 31 37.2**	**0.0**
	comp=Z,2.6nm,0.7s						
GERES	**GERESS Array B**	**160.33**	**337**	PKPab	**PKPab**	**00 31 36.5**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=24,slow=2.8,SNR=1.3						
MOA	**Molln**	**160.99**	**335**	*e*PKP	**PKPab**	**00 31 36.8**	**-3.3**
	comp=Z,3.1nm,1.3s						
ARSA	**Arzberg**	**160.99**	**331**	*i* PKP	**PKPab**	**00 31 41.2**	**+1.0**
	comp=Z,1.1nm,0.6s						
BIOA	**Bad Ischl, Aus**	**161.34**	**336**	*i* PKP	**PKPab**	**00 31 42.8**	**+1.1**
	comp=Z,3.3nm,0.8s						
LESA	**Schwarzleotal**	**161.91**	**337**	*i* PKP	**PKPab**	**00 31 44.6**	**+0.4**
	comp=Z,0.9nm,0.5s						
MYKA	**Terra Mystica**	**162.24**	**334**	*e*PKP	**PKPab**	**00 31 44.9**	**-0.8**
	comp=Z,3.2nm,1.0s						
WATA	**Walderalm**	**162.34**	**339**	*i* PKP	**PKPab**	**00 31 45.5**	**-0.7**
	comp=Z,6.5nm,1.3s						
WTTA	**Wattenberg**	**162.39**	**339**	*e*PKP	**PKPab**	**00 31 46.2**	**-0.2**
	comp=Z,4.5nm,1.0s						
RETA	**Reutte**	**162.45**	**341**	*e*PKP	**PKPab**	**00 31 46.7**	**+0.2**
	comp=Z,3.2nm,0.8s						
MOTA	**Moosalm**	**162.48**	**340**	*i* PKP	**PKPab**	**00 31 47.1**	**+0.3**
	comp=Z,6.2nm,1.1s						
ABTA	**Abfaltersbach**	**162.55**	**336**	*e*PKP	**PKPab**	**00 31 46.8**	**-0.3**
	comp=Z,2.5nm,0.7s						
SQTA	**Sankt Quirin**	**162.56**	**339**	*e*PKP	**PKPab**	**00 31 47.5**	**+0.3**
	comp=Z,5.0nm,0.9s						
DAVA	**Damuels**	**162.87**	**342**	*e*PKP	**PKPab**	**00 31 47.9**	**-0.6**
	comp=Z,4.4nm,0.9s						
FETA	**Feichten**	**162.88**	**340**	*i* PKP	**PKPab**	**00 31 47.9**	**-0.7**
	comp=Z,3.0nm,1.3s						

NEIC ***17*** *00:12:00.6±1.3, 34°.044N±0°.010×117°.539W±0°.010, h4^{km}±2^{km}, Error ellipse: s-maj=1.7km s-min=0.8km az=218.0*

PAS 17 00:12:01.2±0.8**, 34°.051N**±0°.005×**117°.51W**±0°.01**, h5^{km}**±2^{km}**, ML3.0**/210**, ML2.9**/52(NEIC)**, Error ellipse: s-maj=1.7km s-min=0.8km az=86.0, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSC	**Mira Loma**	**0.07**	**226**		Pg	00 12 02.8	+0.1
FON	**Fontana**	**0.07**	**48**		Pg	00 12 04.2	+1.4
RVR	**Riverside**	**0.12**	**118**		Pg	00 12 03.8	+0.1
RVR					Sg	00 12 05.7	+0.3
CHNC	**Chino**	**0.15**	**251**		Pg	00 12 07.0	+2.7
SS2	**San Sevaine**	**0.16**	**2**		Pg	00 12 04.5	+0.1
CLTC	**Calectric**	**0.16**	**75**		Pg	00 12 04.6	+0.2
CLTC					Sg	00 12 07.7	+1.2
RSBC	**Riverside Bore**	**0.17**	**118**		Pg	00 12 04.6	+0.1
RSBC					Sg	00 12 07.0	+0.3
RSBC	**Riverside Bore**	**0.17**	**118**		Pg	00 12 04.7	+0.3
RSBC					Sg	00 12 07.1	+0.4
CRNC	**Corona**	**0.18**	**195**		Pg	00 12 04.8	+0.1
CRNC					Sg	00 12 07.3	+0.2
CFSC	**Central Fire S**	**0.19**	**73**		Pg	00 12 05.4	+0.4
CFSC					Sg	00 12 08.8	+1.3
BFSC	**Mount Baldy Ra**	**0.23**	**326**		Sg	00 12 08.3	-0.4
HLNC	**Highland**	**0.25**	**73**		Pg	00 12 06.3	+0.3
HLNC					Sg	00 12 10.3	+1.0
PSRC	**Puddingstone R**	**0.25**	**279**		Sg	00 12 10.1	+0.6
CSP	**Cedar Springs**	**0.28**	**26**		Sg	00 12 10.6	+0.3
PEC	**Perris**	**0.33**	**119**		Sg	00 12 12.0	+0.2
CFT	**Crafton Hills**	**0.33**	**93**		Pg	00 12 07.9	+0.3
CFT					Sg	00 12 13.0	+1.1
SVD	**Seven Oaks Dam**	**0.34**	**81**		Pg	00 12 08.0	+0.2
SVD					Sg	00 12 13.1	+0.7
FULC	**Fullerton**	**0.39**	**243**		Pg	00 12 09.0	+0.3
ELS	**Elsinore Mount**	**0.41**	**171**		Pg	00 12 08.9	-0.2
ELS				Sg	Sg	00 12 14.5	+0.1
ELS				IAML		00 12 15.5	
	comp=E,817nm,0.3s						
RHC	**Rose Hills Cem**	**0.42**	**263**		Pg	00 12 09.7	+0.3
RHC					Sg	00 12 16.0	+1.0
BBSC	**Beaumont Base**	**0.45**	**106**		Pg	00 12 10.3	+0.4
BBSC					Sg	00 12 16.7	+0.9
BREC	**Barre Substati**	**0.46**	**239**		Pb	00 12 11.0	-0.8
BREC					Sb	00 12 18.4	-0.6
SANC	**Santa Ana**	**0.47**	**223**		Pg	00 12 10.7	+0.5
SANC					Sb	00 12 18.2	-0.9
MWC	**Mount Wilson**	**0.49**	**291**		Pg	00 12 10.5	-0.2
MWC					Sg	00 12 17.2	+0.1
HOLC	**Holcomb Ridge**	**0.49**	**325**		Pg	00 12 10.3	-0.4
HOLC					Sg	00 12 17.1	-0.1
ADO	**Adelanto Recei**	**0.50**	**7**		Sg	00 12 18.2	+0.8
GVRC	**Garvey Reservo**	**0.51**	**270**		Pg	00 12 11.1	+0.1
GVRC					Sg	00 12 18.6	+0.9
CHFC	**Chilao Flat St**	**0.52**	**303**		Pg	00 12 10.8	-0.3
MURC	**Murrieta**	**0.52**	**150**		Sg	00 12 17.7	-0.2
CACC	**Caltech Cellar**	**0.52**	**280**		Pg	00 12 11.0	-0.2
CACC					Sg	00 12 18.4	+0.5
GSA	**Caltech--GSA**	**0.52**	**280**		Pg	00 12 11.0	-0.3
GSA					Sg	00 12 18.7	+0.6
BBRC	**Big Bear Solar**	**0.53**	**66**		Pg	00 12 11.5	+0.1
BBRC					Sg	00 12 18.6	+0.3
VTV	**Victorville**	**0.53**	**16**		Pg	00 12 11.3	-0.1
VTV					Sg	00 12 18.1	-0.1
HMTC	**Hemet**	**0.54**	**129**		Pg	00 12 11.1	-0.4
HMTC					Sg	00 12 18.4	-0.1
JNH	**Juniper Hills**	**0.54**	**317**		Pg	00 12 11.2	-0.5
JNH					Sg	00 12 18.4	-0.3
DGR	**Domenigoni Val**	**0.57**	**134**		Sg	00 12 19.3	-0.4
PASC	**Pasadena Art C**	**0.58**	**282**		Pg	00 12 11.8	-0.4
PASC				Sg	Sg	00 12 19.7	-0.1
PASC				IAML		00 12 20.1	
	comp=E,452nm,0.3s						
PASC				IAML		00 12 20.2	
	comp=N,440nm,0.3s						
BACC	**Bachelor Mtn.**	**0.58**	**138**		Sg	00 12 19.6	-0.4
POB	**Polly Butte**	**0.60**	**127**		Pg	00 12 12.3	-0.5
POB					Sg	00 12 20.2	-0.4
WTT2	**Watts, South G**	**0.63**	**261**		Pb	00 12 14.3	-0.5
WTT2					Sb	00 12 23.8	-0.1
LRRC	**Littlerock Res**	**0.64**	**318**		Pg	00 12 13.2	-0.4
LRRC					Sg	00 12 21.7	-0.1
GR2C	**Griffith Obs.**	**0.66**	**276**		Pg	00 12 13.4	-0.6
GR2C					Sg	00 12 22.2	-0.4
SBB	**Saddle Back Bu**	**0.69**	**338**		Sg	00 12 22.9	-0.5
CJV	**Casa Juvan**	**0.71**	**312**		Pg	00 12 14.2	-0.7
CJV					Sg	00 12 23.8	-0.4
DECC	**Green Verdugo**	**0.72**	**287**		Sg	00 12 24.1	-0.2
FMP	**Fort Macarthur**	**0.74**	**243**		Pg	00 12 14.6	-0.8
FMP					Sb	00 12 27.1	+0.1
DEVC	**Devers**	**0.78**	**98**		Pn	00 12 26.8	+7.9
GVDA	**Garner Valley**	**0.79**	**119**		Sg	00 12 26.2	-0.4
DJJ	**Donna J Jenkin**	**0.79**	**274**		Pg	00 12 15.4	-0.9
DJJ					Sg	00 12 26.1	-0.6
CRY	**Cary Ranch**	**0.80**	**127**		Pg	00 12 15.9	-0.6
CRY					Sg	00 12 26.4	-0.6
RPV	**Rancho Palos V**	**0.81**	**248**		Pg	00 12 16.0	-0.6
RPV					Sb	00 12 29.1	+0.1
HYS	**Haystack Butte**	**0.81**	**356**		Pg	00 12 16.2	-0.6
HYS					Sg	00 12 26.9	-0.5
PLM	**Palomar**	**0.88**	**142**		Sg	00 12 29.1	-0.3
LEOC	**Leona Valley**	**0.88**	**311**		Pg	00 12 17.3	-0.8
BZNA	**Buzz No.'s Pla**	**0.89**	**128**		Sg	00 12 29.4	-0.6
SNDA	**J Saunders Pla**	**0.89**	**124**		Pg	00 12 17.9	-0.4
SNDA					Sg	00 12 29.4	-0.5
ALPC	**Antelope**	**0.91**	**314**		Pn	00 12 30.2	+9.4
EW2	**E Wide Canyon**	**0.92**	**97**		Pg	00 12 18.4	-0.4
EW2					Sg	00 12 30.5	-0.2
EDW2	**Edwards Air Fo**	**0.92**	**334**		Pg	00 12 18.2	-0.7
EDW2					Sg	00 12 30.2	-0.6
GORC	**Green Oak Ranc**	**0.92**	**165**		Pg	00 12 17.7	-1.2
GORC					Sg	00 12 29.9	-1.0
RRX	**Edison Barstow**	**0.92**	**27**		Pg	00 12 18.6	-0.3
RRX					Sg	00 12 31.1	+0.2
BLAC	**Blackrock camp**	**0.93**	**89**		Pg	00 12 18.7	-0.3
BLAC					Sg	00 12 31.1	+0.1
FRD	**Ford Ranch, An**	**0.93**	**126**		Pg	00 12 18.5	-0.6
FRD					Sg	00 12 30.7	-0.5
PFO	**Pinyon Flats O**	**0.97**	**116**		Pg	00 12 18.9	-1.0
PFO				Sg	Sg	00 12 32.1	-0.4
CIAC	**Catalina I. Ai**	**1.00**	**230**		Pg	00 12 20.0	-0.2
CCAC	**Calif City Air**	**1.18**	**339**		Pg	00 12 22.9	-0.8
CCAC				Sg	Sg	00 12 38.5	-0.6
CCAC				IAML		00 12 41.4	
	comp=N,294nm,0.4s						
CCAC				IAML		00 12 44.6	
	comp=E,330nm,0.7s						
GSC	**Goldstone, Bar**	**1.38**	**25**		Pn	00 12 26.2	-1.0
GSC				Sg	Sg	00 12 44.9	-0.5
TJX	**Tijuana**	**1.58**	**166**		Pn	00 12 29.5	-0.4
TJX					Sn	00 12 50.6	-0.1
TKX	**Tecate**	**1.66**	**153**		Pn	00 12 30.1	-0.9
TKX					Sn	00 12 51.2	-1.5
TKX				IAML		00 12 54.2	
	comp=E,220nm,0.2s						
ISA	**Isabella, Lake**	**1.79**	**334**		Pn	00 12 32.9	0.0
ISA				Sg	Sg	00 12 58.2	-0.7
BCW	**Bitter Crk WRg**	**1.81**	**300**		Pn	00 12 33.6	+0.4
BCW					Sn	00 12 56.8	+0.2
CBX	**Cerro Bola**	**1.87**	**158**		Pn	00 12 33.8	-0.3
CBX					Sn	00 12 58.2	+0.1
YUH	**Yuha Desert**	**1.93**	**136**		Pb	00 12 35.8	-1.1
YUH					Sb	00 13 00.6	-0.6
YUH				IAML		00 13 01.3	
	comp=N,77nm,0.6s						
YUH				IAML		00 13 03.1	
	comp=E,88nm,0.9s						
QSM	**Queen of Sheba**	**1.98**	**15**		Pg	00 12 39.0	-0.2
QSM				IAML		00 13 05.2	
	comp=N,139nm,0.5s						
QSM				IAML		00 13 05.3	
	comp=E,145nm,0.3s						
GWY	**Greenwater Val**	**2.24**	**18**		Pg	00 12 43.4	-0.7
GWY				IAML		00 13 15.5	
	comp=N,114nm,0.4s						
CCX	**Cicese**	**2.29**	**162**		Sb	00 13 12.9	+1.3
ESJX	**Sierra Juarez**	**2.42**	**147**		Pn	00 12 42.5	+0.9
ESJX				IAML		00 13 16.5	
	comp=E,72nm,0.2s						
ESJX				IAML		00 13 19.5	
	comp=N,38nm,0.3s						
BLYC	**Blythe**	**2.50**	**96**		Pb	00 12 47.0	+0.5
BLYC				Sg	Sg	00 13 21.1	-0.3
V12A	**Nelson**	**2.75**	**52**		Pn	00 12 45.2	-0.9
V12A				IAML		00 13 30.6	
	comp=E,22nm,0.5s						
V12A				IAML		00 13 30.7	
	comp=N,26nm,0.6s						
TPNV	**Topopah Spring**	**3.07**	**19**	IAML		00 13 47.5	
	comp=N,40nm,0.7s						
SHPR	**Sheep Range**	**3.11**	**37**		Pn	00 12 50.5	-0.6
W13A	**Hualapai Mount**	**3.16**	**70**		Pn	00 12 51.4	-0.5
MZP	**Montezuma Peak**	**3.64**	**2**		Pn	00 12 57.4	-1.2
Y14A	**Wickenburg**	**3.74**	**90**		Pn	00 12 59.1	-0.5
Y14A				IAML		00 14 01.1	
	comp=N,19nm,0.4s						
Y14A				IAML		00 14 14.0	
	comp=E,14nm,0.6s						
LHV	**Little Huntoon**	**4.27**	**349**	IAML		00 14 33.9	
	comp=N,8.2nm,1.6s						
LHV				IAML		00 14 39.8	
	comp=E,9.9nm,2.4s						

IDC ***17*** *00:18:26.2±0.9, 30°.94S×177°.64W, h0^{km}, mb4.1/5, mbtmp4.1/6, ML3.8/1, Error ellipse: s-maj=31.0km s-min=28.6km az=121.0*

NEIC ***17*** *00:18:27.9±1.1, 31°.30S±0°.07×177°.7W±0°.2, h10^{km}±2^{km}, mb4.5/6, Error ellipse: s-maj=29.8km s-min=11.0km az=93.0*

ISC 17 00:18:33.3±0.8**, 31°.25S**±0°.07×**177°.9W**±0°.2**, h46^{km}, n24, σ1^{s}.32**/27**, mb4.2**/8**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.99**	**360**		**Pn**	**00 19 02.2**	**-2.3**
RAO				Sn	**Sn**	**00 19 28.5**	**+0.3**
MXZ	**Matakaoa Point**	**7.03**	**205**		**Pn**	**00 20 11.1**	**-2.5**
URZ	**Urewera**	**8.10**	**209**	Pn	**Pn**	**00 20 28.1**	**-0.2**
	1.1nm,0.3s,baz=356,slow=19,SNR=1.6						
URZ				Sn	**Sn**	**00 21 56.9**	**-1.6**
	2.5nm,0.3s,baz=252,slow=15,SNR=4.6						
	3.2nm,0.3s						
CTAO	**Charters Tower**	**34.01**	**280**	P	**P**	**00 25 14.3**	**+1.3**
CTAO				IAmb	IAmb	00 25 17.8	
	comp=Z,13nm,1.3s						
STKA	**Stephens Creek**	**34.37**	**258**	P	**P**	**00 25 17.5**	**+1.6**
	comp=Z,0.8nm,0.4s,baz=70,slow=8.6,SNR=4.5						
	comp=Z,0.8nm,0.4s						
BBOO	**Buckleboo**	**38.81**	**255**	P	**P**	**00 25 52.3**	**-1.5**
ASAR	**Alice Springs**	**43.14**	**268**	P	**P**	**00 26 29.3**	**-0.2**
ASAR	**Alice Springs**	**43.14**	**268**	P	**P**	**00 26 30.7**	**+1.1**
	comp=Z,2.3nm,0.7s,baz=105,slow=7.5,SNR=14						
ASAR				PcP	**PcP**	**00 28 19.0**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=110,slow=3.6,SNR=1.9						
	comp=Z,2.3nm,0.7s						
WR8	**Warramunga Arr**	**44.06**	**273**	P	**P**	**00 26 37.2**	**+0.2**
WR8				IAmb	IAmb	00 26 50.1	
	comp=Z,3.8nm,0.9s						
WRA	**Warramunga Arr**	**44.21**	**273**	P	**P**	**00 26 38.2**	**+0.1**
WRA	**Warramunga Arr**	**44.21**	**273**	P	**P**	**00 26 39.1**	**+1.0**
	comp=Z,2.0nm,0.4s,baz=112,slow=7.9,SNR=25						
	comp=Z,2.0nm,0.4s						
WB0	**Warramunga Arr**	**44.23**	**273**	P	**P**	**00 26 38.9**	**+0.6**
WB0				IAmb	IAmb	00 26 45.2	
	comp=Z,5.2nm,0.8s						
QSPA	**South Pole Qui**	**58.86**	**180**	P	**P**	**00 28 28.2**	**+1.1**
QSPA				IAmb	IAmb	00 28 52.8	
	comp=Z,4.1nm,0.8s						
QSPA	**South Pole Qui**	**58.86**	**180**	P	**P**	**00 28 29.0**	**+1.8**
	comp=Z,2.8nm,1.0s,baz=5.5,slow=4.4,SNR=4.0						
	comp=Z,2.8nm,1.0s						
SNAA	**Sanae**	**77.31**	**178**	P	**P**	**00 30 24.5**	**+1.9**
	comp=Z,1.7nm,1.1s,baz=198,slow=6.4,SNR=2.2						
	comp=Z,1.7nm,1.1s						
MKAR	**Makanchi Array**	**118.37**	**310**	PKP	**PKPdf**	**00 37 14.3**	**-1.1**
	comp=Z,0.1nm,0.4s,baz=107,slow=1.5,SNR=1.7						
KURBB	**Kurchatov Arra**	**121.72**	**313**	PKP	**PKPdf**	**00 37 20.8**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=102,slow=2.1,SNR=4.1						
FINES	**FINESS Array B**	**145.96**	**340**	PKPbc	**PKPdf**	**00 38 06.1**	**-0.2**
	comp=Z,2.4nm,0.5s,baz=64,slow=4.1,SNR=21						
NB2	**NORSAR Subarra**	**149.60**	**351**	PKP	**PKPbc**	**00 38 15.7**	**-1.3**
	comp=Z,0.5nm,0.8s,baz=8.4,slow=2.8						
NOA	**NORSAR Array B**	**149.60**	**351**	PKPbc	**PKPbc**	**00 38 15.8**	**-1.3**
	comp=Z,0.7nm,0.7s,baz=14,slow=4.2,SNR=4.6						
HFS	**Hagfors**	**150.09**	**348**	PKPbc	**PKPbc**	**00 38 16.5**	**-1.7**
	comp=Z,3.7nm,1.1s,baz=21,slow=2.4,SNR=4.8						
MMAI	**Mount Meron Ar**	**151.79**	**282**	PKPbc	**PKiKP**	**00 38 24.3**	**+0.7**
	comp=Z,1.8nm,0.6s,baz=107,slow=3.0,SNR=5.5						
AKASG	**Malin Array Be**	**152.01**	**322**	PKPbc	**PKPbc**	**00 38 22.4**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=48,slow=3.9,SNR=6.7						
BRTR	**Keskin Array B**	**153.06**	**297**	PKPbc	**PKPbc**	**00 38 25.5**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=96,slow=2.9,SNR=4.6						

IDC ***17*** *00:46:51.9±1.0, 3°.49S×29°.16E, h0^{km}, mb3.8/7, mbtmp3.9/9, ML1.9/1, MS3.7/2, Error ellipse: s-maj=36.5km s-min=14.7km az=99.0*

ISC 17 00:46:53.1±0.8**, 3°.50S**±0°.07×**29°.2E**±0°.2**, h10^{km}, n17, σ1^{s}.53**/19**, mb3.8**/8**, Lake Tanganyika region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**11.75**	**185**	Pn	**Pn**	**00 49 40.3**	**-0.7**
	15nm,0.6s,baz=4.1,slow=9.6,SNR=47						
LSZ				Sn	**Sn**	**00 51 54.3**	**+2.0**
	1.7nm,0.3s,baz=8.8,slow=12,SNR=3.5						
LSZ				Lg	Lg	00 52 59.1	
	2.0nm,0.3s,baz=352,slow=6.7,SNR=9.5						
LSZ				LR	LR	00 54 19.0	
	comp=Z,181nm,18.7s,baz=40,slow=38						
KSANE	**Kasane**	**14.75**	**195**	*i* P	**Pn**	**00 50 19.8**	**-2.3**
KSANE				IAML		00 54 46.9	
	comp=N,33nm,1.3s						
MATP	**Matopo**	**16.84**	**182**	Pn	**Pn**	**00 50 45.0**	**-4.2**
	comp=N,0.2nm,0.3s,baz=1.3,slow=14,SNR=13						
MATP				Sn	**Sn**	**00 53 58.4**	**+1.8**
	comp=N,0.1nm,0.3s,baz=270,slow=16,SNR=2.5						
MATP				Lg	Lg	00 55 45.0	
	comp=N,0.2nm,0.3s,baz=330,slow=7.0,SNR=6.3						
MREMI	**Moremi**	**19.03**	**185**	*i* P	**P**	**00 51 15.5**	**0.0**
MREMI				IAML		00 57 06.3	
	comp=E,26nm,2.8s						
TSUM	**Tsumeb**	**19.29**	**215**	P	**Pn**	**00 51 19.5**	**+0.1**
	comp=E,0.2nm,0.3s,baz=150,slow=20,SNR=4.6						
TSUM				Sn	**S**	**00 54 56.9**	**-0.1**
	comp=E,0.2nm,0.3s,baz=101,slow=22,SNR=1.9						
TSUM				Lg	Lg	00 57 03.6	
	comp=E,0.4nm,0.3s,baz=274,slow=22,SNR=3.8						
	comp=E,0.7nm,0.3s						
GRTLG	**Ghanzi**	**19.37**	**203**	*i* P	**P**	**00 51 19.0**	**-0.3**
GRTLG				IAML		00 57 06.5	
	comp=E,14nm,1.9s						
KGCAE	**Kacgae**	**20.39**	**199**	*i* P	**P**	**00 51 30.6**	**+0.2**
KGCAE				IAML		00 58 01.7	
	comp=E,33nm,0.5s						
KOOLE	**Kule**	**21.24**	**203**	*i* P	**P**	**00 51 42.0**	**+2.3**
KOOLE				IAML		00 58 03.5	
	comp=E,20nm,3.2s						
LBTB	**Lobatse**	**21.67**	**189**	P	**P**	**00 51 44.6**	**+0.5**
	comp=E,5.2nm,0.9s,baz=15,slow=8.0,SNR=5.9						
LBTB				Lg	Lg	00 58 19.6	
	comp=E,0.1nm,0.3s,baz=174,slow=19,SNR=4.3						
	comp=E,5.2nm,0.9s						
BOSA	**Boshof**	**25.26**	**188**	P	**P**	**00 52 20.3**	**+0.6**
	comp=E,3.7nm,0.9s,baz=13,slow=7.9,SNR=6.7						
	comp=E,3.7nm,0.9s						
DBIC	**Dimbokro**	**35.45**	**287**	P	**P**	**00 53 49.9**	**-0.1**
	comp=E,2.2nm,0.8s,baz=120,slow=12,SNR=4.2						
	comp=E,2.2nm,0.8s						
BRTR	**Keskin Array B**	**43.20**	**5**	P	**P**	**00 54 55.4**	**+0.8**
	comp=E,0.7nm,0.8s,baz=179,slow=8.5,SNR=5.7						
	comp=E,0.7nm,0.8s						
ESDC	**Sonseca Array**	**52.66**	**328**	P	**P**	**00 56 07.8**	**0.0**
	comp=E,0.3nm,0.8s,baz=138,slow=7.8,SNR=4.9						
	comp=E,0.3nm,0.8s						
GERES	**GERESS Array B**	**53.84**	**347**	P	**P**	**00 56 16.1**	**-0.2**
	comp=E,0.4nm,0.6s,baz=162,slow=8.4,SNR=0.7						
AAK	**Ala-Archa**	**61.51**	**37**	LR	LR	01 25 46.8	
	comp=E,90nm,19.1s,baz=144,slow=38						
FINES	**FINESS Array B**	**64.80**	**358**	P	**P**	**00 57 31.9**	**+0.2**
	comp=E,1.5nm,0.9s,baz=168,slow=6.7,SNR=3.6						
	comp=E,1.5nm,0.9s						
MKAR	**Makanchi Array**	**68.43**	**36**	P	**P**	**00 57 55.3**	**0.0**
	comp=E,0.3nm,0.5s,baz=231,slow=4.6,SNR=1.8						
	comp=E,0.3nm,0.5s						

NOU ***17*** *00:54:10.9, 17°.98S×177°.76W, h640^{km}, mb4.7/28, Fiji Islands Region*

BGR ***17*** *00:54:10.3, 17°.69S×177°.57W, h600^{km}*

NEIC ***17*** *00:54:11.2±1.5, 18°.0S±0°.1×177°.8W±0°.1, h625^{km}±7^{km}, mb4.4/138, Error ellipse: s-maj=19.0km s-min=15.1km az=125.0*

IDC ***17*** *00:54:12.3±0.9, 17°.95S×177°.94W, h636^{km}±9^{km}, mb3.7/17, mbtmp4.6/19, Error ellipse: s-maj=13.9km s-min=11.6km az=112.0*

ISC 17 00:54:12.0±0.5**, 17°.95S**±0°.08×**177°.82W**±0°.08**, h650^{km}, n548, σ1^{s}.88**/332**, mb4.4**/92**, 6C-7D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**0.99**	**253**	P	**P**	**00 55 26.1**	**-2.0**
DGTI	**Dogotuki**	**2.85**	**305**	P	**P**	**00 55 32.5**	**-2.2**
FUTU	**Fugatoga**	**3.63**	**355**	P	**P**	**00 55 36.3**	**-2.7**
FUTU	**Fugatoga**	**3.63**	**355**	P	**P**	**00 55 36.9**	**-2.1**
MSVF	**Nonsavu**	**3.94**	**272**		**P**	**00 55 38.8**	**-2.1**
MSVF	**Nonsavu**	**3.94**	**272**	P	**P**	**00 55 39.5**	**-1.5**
	335nm,0.8s,baz=136,slow=3.5,SNR=179						
MSVF				S	**S**	**00 56 51.1**	**-2.2**
	102nm,1.1s,baz=101,slow=22,SNR=14						
MSVF	**Nonsavu**	**3.94**	**272**	P	**P**	**00 55 39.3**	**-1.6**
AFI	**Afiamalu**	**7.06**	**56**	P	**P**	**00 56 02.9**	**-2.1**
AFI	**Afiamalu**	**7.06**	**56**	P	**P**	**00 56 03.4**	**-1.6**
FUNA	**Funafuti**	**9.80**	**342**	P	**P**	**00 56 28.9**	**-1.1**
FUNA	**Funafuti**	**9.80**	**342**	P	**P**	**00 56 29.2**	**-0.9**
OUENC	**Ouen Island, N**	**15.07**	**250**	P	**P**	**00 57 19.4**	**+0.5**
DZM	**Mont Dzumac**	**15.35**	**252**		**P**	**00 57 22.1**	**+0.5**
DZM	**Mont Dzumac**	**15.35**	**252**	P	**P**	**00 57 21.9**	**+0.3**
	27nm,0.7s,baz=251,slow=20,SNR=29						
DZM	**Mont Dzumac**	**15.35**	**252**	P	**P**	**00 57 22.1**	**+0.5**
OUZ	**Omahuta**	**18.82**	**202**	P	**P**	**00 57 54.0**	**+1.1**
URZ	**Urewera**	**20.72**	**191**	P	**P**	**00 58 07.5**	**-2.4**
	4.7nm,0.4s,baz=67,slow=6.3,SNR=2.4						
QRZ	**Quartz Range**	**24.27**	**198**	P	**P**	**00 58 40.5**	**-0.8**
THZ	**Tophouse**	**25.03**	**197**	P	**P**	**00 58 47.3**	**-0.8**
KHZ	**Kahutara**	**25.48**	**195**	P	**P**	**00 58 50.4**	**-1.5**
KHZ	**Kahutara**	**25.48**	**195**	P	**P**	**00 58 50.9**	**-1.0**
LTZ	**Lake Taylor**	**26.15**	**197**	P	**P**	**00 58 56.9**	**-0.9**
FOZ	**Fox Glacier**	**27.57**	**200**	P	**P**	**00 59 08.7**	**-1.4**
JCZ	**Jackson Bay**	**28.39**	**201**	P	**P**	**00 59 16.7**	**-0.6**
MLZ	**Mavora Lakes**	**29.75**	**200**	P	**P**	**00 59 28.9**	**0.0**

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EIDS  Eidsvold          29.78 250  P      P      00 59 29.6 +0.1
EIDS  Eidsvold          29.78 250  P      P      00 59 29.4 -0.1
ARMA  Armidale          30.41 240  P      P      00 59 35.4 +0.5
ARMA  Armidale          30.41 240  P      P      00 59 35.4 +0.5
CNB   Canberra Magne    33.85 233  P      P      01 00 04.3 +0.6
CTAO  Charters Tower    33.99 261         P      01 00 04.8 -0.3
CTAO  Charters Tower    33.99 261  P      P      01 00 05.0  0.0
CAN   Canberra          34.13 233         P      01 00 06.1 +0.1
CAN   Canberra          34.13 233  P      P      01 00 06.5 +0.5
PMG   Port Moresby      35.02 279         P      01 00 14.5 +1.0
PMG   Port Moresby      35.02 279  P      P      01 00 14.2 +0.7
      43nm,0.8s,baz=85,slow=5.5,SNR=10
      43nm,0.8s
CMSA  Cobar Meteorol    35.62 241  P      P      01 00 18.5 +0.2
MTSU  Mount Surprise    35.96 264  P      P      01 00 21.3  0.0
QLP   Quilpie           36.04 249  P      P      01 00 22.4 +0.6
TOO   Toolangi          37.58 231         P      01 00 34.5 +0.3
TOO                                IAmb   IAmb   01 00 35.4
      comp=Z,9.4nm,1.0s
MANU  Manus Island      37.63 291  P      P      01 00 36.1 +1.2
COEN  Coen              37.66 270         P      01 00 36.0 +0.9
COEN  Coen              37.66 270  P      P      01 00 36.2 +1.1
STKA  Stephens Creek    39.10 241         P      01 00 46.8 +0.4
STKA  Stephens Creek    39.10 241  P      P      01 00 46.8 +0.4
      comp=Z,17nm,0.8s,baz=77,slow=8.8,SNR=27
      comp=Z,17nm,0.8s
QIS   Mount Isa         40.20 259  P      P      01 00 55.7 +0.4
HTT   Hallett           41.61 240  P      P      01 01 05.7 -0.6
BBOO  Buckleboo         43.88 241         P      01 01 23.9 +0.1
BBOO  Buckleboo         43.88 241  P      P      01 01 23.7 -0.1
WR8   Warramunga Arr    45.02 259  P      P      01 01 32.3 -0.3
WR8                                IAmb   IAmb   01 01 33.6
      comp=Z,10nm,0.8s
WB0   Warramunga Arr    45.14 260         P      01 01 33.2 -0.4
WRA   Warramunga Arr    45.17 259  P      P      01 01 33.3 -0.6
WRA   Warramunga Arr    45.17 259  P      P      01 01 33.5 -0.3
      comp=Z,19nm,0.6s,baz=94,slow=7.4,SNR=197
WRA                                PcP    PcP    01 03 00.6 +0.9
      comp=Z,1.2nm,0.5s,baz=87,slow=3.5,SNR=4.4
WRA                                ScP    ScP    01 05 54.7 +3.0
      comp=Z,1.3nm,0.8s,baz=92,slow=4.4,SNR=5.5
      comp=Z,19nm,0.6s
AS01  Alice Springs     45.28 254  P      P      01 01 34.1 -0.5
ASAR  Alice Springs     45.32 254  P      P      01 01 35.0  0.0
ASAR  Alice Springs     45.32 254  P      P      01 01 34.8 -0.1
      comp=Z,50nm,0.8s,baz=86,slow=8.5,SNR=337
ASAR                               PcP    PcP    01 03 01.1 +0.9
      comp=Z,2.6nm,0.6s,baz=100,slow=3.4,SNR=5.1
ASAR                               ScP    ScP    01 05 55.7 +3.5
      comp=Z,1.2nm,0.6s,baz=96,slow=4.1,SNR=5.5
      comp=Z,50nm,0.8s
MTN   Manton Dam        49.36 268  P      P      01 02 04.7 -0.2
FORT  Forrest           50.50 245  P      P      01 02 12.5 -0.5
FORT  Forrest           50.50 245  P      P      01 02 12.9 -0.1
KNRA  Kununurra         51.04 264  P      P      01 02 17.2 +0.1
KNRA                               IAmb   IAmb   01 02 17.8
      comp=Z,22nm,0.8s
FAKI  Fak Fak           51.13 281  P      P      01 02 18.0 +0.2
FAKI                               IAmb   IAmb   01 02 54.9
      comp=Z,35nm,1.3s
FAKI  Fak Fak           51.13 281  P      P      01 02 17.8 -0.1
SOEI  Soe               56.63 270  P      P      01 02 56.4  0.0
PSA00 Pilbara Seismi    58.44 255  P      P      01 03 08.3 -0.1
PSA00                              IAmb   IAmb   01 03 08.9
      comp=Z,21nm,0.8s
PSA00 Pilbara Seismi    58.44 255  P      P      01 03 08.3 -0.1
PSA00                              IAmb   IAmb   01 03 48.4
      comp=Z,18nm,1.4s
MBWA  Marble Bar        58.61 256  P      P      01 03 09.4 -0.1
MBWA                               IAmb   IAmb   01 03 37.3
      comp=Z,42nm,1.4s
NWAO  Narrogin (SRO)    59.69 242  P      P      01 03 16.7 +0.2
SBA   Scott Base        60.42 184  P      P      01 03 23.0 +2.6
VNDA  Vanda             60.46 185  P      P      01 03 22.4 +1.7
      comp=Z,2.1nm,0.8s,baz=347,slow=7.4,SNR=5.3
      comp=Z,2.1nm,0.8s
TOLI2 Tolitoli          63.27 281  P      P      01 03 40.2 +0.3
TOLI2                              IAmb   IAmb   01 03 41.1
      comp=Z,9.1nm,0.8s
MJAR  Matsushiro Arr    68.27 323  P      P      01 04 11.2 +0.8
      comp=Z,8.0nm,0.7s,baz=156,slow=5.7,SNR=13
      comp=Z,8.0nm,0.7s
KIWB  Kanaga Island     69.50   0  P      P      01 04 18.4 +1.1
UGM   Wanagama          70.20 268  P      P      01 04 22.6 +0.2
NIKH  Nikolski High     71.05   6  P      P      01 04 27.7 +1.3
      baz=189
QSPA  South Pole Qui    72.11 180  P      P      01 04 33.7 +1.1
QSPA                               IAmb   IAmb   01 04 34.6
      comp=Z,11nm,0.8s
QSPA  South Pole Qui    72.11 180  P      P      01 04 33.9 +1.3
      comp=Z,8.6nm,0.6s,baz=324,slow=0.6,SNR=81
      comp=Z,8.6nm,0.6s
UNV   Unalaska Valle    72.16   7  P      P      01 04 33.2 +0.5
UNV   Unalaska Valle    72.16   7  P      P      01 04 34.1 +1.4
      baz=191
AKUT  Akutan            72.53   7  P      P      01 04 35.9 +1.1
SSLB  Suanglung         72.72 303  P      P      01 04 36.8 +0.1
TPUB  Ta-pu             72.75 302  P      P      01 04 36.9  0.0
FALS  False Pass        73.54   9  P      P      01 04 41.7 +1.1
      baz=194
PETK  Petropavlovsk-    73.86 345  P      P      01 04 42.7 +0.2
      comp=Z,13nm,0.8s,baz=110,slow=7.8,SNR=13
PETK                               S      S      01 13 26.6 +3.2
      comp=Z,1.4nm,0.5s,baz=231,slow=41,SNR=5.3
      comp=Z,13nm,0.8s
CHNA  Chernabura Isl    74.14  11  P      P      01 04 45.0 +1.1
      baz=198
SDPT  Sand Point        74.48  10  P      P      01 04 46.9 +1.1
      baz=197
S12K  Black Hills       74.56   9  P      P      01 04 46.8 +0.5
S12K  Black Hills       74.56   9  P      P      01 04 47.0 +0.7
      baz=196
P08K  Saint George I    74.58   5  P      P      01 04 47.5 +1.1
      baz=188
KSRS  Korea Array       75.10 318  P      P      01 04 51.6 +1.9
      comp=Z,1.4nm,0.7s,baz=127,slow=5.7,SNR=3.6
      comp=Z,1.4nm,0.7s
SPIA  Saint Paul Isl    75.10   4  P      P      01 04 50.6 +1.4
      baz=187
S14K  Fog Glacier       75.53  10  P      P      01 04 52.5 +0.7
      baz=198
CHIR  Chirikof Islan    75.84  13  P      P      01 04 54.2 +0.9
      baz=202
SII   Sitkinak Islan    76.83  13  P      P      01 05 00.1 +1.3
      baz=203
OHAK  Old Harbor        77.64  13  P      P      01 05 04.5 +1.4
      baz=204
R18K  Karluk            77.70  13  P      P      01 05 05.0 +1.6
      baz=203
Q17K  Contact Creek     78.07  12  P      P      01 05 06.4 +0.9
      baz=201
O14K  Tigyukauivet M    78.11   9  P      P      01 05 06.5 +1.0
      baz=196
O15K  Ungalikthiuk R    78.25   9  P      P      01 05 07.2 +0.9
      baz=197
KDAK  Kodiak Island     78.31  13  P      P      01 05 07.4 +0.8
      baz=204
Q16K  King Salmon       78.31  11  P      P      01 05 08.1 +1.5
      baz=200
P16K  Nushagak River    78.41  10  P      P      01 05 08.2 +1.1
      baz=199
Q18K  Katmai Hardscr    78.59  12  P      P      01 05 09.3 +1.0
      baz=202
M11K  Mekoryuk          78.62   6  P      P      01 05 09.8 +1.7
      baz=191
N14K  Kuskokwak Cree    78.69   8  P      P      01 05 10.4 +1.9
N14K  Kuskokwak Cree    78.69   8  P      P      01 05 10.0 +1.4
      baz=196,SNR=5.8
P17K  Kvichak River     78.83  11  P      P      01 05 10.5 +1.1
      baz=201
O16K  Kokwok River B    78.92  10  P      P      01 05 10.5 +0.6
O16K  Kokwok River B    78.92  10  P      P      01 05 10.6 +0.7
      baz=199
M13K  Dall Lake         78.96   7  P      P      01 05 11.3 +1.4
      baz=194
I03D  Drain, OR         79.02  37  P      P      01 05 13.4 +2.7
I03D                               IAmb   IAmb   01 05 42.6
      comp=Z,18nm,1.4s
NVAR  Mina Array Bea    79.06  44  P      P      01 05 14.2 +2.8
NVAR  Mina Array Bea    79.06  44  P      P      01 05 14.1 +2.7
      comp=Z,2.0nm,0.7s,baz=223,slow=8.6,SNR=13
      comp=Z,2.0nm,0.7s
Q20K  Shuyak Island     79.10  13  P      P      01 05 12.2 +1.4
      baz=204
Q19K  Cape Douglas,     79.13  12  P      P      01 05 12.6 +1.6
      baz=203
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N15K  Kwethluk River    79.16   9  P      P      01 05 13.0 +1.9
N15K  Kwethluk River    79.16   9  P      P      01 05 12.7 +1.7
      baz=197
P18K  Big Mountain,     79.24  12  P      P      01 05 12.7 +1.1
P18K                               IAmb   IAmb   01 05 13.4
      comp=Z,11nm,0.8s
P18K  Big Mountain,     79.24  12  P      P      01 05 12.5 +0.9
      baz=202
O17K  Koliganek Bris    79.26  11  P      P      01 05 12.8 +1.2
      baz=200
M14K  Bethel            79.46   8  P      P      01 05 13.9 +1.3
      baz=195
M15K  Kasigluk River    79.58   8  P      P      01 05 14.9 +1.7
      baz=196
N16K  Nishlik Lake      79.65   9  P      P      01 05 15.3 +1.6
      baz=198
O18K  Koktuh Hills      79.68  11  P      P      01 05 15.2 +1.4
O18K                               IAmb   IAmb   01 05 15.9
      comp=Z,21nm,0.9s
O18K  Koktuh Hills      79.68  11  P      P      01 05 15.1 +1.2
      baz=202
P19K  Oil Pt            79.88  12  P      P      01 05 16.2 +1.3
P19K                               IAmb   IAmb   01 05 17.8
      comp=Z,12nm,0.9s
P19K  Oil Pt            79.88  12  P      P      01 05 16.7 +1.8
      baz=204
L14K  Kuka Creek        79.94   7  P      P      01 05 17.9 +2.8
L14K  Kuka Creek        79.94   7  P      P      01 05 17.0 +1.9
      baz=195
N17K  Nushagak Hills    79.96  10  P      P      01 05 16.6 +1.3
N17K                               IAmb   IAmb   01 05 18.7
      comp=Z,13nm,1.3s
N17K  Nushagak Hills    79.96  10  P      P      01 05 16.7 +1.5
      baz=200
J05D  Fort Rock, OR     80.00  38         P      01 05 18.5 +2.4
J05D                               IAmb   IAmb   01 05 19.8
      comp=Z,9.7nm,0.9s
M16K  Timber Creek      80.14   9  P      P      01 05 18.6 +2.4
M16K                               IAmb   IAmb   01 05 19.8
      comp=Z,27nm,1.2s
M16K  Timber Creek      80.14   9  P      P      01 05 18.4 +2.1
      baz=198,SNR=6.9
O19K  Port Alsworth     80.16  12  P      P      01 05 18.1 +1.8
      baz=203
HOM   Homer             80.22  13  P      P      01 05 18.2 +1.6
      baz=205
H04A  Detroit Lake      80.29  37  P      P      01 05 19.4 +2.0
K13K  Kusilvak Mount    80.29   6  P      P      01 05 18.7 +1.8
      baz=193
N18K  Kilae Creek       80.33  11  P      P      01 05 17.8 +0.6
N18K  Kilae Creek       80.33  11  P      P      01 05 18.8 +1.6
      baz=201
O20K  Slope Mountain    80.40  13  P      P      01 05 18.9 +1.3
      baz=204
L15K  Ungalak Mounta    80.42   8  P      P      01 05 19.1 +1.5
      baz=196
BNX   BinXian           80.45 325 ⇑P      P      01 05 19.9 +1.8
BNX                                pmax   pmax
      comp=Z,12nm,0.9s
BRSE  Bradley Lake S    80.49  14  P      P      01 05 19.8 +1.7
      baz=206
N19K  Bonanza Creek     80.71  11  P      P      01 05 20.9 +1.7
      baz=202
L16K  Owhat River       80.72   9         P      01 05 20.9 +1.8
L16K                               IAmb   IAmb   01 05 22.3
      comp=Z,12nm,1.0s
L16K  Owhat River       80.72   9  P      P      01 05 20.9 +1.8
      baz=198,SNR=9.3
M17K  Holitna River     80.74  10  P      P      01 05 21.3 +2.0
M17K                               IAmb   IAmb   01 05 22.9
      comp=Z,16nm,0.9s
M17K  Holitna River     80.74  10  P      P      01 05 21.7 +2.4
      baz=200,SNR=6.9
K15K  Wolf Creek Mou    81.01   8  P      P      01 05 22.8 +2.2
K15K  Wolf Creek Mou    81.01   8  P      P      01 05 22.7 +2.1
      baz=196,SNR=9.9
HOLB  Holberg           81.03  29  P      P      01 05 21.9 +0.9
HOLB                               IAmb   IAmb   01 05 37.8
      comp=Z,21nm,1.2s
NLWA  Neilton Lookou    81.03  34  P      P      01 05 22.9 +1.8
NLWA                               IAmb   IAmb   01 05 24.1
      comp=Z,12nm,1.4s
WVOR  Wild Horse Val    81.08  40  P      P      01 05 23.4 +1.8
M18K  Stony River       81.09  10  P      P      01 05 22.8 +1.7
      baz=201
SEW   Seward            81.11  14  P      P      01 05 22.8 +1.7
      baz=207
J14K  Nanvaranak Lak    81.21   7  P      P      01 05 23.2 +1.6
      baz=194
Q23K  Middleton Isla    81.27  16  P      P      01 05 23.3 +1.4
      baz=210
L17K  Donlin            81.30   9  P      P      01 05 24.1 +1.9
      baz=199,SNR=5.6
CAPN  Captain Cook N    81.33  13  P      P      01 05 23.7 +1.5
      baz=206
I07A  Izee              81.49  38  P      P      01 05 26.1 +2.4
P23K  Montague Islan    81.50  15  P      P      01 05 24.6 +1.4
      baz=209
N20K  Mount Spurr       81.50  12  P      P      01 05 25.3 +2.0
      baz=204
SPCR  Spurr Chakacha    81.50  12  P      P      01 05 25.0 +1.7
      baz=204
GAMB  Gambell           81.59   3  P      P      01 05 25.1 +1.6
      baz=186
L18K  Granite Mounta    81.64  10  P      P      01 05 25.8 +2.0
L18K                               IAmb   IAmb   01 05 26.9
      comp=Z,6.9nm,0.7s
L18K  Granite Mounta    81.64  10  P      P      01 05 26.1 +2.3
      baz=200,SNR=10
J08A  Circle Bar Ran    81.69  39  P      P      01 05 25.8 +1.1
M19K  Big River Lodg    81.73  11  P      P      01 05 25.8 +1.5
      baz=202
K17K  Iditarod          81.85   9  P      P      01 05 26.6 +1.7
      baz=199
L19K  White Mountain    81.91  11  P      P      01 05 26.8 +1.5
      baz=202
RC01  Rabbit Creek A    81.92  13  P      P      01 05 26.8 +1.5
      baz=207
M20K  Styx River        81.95  12  P      P      01 05 26.6 +1.1
      baz=204
PWL   Port Wells        82.04  14  P      P      01 05 27.1 +1.2
      baz=208
SUA   Susitna One       82.04  13  P      P      01 05 27.7 +1.6
      baz=206
J16K  Anvik River       82.08   8  P      P      01 05 28.2 +2.2
J16K                               IAmb   IAmb   01 05 29.1
      comp=Z,12nm,1.1s
J16K  Anvik River       82.08   8  P      P      01 05 28.0 +2.0
      baz=196,SNR=6.2
U15A  North Rim         82.13  48         P      01 05 30.2 +2.9
KAIM  Kayak Island      82.20  16  P      P      01 05 28.3 +1.5
      baz=212
CRAG  Craig             82.32  24  P      P      01 05 28.9 +1.5
      baz=222
GLI   Glacier Island    82.35  15  P      P      01 05 28.6 +1.2
GLI                                IAmb   IAmb   01 05 29.3
      comp=Z,13nm,0.8s
GLI   Glacier Island    82.35  15  P      P      01 05 28.5 +1.1
      baz=209
SKT   Skwentna          82.35  12  P      P      01 05 28.5 +1.1
      baz=205
L20K  Farewell, AK      82.36  11  P      P      01 05 28.5 +1.0
      baz=203
EYAK  Cordova Ski Ar    82.39  15  P      P      01 05 28.3 +0.7
      baz=211
J17K  VABM Dome         82.39   8  P      P      01 05 29.8 +2.2
J17K                               IAmb   IAmb   01 05 30.4
      comp=Z,4.4nm,0.7s
J17K  VABM Dome         82.39   8  P      P      01 05 28.6 +1.0
      baz=198,SNR=5.1
M22K  Willow            82.44  13  P      P      01 05 28.5 +0.7
      baz=206
KNK   Knik Glacier      82.50  14  P      P      01 05 28.6 +0.3
      baz=208
PMR   Palmer            82.51  13  P      P      01 05 28.3 +0.1
      baz=207
I17K  Unalakleet        82.65   8  P      P      01 05 29.3 +0.5
      baz=196
BGLC  Bering Glacier    82.67  17  P      P      01 05 29.2 +0.2
      baz=213
SIT   Sitka             82.70  22  P      P      01 05 29.6 +0.4
      baz=220
GHO   Glory Hole Cre    82.71  13  P      P      01 05 30.8 +1.4
U33K  Whale Pass        82.80  23  P      P      01 05 30.1 +0.3
      baz=222
J18K  Innoko River      82.80   9  IAmb   IAmb   01 05 32.3
      comp=Z,8.6nm,0.8s
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J18K  Innoko River      82.80   9  P      P      01 05 30.6 +0.9
      baz=200,SNR=10
ANM   Nome              82.81   5  P      P      01 05 30.1 +0.5
      baz=192
V35K  Ketchikan         82.81  25  P      P      01 05 29.8  0.0
      baz=224
SML   Sawmill           82.88  14  P      P      01 05 31.1 +0.9
SML                                IAmb   IAmb   01 05 52.7
      comp=Z,6.9nm,1.0s
SML   Sawmill           82.88  14  P      P      01 05 30.8 +0.6
      baz=208
CUT   Chulitna          82.99  13  P      P      01 05 31.3 +0.7
      baz=206
M23K  Glacier View      83.00  14  P      P      01 05 31.1 +0.4
      baz=209
BMRM  Bremner River     83.04  16  P      P      01 05 31.8 +0.8
      baz=212
PPLA  Purkeypile        83.06  12  P      P      01 05 31.8 +0.7
      baz=204
S31K  Pelican           83.08  21  P      P      01 05 32.2 +1.1
      baz=219
MESA  MESA              83.09  17  P      P      01 05 32.3 +0.9
      baz=214
SCM   Sheep Creek Mo    83.13  14  IAmb   IAmb   01 05 33.5
      comp=Z,11nm,0.6s
SCM   Sheep Creek Mo    83.13  14  P      P      01 05 32.5 +1.1
      baz=209
K20K  Telida            83.14  11  IAmb   IAmb   01 05 33.7
      comp=Z,7.4nm,0.7s
K20K  Telida            83.14  11  P      P      01 05 32.9 +1.5
      baz=203,SNR=7.9
KLU   Klutina           83.16  15  P      P      01 05 31.9 +0.4
      baz=210
H16K  Elim              83.19   7  P      P      01 05 32.6 +1.1
      baz=195
CRQE  Cirque            83.25  16  P      P      01 05 32.9 +0.8
      baz=213
S32K  Killisnoo         83.28  22  P      P      01 05 32.6 +0.6
      baz=221
WRAK  Wrangell Islan    83.32  24  P      P      01 05 32.7 +0.4
      baz=223
G15K  Niukluk           83.35   6  P      P      01 05 33.4 +1.1
      baz=193
PNL   Peninsula         83.42  19  P      P      01 05 33.2 +0.4
      baz=216
J19K  Poorman           83.47  10  P      P      01 05 33.9 +1.0
      baz=201
PINM  Pinnacle          83.51  18  P      P      01 05 34.2 +0.9
      baz=216
CAST  Castle Rocks      83.55  11  P      P      01 05 33.6 +0.2
      baz=204
VRDI  Verde Repeater    83.56  16  IAmb   IAmb   01 05 36.0
      comp=Z,7.3nm,0.8s
N25K  Chitina, Valde    83.59  15  IAmb   IAmb   01 05 36.0
      comp=Z,11nm,0.7s
N25K  Chitina, Valde    83.59  15  P      P      01 05 34.3 +0.7
      baz=212,SNR=6.2
TNA   Tin City          83.59   4  P      P      01 05 34.8 +1.3
      baz=189
GRNC  Granite Creek     83.60  17  P      P      01 05 35.7 +1.7
GRNC                               IAmb   IAmb   01 05 36.3
      comp=Z,7.8nm,0.9s
F14K  Arctic Creek      83.62   5  P      P      01 05 34.8 +1.1
      baz=191
M24K  Tolsona, Glenn    83.64  14  P      P      01 05 34.2 +0.3
M24K  Tolsona, Glenn    83.64  14  P      P      01 05 35.2 +1.3
      baz=210
GLB   Gilahina Butte    83.65  16  IAmb   IAmb   01 05 36.2
      comp=Z,7.4nm,0.6s
WAT6  Susitna Watana    83.69  14  P      P      01 05 35.3 +1.0
      baz=209,SNR=6.0
WAT1  Susitna Watana    83.73  13  P      P      01 05 35.6 +1.3
      baz=208
H17K  Granite Mounta    83.75   8  P      P      01 05 35.7 +1.4
H17K  Granite Mounta    83.75   8  P      P      01 05 36.0 +1.7
      baz=197
MCARA McCarthy VSAT     83.80  16  P      P      01 05 36.5 +1.8
      baz=213
U35K  Hyder             83.86  25  P      P      01 05 36.1 +1.2
      baz=225
J20K  Nowinta River     83.88  10  IAmb   IAmb   01 05 37.3
      comp=Z,4.7nm,0.7s
J20K  Nowinta River     83.88  10  P      P      01 05 36.4 +1.4
      baz=203,SNR=8.0
LOGN  Logan Glacier     83.89  17  P      P      01 05 37.0 +1.7
LOGN                               IAmb   IAmb   01 05 37.7
      comp=Z,8.1nm,1.1s
KTH   Kantishna Hill    83.90  12  IAmb   IAmb   01 05 37.5
      comp=Z,6.2nm,0.8s
P29M  Windy Craggy      83.90  19  P      P      01 05 36.3 +1.1
      baz=218
BARN  Barnard Glacie    83.90  17  IAmb   IAmb   01 05 38.0
      comp=Z,9.8nm,0.8s
CTG   Chitna Glacier    83.91  17  P      P      01 05 36.7 +1.3
      baz=215
R32K  Eaglecrest        83.91  21  P      P      01 05 36.4 +1.2
      baz=221
G16K  Koyuk River       83.91   6  P      P      01 05 37.0 +1.9
      baz=195
TRF   Thorofare Moun    83.93  12  P      P      01 05 36.0 +0.6
      baz=206,SNR=10.0
GCSA  Galena City Sc    83.99   9  P      P      01 05 36.8 +1.4
      baz=200
F15K  North Star Dit    83.99   5  P      P      01 05 37.2 +1.7
      baz=193
O28M  Mount Upton       84.08  18  P      P      01 05 37.6 +1.2
      baz=216
HARP  HAARP             84.13  15  P      P      01 05 37.4 +1.1
      baz=211
H18K  Honhosa River     84.16   8  P      P      01 05 37.2 +0.8
      baz=199
O29M  Mount Kennedy     84.17  18  P      P      01 05 38.1 +1.4
      baz=217
PLBC  Pleasant Camp     84.20  20  P      P      01 05 37.6 +1.0
      baz=219
DHY   Denali Highway    84.21  13  P      P      01 05 37.8 +1.1
      baz=209
G17K  Kiwalik Mounta    84.21   7  P      P      01 05 37.7 +1.1
      baz=196
LYN   LuoYang           84.28 309  P      P      01 05 40.1 +2.5
LYN                                pmax   pmax
      comp=Z,33nm,0.8s
HLID  Hailey            84.29  41  P      P      01 05 40.1 +2.4
BPAW  Bear Paw Mtn.     84.38  11  P      P      01 05 38.3 +0.9
BPAW  Bear Paw Mtn.     84.38  11  P      P      01 05 38.1 +0.7
      baz=206
I20K  Naaghedeneel      84.41  10  P      P      01 05 38.8 +1.4
      baz=202
MCK   McKinley          84.45  12  P      P      01 05 38.6 +0.8
      baz=208
P30M  Million Dollar    84.53  19  P      P      01 05 39.6 +1.3
      baz=219
T35M  Bob Quinn         84.53  24  P      P      01 05 39.2 +0.9
      baz=225
SKAG  Skagway           84.54  20  P      P      01 05 39.9 +1.7
      baz=220
PAX   Paxson            84.55  14  P      P      01 05 39.7 +1.3
      baz=211
YUK8  Steele Glacier    84.61  17  P      P      01 05 40.2 +1.2
      baz=216
M26K  Nabesna, AK       84.67  15  P      P      01 05 40.6 +1.7
      baz=213,SNR=5.7
YUK6  Outpost Mounta    84.75  18  P      P      01 05 40.9 +1.4
      baz=217
H19K  Roundabout Mou    84.79   9  P      P      01 05 41.1 +1.8
      baz=200
YUK3  Moose Creek       84.82  17  P      P      01 05 41.2 +1.4
      baz=215,SNR=6.6
G18K  Tagagawik         84.83   8  P      P      01 05 40.7 +1.2
      baz=198
S34M  Telegraph Cree    84.86  23  P      P      01 05 41.2 +1.3
      baz=224
HYT   Haines Junctio    84.91  19  P      P      01 05 41.9 +1.7
      baz=218
M27K  Edge Creek, AK    84.92  16  IAmb   IAmb   01 05 43.1
      comp=Z,8.7nm,1.0s
M27K  Edge Creek, AK    84.92  16  P      P      01 05 41.9 +1.7
      baz=214,SNR=7.2
YUK4  Talbot Arm        84.99  18  P      P      01 05 42.8 +2.2
      baz=217
H20K  Anotleneega Mo    84.99   9  P      P      01 05 42.5 +2.2
      baz=202
F17K  Baldwin Pennin    85.05   7  P      P      01 05 42.7 +2.2
      baz=196
L26K  Log Cabin Wild    85.11  15  P      P      01 05 43.0 +2.1
      baz=213
P32M  Atlin             85.18  21  P      P      01 05 42.9 +1.5
      baz=222
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NEA2  Nenana           85.19  12 P        P       01 05 42.9 +1.6
      baz=207
K24K  Donnelly Dome    85.20  14 P        P       01 05 43.1 +1.7
K24K                             IAmb     IAmb    01 05 43.9
      comp=Z,12nm,0.8s
K24K  Donnelly Dome    85.20  14 P        P       01 05 42.8 +1.4
      baz=210
Q32M  Nakina River     85.21  22 P        P       01 05 43.6 +1.9
Q32M                             IAmb     IAmb    01 06 02.5
      comp=Z,14nm,1.5s
Q32M  Nakina River     85.21  22 P        P       01 05 42.8 +1.0
      baz=223
BVCY  Beaver Creek     85.23  16 P        P       01 05 42.8 +1.2
      baz=215
MLY   Manley           85.27  11          P       01 05 42.2 +0.5
MLY                              IAmb     IAmb    01 05 43.1
      comp=Z,7.3nm,1.4s
MLY   Manley           85.27  11 P        P       01 05 42.4 +0.7
      baz=206
G19K  Purcell Mounta   85.28   8 P        P       01 05 42.9 +1.3
      baz=200,SNR=8.0
WRH   Wood River Hil   85.28  12 P        P       01 05 42.6 +0.9
WRH                              IAmb     IAmb    01 05 44.2
      comp=Z,9.1nm,1.0s
O30N  Mendenhall       85.30  19 P        P       01 05 44.2 +2.3
O30N                             IAmb     IAmb    01 05 44.4
      comp=Z,7.5nm,1.1s
O30N  Mendenhall       85.30  19 P        P       01 05 43.4 +1.4
      baz=219
RIDG  Independent Ri   85.36  14 P        P       01 05 43.4 +1.3
      baz=211
F18K  Selawik          85.38   7 P        P       01 05 42.7 +0.6
      baz=197
DOT   Dot Lake         85.46  14 P        P       01 05 44.6 +2.0
HDA   Harding Lake     85.47  13 IAmb     IAmb    01 05 44.0
      comp=Z,4.2nm,0.7s
HDA   Harding Lake     85.47  13 P        P       01 05 43.4 +0.8
      baz=209
H21K  Melozitna Rive   85.48  10 P        P       01 05 44.0 +1.3
      baz=204
CCB   Clear Creek Bu   85.50  12 IAmb     IAmb    01 05 44.3
      comp=Z,15nm,1.3s
L27K  Beaver Creek,    85.52  16 P        P       01 05 45.4 +2.4
L27K  Beaver Creek,    85.52  16 P        P       01 05 44.4 +1.5
      baz=214
BCAR  Beaver Creek A   85.53  16 P        P       01 05 45.6 +2.5
N30M  Aishikik Lake    85.54  18 P        P       01 05 44.6 +1.5
      baz=218
TX31  Lajitas Ar. Si   85.54  57          P       01 05 47.3 +3.4
TXAR  Lajitas Array    85.54  57 P        P       01 05 47.4 +3.4
      comp=Z,1.1nm,0.7s,baz=220,slow=5.9,SNR=16
      comp=Z,1.1nm,0.7s
WHY   Whitehorse       85.60  20 P        P       01 05 44.9 +1.4
      baz=220
E17K  Hotham Inlet     85.61   6 P        P       01 05 44.7 +1.5
      baz=195
I23K  Minto, Yukon-K   85.63  12 P        P       01 05 44.2 +0.8
      baz=207
DLBC  Dease Lake       85.65  23 P        P       01 05 44.8 +1.1
      baz=225
COLA  College          85.69  12 P        P       01 05 44.7 +1.1
      baz=208
SCRK  Sand Creek       85.76  14 P        P       01 05 45.2 +1.0
      baz=212
IL31                   85.80  13 IAmb     IAmb    01 05 45.9
      comp=Z,4.1nm,0.7s
ILAR  Eielson Array    85.80  13          P       01 05 45.4 +1.2
ILAR  Eielson Array    85.80  13 P        P       01 05 44.8 +0.6
      comp=Z,1.8nm,0.4s,baz=218,slow=5.0,SNR=34
      comp=Z,1.8nm,0.4s
F19K  Shaleruckik Mo   85.84   8 P        P       01 05 45.4 +1.2
      baz=199
MCMT  McKenzie Canyo   85.91  40          P       01 05 48.2 +2.7
M29M  Somme Creek      85.92  17 P        P       01 05 46.9 +2.0
M29M  Somme Creek      85.92  17 P        P       01 05 46.4 +1.5
      baz=217
H22K  Ishtalitna Cre   85.94  11 P        P       01 05 46.2 +1.4
      baz=205
P33M  Teslin, Yukon    85.94  21 P        P       01 05 46.6 +1.5
      baz=222
N31M  Braeburn, Yuko   85.95  19 P        P       01 05 46.8 +1.8
      baz=220
J25K  Salcha River,    85.99  13          P       01 05 46.6 +1.4
J25K                             IAmb     IAmb    01 05 46.7
      comp=Z,2.8nm,0.6s
J25K  Salcha River,    85.99  13 P        P       01 05 46.0 +0.9
      baz=211,SNR=5.8
R33M  Jennings River   85.99  22 P        P       01 05 46.4 +1.1
      baz=224
POKR  Poker Plat Res   85.99  12 P        P       01 05 45.9 +0.8
POKR                             IAmb     IAmb    01 05 46.4
      comp=Z,5.5nm,0.8s
POKR  Poker Plat Res   85.99  12 P        P       01 05 46.2 +1.2
      baz=209
E18K  Tukpahlearik C   86.06   7 IAmb     IAmb    01 05 48.0
      comp=Z,3.8nm,0.8s
E18K  Tukpahlearik C   86.06   7 P        P       01 05 46.6 +1.3
      baz=196
D17K  Noatak River     86.08   6 P        P       01 05 46.6 +1.2
      baz=194
XLT   XiLinHaoTe       86.15 319 eP       P       01 05 48.4 +2.0
XLT                              pmax     pmax
      comp=Z,9.0nm,0.8s
G21K  Allakaket        86.15  10 IAmb     IAmb    01 05 47.7
      comp=Z,3.2nm,0.8s
G21K  Allakaket        86.15  10 P        P       01 05 47.2 +1.4
      baz=203,SNR=5.3
H23K  Yukon River      86.20  11 P        P       01 05 47.4 +1.3
      baz=207
K27K  Chicken          86.26  15 P        P       01 05 48.9 +2.6
K27K  Chicken          86.26  15 P        P       01 05 47.7 +1.4
      baz=214
J26L  Joseph Creek     86.30  14 IAmb     IAmb    01 05 50.2
      comp=Z,4.4nm,0.7s
J26L  Joseph Creek     86.30  14 P        P       01 05 47.9 +1.2
      baz=212,SNR=9.4
F20K  Avaraart Lake    86.32   9 P        P       01 05 48.0 +1.5
F20K  Avaraart Lake    86.32   9 P        P       01 05 48.2 +1.6
      baz=201
RDOG  Red Dog Mine     86.44   6 P        P       01 05 48.5 +1.4
      baz=194
C16K  Lisburne Hills   86.45   5 P        P       01 05 48.6 +1.5
      baz=192
E19K  Redstone River   86.50   8 IAmb     IAmb    01 05 49.6
      comp=Z,4.4nm,0.6s
E19K  Redstone River   86.50   8 P        P       01 05 49.0 +1.6
      baz=200,SNR=6.5
H24K  Noodor Dome      86.53  12 P        P       01 05 49.5 +1.8
      baz=208
L29M  L29M             86.54  17          P       01 05 49.9 +2.1
L29M                             IAmb     IAmb    01 05 50.9
      comp=Z,13nm,1.2s
L29M  L29M             86.54  17 P        P       01 05 49.6 +1.8
      baz=218,SNR=6.6
XAN   Xi'an            86.73 307 P        P       01 05 51.6 +2.3
XAN                              pmax     pmax
      comp=Z,20nm,1.1s
PRP   Porcupine Dome   86.73  13 P        P       01 05 50.4 +1.6
      baz=211
F21K  Alatna River     86.81   9 P        P       01 05 50.1 +1.2
      baz=203
C17K  DeLong Mountai   86.83   5 P        P       01 05 50.2 +1.3
      baz=194
G22K  Bettles          86.85  10 P        P       01 05 50.8 +1.7
      baz=205
G23K  Bananza Creek    86.91  11 P        P       01 05 51.0 +1.5
G23K  Bananza Creek    86.91  11 P        P       01 05 50.9 +1.5
      baz=206
M31M  Drury Creek, Y   86.93  19 P        P       01 05 51.1 +1.6
      baz=221
DAWY  Dawson           86.97  16 P        P       01 05 51.6 +1.9
DAWY                             IAmb     IAmb    01 05 52.4
      comp=Z,6.8nm,1.3s
DAWY  Dawson           86.97  16 P        P       01 05 51.4 +1.7
      baz=216
PDAR  Pinedale Array   87.00  43 P        P       01 05 52.5 +1.9
PDAR  Pinedale Array   87.00  43 P        P       01 05 52.7 +2.1
      comp=Z,0.8nm,0.5s,baz=209,slow=2.7,SNR=10
      comp=Z,0.8nm,0.5s
I26K  Coal Creek Min   87.08  14 P        P       01 05 52.0 +1.9
      baz=213
C18K  Utukok River     87.19   6 P        P       01 05 52.7 +2.0
      baz=196
FARO  Faro, Yukon      87.27  19 P        P       01 05 52.9 +1.7
      baz=222
F22K  John River       87.28  10 P        P       01 05 53.0 +1.9
      baz=204
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K29M  Barlow Dome      87.29  17          P       01 05 53.4 +2.1
K29M                             IAmb     IAmb    01 05 54.4
      comp=Z,6.5nm,1.2s
K29M  Barlow Dome      87.29  17 P        P       01 05 52.8 +1.4
      baz=218,SNR=5.6
H25L  Birch Creek      87.32  12 P        P       01 05 53.0 +1.7
      baz=210
COLD  Coldfoot         87.35  10 IAmb     IAmb    01 05 54.1
      comp=Z,4.2nm,0.8s
COLD  Coldfoot         87.35  10 P        P       01 05 53.3 +1.9
      baz=206,SNR=8.3
G24K  Hadweenzic Riv   87.37  12 P        P       01 05 52.6 +1.1
G24K  Hadweenzic Riv   87.37  12 P        P       01 05 53.1 +1.5
      baz=209
D19K  Kuna River       87.38   7 P        P       01 05 52.9 +1.3
D19K                             IAmb     IAmb    01 06 28.1
      comp=Z,5.8nm,1.2s
D19K  Kuna River       87.38   7 P        P       01 05 52.7 +1.1
      baz=199
E20K  Nigu River       87.39   8 P        P       01 05 53.3 +1.7
      baz=200,SNR=9.1
MAYO  Mayo, Yukon      87.55  17 P        P       01 05 54.1 +1.7
      baz=220
J29N  Klondike Camp    87.59  16 P        P       01 05 54.4 +1.7
      baz=217
I27K  Kandik River     87.68  14 P        P       01 05 54.6 +1.5
      baz=214
HHC   Hu-ho-hao-te     87.70 314 eP       P       01 06 00.0 +6.2
HHC                              pmax     pmax
      comp=Z,15nm,0.6s
HHC                              pmax     pmax
      comp=Z,94nm,4.4s
G25K  Bearman Lake     87.70  12 P        P       01 05 55.0 +2.0
      baz=210
TOAD  Toad River Com   87.76  24 P        P       01 05 55.1 +1.6
      baz=229,SNR=7.0
D20K  Etivluk River    87.77   8 IAmb     IAmb    01 05 55.7
      comp=Z,3.0nm,0.8s
D20K  Etivluk River    87.77   8 P        P       01 05 55.2 +1.9
      baz=200
C19K  Lookout Ridge    87.79   6 P        P       01 05 54.6 +1.1
C19K                             IAmb     IAmb    01 06 36.3
      comp=Z,6.4nm,1.4s
C19K  Lookout Ridge    87.79   6 P        P       01 05 55.5 +2.0
      baz=197
B18K  Kokolik River    87.82   6 P        P       01 05 55.4 +1.9
      baz=195
E21K  Killik River     87.87   9 P        P       01 05 55.5 +1.6
      baz=203
E22K  Anaktuvuk Pass   87.91   9 IAmb     IAmb    01 05 56.4
      comp=Z,5.7nm,1.0s
E22K  Anaktuvuk Pass   87.91   9 P        P       01 05 55.6 +1.6
      baz=205,SNR=6.5
I28M  Miner Creek      87.95  15 P        P       01 05 55.8 +1.4
      baz=216,SNR=5.2
F24K  Squaw Lake       88.02  11 IAmb     IAmb    01 05 57.1
      comp=Z,4.0nm,0.7s
F24K  Squaw Lake       88.02  11 P        P       01 05 56.2 +1.6
      baz=208,SNR=8.6
J30M  Hart River       88.19  17 P        P       01 05 56.9 +1.4
      baz=219
E23K  Chandalar        88.19  10          P       01 05 57.2 +1.7
E23K                             IAmb     IAmb    01 05 57.9
      comp=Z,4.2nm,0.9s
E23K  Chandalar        88.19  10 P        P       01 05 57.1 +1.7
      baz=207
MMPY  Sheldon Lake,    88.22  20 P        P       01 05 57.9 +2.2
MMPY                             IAmb     IAmb    01 05 58.7
      comp=Z,4.8nm,1.0s
MMPY  Sheldon Lake,    88.22  20 P        P       01 05 57.2 +1.5
      baz=224
H27K  Steamboat Moun   88.22  14          P       01 05 57.4 +1.8
H27K  Steamboat Moun   88.22  14 P        P       01 05 57.2 +1.7
      baz=214
I29M  Ogilvie Camp,    88.29  15 P        P       01 05 57.7 +1.9
      baz=217
G26K  Porcupine Rive   88.33  13 P        P       01 05 57.6 +1.6
      baz=212
E24K  Your Creek       88.40  11 P        P       01 05 57.9 +1.6
      baz=208
C21K  Knifeblade Rid   88.42   8 P        P       01 05 57.9 +1.6
      baz=202
D22K  Ayikyak River    88.46   9 IAmb     IAmb    01 05 58.8
      comp=Z,5.6nm,0.6s
D22K  Ayikyak River    88.46   9 P        P       01 05 58.1 +1.5
      baz=204,SNR=6.0
F25K  Christian Rive   88.51  12 P        P       01 05 58.8 +1.9
F25K  Christian Rive   88.51  12 P        P       01 05 58.5 +1.6
      baz=210
BMAR  Burnt Mountain   88.58  12          P       01 05 59.3 +2.1
G27K  Doyon Strip      88.67  14 P        P       01 05 59.3 +1.7
      baz=214
I30M  Mount Dempster   88.68  16 IAmb     IAmb    01 06 00.2
      comp=Z,4.2nm,1.1s
I30M  Mount Dempster   88.68  16 P        P       01 05 59.0 +1.1
      baz=219
BEAVL Fort Liard       88.70  23 P        P       01 05 59.1 +1.2
      baz=229
A19K  Wainwright       88.70   6 P        P       01 05 59.0 +1.4
      baz=196
TOLK  Toolik Lake Re   88.72  10 P        P       01 05 59.1 +1.3
      baz=207
D23K  Nanushuk River   88.84   9 IAmb     IAmb    01 06 01.1
      comp=Z,7.2nm,1.0s
D23K  Nanushuk River   88.84   9 P        P       01 05 59.9 +1.5
      baz=206,SNR=5.2
B21K  Ikpikpuk River   88.88   8 IAmb     IAmb    01 06 00.7
      comp=Z,2.7nm,0.8s
B21K  Ikpikpuk River   88.88   8 P        P       01 06 00.4 +1.9
      baz=202
F26K  Sheenjek River   88.89  12 P        P       01 06 00.6 +2.0
F26K  Sheenjek River   88.89  12 P        P       01 06 00.0 +1.4
      baz=212
B20K  Meade River      88.92   7 P        P       01 05 60.0 +1.4
      baz=200
H29M  Whitestone       88.96  15 IAmb     IAmb    01 06 01.4
      comp=Z,6.6nm,0.8s
H29M  Whitestone       88.96  15 P        P       01 06 00.1 +1.1
      baz=217,SNR=5.8
E25K  Arctic Village   88.98  12 P        P       01 06 00.3 +1.3
E25K  Arctic Village   88.98  12 P        P       01 06 00.0 +1.0
      baz=210
D24K  Happy Valley     89.31  10 P        P       01 06 01.6 +1.2
      baz=207
CMAR  Chiang Mai Arr   89.42 290 P        P       01 06 04.0 +1.8
      comp=Z,1.3nm,0.5s,baz=111,slow=5.0,SNR=11
      comp=Z,1.3nm,0.5s
EPYK  Eagle Plains     89.49  15 P        P       01 06 02.4 +1.0
      baz=219
G29M  Pine Creek       89.60  15 P        P       01 06 02.6 +0.7
      baz=218
C23K  Itkillik River   89.64   9 P        P       01 06 03.9 +1.9
C23K                             IAmb     IAmb    01 06 04.7
      comp=Z,6.8nm,1.0s
C23K  Itkillik River   89.64   9 P        P       01 06 03.3 +1.3
      baz=206
PZH   PanZhiHua        89.67 298 P        P       01 06 05.3 +2.0
H31M  Peel River       89.67  16 P        P       01 06 03.9 +1.6
H31M                             IAmb     IAmb    01 06 28.2
      comp=Z,6.9nm,1.3s
H31M  Peel River       89.67  16 P        P       01 06 03.2 +0.9
      baz=221
B22K  Teshekpuk Lake   89.70   8 P        P       01 06 03.8 +1.6
      baz=203
F28M  Old Crow         89.73  14 P        P       01 06 03.9 +1.4
      baz=216
E27K  Coleen River     89.83  13 P        P       01 06 04.5 +1.5
      baz=214
D25K  Kavik River      89.87  11 P        P       01 06 04.4 +1.2
      baz=210
G30M  tAoh Zraii Nji   90.09  15 P        P       01 06 05.2 +1.0
      baz=219,SNR=5.1
A22K  Sinclair Lake    90.12   7 P        P       01 06 05.7 +1.5
      baz=202
A21K  Barrow           90.23   7 P        P       01 06 06.6 +1.9
      baz=200
TROLL Troll, Antarti   90.27 180 ⇑P       P       01 06 05.1 -0.2
      comp=Z,157nm,0.5s
G31M  Satah River      90.54  16 P        P       01 06 07.2 +1.0
      baz=221,SNR=7.7
SNAA  Sanae            90.55 178 ⇑P       P       01 06 05.7 -0.7
      comp=Z,40nm,0.6s
SNAA  Sanae            90.55 178          P       01 06 06.8 +0.3
SNAA                             IAmb     IAmb    01 06 07.4
      comp=Z,3.3nm,0.9s
SNAA  Sanae            90.55 178 P        P       01 06 06.7 +0.3
      comp=Z,2.0nm,0.7s,baz=204,slow=5.7,SNR=14
      comp=Z,2.0nm,0.7s
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E28M  Babbage River    90.61  13 P        P       01 06 07.8 +1.3
      baz=216
C27K  Jago River       90.62  11 P        P       01 06 07.7 +1.2
      baz=212
C26K  Camden Bay       90.65  11 P        P       01 06 08.5 +1.9
      baz=211
VNA3  Neumayer Olymp   90.67 176 ⇑P       P       01 06 07.4 +0.5
      comp=Z,8.1nm,0.6s
F30M  Barrier River    90.69  15 P        P       01 06 08.7 +1.8
      baz=220
E29M  Blow River       90.80  14 P        P       01 06 08.9 +1.5
      baz=218
D27M  Malcolm River    90.83  12 P        P       01 06 09.4 +1.7
      baz=215
PLCA  Paso Flores      90.90 133 P        P       01 06 11.1 +2.4
      comp=Z,2.2nm,0.8s,baz=194,slow=5.3,SNR=5.3
      comp=Z,2.2nm,0.8s
F31M  Tsiigehtchic     91.07  16 P        P       01 06 09.8 +1.3
      baz=221,SNR=12
VNA2  Neumayer--Watz   91.11 177 ⇑P       P       01 06 09.1 +0.2
      comp=Z,7.4nm,0.6s,baz=197,slow=6.9
VNA1  Neumayer--Stat   91.34 177 ⇑P       P       01 06 11.0 +1.1
      comp=Z,7.7nm,0.9s
D28M  Stokes Point     91.37  13 P        P       01 06 11.5 +1.6
      baz=217
INK   Inuvik           91.78  15 P        P       01 06 13.2 +1.4
      baz=222
YKA   Yellowknife Ar   94.13  25 P        P       01 06 23.8 +1.0
      comp=Z,0.5nm,0.7s,baz=245,slow=4.4,SNR=4.9
      comp=Z,0.5nm,0.7s
C36M  Paulatuk         94.97  17 P        P       01 06 27.0 +0.7
      baz=230
A36M  Sachs Harbour    96.38  14 P        P       01 06 33.7 +1.1
      baz=230
MKAR  Makanchi Array  109.56 314 PKiKP    PKiKP   01 11 30.4 -0.1
      comp=Z,0.3nm,0.5s,baz=90,slow=3.5,SNR=3.4
KURBB Kurchatov Arra  112.28 318 PKiKP    PKiKP   01 11 35.7 +0.2
      comp=Z,0.7nm,0.7s,baz=93,slow=1.9,SNR=7.7
BVAR  Borovoye Array  117.23 321 PKP      PKiKP   01 11 44.8 -0.3
      comp=Z,0.8nm,0.3s,baz=106,slow=2.1,SNR=6.2
ARCES ARCESS Array B  126.45 350 PKP      PKiKP   01 12 01.7 -1.1
      comp=Z,1.5nm,0.6s,baz=25,slow=1.5,SNR=8.0
FINES FINESS Array B  133.38 344 PKhKP    PKPpre  01 12 07.3
      comp=Z,0.7nm,0.7s,baz=146,slow=34,SNR=1.7
FINES                            PKP      PKiKP   01 12 15.7 -1.2
      comp=Z,0.8nm,0.7s,baz=46,slow=1.6,SNR=3.9
HFS   Hagfors         137.05 352 PKhKP    PKPpre  01 12 13.8
      comp=Z,0.5nm,0.4s,baz=50,slow=4.5,SNR=5.2
AKASG Malin Array Be  140.85 333 PKhKP    PKPpre  01 12 24.8
      comp=Z,0.4nm,0.3s,baz=46,slow=3.6,SNR=6.2
EKA   Eskdalemuir Ar  142.46   5 PKhKP    PKPpre  01 12 30.6
      comp=Z,1.0nm,0.5s,baz=316,slow=2.3,SNR=5.2
BSEG  Bad Segeberg    143.53 352 ePKPbc   PKiKP   01 12 34.9 -3.0
      baz=16,slow=2.7
GORT1 Trebel          144.31 351 ePKPbc   PKiKP   01 12 37.2 -2.2
      baz=16,slow=2.7
RETH  Rethem/Aller,   144.83 352 ePKPbc   PKiKP   01 12 38.8 -1.8
      baz=16,slow=2.7
BURAR Bucovina Array  144.91 333          PKiKP   01 12 39.4 -1.7
FLTG  Flechtingen     144.96 350 ePKPbc   PKiKP   01 12 38.9 -2.0
      baz=16,slow=2.7
NRDL  Niedersach Rie  144.97 352 ePKPbc   PKiKP   01 12 39.0 -1.8
      baz=16,slow=2.7
STHS  Stebnicka Huta  145.03 338 ePKP     PKiKP   01 12 39.2 -2.0
KOLS  Kolonicke sedl  145.06 337 ePKP     PKiKP   01 12 40.2 -1.1
BR131 Keskin Array S  145.20 315          PKiKP   01 12 40.3 -1.7
BRTR  Keskin Array B  145.20 315          PKiKP   01 12 39.8 -2.2
BRTR  Keskin Array B  145.20 315 PKPbc    PKiKP   01 12 40.1 -1.9
      comp=Z,4.7nm,0.8s,baz=90,slow=3.4,SNR=28
ASSE  Asse, Remlinge  145.24 351 ePKPbc   PKiKP   01 12 40.2 -1.2
      baz=16,slow=2.7
IBBN  Ibbenburen      145.43 354 ePKPbc   PKiKP   01 12 40.9 -1.0
      baz=16,slow=2.7
OSTC  Ostas           145.58 344 ePKP     PKiKP   01 12 42.1 -0.2
CLL   Collm           145.62 348 ePKPbc   PKiKP   01 12 41.0 -1.3
      baz=16,slow=2.7
CLL   Collm           145.62 348 i PKPbc  PKiKP   01 12 41.0 -1.3
      comp=Z,18nm,0.8s
CLL                              i (PKPab) PKPab  01 12 42.8 +1.2
      comp=Z,7.0nm,0.8s
UPC   Upice           145.68 344 ePKP     PKiKP   01 12 41.9 -0.6
STEB  Steborice       145.71 342 ePKP     PKiKP   01 12 41.8 -0.8
DPC   Dobruska-Polom  145.74 344 ePKP     PKiKP   01 12 42.1 -0.6
BRG   Berggiesshubel  145.83 347 ePKPbc   PKiKP   01 12 41.7 -1.1
      baz=16,slow=2.7
KRLC  Kraliky         145.87 343 ePKP     PKiKP   01 12 42.1 -0.8
LANS  Liptovska Anna  145.87 340 ePKP     PKiKP   01 12 43.0  0.0
GTTG  Gottingen       145.91 351 ePKPbc   PKiKP   01 12 42.0 -0.9
      baz=16,slow=2.7
MORC  Moravsky Berou  145.92 342 ePKP     PKiKP   01 12 42.4 -0.7
NEUB  Neuenburg       145.94 349 ePKPbc   PKiKP   01 12 41.9 -1.0
      baz=16,slow=2.7
PVCC  Panska Ves      146.01 346 ePKP     PKPab   01 12 42.6 -0.6
MAUC  Maruska         146.20 342 ePKP     PKPab   01 12 43.3 -0.8
BUG   Bochum--Univer  146.34 354 ePKPbc   PKPab   01 12 42.9 -1.5
      baz=16,slow=2.7
KASTN Kahler Asten    146.45 353 ePKPbc   PKPab   01 12 43.3 -1.7
      baz=16,slow=2.7
MOX   Moxa            146.51 349 ePKPbc   PKPab   01 12 43.7 -1.6
      baz=16,slow=2.7
PRU   Pruhonice       146.52 345 ePKP     PKPab   01 12 44.1 -1.2
TANN  Tannenbergstha  146.57 348 ePKPbc   PKPab   01 12 44.0 -1.6
      baz=16,slow=2.7
VRAC  Vranov          146.61 343 ePKP     PKPab   01 12 42.9 -2.8
VRAC                             e                01 12 47.4
MMAI  Mount Meron Ar  146.63 303  PKPbc   PKPab   01 12 44.8 -1.7
      comp=Z,6.0nm,0.6s,baz=69,slow=4.6,SNR=20
VYHS  Vyhne           146.65 340 ePKP     PKPab   01 12 44.3 -1.6
VYHS                             e                01 12 47.8
JAVC  Velka Javorina  146.70 341 ePKP     PKPab   01 12 45.5 -0.6
JAVC                             e                01 12 49.0
KRUC  Moravsky        146.89 343 ePKP     PKPab   01 12 44.7 -2.1
KRUC                             e                01 12 48.6
TREC  Trest           146.93 344 ePKP     PKPab   01 12 45.1 -1.9
MANZ  Manzenberg      147.05 348 ePKPbc   PKPab   01 12 45.4 -2.1
      baz=16,slow=2.7
ROTZ  Rotzenmuhle     147.24 348 ePKPbc   PKPab   01 12 45.6 -2.6
      baz=16,slow=2.7
MODS  Modra-Piesok    147.25 341 ePKP     PKPab   01 12 46.0 -2.3
MEM   Membach         147.27 355 dPKP     PKPab   01 12 46.1 -2.1
BTNL  Ternell         147.28 355 dPKP     PKiKP   01 12 43.5 -2.3
BSTI  Sart Tilman     147.32 356 dPKP     PKPab   01 12 46.1 -2.4
TNS   Taunus Mts      147.41 353 ePKPbc   PKPab   01 12 46.2 -2.7
      baz=16,slow=2.7
GRF   Grafenberg Arr  147.50 349 ePKPbc   PKPab   01 12 46.6 -2.7
      baz=16,slow=2.7
KHC   Kasperske Hory  147.55 346 ePKP     PKPab   01 12 46.7 -2.8
BGES  Gesves          147.55 357 dPKP     PKPab   01 12 46.1 -3.3
BMRD  Maredsous       147.65 357 dPKP     PKPab   01 12 46.8 -3.1
CKRC  Cesky Krumlov   147.67 345 ePKP     PKPab   01 12 47.1 -2.9
WET   Wettzell        147.69 347 ePKPbc   PKPab   01 12 47.0 -3.1
      baz=16,slow=2.7
GEC2  GERESS Array S  147.79 346 ePKPbc   PKPab   01 12 47.0 -3.6
      baz=16,slow=2.7
GERES GERESS Array B  147.79 346  PKPbc   PKPab   01 12 47.3 -3.3
      comp=Z,3.8nm,0.7s,baz=26,slow=3.3,SNR=11
DOU   Dourbes         147.87 357 dPKP     PKPab   01 12 47.1 -3.6
CONA  Conrad Observa  148.07 342 ePKiKP   PKPab   01 12 48.4 -3.3
      comp=Z,4.8nm,0.7s,SNR=6.4
RONA  Rosalia, Austr  148.15 342 i PKiKP  PKPab   01 12 48.6 -3.5
      comp=Z,11nm,1.5s
WLF   Walferdange     148.20 355 dPKP     PKPab   01 12 48.8 -3.4
WLF   Walferdange     148.20 355 ePKPbc   PKPab   01 12 48.7 -3.4
      baz=16,slow=2.7
MOA   Molln           148.58 344 i PKiKP  PKPab   01 12 49.4 -4.4
      comp=Z,5.5nm,1.3s
STU   Stuttgart       148.73 351 ePKPbc   PKPab   01 12 49.7 -4.6
      baz=16,slow=2.7
ARSA  Arzberg         148.78 342 ePKiKP   PKPab   01 12 49.8 -4.9
      comp=Z,3.5nm,1.0s
BIOA  Bad Ischl, Aus  148.88 345 ePKP     PKPab   01 12 49.6 -5.5
      comp=Z,5.1nm,0.6s
FUR   Furstenfeldbru  148.96 348 ePKPbc   PKPab   01 12 49.9 -5.4
      baz=16,slow=2.7
RJOB  Jochberg        149.04 346 ePKPbc   PKPab   01 12 49.9 -5.9
      baz=16,slow=2.7
BFO   Black Forest    149.28 352          PKPab   01 12 50.9 -5.8
BFO   Black Forest    149.28 352 ePKPbc   PKPab   01 12 50.7 -6.0
      baz=16,slow=2.7
LESA  Schwarzleotal   149.36 346 i PKP    PKPab   01 12 50.7 -6.4
      comp=Z,4.1nm,0.8s
SOKA  Soboth          149.44 342 ePKP     PKPab   01 12 50.7 -6.8
      comp=Z,2.0nm,0.7s
UBR   Ueberruh        149.64 349 ePKPbc   PKPab   01 12 51.5 -6.7
      baz=16,slow=2.7
WATA  Walderalm       149.69 347 i PKP    PKPab   01 12 51.5 -7.1
      comp=Z,3.4nm,0.5s,SNR=4.1
```

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RETA  Reutte             149.71 348  i PKP     PKPab    01 12 51.4  -7.2
      comp=Z,2.6nm,0.8s
WTTA  Wattenberg         149.74 347  i PKiKP   PKPab    01 12 52.1  -6.8
      comp=Z,10nm,0.6s,SNR=8.0
MOTA  Moosalm            149.78 348  i PKP     PKiKP    01 12 51.5  +0.2
      comp=Z,7.1nm,1.0s
MYKA  Terra Mystica      149.87 344  i PKP     PKiKP    01 12 51.5  +0.2
      comp=Z,4.8nm,0.5s,SNR=4.6
SQTA  Sankt Quirin       149.87 348  i PKP     PKPab    01 12 52.1  -7.2
      comp=Z,5.7nm,0.8s
ABTA  Abfaltersbach      150.04 346  i PKP     PKiKP    01 12 52.0  +0.3
      comp=Z,9.7nm,0.7s,SNR=9.5
PRED  Cave del Predi     150.06 344            PKPab    01 13 00.8  +0.7
DAVA  Damuels            150.06 349  i PKiKP   PKPab    01 12 52.9  -7.3
      comp=Z,5.8nm,1.0s
FETA  Feichten           150.16 348  i PKP     PKiKP    01 12 52.6  +0.5
      comp=Z,4.4nm,0.9s
FUORN Ofenpass-Fuorn     150.63 349            PKPab    01 12 54.5  -8.2
ESDC  Sonseca Array      157.70  13            PKPab    01 13 34.4  +1.5
ESDC  Sonseca Array      157.70  13    PKPab   PKPab    01 13 33.7  +0.7
      comp=Z,0.7nm,0.8s,baz=340,slow=4.2,SNR=7.1
```

IDC 17 00:59:16.1±3.3**, 31°.37S**×**177°.47W, h0^{km}, mb3.6**/2**, mbtmp3.8**/3**, ML3.9**/1**, Error ellipse: s-maj=79.2km s-min=47.3km az=120.0, Kermadec Islands region**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC       h  m  s   ISC
URZ   Urewera             8.19 211   Pn      Pn        01 01 15.8  -0.3
      1.5nm,0.3s,baz=316,slow=1.7,SNR=6.8
URZ                                  Sn      Sn        01 02 43.8  -5.5
      0.4nm,0.3s,baz=246,slow=23,SNR=1.2
      3.6nm,0.3s
ASAR  Alice Springs      43.52 268   P       P         01 07 22.3  +0.7
      0.5nm,0.6s,baz=110,slow=7.8,SNR=4.5
      0.5nm,0.6s
WRA   Warramunga Arr     44.59 273   P       P         01 07 29.5  -0.8
      0.7nm,0.6s,baz=113,slow=7.6,SNR=5.9
      0.7nm,0.6s
FINES FINESS Array B    146.21 340   PKPbc   PKPdf     01 18 56.9  +0.2
      1.1nm,0.8s,baz=34,slow=3.6,SNR=4.3
```

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*IDC **17** 01:18:21.2±2.7, 24°.30S×179°.85E, h525^{km}±27^{km}, mb3.1/5, mbtmp4.0/7, Error ellipse: s-maj=32.0km s-min=25.3km az=135.0*

ISC 17 01:18:20.0±1.1**, 24°.4S**±0°.2×**180°.0E**±0°.2**, h517^{km}, n11, σ0^{s}.93**/11**, mb3.6**/5**, South of Fiji Islands**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC       h  m  s   ISC
MSVF  Nonsavu             6.82 345   P       P         01 20 06.2  +0.9
      1.6nm,0.3s,baz=180,slow=10,SNR=4.4
DZM   Mont Dzumac        12.63 278   P       P         01 21 05.3   0.0
      4.6nm,0.7s,baz=87,slow=17,SNR=4.5
STKA  Stephens Creek     34.52 249   P       P         01 24 25.1  +0.3
      0.8nm,0.2s,baz=100,slow=11,SNR=3.4
      0.8nm,0.2s
ASAR  Alice Springs      41.92 261   P       P         01 25 25.1  -0.2
      0.4nm,0.3s,baz=92,slow=8.0,SNR=5.4
      0.4nm,0.3s
WRA   Warramunga Arr     42.34 267   P       P         01 25 27.9  -0.6
      1.3nm,0.5s,baz=98,slow=8.1,SNR=13
      1.3nm,0.5s
QSPA  South Pole Qui     65.73 180   P       P         01 28 14.2  +1.1
      1.7nm,1.2s,baz=30,slow=12,SNR=1.6
      1.7nm,1.2s
SNAA  Sanae              84.21 179   P       P         01 29 56.1  -0.2
      1.6nm,1.1s,baz=192,slow=9.3,SNR=3.0
      1.6nm,1.1s
HFS   Hagfors           142.98 349   PKP     PKPdf     01 36 52.0  -2.1
      2.3nm,0.4s,baz=34,slow=2.0,SNR=36
BRTR  Keskin Array B    147.81 307   PKPbc   PKPbc     01 37 06.5  -0.4
      0.7nm,0.6s,baz=69,slow=3.8,SNR=4.7
MMAI  Mount Meron Ar    147.85 294   PKPbc   PKiKP     01 37 08.4  -0.1
      1.0nm,0.4s,baz=90,slow=2.8,SNR=4.3
EKA   Eskdalemuir Ar    148.97   3   PKPbc   PKPbc     01 37 09.1  +0.1
      0.7nm,0.6s,baz=4.0,slow=3.7,SNR=4.3
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*IDC **17** 01:34:12.4±1.3, 6°.37S×143°.52E, h0^{km}, mb3.9/4, mbtmp4.0/8, ML3.9/3, MS3.1/4, Error ellipse: s-maj=31.8km s-min=20.1km az=81.0*

ISC 17 01:34:17.5±0.8**, 6°.5S**±0°.1×**143°.5E**±0°.1**, h35^{km}, n11, σ0^{s}.67**/10**, mb4.1**/3**, New Guinea**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC       h  m  s   ISC
PMG   Port Moresby        4.67 129   Pn      Pn        01 35 26.1  +0.6
      14nm,0.3s,baz=307,slow=13,SNR=5.7
PMG                                  Sn      Sn        01 36 17.6  -0.8
      2.0nm,0.3s,baz=325,slow=20,SNR=1.7
JAY   Jayapura            4.80 324   Pn      Pn        01 35 26.9  -0.4
      2.2nm,0.3s,baz=162,slow=19,SNR=6.6
JAY                                  Sn      Sn        01 36 21.9  +0.1
      2.5nm,0.3s,baz=187,slow=8.5,SNR=3.8
JAY                                  LR      LR        01 37 42.7
      comp=Z,190nm,20.6s,baz=258,slow=44
      3.1nm,0.3s
WRA   Warramunga Arr     16.09 213   Pn      Pn        01 38 00.3  -0.9
      0.5nm,0.3s,baz=36,slow=12,SNR=9.5
WRA                                  Sn      Sn        01 40 48.5   -10
      0.3nm,0.3s,baz=36,slow=24,SNR=3.5
WRA                                  Lg      Lg        01 42 46.4
      0.2nm,0.3s,baz=33,slow=27,SNR=5.1
      1.6nm,0.8s
ASAR  Alice Springs      19.44 207   P       Pn        01 38 43.5  +0.9
      1.2nm,0.3s,baz=36,slow=9.6,SNR=150
ASAR                                 Lg      Lg        01 44 34.0
      0.1nm,0.3s,baz=27,slow=31,SNR=4.8
      19nm,0.7s
GUMO  Guam               19.96   4   LR      LR        01 46 14.8
      comp=Z,37nm,20.0s,baz=84,slow=36
FITZ  Fitzroy Crossi     20.91 235   P       P         01 38 57.2  +0.1
      3.7nm,0.8s,baz=76,slow=9.0,SNR=3.7
      3.7nm,0.8s
KAPI  Kappang            23.67 272   LR      LR        01 51 39.9
      comp=Z,29nm,19.1s,baz=274,slow=44
STKA  Stephens Creek     25.36 184   LR      LR        01 51 01.9
      comp=Z,136nm,18.7s,baz=204,slow=40
MKAR  Makanchi Array     75.66 322   P       P         01 45 59.7  +0.5
      0.2nm,0.4s,baz=124,slow=8.0,SNR=2.8
      0.2nm,0.4s
QSPA  South Pole Qui     83.52 180   P       P         01 46 41.4  -0.3
      1.9nm,0.9s,baz=360,slow=0.7,SNR=10
      1.9nm,0.9s
BVAR  Borovoye Array     85.10 325   P       P         01 46 49.6  -0.1
      0.8nm,0.6s,baz=66,slow=5.5,SNR=3.9
      0.8nm,0.6s
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*IDC **17** 01:46:15.8±23.0, 46°.80N×153°.01E, h0^{km}, mb3.7/6, mbtmp3.7/6, Error ellipse: s-maj=544.8km s-min=68.7km az=156.0*

*SKHL **17** 01:46:24.3±0.4, 45°.50N×153°.40E, h55^{km}±3^{km}, mb4.7/3*

ISC 17 01:46:18.5±2.6**, 46°.2N**±0°.3×**153°.6E**±0°.2**, h50^{km}, n16, σ2^{s}.50**/14**, mb3.8**/6**, Kuril Islands**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC       h  m  s   ISC
KUR   Kuril'sk            4.09 259   eP      Pn        01 47 22.3  +3.9
KUR                                   AMB    AMB       01 47 26.2
      110nm,0.8s
KUR                                  eS      Sn        01 48 05.5  +0.5
KUR                                   A      A         01 48 15.9
      100nm,0.5s
KUR                                   A      A         01 48 15.9
      120nm,0.5s
SHO   Shikotan            5.29 247   eP      Pn        01 47 37.4  +2.6
SHO                                   AMB    AMB       01 47 43.6
      60nm,0.8s
SHO                                  eS      Sn        01 48 31.3  -3.1
SHO                                   A      A         01 48 36.3
      60nm,0.6s
SHO                                   A      A         01 48 36.3
      50nm,0.6s
YUK   Yuzh-Kuril'sk       5.84 252   eP      Pn        01 47 46.1  +3.6
YUK                                   AMB    AMB       01 47 47.7
      100nm,0.3s
YUK                                  eS      Sn        01 48 45.4  -2.7
YUK                                   A      A         01 48 47.0
      100nm,0.3s
YUK                                   A      A         01 48 47.0
      150nm,0.3s
NMR   Nemuro--Hokkai      6.23 246   eP      Pn        01 47 50.1  +2.4
NMR                                  eS      Sn        01 48 54.7  -2.8
```

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H11N2 WAKE ISLAND Hy     28.55 153   T       T         02 23 43.0
      baz=340,slow=76,SNR=200
H11N1 WAKE ISLAND Hy     28.56 153   T       T         02 23 44.7
      baz=340,slow=76,SNR=162
H11N3 WAKE ISLAND Hy     28.56 153   T       T         02 23 44.4
      baz=340,slow=76,SNR=103
H11S1 WAKE ISLAND Hy     29.63 154   T       T         02 25 04.4
      baz=340,slow=76,SNR=53
H11S3 WAKE ISLAND Hy     29.64 154   T       T         02 25 08.1
      baz=340,slow=76,SNR=50
H11S2 WAKE ISLAND Hy     29.65 154   T       T         02 25 03.9
      baz=340,slow=76,SNR=37
MKAR  Makanchi Array     47.49 298   P       P         01 54 47.5  -0.9
      0.2nm,0.5s,baz=65,slow=7.2,SNR=2.4
      0.2nm,0.5s
KURBB Kurchatov Arra     48.05 304   P       P         01 54 51.0  -1.4
      0.1nm,0.3s,baz=72,slow=8.0,SNR=2.0
      0.1nm,0.3s
FINES FINESS Array B     64.71 335   P       P         01 56 50.4  -0.5
      0.6nm,0.4s,baz=31,slow=7.5,SNR=11
      0.6nm,0.4s
NOA   NORSAR Array B     68.89 341   P       P         01 57 17.5  -0.1
      0.5nm,0.6s,baz=29,slow=6.6,SNR=3.3
      0.5nm,0.6s
HFS   Hagfors            69.13 340   P       P         01 57 18.7  -0.3
      0.8nm,0.4s,baz=36,slow=6.7,SNR=12
      0.8nm,0.4s
AKASG Malin Array Be     72.22 327   P       P         01 57 37.4  -0.5
      0.5nm,0.3s,baz=34,slow=6.5,SNR=5.0
      0.5nm,0.3s
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*IDC **17** 01:54:20.9±1.1, 31°.41S×177°.72W, h0^{km}, mb4.1/3, mbtmp4.1/4, ML3.3/1, Error ellipse: s-maj=38.0km s-min=28.3km az=120.0*

*NEIC **17** 01:54:29.5±1.7, 30°.87S±0°.08×178°.0W±0°.2, h35^{km}±2^{km}, mb4.4/6, Error ellipse: s-maj=36.2km s-min=13.9km az=88.0*

ISC 17 01:54:25.9±0.9**, 31°.21S**±0°.08×**177°.8W**±0°.2**, h35^{km}, n27, σ1^{s}.62**/24**, mb4.3**/7**, 3D, Kermadec Islands region**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC       h  m  s   ISC
RAO   Raoul Island        1.95 357   Pn      Pn        01 54 55.1  -1.4
RAO                                  Sn      Sn        01 55 15.6  -4.2
URZ   Urewera             8.19 209   Pn      Pn        01 56 19.4  -2.7
      0.4nm,0.3s,baz=83,slow=14,SNR=1.6
URZ                                  Sn      Sn        01 57 50.0  -3.4
      2.4nm,0.3s,baz=157,slow=22,SNR=6.8
      3.5nm,0.5s
BKZ   Black Stump Fm      9.21 209   Pn      Pn        01 56 36.8  +0.5
CTAO  Charters Tower     34.10 280   P       P         02 01 09.9  +2.5
CTAO                                 IAmb    IAmb      02 01 15.8
      comp=Z,8.3nm,1.3s
ASAR  Alice Springs      43.24 268   P       P         02 02 24.8  +0.7
      comp=Z,2.6nm,0.8s,baz=105,slow=7.3,SNR=16
      comp=Z,2.6nm,0.8s
WR8   Warramunga Arr     44.16 273   P       P         02 02 32.3  +0.8
WR8                                  IAmb    IAmb      02 02 36.6
      comp=Z,4.5nm,0.9s
WRA   Warramunga Arr     44.30 273   P       P         02 02 33.3  +0.7
WRA   Warramunga Arr     44.30 273   P       P         02 02 33.3  +0.7
      comp=Z,4.5nm,0.6s,baz=112,slow=8.0,SNR=23
      comp=Z,4.5nm,0.6s
WB0   Warramunga Arr     44.33 273   P       P         02 02 33.5  +0.7
WB0                                  IAmb    IAmb      02 02 37.0
      comp=Z,6.5nm,0.8s
QSPA  South Pole Qui     58.91 180   P       P         02 04 29.6  +8.4
QSPA  South Pole Qui     58.91 180   P       P         02 04 20.2  -1.1
      comp=Z,1.3nm,1.1s,baz=275,slow=6.2,SNR=1.9
      comp=Z,1.3nm,1.1s
SNAA  Sanae              77.35 178 ⇓P      P         02 06 24.7  +8.1
      comp=Z,3.6nm,0.3s
SNAA  Sanae              77.35 178   P       P         02 06 23.2  +6.6
SNAA                                 IAmb    IAmb      02 06 38.3
      comp=Z,5.3nm,1.5s
VNA3  Neumayer Olymp     77.49 176 ⇓P      P         02 06 25.4  +8.0
      comp=Z,0.0nm,0.2s
VNA2  Neumayer--Watz     77.93 177 ⇓P      P         02 06 27.3  +7.5
      comp=Z,0.0nm,0.1s,baz=193,slow=4.1
KURBB Kurchatov Arra    121.77 313   PKP     PKPdf     02 13 15.9  +0.3
      comp=Z,0.8nm,0.7s,baz=115,slow=1.8,SNR=4.9
KKAR  Karatay Array     125.66 303           PKPdf     02 13 23.8  +0.3
BVAR  Borovoye Array    127.10 315   PKP     PKiKP     02 13 27.3  +0.9
      comp=Z,0.6nm,0.4s,baz=98,slow=0.2,SNR=2.6
FIA1  FINESS Array S    145.96 340   PKPdf   PKPbc     02 14 01.6  +0.6
FINES FINESS Array B    145.96 340   PKPdf   PKPdf     02 14 01.1  +0.9
FINES FINESS Array B    145.96 340   PKPbc   PKPbc     02 14 01.6  +0.6
      comp=Z,4.8nm,0.7s,baz=51,slow=3.7,SNR=31
HFS   Hagfors           150.07 348   PKPbc   PKiKP     02 14 13.4  +0.4
      comp=Z,1.4nm,0.8s,baz=27,slow=1.9,SNR=6.2
MMAI  Mount Meron Ar    151.88 283   PKPbc   PKiKP     02 14 19.1  +1.3
      comp=Z,1.8nm,0.4s,baz=101,slow=2.9,SNR=8.0
AKASG Malin Array Be    152.04 322   PKPbc   PKiKP     02 14 18.1  +0.7
AKASG Malin Array Be    152.04 322   PKPbc   PKPbc     02 14 17.4  +0.5
      comp=Z,1.3nm,0.6s,baz=51,slow=2.3,SNR=7.1
ILGA  Ilgaz             152.84 300   PKPbc   PKiKP     02 14 20.7  +1.1
BRTR  Keskin Array B    153.13 297   PKPbc   PKPbc     02 14 20.2  +0.2
      comp=Z,0.4nm,0.5s,baz=83,slow=2.3,SNR=4.8
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*NEIC **17** 02:05:40.0±1.1, 31°.08S±0°.10×177°.8W±0°.2, h10^{km}±1^{km}, mb4.9/55, Error ellipse: s-maj=22.6km s-min=16.3km az=79.0*

*IDC **17** 02:05:41.9±3.2, 31°.12S×177°.83W, h26^{km}±20^{km}, mb4.3/14, mbtmp4.5/16, ML5.0/2, MS4.0/38, Error ellipse: s-maj=18.3km s-min=16.9km az=85.0*

*NOU **17** 02:06:12.5, 33°.24S×179°.70W, h136^{km}, mb4.7/10, South of Kermadec Islands*

ISC 17 02:05:38.9±0.3**, 31°.34S**±0°.05×**177°.76W**±0°.08**, h10^{km}, n270, σ1^{s}.97**/253**, mb4.9**/62**, MS4.1**/36**, 7C-3D, Kermadec Islands region**

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Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC       h  m  s   ISC
GLKZ  Green Lake          2.07 356   P       Pn        02 06 10.7  -3.1
GLKZ                                 S       Sn        02 06 31.9  -7.6
RAO   Raoul Island        2.08 356           Pn        02 06 11.2  -2.7
RIZ   Raoul Island        2.09 356   P       Pn        02 06 11.3  -2.7
RIZ                                  S       Sn        02 06 36.1  -3.9
MXZ   Matakaoa Point      7.01 207   Pn      Pn        02 07 20.4  -1.2
MXZ   Matakaoa Point      7.01 207   P       Pn        02 07 20.2  -1.4
MXZ   Matakaoa Point      7.01 207   P       Pn        02 07 20.4  -1.2
MXZ                                  S       Sn        02 08 41.0  -0.3
WMGZ  Waiomatatini S      7.20 205   P       Pn        02 07 23.3  -0.8
WMGZ                                 S       Sn        02 08 46.4  +0.4
PKGZ  Pakihiroa           7.36 207   P       Pn        02 07 24.8  -1.6
PKGZ                                 S       Sn        02 08 47.5  -2.5
HAZ   Te Kaha             7.38 209   P       Pn        02 07 25.8  -0.9
HAZ                                  S       Sn        02 08 51.6  +1.1
PUZ   Puketiti            7.48 205   P       Pn        02 07 26.8  -1.2
PUZ                                  S       Sn        02 08 52.8  -0.1
RUGZ  Raukumara Rang      7.61 208   P       Pn        02 07 28.6  -1.3
RUGZ                                 S       Sn        02 08 56.3   0.0
KUZ   Kuaotunu            7.64 223   P       Pn        02 07 37.4  +7.2
TWGZ  Tauwhareparae       7.67 206   P       Pn        02 07 29.5  -1.3
TWGZ                                 S       Sn        02 08 58.1  +0.4
CNGZ  Carnagh Statio      7.86 204   P       Pn        02 07 30.4  -2.9
CNGZ                                 S       Sn        02 09 03.1  +0.7
MWZ   Matawai             7.98 208   P       Pn        02 07 33.7  -1.3
MWZ                                  S       Sn        02 09 02.0  -3.4
WCZ   Waipu Caves         8.03 233   P       Pn        02 07 42.0  +6.5
MARZ  Manawahe            8.06 213   P       Pn        02 07 31.4  -4.7
URZ   Urewera             8.09 210   Pn      Pn        02 07 35.7  -0.8
      1.7nm,0.3s,baz=350,slow=4.3,SNR=18
URZ                                  Sn      Sn        02 09 06.2  -1.7
      24nm,0.3s,baz=285,slow=3.5,SNR=13
URZ   Urewera             8.09 210   P       Pn        02 07 34.5  -1.9
URZ   Urewera             8.09 210   P       Pn        02 07 34.3  -2.1
URZ                                  S       Sn        02 09 06.5  -1.5
RAGZ  Rawiri              8.17 208   P       Pn        02 07 34.0  -3.6
RAGZ                                 S       Sn        02 09 07.5  -2.5
OUZ   Omahuta             8.21 240   P       Pn        02 07 43.3  +5.2
MKAZ  Moumakai            8.21 224   P       Pn        02 07 42.0  +3.9
RIGZ  Rimuhau             8.22 205   P       Pn        02 07 35.8  -2.4
RIGZ                                 S       Sn        02 09 08.4  -2.8
PRGZ  Paritu Road         8.37 204   P       Pn        02 07 34.6  -5.7
PRGZ                                 S       Sn        02 09 12.6  -2.2
MUGZ  Murupara            8.42 211   S       Sn        02 09 14.1  -2.0
SNGZ  Shannon Statio      8.44 207   P       Pn        02 07 39.4  -1.9
SNGZ                                 S       Sn        02 09 15.6  -1.1
RTZ   Ruatahuna           8.45 209   Pn      Pn        02 07 40.1  -1.3
KNZ   Kokohu              8.53 205   P       Pn        02 07 38.8  -3.7
KNZ                                  S       Sn        02 09 13.9  -4.8
MHGZ  Mahia Peninsul      8.57 203   P       Pn        02 07 38.5  -4.5
MHGZ                                 S       Sn        02 09 15.8  -3.8
BKZ   Black Stump Fm      9.12 209   P       Pn        02 07 47.9  -2.6
WAZ   Wanganui           10.27 213   S       Sn        02 09 52.7  -8.8
BFZ   Birch Farm         10.51 206   P       Pn        02 08 07.1  -2.5
SNZO  South Karori       11.66 209   P       Pn        02 08 22.1  -3.2
QRZ   Quartz Range       12.30 217   P       Pn        02 08 29.6  -4.4
CTZ   Chatham Island     12.41 176   Pn      Pn        02 08 32.5  -3.1
KHZ   Kahutara           13.06 210   P       Pn        02 08 40.4  -4.0
MSVF  Nonsavu            14.07 343   Pn      Pn        02 08 59.6  +1.2
MSVF  Nonsavu            14.07 343   Pn      Pn        02 08 57.8  -0.6
      0.3nm,0.3s,baz=163,slow=17,SNR=5.8
MSVF                                 LR      LR        02 13 34.3
      comp=Z,1μm,18.4s,baz=181,slow=34
      11nm,0.8s
OXZ   Oxford             14.45 211   Pn      Pn        02 09 01.4  -2.0
RPZ   Rata Peaks         15.20 212   Pn      Pn        02 09 14.7  +1.1
      3.7nm,0.3s,baz=52,slow=19,SNR=10
RPZ                                  Sn      Sn        02 11 48.0   -14
      3.1nm,0.3s,baz=338,slow=22,SNR=8.5
      34nm,0.8s
RPZ   Rata Peaks         15.20 212   P       Pn        02 09 08.4  -5.1
ODZ   Otahua Downs       16.42 210   Pn      Pn        02 09 28.2  -1.2
ODZ   Otahua Downs       16.42 210   P       Pn        02 09 24.2  -5.2
JCZ   Jackson Bay        16.56 216   P       Pn        02 09 25.5  -5.7
DZM   Mont Dzumac        16.85 299   Pn      P         02 09 39.2  +2.1
      0.2nm,0.3s,baz=116,slow=12,SNR=11
DZM                                  LR      LR        02 15 02.0
      comp=Z,1μm,18.4s,baz=149,slow=34
EAZ   Earnscleugh        17.16 212   P       Pn        02 09 37.5  -1.2
EAZ                                  S       Sn        02 12 29.2   -20
DCZ   Deep Cove          18.36 216           Pn        02 09 52.5  -1.1
RAR   Rarotonga          18.99  62   LR      LR        02 17 13.7
      comp=Z,237nm,18.1s,baz=242,slow=36
ARMA  Armidale           26.25 264   P       P         02 11 14.9  +0.4
ARMA                                 IAmb    IAmb      02 11 47.4
      comp=Z,59nm,1.6s
ARMA  Armidale           26.25 264   P       P         02 11 17.8  +3.3
      comp=Z,26nm,0.9s
MILA  Mila               27.87 249   P       P         02 11 31.1  +2.2
      comp=Z,12nm,1.5s
EIDS  Eidsvold           28.00 274   P       P         02 11 30.7  +0.7
EIDS                                 IAmb    IAmb      02 11 34.8
      comp=Z,19nm,0.9s
EIDS  Eidsvold           28.00 274   P       P         02 11 31.1  +1.0
      comp=Z,23nm,0.9s
YNG   Young              28.52 255   P       P         02 11 36.1  +1.4
      comp=Z,16nm,1.2s
PPT   Papeete            28.98  68   LR      LR        02 22 55.5
      comp=Z,275nm,18.4s,baz=242,slow=36
TOO   Toolangi           30.80 248   P       P         02 11 55.2  +0.4
CMSA  Cobar Meteorol     31.10 260   P       P         02 11 58.8  +1.3
      comp=Z,26nm,0.6s
QLP   Quilpie            33.48 268   P       P         02 12 18.0  -0.4
      comp=Z,56nm,0.7s
ARPS  Mount Arapiles     33.73 250   P       P         02 12 22.1  +1.6
      comp=Z,27nm,1.0s
CTAO  Charters Tower     34.16 280   P       P         02 12 25.0  +0.6
STKA  Stephens Creek     34.48 258   P       P         02 12 28.1  +1.0
STKA  Stephens Creek     34.48 258   P       P         02 12 28.2  +1.1
      comp=Z,106nm,1.0s
STKA  Stephens Creek     34.48 258   P       P         02 12 28.1  +1.0
      comp=Z,14nm,0.8s,baz=93,slow=10,SNR=18
STKA                                 LR      LR        02 25 13.7
      comp=Z,295nm,18.9s,baz=47,slow=34
      comp=Z,14nm,0.8s
HTT   Hallett            36.45 255   P       P         02 12 44.8  +0.7
      comp=Z,5.1nm,1.2s
MTSU  Mount Surprise     36.68 282   P       P         02 12 47.7  +1.5
      comp=Z,16nm,0.9s
BBOO  Buckleboo          38.92 255   P       P         02 13 04.6  -0.4
BBOO                                 IAmb    IAmb      02 13 18.2
      comp=Z,26nm,0.7s
BBOO  Buckleboo          38.92 255   P       P         02 13 04.6  -0.4
      comp=Z,37nm,0.8s
QIS   Mount Isa          39.60 275   P       P         02 13 11.5  +0.8
      comp=Z,15nm,1.2s
COEN  Coen               39.73 287   P       P         02 13 13.2  +1.3
COEN                                 IAmb    IAmb      02 13 16.2
      comp=Z,29nm,0.9s
COEN  Coen               39.73 287   P       P         02 13 13.2  +1.3
      comp=Z,35nm,1.2s
AS17  Alice Springs      43.20 268   P       P         02 13 39.9  -0.4
      comp=Z,110nm,0.9s
ASAR  Alice Springs      43.27 268   P       P         02 13 41.0   0.0
ASAR  Alice Springs      43.27 268   P       P         02 13 40.8  -0.2
      comp=Z,80nm,0.9s,baz=105,slow=6.2,SNR=100
ASAR                                 ScP     ScP       02 19 20.0  -1.4
      comp=Z,3.2nm,0.8s,baz=99,slow=4.7,SNR=8.7
WR0   Warramunga Arr     44.17 273   P       P         02 13 47.8  -0.3
      comp=Z,109nm,0.9s
WR8   Warramunga Arr     44.20 273   P       P         02 13 48.1  -0.3
WB2   Warramunga Arr     44.34 273   P       P         02 13 49.5   0.0
      comp=Z,180nm,0.9s
WRAB  Tennant Creek      44.34 273   P       P         02 13 49.7  +0.2
WRA   Warramunga Arr     44.35 273   P       P         02 13 49.2  -0.4
WRA                                  IAmb    IAmb      02 13 53.4
      comp=Z,16nm,0.8s
WRA   Warramunga Arr     44.35 273   P       P         02 13 49.2  -0.4
      comp=Z,114nm,0.8s,baz=112,slow=8.0,SNR=123
WRA                                  ScP     ScP       02 19 23.5  -2.3
      comp=Z,3.3nm,1.0s,baz=113,slow=4.5,SNR=5.5
WRA                                  LR      LR        02 31 41.4
      comp=Z,394nm,18.2s,baz=82,slow=35
WB0   Warramunga Arr     44.38 273   P       P         02 13 49.4  -0.4
FORT  Forrest            46.02 256   P       P         02 14 02.6  -0.1
FORT  Forrest            46.02 256   P       P         02 14 02.1  -0.6
      comp=Z,44nm,1.0s
SBA   Scott Base         47.12 184   P       P         02 14 14.0  +3.3
SBA                                  IAmb    IAmb      02 14 16.6
      comp=Z,24nm,1.1s
VNDA  Vanda              47.19 186   P       P         02 14 14.9  +3.6
VNDA  Vanda              47.19 186   P       P         02 14 13.8  +2.6
      comp=Z,1.9nm,0.7s,baz=13,slow=11,SNR=5.1
VNDA                                 LR      LR        02 31 40.4
      comp=Z,109nm,19.7s,baz=356,slow=33
      comp=Z,1.9nm,0.7s
JAY   Jayapura           48.51 298   P       P         02 14 22.3   0.0
      comp=Z,2.3nm,0.5s,baz=74,slow=11,SNR=2.3
JAY                                  LR      LR        02 33 35.0
      comp=Z,32nm,19.0s,baz=206,slow=35
      comp=Z,2.3nm,0.5s
KDU   Kakadu             49.29 281   P       P         02 14 29.9  +1.7
      comp=Z,29nm,0.9s
MTN   Manton Dam         50.34 280   P       P         02 14 36.3   0.0
MTN                                  IAmb    IAmb      02 14 39.9
      comp=Z,14nm,0.7s
KNRA  Kununurra          50.99 275   P       P         02 14 41.4  +0.3
KNRA                                 IAmb    IAmb      02 14 48.1
      comp=Z,24nm,0.8s
KNRA  Kununurra          50.99 275   P       P         02 14 41.6  +0.4
      comp=Z,40nm,0.8s
FITZ  Fitzroy Crossi     52.57 270   P       P         02 14 52.7  -0.2
FITZ  Fitzroy Crossi     52.57 270   P       P         02 14 52.7  -0.2
FITZ  Fitzroy Crossi     52.57 270   LR      LR        02 36 13.6
      comp=Z,322nm,20.1s,baz=118,slow=35
KLBR  Kellerberrin       54.25 252   P       P         02 15 04.1  -1.0
      comp=Z,39nm,1.4s
NWAO  Narrogin (SRO)     54.27 250   LR      LR        02 36 12.1
      comp=Z,162nm,19.8s,baz=284,slow=34
MEEK  Meekatharra        55.18 258   P       P         02 15 11.9  -0.1
      comp=Z,23nm,1.3s
MORW  Morawa             56.47 254   P       P         02 15 21.5  +0.3
GUMO  Guam               57.29 315   LR      LR        02 38 00.0
      comp=Z,65nm,19.1s,baz=94,slow=34
BATI  Baumata            57.98 278   LR      LR        02 40 30.5
      comp=Z,528nm,18.9s,baz=105,slow=36
QSPA  South Pole Qui     58.78 180   P       P         02 15 39.8  +2.8
QSPA  South Pole Qui     58.78 180   P       P         02 15 39.5  +2.4
      comp=Z,20nm,1.1s,baz=15,slow=0.9,SNR=37
QSPA                                 LR      LR        02 38 59.6
      comp=Z,138nm,18.7s,baz=50,slow=34
      comp=Z,20nm,1.1s
KAPI  Kappang            63.98 281   LR      LR        02 45 39.1
      comp=Z,125nm,18.1s,baz=109,slow=38
DAV   Davao City (W)     66.21 295   LR      LR        02 43 01.0
      comp=Z,43nm,21.7s,baz=159,slow=34
MAW   Mawson             71.51 201   P       P         02 16 58.2  -1.2
      comp=Z,7.7nm,1.0s,baz=193,slow=2.6,SNR=5.9
MAW                                  LR      LR        02 47 32.2
      comp=Z,212nm,19.5s,baz=107,slow=35
LEM   Lembang            73.36 272   LR      LR        02 49 38.8
      comp=Z,149nm,19.5s,baz=237,slow=36
SYO   Syowa Base         76.25 193 ⇑iP     P         02 17 28.0  +0.8
TROLL Troll, Antarti     76.94 180 ⇑P      P         02 17 32.6  +1.3
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	comp=Z,919nm,1.0s						
SNAA	**Sanae**	**77.22**	**178**	⇑P	**P**	**02 17 33.7**	**+0.9**
	comp=Z,181nm,1.0s						
SNAA	**Sanae**	**77.22**	**178**	P	**P**	**02 17 33.8**	**+1.1**
SNAA				IAmb	IAmb	02 17 44.9	
	comp=Z,14nm,0.7s						
SNAA	**Sanae**	**77.22**	**178**	P	**P**	**02 17 33.3**	**+0.6**
	comp=Z,6.3nm,0.8s,baz=188,slow=6.6,SNR=29						
	comp=Z,6.3nm,0.8s						
VNA3	**Neumayer Olymp**	**77.36**	**176**	⇑P	**P**	**02 17 34.3**	**+0.8**
	comp=Z,26nm,0.8s						
VNA2	**Neumayer--Watz**	**77.80**	**177**	⇑P	**P**	**02 17 37.1**	**+1.2**
	comp=Z,17nm,0.7s,baz=167,slow=2.9						
VNA1	**Neumayer--Stat**	**78.03**	**176**	⇑P	**P**	**02 17 38.6**	**+1.4**
	comp=Z,28nm,1.0s						
COYC	**Coyhaique**	**78.11**	**136**	P	**P**	**02 17 40.3**	**+2.2**
COYC				IAmb	IAmb	02 17 41.6	
	comp=Z,15nm,0.9s						
LL02	**Futaleuf**	**79.55**	**134**	P	**P**	**02 17 47.1**	**+1.0**
LL02				IAmb	IAmb	02 17 48.7	
	comp=Z,8.1nm,0.8s						
JNU	**Nakatsue**	**80.39**	**318**	LR	LR	02 47 00.8	
	comp=Z,58nm,21.6s,baz=160,slow=31						
PLCA	**Paso Flores**	**81.72**	**133**	P	**P**	**02 17 59.9**	**+2.0**
	comp=Z,2.5nm,1.0s,baz=314,slow=4.9,SNR=3.8						
PLCA				LR	LR	02 45 25.9	
	comp=Z,90nm,21.5s,baz=221,slow=29						
	comp=Z,2.5nm,1.0s						
SHEM	**Shemya Is, Ala**	**84.01**	**355**	LR	LR	02 51 38.8	
	comp=Z,177nm,19.3s,baz=270,slow=33						
LPIG	**La Paz**	**84.85**	**58**	LR	LR	02 51 00.4	
	comp=Z,168nm,18.3s,baz=206,slow=32						
MT01	**Popeta**	**85.14**	**127**	P	**P**	**02 18 16.4**	**+0.9**
KSRS	**Korea Array**	**85.19**	**320**	P	**P**	**02 18 16.5**	**+1.1**
	comp=Z,1.0nm,0.4s,baz=124,slow=6.0,SNR=2.6						
	comp=Z,1.0nm,0.4s						
PSI	**Prapat**	**85.74**	**276**	LR	LR	02 56 43.3	
	comp=Z,171nm,20.5s,baz=111,slow=36						
PFO	**Pinyon Flats O**	**86.69**	**47**	LR	LR	02 52 47.1	
	comp=Z,51nm,18.4s,baz=237,slow=33						
PETK	**Petropavlovsk-**	**86.77**	**345**	P	**P**	**02 18 21.7**	**-1.1**
	comp=Z,4.6nm,0.8s,baz=119,slow=9.0,SNR=7.5						
PETK				LR	LR	02 54 33.4	
	comp=Z,68nm,18.3s,baz=185,slow=34						
	comp=Z,4.6nm,0.8s						
CO03	**El Pedregal**	**87.25**	**125**	P	**P**	**02 18 27.8**	**+1.7**
CMB	**Columbia Colle**	**87.32**	**42**	P	**P**	**02 18 25.9**	**0.0**
QSM	**Queen of Sheba**	**87.99**	**45**	P	**P**	**02 18 29.6**	**+0.5**
QSM				IAmb	IAmb	02 18 31.4	
	comp=Z,7.3nm,1.1s						
USRK	**Ussuriysk Ar.**	**88.05**	**326**	P	**P**	**02 18 28.5**	**-0.7**
	comp=Z,1.2nm,0.7s,baz=137,slow=5.8,SNR=5.6						
	comp=Z,1.2nm,0.7s						
GWY	**Greenwater Val**	**88.25**	**45**	IAmb	IAmb	02 18 32.2	
	comp=Z,4.1nm,0.9s						
YBH	**Yreka Blue Hor**	**88.64**	**38**	LR	LR	02 50 32.3	
	comp=Z,7.9nm,21.4s,baz=232,slow=30						
NVAR	**Mina Array Bea**	**88.78**	**43**	P	**P**	**02 18 32.8**	**-0.3**
	comp=Z,1.7nm,0.4s,baz=224,slow=4.5,SNR=5.8						
NVAR				LR	LR	02 53 29.5	
	comp=Z,148nm,18.4s,baz=266,slow=32						
	comp=Z,1.7nm,0.4s						
NV11	**Mina Array Sit**	**88.87**	**43**	IAmb	IAmb	02 18 35.4	
	comp=Z,5.7nm,1.1s						
TPNV	**Topopah Spring**	**89.01**	**45**	IAmb	IAmb	02 18 36.0	
	comp=Z,6.6nm,1.1s						
V12A	**Nelson**	**89.07**	**46**	P	**P**	**02 18 34.7**	**+0.3**
V12A				IAmb	IAmb	02 18 37.1	
	comp=Z,7.4nm,1.2s						
Y14A	**Wickenburg**	**89.09**	**49**	IAmb	IAmb	02 18 37.3	
	comp=Z,7.7nm,1.0s						
W13A	**Hualapai Mount**	**89.27**	**47**	IAmb	IAmb	02 18 38.3	
	comp=Z,8.9nm,1.1s						
SHPR	**Sheep Range**	**89.38**	**46**	P	**P**	**02 18 36.9**	**+1.0**
TUC	**Tucson**	**89.53**	**51**	P	**P**	**02 18 37.0**	**+0.3**
TUC				IAmb	IAmb	02 18 39.9	
	comp=Z,9.3nm,1.1s						
X16A	**Lo Mia Camp, P**	**90.40**	**49**	P	**P**	**02 18 41.1**	**+0.3**
X16A				IAmb	IAmb	02 18 43.9	
	comp=Z,9.4nm,1.0s						
CN2	**Changchun**	**91.01**	**323**	P	**P**	**02 18 43.0**	**-0.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BNX	**BinXian**	**91.39**	**325**	⇑P	**P**	**02 18 45.9**	**+1.1**
BNX				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SPR3	**Spring Creek 3**	**91.49**	**44**	P	**P**	**02 18 45.9**	**0.0**
I07A	**Izee**	**91.97**	**38**	IAmb	IAmb	02 18 49.6	
	comp=Z,4.4nm,1.0s						
J08A	**Circle Bar Ran**	**92.02**	**39**	IAmb	IAmb	02 18 49.8	
	comp=Z,6.3nm,1.2s						
N15K	**Kwethluk River**	**92.32**	**9**	IAmb	IAmb	02 19 02.4	
	comp=Z,7.4nm,0.9s						
TXAR	**Lajitas Array**	**92.72**	**57**	P	**P**	**02 18 52.1**	**+0.6**
TXAR	**Lajitas Array**	**92.72**	**57**	P	**P**	**02 18 51.9**	**+0.4**
	comp=Z,1.3nm,1.0s,baz=193,slow=4.9,SNR=8.0						
TXAR				LR	LR	02 55 56.7	
	comp=Z,71nm,18.1s,baz=235,slow=32						
	comp=Z,1.3nm,1.0s						
NNA	**Nana**	**92.97**	**106**	LR	LR	02 51 16.3	
	comp=Z,93nm,21.3s,baz=226,slow=29						
G08A	**Pilot Rock**	**93.07**	**37**	P	**P**	**02 18 53.0**	**+0.2**
G08A				IAmb	IAmb	02 18 54.6	
	comp=Z,5.3nm,1.1s						
MFID	**Camas Ranch**	**93.50**	**40**	IAmb	IAmb	02 18 56.3	
	comp=Z,4.0nm,0.9s						
TMUT	**Trail Mountain**	**93.57**	**45**	IAmb	IAmb	02 19 17.5	
	comp=Z,2.6nm,0.8s						
BBB	**Bella Bella**	**93.82**	**28**	LR	LR	02 57 50.6	
	comp=Z,64nm,18.1s,baz=232,slow=33						
CMAR	**Chiang Mai Arr**	**93.91**	**289**	PP	**PP**	**02 22 44.0**	**+0.8**
	comp=Z,0.7nm,0.3s,baz=129,slow=5.9,SNR=5.3						
CMAR				LR	LR	03 02 13.9	
	comp=Z,23nm,21.6s,baz=180,slow=36						
ANMO	**Albuquerque**	**94.00**	**51**	LR	LR	02 56 10.4	
	comp=Z,99nm,18.3s,baz=328,slow=32						
MA2	**Magadan**	**94.25**	**345**	LR	LR	02 57 27.4	
	comp=Z,46nm,20.7s,baz=140,slow=33						
ATAH	**Atahualpa**	**94.26**	**101**	LR	LR	02 50 56.9	
	comp=Z,63nm,21.6s,baz=238,slow=29						
HLID	**Hailey**	**94.38**	**41**	P	**P**	**02 18 58.8**	**-0.2**
PLID	**Pearl Lake**	**94.50**	**39**	P	**P**	**02 18 59.0**	**-0.5**
PLID				IAmb	IAmb	02 19 00.3	
	comp=Z,7.0nm,1.4s						
PZH	**PanZhiHua**	**95.92**	**297**	P	**P**	**02 19 07.0**	**+0.7**
NEW	**Newport**	**96.01**	**36**	LR	LR	02 55 30.4	
	comp=Z,119nm,20.0s,baz=230,slow=31						
PDAR	**Pinedale Array**	**96.67**	**44**	P	**P**	**02 19 09.3**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=269,slow=6.8,SNR=3.7						
PDAR				LR	LR	02 58 41.9	
	comp=Z,65nm,18.2s,baz=252,slow=33						
	comp=Z,0.2nm,0.3s						
O29M	**Mount Kennedy**	**96.81**	**18**	P	**P**	**02 19 08.2**	**-1.4**
HHC	**Hu-ho-hao-te**	**97.03**	**314**	*e*P	Pdif	02 19 13.3	+2.2
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,160nm,5.2s						
LPAZ	**La Paz**	**97.57**	**114**	P	Pdif	02 19 16.5	+1.7
	comp=Z,1.0nm,0.7s,baz=136,slow=2.5,SNR=3.7						
LPAZ				LR	LR	02 52 43.0	
	comp=Z,29nm,21.2s,baz=226,slow=29						
	comp=Z,1.0nm,0.7s						
JTS	**Las Juntas de**	**97.65**	**83**	LR	LR	02 56 06.1	
	comp=Z,60nm,18.1s,baz=269,slow=31						
ILAR	**Eielson Array**	**98.79**	**13**	P	**P**	**02 19 17.1**	**-1.0**
	comp=Z,0.5nm,0.9s,baz=212,slow=6.3,SNR=3.9						
ILAR				LR	LR	02 56 21.6	
	comp=Z,54nm,21.9s,baz=180,slow=31						
	comp=Z,0.5nm,0.9s						
CPUP	**Villa Florida**	**99.24**	**128**	LR	LR	02 59 48.2	
	comp=Z,12nm,18.5s,baz=94,slow=33						
MK31	**Makanchi Array**	**118.53**	**310**	PKPdf	**PKPdf**	**02 24 25.2**	**-1.5**
MKAR	**Makanchi Array**	**118.53**	**310**	PKP	**PKPdf**	**02 24 25.4**	**-1.3**
	comp=Z,1.7nm,0.6s,baz=120,slow=2.3,SNR=18						
ZALV	**Zalesovo Beam**	**118.87**	**318**	PKPdf	**PKPdf**	**02 24 25.1**	**-2.0**
ZALV	**Zalesovo Beam**	**118.87**	**318**	PKP	**PKPdf**	**02 24 25.6**	**-1.4**
	comp=Z,0.8nm,0.5s,baz=135,slow=2.8,SNR=4.0						
KSH	**Kashi**	**120.89**	**300**	PKP	**PKiKP**	**02 24 38.6**	**+6.9**
KDWAN	**Kaudwane**	**121.51**	**204**	PKPdf	**PKiKP**	**02 24 33.2**	**-0.3**
KURK	**Kurchatov**	**121.84**	**313**	PKPdf	**PKPdf**	**02 24 31.7**	**-1.1**
KURBB	**Kurchatov Arra**	**121.88**	**313**	PKP	**PKPdf**	**02 24 31.6**	**-1.3**
	comp=Z,6.3nm,0.7s,baz=107,slow=1.9,SNR=61						
KKAR	**Karatay Array**	**125.76**	**303**	PKPdf	**PKPdf**	**02 24 39.6**	**-1.1**
BVAR	**Borovoye Array**	**127.22**	**315**	PKP	**PKPdf**	**02 24 42.4**	**-0.7**
	comp=Z,5.3nm,0.5s,baz=112,slow=1.6,SNR=30						
BRVK	**Borovoye**	**127.28**	**315**	PKPdf	**PKPdf**	**02 24 41.9**	**-1.3**
AB31	**Akbulak array**	**133.67**	**310**	PKPdf	**PKPdf**	**02 24 54.4**	**-1.1**
ABKAR	**Akbulak array**	**133.67**	**310**	PKPdf	**PKPdf**	**02 24 54.1**	**-1.3**
ARTI	**Arti**	**134.04**	**320**	PKPdf	**PKPdf**	**02 24 55.3**	**-0.6**
ARCES	**ARCESS Array B**	**139.54**	**348**	PKhKP	PKPpre	02 24 57.7	
	comp=Z,1.8nm,0.7s,baz=38,slow=4.6,SNR=8.1						
ARCES				PKP	**PKPdf**	**02 25 05.1**	**-0.7**
	comp=Z,3.1nm,0.7s,baz=42,slow=2.2,SNR=13						
LEIR	**Leirfjorden**	**144.57**	**352**	*e*P	**PKPab**	**02 25 12.9**	**-0.4**
KBZ	**Khabaz**	**145.80**	**303**	PKPbc	**PKPdf**	**02 25 17.2**	**-0.3**
	comp=Z,6.8nm,0.9s,baz=137,slow=3.2,SNR=7.5						
KIV	**Kislovodsk**	**145.92**	**303**	PKPdf	**PKPbc**	**02 25 18.0**	**-0.6**
GEVA	**Gevas**	**145.99**	**293**	PKPdf	**PKPdf**	**02 25 18.3**	**-0.1**
OBN	**Obninsk**	**146.05**	**325**	PKPdf	**PKPdf**	**02 25 17.3**	**-0.3**
FIA1	**FINESS Array S**	**146.09**	**340**	PKPdf	**PKPdf**	**02 25 17.0**	**-0.5**
FINES	**FINESS Array B**	**146.09**	**340**	PKPdf	**PKPdf**	**02 25 16.9**	**-0.6**
FINES	**FINESS Array B**	**146.09**	**340**	PKPbc	**PKPdf**	**02 25 17.2**	**-0.3**
	comp=Z,51nm,0.8s,baz=50,slow=3.5,SNR=198						
NSS	**Namsos**	**146.23**	**352**	*e*P	**PKPdf**	**02 25 17.7**	**+0.1**
MARD	**Mardin**	**147.78**	**291**	PKPdf	**PKPdf**	**02 25 20.6**	**-0.8**
MOL	**Molde**	**148.57**	**355**	*e*P	**PKPbc**	**02 25 25.2**	**-0.1**
AKN	**Aaknes**	**148.99**	**356**	*e*P	**PKPbc**	**02 25 26.4**	**-0.1**
NC303	**NORSAR Array S**	**149.51**	**351**	PKPbc	**PKPbc**	**02 25 26.8**	**-0.9**
NB2	**NORSAR Subarra**	**149.71**	**351**	PKP	**PKPbc**	**02 25 27.2**	**-1.1**
	comp=Z,19nm,1.0s,baz=15,slow=2.6						
NB2	**NORSAR Subarra**	**149.71**	**351**	PKP	**PKPbc**	**02 25 27.2**	**-1.1**
	baz=15,slow=2.6						
NOA	**NORSAR Array B**	**149.71**	**351**	PKPbc	**PKPbc**	**02 25 27.3**	**-0.9**
	comp=Z,9.5nm,0.9s,baz=15,slow=4.2,SNR=26						
NC602	**NORSAR Array S**	**149.96**	**351**	*e*P	**PKPbc**	**02 25 28.0**	**-0.8**
HFS	**Hagfors**	**150.20**	**348**	PKPbc	**PKPbc**	**02 25 28.4**	**-1.0**
	comp=Z,16nm,0.8s,baz=40,slow=2.2,SNR=29						
SKAR	**Skarslia**	**150.38**	**354**	*e*P	**PKPbc**	**02 25 29.9**	**0.0**
MNK	**Minsk**	**150.49**	**329**	*i* PKiKP	**PKPbc**	**02 25 28.2**	**-2.1**
	comp=E,16nm,0.8s						
MNK				*i* PKiKP	**PKPbc**	**02 25 28.2**	**-2.1**
	comp=N,11nm,0.8s						
MNK				*i* PKiKP	**PKPbc**	**02 25 28.2**	**-2.1**
	comp=Z,38nm,0.9s,baz=48						
MNK				*i* PP	**PP**	**02 29 04.3**	**-1.9**
MNK				*i* PPP	PPP	02 32 17.7	
MNK				*i* SKS	**SKSdf**	**02 32 26.7**	**-5.8**
MNK				*i* SKKS	SKKSdf	02 41 44.5	+19
MNK				*i* SS	**SS**	**02 48 31.5**	**+6.3**
MNK				*i* SSS	SSS	02 54 01.8	
MNK				*i* LR	LR	03 35 31.1	
NACGM	**Naroch**	**150.69**	**331**	*e*PKiKP	**PKPbc**	**02 25 30.5**	**-0.2**
	comp=E,10.0nm,0.8s						
OSL	**Oslo**	**150.84**	**351**	*e*P	**PKPab**	**02 25 38.9**	**+0.8**
KONO	**Kongsberg**	**151.25**	**352**	*e*P	**PKPbc**	**02 25 31.6**	**-0.3**
ODD1	**Odda**	**151.27**	**355**	*e*P	**PKiKP**	**02 25 31.9**	**-0.6**
PABE	**Paberze**	**151.38**	**334**	PKPbc	**PKPbc**	**02 25 31.6**	**-0.7**
BEIL	**Beino**	**151.41**	**286**	*e*P	**PKiKP**	**02 25 33.2**	**-0.5**
RCY	**Rachaya**	**151.63**	**283**	*e*P	**PKiKP**	**02 25 33.8**	**-0.4**
STRU	**Stroemstad**	**151.65**	**350**	*i* P	**PKPbc**	**02 25 32.2**	**-0.6**
SHBL	**Chebaa**	**151.69**	**283**	*e*P	**PKiKP**	**02 25 34.1**	**-0.3**
QRWL	**Qaraoun**	**151.76**	**283**	*e*P	**PKiKP**	**02 25 34.1**	**-0.4**
BHL	**Bhannes**	**151.81**	**284**	*e*P	**PKPbc**	**02 25 33.7**	**-0.5**
DQRL	**Deir Qamar**	**151.87**	**284**	*e*P	**PKiKP**	**02 25 34.5**	**-0.2**
MMAI	**Mount Meron Ar**	**151.94**	**282**	PKPbc	**PKiKP**	**02 25 35.0**	**+0.2**
	comp=E,13nm,0.5s,baz=92,slow=5.8,SNR=42						
AKASG	**Malin Array Be**	**152.17**	**322**	PKPbc	**PKPbc**	**02 25 33.4**	**-0.9**
	comp=E,20nm,0.8s,baz=53,slow=2.6,SNR=73						
AKBB	**Malin Array Si**	**152.17**	**322**	PKP	**PKPdf**	**02 25 27.4**	**-0.2**
KIEV	**Kiev**	**152.18**	**322**	PKPbc	**PKPbc**	**02 25 33.0**	**-1.3**
BORU	**Boraas**	**152.72**	**348**	*i* P	**PKPbc**	**02 25 34.2**	**-1.1**
HOMB	**Homborsund**	**152.73**	**353**	*i* P	**PKiKP**	**02 25 35.0**	**-0.5**
SNART	**Snartemo**	**152.78**	**354**	*e*P	**PKiKP**	**02 25 35.3**	**-0.3**
SNART	**Snartemo**	**152.78**	**354**	*i* P	**PKiKP**	**02 25 35.4**	**-0.3**
SUW	**Suwalki**	**152.80**	**333**	*e*PKP	**PKPbc**	**02 25 35.2**	**-0.3**
ONAU	**Onsala**	**153.10**	**348**	*i* P	**PKPbc**	**02 25 34.8**	**-1.3**
BR131	**Keskin Array S**	**153.22**	**297**	PKPbc	**PKPbc**	**02 25 35.8**	**-1.4**
BRTR	**Keskin Array B**	**153.22**	**297**	PKPbc	**PKPbc**	**02 25 35.5**	**-1.7**
BRTR	**Keskin Array B**	**153.22**	**297**	PKPbc	**PKPbc**	**02 25 36.2**	**-1.0**
	comp=E,2.5nm,0.6s,baz=82,slow=2.0,SNR=25						
BLEU	**Blekinge**	**153.29**	**343**	*i* P	**PKPbc**	**02 25 35.7**	**-0.9**
FABU	**Falkenberg**	**153.33**	**347**	*i* P	**PKPbc**	**02 25 35.8**	**-0.9**
RNPP8	**Varash**	**153.49**	**326**	PKP	**PKPdf**	**02 25 29.4**	**-0.1**
DEL	**Delary**	**153.59**	**345**	*i* P	**PKiKP**	**02 25 36.9**	**-0.4**
ANTO	**Ankara**	**153.84**	**297**	PKPbc	**PKPbc**	**02 25 37.3**	**-1.2**
KMPD	**K-Podol'skiy**	**154.85**	**320**	PKP	**PKPdf**	**02 25 31.5**	**0.0**
BEL	**Belsk**	**155.40**	**332**	*e*PKP	PKPab	02 25 49.3	-8.3
GKP	**Gorka Klasztor**	**155.53**	**338**	*e*PKP	PKPdf	02 25 41.9	+10
BUR08	**Bucovina Ar. S**	**156.07**	**319**	PKPdif	PKPdf	02 25 43.4	+10
BURAR	**Bucovina Array**	**156.08**	**319**	PKPdif	PKPdf	02 25 43.2	+10
KOLS	**Kolonicke sedl**	**156.81**	**325**	*e*PKP	PKPdf	02 25 46.2	+12
KOLS				*e*		02 26 10.0	
OJC	**Ojcow**	**157.03**	**330**	*e*PKP	**PKPdf**	**02 25 41.5**	**+7.1**
NIE	**Niedzica**	**157.40**	**328**	*e*PKP	PKPdf	02 25 48.3	+13
KSP	**Ksiaz**	**157.89**	**336**	*e*PKP	**PKPdf**	**02 25 40.1**	**+4.7**
DPC	**Dobruska-Polom**	**158.29**	**335**	*e*PKPAB	**PKPab**	**02 26 06.7**	**-3.5**
MORC	**Moravsky Berou**	**158.29**	**332**	*e*PKP	**PKPab**	**02 26 10.6**	**+0.4**
KRLC	**Kraliky**	**158.35**	**334**	*e*PKPAB	**PKPab**	**02 26 09.4**	**-1.0**
CLL	**Collm**	**158.52**	**341**	*e*PKPdf	**PKPdf**	**02 25 38.0**	**+1.8**
	comp=Z,3.0nm,1.2s						
CLL				*i* x	x	02 25 44.3	
CLL				*e*PKPdif	PKPab	02 25 55.0	-16
CLL				*i* PKPab	**pPKPab**	**02 26 09.9**	**-2.7**
	comp=Z,5.0nm,0.9s						
CLL				*i* x	x	02 26 15.2	
	comp=Z,7.0nm,0.9s						
CLL				*i* x	x	02 26 22.2	
	comp=Z,7.0nm,1.1s						
CLL				*e*SKPdf	**SKPdf**	**02 29 07.0**	**-1.6**
BRG	**Berggiesshubel**	**158.63**	**339**	P	**PKPab**	**02 26 12.2**	**+0.6**
BRG				Amp		02 26 12.6	
	comp=Z,3.4nm,0.9s						
BRG	**Berggiesshubel**	**158.63**	**339**	P	**PKPab**	**02 26 16.4**	**+4.9**
BRG				Amp		02 26 17.9	
	comp=Z,5.7nm,0.9s						
VRAC	**Vranov**	**159.04**	**333**	*e*PKP	**PKPab**	**02 26 11.8**	**-1.6**
KRUC	**Moravsky**	**159.32**	**333**	*e*PKP	**PKPab**	**02 26 14.4**	**-0.2**
ZVC	**Zvikov**	**159.80**	**337**	*e*PKPAB	**PKPab**	**02 26 15.2**	**-1.5**
KHC	**Kasperske Hory**	**160.27**	**338**	*e*PKPAB	**PKPab**	**02 26 18.3**	**-0.5**
KHC				*e*pPKP	**sPKPab**	**02 26 25.0**	**+4.0**
KHC				AMS	AMS	03 40 50.0	
	comp=Z,100nm,21.9s						
CONA	**Conrad Observa**	**160.44**	**332**	*e*PKP	**PKPab**	**02 26 19.3**	**-0.4**
	comp=Z,3.8nm,0.8s						
RONA	**Rosalia, Austr**	**160.44**	**331**	*i* PKP	**PKPab**	**02 26 20.2**	**+0.6**
	comp=Z,2.6nm,0.6s						
MEM	**Membach**	**160.54**	**353**	*d*PKP	**PKPab**	**02 26 18.7**	**-1.1**
BCLA	**Clavier**	**160.80**	**354**	*d*PKP	**PKPab**	**02 26 19.5**	**-1.4**
BMRD	**Maredsous**	**160.96**	**355**	*d*PKP	**PKPab**	**02 26 22.2**	**+0.5**
ARSA	**Arzberg**	**161.12**	**331**	*e*PKP	**PKPab**	**02 26 21.4**	**-1.2**
	comp=Z,4.4nm,1.4s						
MOA	**Molln**	**161.12**	**334**	*e*PKP	**PKPab**	**02 26 21.8**	**-0.7**
	comp=Z,0.2nm,0.2s						
BIOA	**Bad Ischl, Aus**	**161.49**	**335**	*i* PKP	**PKPab**	**02 26 23.7**	**-0.5**
	comp=Z,0.9nm,0.3s						
LESA	**Schwarzleotal**	**162.05**	**336**	*e*PKP	**PKPab**	**02 26 25.2**	**-1.5**
	comp=Z,0.7nm,0.4s						
OBKA	**Obir**	**162.11**	**331**	*i* PKP	**PKPab**	**02 26 23.8**	**-3.2**
	comp=Z,1.2nm,0.5s						
MYKA	**Terra Mystica**	**162.37**	**333**	*e*PKP	**PKPab**	**02 26 28.1**	**0.0**
	comp=Z,1.3nm,0.3s						
WTTA	**Wattenberg**	**162.53**	**338**	*i* PKP	**PKPab**	**02 26 28.2**	**-0.7**
	comp=Z,4.0nm,0.6s						
RETA	**Reutte**	**162.60**	**340**	*i* PKP	**PKPab**	**02 26 28.2**	**-0.9**
	comp=Z,3.1nm,0.7s						
MOTA	**Moosalm**	**162.63**	**339**	*i* PKP	**PKPab**	**02 26 28.6**	**-0.7**
	comp=Z,5.6nm,0.9s						
ABTA	**Abfaltersbach**	**162.69**	**336**	*e*PKP	**PKPab**	**02 26 27.3**	**-2.2**
	comp=Z,2.6nm,0.8s						
SQTA	**Sankt Quirin**	**162.71**	**339**	*e*PKP	**PKPab**	**02 26 29.6**	**0.0**
	comp=Z,1.1nm,0.3s						
DAVA	**Damuels**	**163.03**	**342**	*i* PKP	**PKPab**	**02 26 28.9**	**-2.2**
	comp=Z,2.9nm,0.8s						
ESDC	**Sonseca Array**	**170.27**	**30**	PKP	**PKPdf**	**02 25 47.1**	**0.0**
	comp=Z,1.4nm,1.1s,baz=331,slow=1.6,SNR=6.0						
ESDC				PKPab	**PKPab**	**02 27 02.4**	**-0.7**
	comp=Z,1.5nm,1.0s,baz=322,slow=4.1,SNR=5.5						

RSNC 17 02:23:19.3±0.0,**7°N**±1°×**7°3W**±°,**h151**^{km}±2^{km},**M2.8,mb2.7, mB5.7,ML2.5,Mw(mB)5.2,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.23**	**191**	P	Pn	02 23 39.6	-0.5
BARC				S	Sn	02 23 54.5	-1.4
BRJC	**Barrancabermej**	**0.62**	**284**	P	Pn	02 23 41.4	0.0
BRJC				S	Sn	02 23 58.7	+0.5
PAMC	**Pamplona, Colo**	**0.68**	**40**	P	Pn	02 23 42.5	+0.1
PAMC				S	Sn	02 23 59.3	-0.6
RUSC	**La Rusia**	**0.92**	**176**	P	Pn	02 23 43.5	-0.6
RUSC				S	Sn	02 24 01.8	-1.3
PTBC	**PUERTO BERRIO,**	**1.34**	**258**	P	Pn	02 23 46.1	-1.2
PTBC				S	Sn	02 24 07.2	-1.5
TAMC	**Tame, Arauca**	**1.39**	**106**	P	Pn	02 23 47.8	-0.1
TAMC				S	Sn	02 24 09.3	-0.4
OCAC	**Ocana**	**1.42**	**353**	P	Pn	02 23 47.8	-0.5
OCAC				S	Sn	02 24 10.2	-0.4
SPBC	**San Pablo de B**	**1.48**	**219**	P	Pn	02 23 48.5	-0.4
SPBC				S	Sn	02 24 10.4	-1.2
ZARC	**Zaragoza, Cauc**	**1.83**	**292**	P	Pn	02 23 52.5	-0.1
ZARC				S	Sn	02 24 17.8	-0.3
NORC	**Norcasia**	**2.12**	**234**	P	Pn	02 23 55.8	-0.2
NORC				S	Sn	02 24 23.5	-0.8
CHIC	**Chingaza**	**2.25**	**195**	P	Pn	02 23 57.7	-0.2
CHIC				S	Sn	02 24 27.7	0.0
ROSC	**El Rosal**	**2.29**	**211**	P	Pn	02 23 59.2	+0.8
ROSC				S	Sn	02 24 30.1	+1.7
UREC	**San Jos de Ur**	**2.55**	**291**	P	Pn	02 23 59.6	-1.5
UREC				S	Sn	02 24 31.6	-1.7
GUY2C	**Guyana, Caldas**	**2.72**	**234**	P	Pn	02 24 04.1	+0.4
GUY2C				S	Sn	02 24 37.8	-0.1
VILC	**Villavicencio,**	**2.75**	**192**	P	Pn	02 24 03.4	-0.3
VILC				S	Sn	02 24 36.2	-1.8
PTGC	**Puerto Gaitan,**	**2.79**	**159**	P	Pn	02 24 02.3	-1.8
PTGC				S	Sn	02 24 35.8	-2.9
CBOC	**Ciudad Bolivar**	**3.01**	**252**	P	Pn	02 24 07.5	+0.5
CBOC				S	Sn	02 24 42.0	-1.8
DBBC	**Dabeiba**	**3.05**	**274**	P	Pn	02 24 07.5	0.0
DBBC				S	Sn	02 24 43.4	-1.3
ARGC	**Ariguani, Magd**	**3.21**	**340**	P	Pn	02 24 09.2	-0.2
ARGC				S	Sn	02 24 48.6	+0.3
SDV	**Santo Domingo**	**3.22**	**50**	P	Pn	02 24 09.1	-0.6
SDV				S	Sn	02 24 47.7	-1.1
ANIL	**Santa Ana**	**3.23**	**224**	P	Pn	02 24 10.2	+0.3
ANIL				S	Sn	02 24 51.6	+2.5
PRAC	**Prado**	**3.54**	**209**	P	Pn	02 24 12.8	-0.9
PRAC				S	Sn	02 24 56.1	+0.2
ORTC	**Ortega, Tolima**	**3.57**	**216**	P	Pn	02 24 13.3	-0.8
ORTC				S	Sn	02 24 56.6	0.0
APAC	**Apartado, Choc**	**3.58**	**288**	P	Pn	02 24 12.8	-1.3
APAC				S	Sn	02 24 56.9	+0.3
PLMC	**San Jos del P**	**3.66**	**239**	P	Pn	02 24 15.2	-0.1
PLMC				S	Sn	02 24 56.3	-2.4
SJCC	**San Jacinto, C**	**3.66**	**327**	P	Pn	02 24 13.4	-1.9
SJCC				S	Sn	02 24 55.5	-3.3
URMC	**La Uribe, Meta**	**3.76**	**199**	P	Pn	02 24 16.6	0.0
URMC				S	Sn	02 24 59.9	-1.1
LCBC	**Los crdobas,**	**3.79**	**303**	P	Pn	02 24 14.9	-1.9
LCBC				S	Sn	02 25 00.5	-0.9
CRJC	**Cerrejon, Guaj**	**4.18**	**3**	P	Pn	02 24 20.0	-2.1
CRJC				S	Sn	02 25 07.1	-3.8
YOTC	**Yotoco, Valle**	**4.26**	**229**	P	Pn	02 24 22.6	-0.5
MALC	**Bahia Malaga**	**5.02**	**236**	P	Pn	02 24 34.0	+0.9
POPC	**Popayan, Colom**	**5.52**	**220**	P	Pn	02 24 39.7	-0.2
POPC				S	Sn	02 25 42.0	-0.9

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*IDC **17** 02:36:19.3±1.5,66°.49S×143°.17W,h0^{km},mb3.7/4, mbtmp3.7/4,Error ellipse: s-maj=55.7km s-min=30.5km az=52.0*

ISC 17 02:36:21.0±1.4,**66°.5S**±0°.3×**143°.2W**±0°.3,**h10**^{km},**n8,** σ**0**^{s}**.59**/8,**mb3.8**/4,**Southern Pacific Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QSPA	**South Pole Qui**	**23.60**	**180**	P	**P**	**02 41 32.2**	**+0.5**
	1.4nm,0.7s,baz=80,slow=6.1,SNR=16						
	1.4nm,0.7s						
SNAA	**Sanae**	**39.51**	**162**	P	**P**	**02 43 50.9**	**-0.3**
	0.4nm,0.5s,baz=180,slow=10,SNR=1.9						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**65.71**	**267**	P	**P**	**02 47 05.8**	**+0.3**
	0.7nm,0.8s,baz=155,slow=7.2,SNR=4.6						
	0.7nm,0.8s						
WRA	**Warramunga Arr**	**68.88**	**269**	P	**P**	**02 47 25.5**	**-0.1**
	0.7nm,0.7s,baz=154,slow=5.9,SNR=3.9						
	0.7nm,0.7s						
ILAR	**Eielson Array**	**131.03**	**358**	PKP	**PKPdf**	**02 55 31.6**	**+0.7**
	0.5nm,0.7s,baz=117,slow=1.2,SNR=2.0						
ESDC	**Sonseca Array**	**144.78**	**119**	PKP	**PKPab**	**02 55 56.3**	**+0.3**
	1.1nm,0.9s,baz=212,slow=2.1,SNR=9.1						
MKAR	**Makanchi Array**	**149.16**	**253**	PKPbc	**PKPbc**	**02 56 07.7**	**-0.6**
	1.3nm,1.0s,baz=142,slow=4.9,SNR=5.6						
BRTR	**Keskin Array B**	**153.10**	**175**	PKPbc	**PKPbc**	**02 56 17.2**	**-0.7**
	0.6nm,0.7s,baz=159,slow=4.0,SNR=5.4						

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*AFAD **17** 02:44:48.8,36°.01N×44°.76E,h7^{km}±2^{km},MW3.5*
*ISN **17** 02:44:49.2±0.9,36°.15N×44°.83E,h7^{km}±5^{km},ML2.7*
*TEH **17** 02:44:50.3,36°.17N×44°.95E,h8^{km}±98^{km}*

ISC 17 02:44:48.9±1.3,**36°.05N**±0°.03×**44°.89E**±0°.04,**h5**^{km}±14^{km}, **n22,**σ**1**^{s}**.10**/30,**Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKRK	**Kirkuk**	**0.79**	**215**	*e*Pg	**Pb**	**02 45 05.0**	**0.0**
	baz=28						
IKRK				*e*Sg	**Sn**	**02 45 17.5**	**-1.3**
IKRK				AML	AML	02 45 24.9	
	comp=N,277nm,0.7s						
IKRK				AML	AML	02 45 26.6	
	comp=E,285nm,0.5s						
MAHB	**Mahabad**	**0.97**	**42**	Pg	**Pg**	**02 45 06.9**	**-0.7**
MAHB				Sg	**Sg**	**02 45 19.4**	**-0.9**
CUKT	**Cukurca**	**1.58**	**320**	*e*P	**Pb**	**02 45 18.0**	**-0.6**
CUKT				*e*S	**Sg**	**02 45 39.6**	**0.0**
CUKT	**Cukurca**	**1.58**	**320**	P	**Pb**	**02 45 18.2**	**-0.4**
CUKT				S	**Sg**	**02 45 39.8**	**+0.2**
YOVA	**Hakkari_Yksek**	**1.61**	**343**	P	**Pb**	**02 45 19.0**	**-0.2**
YOVA				S	**Sg**	**02 45 42.3**	**+1.7**
HAKT	**HAKKARI**	**1.78**	**328**	P	**Pb**	**02 45 21.8**	**-0.3**
HAKT				S	**Sg**	**02 45 46.3**	**+0.2**
IDHR	**Dehrash**	**1.82**	**137**	Pn	**Pg**	**02 45 23.8**	**0.0**
IAZR	**Azarshahr**	**1.85**	**28**	Pg	**Pb**	**02 45 23.0**	**-0.3**
ILIN	**Lien**	**2.04**	**123**	Pn	**Pb**	**02 45 27.3**	**+0.8**
GLG1	**Gilan-e-Gharb**	**2.11**	**156**	Pn	**Pb**	**02 45 28.7**	**+1.1**
IGHG	**Ghaleghazi**	**2.20**	**141**	Pn	**Pb**	**02 45 29.8**	**+0.5**
IHSH	**Hashtrud**	**2.28**	**56**	Pn	**Pb**	**02 45 29.3**	**-1.5**
ISHB	**Shabestar**	**2.30**	**14**	Pn	**Pn**	**02 45 28.2**	**+0.5**
SNQR	**Sonqor, Kerman**	**2.53**	**117**	Pn	**Pb**	**02 45 35.0**	**-0.1**
ILBA	**Ilam Banvizeh**	**2.65**	**155**	Pn	**Pb**	**02 45 37.2**	**+0.3**
AKDM	**Akdamar-Van**	**2.74**	**327**	*e*P	**Pn**	**02 45 35.1**	**+1.5**
BHD	**Baghdad**	**2.81**	**189**	*e*Pn	**Pb**	**02 45 37.0**	**-2.4**
BHD				*e*Sn	**Sb**	**02 46 13.0**	**-1.1**
VANB	**Van**	**2.81**	**335**	*e*P	**Pn**	**02 45 33.9**	**-0.7**
IHRS	**Heris**	**2.84**	**37**	Pn	**Pn**	**02 45 36.8**	**+1.6**
SRTM	**Siirt_Merkez**	**3.06**	**310**	P	**Pb**	**02 45 43.9**	**-0.1**
SRTM				S	**Sg**	**02 46 27.5**	**+0.2**
CLDR	**Caldiran**	**3.18**	**346**	*e*P	**Pn**	**02 45 41.4**	**+1.6**
SVAN	**Silvan-Diyarba**	**3.62**	**307**	*e*P	**Pn**	**02 45 47.9**	**+2.3**

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*ISK **17** 03:05:28.9,39°.58N×26°.05E,h14^{km},ML2.5/17*
*AFAD **17** 03:05:30.1,39°.59N×26°.13E,h5^{km}±2^{km},ML2.0*
*ATH **17** 03:05:30.1,39°.53N×26°.03E,h15^{km}±5^{km},ML2.3/7, Manual Solution by S.Liakopoulos First location: 2019/06/17 03:06:42, This location: 2019/06/17 07:43:42 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

ISC 17 03:05:29.6±0.9,**39°.58N**±0°.02×**26°.05E**±0°.02,**h14**^{km}±7^{km}, **n43,**σ**0**^{s}**.75**/64,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GPNR	**Gulpinar-Canak**	**0.14**	**154**	Pg	**Pg**	**03 05 32.9**	**-0.4**
BOZC	**Bozcaada**	**0.26**	**0**	Pg	**Pg**	**03 05 35.3**	**+0.1**
BOZC				Sg	**Sg**	**03 05 39.3**	**+0.4**
EZNE	**Ezine-Canakkal**	**0.30**	**55**	Pg	**Pg**	**03 05 35.7**	**-0.2**
EZNE				Sg	**Sg**	**03 05 40.2**	**+0.1**
EZN	**Ezine**	**0.32**	**41**	Pg	**Pg**	**03 05 36.0**	**-0.3**
EZN				Sg	**Sg**	**03 05 40.8**	**0.0**
SIGR	**SIGRI**	**0.40**	**202**	Pg	**Pg**	**03 05 37.5**	**-0.2**
SIGR				Sg	**Sg**	**03 05 43.4**	**+0.2**
ECEA	**Canakkale, Ece**	**0.47**	**12**	P	**Pg**	**03 05 38.9**	**-0.1**
ECEA				S	**Sg**	**03 05 46.0**	**+0.7**
CNKL	**anakkale-Mer**	**0.55**	**28**	P	**Pg**	**03 05 39.9**	**-0.6**
CNKL				S	**Sg**	**03 05 47.8**	**0.0**
COMU	**Canakkale**	**0.61**	**32**	Pg	**Pg**	**03 05 41.4**	**-0.2**
GADA	**Gvkgeada**	**0.62**	**349**	Pg	**Pg**	**03 05 41.6**	**-0.2**

GADA				Sg	**Sg**	**03 05 50.1**	**+0.1**
LIA	**Limnos Island**	**0.74**	**295**	P	**Pg**	**03 05 44.5**	**+0.5**
LIA				S	**Sb**	**03 05 54.6**	**+0.4**
BUHA	**Balikesir, Bur**	**0.80**	**96**	P	**Pg**	**03 05 44.8**	**-0.4**
BUHA				S	**Sg**	**03 05 54.8**	**-0.8**
BUHA				*i* IAML		03 05 59.0	
	comp=N,86nm,0.7s						
BUHA				*i* IAML		03 06 00.0	
	comp=E,111nm,0.4s						
EFSA	**Agios Efstrati**	**0.82**	**267**	P	**Pg**	**03 05 46.0**	**+0.5**
EFSA				S	**Sg**	**03 05 56.8**	**+0.4**
DKL	**Dikili**	**0.84**	**127**	Pg	**Pg**	**03 05 46.1**	**+0.2**
DKL	**Dikili**	**0.84**	**127**	P	**Pg**	**03 05 46.1**	**+0.2**
DKL				S	**Sb**	**03 05 57.3**	**+0.3**
GELI	**Tayfur-Gelibol**	**0.88**	**22**	Pg	**Pg**	**03 05 46.2**	**-0.4**
CANM	**Can-anakkale**	**0.88**	**61**	Pg	**Pg**	**03 05 46.3**	**-0.4**
IZMD	**zmir-Dikili-**	**0.91**	**131**	P	**Pn**	**03 05 51.0**	**+3.0**
IZMD				S	**Sg**	**03 05 59.0**	**-0.1**
LPK	**Lapseki**	**0.96**	**34**	Pg	**Pb**	**03 05 47.6**	**-0.4**
YENI	**Yenice-Canakka**	**0.98**	**69**	Pg	**Pb**	**03 05 47.7**	**-0.7**
ZEDA	**zmir-Bergama**	**1.01**	**127**	P	**Pg**	**03 05 49.4**	**+0.3**
ZEDA				S	**Sb**	**03 06 02.2**	**+0.2**
ZEDA				*i* IAML		03 06 04.0	
	comp=N,30nm,0.2s						
ZEDA				*i* IAML		03 06 05.0	
	comp=E,31nm,0.4s						
EAG2	**Marmaro, Chios**	**1.04**	**178**	P	**Pb**	**03 05 48.9**	**-0.5**
EAG2				S	**Sb**	**03 06 02.1**	**-0.7**
ERIK	**Erikli-Kesan**	**1.14**	**18**	Pn	**Pb**	**03 05 50.6**	**-0.6**
ENEZ	**Enez**	**1.15**	**4**	Pn	**Pn**	**03 05 51.3**	**0.0**
CHOS	**Chios island**	**1.20**	**180**	Pn	**Pn**	**03 05 51.2**	**-0.8**
CHOS	**Chios island**	**1.20**	**180**	P	**Pn**	**03 05 51.1**	**-0.9**
CHOS				S	**Sb**	**03 06 06.8**	**-0.6**
BALY	**Balya**	**1.22**	**82**	P	**Pn**	**03 05 52.3**	**0.0**
BALY				S	**Sb**	**03 06 07.4**	**-0.7**
BALY				*i* IAML		03 06 09.0	
	comp=E,78nm,0.3s						
KRBG	**Karabiga-Canak**	**1.25**	**49**	Pn	**Pn**	**03 05 52.4**	**-0.3**
ALEX	**Alexandroupoli**	**1.27**	**355**	P	**Pg**	**03 05 54.7**	**+0.5**
URLA	**Izmir**	**1.29**	**161**	Pn	**Pn**	**03 05 52.3**	**-1.0**
STEP	**BALIKESIR_Sava**	**1.31**	**99**	P	**Pb**	**03 05 54.5**	**+0.5**
STEP				S	**Sb**	**03 06 09.8**	**-0.8**
STEP				*i* IAML		03 06 16.0	
	comp=N,43nm,1.3s						
STEP				*i* IAML		03 06 16.0	
	comp=E,48nm,0.4s						
ALN	**Alexandroupoli**	**1.31**	**360**	Pn	**Pn**	**03 05 53.3**	**-0.2**
GONE	**Gonen-Balikesi**	**1.34**	**69**	Pn	**Pn**	**03 05 53.7**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.40**	**38**	Pn	**Pn**	**03 05 54.9**	**+0.1**
THAS	**Thassos island**	**1.45**	**315**	P	**Pn**	**03 05 55.1**	**-0.2**
AKHS	**Akhisar**	**1.54**	**117**	P	**Pn**	**03 05 56.4**	**-0.3**
AKHS				S	**Sb**	**03 06 17.6**	**+0.4**
AKHS				*i* IAML		03 06 22.0	
	comp=E,16nm,0.5s						
RDO	**Rodhopi**	**1.61**	**346**	P	**Pn**	**03 05 58.6**	**+1.0**
OUR	**Ouranopolis**	**1.76**	**296**	P	**Pn**	**03 06 00.4**	**+0.7**
KYMI	**Kymi, Euboea I**	**1.79**	**239**	P	**Pn**	**03 05 59.1**	**-1.0**
KAVA	**Kavala**	**1.84**	**321**	P	**Pn**	**03 06 01.0**	**+0.3**
DURS	**Dursunbey**	**1.87**	**89**	P	**Pn**	**03 06 02.2**	**+0.9**
DURS				S	**Sn**	**03 06 23.4**	**-1.4**
DURS				*i* IAML		03 06 30.0	
	comp=N,35nm,0.5s						
DURS				*i* IAML		03 06 31.0	
	comp=E,32nm,0.2s						
KARY	**Karystos**	**2.00**	**220**	P	**Pn**	**03 06 03.0**	**+0.1**
DEMI	**Demirci**	**2.14**	**104**	P	**Pb**	**03 06 09.8**	**+1.6**
DEMI				S	**Sb**	**03 06 36.7**	**+2.1**
DEMI				*i* IAML		03 06 42.0	
	comp=N,12nm,0.2s						
DEMI				*i* IAML		03 06 42.0	
	comp=E,14nm,0.2s						
MANT	**Manisa**	**2.24**	**118**	P	**Pb**	**03 06 11.2**	**+1.2**
MANT				S	**Sb**	**03 06 38.4**	**+0.8**

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*ISK **17** 03:10:27.4, 35°.30N×24°.28E, h10km, ML3.0/6*
*ATH **17** 03:10:27.2, 35°.20N×24°.26E, h8km±1km, ML2.8/7, Manual Solution by S.Liakopoulos First location: 2019/06/17 03:11:21, This location: 2020/10/27 08:50:47 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*
*THE **17** 03:10:28.2, 35°N±1°×24°.3E±0°.8, h0km±2km, M2.5/8, MLh2.5/8*
ISC 17 03:10:27.8±0.9**, 35°.30N**±0°.03×**24°.30E**±0°.02**, h10**km±8km**,** **n31,** σ**0s.78**/49**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRNS	**Prines Rethymn**	**0.18**	**68**	P	**Pg**	**03 10 31.4**	**-0.3**
PRNS				S	**Sg**	**03 10 34.1**	**-0.3**
CHNB	**Souda**	**0.27**	**316**	P	**Pb**	**03 10 33.6**	**-1.1**
CHNB				S	**Sb**	**03 10 38.2**	**-1.1**
CHAN	**Chania**	**0.30**	**317**	P	**Pb**	**03 10 34.2**	**-1.1**
CHAN				S	**Sb**	**03 10 39.1**	**-1.3**
CHAN	**Chania**	**0.30**	**317**	P	**Pb**	**03 10 34.2**	**-1.1**
CHAN				S	**Sb**	**03 10 39.0**	**-1.3**
IMMV	**Iera Moni Meta**	**0.30**	**303**	Pg	**Pg**	**03 10 33.8**	**-0.1**
IMMV				Sg	**Sg**	**03 10 38.6**	**+0.6**
IMMV	**Iera Moni Meta**	**0.30**	**303**	P	**Pg**	**03 10 34.0**	**+0.1**
IMMV				S	**Sg**	**03 10 38.6**	**+0.6**
IMMV	**Iera Moni Meta**	**0.30**	**303**	P	**Pg**	**03 10 33.9**	**0.0**
IMMV				S	**Sg**	**03 10 38.7**	**+0.6**
CH01	**Chania**	**0.32**	**315**	P	**Pb**	**03 10 34.6**	**-0.9**
CH01				S	**Sb**	**03 10 39.6**	**-1.1**
TMBK	**Timbaki Herakl**	**0.45**	**120**	P	**Pg**	**03 10 36.9**	**+0.4**
TMBK				S	**Sb**	**03 10 43.8**	**-0.6**
IDI	**Anoyia**	**0.49**	**91**	Pg	**Pg**	**03 10 37.5**	**+0.2**
IDI				Sg	**Sb**	**03 10 44.9**	**-0.8**
IDI	**Anoyia**	**0.49**	**91**	P	**Pg**	**03 10 37.7**	**+0.4**
IDI				S	**Sb**	**03 10 45.4**	**-0.3**
IDI	**Anoyia**	**0.49**	**91**	P	**Pg**	**03 10 37.5**	**+0.2**
IDI				S	**Sb**	**03 10 44.8**	**-0.8**
GVD	**Gavdhos**	**0.49**	**201**	Pg	**Pb**	**03 10 37.7**	**-0.8**
GVD	**Gavdhos**	**0.49**	**201**	P	**Pb**	**03 10 37.6**	**-0.8**
GVD				S	**Sb**	**03 10 44.6**	**-1.0**
KNDR	**Palaiochora Ch**	**0.50**	**263**	Pg	**Pb**	**03 10 38.1**	**-0.6**
KNDR				Sg	**Sb**	**03 10 46.3**	**+0.2**
KNDR	**Palaiochora Ch**	**0.50**	**263**	P	**Pb**	**03 10 38.0**	**-0.7**
KNDR				S	**Sb**	**03 10 46.0**	**0.0**
KNDR	**Palaiochora Ch**	**0.50**	**263**	P	**Pb**	**03 10 38.1**	**-0.6**
KNDR				S	**Sg**	**03 10 44.3**	**+0.1**
ANKY	**Antikythira Is**	**0.99**	**305**	P	**Pb**	**03 10 46.8**	**-0.3**
ANKY	**Antikythira Is**	**0.99**	**305**	P	**Pb**	**03 10 46.7**	**-0.3**
ANKY				S	**Sb**	**03 11 00.1**	**-0.1**
THR9	**Santorini-Faro**	**1.37**	**39**	P	**Pb**	**03 10 53.7**	**+0.2**
KTHA	**Kythira Island**	**1.39**	**314**	P	**Pb**	**03 10 53.6**	**-0.2**
MHLO	**Agia Marina, M**	**1.39**	**4**	P	**Pg**	**03 10 55.1**	**+0.5**
MHLO				S	**Sg**	**03 11 14.3**	**+1.6**
THR5	**Thira Island,**	**1.41**	**37**	P	**Pg**	**03 10 54.5**	**-0.3**
SAP3	**Santorini-Thir**	**1.42**	**37**	P	**Pg**	**03 10 55.0**	**-0.1**
ZKR	**Zakros**	**1.58**	**96**	Pn	**Pb**	**03 10 56.9**	**-0.2**
VLI	**Veliai**	**1.80**	**323**	P	**Pn**	**03 10 58.9**	**+0.1**
VLI	**Veliai**	**1.80**	**323**	P	**Pn**	**03 10 59.2**	**+0.3**
APE	**Apeiranthos**	**2.03**	**29**	Pn	**Pn**	**03 11 02.1**	**0.0**
APE	**Apeiranthos**	**2.03**	**29**	P	**Pb**	**03 11 03.5**	**-1.3**
LTK	**Loutraki**	**2.92**	**339**	P	**Pn**	**03 11 16.2**	**+1.8**
KLV	**Kalavryta, Ach**	**3.24**	**328**	P	**Pn**	**03 11 19.9**	**+1.2**

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*IDC **17** 03:20:39.9±0.8, 15°.26S×67°.06E, h0km, mb3.9/12, mbtmp3.9/12, MS3.6/6, Error ellipse: s-maj=27.6km s-min=21.2km az=50.0*
ISC 17 03:20:42.2±0.8**, 15°.3S**±0°.2×**67°.1E**±0°.2**, h14**km**, n30,** σ**0s.89**/15**, mb4.0**/12**, MS3.6**/6**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**9.24**	**36**	T	T	03 32 16.9	
	baz=214,slow=75,SNR=219						
H08S2	**Diego Garcia H**	**9.25**	**36**	T	T	03 32 19.8	
	baz=214,slow=75,SNR=335						
H08S3	**Diego Garcia H**	**9.26**	**36**	T	T	03 32 18.3	
	baz=214,slow=75,SNR=315						
PALK	**Pallekele**	**26.15**	**32**	LR	LR	03 33 19.2	
	comp=Z,73nm,18.3s,baz=205,slow=29						
H04N2	**CROZET ISLANDS**	**33.36**	**199**	T	T	04 02 34.0	
	baz=29,slow=75,SNR=39						
H04N1	**CROZET ISLANDS**	**33.37**	**199**	T	T	04 02 35.0	
	baz=29,slow=75,SNR=36						
H04N3	**CROZET ISLANDS**	**33.38**	**199**	T	T	04 02 33.9	
	baz=29,slow=75,SNR=33						
PSI	**Prapat**	**36.28**	**63**	LR	LR	03 41 29.9	
	comp=Z,67nm,18.1s,baz=234,slow=34						
LSZ	**Lusaka**	**37.47**	**265**	LR	LR	03 41 02.5	
	comp=Z,121nm,19.5s,baz=136,slow=33						
LBTB	**Lobatse**	**39.99**	**249**	LR	LR	03 43 08.8	
	comp=Z,156nm,19.6s,baz=109,slow=34						
BOSA	**Boshof**	**40.79**	**244**	LR	LR	03 42 15.1	
	comp=Z,96nm,18.0s,baz=141,slow=32						
CMAR	**Chiang Mai Arr**	**45.92**	**44**	LR	LR	03 45 52.5	
	comp=Z,51nm,20.0s,baz=240,slow=33						
H01W3	**Cape Leeuwin H**	**46.42**	**124**	T	T	04 18 49.0	
	baz=282,slow=75,SNR=21						
H01W2	**Cape Leeuwin H**	**46.42**	**124**	T	T	04 18 40.8	
	baz=282,slow=75,SNR=22						
H01W1	**Cape Leeuwin H**	**46.44**	**124**	T	T	04 18 42.4	
	baz=282,slow=75,SNR=20						
BRTR	**Keskin Array B**	**62.95**	**332**	P	**P**	**03 31 09.7**	**+1.1**
	0.7nm,0.9s,baz=148,slow=7.3,SNR=6.3						
	0.7nm,0.9s						
ASAR	**Alice Springs**	**63.10**	**109**	P	**P**	**03 31 09.4**	**-0.5**
	0.6nm,0.8s,baz=260,slow=6.6,SNR=4.2						
	0.6nm,0.8s						
MKAR	**Makanchi Array**	**63.27**	**12**	P	**P**	**03 31 09.9**	**-0.4**
	0.5nm,0.7s,baz=213,slow=13,SNR=4.7						
	0.5nm,0.7s						
WRA	**Warramunga Arr**	**63.93**	**105**	P	**P**	**03 31 15.6**	**+0.2**
	1.1nm,0.8s,baz=265,slow=5.9,SNR=6.2						
	1.1nm,0.8s						
KURBB	**Kurchatov Arra**	**66.37**	**8**	P	**P**	**03 31 30.6**	**+0.1**
	0.7nm,0.6s,baz=205,slow=6.5,SNR=4.7						
	0.7nm,0.6s						
BVAR	**Borovoye Array**	**68.06**	**2**	P	**P**	**03 31 41.0**	**-0.2**
	0.7nm,0.6s,baz=168,slow=8.9,SNR=4.3						
	0.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**70.57**	**290**	P	**P**	**03 31 58.4**	**+0.9**
	97nm,0.3s,baz=102,slow=7.0,SNR=2.1						
ZALV	**Zalesovo Beam**	**70.59**	**11**	P	**P**	**03 31 56.0**	**-0.8**
	0.4nm,0.2s,baz=128,slow=4.1,SNR=3.6						
	0.4nm,0.2s						
SONM	**Songino Array**	**71.96**	**27**	P	**P**	**03 32 06.3**	**+0.9**
	1.8nm,0.8s,baz=207,slow=6.8,SNR=10						
	1.8nm,0.8s						
AKASG	**Malin Array Be**	**73.57**	**336**	P	**P**	**03 32 13.1**	**-1.6**
	0.4nm,0.6s,baz=144,slow=5.0,SNR=4.6						
	0.4nm,0.6s						
DBIC	**Dimbokro**	**74.50**	**281**	P	**P**	**03 32 19.8**	**-1.2**
	4.7nm,0.9s,baz=157,slow=7.7,SNR=3.2						
	4.7nm,0.9s						
QSPA	**South Pole Qui**	**74.82**	**180**	P	**P**	**03 32 22.4**	**+0.3**
	1.3nm,1.1s,baz=264,slow=3.4,SNR=5.4						
	1.3nm,1.1s						
ESDC	**Sonseca Array**	**85.65**	**313**	P	**P**	**03 33 21.2**	**+0.5**
	0.8nm,0.9s,baz=108,slow=3.2,SNR=7.5						
	0.8nm,0.9s						
PDAR	**Pinedale Array**	**152.44**	**355**	PKPbc	**PKPbc**	**03 40 37.8**	**-0.8**
	0.5nm,0.6s,baz=4.1,slow=2.1,SNR=5.7						
TXAR	**Lajitas Array**	**163.59**	**330**	PKPab	**PKPab**	**03 41 37.5**	**+0.5**
	0.2nm,0.7s,baz=56,slow=6.7,SNR=3.6						

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*IDC **17** 03:30:22.1±1.1, 59°.70S×28°.63W, h0km, mb3.7/4, mbtmp3.7/5, ML3.7/1, MS3.7/3, Error ellipse: s-maj=37.6km s-min=27.0km az=54.0*
ISC 17 03:30:23.8±0.8**, 59°.7S**±0°.1×**28°.6W**±0°.2**, h10**km**, n18,** σ**0s.98**/13**, mb3.7**/4**, 5C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.77**	**151**	⇑P	**Pn**	**03 33 38.9**	**+0.2**
	comp=Z,1.8nm,0.3s						
VNA3	**Neumayer Olymp**	**13.86**	**154**	⇑P	**Pn**	**03 33 38.8**	**-1.2**
	comp=Z,1.8nm,0.6s						
VNA2	**Neumayer--Watz**	**14.17**	**151**	⇑P	**Pn**	**03 33 44.1**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=328,slow=11						
SNAA	**Sanae**	**15.79**	**150**	⇑P	**Pn**	**03 34 06.5**	**+0.7**
	comp=Z,24nm,0.5s						
SNAA	**Sanae**	**15.79**	**150**	Pn	**Pn**	**03 34 06.3**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=310,slow=16,SNR=14						
SNAA				LR	LR	03 38 50.2	
	comp=Z,47nm,19.8s,baz=288,slow=32						
	comp=Z,0.9nm,0.4s						
TROLL	**Troll, Antarti**	**17.39**	**147**	⇑P	**P**	**03 34 27.4**	**-0.2**
	comp=Z,108nm,0.6s						
QSPA	**South Pole Qui**	**30.50**	**180**	P	**P**	**03 36 37.7**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=209,slow=6.1,SNR=2.3						
	comp=Z,0.8nm,0.7s						
PLCA	**Paso Flores**	**32.15**	**287**	LR	LR	03 48 34.9	
	comp=Z,68nm,18.2s,baz=191,slow=34						
CPUP	**Villa Florida**	**38.84**	**317**	P	**P**	**03 37 49.3**	**+0.5**
	comp=Z,0.5nm,0.9s,baz=243,slow=4.5,SNR=3.1						
	comp=Z,0.5nm,0.9s						
H04S2	**CROZET ISLANDS**	**46.79**	**112**	T	T	04 29 45.0	
	baz=223,slow=75,SNR=13						
H04S3	**CROZET ISLANDS**	**46.80**	**112**	T	T	04 29 41.1	
	baz=223,slow=75,SNR=14						
H04S1	**CROZET ISLANDS**	**46.81**	**112**	T	T	04 29 46.5	
	baz=223,slow=75,SNR=13						
BOSA	**Boshof**	**47.66**	**74**	P	**P**	**03 39 00.3**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=211,slow=12,SNR=1.7						
	comp=Z,1.3nm,0.8s						
LPAZ	**La Paz**	**52.02**	**309**	P	**P**	**03 39 34.1**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=153,slow=4.5,SNR=3.0						
	comp=Z,0.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**76.63**	**30**	P	**P**	**03 42 14.7**	**+0.3**
	comp=Z,69nm,0.4s,baz=198,slow=5.5,SNR=1.7						
STKA	**Stephens Creek**	**88.36**	**172**	LR	LR	04 19 47.7	
	comp=Z,281nm,19.0s,baz=325,slow=34						
ZALV	**Zalesovo Beam**	**144.53**	**69**	PKP	**PKPdf**	**03 49 58.6**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=255,slow=2.2,SNR=3.9						
ILAR	**Eielson Array**	**151.88**	**307**	PKPbc	**PKPbc**	**03 50 14.7**	**-2.4**
	comp=Z,0.3nm,0.5s,baz=119,slow=0.4,SNR=5.7						

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*ISN **17** 03:37:02.9±1.3, 34°.35N×44°.69E, h15km±31km, ML2.9*
*TEH **17** 03:37:02.9, 34°.36N×44°.73E, h8km±23km*
ISC 17 03:37:03.8±1.6**, 34°.39N**±0°.05×**44°.67E**±0°.06**, h11**km±14km**,** **n7,** σ**0s.98**/12**, Iraq**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKRK	**Kirkuk**	**1.04**	**345**	*e*Pg	**Pb**	**03 37 22.5**	**-1.4**
	baz=165						
IKRK				*e*Sg	**Sb**	**03 37 39.0**	**+1.4**
GLG1	**Gilan-e-Gharb**	**1.06**	**105**	Pg	**Pb**	**03 37 23.3**	**-1.0**
GLG1				Sg	**Sb**	**03 37 37.4**	**-0.8**
BHD	**Baghdad**	**1.14**	**192**	*e*Pn	**Pg**	**03 37 26.0**	**+0.2**
BHD				*e*Sn	**Sn**	**03 37 42.0**	**+0.6**
IDHR	**Dehrash**	**1.45**	**77**	Pg	**Pn**	**03 37 30.2**	**0.0**
ILBA	**Ilam Banvizeh**	**1.49**	**120**	Pg	**Pb**	**03 37 30.9**	**-0.6**
ILBA				Sg	**Sg**	**03 37 51.4**	**-0.3**
IGHG	**Ghaleghazi**	**1.57**	**92**	Pg	**Pb**	**03 37 33.3**	**+0.3**
IGHG				Sg	**Sg**	**03 37 55.3**	**+0.9**
ILIN	**Lien**	**1.96**	**74**	Pn	**Pb**	**03 37 39.1**	**-0.6**

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*IDC **17** 03:41:20.5±1.0, 31°.03S×177°.53W, h0km, mb3.9/5, mbtmp3.9/5, MS3.4/4, Error ellipse: s-maj=36.5km s-min=32.2km az=23.0*
ISC 17 03:41:25.1±1.0**, 31°.3S**±0°.1×**177°.7W**±0°.2**, h26**km**, n24,** σ**1s.37**/15**, mb4.0**/5**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.13**	**210**	Pn	**Pn**	**03 43 19.6**	**-1.8**
	0.6nm,0.3s,baz=334,slow=4.0,SNR=9.8						
URZ				Sn	**Sn**	**03 44 51.8**	**-0.6**
	4.0nm,0.3s,baz=336,slow=22,SNR=12						
MSVF	**Nonsavu**	**14.08**	**343**	LR	LR	03 48 22.6	
	comp=Z,29nm,18.5s,baz=185,slow=30						
DZM	**Mont Dzumac**	**16.89**	**299**	LR	LR	03 50 39.5	
	comp=Z,177nm,19.6s,baz=198,slow=33						
PPT	**Papeete**	**28.93**	**68**	LR	LR	03 59 38.6	
	comp=Z,47nm,18.1s,baz=288,slow=38						
STKA	**Stephens Creek**	**34.54**	**258**	P	**P**	**03 48 13.9**	**+2.5**
	1.3nm,0.7s,baz=127,slow=11,SNR=2.9						
	1.3nm,0.7s						
ASAR	**Alice Springs**	**43.33**	**268**	P	**P**	**03 49 25.3**	**+0.1**
	0.8nm,0.5s,baz=104,slow=7.5,SNR=7.1						
	0.8nm,0.5s						
WRA	**Warramunga Arr**	**44.40**	**273**	P	**P**	**03 49 33.5**	**-0.3**
	1.2nm,0.4s,baz=112,slow=7.9,SNR=16						
	1.2nm,0.4s						
QSPA	**South Pole Qui**	**58.78**	**180**	P	**P**	**03 51 23.4**	**+2.6**
	1.9nm,1.0s,baz=339,slow=4.4,SNR=3.5						
	1.9nm,1.0s						
SNAA	**Sanae**	**77.22**	**178**	P	**P**	**03 53 16.5**	**+0.1**
	0.9nm,1.0s,baz=223,slow=18,SNR=1.6						
	0.9nm,1.0s						
H03S2	**Juan Fernandez**	**79.73**	**123**	T	T	05 19 19.5	
	baz=243,slow=75,SNR=21						
H03S1	**Juan Fernandez**	**79.74**	**123**	T	T	05 19 19.5	
	baz=243,slow=75,SNR=22						
H03S3	**Juan Fernandez**	**79.75**	**123**	T	T	05 19 19.5	
	baz=243,slow=75,SNR=24						
H03N3	**Juan Fernandez**	**79.93**	**123**	T	T	05 19 27.4	
	baz=243,slow=74,SNR=9.8						
H03N2	**Juan Fernandez**	**79.93**	**123**	T	T	05 19 27.4	
	baz=243,slow=74,SNR=9.2						
H03N1	**Juan Fernandez**	**79.94**	**123**	T	T	05 19 28.0	
	baz=243,slow=74,SNR=10						
JNU	**Nakatsue**	**80.42**	**318**	LR	LR	04 28 16.5	
	comp=Z,93nm,18.3s,baz=174,slow=35						
MKAR	**Makanchi Array**	**118.57**	**310**	PKP	**PKiKP**	**04 00 10.2**	**-0.2**
	0.2nm,0.6s,baz=46,slow=8.3,SNR=1.9						
KURBB	**Kurchatov Arra**	**121.92**	**313**	PKP	**PKPdf**	**04 00 16.4**	**-0.2**
	0.1nm,0.3s,baz=106,slow=1.8,SNR=1.3						
BVAR	**Borovoye Array**	**127.25**	**315**	PKP	**PKPdf**	**04 00 25.9**	**-0.8**
	0.3nm,0.3s,baz=35,slow=3.5,SNR=1.6						
FINES	**FINESS Array B**	**146.11**	**340**	PKPbc	**PKPdf**	**04 01 01.0**	**-0.1**
	2.3nm,0.7s,baz=29,slow=4.4,SNR=6.5						
HFS	**Hagfors**	**150.20**	**349**	PKPbc	**PKPbc**	**04 01 12.5**	**-0.4**
	0.8nm,0.9s,baz=32,slow=14,SNR=1.2						
MMAI	**Mount Meron Ar**	**152.00**	**282**	PKPbc	**PKPbc**	**04 01 17.7**	**-0.5**
	0.3nm,0.3s,baz=32,slow=5.8,SNR=1.3						
AKASG	**Malin Array Be**	**152.19**	**322**	PKPbc	**PKPbc**	**04 01 16.3**	**-1.5**
	0.4nm,0.6s,baz=53,slow=1.6,SNR=4.0						
BRTR	**Keskin Array B**	**153.26**	**297**	PKPbc	**PKPbc**	**04 01 19.2**	**-1.7**
	0.2nm,0.3s,baz=73,slow=2.0,SNR=2.0						

CATAC 17 03:44:14.0±0.8**, 11°N**±4°×**8°7W**±°**, h26**km±9km**, M3.3**/25**, MLv3.3**/25**, 13C-3D, Error ellipse: s-maj=9.2km s-min=5.1km az=38.8, confirmed, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUN	**El Crucero**	**1.02**	**40**	P	Pn	03 44 32.3	-0.4
COPN	**Copaltepe**	**1.04**	**21**	⇑P	Pn	03 44 32.9	-0.1
SABN	**Sabanita**	**1.09**	**46**	⇑P	Pn	03 44 32.5	-1.1
NANN	**Nandasmo**	**1.11**	**49**	⇑P	Pn	03 44 34.2	+0.4
SAPS	**Ciudad Sandino**	**1.11**	**30**	S	Sb	03 44 49.2	+0.4
SAPS	**Ciudad Sandino**	**1.11**	**30**	⇑P	Pn	03 44 33.7	-0.2
MASN	**Masaya**	**1.12**	**46**	S	Sb	03 44 49.5	+0.5
MAS3	**Al N del Volca**	**1.13**	**44**	P	Pn	03 44 34.4	+0.3
UNAN	**Cigeo UNAN**	**1.14**	**37**	⇑P	Pn	03 44 34.2	0.0
UNAN				S	Sb	03 44 49.9	+0.4
TISN	**Laguna Tiscapa**	**1.16**	**36**	⇑P	Pn	03 44 33.4	-1.2
MGAN	**Managua**	**1.18**	**37**	P	Pn	03 44 34.6	-0.2
APQ3	**Volcan Apoyequ**	**1.22**	**29**	P	Pn	03 44 35.1	-0.3
APQ3				S	Sb	03 44 51.4	-0.4
WILN	**Americas 2**	**1.23**	**39**	⇑P	Pn	03 44 34.5	-0.9
WILN				S	Sb	03 44 53.1	+1.2
MOMN	**Momotombo**	**1.27**	**19**	⇓P	Pn	03 44 35.7	-0.4
MOMN				S	Sn	03 44 52.7	+0.3
CNGA	**Al SSO del Vol**	**1.31**	**12**	⇓P	Pn	03 44 36.3	-0.3
CNGN	**Cerro Negro**	**1.32**	**12**	P	Pb	03 44 37.7	-0.4
MOM2	**El Cardon**	**1.32**	**21**	⇑P	Pn	03 44 36.2	-0.5
MORN	**Al O del Volca**	**1.34**	**75**	P	Pb	03 44 38.3	-0.2
TEL3	**Telica 3**	**1.37**	**5**	⇓P	Pn	03 44 37.3	-0.1
ILCN	**San Idelfonso**	**1.40**	**11**	P	Pn	03 44 37.7	0.0
CARN	**Rivas**	**1.42**	**90**	⇑P	Pn	03 44 38.4	+0.3
CARN				S	Sb	03 44 57.1	-0.5
POLN	**Al Sur del Vol**	**1.45**	**6**	S	Sn	03 44 56.8	+0.1
PKGN	**Cerro Pekin**	**1.46**	**360**	P	Pn	03 44 38.5	-0.1
PKGN				S	Sb	03 44 58.0	-0.7
BOAB	**BOACO BROADBAN**	**.78**	**46**	⇑P	Pn	03 44 42.5	-0.6
ACON	**Acoyapa**	**1.92**	**66**	P	Pn	03 44 45.0	+0.1
ACON	**Acoyapa**	**1.92**	**66**	S	Sn	03 45 08.6	+0.3
LIMN	**Finca el Limon**	**1.94**	**18**	⇑P	Pn	03 44 45.1	-0.3
MATN	**Matagalpa**	**2.00**	**31**	P	Pn	03 44 45.2	-1.0
CNCH	**Conchagua**	**2.23**	**338**	⇑P	Pn	03 44 50.4	+1.1
LCND	**La Caada**	**2.28**	**337**	⇑P	Pn	03 44 49.6	-0.3
RCPN	**Sur Rio San Ju**	**2.47**	**20**	P	Pn	03 44 52.0	-0.6
RCVN	**Varillal2**	**2.49**	**18**	P	Pn	03 44 53.4	+0.5

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*IDC **17** 03:45:03.0±2.1, 31°.27S×177°.71W, h0km, mb3.6/4, mbtmp3.6/4, MS3.6/1, Error ellipse: s-maj=67.2km s-min=36.8km az=45.0*
ISC 17 03:45:08.5±1.5**, 31°.3S**±0°.2×**177°.8W**±0°.2**, h35**km**, n7,** σ**1s.31**/6**, mb3.6**/4**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.10**	**210**	Sn	**Sn**	**03 48 33.5**	**-0.3**
	0.3nm,0.3s,baz=120,slow=6.9,SNR=1.2						
ASAR	**Alice Springs**	**43.24**	**268**	P	**P**	**03 53 06.8**	**+0.2**
	0.1nm,0.3s,baz=110,slow=7.5,SNR=1.3						
	0.1nm,0.3s						
WRA	**Warramunga Arr**	**44.31**	**273**	P	**P**	**03 53 15.4**	**+0.1**
	0.4nm,0.5s,baz=113,slow=7.9,SNR=3.2						
	0.4nm,0.5s						
GUMO	**Guam**	**57.25**	**315**	LR	LR	04 17 24.1	
	comp=Z,48nm,19.4s,baz=78,slow=34						
QSPA	**South Pole Qui**	**58.80**	**180**	P	**P**	**03 55 04.7**	**+1.6**
	0.8nm,1.0s,baz=117,slow=2.3,SNR=1.3						
	0.8nm,1.0s						
SNAA	**Sanae**	**77.24**	**178**	P	**P**	**03 56 57.1**	**-1.5**
	0.8nm,0.9s,baz=203,slow=15,SNR=2.2						
	0.8nm,0.9s						
FINES	**FINESS Array B**	**146.06**	**340**	PKPbc	**PKPbc**	**04 04 43.7**	**-0.2**
	1.2nm,0.8s,baz=56,slow=4.8,SNR=3.6						

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*BJI **17** 04:01:47.2, 7°.01S×129°.42E, h185km, mB4.8/20, mb4.8/69*
*DJA **17** 04:01:50.4±0.1, 7°S±1°×12°9E±°, h175km±2km, M5.1/103, mb5.3/103, mB5.6/55, MLv5.9/18, Mw(mB)5.0/55, MwMwp4.7/7, Mwp5.0/7*
*IDC **17** 04:01:50.9±0.5, 6°.76S×129°.25E, h183km±4km, mb4.5/29, mbtmp5.0/33, MS3.7/15, Error ellipse: s-maj=12.8km s-min=7.6km az=80.0*
*NEIC **17** 04:01:50.4±1.6, 6°.79S±0°.06×129°.26E±0°.04, h172km±3km, mb5.0/99, Error ellipse: s-maj=9.6km s-min=6.2km az=166.0*
*MOS **17** 04:01:51.0±0.9, 6°.76S×129°.23E, h197km, mb5.1/45, Error ellipse: s-maj=10.2km s-min=5.5km az=124.2*
*GCMT **17** 04:01:52.4±0.2, 6°.86S±0°.01×129°.32E±0°.02, h182km±2km, MW5.1/112, Moment Tensor Solution. s37,c43; s112,c163; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.48±.12; $M_{\theta\theta}$-4.46±.13; $M_{\phi\phi}$2.98±.14; $M_{r\theta}$1.02±.10; $M_{\theta\phi}$1.92±.15; $M_{\phi r}$2.57±.11; Best double couple: $M_0$5.16500×10^{16} NP1:ϕ_s323.00000°, δ63.00000°, λ156.00000°. NP2:ϕ_s64.00000°, δ69.00000°, λ29.00000°. Principal axes: T 5.3770, Plg35.0000°, Azm285.0000°; N -0.4240, Plg55.0000°, Azm97.0000°; P -4.9530, Plg4.0000°, Azm192.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 17 04:01:51.1±0.3**, 6°.89S**±0°.03×**129°.28E**±0°.04**, h189**km±2km**, h190**km**:pP-P, n543,** σ**1s.62**/594**, mb4.9**/155**, 15C-5D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.28**	**119**		**Pn**	**04 02 31.3**	**-0.6**
SAUI	**Saumlaki**	**2.28**	**119**	P	**Pn**	**04 02 31.6**	**-0.3**
SAUI	**Saumlaki**	**2.28**	**119**	P	**Pn**	**04 02 31.2**	**-0.6**
SAUI				S	**Sn**	**04 03 01.7**	**-1.9**
BNDI	**Bandanaira**	**2.43**	**15**	P	**Pn**	**04 02 33.5**	**0.0**
BNDI	**Bandanaira**	**2.43**	**15**	P	**Pn**	**04 02 32.9**	**-0.6**
AAI	**Ambon**	**3.35**	**341**	P	**Pn**	**04 02 43.9**	**-0.6**
MSAI	**Masohi**	**3.53**	**354**	P	**Pn**	**04 02 46.9**	**+0.2**
NLAI	**Namlea**	**4.22**	**329**	P	**Pn**	**04 02 56.0**	**+0.7**
FAKI	**Fak Fak**	**4.93**	**37**		**Pn**	**04 03 00.8**	**-3.6**
FAKI	**Fak Fak**	**4.93**	**37**	P	**Pn**	**04 03 00.2**	**-4.2**
KMPI	**Kaimana, Papua**	**5.45**	**54**	P	**Pn**	**04 03 08.0**	**-3.1**
SOEI	**Soe**	**5.72**	**240**	Pn	**Pn**	**04 03 14.2**	**-0.6**
SOEI	**Soe**	**5.72**	**240**	P	**Pn**	**04 03 14.6**	**-0.1**
SOEI	**Soe**	**5.72**	**240**	S	**Sn**	**04 04 19.1**	**-1.5**
SOEI	**Soe**	**5.72**	**240**	P	**Pn**	**04 03 13.4**	**-1.3**
	19nm13μm1μm,1.0s						
SANI	**Sanana**	**5.82**	**326**	P	**Pn**	**04 03 16.5**	**+0.6**
SANI	**Sanana**	**5.82**	**326**	P	**Pn**	**04 03 15.3**	**-0.6**
	276nm,0.9s						
MTN	**Manton Dam**	**6.20**	**163**	Pn	**Pn**	**04 03 19.5**	**-1.3**
MTN	**Manton Dam**	**6.20**	**163**	P	**Pn**	**04 03 19.4**	**-1.3**
	comp=Z,0.0nmcomp=Z,2μm,0.7s						

MTN	Manton Dam	6.20	163	S	Sn	04 04 26.2	-5.5
MTN	Manton Dam	6.20	163	P	Pn	04 03 19.6	-1.2
SWI	Sorong	6.30	18	P	Pn	04 03 18.2	-4.0
	comp=Z,3.9nmcomp=Z,11µmcomp=Z,516nm,0.9s						
BATI	Baumata	6.46	239	P	Pn	04 03 23.9	-0.4
	comp=Z,703nm,0.3s,baz=132,slow=2.0,SNR=93						
BATI				S	Sn	04 04 33.9	-4.1
	comp=Z,2µm,0.5s,baz=358,slow=4.9,SNR=12						
BATI	Baumata	6.46	239	P	Pn	04 03 22.3	-2.0
KDU	Kakadu	6.57	152	P	Pn	04 03 24.1	-1.5
KDU	Kakadu	6.57	152	S	Sn	04 04 34.2	-6.3
KDU	Kakadu	6.57	152	P	Pn	04 03 24.5	-1.2
BBSI	Bau Bau	6.81	281	P	Pn	04 03 29.9	+1.0
	comp=Z,4.4nmcomp=Z,13µmcomp=Z,1µm,1.1s						
MMRI	Maumere	7.19	256	Pn	Pn	04 03 34.1	+0.3
MMRI	Maumere	7.19	256	P	Pn	04 03 35.0	+1.2
MMRI	Maumere	7.19	256	P	Pn	04 03 32.9	-0.9
	comp=Z,1.5nmcomp=Z,4µmcomp=Z,395nm,0.9s						
RKPI	Ransiki, Papua	7.24	43	P	Pn	04 03 31.7	-2.7
TNTI	Ternate	7.84	346	Pn	Pn	04 03 42.0	-0.4
TNTI	Ternate	7.84	346	P	Pn	04 03 42.7	+0.3
TNTI	Ternate	7.84	346	P	Pn	04 03 41.6	-0.8
	comp=Z,2.6nmcomp=Z,7µmcomp=Z,895nm,1.0s						
SRPI	Serui, Papua	8.54	55	P	Pn	04 03 49.8	-1.7
	comp=Z,11µmcomp=Z,211nm,0.5s						
LUWI	Luwuk	8.71	312	Pn	Pn	04 03 55.8	+2.2
LUWI	Luwuk	8.71	312	P	Pn	04 03 55.3	+1.6
LUWI	Luwuk	8.71	312	P	Pn	04 03 55.4	+1.7
	comp=Z,4µmcomp=Z,272nm,1.0s						
KNRA	Kununurra	8.75	183	Pn	Pn	04 03 52.5	-1.8
KNRA	Kununurra	8.75	183	P	Pn	04 03 52.4	-1.8
	comp=Z,2µm,0.9s						
KNRA				S	Sn	04 05 24.6	-7.7
BSSI	Bau Bau, Buton	8.76	274	P	Pn	04 03 55.2	+0.8
	comp=Z,5µmcomp=Z,381nm,1.3s						
BAKI	Biak	8.85	51	P	Pn	04 03 55.0	-0.6
BASI	Baing, Sumba	9.22	248	P	Pn	04 03 58.7	-1.7
	comp=Z,7µmcomp=Z,450nm,0.8s						
WSI	Waingapu	9.31	252	P	Pn	04 03 59.4	-2.1
BNSI	Bone	9.46	285	P	Pn	04 04 04.1	+0.6
	comp=Z,2µmcomp=Z,118nm,0.8s						
APSI	Ampana	9.65	308	P	Pn	04 04 06.6	+0.6
	comp=Z,4µmcomp=Z,323nm,1.7s						
KAPI	Kappang	9.66	281	Pn	Pn	04 04 07.0	+0.8
KAPI	Kappang	9.66	281	P	Pn	04 04 06.7	+0.6
	comp=Z,118nm,1.1s,baz=107,slow=9.7,SNR=23						
KAPI	Kappang	9.66	281	P	Pn	04 04 06.5	+0.4
KAPI	Kappang	9.66	281	c iP	Pn	04 04 05.8	-0.3
WAMI	Wamena	9.85	73	P	Pn	04 04 10.2	+1.5
SPSI	Sidrap Palu	9.90	287	P	Pn	04 04 09.9	+0.6
	comp=Z,128nm,0.7s						
WBSI	Waikabubak, Su	10.16	254	P	Pn	04 04 11.0	-1.7
	comp=Z,3µmcomp=Z,255nm,0.8s						
TTSI	Tana Toraja	10.16	292	P	Pn	04 04 13.0	+0.3
	comp=Z,6µmcomp=Z,293nm,1.1s						
MRSI	Marisa	10.35	315	P	Pn	04 04 17.1	+2.0
	comp=Z,3µmcomp=Z,379nm,1.0s						
SMPI	Sarmi	10.58	63	P	Pn	04 04 16.9	-1.3
	comp=Z,163nm,1.2s						
MMPI	Merauke	11.12	99	P	Pn	04 04 23.2	-1.9
PCI	Palu	11.13	302	P	Pn	04 04 26.6	+1.3
	comp=Z,4µmcomp=Z,394nm,1.1s						
SGSI	Sangihe	11.15	340	P	Pn	04 04 24.6	-0.9
PLAI	Plampang	11.56	260	P	Pn	04 04 28.8	-1.9
PLAI	Plampang	11.56	260	P	Pn	04 04 28.2	-2.5
	comp=Z,3µmcomp=Z,174nm,0.5s						
TOLI2	Tolitoli	11.62	313	Pn	Pn	04 04 32.4	+0.9
TOLI2	Tolitoli	11.62	313	P	Pn	04 04 31.8	+0.3
TOLI2	Tolitoli	11.62	313	S	Sn	04 06 41.1	+0.2
GENI	Genyem	11.66	69	P	Pn	04 04 33.1	+1.1
GENI	Genyem	11.66	69	P	Pn	04 04 33.1	+1.1
	comp=Z,2µmcomp=Z,221nm,0.7s						
FITZ	Fitzroy Crossi	11.70	197	Pn	Pn	04 04 28.5	-4.0
FITZ	Fitzroy Crossi	11.70	197	P	Pn	04 04 29.8	-2.6
	comp=Z,286nm,0.7s,baz=20,slow=10,SNR=380						
FITZ				S	Sn	04 06 33.2	-9.5
	comp=Z,330nm,0.7s,baz=75,slow=21,SNR=6.0						
MPSI	Mapaga	11.79	307	P	Pn	04 04 35.3	+1.6
	comp=Z,58nm,0.7s						
JAY	Jayapura	12.19	70	P	Pn	04 04 38.9	+0.1
	comp=Z,69nm,0.8s,baz=179,slow=5.5,SNR=23						
JAY				S	Sn	04 06 43.8	-11
	comp=Z,24nm,0.8s,baz=184,slow=12,SNR=1.4						
JAY	Jayapura	12.19	70	P	Pn	04 04 38.1	-0.7
	comp=Z,61nm,0.8s						
TWSI	Taliwang, Sumb	12.42	261	P	Pn	04 04 39.8	-1.9
	comp=Z,2µmcomp=Z,95nm,0.9s						
BKB	Balikpapan	13.55	294	P	P	04 05 00.1	+1.4
BKB	Balikpapan	13.55	294	P	P	04 04 57.7	-1.0
BKB	Balikpapan	13.55	294	P	P	04 05 00.6	+1.9
	comp=Z,7µmcomp=Z,684nm,1.2s						
SMKI	Samarinda	13.63	297	P	P	04 05 01.0	+1.3
	comp=Z,786nm,1.1s						
WB0	Warramunga Arr	13.73	159	Pn	Pn	04 04 54.5	-3.7
WRAB	Tennant Creek	13.87	160	Pn	Pn	04 04 56.2	-3.8
WRAB	Tennant Creek	13.87	160	i P	Pn	04 04 56.6	-3.4
WRAB				pmax	pmax		
	comp=Z,483nm,1.0s						
WRA	Warramunga Arr	13.88	160	Pn	Pn	04 04 56.1	-3.9
WRA	Warramunga Arr	13.88	160	P	Pn	04 04 56.9	-3.2
	comp=Z,114nm,0.7s,baz=343,slow=13,SNR=260						
WRA				S	Sn	04 07 25.1	-10
	comp=Z,514nm,0.8s,baz=333,slow=23,SNR=9.9						
WRA	Warramunga Arr	13.88	160	P	Pn	04 04 56.1	-3.9
WR8	Warramunga Arr	13.95	159	Pn	Pn	04 04 57.1	-3.8
SRBI	Singaraja	14.00	264	P	Pn	04 05 01.3	-0.2
DNP	Denpasar	14.05	262	P	Pn	04 05 02.7	+0.5
DAV	Davao City (W)	14.35	345	P	Pn	04 05 03.4	-2.5
	comp=Z,132nm,0.3s,baz=72,slow=17,SNR=1.0						
DAV				S	Sn	04 07 42.1	-4.0
	comp=Z,252nm,0.4s,baz=220,slow=23,SNR=5.6						
ABJI	Asem Bagus	14.95	266	P	Pn	04 05 12.5	-0.8
	comp=Z,3µmcomp=Z,317nm,0.9s						
JAGI	Jajag, Banyuwa	15.07	263	Pn	Pn	04 05 12.7	-2.1
JAGI	Jajag, Banyuwa	15.07	263	P	Pn	04 05 13.9	-0.9
JAGI	Jajag, Banyuwa	15.07	263	P	Pn	04 05 13.5	-1.3
	comp=Z,3µmcomp=Z,170nm,0.8s						
KMMI	Kalianget	15.20	268	P	P	04 05 19.0	+2.0
	comp=Z,207nm,0.9s						
COEN	Coen	15.36	118	Pn	Pn	04 05 16.8	-1.6
COEN	Coen	15.36	118	P	Pn	04 05 18.3	0.0
	comp=Z,316nm,0.6s						
COEN	Coen	15.36	118	P	Pn	04 05 17.6	-0.7
GMJI	Gumukmas	15.76	264	P	P	04 05 23.3	+0.1
	comp=Z,159nm,0.9s						
MYLDM	Lahad Datu	16.10	318	P	Pn	04 05 29.1	+1.7
MYLDM	Lahad Datu	16.10	318	P	Pn	04 05 29.0	+1.7
GRJI	Gresik	16.68	269	P	Pn	04 05 34.9	+0.7
	comp=Z,6µmcomp=Z,571nm,1.4s						
QIS	Mount Isa	16.88	145	P	Pn	04 05 36.3	-0.2
	comp=Z,245nm,0.5s						
QIS	Mount Isa	16.88	145	P	Pn	04 05 36.4	-0.2
MBWA	Marble Bar	16.93	212	P	P	04 05 35.7	-0.4
MBWA	Marble Bar	16.93	212	P	P	04 05 36.2	+0.1
	comp=Z,133nm,0.9s						
MBWA	Marble Bar	16.93	212	P	P	04 05 36.5	+0.4
PSA00	Pilbara Seismi	17.21	211	P	P	04 05 39.6	+0.4
PSA00	Pilbara Seismi	17.21	211	P	P	04 05 39.8	+0.7
	comp=Z,661nm,0.8s						
PSA00	Pilbara Seismi	17.21	211	P	P	04 05 39.9	+0.7
AS31	Alice Springs	17.27	166	P	Pn	04 05 40.7	-0.5
AS31	Alice Springs	17.27	166	P	Pn	04 05 41.3	+0.1
	comp=Z,555nm,0.6s						
ASAR	Alice Springs	17.27	166	P	Pn	04 05 41.1	-0.1
ASAR	Alice Springs	17.27	166	P	Pn	04 05 42.1	+0.9
	comp=Z,1µm,0.6s,baz=337,slow=9.4,SNR=2296						
ASAR				S	S	04 08 41.2	-8.7
	comp=Z,54nm,0.9s,baz=336,slow=16,SNR=4.1						
ASAR				LR	LR	04 13 05.4	
	comp=Z,547nm,20.6s,baz=344,slow=39						
AS01	Alice Springs	17.28	165	P	Pn	04 05 41.0	-0.3
NGJI	Ngawi	17.69	267	P	Pn	04 05 46.0	-0.2
	comp=Z,153nm,0.9s						
PMG	Port Moresby	17.88	99	Pn	Pn	04 05 49.7	+1.3
PMG	Port Moresby	17.88	99	P	Pn	04 05 50.1	+1.7
	comp=Z,245nm,0.8s,baz=290,slow=5.2,SNR=44						
PMG	Port Moresby	17.88	99	P	Pn	04 05 49.5	+1.1
PMG	Port Moresby	17.88	99	P	Pn	04 05 49.8	+1.3
PMG	Port Moresby	17.88	99	P	Pn	04 05 49.7	+1.3
PCJI	Pacitan	17.99	265	P	P	04 05 47.1	-0.6
	comp=Z,291nm,1.2s						
WOJI	Wonogiri, Jawa	18.23	266	P	P	04 05 49.4	-0.9
	comp=Z,236nm,1.0s						
KKM	Kota Kinabalu	18.30	314	P	P	04 05 51.1	-0.1
KKM	Kota Kinabalu	18.30	314	P	Pn	04 05 52.3	-1.2
MTSU	Mount Surprise	18.43	129	P	Pn	04 05 54.1	-0.8
	comp=Z,79nm,0.6s						
MTSU	Mount Surprise	18.43	129	P	Pn	04 05 54.1	-0.8
MANU	Manus Island	18.66	76	P	Pn	04 05 56.4	-1.2
SMRI	Semarang	18.70	268	P	P	04 05 54.8	-0.7
SMRI	Semarang	18.70	268	P	P	04 05 55.9	+0.4
SMRI	Semarang	18.70	268	P	P	04 05 55.8	+0.3
	comp=Z,118nm,0.9s						
STKI	Sintang	19.05	291	P	P	04 06 00.6	+1.3
	comp=Z,383nm,0.9s						
KSM	Kuching	20.67	293	P	P	04 06 15.6	-1.1
KSM	Kuching	20.67	293	P	P	04 06 15.7	-0.9
TV1H	Townsville Har	21.01	128	P	P	04 06 21.5	+1.4
CTAO	Charters Tower	21.06	130	P	P	04 06 21.8	+1.1
CTAO	Charters Tower	21.06	130	P	P	04 06 22.0	+1.3
CTAO	Charters Tower	21.06	130	P	P	04 06 21.8	+1.1
GIRL	Giralia	21.34	221	P	P	04 06 24.3	+0.7
	comp=Z,266nm,2.0s						
BBJI	Bungbulang	21.47	267	P	P	04 06 23.0	-2.1
LEM	Lembang	21.51	269	P	P	04 06 25.8	+0.1
	comp=Z,212nm,0.7s,baz=61,slow=7.3,SNR=24						
LEM				S	S	04 10 07.0	-5.1
	comp=Z,15nm,0.4s,baz=3.7,slow=18,SNR=2.0						
LEM				LR	LR	04 16 30.0	
	comp=Z,180nm,20.0s,baz=5.5,slow=41						
	comp=Z,212nm,0.7s						
LEM	Lembang	21.51	269	P	P	04 06 26.1	+0.5
	comp=Z,3µmcomp=Z,277nm,0.8s						
TPI	Tanjungpandan	21.93	280	P	P	04 06 29.0	-0.7
	comp=Z,3µmcomp=Z,246nm,1.2s						
MEEK	Meekatharra	22.11	206	P	P	04 06 31.1	-0.3
	comp=Z,75nm,0.8s						
MEEK	Meekatharra	22.11	206	P	P	04 06 31.1	-0.3
CGJI	Cibinong	23.42	269	P	P	04 06 41.3	-2.1
	comp=Z,5µmcomp=Z,188nm,1.1s						
PPBI	Pangkal Pinang	23.54	280	P	P	04 06 45.6	+1.1
FORT	Forrest	23.80	183	P	P	04 06 46.9	+0.3
FORT	Forrest	23.80	183	P	P	04 06 47.6	+0.9
	comp=Z,846nm,0.8s						
FORT	Forrest	23.80	183	P	P	04 06 47.7	+1.0
QLP	Quilpie	24.22	146	P	P	04 06 51.7	+1.1
	comp=Z,232nm,0.7s						
QLP	Quilpie	24.22	146	P	P	04 06 51.6	+1.1
KASI	Kota Agung	24.67	272	P	P	04 06 52.4	-2.4
	comp=Z,66nm,0.8s						
PMBI	Palembang	24.73	278	P	P	04 06 56.9	+1.6
MDSI	Maura Dua	25.09	274	P	P	04 06 58.6	0.0
KMBL	Kambalda	25.32	195	P	P	04 07 01.1	+0.5
	comp=Z,137nm,1.0s						
KMBL	Kambalda	25.32	195	P	P	04 07 01.0	+0.5
MORW	Morawa	25.36	208	P	P	04 07 01.2	+0.3
MORW				IAmb	IAmb	04 07 46.3	
	comp=Z,92nm,1.1s						
MORW	Morawa	25.36	208	P	P	04 07 01.0	+0.1
	comp=Z,40nm,0.9s						
MORW	Morawa	25.36	208	P	P	04 07 01.5	+0.7
TPRI	Tanjung Pinang	25.89	286	P	P	04 07 07.0	+1.2
RK1H	Rockhampton Ha	26.18	131	P	P	04 07 09.5	+1.2
BLDU	Ballidu	26.39	205	P	P	04 07 10.6	+0.5
	comp=Z,38nm,1.0s						
BLDU	Ballidu	26.39	205	P	P	04 07 11.1	+1.0
BBOO	Buckleboo	26.56	167	P	P	04 07 11.9	+0.3
BBOO	Buckleboo	26.56	167	P	P	04 07 12.1	+0.5
	comp=Z,97nm,0.8s						
BBOO	Buckleboo	26.56	167	P	P	04 07 12.2	+0.6
KLBR	Kellerberrin	26.84	202	P	P	04 07 14.8	+0.7
	comp=Z,195nm,0.8s						
KLBR	Kellerberrin	26.84	202	P	P	04 07 14.9	+0.8
WHYH	Whyalla	27.14	165	P	P	04 07 17.7	+1.0
STKA	Stephens Creek	27.39	157	P	P	04 07 19.7	+0.7
STKA	Stephens Creek	27.39	157	P	P	04 07 20.0	+1.0
	comp=Z,492nm,0.8s						
STKA	Stephens Creek	27.39	157	P	P	04 07 20.1	+1.0
	comp=Z,82nm,0.7s,baz=330,slow=9.2,SNR=144						
	comp=Z,82nm,0.7s						
STKA	Stephens Creek	27.39	157	P	P	04 07 20.2	+1.1
STKA	Stephens Creek	27.39	157	i P	P	04 07 19.8	+0.7
MUN	Mundaring	27.79	204	P	P	04 07 23.4	+0.8
	comp=Z,64nm,0.8s						
MUN	Mundaring	27.79	204	P	P	04 07 23.2	+0.7
HTT	Hallett	27.89	163	P	P	04 07 24.3	+0.8
	comp=Z,16nm,1.2s						
HTT	Hallett	27.89	163	P	P	04 07 24.3	+0.8
NWAO	Narrogin (SRO)	28.23	202	P	P	04 07 27.2	+0.8
	comp=Z,32nm,0.8s,baz=22,slow=7.9,SNR=14						
NWAO				pP	pP	04 08 06.1	+1.1
	comp=Z,31nm,0.9s,baz=24,slow=10,SNR=3.4						
NWAO				LR	LR	04 19 25.3	
	comp=Z,180nm,18.4s,baz=332,slow=37						
	comp=Z,32nm,0.8s						
CMSA	Cobar Meteorol	28.93	150	P	P	04 07 34.0	+1.3
	comp=Z,80nm,1.0s						
CMSA	Cobar Meteorol	28.93	150	P	P	04 07 33.8	+1.1
BKNI	Bangkinang	29.07	283	P	P	04 07 34.7	+0.6
BKNI	Bangkinang	29.07	283	P	P	04 07 35.4	+1.3
BKNI	Bangkinang	29.07	283	P	P	04 07 35.4	+1.3
	comp=Z,75nm,0.5s						
PPI	Padang Panjang	29.51	281	P	P	04 07 38.1	+0.1
	comp=Z,1µmcomp=Z,75nm,1.3s						
MNSI	Mandailing Nat	30.60	283	P	P	04 07 47.8	+0.2
KULM	Kulim	31.03	292	P	P	04 07 51.5	+0.2
KULM				IAmb	IAmb	04 07 53.9	
	comp=Z,50nm,1.1s						
KULM	Kulim	31.03	292	P	P	04 07 52.3	+0.9
TPUB	Ta-pu	31.17	345		P	04 07 51.2	-1.3
ARMA	Armidale	31.43	141	P	P	04 07 56.7	+1.8
ARMA				IAmb	IAmb	04 07 58.0	
	comp=Z,24nm,1.0s						
ARMA	Armidale	31.43	141	P	P	04 07 56.4	+1.5
	comp=Z,25nm,1.4s						
ARMA	Armidale	31.43	141	P	P	04 07 56.8	+1.9
RPSI	Rantau Prapat	31.76	286	P	P	04 07 57.0	-0.8
PSI	Prapat	31.79	287	P	P	04 07 56.9	-1.3
PSI	Prapat	31.79	287	P	P	04 07 57.0	-1.3
PSI				pmax	pmax		
	comp=Z,57nm,0.8s						
ARPS	Mount Arapiles	31.88	161	P	P	04 08 00.2	+1.6
	comp=Z,465nm,0.6s						
ARPS	Mount Arapiles	31.88	161	P	P	04 07 59.9	+1.3
QIZ	Qiongzhong	32.09	324	P	P	04 08 00.4	-0.2
QIZ				S	S	04 13 04.3	+5.3
QIZ				sS	ScP	04 14 11.4	+0.1
QIZ				pmax	pmax		
	comp=Z,25nm,1.5s						
YHNB	Yeheng	32.30	346	P	P	04 08 01.0	-1.4
YHNB				IAmb	IAmb	04 08 02.4	
	comp=Z,23nm,0.8s						
MGBR	Mount Gambier	32.37	163	P	P	04 08 04.7	+1.9
YNG	Young	32.49	150	P	P	04 08 05.9	+1.9
	comp=Z,123nm,1.0s						
GSI	Gunungsitoli	32.67	283	P	P	04 08 05.9	+0.2
GSI					PcP	04 10 49.0	+1.8
GSI	Gunungsitoli	32.67	283	P	P	04 08 05.8	+0.1
GSI	Gunungsitoli	32.67	283	P	P	04 08 05.6	-0.1
	comp=Z,161nm,1.0s						
SRIT	Nakonsritamara	33.34	297	P	P	04 08 11.7	+0.1
SRIT				IAmb	IAmb	04 08 12.8	
	comp=Z,53nm,0.8s						
SRIT	Nakonsritamara	33.34	297	P	P	04 08 12.2	+0.7
JOW	Kunigami	33.53	358	P	P	04 08 12.3	-0.7
JOW				IAmb	IAmb	04 08 31.7	
	comp=Z,43nm,1.0s						
JOW	Kunigami	33.53	358	LR	LR	04 20 36.6	
	comp=Z,69nm,21.0s,baz=138,slow=34						
JOW	Kunigami	33.53	358	P	P	04 08 13.8	+0.8
CAN	Canberra	33.61	150	P	P	04 08 14.8	+1.1
CAN	Canberra	33.61	150	P	P	04 08 15.8	+2.2
	comp=Z,118nm,0.9s						
CAN	Canberra	33.61	150	P	P	04 08 15.3	+1.6
CAN	Canberra	33.61	150	P	P	04 08 14.8	+1.1
CAN				pmax	pmax		
	comp=Z,80nm,0.8s						
CAN	Canberra	33.61	150	P	P	04 08 16.1	+2.5
CNB	Canberra Magne	33.78	150	P	P	04 08 17.1	+1.9
	comp=Z,62nm,1.4s						
CNB	Canberra Magne	33.78	150	P	P	04 08 17.2	+2.0
TOO	Toolangi	33.92	157	P	P	04 08 17.6	+1.3
TOO				IAmb	IAmb	04 08 20.0	
	comp=Z,36nm,1.4s						
TOO	Toolangi	33.92	157	P	P	04 08 18.7	+2.4
	comp=Z,21nm,1.2s						
TOO	Toolangi	33.92	157	P	P	04 08 17.6	+1.3
TOO				pmax	pmax		
	comp=Z,36nm,1.4s						
LHMI	Lhok Sumawe	34.44	290	P	P	04 08 20.3	-0.7
MLSI	Meulaboh, Aceh	34.63	288	P	P	04 08 20.8	-1.9
	comp=Z,154nm,0.9s						
MILA	Mila	35.07	152	P	P	04 08 28.3	+2.1
	comp=Z,13nm,1.2s						
SLVN	Son La	37.51	319	P	P	04 08 46.8	-0.2
SLVN				IAmb	IAmb	04 08 48.5	
	comp=Z,25nm,0.9s						
SLVN	Son La	37.51	319	P	P	04 08 47.4	+0.4
CORO	Coronation Par	37.92	158	P	P	04 08 51.9	+1.8
SANVU	Saraoutou	38.11	106	P	P	04 08 53.9	+1.8
SANVU				pP	pwP	04 09 36.7	+2.4
NOUC	Port Laguerre	38.77	117	P	P	04 08 58.7	+1.1
NOUC				pP	pwP	04 09 41.1	+0.7
MOO	Moorlands	38.80	159	P	P	04 08 59.2	+1.7
	comp=Z,45nm,1.0s						
DZM	Mont Dzumac	38.88	117	eS	S	04 14 40.7	-2.1
	comp=Z,70nm,32.5s						
DZM				eSS	SS	04 17 30.0	-13
	comp=Z,134nm,28.2s						
DZM				eLR	LR	04 19 53.3	
	comp=Z,203nm,29.2s						
DZM	Mont Dzumac	38.88	117	P	P	04 09 00.0	+1.4
DZM				pP	pwP	04 09 42.2	+0.6
CM31	Chiang Mai Arr	39.11	311	P	P	04 09 00.5	+0.1
CMAR	Chiang Mai Arr	39.11	311	P	P	04 09 00.2	-0.2
CMAR	Chiang Mai Arr	39.11	311	P	P	04 09 00.8	+0.4
	comp=Z,37nm,0.8s,baz=142,slow=7.4,SNR=131						
CMAR				PcP	PcP	04 11 08.0	+1.7
	comp=Z,7.2nm,0.8s,baz=162,slow=2.7,SNR=8.9						
CMAR				ScP	ScP	04 14 38.9	+1.9
	comp=Z,5.6nm,0.8s,baz=162,slow=3.3,SNR=15						
	comp=Z,37nm,0.8s						
CMAR	Chiang Mai Arr	39.11	311	ceP	P	04 09 00.8	+0.4
CMAR				pmax	pmax		
	comp=Z,40nm,0.8s						
CHTO	Chiang Mai	39.33	311	P	P	04 09 02.0	-0.2
CHTO	Chiang Mai	39.33	311	P	P	04 09 02.4	+0.2
CHTO	Chiang Mai	39.33	311	P	P	04 09 02.0	-0.2
CHTO				pmax	pmax		
	comp=Z,93nm,0.9s						
CHTO	Chiang Mai	39.33	311	P	P	04 09 02.4	+0.2
WHN	Wuhan	39.87	340	⇓P	P	04 09 07.3	+0.8
WHN				S	S	04 14 54.8	-2.2
WHN				pmax	pmax		
	comp=Z,260nm,1.4s						
NJ2	Nanjing	39.98	346	⇑P	P	04 09 07.6	+0.3
NJ2				ScP	ScP	04 14 41.3	+1.3
NJ2				pmax	pmax		
	comp=Z,24nm,0.6s						
KMI	Kunming	40.98	322	P	P	04 09 16.8	+0.8
KMI				pmax	pmax		
	comp=Z,35nm,1.2s						
ENH	Enshi	41.54	334	P	P	04 09 18.7	-1.5
ENH	Enshi	41.54	334	P	P	04 09 20.1	-0.1
PZH	PanZhiHua	42.60	322	P	P	04 09 28.3	-0.7
PZH				pmax	pmax		
	comp=Z,20nm,1.0s						
TNCH	TengChong	43.62	318	P	P	04 09 37.3	+0.1
TNCH				S	S	04 15 51.9	-0.8
TNCH				pmax	pmax		
	comp=Z,47nm,1.2s						
TNCH				LR	LR		
	comp=Z,200nm,18.2s						
MJAR	Matsushiro Arr	44.00	10	P	P	04 09 38.4	-1.5
	comp=Z,4.1nm,0.7s,baz=189,slow=8.8,SNR=5.5						
	comp=Z,4.1nm,0.7s						
KSAR	Wonju Array Be	44.12	358	P	P	04 09 41.1	+0.5
KSAR					PcP	04 11 23.4	+1.0
KSAR	Wonju Array Be	44.12	358	P	P	04 09 41.2	+0.5
KSAR						04 11 23.4	
KSRS	Korea Array	44.13	358	P	P	04 09 40.7	-0.1
	comp=Z,2.5nm,0.8s,baz=173,slow=9.0,SNR=9.7						
KSRS				pP	pP	04 10 20.1	-0.3
	comp=Z,2.9nm,0.9s,baz=178,slow=9.1,SNR=2.5						
KSRS				ScP	ScP	04 14 57.2	+0.7
	comp=Z,1.0nm,0.4s,baz=197,slow=4.0,SNR=4.9						
	comp=Z,2.5nm,0.8s						
LYN	LuoYang	44.17	340	P	P	04 09 40.9	-0.3
LYN				pmax	pmax		
	comp=Z,24nm,1.1s						
TIA	Tai'an	44.36	346	P	P	04 09 41.8	-0.9
TIA				pmax	pmax		
	comp=Z,13nm,0.7s						
CD2	Chengdu	44.83	328	P	P	04 09 47.3	+0.8
CD2				pmax	pmax		
	comp=Z,30nm,0.1s						
XAN	Xi'an	45.04	336	⇓P	P	04 09 47.1	-1.0
XAN				pP	pwP	04 10 31.4	-3.0
XAN				PcP	PcP	04 11 26.6	+0.8
XAN				ScP	ScP	04 15 01.9	+1.5
XAN				S	S	04 16 11.8	-0.8
XAN				pmax	pmax		
	comp=Z,47nm,0.9s						
XAN				pmax	pmax		
	comp=Z,240nm,5.2s						
XAN	Xi'an	45.04	336	P	P	04 09 46.9	-1.3
XAN				pP	pP	04 10 30.9	+3.1
XAN				PcP	PcP	04 11 26.3	+0.6
XAN				ScP	ScP	04 15 01.8	+1.4
HNS	HongShan	46.11	344	⇑P	P	04 09 56.0	-0.4
HNS				pP	pwP	04 10 41.3	-1.1
HNS				PcP	PcP	04 11 30.1	+0.8
HNS				ScP	ScP	04 15 06.3	+1.6
HNS				S	S	04 16 34.3	+6.6
HNS				pmax	pmax		
	comp=Z,35nm,0.7s						
TIY	Taiyuan	47.07	342	P	P	04 10 03.8	-0.2
TIY				S	S	04 16 39.4	-2.1
TIY				pmax	pmax		
	comp=Z,32nm,0.6s						
BJT	Baijiatuau	48.21	346	IAmb	IAmb	04 10 13.2	
	comp=Z,25nm,0.7s						
BJT	Baijiatuau	48.21	346	P	P	04 10 12.6	0.0
BJT	Baijiatuau	48.21	346	P	P	04 10 12.3	-0.4
BJT				PcP	PcP	04 11 37.3	+0.5
BJI	Beijing	48.23	347	P	P	04 10 12.4	-0.3
BJI				pmax	pmax		
	comp=Z,17nm,0.7s						
BJI				pmax	pmax		
	comp=Z,59nm,5.2s						
LZH	Lanzhou	48.97	333	eP	P	04 10 18.9	+0.2
LZH				PcP	PcP	04 11 41.4	+1.5
LZH				ScP	ScP	04 15 19.8	+2.7
LZH				pmax	pmax		
	comp=Z,38nm,1.2s						
LZH				LR	LR		
	comp=Z,190nm,13.4s						
LZH				LR	LR		
	comp=Z,230nm,13.4s						
LZH				LR	LR		
	comp=Z,150nm,14.8s						
HHC	Hu-ho-hao-te	50.22	343	⇓iP	P	04 10 28.6	+0.7
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,55nm,5.3s						
PALK	Pallekele	50.45	285	LR	LR	04 33 07.5	
	comp=Z,76nm,18.8s,baz=106,slow=37						
PALK	Pallekele	50.45	285	P	P	04 10 30.7	+0.5
PALK				PcP	PcP	04 11 47.2	+1.5
DCZ	Deep Cove	50.49	146	P	P	04 10 31.4	+1.5
DCZ				IAmb	IAmb	04 10 38.6	
	comp=Z,101nm,1.6s						
CN2	Changchun	50.57	356	P	P	04 10 30.9	+0.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USRK	Ussuriysk Ar.	50.91	3	P	P	04 10 32.2	-0.7
	comp=Z,4.6nm,0.7s,baz=190,slow=7.5,SNR=9.0						
USRK				pP	pP	04 11 11.4	-2.3
	comp=Z,2.8nm,0.7s,baz=198,slow=7.9,SNR=1.9						
	comp=Z,4.6nm,0.7s						
FOZ	Fox Glacier	50.91	142	P	P	04 10 34.4	+1.4
FOZ				IAmb	IAmb	04 11 01.5	
	comp=Z,98nm,1.3s						
MLZ	Mavora Lakes	50.98	145	P	P	04 10 35.2	+1.7
MLZ				IAmb	IAmb	04 10 50.4	
	comp=Z,103nm,1.5s						
WHZ	Wether Hill Ro	51.20	146	P	P	04 10 36.1	+0.9
WHZ				IAmb	IAmb	04 11 37.6	
	comp=Z,131nm,1.6s						
LSA	Lhasa	51.62	317	IAmb	IAmb	04 10 40.8	
	comp=Z,31nm,0.7s						
LSA	Lhasa	51.62	317	P	P	04 10 39.9	+0.8
LSA	Lhasa	51.62	317	P	P	04 10 39.7	+0.6
RPZ	Rata Peaks	51.76	142	P	P	04 10 41.3	+1.9

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XLT   XiLinHaoTe       51.94 348 eP     P       04 10 40.8 +0.1
XLT                              pmax   pmax
      comp=Z,18nm,0.8s
ASAJ  Asahikawa        52.17  12  P     P       04 10 42.6 +0.3
ASAJ                             pmax   pmax
      comp=Z,320nm,2.0s
JKA   Kamikawa-asahi   52.17  12  P     P       04 10 42.6 +0.3
BNX   BinXian          52.41 358 ⇓P     P       04 10 45.4 +1.4
BNX                              pmax   pmax
      comp=Z,4.0nm,0.8s
TUWZ  Tuamarina        52.45 138  P     P       04 10 45.5 +1.1
BKZ   Black Stump Fm   53.19 135  P     P       04 10 50.3 +0.3
BKZ                              IAmb   IAmb    04 12 17.9
      comp=Z,111nm,1.9s
GTA   Gaotai           53.53 332  P     P       04 10 53.3 +0.8
GTA                              sP     sP      04 11 50.9 -2.9
GTA                              PcP    PcP     04 11 58.6 +1.8
GTA                              ScP    ScP     04 15 38.6 +1.9
GTA                              pmax   pmax
      comp=Z,25nm,1.2s
GTA                              LR     LR
      comp=Z,180nm,14.2s
GTA                              LR     LR
      comp=Z,140nm,13.5s
GTA                              LR     LR
      comp=Z,110nm,17.5s
EVN   Everest          53.67 312  P     P       04 10 54.3 -0.1
HYB   Hyderabad        55.62 296 eP     P       04 11 08.5 +0.7
KLR   Kul'dur          55.92   2ceP     P       04 11 07.0 -2.3
KLR                              pmax   pmax
      comp=Z,6.0nm,0.9s
HEH   HeiHe            56.93 359 eP     P       04 11 16.3 -0.1
HEH                              pmax   pmax
      comp=Z,18nm,0.9s
ULN   Ulaanbaatar      57.94 343  P     P       04 11 23.7  0.0
ULN   Ulaanbaatar      57.94 343 i P    P       04 11 23.0 -0.7
ULN                              pmax   pmax
      comp=Z,14nm,0.8s
ULN   Ulaanbaatar      57.94 343  P     P       04 11 24.3 +0.6
ULN                              PcP    PcP     04 12 13.7  0.0
ULN                              ScP    ScP     04 15 57.1 +1.2
SONM  Songino Array    58.11 342  P     P       04 11 25.4 +0.5
SONM  Songino Array    58.11 342  P     P       04 11 25.3 +0.5
      comp=Z,8.8nm,0.7s,baz=155,slow=5.9,SNR=49
SONM                             pP     pP      04 12 05.9 -0.8
      comp=Z,2.0nm,0.6s,baz=163,slow=10,SNR=1.7
SONM                             PcP    PcP     04 12 14.4  0.0
      comp=Z,6.8nm,0.9s,baz=166,slow=3.1,SNR=4.0
SONM                             ScP    ScP     04 15 57.7 +1.1
      comp=Z,2.7nm,0.9s,baz=174,slow=4.5,SNR=6.3
SONM                             S      S       04 19 08.8 -2.3
      comp=Z,0.3nm,0.4s,baz=134,slow=4.2,SNR=1.4
SONM                             LR     LR      04 38 32.7
      comp=Z,74nm,19.1s,baz=142,slow=38
      comp=Z,8.8nm,0.7s
DRV   Dumont d'Urvil   60.14 175  P     P       04 11 39.5 +1.2
DRV                              pP     PcP     04 12 24.8 +2.8
DRV                              sP     sP      04 12 45.8 +3.9
ZEA   Zeya             60.42 359 eP     P       04 11 40.7 +0.3
ZEA                              pmax   pmax
      comp=Z,20nm,0.9s
CASY  Casey            60.71 189  P     P       04 11 43.5 +1.3
CASY  Casey            60.71 189  P     P       04 11 43.2 +1.0
CASY                             PcP    pP      04 12 25.3 +0.4
CASY                             pP     pwP     04 12 29.6 +1.1
CASY                             sP     sP      04 12 51.3 +6.0
ZAK   Zakamensk        61.32 341 eP     P       04 11 46.3 -0.4
ZAK                              e              04 12 26.9
ZAK                              pmax   pmax
      comp=Z,7.0nm,1.3s
ZAK                              pmax   pmax
      comp=Z,6.0nm,1.1s
WMQ   Urumqi           62.91 327 eP     P       04 11 58.3 +0.9
WMQ                              pmax   pmax
      comp=Z,49nm,1.1s
WMQ                              pmax   pmax
      comp=Z,140nm,3.7s
MOY   Mondy            63.17 341 eP     P       04 11 59.4 +0.4
MOY                              pmax   pmax
      comp=Z,36nm,1.9s
PETK  Petropavlovsk-   64.44  19  P     P       04 12 05.5 -1.6
PETK  Petropavlovsk-   64.44  19  P     P       04 12 07.8 +0.7
      comp=Z,4.1nm,0.8s,baz=186,slow=4.6,SNR=8.4
      comp=Z,4.1nm,0.8s
NIL   Nilore           66.60 311  P     P       04 12 20.8 -0.6
NIL                              IAmb   IAmb    04 12 23.6
      comp=Z,24nm,0.8s
NIL   Nilore           66.60 311  P     P       04 12 20.8 -0.6
NIL                              pmax   pmax
      comp=Z,24nm,0.8s
ZSN   Zaisan           66.80 329 eP     P       04 12 22.5 +0.1
ZSN   Zaisan           66.80 329 eP     P       04 12 22.5 +0.1
SHLS  Shalkode         67.19 323 eP     P       04 12 23.7 -1.3
SHLS                             pmax   pmax
      comp=Z,7.0nm,0.8s
SHLS  Shalkode         67.19 323 eP     P       04 12 23.7 -1.3
      comp=Z,7.3nm,0.8s
KSH   Kashi            67.45 318  P     P       04 12 27.4 +0.6
KSH                              PcP    PcP     04 12 54.6 +1.8
KSH                              pP     pP      04 13 10.8 +1.1
KSH                              pmax   pmax
      comp=Z,21nm,0.9s
KSH                              pmax   pmax
      comp=Z,170nm,4.4s
UZB   Uzynbulak        67.45 322 eP     P       04 12 26.9 +0.2
UZB                              pmax   pmax
      comp=Z,16nm,1.6s
UZB   Uzynbulak        67.45 322 eP     P       04 12 27.0 +0.2
      comp=Z,16nm,1.6s
MK31  Makanchi Array   67.74 327ceP     P       04 12 28.5 +0.2
MKAR  Makanchi Array   67.74 327  P     P       04 12 28.4 +0.1
MKAR  Makanchi Array   67.74 327  P     P       04 12 28.6 +0.3
      comp=Z,16nm,0.7s,baz=130,slow=7.7,SNR=163
MKAR                             pP     pP      04 13 11.5 +0.2
      comp=Z,3.5nm,0.7s,baz=126,slow=8.1,SNR=1.1
MKAR                             S      S       04 21 05.4 -5.2
      comp=Z,0.1nm,0.4s,baz=133,slow=6.1,SNR=1.7
      comp=Z,16nm,0.7s
SATY  Saty             67.78 322 eP     P       04 12 29.0 +0.3
SATY                             pmax   pmax
      comp=Z,23nm,1.6s
SATY  Saty             67.78 322 eP     P       04 12 29.1 +0.3
      comp=Z,23nm,1.6s
KPKS  Kokpek           67.83 323 eP     P       04 12 29.3 +0.3
KPKS  Kokpek           67.83 323 eP     P       04 12 29.3 +0.3
MAKZ  Makanchi         67.92 327  P     P       04 12 29.5 +0.1
MAKZ                             IAmb   IAmb    04 12 31.8
      comp=Z,14nm,0.8s
MAKZ  Makanchi         67.92 327  P     P       04 12 29.5 +0.1
MAKZ                             pmax   pmax
      comp=Z,14nm,0.9s
MAKZ  Makanchi         67.92 327  P     P       04 12 29.5 +0.1
MAKZ                             PcP    PcP     04 12 54.1 -0.3
KDJ   Kajisay          68.03 321  P     P       04 12 30.3 -0.1
KDJ   Kajisay          68.03 321  P     P       04 12 30.3 -0.1
KDJ                              pmax   pmax
      comp=Z,10.0nm,1.0s
CCD   Concordia, Ant   68.26 182  P     P       04 12 33.1 +1.6
CCD                              PcP    PcP     04 12 57.2 +1.4
NRN   Naryn            68.41 320  P     P       04 12 32.4 -0.6
NRN   Naryn            68.41 320  P     P       04 12 32.4 -0.6
NRN                              pmax   pmax
      comp=Z,7.0nm,1.0s
MA2   Magadan          68.43  12  LR    LR      04 41 46.3
      comp=Z,30nm,21.2s,baz=344,slow=35
MDOK  Medeo            68.67 322 eP     P       04 12 34.6 +0.3
MDOK  Medeo            68.67 322 eP     P       04 12 34.7 +0.3
YAK   Yakutsk          68.71   0  P     P       04 12 33.4 -0.4
YAK   Yakutsk          68.71   0 eP     P       04 12 33.5 -0.4
YAK                              e*PP   pP      04 13 17.3 +0.1
YAK                              ePPP   PPP     04 16 48.7
YAK                              eS     S       04 21 21.0 -0.4
YAK                              eSS    SS      04 25 54.0 +3.7
YAK                              pmax   pmax
      comp=Z,47nm,0.9s
YAK                              pmax   pmax
      comp=N,13nm,1.3s
YAK                              pmax   pmax
      comp=E,3.0nm,0.9s
YAK                              smax   smax
      comp=N,58nm,1.8s
YAK                              smax   smax
      comp=E,116nm,1.8s
ARXS  Arharly          68.77 323 eP     P       04 12 34.2 -0.6
AAA   Alma-Ata         68.77 322 eP     P       04 12 35.2 +0.4
AAA   Alma-Ata         68.77 322 eP     P       04 12 35.2 +0.4
TDK   Taldyqorghan     68.86 324 eP     P       04 12 35.6 +0.3
TDK                              pmax   pmax
      comp=Z,5.0nm,0.4s
TDK   Taldyqorghan     68.86 324 eP     P       04 12 35.6 +0.3
      comp=Z,5.1nm,0.4s
BOOM  Boomskoye usch   69.00 321  P     P       04 12 36.5 +0.1
BOOM                             IAmb   IAmb    04 12 39.3
      comp=Z,29nm,1.3s
BOOM  Boomskoye usch   69.00 321  P     P       04 12 36.5 +0.1
BOOM                             pmax   pmax
      comp=Z,29nm,1.3s
TKM2  Tokmak 2         69.44 321  P     P       04 12 39.7 +0.6
      SNR=13
KUU   Kurty            69.49 322 eP     P       04 12 39.6 +0.4
KUU                              pmax   pmax
      comp=Z,24nm,1.1s
KUU   Kurty            69.49 322 eP     P       04 12 39.7 +0.4
      comp=Z,24nm,1.1s
AAK   Ala-Archa        69.99 320  P     P       04 12 43.4 +0.9
      SNR=12
AAK   Ala-Archa        69.99 320  P     P       04 12 42.8 +0.3
AAK                              IAmb   IAmb    04 12 45.6
      comp=Z,24nm,1.1s
AAK   Ala-Archa        69.99 320  P     P       04 12 43.0 +0.5
      comp=Z,16nm,0.9s,baz=116,slow=3.7,SNR=20
      comp=Z,16nm,0.9s
AAK   Ala-Archa        69.99 320ceP     P       04 12 43.2 +0.7
AAK                              pmax   pmax
      comp=Z,17nm,1.0s
AAK   Ala-Archa        69.99 320 i P    P       04 12 43.2 +0.7
      SNR=13
AAK   Ala-Archa        69.99 320  P     P       04 12 43.3 +0.9
AAK                              PcP    PcP     04 13 03.3 -0.2
KBL   Kabul            70.14 310  P     P       04 12 42.9 -0.7
KBL   Kabul            70.14 310  P     P       04 12 42.9 -0.7
KBL                              pmax   pmax
      comp=Z,53nm,0.7s
AML   Almayashu        70.25 319  P     P       04 12 45.7 +1.3
      SNR=12
DRK   Karamyk          70.26 316  P     P       04 12 44.8 +0.5
DRK   Karamyk          70.26 316  P     P       04 12 44.8 +0.5
DRK                              pmax   pmax
      comp=Z,55nm,0.3s
USP   Ospenovka        70.31 321  P     P       04 12 44.8 +0.6
      SNR=20
SGDS  Sogindy          70.32 321 eP     P       04 12 44.6 +0.3
ARSB  Arslanbob        70.33 318  P     P       04 12 44.8 +0.3
ARSB                             IAmb   IAmb    04 12 47.4
      comp=Z,78nm,1.4s
ARSB  Arslanbob        70.33 318  P     P       04 12 44.8 +0.3
ARSB                             pmax   pmax
      comp=Z,78nm,1.4s
EKS2  Erkin-Say        70.46 320  P     P       04 12 46.3 +1.0
      SNR=19
SHEM  Shemya Is, Ala   70.50  27  LR    LR      04 38 46.3
      comp=Z,47nm,21.0s,baz=330,slow=32
GAR   Garm             71.08 315  P     P       04 12 48.8 -0.3
ZAA0  Zalesovo Array   71.17 334  P     P       04 12 47.9 -1.1
ZAA0                             IAmb   IAmb    04 12 50.5
      comp=Z,24nm,0.8s
ZALV  Zalesovo Beam    71.17 334  P     P       04 12 48.3 -0.8
ZALV  Zalesovo Beam    71.17 334  P     P       04 12 48.5 -0.6
      comp=Z,25nm,0.7s,baz=113,slow=3.9,SNR=59
ZALV                             S      S       04 21 45.1 -5.2
      comp=Z,0.4nm,0.3s,baz=100,slow=25,SNR=1.5
      comp=Z,25nm,0.7s
BTK   Batken           71.20 316  P     P       04 12 49.7  0.0
BTK                              IAmb   IAmb    04 15 05.5
      comp=Z,44nm,0.9s
BTK   Batken           71.20 316  P     P       04 12 49.7  0.0
BTK                              pmax   pmax
      comp=Z,44nm,1.0s
BTLS  Baital           71.49 322 eP     P       04 12 51.3 +0.1
BTLS                             pmax   pmax
      comp=Z,12nm,1.3s
BTLS  Baital           71.49 322 eP     P       04 12 51.4 +0.1
      comp=Z,12nm,1.3s
SEY   Seymchan         71.83  11  LR    LR      04 43 54.1
      comp=Z,23nm,21.0s,baz=102,slow=35
SEY   Seymchan         71.83  11ceP     P       04 12 53.0 +0.2
SEY                              pmax   pmax
      comp=Z,20nm,0.9s
SIMJ  Simiganj         71.86 314  P     P       04 12 52.8 -0.9
SIMJ  Simiganj         71.86 314  P     P       04 12 53.7  0.0
KURBB Kurchatov Arra   72.04 329  P     P       04 12 54.5 +0.1
      comp=Z,37nm,0.8s,baz=128,slow=4.9,SNR=151
KURBB                            pP     pP      04 13 38.3 +0.5
      comp=Z,6.6nm,0.9s,baz=128,slow=5.1,SNR=1.7
KURBB                            S      S       04 21 57.2 -3.3
      comp=Z,0.4nm,0.2s,baz=108,slow=17,SNR=4.8
      comp=Z,37nm,0.8s
KURK  Kurchatov        72.05 329  P     P       04 12 54.1 -0.3
KURK                             IAmb   IAmb    04 12 56.4
      comp=Z,44nm,0.8s
KURK  Kurchatov        72.05 329ceP     P       04 12 54.4  0.0
KURK                             pmax   pmax
      comp=Z,42nm,0.8s
KURK  Kurchatov        72.05 329  P     P       04 12 54.5 +0.2
KURK                             pP     pwP     04 13 41.6 -2.7
VNDA  Vanda            72.65 173  P     P       04 12 57.8 +0.3
VNDA  Vanda            72.65 173  P     P       04 12 58.6 +1.0
      comp=Z,3.3nm,0.5s,baz=319,slow=7.0,SNR=11
VNDA                             pP     pP      04 13 43.1 +1.1
      comp=Z,2.6nm,0.8s,baz=319,slow=2.6,SNR=2.3
VNDA                             LR     LR      04 45 15.6
      comp=Z,110nm,18.7s,baz=314,slow=36
      comp=Z,3.3nm,0.5s
IUG   Iuzhnay          72.67 318 eP     P       04 12 58.7 +0.3
IUG                              pmax   pmax
      comp=Z,20nm,0.8s
IUG   Iuzhnay          72.67 318 eP     P       04 12 58.7 +0.3
      comp=Z,20nm,0.8s
KK31  Karatay Array    72.78 319  P     P       04 12 58.7 -0.3
KK31  Karatay Array    72.78 319 i P    P       04 12 58.9 -0.1
KKAR  Karatay Array    72.78 319  P     P       04 12 58.6 -0.4
KKAR  Karatay Array    72.78 319  P     P       04 12 58.6 -0.4
CHM   Chimkent         73.03 318 eP     P       04 13 00.9 +0.5
CHM                              pmax   pmax
      comp=Z,15nm,0.8s
CHM   Chimkent         73.03 318 eP     P       04 13 01.0 +0.5
      comp=Z,15nm,0.8s
BRLS  Borolday         73.19 319 eP     P       04 13 01.7 +0.3
BRLS                             pmax   pmax
      comp=Z,11nm,0.8s
BRLS  Borolday         73.19 319 eP     P       04 13 01.7 +0.3
      comp=Z,11nm,0.8s
MAW   Mawson           74.80 201  P     P       04 13 11.5 +1.3
MAW   Mawson           74.80 201  P     P       04 13 12.1 +1.9
      comp=Z,5.3nm,0.9s,baz=68,slow=4.0,SNR=11
      comp=Z,5.3nm,0.9s
BRZS  Berezniki        74.82 326 eP     P       04 13 10.8 +0.2
BRZS  Berezniki        74.82 326 eP     P       04 13 10.9 +0.2
HRA   Herat            75.32 308  IAmb  IAmb    04 13 17.1
      comp=Z,27nm,0.9s
SOHO  SOHO             77.25 297 i P    P       04 13 25.1 +0.2
      SNR=9.9
BVA0  Borovoye Array   77.59 328 i P    P       04 13 25.8 -0.3
BVAR  Borovoye Array   77.59 328  P     P       04 13 26.1  0.0
      comp=Z,21nm,0.9s,baz=134,slow=6.4,SNR=56
      comp=Z,21nm,0.9s
BRVK  Borovoye         77.66 328  P     P       04 13 25.9 -0.6
BRVK                             IAmb   IAmb    04 13 28.6
      comp=Z,16nm,0.8s
BRVK  Borovoye         77.66 328ceP     P       04 13 26.5  0.0
BRVK                             pmax   pmax
      comp=Z,26nm,1.2s
UOSS  Minazif          77.73 297  P     P       04 13 29.0 +1.4
HATD  Hatta, Dubai     77.77 297  P     P       04 13 28.3 +0.5
ASHO  Ashiyiah         77.80 297 i P    P       04 13 28.6 +0.6
      SNR=6.1
MSFE  Esma-Masafi      77.87 298 i P    P       04 13 29.5 +1.1
      SNR=7.5
BANOM Banah            77.88 298 i P    P       04 13 29.1 +0.7
      SNR=6.1
SHME  Shamm            78.05 298 i P    P       04 13 30.1 +0.8
      SNR=11
FAQ   Al Faqa, Dubai   78.23 297 i P    P       04 13 30.7 +0.4
      SNR=6.1
HPO   Honuapo          78.37  69  P     P       04 13 29.4 -1.8
ASUD  Al Ashush, Dub   78.43 297  P     P       04 13 32.2 +0.8
TBI   Tubuai           79.31 112 eLR    LR      04 38 32.5
      comp=Z,641nm,36.0s
MZR   Muzera           79.74 295  P     P       04 13 39.5 +1.0
VOI   Vohitsoka        80.52 249  P     P       04 13 43.0 +0.1
VOI                              IAmb   IAmb    04 13 44.3
      comp=Z,18nm,0.7s
AB31  Akbulak array    81.97 322  P     P       04 13 49.8  0.0
AB31                             IAmb   IAmb    04 13 52.3
      comp=Z,24nm,0.7s
AB31  Akbulak array    81.97 322 i P    P       04 13 49.3 -0.5
ABKAR Akbulak array    81.97 322  P     P       04 13 49.7 -0.1
QSPA  South Pole Qui   83.09 180  P     P       04 13 55.6 +0.1
QSPA  South Pole Qui   83.09 180  P     P       04 13 55.9 +0.4
      comp=Z,4.3nm,0.5s,baz=266,slow=1.5,SNR=74
QSPA                             pP     pP      04 14 41.9 +1.6
      comp=Z,3.8nm,0.8s,baz=322,slow=2.6,SNR=2.6
QSPA                             S      S       04 23 54.6 -4.4
      comp=Z,1.7nm,1.1s,baz=288,slow=6.4,SNR=7.1
QSPA                             LR     LR      04 50 24.6
      comp=Z,76nm,20.0s,baz=357,slow=35
      comp=Z,4.3nm,0.5s
AKTO  Aktyubinsk       83.55 322  P     P       04 13 58.0 +0.1
      comp=Z,23nm,0.8s,baz=104,slow=5.3,SNR=40
      comp=Z,23nm,0.8s
AKTO  Aktyubinsk       83.55 322  P     P       04 13 58.0 +0.1
SVE   Sverdlovsk       84.30 329deP     P       04 14 01.9 +0.4
SVE                              pmax   pmax
      comp=Z,60nm,1.1s
K13K  Kusilvak Mount   85.09  26  P     P       04 14 06.3 +1.0
ARTI  Arti             85.31 328  P     P       04 14 06.6  0.0
ARTI                             IAmb   IAmb    04 14 07.2
      comp=Z,38nm,0.7s
ARTI  Arti             85.31 328  P     P       04 14 05.3 -1.2
      comp=Z,32nm,0.8s,baz=115,slow=3.1,SNR=42
      comp=Z,32nm,0.8s
ARTI  Arti             85.31 328c iP    P       04 14 06.2 -0.4
ARTI                             *PP    pP      04 14 51.0 -0.6
ARTI                             S      SKSac   04 24 13.2 -0.2
ARTI                             SS     SS      04 29 57.3 -2.9
ARTI                             pmax   pmax
      comp=Z,37nm,0.8s
L14K  Kuka Creek       85.72  27  P     P       04 14 08.2 -0.3
M14K  Bethel           85.82  27  P     P       04 14 10.0 +1.0
M14K                             IAmb   IAmb    04 14 10.7
      comp=Z,14nm,0.8s
RAYN  Ar Rayn          87.05 294  P     P       04 14 16.6 +0.7
RAYN  Ar Rayn          87.05 294  P     P       04 14 16.6 +0.7
RAYN                             pmax   pmax
      comp=Z,38nm,0.8s
RAYN  Ar Rayn          87.05 294 i P    P       04 14 16.3 +0.4
      SNR=33
M16K  Timber Creek     87.29  28  P     P       04 14 16.8 +0.6
AKT   Akhty            88.22 312 eP     P       04 14 19.1 -2.1
AKT                              e*PP   pP      04 15 05.2 -1.2
AKT                              e              04 17 48.2
AKT                              pmax   pmax
      comp=Z,37nm,1.3s
KDAK  Kodiak Island    89.50  32  LR    LR      04 49 46.4
      comp=Z,42nm,20.6s,baz=230,slow=32
C19K  Lookout Ridge    89.77  20  IAmb  IAmb    04 14 29.0
      comp=Z,9.8nm,0.8s
E19K  Redstone River   90.06  22  IAmb  IAmb    04 17 07.4
      comp=Z,18nm,0.5s
GNI   Garni            90.23 310  LR    LR      05 01 43.1
      comp=Z,17nm,20.2s,baz=114,slow=40
BELG  Belogornoye      90.33 323  P     P       04 14 29.2 -1.3
      comp=Z,18nm,0.9s,baz=193,slow=2.5,SNR=5.9
BELG                             LR     LR      05 00 10.5
      comp=Z,38nm,19.1s,baz=101,slow=39
      comp=Z,18nm,0.9s
BELG  Belogornoye      90.33 323 i P    P       04 14 30.2 -0.4
BELG                             pmax   pmax
      comp=Z,3.0nm,0.9s
J20K  Nowinta River    90.35  25  IAmb  IAmb    04 16 00.7
      comp=Z,20nm,1.9s
KIRV  Kirov            90.57 329  P     P       04 14 30.3 -1.2
      comp=Z,12nm,0.5s,baz=7.3,slow=2.6,SNR=4.4
      comp=Z,12nm,0.5s
KIRV  Kirov            90.57 329ceP     P       04 14 30.5 -1.0
KMBO  Kilima Mbogo     91.88 269  P     P       04 14 39.6 +0.6
KMBO  Kilima Mbogo     91.88 269  P     P       04 14 39.6 +0.6
KMBO                             pmax   pmax
      comp=Z,7.0nm,1.0s
KMBO  Kilima Mbogo     91.88 269  P     P       04 14 39.9 +0.9
KBZ   Khabaz           92.10 314  P     P       04 14 38.7 -0.3
      comp=Z,3.6nm,0.8s,baz=84,slow=2.9,SNR=7.1
      comp=Z,3.6nm,0.8s
KBZ   Khabaz           92.10 314ceP     P       04 14 38.9 -0.1
KBZ                              pmax   pmax
      comp=Z,4.0nm,0.9s
KVAR  Kislovodsk Arr   92.27 314  P     P       04 14 40.6 +0.7
      comp=Z,2.1nm,0.6s,baz=14,slow=8.3,SNR=1.7
      comp=Z,2.1nm,0.6s
SHA1  Shidzhatmaz      92.27 314 i P    P       04 14 41.4 +1.3
KIV   Kislovodsk       92.28 314 eP     P       04 14 39.1 -0.9
KIV                              pmax   pmax
      comp=Z,4.0nm,1.1s
RND   Reindeer         92.47  26  IAmb  IAmb    04 14 40.0
      comp=Z,9.7nm,0.7s
I23K  Minto, Yukon-K   92.57  25  IAmb  IAmb    04 14 41.4
      comp=Z,5.7nm,0.8s
MARD  Mardin           92.93 307  P     P       04 14 43.0 -0.2
MARD                             IAmb   IAmb    04 14 45.7
      comp=Z,6.3nm,0.7s
DHY   Denali Highway   93.08  27  IAmb  IAmb    04 14 43.8
      comp=Z,5.2nm,0.8s
CCB   Clear Creek Bu   93.14  25  IAmb  IAmb    04 14 43.2
      comp=Z,5.4nm,0.8s
KOPT  Kop Dagi         93.44 310  P     P       04 14 46.0 +0.4
KOPT                             IAmb   IAmb    04 14 49.9
      comp=Z,10.0nm,1.0s
ILAR  Eielson Array    93.55  25  P     P       04 14 43.5 -1.7
      comp=Z,1.8nm,0.8s,baz=255,slow=4.4,SNR=16
ILAR                             PKKPbc PKKPdf  04 31 50.2 -1.0
      comp=Z,0.5nm,0.9s,baz=121,slow=5.9,SNR=4.6
      comp=Z,1.8nm,0.8s
LABN  Labinsk          93.76 314 eP     P       04 14 42.2 -4.4
LABN                             e*PP   pP      04 15 26.9 -5.2
LABN                             e              04 24 57.6
LABN                             pmax   pmax
      comp=Z,12nm,0.7s
VRH   Novokhopyorsk    93.78 321 eP     P       04 14 42.6 -3.9
VRH                              pmax   pmax
      comp=Z,7.0nm,0.8s
ERBR  Yeremizino-Bor   94.03 315 eP     P       04 14 46.1 -1.8
ERBR                             e*PP   pP      04 15 31.4 -2.0
ERBR                             e              04 25 04.6
ERBR                             pmax   pmax
      comp=Z,12nm,1.1s
TROLL Troll, Antarti   94.10 194 ⇑P     P       04 14 49.3 +1.4
      comp=Z,138nm,0.6s
J25K  Salcha River,    94.17  26  IAmb  IAmb    04 16 51.3
      comp=Z,17nm,2.0s
RIDG  Independent Ri   94.29  26  IAmb  IAmb    04 14 48.6
      comp=Z,5.3nm,0.8s
BMAR  Burnt Mountain   94.82  23  P     P       04 14 51.2 +0.2
BELA  Belgrano 2       94.89 183  IAmb  IAmb    04 14 56.4
      comp=Z,3.8nm,0.6s
J26L  Joseph Creek     94.94  26  IAmb  IAmb    04 14 52.2
      comp=Z,5.6nm,0.8s
G26K  Porcupine Rive   95.08  23  IAmb  IAmb    04 14 53.6
      comp=Z,8.4nm,1.1s
VSR   Storozhevoye     95.38 321 eP     P       04 14 50.3 -3.6
VSR                              pmax   pmax
      comp=Z,10.0nm,0.9s
VORR  Voronezh         95.39 321 eP     P       04 14 48.6 -5.3
VORR                             pmax   pmax
      comp=Z,10.0nm,0.8s
K27K  Chicken          95.54  26  IAmb  IAmb    04 14 56.1
      comp=Z,7.4nm,0.9s
L27K  Beaver Creek,    95.58  27  IAmb  IAmb    04 14 56.2
      comp=Z,3.8nm,0.8s
BCAR  Beaver Creek A   95.60  27  P     P       04 14 54.4 -0.3
SNAA  Sanae            95.61 194 ⇑P     P       04 14 55.7 +1.1
      comp=Z,50nm,1.1s
SNAA  Sanae            95.61 194  P     P       04 14 55.5 +0.9
      comp=Z,1.2nm,0.7s,baz=186,slow=5.8,SNR=8.7
SNAA                             LR     LR      04 59 48.0
      comp=Z,85nm,18.1s,baz=337,slow=36
      comp=Z,1.2nm,0.7s
LPSR  Galich'ya Gora   95.63 322 eP     P       04 14 47.4 -7.6
LPSR                             pmax   pmax
      comp=Z,10.0nm,0.8s
KLMR  Klimovskoe       95.84 331 eP     P       04 14 50.3 -5.4
KLMR                             e*PP   pP      04 15 38.1 -3.2
KLMR                             pmax   pmax
      comp=Z,15nm,1.2s
ANN   Anapa            96.11 314 eP     P       04 14 49.1 -8.2
ANN                              e*PP   pP      04 15 34.4 -8.5
ANN                              e              04 25 11.8
ANN                              pmax   pmax
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	comp=Z,40nm,1.0s						
I28M	Miner Creek	96.54	25	IAmb	IAmb	04 15 00.0	
	comp=Z,3.2nm,0.7s						
DAWY	Dawson	96.72	26	IAmb	IAmb	04 15 00.8	
	comp=Z,4.2nm,0.9s						
MMAI	Mount Meron Ar	96.95	302	P	P	04 15 02.5	+0.9
	comp=Z,0.3nm,0.3s,baz=51,slow=9.4,SNR=1.4						
	comp=Z,0.3nm,0.3s						
OBN	Obninsk	97.15	325	P	P	04 14 59.7	-2.1
	comp=Z,8.3nm,0.4s,baz=141,slow=13,SNR=3.8						
	comp=Z,8.3nm,0.4s						
OBN	Obninsk	97.15	325	eP	P	04 15 00.2	-1.6
OBN				i *PP	pP	04 15 45.3	-2.1
OBN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BR131	Keskin Array S	98.69	309	IAmb	IAmb	04 15 45.8	
	comp=Z,8.0nm,1.6s						
BRTR	Keskin Array B	98.69	309	P	P	04 15 08.1	-1.1
	comp=Z,1.0nm,0.8s,baz=137,slow=5.5,SNR=8.0						
BRTR				PP	PP	04 19 10.2	-2.7
	comp=Z,0.5nm,0.8s,baz=94,slow=6.5,SNR=4.9						
	comp=Z,1.0nm,0.8s						
BRTR	Keskin Array B	98.69	309	i P	P	04 15 08.6	-0.7
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
LSZ	Lusaka	98.81	253	P	P	04 15 09.9	-0.4
LSZ				IAmb	IAmb	04 15 11.3	
	comp=Z,4.9nm,0.8s						
LSZ	Lusaka	98.81	253	P	P	04 15 09.9	-0.4
LSZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BOSA	Boshof	98.90	240	P	P	04 15 10.1	-0.4
	comp=Z,4.2nm,0.9s,baz=82,slow=6.1,SNR=5.4						
	comp=Z,4.2nm,0.9s						
ARCES	ARCESS Array B	101.22	340	P	Pdif	04 15 18.4	-1.2
	comp=Z,4.9nm,0.7s,baz=71,slow=5.3,SNR=8.8						
SPITS	Spitsbergen Ar	101.32	349	P	Pdif	04 15 19.5	-0.5
	comp=Z,10nm,1.0s,baz=133,slow=8.1,SNR=2.1						
AK08	Malin Array Si	101.65	320	P	Pdif	04 15 21.0	-0.9
AKASG	Malin Array Be	101.66	320	P	Pdif	04 15 20.2	-1.8
	comp=Z,1.7nm,0.8s,baz=71,slow=4.7,SNR=7.1						
AKASG				PP	PP	04 19 33.4	-1.4
	comp=Z,0.2nm,0.4s,baz=86,slow=6.3,SNR=4.3						
AKASG	Malin Array Be	101.66	320	i P	Pdif	04 15 20.6	-1.4
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKBB	Malin Array Si	101.66	320	P	Pdif	04 15 21.9	-0.1
FINES	FINESS Array B	102.32	331	P	Pdif	04 15 23.0	-1.7
	comp=Z,1.1nm,0.7s,baz=112,slow=8.5,SNR=5.3						
FINES				PKiKP	PKiKP	04 19 45.0	-0.5
	comp=Z,1.4nm,0.9s,baz=90,slow=3.8,SNR=4.8						
FINES	FINESS Array B	102.32	331	i P	Pdif	04 15 22.2	-2.5
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NACGM	Naroch	102.78	325	ePdif	Pdif	04 15 27.0	+0.1
	comp=Z,12nm,0.8s,baz=84						
RNPP5	Staryi Chortor	103.72	321	P	Pdif	04 15 31.2	0.0
YKA	Yellowknife Ar	107.96	26	PKiKP	PKiKP	04 19 55.7	-0.2
	comp=Z,0.3nm,0.6s,baz=306,slow=2.2,SNR=8.8						
YKA				PKKPbc	PKKPbc	04 31 08.9	-2.6
	comp=Z,0.7nm,0.7s,baz=98,slow=2.8,SNR=8.6						
HFS	Hagfors	108.52	332	Pdiff	Pdif	04 15 51.5	-0.9
	comp=Z,0.7nm,0.6s,baz=1.6,slow=10,SNR=2.7						
NB2	NORSAR Subarra	109.35	333	P	Pdif	04 15 54.7	-1.4
	comp=Z,1.5nm,0.8s,baz=70,slow=4.4						
NOA	NORSAR Array B	109.35	333	Pdiff	Pdif	04 15 54.9	-1.2
	comp=Z,0.5nm,0.6s,baz=68,slow=4.6,SNR=5.1						
NOA				PKiKP	PKiKP	04 19 58.2	-0.3
	comp=Z,0.8nm,0.8s,baz=50,slow=6.3,SNR=3.6						
CLL	Collm	111.63	323	ePKIKP	PKiKP	04 20 03.0	-0.1
CLL	Collm	111.63	323	ePKiKP	PKiKP	04 20 03.0	-0.1
GERES	GERESS Array B	111.87	320	PKiKP	PKiKP	04 20 03.4	-0.3
	comp=Z,1.6nm,0.6s,baz=60,slow=3.7,SNR=3.2						
SNOW	Snow King Moun	116.28	45		PKiKP	04 20 12.8	+0.2
PDAR	Pinedale Array	117.32	45	PKP	PKPdf	04 20 14.6	0.0
	comp=Z,0.8nm,0.7s,baz=254,slow=2.3,SNR=6.8						
PDAR				PKKPbc	PKKPbc	04 30 38.4	-1.7
	comp=Z,0.3nm,0.5s,baz=122,slow=5.4,SNR=4.1						
KEST	Kesra	118.19	307	PKP	PKiKP	04 20 16.9	+0.6
	comp=Z,4.9nm,0.8s,baz=117,slow=2.3,SNR=5.1						
LAO	LASA Array	118.26	40	PKPdf	PKiKP	04 20 16.8	+0.7
BORG	Borgarnes	118.60	346	i PKIKP	PKiKP	04 20 17.2	+1.1
EKA	Eskdalemuir Ar	118.72	331	PKP	PKPdf	04 20 15.9	-0.7
	comp=Z,1.7nm,0.6s,baz=37,slow=2.7,SNR=5.6						
MVCO	Mesa Verde	119.63	51	PKPdf	PKiKP	04 20 20.0	+0.7
RSSD	Black Hills	120.65	42	PKPdf	PKPdf	04 20 20.2	-0.7
RSSD	Black Hills	120.65	42	PKIKP	PKPdf	04 20 20.3	-0.7
ANMO	Albuquerque	121.81	53	PKPdf	PKiKP	04 20 24.3	+0.7
ANMO	Albuquerque	121.81	53	PKIKP	PKiKP	04 20 24.3	+0.7
ULM	Lac du Bonnet	122.74	33	PKP	PKPdf	04 20 23.5	-0.9
	comp=Z,2.7nm,0.6s,baz=275,slow=3.7,SNR=5.9						
ULM				PKKPbc	PKKPab	04 30 17.6	-1.0
	comp=Z,0.6nm,0.4s,baz=56,slow=6.5,SNR=3.4						
EPLO	Experimental L	124.21	32	PKPdf	PKPdf	04 20 26.7	-0.6
TXAR	Lajitas Array	125.48	59	PKP	PKiKP	04 20 31.4	+0.4
	comp=Z,0.8nm,0.6s,baz=247,slow=1.3,SNR=15						
ECSD	EROS Data Cent	125.66	40	PKPdf	PKPdf	04 20 29.5	-0.8
ESDC	Sonseca Array	126.92	315	PKP	PKPdf	04 20 33.1	+0.2
	comp=Z,1.7nm,1.0s,baz=29,slow=2.7,SNR=10						
ESDC				PP	PP	04 22 33.8	+1.0
	comp=Z,2.4nm,1.0s,baz=59,slow=7.0,SNR=11						
TBO	Thunder Bay	127.09	31	PKPdf	PKPdf	04 20 32.8	-0.1
PAB	San Pablo	127.24	315	PKPdf	PKPdf	04 20 32.8	-0.7
PAB	San Pablo	127.24	315	PKIKP	PKPdf	04 20 32.8	-0.7
TORD	Torodi Ar. Bea	128.09	281	PKP	PKiKP	04 20 36.1	-0.3
	comp=Z,40nm,0.3s,baz=86,slow=3.0,SNR=1.5						
MVO	Moncorvo	128.32	318	ePKPdf	PKiKP	04 20 37.0	+0.8
MVO				eSKP	SKPbc	04 23 39.1	
PCAB	Cabril	128.71	319	eSKP	SKPbc	04 23 40.4	
PVRL	Vila Real	128.72	319	ePKPdf	PKiKP	04 20 38.0	+1.0
POLO	Lamas de Olo	128.72	319	ePKPdf	PKiKP	04 20 37.8	+0.7
POLO				eSKP	SKPbc	04 23 40.8	
PGAV	Gavieira, Arco	128.73	320	ePKPdf	PKiKP	04 20 37.8	+0.7
MTE	Manteigas	129.04	318	ePKPdf	PKiKP	04 20 38.8	+1.1
MTE				eSKP	SKPbc	04 23 41.3	+1.1
PVIS	Viseu	129.12	318	ePKPdf	PKiKP	04 20 38.5	+0.7
PVIS				eSKP	SKPbc	04 23 42.3	+1.8
PLCA	Paso Flores	129.23	161	PKP	PKiKP	04 20 39.0	+0.9
	comp=Z,1.6nm,0.8s,baz=191,slow=5.2,SNR=5.5						
PLCA				SKPbc	SKPbc	04 23 41.5	+0.6
	comp=Z,2.2nm,0.8s,baz=180,slow=6.5,SNR=5.6						
PCBR	Castelo Branco	129.26	317	ePKPdf	PKiKP	04 20 39.0	+1.0
PCBR				eSKP	SKPbc	04 23 42.9	+2.0
PMRV	Marv??o	129.40	317	ePKPdf	PKiKP	04 20 39.1	+0.8
PMRV				eSKP	SKPbc	04 23 43.2	+1.8
COI	Coimbra	129.71	318	eSKP	SKPbc	04 23 43.8	+1.2
PBAR	Barrancos	129.73	315	ePKPdf	PKiKP	04 20 40.0	+0.9
PBAR				eSKP	SKPbc	04 23 44.2	+1.4
PESTR	Estremoz	129.80	316	eSKP	SKPbc	04 23 43.9	+0.9
PSARD	Sardoal	129.84	317	eSKP	SKPbc	04 23 44.8	+1.7
PMTG	Montargil	130.14	317	eSKP	SKPbc	04 23 45.5	+1.3
EVO	Evora	130.25	316	eSKP	SKPbc	04 23 46.3	+1.6
PSBE	So Bento	130.31	317	eSKP	SKPbc	04 23 46.1	+1.2
PBEJ	Beja	130.38	315	eSKP	SKPbc	04 23 47.3	+2.1
SCHQ	Schefferville	130.47	12	PKP	PKPdf	04 20 39.0	-0.1
	comp=Z,1.4nm,0.6s,baz=9.0,slow=11,SNR=1.8						
SCHQ				SKPbc	SKPbc	04 23 44.4	-0.6
	baz=346,slow=4.2						
PVAQ	Vaqueiros	130.56	314	eSKP	SKPbc	04 23 48.1	+2.2
PCVE	Castro Verde	130.68	315	eSKP	SKPbc	04 23 48.1	+1.7
MESJ	Messejana	130.72	315	eSKP	SKPbc	04 23 48.7	+2.3
MORF	Marmelete	131.27	315	eSKP	SKPbc	04 23 50.9	+2.3
DBIC	Dimbokro	134.47	273	PKP	PKiKP	04 20 48.7	-0.6
	comp=Z,10nm,0.9s,baz=143,slow=1.1,SNR=5.7						
DBIC				SKPbc	SKPbc	04 23 59.9	-0.2
	comp=Z,8.5nm,0.6s,baz=104,slow=2.3,SNR=12						
GO02	Mina Guanaco	143.23	151	PKPdf	PKPbc	04 21 02.2	+0.8
CPUP	Villa Florida	146.37	169	PKPbc	PKPbc	04 21 10.2	-0.2
CPUP	Villa Florida	146.37	169	PKPbc	PKPbc	04 21 11.0	+0.6
	comp=Z,4.4nm,0.9s,baz=114,slow=1.2,SNR=26						
CPUP				SKPbc	SKiKP	04 24 32.4	+0.7
	comp=Z,1.7nm,1.0s,baz=97,slow=0.7,SNR=4.4						
LPAZ	La Paz	151.24	143	PKP	PKPdf	04 21 19.0	+1.2
	comp=Z,2.9nm,0.9s,baz=214,slow=1.1,SNR=8.9						
LPAZ				PKPbc	PKiKP	04 21 25.4	+1.1
	comp=Z,2.7nm,0.4s,baz=174,slow=3.1,SNR=25						
ROSC	El Rosal	156.44	94	PKP	PKPdf	04 21 25.8	+0.8
	comp=Z,2.3nm,0.3s,baz=270,slow=20,SNR=1.7						
ROSC				PKPab	PKPab	04 21 57.2	+2.8
	comp=Z,3.4nm,0.3s,baz=324,slow=19,SNR=4.1						

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*IDC **17** 04:14:05.5±8.0, 36.°14N×70.°96E, h121^{km}±67^{km}, mb3.4/5, mbtmp3.8/9, MS3.6/1, Error ellipse: s-maj=58.0km s-min=28.9km az=31.0*

*NNC **17** 04:14:06.2±6.2, 36.°64N×70.°57E, h0^{km}, mb3.9, mpv3.3, Error ellipse: s-maj=49.4km s-min=41.9km az=157.0*

ISC 17 04:14:12.9±1.4, **36.°7N**±0.°1×**70.°9E**±0.°1, **h188^{km}, n13, σ1^{s}87**/16, **mb3.5**/4, **3C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.46	357	P	Pn	04 15 43.6	-2.3
	2.2nm,0.3s,baz=186,slow=13,SNR=27						
KK31				⇑S	Sn	04 16 59.3	-0.2
	4.4nm,0.3s,baz=188,slow=29,SNR=5.8						
AAK	Ala-Archa	6.59	24	P	Pn	04 15 46.8	-1.0
	3.6nm,0.3s,baz=202,slow=5.8,SNR=7.9						
AAK				S	Sn	04 17 03.8	+1.0
	7.1nm,0.4s,baz=155,slow=23,SNR=15						
AAK	Ala-Archa	6.59	24	⇑P	Pn	04 15 46.5	-1.3
	0.5nm,0.5s						
AAK				⇓S	Sn	04 17 03.0	+0.2
	5.2nm,0.6s						
AB31	Akbulak array	14.93	331	⇑P	P	04 17 33.8	-1.8
	2.4nm,0.4s,baz=158,slow=12,SNR=62						
AB31				S	Sn	04 20 19.7	-1.5
	2.4nm,0.5s,baz=153,slow=22,SNR=10						
KURBB	Kurchatov Arra	15.00	19	P	P	04 17 38.7	+2.3
	0.6nm,0.7s,baz=205,slow=10,SNR=3.8						
BVAR	Borovoye Array	16.38	359	P	Pn	04 17 53.9	+1.7
	1.2nm,0.5s,baz=167,slow=8.4,SNR=1.5						
AKTO	Aktyubinsk	16.62	330	P	Pn	04 17 56.5	+1.4
	2.3nm,0.4s,baz=138,slow=12,SNR=4.1						
ZALV	Zalesovo Beam	19.81	25	P	Pn	04 18 32.1	-0.6
	1.9nm,0.4s,baz=208,slow=9.3,SNR=7.7						
	1.9nm,0.4s						
BRDH	Bariadhala	22.69	122	LR	LR	04 27 50.4	
	comp=Z,163nm,19.0s,baz=140,slow=37						
FINES	FINESS Array B	37.33	326	P	P	04 21 09.1	+2.3
	1.3nm,0.7s,baz=105,slow=8.4,SNR=2.5						
	1.3nm,0.7s						
HFS	Hagfors	42.92	322	P	P	04 21 55.2	+2.5
	3.4nm,1.0s,baz=116,slow=9.8,SNR=2.6						
	3.4nm,1.0s						
NOA	NORSAR Array B	44.23	323	P	P	04 22 05.6	+2.4
	0.3nm,0.4s,baz=112,slow=8.3,SNR=1.9						
	0.3nm,0.4s						
WRA	Warramunga Arr	82.12	122	P	P	04 26 11.0	-1.7
	0.5nm,0.9s,baz=319,slow=5.4,SNR=2.1						
	0.5nm,0.9s						

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*IDC **17** 04:21:03.3±3.2, 32.°43N×132.°23E, h72^{km}±18^{km}, mb3.1/3, mbtmp3.5/6, Error ellipse: s-maj=40.5km s-min=21.8km az=3.0*

*NIED **17** 04:21:03.4, 32.°64N×132.°27E, h32^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.15; $M_{\theta\theta}$-1.60; $M_{\phi\phi}$1.45; $M_{r\theta}$1.89; $M_{\theta\phi}$-0.92; $M_{\phi r}$4.07; Fault plane solution: $M_0$4.82000×10^{14} NP1: ϕ_s296.00000°, δ22.00000°, λ179.00000°. NP2: ϕ_s27.00000°, δ90.00000°, λ68.00000°.*

*JMA **17** 04:21:03.4±0.0, 32.°6N±0.°2×132.°3E±0.°1, h32^{km}, MV3.6/38, HYUGANADA REGION*

JMA Felt I J1 at HYUGANADA REGION .

ISC 17 04:21:02.1±1.2, **32.°58N**±0.°06×**132.°32E**±0.°04, **h40**^{km}±11^{km}, **n17, σ1^{s}80**/26, **mb3.3**/3, **8D, Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSKE	Saikikamae	0.42	302	⇓iP	Pn	04 21 11.3	-0.5
JSKE				⇓S	Sn	04 21 17.3	-1.2
JTO	Tosashimizu	0.49	55	⇓iP	Pn	04 21 13.7	+1.0
JTO				⇓eS	Sn	04 21 21.1	+0.8
JHHC	Hyugahichiya	0.59	257	i P	Pn	04 21 14.5	+0.4
UWA2	Uwa jima 2	0.68	22	i P	Pn	04 21 15.8	+0.5
UWA2				S	Sn	04 21 25.0	+0.1
JUS	Usuki	0.68	315	⇓iP	Pn	04 21 15.4	+0.1
JUS				⇓S	Sn	04 21 24.3	-0.5
JTSN	Tsuno	0.77	244	i P	Pn	04 21 17.4	+0.9
JTSN				S	Sn	04 21 27.9	+1.1
JKU	Kubokawa	0.96	40	⇓iP	Pn	04 21 20.2	+1.1
JKU				⇓eS	Sn	04 21 32.1	+0.5
JNA	Nagahama	0.98	8	i P	Pn	04 21 20.0	+0.6
JNA				eS	Sn	04 21 32.0	-0.2
JTZ	Takazaki	1.25	237	eP	Pn	04 21 24.9	+1.9
JIU3	Izumi3	1.27	269	i P	Pn	04 21 25.1	+1.7
JNU	Nakatsue	1.33	294	P	Pn	04 21 25.9	+1.7
	502nm,0.4s,baz=124,slow=5.3,SNR=825						
JNU				S	Sn	04 21 43.2	+2.5
	641nm,0.4s,baz=171,slow=20,SNR=39						
KSRS	Korea Array	6.05	325	P	Pn	04 22 33.0	+3.9
	0.8nm,0.3s,baz=150,slow=13,SNR=2.2						
KSRS				S	Sn	04 23 40.5	+3.5
	1.1nm,0.5s,baz=139,slow=26,SNR=1.3						
MJAR	Matsushiro Arr	6.26	49	P	Pn	04 22 34.5	+2.6
	1.1nm,0.4s,baz=244,slow=14,SNR=6.4						
KLR	Kul'dur	16.64	359	P	P	04 24 54.8	+0.6
	3.3nm,1.0s,baz=173,slow=2.8,SNR=4.4						
SONM	Songino Array	24.82	315	P	P	04 26 19.2	-1.4
	0.3nm,0.3s,baz=134,slow=8.2,SNR=4.0						
	0.3nm,0.3s						
MKAR	Makanchi Array	40.36	306	P	P	04 28 32.5	-3.4
	0.1nm,0.5s,baz=91,slow=7.2,SNR=1.7						
	0.1nm,0.5s						
BVAR	Borovoye Array	48.16	314	P	P	04 29 37.7	-0.4
	0.6nm,0.5s,baz=90,slow=10,SNR=2.8						
	0.6nm,0.5s						

IDC 17 04:21:50.7±8.2, **23.°31S**×**177.°89W, h0^{km}, mb3.8**/4, **mbtmp3.8**/4, **Error ellipse: s-maj=207.5km s-min=45.2km az=32.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	36.74	248	P	P	04 28 58.8	-1.1
	1.2nm,0.5s,baz=105,slow=14,SNR=4.4						
	1.2nm,0.5s						
ASAR	Alice Springs	44.04	260	P	P	04 30 00.1	-0.5
	0.5nm,0.6s,baz=93,slow=10.0,SNR=5.0						
	0.5nm,0.6s						
WRA	Warramunga Arr	44.38	265	P	P	04 30 04.2	+0.9
	0.6nm,0.5s,baz=99,slow=7.4,SNR=8.3						
	0.6nm,0.5s						
QSPA	South Pole Qui	66.77	180	P	P	04 32 43.8	0.0
	1.4nm,1.0s,baz=45,slow=1.4,SNR=1.9						
	1.4nm,1.0s						

CATAC 17 04:33:01.3±0.7, **10°N**±4°×**8°7W**±°, **h24**^{km}±9^{km}, **M3.5**/32, **MLv3.5**/32, **Error ellipse: s-maj=10.8km s-min=3.9km az=36.6, confirmed, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INDI	Punta indio, G	1.74	102	P	Pn	04 33 28.4	-1.7
CMARA	Lajas Hojancha	1.79	97	P	Pn	04 33 29.3	-1.5
CMARA	Lajas Hojancha	1.79	97	S	Sn	04 33 51.0	-1.9
NADN	Granada	1.91	38	P	Pn	04 33 32.9	+0.6
CARN	Rivas	1.93	61	P	Pn	04 33 31.8	-0.8
SABN	Sabanita	2.00	31	P	Pn	04 33 33.1	-0.6
NANN	Nandasmo	2.01	33	P	Pn	04 33 34.9	+1.1
COPN	Copaltepe	2.03	18	P	Pn	04 33 34.2	+0.1
SAPS	Ciudad Sandino	2.08	23	P	Pn	04 33 35.1	+0.3
SAPS	Ciudad Sandino	2.08	23	S	Sn	04 34 01.2	+1.2
UNAN	Cigeo UNAN	2.09	27	P	Pn	04 33 35.0	+0.2
TISN	Laguna Tiscapa	2.11	26	P	Pn	04 33 34.3	-0.9
MGAN	Managua	2.13	27	P	Pn	04 33 35.5	+0.1
APQ3	Volcan Apoyequ	2.19	23	P	Pn	04 33 36.2	-0.1
APQ3				S	Sn	04 34 03.1	+0.5
MOMN	Momotombo	2.26	17	P	Pn	04 33 37.3	0.0
MOMN				S	Sn	04 34 05.0	+0.6
CNGA	Al SSO del Vol	2.30	13	P	Pn	04 33 37.8	0.0
CNGA				S	Sn	04 34 06.5	+1.1
MOM2	El Cardon	2.31	18	P	Pn	04 33 38.3	+0.4
MOM2				S	Sn	04 34 06.5	+1.1
CNGN	Cerro Negro	2.31	13	P	Pn	04 33 37.6	-0.3
ILCN	San Idelfonso	2.38	13	P	Pn	04 33 38.7	-0.2
PKGN	Cerro Pekin	2.43	6	P	Pn	04 33 39.5	-0.1
PKGN				S	Sn	04 34 08.5	0.0
CRIN	San Cristobal	2.45	4	P	Pn	04 33 39.9	0.0
CRIN	San Cristobal	2.45	4	S	Sn	04 34 10.4	+1.2
SOCE	Pocosol	2.58	87	P	Pn	04 33 42.2	+0.6
SOCE	Pocosol	2.58	87	S	Sn	04 34 13.2	+1.0
BOAB	BOACO BROADBAN	2.68	35	P	Pn	04 33 42.4	-0.6
POTN	Potosi Cosigui	2.76	354	P	Pn	04 33 43.5	-0.6
POTN				S	Sn	04 34 15.3	-1.3
LIMN	Finca el Limon	2.93	17	P	Pn	04 33 46.1	-0.5
MATN	Matagalpa	2.96	25	P	Pn	04 33 46.0	-1.0
CNCH	Conchagua	3.08	349	P	Pn	04 33 48.3	-0.2
CNCH	Conchagua	3.08	349	S	Sn	04 34 24.0	-0.7
LCND	La Caada	3.12	348	P	Pn	04 33 49.0	0.0
LCR2	La Lucha 2	3.22	99	P	Pn	04 33 51.3	+0.7
RCPN	Sur Rio San Ju	3.45	19	P	Pn	04 33 53.3	-0.4
TRT2	Tortugero	3.45	84	P	Pn	04 33 53.7	+0.1
RCVN	Varillal2	3.48	17	P	Pn	04 33 54.4	+0.3
TECO	Alcaldia de Te	3.61	335	P	Pn	04 33 56.0	+0.1
SCLA	Alcaldia de Sa	3.74	337	P	Pn	04 33 58.1	+0.5
SCLA	Alcaldia de Sa	3.74	337	S	Sn	04 34 38.9	-2.1
TGUH	Tegucigalpa,Un	3.79	359	P	Pn	04 33 58.9	+0.5
TGUH				S	Sn	04 34 41.7	-0.8
PAVA	Las Pavas	3.84	334	P	Pn	04 33 59.1	+0.1
LOMA	Loma Larga	3.88	331	P	Pn	04 33 59.6	0.0
JAYA	Jayaque - finc	4.03	328	P	Pn	04 34 01.9	+0.2
DRK0	Durika	4.05	104	P	Pn	04 34 02.2	+0.2
NUBE	Las Nubes	4.41	326	P	Pn	04 34 07.1	+0.2
MTO3	Montecristo	4.63	334	P	Pn	04 34 10.6	+0.6

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*IDC **17** 04:37:47.8±2.8, 18.°64S×179.°60E, h459^{km}±18^{km}, mb3.1/5, mbtmp3.9/5, Error ellipse: s-maj=112.0km s-min=20.7km az=152.0*

ISC 17 04:37:46.5±1.9, **18.°9S**±0.°6×**179.°7E**±0.°3, **h450^{km}, n6, σ0^{s}98**/6, **mb3.5**/5, **Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	1.94	305	P	P	04 38 47.8	+0.9
	4.6nm,0.5s,baz=142,slow=18,SNR=8.8						
WRA	Warramunga Arr	42.72	261	P	P	04 45 01.9	-1.1
	0.4nm,0.5s,baz=97,slow=7.0,SNR=4.7						
	0.4nm,0.5s						
ASAR	Alice Springs	42.83	255	P	P	04 45 04.1	+0.4
	3.8nm,0.5s,baz=90,slow=8.1,SNR=36						
	3.8nm,0.5s						
ILAR	Eielson Array	87.22	14	P	P	04 49 43.0	-0.4
	0.4nm,0.4s,baz=221,slow=5.3,SNR=8.9						
	0.4nm,0.4s						
TXAR	Lajitas Array	88.00	58	P	P	04 49 48.7	+0.6
	0.3nm,0.7s,baz=217,slow=7.4,SNR=5.8						
	0.3nm,0.7s						
PDAR	Pinedale Array	89.26	44	P	P	04 49 53.3	-0.6
	0.3nm,0.5s,baz=205,slow=6.0,SNR=2.8						
	0.3nm,0.5s						

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*IDC **17** 04:38:02.8±2.5, 17.°75S×179.°01W, h535^{km}±20^{km}, mb3.0/3, mbtmp3.8/4, Error ellipse: s-maj=45.5km s-min=37.9km az=172.0*

ISC 17 04:38:02.7±1.7, **17.°6S**±0.°3×**179.°0W**±0.°3, **h539^{km}, n6, σ0^{s}35**/7, **mb3.3**/3, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.79	267	P	P	04 39 15.5	-0.1
	9.9nm,0.8s,baz=117,slow=6.5,SNR=3.7						
WRA	Warramunga Arr	44.10	259	P	P	04 45 23.2	-0.3
	0.2nm,0.3s,baz=96,slow=7.6,SNR=2.4						
WRA				PcP	PcP	04 46 57.4	+0.4
	0.3nm,0.7s,baz=93,slow=3.2,SNR=1.7						
	0.2nm,0.3s						
ASAR	Alice Springs	44.30	254	P	P	04 45 25.4	+0.4
	3.1nm,0.4s,baz=89,slow=8.0,SNR=19						
	3.1nm,0.4s						
QSPA	South Pole Qui	72.44	180	P	P	04 48 34.2	-0.1
	1.0nm,1.1s,baz=59,slow=0.6,SNR=3.0						
	1.0nm,1.1s						
BRTR	Keskin Array B	144.16	315	PKP	PKPdf	04 56 37.5	-0.2
	0.3nm,0.4s,baz=75,slow=2.3,SNR=2.5						
GERES	GERESS Array B	147.17	344	PKPbc	PKPbc	04 56 45.6	+0.1
	0.2nm,0.3s,baz=11,slow=2.2,SNR=1.0						

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*BEO **17** 04:47:25.3±2.2, 38.°89N×26.°71E, h62^{km}±4^{km}, ML3.8/9*

*IDC **17** 04:47:29.6±1.1, 39.°56N×26.°59E, h0^{km}, mb3.7/7, mbtmp3.7/11, ML3.7/3, Error ellipse: s-maj=18.5km s-min=16.9km az=62.0*

*ISK **17** 04:47:30.1, 39.°67N×26.°47E, h12^{km}, ML4.1/20*

*AFAD **17** 04:47:30.6, 39.°68N×26.°48E, h9^{km}±1^{km}, MW3.8*

*ATH **17** 04:47:31.4, 39.°62N×26.°44E, h18^{km}±3^{km}, ML3.7/14, Manual Solution by S.Liakopoulos First location: 2019/06/17 04:48:38, This location: 2019/06/17 09:43:54 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*THE **17** 04:47:31.8, 40°N±2°×2°6E±°, h16^{km}±3^{km}, M3.5/37, MLh3.5/37*

*SOF **17** 04:47:33.3, 39.°90N±0.°03×26.°31E±0.°02, h10^{km}±2^{km}, MD3.9/13*

*CFUSG **17** 04:47:37.3, 40.°09N×26.°81E, h32^{km}, Western Turkey Magtype MSH 3.4 from 1 stations*

ISC 17 04:47:30.8±0.8, **39.°67N**±0.°01×**26.°49E**±0.°01, **h11**^{km}±5^{km}, **n204, σ1^{s}16**/268, **mb3.7**/7, **18C-19D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYC	CANAKKALE_Bayr	0.09	30	P	Pg	04 47 33.3	-0.1
BAYC				S	Sg	04 47 34.5	-0.7
EZNE	Ezine-Canakkal	0.13	314	Pg	Pg	04 47 34.1	+0.2
EZNE				Sg	Sg	04 47 35.9	-0.2
EZN	Ezine	0.20	322	Pg	Pg	04 47 35.2	+0.1
EZN				Sg	Sg	04 47 38.0	-0.1
KOCA	Canakkale, Ayv	0.32	239	P	Pg	04 47 37.3	+0.2
KOCA				S	Sg	04 47 41.9	+0.6
GPNR	Gulpinar-Canak	0.34	233	Pg	Pg	04 47 37.8	+0.1
GPNR				Sg	Sg	04 47 42.6	+0.3
BOZC	Bozcaada	0.38	298	Pg	Pg	04 47 38.3	0.0
BOZC				Sg	Sg	04 47 43.3	-0.1
BOZC	Bozcaada	0.38	298	P	Pg	04 47 38.3	0.0
BOZC				P	Pg	04 47 38.3	0.0
BOZC				S	Sg	04 47 43.3	-0.1
AYVA	Ayvalik	0.39	156	P	Pg	04 47 38.9	+0.4
AYVA				S	Sg	04 47 44.5	+0.9
CNKL	anakkale-Mer	0.41	349	P	Pg	04 47 38.8	-0.1
CNKL				P	Pg	04 47 38.8	-0.1
CNKL				S	Sg	04 47 43.8	-0.4
CNKL				S	Sg	04 47 43.8	-0.4
COMU	Canakkale	0.43	358	Pg	Pg	04 47 39.3	0.0
ECEA	Canakkale, Ece	0.45	328	P	Pg	04 47 39.9	+0.3
ECEA				S	Sg	04 47 46.1	+0.5
PRK	Paraskevi	0.45	202	P	Pg	04 47 39.7	+0.1
PRK				S	Sb	04 47 46.8	-0.7
BUHA	Balikesir, Bur	0.48	110	P	Pg	04 47 40.8	+0.6
BUHA				S	Sg	04 47 47.4	+0.8
CANM	Can-anakkale	0.56	51	Pg	Pg	04 47 41.6	0.0
YENI	Yenice-Canakka	0.64	65	Pg	Pg	04 47 43.1	-0.1
GOAD	anakkale-G¶	0.67	318	P	Pg	04 47 43.5	-0.2
GOAD				S	Sg	04 47 51.9	-0.5
GOAD				i IAML		04 47 52.0	
	comp=N,4µm,0.3s						
GOAD				i IAML		04 47 57.0	
	comp=E,5µm,0.3s						
SIGR	SIGRI	0.67	227	Pg	Pg	04 47 43.4	-0.3
SIGR				Sg	Sg	04 47 52.8	+0.3
SIGR	SIGRI	0.67	227	P	Pg	04 47 43.4	-0.3
SIGR				S	Sg	04 47 52.5	+0.1
SIGR	SIGRI	0.67	227	P	Pg	04 47 43.4	-0.3
SIGR				S	Sg	04 47 52.5	+0.1
DKL	Dikili	0.68	151	Pg	Pg	04 47 44.2	+0.4
DKL	Dikili	0.68	151	P	Pb	04 47 44.4	-0.2
DKL				S	Sb	04 47 53.9	-0.1
GADA	Gvkgeada	0.69	319	Pg	Pg	04 47 43.9	-0.3
GELI	Tayfur-Gelibol	0.73	359	Pg	Pg	04 47 44.7	-0.2
LPK	Lapseki	0.74	16	Pg	Pg	04 47 44.7	-0.3
IZMD	zmir-Dikili-	0.76	153	P	Pg	04 47 45.6	+0.2
IZMD				P	Pb	04 47 45.8	-0.3
IZMD				S	Sg	04 47 55.8	+0.3
IZMD				i IAML		04 48 00.0	
	comp=E,1µm,0.6s						
ZEDA	zmir-Bergama	0.83	147	P	Pg	04 47 47.1	+0.2
ZEDA				S	Sg	04 47 57.9	+0.2
BALY	Balya	0.88	85	P	Pb	04 47 48.1	+0.1
BALY				S	Sg	04 47 59.0	-0.1
KRBG	Karabiga-Canak	0.96	40	Pg	Pg	04 47 48.3	-0.9
SOMA	Soma-Manisa	0.96	122	Pg	Pn	04 47 49.9	-0.3
ENZZ	Sultanice-Enez	0.98	344	Pg	Pb	04 47 49.6	-0.1
STEP	BALIKESIR_Sava	0.99	106	P	Pg	04 47 50.3	+0.4
STEP				S	Sn	04 48 05.0	+0.2
GONE	Gonen-Balikesi	1.00	67	Pg	Pb	04 47 49.6	-0.5

KARB	zmir-Karabur	1.00	183	P	Pb	04 47 50.0	-0.1
KARB				S	Sg	04 48 03.3	+0.2
ERIK	Erikli-Kesan	1.00	1	Pg	Pb	04 47 49.2	-1.0
LIA	Limnos Island	1.03	283	P	Pb	04 47 50.0	-0.6
LIA				S	Sb	04 48 04.1	-0.2
LIA	Limnos Island	1.03	283	P	Pb	04 47 50.1	-0.6
LIA				S	Sb	04 48 03.4	-0.8
CAVK	Edirne/Enez-Ca	1.05	347	P	Pb	04 47 50.8	-0.3
CAVK				S	Sb	04 48 03.6	-1.2
CAVK	Edirne/Enez-Ca	1.05	347	⇓P	Pb	04 47 50.9	-0.1
ENEZ	Enez	1.10	347	Pn	Pb	04 47 51.4	-0.4
BKES	Balkesir-Mer	1.11	86	P	Pg	04 47 52.4	+0.2
BKES				S	Sb	04 48 06.6	0.0
RKY	Sarkoy-Tekirda	1.15	27	Pn	Pb	04 47 51.7	-1.0
SART	Tekirdag	1.15	27	P	Pb	04 47 51.9	-0.9
SART				S	Sg	04 48 08.0	+0.1
EAG2	Marmaro, Chios	1.16	195	P	Pb	04 47 52.2	-0.6
EAG2				S	Sb	04 48 05.9	-1.9
BLKS	Balkesir-Sus	1.16	79	P	Pg	04 47 53.1	0.0
BLKS				S	Sb	04 48 07.8	-0.2
EFSA	Agios Efstrati	1.17	264	P	Pb	04 47 52.5	-0.4
EFSA				S	Sb	04 48 07.1	-1.0
KESN	Edirne-Kesan	1.17	7	P	Pb	04 47 52.2	-1.0
KESN				S	Sb	04 48 08.4	-0.2
EDC	Edincik	1.26	57	Pn	Pn	04 47 53.7	-0.6
SUSR	Susurluk-Balik	1.26	76	Pn	Pn	04 47 54.3	-0.1
ALEX	Alexandroupoli	1.27	339	P	Pb	04 47 54.7	0.0
ALEX				S	Sg	04 48 11.7	0.0
ALN	Alexandroupoli	1.28	345	Pn	Pn	04 47 54.1	-0.4
ALN	Alexandroupoli	1.28	345	P	Pn	04 47 54.2	-0.4
ALN				S	Sn	04 48 11.5	-0.2
URLA	Izmir	1.31	176	Pn	Pn	04 47 54.3	-0.7
CHOS	Chios island	1.32	195	Pn	Pn	04 47 54.4	-0.8
CHOS	Chios island	1.32	195	P	Pn	04 47 54.6	-0.7
CHOS				S	Sb	04 48 11.8	-0.8
CHOS	Chios island	1.32	195	P	Pn	04 47 54.5	-0.7
CHOS				S	Sb	04 48 11.8	-0.8
CESE	eme	1.34	186	Pn	Pn	04 47 54.8	-0.6
BAND	Balkesir-Ban	1.42	60	⇓P	Pn	04 47 56.6	+0.1
BAND				⇑S	Sg	04 48 16.8	+0.4
UKOP	Uzunkopru-Edir	1.47	4	Pn	Pb	04 47 57.7	-0.4
TKR	Tekirdag	1.55	31	Pn	Pn	04 47 58.4	+0.1
RDO	Rodhopi	1.65	334	Pn	Pn	04 47 59.5	-0.2
RDO	Rodhopi	1.65	334	P	Pn	04 48 00.1	+0.4
RDO	Rodhopi	1.65	334	P	Pn	04 47 60.0	+0.3
THAS	Thassos island	1.65	305	P	Pn	04 47 58.7	-1.0
THAS	Thassos island	1.65	305	P	Pn	04 47 58.8	-0.9
SKY	Skiros Island	1.70	243	P	Pn	04 47 59.1	-1.2
XANC	Avdira	1.76	319	P	Pn	04 48 00.8	-0.4
KAVA	Kavala	2.01	312	P	Pn	04 48 04.2	-0.4
KAVA				S	Sn	04 48 28.2	-1.7
KAVA	Kavala	2.01	312	P	Pn	04 48 04.3	-0.4
OUR	Ouranopolis	2.04	290	P	Pn	04 48 04.3	-0.7
OUR	Ouranopolis	2.04	290	P	Pn	04 48 04.4	-0.7
KULA	Kula-Manisa	2.04	124	P	Pn	04 48 05.8	+0.6
TRGA	Dikaia	2.04	356	P	Pn	04 48 06.1	+1.0
KVLA	Kavala	2.05	309	P	Pn	04 48 04.7	-0.5
AOS	Alonnisos	2.08	257	P	Pn	04 48 05.6	-0.1
PHSR	Pinarhisar	2.12	22	⇓P	Pn	04 48 07.1	+1.0
PHSR				⇓S	Sb	04 48 34.4	-1.1
KYMI	Kymi, Euboea I	2.12	242	P	Pn	04 48 05.4	-0.8
KYMI	Kymi, Euboea I	2.12	242	P	Pn	04 48 05.1	-1.1
KDZ	Kurdzhali	2.15	336	P	Pn	04 48 06.8	+0.2
KDZ				S	Sn	04 48 32.7	-0.6
KDZ	Kurdzhali	2.15	336	P	Pn	04 48 06.8	+0.2
PAIG	Paliouri	2.18	278	P	Pn	04 48 06.4	-0.6
EDRB	Edirne	2.19	5	P	Pn	04 48 07.7	+0.6
KARY	Karystos	2.29	225	P	Pn	04 48 07.3	-1.2
KARY	Karystos	2.29	225	P	Pn	04 48 07.2	-1.3
TNSA	Tinos	2.36	206	P	Pn	04 48 08.0	-1.5
ISK	Istanbul-Kandi	2.41	54	P	Pn	04 48 09.8	-0.3
ISK				S	Sb	04 48 42.1	-1.8
RZN	Rozhen	2.42	327	P	Pn	04 48 11.1	+0.6
RZN				S	Sn	04 48 38.9	-1.4
RZN	Rozhen	2.42	327	P	Pn	04 48 10.7	+0.1
PLG	Polygyros	2.44	288	P	Pn	04 48 10.3	-0.3
PLG	Polygyros	2.44	288	P	Pn	04 48 10.4	-0.3
DIM	Dimitrovgrad	2.48	344	P	Pn	04 48 12.5	+1.4
KLYT	Kilyos	2.51	50	⇓P	Pn	04 48 11.5	0.0
NEO	Neokhori	2.55	263	P	Pn	04 48 11.4	-0.7
NEO	Neokhori	2.55	263	P	Pn	04 48 11.5	-0.7
PTL	Penteli	2.61	233	P	Pn	04 48 12.0	-0.9
SRS	Serrai	2.65	304	P	Pn	04 48 12.9	-0.5
SRS	Serrai	2.65	304	*e*Pn	Pn	04 48 12.9	-0.5
SRS				*e*Sn	Sn	04 48 46.2	+0.7
SRS	Serrai	2.65	304	P	Pn	04 48 12.9	-0.5
APE	Apeiranthos	2.70	197	P	Pn	04 48 12.9	-1.3
APE	Apeiranthos	2.70	197	⇑P	Pn	04 48 13.0	-1.1
APE	Apeiranthos	2.70	197	P	Pn	04 48 12.6	-1.6
ATHU	Athens Univers	2.71	232	P	Pn	04 48 12.9	-1.4
ATHU	Athens Univers	2.71	232	P	Pn	04 48 13.0	-1.2
HORT	Hortiatis	2.76	291	P	Pn	04 48 14.7	-0.3
HORT	Hortiatis	2.76	291	P	Pn	04 48 14.7	-0.3
MMB	Musomishta	2.81	313	P	Pn	04 48 16.1	+0.4
MMB				S	Sn	04 48 48.2	-1.4
MMB	Musomishta	2.81	313	P	Pn	04 48 15.8	+0.1
PLD	Plovdiv	2.81	333	P	Pn	04 48 16.1	+0.5
PLD	Plovdiv	2.81	333	*e*Pn	Pn	04 48 16.6	+1.0
PLD				*e*Sn	Sb	04 48 55.2	-0.2
JMB	Yambol	2.82	1	P	Pn	04 48 16.5	+0.7
JMB				S	Sb	04 48 58.4	+2.6
JMB	Yambol	2.82	1	P	Pn	04 48 16.0	+0.2
SILT	Sile	2.83	57	⇑P	Pn	04 48 15.9	0.0
VILL	Villia	2.90	240	P	Pn	04 48 16.0	-0.8
KNT	Kendrikon	3.12	300	P	Pn	04 48 19.4	-0.6
LTK	Loutraki	3.20	240	P	Pn	04 48 20.1	-0.9
TYRN	Tyrnavos	3.29	272	P	Pn	04 48 21.6	-0.6
AGG	Agios Georgios	3.29	260	P	Pn	04 48 22.0	-0.3
PGB	Panagyurishte	3.34	329	P	Pn	04 48 23.7	+0.7
PGB				S	Sn	04 49 02.1	-0.6
KKB	Krupnik	3.35	312	P	Pn	04 48 24.0	+0.9
KKB				S	Sn	04 49 01.7	-1.3
KKB	Krupnik	3.35	312	P	Pn	04 48 23.7	+0.6
VAY	Valandovo	3.42	300	*i* Pn	Pn	04 48 20.1	-3.8
VAY				*i* Sn	Sg	04 49 19.5	-0.9
MAKR	Makrakomi, Fth	3.44	260	P	Pn	04 48 24.7	+0.3
THL	Klokotos Trika	3.46	270	P	Pn	04 48 24.3	-0.2
SAHE	Sakarya_HENDEK	3.54	69	⇑P	Pn	04 48 27.1	+1.3
PVL	Pavlikeni	3.59	344	P	Pn	04 48 27.6	+1.2
PVL				S	Sn	04 49 08.5	-0.4
SZH	Strazhitsa	3.62	354	P	Pn	04 48 27.7	+0.9
SZH				S	Sn	04 49 08.9	-0.6
SZH	Strazhitsa	3.62	354	P	Pn	04 48 27.3	+0.6
PLNA	Plana	3.64	321	P	Pn	04 48 28.2	+1.0
ANX	Ano Chora	3.71	255	P	Pn	04 48 28.2	+0.1
KLV	Kalavryta, Ach	3.75	246	P	Pn	04 48 28.4	-0.3
EFP	Efpalio	3.78	252	P	Pn	04 48 29.2	+0.2
VTS	Vitosha	3.84	321	P	Pn	04 48 31.0	+1.1
VTS				S	Sn	04 49 13.5	-1.6
VTS	Vitosha	3.84	321	P	Pn	04 48 30.7	+0.8
VTS	Vitosha	3.84	321	*e*Pn	Pn	04 48 30.4	+0.5
VTS				*e*Sn	Sn	04 49 17.3	+2.1
PVO	Paravola	4.00	256	P	Pn	04 48 31.7	-0.3
VLI	Veliai	4.06	225	P	Pn	04 48 32.0	-0.9
BOSS	Bosilegrad	4.14	314	*e*Pn	Pn	04 48 35.4	+1.4
BOSS				*e*Sn	Sn	04 49 24.2	+1.7
MPEP	Malo Peshtene	4.23	332	P	Pn	04 48 35.8	+0.7
NEST	Nestorio	4.24	282	P	Pn	04 48 35.2	-0.2
IDI	Anoyia	4.55	197	Pn	Pn	04 48 38.6	-1.0
	3.1nm,0.3s,baz=303,slow=7.6,SNR=9.0						
IDI				Sn	Sn	04 49 30.5	-2.1
	2.1nm,0.3s,baz=299,slow=16,SNR=2.1						
ANKY	Antikythira Is	4.55	215	P	Pn	04 48 38.2	-1.4
SGRR	Singureni	4.57	355	⇑P	Pn	04 48 41.0	+1.2
OHR	Ohrid	4.58	290	*i* Pn	Pn	04 48 41.8	+1.7
ZAPS	Zavoj	4.62	322	*e*Pn	Pn	04 48 42.0	+1.4
ZAPS				*e*Sn	Sn	04 49 35.6	+1.3
BARS	Barje	4.72	313	*e*Pn	Pn	04 48 42.4	+0.4
BARS				*e*Sn	Sn	04 49 38.2	+1.4
IGT	Igoumenitsa	4.76	270	*e*Pn	Pn	04 48 37.1	-5.3
IGT				*e*Sn	Sn	04 49 27.9	-10
BLKB	Belogradchik	4.88	325	*e*Pn	Pn	04 48 44.5	+0.4
HUMR	Humele	4.99	347	⇓P	Pn	04 48 46.5	+0.9
TIRR	Tirgusor	5.00	16	⇓P	Pn	04 48 46.2	+0.5
HARR	Harsova	5.13	12	⇓P	Pn	04 48 49.5	+1.9
ZAGS	Zajecar	5.22	324	*e*Pn	Pn	04 48 49.3	+0.5
ZAGS				*e*Sn	Sn	04 49 51.8	+2.7
BOVS	Bovan	5.34	319	⇑P	Pn	04 48 51.4	+0.9
BOVS	Bovan	5.34	319	*e*Pn	Pn	04 48 51.4	+0.9
SELS	Selova	5.38	313	*e*Pn	Pn	04 48 51.5	+0.6
TPGR	Topolog	5.38	15	⇑P	Pn	04 48 52.3	+1.3
BRTR	Keskin Array B	5.51	87	Pn	Pn	04 48 53.9	+0.9
	1.8nm,0.3s,baz=274,slow=16,SNR=43						
BRTR				Pg	Pg	04 49 13.7	-2.7
	0.8nm,0.3s,baz=269,slow=15,SNR=12						
BRTR				Sn	Sn	04 49 56.0	-0.5
	0.1nm,0.3s,baz=266,slow=18,SNR=1.4						
BRTR				Lg	Lg	04 50 27.0	
	0.6nm,0.3s,baz=259,slow=26,SNR=12						
	3.5nm,0.3s						
BORS2	Bor- Borsko je	5.54	324	*e*Pn	Pn	04 48 53.5	+0.3
CFR	Carcaliu	5.64	12	⇑P	Pn	04 48 55.8	+1.2
GOCS	Kraljevo Serbi	5.73	315	*e*Pn	Pn	04 48 56.2	+0.3
GOCS				*e*Sn	Sn	04 50 01.2	-0.5
NEHR	Nehoiu	5.76	359	⇑P	Pn	04 48 57.3	+1.0
MLR	Muntele Rosu	5.84	356	Pn	Pn	04 48 59.2	+1.9
	1.5nm,0.3s,baz=130,slow=3.9,SNR=17						
MLR				Sn	Sn	04 50 04.5	+0.2
	baz=230,slow=20						
MLR				Lg	Lg	04 50 36.0	
	2.6nm,0.3s,baz=101,slow=19,SNR=4.2						
	6.4nm,0.4s						
MLR	Muntele Rosu	5.84	356	⇓P	Pn	04 48 59.3	+1.9
VOIR		5.87	350	⇑P	Pn	04 48 59.0	+1.3
BISRR	Bisoca	5.88	2	⇓P	Pn	04 48 58.9	+1.0
KUBS	Kucevo	5.94	324	*e*Pn	Pn	04 48 57.6	-1.1
HERR	Herculane	6.02	331	⇓P	Pn	04 49 00.1	+0.3
GRUS	Gruza	6.04	316	*e*Pn	Pn	04 48 59.3	-0.7
SJES	Sjenica	6.07	308	*e*Pn	Pn	04 49 00.1	-0.5
LOT	Lotru	6.12	342	⇑P	Pn	04 49 01.4	+0.2
IVAS	Ivanjica	6.15	312	*e*Pn	Pn	04 49 01.7	+0.1
PLOR	Plostina	6.18	1	⇓P	Pn	04 49 03.4	+1.3
VRI	Vrincioaia	6.20	2	⇓P	Pn	04 49 04.0	+1.8
MDVR	Moldovita	6.22	327	⇓P	Pn	04 49 02.9	+0.3
GZR	Gura Zlata	6.35	336	⇑P	Pn	04 49 04.3	0.0
DOPR	Dopca	6.35	353	⇑P	Pn	04 49 05.5	+1.2
TRUS	Trudelj	6.43	317	*e*Pn	Pn	04 49 04.8	-0.5
OZUR		6.45	356	⇑P	Pn	04 49 07.1	+1.5
MDB	Medias	6.66	347	⇓P	Pn	04 49 10.0	+1.5
VRSS	Vrsac	6.66	327	*e*Pn	Pn	04 49 08.6	+0.1
ONER	Baraj Valea Uz	6.67	359	⇑P	Pn	04 49 10.0	+1.4
BBLS	Lazi&#263i	6.76	311	*e*Pn	Pn	04 49 10.1	+0.2
TESR	Tescani	6.84	1	⇓P	Pn	04 49 12.2	+1.1
SURR	Surduc	6.88	334	⇑P	Pn	04 49 12.0	+0.5
BZS	Buzias	6.95	330	⇑P	Pn	04 49 13.0	+0.5
TEKS	Tekeris	7.11	316	*e*Pn	Pn	04 49 14.7	-0.1
SEV	Sevastopol'	7.23	45	Pm		04 49 25.9	
	comp=Z,5.0nm,0.3s						
SEV				*e*S	Sn	04 50 33.1	-5.3
SEV				Sm		04 50 33.3	
	comp=N,1.0nm,0.4s						
SEV				Sm		04 50 33.3	
	comp=E,10.0nm,0.3s						
TARU	Tarkhankut	7.24	36	*e*S	Sn	04 50 33.8	-4.9
TARU				Sm		04 50 36.2	
	comp=N,1.0nm,0.3s						
TARU				Sm		04 50 36.2	
	comp=E,3.0nm,0.3s						
MARR	Marisel-Cluj	7.43	342	⇑P	Pn	04 49 20.3	+1.1
YAL	Yalta	7.46	47	*e*S	Sn	04 50 39.5	-4.6
YAL				Sm		04 50 39.8	
	comp=N,6.0nm,0.3s						
YAL				Sm		04 50 39.8	
	comp=E,8.0nm,0.4s						
TIP	Timpagrande	7.55	269	⇓P	Pn	04 49 20.7	-0.1
DNZ2	Donuzlav2	7.56	39	*e*S	Sn	04 50 42.4	-4.2
DNZ2				Sm		04 50 48.5	
	comp=N,3.0nm,0.3s						
DNZ2				Sm		04 50 48.5	
	comp=E,5.0nm,0.3s						
DRGR		7.64	340	⇓P	Pn	04 49 22.7	+0.6
SIM	Simferopol'	7.73	44	*e*S	Sn	04 50 45.4	-5.4
SIM				Sm		04 50 47.7	
	comp=N,73nm,0.8s						
SIM				Sm		04 50 47.7	
	comp=E,17nm,0.7s						
BURAR	Bucovina Array	8.00	354	⇓P	Pn	04 49 28.9	+1.9
SUDU	Sudak	8.19	48	*e*S	Sn	04 50 57.0	-5.0
SUDU				Sm		04 51 03.1	
	comp=N,36nm,0.6s						
SUDU				Sm		04 51 03.1	
	comp=E,2.0nm,0.2s						
VYHS	Vyhne	10.40	331	*e*PN	Pn	04 49 59.8	0.0
AKASG	Malin Array Be	11.20	9	Pn	Pn	04 50 11.8	+1.0
	comp=E,0.4nm,0.3s,baz=194,slow=12,SNR=2.3						
	comp=E,0.2nm,0.3s						
FINES	FINESS Array B	21.81	359	P	P	04 52 24.6	+2.0
	comp=E,1.2nm,0.8s,baz=173,slow=14,SNR=4.0						
	comp=E,1.2nm,0.8s						
NOA	NORSAR Array B	23.40	341	P	P	04 52 41.4	+2.0
	comp=E,0.5nm,0.7s,baz=148,slow=11,SNR=3.7						
	comp=E,0.5nm,0.7s						
EKA	Eskdalemuir Ar	25.17	318	P	P	04 52 58.2	+2.3
	comp=E,1.6nm,0.7s,baz=126,slow=8.5,SNR=3.9						
	comp=E,1.6nm,0.7s						
BVAR	Borovoye Array	32.58	51	P	P	04 54 02.3	+0.3
	comp=E,0.7nm,0.7s,baz=280,slow=4.4,SNR=3.7						
	comp=E,0.7nm,0.7s						
TORD	Torodi Ar. Bea	34.28	226	P	P	04 54 17.1	0.0
	comp=E,36nm,0.3s,baz=37,slow=8.9,SNR=2.3						
KURBB	Kurchatov Arra	37.58	55	P	P	04 54 45.5	+0.4
	comp=E,1.7nm,0.6s,baz=280,slow=8.7,SNR=9.4						
	comp=E,1.7nm,0.6s						
MKAR	Makanchi Array	40.53	61	P	P	04 55 10.5	+0.6
	comp=E,1.4nm,0.5s,baz=292,slow=6.4,SNR=12						
	comp=E,1.4nm,0.5s						
ZALV	Zalesovo Beam	41.20	50	P	P	04 55 15.5	+0.3
	comp=E,0.6nm,0.4s,baz=273,slow=8.6,SNR=3.7						
	comp=E,0.6nm,0.4s						

IDC ***17*** *04:49:40.2±0.6, 31.°85S×177.°98W, h0km, mb4.4/11, mbtmp4.4/11, MS3.8/10, Error ellipse: s-maj=24.0km s-min=21.7km az=106.0*

WEL ***17*** *04:49:41.8±0.8, 32°S±5°×17°8W±1°5, h33km, M4.7/15, mB4.9/7, ML5.1/17, MLv5.2/15, Mw(mB)4.2/7, Error ellipse: s-maj=20.5km s-min=3.1km az=104.9, confirmed*

NEIC ***17*** *04:49:43.1±2.3, 31.°9S±0.°1×178.°1W±0.°2, h10km±1km, mb4.8/21, Error ellipse: s-maj=25.8km s-min=17.8km az=91.0*

NOU ***17*** *04:50:18.4, 34.°01S×179.°73W, h41km, mb4.5/10, South of Kermadec Islands*

ISC 17 04:49:44.2±0.5, **32.°02S**±0.°05×**178.°13W**±0.°10, **h24km, n127, σ1ˢ53**/130, **mb4.7**/27, **MS3.9**/7, **3C-5D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.76	4	P	Pn	04 50 24.6	-2.4
GLKZ				S	Sn	04 50 57.7	-1.8
RAO	Raoul Island	2.77	4	Pn	Pn	04 50 24.4	-2.6
RIZ	Raoul Island	2.77	4	P	Pn	04 50 22.8	-4.4
RIZ				S	Sn	04 50 58.4	-1.5
MXZ	Matakaoa Point	6.25	207	Pn	Pn	04 51 12.4	-2.5
MXZ	Matakaoa Point	6.25	207	P	Pn	04 51 16.9	+1.9
MXZ	Matakaoa Point	6.25	207	P	Pn	04 51 13.8	-1.1
MXZ				S	Sn	04 52 24.4	-1.2
WMGZ	Waiomatatini S	6.44	205	P	Pn	04 51 15.6	-1.9
WMGZ				S	Sn	04 52 30.9	+0.7
PKGZ	Pakihiroa	6.61	207	P	Pn	04 51 17.8	-2.0
PKGZ				S	Sn	04 52 34.8	+0.4
HAZ	Te Kaha	6.63	209	P	Pn	04 51 18.8	-1.3
HAZ				S	Sn	04 52 36.0	+1.1
PUZ	Puketiti	6.72	205	P	Pn	04 51 18.7	-2.7
PUZ				S	Sn	04 52 35.4	-1.8
RUGZ	Raukumara Rang	6.85	209	P	Pn	04 51 22.3	-1.0
RUGZ				S	Sn	04 52 39.1	-1.5
TWGZ	Tauwhareparae	6.92	206	P	Pn	04 51 23.5	-0.6
TWGZ				S	Sn	04 52 40.3	-1.7
CNGZ	Carnagh Statio	7.11	204	P	Pn	04 51 18.7	-8.0
CNGZ				S	Sn	04 52 46.5	-0.2
TKGZ	Te Karaka	7.20	206	P	Pn	04 51 26.6	-1.2
TKGZ				S	Sn	04 52 45.9	-3.0
MWZ	Matawai	7.23	208	P	Pn	04 51 27.1	-1.3
MWZ				S	Sn	04 52 47.1	-2.6
URZ	Urewera	7.34	211	Pn	Pn	04 51 27.6	-2.3
	2.6nm,0.3s,baz=123,slow=4.4,SNR=14						
URZ				Sn	Sn	04 52 50.1	-2.2
	22nm,0.3s,baz=43,slow=19,SNR=14						
URZ	Urewera	7.34	211	P	Pn	04 51 29.3	-0.6
URZ	Urewera	7.34	211	P	Pn	04 51 28.1	-1.7
URZ				S	Sn	04 52 50.2	-2.2
WCZ	Waipu Caves	7.37	236	P	Pn	04 51 37.3	+7.1
RAGZ	Rawiri	7.41	208	S	Sn	04 52 52.6	-1.7
RIGZ	Rimuhau	7.46	206	P	Pn	04 51 31.0	-0.6
RIGZ				S	Sn	04 52 53.8	-1.6
MKAZ	Moumakai	7.50	226	P	Pn	04 51 37.1	+5.0
OUZ	Omahuta	7.60	243	P	Pn	04 51 39.6	+6.2
OUZ	Omahuta	7.60	243	P	Pn	04 51 39.7	+6.3
PRGZ	Paritu Road	7.61	204	P	Pn	04 51 30.0	-3.6
PRGZ				S	Sn	04 52 53.8	-5.3
MUGZ	Murupara	7.67	211	S	Sn	04 52 56.3	-4.2
SNGZ	Shannon Statio	7.69	207	P	Pn	04 51 34.7	0.0
SNGZ				S	Sn	04 52 58.8	-2.3
RTZ	Ruatahuna	7.69	210	Pn	Pn	04 51 33.8	-1.0
MHGZ	Mahia Peninsul	7.81	203	P	Pn	04 51 33.4	-2.9
MHGZ				S	Sn	04 52 58.8	-5.2
MTHZ	Maungataniwha	7.95	210	P	Pn	04 51 38.2	-0.1
NMHZ	Naumai	8.17	209	P	Pn	04 51 40.2	-1.1
BKZ	Black Stump Fm	8.36	210	Pn	Pn	04 51 42.0	-1.9
BKZ	Black Stump Fm	8.36	210	P	Pn	04 51 43.8	-0.1
BKZ	Black Stump Fm	8.36	210	P	Pn	04 51 43.6	-0.4
BFZ	Birch Farm	9.75	206	P	Pn	04 52 02.9	-0.1
KHZ	Kahutara	12.31	210	P	Pn	04 52 37.9	0.0
GVZ	Greta Valley S	12.97	210	Pn	Pn	04 52 47.8	+0.8
RPZ	Rata Peaks	14.45	213	Pn	Pn	04 53 03.9	-3.3
	1.6nm,0.3s,baz=45,slow=1.4,SNR=5.0						
RPZ				Sn	Sn	04 55 33.4	-13
	1.5nm,0.3s,baz=86,slow=22,SNR=8.0						
RPZ	Rata Peaks	14.45	213	P	Pn	04 53 08.0	+0.9
MSVF	Nonsavu	14.64	345	Pn	Pn	04 53 02.8	-7.1
	0.3nm,0.3s,baz=154,slow=14,SNR=3.8						
MSVF				LR	LR	04 57 55.2	
	comp=Z,382nm,18.2s,baz=168,slow=34						
ODZ	Otahua Downs	15.67	211	P	Pn	04 53 24.7	+1.4
JCZ	Jackson Bay	15.81	217	P	Pn	04 53 26.6	+1.3
DZM	Mont Dzumac	16.92	302	Pn	Pn	04 53 39.0	-0.6
DZM	Mont Dzumac	16.92	302	*e*P	Pn	04 53 37.1	-2.5
	78nm,26.6s						
DZM				*e*LR	LR	04 57 36.0	
	621nm,22.9s						
DZM	Mont Dzumac	16.92	302	Pn	P	04 53 41.9	+0.5
	0.2nm,0.3s,baz=113,slow=19,SNR=4.9						
DZM				LR	LR	04 59 13.9	
	comp=Z,810nm,18.7s,baz=161,slow=34						
SYZ	Scrubby Hill	17.49	210	P	P	04 53 48.7	+1.3
WHZ	Wether Hill Ro	17.54	214	Pn	Pn	04 53 46.3	-0.8
RAR	Rarotonga	19.60	61	LR	LR	05 02 17.7	
	comp=Z,48nm,18.9s,baz=252,slow=39						
TBI	Tubuai	26.76	78	*e*LR	LR	05 02 02.2	
	706nm,26.5s						
PPT2	Papeete2	29.53	68	*e*LR	LR	05 03 14.2	
	178nm,27.2s						
PPT2				*e*LR	LR	05 03 24.0	
	125nm,23.2s						
PPT	Papeete	29.54	68	LR	LR	05 06 29.1	
	comp=Z,45nm,18.3s,baz=274,slow=34						
CTAO	Charters Tower	33.98	282	P	P	04 56 27.3	+1.2
CTAO				IAmb	IAmb	04 56 29.9	
	comp=Z,19nm,1.0s						
STKA	Stephens Creek	34.03	259	P	P	04 56 27.7	+1.3
STKA	Stephens Creek	34.03	259	P	P	04 56 27.9	+1.5
	comp=Z,5.4nm,0.8s,baz=85,slow=8.8,SNR=8.4						
STKA				LR	LR	05 09 19.0	
	comp=Z,230nm,19.1s,baz=84,slow=34						
	comp=Z,5.4nm,0.8s						
BBOO	Buckleboo	38.44	256	P	P	04 57 04.3	+0.1
BBOO				IAmb	IAmb	04 57 11.7	
	comp=Z,33nm,1.2s						
TAOE	Nuku Hiva Isla	42.07	65	*e*LR	LR	05 09 16.6	
	comp=Z,128nm,24.4s						
AS31	Alice Springs	42.93	269	P	P	04 57 41.3	0.0
ASAR	Alice Springs	42.93	269	P	P	04 57 40.8	-0.6
ASAR	Alice Springs	42.93	269	P	P	04 57 42.1	+0.7
	comp=Z,3.2nm,0.5s,baz=115,slow=7.9,SNR=23						
ASAR				LR	LR	05 15 53.3	
	comp=Z,154nm,18.1s,baz=96,slow=36						
	comp=Z,3.2nm,0.5s						
WR8	Warramunga Arr	43.93	274	P	P	04 57 50.5	+1.1
WR8				IAmb	IAmb	04 57 54.0	
	comp=Z,9.8nm,0.8s						
WRAB	Tennant Creek	44.06	274	P	P	04 57 50.9	+0.4
WRAB				IAmb	IAmb	04 58 00.6	
	comp=Z,9.3nm,0.7s						
WRA	Warramunga Arr	44.07	274	P	P	04 57 50.4	-0.2
WRA	Warramunga Arr	44.07	274	P	P	04 57 51.0	+0.4
	comp=Z,12nm,0.8s,baz=112,slow=7.9,SNR=71						
WRA				LR	LR	05 15 34.6	
	comp=Z,192nm,18.9s,baz=132,slow=35						
	comp=Z,12nm,0.8s						
WB0	Warramunga Arr	44.10	274	P	P	04 57 50.6	-0.2
WB0				IAmb	IAmb	04 57 52.7	
	comp=Z,14nm,0.8s						
FORT	Forrest	45.54	257	P	P	04 58 01.4	-0.7
VNDA	Vanda	46.47	186	LR	LR	05 14 53.0	
	comp=Z,91nm,19.6s,baz=296,slow=32						
FITZ	Fitzroy Crossi	52.26	271	P	P	04 58 53.5	-0.3
FITZ	Fitzroy Crossi	52.26	271	LR	LR	05 20 42.7	
	comp=Z,294nm,18.3s,baz=122,slow=36						
CASY	Casey	53.66	208	P	P	04 59 03.9	+0.5
CASY				IAmb	IAmb	04 59 05.8	
	comp=Z,9.3nm,0.8s						
QSPA	South Pole Qui	58.09	180	P	P	04 59 37.1	+1.7
QSPA	South Pole Qui	58.09	180	P	P	04 59 36.7	+1.3
	comp=Z,1.9nm,0.7s,baz=331,slow=0.7,SNR=12						
	comp=Z,1.9nm,0.7s						
BELA	Belgrano 2	68.20	172	P	P	05 00 42.9	+0.8
BELA				IAmb	IAmb	05 00 57.4	
	comp=Z,6.4nm,0.9s						
MAW	Mawson	70.75	201	P	P	05 01 00.3	+2.3
	comp=Z,3.7nm,0.7s,baz=114,slow=3.7,SNR=5.2						
	comp=Z,3.7nm,0.7s						
SYO	Syowa Base	75.51	193	⇑*e*P	P	05 01 26.6	+0.5
SYO	Syowa Base	75.51	193	⇓*e*sP	sP	05 01 32.8	-1.7
TROLL	Troll, Antarti	76.25	180	⇑P	P	05 01 28.9	-1.6
	comp=Z,65nm,0.5s						
SNAA	Sanae	76.54	178	⇓P	P	05 01 31.9	-0.2
SNAA	Sanae	76.54	178	P	P	05 01 32.7	+0.7
SNAA				IAmb	IAmb	05 01 58.4	
	comp=Z,14nm,1.3s						
SNAA	Sanae	76.54	178	P	P	05 01 31.3	-0.7
	comp=Z,2.6nm,1.1s,baz=168,slow=5.4,SNR=4.5						
	comp=Z,2.6nm,1.1s						
VNA3	Neumayer Olymp	76.70	176	⇓P	P	05 01 33.0	+0.2
	comp=Z,5.0nm,0.8s						
VNA2	Neumayer--Watz	77.13	177	⇓P	P	05 01 35.8	+0.6
	comp=Z,4.8nm,0.8s,baz=164,slow=4.9						
VNA1	Neumayer--Stat	77.36	177	⇓P	P	05 01 37.3	+0.8
	comp=Z,9.2nm,1.0s						
PLCA	Paso Flores	81.49	133	LR	LR	05 36 07.0	
	comp=Z,48nm,18.1s,baz=234,slow=34						
KSRS	Korea Array	85.51	320	P	P	05 02 18.8	-1.2
	comp=Z,0.5nm,0.3s,baz=170,slow=4.8,SNR=2.1						
	comp=Z,0.5nm,0.3s						
NJ2	Nanjing	87.21	311	*e*P	P	05 02 31.6	+3.1
NJ2				pmax	pmax		
	comp=Z,9.0nm,1.2s						
PETK	Petropavlovsk-	87.35	346	P	P	05 02 29.3	+0.6
	comp=Z,3.9nm,0.8s,baz=125,slow=7.4,SNR=3.2						
	comp=Z,3.9nm,0.8s						
USRK	Ussuriysk Ar.	88.45	327	P	P	05 02 34.3	+0.2
	comp=Z,2.8nm,0.8s,baz=175,slow=2.5,SNR=4.6						
	comp=Z,2.8nm,0.8s						
NVAR	Mina Array Bea	89.50	43	P	P	05 02 39.7	+0.2
	comp=Z,1.5nm,0.9s,baz=215,slow=6.1,SNR=7.9						
	comp=Z,1.5nm,0.9s						
TPH	Tonopah	89.89	44	P	P	05 02 41.6	+0.2
W13A	Hualapai Mount	89.97	48	P	P	05 02 42.1	+0.3
W13A				IAmb	IAmb	05 02 56.5	
	comp=Z,4.2nm,1.0s						
X16A	Lo Mia Camp, P	91.09	49	P	P	05 02 47.9	+0.8
X16A				IAmb	IAmb	05 03 01.9	
	comp=Z,4.0nm,0.8s						
BNX	BinXian	91.77	325	⇑P	P	05 02 50.0	+0.4
BNX				pmax	pmax		
	comp=Z,7.0nm,0.7s						
U15A	North Rim	91.81	47	P	P	05 02 50.8	+0.4
U15A				IAmb	IAmb	05 03 05.2	
	comp=Z,3.9nm,0.8s						
TXAR	Lajitas Array	93.36	57	P	P	05 02 56.6	-0.9
	comp=Z,0.5nm,1.0s,baz=230,slow=3.1,SNR=4.0						
	comp=Z,0.5nm,1.0s						
PZH	PanZhiHua	95.95	297	P	P	05 03 10.9	+1.4
JCT	Junction City	96.78	58	P	P	05 03 11.2	-1.8
HHC	Hu-ho-hao-te	97.28	314	*e*P	P	05 03 13.3	-1.8
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		

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      comp=Z,42nm,5.5s
MKAR  Makanchi Array    118.72 309    PKPdf    PKPdf    05 08 29.9 -0.1
MKAR  Makanchi Array    118.72 309    PKP      PKPdf    05 08 28.6 -1.5
      comp=Z,0.5nm,0.7s,baz=80,slow=1.4,SNR=4.9
ZALV  Zalesovo Beam     119.16 318    PKP      PKPdf    05 08 28.4 -2.1
      comp=Z,0.4nm,0.3s,baz=126,slow=7.3,SNR=1.6
KURBB Kurchatov Arra    122.11 313    PKP      PKPdf    05 08 35.0 -1.3
      comp=Z,1.5nm,0.2s,baz=108,slow=1.9,SNR=7.3
BVAR  Borovoye Array    127.47 315    PKP      PKPdf    05 08 46.0 -0.6
      comp=Z,1.0nm,0.5s,baz=90,slow=4.7,SNR=5.1
ARCES ARCESS Array B    140.15 347    PKhKP    PKPpre   05 09 03.6
      comp=Z,5.1nm,1.0s,baz=350,slow=3.7,SNR=3.9
KBZ   Khabaz            145.89 302    PKPbc    PKPdf    05 09 20.3 -0.4
      comp=Z,8.5nm,1.1s,baz=68,slow=1.8,SNR=11
KIV   Kislovodsk        146.02 302    PKPdf    PKPdf    05 09 21.2 +0.2
OBN   Obninsk           146.42 324    PKPdf    PKPdf    05 09 21.4 +0.2
FIA1  FINESS Array S    146.62 339    PKPdf    PKPdf    05 09 21.6 +0.2
FINES FINESS Array B    146.62 339    PKPbc    PKPdf    05 09 22.2 +0.8
      comp=Z,8.0nm,0.6s,baz=45,slow=3.5,SNR=42
MARD  Mardin            147.72 290    PKPbc    PKPbc    05 09 27.6 +0.5
KOPT  Kop Dagi          147.95 295    PKPbc    PKPbc    05 09 27.5 -0.3
NB2   NORSAR Subarra    150.33 351    PKP      PKPbc    05 09 32.0 -0.8
      comp=Z,4.4nm,1.1s,baz=17,slow=2.6
NOA   NORSAR Array B    150.33 351    PKPbc    PKPbc    05 09 31.5 -1.3
      comp=Z,1.4nm,0.7s,baz=14,slow=4.2,SNR=7.9
GAZ   Gaziantep         150.57 290    PKPbc    PKPbc    05 09 34.1  0.0
HFS   Hagfors           150.81 348    PKPbc    PKPbc    05 09 32.8 -1.1
      comp=Z,4.9nm,0.8s,baz=318,slow=1.9,SNR=7.6
NACGM Naroch            151.13 330   ePKP      PKiKP    05 09 35.6 +0.3
      comp=Z,10.0nm,0.8s,baz=50
BNN   Bunyan            151.60 293    PKPbc    PKPbc    05 09 36.5 -0.1
MMAI  Mount Meron Ar    151.77 281    PKPbc    PKiKP    05 09 37.9 +0.4
      comp=Z,4.5nm,0.6s,baz=80,slow=6.1,SNR=7.5
AKASG Malin Array Be    152.50 321    PKPbc    PKPbc    05 09 37.8 -0.2
AKASG Malin Array Be    152.50 321    PKPbc    PKPbc    05 09 38.0 -0.1
      comp=Z,2.1nm,0.7s,baz=59,slow=2.5,SNR=10.0
AKBB  Malin Array Si    152.50 321    PKPbc    PKPbc    05 09 37.2 -0.8
AKBB                                           pPKPbc   05 09 45.4 +0.9
BRTR  Keskin Array B    153.23 296    PKPbc    PKPbc    05 09 39.3 -1.0
BRTR                                  PKPab    PKPab    05 09 52.0 -0.1
BRTR  Keskin Array B    153.23 296    PKPbc    PKPbc    05 09 40.2  0.0
      comp=Z,1.9nm,1.0s,baz=64,slow=2.9,SNR=8.9
MORC  Moravsky Berou    158.75 331   ePKP      PKPab    05 10 15.1 -0.1
CLL   Collm             159.06 340   iPKPab    PKPab    05 10 16.0 -0.4
      comp=Z,6.0nm,0.9s
VYHS  Vyhne             159.14 327   ePKP      PKPab    05 10 17.5 +0.6
JAVC  Velka Javorina    159.39 329   ePKP      PKPab    05 10 19.3 +1.2
TORD  Torodi Ar. Bea    161.21 179    PKPab    PKPab    05 10 27.0 +0.3
      comp=Z,42nm,0.4s,baz=161,slow=3.3,SNR=1.6
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*IDC **17** 05:18:52.4±1.4, 23°.03S×66°.41W, h209^{km}±13^{km}, mb3.6/10, mbtmp4.2/15, MS3.7/1, Error ellipse: s-maj=16.7km s-min=10.2km az=82.0*

*NEIC **17** 05:18:53.2±1.8, 23°.08S±0°.06×66°.44W±0°.08, h214^{km}±6^{km}, mb4.3/70, ML4.4(GUC), Error ellipse: s-maj=10.9km s-min=9.2km az=75.0*

*GUC **17** 05:18:54.6±0.6, 23°.06S×66°.85W, h263^{km}±9^{km}, ML4.6*

*VAO **17** 05:18:54.4±0.5, 23°.00S×66°.46W, h240^{km}±6^{km}, mb4.3*

*SJA **17** 05:18:54.5±0.9, 23°.11S×66°.67W, h225^{km}±7^{km}, ML4.2, MW4.0*

ISC 17 05:18:53.0±0.6, **23°.07S**±0°.04×**66°.51W**±0°.05, **h220**^{km}±6^{km}, **n226**, σ**1^{s}.21**/252, **mb4.3**/39, **11C, Jujuy Province**

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Code  Station Name        Δ°    AZ°    Phase ID          Time      Res
                                       Op       ISC      h  m  s   ISC
SALTA                     1.16 172   iP        Pn       05 19 28.5 +2.0
SALTA                                iS        S        05 19 54.3 +1.7
SALTA                                 IAML              05 19 57.7
      comp=Z,141nm,1.1s
AF01  San Pedro de A      1.54 274             Pn       05 19 32.0 +2.8
AF01                                  Sn       S        05 19 54.8 -2.3
AF01  San Pedro de A      1.54 274 ⇑ iP        Pn       05 19 32.0 +2.8
AF01  San Pedro de A      1.54 274   iP        Pn       05 19 31.1 +2.0
AF01                                  IAML              05 20 13.2
      comp=Z,394nm,0.7s
PB09  IPOC Station P      2.83 296             Pn       05 19 44.1 +2.1
PB09                                  Sn       S        05 20 21.3 +1.3
PB09  IPOC Station P      2.83 296 ⇑ iP        Pn       05 19 44.0 +2.1
PB09                                 iS        S        05 20 21.1 +1.1
PB09                                  IAML              05 20 22.9
      comp=E,522nm,0.5s
PB09  IPOC Station P      2.83 296   iP        Pn       05 19 42.7 +0.8
PB09                                 iS        S        05 20 18.5 -1.5
PB09                                  IAML              05 20 23.2
      comp=Z,577nm,0.7s
PB09                                  IAML              05 20 23.2
      comp=Z,562nm,0.7s
PB06  IPOC Station P      2.84 277             Pn       05 19 43.5 +1.4
PB06                                  Sn       S        05 20 20.7 +0.4
PB06  IPOC Station P      2.84 277 ⇑ iP        Pn       05 19 43.4 +1.3
PB06                                 iS        S        05 20 20.5 +0.2
PB06                                  IAML              05 20 21.4
      comp=N,705nm,0.4s
PB06  IPOC Station P      2.84 277   iP        Pn       05 19 42.9 +0.8
PB06                                 iS        S        05 20 18.8 -1.5
PB06                                  IAML              05 20 25.3
      comp=Z,492nm,0.3s
PB06                                  IAML              05 20 25.3
      comp=Z,492nm,0.3s
FSA   Cafayete            3.07 171   iP        Pn       05 19 46.5 +1.9
FSA                                  iS        S        05 20 25.7 +0.6
PB03  IPOC Station P      3.16 288    Pn       Pn       05 19 46.9 +1.1
PB03                                  Sn       S        05 20 26.2 -0.6
PB03  IPOC Station P      3.16 288 ⇑ iP        Pn       05 19 46.9 +1.1
PB03                                 eS        S        05 20 26.4 -0.5
PB03  IPOC Station P      3.16 288   eP        Pn       05 19 47.0 +1.3
PB03                                 iS        S        05 20 24.9 -2.0
PB03                                  IAML              05 20 27.2
      comp=Z,930nm,0.3s
PB05  IPOC Station P      3.41 273             Pn       05 19 49.5 +1.0
PB05  IPOC Station P      3.41 273 ⇑ iP        Pn       05 19 49.4 +0.8
PB05                                 iS        S        05 20 29.4 -2.6
PB05  IPOC Station P      3.41 273   eP        Pn       05 19 49.6 +1.0
PB05                                 iS        S        05 20 29.7 -2.3
PB05                                  IAML              05 20 34.0
      comp=Z,322nm,0.5s
PB05                                  IAML              05 20 34.0
      comp=Z,321nm,0.5s
PB01  IPOC Station P      3.42 306             Pn       05 19 49.8 +1.1
PB01  IPOC Station P      3.42 306 ⇑ iP        Pn       05 19 49.8 +1.1
PB01                                 iS        S        05 20 32.4 +0.3
PB01  IPOC Station P      3.42 306   eP        Pn       05 19 50.0 +1.3
PB01                                 iS        S        05 20 30.6 -1.5
PB01                                  IAML              05 20 33.5
      comp=Z,346nm,0.2s
PB01                                  IAML              05 20 35.1
      comp=Z,358nm,0.2s
GO02  Mina Guanaco        3.50 233             Pn       05 19 51.6 +1.8
GO02  Mina Guanaco        3.50 233   eP        Pn       05 19 51.6 +1.8
GO02                                 iS        S        05 20 35.1 +0.8
PB10  IPOC Station P      3.74 262             Pn       05 19 53.6 +1.2
PB10  IPOC Station P      3.74 262   eP        Pn       05 19 53.5 +1.0
PB10                                 iS        S        05 20 37.2 -1.8
PB10  IPOC Station P      3.74 262   eP        Pn       05 19 53.0 +0.6
PB10                                 iS        S        05 20 35.4 -3.6
PB10                                  IAML              05 20 44.7
      comp=Z,363nm,0.4s
PB10                                  IAML              05 20 44.7
      comp=Z,363nm,0.4s
PB08  IPOC Station P      3.81 319             Pn       05 19 55.7 +2.0
PB08  IPOC Station P      3.81 319 ⇑ iP        Pn       05 19 55.6 +1.9
PB08                                 iS        S        05 20 40.8 -0.3
PB08  IPOC Station P      3.81 319   iP        Pn       05 19 55.3 +1.6
PB08                                 iS        S        05 20 39.9 -1.1
PB08                                  IAML              05 20 44.1
      comp=Z,352nm,0.7s
PB14  IPOC Station P      3.89 246             Pn       05 19 55.4 +0.9
PB14  IPOC Station P      3.89 246   iP        Pn       05 19 55.4 +0.9
PB14                                 iS        S        05 20 40.0 -2.6
PB14                                  IAML              05 20 45.5
      comp=Z,612nm,0.3s
GO01  Chusmiza            4.20 323             Pn       05 19 60.0 +1.4
TA01  Diego Aracena       4.22 305             Pn       05 19 58.2 -0.1
TA01  Diego Aracena       4.22 305   iP        Pn       05 19 59.3 +1.0
TA01                                 iS        S        05 20 47.4 -2.1
TA01                                  IAML              05 20 51.7
      comp=Z,238nm,0.7s
TA02  Huaiquique          4.37 309             Pn       05 19 59.9 -0.1
PB11  IPOC Station P      4.40 318             Pn       05 20 00.9 +0.1
PB11  IPOC Station P      4.40 318   eP        Pn       05 20 00.8 +0.1
PB11                                 iS        S        05 20 51.2 -2.7
AC02  Maricunga           4.44 212             Pn       05 20 02.7 +1.3
AC01  Pan de Azucar       4.82 230             Pn       05 20 05.2 -0.5
PB16  IPOC Station P      5.48 329             Pn       05 20 15.6 +1.0
AC06  Mina Casimiro       5.51 218             Pn       05 20 13.6 -0.8
GO03  Copiapo             5.63 216             Pn       05 20 15.3 -0.5
AP01  Chacalluta          5.89 322    Pn       Pn       05 20 19.6 +0.4
PB18  Visviri             6.12 332             Pn       05 20 22.6  0.0
AC04  Llanos de Chal      6.57 218             Pn       05 20 26.6 -1.2
LPAZ  La Paz              6.91 347             Pn       05 20 34.1 +1.2
LPAZ  La Paz              6.91 347    P        Pn       05 20 33.9 +0.9
      comp=Z,14nm,0.3s,baz=153,slow=6.5,SNR=126
LPAZ                                  S        S        05 21 50.2 -2.1
      comp=Z,17nm,0.8s,baz=64,slow=22,SNR=10
LPAZ  La Paz              6.91 347   eP        Pn       05 20 33.5 +0.6
LCO   Las Campanas        7.02 212             Pn       05 20 33.2 -0.7
CO01  Juntas del Tor      7.59 204             Pn       05 20 41.0 -0.2
CO05  La Serena           8.03 211    Pn       Pn       05 20 45.7 -0.9
GO04  Tololo Observa      8.05 208             Pn       05 20 45.5 -1.6
MURT  Porto Murtinho      8.36  82   eP        Pn       05 20 49.1 -1.8
CO03  El Pedregal         8.59 205             Pn       05 20 52.9 -1.0
CFA   Coronel Fontan      8.64 190    P        Pn       05 20 53.0 -1.6
      comp=Z,6.9nm,0.3s,baz=4.8,slow=10,SNR=75
CFA                                   S        S        05 22 25.4 -6.7
      comp=Z,5.8nm,0.3s,baz=323,slow=23,SNR=9.6
ZON   Zonda               8.66 192    Pn       Pn       05 20 53.9 -0.9
SIV   San Ignacio         8.71  37    P        Pn       05 20 54.3 -1.2
      comp=Z,44nm,0.5s,baz=215,slow=13,SNR=133
CO06  Fray Jorge          8.85 210    Pn       Pn       05 20 55.8 -1.3
CPUP  Villa Florida       8.96 113    Pn       Pn       05 20 58.0 -0.6
CPUP  Villa Florida       8.96 113    P        Pn       05 20 57.4 -1.2
      comp=Z,0.5nm,0.8s,baz=136,slow=9.6,SNR=6.0
CO02  Combarbal           9.04 205             Pn       05 20 58.9 -0.8
PTLB  Pontes e Lacer     10.29  44             Pn       05 21 14.9 -0.8
PTLB  Pontes e Lacer     10.29  44   eP        Pn       05 21 13.8 -2.0
VA03  San Esteban        10.30 199             Pn       05 21 15.4 -0.5
VA06  Catapilco          10.36 203    Pn       Pn       05 21 15.6 -0.9
AQDB  Aquidauana         10.37  78             Pn       05 21 15.6 -1.2
AQDB  Aquidauana         10.37  78   eP        Pn       05 21 18.6 +1.8
PEL   Peldehue           10.69 199             Pn       05 21 19.8 -1.0
MT08  Bocatoma Ro        10.79 196             Pn       05 21 24.1 +1.8
MT16  CCHEN              10.91 198             Pn       05 21 24.5 +0.9
MT05  Renca              10.94 199             Pn       05 21 23.0 -1.0
MT02  Curacav            10.94 201    Pn       Pn       05 21 23.5 -0.5
MT03  Universidad Ad     10.97 198             Pn       05 21 24.7 +0.3
ITQB  Itaqui             11.04 129   eP        Pn       05 21 27.7 +2.6
LMEL  Las Melosas        11.22 196             Pn       05 21 28.6 +0.9
MT09  Talagante          11.37 199             Pn       05 21 28.8 -0.7
BO04  La Punta           11.46 197             Pn       05 21 30.6  0.0
VA05  Santo Domingo      11.47 202             Pn       05 21 31.0 +0.4
MT01  Popeta             11.54 200             Pn       05 21 31.0 -0.4
VILB  Vilhena            11.71  32             Pn       05 21 34.4 +0.5
VILB  Vilhena            11.71  32   eP        Pn       05 21 33.8  0.0
BO01  Tunca              11.97 199             Pn       05 21 36.3 -0.7
RPRD  Ribas do Rio P     12.18  80   eP        Pn       05 21 41.2 +1.5
BO02  Sierra Bellavi     12.27 197             Pn       05 21 40.9 +0.1
SALV  Santo Antonio      12.44  57   eP        Pn       05 21 42.0 -1.0
TRCB  Terra Rica         12.79  92   eP        P        05 21 48.9 -1.4
PTGB  Pitanga            13.32 100   eP        Pn       05 21 54.6 +0.7
ML02  Panimavida         13.35 198    Pn       Pn       05 21 54.0 -0.1
ITAB  Concordia          13.67 111             Pn       05 21 58.8 +0.6
ITAB  Concordia          13.67 111   eP        P        05 21 59.4 -0.6
CPSB  Cacapava Do Su     13.77 125   eP        Pn       05 21 59.5 +0.1
LDASE Londrina, Braz     14.16  94   eP        Pn       05 22 03.7 -0.5
BI02  San Fabin de       14.16 196             Pn       05 22 04.6 +0.3
PCMB  Pacaembu           14.19  87   eP        P        05 22 05.9 +0.1
PLTB  Pedras Altas       14.36 130    Pn       Pn       05 22 05.1 -1.5
PLTB  Pedras Altas       14.36 130   eP        Pn       05 22 05.4 -1.2
PDRB  Porto dos Gac      14.72  41   eP        Pn       05 22 10.1 -1.0
BI05  Punta Hualpn       14.81 201    P        Pn       05 22 11.1 -0.8
CNLB  Canela             15.37 117   eP        P        05 22 18.1 -0.7
ITRB  Iturama            15.41  81   eP        Pn       05 22 19.8 +0.3
TRQA  Tornquist          15.44 166    P        P        05 22 19.1 -0.4
FRTB  Fartura            15.59  94   eP        Pn       05 22 21.7 +0.1
ARAG  Araguaiana, MT     15.67  65   eP        P        05 22 22.3 +0.1
CLDB  Colider            15.86  42   eP        P        05 22 24.4  0.0
CZSB  Cruzeiro do Su     16.37 338   eP        P        05 22 30.6 +0.7
MAJ01 Sao Joao Batis     16.41 109   eP        P        05 22 29.3 -0.9
LR03  Panguipulli        17.24 195             P        05 22 39.6 +0.4
LR03                                  IAmb     IAmb     05 22 57.2
      comp=Z,26nm,1.4s
SPB   Sao Paulo          17.53  95    P        P        05 22 41.8 -0.7
SPB                                   IAmb     IAmb     05 22 43.4
      comp=Z,14nm,1.0s
SPB   Sao Paulo          17.53  95   eP        P        05 22 41.2 -1.4
PET01 Itanhaem-SP        17.66  98   eP        P        05 22 43.8 -0.2
LR05  Currie             17.73 194    P        P        05 22 44.8 +0.3
IPMB  Ipameri, GO        17.86  77   eP        P        05 22 46.4 +0.1
PLCA  Paso Flores        17.94 190    P        P        05 22 47.8 +0.8
PLCA  Paso Flores        17.94 190    P        P        05 22 47.7 +0.8
      comp=Z,3.9nm,0.8s,baz=3.2,slow=9.9,SNR=18
PLCA  Paso Flores        17.94 190   eP        P        05 22 47.1 +0.2
VAO   Valinhos           17.99  94             P        05 22 47.3 -0.3
VAO   Valinhos           17.99  94   eP        P        05 22 47.1 -0.5
SNDB  Serra Nova Dou     18.21  55   eP        P        05 22 49.2 -0.7
LL03  Petrohue           18.69 194    P        P        05 22 55.6 +0.8
BDFB  Brasilia           18.94  70             P        05 22 58.3 +0.3
BDFB  Brasilia           18.94  70    P        P        05 22 58.2 +0.3
      comp=Z,17nm,0.7s,baz=249,slow=12,SNR=36
TBTG  Tabatinga, AM      19.05 350    P        P        05 23 00.5 +1.4
TBTG  Tabatinga, AM      19.05 350   eP        P        05 22 59.9 +0.9
LL05  Los Muermos        19.20 196    P        P        05 23 00.9 +0.6
PARB  Paraibuna          19.20  95   eP        P        05 22 59.5 -1.2
NPGB  Novo Progresso     19.21  36   eP        P        05 23 00.4 -0.3
PMNB  Patos De Minas     19.30  80   eP        P        05 23 01.2 -0.6
TEFE  Tefe               19.53   6   eP        P        05 23 02.8 -1.4
BSCB  Bom Sucesso        20.25  88   eP        P        05 23 11.7 -0.3
MACA  Manacapuru-AM      20.58  17    P        P        05 23 13.8 -1.5
MACA                                  IAmb     IAmb     05 23 33.3
      comp=Z,11nm,0.7s
MACA  Manacapuru-AM      20.58  17   eP        P        05 23 13.4 -1.9
MAN01 Angra dos Reis     20.76  94   eP        P        05 23 16.6 -0.7
GO07  Milladeo Hill,     20.86 195    P        P        05 23 17.9 -0.1
VAS01 Vassouras-RJ       21.30  92   eP        P        05 23 22.7 -0.2
ITTB  Itaituba           21.31  31   eP        P        05 23 20.7 -2.3
DIAM  Diamantina, MG     21.88  82   eP        P        05 23 27.8 -1.0
DUB01 Friburgo-RJ        22.31  92   eP        P        05 23 31.7 -0.9
JANB  Januaria           22.42  73   eP        P        05 23 32.3 -1.4
SMTB  Santa Maria do     22.99  55   eP        P        05 23 37.2 -1.5
CAM01 Campos-RJ          23.00  92   eP        P        05 23 37.9 -0.9
SDBA  SAO DESIDERIO      23.12  66   eP        P        05 23 38.4 -1.6
PRPB  Parauapebas        23.26  46   eP        P        05 23 39.7 -1.5
SJMB  Sao Joao De Ma     24.04  84   eP        P        05 23 47.1 -1.2
MAL2  Monte Alegre,      24.10  32    P        P        05 23 47.9 -1.0
MAL2                                  IAmb     IAmb     05 23 50.5
      comp=Z,9.3nm,0.7s
OTAV  Otavalo            25.91 332    P        P        05 24 05.7  0.0
BOAV  Boa Vista          25.97  14    P        P        05 24 05.3 -0.4
BOAV                                  IAmb     IAmb     05 24 33.0
      comp=Z,8.3nm,1.3s
RCBR  Riachuelo          34.12  65    P        P        05 25 17.2 -0.2
FDF   Fort de France     37.93   8    P        P        05 25 49.0 -0.6
ACON  Acoyapa            39.32 330    P        P        05 26 00.6 -0.5
ACON                                  IAmb     IAmb     05 26 25.3
      comp=Z,17nm,1.2s
PMSA  Palmer Station     41.73 178    LR       LR       05 45 25.1
      comp=Z,98nm,20.3s,baz=216,slow=38
MTO3  Montecristo        43.44 327    P        P        05 26 35.9 +1.1
BELA  Belgrano 2         56.90 172             P        05 28 16.2 +1.6
BELA                                  IAmb     IAmb     05 28 17.6
      comp=Z,8.6nm,1.5s
SHEL  Horse Pasture      57.38  95             P        05 28 18.4 -0.6
VNA3  Neumayer Olymp     57.89 161 ⇑  P        P        05 28 22.5 +0.9
VNA2  Neumayer--Watz     58.45 161 ⇑  P        P        05 28 26.5 +1.1
      comp=Z,4.6nm,0.8s,baz=293,slow=8.2
LRAL  Lakeview Retre     59.11 340    P        P        05 28 30.4 -0.1
W57A  Gilead             59.30 347    P        P        05 28 32.5 +0.8
W57A                                  IAmb     IAmb     05 28 49.8
      comp=Z,5.7nm,1.1s
Y49A  Blount Mountai     59.69 341    P        P        05 28 34.6 +0.2
SNAA  Sanae              60.08 161 ⇑  P        P        05 28 37.5 +0.7
      comp=Z,50nm,0.6s
SNAA  Sanae              60.08 161    P        P        05 28 37.8 +1.0
SNAA                                  IAmb     IAmb     05 28 38.6
      comp=Z,3.8nm,0.9s
SNAA  Sanae              60.08 161    P        P        05 28 37.3 +0.6
      comp=Z,2.4nm,0.7s,baz=308,slow=5.3,SNR=14
      comp=Z,2.4nm,0.7s
FPAL  Fort Paine         60.09 342    P        P        05 28 37.0 -0.2
V55A  Taylorsville       60.23 346    P        P        05 28 39.1 +1.1
V55A                                  IAmb     IAmb     05 28 39.5
      comp=Z,4.1nm,0.7s
W50A  Signal Mountai     60.63 342    P        P        05 28 40.9 +0.1
W50A                                  IAmb     IAmb     05 28 59.8
      comp=Z,6.0nm,1.3s
TKL   Tuckaleechee C     60.65 344    P        P        05 28 40.8 -0.1
TKL                                   IAmb     IAmb     05 28 41.3
      comp=Z,6.4nm,1.2s
SWET  Sewanee            60.82 342    P        P        05 28 42.2 +0.1
SWET                                  IAmb     IAmb     05 28 42.5
      comp=Z,2.6nm,0.6s
TROLL Troll, Antarti     61.79 161 ⇑  P        P        05 28 49.4 +1.1
      comp=Z,140nm,0.5s
S54A  Dingess, Beckl     62.12 347    P        P        05 28 51.3 +0.6
S54A                                  IAmb     IAmb     05 29 23.1
      comp=Z,8.7nm,1.2s
WVT   Waverly            62.23 341    P        P        05 28 51.2 -0.3
WVT                                   IAmb     IAmb     05 28 55.5
      comp=Z,2.2nm,0.6s
SAND  Sanderson          62.85 325    P        P        05 28 57.0 +1.2
TXAR  Lajitas Array      63.19 324    P        P        05 28 59.0 +0.9
TXAR  Lajitas Array      63.19 324    P        P        05 28 58.3 +0.3
      comp=Z,0.2nm,0.5s,baz=147,slow=7.5,SNR=7.8
      comp=Z,0.2nm,0.5s
TX31  Lajitas Ar. Si     63.19 324    P        P        05 28 58.9 +0.9
P53A  Whipple            63.76 347    P        P        05 29 02.4 +1.0
P53A                                  IAmb     IAmb     05 29 11.4
      comp=Z,6.2nm,1.2s
P52A  Corning            64.06 347    P        P        05 29 03.4  0.0
P52A                                  IAmb     IAmb     05 29 17.5
      comp=Z,6.4nm,1.1s
SSPA  Standing Stone     64.25 350    P        P        05 29 05.5 +0.9
SSPA                                  IAmb     IAmb     05 29 16.8
      comp=Z,13nm,1.4s
O53A  New Philadelph     64.46 348    P        P        05 29 06.5 +0.6
O53A                                  IAmb     IAmb     05 29 26.5
      comp=Z,9.4nm,1.2s
CCM   Cathedral Cave     65.09 339    P        P        05 29 10.1 +0.1
CCM                                   IAmb     IAmb     05 29 10.8
      comp=Z,2.4nm,0.6s
L56A  Greenwood          65.67 351    P        P        05 29 14.0 +0.2
WVNY  West Valley, N     66.09 350    P        P        05 29 17.3 +0.9
WVNY                                  IAmb     IAmb     05 29 28.6
      comp=Z,16nm,1.4s
SMWD  Samnorwood         66.11 330    P        P        05 29 17.9 +1.1
K57A  Scipio Center      66.11 352    P        P        05 29 17.1 +0.5
K57A                                  IAmb     IAmb     05 29 39.9
      comp=Z,6.0nm,1.0s
MMNY  Mt. Morris Dam     66.31 351    P        P        05 29 18.4 +0.7
MMNY                                  IAmb     IAmb     05 29 39.4
      comp=Z,6.1nm,1.0s
J59A  Piesco             66.61 354    P        P        05 29 20.7 +1.0
J59A                                  IAmb     IAmb     05 29 21.6
      comp=Z,8.5nm,1.1s
J55A  Hilton             66.82 351    P        P        05 29 21.2 +0.3
J55A                                  IAmb     IAmb     05 30 00.2
      comp=Z,9.3nm,1.2s
I63A  Otisfield          66.89 357    P        P        05 29 22.6 +1.2
DBIC  Dimbokro           67.08  72    P        P        05 29 22.2 -1.1
DBIC                                  IAmb     IAmb     05 29 32.1
      comp=Z,19nm,1.5s
DBIC  Dimbokro           67.08  72    P        P        05 29 21.6 -1.6
      comp=Z,4.5nm,0.8s,baz=170,slow=6.1,SNR=3.1
      comp=Z,4.5nm,0.8s
QSPA  South Pole Qui     67.14 180             P        05 29 24.7 +1.8
QSPA                                  IAmb     IAmb     05 29 25.2
      comp=Z,4.6nm,0.9s
QSPA  South Pole Qui     67.14 180    P        P        05 29 24.2 +1.3
      comp=Z,2.6nm,0.5s,baz=324,slow=1.1,SNR=32
      comp=Z,2.6nm,0.5s
LBNH  Lisbon             67.16 356    P        P        05 29 24.3 +1.2
LBNH                                  IAmb     IAmb     05 29 36.7
      comp=Z,19nm,1.4s
H62A  Milan              67.44 356    P        P        05 29 26.2 +1.3
DELO  Deloro Mine        68.02 351    P        P        05 29 29.4 +1.0
DELO                                  IAmb     IAmb     05 29 30.4
      comp=Z,12nm,1.4s
PKME  Peaks-Kenny Pk     68.05 358    P        P        05 29 29.1 +0.6
PKME                                  IAmb     IAmb     05 30 11.3
      comp=Z,17nm,1.4s
SADO  Sadowa             68.48 350    P        P        05 29 31.9 +0.6
SADO                                  IAmb     IAmb     05 30 02.1
      comp=Z,14nm,1.4s
LMN   Caledonia Moun     68.60   1             P        05 29 32.1  0.0
F64A  Sherman            68.62 359             P        05 29 32.7 +0.6
E62A  Clayton Lake       69.41 358    P        P        05 29 37.8 +0.8
E62A                                  IAmb     IAmb     05 29 44.2
      comp=Z,8.1nm,1.2s
E46A  Sault Ste Mari     70.96 347    P        P        05 29 46.3 -0.1
E46A                                  IAmb     IAmb     05 29 47.2
      comp=Z,3.4nm,0.8s
DRLN  Deer Lake          72.44   6             P        05 29 55.2 +0.1
SRU   San Rafael Swe     74.30 326    P        P        05 30 07.3 +0.8
P18A  Preston Nutter     74.55 326    P        P        05 30 09.1 +1.1
BSUT  Blindstream Ca     75.49 327    P        P        05 30 14.6 +1.2
TORD  Torodi Ar. Bea     75.81  69    P        P        05 30 14.2 -1.2
      comp=Z,56nm,0.3s,baz=251,slow=5.2,SNR=5.0
SUR   Sutherland         75.88 119             P        05 30 15.6 -0.2
SUR                                   IAmb     IAmb     05 30 30.9
      comp=Z,13nm,1.2s
PDAR  Pinedale Array     76.58 329    P        P        05 30 20.1 +0.7
      comp=Z,0.5nm,0.6s,baz=152,slow=9.9,SNR=4.9
      comp=Z,0.5nm,0.6s
ULM   Lac du Bonnet      77.49 341    P        P        05 30 23.8 -0.2
      comp=Z,1.0nm,0.5s,baz=159,slow=8.6,SNR=2.3
      comp=Z,1.0nm,0.5s
HLID  Hailey             79.55 327    P        P        05 30 37.4 +1.7
BOSA  Boshof             80.76 117    P        P        05 30 41.7 -0.8
      comp=Z,1.1nm,0.5s,baz=263,slow=3.1,SNR=7.1
      comp=Z,1.1nm,0.5s
PLID  Pearl Lake         81.44 327    P        P        05 30 47.3 +1.6
MAW   Mawson             82.19 163    P        P        05 30 50.1 +1.1
      comp=Z,3.4nm,0.9s,baz=149,slow=4.6,SNR=4.5
      comp=Z,3.4nm,0.9s
PAB   San Pablo          85.09  43             P        05 31 05.2 +0.9
ESDC  Sonseca Array      85.41  43    P        P        05 31 06.4 +0.6
ESDC  Sonseca Array      85.41  43    P        P        05 31 06.2 +0.3
      comp=Z,1.1nm,0.7s,baz=244,slow=5.4,SNR=9.5
      comp=Z,1.1nm,0.7s
YKA   Yellowknife Ar     93.41 340    P        P        05 31 42.9 +0.1
      comp=Z,0.4nm,0.7s,baz=264,slow=25,SNR=6.9
      comp=Z,0.4nm,0.7s
TNA   Tin City          115.47 333    PKPdf    PKPdf    05 37 07.2 -0.7
ABKAR Akbulak array     130.76  44    PKPdf    PKPdf    05 37 37.0 -0.8
WB2   Warramunga Arr    132.65 207    PKPdf    PKPdf    05 37 42.7 +0.3
WRA   Warramunga Arr    132.66 207    PKP      PKPdf    05 37 42.5 +0.2
      comp=Z,0.4nm,0.5s,baz=158,slow=1.8,SNR=8.5
KURBB Kurchatov Arra    141.36  36    PKhKP    PKPpre   05 37 49.8
      comp=Z,0.4nm,0.5s,baz=315,slow=3.1,SNR=1.2
ZALV  Zalesovo Beam     142.36  28    PKhKP    PKPpre   05 37 55.1
      comp=Z,1.1nm,0.5s,baz=318,slow=6.0,SNR=5.4
ZALV                                  PKP      PKPdf    05 38 00.1 +1.0
      comp=Z,1.8nm,0.4s,baz=252,slow=2.0,SNR=6.7
KSH   Kashi             144.29  54    PKP      PKPab    05 38 00.6 -1.1
MK31  Makanchi Array    145.52  39    PKPdf    PKPab    05 38 05.9 -0.1
MKAR  Makanchi Array    145.52  39    PKPbc    PKPab    05 38 05.8 -0.2
      comp=Z,3.6nm,0.4s,baz=314,slow=3.2,SNR=38
SONM  Songino Array     154.64  11    PKP      PKPdf    05 38 20.5 +1.3
      comp=Z,0.2nm,0.4s,baz=58,slow=44,SNR=2.1
SONM                                  PKPbc    PKiKP    05 38 28.5 +0.6
      comp=Z,0.6nm,0.4s,baz=248,slow=2.4,SNR=4.6
SONM                                  PKPab    PKPab    05 38 44.3 +0.8
      comp=Z,0.9nm,0.7s,baz=332,slow=5.3,SNR=5.3
CMAR  Chiang Mai Arr    165.65 106    PKPab    PKPab    05 39 32.2 -0.1
      comp=Z,1.0nm,0.3s,baz=255,slow=5.4,SNR=5.4
PZH   PanZhiHua         168.79  70    PKP      PKPdf    05 38 32.9 -1.4
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*IDC **17** 05:22:43.4±1.5, 9°.97S×117°.72E, h0^{km}, mb4.0/7, mbtmp3.9/10, ML3.6/3, Error ellipse: s-maj=52.6km s-min=20.1km az=56.0*

*DJA **17** 05:22:49.4±0.3, 10°S±4°×11°8E±°, h10^{km}, M4.3/13, mb4.6/2, MLv4.2/13*

ISC 17 05:22:47.2±0.8, **9°.76S**±0°.06×**118°.22E**±0°.04, **h10**^{km}, **n28**, σ**2^{s}.01**/31, **mb4.2**/6, **Sumbawa region**

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Code  Station Name        Δ°    AZ°    Phase ID          Time      Res
                                       Op       ISC      h  m  s   ISC
PLAI  Plampang            1.03 335    P        Pg       05 23 07.9 +0.9
PLAI                                  S        Sb       05 23 21.6 +0.9
WBSI  Waikabubak, Su      1.16  84    P        Pb       05 23 08.6 -0.8
WBSI                                  S        Sb       05 23 25.9 +1.4
TWSI  Taliwang, Sumb      1.67 307    P        Pn       05 23 17.2 +0.6
TWSI                                  S        Sb       05 23 40.6 +1.4
WSI   Waingapu            2.05  88    P        Pn       05 23 24.2 +2.5
WSI                                   S        Sb       05 23 52.2 +2.1
BASI  Baing, Sumba        2.36 101    P        Pn       05 23 29.8 +3.7
DNP   Denpasar            3.16 290    P        Pn       05 23 40.2 +3.1
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DNP				S	Sn	05 24 16.4	+1.4
SRBI	Singaraja	3.41	299	P	Pn	05 23 42.3	+1.8
MMRI	Maumere	4.12	75	P	Pn	05 23 53.6	+3.3
JAGI	Jajag, Banyuwa	4.22	287	P	Pn	05 23 52.7	+1.0
BSSI	Bau Bau, Buton	4.24	32	P	Pn	05 23 53.7	+1.8
ABJI	Asem Bagus	4.40	296	P	Pn	05 23 56.1	+2.0
BKSI	Bulukumba	4.80	23	P	Pn	05 24 02.0	+2.4
GMJI	Gumukmas	4.95	287	P	Pn	05 24 03.2	+1.5
KAPI	Kappang	4.95	18	Pn	Pn	05 24 04.8	+3.0
	4.1nm,0.3s,baz=196,slow=7.4,SNR=5.6						
KAPI				Sn	Sn	05 24 59.1	0.0
	11nm,0.3s,baz=49,slow=23,SNR=10.0						
	12nm,0.4s						
PCJI	Pacitan	7.13	282	P	Pn	05 24 33.1	+1.4
	0.3nm59nm,1.9s						
UGM	Wanagama	7.83	283	P	Pn	05 24 43.0	+1.7
FITZ	Fitzroy Crossi	10.97	140	Pn	Pn	05 25 22.8	-1.6
	0.3nm,0.3s,baz=330,slow=12,SNR=10						
FITZ				Sn	Sn	05 27 16.5	-11
	0.8nm,0.3s,baz=165,slow=20,SNR=8.2						
	0.8nm,0.3s						
WRA	Warramunga Arr	18.56	125	P	P	05 27 03.7	-0.7
	0.2nm,0.3s,baz=299,slow=14,SNR=5.2						
WRA				S	Sn	05 30 17.5	-15
	0.2nm,0.4s,baz=304,slow=24,SNR=3.1						
	0.2nm,0.6s						
ASAR	Alice Springs	20.38	135	P	P	05 27 26.2	+1.9
	0.7nm,0.6s,baz=311,slow=9.9,SNR=7.5						
	0.7nm,0.6s						
H08S2	Diego Garcia H	45.23	269	T	T	06 19 31.3	
	baz=96,slow=74						
H08S3	Diego Garcia H	45.24	269	T	T	06 19 26.6	
	baz=96,slow=74						
H08S1	Diego Carcia H	45.25	269	T	T	06 19 34.1	
	baz=96						
KSRS	Korea Array	47.84	10	P	P	05 31 24.9	-0.3
	1.2nm,0.6s,baz=178,slow=8.3,SNR=5.4						
	1.2nm,0.6s						
USRK	Ussuriysk Ar.	55.14	12	P	P	05 32 19.5	-0.3
	1.9nm,0.6s,baz=199,slow=5.7,SNR=3.8						
	1.9nm,0.6s						
SONM	Songino Array	58.30	351	P	P	05 32 41.0	-1.3
	0.9nm,0.7s,baz=162,slow=7.8,SNR=4.2						
	0.9nm,0.7s						
MKAR	Makanchi Array	64.79	334	P	P	05 33 24.0	-2.1
	0.3nm,0.3s,baz=149,slow=6.2,SNR=7.5						
	0.3nm,0.3s						
KURBB	Kurchatov Arra	69.31	334	P	P	05 33 52.0	-2.7
	1.1nm,0.2s,baz=143,slow=6.0,SNR=1.6						
	1.1nm,0.2s						
ZALV	Zalesovo Beam	69.48	340	P	P	05 33 53.3	-2.4
	0.8nm,0.3s,baz=134,slow=6.4,SNR=3.6						
	0.8nm,0.3s						

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*IDC **17** 05:32:04.3±1.7, 30.°30S×178.°16W, h0^{km}, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=50.3km s-min=35.5km az=46.0*

ISC 17 05:32:04.4±2.2, **31.°3S**±0.°2×**177.°6W**±0.°4, **h26**^{km}**, n6,** σ**0^{s}21**/6, **mb4.0**/3, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.20	211	Pn	Pn	05 34 01.6	-0.1
	0.3nm,0.3s,baz=116,slow=12,SNR=1.0						
URZ				Sn	Sn	05 35 33.5	0.0
	0.3nm,0.3s,baz=62,slow=11,SNR=2.8						
ASAR	Alice Springs	43.44	268	P	P	05 40 05.7	+0.3
	0.8nm,0.7s,baz=112,slow=8.1,SNR=6.7						
	0.8nm,0.7s						
WRA	Warramunga Arr	44.51	273	P	P	05 40 13.7	-0.2
	1.0nm,0.4s,baz=112,slow=8.0,SNR=16						
	1.0nm,0.4s						
QSPA	South Pole Qui	58.80	180	P	P	05 42 12.0	+12
	1.9nm,0.8s,baz=332,slow=0.7,SNR=9.2						
	1.9nm,0.8s						
FINES	FINESS Array B	146.12	340	PKPbc	PKPdf	05 51 40.5	0.0
	1.4nm,0.6s,baz=64,slow=3.2,SNR=6.1						
AKASG	Malin Array Be	152.24	322	PKPbc	PKPbc	05 51 57.4	0.0
	0.7nm,0.4s,baz=42,slow=3.9,SNR=3.2						

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*MOS **17** 05:43:27.6±1.0, 8.°66S×122.°99E, h91^{km}, mb5.7/63, Error ellipse: s-maj=8.4km s-min=4.7km az=113.3*

*BJI **17** 05:43:28.0, 8.°90S×123.°00E, h109^{km}, mB5.3/42, mb5.5/86*

*IDC **17** 05:43:30.9±0.7, 8.°71S×123.°07E, h107^{km}±5^{km}, mb5.2/27, mbtmp5.6/29, MS4.3/11, Error ellipse: s-maj=14.4km s-min=7.3km az=73.0*

*NEIC **17** 05:43:30.5±2.5, 8.°73S±0.°06×123.°05E±0.°06, h97^{km}±4^{km}, mb5.6/255, Mwb5.3/13, Mww5.4/25, Error ellipse: s-maj=11.3km s-min=6.4km az=222.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.09; M$_{\theta\theta}$0.46; M$_{\phi\phi}$-0.55; M$_{r\theta}$0.25; M$_{\theta\phi}$-0.18; M$_{\phi r}$-1.03; Fault plane solution: M$_0$1.18000×10^{17} NP1:φ$_s$59.26000°, δ23.32000°, λ168.46000°. NP2:φ$_s$159.88000°, δ85.46000°, λ67.10000°. Principal axes: T 1.0114, Plg45.0000°, Azm47.0000°; N 0.2917, Plg23.0000°, Azm162.0000°; P -1.3031, Plg36.0000°, Azm270.0000°;*

*NEIC **17** 05:43:31.6, 9.°01S×122.°92E, h100^{km}, Moment Tensor Solution. Duration: 2^{s}7 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.40; M$_{\theta\theta}$0.56; M$_{\phi\phi}$-0.96; M$_{r\theta}$0.37; M$_{\theta\phi}$-0.73; M$_{\phi r}$-0.89; Fault plane solution: M$_0$1.47000×10^{17} NP1:φ$_s$62.87000°, δ45.53000°, λ165.20000°. NP2:φ$_s$163.36000°, δ79.50000°, λ45.44000°. Principal axes: T 1.4107, Plg39.0000°, Azm34.0000°; N 0.1170, Plg44.0000°, Azm174.0000°; P -1.5278, Plg21.0000°, Azm286.0000°;*

*NEIC **17** 05:43:31.5, 8.°83S×123.°03E, h106^{km}*

*DJA **17** 05:43:31.3±0.1, 9°S±1°×12°3E±°, h112^{km}±1^{km}, M5.5/144, mB6.0/100, mb5.9/144, MLv6.0/23, Mw5.4/68, Mw(mB)5.7/100, MwMwp5.1/41, Mwp5.3/41*

*NEIC **17** 05:43:31.6, 8.°81S×123.°02E, h100^{km}*

*GCMT **17** 05:43:32.5±0.2, 8.°82S±0.°01×123.°04E±0.°01, h117^{km}±1^{km}, MW5.5/122, Moment Tensor Solution. s114,c173; s122,c220; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.29±.03; M$_{\theta\theta}$0.70±.04; M$_{\phi\phi}$-0.99±.04; M$_{r\theta}$0.52±.03; M$_{\theta\phi}$-1.27±.03; M$_{\phi r}$-1.36±.03; Best double couple: M$_0$2.12300×10^{17} NP1:φ$_s$70.00000°, δ46.00000°, λ172.00000°. NP2:φ$_s$166.00000°, δ84.00000°, λ44.00000°. Principal axes: T 2.1330, Plg34.0000°, Azm38.0000°; N -0.0190, Plg46.0000°, Azm172.0000°; P -2.1130, Plg25.0000°, Azm290.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 05:43:31.1±0.2, **8.°79S**±0.°03×**123.°00E**±0.°03, **h116**^{km}±1^{km}, **h116**^{km}**:pP-P, n1191,** σ**1^{s}80**/1258, **mb5.6**/256, **23C-21D, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	0.77	282		Pn	05 43 51.0	+0.3
MMRI				Sn	Sn	05 44 05.5	+0.1
MMRI	Maumere	0.77	282	P	Pn	05 43 50.4	-0.2
MMRI	Maumere	0.77	282	P	Pn	05 43 50.9	+0.3
MMRI				S	Sn	05 44 04.8	-0.5
BATI	Baumata	1.55	155	P	Pn	05 43 58.7	-0.2
	17μm,0.4s,baz=357,slow=2.5,SNR=428						
BATI				S	Sn	05 44 18.9	-1.1
	26μm,0.3s,baz=13,slow=21,SNR=6.1						
BATI				LR	LR	05 45 01.0	
	comp=Z,15μm,18.9s,baz=48,slow=56						
BATI	Baumata	1.55	155	P	Pn	05 43 58.7	-0.2
BATI				S	Sn	05 44 16.8	-3.2
SOEI	Soe	1.57	127		Pn	05 43 59.2	-0.2
SOEI	Soe	1.57	127	P	Pn	05 43 58.6	-0.7
SOEI	Soe	1.57	127	P	Pn	05 43 59.1	-0.2
BASI	Baing, Sumba	2.78	239	P	Pn	05 44 15.1	+0.7
WSI	Waingapu	2.81	252	P	Pn	05 44 15.8	+1.0
BBSI	Bau Bau	3.31	353	P	Pn	05 44 24.0	+2.5
BSSI	Bau Bau, Buton	3.62	316	P	Pn	05 44 27.7	+2.1
WBSI	Waikabubak, Su	3.66	256	P	Pn	05 44 26.2	+0.1
KDI	Kendari	4.82	355	P	Pn	05 44 43.6	+2.0
KAPI	Kappang	4.95	319	P	Pn	05 44 45.9	+2.5
	969nm,0.9s,baz=128,slow=9.6,SNR=187						
KAPI				S	Sn	05 45 40.2	+0.6
	399nm,0.7s,baz=104,slow=16,SNR=1.4						
KAPI				LR	LR	05 46 47.5	
	comp=Z,3μm,21.5s,baz=109,slow=40						
KAPI				ScS	ScS	05 58 41.9	-0.9
	3.9nm,0.3s,baz=210,slow=21,SNR=1.5						
KAPI	Kappang	4.95	319	P	Pn	05 44 45.9	+2.5
KAPI				S	Sn	05 45 42.6	+3.0
KAPI	Kappang	4.95	319	P	Pn	05 44 44.8	+1.4
KAPI	Kappang	4.95	319*di*	P	Pn	05 44 45.5	+2.1
PLAI	Plampang	5.16	269	P	Pn	05 44 46.9	+0.6
PLAI	Plampang	5.16	269	S	Sn	05 45 45.9	+1.1
PLAI	Plampang	5.16	269	P	Pn	05 44 47.8	+1.5
BNSI	Bone	5.23	326	P	Pn	05 44 49.3	+2.2
	7.8nm9μm24μm3μm,1.3s						
SPSI	Sidrap Palu	5.77	326	P	Pn	05 44 56.2	+1.7
	7μm8μm845nm,0.9s						
TWSI	Taliwang, Sumb	6.05	270	P	Pn	05 44 59.2	+1.0
TTSI	Tana Toraja	6.53	331	P	Pn	05 45 07.8	+3.1
	2.7nm9μm665nm,0.8s						
NLAI	Namlea	6.86	37	P	Pn	05 45 12.0	+2.8
	6.4nm8μm15μm2μm,0.8s						
AAI	Ambon	7.24	46	P	Pn	05 45 15.6	+1.3
	3.8nm10μm1μm,1.0s						
SANI	Sanana	7.33	24	P	Pn	05 45 17.3	+1.7
SANI	Sanana	7.33	24	P	Pn	05 45 17.1	+1.5
	4.0nm6μm14μm1μm,1.0s						
DNP	Denpasar	7.70	270	P	Pn	05 45 21.4	+0.8
	3μm,0.6s						
LUWI	Luwuk	7.70	358		Pn	05 45 22.5	+1.8
LUWI	Luwuk	7.70	358	P	Pn	05 45 22.1	+1.4
LUWI	Luwuk	7.70	358	P	Pn	05 45 22.5	+1.8
	3.6nm12μm1μm,0.9s						
SRBI	Singaraja	7.74	275	P	Pn	05 45 21.2	+0.1
	6.5nm7μm16μm2μm,0.8s						
APSI	Ampana	7.95	350	P	Pn	05 45 27.3	+3.4
	6μm446nm,0.9s						
MSAI	Masohi	8.00	48	P	Pn	05 45 26.4	+1.7
	7μm19μm2μm,1.3s						
BNDI	Bandanaira	8.06	59	P	Pn	05 45 27.4	+1.9
BNDI	Bandanaira	8.06	59	P	Pn	05 45 26.9	+1.4
SAUI	Saumlaki	8.25	85		Pn	05 45 26.9	-1.1
SAUI	Saumlaki	8.25	85	P	Pn	05 45 27.0	-1.1
SAUI	Saumlaki	8.25	85	P	Pn	05 45 27.4	-0.7
PCI	Palu	8.45	338	P	Pn	05 45 35.1	+4.4
	7μm535nm,1.0s						
ABJI	Asem Bagus	8.73	276	P	Pn	05 45 34.9	+0.3
	5μm16μm2μm,1.3s						
JAGI	Jajag, Banyuwa	8.76	271		Pn	05 45 32.4	-2.6
JAGI	Jajag, Banyuwa	8.76	271	P	Pn	05 45 32.3	-2.6
JAGI	Jajag, Banyuwa	8.76	271	S	Sn	05 47 10.1	-1.8
JAGI	Jajag, Banyuwa	8.76	271	P	Pn	05 45 32.6	-2.3
	4μm15μm2μm,0.8s						
KNRA	Kununurra	8.86	141		Pn	05 45 32.1	-4.2
KNRA	Kununurra	8.86	141	P	Pn	05 45 31.6	-4.7
KNRA				S	Sn	05 47 04.2	-10
MTN	Manton Dam	8.94	117		Pn	05 45 33.8	-3.6
MTN	Manton Dam	8.94	117	P	Pn	05 45 33.8	-3.6
MTN	Manton Dam	8.94	117	P	Pn	05 45 33.8	-3.6
KMMI	Kalianget	9.11	280	P	Pn	05 45 42.8	+3.0
	7μm20μm2μm,1.2s						
MRSI	Marisa	9.27	353	P	Pn	05 45 43.9	+2.0
	288nm,0.8s						
KMSI	Cibinong	9.36	6	P	Pn	05 45 45.1	+2.1
	14μm1μm,0.9s						
GMJI	Gumukmas	9.47	272	P	Pn	05 45 43.1	-1.4
	8μm804nm,1.0s						
MPSI	Mapaga	9.58	341	P	Pn	05 45 49.2	+3.1
FITZ	Fitzroy Crossi	9.60	165		Pn	05 45 42.7	-3.6
FITZ	Fitzroy Crossi	9.60	165	P	Pn	05 45 42.0	-4.3
FITZ	Fitzroy Crossi	9.60	165	P	Pn	05 45 42.8	-3.5
	141nm,0.4s,baz=1.6,slow=8.8,SNR=462						
FITZ				S	Sn	05 47 20.0	-12
	3μm,0.5s,baz=139,slow=6.4,SNR=26						
FITZ				LR	LR	05 50 00.2	
	comp=Z,1μm,20.4s,baz=344,slow=40						
FITZ	Fitzroy Crossi	9.60	165	P	Pn	05 45 42.2	-4.1
BKB	Balikpapan	9.64	321		Pn	05 45 53.2	+6.3
BKB	Balikpapan	9.64	321	P	Pn	05 45 52.5	+5.6
	6μm8μm559nm,1.1s						
KDU	Kakadu	10.08	113	P	Pn	05 45 48.4	-4.4
KDU	Kakadu	10.08	113	P	Pn	05 45 49.3	-3.5
TOLI2	Tolitoli	10.09	347		Pn	05 45 55.9	+3.0
TOLI2	Tolitoli	10.09	347	P	Pn	05 45 53.1	+0.2
SMKI	Samarinda	10.10	325	P	Pn	05 45 58.1	+5.0
	4μm9μm768nm,1.1s						
TNTI	Ternate	10.45	25		Pn	05 45 60.0	+2.1
TNTI	Ternate	10.45	25	P	Pn	05 46 00.4	+2.5
	4μm11μm829nm,1.2s						
GRJI	Gresik	10.59	279	P	Pn	05 46 01.0	+1.3
BWJI	Bawean	10.67	285	P	Pn	05 46 03.6	+2.8
FAKI	Fak Fak	10.89	58		Pn	05 46 01.8	-2.1
FAKI	Fak Fak	10.89	58	P	Pn	05 46 02.7	-1.1
FAKI	Fak Fak	10.89	58	S	Sn	05 48 04.8	+1.0
FAKI	Fak Fak	10.89	58	P	Pn	05 46 03.2	-0.6
	5μm15μm2μm,1.0s						
TBJI	Tambak Boyo	11.22	279	P	Pn	05 46 10.7	+2.5
SWI	Sorong	11.39	47	P	Pn	05 46 10.2	-0.2
	5μm19μm1μm,0.9s						
NGJI	Ngawi	11.51	276	P	Pn	05 46 13.4	+1.3
	13μm1μm,0.9s						
PCJI	Pacitan	11.71	272	P	Pn	05 46 13.1	-1.6
KMPI	Kaimana, Papua	11.80	65	P	Pn	05 46 14.5	-1.3
WOJI	Wonogiri, Jawa	11.99	274	P	Pn	05 46 17.2	-1.2
UGM	Wanagama	12.38	273		Pn	05 46 22.1	-1.5
UGM	Wanagama	12.38	273	P	Pn	05 46 21.8	-1.7
UGM	Wanagama	12.38	273	S	Sn	05 48 39.2	-0.7
UGM	Wanagama	12.38	273	P	Pn	05 46 22.4	-1.1
	9μm1μm,0.7s						
SMRI	Semarang	12.56	277		Pn	05 46 26.2	+0.3
SMRI	Semarang	12.56	277	P	Pn	05 46 26.5	+0.6
SMRI	Semarang	12.56	277	S	Sn	05 48 43.5	-0.8
SMRI	Semarang	12.56	277	P	Pn	05 46 26.5	+0.6
YOGI	Yogyakarta	12.61	273	P	Pn	05 46 25.2	-1.4
	6μm879nm,0.8s						
SGSI	Sangihe	12.65	12	P	Pn	05 46 28.9	+1.8
MBWA	Marble Bar	12.69	194		Pn	05 46 23.9	-3.6
MBWA	Marble Bar	12.69	194	P	Pn	05 46 24.3	-3.3
	comp=Z,0.0nmcomp=Z,363nm,0.8s						
MBWA	Marble Bar	12.69	194	P	Pn	05 46 25.7	-1.8
MBWA				S	Sn	05 48 45.4	-1.9
MBWA	Marble Bar	12.69	194	P	Pn	05 46 24.1	-3.5
PSAD1	Pilbara Seismi	12.95	193	P	Pn	05 46 27.9	-3.1
	comp=Z,382nm,0.9s						
PSAC1	Pilbara Seismi	13.03	193	P	Pn	05 46 28.9	-3.1
	comp=Z,0.0nmcomp=Z,289nm,0.7s						
PSAC2	Pilbara Seismi	13.04	193	P	Pn	05 46 29.1	-3.0
	comp=Z,270nm,0.6s						
PSAB2	Pilbara Seismi	13.04	193	P	Pn	05 46 29.1	-3.0
	comp=Z,232nm,0.7s						
PSAA2	Pilbara Seismi	13.05	193	P	Pn	05 46 29.0	-3.3
	comp=Z,321nm,0.7s						
PSA00	Pilbara Seismi	13.06	193		Pn	05 46 29.2	-3.2
PSA00	Pilbara Seismi	13.06	193		Pn	05 46 29.9	-2.5
PSA00	Pilbara Seismi	13.06	193	P	Pn	05 46 29.4	-3.0
	comp=Z,296nm,0.7s,comp=Z,0.0nm						
PSA00	Pilbara Seismi	13.06	193	P	Pn	05 46 29.2	-3.2
PSAB1	Pilbara Seismi	13.07	193	P	Pn	05 46 30.5	-1.9
	comp=Z,34nm,0.8s						
PSAA3	Pilbara Seismi	13.07	193	P	Pn	05 46 29.4	-3.0
	comp=Z,242nm,0.8s						
PSAA1	Pilbara Seismi	13.07	193	P	Pn	05 46 29.2	-3.3
	comp=Z,304nm,0.8s						
PSAB3	Pilbara Seismi	13.08	193	P	Pn	05 46 29.6	-3.0
	comp=Z,386nm,0.8s						
PSAD3	Pilbara Seismi	13.15	193	P	Pn	05 46 30.2	-3.3
	comp=Z,0.0nmcomp=Z,330nm,1.0s						
RKPI	Ransiki, Papua	13.27	58	P	Pn	05 46 33.8	-1.3
STKI	Sintang	14.46	307	P	P	05 46 54.6	+0.7
	comp=Z,5μmcomp=Z,593nm,1.5s						
MYLDM	Lahad Datu	14.59	342	P	P	05 46 56.8	+1.5
MYLDM	Lahad Datu	14.59	342	P	P	05 46 53.6	-1.7
JCJI	Jatiwangi	14.78	278	P	Pn	05 46 53.7	-0.8
	comp=Z,13μmcomp=Z,1μm,0.7s						
SRPI	Serui, Papua	14.86	63	P	Pn	05 46 55.6	+0.1
	comp=Z,483nm,0.9s						
BAKI	Biak	15.08	61	P	Pn	05 46 59.0	+0.8
	comp=Z,4μmcomp=Z,14μmcomp=Z,1μm,0.9s						
BBJI	Bungbulang	15.25	274	P	Pn	05 46 57.4	-3.1
LEM	Lembang	15.37	276	P	Pn	05 46 59.7	-2.3
	comp=Z,1μm,0.8s,baz=41,slow=13,SNR=52						
LEM				LR	LR	05 54 11.2	
	comp=Z,997nm,18.9s,baz=82,slow=42						
LEM	Lembang	15.37	276	P	Pn	05 47 00.7	-1.3
	comp=Z,10μmcomp=Z,2μm,0.8s						
WB0	Warramunga Arr	15.51	136		Pn	05 46 57.9	-5.7
WRA	Warramunga Arr	15.59	137	P	Pn	05 46 58.9	-5.8
WRA	Warramunga Arr	15.59	137	P	Pn	05 46 59.4	-5.3
	comp=Z,243nm,0.7s,baz=310,slow=14,SNR=566						
WRA				S	Sn	05 49 35.4	-22
	comp=Z,640nm,0.8s,baz=308,slow=24,SNR=17						
WRA				LR	LR	05 54 05.0	
	comp=Z,743nm,19.7s,baz=321,slow=41						
WRA	Warramunga Arr	15.59	137	P	Pn	05 46 58.9	-5.8
WR8	Warramunga Arr	15.71	136		Pn	05 47 01.0	-5.2
CNJI	Cibinong	15.78	274	P	Pn	05 47 04.4	-2.7
	comp=Z,7μmcomp=Z,678nm,1.1s						
DAV	Davao City (W)	15.97	9		P	05 47 10.7	+0.1
DAV	Davao City (W)	15.97	9	P	P	05 47 10.4	-0.2
	comp=Z,324nm,0.4s,baz=121,slow=3.6,SNR=20						
DAV				S	Sn	05 50 04.4	-2.1
	comp=Z,259nm,0.4s,baz=39,slow=19,SNR=1.8						
DAV	Davao City (W)	15.97	9	P	P	05 47 10.5	-0.1
DAV				S	S	05 50 09.6	-2.1
DAV	Davao City (W)	15.97	9	P	P	05 47 10.0	-0.6
GIRL	Giralia	16.14	210	P	P	05 47 12.6	+0.2
GIRL	Giralia	16.14	210	P	P	05 47 12.2	-0.2
CBJI	Citeko	16.18	277	P	Pn	05 47 10.4	-1.6
KKM	Kota Kinabalu	16.22	335	P	P	05 47 15.4	+1.9
KKM	Kota Kinabalu	16.22	335	P	P	05 47 14.9	+1.4
KSM	Kuching	16.25	308		P	05 47 15.2	+1.5
SKJI	Sukabumi	16.39	275	P	Pn	05 47 14.2	-0.3
TPI	Tanjungpandan	16.40	291	P	P	05 47 16.2	+0.8
	comp=Z,4μmcomp=Z,7μmcomp=Z,612nm,0.8s						
TNG	Tangerang	16.42	278	P	P	05 47 16.3	+0.7
	comp=Z,811nm,0.8s						
TNG				P	Pn	05 47 16.6	+1.6
	comp=Z,1μm,0.8s						
SBJI	Serang	16.94	278	P	P	05 47 21.6	+0.3
	comp=Z,15μmcomp=Z,1μm,1.0s						
SMPI	Sarmi	17.03	68	P	Pn	05 47 20.7	-1.7
	comp=Z,3μmcomp=Z,4μmcomp=Z,433nm,1.1s						
XMI	Christmas Isla	17.15	263	P	P	05 47 22.4	-1.3
XMIS	Christmas Isla	17.19	263	P	P	05 47 23.1	-1.0
XMIS	Christmas Isla	17.19	263	P	P	05 47 22.6	-1.5
MMPI	Merauke	17.19	90	P	Pn	05 47 24.5	+0.2
CGJI	Cibinong	17.29	276	P	P	05 47 23.0	-2.2
	comp=Z,13μmcomp=Z,900nm,0.6s						
BLSI	Bandar Lampung	17.94	280	P	Pn	05 47 32.9	-0.5
	comp=Z,473nm,0.9s						
PPBI	Pangkal Pinang	18.02	290	P	Pn	05 47 35.3	+0.9
AS31	Alice Springs	18.10	146		P	05 47 33.9	-0.2
AS31	Alice Springs	18.10	146	P	Pn	05 47 35.6	+0.3
ASAR	Alice Springs	18.10	146		P	05 47 33.2	-0.9
ASAR	Alice Springs	18.10	146	P	P	05 47 34.2	+0.1
	comp=Z,276nm,0.6s,baz=324,slow=12,SNR=458						
ASAR				S	S	05 50 41.7	-14
	comp=Z,450nm,0.8s,baz=322,slow=23,SNR=20						
ASAR				LR	LR	05 54 39.7	
	comp=Z,2μm,21.2s,baz=324,slow=37						
AS01	Alice Springs	18.13	146	P	P	05 47 33.7	-0.7
GENI	Genyem	18.15	71	P	P	05 47 34.1	-0.6
GENI	Genyem	18.15	71	P	P	05 47 33.8	-0.9
	comp=Z,10μmcomp=Z,1μm,0.8s						
MEEK	Meekatharra	18.23	193	P	P	05 47 34.3	-1.1
	comp=Z,238nm,0.8s						
MEEK	Meekatharra	18.23	193	P	P	05 47 35.1	-0.4
KASI	Kota Agung	18.64	279	P	P	05 47 38.8	-1.3
	comp=Z,9μmcomp=Z,1μm,0.9s						
JAY	Jayapura	18.68	72	P	P	05 47 39.9	-0.7
	comp=Z,565nm,0.9s,baz=216,slow=8.1,SNR=60						
JAY				S	S	05 51 02.6	-5.0
	comp=Z,143nm,1.0s,baz=324,slow=22,SNR=8.6						
JAY				LR	LR	05 56 27.0	
	comp=Z,1μm,21.0s,baz=214,slow=42						
JAY	Jayapura	18.68	72	P	P	05 47 38.8	-1.8
	comp=Z,6μmcomp=Z,798nm,0.8s						
PMBI	Palembang	19.04	287	P	Pn	05 47 46.0	-0.4
PMBI	Palembang	19.04	287	P	Pn	05 47 45.8	-0.6
	comp=Z,793nm,0.9s						
LWLI	Liwa	19.17	280	P	P	05 47 44.7	-1.3
MDSI	Maura Dua	19.18	282	P	P	05 47 44.7	-1.2
	comp=Z,3μmcomp=Z,4μmcomp=Z,432nm,0.9s						
QIS	Mount Isa	19.84	128	P	P	05 47 52.9	-0.2
	comp=Z,0.0nmcomp=Z,913nm,1.3s						
QIS	Mount Isa	19.84	128	P	P	05 47 53.1	0.0
MNAI	Manna	20.39	281		P	05 47 58.3	-0.7
MNAI	Manna	20.39	281	P	P	05 47 59.8	+0.8
MNAI	Manna	20.39	281	P	P	05 47 59.4	+0.4
	comp=Z,11μmcomp=Z,1μm,0.8s						
COEN	Coen	20.43	106		P	05 47 59.4	0.0
COEN	Coen	20.43	106	P	P	05 47 58.9	-0.5
	comp=Z,563nm,0.7s						
COEN	Coen	20.43	106	P	P	05 47 59.2	-0.2
KSI	Kapahiang	20.91	283	P	P	05 48 04.9	+0.2
	comp=Z,893nm,0.8s						
MORW	Morawa	21.20	197		P	05 48 07.8	+0.2
MORW	Morawa	21.20	197	P	P	05 48 07.3	-0.3
	comp=Z,368nm,0.8s						
MORW	Morawa	21.20	197	P	P	05 48 07.5	-0.1
FORT	Forrest	22.38	169		P	05 48 19.4	-0.5
FORT	Forrest	22.38	169	P	P	05 48 18.0	-1.9
	comp=Z,589nm,0.8s						
FORT	Forrest	22.38	169	P	P	05 48 19.1	-0.8
KMBL	Kambalda	22.48	183	P	P	05 48 20.2	-0.9
	comp=Z,222nm,1.0s						
KMBL	Kambalda	22.48	183	P	P	05 48 20.7	-0.3
BLDU	Ballidu	22.49	194	P	P	05 48 19.9	-1.2
	comp=Z,354nm,0.8s						
BLDU	Ballidu	22.49	194	P	P	05 48 21.1	0.0
MTSU	Mount Surprise	22.69	116	P	P	05 48 22.8	-0.4
	comp=Z,364nm,0.8s						
MTSU	Mount Surprise	22.69	116	P	P	05 48 23.4	+0.1
KLBR	Kellerberrin	23.20	191	P	P	05 48 27.1	-0.8
	comp=Z,554nm,0.7s						
KLBR	Kellerberrin	23.20	191	P	P	05 48 28.1	+0.1
BKNI	Bangkinang	23.68	291		P	05 48 32.3	-0.1
BKNI	Bangkinang	23.68	291	P	P	05 48 32.5	0.0
PMG	Port Moresby	23.86	93		P	05 48 33.0	-1.2
PMG	Port Moresby	23.86	93	P	P	05 48 33.2	-0.9
	comp=Z,102nm,0.6s,baz=302,slow=4.9,SNR=21						
PMG				S	S	05 52 40.3	-1.6
	comp=Z,18nm,0.7s,baz=173,slow=11,SNR=1.0						
PMG				LR	LR	05 59 55.7	
	comp=Z,1μm,19.2s,baz=258,slow=41						
	comp=Z,102nm,0.6s						
PMG	Port Moresby	23.86	93	P	P	05 48 34.4	+0.3
MUN	Mundaring	23.92	194	P	P	05 48 33.5	-1.0
	comp=Z,214nm,1.1s						
MUN	Mundaring	23.92	194	P	P	05 48 34.4	0.0
MUN	Mundaring	23.92	194	P	P	05 48 34.3	-0.1
MTKN	Mount Kenneth	23.98	195	P	P	05 48 36.6	+1.6
PPI	Padang Panjang	23.98	289	P	P	05 48 32.7	-2.5
	comp=Z,307nm,1.0s						
NWAO	Narrogin (SRO)	24.60	192	P	P	05 48 40.8	+0.2
	comp=Z,105nm,0.6s,baz=23,slow=7.4,SNR=69						
NWAO				S	S	05 52 59.6	+6.2
	comp=Z,29nm,0.6s,baz=295,slow=24,SNR=1.0						
NWAO				LR	LR	06 00 12.1	
	comp=Z,784nm,20.3s,baz=45,slow=40						
	comp=Z,105nm,0.6s						
NWAO	Narrogin (SRO)	24.60	192	P	P	05 48 41.2	+0.6
NWAO				S	S	05 52 56.2	+2.7
NWAO	Narrogin (SRO)	24.60	192	P	P	05 48 40.9	+0.2
NWAO	Narrogin (SRO)	24.60	192	P	P	05 48 40.7	+0.1
SISI	Saibi	24.93	286	P	P	05 48 40.7	-3.1
	comp=Z,255nm,0.8s						
CTAO	Charters Tower	25.12	119		P	05 48 46.0	+0.4
CTAO	Charters Tower	25.12	119	P	P	05 48 46.4	+0.8
CTAO	Charters Tower	25.12	119	P	P	05 48 46.0	+0.4
DLV	Lat	25.15	325	P	P	05 48 46.1	+0.1
MANU	Manus Island	25.15	76	P	P	05 48 45.8	-0.1
MNSI	Mandailing Nat	25.21	291	P	P	05 48 45.1	-1.2
	comp=Z,14μmcomp=Z,494nm,0.8s						
TV1H	Townsville Har	25.29	117	P	P	05 48 48.0	+1.0
COCO	West Island	25.94	260	P	P	05 48 54.0	+1.0
COCO	West Island	25.94	260	P	P	05 48 54.7	+1.8
COCO	West Island	25.94	260	P	P	05 48 54.0	+1.0
COCO				pmax	pmax		
	comp=Z,291nm,0.9s						
PBSI	Pulau Batu	26.11	288	P	P	05 48 53.0	-1.5
	comp=Z,216nm,0.8s						
RKGY	Rocky Gully	26.28	191	P	P	05 48 56.4	+0.6
	comp=Z,132nm,0.8s						
KULM	Kulim	26.31	301	P	P	05 48 56.3	0.0
KULM	Kulim	26.31	301	P	P	05 48 56.4	+0.1
RPSI	Rantau Prapat	26.58	294	P	P	05 48 58.7	0.0
PSI	Prapat	26.62	295	LR	LR	06 02 09.0	
	comp=Z,638nm,19.9s,baz=124,slow=42						
PSI	Prapat	26.62	295	P	P	05 48 58.7	-0.6
PSI				pmax	pmax		
	comp=Z,80nm,0.9s						
BBOO	Buckleboo	26.78	155	P	P	05 49 00.7	+0.3
BBOO				IAmb	IAmb	05 49 30.4	
	comp=Z,114nm,0.8s						
BBOO	Buckleboo	26.78	155	P	P	05 48 59.3	-1.1
	comp=Z,96nm,0.8s						

BBOO	Buckleboo	26.78	155	P	P	05 49 00.3	0.0
QLP	Quilpie	26.80	134	P	P	05 49 00.6	+0.1
	comp=Z,337nm,0.9s						
QLP	Quilpie	26.80	134	P	P	05 49 01.6	+1.0
H01W3	Cape Leeuwin H	27.21	196	P	P	05 49 08.0	+4.1
	baz=26,slow=7.0,SNR=18						
H01W1	Cape Leeuwin H	27.21	196	P	P	05 49 05.7	+1.8
	baz=26,slow=7.0,SNR=10						
H01W2	Cape Leeuwin H	27.23	196	P	P	05 49 07.5	+3.5
	baz=26,slow=7.0,SNR=13						
GSI	Gunungsitoli	27.25	290	IAmb	IAmb	05 49 21.5	
	comp=Z,140nm,0.8s						
GSI	Gunungsitoli	27.25	290	P	P	05 49 02.5	-2.3
GSI	Gunungsitoli	27.25	290	P	P	05 49 02.5	-2.3
	comp=Z,3µmcomp=Z,202nm,0.8s						
TSI	Tuntungan	27.25	296	P	P	05 49 04.7	-0.1
	comp=Z,351nm,0.9s						
HTT	Hallett	28.58	151	P	P	05 49 16.5	+0.1
	comp=Z,35nm,0.8s						
HTT	Hallett	28.58	151	P	P	05 49 18.1	+1.6
HTT	Hallett	28.58	151	P	P	05 49 15.4	-1.1
STKA	Stephens Creek	28.74	146	P	P	05 49 18.8	+1.0
STKA	Stephens Creek	28.74	146	P	P	05 49 18.2	+0.4
	comp=Z,328nm,0.7s						
STKA	Stephens Creek	28.74	146	P	P	05 49 18.7	+1.0
	comp=Z,33nm,0.5s,baz=316,slow=9.4,SNR=45						
STKA				LR	LR	06 01 37.3	
	comp=Z,828nm,21.7s,baz=322,slow=38						
	comp=Z,33nm,0.5s						
STKA	Stephens Creek	28.74	146	P	P	05 49 18.8	+1.0
STKA	Stephens Creek	28.74	146	*i* P	P	05 49 18.2	+0.4
SNSI	Sinabang, Aceh	28.82	292	P	P	05 49 18.0	-0.7
	comp=Z,4µmcomp=Z,668nm,1.0s						
SRIT	Nakonsritamara	29.01	306	IAmb	IAmb	05 49 25.5	
	comp=Z,155nm,0.9s						
LHMI	Lhok Sumawe	29.48	297	IAmb	IAmb	05 49 25.4	
	comp=Z,135nm,0.8s						
LHMI	Lhok Sumawe	29.48	297	P	P	05 49 24.0	-0.5
	comp=Z,154nm,0.7s						
MLSI	Meulaboh, Aceh	29.52	295	P	P	05 49 23.2	-1.7
	comp=Z,3µmcomp=Z,522nm,1.0s						
QIZ	Qiongzhong	30.54	335	P	P	05 49 35.0	+1.2
QIZ				S	S	05 54 30.4	+3.2
QIZ				sS	sS	05 55 15.8	+6.1
QIZ				pmax	pmax		
	comp=Z,60nm,0.9s						
QIZ				LR	LR		
	comp=Z,330nm,9.8s						
QIZ				LR	LR		
	comp=Z,560nm,16.5s						
QIZ	Qiongzhong	30.54	335	P	P	05 49 35.4	+1.6
CMSA	Cobar Meteorol	30.94	140	P	P	05 49 37.2	0.0
	comp=Z,104nm,0.7s						
CMSA	Cobar Meteorol	30.94	140	P	P	05 49 38.6	+1.3
BSI	Banda Aceh	31.06	296	P	P	05 49 36.0	-2.5
	comp=Z,79nm,0.9s						
TPUB	Ta-pu	31.98	356	IAmb	IAmb	05 49 59.4	
	comp=Z,93nm,0.9s						
YULB	Yu-li	32.03	357	IAmb	IAmb	05 49 53.8	
	comp=Z,75nm,0.8s						
YULB	Yu-li	32.03	357	P	P	05 49 48.5	+1.6
SSLB	Suanglung	32.44	357	P	P	05 49 50.0	-0.5
SSLB				IAmb	IAmb	05 49 56.8	
	comp=Z,88nm,0.8s						
ARPS	Mount Arapiles	32.68	151	P	P	05 49 53.4	+0.9
	comp=Z,306nm,0.8s						
ARPS	Mount Arapiles	32.68	151	P	P	05 49 54.3	+1.8
NACB	Ninganchiao	32.80	358	P	P	05 49 54.0	+0.5
NACB				IAmb	IAmb	05 49 59.2	
	comp=Z,59nm,0.8s						
NACB	Ninganchiao	32.80	358	P	P	05 49 54.4	+0.9
YOJ	Yonaguni jima	33.05	0	P	P	05 49 57.4	+1.6
YOJ				IAmb	IAmb	05 50 02.5	
	comp=Z,132nm,0.8s						
YOJ	Yonaguni jima	33.05	0	P	P	05 49 57.7	+2.0
YOJ	Yonaguni jima	33.05	0	P	P	05 49 57.4	+1.6
YOJ				pmax	pmax		
	comp=Z,132nm,0.8s						
GZH	Guangzhou	33.06	344	P	P	05 50 02.0	+6.2
YHNB	Yeheng	33.30	357	P	P	05 49 59.5	+1.5
TATO	Taipei	33.60	358	P	P	05 49 60.0	-0.5
TATO	Taipei	33.60	358	P	P	05 50 00.8	+0.3
TATO	Taipei	33.60	358	P	P	05 50 00.3	-0.2
ARMA	Armidale	34.32	133	P	P	05 50 09.4	+2.5
ARMA	Armidale	34.32	133	P	P	05 50 08.0	+1.1
	comp=Z,42nm,0.9s						
ARMA	Armidale	34.32	133	P	P	05 50 08.4	+1.5
YNG	Young	34.47	141	P	P	05 50 08.9	+0.8
	comp=Z,75nm,0.8s						
TOO	Toolangi	35.13	148	P	P	05 50 15.5	+1.9
TOO	Toolangi	35.13	148	P	P	05 50 16.3	+2.6
TOO				pmax	pmax		
	comp=Z,15nm,0.8s						
CAN	Canberra	35.52	142	P	P	05 50 18.2	+1.1
CAN				IAmb	IAmb	05 51 07.2	
	comp=Z,210nm,1.8s						
CAN	Canberra	35.52	142	P	P	05 50 18.8	+1.7
CAN	Canberra	35.52	142	P	P	05 50 18.2	+1.1
CAN				pmax	pmax		
	comp=Z,210nm,1.8s						
CAN	Canberra	35.52	142	P	P	05 50 19.0	+1.9
MGCD	Mangrove Creek	35.54	137	P	P	05 50 15.9	-1.3
CNB	Canberra Magne	35.74	142	P	P	05 50 20.0	+1.0
	comp=Z,43nm,1.2s						
CNB	Canberra Magne	35.74	142	P	P	05 50 20.0	+1.0
JOW	Kunigami	35.78	8	P	P	05 50 19.1	-0.1
JOW				IAmb	IAmb	05 50 22.9	
	comp=Z,221nm,1.8s						
JOW	Kunigami	35.78	8	P	P	05 50 20.0	+0.7
CM31	Chiang Mai Arr	36.01	319	IAmb	IAmb	05 50 23.7	
	comp=Z,78nm,0.9s						
CM31	Chiang Mai Arr	36.01	319	P	P	05 50 22.6	+1.3
	SNR=18						
CMAR	Chiang Mai Arr	36.01	319	P	P	05 50 22.5	+1.1
CMAR	Chiang Mai Arr	36.01	319	P	P	05 50 22.6	+1.2
	comp=Z,43nm,0.8s,baz=143,slow=6.8,SNR=148						
CMAR				PcP	PcP	05 52 47.0	+1.4
	comp=Z,6.7nm,0.6s,baz=167,slow=2.9,SNR=4.9						
CMAR				S	S	05 55 53.7	+1.8
	comp=Z,1.6nm,0.3s,baz=93,slow=30,SNR=1.5						
CMAR				ScP	ScP	05 56 23.1	+1.7
	comp=Z,3.8nm,0.4s,baz=165,slow=3.4,SNR=6.2						
CMAR				LR	LR	06 08 31.1	
	comp=Z,192nm,20.1s,baz=140,slow=42						
	comp=Z,43nm,0.8s						
CMAR	Chiang Mai Arr	36.01	319	*ce*P	P	05 50 22.6	+1.2
CMAR				pmax	pmax		
	comp=Z,46nm,0.8s						
GULI	GuiLin	36.05	340	P	P	05 50 24.3	+2.8
GULI				S	S	05 55 50.8	-1.4
GULI				pmax	pmax		
	comp=Z,50nm,1.0s						
GULI				LR	LR		
	comp=Z,600nm,16.1s						
GULI				LR	LR		
	comp=Z,600nm,15.5s						
GULI				LR	LR		
	comp=Z,440nm,19.2s						
CHTO	Chiang Mai	36.27	319	P	P	05 50 24.7	+1.1
CHTO				IAmb	IAmb	05 50 25.8	
	comp=Z,77nm,1.0s						
CHTO	Chiang Mai	36.27	319	P	P	05 50 24.9	+1.3
CHTO				S	S	05 55 59.5	+3.6
CHTO	Chiang Mai	36.27	319	P	P	05 50 24.4	+0.8
CHTO	Chiang Mai	36.27	319	P	P	05 50 24.7	+1.1
CHTO				pmax	pmax		
	comp=Z,77nm,1.0s						
CHTO	Chiang Mai	36.27	319	P	P	05 50 24.5	+1.0
TATA	Tatamba Isabel	36.38	92	P	P	05 50 23.4	-1.2
HNR	Honiara	36.48	94	P	P	05 50 25.1	-0.3
NGOA	Tingoa Renbel	36.57	98	P	P	05 50 26.0	-0.2
ALEG	Aligegeo Malai	37.24	93	P	P	05 50 30.3	-1.6
CNSH	ChangSha	38.03	345	P	P	05 50 39.1	+0.9
CNSH				S	S	05 56 20.8	-1.4
CNSH				pmax	pmax		
	comp=Z,26nm,0.9s						
CNSH				LR	LR		
	comp=Z,310nm,20.6s						
CNSH				LR	LR		
	comp=Z,530nm,22.7s						
CNSH				LR	LR		
	comp=Z,450nm,10.9s						
GYA	Guiyang	38.47	336	⇑P	P	05 50 44.3	+2.2
GYA				S	S	05 56 31.3	+2.1
GYA				pmax	pmax		
	comp=Z,100nm,0.8s						
GLAD	Gladstone	38.98	149	P	P	05 50 46.5	+0.4
KMI	Kunming	39.07	330	⇓P	P	05 50 50.0	+2.7
KMI				pP	pP	05 51 09.1	-3.6
KMI				S	S	05 56 35.4	-3.0
KMI				sS	sS	05 57 24.6	+2.7
KMI				pmax	pmax		
	comp=Z,110nm,1.1s						
KMI				LR	LR		
	comp=Z,510nm,13.1s						
KMI				LR	LR		
	comp=Z,390nm,17.6s						
KMI				LR	LR		
	comp=Z,630nm,22.8s						
KMI	Kunming	39.07	330	P	P	05 50 50.0	+2.7
MOO	Moorlands	39.69	152	P	P	05 50 51.9	-0.1
SSE	Sheshan	39.70	358	P	P	05 50 54.3	+2.2
SSE				S	S	05 56 43.6	-3.6
SSE				pmax	pmax		
	comp=Z,38nm,0.9s						
SSE				pmax	pmax		
	comp=Z,96nm,3.7s						
SSE				LR	LR		
	comp=Z,140nm,22.0s						
WHN	Wuhan	39.98	348	⇑P	P	05 50 57.3	+2.8
WHN				sP	sP	05 51 35.4	+2.3
WHN				PP	PnPn	05 52 34.8	+1.4
WHN				S	S	05 56 54.1	+2.6
WHN				pmax	pmax		
	comp=Z,140nm,0.9s						
JCJ	Chichijima	40.23	27	P	P	05 50 56.2	-0.5
PZH	PanZhiHua	40.71	330	P	P	05 51 02.1	+1.4
PZH				PP	PP	05 52 40.6	+3.6
PZH				S	S	05 57 00.8	-1.9
PZH				SS	SS	06 00 08.6	+0.5
PZH				pmax	pmax		
	comp=Z,70nm,1.1s						
PZH				pmax	pmax		
	comp=Z,120nm,3.5s						
NJ2	Nanjing	40.81	355	⇑P	P	05 51 03.3	+2.0
NJ2				S	S	05 57 06.8	+3.1
NJ2				sS	sS	05 57 53.3	+5.8
NJ2				pmax	pmax		
	comp=Z,74nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,190nm,4.3s						
ENH	Enshi	40.95	342		P	05 51 03.1	+0.5
ENH				IAmb	IAmb	05 51 07.3	
	comp=Z,64nm,0.8s						
ENH	Enshi	40.95	342	P	P	05 51 03.9	+1.3
TNCH	TengChong	41.22	325	P	P	05 51 06.3	+1.2
TNCH				S	S	05 57 10.9	+0.4
TNCH				pmax	pmax		
	comp=Z,130nm,1.0s						
TNCH				pmax	pmax		
	comp=Z,500nm,2.8s						
TNCH				LR	LR		
	comp=Z,870nm,25.4s						
TNCH				LR	LR		
	comp=Z,950nm,24.5s						
TNCH				LR	LR		
	comp=Z,760nm,26.1s						
LUES	Luesalemba Tem	42.31	96	P	P	05 51 14.8	+0.9
JNU	Nakatsue	42.35	10	P	P	05 51 13.4	-0.6
JNU	Nakatsue	42.35	10	P	P	05 51 13.6	-0.3
JMN	Monobe	43.53	13	IAmb	IAmb	05 51 27.4	
	comp=Z,110nm,0.9s						
JMN	Monobe	43.53	13	P	P	05 51 23.8	+0.4
CD2	Chengdu	43.58	336	P	P	05 51 25.1	+1.2
CD2				pP	pP	05 51 51.0	+0.9
CD2				S	S	05 57 45.8	+1.1
CD2				pmax	pmax		
	comp=Z,240nm,0.6s						
CD2				pmax	pmax		
	comp=Z,180nm,5.4s						
NOUC	Port Laguerre	43.62	113	P	P	05 51 24.7	+0.3
NOUC				pP	pP	05 51 51.2	+1.3
SANVU	Saraoutou	43.66	103	P	P	05 51 25.3	+0.6
SANVU	Saraoutou	43.66	103	P	P	05 51 25.5	+0.8
SANVU	Saraoutou	43.66	103	P	P	05 51 25.3	+0.6
SANVU				pP	pP	05 51 51.5	+1.2
DZM	Mont Dzumac	43.75	113	P	P	05 51 26.1	+0.7
DZM	Mont Dzumac	43.75	113	P	P	05 51 25.8	+0.3
DZM	Mont Dzumac	43.75	113	P	P	05 51 26.0	+0.5
OUENC	Ouen Island, N	44.17	113	P	P	05 51 29.4	+0.6
LYN	LuoYang	44.25	348	⇓P	P	05 51 30.3	+1.2
LYN				S	S	05 57 55.1	+1.0
LYN				sS	sS	05 58 38.0	-0.4
LYN				pmax	pmax		
	comp=Z,51nm,0.9s						
LYN				pmax	pmax		
	comp=Z,260nm,5.6s						
XAN	Xi'an	44.64	343	P	P	05 51 31.3	-1.0
XAN				ScP	ScP	05 56 55.5	+0.6
XAN				S	S	05 58 00.0	0.0
XAN				ScS	ScS	06 01 15.5	-3.0
XAN				pmax	pmax		
	comp=Z,150nm,0.7s						
XAN				pmax	pmax		
	comp=Z,240nm,4.1s						
XAN				LR	LR		
	comp=Z,570nm,13.9s						
XAN				LR	LR		
	comp=Z,460nm,13.6s						
XAN				LR	LR		
	comp=Z,650nm,19.4s						
XAN	Xi'an	44.64	343	P	P	05 51 32.4	0.0
PALK	Pallekele	45.08	289	P	P	05 51 34.7	-1.4
PALK	Pallekele	45.08	289	P	P	05 51 35.1	-1.0
PALK	Pallekele	45.08	289	P	P	05 51 34.7	-1.4
PALK				pmax	pmax		
	comp=Z,48nm,1.0s						
PALK	Pallekele	45.08	289	P	P	05 51 34.6	-1.5
TIA	Tai'an	45.10	353	P	P	05 51 36.3	+0.4
TIA				S	S	05 58 07.3	+0.8
TIA				ScS	ScS	06 01 13.0	-8.2
TIA				SS	SS	06 01 20.4	-11
TIA				pmax	pmax		
	comp=Z,15nm,0.9s						
TIA				LR	LR		
	comp=Z,230nm,12.6s						
TIA				LR	LR		
	comp=Z,560nm,20.1s						
TIA				LR	LR		
	comp=Z,550nm,19.8s						
TJN	Taejon	45.12	5	IAmb	IAmb	05 51 38.8	
	comp=Z,158nm,1.0s						
INU	Inuyama	45.86	16	IAmb	IAmb	05 51 46.7	
	comp=Z,52nm,0.8s						
INCN	Inchon	46.16	4	P	P	05 51 45.2	+1.0
INCN				S	S	05 58 27.3	+5.6
JGF	Kuroka	46.19	16	IAmb	IAmb	05 51 47.5	
	comp=Z,63nm,0.9s						
JGF	Kuroka	46.19	16	P	P	05 51 44.4	-0.1
KSAR	Wonju Array Be	46.22	5	P	P	05 51 46.2	+1.6
KSAR	Wonju Array Be	46.22	5	P	P	05 51 46.2	+1.6
KSRS	Korea Array	46.23	5	P	P	05 51 45.0	+0.3
	comp=Z,11nm,0.7s,baz=182,slow=10.0,SNR=30						
KSRS				PcP	PcP	05 53 19.8	+1.3
	comp=Z,11nm,0.8s,baz=191,slow=4.6,SNR=6.6						
KSRS				ScP	ScP	05 57 02.1	+0.9
	comp=Z,7.1nm,1.0s,baz=185,slow=2.4,SNR=6.2						
	comp=Z,11nm,0.7s						
KS19	Wonju Array Si	46.28	5	P	P	05 51 45.0	-0.1
KS19				IAmb	IAmb	05 51 47.2	
	comp=Z,138nm,1.8s						
HNS	HongShan	46.60	351	⇑P	P	05 51 48.8	+1.2
HNS				ScP	ScP	05 57 03.9	+1.1
HNS				S	S	05 58 23.3	-4.6
HNS				ScS	ScS	06 01 30.4	-0.4
HNS				pmax	pmax		
	comp=Z,34nm,1.6s						
HNS				LR	LR		
	comp=Z,380nm,18.8s						
MJAR	Matsushiro Arr	47.31	17	P	P	05 51 52.3	-0.8
	comp=Z,91nm,0.8s,baz=192,slow=8.8,SNR=77						
MJAR				ScP	ScP	05 57 06.8	+0.9
	comp=Z,3.2nm,0.9s,baz=193,slow=3.8,SNR=3.0						
	comp=Z,91nm,0.8s						
MAJO	Matsushiro	47.31	17	P	P	05 51 53.0	-0.1
MAJO				IAmb	IAmb	05 51 55.6	
	comp=Z,123nm,1.1s						
MAJO	Matsushiro	47.31	17	P	P	05 51 51.7	-1.4
MAJO	Matsushiro	47.31	17	*i* P	P	05 51 52.9	-0.2
MAJO				pmax	pmax		
	comp=Z,105nm,1.1s						
MAJO	Matsushiro	47.31	17	P	P	05 51 52.5	-0.6
TIY	Taiyuan	47.31	349	P	P	05 51 55.5	+2.3
TIY				S	S	05 58 39.1	+1.0
TIY				pmax	pmax		
	comp=Z,28nm,0.9s						
DL2	Dalian	47.47	359	P	P	05 51 50.8	-3.5
DL2				S	S	05 58 38.4	-1.8
DL2				ScS	ScS	06 01 30.0	-6.5
DL2				pmax	pmax		
	comp=Z,87nm,1.1s						
DL2				pmax	pmax		
	comp=Z,240nm,5.3s						
LZH	Lanzhou	48.15	339	*e*P	P	05 52 01.9	+2.1
LZH				pP	pP	05 52 22.0	-4.8
LZH				sP	sP	05 52 40.9	+1.2
LZH				ScP	ScP	05 57 11.3	+1.7
LZH				S	S	05 58 46.3	-3.9
LZH				sS	sS	05 59 31.9	-3.1
LZH				ScS	ScS	06 01 38.3	-3.2
LZH				pmax	pmax		
	comp=Z,88nm,1.3s						
LZH				pmax	pmax		
	comp=Z,260nm,4.5s						
LZH				LR	LR		
	comp=Z,520nm,13.7s						
LZH				LR	LR		
	comp=Z,570nm,14.1s						
LZH				LR	LR		
	comp=Z,440nm,14.1s						
JSD	Sado	48.72	16	P	P	05 52 03.8	-0.2
BJT	Baijiatuau	48.98	353	P	P	05 52 06.5	+0.6
BJI	Beijing	49.00	353	P	P	05 52 06.6	+0.6
BJI				S	S	05 58 56.3	-5.3
BJI				ScS	ScS	06 01 43.6	-3.0
BJI				pmax	pmax		
	comp=Z,19nm,0.8s						
BJI				pmax	pmax		
	comp=Z,58nm,4.5s						
LSA	Lhasa	49.03	323		P	05 52 08.2	+1.1
LSA				IAmb	IAmb	05 52 12.2	
	comp=Z,101nm,0.8s						
LSA	Lhasa	49.03	323	P	P	05 52 08.3	+1.1
LSA	Lhasa	49.03	323	P	P	05 52 08.2	+1.1
LSA				pmax	pmax		
	comp=Z,101nm,0.8s						
LSA	Lhasa	49.03	323	P	P	05 52 08.2	+1.1
LSA	Lhasa	49.03	323	P	P	05 52 08.2	+1.1
JMM	Marumori	49.31	19	P	P	05 52 08.9	+0.5
JMM	Marumori	49.31	19	P	P	05 52 08.9	+0.5
H08S2	Diego Garcia H	49.97	267	P	P	05 52 14.5	+0.8
	baz=62,slow=9.3,SNR=13						
H08S2				T	T	06 46 47.8	
	baz=98,slow=75,SNR=2.6						
H08S3	Diego Garcia H	49.98	267	P	P	05 52 15.0	+1.2
	baz=62,slow=9.3,SNR=7.2						
H08S3				T	T	06 46 47.8	
	baz=98,slow=75,SNR=3.4						
H08S1	Diego Carcia H	49.99	267	P	P	05 52 15.1	+1.3
	baz=62,slow=9.3,SNR=12						
H08S1				T	T	06 46 47.4	
	baz=98,slow=75,SNR=2.6						
SNY	Shenyang	50.38	1	⇑P	P	05 52 16.4	0.0
SNY				S	S	05 59 13.9	-6.9
SNY				pmax	pmax		
	comp=Z,52nm,1.3s						
SNY				pmax	pmax		
	comp=Z,320nm,5.5s						
SNY				LR	LR		
	comp=Z,290nm,5.0s						
SNY				LR	LR		
	comp=Z,390nm,6.5s						
SNY				LR	LR		
	comp=Z,340nm,6.9s						
HHC	Hu-ho-hao-te	50.51	349	*e*P	P	05 52 19.0	+1.4
HHC				S	S	05 59 23.8	+0.9
HHC				pmax	pmax		
	comp=Z,23nm,1.1s						
HHC				pmax	pmax		
	comp=Z,110nm,4.5s						
HHC				LR	LR		
	comp=Z,200nm,21.0s						
HHC				LR	LR		
	comp=Z,340nm,17.7s						
HHC				LR	LR		
	comp=Z,310nm,20.2s						
EVN	Everest	50.59	317	P	P	05 52 19.5	+0.4
BTO	Baotou	50.59	347	*e*P	P	05 52 21.1	+2.8
BTO				pP	pP	05 52 47.3	+1.8
BTO				sP	sP	05 53 00.3	+1.9
BTO				PP	PP	05 54 20.8	+5.4
BTO				S	S	05 59 25.8	+1.7
BTO				sS	sS	06 00 14.0	+4.8
BTO				pmax	pmax		
	comp=Z,46nm,1.3s						
BTO				pmax	pmax		
	comp=Z,290nm,6.4s						
BTO				LR	LR		
	comp=Z,580nm,17.2s						
BTO				LR	LR		
	comp=Z,580nm,12.7s						
BTO				LR	LR		
	comp=Z,2µm,10.9s						
KAAM	Kaadhehdhoo	50.66	278	P	P	05 52 19.3	+0.1
KAAM	Kaadhehdhoo	50.66	278	P	P	05 52 19.2	+0.1
HYB	Hyderabad	51.06	301	*e*P	P	05 52 22.6	+0.5
HYB				*e*pP	pP	05 52 46.8	-2.5
HYB				*e*sP	sP	05 52 57.3	-4.9
HYB				*e*PcP	PcP	05 53 37.2	+0.7
HYB				*e*PP	PP	05 54 21.1	+1.1
HYB				*e*S	S	05 59 34.9	+3.7
MSHR	Mys Shultsa	51.66	8	*i* P	P	05 52 26.6	+0.5
MSHR				pmax	pmax		
	comp=Z,122nm,1.0s						
PSTR	Posyet	51.69	7	*i* P	P	05 52 28.0	+1.8
GOMU	GeErMu	52.02	331	P	P	05 52 30.8	+1.5
GOMU				S	S	05 59 44.0	-0.4
GOMU				pmax	pmax		
	comp=Z,69nm,1.1s						
GOMU				LR	LR		
	comp=Z,170nm,14.9s						
GOMU				LR	LR		
	comp=Z,340nm,14.0s						
GOMU				LR	LR		
	comp=Z,1µm,14.0s						
JTM	Tenmabayashi	52.07	17	P	P	05 52 29.5	+0.4
CN2	Changchun	52.39	2	P	P	05 52 31.4	-0.1
CN2				PcP	PcP	05 53 36.4	-4.4
CN2				ScP	ScP	05 57 28.4	+0.9
CN2				S	S	05 59 48.1	-0.4
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
GTA	Gaotai	52.57	337	P	P	05 52 35.1	+2.1
GTA				sP	sP	05 53 13.6	+0.3
GTA				ScP	ScP	05 57 30.4	+1.9
GTA				S	S	05 59 50.4	-0.9
GTA				sS	sS	06 00 36.5	-0.4
GTA				ScS	ScS	06 02 10.8	-0.8
GTA				pmax	pmax		
	comp=Z,50nm,1.2s						
GTA				LR	LR		
	comp=Z,350nm,16.4s						
GTA				LR	LR		
	comp=Z,300nm,14.9s						
GTA				LR	LR		
	comp=Z,290nm,16.7s						
XLT	XiLinHaoTe	52.82	354	*e*P	P	05 52 35.6	+0.9
XLT				S	S	05 59 51.3	-3.2
XLT				pmax	pmax		
	comp=Z,36nm,1.0s						
JCZ	Jackson Bay	52.98	140	P	P	05 52 38.0	+2.0
OUZ	Omahuta	53.06	128	P	P	05 52 38.5	+1.8
WHZ	Wether Hill Ro	53.33	142	P	P	05 52 39.6	+1.2
WHZ				IAmb	IAmb	05 53 09.4	
	comp=Z,57nm,0.9s						
USA0B	Ussuriysk Arra	53.37	8	P	P	05 52 38.7	+0.1
USA0B	Ussuriysk Arra	53.37	8	*i* P	P	05 52 38.6	0.0
USRK	Ussuriysk Ar.	53.37	8	P	P	05 52 38.5	-0.1
	comp=Z,34nm,0.7s,baz=194,slow=7.0,SNR=50						
USRK				ScP	ScP	05 57 31.2	-0.5
	comp=Z,3.5nm,0.8s,baz=107,slow=1.5,SNR=2.8						
	comp=Z,34nm,0.7s						
MDJ	Mudanjiang	53.49	6	P	P	05 52 40.0	+0.5
MDJ				S	S	06 00 01.0	-2.4

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MDJ                              ScS    ScS     06 02 15.0  -2.6
MDJ                              pmax   pmax
      comp=Z,68nm,1.0s
ERM   Erimo             53.83  19  P      P       05 52 43.0 +1.0
ERM   Erimo             53.83  19  P      P       05 52 43.0 +1.0
ERM                                pmax   pmax
      comp=Z,104nm,0.9s
QRZ   Quartz Range      54.14 135  P      P       05 52 46.8 +2.3
MSVF  Nonsavu           54.15 105  P      P       05 52 47.3 +2.3
MSVF                               IAmb   IAmb    05 52 57.6
      comp=Z,75nm,0.9s
MSVF  Nonsavu           54.15 105  P      P       05 52 47.3 +2.3
MSVF  Nonsavu           54.15 105 i P     P       05 52 45.3 +0.3
MSVF                               pmax   pmax
      comp=Z,90nm,0.9s
MSVF  Nonsavu           54.15 105  P      P       05 52 47.1 +2.1
MSVF                               pP     pwP     05 53 14.7  -1.1
RPZ   Rata Peaks        54.29 138  P      P       05 52 46.7 +1.2
RPZ   Rata Peaks        54.29 138  LR     LR      06 14 21.0
      comp=Z,90µm,20.6s,baz=39,slow=34
RPZ   Rata Peaks        54.29 138  P      P       05 52 46.7 +1.2
BNX   BinXian           54.43   4 ⇑P      P       05 52 46.1  -0.2
BNX                                pmax   pmax
      comp=Z,20nm,1.6s
ODZ   Otahua Downs      54.60 140  P      P       05 52 48.4 +0.7
OXZ   Oxford            54.78 138  IAmb   IAmb    05 52 54.5
      comp=Z,66nm,0.6s
TEY   Ternei            54.97  12 eP      P       05 52 50.7 +0.5
KUZ   Kuaotunu          55.16 129  P      P       05 52 52.3 +0.5
KHZ   Kahutara          55.44 136  IAmb   IAmb    05 52 58.0
      comp=Z,72nm,0.9s
KHZ   Kahutara          55.44 136  P      P       05 52 54.8 +1.0
FUNA  Funafuti          55.51  94  P      P       05 52 55.9 +1.2
SNZO  South Karori      55.85 134  P      P       05 52 57.6 +0.9
SNZO  South Karori      55.85 134  P      P       05 52 57.3 +0.6
BHW   Baring Head       56.00 134  IAmb   IAmb    05 52 58.9
      comp=Z,44nm,0.7s
MRZ   Mangatainoka R    56.26 133  IAmb   IAmb    05 53 59.3
      comp=Z,59nm,1.2s
BKZ   Black Stump Fm    56.45 131  P      P       05 53 02.4 +1.3
BKZ                                IAmb   IAmb    05 53 05.2
      comp=Z,76nm,0.9s
BKZ   Black Stump Fm    56.45 131  P      P       05 53 02.1 +1.0
URZ   Urewera           56.65 130  P      P       05 53 03.2 +0.8
      comp=Z,60nm,0.8s
RTZ   Ruatahuna         56.65 131  IAmb   IAmb    05 53 36.8
      comp=Z,75nm,1.1s
BFZ   Birch Farm        56.74 133  P      P       05 53 04.4 +1.3
MXZ   Matakaoa Point    57.37 129  P      P       05 53 09.4 +1.9
CASY  Casey             58.04 186  P      P       05 53 12.7 +1.0
CASY                               IAmb   IAmb    05 53 43.6
      comp=Z,52nm,1.1s
CASY  Casey             58.04 186  P      P       05 53 12.6 +0.9
CASY                               pP     pwP     05 53 40.3  -2.6
ULN   Ulaanbaatar       58.15 347  P      P       05 53 14.3 +1.4
ULN   Ulaanbaatar       58.15 347  P      P       05 53 14.1 +1.2
ULN   Ulaanbaatar       58.15 347 i P     P       05 53 14.3 +1.4
ULN                                pmax   pmax
      comp=Z,31nm,0.9s
ULN   Ulaanbaatar       58.15 347  P      P       05 53 14.1 +1.2
YSS   Yuzhno-Sakhali    58.22  16  P      P       05 53 13.2  0.0
YSS   Yuzhno-Sakhali    58.22  16 eP      P       05 53 13.2  0.0
YSS                               eS      S       06 01 07.7 +1.7
YSS                                pmax   pmax
      comp=Z,800nm,2.9s
YSS                                pmax   pmax
      comp=Z,100nm,1.0s
SONM  Songino Array     58.27 347  P      P       05 53 14.7 +1.0
SONM                               IAmb   IAmb    05 53 20.3
      comp=Z,77nm,1.2s
SONM  Songino Array     58.27 347  P      P       05 53 14.7 +1.0
      comp=Z,36nm,0.7s,baz=164,slow=8.5,SNR=162
SONM                               PP     PP      05 55 24.8 +0.6
      comp=Z,13nm,1.0s,baz=163,slow=8.1,SNR=2.4
SONM                               S      S       06 01 07.0 +0.1
      comp=Z,0.2nm,0.3s,baz=232,slow=27,SNR=2.1
SONM                               PKP2bc         06 23 04.1
      comp=Z,2.1nm,1.1s,baz=243,slow=0.9,SNR=3.8
      comp=Z,36nm,0.7s
KLR   Kul'dur           58.28   7ceP      P       05 53 14.0 +0.4
KLR                                pmax   pmax
      comp=Z,30nm,1.0s
ROCAM Rodrigues Isla    58.55 252  P      P       05 53 19.1 +3.0
ROCAM                              pP     pwP     05 53 47.1  -0.1
HEH   HeiHe             58.92   3 eP      P       05 53 18.1 +0.1
HEH                                pP     pP      05 53 45.0  -0.9
HEH                                sP     sP      05 53 56.4  -2.2
HEH                                PcP    PcP     05 54 06.1 +0.1
HEH                                ScP    ScP     05 57 55.6  -0.4
HEH                                S      S       06 01 14.8  -0.2
HEH                                pmax   pmax
      comp=Z,160nm,1.1s
HEH                                pmax   pmax
      comp=Z,520nm,3.9s
DRV   Dumont d’Urvil    58.95 172  P      P       05 53 19.1 +1.1
DRV                                pP     pwP     05 53 47.3  -1.8
GRNR  Gornyy            60.45  10⇑iP      P       05 53 29.3 +0.8
GRNR                               pmax   pmax
      comp=Z,20nm,0.6s
CIT   Chita             61.11 353 eP      P       05 53 33.2 +0.2
CIT                               e               05 53 53.7
CIT                               e               05 54 02.7
CIT                               e               05 54 15.7
CIT                               e               06 01 47.8
CIT                               e               06 03 11.6
WMQ   Urumqi            61.38 332 ⇓P      P       05 53 36.8 +1.8
WMQ                                S      S       06 01 46.8  0.0
WMQ                                ScS    SKKSac  06 03 12.3  -3.1
WMQ                                pmax   pmax
      comp=Z,190nm,0.7s
WMQ                                pmax   pmax
      comp=Z,400nm,3.6s
WMQ   Urumqi            61.38 332  P      P       05 53 36.4 +1.4
ZAK   Zakamensk         61.38 346 eP      P       05 53 35.0 +0.1
ZAK                                pmax   pmax
      comp=Z,22nm,1.1s
TYV   Tymovskoe         61.81  14 eP      P       05 53 38.8 +1.2
TYV                                pmax   pmax
      comp=Z,29nm,1.6s
TYV                                pmax   pmax
      comp=Z,700nm,3.2s
IRK   Irkutsk           62.88 347 eP      P       05 53 32.7   -12
IRK                                pmax   pmax
      comp=Z,110nm,0.7s
MOY   Mondy             63.13 345 eP      P       05 53 47.7 +1.1
MOY                                pmax   pmax
      comp=Z,51nm,1.5s
NIL   Nilore            63.32 315  P      P       05 53 47.5  -0.7
NIL   Nilore            63.32 315  P      P       05 53 47.9  -0.2
NIL   Nilore            63.32 315  P      P       05 53 47.5  -0.7
NIL                                pmax   pmax
      comp=Z,120nm,0.9s
NIL   Nilore            63.32 315  P      P       05 53 47.4  -0.7
KSH   Kashi             64.86 321  P      P       05 53 58.9 +0.7
KSH                                S      S       06 02 27.9  -2.5
KSH                                ScS    ScS     06 03 43.8 +1.5
SHLS  Shalkode          65.11 326 eP      P       05 53 58.7  -1.0
SHLS                              eS      S       06 02 32.3  -1.2
SHLS  Shalkode          65.11 326 eP      P       05 53 58.8  -1.0
SHLS                              eS      S       06 02 32.3  -1.2
UZB   Uzynbulak         65.35 326 eP      P       05 54 01.7 +0.4
UZB                                pmax   pmax
      comp=Z,43nm,0.7s
UZB   Uzynbulak         65.35 326 eP      P       05 54 01.8 +0.4
      comp=Z,43nm,0.7s
ZSN   Zaisan            65.41 333 eP      P       05 54 02.1 +0.7
ZSN                                pmax   pmax
      comp=Z,56nm,0.9s
ZSN   Zaisan            65.41 333 eP      P       05 54 02.1 +0.7
      comp=Z,56nm,0.9s
SATY  Saty              65.64 326 eP      P       05 54 03.5 +0.4
SATY                              eS      S       06 02 41.4 +1.6
SATY  Saty              65.64 326 eP      P       05 54 03.6 +0.4
SATY                              eS      S       06 02 41.4 +1.6
RER   Riviere de l’E    65.72 251  P      P       05 54 06.7 +2.6
RER                                pP     pwP     05 54 35.2  -0.7
KPKS  Kokpek            65.75 326 eP      P       05 54 04.1 +0.4
KPKS                              eS      S       06 02 42.4 +1.3
KPKS                               pmax   pmax
      comp=Z,63nm,0.8s
KPKS  Kokpek            65.75 326 eP      P       05 54 04.2 +0.4
      comp=Z,63nm,0.8s
KPKS                              eS      S       06 02 42.5 +1.3
NRN   Naryn             66.00 323  IAmb   IAmb    05 54 07.1
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      comp=Z,80nm,0.7s
MK31  Makanchi Array    66.14 331deP      P       05 54 07.0 +0.8
MKAR  Makanchi Array    66.14 331  P      P       05 54 07.2 +1.0
      comp=Z,242nm,0.6s,baz=132,slow=8.3,SNR=375
MKAR                               S      S       06 02 43.6  -2.0
      comp=Z,1.7nm,0.8s,baz=134,slow=12,SNR=6.5
      comp=Z,242nm,0.6s
MKAR  Makanchi Array    66.14 331  P      P       05 54 07.3 +1.1
CCD   Concordia, Ant    66.28 180  P      P       05 54 09.2 +2.2
CCD                                pP     pwP     05 54 37.8  -1.0
MAKZ  Makanchi          66.31 331  P      P       05 54 08.0 +0.8
MAKZ  Makanchi          66.31 331  P      P       05 54 08.0 +0.8
MAKZ                               pmax   pmax
      comp=Z,140nm,0.8s
MAKZ  Makanchi          66.31 331  P      P       05 54 07.9 +0.7
ULHL  Ulahol            66.36 324  P      P       05 54 08.7 +0.8
      SNR=43
MDOK  Medeo             66.47 325 eP      P       05 54 08.9 +0.5
MDOK  Medeo             66.47 325 eP      P       05 54 09.0 +0.5
AAA   Alma-Ata          66.57 325 eP      P       05 54 09.5 +0.5
AAA   Alma-Ata          66.57 325 eP      P       05 54 09.6 +0.5
ARXS  Arharly           66.70 326 eP      P       05 54 10.0 +0.1
KBL   Kabul             66.77 313  P      P       05 54 10.3  -0.4
KBL   Kabul             66.77 313  P      P       05 54 10.7   0.0
      SNR=50
KBL   Kabul             66.77 313  P      P       05 54 10.3  -0.4
KBL                                pmax   pmax
      comp=Z,151nm,0.8s
BOD   Bodaibo           66.79 355 eP      P       05 54 10.5 +0.5
BOD                                pmax   pmax
      comp=Z,32nm,0.8s
TDK   Taldyqorghan      66.90 327 eP      P       05 54 11.6 +0.6
TDK   Taldyqorghan      66.90 327 eP      P       05 54 11.6 +0.6
MSEY  Mahe Island       67.11 269  P      P       05 54 12.0  -1.0
TKM2  Tokmak 2          67.15 324  P      P       05 54 13.7 +0.8
      SNR=95
KUU   Kurty             67.33 325 eP      P       05 54 14.3 +0.6
KUU   Kurty             67.33 325 eP      P       05 54 14.4 +0.6
KBK   Karagaybulak      67.36 324  P      P       05 54 15.4 +1.2
      SNR=44
UCH   Uchtor            67.36 323  P      P       05 54 15.2 +0.7
      SNR=9.5
AAK   Ala-Archa         67.62 323  P      P       05 54 16.9 +1.1
      SNR=70
AAK   Ala-Archa         67.62 323  P      P       05 54 16.9 +1.1
AAK   Ala-Archa         67.62 323  S      S       06 03 03.9   0.0
      comp=Z,1.2nm,0.4s,baz=312,slow=19,SNR=11
AAK   Ala-Archa         67.62 323  P      P       05 54 16.6 +0.8
AAK   Ala-Archa         67.62 323ceP      P       05 54 16.7 +0.9
AAK                                pmax   pmax
      comp=Z,82nm,0.8s
AAK   Ala-Archa         67.62 323 i P     P       05 54 16.8 +1.1
      SNR=76
AAK   Ala-Archa         67.62 323  P      P       05 54 16.8 +1.0
CHMS  Chumysh           67.69 324  P      P       05 54 16.5 +0.5
      SNR=9.4
AML   Almayashu         67.80 322  P      P       05 54 18.2 +0.9
      SNR=114
USP   Ospenovka         68.00 324  P      P       05 54 18.7 +0.7
      SNR=8.6
SGDS  Sogindy           68.03 324⇓iP      P       05 54 18.8 +0.5
      comp=Z,24nm,0.5s
EKS2  Erkin-Say         68.06 323  P      P       05 54 19.6 +1.1
      SNR=83
PEA0B Petropavlovsk-    68.36  22  IAmb   IAmb    05 54 25.2
      comp=Z,112nm,0.8s
PEA0B Petropavlovsk-    68.36  22ceP      P       05 54 20.4 +0.4
PETK  Petropavlovsk-    68.36  22  P      P       05 54 19.9   0.0
      comp=Z,75nm,0.7s,baz=189,slow=4.2,SNR=54
      comp=Z,75nm,0.7s
PETK  Petropavlovsk-    68.36  22  P      P       05 54 20.0   0.0
PET   Petropavlovsk     68.65  22  P      P       05 54 22.1 +0.4
PET                                IAmb   IAmb    05 54 26.5
      comp=Z,94nm,1.0s
PET   Petropavlovsk     68.65  22 eP      P       05 54 22.1 +0.4
PET                                pmax   pmax
      comp=Z,108nm,0.9s
SIMJ  Simiganj          68.87 317  P      P       05 54 23.5  -0.2
SIMJ  Simiganj          68.87 317  P      P       05 54 23.5  -0.2
NGCH  Negor - Chabah    69.08 301  P      P       05 54 25.4 +0.3
BTLS  Baital            69.33 325d iP     P       05 54 26.5 +0.4
BTLS                               pmax   pmax
      comp=Z,41nm,1.1s
BTLS  Baital            69.33 325⇓iP      P       05 54 26.6 +0.4
      comp=Z,41nm,1.1s
JLN   Jalan Bani Buh    69.47 298  P      P       05 54 27.6   0.0
WBK   Wadi Bani Khal    70.01 298  P      P       05 54 30.6  -0.2
IUG   Iuzhnay           70.05 321 eP      P       05 54 31.3 +0.5
IUG                                pmax   pmax
      comp=Z,57nm,0.7s
IUG   Iuzhnay           70.05 321 eP      P       05 54 31.3 +0.5
      comp=Z,57nm,0.7s
KK31  Karatay Array     70.28 322  P      P       05 54 32.0  -0.1
KK31  Karatay Array     70.28 322 i P     P       05 54 31.8  -0.3
KKAR  Karatay Array     70.28 322  P      P       05 54 32.1   0.0
KKAR                               IAmb   IAmb    05 54 33.4
      comp=Z,47nm,0.7s
KKAR  Karatay Array     70.28 322  P      P       05 54 32.1   0.0
KKAR                               pmax   pmax
      comp=Z,47nm,0.7s
ZAA0  Zalesovo Array    70.32 337  P      P       05 54 31.9  -0.1
ZALV  Zalesovo Beam     70.32 337  P      P       05 54 31.9  -0.1
      comp=Z,97nm,0.5s,baz=134,slow=4.2,SNR=338
ZALV                               S      S       06 03 29.7  -5.2
      comp=Z,6.5nm,0.8s,baz=137,slow=11,SNR=7.4
      comp=Z,97nm,0.5s
MHTO  MHTO              70.38 296  P      P       05 54 32.0  -1.0
CHM   Chimkent          70.41 321 eP      P       05 54 33.6 +0.7
CHM                                pmax   pmax
      comp=Z,46nm,0.6s
CHM   Chimkent          70.41 321 eP      P       05 54 33.6 +0.7
      comp=Z,46nm,0.6s
DQM   DQM               70.44 295  P      P       05 54 33.0  -0.5
KURBB Kurchatov Arra    70.60 332  P      P       05 54 34.1 +0.4
      comp=Z,126nm,0.7s,baz=147,slow=5.4,SNR=277
KURBB                              S      S       06 03 34.0  -4.2
      comp=Z,1.0nm,0.2s,baz=152,slow=10,SNR=7.2
      comp=Z,126nm,0.7s
KURK  Kurchatov         70.62 332  P      P       05 54 34.2 +0.4
KURK  Kurchatov         70.62 332  P      P       05 54 34.9 +1.0
KURK  Kurchatov         70.62 332ceP      P       05 54 34.3 +0.4
KURK                               pmax   pmax
      comp=Z,219nm,0.8s
KURK  Kurchatov         70.62 332  P      P       05 54 34.5 +0.6
BRLS  Borolday          70.66 322d iP     P       05 54 34.1  -0.2
BRLS  Borolday          70.66 322⇓iP      P       05 54 34.2  -0.2
JMDO  Jabal Madar       70.69 297  P      P       05 54 35.0   0.0
H04N2 CROZET ISLANDS    70.69 224  T      T       07 10 10.6
      baz=83,slow=75,SNR=2.7
H04N1 CROZET ISLANDS    70.71 224  T      T       07 10 11.0
      baz=83,slow=75,SNR=7.4
H04N3 CROZET ISLANDS    70.71 224  T      T       07 10 10.8
      baz=83,slow=75,SNR=2.8
MAW   Mawson            70.80 201  P      P       05 54 36.5 +1.8
      comp=Z,42nm,0.6s,baz=76,slow=6.1,SNR=109
      comp=Z,42nm,0.6s
YAK   Yakutsk           70.80   3  P      P       05 54 35.2 +0.5
YAK   Yakutsk           70.80   3 eP      P       05 54 34.7   0.0
YAK                               e*PP    pP      05 55 03.7 +0.1
YAK                               e               05 57 10.8
YAK                               eS      S       06 03 39.6  -0.5
YAK                               e               06 04 24.0
YAK                               e*SS    ScS     06 04 29.3 +1.9
YAK                               eSS     SS      06 08 15.2 +0.2
YAK                                pmax   pmax
      comp=Z,127nm,0.9s
YAK                                pmax   pmax
      comp=E,6.0nm,0.8s
YAK                                pmax   pmax
      comp=N,36nm,1.0s
YAK                                pmax   pmax
      comp=Z,78nm,2.0s
YAK                                pmax   pmax
      comp=N,127nm,4.4s
YAK                                pmax   pmax
      comp=E,79nm,2.9s
YAK                                smax   smax
      comp=N,176nm,1.8s
YAK                                smax   smax
      comp=E,267nm,2.4s
YAK   Yakutsk           70.80   3  P      P       05 54 35.1 +0.4
SMDO  Samad             70.96 298  P      P       05 54 36.5  -0.2
BIDO  Bidbid            71.04 299  P      P       05 54 37.0  -0.1
      SNR=6.8
VNDA  Vanda             71.60 172  P      P       05 54 40.6 +1.1
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VNDA  Vanda             71.60 172  P      P       05 54 40.9 +1.5
      comp=E,6.0nm,0.6s,baz=316,slow=7.0,SNR=18
      comp=E,6.0nm,0.6s
VNDA  Vanda             71.60 172  P      P       05 54 40.9 +1.5
VNDA                               pP     pwP     05 55 10.1  -1.6
VNDA                               sP     sP      05 55 22.5 +3.2
BSY   Bisya             71.60 297  P      P       05 54 40.6 +0.1
SBV   Sambava           71.64 259  P      P       05 54 40.3  -0.5
MA2   Magadan           71.68  14  P      P       05 54 40.8 +0.7
MA2   Magadan           71.68  14c iP     P       05 54 39.9  -0.2
MA2                                pmax   pmax
      comp=Z,101nm,0.8s
MA2   Magadan           71.68  14  P      P       05 54 40.9 +0.8
HRA   Herat             71.70 311  P      P       05 54 40.9  -0.2
HOQ   Hoqain            71.77 298  P      P       05 54 41.7 +0.3
      SNR=5.8
DMTO  DMTO              72.17 292  P      P       05 54 43.8  -0.2
ARQ   Araqi             72.38 298  P      P       05 54 45.2 +0.1
SBA   Scott Base        72.56 171  P      P       05 54 47.3 +2.1
SBA   Scott Base        72.56 171  P      P       05 54 47.3 +2.1
SBA                                pmax   pmax
      comp=Z,62nm,1.4s
SOHO  SOHO              72.61 299  P      P       05 54 46.6 +0.2
SOHO  SOHO              72.61 299 i P     P       05 54 45.6  -0.8
      SNR=11
RBK   Rabkut            72.80 291  P      P       05 54 47.3  -0.4
BRZS  Berezniki         73.06 329d iP     P       05 54 49.1 +0.6
BRZS  Berezniki         73.06 329⇓iP      P       05 54 49.1 +0.6
UOSS  Minazif           73.15 299  P      P       05 54 49.4  -0.3
UOSS  Minazif           73.15 299  P      P       05 54 49.5  -0.1
UOSS  Minazif           73.15 299  P      P       05 54 48.8  -0.8
DOK   Doka              73.16 292  P      P       05 54 48.9  -0.9
HATD  Hatta, Dubai      73.18 299  P      P       05 54 49.3  -0.5
HATD  Hatta, Dubai      73.18 299 i P     P       05 54 50.0 +0.2
      SNR=19
MDH   Madha             73.18 300  P      P       05 54 48.9  -0.9
ASHO  Ashiyiah          73.20 299  P      P       05 54 50.2 +0.2
      SNR=5.9
ASHO  Ashiyiah          73.20 299 i P     P       05 54 49.3  -0.7
      SNR=14
ALNE  Al Ain            73.27 298  P      P       05 54 50.4 +0.1
      SNR=7.1
ALNE  Al Ain            73.27 298 i P     P       05 54 49.9  -0.5
      SNR=14
WHFO  Wadi Hawf         73.31 292  P      P       05 54 49.8  -0.9
MSFE  Esma-Masafi       73.32 300 i P     P       05 54 50.7   0.0
      SNR=7.4
MASF  Masafi            73.33 300  P      P       05 54 50.4  -0.3
BANOM Banah             73.38 300  P      P       05 54 50.9  -0.1
UMZA  Um Al Zommool     73.39 297  P      P       05 54 50.3  -0.7
SHME  Shamm             73.56 300  P      P       05 54 51.9  -0.1
SHME  Shamm             73.56 300 i P     P       05 54 51.0  -0.9
      SNR=11
ABTO  Aybut             73.60 291  P      P       05 54 51.8  -0.6
FAQ   Al Faqa, Dubai    73.62 299  P      P       05 54 52.1  -0.3
      SNR=15
FAQ   Al Faqa, Dubai    73.62 299 i P     P       05 54 51.7  -0.6
      SNR=33
NAZ   Nazwa, Dubai      73.63 299  P      P       05 54 52.5   0.0
      SNR=8.5
NAZ   Nazwa, Dubai      73.63 299 i P     P       05 54 51.7  -0.7
      SNR=6.5
FOMA  Nahampoana Res    73.71 247  P      P       05 54 54.2 +1.3
FOMA                               IAmb   IAmb    05 54 56.5
      comp=Z,98nm,1.2s
ABPO  Ambohimpanom      73.80 253  P      P       05 54 55.7 +1.9
ABPO                               IAmb   IAmb    05 54 57.0
      comp=Z,245nm,1.6s
ABPO  Ambohimpanom      73.80 253  P      P       05 54 55.7 +1.9
ABPO                               pmax   pmax
      comp=Z,245nm,1.6s
UMQ   Umm Al-Quwin      73.80 300  P      P       05 54 53.7 +0.3
ASUD  Al Ashush, Dub    73.81 299  P      P       05 54 53.6 +0.1
      SNR=6.2
ASUD  Al Ashush, Dub    73.81 299 i P     P       05 54 53.3  -0.2
      SNR=15
VOI   Vohitsoka         74.03 250  P      P       05 54 57.0 +2.0
VOI                                IAmb   IAmb    05 54 58.0
      comp=Z,82nm,0.8s
VOI   Vohitsoka         74.03 250  P      P       05 54 57.6 +2.6
      SNR=5.4
AJN   Ajban             74.09 299  P      P       05 54 55.2 +0.1
AJN   Ajban             74.09 299 i P     P       05 54 54.4  -0.7
      SNR=6.2
MZWR  Madinat Zayed     74.82 297  P      P       05 54 59.3   0.0
MZR   Muzera            74.95 297  P      P       05 54 59.9  -0.2
      SNR=9.9
MZR   Muzera            74.95 297 i P     P       05 54 59.7  -0.4
      SNR=9.6
SEY   Seymchan          74.99  13ceP      P       05 55 00.1 +0.6
SEY                                pmax   pmax
      comp=Z,90nm,0.8s
GHWR  Ruwais            75.75 297  P      P       05 55 04.5  -0.2
BVAR  Borovoye Array    76.03 330  P      P       05 55 05.7 +0.1
      comp=Z,56nm,0.7s,baz=131,slow=6.7,SNR=230
BVAR                               S      S       06 04 34.5  -5.0
      comp=Z,6.0nm,1.0s,baz=106,slow=14,SNR=8.4
      comp=Z,56nm,0.7s
JRN   Qarnain Island    76.06 298  P      P       05 55 06.2  -0.2
      SNR=6.5
BRVK  Borovoye          76.10 330  P      P       05 55 06.0   0.0
BRVK                               IAmb   IAmb    05 55 11.0
      comp=Z,68nm,1.0s
BRVK  Borovoye          76.10 330  P      P       05 55 06.8 +0.8
BRVK  Borovoye          76.10 330ceP      P       05 55 06.0   0.0
BRVK                               pmax   pmax
      comp=Z,62nm,0.9s
SLWR  Sila              76.83 297  P      P       05 55 10.6  -0.1
TRNA  Turayna           77.43 298  P      P       05 55 14.0  -0.1
      SNR=7.9
SMRA  Abu-Samra         77.77 298  P      P       05 55 15.9  -0.1
      SNR=8.2
SHMA  Al-Shehemyia      77.95 299  P      P       05 55 16.5  -0.5
SAKB  Bahrain           78.35 299  P      P       05 55 19.0  -0.2
ADK   Adak              79.39  33  P      P       05 55 24.4 +0.2
SYO   Syowa Base        79.48 201⇑eX      P       05 55 24.4  -0.1
AB31  Akbulak array     79.71 324  P      P       05 55 25.8  -0.3
AB31                               IAmb   IAmb    05 55 30.1
      comp=Z,58nm,0.8s
AB31  Akbulak array     79.71 324 i P     P       05 55 25.8  -0.3
ABKAR Akbulak array     79.71 324  P      P       05 55 25.8  -0.3
ATKA  Atka Island       80.89  34  IAmb   IAmb    05 55 35.6
      comp=Z,101nm,0.8s
ATKA  Atka Island       80.89  34  P      P       05 55 32.2  -0.1
QSPA  South Pole Qui    81.20 180  P      P       05 55 35.4 +1.4
QSPA                               IAmb   IAmb    05 56 05.7
      comp=Z,61nm,0.9s
QSPA  South Pole Qui    81.20 180  P      P       05 55 35.4 +1.4
      comp=Z,40nm,0.7s,baz=313,slow=1.2,SNR=295
QSPA                               S      S       06 05 33.1  -1.3
      comp=Z,0.8nm,1.0s,baz=24,slow=22,SNR=5.6
      comp=Z,40nm,0.7s
AKTO  Aktyubinsk        81.34 324  P      P       05 55 34.7  -0.1
      comp=Z,110nm,0.9s,baz=106,slow=5.3,SNR=37
AKTO                               S      S       06 05 31.8  -4.4
      comp=Z,0.8nm,0.3s,baz=177,slow=22,SNR=1.2
      comp=Z,110nm,0.9s
KBD   Kabd              81.63 301  P      P       05 55 36.6  -0.2
RAYN  Ar Rayn           82.18 295  P      P       05 55 40.2 +0.4
RAYN  Ar Rayn           82.18 295  P      P       05 55 40.0 +0.2
RAYN  Ar Rayn           82.18 295 i P     P       05 55 39.8   0.0
      SNR=90
ATD   Arta Tunnel       82.21 283  P      P       05 55 40.9 +0.7
BILL  Bilibino          82.53  15ceP      P       05 55 40.6   0.0
BILL                               pmax   pmax
      comp=Z,7.0nm,0.9s
SVE   Sverdlovsk        82.81 331ceP      P       05 55 42.3   0.0
SVE                               eS      S       06 05 45.7  -5.2
SVE                                pmax   pmax
      comp=Z,97nm,1.0s
ARTI  Arti              83.72 330  P      P       05 55 46.6  -0.4
ARTI                               IAmb   IAmb    05 55 50.7
      comp=Z,70nm,0.8s
ARTI  Arti              83.72 330  S      SKSac   06 05 54.2  -4.8
      comp=Z,1.8nm,0.3s,baz=207,slow=23,SNR=10
ARTI  Arti              83.72 330d iP     P       05 55 46.3  -0.7
ARTI                               *PP    pP      05 56 08.6  -8.1
ARTI                                              05 59 00.1
ARTI                               PPP    PPP     06 00 53.3
ARTI                               S      SKSac   06 05 57.6  -1.4
ARTI                               *SS    sS      06 06 53.7 +3.9
ARTI                               SS     SS      06 11 27.0  -2.8
ARTI                               pmax   pmax
      comp=Z,54nm,0.7s
NIKH  Nikolski High     84.17  34  P      P       05 55 49.5 +0.2
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NIKH	Nikolski High	84.17	34	P	P	05 55 49.7	+0.4
	baz=247						
KIBK	Kibwezi	84.66	268	P	P	05 55 54.0	+1.1
	SNR=8.3						
AKT	Akhty	84.92	313	eP	P	05 55 53.4	-0.1
AKT				e*PP	pP	05 56 22.0	-1.4
AKT				e		05 59 10.1	
AKT				eS	SKSac	06 06 07.2	-0.4
AKT				pmax	pmax		
	comp=Z,70nm,0.9s						
POHA	Pohakuloa	85.00	69	P	P	05 55 56.0	+1.4
SPIA	Saint Paul Isl	85.12	30	P	P	05 55 54.3	+0.3
	baz=246						
PUH	Pauahi	85.22	70	P	P	05 55 57.0	+1.4
P08K	Saint George I	85.23	31	P	P	05 55 55.2	+0.6
	baz=246						
KNHH	Kane Nui o Ham	85.27	70	P	P	05 55 57.1	+1.4
MAK	Makhachkala	85.49	315	d iP	P	05 55 55.9	-0.3
MAK				e*PP	pP	05 56 21.1	-5.0
MAK				e*SP	sP	05 56 32.6	-5.8
MAK				e		05 59 13.6	
MAK				ePPP	PPP	06 01 08.4	
MAK				e		06 06 11.2	
MAK				eSS	SS	06 11 57.8	+1.3
MAK				eSSS	SSS	06 15 32.4	
MAK				pmax	pmax		
	comp=Z,91nm,0.8s						
MAK				MLR	MLR		
	comp=Z,808nm,14.0s						
KMBO	Kilima Mbogo	85.63	270	P	P	05 55 59.1	+1.2
KMBO	Kilima Mbogo	85.63	270	i P	P	05 55 58.8	+0.9
	SNR=26						
UNV	Unalaska Valle	85.80	34	IAmb	IAmb	05 56 08.5	
	comp=Z,47nm,0.8s						
UNV	Unalaska Valle	85.80	34	P	P	05 55 57.5	0.0
	baz=249						
GNI	Garni	86.75	311	P	P	05 56 03.7	+1.0
GNI				IAmb	IAmb	05 56 49.8	
	comp=Z,54nm,0.8s						
GNI	Garni	86.75	311	P	P	05 56 03.4	+0.6
	comp=Z,31nm,0.9s,baz=206,slow=3.3,SNR=13						
	comp=Z,31nm,0.9s						
GNI	Garni	86.75	311	P	P	05 56 03.3	+0.6
GNI	Garni	86.75	311	i P	P	05 56 03.9	+1.2
GNI				pmax	pmax		
	comp=Z,64nm,1.0s						
GAMB	Gambell	87.28	24	P	P	05 56 05.4	+0.9
GAMB	Gambell	87.28	24	P	P	05 56 04.8	+0.4
	baz=244						
TRLG	Trialeti	87.56	312	P	P	05 56 07.6	+1.0
FALS	False Pass	87.84	34	P	P	05 56 07.5	+0.2
	baz=252						
BELG	Belogornoye	88.11	324	P	P	05 56 08.5	-0.2
	comp=Z,107nm,1.0s,baz=99,slow=0.8,SNR=26						
BELG				S	SKSac	06 06 26.4	-0.1
	comp=Z,3.6nm,0.7s,baz=236,slow=22,SNR=1.3						
	comp=Z,107nm,1.0s						
BELG	Belogornoye	88.11	324	d iP	P	05 56 08.3	-0.4
BELG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
LODK	Lodwar	88.19	274	P	P	05 56 10.3	+0.3
M11K	Mekoryuk	88.30	28	P	P	05 56 09.0	-0.3
	baz=249						
NCK	Nalchik	88.39	314	i P	P	05 56 11.8	+1.5
NCK				pmax	pmax		
	comp=Z,61nm,0.9s						
S12K	Black Hills	88.84	33	IAmb	IAmb	05 56 15.4	
	comp=Z,71nm,0.9s						
S12K	Black Hills	88.84	33	P	P	05 56 12.0	-0.1
	baz=253,SNR=5.5						
KBZ	Khabaz	88.94	314	P	P	05 56 12.6	-0.1
	comp=Z,21nm,0.9s,baz=149,slow=3.5,SNR=32						
KBZ				S	SKSac	06 06 32.4	+0.6
	comp=Z,0.7nm,0.4s,baz=41,slow=11,SNR=1.7						
	comp=Z,21nm,0.9s						
KBZ	Khabaz	88.94	314	ceP	P	05 56 12.2	-0.6
KIRV	Kirov	89.03	330	S	SKSac	06 06 31.0	-0.7
	comp=Z,16nm,0.4s,baz=86,slow=19,SNR=5.6						
KIRV	Kirov	89.03	330	ceP	P	05 56 13.0	+0.2
SHA1	Shidzhatmaz	89.11	314	eP	P	05 56 12.6	-1.3
KVAR	Kislovodsk Arr	89.13	315	P	P	05 56 16.7	+2.9
	comp=Z,7.5nm,0.9s,baz=270,slow=23,SNR=2.7						
KIV	Kislovodsk	89.14	315	P	P	05 56 13.9	0.0
KIV				IAmb	IAmb	05 56 20.6	
	comp=Z,37nm,1.0s						
KIV	Kislovodsk	89.14	315	P	P	05 56 14.7	+0.8
KIV	Kislovodsk	89.14	315	eP	P	05 56 13.7	-0.2
KIV				e		05 59 44.9	
KIV				e		06 06 32.7	
KIV				pmax	pmax		
	comp=Z,22nm,3.5s						
KIV				pmax	pmax		
	comp=Z,28nm,1.1s						
GOF	Gofitskoye	89.14	316	ceP	P	05 56 13.5	-0.2
MARD	Mardin	89.14	308	IAmb	IAmb	05 56 22.2	
	comp=Z,28nm,0.8s						
TNA	Tin City	89.50	23	P	P	05 56 15.5	+0.6
	baz=247						
K13K	Kusilvak Mount	89.54	27	IAmb	IAmb	05 56 20.0	
	comp=Z,40nm,0.9s						
K13K	Kusilvak Mount	89.54	27	P	P	05 56 15.3	+0.1
	baz=250						
SDPT	Sand Point	89.60	34	P	P	05 56 15.0	-0.6
SDPT	Sand Point	89.60	34	P	P	05 56 15.4	-0.2
	baz=254						
M13K	Dall Lake	89.64	28	P	P	05 56 16.0	+0.3
M13K				IAmb	IAmb	05 56 21.0	
	comp=Z,37nm,0.8s						
M13K	Dall Lake	89.64	28	P	P	05 56 15.9	+0.2
	baz=251						
KOPT	Kop Dagi	89.90	310	IAmb	IAmb	05 56 23.7	
	comp=Z,47nm,0.8s						
CHNA	Chernabura Isl	89.95	34	P	P	05 56 17.2	0.0
	baz=255						
F14K	Arctic Creek	90.08	23	P	P	05 56 18.4	+0.8
	baz=249						
ANM	Nome	90.14	24	P	P	05 56 18.9	+0.9
	baz=250						
L14K	Kuka Creek	90.24	28	P	P	05 56 19.0	+0.6
L14K	Kuka Creek	90.24	28	P	P	05 56 19.6	+1.1
	baz=252						
N14K	Kuskokwak Cree	90.29	29	P	P	05 56 19.3	+0.6
	baz=253						
O14K	Tigyukauivet M	90.30	30	IAmb	IAmb	05 56 23.1	
	comp=Z,42nm,0.9s						
O14K	Tigyukauivet M	90.30	30	P	P	05 56 19.7	+0.9
	baz=253,SNR=6.5						
J14K	Nanvaranak Lak	90.30	26	P	P	05 56 19.1	+0.5
	baz=251						
S14K	Fog Glacier	90.36	33	P	P	05 56 18.8	-0.5
	baz=255,SNR=6.1						
M14K	Bethel	90.40	28	IAmb	IAmb	05 56 24.1	
	comp=Z,62nm,0.8s						
M14K	Bethel	90.40	28	P	P	05 56 19.0	-0.2
	baz=253,SNR=19						
TROLL	Troll, Antarti	90.65	196	⇓P	P	05 56 22.5	+2.0
	comp=Z,792nm,0.7s						
LABN	Labinsk	90.66	315	eP	P	05 56 19.9	-0.9
LABN				e*PP	pP	05 56 48.6	-2.2
LABN				pmax	pmax		
	comp=Z,44nm,0.7s						
F15K	North Star Dit	90.82	23	P	P	05 56 21.6	+0.5
	baz=250						
G15K	Niukluk	90.82	24	P	P	05 56 21.1	0.0
	baz=251						
L15K	Ungalak Mounta	90.89	28	P	P	05 56 21.5	0.0
	baz=253						
VSLR	Vesyoloye	90.92	314	i P	P	05 56 23.5	+1.4
VSLR				pmax	pmax		
	comp=Z,65nm,1.1s						
M15K	Kasigluk River	90.98	29	P	P	05 56 22.0	+0.1
	baz=254,SNR=9.7						
O15K	Ungalikthiuk R	90.99	30	P	P	05 56 21.0	-1.0
O15K	Ungalikthiuk R	90.99	30	P	P	05 56 21.5	-0.5
	baz=254,SNR=7.2						
ERBR	Yeremizino-Bor	91.04	316	eP	P	05 56 21.8	-0.8
ERBR				e*PP	pP	05 56 50.7	-1.9
ERBR				e		06 06 43.5	
ERBR				pmax	pmax		
	comp=Z,25nm,0.7s						
K15K	Wolf Creek Mou	91.05	27	P	P	05 56 22.6	+0.3
K15K	Wolf Creek Mou	91.05	27	P	P	05 56 21.8	-0.4
	baz=253						
N15K	Kwethluk River	91.12	29	IAmb	IAmb	05 56 27.1	
	comp=Z,23nm,0.8s						
N15K	Kwethluk River	91.12	29	P	P	05 56 22.1	-0.5
	baz=254,SNR=5.9						
SOC	Sochi	91.17	314	eP	P	05 56 21.5	-1.7
SOC				e		05 59 57.9	
SOC				eS	SKSac	06 06 42.7	-2.1
SOC				eSS	SS	06 13 16.2	-2.8
SOC				eSSS	SSS	06 16 55.2	
SOC				pmax	pmax		
	comp=Z,15nm,0.8s						
ASF	Jabal al Asfar	91.35	302	P	P	05 56 24.8	+0.3
	comp=Z,14nm,0.9s,baz=187,slow=2.1,SNR=8.4						
	comp=Z,14nm,0.9s						
VRH	Novokhopyorsk	91.36	322	eP	P	05 56 21.9	-2.0
VRH				pmax	pmax		
	comp=Z,37nm,1.4s						
C16K	Lisburne Hills	91.44	21	P	P	05 56 24.0	+0.1
	baz=250						
H16K	Elim	91.44	25	P	P	05 56 23.7	-0.2
	baz=252						
G16K	Koyuk River	91.62	24	IAmb	IAmb	05 56 29.0	
	comp=Z,27nm,0.8s						
G16K	Koyuk River	91.62	24	P	P	05 56 24.6	-0.2
	baz=252,SNR=16						
R16K	Pilot Point	91.73	32	P	P	05 56 24.3	-1.1
	baz=256						
J16K	Anvik River	91.74	26	IAmb	IAmb	05 56 29.9	
	comp=Z,28nm,0.8s						
J16K	Anvik River	91.74	26	P	P	05 56 24.1	-1.3
	baz=254						
MREMI	Moremi	91.75	247	P	P	05 56 28.0	+1.5
L16K	Owhat River	91.82	28	P	P	05 56 26.0	+0.2
L16K				IAmb	IAmb	05 56 29.9	
	comp=Z,22nm,0.8s						
L16K	Owhat River	91.82	28	P	P	05 56 25.2	-0.6
	baz=255,SNR=7.8						
N16K	Nishlik Lake	91.84	29	P	P	05 56 24.8	-1.1
	baz=255						
P16K	Nushagak River	91.86	31	IAmb	IAmb	05 56 30.8	
	comp=Z,43nm,0.8s						
P16K	Nushagak River	91.86	31	P	P	05 56 24.9	-1.1
	baz=256						
I17K	Unalakleet	91.87	25	P	P	05 56 24.7	-1.3
	baz=254						
M16K	Timber Creek	91.89	28	IAmb	IAmb	05 56 30.9	
	comp=Z,30nm,1.0s						
M16K	Timber Creek	91.89	28	P	P	05 56 24.8	-1.3
	baz=255,SNR=9.2						
O16K	Kokwok River B	91.95	30	IAmb	IAmb	05 56 31.6	
	comp=Z,22nm,0.9s						
O16K	Kokwok River B	91.95	30	P	P	05 56 25.5	-1.0
	baz=256,SNR=9.6						
D17K	Noatak River	92.06	22	P	P	05 56 25.2	-1.5
	baz=252,SNR=30						
MBAR	Mbarara	92.14	269	P	P	05 56 29.0	+0.4
MBAR	Mbarara	92.14	269	P	P	05 56 31.4	+2.8
RDOG	Red Dog Mine	92.23	21	P	P	05 56 25.1	-2.5
	baz=252						
SNAA	Sanae	92.24	195	⇓P	P	05 56 29.3	+1.6
	comp=Z,322nm,0.6s						
SNAA	Sanae	92.24	195	P	P	05 56 29.4	+1.6
SNAA				IAmb	IAmb	05 56 30.6	
	comp=Z,16nm,0.7s						
SNAA	Sanae	92.24	195	P	P	05 56 29.3	+1.6
	comp=Z,15nm,0.7s,baz=141,slow=4.2,SNR=82						
SNAA				PKKP	PKKPdf	06 13 40.4	-1.3
	comp=Z,2.5nm,1.1s,baz=252,slow=4.8,SNR=5.2						
	comp=Z,15nm,0.7s						
SNAA	Sanae	92.24	195	ceP	P	05 56 29.8	+2.1
SNAA				pmax	pmax		
	comp=Z,28nm,1.3s						
C17K	DeLong Mountai	92.27	21	P	P	05 56 25.5	-2.3
	baz=252,SNR=12						
LSZ	Lusaka	92.31	254	P	P	05 56 29.5	+0.2
LSZ	Lusaka	92.31	254	P	P	05 56 28.8	-0.5
LSZ	Lusaka	92.31	254	P	P	05 56 29.5	+0.2
LSZ				pmax	pmax		
	comp=Z,52nm,0.9s						
GHAJ	Ghor Haditha	92.33	301	IAmb	IAmb	05 56 34.8	
	comp=Z,38nm,0.8s						
E17K	Hotham Inlet	92.33	22	P	P	05 56 25.8	-2.3
	baz=253						
G17K	Kiwalik Mounta	92.34	24	P	P	05 56 26.2	-1.9
	baz=254,SNR=20						
F17K	Baldwin Pennin	92.36	23	P	P	05 56 26.7	-1.4
	baz=253						
CHIR	Chirikof Islan	92.39	34	P	P	05 56 26.2	-2.4
	baz=258						
J17K	VABM Dome	92.44	26	IAmb	IAmb	05 56 33.0	
	comp=Z,19nm,0.8s						
J17K	VABM Dome	92.44	26	P	P	05 56 26.8	-1.8
	baz=255,SNR=19						
L17K	Donlin	92.47	27	P	P	05 56 27.2	-1.6
	baz=256,SNR=8.0						
H17K	Granite Mounta	92.48	25	IAmb	IAmb	05 56 33.2	
	comp=Z,21nm,0.8s						
H17K	Granite Mounta	92.48	25	P	P	05 56 27.5	-1.3
	baz=255,SNR=6.3						
O17K	Koliganek Bris	92.48	30	P	P	05 56 27.1	-1.8
	baz=257,SNR=5.7						
BOSA	Boshof	92.56	241	IAmb	IAmb	05 56 32.9	
	comp=Z,64nm,1.4s						
BOSA	Boshof	92.56	241	P	P	05 56 31.4	+1.2
	comp=Z,17nm,0.8s,baz=105,slow=3.6,SNR=29						
	comp=Z,17nm,0.8s						
BELA	Belgrano 2	92.57	185	P	P	05 56 30.6	+1.6
K17K	Iditarod	92.61	27	P	P	05 56 29.8	+0.4
K17K				IAmb	IAmb	05 56 34.3	
	comp=Z,42nm,0.8s						
K17K	Iditarod	92.61	27	P	P	05 56 27.7	-1.7
	baz=256,SNR=26						
N17K	Nushagak Hills	92.61	29	IAmb	IAmb	06 00 12.3	
	comp=Z,35nm,1.6s						
N17K	Nushagak Hills	92.61	29	P	P	05 56 27.3	-2.1
	baz=257						
P17K	Kvichak River	92.68	31	P	P	05 56 27.2	-2.6
	baz=257						
M17K	Holitna River	92.69	28	P	P	05 56 27.8	-2.0
	baz=257,SNR=6.5						
MMAI	Mount Meron Ar	92.72	303	P	P	05 56 30.9	+0.2
	comp=Z,5.2nm,0.6s,baz=90,slow=8.7,SNR=5.8						
	comp=Z,5.2nm,0.6s						
Q17K	Contact Creek	92.76	32	P	P	05 56 28.6	-1.8
	baz=258						
VORD	Divnogorie	92.82	321	eP	P	05 56 29.1	-1.5
VORD				pmax	pmax		
	comp=Z,40nm,1.0s						
E18K	Tukpahlearik C	92.89	22	IAmb	IAmb	05 56 35.1	
	comp=Z,26nm,0.8s						
E18K	Tukpahlearik C	92.89	22	P	P	05 56 28.3	-2.3
	baz=254						
VSR	Storozhevoye	92.94	321	eP	P	05 56 29.6	-1.6
VSR				pmax	pmax		
	comp=Z,30nm,0.9s						
LBTB	Lobatse	92.96	244	IAmb	IAmb	05 56 35.0	
	comp=Z,40nm,1.1s						
ANN	Anapa	93.00	315	eP	P	05 56 31.0	-0.6
ANN				e*PP	pP	05 56 59.8	-1.8
ANN				e		06 06 55.3	
ANN				pmax	pmax		
	comp=Z,24nm,0.8s						
VORR	Voronezh	93.00	322	eP	P	05 56 30.9	-0.5
VORR				pmax	pmax		
	comp=Z,45nm,1.3s						
B18K	Kokolik River	93.01	20	P	P	05 56 28.9	-2.2
	baz=253						
C18K	Utukok River	93.01	21	P	P	05 56 29.5	-1.8
	baz=254						
F18K	Selawik	93.03	23	P	P	05 56 28.8	-2.4
	baz=255						
LPHEP	Lephephe	93.04	246	i P	P	05 56 34.3	+1.8
ACHA	Angle Creek He	93.04	32	P	P	05 56 32.5	+0.8
H18K	Honhosa River	93.17	25	P	P	05 56 30.4	-1.6
	baz=256						
L18K	Granite Mounta	93.22	28	P	P	05 56 31.9	-0.3
L18K				IAmb	IAmb	05 56 37.2	
	comp=Z,24nm,0.8s						
L18K	Granite Mounta	93.22	28	P	P	05 56 29.7	-2.6
	baz=257,SNR=23						
G18K	Tagagawik	93.24	24	P	P	05 56 29.2	-3.1
	baz=256,SNR=16						
BNN	Bunyan	93.24	309	P	P	05 56 33.2	+0.1
BNN				IAmb	IAmb	05 56 38.2	
	comp=Z,48nm,1.0s						
N18K	Kilae Creek	93.27	29	IAmb	IAmb	06 00 16.0	
	comp=Z,39nm,1.8s						
N18K	Kilae Creek	93.27	29	P	P	05 56 29.4	-3.1
	baz=258						
Q18K	Katmai Hardscr	93.29	31	P	P	05 56 29.5	-3.3
	baz=259						
SII	Sitkinak Islan	93.33	33	P	P	05 56 29.3	-3.6
	baz=259						
LPSR	Galich'ya Gora	93.33	323	eP	P	05 56 30.0	-2.9
LPSR				pmax	pmax		
	comp=Z,40nm,1.0s						
P18K	Big Mountain,	93.33	30	P	P	05 56 29.6	-3.3
	baz=258						
R18K	Karluk	93.37	32	P	P	05 56 30.5	-2.5
	baz=259						
O18K	Koktuh Hills	93.43	30	P	P	05 56 31.0	-2.3
	baz=258						
M18K	Stony River	93.47	28	P	P	05 56 31.3	-2.1
	baz=258,SNR=8.5						
J18K	Innoko River	93.48	26	IAmb	IAmb	05 56 37.8	
	comp=Z,18nm,0.8s						
J18K	Innoko River	93.48	26	P	P	05 56 31.2	-2.2
	baz=257,SNR=27						
A19K	Wainwright	93.49	19	P	P	05 56 31.4	-1.9
	baz=254						
MAKGR	Makgori	93.51	243	IAmb	IAmb	05 56 37.4	
	comp=Z,40nm,1.1s						
GCSA	Galena City Sc	93.69	25	P	P	05 56 32.1	-2.2
	baz=257						
C19K	Lookout Ridge	93.70	21	P	P	05 56 34.7	+0.3
C19K				IAmb	IAmb	05 56 39.3	
	comp=Z,26nm,0.9s						
C19K	Lookout Ridge	93.70	21	P	P	05 56 33.4	-1.0
	baz=255,SNR=5.3						
F19K	Shaleruckik Mo	93.81	23	P	P	05 56 33.2	-1.6
	baz=257						
VNA2	Neumayer--Watz	93.85	195	⇓P	P	05 56 36.6	+1.5
	comp=Z,7.2nm,0.5s,baz=130,slow=4.4						
G19K	Purcell Mounta	93.92	24	P	P	05 56 33.5	-1.9
	baz=257,SNR=35						
OHAK	Old Harbor	93.93	33	IAmb	IAmb	05 56 42.3	
	comp=Z,31nm,0.9s						
OHAK	Old Harbor	93.93	33	P	P	05 56 36.2	+0.6
OHAK	Old Harbor	93.93	33	P	P	05 56 33.2	-2.4
	baz=260						
O19K	Port Alsworth	93.94	30	P	P	05 56 34.5	-1.0
	baz=259						
N19K	Bonanza Creek	93.97	29	P	P	05 56 35.5	-0.4
N19K				IAmb	IAmb	05 56 40.4	
	comp=Z,27nm,0.8s						
N19K	Bonanza Creek	93.97	29	P	P	05 56 34.4	-1.5
	baz=259,SNR=23						
H19K	Roundabout Mou	94.04	24	P	P	05 56 35.9	0.0
	baz=258,SNR=50						
Q19K	Cape Douglas,	94.04	31	P	P	05 56 35.5	-0.7
	baz=260						
L19K	White Mountain	94.06	28	P	P	05 56 36.3	+0.2
	baz=259,SNR=20						
D19K	Kuna River	94.07	21	IAmb	IAmb	05 56 40.3	
	comp=Z,24nm,0.9s						
D19K	Kuna River	94.07	21	P	P	05 56 35.2	-0.9
	baz=256,SNR=14						
J19K	Poorman	94.07	26	P	P	05 56 36.0	-0.2
	baz=258,SNR=6.4						
KDWAN	Kaudwane	94.12	246	IAmb	IAmb	05 57 13.8	
	comp=Z,34nm,0.8s						
E19K	Redstone River	94.15	22	P	P	05 56 36.0	-0.5
	baz=257,SNR=51						
VNA3	Neumayer Olymp	94.19	194	⇓P	P	05 56 37.9	+1.2
	comp=Z,6.1nm,0.8s						
M19K	Big River Lodg	94.22	28	P	P	05 56 36.3	-0.6
M19K	Big River Lodg	94.22	28	P	P	05 56 35.7	-1.2
	baz=259						
VNA1	Neumayer--Stat	94.25	195	⇓P	P	05 56 38.9	+2.0
	comp=Z,5.4nm,0.6s						
P19K	Oil Pt	94.38	30	P	P	05 56 36.3	-1.4
	baz=260						
KDAK	Kodiak Island	94.40	32	P	P	05 56 36.5	-1.2
	baz=260						
KLMR	Klimovskoe	94.44	331	eP	P	05 56 35.3	-2.6
KLMR				e*PP	pP	05 57 04.4	-3.6
KLMR				pmax	pmax		
	comp=Z,66nm,1.4s						
SKOMA	Sekoma	94.54	244	i P	P	05 56 41.3	+1.9
L20K	Farewell, AK	94.56	28	P	P	05 56 37.4	-1.1
	baz=260,SNR=8.2						
MOS	Moscow	94.60	326	eP	P	05 56 36.8	-1.9
MOS				e		06 00 26.3	
MOS				e		06 07 05.1	
MOS				e		06 07 32.0	
K20K	Telida	94.63	27	P	P	05 56 37.7	-1.0
	baz=260,SNR=7.1						
Q20K	Shuyak Island	94.63	32	P	P	05 56 37.7	-1.1
	baz=261						
F20K	Avaraart Lake	94.64	23	P	P	05 56 37.8	-0.9
	baz=258						
D20K	Etivluk River	94.65	21	IAmb	IAmb	05 56 43.1	
	comp=Z,19nm,0.8s						
D20K	Etivluk River	94.65	21	P	P	05 56 38.0	-0.8
	baz=258,SNR=22						
H20K	Anotleneega Mo	94.67	24	P	P	05 56 38.0	-0.9
	baz=259,SNR=18						
E20K	Nigu River	94.71	22	P	P	05 56 38.2	-0.9
	baz=258,SNR=55						
I20K	Naaghedeneel	94.71	25	IAmb	IAmb	05 56 43.4	
	comp=Z,20nm,0.8s						
I20K	Naaghedeneel	94.71	25	P	P	05 56 38.0	-1.0
	baz=259,SNR=6.7						
KSANE	Kasane	94.72	251	IAmb	IAmb	05 56 42.8	
	comp=Z,17nm,0.7s						
B20K	Meade River	94.74	20	P	P	05 56 37.9	-1.1
	baz=257						
J20K	Nowinta River	94.74	26	P	P	05 56 38.6	-0.5
	baz=260,SNR=19						
O20K	Slope Mountain	94.75	30	P	P	05 56 37.5	-1.9
	baz=261						
M20K	Styx River	94.80	28	P	P	05 56 38.3	-1.3
	baz=260						
BR131	Keskin Array S	95.06	309	IAmb	IAmb	05 56 45.8	
	comp=Z,23nm,1.0s						
BR131	Keskin Array S	95.06	309	P	P	05 56 40.8	-0.6
	SNR=18						
BRTR	Keskin Array B	95.06	309	P	P	05 56 40.3	-1.1
BRTR	Keskin Array B	95.06	309	P	P	05 56 40.1	-1.3
	comp=Z,5.9nm,0.8s,baz=120,slow=4.9,SNR=29						
BRTR				PP	PP	06 00 28.4	-4.0
	comp=Z,1.3nm,0.8s,baz=95,slow=6.7,SNR=3.9						
	comp=Z,5.9nm,0.8s						
OBN	Obninsk	95.10	325	eP	P	05 56 39.4	-1.6
OBN				i		06 00 34.2	
OBN				pmax	pmax		
	comp=Z,50nm,1.0s						
N20K	Mount Spurr	95.13	29	P	P	05 56 39.6	-1.6
	baz=261						
SPCR	Spurr Chakacha	95.13	29	P	P	05 56 38.7	-2.5
	baz=261						
ILGA	Ilgaz	95.17	311	P	P	05 56 41.8	-0.2
HOM	Homer	95.18	31	P	P	05 56 39.7	-1.6
	baz=262						
A21K	Barrow	95.20	19	P	P	05 56 39.8	-1.2
	baz=258						
IMAR	Indian Mountai	95.22	24	P	P	05 56 41.4	0.0
SIM	Simferopol'	95.35	315	eP	P	05 56 44.0	+1.6
SIM				pmax	pmax		
	comp=Z,24nm,1.1s						
STLK	Strandline Lak	95.35	29	P	P	05 56 41.4	-0.7
CNPM	China Poot	95.36	31	IAmb	IAmb	05 59 56.8	
	comp=Z,32nm,1.3s						
C21K	Knifeblade Rid	95.39	21	P	P	05 56 40.8	-1.3
	baz=260						
PPLA	Purkeypile	95.40	27	P	P	05 56 40.4	-2.1
	baz=261						
G21K	Allakaket	95.41	24	P	P	05 56 42.5	+0.3
G21K	Allakaket	95.41	24	P	P	05 56 41.0	-1.2
	baz=260,SNR=20						
CHUM	Lake Minchumin	95.49	26	P	P	05 56 41.1	-1.5
	baz=261,SNR=26						
CAST	Castle Rocks	95.52	27	P	P	05 56 41.7	-1.1
	baz=262,SNR=8.1						
B21K	Ikpikpuk River	95.53	20	IAmb	IAmb	05 56 53.3	
	comp=Z,13nm,0.7s						
B21K	Ikpikpuk River	95.53	20	P	P	05 56 41.7	-1.0
	baz=260						
F21K	Alatna River	95.53	23	P	P	05 56 41.6	-1.2
	baz=261						
E21K	Killik River	95.55	22	P	P	05 56 42.1	-0.8
	baz=260						
H21K	Melozitna Rive	95.55	24	P	P	05 56 43.1	+0.2
H21K	Melozitna Rive	95.55	24	P	P	05 56 41.9	-1.0
	baz=261,SNR=8.3						
SKT	Skwentna	95.57	28	IAmb	IAmb	05 56 45.5	
	comp=Z,14nm,0.9s						

SKT	Skwentna	95.57	28	P	P	05 56 41.1	-1.9
	baz=262,SNR=6.3						
BRLK	Bradley Lake	95.57	30	IAmb	IAmb	05 56 48.9	
	comp=Z,24nm,0.8s						
CAPN	Captain Cook N	95.58	29	P	P	05 56 41.4	-1.7
	baz=262						
BRSE	Bradley Lake S	95.64	31	P	P	05 56 42.2	-1.2
	baz=262						
A22K	Sinclair Lake	95.66	19	P	P	05 56 42.5	-0.7
	baz=260						
ANTO	Ankara	95.72	309	P	P	05 56 44.7	+0.3
SUA	Susitna One	95.87	29	P	P	05 56 43.0	-1.5
	baz=262						
B22K	Teshekpuk Lake	96.06	20	P	P	05 56 44.1	-0.9
	baz=261						
KTH	Kantishna Hill	96.06	27	P	P	05 56 44.5	-0.8
KTH				IAmb	IAmb	05 56 48.5	
	comp=Z,17nm,1.0s						
F22K	John River	96.08	23	P	P	05 56 44.5	-0.8
	baz=262						
D22K	Ayikyak River	96.09	21	P	P	05 56 44.7	-0.5
	baz=262						
BPAW	Bear Paw Mtn.	96.10	26	P	P	05 56 44.9	-0.6
	baz=262,SNR=7.1						
H22K	Ishtalitna Cre	96.17	24	P	P	05 56 45.0	-0.7
	baz=262,SNR=7.4						
M22K	Willow	96.20	29	P	P	05 56 44.9	-1.0
	baz=263						
O22K	Cooper Landing	96.24	30	P	P	05 56 46.0	-0.1
O22K	Cooper Landing	96.24	30	P	P	05 56 45.0	-1.0
	baz=263						
G22K	Bettles	96.25	23	P	P	05 56 45.6	-0.4
	baz=262						
E22K	Anaktuvuk Pass	96.30	22	IAmb	IAmb	05 56 50.9	
	comp=Z,25nm,0.9s						
E22K	Anaktuvuk Pass	96.30	22	P	P	05 56 45.0	-1.3
	baz=262,SNR=31						
RC01	Rabbit Creek A	96.30	29	P	P	05 56 44.9	-1.5
	baz=263						
MLY	Manley	96.32	25	IAmb	IAmb	05 56 51.1	
	comp=Z,28nm,0.8s						
MLY	Manley	96.32	25	P	P	05 56 45.5	-0.9
	baz=263,SNR=57						
TRF	Thorofare Moun	96.33	27	IAmb	IAmb	05 56 49.7	
	comp=Z,13nm,0.9s						
TRF	Thorofare Moun	96.33	27	P	P	05 56 45.2	-1.5
	baz=263,SNR=6.6						
SEW	Seward	96.33	30	IAmb	IAmb	05 56 49.7	
	comp=Z,18nm,0.8s						
SEW	Seward	96.33	30	P	P	05 56 45.1	-1.4
	baz=263						
KGCAE	Kacgae	96.44	246		P	05 56 48.1	0.0
KGCAE				IAmb	IAmb	05 57 39.0	
	comp=Z,20nm,0.7s						
PMR	Palmer	96.65	29	IAmb	IAmb	05 56 50.9	
	comp=Z,12nm,0.8s						
PMR	Palmer	96.65	29	P	P	05 56 46.2	-1.7
	baz=264						
GHO	Glory Hole Cre	96.77	29	IAmb	IAmb	05 57 07.0	
	comp=Z,12nm,0.9s						
COLD	Coldfoot	96.80	23	P	P	05 56 48.7	+0.2
COLD				IAmb	IAmb	05 56 53.5	
	comp=Z,19nm,0.8s						
COLD	Coldfoot	96.80	23	P	P	05 56 47.9	-0.6
	baz=264,SNR=29						
G23K	Bananza Creek	96.81	24	P	P	05 56 49.0	+0.4
G23K				IAmb	IAmb	05 56 53.3	
	comp=Z,24nm,0.9s						
G23K	Bananza Creek	96.81	24	P	P	05 56 48.0	-0.7
	baz=264,SNR=32						
D23K	Nanushuk River	96.82	21	IAmb	IAmb	05 56 53.5	
	comp=Z,26nm,1.1s						
D23K	Nanushuk River	96.82	21	P	P	05 56 47.9	-0.7
	baz=263,SNR=16						
H23K	Yukon River	96.91	24	IAmb	IAmb	05 56 53.4	
	comp=Z,19nm,0.8s						
H23K	Yukon River	96.91	24	P	P	05 56 47.6	-1.5
	baz=264,SNR=26						
I23K	Minto, Yukon-K	96.92	25	P	P	05 56 48.3	-0.7
	baz=264,SNR=62						
C23K	Itkillik River	96.94	20	P	P	05 56 49.0	-0.1
C23K				IAmb	IAmb	05 56 53.5	
	comp=Z,24nm,0.9s						
C23K	Itkillik River	96.94	20	P	P	05 56 48.1	-1.0
	baz=264						
KNK	Knik Glacier	96.95	29	P	P	05 56 48.2	-1.1
	baz=264,SNR=6.2						
MCK	McKinley	96.96	27	IAmb	IAmb	05 56 52.5	
	comp=Z,20nm,1.0s						
MCK	McKinley	96.96	27	P	P	05 56 47.8	-1.5
	baz=264,SNR=6.7						
PWL	Port Wells	96.96	30	P	P	05 56 47.3	-2.0
	baz=264						
NEA2	Nenana	96.98	26	P	P	05 56 47.2	-2.2
	baz=264						
WAT1	Susitna Watana	97.04	28	P	P	05 56 48.4	-1.4
	baz=264						
SML	Sawmill	97.05	29	P	P	05 56 47.7	-2.1
	baz=265						
E23K	Chandalar	97.11	22	IAmb	IAmb	05 56 55.2	
	comp=Z,22nm,0.8s						
E23K	Chandalar	97.11	22	P	P	05 56 47.8	-2.2
	baz=264,SNR=30						
TOLK	Toolik Lake Re	97.18	22	P	P	05 56 50.0	-0.3
TOLK	Toolik Lake Re	97.18	22	P	P	05 56 48.5	-1.8
	baz=264						
M23K	Glacier View	97.34	29	P	P	05 56 49.5	-1.6
	baz=265						
P23K	Montague Islan	97.34	30	P	P	05 56 48.3	-2.7
	baz=265						
WAT6	Susitna Watana	97.39	28	P	P	05 56 48.9	-2.6
	baz=265						
WRH	Wood River Hil	97.40	26	IAmb	IAmb	05 56 54.2	
	comp=Z,29nm,0.9s						
D24K	Happy Valley	97.50	21	IAmb	IAmb	05 56 56.4	
	comp=Z,22nm,0.9s						
D24K	Happy Valley	97.50	21	P	P	05 56 49.8	-1.8
	baz=265,SNR=5.9						
SCM	Sheep Creek Mo	97.53	29	P	P	05 56 49.4	-2.6
	baz=266						
COLA	College	97.53	26	*i* P	Pdif	05 56 53.2	+1.4
COLA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
COLA	College	97.53	26	P	P	05 56 49.9	-1.9
	baz=265						
CCB	Clear Creek Bu	97.53	26	IAmb	IAmb	05 56 55.1	
	comp=Z,29nm,0.9s						
E24K	Your Creek	97.53	22	P	P	05 56 50.0	-1.8
	baz=265						
GLI	Glacier Island	97.56	30	P	P	05 56 52.0	-0.1
GLI				IAmb	IAmb	05 56 55.9	
	comp=Z,19nm,0.7s						
GLI	Glacier Island	97.56	30	P	P	05 56 49.9	-2.2
	baz=266						
C24K	Franklin Bluff	97.59	21	IAmb	IAmb	05 56 56.8	
	comp=Z,21nm,1.1s						
C24K	Franklin Bluff	97.59	21	P	P	05 56 50.2	-1.8
	baz=265						
H24K	Noodor Dome	97.59	25	IAmb	IAmb	05 56 56.6	
	comp=Z,26nm,0.9s						
H24K	Noodor Dome	97.59	25	P	P	05 56 50.3	-1.9
	baz=266,SNR=32						
DHY	Denali Highway	97.60	27	IAmb	IAmb	05 56 56.1	
	comp=Z,14nm,0.9s						
DHY	Denali Highway	97.60	27	P	P	05 56 50.3	-2.1
	baz=266,SNR=6.7						
GRTLG	Ghanzi	97.65	247	IAmb	IAmb	05 56 56.1	
	comp=Z,11nm,0.8s						
GRTLG	Ghanzi	97.65	247	*i* P	Pdif	05 56 55.3	+1.7
F24K	Squaw Lake	97.72	23	P	P	05 56 52.6	-0.1
F24K	Squaw Lake	97.72	23	P	P	05 56 50.4	-2.3
	baz=266,SNR=14						
POKR	Poker Plat Res	97.73	25	P	Pdif	05 56 53.4	+0.6
POKR	Poker Plat Res	97.73	25	P	P	05 56 51.2	-1.5
	baz=266						
G24K	Hadweenzic Riv	97.82	24	IAmb	IAmb	05 56 57.7	
	comp=Z,15nm,1.0s						
G24K	Hadweenzic Riv	97.82	24	P	P	05 56 52.3	-0.8
	baz=266,SNR=21						
Q23K	Middleton Isla	97.83	31	P	P	05 56 51.8	-1.5
	baz=266						
HDA	Harding Lake	97.89	26	IAmb	IAmb	05 56 56.9	
	comp=Z,26nm,0.8s						
HDA	Harding Lake	97.89	26	P	P	05 56 51.7	-1.8
	baz=266,SNR=30						
APA	Apatity	97.91	337	⇓*i*P	Pdif	05 56 56.1	+2.6
APA				*i* *PP	sP	05 57 29.0	-6.8
APA				*i*		06 00 52.0	
APA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ILAR	Eielson Array	97.94	26	P	P	05 56 52.1	-1.6
	comp=Z,7.0nm,0.9s,baz=272,slow=4.1,SNR=30						
ILAR				PP	PP	06 00 51.1	-2.6
	comp=Z,2.9nm,1.0s,baz=270,slow=6.4,SNR=5.9						
ILAR				PKKPbc	PKKPbc	06 13 28.4	-1.8
	comp=Z,1.1nm,0.9s,baz=66,slow=1.6,SNR=7.6						
	comp=Z,7.0nm,0.9s						
QNGWA	Qangwa	98.08	249	IAmb	IAmb	06 00 21.8	
	comp=Z,33nm,1.7s						
M24K	Tolsona, Glenn	98.09	28	IAmb	IAmb	05 57 00.4	
	comp=Z,24nm,1.0s						
M24K	Tolsona, Glenn	98.09	28	P	P	05 56 52.7	-1.8
	baz=266						
KLU	Klutina	98.17	29	P	P	05 56 54.9	-0.1
KLU	Klutina	98.17	29	P	P	05 56 52.5	-2.4
	baz=267						
EYAK	Cordova Ski Ar	98.20	30	P	P	05 56 52.6	-2.3
	baz=267						
K24K	Donnelly Dome	98.36	27	IAmb	IAmb	05 56 59.6	
	comp=Z,25nm,0.9s						
K24K	Donnelly Dome	98.36	27	P	P	05 56 53.6	-2.1
	baz=267,SNR=8.2						
G25K	Bearman Lake	98.37	24	P	P	05 56 53.3	-2.3
	baz=267,SNR=5.8						
D25K	Kavik River	98.38	21	P	P	05 56 53.2	-2.4
	baz=267						
H25L	Birch Creek	98.46	24	P	P	05 56 53.7	-2.3
	baz=268,SNR=19						
PAX	Paxson	98.46	28	P	P	05 56 54.1	-2.1
	baz=267,SNR=5.4						
PRP	Porcupine Dome	98.55	25	P	P	05 56 53.8	-2.8
	baz=268						
J25K	Salcha River,	98.58	26	P	P	05 56 54.5	-2.1
	baz=268						
HARP	HAARP	98.58	28	P	P	05 56 54.1	-2.6
	baz=268						
F25K	Christian Rive	98.58	23	P	Pdif	05 56 56.6	0.0
F25K	Christian Rive	98.58	23	P	P	05 56 54.7	-1.9
	baz=268,SNR=10						
E25K	Arctic Village	98.63	22	IAmb	IAmb	05 57 01.6	
	comp=Z,12nm,0.9s						
E25K	Arctic Village	98.63	22	P	P	05 56 54.9	-1.9
	baz=268,SNR=5.8						
FYU	Fort Yukon	98.71	24	IAmb	IAmb	05 57 02.5	
	comp=Z,17nm,1.0s						
RIDG	Independent Ri	98.77	27	IAmb	IAmb	05 57 01.2	
	comp=Z,18nm,0.9s						
RIDG	Independent Ri	98.77	27	P	P	05 56 55.0	-2.5
	baz=268,SNR=9.1						
BMRM	Bremner River	98.78	30	P	P	05 56 55.4	-2.2
	baz=268						
N25K	Chitina, Valde	98.81	29	P	P	05 56 57.4	-0.3
N25K				IAmb	IAmb	05 57 01.8	
	comp=Z,8.1nm,0.7s						
N25K	Chitina, Valde	98.81	29	P	P	05 56 55.9	-1.9
	baz=268						
KAIM	Kayak Island	98.84	31	P	P	05 56 55.6	-2.2
	baz=268						
MANT	Manisa	98.87	308	IAmb	IAmb	05 57 03.0	
	comp=Z,13nm,0.9s						
C26K	Camden Bay	98.91	20	P	P	05 56 56.1	-1.8
	baz=269						
BMAR	Burnt Mountain	98.99	23	P	Pdif	05 56 58.8	+0.4
AKASG	Malin Array Be	99.13	320	P	Pdif	05 56 58.7	-0.6
AKASG				IAmb	IAmb	05 57 03.0	
	comp=Z,13nm,1.1s						
AKASG	Malin Array Be	99.13	320	P	Pdif	05 56 58.2	-1.0
	comp=Z,12nm,0.9s,baz=78,slow=4.5,SNR=22						
AKASG				PP	PP	06 01 01.2	-2.0
	comp=Z,2.7nm,0.8s,baz=79,slow=6.5,SNR=7.5						
	comp=Z,12nm,0.9s						
AKBB	Malin Array Si	99.13	320	P	Pdif	05 56 58.3	-1.0
AKBB				IAmb	IAmb	05 57 03.3	
	comp=Z,16nm,0.9s						
AKBB	Malin Array Si	99.13	320	*ce*P	Pdif	05 56 58.5	-0.8
AKBB				pmax	pmax		
	comp=Z,16nm,0.9s						
KIEV	Kiev	99.14	320	P	Pdif	05 56 58.3	-1.0
KIEV				IAmb	IAmb	05 57 03.2	
	comp=Z,14nm,0.9s						
KIEV	Kiev	99.14	320	P	Pdif	05 56 58.3	-1.0
KIEV				pmax	pmax		
	comp=Z,14nm,0.9s						
KIEV	Kiev	99.14	320	*i* P	Pdif	05 56 58.1	-1.2
	SNR=10						
F26K	Sheenjek River	99.16	23	P	Pdif	05 56 57.5	-1.6
	baz=269,SNR=5.9						
SCRK	Sand Creek	99.16	26	P	Pdif	05 56 57.4	-1.9
	baz=269,SNR=5.8						
G26K	Porcupine Rive	99.29	23	P	Pdif	05 56 59.7	+0.1
G26K				IAmb	IAmb	05 57 04.6	
	comp=Z,11nm,0.8s						
G26K	Porcupine Rive	99.29	23	P	Pdif	05 56 58.2	-1.4
	baz=269,SNR=6.9						
C27K	Jago River	99.33	21	P	Pdif	05 56 59.4	-0.5
C27K				IAmb	IAmb	05 57 04.8	
	comp=Z,23nm,1.3s						
C27K	Jago River	99.33	21	P	Pdif	05 56 58.7	-1.2
	baz=270,SNR=5.4						
J26L	Joseph Creek	99.36	26	P	Pdif	05 56 59.2	-1.0
J26L				IAmb	IAmb	05 57 04.0	
	comp=Z,18nm,0.8s						
J26L	Joseph Creek	99.36	26	P	Pdif	05 56 58.4	-1.7
	baz=269,SNR=28						
BGLC	Bering Glacier	99.41	30	P	Pdif	05 56 58.6	-1.7
	baz=269						
L26K	Log Cabin Wild	99.43	27	P	Pdif	05 56 59.5	-0.9
	baz=269						
CRQE	Cirque	99.52	30	P	Pdif	05 56 59.7	-1.3
	baz=269						
I26K	Coal Creek Min	99.54	25	P	Pdif	05 56 59.8	-1.0
	baz=270,SNR=20						
MCARA	McCarthy VSAT	99.56	29	P	Pdif	05 56 59.8	-1.3
	baz=269						
M26K	Nabesna, AK	99.59	28	P	Pdif	05 56 59.6	-1.5
	baz=269						
K27K	Chicken	100.00	26	P	Pdif	05 57 01.7	-1.2
	baz=270						
MNK	Minsk	100.07	324	*i* P	Pdif	05 56 58.1	-5.3
	comp=E,10.0nm,0.8s,baz=90						
MNK				*i* P	Pdif	05 56 58.1	-5.3
	comp=N,9.0nm,0.7s						
MNK				*i* P	Pdif	05 56 58.1	-5.3
	comp=Z,8.0nm,0.6s						
MNK				*i* pP	pPdif	05 57 26.9	-6.7
MNK				*i* sP	pP	05 57 38.0	+4.3
MNK				*i* PP	PP	06 01 02.9	-7.3
MNK				*i* PPP	PPP	06 03 10.0	
MNK				*i* SKS		06 07 07.6	
MNK				*i* S	SKSac	06 07 26.0	-5.3
MNK				*i* sS	SKKSac	06 08 18.4	+13
MNK				*i* PS	PS	06 10 03.5	-8.5
MNK				*i* SS	SS	06 15 15.2	-9.2
MNK				*i* SSS	SSS	06 19 05.1	
MNK				*i* LR	LR	06 38 30.1	
MNK	Minsk	100.07	324	*i* P	Pdif	05 56 58.0	-5.3
MNK				*i* *PP	pPdif	05 57 26.8	-6.7
MNK				*i* S	SKSac	06 07 26.0	-5.3
MNK				*i* *SS	SKKSac	06 08 18.4	+13
MNK				*i* PS	PS	06 10 03.4	-8.5
MNK				pmax	pmax		
	comp=E,10.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MNK				pmax	pmax		
	comp=N,9.0nm,0.7s						
MESA	MESA	100.08	30	P	Pdif	05 57 01.8	-1.8
	baz=270						
M27K	Edge Creek, AK	100.11	28	P	Pdif	05 57 01.8	-1.8
	baz=270						
E27K	Coleen River	100.12	22	P	Pdif	05 57 01.4	-1.9
	baz=272,SNR=18						
L27K	Beaver Creek,	100.12	27	P	Pdif	05 57 02.5	-1.1
	baz=270,SNR=5.3						
G27K	Doyon Strip	100.13	24	P	Pdif	05 57 01.8	-1.6
	baz=271,SNR=7.0						
I27K	Kandik River	100.18	25	P	Pdif	05 57 02.5	-1.2
	baz=271,SNR=26						
H27K	Steamboat Moun	100.20	24	P	Pdif	05 57 02.4	-1.4
	baz=271,SNR=11						
D27M	Malcolm River	100.31	21	P	Pdif	05 57 03.2	-1.1
	baz=272						
CTG	Chitna Glacier	100.38	30	P	Pdif	05 57 02.6	-2.3
	baz=271						
BVCY	Beaver Creek	100.58	28	P	Pdif	05 57 03.7	-1.9
	baz=271						
NACGM	Naroch	100.71	324	*e*P	Pdif	05 57 07.3	+1.1
	comp=Z,14nm,0.7s,baz=90						
YUK3	Moose Creek	100.78	29	P	Pdif	05 57 04.7	-2.0
	baz=272						
F28M	Old Crow	100.79	23	P	Pdif	05 57 05.1	-1.3
	baz=273,SNR=15						
ARCES	ARCESS Array B	100.81	339	P	Pdif	05 57 06.5	+0.1
	comp=Z,3.9nm,0.6s,baz=76,slow=5.1,SNR=8.5						
ARCES				PKKPbc	PKKPbc	06 13 23.4	+1.2
	comp=Z,3.0nm,0.9s,baz=265,slow=4.5,SNR=1.8						
E28M	Babbage River	100.86	22	P	Pdif	05 57 05.3	-1.4
	baz=274						
I28M	Miner Creek	100.88	25	P	Pdif	05 57 05.3	-1.7
	baz=273,SNR=20						
PINM	Pinnacle	100.93	30	P	Pdif	05 57 05.9	-1.3
	baz=271						
O28M	Mount Upton	100.94	30	P	Pdif	05 57 06.1	-1.5
	baz=272						
FINES	FINESS Array B	100.98	331	P	Pdif	05 57 06.7	-0.5
	comp=Z,3.8nm,0.8s,baz=104,slow=8.0,SNR=7.8						
FINES	FINESS Array B	100.98	331	*i* P	Pdif	05 57 09.6	+2.3
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
D28M	Stokes Point	101.09	21	P	Pdif	05 57 06.4	-1.2
	baz=275						
YUK8	Steele Glacier	101.13	29	P	Pdif	05 57 06.2	-2.1
	baz=272						
MLR	Muntele Rosu	101.15	315	P	Pdif	05 57 08.0	-0.6
	comp=Z,2.9nm,0.7s,baz=21,slow=3.4,SNR=4.3						
MLR	Muntele Rosu	101.15	315	P	Pdif	05 57 08.0	-0.6
DAWY	Dawson	101.18	26	P	Pdif	05 57 05.9	-2.3
	baz=273,SNR=6.8						
PNL	Peninsula	101.38	31	P	Pdif	05 57 06.9	-2.2
	baz=272						
H29M	Whitestone	101.48	24	P	Pdif	05 57 07.9	-1.6
	baz=274						
E29M	Blow River	101.48	22	P	Pdif	05 57 07.3	-2.1
	baz=275						
G29M	Pine Creek	101.56	23	P	Pdif	05 57 07.9	-1.9
	baz=275,SNR=7.3						
I29M	Ogilvie Camp,	101.57	25	P	Pdif	05 57 08.2	-1.7
	baz=274,SNR=5.4						
IDI	Anoyia	101.62	304	P	Pdif	05 57 10.5	-0.4
	comp=Z,7.1nm,0.7s,baz=73,slow=7.9,SNR=3.3						
YUK4	Talbot Arm	101.67	29	P	Pdif	05 57 08.2	-2.4
	baz=273						
M29M	Somme Creek	101.69	28	P	Pdif	05 57 08.8	-1.8
	baz=273						
O29M	Mount Kennedy	101.76	30	P	Pdif	05 57 08.5	-2.4
	baz=273						
L29M	L29M	101.80	27	P	Pdif	05 57 08.5	-2.5
	baz=274						
YUK6	Outpost Mounta	101.83	30	P	Pdif	05 57 09.2	-2.2
	baz=273						
SPITS	Spitsbergen Ar	101.94	348	P	Pdif	05 57 11.0	-0.3
	comp=Z,15nm,0.8s,baz=94,slow=7.6,SNR=9.6						
K29M	Barlow Dome	102.02	27	P	Pdif	05 57 09.6	-2.5
	baz=275						
EPYK	Eagle Plains	102.13	24	P	Pdif	05 57 10.3	-2.1
	baz=276						
P29M	Windy Craggy	102.22	31	P	Pdif	05 57 10.1	-2.8
	baz=274						
HYT	Haines Junctio	102.26	30	P	Pdif	05 57 10.3	-2.9
	baz=274						
G30M	tAoh Zraii Nji	102.26	23	P	Pdif	05 57 10.2	-2.7
	baz=276						
F30M	Barrier River	102.35	23	P	Pdif	05 57 10.3	-3.0
	baz=277						
I30M	Mount Dempster	102.39	25	P	Pdif	05 57 10.7	-3.0
	baz=276						
N30M	Aishikik Lake	102.41	29	P	Pdif	05 57 11.4	-2.3
	baz=274						
J30M	Hart River	102.47	26	P	Pdif	05 57 12.3	-1.8
	baz=276						
P30M	Million Dollar	102.58	30	P	Pdif	05 57 12.5	-2.0
	baz=274						
MAYO	Mayo, Yukon	102.77	27	P	Pdif	05 57 13.1	-2.1
	baz=276						
PLBC	Pleasant Camp	102.93	31	P	Pdif	05 57 15.0	-1.1
	baz=275						
O30N	Mendenhall	102.95	30	P	Pdif	05 57 14.3	-1.9
	baz=275						
G31M	Satah River	103.03	23	P	Pdif	05 57 15.0	-1.3
	baz=278						
N31M	Braeburn, Yuko	103.03	29	P	Pdif	05 57 14.6	-1.9
	baz=276						
INK	Inuvik	103.10	22	P	Pdif	05 57 14.8	-1.7
	baz=279						
S31K	Pelican	103.12	33	P	Pdif	05 57 14.3	-2.5
	baz=274						
F31M	Tsiigehtchic	103.15	23	P	Pdif	05 57 14.7	-2.1
	baz=279						
H31M	Peel River	103.16	24	P	Pdif	05 57 16.0	-1.0
	baz=278						
R31K	City Hall, Gus	103.34	32	P	Pdif	05 57 16.7	-1.2
	baz=275						
SKAG	Skagway	103.45	31	P	Pdif	05 57 16.8	-1.5
	baz=276						
WHY	Whitehorse	103.56	30	P	Pdif	05 57 17.5	-1.4
	baz=276						
M31M	Drury Creek, Y	103.61	28	P	Pdif	05 57 17.7	-1.3
	baz=277						
KOLS	Kolonicke sedl	103.62	318	*i* P	Pdif	05 57 21.1	+1.7
KOLS	Kolonicke sedl	103.62	318	*e*PDIFF	Pdif	05 57 21.1	+1.7
SIT	Sitka	103.68	33	P	Pdif	05 57 17.4	-2.0
	baz=275						
R32K	Eaglecrest	103.99	32	P	Pdif	05 57 19.9	-0.9
	baz=276						
S32K	Killisnoo	104.05	33	P	Pdif	05 57 19.2	-1.8
	baz=276						
FARO	Faro, Yukon	104.09	28	P	Pdif	05 57 19.8	-1.4
	baz=278						
P32M	Atlin	104.26	31	P	Pdif	05 57 20.3	-1.7
	baz=277						
N32M	Quiet Lake	104.37	29	P	Pdif	05 57 21.1	-1.4
	baz=278						
P33M	Teslin, Yukon	104.63	30	P	Pdif	05 57 21.7	-2.0
	baz=278						
A36M	Sachs Harbour	104.97	17	P	PKiKP	06 01 37.3	-1.7
	baz=288						
U33K	Whale Pass	104.99	34	P	PKiKP	06 01 37.6	-1.8
	baz=277						
MMPY	Sheldon Lake,	104.99	27	P	PKiKP	06 01 37.4	-2.0
	baz=280						
T33K	Petersburg	105.00	34	P	PKiKP	06 01 37.7	-1.8
	baz=277						
CRAG	Craig	105.06	35	P	PKiKP	06 01 37.0	-2.6
	baz=276						
Q32M	Nakina River	105.08	31	P	PKiKP	06 01 36.9	-2.9
	baz=278						
WRAK	Wrangell Islan	105.38	34	P	PKiKP	06 01 38.0	-2.1
	baz=277						
R33M	Jennings River	105.67	31	P	PKiKP	06 01 38.6	-2.3
	baz=279						
S34M	Telegraph Cree	105.82	32	P	PKiKP	06 01 38.7	-2.2
	baz=279						
V35K	Ketchikan	105.93	35	P	PKiKP	06 01 39.0	-2.2
	baz=278						
C36M	Paulatuk	106.18	20	P	PKiKP	06 01 40.0	-1.3
	baz=289						
DLBC	Dease Lake	106.32	32	P	PKiKP	06 01 40.7	-1.3
	baz=280						
T35M	Bob Quinn	106.44	33	P	PKiKP	06 01 40.7	-1.5
	baz=279						
HFS	Hagfors	107.16	330	Pdiff	Pdif	05 57 34.5	-0.4
	comp=Z,5.6nm,0.9s,baz=64,slow=3.4,SNR=7.1						
HFS				PP	PP	06 02 03.4	+0.6
	comp=Z,9.4nm,1.0s,baz=95,slow=4.6,SNR=7.1						
NB2	NORSAR Subarra	108.13	332	P	Pdif	05 57 42.7	+3.5
	comp=Z,4.6nm,1.4s,baz=76,slow=4.4						
NB2	NORSAR Subarra	108.13	332	P	PKiKP	06 01 49.2	+3.9
	comp=Z,5.7nm,0.9s,baz=77,slow=7.4						
NB2	NORSAR Subarra	108.13	332	P	Pdif	05 57 42.7	+3.5
	baz=76,slow=4.4						
NOA	NORSAR Array B	108.13	332	Pdiff	Pdif	05 57 40.7	+1.5
	comp=Z,1.3nm,0.8s,baz=71,slow=4.4,SNR=4.7						
NOA				PP	PP	06 02 09.8	0.0
	comp=Z,2.2nm,0.7s,baz=79,slow=7.4,SNR=4.6						
GERES	GERESS Array B	109.26	319	PKiKP	PKiKP	06 01 49.2	+1.4
	comp=Z,1.5nm,0.8s,baz=86,slow=4.4,SNR=0.7						
CLL	Collm	109.29	321	*e*PP	PP	06 02 14.0	-4.5
YKA	Yellowknife Ar	112.36	25	Pdiff	Pdif	05 57 58.9	+1.0
	comp=Z,0.1nm,0.6s,baz=300,slow=5.0,SNR=2.4						
YKA				PKiKP	PKiKP	06 01 54.4	+1.3
	comp=Z,1.0nm,0.6s,baz=198,slow=4.1,SNR=14						
YKA				PP	PP	06 02 39.8	-0.2
	comp=Z,2.5nm,1.0s,baz=297,slow=7.0,SNR=4.8						

YKA				SKP		06 05 16.9	
	comp=Z,0.6nm,0.6s,baz=306,slow=1.8,SNR=4.1						
YKA				PKKPbc	PKKPbc	06 12 44.2	-1.9
	comp=Z,2.2nm,0.8s,baz=105,slow=2.9,SNR=22						
G08A	Pilot Rock	115.82	44		PKiKP	06 02 01.2	+0.7
EKA	Eskdalemuir Ar	117.25	329	PKP	PKiKP	06 02 03.6	+0.9
	comp=Z,0.4nm,0.4s,baz=96,slow=0.7,SNR=3.5						
EKA				PP	PP	06 03 16.5	+1.8
	comp=Z,13nm,0.9s,baz=63,slow=8.9,SNR=12						
ILON	Igloolik, Nuna	117.38	10		PKiKP	06 02 02.9	+0.3
NVAR	Mina Array Bea	117.82	51	PKP	PKiKP	06 02 05.2	+0.5
	comp=Z,3.2nm,0.8s,baz=233,slow=2.3,SNR=9.5						
NVAR				SKP		06 05 30.1	
	comp=Z,2.0nm,0.7s,baz=285,slow=1.3,SNR=5.1						
NVAR				PKKPbc	PKKPbc	06 12 26.6	-0.1
	comp=Z,0.7nm,0.7s,baz=115,slow=3.1,SNR=4.4						
BLKN	Baker Lake	118.12	18		PKPdf	06 02 03.6	-0.5
ELK	Elko	119.61	48		PKiKP	06 02 08.9	+0.8
ELK	Elko	119.61	48	PKIKP	PKiKP	06 02 08.9	+0.8
PFO	Pinyon Flats O	120.19	56		PKPdf	06 02 09.3	+0.1
PFO	Pinyon Flats O	120.19	56	PKIKP	PKPdf	06 02 09.3	+0.1
EGMT	Eagleton	120.94	39		PKiKP	06 02 10.8	+0.5
FFC	Flin Flon	121.96	29		PKiKP	06 02 12.6	+0.7
FFC	Flin Flon	121.96	29	PKIKP	PKiKP	06 02 12.6	+0.7
TORD	Torodi Ar. Bea	122.32	280		PKPdf	06 02 13.8	+0.1
TORD	Torodi Ar. Bea	122.32	280	PKP	PKiKP	06 02 14.1	+0.3
	comp=Z,11nm,0.6s,baz=84,slow=1.8,SNR=1.6						
TORD				SKP		06 05 38.8	
	comp=Z,5.3nm,0.7s,baz=51,slow=1.7,SNR=0.6						
TORD				PKKPbc	PKKPbc	06 12 08.3	-0.9
	comp=Z,51nm,0.3s,baz=287,slow=4.1,SNR=16						
PDAR	Pinedale Array	123.04	44		PKiKP	06 02 14.8	0.0
PDAR	Pinedale Array	123.04	44	PKP	PKiKP	06 02 15.6	+0.8
	comp=Z,4.2nm,0.7s,baz=245,slow=2.5,SNR=15						
PDAR				SKP		06 05 40.5	
	comp=Z,1.1nm,0.7s,baz=295,slow=3.3,SNR=2.9						
PDAR				PKKPbc	PKKPbc	06 12 07.8	+0.3
	comp=Z,1.9nm,0.7s,baz=117,slow=7.0,SNR=12						
ESDC	Sonseca Array	123.73	312		PKiKP	06 02 16.6	+0.5
ESDC	Sonseca Array	123.73	312	PKP	PKiKP	06 02 16.3	+0.3
	comp=Z,2.2nm,0.8s,baz=28,slow=2.8,SNR=14						
PAB	San Pablo	124.05	312		PKiKP	06 02 17.9	+1.2
PAB	San Pablo	124.05	312	PKIKP	PKiKP	06 02 17.9	+1.2
TUC	Tucson	125.12	57		PKiKP	06 02 19.1	+0.1
TUC	Tucson	125.12	57	PKIKP	PKiKP	06 02 19.1	+0.1
MVO	Moncorvo	125.42	315	*e*PKPdf	PKiKP	06 02 20.3	+0.9
MVO				*i* tx	tx	06 02 27.9	
PVRL	Vila Real	125.86	315	*e*PKPdf	PKiKP	06 02 21.5	+1.4
PVRL				*i* tx	tx	06 02 27.4	
POLO	Lamas de Olo	125.88	315	*e*PKPdf	PKiKP	06 02 21.4	+1.1
POLO				*i* tx	tx	06 02 27.5	
PCAB	Cabril	125.91	316	*e*PKPdf	PKiKP	06 02 21.6	+1.3
PCAB				*i* tx	tx	06 02 27.4	
PGAV	Gavieira, Arco	125.97	316	*e*PKPdf	PKiKP	06 02 21.4	+0.9
PGAV				*i* tx	tx	06 02 27.6	
MTE	Manteigas	126.07	314	*e*PKPdf	PKiKP	06 02 22.1	+1.4
MTE				*i* tx	tx	06 02 26.2	
RSSD	Black Hills	126.19	41		PKiKP	06 02 20.9	-0.1
RSSD	Black Hills	126.19	41	PKIKP	PKiKP	06 02 20.9	-0.1
PVIS	Viseu	126.19	315	*i* tx	tx	06 02 26.5	
PCBR	Castelo Branco	126.22	313	*e*PKPdf	PKiKP	06 02 21.8	+0.9
PCBR				*i* tx	tx	06 02 28.1	
PMRV	Marv??o	126.31	313	*e*PKPdf	PKiKP	06 02 21.5	+0.4
PMRV				*i* tx	tx	06 02 25.5	
PBAR	Barrancos	126.48	311	*e*PKPdf	PKiKP	06 02 22.3	+0.9
PBAR				*i* tx	tx	06 02 29.0	
PESTR	Estremoz	126.65	312	*e*PKPdf	PKiKP	06 02 22.4	+0.6
PESTR				*i* tx	tx	06 02 28.8	
PSARD	Sardoal	126.80	313	*e*PKPdf	PKiKP	06 02 23.3	+1.3
PSARD				*i* tx	tx	06 02 29.4	
PCAS	Casmilo, Conde	126.87	314	*e*PKPdf	PKiKP	06 02 23.5	+1.3
PMTG	Montargil	127.04	313	*e*PKPdf	PKiKP	06 02 22.6	0.0
PMTG				*i* tx	tx	06 02 29.4	
EVO	Evora	127.08	312	*e*PKPdf	PKiKP	06 02 22.7	+0.1
EVO				*i* tx	tx	06 02 30.7	
PCVE	Castro Verde	127.41	311	*i* tx	tx	06 02 30.5	
MESJ	Messejana	127.48	311	*e*PKPdf	PKiKP	06 02 25.2	+1.8
MESJ				*i* tx	tx	06 02 30.6	
ULM	Lac du Bonnet	127.62	31	PKP	PKiKP	06 02 23.1	-0.2
	comp=Z,5.2nm,0.7s,baz=32,slow=2.0,SNR=7.6						
MORF	Marmelete	127.98	311	*i* tx	tx	06 02 32.1	
DBIC	Dimbokro	128.32	272		PKiKP	06 02 25.7	-0.1
DBIC	Dimbokro	128.32	272	PKP	PKiKP	06 02 25.9	+0.1
	comp=Z,13nm,1.0s,baz=123,slow=4.1,SNR=11						
EPLO	Experimental L	129.06	30		PKiKP	06 02 26.8	+0.5
PLCA	Paso Flores	129.16	167	PKP	PKiKP	06 02 27.2	+0.3
	comp=Z,3.6nm,0.9s,baz=350,slow=1.9,SNR=6.3						
PLCA				SKP		06 05 50.9	
	comp=Z,10nm,0.9s,baz=163,slow=6.9,SNR=6.3						
TXAR	Lajitas Array	131.78	58	PKhKP	PKPpre	06 02 17.0	
	comp=Z,0.2nm,0.6s,baz=244,slow=1.2,SNR=3.7						
TXAR				PKP	PKiKP	06 02 32.8	+0.3
	comp=Z,1.3nm,0.6s,baz=205,slow=2.3,SNR=13						
TXAR				SKPbc	SKPbc	06 05 46.8	-0.1
	comp=Z,10.0nm,0.9s,baz=295,slow=3.5,SNR=16						
SCHQ	Schefferville	133.42	8	PKP	PKiKP	06 02 34.8	-0.2
	comp=Z,4.3nm,0.6s,baz=335,slow=4.8,SNR=6.7						
SCHQ				SKPbc	SKPbc	06 05 50.8	-0.9
	comp=Z,15nm,0.8s,baz=315,slow=2.9,SNR=8.8						
CO02	Combarbal	138.03	162		PKPdf	06 02 42.4	-0.8
CFA	Coronel Fontan	138.41	165	PKhKP	PKPpre	06 02 36.0	
	comp=Z,1.9nm,0.6s,baz=308,slow=4.5,SNR=8.1						
CFA				SKPbc	SKPbc	06 06 09.2	+1.4
	comp=Z,4.5nm,0.6s,baz=194,slow=3.0,SNR=13						
CO01	Juntas del Tor	139.45	162		PKPdf	06 02 46.2	+0.3
ITQB	Itaqui	141.76	181		PKPdf	06 02 48.0	-1.8
ITAB	Concordia	143.88	187		PKPdf	06 02 54.2	+0.6
HRV	Adam Dziewonsk	144.06	18		PKPbc	06 02 52.1	+0.5
HRV	Adam Dziewonsk	144.06	18	PKIKP	PKPbc	06 02 52.1	+0.4
KSCT	Kent School, K	144.11	21		PKPbc	06 02 52.7	+0.9
BRAL	Brewton	144.25	47	PKPdf	PKPdf	06 02 53.4	-0.7
PB14	IPOC Station P	144.30	159		PKPdf	06 02 54.5	-0.4
250A	Grady	144.37	45	PKPdf	PKPab	06 02 52.7	0.0
PAL	Palisades	144.59	22		PKPbc	06 02 53.7	+0.4
PAL	Palisades	144.59	22	PKIKP	PKPbc	06 02 53.7	+0.4
M63A	Gales Ferry	144.90	20	PKPbc	PKPab	06 02 54.1	-0.2
CPUP	Villa Florida	145.09	179	PKPbc	PKPdf	06 02 57.1	+1.4
	comp=Z,10.0nm,0.8s,baz=50,slow=2.1,SNR=79						
CPUP				SKPbc	SKiKP	06 06 26.9	+1.5
	comp=Z,3.5nm,0.9s,baz=50,slow=1.6,SNR=4.8						
V55A	Taylorsville	145.17	36		PKPbc	06 02 55.4	0.0
GOGA	Godfrey	145.42	41		PKPdf	06 02 56.0	-0.1
GOGA	Godfrey	145.42	41	PKIKP	PKPdf	06 02 56.0	-0.1
T57A	Hurt	145.42	32		PKPdf	06 02 55.6	-0.4
451A	Vernon	145.49	47	PKPdf	PKPab	06 02 56.9	+0.1
PAULI	Pauline	145.53	38		PKPdf	06 02 56.3	+0.1
KMSC	Kings Mountain	145.60	37		PKPdf	06 02 56.5	+0.2
HODGE	Hodges	145.66	39	PKPdf	PKPbc	06 02 57.1	+0.1
T59A	Double "B" Far	146.32	30	PKPdf	PKPbc	06 02 58.5	-0.3
BIRD	Birdtown, Kers	146.46	36	PKPbc	PKPbc	06 02 59.1	-0.2
Y57A	Sumter	146.94	37	PKPbc	PKPbc	06 03 00.9	+0.2
PETF	Flores	147.00	73	PKPbc	PKPbc	06 03 01.9	+0.6
NHSC	New Hope	147.69	38	PKPbc	PKPbc	06 03 03.4	+0.6
TEIG	Tepich	147.72	66	PKPbc	PKPbc	06 03 03.6	+0.4
ESQI	Esquipulas	147.84	77	PKPbc	PKPbc	06 03 04.8	+1.0
TA01	Diego Aracena	148.07	156	PKPbc	PKiKP	06 03 05.8	-0.1
Y60A	Bolivia	148.21	35	PKPbc	PKPbc	06 03 04.3	+0.2
TA02	Huaiquique	148.36	156	PKPbc	PKiKP	06 03 06.3	-0.2
GO01	Chusmiza	149.27	157		PKPbc	06 03 06.0	-1.9
DWPF	Disney Wildern	150.01	47	PKPbc	PKPbc	06 03 08.7	-0.1
CRIN	San Cristobal	150.23	80	PKPbc	PKPbc	06 03 09.9	+0.1
HERN	Volcan Telica	150.45	80	PKPbc	PKPbc	06 03 10.3	0.0
PB18	Visviri	151.03	155		PKPbc	06 03 11.1	-1.1
SOR	Soroa	151.43	58		PKiKP	06 03 13.2	+0.5
SOR	Soroa	151.43	58	PKIKP	PKiKP	06 03 13.3	+0.5
NNA	Nana	151.45	136	PKPbc	PKiKP	06 03 14.1	+1.0
	comp=Z,18nm,0.6s,baz=316,slow=8.7,SNR=10.0						
061Z	Ochoppi	151.64	50	PKPbc	PKiKP	06 03 13.5	+0.4
LPAZ	La Paz	152.75	156	PKP	PKPdf	06 03 11.1	+2.0
	comp=Z,3.2nm,0.9s,baz=111,slow=2.4,SNR=11						
LPAZ				PKPbc	PKiKP	06 03 18.6	+2.1
	comp=Z,12nm,0.9s,baz=94,slow=0.9,SNR=21						
BDFB	Brasilia	154.14	200	PKP	PKPdf	06 03 12.1	+1.7
	comp=Z,5.6nm,1.0s,baz=150,slow=3.6,SNR=7.2						
BDFB				PKPbc	PKiKP	06 03 20.1	+1.4
	comp=Z,4.7nm,0.5s,baz=118,slow=3.9,SNR=7.7						
SIV	San Ignacio	155.05	171	PKP	PKPdf	06 03 13.4	+1.8
	comp=Z,5.6nm,1.1s,baz=170,slow=2.0,SNR=13						
SIV				PKPab	PKPab	06 03 37.8	+1.6
	comp=Z,9.2nm,0.7s,baz=182,slow=4.1,SNR=4.0						
BBAC	Balboa, Cauca	158.76	107	P	PKPdf	06 03 21.8	+5.2
MALC	Bahia Malaga	159.25	102	P	PKPdf	06 03 17.2	+0.3
FLOC	Florencia	160.10	110	P	PKPdf	06 03 21.2	+3.2
YOTC	Yotoco, Valle	160.19	103	P	PKPdf	06 03 19.6	+1.4
PLMC	San Jos del P	160.47	100	P	PKPdf	06 03 19.7	+1.3
APAC	Apartado, Choc	160.61	91	P	PKPdf	06 03 21.1	+2.7
APAC				S	PKPab	06 04 02.4	+1.8
CBOC	Ciudad Bolivar	160.92	97	P	PKPdf	06 03 21.7	+2.7
ANIL	Santa Ana	161.23	102	P	PKPdf	06 03 21.7	+2.2
ORTC	Ortega, Tolima	161.23	104	P	PKPdf	06 03 19.5	+0.3
GUY2C	Guyana, Caldas	161.43	100	P	PKPdf	06 03 20.9	+1.0
PRAC	Prado	161.52	105	P	PKPdf	06 03 20.2	+0.7
URMC	La Uribe, Meta	161.87	107	P	PKPab	06 04 08.5	+2.3
MACC	Macarena, Meta	161.98	111	P	PKPdf	06 03 20.2	+0.2
	comp=Z,29nm,0.8s						
NORC	Norcasia	161.98	99	P	PKPdf	06 03 23.8	+3.8
ZARC	Zaragoza, Cauc	162.27	93	P	PKPdf	06 03 20.5	+0.3
ZARC				S	PKPab	06 04 09.3	+1.4
ROSC	El Rosal	162.36	102	PKP	PKPdf	06 03 22.5	+1.7
	comp=Z,20nm,0.9s,baz=131,slow=9.3,SNR=7.9						
ROSC				PKPab	PKPab	06 04 10.1	+1.3
	comp=Z,11nm,0.6s,baz=120,slow=11,SNR=4.5						
ROSC	El Rosal	162.36	102	P	PKPdf	06 03 22.2	+1.4
PTBC	PUERTO BERRIO,	162.56	96	P	PKPdf	06 03 20.2	-0.3
PTBC				S	PKPab	06 04 10.7	+1.5
SPBC	San Pablo de B	162.78	99	P	PKPdf	06 03 21.1	+0.3
SPBC				S	PKPab	06 04 12.2	+1.9
CHIC	Chingaza	162.88	103	P	PKPdf	06 03 21.3	0.0
RUSC	La Rusia	163.79	99	P	PKPdf	06 03 22.1	-0.2
OCAC	Ocana	163.85	91	P	PKPdf	06 03 22.2	+0.3
TAMC	Tame, Arauca	165.15	98	P	PKPab	06 04 22.5	+1.8
OBIP	Obispado Ponce	166.90	44		PKPab	06 04 27.9	-0.1

ASRS 17 06:00:45.0±1.0**, 54°.11N×86°.46E, h0^{km}, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

ASRS 17 06:01:44.0±1.4**, 54°.21N×87°.08E, h0^{km}, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

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*BJI **17** 06:02:01.8, 30°.82S×177°.23W, h14^{km}, mB6.3/75, mb5.7/45, Ms6.3/91, Ms7 6.0/90*

*IDC **17** 06:02:01.8±0.3, 30°.80S×177°.48W, h0^{km}, mb4.9/19, mbtmp4.9/20, ML4.2/1, MS6.1/54, Error ellipse: s-maj=13.3km s-min=10.9km az=90.0*

*NEIC **17** 06:02:03.9, 30°.83S×177°.47W, h10^{km}*

*NEIC **17** 06:02:03.9, 30°.88S×177°.47W, h20^{km}*

*NEIC **17** 06:02:03.9, 30°.88S×176°.77W, h20^{km}, Moment Tensor Solution. Duration: 4^{s}9 Moment tensor: Scale 10^{18}Nm; M_{rr}1.34; $M_{\theta\theta}$-0.12; $M_{\phi\phi}$-1.22; $M_{r\theta}$0.10; $M_{\theta\phi}$-0.42; $M_{\phi r}$0.93; Fault plane solution: $M_0$1.65000×10^{18} NP1: ϕ_s205.75000°, δ28.32000°, λ102.58000°. NP2: ϕ_s11.52000°, δ62.42000°, λ83.30000°. Principal axes: T 1.6491, Plg72.0000°, Azm266.0000°; N -0.0013, Plg6.0000°, Azm15.0000°; P -1.6479, Plg17.0000°, Azm106.0000°;*

*ISC-PP **17** 06:02:04, 30°.84S×177°.48W, h41^{km}, Mwppsm6.5, Moment Tensor Solution. s24 Moment tensor: Scale 10^{18}Nm; M_{rr}0.61±.12; $M_{\theta\theta}$-0.08±.16; $M_{\phi\phi}$-0.54±.15; $M_{r\theta}$0.31±.15; $M_{\theta\phi}$-0.06±.28; $M_{\phi r}$-0.25±.13; Fault plane solution: $M_0$7.00000×10^{18} NP1:ϕ_s182.20000°, δ46.30000°, λ57.00000°. NP2:ϕ_s45.40000°, δ52.70000°, λ119.60000°.*

*NEIC **17** 06:02:04.1±1.7, 30°.84S±0°.08×177°.5W±0°.1, h12^{km}±1^{km}, mb5.7/319, Ms_20 6.4/1093, Mwb6.0/83, Mww6.1/74 Error ellipse: s-maj=16.0km s-min=13.5km az=81.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.72; $M_{\theta\theta}$-0.34; $M_{\phi\phi}$-0.38; $M_{r\theta}$0.53; $M_{\theta\phi}$-0.56; $M_{\phi r}$1.08; Fault plane solution: $M_0$1.47000×10^{18} NP1:ϕ_s28.29000°, δ73.61000°, λ78.58000°. NP2:ϕ_s243.89000°, δ19.89000°, λ123.95000°. Principal axes: T 1.4022, Plg60.0000°, Azm282.0000°; N 0.1268, Plg11.0000°, Azm32.0000°; P -1.5290, Plg28.0000°, Azm127.0000°;*

*IPGP **17** 06:02:05.0, 30°.94S×177°.60W, h16^{km}, Mw6.1, Fault plane solution: NP1:ϕ_s207.00000°, δ20.00000°, λ102.00000°. NP2:ϕ_s14.00000°, δ70.00000°, λ85.00000°.*

*MOS **17** 06:02:05.5±1.1, 30°.87S×177°.65W, h28^{km}, mb5.7/28, MS6.3/35, Error ellipse: s-maj=9.7km s-min=7.2km az=103.0*

*NOU **17** 06:02:07.4, 31°.20S×177°.17W, h39^{km}, mB6.3/93, Kermadec Islands Region*

*GCMT **17** 06:02:10.1±0.1, 30°.85S×177°.22W, h15^{km}, MW6.1/162, Moment Tensor Solution. s155,c357; s162,c598; Duration: 2^{s}7 Moment tensor: Scale 10^{18}Nm; M_{rr}1.32±.01; $M_{\theta\theta}$-0.08±.01; $M_{\phi\phi}$-1.24±.01; $M_{r\theta}$0.25±.01; $M_{\theta\phi}$-0.45±.01; $M_{\phi r}$1.06±.02; Best double couple: $M_0$1.74000×10^{18} NP1:ϕ_s203.00000°, δ26.00000°, λ97.00000°. NP2:ϕ_s15.00000°, δ64.00000°, λ87.00000°. Principal axes: T 1.7060, Plg70.0000°, Azm278.0000°; N 0.0660, Plg3.0000°, Azm17.0000°; P -1.7740, Plg19.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 17 06:02:04.1±0.5**, 30°.96S**±0°.03**×177°.41W**±0°.04**, h15^{km}**±2^{km}**, h16^{km}:pP-P, n1447, σ2^{s}05**/1084**, mb5.6**/248**, MS6.3**/619**, 71C-27D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.75	345	P	Pn	06 02 31.8	-2.0
GLKZ				S	Sn	06 02 53.8	-2.1
RAO	Raoul Island	1.76	345	Pn	Pn	06 02 31.8	-2.2
RAO	Raoul Island	1.76	345	P	Pn	06 02 31.8	-2.2
RAO	Raoul Island	1.76	345	⇑P	Pn	06 02 31.8	-2.2
RIZ	Raoul Island	1.77	345	P	Pn	06 02 32.0	-2.1
RIZ				S	Sn	06 02 56.2	-0.1
MXZ	Matakaoa Point	7.48	207	P	Pn	06 03 50.4	-2.2
	150nm,0.7s						
MXZ	Matakaoa Point	7.48	207	S	Sn	06 05 15.8	-1.3
	150nm,0.7s						
MXZ	Matakaoa Point	7.48	207	P	Pn	06 03 50.6	-2.0
MXZ				S	Sn	06 05 15.3	-1.8
WMGZ	Waiomatatini S	7.66	206	P	Pn	06 03 52.6	-2.5
WMGZ				S	Sn	06 05 21.4	-0.2
PKGZ	Pakihiroa	7.83	207	P	Pn	06 03 54.3	-3.1
PKGZ				S	Sn	06 05 24.3	-1.5
HAZ	Te Kaha	7.86	209	P	Pn	06 03 55.4	-2.4
HAZ				S	Sn	06 05 22.9	-3.5
KUZ	Kuaotunu	8.12	223	P	Pn	06 04 01.9	+0.5
	384nm,2.4s						
KUZ	Kuaotunu	8.12	223	P	Pn	06 04 02.6	+1.2
TKGZ	Te Karaka	8.42	206	P	Pn	06 04 02.8	-2.7
TKGZ				S	Sn	06 05 37.9	-2.3
MWZ	Matawai	8.45	208	P	Pn	06 04 02.6	-3.4
MWZ				S	Sn	06 05 37.6	-3.6
WCZ	Waipu Caves	8.49	232	P	Pn	06 04 11.7	+5.2
URZ	Urewera	8.56	210	Pn	Pn	06 04 05.9	-1.6
	7.6nm,0.3s,baz=127,slow=6.0,SNR=23						
URZ				Sn	Sn	06 05 40.8	-3.0
	33nm,0.3s,baz=312,slow=22,SNR=13						
URZ	Urewera	8.56	210	P	Pn	06 04 05.2	-2.3
URZ				S	Sn	06 05 40.8	-3.0
MBAZ	Motutapu North	8.63	226	P	Pn	06 04 13.4	+5.0
OUZ	Omahuta	8.66	238	P	Pn	06 04 10.3	+1.5
	392nm,1.8s						
OUZ	Omahuta	8.66	238	P	Pn	06 04 15.6	+6.9
OUZ	Omahuta	8.66	238	⇑P	Pn	06 04 13.2	+4.4
RIGZ	Rimuhau	8.68	206	P	Pn	06 04 07.7	-1.5
RIGZ				S	Sn	06 05 43.3	-3.5
MKAZ	Moumakai	8.69	223	P	Pn	06 04 13.5	+4.3
PRGZ	Paritu Road	8.83	205	P	Pn	06 04 05.1	-6.1
PRGZ				S	Sn	06 05 45.9	-4.6
MUGZ	Murupara	8.89	211	P	Pn	06 04 08.3	-3.8
MUGZ				S	Sn	06 05 48.4	-3.5
RRRZ	Republican Roa	8.90	213	P	Pn	06 04 13.1	+1.0
RRRZ				S	Sn	06 05 51.0	-1.1
SNGZ	Shannon Statio	8.91	207	P	Pn	06 04 08.9	-3.4
SNGZ				S	Sn	06 05 49.1	-3.4
MHGZ	Mahia Peninsul	9.03	204	P	Pn	06 04 10.8	-3.0
MHGZ				S	Sn	06 05 51.6	-3.6
BKZ	Black Stump Fm	9.59	210	P	Pn	06 04 21.0	-0.6
	95nm,2.0s						
BKZ	Black Stump Fm	9.59	210	S	Sn	06 06 06.9	-2.1
	95nm,2.0s						
BKZ	Black Stump Fm	9.59	210	P	Pn	06 04 23.0	+1.4
BKZ				S	Sn	06 06 01.8	-7.2
HIZ	Hauiti	9.86	218	P	Pn	06 04 29.2	+4.0
NGZ	Ngauruhoe	9.99	213	P	Pn	06 04 30.0	+2.7
NGZ				S	Sn	06 06 14.6	-4.6
FWVZ	Far West T-bar	10.08	213	P	Pn	06 04 23.6	-4.9
FWVZ				S	Sn	06 06 18.4	-3.0
MOVZ	Moawhango	10.11	212	P	Pn	06 04 29.8	+1.1
MOVZ				S	Sn	06 06 15.8	-6.1
PKVZ	Pokaka	10.20	214	P	Pn	06 04 32.5	+2.4
PNHZ	Pukenui	10.34	208	P	Pn	06 04 28.3	-3.6
PNHZ				S	Sn	06 06 19.7	-7.8
WPHZ	Waipukurau	10.37	207	P	Pn	06 04 29.5	-2.8
WPHZ				S	Sn	06 06 21.6	-6.6
PRHZ	Porangahau	10.47	206	P	Pn	06 04 29.6	-4.0
PRHZ				S	Sn	06 06 24.8	-5.8
DVHZ	Dannevirke	10.68	207	P	Pn	06 04 34.3	-2.2
DVHZ				S	Sn	06 06 29.2	-6.5
ANWZ	Angora Road	10.70	206	P	Pn	06 04 34.5	-2.3
ANWZ				S	Sn	06 06 30.5	-5.7
WAZ	Wanganui	10.74	213	P	Pn	06 04 32.5	-4.8
WAZ				S	Sn	06 06 33.7	-3.6
POWZ	Post Office Ro	10.92	209	P	Pn	06 04 38.9	-0.9
POWZ				S	Sn	06 06 29.9	-12
PRWZ	Pori Road	10.97	207	P	Pn	06 04 36.4	-4.2
PRWZ				S	Sn	06 06 33.7	-9.3
BFZ	Birch Farm	10.98	206	P	Pn	06 04 39.9	-0.7
	105nm,0.8s						
BFZ	Birch Farm	10.98	206	P	Pn	06 04 36.7	-3.9
BFZ				S	Sn	06 06 35.0	-8.1
TIWZ	Tintock	11.20	207	P	Pn	06 04 38.9	-4.7
TIWZ				S	Sn	06 06 40.7	-7.8
MRZ	Mangatainoka R	11.22	208	P	Pn	06 04 39.6	-4.3
MRZ				S	Sn	06 06 38.8	-10
HOWZ	Holdsworth Sta	11.45	208	P	Pn	06 04 42.9	-4.1
HOWZ				S	Sn	06 06 43.9	-11
TMWZ	Te Maipa	11.48	206	P	Pn	06 04 43.6	-3.9
TMWZ				S	Sn	06 06 45.2	-10
KIW	Kapiti Island	11.67	210	P	Pn	06 04 45.1	-5.0
KIW				S	Sn	06 06 49.6	-10
MTW	Mount Morrison	11.67	207	P	Pn	06 04 45.0	-5.1
MTW				S	Sn	06 06 49.0	-11
PAWZ	Paruwai Farm	11.89	207	P	Pn	06 04 46.9	-6.3
PAWZ				S	Sn	06 06 54.1	-11
MSWZ	Moikau Station	11.99	208	P	Pn	06 04 52.5	-2.0
MSWZ				S	Sn	06 06 58.6	-9.4
DUWZ	D'Urville Isla	12.07	213	P	Pn	06 04 54.3	-1.2
DUWZ				S	Sn	06 07 01.1	-8.7
PLWZ	Palliser	12.12	207	P	Pn	06 04 53.9	-2.4
PLWZ				S	Sn	06 06 58.6	-13
BHW	Baring Head	12.14	209	P	Pn	06 04 53.5	-3.0
BHW				S	Sn	06 06 59.2	-12
TCW	Tory Channel	12.23	211	P	Pn	06 04 49.1	-8.6
TCW				S	Sn	06 07 01.8	-12
TUWZ	Tuamarina	12.56	211	P	Pn	06 04 57.9	-4.3
TUWZ				S	Sn	06 07 11.3	-10
NNZ	Nelson	12.65	213	P	Pn	06 05 01.7	-1.7
LKBA	Tubou, Lakemba	12.74	354	P	Pn	06 05 10.1	+5.4
	326nm,1.7s						
CTZ	Chatham Island	12.77	177	P	Pn	06 05 03.5	-1.5
	254nm,0.9s						
QRZ	Quartz Range	12.77	217	P	Pn	06 05 07.3	+2.2
	69nm,2.2s						
QRZ	Quartz Range	12.77	217	P	Pn	06 05 05.7	+0.6
NFK	Norfolk Island	12.84	275	P	P	06 05 12.6	-4.3
NFK	Norfolk Island	12.84	275	⇑P	Pn	06 05 11.1	+5.0
MRNZ	Matariki Terra	13.09	215	P	Pn	06 05 05.6	-3.8
THZ	Tophouse	13.29	213	P	Pn	06 05 12.0	-0.3
KHZ	Kahutara	13.53	210	P	Pn	06 05 15.5	+0.1
	149nm,0.6s						
KHZ	Kahutara	13.53	210	P	Pn	06 05 11.3	-4.2
MSVF	Nonsavu	13.80	342		Pn	06 05 16.8	-2.5
MSVF	Nonsavu	13.80	342	Pn	Pn	06 05 19.3	0.0
	0.9nm,0.3s,baz=158,slow=14,SNR=12						
MSVF				LR	LR	06 09 43.9	
	comp=Z,79μm,18.5s,baz=169,slow=34						
MSVF	Nonsavu	13.80	342	P	Pn	06 05 22.8	+3.5
MSVF	Nonsavu	13.80	342	P	Pn	06 05 20.7	+1.4
MSVF	Nonsavu	13.80	342	⇑P	Pn	06 05 18.8	-0.5
DSZ	Denniston Nort	13.82	216	P	Pn	06 05 18.1	-1.4
GVZ	Greta Valley S	14.20	210	P	Pn	06 05 20.6	-4.0
TAVE	Taveuni	14.37	350	P	P	06 05 31.6	-2.4
	318nm,2.0s						
LTZ	Lake Taylor	14.38	212	P	Pn	06 05 22.8	-4.4
AMCZ	Amberley	14.53	210	P	Pn	06 05 25.1	-4.0
INZ	Inchbonnie	14.73	214	P	Pn	06 05 29.4	-2.4
DGTI	Dogotuki	14.82	349	P	P	06 05 37.7	-1.4
	131nm,0.9s						
OXZ	Oxford	14.92	211	P	Pn	06 05 31.8	-2.7
MQZ	McQueen's Vall	14.96	209	P	Pn	06 05 29.4	-5.5
RACZ	Rakaia	15.20	210	P	Pn	06 05 34.2	-3.9
MHCZ	Mount Hutt	15.29	212	P	Pn	06 05 32.0	-7.4
RPZ	Rata Peaks	15.67	212	Pn	Pn	06 05 36.6	-7.7
	3.8nm,0.3s,baz=35,slow=1.3,SNR=23						
RPZ				Sn	Sn	06 08 21.8	-16
	3.5nm,0.3s,baz=346,slow=19,SNR=5.7						
RPZ	Rata Peaks	15.67	212	P	Pn	06 05 44.6	+0.3
	109nm,0.9s						
PINNC	Pines Island,	15.86	298	P	P	06 05 52.3	+1.8
	529nm,2.5s						
MARNC	Mare, Loyalty	16.10	302	P	P	06 05 56.2	+3.0
	6.3nm,0.7s						
OUENC	Ouen Island, N	16.43	297	P	P	06 05 59.6	+2.7
	489nm,1.2s						
INH	Isangel	16.54	310	P	P	06 06 00.8	+2.7
	606nm,1.9s						
ONTNC	Ouen Toro	16.79	297	P	P	06 06 03.1	+2.2
	317nm,1.5s						
ONTNC	Ouen Toro	16.79	297	⇑P	Pn	06 05 60.0	+1.3
ODZ	Otahua Downs	16.89	210	⇓P	Pn	06 05 57.6	-2.2
DZM	Mont Dzumac	16.93	298		P	06 06 03.2	+0.6
DZM	Mont Dzumac	16.93	298	*e*Pn	P	06 06 04.6	+2.1
	1μm,1.4s						
DZM				*e*LR	LR	06 09 55.9	
	190μm,23.1s						
DZM	Mont Dzumac	16.93	298	Pn	P	06 06 04.1	+1.6
	1.8nm,0.3s,baz=101,slow=8.3,SNR=35						
DZM				LR	LR	06 11 31.0	
	comp=Z,222μm,18.4s,baz=139,slow=34						
DZM	Mont Dzumac	16.93	298	P	P	06 06 05.9	+3.4
	454nm,2.2s						
DZM	Mont Dzumac	16.93	298	⇑P	P	06 06 04.0	+1.5
JCZ	Jackson Bay	17.03	216	P	Pn	06 06 01.4	-0.4
	199nm,1.2s						
AFI	Afiamalu	17.75	18		Pn	06 06 08.9	-1.8
AFI	Afiamalu	17.75	18	P	P	06 06 11.4	-0.1
	79nm,1.1s						
AFI	Afiamalu	17.75	18	P	Pn	06 06 11.3	+0.5
RAR	Rarotonga	18.56	63	P	P	06 06 18.7	-1.7
RAR				IAmb	IAmb	06 06 26.6	
	comp=Z,530nm,1.4s						
RAR	Rarotonga	18.56	63	P	P	06 06 18.2	-2.2
	comp=Z,7.0nm,0.3s,baz=157,slow=3.0,SNR=9.8						
RAR				S	Sn	06 09 28.5	-19
	comp=Z,52nm,0.9s,baz=78,slow=14,SNR=5.9						
RAR				LR	LR	06 14 07.7	
	comp=Z,22μm,18.5s,baz=248,slow=39						
	comp=Z,66nm,0.8s						
RAR	Rarotonga	18.56	63	P	Pn	06 06 20.7	+0.1
	comp=Z,161nm,1.9s						
RAR	Rarotonga	18.56	63	P	P	06 06 18.7	-1.7
RAR				pmax	pmax		
	comp=Z,530nm,1.4s						
RAR	Rarotonga	18.56	63	⇑P	P	06 06 18.9	-1.5
SYZ	Scrubby Hill	18.72	210	P	P	06 06 22.2	+0.3
	comp=Z,287nm,2.6s						
VLAKA	Lakatoro	20.26	313	P	Pn	06 06 43.6	+2.5
SANVU	Saraoutou	20.90	314	P	P	06 06 44.3	-1.6
SANVU	Saraoutou	20.90	314	P	Pn	06 06 50.1	+1.6
	comp=Z,248nm,1.2s						
GC1S	Gold Coast 1 S	25.41	269	P	P	06 07 34.3	+3.2
	comp=Z,97nm,0.9s						
TBI	Tubuai	25.95	80	*e*P	P	06 07 36.0	0.0
	comp=Z,12μm,27.8s						
TBI				*e*S	S	06 12 06.4	+0.4
	comp=Z,191μm,25.8s						
TBI				*e*LR	LR	06 14 03.0	
	comp=Z,255μm,26.5s						
TBI				*e*LR	LR	06 14 06.0	
	comp=Z,54μm,25.0s						
ARMA	Armidale	26.59	263	P	P	06 07 41.7	-0.2
ARMA				IAmb	IAmb	06 07 59.2	
	comp=Z,99nm,0.9s						

ARMA				IAMs_20	IAMs_20	06 17 18.9	
	comp=Z,71µm,18.0s						
ARMA	Armidale	26.59	263	P	P	06 07 45.8	+3.9
ARMA	Armidale	26.59	263	P	P	06 07 44.4	+2.5
	comp=Z,158nm,2.3s						
ARMA	Armidale	26.59	263	⇑P	P	06 07 44.8	+2.8
CNB	Canberra Magne	28.08	252	P	P	06 07 59.4	+4.2
CNB	Canberra Magne	28.08	252	P	P	06 07 58.3	+3.1
	comp=Z,79nm,2.6s						
EIDS	Eidsvold	28.27	273	P	P	06 07 56.3	-0.6
EIDS				IAmb	IAmb	06 08 16.8	
	comp=Z,134nm,1.2s						
EIDS				IAMs_20	IAMs_20	06 17 53.6	
	comp=Z,116µm,19.0s						
EIDS	Eidsvold	28.27	273	P	P	06 08 00.4	+3.5
	comp=Z,0.0nmcomp=Z,86nm,1.6s						
EIDS	Eidsvold	28.27	273	P	P	06 07 57.7	+0.8
	comp=Z,87nm,1.6s						
EIDS	Eidsvold	28.27	273	⇑P	P	06 07 57.8	+0.8
CAN	Canberra	28.38	252	P	P	06 07 56.5	-1.3
CAN	Canberra	28.38	252	P	P	06 07 60.0	+2.1
	comp=Z,0.0nmcomp=Z,68nm,1.6s						
CAN	Canberra	28.38	252	P	P	06 08 00.2	+2.4
	comp=Z,104nm,1.6s						
CAN	Canberra	28.38	252	P	P	06 07 56.5	-1.3
CAN				pmax	pmax		
	comp=Z,93nm,1.2s						
CAN	Canberra	28.38	252	⇑P	P	06 08 00.2	+2.4
PAE	Paea	28.52	69	*e*P	P	06 07 56.2	-2.9
	comp=Z,426nm,23.5s						
PAE				*e*S	S	06 12 41.7	-4.8
	comp=Z,1µm,23.9s						
PAE				*e*LR	LR	06 15 13.0	
	comp=Z,5µm,21.6s						
PPT2	Papeete2	28.56	69	*e*P	P	06 08 00.6	+1.0
	comp=Z,2µm,23.2s						
PPT2				*e*S	S	06 12 53.0	+5.7
	comp=Z,39µm,24.5s						
PPT2				*e*LR	LR	06 15 10.7	
	comp=Z,42µm,25.5s						
PPT2				*e*LR	LR	06 15 12.3	
	comp=Z,32µm,27.5s						
PPT	Papeete	28.57	69	LR	LR	06 19 14.1	
	comp=Z,24µm,18.3s,baz=248,slow=36						
GD1S	Gladstone Soft	28.71	277	P	P	06 08 04.1	+3.3
	comp=Z,150nm,1.0s						
TVO	Taravao	28.72	69	*e*P	P	06 07 54.3	-6.7
	comp=Z,438nm,22.8s						
TVO				*e*S	S	06 12 45.9	-3.9
	comp=Z,1µm,22.7s						
TVO				*e*LR	LR	06 15 19.6	
	comp=Z,6µm,22.0s						
YNG	Young	28.91	254	P	P	06 08 06.1	+3.6
	comp=Z,55nm,2.2s						
GLAD	Gladstone	29.55	241	P	P	06 08 09.0	+0.9
	comp=Z,65nm,1.0s						
HNR	Honiara	30.05	311	P	P	06 08 09.8	-2.9
HNR	Honiara	30.05	311	P	P	06 08 14.8	+2.1
HNR				pmax	pmax		
	comp=Z,309nm,0.9s						
CORO	Coronation Par	30.27	240	P	P	06 08 16.6	+2.2
	comp=Z,34nm,1.0s						
TAU	Tasmania Unive	30.39	237	P	P	06 08 14.9	-0.6
TAU				IAmb	IAmb	06 08 33.2	
	comp=Z,104nm,1.4s						
TAU	Tasmania Unive	30.39	237	IAMs_20	IAMs_20	06 19 46.9	
	comp=Z,50µm,18.0s						
TAU	Tasmania Unive	30.39	237	P	P	06 08 14.9	-0.6
TAU				pmax	pmax		
	comp=Z,104nm,1.5s						
TAU				MLR	MLR		
	comp=Z,50µm,18.0s						
MOO	Moorlands	30.40	238	P	P	06 08 16.7	+1.1
	comp=Z,88nm,1.2s						
MOO	Moorlands	30.40	238	P	P	06 08 16.0	+0.4
	comp=Z,88nm,1.2s						
TOO	Toolangi	31.21	248	P	P	06 08 22.0	-0.9
TOO	Toolangi	31.21	248	P	P	06 08 24.3	+1.4
	comp=Z,39nm,2.2s						
TOO	Toolangi	31.21	248	P	P	06 08 22.0	-0.9
TOO				pmax	pmax		
	comp=Z,49nm,1.2s						
TOO				MLR	MLR		
	comp=Z,27µm,19.0s						
TOO	Toolangi	31.21	248	⇑P	P	06 08 24.4	+1.5
PMOR	Pomariorio Ree	31.34	66	*e*P	P	06 08 17.7	-6.4
	comp=Z,1µm,21.4s						
PMOR				*e*S	S	06 13 27.5	-3.4
	comp=Z,5µm,23.6s						
PMOR				*e*LR	LR	06 16 32.3	
	comp=Z,29µm,22.6s						
CMSA	Cobar Meteorol	31.46	259	P	P	06 08 26.4	+1.3
	comp=Z,0.0nmcomp=Z,164nm,1.9s						
CMSA	Cobar Meteorol	31.46	259	P	P	06 08 26.8	+1.7
	comp=Z,164nm,1.9s						
QLP	Quilpie	33.79	268	P	P	06 08 46.2	+0.7
	comp=Z,0.0nmcomp=Z,252nm,1.7s						
QLP	Quilpie	33.79	268	P	P	06 08 46.2	+0.7
	comp=Z,252nm,1.7s						
QLP	Quilpie	33.79	268	⇑P	P	06 08 46.2	+0.7
ARPS	Mount Arapiles	34.14	249	P	P	06 08 52.2	+3.7
	comp=Z,95nm,1.0s						
ARPS	Mount Arapiles	34.14	249	P	P	06 08 49.7	+1.2
	comp=Z,94nm,1.0s						
TV1H	Townsville Har	34.30	281	P	P	06 08 51.4	+1.4
	comp=Z,67nm,1.1s						
CTAO	Charters Tower	34.39	280	P	P	06 08 51.0	+0.2
CTAO	Charters Tower	34.39	280	P	P	06 08 52.2	+1.4
	comp=Z,99nm,1.5s						
CTAO	Charters Tower	34.39	280	P	P	06 08 51.0	+0.2
CTAO				pmax	pmax		
	comp=Z,276nm,1.2s						
CTAO				MLR	MLR		
	comp=Z,108µm,18.0s						
CTAO	Charters Tower	34.39	280	⇑P	P	06 08 51.4	+0.5
STKA	Stephens Creek	34.85	258	P	P	06 08 54.9	+0.3
STKA	Stephens Creek	34.85	258	P	P	06 08 56.8	+2.1
	comp=Z,0.0nmcomp=Z,880nm,2.4s						
STKA	Stephens Creek	34.85	258	P	P	06 08 54.0	-0.7
	comp=Z,29nm,0.8s,baz=98,slow=9.9,SNR=32						
STKA				S	S	06 14 26.1	+1.0
	comp=Z,2.2nm,0.7s,baz=308,slow=19,SNR=1.5						
STKA				LR	LR	06 22 27.6	
	comp=Z,57µm,18.3s,baz=91,slow=35						
	comp=Z,29nm,0.8s						
STKA	Stephens Creek	34.85	258	P	P	06 08 56.3	+1.6
	comp=Z,43nm,2.4s						
STKA	Stephens Creek	34.85	258*c*	*i*P	P	06 08 54.3	-0.4
HTT	Hallett	36.84	254	P	P	06 09 12.1	+0.3
	comp=Z,33nm,1.9s						
HTT	Hallett	36.84	254	P	P	06 09 13.9	+2.1
	comp=Z,132nm,1.3s						
HTT	Hallett	36.84	254	⇑P	P	06 09 12.1	+0.3
HTT	Hallett	36.84	254	⇑P	P	06 09 12.1	+0.3
MTSU	Mount Surprise	36.90	281	P	P	06 09 13.9	+1.5
	comp=Z,49nm,1.0s						
MTSU	Mount Surprise	36.90	281	P	P	06 09 13.8	+1.4
	comp=Z,49nm,1.0s						
WHYH	Whyalla	38.01	255	P	P	06 09 24.6	+2.9
	comp=Z,113nm,1.0s						
PMG	Port Moresby	39.30	295	P	P	06 09 31.8	-0.9
PMG	Port Moresby	39.30	295	IAMs_20	IAMs_20	06 25 06.3	
	comp=Z,51µm,18.0s						
PMG	Port Moresby	39.30	295	LR	LR	06 23 22.4	
	comp=Z,33µm,20.4s,baz=130,slow=33						
PMG	Port Moresby	39.30	295	P	P	06 09 31.8	-0.9
PMG				pmax	pmax		
	comp=Z,77nm,1.5s						
PMG				MLR	MLR		
	comp=Z,51µm,18.0s						
BBOO	Buckleboo	39.31	255	P	P	06 09 31.9	-0.7
BBOO				IAmb	IAmb	06 09 49.5	
	comp=Z,125nm,1.1s						
BBOO				IAMs_20	IAMs_20	06 25 01.1	
	comp=Z,38µm,18.0s						
BBOO	Buckleboo	39.31	255	P	P	06 09 33.0	+0.5
	comp=Z,0.0nmcomp=Z,102nm,2.4s						
BBOO	Buckleboo	39.31	255	P	P	06 09 32.7	+0.1
	comp=Z,103nm,2.4s						
QIS	Mount Isa	39.86	275	P	P	06 09 37.4	+0.1
	comp=Z,0.0nmcomp=Z,32nm,1.1s						
QIS	Mount Isa	39.86	275	P	P	06 09 39.0	+1.7
	comp=Z,31nm,1.1s						
COEN	Coen	39.91	286	P	P	06 09 37.6	-0.2
COEN				IAmb	IAmb	06 09 54.2	
	comp=Z,192nm,1.6s						
COEN				IAMs_20	IAMs_20	06 24 43.5	
	comp=Z,49µm,18.0s						
COEN	Coen	39.91	286	P	P	06 09 39.0	+1.2
	comp=Z,0.0nmcomp=Z,98nm,1.1s						
COEN	Coen	39.91	286	P	P	06 09 41.0	+3.2
	comp=Z,98nm,1.1s						
COEN	Coen	39.91	286	⇑P	P	06 09 38.0	+0.2
TAOE	Nuku Hiva Isla	41.07	66	P	P	06 09 47.0	-0.5
TAOE				IAmb	IAmb	06 11 10.6	
	comp=Z,283nm,1.4s						
TAOE	Nuku Hiva Isla	41.07	66	*e*P	P	06 09 41.9	-5.5
	comp=Z,1µm,24.0s						
TAOE				*e*S	S	06 15 53.3	-6.5
	comp=Z,7µm,24.5s						
TAOE				*e*SS	SS	06 18 56.8	-5.6
	comp=Z,13µm,26.2s						
TAOE				*e*LR	LR	06 20 56.7	
	comp=Z,25µm,28.2s						
AS01	Alice Springs	43.55	267	P	P	06 10 09.1	+1.6
	comp=Z,69nm,0.8s						
AS31	Alice Springs	43.59	267		P	06 10 07.3	-0.5
AS31	Alice Springs	43.59	267	P	P	06 10 07.6	-0.2
	comp=Z,0.0nmcomp=Z,16nm,0.6s						
ASAR	Alice Springs	43.59	267		P	06 10 07.2	-0.7
ASAR	Alice Springs	43.59	267	P	P	06 10 07.8	-0.1
	comp=Z,17nm,0.6s,baz=105,slow=7.0,SNR=86						
ASAR				PcP	PcP	06 11 56.5	+1.2
	comp=Z,9.7nm,0.7s,baz=102,slow=3.8,SNR=4.5						
ASAR				ScP	ScP	06 15 47.6	+1.2
	comp=Z,3.0nm,0.8s,baz=117,slow=4.6,SNR=5.3						
ASAR				S	S	06 16 33.8	-3.0
	comp=Z,0.3nm,0.3s,baz=222,slow=39,SNR=1.9						
ASAR				ScS	ScS	06 20 04.0	-3.4
	comp=Z,0.4nm,0.8s,baz=73,slow=9.6,SNR=2.0						
ASAR				LR	LR	06 28 13.9	
	comp=Z,73µm,18.1s,baz=114,slow=36						
	comp=Z,17nm,0.6s						
ASAR	Alice Springs	43.59	267	P	P	06 10 07.2	-0.7
MANU	Manus Island	43.99	304	P	P	06 10 08.9	-2.2
MANU				IAmb	IAmb	06 10 27.2	
	comp=Z,115nm,1.4s						
WR0	Warramunga Arr	44.45	272	P	P	06 10 13.5	-1.2
WR0				IAmb	IAmb	06 10 23.3	
	comp=Z,105nm,1.1s						
WR8	Warramunga Arr	44.48	272		P	06 10 13.8	-1.2
WR8				IAmb	IAmb	06 10 23.6	
	comp=Z,101nm,0.9s						
WB2	Warramunga Arr	44.62	272	P	P	06 10 15.8	-0.3
WB2				IAmb	IAmb	06 10 24.6	
	comp=Z,132nm,1.0s						
WRAB	Tennant Creek	44.62	272	P	P	06 10 15.7	-0.5
WRAB				IAmb	IAmb	06 10 24.6	
	comp=Z,116nm,1.0s						
WRAB	Tennant Creek	44.62	272	*i* P	P	06 10 15.5	-0.6
WRAB				pmax	pmax		
	comp=Z,35nm,0.9s						
WRA	Warramunga Arr	44.63	272		P	06 10 15.8	-0.3
WRA	Warramunga Arr	44.63	272	P	P	06 10 15.5	-0.7
	comp=Z,57nm,0.7s,baz=113,slow=7.6,SNR=64						
WRA				PcP	PcP	06 11 59.8	+0.9
	comp=Z,7.0nm,0.7s,baz=125,slow=3.0,SNR=1.4						
WRA				ScP	ScP	06 15 52.4	+1.8
	comp=Z,7.3nm,0.9s,baz=116,slow=3.8,SNR=8.2						
WRA				S	S	06 16 47.1	-4.9
	comp=Z,3.2nm,1.0s,baz=106,slow=14,SNR=3.9						
WRA				LR	LR	06 28 34.9	
	comp=Z,85µm,18.0s,baz=114,slow=36						
	comp=Z,57nm,0.7s						
WRA	Warramunga Arr	44.63	272	P	P	06 10 15.9	-0.3
WRA				pmax	pmax		
	comp=Z,11nm,1.1s						
WB0	Warramunga Arr	44.65	273		P	06 10 16.0	-0.4
WB0				IAmb	IAmb	06 10 24.9	
	comp=Z,136nm,0.9s						
FORT	Forrest	46.40	255		P	06 10 28.8	-1.3
FORT				IAMs_20	IAMs_20	06 30 26.0	
	comp=Z,39µm,19.0s						
FORT	Forrest	46.40	255	P	P	06 10 28.5	-1.6
FORT	Forrest	46.40	255	P	P	06 10 30.9	+0.8
	comp=Z,135nm,0.7s						
FORT	Forrest	46.40	255	⇑P	P	06 10 30.0	0.0
SBA	Scott Base	47.52	184		P	06 10 38.8	+0.6
SBA	Scott Base	47.52	184	P	P	06 10 38.8	+0.6
SBA				pmax	pmax		
	comp=Z,497nm,1.9s						
VNDA	Vanda	47.59	186		P	06 10 38.9	+0.2
VNDA				IAmb	IAmb	06 10 58.9	
	comp=Z,101nm,1.7s						
VNDA	Vanda	47.59	186	P	P	06 10 40.2	+1.5
	comp=Z,4.5nm,1.0s,baz=26,slow=10,SNR=9.7						
VNDA				S	S	06 17 38.6	+5.4
	comp=Z,0.3nm,0.3s,baz=175,slow=17,SNR=1.1						
VNDA				LR	LR	06 27 08.2	
	comp=Z,16µm,20.7s,baz=26,slow=32						
	comp=Z,4.5nm,1.0s						
VNDA	Vanda	47.59	186	P	P	06 10 38.9	+0.2
VNDA				pmax	pmax		
	comp=Z,101nm,1.7s						
JAY	Jayapura	48.60	297	LR	LR	06 28 56.7	
	comp=Z,11µm,21.6s,baz=128,slow=33						
GENI	Genyem	48.97	297	P	P	06 10 52.1	+1.9
	comp=Z,97nm,2.4s						
KDU	Kakadu	49.51	280	P	P	06 10 56.1	+1.8
	comp=Z,0.0nmcomp=Z,53nm,1.0s						
KDU	Kakadu	49.51	280	P	P	06 10 57.8	+3.5
	comp=Z,53nm,1.0s						
MTN	Manton Dam	50.57	279		P	06 11 00.6	-1.8
MTN				IAmb	IAmb	06 11 19.0	
	comp=Z,225nm,1.8s						
MTN	Manton Dam	50.57	279	P	P	06 11 03.6	+1.2
	comp=Z,0.0nmcomp=Z,40nm,1.1s						
MTN	Manton Dam	50.57	279	P	P	06 11 03.6	+1.2
	comp=Z,40nm,1.1s						
KNRA	Kununurra	51.25	274		P	06 11 05.5	-2.0
KNRA				IAmb	IAmb	06 11 39.5	
	comp=Z,167nm,1.6s						
KNRA	Kununurra	51.25	274	P	P	06 11 02.5	-5.0
KMBL	Kambalda	51.34	253	P	P	06 11 08.9	+0.8
	comp=Z,43nm,1.1s						
KMBL	Kambalda	51.34	253	P	P	06 11 09.3	+1.2
	comp=Z,55nm,1.1s						
FITZ	Fitzroy Crossi	52.87	270	P	P	06 11 18.8	-0.7
FITZ	Fitzroy Crossi	52.87	270	LR	LR	06 33 35.9	
	comp=Z,53µm,18.3s,baz=102,slow=36						
KNHH	Kane Nui o Ham	54.42	26	P	P	06 11 29.6	-1.3
HMH	Humu‘ula Sheep	54.51	26	P	P	06 11 30.7	-1.0
KLBR	Kellerberrin	54.65	251	P	P	06 11 33.3	+0.9
	comp=Z,89nm,1.2s						
KLBR	Kellerberrin	54.65	251	P	P	06 11 33.8	+1.3
	comp=Z,89nm,1.2s						
NWAO	Narrogin (SRO)	54.67	250	LR	LR	06 31 36.8	
	comp=Z,15µm,20.9s,baz=92,slow=32						
CASY	Casey	54.88	208		P	06 11 33.9	+0.3
CASY				IAmb	IAmb	06 12 05.7	
	comp=Z,106nm,1.1s						
CASY	Casey	54.88	208	IAMs_20	IAMs_20	06 34 39.9	
	comp=Z,23µm,18.0s						
CASY	Casey	54.88	208	⇑P	P	06 11 34.0	+0.5
KIP	Kipapa	55.31	22		P	06 11 36.4	-0.8
KIP	Kipapa	55.31	22	P	P	06 11 39.8	+2.6
	comp=Z,48nm,1.7s						
KIP	Kipapa	55.31	22	P	P	06 11 38.4	+1.2
	comp=Z,48nm,1.7s						
KIP	Kipapa	55.31	22	P	P	06 11 36.4	-0.8
KIP				pmax	pmax		
	comp=Z,235nm,1.3s						
KIP				MLR	MLR		
	comp=Z,7µm,19.0s						
MEEK	Meekatharra	55.55	257	P	P	06 11 38.2	-0.9
MEEK	Meekatharra	55.55	257	P	P	06 11 38.4	-0.7
	comp=Z,84nm,1.3s						
PSA00	Pilbara Seismi	56.40	263	P	P	06 11 44.8	-0.4
PSA00	Pilbara Seismi	56.40	263	P	P	06 11 45.1	-0.1
	comp=Z,35nm,1.3s						
PSA00	Pilbara Seismi	56.40	263	P	P	06 11 46.4	+1.2
	comp=Z,35nm,1.5s						
MBWA	Marble Bar	56.67	264	P	P	06 11 46.5	-0.6
MBWA	Marble Bar	56.67	264	P	P	06 11 46.0	-1.1
MBWA	Marble Bar	56.67	264	P	P	06 11 47.4	+0.3
	comp=Z,24nm,1.2s						
MBWA	Marble Bar	56.67	264	⇑P	P	06 11 46.8	-0.3
MORW	Morawa	56.86	254	P	P	06 11 48.1	-0.2
MORW				IAmb	IAmb	06 12 02.2	
	comp=Z,60nm,1.2s						
MORW	Morawa	56.86	254	P	P	06 11 49.2	+0.9
	comp=Z,53nm,1.2s						
MORW	Morawa	56.86	254	⇑P	P	06 11 47.8	-0.6
GUMO	Guam	57.23	315	LR	LR	06 34 41.8	
	comp=Z,14µm,18.6s,baz=132,slow=34						
SOEI	Soe	57.94	278	P	P	06 11 56.4	+0.1
SOEI	Soe	57.94	278		P	06 11 55.1	-1.1
SOEI				IAmb	IAmb	06 12 18.4	
	comp=Z,116nm,1.0s						
SOEI	Soe	57.94	278	P	P	06 11 57.7	+1.5
	comp=Z,147nm,1.1s						
BATI	Baumata	58.22	277	LR	LR	06 37 43.1	
	comp=Z,97µm,18.3s,baz=120,slow=37						
MIDW	Midway	58.85	0	IAMs_20	IAMs_20	06 37 11.0	
	comp=Z,24µm,18.0s						
QSPA	South Pole Qui	59.15	180	P	P	06 12 04.9	+0.9
QSPA	South Pole Qui	59.15	180	IAMs_20	IAMs_20	06 35 04.3	
	comp=Z,22µm,19.0s						
QSPA	South Pole Qui	59.15	180	P	P	06 12 06.2	+2.2
	comp=Z,31nm,1.0s,baz=42,slow=3.6,SNR=36						
QSPA				S	S	06 20 15.4	+4.7
	comp=Z,1.5nm,1.1s,baz=167,slow=20,SNR=3.1						
QSPA				LR	LR	06 35 16.2	
	comp=Z,20µm,19.2s,baz=40,slow=34						
QSPA				PKPPKP	P'P'df	06 41 37.5	-6.1
	comp=Z,1.9nm,1.0s,baz=133,slow=3.6,SNR=3.0						
QSPA				PKP2ab		06 41 59.8	
	comp=Z,5.3nm,1.0s,baz=297,slow=4.9,SNR=3.7						
	comp=Z,31nm,1.0s						
MMRI	Maumere	60.23	278	P	P	06 12 10.3	-1.7
MMRI				IAMs_20	IAMs_20	06 39 23.9	
	comp=Z,27µm,18.0s						
MMRI	Maumere	60.23	278	P	P	06 12 13.2	+1.2
	comp=Z,80nm,1.6s						
SANI	Sanana	60.61	287	P	P	06 12 12.1	-2.5
LUWI	Luwuk	63.83	286	P	P	06 12 35.0	-1.1
LUWI	Luwuk	63.83	286	P	P	06 12 34.6	-1.6
PLAI	Plampang	63.94	275	P	P	06 12 36.6	-0.3
	comp=Z,105nm,1.6s						
KAPI	Kappang	64.21	280	P	P	06 12 37.9	-0.8
KAPI				IAmb	IAmb	06 13 36.6	
	comp=Z,81nm,1.6s						
KAPI	Kappang	64.21	280	IAMs_20	IAMs_20	06 41 45.3	
	comp=Z,26µm,18.0s						
KAPI	Kappang	64.21	280	LR	LR	06 40 31.3	
	comp=Z,10µm,19.2s,baz=116,slow=36						
KAPI	Kappang	64.21	280	P	P	06 12 37.9	-0.8
KAPI				pmax	pmax		
	comp=Z,81nm,1.6s						
KAPI				MLR	MLR		
	comp=Z,26µm,18.0s						
DAV	Davao City (W)	66.32	295	LR	LR	06 41 10.1	
	comp=Z,4µm,19.6s,baz=136,slow=36						
DAV	Davao City (W)	66.32	295	P	P	06 12 49.0	-3.3
TOLI2	Tolitoli	66.68	286	P	P	06 12 53.0	-1.7
TOLI2				IAmb	IAmb	06 13 09.4	
	comp=Z,60nm,1.6s						
JAGI	Jajag, Banyuwa	67.22	274		P	06 12 56.9	-1.3
JAGI				IAMs_20	IAMs_20	06 41 49.2	
	comp=Z,29µm,20.0s						
JAGI	Jajag, Banyuwa	67.22	274	P	P	06 12 57.3	-0.8
	comp=Z,103nm,1.6s						
SMAI	San Martin Ant	68.72	158	P	P	06 13 06.9	+0.2
BELA	Belgrano 2	69.16	172	P	P	06 13 09.6	+0.2
JCJ	Chichijima	69.44	322	LR	LR	06 41 53.6	
	comp=Z,3µm,18.4s,baz=315,slow=34						
UGM	Wanagama	70.61	272	IAMs_20	IAMs_20	06 46 09.0	
	comp=Z,16µm,20.0s						
MYLDM	Lahad Datu	70.86	289	P	P	06 13 19.1	-1.5
MYLDM				IAmb	IAmb	06 14 15.6	
	comp=Z,77nm,1.4s						
PMSA	Palmer Station	71.55	155	IAMs_20	IAMs_20	06 39 14.5	
	comp=Z,13µm,18.0s						
PMSA	Palmer Station	71.55	155	LR	LR	06 40 58.9	
	comp=Z,11µm,18.2s,baz=238,slow=33						
MAW	Mawson	71.96	200	P	P	06 13 28.1	+1.5
	comp=Z,26nm,1.1s,baz=122,slow=7.5,SNR=14						
MAW				S	S	06 22 50.4	+3.5
	comp=Z,1.1nm,0.9s,baz=50,slow=23,SNR=1.0						
MAW				LR	LR	06 45 24.4	
	comp=Z,24µm,18.8s,baz=114,slow=36						
	comp=Z,26nm,1.1s						
KKM	Kota Kinabalu	73.21	288	P	P	06 13 33.0	-1.9
KKM	Kota Kinabalu	73.21	288	P	P	06 13 36.5	+1.5
	comp=Z,49nm,1.9s						
BBJI	Bungbulang	73.30	271	P	P	06 13 37.5	+2.0
	comp=Z,34nm,1.3s						
LEM	Lembang	73.64	272	LR	LR	06 47 30.5	
	comp=Z,25µm,18.9s,baz=106,slow=37						
TGY	Tagaytay City	74.23	297	LR	LR	06 43 09.1	
	comp=Z,5µm,21.4s,baz=113,slow=33						
MG04	Isla Riesco	74.64	143	IAMs_20	IAMs_20	06 44 07.9	
	comp=Z,13µm,19.0s						
MG05	Puerto Natales	74.75	141		P	06 13 44.0	+0.7
MG05				IAmb	IAmb	06 13 59.3	
	comp=Z,132nm,1.4s						
MG05				IAMs_20	IAMs_20	06 43 36.9	
	comp=Z,13µm,18.0s						
GO09	Cerro Castillo	75.05	141		P	06 13 46.6	+1.5
USHA	Ushuaia	75.17	146	LR	LR	06 39 19.3	
	comp=Z,7µm,21.5s,baz=233,slow=30						
MG01	Puerto William	75.51	146	P	P	06 13 48.7	+1.2
MG01				IAmb	IAmb	06 13 53.5	
	comp=Z,140nm,1.4s						
KSM	Kuching	75.62	281	P	P	06 13 48.6	-0.3
KSM				IAmb	IAmb	06 14 02.1	
	comp=Z,114nm,1.7s						
KSM	Kuching	75.62	281	P	P	06 13 49.8	+0.9
	comp=Z,32nm,1.2s						
MG02	Cerro Sombrero	75.89	143	IAMs_20	IAMs_20	06 44 47.9	
	comp=Z,12µm,18.0s						
SYO	Syowa Base	76.68	193	⇑*i*P	P	06 13 55.0	+1.0
SYO	Syowa Base	76.68	193	⇓*e*pP	pP	06 13 58.0	+0.7
SYO	Syowa Base	76.68	193	⇑*i*sP	sP	06 14 00.4	+1.8
SYO	Syowa Base	76.68	193	⇑*i*PcP	PcP	06 14 05.1	-0.3
AY03	Cochrane	76.99	137		P	06 13 56.7	+0.6
AY03				IAmb	IAmb	06 14 02.6	
	comp=Z,68nm,1.2s						
AY03				IAMs_20	IAMs_20	06 40 41.4	
	comp=Z,14µm,20.0s						
TROLL	Troll, Antarti	77.31	180	⇑P	P	06 13 58.9	+1.2
	comp=Z,671nm,0.8s						
TROLL				⇑SKSac	S	06 23 50.6	+3.6
JOW	Kunigami	77.41	312	LR	LR	06 43 37.0	
	comp=Z,10µm,20.9s,baz=138,slow=32						
JOW	Kunigami	77.41	312	P	P	06 14 02.0	+3.3
	comp=Z,30nm,2.4s						
SNAA	Sanae	77.58	178	⇑P	P	06 13 59.8	+0.7
	comp=Z,236nm,1.0s						
SNAA				⇑SKSac	S	06 23 51.2	+1.4
SNAA	Sanae	77.58	178		P	06 13 59.4	+0.3
SNAA				IAmb	IAmb	06 14 41.2	
	comp=Z,95nm,1.3s						
SNAA				IAMs_20	IAMs_20	06 49 39.2	
	comp=Z,12µm,18.0s						
SNAA	Sanae	77.58	178	P	P	06 13 59.2	+0.1
	comp=Z,13nm,1.0s,baz=181,slow=4.5,SNR=16						
SNAA				S	S	06 23 52.1	+2.4
	comp=Z,0.5nm,0.9s,baz=84,slow=23,SNR=1.1						
SNAA				LR	LR	06 47 19.0	
	comp=Z,7µm,18.7s,baz=193,slow=35						
	comp=Z,13nm,1.0s						
SNAA	Sanae	77.58	178*c*	*e*P	P	06 13 59.9	+0.7
SNAA				pmax	pmax		
	comp=Z,121nm,2.5s						
SNAA	Sanae	77.58	178	⇑P	P	06 13 59.8	+0.7
VNA3	Neumayer Olymp	77.71	176	⇑P	P	06 14 00.3	+0.5
	comp=Z,26nm,0.7s						
VNA3				⇑SKSac	S	06 23 51.2	+0.1
VNA2	Neumayer--Watz	78.15	177	⇑P	P	06 14 03.1	+0.8
	comp=Z,18nm,0.6s,baz=181,slow=3.8						
VNA2				⇑SKSac	S	06 23 55.7	0.0
	baz=246,slow=33						
COYC	Coyhaique	78.18	136		P	06 14 02.9	+0.1
COYC				IAmb	IAmb	06 14 11.2	
	comp=Z,77nm,1.0s						
NVL	N'lazarevskaya	78.35	183	*e*P	P	06 14 05.9	+2.6
NVL				*e*		06 14 11.7	
NVL				*e*		06 17 02.2	
NVL				*e*PPP	PPP	06 18 50.7	
NVL				*e*S	S	06 23 50.3	-7.5
NVL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NVL				smax	smax		
	comp=E,7µm,12.7s						
VNA1	Neumayer--Stat	78.38	176	⇑P	P	06 14 04.6	+1.1
	comp=Z,36nm,1.0s						
GO07	Milladeo Hill,	78.51	133	IAMs_20	IAMs_20	06 41 03.8	
	comp=Z,15µm,20.0s						

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INU    Inuyama            78.65 323          P         06 14 04.1  -1.3
INU    Inuyama            78.65 323   P      P         06 14 06.6 +1.2
       comp=Z,31nm,0.9s
JGF    Kuroka             78.68 324   P      P         06 14 04.2  -1.4
JGF                                   IAmb   IAmb      06 14 29.4
       comp=Z,58nm,1.3s
JGF    Kuroka             78.68 324   P      P         06 14 05.9 +0.3
       comp=Z,36nm,2.0s
JGF    Kuroka             78.68 324 ⇓P       P         06 14 06.0 +0.5
LL07   Hotel Espejo d     78.78 133   IAMs_20 IAMs_20  06 41 11.8
       comp=Z,13µm,20.0s
JMM    Marumori           78.82 327   IAMs_20 IAMs_20  06 50 29.7
       comp=Z,12µm,19.0s
MJAR   Matsushiro Arr     78.99 325   P      P         06 14 05.7  -1.5
       comp=Z,12nm,0.9s,baz=157,slow=5.5,SNR=13
       comp=Z,12nm,0.9s
MAJO   Matsushiro         78.99 325          P         06 14 06.7  -0.6
MAJO   Matsushiro         78.99 325   P      P         06 14 09.4 +2.2
       comp=Z,46nm,1.1s
MAJO   Matsushiro         78.99 325 i P      P         06 14 05.7  -1.5
MAJO                                  pmax   pmax
       comp=Z,18nm,1.0s
LL06   Loncomilla         79.01 133          P         06 14 08.9 +1.4
JMN    Monobe             79.08 320   P      P         06 14 07.6  -0.2
JMN                                   IAMs_20 IAMs_20  06 47 06.7
       comp=Z,13µm,19.0s
YOJ    Yonaguni jima      79.30 307 ⇑P       P         06 14 08.2  -1.0
LL05   Los Muermos        79.53 132   P      P         06 14 12.0 +1.7
TWGBT  Beinan             79.59 304   P      P         06 14 11.3 +0.5
       comp=Z,49nm,1.1s
LL02   Futaleuf           79.60 134          P         06 14 12.0 +1.3
LL02                                  IAmb   IAmb      06 14 16.9
       comp=Z,172nm,1.6s
LL01   San Ignacio de     79.69 133   P      P         06 14 11.8 +0.7
LL01                                  IAMs_20 IAMs_20  06 41 19.8
       comp=Z,12µm,21.0s
YULB   Yu-li              79.80 305   P      P         06 14 11.5  -0.5
YULB   Yu-li              79.80 305   P      P         06 14 12.2 +0.2
       comp=Z,20nm,0.9s
TPUB   Ta-pu              80.22 305   IAmb   IAmb      06 14 15.3
       comp=Z,62nm,1.0s
TPUB   Ta-pu              80.22 305   P      P         06 14 14.6 +0.4
       comp=Z,74nm,0.9s
SSLB   Suanglung          80.30 305   P      P         06 14 14.9 +0.3
SSLB   Suanglung          80.30 305   P      P         06 14 14.8 +0.1
       comp=Z,44nm,0.8s
JNU    Nakatsue           80.31 318   P      P         06 14 14.0  -0.5
JNU    Nakatsue           80.31 318   LR     LR        06 48 10.9
       comp=Z,2µm,18.5s,baz=113,slow=34
JNU    Nakatsue           80.31 318   P      P         06 14 16.0 +1.5
       comp=Z,47nm,1.0s
JNU    Nakatsue           80.31 318 ⇑P       P         06 14 15.8 +1.2
LL03   Petrohue           80.36 132   P      P         06 14 15.8 +1.0
LL03                                  IAmb   IAmb      06 14 23.7
       comp=Z,47nm,0.8s
LR04   Corral             80.38 131   IAMs_20 IAMs_20  06 43 03.3
       comp=Z,10µm,19.0s
YHNB   Yeheng             80.57 306   P      P         06 14 18.6 +2.4
       comp=Z,25nm,0.9s
JTM    Tenmabayashi       81.07 329   IAMs_20 IAMs_20  06 53 27.2
       comp=Z,13µm,19.0s
LR05   Currie             81.11 132   IAmb   IAmb      06 14 25.0
       comp=Z,170nm,1.4s
ERM    Erimo              81.19 331   IAMs_20 IAMs_20  06 50 06.4
       comp=Z,17µm,19.0s
PLCA   Paso Flores        81.75 133   P      P         06 14 24.1 +1.7
PLCA                                  IAmb   IAmb      06 14 32.0
       comp=Z,178nm,1.9s
PLCA   Paso Flores        81.75 133   P      P         06 14 23.2 +0.8
       comp=Z,16nm,0.8s,baz=239,slow=5.8,SNR=28
PLCA                                  S      S         06 24 39.3 +4.4
       comp=Z,0.8nm,1.0s,baz=222,slow=22,SNR=1.2
PLCA                                  LR     LR        06 42 46.9
       comp=Z,10µm,21.2s,baz=241,slow=30
       comp=Z,16nm,0.8s
YUK    Yuzh-Kuril'sk      81.84 334  eP      P         06 14 14.2  -8.1
YUK                                  eS      S         06 24 36.1 +1.2
YUK                                   MLR    MLR
       comp=Z,12µm,18.0s
KUR    Kuril'sk           82.14 336   P      P         06 14 23.5  -0.4
KUR                                 i S      SKSac     06 24 45.1 +1.6
KUR                                   MLR    MLR
       comp=Z,16µm,17.0s
KUR                                   MLR    MLR
       comp=N,19µm,18.0s
BI05   Punta Hualpn       82.22 128          P         06 14 26.5 +1.8
ADK    Adak               82.49   0   P      P         06 14 27.0 +1.5
ADK    Adak               82.49   0   P      P         06 14 27.6 +2.1
       comp=N,54nm,1.6s
ADK    Adak               82.49   0   P      P         06 14 27.0 +1.5
ADK                                   pmax   pmax
       comp=Z,198nm,1.5s
ADK                                   MLR    MLR
       comp=Z,10µm,20.0s
QZH    Quanzhou           82.69 305⇑iP       P         06 14 27.1  -0.1
QZH                                   S      S         06 24 43.3  -1.2
QZH                                   pmax   pmax
       comp=Z,4µm,10.8s
QZH                                   LR     LR
       comp=Z,3µm,18.6s
QZH                                   LR     LR
       comp=Z,5µm,19.2s
QZH                                   LR     LR
       comp=Z,6µm,20.0s
DLV     Lat               82.82 288   P      P         06 14 31.0 +2.6
       comp=Z,57nm,1.6s
ATKA   Atka Island        82.86   2   P      P         06 14 30.2 +2.8
       comp=Z,105nm,1.2s
BKNI   Bangkinang         82.91 275   P      P         06 14 27.1  -1.7
BKNI   Bangkinang         82.91 275   IAMs_20 IAMs_20  06 54 09.2
       comp=Z,21µm,18.0s
PPI    Padang Panjang     83.06 274   P      P         06 14 32.7 +3.2
JKA    Kamikawa-asahi     83.17 332   IAMs_20 IAMs_20  06 50 40.8
       comp=Z,15µm,19.0s
ASAJ   Asahikawa          83.17 332   LR     LR        06 50 33.6
       comp=Z,12µm,18.3s,baz=174,slow=35
BI02   San Fabin de       83.55 129   IAmb   IAmb      06 14 40.1
       comp=Z,35nm,0.9s
BI02                                  IAMs_20 IAMs_20  06 47 22.3
       comp=Z,12µm,18.0s
SHEM   Shemya Is, Ala     83.67 355   LR     LR        06 48 11.7
       comp=Z,11µm,18.9s,baz=176,slow=33
SMY    Shemya             83.67 355   IAMs_20 IAMs_20  06 48 37.8
       comp=Z,15µm,19.0s
LPIG   La Paz             84.40  58   S      SKSac     06 25 01.0 +1.5
       comp=Z,8.4nm,0.2s,baz=154,slow=7.9,SNR=0.9
LPIG                                  LR     LR        06 46 52.9
       comp=Z,24µm,18.0s,baz=222,slow=32
SLBS   Sierra La Lagu     84.42  58   P      P         06 14 35.3  -1.0
SKR    Severo-Kuril’s     84.59 343d iP      P         06 14 34.3  -2.0
SKR                                  eS      SKSac     06 24 58.1  -1.3
SKR                                   pmax   pmax
       comp=Z,4µm,11.8s
SKR                                   smax   smax
       comp=E,6µm,12.6s
SKR                                   smax   smax
       comp=N,6µm,13.2s
SKR                                   MLR    MLR
       comp=Z,9µm,18.0s
TJN    Taejon             84.66 318   P      P         06 14 36.1  -0.9
TJN    Taejon             84.66 318   P      P         06 14 37.4 +0.3
       comp=Z,147nm,1.1s
TJN    Taejon             84.66 318   P      P         06 14 36.1  -0.9
TJN                                   pmax   pmax
       comp=Z,193nm,1.2s
TJN                                   MLR    MLR
       comp=Z,26µm,18.0s
SSE    Sheshan            84.86 311   P      P         06 14 37.0  -1.2
SSE                                   S      S         06 25 06.8 +0.7
SSE                                   pmax   pmax
       comp=Z,10.0nm,0.5s
SSE                                   pmax   pmax
       comp=Z,1µm,9.4s
SSE                                   LR     LR
       comp=Z,2µm,21.0s
BO02   Sierra Bellavi     84.93 128   P      P         06 14 39.2 +0.4
BO01   Tunca              84.94 127   P      P         06 14 39.3 +0.5
BO01                                  IAmb   IAmb      06 14 47.6
       comp=Z,116nm,1.8s
BO01                                  IAMs_20 IAMs_20  06 48 13.4
       comp=Z,12µm,18.0s
UNV    Unalaska Valle     84.98   6   P      P         06 14 38.2   0.0
UNV                                   IAmb   IAmb      06 14 53.5
       comp=Z,45nm,1.2s
VA05   Santo Domingo      84.99 126   IAmb   IAmb      06 14 44.2
       comp=Z,83nm,1.2s
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SRIG   Santa Rosalia      85.00  54   IAMs_20 IAMs_20  06 46 39.8
       comp=Z,15µm,20.0s
KSRS   Korea Array        85.10 319   P      P         06 14 38.7  -0.6
       comp=Z,6.1nm,0.7s,baz=147,slow=5.8,SNR=18
       comp=Z,6.1nm,0.7s
TJX    Tijuana            85.11  47   IAMs_20 IAMs_20  06 50 30.6
       comp=Z,17µm,18.0s
KSAR   Wonju Array Be     85.11 319   P      P         06 14 39.5 +0.1
KSAR   Wonju Array Be     85.11 319   P      P         06 14 39.5 +0.1
CBX    Cerro Bola         85.23  48   P      P         06 14 40.7 +0.4
CBX                                   IAmb   IAmb      06 14 56.5
       comp=Z,61nm,1.4s
CBX                                   IAMs_20 IAMs_20  06 50 33.7
       comp=Z,18µm,18.0s
BCW    Bitter Crk WRg     85.29  44   P      P         06 14 41.4 +0.9
BCW                                   IAMs_20 IAMs_20  06 49 53.0
       comp=Z,11µm,18.0s
VA01   Torpederas         85.32 126   IAmb   IAmb      06 14 48.8
       comp=Z,68nm,0.9s
VA01                                  IAMs_20 IAMs_20  06 45 50.6
       comp=Z,13µm,19.0s
PMPB   Monarch Peak       85.34  43   P      P         06 14 41.9 +1.3
SAO    San Andreas Ge     85.35  42   IAmb   IAmb      06 15 05.3
       comp=Z,85nm,1.5s
MT09   Talagante          85.36 127   IAmb   IAmb      06 14 53.5
       comp=Z,78nm,1.1s
GZH    Guangzhou          85.37 300   P      P         06 14 42.1 +1.2
GZH                                   S      S         06 25 08.6  -2.9
GZH                                   LR     LR
       comp=Z,2µm,17.1s
GZH                                   LR     LR
       comp=Z,4µm,20.0s
GZH                                   LR     LR
       comp=Z,7µm,21.2s
TKX    Tecate             85.44  48   IAmb   IAmb      06 14 50.4
       comp=Z,47nm,1.2s
TKX                                   IAMs_20 IAMs_20  06 50 32.1
       comp=Z,16µm,18.0s
YSS    Yuzhno-Sakhali     85.47 334   P      P         06 14 41.8 +0.9
YSS                                   IAMs_20 IAMs_20  06 54 31.6
       comp=Z,13µm,19.0s
YSS    Yuzhno-Sakhali     85.47 334   P      P         06 14 42.0 +1.1
       comp=Z,103nm,1.1s
YSS    Yuzhno-Sakhali     85.47 334  eP      P         06 14 41.7 +0.9
YSS                                  e                 06 25 02.8
YSS                                  eS      S         06 25 12.2 +0.8
YSS                                   pmax   pmax
       comp=Z,80nm,1.1s
YSS                                   pmax   pmax
       comp=Z,600nm,2.7s
YSS                                   pmax   pmax
       comp=N,1µm,4.9s
YSS                                   smax   smax
       comp=N,4µm,10.5s
YSS                                   smax   smax
       comp=E,2µm,10.8s
ESJX   Sierra Juarez      85.49  48   IAmb   IAmb      06 14 58.8
       comp=Z,61nm,1.3s
BO04   La Punta           85.50 127   IAmb   IAmb      06 15 05.8
       comp=Z,38nm,1.1s
BO04                                  IAMs_20 IAMs_20  06 48 49.0
       comp=Z,9µm,18.0s
PASC   Pasadena Art C     85.52  46   IAmb   IAmb      06 14 47.8
       comp=Z,46nm,1.2s
PASC                                  IAMs_20 IAMs_20  06 49 04.0
       comp=Z,12µm,18.0s
MT02   Curacav            85.54 126   IAmb   IAmb      06 14 47.4
       comp=Z,63nm,1.1s
MT02                                  IAMs_20 IAMs_20  06 45 12.3
       comp=Z,10µm,20.0s
SFX    San Felipe         85.58  50   IAMs_20 IAMs_20  06 49 53.9
       comp=Z,20µm,18.0s
ELS    Elsinore Mount     85.63  46   IAmb   IAmb      06 14 51.5
       comp=Z,49nm,1.2s
ELS                                   IAMs_20 IAMs_20  06 52 21.3
       comp=Z,16µm,18.0s
QIZ    Qiongzhong         85.69 295   P      P         06 14 42.1  -0.6
QIZ                                   PP     PP        06 18 02.3 +0.2
QIZ                                   S      S         06 25 18.3 +3.5
QIZ                                   SS     SS        06 30 50.3  -1.6
QIZ                                   pmax   pmax
       comp=Z,2µm,10.0s
QIZ                                   LR     LR
       comp=Z,3µm,17.9s
QIZ                                   LR     LR
       comp=Z,4µm,19.2s
MT05   Renca              85.74 127   P      P         06 14 44.4 +1.5
KULM   Kulim              85.81 279   IAmb   IAmb      06 15 00.6
       comp=Z,118nm,1.5s
KULM                                  IAMs_20 IAMs_20  06 55 00.9
       comp=Z,14µm,20.0s
KULM   Kulim              85.81 279   P      P         06 14 43.1  -0.3
       comp=Z,56nm,1.8s
VA06   Catapilco          85.82 126   P      P         06 14 43.7 +0.5
VA06                                  IAMs_20 IAMs_20  06 46 23.7
       comp=Z,12µm,19.0s
MT03   Universidad Ad     85.84 127   IAMs_20 IAMs_20  06 48 41.2
       comp=Z,10µm,18.0s
LMEL   Las Melosas        85.85 127   IAmb   IAmb      06 14 50.7
       comp=Z,64nm,1.1s
LMEL                                  IAMs_20 IAMs_20  06 50 00.4
       comp=Z,10µm,18.0s
MT16   CCHEN              85.87 127   IAMs_20 IAMs_20  06 48 41.9
       comp=Z,10µm,18.0s
PEL    Peldehue           85.92 126   P      P         06 14 46.8 +3.0
YUH    Yuha Desert        85.92  48   IAmb   IAmb      06 15 08.4
       comp=Z,98nm,1.8s
YUH                                   IAMs_20 IAMs_20  06 51 04.0
       comp=Z,19µm,18.0s
RPSI   Rantau Prapat      85.94 276   P      P         06 14 43.0  -1.1
RPSI                                  IAmb   IAmb      06 15 00.3
       comp=Z,131nm,1.6s
RPSI                                  IAMs_20 IAMs_20  06 54 06.4
       comp=Z,15µm,20.0s
PSI    Prapat             86.00 276   LR     LR        06 53 57.0
       comp=Z,16µm,20.6s,baz=129,slow=36
PSI    Prapat             86.00 276   P      P         06 14 43.2  -1.3
       comp=Z,50nm,1.9s
PSI    Prapat             86.00 276   P      P         06 14 43.0  -1.5
PSI                                   pmax   pmax
       comp=Z,131nm,1.6s
PSI                                   MLR    MLR
       comp=Z,16µm,20.0s
CPBX   Cerro Prieto       86.17  49   IAMs_20 IAMs_20  06 50 55.6
       comp=Z,17µm,18.0s
PET    Petropavlovsk      86.20 346c iP      P         06 14 44.5 +0.2
PET                                  eS      S         06 25 18.1  -0.2
PET                                   pmax   pmax
       comp=Z,2µm,8.8s
PET                                   pmax   pmax
       comp=Z,2µm,10.3s
PET                                   MLR    MLR
       comp=Z,6µm,18.0s
MT08   Bocatoma Ro        86.21 127   IAmb   IAmb      06 14 51.6
       comp=Z,68nm,1.4s
MT08                                  IAMs_20 IAMs_20  06 49 03.9
       comp=Z,10µm,18.0s
PFO    Pinyon Flats O     86.22  47   P      P         06 14 46.3 +1.2
PFO                                   IAmb   IAmb      06 15 10.0
       comp=Z,90nm,1.6s
PFO    Pinyon Flats O     86.22  47   LR     LR        06 48 04.0
       comp=Z,15µm,18.2s,baz=239,slow=32
PFO    Pinyon Flats O     86.22  47 i P      P         06 14 46.5 +1.4
PFO                                   pmax   pmax
       comp=Z,35nm,1.1s
VA03   San Esteban        86.23 126   IAmb   IAmb      06 14 51.0
       comp=Z,50nm,1.2s
CCAC   Calif City Air     86.28  45   IAmb   IAmb      06 15 10.2
       comp=Z,74nm,1.3s
CCAC                                  IAMs_20 IAMs_20  06 46 07.1
       comp=Z,11µm,19.0s
ISA    Isabella, Lake     86.34  44   IAMs_20 IAMs_20  06 50 18.9
       comp=Z,11µm,18.0s
GSI    Gunungsitoli       86.38 274   P      P         06 14 45.8  -0.5
GSI    Gunungsitoli       86.38 274   P      P         06 14 46.4 +0.1
       comp=Z,129nm,2.4s
GSI    Gunungsitoli       86.38 274   P      P         06 14 46.2  -0.1
TEY    Ternei             86.43 329deP       P         06 14 42.2  -3.5
TEY                                   pmax   pmax
       comp=Z,200nm,9.8s
KMPM   Mount Pierce       86.48  38   P      P         06 14 45.9  -0.3
PEA0B  Petropavlovsk-     86.48 345   IAmb   IAmb      06 14 59.1
       comp=Z,69nm,0.9s
PEA0B  Petropavlovsk-     86.48 345 i P      P         06 14 46.2 +0.5
PETK   Petropavlovsk-     86.48 345   P      P         06 14 45.4  -0.4
PETK   Petropavlovsk-     86.48 345   P      P         06 14 45.0  -0.8
       comp=Z,7.2nm,0.7s,baz=106,slow=11,SNR=7.8
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PETK                                  LR     LR        06 49 55.1
       comp=Z,6µm,19.9s,baz=166,slow=33
       comp=Z,7.2nm,0.7s
PETK   Petropavlovsk-     86.48 345   P      P         06 14 45.0  -0.8
CO06   Fray Jorge         86.64 124   P      P         06 14 48.0 +0.7
CO06                                  IAmb   IAmb      06 14 52.2
       comp=Z,58nm,1.4s
CO06                                  IAMs_20 IAMs_20  06 47 05.4
       comp=Z,13µm,19.0s
HJU    Haeju              86.75 319   P      P         06 14 46.9  -0.6
HJU                                   S      S         06 25 22.6  -1.8
HJU                                   AmB
       comp=Z,3µm,6.0s
HJU                                   AMS    AMS
       comp=Z,12µm,23.8s
CO02   Combarbal          86.79 125   IAmb   IAmb      06 14 53.6
       comp=Z,88nm,1.2s
CO02                                  IAMs_20 IAMs_20  06 46 33.5
       comp=Z,10µm,19.0s
CNBA   Chernabura Isl     86.80  10   IAMs_20 IAMs_20  06 53 56.4
       comp=Z,11µm,19.0s
JCC    Jacoby Creek,      86.81  38   IAMs_20 IAMs_20  06 49 40.0
       comp=Z,19µm,19.0s
CMB    Columbia Colle     86.84  42   IAmb   IAmb      06 14 54.3
       comp=Z,66nm,1.4s
GLA    Glamis             86.89  48   IAMs_20 IAMs_20  06 51 27.5
       comp=Z,17µm,18.0s
HSIG                      86.94  54   IAmb   IAmb      06 15 12.9
       comp=Z,56nm,1.6s
HSIG                                  IAMs_20 IAMs_20  06 52 07.2
       comp=Z,15µm,18.0s
NJ2    Nanjing            86.99 310  eP      P         06 14 48.6  -0.2
NJ2                                   S      S         06 25 29.6 +2.6
NJ2                                   SS     SS        06 31 10.6   0.0
NJ2                                   pmax   pmax
       comp=Z,38nm,0.6s
NJ2                                   pmax   pmax
       comp=Z,3µm,9.8s
NJ2                                   LR     LR
       comp=Z,6µm,20.4s
NJ2                                   LR     LR
       comp=Z,4µm,18.7s
NJ2                                   LR     LR
       comp=Z,7µm,20.6s
KHMM   Horse Mountain     87.01  38   IAMs_20 IAMs_20  06 49 57.2
       comp=Z,20µm,19.0s
KRPM   Rodgers            87.06  37   IAMs_20 IAMs_20  06 49 46.5
       comp=Z,16µm,19.0s
HHU    Hamhung            87.07 321   P      P         06 14 48.2  -0.7
HHU                                   AmB
       comp=Z,2µm,4.4s
MSHR   Mys Shultsa        87.11 325 i P      P         06 14 48.7  -0.3
MSHR                                  pmax   pmax
       comp=Z,12nm,0.9s
GSC    Goldstone, Bar     87.11  46   IAmb   IAmb      06 14 58.8
       comp=Z,69nm,1.2s
GSC                                   IAMs_20 IAMs_20  06 53 36.4
       comp=Z,13µm,18.0s
AFDM   Forest Hills D     87.14  41   IAmb   IAmb      06 14 55.0
       comp=Z,54nm,1.4s
PAYG   Puerto Ayora       87.19  89   IAMs_20 IAMs_20  06 46 41.1
       comp=Z,11µm,19.0s
CO03   El Pedregal        87.22 124   IAMs_20 IAMs_20  06 46 55.8
       comp=Z,12µm,20.0s
ORV    Oroville           87.28  40   IAmb   IAmb      06 14 55.7
       comp=Z,46nm,1.4s
S12K   Black Hills        87.31   9   IAMs_20 IAMs_20  06 52 51.5
       comp=Z,12µm,20.0s
CO05   La Serena          87.35 123   IAMs_20 IAMs_20  06 46 20.2
       comp=Z,11µm,20.0s
KRMB   Red Mountain       87.39  37   IAMs_20 IAMs_20  06 50 07.1
       comp=Z,15µm,19.0s
113A   Mohawk Valley,     87.39  49   IAmb   IAmb      06 15 01.6
       comp=Z,62nm,1.6s
PYAG   Pyongyang          87.44 319   P      P         06 14 48.8  -1.9
PYAG                                  S      S         06 25 28.7  -2.2
PYAG                                  AmB
       comp=Z,3µm,5.7s
PYAG                                  AMS    AMS
       comp=Z,5µm,15.9s
UGL    Uglegorsk          87.50 335  eP      P         06 14 54.3 +3.6
UGL                                  eS      S         06 25 31.6 +0.6
UGL                                   smax   smax
       comp=N,7µm,11.0s
UGL                                   smax   smax
       comp=E,6µm,11.0s
UGL                                   MLR    MLR
       comp=N,11µm,14.0s
UGL                                   MLR    MLR
       comp=Z,7µm,14.0s
214A   Organ Pipe Nat     87.50  50   IAmb   IAmb      06 15 16.3
       comp=Z,88nm,1.7s
QSM    Queen of Sheba     87.51  45   P      P         06 14 51.7 +0.5
QSM                                   IAmb   IAmb      06 14 57.9
       comp=Z,72nm,1.2s
QSM                                   IAMs_20 IAMs_20  06 46 55.9
       comp=Z,9µm,20.0s
GO04   Tololo Observa     87.52 124   IAMs_20 IAMs_20  06 47 39.7
       comp=Z,10µm,18.0s
BLYC   Blythe             87.53  48   IAmb   IAmb      06 14 57.9
       comp=Z,59nm,1.4s
BLYC                                  IAMs_20 IAMs_20  06 51 56.5
       comp=Z,15µm,18.0s
KSXB   Camp Six Broad     87.63  37   IAMs_20 IAMs_20  06 49 55.4
       comp=Z,15µm,19.0s
KBO    Bosley Butte       87.72  37   IAMs_20 IAMs_20  06 50 24.9
       comp=Z,17µm,19.0s
GWY    Greenwater Val     87.78  45   IAMs_20 IAMs_20  06 54 08.0
       comp=Z,10µm,18.0s
DSP    Deep Springs       87.79  43   IAmb   IAmb      06 14 58.6
       comp=Z,73nm,1.4s
DSP                                   IAMs_20 IAMs_20  06 49 39.1
       comp=Z,14µm,19.0s
GRAC   Grapevine Rang     87.90  44   IAMs_20 IAMs_20  06 49 34.0
       comp=Z,14µm,18.0s
USA0B  Ussuriysk Arra     87.91 326   IAmb   IAmb      06 15 07.1
       comp=Z,74nm,1.4s
USA0B  Ussuriysk Arra     87.91 326 i P      P         06 14 52.3  -0.6
USRK   Ussuriysk Ar.      87.91 326   P      P         06 14 52.3  -0.6
       comp=Z,17nm,0.8s,baz=140,slow=4.3,SNR=22
USRK                                  LR     LR        06 48 01.7
       comp=Z,6µm,21.9s,baz=144,slow=32
       comp=Z,17nm,0.8s
MPK    Martis Peak        87.91  41   P      P         06 14 53.5   0.0
L02F   Cave Junction      87.99  37   IAMs_20 IAMs_20  06 50 16.1
       comp=Z,17µm,19.0s
SPIA   Saint Paul Isl     88.00   4   P      P         06 14 54.9 +1.9
PNTR   Pine Nut           88.01  41   IAmb   IAmb      06 15 15.3
       comp=Z,60nm,1.1s
BEKR   Beckworth          88.12  40   IAmb   IAmb      06 15 18.5
       comp=Z,83nm,1.8s
CO01   Juntas del Tor     88.13 124   IAmb   IAmb      06 15 04.0
       comp=Z,60nm,1.6s
CO01                                  IAMs_20 IAMs_20  06 46 26.9
       comp=Z,10µm,20.0s
KEBM   Edson Butte        88.15  36   IAMs_20 IAMs_20  06 50 30.1
       comp=Z,15µm,19.0s
YBH    Yreka Blue Hor     88.16  38   IAmb   IAmb      06 15 19.1
       comp=Z,72nm,1.7s
YBH                                   IAMs_20 IAMs_20  06 50 25.6
       comp=Z,12µm,19.0s
YBH    Yreka Blue Hor     88.16  38   LR     LR        06 50 26.5
       comp=Z,833nm,18.4s,baz=244,slow=33
GMN    Gold Mountain      88.16  44   IAmb   IAmb      06 15 00.4
       comp=Z,66nm,1.5s
LCO    Las Campanas       88.24 123   P      P         06 14 55.0  -0.5
LCO    Las Campanas       88.24 123   IAMs_20 IAMs_20  06 46 38.0
       comp=Z,10µm,20.0s
LCO    Las Campanas       88.24 123   P      P         06 14 55.0  -0.5
LCO                                   pmax   pmax
       comp=Z,150nm,1.9s
NVAR   Mina Array Bea     88.31  42   P      P         06 14 55.7 +0.4
NVAR   Mina Array Bea     88.31  42   P      P         06 14 56.0 +0.7
       comp=Z,14nm,0.9s,baz=223,slow=7.2,SNR=21
NVAR                                  S      SKSac     06 25 24.6 +1.0
       comp=Z,0.1nm,0.3s,baz=58,slow=41,SNR=1.6
NVAR                                  ScS    ScS       06 25 48.4 +2.7
       comp=Z,0.2nm,0.6s,baz=316,slow=18,SNR=1.9
NVAR                                  LR     LR        06 50 53.8
       comp=Z,18µm,18.0s,baz=232,slow=33
       comp=Z,14nm,0.9s
RYN    Ryan               88.31  42   P      P         06 14 56.0 +0.8
RYN                                   IAmb   IAmb      06 15 04.3
       comp=Z,67nm,1.5s
K02D   Willamette Mer     88.36  36   IAMs_20 IAMs_20  06 50 35.7
       comp=Z,16µm,19.0s
NV11   Mina Array Sit     88.40  42   IAmb   IAmb      06 15 20.0
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      comp=Z,92nm,1.6s
SRIT  Nakonsritamara   88.41 281    IAMs_20  IAMs_20  06 57 55.9
      comp=Z,16µm,20.0s
CHIR  Chirikof Islan   88.42  12    IAMs_20  IAMs_20  06 54 41.0
      comp=Z,19µm,20.0s
CFA   Coronel Fontan   88.50 126    LR       LR       06 49 09.3
      comp=Z,5µm,18.1s,baz=223,slow=32
TPNV  Topopah Spring   88.54  45    IAMs_20  IAMs_20  06 54 43.0
      comp=Z,10µm,18.0s
PAHR  Pah Rah Range    88.56  41    IAmb     IAmb     06 15 01.8
      comp=Z,62nm,1.4s
J01E  Myrtle Point     88.56  36    IAMs_20  IAMs_20  06 50 52.0
      comp=Z,17µm,19.0s
V12A  Nelson           88.60  46    IAMs_20  IAMs_20  06 54 22.7
      comp=Z,18µm,18.0s
Y14A  Wickenburg       88.62  49    IAmb     IAmb     06 15 03.7
      comp=Z,46nm,1.2s
HOPE  Hope Point       88.64 158    IAMs_20  IAMs_20  06 53 47.4
      comp=Z,15µm,19.0s
CNSH  ChangSha         88.67 304    P        P        06 14 55.4 -1.5
CNSH                                pmax     pmax
      comp=Z,2µm,10.7s
CNSH                                LR       LR
      comp=Z,2µm,18.6s
CNSH                                LR       LR
      comp=Z,2µm,16.9s
CNSH                                LR       LR
      comp=Z,3µm,19.7s
TPH   Tonopah          88.70  43    P        P        06 14 57.0 -0.1
TPH   Tonopah          88.70  43    P        P        06 14 57.0 -0.1
TPH                                 pmax     pmax
      comp=Z,408nm,1.3s
TPH                                 MLR      MLR
      comp=Z,56µm,18.0s
L04D  Klamath Falls    88.72  38    IAmb     IAmb     06 15 16.9
      comp=Z,82nm,1.3s
L04D                                IAMs_20  IAMs_20  06 51 11.4
      comp=Z,14µm,19.0s
TYV   Tymovskoe        88.77 336  eP         P        06 14 58.6 +1.8
TYV                               eS         S        06 25 48.2 +5.1
TYV                                 pmax     pmax
      comp=Z,30nm,1.0s
TYV                                 pmax     pmax
      comp=Z,600nm,3.2s
TYV                                 smax     smax
      comp=N,1µm,4.3s
TYV                                 smax     smax
      comp=E,400nm,4.3s
TYV                                 smax     smax
      comp=N,48nm,2.3s
TYV                                 smax     smax
      comp=E,23nm,2.3s
MOIG  Morelia          88.77  66    IAMs_20  IAMs_20  06 50 28.2
      comp=Z,12µm,18.0s
W13A  Hualapai Mount   88.80  47    IAmb     IAmb     06 15 04.7
      comp=Z,42nm,1.2s
W13A                                IAMs_20  IAMs_20  06 52 44.9
      comp=Z,12µm,18.0s
GULI  GuiLin           88.86 300    P        P        06 15 00.8 +3.0
GULI                                PP       PP       06 18 27.4 -0.1
GULI                                LR       LR
      comp=Z,3µm,19.0s
GULI                                LR       LR
      comp=Z,3µm,18.4s
GULI                                LR       LR
      comp=Z,4µm,16.9s
SUJ   Sinuiju          88.87 319    P        P        06 14 56.9 -0.6
SUJ                                 S        S        06 25 42.5 -2.0
SUJ                                 AmB
      comp=Z,2µm,3.5s
SUJ                                 AMS      AMS
      comp=Z,4µm,15.8s
SHPR  Sheep Range      88.91  45    IAmb     IAmb     06 15 23.3
      comp=Z,54nm,1.5s
LHMI  Lhok Sumawe      88.93 277    IAMs_20  IAMs_20  06 57 11.6
      comp=Z,19µm,20.0s
TUC   Tucson           89.07  51    P        P        06 14 59.7 +0.9
TUC                                 IAmb     IAmb     06 15 29.3
      comp=Z,96nm,1.6s
TUC   Tucson           89.07  51    IAMs_20  IAMs_20  06 53 49.5
      comp=Z,11µm,18.0s
TUC   Tucson           89.07  51    P        P        06 14 59.7 +0.9
TUC                                 pmax     pmax
      comp=Z,96nm,1.6s
TUC                                 MLR      MLR
      comp=Z,11µm,18.0s
WHN   Wuhan            89.09 307  ⇑P         P        06 14 58.5 -0.3
WHN                                 PP       PP       06 18 35.3 +6.0
WHN                                 SKS      SKSac    06 25 27.5 -0.6
WHN                                 S        SKKSac   06 25 41.6 +1.7
WHN                                 pmax     pmax
      comp=Z,5µm,9.8s
WHN                                 LR       LR
      comp=Z,7µm,14.7s
WHN                                 LR       LR
      comp=Z,9µm,16.9s
WHN                                 LR       LR
      comp=Z,11µm,18.8s
I03D  Drain, OR        89.24  36    P        P        06 15 00.4 +1.2
I03D                                IAMs_20  IAMs_20  06 50 56.0
      comp=Z,12µm,19.0s
I02E  Swisshome, OR    89.29  35    IAMs_20  IAMs_20  06 51 06.2
      comp=Z,19µm,19.0s
S11A  Rachel           89.30  44    IAMs_20  IAMs_20  06 47 46.0
      comp=Z,11µm,20.0s
K04D  Chiloquin, OR    89.30  38    IAMs_20  IAMs_20  06 51 30.6
      comp=Z,13µm,19.0s
MDJ   Mudanjiang       89.37 325    P        P        06 14 59.8  0.0
MDJ                                 pmax     pmax
      comp=Z,41nm,1.5s
MDJ                                 pmax     pmax
      comp=Z,3µm,10.6s
MDJ                                 LR       LR
      comp=Z,3µm,20.5s
MDJ                                 LR       LR
      comp=Z,2µm,17.7s
MDJ                                 LR       LR
      comp=Z,5µm,18.3s
SII   Sitkinak Islan   89.38  13    IAMs_20  IAMs_20  06 55 18.5
      comp=Z,13µm,20.0s
ZAIG  Zacatecas        89.41  63    IAmb     IAmb     06 15 30.1
      comp=Z,56nm,2.0s
ZAIG                                IAMs_20  IAMs_20  06 52 24.2
      comp=Z,8µm,18.0s
319A  Douglas          89.52  53    P        P        06 15 00.9 -0.1
319A                                IAmb     IAmb     06 15 07.4
      comp=Z,51nm,1.4s
J04A  Umpqua Nationa   89.55  37    P        P        06 14 59.7 -1.3
J04A                                IAMs_20  IAMs_20  06 51 08.2
      comp=Z,11µm,19.0s
PRN   Pahroc Range     89.56  45    P        P        06 15 01.3 +0.2
PRN                                 IAMs_20  IAMs_20  06 55 26.1
      comp=Z,12µm,18.0s
DL2   Dalian           89.70 317    P        P        06 15 01.8 +0.3
DL2                                 SKS      SKSac    06 25 30.0 -1.3
DL2                                 S        S        06 25 51.6 -0.8
DL2                                 pmax     pmax
      comp=Z,39nm,1.9s
DL2                                 pmax     pmax
      comp=Z,3µm,9.6s
DL2                                 LR       LR
      comp=Z,5µm,21.8s
DL2                                 LR       LR
      comp=Z,4µm,23.7s
DL2                                 LR       LR
      comp=Z,2µm,13.6s
TLIG  Tlapa            89.71  69    IAmb     IAmb     06 15 12.5
      comp=Z,88nm,1.6s
TLIG                                IAMs_20  IAMs_20  06 51 32.5
      comp=Z,12µm,18.0s
BUCK  Buck Mountain    89.78  36    IAMs_20  IAMs_20  06 51 32.3
      comp=Z,16µm,19.0s
I04A  Tendick Farm,    89.78  36    IAmb     IAmb     06 15 08.0
      comp=Z,69nm,1.3s
I04A                                IAMs_20  IAMs_20  06 51 31.5
      comp=Z,11µm,19.0s
COR   Corvallis        89.90  35    P        P        06 15 02.9 +0.7
COR   Corvallis        89.90  35    P        P        06 15 02.9 +0.7
COR                                 pmax     pmax
      comp=Z,174nm,1.7s
X16A  Lo Mia Camp, P   89.93  49    P        P        06 15 03.4 +0.4
X16A                                IAMs_20  IAMs_20  06 53 12.3
      comp=Z,18µm,18.0s
AC01  Pan de Azucar    89.94 121    IAMs_20  IAMs_20  06 48 45.1
      comp=Z,10µm,19.0s
J05D  Fort Rock, OR    90.03  37    IAmb     IAmb     06 15 09.8
      comp=Z,84nm,1.4s
J05D                                IAMs_20  IAMs_20  06 51 27.1
      comp=Z,15µm,19.0s
HEBO  Mount Hebo       90.13  35    IAMs_20  IAMs_20  06 53 18.5
      comp=Z,15µm,18.0s
H04D  Lebanon          90.14  36    IAMs_20  IAMs_20  06 51 42.8
      comp=Z,17µm,19.0s
UNM   Universidad Na   90.17  68    IAMs_20  IAMs_20  06 52 52.6
      comp=Z,10µm,18.0s
OHAK  Old Harbor       90.18  13    P        P        06 15 04.0 +0.8
      comp=Z,41nm,1.5s
DUN6  Lazy B Ranch     90.35  52    P        P        06 15 05.1 +0.2
G03D  McMinnville, O   90.37  35    IAMs_20  IAMs_20  06 53 35.8
      comp=Z,13µm,18.0s
LCMT  Little Creek M   90.41  46    IAmb     IAmb     06 17 47.2
      comp=Z,24nm,0.7s
LCMT                                IAMs_20  IAMs_20  06 55 30.8
      comp=Z,14µm,18.0s
H04A  Detroit Lake     90.53  36    P        P        06 15 05.0 -0.2
H04A                                IAmb     IAmb     06 15 11.3
      comp=Z,80nm,1.3s
H04A                                IAMs_20  IAMs_20  06 52 05.1
      comp=Z,17µm,19.0s
PINE  Pine Mountain    90.54  37    IAMs_20  IAMs_20  06 52 11.5
      comp=Z,12µm,19.0s
SNY   Shenyang         90.55 320  ⇑P         P        06 15 05.9 +0.6
SNY                                 pmax     pmax
      comp=Z,16nm,1.7s
SNY                                 pmax     pmax
      comp=Z,2µm,10.8s
SNY                                 LR       LR
      comp=Z,1µm,18.4s
SNY                                 LR       LR
      comp=Z,3µm,23.5s
SNY                                 LR       LR
      comp=Z,5µm,24.4s
AC02  Maricunga        90.63 122    IAMs_20  IAMs_20  06 48 47.1
      comp=Z,10µm,19.0s
U15A  North Rim        90.64  47    IAMs_20  IAMs_20  06 55 27.8
      comp=Z,14µm,18.0s
WUAZ  Wupatki          90.66  48    IAmb     IAmb     06 15 13.4
      comp=Z,77nm,1.2s
WUAZ                                IAMs_20  IAMs_20  06 53 46.3
      comp=Z,18µm,18.0s
KNB   Kanab            90.68  46    P        P        06 15 06.6 +0.3
KNB                                 IAMs_20  IAMs_20  06 53 55.8
      comp=Z,9µm,18.0s
KNB   Kanab            90.68  46    P        P        06 15 06.6 +0.3
KNB                                 pmax     pmax
      comp=Z,87nm,1.3s
KNB                                 MLR      MLR
      comp=Z,9µm,18.0s
I05D  Terrebonne, OR   90.72  37    P        P        06 15 06.6 +0.4
I05D                                IAMs_20  IAMs_20  06 51 45.1
      comp=Z,9µm,20.0s
TIA   Tai'an           90.72 313    P        P        06 15 05.9 -0.4
TIA                                 sP       pwP      06 15 18.6 +2.0
TIA                                 SKS      SKSac    06 25 38.5 +1.1
TIA                                 S        ScS      06 26 07.9 +2.5
TIA                                 pmax     pmax
      comp=Z,11nm,1.0s
TIA                                 pmax     pmax
      comp=Z,3µm,9.6s
TIA                                 LR       LR
      comp=Z,3µm,24.0s
TIA                                 LR       LR
      comp=Z,3µm,23.9s
TIA                                 LR       LR
      comp=Z,7µm,24.8s
ACHA  Angle Creek He   90.74  11    IAMs_20  IAMs_20  06 56 19.3
      comp=Z,9µm,20.0s
WVOR  Wild Horse Val   90.83  39    P        P        06 15 07.1 +0.3
WVOR                                IAmb     IAmb     06 15 13.3
      comp=Z,53nm,1.4s
WVOR  Wild Horse Val   90.83  39    P        P        06 15 07.1 +0.3
WVOR                                pmax     pmax
      comp=Z,53nm,1.4s
O14K  Tigyukauivet M   90.87   8    IAMs_20  IAMs_20  06 56 59.7
      comp=Z,11µm,19.0s
CN2   Changchun        90.89 323    P        P        06 15 06.5 -0.4
CN2                                 SKS      SKSac    06 25 36.3 -1.7
CN2                                 S        S        06 26 01.3 -1.9
CN2                                 pmax     pmax
      comp=Z,30nm,0.9s
CN2                                 pmax     pmax
      comp=Z,2µm,10.0s
CN2                                 LR       LR
      comp=Z,4µm,19.0s
CN2                                 LR       LR
      comp=Z,3µm,19.0s
CN2                                 LR       LR
      comp=Z,3µm,20.0s
X18A  Snowflake        90.97  50    IAmb     IAmb     06 15 14.3
      comp=Z,48nm,1.3s
X18A                                IAMs_20  IAMs_20  06 53 36.8
      comp=Z,18µm,18.0s
PSUT  Pine Spring      91.01  45    IAMs_20  IAMs_20  06 56 04.4
      comp=Z,16µm,18.0s
GRNR  Gornyy           91.01 333⇑iP          P        06 15 07.9 +0.6
GRNR                                pmax     pmax
      comp=Z,5.0nm,0.7s
SPR3  Spring Creek 3   91.02  44    IAmb     IAmb     06 15 13.4
      comp=Z,36nm,1.4s
SPR3                                IAMs_20  IAMs_20  06 48 48.7
      comp=Z,11µm,20.0s
CRZF  Crozet Islands   91.03 212    IAMs_20  IAMs_20  06 55 58.7
      comp=Z,9µm,19.0s
P16K  Nushagak River   91.10  10    IAMs_20  IAMs_20  06 56 30.8
      comp=Z,9µm,19.0s
E03A  Lebam            91.18  34    IAMs_20  IAMs_20  06 54 03.3
      comp=Z,13µm,19.0s
GO02  Mina Guanaco     91.25 120    IAMs_20  IAMs_20  06 48 39.7
      comp=Z,9µm,20.0s
BNX   BinXian          91.26 325  ⇑P         P        06 15 07.6 -0.9
BNX                                 pP       sP       06 15 14.3 +1.1
BNX                                 pmax     pmax
      comp=Z,10.0nm,1.0s
BNX                                 pmax     pmax
      comp=Z,2µm,10.1s
BNX                                 LR       LR
      comp=Z,3µm,18.6s
BNX                                 LR       LR
      comp=Z,3µm,19.0s
BNX                                 LR       LR
      comp=Z,6µm,18.8s
G05A  Wamic            91.36  36    IAMs_20  IAMs_20  06 52 42.2
      comp=Z,17µm,19.0s
N14K  Kuskokwak Cree   91.48   8    P        P        06 15 09.6 +0.5
M11K  Mekoryuk         91.48   6    IAMs_20  IAMs_20  06 53 39.6
      comp=Z,8µm,19.0s
I07A  Izee             91.49  38    IAmb     IAmb     06 15 15.7
      comp=Z,52nm,1.4s
I07A                                IAMs_20  IAMs_20  06 53 02.7
      comp=Z,14µm,19.0s
WISH  Wishkah          91.50  33    P        P        06 15 10.3 +0.7
WISH                                IAmb     IAmb     06 15 36.7
      comp=Z,71nm,1.3s
J08A  Circle Bar Ran   91.54  39    IAmb     IAmb     06 15 16.4
      comp=Z,53nm,1.3s
SLVN  Son La           91.60 294    IAMs_20  IAMs_20  07 04 31.0
      comp=Z,10µm,20.0s
SLVN  Son La           91.60 294    P        P        06 15 12.9 +2.1
ELK   Elko             91.61  42    IAmb     IAmb     06 15 16.2
      comp=Z,30nm,1.3s
ELK   Elko             91.61  42    S        SKSac    06 25 44.0 +1.2
      comp=Z,0.3nm,0.3s,baz=125,slow=9.4,SNR=1.7
ELK                                 ScS      ScS      06 26 15.2 +2.1
      comp=Z,0.2nm,0.3s,baz=17,slow=15,SNR=1.5
ELK                                 LR       LR       06 52 21.7
      comp=Z,18µm,18.2s,baz=236,slow=33
ELK   Elko             91.61  42    P        P        06 15 11.3 +0.6
O16K  Kokwok River B   91.63  10    IAMs_20  IAMs_20  06 56 57.7
      comp=Z,9µm,19.0s
NLWA  Neilton Lookou   91.65  33    IAMs_20  IAMs_20  06 50 22.6
      comp=Z,17µm,20.0s
EPT   El Paso          91.66  54    IAMs_20  IAMs_20  06 54 51.1
      comp=Z,14µm,18.0s
G06A  Carlson Farm,    91.70  36    P        P        06 15 10.9 +0.2
G06A                                IAMs_20  IAMs_20  06 52 45.2
      comp=Z,11µm,19.0s
Q19K  Cape Douglas,    91.72  12    IAMs_20  IAMs_20  06 56 48.1
      comp=Z,12µm,20.0s
M13K  Dall Lake        91.77   7    IAMs_20  IAMs_20  06 59 06.4
      comp=Z,10µm,19.0s
KLR   Kul'dur          91.77 329    S        SKSac    06 25 42.6 -0.1
      comp=Z,1.2nm,0.8s,baz=324,slow=17,SNR=1.5
KLR                                 LR       LR       06 52 34.6
      comp=Z,6µm,20.1s,baz=156,slow=33
KLR   Kul'dur          91.77 329ceP          P        06 15 09.3 -1.6
KLR                                 pmax     pmax
      comp=Z,12nm,1.0s
N15K  Kwethluk River   91.91   9    P        P        06 15 11.6 +0.4
N15K                                IAmb     IAmb     06 15 36.1
      comp=Z,22nm,1.0s
N15K                                IAMs_20  IAMs_20  06 57 31.1
      comp=Z,11µm,20.0s
MVU   Marysvale        91.99  45    IAmb     IAmb     06 15 19.6
      comp=Z,31nm,1.3s
MVU                                 IAMs_20  IAMs_20  06 53 03.4
      comp=Z,11µm,18.0s
OZB   Mount Ozzard     92.05  31    IAMs_20  IAMs_20  06 50 52.0
      comp=Z,13µm,20.0s
VHRN  Van Horn         92.15  55    IAmb     IAmb     06 15 42.8
      comp=Z,42nm,1.6s
HOLB  Holberg          92.17  29    IAMs_20  IAMs_20  06 51 19.1
      comp=Z,9µm,19.0s
HG4B  Hotspring        92.23  26    IAMs_20  IAMs_20  06 52 31.5
      comp=Z,9µm,18.0s
M14K  Bethel           92.25   8    IAMs_20  IAMs_20  06 53 56.2
      comp=Z,9µm,20.0s
TX31  Lajitas Ar. Si   92.27  57    P        P        06 15 13.6 -0.2
TX31                                IAmb     IAmb     06 15 19.6
      comp=Z,30nm,1.4s
TXAR  Lajitas Array    92.27  57    P        P        06 15 13.4 -0.4
TXAR  Lajitas Array    92.27  57    P        P        06 15 14.3 +0.5
      comp=Z,7.0nm,1.2s,baz=194,slow=4.8,SNR=16
TXAR                                S        SKSac    06 25 47.6 +0.9
      comp=Z,0.1nm,0.4s,baz=57,slow=40,SNR=2.0
TXAR                                ScS      ScS      06 26 21.4 +2.6
      comp=Z,0.1nm,0.5s,baz=122,slow=30,SNR=1.3
TXAR                                PKKPbc   PKKPbc   06 32 29.6 +0.8
      comp=Z,0.5nm,0.8s,baz=83,slow=4.2,SNR=5.4
TXAR                                LR       LR       06 51 49.2
      comp=Z,9µm,18.0s,baz=234,slow=32
      comp=Z,7.0nm,1.2s
TXAR  Lajitas Array    92.27  57    P        P        06 15 13.4 -0.4
O18K  Koktuh Hills     92.32  11    IAmb     IAmb     06 15 29.0
      comp=Z,28nm,0.9s
ENH   Enshi            92.33 304    P        P        06 15 14.1 +0.1
      comp=Z,53nm,1.8s
MNTX  Cornudas Mount   92.39  54    P        P        06 15 14.7 +0.5
MNTX                                IAMs_20  IAMs_20  06 55 57.7
      comp=Z,10µm,18.0s
P19K  Oil Pt           92.47  12    P        P        06 15 13.7 -0.2
P19K                                IAMs_20  IAMs_20  06 57 22.1
      comp=Z,9µm,20.0s
DIB   Dawson Inlet,    92.47  25    IAMs_20  IAMs_20  06 53 15.8
      comp=Z,9µm,19.0s
F07A  Phinny Hill Vi   92.52  36    IAMs_20  IAMs_20  06 53 27.7
      comp=Z,15µm,19.0s
HMU   Henry Mountain   92.55  47    IAmb     IAmb     06 15 39.3
      comp=Z,47nm,1.5s
CLRS  Cowichan Lake    92.56  32    IAMs_20  IAMs_20  06 50 56.7
      comp=Z,14µm,20.0s
G08A  Pilot Rock       92.60  37    IAmb     IAmb     06 15 21.2
      comp=Z,48nm,1.2s
G08A                                IAMs_20  IAMs_20  06 53 07.0
      comp=Z,11µm,19.0s
MOBC  Moresby Island   92.61  25    IAMs_20  IAMs_20  06 53 20.5
      comp=Z,10µm,19.0s
DUG   Dugway, Tooele   92.68  44    P        P        06 15 15.2 -0.3
DUG                                 IAMs_20  IAMs_20  06 57 15.7
      comp=Z,13µm,18.0s
DUG   Dugway, Tooele   92.68  44    P        P        06 15 15.2 -0.3
DUG                                 pmax     pmax
      comp=Z,11nm,1.3s
DUG                                 MLR      MLR
      comp=Z,13µm,18.0s
CNPM  China Poot       92.72  13    IAMs_20  IAMs_20  06 54 52.8
      comp=Z,14µm,20.0s
LYN   LuoYang          92.75 309    P        P        06 15 15.6 -0.1
LYN                                 pP       pP       06 15 19.3 +0.1
LYN                                 sP       sP       06 15 24.0 +3.6
LYN                                 SKS      SKSac    06 25 49.1 +0.2
LYN                                 S        ScS      06 26 23.3 +1.0
LYN                                 sS       sS       06 26 32.5 +6.6
LYN                                 pmax     pmax
      comp=Z,28nm,1.1s
LYN                                 pmax     pmax
      comp=Z,3µm,10.3s
LYN                                 LR       LR
      comp=Z,7µm,18.6s
LYN                                 LR       LR
      comp=Z,6µm,18.6s
LYN                                 LR       LR
      comp=Z,12µm,18.2s
L14K  Kuka Creek       92.75   7    P        P        06 15 14.2 -0.9
PGC   Sidney           92.75  32    IAMs_20  IAMs_20  06 50 32.7
      comp=Z,9µm,20.0s
HOM   Homer            92.77  13    IAMs_20  IAMs_20  06 54 54.9
      comp=Z,10µm,19.0s
NNA   Nana             92.78 106    LR       LR       06 51 48.2
      comp=Z,7µm,18.3s,baz=236,slow=32
ILSW  Iliamna Southw   92.80  12    IAmb     IAmb     06 15 26.2
      comp=Z,54nm,1.5s
ILSW                                IAMs_20  IAMs_20  06 57 32.7
      comp=Z,12µm,20.0s
MXC   Moxie City       92.80  35    IAmb     IAmb     06 15 22.2
      comp=Z,42nm,1.4s
ALPN  Alpine           92.87  56    IAmb     IAmb     06 15 21.9
      comp=Z,36nm,1.5s
Q16A  Castle Valley    92.88  46    IAMs_20  IAMs_20  06 52 11.1
      comp=Z,10µm,18.0s
M16K  Timber Creek     92.88   9    IAmb     IAmb     06 15 39.0
      comp=Z,35nm,1.3s
M16K                                IAMs_20  IAMs_20  06 58 09.9
      comp=Z,10µm,19.0s
CBB   Campbell River   92.90  31    IAMs_20  IAMs_20  06 51 36.4
      comp=Z,16µm,19.0s
PB03  IPOC Station P   92.91 118    IAmb     IAmb     06 15 22.7
      comp=Z,43nm,1.3s
HNS   HongShan         92.98 312  ⇑P         P        06 15 17.0 +0.3
HNS                                 SKS      SKSac    06 25 49.0 -1.0
HNS                                 S        ScS      06 26 25.6 +1.5
HNS                                 pmax     pmax
      comp=Z,25nm,1.9s
HNS                                 pmax     pmax
      comp=Z,2µm,11.7s
HNS                                 LR       LR
      comp=Z,4µm,17.5s
HNS                                 LR       LR
      comp=Z,5µm,19.0s
HNS                                 LR       LR
      comp=Z,7µm,24.5s
BRLK  Bradley Lake     93.01  13    IAMs_20  IAMs_20  06 54 51.0
      comp=Z,13µm,20.0s
BGU   Big Grassy Mou   93.02  43    P        P        06 15 17.9 +0.8
BGU                                 IAmb     IAmb     06 15 41.2
      comp=Z,27nm,1.4s
BGU                                 IAMs_20  IAMs_20  06 56 38.4
      comp=Z,17µm,18.0s
MFID  Camas Ranch      93.02  40    P        P        06 15 17.0 +0.1
MFID                                IAmb     IAmb     06 15 23.1
      comp=Z,33nm,1.2s
MFID                                IAMs_20  IAMs_20  06 52 47.4
      comp=Z,12µm,19.0s
HAWA  Hanford          93.06  36    P        P        06 15 17.8 +1.0
HAWA                                IAmb     IAmb     06 15 23.3
      comp=Z,48nm,1.3s
HAWA                                IAMs_20  IAMs_20  06 53 45.0
      comp=Z,18µm,19.0s
LTY   Liberty          93.09  35    P        P        06 15 16.8 -0.3
LTY                                 IAmb     IAmb     06 15 41.1
      comp=Z,68nm,1.8s
TMUT  Trail Mountain   93.09  45    P        P        06 15 18.6 +1.0
TMUT                                IAmb     IAmb     06 15 42.4
      comp=Z,60nm,1.5s
K13K  Kusilvak Mount   93.14   6    IAMs_20  IAMs_20  06 54 40.6
      comp=Z,9µm,20.0s
BMO   Blue Mountains   93.17  38    P        P        06 15 18.5 +0.9
BMO                                 IAmb     IAmb     06 15 22.8
      comp=Z,32nm,1.4s
BMO   Blue Mountains   93.17  38    P        P        06 15 18.5 +0.9
MPU   Maple Canyon     93.28  45    IAMs_20  IAMs_20  07 00 05.5
      comp=Z,13µm,18.0s
N19K  Bonanza Creek    93.35  11    IAMs_20  IAMs_20  06 58 01.3
      comp=Z,8µm,19.0s
BBB   Bella Bella      93.35  28    IAMs_20  IAMs_20  06 57 29.3
      comp=Z,13µm,18.0s
BBB   Bella Bella      93.35  28    S        SKSac    06 25 52.7 +1.3
      comp=Z,3.7nm,0.9s,baz=304,slow=13,SNR=1.4
BBB                                 ScS      ScS      06 26 28.0 +1.6
      comp=Z,3.5nm,0.9s,baz=234,slow=19,SNR=1.5
BBB                                 LR       LR       06 52 12.6
      comp=Z,9µm,18.9s,baz=221,slow=32
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E08A	**Dider Farm, El**	**93.36**	**36**	IAMs_20	IAMs_20	06 53 46.2	
	comp=Z,16µm,19.0s						
SRU	**San Rafael Swe**	**93.40**	**46**	P	**P**	**06 15 18.4**	**-0.5**
SRU				IAmb	IAmb	06 15 24.4	
	comp=Z,44nm,1.4s						
SRU				IAMs_20	IAMs_20	06 52 16.8	
	comp=Z,8µm,19.0s						
SRU	**San Rafael Swe**	**93.40**	**46**	P	**P**	**06 15 18.4**	**-0.5**
SRU				pmax	pmax		
	comp=Z,44nm,1.4s						
TA01	**Diego Aracena**	**93.42**	**116**	IAMs_20	IAMs_20	06 48 14.5	
	comp=Z,10µm,21.0s						
PB09	**IPOC Station P**	**93.44**	**118**	P	**P**	**06 15 18.1**	**-1.5**
M17K	**Holitna River**	**93.46**	**9**	P	**P**	**06 15 19.0**	**+0.7**
M17K				IAmb	IAmb	06 15 30.5	
	comp=Z,38nm,1.4s						
MVCO	**Mesa Verde**	**93.53**	**48**	P	**P**	**06 15 20.1**	**+0.5**
ANMO	**Albuquerque**	**93.53**	**51**	P	**P**	**06 15 19.4**	**-0.2**
ANMO	**Albuquerque**	**93.53**	**51**	P	**P**	**06 15 19.4**	**-0.2**
ANMO	**Albuquerque**	**93.53**	**51**	P	**P**	**06 15 19.2**	**-0.4**
ANMO				IAmb	IAmb	06 15 30.6	
	comp=Z,24nm,1.4s						
ANMO				IAMs_20	IAMs_20	06 54 40.7	
	comp=Z,20µm,18.0s						
ANMO	**Albuquerque**	**93.53**	**51**	S	**SKSac**	**06 25 54.2**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=190,slow=6.6,SNR=1.6						
ANMO				ScS	**ScS**	**06 26 30.4**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=76,slow=15,SNR=1.5						
ANMO				LR	LR	06 53 32.2	
	comp=Z,20µm,18.1s,baz=324,slow=33						
ANMO	**Albuquerque**	**93.53**	**51**	P	**P**	**06 15 19.4**	**-0.2**
ANMO				pmax	pmax		
	comp=Z,22nm,1.4s						
SEW	**Seward**	**93.61**	**14**	IAMs_20	IAMs_20	06 55 23.3	
	comp=Z,9µm,20.0s						
TA02	**Huaiquique**	**93.63**	**116**	IAMs_20	IAMs_20	06 50 07.0	
	comp=Z,9µm,20.0s						
CTU	**Camp Tracy**	**93.63**	**44**	IAMs_20	IAMs_20	06 57 47.7	
	comp=Z,12µm,18.0s						
Q23K	**Middleton Isla**	**93.66**	**15**	IAMs_20	IAMs_20	06 55 02.8	
	comp=Z,11µm,19.0s						
PV05	**Paradox Valley**	**93.66**	**47**	P	**P**	**06 15 20.1**	**-0.1**
BJI	**Beijing**	**93.68**	**315**	P	**P**	**06 15 20.8**	**+0.9**
BJI				SS	SS	06 32 44.3	-2.8
BJI				pmax	pmax		
	comp=Z,750nm,9.8s						
BJI				LR	LR		
	comp=Z,1µm,21.1s						
BJI				LR	LR		
	comp=Z,1µm,19.1s						
BJI				LR	LR		
	comp=Z,3µm,19.3s						
PB01	**IPOC Station P**	**93.68**	**117**	IAMs_20	IAMs_20	06 50 11.4	
	comp=Z,10µm,19.0s						
HVU	**Hansel Valley**	**93.70**	**43**	IAmb	IAmb	06 15 26.5	
	comp=Z,45nm,1.2s						
SAND	**Sanderson**	**93.73**	**57**	P	**P**	**06 15 20.2**	**-0.3**
JLU	**Jordanelle**	**93.75**	**44**	IAmb	IAmb	06 15 51.0	
	comp=Z,39nm,1.7s						
K15K	**Wolf Creek Mou**	**93.81**	**7**	IAmb	IAmb	06 15 26.1	
	comp=Z,54nm,1.6s						
K15K				IAMs_20	IAMs_20	06 58 44.2	
	comp=Z,9µm,19.0s						
D08A	**Wollman Farm,**	**93.82**	**36**	IAmb	IAmb	06 15 26.0	
	comp=Z,60nm,1.5s						
SLKM	**Skilak Lake**	**93.83**	**13**	P	**P**	**06 15 19.3**	**-0.8**
SLKM				IAmb	IAmb	06 15 31.4	
	comp=Z,40nm,1.2s						
SLKM				IAMs_20	IAMs_20	06 55 45.1	
	comp=Z,10µm,19.0s						
E09A	**Wood Farm, Sta**	**93.84**	**37**	IAmb	IAmb	06 15 26.4	
	comp=Z,58nm,1.4s						
E09A				IAMs_20	IAMs_20	06 54 10.9	
	comp=Z,10µm,19.0s						
PV17	**East Wray Mesa**	**93.87**	**47**	P	**P**	**06 15 20.2**	**-0.9**
PV19	**Morning Glory**	**93.87**	**47**	P	**P**	**06 15 20.2**	**-0.9**
PV19				IAmb	IAmb	06 15 27.2	
	comp=Z,55nm,1.4s						
PV10	**Paradox Valley**	**93.88**	**47**	P	**P**	**06 15 20.4**	**-0.8**
PV10				IAmb	IAmb	06 15 26.2	
	comp=Z,29nm,1.3s						
PV18	**Skein Mesa, Pa**	**93.88**	**47**	P	**P**	**06 15 20.7**	**-0.5**
PV18				IAmb	IAmb	06 15 45.2	
	comp=Z,48nm,1.5s						
P18A	**Preston Nutter**	**93.88**	**46**	IAMs_20	IAMs_20	06 57 54.6	
	comp=Z,16µm,18.0s						
CAPN	**Captain Cook N**	**93.89**	**13**	IAMs_20	IAMs_20	06 55 42.7	
	comp=Z,13µm,19.0s						
HLID	**Hailey**	**93.90**	**40**	IAMs_20	IAMs_20	06 57 03.7	
	comp=Z,15µm,18.0s						
O22K	**Cooper Landing**	**93.90**	**13**	IAMs_20	IAMs_20	06 55 46.0	
	comp=Z,8µm,19.0s						
PV20	**West Nyswonger**	**93.90**	**47**	P	**P**	**06 15 20.5**	**-0.7**
PV20				IAmb	IAmb	06 15 27.3	
	comp=Z,42nm,1.3s						
PV16	**Nyswonger Mesa**	**93.92**	**47**	P	**P**	**06 15 20.1**	**-1.3**
PV11	**David Mesa, Pa**	**93.94**	**47**	IAmb	IAmb	06 15 45.4	
	comp=Z,46nm,1.6s						
P23K	**Montague Islan**	**93.94**	**15**	IAMs_20	IAMs_20	06 55 19.1	
	comp=Z,12µm,19.0s						
MA2	**Magadan**	**93.97**	**344**	IAMs_20	IAMs_20	06 53 14.1	
	comp=Z,8µm,20.0s						
MA2	**Magadan**	**93.97**	**344**	LR	LR	06 52 43.6	
	comp=Z,9µm,21.2s,baz=162,slow=32						
PV02	**Paradox Valley**	**93.97**	**47**	IAmb	IAmb	06 15 49.9	
	comp=Z,24nm,1.1s						
PV12	**Saucer Basin,**	**93.99**	**47**	IAmb	IAmb	06 15 27.8	
	comp=Z,41nm,1.2s						
PLID	**Pearl Lake**	**94.02**	**39**	IAmb	IAmb	06 15 27.5	
	comp=Z,53nm,1.3s						
ATAH	**Atahualpa**	**94.04**	**101**	LR	LR	06 48 50.6	
	comp=Z,4µm,21.4s,baz=239,slow=30						
J14K	**Nanvaranak Lak**	**94.05**	**6**	IAMs_20	IAMs_20	06 55 09.5	
	comp=Z,9µm,19.0s						
CMAR	**Chiang Mai Arr**	**94.06**	**289**	P	**P**	**06 15 21.5**	**-0.7**
CMAR	**Chiang Mai Arr**	**94.06**	**289**	P	**P**	**06 15 23.4**	**+1.3**
	comp=Z,0.8nm,0.3s,baz=126,slow=4.6,SNR=6.7						
CMAR				PP	**PP**	**06 19 07.1**	**-1.7**
	comp=Z,1.5nm,0.3s,baz=120,slow=6.9,SNR=6.1						
CMAR				S	**SKSac**	**06 25 58.8**	**+1.9**
	comp=Z,1.1nm,0.3s,baz=344,slow=20,SNR=2.2						
CMAR				LR	LR	07 00 53.1	
	comp=Z,3µm,19.3s,baz=130,slow=38						
	comp=Z,0.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**94.06**	**289**	P	**P**	**06 15 21.5**	**-0.7**
TCUT	**Toone Canyon**	**94.09**	**44**	IAmb	IAmb	06 15 46.4	
	comp=Z,58nm,1.4s						
TCUT				IAMs_20	IAMs_20	06 55 20.0	
	comp=Z,12µm,19.0s						
BSUT	**Blindstream Ca**	**94.12**	**45**	P	**P**	**06 15 21.6**	**-0.8**
BSUT				IAMs_20	IAMs_20	06 58 34.9	
	comp=Z,11µm,18.0s						
PV22	**Blue Mesa, Par**	**94.13**	**47**	P	**P**	**06 15 20.5**	**-1.8**
PV07	**Paradox Valley**	**94.16**	**47**	P	**P**	**06 15 19.9**	**-2.5**
PB11	**IPOC Station P**	**94.28**	**116**	P	**P**	**06 15 23.2**	**-0.3**
PB11				IAmb	IAmb	06 15 32.2	
	comp=Z,34nm,0.9s						
PB11				IAMs_20	IAMs_20	06 50 55.4	
	comp=Z,10µm,19.0s						
HWUT	**Hardware Ranch**	**94.30**	**43**	P	**P**	**06 15 21.8**	**-1.2**
HWUT				IAMs_20	IAMs_20	06 53 58.5	
	comp=Z,18µm,19.0s						
M19K	**Big River Lodg**	**94.39**	**11**	IAMs_20	IAMs_20	06 58 34.9	
	comp=Z,10µm,19.0s						
HEH	**HeiHe**	**94.45**	**328**	*e*P	**P**	**06 15 24.3**	**+1.1**
HEH				pP	**pwP**	**06 15 32.3**	**-1.1**
HEH				SKS	**SKSac**	**06 25 57.0**	**-0.5**
HEH				S	**ScS**	**06 26 38.0**	**+2.3**
HEH				pmax	pmax		
	comp=Z,13nm,0.7s						
HEH				pmax	pmax		
	comp=Z,2µm,9.7s						
HEH				LR	LR		
	comp=Z,5µm,19.0s						
HEH				LR	LR		
	comp=Z,2µm,16.4s						
HEH				LR	LR		
	comp=Z,9µm,18.6s						
PB08	**IPOC Station P**	**94.45**	**116**	IAMs_20	IAMs_20	06 49 17.8	
	comp=Z,10µm,20.0s						
V35K	**Ketchikan**	**94.46**	**24**	IAMs_20	IAMs_20	06 54 18.5	
	comp=Z,9µm,19.0s						
HIN	**Hinchinbrook I**	**94.50**	**15**	IAMs_20	IAMs_20	06 55 33.8	
	comp=Z,12µm,20.0s						
KMI	**Kunming**	**94.53**	**296**	P	**P**	**06 15 23.3**	**-1.1**
KMI				PP	**PP**	**06 19 13.3**	**+0.7**
KMI				S	**S**	**06 26 33.8**	**-3.1**
KMI				SS	**SS**	**06 33 00.6**	**+0.4**
KMI				pmax	pmax		
	comp=Z,1µm,11.0s						
KMI				LR	LR		
	comp=Z,5µm,19.5s						
KMI				LR	LR		
	comp=Z,6µm,17.9s						
KMI				LR	LR		
	comp=Z,7µm,19.0s						
PWL	**Port Wells**	**94.53**	**14**	IAMs_20	IAMs_20	06 55 50.5	
	comp=Z,10µm,19.0s						
KAIM	**Kayak Island**	**94.55**	**16**	IAMs_20	IAMs_20	06 55 28.3	
	comp=Z,17µm,19.0s						
L19K	**White Mountain**	**94.58**	**10**	IAMs_20	IAMs_20	06 58 48.9	
	comp=Z,8µm,19.0s						
K17K	**Iditarod**	**94.60**	**9**	IAMs_20	IAMs_20	06 57 18.3	
	comp=Z,8µm,19.0s						
SUA	**Susitna One**	**94.61**	**12**	IAMs_20	IAMs_20	06 56 06.7	
	comp=Z,11µm,19.0s						
TIY	**Taiyuan**	**94.62**	**312**	P	**P**	**06 15 23.8**	**-0.6**
TIY				SKS	**SKSac**	**06 25 58.5**	**-0.7**
TIY				pmax	pmax		
	comp=Z,1µm,11.0s						
TIY				LR	LR		
	comp=Z,3µm,22.7s						
TIY				LR	LR		
	comp=Z,4µm,19.2s						
TIY				LR	LR		
	comp=Z,5µm,20.6s						
C09A	**Chrisman Ranch**	**94.65**	**35**	P	**P**	**06 15 23.8**	**-0.4**
GO01	**Chusmiza**	**94.69**	**116**	IAMs_20	IAMs_20	06 51 00.2	
	comp=Z,9µm,20.0s						
EYAK	**Cordova Ski Ar**	**94.80**	**15**	IAMs_20	IAMs_20	06 55 40.8	
	comp=Z,12µm,20.0s						
GLI	**Glacier Island**	**94.80**	**14**	IAMs_20	IAMs_20	06 55 46.9	
	comp=Z,10µm,20.0s						
FID	**Port Fidalgo**	**94.82**	**15**	IAMs_20	IAMs_20	06 55 34.1	
	comp=Z,11µm,19.0s						
SUCK	**Suckling Hills**	**94.83**	**16**	IAMs_20	IAMs_20	06 55 28.8	
	comp=Z,17µm,19.0s						
XAN	**Xi'an**	**94.85**	**307**	P	**P**	**06 15 25.5**	**0.0**
XAN				SKS	**SKSac**	**06 26 00.9**	**+0.3**
XAN				S	**S**	**06 26 39.3**	**+0.3**
XAN				pmax	pmax		
	comp=Z,13nm,1.4s						
XAN				pmax	pmax		
	comp=Z,2µm,6.4s						
XAN				LR	LR		
	comp=Z,2µm,17.0s						
XAN				LR	LR		
	comp=Z,6µm,18.0s						
XAN				LR	LR		
	comp=Z,10µm,18.0s						
LLLB	**Lillooet**	**94.86**	**32**	IAMs_20	IAMs_20	06 56 06.5	
	comp=Z,14µm,18.0s						
J16K	**Anvik River**	**94.87**	**8**	IAMs_20	IAMs_20	06 59 17.5	
	comp=Z,9µm,19.0s						
SKT	**Skwentna**	**94.95**	**12**	IAMs_20	IAMs_20	06 58 29.6	
	comp=Z,10µm,20.0s						
M22K	**Willow**	**95.00**	**13**	IAMs_20	IAMs_20	06 56 17.9	
	comp=Z,10µm,19.0s						
S31K	**Pelican**	**95.08**	**21**	IAMs_20	IAMs_20	06 58 23.4	
	comp=Z,8µm,18.0s						
J17K	**VABM Dome**	**95.16**	**8**	IAMs_20	IAMs_20	06 55 56.1	
	comp=Z,10µm,20.0s						
PB16	**IPOC Station P**	**95.21**	**115**	P	**P**	**06 15 27.6**	**-0.7**
PB16				IAmb	IAmb	06 15 38.0	
	comp=Z,59nm,1.6s						
PB16				IAMs_20	IAMs_20	06 50 46.9	
	comp=Z,8µm,19.0s						
DIV	**Divide**	**95.32**	**15**	IAMs_20	IAMs_20	06 57 41.4	
	comp=Z,9µm,19.0s						
MESA	**MESA**	**95.38**	**17**	IAMs_20	IAMs_20	06 55 34.1	
	comp=Z,14µm,20.0s						
WAX	**Waxell Ridge**	**95.39**	**16**	IAMs_20	IAMs_20	06 55 26.4	
	comp=Z,17µm,20.0s						
YKU2	**Yakutat**	**95.39**	**18**	IAMs_20	IAMs_20	06 53 16.7	
	comp=Z,10µm,20.0s						
BMRM	**Bremner River**	**95.43**	**15**	IAMs_20	IAMs_20	06 56 09.6	
	comp=Z,13µm,19.0s						
I17K	**Unalakleet**	**95.45**	**7**	IAMs_20	IAMs_20	06 59 34.7	
	comp=Z,10µm,20.0s						
MSTX	**Muleshoe**	**95.49**	**54**	IAMs_20	IAMs_20	06 54 41.6	
	comp=Z,12µm,18.0s						
U35K	**Hyder**	**95.49**	**25**	IAMs_20	IAMs_20	06 54 49.5	
	comp=Z,13µm,19.0s						
NEW	**Newport**	**95.53**	**36**	LR	LR	06 51 43.9	
	comp=Z,17µm,20.1s,baz=223,slow=31						
KVTX	**Kingsville**	**95.55**	**61**	IAMs_20	IAMs_20	06 57 14.8	
	comp=Z,12µm,19.0s						
CUT	**Chulitna**	**95.57**	**12**	IAMs_20	IAMs_20	06 56 28.1	
	comp=Z,12µm,19.0s						
MCMT	**McKenzie Canyo**	**95.57**	**40**	P	**P**	**06 15 29.3**	**+0.5**
YAH	**Yahtse**	**95.59**	**17**	IAMs_20	IAMs_20	06 55 41.6	
	comp=Z,14µm,20.0s						
KLU	**Klutina**	**95.61**	**15**	IAMs_20	IAMs_20	06 56 01.2	
	comp=Z,9µm,20.0s						
ISLE	**Juniper Island**	**95.65**	**17**	IAMs_20	IAMs_20	06 55 44.3	
	comp=Z,16µm,20.0s						
PB18	**Visviri**	**95.65**	**114**	IAMs_20	IAMs_20	06 54 29.8	
	comp=Z,8µm,18.0s						
TGL	**Tana Glacier**	**95.66**	**16**	IAMs_20	IAMs_20	06 56 04.6	
	comp=Z,16µm,20.0s						
ANM	**Nome**	**95.68**	**5**	IAMs_20	IAMs_20	06 56 00.6	
	comp=Z,9µm,20.0s						
PPLA	**Purkeypile**	**95.69**	**11**	IAMs_20	IAMs_20	06 59 17.1	
	comp=Z,11µm,19.0s						
PCA	**Pinnacle**	**95.74**	**18**	IAMs_20	IAMs_20	06 53 10.8	
	comp=Z,12µm,20.0s						
SDCO	**Great Sand Dun**	**95.77**	**49**	IAMs_20	IAMs_20	06 56 41.9	
	comp=Z,13µm,18.0s						
BCPM	**Bancas Point**	**95.78**	**18**	IAMs_20	IAMs_20	06 54 45.8	
	comp=Z,11µm,20.0s						
TABL	**Table Mountain**	**95.81**	**17**	IAMs_20	IAMs_20	06 55 39.5	
	comp=Z,12µm,20.0s						
K20K	**Telida**	**95.82**	**10**	IAmb	IAmb	06 15 43.7	
	comp=Z,32nm,1.9s						
TPAW	**Teton Pass**	**95.82**	**42**	IAmb	IAmb	06 15 35.6	
	comp=Z,30nm,1.5s						
GRNC	**Granite Creek**	**95.90**	**17**	IAMs_20	IAMs_20	06 55 42.1	
	comp=Z,13µm,20.0s						
SNOW	**Snow King Moun**	**95.92**	**42**	P	**P**	**06 15 30.4**	**0.0**
SNOW				IAmb	IAmb	06 15 54.7	
	comp=Z,23nm,1.1s						
VRDI	**Verde Repeater**	**95.93**	**16**	IAMs_20	IAMs_20	06 56 24.7	
	comp=Z,14µm,19.0s						
N25K	**Chitina, Valde**	**96.00**	**15**	IAMs_20	IAMs_20	06 56 11.6	
	comp=Z,10µm,19.0s						
PZH	**PanZhiHua**	**96.01**	**297**	P	**P**	**06 15 30.4**	**-0.7**
PZH				PP	**PP**	**06 19 24.6**	**+0.6**
PZH				SKS	**SKSac**	**06 26 04.3**	**-2.9**
PZH				SS	**SS**	**06 33 18.8**	**-2.3**
PZH				pmax	pmax		
	comp=Z,830nm,11.3s						
PZH				LR	LR		
	comp=Z,4µm,20.1s						
PZH				LR	LR		
	comp=Z,3µm,19.1s						
PZH				LR	LR		
	comp=Z,3µm,21.1s						
P29M	**Windy Craggy**	**96.03**	**19**	IAMs_20	IAMs_20	06 53 36.4	
	comp=Z,9µm,20.0s						
GLB	**Gilahina Butte**	**96.03**	**16**	IAMs_20	IAMs_20	06 56 28.5	
	comp=Z,11µm,19.0s						
DLMT	**Dillon**	**96.05**	**40**	IAmb	IAmb	06 15 37.1	
	comp=Z,35nm,1.4s						
DLMT				IAMs_20	IAMs_20	06 54 45.4	
	comp=Z,16µm,19.0s						
LOHW	**Long Hollow**	**96.09**	**42**	IAmb	IAmb	06 15 36.6	
	comp=Z,24nm,1.4s						
XLT	**XiLinHaoTe**	**96.10**	**318**	*e*P	**P**	**06 15 30.3**	**-0.7**
XLT				SKS	**SKSac**	**06 26 05.8**	**-1.0**
XLT				S	**ScS**	**06 26 50.3**	**+0.3**
XLT				pmax	pmax		
	comp=Z,930nm,10.9s						
XLT				LR	LR		
	comp=Z,210nm,17.1s						
XLT				LR	LR		
	comp=Z,2µm,19.8s						
XLT				LR	LR		
	comp=Z,4µm,19.7s						
M24K	**Tolsona, Glenn**	**96.11**	**14**	IAMs_20	IAMs_20	06 56 38.3	
	comp=Z,9µm,20.0s						
T25A	**Trinidad**	**96.15**	**50**	IAmb	IAmb	06 15 55.3	
	comp=Z,47nm,2.0s						
T25A				IAMs_20	IAMs_20	06 57 05.8	
	comp=Z,9µm,18.0s						
MCARA	**McCarthy VSAT**	**96.17**	**16**	IAMs_20	IAMs_20	06 56 32.0	
	comp=Z,13µm,19.0s						
LOGN	**Logan Glacier**	**96.17**	**17**	IAMs_20	IAMs_20	06 55 41.1	
	comp=Z,12µm,20.0s						
BW06	**Boulder Array**	**96.19**	**43**	IAMs_20	IAMs_20	06 55 08.5	
	comp=Z,15µm,19.0s						
CAST	**Castle Rocks**	**96.19**	**11**	IAMs_20	IAMs_20	06 59 42.5	
	comp=Z,12µm,19.0s						
PD31	**Pinedale Array**	**96.19**	**43**	P	**P**	**06 15 29.8**	**-1.9**
PDAR	**Pinedale Array**	**96.19**	**43**	P	**P**	**06 15 31.1**	**-0.5**
	comp=Z,1.2nm,0.8s,baz=212,slow=5.3,SNR=12						
PDAR				PP	**PP**	**06 19 24.6**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=267,slow=5.9,SNR=4.2						
PDAR				S	**SKSac**	**06 26 08.7**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=36,slow=33,SNR=1.4						
PDAR				ScS	**ScS**	**06 26 53.0**	**+1.8**
	comp=Z,0.2nm,0.5s,baz=188,slow=40,SNR=1.2						
PDAR				PKKPbc	**PKKPbc**	**06 32 18.8**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=113,slow=4.5,SNR=5.5						
PDAR				LR	LR	06 54 43.4	
	comp=Z,9µm,18.5s,baz=228,slow=33						
	comp=Z,1.2nm,0.8s						
CTGM	**Chitina Glacie**	**96.21**	**17**	IAMs_20	IAMs_20	06 55 52.1	
	comp=Z,10µm,20.0s						
T35M	**Bob Quinn**	**96.23**	**24**	IAMs_20	IAMs_20	06 53 49.3	
	comp=Z,9µm,19.0s						
MSO	**Missoula**	**96.24**	**38**	P	**P**	**06 15 30.1**	**-1.5**
735A	**Kenedy**	**96.30**	**60**	IAMs_20	IAMs_20	06 57 30.7	
	comp=Z,9µm,18.0s						
O28M	**Mount Upton**	**96.33**	**17**	IAMs_20	IAMs_20	06 55 46.5	
	comp=Z,11µm,20.0s						
O29M	**Mount Kennedy**	**96.36**	**18**	IAMs_20	IAMs_20	06 53 30.2	
	comp=Z,9µm,20.0s						
YHB	**Horse Butte**	**96.45**	**41**	IAMs_20	IAMs_20	06 54 38.2	
	comp=Z,12µm,19.0s						
KTH	**Kantishna Hill**	**96.52**	**12**	IAMs_20	IAMs_20	06 59 42.0	
	comp=Z,10µm,20.0s						
YHL	**Hebgen Lake**	**96.52**	**41**	IAmb	IAmb	06 15 40.0	
	comp=Z,31nm,1.2s						
YHL				IAMs_20	IAMs_20	06 54 32.0	
	comp=Z,12µm,19.0s						
TRF	**Thorofare Moun**	**96.53**	**12**	IAmb	IAmb	06 15 56.1	
	comp=Z,17nm,1.2s						
TRF				IAMs_20	IAMs_20	06 57 20.4	
	comp=Z,13µm,20.0s						
H17K	**Granite Mounta**	**96.56**	**7**	IAMs_20	IAMs_20	07 00 38.9	
	comp=Z,11µm,20.0s						
J20K	**Nowinta River**	**96.58**	**10**	IAMs_20	IAMs_20	06 59 53.6	
	comp=Z,8µm,19.0s						
SEY	**Seymchan**	**96.64**	**347**	LR	LR	06 55 19.8	
	comp=Z,11µm,20.4s,baz=161,slow=33						
SEY	**Seymchan**	**96.64**	**347**	*i* P	**P**	**06 15 32.9**	**+0.1**
SEY				pmax	pmax		
	comp=Z,3.0nm,0.9s						
Q24A	**Divide**	**96.69**	**48**	IAMs_20	IAMs_20	06 57 33.2	
	comp=Z,15µm,18.0s						
YNM	**Yellowstone No**	**96.71**	**41**	IAMs_20	IAMs_20	06 58 55.1	
	comp=Z,16µm,18.0s						
YNR	**Norris Junctio**	**96.72**	**41**	IAMs_20	IAMs_20	06 58 55.3	
	comp=Z,15µm,18.0s						
AMTX	**Amarillo**	**96.74**	**53**	IAMs_20	IAMs_20	06 55 48.8	
	comp=Z,14µm,19.0s						
RND	**Reindeer**	**96.75**	**13**	P	**P**	**06 15 33.7**	**+0.2**
RND				IAmb	IAmb	06 16 00.1	
	comp=Z,22nm,1.2s						
RND				IAMs_20	IAMs_20	06 57 12.2	
	comp=Z,11µm,19.0s						
RND	**Reindeer**	**96.75**	**13**	P	**P**	**06 15 33.7**	**+0.2**
RND				pmax	pmax		
	comp=Z,22nm,1.2s						
RND				MLR	MLR		
	comp=Z,10µm,19.0s						
CD2	**Chengdu**	**96.81**	**302**	P	**P**	**06 15 36.5**	**+2.0**
CD2				PP	**PP**	**06 19 29.9**	**-0.2**
CD2				SKS	**SKSac**	**06 26 12.4**	**+1.3**
CD2				S	**S**	**06 26 55.8**	**-0.3**
CD2				pmax	pmax		
	comp=Z,2µm,11.7s						
CD2				LR	LR		
	comp=Z,5µm,16.9s						
CD2				LR	LR		
	comp=Z,5µm,21.0s						
CD2				LR	LR		
	comp=Z,7µm,17.1s						
F15K	**North Star Dit**	**96.86**	**5**	IAMs_20	IAMs_20	06 56 47.9	
	comp=Z,9µm,20.0s						
HERN	**Volcan Telica**	**96.86**	**79**	IAMs_20	IAMs_20	06 51 30.4	
	comp=Z,7µm,19.0s						
ISCO	**Idaho Springs**	**96.87**	**47**	IAMs_20	IAMs_20	06 54 17.8	
	comp=Z,11µm,19.0s						
H18K	**Honhosa River**	**96.94**	**8**	IAMs_20	IAMs_20	07 00 40.2	
	comp=Z,10µm,19.0s						
HHC	**Hu-ho-hao-te**	**96.99**	**314**	*e*P	**P**	**06 15 35.9**	**+0.8**
HHC				PP	**PP**	**06 19 33.0**	**+1.7**
HHC				SKS	**SKSac**	**06 26 13.3**	**+1.7**
HHC				S	**ScS**	**06 26 57.8**	**+0.2**
HHC				sS	sS	06 27 07.9	+5.0
HHC				pmax	pmax		
	comp=Z,14nm,0.8s						
HHC				pmax	pmax		
	comp=Z,620nm,6.1s						
HHC				LR	LR		
	comp=Z,2µm,21.0s						
HHC				LR	LR		
	comp=Z,4µm,19.3s						
HHC				LR	LR		
	comp=Z,5µm,19.3s						
BPAW	**Bear Paw Mtn.**	**97.01**	**11**	IAMs_20	IAMs_20	07 00 07.1	
	comp=Z,10µm,19.0s						
PAX	**Paxson**	**97.03**	**14**	IAMs_20	IAMs_20	06 57 18.6	
	comp=Z,8µm,19.0s						
MCK	**McKinley**	**97.03**	**12**	IAMs_20	IAMs_20	06 57 22.7	
	comp=Z,11µm,19.0s						
M26K	**Nabesna, AK**	**97.06**	**15**	IAMs_20	IAMs_20	06 57 05.7	
	comp=Z,12µm,19.0s						
YNE	**Yellowstone No**	**97.28**	**41**	P	**P**	**06 15 35.8**	**-0.8**
YNE				IAmb	IAmb	06 15 43.1	
	comp=Z,23nm,1.3s						
YNE				IAMs_20	IAMs_20	06 53 11.1	
	comp=Z,14µm,20.0s						
M27K	**Edge Creek, AK**	**97.28**	**16**	IAMs_20	IAMs_20	06 57 09.5	
	comp=Z,14µm,19.0s						
JTS	**Las Juntas de**	**97.30**	**82**	IAMs_20	IAMs_20	06 54 37.1	
	comp=Z,7µm,18.0s						
JTS	**Las Juntas de**	**97.30**	**82**	LR	LR	06 50 29.3	
	comp=Z,6µm,20.2s,baz=240,slow=30						
BWN	**Browne**	**97.34**	**12**	IAMs_20	IAMs_20	06 57 34.7	
	comp=Z,15µm,20.0s						
MENT	**Mentasta**	**97.37**	**15**	IAMs_20	IAMs_20	06 59 08.8	
	comp=Z,10µm,19.0s						
O30N	**Mendenhall**	**97.43**	**19**	IAMs_20	IAMs_20	06 54 21.6	
	comp=Z,10µm,20.0s						
DLBC	**Dease Lake**	**97.44**	**23**	LR	LR	06 51 12.3	
	comp=Z,5µm,21.8s,baz=220,slow=30						
LPAZ	**La Paz**	**97.45**	**114**	P	Pdif	06 15 39.6	+1.0
	comp=Z,0.9nm,0.8s,baz=153,slow=2.6,SNR=5.8						
LPAZ				PP	**PP**	**06 19 36.8**	**+1.4**
	comp=Z,2.5nm,1.0s,baz=228,slow=12,SNR=3.5						
LPAZ				LR	LR	06 51 24.6	
	comp=Z,3µm,21.3s,baz=224,slow=30						
	comp=Z,0.9nm,0.8s						
ITQB	**Itaqui**	**97.50**	**131**	IAMs_20	IAMs_20	06 53 02.7	
	comp=Z,14µm,20.0s						
L26K	**Log Cabin Wild**	**97.53**	**15**	IAMs_20	IAMs_20	06 59 14.0	
	comp=Z,12µm,19.0s						
H19K	**Roundabout Mou**	**97.54**	**9**	IAMs_20	IAMs_20	07 01 05.0	
	comp=Z,8µm,20.0s						
G18K	**Tagagawik**	**97.62**	**8**	IAMs_20	IAMs_20	07 01 12.2	
	comp=Z,12µm,19.0s						
WHY	**Whitehorse**	**97.69**	**20**	IAMs_20	IAMs_20	06 55 54.4	
	comp=Z,15µm,20.0s						
K24K	**Donnelly Dome**	**97.71**	**14**	IAmb	IAmb	06 15 46.1	
	comp=Z,13nm,1.0s						
K24K				IAMs_20	IAMs_20	06 57 41.6	
	comp=Z,10µm,20.0s						
N30M	**Aishikik Lake**	**97.73**	**18**	IAMs_20	IAMs_20	06 54 14.4	
	comp=Z,10µm,20.0s						
TNCH	**TengChong**	**97.75**	**294**	⇑P	**P**	**06 15 38.6**	**-0.5**
TNCH				PP	**PP**	**06 19 36.9**	**-0.6**
TNCH				S	**S**	**06 26 56.1**	**-8.6**
TNCH				sS	sS	06 27 14.3	+4.1
TNCH				pmax	pmax		
	comp=Z,64nm,0.6s						
TNCH				pmax	pmax		
	comp=Z,910nm,6.9s						
TNCH				LR	LR		
	comp=Z,2µm,19.8s						

TNCH				LR	LR		
	comp=Z,3µm,17.5s						
TNCH				LR	LR		
	comp=Z,5µm,19.1s						
BOAB	**BOACO BROADBAN**	**97.77**	**80**	IAMs_20	IAMs_20	06 50 21.4	
	comp=Z,17µm,21.0s						
NEA2	**Nenana**	**97.80**	**12**	IAMs_20	IAMs_20	06 57 57.9	
	comp=Z,11µm,20.0s						
BTO	**Baotou**	**97.81**	**313**	*e*P	Pdif	06 15 42.5	+3.6
BTO				pP	sP	06 15 47.5	+4.0
BTO				sP	pwP	06 15 49.5	+0.3
BTO				SKS	**SKSac**	**06 26 16.3**	**+0.4**
BTO				S	**ScS**	**06 27 08.4**	**+3.9**
BTO				sS	sS	06 27 14.3	+4.3
BTO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BTO				pmax	pmax		
	comp=Z,3µm,9.4s						
BTO				LR	LR		
	comp=Z,5µm,20.4s						
BTO				LR	LR		
	comp=Z,6µm,20.3s						
BTO				LR	LR		
	comp=Z,12µm,24.3s						
RIDG	**Independent Ri**	**97.84**	**14**	IAMs_20	IAMs_20	06 53 38.2	
	comp=Z,10µm,21.0s						
WRH	**Wood River Hil**	**97.86**	**12**	IAmb	IAmb	06 16 02.1	
	comp=Z,16nm,1.2s						
WRH				IAMs_20	IAMs_20	06 57 29.7	
	comp=Z,9µm,19.0s						
L27K	**Beaver Creek,**	**97.91**	**16**	IAMs_20	IAMs_20	06 57 30.0	
	comp=Z,12µm,19.0s						
MLY	**Manley**	**97.91**	**11**	IAMs_20	IAMs_20	07 05 10.9	
	comp=Z,10µm,18.0s						
DOT	**Dot Lake**	**97.92**	**14**	P	**P**	**06 15 38.2**	**-0.5**
DOT				IAMs_20	IAMs_20	06 57 45.3	
	comp=Z,8µm,20.0s						
K22A	**Casper**	**97.94**	**45**	IAmb	IAmb	06 15 45.1	
	comp=Z,22nm,1.3s						
ACON	**Acoyapa**	**97.95**	**81**	IAMs_20	IAMs_20	06 51 16.2	
	comp=Z,7µm,19.0s						
CCB	**Clear Creek Bu**	**98.08**	**12**	IAMs_20	IAMs_20	06 58 04.2	
	comp=Z,9µm,19.0s						
N31M	**Braeburn, Yuko**	**98.11**	**19**	IAMs_20	IAMs_20	06 54 44.5	
	comp=Z,8µm,20.0s						
H21K	**Melozitna Rive**	**98.17**	**10**	P	**P**	**06 15 39.3**	**-0.4**
H21K				IAmb	IAmb	06 19 39.5	
	comp=Z,22nm,1.8s						
M29M	**Somme Creek**	**98.19**	**17**	IAMs_20	IAMs_20	06 56 46.6	
	comp=Z,13µm,20.0s						
SCRK	**Sand Creek**	**98.23**	**14**	P	**P**	**06 15 38.4**	**-1.8**
SCRK				IAMs_20	IAMs_20	06 58 04.4	
	comp=Z,7µm,19.0s						
I23K	**Minto, Yukon-K**	**98.25**	**12**	IAMs_20	IAMs_20	07 00 45.0	
	comp=Z,13µm,20.0s						
COLA	**College**	**98.27**	**12**	IAMs_20	IAMs_20	06 58 01.4	
	comp=Z,11µm,20.0s						
COLA	**College**	**98.27**	**12**	P	Pdif	06 15 40.3	+0.1
	comp=Z,5.6nm,1.9s						
COLA	**College**	**98.27**	**12**	*i* P	Pdif	06 15 41.8	+1.6
COLA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
IMAR	**Indian Mountai**	**98.34**	**10**	P	**P**	**06 15 40.2**	**-0.3**
HKT	**Hockley**	**98.34**	**60**	IAMs_20	IAMs_20	06 54 11.8	
	comp=Z,8µm,19.0s						
KSCO	**Kaye Shedlock’**	**98.35**	**49**	IAMs_20	IAMs_20	06 57 04.2	
	comp=Z,9µm,18.0s						
ILAR	**Eielson Array**	**98.36**	**13**	P	**P**	**06 15 39.5**	**-1.1**
ILAR	**Eielson Array**	**98.36**	**13**	P	**P**	**06 15 40.7**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=223,slow=5.6,SNR=7.3						
ILAR				PKiKP	**PKiKP**	**06 20 13.0**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=254,slow=3.1,SNR=5.4						
ILAR				PKKPbc	**PKKPbc**	**06 32 12.8**	**-0.8**
	comp=Z,0.7nm,1.0s,baz=357,slow=1.6,SNR=4.8						
ILAR				LR	LR	06 55 41.7	
	comp=Z,3µm,19.2s,baz=200,slow=33						
	comp=Z,0.7nm,0.7s						
ILAR	**Eielson Array**	**98.36**	**13**	P	**P**	**06 15 39.5**	**-1.1**
J25K	**Salcha River,**	**98.51**	**13**	P	**P**	**06 15 40.3**	**-1.0**
J25K				IAMs_20	IAMs_20	07 03 04.8	
	comp=Z,8µm,19.0s						
POKR	**Poker Plat Res**	**98.57**	**12**	IAMs_20	IAMs_20	06 58 01.3	
	comp=Z,11µm,20.0s						
N32M	**Quiet Lake**	**98.61**	**20**	IAMs_20	IAMs_20	06 56 33.7	
	comp=Z,8µm,19.0s						
F19K	**Shaleruckik Mo**	**98.63**	**8**	P	**P**	**06 15 41.8**	**+0.1**
F19K				IAmb	IAmb	06 16 07.1	
	comp=Z,29nm,2.0s						
F19K				IAMs_20	IAMs_20	07 01 51.7	
	comp=Z,12µm,19.0s						
WMOK	**Wichita Mounta**	**98.68**	**55**	IAMs_20	IAMs_20	06 56 46.2	
	comp=Z,11µm,18.0s						
K27K	**Chicken**	**98.69**	**15**	IAMs_20	IAMs_20	06 59 39.6	
	comp=Z,12µm,19.0s						
J26L	**Joseph Creek**	**98.78**	**14**	P	**P**	**06 15 42.0**	**-0.6**
L29M	**L29M**	**98.83**	**17**	IAMs_20	IAMs_20	06 57 36.6	
	comp=Z,12µm,20.0s						
H23K	**Yukon River**	**98.84**	**11**	IAMs_20	IAMs_20	07 01 04.6	
	comp=Z,11µm,19.0s						
ELIS	**Ellis County**	**98.93**	**53**	IAMs_20	IAMs_20	06 57 00.8	
	comp=Z,14µm,19.0s						
M31M	**Drury Creek, Y**	**99.08**	**19**	IAMs_20	IAMs_20	07 01 22.1	
	comp=Z,10µm,19.0s						
F20K	**Avaraart Lake**	**99.08**	**8**	IAMs_20	IAMs_20	06 58 08.7	
	comp=Z,8µm,20.0s						
H24K	**Noodor Dome**	**99.14**	**12**	IAMs_20	IAMs_20	06 58 49.4	
	comp=Z,10µm,20.0s						
CPUP	**Villa Florida**	**99.24**	**128**	P	**Pdif**	**06 15 46.6**	**+1.0**
	comp=Z,0.7nm,1.0s,baz=90,slow=4.3,SNR=5.3						
CPUP				S	**SKSac**	**06 26 25.8**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=310,slow=20,SNR=1.2						
CPUP				PKKPbc	**PKKPbc**	**06 32 08.6**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=9.0,slow=1.1,SNR=5.7						
CPUP				LR	LR	06 55 03.4	
	comp=Z,2µm,18.7s,baz=94,slow=32						
	comp=Z,0.7nm,1.0s						
E19K	**Redstone River**	**99.29**	**8**	IAMs_20	IAMs_20	07 02 13.2	
	comp=Z,12µm,19.0s						
RDOG	**Red Dog Mine**	**99.31**	**5**	IAMs_20	IAMs_20	06 58 44.6	
	comp=Z,10µm,20.0s						
DAWY	**Dawson**	**99.33**	**16**	IAMs_20	IAMs_20	06 58 22.7	
	comp=Z,9µm,19.0s						
BILL	**Bilibino**	**99.45**	**354**	IAMs_20	IAMs_20	06 55 24.4	
	comp=Z,9µm,20.0s						
BILL	**Bilibino**	**99.45**	**354**	*i* P	**Pdif**	**06 15 45.9**	**+0.5**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
LZH	**Lanzhou**	**99.46**	**306**	*e*P	**Pdif**	**06 15 47.0**	**+0.5**
LZH				sP	sP	06 15 54.6	+3.5
LZH				SKS	**SKSac**	**06 26 20.8**	**-3.7**
LZH				S	**ScS**	**06 27 13.5**	**-5.1**
LZH				sS	sS	06 27 29.3	+5.0
LZH				pmax	pmax		
	comp=Z,14nm,1.2s						
LZH				pmax	pmax		
	comp=Z,920nm,5.5s						
LZH				LR	LR		
	comp=Z,3µm,17.9s						
LZH				LR	LR		
	comp=Z,4µm,16.5s						
LZH				LR	LR		
	comp=Z,5µm,18.9s						
F21K	**Alatna River**	**99.54**	**9**	IAMs_20	IAMs_20	07 01 57.9	
	comp=Z,8µm,19.0s						
G23K	**Bananza Creek**	**99.58**	**11**	IAMs_20	IAMs_20	06 59 51.0	
	comp=Z,10µm,19.0s						
K29M	**Barlow Dome**	**99.60**	**17**	IAMs_20	IAMs_20	06 57 51.8	
	comp=Z,12µm,20.0s						
MAYO	**Mayo, Yukon**	**99.81**	**18**	IAMs_20	IAMs_20	06 57 36.3	
	comp=Z,10µm,20.0s						
FNO	**Franklin**	**99.92**	**55**	IAMs_20	IAMs_20	06 56 60.0	
	comp=Z,14µm,18.0s						
J29N	**Klondike Camp**	**99.94**	**16**	IAMs_20	IAMs_20	06 58 42.7	
	comp=Z,12µm,19.0s						
G24K	**Hadweenzic Riv**	**99.99**	**12**	IAMs_20	IAMs_20	06 55 40.0	
	comp=Z,9µm,21.0s						
COLD	**Coldfoot**	**100.03**	**10**	IAMs_20	IAMs_20	07 00 08.8	
	comp=Z,10µm,19.0s						
C18K	**Utukok River**	**100.04**	**6**	IAMs_20	IAMs_20	06 59 19.8	
	comp=Z,14µm,19.0s						
CROK	**Carrier**	**100.15**	**54**	IAMs_20	IAMs_20	06 57 50.1	
	comp=Z,11µm,18.0s						
OK029	**Liberty Lake**	**100.16**	**54**	IAMs_20	IAMs_20	06 58 02.3	
	comp=Z,13µm,19.0s						
D19K	**Kuna River**	**100.19**	**7**	IAMs_20	IAMs_20	07 01 09.9	
	comp=Z,11µm,19.0s						
FYU	**Fort Yukon**	**100.28**	**13**	IAMs_20	IAMs_20	06 59 02.4	
	comp=Z,8µm,20.0s						
MMPY	**Sheldon Lake,**	**100.30**	**20**	IAMs_20	IAMs_20	06 57 47.4	
	comp=Z,8µm,20.0s						
I28M	**Miner Creek**	**100.38**	**15**	IAMs_20	IAMs_20	06 59 00.4	
	comp=Z,12µm,19.0s						
LAO	**LASA Array**	**100.41**	**41**	IAMs_20	IAMs_20	07 01 30.9	
	comp=Z,10µm,18.0s						
J30M	**Hart River**	**100.50**	**17**	IAMs_20	IAMs_20	06 58 30.6	
	comp=Z,13µm,20.0s						
D20K	**Etivluk River**	**100.56**	**8**	IAMs_20	IAMs_20	07 03 05.8	
	comp=Z,10µm,19.0s						
E21K	**Killik River**	**100.62**	**9**	IAMs_20	IAMs_20	06 59 18.5	
	comp=Z,9µm,20.0s						
C19K	**Lookout Ridge**	**100.63**	**6**	IAMs_20	IAMs_20	07 01 40.5	
	comp=Z,9µm,20.0s						
F24K	**Squaw Lake**	**100.67**	**11**	IAMs_20	IAMs_20	07 02 11.7	
	comp=Z,14µm,20.0s						
I29M	**Ogilvie Camp,**	**100.68**	**16**	IAMs_20	IAMs_20	06 59 17.3	
	comp=Z,7µm,20.0s						
OK052	**Battle Ridge R**	**100.71**	**55**	IAMs_20	IAMs_20	06 58 30.0	
	comp=Z,14µm,18.0s						
H27K	**Steamboat Moun**	**100.71**	**14**	IAMs_20	IAMs_20	06 59 36.0	
	comp=Z,8µm,19.0s						
E23K	**Chandalar**	**100.88**	**10**	IAMs_20	IAMs_20	07 00 54.4	
	comp=Z,11µm,19.0s						
G26K	**Porcupine Rive**	**100.89**	**13**	IAMs_20	IAMs_20	07 02 29.6	
	comp=Z,7µm,19.0s						
OK051	**E0350 and S346**	**100.95**	**54**	IAMs_20	IAMs_20	06 58 26.2	
	comp=Z,14µm,18.0s						
I30M	**Mount Dempster**	**101.02**	**16**	IAMs_20	IAMs_20	06 58 57.3	
	comp=Z,12µm,20.0s						
E24K	**Your Creek**	**101.07**	**11**	IAMs_20	IAMs_20	07 00 39.4	
	comp=Z,11µm,20.0s						
F25K	**Christian Rive**	**101.12**	**12**	IAMs_20	IAMs_20	06 59 48.6	
	comp=Z,9µm,20.0s						
G27K	**Doyon Strip**	**101.19**	**14**	IAMs_20	IAMs_20	07 01 51.5	
	comp=Z,9µm,20.0s						
D22K	**Ayikyak River**	**101.20**	**9**	IAMs_20	IAMs_20	07 01 26.8	
	comp=Z,12µm,20.0s						
IMP	**Imphal**	**101.26**	**292**	*e*P	**Pdif**	**06 15 47.0**	**-7.6**
T35A	**Sooner Cattle**	**101.38**	**54**	IAMs_20	IAMs_20	06 58 55.6	
	comp=Z,14µm,19.0s						
H29M	**Whitestone**	**101.38**	**15**	IAMs_20	IAMs_20	06 59 30.9	
	comp=Z,8µm,19.0s						
F26K	**Sheenjek River**	**101.48**	**12**	IAMs_20	IAMs_20	06 59 59.2	
	comp=Z,10µm,19.0s						
D23K	**Nanushuk River**	**101.56**	**10**	IAMs_20	IAMs_20	07 03 33.2	
	comp=Z,9µm,19.0s						
KOHI	**KOHIMA**	**101.56**	**293**	*e*P	**Pdif**	**06 15 48.0**	**-8.0**
E25K	**Arctic Village**	**101.60**	**12**	IAMs_20	IAMs_20	06 56 19.4	
	comp=Z,9µm,21.0s						
B21K	**Ikpikpuk River**	**101.66**	**8**	IAMs_20	IAMs_20	07 03 50.8	
	comp=Z,11µm,19.0s						
B20K	**Meade River**	**101.74**	**7**	IAMs_20	IAMs_20	07 01 52.0	
	comp=Z,9µm,20.0s						
AZL	**Aizawl**	**101.74**	**291**	*e*P	**Pdif**	**06 15 49.3**	**-7.5**
EPYK	**Eagle Plains**	**101.88**	**16**	IAMs_20	IAMs_20	07 00 05.1	
	comp=Z,8µm,19.0s						
YAK	**Yakutsk**	**101.96**	**337**	IAMs_20	IAMs_20	07 05 46.5	
	comp=Z,9µm,18.0s						
YAK	**Yakutsk**	**101.96**	**337**	S	**SKSac**	**06 26 33.5**	**-1.5**
	comp=Z,12nm,0.5s,baz=118,slow=1.8,SNR=1.4						
YAK	**Yakutsk**	**101.96**	**337**	*i* P	**Pdif**	**06 15 57.8**	**+1.2**
H31M	**Peel River**	**101.99**	**17**	IAMs_20	IAMs_20	06 59 37.0	
	comp=Z,12µm,20.0s						
D24K	**Happy Valley**	**102.00**	**10**	IAMs_20	IAMs_20	07 01 42.0	
	comp=Z,11µm,19.0s						
G29M	**Pine Creek**	**102.04**	**15**	IAMs_20	IAMs_20	07 00 12.2	
	comp=Z,10µm,20.0s						
Z41A	**Richland Creek**	**102.23**	**59**	IAMs_20	IAMs_20	06 57 52.4	
	comp=Z,13µm,19.0s						
K30B	**Basset**	**102.23**	**48**	IAMs_20	IAMs_20	06 57 48.6	
	comp=Z,14µm,19.0s						
F28M	**Old Crow**	**102.24**	**14**	IAMs_20	IAMs_20	07 00 24.3	
	comp=Z,15µm,20.0s						
MIAR	**Mount Ida**	**102.29**	**57**	IAMs_20	IAMs_20	06 57 46.9	
	comp=Z,8µm,19.0s						
KSU1	**Kansas State U**	**102.40**	**52**	IAMs_20	IAMs_20	07 00 03.4	
	comp=Z,14µm,18.0s						
545A	**Edgard**	**102.42**	**62**	IAMs_20	IAMs_20	06 57 10.7	
	comp=Z,11µm,20.0s						
B22K	**Teshekpuk Lake**	**102.48**	**8**	IAMs_20	IAMs_20	07 02 32.5	
	comp=Z,9µm,19.0s						
G30M	**tAoh Zraii Nji**	**102.50**	**15**	IAMs_20	IAMs_20	07 00 24.4	
	comp=Z,8µm,19.0s						
BGNE	**Belgrade**	**102.53**	**49**	IAMs_20	IAMs_20	07 02 53.7	
	comp=Z,10µm,18.0s						
D25K	**Kavik River**	**102.54**	**11**	IAMs_20	IAMs_20	07 03 53.2	
	comp=Z,9µm,20.0s						
C24K	**Franklin Bluff**	**102.54**	**10**	IAMs_20	IAMs_20	07 02 00.1	
	comp=Z,9µm,19.0s						
ZIRO	**ZIRO**	**102.62**	**295**	*e*P	**Pdif**	**06 15 53.1**	**-7.6**
TBTG	**Tabatinga, AM**	**102.74**	**103**	IAMs_20	IAMs_20	06 56 19.1	
	comp=Z,9µm,19.0s						
ROCAM	**Rodrigues Isla**	**102.88**	**237**	IAMs_20	IAMs_20	07 00 32.6	
	comp=Z,8µm,19.0s						
G31M	**Satah River**	**102.91**	**16**	IAMs_20	IAMs_20	07 00 35.2	
	comp=Z,12µm,20.0s						
AGT	**Agartala**	**102.97**	**290**	*e*P	**Pdif**	**06 15 54.4**	**-7.7**
143A	**Socs Landing,**	**102.99**	**60**	IAMs_20	IAMs_20	06 56 55.8	
	comp=Z,9µm,20.0s						
TEZP	**TEZPUR**	**103.02**	**293**	*e*P	**Pdif**	**06 15 54.7**	**-7.5**
F30M	**Barrier River**	**103.11**	**15**	IAMs_20	IAMs_20	07 00 54.5	
	comp=Z,8µm,20.0s						
E28M	**Babbage River**	**103.14**	**13**	IAMs_20	IAMs_20	07 03 31.3	
	comp=Z,10µm,19.0s						
C27K	**Jago River**	**103.25**	**12**	IAMs_20	IAMs_20	07 06 02.0	
	comp=Z,9µm,19.0s						
E29M	**Blow River**	**103.30**	**14**	IAMs_20	IAMs_20	07 01 05.4	
	comp=Z,13µm,19.0s						
VBMS	**Vicksburg**	**103.42**	**60**	IAMs_20	IAMs_20	06 58 21.3	
	comp=Z,8µm,20.0s						
F31M	**Tsiigehtchic**	**103.45**	**16**	IAMs_20	IAMs_20	07 00 52.4	
	comp=Z,9µm,19.0s						
E28A	**Huff**	**103.56**	**44**	IAMs_20	IAMs_20	06 58 40.5	
	comp=Z,10µm,19.0s						
PALK	**Pallekele**	**103.88**	**270**	IAMs_20	IAMs_20	07 01 32.9	
	comp=Z,14µm,20.0s						
SONM	**Songino Array**	**103.90**	**318**	Pdiff	**Pdif**	**06 16 06.2**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=98,slow=6.0,SNR=2.0						
SONM				PP	**PP**	**06 20 23.2**	**-0.4**
	comp=Z,1.0nm,0.9s,baz=120,slow=5.7,SNR=2.2						
SONM				PKKPbc	**PKKPbc**	**06 31 56.9**	**-0.2**
	comp=Z,2.2nm,1.1s,baz=223,slow=3.2,SNR=9.1						
L34A	**Svendsen Farm,**	**103.96**	**49**	IAMs_20	IAMs_20	07 03 37.5	
	comp=Z,11µm,18.0s						
INK	**Inuvik**	**104.18**	**15**	IAMs_20	IAMs_20	07 01 25.9	
	comp=Z,10µm,19.0s						
AQDB	**Aquidauana**	**104.20**	**125**	IAMs_20	IAMs_20	06 59 54.6	
	comp=Z,7µm,18.0s						
TAWA	**Tawang**	**104.21**	**294**	*e*P	**Pdif**	**06 16 00.4**	**-7.6**
P38A	**Dawn**	**104.74**	**53**	IAMs_20	IAMs_20	07 00 50.5	
	comp=Z,12µm,18.0s						
TRCB	**Terra Rica**	**104.77**	**128**	IAMs_20	IAMs_20	07 02 27.4	
	comp=Z,13µm,18.0s						
Y45A	**Yeager Farm, C**	**104.91**	**59**	IAMs_20	IAMs_20	06 59 48.6	
	comp=Z,9µm,19.0s						
Z47A	**Carrollton**	**105.71**	**61**	IAMs_20	IAMs_20	06 59 23.7	
	comp=Z,9µm,19.0s						
P40A	**Paris**	**105.71**	**53**	IAMs_20	IAMs_20	07 00 25.3	
	comp=Z,7µm,20.0s						
YKA	**Yellowknife Ar**	**105.73**	**25**	PKiKP	**PKiKP**	**06 20 25.6**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=273,slow=1.7,SNR=5.7						
YKA				PKKPbc	**PKKPbc**	**06 31 51.8**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=33,slow=3.3,SNR=6.3						
F33A	**5 Mile Ranch,**	**105.86**	**46**	IAMs_20	IAMs_20	07 05 39.6	
	comp=Z,13µm,18.0s						
GOMU	**GeErMu**	**105.90**	**303**	Pdif	**Pdif**	**06 16 18.3**	**+2.9**
GOMU				SS	SS	06 35 43.1	+4.1
GOMU				AMB	AMB		
	comp=Z,1µm,7.5s						
GOMU				LR	LR		
	comp=Z,3µm,18.2s						
GOMU				LR	LR		
	comp=Z,4µm,18.6s						
GOMU				LR	LR		
	comp=Z,5µm,18.9s						
HALT	**Halls**	**105.99**	**58**	IAMs_20	IAMs_20	07 03 19.9	
	comp=Z,10µm,18.0s						
SCIA	**State Center**	**106.01**	**51**	IAMs_20	IAMs_20	07 04 29.9	
	comp=Z,12µm,18.0s						
FVM	**French Village**	**106.14**	**55**	IAMs_20	IAMs_20	07 04 25.8	
	comp=Z,13µm,18.0s						
LRAL	**Lakeview Retre**	**106.44**	**61**	IAMs_20	IAMs_20	07 01 42.1	
	comp=Z,9µm,19.0s						
GTK	**Tadong**	**106.67**	**292**	*e*P	**Pdif**	**06 16 10.8**	**-7.8**
I37A	**Lemond, Waseca**	**106.85**	**49**	IAMs_20	IAMs_20	07 04 00.9	
	comp=Z,13µm,18.0s						
FFC	**Flin Flon**	**106.96**	**36**	IAMs_20	IAMs_20	06 59 19.7	
	comp=Z,12µm,20.0s						
N41A	**Harden Midland**	**107.06**	**53**	IAMs_20	IAMs_20	07 04 51.9	
	comp=Z,11µm,18.0s						
Y49A	**Blount Mountai**	**107.24**	**61**	IAMs_20	IAMs_20	07 00 58.3	
	comp=Z,8µm,19.0s						
C36M	**Paulatuk**	**107.26**	**17**	IAMs_20	IAMs_20	07 02 15.2	
	comp=Z,8µm,19.0s						
AGMN	**Agassiz Nation**	**107.26**	**44**	IAMs_20	IAMs_20	07 01 20.5	
	comp=Z,11µm,19.0s						
L40A	**Anamosa**	**107.41**	**51**	IAMs_20	IAMs_20	07 02 42.0	
	comp=Z,12µm,18.0s						
MTDJ	**Mount Denham**	**107.41**	**79**	IAMs_20	IAMs_20	06 55 37.8	
	comp=Z,9µm,21.0s						
P43A	**Skaggs, Pawnee**	**107.51**	**54**	IAMs_20	IAMs_20	07 01 52.9	
	comp=Z,13µm,18.0s						
Q44A	**Meyer Farm, Va**	**107.54**	**55**	IAMs_20	IAMs_20	07 04 53.8	
	comp=Z,13µm,18.0s						
SPB	**Sao Paulo**	**107.61**	**132**	IAMs_20	IAMs_20	07 01 03.5	
	comp=Z,8µm,19.0s						
SPMN	**Marine on St.**	**107.77**	**48**	IAMs_20	IAMs_20	07 05 47.1	
	comp=Z,11µm,18.0s						
HDIL	**Hopedale**	**108.06**	**53**	IAMs_20	IAMs_20	07 03 50.5	
	comp=Z,8µm,18.0s						
ULM	**Lac du Bonnet**	**108.14**	**42**	PKKPbc	PKKPbc	06 31 45.1	+1.3
	comp=Z,1.3nm,0.7s,baz=352,slow=7.8,SNR=2.0						
ULM				PKKPab	PKKPab	06 31 55.5	+1.3
	comp=Z,3.2nm,1.0s,baz=95,slow=5.0,SNR=3.1						
CLTN	**Cedars of Leba**	**108.26**	**59**	IAMs_20	IAMs_20	07 03 14.2	
	comp=Z,8µm,18.0s						
VAO	**Valinhos**	**108.34**	**132**	IAMs_20	IAMs_20	07 02 03.5	
	comp=Z,9µm,19.0s						
JFWS	**Jewell Farm**	**108.43**	**51**	IAMs_20	IAMs_20	07 03 12.9	
	comp=Z,13µm,18.0s						
I40A	**Norwalk**	**108.60**	**50**	IAMs_20	IAMs_20	07 04 32.3	
	comp=Z,9µm,18.0s						
A36M	**Sachs Harbour**	**108.82**	**15**	IAMs_20	IAMs_20	07 04 16.3	
	comp=Z,9µm,20.0s						
U49A	**Red Boiling Sp**	**108.84**	**58**	IAMs_20	IAMs_20	07 01 44.6	
	comp=Z,9µm,19.0s						
SDV	**Santo Domingo**	**108.88**	**91**	IAMs_20	IAMs_20	07 01 04.0	
	comp=Z,8µm,19.0s						
Y52A	**Lilburn**	**109.01**	**61**	IAMs_20	IAMs_20	07 01 21.1	
	comp=Z,7µm,19.0s						
CHIV	**Chivirico**	**109.15**	**78**	IAMs_20	IAMs_20	07 03 43.8	
	comp=Z,2µm,18.0s						
GOGA	**Godfrey**	**109.27**	**62**	IAMs_20	IAMs_20	07 07 34.1	
	comp=Z,6µm,18.0s						
M44A	**Midewin, Midew**	**109.27**	**53**	IAMs_20	IAMs_20	07 04 58.4	
	comp=Z,9µm,19.0s						
G40A	**Rib Lake**	**109.45**	**48**	IAMs_20	IAMs_20	07 05 25.7	
	comp=Z,11µm,18.0s						
HQIL	**Hanson Quary C**	**109.57**	**53**	IAMs_20	IAMs_20	07 06 45.3	
	comp=Z,11µm,18.0s						
I42A	**Draeger Farm,**	**109.72**	**50**	IAMs_20	IAMs_20	07 07 11.0	
	comp=Z,8µm,18.0s						
T50A	**Nancy**	**109.74**	**58**	IAMs_20	IAMs_20	07 05 46.3	
	comp=Z,6µm,18.0s						
EYMN	**Ely**	**109.75**	**45**	IAMs_20	IAMs_20	07 07 30.3	
	comp=Z,13µm,18.0s						
FOMA	**Nahampoana Res**	**110.01**	**223**	IAMs_20	IAMs_20	07 02 04.6	
	comp=Z,10µm,18.0s						
HMDM	**Hanimaadhoo**	**110.09**	**266**	IAMs_20	IAMs_20	07 06 27.4	
	comp=Z,14µm,20.0s						
BG3	**Lake Jocassee**	**110.33**	**61**	IAMs_20	IAMs_20	07 06 55.0	
	comp=Z,12µm,18.0s						
HODGE	**Hodges**	**110.52**	**62**	IAMs_20	IAMs_20	07 05 49.3	
	comp=Z,7µm,18.0s						
HYB	**Hyderabad**	**110.56**	**278**	*e*PKiKP	**PKiKP**	**06 20 36.3**	**-0.3**
HYB				⇓*e*sPKi		06 20 42.0	
HYB				*e*SKSac	**SKSac**	**06 27 14.6**	**-0.7**
HYB				*e*PS	**PS**	**06 30 42.3**	**-0.9**
HYB				IVMs_BB	IVMs_BB	07 08 44.5	
	comp=Z,4µm,16.6s						
NMDO	**Nuevo Mundo**	**110.61**	**78**	IAMs_20	IAMs_20	06 58 30.5	
	comp=Z,4µm,21.0s						
H43A	**Windswept, Lux**	**110.70**	**50**	IAMs_20	IAMs_20	07 05 20.1	
	comp=Z,11µm,18.0s						
L46A	**Eue Claire**	**110.72**	**53**	IAMs_20	IAMs_20	07 05 48.8	
	comp=Z,11µm,19.0s						
S51A	**Beattyville**	**110.90**	**58**	IAMs_20	IAMs_20	07 06 11.9	
	comp=Z,13µm,18.0s						
MACA	**Manacapuru-AM**	**110.96**	**107**	IAMs_20	IAMs_20	07 03 54.8	
	comp=Z,10µm,18.0s						
F42A	**Maple Grove Fa**	**110.97**	**49**	IAMs_20	IAMs_20	07 07 38.1	
	comp=Z,12µm,18.0s						
PAULI	**Pauline**	**111.09**	**61**	IAMs_20	IAMs_20	07 07 24.4	
	comp=Z,9µm,18.0s						
JSC	**Jenkinsville**	**111.30**	**62**	IAMs_20	IAMs_20	07 02 50.9	
	comp=Z,7µm,20.0s						
I45A	**Fountain**	**111.55**	**51**	IAMs_20	IAMs_20	07 06 09.6	
	comp=Z,11µm,18.0s						
NHSC	**New Hope**	**111.66**	**64**	IAMs_20	IAMs_20	07 09 16.5	
	comp=Z,7µm,18.0s						
Y57A	**Sumter**	**111.86**	**63**	IAMs_20	IAMs_20	07 03 21.6	
	comp=Z,8µm,20.0s						
BIRD	**Birdtown, Kers**	**112.05**	**62**	IAMs_20	IAMs_20	07 08 00.7	
	comp=Z,7µm,18.0s						
J47A	**Sunmer**	**112.20**	**52**	IAMs_20	IAMs_20	07 08 25.8	
	comp=Z,11µm,18.0s						
GRHM	**Grahamstown, E**	**112.27**	**201**	IAMs_20	IAMs_20	07 05 45.5	
	comp=Z,9µm,18.0s						
Y58A	**Scranton**	**112.37**	**63**	IAMs_20	IAMs_20	07 05 31.2	
	comp=Z,7µm,18.0s						
VOI	**Vohitsoka**	**112.46**	**224**	IAMs_20	IAMs_20	07 00 52.6	
	comp=Z,7µm,20.0s						
W57A	**Gilead**	**112.60**	**62**	IAMs_20	IAMs_20	07 08 11.3	
	comp=Z,11µm,18.0s						
S54A	**Dingess, Beckl**	**112.63**	**59**	IAMs_20	IAMs_20	07 07 19.8	
	comp=Z,12µm,18.0s						
FCC	**Fort Churchill**	**112.64**	**34**	IAMs_20	IAMs_20	07 13 25.7	
	comp=Z,11µm,18.0s						
X58A	**Rowland**	**112.87**	**62**	IAMs_20	IAMs_20	07 08 13.4	
	comp=Z,7µm,18.0s						
Y60A	**Bolivia**	**113.52**	**63**	IAMs_20	IAMs_20	07 06 15.7	
	comp=Z,7µm,18.0s						
E46A	**Sault Ste Mari**	**113.67**	**49**	IAMs_20	IAMs_20	07 06 19.6	
	comp=Z,11µm,18.0s						
W59A	**Clinton**	**113.78**	**62**	IAMs_20	IAMs_20	07 08 50.6	
	comp=Z,10µm,18.0s						
WMQ	**Urumqi**	**113.97**	**308**	*e*PKP	**PKiKP**	**06 20 44.1**	**+1.7**
WMQ				LR	LR		
	comp=Z,3µm,18.1s						
WMQ				LR	LR		
	comp=Z,3µm,18.1s						
WMQ				LR	LR		
	comp=Z,3µm,19.3s						
S57A	**Dark Hollow, R**	**114.35**	**59**	IAMs_20	IAMs_20	07 05 54.4	
	comp=Z,10µm,18.0s						
ABPO	**Ambohimpanom**	**114.36**	**227**	IAMs_20	IAMs_20	07 08 37.2	
	comp=Z,7µm,19.0s						
SUR	**Sutherland**	**114.68**	**197**	IAMs_20	IAMs_20	07 04 20.4	
	comp=Z,10µm,21.0s						
ERPA	**Erie**	**115.13**	**55**	IAMs_20	IAMs_20	07 07 32.5	
	comp=Z,8µm,18.0s						
R58B	**Mineral**	**115.22**	**59**	IAMs_20	IAMs_20	07 06 21.4	
	comp=Z,12µm,19.0s						
POGA	**Pongola**	**115.70**	**209**	IAMs_20	IAMs_20	07 05 20.7	
	comp=Z,8µm,20.0s						
SDMD	**Soldier’s Deli**	**116.47**	**58**	IAMs_20	IAMs_20	07 09 16.5	
	comp=Z,7µm,18.0s						
MEDO	**Medina**	**116.54**	**54**	IAMs_20	IAMs_20	07 10 37.9	
	comp=Z,10µm,18.0s						
BOSA	**Boshof**	**116.94**	**202**	PKP	**PKiKP**	**06 20 50.3**	**+1.5**
	comp=Z,5.6nm,1.0s,baz=202,slow=4.0,SNR=5.1						
J55A	**Hilton**	**117.01**	**54**	IAMs_20	IAMs_20	07 11 01.4	
	comp=Z,11µm,18.0s						
ZSN	**Zaisan**	**117.02**	**311**	*e*PKIKP	**PKPdf**	**06 20 47.9**	**-0.1**
ZSN	**Zaisan**	**117.02**	**311**	*e*PKP	**PKPdf**	**06 20 47.9**	**-0.1**
R61A	**Willards**	**117.22**	**60**	IAMs_20	IAMs_20	07 09 17.6	
	comp=Z,11µm,18.0s						
WUPA	**West Chester U**	**117.54**	**58**	IAMs_20	IAMs_20	07 09 57.9	
	comp=Z,9µm,18.0s						
RES	**Resolute Bay**	**117.63**	**17**	IAMs_20	IAMs_20	07 07 09.3	
	comp=Z,8µm,20.0s						
PECO	**Prince Edward**	**117.79**	**53**	IAMs_20	IAMs_20	07 11 50.8	
	comp=Z,10µm,18.0s						
P61A	**Hammonton**	**118.06**	**59**	IAMs_20	IAMs_20	07 10 50.5	
	comp=Z,11µm,18.0s						
MSEY	**Mahe Island**	**118.37**	**245**	IAMs_20	IAMs_20	07 06 48.4	
	comp=Z,8µm,18.0s						
MK31	**Makanchi Array**	**118.52**	**310**	*i* PKIKP	**PKPdf**	**06 20 49.6**	**-1.4**
MKAR	**Makanchi Array**	**118.52**	**310**		**PKPdf**	**06 20 49.5**	**-1.5**
MKAR	**Makanchi Array**	**118.52**	**310**	PKP	**PKPdf**	**06 20 50.0**	**-1.0**
	comp=Z,1.6nm,0.7s,baz=201,slow=0.4,SNR=11						
MKAR				PKKPbc	**PKKPab**	**06 31 09.8**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=308,slow=2.9,SNR=5.2						
MAKZ	**Makanchi**	**118.73**	**310**		**PKPdf**	**06 20 49.9**	**-1.5**

MAKZ	Makanchi	118.73	310	PKIKP	PKPdf	06 20 49.9	-1.5
MAKZ				MLR	MLR		
	comp=Z,5µm,21.0s						
ZAA0	Zalesovo Array	118.79	318	PKPdf	PKiKP	06 20 52.4	+1.1
ZALV	Zalesovo Beam	118.79	318	PKPdf	PKPdf	06 20 51.0	-0.2
ZALV	Zalesovo Beam	118.79	318	PKP	PKPdf	06 20 50.4	-0.8
	comp=Z,1.4nm,0.5s,baz=90,slow=6.1,SNR=6.7						
WBO	Williamsburg	119.27	53	IAMs_20	IAMs_20	07 09 36.0	
	comp=Z,11µm,18.0s						
N62A	Caumsett State	119.40	58	IAMs_20	IAMs_20	07 09 04.0	
	comp=Z,9µm,19.0s						
SHLS	Shalkode	119.45	305	*e*PKIKP	PKPdf	06 20 51.9	-1.1
SHLS	Shalkode	119.45	305	*e*PKP	PKPdf	06 20 52.0	-1.1
UZB	Uzynbulak	119.76	305	*e*PKIKP	PKPdf	06 20 53.2	-0.4
UZB	Uzynbulak	119.76	305	*e*PKP	PKPdf	06 20 53.2	-0.4
ILAM	Ilet Lapin Mar	120.07	90	IAMs_20	IAMs_20	07 12 37.4	
	comp=Z,6µm,18.0s						
TRQ	Mont Tremblant	120.08	51	IAMs_20	IAMs_20	07 09 59.2	
	comp=Z,7µm,19.0s						
KPKS	Kokpek	120.08	305	*e*PKIKP	PKPdf	06 20 53.7	-0.5
KPKS	Kokpek	120.08	305	*e*PKP	PKPdf	06 20 53.7	-0.5
SATY	Saty	120.17	305	*e*PKIKP	PKPdf	06 20 53.9	-0.5
SATY	Saty	120.17	305	*e*PKP	PKPdf	06 20 54.0	-0.5
FRNY	Flat Rock	120.38	53	IAMs_20	IAMs_20	07 13 45.5	
	comp=Z,10µm,18.0s						
MNTQ	Montreal, Queb	120.53	52	IAMs_20	IAMs_20	07 13 32.2	
	comp=Z,10µm,18.0s						
ILON	Igloolik, Nuna	120.55	24		PKiKP	06 20 55.1	+0.9
ILON				IAMs_20	IAMs_20	07 14 29.1	
	comp=Z,10µm,18.0s						
TDK	Taldyqorghan	120.67	307	*e*PKIKP	PKPdf	06 20 54.9	-0.3
TDK	Taldyqorghan	120.67	307	*e*PKP	PKPdf	06 20 54.9	-0.3
SEM	Semipalatinsk	120.72	313	*e*PKIKP	PKPdf	06 20 54.9	-0.4
SEM	Semipalatinsk	120.72	313	*e*PKP	PKPdf	06 20 54.9	-0.4
ARXS	Arharly	120.87	306	*e*PKIKP	PKiKP	06 20 57.0	+1.2
KSH	Kashi	120.96	300	PKP	PKiKP	06 20 58.4	+2.2
KSH				PP	PP	06 22 27.5	+1.8
KSH				AMB	AMB		
	comp=Z,730nm,17.2s						
KSH				LR	LR		
	comp=Z,4µm,19.2s						
KSH				LR	LR		
	comp=Z,2µm,22.0s						
KSH				LR	LR		
	comp=Z,4µm,20.3s						
MDOK	Medeo	121.15	305	*e*PKIKP	PKPdf	06 20 55.4	-0.9
MDOK	Medeo	121.15	305	*e*PKP	PKPdf	06 20 55.5	-0.9
KURK	Kurchatov	121.80	313		PKPdf	06 20 56.3	-0.8
KURK	Kurchatov	121.80	313*c*	*i*PKIKP	PKPdf	06 20 56.8	-0.3
KURK				pmax	pmax		
	comp=Z,23nm,1.7s						
KUU	Kurty	121.83	305	*e*PKIKP	PKPdf	06 20 57.0	-0.4
KUU	Kurty	121.83	305	*e*PKP	PKPdf	06 20 57.0	-0.4
KURBB	Kurchatov Arra	121.84	313	PKP	PKPdf	06 20 56.0	-1.2
	comp=Z,4.0nm,0.7s,baz=106,slow=1.9,SNR=29						
KDWAN	Kaudwane	121.97	204	PKPdf	PKPdf	06 20 57.6	-1.0
POIN	Pond Inlet	122.05	20		PKiKP	06 20 59.5	+2.4
AAK	Ala-Archa	122.84	303		PKiKP	06 21 00.4	+0.6
AAK	Ala-Archa	122.84	303*c*	*i*PKIKP	PKiKP	06 21 00.4	+0.6
AAK				pmax	pmax		
	comp=Z,14nm,1.3s						
SGDS	Sogindy	122.94	304	*e*PKP	PKPdf	06 20 59.1	-0.5
LMQ	La Malbaie	123.20	51	IAMs_20	IAMs_20	07 18 53.7	
	comp=Z,8µm,18.0s						
PKME	Peaks-Kenny Pk	123.44	54	IAMs_20	IAMs_20	07 12 08.5	
	comp=Z,11µm,18.0s						
E62A	Clayton Lake	123.56	52	IAMs_20	IAMs_20	07 12 25.4	
	comp=Z,9µm,18.0s						
BTLS	Baital	123.69	306	*e*PKIKP	PKPdf	06 21 00.7	-0.2
BTLS	Baital	123.69	306	*e*PKP	PKPdf	06 21 00.7	-0.2
D62A	Allapoint, All	123.96	51	IAMs_20	IAMs_20	07 13 32.0	
	comp=Z,10µm,19.0s						
TULEG	Thule	124.18	16	IAMs_20	IAMs_20	07 17 18.3	
	comp=Z,5µm,19.0s						
G65A	Princeton	124.63	54	IAMs_20	IAMs_20	07 13 29.9	
	comp=Z,10µm,18.0s						
KBU	Kabul Universi	124.83	293	PKP	PKPdf	06 21 03.1	-0.6
KBL	Kabul	124.90	293		PKPdf	06 21 03.9	0.0
KBL	Kabul	124.90	293	PKIKP	PKPdf	06 21 03.9	0.0
GRTLG	Ghanzi	124.99	201		PKiKP	06 21 05.1	+0.3
GAR	Garm	125.07	298	IAMs_20	IAMs_20	07 24 30.1	
	comp=Z,9µm,20.0s						
DZA	Taraz	125.17	303	*e*PKIKP	PKPdf	06 21 03.5	-0.4
DZA	Taraz	125.17	303	*e*PKP	PKPdf	06 21 03.5	-0.4
KUQ	Kuujjuuaa	125.61	38	IAMs_20	IAMs_20	07 14 22.2	
	comp=Z,7µm,19.0s						
KK31	Karatay Array	125.80	303	*i* PKIKP	PKPdf	06 21 04.0	-1.1
KKAR	Karatay Array	125.80	303		PKPdf	06 21 04.2	-0.9
KKAR	Karatay Array	125.80	303	PKIKP	PKPdf	06 21 04.2	-0.9
IUG	Iuzhnay	125.97	302	*e*PKIKP	PKPdf	06 21 05.0	-0.5
IUG	Iuzhnay	125.97	302	*e*PKP	PKPdf	06 21 05.0	-0.5
BATG	Bathurst New B	126.01	52	IAMs_20	IAMs_20	07 17 06.1	
	comp=Z,10µm,18.0s						
CHM	Chimkent	126.31	302	*e*PKIKP	PKPdf	06 21 05.6	-0.5
CHM	Chimkent	126.31	302	*e*PKP	PKPdf	06 21 05.6	-0.5
SCHQ	Schefferville	126.31	42	PKP	PKPdf	06 21 05.1	-0.5
	comp=Z,11nm,1.1s,baz=350,slow=0.7,SNR=5.2						
BVAR	Borovoye Array	127.16	315	PKP	PKPdf	06 21 07.0	-0.3
	comp=Z,4.5nm,0.7s,baz=103,slow=3.2,SNR=13						
BVAR	Borovoye Array	127.16	315	PKIKP	PKPdf	06 21 07.0	-0.3
BRVK	Borovoye	127.22	315		PKiKP	06 21 08.2	+0.2
BRVK	Borovoye	127.22	315	IAMs_20	IAMs_20	07 26 19.8	
	comp=Z,5µm,19.0s						
BRVK	Borovoye	127.22	315*c*	*i*PKIKP	PKPdf	06 21 06.8	-0.6
BRVK				pmax	pmax		
	comp=Z,28nm,1.7s						
KULLO	Kullorsuaq	127.50	17	*i* P	PKPdf	06 21 06.8	-0.5
NEEM	North Greenlan	127.65	13	*i* P	PKPdf	06 21 08.0	0.0
UPNV	Upernavik	128.43	19	*i* P	PKPdf	06 21 07.9	-1.2
NOR	Nord	128.73	4	*i* P	PKPdf	06 21 08.3	-1.3
NUUG	Nuugaatsiaq	129.73	20	*i* P	PKPdf	06 21 10.3	-1.3
ILULI	Ilulissat	131.28	23	*i* P	PKPdf	06 21 13.8	-0.8
SFJD	Kangerlussuaq	132.29	25	*i* P	PKPdf	06 21 16.0	-0.6
SPITS	Spitsbergen Ar	132.29	356	PKP	PKPdf	06 21 16.9	+0.5
	comp=Z,9.9nm,0.8s,baz=140,slow=4.4,SNR=3.7						
KIBK	Kibwezi	132.72	232	PKP	PKPdf	06 21 19.2	0.0
KIBK	Kibwezi	132.72	232	IAMs_20	IAMs_20	07 16 57.7	
	comp=Z,6µm,19.0s						
NUUK	Nuuk	132.82	29	*i* P	PKPdf	06 21 18.3	+0.6
DAG	Danmarks Havn	133.04	7	PKP	PKPdf	06 21 18.4	+0.6
DAG	Danmarks Havn	133.04	7	*i* P	PKPdf	06 21 17.2	-0.6
SUMG	Summit	133.10	16	PKP	PKPdf	06 21 18.3	-0.3
SUMG	Summit	133.10	16	IAMs_20	IAMs_20	07 21 49.0	
	comp=Z,7µm,19.0s						
SUMG	Summit	133.10	16	*i* P	PKPdf	06 21 18.2	-0.3
HSPB	Hornsund (broa	133.48	356	*e*PP	PP	06 23 41.7	-5.2
AB31	Akbulak array	133.66	310	*i* PKIKP	PKPdf	06 21 20.3	+0.6
ABKAR	Akbulak array	133.66	310		PKPdf	06 21 18.8	-0.9
ARTI	Arti	133.95	320		PKPdf	06 21 20.8	+0.7
ARTI	Arti	133.95	320	*i* PKIKP	PKPdf	06 21 20.6	+0.5
ARTI						06 23 48.8	
KMBO	Kilima Mbogo	134.14	232	IAMs_20	IAMs_20	07 17 57.7	
	comp=Z,9µm,19.0s						
ICESG	Greenland Ices	134.92	20	*i* P	PKPdf	06 21 22.4	+0.4
DBG	Daneborg	135.08	9	*i* P	PKPdf	06 21 20.3	-1.4
IVI	Ivigtut	135.32	32	IAMs_20	IAMs_20	07 18 32.1	
	comp=Z,9µm,19.0s						
IVI	Ivigtut	135.32	32	*i* P	PKPdf	06 21 23.1	+0.7
NRS	Narsarsuaq	136.58	32	IAMs_20	IAMs_20	07 18 10.5	
	comp=Z,9µm,20.0s						
NRS	Narsarsuaq	136.58	32	*i* P	PKPdf	06 21 25.0	+0.2
ANGG	Ammassalik, Gr	137.56	23	*i* P	PKiKP	06 21 27.6	-0.8
SOEG	Soedalen	137.81	18	*i* P	PKPdf	06 21 27.1	+0.2
ASCN	Ascension	138.05	154	IAMs_20	IAMs_20	07 24 40.0	
	comp=Z,5µm,20.0s						
KIRV	Kirov	138.07	325	*i* PKIKP	PKiKP	06 21 29.0	-0.6
SCO	Scoresbysund	138.14	12	IAMs_20	IAMs_20	07 28 20.8	
	comp=Z,8µm,18.0s						
SCO	Scoresbysund	138.14	12	*i* P	PKPdf	06 21 27.8	+0.4
LVZ	Lovozero	138.53	342	IAMs_20	IAMs_20	07 30 29.9	
	comp=Z,5µm,18.0s						
LODK	Lodwar	138.71	235	IAMs_20	IAMs_20	07 21 26.0	
	comp=Z,4µm,19.0s						
APA	Apatity	139.10	343	⇓*i*PKIKP	PKiKP	06 21 37.2	+5.7
APA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ARCES	ARCESS Array B	139.24	348	PKhKP	PKPpre	06 21 23.5	
	comp=Z,3.8nm,0.7s,baz=50,slow=2.1,SNR=6.6						
BELG	Belogornoye	140.94	317	PKhKP	PKPpre	06 21 26.4	
	comp=Z,11nm,0.7s,baz=61,slow=3.8,SNR=3.9						
BELG	Belogornoye	140.94	317*c*	*i*PKIKP	PKPdf	06 21 30.4	-2.7
BELG				*i*		06 21 35.8	
BELG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
RAYN	Ar Rayn	141.32	270	IAMs_20	IAMs_20	07 24 27.9	
	comp=Z,6µm,19.0s						
KLMR	Klimovskoe	141.49	332	*e*PKIKP	PKPdf	06 21 32.7	-1.1
KLMR				SS	SS	06 43 09.7	+3.1
KLMR				SSS	SSS	06 48 23.6	
KLMR				pmax	pmax		
	comp=Z,53nm,1.1s						
KLMR				MLR	MLR		
	comp=Z,6µm,20.0s						
AKT	Akhty	142.47	299	*e*PKHKP	PKPpre	06 21 29.4	
AKT				*e*		06 24 38.8	
AKT				*e*PPP	PPP	06 27 50.5	
AKT				pmax	pmax		
	comp=Z,29nm,0.9s						
MAK	Makhachkala	142.58	301	*e*PKHKP	PKPpre	06 21 31.4	
MAK				*e*PPP	PPP	06 27 51.7	
MAK				*e*		06 28 47.6	
MAK				*e*SS	SS	06 43 10.2	-11
MAK				*e*SSS	SSS	06 48 32.2	
MAK				pmax	pmax		
	comp=Z,29nm,0.3s						
GNI	Garni	144.78	297	PKPdf	PKPab	06 21 39.4	-0.1
GNI	Garni	144.78	297	PKP	PKPab	06 21 39.6	+0.2
	comp=Z,17nm,0.7s,baz=106,slow=3.7,SNR=18						
GNI	Garni	144.78	297*c*	*i*PKIKP	PKPab	06 21 39.0	-0.5
VRH	Novokhopyorsk	144.80	316	*e*PKIKP	PKPab	06 21 38.1	-0.8
VRH				pmax	pmax		
	comp=Z,20nm,0.9s						
MOS	Moscow	145.08	325	*i* PKIKP	PKPbc	06 21 37.6	-2.1
MOS				pmax	pmax		
	comp=Z,91nm,1.0s						
MOS				MLR	MLR		
	comp=Z,4µm,21.0s						
GOF	Gofitskoye	145.53	306*c*	*i*PKIKP	PKPdf	06 21 40.5	-0.9
FIA1	FINESS Array S	145.84	340		PKPdf	06 21 41.0	-0.4
KBZ	Khabaz	145.84	303	PKPbc	PKPdf	06 21 42.2	+0.2
	comp=Z,26nm,0.9s,baz=82,slow=4.0,SNR=26						
KBZ	Khabaz	145.84	303*c*	*i*PKP2	PKPdf	06 21 42.4	+0.4
KBZ				pmax	pmax		
	comp=Z,27nm,0.9s						
FINES	FINESS Array B	145.84	340		PKPdf	06 21 40.9	-0.5
FINES	FINESS Array B	145.84	340	PKPbc	PKPdf	06 21 41.0	-0.4
	comp=Z,44nm,0.7s,baz=45,slow=4.0,SNR=149						
FINES	FINESS Array B	145.84	340	PKP2	PKPdf	06 21 40.9	-0.5
LPSR	Galich'ya Gora	145.87	320	*e*PKP2	PKPdf	06 21 41.5	-0.2
LPSR				pmax	pmax		
	comp=Z,100nm,0.8s						
LPSR				MLR	MLR		
	comp=Z,4µm,19.0s						
OBN	Obninsk	145.92	325		PKPdf	06 21 41.8	+0.1
OBN				IAMs_20	IAMs_20	07 26 51.3	
	comp=Z,4µm,20.0s						
OBN	Obninsk	145.92	325	PKPbc	PKPdf	06 21 41.7	0.0
	comp=Z,82nm,0.7s,baz=358,slow=4.7,SNR=20						
OBN	Obninsk	145.92	325*c*	*i*PKP2	PKPdf	06 21 41.7	0.0
OBN				pmax	pmax		
	comp=Z,152nm,1.0s						
KVAR	Kislovodsk Arr	145.95	304	PKPbc	PKPdf	06 21 42.4	0.0
	comp=Z,8.6nm,0.7s,baz=93,slow=21,SNR=3.4						
KIV	Kislovodsk	145.96	304		PKPdf	06 21 42.7	+0.4
KIV				IAMs_20	IAMs_20	07 40 05.5	
	comp=Z,6µm,18.0s						
KIV	Kislovodsk	145.96	304	⇓P	PKPab	06 21 44.2	+0.6
KIV	Kislovodsk	145.96	304	*i* PKP2	PKPdf	06 21 42.5	+0.2
KIV				*e*		06 24 59.9	
KIV				*e*SS	SS	06 43 50.9	-8.9
KIV				pmax	pmax		
	comp=Z,52nm,1.0s						
KARS	Kars	146.03	298		PKPdf	06 21 42.7	+0.1
KARS	Kars	146.03	298	PKP2	PKPdf	06 21 42.7	+0.1
VORR	Voronezh	146.09	318	*e*PKIKP	PKPdf	06 21 41.2	-0.9
VORR				pmax	pmax		
	comp=Z,100nm,0.8s						
GEVA	Gevas	146.11	294		PKPbc	06 21 43.8	-0.1
VSR	Storozhevoye	146.29	318	*e*PKIKP	PKPdf	06 21 40.9	-1.6
VSR				pmax	pmax		
	comp=Z,80nm,0.9s						
VORD	Divnogorie	146.31	317	*e*PKP2	PKPdf	06 21 42.4	-0.1
VORD				pmax	pmax		
	comp=Z,60nm,0.8s						
ERBR	Yeremizino-Bor	147.16	307	*i* PKP2	PKPdf	06 21 44.8	+0.6
ERBR				pmax	pmax		
	comp=E,45nm,0.8s						
ERBR				pmax	pmax		
	comp=Z,315nm,1.1s						
ERBR				pmax	pmax		
	comp=N,92nm,1.1s						
LABN	Labinsk	147.23	305	*i* PKP2	PKPab	06 21 48.0	-0.4
LABN				*e*		06 25 19.7	
LABN				pmax	pmax		
	comp=N,21nm,0.9s						
LABN				pmax	pmax		
	comp=Z,71nm,1.0s						
LABN				pmax	pmax		
	comp=E,16nm,0.7s						
MARD	Mardin	147.92	292		PKPbc	06 21 48.6	-0.4
VSU	Vasula	147.94	336*c*	*i*PKIKP	PKPdf	06 21 46.5	+1.5
VSU				*i*		06 21 48.4	
VSU				pmax	pmax		
	comp=Z,131nm,1.7s						
KOPT	Kop Dagi	148.04	297		PKPbc	06 21 49.6	+0.2
SOC	Sochi	148.14	304	*e*PKIKP	PKPdf	06 21 44.5	-1.4
SOC				*e*		06 25 14.3	
SOC				*e*SS	SS	06 44 20.6	-3.6
SOC				*e*SSS	SSS	06 49 55.5	
SOC				pmax	pmax		
	comp=Z,15nm,0.4s						
NC303	NORSAR Array S	149.18	352		PKiKP	06 21 52.8	+0.3
NC204	NORSAR Array S	149.20	352		PKiKP	06 21 53.0	+0.4
NC405	NORSAR Array S	149.25	351		PKiKP	06 21 53.8	+1.2
NB2	NORSAR Subarra	149.38	352	PKP	PKPbc	06 21 51.9	+0.1
	comp=Z,125nm,1.4s,baz=17,slow=2.6						
NB2	NORSAR Subarra	149.38	352	PKP	PKPbc	06 21 51.9	+0.1
	baz=17,slow=2.6						
NOA	NORSAR Array B	149.38	352	PKPbc	PKPdf	06 21 49.5	+2.1
	comp=Z,3.6nm,0.7s,baz=156,slow=19,SNR=37						
ANN	Anapa	149.48	307	*i* PKHKP	PKPpre	06 21 47.4	
ANN				*e*		06 21 53.8	
ANN				*e*		06 25 23.3	
ANN				pmax	pmax		
	comp=N,42nm,0.9s						
ANN				pmax	pmax		
	comp=Z,132nm,0.8s						
ANN				pmax	pmax		
	comp=E,18nm,0.7s						
HFS	Hagfors	149.89	349	PKPbc	PKPbc	06 21 51.4	-1.6
	comp=E,24nm,0.7s,baz=270,slow=1.5,SNR=18						
MNK	Minsk	150.32	330	*i* PKiKP	PKPbc	06 21 53.1	-1.1
	comp=E,31nm,0.8s						
MNK				*i* PKiKP	PKPbc	06 21 53.1	-1.1
	comp=N,8.0nm,0.6s						
MNK				*i* PKiKP	PKPbc	06 21 53.1	-1.1
	comp=Z,13nm,0.6s,baz=48						
MNK				*i* PP	PP	06 25 23.7	-5.8
MNK				*i* PPP	PPP	06 28 51.1	
MNK				*i* SKS	SKSdf	06 28 52.9	-3.1
MNK				*i* SKKS	SKKSdf	06 37 43.9	-5.4
MNK				*i* SS	SS	06 44 50.0	+3.0
MNK				*i* SSS	SSS	06 50 30.7	
MNK				*i* LR	LR	07 32 34.1	
MNK	Minsk	150.32	330	*e*PKIKP	PKPbc	06 21 53.0	-1.1
NACGM	Naroch	150.51	331	*e*PKiKP	PKiKP	06 21 56.7	+1.3
ASF	Jabal al Asfar	150.81	281	PKPbc	PKPbc	06 21 55.4	-0.8
	comp=Z,28nm,0.8s,baz=98,slow=1.7,SNR=34						
KONO	Kongsberg	150.92	353		PKiKP	06 21 56.5	+0.4
KONO	Kongsberg	150.92	353	IAMs_20	IAMs_20	07 41 24.1	
	comp=Z,4µm,18.0s						
KONO	Kongsberg	150.92	353	PKIKP	PKiKP	06 21 56.5	+0.4
SACV	Santiago Islan	151.21	118	IAMs_20	IAMs_20	07 39 02.9	
	comp=Z,4µm,20.0s						
STRU	Stroemstad	151.33	351	*i* P	PKPdf	06 21 49.7	-0.7
SIM	Simferopol'	151.69	308	*e*PKIKP	PKPdf	06 21 53.2	+1.8
SIM				pmax	pmax		
	comp=Z,640nm,4.3s						
BNN	Bunyan	151.73	295	PKPbc	PKPbc	06 21 58.0	-0.2
DIKM	Dikmen	151.75	301	⇑P	PKiKP	06 21 58.7	+0.4
AKASG	Malin Array Be	152.05	323	PKPbc	PKiKP	06 21 59.1	+0.5
AKASG	Malin Array Be	152.05	323	PKPbc	PKPbc	06 21 56.3	-2.0
	comp=Z,12nm,0.7s,baz=50,slow=2.6,SNR=13						
KIEV	Kiev	152.06	323	PKPbc	PKiKP	06 21 59.3	+0.6
KIEV	Kiev	152.06	323	IAMs_20	IAMs_20	07 29 57.7	
	comp=Z,7µm,22.0s						
KIEV	Kiev	152.06	323	⇓P	PKPbc	06 21 57.5	-0.8
KIEV	Kiev	152.06	323	PKIKP	PKiKP	06 21 59.3	+0.6
EIL	Elat	152.08	276	PKP	PKPdf	06 21 52.8	+0.3
	comp=Z,2.5nm,0.6s,baz=90,slow=1.6,SNR=6.1						
EIL				PKPbc	PKPbc	06 21 59.0	-0.1
	comp=Z,21nm,0.7s,baz=340,slow=3.4,SNR=21						
MMAI	Mount Meron Ar	152.15	283	PKPbc	PKiKP	06 22 00.1	+0.5
	comp=Z,9.9nm,0.5s,baz=67,slow=2.8,SNR=14						
HOMB	Homborsund	152.39	353	*i* P	PKPdf	06 21 53.6	+1.6
BORU	Boraas	152.42	348	*i* P	PKPdf	06 21 51.5	-0.6
SUW	Suwalki	152.60	333	*e*PKP	PKPdf	06 21 51.7	-0.7
SUW				*e*PP	PP	06 25 39.2	-3.3
SUW				*e*SS	SS	06 45 16.8	+4.7
SUW				*e*L	L	07 24 24.4	
	comp=Z,6µm,24.5s						
SUW	Suwalki	152.60	333	PKPbc	PKiKP	06 22 00.3	+0.6
SUW				IAMs_20	IAMs_20	07 36 50.3	
	comp=Z,6µm,19.0s						
ONAU	Onsala	152.79	349	*i* P	PKPdf	06 21 51.7	-0.9
BLEU	Blekinge	153.01	344	*i* P	PKPdf	06 21 51.8	-1.1
FABU	Falkenberg	153.03	348	*i* P	PKPdf	06 21 51.7	-1.3
KIRS	Kirsehir-Merke	153.19	296	⇑P	PKiKP	06 22 01.9	+0.4
DEL	Delary	153.30	346	*i* P	PKPdf	06 21 52.6	-0.8
BRTR	Keskin Array B	153.31	298	PKPbc	PKPbc	06 22 01.7	-0.1
BRTR	Keskin Array B	153.31	298	PKPbc	PKPbc	06 22 01.9	+0.1
	comp=Z,4.3nm,0.8s,baz=129,slow=3.5,SNR=15						
ANTO	Ankara	153.93	298		PKiKP	06 22 03.9	+0.9
ANTO	Ankara	153.93	298	IAMs_20	IAMs_20	07 33 07.9	
	comp=Z,4µm,20.0s						
ANTO	Ankara	153.93	298	⇑P	PKiKP	06 22 07.6	+4.5
SORM	Soroca	153.94	318	⇑P	PKiKP	06 22 06.3	+3.6
CSS	Mathiatis	153.95	287	IAMs_20	IAMs_20	07 34 52.6	
	comp=Z,8µm,20.0s						
LUNU	Lund	154.17	346	*i* P	PKPdf	06 21 53.6	-1.0
KIS	Kishinev	154.24	316	⇑*i*PKP	PKPdf	06 21 52.0	-3.1
KIS	Kishinev	154.24	316	*i* PP	PP	06 25 44.0	-8.3
KIS				*e*SKKS		06 32 37.0	
KIS				*e*L	L	07 21 26.0	
KIS				LQM		07 34 49.0	
	comp=Z,1µm,20.5s						
KIS				LRM	MLR	07 37 05.0	
	comp=Z,2µm,18.0s						
KIS	Kishinev	154.24	316	*e*PKIKP	PKPdf	06 21 52.0	-3.1
MILM	Milestii Mici	154.28	316	*e*PKP	PKPdf	06 21 53.0	-2.1
MILM	Milestii Mici	154.28	316	*e*PP	PP	06 25 43.0	-10
MILM				*e*SKKS		06 32 40.0	
MILM				*e*L	L	07 21 08.0	
MILM				LRM	MLR	07 34 18.0	
	comp=Z,4µm,21.0s						
MILM	Milestii Mici	154.28	316	⇑P	PKPab	06 22 15.7	-1.7
MILM	Milestii Mici	154.28	316	*e*PKIKP	PKPdf	06 21 53.0	-2.1
COP	Copenhagen	154.32	347	*i* P	PKPdf	06 21 55.1	+0.2
ACRG	Accra	154.68	173	IAMs_20	IAMs_20	07 32 55.3	
	comp=Z,8µm,20.0s						
DBIC	Dimbokro	154.85	162	PKPbc	PKPbc	06 22 04.4	-1.2
DBIC	Dimbokro	154.85	162	PKP	PKPdf	06 21 56.1	-0.8
	comp=Z,7.4nm,1.0s,baz=159,slow=1.9,SNR=4.0						
DBIC				PKPbc	pPKPbc	06 22 08.3	-0.6
	comp=Z,15nm,1.1s,baz=208,slow=3.5,SNR=6.3						
SSRD	Sdr. Stenderup	154.99	350	*i* P	PKPdf	06 21 54.5	-1.3
RGN	Rugen	155.20	345	IAMs_20	IAMs_20	07 40 57.4	
	comp=Z,6µm,19.0s						
RGN	Rugen	155.20	345	*e*PP	PP	06 25 53.0	-3.8
	baz=21,slow=5.5						
VLDR	Vladesti	155.24	314	⇑P	PKPab	06 22 20.7	-0.9
GKP	Gorka Klasztor	155.30	339	*e*PKP	PKPdf	06 21 55.8	-0.5
GKP				*e*PP	PP	06 25 52.8	-4.8
GKP				*e*L	L	07 28 19.1	
	comp=Z,5µm,24.0s						
EKA	Eskdalemuir Ar	155.30	8	PKPab	PKPab	06 22 21.0	-0.4
	comp=Z,5.1nm,0.8s,baz=0.0,slow=2.5,SNR=6.2						
EKA	Eskdalemuir Ar	155.30	8	PKP2	PKPab	06 22 21.0	-0.4
ESK	Eskdalemuir	155.31	8	IAMs_20	IAMs_20	07 41 02.4	
	comp=Z,6µm,19.0s						
TPGR	Topolog	155.47	312	⇑P	PKPab	06 22 19.4	-3.3
CFR	Carcaliu	155.51	313	⇑P	PKPab	06 22 10.2	-13
MBO	M'Bour	155.63	128	IAMs_20	IAMs_20	07 45 43.2	
	comp=Z,6µm,18.0s						
BORA	Eskisehir	155.69	299	IAMs_20	IAMs_20	07 34 13.4	
	comp=Z,5µm,20.0s						
TESR	Tescani	155.78	317	⇑P	PKPab	06 22 11.2	-13
HARR	Harsova	155.86	312	⇑P	PKPab	06 22 20.7	-3.5
HARR	Harsova	155.86	312	⇑PKP2	PKPab	06 22 20.7	-3.5
KWP	Kalwaria Pacla	155.98	327	*e*PKP	PKPdf	06 21 55.7	-1.7
KWP				*e*PP	PP	06 26 05.2	+3.5
KWP				*e*PPP	PPP	06 29 35.6	
KWP				*e*L	L	07 30 14.3	
	comp=Z,6µm,23.8s						
BURAR	Bucovina Array	155.98	320		PKPdf	06 21 57.7	+0.1
ISP	Isparta	156.01	294	IAMs_20	IAMs_20	07 38 32.6	
	comp=Z,8µm,22.0s						
VRI	Vrincioaia	156.06	315	⇓P	PKPab	06 22 13.7	-11
PLOR	Plostina	156.11	315	⇑P	PKPab	06 22 14.1	-11
BSEG	Bad Segeberg	156.37	349	*e*PP	PP	06 26 00.7	-2.6
	baz=21,slow=5.5						
HLG	Helgoland	156.48	352	*e*PP	PP	06 26 01.2	-2.6
	baz=21,slow=5.5						
OZUR		156.50	317	⇓P	PKPab	06 22 17.0	-10
KOLS	Kolonicke sedl	156.67	326	*e*PKP2	PKPab	06 22 29.2	+1.7
KOLS	Kolonicke sedl	156.67	326	*e*PKP	PKPab	06 22 29.2	+1.7
MLR	Muntele Rosu	156.72	315	IAMs_20	IAMs_20	07 46 43.0	
	comp=Z,5µm,20.0s						
MLR	Muntele Rosu	156.72	315	PKP	PKPdf	06 21 58.5	-0.2
	comp=Z,1.8nm,0.7s,baz=219,slow=4.1,SNR=3.3						
MLR	Muntele Rosu	156.72	315	⇑P	PKPab	06 22 14.8	-13
ARCR	ARCALIA	156.77	320	⇓P	PKPab	06 22 31.7	+3.6
DSB	Dublin	156.80	14	IAMs_20	IAMs_20	07 31 19.2	
	comp=Z,7µm,19.0s						
STHS	Stebnicka Huta	156.81	328	*e*PKP	PKPab	06 22 29.1	+0.9
OJC	Ojcow	156.84	331	*e*PKP	PKPdf	06 21 57.4	-1.0
OJC				*e*SS	SS	06 46 01.8	+3.5
OJC				*e*L	L	07 27 37.1	
	comp=Z,5µm,23.6s						
BMR	Baia Mare	156.87	322	⇓P	PKPab	06 22 27.0	-1.5
BMR	Baia Mare	156.87	322	⇓PKP2	PKPab	06 22 27.0	-1.5
RUE	Ruedersdorf	156.99	342	*e*PP	PP	06 26 03.1	-3.7
	baz=21,slow=5.5						
VAL	Valentia	157.01	21	PKP	PKPdf	06 21 58.5	-0.1
GORT1	Trebel	157.09	346	*e*PKPdf	PKPdf	06 21 58.0	-0.6
	baz=24,slow=1.5						
GORT1				*e*PKPab	PKPab	06 22 31.0	+1.9
	baz=23,slow=4.4						
GORT1				*e*PP	PP	06 26 04.0	-3.2
	baz=21,slow=5.5						
NIE	Niedzica	157.23	329	*e*PKP	PKPdf	06 21 56.2	-2.9
NIE				*e*PP	PP	06 26 05.0	-3.6
NIE				*e*SS	SS	06 46 02.8	+0.2
NIE				*e*L	L	07 31 43.6	
	comp=Z,4µm,22.9s						
KSP	Ksiaz	157.67	337	*e*PKP	PKPdf	06 21 57.9	-1.6
KSP				*e*PP	PP	06 26 05.5	-5.2
KSP				*e*L	L	07 34 59.7	
	comp=Z,6µm,20.7s						
RETH	Rethem/Aller,	157.68	349	*e*PKPab	PKPab	06 22 33.2	+1.6
	baz=23,slow=4.4						
RETH				*e*PP	PP	06 26 08.1	-2.3
	baz=21,slow=5.5						
JMB	Yambol	157.70	308	P	PKPdf	06 21 59.3	-0.5
FLTG	Flechtingen	157.72	346	*e*PKPdf	PKPdf	06 21 58.7	-0.8
	baz=24,slow=1.5						
FLTG				*e*PP	PP	06 26 06.8	-4.0
	baz=21,slow=5.5						
NRDL	Niedersach Rie	157.79	348	*e*PKPdf	PKPdf	06 21 58.7	-0.8
	baz=24,slow=1.5						
NRDL				*e*PP	PP	06 26 08.4	-2.6
	baz=21,slow=5.5						
LANS	Liptovska Anna	157.80	330	*e*PKP2	PKPab	06 22 33.9	+1.5
LANS	Liptovska Anna	157.80	330	*e*PKP	PKPab	06 22 33.9	+1.5
OKC	Ostrava-Krasne	157.81	333	*e*PKPDF	PKPdf	06 21 59.4	-0.3
OKC				AMS	AMS	07 37 50.0	
	comp=Z,6µm,18.8s						
OKC	Ostrava-Krasne	157.81	333	*e*PKIKP	PKPdf	06 21 59.4	-0.3
OKC				MLR	MLR		
	comp=Z,6µm,18.8s						
DRGR		157.84	321	⇓P	PKPab	06 22 32.4	-0.4
DRGR		157.84	321	⇓PKP2	PKPab	06 22 32.4	-0.4
OSTC	Ostas	157.94	336	*e*PKPDF	PKPdf	06 21 59.5	-0.4
OSTC				AMS	AMS	07 35 00.0	
	comp=Z,6µm,21.2s						
OSTC	Ostas	157.94	336	*e*PKIKP	PKPdf	06 21 59.5	-0.4
OSTC				MLR	MLR		
	comp=Z,6µm,21.2s						
CHVC	Chvalec	157.97	337	*e*PKPDF	PKPdf	06 21 59.8	-0.1
CHVC				AMS	AMS	07 35 00.0	
	comp=Z,7µm,21.5s						
CHVC	Chvalec	157.97	337	*e*PKIKP	PKPdf	06 21 59.8	-0.1

CHVC				MLR	MLR		
	comp=Z,7μm,21.5s						
ASSE	Asse, Remlinge	158.03	347	ePP	PP	06 26 09.3	-3.0
	baz=21,slow=5.5						
UPC	Upice	158.05	337	ePKPDF	PKPdf	06 21 59.6	-0.4
UPC				AMS	AMS	07 44 30.0	
	comp=Z,7μm,18.3s						
UPC	Upice	158.05	337	ePKIKP	PKPdf	06 21 59.6	-0.4
UPC				MLR	MLR		
	comp=Z,7μm,18.3s						
DPC	Dobruska-Polom	158.07	336	ePKPDF	PKPdf	06 22 00.4	+0.3
DPC				ePKPAB	PKPab	06 22 34.4	+0.8
DPC				ePP	PP	06 26 08.1	-4.9
DPC				AMS	AMS	07 45 40.0	
	comp=Z,6μm,17.9s						
DPC	Dobruska-Polom	158.07	336	ePKIKP	PKPdf	06 22 00.4	+0.3
DPC				e		06 26 08.1	
DPC				MLR	MLR		
	comp=Z,6μm,17.9s						
MORC	Moravsky Berou	158.10	333	ePKP	PKPdf	06 22 01.3	+1.2
KRLC	Kraliky	158.14	335	ePKPDF	PKPdf	06 22 00.0	-0.2
KRLC				ePKPAB	PKPab	06 22 35.4	+1.5
KRLC				ePP	PP	06 26 10.3	-3.1
KRLC				AMS	AMS	07 48 00.0	
	comp=Z,6μm,18.1s						
KRLC	Kraliky	158.14	335	ePKIKP	PKPdf	06 22 00.0	-0.2
KRLC				e		06 26 10.3	
KRLC				MLR	MLR		
	comp=Z,6μm,18.1s						
CLL	Collm	158.25	342	IAMs_20	IAMs_20	07 45 45.3	
	comp=Z,7μm,18.0s						
CLL	Collm	158.25	342	ePKIKP	PKPdf	06 22 01.0	+0.8
CLL				pmax	pmax		
	comp=Z,30nm,1.3s						
CLL				MLR	MLR		
	comp=Z,7μm,18.2s						
CLL	Collm	158.25	342	ePKPdf	PKPdf	06 21 59.9	-0.3
	baz=24,slow=1.5						
CLL				ePP	PP	06 26 10.3	-3.5
	baz=21,slow=5.5						
CLL	Collm	158.25	342	ePKPdf	PKPdf	06 22 01.0	+0.8
CLL				ePKPdif	PKPab	06 22 22.0	-12
CLL				i PKPab	pPKPab	06 22 36.3	-1.4
	comp=Z,30nm,1.3s						
CLL				i x	x	06 22 45.9	
	comp=Z,43nm,1.0s						
CLL				ePP	PP	06 26 12.0	-1.8
CLL				ex	x	06 26 45.0	
CLL				ePPP	PPP	06 29 48.0	
CLL				ePSKS		06 36 43.0	
CLL				ePPS	PPS	06 39 33.0	
CLL				ex	x	06 40 40.0	
CLL				ex	x	06 41 17.0	
CLL				eSS	SS	06 46 13.0	+0.2
CLL				ePSPS		06 47 52.0	
CLL				eSSS	SSS	06 52 00.0	
CLL				ex	x	06 54 46.0	
CLL				eSSSS		06 56 30.0	
CLL				AMS	AMS	07 41 00.0	
	comp=N,5μm,19.1s						
CLL				AMS	AMS	07 41 00.0	
	comp=E,3μm,19.1s						
CLL				AMS	AMS	07 41 00.0	
	comp=Z,6μm,19.5s						
CLL				AMS	AMS	07 45 00.0	
CLL				AMS	AMS	07 45 00.0	
	comp=Z,7μm,18.2s						
MAUC	Maruska	158.31	332	ePKPDF	PKPdf	06 22 01.7	+1.3
MAUC				ePP	PP	06 26 12.6	-1.8
IBBN	Ibbenburen	158.34	351	ePP	PP	06 26 11.6	-2.4
	baz=21,slow=5.5						
BRG	Berggiesshubel	158.38	340	ePKPdf	PKPdf	06 21 59.9	-0.5
	baz=24,slow=1.5						
BRG				ePP	PP	06 26 11.1	-3.5
	baz=21,slow=5.5						
BRG	Berggiesshubel	158.38	340	PP	PP	06 26 14.0	-0.6
PVCC	Panska Ves	158.50	339	ePKPDF	PKPdf	06 22 00.3	-0.2
PVCC				ePP	PP	06 26 07.5	-7.7
PVCC				AMS	AMS	07 47 10.0	
	comp=Z,6μm,17.9s						
PVCC	Panska Ves	158.50	339	ePKIKP	PKPdf	06 22 00.3	-0.2
PVCC				MLR	MLR		
	comp=Z,6μm,17.9s						
PSZ	Piszkesteto	158.51	327	IAMs_20	IAMs_20	07 36 38.1	
	comp=Z,7μm,20.0s						
VYHS	Vyhne	158.56	329	ePKP	PKPdf	06 22 00.1	-0.6
VYHS				e		06 22 37.1	
ALN	Alexandroupoli	158.63	304	IAMs_20	IAMs_20	07 38 52.9	
	comp=Z,5μm,20.0s						
RICC	Richard	158.63	340	AMS	AMS	07 40 50.0	
	comp=Z,6μm,18.1s						
NEUB	Neuenburg	158.65	344	ePP	PP	06 26 12.1	-3.8
	baz=21,slow=5.5						
GTTG	Gottingen	158.72	347	ePP	PP	06 26 13.3	-3.0
	baz=21,slow=5.5						
JAVC	Velka Javorina	158.78	332	ePKP	PKPdf	06 22 03.0	+2.0
SURR	Surduc	158.80	320	⇑P	PKPab	06 22 26.7	-10
VRAC	Vranov	158.84	334	PKP	PKPdf	06 22 00.8	-0.2
	comp=Z,1.2nm,0.3s,baz=4.9,slow=3.5,SNR=3.8						
VRAC				PKPab	PKPab	06 22 36.2	-0.7
	comp=Z,3.1nm,0.5s,baz=30,slow=3.9,SNR=8.4						
VRAC	Vranov	158.84	334	ePKP	PKPdf	06 22 02.4	+1.4
VRAC				e		06 22 35.5	
KDZ	Kurdzhali	158.86	307	P	PKPdf	06 21 59.7	-1.6
RDO	Rodhopi	158.90	305	IAMs_20	IAMs_20	07 40 03.8	
	comp=Z,5μm,20.0s						
PRA	Prague	158.94	338	ePKPDF	PKPdf	06 22 00.6	-0.4
PRA				ePP	PP	06 26 14.9	-2.7
PRA				AMS	AMS	07 39 20.0	
	comp=Z,7μm,19.4s						
PRA	Prague	158.94	338	ePKIKP	PKPdf	06 22 00.6	-0.4
PRA				e		06 26 14.9	
PRA				MLR	MLR		
	comp=Z,7μm,19.4s						
GOPC	GO Pecny, Ondr	158.97	338	ePKPDF	PKPdf	06 22 00.6	-0.5
GOPC				ePP	PP	06 26 15.8	-2.0
GOPC				AMS	AMS	07 51 10.0	
	comp=Z,5μm,16.8s						
GOPC	GO Pecny, Ondr	158.97	338	ePKIKP	PKPdf	06 22 00.6	-0.5
GOPC				e		06 26 15.8	
GOPC				MLR	MLR		
	comp=Z,5μm,16.8s						
KARP	Karpathos	158.97	289	IAMs_20	IAMs_20	07 35 55.2	
	comp=Z,6μm,22.0s						
PRU	Pruhonice	158.98	338	ePKPDF	PKPdf	06 21 59.4	-1.7
PRU				ePP	PP	06 26 15.3	-2.6
PRU				AMS	AMS	07 39 10.0	
	comp=Z,5μm,18.8s						
PRU	Pruhonice	158.98	338	ePKIKP	PKPdf	06 21 59.4	-1.7
PRU				e		06 26 15.3	
PRU				MLR	MLR		
	comp=Z,5μm,18.8s						
KRUC	Moravsky	159.12	334	ePKP	PKPdf	06 22 02.6	+1.3
MPEP	Malo Peshtene	159.16	312	P	PKPdf	06 22 01.6	+0.1
VALD	Valchedram	159.18	313	P	PKPdf	06 22 01.6	+0.1
TANN	Tannenbergstha	159.21	342	ePKPdf	PKPdf	06 22 00.8	-0.6
	baz=24,slow=1.5						
TANN				ePP	PP	06 26 15.9	-3.2
	baz=21,slow=5.5						
MOX	Moxa	159.21	344	ePKPdf	PKPdf	06 22 01.5	+0.1
	baz=24,slow=1.5						
MOX				ePP	PP	06 26 15.7	-3.3
	baz=21,slow=5.5						
MOX				eL	L	07 43 37.1	
	comp=Z,5μm,19.1s						
BUG	Bochum--Univer	159.25	352	ePP	PP	06 26 16.2	-2.8
	baz=21,slow=5.5						
TREC	Trest	159.25	336	AMS	AMS	07 44 50.0	
	comp=Z,7μm,18.4s						
PGB	Panagyurishte	159.27	310	P	PKPdf	06 22 00.4	-1.4
KASTN	Kahler Asten	159.32	350	ePP	PP	06 26 16.8	-2.8
	baz=21,slow=5.5						
MODS	Modra-Piesok	159.32	331	ePKP	PKPdf	06 22 00.8	-0.8
NKC	Novy Kostel	159.38	342	ePKPDF	PKPdf	06 22 01.5	-0.1
NKC				ePP	PP	06 26 17.9	-2.1
NKC	Novy Kostel	159.38	342	ePKIKP	PKPdf	06 22 01.5	-0.1
NKC				e		06 26 17.9	
UBBA	Unterbreizbach	159.41	347	ePKPdf	PKPdf	06 22 01.5	+0.1
	baz=24,slow=1.5						
UBBA				ePKPab	PKPab	06 22 41.1	+2.0
	baz=23,slow=4.4						
UBBA				ePP	PP	06 26 16.6	-3.2
	baz=21,slow=5.5						
ZVC	Zvikov	159.57	338	ePKPAB	PKPab	06 22 40.7	+0.7
ZVC				AMS	AMS	07 48 00.0	
	comp=Z,6μm,17.1s						
MANZ	Manzenberg	159.69	342	ePKPdf	PKPdf	06 22 02.2	+0.2
	baz=24,slow=1.5						
MANZ				ePKPab	PKPab	06 22 42.5	+1.9
	baz=23,slow=4.4						
MANZ				ePP	PP	06 26 18.4	-3.3
	baz=21,slow=5.5						
PLNA	Plana	159.78	310	P	PKPdf	06 22 02.5	0.0
VTS	Vitosha	159.84	311	P	PKPdf	06 22 02.1	-0.5
ROTZ	Rotzenmuhle	159.87	342	ePKPab	PKPab	06 22 42.0	+0.7
	baz=23,slow=4.4						
ROTZ				ePP	PP	06 26 19.4	-3.2
	baz=21,slow=5.5						
MMB	Musomishta	159.98	308	P	PKPdf	06 22 00.8	-1.8
KHC	Kasperske Hory	160.03	338	ePKPDF	PKPdf	06 22 00.9	-1.5
KHC				ePKPAB	PKPab	06 22 42.0	-0.1
KHC				ePP	PP	06 26 20.7	-2.9
KHC				AMS	AMS	07 47 40.0	
	comp=Z,7μm,17.3s						
KHC	Kasperske Hory	160.03	338	ePKIKP	PKPdf	06 22 00.9	-1.5
KHC				e		06 22 42.0	
KHC				e		06 26 20.7	
KHC				MLR	MLR		
	comp=Z,7μm,17.3s						
CKRC	Cesky Krumlov	160.07	337	ePKPDF	PKPdf	06 22 01.0	-1.4
CKRC				ePKPAB	PKPab	06 22 43.7	+1.5
CKRC				ePP	PP	06 26 21.9	-1.9
CKRC				AMS	AMS	07 48 00.0	
	comp=Z,6μm,17.9s						
CKRC	Cesky Krumlov	160.07	337	ePKIKP	PKPdf	06 22 01.0	-1.4
CKRC				e		06 26 21.9	
CKRC				MLR	MLR		
	comp=Z,6μm,17.9s						
GRA1	Grafenberg Arr	160.19	343	IAMs_20	IAMs_20	07 46 49.0	
	comp=Z,6μm,18.0s						
GRF	Grafenberg Arr	160.19	343	ePKPab	PKPab	06 22 44.3	+1.6
	baz=23,slow=4.4						
GRF				ePP	PP	06 26 20.8	-3.6
	baz=21,slow=5.5						
GRF				eL	L	07 35 57.0	
	comp=Z,5μm,21.2s						
GRFO	Grafenberg	160.19	343	IAMs_20	IAMs_20	07 47 15.0	
	comp=Z,7μm,18.0s						
MEM	Membach	160.21	354	dPKP	PKPab	06 22 43.9	+1.2
BTNL	Ternell	160.22	353	dPKPdf	PKPdf	06 22 01.5	-1.0
BTNL				dPKP	PKPab	06 22 44.1	+1.3
WET	Wettzell	160.24	340	ePKPdf	PKPdf	06 22 02.0	-0.6
	baz=24,slow=1.5						
WET				ePKPab	PKPab	06 22 44.8	+1.8
	baz=23,slow=4.4						
WET				ePP	PP	06 26 21.0	-3.6
	baz=21,slow=5.5						
CONA	Conrad Observa	160.25	333	ePKP	PKPab	06 22 43.4	+0.2
	comp=Z,16nm,1.0s						
GEC2	GERESS Array S	160.25	338	ePKPdf	PKPdf	06 22 02.4	-0.3
	baz=24,slow=1.5						
GEC2				ePP	PP	06 26 21.4	-3.4
	baz=21,slow=5.5						
GERES	GERESS Array B	160.25	338	PKPab	PKPab	06 22 42.9	-0.2
	comp=Z,3.7nm,0.8s,baz=28,slow=4.4,SNR=3.3						
RONA	Rosalia, Austr	160.26	332	ePKP	PKPab	06 22 43.6	+0.4
	comp=Z,2.8nm,0.6s						
TNS	Taunus Mts	160.26	349	ePP	PP	06 26 21.4	-3.3
	baz=21,slow=5.5						
KKB	Krupnik	160.27	309	P	PKPdf	06 22 01.7	-1.2
BSTI	Sart Tilman	160.27	354	dPKP	PKPab	06 22 44.5	+1.5
MORH	Mrgy, Hungar	160.32	325	⇓P	PKPdf	06 22 07.0	+4.2
BCLA	Clavier	160.46	355	dPKP	PKPab	06 22 44.8	+1.0
BGES	Gesves	160.51	355	dPKP	PKPab	06 22 45.5	+1.5
BMRD	Maredsous	160.61	356	dPKPdf	PKPdf	06 22 02.9	0.0
DOU	Dourbes	160.83	356	dPKP	PKPab	06 22 47.2	+1.7
IDI	Anoyia	160.84	289	PKP	PKPdf	06 22 03.8	+0.1
IDI	Anoyia	160.84	289	PKP	PKPdf	06 22 04.1	+0.3
	comp=Z,7.1nm,0.9s,baz=104,slow=3.0,SNR=3.1						
IDI				PKPab	PKPab	06 22 47.5	+1.2
	comp=Z,5.3nm,0.8s,baz=120,slow=15,SNR=2.0						
MOA	Molln	160.91	335	ePKP	PKPab	06 22 46.0	+0.1
	comp=Z,12nm,1.2s						
ARSA	Arzberg	160.93	332	i PKP	PKPab	06 22 47.5	+1.4
	comp=Z,2.8nm,0.6s						
WLF	Walferdange	161.12	353	PKP	PKPdf	06 22 04.2	+0.7
WLF	Walferdange	161.12	353	dPKPdf	PKPdf	06 22 04.2	+0.7
WLF				dPKP	PKPab	06 22 45.6	-1.1
WLF	Walferdange	161.12	353	ePP	PP	06 26 26.3	-2.9
	baz=21,slow=5.5						
BIOA	Bad Ischl, Aus	161.27	336	i PKP	PKPab	06 22 49.7	+2.2
	comp=Z,31nm,1.4s						
RJOB	Jochberg	161.51	338	ePKPab	PKPab	06 22 50.3	+1.7
	baz=23,slow=4.4						
RJOB				ePP	PP	06 26 29.2	-2.4
	baz=21,slow=5.5						
STU	Stuttgart	161.52	346	ePP	PP	06 26 28.0	-3.4
	baz=21,slow=5.5						
FUR	Furstenfeldbru	161.58	341	ePP	PP	06 26 28.8	-3.1
	baz=21,slow=5.5						
SOKA	Soboth	161.59	332	ePKP	PKPab	06 22 50.2	+1.2
	comp=Z,16nm,1.3s						
LESA	Schwarzleotal	161.82	338	ePKP	PKPab	06 22 52.8	+2.7
	comp=Z,27nm,1.5s						
OBKA	Obir	161.92	333	ePKP	PKPab	06 22 52.3	+1.8
	comp=Z,3.0nm,0.7s						
BFO	Black Forest	162.11	347	ePP	PP	06 26 31.1	-3.5
	baz=21,slow=5.5						
MYKA	Terra Mystica	162.17	334	i PKP	PKPab	06 22 51.8	+0.2
	comp=Z,20nm,1.1s						
WATA	Walderalm	162.25	340	i PKP	PKPab	06 22 53.0	+1.1
	comp=Z,37nm,1.8s						
TORD	Torodi Ar. Bea	162.25	177	PKP	PKPdf	06 22 05.4	-0.4
	comp=Z,12nm,0.3s,baz=243,slow=1.3,SNR=6.1						
TORD				PKPab	PKPab	06 22 52.1	-0.3
	comp=Z,10.0nm,0.3s,baz=175,slow=4.7,SNR=5.0						
TORD				PP	PP	06 26 37.0	+1.9
	comp=Z,2.5nm,1.1s,baz=168,slow=3.5,SNR=2.0						
WTTA	Wattenberg	162.29	339	ePKP	PKPab	06 22 54.1	+1.9
	comp=Z,26nm,1.3s						
UBR	Ueberruh	162.33	343	ePKPab	PKPab	06 22 53.9	+1.7
	baz=23,slow=4.4						
UBR				ePP	PP	06 26 32.3	-3.6
	baz=21,slow=5.5						
RETA	Reutte	162.34	341	ePKP	PKPab	06 22 54.1	+1.8
	comp=Z,11nm,0.8s						
MOTA	Moosalm	162.38	341	ePKP	PKPab	06 22 55.1	+2.5
	comp=Z,14nm,1.2s						
SQTA	Sankt Quirin	162.46	340	ePKP	PKPab	06 22 55.3	+2.4
	comp=Z,19nm,1.2s						
ABTA	Abfaltersbach	162.47	337	ePKP	PKPab	06 22 55.4	+2.5
	comp=Z,13nm,1.2s						
DAVA	Damuels	162.76	343	ePKP	PKPab	06 22 55.6	+1.4
	comp=Z,33nm,0.9s						
FETA	Feichten	162.78	341	i PKP	PKPab	06 22 53.7	-0.6
	comp=Z,10nm,0.9s						
PMOZ	Porto Moniz, M	163.09	79	ePKPdf	PKPdf	06 22 08.5	+2.3
PMOZ				ePP	PP	06 26 52.0	+10
PMOZ				eLR	LR	07 22 37.5	
PMOZ				i AMs_20		07 40 08.2	
	comp=Z,5μm,18.0s						
DAVOX	Davos/Dischmat	163.23	342	PKP	PKPdf	06 22 06.9	+0.9
	comp=Z,1.4nm,0.3s,baz=201,slow=6.0,SNR=3.6						
DAVOX				PKPab	PKPab	06 22 56.0	-0.4
	comp=Z,12nm,0.8s,baz=5.5,slow=5.7,SNR=6.7						
PMAR	Madeira	163.33	79	ePKPdf	PKPdf	06 22 09.0	+2.5
PMAR				ePP	PP	06 26 48.2	+5.2
FUL	Funchal	163.35	79	ePKPdf	PKPdf	06 22 11.1	+4.8
FUL				ePP	PP	06 26 55.1	+12
PMPST	Porto Santo, M	163.81	78	ePKPdf	PKPdf	06 22 09.2	+2.4
PMPST				ePP	PP	06 26 52.2	+6.8
PMPS	Porto Santo	163.81	78	ePKPdf	PKPdf	06 22 23.5	+17
AQU	L'Aquila	165.71	326	PKP	PKPdf	06 22 06.8	-1.3
PGAV	Gavieira, Arco	165.98	35	ePKPdf	PKPdf	06 22 09.3	+0.8
PGAV				ePP	PP	06 26 58.8	+3.2
PGAV				eSS	SS	06 47 44.8	+10
PGAV				eLR	LR	07 28 58.6	
PGAV				i AMs_20		07 35 31.4	
	comp=Z,8μm,18.0s						
PCAB	Cabril	166.29	36	ePKPdf	PKPdf	06 22 10.9	+2.3
PCAB				ePP	PP	06 26 52.1	-5.0
POLO	Lamas de Olo	166.66	36	ePKPdf	PKPdf	06 22 09.4	+0.4
POLO				ePP	PP	06 26 55.1	-4.0
ECAL	Calabor	166.73	32	PKP	PKPdf	06 22 09.5	+0.5
PVRL	Vila Real	166.77	36	ePKPdf	PKPdf	06 22 11.5	+2.5
PVRL				ePP	PP	06 27 03.6	+4.0
PVIS	Viseu	167.09	38	ePKPdf	PKPdf	06 22 08.8	-0.4
PVIS				ePP	PP	06 27 04.3	+3.0
COI	Coimbra	167.15	41	ePKPdf	PKPdf	06 22 08.7	-0.6
COI				ePP	PP	06 27 02.6	+0.9
MVO	Moncorvo	167.20	35	ePKPdf	PKPdf	06 22 09.2	-0.2
MVO				ePP	PP	06 27 04.1	+2.3
MVO				eSS	SS	06 47 56.8	+10
MVO				eLR	LR	07 27 00.4	
MVO				i AMs_20		07 36 46.1	
	comp=Z,10μm,20.0s						
PCAS	Casmilo, Conde	167.21	42	ePKPdf	PKPdf	06 22 09.7	+0.4
PCAS				ePP	PP	06 27 04.4	+2.4
PSBE	So Bento	167.38	44	ePKPdf	PKPdf	06 22 10.6	+1.1
PSBE				ePP	PP	06 27 09.5	+6.5
PMAFR	Mafra	167.42	47	PKP	PKPdf	06 22 10.7	+1.2
MTE	Manteigas	167.50	38	ePKPdf	PKPdf	06 22 10.6	+0.9
MTE				ePP	PP	06 27 03.8	+0.4
MTE				eSS	SS	06 47 56.1	+6.3
MTE				eLR	LR	07 28 07.9	
MTE				i AMs_20		07 37 30.4	
	comp=Z,10μm,20.0s						
LIS	Lisbon	167.64	48	ePKPdf	PKPdf	06 22 10.8	+1.1
LIS				ePP	PP	06 27 06.4	+2.0
LIS				eSS	SS	06 47 55.2	+3.6
LIS				IAMs_20	IAMs_20	07 35 08.1	
	comp=Z,10μm,21.8s						
LIS	Lisbon	167.64	48	ePKPdf	PKPdf	06 22 14.1	+4.5
LIS				ePP	PP	06 27 12.2	+7.8
PSARD	Sardoal	167.70	43	ePKPdf	PKPdf	06 22 11.5	+1.8
PCBR	Castelo Branco	167.93	40	ePKPdf	PKPdf	06 22 12.2	+2.3
PMTG	Montargil	168.01	45	ePKPdf	PKPdf	06 22 11.4	+1.5
PMTG				ePP	PP	06 27 06.2	0.0
PMRV	Marv??o	168.26	41	ePKPdf	PKPdf	06 22 10.4	+0.3
PMRV				ePP	PP	06 27 15.5	+8.1
PMRV				eSS	SS	06 48 07.2	+10
PMRV				eLR	LR	07 30 18.2	
PMRV				i AMs_20		07 38 49.3	
	comp=Z,6μm,18.0s						
EVO	Evora	168.47	46	PKP	PKPdf	06 22 10.8	+0.6
EVO	Evora	168.47	46	ePKP	PKPdf	06 22 10.9	+0.6
PESTR	Estremoz	168.52	44	PKP	PKPdf	06 22 10.7	+0.4
PESTR	Estremoz	168.52	44	ePKPdf	PKPdf	06 22 09.5	-0.8
PESTR				ePP	PP	06 27 10.7	+2.0
EJON	La Jonquera	168.53	359	PKP	PKPdf	06 22 09.6	-0.6
PTEO	Sao Teotonio	168.57	52	ePKPdf	PKPdf	06 22 11.9	+1.6
PTEO				ePP	PP	06 27 12.8	+3.6
PFVI	Vila Bisbo	168.71	54	PKP	PKPdf	06 22 11.7	+1.3
PFVI	Vila Bisbo	168.71	54	ePKPdf	PKPdf	06 22 11.9	+1.4
PFVI				ePP	PP	06 27 13.2	+3.1
MORF	Marmelete	168.75	53	ePKPdf	PKPdf	06 22 11.5	+1.0
MORF				eSS	SS	06 48 06.1	+3.0
MORF				IAMs_20	IAMs_20	07 38 24.2	
	comp=Z,7μm,18.7s						
MORF	Marmelete	168.75	53	ePKPdf	PKPdf	06 22 11.8	+1.3
MORF				ePP	PP	06 27 12.9	+2.7
MORF	Marmelete	168.75	53	ePKIKP	PKPdf	06 22 11.5	+1.0
MORF				eSS	SS	06 48 06.1	+3.0
MESJ	Messejana	168.75	50	ePKPdf	PKPdf	06 22 11.5	+1.0
MESJ				ePP	PP	06 27 12.0	+1.9
MESJ				eSS	SS	06 48 06.1	+3.3
MESJ				IAMs_20	IAMs_20	07 41 33.4	
	comp=Z,9μm,21.2s						
MESJ	Messejana	168.75	50	ePKP	PKPdf	06 22 10.7	+0.2
MESJ				ePP	PP	06 27 11.2	+1.1
MESJ	Messejana	168.75	50	ePKIKP	PKPdf	06 22 11.5	+1.0
MESJ				e		06 27 12.0	
MESJ				eSS	SS	06 48 06.1	+3.2
PBEJ	Beja	168.87	48	ePKPdf	PKPdf	06 22 11.0	+0.4
PBEJ				ePP	PP	06 27 14.9	+4.2
EBAD	Badajoz	168.93	43	PKP	PKPdf	06 22 11.2	+0.7
PCVE	Castro Verde	168.98	50	PKP	PKPdf	06 22 11.2	+0.6
PCVE	Castro Verde	168.98	50	ePKPdf	PKPdf	06 22 11.3	+0.6
PCVE				ePP	PP	06 27 12.5	+1.2
PBDV	Barranco-do-Ve	169.27	51	ePKPdf	PKPdf	06 22 11.5	+0.7
PBDV				ePP	PP	06 27 16.4	+3.5
PBAR	Barrancos	169.29	45	PKP	PKPdf	06 22 11.5	+0.7
PBAR	Barrancos	169.29	45	ePKPdf	PKPdf	06 22 12.0	+1.2
PBAR				ePP	PP	06 27 14.0	+1.3
PVAQ	Vaqueiros	169.32	50	PKP	PKPdf	06 22 12.1	+1.3
PVAQ	Vaqueiros	169.32	50	ePKPdf	PKPdf	06 22 11.0	+0.2
PVAQ				ePP	PP	06 27 19.0	+5.9
PVAQ				eLR	LR	07 35 32.5	
PVAQ				i AMs_20		07 40 46.8	
	comp=Z,8μm,18.0s						
EGRO	El Granado	169.40	49	PKP	PKPdf	06 22 12.3	+1.5
UCM	Universidad Co	169.54	25	PKP	PKPdf	06 22 11.4	+0.4
PAB	San Pablo	169.73	32	⇑PKIKP	PKPdf	06 22 16.0	+4.9
EMIN	Mina Concepcio	169.77	46	PKP	PKPdf	06 22 12.0	+0.9
ESDC	Sonseca Array	169.79	30	PKP	PKPdf	06 22 12.0	+0.8
	comp=Z,3.1nm,1.1s,baz=345,slow=1.9,SNR=16						
ESDC				PKPab	PKPab	06 23 25.0	-0.4
	comp=Z,5.9nm,1.2s,baz=321,slow=4.4,SNR=5.9						
ECAB	El Cabril	170.31	41	PKP	PKPdf	06 22 12.5	+1.1
EADA	Adamuz	170.70	37	PKP	PKPdf	06 22 12.7	+1.0
ESPR	Espera	170.84	48	PKP	PKPdf	06 22 13.0	+1.3
ECHE	Chera	170.91	18	PKP	PKPdf	06 22 12.5	+0.8
MAHO	Mahon	170.98	352	PKP	PKPdf	06 22 11.7	0.0
AVE	Averroes	171.20	72	PKP	PKPdf	06 22 13.2	+1.2
TIO	Tiouine	171.54	88	PKP	PKPdf	06 22 13.3	+0.9
EMIJ	Mijas	171.71	46	PKP	PKPdf	06 22 12.6	+0.4
ECEU	Ceuta	171.72	51	PKP	PKPdf	06 22 13.0	+0.8
CEU	Ceuta	171.72	51	PKP	PKPdf	06 22 13.0	+0.8
EGOR	Sierra Gorda,	171.72	40	PKP	PKPdf	06 22 12.6	+0.2
EMAL	Malaga-Limoner	171.78	43	PKP	PKPdf	06 22 12.6	+0.4
EIBI	Ibiza	171.89	7	PKP	PKPdf	06 22 13.1	+0.9
KEST	Kesra	172.61	312	PKPab	PKPab	06 23 39.2	+1.1
	comp=Z,3.9nm,0.7s,baz=355,slow=6.2,SNR=3.8						
CART	Cartagena	172.75	23	PKP	PKPdf	06 22 13.0	+0.5
ENIJ	Nijar	172.80	32	PKP	PKPdf	06 22 13.0	+0.3
IFR	Ifrane	172.99	67	PKP	PKPdf	06 22 14.5	+1.5

ASRS ***17*** *06:04:45.0±0.7, 54°.40N×86°.82E, h0km, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 17 06:04:49.1±3.6**, 54°.25N×86°.74E, h0km, mbtmp2.8**/2**, ML2.5**/2**, Error ellipse: s-maj=30.4km s-min=18.4km az=50.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.17	256	I	I	06 10 30.0	
	baz=77,slow=328,SNR=4.3						
ZALV	Zalesovo Beam	1.17	256	Pg	Pg	06 05 09.9	-1.6
	0.7nm,0.3s,baz=72,slow=17,SNR=4.0						
ZALV				Lg	Lg	06 05 28.7	
	1.5nm,0.3s,baz=73,slow=20,SNR=5.1						
KURBB	Kurchatov Arra	6.20	237	Pn	Pn	06 06 21.5	-0.2
	0.1nm,0.3s,baz=55,slow=13,SNR=1.6						
	0.5nm,0.3s						
MKAR	Makanchi Array	7.98	203	Pn	Pn	06 06 48.3	+2.0
	0.1nm,0.3s,baz=25,slow=16,SNR=1.9						
	0.1nm,0.3s						

IDC ***17*** *06:15:37.3±1.1, 30°.48S×177°.84W, h0km, mb4.3/4, mbtmp4.2/5, ML3.3/1, Error ellipse: s-maj=30.4km s-min=29.0km az=67.0*

NEIC ***17*** *06:15:39.7±1.3, 30°.75S±0°.02×177°.9W±0°.2, h10km±1km, mb4.6/11, Error ellipse: s-maj=25.5km s-min=3.4km az=95.0*

ISC 17 06:15:43.3±0.8**, 30°.75S**±0°.09×**177°.8W**±0°.1**, h46km, n28, σ1s.44**/29**, mb4.5**/10**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.50	357		Pn	06 16 05.9	-1.8
URZ	Urewera	8.57	208	Pn	Pn	06 17 44.9	+0.2
	0.3nm,0.3s,baz=242,slow=21,SNR=2.1						
URZ				Sn	Sn	06 19 16.1	-4.0
	1.5nm,0.3s,baz=238,slow=22,SNR=6.7						
	7.0nm,0.9s						
BKZ	Black Stump Fm	9.60	208	Pn	Pn	06 17 56.5	-2.4
NIUE	Niue	13.65	33	Pn	Pn	06 18 53.1	-1.1
CTAO	Charters Tower	34.01	280	P	P	06 22 24.7	+1.8
CTAO				IAmb	IAmb	06 22 25.2	
	comp=Z,8.7nm,0.9s						
STKA	Stephens Creek	34.55	257	P	P	06 22 29.1	+1.6
STKA	Stephens Creek	34.55	257	P	P	06 22 28.9	+1.4
	comp=Z,11nm,0.7s,baz=104,slow=11,SNR=18						
	comp=Z,11nm,0.7s						
BBOO	Buckleboo	39.02	255	P	P	06 23 05.8	+0.3
BBOO				IAmb	IAmb	06 23 49.9	
	comp=Z,40nm,1.4s						
COEN	Coen	39.52	286	P	P	06 23 11.1	+1.3
COEN				IAmb	IAmb	06 23 34.7	

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
	comp=Z,15nm,1.3s						
ASAR	Alice Springs	43.24	267	P	P	06 23 40.4	0.0
	comp=Z,1.0nm,0.5s,baz=102,slow=7.3,SNR=15						
	comp=Z,1.0nm,0.5s						
WR8	Warramunga Arr	44.12	272	P	P	06 23 47.4	0.0
WR8				IAmb	IAmb	06 24 31.2	
	comp=Z,11nm,1.3s						
WRAB	Tennant Creek	44.26	272	P	P	06 23 48.6	+0.1
WRAB				IAmb	IAmb	06 23 49.2	
	comp=Z,5.1nm,0.7s						
WRA	Warramunga Arr	44.27	272	P	P	06 23 48.4	-0.2
WRA	Warramunga Arr	44.27	272	P	P	06 23 47.9	-0.7
	comp=Z,2.1nm,0.3s,baz=112,slow=8.3,SNR=42						
	comp=Z,2.1nm,0.3s						
WB0	Warramunga Arr	44.29	273	P	P	06 23 48.7	-0.1
WB0				IAmb	IAmb	06 23 49.8	
	comp=Z,5.0nm,0.6s						
FITZ	Fitzroy Crossi	52.51	270	P	P	06 24 52.1	0.0
PSA00	Pilbara Seismi	56.08	263	P	P	06 25 17.6	-0.4
QSPA	South Pole Qui	59.36	180	P	P	06 25 43.4	+2.9
QSPA				IAmb	IAmb	06 25 50.3	
	comp=Z,4.7nm,0.7s						
QSPA	South Pole Qui	59.36	180	P	P	06 25 43.2	+2.6
	comp=Z,1.0nm,0.8s,baz=20,slow=1.2,SNR=27						
	comp=Z,1.0nm,0.8s						
FIA1	FINESS Array S	145.53	340	PKPdf	PKPbc	06 35 15.4	-0.3
FINES	FINESS Array B	145.53	340	PKPdf	PKPbc	06 35 15.4	-0.3
FINES	FINESS Array B	145.53	340	PKPbc	PKPbc	06 35 15.2	-0.5
	comp=Z,5.1nm,0.7s,baz=57,slow=3.5,SNR=18						
NC303	NORSAR Array S	148.92	351	PKPbc	PKiKP	06 35 26.1	-0.6
NB2	NORSAR Subarra	149.12	351	PKP	PKPbc	06 35 25.7	-0.2
	comp=Z,0.7nm,0.7s,baz=20,slow=2.7						
NOA	NORSAR Array B	149.12	351	PKPbc	PKPbc	06 35 26.0	+0.1
	comp=Z,0.9nm,0.7s,baz=17,slow=2.6,SNR=4.2						
HFS	Hagfors	149.62	349	PKPbc	PKPbc	06 35 26.9	-0.2
	comp=Z,1.1nm,0.7s,baz=158,slow=1.6,SNR=2.8						
AKASG	Malin Array Be	151.67	322	PKPbc	PKPbc	06 35 32.1	-0.1
	comp=Z,0.2nm,0.3s,baz=67,slow=1.8,SNR=2.3						
TORD	Torodi Ar. Bea	162.47	178	PKPab	PKPab	06 36 29.5	+1.2
	comp=Z,0.4nm,0.7s,baz=197,slow=3.7,SNR=1.7						

SNET ***17*** *06:45:48.7±0.9, 13°.26N×87°.65W, h12^{km}±4^{km}, ML2.4*

CATAC 17 06:45:48.4±0.2**, 13°N**±3°×**8°8W**±°**, h7**^{km}±1^{km}**, M2.3**/13**, MLv2.3**/13**, Error ellipse: s-maj=5.8km s-min=2.2km az=17.9, confirmed, Honduras**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	0.19	334	*e*P	Pg	06 45 53.6	+1.2
CNCH				*e*S	Sg	06 45 57.0	+1.9
CNCH	Conchagua	0.19	334	P	Pg	06 45 53.6	+1.2
CNCH	Conchagua	0.19	334	S	Sg	06 45 56.9	+1.8
LCND	La Caada	0.25	326	*e*P	Pg	06 45 54.4	+1.0
LCND				*e*P		06 45 54.5	
LCND				*e*S	Sg	06 45 58.1	+1.3
LCND	La Caada	0.25	326	P	Pg	06 45 54.5	+1.1
POTN	Potosi Cosigui	0.26	113	P	Pb	06 45 55.3	-0.1
BLLM	Bellamira	0.59	305	*e*P	Pb	06 46 00.6	-0.6
LCY	Lacayo	0.62	301	*e*P	Pb	06 46 01.2	-0.5
ALJI	Alcalda de J	0.83	286	P	Pg	06 46 01.6	-2.9
ALJI	Alcalda de J	0.83	286	S	Sg	06 46 15.4	0.0
TECA	Tecapa	0.83	298	*e*P	Pg	06 46 04.5	-0.1
PQSS	Presa 15 de Se	0.95	303	S	Sb	06 46 19.8	-0.2
PQSS	Presa 15 de Se	0.95	303	P	Pg	06 46 06.8	+0.2
POLN	Al Sur del Vol	1.01	116	P	Pg	06 46 06.2	-1.7
POLN				S	Sg	06 46 21.3	+0.1
HERN	Volcan Telica	1.02	119	P	Pg	06 46 08.2	+0.2
TGUH	Tegucigalpa,Un	1.06	26	P	Pg	06 46 08.3	-0.5
TGUH				S	Sg	06 46 22.2	-0.3
TECO	Alcaldia de Te	1.10	293	*e*P	Pg	06 46 09.0	-0.5
TECO	Alcaldia de Te	1.10	293	P	Pg	06 46 08.8	-0.7
TECO	Alcaldia de Te	1.10	293	S	Sg	06 46 23.7	0.0
SCLA	Alcaldia de Sa	1.13	302	S	Sg	06 46 24.7	0.0
SCLA	Alcaldia de Sa	1.13	302	P	Pg	06 46 09.8	-0.3
CNGA	Al SSO del Vol	1.18	120	P	Pg	06 46 10.0	-1.2
PAVA	Las Pavas	1.31	298	P	Pn	06 46 12.4	-0.8
PAVA	Las Pavas	1.31	298	S	Sn	06 46 31.7	+0.6
OCON	Estacion meteo	1.34	67	P	Pn	06 46 07.6	-6.2
LIMN	Finca el Limon	1.35	91	P	Pn	06 46 13.0	-0.7
LOMA	Loma Larga	1.49	291	S	Sn	06 46 33.9	-1.7
RCVN	Varillal2	1.59	72	P	Pn	06 46 17.2	+0.1
RCVN	Varillal2	1.59	72	S	Sn	06 46 37.9	-0.1
PMON	Piamonte	1.64	292	S	Sn	06 46 38.9	-0.4
RCPN	Sur Rio San Ju	1.66	75	S	Sn	06 46 39.8	0.0
JAYA	Jayaque - finc	1.75	289	*e*P	Pn	06 46 18.5	-0.8
JAYA				*e*S	Sb	06 46 43.0	-0.2
JAYA				IAML		06 46 46.1	
	comp=Z,35nm,0.2s						
JAYA	Jayaque - finc	1.75	289	S	Sb	06 46 42.8	-0.4
JAYA	Jayaque - finc	1.75	289	P	Pn	06 46 19.3	-0.1
MATN	Matagalpa	1.78	95	P	Pn	06 46 19.4	-0.4
MATN	Matagalpa	1.78	95	S	Sn	06 46 42.8	0.0
MTO3	Montecristo	2.03	310	P	Pb	06 46 24.6	-1.2
BOAB	BOACO BROADBAN	2.13	107	P	Pb	06 46 26.2	-1.2
BOAB	BOACO BROADBAN	2.13	107	S	Sb	06 46 54.6	+0.5

IDC 17 06:47:18.9±15.0**, 20°.13S**×**177°.86W, h510**^{km}±182^{km}**, mb2.9**/3**, mbtmp3.8**/3**, Error ellipse: s-maj=213.3km s-min=58.4km az=167.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	44.74	256	P	P	06 54 46.9	+0.2
	2.2nm,0.6s,baz=92,slow=8.3,SNR=38						
	2.2nm,0.6s						
WRA	Warramunga Arr	44.79	262	P	P	06 54 46.5	-0.6
	0.9nm,0.8s,baz=98,slow=6.4,SNR=15						
	0.9nm,0.8s						
TXAR	Lajitas Array	86.74	57	P	P	06 59 08.8	-0.1
	0.2nm,0.6s,baz=261,slow=3.2,SNR=2.5						
	0.2nm,0.6s						
AKASG	Malin Array Be	142.75	331	PKhKP	PKPpre	07 05 49.5	
	0.2nm,0.3s,baz=32,slow=4.2,SNR=2.5						
EKA	Eskdalemuir Ar	144.62	5	PKP	PKPdf	07 05 55.5	-1.3
	0.7nm,0.4s,baz=351,slow=3.2,SNR=4.6						
GERES	GERESS Array B	149.88	345	PKPbc	PKPbc	07 06 11.6	+0.3
	0.3nm,0.3s,baz=26,slow=2.8,SNR=1.5						

IDC 17 07:08:57.1±3.5**, 31°.36S**×**177°.68W, h0**^{km}**, mb3.4**/2**, mbtmp3.5**/3**, ML3.1**/1**, Error ellipse: s-maj=80.7km s-min=38.6km az=112.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	8.10	210	Pn	Pn	07 10 55.6	-0.4
	0.2nm,0.3s,baz=295,slow=17,SNR=1.6						
URZ				Sn	Sn	07 12 28.6	+0.2
	0.9nm,0.3s,baz=286,slow=23,SNR=1.7						
	6.7nm,0.8s						
ASAR	Alice Springs	43.34	268	P	P	07 17 00.5	-0.7
	0.4nm,0.7s,baz=111,slow=8.5,SNR=2.6						
	0.4nm,0.7s						
WRA	Warramunga Arr	44.42	273	P	P	07 17 10.5	+0.6
	0.3nm,0.4s,baz=112,slow=7.9,SNR=5.5						
	0.3nm,0.4s						
FINES	FINESS Array B	146.14	340	PKPbc	PKPdf	07 28 37.5	0.0
	0.9nm,0.6s,baz=34,slow=3.5,SNR=1.9						

IDC 17 07:10:15.2±2.1**, 31°.32S**×**178°.31W, h0**^{km}**, mb3.9**/3**, mbtmp3.9**/3**, MS4.5**/1**, Error ellipse: s-maj=59.7km s-min=34.5km az=45.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	7.88	207	Pn	Pn	07 11 59.3	-12
	0.7nm,0.3s,baz=122,slow=7.6,SNR=3.0						
URZ				Sn	Sn	07 13 22.9	-18
	3.1nm,0.3s,baz=283,slow=22,SNR=10						
ASAR	Alice Springs	42.81	268	P	P	07 18 15.1	0.0
	0.5nm,0.5s,baz=105,slow=7.7,SNR=9.3						
	0.5nm,0.5s						
WRA	Warramunga Arr	43.88	273	P	P	07 18 23.5	-0.2
	0.7nm,0.4s,baz=113,slow=8.0,SNR=11						
	0.7nm,0.4s						
JAY	Jayapura	48.09	298	LR	LR	07 37 17.4	
	comp=Z,487nm,18.2s,baz=26,slow=34						
QSPA	South Pole Qui	58.79	180	P	P	07 20 14.9	-0.2
	2.7nm,0.9s,baz=79,slow=3.8,SNR=11						
	2.7nm,0.9s						
FINES	FINESS Array B	145.91	339	PKPbc	PKPdf	07 29 55.4	+0.1
	0.9nm,0.6s,baz=54,slow=5.5,SNR=6.2						

IDC 17 07:11:42.1±1.7**, 31°.04S**×**177°.80W, h0**^{km}**, mb3.8**/3**, mbtmp3.8**/3**, Error ellipse: s-maj=51.8km s-min=42.3km az=36.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	8.33	209	Sn	Sn	07 15 09.4	-10
	0.3nm,0.3s,baz=170,slow=22,SNR=1.4						
ASAR	Alice Springs	43.25	268	P	P	07 19 45.5	0.0
	1.1nm,0.8s,baz=124,slow=7.7,SNR=6.4						
	1.1nm,0.8s						
WRA	Warramunga Arr	44.29	273	P	P	07 19 53.7	-0.2
	0.8nm,0.4s,baz=114,slow=8.0,SNR=6.0						
	0.8nm,0.4s						
QSPA	South Pole Qui	59.07	180	P	P	07 21 44.0	+0.1
	0.9nm,1.0s,baz=252,slow=8.6,SNR=1.5						
	0.9nm,1.0s						
FINES	FINESS Array B	145.80	340	PKPbc	PKPdf	07 31 21.9	0.0
	1.1nm,0.4s,baz=63,slow=3.5,SNR=9.4						
AKASG	Malin Array Be	151.91	322	PKPbc	PKPbc	07 31 37.9	-0.7
	0.5nm,0.4s,baz=46,slow=2.7,SNR=2.6						

CATAC ***17*** *07:14:02.5±0.8, 7°N±4°×8°3W±°, h1^{km}, M4.1/10, mb4.5/1, MLv4.0/10, Error ellipse: s-maj=14.9km s-min=8.7km az=87.8, confirmed*

UPA ***17*** *07:14:02.5±1.6, 7°.16N×82°.27W, h6^{km}±14^{km}, MW3.8*

UCR ***17*** *07:14:03.7±2.1, 7°.22N×82°.33W, h13^{km}±11^{km}, MW3.7*

ISC 17 07:13:60.0±2.1**, 7°.10N**±0°.08×**82°.33W**±0°.04**, h7**^{km}±11^{km}**, n106,** σ**1^{s}48**/120**, 13C-7D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LMNES	Limones	1.13	332	⇑*i*P	Pb	07 14 21.8	0.0
LMNES				*e*S	Sb	07 14 34.3	-2.4
RMDIO	Remedios, Chir	1.23	24	⇓*i*P	Pg	07 14 23.9	+0.4
GMAL	Guarumal, Vera	1.27	59	⇓*e*P	Pg	07 14 24.7	+0.2
GMAL				*e*S	Sg	07 14 40.5	-0.5
GMAL	Guarumal, Vera	1.27	59	*e*P	Pg	07 14 24.7	+0.2
GMAL				*e*S	Sg	07 14 40.8	-0.2
PEDE3	Pedregal, Chir	1.28	356	*e*P	Pb	07 14 24.4	0.0
LOCO3	Loma Colorada,	1.31	356	*e*P	Pb	07 14 25.1	+0.2
CSTBL	De las Acacias	1.31	355	⇑*e*P	Pb	07 14 25.0	0.0
LOMA3	Las Lomas, Chi	1.33	357	*e*P	Pb	07 14 25.3	+0.1
CACAO	El Cacao, Vera	1.48	80	*e*P	Pb	07 14 27.9	+0.1
CACAO				*e*S	Sb	07 14 46.5	-0.3
MCANO	Manzana, Boque	1.48	351	*e*P	Pn	07 14 27.4	+0.3
CDITO	Canoas	1.56	340	P	Pn	07 14 28.2	0.0
CDITO	Canoas	1.56	340	S	Sn	07 14 47.5	-1.2
PSOM3	Paja de Sombre	1.58	0	*e*P	Pb	07 14 30.1	+0.6
PTAR3	Potrerillos Ar	1.60	354	*e*P	Pb	07 14 30.5	+0.6
BQTLY	Boquete Panama	1.66	356	*e*P	Pn	07 14 29.8	+0.2
CLLRA	Cordillera,	1.66	350	*e*P	Pn	07 14 29.7	0.0
BRU2	Volcan	1.73	348	⇑*e*P	Pn	07 14 30.9	+0.4
BRU2	Volcan	1.73	348	S	Sb	07 14 53.0	-1.1
BRU2	Volcan	1.73	348	P	Pn	07 14 30.8	+0.2
BRU2	Volcan	1.73	348	*e*P	Pn	07 14 30.8	+0.2
BRU2				*e*S	Sg	07 14 55.3	-0.2
FITO	Golfito	1.73	332	⇑*e*P	Pn	07 14 29.8	-0.6
JIME	Puerto Jimenez	1.74	326	⇑*e*P	Pn	07 14 30.6	0.0
EDAD	Golfito	1.75	332	*e*P	Pn	07 14 30.3	-0.5
MLIR3	Monte Lirio, C	1.76	344	*e*P	Pb	07 14 32.0	-0.6
RBALA	Bur	1.78	6	*e*P	Pb	07 14 32.6	-0.4
SCLRA	Santa Clara, W	1.78	346	*e*P	Pb	07 14 32.4	-0.7
PBNVO	Pueblo Nuevo,	1.79	4	⇓*e*P	Pn	07 14 32.0	+0.7
VITO	San Vito	1.83	340	*e*P	Pn	07 14 33.0	+1.0
ALCO	Alturas Coton,	1.91	345	⇑*e*P	Pn	07 14 33.4	+0.3
ALCO				*e*S	Sb	07 14 58.6	-0.8
CHIT3	Chitre	2.08	66	*e*P	Pb	07 14 37.1	-1.0
CHIT3				*e*S	Sb	07 15 02.5	-1.7
EDP2	Potrero Grande	2.08	336	⇑*i*P	Pn	07 14 36.8	+1.4
EDP2				*e*S	Sn	07 15 02.2	+0.6
FIMO	Fila Mora	2.14	332	*e*P	Pn	07 14 37.1	+0.9
AZU	Azuero	2.15	71	⇓*i*P	Pb	07 14 38.0	-1.3
AZU				*e*S	Sb	07 15 04.3	-1.9
AZU	Azuero	2.15	71	*e*P	Pb	07 14 38.0	-1.3
AZU				*e*S	Sn	07 15 03.1	-0.2
PANP	Palmar Norte	2.16	329	*e*P	Pn	07 14 37.0	+0.5
ACHO3	Achotines, Los	2.16	81	*e*P	Pn	07 14 37.5	+1.1
ISBTO	Bastimentos Is	2.24	3	*e*P	Pb	07 14 40.2	-0.5
BURE	Buenos Aires	2.29	334	*e*P	Pn	07 14 39.5	+1.3
DRK0	Durika	2.34	337	⇑*e*P	Pn	07 14 39.7	+0.7
DRK0	Durika	2.34	337	P	Pn	07 14 39.9	+0.9
DRK0	Durika	2.34	337	S	Sn	07 15 07.6	-0.5
DRK0	Durika	2.34	337	*e*P	Pn	07 14 39.9	+0.9
OCHAL	Ojochal	2.38	327	S	Sn	07 15 09.3	+0.5
OCHAL	Ojochal	2.38	327	P	Pn	07 14 40.1	+0.7
EDPE	Pejibaye, P	2.39	329	⇑*i*P	Pn	07 14 40.5	+0.9
RGM0	Gandoca	2.49	354	S	Sb	07 15 16.4	+0.4
RGM0	Gandoca	2.49	354	P	Pn	07 14 42.7	+1.7
SAJE	San Jernim	2.52	333	*e*P	Pn	07 14 42.2	+0.7
SAJE				*e*S	Sn	07 15 12.4	-0.2
BRIBI	Bribri	2.55	349	*e*P	Pn	07 14 42.4	+0.5
BRIBI				*e*S	Sb	07 15 15.1	-2.7
CEUA	Cerro Uatsi, L	2.58	347	*e*P	Pb	07 14 46.0	-0.7
VERH	Veragua Rainfo	2.94	343	*e*P	Pn	07 14 49.3	+2.1
PIEC	Cerro El Cedra	2.98	327	⇑*e*P	Pn	07 14 49.3	+1.3
RAZU	San Marcos de	3.05	327	*e*P	Pn	07 14 49.8	+1.0
PITB	Pirrs, San	3.05	327	*e*P	Pn	07 14 50.5	+1.7
ZANG	Zanguenga, Cho	3.06	53	*e*P	Pn	07 14 51.3	+2.5
TURIB	Turrialba	3.10	334	⇓*i*P	Pn	07 14 51.3	+1.9
ABE2	San Pablo	3.10	327	⇓*i*P	Pn	07 14 50.8	+1.2
LCR2	La Lucha 2	3.11	328	⇑*e*P	Pn	07 14 50.9	+1.2
LCR2	La Lucha 2	3.11	328	P	Pn	07 14 50.4	+0.8
LCR2	La Lucha 2	3.11	328	S	Sn	07 15 27.0	-0.1
REPA	Paraso	3.11	331	*e*P	Pn	07 14 51.6	+2.0
VINA	Juan Vinas	3.11	333	*e*P	Pn	07 14 52.9	+3.3
PICV	PH. Pirrs	3.12	324	*e*P	Pn	07 14 50.8	+1.2
PCAYA	Pacayas	3.16	333	⇑*e*P	Pn	07 14 52.2	+1.8
VTCV	VTCV, Calle Va	3.18	334	*e*P	Pn	07 14 52.9	+2.2
RESJ	San Isidro (Tu	3.19	336	*e*P	Pn	07 14 52.9	+2.2
ABRB	Las Abras (San	3.20	335	*e*P	Pn	07 14 52.8	+1.9
IRES	Siquirres	3.20	339	*e*P	Pn	07 14 53.7	+3.0
CVTV	Tajo	3.21	334	*e*P	Pn	07 14 53.0	+1.9
BCIP	Isla Barro Col	3.21	50	*e*P	Pn	07 14 53.0	+2.1
CVTQ	Turrialba Volc	3.22	334	*e*P	Pn	07 14 53.4	+2.1
VTR0	Volcan Turrial	3.23	334	*e*P	Pn	07 14 53.2	+1.7
CVTR	Volcan Turrial	3.23	334	*e*P	Pn	07 14 53.3	+1.8
ACOS	Acosta	3.24	326	*e*P	Pn	07 14 52.1	+0.7
TRIO	Tres Rios	3.24	330	*e*P	Pn	07 14 50.4	-1.1
RVLA	Villa Bonita	3.24	338	*e*P	Pn	07 14 54.5	+3.2
AMPA	Desamparados	3.27	329	*e*P	Pn	07 14 53.2	+1.4
ECI	Escuela Centro	3.30	329	*e*P	Pn	07 14 53.3	+1.1
CORON	Coronado	3.30	330	*e*P	Pn	07 14 54.1	+1.8
LUPE	Guadalupe	3.31	329	⇓*e*P	Pn	07 14 54.3	+2.0
CVIMO	Finca Echandi	3.32	331	*e*P	Pn	07 14 54.8	+2.3
SANTA	Santa Ana	3.36	327	⇑*i*P	Pn	07 14 54.2	+1.1
SANTA				*e*S	Sn	07 15 33.8	+0.5
HDC	Heredia	3.38	329	*e*P	Pn	07 14 55.2	+1.8
HDC	Heredia	3.38	329	P	Pn	07 14 55.2	+1.8
HDC				S	Sn	07 15 34.1	+0.2
PILE	Guapiles	3.42	335	*e*P	Pn	07 14 56.1	+2.3
VBV1	V. Barva	3.47	330	*e*P	Pn	07 14 56.4	+1.7
CARI	Cariari	3.53	337	*e*P	Pn	07 14 57.8	+2.5
CBL1	Cabuya	3.69	312	*e*P	Pn	07 14 58.0	+0.6
TRT2	Tortugero	3.71	338	*e*P	Pn	07 15 00.4	+2.7
TRT2	Tortugero	3.71	338	P	Pn	07 14 59.5	+1.8
ITAL	Pital	3.85	330	*e*P	Pn	07 15 00.6	+0.9
SOCE	Pocosol	3.97	325	*e*P	Pn	07 15 03.5	+2.1
SOCE	Pocosol	3.97	325	P	Pn	07 15 03.0	+1.6
VACR	Volcan Arenal	4.08	326	*e*P	Pn	07 15 06.4	+3.6
NYURE	Nandayure	4.08	315	*e*P	Pn	07 15 04.2	+1.4
ARE1	Arenal 1	4.09	325	*e*P	Pn	07 15 05.8	+2.8
VARE2	V. Arenal	4.09	325	*e*P	Pn	07 15 05.8	+2.7
JTS	Las Juntas de	4.10	321	*e*P	Pn	07 15 04.0	+0.8
JTS	Las Juntas de	4.10	321	*e*P	Pn	07 15 05.4	+2.3
INDI	Punta indio, G	4.17	311	P	Pn	07 15 04.5	+0.4
CMARA	Lajas Hojancha	4.22	314	P	Pn	07 15 05.3	+0.5
PLVR	Palo Verde	4.40	317	*e*P	Pn	07 15 08.1	+0.7
CUI	Cuipilapa	4.51	322	*e*P	Pn	07 15 10.4	+1.6
ALIBA	Liberia Airpor	4.71	318	*e*P	Pn	07 15 14.0	+2.5
LAPC	Finca la Perla	4.76	320	*e*P	Pn	07 15 14.5	+2.3
ACON	Acoyapa	5.59	330	P	Pn	07 15 25.7	+2.0

GUC ***17*** *07:15:44.9±0.7, 37°.44S×74°.13W, h20^{km}, ML4.2*

IDC ***17*** *07:15:46.4±1.9, 37°.41S×73°.57W, h0^{km}, mb3.2/2, mbtmp3.2/4, ML3.3/2, Error ellipse: s-maj=55.1km s-min=27.1km az=67.0*

ISC 17 07:15:50.0±1.2**, 37°.37S**±0°.04×**73°.8W**±0°.1**, h35**^{km}**, n19,** σ**1^{s}78**/21**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BI05	Punta Hualpn	0.77	37	*e*P	Pn	07 16 02.6	-1.8
BI05				*e*S	Sn	07 16 15.7	+0.9
LR02	Universidad Au	2.46	171	*e*P	Pn	07 16 24.8	-2.9
LR02				IAML		07 17 19.3	
	comp=E,3µm,0.9s						
ML02	Panimavida	2.48	50	*e*P	Pn	07 16 27.9	0.0
ML02				IAML		07 17 19.3	
	comp=E,2µm,0.6s						
LR03	Panguipulli	2.52	154	*e*P	Pn	07 16 26.6	-1.8
LR03				*e*S	Sn	07 16 57.7	-0.3
LR03				IAML		07 17 24.3	
	comp=N,1µm,0.8s						
LR04	Corral	2.52	174	*e*P	Pn	07 16 22.7	-5.8
LR04				IAML		07 16 51.8	
	comp=E,1µm,0.4s						
GO05	Hualane	2.78	33	*e*P	Pn	07 16 31.3	-0.9
GO05				IAML		07 17 34.0	
	comp=N,700nm,0.9s						
GO06	Curarrehue	2.85	142	*e*P	Pn	07 16 32.0	-1.1
GO06				*i* S	Sn	07 17 06.0	-0.3
LR05	Currie	3.17	155	*e*P	Pn	07 16 35.5	-1.9
BO03	Pichilemu	3.22	28	*e*P	Pn	07 16 36.2	-1.9
BO03				IAML		07 17 44.0	
	comp=E,179nm,0.6s						
MT01	Popeta	4.05	31	*e*P	Pn	07 16 47.8	-1.8
MT01				*i* S	Sn	07 17 35.0	-0.9
VA05	Santo Domingo	4.10	26	*e*P	Pn	07 16 48.1	-2.1
VA05				*i* S	Sn	07 17 34.0	-2.9
PLCA	Paso Flores	4.19	144	Pn	Pn	07 16 50.5	-1.0
	comp=E,0.4nm,0.3s,baz=321,slow=14,SNR=18						
PLCA				Sn	Sn	07 17 40.4	+1.2
	comp=E,1.0nm,0.3s,baz=313,slow=9.8,SNR=3.1						
	comp=E,1.8nm,0.4s						
H03S1	Juan Fernandez	5.47	309	T	T	07 22 29.9	
	baz=130,slow=73,SNR=240						
H03S3	Juan Fernandez	5.48	309	T	T	07 22 30.2	
	baz=130,slow=73,SNR=188						
H03S2	Juan Fernandez	5.49	308	T	T	07 22 29.7	
	baz=130,slow=73,SNR=234						
CPUP	Villa Florida	17.75	56	P	P	07 19 54.8	-0.1
	baz=242,slow=9.6,SNR=4.0						
	comp=E,0.4nm,0.6s						
LPAZ	La Paz	21.58	15	P	P	07 20 38.0	+0.7
	comp=E,1.7nm,1.1s,baz=185,slow=11,SNR=4.1						
	comp=E,1.7nm,1.1s						
TXAR	Lajitas Array	72.03	333	P	P	07 27 13.8	+3.4
	comp=E,0.1nm,0.6s,baz=162,slow=4.4,SNR=2.1						
	comp=E,0.1nm,0.6s						
BVAR	Borovoye Array	150.66	46	PKPbc	PKiKP	07 35 37.8	-0.6
	comp=E,0.4nm,0.4s,baz=250,slow=2.9,SNR=3.6						

IDC ***17*** *07:18:14.6±0.5, 53°.99S×1°.78W, h0^{km}, mb4.3/15, mbtmp4.3/16, ML4.8/1, MS4.9/11, Error ellipse: s-maj=20.4km s-min=15.3km az=71.0*

NEIC ***17*** *07:18:16.3±1.8, 54°.1S±0°.1×1°.9W±0°.2, h10^{km}±1^{km}, mb5.0/43, Error ellipse: s-maj=19.7km s-min=18.6km az=101.0*

GCMT ***17*** *07:18:23.3±0.3, 53°.87S±0°.01×1°.65W±0°.04, h31^{km}±1^{km}, MW5.4/93, Moment Tensor Solution. s22,c25; s93,c133; Duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.38±.09; $M_{\theta\theta}$0.59±.06; $M_{\phi\phi}$-0.20±.06; $M_{r\theta}$0.42±.07; $M_{\theta\phi}$-1.37±.04; $M_{\phi r}$0.09±.09; Best double couple: $M_0$1.50300×10^{17} NP1:ϕ_s171.00000°,δ71.00000°, λ-8.00000°. NP2:ϕ_s264.00000°,δ83.00000°, λ-161.00000°. Principal axes: T 1.6600, Plg8.0000°, Azm36.0000°; N -0.3140, Plg69.0000°, Azm284.0000°; P -1.3450, Plg19.0000°, Azm129.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 07:18:15.9±0.4**, 54°.03S**±0°.07×**1°.89W**±0°.09**, h10**^{km}**, n113,** σ**0^{s}86**/86**, mb4.8**/33**, MS4.9**/10**, 7D, Bouvet Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	16.93	187	⇓P	Pn	07 22 13.6	+1.2
	comp=Z,1.9nm,0.2s						
VNA2	Neumayer--Watz	17.14	186	⇓P	Pn	07 22 14.7	-0.4
	comp=Z,6.3nm,0.5s,baz=8.5,slow=14						
VNA3	Neumayer Olymp	17.62	188	⇓P	Pn	07 22 20.3	-0.8
SNAA	Sanae	17.71	181	⇓P	Pn	07 22 21.3	-1.1
	comp=Z,71nm,0.6s						
SNAA	Sanae	17.71	181		Pn	07 22 22.3	-0.1
SNAA	Sanae	17.71	181	Pn	Pn	07 22 23.2	+0.8
	comp=Z,2.8nm,0.3s,baz=30,slow=16,SNR=107						
SNAA				Sn	Sn	07 25 24.4	-15
	baz=324,slow=14,SNR=1.8						
SNAA				LR	LR	07 27 58.0	
	comp=Z,4µm,18.3s,baz=64,slow=33						
	comp=Z,11nm,0.3s						
TROLL	Troll, Antarti	18.15	176	⇓P	P	07 22 29.5	+1.4
	comp=Z,486nm,0.7s						
HOPE	Hope Point	20.15	255	P	P	07 22 50.6	+0.7
SYO	Syowa Base	24.15	144	⇓*e*P	P	07 23 30.8	-0.9
SYO	Syowa Base	24.15	144	⇓*e*sP	sP	07 23 35.0	+0.1
BELA	Belgrano 2	26.61	195		P	07 23 53.7	-0.2
BELA				IAmb	IAmb	07 24 01.8	
	comp=Z,34nm,1.3s						
SUR	Sutherland	27.02	46	P	P	07 23 58.0	-0.2
SUR				IAmb	IAmb	07 24 02.5	
	comp=Z,64nm,1.6s						
PMSA	Palmer Station	32.05	226	LR	LR	07 36 13.6	
	comp=Z,911nm,18.1s,baz=140,slow=34						
BOSA	Boshof	32.19	49	P	P	07 24 43.4	-0.6
BOSA				IAmb	IAmb	07 24 46.3	
	comp=Z,31nm,1.9s						
BOSA	Boshof	32.19	49	P	P	07 24 42.8	-1.3
	comp=Z,2.9nm,1.1s,baz=185,slow=5.8,SNR=4.4						
	comp=Z,2.9nm,1.1s						
MAW	Mawson	32.63	140	P	P	07 24 46.5	-0.8
	comp=Z,3.7nm,1.0s,baz=312,slow=7.5,SNR=3.5						
MAW				LR	LR	07 37 05.2	
	comp=Z,542nm,18.1s,baz=75,slow=35						
	comp=Z,3.7nm,1.0s						
H04S2	CROZET ISLANDS	34.26	100	T	T	08 02 00.8	
	baz=238,slow=75,SNR=48						
H04S3	CROZET ISLANDS	34.27	100	T	T	08 01 55.5	
	baz=238,slow=75,SNR=49						
H04S1	CROZET ISLANDS	34.28	100	T	T	08 01 57.4	
	baz=238,slow=75,SNR=41						
LBTB	Lobatse	35.47	46	LR	LR	07 36 49.3	
	comp=Z,3µm,19.1s,baz=177,slow=32						
KGCAE	Kacgae	36.04	40	P	P	07 25 16.6	-0.9
KGCAE				IAmb	IAmb	07 25 18.5	
	comp=Z,58nm,1.8s						
QSPA	South Pole Qui	36.22	180		P	07 25 18.2	-0.4
QSPA	South Pole Qui	36.22	180	P	P	07 25 19.0	+0.4
	comp=Z,11nm,0.9s,baz=233,slow=2.7,SNR=16						
QSPA				LR	LR	07 39 43.4	
	comp=Z,2µm,18.4s,baz=257,slow=36						
	comp=Z,11nm,0.9s						
KDWAN	Kaudwane	36.53	44		P	07 25 20.6	-1.1
GRTLG	Ghanzi	37.04	37		P	07 25 26.2	+0.2
GRTLG				IAmb	IAmb	07 25 30.3	
	comp=Z,19nm,0.8s						
TSUM	Tsumeb	37.85	31		P	07 25 33.8	+1.0
TSUM				IAmb	IAmb	07 25 34.9	
	comp=Z,22nm,1.2s						
TSUM	Tsumeb	37.85	31	LR	LR	07 39 07.6	
	comp=Z,3µm,18.1s,baz=310,slow=33						
QNGWA	Qangwa	38.71	36	P	P	07 25 40.7	+0.5
QNGWA				IAmb	IAmb	07 25 41.5	
	comp=Z,33nm,1.4s						
PHDHD	Phuduhudu	39.34	41	P	P	07 25 46.1	+0.7
PHDHD				IAmb	IAmb	07 25 46.5	
	comp=Z,40nm,1.6s						
MATP	Matopo	40.76	47	LR	LR	07 40 13.7	
	comp=Z,958nm,18.5s,baz=250,slow=32						
GO09	Cerro Castillo	41.22	244	P	P	07 26 01.0	+0.5
TRQA	Tornquist	43.29	266	P	P	07 26 18.4	+0.8
COYC	Coyhaique	44.35	251	P	P	07 26 25.0	-1.0
COYC				IAmb	IAmb	07 26 59.5	
	comp=Z,50nm,1.9s						
LSZ	Lusaka	45.24	43	LR	LR	07 43 33.4	
	comp=Z,2µm,18.6s,baz=221,slow=34						
LL02	Futaleuf	45.69	254		P	07 26 37.2	+0.5
LL02				IAmb	IAmb	07 26 49.2	
	comp=Z,22nm,1.1s						
H10S2	ASCENSION HYDR	46.10	342	T	T	08 16 18.8	

	baz=168,slow=74,SNR=36						
H10S3	ASCENSION HYDR	46.11	342	T	T	08 16 19.5	
	baz=52,slow=74,SNR=36						
PLCA	Paso Flores	46.53	257	P	P	07 26 44.5	+1.1
	comp=Z,1.2nm,0.8s,baz=129,slow=12,SNR=3.4						
	comp=Z,1.2nm,0.8s						
SBA	Scott Base	48.20	177		P	07 26 55.2	-0.6
SBA				IAmb	IAmb	07 26 59.1	
	comp=Z,16nm,1.2s						
VNDA	Vanda	48.33	175		P	07 26 57.6	+0.8
VNDA	Vanda	48.33	175	P	P	07 26 57.2	+0.4
	comp=Z,6.6nm,0.8s,baz=226,slow=6.4,SNR=14						
VNDA				LR	LR	07 46 26.4	
	comp=Z,2µm,20.1s,baz=200,slow=35						
	comp=Z,6.6nm,0.8s						
CPUP	Villa Florida	48.96	282	P	P	07 27 02.9	+0.6
CPUP	Villa Florida	48.96	282	P	P	07 27 02.4	+0.1
	comp=Z,0.6nm,0.8s,baz=4.5,slow=9.1,SNR=5.4						
	comp=Z,0.6nm,0.8s						
TRCB	Terra Rica	49.04	289	P	P	07 27 03.5	+0.5
CASY	Casey	49.66	151	P	P	07 27 07.1	0.0
CASY				IAmb	IAmb	07 27 09.0	
	comp=Z,29nm,1.4s						
BO02	Sierra Bellavi	50.69	263	P	P	07 27 14.5	-1.0
BO02				IAmb	IAmb	07 28 59.4	
	comp=Z,30nm,1.9s						
LMEL	Las Melosas	51.02	264	P	P	07 27 17.6	-0.5
BO01	Tunca	51.15	263	P	P	07 27 17.6	-1.3
BO01				IAmb	IAmb	07 27 21.1	
	comp=Z,46nm,1.9s						
BO04	La Punta	51.16	264	P	P	07 27 18.7	-0.2
BO04				IAmb	IAmb	07 27 28.2	
	comp=Z,39nm,1.5s						
MT08	Bocatoma Ro	51.19	265	P	P	07 27 18.4	-1.0
MT08				IAmb	IAmb	07 27 21.9	
	comp=Z,40nm,1.9s						
MT03	Universidad Ad	51.45	264	P	P	07 27 20.6	-0.7
MT03				IAmb	IAmb	07 28 54.3	
	comp=Z,14nm,1.1s						
MT16	CCHEN	51.50	264	P	P	07 27 21.6	0.0
MT09	Talagante	51.53	264	P	P	07 27 21.8	-0.1
MT02	Curacav	51.98	264	P	P	07 27 25.5	+0.4
VA03	San Esteban	51.99	265	P	P	07 27 25.7	+0.4
VA03				IAmb	IAmb	07 28 14.8	
	comp=Z,12nm,1.1s						
BDFB	Brasilia	52.39	299	P	P	07 27 28.9	+0.5
BDFB				IAmb	IAmb	07 27 30.8	
	comp=Z,24nm,1.5s						
BDFB	Brasilia	52.39	299	P	P	07 27 28.7	+0.3
	comp=Z,3.9nm,0.9s,baz=155,slow=5.4,SNR=6.1						
	comp=Z,3.9nm,0.9s						
AQDB	Aquidauana	52.60	288	P	P	07 27 29.9	+0.1
AQDB				IAmb	IAmb	07 27 32.4	
	comp=Z,35nm,1.9s						
CO01	Juntas del Tor	53.74	268	P	P	07 27 37.6	-0.8
CO01				IAmb	IAmb	07 27 54.2	
	comp=Z,15nm,1.4s						
CO06	Fray Jorge	54.14	266	P	P	07 27 40.9	-0.1
PTLB	Pontes e Lacer	58.56	288	P	P	07 28 12.4	-0.3
DBIC	Dimbokro	60.52	357	P	P	07 28 25.8	-0.3
DBIC				IAmb	IAmb	07 28 36.5	
	comp=Z,21nm,1.1s						
DBIC	Dimbokro	60.52	357	P	P	07 28 25.1	-1.0
	comp=Z,6.1nm,1.1s,baz=183,slow=7.9,SNR=6.7						
	comp=Z,6.1nm,1.1s						
LPAZ	La Paz	63.04	280	P	P	07 28 43.2	-0.8
LPAZ	La Paz	63.04	280	P	P	07 28 43.9	0.0
	comp=Z,2.6nm,0.8s,baz=171,slow=4.4,SNR=11						
	comp=Z,2.6nm,0.8s						
TORD	Torodi Ar. Bea	66.98	4	P	P	07 29 08.5	-0.1
TORD				IAmb	IAmb	07 29 12.9	
	comp=Z,21nm,2.0s						
TORD	Torodi Ar. Bea	66.98	4	P	P	07 29 08.9	+0.3
	comp=Z,2.4nm,0.7s,baz=175,slow=4.5,SNR=35						
	comp=Z,2.4nm,0.7s						
H08S1	Diego Carcia H	74.67	82	T	T	08 51 54.5	
	baz=218						
H08S2	Diego Garcia H	74.68	82	T	T	08 51 55.2	
	baz=218						
H08S3	Diego Garcia H	74.69	82	T	T	08 51 56.2	
	baz=218						
H01W2	Cape Leeuwin H	75.69	130	T	T	08 53 57.7	
	baz=212,slow=75,SNR=22						
H01W1	Cape Leeuwin H	75.71	130	T	T	08 53 57.4	
	baz=212,slow=75,SNR=21						
H01W3	Cape Leeuwin H	75.71	130	T	T	08 53 55.7	
	baz=212,slow=75,SNR=24						
RPZ	Rata Peaks	82.44	175	LR	LR	08 03 51.4	
	comp=Z,638nm,19.7s,baz=188,slow=33						
TOO	Toolangi	84.53	155	P	P	07 30 49.5	+0.5
URZ	Urewera	88.08	179	LR	LR	08 06 32.4	
	comp=Z,357nm,20.9s,baz=270,slow=33						
STKA	Stephens Creek	88.80	150	P	P	07 31 09.8	-0.1
STKA	Stephens Creek	88.80	150	P	P	07 31 10.2	+0.3
	comp=Z,6.0nm,0.7s,baz=186,slow=9.2,SNR=9.6						
	comp=Z,6.0nm,0.7s						
KEST	Kesra	89.92	9	P	P	07 31 16.3	+1.5
	comp=Z,1.7nm,0.7s,baz=202,slow=5.4,SNR=5.2						
	comp=Z,1.7nm,0.7s						
ESDC	Sonseca Array	93.35	358	P	P	07 31 32.1	+1.6
	comp=Z,0.2nm,0.3s,baz=177,slow=5.0,SNR=5.5						
	comp=Z,0.2nm,0.3s						
ASAR	Alice Springs	93.75	140	P	P	07 31 33.4	+0.3
ASAR	Alice Springs	93.75	140	P	P	07 31 33.6	+0.6
	comp=Z,0.7nm,0.8s,baz=200,slow=5.4,SNR=6.0						
	comp=Z,0.7nm,0.8s						
SOCE	Pocosol	94.08	282	P	P	07 31 31.7	-2.8
WRA	Warramunga Arr	97.30	139	P	Pdif	07 31 50.7	+1.3
	comp=Z,0.5nm,1.1s,baz=202,slow=3.9,SNR=2.2						
	comp=Z,0.5nm,1.1s						
TBI	Tubuai	98.02	210	*e*LR	LR	08 03 33.4	
	comp=Z,2µm,27.8s						
PPT2	Papeete2	103.48	212	*e*LR	LR	08 06 04.5	
	comp=Z,255nm,22.2s						
DZM	Mont Dzumac	103.55	169	*e*LR	LR	08 06 07.8	
	comp=Z,588nm,21.8s						
TAOE	Nuku Hiva Isla	108.15	224	*e*LR	LR	08 08 15.0	
	comp=Z,419nm,24.7s						
PZH	PanZhiHua	118.88	84	PKP	PKiKP	07 37 05.8	+1.4
TXAR	Lajitas Array	119.91	280	PKhKP	PKPpre	07 37 01.2	
	comp=Z,0.3nm,1.0s,baz=56,slow=0.6,SNR=2.6						
BVAR	Borovoye Array	122.34	43	PKP	PKPdf	07 37 08.4	-1.6
	comp=Z,1.1nm,0.6s,baz=264,slow=1.5,SNR=5.7						
MKAR	Makanchi Array	123.06	55	PKP	PKPdf	07 37 10.3	-1.3
	comp=Z,0.8nm,0.8s,baz=263,slow=1.2,SNR=5.2						
WMQ	Urumqi	123.64	60	*e*PKP	PKiKP	07 37 15.3	+2.1
KURBB	Kurchatov Arra	124.05	49	PKP	PKPdf	07 37 13.3	0.0
	comp=Z,0.2nm,0.3s,baz=220,slow=2.5,SNR=4.8						
ZALV	Zalesovo Beam	129.14	50	PKP	PKPdf	07 37 22.3	-0.7
	comp=Z,0.6nm,0.3s,baz=323,slow=2.2,SNR=1.7						
MVU	Marysvale	131.41	281		PKPdf	07 37 28.4	+0.2
HHC	Hu-ho-hao-te	134.76	79	*e*P	PKPdf	07 37 31.8	-2.4
SONM	Songino Array	136.17	67	PKP	PKiKP	07 37 37.9	-0.4
	comp=Z,0.2nm,0.4s,baz=198,slow=1.4,SNR=2.2						
BMO	Blue Mountains	138.39	285		PKPdf	07 37 41.1	+0.3
G08A	Pilot Rock	139.59	284		PKPdf	07 37 44.0	+1.0
LLLB	Lillooet	144.12	290	PKPdf	PKPbc	07 37 49.9	+1.0
HIA	Hailar	144.37	73	PKPdf	PKPbc	07 37 49.9	+0.2
YKAW1	Yellowknife Wh	145.12	311		PKPbc	07 37 51.6	0.0
YKA	Yellowknife Ar	145.18	311	PKPbc	PKPbc	07 37 51.3	-0.5
YKA	Yellowknife Ar	145.18	311	PKPbc	PKPbc	07 37 51.7	-0.2
	comp=Z,4.8nm,0.8s,baz=99,slow=3.3,SNR=40						
YKAW3	Yellowknife Wh	145.20	312		PKPbc	07 37 51.8	-0.1
MJAR	Matsushiro Arr	147.47	106	PKPbc	PKPbc	07 37 59.4	-0.2
MJAR	Matsushiro Arr	147.47	106	PKPbc	PKPbc	07 37 59.5	0.0
	comp=Z,3.7nm,0.9s,baz=213,slow=3.5,SNR=6.8						
WRGLY	Wrigley	149.29	311		PKPbc	07 38 04.2	+0.8
A36M	Sachs Harbour	150.26	328	PKPbc	PKiKP	07 38 06.3	0.0
INK	Inuvik	153.54	321		PKPbc	07 38 12.2	-0.8
ILAR	Eielson Array	159.49	315		PKPab	07 38 51.5	+0.1
ILAR	Eielson Array	159.49	315	PKPab	PKPab	07 38 52.4	+0.9
	comp=Z,3.2nm,1.1s,baz=79,slow=2.9,SNR=13						

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*IDC **17** 07:21:28.2±3.5, 54°.28N×87°.04E, h0^{km}, mbtmp2.7/2, ML2.2/2, Error ellipse: s-maj=32.2km s-min=20.4km az=54.0*

ASRS 17 07:21:25.0±0.7**, 54°.24N×87°.04E, h0^{km}, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.34	258	I	I	07 30 10.0	
	baz=76,slow=326,SNR=6.0						
ZALV	Zalesovo Beam	1.34	258	Pg	Pb	07 21 52.0	+1.1
	0.6nm,0.3s,baz=72,slow=20,SNR=7.3						
ZALV				Lg	Lg	07 22 11.3	
	0.7nm,0.3s,baz=76,slow=30,SNR=3.9						
KURBB	Kurchatov Arra	6.34	239	Pn	Pn	07 23 04.2	+4.5
	baz=55,slow=14,SNR=7.6						
	0.7nm,0.5s						
MKAR	Makanchi Array	8.04	204	Pn	Pn	07 23 27.8	+4.8
	baz=15,slow=13,SNR=2.0						
	0.1nm,0.5s						

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*ASRS **17** 07:29:39.0±1.0, 55°.62N×86°.24E, h0^{km}, M2.8, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 17 07:29:45.5±2.7**, 55°.49N×86°.09E, h0^{km}, mbtmp3.0**/3**, ML2.5**/3**, Error ellipse: s-maj=23.4km s-min=16.4km az=68.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.71	206	I	I	07 41 30.0	
	0.1nm,1.0s,baz=23,slow=327,SNR=6.1						
ZALV	Zalesovo Beam	1.71	206	Pg	Pn	07 30 14.9	-1.6
	4.6nm,0.3s,baz=24,slow=18,SNR=37						
ZALV				Lg	Lg	07 30 40.5	
	4.1nm,0.3s,baz=25,slow=27,SNR=13						
KURBB	Kurchatov Arra	6.67	226	Pn	Pn	07 31 23.7	-0.9
	0.1nm,0.3s,baz=43,slow=14,SNR=6.7						
KURBB				Sn	Sn	07 32 38.5	-2.7
	baz=145,slow=47,SNR=1.2						
KURBB				Lg	Lg	07 33 18.2	
	baz=40,slow=29,SNR=4.2						
	0.5nm,0.4s						
MKAR	Makanchi Array	9.03	197	Pn	Pn	07 31 56.6	-0.4
	0.1nm,0.3s,baz=12,slow=10,SNR=3.2						
MKAR				Sn	Sn	07 33 39.5	+0.3
	0.1nm,0.3s,baz=6.3,slow=28,SNR=2.2						
MKAR				Lg	Lg	07 34 32.6	
	baz=26,slow=30						
	0.2nm,0.5s						
BVAR	Borovoye Array	9.51	261	Pn	Pn	07 32 03.9	+0.3
	baz=64,slow=17,SNR=4.5						
	0.7nm,0.4s						

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*IDC **17** 07:37:02.3±0.8, 32°.94S×178°.45W, h0^{km}, mb4.3/5, mbtmp4.3/5, Error ellipse: s-maj=35.8km s-min=25.8km az=62.0*

*WEL **17** 07:37:03.4±0.8, 33°S±6°×17°8W±1°5, h33^{km}, mB4.9/7, ML5.0/14, MLv4.8/13, Mw(mB)4.2/7, Error ellipse: s-maj=20.5km s-min=3.6km az=109.2, confirmed*

*NEIC **17** 07:37:06.2±2.3, 33°.1S±0°.1×178°.58W±0°.05, h10^{km}±1^{km}, mb4.6/13, Error ellipse: s-maj=19.7km s-min=7.4km az=3.0*

ISC 17 07:37:06.8±0.6**, 33°.18S**±0°.06×**178°.2W**±0°.1**, h34^{km}, n69, σ2^{s}.11**/85**, mb4.5**/13**, 6C, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.91	3	P	Pn	07 38 00.3	-4.2
GLKZ				S	Sn	07 38 44.3	-5.0
RAO	Raoul Island	3.92	3	Pn	Pn	07 38 05.7	+1.0
RIZ	Raoul Island	3.93	3	S	Sn	07 38 48.6	-1.0
MXZ	Matakaoa Point	5.23	212	P	Pn	07 38 20.4	-2.2
MXZ				S	Sn	07 39 19.9	-1.9
WMGZ	Waiomatatini S	5.40	210	P	Pn	07 38 23.5	-1.5
WMGZ				S	Sn	07 39 26.4	+0.6
PKGZ	Pakihiroa	5.58	212	P	Pn	07 38 25.4	-2.1
PKGZ				P	Sn	07 39 29.6	-0.9
HAZ	Te Kaha	5.63	215	P	Pn	07 38 26.9	-1.2
HAZ				S	Sn	07 39 32.1	+0.5
PUZ	Puketiti	5.68	210	P	Pn	07 38 25.7	-3.1
PUZ				S	Sn	07 39 30.2	-2.6
RUGZ	Raukumara Rang	5.85	214	P	Pn	07 38 27.2	-4.0
RUGZ				S	Sn	07 39 35.6	-1.5
TWGZ	Tauwhareparae	5.89	211	P	Pn	07 38 29.9	-1.7
TWGZ				S	Sn	07 39 36.2	-1.7
CNGZ	Carnagh Statio	6.05	208	P	Pn	07 38 31.2	-2.7
CNGZ				S	Sn	07 39 39.4	-2.5
KUZ	Kuaotunu	6.15	233	P	Pn	07 38 34.4	-0.8
TKGZ	Te Karaka	6.16	211	P	Pn	07 38 33.7	-1.7
MWZ	Matawai	6.22	213	P	Pn	07 38 33.9	-2.3
MWZ				S	Sn	07 39 43.3	-2.7
URZ	Urewera	6.36	216	Pn	Pn	07 38 34.3	-3.7
	6.4nm,0.3s,baz=352,slow=3.8,SNR=42						
URZ				Sn	Sn	07 39 45.7	-3.7
	3.6nm,0.3s,baz=165,slow=19,SNR=14						
URZ	Urewera	6.36	216	P	Pn	07 38 35.4	-2.6
URZ				S	Sn	07 39 47.6	-1.8
RAGZ	Rawiri	6.40	213	P	Pn	07 38 35.3	-3.4
RAGZ				S	Sn	07 39 47.8	-2.8
RIGZ	Rimuhau	6.42	210	P	Pn	07 38 37.8	-1.2
RIGZ				S	Sn	07 39 48.2	-2.9
PRGZ	Paritu Road	6.56	208	P	Pn	07 38 37.7	-3.2
PRGZ				S	Sn	07 39 53.5	-1.0
SNGZ	Shannon Statio	6.67	212	P	Pn	07 38 40.7	-1.7
SNGZ				S	Sn	07 39 55.6	-1.6
MUGZ	Murupara	6.69	216	S	Sn	07 39 54.6	-3.2
RTZ	Ruatahuna	6.70	215	Pn	Pn	07 38 40.1	-2.7
MHGZ	Mahia Peninsul	6.75	207	P	Pn	07 38 40.2	-3.3
MHGZ				S	Sn	07 39 55.7	-3.5
WCZ	Waipu Caves	6.76	244	P	Pn	07 38 45.4	+1.9
OUZ	Omahuta	7.12	251	P	Pn	07 38 49.6	+1.1
NGZ	Ngauruhoe	7.82	218	P	Pn	07 38 59.0	+0.8
NGZ				S	Sn	07 40 29.2	+3.6
WAZ	Wanganui	8.57	218	S	Sn	07 40 43.2	-0.6
DZM	Mont Dzumac	17.54	305		Pn	07 41 06.2	-2.6
DZM				IAmb	IAmb	07 41 14.7	
	comp=Z,22nm,1.1s						
DZM	Mont Dzumac	17.54	305	Pn	Pn	07 41 08.7	-0.1
	comp=Z,0.3nm,0.3s,baz=134,slow=13,SNR=4.5						
CTAO	Charters Tower	34.20	283	P	P	07 43 49.8	+0.6
CTAO				IAmb	IAmb	07 43 50.9	
	comp=Z,7.6nm,0.8s						
COEN	Coen	39.97	289	P	P	07 44 38.6	+0.3
COEN				IAmb	IAmb	07 44 59.7	
	comp=Z,24nm,1.4s						
AS31	Alice Springs	42.89	270	P	P	07 45 01.4	-0.9
ASAR	Alice Springs	42.89	270	P	P	07 45 01.1	-1.1
ASAR	Alice Springs	42.89	270	P	P	07 45 00.8	-1.4
	comp=Z,6.6nm,0.7s,baz=108,slow=7.3,SNR=77						
	comp=Z,6.6nm,0.7s						
WR8	Warramunga Arr	43.99	275	P	P	07 45 10.2	-0.9
WR8				IAmb	IAmb	07 45 28.1	
	comp=Z,15nm,1.1s						
WRA	Warramunga Arr	44.13	275	P	P	07 45 11.5	-0.7
WRA	Warramunga Arr	44.13	275	P	P	07 45 10.7	-1.6
	comp=Z,5.7nm,0.8s,baz=118,slow=7.6,SNR=27						
	comp=Z,5.7nm,0.8s						
WB0	Warramunga Arr	44.16	275	P	P	07 45 11.7	-0.8
WB0				IAmb	IAmb	07 45 22.9	
	comp=Z,18nm,1.3s						
MTN	Manton Dam	50.33	281	P	P	07 45 59.4	-1.2
KNRA	Kununurra	50.83	277	P	P	07 46 02.9	-1.4
FITZ	Fitzroy Crossi	52.26	272	P	P	07 46 13.1	-1.9
CASY	Casey	52.63	209	P	P	07 46 18.0	+1.0
CASY				IAmb	IAmb	07 46 29.4	
	comp=Z,6.4nm,0.7s						
QSPA	South Pole Qui	56.94	180	P	P	07 46 51.2	+2.8
QSPA	South Pole Qui	56.94	180	P	P	07 46 50.8	+2.4
	comp=Z,5.3nm,0.9s,baz=39,slow=4.4,SNR=12						
	comp=Z,5.3nm,0.9s						
SYO	Syowa Base	74.38	193	⇑*e*sP	sP	07 48 48.6	-3.9
TROLL	Troll, Antarti	75.10	180	⇑P	P	07 48 47.2	+2.2
	comp=Z,135nm,1.1s						
SNAA	Sanae	75.39	178	⇑P	P	07 48 48.1	+1.5
	comp=Z,35nm,1.1s						
SNAA	Sanae	75.39	178	P	P	07 48 48.7	+2.2
SNAA				IAmb	IAmb	07 48 59.3	
	comp=Z,5.8nm,1.0s						
SNAA	Sanae	75.39	178	P	P	07 48 48.4	+1.8
	comp=Z,1.2nm,0.8s,baz=186,slow=6.0,SNR=5.2						
	comp=Z,1.2nm,0.8s						
VNA3	Neumayer Olymp	75.55	176	⇑P	P	07 48 51.4	+4.0
	comp=Z,4.4nm,0.8s						
VNA2	Neumayer--Watz	75.98	177	⇑P	P	07 48 51.9	+2.0
	comp=Z,0.1nm,0.2s,baz=191,slow=3.7						
VNA1	Neumayer--Stat	76.21	177	⇑P	P	07 48 56.1	+4.9
	comp=Z,0.3nm,0.3s						
KSRS	Korea Array	86.37	320	P	P	07 49 46.0	+0.6
	comp=Z,0.5nm,0.5s,baz=131,slow=4.1,SNR=1.7						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	119.42	309	PKP	PKPdf	07 55 51.2	-1.2
	comp=Z,0.1nm,0.5s,baz=90,slow=1.4,SNR=2.1						
KURBB	Kurchatov Arra	122.88	312	PKP	PKPdf	07 55 57.4	-1.4
	comp=Z,0.5nm,0.6s,baz=126,slow=2.2,SNR=7.1						
BVAR	Borovoye Array	128.26	314	PKP	PKPdf	07 56 08.6	-0.5
	comp=Z,0.7nm,0.5s,baz=116,slow=3.4,SNR=4.7						
KBZ	Khabaz	146.47	300	PKPbc	PKPdf	07 56 42.0	-0.7
	comp=Z,1.8nm,0.8s,baz=116,slow=4.7,SNR=4.3						
FIA1	FINESS Array S	147.68	338	PKPdf	PKPbc	07 56 47.2	+0.2
FINES	FINESS Array B	147.69	338	PKPdf	PKPbc	07 56 46.8	-0.2
FINES	FINESS Array B	147.69	338	PKPbc	PKPbc	07 56 47.1	+0.1
	comp=Z,8.0nm,0.8s,baz=93,slow=3.8,SNR=19						
NB2	NORSAR Subarra	151.47	350	PKP	PKPbc	07 56 56.5	+0.1
	comp=Z,18nm,1.7s,baz=13,slow=4.1						
NOA	NORSAR Array B	151.47	350	PKPbc	PKiKP	07 56 57.4	+0.4
	comp=Z,2.7nm,0.9s,baz=22,slow=2.4,SNR=6.5						
HFS	Hagfors	151.93	347	PKPbc	PKPbc	07 56 57.7	+0.3
	comp=Z,2.4nm,0.7s,baz=48,slow=2.1,SNR=4.6						
MMAI	Mount Meron Ar	151.94	279	PKPbc	PKiKP	07 56 59.7	+0.8
	comp=Z,6.2nm,0.7s,baz=78,slow=7.5,SNR=5.0						
AKASG	Malin Array Be	153.37	319	PKPbc	PKiKP	07 57 01.8	+0.7
	comp=Z,0.5nm,0.5s,baz=44,slow=2.1,SNR=4.5						
BRTR	Keskin Array B	153.69	294	PKPbc	PKiKP	07 57 02.7	+0.4
BRTR	Keskin Array B	153.69	294	PKPbc	PKiKP	07 57 02.5	+0.1
	comp=Z,1.5nm,0.5s,baz=142,slow=4.1,SNR=7.8						
TORD	Torodi Ar. Bea	160.06	180	PKPab	PKPab	07 57 46.2	+3.5
	comp=Z,1.2nm,0.9s,baz=193,slow=2.1,SNR=1.9						
VYHS	Vyhne	160.08	325	*e*PG	PKPab	07 57 43.2	+1.1

IDC 17 07:37:24.2±9.3**, 17°.67S×172°.19W, h0^{km}, mb3.9**/3**, mbtmp3.9**/3**, Error ellipse: s-maj=410.5km s-min=40.3km az=140.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	50.49	258	P	P	07 46 23.6	-0.8
	0.6nm,0.6s,baz=98,slow=7.5,SNR=0.8						
	0.6nm,0.6s						
ASAR	Alice Springs	50.55	254	P	P	07 46 25.2	+0.4
	4.2nm,0.7s,baz=90,slow=8.3,SNR=14						
	4.2nm,0.7s						
ILAR	Eielson Array	84.44	11	P	P	07 49 58.2	-0.1
	0.4nm,0.7s,baz=208,slow=4.9,SNR=4.3						
	0.4nm,0.7s						

IDC 17 07:44:45.7±3.4**, 33°.03S×178°.38W, h0^{km}, mb3.5**/2**, mbtmp3.6**/3**, ML3.4**/1**, Error ellipse: s-maj=78.7km s-min=48.1km az=118.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.38	214	Pn	Pn	07 46 19.9	-1.1
	0.8nm,0.3s,baz=356,slow=3.1,SNR=8.4						
URZ				Sn	Sn	07 47 31.4	-3.1
	1.5nm,0.3s,baz=144,slow=23,SNR=7.8						
	7.2nm,0.7s						
ASAR	Alice Springs	42.71	270	P	P	07 52 45.0	+0.2
	0.5nm,0.5s,baz=111,slow=7.4,SNR=6.3						
	0.5nm,0.5s						
WRA	Warramunga Arr	43.94	275	P	P	07 52 54.5	-0.1
	0.4nm,0.5s,baz=114,slow=8.0,SNR=5.4						
	0.4nm,0.5s						
FINES	FINESS Array B	147.48	338	PKPbc	PKPbc	08 04 30.1	-0.8
	0.7nm,0.8s,baz=29,slow=3.2,SNR=1.6						

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*ASRS **17** 08:02:59.0±0.7, 54°.21N×86°.43E, h0^{km}, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 17 08:02:53.8±2.6**, 54°.16N×86°.18E, h0^{km}, mbtmp2.7**/2**, ML2.5**/2**, Error ellipse: s-maj=19.1km s-min=10.7km az=63.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.83	256	I	I	08 09 10.0	
	baz=73,slow=324,SNR=6.6						
ZALV	Zalesovo Beam	0.83	256	Pg	Pg	08 03 09.3	-0.4
	1.2nm,0.3s,baz=76,slow=18,SNR=8.0						
ZALV				Lg	Lg	08 03 21.8	
	3.1nm,0.3s,baz=75,slow=30,SNR=8.9						
KURBB	Kurchatov Arra	5.87	236	Pn	Pn	08 04 22.7	+0.7
	0.1nm,0.3s,baz=52,slow=14,SNR=2.8						
KURBB				Sn	Sn	08 05 28.7	-1.2
	0.1nm,0.3s,baz=40,slow=16,SNR=6.1						
	0.4nm,0.4s						
MKAR	Makanchi Array	7.78	200	Pn	Pn	08 04 49.5	+1.2
	0.1nm,0.3s,baz=20,slow=12,SNR=5.0						
MKAR				Sn	Sn	08 06 16.4	-0.7
	0.1nm,0.3s,baz=18,slow=26,SNR=1.8						
	0.3nm,0.5s						

IDC 17 08:03:40.9±2.1**, 32°.96S×178°.36W, h0^{km}, mb3.8**/3**, mbtmp3.8**/4**, ML3.7**/1**, Error ellipse: s-maj=49.8km s-min=36.8km az=61.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.44	214	Pn	Pn	08 05 15.5	-1.5
	1.7nm,0.3s,baz=292,slow=4.3,SNR=15						
URZ				Sn	Sn	08 06 24.6	-6.6
	1.9nm,0.3s,baz=53,slow=20,SNR=11						
	3.6nm,0.3s						
ASAR	Alice Springs	42.73	270	P	P	08 11 40.1	+0.1
	0.6nm,0.6s,baz=108,slow=7.3,SNR=14						
	0.6nm,0.6s						
WRA	Warramunga Arr	43.95	275	P	P	08 11 50.0	+0.1
	0.7nm,0.6s,baz=118,slow=7.9,SNR=6.4						
	0.7nm,0.6s						
QSPA	South Pole Qui	57.15	180	P	P	08 13 29.7	+0.5
	1.5nm,0.9s,baz=161,slow=5.2,SNR=3.9						
	1.5nm,0.9s						
FINES	FINESS Array B	147.42	338	PKPbc	PKPdf	08 23 24.4	+1.0
	1.8nm,0.9s,baz=40,slow=4.6,SNR=3.7						

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*JMA **17** 08:11:34.6±0.3, 25°N±1°×122°.1E±0°.7, h84^{km}±3^{km}, MV2.1/9, TAIWAN REGION*

*TAP **17** 08:11:34.7, 24°.89N×122°.09E, h84^{km}±1^{km}, ML3.2, C*

ISC 17 08:11:35.5±1.6**, 24°.87N**±0°.04×**122°.10E**±0°.03**, h81^{km}**±8^{km}**, n80,** σ**0^{s}.67**/117**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGS		0.15	260	*e*P	Pn	08 11 47.1	-0.1
TWB1	Santiao Chiao	0.17	325	*i* P	Pn	08 11 47.2	-0.1
TWB1				*e*S	Sn	08 11 55.9	-0.1
TIPB	Shuangxi	0.27	292	*i* P	Pn	08 11 47.5	-0.2
SXI1	Grass Mountain	0.30	318	*i* P	Pn	08 11 47.6	-0.4
TWC	Suao	0.34	221	*i* P	Pn	08 11 47.8	-0.4
TWC				*e*S	Sn	08 11 57.1	-0.3
NWF	Wu-fen Shan	0.35	305	P	Pn	08 11 48.0	-0.3
WFSB	Wu-fen Shan	0.35	305	P	Pn	08 11 48.2	0.0
ESAO	Su ao	0.37	218	*e*P	Pn	08 11 48.1	-0.2
ESAO				*e*S	Sn	08 11 57.7	-0.1
TNOU	National Taiwa	0.40	314	*e*P	Pn	08 11 48.3	-0.3
TWE	Neicheng	0.42	249	*i* P	Pn	08 11 48.5	-0.2
EOS2	EOS2	0.47	165	*i* P	Pn	08 11 49.4	+0.5
EOS2				S	Sn	08 12 00.7	+1.9
FUSB	Fushanzhiwuyua	0.47	257	P	Pn	08 11 48.8	-0.4
TWA	Mucha	0.48	283	*i* P	Pn	08 11 48.8	-0.4
TWA				*i* S	Sn	08 11 59.0	-0.2
EWUT	Wuta	0.51	214	*i* P	Pn	08 11 49.3	-0.1
EWUT				S	Sn	08 12 00.2	+0.5
NHDH	Xindian Distri	0.53	280	*e*P	Pn	08 11 49.2	-0.3
ENTT	Nioudou	0.53	245	*i* P	Pn	08 11 49.5	-0.1
ENA	Nanau	0.55	216	P	Pn	08 11 49.8	+0.1
ENA				*e*S	Sn	08 12 01.1	+0.8
NWLT	Wulai	0.55	260	*e*P	Pn	08 11 49.3	-0.5
YM01	YM01	0.55	300	*i* P	Pn	08 11 49.4	-0.4
YM01				*e*S	Sn	08 11 60.0	-0.5
YM08	YM08	0.56	305	*e*S	Sn	08 11 59.9	-0.6
TATO	Taipei	0.56	281	P	Pn	08 11 49.5	-0.4
TATO	Taipei	0.56	281	S	Sn	08 11 59.7	-0.8
ZUZH	Zhuzihu	0.58	300	P	Pn	08 11 49.6	-0.4
ZUZH				S	Sn	08 12 00.2	-0.7
TWY	Chenhua	0.60	312	P	Pn	08 11 50.1	-0.2
TWY				*e*S	Sn	08 12 01.5	+0.3
EOS3	EOS3	0.62	161	*i* P	Pn	08 11 50.7	+0.5
LATG	Datong	0.62	237	P	Pn	08 11 50.8	+0.3
LATG				*e*S	Sn	08 12 03.0	+1.3
NTST	Danshui	0.66	297	*e*P	Pn	08 11 50.6	-0.2
NTST				*e*S	Sn	08 12 02.1	0.0
TWS1	Kuangyinshan	0.66	291	P	Pn	08 11 50.5	-0.3
TWS1				*e*S	Sn	08 12 02.3	+0.2

YHNB	Yeheng	0.69	253	P	Pn	08 11 50.9	-0.3
YHNB	Yeheng	0.69	253	*i* P	Pn	08 11 50.7	-0.5
YHNB				*e*S	Sn	08 12 03.2	+0.4
NSK	Sanguang	0.70	254	P	Pn	08 11 50.8	-0.5
NSK				*e*S	Sn	08 12 03.3	+0.2
EOS4	EOS4	0.77	165	*e*P	Pn	08 11 51.3	-0.3
EOS4				*e*S	Sn	08 12 03.9	+0.2
NNSB	Datong	0.78	236	P	Pn	08 11 52.4	+0.1
NNSB				S	Sn	08 12 05.2	+0.4
NNS	Nan Shan	0.79	237	*i* P	Pn	08 11 52.6	+0.3
NNS				S	Sn	08 12 05.4	+0.6
ETL	Fush Village	0.83	211	*e*P	Pn	08 11 52.3	-0.4
NACB	Ninganchiao	0.83	213	P	Pn	08 11 51.9	-0.8
NACB	Ninganchiao	0.83	213	P	Pn	08 11 51.9	-0.8
NACB				*e*S	Sn	08 12 05.4	-0.1
KSHI	Guanxi Townshi	0.84	264	*e*P	Pn	08 11 52.9	+0.2
KSHI				*e*S	Sn	08 12 07.3	+1.6
ETLH	Xiulin Townshi	0.87	220	P	Pn	08 11 52.6	-0.6
JYNG	Yonagunijimaku	0.88	118	*e*P	Pn	08 11 52.7	-0.5
TWD	Chiawan	0.91	210	P	Pn	08 11 52.8	-0.8
NFF	Wufeng Townshi	0.92	255	*e*P	Pn	08 11 53.6	-0.1
NFF				S	Sn	08 12 07.5	+0.1
YOJ	Yonaguni jima	0.93	116	P	Pn	08 11 53.3	-0.5
YOJ	Yonaguni jima	0.93	116	*e*P	Pn	08 11 53.2	-0.5
YOJ				*e*S	Sn	08 12 07.4	+0.1
YOJ	Yonaguni jima	0.93	116	P	Pn	08 11 53.3	-0.5
FUSS	Fushou	0.99	232	*e*P	Pn	08 11 54.8	+0.1
FUSS				*e*S	Sn	08 12 09.8	+0.6
LIOB	Emei	1.01	257	*i* P	Pn	08 11 54.6	-0.1
LIOB				*e*S	Sn	08 12 09.3	+0.2
NSTT	Nanjuang	1.02	257	*e*P	Pn	08 11 54.9	0.0
NSTT				*i* S	Sn	08 12 09.3	-0.1
TWT	Tachien	1.04	234	*e*S	Sn	08 12 11.3	+1.2
WHF	Hehuan Shan	1.05	227	*e*P	Pn	08 11 55.5	-0.1
WHF				*e*S	Sn	08 12 10.6	+0.1
TDCB	Techi	1.05	234	*e*P	Pn	08 11 55.8	+0.4
TDCB				*e*S	Sn	08 12 11.0	+0.7
ETM	Tongmen	1.06	212	*e*P	Pn	08 11 53.9	-1.4
TEYL	Yanliau Villag	1.10	205	*e*P	Pn	08 11 55.0	-0.8
TEYL				S	Sn	08 12 10.6	-0.4
SHUL	Shoufeng	1.18	204	*e*P	Pn	08 11 56.2	-0.6
WHP	Taichung City	1.20	241	*e*P	Pn	08 11 57.3	+0.2
WHP				*e*S	Sn	08 12 13.9	+0.5
ESL	Shilin	1.21	210	*e*P	Pn	08 11 57.4	+0.2
ESL				*e*S	Sn	08 12 11.6	-1.9
NMLH	Miaoli	1.23	255	*e*S	Sn	08 12 14.5	+0.5
OWD	Renai	1.24	223	*i* P	Pn	08 11 57.5	-0.2
OWD				*e*S	Sn	08 12 13.8	-0.5
WUSB	Renai	1.25	226	P	Pn	08 11 57.8	0.0
WUSB				*e*S	Sn	08 12 14.8	+0.2
NSY	Sanyi	1.30	250	*e*S	Sn	08 12 16.3	+0.9
WARBT	Fenglin Townsh	1.32	210	*e*P	Pn	08 11 56.6	-1.9
WCS	Beigang Elemen	1.35	233	*e*P	Pn	08 11 59.3	+0.4
VWDT	VWDT	1.41	218	P	Pn	08 11 59.5	-0.2
VWDT				S	Sn	08 12 17.7	-0.3
SSLB	Suanglung	1.50	224	P	Pn	08 12 01.7	+0.8
SSLB	Suanglung	1.50	224	*e*P	Pn	08 12 01.2	+0.3
SSLB				*e*S	Sn	08 12 20.6	+0.5
HGSD	Ruisui	1.50	204	*e*P	Pn	08 12 00.5	-0.4
EHY	Hungye	1.53	208	*e*P	Pn	08 12 01.1	-0.2
IRIF	Iriomote-Funau	1.58	109	*e*P	Pn	08 12 02.2	+0.3
IRIF				*e*S	Sn	08 12 23.2	+1.4
WHYT	Xinyi Township	1.63	224	*e*P	Pn	08 12 03.4	+0.8
YULB	Yu-li	1.64	207	P	Pn	08 12 02.7	-0.1
YULB	Yu-li	1.64	207	*e*P	Pn	08 12 00.8	-2.0
CHKH	Chenggong	1.79	201	*e*P	Pn	08 12 04.6	0.0
ALS	Alishan	1.79	221	*e*P	Pn	08 12 05.8	+0.8
ALS				S	Sn	08 12 28.9	+1.5
CHN5	Tsauling	1.81	226	*e*P	Pn	08 12 05.3	+0.3
FULB	Fuli	1.82	204	*e*P	Pn	08 12 05.5	+0.4
JKRS	Kuro-shima	1.85	109	*e*P	Pn	08 12 05.2	-0.2
EHD	Haiduan	1.90	206	*e*P	Pn	08 12 05.6	-0.5
EHD				*e*S	Sn	08 12 27.3	-2.0
JIJ	Ishigaki jima	1.93	105	*e*P	Pn	08 12 06.2	-0.3
ELDTW	Lidau	1.94	211	*e*S	Sn	08 12 29.4	-1.2
EDH	Donghe	2.02	201	*e*P	Pn	08 12 07.8	+0.1

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*IDC **17** 08:30:37.0±0.6, 54.°10S×1.°79W, h0km, mb4.2/14, mbtmp4.2/15, ML4.3/1, MS4.5/28, Error ellipse: s-maj=21.2km s-min=15.9km az=65.0*

*NEIC **17** 08:30:39.4±1.6, 54.°09S±0.°09×1.°9W±0.°2, h10km±1km, mb4.9/48, Error ellipse: s-maj=18.4km s-min=13.4km az=45.0*

*GCMT **17** 08:30:41.4±0.3, 54.°17S±0.°02×1.°69W±0.°03, h20km±1km, MW5.1/105, Moment Tensor Solution. s16,c17; s105,c140; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.88±.25; $M_{\theta\theta}$3.13±.23; $M_{\phi\phi}$-2.25±.21; $M_{r\theta}$-1.13±.35; $M_{\theta\phi}$-4.14±.15; $M_{\phi r}$-0.57±.39; Best double couple: $M_0$5.11900×10^{16} NP1:ϕ_s343.00000°,δ75.00000°, λ-6.00000°. NP2:ϕ_s74.00000°,δ84.00000°,λ-165.00000°. Principal axes: T 5.4610, Plg7.0000°, Azm208.0000°; N -0.6800, Plg73.0000°, Azm95.0000°; P -4.7770, Plg15.0000°, Azm300.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 08:30:38.7±0.4**, 54.°10S**±0.°07×**1.°82W**±0.°09**, h10km, n114, σ0.s88**/81**, mb4.8**/32**, MS4.6**/28**, 6C-1D, Bouvet Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	16.86	187	⇑P	P	08 34 36.0	-0.5
	comp=Z,23nm,0.8s						
VNA2	Neumayer--Watz	17.07	186	⇑P	Pn	08 34 37.4	+0.4
	comp=Z,7.0nm,0.4s,baz=5.8,slow=14						
VNA3	Neumayer Olymp	17.55	188	⇑P	Pn	08 34 42.7	-0.4
	comp=Z,17nm,0.7s						
SNAA	Sanae	17.64	181	⇑P	P	08 34 45.4	+0.1
	comp=Z,243nm,0.8s						
SNAA	Sanae	17.64	181		P	08 34 46.6	+1.3
SNAA	Sanae	17.64	181	P	P	08 34 45.4	+0.1
	comp=Z,1.0nm,0.3s,baz=29,slow=16,SNR=45						
SNAA				S	Sn	08 37 47.7	-13
	comp=Z,0.7nm,0.5s,baz=206,slow=18,SNR=1.5						
SNAA				LR	LR	08 39 40.8	
	comp=Z,2µm,20.7s,baz=346,slow=31						
	comp=Z,24nm,0.9s						
TROLL	Troll, Antarti	18.07	176	⇑P	P	08 34 51.3	+1.2
	comp=Z,1µm,0.8s						
TRIS	Tristan da Cun	18.52	333	P	Pn	08 34 56.1	+1.0
HOPE	Hope Point	20.17	255	P	P	08 35 13.0	0.0
HOPE				IAmb	IAmb	08 35 20.6	
	comp=Z,97nm,1.6s						
SYO	Syowa Base	24.07	144	⇓*e*P	P	08 35 53.0	-0.7
SYO	Syowa Base	24.07	144	⇑*e*sP	sP	08 35 57.1	+0.1
SUR	Sutherland	27.04	46	P	P	08 36 21.4	+0.2
SUR				IAmb	IAmb	08 37 00.7	
	comp=Z,45nm,1.6s						
PMSA	Palmer Station	32.03	226	LR	LR	08 46 34.6	
	comp=Z,589nm,20.6s,baz=76,slow=30						
BOSA	Boshof	32.21	49	P	P	08 37 06.7	-0.3
BOSA				IAmb	IAmb	08 38 10.5	
	comp=Z,28nm,1.9s						
BOSA	Boshof	32.21	49	P	P	08 37 04.9	-2.1
	comp=Z,1.1nm,0.7s,baz=202,slow=9.6,SNR=4.3						
BOSA				LR	LR	08 47 42.4	
	comp=Z,1µm,18.1s,baz=230,slow=32						
	comp=Z,1.1nm,0.7s						
MAW	Mawson	32.54	140	P	P	08 37 07.2	-2.1
	comp=Z,2.3nm,0.9s,baz=241,slow=21,SNR=4.1						
	comp=Z,2.3nm,0.9s						
H04S2	CROZET ISLANDS	34.21	100	T	T	09 14 12.0	
	baz=238,slow=75,SNR=82						
H04S3	CROZET ISLANDS	34.21	100	T	T	09 14 11.3	
	baz=238,slow=75,SNR=78						
H04S1	CROZET ISLANDS	34.22	100	T	T	09 14 16.9	
	baz=238,slow=75,SNR=94						
WIN	Windhoek	34.58	32		P	08 37 28.7	+0.9
WIN				IAmb	IAmb	08 37 38.8	
	comp=Z,43nm,1.9s						
KOOLE	Kule	35.21	37		P	08 37 33.5	+0.3
LBTB	Lobatse	35.49	46	LR	LR	08 49 51.9	
	comp=Z,1µm,18.4s,baz=218,slow=33						
KGCAE	Kacgae	36.07	40	P	P	08 37 40.6	+0.1
QSPA	South Pole Qui	36.14	180	P	P	08 37 41.5	+0.7
QSPA				IAmb	IAmb	08 37 43.8	
	comp=Z,16nm,0.9s						
QSPA	South Pole Qui	36.14	180	P	P	08 37 40.6	-0.2
	comp=Z,15nm,0.9s,baz=214,slow=5.7,SNR=32						
	comp=Z,15nm,0.9s						
GRTLG	Ghanzi	37.07	37		P	08 37 48.9	-0.2
GRTLG				IAmb	IAmb	08 37 57.4	
	comp=Z,10nm,0.7s						
TSUM	Tsumeb	37.89	31		P	08 37 56.4	+0.3
TSUM				IAmb	IAmb	08 38 12.3	
	comp=Z,42nm,1.9s						
TSUM	Tsumeb	37.89	31	LR	LR	08 50 34.0	
	comp=Z,733nm,19.2s,baz=152,slow=32						
QNGWA	Qangwa	38.75	36		P	08 38 03.2	0.0
PHDHD	Phuduhudu	39.37	41	P	P	08 38 09.3	+0.9
MATP	Matopo	40.78	46	LR	LR	08 52 54.7	
	comp=Z,480nm,18.3s,baz=212,slow=33						
GO09	Cerro Castillo	41.22	244	P	P	08 38 22.7	-0.6
KSANE	Kasane	41.79	40	P	P	08 38 27.7	-0.8
TRQA	Tornquist	43.33	266	P	P	08 38 40.8	+0.1
LSZ	Lusaka	45.27	43	LR	LR	08 55 45.5	
	comp=Z,2µm,18.9s,baz=180,slow=33						
LL02	Futaleuf	45.71	254		P	08 38 59.0	-0.6
LL02				IAmb	IAmb	08 39 07.5	
	comp=Z,14nm,1.1s						
VAO	Valinhos	45.83	294		P	08 39 00.2	-0.6
VAO				IAmb	IAmb	08 39 03.2	
	comp=Z,31nm,1.6s						
H10S2	ASCENSION HYDR	46.18	342	T	T	09 28 38.0	
	baz=168,slow=74,SNR=42						
H10S3	ASCENSION HYDR	46.19	342	T	T	09 28 38.3	
	baz=52,slow=74,SNR=31						
PLCA	Paso Flores	46.55	257	P	P	08 39 07.0	+0.6
PLCA	Paso Flores	46.55	257	P	P	08 39 05.2	-1.2
	comp=Z,1.7nm,0.9s,baz=151,slow=8.3,SNR=4.6						
	comp=Z,1.7nm,0.9s						
LR05	Currie	47.72	257	P	P	08 39 14.4	-0.9
LL05	Los Muermos	47.78	255	P	P	08 39 15.8	-0.1
SBA	Scott Base	48.12	177	P	P	08 39 20.0	+2.0
VNDA	Vanda	48.25	175		P	08 39 20.6	+1.6
VNDA				IAmb	IAmb	08 39 22.5	
	comp=Z,11nm,0.9s						
VNDA	Vanda	48.25	175	P	P	08 39 20.1	+1.0
	comp=Z,9.3nm,0.8s,baz=219,slow=8.7,SNR=22						
VNDA				LR	LR	08 59 52.5	
	comp=Z,742nm,18.5s,baz=204,slow=36						
	comp=Z,9.3nm,0.8s						
LR03	Panguipulli	48.31	257	P	P	08 39 19.4	-0.6
LR03				IAmb	IAmb	08 39 45.3	
	comp=Z,11nm,0.9s						
CPUP	Villa Florida	49.02	282		P	08 39 25.5	0.0
CPUP	Villa Florida	49.02	282	P	P	08 39 24.7	-0.9
	comp=Z,0.5nm,0.7s,baz=24,slow=1.7,SNR=6.3						
CPUP				LR	LR	08 58 25.2	
	comp=Z,93nm,18.0s,baz=291,slow=34						
	comp=Z,0.5nm,0.7s						
CASY	Casey	49.57	151		P	08 39 30.3	+1.0
CASY				IAmb	IAmb	08 39 31.5	
	comp=Z,12nm,1.2s						
BO02	Sierra Bellavi	50.72	263	P	P	08 39 38.4	-0.2
MT09	Talagante	51.56	264	P	P	08 39 44.4	-0.5
MT01	Popeta	51.65	263	P	P	08 39 46.0	+0.6
MT01				IAmb	IAmb	08 40 05.5	
	comp=Z,18nm,1.4s						
MT02	Curacav	52.02	264	P	P	08 39 49.6	+1.4
MT02				IAmb	IAmb	08 40 58.9	
	comp=Z,28nm,1.6s						
VA03	San Esteban	52.03	265	P	P	08 39 48.5	+0.1
BDFB	Brasilia	52.46	299		P	08 39 51.6	-0.1
BDFB	Brasilia	52.46	299	P	P	08 39 51.2	-0.6
	comp=Z,2.4nm,0.6s,baz=147,slow=9.6,SNR=4.1						
BDFB				LR	LR	08 57 13.5	
	comp=Z,549nm,21.0s,baz=145,slow=30						
	comp=Z,2.4nm,0.6s						
AQDB	Aquidauana	52.66	288	P	P	08 39 52.2	-0.8
CO02	Combarbal	53.42	266	P	P	08 40 00.4	+1.8
CO02				IAmb	IAmb	08 40 52.1	
	comp=Z,13nm,1.1s						
CO01	Juntas del Tor	53.78	268	P	P	08 40 01.7	+0.2
CO01				IAmb	IAmb	08 40 18.7	
	comp=Z,26nm,1.9s						
GO04	Tololo Observa	54.05	267	P	P	08 40 04.7	+1.2
GO04				IAmb	IAmb	08 41 50.9	
	comp=Z,12nm,1.1s						
AC06	Mina Casimiro	55.87	270		P	08 40 16.5	+0.1
AC06				IAmb	IAmb	08 40 59.0	
	comp=Z,23nm,1.4s						
PTLB	Pontes e Lacer	58.63	288	P	P	08 40 36.3	+0.4
DBIC	Dimbokro	60.60	357	P	P	08 40 49.7	+0.3
DBIC	Dimbokro	60.60	357	P	P	08 40 50.1	+0.7
	comp=Z,3.2nm,0.7s,baz=163,slow=6.7,SNR=4.6						
DBIC				LR	LR	08 59 36.5	
	comp=Z,203nm,21.8s,baz=173,slow=29						
	comp=Z,3.2nm,0.7s						
PB08	IPOC Station P	60.67	276	P	P	08 40 50.5	+0.1
PB08				IAmb	IAmb	08 40 56.8	
	comp=Z,7.1nm,0.9s						
LPAZ	La Paz	63.10	280		P	08 41 08.1	+1.0
LPAZ				IAmb	IAmb	08 41 08.3	
	comp=Z,8.3nm,1.2s						
LPAZ	La Paz	63.10	280	P	P	08 41 06.2	-0.8
	comp=Z,2.7nm,0.9s,baz=128,slow=6.8,SNR=12						
	comp=Z,2.7nm,0.9s						
TORD	Torodi Ar. Bea	67.05	4		P	08 41 32.2	+0.3
TORD				IAmb	IAmb	08 41 43.8	
	comp=Z,16nm,1.9s						
TORD	Torodi Ar. Bea	67.05	4	P	P	08 41 33.3	+1.4
	comp=Z,1.8nm,0.6s,baz=194,slow=6.2,SNR=4.0						
	comp=Z,1.8nm,0.6s						
MAL2	Monte Alegre,	67.19	301	P	P	08 41 33.0	+0.1
MACA	Manacapuru-AM	69.61	294	P	P	08 41 47.4	-0.7
MACA				IAmb	IAmb	08 42 50.4	
	comp=Z,9.8nm,1.0s						
MDP	Montagnes des	72.59	306	LR	LR	09 10 41.1	
	comp=Z,196nm,18.3s,baz=147,slow=33						
ATD	Arta Tunnel	75.52	45	LR	LR	09 15 14.0	
	comp=Z,21nm,18.1s,baz=202,slow=36						
H01W2	Cape Leeuwin H	75.61	130	T	T	10 06 15.9	
	baz=212,slow=75,SNR=38						
H01W1	Cape Leeuwin H	75.63	130	T	T	10 06 15.7	
	baz=212,slow=75,SNR=34						
H01W3	Cape Leeuwin H	75.63	130	T	T	10 06 15.0	
	baz=212,slow=75,SNR=29						
NWAO	Narrogin (SRO)	78.66	131	LR	LR	09 10 00.6	
	comp=Z,296nm,19.5s,baz=262,slow=30						
FLOC	Florencia	81.85	284		P	08 42 56.5	-1.7
FLOC				IAmb	IAmb	08 42 57.3	
	comp=Z,25nm,1.9s						
RPZ	Rata Peaks	82.37	175	LR	LR	09 17 09.9	
	comp=Z,820nm,18.3s,baz=182,slow=34						
ROSC	El Rosal	83.76	287	LR	LR	09 18 50.0	
	comp=Z,412nm,18.5s,baz=234,slow=34						
TOO	Toolangi	84.44	154	P	P	08 43 11.4	+0.1
TOO				IAmb	IAmb	08 44 00.2	
	comp=Z,11nm,1.6s						
SDV	Santo Domingo	85.05	292	LR	LR	09 19 57.7	
	comp=Z,295nm,18.2s,baz=100,slow=35						
MDT	Midelt	86.59	358	LR	LR	09 17 48.1	
	comp=Z,332nm,19.0s,baz=203,slow=33						
URZ	Urewera	88.00	179	LR	LR	09 20 07.7	
	comp=Z,411nm,18.7s,baz=283,slow=34						
STKA	Stephens Creek	88.72	150		P	08 43 32.3	0.0
STKA	Stephens Creek	88.72	150	P	P	08 43 32.7	+0.4
	comp=Z,3.8nm,0.9s,baz=142,slow=7.2,SNR=6.2						
	comp=Z,3.8nm,0.9s						
EIL	Elat	89.28	31	LR	LR	09 22 53.4	
	comp=Z,328nm,18.2s,baz=243,slow=35						
SJG	San Juan	90.41	301	LR	LR	09 21 18.7	
	comp=Z,114nm,20.0s,baz=194,slow=34						
PALK	Pallekele	91.47	80	LR	LR	09 18 20.7	
	comp=Z,157nm,18.1s,baz=226,slow=31						
ASF	Jabal al Asfar	92.21	32	LR	LR	09 23 11.1	
	comp=Z,116nm,18.6s,baz=236,slow=34						
VAE	Valguarnera	92.28	13	LR	LR	09 23 23.5	
	comp=Z,187nm,19.0s,baz=211,slow=34						
MMAI	Mount Meron Ar	92.54	31	LR	LR	09 24 31.3	
	comp=Z,292nm,18.3s,baz=210,slow=35						
ESDC	Sonseca Array	93.42	358	P	P	08 43 52.4	-1.3
	comp=Z,0.3nm,0.6s,baz=168,slow=4.1,SNR=1.7						
	comp=Z,0.3nm,0.6s						
ASAR	Alice Springs	93.67	140	P	P	08 43 54.0	-1.5
	comp=Z,0.6nm,0.9s,baz=206,slow=5.5,SNR=5.0						
	comp=Z,0.6nm,0.9s						
FITZ	Fitzroy Crossi	95.23	131	LR	LR	09 21 26.7	
	comp=Z,191nm,18.7s,baz=193,slow=32						
LEM	Lembang	95.69	110	LR	LR	09 18 23.1	
	comp=Z,257nm,20.7s,baz=19,slow=30						
WRA	Warramunga Arr	97.21	139	P	Pdif	08 44 12.6	+0.9
WRA	Warramunga Arr	97.21	139	P	P	08 44 11.3	-0.3
	comp=Z,0.4nm,1.0s,baz=184,slow=5.9,SNR=3.3						
	comp=Z,0.4nm,1.0s						
BRTR	Keskin Array B	98.31	27	LR	LR	09 31 25.9	
	comp=Z,100nm,18.0s,baz=194,slow=37						
PSI	Prapat	98.56	97	LR	LR	09 22 05.0	
	comp=Z,198nm,18.1s,baz=60,slow=31						
PZH	PanZhiHua	118.85	84	PKP	PKiKP	08 49 27.6	+0.4
BVAR	Borovoye Array	122.37	43	PKP	PKPdf	08 49 32.3	-0.5
	comp=Z,0.4nm,0.5s,baz=202,slow=1.6,SNR=3.6						
MKAR	Makanchi Array	123.07	55	PKP	PKPdf	08 49 34.0	-0.5
	comp=Z,0.5nm,0.8s,baz=245,slow=2.6,SNR=4.2						
NJ2	Nanjing	133.00	93	*e*P	PKiKP	08 49 55.4	+0.4
NJ2				pmax	pmax		
	comp=Z,11nm,1.4s						
HHC	Hu-ho-hao-te	134.74	79	*e*P	PKPdf	08 49 55.0	-2.0
YKAW1	Yellowknife Wh	145.20	311	PKPbc	PKPdf	08 50 15.5	+0.5
YKA	Yellowknife Ar	145.25	311	PKPbc	PKPdf	08 50 15.7	+0.6
YKA	Yellowknife Ar	145.25	311	PKPbc	PKPdf	08 50 15.4	+0.4
	comp=Z,3.4nm,0.8s,baz=101,slow=3.5,SNR=13						
YKAW3	Yellowknife Wh	145.28	311	PKPbc	PKPab	08 50 15.8	+0.7
JGF	Kuroka	146.26	106	PKPbc	PKPab	08 50 19.9	+0.2
MJAR	Matsushiro Arr	147.41	106	PKPbc	PKPbc	08 50 21.8	-0.4
	comp=Z,3.4nm,0.8s,baz=210,slow=3.8,SNR=6.9						
A36M	Sachs Harbour	150.34	328	PKPbc	PKiKP	08 50 30.7	+1.4
ILAR	Eielson Array	159.57	315	PKPab	PKPab	08 51 15.8	+1.2
	comp=Z,0.6nm,0.8s,baz=72,slow=3.3,SNR=6.0						

CATAC 17 08:32:21.4±0.3**, 10°N**±2°×**8°6W**±°**, h20km**±4km**, M3.0**/10**, MLv3.0**/10**, 2C-2D, Error ellipse: s-maj=6.8km s-min=3.6km az=54.0, confirmed, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMARA	Lajas Hojancha	0.45	164	S	Sn	08 32 39.1	-1.4
CMARA	Lajas Hojancha	0.45	164	⇑P	Pb	08 32 31.6	+0.8
INDI	Punta indio, G	0.59	175	⇑P	Pb	08 32 32.9	-0.1
CARN	Rivas	0.73	2	⇓P	Pn	08 32 36.9	+0.2
CARN				S	Sn	08 32 47.9	+0.6
SOCE	Pocosol	0.92	94	⇓P	Pb	08 32 38.9	+0.1
SOCE	Pocosol	0.92	94	S	Sg	08 32 51.8	+0.1
COVE	Coope Vega, Sa	1.16	77	S	Sb	08 32 57.5	0.0
NADN	Granada	1.37	340	P	Pn	08 32 45.6	+0.1
NADN				S	Sb	08 33 03.6	+0.1
ACON	Acoyapa	1.55	14	S	Sn	08 33 06.9	-0.6
ACON	Acoyapa	1.55	14	P	Pn	08 32 47.6	-0.3
NANN	Nandasmo	1.58	339	P	Pn	08 32 47.9	-0.4
NANN	Nandasmo	1.58	339	S	Sn	08 33 08.4	+0.2
LCR2	La Lucha 2	1.68	115	P	Pn	08 32 49.4	-0.5
LCR2	La Lucha 2	1.68	115	S	Sb	08 33 13.2	+0.5
BOAB	BOACO BROADBAN	1.98	357	P	Pn	08 32 53.7	-0.2
COPN	Copaltepe	2.00	329	P	Pn	08 32 55.4	+1.3
ESPN	Las Esperanzas	2.12	35	P	Pn	08 32 55.4	-0.4
DRK0	Durika	2.56	117	P	Pn	08 33 02.2	+0.1

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*ASRS **17** 08:33:26.0±2.5, 53.°75N×91.°07E, h0km, M3.2, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*IDC **17** 08:33:30.1±3.3, 53.°69N×90.°92E, h0km, mbtmp3.4/2, ML3.1/2, Error ellipse: s-maj=28.0km s-min=23.1km az=51.0*

*NNC **17** 08:33:31.8±3.8, 53.°72N×90.°73E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=27.4km s-min=19.7km az=57.0, Suspected Mining explosion.*

ISC 17 08:33:31.7±4.1**, 53.°7N**±0.°1×**90.°8E**±0.°2**, h0km, n10, σ1.s58**/13**, 7C-6D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	3.54	276	I	I	08 55 15.0	
	0.2nm,1.1s,baz=90,slow=325,SNR=3.6						
ZAA0	Zalesovo Array	3.54	276	⇑Pg	Pb	08 34 34.0	-1.1
	1.2nm,0.6s						
ZAA0				⇓Lg	Lg	08 35 25.0	
	8.1nm,0.8s						
ZALV	Zalesovo Beam	3.54	276	Pg	Pb	08 34 35.4	+0.2
	1.9nm,0.3s,baz=92,slow=15,SNR=19						
ZALV				Lg	Lg	08 35 25.2	
	1.4nm,0.3s,baz=94,slow=21,SNR=3.5						
KURK	Kurchatov	8.05	253	⇑Pn	Pn	08 35 30.9	+1.1
	1.2nm,0.7s						
KURK				⇑Sn	Sn	08 37 00.4	-1.0
	3.8nm,0.8s						
KURK				⇓Lg	Lg	08 37 49.2	
	17nm,0.9s						
KURBB	Kurchatov Arra	8.14	253	Pn	Pn	08 35 30.0	-1.0
	0.2nm,0.3s,baz=66,slow=15,SNR=11						
KURBB				Sn	Sn	08 37 02.8	-0.8
	baz=76,slow=16,SNR=4.4						
KURBB				Lg	Lg	08 37 52.8	
	0.1nm,0.3s,baz=64,slow=37,SNR=1.2						
	3.3nm,0.7s						
KURBB	Kurchatov Arra	8.14	253	⇓Sn	Sn	08 37 07.1	+3.4
	16nm,0.7s						
KURBB				⇓Lg	Lg	08 37 49.1	
	19nm,0.7s						
MK31	Makanchi Array	8.80	222	⇑Pn	Pn	08 35 41.1	+1.1
	0.7nm,0.6s,baz=42,slow=14,SNR=11						
MK31				⇓Sn	Sn	08 37 20.7	+0.9
	1.7nm,0.6s,baz=42,slow=26,SNR=4.2						
MK31				⇑Lg	Lg	08 38 09.1	
	8.1nm,0.8s,baz=47,slow=32,SNR=4.6						
MKAR	Makanchi Array	8.80	222	Pn	Pn	08 35 40.2	+0.2
	0.2nm,0.3s,baz=40,slow=12,SNR=9.8						
MKAR				Sn	Sn	08 37 17.5	-2.4
	0.4nm,0.3s,baz=43,slow=24,SNR=6.5						
MKAR				Lg	Lg	08 38 10.1	
	0.1nm,0.3s,baz=35,slow=21,SNR=3.9						
	0.6nm,0.5s						
MAKZ	Makanchi	8.91	223	⇑Pn	Pn	08 35 42.1	+0.5
	1.3nm,0.8s						
MAKZ				⇑Sn	Sn	08 37 22.5	-0.1
	2.7nm,0.7s						
MAKZ				⇓Lg	Lg	08 38 13.2	
	8.4nm,0.9s						
SONM	Songino Array	11.49	114	Lg	Lg	08 39 27.7	
	0.2nm,0.3s,baz=304,slow=29,SNR=6.9						

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*ASRS **17** 08:50:44.0±1.3, 54.°15N×87.°22E, h0km, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 17 08:50:45.5±3.0**, 54.°21N**×**87.°27E, h0km, mbtmp2.7**/2**, ML2.7**/2**, Error ellipse: s-maj=25.5km s-min=18.5km az=53.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.47	261	I	I	08 59 50.0	
	baz=79,slow=322,SNR=3.3						
ZALV	Zalesovo Beam	1.47	261	Pg	Pn	08 51 11.9	-1.3
	3.6nm,0.3s,baz=79,slow=17,SNR=24						
ZALV				Lg	Lg	08 51 31.5	
	4.4nm,0.3s,baz=82,slow=25,SNR=14						
KURBB	Kurchatov Arra	6.44	240	Pn	Pn	08 52 22.6	+1.1
	0.1nm,0.3s,baz=54,slow=13,SNR=5.7						
KURBB				Sn	Sn	08 53 35.4	-0.2
	baz=32,slow=26,SNR=1.2						
KURBB				Lg	Lg	08 54 13.8	
	baz=57,slow=39,SNR=5.2						
	0.4nm,0.3s						
MKAR	Makanchi Array	8.07	205	Pn	Pn	08 52 44.7	+0.8
	0.1nm,0.3s,baz=15,slow=17,SNR=4.8						
MKAR				Lg	Lg	08 55 04.2	
	baz=27,slow=33,SNR=3.0						
	0.2nm,0.4s						

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*IDC **17** 08:50:59.0±2.8, 8.°04N×104.°40W, h0km, mb3.7/5, mbtmp3.7/5, MS4.1/17, Error ellipse: s-maj=121.9km s-min=21.8km az=61.0*

*NEIC **17** 08:51:05.6±1.7, 8.°5N±0.°1×103.°7W±0.°2, h10km±2km, mb4.2/27, Error ellipse: s-maj=27.7km s-min=18.4km az=249.0*

ISC 17 08:51:03.0±1.1**, 8.°4N**±0.°1×**103.°8W**±0.°2**, h10km, n51, σ0.s98**/35**, mb4.1**/17**, MS4.0**/16**, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	Tlapa	10.46	29	Pn	Pn	08 53 33.0	-0.3
ZAIG	Zacatecas	14.35	5	Pn	Pn	08 54 25.8	-0.8
MTO3	Montecristo	15.39	66	Pn	Pn	08 54 40.3	-0.4
ESQI	Esquipulas	15.47	65	Pn	Pn	08 54 41.5	-0.1
LPIG	La Paz	16.80	339	LR	LR	08 59 46.4	

	comp=Z,618nm,19.2s,baz=169,slow=31						
TX31	Lajitas Ar. Si	20.83	0	P	P	08 55 46.1	+1.1
TXAR	Lajitas Array	20.83	0		P	08 55 46.1	+1.0
TXAR	Lajitas Array	20.83	0	P	P	08 55 45.2	+0.2
	1.6nm,0.9s,baz=186,slow=11,SNR=11						
TXAR				LR	LR	09 03 24.9	
	comp=Z,292nm,18.2s,baz=138,slow=35						
	1.6nm,0.9s						
HNDO	Hondo	21.46	11	P	P	08 55 51.9	+0.2
SAND	Sanderson	21.51	4		P	08 55 51.6	-0.7
SAND				IAmb	IAmb	08 56 11.7	
	comp=Z,9.3nm,1.2s						
ALPN	Alpine	21.87	0		P	08 55 55.8	-0.5
ALPN				IAmb	IAmb	08 56 03.4	
	comp=Z,9.9nm,1.3s						
VHRN	Van Horn	22.30	357	P	P	08 56 00.8	-0.1
VHRN				IAmb	IAmb	08 56 26.6	
	comp=Z,9.4nm,1.4s						
MNHN	Monahans	22.85	2	P	P	08 56 07.8	+1.2
PECS	Pecos	22.86	360	P	P	08 56 06.5	-0.3
MNTX	Cornudas Mount	23.23	357		P	08 56 11.5	+0.9
MNTX				IAmb	IAmb	08 56 21.6	
	comp=Z,9.1nm,1.4s						
319A	Douglas	23.42	348	P	P	08 56 12.2	-0.3
319A				IAmb	IAmb	08 56 15.7	
	comp=Z,4.6nm,0.8s						
ABTX	Abilene, Hawle	24.42	9	P	P	08 56 22.6	+0.6
ABTX				IAmb	IAmb	08 56 42.7	
	comp=Z,10.0nm,1.1s						
POST	Post	24.65	5	P	P	08 56 25.2	+1.1
POST				IAmb	IAmb	08 56 33.7	
	comp=Z,6.9nm,1.1s						
TUC	Tucson	24.66	346	P	P	08 56 25.8	+1.7
TUC				IAmb	IAmb	08 56 36.2	
	comp=Z,7.1nm,1.2s						
APMT	Aspermont	25.05	7	P	P	08 56 27.4	-0.2
DKNS	Dickens	25.29	6	P	P	08 56 30.8	+0.9
DKNS				IAmb	IAmb	08 56 33.1	
	comp=Z,9.1nm,1.2s						
MSTX	Muleshoe	25.47	2	P	P	08 56 32.0	+0.5
MSTX				IAmb	IAmb	08 56 35.9	
	comp=Z,9.3nm,1.3s						
LENM	Lemitar	25.81	354	P	P	08 56 36.5	+1.8
AMTX	Amarillo	26.44	4	P	P	08 56 41.2	+1.0
OTAV	Otavalo	26.56	106		P	08 56 43.5	+1.4
OTAV				IAmb	IAmb	08 56 50.9	
	comp=Z,8.1nm,1.2s						
CBX	Cerro Bola	26.61	335	P	P	08 56 43.2	+1.3
PFO	Pinyon Flats O	27.67	337	LR	LR	09 05 20.1	
	comp=Z,313nm,19.9s,baz=134,slow=31						
ATAH	Atahualpa	29.69	121	LR	LR	09 06 39.9	
	comp=Z,360nm,19.6s,baz=276,slow=31						
NVAR	Mina Array Bea	32.62	339	LR	LR	09 08 21.2	
	comp=Z,590nm,19.0s,baz=154,slow=32						
TKL	Tuckaleechee C	32.75	31	LR	LR	09 12 12.1	
	comp=Z,206nm,19.2s,baz=210,slow=38						
NNA	Nana	33.62	127	LR	LR	09 08 37.7	
	comp=Z,216nm,19.9s,baz=273,slow=31						
BW06	Boulder Array	34.60	353	P	P	08 57 53.9	+1.4
BW06				IAmb	IAmb	08 58 03.2	
	comp=Z,4.0nm,1.1s						
PD31	Pinedale Array	34.60	353	P	P	08 57 52.8	+0.2
PD31				IAmb	IAmb	08 58 03.2	
	comp=Z,4.4nm,1.2s						
PDAR	Pinedale Array	34.60	353		P	08 57 54.1	+1.5
PDAR	Pinedale Array	34.60	353	P	P	08 57 53.6	+1.1
	comp=Z,1.6nm,1.0s,baz=157,slow=4.8,SNR=6.9						
	comp=Z,1.6nm,1.0s						
CZSB	Cruzeiro do Su	34.92	116	P	P	08 57 55.8	+0.5
AGMN	Agassiz Nation	40.34	8	P	P	08 58 40.3	-0.4
AGMN				IAmb	IAmb	08 58 51.1	
	comp=Z,5.1nm,0.9s						
SADO	Sadowa	42.09	26	LR	LR	09 16 46.6	
	comp=Z,125nm,18.8s,baz=188,slow=36						
ULM	Lac du Bonnet	42.25	8	LR	LR	09 16 29.1	
	comp=Z,247nm,18.8s,baz=186,slow=36						
LPAZ	La Paz	43.02	125		P	08 59 04.1	+0.2
LPAZ				IAmb	IAmb	08 59 05.8	
	comp=Z,5.0nm,1.1s						
LPAZ	La Paz	43.02	125	P	P	08 59 03.5	-0.3
	comp=Z,2.9nm,0.9s,baz=316,slow=6.7,SNR=10.0						
	comp=Z,2.9nm,0.9s						
BBB	Bella Bella	47.96	340	LR	LR	09 17 24.3	
	comp=Z,170nm,20.0s,baz=108,slow=33						
SCHQ	Schefferville	54.87	25	LR	LR	09 25 45.9	
	comp=Z,202nm,18.5s,baz=244,slow=38						
CPUP	Villa Florida	56.83	129	P	P	09 00 46.7	-1.4
	comp=Z,0.5nm,0.8s,baz=267,slow=3.0,SNR=4.8						
	comp=Z,0.5nm,0.8s						
PLCA	Paso Flores	57.71	150	LR	LR	09 19 48.7	
	comp=Z,281nm,18.7s,baz=224,slow=30						
RAR	Rarotonga	62.29	241	LR	LR	09 23 32.2	
	comp=Z,327nm,18.0s,baz=182,slow=32						
ILAR	Eielson Array	63.84	341	P	P	09 01 33.7	-1.7
	comp=Z,0.4nm,0.9s,baz=135,slow=8.2,SNR=4.4						
	comp=Z,0.4nm,0.9s						
SFJD	Kangerlussuaq	68.52	20	LR	LR	09 33 01.5	
	comp=Z,78nm,18.3s,baz=246,slow=36						
BORG	Borgarnes	79.26	26	LR	LR	09 38 57.2	
	comp=Z,60nm,18.1s,baz=195,slow=36						
NOA	NORSAR Array B	94.43	26	LR	LR	09 47 15.0	
	comp=Z,27nm,18.3s,baz=185,slow=36						
ARCES	ARCESS Array B	94.87	16	LR	LR	09 49 12.7	
	comp=Z,80nm,18.0s,baz=184,slow=37						

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*JMA **17** 08:51:23.6±0.1, 24°.9N±0°.9×122°.3E±0°.4, h4^{km}, MV3.1/6, TAIWAN REGION*

*TAP **17** 08:51:24.3, 24°.87N×122°.24E, h9^{km}±1^{km}, ML3.1, D*

ISC 17 08:51:23.1±1.1**, 24°.90N**±0°.03×**122°.35E**±0°.03**, h12**^{km}±10^{km}**, n67, σ0ˢ.38**/92**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao	0.35	289	*i* P	Pg	08 51 30.2	+0.1
TWB1				S	Sg	08 51 35.0	+0.3
SXI1	Grass Mountain	0.47	295	⇑*i*P	Pb	08 51 32.9	-0.4
SXI1				*i* S	Sb	08 51 39.9	-0.4
TIPB	Shuangxi	0.48	279	*i* P	Pb	08 51 33.0	-0.4
TIPB				*e*S	Sb	08 51 39.9	-0.6
EOS2	EOS2	0.49	193	*i* P	Pb	08 51 33.9	+0.5
EOS2				*i* S	Sb	08 51 41.8	+1.3
TWC	Suao	0.54	238	*i* P	Pg	08 51 33.6	+0.1
TWC				S	Sg	08 51 40.6	-0.1
NWF	Wu-fen Shan	0.54	289	P	Pb	08 51 34.5	-0.1
NWF				*e*S	Sg	08 51 41.8	+0.8
WFSB	Wu-fen Shan	0.54	289	P	Pb	08 51 34.5	0.0
WFSB				S	Sg	08 51 41.6	+0.7
ESAO	Su ao	0.56	235	*e*P	Pb	08 51 34.4	-0.3
ESAO				*e*S	Sg	08 51 41.1	-0.3
TNOU	National Taiwa	0.58	296	*e*P	Pb	08 51 35.0	-0.2
EOS3	EOS3	0.61	183	P	Pb	08 51 36.1	+0.7
NDS	Dongshan	0.63	246	*e*P	Pg	08 51 35.1	-0.3
TWE	Neicheng	0.64	255	P	Pb	08 51 35.9	-0.3
EWUT	Wuta	0.69	229	*e*P	Pb	08 51 36.9	0.0
EWUT				*e*S	Sg	08 51 44.9	-0.5
TWA	Mucha	0.70	277	P	Pb	08 51 37.2	0.0
JYNG	Yonagunijimaku	0.70	129	*e*P	Pb	08 51 36.9	-0.3
JYNG				*e*S	Sb	08 51 47.0	+0.3
FUSB	Fushanzhiwuyua	0.70	259	P	Pb	08 51 37.1	-0.2
ENA	Nanau	0.72	230	*e*P	Pb	08 51 37.7	+0.1
ENA				S	Sg	08 51 46.1	-0.4
YOJ	Yonaguni jima	0.74	125	P	Pg	08 51 37.1	-0.3
YOJ	Yonaguni jima	0.74	125	P	Pb	08 51 38.1	+0.2
YOJ				*e*S	Sb	08 51 47.7	-0.2
YM08	YM08	0.75	293	*e*P	Pg	08 51 37.6	0.0
YM08				*e*S	Sb	08 51 48.0	-0.2
YM01	YM01	0.75	290	P	Pb	08 51 37.9	-0.1
YM01				*e*S	Sb	08 51 48.1	-0.1
ENTT	Nioudou	0.76	251	P	Pb	08 51 38.0	-0.2
EOS4	EOS4	0.77	182	P	Pn	08 51 38.8	-0.6
ZUZH	Zhuzihu	0.78	290	*e*P	Pg	08 51 38.2	+0.1
NWLT	Wulai	0.78	261	*e*P	Pb	08 51 38.6	+0.1
TWY	Chenhua	0.78	299	*e*P	Pb	08 51 38.4	-0.1
TWY				*i* S	Sb	08 51 49.2	+0.2
TATO	Taipei	0.79	276	P	Pb	08 51 38.6	0.0
TATO	Taipei	0.79	276	S	Sb	08 51 49.1	-0.1
EAHA	Aohua	0.79	225	*e*P	Pb	08 51 39.0	+0.3
EAHA				*i* S	Sg	08 51 48.7	0.0
ANP	Anpu	0.81	291	*e*P	Pg	08 51 38.8	+0.1
ANP				*e*S	Sg	08 51 49.3	+0.1
LATG	Datong	0.83	245	P	Pb	08 51 39.5	0.0
LATG				*e*S	Sb	08 51 50.9	+0.3
TWS1	Kuangyinshan	0.87	284	*e*P	Pb	08 51 40.2	+0.1
TWS1				*e*S	Sb	08 51 52.1	+0.4
YHNB	Yeheng	0.91	256	P	Pg	08 51 40.7	0.0
YHNB	Yeheng	0.91	256	P	Pg	08 51 40.6	0.0
NSK	Sanguang	0.93	257	P	Pb	08 51 41.2	+0.1
NACB	Ninganchiao	0.99	224	P	Pg	08 51 42.1	-0.1
NACB	Ninganchiao	0.99	224	*e*P	Pg	08 51 42.1	-0.1
NACB				*e*S	Sg	08 51 54.8	-0.4
NNSB	Datong	0.99	242	*e*P	Pb	08 51 42.3	+0.1
NNS	Nan Shan	1.00	243	*i* P	Pb	08 51 42.4	+0.1
NNS				*e*S	Sg	08 51 55.2	-0.1
ETLH	Xiulin Townshi	1.04	229	P	Pb	08 51 43.2	+0.1
ETLH				S	Sg	08 51 56.7	-0.2
TWD	Chiawan	1.06	220	*e*P	Pb	08 51 43.6	+0.2
TWD				*e*S	Sg	08 51 57.2	-0.2
KSHI	Guanxi Townshi	1.07	264	*e*P	Pg	08 51 43.6	-0.1
NFF	Wufeng Townshi	1.15	257	*e*P	Pb	08 51 44.7	-0.2
FUSS	Fushou	1.20	238	*e*P	Pg	08 51 46.1	0.0
ETM	Tongmen	1.21	220	*e*P	Pg	08 51 46.2	-0.1
LIOB	Emei	1.24	259	*e*P	Pn	08 51 45.8	-0.4
WHF	Hehuan Shan	1.24	233	P	Pg	08 51 46.9	0.0
WHF				*e*S	Sb	08 52 02.7	0.0
NSTT	Nanjuang	1.25	258	*e*P	Pg	08 51 47.0	-0.2
SHUL	Shoufeng	1.31	213	*e*P	Pg	08 51 48.5	+0.1
WHP	Taichung City	1.42	245	*e*P	Pg	08 51 50.6	+0.2
OWD	Renai	1.42	229	*i* P	Pb	08 51 49.8	+0.2
OWD				*e*S	Sb	08 52 08.2	+0.6
WUSB	Renai	1.44	232	P	Pg	08 51 50.3	-0.4
WARBT	Fenglin Townsh	1.46	217	*e*P	Pn	08 51 49.8	+0.5
WCS	Beigang Elemen	1.55	238	*e*P	Pb	08 51 51.9	+0.2
VWDT	VWDT	1.58	224	*e*P	Pb	08 51 52.2	0.0
HGSD	Ruisui	1.63	211	*e*P	Pb	08 51 53.1	0.0
SMLT	Sun Moon Lake	1.66	233	*e*P	Pb	08 51 53.1	-0.6
EHYH	Wanrong	1.67	214	*e*P	Pb	08 51 53.3	-0.4
EHY	Hungye	1.67	214	*e*P	Pb	08 51 53.3	-0.5
SSLB	Suanglung	1.68	229	P	Pb	08 51 54.1	+0.1
SSLB	Suanglung	1.68	229	*e*P	Pb	08 51 53.4	-0.6
YULB	Yu-li	1.78	213	P	Pg	08 51 56.6	-0.6
YULB	Yu-li	1.78	213	*e*P	Pb	08 51 54.9	-0.7
TWF1	Yuli	1.81	212	*e*P	Pb	08 51 55.4	-0.8
WHYT	Xinyi Township	1.81	229	*e*P	Pb	08 51 55.6	-0.6
ALS	Alishan	1.97	226	*e*P	Pn	08 51 57.7	+1.2
TPUB	Ta-pu	2.23	225	P	Pb	08 52 02.7	-0.7

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*IDC **17** 08:54:40.2±3.3, 53°.61N×87°.92E, h0^{km}, mbtmp2.6/2, ML2.4/2, Error ellipse: s-maj=28.3km s-min=17.6km az=57.0*

ASRS 17 08:54:36.0±1.0**, 53°.66N×88°.00E, h0**^{km}**, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.91	280	I	I	09 06 45.0	
	0.1nm,1.3s,baz=96,slow=334,SNR=32						
ZALV	Zalesovo Beam	1.91	280	Pg	Pg	08 55 14.2	+1.7
	1.1nm,0.3s,baz=98,slow=14,SNR=9.6						
ZALV				Lg	Lg	08 55 39.0	
	3.7nm,0.3s,baz=100,slow=26,SNR=11						
KURBB	Kurchatov Arra	6.57	246	Pn	Pn	08 56 18.1	+4.3
	0.1nm,0.3s,baz=60,slow=14,SNR=3.0						
KURBB				Lg	Lg	08 58 06.7	
	baz=64,slow=32,SNR=7.3						
	0.4nm,0.4s						
MKAR	Makanchi Array	7.79	210	Pn	Pn	08 56 34.9	+4.4
	0.1nm,0.3s,baz=32,slow=12,SNR=2.0						
MKAR				Lg	Lg	08 58 43.8	
	0.1nm,0.3s,baz=32,slow=30,SNR=7.0						
	0.1nm,0.3s						

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*SOME **17** 09:01:00.4, 44°.72N×82°.15E, h30^{km}*

*NNC **17** 09:01:02.4±1.2, 44°.71N×81°.90E, h0^{km}, mb3.6, mpv3.5, Error ellipse: s-maj=16.7km s-min=3.4km az=121.0, Suspected Mining explosion.*

ISC 17 09:00:58.3±1.6**, 44°.68N**±0°.07×**82°.2E**±0°.1**, h0**^{km}**, n13, σ0ˢ.72**/19**, 4C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	Jarkent	1.74	259	*e*P	Pg	09 01 31.9	+0.3
	10nm,0.2s						
DJR				*e*S	Sg	09 01 55.1	+0.8
	15nm,0.2s						
KTMS	Ketmen	1.80	227	*e*P	Pg	09 01 33.3	+0.4
	5.2nm,0.1s						
KTMS				*e*S	Sg	09 01 57.0	+0.8
	24nm,0.2s						
MK31	Makanchi Array	2.11	2	⇑Pn	Pg	09 01 38.8	0.0
	6.5nm,0.3s,baz=185,slow=16,SNR=338						
MK31				⇓Sn	Sg	09 02 06.6	+0.5
	2.2nm,0.2s,baz=188,slow=23,SNR=16						
MAKZ	Makanchi	2.13	356	⇑Pn	Pg	09 01 38.8	-0.3
	4.2nm,0.3s						
MAKZ				⇓Sn	Sg	09 02 06.5	-0.2
	6.9nm,0.3s						
KNOS	Konyrlen	2.17	262	Pg	Pb	09 01 38.9	+0.4
	26nm,0.1s						
KNOS				Lg	Lg	09 02 07.1	
	23nm,0.3s						
PDGK	Podgornoye	2.36	236	⇑Pn	Pb	09 01 41.3	-0.5
	5.2nm,0.4s						
PDGK				⇑Sn	Sb	09 02 11.3	-0.3
	8.9nm,0.6s						
SHLS	Shalkode	2.48	233	Pg	Pn	09 01 40.7	+0.7
	23nm,0.2s						
SHLS				Lg	Lg	09 02 09.8	
	30nm,0.3s						
SHLS	Shalkode	2.48	233	*e*P	Pn	09 01 40.8	+0.7
	23nm,0.2s						
SHLS				*e*S	Sn	09 02 09.8	-1.4
	30nm,0.3s						
BLB	Baldybastay	2.71	259	Pg	Pb	09 01 48.0	+0.2
	25nm,0.2s						
BLB				Lg	Lg	09 02 22.4	
	45nm,0.2s						
UZB	Uzynbulak	2.75	237	Pg	Pb	09 01 48.0	-0.3
	6.9nm,0.2s						
UZB				Lg	Lg	09 02 22.2	
	8.0nm,0.2s						
KPKS	Kokpek	2.79	245	Pg	Pb	09 01 49.1	0.0
	3.0nm,0.2s						
KPKS				Lg	Lg	09 02 24.3	
	14nm,0.3s						
KURS	Kuram	3.12	249	Pg	Pg	09 01 56.5	-1.6
	3.3nm,0.4s						
KURS				Lg	Lg	09 02 36.8	
	2.9nm,0.3s						
SATY	Saty	3.17	241	Pg	Pb	09 01 55.5	0.0
	5.0nm,0.3s						
SATY				Lg	Lg	09 02 35.2	
	20nm,0.3s						

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*IDC **17** 09:05:04.5±3.8, 53°.61N×87°.90E, h0^{km}, mbtmp2.6/2, ML2.2/2, Error ellipse: s-maj=36.7km s-min=18.7km az=50.0*

ASRS 17 09:05:00.0±1.0**, 53°.66N×87°.85E, h0**^{km}**, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.82	280	I	I	09 16 40.0	
	0.1nm,0.6s,baz=98,slow=323,SNR=1.7						
ZALV	Zalesovo Beam	1.82	280	Pg	Pg	09 05 38.4	+3.5
	0.7nm,0.3s,baz=99,slow=18,SNR=10						
ZALV				Lg	Lg	09 06 03.7	
	2.1nm,0.3s,baz=101,slow=30,SNR=12						
KURBB	Kurchatov Arra	6.49	246	Pn	Pn	09 06 41.4	+4.7
	baz=63,slow=14,SNR=1.7						
	0.3nm,0.5s						
MKAR	Makanchi Array	7.74	210	Pn	Pn	09 06 59.5	+5.6
	0.1nm,0.3s,baz=26,slow=13,SNR=1.9						
	0.1nm,0.3s						

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*SOME **17** 09:22:36.4, 44°.70N×82°.18E, h25^{km}*

*NNC **17** 09:22:40.9±1.8, 44°.79N×81°.71E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=28.2km s-min=5.0km az=120.0*

ISC 17 09:22:35.6±2.2**, 44°.67N**±0°.08×**82°.2E**±0°.1**, h5**^{km}±16^{km}**, n12, σ0ˢ.68**/18**, 2C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	Jarkent	1.73	259	*e*P	Pg	09 23 08.8	+0.1
	10nm,0.2s						
DJR				*e*S	Sg	09 23 32.1	+1.0
	24nm,0.4s						
KTMS	Ketmen	1.79	227	*e*P	Pb	09 23 09.3	+0.4
	1.5nm,0.1s						
KTMS				*e*S	Sg	09 23 33.1	+0.1
	13nm,0.2s						
MK31	Makanchi Array	2.12	2	Pn	Pg	09 23 16.5	+0.2
	7.7nm,0.3s,baz=186,slow=14,SNR=515						
MK31				⇑Sn	Sg	09 23 44.0	+0.2
	6.1nm,0.5s,baz=194,slow=27,SNR=10						
MAKZ	Makanchi	2.14	357	⇓Pn	Pg	09 23 16.3	-0.3
	5.5nm,0.3s						
MAKZ				⇑Sn	Sg	09 23 43.7	-0.7
	12nm,0.3s						
PDGK	Podgornoye	2.35	236	⇓Pn	Pb	09 23 19.0	+0.5
	3.0nm,0.2s						
PDGK				⇓Sn	Sg	09 23 49.2	-1.7
	7.8nm,0.5s						
SHLS	Shalkode	2.47	233	Pg	Pn	09 23 17.0	+0.3
	24nm,0.2s						
SHLS				Lg	Lg	09 23 46.6	
	20nm,0.3s						
SHLS	Shalkode	2.47	233	*e*P	Pn	09 23 17.0	+0.3
	24nm,0.2s						
SHLS				*e*S	Sn	09 23 46.6	-0.6
	20nm,0.3s						
BLB	Baldybastay	2.70	259	Pg	Pb	09 23 24.8	+0.3
	25nm,0.2s						
BLB				Lg	Lg	09 23 59.9	
	21nm,0.2s						
UZB	Uzynbulak	2.73	237	Pg	Pb	09 23 24.5	-0.5
	3.3nm,0.2s						
UZB				Lg	Lg	09 23 59.2	
	4.7nm,0.2s						
KPKS	Kokpek	2.78	245	Pg	Pb	09 23 26.2	+0.4
	3.3nm,0.2s						
KPKS				Lg	Lg	09 24 02.1	
	30nm,0.2s						
ARXS	Arharly	3.13	263	Pg	Pb	09 23 31.5	-0.3
	4.7nm,0.4s						
ARXS				Lg	Lg	09 24 11.5	
	15nm,0.5s						
SATY	Saty	3.15	241	Pg	Pb	09 23 32.5	+0.2
	4.5nm,0.2s						
SATY				Lg	Lg	09 24 12.9	
	20nm,0.3s						

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*ASRS **17** 09:27:41.0±0.8, 53°.58N×87°.89E, h0^{km}, M2.9, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 17 09:27:46.2±2.6**, 53°.54N×87°.75E, h0**^{km}**, mbtmp3.2**/3**, ML2.5**/3**, Error ellipse: s-maj=21.5km s-min=13.4km az=65.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.79	285	I	I	09 39 45.0	
	0.1nm,1.1s,baz=98,slow=334,SNR=7.9						
ZALV	Zalesovo Beam	1.79	285	Pg	Pn	09 28 17.6	-0.7
	1.8nm,0.3s,baz=98,slow=16,SNR=35						
ZALV				Lg	Lg	09 28 43.2	
	3.7nm,0.3s,baz=102,slow=28,SNR=26						
KURBB	Kurchatov Arra	6.39	247	Pn	Pn	09 29 22.1	+0.6
	0.1nm,0.3s,baz=63,slow=15,SNR=7.3						
KURBB				Sn	Sn	09 30 33.8	-1.3
	0.1nm,0.3s,baz=66,slow=24,SNR=5.9						
KURBB				Lg	Lg	09 31 10.2	
	0.1nm,0.3s,baz=63,slow=31,SNR=7.3						
	1.3nm,0.5s						
MKAR	Makanchi Array	7.61	210	Pn	Pn	09 29 39.3	+1.1
	0.2nm,0.3s,baz=28,slow=12,SNR=5.3						
MKAR				Sn	Sn	09 31 04.2	-0.9
	0.2nm,0.3s,baz=27,slow=23,SNR=1.6						
MKAR				Lg	Lg	09 31 48.5	
	0.5nm,0.3s,baz=28,slow=29,SNR=7.4						
	0.5nm,0.6s						
BVAR	Borovoye Array	10.41	274	Pn	Pn	09 30 17.1	+0.4
	baz=65,slow=18,SNR=1.9						
BVAR				Sn	Sn	09 32 08.2	-5.8
	baz=81,slow=26,SNR=2.1						
	0.7nm,0.5s						

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*IDC **17** 09:28:19.1±2.0, 23°.99N×141°.37E, h176^{km}±16^{km}, mb3.6/9, mbtmp4.1/10, MS3.3/1, Error ellipse: s-maj=25.8km s-min=18.8km az=94.0*

ISC 17 09:28:16.2±1.1**, 23°.7N**±0°.1×**141°.5E**±0°.2**, h150**^{km}**, n12, σ2ˢ.05**/12**, mb3.7**/9**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	3.41	11	P	Pn	09 29 11.0	+2.2
	32nm,0.3s						
JCJ				S	Sn	09 29 49.4	-0.3
GUMO	Guam	10.60	162	LR	LR	09 33 52.2	
	comp=Z,145nm,18.7s,baz=124,slow=31						
KSRS	Korea Array	17.93	323	P	Pn	09 32 19.4	+3.3
	1.9nm,0.7s,baz=135,slow=12,SNR=8.6						
WRA	Warramunga Arr	43.96	190	P	P	09 36 10.3	+1.8
	0.9nm,0.7s,baz=6.9,slow=8.6,SNR=9.0						
	0.9nm,0.7s						
ZALV	Zalesovo Beam	51.63	321	P	P	09 37 05.6	-1.5
	0.6nm,0.2s,baz=104,slow=6.3,SNR=2.2						
	0.6nm,0.2s						
MKAR	Makanchi Array	52.15	312	P	P	09 37 10.4	-0.8
	0.4nm,0.4s,baz=82,slow=10,SNR=2.3						
	0.4nm,0.4s						
KURBB	Kurchatov Arra	54.95	316	P	P	09 37 30.3	-1.1
	2.7nm,0.2s,baz=83,slow=8.0,SNR=3.3						
	2.7nm,0.2s						
BVAR	Borovoye Array	60.09	319	P	P	09 38 06.5	-0.9
	1.6nm,0.4s,baz=91,slow=8.2,SNR=6.6						
	1.6nm,0.4s						
ILAR	Eielson Array	60.98	28	P	P	09 38 12.0	-1.2
	1.4nm,0.8s,baz=257,slow=5.5,SNR=15						
	1.4nm,0.8s						
FINES	FINESS Array B	80.66	334	P	P	09 40 09.8	-2.3
	0.4nm,0.3s,baz=64,slow=5.5,SNR=6.9						
	0.4nm,0.3s						
NVAR	Mina Array Bea	83.12	51	P	P	09 40 26.1	+0.3
	0.5nm,0.7s,baz=276,slow=4.1,SNR=5.4						
	0.5nm,0.7s						
HFS	Hagfors	86.23	337	P	P	09 40 38.0	-2.6
	1.0nm,0.9s,baz=72,slow=9.3,SNR=1.0						
	1.0nm,0.9s						

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*TXNET **17** 09:28:37.7, 31°.2N±0°.8×103°.4W±0°.6, h5^{km}±1^{km}, ML2.7/15, Error ellipse: s-maj=1.3km s-min=0.9km az=20.9, final*

*NEIC **17** 09:28:37.7±0.9, 31°.19N±0°.02×103°.37W±0°.02, h5^{km}±3^{km}, Error ellipse: s-maj=2.5km s-min=1.9km az=185.0*

NEIC 17 09:28:38.0±0.9**, 31°.183N**±0°.009×**103°.35W**±0°.01**, h5**^{km}±1^{km}**, mb_Lg2.7**/66**, ML2.4**/15**, ML2.4**/46**, Error ellipse: s-maj=2.9km s-min=1.7km az=142.0, Western Texas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TPB04	Verhalen	0.07	87	P	Pg	09 28 39.9	+0.1
TPB04				S	Sg	09 28 41.7	+0.8
TPB16	Coyonosa	0.10	123	P	Pg	09 28 40.8	+0.6
TPB16				S	Sg	09 28 43.1	+1.4
TPB03	Saragosa	0.17	234	P	Pg	09 28 41.4	0.0
TPB03				S	Sg	09 28 45.1	+1.4
TPB19	West of Imperi	0.25	61	P	Pg	09 28 43.7	+0.8
TPB19				S	Sg	09 28 47.7	+1.5
PCOS	Crockett Middl	0.26	329		Pg	09 28 43.7	+0.5
PCOS	Crockett Middl	0.26	329	P	Pg	09 28 43.7	+0.5
PCOS				S	Sg	09 28 47.8	+1.1
TPB05	Hovey Rd	0.26	174	P	Pb	09 28 44.5	-0.8
TPB05				S	Sb	09 28 49.3	-0.9
TPB10	Southeast of T	0.36	286	P	Pg	09 28 45.5	+0.5
TPB10				S	Sg	09 28 50.9	+1.2
TPB01	Permian Basin	0.44	237	P	Pg	09 28 46.5	0.0
PECS	Pecos	0.48	293		Pg	09 28 47.0	-0.2
PECS				IAML		09 29 02.1	
	224nm,1.1s						
PECS	Pecos	0.48	293	P	Pg	09 28 47.0	-0.3
PECS				S	Sg	09 28 54.0	+0.5
TPB06	Permian Basin	0.48	14	P	Pg	09 28 48.0	+0.7
TPB07	Mentone	0.48	326	P	Pb	09 28 48.2	-0.8

TPB07				S	Sb	09 28 55.1	-1.2
TPB08	**Permian Basin**	**0.48**	**127**	P	Pb	09 28 48.3	-0.7
TPB08				S	Sb	09 28 55.1	-1.3
TPB12	**Southwest of T**	**0.52**	**273**	P	Pg	09 28 48.1	+0.1
TPB12				S	Sg	09 28 55.3	+0.6
MNHN	**Monahans**	**0.53**	**73**		Pg	09 28 48.4	+0.1
MNHN					Sg	09 28 55.9	+0.8
MNHN	**Monahans**	**0.53**	**73**	P	Pg	09 28 48.4	+0.1
MNHN				S	Sg	09 28 55.9	+0.8
TPB13	**Reeves - Culbe**	**0.56**	**311**	S	Sb	09 28 57.9	-0.8
ALPN	**Alpine**	**0.84**	**197**		Pg	09 28 53.9	-0.2
ALPN					Sg	09 29 05.8	+0.7
ALPN				IAML		09 29 07.0	
	138nm,0.3s						
ALPN				IAML		09 29 15.7	
	154nm,0.5s						
ALPN	**Alpine**	**0.84**	**197**	P	Pg	09 28 54.0	-0.1
ALPN				S	Sg	09 29 05.8	+0.7
TPB11	**China Draw**	**0.95**	**322**	P	Pg	09 28 55.9	-0.4
TPB11				S	Sg	09 29 08.5	0.0
TPB09	**Culberson Coun**	**1.00**	**306**	P	Pg	09 28 56.8	-0.5
TPB09				S	Sg	09 29 10.7	+0.5
TMB02	**Rankin**	**1.13**	**89**	P	Pg	09 28 59.5	-0.2
TMB02				S	Sb	09 29 15.0	0.0
ODSA	**Odessa**	**1.16**	**36**		Pg	09 28 59.7	-0.6
ODSA					Sg	09 29 15.4	+0.1
ODSA	**Odessa**	**1.16**	**36**	P	Pg	09 28 59.6	-0.7
ODSA				S	Sg	09 29 15.4	+0.1
CLNB	**Carlsbad**	**1.17**	**338**		Pg	09 29 00.4	0.0
CLNB	**Carlsbad**	**1.17**	**338**	P	Pg	09 29 00.1	-0.4
CLNB				S	Sb	09 29 15.9	-0.3
NM01	**Eunice**	**1.17**	**358**	P	Pg	09 29 00.1	-0.4
NM01				S	Sg	09 29 15.9	+0.2
TMB01	**Midkiff**	**1.19**	**66**	P	Pg	09 29 00.3	-0.6
TMB01				S	Sb	09 29 17.0	+0.2
CLN7	**Carlsbad 7**	**1.29**	**343**		Pg	09 29 02.0	-0.7
CLN7	**Carlsbad 7**	**1.29**	**343**	P	Pg	09 29 01.9	-0.8
HTMS	**Hat Mesa**	**1.31**	**350**		Pn	09 29 02.9	-0.2
HTMS	**Hat Mesa**	**1.31**	**350**	P	Pn	09 29 03.0	-0.1
HTMS				S	Sn	09 29 21.2	+0.2
GDL2	**Guadalupe Moun**	**1.33**	**320**		Pn	09 29 03.0	-0.3
GDL2	**Guadalupe Moun**	**1.33**	**320**	P	Pn	09 29 03.0	-0.3
VHRN	**Van Horn**	**1.46**	**255**		Pn	09 29 04.9	-0.2
VHRN					Sb	09 29 24.0	-0.6
VHRN				IAML		09 29 34.1	
	103nm,0.8s						
VHRN	**Van Horn**	**1.46**	**255**	P	Pn	09 29 04.8	-0.3
VHRN				S	Sb	09 29 24.0	-0.6
TMB06	**Greenwood**	**1.54**	**59**	P	Pb	09 29 06.7	-0.4
TMB06				S	Sg	09 29 27.5	-0.2
TMB04	**Seminole**	**1.62**	**27**	P	Pn	09 29 07.1	-0.2
TMB04				S	Sb	09 29 29.0	-0.1
SAND	**Sanderson**	**1.62**	**139**		Pb	09 29 08.1	-0.3
SAND					Sg	09 29 31.5	+1.4
SAND	**Sanderson**	**1.62**	**139**	P	Pb	09 29 08.1	-0.3
SAND				S	Sg	09 29 31.5	+1.4
MNTX	**Cornudas Mount**	**1.81**	**287**		Pn	09 29 10.4	+0.5
MNTX					Sb	09 29 35.0	+0.5
MNTX				IAML		09 29 37.5	
	37nm,0.5s						
MNTX				IAML		09 29 37.5	
	33nm,0.6s						
MNTX	**Cornudas Mount**	**1.81**	**287**	P	Pn	09 29 10.4	+0.6
MNTX				S	Sb	09 29 35.0	+0.5
TX31	**Lajitas Ar. Si**	**1.86**	**188**		Pb	09 29 11.8	-0.8
TX31	**Lajitas Ar. Si**	**1.86**	**188**	P	Pb	09 29 12.0	-0.6
TX31				S	Sg	09 29 37.4	-0.5
TXAR	**Lajitas Array**	**1.86**	**188**		Pb	09 29 12.3	-0.3
CPRX	**Cap Rock**	**1.89**	**347**		Pn	09 29 11.8	+0.7
TMB05	**Klondike**	**1.92**	**41**	P	Pn	09 29 12.3	+0.8
TMB05				S	Sb	09 29 38.2	+0.3
OZNA	**Ozona**	**1.93**	**97**		Pb	09 29 13.1	-0.6
OZNA					Sg	09 29 39.8	-0.2
OZNA	**Ozona**	**1.93**	**97**	P	Pb	09 29 13.1	-0.6
OZNA				S	Sg	09 29 39.8	-0.2
SGCY	**Sterling City**	**2.04**	**68**		Pb	09 29 14.4	-1.2
SGCY					Sb	09 29 42.0	+0.8
SGCY				IAmb_Lg		09 29 46.9	
	comp=Z,30nm,0.8s						
SGCY	**Sterling City**	**2.04**	**68**	P	Pb	09 29 14.3	-1.2
SGCY				Pg	Pg	09 29 15.5	-1.6
SGCY				S	Sb	09 29 42.0	+0.8
POST	**Post**	**2.45**	**39**		Pn	09 29 19.6	+0.9
SN05	**Snyder 5**	**2.69**	**50**		Pn	09 29 24.1	+2.0
MSTX	**Muleshoe**	**2.82**	**10**		Pn	09 29 24.6	+0.8
SN07	**Snyder 07**	**2.83**	**47**		Pn	09 29 24.8	+1.0
DRIO	**Del Rio**	**2.94**	**126**	IAmb_Lg		09 30 12.1	
	comp=Z,22nm,0.8s						
JCT	**Junction City**	**3.13**	**102**		Pn	09 29 29.9	+1.8
DKNS	**Dickens**	**3.22**	**39**	IAmb_Lg		09 30 25.6	
	comp=Z,33nm,0.8s						
ABTX	**Abilene, Hawle**	**3.47**	**65**		Pn	09 29 34.2	+1.5
ABTX				IAmb_Lg		09 30 26.7	
	comp=Z,22nm,0.7s						
APMT	**Aspermont**	**3.47**	**51**		Pn	09 29 33.8	+1.1
APMT				IAmb_Lg		09 30 34.4	
	comp=Z,31nm,0.8s						
BRDY	**Brady**	**3.73**	**87**	IAmb_Lg		09 30 42.5	
	comp=Z,25nm,0.8s						
HNDO	**Hondo**	**3.89**	**114**	IAmb_Lg		09 30 49.3	
	comp=Z,14nm,0.8s						
AMTX	**Amarillo**	**3.95**	**20**	IAmb_Lg		09 30 49.6	
	comp=Z,28nm,0.8s						
ANMO	**Albuquerque**	**4.57**	**326**	IAmb_Lg		09 31 05.8	
	comp=Z,4.0nm,0.9s						
ANMO	**Albuquerque**	**4.57**	**326**	IAmb_Lg		09 31 06.3	
	comp=Z,4.7nm,0.9s						
ANMO	**Albuquerque**	**4.57**	**326**	IAmb_Lg		09 31 05.7	
	comp=Z,4.0nm,0.9s						
ANMO	**Albuquerque**	**4.57**	**326**	IAmb_Lg		09 31 09.8	
	comp=Z,3.8nm,0.7s						
PLPT	**Palo Pinto**	**4.58**	**68**	IAmb_Lg		09 31 12.3	
	comp=Z,18nm,0.9s						
FW03	**Perrin-Whitt E**	**4.85**	**66**	IAmb_Lg		09 31 15.3	
	comp=Z,19nm,0.9s						
WTFS	**Witchita Falls**	**4.87**	**57**	IAmb_Lg		09 31 14.5	
	comp=Z,12nm,1.0s						
FW07	**Weatherford**	**4.97**	**71**	IAmb_Lg		09 31 28.0	
	comp=Z,13nm,0.8s						
WHTX	**Lake Whitney,**	**5.10**	**79**	IAmb_Lg		09 31 32.7	
	comp=Z,17nm,0.9s						
FW13	**Cleburne**	**5.18**	**75**	IAmb_Lg		09 31 29.5	
	comp=Z,15nm,0.8s						
FW06	**Azle**	**5.23**	**69**	IAmb_Lg		09 31 34.8	
	comp=Z,14nm,0.8s						
RTBA	**Rita Blanca**	**5.27**	**5**	IAmb_Lg		09 31 36.3	
	comp=Z,9.9nm,0.8s						
FW14	**Alvarado**	**5.38**	**75**	IAmb_Lg		09 31 37.7	
	comp=Z,18nm,0.8s						
Z35A	**Perchaven, San**	**5.59**	**66**	IAmb_Lg		09 31 49.4	
	comp=Z,18nm,1.0s						
X34A	**Smith Ranch, M**	**5.76**	**52**	IAmb_Lg		09 31 51.4	
	comp=Z,12nm,0.8s						
OK038	**West end E0370**	**6.53**	**35**	IAmb_Lg		09 32 24.0	
	comp=Z,9.5nm,0.9s						
KSCO	**Kaye Shedlock'**	**7.83**	**4**	IAmb_Lg		09 32 59.3	
	comp=Z,6.9nm,0.8s						
CBKS	**Cedar Bluff**	**8.17**	**20**	IAmb_Lg		09 33 10.5	
	comp=Z,6.2nm,0.8s						
OGNE	**Ogallala**	**9.80**	**6**	IAmb_Lg		09 34 14.6	
	comp=Z,7.8nm,0.9s						

IDC 17 09:28:54.5±232.0**,37°.41N×136°.68E,h0^{km},Error ellipse: s-maj=98.2km s-min=74.3km az=120.0,Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I30JP	**ISUMI INFRASON**	**3.60**	**125**	I	I	09 51 40.0	
	baz=308,slow=314,SNR=0.6						
I45RU	**USSURIYSK INFR**	**7.66**	**334**	I	I	10 12 40.0	
	0.1nm,0.6s,baz=153,slow=324,SNR=3.0						
I34MN	**SONGINO INFRAS**	**24.44**	**305**	I	I	12 00 20.0	
	baz=101,slow=323,SNR=1.2						
I39PW	**PALAU INFRASON**	**29.81**	**184**	I	I	12 30 10.0	
	baz=1.4,slow=315,SNR=1.1						

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*IDC **17** 09:41:43.7±1.9,30°.64S×177°.95W,h0^{km},mb4.0/5, mbtmp4.0/5,Error ellipse: s-maj=55.7km s-min=27.9km az=36.0*

ISC 17 09:41:52.4±1.4**,31°.0S**±0°.1×**178°.5W**±0°.2**,h35^{km},n10,σ2^{s}68**/10**,mb4.0**/7**,3C,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**8.11**	**205**	Sn	**Sn**	**09 45 16.7**	**-1.4**
	4.6nm,0.3s,baz=313,slow=23,SNR=6.9						
STKA	**Stephens Creek**	**33.93**	**258**	P	**P**	**09 48 34.0**	**+1.7**
	1.1nm,0.3s,baz=103,slow=7.0,SNR=8.6						
	1.1nm,0.3s						
ASAR	**Alice Springs**	**42.65**	**268**	P	**P**	**09 49 45.6**	**-0.2**
	0.9nm,0.5s,baz=106,slow=7.5,SNR=25						
	0.9nm,0.5s						
WRA	**Warramunga Arr**	**43.69**	**273**	P	**P**	**09 49 53.9**	**-0.4**
	1.0nm,0.3s,baz=111,slow=8.1,SNR=38						
	1.0nm,0.3s						
QSPA	**South Pole Qui**	**59.13**	**180**	P	**P**	**09 51 48.3**	**-1.0**
	0.8nm,0.6s,baz=83,slow=16,SNR=5.2						
	0.8nm,0.6s						
SNAA	**Sanae**	**77.59**	**179**	⇑P	**P**	**09 53 47.1**	**+2.6**
	comp=Z,10nm,0.3s						
SNAA	**Sanae**	**77.59**	**179**	P	**P**	**09 53 43.0**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=177,slow=8.0,SNR=16						
	comp=Z,0.3nm,0.3s						
VNA3	**Neumayer Olymp**	**77.76**	**176**	⇑P	**P**	**09 53 48.5**	**+3.1**
	comp=Z,1.3nm,0.3s						
VNA2	**Neumayer--Watz**	**78.19**	**177**	⇑P	**P**	**09 53 51.0**	**+3.2**
	comp=Z,2.2nm,0.6s,baz=175,slow=5.2						
FINES	**FINESS Array B**	**145.54**	**339**	PKPbc	**PKPdf**	**10 01 22.2**	**-3.9**
	comp=Z,0.8nm,0.5s,baz=62,slow=3.9,SNR=4.9						

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*IDC **17** 09:49:49.7±0.8,43°.22N×146°.89E,h0^{km},mb3.8/15, mbtmp3.8/16,ML3.9/1,Error ellipse: s-maj=22.1km s-min=18.1km az=175.0*

*NIED **17** 09:49:53.8,43°.23N×146°.93E,h39^{km},MW3.7,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.75; $M_{\theta\theta}$-1.81; $M_{\phi\phi}$-1.94; $M_{r\theta}$1.03; $M_{\theta\phi}$-2.29; $M_{\phi r}$2.06; Fault plane solution: $M_0$4.58000×10^{14} NP1: ϕ_s234.00000°,δ31.00000°,λ107.00000°. NP2: ϕ_s35.00000°,δ60.00000°,λ80.00000°.*

*JMA **17** 09:49:53.8±0.2,43°.2N±0°.9×14°7E±°,h39^{km}±2^{km}, MV3.8/34,E OFF HOKKAIDO*

*MOS **17** 09:49:54.5±0.9,43°.22N×146°.84E,h47^{km},mb4.1/3,Error ellipse: s-maj=12.5km s-min=8.6km az=112.5*

*SKHL **17** 09:49:55.2±0.8,43°.20N×147°.00E,h40^{km}±5^{km},mb5.3/3*

ISC 17 09:49:55.4±0.7**,43°.20N**±0°.07×**146°.90E**±0°.06**,h38**^{km}±3^{km}**, n52,σ1^{s}15**/65**,mb3.8**/17**,5C-3D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHO	**Shikotan**	**0.67**	**355**	d *i*PN	**Pn**	**09 50 08.0**	**-0.4**
SHO				*e*S	**Sn**	**09 50 16.9**	**-0.8**
SHO				pmax	pmax		
	comp=E,183nm,0.1s						
SHO				pmax	pmax		
	comp=Z,1μm,0.1s						
SHO				pmax	pmax		
	comp=N,389nm,0.2s						
SHO				smax	smax		
	comp=N,9μm,0.3s						
SHO				smax	smax		
	comp=E,8μm,0.3s						
SHO	**Shikotan**	**0.67**	**355**	*i* P	**Pn**	**09 50 08.0**	**-0.4**
SHO				AMB	AMB	09 50 08.4	
	comp=E,1μm,0.2s						
SHO				*e*S	**Sn**	**09 50 17.1**	**-0.6**
SHO				A	A	09 50 17.8	
	comp=E,10μm,0.4s						
SHO				A	A	09 50 17.8	
	comp=E,8μm,0.4s						
NEM2	**Nemuro 2**	**0.86**	**281**	P	**Pn**	**09 50 09.8**	**-1.2**
NEM2				*e*S	**Sn**	**09 50 21.5**	**-0.8**
NMR	**Nemuro--Hokkai**	**0.88**	**281**	⇓*i*PN	**Pn**	**09 50 09.8**	**-1.3**
NMR				*e*S	**Sn**	**09 50 21.8**	**-0.9**
NMR	**Nemuro--Hokkai**	**0.88**	**281**	*i* P	**Pn**	**09 50 09.8**	**-1.3**
NMR				*e*S	**Sn**	**09 50 20.0**	**-2.7**
YUK	**Yuzh-Kuril'sk**	**1.12**	**318**	d *i*PN	**Pn**	**09 50 13.4**	**-1.2**
YUK	**Yuzh-Kuril'sk**	**1.12**	**318**	*i* P	**Pn**	**09 50 13.6**	**-1.0**
YUK				AMB	AMB	09 50 13.8	
	comp=E,1μm,0.4s						
YUK				*e*S	**Sn**	**09 50 27.3**	**-1.5**
YUK				A	A	09 50 28.7	
	comp=E,11μm,0.7s						
YUK				A	A	09 50 28.7	
	comp=E,6μm,0.7s						
GLVR	**Golovnino**	**1.14**	**298**	*e*PN	**Pn**	**09 50 14.1**	**-0.7**
GLVR				*e*S	**Sn**	**09 50 29.4**	**+0.2**
GLVR				pmax	pmax		
	comp=Z,939nm,0.2s						
GLVR				pmax	pmax		
	comp=E,207nm,0.3s						
GLVR				smax	smax		
	comp=N,3μm,0.3s						
GLVR				smax	smax		
	comp=E,3μm,0.2s						
GLVR	**Golovnino**	**1.14**	**298**	*e*P	**Pn**	**09 50 14.1**	**-0.7**
GLVR				AMB	AMB	09 50 15.1	
	comp=E,940nm,0.2s						
GLVR				*e*S	**Sn**	**09 50 29.4**	**+0.2**
GLVR				A	A	09 50 33.4	
	comp=E,3μm,0.2s						
GLVR				A	A	09 50 33.4	
	comp=E,3μm,0.2s						
JKHN	**Kushirohamanak**	**1.28**	**265**	*e*P	**Pn**	**09 50 16.4**	**-0.3**
JKHN				*e*S	**Sn**	**09 50 32.6**	**0.0**
JRA	**Rausu**	**1.49**	**300**	P	**Pn**	**09 50 18.9**	**-0.6**
JRA				*e*S	**Sn**	**09 50 37.3**	**-0.4**
JNSB	**Nemuroshibetsu**	**1.50**	**293**	*e*P	**Pn**	**09 50 18.9**	**-0.8**
JNSB				*e*S	**Sn**	**09 50 37.3**	**-0.7**
RUSJ	**Misakicho**	**1.50**	**307**	*e*PN	**Pn**	**09 50 19.3**	**-0.5**
RUSJ				*e*S	**Sn**	**09 50 40.2**	**+2.1**
AKK	**Akkeshi**	**1.52**	**264**	*e*P	**Pn**	**09 50 19.9**	**-0.1**
JAK	**Akkeshi**	**1.63**	**264**	*e*P	**Pn**	**09 50 21.0**	**-0.5**
JAK				*e*S	**Sn**	**09 50 42.0**	**+0.7**
JNK	**Nakash**	**1.64**	**284**	*e*P	**Pn**	**09 50 20.6**	**-1.0**
JNK				S	**Sn**	**09 50 41.0**	**-0.4**
KUR	**Kuril'sk**	**2.15**	**18**	*e*PN	**Pn**	**09 50 28.5**	**-0.1**
KUR				*i* S	**Sn**	**09 50 54.2**	**+0.3**
KUR				pmax	pmax		
	comp=Z,111nm,0.4s						
KUR				smax	smax		
	comp=E,282nm,0.2s						
KUR				smax	smax		
	comp=N,232nm,0.3s						
KUR	**Kuril'sk**	**2.15**	**18**	*e*P	**Pn**	**09 50 28.8**	**+0.2**
KUR				AMB	AMB	09 50 30.5	
	comp=N,100nm,0.3s						
KUR				*e*S	**Sn**	**09 50 53.3**	**-0.6**
KUR				A	A	09 50 56.7	
	comp=N,240nm,0.4s						
KUR				A	A	09 50 56.7	
	comp=N,160nm,0.4s						
JOB	**Onbets**	**2.27**	**263**	*e*P	**Pn**	**09 50 30.2**	**-0.1**
JOB				*e*S	**Sn**	**09 50 57.5**	**+0.6**
JAR	**Ashorobuto**	**2.29**	**273**	*e*P	**Pn**	**09 50 30.9**	**+0.3**
JTKR	**Abashiri--Toko**	**2.31**	**290**	P	**Pn**	**09 50 31.1**	**+0.3**
ERM	**Erimo**	**3.01**	**248**	⇑*e*PN	**Pn**	**09 50 41.9**	**+1.4**
ASAJ	**Asahikawa**	**3.26**	**288**	Pn	**Pn**	**09 50 43.4**	**-0.5**
	comp=N,9.5nm,0.3s,baz=123,slow=12,SNR=57						
ASAJ				Sn	**Sn**	**09 51 23.1**	**+1.8**
	comp=N,4.4nm,0.3s,baz=149,slow=7.9,SNR=5.2						
	comp=N,9.0nm,0.4s						
YSS	**Yuzhno-Sakhali**	**4.76**	**323**	*e*PN	**Pn**	**09 51 07.1**	**+2.5**
YSS				*e*S	**Sn**	**09 52 03.9**	**+5.4**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS				smax	smax		
	comp=E,20nm,0.9s						
YSS	**Yuzhno-Sakhali**	**4.76**	**323**	*e*P	**Pn**	**09 51 05.3**	**+0.7**
MAJO	**Matsushiro**	**9.43**	**228**	⇑*e*PN	**Pn**	**09 52 09.2**	**+0.6**
SONM	**Songino Array**	**28.52**	**294**	P	**P**	**09 55 47.5**	**+0.3**
	comp=E,0.4nm,0.4s,baz=90,slow=7.9,SNR=3.2						
	comp=E,0.4nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**28.81**	**138**	T	T	10 26 32.4	
	baz=330,slow=76,SNR=330						
H11N1	**WAKE ISLAND Hy**	**28.82**	**138**	T	T	10 26 33.5	
	baz=330,slow=76,SNR=209						
H11N3	**WAKE ISLAND Hy**	**28.83**	**138**	T	T	10 26 31.1	
	baz=330,slow=76,SNR=296						
H11S1	**WAKE ISLAND Hy**	**29.76**	**140**	T	T	10 27 37.5	
	baz=330,slow=76,SNR=646						
H11S3	**WAKE ISLAND Hy**	**29.77**	**140**	T	T	10 27 37.2	
	baz=330,slow=76,SNR=391						
H11S2	**WAKE ISLAND Hy**	**29.78**	**140**	T	T	10 27 40.7	
	baz=330,slow=76,SNR=341						
ILAR	**Eielson Array**	**42.04**	**36**	P	**P**	**09 57 42.5**	**-0.2**
	comp=E,0.4nm,0.8s,baz=277,slow=8.0,SNR=4.3						
	comp=E,0.4nm,0.8s						
MK31	**Makanchi Array**	**44.68**	**298**	c*e*P	**P**	**09 58 04.0**	**-0.3**
MKAR	**Makanchi Array**	**44.68**	**298**	P	**P**	**09 58 04.3**	**0.0**
	comp=E,1.4nm,0.5s,baz=82,slow=9.2,SNR=18						
	comp=E,1.4nm,0.5s						
KURK	**Kurchatov**	**45.69**	**304**	⇑*e*P	**P**	**09 58 13.6**	**+1.4**
KURK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KURK	**Kurchatov**	**45.69**	**304**	*e*P	**P**	**09 58 13.6**	**+1.4**
KURBB	**Kurchatov Arra**	**45.77**	**304**	P	**P**	**09 58 12.2**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=74,slow=7.2,SNR=8.8						
	comp=Z,0.8nm,0.4s						
INK	**Inuvik**	**46.97**	**30**	P	**P**	**09 58 22.5**	**+0.6**
	comp=Z,0.9nm,0.4s,baz=292,slow=8.3,SNR=30						
	comp=Z,0.9nm,0.4s						
ARTI	**Arti**	**54.73**	**317**	⇑*e*P	**P**	**09 59 19.9**	**-0.7**
ARTI				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	**Warramunga Arr**	**63.89**	**193**	P	**P**	**10 00 24.1**	**0.0**
	comp=Z,0.4nm,0.7s,baz=9.3,slow=6.8,SNR=5.0						
	comp=Z,0.4nm,0.7s						
FINES	**FINESS Array B**	**65.28**	**333**	P	**P**	**10 00 32.8**	**0.0**
	comp=Z,1.0nm,0.5s,baz=35,slow=7.0,SNR=7.0						
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**67.60**	**193**	P	**P**	**10 00 48.1**	**0.0**
	comp=Z,0.2nm,0.7s,baz=11,slow=6.2,SNR=1.7						
	comp=Z,0.2nm,0.7s						
NVAR	**Mina Array Bea**	**68.02**	**58**	P	**P**	**10 00 51.1**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=292,slow=3.9,SNR=3.1						
	comp=Z,0.4nm,0.7s						
NOA	**NORSAR Array B**	**70.05**	**339**	P	**P**	**10 01 02.5**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=52,slow=7.4,SNR=4.6						
	comp=Z,0.2nm,0.3s						
HFS	**Hagfors**	**70.12**	**337**	P	**P**	**10 01 02.2**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=17,slow=6.2,SNR=6.9						
	comp=Z,0.5nm,0.3s						
AKASG	**Malin Array Be**	**71.92**	**324**	P	**P**	**10 01 13.3**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=40,slow=6.1,SNR=5.1						
	comp=Z,0.2nm,0.3s						
SCHQ	**Schefferville**	**78.20**	**19**	P	**P**	**10 01 50.2**	**-0.3**
	comp=Z,2.1nm,0.7s,baz=254,slow=7.4						
	comp=Z,2.1nm,0.7s						
EKA	**Eskdalemuir Ar**	**78.60**	**343**	P	**P**	**10 01 52.3**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=39,slow=2.9,SNR=1.4						
	comp=Z,0.7nm,0.7s						
TXAR	**Lajitas Array**	**83.10**	**56**	P	**P**	**10 02 18.2**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=307,slow=4.4,SNR=9.7						
	comp=Z,0.6nm,0.7s						
PLCA	**Paso Flores**	**152.19**	**98**	*e*PKIKP	**PKPdf**	**10 09 39.5**	**-0.3**
PLCA				pmax	pmax		
	comp=Z,3.0nm,1.0s						

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*NEIC **17** 09:55:24.8±0.6,19°.21N±0°.02×155°.49W±0°.02,h36^{km}±4^{km}, Error ellipse: s-maj=3.3km s-min=2.4km az=144.0*

HVO 17 09:55:26.1±0.8**,19°.20N**±0°.05×**155°.47W**±0°.08**,h31**^{km}±8^{km}**, ML2.7**/43**,ML2.8**/44(NEIC)**,Error ellipse: s-maj=11.2km s-min=6.8km az=115.0,Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HTC	**Hot Caves**	**0.08**	**59**		Pb	09 55 31.3	-0.3
HPO	**Honuapo**	**0.13**	**216**		Pb	09 55 31.4	-0.5
HPO					Sn	09 55 35.3	-0.3
KHU	**Kahuku**	**0.14**	**290**		Pb	09 55 31.5	-0.7
KHU					Sn	09 55 35.4	-0.8
KHU	**Kahuku**	**0.14**	**290**	IAML		09 55 35.7	
	comp=E,963nm,0.2s						
KHU				IAML		09 55 35.8	
	comp=N,885nm,0.2s						
AIN	**Ainahou**	**0.17**	**4**		Pb	09 55 32.0	-0.5
AIN					Sb	09 55 36.2	-0.7
AIN	**Ainahou**	**0.17**	**4**	IAML		09 55 36.6	
	comp=E,4μm,0.3s						
AIN				IAML		09 55 36.9	
	comp=N,7μm,0.3s						
HLP	**Hilina Pali**	**0.18**	**57**		Pb	09 55 32.0	-0.5
HLP					Sb	09 55 36.4	-0.4
HLP	**Hilina Pali**	**0.18**	**57**	IAML		09 55 36.6	
	comp=N,1μm,1.1s						
HLP				IAML		09 55 39.9	
	comp=E,1μm,0.4s						
SDHHI	**Sand Hill**	**0.26**	**41**		Pb	09 55 32.4	-0.9
SDHHI					Sb	09 55 37.0	-1.2
WRMHI	**West Rim**	**0.26**	**38**		Pb	09 55 32.4	-1.0
WRMHI					Sb	09 55 37.3	-1.1
RIM	**Rim**	**0.27**	**43**		Pb	09 55 32.5	-1.0
RIM					Sb	09 55 37.3	-1.2
KKO	**Keanakako'i**	**0.28**	**44**		Pb	09 55 32.6	-1.0
UWE	**Uwekahuna**	**0.28**	**37**		Pb	09 55 32.6	-1.0
UWE					Sb	09 55 37.6	-1.1
UWE	**Uwekahuna**	**0.28**	**37**	IAML		09 55 41.3	
	comp=N,1μm,0.3s						
UWE				IAML		09 55 43.8	
	comp=E,1μm,0.3s						
OBL	**Observatory Le**	**0.28**	**39**		Pb	09 55 32.6	-1.1
OBL					Sb	09 55 37.5	-1.2
UWB	**Uwekahuna Bluf**	**0.29**	**39**		Pb	09 55 32.6	-1.2
UWB					Sb	09 55 37.4	-1.5
BYL	**Byron's Ledge**	**0.29**	**43**		Pb	09 55 32.7	-1.1
BYL					Sb	09 55 37.6	-1.3
BYL	**Byron's Ledge**	**0.29**	**43**	IAML		09 55 39.0	
	comp=N,454nm,0.4s						
BYL				IAML		09 55 39.3	
	comp=E,581nm,0.5s						
PUH	**Pauahi**	**0.30**	**54**		Pb	09 55 32.7	-1.1
PUH					Sb	09 55 37.7	-1.3
PUH	**Pauahi**	**0.30**	**54**	IAML		09 55 37.9	
	comp=E,761nm,0.4s						
PUH				IAML		09 55 38.0	
	comp=N,631nm,0.3s						
SBLHI	**Steaming Bluff**	**0.30**	**40**		Pb	09 55 32.6	-1.2
SBLHI					Sb	09 55 37.5	-1.5
HATHI	**Halema‘uma‘u T**	**0.30**	**41**		Pb	09 55 32.7	-1.2
HATHI					Sb	09 55 37.6	-1.5
HATHI	**Halema‘uma‘u T**	**0.30**	**41**	IAML		09 55 38.9	
	comp=N,586nm,0.3s						
HATHI				IAML		09 55 42.8	
	comp=E,634nm,0.5s						
MLH	**Mauna Loa**	**0.31**	**15**	Pg	Pb	09 55 33.1	-0.9
MLH				IAML		09 55 38.5	
	comp=E,1μm,0.2s						
MLH	**Mauna Loa**	**0.31**	**15**		Sb	09 55 38.4	-1.1
MWH	**Mokuaweoweo**	**0.31**	**338**		Pb	09 55 33.1	-1.3
MWH					Sb	09 55 38.2	-1.8
MWH	**Mokuaweoweo**	**0.31**	**338**	IAML		09 55 38.9	
	comp=E,2μm,0.4s						
MWH				IAML		09 55 42.7	
	comp=N,813nm,0.4s						
RSD	**Rainshed**	**0.32**	**34**		Pb	09 55 32.9	-1.2
RSD					Sb	09 55 38.1	-1.5
KNHH	**Kane Nui o Ham**	**0.34**	**57**		Pb	09 55 33.2	-1.1
STCH	**Steam Cracks**	**0.38**	**60**		Pb	09 55 33.6	-1.3
STCH					Sb	09 55 39.3	-1.5
STCH	**Steam Cracks**	**0.38**	**60**	IAML		09 55 39.9	
	comp=N,369nm,0.2s						
STCH				IAML		09 55 41.0	
	comp=E,443nm,0.1s						
ALEP	**Alea Permanent**	**0.38**	**335**		Pb	09 55 33.7	-1.5
ALEP					Sb	09 55 39.7	-1.6
NPOC	**North of Pu‘u**	**0.39**	**60**		Pb	09 55 33.8	-1.3
JCUZ	**Jacuzzi**	**0.40**	**62**		Pb	09 55 33.9	-1.3
HMH	**Humu‘ula Sheep**	**0.41**	**358**		Pb	09 55 34.5	-1.0
HMH					Sb	09 55 40.5	-1.3
HMH	**Humu‘ula Sheep**	**0.41**	**358**	IAML		09 55 40.9	
	comp=N,2μm,0.3s						
HMH				IAML		09 55 41.0	
	comp=E,935nm,0.3s						
JOKA	**Jonika Flow**	**0.50**	**62**		Pb	09 55 35.0	-1.6
JOKA	**Jonika Flow**	**0.50**	**62**	IAML		09 55 42.0	
	comp=E,285nm,0.5s						
JOKA				IAML		09 55 42.9	
	comp=N,299nm,0.5s						
CPH	**Captain Cook**	**0.51**	**305**		Pb	09 55 35.0	-1.9
POHA	**Pohakuloa**	**0.56**	**354**		Pb	09 55 35.9	-1.9
POHA	**Pohakuloa**	**0.56**	**354**	IAML		09 55 49.1	
	comp=N,412nm,0.5s						
POHA				IAML		09 55 49.8	
	comp=N,333nm,0.3s						
HUH	**Hualalai**	**0.60**	**325**		Pb	09 55 36.7	-1.7
HUH	**Hualalai**	**0.60**	**325**	IAML		09 55 56.1	
	comp=E,710nm,0.3s						
KKH	**Kailua Kona**	**0.69**	**312**		Pn	09 55 37.4	-2.3
KKH					Sb	09 55 46.1	-3.0

HPAH	**Hawaii Prepara**	**0.86**	**346**		Pn	09 55 39.7	-2.4
HPAH					Sn	09 55 49.4	-4.2
HPAH	**Hawaii Prepara**	**0.86**	**346**	IAML		09 55 50.3	
	comp=E,309nm,0.2s						
HPAH				IAML		09 55 50.4	
	comp=N,285nm,0.2s						
MHA	**Mahukona**	**1.07**	**338**		Pn	09 55 42.7	-2.2
MHA					Sn	09 55 55.1	-3.6
HLK	**Haleakala**	**1.72**	**335**		Pn	09 55 51.4	-2.8
HLK					Sn	09 56 10.0	-5.1
KHLH	**Kahului Airpor**	**1.92**	**332**		Pn	09 55 54.6	-2.0
KHLH					Sn	09 56 15.8	-3.9
WMR	**Waimanalo Ridg**	**2.96**	**316**		Pn	09 56 07.8	-3.2
WMR					Sn	09 56 41.1	-4.4
DHH	**Diamond Head**	**3.00**	**314**		Pn	09 56 07.0	-4.5
HON	**Honolulu**	**3.18**	**312**		Pn	09 56 11.1	-2.9

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*IDC **17** 09:57:16.1±0.5, 31°.05S×177°.67W, h0^{km}, mb4.5/15, mbtmp4.5/16, ML6.6/1, MS4.3/21, Error ellipse: s-maj=19.8km s-min=16.3km az=87.0*

*NEIC **17** 09:57:19.2±1.6, 31°.08S±0°.06×177°.7W±0°.2, h10^{km}±1^{km}, mb4.9/56, Error ellipse: s-maj=23.0km s-min=10.5km az=83.0*

*GCMT **17** 09:57:23.2±0.4, 31°.18S±0°.04×177°.36W±0°.02, h24^{km}, MW5.0/70, Moment Tensor Solution. s39,c45; s70,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.86±.24; M$_{\theta\theta}$-0.73±.14; M$_{\phi\phi}$-3.13±.14; M$_{r\theta}$0.29±.25; M$_{\theta\phi}$-0.36±.09; M$_{\phi r}$1.42±.17; Best double couple: M$_0$3.80900×10^{16} NP1:φ$_s$188.00000°,δ34.00000°,λ88.00000°. NP2: φ$_s$10.00000°,δ56.00000°,λ91.00000°. Principal axes: T 4.1470, Plg79.0000°, Azm283.0000°; N -0.6820, Plg1.0000°, Azm189.0000°; P -3.4700, Plg11.0000°, Azm99.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 09:57:21.7±0.3**, 31°.22S**±0°.05×**177°.79W**±0°.07**, h35^{km}, n216, σ1.^{s}96**/217**, mb4.9**/53**, MS4.3**/20**, 15C-3D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.95**	**357**	P	**Pn**	**09 57 49.5**	**-2.8**
RAO	**Raoul Island**	**1.96**	**357**		**Pn**	**09 57 50.5**	**-2.0**
RIZ	**Raoul Island**	**1.97**	**357**	P	**Pn**	**09 57 49.6**	**-3.0**
RIZ				S	**Sn**	**09 58 12.8**	**-3.2**
WMGZ	**Waiomatatini S**	**7.29**	**204**	P	**Pn**	**09 59 02.9**	**-2.7**
WMGZ				S	**Sn**	**10 00 27.2**	**0.0**
PKGZ	**Pakihiroa**	**7.45**	**206**	P	**Pn**	**09 59 05.2**	**-2.8**
PKGZ				S	**Sn**	**10 00 29.5**	**-1.7**
HAZ	**Te Kaha**	**7.47**	**208**	P	**Pn**	**09 59 05.2**	**-3.0**
HAZ				S	**Sn**	**10 00 32.0**	**+0.3**
PUZ	**Puketiti**	**7.57**	**204**	P	**Pn**	**09 59 05.7**	**-3.9**
PUZ				S	**Sn**	**10 00 33.1**	**-1.0**
RUGZ	**Raukumara Rang**	**7.70**	**208**	P	**Pn**	**09 59 08.4**	**-3.0**
RUGZ				S	**Sn**	**10 00 35.9**	**-1.5**
TWGZ	**Tauwhareparae**	**7.76**	**205**	P	**Pn**	**09 59 09.2**	**-3.0**
TWGZ				S	**Sn**	**10 00 37.6**	**-1.3**
CNGZ	**Carnagh Statio**	**7.96**	**203**	P	Pn	09 59 09.3	-5.5
CNGZ				S	**Sn**	**10 00 44.4**	**+0.8**
TKGZ	**Te Karaka**	**8.04**	**205**	P	**Pn**	**09 59 12.4**	**-3.6**
TKGZ				S	**Sn**	**10 00 44.3**	**-1.5**
MWZ	**Matawai**	**8.07**	**207**	P	**Pn**	**09 59 13.2**	**-3.3**
MWZ				S	**Sn**	**10 00 43.8**	**-2.7**
WCZ	**Waipu Caves**	**8.07**	**232**	P	Pn	09 59 20.7	+4.3
URZ	**Urewera**	**8.18**	**209**	Pn	**Pn**	**09 59 13.9**	**-3.9**
	3.1nm,0.3s,baz=124,slow=5.7,SNR=6.0						
URZ				Sn	**Sn**	**10 00 46.6**	**-2.4**
	13nm,0.3s,baz=253,slow=18,SNR=6.1						
URZ	**Urewera**	**8.18**	**209**	P	**Pn**	**09 59 14.0**	**-3.9**
URZ				S	**Sn**	**10 00 46.2**	**-2.8**
OUZ	**Omahuta**	**8.24**	**239**	P	Pn	09 59 25.1	+6.4
RAGZ	**Rawiri**	**8.26**	**207**	P	**Pn**	**09 59 14.8**	**-4.3**
RAGZ				S	**Sn**	**10 00 49.4**	**-1.7**
MKAZ	**Moumakai**	**8.28**	**223**	P	**Pn**	**09 59 20.9**	**+1.7**
RIGZ	**Rimuhau**	**8.31**	**205**	P	**Pn**	**09 59 16.2**	**-3.5**
RIGZ				S	**Sn**	**10 00 49.7**	**-2.7**
PRGZ	**Paritu Road**	**8.46**	**204**	P	**Pn**	**09 59 17.3**	**-4.5**
PRGZ				S	**Sn**	**10 00 50.7**	**-5.3**
MUGZ	**Murupara**	**8.51**	**210**	S	**Sn**	**10 00 53.7**	**-3.4**
RTZ	**Ruatahuna**	**8.54**	**209**		**Pn**	**09 59 20.5**	**-2.3**
RTZ	**Ruatahuna**	**8.54**	**209**	P	**Pn**	**09 59 20.6**	**-2.2**
RTZ				S	**Sn**	**10 00 55.4**	**-2.5**
SNGZ	**Shannon Statio**	**8.54**	**207**	P	**Pn**	**09 59 18.9**	**-3.8**
SNGZ				S	**Sn**	**10 00 55.9**	**-1.9**
MHGZ	**Mahia Peninsul**	**8.66**	**203**	P	Pn	09 59 18.2	-6.3
MHGZ				S	**Sn**	**10 00 56.7**	**-4.2**
RAHZ	**Arahi**	**8.75**	**207**	P	**Pn**	**09 59 22.6**	**-3.2**
RAHZ				S	**Sn**	**10 00 59.5**	**-3.6**
MTHZ	**Maungataniwha**	**8.79**	**209**	P	**Pn**	**09 59 25.4**	**-0.9**
MTHZ				S	**Sn**	**10 01 00.5**	**-3.7**
NMHZ	**Naumai**	**9.02**	**208**	P	**Pn**	**09 59 26.6**	**-2.8**
NMHZ				S	**Sn**	**10 01 07.8**	**-2.0**
ARHZ	**Aropaoanui**	**9.09**	**207**	P	**Pn**	**09 59 25.9**	**-4.4**
ARHZ				S	**Sn**	**10 01 08.3**	**-3.0**
BKZ	**Black Stump Fm**	**9.20**	**209**	P	**Pn**	**09 59 28.1**	**-3.8**
BKZ				S	**Sn**	**10 01 10.2**	**-4.1**
MCHZ	**McNeill Hill**	**9.36**	**207**	P	**Pn**	**09 59 31.9**	**-2.1**
MCHZ				S	**Sn**	**10 01 14.9**	**-3.1**
NGZ	**Ngauruhoe**	**9.60**	**212**	P	**Pn**	**09 59 34.9**	**-2.7**
TUWZ	**Tuamarina**	**12.17**	**211**		**Pn**	**10 00 10.8**	**-1.7**
MSVF	**Nonsavu**	**13.95**	**343**	Pn	**Pn**	**10 00 34.3**	**-2.7**
	9.9nm,0.3s,baz=121,slow=23,SNR=52						
MSVF				LR	LR	10 05 09.9	
	comp=Z,1µm,18.9s,baz=160,slow=34						
	41nm,0.6s						
OXZ	**Oxford**	**14.53**	**211**		**Pn**	**10 00 41.7**	**-3.0**
RPZ	**Rata Peaks**	**15.28**	**212**	Pn	**Pn**	**10 00 50.4**	**-4.3**
	1.8nm,0.3s,baz=63,slow=2.7,SNR=7.9						
RPZ				Sn	Sn	10 03 29.3	-13
	2.2nm,0.3s,baz=72,slow=22,SNR=6.3						
DZM	**Mont Dzumac**	**16.77**	**299**		**P**	**10 01 16.3**	**+0.5**
DZM	**Mont Dzumac**	**16.77**	**299**	*e*Pn	**P**	**10 01 17.6**	**+1.7**
	144nm,1.1s						
DZM				*e*LR	LR	10 05 08.5	
	2µm,22.9s						
DZM	**Mont Dzumac**	**16.77**	**299**	Pn	**P**	**10 01 16.2**	**+0.3**
	0.3nm,0.3s,baz=124,slow=13,SNR=5.3						
DZM				LR	LR	10 06 42.8	
	comp=Z,2µm,18.3s,baz=132,slow=34						
MLZ	**Mavora Lakes**	**17.90**	**214**		**Pn**	**10 01 25.1**	**-2.7**
ARMA	**Armidale**	**26.24**	**264**		**P**	**10 02 53.1**	**-0.5**
ARMA	**Armidale**	**26.24**	**264**	P	**P**	**10 02 57.9**	**+4.3**
TBI	**Tubuai**	**26.32**	**80**	*e*S	**S**	**10 07 29.7**	**+4.8**
	2µm,26.8s						
TBI				*e*LR	LR	10 09 24.2	
	926nm,27.5s						
TBI				*e*LR	LR	10 09 37.3	
	3µm,27.2s						
EIDS	**Eidsvold**	**27.96**	**274**		**P**	**10 03 08.9**	**-0.1**
EIDS				IAmb	IAmb	10 03 12.2	
	comp=Z,20nm,0.9s						
EIDS	**Eidsvold**	**27.96**	**274**	P	**P**	**10 03 11.2**	**+2.2**
	comp=Z,27nm,1.2s						
CAN	**Canberra**	**27.99**	**253**	P	**P**	**10 03 12.5**	**+3.3**
CAN				IAmb	IAmb	10 03 37.2	
	comp=Z,32nm,1.2s						
PPT2	**Papeete2**	**28.96**	**69**	*e*P	**P**	**10 03 16.9**	**-1.1**
	comp=Z,54nm,24.2s						
PPT2				*e*S	**S**	**10 08 10.8**	**+4.1**
	comp=Z,431nm,23.8s						
PPT2				*e*LR	LR	10 10 40.6	
	comp=Z,377nm,24.0s						
PPT2				*e*LR	LR	10 10 46.8	
	comp=Z,529nm,25.2s						
PPT	**Papeete**	**28.97**	**69**	LR	LR	10 12 20.8	
	comp=Z,239nm,18.9s,baz=253,slow=31						
TAU	**Tasmania Unive**	**29.98**	**237**	P	**P**	**10 03 27.7**	**+0.9**
TOO	**Toolangi**	**30.82**	**248**		**P**	**10 03 36.0**	**+1.7**
TOO	**Toolangi**	**30.82**	**248**	P	**P**	**10 03 36.8**	**+2.5**
	comp=Z,7.1nm,1.0s						
CMSA	**Cobar Meteorol**	**31.09**	**260**	P	**P**	**10 03 39.3**	**+2.6**
	comp=Z,40nm,0.8s						
QLP	**Quilpie**	**33.45**	**268**	P	**P**	**10 03 59.6**	**+2.1**
	comp=Z,65nm,0.8s						
ARPS	**Mount Arapiles**	**33.74**	**249**	P	**P**	**10 03 59.7**	**-0.2**
	comp=Z,33nm,0.9s						
CTAO	**Charters Tower**	**34.11**	**280**		**P**	**10 04 05.8**	**+2.5**
STKA	**Stephens Creek**	**34.48**	**258**	P	**P**	**10 04 07.6**	**+1.3**
STKA	**Stephens Creek**	**34.48**	**258**	P	**P**	**10 04 07.3**	**+0.9**
	comp=Z,102nm,0.9s						
STKA	**Stephens Creek**	**34.48**	**258**	P	**P**	**10 04 07.2**	**+0.9**
	comp=Z,9.1nm,0.6s,baz=101,slow=12,SNR=25						
STKA				LR	LR	10 17 24.4	
	comp=Z,419nm,18.6s,baz=102,slow=35						
	comp=Z,9.1nm,0.6s						
HTT	**Hallett**	**36.45**	**255**	P	**P**	**10 04 24.7**	**+1.4**
	comp=Z,7.2nm,1.4s						
MTSU	**Mount Surprise**	**36.63**	**282**	P	**P**	**10 04 26.9**	**+2.0**
	comp=Z,23nm,1.0s						
BBOO	**Buckleboo**	**38.92**	**255**		**P**	**10 04 45.3**	**+1.1**
BBOO	**Buckleboo**	**38.92**	**255**	P	**P**	**10 04 44.4**	**+0.2**
	comp=Z,65nm,1.7s						
QIS	**Mount Isa**	**39.56**	**275**	P	**P**	**10 04 50.1**	**+0.5**
	comp=Z,11nm,0.6s						
COEN	**Coen**	**39.67**	**287**		**P**	**10 04 52.1**	**+1.5**
COEN				IAmb	IAmb	10 04 54.0	
	comp=Z,20nm,0.8s						
COEN	**Coen**	**39.67**	**287**	P	**P**	**10 04 51.7**	**+1.1**
	comp=Z,31nm,1.0s						
TAOE	**Nuku Hiva Isla**	**41.47**	**66**	*e*LR	LR	10 16 32.0	
	comp=Z,300nm,26.2s						
AS31	**Alice Springs**	**43.25**	**268**		**P**	**10 05 20.9**	**+1.0**
ASAR	**Alice Springs**	**43.25**	**268**	P	**P**	**10 05 20.9**	**+1.0**
ASAR	**Alice Springs**	**43.25**	**268**	P	**P**	**10 05 20.6**	**+0.6**
	comp=Z,25nm,0.7s,baz=104,slow=7.2,SNR=346						
ASAR				PcP	**PcP**	**10 07 09.1**	**+0.3**
	comp=Z,2.2nm,0.6s,baz=115,slow=4.1,SNR=1.2						
ASAR				ScP	**ScP**	**10 11 02.1**	**+4.7**
	comp=Z,4.0nm,0.9s,baz=113,slow=4.7,SNR=9.9						
ASAR				LR	LR	10 23 20.2	
	comp=Z,562nm,18.0s,baz=114,slow=36						
	comp=Z,25nm,0.7s						
WR8	**Warramunga Arr**	**44.17**	**273**		**P**	**10 05 28.4**	**+1.1**
WRAB	**Tennant Creek**	**44.31**	**273**	P	**P**	**10 05 28.9**	**+0.5**
WRA	**Warramunga Arr**	**44.31**	**273**	P	**P**	**10 05 28.6**	**+0.2**
WRA	**Warramunga Arr**	**44.31**	**273**	P	**P**	**10 05 28.7**	**+0.2**
	comp=Z,20nm,0.5s,baz=112,slow=8.0,SNR=317						
WRA				PcP	**PP**	**10 07 11.3**	**-0.9**
	comp=Z,3.7nm,0.9s,baz=103,slow=3.5,SNR=0.8						
WRA				ScP	**ScP**	**10 11 06.8**	**+5.1**
	comp=Z,4.6nm,1.1s,baz=112,slow=4.5,SNR=7.0						
WRA				LR	LR	10 23 15.4	
	comp=Z,679nm,18.1s,baz=138,slow=35						
	comp=Z,20nm,0.5s						
SBA	**Scott Base**	**47.24**	**184**		**P**	**10 05 53.6**	**+2.9**
VNDA	**Vanda**	**47.30**	**186**	P	**P**	**10 05 52.6**	**+1.3**
	comp=Z,1.3nm,0.7s,baz=357,slow=7.7,SNR=4.4						
VNDA				LR	LR	10 22 12.4	
	comp=Z,141nm,20.8s,baz=22,slow=32						
	comp=Z,1.3nm,0.7s						
JAY	**Jayapura**	**48.43**	**298**	LR	LR	10 23 57.7	
	comp=Z,154nm,20.9s,baz=193,slow=33						
FITZ	**Fitzroy Crossi**	**52.54**	**270**	LR	LR	10 28 24.6	
	comp=Z,604nm,18.1s,baz=112,slow=36						
NWAO	**Narrogin (SRO)**	**54.28**	**250**	LR	LR	10 27 52.6	
	comp=Z,260nm,19.3s,baz=114,slow=34						
CASY	**Casey**	**54.50**	**208**		**P**	**10 06 46.5**	**+1.0**
PSA00	**Pilbara Seismi**	**56.05**	**264**	P	**P**	**10 06 56.6**	**-0.8**
PSA00				IAmb	IAmb	10 06 57.4	
	comp=Z,12nm,1.2s						
MBWA	**Marble Bar**	**56.32**	**264**	P	**P**	**10 06 59.3**	**0.0**
GUMO	**Guam**	**57.19**	**315**	LR	LR	10 29 39.3	
	comp=Z,146nm,19.7s,baz=130,slow=34						
BATI	**Baumata**	**57.93**	**278**	LR	LR	10 32 42.2	
	comp=Z,758nm,18.1s,baz=134,slow=37						
QSPA	**South Pole Qui**	**58.90**	**180**	P	**P**	**10 07 18.2**	**+1.3**
	comp=Z,8.2nm,0.8s,baz=6.4,slow=1.3,SNR=32						
	comp=Z,8.2nm,0.8s						
KAPI	**Kappang**	**63.93**	**280**	LR	LR	10 35 40.2	
	comp=Z,160nm,19.1s,baz=100,slow=36						
BELA	**Belgrano 2**	**68.95**	**172**		**P**	**10 08 23.0**	**+0.3**
BELA				IAmb	IAmb	10 08 35.0	
	comp=Z,10.0nm,0.9s						
PMSA	**Palmer Station**	**71.45**	**156**	LR	LR	10 36 23.3	
	comp=Z,118nm,18.4s,baz=230,slow=33						
MAW	**Mawson**	**71.61**	**201**	P	**P**	**10 08 40.6**	**+1.6**
	comp=Z,5.5nm,0.8s,baz=141,slow=6.4,SNR=7.0						
	comp=Z,5.5nm,0.8s						
MAW	**Mawson**	**71.61**	**201**	PKHKP	PKPpre	10 08 40.6	
LEM	**Lembang**	**73.32**	**272**	LR	LR	10 42 53.9	
	comp=Z,261nm,18.0s,baz=158,slow=37						
USHA	**Ushuaia**	**75.15**	**146**	LR	LR	10 34 36.6	
	comp=Z,186nm,18.8s,baz=203,slow=30						
TROLL	**Troll, Antarti**	**77.06**	**180**	⇑P	**P**	**10 09 11.6**	**+0.7**
	comp=Z,314nm,0.9s						
SNAA	**Sanae**	**77.33**	**178**	⇑P	**P**	**10 09 12.6**	**+0.2**
	comp=Z,34nm,0.5s						
SNAA	**Sanae**	**77.33**	**178**		**P**	**10 09 12.8**	**+0.4**
SNAA	**Sanae**	**77.33**	**178**	P	**P**	**10 09 12.8**	**+0.4**
	comp=Z,2.1nm,0.8s,baz=194,slow=10,SNR=20						
SNAA				LR	LR	10 42 47.9	
	comp=Z,107nm,18.7s,baz=125,slow=35						
	comp=Z,2.1nm,0.8s						
VNA3	**Neumayer Olymp**	**77.48**	**176**	⇑P	**P**	**10 09 13.1**	**0.0**
	comp=Z,8.9nm,0.6s						
VNA2	**Neumayer--Watz**	**77.92**	**177**	⇑P	**P**	**10 09 16.0**	**+0.5**
	comp=Z,4.3nm,0.5s,baz=175,slow=5.2						
VNA1	**Neumayer--Stat**	**78.14**	**176**	⇑P	**P**	**10 09 14.6**	**-2.2**
	comp=Z,2.5nm,0.5s						
COYC	**Coyhaique**	**78.22**	**136**		**P**	**10 09 18.5**	**+0.8**
MJAR	**Matsushiro Arr**	**79.01**	**325**	P	**P**	**10 09 20.4**	**-1.6**
	comp=Z,2.8nm,0.8s,baz=155,slow=5.1,SNR=6.7						
	comp=Z,2.8nm,0.8s						
LL02	**Futaleuf**	**79.65**	**134**		**P**	**10 09 27.2**	**+1.6**
LL02				IAmb	IAmb	10 09 38.8	
	comp=Z,8.2nm,0.8s						
JNU	**Nakatsue**	**80.28**	**318**	LR	LR	10 39 14.0	
	comp=Z,87nm,21.9s,baz=146,slow=31						
PLCA	**Paso Flores**	**81.82**	**133**	IAmb	IAmb	10 09 50.7	
	comp=Z,7.8nm,1.1s						
PLCA	**Paso Flores**	**81.82**	**133**	P	**P**	**10 09 37.3**	**-0.1**
	comp=Z,2.5nm,1.0s,baz=231,slow=5.2,SNR=5.3						
	comp=Z,2.5nm,1.0s						
ASAJ	**Asahikawa**	**83.25**	**332**	LR	LR	10 42 30.4	
	comp=Z,91nm,20.1s,baz=174,slow=33						
BI02	**San Fabin de**	**83.64**	**129**		**P**	**10 09 48.9**	**+2.0**
BI02				IAmb	IAmb	10 09 50.3	
	comp=Z,13nm,1.2s						
SHEM	**Shemya Is, Ala**	**83.89**	**355**	LR	LR	10 42 05.1	
	comp=Z,192nm,20.1s,baz=148,slow=32						
KSRS	**Korea Array**	**85.08**	**320**	P	**P**	**10 09 52.6**	**-1.2**
	comp=Z,1.6nm,0.7s,baz=144,slow=5.2,SNR=6.4						
KSRS				LR	LR	10 46 52.3	
	comp=Z,20µm,18.2s,baz=165,slow=35						
	comp=Z,1.6nm,0.7s						
PETK	**Petropavlovsk-**	**86.65**	**345**	P	**P**	**10 09 58.0**	**-3.2**
	comp=Z,4.3nm,0.8s,baz=103,slow=7.2,SNR=7.1						
NJ2	**Nanjing**	**86.91**	**311**	*e*P	**P**	**10 10 06.0**	**+3.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GSC	**Goldstone, Bar**	**87.53**	**46**	IAmb	IAmb	10 10 19.5	
	comp=Z,6.7nm,1.1s						
USRK	**Ussuriysk Ar.**	**87.94**	**326**	P	**P**	**10 10 06.4**	**-1.2**
	comp=Z,4.0nm,1.0s,baz=149,slow=5.6,SNR=4.2						
	comp=Z,4.0nm,1.0s						
PNTR	**Pine Nut**	**88.42**	**41**	IAmb	IAmb	10 10 23.4	
	comp=Z,6.4nm,0.9s						
NVAR	**Mina Array Bea**	**88.72**	**43**	P	**P**	**10 10 11.9**	**+0.1**
NVAR	**Mina Array Bea**	**88.72**	**43**	P	**P**	**10 10 10.8**	**-0.9**
	comp=Z,1.5nm,0.8s,baz=226,slow=7.6,SNR=12						
	comp=Z,1.5nm,0.8s						
TPNV	**Topopah Spring**	**88.95**	**45**	IAmb	IAmb	10 10 31.2	
	comp=Z,4.2nm,0.9s						
Y14A	**Wickenburg**	**89.04**	**49**	IAmb	IAmb	10 10 52.2	
	comp=Z,19nm,1.8s						
W13A	**Hualapai Mount**	**89.21**	**47**	IAmb	IAmb	10 10 39.1	
	comp=Z,6.9nm,1.4s						
SHPR	**Sheep Range**	**89.32**	**46**		**P**	**10 10 14.9**	**+0.4**
PRN	**Pahroc Range**	**89.97**	**45**	IAmb	IAmb	10 10 54.2	
	comp=Z,8.4nm,1.2s						
X16A	**Lo Mia Camp, P**	**90.35**	**49**	IAmb	IAmb	10 10 35.8	
	comp=Z,4.3nm,0.9s						
TIA	**Tai'an**	**90.66**	**313**	P	**P**	**10 10 20.4**	**-0.2**
TIA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CN2	**Changchun**	**90.90**	**323**	P	**P**	**10 10 21.8**	**+0.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PINE	**Pine Mountain**	**90.94**	**37**	IAmb	IAmb	10 10 36.6	
	comp=Z,6.6nm,0.8s						
U15A	**North Rim**	**91.05**	**47**	IAmb	IAmb	10 10 29.7	
	comp=Z,4.7nm,0.9s						
WUAZ	**Wupatki**	**91.07**	**48**		**P**	**10 10 23.4**	**+0.6**
KNB	**Kanab**	**91.09**	**46**	IAmb	IAmb	10 10 55.6	
	comp=Z,15nm,1.5s						
BNX	**BinXian**	**91.28**	**325**	⇑P	**P**	**10 10 23.4**	**+0.2**
BNX				PcP	**PcP**	**10 10 26.6**	**+2.5**
BNX				pmax	pmax		
	comp=Z,6.0nm,0.4s						
KLR	**Kul'dur**	**91.83**	**330**	P	**P**	**10 10 25.4**	**-0.2**
	comp=Z,3.9nm,0.7s,baz=127,slow=2.8,SNR=13						
	comp=Z,3.9nm,0.7s						
N15K	**Kwethluk River**	**92.21**	**9**		**P**	**10 10 27.9**	**+0.8**
O18K	**Koktuh Hills**	**92.64**	**11**	P	**P**	**10 10 28.9**	**-0.2**
O18K				IAmb	IAmb	10 10 36.1	
	comp=Z,7.5nm,0.9s						
TXAR	**Lajitas Array**	**92.68**	**57**	P	**P**	**10 10 29.1**	**-1.2**
	comp=Z,0.7nm,1.0s,baz=237,slow=4.0,SNR=3.9						
	comp=Z,0.7nm,1.0s						
MFID	**Camas Ranch**	**93.43**	**40**	IAmb	IAmb	10 10 46.3	
	comp=Z,4.6nm,1.1s						
HLID	**Hailey**	**94.31**	**41**	IAmb	IAmb	10 11 00.5	
	comp=Z,6.1nm,1.5s						
KNK	**Knik Glacier**	**95.33**	**14**	P	**P**	**10 10 43.1**	**+1.5**
PZH	**PanZhiHua**	**95.84**	**297**	P	**P**	**10 10 47.1**	**+2.2**
PDAR	**Pinedale Array**	**96.60**	**44**	P	**P**	**10 10 47.4**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=240,slow=7.7,SNR=2.2						
	comp=Z,0.2nm,0.5s						
HHC	**Hu-ho-hao-te**	**96.93**	**314**	*e*P	**P**	**10 10 52.8**	**+3.4**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,4.3s						
JTS	**Las Juntas de**	**97.66**	**83**	LR	LR	10 45 40.5	
	comp=Z,175nm,19.8s,baz=252,slow=30						
J26L	**Joseph Creek**	**99.11**	**14**	IAmb	IAmb	10 11 03.9	
	comp=Z,4.3nm,0.9s						
MKAR	**Makanchi Array**	**118.43**	**310**	PKP	**PKiKP**	**10 16 04.6**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=348,slow=0.3,SNR=6.2						
KURK	**Kurchatov**	**121.74**	**313**		**PKiKP**	**10 16 10.9**	**-0.7**
KURBB	**Kurchatov Arra**	**121.78**	**313**	PKP	**PKiKP**	**10 16 11.0**	**-0.7**
	comp=Z,2.6nm,0.6s,baz=109,slow=2.0,SNR=13						
AAK	**Ala-Archa**	**122.71**	**303**		**PKPdf**	**10 16 12.6**	**-1.3**
KKAR	**Karatay Array**	**125.67**	**303**		**PKiKP**	**10 16 19.0**	**-0.7**
BVAR	**Borovoye Array**	**127.11**	**315**	PKP	**PKiKP**	**10 16 21.8**	**-0.5**
	comp=Z,2.4nm,0.4s,baz=110,slow=2.1,SNR=9.6						
SPITS	**Spitsbergen Ar**	**132.53**	**356**	PKP	**PKiKP**	**10 16 32.2**	**-0.3**
	comp=Z,1.6nm,0.6s,baz=104,slow=9.1,SNR=1.3						
ABKAR	**Akbulak array**	**133.57**	**310**		**PKPdf**	**10 16 33.1**	**-0.9**
ARCES	**ARCESS Array B**	**139.42**	**348**	PKhKP	PKPpre	10 16 32.5	
	comp=Z,3.0nm,0.8s,baz=68,slow=4.6,SNR=4.7						
ARCES				PKP	**PKiKP**	**10 16 45.2**	**-1.5**
	comp=Z,2.7nm,0.6s,baz=22,slow=0.5,SNR=9.1						
KBZ	**Khabaz**	**145.71**	**303**	PKPbc	**PKPab**	**10 16 56.8**	**-0.2**
	comp=Z,12nm,1.0s,baz=69,slow=3.3,SNR=8.1						
OBN	**Obninsk**	**145.94**	**325**		**PKPab**	**10 16 56.7**	**-0.8**
OBN	**Obninsk**	**145.94**	**325**	⇑P	**PKPab**	**10 16 56.9**	**-0.6**
FINES	**FINESS Array B**	**145.97**	**340**	PKPbc	**PKPab**	**10 16 56.2**	**-1.2**
	comp=Z,33nm,0.7s,baz=56,slow=3.4,SNR=61						
DOMB	**Dombas**	**148.84**	**354**	*e*P	**PKiKP**	**10 17 04.8**	**-1.5**
AKN	**Aaknes**	**148.87**	**356**	*e*P	**PKPbc**	**10 17 04.5**	**-0.4**
NB2	**NORSAR Subarra**	**149.58**	**351**	PKP	**PKPbc**	**10 17 06.1**	**-0.7**
	comp=Z,1.9nm,0.5s,baz=17,slow=2.6						
NB2	**NORSAR Subarra**	**149.58**	**351**	PKP	**PKPbc**	**10 17 06.1**	**-0.7**
	baz=17,slow=2.6						
NOA	**NORSAR Array B**	**149.58**	**351**	PKPbc	**PKPbc**	**10 17 05.9**	**-0.9**
	comp=Z,2.8nm,0.6s,baz=14,slow=4.1,SNR=15						
NC602	**NORSAR Array S**	**149.84**	**351**	*e*P	**PKPbc**	**10 17 06.6**	**-0.7**
HFS	**Hagfors**	**150.08**	**348**	PKPbc	**PKPbc**	**10 17 07.2**	**-0.7**
	comp=Z,7.6nm,0.8s,baz=27,slow=1.7,SNR=14						
SKAR	**Skarslia**	**150.25**	**354**	*e*P	**PKiKP**	**10 17 08.3**	**-0.9**
MNK	**Minsk**	**150.38**	**329**	*i* PKiKP	**PKiKP**	**10 17 09.5**	**-0.1**
	comp=E,14nm,0.7s						
MNK				*i* PKiKP	**PKiKP**	**10 17 09.5**	**-0.1**
	comp=N,18nm,1.0s						
MNK				*i* PKiKP	**PKiKP**	**10 17 09.5**	**-0.1**
	comp=Z,23nm,0.8s,baz=49						
MNK				*i* PP	**PP**	**10 20 44.1**	**-0.5**
MNK				*i* PPP	PPP	10 24 01.5	
MNK				*i* SKS	**SKSdf**	**10 24 08.1**	**-0.3**
MNK				*i* SKKS	**SKKSdf**	**10 33 00.0**	**-1.5**
MNK				*i* SS	**SS**	**10 40 01.3**	**+0.8**
MNK				*i* SSS	SSS	10 45 47.1	
MNK				*i* LR	LR	11 28 22.4	
NACGM	**Naroch**	**150.58**	**331**	*e*PKiKP	**PKiKP**	**10 17 08.7**	**-1.3**
KONO	**Kongsberg**	**151.13**	**352**	*e*P	**PKiKP**	**10 17 10.4**	**-0.6**
ODD1	**Odda**	**151.15**	**355**	*e*P	**PKiKP**	**10 17 11.0**	**-0.1**
DIKM	**Dikmen**	**151.60**	**301**	⇑P	**PKiKP**	**10 17 12.2**	**-0.3**
MMAI	**Mount Meron Ar**	**151.89**	**283**	PKPbc	**PKiKP**	**10 17 14.6**	**+1.1**
	comp=Z,11nm,0.6s,baz=75,slow=4.4,SNR=15						
AKASG	**Malin Array Be**	**152.06**	**322**		**PKiKP**	**10 17 12.7**	**-0.4**
AKASG	**Malin Array Be**	**152.06**	**322**	PKPbc	**PKiKP**	**10 17 12.4**	**-0.8**
	comp=Z,7.8nm,0.7s,baz=50,slow=2.9,SNR=30						
AKBB	**Malin Array Si**	**152.06**	**322**	PKPdf	**PKPbc**	**10 17 11.8**	**-1.0**
KIEV	**Kiev**	**152.07**	**322**		**PKiKP**	**10 17 12.8**	**-0.4**
KIEV	**Kiev**	**152.07**	**322**	⇑P	**PKiKP**	**10 17 13.2**	**+0.1**
MI28	**Mi28,Pidlybu**	**152.73**	**324**	PKPdf	**PKiKP**	**10 17 13.7**	**-0.8**
ILGA	**Ilgaz**	**152.85**	**300**		**PKiKP**	**10 17 16.1**	**+0.6**
KIRS	**Kirsehir-Merke**	**153.01**	**296**	⇓P	**PKiKP**	**10 17 15.9**	**+0.3**
BR131	**Keskin Array S**	**153.14**	**297**		**PKiKP**	**10 17 15.3**	**-0.7**
BRTR	**Keskin Array B**	**153.14**	**297**		**PKiKP**	**10 17 15.4**	**-0.6**
BRTR	**Keskin Array B**	**153.14**	**297**	PKPbc	**PKiKP**	**10 17 15.8**	**-0.1**
	comp=Z,3.3nm,0.7s,baz=116,slow=2.9,SNR=23						
RNPP9	**Sopachiv**	**153.31**	**326**	PKPdf	**PKPbc**	**10 17 13.2**	**-2.4**
RNPP5	**Staryi Chortor**	**153.43**	**326**	PKPdf	**PKiKP**	**10 17 15.1**	**-0.9**
EKA	**Eskdalemuir Ar**	**155.59**	**7**	PKPab	**PKPab**	**10 17 36.9**	**-0.3**
	comp=Z,4.6nm,0.9s,baz=335,slow=3.7,SNR=5.0						
BURAR	**Bucovina Array**	**155.97**	**320**	⇑P	**PKPab**	**10 17 39.4**	**+0.1**
VRI	**Vrincioaia**	**156.01**	**315**	⇑P	**PKPab**	**10 17 40.8**	**+1.4**
PLOR	**Plostina**	**156.06**	**315**	⇑P	PKPab	10 17 52.0	+12
VOIR		**157.24**	**315**	⇓P	**PKPab**	**10 17 44.2**	**-0.6**
DRGR		**157.84**	**320**	⇑P	**PKPab**	**10 17 46.2**	**-1.1**
BRG	**Berggiesshubel**	**158.51**	**339**	*e*PKP	**PKPab**	**10 17 49.0**	**-0.9**
BRG				Amp		10 17 50.4	
	comp=Z,8.0nm,0.8s						
PSZ	**Piszkesteto**	**158.54**	**326**	⇓P	**PKPab**	**10 17 51.1**	**+0.8**
VYHS	**Vyhne**	**158.62**	**329**	*e*PKP	**PKPab**	**10 17 52.0**	**+1.5**
SURR	**Surduc**	**158.78**	**319**	⇑P	**PKPab**	**10 17 51.6**	**+0.2**
JAVC	**Velka Javorina**	**158.84**	**331**	*e*PKP	**PKPab**	**10 17 51.3**	**-0.3**
VRAC	**Vranov**	**158.92**	**333**	*e*PKP	**PKPab**	**10 17 51.6**	**-0.2**
BZS	**Buzias**	**159.15**	**319**	⇑P	**PKPab**	**10 17 52.9**	**0.0**
KRUC	**Moravsky**	**159.20**	**333**	*e*PKP	**PKPab**	**10 17 50.9**	**-2.1**
MODS	**Modra-Piesok**	**159.38**	**331**	*e*PKP	**PKPab**	**10 17 55.6**	**+1.7**
CONA	**Conrad Observa**	**160.32**	**332**	*i* PKP	**PKPab**	**10 17 58.5**	**+0.5**
	comp=Z,3.5nm,0.7s						
RONA	**Rosalia, Austr**	**160.32**	**331**	*i* PKP	**PKPab**	**10 17 58.5**	**+0.5**
	comp=Z,5.6nm,0.5s						
WET	**Wettzell**	**160.36**	**339**	*e*PKPab	**PKPab**	**10 17 58.1**	**0.0**
TNS	**Taunus Mts**	**160.45**	**348**	*e*PKPab	**PKPab**	**10 17 57.8**	**-0.6**
ARSA	**Arzberg**	**161.00**	**331**	*e*PKP	**PKPab**	**10 18 02.6**	**+1.7**
	comp=Z,4.8nm,1.1s						
BIOA	**Bad Ischl, Aus**	**161.37**	**335**	*e*PKP	**PKPab**	**10 18 03.2**	**+0.7**
	comp=Z,5.3nm,0.8s						
RJOB	**Jochberg**	**161.62**	**337**	*e*PKPab	**PKPab**	**10 18 03.9**	**+0.2**
SOKA	**Soboth**	**161.66**	**331**	*i* PKP	**PKPab**	**10 18 03.6**	**-0.3**
	comp=Z,2.8nm,0.9s						
LESA	**Schwarzleotal**	**161.93**	**337**	*i* PKP	**PKPab**	**10 18 06.0**	**+1.0**
	comp=Z,6.2nm,1.1s						
OBKA	**Obir**	**161.99**	**331**	*i* PKP	**PKPab**	**10 18 06.2**	**+0.8**
	comp=Z,12nm,1.4s						
TORD	**Torodi Ar. Bea**	**162.01**	**178**	PKPab	**PKPab**	**10 18 04.4**	**-1.6**
	comp=Z,2.2nm,0.7s,baz=165,slow=2.9,SNR=4.8						
MYKA	**Terra Mystica**	**162.25**	**333**	*e*PKP	**PKPab**	**10 18 05.2**	**-1.2**
	comp=Z,3.5nm,0.7s						
WATA	**Walderalm**	**162.37**	**339**	*e*PKP	**PKPab**	**10 18 06.5**	**-0.6**
	comp=Z,3.7nm,0.6s						
WTTA	**Wattenberg**	**162.41**	**338**	*i* PKP	**PKPab**	**10 18 07.3**	**0.0**
	comp=Z,6.0nm,0.6s						
RETA	**Reutte**	**162.48**	**340**	*e*PKP	**PKPab**	**10 18 07.1**	**-0.3**
	comp=Z,3.9nm,0.7s						
MOTA	**Moosalm**	**162.50**	**340**	*i* PKP	**PKPab**	**10 18 08.0**	**+0.3**
	comp=Z,14nm,1.1s						
ABTA	**Abfaltersbach**	**162.57**	**336**	*e*PKP	**PKPab**	**10 18 06.9**	**-1.0**
	comp=Z,3.2nm,0.7s						
SQTA	**Sankt Quirin**	**162.59**	**339**	*e*PKP	**PKPab**	**10 18 08.3**	**+0.3**
	comp=Z,5.7nm,0.6s						
DAVA	**Damuels**	**162.90**	**342**	*i* PKP	**PKPab**	**10 18 09.4**	**0.0**
	comp=Z,4.7nm,0.7s						
FETA	**Feichten**	**162.91**	**340**	*i* PKP	**PKPab**	**10 18 09.7**	**+0.3**
	comp=Z,5.2nm,1.0s						
ESDC	**Sonseca Array**	**170.18**	**29**	PKPab	**PKPab**	**10 18 41.4**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=356,slow=1.6,SNR=2.9						

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*IDC **17** 09:59:09.0±4.9, 20°.93S×179°.09W, h605^{km}±58^{km}, mb3.5/8, mbtmp4.4/8, Error ellipse: s-maj=82.5km s-min=23.2km az=155.0*

ISC 17 09:59:10.0±1.4**, 21°.0S**±0°.5×**179°.1W**±0°.3**, h619^{km}, n21, σ0.^{s}94**/21**, mb4.0**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MUGZ	**Murupara**	**17.81**	**191**	S	S	10 05 24.4	-11

STKA	Stephens Creek	36.67	245	P	P	10 05 26.4	-0.2
	6.1nm,0.9s,baz=79,slow=10,SNR=1.3						
	6.1nm,0.9s						
ASAR	Alice Springs	43.43	257	P	P	10 06 20.5	+0.2
	7.5nm,0.5s,baz=93,slow=8.1,SNR=6.0						
ASAR				PcP	PcP	10 07 55.3	+1.0
	1.3nm,0.7s,baz=96,slow=3.6,SNR=2.0						
	7.5nm,0.5s						
WRA	Warramunga Arr	43.53	263	P	P	10 06 20.3	-0.9
	4.8nm,0.7s,baz=96,slow=7.4,SNR=9.6						
	4.8nm,0.7s						
NVAR	Mina Array Bea	82.06	44	P	P	10 10 27.6	+0.2
	1.7nm,0.7s,baz=229,slow=8.7,SNR=9.0						
	1.7nm,0.7s						
TXAR	Lajitas Array	88.16	58	P	P	10 10 57.3	+0.4
	0.9nm,1.0s,baz=225,slow=6.5,SNR=5.6						
	0.9nm,1.0s						
ILAR	Eielson Array	89.00	13	P	P	10 10 59.4	-0.4
	0.8nm,0.5s,baz=222,slow=5.6,SNR=11						
	0.8nm,0.5s						
CMAR	Chiang Mai Arr	89.32	290	P	P	10 11 04.1	+1.7
	1.8nm,0.3s,baz=112,slow=5.2,SNR=4.5						
	1.8nm,0.3s						
PDAR	Pinedale Array	90.00	44	P	P	10 11 05.2	0.0
	0.6nm,0.6s,baz=224,slow=5.6,SNR=5.2						
	0.6nm,0.6s						
MKAR	Makanchi Array	110.79	313	PKiKP	PKiKP	10 16 33.2	-0.6
	0.6nm,0.6s,baz=270,slow=0.9,SNR=1.3						
KURBB	Kurchatov Arra	113.70	317	PKiKP	PKiKP	10 16 38.2	-1.0
	0.8nm,0.4s,baz=105,slow=2.3,SNR=4.3						
BVAR	Borovoye Array	118.79	320	PKP	PKPdf	10 16 48.9	-0.1
	3.5nm,0.8s,baz=122,slow=1.4,SNR=3.8						
ARCES	ARCESS Array B	129.20	349	PKP	PKPdf	10 17 08.1	-0.4
	2.1nm,0.7s,baz=51,slow=1.5,SNR=4.6						
AKASG	Malin Array Be	142.93	330	PKP	PKPdf	10 17 32.2	-2.0
	8.0nm,0.5s,baz=48,slow=3.7,SNR=15						
KWP	Kalwaria Pacla	146.57	334	*e*PKP	PKPdf	10 17 39.6	-0.9
STHS	Stebnicka Huta	147.33	335	*e*PKP	PKPdf	10 17 43.2	+1.4
NIE	Niedzica	147.69	336	*e*PKP	PKPbc	10 17 44.7	-1.5
KSP	Ksiaz	147.83	342	*e*PKP	PKPbc	10 17 47.1	+0.7
LANS	Liptovska Anna	148.22	337	*e*PKP	PKPbc	10 17 47.6	0.0
MORC	Moravsky Berou	148.37	339	*e*PKP	PKPbc	10 17 48.0	+0.1
GERES	GERESS Array B	150.37	343	PKPbc	PKiKP	10 17 53.3	+0.1
	1.8nm,0.6s,baz=20,slow=4.3,SNR=4.6						

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*IDC **17** 10:01:46.1±0.8, 30°.84S×177°.55W, h0^{km}, mb4.2/7, mbtmp4.1/7, Error ellipse: s-maj=36.0km s-min=24.0km az=176.0*

*NEIC **17** 10:01:47.4±0.6, 31°.13S±0°.03×177°.4W±0°.2, h10^{km}±2^{km}, mb4.6/13, Error ellipse: s-maj=26.7km s-min=3.3km az=95.0*

ISC 17 10:01:49.6±0.6**, 31°.28S**±0°.05×**177°.6W**±0°.1**, h26**^{km}**, n58,** σ**2**^{s}**01**/62**, mb4.4**/12**, 3C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.04	351	P	Pn	10 02 19.8	-2.4
GLKZ				S	Sn	10 02 42.5	-4.3
RAO	Raoul Island	2.04	351		Pn	10 02 20.3	-2.1
RIZ	Raoul Island	2.05	351	P	Pn	10 02 19.4	-3.1
RIZ				S	Sn	10 02 44.2	-3.0
WMGZ	Waiomatatini S	7.32	206	P	Pn	10 03 33.2	-1.6
WMGZ				S	Sn	10 04 56.7	-0.3
PKGZ	Pakihiroa	7.49	207	P	Pn	10 03 35.4	-1.7
PKGZ				S	Sn	10 05 00.1	-1.2
HAZ	Te Kaha	7.51	209	P	Pn	10 03 35.5	-2.0
HAZ				S	Sn	10 05 02.8	+1.0
PUZ	Puketiti	7.60	206	P	Pn	10 03 35.7	-3.0
PUZ				S	Sn	10 05 02.7	-1.2
RUGZ	Raukumara Rang	7.74	209	P	Pn	10 03 39.0	-1.7
RUGZ				S	Sn	10 05 06.5	-0.9
TWGZ	Tauwhareparae	7.79	207	P	Pn	10 03 38.1	-3.3
TWGZ				S	Sn	10 05 08.2	-0.6
TKGZ	Te Karaka	8.07	207	P	Pn	10 03 40.9	-4.2
TKGZ				S	Sn	10 05 15.7	+0.1
MWZ	Matawai	8.11	208	S	Sn	10 05 15.5	-1.1
URZ	Urewera	8.22	211	Pn	Pn	10 03 43.9	-3.4
	1.4nm,0.3s,baz=59,slow=12,SNR=1.0						
URZ				Sn	Sn	10 05 18.4	-0.9
	4.9nm,0.3s,baz=186,slow=22,SNR=9.0						
URZ	Urewera	8.22	211	P	Pn	10 03 45.3	-1.9
URZ				S	Sn	10 05 16.3	-3.0
RIGZ	Rimuhau	8.34	206	S	Sn	10 05 21.8	-0.5
OUZ	Omahuta	8.38	240	P	Pn	10 03 55.6	+6.2
PRGZ	Paritu Road	8.49	205	P	Pn	10 03 47.0	-3.8
PRGZ				S	Sn	10 05 25.6	-0.2
SNGZ	Shannon Statio	8.57	208	P	Pn	10 03 50.4	-1.6
SNGZ				S	Sn	10 05 24.9	-3.0
RTZ	Ruatahuna	8.58	210	Pn	Pn	10 03 53.0	+0.9
TOZ	Tahuroa Road	8.61	220	Pn	Pn	10 03 55.9	+3.3
MHGZ	Mahia Peninsul	8.68	204	P	Pn	10 03 49.3	-4.2
MHGZ				S	Sn	10 05 28.8	-1.8
NMHZ	Naumai	9.05	209	P	Pn	10 03 57.2	-1.5
NMHZ				S	Sn	10 05 37.3	-2.5
WAZ	Wanganui	10.40	214	S	Sn	10 06 13.4	+0.6
FOZ	Fox Glacier	15.79	216		P	10 05 33.8	0.0
FOZ				IAmb	IAmb	10 06 02.9	
	comp=Z,102nm,1.4s						
DZM	Mont Dzumac	16.97	299	Pn	Pn	10 05 46.0	+0.6
	comp=Z,0.1nm,0.3s,baz=139,slow=18,SNR=4.2						
CTAO	Charters Tower	34.31	280	P	P	10 08 35.7	+1.5
CTAO				IAmb	IAmb	10 08 50.3	
	comp=Z,5.7nm,0.8s						
STKA	Stephens Creek	34.65	258	P	P	10 08 38.6	+1.6
STKA	Stephens Creek	34.65	258	P	P	10 08 38.7	+1.6
	comp=Z,2.3nm,0.7s,baz=117,slow=10.0,SNR=4.4						
	comp=Z,2.3nm,0.7s						
BBOO	Buckleboo	39.10	255	P	P	10 09 15.5	+0.7
AS31	Alice Springs	43.44	268	P	P	10 09 51.0	+0.4
ASAR	Alice Springs	43.44	268	P	P	10 09 50.8	+0.1
ASAR	Alice Springs	43.44	268	P	P	10 09 50.6	-0.1
	comp=Z,1.8nm,0.5s,baz=105,slow=7.1,SNR=9.1						
ASAR				PcP	PcP	10 11 38.5	-0.2
	comp=Z,0.2nm,0.3s,baz=109,slow=3.9,SNR=0.8						
ASAR				ScP	ScP	10 15 32.2	+3.8
	comp=Z,1.5nm,1.0s,baz=120,slow=3.3,SNR=5.7						
	comp=Z,1.8nm,0.5s						
WR8	Warramunga Arr	44.37	273	P	P	10 09 58.3	+0.2
WR8				IAmb	IAmb	10 10 24.1	
	comp=Z,6.3nm,1.0s						
WRAB	Tennant Creek	44.50	273	P	P	10 09 58.6	-0.6
WRAB				IAmb	IAmb	10 10 04.8	
	comp=Z,5.7nm,0.9s						
WRA	Warramunga Arr	44.51	273	P	P	10 09 59.4	+0.2
WRA	Warramunga Arr	44.51	273	P	P	10 09 58.7	-0.5
	comp=Z,2.1nm,0.3s,baz=112,slow=8.0,SNR=43						
	comp=Z,2.1nm,0.3s						
WB0	Warramunga Arr	44.54	273	P	P	10 09 59.5	+0.1
WB0				IAmb	IAmb	10 10 26.1	
	comp=Z,9.0nm,1.1s						
FITZ	Fitzroy Crossi	52.74	270	P	P	10 11 03.2	+0.7
CASY	Casey	54.54	208	P	P	10 11 16.3	+1.3
QSPA	South Pole Qui	58.83	180	P	P	10 11 50.0	+4.3
QSPA				IAmb	IAmb	10 12 03.1	
	comp=Z,6.0nm,0.8s						
QSPA	South Pole Qui	58.83	180	P	P	10 11 49.3	+3.6
	comp=Z,4.0nm,1.1s,baz=34,slow=7.7,SNR=4.6						
	comp=Z,4.0nm,1.1s						
TROLL	Troll, Antarti	77.00	180	⇑P	P	10 13 41.9	+2.1
	comp=Z,3.7nm,0.1s						
SNAA	Sanae	77.27	178	⇑P	P	10 13 46.2	+5.0
SNAA	Sanae	77.27	178	P	P	10 13 42.4	+1.1
SNAA				IAmb	IAmb	10 14 01.5	
	comp=Z,11nm,1.5s						
VNA3	Neumayer Olymp	77.40	176	⇑P	P	10 13 47.3	+5.4
H03S2	Juan Fernandez	79.67	123	T	T	11 40 40.6	
	baz=243,slow=74,SNR=18						
H03S1	Juan Fernandez	79.68	123	T	T	11 40 25.3	
	baz=243,slow=74,SNR=21						
H03S3	Juan Fernandez	79.69	123	T	T	11 40 24.1	
	baz=243,slow=74,SNR=29						
PLCA	Paso Flores	81.64	133	P	P	10 14 08.0	+2.4
	comp=Z,2.1nm,0.9s,baz=229,slow=8.5,SNR=3.9						
	comp=Z,2.1nm,0.9s						
NVAR	Mina Array Bea	88.63	42	P	P	10 14 39.0	-1.6
	comp=Z,0.9nm,0.9s,baz=244,slow=4.6,SNR=4.6						
	comp=Z,0.9nm,0.9s						
TXAR	Lajitas Array	92.55	57	P	P	10 14 56.9	-2.1
	comp=Z,0.4nm,1.0s,baz=240,slow=2.6,SNR=3.1						
	comp=Z,0.4nm,1.0s						
H10S3	ASCENSION HYDR	136.77	155	T	T	12 54 01.7	
	baz=16,slow=74,SNR=19						
H10S2	ASCENSION HYDR	136.77	155	T	T	12 54 00.8	
	baz=204,slow=74,SNR=19						
H10N3	ASCENSION HYDR	137.86	155	T	T	12 55 22.9	
	baz=202,slow=75,SNR=22						
H10N1	ASCENSION HYDR	137.86	155	T	T	12 55 22.4	
	baz=202,slow=75,SNR=20						
H10N2	ASCENSION HYDR	137.87	155	T	T	12 55 23.4	
	baz=202,slow=75,SNR=22						
FINES	FINESS Array B	146.10	340	PKPbc	PKPbc	10 21 26.6	+0.1
	comp=Z,4.5nm,0.5s,baz=52,slow=3.4,SNR=13						
AKASG	Malin Array Be	152.22	322	PKPbc	PKiKP	10 21 43.2	+0.4
	comp=Z,1.9nm,0.7s,baz=52,slow=2.6,SNR=5.8						
BRTR	Keskin Array B	153.34	297	PKPbc	PKiKP	10 21 46.4	+0.7
	comp=Z,0.8nm,0.7s,baz=96,slow=1.4,SNR=3.8						

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*MOS **17** 10:08:57.8±0.8, 43°.10N×146°.89E, h41^{km}, mb4.6/17, Error ellipse: s-maj=8.8km s-min=6.2km az=114.8*

*NIED **17** 10:08:58.2, 43°.13N×146°.92E, h50^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.22; M$_{\theta\theta}$-0.64; M$_{\phi\phi}$-0.58; M$_{r\theta}$0.26; M$_{\theta\phi}$-0.75; M$_{\phi r}$1.09; Fault plane solution: M$_0$1.71000×10^{15} NP1: ϕ_s246.00000°, δ30.00000°, λ126.00000°. NP2: ϕ_s26.00000°, δ66.00000°, λ71.00000°.*

*JMA **17** 10:08:58.2±0.2, 43°.1N±0°.7×14°7E±°, h50^{km}±3^{km}, MD4.4/34, MV4.4/34, E OFF HOKKAIDO*

JMA Felt I J1 at E OFF HOKKAIDO .

*SKHL **17** 10:08:58.7±0.5, 43°.10N×147°.00E, h46^{km}±4^{km}, mb5.5/5*

*IDC **17** 10:09:00.5±2.0, 43°.16N×146°.83E, h46^{km}±18^{km}, mb3.9/23, mbtmp4.1/29, ML3.6/6, MS3.3/8, Error ellipse: s-maj=15.9km s-min=12.3km az=137.0*

*NEIC **17** 10:09:01.5±1.7, 43°.01N±0°.09×146°.7E±0°.1, h58^{km}±9^{km}, mb4.5/58, Error ellipse: s-maj=16.3km s-min=10.7km az=129.0*

ISC 17 10:08:59.7±0.5**, 43°.15N**±0°.05×**146°.84E**±0°.05**, h39**^{km}±4^{km}**, n321,** σ**1**^{s}**44**/309**, mb4.4**/65**, MS3.3**/3**, 17C-9D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	0.72	359	*d i*PN	Pn	10 09 13.2	-0.2
SHO				*e*S	Sn	10 09 23.4	+0.1
SHO				pmax	pmax		
	comp=N,2µm,0.2s						
SHO				pmax	pmax		
	comp=Z,4µm,0.2s						
SHO				pmax	pmax		
	comp=E,367nm,0.1s						
SHO				smax	smax		
	comp=N,23µm,0.3s						
SHO				smax	smax		
	comp=E,16µm,0.3s						
SHO	Shikotan	0.72	359	*i* P	Pn	10 09 13.0	-0.4
SHO				AMB	AMB	10 09 13.6	
	comp=E,3µm,0.2s						
SHO				*e*S	Sn	10 09 23.6	+0.3
SHO				A	A	10 09 24.4	
	comp=E,21µm,0.4s						
SHO				A	A	10 09 24.4	
	comp=E,20µm,0.4s						
NEM2	Nemuro 2	0.83	286	P	Pn	10 09 14.5	-0.4
NEM2				S	Sn	10 09 26.7	+0.7
NEM2	Nemuro 2	0.83	286	A	A	10 09 14.5	
	comp=N,11nm,0.9s,comp=E,35nm,0.9s						
NMR	Nemuro--Hokkai	0.85	286	⇓*i*PN	Pn	10 09 14.5	-0.5
NMR				*e*S	Sn	10 09 26.6	+0.3
NMR	Nemuro--Hokkai	0.85	286	*i* P	Pn	10 09 14.6	-0.5
NMR				*e*S	Sn	10 09 26.7	+0.4
GLVR	Golovnino	1.13	302	⇓*i*PN	Pn	10 09 18.5	-0.5
GLVR				*e*S	Sn	10 09 33.0	-0.3
GLVR				pmax	pmax		
	comp=N,639nm,0.4s						
GLVR				pmax	pmax		
	comp=Z,3µm,0.4s						
GLVR				pmax	pmax		
	comp=E,419nm,0.3s						
GLVR				smax	smax		
	comp=N,13µm,0.3s						
GLVR				smax	smax		
	comp=E,2µm,0.3s						
GLVR	Golovnino	1.13	302	*i* P	Pn	10 09 18.5	-0.5
GLVR				AMB	AMB	10 09 19.3	
	comp=E,3µm,0.4s						
GLVR				*e*S	Sn	10 09 33.0	-0.3
GLVR				A	A	10 09 39.9	
	comp=E,13µm,0.3s						
GLVR				A	A	10 09 39.9	
	comp=E,2µm,0.3s						
YUK	Yuzh-Kuril'sk	1.14	322	*d i*PN	Pn	10 09 18.4	-0.7
YUK				*e*S	Sn	10 09 33.2	-0.3
YUK				pmax	pmax		
	comp=Z,6µm,0.3s						
YUK				pmax	pmax		
	comp=N,569nm,0.2s						
YUK				pmax	pmax		
	comp=E,862nm,0.2s						
YUK				smax	smax		
	comp=N,15µm,0.4s						
YUK				smax	smax		
	comp=E,17µm,0.4s						
YUK	Yuzh-Kuril'sk	1.14	322	*i* P	Pn	10 09 18.4	-0.7
YUK				AMB	AMB	10 09 19.2	
	comp=E,6µm,0.3s						
YUK				*e*S	Sn	10 09 32.0	-1.5
YUK				A	A	10 09 36.4	
	comp=E,15µm,0.6s						
YUK				A	A	10 09 36.4	
	comp=E,16µm,0.6s						
JKHN	Kushirohamanak	1.23	268	P	Pn	10 09 20.7	+0.3
JKHN				*e*S	Sn	10 09 37.2	+1.4
JKHN	Kushirohamanak	1.23	268	A	A	10 09 20.7	
	comp=N,12nm,1.7s,comp=E,10.0nm,3.5s						
AKK	Akkeshi	1.47	266	*e*P	Pn	10 09 23.6	0.0
JNSB	Nemuroshibetsu	1.48	296	P	Pn	10 09 23.5	-0.3
JNSB				S	Sn	10 09 42.5	+0.6
JRA	Rausu	1.48	303	P	Pn	10 09 23.8	0.0
JRA				S	Sn	10 09 42.7	+0.9
RUSJ	Misakicho	1.50	310	⇓*i*PN	Pn	10 09 24.1	0.0
RUSJ				*e*S	Sn	10 09 42.5	0.0
JAK	Akkeshi	1.58	265	P	Pn	10 09 24.9	-0.2
JAK				*e*S	Sn	10 09 44.3	0.0
JAK	Akkeshi	1.58	265	A	A	10 09 24.9	
	comp=N,11nm,2.0s,comp=E,14nm,0.8s						
JNK	Nakash	1.61	287	P	Pn	10 09 25.2	-0.3
JNK				*e*S	Sn	10 09 45.6	+0.5
KUR	Kuril'sk	2.21	19	PN	Pn	10 09 33.6	-0.2
KUR				*e*S	Sn	10 10 00.1	+0.2
KUR				pmax	pmax		
	comp=Z,266nm,0.5s						
KUR				smax	smax		
	comp=N,899nm,0.4s						
KUR				smax	smax		
	comp=E,816nm,0.4s						
KUR	Kuril'sk	2.21	19	*e*P	Pn	10 09 33.4	-0.4
KUR				AMB	AMB	10 09 36.6	
	comp=E,300nm,0.5s						
KUR				*e*S	Sn	10 09 58.9	-1.0
KUR				A	A	10 10 02.9	
	comp=E,950nm,0.3s						
KUR				A	A	10 10 02.9	
	comp=E,830nm,0.3s						
JOB	Onbets	2.22	265	P	Pn	10 09 33.8	-0.1
JAR	Ashorobuto	2.25	275	P	Pn	10 09 34.6	+0.2
JAR				S	Sn	10 10 01.6	+0.7
JTKR	Abashiri--Toko	2.29	292	P	Pn	10 09 35.9	+1.0
JCH	Churui	2.61	259	*e*P	Pn	10 09 38.9	-0.4
JMP	Maruseppu	2.67	290	*e*P	Pn	10 09 41.4	+1.2
ERM	Erimo	2.95	249		Pn	10 09 45.6	+1.7
ERM	Erimo	2.95	249	*ce*PN	Pn	10 09 45.5	+1.6
JFR	Furan	3.11	272	P	Pn	10 09 47.1	+0.9
JKA	Kamikawa-asahi	3.23	289		Pn	10 09 49.5	+1.7
ASAJ	Asahikawa	3.23	289	P	Pn	10 09 49.2	+1.3
	comp=E,36nm,0.3s,baz=119,slow=11,SNR=63						
ASAJ				S	Sn	10 10 29.2	+4.2
	comp=E,110nm,0.6s,baz=305,slow=20,SNR=3.5						
ASAJ				LR	LR	10 10 33.4	
	comp=E,174nm,18.1s,baz=168,slow=29						
	comp=E,172nm,0.5s						
ASAJ	Asahikawa	3.23	289	PN	Pn	10 09 49.5	+1.7
YSS	Yuzhno-Sakhali	4.79	324		Pn	10 10 11.1	+1.9
YSS	Yuzhno-Sakhali	4.79	324	*e*PN	Pn	10 10 10.2	+1.1
YSS				pmax	pmax		
	comp=Z,40nm,1.3s						
YSS	Yuzhno-Sakhali	4.79	324	*e*P	Pn	10 10 10.7	+1.6
YSS				AMB	AMB	10 10 13.2	
	comp=Z,60nm,0.3s						
YSS				*e*S	Sn	10 11 03.6	+0.3
JTM	Tenmabayashi	4.91	243		Pn	10 10 10.6	-0.2
JMM	Marumori	7.00	223	Pn	Pn	10 10 37.8	-1.8
JMM					Sn	10 11 51.8	-6.1
TYV	Tymovskoe	8.23	341	*e*P	Pn	10 10 57.0	+0.6
MAJO	Matsushiro	9.36	228	Pn	Pn	10 11 12.0	+0.1
MAJO	Matsushiro	9.36	228	PN	Pn	10 11 12.0	+0.1
MJAR	Matsushiro Arr	9.36	228	Pn	Pn	10 11 11.2	-0.7
MJAR	Matsushiro Arr	9.36	228	P	Pn	10 11 10.9	-1.0
	comp=Z,0.1nm,0.3s,baz=27,slow=14,SNR=7.3						
MJAR				S	Sn	10 12 57.8	+2.0
	comp=Z,1.6nm,0.4s,baz=43,slow=23,SNR=4.2						
	comp=Z,1.2nm,0.4s						
MJAR	Matsushiro Arr	9.36	228	PN	Pn	10 11 11.2	-0.7
JGF	Kuroka	10.51	227	Pn	Pn	10 11 27.9	+0.1
USRK	Ussuriysk Ar.	10.82	281	P	Pn	10 11 33.4	+1.5
	comp=Z,0.2nm,0.3s,baz=83,slow=12,SNR=2.9						
USRK				LR	LR	10 15 21.1	
	comp=Z,128nm,21.6s,baz=155,slow=35						
	comp=Z,3.1nm,0.8s						
KLR	Kul'dur	12.09	305	LR	LR	10 16 48.6	
	comp=Z,166nm,19.9s,baz=96,slow=39						
KLR	Kul'dur	12.09	305	⇑*e*PN	Pn	10 11 49.9	+0.7
KLR	Kul'dur	12.09	305	*e*P	Pn	10 11 49.9	+0.7
PEA0B	Petropavlovsk-	12.31	32	⇑*e*PN	Pn	10 11 52.4	+0.2
PETK	Petropavlovsk-	12.31	32	Pn	Pn	10 11 57.8	+5.6
PETK	Petropavlovsk-	12.31	32	P	Pn	10 11 51.1	-1.1
	comp=Z,0.7nm,0.3s,baz=210,slow=12,SNR=9.0						
	comp=Z,4.0nm,0.9s						
PETK	Petropavlovsk-	12.31	32	PN	Pn	10 11 57.8	+5.6
KSRS	Korea Array	15.51	255	P	Pn	10 12 35.4	+0.1
	comp=Z,0.1nm,0.3s,baz=62,slow=11,SNR=4.8						
	comp=Z,1.3nm,0.9s						
JNU	Nakatsue	16.04	237	P	Pn	10 12 42.8	+0.6
	comp=Z,0.1nm,0.3s,baz=94,slow=15,SNR=3.5						
JNU				LR	LR	10 19 30.6	
	comp=Z,117nm,19.6s,baz=34,slow=39						
	comp=Z,6.4nm,1.1s						
MA2	Magadan	16.63	7	LR	LR	10 18 42.4	
	comp=Z,117nm,18.4s,baz=226,slow=35						
ZEA	Zeya	16.71	316	⇑*e*P	P	10 12 51.8	-0.7
ZEA	Zeya	16.71	316	*e*P	Pn	10 12 47.8	-2.8
SEY	Seymchan	20.09	7	P	P	10 13 30.0	+0.5
	comp=Z,3.7nm,0.9s,baz=216,slow=8.6,SNR=5.0						
SEY				LR	LR	10 21 07.6	
	comp=Z,87nm,18.6s,baz=198,slow=36						
	comp=Z,3.7nm,0.9s						
SEY	Seymchan	20.09	7	⇑*e*P	P	10 13 29.0	-0.5
SEY				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SEY	Seymchan	20.09	7	*e*P	P	10 13 29.0	-0.5
BILL	Bilibino	27.00	16	⇑*e*P	P	10 14 35.2	-2.3
BILL				pmax	pmax		
	comp=Z,9.0nm,2.2s						
ULN	Ulaanbaatar	28.06	294	⇑*e*P	P	10 14 48.0	+0.7
ULN				pmax	pmax		
	comp=Z,9.0nm,1.4s						
ULN	Ulaanbaatar	28.06	294	*e*P	P	10 14 48.0	+0.7
SONM	Songino Array	28.50	294	P	P	10 14 50.5	-0.8
SONM	Songino Array	28.50	294	P	P	10 14 51.3	0.0
	comp=Z,2.3nm,0.6s,baz=86,slow=8.2,SNR=11						
SONM				LR	LR	10 27 19.8	
	comp=Z,148nm,20.2s,baz=72,slow=39						
	comp=Z,2.3nm,0.6s						
H11N2	WAKE ISLAND Hy	28.80	138	T	T	10 45 43.0	
	baz=329,slow=75,SNR=1084						
H11N1	WAKE ISLAND Hy	28.81	138	T	T	10 45 37.1	
	baz=329,slow=75,SNR=973						
H11N3	WAKE ISLAND Hy	28.81	138	T	T	10 45 44.3	
	baz=329,slow=75,SNR=983						
H11S1	WAKE ISLAND Hy	29.75	139	T	T	10 46 51.6	
	baz=330,slow=76,SNR=2004						
H11S3	WAKE ISLAND Hy	29.75	140	T	T	10 46 52.5	
	baz=330,slow=76,SNR=1345						
H11S2	WAKE ISLAND Hy	29.76	139	T	T	10 46 54.5	
	baz=330,slow=76,SNR=1071						
N15K	Kwethluk River	35.90	43	P	P	10 15 55.4	-0.2
N15K				IAmb	IAmb	10 16 33.3	
	comp=Z,8.4nm,1.1s						
CHNA	Chernabura Isl	36.17	52	P	P	10 16 03.6	+5.6
	baz=274						
C17K	DeLong Mountai	36.20	29	P	P	10 15 58.1	0.0
	baz=252						
E17K	Hotham Inlet	36.29	31	P	P	10 15 59.2	+0.4
	baz=255						
F17K	Baldwin Pennin	36.35	32	P	P	10 16 00.1	+0.8
	baz=256						
G17K	Kiwalik Mounta	36.38	34	P	P	10 16 00.2	+0.6
	baz=258						
M16K	Timber Creek	36.52	42	P	P	10 16 02.2	+1.3
	baz=266						
H17K	Granite Mounta	36.58	35	P	P	10 16 02.2	+0.8
	baz=260						
N16K	Nishlik Lake	36.58	43	P	P	10 16 04.5	+3.0
	baz=267						
J17K	VABM Dome	36.70	38	P	P	10 16 03.6	+1.1
	baz=263						
E18K	Tukpahlearik C	36.83	31	P	P	10 16 04.2	+0.7
	baz=256						
O16K	Kokwok River B	36.88	44	P	P	10 16 07.6	+3.6
	baz=269						
L17K	Donlin	36.92	40	P	P	10 16 06.5	+2.1
	baz=265						
C18K	Utukok River	36.94	29	P	P	10 16 04.8	+0.3
	baz=254						
B18K	Kokolik River	36.95	27	P	P	10 16 06.2	+1.7
	baz=252						
K17K	Iditarod	36.98	39	P	P	10 16 06.4	+1.6
	baz=264						
F18K	Selawik	37.01	32	P	P	10 16 06.0	+1.0
	baz=258						
R16K	Pilot Point	37.16	47	P	P	10 16 10.6	+4.2
	baz=272						
H18K	Honhosa River	37.26	35	P	P	10 16 08.8	+1.6
	baz=261						
G18K	Tagagawik	37.27	34	P	P	10 16 08.4	+1.2
G18K	Tagagawik	37.27	34	P	P	10 16 08.1	+0.9
	baz=260,SNR=7.4						
M17K	Holitna River	37.28	41	P	P	10 16 10.0	+2.6
	baz=267						
N17K	Nushagak Hills	37.36	42	P	P	10 16 10.6	+2.5
	baz=268						
O17K	Koliganek Bris	37.39	44	P	P	10 16 11.6	+3.3
	baz=269						
A19K	Wainwright	37.45	26	P	P	10 16 10.0	+1.3
	baz=252						
C19K	Lookout Ridge	37.63	28	P	P	10 16 12.2	+1.9
	baz=255						
L18K	Granite Mounta	37.68	40	P	P	10 16 13.0	+2.2
	baz=266						
J18K	Innoko River	37.77	38	P	P	10 16 12.8	+1.3
	baz=265						
F19K	Shaleruckik Mo	37.79	32	P	P	10 16 12.1	+0.5
F19K				IAmb	IAmb	10 16 12.6	
	comp=Z,4.2nm,0.8s						
F19K	Shaleruckik Mo	37.79	32	P	P	10 16 12.3	+0.7
	baz=260						
G19K	Purcell Mounta	37.94	33	P	P	10 16 12.9	0.0
	baz=261						
D19K	Kuna River	38.00	29	P	P	10 16 14.2	+0.8
	baz=257						
Q17K	Contact Creek	38.04	46	P	P	10 16 16.8	+2.9
	baz=272						
M18K	Stony River	38.06	41	P	P	10 16 16.2	+2.2
	baz=268						
E19K	Redstone River	38.11	31		P	10 16 15.2	+0.9
E19K				IAmb	IAmb	10 16 29.4	
	comp=Z,6.9nm,0.8s						
E19K	Redstone River	38.11	31	P	P	10 16 15.3	+1.0
	baz=259,SNR=5.0						
H19K	Roundabout Mou	38.11	34		P	10 16 15.8	+1.5
H19K	Roundabout Mou	38.11	34	P	P	10 16 15.7	+1.5
	baz=262,SNR=8.5						
J19K	Poorman	38.30	37	P	P	10 16 17.6	+1.7
	baz=265						
P18K	Big Mountain,	38.34	44	P	P	10 16 18.8	+2.4
	baz=271						
O18K	Koktuh Hills	38.35	44	P	P	10 16 19.2	+2.8
	baz=271						
L19K	White Mountain	38.54	40	P	P	10 16 20.0	+2.0
	baz=268						
D20K	Etivluk River	38.58	29	P	P	10 16 19.2	+0.8
	baz=258						
F20K	Avaraart Lake	38.62	32	P	P	10 16 19.4	+0.8
	baz=261						

E20K	Nigu River	38.65	30	P	P	10 16 19.3	+0.4
	baz=259						
B20K	Meade River	38.68	27	P	P	10 16 19.8	+0.7
	baz=256						
H20K	Anotleneega Mo	38.76	35	P	P	10 16 21.1	+1.3
	baz=264,SNR=5.1						
J20K	Nowinta River	38.96	37		P	10 16 22.7	+1.2
J20K	Nowinta River	38.96	37	P	P	10 16 23.2	+1.8
	baz=266						
A21K	Barrow	39.19	25	P	P	10 16 24.1	+0.8
	baz=255						
IMAR	Indian Mountai	39.27	34	P	P	10 16 25.3	+1.2
C21K	Knifeblade Rid	39.32	29	P	P	10 16 25.4	+1.0
	baz=260						
G21K	Allakaket	39.42	33		P	10 16 26.5	+1.2
G21K				IAmb	IAmb	10 16 27.2	
	comp=Z,6.6nm,0.8s						
G21K	Allakaket	39.42	33	P	P	10 16 26.6	+1.2
	baz=264,SNR=7.3						
B21K	Ikpikpuk River	39.46	28	P	P	10 16 27.4	+1.8
	baz=259						
E21K	Killik River	39.49	30	P	P	10 16 26.7	+0.8
	baz=261						
OHAK	Old Harbor	39.50	48	P	P	10 16 30.2	+4.1
	baz=276						
F21K	Alatna River	39.51	32	P	P	10 16 27.6	+1.6
	baz=263						
H21K	Melozitna Rive	39.63	34	P	P	10 16 28.4	+1.3
H21K				IAmb	IAmb	10 16 47.5	
	comp=Z,6.7nm,1.2s						
H21K	Melozitna Rive	39.63	34	P	P	10 16 28.1	+1.0
	baz=266						
D22K	Ayikyak River	40.02	29	P	P	10 16 30.7	+0.4
	baz=262						
H22K	Ishtalitna Cre	40.23	34	P	P	10 16 33.4	+1.3
	baz=267						
E22K	Anaktuvuk Pass	40.25	31		P	10 16 32.9	+0.7
E22K				IAmb	IAmb	10 16 33.5	
	comp=Z,4.9nm,0.8s						
E22K	Anaktuvuk Pass	40.25	31	P	P	10 16 33.1	+0.9
	baz=264,SNR=5.7						
G22K	Bettles	40.25	32	P	P	10 16 32.6	+0.4
	baz=266						
MLY	Manley	40.46	35	P	P	10 16 35.9	+1.9
	baz=268						
COLD	Coldfoot	40.78	32	P	P	10 16 37.6	+1.0
	baz=266						
G23K	Bananza Creek	40.82	33	P	P	10 16 37.9	+0.9
	baz=267,SNR=6.8						
C23K	Itkillik River	40.88	28	P	P	10 16 37.7	+0.4
	baz=263						
H23K	Yukon River	40.98	34	IAmb	IAmb	10 16 41.1	
	comp=Z,4.1nm,0.8s						
H23K	Yukon River	40.98	34	P	P	10 16 40.6	+2.3
	baz=269,SNR=6.4						
I23K	Minto, Yukon-K	41.05	35	P	P	10 16 39.9	+1.1
	baz=270						
E23K	Chandalar	41.06	31	P	P	10 16 40.1	+1.2
	baz=266						
TOLK	Toolik Lake Re	41.12	30	P	P	10 16 40.5	+1.0
	baz=265						
NEA2	Nenana	41.17	36	P	P	10 16 41.9	+2.0
	baz=270						
ZALV	Zalesovo Beam	41.19	308	P	P	10 16 40.4	+0.4
	comp=Z,0.8nm,0.3s,baz=78,slow=9.0,SNR=3.2						
ZALV				LR	LR	10 34 22.7	
	comp=Z,40nm,20.1s,baz=81,slow=37						
	comp=Z,0.8nm,0.3s						
MCK	McKinley	41.25	37	P	P	10 16 42.3	+1.8
	baz=272						
D24K	Happy Valley	41.43	29	P	P	10 16 42.9	+1.0
	baz=266						
E24K	Your Creek	41.49	31	IAmb	IAmb	10 16 44.1	
	comp=Z,5.3nm,0.8s						
E24K	Your Creek	41.49	31	P	P	10 16 44.0	+1.6
	baz=267						
KNK	Knik Glacier	41.59	41	P	P	10 16 45.9	+2.6
	baz=275						
SML	Sawmill	41.62	40	P	P	10 16 45.8	+2.2
	baz=274						
H24K	Noodor Dome	41.67	34		P	10 16 45.2	+1.2
H24K	Noodor Dome	41.67	34	P	P	10 16 44.8	+0.8
	baz=270						
F24K	Squaw Lake	41.69	32	P	P	10 16 44.7	+0.6
	baz=268						
COLA	College	41.69	36	⇓eP	P	10 16 43.6	-0.4
COLA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
COLA	College	41.69	36	P	P	10 16 46.1	+2.1
	baz=271						
PWL	Port Wells	41.70	42	P	P	10 16 46.3	+2.1
	baz=275						
G24K	Hadweenzic Riv	41.84	33	IAmb	IAmb	10 16 47.5	
	comp=Z,4.3nm,0.7s						
G24K	Hadweenzic Riv	41.84	33	P	P	10 16 46.3	+1.1
	baz=270						
POKR	Poker Plat Res	41.86	35	P	P	10 16 46.5	+1.0
	baz=271						
DHY	Denali Highway	41.98	38	P	P	10 16 48.1	+1.5
	baz=274						
HDA	Harding Lake	42.10	36	P	P	10 16 47.8	+0.5
	baz=273						
SCM	Sheep Creek Mo	42.10	40	P	P	10 16 50.0	+2.4
	baz=275						
ILAR	Eielson Array	42.11	36	P	P	10 16 47.8	+0.3
	comp=Z,0.7nm,0.7s,baz=273,slow=7.6,SNR=11						
ILAR				PcP	PcP	10 18 40.6	-0.8
	comp=Z,0.2nm,0.8s,baz=270,slow=2.7,SNR=2.2						
	comp=Z,0.7nm,0.7s						
P23K	Montague Islan	42.26	43	P	P	10 16 51.9	+3.1
	baz=277						
GLI	Glacier Island	42.30	42	P	P	10 16 51.6	+2.5
	baz=276						
D25K	Kavik River	42.31	29	IAmb	IAmb	10 17 30.6	
	comp=Z,4.3nm,0.8s						
D25K	Kavik River	42.31	29	P	P	10 16 50.0	+0.8
	baz=268						
G25K	Bearman Lake	42.38	33	P	P	10 16 50.8	+1.2
	baz=271						
H25L	Birch Creek	42.50	34	P	P	10 16 51.9	+1.2
	baz=272						
F25K	Christian Rive	42.55	32	P	P	10 16 52.1	+1.0
	baz=270						
E25K	Arctic Village	42.58	31	P	P	10 16 52.9	+1.6
	baz=270						
M24K	Tolsona, Glenn	42.61	40	P	P	10 16 53.1	+1.4
	baz=276						
K24K	Donnelly Dome	42.65	37	P	P	10 16 53.1	+1.2
	baz=274						
PRP	Porcupine Dome	42.65	35	IAmb	IAmb	10 17 09.7	
	comp=Z,11nm,1.4s						
PRP	Porcupine Dome	42.65	35	P	P	10 16 53.8	+1.8
	baz=273						
FYU	Fort Yukon	42.73	33	IAmb	IAmb	10 17 07.3	
	comp=Z,6.4nm,0.7s						
J25K	Salcha River,	42.77	36	P	P	10 16 55.0	+2.0
	baz=274						
KLU	Klutina	42.80	41	P	P	10 16 55.7	+2.4
	baz=277						
C26K	Camden Bay	42.85	28	P	P	10 16 54.9	+1.6
	baz=268						
PAX	Paxson	42.85	38	P	P	10 16 56.3	+2.6
	baz=275						
EYAK	Cordova Ski Ar	43.00	42	P	P	10 16 57.8	+3.1
	baz=278						
HARP	HAARP	43.06	39	P	P	10 16 58.0	+2.8
	baz=276						
RIDG	Independent Ri	43.06	37	P	P	10 16 57.1	+1.8
	baz=275						
F26K	Sheenjek River	43.12	31	P	P	10 16 57.6	+1.9
	baz=272,SNR=6.3						
C27K	Jago River	43.26	29	P	P	10 16 59.0	+2.2
	baz=270						
G26K	Porcupine Rive	43.29	33	IAmb	IAmb	10 16 59.5	
	comp=Z,5.7nm,0.9s						
G26K	Porcupine Rive	43.29	33	P	P	10 16 58.6	+1.7
	baz=273,SNR=6.6						
N25K	Chitina, Valde	43.41	40	P	P	10 17 00.4	+2.2
	baz=278						
SCRK	Sand Creek	43.42	37	P	P	10 16 59.5	+1.3
	baz=276						
BMRM	Bremner River	43.50	41	P	P	10 17 00.9	+2.0
	baz=278						
J26L	Joseph Creek	43.55	36	P	P	10 17 00.3	+1.0
	baz=275						
I26K	Coal Creek Min	43.66	35	P	P	10 17 01.0	+1.1
	baz=275						
L26K	Log Cabin Wild	43.81	38	P	P	10 17 02.7	+1.4
	baz=277						
M26K	Nabesna, AK	44.05	39	P	P	10 17 05.2	+1.9
	baz=278						
E27K	Coleen River	44.07	31	P	P	10 17 04.3	+1.0
	baz=273						
G27K	Doyon Strip	44.14	33	P	P	10 17 05.7	+1.8
	baz=275						
D27M	Malcolm River	44.24	29	P	P	10 17 06.3	+1.6
	baz=273						
H27K	Steamboat Moun	44.24	33	IAmb	IAmb	10 17 19.8	
	comp=Z,8.1nm,1.5s						
H27K	Steamboat Moun	44.24	33	P	P	10 17 06.6	+1.9
	baz=275						
K27K	Chicken	44.25	37	P	P	10 17 06.0	+1.2
	baz=277						
I27K	Kandik River	44.27	34	P	P	10 17 06.1	+1.1
	baz=276						
L27K	Beaver Creek,	44.49	38	P	P	10 17 08.4	+1.7
L27K	Beaver Creek,	44.49	38	P	P	10 17 08.1	+1.4
	baz=278						
BCAR	Beaver Creek A	44.51	38	P	P	10 17 08.3	+1.4
MK31	Makanchi Array	44.67	298	deP	P	10 17 08.8	+0.4
MKAR	Makanchi Array	44.67	298		P	10 17 08.6	+0.2
MKAR	Makanchi Array	44.67	298	P	P	10 17 08.5	+0.1
	comp=Z,6.0nm,0.5s,baz=82,slow=9.3,SNR=34						
	comp=Z,6.0nm,0.5s						
MKAR	Makanchi Array	44.67	298	ceP	P	10 17 08.8	+0.4
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MKAR	Makanchi Array	44.67	298	eP	P	10 17 08.8	+0.4
F28M	Old Crow	44.76	31	P	P	10 17 10.0	+1.2
	baz=276						
E28M	Babbage River	44.80	30	P	P	10 17 10.3	+1.2
	baz=275						
MAKZ	Makanchi	44.87	298		P	10 17 10.3	+0.3
MAKZ				IAmb	IAmb	10 17 10.9	
	comp=Z,7.4nm,0.6s						
MAKZ	Makanchi	44.87	298	P	P	10 17 10.3	+0.3
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.6s						
I28M	Miner Creek	44.98	34	IAmb	IAmb	10 17 23.6	
	comp=Z,4.2nm,0.7s						
I28M	Miner Creek	44.98	34	P	P	10 17 12.3	+1.6
	baz=278						
D28M	Stokes Point	45.02	29	P	P	10 17 13.2	+2.4
	baz=275						
BVCY	Beaver Creek	45.03	39	P	P	10 17 14.0	+2.9
	baz=280						
CTG	Chitna Glacier	45.07	41	P	P	10 17 14.0	+2.5
	baz=281						
YUK3	Moose Creek	45.33	40	P	P	10 17 16.5	+2.8
	baz=281						
DAWY	Dawson	45.41	36	P	P	10 17 16.0	+1.9
	baz=279						
E29M	Blow River	45.42	30	IAmb	IAmb	10 17 16.3	
	comp=Z,6.6nm,0.9s						
E29M	Blow River	45.42	30	P	P	10 17 15.8	+1.7
	baz=276,SNR=8.0						
H29M	Whitestone	45.51	33	P	P	10 17 16.5	+1.7
	baz=278						
G29M	Pine Creek	45.55	32	P	P	10 17 17.4	+2.2
	baz=278						
I29M	Ogilvie Camp,	45.67	34	IAmb	IAmb	10 17 28.1	
	comp=Z,4.0nm,0.8s						
I29M	Ogilvie Camp,	45.67	34	P	P	10 17 17.2	+1.2
	baz=279,SNR=5.8						
KURK	Kurchatov	45.69	304		P	10 17 16.1	-0.3
KURK				IAmb	IAmb	10 17 17.0	
	comp=Z,5.7nm,0.6s						
KURK	Kurchatov	45.69	304	c iP	P	10 17 16.0	-0.3
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KURK	Kurchatov	45.69	304	eP	P	10 17 16.0	-0.3
KURBB	Kurchatov Arra	45.77	304	P	P	10 17 16.6	-0.4
	comp=Z,4.2nm,0.6s,baz=74,slow=8.2,SNR=17						
KURBB				PcP	PcP	10 18 53.4	-0.7
	comp=Z,0.5nm,0.5s,baz=98,slow=2.8,SNR=1.7						
	comp=Z,4.2nm,0.6s						
M29M	Somme Creek	46.12	38	P	P	10 17 21.2	+1.4
	baz=282						
L29M	L29M	46.14	38	P	P	10 17 21.2	+1.4
	baz=281						
EPYK	Eagle Plains	46.15	33	IAmb	IAmb	10 17 32.3	
	comp=Z,5.9nm,0.6s						
EPYK	Eagle Plains	46.15	33	P	P	10 17 21.8	+1.9
	baz=279						
G30M	tAoh Zraii Nji	46.25	32	IAmb	IAmb	10 17 22.6	
	comp=Z,5.0nm,0.8s						
G30M	tAoh Zraii Nji	46.25	32	P	P	10 17 22.2	+1.6
	baz=279						
K29M	Barlow Dome	46.27	36	P	P	10 17 22.8	+1.8
	baz=281						
F30M	Barrier River	46.31	31	P	P	10 17 23.1	+2.1
	baz=279,SNR=10						
I30M	Mount Dempster	46.49	34	IAmb	IAmb	10 17 35.3	
	comp=Z,3.8nm,0.8s						
I30M	Mount Dempster	46.49	34	P	P	10 17 24.0	+1.3
	baz=281,SNR=6.6						
HYT	Haines Junctio	46.93	41		P	10 17 28.0	+1.8
HYT	Haines Junctio	46.93	41	P	P	10 17 27.8	+1.7
	baz=284						
G31M	Satah River	47.01	32	IAmb	IAmb	10 17 28.4	
	comp=Z,5.0nm,0.6s						
G31M	Satah River	47.01	32	P	P	10 17 27.2	+0.7
	baz=281						
MAYO	Mayo, Yukon	47.03	37	P	P	10 17 28.1	+1.4
	baz=283						
INK	Inuvik	47.04	30	IAmb	IAmb	10 17 28.3	
	comp=Z,6.4nm,0.8s						
INK	Inuvik	47.04	30	P	P	10 17 27.5	+0.9
	comp=Z,3.8nm,0.4s,baz=299,slow=5.5,SNR=14						
	comp=Z,3.8nm,0.4s						
INK	Inuvik	47.04	30	P	P	10 17 27.6	+0.9
	baz=280,SNR=7.4						
F31M	Tsiigehtchic	47.12	31	IAmb	IAmb	10 17 29.6	
	comp=Z,6.8nm,0.9s						
F31M	Tsiigehtchic	47.12	31	P	P	10 17 28.3	+1.0
	baz=281						
P29M	Windy Craggy	47.12	42	P	P	10 17 30.2	+2.7
	baz=285						
CMAR	Chiang Mai Arr	47.14	254	P	P	10 17 29.1	+0.9
	comp=Z,1.0nm,0.5s,baz=39,slow=7.2,SNR=4.9						
	comp=Z,1.0nm,0.5s						
CMAR	Chiang Mai Arr	47.14	254	ceP	P	10 17 29.6	+1.4
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
H31M	Peel River	47.21	33	IAmb	IAmb	10 17 40.7	
	comp=Z,3.9nm,0.7s						
H31M	Peel River	47.21	33	P	P	10 17 29.2	+1.1
	baz=282						
N31M	Braeburn, Yuko	47.58	39	P	P	10 17 33.3	+2.2
	baz=285						
M31M	Drury Creek, Y	48.03	38	P	P	10 17 36.1	+1.6
	baz=285						
FARO	Faro, Yukon	48.49	38	P	P	10 17 39.7	+1.5
	baz=286						
R32K	Eaglecrest	49.10	43	P	P	10 17 45.1	+2.3
	baz=288						
MMPY	Sheldon Lake,	49.31	37	P	P	10 17 46.0	+1.5
	baz=287						
P33M	Teslin, Yukon	49.33	40	P	P	10 17 46.5	+1.9
	baz=288						
BVAR	Borovoye Array	49.72	310	P	P	10 17 47.1	-0.5
	comp=Z,0.8nm,0.3s,baz=72,slow=9.3,SNR=4.5						
	comp=Z,0.8nm,0.3s						
BRVK	Borovoye	49.76	310	deP	P	10 17 47.1	-0.8
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRVK	Borovoye	49.76	310	eP	P	10 17 47.1	-0.8
C36M	Paulatuk	50.12	28	P	P	10 17 51.2	+0.9
C36M	Paulatuk	50.12	28	P	P	10 17 51.0	+0.7
	baz=288						
AAK	Ala-Archa	51.42	296	c iP	P	10 18 00.7	-0.1
AAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
AAK	Ala-Archa	51.42	296	eP	P	10 18 00.7	-0.1
KK31	Karatay Array	53.80	298	IAmb	IAmb	10 18 19.0	
	comp=Z,4.7nm,0.7s						
KKAR	Karatay Array	53.80	298		P	10 18 18.3	+0.1
KKAR	Karatay Array	53.80	298	IAmb	IAmb	10 18 19.0	
	comp=Z,4.9nm,0.7s						
KKAR	Karatay Array	53.80	298	P	P	10 18 18.3	+0.1
ARTI	Arti	54.74	317	c iP	P	10 18 24.0	-0.8
ARTI				*PP	pP	10 18 35.5	-0.4
ARTI				S	S	10 26 02.0	-0.3
ARTI				SS	SS	10 29 47.0	+2.0
ARTI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
RES	Resolute Bay	55.61	16	IAmb	IAmb	10 18 31.2	
	comp=Z,4.7nm,0.7s						
YKA	Yellowknife Ar	56.43	33	P	P	10 18 36.8	0.0
	comp=Z,0.7nm,0.7s,baz=306,slow=8.0,SNR=3.2						
	comp=Z,0.7nm,0.7s						
SIMJ	Simiganj	57.00	294		P	10 18 41.2	-0.2
ABKAR	Akbulak array	57.27	309		P	10 18 43.1	+0.1
ABKAR	Akbulak array	57.27	309	IAmb	IAmb	10 18 43.7	
	comp=Z,9.6nm,0.5s						
BLKN	Baker Lake	62.11	26		P	10 19 15.3	-0.7
BELG	Belogornoye	62.19	317	⇑eP	P	10 19 16.5	-0.2
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WRA	Warramunga Arr	63.82	193	P	P	10 19 27.1	-0.7
	comp=Z,0.5nm,0.6s,baz=12,slow=7.0,SNR=9.3						
	comp=Z,0.5nm,0.6s						
SUMG	Summit	64.52	2		P	10 19 32.2	-0.2
SUMG	Summit	64.52	2	P	P	10 19 32.2	-0.2
SUMG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SUMG	Summit	64.52	2	i P	P	10 19 32.7	+0.3
SUMG				IAmb	IAmb	10 19 33.3	
	comp=Z,7.4nm,0.8s						
NUUG	Nuugaatsiaq	64.73	7	i P	P	10 19 40.9	+7.7
NUUG				IAmb	IAmb	10 19 48.6	
	comp=Z,39nm,1.1s						
FINES	FINESS Array B	65.31	333	P	P	10 19 36.5	-0.7
	comp=Z,1.7nm,0.7s,baz=26,slow=8.6,SNR=3.3						
	comp=Z,1.7nm,0.7s						
FINES	FINESS Array B	65.31	333	i P	P	10 19 38.9	+1.8
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
OBN	Obninsk	65.67	324	eP	P	10 19 41.1	+1.6
OBN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
OBN	Obninsk	65.67	324	eP	P	10 19 41.1	+1.6
ASAR	Alice Springs	67.54	193	P	P	10 19 52.5	+0.7
	comp=Z,0.6nm,0.8s,baz=10,slow=6.6,SNR=5.6						
	comp=Z,0.6nm,0.8s						
ICESG	Greenland Ices	67.98	3	i P	P	10 19 54.3	-0.2
ICESG				IAmb	IAmb	10 19 55.2	
	comp=Z,6.7nm,0.9s						
NVAR	Mina Array Bea	68.09	58	P	P	10 19 56.5	+0.9
	comp=Z,0.5nm,0.5s,baz=286,slow=6.8,SNR=7.1						
	comp=Z,0.5nm,0.5s						
SOEG	Soedalen	68.97	359	i P	P	10 19 48.8	-11
SOEG				IAmb	IAmb	10 19 51.4	
	comp=Z,5.9nm,0.5s						
KIV	Kislovodsk	70.00	312	eP	P	10 20 08.1	+1.0
KIV				pmax	pmax		
	comp=Z,16nm,1.0s						
KIV	Kislovodsk	70.00	312	eP	P	10 20 08.3	+1.2
KBZ	Khabaz	70.03	312	P	P	10 20 07.7	+0.5
	comp=Z,6.3nm,0.8s,baz=34,slow=5.4,SNR=7.8						
	comp=Z,6.3nm,0.8s						
KBZ	Khabaz	70.03	312	ceP	P	10 20 07.8	+0.6
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KBZ	Khabaz	70.03	312	eP	P	10 20 07.8	+0.6
NB2	NORSAR Subarra	70.09	339	P	P	10 20 06.9	-0.4
	comp=Z,1.0nm,0.6s,baz=32,slow=6.5						
NOA	NORSAR Array B	70.09	339	P	P	10 20 06.5	-0.8
	comp=Z,2.0nm,0.8s,baz=33,slow=6.3,SNR=5.3						
	comp=Z,2.0nm,0.8s						
SHA1	Shidzhatmaz	70.16	312	⇑eP	P	10 20 08.8	+0.5
HFS	Hagfors	70.16	337	P	P	10 20 07.1	-0.6
	comp=Z,2.1nm,0.6s,baz=46,slow=6.4,SNR=6.3						
	comp=Z,2.1nm,0.6s						
PDAR	Pinedale Array	70.47	49	P	P	10 20 08.9	-1.3
	comp=Z,0.3nm,0.5s,baz=307,slow=7.2,SNR=3.7						
	comp=Z,0.3nm,0.5s						
AKASG	Malin Array Be	71.94	324	P	P	10 20 18.1	-0.5
	comp=Z,2.8nm,0.5s,baz=41,slow=6.3,SNR=11						
	comp=Z,2.8nm,0.5s						
AKASG	Malin Array Be	71.94	324	ceP	P	10 20 18.5	-0.1
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKBB	Malin Array Si	71.94	324	deP	P	10 20 18.4	-0.2
BUR08	Bucovina Ar. S	75.97	324		P	10 20 42.1	-0.3
BURAR	Bucovina Array	75.99	324		P	10 20 42.1	-0.4
BURAR				IAmb	IAmb	10 20 43.9	
	comp=Z,3.4nm,0.9s						
CLL	Collm	77.75	332	eP	P	10 20 52.0	-0.2
BRTR	Keskin Array B	77.80	314	P	P	10 20 52.8	-0.1
	comp=Z,0.9nm,0.7s,baz=59,slow=4.8,SNR=4.5						
	comp=Z,0.9nm,0.7s						
BRTR	Keskin Array B	77.80	314	ceP	P	10 20 53.4	+0.5
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
EKA	Eskdalemuir Ar	78.64	343	P	P	10 20 57.2	+0.1
	comp=Z,1.8nm,0.7s,baz=20,slow=6.0,SNR=3.0						
	comp=Z,1.8nm,0.7s						
MMAI	Mount Meron Ar	81.68	308	P	P	10 21 14.8	+0.9
	comp=Z,3.7nm,0.5s,baz=46,slow=7.1,SNR=4.5						
	comp=Z,3.7nm,0.5s						
TXAR	Lajitas Array	83.17	56	P	P	10 21 22.9	+1.1
	comp=Z,0.9nm,0.5s,baz=297,slow=3.4,SNR=38						
	comp=Z,0.9nm,0.5s						
ESDC	Sonseca Array	93.43	338	P	P	10 22 08.4	-2.5
	comp=Z,0.8nm,1.1s,baz=25,slow=4.2,SNR=2.2						
SNAA	Sanae	147.81	197	PKPbc	PKPbc	10 28 39.5	+0.5
	comp=Z,1.9nm,0.9s,baz=224,slow=3.3,SNR=5.8						
BDFB	Brasilia	149.78	29	PKPbc	PKPbc	10 28 44.9	-0.8
	comp=Z,1.3nm,0.5s,baz=224,slow=9.5,SNR=1.8						
PLCA	Paso Flores	152.23	98	PKPbc	PKPbc	10 28 49.2	-1.6
	comp=Z,0.7nm,0.8s,baz=344,slow=7.4,SNR=1.4						

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*AEIC **17** 10:15:38.4±1.9, 51°.9N±0°.1×175°.56W±0°.05, h28^{km}±7^{km},*
Error ellipse: s-maj=16.6km s-min=3.4km az=170.0
*NEIC **17** 10:15:38.4±1.6, 51°.89N±0°.08×175°.51W±0°.04, h35^{km}±2^{km},*
ML3.6/8, ML3.1(AEIC), Error ellipse: s-maj=14.1km
s-min=3.9km az=354.0
*IDC **17** 10:15:41.0±2.5, 51°.47N×173°.94W, h0^{km}, mb3.6/3,*
mbtmp3.6/5, ML3.4/2, Error ellipse: s-maj=61.9km
s-min=33.0km az=7.0
ISC 17 10:15:36.4±1.9**, 51°.7N**±0°.1×**175°.49W**±0°.04**, h15**^{km}±11^{km}**,**
n33, σ0^{s}94/38**, mb3.8**/3**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSCK	Great Sitkin C	0.54	309		Pg	10 15 47.3	+0.3
GSCK					Sg	10 15 53.5	-0.6
GSTR	Great Sitkin T	0.55	320		Pg	10 15 47.8	+0.6
GSTR				Sg	Sg	10 15 53.8	-0.8
GSTD	Great Sitkin T	0.56	313		Pg	10 15 47.7	+0.3
GSTD					Sg	10 15 54.6	-0.3
GSSP	Great Sitkin S	0.60	315		Pg	10 15 48.3	+0.2
GSSP					Sg	10 15 55.2	-0.8
ADK	Adak	0.77	286	Pn	Pg	10 15 51.5	+0.2
ADK				IAML		10 16 01.9	
	5µm,0.2s						
ADK	Adak	0.77	286		Sg	10 16 01.2	-0.3
ATKA	Atka Island	0.96	56		Pb	10 15 54.2	-0.4
ATKA					Sb	10 16 04.8	-2.3
ATKA				IAML		10 16 06.8	
	comp=N,810nm,0.4s						
KIRH	Kanaga Island	1.02	283		Pb	10 15 55.7	-0.1
KIRH					Sb	10 16 08.8	-0.2
KIWB	Kanaga Island	1.05	280		Pb	10 15 56.1	-0.1
KIWB	Kanaga Island	1.05	280		Sb	10 16 09.3	-0.4
KIKV	Kanaga Island	1.06	282		Pb	10 15 56.3	-0.2
KIKV					Sb	10 16 09.6	-0.6
KICM	Kanaga Island	1.09	284		Sb	10 16 10.2	-0.6
KIMD	Kanaga Island	1.09	275		Pb	10 15 56.6	-0.3
TAFP	Tanaga Falls P	1.57	279		Pn	10 16 03.8	+0.2
TAFP					Sn	10 16 22.4	-1.2
TASE	Tanaga Southea	1.59	277		Pn	10 16 04.3	+0.2
TANO	Tanaga North	1.65	279		Pn	10 16 05.1	+0.2
TANO					Sn	10 16 25.1	-0.7
GANE	Gareloi Northe	2.05	275		Pn	10 16 10.9	+0.6
GANO	Gareloi North	2.07	275		Pn	10 16 10.9	+0.3
CERB	Semis' Cerberu	3.04	277		Pn	10 16 23.8	-0.2
AMKA	Amchitka	3.27	267	Pn	Pn	10 16 28.5	+1.5
LSSE	Little Sitkin	3.70	276		Pn	10 16 33.7	+0.8
NIKH	Nikolski High	4.27	70	Pn	Pn	10 16 40.3	-0.5
NIKH				IAML		10 17 36.6	
	comp=N,73nm,1.2s						
NIKH				IAML		10 17 41.2	
	comp=E,66nm,0.9s						
UNV	Unalaska Valle	5.87	65	Pn	Pn	10 17 02.5	-0.2
LVA	Lava Point	6.24	63	Pn	Pn	10 17 11.4	+3.6
SPIA	Saint Paul Isl	6.30	27	Pn	Pn	10 17 09.9	+1.3
KDAK	Kodiak Island	14.53	56	Pn	Pn	10 19 02.0	+0.7

	comp=E,0.2nm,0.3s,baz=286,slow=18,SNR=1.2						
	comp=E,5.7nm,0.9s						
ILAR	Eielson Array	19.73	37	P	Pn	10 20 07.3	+0.7
	comp=E,0.1nm,0.3s,baz=232,slow=13,SNR=5.6						
	comp=E,0.2nm,0.5s						
PDAR	Pinedale Array	44.24	75	P	P	10 23 45.3	+0.1
	comp=E,0.8nm,0.6s,baz=305,slow=9.1,SNR=6.5						
	comp=E,0.8nm,0.6s						
ZALV	Zalesovo Beam	55.31	315	P	P	10 25 21.8	+13
	comp=E,0.4nm,0.3s,baz=65,slow=11,SNR=1.9						
	comp=E,0.4nm,0.3s						
TXAR	Lajitas Array	56.56	84	P	P	10 25 18.3	0.0
	comp=E,0.3nm,0.6s,baz=295,slow=5.2,SNR=5.5						
	comp=E,0.3nm,0.6s						
H03N2	Juan Fernandez	119.25	108	T	T	12 45 09.8	
	baz=318,slow=78,SNR=4.4						
H03N1	Juan Fernandez	119.26	108	T	T	12 45 03.9	
	baz=318,slow=78,SNR=5.2						
H03N3	Juan Fernandez	119.27	108	T	T	12 45 24.8	
	baz=318,slow=78,SNR=5.5						

IDC 17 10:16:34.9±1.7,24°.59N×96°.53E,h0km,mb3.4/3, mbtmp3.3/4,ML3.5/1,Error ellipse: s-maj=119.5km s-min=25.2km az=62.0,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	6.50	159	Pn	Pn	10 18 14.0	+2.2
	0.3nm,0.3s,baz=332,slow=15,SNR=2.4						
	0.5nm,0.3s						
MKAR	Makanchi Array	24.92	336	P	P	10 21 59.9	+0.3
	0.7nm,0.5s,baz=147,slow=9.0,SNR=8.5						
	0.7nm,0.5s						
WRA	Warramunga Arr	57.57	137	P	P	10 26 26.4	-0.2
	0.3nm,0.7s,baz=317,slow=7.3,SNR=1.6						
	0.3nm,0.7s						
ASAR	Alice Springs	60.12	140	P	P	10 26 43.7	-0.7
	0.3nm,0.8s,baz=317,slow=6.5,SNR=4.7						
	0.3nm,0.8s						

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*IDC **17** 10:32:31.0±1.4,8°.40N×103°.77W,h0km,mb3.7/8, mbtmp3.7/8,MS4.1/29,Error ellipse: s-maj=62.9km s-min=20.1km az=62.0*

*GCMT **17** 10:32:36.0±0.3,8°.45N±0°.02×103°.94W±0°.02,h14km±1km, MW4.9/99,Moment Tensor Solution. s20,c20; s99,c135; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.71±.12; $M_{\theta\theta}$1.01±.10; $M_{\phi\phi}$-0.30±.10; $M_{r\theta}$-1.90±.34; $M_{\theta\phi}$-2.46±.09; $M_{\phi r}$1.02±.26; Best double couple: $M_0$3.11900×10^{16} NP1:ϕ_s357.00000°,δ54.00000°,λ1.00000°. NP2: ϕ_s267.00000°,δ89.00000°,λ144.00000°. Principal axes: T 3.8880, Plg25.0000°, Azm216.0000°; N -1.5420, Plg54.0000°, Azm85.0000°; P -2.3510, Plg24.0000°, Azm318.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 17 10:32:32.6±1.4,8°.4N±0°.2×103°.7W±0°.4,h10km,n42, σ1ˢ29/9,mb3.7/7,MS4.2/29,Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	Lajitas Array	20.82	0	P	P	10 37 15.2	+0.7
	2.7nm,1.0s,baz=190,slow=8.4,SNR=14						
	2.7nm,1.0s						
PFO	Pinyon Flats O	27.71	337	LR	LR	10 46 41.4	
	comp=Z,364nm,21.4s,baz=150,slow=31						
ROSC	El Rosal	29.40	95	LR	LR	10 47 41.2	
	comp=Z,308nm,20.3s,baz=228,slow=31						
NVAR	Mina Array Bea	32.66	338	P	P	10 39 06.2	+1.0
	0.1nm,0.3s,baz=158,slow=12,SNR=1.8						
	0.1nm,0.3s						
TKL	Tuckaleechee C	32.67	31	LR	LR	10 53 54.0	
	comp=Z,217nm,20.5s,baz=220,slow=39						
SDV	Santo Domingo	32.70	87	LR	LR	10 51 05.4	
	comp=Z,175nm,19.2s,baz=248,slow=34						
NNA	Nana	33.53	127	LR	LR	10 50 08.5	
	comp=Z,175nm,21.7s,baz=300,slow=32						
PDAR	Pinedale Array	34.61	352	P	P	10 39 22.3	+0.2
	0.6nm,0.7s,baz=196,slow=9.7,SNR=6.4						
PDAR				LR	LR	10 53 59.6	
	comp=Z,320nm,18.1s,baz=179,slow=37						
	0.6nm,0.7s						
SJG	San Juan	37.74	71	LR	LR	10 55 02.9	
	comp=Z,210nm,18.8s,baz=270,slow=36						
TAOE	Nuku Hiva Isla	40.15	246	eLR	LR	10 50 33.3	
	445nm,24.8s						
ULM	Lac du Bonnet	42.22	7	P	P	10 40 26.1	+0.3
	1.0nm,0.6s,baz=200,slow=5.4,SNR=3.0						
ULM				LR	LR	10 57 30.6	
	comp=Z,364nm,20.4s,baz=188,slow=36						
	1.0nm,0.6s						
LPAZ	La Paz	42.92	125	P	P	10 40 34.2	+1.7
	2.8nm,0.9s,baz=303,slow=4.7,SNR=8.6						
LPAZ				LR	LR	10 54 01.3	
	comp=Z,58nm,21.7s,baz=305,slow=30						
	2.8nm,0.9s						
H03N2	Juan Fernandez	47.82	152	T	T	11 32 39.0	
	baz=328,slow=78,SNR=3.2						
H03N1	Juan Fernandez	47.83	152	T	T	11 32 37.6	
	baz=328,slow=78,SNR=4.4						
H03N3	Juan Fernandez	47.84	152	T	T	11 32 39.4	
	baz=328,slow=78,SNR=4.1						
BBB	Bella Bella	47.99	340	LR	LR	10 58 38.5	
	comp=Z,218nm,18.2s,baz=154,slow=33						
SIV	San Ignacio	48.68	120	LR	LR	11 00 06.3	
	comp=Z,312nm,18.5s,baz=294,slow=34						
MDP	Montagnes des	50.79	90	LR	LR	11 02 15.8	
	comp=Z,134nm,19.3s,baz=258,slow=35						
PPT	Papeete	52.15	240	LR	LR	10 58 02.9	
	comp=Z,226nm,18.0s,baz=60,slow=29						
PPT2	Papeete2	52.16	240	eLR	LR	10 56 09.4	
	547nm,25.5s						
PPT2				eLR	LR	10 56 16.3	
	449nm,28.5s						
YKA	Yellowknife Ar	54.57	354	LR	LR	11 03 32.7	
	comp=Z,258nm,20.1s,baz=135,slow=34						
TBI	Tubuai	54.74	234	eLR	LR	10 57 23.5	
	846nm,23.5s						
TBI				eLR	LR	10 57 32.7	
	3µm,28.8s						
SCHQ	Schefferville	54.80	25	LR	LR	11 06 54.3	
	comp=Z,384nm,19.2s,baz=238,slow=38						
CPUP	Villa Florida	56.74	129	P	P	10 42 15.6	-1.3
	0.2nm,0.3s,baz=281,slow=5.2,SNR=3.9						
	0.2nm,0.3s						
PLCA	Paso Flores	57.66	151	LR	LR	11 01 58.6	
	comp=Z,106nm,18.8s,baz=275,slow=31						
BDFB	Brasilia	60.11	113	LR	LR	11 06 50.4	
	comp=Z,189nm,20.7s,baz=309,slow=34						
FRB	Frobisher Bay	60.67	17	LR	LR	11 09 26.8	
	comp=Z,151nm,18.9s,baz=277,slow=36						
KDAK	Kodiak Island	61.88	333	LR	LR	11 04 38.1	
	comp=Z,134nm,18.4s,baz=141,slow=31						
ILAR	Eielson Array	63.87	341	P	P	10 43 03.8	-1.4
	0.5nm,0.8s,baz=149,slow=4.9,SNR=7.0						
	0.5nm,0.8s						
RES	Resolute Bay	66.43	3	LR	LR	11 13 05.9	
	comp=Z,225nm,18.3s,baz=208,slow=37						
SFJD	Kangerlussuaq	68.46	20	LR	LR	11 13 24.1	
	comp=Z,216nm,18.9s,baz=252,slow=36						
BORG	Borgarnes	79.19	26	LR	LR	11 20 30.0	
	comp=Z,122nm,18.7s,baz=298,slow=36						
MSVF	Nonsavu	81.48	251	LR	LR	11 12 01.1	
	comp=Z,139nm,19.9s,baz=67,slow=29						
JMIC	Jan Mayen	83.81	19	LR	LR	11 25 09.6	
	comp=Z,58nm,18.5s,baz=264,slow=38						
BBTS	Babate	85.20	76	LR	LR	11 17 27.0	
	comp=Z,96nm,20.1s,baz=135,slow=32						
EKA	Eskdalemuir Ar	89.10	34	P	P	10 45 27.1	-1.1
	1.9nm,0.9s,baz=241,slow=7.2,SNR=2.1						
	1.9nm,0.9s						
ESDC	Sonseca Array	92.11	50	LR	LR	11 21 15.2	
	comp=Z,69nm,20.2s,baz=312,slow=32						
DZM	Mont Dzumac	92.97	248	eLR	LR	11 15 13.6	
	100nm,22.4s						
NOA	NORSAR Array B	94.36	26	LR	LR	11 28 26.2	
	comp=Z,64nm,19.2s,baz=280,slow=36						
HFS	Hagfors	95.86	27	LR	LR	11 28 09.7	
	comp=Z,104nm,20.8s,baz=24,slow=35						
DAVOX	Davos/Dischmat	99.59	40	LR	LR	11 26 49.5	
	comp=Z,79nm,21.9s,baz=260,slow=33						
WRA	Warramunga Arr	122.81	252	PKP	PKPdf	10 51 30.7	+0.8
	0.3nm,0.8s,baz=140,slow=5.6,SNR=1.8						

IDC 17 10:36:34.5±3.5,32°.02S×177°.79W,h0km,mb3.7/2, mbtmp3.9/4,ML5.3/1,Error ellipse: s-maj=75.2km s-min=33.0km az=110.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.49	212	Pn	Pn	10 38 24.6	-0.4
	6.2nm,0.8s,baz=84,slow=8.2,SNR=1.8						
URZ				Sn	Sn	10 39 51.9	+1.3
	0.8nm,0.3s,baz=300,slow=4.3,SNR=9.6						
MSVF	Nonsavu	14.72	344	Pn	Pn	10 40 05.4	+1.3
	0.5nm,0.3s,baz=13,slow=17,SNR=1.9						
	5.2nm,0.8s						
ASAR	Alice Springs	43.22	269	P	P	10 44 37.6	0.0
	0.4nm,0.4s,baz=108,slow=7.1,SNR=12						
	0.4nm,0.4s						
WRA	Warramunga Arr	44.36	274	P	P	10 44 46.5	-0.3
	0.8nm,0.6s,baz=112,slow=7.8,SNR=14						
	0.8nm,0.6s						
H03S2	Juan Fernandez	79.43	123	T	T	12 16 24.8	
	baz=243,slow=74,SNR=16						
H03S1	Juan Fernandez	79.44	123	T	T	12 16 25.9	
	baz=243,slow=74,SNR=18						
H03S3	Juan Fernandez	79.44	123	T	T	12 16 25.0	
	baz=243,slow=74,SNR=17						
FINES	FINESS Array B	146.72	339	PKPbc	PKPdf	10 56 16.6	+0.7
	0.5nm,0.5s,baz=65,slow=4.7,SNR=1.4						

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*IDC **17** 10:47:26.9±0.6,30°.77S×177°.41W,h0km,mb4.3/12, mbtmp4.3/12,MS4.0/2,Error ellipse: s-maj=23.2km s-min=21.1km az=177.0*

*NEIC **17** 10:47:29.9±1.2,30°.7S±0°.1×177°.4W±0°.2,h10km±1km, mb4.8/20,Error ellipse: s-maj=27.2km s-min=17.1km az=62.0*

ISC 17 10:47:31.0±0.5,30°.98S±0°.05×177°.32W±0°.09,h27km,n91, σ2ˢ02/97,mb4.7/26,MS4.6/3,5C,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.79	343	P	Pn	10 47 57.2	-2.8
GLKZ				S	Sn	10 48 19.5	-2.4
RAO	Raoul Island	1.79	343		Pn	10 47 57.6	-2.6
RIZ	Raoul Island	1.80	343	P	Pn	10 47 58.0	-2.4
RIZ				S	Sn	10 48 19.7	-2.6
WMGZ	Waiomatatini S	7.68	206	P	Pn	10 49 18.2	-2.9
WMGZ				S	Sn	10 50 46.3	-1.0
PKGZ	Pakihiroa	7.86	208	P	Pn	10 49 21.4	-2.1
HAZ	Te Kaha	7.88	210	P	Pn	10 49 22.2	-1.6
HAZ				S	Sn	10 50 52.9	+0.7
PUZ	Puketiti	7.96	206	P	Pn	10 49 20.6	-4.4
PUZ				S	Sn	10 50 51.9	-2.3
RUGZ	Raukumara Rang	8.11	209	P	Pn	10 49 24.4	-2.6
TWGZ	Tauwhareparae	8.16	207	P	Pn	10 49 23.4	-4.3
TWGZ				S	Sn	10 50 57.5	-1.6
CNGZ	Carnagh Statio	8.35	205	P	Pn	10 49 29.5	-0.7
CNGZ				S	Sn	10 51 03.0	-0.5
TKGZ	Te Karaka	8.44	207	P	Pn	10 49 30.4	-1.1
TKGZ				S	Sn	10 51 02.9	-3.0
MWZ	Matawai	8.48	209	P	Pn	10 49 27.6	-4.5
MWZ				S	Sn	10 51 03.9	-3.0
WCZ	Waipu Caves	8.55	232	P	Pn	10 49 36.6	+3.7
URZ	Urewera	8.60	211	Pn	Pn	10 49 28.5	-5.1
	1.3nm,0.3s,baz=70,slow=3.3,SNR=8.5						
URZ				Sn	Sn	10 51 06.3	-3.3
	6.0nm,0.3s,baz=308,slow=16,SNR=15						
URZ	Urewera	8.60	211	P	Pn	10 49 28.7	-4.9
URZ				S	Sn	10 51 06.7	-2.9
RAGZ	Rawiri	8.66	209	S	Sn	10 51 08.8	-2.7
RIGZ	Rimuhau	8.71	206	S	Sn	10 51 10.6	-1.9
OUZ	Omahuta	8.72	239	P	Pn	10 49 41.5	+6.2
PRGZ	Paritu Road	8.85	205	P	Pn	10 49 32.2	-5.0
MUGZ	Murupara	8.93	211	S	Sn	10 51 16.3	-1.5
SNGZ	Shannon Statio	8.94	208	P	Pn	10 49 37.0	-1.4
TOZ	Tahuroa Road	8.98	219	Pn	Pn	10 49 40.3	+1.5
MHGZ	Mahia Peninsul	9.05	204	S	Sn	10 51 18.2	-2.6
RAHZ	Arahi	9.16	209	P	Pn	10 49 38.9	-2.5
RAHZ				S	Sn	10 51 19.3	-4.2
MTHZ	Maungataniwha	9.21	210	P	Pn	10 49 39.4	-2.7
MTHZ				S	Sn	10 51 24.9	+0.2
BKZ	Black Stump Fm	9.62	210	P	Pn	10 49 44.0	-3.6
BKZ				S	Sn	10 51 30.3	-4.5
HIZ	Hauiti	9.90	218	Pn	Pn	10 49 53.1	+1.7
HIZ	Hauiti	9.90	218	P	Pn	10 49 53.3	+1.8
PNHZ	Pukenui	10.37	209	P	Pn	10 49 53.0	-5.0
CTZ	Chatham Island	12.75	178	P	Pn	10 50 28.8	-1.6
RPZ	Rata Peaks	15.70	213	Pn	Pn	10 51 04.9	-5.4
	1.6nm,0.3s,baz=313,slow=4.0,SNR=6.2						
DZM	Mont Dzumac	17.01	298	ePn	Pn	10 51 27.8	+0.6
	93nm,1.3s						
DZM				eLR	LR	10 55 23.5	
	480nm,25.2s						
DZM	Mont Dzumac	17.01	298	Pn	P	10 51 29.5	+0.7
	0.4nm,0.3s,baz=94,slow=14,SNR=8.2						
DZM				LR	LR	10 56 59.8	
	comp=Z,478nm,18.4s,baz=175,slow=34						
TBI	Tubuai	25.87	80	eLR	LR	10 59 37.9	
	817nm,21.0s						
ARMA	Armidale	26.67	263	P	P	10 53 08.4	+0.5
EIDS	Eidsvold	28.36	273		P	10 53 23.7	+0.8
PPT2	Papeete2	28.49	69	eLR	LR	11 00 48.5	
	147nm,22.5s						
PPT2				eLR	LR	11 00 50.5	
	183nm,20.8s						
TOO	Toolangi	31.29	248		P	10 53 50.6	+1.8
TOO				IAmb	IAmb	10 53 52.4	
	comp=Z,18nm,1.7s						
CTAO	Charters Tower	34.47	280		P	10 54 18.4	+1.6
CTAO				IAmb	IAmb	10 54 19.7	
	comp=Z,12nm,0.8s						
STKA	Stephens Creek	34.93	258		P	10 54 22.1	+1.6
STKA	Stephens Creek	34.93	258	P	P	10 54 19.6	-1.0
	comp=Z,16nm,0.9s,baz=90,slow=8.7,SNR=12						
STKA				LR	LR	11 08 32.1	
	comp=Z,239nm,18.1s,baz=179,slow=36						
	comp=Z,16nm,0.9s						
BBOO	Buckleboo	39.38	255	P	P	10 54 58.8	+0.4
TAOE	Nuku Hiva Isla	41.00	66	eLR	LR	11 06 35.2	
	comp=Z,131nm,21.6s						
AS31	Alice Springs	43.67	267		P	10 55 34.0	+0.3
ASAR	Alice Springs	43.67	267	P	P	10 55 33.5	-0.2
ASAR	Alice Springs	43.67	267	P	P	10 55 33.4	-0.4
	comp=Z,4.8nm,0.6s,baz=103,slow=7.4,SNR=90						
ASAR				PcP	PcP	10 57 20.6	0.0
	comp=Z,1.9nm,0.9s,baz=124,slow=4.5,SNR=4.2						
	comp=Z,4.8nm,0.6s						
WR0	Warramunga Arr	44.53	272	P	P	10 55 41.0	+0.4
WR0				IAmb	IAmb	10 55 42.0	
	comp=Z,12nm,0.9s						
WR8	Warramunga Arr	44.57	272		P	10 55 40.4	-0.5
WR8				IAmb	IAmb	10 55 41.9	
	comp=Z,12nm,0.9s						
WB2	Warramunga Arr	44.70	272	P	P	10 55 41.7	-0.3
WB2				IAmb	IAmb	10 55 42.9	
	comp=Z,14nm,0.9s						
WRAB	Tennant Creek	44.70	272	P	P	10 55 41.7	-0.3
WRAB				IAmb	IAmb	10 55 42.8	
	comp=Z,9.0nm,0.8s						
WRA	Warramunga Arr	44.71	272		P	10 55 42.1	+0.1
WRA	Warramunga Arr	44.71	272	P	P	10 55 41.2	-0.8
	comp=Z,10nm,0.8s,baz=111,slow=7.8,SNR=38						
WRA				PcP	PcP	10 57 24.2	0.0
	comp=Z,2.0nm,0.8s,baz=109,slow=3.4,SNR=4.8						
WRA				ScP	ScP	11 01 18.5	+3.8
	comp=Z,1.6nm,1.0s,baz=111,slow=4.3,SNR=5.4						
	comp=Z,10nm,0.8s						
WB0	Warramunga Arr	44.73	273		P	10 55 41.7	-0.5
WB0				IAmb	IAmb	10 55 43.6	
	comp=Z,16nm,0.9s						
FORT	Forrest	46.47	255	P	P	10 55 55.7	-0.2
KNRA	Kununurra	51.34	274	P	P	10 56 33.2	-0.1
KNRA				IAmb	IAmb	10 56 53.9	
	comp=Z,23nm,1.4s						
FITZ	Fitzroy Crossi	52.95	270	P	P	10 56 43.9	-1.4
QSPA	South Pole Qui	59.14	180	P	P	10 57 31.8	+2.7
	comp=Z,4.9nm,0.9s,baz=77,slow=0.5,SNR=12						
	comp=Z,4.9nm,0.9s						
BELA	Belgrano 2	69.14	172	P	P	10 58 37.1	+2.8
BELA				IAmb	IAmb	10 59 03.7	
	comp=Z,17nm,1.8s						
TROLL	Troll, Antarti	77.30	180	⇑P	P	10 59 23.7	+1.0
	comp=Z,89nm,0.7s						
SNAA	Sanae	77.56	178	⇑P	P	10 59 25.0	+0.8
	comp=Z,36nm,1.0s						
SNAA	Sanae	77.56	178	P	P	10 59 26.2	+2.1
SNAA				IAmb	IAmb	11 00 00.6	
	comp=Z,7.9nm,1.1s						
SNAA	Sanae	77.56	178	P	P	10 59 24.8	+0.7
	comp=Z,3.1nm,1.2s,baz=195,slow=5.8,SNR=4.3						
	comp=Z,3.1nm,1.2s						
VNA3	Neumayer Olymp	77.69	176	⇑P	P	10 59 25.3	+0.5
	comp=Z,5.6nm,0.7s						
VNA2	Neumayer--Watz	78.13	177	⇑P	P	10 59 28.2	+0.9
	comp=Z,4.0nm,0.8s,baz=176,slow=5.8						
VNA1	Neumayer--Stat	78.36	176	⇑P	P	10 59 30.0	+1.6
	comp=Z,5.5nm,0.9s						
MJAR	Matsushiro Arr	79.05	325	P	P	10 59 31.6	-1.1
	comp=Z,3.1nm,0.9s,baz=152,slow=5.6,SNR=5.2						
	comp=Z,3.1nm,0.9s						
H03S2	Juan Fernandez	79.66	123	T	T	12 28 38.5	
	baz=243,slow=75,SNR=30						
H03S1	Juan Fernandez	79.67	123	T	T	12 28 15.7	
	baz=243,slow=75,SNR=37						
H03S3	Juan Fernandez	79.67	123	T	T	12 28 14.8	
	baz=243,slow=75,SNR=34						
PLCA	Paso Flores	81.69	133	P	P	10 59 47.0	-0.2
	comp=Z,1.8nm,1.0s,baz=259,slow=5.2,SNR=3.5						
	comp=Z,1.8nm,1.0s						
KSRS	Korea Array	85.17	319	P	P	11 00 04.7	0.0
	comp=Z,2.2nm,0.9s,baz=143,slow=5.7,SNR=6.2						
	comp=Z,2.2nm,0.9s						
NJ2	Nanjing	87.06	310	eP	P	11 00 16.9	+2.7
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
USRK	Ussuriysk Ar.	87.96	326	P	P	11 00 16.4	-1.9
	comp=Z,2.7nm,0.8s,baz=157,slow=4.4,SNR=4.3						
	comp=Z,2.7nm,0.8s						
NVAR	Mina Array Bea	88.26	42	P	P	11 00 19.9	-0.1
	comp=Z,1.5nm,0.9s,baz=231,slow=11,SNR=8.7						
	comp=Z,1.5nm,0.9s						
TXAR	Lajitas Array	92.20	57	P	P	11 00 39.7	+1.1
	comp=Z,0.2nm,0.9s,baz=258,slow=4.5,SNR=3.5						
	comp=Z,0.2nm,0.9s						
PDAR	Pinedale Array	96.15	43	P	P	11 00 57.0	+0.5
	comp=Z,0.2nm,0.3s,baz=185,slow=5.6,SNR=2.0						
	comp=Z,0.2nm,0.3s						
HHC	Hu-ho-hao-te	97.06	314	eP	Pdif	11 01 05.3	+4.7
HHC				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,68nm,4.5s						
HHC				LR	LR		
	comp=N,550nm,16.0s						
HHC				LR	LR		
	comp=E,250nm,17.7s						
HHC				LR	LR		
	comp=Z,680nm,18.5s						
WMQ	Urumqi	114.04	308	ePKP	PKiKP	11 06 08.8	+1.3
WMQ				LR	LR		
	comp=Z,180nm,22.5s						
MKAR	Makanchi Array	118.59	310	PKP	PKPdf	11 06 14.3	-1.8
	comp=Z,0.2nm,0.5s,baz=63,slow=1.3,SNR=2.8						
KURBB	Kurchatov Arra	121.91	313	PKP	PKPdf	11 06 20.8	-1.5
	comp=Z,1.2nm,0.8s,baz=106,slow=2.3,SNR=7.6						
BVAR	Borovoye Array	127.23	315	PKP	PKPdf	11 06 31.7	-0.8
	comp=Z,1.6nm,0.8s,baz=95,slow=1.8,SNR=6.2						
GNI	Garni	144.86	297	PKP	PKPab	11 07 04.7	0.0
	comp=Z,4.3nm,0.4s,baz=29,slow=5.3,SNR=4.7						
FINES	FINESS Array B	145.88	340	PKPbc	PKPdf	11 07 06.7	+0.2
	comp=Z,7.2nm,0.6s,baz=62,slow=3.2,SNR=31						
KBZ	Khabaz	145.92	303	PKPbc	PKPbc	11 07 08.0	+0.1
	comp=Z,3.3nm,0.7s,baz=80,slow=3.4,SNR=7.7						
NB2	NORSAR Subarra	149.40	352	PKP	PKPbc	11 07 16.7	-0.2
	comp=Z,1.8nm,0.9s,baz=11,slow=2.8						
NOA	NORSAR Array B	149.40	352	PKPbc	PKPbc	11 07 16.2	-0.6
	comp=Z,2.7nm,0.8s,baz=14,slow=4.3,SNR=6.6						
HFS	Hagfors	149.92	349	PKPbc	PKPbc	11 07 17.5	-0.6
	comp=Z,2.9nm,0.7s,baz=159,slow=4.6,SNR=5.6						
ASF	Jabal al Asfar	150.90	281	PKPbc	PKiKP	11 07 22.1	+0.1
	comp=Z,6.0nm,0.9s,baz=109,slow=2.3,SNR=4.2						
AKASG	Malin Array Be	152.11	323	PKPbc	PKPbc	11 07 22.8	-0.7
	comp=Z,3.9nm,0.8s,baz=52,slow=2.9,SNR=22						
MMAI	Mount Meron Ar	152.24	283	PKPbc	PKiKP	11 07 25.8	+1.0
	comp=Z,2.7nm,0.5s,baz=90,slow=7.2,SNR=3.3						
BRTR	Keskin Array B	153.39	298	PKPbc	PKPbc	11 07 24.9	-2.0
	comp=Z,2.0nm,1.0s,baz=134,slow=4.2,SNR=5.8						
BRTR				PKPab	sPKPbc	11 07 38.0	+1.7
	comp=Z,1.7nm,0.8s,baz=87,slow=4.7,SNR=6.6						

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*ISN **17** 10:50:09.8±0.4,33°.23N×46°.28E,h12km±2km,ML2.7*

*TEH **17** 10:50:10.5,33°.25N×46°.30E,h19km±22km*

ISC 17 10:50:10.3±1.0,33°.23N±0°.06×46°.30E±0°.04,h13km,n13, σ0ˢ90/16,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBDR	Badra	0.33	250	ePg	Pg	10 50 16.5	-0.6
IBDR				eSg	Sg	10 50 21.0	-0.6
IBDR				AML	AML	10 50 30.7	
	comp=N,651nm,0.4s						
IBDR				AML	AML	10 50 32.9	
	comp=E,733nm,0.5s						
ILBA	Ilam Banvizeh	0.41	349	Pg	Pg	10 50 18.0	-0.4
GLG1	Gilan-e-Gharb	0.94	340	Pg	Pb	10 50 28.2	-0.5
IGHG	Ghaleghazi	1.12	11	Pg	Pn	10 50 31.6	-0.4
KCHF	Cheshme Sefid,	1.22	30	Pg	Pb	10 50 32.8	-0.5
IKFM	Kafar-mosalman	1.33	77	Pg	Pg	10 50 35.7	-0.2
IDHR	Dehrash	1.47	3	Pg	Pg	10 50 38.0	-0.6
BHD	Baghdad	1.61	272	ePn	Pb	10 50 39.5	-0.4
BHD				eSn	Sg	10 51 01.5	-0.6
IDOB	Doab	1.67	70	Pg	Pb	10 50 40.7	-0.3
IBZA	Bozab	1.80	46	Pg	Pb	10 50 42.3	-1.0
HSAM	Samen	2.16	62	Pn	Pn	10 50 47.3	+1.0
IKRK	Kirkuk	2.71	324	ePn	Pn	10 50 55.0	+1.4
IKRK				eSn	Sn	10 51 28.0	+1.8
HAGD	Aghdareh	2.85	55	Pn	Pn	10 50 56.5	+0.8

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*GCG **17** 11:02:21.9±1.0,13°.54N×91°.43W,h37km±604km,MD3.9, ML3.5*

*CATAC **17** 11:02:21.9±0.8,14°N±4°×9°1W±°,h11km±6km,M2.9/7, MLv2.9/7,Error ellipse: s-maj=10.3km s-min=7.7km az=34.1,confirmed*

ISC 17 11:02:18.7±3.1,13°.2N±0°.2×91°.27W±0°.10,h28km,n21, σ0ˢ95/22,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG0	El Palmar, Qui	1.25	357	i P	Pb	11 02 42.4	+0.5
STG0				IAML		11 03 02.6	
	comp=E,773nm,0.2s						
STG8	El Palmar, Qui	1.28	356	i P	Pb	11 02 43.1	+0.7
STG8				i S	Sb	11 02 59.8	+1.3
STG8				IAML		11 03 02.5	
	comp=N,503nm,0.2s						
ESSG	Sabana Grande	1.28	19	i P	Pn	11 02 39.8	-1.1
FG8	Yepocapa, Chim	1.28	32	eP	Pn	11 02 40.1	-0.9
FG16	Alotenango, Sa	1.32	34	i P	Pn	11 02 41.4	-0.2
FG16				IAML		11 03 01.3	
	comp=E,2µm,0.2s						
FAME	Alcaldia de Sa	1.39	61	P	Pb	11 02 44.4	+0.3
RTAL	Retalhuleu	1.41	343	P	Pn	11 02 41.5	-1.1
NUBE	Las Nubes	1.62	63	eP	Pb	11 02 48.0	0.0
NUBE	Las Nubes	1.62	63	S	Sb	11 03 07.5	-0.7
NUBE	Las Nubes	1.62	63	P	Pb	11 02 47.7	-0.4
SLOZ	Alcaldia de Sa	1.68	59	P	Pb	11 02 49.0	+0.1
SLOZ	Alcaldia de Sa	1.68	59	S	Sb	11 03 09.7	0.0
CEVE	Cerro Verde	1.73	67	S	Sb	11 03 13.0	+1.6
CEVE	Cerro Verde	1.73	67	P	Pb	11 02 50.6	+0.6
JAYA	Jayaque - finc	1.83	74	P	Pb	11 02 52.2	+0.4
JAYA	Jayaque - finc	1.83	74	S	Sb	11 03 15.3	+1.0
PMON	Piamonte	1.98	74	P	Pb	11 02 54.8	+0.7
PMON	Piamonte	1.98	74	S	Sb	11 03 19.6	+1.2
UEES	Universidad Ev	2.05	74	S	Sb	11 03 21.6	+1.2
MTO3	Montecristo	2.22	56	i P	Pb	11 02 57.3	-1.0
MTO3	Montecristo	2.22	56	P	Pb	11 02 56.9	-1.5

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*BJI **17** 11:03:56.5,1°.05S×99°.07E,h55km,mB5.2/29,mb5.1/65, Ms4.5/49,Ms7 4.3/52*

*MOS **17** 11:03:59.9±0.9,0°.25S×99°.12E,h44km,mb5.3/52,Error ellipse: s-maj=9.8km s-min=4.5km az=110.9*

*DJA **17** 11:04:01.8±0.2,0°S±2°×9°9E±°,h41km±2km,M5.1/54, mb5.1/54,mB5.5/24,MLv5.4/19,Mw(mB)5.0/24, MwMwp5.0/2,Mwp5.3/2*

*NEIC **17** 11:04:02.4,0°.43S×98°.79E,h46km,Moment Tensor Solution. Duration: 1ˢ6 Moment tensor: Scale 10^{16}Nm; M_{rr}3.09; $M_{\theta\theta}$-1.99; $M_{\phi\phi}$-1.10; $M_{r\theta}$1.69; $M_{\theta\phi}$1.22; $M_{\phi r}$-0.43;*

Fault plane solution: $M_0$3.45000×10^{16} NP1: ϕ_s313.05000°,δ31.13000°,λ105.28000°. NP2: ϕ_s115.35000°,δ60.09000°,λ80.96000°. Principal axes: T 3.5990, Plg73.0000°, Azm3.0000°; N -0.3317, Plg8.0000°, Azm120.0000°; P -3.2673, Plg15.0000°, Azm212.0000°;

NEIC ***17*** *11:04:02.4,0°.33S×98°.99E,h46km*

IDC ***17*** *11:04:03.2±1.6,0°.26S×99°.10E,h56km±12km,mb4.6/29, mbtmp4.9/33,MS4.1/36,Error ellipse: s-maj=15.1km s-min=8.9km az=64.0*

GCMT ***17*** *11:04:03.2±0.2,0°.46S±0°.02×98°.92E±0°.02,h51km±1km, MW5.0/89,Moment Tensor Solution. s51,c65; s89,c124; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.18±.15; $M_{\theta\theta}$-2.64±.10; $M_{\phi\phi}$-0.53±.12; $M_{r\theta}$1.58±.08; $M_{\theta\phi}$1.97±.07; $M_{\phi r}$-0.47±.09; Best double couple: $M_0$3.87500×10^{16} NP1:ϕ_s310.00000°,δ33.00000°,λ103.00000°. NP2: ϕ_s114.00000°,δ58.00000°,λ81.00000°. Principal axes: T 3.5810, Plg76.0000°, Azm358.0000°; N 0.5970, Plg7.0000°, Azm118.0000°; P -4.1690, Plg12.0000°, Azm210.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***17*** *11:04:04.2±1.9,0°.30S±0°.08×99°.03E±0°.08,h59km±5km, mb5.3/119,Mww5.0/10 Error ellipse: s-maj=13.3km s-min=8.1km az=223.0*

BGR ***17*** *11:04:05.9,0°.28S×97°.27E,h33km,mb5.0,Ms4.5*

ISC 17 11:04:03.1±0.4,**0°.39S**±0°.03×**99°.00E**±0°.04,**h59**km±2km, **h59km:pP-P,n813,σ1ˢ.95**/784,**mb5.2**/202,**MS4.2**/54, **28C-15D,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBSI	**Pulau Batu**	**0.79**	**295**	P	**Pn**	**11 04 16.4**	**-2.0**
PBSI				S	**Sn**	**11 04 27.3**	**-2.4**
SISI	**Saibi**	**0.94**	**175**	P	**Pn**	**11 04 19.4**	**-0.9**
MNSI	**Mandailing Nat**	**1.31**	**26**	P	**Pn**	**11 04 23.3**	**-1.9**
PPI	**Padang Panjang**	**1.40**	**93**	P	**Pn**	**11 04 25.4**	**-1.0**
SBSI	**Sibolga**	**1.93**	**357**	P	**Pn**	**11 04 30.5**	**-3.1**
BKNI	**Bangkinang**	**2.16**	**71**		**Pn**	**11 04 36.3**	**-0.4**
BKNI	**Bangkinang**	**2.16**	**71**	P	**Pn**	**11 04 37.1**	**+0.4**
BKNI	**Bangkinang**	**2.16**	**71**	P	**Pn**	**11 04 35.7**	**-1.0**
GSI	**Gunungsitoli**	**2.20**	**320**		**Pn**	**11 04 36.7**	**-0.6**
GSI	**Gunungsitoli**	**2.20**	**320**	P	**Pn**	**11 04 35.7**	**-1.6**
GSI	**Gunungsitoli**	**2.20**	**320**	S	**Sn**	**11 05 02.7**	**-0.7**
GSI	**Gunungsitoli**	**2.20**	**320**	P	**Pn**	**11 04 36.1**	**-1.2**
RPSI	**Rantau Prapat**	**3.06**	**359**		**Pn**	**11 04 47.0**	**-2.1**
RPSI					**Sn**	**11 05 23.2**	**-1.3**
RPSI	**Rantau Prapat**	**3.06**	**359**		**Pn**	**11 04 47.8**	**-1.3**
PSI	**Prapat**	**3.17**	**359**	P	**Pn**	**11 04 47.0**	**-3.6**
	228nm,0.4s,baz=168,slow=13,SNR=57						
PSI				S	**Sn**	**11 05 23.2**	**-4.1**
	163nm,0.4s,baz=138,slow=18,SNR=5.6						
PSI				LR	LR	11 06 14.7	
	comp=Z,8µm,20.5s,baz=140,slow=45						
PSI	**Prapat**	**3.17**	**359**	P	**Pn**	**11 04 48.7**	**-1.9**
TSI	**Tuntungan**	**3.88**	**354**	P	**Pn**	**11 05 01.1**	**+0.8**
KSI	**Kapahiang**	**4.84**	**132**	P	**Pn**	**11 05 12.9**	**-0.6**
MLSI	**Meulaboh, Aceh**	**5.30**	**331**	P	**Pn**	**11 05 18.5**	**-1.2**
	4.4nm3µm9µm527nm,1.1s						
MNAI	**Manna**	**5.59**	**135**	P	**Pn**	**11 05 24.9**	**+1.2**
MNAI	**Manna**	**5.59**	**135**	P	**Pn**	**11 05 23.8**	**+0.1**
KULM	**Kulim**	**5.87**	**16**		**Pn**	**11 05 27.0**	**-0.6**
KULM	**Kulim**	**5.87**	**16**	P	**Pn**	**11 05 27.8**	**+0.2**
LHMI	**Lhok Sumawe**	**5.94**	**340**		**Pn**	**11 05 27.9**	**-0.7**
LHMI	**Lhok Sumawe**	**5.94**	**340**	P	**Pn**	**11 05 30.1**	**+1.6**
LHMI	**Lhok Sumawe**	**5.94**	**340**	P	**Pn**	**11 05 27.8**	**-0.7**
	4.6nm6µm303nm,1.2s						
MDSI	**Maura Dua**	**6.58**	**128**	P	**Pn**	**11 05 37.8**	**+0.5**
	0.5nm143nm,0.8s						
LWLI	**Liwa**	**6.83**	**132**	P	**Pn**	**11 05 41.3**	**+0.4**
BSI	**Banda Aceh**	**6.92**	**328**	P	**Pn**	**11 05 39.5**	**-2.4**
	1.9nm3µm81nm,0.5s						
PPBI	**Pangkal Pinang**	**7.35**	**104**	P	**Pn**	**11 05 48.9**	**+1.1**
SRIT	**Nakonsritamara**	**8.94**	**4**		**Pn**	**11 06 08.5**	**-1.1**
TPI	**Tanjungpandan**	**8.96**	**105**	P	**Pn**	**11 06 10.4**	**+0.4**
	68nm,0.8s						
CGJI	**Cibinong**	**9.10**	**133**	P	**Pn**	**11 06 09.0**	**-2.8**
	16µm1µm53nm,0.6s						
CNJI	**Cibinong**	**10.63**	**130**	P	**Pn**	**11 06 29.2**	**-3.5**
LEM	**Lembang**	**10.72**	**127**	P	**Pn**	**11 06 33.4**	**-0.6**
	12nm,0.4s,baz=311,slow=19,SNR=1.9						
LEM				LR	LR	11 11 07.2	
	comp=Z,851nm,18.5s,baz=314,slow=40						
UGM	**Wanagama**	**13.71**	**123**	Pn	**Pn**	**11 07 13.0**	**-1.7**
UGM	**Wanagama**	**13.71**	**123**	P	**Pn**	**11 07 16.2**	**+1.5**
UGM	**Wanagama**	**13.71**	**123**	P	**Pn**	**11 07 12.9**	**-1.8**
	70nm,1.4s						
PCJI	**Pacitan**	**14.40**	**123**	P	**Pn**	**11 07 20.8**	**-3.1**
	69nm,2.0s						
DLV	**Lat**	**15.45**	**37**		**Pn**	**11 07 38.0**	**+0.2**
KMMI	**Kalianget**	**16.33**	**114**	P	**P**	**11 07 49.7**	**-1.0**
	73nm,1.9s						
GMJI	**Gumukmas**	**16.39**	**119**	P	**Pn**	**11 07 47.3**	**-2.1**
	35nm,1.2s						
JAGI	**Jajag, Banyuwa**	**17.10**	**118**	P	**Pn**	**11 07 56.6**	**-1.7**
KKM	**Kota Kinabalu**	**18.33**	**69**		**Pn**	**11 08 14.1**	**+0.6**
KKM	**Kota Kinabalu**	**18.33**	**69**	P	**Pn**	**11 08 15.2**	**+1.7**
CM31	**Chiang Mai Arr**	**18.73**	**360**	P	**P**	**11 08 16.8**	**-0.3**
CMAR	**Chiang Mai Arr**	**18.73**	**360**		**P**	**11 08 16.2**	**-0.9**
CMAR	**Chiang Mai Arr**	**18.73**	**360**	P	**P**	**11 08 15.7**	**-1.4**
	6.8nm,0.6s,baz=190,slow=12,SNR=30						
CMAR				PcP	**PcP**	**11 12 44.6**	**+1.5**
	1.9nm,0.6s,baz=213,slow=2.8,SNR=5.7						
CMAR				LR	LR	11 16 06.3	
	comp=Z,1µm,18.1s,baz=180,slow=39						
CMAR	**Chiang Mai Arr**	**18.73**	**360**	*i* P	**P**	**11 08 16.2**	**-0.9**
CMAR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CHTO	**Chiang Mai**	**19.08**	**360**		**P**	**11 08 20.2**	**-0.8**
CHTO	**Chiang Mai**	**19.08**	**360**	P	**P**	**11 08 21.4**	**+0.4**
CHTO	**Chiang Mai**	**19.08**	**360**	P	**P**	**11 08 20.2**	**-0.8**
CHTO				pmax	pmax		
	comp=Z,14nm,0.8s						
TWSI	**Taliwang, Sumb**	**19.65**	**115**	P	**P**	**11 08 25.3**	**-1.9**
PALK	**Pallekele**	**19.77**	**293**	P	**Pn**	**11 08 31.1**	**+0.5**
	comp=Z,21nm,0.9s,baz=94,slow=12,SNR=5.6						
PALK				S	S	11 11 56.6	-12
	comp=Z,11nm,0.7s,baz=189,slow=4.0,SNR=5.2						
PALK				LR	LR	11 15 02.8	
	comp=Z,467nm,21.3s,baz=107,slow=33						
MYLDM	**Lahad Datu**	**20.25**	**74**	P	Pn	11 08 35.1	-1.0
MYLDM				IAmb	IAmb	11 08 40.7	
	comp=Z,87nm,1.0s						
MYLDM	**Lahad Datu**	**20.25**	**74**	P	Pn	11 08 35.8	-0.3
PLAI	**Plampang**	**20.49**	**115**	P	**P**	**11 08 33.5**	**-2.9**
MPSI	**Mapaga**	**20.91**	**88**	P	**P**	**11 08 42.1**	**+1.2**
	comp=Z,51nm,0.8s						
SPSI	**Sidrap Palu**	**21.05**	**100**	P	**P**	**11 08 43.8**	**+1.3**
	comp=Z,5µmcomp=Z,37nm,0.8s						
KAPI	**Kappang**	**21.23**	**103**		**P**	**11 08 47.6**	**+3.4**
KAPI	**Kappang**	**21.23**	**103**	P	**P**	**11 08 46.9**	**+2.6**
	comp=Z,27nm,0.7s,baz=258,slow=20,SNR=8.7						
KAPI				LR	LR	11 16 52.1	
	comp=Z,361nm,19.7s,baz=276,slow=36						
KAPI	**Kappang**	**21.23**	**103**	P	**P**	**11 08 47.2**	**+2.9**
KAPI	**Kappang**	**21.23**	**103**	P	**P**	**11 08 47.7**	**+3.4**
KAPI				pmax	pmax		
	comp=Z,54nm,1.3s						
BNSI	**Bone**	**21.46**	**101**	P	**P**	**11 08 48.5**	**+1.7**
	comp=Z,1µmcomp=Z,60nm,1.6s						
TOLI2	**Tolitoli**	**21.83**	**86**		**P**	**11 08 50.3**	**-0.4**
TOLI2	**Tolitoli**	**21.83**	**86**	P	**P**	**11 08 50.4**	**-0.4**
QIZ	**Qiongzhong**	**22.04**	**28**	P	**P**	**11 08 53.3**	**+0.4**
QIZ				sP	**sP**	**11 09 10.5**	**-2.9**
QIZ				S	**S**	**11 12 57.9**	**+5.1**
QIZ				pmax	pmax		
	comp=Z,34nm,1.5s						
QIZ				LR	LR		
	comp=Z,280nm,9.6s						
QIZ				LR	LR		
	comp=Z,650nm,19.2s						
SLVN	**Son La**	**22.11**	**12**		**P**	**11 08 54.0**	**+0.3**
BSSI	**Bau Bau, Buton**	**22.20**	**105**	P	**P**	**11 08 54.8**	**+0.1**
	comp=Z,2µmcomp=Z,187nm,1.2s						
APSI	**Ampana**	**22.65**	**91**	P	**P**	**11 09 01.8**	**+2.2**
	comp=Z,932nmcomp=Z,69nm,0.9s						
MRSI	**Marisa**	**22.96**	**88**	P	**P**	**11 09 02.6**	**-0.2**
	comp=Z,2µmcomp=Z,142nm,0.7s						
LUWI	**Luwuk**	**23.78**	**92**		**P**	**11 09 11.2**	**+0.7**
LUWI				IAmb	IAmb	11 09 25.8	
	comp=Z,142nm,0.9s						
LUWI	**Luwuk**	**23.78**	**92**	P	**P**	**11 09 12.4**	**+1.8**
LUWI	**Luwuk**	**23.78**	**92**	P	**P**	**11 09 11.1**	**+0.5**
KDI	**Kendari**	**23.86**	**99**	P	**P**	**11 09 11.8**	**+0.5**
BRDH	**Bariadhala**	**24.02**	**343**	LR	LR	11 21 08.2	
	comp=Z,663nm,19.5s,baz=154,slow=43						
BBSI	**Bau Bau**	**24.07**	**103**	P	**P**	**11 09 13.9**	**+0.7**
	comp=Z,2µmcomp=Z,126nm,0.8s						
TNCH	**TengChong**	**25.27**	**359**	P	**P**	**11 09 27.1**	**+2.9**
TNCH				S	**S**	**11 13 48.1**	**+2.0**
TNCH				pmax	pmax		
	comp=Z,89nm,0.6s						
TNCH				pmax	pmax		
	comp=Z,190nm,3.4s						
TNCH				LR	LR		
	comp=Z,800nm,15.6s						
TNCH				LR	LR		
	comp=Z,470nm,6.7s						
TNCH				LR	LR		
	comp=Z,1µm,16.9s						
IMP	**Imphal**	**25.54**	**349**	*e*P	**P**	**11 09 24.6**	**-2.0**
IMP				IAmb	IAmb	11 09 28.4	
	comp=Z,41nm,0.7s						
KMI	**Kunming**	**25.62**	**8**	⇑P	**P**	**11 09 28.3**	**+0.9**
KMI				S	**S**	**11 13 50.1**	**-1.5**
KMI				pmax	pmax		
	comp=Z,53nm,1.1s						
KMI				LR	LR		
	comp=Z,610nm,19.6s						
KMI				LR	LR		
	comp=Z,280nm,16.5s						
KMI				LR	LR		
	comp=Z,800nm,24.4s						
KOHI	**KOHIMA**	**26.38**	**350**	*e*P	**P**	**11 09 33.0**	**-1.2**
KOHI				IAmb	IAmb	11 09 36.8	
	comp=Z,121nm,0.9s						
HYB	**Hyderabad**	**26.80**	**312**	*e*P	**P**	**11 09 39.1**	**+1.1**
HYB				*e*pP	**pP**	**11 09 53.0**	**+0.5**
HYB				*e*S	**S**	**11 14 11.4**	**+1.2**
PZH	**PanZhiHua**	**26.86**	**5**	P	**P**	**11 09 38.8**	**+0.3**
PZH				S	S	11 14 22.4	+11
PZH				pmax	pmax		
	comp=Z,20nm,0.8s						
PZH				LR	LR		
	comp=Z,430nm,23.0s						
PZH				LR	LR		
	comp=Z,430nm,19.6s						
PZH				LR	LR		
	comp=Z,650nm,23.5s						
H08S2	**Diego Garcia H**	**27.39**	**254**	T	T	11 37 41.3	
	baz=76,slow=75,SNR=468						
H08S3	**Diego Garcia H**	**27.39**	**254**	T	T	11 37 40.8	
	baz=76,slow=75,SNR=1157						
H08S1	**Diego Carcia H**	**27.41**	**254**	T	T	11 37 41.8	
	baz=76,slow=75,SNR=358						
TEZP	**TEZPUR**	**27.50**	**348**	*e*P	**P**	**11 09 43.0**	**-1.1**
TEZP				IAmb	IAmb	11 09 48.4	
	comp=Z,48nm,0.4s						
BLSP	**Bilaspur**	**27.77**	**325**	*e*P	**P**	**11 09 46.8**	**+0.2**
NLAI	**Namlea**	**28.23**	**96**	P	**P**	**11 09 52.8**	**+2.1**
	comp=Z,67nm,0.7s						
MBWA	**Marble Bar**	**28.91**	**137**	P	**P**	**11 09 58.5**	**+1.7**
PSA00	**Pilbara Seismi**	**29.27**	**137**	P	**P**	**11 10 01.9**	**+1.9**
LSA	**Lhasa**	**30.84**	**347**	IAmb	IAmb	11 10 16.2	
	comp=Z,57nm,1.3s						
LSA	**Lhasa**	**30.84**	**347**	P	**P**	**11 10 14.8**	**+0.6**
LSA				pP	**pP**	**11 10 28.9**	**0.0**
CD2	**Chengdu**	**31.45**	**8**	P	**P**	**11 10 19.3**	**+0.2**
CD2				S	**S**	**11 15 28.1**	**+5.1**
CD2				pmax	pmax		
	comp=Z,70nm,1.1s						
CD2				pmax	pmax		
	comp=Z,160nm,12.0s						
CD2				LR	LR		
	comp=Z,950nm,24.1s						
CD2				LR	LR		
	comp=Z,850nm,18.8s						
CD2				LR	LR		
	comp=Z,1µm,21.2s						
FITZ	**Fitzroy Crossi**	**31.55**	**125**		**P**	**11 10 19.4**	**-0.7**
FITZ	**Fitzroy Crossi**	**31.55**	**125**	LR	LR	11 24 19.8	
	comp=Z,259nm,19.5s,baz=308,slow=39						
FITZ	**Fitzroy Crossi**	**31.55**	**125**	P	**P**	**11 10 20.0**	**-0.1**
ENH	**Enshi**	**32.08**	**17**		**P**	**11 10 23.8**	**-0.9**
ENH				IAmb	IAmb	11 10 24.3	
	comp=Z,25nm,0.5s						
ENH	**Enshi**	**32.08**	**17**	P	**P**	**11 10 23.7**	**-0.9**
ENH	**Enshi**	**32.08**	**17**	P	**P**	**11 10 23.7**	**-0.9**
ENH				pP	**pP**	**11 10 37.5**	**-1.9**
GUNA	**GUNA**	**32.56**	**321**	*e*P	**P**	**11 10 29.4**	**+0.5**
GUNA				IAmb	IAmb	11 10 30.7	
	comp=Z,76nm,0.8s						
MORW	**Morawa**	**32.84**	**152**	P	**P**	**11 10 31.9**	**+0.6**
FAKI	**Fak Fak**	**33.33**	**95**	P	**P**	**11 10 36.9**	**+1.1**
BLDU	**Ballidu**	**34.45**	**152**	P	**P**	**11 10 46.4**	**+1.1**
PTH	**Pithoragarh**	**34.75**	**331**	*e*P	**P**	**11 10 48.8**	**+0.7**
PTH				IAmb	IAmb	11 10 50.4	
	comp=Z,110nm,0.7s						
MUN	**Mundaring**	**35.38**	**154**	P	**P**	**11 10 53.9**	**+0.6**
XAN	**Xi'an**	**35.49**	**14**	P	**P**	**11 10 53.1**	**-1.1**
XAN				S	**S**	**11 16 23.9**	**-1.6**
XAN				pmax	pmax		
	comp=Z,59nm,0.6s						
XAN				pmax	pmax		
	comp=Z,290nm,4.5s						
XAN				LR	LR		
	comp=Z,870nm,14.9s						
XAN				LR	LR		
	comp=Z,440nm,13.9s						
XAN				LR	LR		
	comp=Z,1µm,17.7s						
XAN	**Xi'an**	**35.49**	**14**	P	**P**	**11 10 53.1**	**-1.1**
AJM	**Ajmer**	**35.56**	**321**	*e*P	**P**	**11 10 55.0**	**+0.1**
AJM				IAmb	IAmb	11 10 55.9	
	comp=Z,32nm,1.0s						
KUDL	**Kundal**	**35.65**	**325**	*e*P	**P**	**11 10 52.6**	**-2.9**
KUDL				IAmb	IAmb	11 10 56.2	
JOSI	**Joshimath**	**35.90**	**331**	*e*P	**P**	**11 10 57.9**	**-0.1**
JOSI				IAmb	IAmb	11 10 58.8	
	comp=Z,16nm,0.5s						
LZH	**Lanzhou**	**36.57**	**7**	*e*P	**P**	**11 11 03.6**	**+0.1**
LZH				pP	pP	11 11 17.8	-0.6
LZH				sP	sP	11 11 24.0	-1.3
LZH				S	**S**	**11 16 39.8**	**-2.3**
LZH				pmax	pmax		
	comp=Z,96nm,1.2s						
LZH				pmax	pmax		
	comp=Z,190nm,4.1s						
LZH				LR	LR		
	comp=Z,590nm,15.5s						
LZH				LR	LR		
	comp=Z,520nm,16.2s						
LZH				LR	LR		
	comp=Z,780nm,16.8s						
NWAO	**Narrogin (SRO)**	**36.64**	**154**	LR	LR	11 24 02.2	
	comp=Z,368nm,21.9s,baz=303,slow=33						
LYN	**LuoYang**	**36.98**	**19**	P	**P**	**11 11 05.8**	**-1.0**
LYN				pP	pP	11 11 17.8	-3.9
LYN				pmax	pmax		
	comp=Z,45nm,0.8s						
H01W3	**Cape Leeuwin H**	**37.12**	**159**	T	T	11 49 19.6	
	baz=335,slow=76,SNR=12						
H01W2	**Cape Leeuwin H**	**37.13**	**159**	T	T	11 49 11.4	
	baz=335,slow=76,SNR=15						
H01W1	**Cape Leeuwin H**	**37.13**	**159**	T	T	11 49 10.6	
	baz=335,slow=76,SNR=12						
NJ2	**Nanjing**	**37.33**	**28**	*e*P	**P**	**11 11 11.9**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,370nm,16.6s						
NJ2				LR	LR		
	comp=Z,390nm,16.6s						
NJ2				LR	LR		
	comp=Z,630nm,17.0s						
KLP	**Kalpa**	**37.34**	**330**	*e*P	**P**	**11 11 10.6**	**+0.2**
SMLA	**Simla**	**37.57**	**328**	*e*P	**P**	**11 11 11.4**	**-0.5**
SMLA				IAmb	IAmb	11 11 13.7	
	comp=Z,56nm,0.7s						
KMBL	**Kambalda**	**37.67**	**147**	P	**P**	**11 11 13.6**	**+0.8**
SSE	**Sheshan**	**37.73**	**32**	P	**P**	**11 11 13.8**	**+0.5**
SSE				S	**S**	**11 17 02.4**	**+2.8**
SSE				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SSE				LR	LR		
	comp=Z,330nm,15.9s						
SSE				LR	LR		
	comp=Z,170nm,17.2s						
HNLY	**HANLEY**	**38.01**	**332**	*e*P	**P**	**11 11 16.4**	**+0.1**
HNLY				IAmb	IAmb	11 11 18.7	
	comp=Z,100nm,1.2s						
BHK	**Bhakra**	**38.20**	**328**	*e*P	**P**	**11 11 17.4**	**+0.2**
DHRM	**DHARAMSHALA**	**38.91**	**329**	*e*P	**P**	**11 11 23.2**	**-0.2**
JOW	**Kunigami**	**39.07**	**44**	P	**P**	**11 11 25.2**	**+0.6**
GTA	**Gaotai**	**39.61**	**1**	P	**P**	**11 11 29.5**	**+0.4**
GTA				sP	pP	11 11 45.8	+1.7
GTA				PcP	**PcP**	**11 13 37.3**	**+2.0**
GTA				pmax	pmax		
	comp=Z,49nm,1.3s						
GTA				LR	LR		
	comp=Z,330nm,21.1s						
GTA				LR	LR		
	comp=Z,300nm,19.9s						
GTA				LR	LR		
	comp=Z,550nm,21.9s						
WRA	**Warramunga Arr**	**39.68**	**122**		**P**	**11 11 28.2**	**-1.6**
WRA	**Warramunga Arr**	**39.68**	**122**	P	**P**	**11 11 29.4**	**-0.4**
	comp=Z,5.4nm,0.4s,baz=305,slow=8.4,SNR=153						
WRA				PcP	**PcP**	**11 13 36.2**	**+0.5**
	comp=Z,3.8nm,0.5s,baz=313,slow=2.7,SNR=9.6						
WRA				S	**S**	**11 17 21.8**	**-7.6**
	comp=Z,1.6nm,0.9s,baz=297,slow=15,SNR=4.6						
WRA				LR	LR	11 28 35.3	
	comp=Z,226nm,20.3s,baz=322,slow=37						
	comp=Z,5.4nm,0.4s						
WRA	**Warramunga Arr**	**39.68**	**122**	*i* P	**P**	**11 11 28.5**	**-1.3**
WRA				pmax	pmax		
	comp=Z,8.0nm,0.3s						
WRAB	**Tennant Creek**	**39.68**	**122**	P	**P**	**11 11 29.8**	**0.0**
WRAB	**Tennant Creek**	**39.68**	**122**	*de*P	**P**	**11 11 28.4**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WB1	**Warramunga Ar.**	**39.69**	**122**	P	**P**	**11 11 28.7**	**-1.2**
WR8	**Warramunga Arr**	**39.82**	**121**	IAmb	IAmb	11 11 31.7	
	comp=Z,20nm,0.5s						
TIY	**Taiyuan**	**39.89**	**17**	P	**P**	**11 11 31.8**	**+0.4**
TIY				S	**S**	**11 17 39.3**	**+7.2**
TIY				pmax	pmax		
	comp=Z,190nm,6.1s						
TIY				LR	LR		
	comp=Z,370nm,17.9s						
TIY				LR	LR		
	comp=Z,200nm,15.8s						
TIY				LR	LR		
	comp=Z,330nm,17.2s						
HNS	**HongShan**	**40.31**	**19**	⇓P	**P**	**11 11 34.5**	**-0.2**
HNS				pP	**pP**	**11 11 49.3**	**-0.4**
HNS				S	**S**	**11 17 43.5**	**+5.3**
HNS				sS	**sS**	**11 18 08.6**	**+5.1**
HNS				pmax	pmax		
	comp=Z,13nm,1.0s						
HNS				LR	LR		
	comp=Z,290nm,22.0s						
HNS				LR	LR		
	comp=Z,180nm,21.5s						
HNS				LR	LR		
	comp=Z,260nm,22.9s						
FORT	**Forrest**	**40.91**	**140**		**P**	**11 11 41.2**	**+1.4**
FORT	**Forrest**	**40.91**	**140**	P	**P**	**11 11 40.3**	**+0.5**
AS31	**Alice Springs**	**41.01**	**127**		**P**	**11 11 40.2**	**-0.6**
ASAR	**Alice Springs**	**41.01**	**127**	P	**P**	**11 11 40.0**	**-0.8**
	comp=Z,15nm,0.6s,baz=300,slow=7.6,SNR=220						
ASAR				PcP	**PcP**	**11 13 41.1**	**+1.1**
	comp=Z,4.9nm,0.7s,baz=300,slow=2.9,SNR=11						
ASAR				ScP	**ScP**	**11 17 25.6**	**+0.6**
	comp=Z,0.3nm,0.8s,baz=294,slow=2.9,SNR=1.8						
ASAR				S	**S**	**11 17 43.5**	**-5.7**
	comp=Z,0.7nm,0.7s,baz=295,slow=13,SNR=6.5						
ASAR				LR	LR	11 31 11.7	
	comp=Z,212nm,20.3s,baz=304,slow=40						
	comp=Z,15nm,0.6s						
GENI	**Genyem**	**41.21**	**93**	P	**P**	**11 11 43.2**	**+0.7**
NIL	**Nilore**	**41.62**	**327**		**P**	**11 11 45.5**	**-0.1**
NIL				IAmb	IAmb	11 11 46.5	
	comp=Z,98nm,1.1s						
NIL	**Nilore**	**41.62**	**327**	P	**P**	**11 11 45.5**	**-0.1**
NIL				pmax	pmax		
	comp=Z,98nm,1.2s						
NIL	**Nilore**	**41.62**	**327**	P	**P**	**11 11 45.6**	**-0.1**
JAY	**Jayapura**	**41.74**	**93**	LR	LR	11 30 50.4	
	comp=Z,98nm,20.6s,baz=296,slow=39						
BTO	**Baotou**	**42.02**	**13**	*e*P	**P**	**11 11 50.8**	**+2.0**
BTO				pP	**pP**	**11 12 06.3**	**+2.4**
BTO				sP	**sP**	**11 12 13.6**	**+2.8**
BTO				PP	**PP**	**11 13 33.5**	**+6.4**
BTO				S	**S**	**11 18 05.0**	**+1.3**
BTO				sS	**sS**	**11 18 29.1**	**0.0**
BTO				SS	**SS**	**11 21 11.8**	**-1.0**
BTO				pmax	pmax		
	comp=Z,27nm,0.4s						
BTO				pmax	pmax		
	comp=Z,310nm,7.4s						
BTO				LR	LR		
	comp=Z,1µm,21.0s						
BTO				LR	LR		
	comp=Z,730nm,17.2s						
BTO				LR	LR		
	comp=Z,1µm,20.1s						
HHC	**Hu-ho-hao-te**	**42.60**	**14**	*e*P	**P**	**11 11 57.1**	**+3.5**
HHC				S	**S**	**11 18 15.1**	**+2.7**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,62nm,5.2s						
HHC				LR	LR		
	comp=Z,550nm,16.8s						
HHC				LR	LR		
	comp=Z,250nm,16.8s						
HHC				LR	LR		
	comp=Z,680nm,17.7s						
BJI	**Beijing**	**43.18**	**19**	P	**P**	**11 11 58.1**	**0.0**
BJI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BJI				pmax	pmax		
	comp=Z,41nm,10.6s						
BJI				LR	LR		
	comp=Z,170nm,24.3s						
BJI				LR	LR		
	comp=Z,130nm,15.9s						
BJI				LR	LR		
	comp=Z,230nm,20.2s						
QIS	**Mount Isa**	**44.46**	**119**	P	**P**	**11 12 09.5**	**+0.7**
JNU	**Nakatsue**	**44.85**	**39**	P	**P**	**11 12 11.6**	**-0.1**
KSH	**Kashi**	**44.96**	**335**	P	**P**	**11 12 11.6**	**-1.0**
KSH				pP	pP	11 12 24.8	-3.0
KSH				pmax	pmax		
	comp=Z,21nm,1.0s						
KSH				LR	LR		
	comp=Z,270nm,18.2s						
KSH				LR	LR		
	comp=Z,230nm,17.2s						
KSH				LR	LR		
	comp=Z,390nm,22.0s						
TJN	**Taejon**	**45.08**	**33**	*c i*P	**P**	**11 12 12.7**	**-0.7**
WMQ	**Urumqi**	**45.16**	**348**	*e*P	**P**	**11 12 15.3**	**+1.3**
WMQ				sP	pP	11 12 31.6	+2.3
WMQ				pmax	pmax		
	comp=Z,53nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,190nm,3.7s						
WMQ				LR	LR		
	comp=Z,230nm,24.2s						
TARG	**Taragay, Kyrgy**	**46.10**	**338**	P	**P**	**11 12 23.3**	**+1.4**
TARG				pmax	pmax		
	comp=Z,65nm,1.1s						
KSRS	**Korea Array**	**46.17**	**32**	P	**P**	**11 12 20.6**	**-1.4**
	comp=Z,11nm,0.6s,baz=222,slow=8.1,SNR=58						
KSRS				PcP	**PcP**	**11 13 57.0**	**-0.2**
	comp=Z,2.7nm,0.9s,baz=228,slow=4.4,SNR=2.2						
	comp=Z,11nm,0.6s						
KS19	**Wonju Array Si**	**46.18**	**32**	IAmb	IAmb	11 12 22.4	
	comp=Z,19nm,0.7s						
XLT	**XiLinHaoTe**	**46.66**	**17**	*e*P	**P**	**11 12 26.3**	**+0.5**
XLT				pP	pP	11 12 42.5	+1.3
XLT				pmax	pmax		
	comp=Z,13nm,0.8s						
XLT				LR	LR		
	comp=Z,200nm,14.1s						
XLT				LR	LR		
	comp=Z,220nm,13.9s						
SHLS	**Shalkode**	**46.76**	**340**	*e*P	**P**	**11 12 25.0**	**-1.7**
SHLS				pmax	pmax		
	comp=Z,22nm,1.3s						

SHLS	**Shalkode**	46.76	340	eP	P	11 12 25.1	-1.7
	comp=Z,22nm,1.3s						
UZB	**Uzynbulak**	46.90	340	eP	P	11 12 27.2	-0.6
UZB				pmax	pmax		
	comp=Z,18nm,1.2s						
UZB	**Uzynbulak**	46.90	340	eP	P	11 12 27.2	-0.6
	comp=Z,18nm,1.2s						
SATY	**Saty**	47.04	339	eP	P	11 12 28.3	-0.6
SATY				pmax	pmax		
	comp=Z,27nm,1.2s						
SATY	**Saty**	47.04	339	eP	P	11 12 28.3	-0.6
	comp=Z,27nm,1.2s						
ULHL	**Ulahol**	47.14	337	P	P	11 12 30.8	+1.0
	SNR=13						
JMN	**Monobe**	47.16	41		P	11 12 29.4	-0.5
JMN				IAmb	IAmb	11 12 30.4	
	comp=Z,19nm,0.7s						
JMN	**Monobe**	47.16	41	P	P	11 12 30.3	+0.4
GAR	**Garm**	47.20	329	IAmb	IAmb	11 12 33.0	
	comp=Z,43nm,1.0s						
KPKS	**Kokpek**	47.30	340	eP	P	11 12 30.1	-0.7
KPKS				pmax	pmax		
	comp=Z,13nm,1.3s						
KPKS	**Kokpek**	47.30	340	eP	P	11 12 30.2	-0.7
	comp=Z,13nm,1.3s						
BBOO	**Buckleboo**	47.50	136	P	P	11 12 33.4	+0.9
MDOK	**Medeo**	47.62	338	eP	P	11 12 32.8	-0.6
MDOK				eS	S	11 19 26.8	+1.9
MDOK	**Medeo**	47.62	338	eP	P	11 12 32.9	-0.6
MDOK				eS	S	11 19 26.9	+2.0
SIMJ	**Simiganj**	47.63	328		P	11 12 32.9	-0.7
SIMJ				IAmb	IAmb	11 12 34.1	
	comp=Z,46nm,1.3s						
SIMJ	**Simiganj**	47.63	328	P	P	11 12 32.8	-0.7
SIMJ				PcP	PcP	11 14 03.8	+1.3
AAA	**Alma-Ata**	47.71	338	eP	P	11 12 33.5	-0.5
AAA				pmax	pmax		
	comp=Z,21nm,0.9s						
AAA	**Alma-Ata**	47.71	338	eP	P	11 12 33.5	-0.5
	comp=Z,21nm,0.9s						
BTK	**Batken**	47.76	331	IAmb	IAmb	11 12 38.0	
	comp=Z,49nm,1.4s						
UCH	**Uchtor**	47.82	335	P	P	11 12 36.6	+1.2
	SNR=6.0						
DZET	**Dzherino**	47.83	328	P	P	11 12 34.4	-0.7
DZET				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MTSU	**Mount Surprise**	47.88	114	P	P	11 12 36.9	+1.2
TKM2	**Tokmak 2**	47.97	337	P	P	11 12 37.3	+1.1
	SNR=76						
KBK	**Karagaybulak**	48.00	336	P	P	11 12 38.0	+1.6
	SNR=37						
AML	**Almayashu**	48.09	335	P	P	11 12 38.6	+1.2
	SNR=12						
AAK	**Ala-Archa**	48.17	336	P	P	11 12 38.8	+1.0
	SNR=14						
AAK	**Ala-Archa**	48.17	336		P	11 12 38.3	+0.6
AAK				IAmb	IAmb	11 12 41.4	
	comp=Z,53nm,1.4s						
AAK	**Ala-Archa**	48.17	336	LR	LR	11 34 44.8	
	comp=Z,238nm,21.4s,baz=156,slow=38						
AAK	**Ala-Archa**	48.17	336	c iP	P	11 12 38.7	+1.0
AAK				pmax	pmax		
	comp=Z,24nm,1.3s						
AAK	**Ala-Archa**	48.17	336	P	P	11 12 39.1	+1.4
AAK				PcP	PcP	11 14 06.8	+2.4
ARXS	**Arharly**	48.25	340	eP	P	11 12 38.5	+0.3
CHMS	**Chumysh**	48.37	336	P	P	11 12 40.0	+0.9
	SNR=10						
SONM	**Songino Array**	48.46	7		P	11 12 40.9	+1.1
SONM	**Songino Array**	48.46	7	P	P	11 12 40.3	+0.5
	comp=Z,53nm,0.7s,baz=191,slow=9.5,SNR=193						
SONM				PcP	PcP	11 14 05.6	+0.4
	comp=Z,6.3nm,0.5s,baz=191,slow=3.8,SNR=6.4						
SONM				ScP	ScP	11 17 55.9	+0.8
	comp=Z,0.3nm,0.4s,baz=207,slow=6.1,SNR=1.9						
SONM				LR	LR	11 35 24.3	
	comp=Z,497nm,19.2s,baz=188,slow=39						
	comp=Z,53nm,0.7s						
SONM	**Songino Array**	48.46	7	P	P	11 12 40.9	+1.1
SONM				pmax	pmax		
	comp=Z,57nm,0.8s						
EKS2	**Erkin-Say**	48.49	335	P	P	11 12 41.6	+1.5
	SNR=33						
ULN	**Ulaanbaatar**	48.57	7		P	11 12 41.2	+0.6
ULN	**Ulaanbaatar**	48.57	7	c iP	P	11 12 40.8	+0.1
ULN				pmax	pmax		
	comp=Z,51nm,1.1s						
ULN	**Ulaanbaatar**	48.57	7	P	P	11 12 41.1	+0.5
ULN				PcP	PcP	11 14 05.9	+0.3
USP	**Ospenovka**	48.69	336	P	P	11 12 42.5	+0.9
	SNR=45						
TDK	**Taldyqorghan**	48.75	341	eP	P	11 12 41.5	-0.4
TDK				pmax	pmax		
	comp=Z,13nm,1.2s						
TDK	**Taldyqorghan**	48.75	341	eP	P	11 12 41.5	-0.4
	comp=Z,13nm,1.2s						
SGDS	**Sogindy**	48.79	336	eP	P	11 12 41.9	-0.5
	comp=Z,14nm,1.2s						
MK31	**Makanchi Array**	49.22	345	c iP	P	11 12 45.4	-0.1
MK31				pmax	pmax		
	comp=Z,26nm,0.7s						
MKAR	**Makanchi Array**	49.22	345		P	11 12 46.0	+0.5
MKAR	**Makanchi Array**	49.22	345	P	P	11 12 45.8	+0.3
	comp=Z,16nm,0.6s,baz=152,slow=8.1,SNR=141						
MKAR				PcP	PcP	11 14 08.6	+0.7
	comp=Z,1.8nm,0.6s,baz=150,slow=5.0,SNR=0.7						
MKAR				LR	LR	11 37 32.6	
	comp=Z,121nm,21.9s,baz=156,slow=41						
	comp=Z,16nm,0.6s						
MKAR	**Makanchi Array**	49.22	345	P	P	11 12 46.0	+0.5
MAKZ	**Makanchi**	49.31	345		P	11 12 46.6	+0.3
MAKZ				IAmb	IAmb	11 12 47.6	
	comp=Z,38nm,1.2s						
MAKZ	**Makanchi**	49.31	345	P	P	11 12 46.6	+0.3
MAKZ				pmax	pmax		
	comp=Z,38nm,1.2s						
MAKZ	**Makanchi**	49.31	345	P	P	11 12 46.2	-0.1
MAKZ				pP	pP	11 13 01.6	-0.1
MAKZ				sP	sP	11 13 08.7	+0.3
DZA	**Taraz**	49.73	333	eP	P	11 12 49.2	-0.3
DZA				pmax	pmax		
	comp=Z,16nm,1.1s						
DZA	**Taraz**	49.73	333	eP	P	11 12 49.2	-0.3
	comp=Z,16nm,1.1s						
IUG	**Iuzhnay**	49.75	332	eP	P	11 12 49.2	-0.6
IUG				pmax	pmax		
	comp=Z,23nm,1.2s						
IUG	**Iuzhnay**	49.75	332	eP	P	11 12 49.2	-0.6
	comp=Z,23nm,1.2s						
HTT	**Hallett**	49.84	135	P	P	11 12 50.0	-0.5
CN2	**Changchun**	49.94	25	P	P	11 12 49.3	-1.7
CN2				sP	pP	11 13 07.3	+0.9
CN2				pmax	pmax		
	comp=Z,30nm,0.5s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
CN2				LR	LR		
	comp=Z,400nm,16.0s						
CN2				LR	LR		
	comp=Z,300nm,15.0s						
CHM	**Chimkent**	50.08	332	eP	P	11 12 51.8	-0.4
CHM	**Chimkent**	50.08	332	eP	P	11 12 51.8	-0.4
CTAO	**Charters Tower**	50.19	116		P	11 12 53.1	-0.2
CTAO	**Charters Tower**	50.19	116	P	P	11 12 53.7	+0.3
CTAO	**Charters Tower**	50.19	116	P	P	11 12 53.1	-0.2
CTAO				pmax	pmax		
	comp=Z,8.0nm,0.7s						
CTAO	**Charters Tower**	50.19	116	P	P	11 12 53.2	-0.2
CTAO				pP	pP	11 13 09.3	+0.8
CTAO				PcP	PcP	11 14 12.0	0.0
KK31	**Karatay Array**	50.27	333	IAmb	IAmb	11 12 55.1	
	comp=Z,44nm,1.4s						
KK31	**Karatay Array**	50.27	333	i P	P	11 12 53.3	-0.3
KKAR	**Karatay Array**	50.27	333		P	11 12 53.9	+0.3
KKAR	**Karatay Array**	50.27	333	IAmb	IAmb	11 12 55.1	
	comp=Z,46nm,1.4s						
KKAR	**Karatay Array**	50.27	333	P	P	11 12 53.9	+0.3
BTLS	**Baital**	50.35	337	eP	P	11 12 53.7	-0.4
BTLS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BTLS	**Baital**	50.35	337	eP	P	11 12 53.8	-0.4
	comp=Z,9.7nm,0.6s						
BRLS	**Borolday**	50.52	332	eP	P	11 12 54.0	-1.5
BRLS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BRLS	**Borolday**	50.52	332	eP	P	11 12 54.1	-1.5
	comp=Z,9.3nm,0.9s						
JGF	**Kuroka**	50.57	41	P	P	11 12 56.0	0.0
QLP	**Quilpie**	50.69	125	P	P	11 12 58.1	+1.1
ZAK	**Zakamensk**	50.71	4	eP	P	11 12 56.4	-0.4
ZAK				pmax	pmax		
	comp=Z,15nm,1.3s						
STKA	**Stephens Creek**	50.97	132	P	P	11 12 59.3	+0.3
	comp=Z,16nm,0.6s,baz=305,slow=7.3,SNR=35						
STKA				LR	LR	11 36 46.6	
	comp=Z,178nm,19.1s,baz=300,slow=38						
	comp=Z,16nm,0.6s						
STKA	**Stephens Creek**	50.97	132	P	P	11 12 59.7	+0.7
STKA	**Stephens Creek**	50.97	132	ceP	P	11 12 58.8	-0.2
MAJO	**Matsushiro**	51.68	40	P	P	11 13 03.7	-0.6
MJAR	**Matsushiro Arr**	51.68	40	P	P	11 13 02.7	-1.6
	comp=Z,2.5nm,0.5s,baz=224,slow=7.2,SNR=9.5						
MJAR				PcP	PcP	11 14 17.5	+0.3
	comp=Z,3.8nm,0.9s,baz=218,slow=2.9,SNR=5.3						
	comp=Z,2.5nm,0.5s						
BNX	**BinXian**	52.32	25	⇑P	P	11 13 07.4	-1.4
BNX				pmax	pmax		
	comp=Z,16nm,0.5s						
IRK	**Irkutsk**	52.63	4	eP	P	11 13 10.4	-0.6
IRK				pmax	pmax		
	comp=Z,78nm,1.6s						
SEM	**Semipalatinsk**	53.08	345	eP	P	11 13 13.8	-0.8
SEM				pmax	pmax		
	comp=Z,22nm,0.9s						
SEM	**Semipalatinsk**	53.08	345	eP	P	11 13 13.9	-0.8
	comp=Z,22nm,0.9s						
USA0B	**Ussuriysk Arra**	53.23	29		P	11 13 15.0	-0.6
USA0B				IAmb	IAmb	11 13 16.3	
	comp=Z,34nm,0.8s						
USA0B	**Ussuriysk Arra**	53.23	29	c iP	P	11 13 14.5	-1.1
USRK	**Ussuriysk Ar.**	53.23	29	P	P	11 13 15.2	-0.3
USRK	**Ussuriysk Ar.**	53.23	29	P	P	11 13 14.9	-0.7
	comp=Z,22nm,0.6s,baz=249,slow=3.8,SNR=51						
USRK				LR	LR	11 38 55.6	
	comp=Z,379nm,18.1s,baz=215,slow=39						
	comp=Z,22nm,0.6s						
USRK	**Ussuriysk Ar.**	53.23	29	P	P	11 13 15.2	-0.3
ARPS	**Mount Arapiles**	53.65	137	P	P	11 13 19.6	+0.8
KURBB	**Kurchatov Arra**	53.73	344	P	P	11 13 19.2	+0.1
	comp=Z,17nm,0.7s,baz=164,slow=6.9,SNR=69						
KURBB				PcP	PcP	11 14 25.7	+1.2
	comp=Z,3.9nm,1.0s,baz=163,slow=6.8,SNR=1.1						
KURBB				LR	LR	11 40 33.9	
	comp=Z,154nm,19.2s,baz=162,slow=41						
	comp=Z,17nm,0.7s						
KURK	**Kurchatov**	53.79	344		P	11 13 20.0	+0.5
KURK	**Kurchatov**	53.79	344	c iP	P	11 13 19.6	+0.1
KURK				pmax	pmax		
	comp=Z,47nm,1.0s						
KURK	**Kurchatov**	53.79	344	P	P	11 13 19.7	+0.1
CMSA	**Cobar Meteorol**	53.90	130	P	P	11 13 20.6	-0.2
BRZS	**Berezniki**	55.01	340	eP	P	11 13 28.1	-0.3
BRZS	**Berezniki**	55.01	340	eP	P	11 13 28.1	-0.3
ZALV	**Zalesovo Beam**	55.41	350	P	P	11 13 31.4	+0.2
ZALV	**Zalesovo Beam**	55.41	350	P	P	11 13 31.2	-0.1
	comp=Z,47nm,0.5s,baz=164,slow=7.1,SNR=161						
ZALV				S	S	11 21 10.0	-1.4
	comp=Z,0.4nm,0.3s,baz=157,slow=16,SNR=3.8						
ZALV				LR	LR	11 39 42.5	
	comp=Z,149nm,18.9s,baz=112,slow=39						
	comp=Z,47nm,0.5s						
ZALV	**Zalesovo Beam**	55.41	350	P	P	11 13 31.4	+0.2
HEH	**HeiHe**	55.98	22	eP	P	11 13 34.1	-1.3
HEH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
EIDS	**Eidsvold**	56.03	121	P	P	11 13 36.0	-0.2
KLR	**Kul'dur**	56.89	25	c iP	P	11 13 40.7	-1.2
KLR				pmax	pmax		
	comp=Z,35nm,1.0s						
RAYN	**Ar Rayn**	57.09	298		P	11 13 43.9	0.0
RAYN	**Ar Rayn**	57.09	298	P	P	11 13 43.9	0.0
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CAN	**Canberra**	58.03	132	P	P	11 13 50.6	+0.3
ARMA	**Armidale**	58.15	126	P	P	11 13 51.4	+0.1
BVA0	**Borovoye Array**	58.34	340	i P	P	11 13 51.2	-0.8
BVAR	**Borovoye Array**	58.34	340	P	P	11 13 51.3	-0.7
	comp=Z,14nm,0.5s,baz=147,slow=8.2,SNR=70						
BVAR				LR	LR	11 42 47.4	
	comp=Z,201nm,20.3s,baz=164,slow=40						
	comp=Z,14nm,0.5s						
BRVK	**Borovoye**	58.40	340		P	11 13 52.1	-0.3
BRVK				IAmb	IAmb	11 13 53.0	
	comp=Z,18nm,0.7s						
BRVK	**Borovoye**	58.40	340	c iP	P	11 13 51.7	-0.7
BRVK				pmax	pmax		
	comp=Z,48nm,1.7s						
BRVK	**Borovoye**	58.40	340	P	P	11 13 51.8	-0.6
ZEA	**Zeya**	58.81	19	⇓eP	P	11 13 54.8	-0.4
ASAJ	**Asahikawa**	58.87	35	LR	LR	11 42 03.8	
	comp=Z,68nm,18.4s,baz=172,slow=39						
BOD	**Bodaibo**	59.25	9	eP	P	11 13 58.4	+0.2
BOD				pmax	pmax		
	comp=Z,72nm,1.3s						
AB31	**Akbulak array**	59.75	331	i P	P	11 14 00.8	-1.1
ABKAR	**Akbulak array**	59.75	331		P	11 14 01.6	-0.2
ABKAR	**Akbulak array**	59.75	331	IAmb	IAmb	11 14 02.6	
	comp=Z,56nm,1.2s						
GRNR	**Gornyy**	60.06	26	⇓iP	P	11 14 03.5	-0.5
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GRNR				MLR	MLR		
	comp=E,220nm,13.0s						
YSS	**Yuzhno-Sakhali**	60.66	33	P	P	11 14 07.1	-1.0
YSS	**Yuzhno-Sakhali**	60.66	33	⇓eP	P	11 14 07.1	-1.0
YSS				pmax	pmax		
	comp=Z,55nm,1.7s						
YSS	**Yuzhno-Sakhali**	60.66	33	P	P	11 14 07.7	-0.4
YSS				pP	pP	11 14 24.0	0.0
AKTO	**Aktyubinsk**	61.47	331	P	P	11 14 12.5	-1.1
	comp=Z,4.6nm,0.3s,baz=129,slow=6.2,SNR=27						
AKTO				PcP	PcP	11 14 55.9	+0.9
	comp=Z,4.1nm,0.6s,baz=158,slow=3.7,SNR=4.5						
	comp=Z,4.6nm,0.3s						
H04N2	**CROZET ISLANDS**	61.51	215	T	T	12 20 11.1	
	baz=57,slow=75,SNR=756						
H04N1	**CROZET ISLANDS**	61.52	215	T	T	12 20 11.6	
	baz=57,slow=75,SNR=716						
H04N3	**CROZET ISLANDS**	61.53	215	T	T	12 20 10.3	
	baz=57,slow=75,SNR=608						
NGOA	**Tingoa Renbel**	61.61	103	P	P	11 14 15.3	+0.2
CRZF	**Crozet Islands**	61.62	215	P	P	11 14 16.9	+2.3
CRZF				pP	pP	11 14 32.9	+2.6
H04S1	**CROZET ISLANDS**	61.82	215	T	T	12 20 27.8	
	baz=56,slow=75,SNR=254						
H04S3	**CROZET ISLANDS**	61.83	215	T	T	12 20 27.4	
	baz=56,slow=75,SNR=269						
H04S2	**CROZET ISLANDS**	61.84	215	T	T	12 20 28.7	
	baz=56,slow=75,SNR=127						
AKT	**Akhty**	62.24	319	eP	P	11 14 18.1	-1.0
AKT				e		11 14 56.1	
AKT				ePPP	PPP	11 18 04.7	
AKT				pmax	pmax		
	comp=Z,54nm,1.3s						
GNI	**Garni**	63.68	316	LR	LR	11 44 56.9	
	comp=Z,55nm,18.3s,baz=205,slow=38						
GNI	**Garni**	63.68	316	c iP	P	11 14 28.9	+0.2
GNI				pmax	pmax		
	comp=Z,20nm,1.3s						
SVE	**Sverdlovsk**	64.82	338	deP	P	11 14 35.5	-0.1
SVE				pmax	pmax		
	comp=Z,53nm,1.3s						
GURO	**Guroymak-BITLI**	64.96	313	IAmb	IAmb	11 14 39.1	
	comp=Z,30nm,1.4s						
ARTI	**Arti**	65.38	337	P	P	11 14 38.8	-0.5
ARTI				IAmb	IAmb	11 14 39.7	
	comp=Z,33nm,0.7s						
ARTI	**Arti**	65.38	337	LR	LR	11 45 24.4	
	comp=Z,281nm,21.4s,baz=146,slow=38						
ARTI	**Arti**	65.38	337	c iP	P	11 14 38.6	-0.7
ARTI						11 15 10.4	
ARTI						11 17 00.8	
ARTI				S	S	11 23 23.6	+4.7
ARTI				SS	SS	11 27 34.8	+1.7
ARTI				pmax	pmax		
	comp=Z,22nm,0.7s						
ARTI				MLR	MLR		
	comp=Z,298nm,20.0s						
ARTI	**Arti**	65.38	337	P	P	11 14 38.5	-0.7
KBZ	**Khabaz**	66.44	319	P	P	11 14 46.0	-0.3
	comp=Z,10nm,1.0s,baz=104,slow=4.3,SNR=21						
	comp=Z,10nm,1.0s						
KBZ	**Khabaz**	66.44	319	c iP	P	11 14 46.4	+0.1
KBZ				pmax	pmax		
	comp=Z,14nm,1.2s						
YAK	**Yakutsk**	66.45	15	LR	LR	11 46 41.5	
	comp=Z,266nm,18.2s,baz=212,slow=39						
YAK	**Yakutsk**	66.45	15	eP	P	11 14 43.9	-2.1
YAK				e*PP	pP	11 14 57.6	-4.5
YAK				e		11 15 12.4	
YAK				e		11 17 08.8	
YAK				ePPP	PPP	11 18 46.2	
YAK				eS	S	11 23 32.7	+1.0
YAK				e*SS	pS	11 23 51.6	+0.6
YAK				eSS	SS	11 27 48.4	-1.1
YAK				pmax	pmax		
	comp=Z,52nm,1.2s						
YAK				pmax	pmax		
	comp=N,22nm,1.4s						
YAK				pmax	pmax		
	comp=E,20nm,1.4s						
YAK				pmax	pmax		
	comp=Z,172nm,5.1s						
YAK				pmax	pmax		
	comp=N,116nm,5.3s						
YAK				pmax	pmax		
	comp=E,99nm,4.4s						
YAK				smax	smax		
	comp=N,3.0nm,0.5s						
YAK				smax	smax		
	comp=E,56nm,3.1s						
YAK	**Yakutsk**	66.45	15	P	P	11 14 45.0	-1.0
SHA1	**Shidzhatmaz**	66.60	319	c iP	P	11 14 47.8	+0.1
KIV	**Kislovodsk**	66.68	319		P	11 14 48.3	+0.3
KIV				IAmb	IAmb	11 14 49.4	
	comp=Z,69nm,1.5s						
KIV	**Kislovodsk**	66.68	319	eP	P	11 14 47.8	-0.2
KIV				pmax	pmax		
	comp=Z,19nm,1.0s						
KIV				MLR	MLR		
	comp=Z,76nm,17.0s						
ASF	**Jabal al Asfar**	66.84	305	LR	LR	11 46 19.3	
	comp=Z,77nm,18.2s,baz=135,slow=38						
EIL	**Elat**	67.82	302	LR	LR	11 44 56.9	
	comp=Z,166nm,19.4s,baz=79,slow=36						
BELG	**Belogornoye**	67.84	329	P	P	11 14 53.8	-1.2
	comp=Z,28nm,1.0s,baz=83,slow=1.4,SNR=13						
	comp=Z,28nm,1.0s						
BELG	**Belogornoye**	67.84	329	c iP	P	11 14 53.9	-1.1
BELG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
VSLR	**Vesyoloye**	68.24	318	⇑eP	P	11 14 57.1	-0.6
VSLR				pmax	pmax		
	comp=Z,33nm,1.3s						
MMAI	**Mount Meron Ar**	68.28	306	P	P	11 14 59.3	+1.0
	comp=Z,0.7nm,0.3s,baz=126,slow=3.7,SNR=3.8						
MMAI				LR	LR	11 47 59.4	
	comp=Z,66nm,18.2s,baz=129,slow=39						
	comp=Z,0.7nm,0.3s						
DZM	**Mont Dzumac**	69.00	113	eLR	LR	11 36 03.3	
	comp=Z,281nm,27.1s						
OUENC	**Ouen Island, N**	69.42	114	P	P	11 15 06.4	+0.9
KIRV	**Kirov**	70.50	335	ceP	P	11 15 11.0	-0.3
LSZ	**Lusaka**	71.40	254	LR	LR	11 43 39.5	
	comp=Z,70nm,18.4s,baz=130,slow=33						
BR131	**Keskin Array S**	71.50	312	ceP	P	11 15 17.2	-0.8
BRTR	**Keskin Array B**	71.50	312	P	P	11 15 17.2	-0.8
	comp=Z,1.8nm,0.5s,baz=131,slow=7.4,SNR=14						
	comp=Z,1.8nm,0.5s						
MAW	**Mawson**	71.60	194	LR	LR	11 40 01.2	
	comp=Z,262nm,19.6s,baz=19,slow=30						
MATP	**Matopo**	71.62	249	LR	LR	11 42 59.3	
	comp=Z,95nm,18.6s,baz=74,slow=33						
ILGA	**Ilgaz**	71.83	314	IAmb	IAmb	11 15 21.4	
	comp=Z,68nm,1.4s						
MA2	**Magadan**	71.99	25	LR	LR	11 48 29.1	
	comp=Z,195nm,19.7s,baz=264,slow=37						
MA2	**Magadan**	71.99	25	P	P	11 15 20.1	-0.2
PETK	**Petropavlovsk-**	72.07	33	P	P	11 15 20.7	-0.3
	comp=Z,2.1nm,0.7s,baz=276,slow=2.8,SNR=1.4						
	comp=Z,2.1nm,0.7s						
PET	**Petropavlovsk**	72.55	33	P	P	11 15 24.5	+0.7
SIM	**Simferopol'**	72.74	318	eP	P	11 15 25.4	+0.3
SIM				pmax	pmax		
	comp=Z,28nm,1.2s						
TIXI	**Tiksi**	74.44	9	LR	LR	11 51 47.8	
	comp=Z,174nm,18.4s,baz=220,slow=39						
SEY	**Seymchan**	74.52	22	deP	P	11 15 35.1	-0.1
SEY				pmax	pmax		
	comp=Z,21nm,1.7s						
MOS	**Moscow**	74.61	329	eP	P	11 15 34.7	-1.1
MOS				pmax	pmax		
	comp=Z,59nm,1.3s						
LBTB	**Lobatse**	74.81	244	LR	LR	11 45 38.3	
	comp=Z,208nm,18.1s,baz=100,slow=33						
MSZ	**Milford Sound**	74.86	136	P	P	11 15 39.8	+2.3
OBN	**Obninsk**	74.91	328	P	P	11 15 37.3	-0.2
	comp=Z,26nm,0.5s,baz=85,slow=6.8,SNR=9.0						
	comp=Z,26nm,0.5s						
OBN	**Obninsk**	74.91	328	eP	P	11 15 37.0	-0.5
OBN				i		11 15 45.9	
OBN				pmax	pmax		
	comp=Z,30nm,1.3s						
OBN				MLR	MLR		
	comp=Z,77nm,17.0s						
JCZ	**Jackson Bay**	75.30	136	P	P	11 15 40.3	0.0
JCZ	**Jackson Bay**	75.30	136	P	P	11 15 41.5	+1.2
BOSA	**Boshof**	75.56	241	P	P	11 15 43.3	+1.2
	comp=Z,2.3nm,0.7s,baz=340,slow=3.7,SNR=3.9						
BOSA				LR	LR	11 42 24.0	
	comp=Z,225nm,21.7s,baz=33,slow=30						
	comp=Z,2.3nm,0.7s						
WKZ	**Wanaka**	75.65	136	P	P	11 15 44.0	+1.8
EAZ	**Earnscleugh**	75.95	137	P	P	11 15 46.0	+2.2
TUZ	**Tuapeka**	76.34	137	P	P	11 15 47.5	+1.6
LBZ	**Lake Benmore**	76.36	136	P	P	11 15 46.7	+0.5
RPZ	**Rata Peaks**	76.82	135	P	P	11 15 48.8	0.0
RPZ	**Rata Peaks**	76.82	135	P	P	11 15 49.8	+1.0
DSZ	**Denniston Nort**	76.96	133	P	P	11 15 51.2	+1.6
QRZ	**Quartz Range**	77.32	132	P	P	11 15 50.7	-0.9
QRZ	**Quartz Range**	77.32	132	P	P	11 15 53.1	+1.4
SORM	**Soroca**	77.47	320	⇑P	P	11 15 52.2	0.0
AKASG	**Malin Array Be**	77.60	322	P	P	11 15 52.2	-0.7
	comp=Z,1.2nm,0.6s,baz=92,slow=4.4,SNR=20						
AKASG				PP	PP	11 18 47.8	-0.9
	comp=Z,1.2nm,0.9s,baz=100,slow=6.0,SNR=6.4						
	comp=Z,1.2nm,0.6s						
AKASG	**Malin Array Be**	77.60	322	ceP	P	11 15 52.2	-0.7
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKBB	**Malin Array Si**	77.60	322	ceP	P	11 15 52.0	-1.0
KIEV	**Kiev**	77.61	322		P	11 15 52.4	-0.5
KIEV	**Kiev**	77.61	322	⇓P	P	11 15 52.5	-0.5
KIEV	**Kiev**	77.61	322	P	P	11 15 52.4	-0.5
KIEV				pmax	pmax		
	comp=Z,24nm,1.6s						
THZ	**Tophouse**	77.77	133	P	P	11 15 55.8	+1.6
VRI	**Vrincioaia**	78.00	317	⇑P	P	11 15 56.2	+0.9
NNZ	**Nelson**	78.02	132	P	P	11 15 56.0	+0.5
PLOR	**Plostina**	78.05	317	⇓P	P	11 15 56.5	+0.9
TESR	**Tescani**	78.20	318	⇑P	P	11 15 56.5	+0.2
KHZ	**Kahutara**	78.35	133	P	P	11 15 59.0	+1.7
KHZ	**Kahutara**	78.35	133	P	P	11 15 58.0	+0.8
DUWZ	**D’Urville Isla**	78.36	132	P	P	11 15 58.3	+0.9
MLR	**Muntele Rosu**	78.45	317	IAmb	IAmb	11 15 59.7	
	comp=Z,44nm,1.3s						
MLR	**Muntele Rosu**	78.45	317	⇓P	P	11 15 58.7	+0.8
SNZO	**South Karori**	79.02	132	P	P	11 16 01.5	+0.5
OGWZ	**Otaki Gorge**	79.29	131	P	P	11 16 03.9	+1.4
FWVZ	**Far West T-bar**	79.35	130	P	P	11 16 04.4	+1.3
NGZ	**Ngauruhoe**	79.38	130	P	P	11 16 05.3	+2.1
BURAR	**Bucovina Array**	79.40	319		P	11 16 04.1	+1.1
BURAR	**Bucovina Array**	79.40	319	⇑P	P	11 16 04.2	+1.1
WNVZ	**Wahianoa**	79.40	130	P	P	11 16 05.3	+1.9
MNK	**Minsk**	79.44	326	i P	P	11 15 57.3	-5.7
	comp=E,14nm,0.6s						
MNK				i P	P	11 15 57.3	-5.7
	comp=N,18nm,0.7s						
MNK				i P	P	11 15 57.3	-5.7
	comp=Z,15nm,0.7s,baz=106						
MNK				i PP	PP	11 18 47.9	-16
MNK				i PPP	PPP	11 20 45.4	
MNK				i S	S	11 25 56.2	-3.3
MNK				i SS	SS	11 30 52.9	-15
MNK				i SSS	SSS	11 34 25.5	

MNK				*i* LR	LR	11 51 52.1	
MNK	Minsk	79.44	326	*i* P	P	11 15 57.3	-5.7
MNK				*i* S	S	11 25 56.2	-3.3
MNK				*i* SSS	SSS	11 34 25.5	
MNK				pmax	pmax		
	comp=E,14nm,0.6s						
MNK				pmax	pmax		
	comp=Z,15nm,0.7s						
MNK				pmax	pmax		
	comp=N,18nm,0.7s						
HOWZ	Holdsworth Sta	79.56	131	P	P	11 16 05.3	+1.3
MRZ	Mangatainoka R	79.58	131	P	P	11 16 04.6	+0.5
MTW	Mount Morrison	79.59	132	P	P	11 16 05.3	+1.1
PRWZ	Pori Road	79.86	131	P	P	11 16 06.6	+1.0
PNHZ	Pukenui	79.94	130	P	P	11 16 07.6	+1.4
BKZ	Black Stump Fm	80.06	130	P	P	11 16 07.0	+0.2
BKZ	Black Stump Fm	80.06	130	P	P	11 16 07.2	+0.4
BFZ	Birch Farm	80.08	131	P	P	11 16 07.4	+0.6
BFZ	Birch Farm	80.08	131	P	P	11 16 07.6	+0.8
NACGM	Naroch	80.16	326	*e*P	P	11 16 04.7	-2.2
	comp=Z,20nm,0.9s,baz=105						
MTHZ	Maungataniwha	80.29	129	P	P	11 16 08.6	+0.6
RTZ	Ruatahuna	80.37	129	P	P	11 16 09.4	+0.9
URZ	Urewera	80.43	129	P	P	11 16 09.3	+0.6
GZR	Gura Zlata	80.62	316	⇑P	P	11 16 10.5	+0.8
MWZ	Matawai	80.76	129	P	P	11 16 10.7	+0.1
HAZ	Te Kaha	80.89	128	P	P	11 16 11.6	+0.4
DRGR		80.91	317	⇑P	P	11 16 11.9	+0.7
BOVS	Bovan	81.08	314	⇓P	P	11 16 12.1	+0.1
VSU	Vasula	81.12	330	d*e*P	P	11 16 09.9	-2.0
VSU				pmax	pmax		
	comp=Z,28nm,2.5s						
PUZ	Puketiti	81.30	128	P	P	11 16 13.9	+0.5
KWP	Kalwaria Pacla	81.43	320	*e*P	P	11 16 14.1	+0.2
BZS	Buzias	81.46	316	⇓P	P	11 16 14.6	+0.6
KOLS	Kolonicke sedl	81.58	320	*e*P	P	11 16 15.7	+1.1
KOLS				pmax	pmax		
	comp=Z,21nm,1.0s						
KOLS	Kolonicke sedl	81.58	320	*e*P	P	11 16 15.7	+1.1
TSUM	Tsumeb	81.77	251	LR	LR	11 49 38.0	
	comp=Z,160nm,19.3s,baz=152,slow=33						
PABE	Paberze	81.87	326	IAmb	IAmb	11 16 17.4	
	comp=Z,78nm,1.5s						
SUW	Suwalki	82.00	325	*e*P	P	11 16 16.2	-0.4
BILL	Bilibino	82.00	21	⇓*e*P	P	11 16 14.5	-1.9
BILL				pmax	pmax		
	comp=Z,5.0nm,1.4s						
FIA1	FINESS Array S	82.23	332	P	P	11 16 18.2	+0.5
FIA1				IAmb	IAmb	11 16 19.1	
	comp=Z,50nm,1.1s						
FINES	FINESS Array B	82.23	332	P	P	11 16 18.3	+0.6
FINES	FINESS Array B	82.23	332	P	P	11 16 17.8	+0.1
	comp=Z,3.5nm,0.5s,baz=113,slow=6.1,SNR=24						
	comp=Z,3.5nm,0.5s						
FINES	FINESS Array B	82.23	332	*i* P	P	11 16 18.1	+0.4
FINES				pmax	pmax		
	comp=Z,4.0nm,0.5s						
STHS	Stebnicka Huta	82.33	320	*e*P	P	11 16 19.2	+0.6
KECS	Kecovo	82.67	319	*e*P	P	11 16 21.0	+0.6
KECS				pmax	pmax		
	comp=Z,18nm,0.7s						
KECS	Kecovo	82.67	319	*e*P	P	11 16 21.0	+0.6
NIE	Niedzica	82.94	320	*e*P	P	11 16 22.4	+0.7
OJC	Ojcow	83.38	321	*e*P	P	11 16 23.2	-0.8
MORH	Mrgy, Hungar	83.60	316	⇓P	P	11 16 25.7	+0.6
VYHS	Vyhne	83.76	319	*e*P	P	11 16 26.3	+0.3
JAVC	Velka Javorina	84.58	319	*e*P	P	11 16 30.9	+0.7
ARCES	ARCESS Array B	84.63	340	P	P	11 16 30.5	+0.6
ARCES	ARCESS Array B	84.63	340	P	P	11 16 30.0	+0.1
	comp=Z,5.6nm,0.4s,baz=101,slow=5.3,SNR=103						
	comp=Z,5.6nm,0.4s						
ARCES	ARCESS Array B	84.63	340	P	P	11 16 30.5	+0.6
ARCES				pmax	pmax		
	comp=Z,88nm,1.8s						
MORC	Moravsky Berou	84.77	320	*e*P	P	11 16 31.3	+0.2
MODS	Modra-Piesok	84.78	319	*e*P	P	11 16 30.9	-0.2
CEL	Celeste	84.81	308	IAmb	IAmb	11 16 34.0	
	comp=Z,25nm,1.3s						
ACER	Acerenza	84.98	311	P	P	11 16 32.8	+0.4
KRUC	Moravsky	85.43	319	*e*P	P	11 16 33.9	-0.5
KSP	Ksiaz	85.68	321	*e*P	P	11 16 36.0	+0.4
BLEU	Blekinge	86.53	326	*i* P	P	11 16 40.0	+0.4
ADK	Adak	86.78	38	P	P	11 16 41.0	+0.1
PRED	Cave del Predi	87.12	316	IAmb	IAmb	11 16 44.3	
	comp=Z,20nm,1.4s						
BRG	Berggiesshubel	87.17	321	*e*P	P	11 16 43.6	+0.7
	comp=Z,20nm,1.6s,baz=93,slow=4.8						
BRG	Berggiesshubel	87.17	321	*e*P	P	11 16 43.4	+0.5
BRG				Amp		11 16 44.9	
	comp=Z,4.9nm,1.0s						
GEC2	GERESS Array S	87.18	319	*e*P	P	11 16 43.7	+0.5
	comp=Z,12nm,1.2s,baz=93,slow=4.8						
GERES	GERESS Array B	87.18	319	P	P	11 16 43.6	+0.5
	comp=Z,4.1nm,0.3s,baz=122,slow=5.0,SNR=4.6						
	comp=Z,4.1nm,0.3s						
KHC	Kasperske Hory	87.28	319	c*e*P	P	11 16 43.6	+0.1
KHC				pmax	pmax		
	comp=Z,15nm,2.5s						
RUE	Ruedersdorf	87.38	322	*e*P	P	11 16 44.4	+0.6
	comp=Z,30nm,0.5s,baz=93,slow=4.8						
DEL	Delary	87.62	326	*i* P	P	11 16 45.5	+0.7
RJOB	Jochberg	87.72	318	*e*P	P	11 16 45.4	-0.3
	comp=Z,4.6nm,1.0s,baz=93,slow=4.8						
WET	Wettzell	87.74	319	*e*P	P	11 16 46.3	+0.6
	comp=Z,12nm,1.3s,baz=93,slow=4.8						
CLL	Collm	87.79	321	*i* P	P	11 16 46.2	+0.4
CLL				pmax	pmax		
	comp=Z,11nm,1.2s						
CLL	Collm	87.79	321	*e*P	P	11 16 46.2	+0.4
	comp=Z,16nm,1.5s,baz=93,slow=4.8						
CLL	Collm	87.79	321	*i* P	P	11 16 46.2	+0.4
	comp=Z,11nm,1.2s						
CLL				*e*PP	PP	11 20 13.0	+0.8
RGN	Rugen	87.80	324	*e*P	P	11 16 47.6	+1.9
	comp=Z,19nm,0.8s,baz=93,slow=4.8						
LUNU	Lund	87.80	326	*i* P	P	11 16 46.5	+0.8
HFS	Hagfors	87.98	330	P	P	11 16 47.2	+0.6
	comp=Z,5.5nm,0.5s,baz=111,slow=6.5,SNR=19						
	comp=Z,5.5nm,0.5s						
TANN	Tannenbergstha	88.08	320	*e*P	P	11 16 47.7	+0.4
	comp=Z,6.8nm,1.1s,baz=93,slow=4.8						
ROTZ	Rotzenmuhle	88.21	320	*e*P	P	11 16 48.7	+0.8
	comp=Z,1.2nm,1.0s,baz=93,slow=4.8						
FABU	Falkenberg	88.29	327	*i* P	P	11 16 48.8	+0.8
MANZ	Manzenberg	88.29	320	*e*P	P	11 16 49.0	+0.7
	comp=Z,2.2nm,1.0s,baz=93,slow=4.8						
BORU	Boraas	88.30	328	*i* P	P	11 16 48.3	+0.3
ATKA	Atka Island	88.34	38	P	P	11 16 49.0	+0.6
CTI	Castel Tesino	88.43	316	IAmb	IAmb	11 16 51.1	
	comp=Z,32nm,1.5s						
WTTA	Wattenberg	88.48	317	*i* P	P	11 16 49.2	-0.3
	comp=Z,3.7nm,0.5s						
WATA	Walderalm	88.53	317	*i* P	P	11 16 49.6	-0.1
	comp=Z,2.6nm,0.5s						
NEUB	Neuenburg	88.55	321	*e*P	P	11 16 49.7	+0.3
	comp=Z,15nm,1.0s,baz=93,slow=4.8						
MOX	Moxa	88.63	320	*e*P	P	11 16 50.6	+0.7
	comp=Z,10nm,1.2s,baz=93,slow=4.8						
MOX				*e*L	L	12 28 25.7	
	comp=Z,180nm,21.1s						
ONAU	Onsala	88.74	327	*i* P	P	11 16 50.9	+0.7
FUR	Furstenfeldbru	88.76	318	*e*P	P	11 16 49.5	-1.0
	comp=Z,15nm,0.6s,baz=93,slow=4.8						
SQTA	Sankt Quirin	88.78	317	*i* P	P	11 16 50.5	-0.2
	comp=Z,5.9nm,0.8s						
GRF	Grafenberg Arr	88.85	320	*e*P	P	11 16 51.8	+0.9
	comp=Z,7.6nm,0.7s,baz=93,slow=4.8						
GRF				*e*L	L	12 25 08.4	
	comp=Z,230nm,20.4s						
MOTA	Moosalm	88.85	317	*i* P	P	11 16 51.2	+0.1
	comp=Z,8.9nm,1.3s						
SPB2	Spitsbergen Ar	88.86	348	IAmb	IAmb	11 16 51.5	
	comp=Z,17nm,0.7s						
SPITS	Spitsbergen Ar	88.86	348	P	P	11 16 50.4	0.0
	comp=Z,6.8nm,0.5s,baz=100,slow=8.0,SNR=38						
	comp=Z,6.8nm,0.5s						
GORT1	Trebel	88.91	323	*e*P	P	11 16 51.6	+0.6
	comp=Z,7.8nm,0.8s,baz=93,slow=4.8						
FLTG	Flechtingen	88.93	322	*e*P	P	11 16 51.1	-0.1
	comp=Z,5.7nm,0.7s,baz=93,slow=4.8						
NORES	NORESS Array B	89.08	331	P	P	11 16 52.8	+1.1
RETA	Reutte	89.09	317	*i* P	P	11 16 52.4	+0.2
	comp=Z,2.7nm,0.5s						
FETA	Feichten	89.10	317	*e*P	P	11 16 51.7	-0.7
	comp=Z,4.5nm,1.2s						
NOA	NORSAR Array B	89.26	331	P	P	11 16 53.3	+0.7
	comp=Z,3.2nm,1.0s,baz=93,slow=5.6,SNR=5.9						
	comp=Z,3.2nm,1.0s						
ASSE	Asse, Remlinge	89.27	322	*e*P	P	11 16 53.4	+0.7
	comp=Z,26nm,1.3s,baz=93,slow=4.8						
FUORN	Ofenpass-Fuorn	89.41	316	IAmb	IAmb	11 16 56.1	
	comp=Z,27nm,1.4s						
BSEG	Bad Segeberg	89.53	324	*e*P	P	11 16 55.1	+1.2
	comp=Z,12nm,0.8s,baz=93,slow=4.8						
UBR	Ueberruh	89.53	317	*e*P	P	11 16 54.3	+0.1
	comp=Z,5.6nm,1.0s,baz=93,slow=4.8						
QSPA	South Pole Qui	89.57	180	P	P	11 16 55.9	+1.8
	comp=Z,1.7nm,0.6s,baz=292,slow=1.8,SNR=20						
QSPA				LR	LR	11 53 27.6	
	comp=Z,197nm,19.8s,baz=10.0,slow=33						
	comp=Z,1.7nm,0.6s						
NRDL	Niedersach Rie	89.63	322	*e*P	P	11 16 55.7	+1.4
	comp=Z,35nm,1.3s,baz=93,slow=4.8						
UBBA	Unterbreizbach	89.66	321	*e*P	P	11 16 55.3	+0.8
	comp=Z,4.0nm,0.8s,baz=93,slow=4.8						
DAVOX	Davos/Dischmat	89.67	317	P	P	11 16 56.0	+1.0
	comp=Z,8.1nm,0.5s,baz=130,slow=4.0,SNR=14						
	comp=Z,8.1nm,0.5s						
DAVA	Damuels	89.68	317	*i* P	P	11 16 55.5	+0.4
	comp=Z,13nm,0.9s						
GTTG	Gottingen	89.70	321	*e*P	P	11 16 55.8	+1.0
	comp=Z,11nm,0.7s,baz=93,slow=4.8						
KEST	Kesra	89.94	306	P	P	11 16 58.0	+1.5
	comp=Z,9.9nm,1.1s,baz=136,slow=5.4,SNR=4.1						
	comp=Z,9.9nm,1.1s						
GAMB	Gambell	90.03	26	P	P	11 16 55.5	-0.5
	baz=269						
TUE	Stuetta	90.04	316	IAmb	IAmb	11 16 59.2	
	comp=Z,16nm,1.6s						
RETH	Rethem/Aller,	90.08	323	*e*P	P	11 16 57.3	+0.8
	comp=Z,19nm,1.3s,baz=93,slow=4.8						
TNS	Taunus Mts	90.65	320	*e*P	P	11 17 00.2	+0.8
	comp=Z,31nm,1.3s,baz=93,slow=4.8						
KASTN	Kahler Asten	90.67	321	*e*P	P	11 17 00.3	+0.9
	comp=Z,12nm,1.1s,baz=93,slow=4.8						
SPIA	Saint Paul Isl	90.73	33	P	P	11 16 59.0	-0.5
	baz=270						
BFO	Black Forest	90.73	318	P	P	11 16 60.0	+0.2
BFO				IAmb	IAmb	11 17 01.2	
	comp=Z,18nm,1.3s						
BFO	Black Forest	90.73	318	P	P	11 17 00.0	+0.2
BFO				pmax	pmax		
	comp=Z,18nm,1.3s						
BFO	Black Forest	90.73	318	*e*P	P	11 16 59.9	+0.2
	comp=Z,7.2nm,0.9s,baz=93,slow=4.8						
IBBN	Ibbenburen	91.07	322	*e*P	P	11 17 01.9	+0.8
	comp=Z,16nm,1.0s,baz=93,slow=4.8						
P08K	Saint George I	91.12	34	P	P	11 17 00.9	-0.4
	baz=271						
BUG	Bochum--Univer	91.38	321	*e*P	P	11 17 03.5	+0.9
	comp=Z,16nm,1.1s,baz=93,slow=4.8						
SENIN	Lac Senin/Sane	91.45	316	IAmb	IAmb	11 17 06.5	
	comp=Z,19nm,1.6s						
ECH	Echery	91.52	318	IAmb	IAmb	11 17 05.0	
	comp=Z,8.0nm,1.0s						
NIKH	Nikolski High	91.60	37	P	P	11 17 03.7	+0.1
NIKH	Nikolski High	91.60	37	P	P	11 17 03.3	-0.4
	baz=272						
TNA	Tin City	91.63	25	P	P	11 17 04.0	+0.6
	baz=273						
WLF	Walferdange	92.14	320	*e*P	P	11 17 07.3	+1.1
	comp=Z,6.4nm,0.8s,baz=93,slow=4.8						
F14K	Arctic Creek	92.30	25	P	P	11 17 06.6	+0.1
	baz=274						
C16K	Lisburne Hills	92.46	22	P	P	11 17 07.6	+0.4
	baz=275						
M11K	Mekoryuk	92.71	30	P	P	11 17 08.1	-0.4
	baz=274						
ANM	Nome	92.77	25	P	P	11 17 08.0	-0.8
	baz=275						
UNV	Unalaska Valle	92.97	36	P	P	11 17 09.1	-0.8
	baz=273						
F15K	North Star Dit	92.97	24	P	P	11 17 08.9	-0.8
	baz=276						
C17K	DeLong Mountai	93.24	21	P	P	11 17 10.1	-0.8
	baz=277						
K13K	Kusilvak Mount	93.33	28	IAmb	IAmb	11 17 14.3	
	comp=Z,28nm,1.4s						
K13K	Kusilvak Mount	93.33	28	P	P	11 17 10.8	-0.6
	baz=275						
SNAA	Sanae	93.36	198	P	P	11 17 13.5	+2.1
	comp=Z,0.5nm,0.9s,baz=106,slow=2.1,SNR=1.3						
SNAA				LR	LR	11 53 59.4	
	comp=Z,114nm,18.9s,baz=356,slow=32						
D17K	Noatak River	93.37	22	P	P	11 17 11.0	-0.5
	baz=277						
AKUT	Akutan	93.38	36	P	P	11 17 12.5	+0.7
B18K	Kokolik River	93.61	21	P	P	11 17 11.9	-0.6
	baz=278						
A19K	Wainwright	93.73	20	P	P	11 17 12.8	-0.2
	baz=279						
J14K	Nanvaranak Lak	93.76	27	P	P	11 17 12.7	-0.7
	baz=276						
C18K	Utukok River	93.93	21	P	P	11 17 13.1	-1.1
	baz=279						
E17K	Hotham Inlet	93.93	23	P	P	11 17 13.0	-1.1
	baz=278						
G16K	Koyuk River	93.96	25	P	P	11 17 13.4	-0.8
	baz=278						
H16K	Elim	94.11	25	P	P	11 17 14.1	-0.8
	baz=278						
M13K	Dall Lake	94.12	30	P	P	11 17 14.6	-0.4
	baz=276						
L14K	Kuka Creek	94.33	29	IAmb	IAmb	11 17 18.6	
	comp=Z,15nm,0.8s						
L14K	Kuka Creek	94.33	29	P	P	11 17 15.5	-0.5
	baz=277,SNR=8.6						
E18K	Tukpahlearik C	94.35	22	P	P	11 17 15.1	-0.9
	baz=280						
C19K	Lookout Ridge	94.43	21	IAmb	IAmb	11 17 18.7	
	comp=Z,12nm,1.1s						
C19K	Lookout Ridge	94.43	21	P	P	11 17 15.0	-1.4
	baz=281						
G17K	Kiwalik Mounta	94.64	24	P	P	11 17 16.4	-1.0
	baz=279,SNR=5.7						
FALS	False Pass	94.69	35	P	P	11 17 16.7	-1.1
	baz=276						
K15K	Wolf Creek Mou	94.75	28	P	P	11 17 16.9	-1.0
	baz=278						
M14K	Bethel	94.76	29	P	P	11 17 16.4	-1.6
	baz=278,SNR=6.6						
L15K	Ungalak Mounta	94.86	28	P	P	11 17 16.7	-1.7
	baz=278						
F18K	Selawik	94.86	23	P	P	11 17 16.5	-1.8
	baz=280,SNR=8.2						
I17K	Unalakleet	94.89	26	P	P	11 17 17.4	-1.1
	baz=279						
A21K	Barrow	94.95	18	P	P	11 17 17.8	-0.8
	baz=284						
N14K	Kuskokwak Cree	95.01	30	P	P	11 17 19.7	+0.6
N14K	Kuskokwak Cree	95.01	30	P	P	11 17 17.6	-1.5
	baz=278						
J16K	Anvik River	95.02	27	P	P	11 17 17.8	-1.3
	baz=279						
H17K	Granite Mounta	95.05	25	IAmb	IAmb	11 17 20.6	
	comp=Z,32nm,1.6s						
H17K	Granite Mounta	95.05	25	P	P	11 17 17.6	-1.7
	baz=280						
D19K	Kuna River	95.07	21	IAmb	IAmb	11 17 21.0	
	comp=Z,7.8nm,0.8s						
D19K	Kuna River	95.07	21	P	P	11 17 17.5	-1.9
	baz=282,SNR=5.2						
B20K	Meade River	95.08	20	P	P	11 17 17.3	-2.0
	baz=283						
O14K	Tigyukauivet M	95.31	31	P	P	11 17 18.4	-2.2
	baz=278						
S12K	Black Hills	95.36	34	P	P	11 17 19.5	-1.4
	baz=277						
M15K	Kasigluk River	95.39	29	P	P	11 17 20.2	-0.7
	baz=279,SNR=7.8						
G18K	Tagagawik	95.39	24	P	P	11 17 19.8	-1.0
	baz=281						
F19K	Shaleruckik Mo	95.55	23	P	P	11 17 20.5	-1.0
	baz=282						
A22K	Sinclair Lake	95.55	18	P	P	11 17 20.5	-0.9
	baz=285						
D20K	Etivluk River	95.56	21	IAmb	IAmb	11 17 23.3	
	comp=Z,18nm,1.1s						
D20K	Etivluk River	95.56	21	P	P	11 17 20.7	-0.9
	baz=283,SNR=8.2						
E19K	Redstone River	95.62	22	IAmb	IAmb	11 17 23.4	
	comp=Z,6.6nm,0.8s						
E19K	Redstone River	95.62	22	P	P	11 17 20.0	-1.8
	baz=283,SNR=6.8						
H18K	Honhosa River	95.65	24	IAmb	IAmb	11 17 23.2	
	comp=Z,6.9nm,0.8s						
H18K	Honhosa River	95.65	24	P	P	11 17 20.9	-1.2
	baz=281						
J17K	VABM Dome	95.68	26	P	P	11 17 20.4	-1.7
	baz=280						
N15K	Kwethluk River	95.76	30	IAmb	IAmb	11 17 24.7	
	comp=Z,9.0nm,0.9s						
N15K	Kwethluk River	95.76	30	P	P	11 17 20.6	-2.0
	baz=279						
L16K	Owhat River	95.80	28	IAmb	IAmb	11 17 24.7	
	comp=Z,21nm,1.2s						
L16K	Owhat River	95.80	28	P	P	11 17 21.3	-1.4
	baz=280,SNR=6.7						
E20K	Nigu River	95.82	21	P	P	11 17 20.6	-2.2
	baz=284,SNR=12						
G19K	Purcell Mounta	95.96	23	IAmb	IAmb	11 17 25.1	
	comp=Z,7.2nm,0.9s						
G19K	Purcell Mounta	95.96	23	P	P	11 17 21.8	-1.6
	baz=283,SNR=5.9						
B21K	Ikpikpuk River	96.03	20	P	P	11 17 21.8	-1.8
	baz=285						
O15K	Ungalikthiuk R	96.06	31	P	P	11 17 21.4	-2.6
	baz=279						
C21K	Knifeblade Rid	96.10	20	P	P	11 17 21.6	-2.4
	baz=285						
K17K	Iditarod	96.16	27	P	P	11 17 22.2	-2.1
	baz=281,SNR=7.8						
M16K	Timber Creek	96.17	29	P	P	11 17 22.7	-1.7
	baz=280						
B22K	Teshekpuk Lake	96.23	19	P	P	11 17 22.8	-1.7
	baz=286						
L17K	Donlin	96.27	27	P	P	11 17 23.6	-1.3
	baz=281,SNR=5.4						
F20K	Avaraart Lake	96.28	22	P	P	11 17 23.1	-1.7
	baz=284						
SDPT	Sand Point	96.30	34	P	P	11 17 25.1	0.0
SDPT	Sand Point	96.30	34	P	P	11 17 23.5	-1.6
	baz=278						
GCSA	Galena City Sc	96.36	25	P	P	11 17 24.3	-0.9
	baz=283						
H19K	Roundabout Mou	96.36	24	P	P	11 17 23.8	-1.3
	baz=283,SNR=16						
N16K	Nishlik Lake	96.36	29	P	P	11 17 23.8	-1.5
	baz=280,SNR=7.2						
E21K	Killik River	96.57	21	P	P	11 17 24.8	-1.4
	baz=286						
S14K	Fog Glacier	96.67	33	P	P	11 17 25.3	-1.7
	baz=279						
J18K	Innoko River	96.71	26	IAmb	IAmb	11 17 28.5	
	comp=Z,6.9nm,0.8s						
J18K	Innoko River	96.71	26	P	P	11 17 26.0	-0.9
	baz=283,SNR=6.6						
M17K	Holitna River	96.82	28	P	P	11 17 26.3	-1.0
	baz=282,SNR=5.6						
O16K	Kokwok River B	96.86	30	P	P	11 17 26.5	-1.0
	baz=281						
CHNA	Chernabura Isl	96.89	35	P	P	11 17 26.9	-0.9
	baz=279						
D22K	Ayikyak River	96.90	20	P	P	11 17 26.1	-1.5
	baz=287						
L18K	Granite Mounta	96.99	27	IAmb	IAmb	11 17 30.3	
	comp=Z,13nm,1.2s						
L18K	Granite Mounta	96.99	27	P	P	11 17 27.0	-1.1
	baz=283,SNR=7.7						
H20K	Anotleneega Mo	97.00	24	P	P	11 17 27.3	-0.9
	baz=285,SNR=12						
P16K	Nushagak River	97.02	31	P	P	11 17 27.2	-1.0
	baz=281						
J19K	Poorman	97.06	25	IAmb	IAmb	11 17 30.4	
	comp=Z,9.3nm,1.0s						
J19K	Poorman	97.06	25	P	P	11 17 27.5	-0.9
	baz=284,SNR=5.7						
F21K	Alatna River	97.09	22	P	P	11 17 26.0	-2.5
	baz=286						
N17K	Nushagak Hills	97.12	29	P	P	11 17 26.9	-1.9
	baz=282						
TORD	Torodi Ar. Bea	97.20	283	P	Pdif	11 17 30.7	+0.5
	comp=Z,0.6nm,0.8s,baz=104,slow=6.6,SNR=1.0						
G21K	Allakaket	97.27	23	P	P	11 17 28.2	-1.1
	baz=286,SNR=18						
C23K	Itkillik River	97.30	19	P	P	11 17 28.8	-0.6
	baz=289						
O17K	Koliganek Bris	97.32	30	P	P	11 17 27.8	-1.8
	baz=282						
IMAR	Indian Mountai	97.32	23	P	Pdif	11 17 29.6	0.0
I20K	Naaghedeneel	97.34	24	P	P	11 17 27.9	-1.8
	baz=285						
E22K	Anaktuvuk Pass	97.43	21	IAmb	IAmb	11 17 31.2	
	comp=Z,13nm,1.5s						
E22K	Anaktuvuk Pass	97.43	21	P	P	11 17 27.9	-2.2
	baz=288						
F22K	John River	97.49	22	P	P	11 17 28.6	-1.7
	baz=287						
R16K	Pilot Point	97.51	32	P	P	11 17 28.8	-1.8
	baz=281						
M18K	Stony River	97.55	28	P	P	11 17 29.5	-1.2
	baz=283						
D23K	Nanushuk River	97.56	20	P	P	11 17 29.3	-1.3
	baz=289						
J20K	Nowinta River	97.64	25	IAmb	IAmb	11 17 33.2	
	comp=Z,7.7nm,0.9s						
J20K	Nowinta River	97.64	25	P	P	11 17 29.2	-1.8
	baz=285,SNR=8.2						
N18K	Kilae Creek	97.71	29	IAmb	IAmb	11 20 03.9	
	comp=Z,23nm,1.6s						
N18K	Kilae Creek	97.71	29	P	P	11 17 29.9	-1.6
	baz=283						
P17K	Kvichak River	97.77	30	P	P	11 17 29.9	-1.8
	baz=282						
H21K	Melozitna Rive	97.79	23	IAmb	IAmb	11 17 33.8	
	comp=Z,9.3nm,0.9s						
H21K	Melozitna Rive	97.79	23	P	P	11 17 30.0	-1.7
	baz=286,SNR=12						
L19K	White Mountain	97.84	27	IAmb	IAmb	11 17 46.0	
	comp=Z,24nm,1.9s						
L19K	White Mountain	97.84	27	P	P	11 17 30.2	-1.8
	baz=284						
K20K	Telida	97.89	26	P	P	11 17 30.6	-1.5
	baz=285						
G22K	Bettles	97.91	22	P	P	11 17 30.6	-1.6
	baz=288						
C24K	Franklin Bluff	97.97	19	P	P	11 17 30.7	-1.6
	baz=291						
TOLK	Toolik Lake Re	98.05	20	P	P	11 17 31.8	-1.1
	baz=290						
M19K	Big River Lodg	98.12	27	IAmb	IAmb	11 17 35.7	
	comp=Z,15nm,1.4s						
M19K	Big River Lodg	98.12	27	P	P	11 17 31.2	-2.0
	baz=285						
D24K	Happy Valley	98.13	20	P	P	11 17 31.8	-1.3
	baz=291						
L20K	Farewell, AK	98.20	27	P	P	11 17 32.0	-1.6
	baz=285						
O18K	Koktuh Hills	98.23	29	P	P	11 17 31.6	-2.2
	baz=284						
E23K	Chandalar	98.23	21	IAmb	IAmb	11 17 36.0	
	comp=Z,19nm,1.7s						
E23K	Chandalar	98.23	21	P	P	11 17 32.3	-1.5
	baz=290						
Q17K	Contact Creek	98.25	31	P	P	11 17 32.0	-2.0
	baz=283						
H22K	Ishtalitna Cre	98.28	23	P	P	11 17 32.0	-1.9
	baz=288,SNR=9.2						
COLD	Coldfoot	98.30	22	P	P	11 17 32.5	-1.5
	baz=289						
P18K	Big Mountain,	98.33	30	P	P	11 17 32.7	-1.5
	baz=284						
N19K	Bonanza Creek	98.35	28	IAmb	IAmb	11 17 36.3	
	comp=Z,9.8nm,0.8s						
N19K	Bonanza Creek	98.35	28	P	P	11 17 32.6	-1.8
	baz=284,SNR=6.1						
CHUM	Lake Minchumin	98.50	25	P	P	11 17 33.5	-1.4
	baz=287						
G23K	Bananza Creek	98.54	22	IAmb	IAmb	11 17 37.8	
	comp=Z,11nm,1.4s						
G23K	Bananza Creek	98.54	22	P	P	11 17 33.6	-1.5
	baz=289						
O19K	Port Alsworth	98.58	29	P	P	11 17 33.7	-1.6
	baz=284						
Q18K	Katmai Hardscr	98.61	31	P	P	11 17 33.9	-1.8
	baz=284						
E24K	Your Creek	98.63	21	P	P	11 17 34.1	-1.3
	baz=291						
M20K	Styx River	98.70	27	P	P	11 17 34.0	-1.9
	baz=286						
CAST	Castle Rocks	98.73	26		Pdif	11 17 36.0	0.0

CAST				IAmb	IAmb	11 17 39.0	
	comp=Z,8.4nm,1.2s						
CAST	Castle Rocks	98.73	26	P	P	11 17 33.6	-2.4
	baz=287						
MLY	Manley	98.80	24	IAmb	IAmb	11 17 37.5	
	comp=Z,10nm,1.5s						
MLY	Manley	98.80	24	P	P	11 17 34.0	-2.3
	baz=288						
PPLA	Purkeypile	98.84	26	P	P	11 17 34.0	-2.6
	baz=287						
D25K	Kavik River	98.87	19	P	P	11 17 34.3	-2.2
	baz=293						
CHIR	Chirikof Islan	98.93	33	P	P	11 17 33.8	-3.2
	baz=283						
BPAW	Bear Paw Mtn.	98.99	25		P	11 17 36.1	-1.0
BPAW				IAmb	IAmb	11 17 38.8	
	comp=Z,8.8nm,1.0s						
BPAW	Bear Paw Mtn.	98.99	25	P	P	11 17 34.5	-2.6
	baz=288						
H23K	Yukon River	99.02	23	IAmb	IAmb	11 17 39.4	
	comp=Z,6.0nm,1.1s						
H23K	Yukon River	99.02	23	P	Pdif	11 17 33.7	-3.5
	baz=290						
F24K	Squaw Lake	99.04	21	P	Pdif	11 17 34.9	-2.4
	baz=291						
C26K	Camden Bay	99.10	18	P	Pdif	11 17 35.2	-2.3
	baz=295						
R18K	Karluk	99.16	32	P	Pdif	11 17 35.4	-2.5
	baz=284						
Q19K	Cape Douglas,	99.23	30	P	Pdif	11 17 35.0	-3.3
	baz=285						
P19K	Oil Pt	99.25	29	P	Pdif	11 17 35.4	-3.0
	baz=285						
N20K	Mount Spurr	99.31	28	P	Pdif	11 17 35.2	-3.5
	baz=286						
SPCR	Spurr Chakacha	99.31	28	P	Pdif	11 17 35.2	-3.4
	baz=286						
I23K	Minto, Yukon-K	99.32	23	P	Pdif	11 17 35.1	-3.4
	baz=290						
SKT	Skwentna	99.40	27	P	Pdif	11 17 36.0	-3.0
	baz=287						
O20K	Slope Mountain	99.43	29	P	Pdif	11 17 35.2	-4.0
	baz=286						
TRF	Thorofare Moun	99.49	25	P	Pdif	11 17 35.1	-4.5
	baz=288						
G24K	Hadweenzic Riv	99.49	22	P	Pdif	11 17 35.5	-3.7
	baz=292						
SII	Sitkinak Islan	99.54	33	P	Pdif	11 17 35.2	-4.5
	baz=284						
C27K	Jago River	99.60	18	P	Pdif	11 17 35.1	-4.6
	baz=296						
NEA2	Nenana	99.62	24	P	Pdif	11 17 35.5	-4.5
	baz=290						
E25K	Arctic Village	99.62	20	P	Pdif	11 17 35.5	-4.3
	baz=294						
H24K	Noodor Dome	99.66	23	P	Pdif	11 17 35.7	-4.4
	baz=291						
F25K	Christian Rive	99.81	21	P	Pdif	11 17 36.0	-4.7
	baz=294						
SUA	Susitna One	99.91	27	P	Pdif	11 17 36.8	-4.5
	baz=288						
CAPN	Captain Cook N	99.93	28	P	Pdif	11 17 37.2	-4.1
	baz=287						
Q20K	Shuyak Island	99.94	30	P	Pdif	11 17 37.0	-4.4
	baz=286						
MCK	McKinley	99.97	25	P	Pdif	11 17 36.9	-4.6
	baz=290						
G25K	Bearman Lake	99.97	21	P	Pdif	11 17 36.8	-4.6
	baz=293						
COLA	College	100.01	23	P	Pdif	11 17 37.3	-4.3
	baz=291						
HOM	Homer	100.02	29	P	Pdif	11 17 37.1	-4.6
	baz=287						
KDAK	Kodiak Island	100.07	31	P	Pdif	11 17 37.0	-5.0
	baz=286						
POKR	Poker Plat Res	100.09	23	P	Pdif	11 17 37.7	-4.2
	baz=291						
M22K	Willow	100.10	27	P	Pdif	11 17 37.5	-4.6
	baz=288						
ESDC	Sonseca Array	100.22	310	P	Pdif	11 17 42.2	-1.0
	comp=Z,0.3nm,0.5s,baz=76,slow=3.7,SNR=2.1						
H25L	Birch Creek	100.27	22	P	Pdif	11 17 38.0	-4.7
	baz=293						
F26K	Sheenjek River	100.29	20	P	Pdif	11 17 38.3	-4.6
	baz=295						
BRSE	Bradley Lake S	100.44	29	P	Pdif	11 17 38.3	-5.4
	baz=288						
ILAR	Eielson Array	100.44	23	P	Pdif	11 17 43.7	+0.2
	comp=Z,0.2nm,0.6s,baz=279,slow=5.0,SNR=2.3						
ILAR				PP	PP	11 21 47.9	-2.4
	comp=Z,0.2nm,0.6s,baz=323,slow=8.4,SNR=4.1						
ILAR				PKKP	PKKPbc	11 33 59.6	-2.2
	comp=Z,0.2nm,0.6s,baz=133,slow=1.5,SNR=4.9						
WAT1	Susitna Watana	100.44	26	P	Pdif	11 17 39.4	-4.2
	baz=290						
RC01	Rabbit Creek A	100.49	27	P	Pdif	11 17 40.0	-3.8
	baz=289						
HDA	Harding Lake	100.55	24	P	Pdif	11 17 40.4	-3.6
	baz=292						
PMR	Palmer	100.60	27	P	Pdif	11 17 40.1	-4.1
	baz=289						
D27M	Malcolm River	100.64	18	P	Pdif	11 17 39.9	-4.5
	baz=298						
PRP	Porcupine Dome	100.68	23	P	Pdif	11 17 39.5	-5.2
	baz=293						
O22K	Cooper Landing	100.69	28	P	Pdif	11 17 40.1	-4.6
	baz=289						
G26K	Porcupine Rive	100.73	21	P	Pdif	11 17 40.3	-4.4
	baz=295						
DHY	Denali Highway	100.86	25	P	Pdif	11 17 40.8	-4.8
	baz=291						
WAT6	Susitna Watana	100.88	26	P	Pdif	11 17 41.6	-4.2
	baz=291						
SML	Sawmill	100.89	27	P	Pdif	11 17 40.9	-4.7
	baz=290						
E27K	Coleen River	100.94	19	P	Pdif	11 17 41.3	-4.4
	baz=298						
SEW	Seward	100.94	28	P	Pdif	11 17 41.7	-4.1
	baz=289						
KNK	Knik Glacier	100.97	27	P	Pdif	11 17 41.5	-4.5
	baz=290						
J25K	Salcha River,	101.10	23	P	Pdif	11 17 42.8	-3.8
	baz=293						
PWL	Port Wells	101.21	27	P	Pdif	11 17 43.3	-3.8
	baz=290						
K24K	Donnelly Dome	101.25	24	P	Pdif	11 17 43.7	-3.5
	baz=293						
SCM	Sheep Creek Mo	101.33	26	P	Pdif	11 17 44.1	-3.5
	baz=291						
E28M	Babbage River	101.41	19	P	Pdif	11 17 44.4	-3.3
	baz=300						
G27K	Doyon Strip	101.55	21	P	Pdif	11 17 45.1	-3.4
	baz=297						
RIDG	Independent Ri	101.66	24	P	Pdif	11 17 45.8	-3.2
	baz=294						
I26K	Coal Creek Min	101.67	22	P	Pdif	11 17 45.5	-3.5
	baz=296						
PAX	Paxson	101.70	25	P	Pdif	11 17 46.1	-3.2
	baz=293						
M24K	Tolsona, Glenn	101.73	26	P	Pdif	11 17 46.4	-3.1
	baz=292						
GLI	Glacier Island	101.77	27	P	Pdif	11 17 45.8	-3.8
	baz=291						
F28M	Old Crow	101.78	20	P	Pdif	11 17 45.8	-3.7
	baz=299						
J26L	Joseph Creek	101.86	23	P	Pdif	11 17 46.3	-3.6
	baz=295						
H27K	Steamboat Moun	101.86	21	P	Pdif	11 17 45.9	-4.0
	baz=297						
SCRK	Sand Creek	101.91	24	P	Pdif	11 17 46.8	-3.5
	baz=294						
P23K	Montague Islan	101.94	28	P	Pdif	11 17 46.2	-4.1
	baz=291						
E29M	Blow River	102.04	18	P	Pdif	11 17 46.3	-4.2
	baz=301						
HARP	HAARP	102.06	25	P	Pdif	11 17 46.7	-4.1
	baz=293						
KLU	Klutina	102.08	26	P	Pdif	11 17 47.0	-4.0
	baz=292						
I27K	Kandik River	102.11	22	P	Pdif	11 17 47.2	-3.8
	baz=297						
MVO	Moncorvo	102.29	312	*e*LR	LR	12 11 13.2	
MVO				*i* AMs_20		12 13 50.5	
	comp=Z,185nm,22.0s						
EYAK	Cordova Ski Ar	102.51	27	P	Pdif	11 17 48.8	-4.0
	baz=292						
L26K	Log Cabin Wild	102.57	24	P	Pdif	11 17 49.6	-3.5
	baz=295						
N25K	Chitina, Valde	102.62	26	P	Pdif	11 17 49.4	-4.0
	baz=293						
Q23K	Middleton Isla	102.65	28	P	Pdif	11 17 50.3	-3.1
	baz=291						
K27K	Chicken	102.65	23	P	Pdif	11 17 50.7	-2.6
	baz=296						
G29M	Pine Creek	102.76	20	P	Pdif	11 17 49.7	-4.1
	baz=301						
I28M	Miner Creek	102.81	22	P	Pdif	11 17 50.4	-3.8
	baz=299						
MTE	Manteigas	102.81	311	*e*LR	LR	12 11 10.0	
MTE				*i* AMs_20		12 17 58.3	
	comp=Z,266nm,18.0s						
BMRM	Bremner River	102.87	27	P	Pdif	11 17 51.2	-3.3
	baz=293						
PMRV	Marv??o	102.87	310	*e*LR	LR	12 11 52.1	
PMRV				*i* AMs_20		12 22 47.0	
	comp=Z,261nm,18.0s						
M26K	Nabesna, AK	102.98	25	P	Pdif	11 17 52.2	-2.7
	baz=295						
H29M	Whitestone	102.99	21	P	Pdif	11 17 51.7	-3.2
	baz=300						
PGAV	Gavieira, Arco	103.05	313	*e*LR	LR	12 10 15.9	
PGAV				*i* AMs_20		12 14 45.4	
	comp=Z,263nm,22.0s						
F30M	Barrier River	103.12	19	P	Pdif	11 17 52.3	-3.1
	baz=303						
L27K	Beaver Creek,	103.18	24	P	Pdif	11 17 53.2	-2.6
	baz=296						
A36M	Sachs Harbour	103.25	13	P	Pdif	11 17 52.8	-3.0
	baz=314						
G30M	tAoh Zraii Nji	103.33	19	P	Pdif	11 17 54.2	-2.2
	baz=302						
KAIM	Kayak Island	103.36	28	P	Pdif	11 17 54.0	-2.6
	baz=293						
MCARA	McCarthy VSAT	103.40	26	P	Pdif	11 17 54.4	-2.4
	baz=295						
INK	Inuvik	103.44	18	P	Pdif	11 17 54.1	-2.7
	baz=305						
M27K	Edge Creek, AK	103.47	25	P	Pdif	11 17 54.7	-2.5
	baz=296						
EPYK	Eagle Plains	103.48	20	P	Pdif	11 17 54.5	-2.6
	baz=302						
CRQE	Cirque	103.63	27	P	Pdif	11 17 54.9	-3.1
	baz=295						
DAWY	Dawson	103.68	23	P	Pdif	11 17 56.1	-1.9
	baz=299						
BGLC	Bering Glacier	103.81	27	P	Pdif	11 17 56.8	-1.7
	baz=294						
BVCY	Beaver Creek	103.87	24	P	Pdif	11 17 56.9	-1.9
	baz=297						
F31M	Tsiigehtchic	103.87	18	P	Pdif	11 17 56.9	-1.8
	baz=305						
J29N	Klondike Camp	103.94	22	P	Pdif	11 17 57.0	-2.2
	baz=300						
G31M	Satah River	104.00	19	P	Pdif	11 17 57.2	-2.0
	baz=304						
I30M	Mount Dempster	104.21	21	P	Pdif	11 17 58.2	-2.3
	baz=302						
CTG	Chitna Glacier	104.31	26	P	Pdif	11 17 58.7	-2.3
	baz=296						
YUK3	Moose Creek	104.33	25	P	Pdif	11 17 58.8	-2.3
	baz=297						
MESA	MESA	104.39	27	P	Pdif	11 17 59.1	-2.3
	baz=296						
K29M	Barlow Dome	104.51	22	P	Pdif	11 17 58.7	-3.1
	baz=301						
J30M	Hart River	104.57	22	P	Pdif	11 17 59.0	-3.1
	baz=302						
H31M	Peel River	104.60	20	P	Pdif	11 17 59.5	-2.6
	baz=304						
L29M	L29M	104.64	23	P	Pdif	11 17 59.4	-2.9
	baz=300						
M29M	Somme Creek	104.84	24	P	Pdif	11 18 00.9	-2.4
	baz=299						
YUK8	Steele Glacier	104.85	25	P	Pdif	11 18 00.5	-3.1
	baz=298						
PINM	Pinnacle	105.19	27	P	PKiKP	11 22 15.9	-3.0
	baz=297						
YUK4	Talbot Arm	105.30	25	P	PKiKP	11 22 15.8	-3.4
	baz=299						
C36M	Paulatuk	105.39	15	P	PKiKP	11 22 16.1	-2.7
	baz=315						
YUK6	Outpost Mounta	105.61	25	P	PKiKP	11 22 16.4	-3.4
	baz=299						
PNL	Peninsula	105.77	27	P	PKiKP	11 22 16.7	-3.2
	baz=298						
O29M	Mount Kennedy	105.83	26	P	PKiKP	11 22 17.3	-2.8
	baz=299						
N30M	Aishikik Lake	105.89	24	P	PKiKP	11 22 17.3	-2.8
	baz=300						
HYT	Haines Junctio	106.04	25	P	PKiKP	11 22 17.4	-3.1
	baz=300						
N31M	Braeburn, Yuko	106.42	24	P	PKiKP	11 22 17.9	-3.1
	baz=302						
P29M	Windy Craggy	106.53	26	P	PKiKP	11 22 18.0	-3.3
	baz=299						
M31M	Drury Creek, Y	106.59	23	P	PKiKP	11 22 18.6	-2.8
	baz=303						
P30M	Million Dollar	106.62	26	P	PKiKP	11 22 18.5	-3.0
	baz=300						
O30N	Mendenhall	106.66	25	P	PKiKP	11 22 18.6	-3.0
	baz=301						
FARO	Faro, Yukon	106.98	23	P	PKiKP	11 22 19.3	-2.8
	baz=304						
PLBC	Pleasant Camp	107.22	26	P	PKiKP	11 22 19.6	-2.9
	baz=301						
WHY	Whitehorse	107.22	25	P	PKiKP	11 22 19.4	-3.3
	baz=302						
MMPY	Sheldon Lake,	107.55	22	P	PKiKP	11 22 20.2	-2.9
	baz=306						
SKAG	Skagway	107.67	26	P	PKiKP	11 22 20.7	-2.7
	baz=302						
N32M	Quiet Lake	107.69	24	P	PKiKP	11 22 20.9	-2.5
	baz=304						
R31K	City Hall, Gus	108.03	27	P	PKiKP	11 22 21.1	-2.9
	baz=301						
S31K	Pelican	108.04	27	P	PKiKP	11 22 21.0	-3.0
	baz=300						
P32M	Atlin	108.30	25	P	PKiKP	11 22 21.3	-3.3
	baz=303						
P33M	Teslin, Yukon	108.33	24	P	PKiKP	11 22 21.4	-3.3
	baz=304						
R32K	Eaglecrest	108.65	27	P	PKiKP	11 22 21.9	-3.3
	baz=302						
SIT	Sitka	108.92	28	P	PKiKP	11 22 22.8	-2.9
	baz=301						
S32K	Killisnoo	109.05	27	P	PKiKP	11 22 23.1	-2.8
	baz=302						
Q32M	Nakina River	109.26	25	P	PKiKP	11 22 23.4	-3.2
	baz=304						
TGTN	Hyland Airport	109.33	22	P	PKiKP	11 22 23.1	-3.4
	baz=309						
R33M	Jennings River	109.56	25	P	PKiKP	11 22 24.0	-3.1
	baz=306						
WRGLY	Wrigley	109.88	19	P	PKiKP	11 22 24.4	-2.9
	baz=314						
WTLY	Watson Lake, Y	110.01	23	P	PKiKP	11 22 24.5	-3.3
	baz=308						
PPT2	Papeete2	110.27	109	*e*LR	LR	11 55 08.0	
	comp=Z,102nm,25.0s						
PPT2				*e*LR	LR	11 55 10.3	
	comp=Z,129nm,25.0s						
S34M	Telegraph Cree	110.35	26	P	PKiKP	11 22 25.8	-2.6
	baz=305						
U33K	Whale Pass	110.45	28	P	PKiKP	11 22 26.0	-2.6
	baz=303						
DLBC	Dease Lake	110.52	25	P	PKiKP	11 22 25.8	-3.1
	baz=306						
WRAK	Wrangell Islan	110.65	28	P	PKiKP	11 22 26.4	-2.6
	baz=304						
CRAG	Craig	110.80	29	P	PKiKP	11 22 26.8	-2.5
	baz=302						
T35M	Bob Quinn	111.28	26	P	PKiKP	11 22 27.6	-2.7
	baz=306						
BEAVL	Fort Liard	111.40	22	P	PKiKP	11 22 27.9	-2.5
	baz=312						
V35K	Ketchikan	111.60	28	P	PKiKP	11 22 28.7	-2.1
	baz=304						
KOTAN	Kotaneelee Air	111.81	22	P	PKiKP	11 22 29.5	-1.7
	baz=313						
TOAD	Toad River Com	112.22	23	P	PKiKP	11 22 29.7	-2.4
	baz=311						
FFC	Flin Flon	123.17	14		PKPdf	11 22 53.2	+0.1
FFC	Flin Flon	123.17	14	PKIKP	PKPdf	11 22 53.2	+0.1
SCHQ	Schefferville	124.50	350	PKP	PKiKP	11 22 55.9	-0.2
	comp=Z,2.1nm,0.5s,baz=21,slow=8.6,SNR=5.7						
ULM	Lac du Bonnet	128.72	12		PKPdf	11 23 03.5	-0.4
ULM	Lac du Bonnet	128.72	12	PKP	PKPdf	11 23 04.0	+0.1
	comp=Z,6.2nm,0.6s,baz=337,slow=2.2,SNR=18						
ULM	Lac du Bonnet	128.72	12	PKIKP	PKPdf	11 23 04.0	+0.1
NVAR	Mina Array Bea	128.97	38	PKP	PKiKP	11 23 05.6	-0.1
	comp=Z,1.1nm,0.7s,baz=279,slow=1.7,SNR=7.4						
PDAR	Pinedale Array	130.64	28		PKPdf	11 23 08.3	+0.2
PDAR	Pinedale Array	130.64	28	PKP	PKPdf	11 23 08.4	+0.3
	comp=Z,0.7nm,0.5s,baz=256,slow=3.1,SNR=9.7						
RSSD	Black Hills	131.87	22		PKiKP	11 23 11.3	-0.1
RSSD	Black Hills	131.87	22	PKIKP	PKiKP	11 23 11.3	-0.1
PLCA	Paso Flores	137.98	192	PKhKP	PKPpre	11 23 11.1	
	comp=Z,1.4nm,0.9s,baz=108,slow=6.4,SNR=2.9						
PLCA				PKP	PKiKP	11 23 23.7	0.0
	comp=Z,1.0nm,0.9s,baz=281,slow=5.2,SNR=3.1						
ANMO	Albuquerque	138.21	32		PKPdf	11 23 22.9	+0.4
ANMO	Albuquerque	138.21	32	PKIKP	PKPdf	11 23 22.9	+0.4
ALPN	Alpine	143.22	34		PKPdf	11 23 30.6	-0.9
BDFB	Brasilia	143.74	242	PKP	PKPbc	11 23 31.2	+0.8
	comp=Z,1.4nm,0.5s,baz=254,slow=5.7,SNR=3.5						
WVT	Waverly	143.87	9		PKPab	11 23 29.5	+0.1
WVT	Waverly	143.87	9	PKIKP	PKPab	11 23 29.5	+0.1
TXAR	Lajitas Array	144.00	35		PKPbc	11 23 31.2	+0.4
TXAR	Lajitas Array	144.00	35	PKP	PKPbc	11 23 31.3	+0.5
	comp=Z,3.6nm,0.6s,baz=320,slow=0.6,SNR=57						
BO01	Tunca	144.18	194		PKPdf	11 23 32.2	-0.7
MT01	Popeta	144.72	194		PKPdf	11 23 34.1	+0.2
CPUP	Villa Florida	144.98	219		PKPab	11 23 33.6	-0.2
CPUP	Villa Florida	144.98	219	PKPbc	PKPdf	11 23 34.9	+0.4
	comp=Z,3.2nm,0.8s,baz=343,slow=2.6,SNR=24						
W57A	Gilead	145.40	359		PKPbc	11 23 34.8	-0.1
AC02	Maricunga	150.62	202		PKiKP	11 23 51.8	+1.2
PTLB	Pontes e Lacer	153.28	233		PKPdf	11 23 49.9	+1.9
LPAZ	La Paz	159.12	217	PKP	PKPdf	11 23 56.0	-0.4
	comp=Z,1.2nm,0.6s,baz=224,slow=5.0,SNR=4.7						

GCG 17 11:06:10.6±0.3, 13°.69N×91°.39W, h88^{km}±40^{km}, MD3.9, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
STG8	El Palmar, Qui	0.76	3	*i* P	Pn	11 06 32.0	+4.1
STG8				*i* S	Sn	11 06 48.7	+8.0
FG16	Alotenango, Sa	1.03	55	*i* P	Pn	11 06 30.3	-0.5

GCG 17 11:18:35.1±0.6, 14°.32N×91°.18W, h69^{km}±72^{km}, MD3.6, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
STG0	El Palmar, Qui	0.19	305	*i* P	Pn	11 18 49.2	+3.4
STG8	El Palmar, Qui	0.21	309	*i* P	Pn	11 18 49.1	+3.2
FG8	Yepocapa, Chim	0.60	95	*i* P	Pn	11 18 46.2	-2.8
FG16	Alotenango, Sa	0.65	94	*i* P	Pn	11 18 47.4	-2.2

STR 17 11:24:23.6±1.6, 45°N±5°×°±°, h0^{km}, MLv0.9/7, Error ellipse: s-maj=0.0km s-min=0.0km az=111.1, preliminary, France

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GRN	Grenoble	0.22	69	Pg	Pg	11 24 28.0	+0.3
GRN				Sg	Sg	11 24 31.8	+1.3
ORIF	Oris-en-Rattie	0.39	129	Pg	Pg	11 24 31.0	0.0

*IDC **17** 11:28:53.7±1.0, 8°.27N×104°.09W, h0^{km}, mb3.9/8, mbtmp4.0/9, ML4.9/1, MS4.5/45, Error ellipse: s-maj=44.2km s-min=18.7km az=64.0*

*NEIC **17** 11:28:58.0±1.9, 8°.39N±0°.09×104°.0W±0°.1, h10^{km}±1^{km}, mb4.6/131, Error ellipse: s-maj=19.3km s-min=15.0km az=255.0*

*GCMT **17** 11:28:59.0±0.1, 8°.48N±0°.01×104°.01W±0°.01, h12^{km}, MW5.2/134, Moment Tensor Solution. s92,c142; s134,c241; Duration: $1^{s}0$ Moment tensor: Scale 10^{16} Nm; M_{rr}-1.04±.12; $M_{\theta\theta}$2.01±.12; $M_{\phi\phi}$-0.96±.14; $M_{r\theta}$-2.92±.29; $M_{\theta\phi}$-7.91±.10; $M_{\phi r}$1.18±.32; Best double couple: $M_0$8.55600×10^{16} NP1:ϕ_s356.00000°, δ72.00000°, λ5.00000°. NP2:ϕ_s264.00000°, δ85.00000°, λ162.00000°. Principal axes: T 9.4350, Plg16.0000°, Azm219.0000°; N -1.7540, Plg72.0000°, Azm69.0000°; P -7.6770, Plg9.0000°, Azm311.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 11:28:56.5±0.5, 8°.35N±0°.08×104°.05W±0°.09, h10^{km}, n154, σ$1^{s}26$/73, mb4.6/60, MS4.5/47, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TLIG	Tlapa	10.60	30		Pn	11 31 29.6	+0.9
MOIG	Morelia	11.60	14	Pn	Pn	11 31 43.5	+0.9
HUEH	Huehuetenango	14.10	59	Pn	Pn	11 32 15.3	-1.3
ZAIG	Zacatecas	14.41	6	Pn	Pn	11 32 21.1	+0.1
MTO3	Montecristo	15.60	66		Pn	11 32 35.6	-1.4
ESQI	Esquipulas	15.68	65	Pn	Pn	11 32 38.0	+0.1
ESQI				IAmb	IAmb	11 32 51.5	
	comp=Z,72nm,1.3s						
PETF	Flores	16.24	57	Pn	Pn	11 32 46.1	+1.1
PETF				IAmb	IAmb	11 32 57.0	
	comp=Z,54nm,1.3s						
LPIG	La Paz	16.77	340	Pn	Pn	11 32 49.7	-1.9
	comp=Z,4.3nm,0.3s,baz=264,slow=3.2,SNR=4.8						
LPIG				LR	LR	11 37 41.3	
	comp=Z,3μm,20.1s,baz=164,slow=31						
	comp=Z,28nm,0.5s						
TGUH	Tegucigalpa,Un	17.41	69	Pn	Pn	11 32 58.8	-1.0
TGUH				IAmb	IAmb	11 33 19.3	
	comp=Z,35nm,1.0s						
HPIG		18.55	355		P	11 33 15.2	+1.5
ACON	Acoyapa	18.93	77		P	11 33 18.6	+0.8
ACON				IAmb	IAmb	11 33 43.2	
	comp=Z,56nm,1.5s						
JTS	Las Juntas de	18.95	83	P	P	11 33 13.0	-5.0
	comp=Z,3.8nm,0.9s,baz=264,slow=22,SNR=1.7						
TXAR	Lajitas Array	20.88	1	P	P	11 33 39.8	+0.7
TXAR	Lajitas Array	20.88	1	P	P	11 33 39.6	+0.5
	comp=Z,1.7nm,0.8s,baz=182,slow=12,SNR=15						
TXAR				LR	LR	11 41 11.9	
	comp=Z,2μm,19.4s,baz=178,slow=35						
	comp=Z,1.7nm,0.8s						
TX31	Lajitas Ar. Si	20.88	1		P	11 33 40.0	+0.9
DRIO	Del Rio	21.21	8	P	P	11 33 43.3	+0.8
ALPN	Alpine	21.92	1		P	11 33 50.8	+0.6
ALPN				IAmb	IAmb	11 34 03.2	
	comp=Z,44nm,1.5s						
VHRN	Van Horn	22.34	358		P	11 33 54.9	0.0
VHRN				IAmb	IAmb	11 34 06.3	
	comp=Z,25nm,1.4s						
JCT	Junction City	22.38	10	P	P	11 33 54.9	-0.2
JCT				IAmb	IAmb	11 34 05.8	
	comp=Z,33nm,1.2s						
HKT	Hockley	22.83	19		P	11 34 00.2	+0.5
MNHN	Monahans	22.91	3	P	P	11 34 01.1	+0.3
MNHN				IAmb	IAmb	11 34 07.6	
	comp=Z,25nm,1.3s						
MNTX	Cornudas Mount	23.27	357		P	11 34 04.2	-0.1
MNTX				IAmb	IAmb	11 34 10.7	
	comp=Z,23nm,1.2s						
BRDY	Brady	23.30	11		P	11 34 04.2	-0.6
BRDY				IAmb	IAmb	11 34 40.9	
	comp=Z,24nm,1.5s						
319A	Douglas	23.43	349		P	11 34 07.1	+1.0
319A				IAmb	IAmb	11 34 13.1	
	comp=Z,14nm,1.1s						
HTMS	Hat Mesa	24.01	1	P	P	11 34 13.6	+1.8
ABTX	Abilene, Hawle	24.50	9		P	11 34 17.6	+1.4
ABTX				IAmb	IAmb	11 34 32.7	
	comp=Z,20nm,1.0s						
TUC	Tucson	24.65	346		P	11 34 19.6	+2.0
TUC				IAmb	IAmb	11 34 33.7	
	comp=Z,24nm,1.5s						
POST	Post	24.71	5	P	P	11 34 17.4	-0.8
NATX	Nacogdoches	24.88	19	P	P	11 34 20.3	+0.8
APMT	Aspermont	25.12	8		P	11 34 19.9	-1.8
APMT				IAmb	IAmb	11 34 38.0	
	comp=Z,17nm,1.1s						
FW03	Perrin-Whitt E	25.19	12	P	P	11 34 20.3	-2.1
FW03				IAmb	IAmb	11 34 32.6	
	comp=Z,14nm,0.9s						
DKNS	Dickens	25.36	6	P	P	11 34 22.9	-1.1

MSTX	Muleshoe	25.53	2		P	11 34 23.9	-1.6
ANMO	Albuquerque	26.57	356	LR	LR	11 45 15.1	
	comp=Z,1µm,18.2s,baz=270,slow=37						
PFO	Pinyon Flats O	27.63	337	P	P	11 34 45.1	+0.6
PFO	Pinyon Flats O	27.63	337	LR	LR	11 43 47.1	
	comp=Z,887nm,18.1s,baz=146,slow=32						
MIAR	Mount Ida	27.80	19		P	11 34 44.7	-1.2
MIAR				IAmb	IAmb	11 35 05.4	
	comp=Z,18nm,1.4s						
WUAZ	Wupatki	27.86	347	IAmb	IAmb	11 34 53.9	
	comp=Z,12nm,1.4s						
T25A	Trinidad	28.66	359	P	P	11 34 54.1	+0.2
T25A				IAmb	IAmb	11 35 00.9	
	comp=Z,16nm,1.3s						
FLOC	Florencia	29.06	102		P	11 34 58.6	+1.1
GSC	Goldstone, Bar	29.26	338	P	P	11 35 00.2	+1.2
CCAC	Calif City Air	29.59	336	IAmb	IAmb	11 35 12.3	
	comp=Z,8.7nm,0.8s						
ROSC	El Rosal	29.73	95	LR	LR	11 44 07.2	
	comp=Z,1µm,21.4s,baz=256,slow=31						
ATAH	Atahualpa	29.85	120	LR	LR	11 44 37.2	
	comp=Z,2µm,21.6s,baz=297,slow=32						
PV05	Paradox Valley	29.95	352	IAmb	IAmb	11 35 12.4	
	comp=Z,14nm,1.2s						
PV13	Radium Mtn., P	29.99	352	IAmb	IAmb	11 35 11.8	
	comp=Z,7.6nm,1.0s						
PV02	Paradox Valley	30.03	353	IAmb	IAmb	11 35 12.2	
	comp=Z,17nm,1.2s						
HMU	Henry Mountain	30.07	349	IAmb	IAmb	11 35 14.0	
	comp=Z,8.7nm,1.2s						
PV03	Paradox Valley	30.09	352	IAmb	IAmb	11 35 13.2	
	comp=Z,16nm,1.4s						
PV18	Skein Mesa, Pa	30.09	352	IAmb	IAmb	11 35 12.5	
	comp=Z,18nm,1.1s						
PV17	East Wray Mesa	30.13	352	P	P	11 35 08.2	+1.3
PV17				IAmb	IAmb	11 35 13.5	
	comp=Z,14nm,1.2s						
PV16	Nyswonger Mesa	30.15	352	IAmb	IAmb	11 35 13.1	
	comp=Z,8.1nm,1.2s						
PV20	West Nyswonger	30.19	352	IAmb	IAmb	11 35 19.6	
	comp=Z,10nm,1.0s						
PV04	Paradox Valley	30.23	352	IAmb	IAmb	11 35 14.0	
	comp=Z,8.8nm,1.1s						
PV23	Carpenter Ridg	30.30	352	IAmb	IAmb	11 35 27.8	
	comp=Z,14nm,1.1s						
PBMO	Poplar Bluff	30.89	22	IAmb	IAmb	11 35 20.6	
	comp=Z,19nm,1.5s						
MPU	Maple Canyon	32.25	349	IAmb	IAmb	11 35 32.4	
	comp=Z,7.8nm,1.1s						
CPCT	Cooper Cave	32.36	31	IAmb	IAmb	11 35 32.3	
	comp=Z,6.1nm,1.0s						
NVAR	Mina Array Bea	32.59	339	P	P	11 35 29.4	+0.8
	comp=Z,0.5nm,0.7s,baz=171,slow=6.0,SNR=3.6						
NVAR				LR	LR	11 46 28.2	
	comp=Z,926nm,21.6s,baz=150,slow=32						
	comp=Z,0.5nm,0.7s						
BSUT	Blindstream Ca	32.61	350	IAmb	IAmb	11 35 40.0	
	comp=Z,8.1nm,1.3s						
P40A	Paris	32.86	17	P	P	11 35 29.1	-1.5
P40A				IAmb	IAmb	11 35 38.5	
	comp=Z,14nm,1.2s						
TKL	Tuckaleechee C	32.90	31	LR	LR	11 50 18.5	
	comp=Z,840nm,20.3s,baz=220,slow=39						
SDV	Santo Domingo	33.04	87		P	11 35 32.7	0.0
SDV	Santo Domingo	33.04	87	LR	LR	11 47 11.6	
	comp=Z,675nm,20.6s,baz=266,slow=33						
ELK	Elko	33.76	345	LR	LR	11 47 20.0	
	comp=Z,384nm,21.5s,baz=166,slow=33						
NNA	Nana	33.76	126	LR	LR	11 46 12.9	
	comp=Z,804nm,20.1s,baz=319,slow=31						
HWUT	Hardware Ranch	33.79	350	IAmb	IAmb	11 35 59.8	
	comp=Z,5.7nm,1.1s						
BW06	Boulder Array	34.62	353	IAmb	IAmb	11 36 08.7	
	comp=Z,8.0nm,1.0s						
PD31	Pinedale Array	34.62	353	IAmb	IAmb	11 36 08.7	
	comp=Z,7.8nm,1.0s						
PDAR	Pinedale Array	34.62	353		P	11 35 45.9	-0.3
PDAR	Pinedale Array	34.62	353	P	P	11 35 45.7	-0.5
	comp=Z,2.8nm,1.0s,baz=157,slow=8.0,SNR=9.3						
PDAR				LR	LR	11 50 24.4	
	comp=Z,474nm,18.8s,baz=170,slow=37						
	comp=Z,2.8nm,1.0s						
LOHW	Long Hollow	35.59	352	IAmb	IAmb	11 36 16.2	
	comp=Z,7.3nm,1.1s						
BAUV	El Baul	35.60	86		P	11 35 55.5	+0.8
RSSD	Black Hills	35.64	0	P	P	11 35 55.7	+0.8
Q54A	Coxs Mills	36.95	31	IAmb	IAmb	11 36 35.7	
	comp=Z,15nm,1.2s						
S57A	Dark Hollow, R	37.04	34	IAmb	IAmb	11 36 16.4	
	comp=Z,16nm,1.2s						
YBH	Yreka Blue Hor	37.12	337	LR	LR	11 48 58.4	
	comp=Z,46nm,19.8s,baz=123,slow=32						
DLMT	Dillon	37.61	350	IAmb	IAmb	11 36 19.0	
	comp=Z,16nm,1.4s						
SJG	San Juan	38.08	71	LR	LR	11 51 28.1	
	comp=Z,626nm,18.9s,baz=278,slow=36						
PCRV	Puerto La Cruz	38.93	84	LR	LR	11 51 34.2	
	comp=Z,458nm,20.5s,slow=35						
COWI	Conover	39.74	16	IAmb	IAmb	11 36 38.7	
	comp=Z,15nm,1.3s						
TAOE	Nuku Hiva Isla	39.81	245	*e*LR	LR	11 47 08.1	
	comp=Z,902nm,22.9s						
AGMN	Agassiz Nation	40.41	8		P	11 36 33.7	-1.2
AGMN				IAmb	IAmb	11 36 44.2	
	comp=Z,11nm,0.8s						
NEW	Newport	41.29	347	P	P	11 36 42.6	+0.5
NEW	Newport	41.29	347	LR	LR	11 52 33.8	
	comp=Z,344nm,21.0s,baz=168,slow=34						
PTCN	Pitcairn Islan	41.80	217	P	P	11 36 47.0	+0.4
B08A	Colville Reser	41.92	345	P	P	11 36 49.4	+2.1
SADO	Sadowa	42.23	27	LR	LR	11 55 50.3	
	comp=Z,633nm,18.6s,baz=213,slow=38						
ULM	Lac du Bonnet	42.32	8	IAmb	IAmb	11 36 55.6	
	comp=Z,16nm,1.4s						
ULM	Lac du Bonnet	42.32	8	P	P	11 36 49.1	-1.4
	comp=Z,2.7nm,1.0s,baz=200,slow=8.4,SNR=4.2						
ULM				LR	LR	11 53 55.3	
	comp=Z,1µm,19.9s,baz=196,slow=35						
	comp=Z,2.7nm,1.0s						
LPAZ	La Paz	43.16	125		P	11 36 58.9	+0.4
LPAZ	La Paz	43.16	125	P	P	11 36 57.7	-0.9
	comp=Z,6.9nm,1.1s,baz=326,slow=6.3,SNR=11						
LPAZ				LR	LR	11 54 17.0	
	comp=Z,589nm,18.3s,baz=306,slow=35						
	comp=Z,6.9nm,1.1s						
PB16	IPOC Station P	43.19	128	P	P	11 36 58.1	-0.5
PB16				IAmb	IAmb	11 37 13.8	
	comp=Z,9.7nm,1.1s						
FFC	Flin Flon	46.28	2		P	11 37 20.6	-1.6
FFC				IAmb	IAmb	11 37 26.7	
	comp=Z,9.0nm,1.3s						
H03N2	Juan Fernandez	47.93	151	T	T	12 29 01.9	
	baz=328,slow=78						
BBB	Bella Bella	47.94	340	LR	LR	11 55 52.8	
	comp=Z,396nm,21.5s,baz=160,slow=34						
H03N1	Juan Fernandez	47.94	151	T	T	12 29 03.3	
	baz=328,slow=78						
H03N3	Juan Fernandez	47.95	151	T	T	12 29 01.6	
	baz=328,slow=78						
FCC	Fort Churchill	50.88	7		P	11 37 57.8	+0.3
FCC				IAmb	IAmb	11 38 03.0	
	comp=Z,18nm,1.4s						
MDP	Montagnes des	51.13	90	LR	LR	11 57 45.8	
	comp=Z,448nm,20.5s,baz=280,slow=34						
PPT	Papeete	51.82	240	LR	LR	11 53 37.0	
	comp=Z,588nm,21.0s,baz=63,slow=29						
PPT2	Papeete2	51.83	240	*e*S	S	11 45 26.7	-1.5
	comp=Z,248nm,26.5s						
PPT2				*e*LQ	LQ	11 50 40.6	
	comp=Z,615nm,24.5s						
PPT2				*e*LR	LR	11 52 39.5	
	comp=Z,905nm,24.2s						
PPT2				*e*LR	LR	11 52 45.8	
	comp=Z,935nm,22.2s						
DLBC	Dease Lake	53.80	343	LR	LR	12 01 06.0	
	comp=Z,621nm,18.1s,baz=136,slow=36						
TBI	Tubuai	54.43	234	*e*S	S	11 46 06.2	+2.9
	comp=Z,1µm,28.0s						
TBI				*e*LR	LR	11 53 58.3	
	comp=Z,1µm,25.8s						
TBI				*e*LR	LR	11 54 04.3	
	comp=Z,6µm,27.0s						
YKA	Yellowknife Ar	54.59	354	LR	LR	11 59 57.3	
	comp=Z,781nm,20.2s,baz=156,slow=34						
SCHQ	Schefferville	55.00	25	P	P	11 38 26.9	-1.2
	comp=Z,2.8nm,0.9s,baz=233,slow=5.1,SNR=2.7						
SCHQ				LR	LR	12 03 20.4	
	comp=Z,738nm,19.5s,baz=222,slow=38						
	comp=Z,2.8nm,0.9s						
BLKN	Baker Lake	56.17	4	IAmb	IAmb	11 38 40.5	
	comp=Z,9.8nm,1.2s						
CPUP	Villa Florida	56.97	129		P	11 38 44.3	+1.8
CPUP	Villa Florida	56.97	129	P	P	11 38 40.6	-1.9
	comp=Z,0.3nm,0.4s,baz=329,slow=2.4,SNR=4.3						
	comp=Z,0.3nm,0.4s						
PLCA	Paso Flores	57.77	150	LR	LR	11 58 12.9	
	comp=Z,580nm,18.2s,baz=309,slow=30						
L29M	L29M	59.92	343		P	11 39 03.7	+1.0
L29M				IAmb	IAmb	11 39 18.8	
	comp=Z,6.2nm,0.9s						
BDFB	Brasilia	60.40	113	LR	LR	12 04 17.6	
	comp=Z,564nm,18.3s,baz=316,slow=35						
FRB	Frobisher Bay	60.83	17	LR	LR	12 05 48.8	
	comp=Z,546nm,18.9s,baz=230,slow=36						
KDAK	Kodiak Island	61.78	333	LR	LR	12 00 53.6	
	comp=Z,299nm,18.1s,baz=124,slow=31						
K27K	Chicken	61.79	342	IAmb	IAmb	11 39 48.6	
	comp=Z,6.6nm,1.1s						
ILON	Igloolik, Nuna	62.65	9	P	P	11 39 21.4	+0.5
INK	Inuvik	62.99	348	LR	LR	12 04 47.7	
	comp=Z,346nm,20.6s,baz=156,slow=34						
IL31		63.81	341	IAmb	IAmb	11 39 40.9	
	comp=Z,7.0nm,1.1s						
ILAR	Eielson Array	63.81	341		P	11 39 29.6	+0.9
ILAR	Eielson Array	63.81	341	P	P	11 39 26.8	-2.0
	comp=Z,0.8nm,0.9s,baz=152,slow=4.7,SNR=8.8						
	comp=Z,0.8nm,0.9s						
PRP	Porcupine Dome	63.89	342	IAmb	IAmb	11 39 56.7	
	comp=Z,8.7nm,1.4s						
NEA2	Nenana	64.41	340	IAmb	IAmb	11 39 59.8	
	comp=Z,6.8nm,1.1s						
MLY	Manley	65.25	340	IAmb	IAmb	11 40 14.5	
	comp=Z,6.7nm,1.3s						
F25K	Christian Rive	65.36	344	IAmb	IAmb	11 39 53.5	
	comp=Z,4.0nm,1.1s						
K20K	Telida	65.46	338	IAmb	IAmb	11 39 43.3	
	comp=Z,6.0nm,1.1s						
H21K	Melozitna Rive	66.32	340	P	P	11 39 44.9	-0.1
RES	Resolute Bay	66.50	3	LR	LR	12 07 40.0	
	comp=Z,432nm,20.5s,baz=198,slow=35						
L14K	Kuka Creek	68.00	334	P	P	11 39 58.2	+2.5
F20K	Avaraart Lake	68.08	341	IAmb	IAmb	11 40 24.3	
	comp=Z,3.5nm,1.1s						
SFJD	Kangerlussuaq	68.63	20	LR	LR	12 09 46.4	
	comp=Z,410nm,20.4s,baz=244,slow=36						
USHA	Ushuaia	69.65	159	LR	LR	12 04 48.7	
	comp=Z,307nm,19.4s,baz=260,slow=31						
SUMG	Summit	74.89	17	P	P	11 40 38.5	+0.8
SUMG				IAmb	IAmb	11 40 44.7	
	comp=Z,6.8nm,1.1s						
SHEM	Shemya Is, Ala	78.47	322	LR	LR	12 08 03.0	
	comp=Z,337nm,21.7s,baz=96,slow=30						
BORG	Borgarnes	79.39	26	LR	LR	12 16 53.5	
	comp=Z,367nm,18.0s,baz=281,slow=36						
JMIC	Jan Mayen	83.98	19	LR	LR	12 19 45.8	
	comp=Z,149nm,18.6s,baz=262,slow=36						
SPITS	Spitsbergen Ar	87.83	10	LR	LR	12 21 47.2	
	comp=Z,504nm,21.3s,baz=275,slow=36						
PETK	Petropavlovsk-	88.31	323	LR	LR	12 13 49.3	
	comp=Z,80nm,21.0s,baz=73,slow=30						
SEY	Seymchan	88.73	334	LR	LR	12 15 02.5	
	comp=Z,302nm,21.8s,slow=31						
MA2	Magadan	90.44	331	LR	LR	12 18 57.7	
	comp=Z,72nm,18.7s,baz=80,slow=33						
ESDC	Sonseca Array	92.41	50	LR	LR	12 22 22.4	
	comp=Z,157nm,18.0s,baz=284,slow=35						
DZM	Mont Dzumac	92.63	248	*e*LR	LR	12 11 50.2	
	comp=Z,437nm,25.4s						
TIXI	Tiksi	92.99	345	LR	LR	12 27 53.0	
	comp=Z,231nm,18.4s,baz=38,slow=38						
MDT	Midelt	93.38	56	LR	LR	12 18 18.3	
	comp=Z,191nm,20.9s,baz=276,slow=32						
ARCES	ARCESS Array B	94.97	16	LR	LR	12 25 19.1	
	comp=Z,316nm,20.4s,baz=301,slow=36						
DBIC	Dimbokro	98.07	82	LR	LR	12 24 25.2	
	comp=Z,197nm,19.9s,baz=306,slow=34						
DAVOX	Davos/Dischmat	99.85	40	LR	LR	12 23 05.1	
	comp=Z,183nm,21.8s,baz=265,slow=32						
HHC	Hu-ho-hao-te	121.08	329	*e*P	PKPdf	11 47 46.3	-3.8
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,68nm,5.1s						
HHC				LR	LR		
	comp=N,95nm,13.5s						
HHC				LR	LR		
	comp=E,230nm,18.5s						
HHC				LR	LR		
	comp=Z,370nm,22.7s						
WRA	Warramunga Arr	122.47	252	PKP	PKPdf	11 47 51.4	-1.8
	comp=Z,0.6nm,1.1s,baz=98,slow=1.8,SNR=2.0						
ASAR	Alice Springs	122.61	247	PKP	PKPdf	11 47 51.2	-2.2
	comp=Z,0.4nm,0.9s,baz=87,slow=1.8,SNR=1.6						
NJ2	Nanjing	122.64	317	*e*P	PKPdf	11 47 53.3	+0.1
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MKAR	Makanchi Array	124.81	355	PKP	PKPdf	11 47 55.8	-1.2
	comp=Z,0.5nm,0.9s,baz=34,slow=5.4,SNR=4.5						
WMQ	Urumqi	127.00	349	*e*PKP	PKPdf	11 48 02.4	+1.1
WMQ				PKS	PKSdf	11 51 36.8	-1.1
WMQ				LR	LR		
	comp=N,350nm,21.3s						
WMQ				LR	LR		
	comp=E,110nm,11.5s						
WMQ				LR	LR		
	comp=Z,310nm,21.3s						
PZH	PanZhiHua	137.25	325	PKP	PKPdf	11 48 20.8	-0.4
CMAR	Chiang Mai Arr	145.01	320	PKPbc	PKPbc	11 48 34.1	-0.3
	comp=Z,0.9nm,0.6s,baz=72,slow=1.3,SNR=6.0						

CATAC 17 11:30:16.9±0.5,11˚N±3˚×8˚7W±˚,h12^{km},M2.8/18, MLv2.8/18,Error ellipse: s-maj=6.6km s-min=4.1km az=40.0,confirmed,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
NADN	Granada	0.83	43	P	Pn	11 30 34.3	0.0
NADN				S	Sn	11 30 46.3	-0.3
NANN	Nandasmo	0.93	31	P	Pn	11 30 36.7	+0.9
NANN	Nandasmo	0.93	31	S	Sn	11 30 48.7	-0.4
MAS3	Al N del Volca	0.98	25	S	Sn	11 30 49.5	-0.8
JAPN	Al SSO del Vol	0.99	67	P	Pn	11 30 36.7	+0.1
MORN	Al O del Volca	1.02	66	P	Pn	11 30 37.4	+0.3
UNAN	Cigeo UNAN	1.02	19	P	Pg	11 30 36.7	+0.1
UNAN				S	Sn	11 30 51.1	-0.3
COPN	Copaltepe	1.04	1	P	Pn	11 30 37.2	-0.1
SAPS	Ciudad Sandino	1.05	11	P	Pn	11 30 37.7	+0.3
TISN	Laguna Tiscapa	1.05	18	P	Pb	11 30 36.9	-0.2
CARN	Rivas	1.06	87	P	Pb	11 30 37.0	-0.2
CARN				S	Sg	11 30 51.7	+0.5
MGAN	Managua	1.06	19	P	Pn	11 30 37.9	+0.2
MGAN	Managua	1.06	19	S	Sn	11 30 52.6	+0.2
BC86	Nagarote	1.12	2	P	Pb	11 30 38.2	0.0
APQ3	Volcan Apoyequ	1.15	12	P	Pb	11 30 38.5	-0.3
APQ3				S	Sn	11 30 55.1	+0.5
MOMN	Momotombo	1.27	3	P	Pn	11 30 40.2	-0.3
MOMN				S	Sb	11 30 56.4	-0.6
MOM2	El Cardon	1.30	5	P	Pn	11 30 40.4	-0.5
MOM2				S	Sn	11 30 58.4	+0.3
CNGA	Al SSO del Vol	1.35	356	P	Pn	11 30 41.6	-0.1
CNGA				S	Sb	11 30 57.1	-2.5
CNGN	Cerro Negro	1.36	356	P	Pn	11 30 41.3	-0.5
POLN	Al Sur del Vol	1.52	352	P	Pn	11 30 42.2	-1.7
POLN				S	Sn	11 31 01.0	-2.7
PKGN	Cerro Pekin	1.57	347	P	Pn	11 30 43.2	-1.3
PKGN				S	Sn	11 31 04.8	0.0
BOAB	BOACO BROADBAN	1.60	35	P	Pn	11 30 44.2	-0.8
BOAB	BOACO BROADBAN	1.60	35	S	Sn	11 31 03.4	-2.1
ACON	Acoyapa	1.63	59	S	Sn	11 31 05.4	-0.9
ACON	Acoyapa	1.63	59	P	Pn	11 30 44.8	-0.6

NEIC ***17*** *11:41:18.9±2.6,50˚60N±0˚04×178˚86E±0˚07,h10^{km}±1^{km}, mb4.1/85,ML4.0/8,ML3.6(AEIC),Error ellipse: s-maj=7.6km s-min=6.9km az=145.0*

AEIC ***17*** *11:41:22.9±2.4,50˚73N±0˚03×178˚96E±0˚07,h34^{km}±5^{km}, Error ellipse: s-maj=6.6km s-min=4.5km az=99.0*

IDC ***17*** *11:41:25.8±2.7,51˚32N×179˚13E,h43^{km}±24^{km},mb3.4/15, mbtmp3.8/18,ML3.7/4,MS3.7/2,Error ellipse: s-maj=26.6km s-min=13.4km az=180.0*

ISC 17 11:41:23.7±1.3,**50˚75N**±0˚09×**178˚91E**±0˚04,**h46**^{km}±11^{km}, **n115,**σ1^{s}**11**/94,**mb4.1**/40,**Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AMKA	Amchitka	0.67	21		Pn	11 41 36.0	-0.9
AMKA					Sn	11 41 45.6	-0.9
LSSE	Little Sitkin	1.20	350		Pn	11 41 44.0	0.0
CESW	Semis’ Southwe	1.22	19		Pn	11 41 44.4	+0.1
CESW					Sn	11 42 01.2	+1.5
LSPA	Little Sitkin	1.23	350		Pn	11 41 45.0	+0.6
LSPA					Sn	11 42 02.2	+2.4
LSNW	Little Sitkin	1.25	349		Pn	11 41 44.4	-0.3
LSNW					Sn	11 42 00.2	0.0
CERB	Semis’ Cerberu	1.26	21		Pn	11 41 45.5	+0.6
CERB					Sn	11 42 02.9	+2.1
CEAP	Semis’ Anvil P	1.32	18		Pn	11 41 46.2	+0.5
CEAP					Sn	11 42 03.1	+1.0
GASW	Gareloi Southw	1.74	53		Pn	11 41 51.5	+0.1
GASW					Sn	11 42 13.1	+0.7
GALAA	Gareloi Lava P	1.77	54		Pn	11 41 52.0	+0.2
GALAA					Sn	11 42 14.1	+0.9
GANO	Gareloi North	1.79	52		Pn	11 41 52.0	-0.1
GANO					Sn	11 42 15.0	+1.4
TANO	Tanaga North	2.20	57		Pn	11 41 58.2	+0.5
TANO					Sn	11 42 24.4	+0.8
TASE	Tanaga Southea	2.20	59		Sn	11 42 24.8	+1.0
TAFP	Tanaga Falls P	2.26	58		Sn	11 42 26.7	+1.5
KIMD	Kanaga Island	2.62	66		Pn	11 42 03.3	-0.2
KIWB	Kanaga Island	2.71	64		Pn	11 42 04.4	-0.2
ADK	Adak	2.99	66		Pn	11 42 08.3	-0.1
ADK				Sn	Sn	11 42 41.9	-1.1
ADAG	Mount Adagdak	3.07	65		Pn	11 42 10.2	+0.6
GSTD	Great Sitkin T	3.36	65		Pn	11 42 13.7	0.0
GSMY	Great Sitkin M	3.41	66		Pn	11 42 14.4	+0.1
GSTR	Great Sitkin T	3.42	65		Pn	11 42 14.6	+0.1
SHEM	Shemya Is, Ala	3.59	305	Pn	Pn	11 42 16.1	-0.7
SHEM				IAML		11 42 57.8	
	comp=N,60nm,1.7s						
SHEM				IAML		11 43 08.0	
	comp=E,95nm,0.8s						
SHEM	Shemya Is, Ala	3.59	305	P	Pn	11 42 15.6	-1.1
	comp=E,9.9nm,0.3s,baz=157,slow=4.2,SNR=27						
SHEM				S	Sn	11 42 56.5	-1.3
	comp=E,31nm,0.4s,baz=251,slow=19,SNR=5.7						
	comp=E,37nm,0.2s						
SMY	Shemya	3.59	305	Pn	Pn	11 42 16.9	+0.2
SMY				Sn	Sn	11 42 56.9	-0.9
SMY				IAML		11 42 57.9	
	comp=N,146nm,1.8s						
SMY				IAML		11 43 08.0	
	comp=E,196nm,0.9s						
ATKA	Atka Island	4.55	69		Pn	11 42 29.6	-0.2
ATKA				IAML		11 43 25.4	
	comp=N,180nm,0.7s						
ATKA				IAML		11 43 36.9	
	comp=E,152nm,0.9s						
NIKH	Nikolski High	7.89	69	Pn	Pn	11 43 16.7	+0.9
SPIA	Saint Paul Isl	9.06	41		Pn	11 43 34.1	+2.4
UNV	Unalaska Valle	9.46	65	Pn	Pn	11 43 37.1	0.0
LVA	Lava Point	9.80	64	Pn	Pn	11 43 42.5	+0.6
PET	Petropavlovsk	12.72	288	Pn	Pn	11 44 22.1	+0.4
SDPT	Sand Point	13.21	62	Pn	Pn	11 44 26.3	-2.1
PEA0B	Petropavlovsk-	13.29	288		Pn	11 44 31.1	+1.6
PETK	Petropavlovsk-	13.29	288		Pn	11 44 30.9	+1.3
PETK	Petropavlovsk-	13.29	288	P	Pn	11 44 30.3	+0.8
	comp=E,1.8nm,0.3s,baz=95,slow=16,SNR=23						
CNBA	Chernabura Isl	13.62	64	Pn	Pn	11 44 32.2	-1.7
M13K	Dall Lake	13.89	39	Pn	Pn	11 44 36.9	-0.7
M14K	Bethel	14.64	40		Pn	11 44 48.8	+1.1
O15K	Ungalikthiuk R	14.78	47		Pn	11 44 50.1	+0.6
N15K	Kwethluk River	15.12	43		Pn	11 44 55.0	+1.0
K15K	Wolf Creek Mou	15.73	35	P	Pn	11 45 02.9	+1.1
K15K				IAmb	IAmb	11 45 07.1	
	comp=Z,18nm,1.0s						
M16K	Timber Creek	16.03	42	P	P	11 45 06.8	-1.6
M16K				IAmb	IAmb	11 45 12.1	
	comp=Z,17nm,1.3s						
L16K	Owhat River	16.18	39	P	Pn	11 45 08.2	+0.7
M17K	Holitna River	16.86	42	P	P	11 45 18.2	+0.6
K17K	Iditarod	17.19	37	IAmb	IAmb	11 45 21.7	
	comp=Z,10nm,0.9s						
N18K	Kilae Creek	17.21	45	P	P	11 45 21.4	-0.1
N18K				IAmb	IAmb	11 45 21.6	
	comp=Z,15nm,1.3s						
O18K	Koktuh Hills	17.22	48		P	11 45 22.2	+0.6
O18K				IAmb	IAmb	11 45 24.3	
	comp=Z,11nm,0.9s						
J17K	VABM Dome	17.30	35	IAmb	IAmb	11 45 24.8	
	comp=Z,20nm,1.1s						
G16K	Koyuk River	17.59	26	IAmb	IAmb	11 45 29.6	
	comp=Z,16nm,0.9s						
KDAK	Kodiak Island	17.97	56	P	Pn	11 45 26.6	-3.2
	comp=Z,0.6nm,0.3s,baz=247,slow=7.7,SNR=9.3						
	comp=Z,22nm,1.1s						
SEY	Seymchan	18.78	321	P	P	11 45 38.2	-0.5
	comp=Z,0.1nm,0.3s,baz=275,slow=13,SNR=3.8						
	comp=Z,1.9nm,0.7s						
M20K	Styx River	18.92	43	IAmb	IAmb	11 45 43.7	
	comp=Z,14nm,1.1s						
G18K	Tagagawik	19.03	29	IAmb	IAmb	11 45 45.5	
	comp=Z,11nm,1.1s						
SPU	Mount Spurr	19.14	46	P	P	11 45 42.8	0.0
SPU				IAmb	IAmb	11 45 49.5	
	comp=Z,17nm,1.5s						
STLK	Strandline Lak	19.35	45	IAmb	IAmb	11 45 46.6	
	comp=Z,7.1nm,0.7s						
J20K	Nowinta River	19.55	36	IAmb	IAmb	11 45 50.6	
	comp=Z,12nm,0.9s						
E18K	Tukpahlearik C	19.57	24	IAmb	IAmb	11 45 49.7	
	comp=Z,8.2nm,0.8s						
G19K	Purcell Mounta	19.68	29	IAmb	IAmb	11 45 53.6	
	comp=Z,7.0nm,0.7s						
I20K	Naaghedeneel	19.76	35	IAmb	IAmb	11 45 53.2	
	comp=Z,11nm,0.8s						
F19K	Shaleruckik Mo	19.93	27	IAmb	IAmb	11 45 55.9	
	comp=Z,9.7nm,0.8s						
CAST	Castle Rocks	20.00	40	P	P	11 45 52.0	-0.1
CAST				IAmb	IAmb	11 45 55.8	
	comp=Z,9.8nm,0.8s						
E19K	Redstone River	20.51	26	IAmb	IAmb	11 46 04.7	
	comp=Z,8.4nm,0.9s						
IMAR	Indian Mountai	20.67	32	P	P	11 45 58.8	-0.5
BPAW	Bear Paw Mtn.	20.74	38	P	P	11 45 59.9	-0.2
BPAW				IAmb	IAmb	11 46 04.2	
	comp=Z,16nm,1.2s						
H21K	Melozitna Rive	20.82	34	IAmb	IAmb	11 46 02.2	
	comp=Z,12nm,0.9s						
D19K	Kuna River	21.00	24	IAmb	IAmb	11 46 04.4	
	comp=Z,9.7nm,0.8s						
G21K	Allakaket	21.06	31	IAmb	IAmb	11 46 04.7	
	comp=Z,11nm,0.9s						
F21K	Alatna River	21.48	30	IAmb	IAmb	11 46 10.9	
	comp=Z,6.1nm,0.7s						
NEA2	Nenana	21.70	38	IAmb	IAmb	11 46 25.8	
	comp=Z,15nm,1.3s						
I23K	Minto, Yukon-K	21.83	37	IAmb	IAmb	11 46 17.9	
	comp=Z,8.9nm,1.4s						
E21K	Killik River	22.09	27	IAmb	IAmb	11 46 15.8	
	comp=Z,10nm,1.2s						
G23K	Bananza Creek	22.33	33	IAmb	IAmb	11 46 18.8	
	comp=Z,9.4nm,0.9s						
E22K	Anaktuvuk Pass	22.53	29	IAmb	IAmb	11 46 21.3	
	comp=Z,5.4nm,0.8s						
POKR	Poker Plat Res	22.56	38	IAmb	IAmb	11 46 19.4	
	comp=Z,6.5nm,0.8s						
ILAR	Eielson Array	22.64	39	P	P	11 46 17.1	-3.3
	comp=Z,0.6nm,0.8s,baz=247,slow=11,SNR=8.5						
	comp=Z,0.6nm,0.8s						
H24K	Noodor Dome	22.69	36	IAmb	IAmb	11 46 35.2	
	comp=Z,5.0nm,0.9s						
GLB	Gilahina Butte	23.05	48	IAmb	IAmb	11 46 24.8	
	comp=Z,8.2nm,1.1s						
D23K	Nanushuk River	23.36	27	IAmb	IAmb	11 46 29.0	
	comp=Z,9.4nm,1.3s						
DOT	Dot Lake	23.44	42	P	P	11 46 28.1	-0.4
TOLK	Toolik Lake Re	23.51	29	P	P	11 46 28.7	-0.4
TOLK				IAmb	IAmb	11 47 04.0	
	comp=Z,12nm,1.4s						
L26K	Log Cabin Wild	23.59	44	IAmb	IAmb	11 46 35.0	
	comp=Z,10.0nm,1.4s						
L27K	Beaver Creek,	24.27	45	P	P	11 46 35.5	-0.7
L27K				IAmb	IAmb	11 46 37.0	
	comp=Z,6.2nm,0.9s						
BCAR	Beaver Creek A	24.30	45	P	P	11 46 35.5	-0.9
BMAR	Burnt Mountain	24.56	34	P	P	11 46 38.7	0.0
DAWY	Dawson	25.55	43	IAmb	IAmb	11 46 52.4	

	comp=Z,3.2nm,0.8s						
I28M	Miner Creek	25.64	39	IAmb	IAmb	11 46 50.2	
	comp=Z,4.7nm,0.8s						
M29M	Somme Creek	25.70	47	IAmb	IAmb	11 47 10.3	
	comp=Z,3.6nm,0.8s						
I29M	Ogilvie Camp,	26.28	40	IAmb	IAmb	11 46 55.8	
	comp=Z,3.7nm,1.0s						
F28M	Old Crow	26.30	35	IAmb	IAmb	11 46 57.4	
	comp=Z,4.9nm,0.8s						
K29M	Barlow Dome	26.32	44	P	P	11 46 54.0	-0.9
D27M	Malcolm River	26.52	31	P	P	11 46 57.0	+0.4
D27M				IAmb	IAmb	11 47 36.7	
	comp=Z,4.1nm,0.9s						
KLR	Kul'dur	29.96	286	LR	LR	12 00 35.3	
	comp=Z,35nm,18.9s,baz=40,slow=38						
B08A	Colville Reser	39.11	69	IAmb	IAmb	11 48 48.1	
	comp=Z,5.8nm,0.9s						
NEW	Newport	40.46	68	P	P	11 48 57.9	+0.4
NEW				IAmb	IAmb	11 48 58.9	
	comp=Z,5.3nm,0.8s						
MSO	Missoula	43.04	68	P	P	11 49 18.6	-0.1
NVAR	Mina Array Bea	45.07	81	P	P	11 49 36.1	+0.9
	comp=Z,0.2nm,0.5s,baz=305,slow=7.6,SNR=3.6						
	comp=Z,0.2nm,0.5s						
SONM	Songino Array	45.63	296	P	P	11 49 40.1	+0.7
	comp=Z,0.5nm,0.5s,baz=66,slow=4.9,SNR=1.9						
	comp=Z,0.5nm,0.5s						
YHL	Hebgen Lake	45.73	69	P	P	11 49 40.6	+0.2
YHB	Horse Butte	45.77	69	P	P	11 49 41.7	+1.1
YHH	Holmes Hill	45.96	69	P	P	11 49 42.9	+0.7
YNE	Yellowstone No	46.33	68	P	P	11 49 45.0	-0.1
H17A	Grant Village	46.34	69	P	P	11 49 45.6	+0.4
HHC	Hu-ho-hao-te	46.47	285	*e*P	P	11 49 46.0	0.0
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,59nm,5.8s						
PDAR	Pinedale Array	47.88	70	P	P	11 49 56.9	-0.2
	comp=Z,5.9nm,0.7s,baz=306,slow=4.3,SNR=46						
SPITS	Spitsbergen Ar	50.89	355	P	P	11 50 17.1	-2.3
	comp=Z,2.7nm,0.7s,baz=35,slow=5.3,SNR=4.2						
	comp=Z,2.7nm,0.7s						
ULM	Lac du Bonnet	51.23	55	P	P	11 50 21.2	-1.0
	comp=Z,1.4nm,0.6s,baz=342,slow=3.2,SNR=3.2						
	comp=Z,1.4nm,0.6s						
KURBB	Kurchatov Arra	58.50	313	P	P	11 51 15.5	+0.8
	comp=Z,0.4nm,0.5s,baz=42,slow=6.4,SNR=3.8						
	comp=Z,0.4nm,0.5s						
MKAR	Makanchi Array	59.28	307	P	P	11 51 20.1	-0.2
	comp=Z,0.3nm,0.7s,baz=46,slow=4.2,SNR=2.9						
	comp=Z,0.3nm,0.7s						
TXAR	Lajitas Array	60.18	79	P	P	11 51 26.8	0.0
	comp=Z,0.3nm,0.6s,baz=305,slow=5.0,SNR=5.5						
	comp=Z,0.3nm,0.6s						
BVAR	Borovoye Array	60.42	319	P	P	11 51 28.3	+0.3
	comp=Z,1.3nm,0.5s,baz=44,slow=8.6,SNR=6.6						
	comp=Z,1.3nm,0.5s						
SCHQ	Schefferville	61.38	37	P	P	11 51 34.0	-0.5
	comp=Z,1.4nm,0.5s,baz=274,slow=10,SNR=4.2						
	comp=Z,1.4nm,0.5s						
PZH	PanZhiHua	62.02	278	P	P	11 51 40.5	+1.2
NOA	NORSAR Array B	68.12	354	P	P	11 52 17.4	-0.8
	comp=Z,0.6nm,0.7s,baz=10.0,slow=6.4,SNR=2.7						
	comp=Z,0.6nm,0.7s						
AKASG	Malin Array Be	75.68	341	P	P	11 53 03.1	-0.6
	comp=Z,0.3nm,0.4s,baz=21,slow=6.0,SNR=2.6						
AKASG				LR	LR	12 29 38.8	
	comp=Z,231nm,21.8s,baz=278,slow=38						
	comp=Z,0.3nm,0.4s						
WRA	Warramunga Arr	80.57	222	P	P	11 53 35.0	+3.9
	comp=Z,0.4nm,0.9s,baz=30,slow=5.1,SNR=1.7						
	comp=Z,0.4nm,0.9s						
ASAR	Alice Springs	84.06	221	P	P	11 53 56.0	+6.8
	comp=Z,0.4nm,1.0s,baz=24,slow=7.1,SNR=4.4						
	comp=Z,0.4nm,1.0s						
ESDC	Sonseca Array	89.92	2	P	P	11 54 16.3	-1.4
	comp=Z,0.2nm,0.6s,baz=7.1,slow=4.7,SNR=2.6						
	comp=Z,0.2nm,0.6s						

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*IDC **17** 12:10:01.3±0.5, 30°.27S×177°.29W, h0^{km}, mb4.3/14, mbtmp4.3/17, ML4.3/3, MS4.3/32, Error ellipse: s-maj=20.9km s-min=17.3km az=81.0*

*NEIC **17** 12:10:03.7±2.1, 30°.39S±0°.08×177°.2W±0°.1, h10^{km}±1^{km}, mb4.9/40, Error ellipse: s-maj=22.4km s-min=11.2km az=67.0*

*GCMT **17** 12:10:07.7±0.4, 30°.37S±0°.03×176°.67W±0°.03, h29^{km}±1^{km}, MW5.0/76, Moment Tensor Solution. s34,c36; s76,c96; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.26±.22; $M_{\theta\theta}$-0.38±.14; $M_{\phi\phi}$-2.88±.13; $M_{r\theta}$0.10±.24; $M_{\theta\phi}$-0.44±.10; $M_{\phi r}$2.43±.17; Best double couple: $M_0$3.94600×10^{16} NP1:ϕ_s193.00000°,δ26.00000°,λ97.00000°. NP2: ϕ_s5.00000°,δ64.00000°,λ87.00000°. Principal axes: T 4.1060, Plg71.0000°, Azm268.0000°; N -0.3190, Plg3.0000°, Azm7.0000°; P -3.7850, Plg19.0000°, Azm98.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 12:10:06.9±0.5**, 30°.47S**±0°.04×**177°.45W**±0°.09**, h33**^{km}**, n125,** σ**1**^{s}**86**/106**, mb4.8**/39**, MS4.3**/31**, 6C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	1.27	341	P	Pn	12 10 26.2	-2.2
GLKZ				S	Sb	12 10 46.2	-0.2
RAO	Raoul Island	1.28	341		Pn	12 10 26.5	-2.1
RAO				Sn	Sb	12 10 46.0	-0.7
RIZ	Raoul Island	1.29	341	P	Pn	12 10 27.1	-1.5
RIZ				S	Sb	12 10 46.5	-0.5
MXZ	Matakaoa Point	7.90	205	Pn	Pn	12 11 59.5	0.0
WMGZ	Waiomatatini S	8.09	204	P	Pn	12 12 01.2	-0.9
WMGZ				S	Sn	12 13 34.1	+1.7
PKGZ	Pakihiroa	8.25	205	P	Pn	12 12 02.7	-1.6
HAZ	Te Kaha	8.27	207	P	Pn	12 12 01.6	-2.9
HAZ				S	Sn	12 13 38.8	+2.0
PUZ	Puketiti	8.37	204	P	Pn	12 12 02.8	-3.2
PUZ				S	Sn	12 13 38.8	-0.5
RUGZ	Raukumara Rang	8.49	207	P	Pn	12 12 06.0	-1.8
RUGZ				S	Sn	12 13 42.8	+0.3
CNGZ	Carnagh Statio	8.76	203	P	Pn	12 12 08.3	-3.0
CNGZ				S	Sn	12 13 50.1	+1.3
WCZ	Waipu Caves	8.77	229	P	Pn	12 12 22.1	+11
MWZ	Matawai	8.87	207	P	Pn	12 12 10.4	-2.4
OUZ	Omahuta	8.90	236	P	Pn	12 12 20.6	+7.5
URZ	Urewera	8.97	209	Pn	Pn	12 12 11.3	-3.0
	1.0nm,0.3s,baz=332,slow=4.6,SNR=7.4						
URZ				Sn	Sn	12 13 52.2	-1.9
	6.1nm,0.3s,baz=247,slow=18,SNR=9.1						
URZ	Urewera	8.97	209	P	Pn	12 12 11.2	-3.0
PRGZ	Paritu Road	9.26	203	P	Pn	12 12 15.9	-2.3
PRGZ				S	Sn	12 13 59.4	-1.9
MUGZ	Murupara	9.30	209	S	Sn	12 13 59.7	-2.5
SNGZ	Shannon Statio	9.33	206	P	Pn	12 12 19.1	0.0
RAHZ	Arahi	9.55	207	P	Pn	12 12 22.5	+0.4
RAHZ				S	Sn	12 14 07.5	-0.7
MTHZ	Maungataniwha	9.59	208	P	Pn	12 12 21.9	-0.8
BKZ	Black Stump Fm	10.00	208	P	Pn	12 12 26.3	-2.0
BKZ				S	Sn	12 14 17.6	-1.8
MCHZ	McNeill Hill	10.16	207	P	Pn	12 12 28.5	-1.9
MCHZ				S	Sn	12 14 22.0	-1.2
MSVF	Nonsavu	13.33	341		Pn	12 13 12.7	-1.3
MSVF	Nonsavu	13.33	341	Pn	Pn	12 13 11.4	-2.5
	0.1nm,0.3s,baz=85,slow=7.1,SNR=1.2						
MSVF				LR	LR	12 17 00.3	
	comp=Z,742nm,19.2s,baz=173,slow=32						
	5.5nm,0.8s						
OXZ	Oxford	15.32	210	Pn	P	12 13 43.1	-2.1
OXZ				IAmb	IAmb	12 13 49.6	
	comp=Z,32nm,0.5s						
RPZ	Rata Peaks	16.07	211	Pn	P	12 13 52.0	-1.4
	comp=Z,1.5nm,0.3s,baz=58,slow=16,SNR=6.0						
RPZ				Sn	Sn	12 16 37.6	-10
	comp=Z,0.7nm,0.3s,baz=96,slow=18,SNR=1.6						
	comp=Z,16nm,0.8s						
DZM	Mont Dzumac	16.68	296		P	12 14 03.8	+3.3
DZM				IAmb	IAmb	12 14 08.2	
	comp=Z,282nm,1.7s						
DZM	Mont Dzumac	16.68	296	Pn	Pn	12 13 57.9	-0.4
	comp=Z,0.5nm,0.3s,baz=132,slow=14,SNR=20						
DZM				LR	LR	12 19 28.4	
	comp=Z,3μm,18.3s,baz=156,slow=34						
	comp=Z,3.1nm,1.0s						
RAR	Rarotonga	18.37	64	LR	LR	12 19 57.1	
	comp=Z,483nm,18.7s,baz=248,slow=33						
ARMA	Armidale	26.62	262	P	P	12 15 45.4	+2.8
EIDS	Eidsvold	28.22	273		P	12 15 57.3	+0.5
EIDS				IAmb	IAmb	12 16 08.8	
	comp=Z,37nm,1.6s						
PPT	Papeete	28.43	70	LR	LR	12 25 28.4	
	comp=Z,224nm,20.4s,baz=252,slow=33						
CAN	Canberra	28.50	251	P	P	12 16 02.1	+2.8
CTAO	Charters Tower	34.28	279		P	12 16 52.2	+1.9
CTAO				IAmb	IAmb	12 17 12.5	
	comp=Z,15nm,0.8s						
STKA	Stephens Creek	34.93	257		P	12 16 57.4	+1.6
STKA	Stephens Creek	34.93	257	P	P	12 16 56.4	+0.7
	comp=Z,7.4nm,0.8s,baz=105,slow=13,SNR=8.2						
	comp=Z,7.4nm,0.8s						
BBOO	Buckleboo	39.41	254	P	P	12 17 34.8	+1.0
BBOO				IAmb	IAmb	12 18 02.8	
	comp=Z,34nm,1.1s						
AS31	Alice Springs	43.58	267		P	12 18 07.7	-0.4
ASAR	Alice Springs	43.58	267		P	12 18 08.0	-0.1
ASAR	Alice Springs	43.58	267	P	P	12 18 08.2	+0.1
	comp=Z,2.9nm,0.8s,baz=106,slow=7.4,SNR=42						
ASAR				LR	LR	12 36 01.7	
	comp=Z,1μm,18.2s,baz=117,slow=36						
	comp=Z,2.9nm,0.8s						
WR8	Warramunga Arr	44.43	272		P	12 18 15.1	+0.1
WR8				IAmb	IAmb	12 18 28.4	
	comp=Z,33nm,1.1s						
WRAB	Tennant Creek	44.57	272	P	P	12 18 17.1	+1.0
WRAB				IAmb	IAmb	12 18 29.4	
	comp=Z,22nm,1.0s						
WRA	Warramunga Arr	44.58	272	P	P	12 18 16.6	+0.4
WRA	Warramunga Arr	44.58	272	P	P	12 18 16.7	+0.6
	comp=Z,6.1nm,0.7s,baz=114,slow=6.8,SNR=36						
WRA				LR	LR	12 36 20.5	
	comp=Z,798nm,18.1s,baz=80,slow=35						
	comp=Z,6.1nm,0.7s						
WB0	Warramunga Arr	44.60	272	P	P	12 18 17.0	+0.7
VNDA	Vanda	48.07	186	P	P	12 18 44.2	+1.4
	comp=Z,0.4nm,0.5s,baz=17,slow=1.5,SNR=1.5						
VNDA				LR	LR	12 36 38.6	
	comp=Z,284nm,19.4s,baz=20,slow=33						
	comp=Z,0.4nm,0.5s						
JAY	Jayapura	48.35	297	LR	LR	12 36 19.1	
	comp=Z,284nm,20.4s,baz=146,slow=33						
KNRA	Kununurra	51.19	274	P	P	12 19 08.3	+1.0
KNRA				IAmb	IAmb	12 19 33.7	
	comp=Z,39nm,1.7s						
FITZ	Fitzroy Crossi	52.84	270	P	P	12 19 19.8	+0.2
FITZ	Fitzroy Crossi	52.84	270	LR	LR	12 41 12.2	
	comp=Z,421nm,18.8s,baz=116,slow=35						
CASY	Casey	55.30	208		P	12 19 37.0	+0.2
GUMO	Guam	56.87	315	LR	LR	12 44 19.0	
	comp=Z,139nm,18.1s,baz=120,slow=36						
MORW	Morawa	56.97	253	P	P	12 19 48.7	-0.7
BATI	Baumata	58.13	277	LR	LR	12 45 53.9	
	comp=Z,2μm,18.2s,baz=140,slow=37						
QSPA	South Pole Qui	59.64	180	P	P	12 20 08.4	+0.8
	comp=Z,4.6nm,0.9s,baz=67,slow=2.2,SNR=17						
	comp=Z,4.6nm,0.9s						
KAPI	Kappang	64.09	280	LR	LR	12 48 42.2	
	comp=Z,94nm,18.5s,baz=116,slow=36						
DAV	Davao City (W)	66.09	294	LR	LR	12 48 26.5	
	comp=Z,65nm,20.8s,baz=94,slow=35						
BELA	Belgrano 2	69.65	172	P	P	12 21 12.3	-0.3
BELA				IAmb	IAmb	12 21 36.2	
	comp=Z,21nm,1.7s						
PMSA	Palmer Station	72.00	156	LR	LR	12 48 10.2	
	comp=Z,334nm,19.2s,baz=240,slow=32						
MAW	Mawson	72.41	200	P	P	12 21 30.4	+1.0
	comp=Z,4.8nm,0.9s,baz=123,slow=8.0,SNR=4.3						
	comp=Z,4.8nm,0.9s						
LEM	Lembang	73.60	272	LR	LR	12 54 47.9	
	comp=Z,307nm,19.1s,baz=153,slow=36						
JOW	Kunigami	77.06	312	LR	LR	12 55 57.8	
	comp=Z,79nm,18.3s,baz=113,slow=36						
TROLL	Troll, Antarti	77.80	180	⇑P	P	12 22 01.0	+0.4
	comp=Z,187nm,0.8s						
SNAA	Sanae	78.07	178	⇑P	P	12 22 03.9	+1.9
	comp=Z,58nm,1.0s						
SNAA	Sanae	78.07	178	P	P	12 22 02.8	+0.7
SNAA	Sanae	78.07	178	P	P	12 22 03.4	+1.3
	comp=Z,2.8nm,1.0s,baz=145,slow=3.6,SNR=7.5						
SNAA				LR	LR	12 53 27.1	
	comp=Z,165nm,20.3s,baz=50,slow=33						
	comp=Z,2.8nm,1.0s						
VNA3	Neumayer Olymp	78.20	176	⇑P	P	12 22 04.3	+1.6
	comp=Z,7.2nm,0.8s						
MJAR	Matsushiro Arr	78.57	325	P	P	12 22 05.2	0.0
	comp=Z,1.6nm,0.9s,baz=158,slow=7.7,SNR=4.4						
	comp=Z,1.6nm,0.9s						
VNA2	Neumayer--Watz	78.64	177	⇑P	P	12 22 07.1	+2.0
	comp=Z,4.4nm,0.7s,baz=171,slow=5.1						
VNA1	Neumayer--Stat	78.87	176	⇑P	P	12 22 08.1	+1.8
	comp=Z,7.0nm,1.0s						
PLCA	Paso Flores	82.11	133	P	P	12 22 25.1	+0.7
	comp=Z,2.3nm,0.9s,baz=265,slow=5.0,SNR=4.5						
	comp=Z,2.3nm,0.9s						
ASAJ	Asahikawa	82.72	332	LR	LR	12 54 47.4	
	comp=Z,90nm,20.1s,baz=160,slow=32						
LPIG	La Paz	84.17	58	LR	LR	12 53 30.7	
	comp=Z,203nm,18.2s,baz=192,slow=31						
KSRS	Korea Array	84.71	319	P	P	12 22 38.0	+0.6
	comp=Z,1.4nm,0.8s,baz=136,slow=5.3,SNR=6.4						
	comp=Z,1.4nm,0.8s						
KS19	Wonju Array Si	84.78	319	P	P	12 22 38.2	+0.4
KS19				IAmb	IAmb	12 22 40.3	
	comp=Z,14nm,1.0s						
PFO	Pinyon Flats O	85.90	47	LR	LR	12 53 24.0	
	comp=Z,132nm,19.5s,baz=193,slow=30						
PETK	Petropavlovsk-	86.00	345	P	P	12 22 42.4	-1.2
	comp=Z,5.9nm,0.9s,baz=108,slow=4.8,SNR=4.0						
PETK				LR	LR	12 58 20.1	
	comp=Z,95nm,18.9s,baz=215,slow=34						
	comp=Z,5.9nm,0.9s						
NJ2	Nanjing	86.65	310	*e*P	P	12 22 50.1	+2.9
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AFDM	Forest Hills D	86.79	41	P	P	12 22 47.2	-0.6
AFDM				IAmb	IAmb	12 23 29.4	
	comp=Z,8.6nm,1.3s						
USRK	Ussuriysk Ar.	87.48	326	P	P	12 22 51.8	+0.8
	comp=Z,2.3nm,0.8s,baz=130,slow=4.2,SNR=4.9						
	comp=Z,2.3nm,0.8s						
YBH	Yreka Blue Hor	87.80	38	LR	LR	12 54 18.3	
	comp=Z,11nm,21.0s,baz=254,slow=30						
NVAR	Mina Array Bea	87.97	42	P	P	12 22 52.9	-0.9
NVAR	Mina Array Bea	87.97	42	P	P	12 22 52.3	-1.5
	comp=Z,3.3nm,1.0s,baz=219,slow=7.9,SNR=12						
NVAR				LR	LR	12 56 45.0	
	comp=Z,168nm,19.1s,baz=205,slow=32						
	comp=Z,3.3nm,1.0s						
PRN	Pahroc Range	89.24	45	IAmb	IAmb	12 23 18.0	
	comp=Z,8.5nm,1.1s						
X16A	Lo Mia Camp, P	89.64	49	IAmb	IAmb	12 23 21.3	
	comp=Z,6.5nm,1.2s						
U15A	North Rim	90.33	47	IAmb	IAmb	12 23 24.5	
	comp=Z,7.2nm,1.0s						
KNB	Kanab	90.36	46	IAmb	IAmb	12 23 13.7	
	comp=Z,18nm,1.6s						
TIA	Tai'an	90.37	313	P	P	12 23 11.0	+6.2
TIA				pmax	pmax		
	comp=Z,11nm,0.9s						
CN2	Changchun	90.49	323	P	P	12 22 58.3	-6.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BNX	BinXian	90.84	325	⇑P	P	12 23 10.5	+3.8
BNX				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ELK	Elko	91.27	42	LR	LR	12 59 37.2	
	comp=Z,162nm,18.9s,baz=230,slow=33						
KLR	Kul'dur	91.34	329	LR	LR	12 58 53.7	
	comp=Z,92nm,21.5s,baz=130,slow=32						
TXAR	Lajitas Array	92.03	57	P	P	12 23 12.8	0.0
	comp=Z,0.7nm,0.9s,baz=230,slow=4.7,SNR=3.5						
TXAR				LR	LR	12 57 12.0	
	comp=Z,85nm,19.6s,baz=226,slow=31						
	comp=Z,0.7nm,0.9s						
G08A	Pilot Rock	92.23	37		P	12 23 13.1	-0.3
G08A				IAmb	IAmb	12 23 40.4	
	comp=Z,4.4nm,1.0s						
K13K	Kusilvak Mount	92.66	6	P	P	12 23 13.3	-1.4
MFID	Camas Ranch	92.67	40	P	P	12 23 14.4	-1.1
MFID				IAmb	IAmb	12 23 17.6	
	comp=Z,4.2nm,1.1s						
NNA	Nana	92.94	106	LR	LR	12 58 04.4	
	comp=Z,117nm,18.3s,baz=264,slow=31						
SRU	San Rafael Swe	93.08	46	IAmb	IAmb	12 23 37.5	
	comp=Z,17nm,2.0s						
ANMO	Albuquerque	93.25	51	LR	LR	12 58 38.7	
	comp=Z,143nm,19.0s,baz=318,slow=31						
HVU	Hansel Valley	93.36	43	IAmb	IAmb	12 23 37.2	
	comp=Z,4.6nm,1.2s						
MA2	Magadan	93.49	344	LR	LR	13 07 12.8	
	comp=Z,119nm,18.1s,baz=142,slow=37						
HLID	Hailey	93.55	40		P	12 23 18.9	-0.6
PLID	Pearl Lake	93.66	39		P	12 23 19.6	-0.5
NEW	Newport	95.15	36	LR	LR	12 59 05.4	
	comp=Z,230nm,20.3s,baz=219,slow=31						
PZH	PanZhiHua	95.76	297	P	P	12 23 31.0	+0.9
PDAR	Pinedale Array	95.86	43	LR	LR	13 00 30.1	
	comp=Z,107nm,19.4s,baz=244,slow=32						
SEY	Seymchan	96.16	347	LR	LR	13 04 12.3	
	comp=Z,84nm,18.9s,baz=152,slow=34						
HHC	Hu-ho-hao-te	96.63	314	*e*P	P	12 23 36.3	+2.7
HHC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,73nm,4.1s						
LPAZ	La Paz	97.68	114	LR	LR	13 01 31.6	
	comp=Z,60nm,18.2s,baz=47,slow=32						
WMQ	Urumqi	113.65	308	*e*PKP	PKiKP	12 28 42.4	+0.6
MKAR	Makanchi Array	118.18	310		PKiKP	12 28 51.4	+1.0
MKAR	Makanchi Array	118.18	310	PKP	PKiKP	12 28 50.3	-0.1
	comp=Z,0.5nm,0.6s,baz=119,slow=0.8,SNR=4.5						
KURBB	Kurchatov Arra	121.48	314	PKP	PKPdf	12 28 55.0	-1.6
	comp=Z,0.8nm,0.8s,baz=116,slow=2.0,SNR=5.2						
BVAR	Borovoye Array	126.79	316	PKP	PKPdf	12 29 05.9	-0.8
	comp=Z,1.6nm,0.8s,baz=104,slow=1.8,SNR=5.0						
FINES	FINESS Array B	145.38	340	PKPbc	PKPbc	12 29 39.0	-1.6
	comp=Z,6.1nm,0.5s,baz=54,slow=4.0,SNR=26						
KBZ	Khabaz	145.55	304	PKPbc	PKPdf	12 29 41.2	-0.3
	comp=Z,4.8nm,1.0s,baz=28,slow=4.9,SNR=6.7						
NB2	NORSAR Subarra	148.89	352	PKP	PKPbc	12 29 49.1	-1.5
	comp=Z,7.0nm,1.0s,baz=14,slow=4.4						
NOA	NORSAR Array B	148.89	352	PKPbc	PKPbc	12 29 48.5	-2.1
	comp=Z,4.0nm,0.8s,baz=18,slow=4.2,SNR=9.9						
HFS	Hagfors	149.41	349	PKPbc	PKPbc	12 29 49.3	-2.6
	comp=Z,8.0nm,0.7s,baz=291,slow=4.0,SNR=4.7						
NACGM	Naroch	150.07	332	*i* PKiKP	PKiKP	12 29 56.4	+1.9
	comp=Z,20nm,0.9s,baz=45						
AKASG	Malin Array Be	151.65	323	PKPbc	PKPbc	12 29 54.7	-2.7
	comp=Z,2.3nm,0.6s,baz=50,slow=2.6,SNR=12						
MMAI	Mount Meron Ar	152.01	284	PKPbc	PKPbc	12 29 57.5	-1.6
	comp=Z,6.6nm,0.7s,baz=64,slow=5.7,SNR=4.2						
BRTR	Keskin Array B	153.05	299	PKPbc	PKPbc	12 30 00.1	-1.1
	comp=Z,1.4nm,0.7s,baz=132,slow=3.7,SNR=6.5						
CLL	Collm	157.78	342	*i* PKPab	PKPab	12 30 32.7	+0.4
	comp=Z,7.0nm,1.3s						
CLL				*i* pPKPab	pPKPab	12 30 41.9	+0.4
CLL				*i* x	x	12 30 47.0	
	comp=Z,7.0nm,0.9s						
CLL				AMS	AMS	13 56 00.0	
	comp=Z,100nm,20.2s						
ESDC	Sonseca Array	169.38	28	PKP	PKPdf	12 30 09.4	-1.6
	comp=Z,0.2nm,0.5s,baz=135,slow=0.5,SNR=2.1						

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*KRNET **17** 12:11:12.8±0.1, 42°.23N×69°.25E, mb2.6*

*SOME **17** 12:11:14.7, 42°.27N×69°.30E, h5^{km}*

ISC 17 12:11:13.4±2.9**, 42°.44N**±0°.07×**69°.3E**±0°.2**, h10**^{km}**, n7,** σ**2**^{s}**24**/14**, 8C-4D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRLS	Borolday	0.73	36	*e*P	Pg	12 11 26.0	-1.5
BRLS				*e*S	Sg	12 11 34.3	-2.7
KK31	Karatay Array	1.14	54	⇓P	Pn	12 11 37.9	+2.5
	0.3nm,0.2s,baz=226,slow=16,SNR=4.9						
KK31				⇓S	Sn	12 11 54.4	+3.3
	6.5nm,0.4s,baz=230,slow=29,SNR=23						
KKAR	Karatay Array	1.14	54	⇑*e*P	Pn	12 11 36.8	+1.4
KKAR				⇑*e*S	Sn	12 11 54.3	+3.2
TRKS	Terek-Say	1.67	122	⇓*e*P	Pb	12 11 43.0	-1.4
TRKS				⇓*e*S	Sb	12 12 05.0	-0.6
ARK	Arkit	2.11	107	⇑*e*P	Pb	12 11 50.2	-1.7
ARK				⇑*e*S	Sb	12 12 17.7	-0.5
MNAS	Manas	2.40	88	⇑*e*P	Pb	12 11 55.1	-1.7
MNAS				⇑*e*S	Sb	12 12 26.2	-0.4
AML	Almayashu	3.31	94	⇑*e*P	Pn	12 12 07.5	+1.9
AML				⇑*e*S	Sn	12 12 47.1	+2.0

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*IDC **17** 12:14:37.1±2.7, 20°.35S×177°.90W, h536^{km}±23^{km}, mb3.3/9, mbtmp4.1/10, Error ellipse: s-maj=50.7km s-min=17.9km az=147.0*

ISC 17 12:14:36.7±1.2**, 20°.4S**±0°.3×**177°.9W**±0°.2**, h534**^{km}**, n13,** σ**0**^{s}**87**/12**, mb3.7**/9**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.68	304	P	P	12 16 03.6	+0.5
	23nm,0.6s,baz=227,slow=19,SNR=19						
STKA	Stephens Creek	37.96	244	P	P	12 21 08.7	-0.3
	3.8nm,0.7s,baz=86,slow=10.0,SNR=3.6						
	3.8nm,0.7s						
ASAR	Alice Springs	44.67	257	P	P	12 22 02.3	0.0
	12nm,0.8s,baz=87,slow=8.6,SNR=35						
	12nm,0.8s						
WRA	Warramunga Arr	44.75	262	P	P	12 22 02.1	-0.8
	5.8nm,0.9s,baz=97,slow=8.4,SNR=14						
	5.8nm,0.9s						
MJAR	Matsushiro Arr	70.19	324	P	P	12 24 55.4	-0.5
	1.8nm,0.7s,baz=170,slow=4.7,SNR=5.5						
	1.8nm,0.7s						
NVAR	Mina Array Bea	80.85	43	P	P	12 25 55.8	+0.5
	0.5nm,0.8s,baz=238,slow=5.8,SNR=3.9						
	0.5nm,0.8s						
TXAR	Lajitas Array	86.88	57	P	P	12 26 25.9	+0.7
	0.3nm,0.7s,baz=195,slow=7.3,SNR=3.9						
	0.3nm,0.7s						
ILAR	Eielson Array	88.17	13	P	P	12 26 29.1	-1.2
	0.6nm,0.8s,baz=222,slow=5.7,SNR=5.1						
	0.6nm,0.8s						
PDAR	Pinedale Array	88.79	43	P	P	12 26 33.7	-0.3
	0.4nm,0.7s,baz=221,slow=4.2,SNR=2.5						
	0.4nm,0.7s						
CMAR	Chiang Mai Arr	90.20	290	P	P	12 26 42.5	+1.7
	2.3nm,0.9s,baz=105,slow=2.0,SNR=11						
	2.3nm,0.9s						
AKASG	Malin Array Be	142.97	331	PKhKP	PKPpre	12 33 06.0	
	3.1nm,0.7s,baz=43,slow=4.3,SNR=11						
BRTR	Keskin Array B	146.86	313	PKPbc	PKPbc	12 33 19.2	-0.3
	0.9nm,0.7s,baz=159,slow=4.9,SNR=4.1						
MMAI	Mount Meron Ar	147.87	300	PKPbc	PKPbc	12 33 21.6	-0.7
	3.3nm,0.2s,baz=82,slow=3.1,SNR=8.0						

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*HEL **17** 12:24:16.1±0.1, 68°.17N×32°.94E, h0^{km}, ML1.9, Explosion*

*KOLA **17** 12:24:16.7, 68°.10N×33°.00E, h0^{km}, ML2.5, Error ellipse: s-maj=2.0km s-min=1.5km az=90.0, Olenegorsk City, Mines*

*UPP **17** 12:24:18.8±2.8, 68°.10N×32°.41E, h0^{km}, ML1.7*

*IDC **17** 12:24:19.9±2.6, 68°.03N×32°.00E, h0^{km}, mbtmp2.6/2, ML1.5/2, Error ellipse: s-maj=29.8km s-min=11.7km az=67.0*

ISC 17 12:24:15.2±0.8**, 68°.07N**±0°.03×**33°.07E**±0°.03**, h0**^{km}**, n43,** σ**1**^{s}**29**/66**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APA0	Apatity Array	0.47	184	P	Pb	12 24 25.4	-0.9
APA	Apatity	0.52	166	P	Pb	12 24 26.8	-0.4
LVZ	Lovozero	0.62	106	P	Pb	12 24 28.8	-0.1
LVZ				S	Sb	12 24 37.3	-0.9
LVZ	Lovozero	0.62	106	PG	Pb	12 24 29.2	+0.3
LVZ				SG	Sb	12 24 37.3	-0.9
VRF	Varrio	1.35	258	PG	Pg	12 24 40.0	-1.0
	baz=69						
VRF				MSG		12 24 56.0	
	comp=Z,12nm,0.2s						
VRF				SB	Sg	12 24 57.7	-0.8
TERR	Teriberka	1.36	32	P	Pg	12 24 41.0	-0.1
TERR				S	Sg	12 24 58.3	-0.4
KVDA	Kovda	1.39	183	P	Pn	12 24 41.8	+0.1
KVDA				S	Sn	12 25 01.6	+0.8
RAJF	Raja-Jooseppi	1.82	285	PG	Pn	12 24 47.6	-0.1
RAJF				SN	Sn	12 25 10.2	-1.1
OLKF	Oulanka, Finla	2.27	221	PB	Pb	12 24 56.0	-1.0
OLKF				MSG		12 25 24.5	
	comp=Z,4.6nm,0.2s						
OLKF				SB	Sb	12 25 26.0	+0.5
KU6	Riekki	2.41	213	PB	Pb	12 24 58.3	-1.0

KU6				MSG		12 25 28.9	
	comp=Z,2.7nm,0.2s						
KU6				SG	Sg	12 25 34.2	+1.8
VADS	Vadso	2.45	329	P	Pn	12 24 56.8	+0.5
VADS				S	Sn	12 25 29.1	+2.1
VADS	Vadso	2.45	329	eP	Pn	12 24 56.6	+0.2
MSF	Maaselka	2.69	218	PB	Pb	12 25 02.9	-1.2
MSF				SG	Sb	12 25 39.0	+1.4
KEV	Kevo	2.77	310	eP	Pn	12 25 01.5	+0.8
KEV	Kevo	2.77	310	PB	Pn	12 25 01.5	+0.8
KEV				SG	Sn	12 25 34.8	0.0
KEV				MSG		12 25 34.9	
	comp=Z,7.6nm,0.2s						
KU1	Kurvinen	2.88	211	PB	Pb	12 25 06.7	-0.6
KU2	Taivalkoski	3.05	221	PB	Pb	12 25 09.5	-0.7
RNF	Rovaniemi	3.10	245	PN	Pn	12 25 06.4	+1.1
RNF				SN	Sn	12 25 44.0	+0.9
ARA0	ARCESS Array S	3.12	302	PB	Pn	12 25 06.3	+0.8
ARA0				SG	Sb	12 25 48.2	-1.6
ARCES	ARCESS Array B	3.12	302	Pn	Pn	12 25 05.5	0.0
	comp=Z,0.2nm,0.3s,baz=118,slow=15,SNR=31						
ARCES				Sn	Sn	12 25 42.2	-1.2
	comp=Z,0.3nm,0.3s,baz=116,slow=20,SNR=6.6						
ARCES				Lg	Lg	12 25 47.9	
	comp=Z,0.8nm,0.3s,baz=122,slow=28,SNR=4.5						
	comp=Z,0.6nm,0.2s						
ARCES	ARCESS Array B	3.12	302	P	Pn	12 25 05.9	+0.4
ARCES				S	Sn	12 25 43.4	0.0
RANF	Ranua	3.21	233	PN	Pn	12 25 07.2	+0.4
	baz=43						
RANF				SB	Sb	12 25 52.5	-0.2
HEF	Hetta	3.52	280	PN	Pn	12 25 11.0	-0.1
HEF				SG	Sb	12 26 02.2	+0.6
KLF	Kolari	3.58	261	PN	Pn	12 25 12.2	+0.3
KTK1	Kautokeino	3.73	289	SB	Sn	12 26 02.5	+3.9
PAJU	Pajala	3.96	259	P	Pn	12 25 16.9	-0.3
PAJU	Pajala	3.96	259	PN	Pn	12 25 17.2	+0.1
	baz=70						
PAJU				SN	Sn	12 26 04.8	+0.6
TOF	Tornio	3.96	244	PG	Pb	12 25 27.0	+1.2
TOF				SN	Sn	12 26 03.6	-0.6
OUL	Oulu	4.15	227	PN	Pn	12 25 21.0	+1.4
LANU	Lannavaara	4.16	275	PN	Pn	12 25 22.1	+2.3
LANU				SG	Sb	12 26 21.8	+2.0
KALU	Kalix	4.42	244	P	Pn	12 25 23.9	+0.6
KALU				S	Sn	12 26 13.2	-2.2
KALU	Kalix	4.42	244	SN	Sn	12 26 16.6	+1.3
ERTU	Ertsjaerv	4.48	255	P	Pn	12 25 24.0	-0.2
ERTU	Ertsjaerv	4.48	255	PN	Pn	12 25 23.9	-0.4
	baz=61						
ERTU				SN	Sn	12 26 16.1	-0.9
OBF4	Vikkela, Lumij	4.57	228	PN	Pn	12 25 26.3	+0.8
	baz=38						
KIF	Kilpisjarvi	4.60	287	PN	Pn	12 25 25.9	+0.1
KIF				SG	Sb	12 26 35.2	+2.6
KUA	Kurravaara	4.79	274	P	Pn	12 25 27.9	-0.5
KUA				S	Sn	12 26 20.6	-4.0
KOVU	Salmi	4.83	278	P	Pn	12 25 28.9	-0.1
KOVU				S	Sn	12 26 22.0	-3.5
RATU	Laukkuluspa	5.09	273	P	Pn	12 25 31.9	-0.7
SJUU	Sjulsmark	5.21	246	P	Pn	12 25 34.0	-0.3
I37NO	I37NO	5.40	287	I	I	12 55 30.0	
	baz=94,slow=323,SNR=3.1						
FAUS	Fauske	6.79	272	S	Sn	12 27 04.9	-8.9
FINES	FINESS Array B	7.29	207	Pn	Pn	12 26 04.3	+1.6
	baz=30,slow=12,SNR=1.6						
FINES				Lg	Lg	12 27 58.6	
	comp=Z,0.2nm,0.3s,baz=20,slow=28,SNR=3.1						
	comp=Z,0.6nm,0.7s						

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*JMA **17** 12:28:02.5±0.3, 36°.2N±0°.6×14°2E±°, h31^{km}, MV3.2/35, FAR E OFF IBARAKI PREF*

*IDC **17** 12:28:06.6±1.5, 36°.59N×141°.52E, h0^{km}, mb3.6/6, mbtmp3.6/8, ML2.9/2, Error ellipse: s-maj=41.5km s-min=23.1km az=74.0*

ISC 17 12:28:06.0±1.1**, 36°.28N**±0°.06×**141°.71E**±0°.09**, h10^{km}, n24, σ2.^{s}32**/24**, mb3.6**/6**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHYU	Hitachinakayam	0.91	274	P	Pg	12 28 23.4	-0.1
JHYU				eS	Sn	12 28 38.4	+0.3
JHO	Hitachi	0.98	290	P	Pg	12 28 23.8	-1.0
JIHU	Itakohorinouch	1.01	252	eP	Pg	12 28 24.5	-0.9
ONAJ	Iwakimizuishiy	1.10	318	P	Pb	12 28 25.5	-1.6
JFK	Kawauchi	1.27	328	P	Pn	12 28 28.4	-1.5
JOTO	OTAMA OYAMA	1.69	319	P	Pn	12 28 35.2	-0.3
BSO1	Boso 1	1.73	200	P	Pn	12 28 31.9	-3.8
BSO1				eS	Sn	12 28 54.2	-3.4
JMM	Marumori	1.74	335	P	Pn	12 28 34.5	-1.8
BSO3	Boso 3	1.77	214	P	Pn	12 28 33.7	-2.8
JAG	Ashikaga	1.83	275	P	Pn	12 28 36.1	-1.4
JFY	Yanaizu	1.96	305	eP	Pn	12 28 39.2	-0.2
JKT	Katashina	2.04	284	P	Pn	12 28 40.4	-0.1
JRY	Ryogami san	2.29	264	P	Pn	12 28 42.5	-1.3
MJAR	Matsushiro Arr	2.84	276	Pn	Pn	12 28 51.6	+0.2
	0.7nm,0.3s,baz=83,slow=9.8,SNR=31						
MJAR				Sn	Sn	12 29 29.0	+3.4
	0.4nm,0.3s,baz=72,slow=12,SNR=6.0						
	8.2nm,0.6s						
ASAJ	Asahikawa	7.85	5	Pn	Pn	12 29 56.9	-3.3
	0.3nm,0.3s,baz=190,slow=18,SNR=1.5						
	15nm,1.1s						
H11S1	WAKE ISLAND Hy	28.25	122	T	T	13 03 14.3	
	baz=314,slow=76,SNR=8.5						
H11S3	WAKE ISLAND Hy	28.25	122	T	T	13 03 14.1	
	baz=314,slow=76,SNR=6.3						
H11S2	WAKE ISLAND Hy	28.27	122	T	T	13 03 17.1	
	baz=314,slow=76,SNR=7.1						
SONM	Songino Array	28.41	305	P	P	12 34 00.4	-0.3
	0.6nm,0.5s,baz=102,slow=8.1,SNR=4.7						
	0.6nm,0.5s						
MKAR	Makanchi Array	44.72	303	P	P	12 36 18.2	-1.0
	0.4nm,0.7s,baz=82,slow=9.9,SNR=3.6						
	0.4nm,0.7s						
KURBB	Kurchatov Arra	46.65	309	P	P	12 36 32.2	-2.2
	0.3nm,0.4s,baz=81,slow=7.6,SNR=5.5						
	0.3nm,0.4s						
WRA	Warramunga Arr	56.35	188	P	P	12 37 51.0	+3.7
	0.2nm,0.4s,baz=6.7,slow=8.2,SNR=4.7						
	0.2nm,0.4s						
ASAR	Alice Springs	60.08	188	P	P	12 38 17.7	+4.3
	0.2nm,0.7s,baz=11,slow=7.7,SNR=1.1						
	0.2nm,0.7s						
FINES	FINESS Array B	69.59	332	P	P	12 39 17.0	+2.1
	1.8nm,0.9s,baz=35,slow=5.1,SNR=4.6						
	1.8nm,0.9s						

GCG 17 12:30:21.8±0.8**, 14°.23N**×**91°.10W, h124^{km}**±19^{km}**, MD4.0, ML3.3, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESSG	Sabana Grande	0.30	60	i P	Pn	12 30 39.2	-0.2
ESSG				i S	Sn	12 30 53.1	+0.4
STG8	El Palmar, Qui	0.33	312	i P	Pn	12 30 42.2	+2.5
STG8				i S	Sn	12 30 59.0	+5.9
STG8				IAML		12 31 01.6	
	comp=E,256nm,0.2s						
FG8	Yepocapa, Chim	0.52	87	i P	Pn	12 30 40.0	-0.5
FG16	Alotenango, Sa	0.57	86	i P	Pn	12 30 40.3	-0.6
FG16				i S	Sn	12 30 54.2	-1.2
FG16				IAML		12 31 00.6	
	comp=N,2µm,0.3s						

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*KRNET **17** 13:00:06.4±0.1, 40°.34N×69°.45E, mb3.0*

*SOME **17** 13:00:07.6, 40°.48N×69°.52E, h10^{km}*

ISC 17 13:00:06.2±2.4**, 40°.37N**±0°.08×**69°.5E**±0°.1**, h8^{km}**±14^{km}**, n8, σ0.^{s}71**/15**, 11C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTK	Batken	1.07	106	⇑iP	Pg	13 00 26.4	-0.5
BTK				⇑eS	Sg	13 00 41.1	+0.3
TRKS	Terek-Say	1.71	47	⇑eP	Pn	13 00 36.9	+0.3
TRKS				⇑iS	Sb	13 00 59.0	-0.9
DRK	Karamyk	2.00	116	⇑eP	Pn	13 00 41.0	+0.4
DRK				⇑eS	Sn	13 01 05.4	-0.5
ARK	Arkit	2.36	52	⇓eP	Pn	13 00 46.3	+0.9
ARK				⇓eS	Sn	13 01 15.3	+0.6
OHH	Osh	2.53	85	⇑eP	Pn	13 00 48.1	+0.4
OHH				⇑eS	Sn	13 01 18.8	0.0
BRLS	Borolday	2.67	6	eP	Pn	13 00 50.0	+0.4
	1.8nm,0.3s						
BRLS				eS	Sn	13 01 20.8	-1.4
	5.6nm,0.4s						
KK31	Karatay Array	2.84	16	Pg	Pb	13 00 57.5	+0.3
	0.7nm,0.3s,baz=192,slow=16,SNR=6.6						
KK31				⇑Lg	Lg	13 01 32.7	
	2.8nm,0.5s,baz=199,slow=28,SNR=11						
KKAR	Karatay Array	2.84	16	⇑eP	Pn	13 00 52.6	+0.7
KKAR				⇑eS	Sn	13 01 26.4	0.0

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*NNC **17** 13:08:01.5±0.5, 50°.01N×78°.80E, h0^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=9.7km s-min=2.6km az=75.0, Suspected Mining explosion.*

*IDC **17** 13:08:02.8±1.1, 50°.07N×78°.83E, h0^{km}, mbtmp2.7/2, ML2.1/2, Error ellipse: s-maj=13.0km s-min=7.5km az=62.0*

ISC 17 13:08:03.0±0.9**, 50°.11N**±0°.06×**78°.79E**±0°.06**, h0^{km}, n18, σ0.^{s}54**/29**, 22C-6D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	Kurchatov Arra	0.51	340	⇑P	Pg	13 08 13.3	+0.6
KUR07				⇑S	Sb	13 08 22.7	0.0
KUR14	Kurchatov Arra	0.52	346	⇑P	Pg	13 08 13.4	+0.4
KUR14				⇑S	Sb	13 08 22.7	-0.4
KUR06	Kurchatov Arra	0.53	341	⇓P	Pg	13 08 13.4	+0.4
KUR06				⇑S	Sb	13 08 22.8	-0.4
KUR15	Kurchatov Arra	0.53	344	⇑P	Pg	13 08 13.6	+0.4
KUR15				⇓S	Sb	13 08 23.0	-0.4
KURBB	Kurchatov Arra	0.54	343	Pg	Pg	13 08 13.9	+0.6
	1.1nm,0.3s,baz=165,slow=18,SNR=104						
KURBB				Lg	Lg	13 08 23.4	
	1.6nm,0.3s,baz=162,slow=33,SNR=9.6						
KURBB	Kurchatov Arra	0.54	343	⇓P	Pg	13 08 13.6	+0.2
	26nm,0.6s						
KURBB				⇑S	Sb	13 08 23.3	-0.4
	187nm,0.8s						
KUR16	Kurchatov Arra	0.55	341	⇑P	Pg	13 08 14.2	+0.6
KUR16				⇑S	Sb	13 08 23.3	-0.7
KUR05	Kurchatov Arra	0.56	344	⇓P	Pg	13 08 14.1	+0.4
KUR05				⇑S	Sb	13 08 23.6	-0.7
KUR17	Kurchatov Arra	0.56	339	⇑P	Pg	13 08 14.5	+0.7
KUR17				⇑S	Sb	13 08 23.8	-0.6
KUR04	Kurchatov Arra	0.58	344	⇑P	Pg	13 08 14.6	+0.5
KUR04				⇑S	Sb	13 08 24.0	-0.8
KURK	Kurchatov	0.62	350	⇑P	Pg	13 08 15.0	+0.1
	5.3nm,0.6s						
KURK				⇓S	Sb	13 08 25.8	-0.2
	30nm,0.9s						
MAKZ	Makanchi	3.92	146	⇑Pg	Pb	13 09 13.8	+0.8
	4.1nm,0.8s						
MAKZ				⇑Lg	Lg	13 10 01.0	
	22nm,0.8s						
MK31	Makanchi Array	4.05	144	⇑Pn	Pn	13 09 06.2	-0.1
	0.1nm,0.2s,baz=322,slow=10,SNR=26						
MK31				⇑Pg	Pb	13 09 14.5	-0.7
	2.1nm,0.6s,baz=329,slow=14,SNR=19						
MK31				⇓Lg	Lg	13 10 08.8	
	21nm,0.7s,baz=333,slow=28,SNR=28						
MKAR	Makanchi Array	4.05	144	Pn	Pn	13 09 06.1	-0.1
	0.1nm,0.3s,baz=335,slow=12,SNR=16						
MKAR				Lg	Lg	13 10 09.0	
	1.2nm,0.3s,baz=331,slow=26,SNR=20						
	0.5nm,0.7s						
OTUK	Ortayu	4.62	249	⇑Pn	Pn	13 09 13.2	-0.8
	1.2nm,0.5s						
OTUK				⇑Pg	Pb	13 09 25.5	+0.5
	2.6nm,0.9s						
OTUK				⇑Lg	Lg	13 10 27.9	
	6.9nm,0.8s						
I46RU	ZALESOVO INFRA	5.35	42	I	I	13 39 10.0	
	baz=227,slow=322,SNR=6.1						
ZALV	Zalesovo Beam	5.35	42	Pn	Pn	13 09 24.5	+0.4
	0.3nm,0.3s,baz=230,slow=15,SNR=5.1						
ZALV				Lg	Lg	13 10 49.4	
	0.3nm,0.3s,baz=225,slow=25,SNR=6.3						
	1.2nm,0.4s						
BVAR	Borovoye Array	6.00	302	Sn	Sn	13 10 42.2	0.0
	baz=111,slow=23,SNR=4.8						

RSNC 17 13:11:56.6±0.0**, 5°N**±1°×**7°8W**±°**, h10^{km}**±4^{km}**, M2.4, mB7.0, ML2.2, Mw(mB)6.9, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MALC	Bahia Malaga	1.36	128	P	Pb	13 12 22.0	-0.1
MALC				S	Sg	13 12 40.8	+0.5
GR1C	Gorgona, Isla	1.85	172	P	Pn	13 12 27.1	-1.3
GR1C				S	Sn	13 12 50.5	-1.4
PLMC	San Jos del P	2.12	88	P	Pn	13 12 30.9	-1.3
PLMC				S	Sn	13 12 54.9	-3.8
YOTC	Yotoco, Valle	2.23	113	P	Pn	13 12 33.5	-0.3
YOTC				S	Sn	13 12 59.6	-1.9
PTAC	Punta Ardita,	2.36	15	P	Pn	13 12 33.2	-2.2
PTAC				S	Sn	13 12 55.2	-9.3
JAMC	Jamundi, Valle	2.38	133	P	Pn	13 12 36.4	+0.6
JAMC				S	Sn	13 13 04.1	-1.1
CBOC	Ciudad Bolivar	2.59	67	P	Pn	13 12 36.8	-2.0
CBOC				S	Sn	13 13 07.8	-2.6
POPC	Popayan, Colom	2.87	143	P	Pn	13 12 44.4	+1.7
POPC				S	Sn	13 13 16.3	-1.2
ANIL	Santa Ana	3.02	97	P	Pn	13 12 44.1	-0.7
ANIL				S	Sn	13 13 21.5	+0.3
BBAC	Balboa, Cauca	3.04	158	P	Pn	13 12 47.8	+2.8
BBAC				S	Sn	13 13 18.7	-2.9
GUY2C	Guyana, Caldas	3.06	83	P	Pn	13 12 45.8	+0.4
GUY2C				S	Sn	13 13 20.2	-2.1
ORTC	Ortega, Tolima	3.29	106	P	Pn	13 12 49.9	+1.6
ORTC				S	Sn	13 13 27.7	+0.2
AZU	Azuero	3.46	328	P	Pn	13 12 49.4	-1.2
AZU				S	Sn	13 13 24.9	-6.8
NORC	Norcasia	3.60	78	P	Pn	13 12 53.1	+0.6
NORC				S	Sn	13 13 34.7	-0.4
PRAC	Prado	3.69	108	P	Pn	13 12 55.2	+1.4
PRAC				S	Sn	13 13 38.5	+1.1
PTBC	PUERTO BERRIO,	4.28	67	P	Pn	13 13 00.8	-1.0
PTBC				S	Sn	13 13 52.2	+0.3
BARC	Barichara	5.48	71	P	Pn	13 13 20.2	+1.6

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*IDC **17** 13:20:49.2±3.0, 15°.08S×173°.72W, h0^{km}, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=164.7km s-min=26.1km az=146.0*

*NEIC **17** 13:20:56.1±2.3, 15°.3S±0°.1×173°.9W±0°.1, h35^{km}±2^{km}, mb4.5/9, Error ellipse: s-maj=22.5km s-min=15.1km az=118.0*

ISC 17 13:20:55.1±0.7**, 15°.3S**±0°.1×**173°.8W**±0°.1**, h35^{km}, n19, σ1.^{s}03**/19**, mb4.2**/9**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	2.43	55		Pn	13 21 34.4	+1.9
NIUE	Niue	5.29	136		Pn	13 22 13.5	+1.7
RAR	Rarotonga	14.59	116	P	P	13 24 23.9	-1.2
WR8	Warramunga Arr	49.30	257	P	P	13 29 41.8	+0.6
WR8				IAmb	IAmb	13 29 54.5	
	comp=Z,8.7nm,1.3s						
WB0	Warramunga Arr	49.41	257	P	P	13 29 42.4	+0.4
WB0				IAmb	IAmb	13 30 22.4	
	comp=Z,10nm,1.4s						
WRA	Warramunga Arr	49.45	257	P	P	13 29 42.8	+0.5
	comp=Z,0.9nm,0.5s,baz=90,slow=6.8,SNR=28						
	comp=Z,0.9nm,0.5s						
AS31	Alice Springs	49.73	252	P	P	13 29 44.7	+0.3
ASAR	Alice Springs	49.74	252	P	P	13 29 44.5	0.0
ASAR	Alice Springs	49.74	252	P	P	13 29 44.9	+0.4
	comp=Z,1.9nm,0.4s,baz=89,slow=7.9,SNR=62						
	comp=Z,1.9nm,0.4s						
PSA00	Pilbara Seismi	62.83	253	P	P	13 31 17.6	-0.3
AMKA	Amchitka	66.67	355	P	P	13 31 42.9	+0.8
PET	Petropavlovsk	72.07	343	P	P	13 32 15.9	+0.4
NVAR	Mina Array Bea	74.55	42	P	P	13 32 28.6	-2.2
	comp=Z,0.7nm,0.7s,baz=241,slow=8.2,SNR=5.4						
	comp=Z,0.7nm,0.7s						
N18K	Kilae Creek	77.09	9	P	P	13 32 44.4	-0.1
N18K				IAmb	IAmb	13 33 09.4	
	comp=Z,7.3nm,1.4s						
HYT	Haines Junctio	81.25	17	P	P	13 33 07.2	-0.2
HYT				IAmb	IAmb	13 33 45.8	
	comp=Z,3.1nm,1.0s						
CCB	Clear Creek Bu	82.16	11	P	P	13 33 11.1	-0.8
CCB				IAmb	IAmb	13 33 11.9	
	comp=Z,1.3nm,0.7s						
ILAR	Eielson Array	82.44	11	P	P	13 33 12.2	-1.2
	comp=Z,0.2nm,0.6s,baz=230,slow=5.5,SNR=6.6						
	comp=Z,0.2nm,0.6s						
IMAR	Indian Mountai	82.44	8	P	P	13 33 13.5	+0.1
C19K	Lookout Ridge	84.80	5	P	P	13 33 25.8	+0.3

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*IDC **17** 13:22:57.4±1.1, 2°.81S×119°.63E, h0^{km}, mb3.4/5, mbtmp3.5/6, ML4.3/1, Error ellipse: s-maj=62.2km s-min=17.3km az=70.0*

*DJA **17** 13:22:59.4±0.3, 3°S±3°×11°9E±°, h10^{km}, M4.0/13, MLv4.0/13*

ISC 17 13:22:59.3±1.0**, 2°.92S**±0°.04×**119°.48E**±0°.07**, h10^{km}, n17, σ1.^{s}04**/18**, mb3.6**/5**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTSI	Tana Toraja	0.36	111	P	Pg	13 23 06.3	-0.3
TTSI				S	Sg	13 23 12.3	+0.9
SPSI	Sidrap Palu	1.08	164	P	Pg	13 23 18.8	-1.4
BNSI	Bone	1.60	157	P	Pn	13 23 28.3	+0.5
PCI	Palu	2.03	10	P	Pn	13 23 35.2	+1.6
KAPI	Kappang	2.10	173	Pn	Pn	13 23 35.3	+0.7
	88nm,0.3s,baz=354,slow=8.5,SNR=37						
KAPI				Sn	Sn	13 24 03.0	+2.1
	24nm,0.3s,baz=17,slow=8.0,SNR=4.0						
	157nm,0.3s						
BKSI	Bulukumba	2.48	165	P	Pn	13 23 40.6	+0.8
APSI	Ampana	2.94	47	P	Pn	13 23 46.4	+0.2
MPSI	Mapaga	3.26	7	P	Pn	13 23 49.9	-0.6
KDI	Kendari	3.30	108	P	Pn	13 23 50.5	-0.6
BSSI	Bau Bau, Buton	3.36	163	P	Pn	13 23 51.2	-0.8
LUWI	Luwuk	3.78	61	P	Pn	13 23 57.8	+0.1
BBSI	Bau Bau	4.00	130	P	Pn	13 24 01.3	+0.5
WRA	Warramunga Arr	22.29	140	P	P	13 27 55.5	-1.6
	0.7nm,0.7s,baz=317,slow=12,SNR=5.7						
	0.7nm,0.7s						
ASAR	Alice Springs	24.91	147	P	P	13 28 23.3	+0.6
	0.4nm,0.8s,baz=343,slow=14,SNR=5.6						
	0.4nm,0.8s						
SONM	Songino Array	51.82	349	P	P	13 32 07.0	-0.7
	0.5nm,0.6s,baz=175,slow=8.6,SNR=2.7						
	0.5nm,0.6s						
MKAR	Makanchi Array	59.34	331	P	P	13 33 02.0	+0.3
	0.5nm,0.6s,baz=139,slow=6.8,SNR=6.6						
	0.5nm,0.6s						
KURBB	Kurchatov Arra	63.80	332	P	P	13 33 29.6	-2.1
	0.2nm,0.5s,baz=133,slow=6.1,SNR=2.1						
	0.2nm,0.5s						

IDC 17 13:25:47.4±1.9**, 5°.86S**×**153°.68E, h0^{km}, mb3.7**/4**, mbtmp3.7**/4**, Error ellipse: s-maj=149.3km s-min=32.1km az=142.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.44	232	P	P	13 30 58.8	+0.2
	0.9nm,0.6s,baz=56,slow=9.4,SNR=7.6						
	0.9nm,0.6s						
ASAR	Alice Springs	25.99	225	P	P	13 31 21.6	-0.7
	0.8nm,0.9s,baz=57,slow=9.0,SNR=4.7						
	0.8nm,0.9s						
FITZ	Fitzroy Crossi	29.95	244	P	P	13 31 57.9	+0.3
	1.1nm,0.6s,baz=72,slow=6.4,SNR=2.0						
	1.1nm,0.6s						
NVAR	Mina Array Bea	92.05	52	P	P	13 38 59.2	+0.2
	0.6nm,0.8s,baz=275,slow=6.4,SNR=4.0						
	0.6nm,0.8s						

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*DSN **17** 13:32:15.9±1.0, 28°.46N×56°.27E, h15^{km}, ML4.2/14, Error ellipse: s-maj=13.7km s-min=7.7km az=70.0*

*BJI **17** 13:32:23.0, 27°.64N×55°.76E, h11^{km}, mB4.9/5, mb4.5/25, Ms4.2/2, Ms7 3.9/1*

*IDC **17** 13:32:23.8±0.8, 27°.60N×55°.98E, h0^{km}, mb4.3/20, mbtmp4.3/24, ML4.0/4, MS3.2/9, Error ellipse: s-maj=17.8km s-min=13.2km az=15.0*

*MOS **17** 13:32:24.2±1.1, 27°.50N×55°.88E, h14^{km}, mb4.6/31, Error ellipse: s-maj=7.0km s-min=4.7km az=79.3*

*TEH **17** 13:32:25.8, 27°.51N×55°.93E, h12^{km}±30^{km}*

*THR **17** 13:32:25.8±0.0, 27°.54N×55°.94E, h10^{km}±3^{km}, ML4.3*

*NEIC **17** 13:32:26.3±1.7, 27°.63N±0°.07×55°.89E±0°.09, h10^{km}±1^{km}, mb4.7/68, Error ellipse: s-maj=13.5km s-min=10.1km az=239.0*

*OMAN **17** 13:32:28.8±0.3, 27°.43N×55°.82E, h10^{km}, mb4.8/8, ml4.1/23, Error ellipse: s-maj=5.0km s-min=2.7km az=29.0*

ISC 17 13:32:26.2±0.7**, 27°.54N**±0°.02×**55°.91E**±0°.03**, h14^{km}**±4^{km}**, n323, σ1.^{s}79**/321**, mb4.6**/84**, MS3.1**/10**, 14C-10D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	Bandar-Abbas	0.27	121	Pg	Pg	13 32 31.3	-0.9
BNDS	Bandar-Abbas	0.27	121	ePgA		13 32 30.7	
BNDS				IAML		13 32 42.4	
	comp=Z,160nm,1.0s						
IBND	Bandar-abas	0.57	99	Pg	Pg	13 32 36.6	-0.8
LAR1	LAR	1.37	276	Pg	Pb	13 32 51.8	+0.2
SHME	Shamm	1.50	172	P	Pg	13 32 54.9	-0.2
SHME				S	Sg	13 33 13.9	-0.7
SHME	Shamm	1.50	172	P	Pg	13 32 55.1	0.0
KHNJ	Kahnooj	1.65	75	Pg	Pb	13 32 55.4	-1.0
BANOM	Banah	1.65	168	P	Pg	13 32 57.3	-0.6
BANOM				S	Sg	13 33 18.4	-0.9
BANOM	Banah	1.65	168	eP	Pg	13 32 56.4	-1.5
	SNR=29						
UMQ	Umm Al-Quwin	2.02	186	P	Pg	13 33 04.4	-0.5
	SNR=15						
UMQ				S	Sb	13 33 26.7	-1.0
UMQ	Umm Al-Quwin	2.02	186	eP	Pg	13 33 03.1	-1.9
	SNR=10.0						
MASF	Masafi	2.17	174	P	Pb	13 33 05.1	-0.3
	SNR=43						
MASF				S	Sb	13 33 30.4	-1.7
MSFE	Esma-Masafi	2.18	174	i P	Pb	13 33 04.8	-0.8
	SNR=8.3						
MSFE				S	Sg	13 33 41.7	+5.2
MDH	Madha	2.26	171	P	Pb	13 33 05.6	-1.2
	SNR=8.4						
MDH				S	Sb	13 33 32.3	-2.3
MDH	Madha	2.26	171	i P	Pb	13 33 05.1	-1.7
	SNR=16						
JHRM	Jahrom	2.27	296	Pn	Pn	13 33 04.9	+1.5
LMD1	Lamerd	2.44	266	Pn	Pn	13 33 07.2	+1.4
KRBR	Kerman	2.55	17	Pn	Pn	13 33 09.1	+1.7
KRBR	Kerman	2.55	17	ePnA		13 33 09.1	
KRBR				eSg	Sb	13 33 41.4	-1.8
KRBR				IAML		13 33 52.2	
	comp=Z,3.6nm,1.0s						
NAZ	Nazwa, Dubai	2.55	185	P	Pb	13 33 10.8	-1.0
	SNR=25						
NAZ				S	Sn	13 33 39.6	+1.6
NAZ	Nazwa, Dubai	2.55	185	i P	Pb	13 33 11.0	-0.8
	SNR=25						
UOSS	Minazif	2.60	174		Pb	13 33 10.1	-2.5
UOSS	Minazif	2.60	174	Pn	Pn	13 33 09.3	+1.5
UOSS	Minazif	2.60	174	P	Pb	13 33 10.1	-2.5
UOSS				S	Sn	13 33 40.8	+1.6
UOSS	Minazif	2.60	174	i P	Pb	13 33 10.0	-2.5
	SNR=16						
QIR1	Qir	2.70	291	Pn	Pb	13 33 11.9	-2.4
HATD	Hatta, Dubai	2.71	176	P	Pb	13 33 12.3	-2.2
	SNR=14						
HATD	Hatta, Dubai	2.71	176	i P	Pb	13 33 11.5	-3.0
	SNR=14						
CHMN	Cheshme madani	2.72	31	Pn	Pn	13 33 11.6	+1.8
KBAM	BAM	2.75	54	Pn	Pn	13 33 11.6	+1.6
FAQ	Al Faqa, Dubai	2.80	186	i P	Pb	13 33 13.4	-2.6
	SNR=6.7						
ASHO	Ashiyiah	2.85	177	P	Pb	13 33 14.4	-2.5
	SNR=41						
ASHO	Ashiyiah	2.85	177	i P	Pb	13 33 13.9	-3.0
	SNR=41						
KHGB	Koh Gabri	2.87	10	Pn	Pn	13 33 13.9	+2.2
ASUD	Al Ashush, Dub	2.95	190	P	Pb	13 33 16.9	-1.7
	SNR=19						
ASUD	Al Ashush, Dub	2.95	190	i P	Pb	13 33 15.5	-3.1
	SNR=7.8						

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AJN   Ajban              3.08 196   P      Pb     13 33 18.8  -1.9
KRM1  Kerman Provinc     3.19  22   Pn     Pn     13 33 18.0  +1.9
SOHO  SOHO               3.44 170   P      Pn     13 33 21.6  +2.2
ZRDN  Zarand Kerman      3.46   9   Pn     Pn     13 33 21.7  +1.9
ALNE  Al Ain             3.47 182   P      Pn     13 33 22.7  +2.9
      SNR=7.2
ALNE  Al Ain             3.47 182  i P     Pn     13 33 21.9  +2.0
      SNR=7.7
JRN   Qarnain Island     3.77 227   P      Pn     13 33 26.3  +2.3
JRN                                 S      Sn     13 34 09.3  +1.1
IMEH  Mehriz             4.00 344   Pn     Pn     13 33 29.5  +2.2
HOQ   Hoqain             4.14 162   Pn     Pn     13 33 29.5  +0.5
HOQ   Hoqain             4.14 162   P      Pn     13 33 30.3  +1.3
      SNR=11
HOQ                                 S      Sn     13 34 17.6  +0.3
DSBU  Dashti - Bushe     4.19 282   Pn     Pn     13 33 31.8  +2.0
ARQ   Araqi              4.22 172   P      Pb     13 33 34.6  -5.7
      SNR=25
BIDO  Bidbid             4.48 153   P      Pn     13 33 35.0  +1.3
      SNR=7.8
BIDO                                S      Sn     13 34 26.6  +1.1
GHWR  Ruwais             4.49 218   P      Pn     13 33 35.0  +1.2
GHWR                                S      Sn     13 34 27.8  +2.0
CHBR  Chabahar           4.53 114   Pn     Pn     13 33 35.2  +0.8
SHMA  Al-Shehemyia       4.73 250   P      Pn     13 33 40.6  +3.5
SHMA                                S      Sn     13 34 31.6  -0.1
ZHSF  Zahedan            4.75  63   Pn     Pn     13 33 39.4  +1.8
ZHSF  Zahedan            4.75  63  ePnA           13 33 39.5
ZHSF                                IAML          13 34 39.2
      comp=Z,0.2nm,1.0s
UMZA  Um Al Zommool      4.85 188   P      Pn     13 33 40.9  +2.1
UMZA                                S      Sn     13 34 38.0  +3.2
ICHK  Chekchek           4.87 345   Pn     Pn     13 33 40.7  +1.5
SMDO  Samad              4.87 156   P      Pn     13 33 42.4  +3.3
      SNR=13
SMDO                                S      Sn     13 34 36.5  +1.3
BSY   Bisya              4.92 166   P      Pn     13 33 42.9  +3.1
BSY                                 S      Sn     13 34 40.5  +4.0
WSAR  Wadi Sarin         4.94 150   Pn     Pn     13 33 41.6  +1.6
      comp=Z,0.2nm,0.3s,baz=341,slow=24,SNR=99
WSAR                                Sn     Sn     13 34 37.0  -0.1
      comp=Z,0.3nm,0.3s,baz=217,slow=24,SNR=19
WSAR  Wadi Sarin         4.94 150   P      Pn     13 33 42.2  +2.1
WSAR                                S      Sn     13 34 36.9  -0.1
YZKH  Yazd               4.97 347  ePnA           13 33 42.4
YZKH                                IAML          13 34 49.5
      comp=Z,0.1nm,1.0s
MZR   Muzera             5.02 206   P      Pn     13 33 44.3  +3.1
MZR                                 S      Sn     13 34 36.8  -2.3
MZR   Muzera             5.02 206   P      Pn     13 33 43.7  +2.6
SAKB  Bahrain            5.05 253   P      Pn     13 33 41.1  -0.4
SAKB                                S      Sn     13 34 39.6  +0.1
TRNA  Turayna            5.06 238   P      Pn     13 33 44.0  +2.4
      SNR=15
TRNA                                S      Sn     13 34 40.8  +0.9
KLNJ  Kolanjah           5.11 314   Pn     Pn     13 33 44.1  +1.4
KLNJ  Kolanjah           5.11 314  ePnA           13 33 46.2
KLNJ                                IAML          13 35 42.0
      comp=Z,0.3nm,1.0s
SLWR  Sila               5.14 229   P      Pn     13 33 42.8  +0.1
SLWR                                S      Sn     13 34 42.9  +1.1
NGCH  Negor - Chabah     5.17 114   Pn     Pn     13 33 44.8  +1.7
NGCH  Negor - Chabah     5.17 114   P      Pn     13 33 44.8  +1.7
      SNR=14
BSRN  Basiran            5.22  32   Pn     Pn     13 33 46.1  +2.1
BSRN  Basiran            5.22  32  ePnA           13 33 45.9
BSRN                                IAML          13 35 19.5
      comp=Z,320nm,1.0s
IRAM  Ramesheh           5.24 325   Pn     Pn     13 33 46.6  +2.2
NHDN  Nehbandan          5.27  42   Pn     Pn     13 33 46.0  +1.3
SMRA  Abu-Samra          5.35 240   P      Pn     13 33 47.6  +1.9
      SNR=7.5
SMRA                                S      Sn     13 34 46.5  -0.5
TPRV  Parvadeh(Tabas     5.51   7   Pn     Pn     13 33 50.0  +2.0
JMDO  Jabal Madar        5.52 158   P      Pn     13 33 50.3  +2.2
JMDO                                S      Sn     13 34 54.1  +2.8
WBK   Wadi Bani Khal     5.64 150   P      Pn     13 33 51.2  +1.5
      SNR=7.8
WBK                                 S      Sn     13 34 54.2  -0.1
SRVN  Saravan            5.77  90   Pn     Pn     13 33 53.3  +1.7
SRVN  Saravan            5.77  90  ePnA           13 33 54.3
ITEG  Tejag              5.88  24   Pn     Pn     13 33 54.9  +1.9
IGAR  Gharneh            5.89 326   Pn     Pn     13 33 54.6  +1.3
ANAR  Anarak             5.94 342   Pn     Pn     13 33 55.4  +1.6
IBRJ  Brojen             5.94 318   Pn     Pn     13 33 55.8  +1.8
IZEF  Zefreh             6.17 331   Pn     Pn     13 33 58.1  +0.9
TABS  Tabas              6.18   9  ePn     Pn     13 34 00.3  +3.2
TABS                                IAML          13 35 54.8
      comp=Z,170nm,1.0s
IDAH  Dahanechah         6.21  33   Pn     Pn     13 33 59.3  +1.5
JLN   Jalan Bani Buh     6.24 149   P      Pn     13 33 59.0  +1.1
      SNR=20
ZNGN  Zangian            6.33 317   Pn     Pn     13 34 01.1  +1.7
TNSJ  Nastanj            6.43   5   Pn     Pn     13 34 02.2  +1.6
AFRZ  Afriz              6.45  24   Pn     Pn     13 34 03.1  +2.2
IPIR  Pirpir             6.72 321   Pn     Pn     13 34 07.5  +2.7
MHTO  MHTO               6.79 163   P      Pn     13 34 07.6  +2.1
MHTO                                S      Sn     13 35 24.1  +1.6
SHRT  Shahrakht          7.16  31  ePn     Pn     13 34 13.4  +2.8
SHRT                                IAML          13 36 32.4
      comp=Z,79nm,1.0s
KRSH  Karshahi           7.18 334   Pn     Pn     13 34 12.2  +1.2
TAPT  Tabas- Tapeh t     7.40   8   Pn     Pn     13 34 16.5  +2.6
KBD   Kabd               7.42 285   P      Pn     13 34 15.4  +1.3
KBD                                 S      Sn     13 35 37.9  -0.1
ISFB  Sefidab            7.48 336   Pn     Pn     13 34 16.7  +1.7
GTMR  Gotvand            7.67 311  ePnA           13 34 18.7
GTMR                                IAML          13 35 57.3
      comp=Z,73nm,1.0s
DQM   DQM                7.72 168   P      Pn     13 34 19.3  +1.0
KHMZ  Khomeyn            8.03 322  ePnA           13 34 24.5
KHMZ                                IAML          13 35 56.9
      comp=Z,83nm,1.0s
SHRO  Shahrood           8.43   1  ePn     Pn     13 34 29.4  +1.4
TBJM  Torbat-e-JAM       8.58  25   Pn     Pn     13 34 31.6  +1.4
ASAO  Ashtian            8.62 326  ePnA           13 34 32.7
ASAO                                IAML          13 36 15.1
      comp=Z,39nm,1.0s
IDMV  Damavand           8.67 339   Pn     Pn     13 34 34.0  +2.6
IALA  Alasht             8.91 344   Pn     Pn     13 34 37.0  +2.2
SBZV  Sabzevar           8.94   9   Pn     Pn     13 34 37.8  +2.7
SBZV  Sabzevar           8.94   9  ePn     Pn     13 34 37.9  +2.8
DOK   Doka               9.03 191   P      Pn     13 34 39.0  +2.8
      SNR=14
DOK                                 S      Sn     13 36 16.6  -1.2
IGLO  Ghaloghah          9.11 349   Pn     Pn     13 34 39.4  +1.9
IDOB  Doab               9.11 315   Pn     Pn     13 34 38.7  +1.2
IPRN  Peran              9.19 342   Pn     Pn     13 34 40.8  +2.3
IPAY  Payeh              9.26  16   Pn     Pn     13 34 42.3  +2.7
IAKL  Akhelmad           9.35  14   Pn     Pn     13 34 43.0  +2.2
WHFO  Wadi Hawf          9.78 192   P      Pn     13 34 48.0  +1.5
      SNR=32
WHFO                                S      Sn     13 36 34.7  -1.4
DMTO  DMTO               9.82 185   P      Pn     13 34 50.0  +3.0
DMTO                                S      Sn     13 36 36.8  -0.3
KLST  Kelardasht - M     9.85 337   Pn     Pn     13 34 50.3  +2.6
RBK   Rabkut            10.11 189   P      Pn     13 34 54.2  +3.1
BJRD  Bojnurd           10.21   7  ePn     Pn     13 34 54.8  +2.4
RAYN  Ar Rayn           10.21 249          Pn     13 34 51.9  -0.5
RAYN  Ar Rayn           10.21 249   P      Pn     13 34 51.9  -0.5
ILBA  Ilam Banvizeh     10.32 308   Pn     Pn     13 34 54.7  +0.8
ILBA  Ilam Banvizeh     10.32 308  ePnA           13 34 55.3
ABTO  Aybut             10.42 194   P      Pn     13 34 58.0  +2.6
      SNR=9.5
IGHG  Ghaleghazi        10.49 312   Pn     Pn     13 34 57.8  +1.4
SRSL  SARDASHT          12.40 317  ePnA           13 35 24.9
GRMI  Germi             13.08 331  ePn     Pn     13 35 34.6  +2.9
GEVA  Gevas             15.21 318   Pn     Pn     13 36 00.8  +0.1
GNI   Garni             15.61 327   Pn     Pn     13 36 06.6  +0.6
GNI                                 IAmb   IAmb   13 36 16.6
      comp=Z,24nm,0.8s
GNI   Garni             15.61 327   Pn     Pn     13 36 06.8  +0.9
      comp=Z,1.4nm,0.3s,baz=161,slow=5.1,SNR=8.7
GNI                                 LR     LR     13 43 31.4
      comp=Z,60nm,21.7s,baz=82,slow=43
      comp=Z,3.4nm,0.3s
GNI   Garni             15.61 327   P      Pn     13 36 06.6  +0.6
GNI                                 pmax   pmax
      comp=Z,24nm,0.8s
MARD  Mardin            16.05 311   P      P      13 36 15.9  +0.9
NIL   Nilore            16.12  64   P      P      13 36 16.3  +0.6
NIL   Nilore            16.12  64   P      P      13 36 16.3  +0.6
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NIL                                 pmax   pmax
      comp=Z,13nm,0.9s
GAR   Garm              16.58  43          Pn     13 36 17.4  -1.1
ASF   Jabal al Asfar    17.12 290   P      Pn     13 36 25.9  +0.7
      comp=Z,0.5nm,0.3s,baz=177,slow=10,SNR=3.9
ASF                                 S      Sn     13 39 23.8   -12
      comp=Z,1.3nm,0.5s,baz=110,slow=4.2,SNR=1.7
      comp=Z,1.9nm,0.4s
BTK   Batken            17.56  41   Pn     Pn     13 36 29.9  -0.8
BTK   Batken            17.56  41   P      Pn     13 36 29.9  -0.8
BTK                                 pmax   pmax
      comp=Z,11nm,0.7s
CHM   Chimkent          18.50  34  eP      Pn     13 36 42.0   0.0
CHM   Chimkent          18.50  34  eP      Pn     13 36 42.0   0.0
MMAI  Mount Meron Ar    18.52 292   P      Pn     13 36 43.2  +0.7
      comp=Z,0.7nm,0.3s,baz=119,slow=17,SNR=4.6
      comp=Z,0.8nm,0.3s
EIL   Elat              18.52 282   LR     LR     13 44 58.6
      comp=Z,72nm,19.0s,baz=74,slow=41
IUG   Iuzhnay           18.58  35  eP      P      13 36 43.0  +0.1
IUG   Iuzhnay           18.58  35  eP      P      13 36 43.1  +0.1
NCK   Nalchik           18.78 331deP      P      13 36 44.4  -0.6
BRLS  Borolday          19.14  33  eP      P      13 36 45.9  -3.1
BRLS  Borolday          19.14  33  eP      P      13 36 45.9  -3.1
KBZ   Khabaz            19.27 330   P      Pn     13 36 51.6  +0.3
      comp=Z,0.2nm,0.3s,baz=146,slow=7.1,SNR=13
      comp=Z,1.6nm,0.6s
KBZ   Khabaz            19.27 330⇑eP      P      13 36 48.9  -1.4
KK31  Karatay Array     19.53  34   P      P      13 36 53.7  +0.5
KK31  Karatay Array     19.53  34   P      P      13 36 53.7  +0.5
KK31                                pmax   pmax
      comp=Z,12nm,0.9s
KKAR  Karatay Array     19.53  34   P      P      13 36 53.8  +0.6
KKAR  Karatay Array     19.53  34          P      13 36 53.1  -0.1
KKAR  Karatay Array     19.53  34   P      P      13 36 53.8  +0.6
KKAR                                pmax   pmax
      comp=Z,12nm,0.9s
KIV   Kislovodsk        19.54 330  eP      P      13 36 53.8  +0.4
KIV                                 pmax   pmax
      comp=Z,21nm,1.0s
ARSB  Arslanbob         19.63  41          Pn     13 36 56.3  +0.4
ARSB  Arslanbob         19.63  41   P      Pn     13 36 56.3  +0.4
ARSB                                pmax   pmax
      comp=Z,8.0nm,0.8s
DZA   Taraz             19.78  35  eP      P      13 36 56.4  +0.4
DZA   Taraz             19.78  35  eP      P      13 36 56.4  +0.4
ATD   Arta Tunnel       20.10 220   LR     LR     13 46 30.7
      comp=Z,4.2nm,18.2s,baz=4.0,slow=42
VSLR  Vesyoloye         20.42 325⇓eP      P      13 37 02.1  -0.8
VSLR                                pmax   pmax
      comp=Z,18nm,0.7s
KSH   Kashi             20.50  49   P      P      13 36 57.4  -6.6
KSH                                 pP     Pn     13 37 00.3  -5.9
KSH                                 pmax   pmax
      comp=Z,13nm,0.8s
SOC   Sochi             20.67 325  eP      Pn     13 37 07.6  -0.3
SOC                                ePPP    PPP    13 37 28.0
SOC                                eSS     Sn     13 41 10.4   +10
SOC                                eSSS    SSS    13 41 27.6
SOC                                 pmax   pmax
      comp=Z,49nm,1.2s
SOC                                 MLR    MLR
      comp=Z,89nm,18.0s
AAK   Ala-Archa         21.34  40   P      P      13 37 13.1  +0.1
AAK   Ala-Archa         21.34  40   P      P      13 37 13.1  +0.1
      comp=Z,7.9nm,0.9s,baz=199,slow=7.2,SNR=9.4
AAK                                 LR     LR     13 46 50.2
      comp=Z,64nm,18.3s,baz=253,slow=41
      comp=Z,7.9nm,0.9s
AAK   Ala-Archa         21.34  40deP      P      13 37 13.6  +0.6
AAK                                 pmax   pmax
      comp=Z,14nm,1.3s
AB31  Akbulak array     21.91   7   P      P      13 37 18.8  -0.1
AB31                                IAmb   IAmb   13 37 24.5
      comp=Z,32nm,1.0s
ABKAR Akbulak array     21.91   7   P      P      13 37 18.5  -0.3
SGDS  Sogindy           21.93  39  eP      P      13 37 19.2   0.0
BOOM  Boomskoye usch    22.09  42   P      P      13 37 21.1   0.0
BOOM                                IAmb   IAmb   13 37 27.7
      comp=Z,24nm,1.0s
BOOM  Boomskoye usch    22.09  42   P      P      13 37 21.1   0.0
BOOM                                pmax   pmax
      comp=Z,24nm,1.0s
BR131 Keskin Array S    22.10 309   P      P      13 37 21.8  +0.6
BR131                               IAmb   IAmb   13 37 28.0
      comp=Z,19nm,0.9s
BR131 Keskin Array S    22.10 309ceP      P      13 37 20.0  -1.2
BRTR  Keskin Array B    22.10 309   P      P      13 37 22.1  +0.8
BRTR  Keskin Array B    22.10 309   P      P      13 37 22.2  +1.0
      comp=Z,21nm,1.1s,baz=126,slow=12,SNR=32
      comp=Z,21nm,1.1s
KDJ   Kajisay           22.65  44   IAmb   IAmb   13 37 36.2
      comp=Z,18nm,1.0s
BTLS  Baital            22.69  35  eP      P      13 37 27.1  -0.2
BTLS                                pmax   pmax
      comp=Z,10.0nm,1.0s
BTLS  Baital            22.69  35  eP      P      13 37 27.2  -0.1
      comp=Z,10.0nm,1.0s
ANTO  Ankara            22.75 309   P      P      13 37 31.6  +3.5
ANTO                                pmax   pmax
      comp=Z,14nm,1.1s
TARG  Taragay, Kyrgy    22.83  46   P      P      13 37 29.4  +0.2
TARG                                IAmb   IAmb   13 37 35.4
      comp=Z,16nm,1.0s
TARG  Taragay, Kyrgy    22.83  46   P      P      13 37 29.4  +0.2
TARG                                pmax   pmax
      comp=Z,16nm,1.0s
AKTO  Aktyubinsk        22.92   3   LR     LR     13 47 49.7
      comp=Z,116nm,18.4s,baz=264,slow=40
AAA   Alma-Ata          23.10  42  eP      P      13 37 31.9  +0.3
AAA   Alma-Ata          23.10  42  eP      P      13 37 31.9  +0.3
MDOK  Medeo             23.15  42  eP      P      13 37 32.4  +0.2
MDOK  Medeo             23.15  42  eP      P      13 37 32.5  +0.2
KUU   Kurty             23.17  40  eP      P      13 37 32.8  +0.5
KUU   Kurty             23.17  40  eP      P      13 37 32.9  +0.5
SATY  Saty              23.91  44  eP      P      13 37 40.1  +0.4
SATY  Saty              23.91  44  eP      P      13 37 40.2  +0.4
ARXS  Arharly           24.22  41  eP      P      13 37 42.1  -0.5
KPKS  Kokpek            24.30  43  eP      P      13 37 43.7  +0.4
KPKS  Kokpek            24.30  43  eP      P      13 37 43.8  +0.4
UZB   Uzynbulak         24.34  44  eP      P      13 37 44.2  +0.5
UZB                                 pmax   pmax
      comp=Z,10.0nm,0.8s
UZB   Uzynbulak         24.34  44  eP      P      13 37 44.2  +0.5
      comp=Z,9.7nm,0.8s
SHLS  Shalkode          24.62  45  eP      P      13 37 49.1  +2.9
SHLS                                pmax   pmax
      comp=Z,11nm,0.8s
SHLS  Shalkode          24.62  45  eP      P      13 37 49.2  +2.9
      comp=Z,11nm,0.8s
TDK   Taldyqorghan      25.02  40  eP      P      13 37 50.6  +0.9
TDK   Taldyqorghan      25.02  40  eP      P      13 37 50.7  +0.9
BELG  Belogornoye       25.59 348ceP      P      13 37 53.9  -0.8
BELG                                pmax   pmax
      comp=Z,5.0nm,0.9s
VRH   Novokhopyorsk     25.96 339  eP      P      13 37 57.9  -0.2
VRH                                 pmax   pmax
      comp=Z,60nm,0.8s
VORD  Divnogorie        26.57 336  eP      P      13 38 06.9  +3.2
VORD                                pmax   pmax
      comp=Z,7.0nm,1.0s
VSR   Storozhevoye      26.83 336  eP      P      13 38 07.6  +1.7
VSR                                 pmax   pmax
      comp=Z,5.0nm,0.9s
VORR  Voronezh          27.19 337  eP      P      13 38 10.6  +1.4
VORR                                pmax   pmax
      comp=Z,17nm,1.5s
BRVK  Borovoye          27.64  19   P      P      13 38 12.8  -0.4
BRVK  Borovoye          27.64  19deP      P      13 38 13.1  -0.2
BRVK                                pmax   pmax
      comp=Z,13nm,1.3s
BVAR  Borovoye Array    27.64  19   P      P      13 38 12.4  -0.9
      comp=Z,15nm,0.9s,baz=202,slow=7.7,SNR=38
BVAR                                LR     LR     13 49 58.2
      comp=Z,54nm,21.8s,baz=201,slow=38
      comp=Z,15nm,0.9s
MAKZ  Makanchi          28.10  40   P      P      13 38 14.0  -3.5
MAKZ                                IAmb   IAmb   13 38 21.6
      comp=Z,14nm,1.1s
MAKZ  Makanchi          28.10  40   P      P      13 38 14.0  -3.5
MAKZ                                pmax   pmax
      comp=Z,14nm,1.1s
MK31  Makanchi Array    28.27  40ceP      P      13 38 16.4  -2.6
MKAR  Makanchi Array    28.27  40   P      P      13 38 16.1  -2.9
MKAR  Makanchi Array    28.27  40   P      P      13 38 16.9  -2.1
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      comp=Z,3.7nm,0.9s,baz=228,slow=11,SNR=9.9
MKAR                                LR     LR     13 50 46.0
      comp=Z,35nm,21.2s,baz=236,slow=39
      comp=Z,3.7nm,0.9s
MKAR  Makanchi Array    28.27  40ceP      P      13 38 18.6  -0.4
MKAR                                pmax   pmax
      comp=Z,5.0nm,0.9s
KURBB Kurchatov Arra    28.76  31   P      P      13 38 22.6  -0.6
      comp=Z,5.6nm,0.9s,baz=230,slow=8.6,SNR=35
      comp=Z,5.6nm,0.9s
KURK  Kurchatov         28.87  31   P      P      13 38 23.2  -1.0
KURK  Kurchatov         28.87  31ceP      P      13 38 24.5  +0.3
KURK                                pmax   pmax
      comp=Z,6.0nm,0.8s
ARTI  Arti              28.88   3d iP      P      13 38 26.2  +1.9
ARTI                                              13 39 14.9
ARTI                                S      S      13 43 17.6  +3.6
ARTI                                SS     SnSn   13 44 39.1  +2.9
ARTI                                pmax   pmax
      comp=Z,4.0nm,0.8s
SEM   Semipalatinsk     29.41  32  eP      P      13 38 29.9  +0.6
SEM   Semipalatinsk     29.41  32  eP      P      13 38 29.9  +0.6
ZSN   Zaisan            30.11  41  eP      P      13 38 36.1  +0.8
ZSN                                 pmax   pmax
      comp=Z,7.0nm,1.2s
ZSN   Zaisan            30.11  41  eP      P      13 38 36.1  +0.8
      comp=Z,6.7nm,1.2s
WMQ   Urumqi            30.27  49  eP      P      13 38 39.8  +3.0
VOIR                    30.31 314 ⇓P      P      13 38 41.2  +4.0
VOIR                    30.31 314   P      P      13 38 38.4  +1.2
VOIR                                pmax   pmax
      comp=Z,7.0nm,0.9s
AKASG Malin Array Be    30.74 326   P      P      13 38 39.4  -1.4
      comp=Z,9.4nm,0.9s,baz=130,slow=7.8,SNR=29
      comp=Z,9.4nm,0.9s
AKASG Malin Array Be    30.74 326ceP      P      13 38 43.0  +2.2
AKASG                               pmax   pmax
      comp=Z,11nm,1.0s
AKBB  Malin Array Si    30.74 326   P      P      13 38 39.5  -1.3
AKBB  Malin Array Si    30.74 326ceP      P      13 38 40.5  -0.3
KIEV  Kiev              30.75 326   P      P      13 38 39.8  -1.0
KIEV  Kiev              30.75 326 ⇑P      P      13 38 43.1  +2.3
KIEV  Kiev              30.75 326   P      P      13 38 39.8  -1.0
KIEV                                pmax   pmax
      comp=Z,16nm,0.9s
OBN   Obninsk           30.93 338  eP      P      13 38 44.1  +1.8
OBN                                 pmax   pmax
      comp=Z,10.0nm,1.0s
KIRV  Kirov             31.36 353⇑eP      P      13 38 46.4  +0.3
GZR   Gura Zlata        31.75 313 ⇑P      P      13 38 53.1  +3.2
MDVR  Moldovita         32.23 311 ⇓P      P      13 38 54.8  +0.7
BZS   Buzias            32.59 313 ⇑P      P      13 38 57.5  +0.3
BZS   Buzias            32.59 313   P      P      13 38 57.9  +0.7
BZS                                 pmax   pmax
      comp=Z,6.0nm,1.2s
KOLS  Kolonicke sedl    33.56 319  eP      P      13 39 09.8  +4.2
KOLS  Kolonicke sedl    33.56 319  eP      P      13 39 09.8  +4.2
MNK   Minsk             33.82 331  i P     P      13 39 05.1  -2.7
      comp=E,15nm,0.7s
MNK                                i P     P      13 39 05.1  -2.7
      comp=N,13nm,0.8s
MNK                                i P     P      13 39 05.1  -2.7
      comp=Z,12nm,0.7s,baz=131
MNK                                i PP    PnPn   13 40 16.8  -3.5
MNK                                i PPP   PPP    13 40 27.7
MNK                                i S     S      13 44 28.9  -2.3
MNK                                i SS    SnSn   13 46 33.0  -3.2
MNK                                i SSS   SSS    13 46 48.7
MNK                                i LR    LR     13 52 46.1
MNK                                i LRM   MLR    13 54 37.4
      comp=Z,77nm,17.0s
MNK                                i LRM   MLR    13 54 47.8
      comp=N,384nm,21.0s
MNK                                i LRM   MLR    13 54 49.3
      comp=E,335nm,21.1s
MNK   Minsk             33.82 331  i P     P      13 39 05.0  -2.7
MNK                                i              13 40 16.7
MNK                                i S     S      13 44 28.8  -2.3
MNK                                i SS    SnSn   13 46 33.0  -3.2
MNK                                 pmax   pmax
      comp=N,13nm,0.8s
MNK                                 pmax   pmax
      comp=Z,12nm,0.7s
MNK                                 pmax   pmax
      comp=E,15nm,0.7s
MNK                                 MLR    MLR
      comp=Z,77nm,17.0s
MNK                                 MLR    MLR
      comp=N,384nm,21.0s
MNK                                 MLR    MLR
      comp=E,335nm,21.0s
ZALV  Zalesovo Beam     33.86  31   P      P      13 39 06.5  -1.6
ZALV  Zalesovo Beam     33.86  31   P      P      13 39 06.8  -1.3
      comp=E,12nm,0.8s,baz=251,slow=9.1,SNR=25
ZALV                                LR     LR     13 53 32.3
      comp=E,29nm,18.8s,baz=225,slow=38
      comp=E,12nm,0.8s
TIP   Timpagrande       34.45 300 ⇑P      P      13 39 15.1  +1.6
NACGM Naroch            34.57 330  eP      P      13 39 14.6  +0.4
      comp=Z,13nm,0.9s,baz=130
KLMR  Klimovskoe        35.11 346  eP      P      13 39 14.9  -3.9
KLMR                                pmax   pmax
      comp=Z,17nm,1.3s
CUC   Castrocucco       35.28 301   P      P      13 39 19.9  -0.8
SUW   Suwalki           35.69 327   P      P      13 39 26.7  +2.8
SUW                                 pmax   pmax
      comp=Z,46nm,0.9s
PABE  Paberze           36.20 329   P      P      13 39 27.7  -0.5
MODS  Modra-Piesok      36.36 315  eP      P      13 39 32.9  +3.1
MORC  Moravsky Berou    36.72 318  eP      P      13 39 35.2  +2.3
INTR  Introdacqua       37.02 304   IAmb   IAmb   13 39 40.9
      comp=Z,12nm,0.9s
KRUC  Moravsky          37.15 316  eP      P      13 39 37.5  +1.0
CAMP  Campotosto        37.47 305   IAmb   IAmb   13 39 45.6
      comp=Z,18nm,1.0s
NRCA  Norcia            37.73 305   IAmb   IAmb   13 39 46.4
      comp=Z,16nm,1.4s
GTA   Gaotai            38.15  60  eP      P      13 39 45.8  +0.6
GTA                                 pmax   pmax
      comp=Z,10.0nm,1.3s
TNCH  TengChong         38.16  84  eP      P      13 39 47.4  +1.9
TNCH                                pmax   pmax
      comp=Z,22nm,0.7s
TNCH                                pmax   pmax
      comp=Z,100nm,3.0s
ZVC   Zvikov            38.64 316  eP      P      13 39 49.7  +0.7
GERES GERESS Array B    38.76 315   P      P      13 39 50.3  +0.2
      comp=Z,4.1nm,0.3s,baz=83,slow=8.0,SNR=4.5
      comp=Z,4.1nm,0.3s
KHC   Kasperske Hory    38.92 315  eP      P      13 39 51.2  -0.3
KHC   Kasperske Hory    38.92 315deP      P      13 39 51.4  -0.1
KHC                                 pmax   pmax
      comp=Z,42nm,1.7s
BRG   Berggiesshubel    39.27 318  eP      P      13 39 56.6  +2.3
BRG                                 Amp           13 39 58.1
      comp=Z,2.7nm,0.7s
FINES FINESS Array B    39.33 338   P      P      13 39 54.5  -0.1
      comp=Z,3.1nm,0.8s,baz=142,slow=9.6,SNR=9.9
      comp=Z,3.1nm,0.8s
FINES FINESS Array B    39.33 338  i P     P      13 39 57.0  +2.4
FINES                               pmax   pmax
      comp=Z,2.0nm,0.6s
CLL   Collm             39.98 318  eP      P      13 40 00.0  -0.2
CLL                                 pmax   pmax
      comp=Z,8.0nm,1.3s
CLL   Collm             39.98 318  eP      P      13 40 00.0  -0.2
      comp=Z,8.0nm,1.3s
CLL                                ex      x      13 41 43.0
VSL   Villasalto        40.18 299   P      P      13 40 02.6  +0.6
VSL                                 IAmb   IAmb   13 40 07.6
      comp=Z,14nm,1.0s
PZH   PanZhiHua         40.67  81   P      P      13 40 07.4  +1.0
LZH   Lanzhou           41.27  66  eP      P      13 40 07.3  -4.0
LZH                                 sP     sP     13 40 20.8  +3.1
LZH                                 pmax   pmax
      comp=Z,19nm,1.2s
ECH   Echery            42.82 312   P      P      13 40 23.2  -0.4
ECH   Echery            42.82 312   P      P      13 40 23.2  -0.4
ECH                                 pmax   pmax
      comp=Z,4.0nm,1.0s
HFS   Hagfors           43.34 331   P      P      13 40 26.8  -0.8
      comp=Z,7.5nm,0.9s,baz=120,slow=8.7,SNR=8.2
HFS                                 LR     LR     13 59 44.0
      comp=Z,55nm,20.8s,baz=160,slow=38
      comp=Z,7.5nm,0.9s
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SONM	Songino Array	43.90	49	P	P	13 40 32.4	-0.1
	comp=Z,1.7nm,0.9s,baz=258,slow=7.4,SNR=8.5						
SONM				LR	LR	13 58 37.0	
	comp=Z,51nm,18.7s,baz=232,slow=36						
	comp=Z,1.7nm,0.9s						
ULN	Ulaanbaatar	44.35	49	⇑eP	P	13 40 35.6	-0.5
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NB2	NORSAR Subarra	44.85	331	P	P	13 40 38.3	-1.4
	comp=Z,6.0nm,1.1s,baz=117,slow=8.6						
NOA	NORSAR Array B	44.85	331	P	P	13 40 38.9	-0.8
	comp=Z,3.5nm,0.9s,baz=117,slow=8.0,SNR=7.5						
	comp=Z,3.5nm,0.9s						
ARCES	ARCESS Array B	45.58	346	P	P	13 40 44.8	-0.6
	comp=Z,7.0nm,0.8s,baz=112,slow=8.2,SNR=9.7						
	comp=Z,7.0nm,0.8s						
BTO	Baotou	46.02	59	eP	P	13 40 49.3	-0.1
BTO				pP	pP	13 40 53.8	-0.2
BTO				sP	sP	13 40 56.3	+0.5
BTO				PP	PP	13 42 36.8	-0.4
BTO				pmax	pmax		
	comp=Z,22nm,0.8s						
BTO				pmax	pmax		
	comp=Z,350nm,9.3s						
HHC	Hu-ho-hao-te	47.18	59	eP	P	13 40 57.8	-0.7
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,62nm,4.4s						
ESDC	Sonseca Array	50.47	300	P	P	13 41 23.6	-0.2
	comp=Z,0.8nm,0.7s,baz=62,slow=7.0,SNR=8.6						
	comp=Z,0.8nm,0.7s						
TORD	Torodi Ar. Bea	52.43	266	P	P	13 41 38.6	-0.1
TORD	Torodi Ar. Bea	52.43	266	P	P	13 41 38.3	-0.4
	comp=Z,33nm,0.3s,baz=55,slow=7.7,SNR=1.0						
NJ2	Nanjing	54.14	69	eP	P	13 41 50.8	-0.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TIXI	Tiksi	58.76	21	P	P	13 42 22.8	-0.5
TIXI				IAmb	IAmb	13 42 28.2	
	comp=Z,5.6nm,0.9s						
TIXI	Tiksi	58.76	21	⇓iP	P	13 42 22.5	-0.8
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KSRS	Korea Array	60.22	61	P	P	13 42 33.0	-0.9
	comp=Z,1.9nm,0.9s,baz=279,slow=6.7,SNR=7.2						
	comp=Z,1.9nm,0.9s						
KLR	Kul'dur	60.68	47	⇓eP	P	13 42 35.8	-1.1
KLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
DBIC	Dimbokro	61.06	262	P	P	13 42 39.7	-0.3
	comp=Z,3.5nm,1.0s,baz=64,slow=6.5,SNR=4.3						
	comp=Z,3.5nm,1.0s						
USRK	Ussuriysk Ar.	61.76	52	P	P	13 42 42.2	-2.1
	comp=Z,1.6nm,0.8s,baz=265,slow=7.1,SNR=2.7						
	comp=Z,1.6nm,0.8s						
SUMG	Summit	65.28	341	P	P	13 43 07.7	+0.1
SUMG	Summit	65.28	341	P	P	13 43 07.7	+0.1
SUMG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SUMG	Summit	65.28	341	iP	P	13 43 08.2	+0.6
ICESG	Greenland Ices	66.52	337	iP	P	13 43 15.7	+0.1
NEEM	North Greenlan	66.92	347	eP	P	13 43 08.9	-9.0
NUUG	Nuugaatsiaq	69.92	341	iP	P	13 43 25.9	-10
NRS	Narsarsuaq	71.48	330	iP	P	13 43 39.3	-6.7
E18K	Tukpahlearik C	81.45	13	P	P	13 44 42.4	-0.1
E18K				IAmb	IAmb	13 44 46.5	
	comp=Z,6.4nm,1.1s						
TOLK	Toolik Lake Re	82.28	9	IAmb	IAmb	13 44 51.1	
	comp=Z,9.9nm,1.1s						
E23K	Chandalar	82.81	9	IAmb	IAmb	13 44 54.9	
	comp=Z,6.8nm,1.0s						
E24K	Your Creek	82.96	9	IAmb	IAmb	13 44 55.3	
	comp=Z,4.5nm,0.9s						
G19K	Purcell Mounta	83.27	13	IAmb	IAmb	13 44 55.6	
	comp=Z,5.0nm,0.9s						
COLD	Coldfoot	83.50	10	IAmb	IAmb	13 44 58.2	
	comp=Z,5.0nm,0.9s						
G23K	Bananza Creek	84.00	10	IAmb	IAmb	13 45 00.0	
	comp=Z,3.8nm,1.0s						
IMAR	Indian Mountai	84.04	12	P	P	13 44 55.4	-0.6
BMAR	Burnt Mountain	84.08	8	P	P	13 44 56.4	+0.2
H21K	Melozitna Rive	84.50	12	IAmb	IAmb	13 45 02.3	
	comp=Z,6.6nm,1.2s						
F30M	Barrier River	84.74	4	IAmb	IAmb	13 45 03.4	
	comp=Z,6.7nm,1.1s						
H23K	Yukon River	84.90	10	IAmb	IAmb	13 45 05.0	
	comp=Z,5.3nm,0.9s						
G27K	Doyon Strip	85.01	7	IAmb	IAmb	13 45 04.8	
	comp=Z,6.6nm,1.4s						
G30M	tAoh Zraii Nji	85.33	5	IAmb	IAmb	13 45 05.9	
	comp=Z,6.2nm,1.0s						
MLY	Manley	85.44	11	IAmb	IAmb	13 45 10.6	
	comp=Z,6.3nm,1.2s						
J19K	Poorman	85.46	13	IAmb	IAmb	13 45 08.2	
	comp=Z,4.7nm,0.9s						
H27K	Steamboat Moun	85.58	7	IAmb	IAmb	13 45 08.7	
	comp=Z,5.1nm,1.1s						
H29M	Whitestone	85.90	6	IAmb	IAmb	13 45 09.2	
	comp=Z,6.1nm,1.1s						
ILAR	Eielson Array	86.29	10	P	P	13 45 06.5	-0.7
	comp=Z,0.8nm,0.9s,baz=322,slow=4.7,SNR=7.5						
	comp=Z,0.8nm,0.9s						
K20K	Telida	86.34	13	IAmb	IAmb	13 45 12.1	
	comp=Z,7.6nm,1.1s						
I28M	Miner Creek	86.51	7	IAmb	IAmb	13 45 11.8	
	comp=Z,3.5nm,1.1s						
J25K	Salcha River,	86.66	9	IAmb	IAmb	13 45 12.6	
	comp=Z,5.9nm,1.2s						
J26L	Joseph Creek	87.00	8	IAmb	IAmb	13 45 15.0	
	comp=Z,5.5nm,0.8s						
I30M	Mount Dempster	87.05	5	IAmb	IAmb	13 45 15.0	
	comp=Z,4.3nm,0.9s						
K29M	Barlow Dome	88.31	6	IAmb	IAmb	13 45 22.7	
	comp=Z,2.5nm,0.8s						
WRA	Warramunga Arr	89.34	113	P	P	13 45 22.7	+0.1
	comp=Z,0.8nm,0.8s,baz=316,slow=4.2,SNR=9.0						
	comp=Z,0.8nm,0.8s						
ASAR	Alice Springs	90.82	116	P	P	13 45 29.6	+0.1
	comp=Z,0.7nm,0.7s,baz=306,slow=5.0,SNR=9.3						
	comp=Z,0.7nm,0.7s						

IDC ***17*** *13:37:19.9±1.8, 17°.97S×178°.12W, h540^{km}±20^{km}, mb3.0/6, mbtmp3.9/7, Error ellipse: s-maj=29.7km s-min=19.3km az=140.0*

NEIC ***17*** *13:37:20.1±1.2, 17°.9S±0°.1×178°.0W±0°.2, h552^{km}±9^{km}, mb4.0/16, Error ellipse: s-maj=23.9km s-min=18.0km az=90.0*

ISC 17 13:37:20.6±0.7**, 18°.0S**±0°.1×**178°.2W**±0°.2**, h550**^{km}**, n26, σ0^{s}.70**/24**, mb4.0**/13**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.58	273	P	P	13 38 39.2	-0.4
	24nm,0.8s,baz=137,slow=14,SNR=11						
NIUE	Niue	7.92	99	P	P	13 39 14.8	-2.7
URZ	Urewera	20.64	191	P	P	13 41 21.5	-0.8
	10nm,0.9s,baz=359,slow=2.1,SNR=7.5						
	10nm,0.9s						
RTZ	Ruatahuna	21.02	191	P	P	13 41 25.8	0.0
BKZ	Black Stump Fm	21.64	191	P	P	13 41 30.4	-1.0
WR8	Warramunga Arr	44.67	260	P	P	13 44 45.3	+0.2
WR8				IAmb	IAmb	13 45 22.2	
	comp=Z,8.7nm,1.4s						
WB0	Warramunga Arr	44.79	260	P	P	13 44 46.5	+0.5
WB0				IAmb	IAmb	13 44 58.1	
	comp=Z,5.9nm,1.2s						
WRA	Warramunga Arr	44.83	260	P	P	13 44 45.8	-0.5
	comp=Z,0.1nm,0.3s,baz=94,slow=7.3,SNR=6.8						
WRA				PcP	PcP	13 46 17.5	+1.1
	comp=Z,0.4nm,0.8s,baz=102,slow=4.1,SNR=1.2						
	comp=Z,0.1nm,0.3s						
AS31	Alice Springs	44.98	254	P	P	13 44 47.8	+0.3
ASAR	Alice Springs	44.98	254	P	P	13 44 47.5	0.0
ASAR	Alice Springs	44.98	254	P	P	13 44 48.0	+0.5
	comp=Z,4.0nm,0.6s,baz=90,slow=7.8,SNR=114						
ASAR				PcP	PcP	13 46 18.2	+1.4
	comp=Z,0.4nm,0.6s,baz=102,slow=3.8,SNR=5.7						
	comp=Z,4.0nm,0.6s						
CASY	Casey	66.18	205	P	P	13 47 13.4	-0.3
CASY				IAmb	IAmb	13 47 31.5	
	comp=Z,6.5nm,1.4s						
QSPA	South Pole Qui	72.10	180	P	P	13 47 49.7	+0.3
O16K	Kokwok River B	78.99	10	P	P	13 48 25.9	-1.3
O16K				IAmb	IAmb	13 48 27.4	
	comp=Z,10.0nm,1.5s						
NVAR	Mina Array Bea	79.31	44	P	P	13 48 29.6	-0.2
	comp=Z,0.7nm,0.7s,baz=245,slow=8.6,SNR=4.7						
	comp=Z,0.7nm,0.7s						
P18K	Big Mountain,	79.32	12	P	P	13 48 28.1	-1.0
P18K				IAmb	IAmb	13 48 38.5	
	comp=Z,13nm,1.4s						
N18K	Kilae Creek	80.40	11	P	P	13 48 34.1	-0.7
N18K				IAmb	IAmb	13 48 51.6	
	comp=Z,11nm,1.5s						
L18K	Granite Mounta	81.70	10	P	P	13 48 41.1	-0.2
L18K				IAmb	IAmb	13 48 57.5	
	comp=Z,8.6nm,1.4s						
GHO	Glory Hole Cre	82.80	14	P	P	13 48 46.2	-0.8
J18K	Innoko River	82.87	10	P	P	13 48 46.6	-0.7
J19K	Poorman	83.54	10	P	P	13 48 50.5	-0.1
TRF	Thorofare Moun	84.01	12	P	P	13 48 51.8	-1.3
IMAR	Indian Mountai	85.69	10	P	P	13 49 00.7	-0.4
TXAR	Lajitas Array	85.85	58	P	P	13 49 03.7	+0.9
	comp=Z,0.5nm,0.8s,baz=235,slow=4.4,SNR=6.0						
	comp=Z,0.5nm,0.8s						
ILAR	Eielson Array	85.88	13	P	P	13 49 00.8	-1.2
	comp=Z,0.3nm,0.4s,baz=222,slow=4.8,SNR=6.9						
	comp=Z,0.3nm,0.4s						
I28M	Miner Creek	88.05	15	P	P	13 49 11.3	-0.9
I28M				IAmb	IAmb	13 49 51.4	
	comp=Z,3.6nm,1.5s						

ROM 17 13:39:30.6±0.2**, 38°.491N**±0°.004×**16°.142E**±0°.006**, h9**^{km}±1^{km}**, ML1.2**/12**, 2C, Error ellipse: s-maj=0.5km s-min=0.0km az=138.0, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOPP	Joppolo	0.23	300	⇑P	Pg	13 39 36.3	+0.9
JOPP				S	Sg	13 39 40.3	+1.7
JOPP				AML	AML		
	comp=E,720µm,1.0s						
JOPP				AML	AML		
	comp=N,754µm,0.4s						
JOPP				AML	AML		
	comp=E,724µm,1.0s						
JOPP				AML	AML		
	comp=E,119µm,0.2s						
JOPP				AML	AML		
	comp=N,136µm,0.5s						
PLAC	Placanica	0.24	100	⇑P	Pg	13 39 36.4	+0.9
PLAC				S	Sg	13 39 40.4	+1.7
PLAC				AML	AML		
	comp=E,864µm,1.6s						
PLAC				AML	AML		
	comp=N,1725µm,0.6s						
PLAC				AML	AML		
	comp=E,863µm,1.6s						
PLAC				AML	AML		
	comp=N,1730µm,0.6s						
PLAC				AML	AML		
	comp=E,1845µm,0.6s						
PLAC				AML	AML		
	comp=N,972µm,1.6s						
PLAC				AML	AML		
	comp=E,152µm,0.2s						
PLAC				AML	AML		
	comp=N,69µm,0.2s						
PLAC				AML	AML		
	comp=E,81µm,0.6s						
PLAC				AML	AML		
	comp=N,142µm,0.2s						
CEL	Celeste	0.30	220	P	Pb	13 39 37.5	-0.7
CEL				S	Sb	13 39 42.5	-0.8
CEL				AML	AML		
	comp=E,571µm,0.4s						
CEL				AML	AML		
	comp=N,350µm,0.3s						
CEL				AML	AML		
	comp=N,353µm,0.3s						
CEL				AML	AML		
	comp=E,572µm,0.4s						
CEL				AML	AML		
	comp=N,350µm,0.3s						
CEL				AML	AML		
	comp=E,566µm,0.4s						
CEL				AML	AML		
	comp=E,72µm,0.4s						
CEL				AML	AML		
	comp=N,39µm,0.3s						
CEL				AML	AML		
	comp=E,80µm,0.4s						
CEL				AML	AML		
	comp=N,43µm,0.2s						
GRI	Girifalco	0.40	33	P	Pg	13 39 39.0	+0.6
GRI				S	Sb	13 39 45.0	-1.0
GRI				AML	AML		
	comp=E,724µm,0.5s						
GRI				AML	AML		
	comp=N,673µm,0.2s						
GRI				AML	AML		
	comp=E,42µm,0.3s						
GRI				AML	AML		
	comp=N,66µm,0.8s						
GMB	Gambarie	0.41	217	P	Pg	13 39 39.1	+0.5
GMB				S	Sb	13 39 45.4	-0.9
SICLA	Scilla	0.41	235	P	Pg	13 39 38.7	0.0
SOI	Samo	0.42	189	P	Pg	13 39 39.4	+0.5
SOI				S	Sb	13 39 46.2	-0.5
SOI				AML	AML		
	comp=E,259µm,0.4s						
SOI				AML	AML		
	comp=N,172µm,0.7s						
SOI				AML	AML		
	comp=E,23µm,0.3s						
SOI				AML	AML		
	comp=N,21µm,1.7s						
CAR1	CAROLEI	0.76	4	P	Pg	13 39 45.6	+0.2

ROM 17 13:40:04.4±0.1**, 38°.492N**±0°.004×**16°.150E**±0°.006**, h13**^{km}±2^{km}**, ML2.2**/23**, Error ellipse: s-maj=0.5km s-min=0.2km az=313.0, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAC	Placanica	0.23	100	P	Pg	13 40 09.9	+0.5
PLAC				S	Sb	13 40 13.9	-0.6
PLAC				AML	AML		
	comp=E,864µm,1.6s						
PLAC				AML	AML		
	comp=N,1725µm,0.6s						
PLAC				AML	AML		
	comp=E,863µm,1.6s						
PLAC				AML	AML		
	comp=E,1845µm,0.6s						
PLAC				AML	AML		
	comp=N,972µm,1.6s						
PLAC				AML	AML		
	comp=N,972µm,0.4s						
PLAC				AML	AML		
	comp=N,1730µm,0.6s						
PLAC				AML	AML		
	comp=E,863µm,0.4s						
JOPP	Joppolo	0.24	299	P	Pg	13 40 09.8	+0.3
JOPP				S	Sb	13 40 13.9	-0.8
JOPP				AML	AML		
	comp=E,720µm,1.0s						
JOPP				AML	AML		
	comp=E,724µm,1.0s						
JOPP				AML	AML		
	comp=N,754µm,0.4s						
CEL	Celeste	0.31	221	P	Pg	13 40 11.0	+0.2
CEL				S	Sb	13 40 16.1	-0.6
CEL				AML	AML		
	comp=N,350µm,0.3s						
CEL				AML	AML		
	comp=N,350µm,0.3s						
CEL				AML	AML		
	comp=N,353µm,0.3s						
CEL				AML	AML		
	comp=E,572µm,0.4s						
CEL				AML	AML		
	comp=E,566µm,0.4s						
GRI	Girifalco	0.39	33	P	Pg	13 40 12.2	-0.1
GRI				S	Sb	13 40 18.4	-0.7
GRI				AML	AML		
	comp=E,724µm,0.5s						
GRI				AML	AML		
	comp=N,673µm,0.2s						
GMB	Gambarie	0.41	218	P	Pg	13 40 12.6	-0.1
GMB				S	Sg	13 40 18.9	+0.7
GMB				AML	AML		
	comp=E,1200µm,0.3s						
GMB				AML	AML		
	comp=N,1300µm,0.2s						
GMB				AML	AML		
	comp=E,1200µm,1.7s						
SICLA	Scilla	0.41	236	P	Pg	13 40 12.6	-0.1
SOI	Samo	0.42	190	P	Pg	13 40 12.9	0.0
SOI				S	Sg	13 40 19.3	+0.7
SOI				AML	AML		
	comp=E,258µm,0.4s						
SOI				AML	AML		
	comp=N,172µm,0.7s						
SOI				AML	AML		
	comp=E,259µm,0.4s						
SOI				AML	AML		
	comp=N,172µm,0.7s						
MSRU	Castanea	0.55	246	P	Pg	13 40 15.5	+0.3
MSRU				S	Sb	13 40 23.6	-0.1
MSRU				AML	AML		
	comp=E,354µm,0.5s						
MSRU				AML	AML		
	comp=N,193µm,0.6s						
MSRU				AML	AML		
	comp=N,193µm,1.4s						
MTTG	Motta San Giov	0.61	216	P	Pg	13 40 16.3	0.0
MTTG				S	Sb	13 40 25.2	-0.1
MTTG				AML	AML		
	comp=N,176µm,0.7s						
MTTG				AML	AML		
	comp=N,163µm,0.4s						
MTTG				AML	AML		
	comp=E,116µm,0.4s						
CAR1	CAROLEI	0.76	4	P	Pg	13 40 19.0	-0.2
CAR1				AML	AML		
	comp=E,438µm,0.4s						
CAR1				AML	AML		
	comp=N,332µm,0.3s						
CAR1				AML	AML		
	comp=E,438µm,1.6s						
SPS2	Spezzano della	0.81	10	P	Pg	13 40 20.1	-0.1
SPS2				AML	AML		
	comp=E,53µm,1.6s						
SPS2				AML	AML		
	comp=E,53µm,0.4s						
SPS2				AML	AML		
	comp=N,60µm,0.3s						
TIP	Timpagrande	0.83	35	P	Pg	13 40 19.7	-0.9
CET2	Cetraro	1.05	352	P	Pb	13 40 24.1	-0.3
CET2				AML	AML		
	comp=E,122µm,0.7s						
CET2				AML	AML		
	comp=N,234µm,1.6s						
LIK	San Giovanni I	3.61	327	AML	AML		
	comp=N,160µm,1.2s						
LIK				AML	AML		
	comp=E,189µm,1.3s						

GCG ***17*** *13:47:06.6±1.1, 13°.82N×91°.51W, h60^{km}±33^{km}, MD4.0, ML3.8*

SNET ***17*** *13:47:08.0±0.9, 13°.69N×91°.32W, h14^{km}±5^{km}, ML3.7*

CATAC ***17*** *13:47:10.6±0.7, 14°N±4°×9°1W±°, h24^{km}±5^{km}, M3.7/12, MLv3.7/12, Error ellipse: s-maj=10.2km s-min=6.5km az=25.1, confirmed*

ISC 17 13:47:08.3±2.4**, 13°.78N**±0°.09×**91°.24W**±0°.07**, h7**^{km}±11^{km}**, n40, σ0^{s}.83**/49**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG0	El Palmar, Qui	0.65	351	iP	Pn	13 47 23.8	-0.3
STG0				IAML		13 47 45.8	
	comp=E,2µm,0.3s						
STG8	El Palmar, Qui	0.67	351	iP	Pn	13 47 23.7	-0.8
STG8				iS	Sn	13 47 38.3	+2.8
STG8				IAML		13 47 43.1	
	comp=N,2µm,0.3s						
ESSG	Sabana Grande	0.72	34	iP	Pb	13 47 23.4	+0.2
ESSG				iS	Sn	13 47 35.6	-0.8
ESSG				IAML		13 47 53.9	
	comp=N,931nm,0.7s						
FG8	Yepocapa, Chim	0.81	54	iP	Pg	13 47 22.7	-1.2
FG8				iS	Sb	13 47 35.9	-0.2
RTAL	Retalhuleu	0.86	329	P	Pn	13 47 27.2	+0.3
FG16	Alotenango, Sa	0.86	55	iP	Pg	13 47 24.1	-0.7
FG16				IAML		13 47 45.2	
	comp=E,9µm,0.2s						
SOKI	Kika Raxquin	1.04	351	iS	Sb	13 47 41.7	-1.3
SOKI				IAML		13 47 46.1	
	comp=E,3µm,0.4s						
FAME	Alcaldia de Sa	1.19	87	P	Pb	13 47 31.0	-0.2
NUBE	Las Nubes	1.42	85	eP	Pn	13 47 34.2	-0.5
NUBE				eS	Sb	13 47 54.4	+0.7
NUBE	Las Nubes	1.42	85	iP	Pn	13 47 35.2	+0.5
NUBE				iS	Sg	13 47 55.6	+1.4
NUBE	Las Nubes	1.42	85	P	Pn	13 47 33.7	-1.1
NUBE	Las Nubes	1.42	85	S	Sn	13 47 52.5	-1.4
LOAL	Lomas de Alarc	1.43	81	eS	Sg	13 47 55.4	+1.0
LOAL	Lomas de Alarc	1.43	81	S	Sg	13 47 55.5	+1.0
LOAL	Lomas de Alarc	1.43	81	P	Pn	13 47 35.3	+0.5
SLOZ	Alcaldia de Sa	1.44	80	P	Pb	13 47 36.0	+0.5
SLOZ	Alcaldia de Sa	1.44	80	S	Sn	13 47 53.3	-0.7
CEVE	Cerro Verde	1.57	88	eP	Pn	13 47 36.4	-0.5
CEVE				eS	Sb	13 47 59.0	+0.9
CEVE				IAML		13 48 09.1	
	comp=Z,1µm,0.3s						
CEVE	Cerro Verde	1.57	88	P	Pn	13 47 36.6	-0.3
CEVE	Cerro Verde	1.57	88	S	Sn	13 47 57.5	-0.1
UNIC	Universidad Ca	1.66	83	P	Pn	13 47 38.3	+0.4
UNIC	Universidad Ca	1.66	83	S	Sn	13 47 58.3	-1.2
JAYA	Jayaque - finc	1.75	94	eP	Pn	13 47 38.4	-0.8
JAYA				eS	Sn	13 48 01.8	0.0
JAYA				IAML		13 48 08.2	
	comp=Z,735nm,0.2s						
JAYA	Jayaque - finc	1.75	94	iP	Pn	13 47 38.0	-1.2
JAYA				iS	Sn	13 48 01.9	+0.1
JAYA	Jayaque - finc	1.75	94	P	Pn	13 47 39.4	+0.2
CEDA	San Andres	1.79	89	eP	Pn	13 47 38.7	-1.1
CEDA				eS	Sb	13 48 04.2	-0.1
CEDA				IAML		13 48 07.7	
	comp=Z,514nm,0.4s						
PMON	Piamonte	1.87	92	P	Pn	13 47 41.3	+0.3
PMON	Piamonte	1.87	92	S	Sn	13 48 04.7	-0.2
MTO3	Montecristo	1.92	71	eP	Pn	13 47 42.2	+0.5
MTO3	Montecristo	1.92	71	iP	Pn	13 47 41.9	+0.2
MTO3	Montecristo	1.92	71	S	Sn	13 48 05.8	-0.5
MTO3	Montecristo	1.92	71	P	Pn	13 47 42.5	+0.7
PIC2	El Picacho	1.93	91	eP	Pn	13 47 41.9	+0.1
UEES	Universidad Ev	1.94	92	P	Pn	13 47 42.3	+0.4
UEES	Universidad Ev	1.94	92	S	Sn	13 48 07.3	+0.6
LOMA	Loma Larga	2.02	94	eP	Pn	13 47 43.0	+0.1
LOMA	Loma Larga	2.02	94	P	Pn	13 47 43.3	+0.4
LOMA	Loma Larga	2.02	94	S	Sn	13 48 09.1	+0.6
LFRS	El Faro	2.12	94	eP	Pn	13 47 44.4	0.0
LCND	La Caada	3.29	98	eP	Pn	13 48 00.2	-0.2
LCND				IAML		13 48 54.8	
	comp=Z,156nm,0.3s						

IDC ***17*** *13:47:45.9±0.5, 65°.48S×176°.62W, h0^{km}, mb4.7/11, mbtmp4.7/12, ML4.4/1, MS5.3/37, Error ellipse: s-maj=23.2km s-min=15.6km az=45.0*

MOS ***17*** *13:47:47.2±1.6, 65°.72S×177°.04W, h10^{km}, mb5.5/9, Error ellipse: s-maj=34.6km s-min=11.5km az=94.0*

NEIC ***17*** *13:47:48.1, 65°.61S×176°.70W, h10^{km}*

NEIC ***17*** *13:47:48.1±1.2, 65°.6S±0°.1×176°.7W±0°.3, h10^{km}±1^{km}, mb5.4/66, Ms_20 5.5/614, Mwb5.7/23, Mww5.8/35, Error ellipse: s-maj=23.1km s-min=16.1km az=61.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.69; $M_{\theta\theta}$3.72; $M_{\phi\phi}$-4.41; $M_{r\theta}$0.35; $M_{\theta\phi}$1.34; $M_{\phi r}$-0.30; Fault plane solution: $M_0$4.35000×10^{17} NP1:ϕ_s35.89000°, δ83.64000°, λ179.02000°. NP2:ϕ_s126.00000°, δ89.03000°, λ6.36000°. Principal axes: T 3.9658, Plg5.0000°, Azm351.0000°; N 0.6864, Plg84.0000°, Azm135.0000°; P -4.6522, Plg4.0000°, Azm261.0000°;*

BJI ***17*** *13:47:48.0, 65°.60S×176°.80W, h10^{km}, mB5.5/1, Ms5.3/8, Ms7 5.1/8*

GCMT ***17*** *13:47:50.1±0.1, 65°.54S×176°.38W, h12^{km}, MW5.7/159, Moment Tensor Solution. s139,c266; s159,c463;*

Duration: 1^s7 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.85±.03; $M_{\theta\theta}$4.52±.03; $M_{\phi\phi}$-3.67±.03; $M_{r\theta}$-0.76±.08; $M_{\theta\phi}$1.68±.03; $M_{\phi r}$-0.05±.09; Best double couple: $M_0$4.47700×10^{17} NP1:ϕ_s214.00000°,δ84.00000°, λ176.00000°. NP2:ϕ_s304.00000°,δ86.00000°,λ7.00000°. Principal axes: T 4.9490, Plg7.0000°, Azm169.0000°; N -0.9440, Plg82.0000°, Azm335.0000°; P -4.0040, Plg2.0000°, Azm79.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function

ISC 17 13:47:48.1±0.3**, 65°.58S**±0°.05×**176°.50W**±0°.06**, h10**^{km}**,**
n530, σ1^s**87**/187**, mb5.3**/64**, MS5.5**/337**, 9C-13D,**
Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBA	**Scott Base**	**13.30**	**195**		**Pn**	**13 50 54.1**	**-2.4**
SBA	**Scott Base**	**13.30**	**195**	P	**Pn**	**13 50 54.1**	**-2.4**
VNDA	**Vanda**	**13.64**	**200**		**Pn**	**13 50 60.0**	**-1.3**
VNDA	**Vanda**	**13.64**	**200**	Pn	**Pn**	**13 51 00.3**	**-0.9**
	1.5nm,0.3s,baz=49,slow=15,SNR=33						
VNDA				Sn	**Sn**	**13 53 24.4**	**-8.2**
	0.2nm,0.3s,baz=86,slow=13,SNR=2.5						
VNDA				LR	LR	13 55 09.0	
	comp=Z,29µm,20.6s,baz=51,slow=32						
	13nm,0.8s						
WHZ	**Wether Hill Ro**	**21.47**	**329**	P	**P**	**13 52 36.0**	**-0.3**
WHZ				IAMs_20	IAMs_20	13 59 11.3	
	comp=Z,15µm,20.0s						
PYZ	**Puysegur Point**	**21.49**	**327**	IAMs_20	IAMs_20	13 59 21.7	
	comp=Z,18µm,19.0s						
ODZ	**Otahua Downs**	**21.76**	**335**	IAMs_20	IAMs_20	13 58 58.1	
	comp=Z,25µm,20.0s						
CTZ	**Chatham Island**	**21.89**	**360**	IAMs_20	IAMs_20	13 58 40.7	
	comp=Z,21µm,20.0s						
MLZ	**Mavora Lakes**	**21.93**	**330**	IAMs_20	IAMs_20	13 58 54.6	
	comp=Z,20µm,21.0s						
DCZ	**Deep Cove**	**22.05**	**328**	IAMs_20	IAMs_20	14 00 31.5	
	comp=Z,14µm,18.0s						
WKZ	**Wanaka**	**22.27**	**332**		**P**	**13 52 44.7**	**-0.3**
WKZ				IAmb	IAmb	13 52 48.0	
	comp=Z,305nm,1.7s						
LBZ	**Lake Benmore**	**22.48**	**334**	IAMs_20	IAMs_20	13 59 20.2	
	comp=Z,23µm,20.0s						
MQZ	**McQueen's Vall**	**22.74**	**339**	IAMs_20	IAMs_20	13 59 30.2	
	comp=Z,16µm,20.0s						
RPZ	**Rata Peaks**	**22.98**	**336**	IAMs_20	IAMs_20	13 59 22.5	
	comp=Z,17µm,21.0s						
RPZ	**Rata Peaks**	**22.98**	**336**	LR	LR	13 59 34.2	
	comp=Z,20µm,21.6s,baz=178,slow=31						
OXZ	**Oxford**	**23.20**	**338**	IAMs_20	IAMs_20	13 59 55.5	
	comp=Z,15µm,19.0s						
GVZ	**Greta Valley S**	**23.41**	**340**	IAMs_20	IAMs_20	13 59 51.0	
	comp=Z,19µm,20.0s						
LTZ	**Lake Taylor**	**23.70**	**339**	P	**P**	**13 52 59.1**	**-0.7**
LTZ				IAMs_20	IAMs_20	14 00 55.7	
	comp=Z,16µm,18.0s						
KHZ	**Kahutara**	**23.88**	**342**	IAMs_20	IAMs_20	14 00 35.6	
	comp=Z,17µm,19.0s						
INZ	**Inchbonnie**	**23.88**	**338**	IAMs_20	IAMs_20	14 00 46.4	
	comp=Z,18µm,19.0s						
QSPA	**South Pole Qui**	**24.50**	**180**	P	**P**	**13 53 07.4**	**+0.1**
QSPA				IAmb	IAmb	13 53 31.3	
	comp=Z,118nm,1.4s						
QSPA	**South Pole Qui**	**24.50**	**180**	IAMs_20	IAMs_20	14 01 55.9	
	comp=Z,22µm,18.0s						
QSPA	**South Pole Qui**	**24.50**	**180**	P	**P**	**13 53 07.9**	**+0.6**
	comp=Z,17nm,0.9s,baz=0.1,slow=1.8,SNR=16						
QSPA				LR	LR	14 01 57.5	
	comp=Z,21µm,18.9s,baz=44,slow=35						
	comp=Z,17nm,0.9s						
THZ	**Tophouse**	**24.61**	**341**	IAMs_20	IAMs_20	14 00 48.8	
	comp=Z,20µm,20.0s						
DSZ	**Denniston Nort**	**24.78**	**339**	IAMs_20	IAMs_20	14 00 14.3	
	comp=Z,15µm,22.0s						
TUWZ	**Tuamarina**	**24.80**	**343**	P	**P**	**13 53 09.4**	**-0.5**
SNZO	**South Karori**	**24.83**	**344**	IAMs_20	IAMs_20	14 00 33.8	
	comp=Z,12µm,20.0s						
MRNZ	**Matariki Terra**	**24.98**	**341**	P	**P**	**13 53 11.4**	**-0.2**
NNZ	**Nelson**	**25.08**	**342**	IAMs_20	IAMs_20	14 00 54.3	
	comp=Z,12µm,20.0s						
BFZ	**Birch Farm**	**25.29**	**347**	IAMs_20	IAMs_20	14 00 57.1	
	comp=Z,16µm,18.0s						
TKNZ	**Takaka Hill**	**25.32**	**341**	P	**P**	**13 53 14.7**	**+0.1**
QRZ	**Quartz Range**	**25.58**	**340**	IAMs_20	IAMs_20	14 01 31.5	
	comp=Z,17µm,20.0s						
BKZ	**Black Stump Fm**	**26.77**	**348**	IAMs_20	IAMs_20	14 01 45.3	
	comp=Z,18µm,20.0s						
RTZ	**Ruatahuna**	**27.27**	**349**	P	**P**	**13 53 32.5**	**+0.2**
RTZ				IAmb	IAmb	13 53 36.0	
	comp=Z,88nm,1.3s						
URZ	**Urewera**	**27.62**	**349**	LR	LR	14 02 51.0	
	comp=Z,21µm,19.2s,baz=224,slow=33						
MXZ	**Matakaoa Point**	**28.23**	**351**	IAMs_20	IAMs_20	14 02 03.0	
	comp=Z,14µm,22.0s						
CASY	**Casey**	**28.23**	**235**		**P**	**13 53 41.4**	**+0.8**
TOZ	**Tahuroa Road**	**28.28**	**347**	IAMs_20	IAMs_20	14 02 54.3	
	comp=Z,11µm,20.0s						
BELA	**Belgrano 2**	**34.93**	**167**	P	**P**	**13 54 39.3**	**-0.1**
BELA				IAmb	IAmb	13 54 49.9	
	comp=Z,44nm,1.2s						
YNG	**Young**	**37.66**	**309**	P	**P**	**13 55 04.4**	**+1.4**
	comp=Z,21nm,1.1s						
MAW	**Mawson**	**40.63**	**210**	P	**P**	**13 55 29.5**	**+2.0**
MAW	**Mawson**	**40.63**	**210**	P	**P**	**13 55 26.9**	**-0.6**
	comp=Z,2.7nm,0.7s,baz=145,slow=11,SNR=7.2						
MAW				LR	LR	14 12 05.8	
	comp=Z,8µm,19.2s,baz=143,slow=36						
	comp=Z,2.7nm,0.7s						
CMSA	**Cobar Meteorol**	**41.08**	**307**	P	**P**	**13 55 32.0**	**+0.5**
	comp=Z,16nm,1.0s						
PMSA	**Palmer Station**	**41.09**	**143**	IAMs_20	IAMs_20	14 09 37.6	
	comp=Z,6µm,19.0s						
PMSA	**Palmer Station**	**41.09**	**143**	LR	LR	14 09 59.6	
	comp=Z,5µm,18.5s,baz=226,slow=32						
HTT	**Hallett**	**41.73**	**298**	P	**P**	**13 55 39.0**	**+2.1**
STKA	**Stephens Creek**	**42.17**	**302**		**P**	**13 55 40.6**	**+0.1**
STKA				IAmb	IAmb	13 56 01.4	
	comp=Z,107nm,1.2s						
STKA	**Stephens Creek**	**42.17**	**302**	P	**P**	**13 55 41.5**	**+0.9**
	comp=Z,82nm,1.1s						
STKA	**Stephens Creek**	**42.17**	**302**	P	**P**	**13 55 37.7**	**-2.8**
	comp=Z,6.7nm,0.9s,baz=155,slow=10.0,SNR=6.3						
STKA				LR	LR	14 09 45.5	
	comp=Z,2µm,20.6s,baz=156,slow=31						
	comp=Z,6.7nm,0.9s						
STKA	**Stephens Creek**	**42.17**	**302**	P	**P**	**13 55 40.6**	**+0.1**
STKA				pmax	pmax		
	comp=Z,107nm,1.2s						
TROLL	**Troll, Antarti**	**42.66**	**180**	⇓P	**P**	**13 55 44.8**	**+0.5**
	comp=Z,360nm,0.7s						
SNAA	**Sanae**	**42.94**	**177**	⇓P	**P**	**13 55 46.9**	**+0.5**
	comp=Z,42nm,0.9s						
SNAA	**Sanae**	**42.94**	**177**	P	**P**	**13 55 45.9**	**-0.5**
SNAA				IAMs_20	IAMs_20	14 12 33.0	
	comp=Z,8µm,20.0s						
SNAA	**Sanae**	**42.94**	**177**	P	**P**	**13 55 46.9**	**+0.5**
	comp=Z,7.9nm,1.0s,baz=167,slow=7.9,SNR=18						
SNAA				PcP	**PcP**	**13 57 35.6**	**-1.1**
	comp=Z,5.4nm,0.9s,baz=169,slow=5.2,SNR=3.7						
SNAA				LR	LR	14 12 44.8	
	comp=Z,8µm,21.1s,baz=185,slow=35						
	comp=Z,7.9nm,1.0s						
VNA3	**Neumayer Olymp**	**43.14**	**174**	⇓P	**P**	**13 55 47.9**	**-0.1**
	comp=Z,7.6nm,0.8s						
SYO	**Syowa Base**	**43.33**	**198**	⇓*e*P	**P**	**13 55 48.0**	**-1.5**
SYO	**Syowa Base**	**43.33**	**198**	⇓*e*sP	sP	13 55 52.3	-0.5
BBOO	**Buckleboo**	**43.34**	**295**		**P**	**13 55 50.0**	**-0.1**
BBOO	**Buckleboo**	**43.34**	**295**	P	**P**	**13 55 50.4**	**+0.3**
	comp=Z,45nm,1.1s						
VNA2	**Neumayer--Watz**	**43.55**	**175**	⇓P	**P**	**13 55 51.7**	**+0.4**
	comp=Z,2.6nm,0.7s,baz=186,slow=8.8						
VNA1	**Neumayer--Stat**	**43.79**	**174**	⇓P	**P**	**13 55 55.8**	**+2.6**
	comp=Z,12nm,1.0s						
DZM	**Mont Dzumac**	**44.90**	**337**	P	**P**	**13 56 01.7**	**-1.0**
DZM	**Mont Dzumac**	**44.90**	**337**	*e*P	P	13 55 57.0	-5.7
	comp=Z,45nm,1.3s						
DZM	**Mont Dzumac**	**44.90**	**337**	*e*PP	PP	13 57 40.5	-6.9
	comp=Z,310nm,24.9s						
DZM				*e*S	**S**	**14 02 35.3**	**-5.0**
	comp=Z,958nm,25.9s						
DZM				*e*SS	**SS**	**14 06 03.8**	**+2.4**
	comp=Z,1µm,26.2s						
DZM				*e*LR	LR	14 08 34.0	
	comp=Z,16µm,24.3s						
DZM	**Mont Dzumac**	**44.90**	**337**	LR	LR	14 13 18.7	
	comp=Z,9µm,18.1s,baz=174,slow=34						
EIDS	**Eidsvold**	**45.17**	**317**		**P**	**13 56 03.7**	**-1.0**
EIDS	**Eidsvold**	**45.17**	**317**	P	**P**	**13 56 03.7**	**-1.0**
	comp=Z,35nm,1.0s						
TBI	**Tubuai**	**45.68**	**36**	*e*P	**P**	**13 56 07.7**	**-1.0**
	comp=Z,547nm,35.5s						
TBI				*e*S	**S**	**14 02 48.3**	**-3.1**
	comp=Z,2µm,26.8s						
TBI				*e*LQ	LQ	14 06 52.6	
	comp=Z,5µm,21.8s						
TBI				*e*LR	LR	14 08 46.9	
	comp=Z,4µm,26.8s						
RAR	**Rarotonga**	**45.69**	**22**	IAMs_20	IAMs_20	14 09 31.5	
	comp=Z,6µm,20.0s						
RAR	**Rarotonga**	**45.69**	**22**	LR	LR	14 10 16.6	
	comp=Z,5µm,21.3s,baz=192,slow=30						
QLP	**Quilpie**	**46.13**	**308**	P	**P**	**13 56 12.5**	**+0.2**
	comp=Z,34nm,1.6s						
MSVF	**Nonsavu**	**47.95**	**353**	LR	LR	14 13 15.0	
	comp=Z,2µm,18.6s,baz=183,slow=32						
MSVF	**Nonsavu**	**47.95**	**353**	⇑*e*P	**P**	**13 56 27.7**	**+1.0**
MSVF				pmax	pmax		
	comp=Z,13nm,1.0s						
USHA	**Ushuaia**	**48.15**	**132**	LR	LR	14 12 18.6	
	comp=Z,3µm,20.6s,baz=218,slow=30						
FORT	**Forrest**	**48.24**	**288**	P	**P**	**13 56 27.9**	**-0.8**
FORT	**Forrest**	**48.24**	**288**	P	**P**	**13 56 28.6**	**-0.1**
	comp=Z,121nm,0.9s						
GO09	**Cerro Castillo**	**49.93**	**127**	P	**P**	**13 56 42.1**	**+0.7**
KMBL	**Kambalda**	**50.20**	**282**	P	**P**	**13 56 43.3**	**-0.4**
	comp=Z,45nm,1.3s						
H01W1	**Cape Leeuwin H**	**50.32**	**272**	T	T	14 51 18.8	
	baz=149,slow=76,SNR=793						
H01W2	**Cape Leeuwin H**	**50.33**	**272**	T	T	14 51 12.6	
	baz=149,slow=76,SNR=783						
H01W3	**Cape Leeuwin H**	**50.34**	**272**	T	T	14 51 13.5	
	baz=149,slow=76,SNR=605						
NWAO	**Narrogin (SRO)**	**50.75**	**276**	IAMs_20	IAMs_20	14 13 05.1	
	comp=Z,7µm,21.0s						
NWAO	**Narrogin (SRO)**	**50.75**	**276**	LR	LR	14 13 06.3	
	comp=Z,8µm,21.0s,baz=130,slow=30						
PPT2	**Papeete2**	**51.19**	**34**	*e*PKIKP	**P**	**13 56 47.7**	**-3.7**
	comp=Z,58nm,23.2s						
PPT2				*e*S	**S**	**14 04 06.2**	**-3.3**
	comp=Z,811nm,25.5s						
PPT2				*e*SS	**SS**	**14 07 37.7**	**-7.0**
	comp=Z,427nm,24.0s						
PPT2				*e*LQ	LQ	14 08 55.8	
	comp=Z,3µm,36.0s						
PPT2				*e*LR	LR	14 11 13.2	
	comp=Z,3µm,27.8s						
PPT2				*e*LR	LR	14 11 25.8	
	comp=Z,4µm,25.2s						
PPT	**Papeete**	**51.22**	**34**	LR	LR	14 12 50.2	
	comp=Z,2µm,20.6s,baz=198,slow=29						
SANVU	**Saraoutou**	**51.28**	**340**	IAMs_20	IAMs_20	14 16 50.2	
	comp=Z,4µm,18.0s						
CTAO	**Charters Tower**	**51.57**	**313**	IAMs_20	IAMs_20	14 14 33.6	
	comp=Z,3µm,20.0s						
ASAR	**Alice Springs**	**52.41**	**298**	P	**P**	**13 56 59.4**	**-1.0**
	comp=Z,12nm,1.0s,baz=156,slow=7.6,SNR=46						
	comp=Z,12nm,1.0s						
AS31	**Alice Springs**	**52.41**	**298**	P	**P**	**13 56 59.4**	**-1.0**
	comp=Z,5.8nm,1.0s						
QIS	**Mount Isa**	**53.26**	**306**	P	**P**	**13 57 05.0**	**-1.7**
EFI	**East Falkland**	**53.95**	**137**	P	**P**	**13 57 12.0**	**+0.6**
EFI	**East Falkland**	**53.95**	**137**	⇓*e*P	**P**	**13 57 13.7**	**+2.3**
EFI				pmax	pmax		
	comp=Z,70nm,1.1s						
MORW	**Morawa**	**54.61**	**277**	P	**P**	**13 57 16.1**	**-0.4**
	comp=Z,28nm,1.2s						
COYC	**Coyhaique**	**54.92**	**124**	IAMs_20	IAMs_20	14 17 48.5	
	comp=Z,4µm,19.0s						
WR8	**Warramunga Arr**	**55.59**	**301**	P	**P**	**13 57 22.2**	**-1.5**
WR8				IAmb	IAmb	13 57 31.3	
	comp=Z,30nm,1.0s						
WRA	**Warramunga Arr**	**55.66**	**300**	P	**P**	**13 57 22.5**	**-1.6**
	comp=Z,13nm,1.0s,baz=162,slow=6.3,SNR=36						
WRA				LR	LR	14 18 47.9	
	comp=Z,3µm,19.1s,baz=150,slow=34						
	comp=Z,13nm,1.0s						
WRAB	**Tennant Creek**	**55.66**	**300**	P	**P**	**13 57 22.8**	**-1.4**
WRAB				IAmb	IAmb	13 57 31.7	
	comp=Z,26nm,0.9s						
WRAB	**Tennant Creek**	**55.66**	**300**	*de*P	**P**	**13 57 23.0**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,26nm,1.3s						
MEEK	**Meekatharra**	**55.70**	**281**	P	**P**	**13 57 23.8**	**-0.6**
	comp=Z,35nm,0.9s						
WB0	**Warramunga Arr**	**55.80**	**301**	P	**P**	**13 57 23.6**	**-1.5**
WB0				IAmb	IAmb	13 57 30.6	
	comp=Z,32nm,1.0s						
LL02	**Futaleuf**	**57.09**	**123**	IAmb	IAmb	13 57 40.3	
	comp=Z,46nm,1.3s						
LL01	**San Ignacio de**	**57.60**	**122**	P	**P**	**13 57 38.2**	**+0.6**
COEN	**Coen**	**58.29**	**312**	P	**P**	**13 57 42.5**	**-0.2**
HNR	**Honiara**	**58.40**	**332**	IAMs_20	IAMs_20	14 18 00.2	
	comp=Z,6µm,22.0s						
PLCA	**Paso Flores**	**59.71**	**122**	P	**P**	**13 57 52.7**	**+0.2**
PLCA				IAmb	IAmb	13 57 58.8	
	comp=Z,32nm,1.3s						
PLCA	**Paso Flores**	**59.71**	**122**	P	**P**	**13 57 52.7**	**+0.2**
	comp=Z,10nm,0.9s,baz=227,slow=9.1,SNR=8.1						
PLCA				LR	LR	14 17 54.2	
	comp=Z,1µm,19.7s,baz=211,slow=30						
	comp=Z,10nm,0.9s						
PSA00	**Pilbara Seismi**	**59.72**	**285**	P	**P**	**13 57 50.8**	**-1.9**
PSA00	**Pilbara Seismi**	**59.72**	**285**	IAmb	IAmb	13 57 58.0	
	comp=Z,36nm,0.9s						
PSA00	**Pilbara Seismi**	**59.72**	**285**	P	**P**	**13 57 50.6**	**-2.1**
MBWA	**Marble Bar**	**60.14**	**285**	P	**P**	**13 57 54.8**	**-0.8**
MBWA				IAmb	IAmb	13 58 01.3	
	comp=Z,38nm,0.9s						
MBWA				IAMs_20	IAMs_20	14 18 57.4	
	comp=Z,5µm,19.0s						
MBWA	**Marble Bar**	**60.14**	**285**	P	**P**	**13 57 54.7**	**-0.8**
	comp=Z,54nm,0.9s						
FITZ	**Fitzroy Crossi**	**60.58**	**292**	P	**P**	**13 57 58.1**	**-0.5**
FITZ	**Fitzroy Crossi**	**60.58**	**292**	P	**P**	**13 57 57.7**	**-0.9**
	comp=Z,8.4nm,1.1s						
FITZ	**Fitzroy Crossi**	**60.58**	**292**	LR	LR	14 21 02.6	
	comp=Z,3µm,18.8s,baz=162,slow=33						
PMG	**Port Moresby**	**61.44**	**318**	P	**P**	**13 58 03.1**	**-1.3**
PMG				IAmb	IAmb	13 58 10.9	
	comp=Z,27nm,0.9s						
PMG	**Port Moresby**	**61.44**	**318**	P	**P**	**13 58 03.1**	**-1.3**
PMG				pmax	pmax		
	comp=Z,27nm,0.9s						
KNRA	**Kununurra**	**61.61**	**297**		**P**	**13 58 04.5**	**-1.1**
KNRA	**Kununurra**	**61.61**	**297**	P	**P**	**13 58 04.9**	**-0.7**
	comp=Z,47nm,1.3s						
TAOE	**Nuku Hiva Isla**	**61.97**	**42**	*e*PKIKP	**P**	**13 58 06.8**	**-1.3**
	comp=Z,67nm,25.8s						
TAOE				*e*S	**S**	**14 06 31.8**	**-0.4**
	comp=Z,199nm,26.8s						
TAOE				*e*SS	**SS**	**14 10 34.5**	**0.0**
	comp=Z,257nm,24.7s						
TAOE				*e*LQ	LQ	14 13 41.8	
	comp=Z,6µm,30.9s						
TAOE				*e*LR	LR	14 16 34.7	
	comp=Z,2µm,25.5s						
H03S2	**Juan Fernandez**	**62.71**	**112**	T	T	15 06 44.3	
	baz=206,slow=74,SNR=190						
H03S1	**Juan Fernandez**	**62.71**	**112**	T	T	15 06 45.8	
	baz=206,slow=74,SNR=153						
H03S3	**Juan Fernandez**	**62.73**	**112**	T	T	15 06 45.0	
	baz=206,slow=74,SNR=285						
KDU	**Kakadu**	**63.02**	**302**	P	**P**	**13 58 14.3**	**-0.7**
	comp=Z,28nm,1.6s						
H03N3	**Juan Fernandez**	**63.05**	**112**	T	T	15 07 06.3	
	baz=206,slow=72,SNR=87						
H03N2	**Juan Fernandez**	**63.06**	**112**	T	T	15 07 13.1	
	baz=206,slow=72,SNR=140						
H03N1	**Juan Fernandez**	**63.06**	**112**	T	T	15 07 04.6	
	baz=206,slow=72,SNR=57						
BI02	**San Fabin de**	**63.07**	**120**	IAmb	IAmb	13 58 23.7	
	comp=Z,26nm,1.1s						
MTN	**Manton Dam**	**63.36**	**300**	IAmb	IAmb	13 58 25.9	
	comp=Z,34nm,1.1s						
MTN	**Manton Dam**	**63.36**	**300**	P	**P**	**13 58 16.2**	**-1.1**
	comp=Z,27nm,1.4s						
BO02	**Sierra Bellavi**	**64.92**	**119**		**P**	**13 58 27.9**	**+0.5**
BO01	**Tunca**	**65.17**	**119**		**P**	**13 58 28.8**	**-0.2**
BO01				IAmb	IAmb	13 58 34.1	
	comp=Z,26nm,1.1s						
LMEL	**Las Melosas**	**65.97**	**119**	IAmb	IAmb	13 58 53.0	
	comp=Z,33nm,1.1s						
MT02	**Curacav**	**66.16**	**118**	IAmb	IAmb	13 58 40.8	
	comp=Z,41nm,1.4s						
PEL	**Peldehue**	**66.43**	**118**	P	**P**	**13 58 37.5**	**+0.3**
PEL				pmax	pmax		
	comp=Z,27nm,1.1s						
VA03	**San Esteban**	**66.82**	**118**	IAmb	IAmb	13 58 44.4	
	comp=Z,18nm,0.8s						
CO02	**Combarbal**	**68.06**	**117**	IAmb	IAmb	13 58 53.0	
	comp=Z,24nm,0.9s						
BATI	**Baumata**	**68.55**	**294**	LR	LR	14 27 38.3	
	comp=Z,2µm,18.1s,baz=194,slow=35						
CFA	**Coronel Fontan**	**68.70**	**120**	LR	LR	14 24 07.7	
	comp=Z,414nm,18.9s,baz=185,slow=32						
SOEI	**Soe**	**68.73**	**295**	IAMs_20	IAMs_20	14 32 20.5	
	comp=Z,3µm,18.0s						
XMAS	**Kiritimati**	**68.87**	**20**	IAMs_20	IAMs_20	14 25 47.0	
	comp=Z,4µm,20.0s						
GO04	**Tololo Observa**	**69.06**	**117**	IAmb	IAmb	13 59 04.5	
	comp=Z,26nm,1.1s						
CO01	**Juntas del Tor**	**69.50**	**117**	IAmb	IAmb	13 59 08.9	
	comp=Z,42nm,1.5s						
JAY	**Jayapura**	**69.86**	**314**	LR	LR	14 24 34.8	
	comp=Z,2µm,22.0s,baz=142,slow=32						
SMPI	**Sarmi**	**70.96**	**312**	P	**P**	**13 59 06.2**	**+0.7**
	comp=Z,49nm,1.4s						
NLAI	**Namlea**	**73.70**	**300**	P	P	13 59 28.9	+7.1
JAGI	**Jajag, Banyuwa**	**73.85**	**285**	IAMs_20	IAMs_20	14 27 30.7	
	comp=Z,2µm,20.0s						
SWI	**Sorong**	**74.45**	**305**	P	P	13 59 32.0	+5.8
	comp=Z,602nmcomp=Z,48nm,1.3s						
ITQB	**Itaqui**	**74.47**	**128**		**P**	**13 59 26.4**	**+0.2**
ITQB				IAmb	IAmb	13 59 31.9	
	comp=Z,42nm,0.9s						
KAPI	**Kappang**	**74.80**	**292**	LR	LR	14 29 26.9	
	comp=Z,2µm,19.7s,baz=160,slow=34						
KAPI	**Kappang**	**74.80**	**292**	⇑*e*P	**P**	**13 59 28.7**	**+0.4**
KAPI				pmax	pmax		
	comp=Z,16nm,1.1s						
PB05	**IPOC Station P**	**75.90**	**114**	IAmb	IAmb	13 59 40.7	
	comp=Z,41nm,1.2s						
PB03	**IPOC Station P**	**76.80**	**114**	IAmb	IAmb	13 59 51.5	
	comp=Z,43nm,1.2s						
CPUP	**Villa Florida**	**77.33**	**127**	P	**P**	**13 59 42.3**	**-0.3**
CPUP	**Villa Florida**	**77.33**	**127**	P	**P**	**13 59 42.3**	**-0.3**
	comp=Z,3.5nm,0.9s,baz=58,slow=6.2,SNR=21						
CPUP				LR	LR	14 30 22.2	
	comp=Z,518nm,19.2s,baz=62,slow=33						
	comp=Z,3.5nm,0.9s						
PB01	**IPOC Station P**	**77.81**	**114**	IAmb	IAmb	14 01 06.1	
	comp=Z,26nm,0.9s						
LEM	**Lembang**	**77.99**	**280**	LR	LR	14 28 49.9	
	comp=Z,1µm,20.7s,baz=164,slow=32						
ITAB	**Concordia**	**78.17**	**131**	IAmb	IAmb	13 59 55.7	
	comp=Z,40nm,1.3s						
BKB	**Balikpapan**	**79.34**	**291**	IAMs_20	IAMs_20	14 30 33.2	
	comp=Z,2µm,20.0s						
MPSI	**Mapaga**	**79.66**	**294**	P	P	14 00 04.4	+8.9
PB16	**IPOC Station P**	**80.27**	**113**	IAmb	IAmb	14 00 06.5	
	comp=Z,51nm,1.3s						
SUR	**Sutherland**	**81.43**	**195**	P	**P**	**14 00 05.4**	**+0.3**
SUR				IAmb	IAmb	14 00 11.8	
	comp=Z,37nm,0.8s						
LPAZ	**La Paz**	**82.66**	**113**	P	**P**	**14 00 12.2**	**-0.2**
	comp=Z,13nm,0.8s,baz=197,slow=4.1,SNR=39						
LPAZ				LR	LR	14 28 51.0	
	comp=Z,494nm,20.3s,baz=194,slow=30						
	comp=Z,13nm,0.8s						
LPAZ	**La Paz**	**82.66**	**113**	*e*P	**P**	**14 00 12.4**	**+0.1**
NNA	**Nana**	**83.14**	**104**	LR	LR	14 29 43.7	
	comp=Z,1µm,19.6s,baz=203,slow=30						
NNA	**Nana**	**83.14**	**104**	⇑*e*P	**P**	**14 00 14.4**	**+0.3**
NNA				pmax	pmax		
	comp=Z,42nm,1.3s						
FOMA	**Nahampoana Res**	**83.79**	**219**	IAMs_20	IAMs_20	14 33 50.9	
	comp=Z,3µm,21.0s						
DAV	**Davao City (W)**	**83.81**	**302**	LR	LR	14 38 03.3	
	comp=Z,482nm,18.3s,baz=136,slow=36						
GUMO	**Guam**	**84.06**	**322**	LR	LR	14 32 14.0	
	comp=Z,837nm,22.0s,baz=148,slow=32						
BOSA	**Boshof**	**84.61**	**199**		**P**	**14 00 21.2**	**-0.4**
BOSA				IAmb	IAmb	14 00 23.9	
	comp=Z,57nm,1.9s						
BOSA	**Boshof**	**84.61**	**199**	P	**P**	**14 00 21.6**	**+0.1**
	comp=Z,6.5nm,0.8s,baz=183,slow=5.1,SNR=11						
BOSA				LR	LR	14 34 23.4	
	comp=Z,2µm,20.9s,baz=174,slow=33						
	comp=Z,6.5nm,0.8s						
SIV	**San Ignacio**	**85.56**	**119**	LR	LR	14 32 45.6	
	comp=Z,666nm,21.4s,baz=210,slow=32						
POHA	**Pohakuloa**	**86.56**	**20**	IAMs_20	IAMs_20	14 29 42.7	
	comp=Z,3µm,20.0s						
PTLB	**Pontes e Lacer**	**86.76**	**121**	P	**P**	**14 00 32.2**	**0.0**
PTLB				IAmb	IAmb	14 00 37.9	
	comp=Z,31nm,1.5s						
VOI	**Vohitsoka**	**86.77**	**220**	IAMs_20	IAMs_20	14 40 33.7	
	comp=Z,3µm,18.0s						
ATAH	**Atahualpa**	**86.90**	**100**	LR	LR	14 30 13.4	
	comp=Z,2µm,20.8s,baz=216,slow=29						
PAYG	**Puerto Ayora**	**87.82**	**87**	IAMs_20	IAMs_20	14 30 34.8	
	comp=Z,3µm,21.0s						
KIP	**Kipapa**	**87.88**	**17**	⇓*e*P	**P**	**14 00 38.7**	**+1.4**
KIP				pmax	pmax		
	comp=Z,47nm,1.0s						
LBTB	**Lobatse**	**88.11**	**200**	LR	LR	14 36 41.4	
	comp=Z,2µm,20.9s,baz=175,slow=33						
BDFB	**Brasilia**	**90.32**	**131**	P	**P**	**14 00 48.2**	**-1.0**
	comp=Z,2.0nm,0.6s,baz=187,slow=4.2,SNR=4.3						
BDFB				LR	LR	14 39 16.1	
	comp=Z,1µm,19.1s,baz=190,slow=34						
	comp=Z,2.0nm,0.6s						
KGCAE	**Kacgae**	**90.68**	**197**	P	**P**	**14 00 51.0**	**+0.1**
KGCAE				IAmb	IAmb	14 00 53.0	
	comp=Z,13nm,0.8s						
MATP	**Matopo**	**92.17**	**203**	LR	LR	14 38 05.0	
	comp=Z,2µm,21.9s,baz=172,slow=33						
OTAV	**Otavalo**	**93.55**	**97**	P	**P**	**14 01 06.4**	**+1.8**
OTAV				IAmb	IAmb	14 01 12.3	
	comp=Z,36nm,1.6s						
OTAV	**Otavalo**	**93.55**	**97**	*e*P	**P**	**14 01 06.4**	**+1.8**
TSUM	**Tsumeb**	**94.80**	**193**	LR	LR	14 42 46.1	
	comp=Z,4µm,18.0s,baz=159,slow=35						
LSZ	**Lusaka**	**97.26**	**204**	LR	LR	14 41 11.4	
	comp=Z,4µm,21.9s,baz=176,slow=33						
ROSC	**El Rosal**	**99.42**	**99**	LR	LR	14 38 53.2	
	comp=Z,799nm,19.6s,baz=242,slow=31						
JTS	**Las Juntas de**	**99.93**	**87**	LR	LR	14 36 41.5	
	comp=Z,2µm,21.4s,baz=198,slow=29						
HDC	**Heredia**	**100.02**	**88**	IAMs_20	IAMs_20	14 37 20.1	
	comp=Z,2µm,20.0s						
QIZ	**Qiongzhong**	**100.61**	**293**	P	**Pdif**	**14 01 36.6**	**+0.9**
QIZ				PP	**PP**	**14 05 48.9**	**+5.8**
QIZ				S	**Sdif**	**14 13 16.1**	**+3.7**
QIZ				SS	**SS**	**14 20 10.3**	**+1.0**
QIZ				LR	LR		
	comp=Z,370nm,13.7s						
QIZ				LR	LR		
	comp=Z,410nm,22.0s						
BCIP	**Isla Barro Col**	**101.04**	**92**	IAMs_20	IAMs_20	14 36 36.1	
	comp=Z,1µm,22.0s						
SLBS	**Sierra La Lagu**	**102.22**	**59**	IAMs_20	IAMs_20	14 40 08.1	
	comp=Z,1µm,18.0s						
UNM	**Universidad Na**	**102.30**	**71**	IAMs_20	IAMs_20	14 38 51.2	
	comp=Z,2µm,22.0s						
TGUH	**Tegucigalpa,Un**	**102.36**	**83**	IAMs_20	IAMs_20	14 38 15.3	
	comp=Z,1µm,22.0s						
RCBR	**Riachuelo**	**103.17**	**140**	IAMs_20	IAMs_20	14 45 02.3	
	comp=Z,1µm,20.0s						
SDV	**Santo Domingo**	**104.59**	**101**	IAMs_20	IAMs_20	14 41 43.5	
	comp=Z,2µm,21.0s						
SLVN	**Son La**	**105.01**	**288**	IAMs_20	IAMs_20	14 58 39.3	
	comp=Z,2µm,20.0s						
INU	**Inuyama**	**106.85**	**322**	IAMs_20	IAMs_20	14 43 19.7	
	comp=Z,1µm,22.0s						
MTDJ	**Mount Denham**	**110.14**	**90**	IAMs_20	IAMs_20	14 42 47.2	
	comp=Z,890nm,19.0s						
PZH	**PanZhiHua**	**110.50**	**289**	PKP	**PKiKP**	**14 06 20.5**	**+0.3**
SAO	**San Andreas Ge**	**110.54**	**45**	IAMs_20	IAMs_20	14 50 58.2	
	comp=Z,1µm,20.0s						
MCCM	**Marconi Confer**	**111.41**	**43**	IAMs_20	IAMs_20	14 52 00.3	
	comp=Z,2µm,18.0s						
INCN	**Inchon**	**111.74**	**314**	IAMs_20	IAMs_20	15 00 51.8	
	comp=Z,2µm,20.0s						
HYB	**Hyderabad**	**111.90**	**264**	*e*Pdif	**Pdif**	**14 02 25.9**	**-0.1**
HYB				*e*PKiKP	**PKiKP**	**14 06 24.1**	**+1.1**
HYB				*e*SKSac	**SKSac**	**14 13 04.6**	**-0.1**
HOPS	**Hopland Field**	**112.15**	**43**	IAMs_20	IAMs_20	14 52 46.8	
	comp=Z,2µm,18.0s						

TPNV	Topopah Spring	112.28	49	IAMs_20	IAMs_20	14 50 55.4	
	comp=Z,829nm,19.0s						
Y22D	IRIS PASSCAL I	112.76	58	IAMs_20	IAMs_20	14 54 10.1	
	comp=Z,979nm,18.0s						
ORV	Oroville	113.11	44	IAMs_20	IAMs_20	14 48 32.4	
	comp=Z,961nm,19.0s						
HKT	Hockley	113.16	69	IAMs_20	IAMs_20	14 47 59.0	
	comp=Z,912nm,18.0s						
JCC	Jacoby Creek,	113.58	41	IAMs_20	IAMs_20	14 48 13.7	
	comp=Z,1µm,20.0s						
ANMO	Albuquerque	113.71	57	IAMs_20	IAMs_20	14 54 57.3	
	comp=Z,870nm,18.0s						
ANMO	Albuquerque	113.71	57	IAMs_20	IAMs_20	14 54 57.3	
	comp=Z,879nm,18.0s						
ANMO	Albuquerque	113.71	57	IAMs_20	IAMs_20	14 54 57.3	
	comp=Z,880nm,18.0s						
LODK	Lodwar	113.97	215	IAMs_20	IAMs_20	14 50 54.8	
	comp=Z,2µm,19.0s						
ABTX	Abilene, Hawle	114.09	64	IAMs_20	IAMs_20	14 46 06.5	
	comp=Z,904nm,20.0s						
MSTX	Muleshoe	114.14	61	IAMs_20	IAMs_20	14 54 58.9	
	comp=Z,879nm,20.0s						
HATC	Hat Creek Radi	114.29	43	IAMs_20	IAMs_20	14 49 24.6	
	comp=Z,1µm,20.0s						
AMTX	Amarillo	115.36	61	IAMs_20	IAMs_20	14 55 31.1	
	comp=Z,1µm,18.0s						
K02D	Willamette Mer	115.43	41	IAMs_20	IAMs_20	14 49 34.6	
	comp=Z,2µm,20.0s						
Z35A	Perchaven, San	115.62	66	IAMs_20	IAMs_20	14 57 04.1	
	comp=Z,845nm,19.0s						
ELK	Elko	116.07	48	IAMs_20	IAMs_20	14 53 53.8	
	comp=Z,1µm,18.0s						
S22A	4UR Ranch, Cre	116.10	56	IAMs_20	IAMs_20	14 49 55.6	
	comp=Z,891nm,19.0s						
WMOK	Wichita Mounta	116.30	64	IAMs_20	IAMs_20	14 47 27.0	
	comp=Z,1µm,20.0s						
T25A	Trinidad	116.40	58	IAMs_20	IAMs_20	14 49 14.5	
	comp=Z,801nm,18.0s						
Z38A	Mt. Pleasant	116.43	68	IAMs_20	IAMs_20	14 57 46.3	
	comp=Z,939nm,19.0s						
YSS	Yuzhno-Sakhali	116.54	330	*i* PKIKP	PKiKP	14 06 34.0	+3.2
YSS				*e*SS	SS	14 24 01.0	+17
WVOR	Wild Horse Val	116.60	45	IAMs_20	IAMs_20	14 50 29.7	
	comp=Z,2µm,20.0s						
060A	Indiantown	116.80	83	IAMs_20	IAMs_20	14 47 05.8	
	comp=Z,888nm,20.0s						
ADK	Adak	117.14	360	IAMs_20	IAMs_20	14 48 15.3	
	comp=Z,1µm,20.0s						
COR	Corvallis	117.28	40	IAMs_20	IAMs_20	14 51 11.6	
	comp=Z,2µm,20.0s						
ATKA	Atka Island	117.47	2	IAMs_20	IAMs_20	14 48 37.2	
	comp=Z,2µm,21.0s						
OK029	Liberty Lake	117.74	64	IAMs_20	IAMs_20	14 48 50.0	
	comp=Z,1µm,19.0s						
O20A	White River Ci	117.77	54	IAMs_20	IAMs_20	14 50 08.8	
	comp=Z,846nm,18.0s						
OK038	West end E0370	117.86	63	IAMs_20	IAMs_20	14 57 22.3	
	comp=Z,995nm,20.0s						
HWUT	Hardware Ranch	118.01	50	IAMs_20	IAMs_20	14 56 29.1	
	comp=Z,1µm,18.0s						
MFID	Camas Ranch	118.33	46	IAMs_20	IAMs_20	14 53 41.4	
	comp=Z,940nm,18.0s						
ISCO	Idaho Springs	118.36	56	IAMs_20	IAMs_20	14 51 38.4	
	comp=Z,774nm,18.0s						
NIKH	Nikolski High	118.37	5	IAMs_20	IAMs_20	14 50 09.3	
	comp=Z,2µm,20.0s						
FURI	Furi	118.39	220	IAMs_20	IAMs_20	14 55 14.8	
	comp=Z,1µm,20.0s						
OK051	E0350 and S346	118.60	65	IAMs_20	IAMs_20	14 49 16.7	
	comp=Z,998nm,20.0s						
HLID	Hailey	118.89	47	IAMs_20	IAMs_20	14 57 08.3	
	comp=Z,938nm,18.0s						
T35A	Sooner Cattle	119.08	65	IAMs_20	IAMs_20	14 49 50.5	
	comp=Z,924nm,19.0s						
BMO	Blue Mountains	119.20	44	IAMs_20	IAMs_20	14 52 36.5	
	comp=Z,1µm,21.0s						
AHID	Auburn Hatcher	119.20	50	IAMs_20	IAMs_20	14 54 02.7	
	comp=Z,858nm,19.0s						
UNV	Unalaska Valle	119.34	7	IAMs_20	IAMs_20	14 47 56.1	
	comp=Z,2µm,22.0s						
CBKS	Cedar Bluff	119.56	61	IAMs_20	IAMs_20	14 53 55.3	
	comp=Z,936nm,18.0s						
R32A	Long Quarter,	119.59	62	IAMs_20	IAMs_20	14 58 53.1	
	comp=Z,834nm,19.0s						
HHC	Hu-ho-hao-te	119.66	304	*e*PKP	PKPdf	14 06 35.5	-1.7
BW06	Boulder Array	119.70	51	IAMs_20	IAMs_20	14 57 31.8	
	comp=Z,904nm,19.0s						
PDAR	Pinedale Array	119.70	51	PKP	PKPdf	14 06 35.4	-2.0
	comp=Z,1.2nm,0.9s,baz=165,slow=2.3,SNR=5.9						
ATD	Arta Tunnel	119.71	226	IAMs_20	IAMs_20	14 53 23.0	
	comp=Z,1µm,21.0s						
NLWA	Neilton Lookou	119.73	38	IAMs_20	IAMs_20	14 53 25.4	
	comp=Z,2µm,18.0s						
PLID	Pearl Lake	119.80	45	IAMs_20	IAMs_20	14 52 42.3	
	comp=Z,1µm,21.0s						
PET	Petropavlovsk	119.80	343	IAMs_20	IAMs_20	14 49 49.2	
	comp=Z,1µm,20.0s						
TPAW	Teton Pass	119.90	50	IAMs_20	IAMs_20	14 58 32.1	
	comp=Z,833nm,18.0s						
SNOW	Snow King Moun	119.94	50	IAMs_20	IAMs_20	14 57 01.1	
	comp=Z,860nm,19.0s						
HAWA	Hanford	119.97	42	IAMs_20	IAMs_20	14 52 53.9	
	comp=Z,1µm,20.0s						
FXWY	Fox Creek	120.01	50	IAMs_20	IAMs_20	14 58 44.1	
	comp=Z,1µm,18.0s						
LOHW	Long Hollow	120.12	50	IAMs_20	IAMs_20	14 57 07.0	
	comp=Z,779nm,19.0s						
FALS	False Pass	120.53	9	IAMs_20	IAMs_20	14 48 13.4	
	comp=Z,1µm,21.0s						
K22A	Casper	120.60	54	IAMs_20	IAMs_20	14 56 32.6	
	comp=Z,986nm,18.0s						
CNBA	Chernabura Isl	120.77	11	IAMs_20	IAMs_20	14 47 17.2	
	comp=Z,2µm,21.0s						
KSU1	Kansas State U	120.97	63	IAMs_20	IAMs_20	14 50 33.4	
	comp=Z,982nm,19.0s						
DLMT	Dillon	121.07	48	IAMs_20	IAMs_20	14 55 29.1	
	comp=Z,1µm,19.0s						
S12K	Black Hills	121.46	10	IAMs_20	IAMs_20	14 54 20.1	
	comp=Z,1µm,20.0s						
T45A	Paducah	122.20	71	IAMs_20	IAMs_20	15 01 41.9	
	comp=Z,841nm,20.0s						
NEW	Newport	122.36	43	IAMs_20	IAMs_20	14 54 19.0	
	comp=Z,2µm,20.0s						
BGNE	Belgrade	122.42	61	IAMs_20	IAMs_20	14 51 07.0	
	comp=Z,960nm,20.0s						
P38A	Dawn	122.58	65	IAMs_20	IAMs_20	15 00 42.1	
	comp=Z,1µm,18.0s						
GTA	Gaotai	122.66	294	*e*PKP	PKiKP	14 06 49.6	+6.3
RSSD	Black Hills	122.74	55	IAMs_20	IAMs_20	14 58 48.3	
	comp=Z,860nm,20.0s						
T47A	Sharon Grove	122.78	72	IAMs_20	IAMs_20	15 02 16.3	
	comp=Z,854nm,21.0s						
N35A	Tabor	122.86	63	IAMs_20	IAMs_20	14 50 26.7	
	comp=Z,1µm,21.0s						
K30B	Basset	123.00	59	IAMs_20	IAMs_20	14 53 53.4	
	comp=Z,892nm,20.0s						
L34A	Svendsen Farm,	123.56	62	IAMs_20	IAMs_20	14 55 02.0	
	comp=Z,708nm,18.0s						
W57A	Gilead	124.05	79	IAMs_20	IAMs_20	14 55 31.9	
	comp=Z,713nm,18.0s						
WCI	Wyandotte Cave	124.17	72	IAMs_20	IAMs_20	15 03 00.2	
	comp=Z,852nm,20.0s						
EGMT	Eagleton	124.33	48	IAMs_20	IAMs_20	14 56 18.3	
	comp=Z,1µm,20.0s						
N41A	Harden Midland	124.53	67	IAMs_20	IAMs_20	15 01 42.9	
	comp=Z,834nm,19.0s						
R49A	Shelbyville	124.67	73	IAMs_20	IAMs_20	15 03 36.4	
	comp=Z,782nm,20.0s						
SCIA	State Center	124.68	64	IAMs_20	IAMs_20	14 53 14.7	
	comp=Z,858nm,18.0s						
U56A	King	124.92	78	IAMs_20	IAMs_20	14 55 19.1	
	comp=Z,667nm,18.0s						
ECSD	EROS Data Cent	125.00	61	IAMs_20	IAMs_20	14 53 49.3	
	comp=Z,1µm,18.0s						
HDIL	Hopedale	125.00	68	IAMs_20	IAMs_20	15 02 44.3	
	comp=Z,669nm,18.0s						
P46A	Rosedale	125.01	71	IAMs_20	IAMs_20	15 04 02.4	
	comp=Z,766nm,20.0s						
O14K	Tigyukauivet M	125.05	9	IAMs_20	IAMs_20	14 57 44.9	
	comp=Z,1µm,19.0s						
O15K	Ungalikthiuk R	125.07	10	IAMs_20	IAMs_20	14 55 33.7	
	comp=Z,1µm,20.0s						
P16K	Nushagak River	125.07	12	IAMs_20	IAMs_20	14 50 02.8	
	comp=Z,1µm,22.0s						
SYI	Shuyak Island	125.20	15	IAMs_20	IAMs_20	14 56 38.1	
	comp=Z,1µm,20.0s						
Q19K	Cape Douglas,	125.38	14	IAMs_20	IAMs_20	14 51 51.9	
	comp=Z,2µm,20.0s						
O16K	Kokwok River B	125.62	11	IAMs_20	IAMs_20	14 55 24.3	
	comp=Z,1µm,21.0s						
P18K	Big Mountain,	125.68	13	IAMs_20	IAMs_20	14 50 00.8	
	comp=Z,1µm,22.0s						
N14K	Kuskokwak Cree	125.68	9	IAMs_20	IAMs_20	14 54 35.8	
	comp=Z,996nm,21.0s						
E28A	Huff	126.03	56	IAMs_20	IAMs_20	14 55 51.3	
	comp=Z,968nm,20.0s						
Q51A	Peebles	126.03	74	IAMs_20	IAMs_20	15 04 37.4	
	comp=Z,767nm,20.0s						
N15K	Kwethluk River	126.04	10	IAMs_20	IAMs_20	14 51 27.2	
	comp=Z,1µm,22.0s						
M13K	Dall Lake	126.07	8	IAMs_20	IAMs_20	14 51 45.9	
	comp=Z,1µm,22.0s						
P19K	Oil Pt	126.13	14	IAMs_20	IAMs_20	14 52 25.8	
	comp=Z,1µm,20.0s						
O18K	Koktuh Hills	126.14	13	IAMs_20	IAMs_20	15 00 11.9	
	comp=Z,1µm,19.0s						
M44A	Midewin, Midew	126.20	69	IAMs_20	IAMs_20	15 04 33.0	
	comp=Z,730nm,20.0s						
O48B	Farmland	126.36	72	IAMs_20	IAMs_20	15 05 04.3	
	comp=Z,753nm,21.0s						
Q52A	Bidwell	126.41	75	IAMs_20	IAMs_20	15 04 50.4	
	comp=Z,900nm,20.0s						
I37A	Lemond, Waseca	126.42	63	IAMs_20	IAMs_20	14 53 53.9	
	comp=Z,1µm,20.0s						
M14K	Bethel	126.49	9	IAMs_20	IAMs_20	14 55 19.1	
	comp=Z,1µm,21.0s						
O19K	Port Alsworth	126.56	14	IAMs_20	IAMs_20	14 53 08.0	
	comp=Z,1µm,20.0s						
N17K	Nushagak Hills	126.62	12	IAMs_20	IAMs_20	14 51 01.7	
	comp=Z,1µm,22.0s						
HQIL	Hanson Quary C	126.63	69	IAMs_20	IAMs_20	15 03 41.3	
	comp=Z,856nm,20.0s						
O49A	Covington	126.63	73	IAMs_20	IAMs_20	15 05 33.3	
	comp=Z,692nm,19.0s						
N18K	Kilae Creek	126.89	13	IAMs_20	IAMs_20	14 50 59.7	
	comp=Z,1µm,22.0s						
F33A	5 Mile Ranch,	126.94	60	IAMs_20	IAMs_20	14 54 41.4	
	comp=Z,767nm,20.0s						
M16K	Timber Creek	126.97	11	IAMs_20	IAMs_20	14 51 44.8	
	comp=Z,1µm,22.0s						
Q54A	Coxs Mills	127.00	76	IAMs_20	IAMs_20	15 06 25.1	
	comp=Z,910nm,20.0s						
L14K	Kuka Creek	127.03	8	IAMs_20	IAMs_20	14 56 24.4	
	comp=Z,948nm,20.0s						
N19K	Bonanza Creek	127.15	13	IAMs_20	IAMs_20	14 53 46.7	
	comp=Z,1µm,20.0s						
P53A	Whipple	127.21	75	IAMs_20	IAMs_20	15 05 24.6	
	comp=Z,937nm,19.0s						
K43A	Burlington	127.22	68	IAMs_20	IAMs_20	15 03 51.8	
	comp=Z,770nm,19.0s						
MA2	Magadan	127.22	340	IAMs_20	IAMs_20	14 52 37.5	
	comp=Z,1µm,22.0s						
SLKM	Skilak Lake	127.30	16	IAMs_20	IAMs_20	14 57 07.8	
	comp=Z,1µm,20.0s						
R58B	Mineral	127.33	79	IAMs_20	IAMs_20	14 55 59.8	
	comp=Z,668nm,19.0s						
ULN	Ulaanbaatar	127.36	305	⇑*i*PKIKP	PKiKP	14 06 54.3	+1.9
L46A	Eue Claire	127.42	70	IAMs_20	IAMs_20	15 04 15.1	
	comp=Z,859nm,19.0s						
M17K	Holitna River	127.47	11	IAMs_20	IAMs_20	14 59 14.0	
	comp=Z,1µm,19.0s						
MDND	Maddock	127.50	56	IAMs_20	IAMs_20	14 57 01.3	
	comp=Z,808nm,19.0s						
K13K	Kusilvak Mount	127.51	7	IAMs_20	IAMs_20	14 53 54.1	
	comp=Z,2µm,21.0s						
SONM	Songino Array	127.56	304	PP	PP	14 08 54.7	+0.8
	comp=Z,0.4nm,0.5s,baz=178,slow=4.3,SNR=3.9						
L16K	Owhat River	127.61	10	IAMs_20	IAMs_20	14 52 02.8	
	comp=Z,1µm,22.0s						
SPMN	Marine on St.	127.68	63	IAMs_20	IAMs_20	14 58 33.1	
	comp=Z,776nm,18.0s						
PWL	Port Wells	127.86	17	IAMs_20	IAMs_20	14 59 31.7	
	comp=Z,1µm,19.0s						
FIS	Fire Island	127.92	16	IAMs_20	IAMs_20	14 58 25.1	
	comp=Z,1µm,19.0s						
MCWV	Mont Chateau	127.98	77	IAMs_20	IAMs_20	15 06 52.9	
	comp=Z,934nm,20.0s						
S61A	Accomac	127.99	81	IAMs_20	IAMs_20	14 54 23.3	
	comp=Z,920nm,20.0s						
I42A	Draeger Farm,	128.00	66	IAMs_20	IAMs_20	14 58 14.7	
	comp=Z,686nm,19.0s						
GLI	Glacier Island	128.03	18	IAMs_20	IAMs_20	15 00 01.3	
	comp=Z,2µm,19.0s						
K15K	Wolf Creek Mou	128.05	9	IAMs_20	IAMs_20	14 56 35.4	
	comp=Z,1µm,20.0s						
O54A	Avella	128.21	76	IAMs_20	IAMs_20	15 06 05.0	
	comp=Z,1µm,20.0s						
M19K	Big River Lodg	128.23	13	IAMs_20	IAMs_20	14 51 42.3	
	comp=Z,1µm,22.0s						
M20K	Styx River	128.33	14	IAMs_20	IAMs_20	14 51 25.0	
	comp=Z,1µm,21.0s						
L18K	Granite Mounta	128.34	12	IAMs_20	IAMs_20	14 59 32.0	
	comp=Z,1µm,19.0s						
J14K	Nanvaranak Lak	128.38	8	IAMs_20	IAMs_20	14 54 02.1	
	comp=Z,1µm,21.0s						
KNK	Knik Glacier	128.38	17	IAMs_20	IAMs_20	15 01 02.5	
	comp=Z,1µm,19.0s						
DIV	Divide	128.45	18	IAMs_20	IAMs_20	14 59 57.2	
	comp=Z,1µm,19.0s						
L19K	White Mountain	128.46	13	IAMs_20	IAMs_20	14 58 03.3	
	comp=Z,1µm,19.0s						
M22K	Willow	128.52	16	IAMs_20	IAMs_20	14 58 07.1	
	comp=Z,1µm,20.0s						
SKT	Skwentna	128.59	15	IAMs_20	IAMs_20	15 05 28.9	
	comp=Z,1µm,18.0s						
G40A	Rib Lake	128.69	65	IAMs_20	IAMs_20	14 57 51.7	
	comp=Z,823nm,18.0s						
K17K	Iditarod	128.70	11	IAMs_20	IAMs_20	14 57 19.5	
	comp=Z,1µm,20.0s						
KLU	Klutina	128.78	18	IAMs_20	IAMs_20	14 58 31.0	
	comp=Z,1µm,19.0s						
SML	Sawmill	128.78	17	IAMs_20	IAMs_20	15 01 33.0	
	comp=Z,2µm,19.0s						
VRDI	Verde Repeater	128.86	20	IAMs_20	IAMs_20	14 53 27.2	
	comp=Z,2µm,20.0s						
SCM	Sheep Creek Mo	128.93	17	IAMs_20	IAMs_20	14 59 56.9	
	comp=Z,1µm,19.0s						
GLB	Gilahina Butte	129.01	20	IAMs_20	IAMs_20	14 56 03.3	
	comp=Z,2µm,19.0s						
J47A	Sunmer	129.03	70	IAMs_20	IAMs_20	15 05 11.9	
	comp=Z,690nm,20.0s						
J16K	Anvik River	129.10	9	IAMs_20	IAMs_20	14 53 32.0	
	comp=Z,1µm,22.0s						
GAMB	Gambell	129.11	3	IAMs_20	IAMs_20	14 55 10.1	
	comp=Z,1µm,21.0s						
I45A	Fountain	129.15	68	IAMs_20	IAMs_20	15 05 42.1	
	comp=Z,621nm,18.0s						
AGMN	Agassiz Nation	129.19	58	IAMs_20	IAMs_20	15 03 33.0	
	comp=Z,926nm,18.0s						
E38A	The Farm, Brul	129.31	63	IAMs_20	IAMs_20	14 55 57.3	
	comp=Z,896nm,19.0s						
J17K	VABM Dome	129.31	10	IAMs_20	IAMs_20	14 56 47.8	
	comp=Z,1µm,22.0s						
M24K	Tolsona, Glenn	129.34	18	IAMs_20	IAMs_20	14 59 51.8	
	comp=Z,1µm,19.0s						
PPLA	Purkeypile	129.42	14	IAMs_20	IAMs_20	14 52 20.8	
	comp=Z,2µm,22.0s						
J18K	Innoko River	129.56	11	IAMs_20	IAMs_20	14 53 16.5	
	comp=Z,1µm,21.0s						
SSPA	Standing Stone	129.60	78	IAMs_20	IAMs_20	15 07 14.8	
	comp=Z,865nm,20.0s						
I17K	Unalakleet	129.69	9	IAMs_20	IAMs_20	15 00 55.7	
	comp=Z,1µm,19.0s						
K20K	Telida	129.69	13	IAMs_20	IAMs_20	14 58 58.8	
	comp=Z,1µm,19.0s						
COWI	Conover	129.79	65	IAMs_20	IAMs_20	14 56 37.9	
	comp=Z,721nm,19.0s						
CAST	Castle Rocks	129.94	14	IAMs_20	IAMs_20	14 52 48.5	
	comp=Z,2µm,22.0s						
DHY	Denali Highway	130.13	17	IAMs_20	IAMs_20	15 00 18.6	
	comp=Z,1µm,19.0s						
J19K	Poorman	130.18	12	IAMs_20	IAMs_20	14 53 12.7	
	comp=Z,2µm,22.0s						
N58A	Sunbury	130.25	78	IAMs_20	IAMs_20	15 07 23.0	
	comp=Z,684nm,20.0s						
RND	Reindeer	130.28	16	IAMs_20	IAMs_20	14 58 51.4	
	comp=Z,1µm,19.0s						
I49A	Point Hope	130.40	71	IAMs_20	IAMs_20	15 06 30.2	
	comp=Z,664nm,19.0s						
GLMI	Grayling	130.44	69	IAMs_20	IAMs_20	15 06 35.3	
	comp=Z,774nm,18.0s						
EYMN	Ely	130.46	62	IAMs_20	IAMs_20	14 55 27.8	
	comp=Z,1µm,20.0s						
J20K	Nowinta River	130.49	13	IAMs_20	IAMs_20	15 00 20.9	
	comp=Z,1µm,20.0s						
M57A	Sunshine Farm,	130.50	78	IAMs_20	IAMs_20	15 07 28.7	
	comp=Z,708nm,20.0s						
MCK	McKinley	130.58	16	IAMs_20	IAMs_20	14 59 11.6	
	comp=Z,1µm,20.0s						
H17K	Granite Mounta	130.78	9	IAMs_20	IAMs_20	15 01 48.6	
	comp=Z,1µm,19.0s						
ULM	Lac du Bonnet	130.84	57	PKP	PKiKP	14 06 59.0	0.0
	comp=Z,1.4nm,0.6s,baz=254,slow=1.8,SNR=3.4						
ULM	Lac du Bonnet	130.84	57	⇑*i*PKIKP	PKiKP	14 07 00.6	+1.6
L27K	Beaver Creek,	130.84	20	IAMs_20	IAMs_20	14 55 58.7	
	comp=Z,2µm,20.0s						
L56A	Greenwood	131.00	77	IAMs_20	IAMs_20	15 08 12.8	
	comp=Z,712nm,20.0s						
TNA	Tin City	131.00	5	IAMs_20	IAMs_20	14 53 41.1	
	comp=Z,1µm,22.0s						
K24K	Donnelly Dome	131.03	17	IAMs_20	IAMs_20	14 58 06.4	
	comp=Z,1µm,20.0s						
I20K	Naaghedeneel	131.07	12	IAMs_20	IAMs_20	14 53 52.2	
	comp=Z,1µm,22.0s						
G16K	Koyuk River	131.09	8	IAMs_20	IAMs_20	14 56 37.5	
	comp=Z,1µm,21.0s						
DOT	Dot Lake	131.10	19	IAMs_20	IAMs_20	15 01 06.3	
	comp=Z,1µm,19.0s						
H18K	Honhosa River	131.10	10	IAMs_20	IAMs_20	14 54 57.1	
	comp=Z,1µm,22.0s						
WMQ	Urumqi	131.15	287	*e*PKP	PKiKP	14 07 00.5	+0.5
F15K	North Star Dit	131.28	6	IAMs_20	IAMs_20	14 57 49.6	
	comp=Z,1µm,20.0s						
NEA2	Nenana	131.40	15	IAMs_20	IAMs_20	15 00 25.3	
	comp=Z,1µm,20.0s						
SCRK	Sand Creek	131.42	18	IAMs_20	IAMs_20	15 01 24.9	
	comp=Z,1µm,18.0s						
HDA	Harding Lake	131.47	17	IAMs_20	IAMs_20	14 59 09.0	
	comp=Z,1µm,20.0s						
H19K	Roundabout Mou	131.62	11	IAMs_20	IAMs_20	14 54 28.8	
	comp=Z,1µm,21.0s						
N62A	Caumsett State	131.65	81	IAMs_20	IAMs_20	15 09 48.1	
	comp=Z,853nm,20.0s						
MLY	Manley	131.65	14	IAMs_20	IAMs_20	15 07 49.8	
	comp=Z,1µm,18.0s						
COLA	College	131.81	16	IAMs_20	IAMs_20	15 00 17.1	
	comp=Z,1µm,19.0s						
COLA	College	131.81	16	*d* *i*PKIKP	PKiKP	14 07 01.7	+1.2
G18K	Tagagawik	131.82	10	IAMs_20	IAMs_20	15 01 46.0	
	comp=Z,1µm,19.0s						
ILAR	Eielson Array	131.83	17	PKP	PKPdf	14 06 59.1	-0.4
	comp=Z,5.0nm,0.8s,baz=230,slow=3.0,SNR=26						
E46A	Sault Ste Mari	131.85	68	IAMs_20	IAMs_20	15 17 25.5	
	comp=Z,670nm,19.0s						
J26L	Joseph Creek	131.98	18	IAMs_20	IAMs_20	15 02 00.7	
	comp=Z,1µm,18.0s						
H21K	Melozitna Rive	132.06	13	IAMs_20	IAMs_20	15 07 24.6	
	comp=Z,1µm,18.0s						
POKR	Poker Plat Res	132.10	16	IAMs_20	IAMs_20	15 03 18.6	
	comp=Z,1µm,19.0s						
G19K	Purcell Mounta	132.18	11	IAMs_20	IAMs_20	14 55 18.5	
	comp=Z,1µm,22.0s						
F17K	Baldwin Pennin	132.19	8	IAMs_20	IAMs_20	14 56 30.8	
	comp=Z,1µm,21.0s						
M63A	Gales Ferry	132.63	82	IAMs_20	IAMs_20	15 17 57.1	
	comp=Z,710nm,19.0s						
J29N	Klondike Camp	132.69	21	IAMs_20	IAMs_20	14 53 42.6	
	comp=Z,2µm,21.0s						
I26K	Coal Creek Min	132.81	18	IAMs_20	IAMs_20	14 59 12.4	
	comp=Z,1µm,19.0s						
F19K	Shaleruckik Mo	132.81	10	IAMs_20	IAMs_20	15 02 27.1	
	comp=Z,1µm,19.0s						
G21K	Allakaket	132.84	12	IAMs_20	IAMs_20	14 59 10.0	
	comp=Z,1µm,21.0s						
F20K	Avaraart Lake	133.18	11	IAMs_20	IAMs_20	14 57 30.9	
	comp=Z,2µm,21.0s						
E18K	Tukpahlearik C	133.20	8	IAMs_20	IAMs_20	14 57 44.5	
	comp=Z,1µm,21.0s						
L61B	Northampton	133.25	81	IAMs_20	IAMs_20	15 11 14.3	
	comp=Z,803nm,20.0s						
M65A	Busby, Falmout	133.34	83	IAMs_20	IAMs_20	15 07 09.8	
	comp=Z,671nm,19.0s						
G23K	Bananza Creek	133.36	14	IAMs_20	IAMs_20	15 05 37.9	
	comp=Z,1µm,18.0s						
E19K	Redstone River	133.46	10	IAMs_20	IAMs_20	14 56 10.5	
	comp=Z,1µm,22.0s						
I29M	Ogilvie Camp,	133.53	21	IAMs_20	IAMs_20	14 55 08.8	
	comp=Z,1µm,20.0s						
L64A	Middleborough	133.57	83	IAMs_20	IAMs_20	15 10 32.0	
	comp=Z,1µm,20.0s						
K62A	Royalston	133.61	81	IAMs_20	IAMs_20	15 17 20.9	
	comp=Z,925nm,19.0s						
RDOG	Red Dog Mine	133.71	7	IAMs_20	IAMs_20	14 59 57.7	
	comp=Z,1µm,20.0s						
WES	Weston	133.75	82	IAMs_20	IAMs_20	15 17 38.6	
	comp=Z,829nm,19.0s						
FYU	Fort Yukon	133.75	17	IAMs_20	IAMs_20	15 04 01.3	
	comp=Z,1µm,19.0s						
HRV	Adam Dziewonsk	133.75	82	IAMs_20	IAMs_20	15 11 38.7	
	comp=Z,853nm,20.0s						
C16K	Lisburne Hills	133.81	6	IAMs_20	IAMs_20	14 55 08.5	
	comp=Z,2µm,22.0s						
COLD	Coldfoot	133.84	14	IAMs_20	IAMs_20	14 58 44.7	
	comp=Z,1µm,21.0s						
LONY	Lake Ozonia	134.26	77	IAMs_20	IAMs_20	15 00 50.3	
	comp=Z,646nm,19.0s						
H29M	Whitestone	134.33	20	IAMs_20	IAMs_20	15 01 40.8	
	comp=Z,1µm,19.0s						
D19K	Kuna River	134.43	9	IAMs_20	IAMs_20	14 57 12.9	
	comp=Z,2µm,22.0s						
G27K	Doyon Strip	134.43	18	IAMs_20	IAMs_20	15 00 14.4	
	comp=Z,1µm,19.0s						
HNH	Hanover	134.45	80	IAMs_20	IAMs_20	14 57 04.1	
	comp=Z,680nm,21.0s						
E22K	Anaktuvuk Pass	134.57	13	IAMs_20	IAMs_20	14 56 15.9	
	comp=Z,2µm,22.0s						
E21K	Killik River	134.69	11	IAMs_20	IAMs_20	15 01 24.8	
	comp=Z,1µm,20.0s						
E23K	Chandalar	134.71	14	IAMs_20	IAMs_20	15 07 05.5	
	comp=Z,1µm,19.0s						
EPYK	Eagle Plains	134.72	21	IAMs_20	IAMs_20	15 07 36.0	
	comp=Z,1µm,18.0s						
D20K	Etivluk River	134.75	10	IAMs_20	IAMs_20	14 57 14.4	
	comp=Z,1µm,21.0s						
VT1	Waterbury	134.77	79	IAMs_20	IAMs_20	15 16 51.5	
	comp=Z,630nm,19.0s						
I62A	Tamworth	134.97	81	IAMs_20	IAMs_20	14 58 54.1	
	comp=Z,657nm,20.0s						
G29M	Pine Creek	135.03	20	IAMs_20	IAMs_20	15 03 15.3	
	comp=Z,1µm,19.0s						
LBNH	Lisbon	135.03	80	IAMs_20	IAMs_20	14 57 10.7	
	comp=Z,704nm,21.0s						
E25K	Arctic Village	135.20	16	IAMs_20	IAMs_20	14 58 13.6	
	comp=Z,1µm,20.0s						
D22K	Ayikyak River	135.22	12	IAMs_20	IAMs_20	15 01 45.1	
	comp=Z,1µm,20.0s						
TOLK	Toolik Lake Re	135.28	14	IAMs_20	IAMs_20	15 00 54.6	
	comp=Z,1µm,20.0s						
I63A	Otisfield	135.43	81	IAMs_20	IAMs_20	14 59 52.1	
	comp=Z,711nm,20.0s						
D23K	Nanushuk River	135.49	13	IAMs_20	IAMs_20	14 59 42.1	
	comp=Z,1µm,20.0s						
YKA	Yellowknife Ar	135.61	36	PKP	PKPdf	14 07 06.3	-0.4
	comp=Z,2.6nm,1.0s,baz=223,slow=1.9,SNR=3.6						
H62A	Milan	135.62	80	IAMs_20	IAMs_20	14 59 33.3	
	comp=Z,721nm,20.0s						
E27K	Coleen River	135.74	18	IAMs_20	IAMs_20	15 03 28.0	
	comp=Z,1µm,20.0s						
MK31	Makanchi Array	135.75	285	⇑*i*PKIKP	PKiKP	14 07 12.0	+2.8
MKAR	Makanchi Array	135.75	285	PP	PP	14 09 44.9	-1.8
	comp=Z,0.8nm,0.8s,baz=130,slow=8.5,SNR=3.6						
B21K	Ikpikpuk River	135.79	11	IAMs_20	IAMs_20	14 57 25.0	
	comp=Z,1µm,21.0s						
D24K	Happy Valley	135.85	14	IAMs_20	IAMs_20	15 01 00.6	
	comp=Z,1µm,22.0s						
F30M	Barrier River	136.01	21	IAMs_20	IAMs_20	15 02 47.2	
	comp=Z,1µm,18.0s						
WVL	Waterville	136.23	81	IAMs_20	IAMs_20	15 00 34.3	
	comp=Z,700nm,20.0s						
C24K	Franklin Bluff	136.41	14	IAMs_20	IAMs_20	15 02 01.4	
	comp=Z,1µm,20.0s						
G62A	West of Eustis	136.41	80	IAMs_20	IAMs_20	15 00 16.0	
	comp=Z,736nm,20.0s						
E29M	Blow River	136.43	20	IAMs_20	IAMs_20	15 00 40.1	
	comp=Z,1µm,19.0s						
B22K	Teshekpuk Lake	136.59	11	IAMs_20	IAMs_20	14 57 51.1	
	comp=Z,1µm,21.0s						
C27K	Jago River	136.85	16	IAMs_20	IAMs_20	15 06 01.2	
	comp=Z,1µm,19.0s						
PKME	Peaks-Kenny Pk	136.95	81	IAMs_20	IAMs_20	15 19 21.4	
	comp=Z,658nm,18.0s						
TAM	Tamanrasset	137.20	183	IAMs_20	IAMs_20	15 07 50.5	
	comp=Z,1µm,20.0s						
EMMW	East Machias	137.25	83	IAMs_20	IAMs_20	15 01 10.4	

	comp=Z,797nm,20.0s						
G65A	**Princeton**	**137.61**	**83**	IAMs_20	IAMs_20	15 12 23.8	
	comp=Z,752nm,20.0s						
F64A	**Sherman**	**137.82**	**81**	IAMs_20	IAMs_20	15 01 58.5	
	comp=Z,734nm,20.0s						
D62A	**Allapoint, All**	**138.52**	**80**	IAMs_20	IAMs_20	15 13 01.9	
	comp=Z,631nm,19.0s						
KURBB	**Kurchatov Arra**	**140.31**	**286**	PKhKP	PKPpre	14 07 10.3	
	comp=Z,1.5nm,0.8s,baz=142,slow=2.2,SNR=5.8						
KURBB				PP	**PP**	**14 10 15.7**	**+0.8**
	comp=Z,0.5nm,0.8s,baz=147,slow=5.2,SNR=5.2						
KURK	**Kurchatov**	**140.35**	**286**	⇑*e*PKIKP	**PKPdf**	**14 07 15.3**	**-0.5**
ZALV	**Zalesovo Beam**	**140.42**	**294**	PKP	**PKPdf**	**14 07 14.8**	**-1.0**
	comp=Z,0.7nm,0.6s,baz=160,slow=4.6,SNR=2.2						
TIXI	**Tiksi**	**141.86**	**335**	⇑*e*PKIKP	**PKiKP**	**14 07 20.5**	**-0.3**
BLKN	**Baker Lake**	**142.07**	**44**		PKPpre	14 07 14.1	
CSS	**Mathiatis**	**144.59**	**225**	IAMs_20	IAMs_20	15 17 38.9	
	comp=Z,1μm,20.0s						
PMOZ	**Porto Moniz, M**	**144.89**	**149**	*e*PKPdf	**PKiKP**	**14 07 32.1**	**+3.7**
SCHQ	**Schefferville**	**145.36**	**73**	PKPbc	**PKPbc**	**14 07 23.0**	**-1.5**
	comp=Z,16nm,0.9s,baz=202,slow=0.9,SNR=14						
BVAR	**Borovoye Array**	**145.43**	**282**	PKPbc	**PKPdf**	**14 07 23.5**	**-1.2**
	comp=Z,9.2nm,1.0s,baz=134,slow=4.3,SNR=19						
AKT	**Akhty**	**145.48**	**248**	*e*PKIKP	**PKPdf**	**14 07 25.1**	**-0.3**
AKT				*e*PPP	PPP	14 13 55.9	
AKT				*e*		14 14 35.1	
AKT				pmax	pmax		
	comp=Z,17nm,0.7s						
BRVK	**Borovoye**	**145.49**	**282**	*de*PKIKP	**PKPdf**	**14 07 23.8**	**-1.0**
MAK	**Makhachkala**	**146.83**	**249**	*c i*PKHKP	PKPpre	14 07 23.7	
MAK				*e*		14 10 56.9	
MAK				*e*SS	SS	14 29 48.3	-4.9
MAK				*e*SSS	SSS	14 35 17.6	
MAK				pmax	pmax		
	comp=Z,70nm,0.8s						
ABKAR	**Akbulak array**	**146.89**	**268**	PKPdf	**PKPdf**	**14 07 28.2**	**+0.8**
BRTR	**Keskin Array B**	**148.89**	**229**	PKPbc	**PKPbc**	**14 07 34.0**	**-1.2**
	comp=Z,7.9nm,1.0s,baz=158,slow=4.5,SNR=16						
KBZ	**Khabaz**	**149.24**	**244**	PKPbc	**PKPbc**	**14 07 35.7**	**0.0**
	comp=Z,5.4nm,0.9s,baz=252,slow=1.8,SNR=7.4						
KIV	**Kislovodsk**	**149.52**	**244**	*e*PKIKP	**PKPdf**	**14 07 34.0**	**+2.0**
KIV				pmax	pmax		
	comp=Z,31nm,1.1s						
KEST	**Kesra**	**149.91**	**190**	PKPbc	**PKPbc**	**14 07 35.9**	**-1.9**
	comp=Z,13nm,1.1s,baz=189,slow=3.1,SNR=5.0						
MORF	**Marmelete**	**150.80**	**160**	*e*PKPdf	**PKPdf**	**14 07 34.5**	**+0.4**
MORF				*e*PKPab	**PKPab**	**14 07 46.4**	**-0.5**
MORF				IAMs_20	IAMs_20	15 11 10.4	
	comp=Z,3μm,29.4s						
MORF	**Marmelete**	**150.80**	**160**	*e*PKPdf	**PKPdf**	**14 07 34.3**	**+0.1**
MORF				*e*PKPab	**pPKPab**	**14 07 48.8**	**-0.7**
MORF	**Marmelete**	**150.80**	**160**	*e*PKIKP	**PKPab**	**14 07 46.4**	**-0.5**
LABN	**Labinsk**	**150.83**	**242**	*i* PKIKP	**PKPab**	**14 07 44.9**	**-1.9**
LABN				pmax	pmax		
	comp=Z,32nm,0.6s						
PBDV	**Barranco-do-Ve**	**150.84**	**161**	*e*PKPdf	**PKPdf**	**14 07 36.4**	**+2.2**
PTEO	**Sao Teotonio**	**151.02**	**160**	*e*PKPab	**PKPab**	**14 07 47.8**	**0.0**
PVAQ	**Vaqueiros**	**151.02**	**161**	*e*PKPab	**PKPab**	**14 07 49.1**	**+1.4**
PVAQ				*e*LR	LR	14 59 09.2	
PVAQ				*i* AMs_20		15 15 00.4	
	comp=Z,935nm,18.0s						
PCVE	**Castro Verde**	**151.20**	**161**	*e*PKPab	**PKPab**	**14 07 52.0**	**+3.4**
MESJ	**Messejana**	**151.38**	**160**	*e*PKPdf	**PKPbc**	**14 07 38.9**	**-2.1**
PBEJ	**Beja**	**151.62**	**161**	*e*PKPdf	**PKiKP**	**14 07 41.9**	**0.0**
PBEJ				*e*PKPab	**sPKPab**	**14 07 54.8**	**+1.1**
ERBR	**Yeremizino-Bor**	**151.84**	**243**	*i* PKIKP	**PKiKP**	**14 07 45.3**	**+3.1**
ERBR				pmax	pmax		
	comp=Z,28nm,0.5s						
CART	**Cartagena**	**151.84**	**172**	IAMs_20	IAMs_20	15 13 43.7	
	comp=Z,1μm,20.0s						
PBAR	**Barrancos**	**151.87**	**162**	*e*PKPdf	**PKiKP**	**14 07 43.8**	**+1.3**
PBAR				*e*PKPab	**PKPab**	**14 07 51.8**	**+0.6**
ANN	**Anapa**	**152.16**	**238**	*i* PKIKP	**PKPdf**	**14 07 36.5**	**+0.7**
ANN				pmax	pmax		
	comp=Z,29nm,0.9s						
PESTR	**Estremoz**	**152.48**	**161**	*e*PKPab	**PKPab**	**14 07 55.0**	**+1.1**
PMTG	**Montargil**	**152.59**	**160**	*e*PKPdf	**PKiKP**	**14 07 45.0**	**+1.1**
PMTG				*e*PKPab	**sPKPab**	**14 07 57.3**	**-0.5**
ARTI	**Arti**	**152.73**	**277**	*i* PKIKP	**PKPab**	**14 07 49.1**	**-5.3**
PMRV	**Marv??o**	**153.06**	**161**	*e*PKPab	**PKPab**	**14 07 58.0**	**+1.7**
PMRV				*e*LR	LR	15 00 01.1	
PMRV				*i* AMs_20		15 11 49.0	
	comp=Z,848nm,20.0s						
PAB	**San Pablo**	**153.53**	**166**	IAMs_20	IAMs_20	15 23 29.8	
	comp=Z,1μm,18.0s						
ESDC	**Sonseca Array**	**153.69**	**167**	PKP	**PKPdf**	**14 07 38.9**	**+0.5**
	comp=Z,1.6nm,1.0s,baz=157,slow=0.7,SNR=9.4						
MTE	**Manteigas**	**153.99**	**161**	*e*PKPdf	**PKPdf**	**14 07 31.6**	**-7.2**
MTE				*e*SS	SS	14 32 06.4	+54
MTE				*e*LR	LR	15 00 21.2	
MTE				*i* AMs_20		15 15 54.3	
	comp=Z,1μm,18.0s						
TIR	**Tirane**	**154.01**	**209**	IAMs_20	IAMs_20	15 17 12.2	
	comp=Z,1μm,22.0s						
PVIS	**Viseu**	**154.25**	**160**	*e*PKPdf	**PKiKP**	**14 07 48.0**	**+0.6**
MVO	**Moncorvo**	**154.81**	**161**	*e*SS	SS	14 32 20.8	+60
MVO				*e*LR	LR	15 00 57.9	
MVO				*i* AMs_20		15 18 07.7	
	comp=Z,971nm,18.0s						
PDG	**Podgorica**	**155.17**	**209**	IAMs_20	IAMs_20	15 24 24.0	
	comp=Z,1μm,20.0s						
PGAV	**Gavieira, Arco**	**155.42**	**159**	*e*LR	LR	15 00 45.3	
PGAV				*i* AMs_20		15 18 31.5	
	comp=Z,2μm,18.0s						
IVI	**Ivigtut**	**157.02**	**77**	IAMs_20	IAMs_20	15 10 24.1	
	comp=Z,946nm,21.0s						
NRS	**Narsarsuaq**	**158.11**	**79**	IAMs_20	IAMs_20	15 31 31.0	
	comp=Z,1μm,21.0s						
AKASG	**Malin Array Be**	**160.06**	**234**	PKPab	**PKPab**	**14 08 25.7**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=147,slow=3.2,SNR=7.8						
ABTA	**Abfaltersbach**	**160.50**	**199**	*i* PKP	**PKPab**	**14 08 29.9**	**+1.7**
	comp=Z,5.8nm,1.0s						
FETA	**Feichten**	**160.99**	**195**	*i* PKP	**PKPab**	**14 08 31.6**	**+1.2**
	comp=Z,6.8nm,0.8s						
VYHS	**Vyhne**	**161.04**	**213**	*e*PKP	**PKPab**	**14 08 31.7**	**+1.3**
WTTA	**Wattenberg**	**161.12**	**197**	*i* PKP	**PKPab**	**14 08 32.1**	**+1.1**
	comp=Z,4.2nm,0.6s						
LESA	**Schwarzleotal**	**161.14**	**200**	*i* PKP	**PKPab**	**14 08 32.6**	**+1.6**
	comp=Z,5.4nm,1.0s						
WATA	**Walderalm**	**161.20**	**197**	*i* PKP	**PKPab**	**14 08 31.3**	**0.0**
	comp=Z,3.5nm,0.7s						
BIOA	**Bad Ischl, Aus**	**161.26**	**202**	*i* PKP	**PKPab**	**14 08 31.0**	**-0.4**
	comp=Z,7.0nm,1.0s						
MOTA	**Moosalm**	**161.27**	**196**	*i* PKP	**PKPab**	**14 08 30.2**	**-1.4**
	comp=Z,3.6nm,0.8s						
MOA	**Molln**	**161.32**	**203**	*e*PKP	**PKPab**	**14 08 31.9**	**+0.3**
	comp=Z,6.0nm,0.8s						
RETA	**Reutte**	**161.44**	**196**	*i* PKP	**PKPab**	**14 08 31.9**	**-0.4**
	comp=Z,6.8nm,0.9s						
LANS	**Liptovska Anna**	**161.51**	**215**	*e*PKP2	**PKPab**	**14 08 35.1**	**+2.6**
LANS	**Liptovska Anna**	**161.51**	**215**	*e*PKP	**PKPab**	**14 08 35.1**	**+2.6**
KRUC	**Moravsky**	**162.10**	**209**	*e*PKP	**PKPab**	**14 08 35.3**	**+0.3**
VRAC	**Vranov**	**162.29**	**209**	*e*PKP	**PKPab**	**14 08 35.9**	**0.0**
MORC	**Moravsky Berou**	**162.54**	**212**	*e*PKP	**PKPab**	**14 08 36.8**	**-0.2**
BMRD	**Maredsous**	**164.66**	**183**	*d*PKP	**PKPab**	**14 08 47.3**	**+1.1**
CLL	**Collm**	**164.87**	**203**	*e*PKIKP	**PKPdf**	**14 07 54.0**	**+3.2**
CLL				*e*		14 08 47.0	
CLL	**Collm**	**164.87**	**203**	*e*PKPdf	**PKPdf**	**14 07 54.0**	**+3.2**
CLL				*e*PKPab	**PKPab**	**14 08 47.0**	**-0.1**
SOEG	**Soedalen**	**166.18**	**63**	*e*	**PKPab**	**14 08 57.4**	**+4.8**
EKA	**Eskdalemuir Ar**	**169.21**	**159**	PKPab	**PKPab**	**14 09 07.5**	**+1.3**
	comp=Z,2.3nm,0.8s,baz=176,slow=3.3,SNR=3.7						
ARCES	**ARCESS Array B**	**170.73**	**305**	PKPab	**PKPab**	**14 09 12.6**	**-0.1**
	comp=Z,3.9nm,0.8s,baz=66,slow=5.0,SNR=4.0						

MEX ***17*** *13:52:32.7±0.4, 29.°85N×114.°06W, h3^{km}±3^{km}, MD4.2*
ECX ***17*** *13:52:34.0±0.3, 29.°86N×114.°08W, h3^{km}±5^{km}, ML3.7*
ISC 17 13:52:31.9±1.3**, 29.°90N**±0.°06×**114.°04W**±0.°08**,**
h13^{km}±14^{km}**, n12, σ0.^{s}97**/20**, 4C-3D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAHB	**Baha de los**	**1.04**	**156**	⇓*e*P	**Pb**	**13 52 51.8**	**0.0**
BAHB				*e*S	**Sb**	**13 53 05.5**	**+0.3**
BAHB	**Baha de los**	**1.04**	**156**	*e*P	**Pb**	**13 52 51.8**	**0.0**
BAHB				*e*S	**Sg**	**13 53 05.8**	**+0.3**
SFX	**San Felipe**	**1.33**	**329**	⇓*i*P	**Pg**	**13 52 57.2**	**-0.3**
SFX				*e*S	**Sg**	**13 53 15.8**	**+0.9**
SFX				IAML		13 53 20.8	
	comp=E,696nm,0.7s						
SFX				IAML		13 53 28.2	
	comp=N,648nm,0.5s						
SFX				⇑*e*		13 53 28.2	
SPIG	**San Pedro Mart**	**1.68**	**313**	*e*P	**Pb**	**13 53 02.6**	**-0.3**
SPIG				*e*S	**Sg**	**13 53 25.3**	**-0.6**
SPIG				IAML		13 53 30.3	
	comp=E,492nm,0.8s						
SPIG				⇓*e*		13 53 30.3	
SPIG				⇑*e*		13 53 35.4	
SPIG				IAML		13 53 35.4	
	comp=N,350nm,0.9s						
SPIG	**San Pedro Mart**	**1.68**	**313**	*e*P	**Pb**	**13 53 02.6**	**-0.3**
SPIG				*e*S	**Sg**	**13 53 26.2**	**+0.2**
SQX	**San Quintin**	**1.72**	**294**	⇑*e*P	**Pb**	**13 53 03.1**	**-0.3**
SQX				*e*S	**Sg**	**13 53 26.5**	**-0.9**
SQX				IAML		13 53 29.6	
	comp=N,1μm,0.6s						
SQX				⇑*e*		13 53 29.9	
SQX				IAML		13 53 29.9	
	comp=E,1μm,0.4s						
ECBX	**El Chinero**	**1.79**	**331**	*e*P	**Pn**	**13 53 03.4**	**+0.8**
ECBX				*e*S	**Sb**	**13 53 27.4**	**+0.3**
HSIG		**2.84**	**107**	*e*P	**Pn**	**13 53 15.4**	**-1.5**
HSIG				*e*S	**Sn**	**13 53 49.8**	**-1.2**
SRIG	**Santa Rosalia**	**3.02**	**148**	*i* P	Pn	13 53 14.0	-5.4
SRIG				*e*S	**Sb**	**13 54 02.4**	**+0.1**
GUYB	**Guaymas**	**3.42**	**125**	*e*P	**Pn**	**13 53 27.0**	**+2.1**
TUC	**Tucson**	**3.69**	**48**	*e*P	**Pn**	**13 53 30.4**	**+1.7**
NZIG	**Nacozari, Sono**	**3.92**	**82**	*i* P	**Pn**	**13 53 31.2**	**-0.8**

SNET ***17*** *14:07:59.2±1.1, 13.°11N×89.°84W, h54^{km}±16^{km}, ML3.1*
CATAC ***17*** *14:07:59.2±0.6, 13°N±3°×9°0W±°, h23^{km}±3^{km}, M3.5/19, MLv3.5/19, Error ellipse: s-maj=6.5km s-min=3.9km az=17.2, confirmed*
GCG ***17*** *14:08:01.4±0.8, 13.°28N×89.°86W, h41^{km}±28^{km}, MD3.7, ML3.4*
ISC 17 14:08:01.0±1.7**, 13.°13N**±0.°07×**89.°75W**±0.°04**, h25**^{km}±12^{km}**,**
n59, σ1.^{s}01/70**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.55**	**50**	*i* P	**Pn**	**14 08 12.8**	**-0.4**
LALI				*i* S	**Sb**	**14 08 21.3**	**+1.7**
LALI				IAML		14 08 23.0	
	comp=N,488nm,0.1s						
LALI	**Alcalda de L**	**0.55**	**50**	S	**Sb**	**14 08 20.8**	**+1.2**
LALI	**Alcalda de L**	**0.55**	**50**	P	**Pb**	**14 08 12.1**	**0.0**
JAYA	**Jayaque - finc**	**0.60**	**30**	*e*P	**Pb**	**14 08 13.0**	**0.0**
JAYA				*e*S	**Sn**	**14 08 23.4**	**+0.4**
JAYA	**Jayaque - finc**	**0.60**	**30**	*i* P	**Pb**	**14 08 13.0**	**0.0**
JAYA				*i* S	**Sb**	**14 08 21.4**	**+0.3**
JAYA	**Jayaque - finc**	**0.60**	**30**	P	**Pb**	**14 08 13.1**	**0.0**
JAYA	**Jayaque - finc**	**0.60**	**30**	S	**Sb**	**14 08 22.5**	**+1.3**
CEVE	**Cerro Verde**	**0.70**	**10**	*e*P	**Pb**	**14 08 14.2**	**-0.6**
CEVE				*e*S	**Sn**	**14 08 26.7**	**+0.9**
CEVE	**Cerro Verde**	**0.70**	**10**	S	**Sb**	**14 08 25.2**	**+1.0**
CEVE	**Cerro Verde**	**0.70**	**10**	P	**Pb**	**14 08 14.3**	**-0.6**
PMON	**Piamonte**	**0.72**	**37**	*e*P	**Pb**	**14 08 15.0**	**+0.1**
PMON	**Piamonte**	**0.72**	**37**	P	**Pn**	**14 08 15.1**	**-0.5**
PMON	**Piamonte**	**0.72**	**37**	S	**Sb**	**14 08 26.0**	**+1.5**
PANCS	**Alcalda de**	**0.73**	**50**	P	**Pb**	**14 08 15.0**	**-0.2**
PANCS	**Alcalda de**	**0.73**	**50**	S	**Sb**	**14 08 25.2**	**+0.3**
FAME	**Alcaldia de Sa**	**0.75**	**340**	P	**Pb**	**14 08 13.9**	**-1.6**
CEDA	**San Andres**	**0.75**	**28**	*e*S	**Sb**	**14 08 27.0**	**+1.6**
CEDA				IAML		14 08 32.7	
	comp=Z,758nm,0.3s						
BOQS	**Boqueron**	**0.76**	**38**	*e*P	**Pb**	**14 08 15.5**	**-0.2**
LOMA	**Loma Larga**	**0.76**	**48**	*e*P	**Pb**	**14 08 15.1**	**-0.6**
LOMA				*e*S	**Sb**	**14 08 27.1**	**+1.3**
LOMA	**Loma Larga**	**0.76**	**48**	P	**Pb**	**14 08 15.4**	**-0.3**
LOMA	**Loma Larga**	**0.76**	**48**	S	**Sb**	**14 08 26.8**	**+1.0**
NUBE	**Las Nubes**	**0.77**	**358**	*e*P	**Pb**	**14 08 14.6**	**-1.2**
NUBE				*e*S	**Sb**	**14 08 25.9**	**-0.1**
NUBE	**Las Nubes**	**0.77**	**358**	*i* P	**Pb**	**14 08 14.4**	**-1.5**
NUBE				*i* S	**Sb**	**14 08 24.9**	**-1.1**
NUBE	**Las Nubes**	**0.77**	**358**	P	**Pb**	**14 08 14.7**	**-1.2**
UEES	**Universidad Ev**	**0.77**	**41**	P	**Pb**	**14 08 15.4**	**-0.4**
UEES	**Universidad Ev**	**0.77**	**41**	S	**Sb**	**14 08 27.0**	**+1.1**
PIC2	**El Picacho**	**0.78**	**38**	*e*P	**Pb**	**14 08 15.8**	**-0.3**
IGN	**Direccin Gen**	**0.81**	**44**	P	**Pb**	**14 08 16.3**	**-0.2**
IGN	**Direccin Gen**	**0.81**	**44**	S	**Sb**	**14 08 27.7**	**+0.6**
UDBS	**Universidad Do**	**0.82**	**45**	P	**Pb**	**14 08 16.4**	**-0.3**
UDBS	**Universidad Do**	**0.82**	**45**	S	**Sb**	**14 08 28.1**	**+0.7**
LFRS	**El Faro**	**0.83**	**54**	*e*P	**Pb**	**14 08 15.9**	**-1.0**
LOAL	**Lomas de Alarc**	**0.86**	**358**	*e*S	**Sb**	**14 08 28.9**	**+0.3**
LOAL	**Lomas de Alarc**	**0.86**	**358**	P	**Pb**	**14 08 16.2**	**-1.2**
LOAL	**Lomas de Alarc**	**0.86**	**358**	S	**Sb**	**14 08 29.0**	**+0.5**
UNIC	**Universidad Ca**	**0.87**	**13**	P	**Pb**	**14 08 16.4**	**-1.1**
UNIC	**Universidad Ca**	**0.87**	**13**	S	**Sb**	**14 08 28.9**	**+0.2**
LFU	**La Fuente**	**0.87**	**45**	*e*P	**Pb**	**14 08 16.9**	**-0.7**
PAVA	**Las Pavas**	**0.98**	**54**	*e*P	**Pn**	**14 08 18.9**	**-0.4**
PAVA				*e*S	**Sn**	**14 08 33.7**	**+1.2**
PAVA	**Las Pavas**	**0.98**	**54**	P	**Pn**	**14 08 18.4**	**-0.9**
TECO	**Alcaldia de Te**	**1.03**	**67**	P	**Pn**	**14 08 18.7**	**-1.2**
TECO	**Alcaldia de Te**	**1.03**	**67**	S	**Sb**	**14 08 32.9**	**-0.4**
UESV	**Universidad de**	**1.06**	**62**	P	**Pn**	**14 08 19.7**	**-0.7**
UESV	**Universidad de**	**1.06**	**62**	S	**Sb**	**14 08 34.6**	**+0.3**
SCLA	**Alcaldia de Sa**	**1.15**	**60**	P	**Pn**	**14 08 21.2**	**-0.3**
SCLA	**Alcaldia de Sa**	**1.15**	**60**	S	**Sn**	**14 08 37.5**	**+1.0**
PQSS	**Presa 15 de Se**	**1.26**	**67**	P	**Pn**	**14 08 22.4**	**-0.6**
PQSS	**Presa 15 de Se**	**1.26**	**67**	S	**Sn**	**14 08 39.4**	**+0.3**
LLGN	**La Laguna**	**1.29**	**37**	P	**Pn**	**14 08 22.5**	**-1.1**
LLGN	**La Laguna**	**1.29**	**37**	S	**Sn**	**14 08 41.4**	**+1.4**
MTO3	**Montecristo**	**1.31**	**17**	*e*P	**Pn**	**14 08 22.6**	**-1.4**
MTO3				*e*S	**Sn**	**14 08 41.1**	**+0.2**
MTO3	**Montecristo**	**1.31**	**17**	*i* P	**Pn**	**14 08 22.6**	**-1.4**
MTO3	**Montecristo**	**1.31**	**17**	P	**Pn**	**14 08 22.1**	**-1.9**
FG16	**Alotenango, Sa**	**1.35**	**327**	*i* P	**Pb**	**14 08 26.5**	**+0.7**
FG16				IAML		14 08 56.1	
	comp=N,1μm,0.2s						
FG8	**Yepocapa, Chim**	**1.37**	**325**	*i* P	**Pb**	**14 08 27.3**	**+1.2**
FG8				*i* S	**Sb**	**14 08 46.1**	**+3.0**
LCND	**La Caada**	**1.82**	**84**	*e*P	**Pn**	**14 08 29.0**	**-1.8**
LCND				IAML		14 08 57.5	
	comp=Z,121nm,0.3s						
CNCH	**Conchagua**	**1.88**	**85**	P	**Pn**	**14 08 30.6**	**-1.0**
CNCH	**Conchagua**	**1.88**	**85**	S	**Sn**	**14 08 55.5**	**+0.9**
STG0	**El Palmar, Qui**	**2.01**	**310**	*i* P	**Pb**	**14 08 36.4**	**-0.6**
STG0				*i* S	**Sb**	**14 09 02.8**	**+1.1**
STG0				IAML		14 09 06.2	
	comp=E,340nm,0.1s						

IDC 17 14:36:06.9±2.3**, 31.°26S**×**177.°06W, h0**^{km}**, mb3.8**/2**,**
mbtmp3.8/3**, ML3.6**/1**, Error ellipse: s-maj=68.9km**
s-min=42.6km az=133.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.47**	**213**	Pn	Pn	14 38 10.2	-0.6
	0.7nm,0.3s,baz=354,slow=4.3,SNR=6.9						
URZ				Sn	Sn	14 39 43.3	-3.8
	1.1nm,0.3s,baz=176,slow=20,SNR=9.4						
	5.9nm,0.9s						
ASAR	**Alice Springs**	**43.87**	**267**	P	P	14 44 15.3	0.0
	0.4nm,0.5s,baz=106,slow=7.2,SNR=14						
ASAR				PcP	PcP	14 46 02.6	+0.9
	0.3nm,0.5s,baz=117,slow=3.9,SNR=4.2						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**44.94**	**273**	P	P	14 44 23.6	-0.3
	1.4nm,0.5s,baz=112,slow=8.0,SNR=17						
WRA				PcP	PcP	14 46 04.2	-1.2
	0.5nm,0.9s,baz=98,slow=3.6,SNR=2.7						
	1.4nm,0.5s						
FINES	**FINESS Array B**	**146.23**	**340**	PKPbc	PKPdf	14 55 47.6	+0.1
	1.1nm,0.3s,baz=43,slow=3.4,SNR=16						

FCIAR ***17*** *14:42:17.0, 79.°94N×18.°76E, h10^{km}, station OMEGA has station magnitude of 3.30 station ZFI2 has station magnitude of 3.50*
BER ***17*** *14:42:18.8±3.8, 80.°16N×20.°81E, h15^{km}±16^{km}, ML2.2, ML3.1(NAO), Confirmed Earthquake*
KOLA ***17*** *14:42:19.1, 79.°86N×20.°00E, h0^{km}, ML2.3, Error ellipse: s-maj=22.5km s-min=19.0km az=90.0, Spitsbergen*
ISC 17 14:42:18.5±1.6**, 79.°90N**±0.°05×**20.°03E**±0.°04**, h3**^{km}±11^{km}**,**
n21, σ1.^{s}12/47**, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.79**	**241**	Pn	**Pb**	**14 42 51.6**	**-0.2**
KBS				Pg	**Pg**	**14 42 53.3**	**+0.6**
KBS				Sn	**Sb**	**14 43 14.7**	**+0.2**
KBS	**Kingsbay**	**1.79**	**241**	P	**Pb**	**14 42 52.0**	**+0.2**
KBS				S	**Sn**	**14 43 12.5**	**-0.8**
KBS	**Kingsbay**	**1.79**	**241**	*e*P	**Pn**	**14 42 50.2**	**+0.1**
KBS				*e*Pg	**Pg**	**14 42 53.3**	**+0.6**
KBS				*e*S	**Sb**	**14 43 14.6**	**+0.1**
KBS				IAML		14 43 19.5	
	comp=Z,76nm,0.8s						
SPA0	**Spitsbergen Ar**	**1.87**	**204**	Pn	**Pn**	**14 42 51.5**	**+0.2**
	baz=24,slow=16						
SPA0				Pg	**Pg**	**14 42 54.5**	**+0.2**
	baz=24,slow=16						
SPA0				Sn	**Sg**	**14 43 19.1**	**+0.6**
	baz=17,slow=37						
SPA0	**Spitsbergen Ar**	**1.87**	**204**	*e*P	**Pb**	**14 42 53.8**	**+0.6**
SPA0				*e*S	**Sb**	**14 43 17.6**	**+0.6**
SPA0	**Spitsbergen Ar**	**1.87**	**204**	Pn	**Pn**	**14 42 51.5**	**+0.2**
	baz=24,slow=16						
SPA0				Pg	**Pg**	**14 42 54.5**	**+0.2**
	baz=24,slow=16						
SPA0				Sn	**Sg**	**14 43 19.1**	**+0.6**
	baz=17,slow=37						
SPA0				IAML		14 43 30.6	
	comp=Z,67nm,0.6s						
SPITS	**Spitsbergen Ar**	**1.87**	**204**	P	**Pn**	**14 42 51.4**	**+0.1**
SPITS				S	**Sn**	**14 43 15.8**	**+0.5**
BRBB	**Barentsburg B**	**2.14**	**214**	Pn	**Pn**	**14 42 55.0**	**+0.2**
BRBB				Sn	**Sb**	**14 43 23.7**	**-0.8**
BRBB	**Barentsburg B**	**2.14**	**214**	P	**Pn**	**14 42 54.9**	**0.0**
BRBB				S	**Sb**	**14 43 25.7**	**+1.2**
BRBB	**Barentsburg B**	**2.14**	**214**	*e*P	**Pn**	**14 42 55.1**	**+0.2**
BRBB				Sn	**Sb**	**14 43 23.7**	**-0.8**
BRBA	**Barentsburg A**	**2.17**	**214**	Pn	**Pn**	**14 42 55.6**	**+0.3**
BRBA				Sn	**Sb**	**14 43 26.9**	**+1.5**
BRBA	**Barentsburg A**	**2.17**	**214**	*e*P	**Pn**	**14 42 55.6**	**+0.3**
BRBA				Sn	**Sb**	**14 43 26.9**	**+1.5**
HSPB	**Hornsund (broa**	**3.06**	**199**	*e*P	**Pb**	**14 43 14.8**	**+1.5**
HSPB				*e*S	**Sg**	**14 43 54.6**	**-1.8**
HSPB	**Hornsund (broa**	**3.06**	**199**	*e*P	**Pb**	**14 43 10.6**	**-2.7**
HSPB				Pg	**Pg**	**14 43 14.5**	**-2.4**
HSPB				Sg	**Sg**	**14 43 56.4**	**-0.1**
HOPEN	**Hopen**	**3.56**	**161**	Pn	**Pn**	**14 43 15.4**	**+0.9**
HOPEN				Sn	**Sn**	**14 43 55.6**	**-1.3**
HOPEN				Sg	**Sb**	**14 44 09.5**	**+4.0**
HOPEN	**Hopen**	**3.56**	**161**	*e*P	**Pn**	**14 43 14.3**	**-0.2**
HOPEN				*e*S	**Sn**	**14 43 55.6**	**-1.3**
HOPEN	**Hopen**	**3.56**	**161**	*e*P	**Pn**	**14 43 15.5**	**+1.1**
HOPEN				Sn	**Sn**	**14 43 55.6**	**-1.3**
HOPEN				*e*Sg	**Sg**	**14 44 13.3**	**+0.6**
ZFI2	**Zemlya Franca-**	**4.70**	**66**	*e*P	**Pn**	**14 43 29.9**	**-0.1**
ZFI2				*e*S	**Sn**	**14 44 24.6**	**-0.3**
	comp=Z,31nm,0.7s						
OMEGA	**Omega**	**4.71**	**66**	*e*P	**Pn**	**14 43 29.9**	**-0.3**
OMEGA				*e*S	**Sn**	**14 44 24.6**	**-0.6**
	comp=Z,22nm,0.9s						
ARA0	**ARCESS Array S**	**10.52**	**169**	Pn	**Pn**	**14 44 49.5**	**-0.4**
	baz=358,slow=11						
ARA0				Sn	Sn	14 46 37.5	-10
	baz=358,slow=22						
ARA0	**ARCESS Array S**	**10.52**	**169**	Pn	**Pn**	**14 44 49.5**	**-0.4**
	baz=358,slow=11						
ARA0				Sn	Sn	14 46 37.5	-10
	baz=358,slow=22						

KRNET ***17*** *14:51:34.6±0.1, 40.°91N×74.°87E, h12^{km}, mb3.4*
NNC ***17*** *14:51:34.5±1.3, 40.°80N×74.°92E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=9.2km s-min=5.9km az=179.0*
SOME ***17*** *14:51:36.2, 41.°03N×74.°87E, h10^{km}*
KNET ***17*** *14:51:38.3±0.6, 41.°10N×74.°83E, h14^{km}±10^{km}, ml2.8, Error ellipse: s-maj=7.8km s-min=3.7km az=0.0*
ISC 17 14:51:31.9±1.2**, 40.°79N**±0.°03×**74.°96E**±0.°02**, h3**^{km}±10^{km}**,**
n66, σ1.^{s}62/108**, 54C-26D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNKS	**Jany-Kuch**	**0.59**	**62**	⇑*i*P	**Pn**	**14 51 46.5**	**-0.9**
JNKS				⇑*i*S	**Sn**	**14 51 55.2**	**-2.5**
SALK	**Salom-Alik**	**0.87**	**277**	⇑*i*P	**Pb**	**14 51 49.8**	**0.0**
SALK				⇑*e*S	**Sg**	**14 52 01.1**	**+1.2**
NRN	**Naryn**	**1.02**	**50**	⇑*e*P	**Pn**	**14 51 53.3**	**-0.1**
NRN				⇑*e*S	**Sn**	**14 52 07.1**	**-1.2**
ARLS	**Aral**	**1.18**	**336**	⇑*e*P	**Pg**	**14 51 54.1**	**-0.4**
ARLS				⇑*e*S	**Sg**	**14 52 08.6**	**-1.1**
SFK	**Sufi-Kurgan**	**1.36**	**236**	⇑*e*P	**Pb**	**14 52 00.7**	**+2.6**
SFK				⇑*e*S	**Sn**	**14 52 19.9**	**+3.3**
UCH	**Uchtor**	**1.48**	**347**	⇑P	**Pb**	**14 52 00.2**	**-0.1**
	15nm,0.2s,SNR=7.3						
UCH				⇓S	**Sg**	**14 52 17.4**	**-2.1**
	78nm,0.4s						
UCH	**Uchtor**	**1.48**	**347**	⇓*e*P	**Pb**	**14 52 00.2**	**-0.1**
UCH				⇓*e*S	**Sg**	**14 52 19.1**	**-0.3**
ARSB	**Arslanbob**	**1.59**	**290**	⇑*e*P	**Pg**	**14 52 02.8**	**+0.4**
ARSB				⇑*e*S	**Sb**	**14 52 23.3**	**+0.7**
AML	**Almayashu**	**1.65**	**325**	⇑P	**Pb**	**14 52 03.0**	**-0.1**
	43nm,0.2s,SNR=44						
AML				⇓S	**Sn**	**14 52 23.0**	**-1.0**
	96nm,0.2s						
AML	**Almayashu**	**1.65**	**325**	⇑*e*P	**Pb**	**14 52 02.9**	**-0.2**
AML				⇑*e*S	**Sn**	**14 52 23.9**	**-0.1**
OHH	**Osh**	**1.68**	**262**	⇑*e*P	**Pg**	**14 52 05.1**	**+1.0**
OHH				⇑*e*S	**Sg**	**14 52 27.6**	**+1.8**
ULHL	**Ulahol**	**1.75**	**33**	⇑P	**Pg**	**14 52 06.7**	**+1.3**
	23nm,0.1s						
ULHL	**Ulahol**	**1.75**	**33**	⇑*e*P	**Pg**	**14 52 06.1**	**+0.7**
ULHL				⇑*e*S	**Sg**	**14 52 29.1**	**+1.1**
BOOM	**Boomskoye usch**	**1.85**	**23**	⇑*e*P	**Pg**	**14 52 07.8**	**+0.4**
BOOM				⇑*e*S	**Sg**	**14 52 31.8**	**+0.4**
KBK	**Karagaybulak**	**1.87**	**360**	⇓P	**Pg**	**14 52 07.7**	**0.0**
	46nm,0.1s,SNR=10						
KBK				⇓S	**Sn**	**14 52 30.0**	**+0.9**
	214nm,0.3s						
KBK	**Karagaybulak**	**1.87**	**360**	⇓*e*P	**Pg**	**14 52 07.5**	**-0.2**
KBK				⇓*e*S	**Sb**	**14 52 31.2**	**+0.6**
AAK	**Ala-Archa**	**1.88**	**349**	⇓P	**Pb**	**14 52 07.5**	**+0.5**
	19nm,0.2s,SNR=33						
AAK				⇓S	**Sn**	**14 52 30.0**	**+0.5**
	58nm,0.3s						
AAK	**Ala-Archa**	**1.88**	**349**	⇑Pn	**Pb**	**14 52 07.5**	**+0.5**
	2.3nm,0.4s						
AAK				⇑Sn	**Sg**	**14 52 34.2**	**+1.8**
	28nm,0.8s						
AAK	**Ala-Archa**	**1.88**	**349**	⇓*e*P	**Pb**	**14 52 07.5**	**+0.5**
AAK				⇓*e*S	**Sb**	**14 52 31.2**	**+0.2**
FRU1	**Bishkek**	**2.04**	**353**	⇓*e*P	**Pg**	**14 52 10.8**	**-0.1**
FRU1				⇓*e*S	**Sg**	**14 52 37.3**	**0.0**
EKS2	**Erkin-Say**	**2.07**	**335**	⇓P	**Pb**	**14 52 10.8**	**+0.6**
	9.7nm,0.2s,SNR=13						
EKS2				⇓S	**Sn**	**14 52 34.7**	**+0.6**
	40nm,0.5s						
EKS2	**Erkin-Say**	**2.07**	**335**	⇑*e*P	**Pb**	**14 52 10.8**	**+0.6**
EKS2				⇑*e*S	**Sb**	**14 52 37.3**	**+0.9**
KDJ	**Kajisay**	**2.14**	**50**	⇑*e*P	**Pg**	**14 52 13.8**	**+0.9**
KDJ				⇑*e*S	**Sg**	**14 52 42.0**	**+1.3**
TKM2	**Tokmak 2**	**2.18**	**12**	⇑P	**Pg**	**14 52 13.5**	**-0.3**
	25nm,0.1s,SNR=26						
TKM2	**Tokmak 2**	**2.18**	**12**	⇓Pn	**Pg**	**14 52 13.8**	**0.0**
	8.2nm,0.3s						
TKM2				⇓Sn	**Sg**	**14 52 41.4**	**-0.6**
	90nm,0.6s						
TKM2	**Tokmak 2**	**2.18**	**12**	⇑*e*P	**Pb**	**14 52 12.9**	**+0.7**
TKM2				⇑*e*S	**Sb**	**14 52 40.8**	**+1.1**
CHMS	**Chumysh**	**2.21**	**356**	⇑P	**Pb**	**14 52 13.6**	**+1.0**
	13nm,0.2s,SNR=16						
CHMS	**Chumysh**	**2.21**	**356**	⇑Pn	**Pb**	**14 52 13.6**	**+1.0**
	11nm,0.4s						
CHMS				⇑Sn	**Sb**	**14 52 42.1**	**+1.7**
	97nm,0.6s						
CHMS	**Chumysh**	**2.21**	**356**	⇑*e*P	**Pb**	**14 52 12.9**	**+0.3**
CHMS				⇑*e*S	**Sb**	**14 52 40.8**	**+0.3**
TARG	**Taragay, Kyrgy**	**2.34**	**65**	⇑*i*P	**Pg**	**14 52 16.8**	**0.0**
TARG				⇑*e*S	**Sg**	**14 52 47.6**	**+0.5**
MRKS	**Merke**	**2.35**	**327**	Pg	**Pb**	**14 52 15.6**	**+0.7**
	83nm,0.3s						
MRKS				Lg	Lg	14 52 45.9	
	153nm,0.7s						
MRKS	**Merke**	**2.35**	**327**	*e*P	**Pb**	**14 52 15.3**	**+0.4**
	83nm,0.3s						
MRKS				*e*S	**Sb**	**14 52 43.5**	**-0.8**
	159nm,0.4s						
KST	**Kastek**	**2.37**	**18**	Pg	**Pg**	**14 52 18.0**	**+0.6**
	20nm,0.3s						
KST				Lg	Lg	14 52 48.6	
	135nm,0.3s						

KST	Kastek	2.37	18	eP	Pg	14 52 17.3	-0.1
	17nm,0.2s						
KST				eS	Sb	14 52 47.0	+1.8
	157nm,0.4s						
ARK	Arkit	2.48	295	⇑eP	Pb	14 52 16.8	-0.3
ARK				⇑eS	Sb	14 52 47.4	-0.6
USP	Ospenovka	2.50	352	⇓P	Pb	14 52 17.3	-0.2
	42nm,0.2s,SNR=45						
USP	Ospenovka	2.50	352	⇑iP	Pb	14 52 16.8	-0.7
USP				⇑eS	Sb	14 52 47.6	-1.1
MNAS	Manas	2.51	313	⇓eP	Pb	14 52 17.1	-0.5
MNAS				⇓eS	Sb	14 52 47.7	-1.2
MTBS	Maitube	2.58	25	Pg	Pg	14 52 20.9	-0.5
	12nm,0.4s						
MTBS				Lg	Lg	14 52 54.0	
	117nm,0.4s						
MTBS	Maitube	2.58	25	eP	Pg	14 52 20.9	-0.5
	4.2nm,0.1s						
MTBS				eS	Sg	14 52 53.6	-1.3
	117nm,0.4s						
SGDS	Sogindy	2.67	355	Pg	Pb	14 52 21.5	+1.0
	25nm,0.4s						
SGDS				Lg	Lg	14 52 56.2	
	49nm,0.5s						
DRK	Karamyk	2.75	243	⇑iP	Pb	14 52 22.3	+0.4
DRK				⇑eS	Sb	14 52 57.1	+0.9
MDOK	Medeo	2.84	33	Pg	Pg	14 52 26.5	+0.2
	15nm,0.3s						
MDOK				Pg	Pg	14 52 26.5	+0.2
	8.3nm,0.4s						
MDOK				Lg	Lg	14 53 03.6	
	25nm,0.5s						
MDOK				Lg	Lg	14 53 03.6	
	55nm,0.8s						
KNDC	Almaty	2.85	31	⇓Pg	Pg	14 52 26.9	+0.4
	20nm,0.3s						
KNDC				⇑Lg	Lg	14 53 04.7	
	85nm,0.5s						
TRKS	Terek-Say	2.98	286	⇑eP	Pb	14 52 23.6	-2.1
TRKS				⇑eS	Sn	14 52 59.0	+2.5
PRZ	Przheval'sk	3.08	56	⇑iP	Pb	14 52 26.8	-0.7
PRZ				⇑eS	Sb	14 53 05.4	-0.2
BTK	Batken	3.25	258	⇓eP	Pb	14 52 28.5	-1.7
BTK				⇓iS	Sb	14 53 07.8	-2.4
KUU	Kurty	3.27	18	Pg	Pg	14 52 33.2	-1.3
	6.1nm,0.4s						
KUU				Lg	Lg	14 53 15.3	
	118nm,0.6s						
KUU	Kurty	3.27	18	eP	Pg	14 52 33.5	-1.0
	2.3nm,0.1s						
KUU				eS	Sg	14 53 14.4	-2.5
	118nm,0.6s						
SATY	Saty	3.43	47	Pg	Pg	14 52 38.0	+0.4
	7.0nm,0.4s						
SATY				Lg	Lg	14 53 23.4	
	26nm,0.7s						
UZB	Uzynbulak	3.84	51	Pg	Pg	14 52 45.4	-0.1
	12nm,0.4s						
UZB				Lg	Lg	14 53 34.6	
	23nm,0.4s						
KPKS	Kokpek	3.85	45	Pg	Pg	14 52 44.7	-1.0
	2.2nm,0.5s						
KPKS				Lg	Lg	14 53 33.3	
	27nm,0.6s						
IUG	Iuzhnay	3.95	292	Pg	Pg	14 52 45.1	-2.5
	31nm,0.2s						
IUG				Lg	Lg	14 53 34.1	
	67nm,0.4s						
GAR	Garm	4.00	245	⇑iP	Pb	14 52 39.6	-3.4
GAR				⇑eS	Sb	14 53 26.3	-5.5
ARXS	Arharly	4.03	31	Pg	Pg	14 52 46.8	-2.2
	7.6nm,0.5s						
ARXS				Lg	Lg	14 53 37.9	
	26nm,0.5s						
KK31	Karatay Array	4.05	306	⇓Pg	Pb	14 52 45.1	+1.3
	0.6nm,0.2s,baz=129,slow=17,SNR=5.2						
KK31				⇓Lg	Lg	14 53 38.3	
	14nm,0.5s,baz=126,slow=27,SNR=5.3						
SHLS	Shalkode	4.11	53	Pg	Pg	14 52 55.0	+4.4
	8.9nm,0.2s						
SHLS				Lg	Lg	14 53 51.2	
	22nm,0.9s						
SHLS	Shalkode	4.11	53	eP	Pg	14 52 55.0	+4.4
	8.9nm,0.2s						
SHLS				eS	Sg	14 53 51.2	+7.4
	22nm,0.9s						
BLB	Baldybastay	4.21	37	Pg	Pg	14 52 50.8	-1.7
	18nm,0.5s						
BLB				Lg	Lg	14 53 43.8	
	19nm,0.6s						
PDGK	Podgornoye	4.22	52	⇑Pg	Pg	14 52 52.9	+0.1
	7.5nm,0.9s						
PDGK				⇑Lg	Lg	14 53 50.1	
	21nm,0.8s						
BRLS	Borolday	4.43	302	Pg	Pb	14 52 53.8	+3.4
	6.1nm,0.4s						
BRLS				Lg	Lg	14 53 49.1	
	22nm,0.6s						
BRLS	Borolday	4.43	302	eP	Pb	14 52 53.8	+3.4
	6.1nm,0.4s						
BRLS				eS	Sb	14 53 49.0	+4.8
	22nm,0.6s						
KTMS	Ketmen	4.81	55	Pg	Pg	14 53 02.7	-1.4
	2.1nm,0.6s						
KTMS				Lg	Lg	14 54 04.6	
	3.5nm,0.5s						
KTMS	Ketmen	4.81	55	eP	Pg	14 53 04.0	0.0
	1.0nm,0.2s						
KTMS				eS	Sg	14 54 06.5	+0.1
	6.6nm,0.2s						
DJR	Jarkent	5.03	44	Pg	Pg	14 53 05.5	-2.7
	2.5nm,0.5s						
DJR				Lg	Lg	14 54 09.5	
	4.9nm,0.4s						
DJR	Jarkent	5.03	44	eP	Pg	14 53 07.2	-1.0
	1.4nm,0.1s						
DJR				eS	Sg	14 54 11.8	-1.5
	4.5nm,0.3s						

NOU **17** 14:55:08.8, 38°.56S×177°.95E, h2^{km}, MLv3.4/9, North Island, New Zealand

WEL **17** 14:55:10.1±0.6, 38°S±3°×17°8E±°, h22^{km}±5^{km}, M3.3/48, ML3.6/49, MLv3.3/48, Error ellipse: s-maj=4.3km s-min=3.3km az=109.9, confirmed

ISC 17 14:55:10.9±0.9, **38°.45S**±0°.03×**177°.89E**±0°.03, **h26**^{km}±6^{km}, **n96,** σ**0^{s}99**/103, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TKGZ	Te Karaka	0.04	292	P	Pb	14 55 14.5	-0.9
TKGZ				S	Sb	14 55 18.2	-0.3
CNGZ	Carnagh Statio	0.25	97	P	Pb	14 55 17.9	+0.6
GKBS	Kaiti Beach	0.25	155	P	Pn	14 55 18.4	-0.5
RIGZ	Rimuhau	0.27	202	P	Pb	14 55 18.4	+0.7
RIGZ				S	Sn	14 55 25.0	+0.5
TWGZ	Tauwhareparae	0.28	14	P	Pb	14 55 17.1	-0.8
TWGZ				S	Sb	14 55 22.9	+0.3
MWZ	Matawai	0.31	292	P	Pb	14 55 17.3	-0.9
MWZ				S	Sb	14 55 22.3	-0.9
TBAS	Tolaga Bay Are	0.33	76	P	Pb	14 55 19.2	+0.7
RAGZ	Rawiri	0.38	263	P	Pb	14 55 19.0	-0.2
RAGZ				S	Sb	14 55 25.7	+0.8
PRGZ	Paritu Road	0.47	181	P	Pn	14 55 21.7	-0.3
PUZ	Puketiti	0.48	37	P	Pb	14 55 20.4	-0.4
PUZ				S	Sb	14 55 28.4	+0.9
RUGZ	Raukumara Rang	0.52	341	P	Pb	14 55 20.1	-1.4
RUGZ				S	Sb	14 55 27.4	-1.3
SNGZ	Shannon Statio	0.54	233	P	Pn	14 55 22.7	-0.2
KNZ	Kokohu	0.59	197	P	Pb	14 55 23.1	+0.4
PKGZ	Pakihiroa	0.60	14	P	Pb	14 55 22.1	-0.9
URZ	Urewera	0.65	287	P	Pb	14 55 22.8	-0.7
URZ	Urewera	0.65	287	S	Sb	14 55 32.2	0.0
URZ	Urewera	0.65	287	P	Pb	14 55 22.9	-0.7
MHGZ	Mahia Peninsul	0.70	179	P	Pn	14 55 25.0	-0.1
HAZ	Te Kaha	0.70	353	P	Pb	14 55 23.1	-1.4
RTZ	Ruatahuna	0.73	257	P	Pb	14 55 25.2	0.0
WMGZ	Waiomatatini S	0.76	33	P	Pb	14 55 24.9	-0.5
RAHZ	Arahi	0.78	234	P	Pn	14 55 26.2	0.0
WHHZ	Waihua	0.81	219	P	Pn	14 55 26.7	+0.1
MUGZ	Murupara	0.88	268	P	Pb	14 55 27.4	-0.2
MTHZ	Maungataniwha	0.92	244	P	Pn	14 55 28.1	0.0
WHRZ	Whale Island	0.94	309	P	Pb	14 55 28.3	-0.2
MXZ	Matakaoa Point	0.95	20	P	Pb	14 55 27.8	-0.9
MXZ	Matakaoa Point	0.95	20	S	Sn	14 55 42.9	+1.8
MXZ	Matakaoa Point	0.95	20	P	Pb	14 55 27.7	-0.9
EDRZ	Edgecumbe	0.97	291	P	Pn	14 55 29.0	+0.2
NMHZ	Naumai	1.06	233	P	Pn	14 55 30.3	+0.1
MARZ	Manawahe	1.07	296	P	Pb	14 55 30.4	-0.3
ARHZ	Aropaoanui	1.07	221	P	Pn	14 55 30.1	0.0
RRRZ	Republican Roa	1.09	276	P	Pb	14 55 30.9	-0.1
TARZ	Mount Tarawera	1.11	281	P	Pb	14 55 31.3	-0.2
PRRZ	Plateau Road	1.18	267	P	Pn	14 55 31.9	+0.2
MRHZ	Matea Rd	1.22	251	P	Pn	14 55 32.6	+0.4
ALRZ	Allen Road	1.22	264	P	Pn	14 55 32.6	+0.3
HLRZ	Highlands Stat	1.23	279	P	Pb	14 55 33.0	-0.4
HRRZ	Handcock Road	1.27	272	P	Pn	14 55 33.1	+0.2
LIRZ	Lichensteins R	1.27	290	P	Pn	14 55 32.8	-0.1
HSRZ	Hossack Road	1.30	276	P	Pn	14 55 33.8	+0.4
BKZ	Black Stump Fm	1.30	237	P	Pn	14 55 33.5	+0.1
BKZ	Black Stump Fm	1.30	237	P	Pn	14 55 33.5	+0.1
CKHZ	Cape Kidnapper	1.36	208	P	Pn	14 55 33.3	-0.8
MCHZ	McNeill Hill	1.36	223	P	Pn	14 55 34.1	-0.1
WPRZ	Whakapapatarin	1.36	267	P	Pb	14 55 34.9	-0.8
UTU	Utuhina	1.36	281	P	Pb	14 55 35.1	-0.7
KARZ	Kaharoa	1.37	288	P	Pn	14 55 34.3	0.0
GRRZ	Galatos Road	1.41	274	P	Pn	14 55 35.3	+0.5
TGRZ	Tauranga	1.48	299	P	Pn	14 55 35.3	-0.5
KWHZ	Kaweka Forest	1.50	229	P	Pn	14 55 36.1	-0.1
KAHZ	Kahuranaki	1.56	210	P	Pn	14 55 36.1	-0.8
KUTZ	Kaahu Road	1.62	268	P	Pn	14 55 38.0	+0.2
RITZ	Rihia Road	1.68	251	P	Pb	14 55 40.4	-0.6
KRHZ	Kereru	1.68	224	P	Pn	14 55 36.9	-1.6
RATZ	Rangitukua	1.71	255	P	Pn	14 55 40.0	+0.9
PXZ	Pawanui	1.77	207	P	Pn	14 55 38.0	-1.7
KATZ	Kakaramea	1.80	252	P	Pb	14 55 44.4	+1.2
TMVZ	Te Maari	1.83	248	P	Pn	14 55 41.4	+0.6
ETVZ	East Tongariro	1.84	248	P	Pn	14 55 41.0	+0.2
NTVZ	North Tongarir	1.85	249	P	Pn	14 55 41.3	+0.3
TLZ	Tolley Road	1.85	273	P	Pn	14 55 40.9	-0.1
KRVZ	Karewarewa	1.87	249	P	Pn	14 55 42.3	+1.0
OTVZ	Oturere	1.88	247	P	Pn	14 55 42.3	+0.8
NNVZ	North Ngauruho	1.91	248	P	Pb	14 55 43.5	-1.6
SNVZ	South Ngauruho	1.91	247	P	Pn	14 55 42.8	+1.0
WTVZ	West Tongariro	1.92	249	P	Pb	14 55 46.4	+1.2
MOVZ	Moawhango	1.92	240	P	Pn	14 55 43.3	+1.4
TUVZ	Tukino	1.93	244	P	Pb	14 55 46.3	+0.9
NGZ	Ngauruhoe	1.93	247	P	Pb	14 55 44.0	-1.5
WPHZ	Waipukurau	1.96	215	P	Pn	14 55 41.0	-1.5
WHVZ	Whangaehu Hut	1.98	245	P	Pb	14 55 44.8	-1.6
COVZ	Chateau Observ	1.98	247	P	Pb	14 55 44.8	-1.5
WNVZ	Wahianoa	1.99	243	P	Pn	14 55 43.7	+0.7
MAVZ	Matarangi	1.99	245	P	Pn	14 55 44.2	+1.0
FWVZ	Far West T-bar	2.00	246	P	Pb	14 55 46.2	-0.4
TRVZ	Turoa	2.02	245	P	Pn	14 55 44.7	+1.3
TOZ	Tahuroa Road	2.02	290	P	Pn	14 55 42.7	-0.5
MTVZ	Mangateitei	2.11	243	P	Pn	14 55 45.6	+1.2
PKVZ	Pokaka	2.16	246	P	Pb	14 55 47.4	-1.9
TSZ	Takapari Road	2.19	223	P	Pn	14 55 44.0	-1.6
DVHZ	Dannevirke	2.28	215	P	Pn	14 55 44.8	-2.0
HIZ	Hauiti	2.38	268	P	Pn	14 55 49.1	+0.9
HIZ	Hauiti	2.38	268	P	Pn	14 55 49.2	+0.9
KUZ	Kuaotunu	2.43	314	P	Pn	14 55 51.0	+2.2
VRZ	Vera Road	2.54	254	P	Pn	14 55 52.0	+1.6
MKAZ	Moumakai	2.55	301	P	Pn	14 55 50.2	-0.3
BFZ	Birch Farm	2.56	209	P	Pn	14 55 49.6	-1.1
BFZ	Birch Farm	2.56	209	P	Pn	14 55 49.1	-1.6
WAZ	Wanganui	2.61	239	P	Pn	14 55 52.8	+1.5
LREZ	Lake Rotokare	2.90	249	P	Pn	14 55 56.7	+1.3
NEZ	North Egmont	3.08	253	P	Pn	14 55 59.9	+2.1
KHEZ	Kahui Hut	3.14	253	P	Pn	14 56 00.9	+2.2
QRZ	Quartz Range	4.77	239	P	Pn	14 56 21.5	+0.5
MRNZ	Matariki Terra	4.92	232	P	Pn	14 56 21.0	-2.1

IDC **17** 14:55:42.8±0.3, 28°.34N×104°.99E, h0^{km}, mb5.6/45, mbtmp5.6/47, ML5.5/2, MS5.6/65, Error ellipse: s-maj=9.1km s-min=6.4km az=59.0

MOS **17** 14:55:43.2±0.8, 28°.36N×104°.94E, h13^{km}, mb6.0/88, MS5.8/82, Error ellipse: s-maj=5.3km s-min=3.3km az=124.3

BJI **17** 14:55:43.9, 28°.34N×104°.96E, h8^{km}, mB5.8/34, mb5.5/54, ML6.0/19, Ms6.0/37, Ms7 6.0/66

ISC-PP **17** 14:55:44, 28°.41N×104°.93E, h2^{km}, Mwppsm6.5, Moment Tensor Solution. s40 Moment tensor: Scale 10^{18}Nm; M_{rr}0.40±.15; $M_{\theta\theta}$-0.55±.14; $M_{\phi\phi}$0.14±.10; $M_{r\theta}$0.01±.14; $M_{\theta\phi}$0.28±.14; $M_{\phi r}$0.42±.20; Fault plane solution: $M_0$7.00000×10^{18} NP1:ϕ_s81.40000°,δ53.10000°, λ35.50000°. NP2:ϕ_s328.20000°,δ62.30000°,λ137.30000°.

NEIC **17** 14:55:44.9±1.2, 28°.41N±0°.06×104°.93E±0°.07, h6^{km}±1^{km}, mb5.9/516, Ms_20 5.9/1011, Mww5.8/27 Error ellipse: s-maj=11.4km s-min=10.2km az=320.0

NEIC **17** 14:55:44.9, 28°.40N×104°.93E, h12^{km}

NEIC **17** 14:55:44.9, 28°.30N×105°.05E, h12^{km}, Moment Tensor Solution. Duration: 4^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}4.52; $M_{\theta\theta}$0.21; $M_{\phi\phi}$-4.73; $M_{r\theta}$-3.87; $M_{\theta\phi}$1.86; $M_{\phi r}$1.30; Fault plane solution: $M_0$6.45000×10^{17} NP1: ϕ_s185.49000°,δ37.27000°,λ135.24000°. NP2: ϕ_s313.77000°,δ64.76000°,λ61.62000°. Principal axes: T 6.7978, Plg60.0000°, Azm182.0000°; N -0.7746, Plg25.0000°, Azm327.0000°; P -6.0232, Plg15.0000°, Azm64.0000°;

BGR **17** 14:55:45.3, 28°.31N×105°.54E, h33^{km}, mb5.8, mB_BB6.3, Ms5.8

GCMT **17** 14:55:46.9±0.1, 28°.38N±0°.01×104°.95E, h12^{km}, MW5.7/158, Moment Tensor Solution. s122,c218; s158,c432; Duration: 1^{s}8 Moment tensor: Scale 10^{17} Nm; M_{rr}3.14±.04; $M_{\theta\theta}$2.35±.04; $M_{\phi\phi}$-5.49±.04; $M_{r\theta}$-0.17±.12; $M_{\theta\phi}$2.90±.04; $M_{\phi r}$0.53±.11; Best double couple: $M_0$4.89200×10^{17} NP1:ϕ_s117.00000°,δ87.00000°, λ-2.00000°. NP2:ϕ_s207.00000°,δ88.00000°, λ-177.00000°. Principal axes: T 3.3060, Plg1.0000°, Azm342.0000°; N 3.1730, Plg87.0000°, Azm242.0000°; P -6.4790, Plg3.0000°, Azm72.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function

ISC 17 14:55:46.2±0.4, **28°.36N**±0°.02×**104°.93E**±0°.02, **h17**^{km}±2^{km}, **h17^{km}:pP-P, n2106,** σ**1^{s}41**/1733, **mb5.9**/506, **MS5.9**/645, **116C-94D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GYA	Guiyang	2.44	140	⇑Pn	Pn	14 56 26.4	+1.0
GYA				smax	smax		
	comp=N,96μm,0.7s						
GYA				smax	smax		
	comp=E,74μm,0.9s						
CD2	Chengdu	2.74	339	Pn	Pn	14 56 30.3	+0.9
CD2				Pg	Pb	14 56 36.3	+1.6
CD2				Sn	Sn	14 57 03.3	+1.2
CD2				Sg	Sg	14 57 14.0	-0.3
CD2				smax	smax		
	comp=N,120μm,0.9s						
CD2				smax	smax		
	comp=E,164μm,0.7s						
PZH	PanZhiHua	3.38	238	Pn	Pn	14 56 40.0	+1.7
PZH				Pg	Pg	14 56 49.1	-1.9
PZH				Sg	Sg	14 57 32.8	-2.0
PZH				smax	smax		
	comp=N,23μm,1.2s						
PZH				smax	smax		
	comp=E,18μm,1.0s						
KMI	Kunming	3.77	212	⇑Pn	Pn	14 56 44.6	+0.9
KMI				Sn	Sn	14 57 29.8	+2.0
KMI				smax	smax		
	comp=N,7μm,1.4s						
KMI				smax	smax		
	comp=E,9μm,1.9s						
KMI				LR	LR		
	comp=Z,243μm,7.4s						
ENH	Enshi	4.42	63		Pn	14 56 52.7	+0.2
ENH	Enshi	4.42	63	P	Pn	14 56 54.7	+2.2
ENH	Enshi	4.42	63	S	Sn	14 57 48.6	+5.1
GULI	GuiLin	5.74	121	Pn	Pn	14 57 10.1	-0.6
GULI				Sn	Sn	14 58 17.6	+1.4
GULI				smax	smax		
	comp=N,18μm,1.4s						
GULI				smax	smax		
	comp=E,17μm,1.1s						
XAN	Xi'an	6.62	30	Pn	Pn	14 57 23.3	+0.6
XAN				Sn	Sn	14 58 38.8	+1.1
XAN				LR	LR		
	comp=Z,211μm,10.3s						
TNCH	TengChong	6.62	241	Pn	Pn	14 57 24.4	+1.5
TNCH				Sn	Sn	14 58 37.3	-0.7
TNCH				Sg	Sg	14 59 16.1	-2.6
TNCH				smax	smax		
	comp=N,14μm,1.9s						
TNCH				smax	smax		
	comp=E,11μm,2.5s						
TNCH				LR	LR		
	comp=Z,191μm,14.2s						
SLVN	Son La	7.05	188		Pn	14 57 29.3	+0.5
SLVN	Son La	7.05	188	P	Pn	14 57 29.0	+0.2
CNSH	ChangSha	7.06	90	Pn	Pn	14 57 28.4	-0.4
CNSH				Sn	Sn	14 58 45.9	-2.8
CNSH				smax	smax		
	comp=N,18μm,1.2s						
CNSH				smax	smax		
	comp=E,9μm,1.8s						
LZH	Lanzhou	7.76	354	⇑Pn	Pn	14 57 39.5	+1.0
LZH				Sn	Sn	14 59 11.5	+5.5
LZH				Sg	Sb	14 59 48.8	+16
LZH				LR	LR		
	comp=Z,124μm,8.9s						
WHN	Wuhan	8.50	73	⇑P	Pn	14 57 48.8	+0.3
WHN				S	Sn	14 59 21.5	-2.5
LYN	LuoYang	8.92	44	⇓P	Pn	14 57 52.8	-1.5
GZH	Guangzhou	9.23	123	P	Pn	14 57 56.5	-2.0
GZH				S	Sn	14 59 37.1	-4.8
GZH				smax	smax		
	comp=N,12μm,1.2s						
GZH				smax	smax		
	comp=E,10μm,1.1s						
KOHI	KOHIMA	9.99	257	eP	Pn	14 58 06.2	-3.0
HKPS	Hong Kong Po S	10.30	124		Pn	14 58 13.4	+0.2
QIZ	Qiongzhong	10.32	153		Pn	14 58 12.7	-0.8
QIZ	Qiongzhong	10.32	153	P	Pn	14 58 13.0	-0.5
QIZ				pP		14 58 16.6	
QIZ				sP		14 58 19.8	
QIZ				S	Sn	15 00 11.3	+2.5
QIZ				pmax	pmax		
	comp=Z,110nm,0.7s						
QIZ				LR	LR		
	comp=Z,77μm,8.7s						
QIZ	Qiongzhong	10.32	153	P	Pn	14 58 14.9	+1.4
IMP	Imphal	10.43	253	eP	Pn	14 58 13.0	-2.1
IMP				IAmb	IAmb	14 58 37.3	
	comp=Z,237nm,0.9s						
CHTO	Chiang Mai	10.97	211		Pn	14 58 23.6	+1.2
CHTO	Chiang Mai	10.97	211	P	Pn	14 58 24.6	+2.3
CHTO	Chiang Mai	10.97	211	P	Pn	14 58 23.6	+1.2
TIY	Taiyuan	11.25	32	P	Pn	14 58 24.4	-1.9
TIY				S	Sn	15 00 32.0	+0.3
TIY				pmax	pmax		
	comp=Z,51nm,1.1s						
TIY				LR	LR		
	comp=Z,56μm,11.0s						
CM31	Chiang Mai Arr	11.28	210		Pn	14 58 27.5	+0.8
CM31	Chiang Mai Arr	11.28	210	P	Pn	14 58 29.2	+2.5
	SNR=88						
CMAR	Chiang Mai Arr	11.28	210		Pn	14 58 27.4	+0.7
CMAR	Chiang Mai Arr	11.28	210	Pn	Pn	14 58 28.3	+1.6
	comp=Z,2.4nm,0.3s,baz=19,slow=8.9,SNR=202						
CMAR				LR	LR	15 03 33.6	
	comp=Z,22μm,18.0s,baz=40,slow=42						
CMAR				ScP	ScP	15 07 54.9	+1.5
	comp=Z,23nm,1.0s,baz=313,slow=1.6,SNR=13						
CMAR				PKiKP	PKiKP	15 12 19.9	-0.2
	comp=Z,1.3nm,0.7s,baz=136,slow=0.4,SNR=6.8						
CMAR	Chiang Mai Arr	11.28	210	ceP	Pn	14 58 29.7	+3.0
CMAR				pmax	pmax		
	comp=Z,249nm,0.9s						
TAWA	Tawang	11.57	269	eP	Pn	14 58 27.7	-3.2
TAWA				IAmb	IAmb	14 58 36.9	
	comp=Z,833nm,0.9s						
GOMU	GeErMu	11.58	315	P	Pn	14 58 30.8	-0.3
GOMU				sP		14 58 38.0	
GOMU				S	Sn	15 00 43.8	+3.6
GOMU				pmax	pmax		
	comp=Z,83nm,1.4s						
GOMU				LR	LR		
	comp=Z,80μm,11.6s						
GTA	Gaotai	11.81	340	P	Pn	14 58 35.5	+1.5
GTA				S	Sn	15 00 52.0	+6.6
GTA				pmax	pmax		
	comp=Z,380nm,1.4s						
GTA				pmax	pmax		
	comp=Z,2μm,8.8s						
GTA				LR	LR		
	comp=Z,77μm,15.5s						
GTA				LR	LR		
	comp=Z,104μm,14.7s						
LSA	Lhasa	12.13	280		Pn	14 58 37.9	-0.8
LSA	Lhasa	12.13	280	P	Pn	14 58 38.5	-0.2
LSA				LR	LR		
	comp=Z,30μm,7.2s						
LSA				LR	LR		
	comp=Z,93μm,10.8s						
LSA	Lhasa	12.13	280	P	Pn	14 58 37.9	-0.8
LSA	Lhasa	12.13	280	i P	Pn	14 58 39.4	+0.7
	SNR=62						
HNS	HongShan	12.19	40	⇓P	Pn	14 58 38.4	-0.7
HNS				S	Sn	15 00 57.4	+2.8
HNS				pmax	pmax		
	comp=Z,150nm,1.3s						
HNS				LR	LR		
	comp=Z,97μm,12.1s						
NJ2	Nanjing	12.60	70	⇑P	Pn	14 58 45.9	+1.3
NJ2				sP	P	14 58 55.0	-1.0
NJ2				S	Sn	15 01 02.1	-2.4
NJ2				pmax	pmax		
	comp=Z,210nm,1.5s						
NJ2				pmax	pmax		
	comp=Z,3μm,3.8s						
KNMB	Chin-men Tao	12.67	105		Pn	14 58 45.5	-0.1
QZH	Quanzhou	12.69	102	⇓iP	Pn	14 58 46.3	+0.4
QZH				LR	LR		
	comp=Z,57μm,10.9s						
BTO	Baotou	12.92	18	eP	Pn	14 58 48.3	-0.7
BTO				pP	P	14 58 52.0	-7.7
BTO				sP		14 58 54.9	
BTO				PP	PnPn	14 58 59.1	+2.1
BTO				S	Sn	15 01 14.1	+1.7
BTO				sS		15 01 19.3	
BTO				SS	SnSn	15 01 28.6	+3.7
BTO				pmax	pmax		
	comp=Z,390nm,1.6s						
BTO				pmax	pmax		
	comp=Z,3μm,7.3s						
TIA	Tai'an	12.95	50	P	Pn	14 58 48.5	-0.9
TIA				S	Sn	15 01 17.1	+4.1
TIA				pmax	pmax		
	comp=Z,49nm,1.5s						
TIA				pmax	pmax		
	comp=Z,2μm,10.0s						
TIA				LR	LR		
	comp=Z,68μm,15.7s						
TIA				LR	LR		
	comp=Z,118μm,15.3s						
BRDH	Bariadhala	13.26	248	Pn	Pn	14 58 54.0	+0.4
	comp=Z,44nm,0.3s,baz=59,slow=9.3,SNR=14						
BRDH				LR	LR	15 04 56.5	
	comp=Z,38μm,21.1s,baz=60,slow=42						
	comp=Z,120nm,0.3s						
HHC	Hu-ho-hao-te	13.60	22	⇑iP	Pn	14 58 58.5	+0.1
HHC				pP	P	14 59 01.6	-5.7
HHC				PP	PnPn	14 59 12.1	+5.7
HHC				S	Sn	15 01 30.8	+1.7
HHC				sS	sSn	15 01 37.3	+1.5
HHC				pmax	pmax		
	comp=Z,91nm,1.1s						
HHC				LR	LR		
	comp=Z,74μm,15.6s						
HHC				LR	LR		
	comp=Z,63μm,10.8s						
SSE	Sheshan	14.39	75	P	Pn	14 59 06.8	-2.3
SSE				S	Sn	15 01 49.1	+0.8
SSE				pmax	pmax		
	comp=Z,64nm,1.1s						
SSE				pmax	pmax		
	comp=Z,940nm,7.6s						
GTK	Tadong	14.48	270	eP	Pn	14 59 07.6	-3.0
GTK				IAmb	IAmb	14 59 22.2	
	comp=Z,436nm,1.0s						
BJT	Baijiatuau	14.88	36		Pn	14 59 14.7	-1.0

BJT	Baijiatuau	14.88	36	P	Pn	14 59 16.0	+0.3
BJT	Baijiatuau	14.88	36	P	Pn	14 59 14.7	-1.0
BJI	Beijing	14.90	36	P	Pn	14 59 15.3	-0.7
BJI				S	Sn	15 02 03.0	+2.5
BJI				pmax	pmax		
	comp=Z,80nm,1.0s						
BJI				pmax	pmax		
	comp=Z,720nm,3.6s						
BJI				LR	LR		
	comp=Z,42µm,12.2s						
BJI				LR	LR		
	comp=Z,48µm,15.8s						
BJI				LR	LR		
	comp=Z,21µm,15.9s						
TPUB	Ta-pu	15.01	106		Pn	14 59 17.7	+0.1
TPUB	Ta-pu	15.01	106	P	Pn	14 59 18.5	+0.9
SSLB	Suanglung	15.10	104		Pn	14 59 18.1	-0.8
SSLB	Suanglung	15.10	104	P	Pn	14 59 20.6	+1.7
YHNB	Yeheng	15.18	100	P	Pn	14 59 22.1	+2.2
TATO	Taipei	15.19	99	Pn	Pn	14 59 19.2	-0.7
NACB	Ninganchiao	15.52	102	Pn	Pn	14 59 25.0	+0.7
YULB	Yu-li	15.54	105		Pn	14 59 24.9	+0.3
YULB	Yu-li	15.54	105	P	P	14 59 28.0	-0.8
YOJ	Yonaguni jima	16.66	99		Pn	14 59 39.3	+0.4
YOJ	Yonaguni jima	16.66	99	P	P	14 59 41.1	-0.1
YOJ	Yonaguni jima	16.66	99	P	Pn	14 59 39.3	+0.4
YOJ				pmax	pmax		
	comp=Z,327nm,1.1s						
DLV	Lat	16.67	168		P	14 59 42.9	+1.3
DL2	Dalian	17.41	49	⇑iP	Pn	14 59 48.5	+0.2
DL2				S	Sn	15 03 01.8	+0.2
DL2				pmax	pmax		
	comp=Z,360nm,1.0s						
DL2				pmax	pmax		
	comp=Z,5µm,8.9s						
DL2				LR	LR		
	comp=Z,24µm,17.0s						
DL2				LR	LR		
	comp=Z,64µm,15.7s						
XLT	XiLinHaoTe	17.91	27	eP	P	14 59 54.9	-0.1
XLT				S	Sn	15 03 12.1	-1.7
XLT				SS	SnSn	15 03 39.3	+12
XLT				pmax	pmax		
	comp=Z,180nm,0.9s						
XLT				pmax	pmax		
	comp=Z,2µm,6.7s						
XLT				LR	LR		
	comp=Z,7µm,12.1s						
XLT				LR	LR		
	comp=Z,38µm,10.3s						
JMJ	Miyako jima 2	18.55	96	P	Pn	15 00 05.5	+3.1
DGPR	DIGLIPUR	18.79	219	eP	P	15 00 03.8	-1.0
DGPR				IAmb	IAmb	15 00 10.3	
	comp=Z,364nm,0.8s						
SONM	Songino Array	19.48	3	P	P	15 00 12.4	+0.2
SONM	Songino Array	19.48	3	P	Pn	15 00 13.0	-0.5
	comp=Z,8.1nm,0.3s,baz=185,slow=11,SNR=99						
SONM				LR	LR	15 07 42.9	
	comp=Z,12µm,21.9s,baz=182,slow=37						
SONM				P3KPbc		15 34 37.0	
	comp=Z,2.0nm,0.9s,baz=336,slow=3.0,SNR=9.8						
	comp=Z,74nm,0.6s						
ULN	Ulaanbaatar	19.55	4		P	15 00 12.8	-0.3
ULN	Ulaanbaatar	19.55	4	P	P	15 00 10.6	-2.4
ULN				S	Sn	15 03 53.9	+0.5
ULN	Ulaanbaatar	19.55	4	d iP	P	15 00 13.2	+0.1
ULN				pmax	pmax		
	comp=Z,110nm,1.1s						
ULN				MLR	MLR		
	comp=Z,16µm,13.0s						
HJU	Haeju	19.87	56	P	P	15 00 15.9	-0.5
HJU				S	S	15 03 58.1	-1.5
HJU				AmB			
	comp=Z,4µm,1.6s						
HJU				AMS	AMS		
	comp=Z,74µm,11.7s						
SUJ	Sinuiju	19.93	49	P	P	15 00 16.2	-0.8
SUJ				S	S	15 03 58.9	-1.7
SUJ				AmB			
	comp=Z,2µm,2.1s						
SUJ				AMS	AMS		
	comp=Z,24µm,11.6s						
PBA	Port Blair	20.15	217	P	P	15 00 19.7	+0.1
PBA				IAmb	IAmb	15 00 33.9	
	comp=Z,688nm,0.9s						
PBA				IAMs_20	IAMs_20	15 09 26.3	
	comp=Z,60µm,18.0s						
PBA	Port Blair	20.15	217	P	Pn	15 00 21.6	0.0
JHSG	JHARSUGUGA	20.24	256	eP	P	15 00 18.8	-1.9
JHSG				IAmb	IAmb	15 00 29.4	
	comp=Z,743nm,1.1s						
SNY	Shenyang	20.28	44	⇓P	P	15 00 20.6	-0.3
SNY				S	S	15 04 03.3	-4.3
SNY				pmax	pmax		
	comp=Z,340nm,0.8s						
SNY				pmax	pmax		
	comp=Z,2µm,8.4s						
SNY				LR	LR		
	comp=Z,36µm,15.7s						
SNY				LR	LR		
	comp=Z,51µm,17.1s						
PYAG	Pyongyang	20.30	53	P	P	15 00 20.0	-1.2
PYAG				S	S	15 04 06.8	-1.4
PYAG				AmB			
	comp=Z,2µm,1.9s						
PYAG				AMS	AMS		
	comp=Z,23µm,11.6s						
INCN	Inchon	20.33	58		P	15 00 20.0	-1.6
INCN				IAmb	IAmb	15 00 26.7	
	comp=Z,385nm,0.9s						
INCN	Inchon	20.33	58	IAMs_20	IAMs_20	15 08 56.0	
	comp=Z,47µm,18.0s						
INCN	Inchon	20.33	58	P	P	15 00 13.0	-8.5
INCN	Inchon	20.33	58	P	Pn	15 00 23.3	-0.3
INCN	Inchon	20.33	58	S	Sn	15 04 15.2	+2.9
INCN	Inchon	20.33	58	P	P	15 00 20.0	-1.6
INCN				pmax	pmax		
	comp=Z,385nm,0.9s						
INCN				MLR	MLR		
	comp=Z,47µm,18.0s						
TJN	Taejon	20.54	61	P	P	15 00 24.5	+0.7
TJN	Taejon	20.54	61	S	Sn	15 04 18.3	+1.1
TJN	Taejon	20.54	61	deP	P	15 00 23.6	-0.2
TGY	Tagaytay City	20.56	130	P	P	15 00 25.2	+1.1
	comp=Z,484nm,0.6s,baz=275,slow=4.0,SNR=15						
WMQ	Urumqi	20.72	323	eP	P	15 00 25.9	+0.1
WMQ				S	S	15 04 14.6	-1.9
WMQ				pmax	pmax		
	comp=Z,150nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,1µm,6.7s						
WMQ				LR	LR		
	comp=Z,34µm,11.3s						
WMQ				LR	LR		
	comp=Z,13µm,14.3s						
JOW	Kunigami	20.75	89	P	P	15 00 25.5	-0.6
JOW				IAmb	IAmb	15 00 32.5	
	comp=Z,301nm,0.7s						
JOW	Kunigami	20.75	89	P	P	15 00 25.9	-0.3
	comp=Z,71nm,0.3s,baz=169,slow=12,SNR=108						
JOW				S	S	15 04 18.1	+0.9
	comp=Z,15nm,0.8s,baz=72,slow=29,SNR=1.6						
JOW				LR	LR	15 09 05.1	
	comp=Z,34µm,19.0s,baz=277,slow=39						
	comp=Z,71nm,0.3s						
JOW	Kunigami	20.75	89	P	P	15 00 26.7	+0.6
ALBI	Allahabad	20.84	267	eP	P	15 00 25.3	-1.9
ALBI				IAmb	IAmb	15 00 34.2	
	comp=Z,271nm,0.8s						
KSAR	Wonju Array Be	21.26	59	P	P	15 00 31.2	-0.3
KSAR	Wonju Array Be	21.26	59	P	P	15 00 31.2	-0.3
KS19	Wonju Array Si	21.26	59	IAmb	IAmb	15 00 39.7	
	comp=Z,1µm,1.7s						
KSRS	Korea Array	21.29	59	P	P	15 00 31.2	-0.7
	comp=Z,205nm,0.7s,baz=243,slow=9.8,SNR=231						
KSRS				LR	LR	15 09 13.2	
	comp=Z,11623µm,21.0s,baz=250,slow=38						
	comp=Z,205nm,0.7s						
RAGD	RAYAGADA	21.61	250	eP	P	15 00 33.5	-2.0
LGTI	Lohaghat	21.62	279	eP	P	15 00 34.9	-0.6
LGTI				IAmb	IAmb	15 00 57.5	
	comp=Z,842nm,1.4s						
PTH	Pithoragarh	21.65	279	eP	P	15 00 32.9	-3.1
PTH				IAmb	IAmb	15 00 56.5	
	comp=Z,509nm,1.0s						
JTU	Tsushima	21.74	67	P	P	15 00 37.3	+0.6
HHU	Hamhung	21.92	52	P	P	15 00 37.6	-1.0
HHU				S	S	15 04 38.0	-1.9
HHU				AmB			
	comp=Z,3µm,1.7s						
HHU				AMS	AMS		
	comp=Z,44µm,10.2s						
ZAK	Zakamensk	22.03	357	eP	P	15 00 40.5	+0.7
ZAK				pmax	pmax		
	comp=Z,530nm,1.4s						
CN2	Changchun	22.55	41	P	P	15 00 44.6	-0.8
CN2				S	S	15 04 45.8	-6.0
CN2				pmax	pmax		
	comp=Z,220nm,1.1s						
CN2				pmax	pmax		
	comp=Z,2µm,3.0s						
CN2				LR	LR		
	comp=Z,30µm,15.0s						
CN2				LR	LR		
	comp=Z,29µm,15.0s						
CN2				LR	LR		
	comp=Z,29µm,16.0s						
JNU	Nakatsue	22.78	72	IAmb	IAmb	15 00 52.4	
	comp=Z,568nm,1.1s						
JNU				IAMs_20	IAMs_20	15 10 23.3	
	comp=Z,44µm,21.0s						
JNU	Nakatsue	22.78	72	LR	LR	15 10 58.0	
	comp=Z,33µm,18.1s,baz=267,slow=40						
JNU	Nakatsue	22.78	72	P	P	15 00 48.2	+0.2
KULM	Kulim	23.30	191	IAmb	IAmb	15 00 55.9	
	comp=Z,388nm,1.3s						
KULM	Kulim	23.30	191	P	P	15 00 53.0	-0.3
MOY	Mondy	23.47	354	eP	P	15 00 54.9	+0.1
MOY				pmax	pmax		
	comp=Z,680nm,2.7s						
DDI	Dehra Dun	23.49	281	eP	P	15 00 52.5	-2.7
DDI				IAmb	IAmb	15 01 18.4	
	comp=Z,385nm,0.7s						
JMZ	Minamidaito 2	23.54	90	P	P	15 00 55.7	0.0
JMZ				IAmb	IAmb	15 01 14.1	
	comp=Z,622nm,1.1s						
JMZ	Minamidaito 2	23.54	90	P	P	15 00 57.8	+2.2
JHNI	Jhansi	23.69	269	eP	P	15 00 54.7	-2.5
JHNI				IAmb	IAmb	15 00 58.6	
	comp=Z,515nm,1.0s						
HIA	Hailar	23.77	25	IAMs_20	IAMs_20	15 09 50.3	
	comp=Z,23µm,18.0s						
HIA	Hailar	23.77	25	IAmb	IAmb	15 01 01.6	
	comp=Z,456nm,1.6s						
HIA	Hailar	23.77	25	P	P	15 00 59.3	+1.5
IRK	Irkutsk	23.86	359	⇑iP	P	15 00 59.2	+0.7
IRK				eS	S	15 05 18.4	+4.7
IRK				pmax	pmax		
	comp=Z,2µm,2.8s						
LHMI	Lhok Sumawe	24.22	200	P	P	15 01 02.8	+0.7
LHMI	Lhok Sumawe	24.22	200	P	P	15 01 03.7	+1.6
	comp=Z,8µmcomp=Z,511nm,1.1s						
SMLA	Simla	24.23	283	eP	P	15 01 00.1	-2.1
SMLA				IAmb	IAmb	15 01 06.4	
	comp=Z,695nm,1.2s						
NDI	New Delhi	24.33	277	eP	P	15 01 01.3	-1.8
NDI				IAmb	IAmb	15 01 06.5	
	comp=Z,212nm,0.8s						
AYAN	Aya Nagar	24.43	277	eP	P	15 01 01.9	-2.1
CIT	Chita	24.50	13	eP	P	15 01 05.6	+1.1
CIT				e		15 01 14.8	
CIT				e		15 01 36.4	
CIT				e		15 05 29.8	
CIT				pmax	pmax		
	comp=Z,827nm,2.6s						
BSI	Banda Aceh	24.50	204	P	P	15 01 04.2	-0.6
	comp=Z,4µmcomp=Z,364nm,1.2s						
KKM	Kota Kinabalu	24.64	152	P	P	15 01 05.7	-0.4
KKM	Kota Kinabalu	24.64	152	P	P	15 01 06.8	+0.7
ZSN	Zaisan	24.65	326	eP	P	15 01 05.3	-0.5
ZSN				eS	S	15 05 27.6	+1.2
ZSN				pmax	pmax		
	comp=Z,140nm,1.4s						
ZSN	Zaisan	24.65	326	eP	P	15 01 05.4	-0.5
	comp=Z,140nm,1.4s						
ZSN				eS	S	15 05 27.7	+1.2
BNX	BinXian	24.82	40	⇓P	P	15 01 06.8	-0.6
BNX				S	S	15 05 29.3	0.0
BNX				pmax	pmax		
	comp=Z,37nm,0.8s						
BNX				pmax	pmax		
	comp=Z,2µm,6.5s						
BNX				LR	LR		
	comp=Z,32µm,17.1s						
BHK	Bhakra	24.88	284	eP	P	15 01 02.1	-6.0
BHK				IAmb	IAmb	15 01 12.3	
	comp=Z,367nm,0.5s						
DHRM	DHARAMSHALA	24.98	286	eP	P	15 01 07.1	-2.2
KUDL	Kundal	25.03	276	eP	P	15 01 07.7	-1.7
KUDL				IAmb	IAmb	15 01 12.2	
	comp=Z,241nm,0.8s						
BHPL	Bhopal	25.25	265	eP	P	15 01 08.8	-2.7
SHLS	Shalkode	25.27	313	eP	P	15 01 08.5	-3.1
SHLS				eS	S	15 05 33.1	-3.6
SHLS				pmax	pmax		
	comp=Z,217nm,1.1s						
SHLS	Shalkode	25.27	313	eP	P	15 01 08.6	-3.1
	comp=Z,217nm,1.1s						
SHLS				eS	S	15 05 33.2	-3.5
MLSI	Meulaboh, Aceh	25.29	200	P	P	15 01 15.4	+3.5
PSTR	Posyet	25.31	49	d iP	P	15 01 11.1	-0.8
JMN	Monobe	25.33	71	IAmb	IAmb	15 01 46.1	
	comp=Z,199nm,1.0s						
JMN				IAMs_20	IAMs_20	15 12 02.9	
	comp=Z,45µm,20.0s						
JMN	Monobe	25.33	71	P	P	15 01 13.3	+1.1
TSI	Tuntungan	25.45	195	P	P	15 01 15.0	+1.7
MDJ	Mudanjiang	25.48	44	P	P	15 01 14.4	+1.0
MDJ				S	S	15 05 38.4	-1.4
MDJ				LR	LR		
	comp=Z,30µm,15.7s						
MDJ				LR	LR		
	comp=Z,55µm,16.0s						
MSHR	Mys Shultsa	25.52	49	⇓eP	P	15 01 13.1	-0.6
MSHR				pmax	pmax		
	comp=Z,71nm,0.9s						
MSHR				MLR	MLR		
	comp=Z,44µm,15.0s						
MK31	Makanchi Array	25.55	322	ceP	P	15 01 13.3	-0.7
MK31				pmax	pmax		
	comp=Z,475nm,1.0s						
MKAR	Makanchi Array	25.55	322	P	P	15 01 13.9	-0.1
MKAR	Makanchi Array	25.55	322	P	P	15 01 13.4	-0.7
	comp=Z,199nm,0.9s,baz=116,slow=8.2,SNR=252						
MKAR				PcP	PcP	15 04 45.7	+0.7
	comp=Z,26nm,0.8s,baz=101,slow=5.1,SNR=3.7						
MKAR				ScP	ScP	15 08 24.6	+0.9
	comp=Z,28nm,1.1s,baz=123,slow=4.5,SNR=6.6						
MKAR				LR	LR	15 11 52.5	
	comp=Z,10µm,20.6s,baz=118,slow=38						
MKAR				PKiKP	PKiKP	15 12 23.4	-1.9
	comp=Z,0.9nm,0.5s,baz=217,slow=2.0,SNR=6.6						
MKAR				P3KPbc		15 34 12.8	
	comp=Z,2.9nm,0.9s,baz=314,slow=3.5,SNR=19						
	comp=Z,199nm,0.9s						
MKAR	Makanchi Array	25.55	322	i P	P	15 01 13.3	-0.7
MKAR				pmax	pmax		
	comp=Z,195nm,0.9s						
UZB	Uzynbulak	25.55	312	eP	P	15 01 13.5	-0.7
UZB				pmax	pmax		
	comp=Z,191nm,1.2s						
UZB	Uzynbulak	25.55	312	eP	P	15 01 13.5	-0.7
	comp=Z,191nm,1.2s						
PRZ	Przheval'sk	25.67	310	IAmb	IAmb	15 01 23.4	
	comp=Z,324nm,0.8s						
MAKZ	Makanchi	25.73	322	P	P	15 01 15.3	-0.3
MAKZ	Makanchi	25.73	322	P	P	15 01 15.3	-0.3
MAKZ				pmax	pmax		
	comp=Z,449nm,1.0s						
MAKZ				MLR	MLR		
	comp=Z,15µm,19.0s						
KPKS	Kokpek	25.91	313	eP	P	15 01 16.8	-0.6
KPKS				eS	S	15 05 47.7	+0.8
KPKS	Kokpek	25.91	313	eP	P	15 01 16.9	-0.6
KPKS				eS	S	15 05 47.7	+0.8
SATY	Saty	25.91	312	eP	P	15 01 16.8	-0.7
SATY				pmax	pmax		
	comp=Z,156nm,0.9s						
SATY	Saty	25.91	312	eP	P	15 01 16.8	-0.7
	comp=Z,156nm,0.9s						
PSI	Prapat	26.05	194	P	P	15 01 19.1	+0.2
	comp=Z,194nm,1.1s,baz=344,slow=6.8,SNR=55						
PSI				ScP	ScP	15 08 26.2	+0.6
	comp=Z,39nm,1.0s,baz=261,slow=4.0,SNR=9.0						
PSI				LR	LR	15 13 02.0	
	comp=Z,10µm,20.4s,baz=340,slow=40						
	comp=Z,194nm,1.1s						
PSI	Prapat	26.05	194	P	P	15 01 20.5	+1.6
RPSI	Rantau Prapat	26.16	194		ScP	15 08 26.2	+0.4
RPSI	Rantau Prapat	26.16	194	P	P	15 01 18.8	-0.9
RPSI				IAmb	IAmb	15 01 21.4	
	comp=Z,309nm,1.3s						
VLA	Vladivostok	26.23	49	ceP	P	15 01 20.3	+0.1
VLA				pmax	pmax		
	comp=Z,116nm,0.9s						
VLA				MLR	MLR		
	comp=Z,46µm,15.0s						
KDJ	Kajisay	26.36	309	IAmb	IAmb	15 01 43.5	
	comp=Z,267nm,1.1s						
KSH	Kashi	26.36	303	P	P	15 01 24.3	+2.7
KSH				S	S	15 05 59.3	+5.2
KSH				pmax	pmax		
	comp=Z,190nm,2.1s						
KSH				LR	LR		
	comp=Z,26µm,13.7s						
MYLDM	Lahad Datu	26.41	148	P	P	15 01 23.3	+1.2
MYLDM	Lahad Datu	26.41	148	P	P	15 01 24.2	+2.2
AKL	Akola	26.47	260	eP	P	15 01 20.9	-1.6
HYB	Hyderabad	26.57	251	eP	P	15 01 23.9	+0.4
HYB				IVmB_BB		15 01 26.4	
	comp=Z,4µm,1.2s						
HYB				ePcP	PcP	15 04 47.6	-0.2
HYB				eS	S	15 06 10.1	+13
HYB				eScP	ScP	15 08 28.4	+1.3
HYB				ePcS	PcS	15 08 28.9	-0.4
HYB				IVMs_BB	IVMs_BB	15 14 11.0	
	comp=Z,6µm,15.4s						
USA0B	Ussuriysk Arra	26.78	47	d iP	P	15 01 24.2	-0.9
USRK	Ussuriysk Ar.	26.78	47	P	P	15 01 24.5	-0.6
	comp=Z,168nm,0.7s,baz=247,slow=11,SNR=88						
USRK				LR	LR	15 13 41.9	
	comp=Z,16µm,18.6s,baz=244,slow=40						
	comp=Z,168nm,0.7s						
ARXS	Arharly	26.80	313	eP	P	15 01 24.7	-0.8
TDK	Taldyqorghan	26.81	315	eP	P	15 01 24.9	-0.6
TDK				pmax	pmax		
	comp=Z,179nm,0.8s						
TDK				MLR	MLR		
	comp=Z,7µm,12.0s						
TDK	Taldyqorghan	26.81	315	eP	P	15 01 24.9	-0.6
	comp=Z,179nm,0.8s						
TDK				LR	LR	15 12 27.8	
	comp=Z,7µm,11.9s						
MDOK	Medeo	26.86	311	eP	P	15 01 25.4	-0.7
MDOK				eS	S	15 06 02.7	+0.8
MDOK				MLR	MLR		
	comp=Z,7µm,10.0s						
MDOK	Medeo	26.86	311	eP	P	15 01 25.5	-0.7
MDOK				eS	S	15 06 02.7	+0.8
MDOK				LR	LR	15 12 44.6	
	comp=Z,7µm,10.2s						
NRN	Naryn	26.93	307	IAmb	IAmb	15 01 30.7	
	comp=Z,338nm,1.4s						
ULHL	Ulahol	27.05	308	P	P	15 01 29.3	+1.4
	SNR=12						
KSM	Kuching	27.23	168	IAmb	IAmb	15 01 32.0	
	comp=Z,299nm,1.8s						
SBSI	Sibolga	27.27	193	P	P	15 01 34.2	+4.4
BOOM	Boomskoye usch	27.35	309	IAmb	IAmb	15 01 45.7	
	comp=Z,178nm,1.1s						
MDRS	Chennai	27.56	242	eP	P	15 01 31.8	-0.6
MDRS				IAmb	IAmb	15 01 42.2	
	comp=Z,236nm,0.8s						
NIL	Nilore	27.59	289	P	P	15 01 32.2	-0.4
NIL				IAmb	IAmb	15 02 08.6	
	comp=Z,261nm,1.1s						
NIL	Nilore	27.59	289	IAMs_20	IAMs_20	15 13 04.2	
	comp=Z,36µm,19.0s						
NIL	Nilore	27.59	289	P	P	15 01 31.8	-0.8
NIL	Nilore	27.59	289	P	P	15 01 32.2	-0.4
NIL				pmax	pmax		
	comp=Z,261nm,1.1s						
NIL				MLR	MLR		
	comp=Z,36µm,19.0s						
KUU	Kurty	27.63	312	eP	P	15 01 32.3	-0.5
KUU				pmax	pmax		
	comp=Z,317nm,1.6s						
KUU				MLR	MLR		
	comp=Z,11µm,10.0s						
KUU	Kurty	27.63	312	eP	P	15 01 32.3	-0.5
	comp=Z,317nm,1.6s						
KUU				LR	LR	15 13 18.1	
	comp=Z,11µm,10.4s						
HEH	HeiHe	27.74	32	eP	P	15 01 33.4	-0.3
HEH				S	S	15 06 16.0	+0.6
HEH				ScP	ScP	15 08 30.3	+0.3
HEH				pmax	pmax		
	comp=Z,76nm,1.0s						
HEH				LR	LR		
	comp=Z,38µm,15.9s						
TKM2	Tokmak 2	27.74	309	P	P	15 01 34.8	+0.7
	SNR=26						
GSI	Gunungsitoli	27.80	196	P	P	15 01 34.2	-0.4
	comp=Z,132nm,0.9s						
INU	Inuyama	28.05	67	IAmb	IAmb	15 01 59.8	
	comp=Z,144nm,0.9s						
INU				IAMs_20	IAMs_20	15 13 45.2	
	comp=Z,31µm,18.0s						
INU	Inuyama	28.05	67	P	P	15 01 40.4	+3.7
KBK	Karagaybulak	28.09	308	P	P	15 01 38.1	+1.0
	SNR=30						
BKNI	Bangkinang	28.12	188	IAmb	IAmb	15 02 08.5	
	comp=Z,264nm,1.0s						
BKNI	Bangkinang	28.12	188	P	P	15 01 38.9	+1.5
	comp=Z,3µmcomp=Z,276nm,1.2s						
UCH	Uchtor	28.25	307	P	P	15 01 41.1	+2.2
	SNR=12						
JGF	Kuroka	28.35	67	IAmb	IAmb	15 01 59.0	
	comp=Z,267nm,1.0s						
JGF	Kuroka	28.35	67	P	P	15 01 41.3	+1.9
AAK	Ala-Archa	28.40	308	P	P	15 01 40.8	+0.9
	SNR=25						
AAK	Ala-Archa	28.40	308	P	P	15 01 40.4	+0.5
AAK	Ala-Archa	28.40	308	P	P	15 01 40.0	+0.1
	comp=Z,18nm,0.6s,baz=103,slow=11,SNR=60						
AAK				LR	LR	15 14 10.8	
	comp=Z,17µm,18.1s,baz=86,slow=39						
	comp=Z,18nm,0.6s						
AAK	Ala-Archa	28.40	308	P	P	15 01 41.1	+1.2
AAK				P	P	15 01 41.1	+1.2
AAK				S	S	15 06 30.2	+3.9
AAK				S	S	15 06 30.2	+3.9
AAK	Ala-Archa	28.40	308	c iP	P	15 01 41.0	+1.1
AAK				pmax	pmax		
	comp=Z,196nm,2.5s						
AAK				MLR	MLR		
	comp=Z,15µm,17.0s						
AAK	Ala-Archa	28.40	308	i P	P	15 01 41.0	+1.1
	SNR=27						
SGDS	Sogindy	28.60	310	eP	P	15 01 41.0	-0.6
USP	Ospenovka	28.62	309	P	P	15 01 42.6	+0.9
	SNR=59						
AML	Almayashu	28.79	307	P	P	15 01 45.3	+1.6
	SNR=46						
DAV	Davao City (W)	28.80	133	LR	LR	15 13 38.2	
	comp=Z,11µm,18.9s,baz=1.0,slow=37						
STKI	Sintang	28.82	166	P	P	15 01 45.2	+1.6
	comp=Z,109nm,1.1s						
KRAR	Krasnoyarsk	28.95	346	⇑eP	P	15 01 45.2	+0.8
PPI	Padang Panjang	28.98	189	P	P	15 01 45.3	+0.3
MAJO	Matsushiro	29.14	65	P	P	15 01 44.7	-1.6
MAJO	Matsushiro	29.14	65	IAMs_20	IAMs_20	15 14 40.5	
	comp=Z,31µm,18.0s						
MAJO	Matsushiro	29.14	65	⇑eP	P	15 01 45.8	-0.5
MAJO				pmax	pmax		
	comp=Z,64nm,2.6s						
MAJO				MLR	MLR		
	comp=Z,30µm,17.0s						
MJAR	Matsushiro Arr	29.14	65	P	P	15 01 46.3	0.0
	comp=Z,19nm,0.9s,baz=272,slow=9.3,SNR=16						
MJAR				PcP	PcP	15 04 54.0	+0.1
	comp=Z,14nm,0.8s,baz=255,slow=1.0,SNR=7.1						
MJAR				ScP	ScP	15 08 34.9	+0.2
	comp=Z,17nm,1.0s,baz=261,slow=2.7,SNR=10						
MJAR				LR	LR	15 14 46.0	
	comp=Z,26µm,19.2s,baz=260,slow=39						

MJAR				P3KPbc		15 33 55.2	
	comp=Z,1.2nm,0.7s,baz=100,slow=4.2,SNR=4.2						
	comp=Z,19nm,0.9s						
KLR	**Kul'dur**	**29.26**	**37**	LR	LR	15 15 10.2	
	comp=Z,25µm,18.1s,baz=237,slow=40						
KLR	**Kul'dur**	**29.26**	**37**	*d i*P	**P**	**15 01 47.0**	**-0.3**
KLR				pmax	pmax		
	comp=Z,31nm,1.0s						
KLR				MLR	MLR		
	comp=Z,24µm,18.0s						
DRK	**Karamyk**	**29.49**	**301**	IAmb	IAmb	15 02 12.7	
	comp=Z,311nm,1.4s						
ZALV	**Zalesovo Beam**	**29.50**	**336**	P	**P**	**15 01 48.9**	**-0.4**
ZALV	**Zalesovo Beam**	**29.50**	**336**	P	**P**	**15 01 48.5**	**-0.8**
	comp=Z,92nm,0.8s,baz=134,slow=8.5,SNR=130						
ZALV				ScP	**ScP**	**15 08 36.2**	**+0.8**
	comp=Z,16nm,0.9s,baz=103,slow=4.7,SNR=4.8						
ZALV				PKiKP	**PKiKP**	**15 12 27.3**	**-0.1**
	comp=Z,2.9nm,0.7s,baz=202,slow=2.7,SNR=3.8						
ZALV				LR	LR	15 14 30.1	
	comp=Z,17µm,21.4s,baz=144,slow=38						
ZALV				P3KPbc		15 33 53.9	
	comp=Z,1.8nm,0.7s,baz=335,slow=6.6,SNR=6.5						
	comp=Z,92nm,0.8s						
ZALV	**Zalesovo Beam**	**29.50**	**336**	P	**P**	**15 01 48.9**	**-0.4**
BTLS	**Baital**	**29.60**	**313**	*e*P	**P**	**15 01 49.6**	**-0.7**
BTLS	**Baital**	**29.60**	**313**	*e*P	**P**	**15 01 49.6**	**-0.7**
KURBB	**Kurchatov Arra**	**29.88**	**325**	P	**P**	**15 01 52.5**	**-0.1**
	comp=Z,105nm,1.0s,baz=133,slow=9.3,SNR=271						
KURBB				ScP	**ScP**	**15 08 37.6**	**+0.9**
	comp=Z,6.7nm,0.2s,baz=146,slow=2.6,SNR=4.5						
KURBB				LR	LR	15 15 22.5	
	comp=Z,12µm,18.6s,baz=128,slow=39						
KURBB				P3KPbc		15 33 52.4	
	comp=Z,1.0nm,0.4s,baz=308,slow=4.7,SNR=15						
	comp=Z,105nm,1.0s						
KURK	**Kurchatov**	**29.89**	**326**	P	**P**	**15 01 52.4**	**-0.3**
KURK				IAmb	IAmb	15 01 54.7	
	comp=Z,266nm,1.2s						
KURK	**Kurchatov**	**29.89**	**326**	P	**P**	**15 01 51.7**	**-1.0**
KURK				S	**S**	**15 06 50.8**	**+1.7**
KURK	**Kurchatov**	**29.89**	**326**	*c i*P	**P**	**15 01 51.9**	**-0.9**
KURK				pmax	pmax		
	comp=Z,392nm,1.7s						
KURK				MLR	MLR		
	comp=Z,11µm,17.0s						
SISI	**Saibi**	**30.04**	**192**	P	**P**	**15 01 55.1**	**+0.7**
	comp=Z,149nm,1.2s						
POO	**Poona**	**30.07**	**258**	*e*P	**P**	**15 01 52.9**	**-1.8**
POO				IAmb	IAmb	15 01 57.6	
	comp=Z,103nm,0.7s						
TEY	**Ternei**	**30.12**	**48**	⇓*e*P	**P**	**15 01 54.5**	**-0.4**
TEY				*e*S	**S**	**15 06 48.5**	**-4.3**
TEY				pmax	pmax		
	comp=E,10.0nm,1.1s						
TEY				pmax	pmax		
	comp=Z,20nm,0.9s						
TEY				MLR	MLR		
	comp=E,19µm,12.0s						
TEY				MLR	MLR		
	comp=N,24µm,15.0s						
TEY				MLR	MLR		
	comp=Z,38µm,14.0s						
BOD	**Bodaibo**	**30.13**	**10**	*e*P	**P**	**15 01 55.5**	**+0.7**
BOD				pmax	pmax		
	comp=Z,194nm,1.6s						
ZEA	**Zeya**	**30.18**	**27**	*i* P	**P**	**15 01 55.8**	**+0.4**
KAD	**Karad**	**30.31**	**255**	*e*P	**P**	**15 01 55.0**	**-1.9**
KAD				IAmb	IAmb	15 02 00.4	
	comp=Z,138nm,1.0s						
GAR	**Garm**	**30.53**	**299**	IAmb	IAmb	15 02 02.1	
	comp=Z,410nm,1.7s						
DZA	**Taraz**	**30.69**	**307**	*e*P	**P**	**15 01 59.5**	**-0.5**
DZA	**Taraz**	**30.69**	**307**	*e*P	**P**	**15 01 59.5**	**-0.5**
SMKI	**Samarinda**	**30.97**	**156**	P	**P**	**15 02 05.5**	**+2.9**
	comp=Z,367nm,1.5s						
PALK	**Pallekele**	**31.04**	**232**	P	**P**	**15 02 04.1**	**+0.7**
PALK				IAmb	IAmb	15 02 07.9	
	comp=Z,166nm,1.0s						
PALK	**Pallekele**	**31.04**	**232**	LR	LR	15 16 38.8	
	comp=Z,9µm,18.4s,baz=47,slow=40						
PALK	**Pallekele**	**31.04**	**232**	P	**P**	**15 02 04.4**	**+1.0**
PALK				P	**P**	**15 02 04.4**	**+1.0**
PALK				S	**S**	**15 07 12.1**	**+4.2**
PALK				S	**S**	**15 07 12.1**	**+4.2**
PALK	**Pallekele**	**31.04**	**232**	*d i*P	**P**	**15 02 03.7**	**+0.3**
PALK				pmax	pmax		
	comp=Z,165nm,0.9s						
PALK				MLR	MLR		
	comp=Z,10µm,18.0s						
TPI	**Tanjungpandan**	**31.05**	**175**	P	**P**	**15 02 05.6**	**+2.3**
	comp=Z,1µmcomp=Z,88nm,0.8s						
TOLI2	**Tolitoli**	**31.05**	**148**	IAmb	IAmb	15 02 07.4	
	comp=Z,163nm,0.7s						
TOLI2	**Tolitoli**	**31.05**	**148**	P	**P**	**15 02 03.9**	**+0.6**
KBL	**Kabul**	**31.11**	**291**	P	**P**	**15 02 04.7**	**+0.6**
KBL				IAmb	IAmb	15 02 30.1	
	comp=Z,137nm,1.2s						
KBL	**Kabul**	**31.11**	**291**	P	**P**	**15 02 04.4**	**+0.3**
	SNR=57						
KBL				S	**S**	**15 07 09.8**	**+0.7**
KBL	**Kabul**	**31.11**	**291**	P	**P**	**15 02 04.7**	**+0.6**
KBL				pmax	pmax		
	comp=Z,137nm,1.3s						
KK31	**Karatay Array**	**31.32**	**307**	IAmb	IAmb	15 02 07.8	
	comp=Z,226nm,1.6s						
KK31	**Karatay Array**	**31.32**	**307**	P	**P**	**15 02 05.1**	**-0.5**
KKAR	**Karatay Array**	**31.32**	**307**	P	**P**	**15 02 05.6**	**0.0**
KKAR	**Karatay Array**	**31.32**	**307**	IAmb	IAmb	15 02 07.8	
	comp=Z,237nm,1.6s						
KKAR	**Karatay Array**	**31.32**	**307**	P	**P**	**15 02 05.6**	**0.0**
MPSI	**Mapaga**	**31.34**	**150**	P	**P**	**15 02 07.9**	**+2.0**
IUG	**Iuzhnay**	**31.41**	**305**	*e*P	**P**	**15 02 05.9**	**-0.5**
IUG				pmax	pmax		
	comp=Z,181nm,1.5s						
IUG	**Iuzhnay**	**31.41**	**305**	*e*P	**P**	**15 02 06.0**	**-0.5**
	comp=Z,181nm,1.5s						
SGSI	**Sangihe**	**31.41**	**138**	P	**P**	**15 02 09.3**	**+2.7**
	comp=Z,337nm,0.8s						
KOD	**Kodaikanal**	**31.44**	**240**	*e*P	**P**	**15 02 05.6**	**-1.6**
KOD				IAmb	IAmb	15 02 10.1	
	comp=Z,97nm,0.8s						
SIMJ	**Simiganj**	**31.48**	**298**	P	**P**	**15 02 06.8**	**-0.4**
BKB	**Balikpapan**	**31.61**	**157**	P	**P**	**15 02 09.7**	**+1.4**
	comp=Z,4µmcomp=Z,407nm,1.1s						
CHM	**Chimkent**	**31.76**	**305**	*e*P	**P**	**15 02 09.0**	**-0.4**
CHM				MLR	MLR		
	comp=Z,6µm,15.0s						
CHM	**Chimkent**	**31.76**	**305**	*e*P	**P**	**15 02 09.1**	**-0.4**
CHM				LR	LR	15 15 50.8	
	comp=Z,6µm,14.9s						
BRLS	**Borolday**	**31.78**	**307**	*e*P	**P**	**15 02 09.4**	**-0.2**
BRLS	**Borolday**	**31.78**	**307**	*e*P	**P**	**15 02 09.5**	**-0.2**
KSI	**Kapahiang**	**31.90**	**184**	P	**P**	**15 02 13.9**	**+3.0**
JTM	**Tenmabayashi**	**32.02**	**58**	IAMs_20	IAMs_20	15 15 33.6	
	comp=Z,20µm,18.0s						
JTM	**Tenmabayashi**	**32.02**	**58**	P	**P**	**15 02 14.8**	**+3.1**
MRSI	**Marisa**	**32.15**	**147**	P	**P**	**15 02 14.5**	**+1.4**
	comp=Z,3µmcomp=Z,358nm,0.8s						
PCI	**Palu**	**32.42**	**151**	P	**P**	**15 02 17.1**	**+1.7**
	comp=Z,3µmcomp=Z,223nm,1.2s						
GRNR	**Gornyy**	**32.63**	**38**	⇓*i*P	**P**	**15 02 14.7**	**-2.2**
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
GRNR				MLR	MLR		
	comp=E,10µm,16.0s						
GRNR				MLR	MLR		
	comp=N,14µm,12.0s						
GRNR				MLR	MLR		
	comp=Z,17µm,14.0s						
BRZS	**Berezniki**	**32.64**	**320**	*e*P	**P**	**15 02 16.6**	**-0.4**
BRZS	**Berezniki**	**32.64**	**320**	*e*P	**P**	**15 02 16.7**	**-0.4**
MDSI	**Maura Dua**	**32.66**	**181**	P	**P**	**15 02 17.6**	**+0.1**
	comp=Z,2µmcomp=Z,110nm,1.2s						
JCJ	**Chichijima**	**32.92**	**83**	P	**P**	**15 02 17.9**	**-1.9**
JCJ				IAmb	IAmb	15 02 35.3	
	comp=Z,117nm,0.6s						
JCJ	**Chichijima**	**32.92**	**83**	LR	LR	15 15 30.7	
	comp=Z,5µm,19.3s,baz=135,slow=36						
KMSI	**Cibinong**	**33.10**	**143**	P	**P**	**15 02 23.1**	**+1.7**
LWLI	**Liwa**	**33.19**	**182**	P	**P**	**15 02 25.9**	**+3.6**
APSI	**Ampana**	**33.23**	**148**	P	**P**	**15 02 24.1**	**+1.6**
	comp=Z,4µmcomp=Z,500nm,1.1s						
ERM	**Erimo**	**33.80**	**56**	P	**P**	**15 02 27.2**	**-0.1**
ERM	**Erimo**	**33.80**	**56**	IAMs_20	IAMs_20	15 16 50.8	
	comp=Z,24µm,18.0s						
ERM	**Erimo**	**33.80**	**56**	P	**P**	**15 02 30.3**	**+3.1**
ERM	**Erimo**	**33.80**	**56**	⇑*e*P	**P**	**15 02 27.9**	**+0.7**
ERM				pmax	pmax		
	comp=Z,50nm,0.9s						
ERM				MLR	MLR		
	comp=Z,22µm,18.0s						
JEM	**Erimo**	**33.80**	**56**	P	**P**	**15 02 30.2**	**+3.0**
LUWI	**Luwuk**	**33.88**	**147**	P	**P**	**15 02 29.2**	**+1.1**
LUWI	**Luwuk**	**33.88**	**147**	P	**P**	**15 02 28.3**	**+0.2**
	comp=Z,5µmcomp=Z,551nm,1.2s						
ASAJ	**Asahikawa**	**33.88**	**52**	LR	LR	15 15 57.4	
	comp=Z,8µm,20.8s,baz=260,slow=36						
JKA	**Kamikawa-asahi**	**33.88**	**52**	IAmb	IAmb	15 02 57.5	
	comp=Z,213nm,1.6s						
SBJI	**Serang**	**34.30**	**178**	P	P	15 02 37.9	+6.2
TTSI	**Tana Toraja**	**34.35**	**153**	P	**P**	**15 02 33.7**	**+1.5**
	comp=Z,2µmcomp=Z,198nm,1.3s						
CGJI	**Cibinong**	**34.77**	**179**	P	**P**	**15 02 37.7**	**+1.8**
YSS	**Yuzhno-Sakhali**	**34.81**	**47**	P	**P**	**15 02 35.3**	**-0.6**
YSS				IAMs_20	IAMs_20	15 16 31.4	
	comp=Z,21µm,20.0s						
YSS	**Yuzhno-Sakhali**	**34.81**	**47**	P	**P**	**15 02 38.2**	**+2.3**
YSS	**Yuzhno-Sakhali**	**34.81**	**47**	*e*P	**P**	**15 02 35.0**	**-0.9**
YSS				*e*		15 05 11.3	
YSS				*e*S	**S**	**15 08 02.0**	**-3.7**
YSS				*e*SS	**SnSn**	**15 10 17.0**	**-2.7**
YSS				pmax	pmax		
	comp=Z,70nm,1.0s						
YSS				pmax	pmax		
	comp=E,30nm,1.1s						
YSS				pmax	pmax		
	comp=Z,700nm,3.3s						
YSS				smax	smax		
	comp=N,1µm,13.1s						
YSS				smax	smax		
	comp=E,2µm,12.3s						
YSS				MLR	MLR		
	comp=E,26µm,16.0s						
YSS				MLR	MLR		
	comp=Z,36µm,16.0s						
YSS				MLR	MLR		
	comp=N,26µm,14.0s						
TNTI	**Ternate**	**34.83**	**138**	IAmb	IAmb	15 02 39.5	
	comp=Z,102nm,0.8s						
TNTI	**Ternate**	**34.83**	**138**	P	**P**	**15 02 37.1**	**+0.7**
	comp=Z,132nm,0.9s						
LEM	**Lembang**	**35.08**	**175**	P	**P**	**15 02 38.5**	**-0.2**
	comp=Z,237nm,0.8s,baz=346,slow=5.9,SNR=32						
	comp=Z,237nm,0.8s						
UGL	**Uglegorsk**	**35.12**	**44**	*e*P	P	15 02 31.9	-6.7
UGL				*e*S	**S**	**15 08 03.9**	**-6.6**
UGL				pmax	pmax		
	comp=Z,400nm,0.9s						
UGL				smax	smax		
	comp=N,2µm,4.6s						
UGL				smax	smax		
	comp=E,2µm,4.6s						
UGL				MLR	MLR		
	comp=E,20µm,7.0s						
UGL				MLR	MLR		
	comp=N,16µm,10.0s						
UGL				MLR	MLR		
	comp=Z,24µm,10.0s						
SPSI	**Sidrap Palu**	**35.17**	**154**	P	**P**	**15 02 40.5**	**+1.2**
	comp=Z,2µmcomp=Z,197nm,1.0s						
BVAR	**Borovoye Array**	**35.40**	**324**	P	**P**	**15 02 40.5**	**-0.5**
	comp=Z,44nm,0.7s,baz=119,slow=9.2,SNR=99						
BVAR				ScP	**ScP**	**15 08 55.6**	**-0.1**
	comp=Z,23nm,0.9s,baz=131,slow=6.1,SNR=6.5						
BVAR				LR	LR	15 18 22.2	
	comp=Z,18µm,19.9s,baz=126,slow=38						
	comp=Z,44nm,0.7s						
BRVK	**Borovoye**	**35.47**	**324**	P	**P**	**15 02 40.8**	**-0.8**
BRVK	**Borovoye**	**35.47**	**324**	IAMs_20	IAMs_20	15 18 02.8	
	comp=Z,21µm,21.0s						
BRVK	**Borovoye**	**35.47**	**324**	P	**P**	**15 02 41.1**	**-0.5**
BRVK				P	**P**	**15 02 41.1**	**-0.5**
BRVK				S	**S**	**15 08 16.9**	**+1.0**
BRVK				S	**S**	**15 08 16.9**	**+1.0**
BRVK	**Borovoye**	**35.47**	**324**	*ce*P	**P**	**15 02 40.9**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,119nm,1.0s						
BRVK				MLR	MLR		
	comp=Z,17µm,18.0s						
SMRI	**Semarang**	**35.60**	**171**	P	P	15 02 47.9	+4.9
BNSI	**Bone**	**35.70**	**153**	P	**P**	**15 02 45.4**	**+1.5**
	comp=Z,2µmcomp=Z,167nm,1.3s						
GRJI	**Gresik**	**35.82**	**167**	P	P	15 02 51.0	+6.2
NGJI	**Ngawi**	**36.07**	**169**	P	P	15 02 52.3	+5.3
NKL	**Nikolayevsk**	**36.10**	**37**	*e*P	**P**	**15 02 43.9**	**-3.0**
NKL				*e*S	**S**	**15 08 21.9**	**-3.5**
NKL				pmax	pmax		
	comp=E,38nm,0.6s						
NKL				pmax	pmax		
	comp=N,82nm,0.9s						
NKL				pmax	pmax		
	comp=Z,211nm,1.1s						
NKL				smax	smax		
	comp=E,312nm,2.8s						
NKL				smax	smax		
	comp=N,367nm,3.7s						
NKL				MLR	MLR		
	comp=E,19µm,9.0s						
NKL				MLR	MLR		
	comp=N,67µm,11.0s						
NKL				MLR	MLR		
	comp=Z,101µm,12.0s						
KAPI	**Kappang**	**36.12**	**154**	P	**P**	**15 02 46.6**	**-0.9**
KAPI				IAmb	IAmb	15 02 52.1	
	comp=Z,215nm,1.2s						
KAPI	**Kappang**	**36.12**	**154**	P	**P**	**15 02 46.1**	**-1.4**
	comp=Z,128nm,0.9s,baz=318,slow=10.0,SNR=16						
	comp=Z,128nm,0.9s						
KAPI	**Kappang**	**36.12**	**154**	P	**P**	**15 02 45.2**	**-2.3**
KAPI				P	**P**	**15 02 45.2**	**-2.3**
KAPI				S	**S**	**15 08 25.8**	**-0.7**
KAPI				S	**S**	**15 08 25.8**	**-0.7**
KAPI	**Kappang**	**36.12**	**154**	*d i*P	**P**	**15 02 47.4**	**-0.1**
KAPI				pmax	pmax		
	comp=Z,147nm,0.9s						
KAPI				MLR	MLR		
	comp=Z,2µm,18.0s						
YUK	**Yuzh-Kuril'sk**	**36.15**	**53**	P	**P**	**15 02 43.4**	**-4.1**
YUK				*e*S	**S**	**15 08 23.6**	**-2.8**
YUK				pmax	pmax		
	comp=Z,626nm,1.2s						
YUK				pmax	pmax		
	comp=N,491nm,1.5s						
YUK				MLR	MLR		
	comp=Z,10µm,20.0s						
YUK				MLR	MLR		
	comp=N,9µm,16.0s						
TYV	**Tymovskoe**	**36.17**	**41**	*e*P	**P**	**15 02 49.3**	**+1.7**
TYV				*e*S	**S**	**15 08 28.6**	**+2.0**
TYV				pmax	pmax		
	comp=Z,68nm,1.3s						
TYV				pmax	pmax		
	comp=Z,500nm,2.3s						
TYV				smax	smax		
	comp=N,24nm,1.8s						
TYV				smax	smax		
	comp=E,37nm,1.8s						
TYV				smax	smax		
	comp=N,500nm,2.3s						
TYV				smax	smax		
	comp=E,700nm,2.3s						
KMMI	**Kalianget**	**36.27**	**165**	P	**P**	**15 02 53.0**	**+4.3**
YOGI	**Yogyakarta**	**36.34**	**171**	P	**P**	**15 02 52.7**	**+3.4**
SANI	**Sanana**	**36.38**	**143**	P	**P**	**15 02 50.0**	**+0.3**
SANI	**Sanana**	**36.38**	**143**	P	**P**	**15 02 49.2**	**-0.5**
WOJI	**Wonogiri, Jawa**	**36.45**	**170**	P	**P**	**15 02 52.5**	**+2.3**
	comp=E,180nm,1.4s						
UGM	**Wanagama**	**36.46**	**171**	P	**P**	**15 02 50.3**	**-0.1**
UGM	**Wanagama**	**36.46**	**171**	P	**P**	**15 02 51.1**	**+0.7**
UGM	**Wanagama**	**36.46**	**171**	P	**P**	**15 02 53.5**	**+3.1**
	comp=E,5µmcomp=E,340nm,1.3s						
BKSI	**Bulukumba**	**36.55**	**154**	P	**P**	**15 02 52.0**	**+0.9**
	comp=E,2µmcomp=E,212nm,1.0s						
PCJI	**Pacitan**	**36.84**	**170**	P	**P**	**15 02 57.7**	**+4.1**
GMJI	**Gumukmas**	**37.34**	**166**	P	**P**	**15 03 00.8**	**+3.0**
YAK	**Yakutsk**	**37.44**	**19**	P	**P**	**15 02 57.1**	**-1.1**
YAK				IAmb	IAmb	15 03 10.4	
	comp=Z,224nm,0.9s						
YAK	**Yakutsk**	**37.44**	**19**	IAMs_20	IAMs_20	15 19 17.5	
	comp=Z,18µm,18.0s						
YAK	**Yakutsk**	**37.44**	**19**	P	**P**	**15 02 57.5**	**-0.7**
	comp=Z,116nm,0.6s,baz=80,slow=0.6,SNR=40						
YAK				S	**S**	**15 08 45.3**	**-0.3**
	comp=Z,54nm,1.1s,baz=87,slow=23,SNR=12						
YAK				LR	LR	15 19 35.8	
	comp=Z,18µm,19.9s,baz=212,slow=38						
	comp=Z,116nm,0.6s						
YAK	**Yakutsk**	**37.44**	**19**	*e*P	**P**	**15 02 57.1**	**-1.1**
YAK				*e*PPP	PPP	15 04 41.5	
YAK				*e*		15 05 14.9	
YAK				*e*S	**S**	**15 08 44.3**	**-1.3**
YAK				*e*		15 13 06.9	
YAK				pmax	pmax		
	comp=Z,120nm,1.1s						
YAK				pmax	pmax		
	comp=N,52nm,1.1s						
YAK				pmax	pmax		
	comp=E,44nm,1.0s						
YAK				smax	smax		
	comp=E,1µm,1.8s						
YAK				smax	smax		
	comp=N,386nm,2.9s						
YAK				MLR	MLR		
	comp=Z,11µm,12.0s						
YAK				MLR	MLR		
	comp=N,5µm,11.0s						
YAK				MLR	MLR		
	comp=E,8µm,11.0s						
BSSI	**Bau Bau, Buton**	**37.44**	**154**	P	**P**	**15 03 00.5**	**+1.8**
	comp=E,2µmcomp=E,115nm,1.1s						
SRBI	**Singaraja**	**37.57**	**163**	P	**P**	**15 03 03.4**	**+3.6**
SRBI				pP	**sP**	**15 03 10.7**	**+3.0**
JAGI	**Jajag, Banyuwa**	**37.68**	**165**	P	**P**	**15 03 01.2**	**+0.4**
JAGI				IAmb	IAmb	15 03 04.0	
	comp=Z,162nm,1.0s						
JAGI	**Jajag, Banyuwa**	**37.68**	**165**	P	**P**	**15 03 01.4**	**+0.6**
JAGI	**Jajag, Banyuwa**	**37.68**	**165**	P	**P**	**15 03 03.1**	**+2.3**
	comp=Z,2µmcomp=Z,176nm,1.5s						
NLAI	**Namlea**	**37.97**	**142**	P	**P**	**15 03 05.4**	**+2.2**
	comp=Z,3µmcomp=Z,432nm,0.9s						
SWI	**Sorong**	**38.49**	**135**	P	**P**	**15 03 07.8**	**+0.2**
	comp=Z,2µmcomp=Z,82nm,1.0s						
SWI				pP	**sP**	**15 03 18.4**	**+2.8**
	comp=Z,2µmcomp=Z,82nm,1.0s						
AAI	**Ambon**	**38.94**	**141**	P	**P**	**15 03 13.2**	**+1.8**
	comp=Z,2µmcomp=Z,246nm,0.9s						
PLAI	**Plampang**	**39.00**	**160**	P	**P**	**15 03 13.8**	**+2.0**
PLAI	**Plampang**	**39.00**	**160**	P	P	15 03 21.3	+9.5
MSAI	**Masohi**	**39.07**	**140**	P	**P**	**15 03 14.3**	**+1.8**
GUMO	**Guam**	**39.88**	**103**	P	**P**	**15 03 19.8**	**+0.5**
GUMO				IAmb	IAmb	15 03 24.2	
	comp=Z,443nm,1.0s						
GUMO	**Guam**	**39.88**	**103**	LR	LR	15 20 25.5	
	comp=Z,3µm,19.2s,baz=294,slow=37						
GUMO	**Guam**	**39.88**	**103**	P	**P**	**15 03 21.8**	**+2.5**
GUMO	**Guam**	**39.88**	**103**	P	**P**	**15 03 19.8**	**+0.5**
GUMO				pmax	pmax		
	comp=Z,443nm,1.0s						
GUMO				MLR	MLR		
	comp=Z,3µm,20.0s						
AB31	**Akbulak array**	**40.06**	**314**	P	**P**	**15 03 19.9**	**-0.5**
ABKAR	**Akbulak array**	**40.06**	**314**	P	**P**	**15 03 20.6**	**+0.2**
ABKAR	**Akbulak array**	**40.06**	**314**	IAmb	IAmb	15 03 22.7	
	comp=Z,187nm,1.1s						
WBSI	**Waikabubak, Su**	**40.28**	**158**	P	**P**	**15 03 21.8**	**-0.8**
EDFI	**Ende, Flores**	**40.29**	**154**	P	**P**	**15 03 22.4**	**-0.3**
	comp=Z,1µmcomp=Z,92nm,1.0s						
MMRI	**Maumere**	**40.40**	**153**	P	**P**	**15 03 24.4**	**+0.8**
MMRI	**Maumere**	**40.40**	**153**	P	**P**	**15 03 23.1**	**-0.5**
BNDI	**Bandanaira**	**40.59**	**140**	P	**P**	**15 03 27.0**	**+1.9**
BNDI	**Bandanaira**	**40.59**	**140**	P	**P**	**15 03 26.2**	**+1.1**
WSI	**Waingapu**	**40.62**	**156**	P	**P**	**15 03 26.2**	**+0.9**
FAKI	**Fak Fak**	**40.70**	**135**	P	**P**	**15 03 26.9**	**+0.8**
FAKI	**Fak Fak**	**40.70**	**135**	P	**P**	**15 03 26.9**	**+0.8**
	comp=Z,130nm,1.0s						
RKPI	**Ransiki, Papua**	**40.86**	**132**	P	**P**	**15 03 30.1**	**+2.7**
	comp=Z,181nm,0.8s						
RKPI				pP	**sP**	**15 03 37.4**	**+2.0**
	comp=Z,181nm,0.8s						
COCO	**West Island**	**41.06**	**192**	P	**P**	**15 03 28.6**	**-0.3**
BASI	**Baing, Sumba**	**41.23**	**156**	P	**P**	**15 03 31.6**	**+1.3**
BASI				pP	**sP**	**15 03 41.2**	**+2.8**
KAAM	**Kaadhehdhoo**	**41.24**	**233**	P	**P**	**15 03 30.7**	**+0.2**
KAAM				IAmb	IAmb	15 03 35.4	
	comp=Z,444nm,1.1s						
KAAM	**Kaadhehdhoo**	**41.24**	**233**	P	**P**	**15 03 32.7**	**+2.2**
	SNR=5.4						
JLN	**Jalan Bani Buh**	**41.44**	**272**	P	**P**	**15 03 32.1**	**0.0**
	SNR=12						
JLN				P	**P**	**15 03 32.1**	**0.0**
	SNR=12						
JLN				S	**S**	**15 09 48.5**	**+1.8**
JLN				S	**S**	**15 09 48.5**	**+1.8**
AKTO	**Aktyubinsk**	**41.56**	**315**	P	**P**	**15 03 33.0**	**+0.3**
	comp=Z,63nm,0.8s,baz=101,slow=7.1,SNR=132						
	comp=Z,63nm,0.8s						
WBK	**Wadi Bani Khal**	**41.69**	**273**	P	**P**	**15 03 34.5**	**+0.3**
	SNR=7.6						
WBK				P	**P**	**15 03 34.5**	**+0.3**
	SNR=7.6						
WBK				S	**S**	**15 09 54.2**	**+3.8**
WBK				S	**S**	**15 09 54.2**	**+3.8**
WSAR	**Wadi Sarin**	**41.80**	**274**	LR	LR	15 24 36.5	
	comp=Z,30nm,18.9s,baz=89,slow=41						
WSAR	**Wadi Sarin**	**41.80**	**274**	P	**P**	**15 03 35.2**	**+0.1**
	SNR=11						
WSAR				S	**S**	**15 09 54.2**	**+2.2**
BAKI	**Biak**	**41.92**	**129**	P	**P**	**15 03 40.3**	**+4.2**
BAKI				pP	**sP**	**15 03 46.0**	**+1.9**
SVE	**Sverdlovsk**	**42.14**	**325**	*d i*P	**P**	**15 03 38.5**	**+1.1**
SVE				*e*		15 05 19.4	
SVE				*e*S	**S**	**15 09 57.8**	**+1.6**
SVE				*e*		15 12 56.1	
SVE				pmax	pmax		
	comp=Z,352nm,1.9s						
SVE				MLR	MLR		
	comp=Z,9µm,18.0s						
BIDO	**Bidbid**	**42.16**	**275**	P	**P**	**15 03 39.0**	**+1.0**
	SNR=8.9						
BIDO				P	**P**	**15 03 39.0**	**+1.0**
	SNR=8.9						
BIDO				S	**S**	**15 09 58.5**	**+1.2**
BIDO				S	**S**	**15 09 58.5**	**+1.2**
KMPI	**Kaimana, Papua**	**42.19**	**134**	P	**P**	**15 03 40.7**	**+2.4**
SOEI	**Soe**	**42.26**	**151**	P	**P**	**15 03 38.4**	**-0.5**
SOEI	**Soe**	**42.26**	**151**	P	**P**	**15 03 39.7**	**+0.8**
SOEI	**Soe**	**42.26**	**151**	P	**P**	**15 03 38.9**	**0.0**
	comp=Z,3µmcomp=Z,435nm,1.0s						
SOEI				pP	**sP**	**15 03 50.5**	**+3.6**
	comp=Z,3µmcomp=Z,435nm,1.0s						
SMDO	**Samad**	**42.36**	**274**	P	**P**	**15 03 40.1**	**+0.3**
	SNR=20						
SMDO				P	**P**	**15 03 40.1**	**+0.3**
	SNR=20						
SMDO				S	**S**	**15 10 00.2**	**-0.3**
SMDO				S	**S**	**15 10 00.2**	**-0.3**
BATI	**Baumata**	**42.41**	**152**	P	**P**	**15 03 38.8**	**-1.2**
	comp=Z,332nm,0.9s,baz=160,slow=0.5,SNR=25						
	comp=Z,332nm,0.9s						
BATI	**Baumata**	**42.41**	**152**	P	**P**	**15 03 39.2**	**-0.8**
SRPI	**Serui, Papua**	**42.51**	**130**	P	**P**	**15 03 42.5**	**+1.6**
	comp=Z,110nm,0.9s						
JMDO	**Jabal Madar**	**42.52**	**273**	P	**P**	**15 03 41.4**	**+0.4**
	SNR=8.5						
JMDO				P	**P**	**15 03 41.4**	**+0.4**
	SNR=8.5						
JMDO				S	**S**	**15 10 05.7**	**+3.0**
JMDO				S	**S**	**15 10 05.7**	**+3.0**
HOQ	**Hoqain**	**42.86**	**275**	P	**P**	**15 03 43.8**	**+0.1**
	SNR=11						
HOQ				P	**P**	**15 03 43.8**	**+0.1**
	SNR=11						
HOQ				S	**S**	**15 10 07.9**	**+0.3**
HOQ				S	**S**	**15 10 07.9**	**+0.3**
MHTO	**MHTO**	**43.08**	**271**	P	**P**	**15 03 45.2**	**-0.3**
	SNR=17						
MHTO				P	**P**	**15 03 45.2**	**-0.3**
	SNR=17						
MHTO				S	**S**	**15 10 10.3**	**-0.6**
MHTO				S	**S**	**15 10 10.3**	**-0.6**
ARTI	**Arti**	**43.13**	**324**	P	**P**	**15 03 45.4**	**0.0**
ARTI				IAmb	IAmb	15 03 48.7	
	comp=Z,539nm,1.6s						
ARTI	**Arti**	**43.13**	**324**	P	**P**	**15 03 45.1**	**-0.3**
	comp=Z,43nm,0.5s,baz=122,slow=4.8,SNR=81						
ARTI				LR	LR	15 23 05.3	
	comp=Z,13µm,18.2s,baz=124,slow=38						

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      comp=Z,43nm,0.5s
ARTI  Arti               43.13 324c iP        P         15 03 44.6 -0.8
ARTI                                                    15 05 25.8
ARTI                                PPP       PPP       15 06 01.0
ARTI                                S         S         15 10 12.3 +1.5
ARTI                                SSS       SSS       15 14 03.0
ARTI                                pmax      pmax
      comp=Z,385nm,1.8s
ARTI                                MLR       MLR
      comp=Z,10µm,16.0s
BSY   Bisya              43.20 274  P         P         15 03 46.9 +0.4
      SNR=20
BSY                                 P         P         15 03 46.9 +0.4
      SNR=20
BSY                                 S         S         15 10 14.0 +1.2
BSY                                 S         S         15 10 14.0 +1.2
SHME  Shamm              43.22 279  P         P         15 03 47.5 +1.0
SHME                                P         P         15 03 47.5 +1.0
SHME                                S         S         15 10 15.5 +2.6
SHME                                S         S         15 10 15.5 +2.6
SHME  Shamm              43.22 279 i P        P         15 03 47.4 +0.8
      SNR=7.8
MDH   Madha              43.27 278  P         P         15 03 48.2 +1.2
MDH                                 P         P         15 03 48.2 +1.2
MDH                                 S         S         15 10 15.9 +2.2
MDH                                 S         S         15 10 15.9 +2.2
MDH   Madha              43.27 278  P         P         15 03 46.4 -0.7
MASF  Masafi             43.37 278  P         P         15 03 48.7 +0.8
MASF                                P         P         15 03 48.7 +0.8
SOHO  SOHO               43.38 276  P         P         15 03 48.3 +0.4
SOHO                                P         P         15 03 48.3 +0.4
SOHO  SOHO               43.38 276 i P        P         15 03 46.6 -1.3
      SNR=13
UOSS  Minazif            43.45 277  P         P         15 03 48.1 -0.4
UOSS  Minazif            43.45 277  P         P         15 03 49.0 +0.5
UOSS                                P         P         15 03 49.0 +0.5
UOSS  Minazif            43.45 277  P         P         15 03 48.4 -0.1
HATD  Hatta, Dubai       43.54 277  P         P         15 03 50.0 +0.7
HATD                                P         P         15 03 50.0 +0.7
HATD  Hatta, Dubai       43.54 277 i P        P         15 03 49.3  0.0
      SNR=5.1
ARQ   Araqi              43.62 275  P         P         15 03 50.5 +0.6
      SNR=11
ARQ                                 P         P         15 03 50.5 +0.6
      SNR=11
ASHO  Ashiyiah           43.65 277  P         P         15 03 50.4 +0.3
      SNR=8.2
ASHO                                P         P         15 03 50.4 +0.3
      SNR=8.2
ASHO  Ashiyiah           43.65 277 i P        P         15 03 50.9 +0.8
      SNR=24
DQM   DQM                43.82 270  P         P         15 03 50.9 -0.6
DQM                                 P         P         15 03 50.9 -0.6
NAZ   Nazwa, Dubai       43.91 277  P         P         15 03 53.4 +1.2
      SNR=8.6
NAZ                                 P         P         15 03 53.4 +1.2
      SNR=8.6
NAZ   Nazwa, Dubai       43.91 277 i P        P         15 03 53.0 +0.8
      SNR=9.1
MA2   Magadan            44.01  32  P         P         15 03 51.9 -0.6
MA2   Magadan            44.01  32  P         P         15 03 52.8 +0.3
      comp=Z,30nm,0.8s,baz=240,slow=7.1,SNR=20
MA2                                 ScP       ScP       15 09 28.6 -0.3
      comp=Z,28nm,1.0s,baz=201,slow=6.9,SNR=4.6
MA2                                 LR        LR        15 22 21.9
      comp=Z,5µm,19.1s,baz=244,slow=36
      comp=Z,30nm,0.8s
MA2   Magadan            44.01  32  P         P         15 03 53.1 +0.6
MA2   Magadan            44.01  32d iP        P         15 03 51.1 -1.4
MA2                                 pmax      pmax
      comp=Z,43nm,0.9s
MA2                                 MLR       MLR
      comp=Z,6µm,14.0s
FAQ   Al Faqa, Dubai     44.04 277  P         P         15 03 53.8 +0.6
      SNR=8.5
FAQ                                 P         P         15 03 53.8 +0.6
      SNR=8.5
FAQ   Al Faqa, Dubai     44.04 277 i P        P         15 03 53.8 +0.6
      SNR=8.3
ALNE  Al Ain             44.09 276  P         P         15 03 54.0 +0.4
      SNR=12
ALNE                                P         P         15 03 54.0 +0.4
      SNR=12
ALNE  Al Ain             44.09 276 i P        P         15 03 54.3 +0.7
      SNR=12
SKR   Severo-Kuril’s     44.28  45  eP        P         15 03 48.5 -6.2
SKR                                 eS        S         15 10 22.7 -5.0
SKR                                 pmax      pmax
      comp=Z,1µm,4.7s
SMPI  Sarmi              44.30 127  P         P         15 03 56.9 +1.6
ASUD  Al Ashush, Dub     44.30 277  P         P         15 03 56.1 +0.8
      SNR=6.9
ASUD                                P         P         15 03 56.1 +0.8
      SNR=6.9
ASUD  Al Ashush, Dub     44.30 277 i P        P         15 03 54.5 -0.8
      SNR=19
AJN   Ajban              44.62 277  P         P         15 03 57.5 -0.3
      SNR=7.0
AJN                                 P         P         15 03 57.5 -0.3
      SNR=7.0
AJN   Ajban              44.62 277 i P        P         15 03 58.2 +0.3
      SNR=9.4
UMZA  Um Al Zommool      45.00 275  P         P         15 04 01.7 +0.8
UMZA                                P         P         15 04 01.7 +0.8
TIXI  Tiksi              45.31  10  P         P         15 04 01.4 -1.2
TIXI                                IAMs_20   IAMs_20   15 24 28.5
      comp=Z,12µm,19.0s
TIXI  Tiksi              45.31  10d iP        P         15 04 01.8 -0.8
TIXI                                pmax      pmax
      comp=Z,180nm,1.3s
TIXI                                MLR       MLR
      comp=Z,11µm,16.0s
PETK  Petropavlovsk-     45.70  42  P         P         15 04 06.2 +0.1
PETK  Petropavlovsk-     45.70  42  P         P         15 04 05.8 -0.3
      comp=Z,9.6nm,0.9s,baz=230,slow=8.2,SNR=11
PETK                                LR        LR        15 25 41.7
      comp=Z,14µm,18.6s,baz=257,slow=39
      comp=Z,9.6nm,0.9s
PETK  Petropavlovsk-     45.70  42  P         P         15 04 06.2 +0.1
GENI  Genyem             45.75 126  P         P         15 04 08.5 +1.6
MZWR  Madinat Zayed      45.81 276  P         P         15 04 07.3 -0.1
MZWR                                P         P         15 04 07.3 -0.1
JAY   Jayapura           46.08 126  P         P         15 04 09.8 +0.2
      comp=Z,61nm,0.9s,baz=281,slow=6.4,SNR=20
JAY                                 S         S         15 10 55.3 +0.7
      comp=Z,2.6nm,0.7s,baz=121,slow=22,SNR=0.9
JAY                                 LR        LR        15 20 55.5
      comp=Z,2µm,21.9s,baz=336,slow=33
      comp=Z,61nm,0.9s
JAY   Jayapura           46.08 126  P         P         15 04 11.8 +2.3
      comp=Z,104nm,0.9s
JAY                                 pP        pP        15 04 15.8 +0.5
      comp=Z,104nm,0.9s
SEY   Seymchan           46.15  28  P         P         15 04 10.0 +0.6
      comp=Z,36nm,0.7s,baz=245,slow=7.7,SNR=46
SEY                                 ScP       ScP       15 09 38.5 +0.8
      comp=Z,20nm,1.1s,baz=278,slow=7.8,SNR=4.5
SEY                                 S         S         15 10 52.4 -2.1
      comp=Z,3.4nm,0.9s,baz=255,slow=23,SNR=1.4
SEY                                 LR        LR        15 24 30.2
      comp=Z,14µm,19.3s,baz=242,slow=37
      comp=Z,36nm,0.7s
SEY   Seymchan           46.15  28c iP        P         15 04 10.1 +0.6
SEY                                 pmax      pmax
      comp=Z,32nm,0.6s
SEY                                 MLR       MLR
      comp=Z,11µm,15.0s
PET   Petropavlovsk      46.25  42  IAMs_20   IAMs_20   15 25 48.7
      comp=Z,13µm,19.0s
PET   Petropavlovsk      46.25  42  eP        P         15 04 05.7 -4.7
PET                                 eS        S         15 10 54.3 -1.8
PET                                 eSS       SS        15 14 14.8 -6.5
PET                                 pmax      pmax
      comp=Z,53nm,1.9s
PET                                 MLR       MLR
      comp=Z,20µm,16.0s
PET                                 MLR       MLR
      comp=Z,20µm,16.0s
JRN   Qarnain Island     46.38 278  P         P         15 04 10.4 -1.4
      SNR=5.3
JRN                                 P         P         15 04 10.4 -1.4
      SNR=5.3
MZR   Muzera             46.39 276  P         P         15 04 11.1 -0.9
      SNR=16
MZR                                 P         P         15 04 11.1 -0.9
      SNR=16
MZR   Muzera             46.39 276 i P        P         15 04 11.8 -0.1
      SNR=27
GHWR  Ruwais             46.63 277  P         P         15 04 13.9 +0.2
GHWR                                P         P         15 04 13.9 +0.2
DMTO  DMTO               46.91 268  P         P         15 04 15.5 -0.6
DOK   Doka               47.30 270  P         P         15 04 18.0 -1.0
DOK                                 P         P         15 04 18.0 -1.0
SLWR  Sila               47.64 278  P         P         15 04 20.9 -0.7
RBK   Rabkut             47.65 268  P         P         15 04 21.4 -0.4
SHMA  Al-Shehemyia       47.77 280  P         P         15 04 21.5 -1.1
SHMA                                P         pP        15 04 26.0 -2.3
      SNR=6.1
TRNA  Turayna            47.86 279  P         P         15 04 23.1 -0.3
      SNR=7.4
WHFO  Wadi Hawf          47.87 269  P         P         15 04 22.4 -1.2
AKT   Akhty              47.89 302  eP        P         15 04 23.2 -0.3
AKT                                 e                   15 05 48.5
AKT                                 e                   15 06 13.4
AKT                                 eS        S         15 11 19.2 -0.9
AKT                                 pmax      pmax
      comp=Z,284nm,1.5s
AKT                                 MLR       MLR
      comp=Z,6µm,13.0s
MAK   Makhachkala        47.99 304  eP        P         15 04 23.4 -0.7
MAK                                 eS        S         15 11 22.6 +1.3
MAK                                 pmax      pmax
      comp=Z,286nm,1.6s
MAK                                 MLR       MLR
      comp=Z,10µm,17.0s
SAKB  Bahrain            48.10 281  P         P         15 04 24.5 -0.8
MTN   Manton Dam         48.18 145  IAmb      IAmb      15 04 31.7
      comp=Z,67nm,0.8s
MTN   Manton Dam         48.18 145  P         P         15 04 27.0 +1.2
SMRA  Abu-Samra          48.20 279  P         P         15 04 24.9 -1.1
      SNR=12
BELG  Belogornoye        48.30 316c iP        P         15 04 25.7 -0.7
BELG                                pmax      pmax
      comp=Z,30nm,1.0s
BELG                                MLR       MLR
      comp=Z,966nm,15.0s
KIRV  Kirov              48.40 325  P         P         15 04 27.2 +0.2
      comp=Z,57nm,0.5s,baz=87,slow=4.4,SNR=47
KIRV                                PP        PP        15 06 20.1 +0.6
      comp=Z,30nm,0.4s,baz=99,slow=8.3,SNR=4.3
KIRV                                LR        LR        15 26 31.8
      comp=Z,8µm,21.8s,baz=115,slow=38
      comp=Z,57nm,0.5s
KIRV  Kirov              48.40 325d iP        P         15 04 27.0  0.0
ABTO  Aybut              48.50 269  P         P         15 04 27.9 -0.6
ABTO                                P         P         15 04 27.9 -0.6
KDU   Kakadu             48.74 143  P         P         15 04 30.4 +0.3
KBD   Kabd               49.73 285  P         P         15 04 37.2 -0.5
GNI   Garni              50.26 300  P         P         15 04 41.8  0.0
GNI                                 IAmb      IAmb      15 04 50.1
      comp=Z,200nm,1.1s
GNI   Garni              50.26 300  LR        LR        15 28 39.8
      comp=Z,3µm,18.8s,baz=98,slow=39
GNI   Garni              50.26 300  P         P         15 04 41.5 -0.3
GNI   Garni              50.26 300c iP        P         15 04 42.0 +0.3
GNI                                 pmax      pmax
      comp=Z,132nm,1.4s
GNI                                 MLR       MLR
      comp=Z,3µm,18.0s
GNI   Garni              50.26 300  P         P         15 04 40.8 -0.9
FITZ  Fitzroy Crossi     50.34 154  P         P         15 04 41.7 -0.6
      comp=Z,58nm,1.0s,baz=354,slow=6.4,SNR=38
FITZ                                LR        LR        15 28 05.8
      comp=Z,2µm,20.3s,baz=338,slow=39
      comp=Z,58nm,1.0s
FITZ  Fitzroy Crossi     50.34 154  P         P         15 04 42.5 +0.2
TRLG  Trialeti           50.60 302  P         P         15 04 44.5 +0.2
MANU  Manus Island       50.71 119  P         P         15 04 45.1 -0.2
MANU                                IAmb      IAmb      15 04 50.1
      comp=Z,292nm,1.3s
NCK   Nalchik            50.82 305⇑ iP        P         15 04 45.9 +0.1
NCK                                 pmax      pmax
      comp=Z,56nm,1.2s
NCK                                 MLR       MLR
      comp=Z,5µm,19.0s
GOF   Gofitskoye         51.12 307c iP        P         15 04 49.2 +1.2
GOF                                 eS        S         15 12 08.1 +3.1
MBWA  Marble Bar         51.26 162  P         P         15 04 49.0 -0.2
MBWA                                IAmb      IAmb      15 04 51.9
      comp=Z,149nm,0.9s
MBWA  Marble Bar         51.26 162  P         P         15 04 47.3 -1.9
MBWA                                P         P         15 04 47.3 -1.9
MBWA  Marble Bar         51.26 162  P         P         15 04 48.6 -0.6
KBZ   Khabaz             51.31 305  P         P         15 04 49.5 +0.1
      comp=Z,50nm,0.9s,baz=76,slow=9.0,SNR=59
KBZ                                 LR        LR        15 29 43.7
      comp=Z,5µm,19.7s,baz=88,slow=40
      comp=Z,50nm,0.9s
KBZ   Khabaz             51.31 305d iP        P         15 04 49.2 -0.2
KBZ                                 pmax      pmax
      comp=Z,55nm,0.9s
KBZ                                 MLR       MLR
      comp=Z,6µm,15.0s
KIV   Kislovodsk         51.44 305  P         P         15 04 50.6 +0.1
KIV   Kislovodsk         51.44 305  P         P         15 04 50.9 +0.4
KIV   Kislovodsk         51.44 305  eP        P         15 04 50.4 -0.1
KIV                                 e                   15 06 47.2
KIV                                 eS        S         15 12 10.9 +1.2
KIV                                 pmax      pmax
      comp=Z,265nm,4.1s
KIV                                 pmax      pmax
      comp=Z,322nm,1.1s
KIV                                 MLR       MLR
      comp=Z,5µm,17.0s
KIV   Kislovodsk         51.44 305 i P        P         15 04 50.9 +0.4
      SNR=49
KARS  Kars               51.47 301  IAMs_20   IAMs_20   15 29 21.8
      comp=Z,9µm,20.0s
SHA1  Shidzhatmaz        51.48 305c iP        P         15 04 50.7 -0.3
GIRL  Giralia            51.49 169  P         P         15 04 51.5 +0.6
PSA00 Pilbara Seismi     51.69 162  P         P         15 04 51.8 -0.5
PSA00 Pilbara Seismi     51.69 162  P         P         15 04 51.6 -0.8
PSA00                               IAmb      IAmb      15 05 02.8
      comp=Z,69nm,0.9s
PSA00 Pilbara Seismi     51.69 162  P         P         15 04 52.3 -0.1
GEVA  Gevas              51.78 298  P         P         15 04 53.6 +0.3
GEVA                                IAmb      IAmb      15 04 58.3
      comp=Z,225nm,1.7s
VRH   Novokhopyorsk      51.88 314  eP        P         15 04 52.5 -1.1
VRH                                 eS        S         15 12 12.5 -2.9
VRH                                 pmax      pmax
      comp=Z,168nm,0.7s
VRH                                 pmax      pmax
      comp=Z,1µm,2.1s
VRH                                 smax      smax
      comp=N,1µm,8.0s
VRH                                 MLR       MLR
      comp=Z,6µm,12.0s
GURO  Guroymak-BITLI     52.54 298  IAmb      IAmb      15 05 02.0
      comp=Z,161nm,1.1s
LABN  Labinsk            52.79 306  eP        P         15 05 01.8 +1.4
LABN                                e*PP      pP        15 05 04.8 -1.4
LABN                                eS        S         15 12 33.8 +5.7
LABN                                pmax      pmax
      comp=Z,99nm,1.1s
ERBR  Yeremizino-Bor     52.88 308  eP        P         15 05 00.2 -0.8
ERBR                                e*PP      pP        15 05 04.3 -2.5
ERBR                                eS        S         15 12 31.6 +2.5
ERBR                                pmax      pmax
      comp=Z,265nm,1.1s
ERBR                                MLR       MLR
      comp=Z,6µm,19.0s
RAYN  Ar Rayn            53.20 279  P         P         15 05 03.4 -0.4
RAYN  Ar Rayn            53.20 279  P         P         15 05 03.4 -0.4
RAYN  Ar Rayn            53.20 279  P         P         15 05 03.4 -0.4
RAYN                                pmax      pmax
      comp=Z,198nm,0.7s
RAYN                                MLR       MLR
      comp=Z,4µm,20.0s
RAYN  Ar Rayn            53.20 279 i P        P         15 05 04.0 +0.2
      SNR=33
BILL  Bilibino           53.36  24  P         P         15 05 04.0 -0.3
BILL                                IAmb      IAmb      15 05 05.8
      comp=Z,146nm,1.3s
BILL  Bilibino           53.36  24c iP        P         15 05 03.1 -1.2
BILL                                pmax      pmax
      comp=Z,177nm,1.7s
BILL                                MLR       MLR
      comp=Z,19µm,18.0s
VSLR  Vesyoloye          53.40 305d iP        P         15 05 05.1 +0.1
VSLR                                pmax      pmax
      comp=Z,253nm,1.0s
VSLR                                MLR       MLR
      comp=Z,3µm,15.0s
VORD  Divnogorie         53.42 314  eP        P         15 05 03.2 -1.7
VORD                                e                   15 05 03.4
VORD                                eS        S         15 12 34.3 -2.0
VORD                                pmax      pmax
      comp=Z,110nm,1.2s
VORD                                smax      smax
      comp=N,280nm,5.6s
VORD                                MLR       MLR
      comp=Z,2µm,11.0s
VORR  Voronezh           53.46 315  eP        P         15 05 05.1 -0.1
VORR                                eS        S         15 12 35.3 -1.5
VORR                                pmax      pmax
      comp=Z,500nm,1.1s
VORR                                pmax      pmax
      comp=Z,137nm,0.5s
VORR                                smax      smax
      comp=N,100nm,4.3s
VORR                                MLR       MLR
      comp=Z,4µm,11.0s
VSR   Storozhevoye       53.49 314  eP        P         15 05 03.8 -1.7
VSR                                 e                   15 05 05.2
VSR                                 eS        S         15 12 36.2 -1.1
VSR                                 pmax      pmax
      comp=Z,130nm,0.8s
VSR                                 smax      smax
      comp=N,1µm,8.1s
SOC   Sochi              53.62 305  eP        P         15 05 06.5  0.0
SOC                                 i                   15 07 01.8
SOC                                 ePPP      PPP       15 08 10.2
SOC                                 eS        S         15 12 38.8 -0.5
SOC                                 eSS       SKiKP     15 16 22.9 +2.0
SOC                                 pmax      pmax
      comp=Z,180nm,1.3s
SOC                                 MLR       MLR
      comp=Z,4µm,15.0s
LPSR  Galich'ya Gora     53.62 316  eP        P         15 05 03.0 -3.4
LPSR                                e                   15 05 04.2
LPSR                                eS        S         15 12 33.3 -5.7
LPSR                                pmax      pmax
      comp=Z,310nm,1.0s
LPSR                                smax      smax
      comp=N,740nm,7.4s
LPSR                                MLR       MLR
      comp=Z,5µm,13.0s
MARD  Mardin             53.73 297  IAmb      IAmb      15 05 11.4
      comp=Z,130nm,0.9s
KLMR  Klimovskoe         53.73 326d iP        P         15 05 04.1 -3.0
KLMR                                e                   15 06 09.5
KLMR                                S         S         15 12 37.2 -3.1
KLMR                                SS        SKiKP     15 16 18.2 -2.3
KLMR                                SSS       SSS       15 18 12.6
KLMR                                pmax      pmax
      comp=Z,586nm,1.2s
KLMR                                MLR       MLR
      comp=Z,5µm,13.0s
MOS   Moscow             54.41 320  eP        P         15 05 11.1 -1.0
MOS                                 eS        S         15 12 48.8 -0.7
MOS                                 pmax      pmax
      comp=Z,1µm,1.7s
MOS                                 pmax      pmax
      comp=E,500nm,1.7s
MOS                                 pmax      pmax
      comp=Z,661nm,1.2s
MOS                                 pmax      pmax
      comp=E,278nm,1.3s
MOS                                 pmax      pmax
      comp=N,144nm,1.2s
MOS                                 smax      smax
      comp=E,1µm,3.5s
MOS                                 smax      smax
      comp=N,2µm,3.5s
MOS                                 MLR       MLR
      comp=E,7µm,15.0s
MOS                                 MLR       MLR
      comp=Z,8µm,15.0s
OBN   Obninsk            55.01 319  P         P         15 05 16.1 -0.3
OBN   Obninsk            55.01 319  LR        LR        15 30 13.0
      comp=Z,7µm,19.7s,baz=33,slow=38
OBN   Obninsk            55.01 319c iP        P         15 05 15.4 -1.0
OBN                                 i S       S         15 12 54.8 -2.8
OBN                                 pmax      pmax
      comp=Z,248nm,1.1s
OBN                                 MLR       MLR
      comp=Z,6µm,16.0s
ANN   Anapa              55.11 307  eP        P         15 05 17.1 -0.2
ANN                                 e*PP      pP        15 05 20.3 -2.8
ANN                                 eS        S         15 13 00.0 +0.7
ANN                                 pmax      pmax
      comp=Z,147nm,0.7s
ANN                                 pmax      pmax
      comp=N,30nm,0.6s
ANN                                 pmax      pmax
      comp=E,20nm,0.6s
ANN                                 MLR       MLR
      comp=E,7µm,16.0s
ANN                                 MLR       MLR
      comp=N,8µm,16.0s
ANN                                 MLR       MLR
      comp=Z,5µm,15.0s
PMG   Port Moresby       55.45 126  P         P         15 05 19.5 -0.6
PMG   Port Moresby       55.45 126  P         P         15 05 21.0 +0.9
PMG   Port Moresby       55.45 126  P         P         15 05 19.5 -0.6
PMG                                 pmax      pmax
      comp=Z,542nm,0.9s
SHEM  Shemya Is, Ala     55.55  44  P         P         15 05 20.1 -0.3
      comp=Z,145nm,0.8s,baz=310,slow=4.2,SNR=10
SHEM                                LR        LR        15 29 02.3
      comp=Z,5µm,21.0s,baz=272,slow=36
      comp=Z,145nm,0.8s
SMY   Shemya             55.55  44  P         P         15 05 20.1 -0.3
SMY   Shemya             55.55  44  P         P         15 05 20.1 -0.3
SMY                                 pmax      pmax
      comp=Z,264nm,1.1s
WRAB  Tennant Creek      55.80 146  P         P         15 05 21.7 -0.9
WRAB  Tennant Creek      55.80 146c iP        P         15 05 21.6 -0.9
WRAB                                pmax      pmax
      comp=Z,390nm,0.9s
WRAB                                MLR       MLR
      comp=Z,1µm,21.0s
WRA   Warramunga Arr     55.80 146  P         P         15 05 21.6 -1.0
WRA   Warramunga Arr     55.80 146  P         P         15 05 21.5 -1.1
      comp=Z,258nm,0.9s,baz=334,slow=7.8,SNR=237
WRA                                 S         S         15 13 06.4 -2.7
      comp=Z,5.2nm,0.9s,baz=332,slow=14,SNR=11
WRA                                 PKPPKP              15 35 20.6
      comp=Z,3.0nm,1.0s,baz=121,slow=2.3,SNR=6.9
WRA                                 PKP2bc              15 35 37.5
      comp=Z,12nm,1.1s,baz=156,slow=1.7,SNR=8.6
WRA                                 P4KPbc              15 42 40.4
      comp=Z,1.0nm,0.9s,baz=337,slow=4.9,SNR=5.2
      comp=Z,258nm,0.9s
WRA   Warramunga Arr     55.80 146 i P        P         15 05 21.5 -1.1
WRA                                 pmax      pmax
      comp=Z,275nm,0.9s
COEN  Coen               56.03 134  P         P         15 05 25.0 +0.7
TOKA  Tokat              56.49 301  IAmb      IAmb      15 05 31.1
      comp=Z,151nm,1.4s
LVZ   Lovozero           56.64 335  P         P         15 05 27.2 -0.8
LVZ                                 IAmb      IAmb      15 05 33.9
      comp=Z,94nm,0.9s
LVZ   Lovozero           56.64 335c iP        P         15 05 27.7 -0.3
LVZ                                 pmax      pmax
      comp=Z,85nm,1.0s
LVZ                                 MLR       MLR
      comp=Z,19µm,16.0s
H11S3 WAKE ISLAND Hy     57.00  86  P         P         15 05 33.3 +2.2
      baz=232,slow=5.3,SNR=3.9
H11S1 WAKE ISLAND Hy     57.00  85  P         P         15 05 32.7 +1.6
      baz=232,slow=5.3,SNR=3.0
H11S2 WAKE ISLAND Hy     57.01  86  P         P         15 05 32.7 +1.5
      baz=232,slow=5.3,SNR=3.3
APA   Apatity            57.08 334⇓ iP        P         15 05 29.7 -1.3
APA                                 i                   15 06 23.0
APA                                 i                   15 07 36.0
APA                                 i S       S         15 13 20.0 -4.8
APA                                 i                   15 15 11.0
APA                                 i SS      SS        15 17 16.0 +2.9
APA                                 pmax      pmax
      comp=Z,55nm,1.1s
APA                                 MLR       MLR
      comp=Z,32µm,15.0s
DIKM  Dikmen             57.16 303 ⇓P         P         15 05 33.1 +1.0
SIM   Simferopol'        57.42 307  eP        P         15 05 34.4 +0.5
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SIM				eS	S	15 13 33.0	+2.9
SIM				pmax	pmax		
	comp=Z,200nm,0.8s						
SIM				smax	smax		
	comp=N,140nm,1.3s						
JOF	Joensuu	57.73	329	eP	P	15 05 35.4	-0.3
MSEY	Mahe Island	57.80	244	P	P	15 05 37.2	+0.2
MSEY				IAmb	IAmb	15 05 40.0	
	comp=Z,209nm,1.2s						
MSEY	Mahe Island	57.80	244	P	P	15 05 36.0	-1.0
MSEY	Mahe Island	57.80	244	P	P	15 05 37.2	+0.2
MSEY				pmax	pmax		
	comp=Z,209nm,1.3s						
MSEY				MLR	MLR		
	comp=Z,3µm,19.0s						
FKH	Fakeheh	57.85	294	eP	P	15 05 37.4	+0.2
BEIL	Beino	57.96	295	eP	P	15 05 38.1	+0.2
ASF	Jabal al Asfar	57.99	292	LR	LR	15 36 00.2	
	comp=Z,7µm,18.2s,baz=107,slow=42						
MORW	Morawa	58.09	169	P	P	15 05 38.9	+0.4
MORW				IAmb	IAmb	15 05 41.3	
	comp=Z,154nm,1.4s						
MORW	Morawa	58.09	169	P	P	15 05 39.3	+0.7
HWQ	Hawqa	58.22	295	eP	P	15 05 38.9	-0.9
PUL	Pulkovo	58.27	325	⇑eP	P	15 05 40.1	+0.6
PUL				pmax	pmax		
	comp=Z,167nm,0.5s						
PUL				MLR	MLR		
	comp=Z,6µm,18.0s						
ZAHL	Zahle	58.37	294	eP	P	15 05 41.4	+0.5
ILGA	Ilgaz	58.41	303	IAMs_20	IAMs_20	15 35 19.7	
	comp=Z,7µm,20.0s						
RCY	Rachaya	58.51	294	eP	P	15 05 41.2	-0.7
BHL	Bhannes	58.55	294	eP	P	15 05 40.3	-1.8
KIRS	Kirsehir-Merke	58.66	301	⇓P	P	15 05 42.4	-0.4
VADS	Vadso	58.72	337	eP	P	15 05 42.4	-0.1
MSF	Maaselka	58.73	332	P	P	15 05 42.7	0.0
BR131	Keskin Array S	58.74	301	IAmb	IAmb	15 05 45.6	
	comp=Z,72nm,0.8s						
BR131	Keskin Array S	58.74	301	P	P	15 05 43.0	-0.5
	SNR=46						
BR131				P	P	15 05 43.0	-0.5
	SNR=46						
BR131	Keskin Array S	58.74	301	d iP	P	15 05 42.5	-0.9
BRTR	Keskin Array B	58.74	301	P	P	15 05 43.1	-0.3
BRTR	Keskin Array B	58.74	301	P	P	15 05 42.5	-0.9
	comp=Z,48nm,0.9s,baz=117,slow=5.8,SNR=112						
BRTR				PKP2bc		15 35 30.0	
	comp=Z,1.4nm,1.1s,baz=257,slow=4.8,SNR=4.1						
BRTR				LR	LR	15 35 47.3	
	comp=Z,2µm,18.7s,baz=81,slow=41						
	comp=Z,48nm,0.9s						
BRTR	Keskin Array B	58.74	301	iP	P	15 05 42.5	-0.9
BRTR				pmax	pmax		
	comp=Z,49nm,0.9s						
ASAR	Alice Springs	58.78	149	P	P	15 05 43.2	-0.4
ASAR	Alice Springs	58.78	149	P	P	15 05 43.0	-0.6
	comp=Z,128nm,0.9s,baz=328,slow=6.2,SNR=228						
ASAR				S	S	15 13 47.8	-0.5
	comp=Z,2.9nm,1.0s,baz=340,slow=11,SNR=6.6						
ASAR				PKPPKP		15 35 17.8	
	comp=Z,2.2nm,0.8s,baz=151,slow=2.4,SNR=9.1						
ASAR				P4KPbc		15 42 53.6	
	comp=Z,2.1nm,0.8s,baz=336,slow=3.9,SNR=12						
	comp=Z,128nm,0.9s						
ASAR	Alice Springs	58.78	149	P	P	15 05 43.2	-0.4
AS01	Alice Springs	58.80	149	P	P	15 05 44.5	+0.8
CIDE	Kastamonu/Cide	58.81	304	⇓P	P	15 05 44.2	+0.6
AMKA	Amchitka	58.87	45	P	P	15 05 43.3	-0.6
MMAI	Mount Meron Ar	58.98	293	P	P	15 05 44.7	-0.4
	comp=Z,64nm,1.0s,baz=82,slow=8.7,SNR=41						
MMAI				LR	LR	15 36 39.0	
	comp=Z,6µm,19.1s,baz=76,slow=42						
	comp=Z,64nm,1.0s						
QIS	Mount Isa	59.06	142	P	P	15 05 46.3	+0.8
ANTO	Ankara	59.35	302	P	P	15 05 47.2	-0.3
ANTO	Ankara	59.35	302	P	P	15 05 47.3	-0.2
ANTO				P	P	15 05 47.3	-0.2
ANTO	Ankara	59.35	302	P	P	15 05 47.2	-0.3
ANTO				pmax	pmax		
	comp=Z,123nm,0.6s						
KEV	Kevo	59.52	337	P	P	15 05 48.1	0.0
KEV				IAMs_20	IAMs_20	15 33 30.0	
	comp=Z,10µm,18.0s						
KEV	Kevo	59.52	337	P	P	15 05 48.1	0.0
KEV				pmax	pmax		
	comp=Z,330nm,1.2s						
KEV				MLR	MLR		
	comp=Z,10µm,18.0s						
BLDU	Ballidu	59.71	168	P	P	15 05 50.6	+0.8
SGF	Sodankyl	59.71	334	P	P	15 05 50.0	+0.5
AKASG	Malin Array Be	59.80	315	P	P	15 05 49.5	-0.8
AKASG	Malin Array Be	59.80	315	P	P	15 05 49.2	-1.1
	comp=Z,65nm,0.8s,baz=76,slow=6.1,SNR=176						
AKASG				LR	LR	15 33 00.5	
	comp=Z,8µm,18.1s,baz=82,slow=37						
AKASG				PKP2bc		15 35 28.6	
	comp=Z,0.2nm,0.3s,baz=271,slow=3.7,SNR=4.7						
	comp=Z,65nm,0.8s						
AKASG	Malin Array Be	59.80	315	iP	P	15 05 49.2	-1.1
AKASG				pmax	pmax		
	comp=Z,55nm,0.6s						
AKBB	Malin Array Si	59.80	315	IAmb	IAmb	15 05 51.7	
	comp=Z,125nm,0.9s						
AKBB	Malin Array Si	59.80	315	c eP	P	15 05 48.9	-1.4
KIEV	Kiev	59.81	315	P	P	15 05 49.5	-0.8
KIEV				IAmb	IAmb	15 05 51.7	
	comp=Z,112nm,0.9s						
KIEV	Kiev	59.81	315	IAMs_20	IAMs_20	15 33 29.5	
	comp=Z,7µm,20.0s						
KIEV	Kiev	59.81	315	P	P	15 05 49.6	-0.8
KIEV				pmax	pmax		
	comp=Z,113nm,1.0s						
KIEV				MLR	MLR		
	comp=Z,7µm,20.0s						
KIEV	Kiev	59.81	315	iP	P	15 05 49.4	-1.0
	SNR=38						
MTSU	Mount Surprise	59.90	136	P	P	15 05 52.6	+1.2
ARA0	ARCESS Array S	60.05	336	eP	P	15 05 51.7	-0.1
ARCES	ARCESS Array B	60.05	336	P	P	15 05 51.4	-0.4
ARCES				IAmb	IAmb	15 05 53.6	
	comp=Z,156nm,1.1s						
ARCES	ARCESS Array B	60.05	336	P	P	15 05 51.3	-0.4
	comp=Z,57nm,0.7s,baz=85,slow=4.8,SNR=75						
ARCES				LR	LR	15 34 37.1	
	comp=Z,5µm,18.6s,baz=92,slow=39						
	comp=Z,57nm,0.7s						
ARCES	ARCESS Array B	60.05	336	P	P	15 05 51.4	-0.4
ARCES				pmax	pmax		
	comp=Z,156nm,1.1s						
MNK	Minsk	60.06	319	iP	P	15 05 51.9	-0.1
	comp=E,41nm,0.9s						
MNK				iP	P	15 05 51.9	-0.1
	comp=N,89nm,1.0s						
MNK				iP	P	15 05 51.9	-0.1
	comp=Z,163nm,1.0s,baz=82						
MNK				iPP	PP	15 08 04.4	+0.1
MNK				iPPP	PPP	15 09 25.6	
MNK				iS	S	15 14 04.9	+0.8
MNK				iSS	SS	15 18 04.0	+3.5
MNK				iSSS	SSS	15 20 46.6	
MNK				iLQ	LQ	15 27 41.9	
MNK				iLR	LR	15 31 20.3	
MNK				iLRM	MLR	15 33 03.0	
	comp=N,5µm,16.3s						
MNK				iLRM	MLR	15 33 04.4	
	comp=Z,5µm,14.8s						
MNK				iLRM	MLR	15 33 26.4	
	comp=E,3µm,16.8s						
MNK	Minsk	60.06	319	iP	P	15 05 51.9	-0.1
MNK				i		15 08 04.4	
MNK				iS	S	15 14 04.8	+0.8
MNK				iSS	SS	15 18 03.9	+3.5
MNK				pmax	pmax		
	comp=Z,163nm,1.0s						
MNK				pmax	pmax		
	comp=N,89nm,1.0s						
MNK				pmax	pmax		
	comp=E,41nm,0.9s						
MNK				MLR	MLR		
	comp=N,5µm,16.0s						
MNK				MLR	MLR		
	comp=Z,5µm,15.0s						
MNK				MLR	MLR		
	comp=E,3µm,17.0s						
OUL	Oulu	60.06	331	P	P	15 05 52.2	+0.3
PURM	Purcari	60.08	310	⇑P	P	15 05 52.4	+0.1
ATD	Arta Tunnel	60.11	267	P	P	15 05 53.6	+0.5
ATD	Arta Tunnel	60.11	267	LR	LR	15 33 27.7	
	comp=E,96nm,19.0s,baz=54,slow=38						
ATD	Arta Tunnel	60.11	267	P	P	15 05 53.7	+0.6
	SNR=20						
CSS	Mathiatis	60.12	296	P	P	15 05 52.5	-0.3
CSS				IAmb	IAmb	15 06 00.8	
	comp=Z,88nm,0.9s						
VSU	Vasula	60.21	324	c iP	P	15 05 51.3	-1.7
VSU				pmax	pmax		
	comp=Z,327nm,1.0s						
VSU				MLR	MLR		
	comp=Z,8µm,18.0s						
VSU	Vasula	60.21	324	eP	P	15 05 52.1	-0.9
FINES	FINESS Array B	60.24	327	P	P	15 05 53.0	-0.2
FINES	FINESS Array B	60.24	327	P	P	15 05 52.6	-0.5
	comp=Z,79nm,0.8s,baz=96,slow=5.7,SNR=92						
	comp=Z,79nm,0.8s						
HOPEN	Hopen	60.29	345	eP	P	15 05 54.2	+0.9
EIL	Elat	60.30	290	LR	LR	15 35 06.9	
	comp=Z,8µm,21.9s,baz=74,slow=39						
IDID	Didziasalis	60.60	320	eP	P	15 05 55.2	-0.5
NACGM	Naroch	60.64	320	⇑iP	P	15 05 56.8	+0.8
	comp=Z,199nm,1.0s,baz=81						
HAMF	Hammerfest	60.64	338	eP	P	15 05 55.9	+0.1
KIS	Kishinev	60.70	310	eP	P	15 05 56.0	-0.6
	comp=Z,340nm,3.0s						
KIS	Kishinev	60.70	310	ePcP	PcP	15 06 39.0	-1.6
KIS				eS	S	15 14 12.0	-0.5
KIS				eL	L	15 28 06.0	
KIS				LRM	MLR	15 34 12.0	
	comp=Z,2µm,13.0s						
KIS	Kishinev	60.70	310	eP	P	15 05 56.0	-0.6
KIS				i		15 06 39.0	
KIS				eS	S	15 14 12.0	-0.5
KIS				MLR	MLR		
	comp=Z,2µm,13.5s						
MILM	Milestii Mici	60.72	310	eP	P	15 05 54.0	-2.7
	comp=Z,750nm,2.2s						
MILM	Milestii Mici	60.72	310	iPcP	PcP	15 06 34.0	-6.7
MILM	Milestii Mici	60.72	310	ePP	PP	15 08 48.0	+38
MILM				eS	S	15 14 07.0	-5.8
MILM				eL	L	15 28 11.0	
	comp=Z,4µm,33.0s						
MILM				LRM	MLR	15 34 11.0	
	comp=Z,4µm,14.5s						
MILM	Milestii Mici	60.72	310	⇑P	P	15 05 55.9	-0.8
MILM	Milestii Mici	60.72	310	eP	P	15 05 54.0	-2.7
MILM				i		15 06 34.0	
MILM				eS	S	15 14 07.0	-5.8
MILM				pmax	pmax		
	comp=Z,750nm,2.2s						
MILM				MLR	MLR		
	comp=Z,5µm,14.5s						
KEF	Keuruu	60.75	328	eP	P	15 05 56.2	-0.4
SORM	Soroca	60.80	312	⇓P	P	15 05 56.1	-1.1
SORM	Soroca	60.80	312	P	P	15 05 56.0	-1.1
KLBR	Kellerberrin	60.86	167	P	P	15 05 58.5	+0.8
ISAL	Salakas	60.91	320	eP	P	15 05 58.2	+0.3
MUN	Mundaring	60.96	169	P	P	15 05 59.6	+1.3
KIWB	Kanaga Island	60.99	44	P	P	15 05 58.6	+0.2
TLCR		61.07	308	⇑P	P	15 05 59.1	0.0
TLCR		61.07	308	P	P	15 05 59.1	0.0
BORA	Eskisehir	61.10	302	P	P	15 05 59.1	-0.4
BORA				IAmb	IAmb	15 06 01.2	
	comp=Z,86nm,0.7s						
JURR	Jurilovca	61.12	308	⇑P	P	15 06 00.5	+1.1
MEF	Metsahovi	61.20	326	eP	P	15 05 59.4	-0.3
ADK	Adak	61.27	44	P	P	15 05 60.0	-0.3
ADK	Adak	61.27	44	P	P	15 06 01.9	+1.6
ADK	Adak	61.27	44	P	P	15 06 00.0	-0.3
ADK				pmax	pmax		
	comp=Z,38nm,0.9s						
TPGR	Topolog	61.42	308	⇑P	P	15 06 01.7	+0.2
GIUM	Giurgiulesti	61.43	309	⇓P	P	15 06 03.2	+1.7
VLDR	Vladesti	61.44	309	⇓P	P	15 06 01.7	+0.1
VASR	Vaslui	61.47	310	⇓P	P	15 06 02.6	+0.8
TIRR	Tirgusor	61.51	308	IAmb	IAmb	15 06 03.8	
	comp=Z,120nm,1.0s						
TIRR	Tirgusor	61.51	308	⇑P	P	15 06 02.2	+0.1
TIRR	Tirgusor	61.51	308	P	P	15 06 02.2	+0.1
TATR	Tatarca	61.51	309	⇓P	P	15 06 03.2	+1.1
MANR	Mangalia	61.53	307	⇓P	P	15 06 03.3	+1.1
SCTR	Scanteiesti	61.53	309	⇓P	P	15 06 02.5	+0.2
CFR	Carcaliu	61.54	308	⇑P	P	15 06 02.3	0.0
CFR	Carcaliu	61.54	308	P	P	15 06 02.3	0.0
KMBL	Kambalda	61.55	164	P	P	15 06 02.8	+0.4
ISP	Isparta	61.56	300	d iP	P	15 06 01.5	-1.2
ISP				pmax	pmax		
	comp=Z,135nm,0.9s						
ISP				MLR	MLR		
	comp=Z,2µm,21.0s						
MFTR	Murfatlar	61.56	307	⇑P	P	15 06 03.9	+1.4
NEGRR	Negrea	61.64	309	⇑P	P	15 06 03.9	+0.9
VAF	Ylistaro	61.66	329	eP	P	15 06 02.5	-0.3
MTSE	Matsula	61.70	324	eP	P	15 06 03.1	+0.1
IZVR	Izvoarele	61.72	309	⇑P	P	15 06 03.9	+0.5
TLBR	Topalu	61.74	308	⇑P	P	15 06 03.9	+0.2
TUDR		61.77	309	⇓P	P	15 06 05.2	+1.4
HARR	Harsova	61.79	308	⇓P	P	15 06 04.4	+0.4
HARR	Harsova	61.79	308	P	P	15 06 04.4	+0.4
KLYT	Kilyos	61.80	304	⇓P	P	15 06 03.7	-0.4
JETT	Jettan, Norway	61.84	337	eP	P	15 06 03.8	-0.2
ISK	Istanbul-Kandi	61.84	304	P	P	15 06 04.7	+0.3
PSN	Preselentsi	61.89	307	iP	P	15 06 03.9	-0.8
ICOR	Ion Corvin	62.02	307	⇑P	P	15 06 06.8	+1.3
NWAO	Narrogin (SRO)	62.06	168	P	P	15 06 05.6	-0.1
NWAO				IAmb	IAmb	15 06 35.2	
	comp=Z,162nm,1.4s						
NWAO	Narrogin (SRO)	62.06	168	P	P	15 06 05.7	-0.1
	comp=Z,22nm,0.7s,baz=338,slow=5.9,SNR=10						
NWAO				LR	LR	15 33 44.9	
	comp=Z,3µm,21.2s,baz=326,slow=37						
	comp=Z,22nm,0.7s						
NWAO	Narrogin (SRO)	62.06	168	P	P	15 06 05.8	0.0
NWAO				P	P	15 06 05.8	0.0
NWAO	Narrogin (SRO)	62.06	168	P	P	15 06 06.7	+0.9
GAMB	Gambell	62.06	30	IAmb	IAmb	15 06 07.6	
	comp=Z,114nm,1.3s						
GAMB				IAMs_20	IAMs_20	15 35 31.5	
	comp=Z,10µm,21.0s						
GAMB	Gambell	62.06	30	P	P	15 06 05.6	+0.2
	baz=278,SNR=10						
PANC	Panciu	62.07	309	⇑P	P	15 06 06.9	+1.0
VSVD	Vaisvydziai	62.07	321	eP	P	15 06 06.7	+1.0
PABE	Paberze	62.13	321	IAMs_20	IAMs_20	15 36 28.0	
	comp=Z,6µm,19.0s						
PABE	Paberze	62.13	321	eP	P	15 06 06.6	+0.5
ODBI	Odobesti	62.16	309	⇓P	P	15 06 08.2	+1.8
SPA0	Spitsbergen Ar	62.16	347	eP	P	15 06 06.2	+0.2
SPITS	Spitsbergen Ar	62.16	347	P	P	15 06 06.4	+0.4
	comp=Z,54nm,1.0s,baz=99,slow=10,SNR=34						
SPITS				LR	LR	15 36 48.2	
	comp=Z,5µm,18.4s,baz=44,slow=40						
	comp=Z,54nm,1.0s						
AMRR	Amara	62.23	308	⇓P	P	15 06 08.3	+1.4
AMRR	Amara	62.23	308	P	P	15 06 08.3	+1.4
TESR	Tescani	62.26	310	⇓P	P	15 06 06.7	-0.4
GRER		62.30	309	⇑P	P	15 06 09.0	+1.6
CTYL	Yalikoy Yolu	62.30	304	⇓P	P	15 06 09.2	+1.7
TRO	Tromso	62.34	337	eP	P	15 06 07.6	+0.3
VRI	Vrincioaia	62.35	309	⇓P	P	15 06 08.3	+0.4
VRI	Vrincioaia	62.35	309	P	P	15 06 08.2	+0.4
RAF	Rauma	62.37	327	eP	P	15 06 07.4	-0.1
PLOR	Plostina	62.41	309	⇑P	P	15 06 09.1	+0.9
PLOR	Plostina	62.41	309	P	P	15 06 09.1	+0.9
BISRR	Bisoca	62.44	309	⇓P	P	15 06 09.7	+1.3
HSPB	Hornsund (broa	62.46	345	eP	P	15 06 08.4	+0.5
HSPB				eS	S	15 14 34.4	+0.5
HSPB				eL	L	15 36 19.4	
	comp=Z,8µm,20.0s						
ONER	Baraj Valea Uz	62.48	310	⇓P	P	15 06 08.9	+0.3
CTAO	Charters Tower	62.57	136	P	P	15 06 09.6	+0.1
CTAO	Charters Tower	62.57	136	P	P	15 06 10.6	+1.2
CTAO	Charters Tower	62.57	136	P	P	15 06 09.6	+0.1
CTAO				pmax	pmax		
	comp=Z,196nm,1.1s						
ISR	Istrita	62.65	309	⇑P	P	15 06 11.4	+1.6
ISR	Istrita	62.65	309	P	P	15 06 11.4	+1.6
SLIT	Slitere, Latvi	62.67	323	eP	P	15 06 09.6	0.0
ATKA	Atka Island	62.72	43	P	P	15 06 11.3	+1.3
NEHR	Nehoiu	62.75	309	⇑P	P	15 06 11.5	+1.0
TURR	Turia	62.80	310	⇑P	P	15 06 12.1	+1.4
FORT	Forrest	62.81	158	P	P	15 06 11.7	+0.9
FORT				IAmb	IAmb	15 06 39.6	
	comp=Z,76nm,0.8s						
FORT	Forrest	62.81	158	P	P	15 06 11.7	+0.9
SUW	Suwalki	62.86	319	eP	P	15 06 10.5	-0.5
SUW				eS	S	15 14 40.8	+1.2
SUW				eL	L	15 34 26.9	
	comp=Z,8µm,24.6s						
SUW	Suwalki	62.86	319	IAMs_20	IAMs_20	15 34 26.3	
	comp=Z,7µm,19.0s						
SUW	Suwalki	62.86	319	eP	P	15 06 10.7	-0.3
EDC	Edincik	62.90	303	P	P	15 06 11.9	+0.4
OZUR		62.94	310	⇓P	P	15 06 12.0	+0.3
KBS	Kingsbay	62.95	347	P	P	15 06 10.6	-0.6
KBS				IAMs_20	IAMs_20	15 37 11.2	
	comp=Z,7µm,18.0s						
KBS	Kingsbay	62.95	347	P	P	15 06 10.6	-0.6
KBS				pmax	pmax		
	comp=Z,30nm,0.8s						
KBS				MLR	MLR		
	comp=Z,7µm,18.0s						
KBS	Kingsbay	62.95	347	eP	P	15 06 11.4	+0.2
SULR		62.96	308	⇑P	P	15 06 12.8	+1.0
BURAR	Bucovina Array	62.97	312	P	P	15 06 11.7	-0.3
BURAR				IAmb	IAmb	15 06 15.8	
	comp=Z,42nm,0.8s						
BURAR	Bucovina Array	62.97	312	P	P	15 06 11.7	-0.3
BURAR				pmax	pmax		
	comp=Z,42nm,0.7s						
BUR08	Bucovina Ar. S	62.97	312	IAmb	IAmb	15 06 14.0	
	comp=Z,59nm,1.1s						
MLR	Muntele Rosu	62.98	309	IAMs_20	IAMs_20	15 36 33.1	
	comp=Z,7µm,21.0s						
MLR	Muntele Rosu	62.98	309	LR	LR	15 36 44.0	
	comp=Z,6µm,21.6s,baz=65,slow=39						
MLR	Muntele Rosu	62.98	309	⇓P	P	15 06 12.6	+0.5
MLR	Muntele Rosu	62.98	309	P	P	15 06 12.6	+0.5
BOSR	Bodos	63.03	310	⇓P	P	15 06 12.8	+0.5
PBUR	Paburge	63.17	321	eP	P	15 06 13.2	+0.2
DOPR	Dopca	63.24	310	⇑P	P	15 06 14.9	+1.1
JMB	Yambol	63.31	306	iP	P	15 06 13.7	-0.5
TNA	Tin City	63.39	28	IAMs_20	IAMs_20	15 35 30.5	
	comp=Z,9µm,18.0s						
TNA	Tin City	63.39	28	P	P	15 06 14.7	+0.4
	baz=280						
SZH	Strazhitsa	63.51	307	iP	P	15 06 15.4	-0.1
VOIR		63.60	309	⇑P	P	15 06 16.0	-0.2
VOIR		63.60	309	P	P	15 06 15.9	-0.2
MTUR	Matau	63.64	309	⇑P	P	15 06 17.6	+1.1
MTUR	Matau	63.64	309	P	P	15 06 17.5	+1.1
ARCR	ARCALIA	63.66	311	⇑P	P	15 06 17.7	+1.2
TGMR	Targu Mures	63.69	311	⇑P	P	15 06 18.1	+1.4
COPA	Copaceanca	63.81	308	⇓P	P	15 06 18.4	+0.9
ARG	Arkhangelos	63.85	299	P	P	15 06 17.8	-0.1
HUMR	Humele	63.88	308	⇓P	P	15 06 18.6	+0.7
MDB	Medias	63.88	310	⇑P	P	15 06 19.5	+1.5
MDB	Medias	63.88	310	P	P	15 06 19.4	+1.5
C16K	Lisburne Hills	63.89	24	P	P	15 06 17.7	+0.1
	baz=281,SNR=23						
SPIA	Saint Paul Isl	63.92	37	P	P	15 06 16.4	-1.5
	baz=282						
STEI	Steigen	63.94	335	eP	P	15 06 17.5	-0.3
FAUS	Fauske	64.03	335	eP	P	15 06 17.8	-0.7
F14K	Arctic Creek	64.06	28	P	P	15 06 18.9	+0.2
	baz=282						
TNR	Turnu Rosu	64.07	310	⇑P	P	15 06 20.2	+1.0
TNR	Turnu Rosu	64.07	310	P	P	15 06 20.2	+1.0
BMR	Baia Mare	64.08	312	⇓P	P	15 06 20.8	+1.6
BMR	Baia Mare	64.08	312	P	P	15 06 19.3	+0.1
ALN	Alexandroupoli	64.08	304	IAmb	IAmb	15 06 20.3	
	comp=Z,149nm,1.3s						
ALN	Alexandroupoli	64.08	304	P	P	15 06 18.6	-0.7
PVL	Pavlikeni	64.11	307	iP	P	15 06 19.2	-0.3
KWP	Kalwaria Pacla	64.11	314	eP	P	15 06 19.0	-0.4
KWP				eS	S	15 14 57.5	+2.0
KWP				eL	L	15 35 25.6	
	comp=Z,9µm,20.6s						
EZN	Ezine	64.18	303	⇑P	P	15 06 21.1	+1.2
EZN	Ezine	64.18	303	P	P	15 06 20.1	+0.2
TATA	Tatamba Isabel	64.33	116	P	P	15 06 24.3	+3.1
RDO	Rodhopi	64.39	305	IAmb	IAmb	15 06 23.0	
	comp=Z,81nm,1.0s						
KDZ	Kurdzhali	64.39	305	iP	P	15 06 21.4	0.0
VLAD	Vladila	64.42	308	⇓P	P	15 06 21.5	+0.1
P08K	Saint George I	64.42	38	P	P	15 06 21.5	+0.3
	baz=283						
R9F13	Warsaw-Wawer	64.45	317	eP	P	15 06 22.2	+0.7
LOT	Lotru	64.47	310	⇓P	P	15 06 23.0	+1.1
LOF	Lofoten	64.52	335	eP	P	15 06 20.6	-1.1
KOLS	Kolonicke sedl	64.56	314	eP	P	15 06 22.4	+0.1
KOLS				pmax	pmax		
	comp=Z,37nm,0.9s						
KOLS	Kolonicke sedl	64.56	314	eP	P	15 06 22.4	+0.1
KOLS				ePP	PP	15 08 43.1	-1.0
MESR	Meseseni	64.58	312	⇑P	P	15 06 24.0	+1.5
MOR8	Moi Rana	64.61	333	eP	P	15 06 21.0	-1.4
C17K	DeLong Mountai	64.63	24	P	P	15 06 22.3	-0.2
	baz=283,SNR=38						
ANM	Nome	64.65	29	IAmb	IAmb	15 07 33.7	
	comp=Z,60nm,1.1s						
ANM	Nome	64.65	29	P	P	15 06 23.1	+0.5
	baz=283						
F15K	North Star Dit	64.69	27	IAMs_20	IAMs_20	15 35 45.0	
	comp=Z,9µm,20.0s						
F15K	North Star Dit	64.69	27	P	P	15 06 23.4	+0.5
	baz=283,SNR=17						
BEL	Belsk	64.76	317	eP	P	15 06 23.6	+0.1
BEL				eS	S	15 15 05.6	+2.4
BEL				eL	L	15 35 49.0	
	comp=Z,2µm,19.1s						
KARP	Karpathos	64.80	298	eP	P	15 06 23.6	-0.5
RZN	Rozhen	64.81	305	iP	P	15 06 24.4	+0.1
RDOG	Red Dog Mine	64.83	25	P	P	15 06 23.6	-0.2
	baz=283,SNR=6.1						
D17K	Noatak River	64.85	25	P	P	15 06 24.2	+0.4
	baz=283,SNR=68						
B18K	Kokolik River	64.91	23	P	P	15 06 24.7	+0.4
	baz=284,SNR=34						
DEV	Deva	64.94	310	⇑P	P	15 06 25.9	+1.0
DEV	Deva	64.94	310	P	P	15 06 25.8	+1.0
VAGH	Vaagaholmen	64.94	334	eP	P	15 06 23.8	-0.7
A19K	Wainwright	64.96	22	P	P	15 06 24.8	+0.3
	baz=284						
MPEP	Malo Peshtene	65.05	307	P	P	15 06 26.1	+0.5
KONS	Konsvik	65.06	334	eP	P	15 06 24.3	-0.9
HNR	Honiara	65.07	117	P	P	15 06 25.8	-0.2
HNR	Honiara	65.07	117	P	P	15 06 28.4	+2.4
HNR	Honiara	65.07	117	P	P	15 06 25.8	-0.2
HNR				pmax	pmax		
	comp=Z,277nm,0.9s						
STHS	Stebnicka Huta	65.09	314	eP	P	15 06 25.0	-0.8
G15K	Niukluk	65.11	28	P	P	15 06 25.8	+0.3
	baz=284,SNR=20						
STOK	Stokkvaagen	65.14	334	eP	P	15 06 24.6	-1.1
LEIR	Leirfjorden	65.15	333	eP	P	15 06 24.9	-0.9
GZR	Gura Zlata	65.16	310	⇓P	P	15 06 26.3	-0.1
GZR	Gura Zlata	65.16	310	P	P	15 06 26.2	-0.1
VALD	Valchedram	65.17	308	iP	P	15 06 26.6	+0.2
M11K	Mekoryuk	65.25	33	IAMs_20	IAMs_20	15 35 26.8	
	comp=Z,6µm,20.0s						
M11K	Mekoryuk	65.25	33	P	P	15 06 28.1	+1.6
	baz=284						
C18K	Utukok River	65.30	24	P	P	15 06 26.9	0.0
	baz=285,SNR=43						
PUNG	Punghina	65.36	309	⇓P	P	15 06 28.5	+0.9
E17K	Hotham Inlet	65.47	25	P	P	15 06 28.1	+0.2
	baz=285,SNR=74						
SURR	Surduc	65.50	310	⇓P	P	15 06 28.9	+0.4
HERR	Herculane	65.54	309	⇑P	P	15 06 29.1	+0.4
MMB	Musomishta	65.56	305	iP	P	15 06 28.2	-0.8
K13K	Kusilvak Mount	65.59	31	IAMs_20	IAMs_20	15 33 43.8	
	comp=Z,6µm,20.0s						
K13K	Kusilvak Mount	65.59	31	P	P	15 06 29.3	+0.6
	baz=285,SNR=67						
VTS	Vitosha	65.62	307	iP	P	15 06 29.5	0.0
NIE	Niedzica	65.69	314	eP	P	15 06 29.8	+0.1
NIE				eS	S	15 15 18.7	+3.8
NIE				eL	L	15 36 39.9	
	comp=Z,5µm,21.7s						
G16K	Koyuk River	65.69	27	IAMs_20	IAMs_20	15 32 30.6	
	comp=Z,10µm,20.0s						
G16K	Koyuk River	65.69	27	P	P	15 06 29.5	+0.1
	baz=285						

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NIKH  Nikolski High     65.70  41  P         P         15 06 29.8 +0.1
      baz=285
C19K  Lookout Ridge     65.74  23  P         P         15 06 29.9 +0.1
      baz=286,SNR=46
OUR   Ouranopolis       65.75 304  P         P         15 06 30.3 +0.1
OJC   Ojcow             65.78 315 eP         P         15 06 29.6 -0.6
OJC                               eS         S         15 15 17.7 +1.8
OJC                               eL         L         15 36 38.3
      comp=Z,9µm,17.8s
KECS  Kecovo            65.82 313 eP         P         15 06 31.7 +1.2
KECS                               pmax      pmax
      comp=Z,54nm,1.0s
KECS  Kecovo            65.82 313 eP         P         15 06 31.7 +1.2
E18K  Tukpahlearik C    65.84  25  P         P         15 06 30.7 +0.4
      baz=286
F17K  Baldwin Pennin    65.86  26  P         P         15 06 30.3 -0.1
      baz=286
J14K  Nanvaranak Lak    65.88  30  IAMs_20   IAMs_20   15 34 39.4
      comp=Z,6µm,18.0s
J14K  Nanvaranak Lak    65.88  30  P         P         15 06 31.3 +0.7
      baz=285,SNR=32
BZS   Buzias            65.88 310 ⇑P         P         15 06 30.9  0.0
BZS   Buzias            65.88 310  P         P         15 06 30.9  0.0
KKB   Krupnik           65.92 306 i P        P         15 06 30.8 -0.5
H16K  Elim              65.94  28  P         P         15 06 31.2 +0.3
      baz=285,SNR=11
NSS   Namsos            66.02 332 eP         P         15 06 31.0 -0.5
MDVR  Moldovita         66.05 309 ⇓P         P         15 06 32.1  0.0
A21K  Barrow            66.07  20  P         P         15 06 32.6 +0.9
      baz=288,SNR=7.2
PAIG  Paliouri          66.09 304  P         P         15 06 31.4 -1.0
PEHC  Pehcevo           66.10 306 i P        P         15 06 38.5 +5.9
LANS  Liptovska Anna    66.28 314 eP         P         15 06 34.6 +1.1
LANS                               pmax      pmax
      comp=Z,16nm,1.2s
LANS  Liptovska Anna    66.28 314 eP         P         15 06 34.6 +1.1
LANS                              ePP        PP        15 08 59.7 +0.5
B20K  Meade River       66.30  22  IAMs_20   IAMs_20   15 37 57.3
      comp=Z,11µm,20.0s
B20K  Meade River       66.30  22  P         P         15 06 33.4 +0.2
      baz=288
G17K  Kiwalik Mounta    66.35  27  P         P         15 06 33.7 +0.1
      baz=286,SNR=18
PSZ   Piszkesteto       66.36 313  IAmb      IAmb      15 06 38.5
      comp=Z,114nm,1.2s
PSZ   Piszkesteto       66.36 313 eP         P         15 06 34.3 +0.2
BOVS  Bovan             66.39 308 ⇑P         P         15 06 34.3 +0.1
QLP   Quilpie           66.40 142  P         P         15 06 36.1 +1.7
F18K  Selawik           66.43  26  P         P         15 06 34.5 +0.5
      baz=287,SNR=25
D19K  Kuna River        66.43  24  P         P         15 06 34.2 +0.1
      baz=287
NGOA  Tingoa Renbel     66.44 119  P         P         15 06 35.3 +0.4
HFS   Hagfors           66.45 327  P         P         15 06 33.5 -0.8
      comp=Z,76nm,0.8s,baz=88,slow=4.6,SNR=73
      comp=Z,76nm,0.8s
NOR   Nord              66.45 352 i P        P         15 06 33.1 -1.0
NOR                                IAmb      IAmb      15 06 35.7
      comp=Z,86nm,1.1s
GKP   Gorka Klasztor    66.47 319 eP         P         15 06 33.9 -0.7
GKP                               eS         S         15 15 26.1 +1.9
GKP                               eL         L         15 37 03.6
      comp=Z,10µm,21.6s
GKP   Gorka Klasztor    66.47 319 eP         P         15 06 34.9 +0.4
VAY   Valandovo         66.48 305 i P        P         15 06 34.2 -0.6
M13K  Dall Lake         66.61  33  IAMs_20   IAMs_20   15 36 16.7
      comp=Z,8µm,18.0s
M13K  Dall Lake         66.61  33  P         P         15 06 36.3 +1.0
      baz=286,SNR=25
IDI   Anoyia            66.64 299  IAmb      IAmb      15 06 43.6
      comp=Z,121nm,0.9s
IDI   Anoyia            66.64 299  LR        LR        15 43 04.4
      comp=Z,1µm,18.3s,baz=90,slow=43
L14K  Kuka Creek        66.66  32  P         P         15 06 36.6 +1.0
      baz=286,SNR=84
A22K  Sinclair Lake     66.68  21  P         P         15 06 36.0 +0.4
      baz=289,SNR=20
I17K  Unalakleet        66.80  29  IAmb      IAmb      15 06 39.9
      comp=Z,71nm,0.8s
I17K  Unalakleet        66.80  29  P         P         15 06 36.8 +0.3
      baz=287,SNR=10.0
H17K  Granite Mounta    66.81  27  P         P         15 06 37.1 +0.5
      baz=287,SNR=58
UNV   Unalaska Valle    66.82  40  P         P         15 06 36.0 -0.8
UNV                                IAMs_20   IAMs_20   15 34 52.7
      comp=Z,9µm,22.0s
UNV   Unalaska Valle    66.82  40  P         P         15 06 38.0 +1.3
UNV   Unalaska Valle    66.82  40  P         P         15 06 36.2 -0.5
      baz=287
VYHS  Vyhne             66.87 314 eP         P         15 06 37.2 -0.1
VYHS                              e                    15 35 09.6
D20K  Etivluk River     66.89  23  P         P         15 06 36.9 -0.1
      baz=289
K15K  Wolf Creek Mou    66.90  30  IAMs_20   IAMs_20   15 36 54.5
      comp=Z,6µm,20.0s
K15K  Wolf Creek Mou    66.90  30  P         P         15 06 38.4 +1.2
      baz=287,SNR=34
OKC   Ostrava-Krasne    66.91 315 eP         P         15 06 37.5 +0.1
OKC                                AMS       AMS       15 37 20.0
      comp=Z,8µm,16.8s
OKC   Ostrava-Krasne    66.91 315 eP         P         15 06 37.5 +0.1
OKC                                MLR       MLR
      comp=Z,8µm,16.8s
LVA   Lava Point        66.99  40  IAMs_20   IAMs_20   15 34 36.3
      comp=Z,7µm,22.0s
J16K  Anvik River       67.02  29  IAmb      IAmb      15 06 41.3
      comp=Z,66nm,0.8s
J16K                               IAMs_20   IAMs_20   15 37 58.5
      comp=Z,7µm,19.0s
J16K  Anvik River       67.02  29  P         P         15 06 38.8 +0.9
      baz=287,SNR=25
G18K  Tagagawik         67.02  26  IAMs_20   IAMs_20   15 33 35.6
      comp=Z,11µm,22.0s
G18K  Tagagawik         67.02  26  P         P         15 06 37.9  0.0
      baz=288,SNR=21
BUD   Budapest          67.05 313  P         P         15 06 39.3 +0.9
F19K  Shaleruckik Mo    67.07  25  P         P         15 06 37.7 -0.4
      baz=288
E19K  Redstone River    67.07  25  P         P         15 06 38.1 -0.1
      baz=289
SKO   Skopje            67.08 306 i P        P         15 06 38.2 -0.5
L15K  Ungalak Mounta    67.11  31  P         P         15 06 39.2 +0.8
      baz=287,SNR=41
STEB  Steborice         67.11 316 eP         P         15 06 38.8  0.0
AKUT  Akutan            67.15  40  IAmb      IAmb      15 06 41.9
      comp=Z,91nm,1.0s
AKUT                               IAMs_20   IAMs_20   15 35 03.4
      comp=Z,7µm,21.0s
AKUT  Akutan            67.15  40  P         P         15 06 40.9 +2.1
M14K  Bethel            67.16  32  P         P         15 06 39.7 +0.9
      baz=287,SNR=58
E20K  Nigu River        67.18  24  P         P         15 06 39.1 +0.2
      baz=289
FRGS  Fruska Gora       67.23 310⇑iP         P         15 06 38.7 -0.9
MAUC  Maruska           67.25 315 eP         P         15 06 40.2 +0.5
B21K  Ikpikpuk River    67.26  22  P         P         15 06 39.5 +0.2
      baz=290,SNR=30
NC602 NORSAR Array S    67.30 328  IAmb      IAmb      15 06 40.6
      comp=Z,122nm,1.1s
NC602 NORSAR Array S    67.30 328 eP         P         15 06 38.6 -1.1
NORES NORESS Array B    67.30 328  P         P         15 06 39.7  0.0
NORES                              pmax      pmax
      comp=Z,5.0nm,0.7s
MORC  Moravsky Berou    67.30 315  IAMs_20   IAMs_20   15 37 48.0
      comp=Z,9µm,18.0s
MORC  Moravsky Berou    67.30 315 eP         P         15 06 40.0  0.0
MORC                              eS         S         15 15 36.9 +2.4
MORC  Moravsky Berou    67.30 315 ⇓P         P         15 06 40.2 +0.2
MORC  Moravsky Berou    67.30 315  P         P         15 06 40.1  0.0
NB201 NORSAR Array S    67.31 328  IAmb      IAmb      15 06 41.0
      comp=Z,128nm,1.0s
NB2   NORSAR Subarra    67.36 328  P         P         15 06 38.5 -1.6
      comp=Z,327nm,1.4s,baz=73,slow=6.9
NB2   NORSAR Subarra    67.36 328  P         P         15 06 36.0 -4.1
NB2                                pmax      pmax
      comp=Z,206nm,1.6s
NB2   NORSAR Subarra    67.36 328  P         P         15 06 38.5 -1.6
      baz=73,slow=6.9
NOA   NORSAR Array B    67.36 328  P         P         15 06 38.6 -1.6
      comp=Z,49nm,0.9s,baz=73,slow=6.4,SNR=99
NOA                                PP        PP        15 09 08.2 -0.1
      comp=Z,8.2nm,0.8s,baz=68,slow=7.8,SNR=3.5
NOA                                LR        LR        15 36 28.8
      comp=Z,3µm,20.9s,baz=80,slow=36
      comp=Z,49nm,0.9s
C21K  Knifeblade Rid    67.36  22  P         P         15 06 40.5 +0.5
      baz=290,SNR=64
H18K  Honhosa River     67.37  27  IAMs_20   IAMs_20   15 35 13.9
      comp=Z,8µm,20.0s
H18K  Honhosa River     67.37  27  P         P         15 06 40.1  0.0
      baz=288
B22K  Teshekpuk Lake    67.39  21  IAMs_20   IAMs_20   15 34 17.2
      comp=Z,8µm,21.0s
B22K  Teshekpuk Lake    67.39  21  P         P         15 06 40.5 +0.3
      baz=291,SNR=45
SRO   Srobarova         67.41 313 eP         P         15 06 41.0 +0.4
JAVC  Velka Javorina    67.50 314 eP         P         15 06 42.6 +1.3
SBV   Sambava           67.51 240  P         P         15 06 41.2 -0.5
N14K  Kuskokwak Cree    67.55  33  IAMs_20   IAMs_20   15 34 55.6
      comp=Z,5µm,18.0s
N14K  Kuskokwak Cree    67.55  33  P         P         15 06 41.8 +0.6
      baz=288,SNR=32
G19K  Purcell Mounta    67.55  26  P         P         15 06 41.0 -0.2
      baz=289,SNR=14
NAO01 NORSAR Array S    67.57 328  IAmb      IAmb      15 06 42.3
      comp=Z,101nm,1.1s
TEKS  Tekeris           67.61 310⇑iP         P         15 06 40.6 -1.4
BBOO  Buckleboo         67.64 152  IAmb      IAmb      15 06 44.6
      comp=Z,86nm,1.1s
BBOO  Buckleboo         67.64 152  P         P         15 06 43.8 +1.7
J17K  VABM Dome         67.64  29  IAmb      IAmb      15 06 44.6
      comp=Z,153nm,1.4s
J17K  VABM Dome         67.64  29  P         P         15 06 41.5 -0.4
      baz=289,SNR=37
KRLC  Kraliky           67.68 316 eP         P         15 06 42.7 +0.3
KRLC                               AMS       AMS       15 37 30.0
      comp=Z,9µm,17.3s
KRLC  Kraliky           67.68 316 eP         P         15 06 42.7 +0.3
KRLC                               MLR       MLR
      comp=Z,9µm,17.3s
MORH  Mrgy, Hungar      67.68 311 ⇓P         P         15 06 42.2 -0.2
SJES  Sjenica           67.71 308⇑iP         P         15 06 42.2 -0.6
KSP   Ksiaz             67.74 317 eP         P         15 06 42.5 -0.2
KSP                               eS         S         15 15 42.1 +2.5
KSP                               eL         L         15 37 51.5
      comp=Z,11µm,18.2s
F20K  Avaraart Lake     67.76  25  IAmb      IAmb      15 06 44.6
      comp=Z,127nm,1.4s
F20K  Avaraart Lake     67.76  25  P         P         15 06 42.4 -0.1
      baz=290,SNR=56
M15K  Kasigluk River    67.78  32  P         P         15 06 43.3 +0.5
      baz=288,SNR=43
OHR   Ohrid             67.81 306 i P        P         15 06 42.7 -0.7
DPC   Dobruska-Polom    67.88 316 eP         P         15 06 44.3 +0.7
DPC                                AMS       AMS       15 37 50.0
      comp=Z,10µm,17.8s
DPC   Dobruska-Polom    67.88 316 eP         P         15 06 44.3 +0.7
DPC                                MLR       MLR
      comp=Z,10µm,17.8s
OSTC  Ostas             67.88 316 eP         P         15 06 43.8 +0.2
OSTC                               AMS       AMS       15 37 50.0
      comp=Z,10µm,17.8s
OSTC  Ostas             67.88 316 eP         P         15 06 43.8 +0.2
OSTC                               MLR       MLR
      comp=Z,10µm,17.8s
IVA   Berane            67.89 308⇓iP         P         15 06 44.2 +0.3
E21K  Killik River      67.89  23  P         P         15 06 43.3 -0.1
      baz=291
MODS  Modra-Piesok      67.90 314 eP         P         15 06 44.2 +0.4
BBLS  Lazi&#263i        67.91 309⇑iP         P         15 06 42.7 -1.3
OSL   Oslo              67.93 327 eP         P         15 06 44.1 +0.4
O14K  Tigyukauivet M    67.96  34  IAmb      IAmb      15 06 47.0
      comp=Z,100nm,1.2s
O14K                               IAMs_20   IAMs_20   15 36 21.5
      comp=Z,7µm,20.0s
O14K  Tigyukauivet M    67.96  34  P         P         15 06 44.9 +1.0
      baz=288,SNR=10
CHVC  Chvalec           67.97 317 eP         P         15 06 44.6 +0.4
CHVC                               AMS       AMS       15 38 00.0
      comp=Z,10µm,15.0s
CHVC  Chvalec           67.97 317 eP         P         15 06 44.6 +0.4
CHVC                               MLR       MLR
      comp=Z,10µm,15.0s
H19K  Roundabout Mou    68.01  26  P         P         15 06 44.6 +0.5
      baz=290,SNR=112
L16K  Owhat River       68.01  31  IAmb      IAmb      15 06 47.1
      comp=Z,94nm,1.2s
L16K                               IAMs_20   IAMs_20   15 35 35.7
      comp=Z,7µm,19.0s
L16K  Owhat River       68.01  31  P         P         15 06 44.6 +0.4
      baz=289,SNR=48
RUDO  Rudo              68.01 309⇑iP         P         15 06 43.4 -1.2
DOMB  Dombas            68.02 330 eP         P         15 06 43.3 -1.0
UPC   Upice             68.02 316 eP         P         15 06 45.0 +0.5
UPC                                AMS       AMS       15 38 00.0
      comp=Z,10µm,16.0s
UPC   Upice             68.02 316 eP         P         15 06 45.0 +0.5
UPC                                MLR       MLR
      comp=Z,10µm,16.0s
VRAC  Vranov            68.03 315  LR        LR        15 38 32.2
      comp=Z,7µm,19.0s,baz=75,slow=38
VRAC  Vranov            68.03 315 eP         P         15 06 45.1 +0.5
VRAC                              eS         S         15 15 44.3 +1.1
VRAC  Vranov            68.03 315 ⇑P         P         15 06 44.8 +0.2
VRAC  Vranov            68.03 315  P         P         15 06 44.8 +0.2
PLE   Pljevlja          68.09 308⇓iP         P         15 06 45.5 +0.3
GCSA  Galena City Sc    68.10  27  P         P         15 06 45.1 +0.4
      baz=290,SNR=67
HAPS  Han Pijesak,Bl    68.15 309⇑iP         P         15 06 44.8 -0.7
KOME  Kolasin           68.16 308⇓iP         P         15 06 45.5 -0.1
D22K  Ayikyak River     68.17  22  P         P         15 06 45.6 +0.5
      baz=292,SNR=80
K17K  Iditarod          68.19  30  IAMs_20   IAMs_20   15 39 07.6
      comp=Z,8µm,20.0s
K17K  Iditarod          68.19  30  P         P         15 06 46.3 +1.0
      baz=290
N15K  Kwethluk River    68.23  32  IAmb      IAmb      15 06 49.4
      comp=Z,102nm,0.8s
N15K  Kwethluk River    68.23  32  P         P         15 06 46.6 +1.0
      baz=289,SNR=50
KRUC  Moravsky          68.23 315 eP         P         15 06 46.2 +0.4
KRUC                              eS         S         15 15 47.4 +1.9
FALS  False Pass        68.24  38  IAMs_20   IAMs_20   15 37 42.1
      comp=Z,7µm,20.0s
FALS  False Pass        68.24  38  P         P         15 06 45.5 -0.2
      baz=288
ITM   Ithomi            68.28 301  IAmb      IAmb      15 06 47.7
      comp=Z,65nm,0.6s
RGN   Rugen             68.30 321  IAMs_20   IAMs_20   15 38 12.1
      comp=Z,8µm,18.0s
RGN   Rugen             68.30 321 eP         P         15 06 46.1  0.0
      comp=Z,252nm,1.2s,baz=69,slow=6.0
RGN                               eS         S         15 15 48.4 +2.3
      baz=68,slow=12
L17K  Donlin            68.39  30  P         P         15 06 47.7 +1.1
      baz=290,SNR=43
TIR   Tirane            68.40 306  IAmb      IAmb      15 07 04.8
      comp=Z,54nm,0.7s
TIR   Tirane            68.40 306 ⇓P         P         15 06 46.5 -0.5
TIR   Tirane            68.40 306  P         P         15 06 46.5 -0.5
COP   Copenhagen        68.42 323 i P        P         15 06 47.8 +0.9
COP                                IAmb      IAmb      15 06 48.7
      comp=Z,310nm,1.1s
UPM   Unac-Piva         68.47 308⇑iP         P         15 06 47.2 -0.4
UPM   Unac-Piva         68.47 308⇓iP         P         15 06 47.2 -0.4
M16K  Timber Creek      68.47  31  IAMs_20   IAMs_20   15 36 11.0
      comp=Z,6µm,19.0s
M16K  Timber Creek      68.47  31  P         P         15 06 48.0 +0.9
      baz=290,SNR=59
PDG   Podgorica         68.47 307⇑iP         P         15 06 46.2 -1.2
PDG   Podgorica         68.47 307 ⇑P         P         15 06 47.1 -0.3
PDG   Podgorica         68.47 307⇓iP         P         15 06 46.8 -0.6
C23K  Itkillik River    68.48  21  IAMs_20   IAMs_20   15 35 00.8
      comp=Z,8µm,20.0s
C23K  Itkillik River    68.48  21  P         P         15 06 47.5 +0.5
      baz=294,SNR=41
MOL   Molde             68.51 330 eP         P         15 06 47.7 +0.5
F21K  Alatna River      68.51  24  IAmb      IAmb      15 06 49.5
      comp=Z,142nm,1.4s
F21K  Alatna River      68.51  24  P         P         15 06 47.3  0.0
      baz=292,SNR=34
KONO  Kongsberg         68.56 327  P         P         15 06 46.5 -1.1
KONO                               IAmb      IAmb      15 06 49.9
      comp=Z,69nm,0.8s
KONO  Kongsberg         68.56 327  IAMs_20   IAMs_20   15 40 08.5
      comp=Z,6µm,18.0s
KONO  Kongsberg         68.56 327c iP        P         15 06 47.3 -0.4
KONO                               pmax      pmax
      comp=Z,70nm,1.1s
KONO                               MLR       MLR
      comp=Z,4µm,15.0s
KONO  Kongsberg         68.56 327 eP         P         15 06 47.6 -0.1
SOP   Sopron            68.57 313  P         P         15 06 47.7 -0.3
DRME  Dracevica, Mon    68.61 307⇑iP         P         15 06 47.3 -1.0
DRME  Dracevica, Mon    68.61 307⇓iP         P         15 06 47.9 -0.4
J18K  Innoko River      68.62  29  IAmb      IAmb      15 06 50.8
      comp=Z,80nm,0.8s
J18K  Innoko River      68.62  29  P         P         15 06 48.0  0.0
      baz=291,SNR=102
H20K  Anotleneega Mo    68.63  26  P         P         15 06 48.5 +0.4
      baz=291,SNR=88
ULC   Ulcinj            68.64 307⇓iP         P         15 06 47.7 -0.8
CEME  Cevo              68.67 308⇓iP         P         15 06 48.2 -0.6
O15K  Ungalikthiuk R    68.68  33  IAMs_20   IAMs_20   15 39 36.7
      comp=Z,5µm,19.0s
O15K  Ungalikthiuk R    68.68  33  P         P         15 06 49.2 +0.7
      baz=290,SNR=52
S12K  Black Hills       68.70  37  IAmb      IAmb      15 06 50.5
      comp=Z,68nm,0.9s
S12K                               IAMs_20   IAMs_20   15 37 53.2
      comp=Z,7µm,18.0s
S12K  Black Hills       68.70  37  P         P         15 06 48.7 +0.1
      baz=289,SNR=6.2
RUE   Ruedersdorf       68.71 319 eP         P         15 06 49.1 +0.4
RUE   Ruedersdorf       68.71 319 eP         P         15 06 48.4 -0.3
      comp=Z,36nm,0.5s,baz=69,slow=6.0
RUE                               eS         S         15 15 51.1 +0.1
      baz=68,slow=12
TREC  Trest             68.72 315 eP         P         15 06 49.2 +0.3
TREC                               AMS       AMS       15 38 20.0
      comp=Z,8µm,17.8s
TREC  Trest             68.72 315 eP         P         15 06 49.2 +0.3
TREC                               MLR       MLR
      comp=Z,8µm,17.8s
RONA  Rosalia, Austr    68.74 314 i P        P         15 06 48.7 -0.4
      comp=Z,155nm,1.3s,SNR=32
N16K  Nishlik Lake      68.74  32  P         P         15 06 49.9 +1.1
      baz=290,SNR=77
E22K  Anaktuvuk Pass    68.75  23  IAMs_20   IAMs_20   15 39 19.2
      comp=Z,9µm,19.0s
E22K  Anaktuvuk Pass    68.75  23  P         P         15 06 48.8 -0.1
      baz=293,SNR=116
BUM   Brajici-Budva     68.77 307⇓iP         P         15 06 48.6 -0.8
G21K  Allakaket         68.77  25  IAMs_20   IAMs_20   15 34 30.8
      comp=Z,11µm,22.0s
G21K  Allakaket         68.77  25  P         P         15 06 49.1 +0.2
      baz=292
D23K  Nanushuk River    68.81  22  P         P         15 06 49.6 +0.6
      baz=294,SNR=109
BRY   Bratogost         68.82 308⇑iP         P         15 06 48.4 -1.4
BRY   Bratogost         68.82 308⇓iP         P         15 06 49.1 -0.7
SKAR  Skarslia          68.82 328 eP         P         15 06 49.7 +0.3
BEHE  Becsehely         68.83 312  IAmb      IAmb      15 06 51.9
      comp=Z,63nm,1.0s
F22K  John River        68.87  24  P         P         15 06 50.1 +0.6
      baz=293,SNR=28
J19K  Poorman           68.88  28  IAmb      IAmb      15 06 52.9
      comp=Z,61nm,0.9s
J19K                               IAMs_20   IAMs_20   15 36 13.7
      comp=Z,8µm,19.0s
J19K  Poorman           68.88  28  P         P         15 06 50.2 +0.6
      baz=291,SNR=58
IMAR  Indian Mountai    68.88  25  P         P         15 06 48.9 -0.7
PVCC  Panska Ves        68.88 317  AMS       AMS       15 38 30.0
      comp=Z,8µm,18.0s
AKN   Aaknes            68.88 330 eP         P         15 06 49.7  0.0
CONA  Conrad Observa    68.94 314 i P        P         15 06 50.2 -0.2
      comp=Z,206nm,1.3s,SNR=58
GOPC  GO Pecny, Ondr    68.95 316 eP         P         15 06 51.1 +0.8
GOPC                               AMS       AMS       15 38 30.0
      comp=Z,11µm,17.8s
GOPC  GO Pecny, Ondr    68.95 316 eP         P         15 06 51.1 +0.8
GOPC                               MLR       MLR
      comp=Z,11µm,17.8s
KEK   Kerkira           68.99 305  IAmb      IAmb      15 06 52.7
      comp=Z,91nm,1.3s
HCY   Herceg Novi       69.00 308⇑iP         P         15 06 49.8 -1.0
HCY   Herceg Novi       69.00 308⇓iP         P         15 06 49.6 -1.2
TREB  Trebinje          69.01 308⇑iP         P         15 06 50.4 -0.4
M17K  Holitna River     69.03  31  IAMs_20   IAMs_20   15 37 15.8
      comp=Z,7µm,19.0s
M17K  Holitna River     69.03  31  P         P         15 06 52.2 +1.7
      baz=291,SNR=90
I20K  Naaghedeneel      69.05  27  IAmb      IAmb      15 07 38.8
      comp=Z,135nm,1.2s
I20K                               IAMs_20   IAMs_20   15 34 51.0
      comp=Z,9µm,22.0s
I20K  Naaghedeneel      69.05  27  P         P         15 06 51.5 +0.9
      baz=292,SNR=21
OVD   Ostervraa, Den    69.05 325 i P        P         15 06 50.9 +0.2
OVD                                IAmb      IAmb      15 06 53.7
      comp=Z,202nm,0.7s
L18K  Granite Mounta    69.07  30  IAmb      IAmb      15 06 53.8
      comp=Z,85nm,1.2s
L18K                               IAMs_20   IAMs_20   15 34 50.8
      comp=Z,7µm,20.0s
L18K  Granite Mounta    69.07  30  P         P         15 06 51.4 +0.6
      baz=291,SNR=47
PRU   Pruhonice         69.08 316 eP         P         15 06 51.5 +0.4
PRU                                AMS       AMS       15 38 30.0
      comp=Z,12µm,17.7s
PRU   Pruhonice         69.08 316 eP         P         15 06 51.5 +0.4
PRU                                MLR       MLR
      comp=Z,12µm,17.7s
PRA   Prague            69.12 316 eP         P         15 06 53.1 +1.8
PRA                                AMS       AMS       15 38 40.0
      comp=Z,12µm,17.8s
PRA   Prague            69.12 316 eP         P         15 06 53.1 +1.8
PRA                                MLR       MLR
      comp=Z,12µm,17.8s
BLY   Banja Luka        69.13 310⇑iP         P         15 06 52.0 +0.5
C24K  Franklin Bluff    69.13  21  IAMs_20   IAMs_20   15 35 58.1
      comp=Z,8µm,21.0s
C24K  Franklin Bluff    69.13  21  P         P         15 06 51.3 +0.3
      baz=295
BRG   Berggiesshubel    69.14 317 eP         P         15 06 50.8 -0.7
      comp=Z,49nm,0.7s,baz=69,slow=6.0
BRG                               eS         S         15 15 57.4 +1.1
      baz=68,slow=12
BRG   Berggiesshubel    69.14 317 eP         P         15 06 50.6 -0.9
BRG                                Amp                 15 06 53.5
      comp=Z,58nm,0.8s
BRG   Berggiesshubel    69.14 317  P         P         15 06 58.8 +7.3
BRG                                Amp                 15 06 59.4
      comp=Z,29nm,0.7s
BRG   Berggiesshubel    69.14 317  S         S         15 15 59.0 +2.7
RICC  Richard           69.16 317  AMS       AMS       15 38 50.0
      comp=Z,7µm,15.5s
KOGS  Kog               69.18 312 eP         P         15 06 51.0 -0.7
KOGS                              i pP       pP        15 06 52.2 -5.5
KOGS                              eS         S         15 15 59.8 +3.0
KOGS                              e                    15 24 01.7
A051A Mrakovica         69.22 311⇑iP         P         15 06 50.8 -1.4
TOLK  Toolik Lake Re    69.31  22  P         P         15 06 52.4 +0.2
      baz=295,SNR=45
STKA  Stephens Creek    69.32 147  P         P         15 06 52.3 -0.4
      comp=Z,58nm,0.8s,baz=324,slow=6.6,SNR=55
STKA                               PKPPKP    P'P'df    15 35 03.5 +6.2
      comp=Z,12nm,1.1s,baz=158,slow=3.2,SNR=7.8
      comp=Z,58nm,0.8s
STKA  Stephens Creek    69.32 147  P         P         15 06 53.3 +0.6
D24K  Happy Valley      69.33  22  IAMs_20   IAMs_20   15 41 02.5
      comp=Z,6µm,20.0s
D24K  Happy Valley      69.33  22  P         P         15 06 53.1 +0.8
      baz=295,SNR=28
G22K  Bettles           69.34  24  P         P         15 06 52.6 +0.2
      baz=294,SNR=20
H21K  Melozitna Rive    69.37  26  P         P         15 06 52.8 +0.2
      baz=293,SNR=87
O16K  Kokwok River B    69.37  33  IAMs_20   IAMs_20   15 36 52.8
      comp=Z,5µm,20.0s
O16K  Kokwok River B    69.37  33  P         P         15 06 54.1 +1.4
      baz=291,SNR=99
ARSA  Arzberg           69.38 313  IAMs_20   IAMs_20   15 39 44.2
      comp=Z,5µm,20.0s
ARSA  Arzberg           69.38 313 i P        P         15 06 52.5 -0.5
      comp=Z,98nm,1.2s,SNR=31
HTT   Hallett           69.39 150  P         P         15 06 55.4 +2.2
STON  Ston              69.41 308⇑iP         P         15 06 51.4 -1.8
J20K  Nowinta River     69.41  27  IAmb      IAmb      15 06 56.4
      comp=Z,70nm,0.8s
J20K                               IAMs_20   IAMs_20   15 34 46.8
      comp=Z,9µm,20.0s
J20K  Nowinta River     69.41  27  P         P         15 06 53.6 +0.7
      baz=292,SNR=89
EIDS  Eidsvold          69.45 136  P         P         15 06 55.1 +1.5
N17K  Nushagak Hills    69.46  32  IAmb      IAmb      15 06 57.3
      comp=Z,74nm,0.8s
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N17K				IAMs_20	IAMs_20	15 39 18.1	
	comp=Z,5μm,20.0s						
N17K	**Nushagak Hills**	**69.46**	**32**	P	**P**	**15 06 54.4**	**+1.2**
	baz=291,SNR=55						
ZVC	**Zvikov**	**69.48**	**316**	*e*P	**P**	**15 06 53.5**	**-0.1**
ZVC				AMS	AMS	15 38 50.0	
	comp=Z,11μm,18.2s						
E23K	**Chandalar**	**69.54**	**23**	IAmb	IAmb	15 06 56.2	
	comp=Z,195nm,1.4s						
E23K				IAMs_20	IAMs_20	15 40 03.9	
	comp=Z,13μm,18.0s						
E23K	**Chandalar**	**69.54**	**23**	P	**P**	**15 06 53.9**	**+0.1**
	baz=295,SNR=85						
CLL	**Collm**	**69.56**	**318**	IAmb	IAmb	15 06 55.8	
	comp=Z,80nm,1.0s						
CLL	**Collm**	**69.56**	**318**	*i* P	**P**	**15 06 53.0**	**-1.0**
CLL				*e*S	**S**	**15 16 03.0**	**+1.9**
CLL				pmax	pmax		
	comp=Z,129nm,1.3s						
CLL				MLR	MLR		
	comp=Z,4μm,19.5s						
CLL	**Collm**	**69.56**	**318**	*e*P	**P**	**15 06 53.2**	**-0.8**
	comp=Z,84nm,1.1s,baz=69,slow=6.0						
CLL				*e*S	**S**	**15 16 01.9**	**+0.8**
	baz=68,slow=12						
CLL	**Collm**	**69.56**	**318**	*i* P	**P**	**15 06 53.0**	**-1.0**
	comp=Z,129nm,1.3s						
CLL				*e*PP	**PP**	**15 09 28.0**	**+0.5**
CLL				*e*S	**S**	**15 16 03.0**	**+1.9**
CLL				*e*PS	**PnS**	**15 16 29.0**	**+1.7**
CLL				*e*PPS	PPS	15 16 38.0	
CLL				*e*(SS)		15 20 06.0	
CLL				*e*SSS	SSS	15 23 48.0	
CLL				*e*PKPPKPdf	**P'P'df**	**15 35 02.0**	**-4.9**
CLL				AMS	AMS	15 38 00.0	
	comp=Z,4μm,19.5s						
HOMB	**Homborsund**	**69.57**	**326**	*e*P	**P**	**15 06 54.2**	**+0.3**
HYA	**Hoyanger**	**69.61**	**329**	*e*P	**P**	**15 06 54.4**	**+0.3**
CKRC	**Cesky Krumlov**	**69.61**	**315**	*e*P	**P**	**15 06 54.4**	**-0.1**
CKRC				AMS	AMS	15 39 00.0	
	comp=Z,6μm,18.0s						
CKRC	**Cesky Krumlov**	**69.61**	**315**	*e*P	**P**	**15 06 54.4**	**-0.1**
CKRC				MLR	MLR		
	comp=Z,6μm,18.0s						
P16K	**Nushagak River**	**69.62**	**33**	IAMs_20	IAMs_20	15 39 56.5	
	comp=Z,5μm,19.0s						
P16K	**Nushagak River**	**69.62**	**33**	P	**P**	**15 06 54.9**	**+0.6**
	baz=291,SNR=15						
A050A	**Klekovaca**	**69.66**	**310**	⇑*i*P	**P**	**15 06 54.0**	**-0.9**
GROS	**Grobnik**	**69.66**	**313**	*e*P	**P**	**15 06 54.0**	**-0.9**
GROS				*i* pP	**pP**	**15 06 55.1**	**-5.6**
DAG	**Danmarks Havn**	**69.66**	**348**	*i* P	**P**	**15 06 53.0**	**-1.2**
DAG				IAmb	IAmb	15 06 55.2	
	comp=Z,192nm,1.5s						
SDPT	**Sand Point**	**69.67**	**37**	IAmb	IAmb	15 06 57.1	
	comp=Z,45nm,0.6s						
SDPT	**Sand Point**	**69.67**	**37**	P	**P**	**15 06 56.6**	**+2.0**
SDPT	**Sand Point**	**69.67**	**37**	P	**P**	**15 06 55.1**	**+0.5**
	baz=290,SNR=5.8						
COLD	**Coldfoot**	**69.69**	**24**	IAmb	IAmb	15 06 57.0	
	comp=Z,249nm,1.7s						
COLD	**Coldfoot**	**69.69**	**24**	P	**P**	**15 06 55.1**	**+0.5**
	baz=295,SNR=42						
M18K	**Stony River**	**69.72**	**30**	P	**P**	**15 06 55.6**	**+0.8**
	baz=292,SNR=41						
K20K	**Telida**	**69.76**	**28**	IAmb	IAmb	15 06 58.1	
	comp=Z,170nm,1.4s						
K20K				IAMs_20	IAMs_20	15 36 43.0	
	comp=Z,7μm,20.0s						
K20K	**Telida**	**69.76**	**28**	P	**P**	**15 06 56.0**	**+0.9**
	baz=293,SNR=69						
O17K	**Koliganek Bris**	**69.78**	**32**	P	**P**	**15 06 56.2**	**+1.1**
	baz=292,SNR=34						
H22K	**Ishtalitna Cre**	**69.81**	**25**	P	**P**	**15 06 56.0**	**+0.7**
	baz=294,SNR=88						
S14K	**Fog Glacier**	**69.82**	**36**	P	**P**	**15 06 56.4**	**+0.7**
	baz=291						
PERS	**Pernice**	**69.85**	**313**	*e*P	**P**	**15 06 55.2**	**-0.7**
PERS				*e*S	**S**	**15 16 07.2**	**+2.3**
ODD1	**Odda**	**69.87**	**328**	*e*P	**P**	**15 06 55.9**	**+0.1**
L19K	**White Mountain**	**69.88**	**29**	IAMs_20	IAMs_20	15 36 32.2	
	comp=Z,9μm,18.0s						
L19K	**White Mountain**	**69.88**	**29**	P	**P**	**15 06 56.9**	**+1.0**
	baz=293,SNR=87						
SOKA	**Soboth**	**69.89**	**313**	*e*P	**P**	**15 06 55.7**	**-0.6**
	comp=Z,169nm,1.3s,SNR=44						
CRES	**Cresnjevec Ost**	**69.91**	**312**	⇑*i*P	**P**	**15 06 55.7**	**-0.6**
E24K	**Your Creek**	**69.91**	**23**	IAmb	IAmb	15 06 59.0	
	comp=Z,90nm,0.8s						
E24K	**Your Creek**	**69.91**	**23**	P	**P**	**15 06 56.4**	**+0.4**
	baz=296,SNR=156						
GORT1	**Trebel**	**69.95**	**320**	*e*P	**P**	**15 06 56.5**	**+0.2**
	comp=Z,328nm,1.3s,baz=69,slow=6.0						
FOO	**Floro**	**69.96**	**330**	*e*P	**P**	**15 06 56.6**	**+0.4**
KHC	**Kasperske Hory**	**69.96**	**316**	*e*P	**P**	**15 06 56.3**	**-0.3**
KHC				AMS	AMS	15 39 10.0	
	comp=Z,10μm,17.4s						
KHC	**Kasperske Hory**	**69.96**	**316**	*c i*P	**P**	**15 06 56.1**	**-0.5**
KHC				pmax	pmax		
	comp=Z,205nm,1.7s						
KHC				MLR	MLR		
	comp=Z,9μm,17.0s						
G23K	**Bananza Creek**	**69.97**	**24**	IAmb	IAmb	15 06 58.7	
	comp=Z,165nm,1.4s						
G23K	**Bananza Creek**	**69.97**	**24**	P	**P**	**15 06 56.6**	**+0.3**
	baz=295,SNR=64						
MOA	**Molln**	**69.97**	**314**	*i* P	**P**	**15 06 56.5**	**-0.2**
	comp=Z,594nm,2.7s,SNR=14						
GEC2	**GERESS Array S**	**69.98**	**315**	IAmb	IAmb	15 06 58.9	
	comp=Z,100nm,1.1s						
GEC2	**GERESS Array S**	**69.98**	**315**	*e*P	**P**	**15 06 56.3**	**-0.5**
	comp=Z,45nm,0.6s,baz=69,slow=6.0						
GEC2				*e*S	**S**	**15 16 09.1**	**+2.6**
	baz=68,slow=12						
GERES	**GERESS Array B**	**69.98**	**315**	P	**P**	**15 06 57.2**	**+0.4**
	comp=Z,57nm,0.8s,baz=104,slow=5.6,SNR=13						
GERES				LR	LR	15 39 41.3	
	comp=Z,6μm,18.2s,baz=76,slow=38						
	comp=Z,57nm,0.8s						
SSRD	**Sdr. Stenderup**	**69.99**	**323**	*i* P	**P**	**15 06 57.3**	**+0.7**
SSRD				IAmb	IAmb	15 07 00.4	
	comp=Z,145nm,0.9s						
N18K	**Kilae Creek**	**70.00**	**31**	IAmb	IAmb	15 07 00.4	
	comp=Z,53nm,0.8s						
N18K				IAMs_20	IAMs_20	15 37 07.3	
	comp=Z,5μm,19.0s						
N18K	**Kilae Creek**	**70.00**	**31**	P	**P**	**15 06 57.4**	**+0.8**
	baz=292,SNR=30						
D25K	**Kavik River**	**70.04**	**21**	IAmb	IAmb	15 06 59.0	
	comp=Z,217nm,1.5s						
D25K				IAMs_20	IAMs_20	15 36 00.2	
	comp=Z,9μm,20.0s						
D25K	**Kavik River**	**70.04**	**21**	P	**P**	**15 06 57.1**	**+0.3**
	baz=297,SNR=48						
BLS5	**Blasjo**	**70.14**	**327**	*e*P	**P**	**15 06 58.2**	**+0.7**
BSEG	**Bad Segeberg**	**70.17**	**321**	*e*P	**P**	**15 06 57.9**	**+0.2**
	comp=Z,120nm,0.9s,baz=69,slow=6.0						
BSEG				*e*S	**S**	**15 16 10.8**	**+2.6**
	baz=68,slow=12						
SNART	**Snartemo**	**70.18**	**326**	*e*P	**P**	**15 06 58.1**	**+0.4**
L20K	**Farewell, AK**	**70.19**	**29**	P	**P**	**15 06 58.7**	**+1.0**
	baz=293,SNR=51						
TANN	**Tannenbergstha**	**70.19**	**317**	*e*P	**P**	**15 06 57.5**	**-0.5**
	comp=Z,37nm,0.8s,baz=69,slow=6.0						
TANN				*e*S	**S**	**15 16 07.7**	**-1.0**
	baz=68,slow=12						
M19K	**Big River Lodg**	**70.19**	**30**	IAmb	IAmb	15 07 01.2	
	comp=Z,148nm,1.4s						
M19K				IAMs_20	IAMs_20	15 40 02.5	
	comp=Z,6μm,19.0s						
M19K	**Big River Lodg**	**70.19**	**30**	P	**P**	**15 06 58.8**	**+1.1**
	baz=293,SNR=51						
C26K	**Camden Bay**	**70.21**	**20**	P	**P**	**15 06 59.7**	**+2.0**
	baz=298						
FLTG	**Flechtingen**	**70.23**	**319**	*e*P	**P**	**15 06 57.1**	**-0.9**
	comp=Z,62nm,1.0s,baz=69,slow=6.0						
FLTG				*e*S	**S**	**15 16 09.4**	**+0.5**
	baz=68,slow=12						
NKC	**Novy Kostel**	**70.26**	**317**	AMS	AMS	15 39 30.0	
	comp=Z,6μm,14.8s						
OBKA	**Obir**	**70.26**	**313**	⇑*i*P	**P**	**15 06 57.5**	**-1.1**
OBKA	**Obir**	**70.26**	**313**	*i* P	**P**	**15 06 57.8**	**-0.8**
	comp=Z,413nm,2.6s,SNR=14						
CHUM	**Lake Minchumin**	**70.27**	**27**	P	**P**	**15 06 59.1**	**+1.0**
	baz=294,SNR=37						
SUE	**Sulen**	**70.29**	**329**	*e*P	**P**	**15 06 58.6**	**+0.3**
BER	**Bergen**	**70.30**	**329**	*e*P	**P**	**15 06 59.0**	**+0.6**
P17K	**Kvichak River**	**70.30**	**33**	P	**P**	**15 06 59.3**	**+0.9**
	baz=292,SNR=48						
NEUB	**Neuenburg**	**70.31**	**318**	*e*P	**P**	**15 06 58.1**	**-0.5**
	comp=Z,73nm,0.8s,baz=69,slow=6.0						
NEUB				*e*S	**S**	**15 16 11.1**	**+1.1**
	baz=68,slow=12						
ASK	**Askoy**	**70.32**	**329**	*e*P	**P**	**15 06 58.7**	**+0.2**
CHNA	**Chernabura Isl**	**70.33**	**38**	P	**P**	**15 06 59.7**	**+1.1**
CHNA	**Chernabura Isl**	**70.33**	**38**	P	**P**	**15 06 58.4**	**-0.2**
	baz=291,SNR=16						
CNBA	**Chernabura Isl**	**70.33**	**38**	IAmb	IAmb	15 07 00.8	
	comp=Z,95nm,0.8s						
CNBA				IAMs_20	IAMs_20	15 36 59.4	
	comp=Z,8μm,22.0s						
R16K	**Pilot Point**	**70.36**	**35**	IAMs_20	IAMs_20	15 38 25.2	
	comp=Z,5μm,19.0s						
R16K	**Pilot Point**	**70.36**	**35**	P	**P**	**15 06 58.9**	**+0.1**
	baz=292						
F24K	**Squaw Lake**	**70.36**	**23**	IAmb	IAmb	15 07 01.2	
	comp=Z,106nm,1.4s						
F24K	**Squaw Lake**	**70.36**	**23**	P	**P**	**15 06 58.7**	**-0.1**
	baz=297,SNR=58						
WET	**Wettzell**	**70.39**	**316**	*e*P	**P**	**15 06 58.9**	**-0.3**
	comp=Z,39nm,0.9s,baz=69,slow=6.0						
WET				*e*S	**S**	**15 16 14.3**	**+3.3**
	baz=68,slow=12						
Q16K	**King Salmon**	**70.40**	**33**	P	**P**	**15 06 59.9**	**+0.9**
	baz=292,SNR=14						
LODK	**Lodwar**	**70.42**	**263**	IAmb	IAmb	15 07 03.7	
	comp=Z,64nm,0.9s						
LODK	**Lodwar**	**70.42**	**263**	P	**P**	**15 07 00.1**	**+0.1**
	SNR=44						
MLY	**Manley**	**70.42**	**26**	IAmb	IAmb	15 07 02.4	
	comp=Z,78nm,0.9s						
MLY	**Manley**	**70.42**	**26**	P	**P**	**15 06 59.9**	**+0.8**
	baz=295,SNR=123						
BIOA	**Bad Ischl, Aus**	**70.43**	**314**	*i* P	**P**	**15 06 59.2**	**-0.3**
	comp=Z,202nm,1.3s,SNR=33						
H23K	**Yukon River**	**70.53**	**25**	IAMs_20	IAMs_20	15 35 35.0	
	comp=Z,10μm,21.0s						
H23K	**Yukon River**	**70.53**	**25**	P	**P**	**15 07 00.4**	**+0.6**
	baz=296,SNR=144						
MANZ	**Manzenberg**	**70.55**	**317**	*e*P	**P**	**15 07 01.2**	**+1.0**
	comp=Z,14nm,1.0s,baz=69,slow=6.0						
MANZ				*e*S	**S**	**15 16 15.2**	**+2.2**
	baz=68,slow=12						
CAST	**Castle Rocks**	**70.56**	**28**	IAmb	IAmb	15 07 02.7	
	comp=Z,82nm,1.2s						
CAST				IAMs_20	IAMs_20	15 35 33.0	
	comp=Z,6μm,18.0s						
CAST	**Castle Rocks**	**70.56**	**28**	P	**P**	**15 07 00.2**	**+0.3**
	baz=294,SNR=53						
ROTZ	**Rotzenmuhle**	**70.57**	**317**	*e*P	**P**	**15 07 00.2**	**-0.1**
	comp=Z,16nm,0.7s,baz=69,slow=6.0						
ROTZ				*e*S	**S**	**15 16 11.2**	**-1.9**
	baz=68,slow=12						
JNE	**Jan Mayen East**	**70.58**	**341**	*e*P	**P**	**15 07 00.7**	**+0.8**
N19K	**Bonanza Creek**	**70.58**	**31**	IAmb	IAmb	15 07 03.9	
	comp=Z,85nm,0.8s						
N19K				IAMs_20	IAMs_20	15 37 34.8	
	comp=Z,6μm,19.0s						
N19K	**Bonanza Creek**	**70.58**	**31**	P	**P**	**15 07 01.5**	**+1.3**
	baz=293,SNR=52						
JNW	**Jan Mayen West**	**70.59**	**341**	*e*P	**P**	**15 07 01.0**	**+1.0**
MOX	**Moxa**	**70.61**	**318**	*e*P	**P**	**15 07 00.0**	**-0.5**
	comp=Z,38nm,1.0s,baz=69,slow=6.0						
MOX				*e*S	**S**	**15 16 09.4**	**-4.1**
	baz=68,slow=12						
MOX				*e*L	L	15 40 50.7	
	comp=Z,4μm,20.9s						
ASSE	**Asse, Remlinge**	**70.62**	**319**	*e*P	**P**	**15 06 59.9**	**-0.5**
	comp=Z,6.2nm,0.3s,baz=69,slow=6.0						
ASSE				*e*S	**S**	**15 16 13.8**	**+0.4**
	baz=68,slow=12						
O18K	**Koktuh Hills**	**70.63**	**32**	IAmb	IAmb	15 07 04.1	
	comp=Z,107nm,0.8s						
O18K				IAMs_20	IAMs_20	15 38 33.1	
	comp=Z,8μm,18.0s						
O18K	**Koktuh Hills**	**70.63**	**32**	P	**P**	**15 07 01.6**	**+1.1**
	baz=293,SNR=77						
JMIC	**Jan Mayen**	**70.64**	**341**	LR	LR	15 41 36.3	
	comp=Z,3μm,18.9s,baz=60,slow=39						
JMIC	**Jan Mayen**	**70.64**	**341**	*e*P	**P**	**15 07 01.1**	**+0.8**
BPAW	**Bear Paw Mtn.**	**70.71**	**27**	IAmb	IAmb	15 07 07.0	
	comp=Z,70nm,0.8s						
BPAW				IAMs_20	IAMs_20	15 40 24.1	
	comp=Z,8μm,18.0s						
BPAW	**Bear Paw Mtn.**	**70.71**	**27**	P	**P**	**15 07 01.3**	**+0.4**
	baz=295,SNR=93						
C27K	**Jago River**	**70.72**	**20**	IAmb	IAmb	15 07 04.2	
	comp=Z,132nm,1.0s						
C27K				IAMs_20	IAMs_20	15 36 41.1	
	comp=Z,9μm,19.0s						
C27K	**Jago River**	**70.72**	**20**	P	**P**	**15 07 01.7**	**+0.9**
	baz=300,SNR=37						
JMI	**Jan Mayen**	**70.73**	**341**	*e*P	**P**	**15 07 01.8**	**+0.9**
PPLA	**Purkeypile**	**70.73**	**28**	IAMs_20	IAMs_20	15 37 13.6	
	comp=Z,8μm,21.0s						
PPLA	**Purkeypile**	**70.73**	**28**	P	**P**	**15 07 01.6**	**+0.4**
	baz=294,SNR=72						
M20K	**Styx River**	**70.75**	**29**	IAmb	IAmb	15 07 07.7	
	comp=Z,164nm,1.1s						
M20K				IAMs_20	IAMs_20	15 40 34.1	
	comp=Z,7μm,18.0s						
M20K	**Styx River**	**70.75**	**29**	P	**P**	**15 07 01.9**	**+0.7**
	baz=294,SNR=95						
P18K	**Big Mountain,**	**70.80**	**32**	IAmb	IAmb	15 07 04.8	
	comp=Z,78nm,0.8s						
P18K				IAMs_20	IAMs_20	15 40 55.6	
	comp=Z,5μm,18.0s						
P18K	**Big Mountain,**	**70.80**	**32**	P	**P**	**15 07 02.3**	**+0.8**
	baz=293,SNR=37						
MYKA	**Terra Mystica**	**70.80**	**313**	*e*P	**P**	**15 07 00.7**	**-1.2**
	comp=Z,75nm,1.1s,SNR=14						
NRDL	**Niedersach Rie**	**70.81**	**320**	*e*P	**P**	**15 07 01.8**	**+0.2**
	comp=Z,184nm,1.2s,baz=69,slow=6.0						
NRDL				*e*S	**S**	**15 16 15.6**	**0.0**
	baz=68,slow=12						
E25K	**Arctic Village**	**70.87**	**22**	P	**P**	**15 07 01.8**	**0.0**
	baz=298,SNR=18						
G24K	**Hadweenzic Riv**	**70.88**	**24**	IAmb	IAmb	15 07 04.4	
	comp=Z,240nm,1.6s						
G24K	**Hadweenzic Riv**	**70.88**	**24**	P	**P**	**15 07 02.4**	**+0.5**
	baz=297,SNR=66						
MATE	**Matera**	**70.89**	**306**	⇑P	**P**	**15 07 01.7**	**-0.7**
MATE	**Matera**	**70.89**	**306**	*e*P	**P**	**15 06 59.7**	**-2.6**
I23K	**Minto, Yukon-K**	**70.89**	**26**	IAmb	IAmb	15 07 04.6	
	comp=Z,190nm,1.6s						
I23K	**Minto, Yukon-K**	**70.89**	**26**	P	**P**	**15 07 02.5**	**+0.5**
	baz=296,SNR=95						
O19K	**Port Alsworth**	**70.90**	**31**	IAmb	IAmb	15 07 04.9	
	comp=Z,97nm,1.2s						
O19K				IAMs_20	IAMs_20	15 38 09.3	
	comp=Z,5μm,18.0s						
O19K	**Port Alsworth**	**70.90**	**31**	P	**P**	**15 07 03.3**	**+1.3**
	baz=294,SNR=8.6						
Q17K	**Contact Creek**	**70.93**	**34**	P	**P**	**15 07 01.9**	**-0.6**
	baz=293,SNR=20						
KIBK	**Kibwezi**	**70.94**	**256**	IAmb	IAmb	15 07 06.8	
	comp=Z,238nm,1.6s						
KIBK	**Kibwezi**	**70.94**	**256**	P	**P**	**15 07 03.4**	**+0.2**
	SNR=14						
RJOB	**Jochberg**	**70.94**	**314**	*e*P	**P**	**15 07 02.9**	**+0.2**
	comp=Z,43nm,0.9s,baz=69,slow=6.0						
RJOB				*e*S	**S**	**15 16 19.0**	**+1.4**
	baz=68,slow=12						
KTH	**Kantishna Hill**	**70.97**	**27**	IAmb	IAmb	15 07 27.3	
	comp=Z,126nm,1.3s						
KTH				IAMs_20	IAMs_20	15 35 38.0	
	comp=Z,7μm,18.0s						
KMBO	**Kilima Mbogo**	**71.00**	**258**	P	**P**	**15 07 03.4**	**-0.4**
KMBO	**Kilima Mbogo**	**71.00**	**258**	P	**P**	**15 07 03.7**	**0.0**
KMBO				P	**P**	**15 07 03.7**	**0.0**
KMBO	**Kilima Mbogo**	**71.00**	**258**	P	**P**	**15 07 03.4**	**-0.4**
KMBO				pmax	pmax		
	comp=Z,648nm,2.0s						
KMBO				MLR	MLR		
	comp=Z,3μm,20.0s						
KMBO	**Kilima Mbogo**	**71.00**	**258**	*i* P	**P**	**15 07 03.4**	**-0.4**
	SNR=68						
TRI	**Trieste**	**71.06**	**312**	IAmb	IAmb	15 07 04.5	
	comp=Z,140nm,1.1s						
F25K	**Christian Rive**	**71.09**	**22**	IAmb	IAmb	15 07 06.1	
	comp=Z,158nm,1.6s						
F25K	**Christian Rive**	**71.09**	**22**	P	**P**	**15 07 04.2**	**+1.0**
	baz=299,SNR=82						
CMSA	**Cobar Meteorol**	**71.10**	**144**	P	**P**	**15 07 04.7**	**+1.1**
LESA	**Schwarzleotal**	**71.13**	**314**	*i* P	**P**	**15 07 03.3**	**-0.5**
	comp=Z,306nm,1.3s,SNR=80						
H24K	**Noodor Dome**	**71.13**	**25**	IAmb	IAmb	15 07 10.5	
	comp=Z,61nm,0.9s						
H24K				IAMs_20	IAMs_20	15 35 55.1	
	comp=Z,9μm,20.0s						
H24K	**Noodor Dome**	**71.13**	**25**	P	**P**	**15 07 03.6**	**+0.1**
	baz=297,SNR=63						
RETH	**Rethem/Aller,**	**71.14**	**320**	*e*P	**P**	**15 07 03.5**	**-0.1**
	comp=Z,486nm,2.1s,baz=69,slow=6.0						
SGRT	**San Giovanni R**	**71.16**	**308**	IAmb	IAmb	15 07 05.1	
	comp=Z,83nm,1.1s						
GRA1	**Grafenberg Arr**	**71.19**	**317**	IAMs_20	IAMs_20	15 39 56.9	
	comp=Z,7μm,20.0s						
GRF	**Grafenberg Arr**	**71.19**	**317**	*e*P	**P**	**15 07 04.0**	**-0.1**
	comp=Z,64nm,0.8s,baz=69,slow=6.0						
GRF				*e*S	**S**	**15 16 23.2**	**+2.8**
	baz=68,slow=12						
GRF				*e*L	L	15 39 57.1	
	comp=Z,7μm,20.0s						
GRFO	**Grafenberg**	**71.20**	**317**	P	**P**	**15 07 04.2**	**+0.1**
GRFO				IAMs_20	IAMs_20	15 39 56.9	
	comp=Z,7μm,20.0s						
GRFO	**Grafenberg**	**71.20**	**317**	P	**P**	**15 07 04.2**	**+0.1**
GRFO				pmax	pmax		
	comp=Z,682nm,1.9s						
GRFO				MLR	MLR		
	comp=Z,7μm,20.0s						
Q18K	**Katmai Hardscr**	**71.20**	**33**	P	**P**	**15 07 03.7**	**-0.4**
	baz=294,SNR=20						
ACHA	**Angle Creek He**	**71.22**	**33**	IAmb	IAmb	15 07 08.1	
	comp=Z,98nm,1.4s						
GTTG	**Gottingen**	**71.25**	**319**	*e*P	**P**	**15 07 04.0**	**-0.3**
	comp=Z,59nm,0.7s,baz=69,slow=6.0						
GTTG				*e*S	**S**	**15 16 22.0**	**+1.2**
	baz=68,slow=12						
NEA2	**Nenana**	**71.25**	**26**	IAmb	IAmb	15 07 07.1	
	comp=Z,124nm,0.9s						
NEA2				IAMs_20	IAMs_20	15 37 36.2	
	comp=Z,8μm,20.0s						
NEA2	**Nenana**	**71.25**	**26**	P	**P**	**15 07 04.5**	**+0.4**
	baz=297,SNR=200						
TRF	**Thorofare Moun**	**71.27**	**27**	IAMs_20	IAMs_20	15 35 56.9	
	comp=Z,7μm,21.0s						
TRF	**Thorofare Moun**	**71.27**	**27**	P	**P**	**15 07 04.7**	**+0.2**
	baz=296,SNR=21						
G25K	**Bearman Lake**	**71.33**	**23**	P	**P**	**15 07 05.4**	**+0.8**
	baz=298,SNR=21						
SKT	**Skwentna**	**71.39**	**29**	IAMs_20	IAMs_20	15 37 57.2	
	comp=Z,7μm,18.0s						
SKT	**Skwentna**	**71.39**	**29**	P	**P**	**15 07 04.6**	**-0.5**
	baz=295,SNR=61						
HLG	**Helgoland**	**71.41**	**322**	*e*P	**P**	**15 07 05.1**	**-0.1**
	comp=Z,325nm,1.3s,baz=69,slow=6.0						
HLG				*e*S	**S**	**15 16 23.1**	**+0.5**
	baz=68,slow=12						
N20K	**Mount Spurr**	**71.43**	**30**	P	**P**	**15 07 05.8**	**+0.4**
	baz=295						
SPCR	**Spurr Chakacha**	**71.43**	**30**	P	**P**	**15 07 05.7**	**+0.3**
	baz=295,SNR=9.3						
ABTA	**Abfaltersbach**	**71.48**	**314**	*i* P	**P**	**15 07 04.5**	**-1.5**
	comp=Z,100nm,1.4s,SNR=28						
UBBA	**Unterbreizbach**	**71.50**	**318**	*e*P	**P**	**15 07 05.6**	**-0.1**
	comp=Z,7.6nm,0.5s,baz=69,slow=6.0						
UBBA				*e*S	**S**	**15 16 25.3**	**+1.8**
	baz=68,slow=12						
RED	**Redoubt Volcan**	**71.51**	**31**	IAmb	IAmb	15 07 08.0	
	comp=Z,146nm,1.4s						
ILSW	**Iliamna Southw**	**71.53**	**31**	IAmb	IAmb	15 07 09.5	
	comp=Z,160nm,1.6s						
BMAR	**Burnt Mountain**	**71.53**	**22**	P	**P**	**15 07 06.2**	**+0.4**
STAL	**STALIGIAL**	**71.54**	**313**	IAmb	IAmb	15 07 07.1	
	comp=Z,112nm,1.1s						
DBG	**Daneborg**	**71.54**	**346**	*i* P	**P**	**15 07 04.2**	**-1.5**
DBG				IAmb	IAmb	15 07 07.1	
	comp=Z,256nm,1.4s						
F26K	**Sheenjek River**	**71.55**	**22**	P	**P**	**15 07 06.7**	**+0.8**
	baz=300,SNR=50						
COLA	**College**	**71.59**	**25**	P	**P**	**15 07 07.4**	**+1.3**
COLA	**College**	**71.59**	**25**	*d i*P	**P**	**15 07 06.1**	**0.0**
COLA				pmax	pmax		
	comp=Z,132nm,1.1s						
COLA	**College**	**71.59**	**25**	P	**P**	**15 07 06.2**	**+0.1**
	baz=298						
P19K	**Oil Pt**	**71.63**	**32**	IAmb	IAmb	15 07 09.0	
	comp=Z,115nm,0.9s						
P19K				IAMs_20	IAMs_20	15 41 44.4	
	comp=Z,6μm,19.0s						
P19K	**Oil Pt**	**71.63**	**32**	P	**P**	**15 07 06.2**	**-0.4**
	baz=295,SNR=28						
POKR	**Poker Plat Res**	**71.63**	**25**	P	**P**	**15 07 06.5**	**0.0**
	baz=298,SNR=172						
EUNU	**Eureka**	**71.63**	**2**	IAmb	IAmb	15 07 09.2	
	comp=Z,188nm,1.6s						
H25L	**Birch Creek**	**71.67**	**24**	P	**P**	**15 07 07.3**	**+0.7**
	baz=299,SNR=18						
MCK	**McKinley**	**71.69**	**27**	IAmb	IAmb	15 07 30.4	
	comp=Z,203nm,1.8s						
MCK				IAMs_20	IAMs_20	15 36 23.9	
	comp=Z,8μm,22.0s						
MCK	**McKinley**	**71.69**	**27**	P	**P**	**15 07 07.9**	**+1.0**
	baz=297,SNR=17						
O20K	**Slope Mountain**	**71.72**	**31**	P	**P**	**15 07 06.9**	**-0.3**
	baz=295						
FUR	**Furstenfeldbru**	**71.73**	**315**	*e*P	**P**	**15 07 07.3**	**0.0**
	comp=Z,177nm,0.6s,baz=69,slow=6.0						
FUR				*e*S	**S**	**15 16 29.8**	**+3.1**
	baz=68,slow=12						
Q19K	**Cape Douglas,**	**71.73**	**32**	IAmb	IAmb	15 07 09.1	
	comp=Z,87nm,0.9s						
Q19K				IAMs_20	IAMs_20	15 36 59.3	
	comp=Z,7μm,19.0s						
Q19K	**Cape Douglas,**	**71.73**	**32**	P	**P**	**15 07 06.5**	**-0.7**
	baz=295,SNR=7.3						
CUT	**Chulitna**	**71.74**	**28**	IAMs_20	IAMs_20	15 42 07.4	
	comp=Z,6μm,20.0s						
CUT	**Chulitna**	**71.74**	**28**	P	**P**	**15 07 06.8**	**-0.4**
	baz=296,SNR=9.8						
D27M	**Malcolm River**	**71.75**	**20**	IAmb	IAmb	15 07 09.7	
	comp=Z,123nm,1.4s						
D27M	**Malcolm River**	**71.75**	**20**	P	**P**	**15 07 07.6**	**+0.4**
	baz=302,SNR=36						
WTTA	**Wattenberg**	**71.85**	**314**	*e*P	**P**	**15 07 07.3**	**-1.0**
	comp=Z,251nm,1.4s,SNR=46						
WATA	**Walderalm**	**71.86**	**314**	*e*P	**P**	**15 07 07.4**	**-0.9**
	comp=Z,200nm,1.3s,SNR=26						
RND	**Reindeer**	**71.87**	**27**	IAmb	IAmb	15 07 09.5	
	comp=Z,208nm,1.4s						
R18K	**Karluk**	**71.91**	**34**	P	**P**	**15 07 08.5**	**+0.3**
	baz=294,SNR=5.4						
SUA	**Susitna One**	**71.96**	**29**	IAmb	IAmb	15 07 13.2	
	comp=Z,150nm,0.9s						
SUA				IAMs_20	IAMs_20	15 35 46.0	
	comp=Z,5μm,18.0s						
SUA	**Susitna One**	**71.96**	**29**	P	**P**	**15 07 08.5**	**-0.1**
	baz=296,SNR=52						
ILAR	**Eielson Array**	**72.00**	**25**	P	**P**	**15 07 07.3**	**-1.3**
ILAR	**Eielson Array**	**72.00**	**25**	P	**P**	**15 07 07.2**	**-1.5**
	comp=Z,20nm,0.9s,baz=276,slow=3.4,SNR=105						
	comp=Z,20nm,0.9s						
ILAR	**Eielson Array**	**72.00**	**25**	P	**P**	**15 07 07.3**	**-1.3**
CHIR	**Chirikof Islan**	**72.04**	**36**	IAMs_20	IAMs_20	15 37 58.5	
	comp=Z,7μm,19.0s						
CHIR	**Chirikof Islan**	**72.04**	**36**	P	**P**	**15 07 09.6**	**+0.6**
CHIR	**Chirikof Islan**	**72.04**	**36**	P	**P**	**15 07 09.6**	**+0.6**
	baz=294						
G26K	**Porcupine Rive**	**72.04**	**23**	IAmb	IAmb	15 07 11.8	
	comp=Z,195nm,1.4s						
G26K	**Porcupine Rive**	**72.04**	**23**	P	**P**	**15 07 09.3**	**+0.5**
	baz=300,SNR=24						
CAPN	**Captain Cook N**	**72.08**	**30**	IAMs_20	IAMs_20	15 36 20.5	
	comp=Z,8μm,19.0s						
CAPN	**Captain Cook N**	**72.08**	**30**	P	**P**	**15 07 09.3**	**+0.1**
	baz=296						
M22K	**Willow**	**72.10**	**29**	IAMs_20	IAMs_20	15 41 37.7	
	comp=Z,8μm,20.0s						
M22K	**Willow**	**72.10**	**29**	P	**P**	**15 07 09.4**	**+0.2**
	baz=296,SNR=14						
E27K	**Coleen River**	**72.12**	**21**	IAmb	IAmb	15 07 11.8	
	comp=Z,103nm,1.3s						
E27K	**Coleen River**	**72.12**	**21**	P	**P**	**15 07 09.7**	**+0.3**
	baz=302,SNR=40						
SQTA	**Sankt Quirin**	**72.13**	**314**	*e*P	**P**	**15 07 09.0**	**-1.0**
	comp=Z,280nm,1.5s,SNR=59						
PRP	**Porcupine Dome**	**72.14**	**24**	IAmb	IAmb	15 07 12.7	
	comp=Z,140nm,0.9s						
PRP				IAMs_20	IAMs_20	15 36 26.8	
	comp=Z,8μm,20.0s						
PRP	**Porcupine Dome**	**72.14**	**24**	P	**P**	**15 07 09.9**	**+0.3**

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      baz=299,SNR=170
HDA   Harding Lake      72.15  26   P        P        15 07 09.2 -0.4
      baz=298,SNR=21
MOTA  Moosalm           72.15 315  eP        P        15 07 09.0 -1.0
      comp=Z,224nm,1.3s,SNR=41
IBBN  Ibbenburen        72.22 320  eP        P        15 07 09.8 -0.3
      comp=Z,89nm,1.0s,baz=69,slow=6.0
IBBN                               eS        S        15 16 34.1 +2.1
      baz=68,slow=12
WAT1  Susitna Watana    72.26  28   P        P        15 07 09.9 -0.3
      baz=298
KASTN Kahler Asten      72.28 319  eP        P        15 07 10.9 +0.3
      comp=Z,69nm,1.3s,baz=69,slow=6.0
KASTN                              eS        S        15 16 36.8 +4.0
      baz=68,slow=12
CTI   Castel Tesino     72.30 313   IAmb     IAmb     15 07 14.2
      comp=Z,85nm,1.0s
RETA  Reutte            72.31 315 i P        P        15 07 09.8 -1.1
      comp=Z,262nm,1.9s,SNR=27
FIS   Fire Island       72.33  29   IAMs_20  IAMs_20  15 42 23.9
      comp=Z,6µm,22.0s
GUMA  Gualdo di Mace    72.33 310   IAmb     IAmb     15 07 14.7
      comp=Z,103nm,1.1s
INTR  Introdacqua       72.34 309   IAmb     IAmb     15 07 33.7
      comp=Z,59nm,0.9s
HOM   Homer             72.35  31   P        P        15 07 11.2 +0.4
      baz=296
CEL   Celeste           72.36 304   IAmb     IAmb     15 07 12.8
      comp=Z,165nm,1.0s
D28M  Stokes Point      72.37  20   P        P        15 07 10.8 +0.1
      baz=304
Q20K  Shuyak Island     72.46  32   P        P        15 07 10.4 -1.1
      baz=296
SYI   Shuyak Island     72.46  32   IAMs_20  IAMs_20  15 38 38.5
      comp=Z,7µm,20.0s
SII   Sitkinak Islan    72.47  35   IAMs_20  IAMs_20  15 39 20.7
      comp=Z,6µm,19.0s
SII   Sitkinak Islan    72.47  35   P        P        15 07 12.2 +0.6
SII   Sitkinak Islan    72.47  35   P        P        15 07 10.4 -1.2
      baz=295
FDMO  Fiordimonte       72.51 310   IAmb     IAmb     15 07 15.8
      comp=Z,96nm,0.8s
FETA  Feichten          72.51 314 i P        P        15 07 11.4 -0.9
      comp=Z,208nm,1.2s,SNR=67
E28M  Babbage River     72.53  20   IAmb     IAmb     15 07 14.3
      comp=Z,140nm,1.3s
E28M  Babbage River     72.53  20   P        P        15 07 11.9 +0.1
      baz=304,SNR=48
AQU   L'Aquila          72.55 309   P        P        15 07 13.2 +0.8
RC01  Rabbit Creek A    72.56  29   IAmb     IAmb     15 07 13.8
      comp=Z,186nm,1.6s
RC01  Rabbit Creek A    72.56  29   P        P        15 07 11.6 -0.4
      baz=297,SNR=6.5
NRCA  Norcia            72.57 310   IAmb     IAmb     15 07 16.2
      comp=Z,106nm,0.9s
PMR   Palmer            72.59  29   IAmb     IAmb     15 07 14.5
      comp=Z,90nm,0.8s
PMR                                 IAMs_20  IAMs_20  15 36 56.8
      comp=Z,7µm,20.0s
PMR   Palmer            72.59  29   P        P        15 07 13.2 +1.0
PMR   Palmer            72.59  29   P        P        15 07 11.8 -0.4
      baz=297,SNR=38
GHO   Glory Hole Cre    72.59  29   IAmb     IAmb     15 07 20.1
      comp=Z,65nm,0.9s
GHO                                 IAMs_20  IAMs_20  15 42 32.9
      comp=Z,9µm,19.0s
CNPM  China Poot        72.60  31   IAmb     IAmb     15 07 16.9
      comp=Z,161nm,1.6s
CNPM                                IAMs_20  IAMs_20  15 37 23.1
      comp=Z,7µm,18.0s
SLKM  Skilak Lake       72.61  30   IAMs_20  IAMs_20  15 39 28.4
      comp=Z,7µm,18.0s
DHY   Denali Highway    72.62  27   IAMs_20  IAMs_20  15 37 15.4
      comp=Z,7µm,20.0s
DHY   Denali Highway    72.62  27   P        P        15 07 11.6 -0.9
      baz=298,SNR=25
OHAK  Old Harbor        72.63  34   IAmb     IAmb     15 07 16.5
      comp=Z,85nm,0.8s
OHAK                                IAMs_20  IAMs_20  15 40 02.0
      comp=Z,8µm,20.0s
OHAK  Old Harbor        72.63  34   P        P        15 07 15.0 +2.5
OHAK  Old Harbor        72.63  34   P        P        15 07 12.0 -0.5
      baz=295,SNR=15
UBR   Ueberruh          72.64 315  eP        P        15 07 11.9 -1.0
      comp=Z,41nm,0.7s,baz=69,slow=6.0
TNS   Taunus Mts        72.65 318  eP        P        15 07 12.4 -0.5
      comp=Z,60nm,1.0s,baz=69,slow=6.0
J25K  Salcha River,     72.65  25   P        P        15 07 11.4 -1.2
      baz=300,SNR=47
BRLK  Bradley Lake      72.65  31   IAmb     IAmb     15 07 17.1
      comp=Z,108nm,1.1s
BRLK                                IAMs_20  IAMs_20  15 44 01.4
      comp=Z,5µm,19.0s
WAT6  Susitna Watana    72.71  28   P        P        15 07 12.0 -1.1
      baz=298,SNR=23
BRSE  Bradley Lake S    72.73  31   P        P        15 07 12.2 -0.9
      baz=297,SNR=13
KDAK  Kodiak Island     72.73  33   P        P        15 07 12.7 -0.4
KDAK                                IAmb     IAmb     15 07 15.3
      comp=Z,204nm,1.2s
KDAK  Kodiak Island     72.73  33   IAMs_20  IAMs_20  15 39 55.7
      comp=Z,6µm,21.0s
KDAK  Kodiak Island     72.73  33   LR       LR       15 40 38.9
      comp=Z,5µm,19.0s,baz=295,slow=37
KDAK  Kodiak Island     72.73  33c iP        P        15 07 13.5 +0.4
KDAK                                pmax     pmax
      comp=Z,180nm,1.4s
KDAK                                MLR      MLR
      comp=Z,7µm,20.0s
KDAK  Kodiak Island     72.73  33   P        P        15 07 13.1  0.0
      baz=296
OPO   Ambohidratompo    72.74 237   LR       LR       15 37 53.3
      comp=Z,3µm,20.9s,baz=182,slow=35
STU   Stuttgart         72.78 316   IAmb     IAmb     15 07 16.4
      comp=Z,110nm,0.8s
STU                                 IAMs_20  IAMs_20  15 41 03.7
      comp=Z,8µm,18.0s
STU   Stuttgart         72.78 316   P        P        15 07 14.3 +0.7
STU   Stuttgart         72.78 316  eP        P        15 07 13.7 +0.1
STU   Stuttgart         72.78 316  eP        P        15 07 13.1 -0.5
      comp=Z,180nm,0.6s,baz=69,slow=6.0
STU                                eS        S        15 16 41.3 +2.8
      baz=68,slow=12
SML   Sawmill           72.83  28   IAMs_20  IAMs_20  15 38 29.0
      comp=Z,8µm,21.0s
SML   Sawmill           72.83  28   P        P        15 07 13.6 -0.1
      baz=298,SNR=46
G27K  Doyon Strip       72.83  22   P        P        15 07 14.1 +0.5
      baz=302,SNR=116
BUG   Bochum--Univer    72.84 320  eP        P        15 07 13.5 -0.4
      comp=Z,109nm,1.1s,baz=69,slow=6.0
BUG                                eS        S        15 16 41.7 +2.6
      baz=68,slow=12
O22K  Cooper Landing    72.84  30   IAmb     IAmb     15 07 37.1
      comp=Z,115nm,0.8s
O22K  Cooper Landing    72.84  30   P        P        15 07 13.8 +0.1
      baz=297
K24K  Donnelly Dome     72.89  26   P        P        15 07 13.4 -0.6
      baz=300,SNR=93
DAVA  Damuels           72.94 315 i P        P        15 07 14.0 -0.8
      comp=Z,121nm,1.4s,SNR=18
KNK   Knik Glacier      72.96  29   IAmb     IAmb     15 07 16.6
      comp=Z,211nm,1.6s
KNK                                 IAMs_20  IAMs_20  15 42 14.5
      comp=Z,7µm,18.0s
KNK   Knik Glacier      72.96  29   P        P        15 07 14.8 +0.4
      baz=298,SNR=17
FUORN Ofenpass-Fuorn    72.96 314   IAMs_20  IAMs_20  15 41 41.9
      comp=Z,7µm,19.0s
F28M  Old Crow          72.98  21   P        P        15 07 15.0 +0.6
      baz=304,SNR=22
ABPO  Ambohimpanom      72.99 237   P        P        15 07 14.5 -0.9
ABPO                                IAmb     IAmb     15 07 16.4
      comp=Z,81nm,1.1s
ABPO  Ambohimpanom      72.99 237   IAMs_20  IAMs_20  15 35 45.2
      comp=Z,7µm,22.0s
ABPO  Ambohimpanom      72.99 237   P        P        15 07 14.5 -0.9
ABPO                                pmax     pmax
      comp=Z,81nm,1.2s
M23K  Glacier View      73.09  28   P        P        15 07 15.4 +0.2
      baz=298,SNR=34
I26K  Coal Creek Min    73.11  24   IAMs_20  IAMs_20  15 39 45.3
      comp=Z,8µm,20.0s
I26K  Coal Creek Min    73.11  24   P        P        15 07 15.2  0.0
      baz=301,SNR=67
SEW   Seward            73.14  30   IAmb     IAmb     15 07 19.7
      comp=Z,65nm,1.0s
SEW   Seward            73.14  30   P        P        15 07 16.6 +1.2
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      baz=298,SNR=13
DAVOX Davos/Dischmat    73.14 314   LR       LR       15 42 06.5
      comp=Z,9µm,18.8s,baz=63,slow=38
E29M  Blow River        73.16  20   IAMs_20  IAMs_20  15 41 03.4
      comp=Z,9µm,19.0s
E29M  Blow River        73.16  20   P        P        15 07 15.7 +0.2
      baz=305,SNR=76
H27K  Steamboat Moun    73.19  23   P        P        15 07 16.4 +0.7
      baz=302,SNR=130
SCM   Sheep Creek Mo    73.23  28   IAmb     IAmb     15 07 47.6
      comp=Z,108nm,1.0s
SCM                                 IAMs_20  IAMs_20  15 38 53.8
      comp=Z,7µm,21.0s
SCM   Sheep Creek Mo    73.23  28   P        P        15 07 16.2  0.0
      baz=299,SNR=30
PWL   Port Wells        73.27  29   IAmb     IAmb     15 07 18.3
      comp=Z,235nm,1.6s
PWL                                 IAMs_20  IAMs_20  15 42 47.9
      comp=Z,7µm,20.0s
PWL   Port Wells        73.27  29   P        P        15 07 16.1 -0.2
      baz=298,SNR=22
RIDG  Independent Ri    73.28  26   P        P        15 07 15.6 -0.8
      baz=300,SNR=52
LRW   Lerwick           73.34 330  eP        P        15 07 16.9 +0.3
LRW                                 IAmb     IAmb     15 07 18.9
      comp=Z,106nm,0.7s
LRW                                 IAMs_20  IAMs_20  15 43 16.0
      comp=Z,6µm,16.0s
J26L  Joseph Creek      73.38  25   IAmb     IAmb     15 07 19.1
      comp=Z,119nm,0.8s
J26L                                IAMs_20  IAMs_20  15 37 13.4
      comp=Z,8µm,21.0s
J26L  Joseph Creek      73.38  25   P        P        15 07 16.1 -0.9
      baz=301,SNR=228
ZCCA  Zocca             73.40 312   IAmb     IAmb     15 07 32.2
      comp=Z,115nm,0.9s
ZCCA                                IAMs_20  IAMs_20  15 42 30.8
      comp=Z,7µm,21.0s
PAX   Paxson            73.43  27   IAMs_20  IAMs_20  15 37 29.9
      comp=Z,9µm,22.0s
PAX   Paxson            73.43  27   P        P        15 07 16.2 -1.1
      baz=300,SNR=20
NEEM  North Greenlan    73.44 355 i P        P        15 07 17.4  0.0
NEEM                                IAmb     IAmb     15 07 20.0
      comp=Z,338nm,1.1s
BFO   Black Forest      73.48 316   P        P        15 07 17.6 -0.2
BFO                                 IAmb     IAmb     15 07 21.6
      comp=Z,96nm,0.9s
BFO   Black Forest      73.48 316   P        P        15 07 17.6 -0.2
BFO                                 pmax     pmax
      comp=Z,96nm,0.9s
BFO                                 MLR      MLR
      comp=Z,9µm,18.0s
BFO   Black Forest      73.48 316  eP        P        15 07 17.0 -0.8
      comp=Z,63nm,0.8s,baz=69,slow=6.0
BFO                                eS        SKiKP    15 16 48.3 +0.6
      baz=68,slow=12
ARPS  Mount Arapiles    73.49 150   P        P        15 07 19.0 +1.3
SCRK  Sand Creek        73.49  25   IAmb     IAmb     15 07 19.4
      comp=Z,141nm,1.3s
SCRK  Sand Creek        73.49  25   P        P        15 07 17.2 -0.5
      baz=301,SNR=91
I27K  Kandik River      73.50  23   P        P        15 07 18.2 +0.6
      baz=302,SNR=99
ARMA  Armidale          73.50 139   IAmb     IAmb     15 07 22.4
      comp=Z,84nm,1.1s
ARMA  Armidale          73.50 139   P        P        15 07 19.4 +1.3
OSSC  Osservatorio P    73.55 311   IAmb     IAmb     15 07 21.2
      comp=Z,209nm,1.5s
M24K  Tolsona, Glenn    73.58  28   IAMs_20  IAMs_20  15 43 20.8
      comp=Z,7µm,20.0s
M24K  Tolsona, Glenn    73.58  28   P        P        15 07 18.8 +0.6
      baz=300,SNR=41
TUE   Stuetta           73.60 314   IAmb     IAmb     15 07 22.0
      comp=Z,77nm,0.7s
DOT   Dot Lake          73.63  26   IAMs_20  IAMs_20  15 37 32.1
      comp=Z,7µm,22.0s
GLI   Glacier Island    73.80  29   IAMs_20  IAMs_20  15 39 31.7
      comp=Z,6µm,18.0s
GLI   Glacier Island    73.80  29   P        P        15 07 19.6 +0.2
      baz=299,SNR=9.6
HARP  HAARP             73.84  27   P        P        15 07 20.3 +0.7
      baz=300,SNR=11
BTNL  Ternell           73.85 319  dP        P        15 07 19.4 -0.5
      comp=Z,34nm,1.0s
MEM   Membach           73.91 319  dP        P        15 07 20.1 -0.1
      comp=Z,33nm,1.0s
MEM                                dPcP      PcP      15 07 33.5 -2.1
G29M  Pine Creek        73.97  21   IAmb     IAmb     15 07 22.5
      comp=Z,250nm,1.6s
G29M                                IAMs_20  IAMs_20  15 43 55.0
      comp=Z,8µm,19.0s
G29M  Pine Creek        73.97  21   P        P        15 07 20.3  0.0
      baz=305,SNR=48
KLU   Klutina           73.99  28   IAmb     IAmb     15 07 26.3
      comp=Z,197nm,1.1s
KLU                                 IAMs_20  IAMs_20  15 40 32.7
      comp=Z,6µm,18.0s
KLU   Klutina           73.99  28   P        P        15 07 20.7 +0.1
      baz=300,SNR=68
BEBN  Eben Emael        74.02 319  dP        P        15 07 21.4 +0.6
P23K  Montague Islan    74.09  30   IAmb     IAmb     15 07 23.4
      comp=Z,206nm,1.5s
P23K                                IAMs_20  IAMs_20  15 40 32.6
      comp=Z,7µm,18.0s
P23K  Montague Islan    74.09  30   P        P        15 07 21.4 +0.3
      baz=299
FID   Port Fidalgo      74.12  29   IAMs_20  IAMs_20  15 39 41.2
      comp=Z,8µm,18.0s
A36M  Sachs Harbour     74.13  14   P        P        15 07 21.9 +0.8
      baz=315,SNR=30
I28M  Miner Creek       74.17  23   IAmb     IAmb     15 07 24.0
      comp=Z,191nm,1.6s
I28M  Miner Creek       74.17  23   P        P        15 07 21.5 -0.1
      baz=304,SNR=76
BSTI  Sart Tilman       74.17 319  dP        P        15 07 21.5 -0.2
      comp=Z,9.6nm,1.2s
K27K  Chicken           74.18  25   IAmb     IAmb     15 07 24.2
      comp=Z,287nm,1.6s
K27K                                IAMs_20  IAMs_20  15 38 00.6
      comp=Z,9µm,20.0s
K27K  Chicken           74.18  25   P        P        15 07 22.2 +0.6
      baz=302
WLF   Walferdange       74.23 318   IAMs_20  IAMs_20  15 44 03.0
      comp=Z,5µm,18.0s
WLF   Walferdange       74.23 318  dP        P        15 07 22.3 +0.1
      comp=Z,132nm,0.9s
WLF   Walferdange       74.23 318  eP        P        15 07 22.2 +0.1
      comp=Z,124nm,0.7s,baz=69,slow=6.0
WLF                                eS        S        15 16 57.3 +2.4
      baz=68,slow=12
DIV   Divide            74.23  28   IAMs_20  IAMs_20  15 37 02.1
      comp=Z,8µm,19.0s
L26K  Log Cabin Wild    74.23  26   P        P        15 07 22.3 +0.3
      baz=302,SNR=22
F30M  Barrier River     74.26  20   P        P        15 07 22.0 +0.1
      baz=307,SNR=39
H29M  Whitestone        74.26  22   P        P        15 07 22.3 +0.3
      baz=305,SNR=33
HIN   Hinchinbrook I    74.29  29   IAmb     IAmb     15 07 28.1
      comp=Z,81nm,0.9s
HIN                                 IAMs_20  IAMs_20  15 40 15.7
      comp=Z,6µm,18.0s
WDD   Wied Dalam        74.31 302   IAmb     IAmb     15 07 24.6
      comp=Z,109nm,0.7s
SANVU Saraoutou         74.32 118   P        P        15 07 23.1 +0.1
SANVU Saraoutou         74.32 118   P        P        15 07 26.2 +3.2
BCLA  Clavier           74.40 319  dP        P        15 07 22.7 -0.3
      comp=Z,46nm,1.0s
N25K  Chitina, Valde    74.47  28   IAMs_20  IAMs_20  15 37 48.6
      comp=Z,7µm,19.0s
N25K  Chitina, Valde    74.47  28   P        P        15 07 24.2 +0.8
      baz=301,SNR=32
SCO   Scoresbysund      74.50 344 i P        P        15 07 22.9 -0.3
SCO                                 IAmb     IAmb     15 07 25.5
      comp=Z,71nm,1.1s
INK   Inuvik            74.50  19   IAmb     IAmb     15 07 25.8
      comp=Z,77nm,0.8s
INK                                 IAMs_20  IAMs_20  15 42 08.0
      comp=Z,7µm,18.0s
INK   Inuvik            74.50  19   LR       LR       15 44 32.7
      comp=Z,7µm,18.1s,baz=262,slow=39
INK   Inuvik            74.50  19   P        P        15 07 23.1 -0.2
      baz=309,SNR=52
G30M  tAoh Zraii Nji    74.50  21   IAmb     IAmb     15 07 25.6
      comp=Z,109nm,0.8s
G30M  tAoh Zraii Nji    74.50  21   P        P        15 07 23.0 -0.4
      baz=307,SNR=51
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EYAK  Cordova Ski Ar    74.53  29   IAmb     IAmb     15 07 29.5
      comp=Z,168nm,1.3s
EYAK  Cordova Ski Ar    74.53  29   P        P        15 07 24.6 +1.0
EYAK  Cordova Ski Ar    74.53  29   P        P        15 07 24.5 +0.9
      baz=300,SNR=20
BGES  Gesves            74.54 319  dP        P        15 07 24.2 +0.3
      comp=Z,25nm,1.2s
M26K  Nabesna, AK       74.70  27   IAmb     IAmb     15 07 27.3
      comp=Z,223nm,1.7s
M26K  Nabesna, AK       74.70  27   P        P        15 07 25.1 +0.4
      baz=302,SNR=39
EPYK  Eagle Plains      74.71  22   IAmb     IAmb     15 07 26.0
      comp=Z,138nm,1.4s
EPYK  Eagle Plains      74.71  22   P        P        15 07 24.4 -0.2
      baz=306,SNR=34
BMRD  Maredsous         74.76 319  dP        P        15 07 24.9 -0.3
      comp=Z,37nm,0.8s
UCC   Uccle             74.77 320  dP        P        15 07 25.6 +0.4
I29M  Ogilvie Camp,     74.78  23   P        P        15 07 24.5 -0.5
      baz=305,SNR=37
L27K  Beaver Creek,     74.80  26   IAmb     IAmb     15 07 28.2
      comp=Z,223nm,1.6s
L27K  Beaver Creek,     74.80  26   P        P        15 07 25.6 +0.4
      baz=303,SNR=125
BMRM  Bremner River     74.80  28   IAmb     IAmb     15 07 41.3
      comp=Z,129nm,0.9s
BMRM                                IAMs_20  IAMs_20  15 39 18.2
      comp=Z,7µm,20.0s
BMRM  Bremner River     74.80  28   P        P        15 07 26.1 +0.8
      baz=301,SNR=40
BCAR  Beaver Creek A    74.81  26   P        P        15 07 25.5 +0.2
Q23K  Middleton Isla    74.84  30   P        P        15 07 25.5 +0.1
      baz=300
GLB   Gilahina Butte    74.88  28   IAmb     IAmb     15 07 28.8
      comp=Z,71nm,0.8s
GLB                                 IAMs_20  IAMs_20  15 43 22.3
      comp=Z,8µm,19.0s
SENIN Lac Senin/Sane    74.94 315   IAMs_20  IAMs_20  15 42 40.1
      comp=Z,6µm,18.0s
DOU   Dourbes           74.95 319  dP        P        15 07 25.2 -1.0
      comp=Z,28nm,1.2s
DOU                                dPcP      PcP      15 07 38.9 -1.2
DOU                                dPP       PP       15 10 15.2 +1.6
F31M  Tsiigehtchic      74.98  20   IAmb     IAmb     15 07 27.8
      comp=Z,189nm,1.5s
F31M  Tsiigehtchic      74.98  20   P        P        15 07 25.6 -0.5
      baz=309,SNR=12
VOI   Vohitsoka         75.12 235   P        P        15 07 26.4 -1.3
VOI                                 IAmb     IAmb     15 07 33.5
      comp=Z,131nm,1.2s
VOI   Vohitsoka         75.12 235   P        P        15 07 26.5 -1.3
      SNR=7.6
DAWY  Dawson            75.14  24   IAmb     IAmb     15 07 29.1
      comp=Z,174nm,1.6s
DAWY                                IAMs_20  IAMs_20  15 37 19.0
      comp=Z,6µm,21.0s
DAWY  Dawson            75.14  24   P        P        15 07 26.7 -0.5
      baz=305,SNR=54
VRDI  Verde Repeater    75.14  28   IAMs_20  IAMs_20  15 43 29.2
      comp=Z,8µm,19.0s
G31M  Satah River       75.15  21   P        P        15 07 26.6 -0.4
      baz=308,SNR=27
M27K  Edge Creek, AK    75.16  26   IAmb     IAmb     15 07 34.0
      comp=Z,82nm,0.9s
M27K  Edge Creek, AK    75.16  26   P        P        15 07 28.2 +0.8
      baz=303,SNR=61
MCARA McCarthy VSAT     75.23  27   IAmb     IAmb     15 07 31.5
      comp=Z,67nm,0.8s
MCARA                               IAMs_20  IAMs_20  15 40 09.6
      comp=Z,7µm,18.0s
MCARA McCarthy VSAT     75.23  27   P        P        15 07 28.4 +0.7
      baz=302,SNR=21
TULEG Thule             75.28 358   IAmb     IAmb     15 07 29.8
      comp=Z,240nm,1.6s
J29N  Klondike Camp     75.34  24   IAmb     IAmb     15 07 31.5
      comp=Z,56nm,0.6s
J29N  Klondike Camp     75.34  24   P        P        15 07 28.6 +0.3
      baz=306,SNR=5.4
BIGH  Upper Bighouse    75.36 329⥣eP        P        15 07 29.2 +0.7
BIGH                                IAmb     IAmb     15 07 30.3
      comp=Z,127nm,1.0s
KAIM  Kayak Island      75.42  29   IAMs_20  IAMs_20  15 41 50.7
      comp=Z,7µm,20.0s
KAIM  Kayak Island      75.42  29   P        P        15 07 29.7 +0.9
      baz=302
I30M  Mount Dempster    75.51  22   IAmb     IAmb     15 07 31.0
      comp=Z,149nm,1.6s
I30M  Mount Dempster    75.51  22   P        P        15 07 28.9 -0.5
      baz=307,SNR=74
MCD   Coleburn Disti    75.52 328  eP        P        15 07 29.3 -0.1
MCD                                 IAmb     IAmb     15 07 32.0
      comp=Z,129nm,0.7s
MCD                                 IAMs_20  IAMs_20  15 43 22.4
      comp=Z,6µm,20.0s
CRQM  Cirque            75.52  28   IAMs_20  IAMs_20  15 38 12.9
      comp=Z,9µm,20.0s
BVCY  Beaver Creek      75.53  26   P        P        15 07 30.3 +0.8
      baz=304,SNR=53
CRQE  Cirque            75.55  28   P        P        15 07 30.0 +0.3
      baz=302,SNR=6.5
TGL   Tana Glacier      75.65  28   IAmb     IAmb     15 07 33.2
      comp=Z,69nm,0.8s
TGL                                 IAMs_20  IAMs_20  15 38 15.7
      comp=Z,8µm,21.0s
CAN   Canberra          75.77 144   IAmb     IAmb     15 07 34.8
      comp=Z,230nm,1.6s
CAN   Canberra          75.77 144   P        P        15 07 32.4 +1.3
WAX   Waxell Ridge      75.81  28   IAmb     IAmb     15 07 34.0
      comp=Z,206nm,1.6s
TOO   Toolangi          75.81 148   P        P        15 07 31.1 -0.2
TOO   Toolangi          75.81 148   P        P        15 07 31.1 -0.2
TOO                                 pmax     pmax
      comp=Z,38nm,1.2s
H31M  Peel River        75.82  21   IAmb     IAmb     15 07 33.1
      comp=Z,60nm,0.8s
H31M  Peel River        75.82  21   P        P        15 07 30.5 -0.6
      baz=309,SNR=47
BNI   Bardonecchia      75.89 314   IAmb     IAmb     15 07 35.2
      comp=Z,56nm,0.7s
BNI                                 IAMs_20  IAMs_20  15 43 50.5
      comp=Z,6µm,21.0s
J30M  Hart River        75.92  23   IAmb     IAmb     15 07 33.8
      comp=Z,137nm,1.6s
J30M  Hart River        75.92  23   P        P        15 07 31.7 -0.1
      baz=307,SNR=46
ISLE  Juniper Island    75.94  28   IAMs_20  IAMs_20  15 38 23.3
      comp=Z,7µm,20.0s
K29M  Barlow Dome       75.94  24   IAmb     IAmb     15 07 34.9
      comp=Z,80nm,0.8s
K29M                                IAMs_20  IAMs_20  15 44 24.2
      comp=Z,8µm,19.0s
K29M  Barlow Dome       75.94  24   P        P        15 07 32.2 +0.3
      baz=306,SNR=133
CNB   Canberra Magne    75.95 144   P        P        15 07 33.6 +1.4
WACR  West Acre         75.95 323  eP        P        15 07 32.1 +0.1
WACR                                IAmb     IAmb     15 07 33.8
      comp=Z,213nm,1.1s
WACR                                IAMs_20  IAMs_20  15 44 32.1
      comp=Z,4µm,17.1s
YUK3  Moose Creek       76.04  26   P        P        15 07 32.7 +0.1
      baz=304,SNR=39
GRNC  Granite Creek     76.11  28   IAmb     IAmb     15 07 36.4
      comp=Z,65nm,0.9s
GRNC                                IAMs_20  IAMs_20  15 44 09.7
      comp=Z,6µm,20.0s
CTG   Chitna Glacier    76.15  27   P        P        15 07 33.9 +0.7
      baz=304,SNR=27
CTGM  Chitina Glacie    76.15  27   IAmb     IAmb     15 07 36.6
      comp=Z,60nm,0.7s
L29M  L29M              76.16  25   IAmb     IAmb     15 07 36.4
      comp=Z,123nm,0.9s
L29M                                IAMs_20  IAMs_20  15 39 11.9
      comp=Z,8µm,20.0s
L29M  L29M              76.16  25   P        P        15 07 33.7 +0.6
      baz=306,SNR=112
SUMG  Summit            76.26 349   IAMs_20  IAMs_20  15 45 30.8
      comp=Z,5µm,20.0s
SUMG  Summit            76.26 349 i P        P        15 07 33.0 -0.9
SUMG                                IAmb     IAmb     15 07 35.8
      comp=Z,271nm,1.1s
EDMD  Edmundbyers       76.28 325⥣eP        P        15 07 33.7  0.0
EDMD                                IAmb     IAmb     15 07 34.7
      comp=Z,176nm,1.1s
EDMD                                IAMs_20  IAMs_20  15 42 46.2
      comp=Z,4µm,16.8s
C36M  Paulatuk          76.31  16   P        P        15 07 32.9 -0.8
      baz=317,SNR=38
YAH   Yahtse            76.32  28   IAmb     IAmb     15 07 40.5
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                comp=Z,106nm,1.0s
YAH                                   IAMs_20  IAMs_20  15 41 21.3
                comp=Z,7µm,20.0s
EDI    Edinburgh        76.33 327⇑eP       P        15 07 34.2 +0.2
EDI                                   IAmb     IAmb     15 07 35.8
                comp=Z,120nm,1.0s
EDI                                   IAMs_20  IAMs_20  15 43 47.5
                comp=Z,6µm,16.5s
DOV    Dover Castle,    76.33 321  eP       P        15 07 34.7 +0.6
MESA   MESA             76.33  28  IAmb     IAmb     15 07 37.9
                comp=Z,89nm,0.7s
MESA                                  IAMs_20  IAMs_20  15 38 48.7
                comp=Z,7µm,21.0s
MESA   MESA             76.33  28  P        P        15 07 35.0 +0.8
                baz=304,SNR=5.2
LOGN   Logan Glacier    76.36  27  IAmb     IAmb     15 07 37.2
                comp=Z,93nm,1.3s
LOGN                                  IAMs_20  IAMs_20  15 40 45.4
                comp=Z,8µm,20.0s
MBAR   Mbarara          76.39 262  P        P        15 07 35.4  0.0
MBAR                               P        P        15 07 35.4  0.0
MBAR   Mbarara          76.39 262d iP       P        15 07 35.5 +0.2
MBAR                               pmax     pmax
                comp=Z,82nm,1.3s
MBAR                               MLR      MLR
                comp=Z,3µm,18.0s
RES    Resolute Bay     76.40   5  IAmb     IAmb     15 07 36.5
                comp=Z,101nm,1.2s
M29M   Somme Creek      76.43  25  P        P        15 07 35.4 +0.8
                baz=306,SNR=40
TABL   Table Mountain   76.52  28  IAmb     IAmb     15 07 38.1
                comp=Z,189nm,1.6s
TABL                                  IAMs_20  IAMs_20  15 40 51.7
                comp=Z,9µm,22.0s
HPK    Haverah Park     76.54 324⇑eP       P        15 07 35.5 +0.3
HPK                                IAmb     IAmb     15 07 36.6
                comp=Z,194nm,1.3s
HPK                                   IAMs_20  IAMs_20  15 43 54.4
                comp=Z,6µm,18.8s
YUK8   Steele Glacier   76.60  27  P        P        15 07 36.4 +0.6
                baz=305,SNR=26
EKA    Eskdalemuir Ar   76.62 326  P        P        15 07 35.1 -0.6
                comp=Z,36nm,0.8s,baz=55,slow=5.8,SNR=48
                comp=Z,36nm,0.8s
ESK    Eskdalemuir      76.65 326  P        P        15 07 36.0 +0.1
ESK                                IAmb     IAmb     15 07 37.5
                comp=Z,114nm,1.1s
ESK    Eskdalemuir      76.65 326⇑eP       P        15 07 35.9 +0.1
ESK                                IAmb     IAmb     15 07 37.1
                comp=Z,161nm,1.3s
ESK                                   IAMs_20  IAMs_20  15 44 09.9
                comp=Z,6µm,15.5s
ESK    Eskdalemuir      76.65 326  P        P        15 07 36.0 +0.1
ESK                                pmax     pmax
                comp=Z,114nm,1.1s
KULLO  Kullorsuaq       76.65 355 i P       P        15 07 35.6  0.0
KULLO                              IAmb     IAmb     15 07 37.8
                comp=Z,265nm,1.2s
MAYO   Mayo, Yukon      76.67  24  IAmb     IAmb     15 07 38.6
                comp=Z,98nm,0.7s
MAYO                                  IAMs_20  IAMs_20  15 42 40.5
                comp=Z,7µm,20.0s
MAYO   Mayo, Yukon      76.67  24  P        P        15 07 36.7 +0.8
                baz=308,SNR=8.3
O28M   Mount Upton      76.72  27  IAMs_20  IAMs_20  15 41 04.9
                comp=Z,7µm,18.0s
O28M   Mount Upton      76.72  27  P        P        15 07 37.3 +0.8
                baz=305,SNR=10
KPL    Plockton         76.76 329  eP       P        15 07 36.9 +0.4
KPL                                IAmb     IAmb     15 07 37.2
                comp=Z,159nm,1.4s
KPL                                   IAMs_20  IAMs_20  15 45 26.4
                comp=Z,6µm,14.5s
LBWR   Ladybower, Pea   76.86 324⇑eP       P        15 07 37.2 +0.1
LBWR                               IAmb     IAmb     15 07 38.4
                comp=Z,272nm,1.1s
LBWR                                  IAMs_20  IAMs_20  15 44 15.3
                comp=Z,8µm,18.4s
LEWI   Lewis, Hebride   76.88 330⇑eP       P        15 07 37.6 +0.5
LEWI                               IAmb     IAmb     15 07 38.8
                comp=Z,817nm,2.2s
FOMA   Nahampoana Res   76.93 232  IAmb     IAmb     15 07 40.5
                comp=Z,82nm,1.1s
FOMA                                  IAMs_20  IAMs_20  15 36 33.6
                comp=Z,5µm,22.0s
KESW   Keswick, Cumbr   76.97 325⇑eP       P        15 07 37.9 +0.2
KESW                               IAmb     IAmb     15 07 39.1
                comp=Z,158nm,1.1s
KESW                                  IAMs_20  IAMs_20  15 44 35.7
                comp=Z,5µm,14.5s
CWF    Charnwood Fore   76.98 323⇑eP       P        15 07 37.6 -0.2
CWF                                IAmb     IAmb     15 07 38.1
                comp=Z,57nm,1.2s
CWF                                   IAMs_20  IAMs_20  15 44 28.0
                comp=Z,10µm,16.4s
YUK4   Talbot Arm       77.00  26  P        P        15 07 38.4 +0.3
                baz=306,SNR=15
HMNX   Herstmonceux     77.00 321⇑eP       P        15 07 38.8 +0.9
HMNX                               IAMs_20  IAMs_20  15 43 21.4
                comp=Z,4µm,18.0s
PGBU   Glenifferbraes   77.01 327⇑eP       P        15 07 38.5 +0.5
PGBU                               IAmb     IAmb     15 07 39.4
                comp=Z,395nm,1.1s
PCA    Pinnacle         77.08  28  IAmb     IAmb     15 07 41.9
                comp=Z,78nm,0.8s
PCA                                   IAMs_20  IAMs_20  15 41 57.5
                comp=Z,7µm,21.0s
PINM   Pinnacle         77.08  28  P        P        15 07 39.4 +1.0
                baz=305,SNR=8.0
LAWE   Loch Awe, Argy   77.21 328⇑eP       P        15 07 39.2 +0.2
LAWE                               IAmb     IAmb     15 07 40.4
                comp=Z,114nm,1.3s
LAWE                                  IAMs_20  IAMs_20  15 44 01.8
                comp=Z,7µm,15.6s
NEWG   New Galloway     77.25 326⇑eP       P        15 07 39.3 +0.1
NEWG                               IAmb     IAmb     15 07 40.8
                comp=Z,219nm,1.5s
NEWG                                  IAMs_20  IAMs_20  15 45 46.8
                comp=Z,5µm,14.4s
CLF    Chambon-Foret    77.26 318  IAMs_20  IAMs_20  15 45 57.3
                comp=Z,5µm,18.0s
STNC   Stoke            77.27 324⇑eP       P        15 07 39.8 +0.4
STNC                               IAmb     IAmb     15 07 42.3
                comp=Z,182nm,1.2s
STNC                                  IAMs_20  IAMs_20  15 44 37.8
                comp=Z,9µm,17.0s
YUK6   Outpost Mounta   77.35  27  P        P        15 07 41.1 +1.1
                baz=306,SNR=16
BCPM   Bancas Point     77.42  28  IAMs_20  IAMs_20  15 40 05.4
                comp=Z,6µm,20.0s
N30M   Aishikik Lake    77.54  26  IAmb     IAmb     15 07 43.7
                comp=Z,206nm,1.6s
N30M                                  IAMs_20  IAMs_20  15 39 56.4
                comp=Z,7µm,18.0s
N30M   Aishikik Lake    77.54  26  P        P        15 07 42.1 +1.3
                baz=307,SNR=38
O29M   Mount Kennedy    77.64  27  P        P        15 07 42.8 +1.2
                baz=306,SNR=12
YKU2   Yakutat          77.66  28  IAMs_20  IAMs_20  15 39 55.8
                comp=Z,5µm,20.0s
PNL    Peninsula        77.68  28  P        P        15 07 44.4 +2.8
PNL    Peninsula        77.68  28  P        P        15 07 43.0 +1.3
                baz=306,SNR=10
DZM    Mont Dzumac      77.68 123  IAmb     IAmb     15 07 46.9
                comp=Z,115nm,0.9s
DZM    Mont Dzumac      77.68 123  eP       P        15 07 42.5 +0.3
                comp=Z,333nm,1.1s
DZM                                eS       S        15 17 24.2  -10
                comp=Z,237nm,25.2s
DZM                                eSS      SS       15 22 13.3  -21
                comp=Z,567nm,26.1s
DZM                                eLQ      LQ       15 28 16.5
                comp=Z,7µm,32.0s
DZM                                eLR      LR       15 31 34.5
                comp=Z,3µm,25.3s
DZM    Mont Dzumac      77.68 123  P        P        15 07 44.3 +2.1
HYT    Haines Junctio   77.76  26  P        P        15 07 42.8 +0.6
                baz=307,SNR=30
SWN1   Swindon          77.85 322  eP       P        15 07 43.0 +0.4
SWN1                               IAMs_20  IAMs_20  15 45 16.0
                comp=Z,5µm,14.6s
IOMK   Kirk Michael     77.87 326⇑eP       P        15 07 43.3 +0.6
IOMK                               IAmb     IAmb     15 07 44.4
                comp=Z,70nm,1.0s
IOMK                                  IAMs_20  IAMs_20  15 45 58.7
                comp=Z,3µm,13.4s
FOEL   Foel Wylfa       77.89 324  eP       P        15 07 43.4 +0.4
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FOEL                               IAmb     IAmb     15 07 45.6
                comp=Z,87nm,0.7s
FOEL                                  IAMs_20  IAMs_20  15 44 57.3
                comp=Z,9µm,16.9s
STRD   Stroud           77.92 323⇑eP       P        15 07 43.4 +0.3
STRD                               IAmb     IAmb     15 07 46.6
                comp=Z,206nm,0.8s
STRD                                  IAMs_20  IAMs_20  15 44 19.3
                comp=Z,6µm,18.4s
WIM    Isle of Man      77.98 325  eP       P        15 07 43.9 +0.5
N31M   Braeburn, Yuko   78.02  25  IAmb     IAmb     15 07 46.6
                comp=Z,85nm,0.8s
N31M   Braeburn, Yuko   78.02  25  P        P        15 07 43.7 +0.2
                baz=308,SNR=51
M31M   Drury Creek, Y   78.08  24  IAMs_20  IAMs_20  15 41 07.7
                comp=Z,6µm,22.0s
M31M   Drury Creek, Y   78.08  24  P        P        15 07 44.0 +0.1
                baz=309,SNR=23
KEST   Kesra            78.17 304  P        P        15 07 45.1 +0.3
                comp=Z,28nm,0.7s,baz=63,slow=1.4,SNR=20
KEST                               LR       LR       15 48 16.7
                comp=Z,2µm,18.6s,baz=54,slow=40
                comp=Z,28nm,0.7s
KEST   Kesra            78.17 304  P        P        15 07 45.6 +0.7
                SNR=8.6
KEST                               P        P        15 07 45.6 +0.7
                SNR=8.6
OUENC  Ouen Island, N   78.19 123  P        P        15 07 47.3 +2.4
CLGH   Cloghs, Cushen   78.19 327  eP       P        15 07 44.7 +0.3
CLGH                               IAmb     IAmb     15 07 45.9
                comp=Z,2.4nm,1.0s
WME    Myndd Eilian     78.19 325  eP       P        15 07 43.5 -1.0
MONM   Monmouth         78.22 323  eP       P        15 07 44.9 +0.2
MONM                               IAmb     IAmb     15 07 46.0
                comp=Z,94nm,1.2s
MONM                                  IAMs_20  IAMs_20  15 45 07.4
                comp=Z,6µm,16.2s
YLL    Llanberis        78.26 324  eP       P        15 07 45.4 +0.5
BORG   Borgarnes        78.27 339  P        P        15 07 46.4 +1.7
BORG   Borgarnes        78.27 339  LR       LR       15 45 44.3
                comp=Z,1µm,20.2s,baz=54,slow=38
BORG   Borgarnes        78.27 339  P        P        15 07 46.4 +1.7
BORG                               pmax     pmax
                comp=Z,196nm,1.1s
BORG                               MLR      MLR
                comp=Z,2µm,19.0s
WPS    Cemaes, Angles   78.29 325  eP       P        15 07 45.3 +0.2
WPS                                IAmb     IAmb     15 07 45.9
                comp=Z,142nm,1.3s
WPS                                   IAMs_20  IAMs_20  15 47 47.3
                comp=Z,5µm,18.2s
UPNV   Upernavik        78.30 354 i P       P        15 07 45.1 +0.3
UPNV                               IAmb     IAmb     15 07 46.9
                comp=Z,198nm,1.1s
WLF1   Llynfaes         78.30 325  eP       P        15 07 45.5 +0.4
WLF1                               IAmb     IAmb     15 07 47.1
                comp=Z,313nm,1.1s
WLF1                                  IAMs_20  IAMs_20  15 47 48.9
                comp=Z,9µm,18.5s
O30N   Mendenhall       78.34  26  IAmb     IAmb     15 07 48.1
                comp=Z,181nm,1.5s
O30N                                  IAMs_20  IAMs_20  15 39 38.7
                comp=Z,7µm,18.0s
O30N   Mendenhall       78.34  26  P        P        15 07 45.6 +0.3
                baz=308,SNR=40
P29M   Windy Craggy     78.39  27  P        P        15 07 46.4 +0.8
                baz=307,SNR=16
P30M   Million Dollar   78.40  27  P        P        15 07 46.0 +0.4
                baz=308
FARO   Faro, Yukon      78.44  24  IAMs_20  IAMs_20  15 41 51.2
                comp=Z,7µm,19.0s
FARO   Faro, Yukon      78.44  24  P        P        15 07 46.9 +1.1
                baz=310,SNR=15
SOEG   Soedalen         78.44 345 i P       P        15 07 45.7  0.0
SOEG                               IAmb     IAmb     15 07 48.9
                comp=Z,178nm,0.8s
IDGL   Inch Island, C   78.86 327  eP       P        15 07 48.3 +0.1
IDGL                               IAmb     IAmb     15 07 51.2
                comp=Z,137nm,0.7s
IDGL   Inch Island, C   78.86 327  P        P        15 07 48.2  0.0
ILTH   Belurgan, Co L   78.87 326  P        P        15 07 48.6 +0.3
WHY    Whitehorse       78.88  26  P        P        15 07 48.3  0.0
                baz=309,SNR=13
MMPY   Sheldon Lake,    78.92  23  IAMs_20  IAMs_20  15 41 05.8
                comp=Z,8µm,21.0s
MMPY   Sheldon Lake,    78.92  23  P        P        15 07 48.9 +0.4
                baz=312,SNR=33
PLBC   Pleasant Camp    79.05  27  P        P        15 07 49.3 +0.1
                baz=308,SNR=14
RSBS   Rosebush, Pemb   79.19 324  eP       P        15 07 50.4 +0.3
POIN   Pond Inlet       79.19   1  IAmb     IAmb     15 07 51.6
                comp=Z,99nm,1.1s
NUUG   Nuugaatsiaq      79.20 353 i P       P        15 07 49.7 -0.1
NUUG                               IAmb     IAmb     15 07 51.8
                comp=Z,172nm,1.3s
N32M   Quiet Lake       79.24  25  IAmb     IAmb     15 07 52.9
                comp=Z,82nm,0.9s
N32M                                  IAMs_20  IAMs_20  15 42 10.4
                comp=Z,7µm,19.0s
N32M   Quiet Lake       79.24  25  P        P        15 07 50.0 -0.2
                baz=310,SNR=42
JSA    Saint Aubin      79.24 320⇑eP       P        15 07 50.9 +0.5
JSA                                IAMs_20  IAMs_20  15 45 27.6
                comp=Z,7µm,18.4s
DSB    Dublin           79.32 325  IAMs_20  IAMs_20  15 45 58.2
                comp=Z,5µm,18.0s
DSB    Dublin           79.32 325⇑eP       P        15 07 51.3 +0.5
DSB                                IAmb     IAmb     15 07 51.7
                comp=Z,102nm,1.2s
DSB    Dublin           79.32 325  P        P        15 07 50.9 +0.1
ICESG  Greenland Ices   79.44 348 i P       P        15 07 51.1 -0.4
ICESG                              IAmb     IAmb     15 07 53.3
                comp=Z,304nm,1.2s
SKAG   Skagway          79.46  27  IAmb     IAmb     15 07 55.0
                comp=Z,98nm,0.9s
SKAG                                  IAMs_20  IAMs_20  15 46 10.3
                comp=Z,6µm,18.0s
SKAG   Skagway          79.46  27  P        P        15 07 52.7 +1.3
SKAG   Skagway          79.46  27  P        P        15 07 52.2 +0.8
                baz=309,SNR=35
DYA    Yadsworthy       79.56 322  eP       P        15 07 52.3 +0.1
DYA                                IAmb     IAmb     15 07 53.4
                comp=Z,109nm,1.2s
DYA                                   IAMs_20  IAMs_20  15 45 52.2
                comp=Z,7µm,15.3s
MAHO   Mahon            79.84 310  IAmb     IAmb     15 07 57.7
                comp=Z,151nm,1.2s
UMMG   Uummannaq        79.90 352 i P       P        15 07 53.1 -0.4
UMMG                               IAmb     IAmb     15 07 54.9
                comp=Z,118nm,1.2s
P33M   Teslin, Yukon    79.95  25  IAMs_20  IAMs_20  15 47 36.2
                comp=Z,6µm,18.0s
P33M   Teslin, Yukon    79.95  25  P        P        15 07 54.3 +0.1
                baz=311,SNR=28
IWEX   Carrickbyrne,    80.01 325  P        P        15 07 54.6 +0.1
P32M   Atlin            80.01  26  IAMs_20  IAMs_20  15 41 24.8
                comp=Z,6µm,20.0s
P32M   Atlin            80.01  26  P        P        15 07 54.9 +0.5
                baz=310,SNR=19
S31K   Pelican          80.03  28  IAMs_20  IAMs_20  15 41 46.4
                comp=Z,6µm,20.0s
S31K   Pelican          80.03  28  P        P        15 07 55.6 +1.2
                baz=308,SNR=6.5
BESE   Bessie Mountai   80.21  27  IAmb     IAmb     15 07 58.5
                comp=Z,184nm,1.7s
BESE                                  IAMs_20  IAMs_20  15 40 58.1
                comp=Z,6µm,20.0s
R32K   Eaglecrest       80.54  27  IAMs_20  IAMs_20  15 41 08.8
                comp=Z,7µm,21.0s
R32K   Eaglecrest       80.54  27  P        P        15 07 57.9 +0.6
                baz=310
TGTN   Hyland Airport   80.69  23  P        P        15 07 58.7 +0.6
                baz=314,SNR=18
IGLA   Glengowla, Co    80.71 326  P        P        15 07 57.9 -0.3
TAU    Tasmania Unive   80.93 150  P        P        15 07 59.7 +0.3
SIT    Sitka            80.98  29  P        P        15 08 01.2 +1.6
SIT    Sitka            80.98  29  P        P        15 08 00.0 +0.5
                baz=309,SNR=13
Q32M   Nakina River     80.98  26  P        P        15 07 59.3 -0.6
                baz=311,SNR=16
WRGLY  Wrigley          81.01  20  IAMs_20  IAMs_20  15 47 16.1
                comp=Z,7µm,19.0s
WRGLY  Wrigley          81.01  20  P        P        15 08 00.3 +0.6
                baz=318
S32K   Killisnoo        81.03  28  IAMs_20  IAMs_20  15 43 48.9
                comp=Z,7µm,20.0s
S32K   Killisnoo        81.03  28  P        P        15 08 00.7 +0.8
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                baz=310
ILULI  Ilulissat        81.15 352  IAmb     IAmb     15 08 02.3
                comp=Z,166nm,1.1s
ILULI  Ilulissat        81.15 352 i P       P        15 08 00.1 -0.2
ILULI                              IAmb     IAmb     15 08 02.0
                comp=Z,180nm,1.2s
R33M   Jennings River   81.19  25  IAmb     IAmb     15 08 04.0
                comp=Z,101nm,1.2s
R33M                                  IAMs_20  IAMs_20  15 43 28.0
                comp=Z,7µm,19.0s
R33M   Jennings River   81.19  25  P        P        15 08 01.8 +0.8
                baz=312,SNR=44
WTLY   Watson Lake, Y   81.50  24  IAmb     IAmb     15 08 04.5
                comp=Z,171nm,1.6s
WTLY   Watson Lake, Y   81.50  24  P        P        15 08 02.5 +0.1
                baz=314,SNR=12
ANGG   Ammassalik, Gr   81.99 345 i P       P        15 08 03.2 -1.5
ANGG                               IAmb     IAmb     15 08 05.6
                comp=Z,423nm,2.2s
VAL    Valentia         82.01 326  P        P        15 08 05.3 +0.2
S34M   Telegraph Cree   82.13  27  IAMs_20  IAMs_20  15 41 46.9
                comp=Z,6µm,18.0s
S34M   Telegraph Cree   82.13  27  P        P        15 08 06.9 +1.2
                baz=312,SNR=22
DLBC   Dease Lake       82.20  26  IAmb     IAmb     15 08 09.4
                comp=Z,101nm,1.3s
DLBC                                  IAMs_20  IAMs_20  15 42 52.8
                comp=Z,5µm,18.0s
DLBC   Dease Lake       82.20  26  P        P        15 08 07.2 +1.0
                baz=313,SNR=30
ISOG   Isortoq, Green   82.34 346 i P       P        15 08 06.1 -0.5
ISOG                               IAmb     IAmb     15 08 07.2
                comp=Z,85nm,1.2s
ILON   Igloolik, Nuna   82.43   2  IAmb     IAmb     15 08 09.1
                comp=Z,184nm,1.3s
U33K   Whale Pass       82.52  29  IAmb     IAmb     15 08 10.8
                comp=Z,218nm,1.7s
U33K   Whale Pass       82.52  29  P        P        15 08 09.1 +1.3
                baz=311,SNR=9.0
WRAK   Wrangell Islan   82.64  28  IAMs_20  IAMs_20  15 42 39.5
                comp=Z,6µm,20.0s
WRAK   Wrangell Islan   82.64  28  IAmb     IAmb     15 08 12.0
                comp=Z,97nm,0.8s
WRAK   Wrangell Islan   82.64  28  P        P        15 08 09.4 +1.0
                baz=312,SNR=18
BEAVL  Fort Liard       82.76  23  P        P        15 08 10.1 +1.1
                baz=317,SNR=21
CRAG   Craig            82.94  29  IAmb     IAmb     15 08 13.2
                comp=Z,169nm,1.4s
CRAG                                  IAMs_20  IAMs_20  15 45 01.6
                comp=Z,6µm,20.0s
CRAG   Craig            82.94  29  P        P        15 08 10.8 +0.8
CRAG   Craig            82.94  29  P        P        15 08 10.9 +1.0
                baz=311,SNR=8.5
LIRD   Liard River Hi   82.96  24  P        P        15 08 10.5 +0.5
                baz=316,SNR=13
T35M   Bob Quinn        83.12  27  IAmb     IAmb     15 08 14.4
                comp=Z,162nm,1.5s
T35M   Bob Quinn        83.12  27  P        P        15 08 12.8 +1.9
                baz=313,SNR=32
KOTAN  Kotaneelee Air   83.14  22  P        P        15 08 11.3 +0.4
                baz=318,SNR=9.6
SFJD   Kangerlussuaq    83.16 351  P        P        15 08 10.9 +0.1
SFJD   Kangerlussuaq    83.16 351  LR       LR       15 49 30.4
                comp=Z,3µm,18.7s,baz=22,slow=39
SFJD   Kangerlussuaq    83.16 351  P        P        15 08 10.9 +0.1
SFJD                               pmax     pmax
                comp=Z,239nm,1.1s
SFJD                               MLR      MLR
                comp=Z,3µm,18.0s
SFJD   Kangerlussuaq    83.16 351 i P       P        15 08 10.7 -0.1
SFJD                               IAmb     IAmb     15 08 12.5
                comp=Z,214nm,1.1s
TOAD   Toad River Com   83.68  24  P        P        15 08 14.5 +0.7
                baz=317,SNR=42
V35K   Ketchikan        83.68  29  P        P        15 08 14.4 +0.6
                baz=312
U35K   Hyder            83.94  28  IAMs_20  IAMs_20  15 42 46.8
                comp=Z,8µm,22.0s
YKAW3  Yellowknife Wh   84.04  17  IAmb     IAmb     15 08 17.8
                comp=Z,146nm,1.4s
YKA    Yellowknife Ar   84.09  17  P        P        15 08 15.4 -0.4
YKA    Yellowknife Ar   84.09  17  P        P        15 08 16.3 +0.5
                comp=Z,22nm,0.7s,baz=327,slow=5.5,SNR=42
YKA                                LR       LR       15 48 34.1
                comp=Z,3µm,21.5s,baz=303,slow=38
                comp=Z,22nm,0.7s
YKAW1  Yellowknife Wh   84.14  17  IAmb     IAmb     15 08 18.2
                comp=Z,175nm,1.6s
MSVF   Nonsavu          84.22 114  LR       LR       15 40 48.4
                comp=Z,2µm,21.7s,baz=310,slow=32
MSVF   Nonsavu          84.22 114  P        P        15 08 19.6 +2.4
MSVF   Nonsavu          84.22 114c iP       P        15 08 17.0 -0.2
MSVF                               pmax     pmax
                comp=Z,61nm,2.1s
MSVF                               MLR      MLR
                comp=Z,1µm,18.0s
DIB    Dawson Inlet,    84.73  31  IAmb     IAmb     15 08 24.0
                comp=Z,88nm,0.9s
DIB                                   IAMs_20  IAMs_20  15 44 56.9
                comp=Z,5µm,19.0s
H02S1  DAWSON INLET T   84.73  31  P        P        15 08 20.6 +1.4
                SNR=22
RUBB   Prince Rupert    84.94  29  IAmb     IAmb     15 08 27.1
                comp=Z,62nm,1.2s
RUBB                                  IAMs_20  IAMs_20  15 46 10.4
                comp=Z,5µm,19.0s
MOBC   Moresby Island   85.00  30  IAmb     IAmb     15 08 23.1
                comp=Z,140nm,1.5s
MOBC                                  IAMs_20  IAMs_20  15 47 18.0
                comp=Z,5µm,18.0s
ESBB   Sonseca Array    85.39 313  IAmb     IAmb     15 08 26.3
                comp=Z,135nm,1.8s
ESDC   Sonseca Array    85.40 313  P        P        15 08 21.8 -1.1
ESDC                               IAmb     IAmb     15 08 26.3
                comp=Z,143nm,1.9s
ESDC   Sonseca Array    85.40 313  P        P        15 08 22.8 -0.1
                comp=Z,15nm,0.9s,baz=41,slow=5.4,SNR=82
ESDC                               PP       PP       15 11 40.5  0.0
                comp=Z,11nm,1.1s,baz=47,slow=9.4,SNR=6.3
ESDC                               LR       LR       15 49 32.5
                comp=Z,2µm,19.2s,baz=52,slow=38
                comp=Z,15nm,0.9s
PAB    San Pablo        85.72 313  P        P        15 08 24.2 -0.3
PAB                                IAmb     IAmb     15 08 27.8
                comp=Z,114nm,1.9s
PAB    San Pablo        85.72 313  IAMs_20  IAMs_20  15 50 01.5
                comp=Z,4µm,18.0s
PAB    San Pablo        85.72 313  P        P        15 08 24.2 -0.3
PAB                                pmax     pmax
                comp=Z,114nm,1.9s
PAB                                MLR      MLR
                comp=Z,4µm,18.0s
LSZ    Lusaka           85.90 250  P        P        15 08 23.9 -1.9
LSZ    Lusaka           85.90 250  IAMs_20  IAMs_20  15 45 42.2
                comp=Z,4µm,20.0s
LSZ    Lusaka           85.90 250  LR       LR       15 46 14.3
                comp=Z,4µm,20.4s,baz=54,slow=35
LSZ    Lusaka           85.90 250  P        P        15 08 25.8 +0.1
LSZ                                P        P        15 08 25.8 +0.1
LSZ    Lusaka           85.90 250  P        P        15 08 23.9 -1.9
LSZ                                pmax     pmax
                comp=Z,214nm,1.1s
LSZ                                MLR      MLR
                comp=Z,4µm,20.0s
HG4B   Hotspring        85.92  31  IAMs_20  IAMs_20  15 45 55.3
                comp=Z,5µm,19.0s
NUUK   Nuuk             85.96 350 i P       P        15 08 24.3 -0.8
NUUK                               IAmb     IAmb     15 08 27.0
                comp=Z,378nm,1.3s
BLKN   Baker Lake       86.18   9  IAmb     IAmb     15 08 27.8
                comp=Z,110nm,1.4s
MVO    Moncorvo         86.50 315  eP       P        15 08 29.3 +0.9
MVO                               i Amb              15 08 33.8
                comp=Z,113nm,1.7s
MVO                                ePP      PP       15 11 50.1 +0.6
MVO                                eLQ      LQ       15 40 42.6
MVO                               i AMs_20           15 52 44.3
                comp=Z,2µm,18.0s
PGAV   Gavieira, Arco   86.79 317  eP       P        15 08 30.8 +1.0
PGAV                              i Amb              15 08 35.3
                comp=Z,168nm,1.9s
PGAV                               eLQ      LQ       15 41 24.8
PGAV                              i AMs_20           15 48 26.5
                comp=Z,2µm,22.0s
PCAB   Cabril           86.80 316  eP       P        15 08 30.7 +0.9
PCAB                              i Amb              15 08 35.0
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	comp=Z,141nm,2.2s						
PCAB				ePP	PP	15 12 03.3	+12
POLO	Lamas de Olo	86.85	316	eP	P	15 08 30.9	+0.8
POLO				i Amb		15 08 34.6	
	comp=Z,48nm,1.6s						
PVRL	Vila Real	86.86	316	eP	P	15 08 30.8	+0.7
PVRL				i Amb		15 08 34.4	
	comp=Z,100nm,1.7s						
TAM	Tamanrasset	87.18	294	IAmb	IAmb	15 08 36.5	
	comp=Z,43nm,0.8s						
MTE	Manteigas	87.26	315	IAmb	IAmb	15 08 34.7	
	comp=Z,61nm,1.0s						
MTE	Manteigas	87.26	315	eP	P	15 08 33.3	+1.3
MTE				i Amb		15 08 36.9	
	comp=Z,140nm,1.6s						
MTE				ePP	PP	15 11 54.1	-1.5
MTE				eLQ	LQ	15 41 41.1	
MTE				i AMs_20		15 54 12.8	
	comp=Z,2μm,16.0s						
MTE	Manteigas	87.26	315	eP	P	15 08 33.0	+1.0
PVIS	Viseu	87.29	315	eP	P	15 08 33.4	+1.2
PVIS				ePP	PP	15 11 51.8	-4.0
BBB	Bella Bella	87.36	30	IAMs_20	IAMs_20	15 45 09.3	
	comp=Z,4μm,20.0s						
BBB	Bella Bella	87.36	30	LR	LR	15 47 58.0	
	comp=Z,2μm,20.7s,baz=322,slow=36						
PTO	Porto	87.48	316	eP	P	15 08 34.5	+1.5
PCBR	Castelo Branco	87.54	315	eP	P	15 08 34.0	+0.7
PCBR				i Amb		15 08 37.7	
	comp=Z,72nm,1.7s						
PCBR				ePP	PP	15 12 00.9	+3.2
NRS	Narsarsuaq	87.60	346	IAMs_20	IAMs_20	15 51 13.5	
	comp=Z,4μm,19.0s						
NRS	Narsarsuaq	87.60	346	i P	P	15 08 32.6	-0.5
NRS				IAmb	IAmb	15 08 34.0	
	comp=Z,69nm,1.0s						
PMRV	Marv??o	87.72	314	eP	P	15 08 34.9	+0.7
PMRV				i Amb		15 08 39.4	
	comp=Z,99nm,1.8s						
PMRV				ePP	PP	15 12 00.4	+1.2
PMRV				eLQ	LQ	15 42 41.4	
PMRV				i AMs_20		15 51 11.9	
	comp=Z,2μm,20.0s						
COI	Coimbra	87.91	315	IAmb	IAmb	15 08 38.3	
	comp=Z,75nm,0.8s						
COI	Coimbra	87.91	315	eP	P	15 08 35.9	+0.9
COI				i Amb		15 08 40.0	
	comp=Z,143nm,2.0s						
PCAS	Casmilo, Conde	88.05	315	eP	P	15 08 36.8	+1.0
PCAS				i Amb		15 08 40.2	
	comp=Z,86nm,2.0s						
PSARD	Sardoal	88.11	315	eP	P	15 08 37.1	+1.0
PSARD				i Amb		15 08 40.6	
	comp=Z,165nm,1.9s						
IVI	Ivigtut	88.11	347	IAMs_20	IAMs_20	15 49 11.0	
	comp=Z,4μm,21.0s						
IVI	Ivigtut	88.11	347	i P	P	15 08 35.2	-0.4
IVI				IAmb	IAmb	15 08 37.3	
	comp=Z,81nm,0.7s						
PESTR	Estremoz	88.17	314	eP	P	15 08 37.0	+0.6
PESTR				i Amb		15 08 40.7	
	comp=Z,62nm,1.4s						
PESTR				ePP	PP	15 12 03.2	+0.3
PBAR	Barrancos	88.22	313	eP	P	15 08 37.1	+0.5
PBAR				i Amb		15 08 41.8	
	comp=Z,108nm,1.7s						
PBAR				ePP	PP	15 12 05.2	+1.9
MATP	Matopo	88.28	246	LR	LR	15 45 41.0	
	comp=Z,1μm,21.9s,baz=52,slow=34						
HOLB	Holberg	88.45	31	IAmb	IAmb	15 08 40.8	
	comp=Z,81nm,0.9s						
HOLB				IAMs_20	IAMs_20	15 50 22.2	
	comp=Z,4μm,19.0s						
PMTG	Montargil	88.46	314	eP	P	15 08 38.0	+0.3
PMTG				i Amb		15 08 41.9	
	comp=Z,83nm,1.6s						
PMTG				ePP	PP	15 12 01.4	-3.8
PSBE	So Bento	88.56	315	eP	P	15 08 39.2	+1.0
PSBE				i Amb		15 08 43.9	
	comp=Z,207nm,1.8s						
EVO	Evora	88.64	314	eP	P	15 08 39.5	+1.0
EVO				i Amb		15 08 43.0	
	comp=Z,100nm,1.7s						
EVO				ePP	PP	15 12 08.2	+1.6
PBEJ	Beja	88.84	313	eP	P	15 08 40.4	+0.9
PBEJ				i Amb		15 08 44.0	
	comp=Z,105nm,1.5s						
PBEJ				ePP	PP	15 12 10.9	+2.7
PVAQ	Vaqueiros	89.11	313	IAmb	IAmb	15 08 44.6	
	comp=Z,196nm,1.9s						
PVAQ	Vaqueiros	89.11	313	eP	P	15 08 41.7	+0.9
PVAQ				i Amb		15 08 45.2	
	comp=Z,97nm,1.8s						
PVAQ				ePP	PP	15 12 12.3	+2.0
MESJ	Messejana	89.17	313	eP	P	15 08 41.2	+0.1
MESJ				IAMs_20	IAMs_20	15 53 39.9	
	comp=Z,4μm,16.7s						
MESJ	Messejana	89.17	313	IAmb	IAmb	15 08 43.5	
	comp=Z,82nm,1.1s						
MESJ	Messejana	89.17	313	eP	P	15 08 42.1	+1.0
MESJ				i Amb		15 08 45.6	
	comp=Z,126nm,1.7s						
MESJ				ePP	PP	15 12 13.1	+2.2
PCVE	Castro Verde	89.18	313	eP	P	15 08 42.0	+0.8
PCVE				i Amb		15 08 46.4	
	comp=Z,79nm,1.9s						
PCVE				ePP	PP	15 12 13.1	+2.2
PBDV	Barranco-do-Ve	89.34	313	eP	P	15 08 43.1	+1.2
PBDV				i Amb		15 08 47.5	
	comp=Z,135nm,1.9s						
PBDV				ePP	PP	15 12 14.4	+2.2
POGA	Pongola	89.40	238	IAmb	IAmb	15 08 45.4	
	comp=Z,47nm,0.8s						
POGA				IAMs_20	IAMs_20	15 46 38.9	
	comp=Z,5μm,20.0s						
BROLN	Tlhalogang	89.56	246	i P	P	15 08 42.0	-1.2
MDT	Midelt	89.61	307	LR	LR	15 56 06.5	
	comp=Z,684nm,18.7s,baz=48,slow=40						
PTEO	Sao Teotonio	89.67	313	eP	P	15 08 44.6	+1.2
PTEO				i Amb		15 08 49.0	
	comp=Z,110nm,1.8s						
PTEO				ePP	PP	15 12 17.2	+2.4
MORF	Marmelete	89.77	313	eP	P	15 08 44.0	+0.1
MORF				IAMs_20	IAMs_20	15 46 44.5	
	comp=E,4μm,22.7s						
MORF	Marmelete	89.77	313	IAmb	IAmb	15 08 46.4	
	comp=Z,71nm,1.3s						
MORF	Marmelete	89.77	313	eP	P	15 08 45.0	+1.0
MORF				i Amb		15 08 49.3	
	comp=Z,117nm,1.9s						
MORF				ePP	PP	15 12 17.6	+1.9
MORF	Marmelete	89.77	313	eP	P	15 08 44.0	+0.1
PFVI	Vila Bisbo	89.98	313	eP	P	15 08 46.0	+1.1
PFVI				i Amb		15 08 49.5	
	comp=Z,86nm,1.6s						
PFVI				ePP	PP	15 12 19.4	+2.1
OUZ	Omahuta	90.51	130	P	P	15 08 48.6	+1.5
OZB	Mount Ozzard	90.84	31	IAmb	IAmb	15 08 51.9	
	comp=Z,117nm,1.4s						
AVE	Averroes	91.28	309	IAmb	IAmb	15 08 55.0	
	comp=Z,73nm,1.0s						
CLRS	Cowichan Lake	91.55	30	IAmb	IAmb	15 08 55.3	
	comp=Z,145nm,1.7s						
CLRS				IAMs_20	IAMs_20	15 48 26.3	
	comp=Z,5μm,21.0s						
FCC	Fort Churchill	91.77	10	IAMs_20	IAMs_20	15 51 12.4	
	comp=Z,4μm,20.0s						
LPHEP	Lephephe	91.87	245	i P	P	15 08 52.8	-1.1
PGC	Sidney	91.98	30	IAMs_20	IAMs_20	15 52 32.6	
	comp=Z,4μm,18.0s						
NLWA	Neilton Lookou	92.74	31	IAmb	IAmb	15 09 01.3	
	comp=Z,48nm,1.2s						
NLWA				IAMs_20	IAMs_20	15 49 11.7	
	comp=Z,5μm,19.0s						
LBTB	Lobatse	92.90	243	IAmb	IAmb	15 08 59.5	
	comp=Z,49nm,1.2s						
LBTB	Lobatse	92.90	243	LR	LR	15 48 49.5	
	comp=Z,1μm,21.7s,baz=52,slow=34						
QRZ	Quartz Range	93.03	135	P	P	15 08 59.8	+1.1
GNW	Green Mountain	93.08	30	IAmb	IAmb	15 09 02.6	
	comp=Z,50nm,1.4s						
E03A	Lebam	93.51	31	IAMs_20	IAMs_20	15 50 49.2	
	comp=Z,6μm,20.0s						
KUQ	Kuujjuuaa	93.68	356	IAmb	IAmb	15 09 02.3	
	comp=Z,45nm,1.0s						
KUQ				IAMs_20	IAMs_20	15 55 15.9	
	comp=Z,3μm,19.0s						
RPZ	Rata Peaks	93.83	138	P	P	15 09 03.2	+0.9
B08A	Colville Reser	93.95	28	IAmb	IAmb	15 09 05.9	
	comp=Z,65nm,1.6s						
SKOMA	Sekoma	93.97	244	i P	P	15 09 02.1	-1.5
FFC	Flin Flon	94.07	15	P	P	15 09 02.1	-1.4
FFC				IAmb	IAmb	15 09 05.3	
	comp=Z,90nm,1.5s						
FFC	Flin Flon	94.07	15	IAMs_20	IAMs_20	15 52 47.2	
	comp=Z,6μm,20.0s						
FFC	Flin Flon	94.07	15	P	P	15 09 02.1	-1.4
FFC				pmax	pmax		
	comp=Z,90nm,1.5s						
FFC				MLR	MLR		
	comp=Z,6μm,20.0s						
F04D	Rainier, OR	94.11	31	IAMs_20	IAMs_20	15 50 27.1	
	comp=Z,4μm,20.0s						
HEBO	Mount Hebo	94.42	32	IAMs_20	IAMs_20	15 51 47.3	
	comp=Z,4μm,20.0s						
CASY	Casey	94.43	178	P	P	15 09 04.0	-0.5
BKZ	Black Stump Fm	94.62	132	P	P	15 09 06.8	+0.6
RTZ	Ruatahuna	94.64	132	IAmb	IAmb	15 09 08.4	
	comp=Z,76nm,1.1s						
G03D	McMinnville, O	94.65	32	IAMs_20	IAMs_20	15 51 41.4	
	comp=Z,5μm,20.0s						
GRTLG	Ghanzi	94.65	248	i P	P	15 09 07.5	+0.8
C09A	Chrisman Ranch	94.83	28	IAMs_20	IAMs_20	15 53 37.9	
	comp=Z,5μm,20.0s						
NEW	Newport	94.92	27	IAMs_20	IAMs_20	15 49 50.1	
	comp=Z,5μm,18.0s						
NEW	Newport	94.92	27	LR	LR	15 54 21.3	
	comp=Z,4μm,20.9s,baz=322,slow=37						
MXC	Moxie City	94.94	29	IAMs_20	IAMs_20	15 49 28.8	
	comp=Z,4μm,22.0s						
BOSA	Boshof	94.94	240	P	P	15 09 06.3	-1.7
	comp=Z,15nm,0.6s,baz=56,slow=2.3,SNR=19						
BOSA				LR	LR	15 51 05.5	
	comp=Z,2μm,20.2s,baz=58,slow=35						
	comp=Z,15nm,0.6s						
COR	Corvallis	95.10	32	IAMs_20	IAMs_20	15 49 55.4	
	comp=Z,5μm,21.0s						
E07A	Sunnyside	95.14	29	IAMs_20	IAMs_20	15 50 00.3	
	comp=Z,4μm,22.0s						
TORD	Torodi Ar. Bea	95.14	288	LR	LR	15 56 23.2	
	comp=Z,2μm,19.3s,baz=56,slow=38						
D08A	Wollman Farm,	95.15	28	IAMs_20	IAMs_20	15 50 47.4	
	comp=Z,3μm,18.0s						
HOOD	Mount Hood Mea	95.31	31	IAMs_20	IAMs_20	15 51 48.7	
	comp=Z,4μm,19.0s						
HAWA	Hanford	95.41	29	IAMs_20	IAMs_20	15 50 07.4	
	comp=Z,5μm,21.0s						
H04D	Lebanon	95.42	32	IAMs_20	IAMs_20	15 51 04.7	
	comp=Z,4μm,22.0s						
G05A	Wamic	95.52	31	IAMs_20	IAMs_20	15 51 01.4	
	comp=Z,3μm,20.0s						
H04A	Detroit Lake	95.55	32	IAMs_20	IAMs_20	15 52 32.2	
	comp=Z,3μm,20.0s						
F07A	Phinny Hill Vi	95.63	30	IAMs_20	IAMs_20	15 49 51.2	
	comp=Z,4μm,20.0s						
I03D	Drain, OR	95.75	33	IAMs_20	IAMs_20	15 52 37.5	
	comp=Z,3μm,19.0s						
G06A	Carlson Farm,	95.83	30	IAmb	IAmb	15 12 03.0	
	comp=Z,55nm,1.9s						
G06A				IAMs_20	IAMs_20	15 54 35.6	
	comp=Z,3μm,18.0s						
J01E	Myrtle Point	95.87	34	IAMs_20	IAMs_20	15 48 58.7	
	comp=Z,4μm,22.0s						
KEBM	Edson Butte	95.88	34	IAMs_20	IAMs_20	15 48 47.2	
	comp=Z,4μm,21.0s						
E09A	Wood Farm, Sta	95.91	28	IAMs_20	IAMs_20	15 50 21.3	
	comp=Z,3μm,19.0s						
I04A	Tendick Farm,	96.12	32	IAMs_20	IAMs_20	15 49 42.3	
	comp=Z,3μm,22.0s						
I05D	Terrebonne, OR	96.21	31	IAMs_20	IAMs_20	15 53 13.5	
	comp=Z,3μm,19.0s						
KOOLE	Kule	96.25	247	IAmb	IAmb	15 09 14.6	
	comp=Z,35nm,1.4s						
K02D	Willamette Mer	96.34	34	IAMs_20	IAMs_20	15 49 00.4	
	comp=Z,4μm,21.0s						
GRHM	Grahamstown, E	96.40	236	IAMs_20	IAMs_20	15 53 19.2	
	comp=Z,3μm,18.0s						
KBO	Bosley Butte	96.43	34	IAMs_20	IAMs_20	15 52 09.6	
	comp=Z,3μm,18.0s						
G08A	Pilot Rock	96.53	30	IAMs_20	IAMs_20	15 50 15.9	
	comp=Z,4μm,22.0s						
TSUM	Tsumeb	96.65	252	LR	LR	15 51 53.7	
	comp=Z,1μm,21.1s,baz=46,slow=35						
PINE	Pine Mountain	96.81	32	IAMs_20	IAMs_20	15 53 33.5	
	comp=Z,4μm,19.0s						
L02F	Cave Junction	96.82	34	IAMs_20	IAMs_20	15 52 34.0	
	comp=Z,3μm,21.0s						
SCHQ	Schefferville	96.85	355	P	P	15 09 15.7	-0.4
	comp=Z,17nm,0.6s,baz=15,slow=5.5,SNR=25						
	comp=Z,17nm,0.6s						
J05D	Fort Rock, OR	97.06	32	IAMs_20	IAMs_20	15 51 00.2	
	comp=Z,5μm,21.0s						
I07A	Izee	97.24	31	IAMs_20	IAMs_20	15 52 13.7	
	comp=Z,4μm,20.0s						
L04D	Klamath Falls	97.37	33	IAMs_20	IAMs_20	15 49 47.4	
	comp=Z,3μm,22.0s						
YBH	Yreka Blue Hor	97.54	34	LR	LR	15 53 33.1	
	comp=Z,120nm,20.5s,baz=310,slow=36						
BMO	Blue Mountains	97.59	29	IAMs_20	IAMs_20	15 52 31.9	
	comp=Z,5μm,19.0s						
KMPM	Mount Pierce	97.81	36	IAMs_20	IAMs_20	15 52 50.3	
	comp=Z,3μm,19.0s						
EGMT	Eagleton	97.83	23	IAmb	IAmb	15 09 23.7	
	comp=Z,22nm,1.0s						
PLID	Pearl Lake	97.94	28	IAMs_20	IAMs_20	15 54 39.3	
	comp=Z,4μm,18.0s						
KMRM	Mail Ridge	98.17	35	IAMs_20	IAMs_20	15 53 02.1	
	comp=Z,3μm,19.0s						
WIN	Windhoek	98.59	249	IAMs_20	IAMs_20	15 53 38.5	
	comp=Z,4μm,20.0s						
WVOR	Wild Horse Val	98.92	31	IAMs_20	IAMs_20	15 53 28.4	
	comp=Z,4μm,20.0s						
MFID	Camas Ranch	99.38	29	IAMs_20	IAMs_20	15 52 41.2	
	comp=Z,4μm,19.0s						
HOPS	Hopland Field	99.41	36	IAMs_20	IAMs_20	15 50 48.6	
	comp=Z,3μm,20.0s						
ULM	Lac du Bonnet	99.59	13	P	Pdif	15 09 28.4	-0.2
	comp=Z,2.3nm,0.8s,baz=359,slow=2.8,SNR=5.1						
ULM				PKKPbc	PKKPbc	15 25 48.1	-2.8
	comp=Z,3.1nm,0.6s,baz=180,slow=2.3,SNR=5.5						
ULM				LR	LR	15 58 40.5	
	comp=Z,2μm,20.7s,baz=342,slow=38						
	comp=Z,2.3nm,0.8s						
ULM	Lac du Bonnet	99.59	13	ceP	Pdif	15 09 27.8	-0.7
GDXM	Geysers	99.69	36	IAMs_20	IAMs_20	15 50 58.1	
	comp=Z,3μm,21.0s						
HLID	Hailey	99.85	28	IAMs_20	IAMs_20	15 52 25.6	
	comp=Z,3μm,20.0s						
SUR	Sutherland	100.10	239	IAMs_20	IAMs_20	15 53 09.2	
	comp=Z,4μm,21.0s						
RLMT	Red Lodge	100.51	24	IAMs_20	IAMs_20	15 56 33.9	
	comp=Z,4μm,18.0s						
EPLO	Experimental L	100.56	12	IAMs_20	IAMs_20	15 57 50.8	
	comp=Z,4μm,20.0s						
PAHR	Pah Rah Range	100.71	33	IAMs_20	IAMs_20	15 55 06.7	
	comp=Z,3μm,18.0s						
MDND	Maddock	101.00	17	IAMs_20	IAMs_20	15 56 02.5	
	comp=Z,5μm,21.0s						
AGMN	Agassiz Nation	101.45	14	IAMs_20	IAMs_20	15 59 45.3	
	comp=Z,4μm,19.0s						
ELK	Elko	101.80	30	IAMs_20	IAMs_20	15 54 16.5	
	comp=Z,5μm,21.0s						
E28A	Huff	101.89	18	IAMs_20	IAMs_20	15 56 23.2	
	comp=Z,5μm,18.0s						
HVU	Hansel Valley	102.00	28	IAMs_20	IAMs_20	15 58 04.6	
	comp=Z,3μm,18.0s						
NVAR	Mina Array Bea	102.23	33	P	Pdif	15 09 40.4	-0.5
	comp=Z,0.7nm,0.7s,baz=270,slow=4.7,SNR=4.5						
NVAR				PP	PP	15 13 51.8	-0.3
	comp=Z,2.9nm,1.0s,baz=298,slow=7.5,SNR=4.6						
BW06	Boulder Array	102.43	25	IAMs_20	IAMs_20	15 55 01.8	
	comp=Z,5μm,19.0s						
PDAR	Pinedale Array	102.43	25	P	Pdif	15 09 41.5	-0.2
	comp=Z,0.8nm,0.8s,baz=150,slow=1.2,SNR=4.3						
PDAR				PP	PP	15 13 52.1	-1.2
	comp=Z,2.1nm,1.0s,baz=321,slow=7.4,SNR=5.4						
PDAR				PKKPbc	PKKPbc	15 25 41.9	-1.0
	comp=Z,1.1nm,0.7s,baz=152,slow=4.4,SNR=8.0						
BGU	Big Grassy Mou	102.60	29	IAMs_20	IAMs_20	15 54 33.7	
	comp=Z,3μm,19.0s						
HULI	Fort Hunter Li	102.60	37	IAMs_20	IAMs_20	15 57 04.2	
	comp=Z,3μm,18.0s						
EYMN	Ely	102.62	11	IAMs_20	IAMs_20	15 57 13.3	
	comp=Z,5μm,18.0s						
HWUT	Hardware Ranch	102.64	27	IAMs_20	IAMs_20	15 59 30.4	
	comp=Z,4μm,21.0s						
TCUT	Toone Canyon	103.11	27	IAMs_20	IAMs_20	15 59 46.0	
	comp=Z,5μm,20.0s						
DSP	Deep Springs	103.23	34	IAMs_20	IAMs_20	15 53 29.5	
	comp=Z,4μm,21.0s						
DUG	Dugway, Tooele	103.30	29	IAMs_20	IAMs_20	15 56 19.1	
	comp=Z,4μm,18.0s						
CTU	Camp Tracy	103.33	28	IAMs_20	IAMs_20	15 56 58.8	
	comp=Z,4μm,19.0s						
JLU	Jordanelle	103.53	28	IAMs_20	IAMs_20	16 00 11.1	
	comp=Z,4μm,20.0s						
SPR3	Spring Creek 3	103.63	30	IAMs_20	IAMs_20	15 56 33.9	
	comp=Z,3μm,21.0s						
K22A	Casper	103.63	23	IAMs_20	IAMs_20	16 02 50.5	
	comp=Z,3μm,18.0s						
GRAC	Grapevine Rang	103.82	34	IAMs_20	IAMs_20	15 53 48.1	
	comp=Z,4μm,21.0s						
VLDQ	Val d'Or	103.85	2	IAMs_20	IAMs_20	16 00 17.5	
	comp=Z,3μm,21.0s						
BSUT	Blindstream Ca	103.87	27	IAMs_20	IAMs_20	15 59 57.9	
	comp=Z,5μm,19.0s						
E38A	The Farm, Brul	103.91	12	IAMs_20	IAMs_20	16 00 15.4	
	comp=Z,4μm,20.0s						
MPU	Maple Canyon	103.95	28	IAMs_20	IAMs_20	15 59 17.2	
	comp=Z,4μm,19.0s						
LDAQ	Lac Daran	103.95	357	IAMs_20	IAMs_20	16 00 27.5	
	comp=Z,3μm,20.0s						
DBIC	Dimbokro	103.99	286	Pdiff	Pdif	15 09 49.6	+0.8
	comp=Z,3.8nm,0.7s,baz=92,slow=3.3,SNR=4.9						
DBIC				PP	PP	15 14 03.4	-2.7
	comp=Z,40nm,0.9s,baz=70,slow=8.7,SNR=15						
S11A	Rachel	104.08	32	IAMs_20	IAMs_20	15 57 37.9	
	comp=Z,3μm,19.0s						
PSUT	Pine Spring	104.22	30	IAMs_20	IAMs_20	15 55 14.6	
	comp=Z,4μm,22.0s						
BATG	Bathurst New B	104.28	354	IAMs_20	IAMs_20	16 02 03.2	
	comp=Z,3μm,19.0s						
ISA	Isabella, Lake	104.31	35	IAMs_20	IAMs_20	15 57 46.3	
	comp=Z,3μm,20.0s						
LMQ	La Malbaie	104.32	357	IAMs_20	IAMs_20	16 00 00.3	
	comp=Z,4μm,20.0s						
PRN	Pahroc Range	104.59	32	IAMs_20	IAMs_20	16 00 44.6	
	comp=Z,3μm,20.0s						
D62A	Allapoint, All	104.72	356	IAMs_20	IAMs_20	15 59 37.7	
	comp=Z,4μm,21.0s						
TMUT	Trail Mountain	104.73	28	IAMs_20	IAMs_20	15 57 16.9	
	comp=Z,4μm,20.0s						
COWI	Conover	104.80	10	IAMs_20	IAMs_20	15 58 46.9	
	comp=Z,3μm,19.0s						
P18A	Preston Nutter	104.85	27	IAMs_20	IAMs_20	16 00 40.9	
	comp=Z,4μm,19.0s						
CCAC	Calif City Air	104.94	35	IAMs_20	IAMs_20	15 58 07.0	
	comp=Z,3μm,22.0s						
MVU	Marysvale	104.97	29	IAMs_20	IAMs_20	16 00 28.3	
	comp=Z,3μm,19.0s						
Q16A	Castle Valley	105.06	28	IAMs_20	IAMs_20	15 57 27.7	
	comp=Z,3μm,18.0s						
E46A	Sault Ste Mari	105.16	7	IAMs_20	IAMs_20	16 01 29.3	
	comp=Z,5μm,20.0s						
SRU	San Rafael Swe	105.17	28	IAMs_20	IAMs_20	15 58 17.5	
	comp=Z,4μm,20.0s						
O20A	White River Ci	105.20	26	IAMs_20	IAMs_20	15 56 42.2	
	comp=Z,3μm,18.0s						
F42A	Maple Grove Fa	105.29	9	IAMs_20	IAMs_20	15 59 16.7	
	comp=Z,4μm,18.0s						
LCMT	Little Creek M	105.75	31	IAMs_20	IAMs_20	15 57 51.0	
	comp=Z,3μm,20.0s						
TRQ	Mont Tremblant	105.77	360	IAMs_20	IAMs_20	16 05 55.7	
	comp=Z,3μm,20.0s						
F64A	Sherman	105.88	355	IAMs_20	IAMs_20	16 01 20.5	
	comp=Z,3μm,21.0s						
I37A	Lemond, Waseca	106.05	14	IAMs_20	IAMs_20	16 05 25.0	
	comp=Z,4μm,19.0s						
V12A	Nelson	106.05	33	IAMs_20	IAMs_20	15 59 03.1	
	comp=Z,3μm,19.0s						
HMU	Henry Mountain	106.07	29	IAMs_20	IAMs_20	16 01 38.4	
	comp=Z,3μm,18.0s						
ELS	Elsinore Mount	106.42	36	IAMs_20	IAMs_20	16 00 00.3	
	comp=Z,2μm,19.0s						
ISCO	Idaho Springs	106.47	24	IAMs_20	IAMs_20	15 57 30.8	
	comp=Z,4μm,19.0s						
G65A	Princeton	106.47	354	IAMs_20	IAMs_20	16 02 17.3	
	comp=Z,3μm,19.0s						
MNTQ	Montreal, Queb	106.48	359	IAMs_20	IAMs_20	16 02 19.4	
	comp=Z,3μm,20.0s						
GGN	Saint George	106.49	354	IAMs_20	IAMs_20	16 04 03.8	
	comp=Z,3μm,18.0s						
PKME	Peaks-Kenny Pk	106.54	356	IAMs_20	IAMs_20	16 05 51.0	
	comp=Z,4μm,20.0s						
H43A	Windswept, Lux	106.60	9	IAMs_20	IAMs_20	16 00 05.5	
	comp=Z,4μm,19.0s						
HAL	Halifax	106.60	351	IAMs_20	IAMs_20	16 04 03.8	
	comp=Z,3μm,20.0s						
GLMI	Grayling	106.65	7	IAMs_20	IAMs_20	16 00 06.8	
	comp=Z,3μm,21.0s						
G62A	West of Eustis	106.66	357	IAMs_20	IAMs_20	16 04 41.1	
	comp=Z,4μm,18.0s						
U15A	North Rim	106.66	31	IAMs_20	IAMs_20	15 58 18.1	
	comp=Z,3μm,20.0s						
I40A	Norwalk	106.70	12	IAMs_20	IAMs_20	16 01 29.3	
	comp=Z,5μm,21.0s						
PFO	Pinyon Flats O	106.95	35	IAMs_20	IAMs_20	15 57 13.2	
	comp=Z,3μm,19.0s						
EMMW	East Machias	106.95	354	IAMs_20	IAMs_20	16 00 44.0	
	comp=Z,3μm,21.0s						
I42A	Draeger Farm,	106.99	10	IAMs_20	IAMs_20	16 00 28.9	
	comp=Z,3μm,20.0s						
WBO	Williamsburg	106.99	0	IAMs_20	IAMs_20	15 59 52.9	
	comp=Z,3μm,19.0s						
W13A	Hualapai Mount	107.02	33	IAMs_20	IAMs_20	15 59 40.6	
	comp=Z,3μm,20.0s						
FRNY	Flat Rock	107.15	359	IAMs_20	IAMs_20	16 02 38.0	
	comp=Z,3μm,20.0s						
WVL	Waterville	107.26	356	IAMs_20	IAMs_20	16 03 36.1	
	comp=Z,3μm,20.0s						
H62A	Milan	107.33	357	IAMs_20	IAMs_20	16 05 03.9	
	comp=Z,3μm,18.0s						
LONY	Lake Ozonia	107.37	360	IAMs_20	IAMs_20	16 00 08.0	
	comp=Z,3μm,19.0s						
Q24A	Divide	107.38	24	IAMs_20	IAMs_20	15 58 19.6	
	comp=Z,3μm,19.0s						
DELO	Deloro Mine	107.44	2	IAMs_20	IAMs_20	16 01 54.7	
	comp=Z,3μm,19.0s						
MVCO	Mesa Verde	107.62	27	IAMs_20	IAMs_20	16 02 28.7	
	comp=Z,4μm,19.0s						
VT1	Waterbury	107.63	358	IAMs_20	IAMs_20	16 03 36.1	
	comp=Z,4μm,21.0s						
LBNH	Lisbon	107.70	358	IAMs_20	IAMs_20	16 02 18.6	
	comp=Z,3μm,21.0s						
JFWS	Jewell Farm	107.72	12	IAMs_20	IAMs_20	16 03 06.1	
	comp=Z,4μm,20.0s						
BLYC	Blythe	107.80	34	IAMs_20	IAMs_20	15 56 24.6	
	comp=Z,3μm,20.0s						
S22A	4UR Ranch, Cre	107.82	26	IAMs_20	IAMs_20	15 58 08.5	
	comp=Z,4μm,20.0s						
I63A	Otisfield	107.83	357	IAMs_20	IAMs_20	16 03 36.0	
	comp=Z,4μm,18.0s						
WUAZ	Wupatki	107.83	30	IAMs_20	IAMs_20	15 56 53.0	
	comp=Z,3μm,20.0s						
SYO	Syowa Base	107.95	200	⇑ePKiKP	PKiKP	15 14 13.3	+1.4
SYO	Syowa Base	107.95	200	⇓epPKiKP	PKiKP	15 14 15.0	+3.1
SYO	Syowa Base	107.95	200	⇓ePP	PP	15 14 36.6	+2.1
I62A	Tamworth	108.04	357	IAMs_20	IAMs_20	16 02 58.6	
	comp=Z,3μm,19.0s						
PECO	Prince Edward	108.04	1	IAMs_20	IAMs_20	16 06 10.5	
	comp=Z,3μm,20.0s						
J47A	Sunmer	108.19	7	IAMs_20	IAMs_20	16 02 06.7	
	comp=Z,3μm,19.0s						
GLA	Glamis	108.21	34	IAMs_20	IAMs_20	16 02 40.6	
	comp=Z,3μm,18.0s						
K43A	Burlington	108.24	10	IAMs_20	IAMs_20	15 59 52.0	
	comp=Z,3μm,20.0s						
HNH	Hanover	108.24	358	IAMs_20	IAMs_20	16 08 20.0	
	comp=Z,3μm,19.0s						
SDCO	Great Sand Dun	108.32	25	IAMs_20	IAMs_20	16 04 53.8	
	comp=Z,4μm,19.0s						
L40A	Anamosa	108.36	13	IAMs_20	IAMs_20	16 00 02.1	
	comp=Z,4μm,19.0s						
Y14A	Wickenburg	108.38	33	IAMs_20	IAMs_20	16 00 21.9	
	comp=Z,3μm,19.0s						
J59A	Piesco	108.53	360	IAMs_20	IAMs_20	16 00 50.5	
	comp=Z,3μm,18.0s						
J57A	Williamstown	108.58	1	IAMs_20	IAMs_20	16 03 13.9	
	comp=Z,4μm,19.0s						
ACCN	Adirondack Com	108.60	359	IAMs_20	IAMs_20	16 03 14.4	
	comp=Z,3μm,19.0s						

J61A	Chester	108.61	358	IAMs_20	IAMs_20	16 02 36.7	
	comp=Z,4µm,21.0s						
L42A	Oliver, Polo	108.70	11	IAMs_20	IAMs_20	16 03 13.2	
	comp=Z,3µm,20.0s						
MEDO	Medina	108.76	3	IAMs_20	IAMs_20	16 01 43.7	
	comp=Z,4µm,22.0s						
L44A	Lake County Fo	108.82	10	IAMs_20	IAMs_20	16 00 20.3	
	comp=Z,4µm,20.0s						
HQIL	Hanson Quary C	109.20	10	IAMs_20	IAMs_20	16 00 30.3	
	comp=Z,4µm,20.0s						
MMNY	Mt. Morris Dam	109.21	2	IAMs_20	IAMs_20	16 02 00.6	
	comp=Z,5µm,21.0s						
L46A	Eue Claire	109.22	9	IAMs_20	IAMs_20	16 04 37.7	
	comp=Z,4µm,19.0s						
AAM	Ann Arbor	109.25	7	IAMs_20	IAMs_20	16 01 01.5	
	comp=Z,4µm,21.0s						
K57A	Scipio Center	109.25	1	IAMs_20	IAMs_20	16 04 22.6	
	comp=Z,2µm,19.0s						
T25A	Trinidad	109.26	25	IAMs_20	IAMs_20	15 59 38.6	
	comp=Z,4µm,18.0s						
K62A	Royalston	109.28	358	IAMs_20	IAMs_20	16 03 49.5	
	comp=Z,3µm,20.0s						
X18A	Snowflake	109.29	30	IAMs_20	IAMs_20	15 57 39.7	
	comp=Z,3µm,21.0s						
HRV	Adam Dziewonsk	109.41	357	IAMs_20	IAMs_20	16 08 57.0	
	comp=Z,3µm,19.0s						
L61B	Northampton	109.51	358	IAMs_20	IAMs_20	16 03 12.5	
	comp=Z,4µm,21.0s						
WVNY	West Valley, N	109.51	3	IAMs_20	IAMs_20	16 05 51.5	
	comp=Z,4µm,18.0s						
WES	Weston	109.52	357	IAMs_20	IAMs_20	16 04 34.9	
	comp=Z,3µm,18.0s						
MBO	M'Bour	109.53	299	IAMs_20	IAMs_20	16 09 15.9	
	comp=Z,2µm,20.0s						
M44A	Midewin, Midew	109.57	10	IAMs_20	IAMs_20	16 03 14.2	
	comp=Z,4µm,19.0s						
N41A	Harden Midland	109.74	13	IAMs_20	IAMs_20	16 03 33.7	
	comp=Z,3µm,20.0s						
BINY	Binghamton	109.79	1	IAMs_20	IAMs_20	16 07 51.9	
	comp=Z,3µm,18.0s						
L59A	Walton	109.80	360	IAMs_20	IAMs_20	16 08 12.3	
	comp=Z,4µm,18.0s						
L56A	Greenwood	109.82	2	IAMs_20	IAMs_20	16 02 29.7	
	comp=Z,5µm,21.0s						
L64A	Middleborough	109.95	357	IAMs_20	IAMs_20	16 05 17.2	
	comp=Z,4µm,20.0s						
UCCT	U. Connecticut	110.15	358	IAMs_20	IAMs_20	16 04 21.5	
	comp=Z,3µm,21.0s						
HDIL	Hopedale	110.17	12	IAMs_20	IAMs_20	16 00 30.2	
	comp=Z,3µm,19.0s						
ALLY	Alegheny Colle	110.19	4	IAMs_20	IAMs_20	16 04 20.4	
	comp=Z,3µm,19.0s						
M50A	Fremont	110.20	6	IAMs_20	IAMs_20	16 03 13.7	
	comp=Z,3µm,19.0s						
P38A	Dawn	110.21	15	IAMs_20	IAMs_20	16 03 20.3	
	comp=Z,4µm,20.0s						
M65A	Busby, Falmout	110.31	356	IAMs_20	IAMs_20	16 04 30.8	
	comp=Z,3µm,20.0s						
ANMO	Albuquerque	110.41	27	IAMs_20	IAMs_20	16 06 22.0	
	comp=Z,4µm,19.0s						
ANMO	Albuquerque	110.41	27	IAMs_20	IAMs_20	16 02 43.0	
	comp=Z,4µm,20.0s						
ANMO	Albuquerque	110.41	27	IAMs_20	IAMs_20	16 02 43.0	
	comp=Z,4µm,20.0s						
ANMO	Albuquerque	110.41	27	c *i*PKIKP	PKiKP	15 14 18.4	+0.4
ANMO				MLR	MLR		
	comp=Z,4µm,18.0s						
N47A	Urbana	110.41	9	IAMs_20	IAMs_20	16 05 33.3	
	comp=Z,4µm,20.0s						
KSPA	Keystone Colle	110.43	1	IAMs_20	IAMs_20	16 04 05.9	
	comp=Z,3µm,18.0s						
M63A	Gales Ferry	110.53	358	IAMs_20	IAMs_20	16 02 41.6	
	comp=Z,3µm,20.0s						
N49A	Columbus Grove	110.55	7	IAMs_20	IAMs_20	16 02 46.1	
	comp=Z,4µm,19.0s						
M57A	Sunshine Farm,	110.63	2	IAMs_20	IAMs_20	16 02 57.1	
	comp=Z,5µm,20.0s						
SFIN	Lafayette	110.71	10	IAMs_20	IAMs_20	16 03 31.2	
	comp=Z,3µm,18.0s						
N51A	Ashland	110.74	6	IAMs_20	IAMs_20	16 04 48.1	
	comp=Z,3µm,18.0s						
VNDA	Vanda	110.89	169	PKKPbc	PKKPbc	15 25 15.1	-2.3
	comp=Z,3.0nm,1.0s,baz=123,slow=2.5,SNR=5.5						
Y22D	IRIS PASSCAL I	110.97	28	IAMs_20	IAMs_20	15 57 37.1	
	comp=Z,3µm,22.0s						
PAL	Palisades	110.98	359	IAMs_20	IAMs_20	16 01 13.4	
	comp=Z,4µm,20.0s						
P43A	Skaggs, Pawnee	111.02	12	IAMs_20	IAMs_20	16 04 02.6	
	comp=Z,3µm,19.0s						
N62A	Caumsett State	111.05	359	IAMs_20	IAMs_20	16 03 59.1	
	comp=Z,3µm,20.0s						
O48B	Farmland	111.09	8	IAMs_20	IAMs_20	16 05 14.4	
	comp=Z,4µm,18.0s						
N58A	Sunbury	111.14	1	IAMs_20	IAMs_20	16 08 43.5	
	comp=Z,4µm,18.0s						
SSPA	Standing Stone	111.31	2	IAMs_20	IAMs_20	16 10 42.0	
	comp=Z,3µm,19.0s						
BRNJ	Basking Ridge	111.31	360	IAMs_20	IAMs_20	16 04 17.1	
	comp=Z,5µm,20.0s						
ACSO	Alum Creek Sta	111.36	6	IAMs_20	IAMs_20	16 03 57.5	
	comp=Z,3µm,19.0s						
LUPA	Lehigh Univers	111.39	0	IAMs_20	IAMs_20	16 03 56.3	
	comp=Z,4µm,20.0s						
P46A	Rosedale	111.43	10	IAMs_20	IAMs_20	16 04 20.4	
	comp=Z,4µm,18.0s						
PPT2	Papeete2	111.50	99	*e*PS	PS	15 24 31.0	-2.8
	comp=Z,772nm,29.2s						
PPT2				*e*SS	SS	15 30 27.1	-9.0
	comp=Z,2µm,28.0s						
PPT2	Papeete2	111.50	99	*e*LQ	LQ	15 42 14.5	
	comp=Z,3µm,35.8s						
PPT2				*e*LR	LR	15 47 12.2	
	comp=Z,3µm,36.0s						
PPT2				*e*LR	LR	15 47 14.2	
	comp=Z,3µm,26.2s						
O52A	Adamsville	111.59	6	IAMs_20	IAMs_20	16 08 13.3	
	comp=Z,4µm,18.0s						
R40A	Maddies Statio	111.77	15	IAMs_20	IAMs_20	16 06 05.5	
	comp=Z,4µm,20.0s						
Q44A	Meyer Farm, Va	111.83	12	IAMs_20	IAMs_20	16 06 44.0	
	comp=Z,4µm,20.0s						
P48A	Milroy	111.84	9	IAMs_20	IAMs_20	16 06 25.2	
	comp=Z,4µm,18.0s						
BLO	Bloomington	111.97	10	IAMs_20	IAMs_20	16 04 39.7	
	comp=Z,3µm,20.0s						
MVL	Millersville	111.98	1	IAMs_20	IAMs_20	16 04 34.9	
	comp=Z,4µm,19.0s						
P52A	Corning	112.04	6	IAMs_20	IAMs_20	16 04 12.4	
	comp=Z,3µm,19.0s						
WUPA	West Chester U	112.06	0	IAMs_20	IAMs_20	16 04 23.9	
	comp=Z,3µm,20.0s						
P51A	Williamsport	112.10	7	IAMs_20	IAMs_20	16 03 12.0	
	comp=Z,4µm,19.0s						
S39A	Bolivar	112.11	16	IAMs_20	IAMs_20	16 00 31.9	
	comp=Z,4µm,22.0s						
OLIL	Olney	112.16	11	IAMs_20	IAMs_20	16 05 54.5	
	comp=Z,3µm,21.0s						
MCWV	Mont Chateau	112.19	4	IAMs_20	IAMs_20	16 03 10.3	
	comp=Z,3µm,19.0s						
CCM	Cathedral Cave	112.22	14	IAMs_20	IAMs_20	16 05 03.3	
	comp=Z,4µm,20.0s						
319A	Douglas	112.25	31	IAMs_20	IAMs_20	16 02 41.1	
	comp=Z,3µm,21.0s						
P53A	Whipple	112.25	5	IAMs_20	IAMs_20	16 06 39.9	
	comp=Z,4µm,18.0s						
P61A	Hammonton	112.32	360	IAMs_20	IAMs_20	16 05 33.8	
	comp=Z,4µm,19.0s						
P57A	Homestead Farm	112.45	2	IAMs_20	IAMs_20	16 05 49.3	
	comp=Z,3µm,19.0s						
Q51A	Peebles	112.52	7	IAMs_20	IAMs_20	16 03 58.2	
	comp=Z,4µm,19.0s						
Q52A	Bidwell	112.69	6	IAMs_20	IAMs_20	16 04 21.7	
	comp=Z,3µm,19.0s						
Q54A	Coxs Mills	112.79	5	IAMs_20	IAMs_20	16 06 08.3	
	comp=Z,4µm,18.0s						
Q56A	Snyder Ridge,	112.84	3	IAMs_20	IAMs_20	16 09 11.6	
	comp=Z,4µm,19.0s						
USIN	University of	112.98	11	IAMs_20	IAMs_20	16 02 08.3	
	comp=Z,3µm,21.0s						
U38A	Gravette	113.03	17	IAMs_20	IAMs_20	16 02 11.0	
	comp=Z,3µm,18.0s						
RLO	Rose Lookout	113.13	17	IAMs_20	IAMs_20	16 07 42.4	
	comp=Z,4µm,20.0s						
R50A	Paris	113.14	8	IAMs_20	IAMs_20	16 04 21.7	
	comp=Z,3µm,20.0s						
HHAR	Hobbs	113.30	17	IAMs_20	IAMs_20	16 02 55.9	
	comp=Z,3µm,19.0s						
PBMO	Poplar Bluff	113.62	13	IAMs_20	IAMs_20	16 05 45.4	
	comp=Z,4µm,20.0s						
MNTX	Cornudas Mount	113.67	28	IAMs_20	IAMs_20	16 08 28.6	
	comp=Z,4µm,20.0s						
CBN	Corbin Frederi	113.75	2	IAMs_20	IAMs_20	16 06 38.7	
	comp=Z,4µm,19.0s						
TBI	Tubuai	113.84	105	*e*PS	PS	15 24 53.7	-1.4
	comp=Z,3µm,28.5s						
TBI				*e*SS	SS	15 31 06.0	-0.9
	comp=Z,7µm,34.5s						
TBI	Tubuai	113.84	105	*e*LQ	LQ	15 43 32.8	
	comp=Z,4µm,27.5s						
TBI				*e*LR	LR	15 48 22.4	
	comp=Z,10µm,30.0s						
TBI				*e*LR	LR	15 48 25.3	
	comp=Z,3µm,28.8s						
S51A	Beattyville	113.86	7	IAMs_20	IAMs_20	16 07 33.7	
	comp=Z,4µm,19.0s						
T47A	Sharon Grove	114.02	11	IAMs_20	IAMs_20	16 05 14.0	
	comp=Z,3µm,20.0s						
FCAR	Ozark Folk Cen	114.11	15	IAMs_20	IAMs_20	16 01 53.3	
	comp=Z,4µm,20.0s						
S57A	Dark Hollow, R	114.13	3	IAMs_20	IAMs_20	16 05 53.7	
	comp=Z,4µm,19.0s						
S61A	Accomac	114.31	1	IAMs_20	IAMs_20	16 09 02.4	
	comp=Z,3µm,20.0s						
GLAT	Glass	114.34	13	IAMs_20	IAMs_20	16 10 00.4	
	comp=Z,4µm,20.0s						
BLA	Blacksburg	114.58	5	IAMs_20	IAMs_20	16 06 27.7	
	comp=Z,3µm,20.0s						
WHAR	Wooly Hollow	114.64	15	IAMs_20	IAMs_20	16 04 38.5	
	comp=Z,4µm,19.0s						
HALT	Halls	114.67	13	IAMs_20	IAMs_20	16 10 18.3	
	comp=Z,4µm,20.0s						
U49A	Red Boiling Sp	114.69	9	IAMs_20	IAMs_20	16 09 25.7	
	comp=Z,4µm,19.0s						
HBAR	Harrisburg	114.75	14	IAMs_20	IAMs_20	16 05 38.4	
	comp=Z,5µm,21.0s						
TZTN	Tazewell	114.95	8	IAMs_20	IAMs_20	16 04 51.5	
	comp=Z,3µm,21.0s						
T59A	Double "B" Far	114.97	2	IAMs_20	IAMs_20	16 14 03.1	
	comp=Z,3µm,19.0s						
UALR	University of	115.12	16	IAMs_20	IAMs_20	16 04 05.2	
	comp=Z,4µm,20.0s						
U54A	Nelsons Funny	115.15	6	IAMs_20	IAMs_20	16 11 48.8	
	comp=Z,3µm,19.0s						
V48A	Smith Brothers	115.29	11	IAMs_20	IAMs_20	16 04 02.5	
	comp=Z,4µm,20.0s						
U56A	King	115.44	5	IAMs_20	IAMs_20	16 07 24.5	
	comp=Z,3µm,22.0s						
V53A	Saluda	115.90	7	IAMs_20	IAMs_20	16 08 45.6	
	comp=Z,4µm,20.0s						
CPCT	Cooper Cave	115.91	9	IAMs_20	IAMs_20	16 11 33.9	
	comp=Z,3µm,19.0s						
SWET	Sewanee	115.94	10	IAMs_20	IAMs_20	16 08 20.7	
	comp=Z,4µm,21.0s						
FW14	Alvarado	116.02	21	IAMs_20	IAMs_20	16 08 58.3	
	comp=Z,4µm,18.0s						
TAOE	Nuku Hiva Isla	116.06	86	*e*S	SKSdf	15 21 57.6	+17
	comp=Z,613nm,28.7s						
TAOE				*e*SS	SS	15 31 27.2	-9.1
	comp=Z,544nm,35.0s						
TAOE	Nuku Hiva Isla	116.06	86	*e*LR	LR	15 49 30.2	
	comp=Z,3µm,22.9s						
V58A	Windy Hill, Pi	116.08	4	IAMs_20	IAMs_20	16 12 21.3	
	comp=Z,3µm,18.0s						
V61A	Roper	116.18	1	IAMs_20	IAMs_20	16 06 06.0	
	comp=Z,4µm,20.0s						
W52A	Murphy	116.34	8	IAMs_20	IAMs_20	16 08 10.2	
	comp=Z,3µm,18.0s						
TXAR	Lajitas Array	116.45	28	PKP	PKPdf	15 14 29.2	-0.4
	comp=Z,6.0nm,0.8s,baz=229,slow=0.8,SNR=31						
TXAR				PKKPbc	PKKPbc	15 24 56.2	-1.5
	comp=Z,2.8nm,0.8s,baz=159,slow=5.2,SNR=14						
Y45A	Yeager Farm, C	116.61	13	IAMs_20	IAMs_20	16 04 09.7	
	comp=Z,4µm,20.0s						
W57A	Gilead	116.66	5	IAMs_20	IAMs_20	16 12 05.7	
	comp=Z,3µm,18.0s						
X58A	Rowland	117.30	4	IAMs_20	IAMs_20	16 12 14.6	
	comp=Z,3µm,19.0s						
JSC	Jenkinsville	117.42	6	IAMs_20	IAMs_20	16 12 14.0	
	comp=Z,3µm,18.0s						
Z47A	Carrollton	117.55	12	IAMs_20	IAMs_20	16 08 59.4	
	comp=Z,4µm,20.0s						
HPIG		117.67	31	IAMs_20	IAMs_20	16 06 42.7	
	comp=Z,3µm,20.0s						
Y57A	Sumter	117.76	5	IAMs_20	IAMs_20	16 07 36.8	
	comp=Z,3µm,20.0s						
LRAL	Lakeview Retre	117.90	11	IAMs_20	IAMs_20	16 04 31.6	
	comp=Z,4µm,21.0s						
Y58A	Scranton	117.92	4	IAMs_20	IAMs_20	16 07 29.1	
	comp=Z,3µm,19.0s						
QSPA	South Pole Qui	118.14	180	PKP	PKPdf	15 14 31.0	-0.5
	comp=Z,16nm,0.7s,baz=275,slow=1.2,SNR=36						
QSPA				PKKPbc	PKKPab	15 24 51.0	-0.6
	comp=Z,11nm,1.1s,baz=165,slow=1.3,SNR=9.7						
SLBS	Sierra La Lagu	118.30	37	IAMs_20	IAMs_20	16 11 43.0	
	comp=Z,2µm,19.0s						
152A	Waverly Hall	118.62	9	IAMs_20	IAMs_20	16 07 41.7	
	comp=Z,4µm,20.0s						
NHSC	New Hope	118.68	5	IAMs_20	IAMs_20	16 08 15.2	
	comp=Z,3µm,20.0s						
HKT	Hockley	118.72	21	d *i*PKIKP	PKiKP	15 14 33.9	+0.1
CSU	Charleston Sou	118.81	5	IAMs_20	IAMs_20	16 08 18.5	
	comp=Z,3µm,18.0s						
346A	Big Creek Wild	119.02	14	IAMs_20	IAMs_20	16 10 40.5	
	comp=Z,3µm,18.0s						
451A	Vernon	120.48	11	IAMs_20	IAMs_20	16 06 23.9	
	comp=Z,3µm,21.0s						
TROLL	Troll, Antarti	120.53	201	⇑PKKPbc	PKKPab	15 24 42.3	+1.1
	comp=Z,225nm,0.7s						
TROLL				⇓PKPdf	PKPdf	15 14 35.7	-0.4
	comp=Z,402nm,0.5s						
456A	Hilliard	120.87	7	IAMs_20	IAMs_20	16 11 32.3	
	comp=Z,4µm,20.0s						
SNAA	Sanae	122.23	201	⇑PKKPbc	PKKPab	15 24 34.8	+1.0
	comp=Z,76nm,0.6s						
SNAA				⇓PKPdf	PKPdf	15 14 38.0	-1.2
	comp=Z,72nm,0.5s						
SNAA	Sanae	122.23	201	PKP	PKPdf	15 14 38.2	-1.0
	comp=Z,9.4nm,0.5s,baz=196,slow=2.4,SNR=71						
SNAA				PKKPbc	PKKPab	15 24 34.6	+0.9
	comp=Z,3.2nm,0.7s,baz=257,slow=4.6,SNR=24						
SNAA	Sanae	122.23	201	c *i*PKIKP	PKPdf	15 14 38.1	-1.2
SNAA				pmax	pmax		
	comp=Z,50nm,2.5s						
ZAIG	Zacatecas	122.67	30	IAMs_20	IAMs_20	16 12 25.0	
	comp=Z,4µm,19.0s						
VNA2	Neumayer--Watz	123.80	201	⇑PKKPbc	PKKPab	15 24 28.9	+1.8
	comp=Z,2.1nm,0.6s,baz=333,slow=0.7						
VNA2				⇓PKPdf	PKPdf	15 14 41.5	-0.8
	comp=Z,19nm,0.6s,baz=115,slow=1.9						
VNA1	Neumayer--Stat	124.14	202	⇓PKPdf	PKPdf	15 14 42.1	-0.7
	comp=Z,6.5nm,0.6s						
VNA3	Neumayer Olymp	124.46	201	⇑PKKPbc	PKKPbc	15 24 27.0	-1.2
	comp=Z,2.6nm,0.7s						
VNA3				⇓PKPdf	PKPdf	15 14 41.8	-1.7
	comp=Z,8.6nm,0.6s						
060A	Indiantown	124.69	6	IAMs_20	IAMs_20	16 14 01.3	
	comp=Z,3µm,20.0s						
061Z	Ochoppi	125.80	6	IAMs_20	IAMs_20	16 12 03.7	
	comp=Z,3µm,19.0s						
MOIG	Morelia	125.98	31	IAMs_20	IAMs_20	16 15 59.2	
	comp=Z,3µm,22.0s						
BELA	Belgrano 2	127.13	190	IAMs_20	IAMs_20	16 05 59.6	
	comp=Z,2µm,21.0s						
UNM	Universidad Na	127.17	29	IAMs_20	IAMs_20	16 08 11.3	
	comp=Z,3µm,21.0s						
TLIG	Tlapa	129.00	29	IAMs_20	IAMs_20	16 12 33.8	
	comp=Z,2µm,18.0s						
TEIG	Tepich	130.04	16	IAMs_20	IAMs_20	16 15 54.5	
	comp=Z,3µm,22.0s						
MOAC	Moa	131.27	360	*e*P	SKPbc	15 18 22.5	+0.4
NMDO	Nuevo Mundo	131.37	360	IAMs_20	IAMs_20	16 15 31.3	
	comp=Z,3µm,21.0s						
NMDO	Nuevo Mundo	131.37	360	*e*P	SKPbc	15 18 22.2	-0.2
PINC	Pinares de May	131.44	1	*e*P	SKPbc	15 18 22.5	-0.2
YAR	Yar	131.54	2	*e*P	SKPbc	15 18 21.5	-1.7
QMBU	Quimbuelo	131.73	360	*e*P	SKPbc	15 18 23.8	-0.1
MASC	Masc	131.74	359	*e*P	SKPbc	15 18 23.1	-0.7
LMGC	Las Mercedes	131.83	2	*e*P	SKPbc	15 18 23.6	-0.5
MARVS	Santiago de Cu	131.92	1	*e*P	SKPbc	15 18 23.4	-1.1
RCC	Rio Carpintero	131.93	1	*e*P	SKPbc	15 18 23.9	-0.6
CHIV	Chivirico	131.93	2	IAMs_20	IAMs_20	16 20 37.2	
	comp=Z,3µm,18.0s						
CHIV	Chivirico	131.93	2	*e*P	SKPbc	15 18 24.8	+0.3
PILO	Pilon	131.96	3	*e*P	SKPbc	15 18 23.9	-0.8
GTBY	Guantanamo Bay	132.00	0	IAMs_20	IAMs_20	16 18 55.0	
	comp=Z,3µm,20.0s						
GTBY	Guantanamo Bay	132.00	0	*e*P	SKPbc	15 18 25.6	+0.8
CCIG	Comitan	132.65	23	IAMs_20	IAMs_20	16 12 45.9	
	comp=Z,2µm,22.0s						
PETF	Flores	132.77	19	IAMs_20	IAMs_20	16 20 54.9	
	comp=Z,3µm,21.0s						
SDDR	Presa de Saban	132.80	355	IAMs_20	IAMs_20	16 17 42.2	
	comp=Z,3µm,20.0s						
SDDR	Presa de Saban	132.80	355	*e*P	SKPbc	15 18 24.7	-3.0
SABA	Saba	132.88	345	IAMs_20	IAMs_20	16 15 53.1	
	comp=Z,2µm,20.0s						
SEUS	St. Eustatius	132.94	344	IAMs_20	IAMs_20	16 16 53.7	
	comp=Z,2µm,21.0s						
SJG	San Juan	133.00	348	IAMs_20	IAMs_20	16 23 03.2	
	comp=Z,2µm,21.0s						
IGPR	InterUniversit	133.14	348	IAMs_20	IAMs_20	16 23 12.7	
	comp=Z,2µm,20.0s						
CRPR	Cabo Rojo, PR	133.27	350	IAMs_20	IAMs_20	16 20 27.0	
	comp=Z,2µm,21.0s						
MTDJ	Mount Denham	133.63	3	IAMs_20	IAMs_20	16 15 29.2	
	comp=Z,2µm,20.0s						
MTDJ	Mount Denham	133.63	3	⇑*e*P	SKPbc	15 18 19.8	-11
HUEH	Huehuetenango	133.76	22	IAMs_20	IAMs_20	16 14 02.3	
	comp=Z,2µm,20.0s						
CBE	Ff, Capester	133.95	342	IAMs_20	IAMs_20	16 19 45.7	
	comp=Z,2µm,21.0s						
SVN	Savane Anatole	134.99	341	IAMs_20	IAMs_20	16 24 45.4	
	comp=Z,2µm,20.0s						
ESQI	Esquipulas	135.16	20	IAMs_20	IAMs_20	16 17 53.1	
	comp=Z,3µm,21.0s						
MTO3	Montecristo	135.30	20	IAMs_20	IAMs_20	16 17 56.0	
	comp=Z,2µm,20.0s						
RCBR	Riachuelo	136.67	294	*e*P	PKPdf	15 15 08.8	+0.4
GRGR	Grenville	137.70	340	IAMs_20	IAMs_20	16 21 44.3	
	comp=Z,2µm,22.0s						
HERN	Volcan Telica	137.71	17	IAMs_20	IAMs_20	16 25 31.8	
	comp=Z,2µm,22.0s						
HDC	Heredia	140.88	14	*e*P	PKPdf	15 15 15.5	-0.7
BRU2	Volcan	142.34	12	IAMs_20	IAMs_20	16 25 34.2	
	comp=Z,2µm,18.0s						
SDV	Santo Domingo	142.73	353	*e*P	PKPdf	15 15 15.7	-3.9
TMAB	Tom-Au,PA,Br	143.53	310	*e*P	PKPdf	15 15 19.9	-0.9
CMC01	Camacan, BA	144.69	284	*e*P	PKPab	15 15 20.5	-0.8
GUA01	Guaratinga, BA	145.49	282	*e*P	PKPdf	15 15 22.9	-1.2
BOAV	Boa Vista	146.38	333	*e*P	PKPdf	15 15 25.9	+0.2
ROSC	El Rosal	146.99	359	PKPbc	PKPbc	15 15 28.3	-0.8
	comp=Z,287nm,0.8s,baz=30,slow=2.9,SNR=47						
RIB01	Linhares ES	147.12	278	*e*P	PKPdf	15 15 26.1	-0.7
PRPB	Parauapebas	147.45	308	*e*P	PKPdf	15 15 26.9	-0.6
SJMB	Sao Joao De Ma	147.57	280	*e*P	PKPdf	15 15 26.6	-0.8
SMTB	Santa Maria do	147.67	301	*e*P	PKPdf	15 15 26.9	-0.9
SDBA	SAO DESIDERIO	147.70	293	*e*P	PKPdf	15 15 27.1	-0.7
JANB	Januaria	148.61	288	*e*P	PKPdf	15 15 28.5	-0.8
CAM01	Campos-RJ	149.11	275	*e*P	PKPdf	15 15 28.9	-1.0
DUB01	Friburgo-RJ	149.82	274	*e*P	PKPdf	15 15 29.8	-1.3
ITTB	Itaituba	149.88	319	*e*P	PKPdf	15 15 30.2	-1.2
VAS01	Vassouras-RJ	150.83	275	*e*P	PKPdf	15 15 31.3	-1.3
OTAV	Otavalo	151.38	7	IAMs_20	IAMs_20	16 28 23.7	
	comp=Z,2µm,22.0s						
OTAV	Otavalo	151.38	7	*e*P	PKPdf	15 15 32.6	-1.8
MACA	Manacapuru-AM	151.43	329	IAMs_20	IAMs_20	16 32 14.4	
	comp=Z,2µm,22.0s						
MACA	Manacapuru-AM	151.43	329	*e*P	PKPdf	15 15 32.0	-1.9
MAN01	Angra dos Reis	151.47	274	*e*P	PKPdf	15 15 33.2	-0.5
BSCB	Bom Sucesso	151.56	278	*e*P	PKPdf	15 15 32.6	-1.3
NPGB	Novo Progresso	151.77	315	*e*P	PKPdf	15 15 32.9	-1.4
BDFB	Brasilia	151.97	291	PKP	PKPdf	15 15 35.1	+0.4
	comp=Z,12nm,0.9s,baz=52,slow=4.2,SNR=12						
PMNB	Patos De Minas	152.03	284	*e*P	PKPdf	15 15 33.3	-1.4
SNDB	Serra Nova Dou	152.45	301	*e*P	PKPdf	15 15 33.7	-1.6
SLP01	Ubatuba-SP	152.65	274	*e*P	PKPdf	15 15 33.8	-1.7
PARB	Paraibuna	153.06	274	*e*P	PKPdf	15 15 34.5	-1.6
IPMB	Ipameri, GO	153.29	287	*e*P	PKPdf	15 15 34.5	-2.0
TEFE	Tefe	153.36	336	*e*P	PKPdf	15 15 35.3	-1.4
VAO	Valinhos	154.14	275	IAMs_20	IAMs_20	16 28 01.4	
	comp=Z,3µm,21.0s						
VAO	Valinhos	154.14	275	*e*P	PKPdf	15 15 36.5	-1.1
SPB	Sao Paulo	154.73	274	IAMs_20	IAMs_20	16 28 31.8	
	comp=Z,2µm,21.0s						
SPB	Sao Paulo	154.73	274	*e*P	PKPdf	15 15 37.0	-1.3
PET01	Itanhaem-SP	154.78	273	*e*P	PKPdf	15 15 37.0	-1.3
CLDB	Colider	154.92	310	*e*P	PKPdf	15 15 37.5	-1.3
ARAG	Araguaiana, MT	155.09	295	*e*P	PKPdf	15 15 37.7	-1.3
TBTG	Tabatinga, AM	155.46	348	*e*P	PKPdf	15 15 39.1	-0.5
ITRB	Iturama	155.87	285	*e*P	PKPdf	15 15 39.3	-0.7
PDRB	Porto dos Gac	156.08	310	*e*P	PKPdf	15 15 39.5	-0.9
FRTB	Fartura	156.52	276	*e*P	PKPdf	15 15 39.9	-0.9
MAJ01	Sao Joao Batis	156.95	266	*e*P	PKPdf	15 15 40.4	-0.8
PCMB	Pacaembu	157.41	282	*e*P	PKPdf	15 15 41.0	-0.9
C2SB	Chapadao do Su	157.53	290	*e*P	PKPdf	15 15 41.4	-0.7
LDASE	Londrina, Braz	157.90	277	*e*P	PKPdf	15 15 41.6	-0.9
SALV	Santo Antonio	158.22	301	*e*P	PKPdf	15 15 42.2	-0.8
ATAH	Atahualpa	158.66	9	PKP	PKPdf	15 15 45.1	+0.9
	comp=Z,9.0nm,0.7s,baz=311,slow=2.3,SNR=12						
CNLB	Canela	158.76	262	*e*P	PKPdf	15 15 42.6	-0.8
TRCB	Terra Rica	159.03	280	*e*P	PKPdf	15 15 43.3	-0.6
RPRD	Ribas do Rio P	159.04	287	*e*P	PKPdf	15 15 43.0	-0.9
PTGB	Pitanga	159.10	275	*e*P	PKPdf	15 15 41.9	-2.1
VILB	Vilhena	159.33	315	IAMs_20	IAMs_20	16 42 52.5	
	comp=Z,2µm,20.0s						
VILB	Vilhena	159.33	315	*e*P	PKPdf	15 15 44.6	+0.1
CZSB	Cruzeiro do Su	159.36	353	IAMs_20	IAMs_20	16 36 22.3	
	comp=Z,2µm,22.0s						
ITAB	Concordia	159.67	268	IAMs_20	IAMs_20	16 32 01.2	
	comp=Z,2µm,19.0s						
ITAB	Concordia	159.67	268	*e*P	PKPdf	15 15 43.7	-0.8
PTLB	Pontes e Lacer	160.44	308	*e*P	PKPdf	15 15 44.9	-0.7
AQDB	Aquidauana	160.71	290	*e*P	PKPdf	15 15 44.7	-1.1
CPSB	Cacapava Do Su	161.04	259	*e*P	PKPdf	15 15 45.3	-0.6
BDQN	Bodoquena, MS	161.56	291	*e*P	PKPdf	15 15 45.2	-1.5
SIV	San Ignacio	162.14	311	PKP	PKPdf	15 15 46.7	-0.7
	comp=Z,16nm,1.1s,baz=52,slow=1.7,SNR=27						
SIV				PKPab	PKPab	15 16 33.5	-0.5
	comp=Z,21nm,1.0s,baz=77,slow=5.9,SNR=12						
SJPY	San Joaquin	162.72	277	*e*P	PKPdf	15 15 46.9	-0.9
MURT	Porto Murtinho	162.83	289	*e*P	PKPdf	15 15 46.7	-1.2
ITQB	Itaqui	163.80	261	*e*P	PKPdf	15 15 47.5	-1.2
CPUP	Villa Florida	164.10	273	PKP	PKPdf	15 15 48.0	-1.1
	comp=Z,9.0nm,1.2s,baz=290,slow=1.3,SNR=18						
CPUP				PKPab	PKPab	15 16 41.9	-0.7
	comp=Z,1.8nm,0.8s,baz=301,slow=4.4,SNR=4.9						
CPUP	Villa Florida	164.10	273	*e*P	PKPdf	15 15 47.9	-1.1
LPAZ	La Paz	166.38	330	PKP	PKPdf	15 15 52.1	+0.1
	comp=Z,39nm,1.2s,baz=22,slow=3.7,SNR=43						
LPAZ				PKPab	PKPab	15 16 52.2	-1.1
	comp=Z,10nm,0.7s,baz=339,slow=2.5,SNR=9.4						
LPAZ	La Paz	166.38	330	*e*P	PKPdf	15 15 49.9	-2.1
PLCA	Paso Flores	167.11	196	PKP	PKPdf	15 15 52.1	+0.9
	comp=Z,18nm,1.2s,baz=330,slow=1.8,SNR=12						
PLCA				PKPab	PKPab	15 16 54.5	-0.7
	comp=Z,6.1nm,0.6s,baz=144,slow=3.9,SNR=8.9						
PLCA	Paso Flores	167.11	196	*e*P	PKPdf	15 15 50.0	-1.2
CFA	Coronel Fontan	173.25	240	PKP	PKPdf	15 15 55.5	+0.6
	comp=Z,6.5nm,0.9s,baz=302,slow=0.2,SNR=22						
CFA				PKPab	PKPab	15 17 21.4	-1.4
	comp=Z,4.7nm,0.8s,baz=115,slow=6.1,SNR=5.5						

DJA 17 14:57:50.0±0.2, 8˚S±3˚×11˚7E±˚, h10km, M4.1/15, mb4.2/4, MLv4.0/15, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWSI	Taliwang, Sumb	0.49	141	P	Pg	14 57 59.9	+0.4
TWSI				S	Sb	14 58 07.5	-0.4
PLAI	Plampang	1.28	111	P	Pb	14 58 14.3	+0.1
PLAI				S	Sg	14 58 31.9	+0.6
SRBI	Singaraja	1.37	281	P	Pn	14 58 14.3	-0.9
SRBI				S	Sg	14 58 33.9	-0.3
DNP	Denpasar	1.38	257	P	Pg	14 58 16.5	-0.1
DNP				S	Sg	14 58 35.0	+0.5
JAGI	Jajag, Banyuwa	2.40	267	P	Pn	14 58 28.6	-0.7
KMMI	Kalianget	2.89	297	P	Pn	14 58 36.7	+0.6
WBSI	Waikabubak, Su	3.06	115	P	Pn	14 58 37.3	-1.3
GMJI	Gumukmas	3.10	271	P	Pn	14 58 38.8	-0.1
WSI	Waingapu	3.91	110	P	Pn	14 58 49.8	-0.3
BSSI	Bau Bau, Buton	4.47	61	P	Pn	14 58 57.5	-0.4
BKSI	Bulukumba	4.64	50	P	Pn	14 58 59.3	-0.9
EDFI	Ende, Flores	5.08	95	P	Pn	14 59 06.7	+0.3
	0.1nm24nm,1.2s						
BNSI	Bone	5.28	42	P	Pn	14 59 10.0	+1.1
	0.2nm20nm,1.0s						
PCJI	Pacitan	5.34	271	P	Pn	14 59 09.2	-0.6
	0.4nm43nm,1.4s						
UGM	Wanagama	6.00	274	P	Pn	14 59 18.6	-0.4

*IDC **17** 15:02:34.9±7.5, 28°.39N×104°.79E, h0^{km}, mb3.9/4, mbtmp4.0/4, Error ellipse: s-maj=162.2km s-min=38.4km az=122.0*

*NEIC **17** 15:02:37.5±1.0, 28°.4N±0°.1×104°.8E±0°.1, h10^{km}±1^{km}, mb4.9/18, Error ellipse: s-maj=24.3km s-min=18.1km az=316.0*

ISC 17 15:02:38.4±0.9**, 28°.4N**±0°.1×**104°.8E**±0°.1**, h19^{km}, n24, σ0ˢ.70**/24**, mb4.8**/7**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENH	**Enshi**	4.54	64	Pn	**Pn**	15 03 47.5	+1.3
TJN	**Taejon**	20.66	61	P	**P**	15 07 16.9	-0.2
JOW	**Kunigami**	20.88	89	P	**P**	15 07 18.8	-0.8
JOW				IAmb	IAmb	15 07 31.6	
	comp=Z,95nm,1.5s						
JOW	**Kunigami**	20.88	89	P	**P**	15 07 18.6	-1.0
	comp=Z,9.9nm,1.0s,baz=23,slow=22,SNR=1.4 comp=Z,9.9nm,1.0s						
KS19	**Wonju Array Si**	21.38	59	P	**P**	15 07 24.5	-0.4
KSRS	**Korea Array**	21.41	59	P	**P**	15 07 23.6	-1.5
	comp=Z,2.2nm,0.7s,baz=240,slow=10,SNR=4.0 comp=Z,2.2nm,0.7s						
MJB9	**Matsu-Tunnel**	29.26	65	P	**P**	15 08 38.0	-1.4
MJB9				IAmb	IAmb	15 08 38.2	
	comp=Z,21nm,1.0s						
KAPI	**Kappang**	36.18	154	P	**P**	15 09 40.7	+0.7
HMDM	**Hanimaadhoo**	36.78	240	P	**P**	15 09 45.0	-0.2
YAK	**Yakutsk**	37.48	19	P	**P**	15 09 51.2	+0.6
MTN	**Manton Dam**	48.25	145	P	**P**	15 11 19.1	+0.8
WB0	**Warramunga Arr**	55.75	146	P	**P**	15 12 13.9	-0.2
WRA	**Warramunga Arr**	55.88	146	P	**P**	15 12 14.7	-0.3
	comp=Z,1.3nm,0.8s,baz=336,slow=7.5,SNR=10 comp=Z,1.3nm,0.8s						
ASAR	**Alice Springs**	58.85	149	P	**P**	15 12 35.6	-0.5
	comp=Z,1.6nm,0.9s,baz=337,slow=8.1,SNR=2.3 comp=Z,1.6nm,0.9s						
CTAO	**Charters Tower**	62.66	136	P	**P**	15 13 02.0	0.0
FORT	**Forrest**	62.86	158	P	**P**	15 13 03.0	-0.1
C19K	**Lookout Ridge**	65.80	23	P	**P**	15 13 22.3	+0.2
D19K	**Kuna River**	66.49	24	P	**P**	15 13 26.4	-0.1
D20K	**Etivluk River**	66.94	23	P	**P**	15 13 29.1	-0.2
L16K	**Owhat River**	68.08	31	P	**P**	15 13 36.5	-0.1
L16K				IAmb	IAmb	15 14 02.6	
	comp=Z,13nm,1.4s						
J19K	**Poorman**	68.95	28	P	**P**	15 13 41.9	-0.1
J19K				IAmb	IAmb	15 13 47.6	
	comp=Z,12nm,1.5s						
E24K	**Your Creek**	69.97	23	P	**P**	15 13 48.7	+0.4
CCB	**Clear Creek Bu**	71.77	26	P	**P**	15 13 59.3	0.0
CCB				IAmb	IAmb	15 14 01.2	
	comp=Z,18nm,1.8s						
BCAR	**Beaver Creek A**	74.88	26	P	**P**	15 14 17.0	-0.6

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*IDC **17** 15:03:07.5±7.1, 28°.19N×105°.00E, h0^{km}, mb4.2/4, mbtmp4.3/4, Error ellipse: s-maj=154.8km s-min=36.1km az=122.0*

*NEIC **17** 15:03:08.3±0.9, 28°.31N±0°.10×104°.8E±0°.1, h10^{km}±1^{km}, mb4.9/23, Error ellipse: s-maj=21.5km s-min=11.9km az=230.0*

ISC 17 15:03:09.6±0.9**, 28°.3N**±0°.1×**104°.8E**±0°.1**, h19^{km}, n30, σ0ˢ.66**/30**, mb4.8**/8**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENH	**Enshi**	4.50	63	Pn	**Pn**	15 04 17.9	+1.1
YOJ	**Yonaguni jima**	16.73	99	Pn	**Pn**	15 07 02.8	-0.2
ULN	**Ulaanbaatar**	19.59	4	P	**P**	15 07 36.0	-0.6
JOW	**Kunigami**	20.82	89	P	**P**	15 07 49.8	-0.4
JOW	**Kunigami**	20.82	89	P	**P**	15 07 49.7	-0.4
	7.8nm,0.5s,baz=256,slow=4.2,SNR=4.6 7.8nm,0.5s						
KS19	**Wonju Array Si**	21.35	59	P	**P**	15 07 55.6	0.0
KSRS	**Korea Array**	21.38	59	P	**P**	15 07 55.4	-0.5
	3.5nm,0.7s,baz=239,slow=9.5,SNR=5.8 3.5nm,0.7s						
JNU	**Nakatsue**	22.87	71	P	**P**	15 08 11.4	-0.6
KULM	**Kulim**	23.25	191	P	**P**	15 08 17.3	+1.4
KULM				IAmb	IAmb	15 08 20.3	
	comp=Z,58nm,1.3s						
WB0	**Warramunga Arr**	55.70	146	P	**P**	15 12 44.3	-0.6
WRAB	**Tennant Creek**	55.82	146	P	**P**	15 12 46.2	+0.4
WRA	**Warramunga Arr**	55.82	146	P	**P**	15 12 45.0	-0.8
WRA	**Warramunga Arr**	55.82	146	P	**P**	15 12 44.9	-0.9
	comp=Z,4.7nm,0.9s,baz=337,slow=8.3,SNR=9.4 comp=Z,4.7nm,0.9s						
WB2	**Warramunga Arr**	55.83	146	P	**P**	15 12 45.2	-0.7
WR8	**Warramunga Arr**	55.91	146	P	**P**	15 12 45.6	-0.8
WR0	**Warramunga Arr**	55.93	146	P	**P**	15 12 45.7	-0.9
COEN	**Coen**	56.07	133	P	**P**	15 12 47.3	-0.4
COEN				IAmb	IAmb	15 13 49.8	
	comp=Z,18nm,1.2s						
AS31	**Alice Springs**	58.79	149	P	**P**	15 13 06.2	-0.6
ASAR	**Alice Springs**	58.79	149	P	**P**	15 13 06.7	-0.1
	comp=Z,1.8nm,0.6s,baz=328,slow=6.9,SNR=8.8 comp=Z,1.8nm,0.6s						
B20K	**Meade River**	66.36	22	P	**P**	15 13 56.9	+0.2
N17K	**Nushagak Hills**	69.53	32	P	**P**	15 14 17.5	+0.7
E23K	**Chandalar**	69.60	23	P	**P**	15 14 17.4	+0.2
SCTE	**Santa Cesarea**	69.79	305	P	**P**	15 14 18.6	-0.1
BPAW	**Bear Paw Mtn.**	70.78	27	P	**P**	15 14 24.6	+0.2
BPAW				IAmb	IAmb	15 14 35.9	
	comp=Z,9.1nm,1.4s						
P18K	**Big Mountain,**	70.87	32	P	**P**	15 14 26.0	+0.9
BMAR	**Burnt Mountain**	71.59	22	P	**P**	15 14 29.5	+0.2
PRP	**Porcupine Dome**	72.21	24	P	**P**	15 14 33.0	-0.2
G27K	**Doyon Strip**	72.89	22	P	**P**	15 14 37.5	+0.4
G27K				IAmb	IAmb	15 15 10.0	
	comp=Z,18nm,1.9s						
J26L	**Joseph Creek**	73.44	25	P	**P**	15 14 39.8	-0.6
J26L				IAmb	IAmb	15 14 41.0	
	comp=Z,28nm,1.9s						
BCAR	**Beaver Creek A**	74.88	26	P	**P**	15 14 49.7	+0.9

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*IDC **17** 15:09:00.4±0.9, 28°.31N×104°.88E, h0^{km}, mb4.0/8, mbtmp4.0/9, ML3.9/1, Error ellipse: s-maj=27.3km s-min=17.5km az=48.0*

*NEIC **17** 15:09:02.5±1.3, 28°.39N±0°.08×104°.89E±0°.05, h10^{km}±1^{km}, mb4.6/22, Error ellipse: s-maj=14.8km s-min=5.3km az=155.0*

ISC 17 15:09:03.7±0.5**, 28°.40N**±0°.04×**104°.83E**±0°.05**, h19^{km}, n46, σ1ˢ.35**/51**, mb4.6**/20**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	2.67	340	Pn	**Pn**	15 09 46.5	+0.7
CD2				Pg	**Pg**	15 09 53.3	-1.8
CD2				Sn	**Sn**	15 10 20.3	+2.5
CD2				Sg	**Sg**	15 10 30.9	+1.1
CD2				smax	smax		
	comp=N,1μm,0.7s						
CD2				smax	smax		
	comp=E,2μm,0.8s						
PZH	**PanZhiHua**	3.33	236	Pn	**Pb**	15 10 00.0	-2.3
PZH				Pg	**Pg**	15 10 08.9	+1.3
PZH				Sg	**Sg**	15 10 51.8	+1.0
PZH				smax	smax		
	comp=N,150nm,0.9s						
PZH				smax	smax		
	comp=E,150nm,0.9s						
ENH	**Enshi**	4.47	64	Pn	**Pn**	15 10 11.5	+1.0
TNCH	**TengChong**	6.56	241	Pg	**Pg**	15 11 09.9	+0.5
TNCH				Sg	**Sg**	15 12 29.0	-5.5
TNCH				smax	smax		
	comp=N,160nm,2.5s						
TNCH				smax	smax		
	comp=E,130nm,3.0s						
TNCH				LR	LR		
	comp=N,4μm,8.3s						
TNCH				LR	LR		
	comp=E,6μm,9.0s						
TNCH				LR	LR		
	comp=Z,5μm,10.6s						
SLVN	**Son La**	7.08	187	Pn	**Pn**	15 10 47.4	+1.0
QIZ	**Qiongzhong**	10.39	153	Pn	**Pn**	15 11 32.0	+0.2
CMAR	**Chiang Mai Arr**	11.27	210	Pn	**Pn**	15 11 47.4	+3.5
	comp=Z,0.1nm,0.3s,baz=17,slow=12,SNR=8.1						
EVN	**Everest**	15.90	273	P	**P**	15 12 51.5	+0.8
SONM	**Songino Array**	19.45	3	P	**Pn**	15 13 29.9	-0.5
	comp=Z,0.4nm,0.3s,baz=181,slow=12,SNR=3.1 comp=Z,1.8nm,0.6s						
WMQ	**Urumqi**	20.64	323	*e*P	Pn	15 13 46.9	+2.4
JOW	**Kunigami**	20.83	89	P	**P**	15 13 44.2	-0.1
JOW	**Kunigami**	20.83	89	P	**P**	15 13 43.4	-0.9
	comp=Z,8.8nm,0.6s,baz=196,slow=13,SNR=7.7 comp=Z,8.8nm,0.6s						
KSAR	**Wonju Array Be**	21.31	59	P	**P**	15 13 48.7	-0.6
KSRS	**Korea Array**	21.34	59	P	**P**	15 13 48.5	-1.2
	comp=Z,2.4nm,0.7s,baz=245,slow=10.0,SNR=11 comp=Z,2.4nm,0.7s						
MKAR	**Makanchi Array**	25.47	322	P	**P**	15 14 30.9	+0.3
MKAR	**Makanchi Array**	25.47	322	P	**P**	15 14 31.3	+0.7
	comp=Z,3.3nm,0.8s,baz=116,slow=12,SNR=7.9 comp=Z,3.3nm,0.8s						
MAKZ	**Makanchi**	25.65	322	P	**P**	15 14 33.2	+1.1
MYLDM	**Lahad Datu**	26.48	148	P	**P**	15 14 41.5	+1.5
MYLDM				IAmb	IAmb	15 15 12.2	
	comp=Z,13nm,1.1s						
USRK	**Ussuriysk Ar.**	26.81	47	P	**P**	15 14 41.8	-0.8
ARSB	**Arslanbob**	28.97	305	P	**P**	15 15 02.9	+0.6
ARSB				IAmb	IAmb	15 15 27.0	
	comp=Z,7.0nm,0.6s						
AB31	**Akbulak array**	39.97	314	P	**P**	15 16 37.0	+0.1
ABKAR	**Akbulak array**	39.97	314	P	**P**	15 16 36.9	-0.1
MTN	**Manton Dam**	48.25	145	P	**P**	15 17 42.3	-1.3
MTN				IAmb	IAmb	15 18 07.1	
	comp=Z,13nm,1.2s						
KNRA	**Kununurra**	49.56	149	P	**P**	15 17 52.5	-1.1
KNRA				IAmb	IAmb	15 18 12.9	
	comp=Z,7.0nm,1.1s						
RAYN	**Ar Rayn**	53.11	279	P	**P**	15 18 20.4	0.0
RAYN				IAmb	IAmb	15 18 21.2	
	comp=Z,4.6nm,0.8s						
SHEM	**Shemya Is, Ala**	55.58	44	P	**P**	15 18 38.0	+0.2
	comp=Z,18nm,0.3s,baz=236,slow=6.5,SNR=7.0						
WB0	**Warramunga Arr**	55.76	146	P	**P**	15 18 38.1	-1.4
WB0				IAmb	IAmb	15 19 21.1	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	55.88	146	P	**P**	15 18 39.2	-1.1
	comp=Z,2.7nm,0.9s,baz=317,slow=12,SNR=34 comp=Z,2.7nm,0.9s						
WR8	**Warramunga Arr**	55.97	146	P	**P**	15 18 39.6	-1.4
WR8				IAmb	IAmb	15 18 41.7	
	comp=Z,10nm,1.4s						
COEN	**Coen**	56.12	133	P	**P**	15 18 41.2	-0.9
BRTR	**Keskin Array B**	58.66	301	P	**P**	15 19 00.9	+0.9
	comp=Z,1.0nm,0.8s,baz=91,slow=5.1,SNR=5.0 comp=Z,1.0nm,0.8s						
AS31	**Alice Springs**	58.85	149	P	**P**	15 19 00.6	-0.8
ASAR	**Alice Springs**	58.86	149	P	**P**	15 19 00.6	-0.8
	comp=Z,0.9nm,0.5s,baz=331,slow=7.0,SNR=18 comp=Z,0.9nm,0.5s						
AKASG	**Malin Array Be**	59.71	314	P	**P**	15 19 05.8	-1.2
	comp=Z,0.7nm,0.6s,baz=68,slow=6.8,SNR=3.2 comp=Z,0.7nm,0.6s						
AKBB	**Malin Array Si**	59.71	314	P	**P**	15 19 05.8	-1.2
AKBB				IAmb	IAmb	15 19 26.2	
	comp=Z,7.1nm,1.4s						
KIEV	**Kiev**	59.72	314	P	**P**	15 19 05.9	-1.1
KIEV				IAmb	IAmb	15 19 12.5	
	comp=Z,5.7nm,1.4s						
ARCES	**ARCESS Array B**	59.98	336	P	**P**	15 19 09.0	+0.5
	comp=Z,4.4nm,0.9s,baz=84,slow=8.3,SNR=2.2 comp=Z,4.4nm,0.9s						
C16K	**Lisburne Hills**	63.89	24	P	**P**	15 19 34.6	-0.2
C18K	**Utukok River**	65.30	24	P	**P**	15 19 43.6	-0.5
C19K	**Lookout Ridge**	65.74	23	P	**P**	15 19 46.7	-0.3
C19K				IAmb	IAmb	15 20 18.1	
	comp=Z,10nm,1.4s						
D20K	**Etivluk River**	66.89	23	P	**P**	15 19 54.1	-0.1
D20K				IAmb	IAmb	15 19 55.7	
	comp=Z,3.7nm,0.8s						
K17K	**Iditarod**	68.20	30	P	**P**	15 20 03.0	+0.4
C23K	**Itkillik River**	68.47	21	P	**P**	15 20 03.8	-0.3
BMAR	**Burnt Mountain**	71.53	22	P	**P**	15 20 23.2	+0.2
BCAR	**Beaver Creek A**	74.81	26	P	**P**	15 20 42.6	+0.1
SUMG	**Summit**	76.21	349	P	**P**	15 20 50.6	-0.2
SUMG				IAmb	IAmb	15 21 27.5	
	comp=Z,8.1nm,1.4s						

STR 17 15:11:35.5±1.9**, 45°N**±8°×°±°**, h0^{km}, MLv0.6**/5**, Error ellipse: s-maj=0.0km s-min=0.0km az=32.4, preliminary, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRN	**Grenoble**	0.07	259	Pg	Pg	15 11 36.7	-0.2
GRN				Sg	Sg	15 11 38.3	+0.5
ORIF	**Oris-en-Rattie**	0.34	176	Pg	Pg	15 11 43.2	+1.2
ORIF				Sg	Sg	15 11 46.8	+0.5

IDC 17 15:20:57.6±3.5**, 30°.61N**×**108°.91E, h0^{km}, mb3.4**/3**, mbtmp3.4**/3**, Error ellipse: s-maj=415.0km s-min=29.2km az=53.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	26.14	316	P	P	15 26 33.5	0.0
	0.4nm,0.7s,baz=130,slow=11,SNR=3.7 0.4nm,0.7s						
WRA	**Warramunga Arr**	55.90	151	P	P	15 30 37.8	+0.4
	0.6nm,0.9s,baz=338,slow=8.1,SNR=7.8 0.6nm,0.9s						
ASAR	**Alice Springs**	59.05	153	P	P	15 30 59.0	-0.6
	0.5nm,1.0s,baz=328,slow=7.2,SNR=4.8 0.5nm,1.0s						

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*IDC **17** 15:23:30.5±1.3, 28°.47N×105°.41E, h0^{km}, mb3.5/3, mbtmp3.5/5, ML3.8/1, Error ellipse: s-maj=50.6km s-min=23.5km az=68.0*

*NEIC **17** 15:23:30.0±0.9, 28°.5N±0°.1×104°.97E±0°.09, h10^{km}±1^{km}, mb4.4/8, Error ellipse: s-maj=23.0km s-min=9.9km az=205.0*

ISC 17 15:23:32.5±0.7**, 28°.40N**±0°.05×**105°.22E**±0°.07**, h19^{km}, n18, σ1ˢ.77**/22**, mb3.8**/6**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	2.80	333	Pn	**Pn**	15 24 16.9	+0.5
CD2				Pg	**Pb**	15 24 24.8	+2.8
CD2				Sn	**Sn**	15 24 50.6	+0.8
CD2				Sg	**Sg**	15 25 01.0	-1.7
CD2				smax	smax		
	comp=N,400nm,0.7s						
CD2				smax	smax		
	comp=E,540nm,0.6s						
PZH	**PanZhiHua**	3.62	239	Pg	**Pb**	15 24 36.4	+0.4
PZH				Sg	**Sb**	15 25 20.4	+0.8
PZH				smax	smax		
	comp=N,40nm,0.7s						
PZH				smax	smax		
	comp=E,30nm,0.7s						
ENH	**Enshi**	4.17	62	Pn	**Pn**	15 24 36.6	+1.4
CMAR	**Chiang Mai Arr**	11.45	212	Pn	**Pn**	15 26 18.1	+3.1
	comp=E,0.2nm,0.3s,baz=19,slow=11,SNR=5.4 comp=E,0.5nm,0.4s						
EVN	**Everest**	16.23	273		**Pn**	15 27 19.1	-1.1
SONM	**Songino Array**	19.42	2	P	**P**	15 27 58.6	+0.8
	comp=E,0.5nm,0.6s,baz=181,slow=11,SNR=2.3						
MKAR	**Makanchi Array**	25.67	322	P	**P**	15 28 58.1	-3.1
MKAR	**Makanchi Array**	25.67	322	P	**P**	15 29 01.9	+0.7
	comp=E,0.8nm,0.9s,baz=119,slow=9.8,SNR=3.9 comp=E,0.8nm,0.9s						
MAKZ	**Makanchi**	25.85	322	P	**P**	15 28 59.2	-3.6
MAKZ				IAmb	IAmb	15 29 20.4	
	comp=Z,3.5nm,1.4s						
GIRL	**Giralia**	51.49	169	P	**P**	15 32 35.7	-1.1
WB0	**Warramunga Arr**	55.57	146	P	**P**	15 33 06.5	-0.5
WRA	**Warramunga Arr**	55.70	146	P	**P**	15 33 08.2	+0.3
	comp=Z,0.6nm,0.8s,baz=337,slow=8.3,SNR=9.3 comp=Z,0.6nm,0.8s						
WR8	**Warramunga Arr**	55.79	146	P	**P**	15 33 07.8	-0.7
WR8				IAmb	IAmb	15 33 26.8	
	comp=Z,6.8nm,1.2s						
COEN	**Coen**	55.88	134	P	**P**	15 33 08.3	-0.9
ASAR	**Alice Springs**	58.69	149	P	**P**	15 33 29.9	+0.9
	comp=Z,0.4nm,0.6s,baz=327,slow=6.9,SNR=13 comp=Z,0.4nm,0.6s						
M20K	**Styx River**	70.58	29	P	**P**	15 34 45.8	-0.5
ILSW	**Iliamna Southw**	71.36	31	P	**P**	15 34 49.1	-1.9
ILSW				IAmb	IAmb	15 35 00.7	
	comp=Z,6.5nm,1.1s						
BMAR	**Burnt Mountain**	71.39	22	P	**P**	15 34 49.5	-1.6

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*IDC **17** 15:36:00.8±0.4, 28°.35N×104°.84E, h0^{km}, mb5.0/31, mbtmp5.0/32, ML4.8/1, MS4.7/35, Error ellipse: s-maj=14.2km s-min=9.5km az=52.0*

*MOS **17** 15:36:01.4±0.8, 28°.38N×104°.87E, h15^{km}, mb5.4/71, MS5.2/4, Error ellipse: s-maj=6.1km s-min=3.6km az=124.7*

*NEIC **17** 15:36:02.7, 28°.54N×104°.88E, h12^{km}, Moment Tensor Solution. Duration: 2ˢ.0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.79; $M_{\theta\theta}$0.42; $M_{\phi\phi}$-4.21; $M_{r\theta}$-1.91; $M_{\theta\phi}$2.44; $M_{\phi r}$-3.85; Fault plane solution: $M_0$6.37000×10^{16} NP1: ϕ_s308.66000°, δ36.89000°, λ37.67000°. NP2: ϕ_s186.97000°, δ68.48000°, λ120.71000°. Principal axes: T 6.5544, Plg56.0000°, Azm137.0000°; N -0.3880, Plg28.0000°, Azm355.0000°; P -6.1664, Plg18.0000°, Azm255.0000°;*

*NEIC **17** 15:36:02.7, 28°.44N×104°.88E, h12^{km}*

*GCMT **17** 15:36:02.7±0.2, 28°.40N±0°.02×104°.93E±0°.01, h12^{km}, MW5.1/90, Moment Tensor Solution. s32,c37; s90,c163; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.25±.14; $M_{\theta\theta}$0.91±.13; $M_{\phi\phi}$-5.16±.11; $M_{r\theta}$-1.10±.48; $M_{\theta\phi}$2.35±.10; $M_{\phi r}$0.55±.38; Best double couple: $M_0$5.31100×10^{16} NP1: ϕ_s178.00000°, δ43.00000°, λ115.00000°. NP2: ϕ_s326.00000°, δ52.00000°, λ69.00000°. Principal axes: T 4.5820, Plg73.0000°, Azm177.0000°; N 1.4550, Plg17.0000°, Azm339.0000°; P -6.0390, Plg5.0000°, Azm71.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **17** 15:36:02.7±1.3, 28°.44N±0°.06×104°.87E±0°.07, h10^{km}±1^{km}, mb5.3/345, Mww5.1/27 Error ellipse: s-maj=10.8km s-min=10.0km az=343.0*

*BJI **17** 15:36:03.7, 28°.47N×104°.72E, h10^{km}, mB5.4/15, mb4.9/50, ML5.2/17, Ms5.3/55, Ms7 5.2/63*

*BGR **17** 15:36:07.3, 28°.30N×104°.24E, h33^{km}, mb5.3*

ISC 17 15:36:02.6±0.5**, 28°.40N**±0°.02×**104°.86E**±0°.03**, h11^{km}**±3^{km}**, h11^{km}:pP-P, n1072, σ1ˢ.14**/981**, mb5.3**/330**, MS4.8**/43**, 50C-38D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GYA	**Guiyang**	2.52	140	⇑Pn	**Pb**	15 36 45.8	-2.1
GYA				smax	smax		
	comp=N,11μm,0.8s						
GYA				smax	smax		
	comp=E,10μm,1.0s						
CD2	**Chengdu**	2.67	339	Pn	**Pn**	15 36 47.1	+1.4
CD2				Pg	**Pg**	15 36 54.3	+0.4
CD2				Sn	**Sn**	15 37 20.8	+2.6
CD2				Sg	**Sg**	15 37 29.8	+1.3
CD2				smax	smax		
	comp=N,27μm,1.0s						
CD2				smax	smax		
	comp=E,27μm,0.7s						
PZH	**PanZhiHua**	3.35	236	Pn	**Pn**	15 36 57.9	+2.8
PZH				Pg	**Pg**	15 37 05.9	-1.0
PZH				Sg	**Sg**	15 37 48.3	-2.0
PZH				smax	smax		
	comp=N,6μm,1.5s						
PZH				smax	smax		
	comp=E,4μm,1.3s						
KMI	**Kunming**	3.78	211	⇑Pn	**Pn**	15 37 02.9	+1.9
KMI				Pg	**Pg**	15 37 14.3	-0.7
KMI				Sn	**Sn**	15 37 46.4	+0.8
KMI				smax	smax		
	comp=N,2μm,1.1s						
KMI				smax	smax		
	comp=E,2μm,1.2s						
KMI				LR	LR		
	comp=N,59μm,9.0s						
KMI				LR	LR		
	comp=Z,42μm,6.2s						
ENH	**Enshi**	4.45	64		**Pn**	15 37 10.6	+0.5
ENH	**Enshi**	4.45	64	P	**Pn**	15 37 13.8	+3.7
GULI	**GuiLin**	5.82	121	Pn	**Pn**	15 37 29.1	+0.2
GULI				Sn	**Sn**	15 38 37.5	+1.9
GULI				smax	smax		
	comp=N,2μm,0.9s						
GULI				smax	smax		
	comp=E,2μm,0.9s						
GULI				LR	LR		
	comp=E,49μm,6.0s						
GULI				LR	LR		
	comp=Z,13μm,6.3s						
TNCH	**TengChong**	6.59	241	Pn	**Pn**	15 37 41.8	+2.2
TNCH				smax	smax		
	comp=N,5μm,1.7s						
TNCH				smax	smax		
	comp=E,5μm,1.6s						
TNCH				LR	LR		
	comp=E,18μm,4.4s						
TNCH				LR	LR		
	comp=Z,26μm,10.1s						
XAN	**Xi'an**	6.61	31	Pn	**Pn**	15 37 40.0	+0.2
XAN				Sg	**Sg**	15 39 31.9	-2.8
XAN				LR	LR		
	comp=Z,33μm,10.0s						
SLVN	**Son La**	7.09	187		**Pn**	15 37 47.0	+0.6
SLVN	**Son La**	7.09	187	P	**Pn**	15 37 48.7	+2.2
CNSH	**ChangSha**	7.12	90	P	**Pn**	15 37 48.4	+1.6
CNSH				S	**Sn**	15 39 05.4	-2.4
CNSH				smax	smax		
	comp=N,2μm,1.3s						
CNSH				smax	smax		
	comp=E,840nm,1.2s						
LZH	**Lanzhou**	7.71	354	⇑Pn	**Pn**	15 37 56.5	+1.5
LZH				Pg	**Pb**	15 38 15.5	-0.9
LZH				Sn	**Sn**	15 39 22.1	-0.3
LZH				Sg	**Sg**	15 40 05.3	-4.7
LZH				smax	smax		
	comp=E,2μm,1.4s						
LZH				smax	smax		
	comp=E,3μm,1.4s						
LZH				LR	LR		
	comp=E,14μm,9.3s						
LZH				LR	LR		
	comp=E,26μm,10.0s						
LZH				LR	LR		
	comp=E,10μm,8.9s						
WHN	**Wuhan**	8.55	73	⇑P	**Pn**	15 38 07.5	+1.2
LYN	**LuoYang**	8.93	45	P	**Pn**	15 38 10.5	-1.1
LYN				S	**Sn**	15 39 50.1	-2.1
LYN				pmax	pmax		
	comp=Z,1μm,0.7s						
LYN				smax	smax		
	comp=N,2μm,1.5s						
LYN				smax	smax		
	comp=E,2μm,1.2s						
LYN				LR	LR		
	comp=N,42μm,8.2s						
LYN				LR	LR		
	comp=E,25μm,7.2s						
LYN				LR	LR		
	comp=Z,36μm,9.3s						
GZH	**Guangzhou**	9.30	123	P	**Pn**	15 38 15.1	-1.6
GZH				S	**Sn**	15 39 59.5	-1.9
GZH				smax	smax		
	comp=N,1μm,1.1s						
GZH				smax	smax		
	comp=E,880nm,0.9s						
HKPS	**Hong Kong Po S**	10.38	124		**Pn**	15 38 31.4	0.0
QIZ	**Qiongzhong**	10.39	153		**Pn**	15 38 31.2	-0.4
QIZ	**Qiongzhong**	10.39	153	P	**Pn**	15 38 30.9	-0.7
QIZ				sP		15 38 36.3	
QIZ				S	**Sn**	15 40 31.6	+3.5
QIZ				pmax	pmax		
	comp=Z,41nm,0.7s						
QIZ				smax	smax		
	comp=E,280nm,0.9s						
QIZ				LR	LR		
	comp=E,8μm,6.3s						
QIZ				LR	LR		
	comp=Z,6μm,7.1s						
QIZ	**Qiongzhong**	10.39	153	P	**Pn**	15 38 33.5	+1.9
CHTO	**Chiang Mai**	10.97	211		**Pn**	15 38 40.5	+0.8
CHTO	**Chiang Mai**	10.97	211	P	**Pn**	15 38 43.2	+3.5
CHTO	**Chiang Mai**	10.97	211	P	**Pn**	15 38 40.5	+0.8
TIY	**Taiyuan**	11.25	32	*e*P	**Pn**	15 38 41.9	-1.5
TIY				S	Sn	15 41 00.8	+12
TIY				pmax	pmax		

	comp=Z,82nm,1.0s						
TIY				LR	LR		
	comp=N,23µm,10.7s						
TIY				LR	LR		
	comp=E,21µm,10.3s						
TIY				LR	LR		
	comp=Z,10µm,12.6s						
CM31	**Chiang Mai Arr**	**11.29**	**210**		**Pn**	**15 38 46.9**	**+2.9**
CMAR	**Chiang Mai Arr**	**11.29**	**210**		**Pn**	**15 38 46.8**	**+2.8**
CMAR	**Chiang Mai Arr**	**11.29**	**210**	Pn	**Pn**	**15 38 47.5**	**+3.6**
	comp=Z,0.7nm,0.3s,baz=17,slow=11,SNR=122						
CMAR				LR	LR	15 43 41.0	
	comp=Z,4µm,19.8s,baz=25,slow=41						
CMAR				ScP	**ScP**	**15 48 12.1**	**+0.4**
	comp=Z,1.8nm,0.7s,baz=281,slow=1.0,SNR=7.8						
CMAR				PKiKP	**PKiKP**	**15 52 36.4**	**-1.3**
	comp=Z,0.4nm,0.7s,baz=264,slow=2.9,SNR=4.3						
CMAR	**Chiang Mai Arr**	**11.29**	**210**	P	**Pn**	**15 38 46.8**	**+2.8**
GOMU	**GeErMu**	**11.51**	**315**	P	**Pn**	**15 38 48.8**	**+1.6**
GOMU				LR	LR		
	comp=Z,16µm,11.8s						
GOMU				LR	LR		
	comp=Z,8µm,11.4s						
GTA	**Gaotai**	**11.75**	**340**	P	**Pn**	**15 38 53.3**	**+3.0**
GTA				pmax	pmax		
	comp=Z,98nm,1.3s						
GTA				LR	LR		
	comp=Z,4µm,11.5s						
GTA				LR	LR		
	comp=Z,7µm,10.8s						
GTA				LR	LR		
	comp=Z,6µm,14.7s						
LSA	**Lhasa**	**12.06**	**279**		**Pn**	**15 38 54.9**	**0.0**
LSA	**Lhasa**	**12.06**	**279**	P	**Pn**	**15 38 56.4**	**+1.4**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
LSA				LR	LR		
	comp=Z,4µm,7.4s						
LSA				LR	LR		
	comp=Z,13µm,10.0s						
LSA	**Lhasa**	**12.06**	**279**	P	**Pn**	**15 38 54.9**	**0.0**
LSA	**Lhasa**	**12.06**	**279**	*i* P	**Pn**	**15 38 56.0**	**+1.0**
	SNR=12						
HNS	**HongShan**	**12.20**	**40**	⇓P	**Pn**	**15 38 56.4**	**+0.1**
HNS				pmax	pmax		
	comp=Z,37nm,1.1s						
HNS				LR	LR		
	comp=Z,12µm,13.4s						
HNS				LR	LR		
	comp=Z,14µm,13.9s						
HNS				LR	LR		
	comp=Z,12µm,12.7s						
NJ2	**Nanjing**	**12.64**	**70**	*e*P	**Pn**	**15 39 01.8**	**-0.5**
NJ2				sP	**P**	**15 39 13.0**	**-0.8**
NJ2				S	**Sn**	**15 41 19.4**	**-3.7**
NJ2				pmax	pmax		
	comp=Z,27nm,1.9s						
NJ2				LR	LR		
	comp=N,15µm,6.8s						
NJ2				LR	LR		
	comp=E,29µm,9.4s						
NJ2				LR	LR		
	comp=Z,31µm,11.5s						
QZH	**Quanzhou**	**12.76**	**103**	*e*P	**Pn**	**15 39 05.3**	**+1.3**
QZH				LR	LR		
	comp=Z,13µm,10.1s						
BTO	**Baotou**	**12.89**	**18**	*e*P	**Pn**	**15 39 05.4**	**-0.5**
BTO				pP	**P**	**15 39 12.8**	**-3.9**
BTO				PP	**PnPn**	**15 39 16.4**	**+2.5**
BTO				sP		15 39 17.5	
BTO				S	**Sn**	**15 41 30.3**	**+0.9**
BTO				sS		15 41 40.8	
BTO				SS	**SnSn**	**15 41 45.6**	**+3.7**
BTO				pmax	pmax		
	comp=Z,210nm,1.4s						
BTO				LR	LR		
	comp=Z,24µm,13.1s						
BTO				LR	LR		
	comp=Z,22µm,8.4s						
TIA	**Tai'an**	**12.96**	**50**	P	**Pn**	**15 39 06.9**	**+0.1**
TIA				PP	**P**	**15 39 20.6**	**+3.2**
TIA				pmax	pmax		
	comp=Z,26nm,1.2s						
TIA				LR	LR		
	comp=Z,7µm,9.8s						
TIA				LR	LR		
	comp=Z,18µm,10.6s						
UBPT	**Khong Chiam**	**13.07**	**177**		**Pn**	**15 39 09.6**	**+1.2**
UBPT	**Khong Chiam**	**13.07**	**177**	P	**Pn**	**15 39 12.3**	**+3.9**
BRDH	**Bariadhala**	**13.22**	**247**	LR	LR	15 45 10.7	
	comp=Z,5µm,19.1s,baz=44,slow=42						
HHC	**Hu-ho-hao-te**	**13.58**	**22**	⇓*i*P	**Pn**	**15 39 15.1**	**-0.2**
HHC				PP	**P**	**15 39 27.0**	**+2.6**
HHC				pmax	pmax		
	comp=Z,60nm,0.9s						
HHC				LR	LR		
	comp=Z,8µm,8.0s						
HHC				LR	LR		
	comp=Z,19µm,13.0s						
HHC				LR	LR		
	comp=Z,7µm,10.9s						
SSE	**Sheshan**	**14.44**	**75**	P	**Pn**	**15 39 24.6**	**-2.4**
SSE				S	**Sn**	**15 42 03.8**	**-3.3**
SSE				LR	LR		
	comp=N,5µm,11.2s						
SSE				LR	LR		
	comp=E,8µm,9.0s						
SSE				LR	LR		
	comp=Z,9µm,10.0s						
BJT	**Baijiatuau**	**14.88**	**36**	Pn	**Pn**	**15 39 32.2**	**-0.7**
BJT	**Baijiatuau**	**14.88**	**36**	P	**Pn**	**15 39 32.2**	**-0.7**
BJI	**Beijing**	**14.90**	**36**	P	**Pn**	**15 39 33.1**	**0.0**
BJI				pmax	pmax		
	comp=Z,23nm,1.1s						
BJI				pmax	pmax		
	comp=Z,400nm,11.3s						
BJI				LR	LR		
	comp=Z,4µm,12.3s						
BJI				LR	LR		
	comp=Z,5µm,18.7s						
BJI				LR	LR		
	comp=Z,3µm,17.6s						
TPUB	**Ta-pu**	**15.08**	**106**	Pn	**Pn**	**15 39 35.1**	**-0.6**
SSLB	**Suanglung**	**15.17**	**104**		**Pn**	**15 39 36.8**	**-0.2**
YHNB	**Yeheng**	**15.24**	**100**		**Pn**	**15 39 37.0**	**-1.0**
YHNB	**Yeheng**	**15.24**	**100**	P	**Pn**	**15 39 39.9**	**+1.9**
NACB	**Ninganchiao**	**15.59**	**102**	Pn	**Pn**	**15 39 41.4**	**-1.1**
YULB	**Yu-li**	**15.61**	**105**	Pn	**Pn**	**15 39 40.2**	**-2.5**
YULB	**Yu-li**	**15.61**	**105**	P	**P**	**15 39 46.0**	**-0.9**
TWG	**Pinlang**	**15.64**	**107**	Pn	**Pn**	**15 39 42.4**	**-0.7**
EVN	**Everest**	**15.92**	**273**		**Pn**	**15 39 45.0**	**-2.3**
DLV	**Lat**	**16.73**	**168**		**P**	**15 39 59.2**	**-0.4**
DL2	**Dalian**	**17.43**	**49**	P	**P**	**15 40 06.8**	**-0.1**
DL2				S	**S**	**15 43 27.4**	**-0.7**
DL2				pmax	pmax		
	comp=Z,140nm,1.1s						
DL2				pmax	pmax		
	comp=Z,1µm,8.0s						
DL2				LR	LR		
	comp=Z,8µm,15.1s						
DL2				LR	LR		
	comp=Z,4µm,13.1s						
DL2				LR	LR		
	comp=Z,8µm,14.7s						
XLT	**XiLinHaoTe**	**17.90**	**27**	*e*P	**Pn**	**15 40 11.4**	**-0.2**
XLT				pmax	pmax		
	comp=Z,120nm,1.0s						
XLT				LR	LR		
	comp=Z,670nm,7.8s						
XLT				LR	LR		
	comp=Z,4µm,5.9s						
XLT				LR	LR		
	comp=Z,5µm,9.8s						
SONM	**Songino Array**	**19.44**	**3**		**P**	**15 40 29.6**	**+0.4**
SONM	**Songino Array**	**19.44**	**3**	P	**Pn**	**15 40 30.5**	**+0.1**
	comp=Z,2.5nm,0.3s,baz=186,slow=13,SNR=61						
SONM				P3KPbc		16 14 56.2	
	comp=Z,0.7nm,0.6s,baz=12,slow=4.1,SNR=6.6						
	comp=Z,30nm,0.9s						
ULN	**Ulaanbaatar**	**19.50**	**4**		**P**	**15 40 30.3**	**+0.3**
ULN	**Ulaanbaatar**	**19.50**	**4**	P	**Pn**	**15 40 31.5**	**+0.3**
HJU	**Haeju**	**19.89**	**56**	P	**Pn**	**15 40 34.9**	**-0.8**
HJU				AmB			
	comp=Z,649nm,1.3s						
HJU				AMS	AMS		
	comp=Z,10µm,11.5s						
SUJ	**Sinuiju**	**19.94**	**49**	P	**Pn**	**15 40 35.3**	**-1.0**
SUJ				S	**S**	**15 44 16.9**	**-2.0**
SUJ				AmB			
	comp=Z,350nm,1.8s						
SUJ				AMS	AMS		
	comp=Z,6µm,11.7s						
SNY	**Shenyang**	**20.29**	**44**	⇓P	**P**	**15 40 38.6**	**+0.3**
SNY				S	**S**	**15 44 22.5**	**-3.2**
SNY				pmax	pmax		
	comp=Z,88nm,0.9s						
SNY				pmax	pmax		
	comp=Z,1µm,12.0s						
SNY				LR	LR		
	comp=Z,4µm,15.9s						
SNY				LR	LR		
	comp=Z,5µm,15.3s						
SNY				LR	LR		
	comp=Z,6µm,15.9s						
SRIT	**Nakonsritamara**	**20.32**	**195**	P	Pn	15 40 40.2	-0.6
SRIT				IAmb	IAmb	15 40 45.5	
	comp=Z,230nm,1.4s						
PYAG	**Pyongyang**	**20.33**	**53**	P	**P**	**15 40 39.3**	**+0.6**
PYAG				S	**S**	**15 44 26.8**	**+0.3**
PYAG				AmB			
	comp=Z,290nm,1.2s						
PYAG				AMS	AMS		
	comp=Z,2µm,6.8s						
INCN	**Inchon**	**20.36**	**58**	Pn	**P**	**15 40 40.0**	**+0.8**
INCN				IAmb	IAmb	15 40 45.3	
	comp=Z,152nm,1.1s						
INCN	**Inchon**	**20.36**	**58**	P	**P**	**15 40 40.0**	**+0.8**
INCN				pmax	pmax		
	comp=Z,151nm,1.2s						
TJN	**Taejon**	**20.57**	**62**	P	**P**	**15 40 41.5**	**0.0**
TJN	**Taejon**	**20.57**	**62**	P	Pn	15 40 43.1	-0.6
TJN	**Taejon**	**20.57**	**62**	P	**P**	**15 40 41.5**	**0.0**
TJN				pmax	pmax		
	comp=Z,706nm,1.3s						
TGY	**Tagaytay City**	**20.63**	**130**	LR	LR	15 48 13.2	
	comp=Z,995nm,18.2s,baz=329,slow=36						
WMQ	**Urumqi**	**20.65**	**323**	*e*P	**P**	**15 40 42.8**	**+0.5**
WMQ				pmax	pmax		
	comp=Z,30nm,1.1s						
WMQ				LR	LR		
	comp=Z,4µm,11.7s						
WMQ				LR	LR		
	comp=Z,3µm,16.7s						
WMQ				LR	LR		
	comp=Z,1µm,19.5s						
JOW	**Kunigami**	**20.81**	**89**	P	**P**	**15 40 43.0**	**-1.1**
JOW	**Kunigami**	**20.81**	**89**	P	**P**	**15 40 44.2**	**+0.1**
	comp=Z,31nm,0.5s,baz=276,slow=8.6,SNR=16						
JOW				LR	LR	15 49 31.8	
	comp=Z,4µm,18.7s,baz=271,slow=39						
	comp=Z,31nm,0.5s						
JOW	**Kunigami**	**20.81**	**89**	P	Pn	15 40 46.9	+0.4
KSAR	**Wonju Array Be**	**21.29**	**59**	P	**P**	**15 40 49.1**	**-0.1**
KSAR	**Wonju Array Be**	**21.29**	**59**	P	**P**	**15 40 49.1**	**-0.1**
KSRS	**Korea Array**	**21.32**	**59**	P	**P**	**15 40 49.8**	**+0.2**
	comp=Z,36nm,0.7s,baz=238,slow=11,SNR=142						
	comp=Z,36nm,0.7s						
JTU	**Tsushima**	**21.78**	**68**	P	**P**	**15 40 56.6**	**+2.1**
HHU	**Hamhung**	**21.94**	**53**	P	**P**	**15 40 57.0**	**+0.9**
HHU				AmB			
	comp=Z,814nm,1.9s						
HHU				AMS	AMS		
	comp=Z,6µm,8.5s						
ZAK	**Zakamensk**	**21.98**	**357**	*e*P	**P**	**15 40 56.8**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,126nm,1.3s						
CN2	**Changchun**	**22.56**	**42**	P	**P**	**15 41 03.4**	**+0.6**
CN2				S	**S**	**15 45 04.3**	**-5.7**
CN2				pmax	pmax		
	comp=Z,100nm,1.0s						
CN2				LR	LR		
	comp=Z,4µm,14.0s						
CN2				LR	LR		
	comp=Z,4µm,14.0s						
CN2				LR	LR		
	comp=Z,4µm,16.0s						
JNU	**Nakatsue**	**22.83**	**72**	P	**P**	**15 41 04.2**	**-1.5**
JNU				IAmb	IAmb	15 41 10.8	
	comp=Z,191nm,1.5s						
JNU	**Nakatsue**	**22.83**	**72**	LR	LR	15 51 15.1	
	comp=Z,4µm,18.3s,baz=262,slow=40						
JNU	**Nakatsue**	**22.83**	**72**	P	**P**	**15 41 06.4**	**+0.6**
KULM	**Kulim**	**23.33**	**191**	P	**P**	**15 41 10.7**	**-0.3**
KULM				IAmb	IAmb	15 41 13.4	
	comp=Z,139nm,1.2s						
KULM	**Kulim**	**23.33**	**191**	P	**P**	**15 41 11.7**	**+0.7**
MOY	**Mondy**	**23.42**	**354**	*e*P	**P**	**15 41 11.9**	**+0.2**
MOY				pmax	pmax		
	comp=Z,111nm,2.4s						
HIA	**Hailar**	**23.76**	**25**	P	**P**	**15 41 15.0**	**0.0**
HIA				IAmb	IAmb	15 41 17.2	
	comp=Z,158nm,1.5s						
HIA	**Hailar**	**23.76**	**25**	P	**P**	**15 41 15.0**	**0.0**
HIA				pmax	pmax		
	comp=Z,158nm,1.5s						
IRK	**Irkutsk**	**23.82**	**359**	⇑*i*P	**P**	**15 41 14.8**	**-0.7**
IRK				*e*S	**S**	**15 45 34.0**	**+2.9**
IRK				pmax	pmax		
	comp=Z,483nm,2.2s						
CIT	**Chita**	**24.47**	**13**	*e*P	**P**	**15 41 23.1**	**+1.5**
CIT				*e*		15 41 55.5	
CIT				*e*		15 42 01.5	
CIT				*e*		15 44 59.7	
CIT				*e*		15 46 32.7	
CIT				pmax	pmax		
	comp=Z,193nm,2.3s						
BSI	**Banda Aceh**	**24.52**	**203**	P	**P**	**15 41 22.1**	**-0.2**
	comp=Z,143nm,1.2s						
ZSN	**Zaisan**	**24.58**	**326**	*e*P	**P**	**15 41 22.9**	**+0.3**
ZSN				*e*S	**S**	**15 45 45.6**	**+2.2**
ZSN	**Zaisan**	**24.58**	**326**	*e*P	**P**	**15 41 23.0**	**+0.3**
ZSN				*e*S	**S**	**15 45 45.6**	**+2.2**
KKM	**Kota Kinabalu**	**24.71**	**152**	P	**P**	**15 41 24.2**	**+0.1**
KKM	**Kota Kinabalu**	**24.71**	**152**	P	**P**	**15 41 25.7**	**+1.6**
BNX	**BinXian**	**24.83**	**40**	⇑P	**P**	**15 41 23.5**	**-1.3**
BNX				S	**S**	**15 45 48.6**	**+1.2**
BNX				pmax	pmax		
	comp=Z,29nm,0.8s						
BNX				pmax	pmax		
	comp=Z,1µm,12.0s						
BNX				LR	LR		
	comp=Z,3µm,16.7s						
BNX				LR	LR		
	comp=Z,3µm,11.8s						
BNX				LR	LR		
	comp=Z,4µm,16.3s						
SHLS	**Shalkode**	**25.19**	**313**	*e*P	**P**	**15 41 26.4**	**-1.9**
SHLS				*e*S	**S**	**15 45 50.9**	**-2.7**
SHLS				pmax	pmax		
	comp=Z,59nm,1.4s						
SHLS	**Shalkode**	**25.19**	**313**	*e*P	**P**	**15 41 26.4**	**-1.9**
	comp=Z,59nm,1.4s						
SHLS				*e*S	**S**	**15 45 50.9**	**-2.7**
JMN	**Monobe**	**25.38**	**71**	IAmb	IAmb	15 41 31.1	
	comp=Z,85nm,1.5s						
JMN	**Monobe**	**25.38**	**71**	P	**P**	**15 41 31.7**	**+1.7**
UZB	**Uzynbulak**	**25.47**	**312**	*e*P	**P**	**15 41 31.5**	**+0.6**
UZB				pmax	pmax		
	comp=Z,40nm,1.2s						
UZB	**Uzynbulak**	**25.47**	**312**	*e*P	**P**	**15 41 31.6**	**+0.6**
	comp=Z,40nm,1.2s						
MK31	**Makanchi Array**	**25.48**	**322**	*i* P	**P**	**15 41 30.9**	**+0.1**
MK31				pmax	pmax		
	comp=Z,184nm,1.4s						
MKAR	**Makanchi Array**	**25.48**	**322**	P	**P**	**15 41 30.7**	**-0.1**
MKAR	**Makanchi Array**	**25.48**	**322**	P	**P**	**15 41 31.1**	**+0.3**
	comp=Z,28nm,0.6s,baz=125,slow=11,SNR=118						
MKAR				PcP	**PcP**	**15 45 02.9**	**+0.5**
	comp=Z,7.3nm,0.9s,baz=108,slow=4.0,SNR=3.7						
MKAR				ScP	**ScP**	**15 48 40.8**	**-1.0**
	comp=Z,2.8nm,0.8s,baz=97,slow=3.9,SNR=5.4						
MKAR				LR	LR	15 51 56.2	
	comp=Z,800nm,20.2s,baz=50,slow=38						
MKAR				P3KPbc		16 14 30.3	
	comp=Z,0.8nm,0.8s,baz=328,slow=4.3,SNR=7.2						
	comp=Z,28nm,0.6s						
MKAR	**Makanchi Array**	**25.48**	**322**	*ce*P	**P**	**15 41 31.1**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,29nm,0.6s						
TSI	**Tuntungan**	**25.48**	**195**	P	**P**	**15 41 31.5**	**+0.5**
MDJ	**Mudanjiang**	**25.49**	**44**	P	**P**	**15 41 31.3**	**+0.4**
MDJ				pmax	pmax		
	comp=Z,22nm,2.3s						
PRZ	**Przheval'sk**	**25.60**	**310**	IAmb	IAmb	15 41 36.5	
	comp=Z,77nm,0.9s						
MAKZ	**Makanchi**	**25.66**	**322**	P	**P**	**15 41 32.5**	**+0.1**
MAKZ	**Makanchi**	**25.66**	**322**	P	**P**	**15 41 32.5**	**+0.1**
MAKZ				pmax	pmax		
	comp=Z,142nm,1.2s						
KPKS	**Kokpek**	**25.84**	**313**	*e*P	**P**	**15 41 34.7**	**+0.6**
KPKS	**Kokpek**	**25.84**	**313**	*e*P	**P**	**15 41 34.8**	**+0.6**
SATY	**Saty**	**25.84**	**311**	*e*P	**P**	**15 41 34.6**	**+0.4**
SATY				pmax	pmax		
	comp=Z,29nm,0.9s						
SATY	**Saty**	**25.84**	**311**	*e*P	**P**	**15 41 34.7**	**+0.4**
	comp=Z,29nm,0.9s						
PSI	**Prapat**	**26.08**	**194**	LR	LR	15 51 39.6	
	comp=Z,890nm,19.2s,baz=352,slow=36						
PSI	**Prapat**	**26.08**	**194**	P	**P**	**15 41 37.2**	**+0.6**
PSI				pmax	pmax		
	comp=Z,103nm,1.1s						
RPSI	**Rantau Prapat**	**26.18**	**194**	P	**P**	**15 41 37.2**	**-0.2**
RPSI				IAmb	IAmb	15 41 38.8	
	comp=Z,103nm,1.1s						
KSH	**Kashi**	**26.29**	**302**	P	**P**	**15 41 41.3**	**+3.0**
KSH				pP	sP	15 41 43.8	+0.7
KSH				sP	pP	15 41 50.9	+9.2
KSH				pmax	pmax		
	comp=Z,37nm,1.6s						
KSH				LR	LR		
	comp=Z,3µm,17.2s						
KSH				LR	LR		
	comp=Z,3µm,12.7s						
KSH				LR	LR		
	comp=Z,3µm,15.5s						
HYB	**Hyderabad**	**26.52**	**251**	*e*P	**P**	**15 41 40.6**	**+0.1**
HYB				*e*P	**pP**	**15 41 40.7**	**-3.2**
HYB				*e*S	**S**	**15 46 16.5**	**+1.6**
ARXS	**Arharly**	**26.73**	**313**	*e*P	**P**	**15 41 42.2**	**0.0**
TDK	**Taldyqorghan**	**26.74**	**315**	*e*P	**P**	**15 41 42.7**	**+0.5**
TDK				pmax	pmax		
	comp=Z,36nm,0.8s						
TDK	**Taldyqorghan**	**26.74**	**315**	*e*P	**P**	**15 41 42.7**	**+0.5**
	comp=Z,36nm,0.8s						
MDOK	**Medeo**	**26.79**	**311**	*e*P	**P**	**15 41 43.4**	**+0.6**
MDOK	**Medeo**	**26.79**	**311**	*e*P	**P**	**15 41 43.4**	**+0.6**
USA0B	**Ussuriysk Arra**	**26.79**	**47**	IAmb	IAmb	15 41 43.9	
	comp=Z,68nm,0.9s						
USRK	**Ussuriysk Ar.**	**26.79**	**47**	P	**P**	**15 41 41.8**	**-0.8**
USRK	**Ussuriysk Ar.**	**26.79**	**47**	P	**P**	**15 41 42.6**	**-0.1**
	comp=Z,48nm,0.8s,baz=248,slow=8.9,SNR=97						
USRK				LR	LR	15 53 27.9	
	comp=Z,2µm,18.6s,baz=241,slow=39						
	comp=Z,48nm,0.8s						
NRN	**Naryn**	**26.86**	**307**	IAmb	IAmb	15 41 49.5	
	comp=Z,82nm,1.2s						
AAA	**Alma-Ata**	**26.89**	**311**	*e*P	**P**	**15 41 44.3**	**+0.7**
AAA				pmax	pmax		
	comp=Z,38nm,0.9s						
AAA	**Alma-Ata**	**26.89**	**311**	*e*P	**P**	**15 41 44.4**	**+0.7**
	comp=Z,38nm,0.9s						
BOOM	**Boomskoye usch**	**27.27**	**309**	IAmb	IAmb	15 41 53.0	
	comp=Z,50nm,1.0s						
NIL	**Nilore**	**27.52**	**289**	P	**P**	**15 41 48.9**	**-0.5**
NIL				IAmb	IAmb	15 42 26.7	
	comp=Z,61nm,1.1s						
NIL	**Nilore**	**27.52**	**289**	P	**P**	**15 41 48.9**	**-0.5**
NIL				pmax	pmax		
	comp=Z,61nm,1.1s						
KUU	**Kurty**	**27.56**	**312**	*e*P	**P**	**15 41 50.2**	**+0.6**
KUU				pmax	pmax		
	comp=Z,77nm,2.2s						
KUU	**Kurty**	**27.56**	**312**	*e*P	**P**	**15 41 50.2**	**+0.6**
	comp=Z,77nm,2.2s						
HEH	**HeiHe**	**27.74**	**32**	*e*P	**P**	**15 41 51.0**	**-0.1**
HEH				PcP	**PcP**	**15 45 08.4**	**+0.8**
HEH				ScP	**ScP**	**15 48 48.4**	**+0.1**
HEH				pmax	pmax		
	comp=Z,19nm,1.0s						
HEH				LR	LR		
	comp=Z,7µm,12.2s						
HEH				LR	LR		
	comp=Z,5µm,10.9s						
GSI	**Gunungsitoli**	**27.83**	**196**	IAmb	IAmb	15 41 52.0	
	comp=Z,58nm,1.1s						
GSI	**Gunungsitoli**	**27.83**	**196**	P	**P**	**15 41 50.9**	**-1.3**
	comp=Z,51nm,1.4s						
INU	**Inuyama**	**28.09**	**68**	IAmb	IAmb	15 42 00.1	
	comp=Z,53nm,1.3s						
AAK	**Ala-Archa**	**28.32**	**308**	P	**P**	**15 41 57.2**	**+0.6**
AAK	**Ala-Archa**	**28.32**	**308**	LR	LR	15 54 08.0	
	comp=Z,1µm,20.5s,baz=30,slow=38						
AAK	**Ala-Archa**	**28.32**	**308**	*ce*P	**P**	**15 41 58.1**	**+1.5**
AAK				pmax	pmax		
	comp=Z,16nm,1.3s						
AAK	**Ala-Archa**	**28.32**	**308**	*i* P	**P**	**15 41 57.5**	**+0.9**
	SNR=6.9						
JGF	**Kuroka**	**28.39**	**67**	P	**P**	**15 41 58.4**	**+1.3**
SGDS	**Sogindy**	**28.52**	**310**	*e*P	**P**	**15 41 58.6**	**+0.3**
DAV	**Davao City (W)**	**28.88**	**133**	LR	LR	15 54 05.2	
	comp=Z,1µm,18.5s,baz=356,slow=38						
STKI	**Sintang**	**28.88**	**166**	P	**P**	**15 42 04.0**	**+2.4**
	comp=Z,47nm,0.9s						
MJAR	**Matsushiro Arr**	**29.17**	**65**	P	**P**	**15 42 03.6**	**-0.5**
	comp=Z,2.5nm,0.8s,baz=266,slow=9.3,SNR=5.4						
MJAR				PcP	**PcP**	**15 45 12.8**	**+1.3**
	comp=Z,5.3nm,0.9s,baz=267,slow=2.8,SNR=6.3						
MJAR				LR	LR	15 55 03.3	
	comp=Z,3µm,19.4s,baz=262,slow=39						
	comp=Z,2.5nm,0.8s						
KLR	**Kul'dur**	**29.26**	**37**	P	**P**	**15 42 05.0**	**+0.3**
	comp=Z,10.0nm,0.9s,baz=253,slow=8.5,SNR=19						
KLR				PcP	**PcP**	**15 45 11.6**	**+0.2**
	comp=Z,9.1nm,0.9s,baz=218,slow=3.1,SNR=4.4						
KLR				LR	LR	15 55 17.3	
	comp=Z,3µm,19.0s,baz=235,slow=40						
	comp=Z,10.0nm,0.9s						
KLR	**Kul'dur**	**29.26**	**37**	*ce*P	**P**	**15 42 05.0**	**+0.3**
KLR				pmax	pmax		
	comp=Z,11nm,0.8s						
ZALV	**Zalesovo Beam**	**29.44**	**336**	P	**P**	**15 42 05.3**	**-0.9**
ZALV	**Zalesovo Beam**	**29.44**	**336**	P	**P**	**15 42 06.5**	**+0.3**
	comp=Z,14nm,0.7s,baz=134,slow=8.5,SNR=54						
	comp=Z,14nm,0.7s						
KURBB	**Kurchatov Arra**	**29.80**	**325**	P	**P**	**15 42 09.5**	**0.0**
	comp=Z,32nm,0.9s,baz=132,slow=9.3,SNR=104						
KURBB				PcP	**PcP**	**15 45 12.8**	**+0.1**
	comp=Z,7.8nm,0.9s,baz=119,slow=2.4,SNR=6.6						
	comp=Z,32nm,0.9s						
KURK	**Kurchatov**	**29.82**	**326**	P	**P**	**15 42 08.8**	**-0.7**
KURK				IAmb	IAmb	15 42 11.6	
	comp=Z,68nm,1.1s						
KURK	**Kurchatov**	**29.82**	**326**	*i* P	**P**	**15 42 09.6**	**+0.1**
KURK				pmax	pmax		
	comp=Z,37nm,1.2s						
SISI	**Saibi**	**30.07**	**192**	P	**P**	**15 42 13.3**	**+1.2**
	comp=Z,51nm,1.2s						
DZA	**Taraz**	**30.61**	**307**	*e*P	**P**	**15 42 17.2**	**+0.5**
DZA	**Taraz**	**30.61**	**307**	*e*P	**P**	**15 42 17.2**	**+0.5**
PALK	**Pallekele**	**31.02**	**232**	P	**P**	**15 42 20.9**	**+0.3**
PALK				IAmb	IAmb	15 42 23.1	
	comp=Z,59nm,1.1s						
PALK	**Pallekele**	**31.02**	**232**	P	**P**	**15 42 20.9**	**+0.3**
PALK				pmax	pmax		
	comp=Z,59nm,1.1s						
KBL	**Kabul**	**31.04**	**290**	P	**P**	**15 42 20.8**	**0.0**
KBL	**Kabul**	**31.04**	**290**	P	**P**	**15 42 20.8**	**0.0**
KBL				pmax	pmax		
	comp=Z,22nm,1.1s						
TOLI2	**Tolitoli**	**31.12**	**148**	P	**P**	**15 42 21.2**	**-0.2**
TOLI2				IAmb	IAmb	15 42 23.4	
	comp=Z,29nm,0.8s						
KK31	**Karatay Array**	**31.25**	**307**	*i* P	**P**	**15 42 22.3**	**-0.1**
KKAR	**Karatay Array**	**31.25**	**307**	P	**P**	**15 42 22.4**	**0.0**
KKAR	**Karatay Array**	**31.25**	**307**	IAmb	IAmb	15 42 24.8	
	comp=Z,15nm,0.8s						
KKAR	**Karatay Array**	**31.25**	**307**	P	**P**	**15 42 22.4**	**0.0**
IUG	**Iuzhnay**	**31.33**	**305**	*e*P	**P**	**15 42 23.6**	**+0.4**
IUG				pmax	pmax		
	comp=Z,16nm,0.7s						
IUG	**Iuzhnay**	**31.33**	**305**	*e*P	**P**	**15 42 23.6**	**+0.4**
	comp=Z,16nm,0.7s						
SIMJ	**Simiganj**	**31.41**	**298**	P	**P**	**15 42 24.2**	**+0.3**
DZET	**Dzherino**	**31.57**	**299**	P	**P**	**15 42 25.7**	**+0.3**
DZET				pmax	pmax		
	comp=Z,15nm,0.5s						
CHM	**Chimkent**	**31.68**	**305**	*e*P	**P**	**15 42 26.6**	**+0.4**

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CHM                                pmax   pmax
      comp=Z,7.0nm,0.4s
CHM   Chimkent            31.68 305 eP     P        15 42 26.6 +0.4
      comp=Z,7.1nm,0.4s
BRLS  Boroldey            31.70 307 eP     P        15 42 26.9 +0.6
BRLS  Boroldey            31.70 307 eP     P        15 42 27.0 +0.6
MRSI  Marisa              32.23 147  P     P        15 42 33.0 +1.9
      comp=Z,600nmcomp=Z,65nm,0.8s
PCI   Palu                32.49 151  P     P        15 42 43.5  +10
BRZS  Berezniki           32.57 320 eP     P        15 42 34.3 +0.5
BRZS  Berezniki           32.57 320 eP     P        15 42 34.4 +0.5
MDSI  Maura Dua           32.71 181  P     P        15 42 36.1 +0.8
      comp=Z,57nm,1.3s
JCJ   Chichijima          32.98  83  LR    LR       15 55 58.5
      comp=Z,525nm,20.4s,baz=135,slow=36
KMSI  Cibinong            33.17 143  P     P        15 42 41.5 +2.1
APSI  Ampana              33.30 148  P     P        15 42 43.2 +2.7
      comp=Z,1µmcomp=Z,107nm,1.2s
ASAJ  Asahikawa           33.90  52  LR    LR       15 56 34.1
      comp=Z,944nm,20.6s,baz=310,slow=36
LUWI  Luwuk               33.95 147  P     P        15 42 46.9 +0.8
      comp=Z,1µmcomp=Z,145nm,1.3s
TTSI  Tana Toraja         34.42 153  P     P        15 42 52.1 +1.9
      comp=Z,836nmcomp=Z,61nm,1.4s
YSS   Yuzhno-Sakhali      34.82  47 eP     P        15 42 54.3 +0.9
YSS                                pmax   pmax
      comp=Z,20nm,1.1s
YSS                                MLR    MLR
      comp=N,5µm,14.0s
YSS                                MLR    MLR
      comp=Z,6µm,14.0s
YSS                                MLR    MLR
      comp=E,4µm,12.0s
TNTI  Ternate             34.91 138  IAmb  IAmb     15 42 56.4
      comp=Z,31nm,0.9s
TNTI  Ternate             34.91 138  P     P        15 42 55.3 +0.8
      comp=Z,38nm,0.9s
SPSI  Sidrap Palu         35.24 154  P     P        15 42 58.4 +1.1
      comp=Z,50nm,1.3s
BVA0  Borovoye Array      35.33 324 i P    P        15 42 57.5 -0.3
BVAR  Borovoye Array      35.33 324  P     P        15 42 58.0 +0.2
      comp=Z,9.5nm,0.6s,baz=120,slow=8.9,SNR=39
BVAR                                PcP    PcP      15 45 27.8 -0.1
      comp=Z,7.2nm,0.6s,baz=135,slow=2.1,SNR=5.4
      comp=Z,9.5nm,0.6s
BRVK  Borovoye            35.40 324  P     P        15 42 58.4  0.0
BRVK                                IAmb   IAmb     15 43 00.6
      comp=Z,51nm,1.2s
BRVK  Borovoye            35.40 324ceP     P        15 42 59.1 +0.7
BRVK                                pmax   pmax
      comp=Z,42nm,1.0s
BNSI  Bone                35.77 153  P     P        15 43 03.3 +1.4
      comp=Z,54nm,1.3s
TYV   Tymovskoe           36.18  41 eP     P        15 43 07.0 +1.9
TYV                                 eS     S        15 48 48.8 +4.0
TYV                                 pmax   pmax
      comp=Z,45nm,1.0s
TYV                                 pmax   pmax
      comp=Z,400nm,2.3s
TYV                                 smax   smax
      comp=N,500nm,2.8s
TYV                                 smax   smax
      comp=E,500nm,2.8s
KAPI  Kappang             36.19 154  P     P        15 43 05.7 +0.2
KAPI                                IAmb   IAmb     15 43 07.4
      comp=Z,39nm,1.0s
KAPI  Kappang             36.19 154  P     P        15 43 04.3 -1.2
      comp=Z,33nm,0.9s,baz=324,slow=14,SNR=8.6
      comp=Z,33nm,0.9s
KAPI  Kappang             36.19 154  P     P        15 43 05.7 +0.2
KAPI                                pmax   pmax
      comp=Z,39nm,1.0s
WOJI  Wonogiri, Jawa      36.50 170  P     P        15 43 10.3 +2.2
      comp=Z,107nm,1.8s
BKSI  Bulukumba           36.62 154  P     P        15 43 10.1 +1.0
      comp=Z,40nm,1.0s
YAK   Yakutsk             37.41  19  P     P        15 43 14.9 -0.5
YAK   Yakutsk             37.41  19  LR    LR       15 59 52.0
      comp=Z,2µm,18.6s,baz=216,slow=38
YAK   Yakutsk             37.41  19d iP    P        15 43 14.9 -0.5
YAK                                 e*PP   sP       15 43 25.6 +5.4
YAK                                 e               15 45 35.2
YAK                                 eS     S        15 49 00.4 -2.9
YAK                                 e               15 53 24.2
YAK                                 pmax   pmax
      comp=Z,56nm,0.8s
YAK                                 pmax   pmax
      comp=E,18nm,1.3s
YAK                                 pmax   pmax
      comp=N,18nm,1.2s
YAK                                 smax   smax
      comp=N,211nm,3.0s
YAK                                 smax   smax
      comp=E,171nm,2.0s
YAK                                 MLR    MLR
      comp=Z,2µm,18.0s
YAK                                 MLR    MLR
      comp=N,1µm,14.0s
YAK                                 MLR    MLR
      comp=E,511nm,16.0s
NLAI  Namlea              38.04 142  P     P        15 43 24.2 +3.0
      comp=E,956nmcomp=E,75nm,1.0s
SWI   Sorong              38.57 135  P     P        15 43 26.2 +0.5
AAI   Ambon               39.01 141  P     P        15 43 30.9 +1.5
      comp=E,79nm,1.2s
MSAI  Masohi              39.15 140  P     P        15 43 32.5 +2.0
GUMO  Guam                39.95 103  LR    LR       16 00 42.6
      comp=E,733nm,19.1s,baz=294,slow=37
AB31  Akbulak array       39.98 314 i P    P        15 43 37.2  0.0
ABKAR Akbulak array       39.98 314  P     P        15 43 37.0 -0.2
ABKAR Akbulak array       39.98 314  IAmb  IAmb     15 43 39.0
      comp=Z,42nm,0.9s
WBSI  Waikabubak, Su      40.35 158  P     P        15 43 39.8 -0.7
EDFI  Ende, Flores        40.36 154  P     P        15 43 40.9 +0.2
      comp=Z,25nm,0.9s
MMRI  Maumere             40.47 153  P     P        15 43 41.2 -0.3
MMRI  Maumere             40.47 153  P     P        15 43 41.6 +0.1
FAKI  Fak Fak             40.78 135  P     P        15 43 45.7 +1.6
KAAM  Kaadhehdhoo         41.22 233  P     P        15 43 48.6 +0.9
SVE   Sverdlovsk          42.07 325 eP     P        15 43 54.9 +0.7
SVE                                 pmax   pmax
      comp=Z,58nm,1.5s
SOEI  Soe                 42.32 151  IAmb  IAmb     15 44 07.1
      comp=Z,69nm,1.1s
SOEI  Soe                 42.32 151  P     P        15 44 01.9 +5.0
      comp=Z,58nm,1.0s
BATI  Baumata             42.47 152  P     P        15 43 56.1 -1.9
      comp=Z,82nm,0.9s,baz=137,slow=1.7,SNR=9.9
      comp=Z,82nm,0.9s
BATI  Baumata             42.47 152  P     P        15 43 57.6 -0.4
      comp=Z,1µmcomp=Z,100nm,1.1s
ARTI  Arti                43.05 324  P     P        15 44 02.2 -0.1
ARTI                                IAmb   IAmb     15 44 04.6
      comp=Z,116nm,1.6s
ARTI  Arti                43.05 324  LR    LR       16 03 17.8
      comp=Z,1µm,18.2s,baz=40,slow=38
ARTI  Arti                43.05 324c iP    P        15 44 02.9 +0.6
ARTI                                                15 45 38.9
ARTI                                PPP    PPP      15 46 20.2
ARTI                                S      S        15 50 31.1 +3.3
ARTI                                SS     SS       15 53 40.1 +0.3
ARTI                                pmax   pmax
      comp=Z,64nm,1.5s
SOHO  SOHO                43.32 276  P     P        15 44 03.7 -1.1
ASHO  Ashiyiah            43.58 277 i P    P        15 44 07.1  0.0
      SNR=7.0
MA2   Magadan             44.00  32  LR    LR       16 02 29.5
      comp=Z,1µm,19.0s,baz=288,slow=36
ALNE  Al Ain              44.02 276 i P    P        15 44 10.9 +0.4
      SNR=6.9
ASUD  Al Ashush, Dub      44.23 277  P     P        15 44 13.0 +0.8
SMPI  Sarmi               44.37 127  P     P        15 44 15.1 +1.8
      comp=Z,116nm,0.9s
TIXI  Tiksi               45.27  10  P     P        15 44 18.6 -1.2
TIXI                                IAmb   IAmb     15 44 20.4
      comp=Z,47nm,0.8s
TIXI  Tiksi               45.27  10  P     P        15 44 19.8  0.0
PETK  Petropavlovsk-      45.71  42  P     P        15 44 23.8 +0.2
      comp=Z,13nm,1.1s,baz=194,slow=5.5,SNR=4.0
PETK                                LR     LR       16 06 31.9
      comp=Z,1µm,18.6s,baz=276,slow=40
      comp=Z,13nm,1.1s
GENI  Genyem              45.82 126  P     P        15 44 26.9 +2.0
SEY   Seymchan            46.14  28  LR    LR       16 05 46.9
      comp=Z,1µm,19.2s,baz=252,slow=39
SEY   Seymchan            46.14  28ceP     P        15 44 27.3 +0.5
SEY                                 pmax   pmax
      comp=Z,36nm,1.7s
JAY   Jayapura            46.15 126  LR    LR       16 01 33.1
      comp=Z,402nm,21.9s,baz=312,slow=33
JAY   Jayapura            46.15 126  P     P        15 44 32.0 +4.5
      comp=Z,34nm,0.9s
LKRN  Lenkeran, Azer      47.21 298  P     P        15 44 36.8 +1.3
AKT   Akhty               47.81 302 eP     P        15 44 40.3 -0.1
AKT                                 e               15 46 09.9
AKT                                 ePPP   PPP      15 47 15.2
AKT                                 eS     S        15 51 34.9 -2.3
AKT                                 e               15 54 28.2
AKT                                 pmax   pmax
      comp=Z,68nm,1.2s
MAK   Makhachkala         47.92 304 eP     P        15 44 34.8 -6.2
MAK                                 eS     S        15 51 30.2 -8.1
MAK                                 pmax   pmax
      comp=Z,31nm,0.4s
MAK                                 MLR    MLR
      comp=Z,2µm,15.0s
SEKA  Sheki               48.23 301  P     P        15 44 44.2 +0.7
MTN   Manton Dam          48.25 145  P     P        15 44 42.4 -1.4
KIRV  Kirov               48.33 325ceP     P        15 44 44.5 +0.6
MNGR  Mingechevir, A      48.34 301  P     P        15 44 45.6 +1.3
KDU   Kakadu              48.81 143  P     P        15 44 46.3 -1.8
GANJ  Ganja               48.93 301  P     P        15 44 50.0 +1.1
KNRA  Kununurra           49.55 149  P     P        15 44 52.7 -1.1
KNRA                                IAmb   IAmb     15 44 55.0
      comp=Z,40nm,0.9s
KNRA  Kununurra           49.55 149  P     P        15 44 53.1 -0.6
      comp=Z,48nm,0.9s
NAX   Nakhchivan          49.71 299  P     P        15 44 55.9 +1.0
GNI   Garni               50.18 300  P     P        15 44 58.1 -0.5
GNI                                 IAmb   IAmb     15 45 06.1
      comp=Z,53nm,1.1s
GNI   Garni               50.18 300  LR    LR       16 09 27.3
      comp=Z,678nm,19.6s,baz=60,slow=40
GNI   Garni               50.18 300  P     P        15 44 58.1 -0.5
GNI                                 pmax   pmax
      comp=Z,53nm,1.1s
FITZ  Fitzroy Crossi      50.41 154  P     P        15 44 59.2 -1.0
MANU  Manus Island        50.78 119  P     P        15 45 02.5 -0.7
MANU                                IAmb   IAmb     15 45 06.4
      comp=Z,84nm,1.6s
GOF   Gofitskoye          51.04 307ceP     P        15 45 05.6 +0.8
KBZ   Khabaz              51.23 305  P     P        15 45 06.8 +0.5
      comp=Z,12nm,0.9s,baz=68,slow=10.0,SNR=20
      comp=Z,12nm,0.9s
KBZ   Khabaz              51.23 305deP     P        15 45 06.6 +0.4
KBZ                                 pmax   pmax
      comp=Z,21nm,1.0s
MBWA  Marble Bar          51.33 162  P     P        15 45 06.4 -0.7
MBWA                                IAmb   IAmb     15 45 08.1
      comp=Z,46nm,0.8s
MBWA  Marble Bar          51.33 162  P     P        15 45 06.4 -0.7
      comp=Z,69nm,1.4s
MBWA  Marble Bar          51.33 162  P     P        15 45 07.9 +0.8
KIV   Kislovodsk          51.37 305  P     P        15 45 07.5 +0.1
KIV   Kislovodsk          51.37 305 eP     P        15 45 07.8 +0.4
KIV                                 eS     S        15 52 28.2 +1.4
KIV                                 pmax   pmax
      comp=Z,99nm,1.0s
KIV                                 pmax   pmax
      comp=Z,25nm,3.5s
KIV   Kislovodsk          51.37 305 i P    P        15 45 08.2 +0.8
      SNR=22
SHA1  Shidzhatmaz         51.40 305c iP    P        15 45 08.0 +0.1
GEVA  Gevas               51.71 298  P     P        15 45 10.2  0.0
PSA00 Pilbara Seismi      51.75 162  P     P        15 45 09.5 -0.8
PSA00                               IAmb   IAmb     15 45 11.2
      comp=Z,29nm,0.9s
PSA00 Pilbara Seismi      51.75 162  P     P        15 45 09.7 -0.5
      comp=Z,35nm,1.5s
VRH   Novokhopyorsk       51.81 314 eP     P        15 45 08.9 -1.5
VRH                                 pmax   pmax
      comp=Z,53nm,1.6s
GURO  Guroymak-BITLI      52.47 298  IAmb  IAmb     15 45 18.4
      comp=Z,45nm,1.1s
LABN  Labinsk             52.72 306 eP     P        15 45 17.7 +0.4
LABN                                e*PP   pP       15 45 21.0 +0.1
LABN                                eS     S        15 52 46.4 +1.2
LABN                                pmax   pmax
      comp=Z,31nm,0.7s
ERBR  Yeremizino-Bor      52.80 308 eP     P        15 45 18.0 +0.1
ERBR                                e*PP   pP       15 45 21.2 -0.2
ERBR                                eS     S        15 52 47.3 +1.0
ERBR                                pmax   pmax
      comp=Z,76nm,1.3s
RAYN  Ar Rayn             53.13 279  P     P        15 45 19.7 -1.1
RAYN                                IAmb   IAmb     15 45 22.6
      comp=Z,42nm,0.8s
RAYN  Ar Rayn             53.13 279  P     P        15 45 21.2 +0.4
RAYN  Ar Rayn             53.13 279 i P    P        15 45 20.3 -0.5
      SNR=56
VSLR  Vesyoloye           53.33 305d iP    P        15 45 21.2 -0.7
VSLR                                pmax   pmax
      comp=Z,69nm,1.1s
VORD  Divnogorie          53.34 314 eP     P        15 45 19.8 -2.0
VORD                                pmax   pmax
      comp=Z,10.0nm,1.2s
BILL  Bilibino            53.34  24  P     P        15 45 20.4 -1.2
BILL  Bilibino            53.34  24deP     P        15 45 20.9 -0.7
BILL                                pmax   pmax
      comp=Z,37nm,1.3s
VORR  Voronezh            53.38 315 eP     P        15 45 21.4 -0.7
VORR                                pmax   pmax
      comp=Z,31nm,1.2s
VSR   Storozhevoye        53.42 314 eP     P        15 45 19.3 -3.1
VSR                                 pmax   pmax
      comp=Z,20nm,0.9s
SOC   Sochi               53.54 305 eP     P        15 45 23.3 -0.1
SOC                                 e               15 47 23.5
SOC                                 ePPP   PPP      15 48 27.2
SOC                                 eS     S        15 52 56.3 -0.1
SOC                                 pmax   pmax
      comp=Z,50nm,1.5s
LPSR  Galich'ya Gora      53.55 316 eP     P        15 45 19.8 -3.5
LPSR                                pmax   pmax
      comp=Z,30nm,1.0s
MARD  Mardin              53.65 297  IAmb  IAmb     15 45 28.3
      comp=Z,28nm,1.0s
KLMR  Klimovskoe          53.66 326 eP     P        15 45 21.9 -2.1
KLMR                                e               15 46 27.4
KLMR                                pmax   pmax
      comp=Z,119nm,1.3s
MOS   Moscow              54.33 320 eP     P        15 45 27.6 -1.4
MOS                                 eS     S        15 53 04.5 -2.2
MOS                                 pmax   pmax
      comp=Z,127nm,1.2s
MOS                                 pmax   pmax
      comp=Z,200nm,1.5s
OBN   Obninsk             54.93 319d iP    P        15 45 33.4 +0.1
OBN                                 pmax   pmax
      comp=Z,62nm,1.2s
ANN   Anapa               55.03 307 eP     P        15 45 32.2 -2.0
ANN                                 e*PP   pP       15 45 35.8 -2.0
ANN                                 eS     S        15 53 16.7 +0.3
ANN                                 pmax   pmax
      comp=Z,70nm,1.2s
PMG   Port Moresby        55.52 126  P     P        15 45 37.3 -0.8
PMG   Port Moresby        55.52 126  P     P        15 45 39.8 +1.7
PMG   Port Moresby        55.52 126  P     P        15 45 37.3 -0.8
PMG                                 pmax   pmax
      comp=Z,105nm,0.8s
SHEM  Shemya Is, Ala      55.56  44  LR    LR       16 09 19.4
      comp=Z,497nm,21.6s,baz=293,slow=36
WB0   Warramunga Arr      55.75 146  IAmb  IAmb     15 45 41.0
      comp=Z,44nm,0.9s
RABL  Rabaul              55.85 118  P     P        15 45 40.5  0.0
WRAB  Tennant Creek       55.87 146  P     P        15 45 39.6 -0.9
WRAB  Tennant Creek       55.87 146d iP    P        15 45 40.5  0.0
WRAB                                pmax   pmax
      comp=Z,67nm,0.9s
WRA   Warramunga Arr      55.88 146  P     P        15 45 39.5 -1.1
WRA   Warramunga Arr      55.88 146  P     P        15 45 40.0 -0.6
      comp=Z,48nm,0.9s,baz=337,slow=8.3,SNR=130
WRA                                 PcP    PcP      15 46 41.1 +1.8
      comp=Z,9.8nm,0.8s,baz=327,slow=3.8,SNR=8.2
      comp=Z,48nm,0.9s
WRA   Warramunga Arr      55.88 146 i P    P        15 45 40.0 -0.6
WRA                                 pmax   pmax
      comp=Z,54nm,0.9s
COEN  Coen                56.11 134  IAmb  IAmb     15 45 44.2
      comp=Z,39nm,0.8s
COEN  Coen                56.11 134  P     P        15 45 41.6 -0.7
      comp=Z,55nm,1.0s
GAZ   Gaziantep           56.47 298  IAmb  IAmb     15 45 46.9
      comp=Z,41nm,1.1s
APA   Apatity             57.01 334⇓iP     P        15 45 44.6 -3.4
APA                                 pmax   pmax
      comp=Z,8.0nm,0.9s
APA                                 MLR    MLR
      comp=Z,2µm,11.0s
SIM   Simferopol'         57.35 307 eP     P        15 45 50.0 -0.8
SIM                                 pmax   pmax
      comp=Z,41nm,0.8s
JOF   Joensuu             57.66 329 eP     P        15 45 53.1 +0.4
ASF   Jabal al Asfar      57.92 292  LR    LR       16 16 05.7
      comp=Z,853nm,18.3s,baz=102,slow=42
MORW  Morawa              58.14 168  P     P        15 45 56.6 +0.2
MORW                                IAmb   IAmb     15 45 58.8
      comp=Z,41nm,1.1s
MORW  Morawa              58.14 168  P     P        15 45 57.2 +0.8
      comp=Z,41nm,1.4s
KIRS  Kirsehir-Merke      58.59 301 ⇑P     P        15 46 00.1 +0.3
BR131 Keskin Array S      58.67 301d iP    P        15 45 59.9 -0.5
BRTR  Keskin Array B      58.67 301  P     P        15 45 59.1 -1.2
BRTR  Keskin Array B      58.67 301  P     P        15 46 00.3  0.0
      comp=Z,8.9nm,0.9s,baz=101,slow=5.9,SNR=38
BRTR                                PcP    PcP      15 46 51.9 +1.5
      comp=Z,5.9nm,1.1s,baz=77,slow=2.7,SNR=3.6
      comp=Z,8.9nm,0.9s
ASAR  Alice Springs       58.85 149  P     P        15 46 01.3 -0.2
ASAR  Alice Springs       58.85 149  P     P        15 46 01.4 -0.1
      comp=Z,28nm,0.8s,baz=328,slow=6.5,SNR=130
ASAR                                PcP    PcP      15 46 51.0  0.0
      comp=Z,14nm,1.0s,baz=334,slow=4.3,SNR=6.3
      comp=Z,28nm,0.8s
AS01  Alice Springs       58.87 149  P     P        15 46 02.5 +0.8
MMAI  Mount Meron Ar      58.91 293  P     P        15 46 02.6 +0.5
      comp=Z,14nm,1.0s,baz=84,slow=8.5,SNR=14
MMAI                                PcP    PcP      15 46 52.3 +1.0
      comp=Z,7.1nm,0.9s,baz=86,slow=5.9,SNR=3.7
MMAI                                LR     LR       16 14 06.3
      comp=Z,759nm,18.1s,baz=41,slow=39
      comp=Z,14nm,1.0s
QIS   Mount Isa           59.13 142  P     P        15 46 02.3 -1.2
      comp=Z,31nm,0.8s
ANTO  Ankara              59.27 302  P     P        15 46 04.0 -0.5
ANTO  Ankara              59.27 302 ⇓P     P        15 46 04.8 +0.4
ANTO  Ankara              59.27 302  P     P        15 46 04.8 +0.4
KEV   Kevo                59.46 337  P     P        15 46 05.1  0.0
KEV   Kevo                59.46 337  P     P        15 46 05.1  0.0
KEV                                 pmax   pmax
      comp=Z,61nm,1.3s
AKASG Malin Array Be      59.72 314  P     P        15 46 06.7 -0.5
AKASG Malin Array Be      59.72 314  P     P        15 46 06.8 -0.5
      comp=Z,5.1nm,0.5s,baz=75,slow=6.2,SNR=58
      comp=Z,5.1nm,0.5s
AKASG Malin Array Be      59.72 314ceP     P        15 46 07.0 -0.2
AKASG                               pmax   pmax
      comp=Z,10.0nm,0.6s
AKBB  Malin Array Si      59.72 314d iP    P        15 46 07.0 -0.2
KIEV  Kiev                59.73 314  P     P        15 46 06.5 -0.8
KIEV                                IAmb   IAmb     15 46 08.2
      comp=Z,60nm,1.4s
KIEV  Kiev                59.73 314 ⇑P     P        15 46 06.9 -0.5
KIEV  Kiev                59.73 314  P     P        15 46 06.8 -0.5
KIEV  Kiev                59.73 314 i P    P        15 46 06.7 -0.6
      SNR=22
ARA0  ARCESS Array S      59.98 336 eP     P        15 46 08.4 -0.3
ARCES ARCESS Array B      59.98 336  P     P        15 46 08.7 -0.1
ARCES                               IAmb   IAmb     15 46 10.6
      comp=Z,43nm,1.4s
ARCES ARCESS Array B      59.98 336  P     P        15 46 08.8  0.0
      comp=Z,17nm,0.9s,baz=86,slow=7.5,SNR=15
      comp=Z,17nm,0.9s
MNK   Minsk               59.99 319 i P    P        15 46 08.4 -0.6
      comp=Z,35nm,0.8s,baz=82
MNK                                 i PP   PP       15 48 18.0 -3.0
MNK                                 i PPP  PPP      15 49 39.4
MNK                                 i S    S        15 54 21.1 -0.1
MNK                                 i SS   SS       15 58 20.4 +3.1
MNK                                 i SSS  SSS      16 01 00.0
MNK                                 i LR   LR       16 12 24.6
MNK   Minsk               59.99 319 i P    P        15 46 08.4 -0.6
MNK                                 i               15 48 18.0
MNK                                 i S    S        15 54 21.1 -0.1
MNK                                 i SS   SS       15 58 20.4 +3.1
MNK                                 pmax   pmax
      comp=Z,35nm,0.8s
CSS   Mathiatis           60.05 296  P     P        15 46 08.7 -1.2
CSS                                 IAmb   IAmb     15 46 21.0
      comp=Z,31nm,1.0s
ATD   Arta Tunnel         60.05 267  P     P        15 46 09.6 -0.5
ATD   Arta Tunnel         60.05 267  LR    LR       16 14 12.3
      comp=Z,11nm,18.2s,baz=31,slow=38
VSU   Vasula              60.14 324deP     P        15 46 09.0 -1.0
VSU                                 pmax   pmax
      comp=Z,69nm,1.0s
VSU   Vasula              60.14 324 eP     P        15 46 09.6 -0.4
FIA1  FINESS Array S      60.17 327  P     P        15 46 09.9 -0.3
FINES FINESS Array B      60.17 327  P     P        15 46 09.6 -0.6
FINES FINESS Array B      60.17 327  P     P        15 46 10.2  0.0
      comp=Z,18nm,0.9s,baz=83,slow=7.2,SNR=35
      comp=Z,18nm,0.9s
EIL   Elat                60.23 290  LR    LR       16 15 21.2
      comp=Z,1µm,21.2s,baz=59,slow=39
IDID  Didziasalis         60.53 320 eP     P        15 46 13.1 +0.4
NACGM Naroch              60.56 320 eP     P        15 46 13.9 +1.0
HAMF  Hammerfest          60.58 338 eP     P        15 46 12.7 -0.1
KEF   Keuruu              60.68 328 eP     P        15 46 13.2 -0.4
SORM  Soroca              60.72 312 ⇑P     P        15 46 14.1  0.0
SORM  Soroca              60.72 312  P     P        15 46 14.1  0.0
ISAL  Salakas             60.84 320 eP     P        15 46 15.3 +0.5
TLCR                      61.00 308 ⇓P     P        15 46 16.7 +0.7
TLCR                      61.00 308  P     P        15 46 16.7 +0.7
BORA  Eskisehir           61.02 302  P     P        15 46 15.6 -0.9
BORA                                IAmb   IAmb     15 46 18.4
      comp=Z,38nm,1.4s
JURR  Jurilovca           61.04 308 ⇑P     P        15 46 17.5 +1.1
MEF   Metsahovi           61.12 326 eP     P        15 46 16.5 -0.2
TPGR  Topolog             61.34 308 ⇑P     P        15 46 19.0 +0.5
TIRR  Tirgusor            61.43 308 ⇑P     P        15 46 19.7 +0.6
TIRR  Tirgusor            61.43 308  P     P        15 46 19.6 +0.6
SCTR  Scanteiesti         61.46 309 ⇑P     P        15 46 20.3 +1.1
CFR   Carcaliu            61.47 308 ⇑P     P        15 46 19.7 +0.4
CFR   Carcaliu            61.47 308  P     P        15 46 19.6 +0.4
ISP   Isparta             61.49 300⇓eP     P        15 46 18.7 -1.0
ISP                                 pmax   pmax
      comp=Z,53nm,1.3s
VAF   Ylistaro            61.59 329 eP     P        15 46 19.8  0.0
MTSE  Matsula             61.62 324 eP     P        15 46 19.4 -0.7
HARR  Harsova             61.72 308 ⇑P     P        15 46 21.3 +0.3
HARR  Harsova             61.72 308  P     P        15 46 21.2 +0.3
JETT  Jettan, Norway      61.77 337 eP     P        15 46 21.5 +0.5
ICOR  Ion Corvin          61.94 307 ⇑P     P        15 46 23.6 +1.1
VSVD  Vaisvydziai         62.00 321 eP     P        15 46 23.4 +0.8
GAMB  Gambell             62.05  30  P     P        15 46 22.7 -0.2
GAMB                                IAmb   IAmb     15 46 24.3
      comp=Z,30nm,1.1s
GAMB  Gambell             62.05  30  P     P        15 46 22.6 -0.2
      baz=278
PABE  Paberze             62.06 321  P     P        15 46 22.5 -0.6
PABE  Paberze             62.06 321 eP     P        15 46 23.7 +0.6
SPITS Spitsbergen Ar      62.11 347  P     P        15 46 22.6 -0.5
      comp=Z,5.4nm,0.7s,baz=104,slow=7.0,SNR=8.6
      comp=Z,5.4nm,0.7s
NWAO  Narrogin (SRO)      62.12 168  P     P        15 46 25.7 +2.1
TESR  Tescani             62.19 310 ⇑P     P        15 46 24.6 +0.5
TRO   Tromso              62.28 337 eP     P        15 46 24.5 +0.2
VRI   Vrincioaia          62.28 309 ⇑P     P        15 46 26.0 +1.2
VRI   Vrincioaia          62.28 309  P     P        15 46 26.0 +1.2
RAF   Rauma               62.30 327 eP     P        15 46 24.8 +0.2
PLOR  Plostina            62.34 309 ⇑P     P        15 46 26.5 +1.3
PLOR  Plostina            62.34 309  P     P        15 46 26.5 +1.3
ONER  Baraj Valea Uz      62.40 310 ⇑P     P        15 46 26.7 +1.1
HSPB  Hornsund (broa      62.40 345 epP    P        15 46 25.8 +0.7
ISR   Istrita             62.58 309 ⇓P     P        15 46 28.1 +1.2
ISR   Istrita             62.58 309  P     P        15 46 28.0 +1.2
CTAO  Charters Tower      62.64 136  P     P        15 46 27.2 -0.1
CTAO  Charters Tower      62.64 136  P     P        15 46 27.5 +0.1
CTAO  Charters Tower      62.64 136  P     P        15 46 27.3 -0.1
CTAO                                pmax   pmax
      comp=Z,44nm,1.1s
SUW   Suwalki             62.79 319 epP    P        15 46 28.1 +0.2
SUW   Suwalki             62.79 319 eP     P        15 46 28.1 +0.2
MANT  Manisa              62.80 301  IAmb  IAmb     15 46 32.0
      comp=Z,20nm,1.2s
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OZUR                    62.87 310 ⇑P     P       15 46 29.8 +1.1
BURAR Bucovina Array    62.89 312  P     P       15 46 28.4  -0.5
BURAR Bucovina Array    62.89 312 ⇑P     P       15 46 29.5 +0.6
BURAR Bucovina Array    62.89 312  P     P       15 46 29.5 +0.6
BUR08 Bucovina Ar. S    62.90 312  IAmb  IAmb    15 46 40.4
      comp=Z,18nm,1.1s
MLR   Muntele Rosu      62.90 309  P     P       15 46 28.8  -0.3
MLR   Muntele Rosu      62.90 309 ⇑P     P       15 46 30.1 +1.0
MLR   Muntele Rosu      62.90 309  P     P       15 46 30.1 +1.0
DOPR  Dopca             63.16 310 ⇑P     P       15 46 31.8 +1.1
TNA   Tin City          63.38  28  P     P       15 46 30.9  -0.7
      baz=280
VOIR                    63.52 309 ⇑P     P       15 46 33.6 +0.5
VOIR                    63.52 309  P     P       15 46 33.6 +0.5
ARCR  ARCALIA           63.59 311 ⇑P     P       15 46 35.0 +1.6
C16K  Lisburne Hills    63.88  24  P     P       15 46 35.1 +0.2
      baz=281,SNR=9.8
TNR   Turnu Rosu        64.00 310 ⇑P     P       15 46 37.5 +1.3
TNR   Turnu Rosu        64.00 310  P     P       15 46 37.4 +1.3
BMR   Baia Mare         64.01 312 ⇑P     P       15 46 37.5 +1.3
BMR   Baia Mare         64.01 312  P     P       15 46 37.5 +1.3
KWP   Kalwaria Pacla    64.04 314 epP    P       15 46 36.8 +0.4
F14K  Arctic Creek      64.05  28  P     P       15 46 36.6 +0.5
      baz=282
RDO   Rodhopi           64.31 305  IAmb  IAmb    15 46 39.5
      comp=Z,25nm,1.2s
LOT   Lotru             64.39 310 ⇑P     P       15 46 39.7 +0.8
TATA  Tatamba Isabel    64.40 116  P     P       15 46 41.2 +2.0
LOF   Lofoten           64.46 335 eP     P       15 46 38.4  -0.4
KOLS  Kolonicke sedl    64.49 314 eP     P       15 46 39.9 +0.6
KOLS                               pmax  pmax
      comp=Z,8.0nm,0.7s
KOLS  Kolonicke sedl    64.49 314 eP     P       15 46 39.9 +0.6
MOR8  Moi Rana          64.55 333 eP     P       15 46 37.6  -1.8
C17K  DeLong Mountai    64.62  24  P     P       15 46 39.9 +0.1
      baz=283,SNR=16
ANM   Nome              64.64  29  P     P       15 46 40.2 +0.2
      baz=283
F15K  North Star Dit    64.68  27  IAmb  IAmb    15 46 42.0
      comp=Z,28nm,0.9s
F15K  North Star Dit    64.68  27  P     P       15 46 40.8 +0.6
      baz=283,SNR=7.0
KARP  Karpathos         64.72 298 eP     P       15 46 41.6 +0.5
RDOG  Red Dog Mine      64.81  25  P     P       15 46 40.9  -0.2
RDOG                               IAmb  IAmb    15 46 42.1
      comp=Z,12nm,0.7s
RDOG  Red Dog Mine      64.81  25  P     P       15 46 41.5 +0.4
      baz=283
D17K  Noatak River      64.83  25  P     P       15 46 41.9 +0.7
      baz=283,SNR=26
DEV   Deva              64.86 310  P     P       15 46 43.1 +1.3
B18K  Kokolik River     64.89  23  P     P       15 46 42.3 +0.7
      baz=284,SNR=8.9
A19K  Wainwright        64.94  22  P     P       15 46 42.6 +0.8
      baz=284
STHS  Stebnicka Huta    65.02 314 eP     P       15 46 42.5  -0.3
STOK  Stokkvaagen       65.07 334 eP     P       15 46 42.1  -0.6
GZR   Gura Zlata        65.08 310 ⇑P     P       15 46 44.2 +0.8
GZR   Gura Zlata        65.08 310  P     P       15 46 44.1 +0.8
LEIR  Leirfjorden       65.08 333 eP     P       15 46 42.3  -0.5
G15K  Niukluk           65.09  28  P     P       15 46 43.5 +0.6
      baz=284,SNR=6.3
M11K  Mekoryuk          65.24  33  P     P       15 46 44.3 +0.4
      baz=284
C18K  Utukok River      65.28  24  P     P       15 46 44.6 +0.3
      baz=285,SNR=12
SURR  Surduc            65.42 310 ⇑P     P       15 46 46.5 +1.1
E17K  Hotham Inlet      65.45  25  P     P       15 46 45.9 +0.7
      baz=285,SNR=12
HERR  Herculane         65.47 309 ⇓P     P       15 46 46.0 +0.3
K13K  Kusilvak Mount    65.58  31  P     P       15 46 46.8 +0.6
      baz=285,SNR=17
NIE   Niedzica          65.61 314 epP    P       15 46 47.5 +0.9
NIE   Niedzica          65.61 314  P     P       15 46 47.7 +1.1
G16K  Koyuk River       65.68  27  P     P       15 46 46.8   0.0
      baz=285
OJC   Ojcow             65.71 315 epP    P       15 46 47.8 +0.6
OJC   Ojcow             65.71 315  P     P       15 46 47.8 +0.6
C19K  Lookout Ridge     65.72  23  P     P       15 46 47.7 +0.6
      baz=286,SNR=22
BZS   Buzias            65.80 310 ⇓P     P       15 46 48.1 +0.1
BZS   Buzias            65.80 310  P     P       15 46 48.0 +0.1
E18K  Tukpahlearik C    65.82  25  P     P       15 46 47.6   0.0
      baz=286
F17K  Baldwin Pennin    65.84  26  P     P       15 46 48.0 +0.3
      baz=286
J14K  Nanvaranak Lak    65.87  30  P     P       15 46 48.6 +0.7
      baz=285,SNR=10
H16K  Elim              65.93  28  P     P       15 46 48.6 +0.2
      baz=286
NSS   Namsos            65.95 332 eP     P       15 46 45.9  -2.6
MDVR  Moldovita         65.98 309 ⇓P     P       15 46 49.3 +0.2
PEHC  Pehcevo           66.03 306 i P    P       15 46 55.9 +6.4
A21K  Barrow            66.05  20  P     P       15 46 49.1 +0.1
      baz=288
LANS  Liptovska Anna    66.21 314 eP     P       15 46 51.6 +1.1
LANS                               pmax  pmax
      comp=Z,3.0nm,0.7s
LANS  Liptovska Anna    66.21 314 eP     P       15 46 51.6 +1.1
B20K  Meade River       66.28  22  P     P       15 46 51.0 +0.5
      baz=288,SNR=31
PSZ   Piszkesteto       66.28 313  IAmb  IAmb    15 46 52.8
      comp=Z,24nm,1.3s
PSZ   Piszkesteto       66.28 313 ⇑P     P       15 46 51.9 +0.9
PSZ   Piszkesteto       66.28 313  P     P       15 46 51.9 +0.9
PSZ   Piszkesteto       66.28 313 eP     P       15 46 51.4 +0.3
BOVS  Bovan             66.32 308 ⇑P     P       15 46 51.7 +0.5
G17K  Kiwalik Mounta    66.34  27  P     P       15 46 51.9 +0.9
      baz=286,SNR=7.1
BLEU  Blekinge          66.35 323 eP     P       15 46 51.0  -0.2
HFS   Hagfors           66.38 327  P     P       15 46 51.0  -0.3
      comp=Z,17nm,0.9s,baz=87,slow=5.0,SNR=20
      comp=Z,17nm,0.9s
HFS   Hagfors           66.38 327  P     P       15 46 51.0  -0.3
VAY   Valandovo         66.40 305 i P    P       15 46 51.4  -0.4
NOR   Nord              66.40 352 i P    P       15 46 51.4 +0.2
NOR                                IAmb  IAmb    15 46 51.9
      comp=Z,14nm,0.9s
F18K  Selawik           66.41  26  P     P       15 46 51.9 +0.5
      baz=287
D19K  Kuna River        66.41  24  P     P       15 46 51.6 +0.1
      baz=287
IDI   Anoyia            66.56 299  IAmb  IAmb    15 46 55.2
      comp=Z,26nm,0.9s
M13K  Dall Lake         66.60  33  P     P       15 46 53.8 +1.1
      baz=286,SNR=10.0
L14K  Kuka Creek        66.65  32  P     P       15 46 54.4 +1.4
      baz=287
A22K  Sinclair Lake     66.66  21  P     P       15 46 54.5 +1.6
      baz=289,SNR=10
I17K  Unalakleet        66.79  29  P     P       15 46 54.5 +0.7
      baz=287
VYHS  Vyhne             66.80 314 eP     P       15 46 54.7 +0.5
H17K  Granite Mounta    66.80  27  IAmb  IAmb    15 46 55.8
      comp=Z,26nm,0.8s
H17K  Granite Mounta    66.80  27  P     P       15 46 55.3 +1.3
      baz=287,SNR=16
UNV   Unalaska Valle    66.82  40  P     P       15 46 53.6  -0.6
      baz=287
D20K  Etivluk River     66.87  23  P     P       15 46 54.6 +0.2
      baz=289
K15K  Wolf Creek Mou    66.90  30  IAmb  IAmb    15 46 57.1
      comp=Z,36nm,1.0s
K15K  Wolf Creek Mou    66.90  30  P     P       15 46 55.7 +1.1
      baz=287,SNR=11
SKO   Skopje            67.01 306 i P    P       15 46 55.6  -0.1
J16K  Anvik River       67.01  29  IAmb  IAmb    15 46 57.4
      comp=Z,24nm,0.8s
J16K  Anvik River       67.01  29  P     P       15 46 56.0 +0.7
      baz=288,SNR=8.1
G18K  Tagagawik         67.01  26  P     P       15 46 55.2  -0.1
      baz=288
STEB  Steborice         67.04 316 eP     P       15 46 55.5  -0.2
F19K  Shaleruckik Mo    67.05  25  P     P       15 46 55.4  -0.1
      baz=288
E19K  Redstone River    67.05  25  P     P       15 46 55.7 +0.2
      baz=289
L15K  Ungalak Mounta    67.10  31  P     P       15 46 56.7 +0.8
      baz=287,SNR=11
FRGS  Fruska Gora       67.16 310 eP     P       15 46 56.7 +0.1
NC303 NORSAR Array S    67.16 328  IAmb  IAmb    15 46 57.1
      comp=Z,42nm,1.1s
M14K  Bethel            67.16  32  P     P       15 46 57.1 +0.8
      baz=287,SNR=19
E20K  Nigu River        67.17  24  P     P       15 46 56.5 +0.2
      baz=289
NC602 NORSAR Array S    67.22 328  IAmb  IAmb    15 47 26.7
      comp=Z,32nm,1.2s
NC602 NORSAR Array S    67.22 328 eP     P       15 46 56.3  -0.4
NORES NORESS Array B    67.22 328  P     P       15 46 56.0  -0.7
NORES                              pmax  pmax
      comp=Z,5.0nm,0.9s
MORC  Moravsky Berou    67.23 315  IAmb  IAmb    15 46 58.8
      comp=Z,24nm,1.1s
MORC  Moravsky Berou    67.23 315 eP     P       15 46 57.4 +0.4
MORC  Moravsky Berou    67.23 315 ⇑P     P       15 46 58.0 +0.9
MORC  Moravsky Berou    67.23 315  P     P       15 46 57.9 +0.9
B21K  Ikpikpuk River    67.24  22  P     P       15 46 57.5 +0.9
      baz=290,SNR=13
NB201 NORSAR Array S    67.25 328  IAmb  IAmb    15 46 57.6
      comp=Z,34nm,1.2s
NB2   NORSAR Subarra    67.28 328  P     P       15 46 55.8  -1.4
      comp=Z,3.6nm,0.6s,baz=72,slow=6.9
NB2                                PP    PP      15 49 24.7  -0.3
      comp=Z,6.2nm,1.1s,baz=70,slow=8.6
NB2   NORSAR Subarra    67.28 328  P     P       15 46 54.7  -2.5
NB2   NORSAR Subarra    67.28 328  P     P       15 46 55.8  -1.4
      baz=72,slow=6.9
NOA   NORSAR Array B    67.28 328  P     P       15 46 56.1  -1.1
      comp=Z,11nm,0.9s,baz=74,slow=6.5,SNR=24
NOA                                PP    PP      15 49 25.1 +0.1
      comp=Z,2.9nm,0.9s,baz=68,slow=8.2,SNR=3.9
      comp=Z,11nm,0.9s
SRO   Srobarova         67.33 313 eP     P       15 46 59.1 +1.5
DEL   Delary            67.34 323 eP     P       15 46 57.7 +0.2
C21K  Knifeblade Rid    67.35  22  P     P       15 46 58.2 +0.9
      baz=290,SNR=28
H18K  Honhosa River     67.36  27  P     P       15 46 57.4  -0.1
      baz=289
B22K  Teshekpuk Lake    67.38  21  P     P       15 46 57.9 +0.4
      baz=291,SNR=20
NC204 NORSAR Array S    67.42 329  IAmb  IAmb    15 46 58.6
      comp=Z,43nm,1.1s
JAVC  Velka Javorina    67.42 314 eP     P       15 46 59.6 +1.3
TEKS  Tekeris           67.53 310 eP     P       15 46 58.4  -0.6
G19K  Purcell Mounta    67.54  26  IAmb  IAmb    15 46 59.9
      comp=Z,15nm,0.9s
G19K  Purcell Mounta    67.54  26  P     P       15 46 59.2 +0.6
      baz=289,SNR=7.5
N14K  Kuskokwak Cree    67.54  33  P     P       15 46 59.4 +0.7
      baz=288,SNR=7.5
BORU  Boraas            67.56 324 eP     P       15 46 59.0 +0.1
KRLC  Kraliky           67.61 316 eP     P       15 46 59.5 +0.1
KRLC  Kraliky           67.61 316 eP     P       15 46 59.5 +0.1
MORH  Mrgy, Hungar      67.61 311 ⇑P     P       15 46 59.1  -0.3
J17K  VABM Dome         67.63  29  IAmb  IAmb    15 47 01.2
      comp=Z,21nm,0.8s
J17K  VABM Dome         67.63  29  P     P       15 47 00.0 +0.8
      baz=289,SNR=12
SJES  Sjenica           67.63 308 eP     P       15 46 59.7  -0.1
KSP   Ksiaz             67.67 317 epP    P       15 47 00.1 +0.4
KSP   Ksiaz             67.67 317  P     P       15 47 00.3 +0.6
OHR   Ohrid             67.74 306 i P    P       15 46 52.3  -8.1
F20K  Avaraart Lake     67.74  25  IAmb  IAmb    15 47 01.2
      comp=Z,19nm,0.8s
F20K  Avaraart Lake     67.74  25  P     P       15 46 60.0 +0.1
      baz=290,SNR=20
M15K  Kasigluk River    67.77  32  P     P       15 47 01.1 +1.0
      baz=288,SNR=14
DPC   Dobruska-Polom    67.80 316 eP     P       15 47 00.9 +0.3
DPC   Dobruska-Polom    67.80 316 eP     P       15 47 00.9 +0.3
OSTC  Ostas             67.80 316 eP     P       15 47 01.6 +1.0
OSTC  Ostas             67.80 316 eP     P       15 47 01.6 +1.0
LUNU  Lund              67.82 322 eP     P       15 47 00.7 +0.2
MODS  Modra-Piesok      67.82 314 eP     P       15 47 01.2 +0.4
BBLS  Lazi&#263i        67.83 309 eP     P       15 47 00.8  -0.2
OSL   Oslo              67.86 327 eP     P       15 47 01.0 +0.3
E21K  Killik River      67.88  23  P     P       15 47 01.0 +0.2
      baz=291
CHVC  Chvalec           67.89 317 eP     P       15 47 02.4 +1.2
CHVC  Chvalec           67.89 317 eP     P       15 47 02.4 +1.2
STRU  Stroemstad        67.92 326 eP     P       15 47 00.7  -0.4
RUDO  Rudo              67.94 309 eP     P       15 47 00.6  -1.0
UPC   Upice             67.94 316 eP     P       15 47 02.9 +1.4
UPC   Upice             67.94 316 eP     P       15 47 02.9 +1.4
DOMB  Dombas            67.95 330 eP     P       15 47 00.4  -1.0
O14K  Tigyukauivet M    67.95  34  P     P       15 47 02.3 +1.0
      baz=289
VRAC  Vranov            67.96 315 eP     P       15 47 02.3 +0.7
VRAC  Vranov            67.96 315 ⇑P     P       15 47 02.9 +1.3
VRAC  Vranov            67.96 315  P     P       15 47 02.9 +1.3
H19K  Roundabout Mou    67.99  26  P     P       15 47 02.4 +1.0
      baz=290,SNR=38
L16K  Owhat River       68.00  31  IAmb  IAmb    15 47 03.7
      comp=Z,18nm,0.9s
L16K  Owhat River       68.00  31  P     P       15 47 02.5 +0.9
      baz=289,SNR=13
HAPS  Han Pijesak,BI    68.07 309 eP     P       15 47 01.6  -0.9
GCSA  Galena City Sc    68.09  27  P     P       15 47 02.6 +0.6
      baz=290,SNR=7.7
D22K  Ayikyak River     68.15  22  P     P       15 47 03.1 +0.6
      baz=292,SNR=22
KRUC  Moravsky          68.16 315 eP     P       15 47 03.7 +0.9
K17K  Iditarod          68.19  30  P     P       15 47 03.7 +1.0
      baz=290,SNR=34
ITM   Ithomi            68.20 301  IAmb  IAmb    15 47 02.1
      comp=Z,17nm,0.9s
N15K  Kwethluk River    68.22  32  P     P       15 47 04.4 +1.3
      baz=289,SNR=21
RGN   Rugen             68.23 321 eP     P       15 47 03.4 +0.3
      comp=Z,50nm,1.1s,baz=69,slow=6.0
L17K  Donlin            68.38  30  P     P       15 47 05.3 +1.3
      baz=290,SNR=18
UPM   Unac-Piva         68.39 308 eP     P       15 47 04.9 +0.3
PDG   Podgorica         68.40 307  IAmb  IAmb    15 47 05.3
      comp=Z,24nm,0.9s
PDG   Podgorica         68.40 307 eP     P       15 47 03.9  -0.5
PDG   Podgorica         68.40 307 ⇑P     P       15 47 04.0  -0.4
MOL   Molde             68.44 330 eP     P       15 47 04.2  -0.1
C23K  Itkillik River    68.46  21  P     P       15 47 05.0 +0.7
      baz=294,SNR=20
M16K  Timber Creek      68.46  31  P     P       15 47 05.9 +1.4
      baz=290,SNR=31
KONO  Kongsberg         68.49 327ceP     P       15 47 04.8 +0.1
KONO                               pmax  pmax
      comp=Z,18nm,1.4s
F21K  Alatna River      68.50  24  P     P       15 47 05.1 +0.4
      baz=292,SNR=8.1
SOP   Sopron            68.50 313  P     P       15 47 05.8 +0.8
DRME  Dracevica, Mon    68.53 307 eP     P       15 47 03.7  -1.6
J18K  Innoko River      68.61  29  P     P       15 47 05.9 +0.5
      baz=291,SNR=31
H20K  Anotleneega Mo    68.62  26  P     P       15 47 06.4 +1.0
      baz=291,SNR=30
RUE   Ruedersdorf       68.64 319 eP     P       15 47 06.0 +0.3
      comp=Z,23nm,0.5s,baz=69,slow=6.0
TREC  Trest             68.65 315 eP     P       15 47 06.5 +0.6
TREC  Trest             68.65 315 eP     P       15 47 06.5 +0.6
RONA  Rosalia, Austr    68.66 314 i P    P       15 47 06.5 +0.4
      comp=Z,18nm,1.1s,SNR=7.7
O15K  Ungalikthiuk R    68.68  33  P     P       15 47 06.5 +0.6
      baz=290,SNR=23
E22K  Anaktuvuk Pass    68.74  23  P     P       15 47 07.1 +0.9
      baz=293,SNR=37
N16K  Nishlik Lake      68.74  32  P     P       15 47 07.6 +1.3
      baz=290,SNR=31
BRY   Bratogost         68.74 308 eP     P       15 47 05.4  -1.4
SKAR  Skarslia          68.75 328 eP     P       15 47 06.4   0.0
G21K  Allakaket         68.76  25  P     P       15 47 06.6 +0.3
      baz=292
D23K  Nanushuk River    68.78  22  P     P       15 47 07.4 +0.9
      baz=294,SNR=32
AKN   Aaknes            68.81 330 eP     P       15 47 07.2 +0.4
F22K  John River        68.85  24  P     P       15 47 07.7 +0.8
      baz=293,SNR=5.6
CONA  Conrad Observa    68.86 314 i P    P       15 47 07.7 +0.3
      comp=Z,22nm,1.1s,SNR=15
IMAR  Indian Mountai    68.87  25  P     P       15 47 06.6  -0.4
J19K  Poorman           68.87  28  IAmb  IAmb    15 47 08.9
      comp=Z,25nm,0.9s
J19K  Poorman           68.87  28  P     P       15 47 07.6 +0.6
      baz=291,SNR=25
GOPC  GO Pecny, Ondr    68.88 316 eP     P       15 47 08.1 +0.8
GOPC  GO Pecny, Ondr    68.88 316 eP     P       15 47 08.1 +0.8
TREB  Trebinje          68.94 308 eP     P       15 47 06.7  -1.1
M17K  Holitna River     69.02  31  P     P       15 47 09.2 +1.2
      baz=291,SNR=29
I20K  Naaghedeneel      69.03  27  IAmb  IAmb    15 47 10.1
      comp=Z,24nm,0.9s
I20K  Naaghedeneel      69.03  27  P     P       15 47 09.1 +1.1
      baz=292,SNR=6.8
BLY   Banja Luka        69.05 310 eP     P       15 47 06.7  -1.8
L18K  Granite Mounta    69.06  30  IAmb  IAmb    15 47 10.4
      comp=Z,32nm,1.4s
L18K  Granite Mounta    69.06  30  P     P       15 47 09.8 +1.6
      baz=291,SNR=10
BRG   Berggiesshubel    69.07 317 eP     P       15 47 08.1  -0.4
      comp=Z,24nm,1.2s,baz=69,slow=6.0
BRG   Berggiesshubel    69.07 317 eP     P       15 47 08.8 +0.4
BRG                                Amp           15 47 10.5
      comp=Z,12nm,0.8s
BRG   Berggiesshubel    69.07 317  P     P       15 47 18.2  +10
BRG                                Amp           15 47 19.3
      comp=Z,7.1nm,0.8s
C24K  Franklin Bluff    69.11  21  P     P       15 47 08.9 +0.5
      baz=295
A051A Mrakovica         69.15 311 eP     P       15 47 09.2   0.0
TOLK  Toolik Lake Re    69.29  22  IAmb  IAmb    15 47 11.2
      comp=Z,25nm,0.8s
TOLK  Toolik Lake Re    69.29  22  P     P       15 47 09.7 +0.1
      baz=295,SNR=14
ARSA  Arzberg           69.30 313 i P    P       15 47 10.3 +0.2
      comp=Z,9.6nm,0.8s,SNR=6.8
D24K  Happy Valley      69.31  22  IAmb  IAmb    15 47 11.2
      comp=Z,25nm,0.7s
D24K  Happy Valley      69.31  22  P     P       15 47 10.7 +1.0
      baz=295,SNR=12
G22K  Bettles           69.33  24  P     P       15 47 10.2 +0.4
      baz=294
STON  Ston              69.33 308 eP     P       15 47 08.8  -1.4
H21K  Melozitna Rive    69.35  26  P     P       15 47 10.8 +0.8
      baz=293,SNR=28
O16K  Kokwok River B    69.36  33  P     P       15 47 11.5 +1.4
      baz=291,SNR=34
STKA  Stephens Creek    69.39 147  P     P       15 47 09.8  -0.8
STKA  Stephens Creek    69.39 147  P     P       15 47 10.5  -0.1
      comp=Z,18nm,0.8s,baz=332,slow=6.3,SNR=21
      comp=Z,18nm,0.8s
STKA  Stephens Creek    69.39 147  P     P       15 47 11.8 +1.2
STKA  Stephens Creek    69.39 147d iP    P       15 47 10.7 +0.1
J20K  Nowinta River     69.40  27  IAmb  IAmb    15 47 12.4
      comp=Z,27nm,0.8s
J20K  Nowinta River     69.40  27  P     P       15 47 11.1 +0.8
      baz=292,SNR=25
N17K  Nushagak Hills    69.45  32  IAmb  IAmb    15 47 13.3
      comp=Z,29nm,0.9s
N17K  Nushagak Hills    69.45  32  P     P       15 47 12.0 +1.3
      baz=291,SNR=14
HTT   Hallett           69.47 150  P     P       15 47 12.1 +1.0
CLL   Collm             69.48 318  IAmb  IAmb    15 47 12.3
      comp=Z,27nm,1.2s
CLL   Collm             69.48 318⇓iP     P       15 47 11.1 +0.1
CLL                                pmax  pmax
      comp=Z,21nm,1.0s
CLL   Collm             69.48 318 eP     P       15 47 10.5  -0.5
      comp=Z,24nm,1.2s,baz=69,slow=6.0
CLL   Collm             69.48 318⇓iP     P       15 47 11.1 +0.1
      comp=Z,21nm,1.0s
CLL                               ePP    PP      15 49 44.0  -0.2
CLL                               ex     x       15 50 10.0
E23K  Chandalar         69.52  23  P     P       15 47 11.4 +0.3
      baz=295,SNR=25
EIDS  Eidsvold          69.53 136  IAmb  IAmb    15 47 13.8
      comp=Z,34nm,1.0s
CKRC  Cesky Krumlov     69.54 315 eP     P       15 47 12.0 +0.5
CKRC  Cesky Krumlov     69.54 315 eP     P       15 47 12.0 +0.5
A050A Klekovaca         69.58 310 eP     P       15 47 11.2  -0.7
GROS  Grobnik           69.59 312 eP     P       15 47 11.8   0.0
DAG   Danmarks Havn     69.61 348 i P    P       15 47 10.0  -1.3
DAG                                IAmb  IAmb    15 47 11.6
      comp=Z,44nm,1.7s
P16K  Nushagak River    69.62  33  P     P       15 47 12.7 +1.0
      baz=291,SNR=6.6
SDPT  Sand Point        69.67  37  P     P       15 47 13.2 +1.2
SDPT  Sand Point        69.67  37  P     P       15 47 12.4 +0.4
      baz=291
COLD  Coldfoot          69.67  24  IAmb  IAmb    15 47 13.6
      comp=Z,23nm,1.0s
COLD  Coldfoot          69.67  24  P     P       15 47 12.1 +0.2
      baz=295,SNR=15
M18K  Stony River       69.71  30  P     P       15 47 13.3 +1.1
      baz=292,SNR=19
K20K  Telida            69.75  28  IAmb  IAmb    15 47 14.8
      comp=Z,31nm,1.1s
K20K  Telida            69.75  28  P     P       15 47 13.1 +0.6
      baz=293
O17K  Koliganek Bris    69.77  32  P     P       15 47 13.4 +0.8
      baz=292,SNR=12
H22K  Ishtalitna Cre    69.80  25  P     P       15 47 13.2 +0.5
      baz=294,SNR=24
SOKA  Soboth            69.81 313 i P    P       15 47 13.5 +0.3
      comp=Z,14nm,0.8s,SNR=8.8
S14K  Fog Glacier       69.82  36  P     P       15 47 13.6 +0.4
      baz=291
CRES  Cresnjevec Ost    69.83 312 eP     P       15 47 12.8  -0.5
L19K  White Mountain    69.87  29  IAmb  IAmb    15 47 15.7
      comp=Z,37nm,1.0s
L19K  White Mountain    69.87  29  P     P       15 47 14.3 +1.0
      baz=293,SNR=26
GORT1 Trebel            69.88 320 eP     P       15 47 13.8 +0.5
      comp=Z,43nm,1.1s,baz=69,slow=6.0
KHC   Kasperske Hory    69.89 316 eP     P       15 47 13.9 +0.3
KHC   Kasperske Hory    69.89 316 eP     P       15 47 13.9 +0.3
E24K  Your Creek        69.89  23  IAmb  IAmb    15 47 15.0
      comp=Z,33nm,0.8s
E24K  Your Creek        69.89  23  P     P       15 47 14.2 +0.8
      baz=296,SNR=35
MOA   Molln             69.90 314 i P    P       15 47 14.1 +0.4
      comp=Z,16nm,1.0s,SNR=8.4
GEC2  GERESS Array S    69.91 315  IAmb  IAmb    15 47 15.4
      comp=Z,27nm,1.2s
GEC2  GERESS Array S    69.91 315 eP     P       15 47 13.6  -0.2
      comp=Z,28nm,1.2s,baz=69,slow=6.0
G23K  Bananza Creek     69.95  24  IAmb  IAmb    15 47 15.3
      comp=Z,30nm,1.1s
G23K  Bananza Creek     69.95  24  P     P       15 47 14.1 +0.4
      baz=295,SNR=21
N18K  Kilae Creek       69.99  31  IAmb  IAmb    15 47 16.5
      comp=Z,22nm,0.9s
N18K  Kilae Creek       69.99  31  P     P       15 47 14.9 +0.9
      baz=292,SNR=13
D25K  Kavik River       70.02  21  P     P       15 47 15.0 +0.9
      baz=297,SNR=12
PDKS  Podkum            70.05 312 eP     P       15 47 15.1 +0.4
BOJS  Bojanci           70.08 312 i P    P       15 47 15.3 +0.5
BSEG  Bad Segeberg      70.10 321 eP     P       15 47 15.1 +0.4
      comp=Z,65nm,1.2s,baz=69,slow=6.0
SNART Snartemo          70.11 326 i P    P       15 47 13.0  -1.7
TANN  Tannenbergstha    70.11 317 eP     P       15 47 14.8  -0.2
      comp=Z,15nm,1.1s,baz=69,slow=6.0
FLTG  Flechtingen       70.15 319 eP     P       15 47 15.4 +0.3
      comp=Z,27nm,1.1s,baz=69,slow=6.0
L20K  Farewell, AK      70.18  29  P     P       15 47 16.1 +1.0
      baz=293,SNR=19
M19K  Big River Lodg    70.18  30  P     P       15 47 16.3 +1.1
      baz=293
OBKA  Obir              70.19 313 eP     P       15 47 15.3  -0.3
OBKA  Obir              70.19 313 i P    P       15 47 15.7 +0.1
      comp=Z,7.2nm,0.7s
C26K  Camden Bay        70.19  20  P     P       15 47 15.8 +0.8
      baz=298
NEUB  Neuenburg         70.24 318 eP     P       15 47 16.1 +0.4
      comp=Z,38nm,1.0s,baz=69,slow=6.0
CHUM  Lake Minchumin    70.26  27  P     P       15 47 16.3 +0.7
      baz=294,SNR=18
P17K  Kvichak River     70.30  33  P     P       15 47 16.2 +0.3
      baz=292,SNR=9.4
WET   Wettzell          70.31 316 eP     P       15 47 16.2   0.0
      comp=Z,16nm,1.1s,baz=69,slow=6.0
CHNA  Chernabura Isl    70.33  38  P     P       15 47 17.5 +1.4
CHNA  Chernabura Isl    70.33  38  P     P       15 47 16.4 +0.3
      baz=291
F24K  Squaw Lake        70.35  23  IAmb  IAmb    15 47 17.8
      comp=Z,38nm,1.4s
F24K  Squaw Lake        70.35  23  P     P       15 47 16.5 +0.4
      baz=297,SNR=16
BIOA  Bad Ischl, Aus    70.35 314 i P    P       15 47 17.1 +0.6
      comp=Z,32nm,1.5s,SNR=8.9
LODK  Lodwar            70.36 263  IAmb  IAmb    15 47 18.1
      comp=Z,19nm,1.0s
R16K  Pilot Point       70.36  35  P     P       15 47 17.0 +0.8
      baz=292
Q16K  King Salmon       70.39  33  P     P       15 47 17.0 +0.6
      baz=292
MLY   Manley            70.40  26  IAmb  IAmb    15 47 18.4
      comp=Z,29nm,0.9s
MLY   Manley            70.40  26  P     P       15 47 17.2 +0.7
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	baz=295,SNR=45						
MANZ	Manzenberg	70.48	317	eP	P	15 47 17.4	+0.2
	comp=Z,3.1nm,1.1s,baz=69,slow=6.0						
ROTZ	Rotzenmuhle	70.50	317	eP	P	15 47 17.5	+0.2
	comp=Z,9.2nm,1.1s,baz=69,slow=6.0						
H23K	Yukon River	70.51	25	P	P	15 47 18.1	+1.0
	baz=296,SNR=36						
JNW	Jan Mayen West	70.53	341	eP	P	15 47 18.4	+1.3
MOX	Moxa	70.54	318	eP	P	15 47 17.4	-0.2
	comp=Z,18nm,1.2s,baz=69,slow=6.0						
CAST	Castle Rocks	70.55	28	IAmb	IAmb	15 47 19.5	
	comp=Z,43nm,1.5s						
CAST	Castle Rocks	70.55	28	P	P	15 47 18.6	+1.2
	baz=294,SNR=16						
ASSE	Asse, Remlinge	70.55	319	eP	P	15 47 17.2	-0.2
	comp=Z,14nm,1.1s,baz=69,slow=6.0						
JMIC	Jan Mayen	70.57	341	eP	P	15 47 18.7	+1.3
N19K	Bonanza Creek	70.57	31	IAmb	IAmb	15 47 20.0	
	comp=Z,31nm,0.8s						
N19K	Bonanza Creek	70.57	31	P	P	15 47 18.7	+1.0
	baz=293,SNR=20						
O18K	Koktuh Hills	70.62	32	P	P	15 47 19.2	+1.3
	baz=293,SNR=17						
BPAW	Bear Paw Mtn.	70.70	27	IAmb	IAmb	15 47 20.6	
	comp=Z,39nm,1.0s						
BPAW	Bear Paw Mtn.	70.70	27	P	P	15 47 18.9	+0.5
	baz=295,SNR=25						
C27K	Jago River	70.70	20	P	P	15 47 18.7	+0.5
	baz=300,SNR=16						
PPLA	Purkeypile	70.72	28	P	P	15 47 19.5	+0.9
	baz=295,SNR=21						
M20K	Styx River	70.74	29	IAmb	IAmb	15 47 21.1	
	comp=Z,33nm,0.9s						
M20K	Styx River	70.74	29	P	P	15 47 19.7	+1.0
	baz=294,SNR=22						
NRDL	Niedersach Rie	70.74	320	eP	P	15 47 19.2	+0.6
	comp=Z,52nm,1.3s,baz=69,slow=6.0						
P18K	Big Mountain,	70.80	32	P	P	15 47 20.2	+1.2
	baz=293,SNR=14						
MATE	Matera	70.81	306	eP	P	15 47 18.9	-0.4
E25K	Arctic Village	70.85	22	IAmb	IAmb	15 47 20.9	
	comp=Z,42nm,1.9s						
E25K	Arctic Village	70.85	22	P	P	15 47 20.0	+0.8
	baz=298,SNR=5.8						
G24K	Hadweenzic Riv	70.86	24	IAmb	IAmb	15 47 21.1	
	comp=Z,28nm,0.9s						
G24K	Hadweenzic Riv	70.86	24	P	P	15 47 20.4	+1.1
	baz=297,SNR=28						
RJOB	Jochberg	70.87	314	eP	P	15 47 19.3	-0.4
	comp=Z,13nm,0.8s,baz=69,slow=6.0						
I23K	Minto, Yukon-K	70.88	25	IAmb	IAmb	15 47 21.1	
	comp=Z,21nm,0.9s						
I23K	Minto, Yukon-K	70.88	25	P	P	15 47 20.4	+1.1
	baz=296,SNR=21						
KIBK	Kibwezi	70.89	256	IAmb	IAmb	15 47 21.2	
	comp=Z,28nm,1.3s						
O19K	Port Alsworth	70.89	31	P	P	15 47 20.4	+0.9
	baz=294						
Q17K	Contact Creek	70.92	34	P	P	15 47 20.2	+0.3
	baz=293,SNR=5.4						
KMBO	Kilima Mbogo	70.95	258	P	P	15 47 19.4	-1.5
KMBO				IAmb	IAmb	15 47 22.3	
	comp=Z,28nm,0.9s						
KMBO	Kilima Mbogo	70.95	258	P	P	15 47 19.4	-1.5
KMBO				pmax	pmax		
	comp=Z,28nm,0.9s						
KMBO	Kilima Mbogo	70.95	258	i P	P	15 47 20.9	0.0
	SNR=15						
KTH	Kantishna Hill	70.96	27	IAmb	IAmb	15 47 22.7	
	comp=Z,37nm,1.2s						
LESA	Schwarzleotal	71.06	314	i P	P	15 47 21.1	+0.3
	comp=Z,22nm,0.9s,SNR=15						
RETH	Rethem/Aller,	71.07	320	eP	P	15 47 20.9	+0.2
	comp=Z,20nm,1.3s,baz=69,slow=6.0						
F25K	Christian Rive	71.08	22	IAmb	IAmb	15 47 22.8	
	comp=Z,23nm,1.0s						
F25K	Christian Rive	71.08	22	P	P	15 47 21.4	+0.8
	baz=299,SNR=20						
H24K	Noodor Dome	71.12	25	IAmb	IAmb	15 47 22.8	
	comp=Z,20nm,0.9s						
H24K	Noodor Dome	71.12	25	P	P	15 47 21.7	+0.8
	baz=297,SNR=19						
GRA1	Grafenberg Arr	71.12	317	IAmb	IAmb	15 47 23.2	
	comp=Z,50nm,1.3s						
GRF	Grafenberg Arr	71.12	317	eP	P	15 47 21.4	+0.3
	comp=Z,47nm,1.3s,baz=69,slow=6.0						
GRFO	Grafenberg	71.12	317	P	P	15 47 20.8	-0.3
GRFO				IAmb	IAmb	15 47 23.1	
	comp=Z,44nm,1.3s						
GRFO	Grafenberg	71.12	317	P	P	15 47 20.8	-0.3
GRFO				pmax	pmax		
	comp=Z,45nm,1.3s						
CMSA	Cobar Meteorol	71.17	144	P	P	15 47 23.6	+2.1
GTTG	Gottingen	71.17	319	eP	P	15 47 21.4	0.0
	comp=Z,50nm,1.3s,baz=69,slow=6.0						
Q18K	Katmai Hardscr	71.20	33	P	P	15 47 21.2	-0.3
	baz=294						
NEA2	Nenana	71.23	26	P	P	15 47 21.9	+0.3
	baz=297,SNR=55						
TRF	Thorofare Moun	71.26	27	P	P	15 47 22.1	+0.2
	baz=296,SNR=8.7						
ACER	Acerenza	71.30	307	IAmb	IAmb	15 47 23.5	
	comp=Z,38nm,1.1s						
G25K	Bearman Lake	71.32	23	P	P	15 47 22.9	+0.9
	baz=298,SNR=6.3						
SKT	Skwentna	71.39	29	IAmb	IAmb	15 47 24.4	
	comp=Z,38nm,1.1s						
SKT	Skwentna	71.39	29	P	P	15 47 22.3	-0.2
	baz=295,SNR=21						
ABTA	Abfaltersbach	71.41	314	i P	P	15 47 22.4	-0.7
	comp=Z,11nm,0.7s,SNR=5.5						
N20K	Mount Spurr	71.42	30	P	P	15 47 23.1	+0.2
	baz=295						
SPCR	Spurr Chakacha	71.42	30	P	P	15 47 23.4	+0.5
	baz=295						
UBBA	Unterbreizbach	71.43	318	eP	P	15 47 22.7	0.0
	comp=Z,26nm,1.6s,baz=69,slow=6.0						
STAL	STALIGIAL	71.46	313	IAmb	IAmb	15 47 23.6	
	comp=Z,30nm,1.1s						
DBG	Daneborg	71.48	346	i P	P	15 47 21.8	-1.0
DBG				IAmb	IAmb	15 47 23.7	
	comp=Z,39nm,1.3s						
RED	Redoubt Volcan	71.51	31	IAmb	IAmb	15 47 24.7	
	comp=Z,25nm,1.1s						
BMAR	Burnt Mountain	71.51	22	P	P	15 47 23.2	0.0
ILSW	Iliamna Southw	71.52	31	IAmb	IAmb	15 47 26.1	
	comp=Z,29nm,1.2s						
F26K	Sheenjek River	71.53	22	P	P	15 47 23.8	+0.6
	baz=300,SNR=15						
COLA	College	71.57	25	P	P	15 47 22.9	-0.6
COLA	College	71.57	25	P	P	15 47 24.9	+1.4
COLA	College	71.57	25	d iP	P	15 47 23.6	+0.1
COLA				pmax	pmax		
	comp=Z,48nm,1.1s						
COLA	College	71.57	25	P	P	15 47 23.8	+0.3
	baz=298						
POKR	Poker Plat Res	71.62	25	P	P	15 47 24.5	+0.7
	baz=298,SNR=22						
P19K	Oil Pt	71.62	32	P	P	15 47 23.1	-0.9
	baz=295,SNR=6.6						
H25L	Birch Creek	71.66	24	P	P	15 47 24.4	+0.4
	baz=299,SNR=12						
FUR	Furstenfeldbru	71.66	315	eP	P	15 47 24.6	+0.2
	comp=Z,110nm,1.3s,baz=69,slow=6.0						
MCK	McKinley	71.68	27	P	P	15 47 24.6	+0.3
	baz=297						
O20K	Slope Mountain	71.72	31	P	P	15 47 24.0	-0.5
	baz=295						
Q19K	Cape Douglas,	71.73	32	P	P	15 47 24.3	-0.3
	baz=295						
D27M	Malcolm River	71.73	20	IAmb	IAmb	15 47 26.3	
	comp=Z,19nm,0.9s						
D27M	Malcolm River	71.73	20	P	P	15 47 25.2	+0.7
	baz=302,SNR=16						
CUT	Chulitna	71.73	28	P	P	15 47 23.9	-0.6
	baz=296						
WTTA	Wattenberg	71.77	314	eP	P	15 47 25.3	0.0
	comp=Z,19nm,0.7s,SNR=6.8						
WATA	Walderalm	71.78	314	i P	P	15 47 24.8	-0.5
	comp=Z,9.4nm,0.7s						
RND	Reindeer	71.86	27	IAmb	IAmb	15 47 27.0	
	comp=Z,32nm,1.1s						
R18K	Karluk	71.91	34	P	P	15 47 24.7	-0.9
	baz=294						
SUA	Susitna One	71.95	29	P	P	15 47 26.0	0.0
	baz=296,SNR=23						
IL31		71.98	25	IAmb	IAmb	15 47 26.5	
	comp=Z,37nm,1.6s						
ILAR	Eielson Array	71.98	25	P	P	15 47 24.4	-1.6
ILAR	Eielson Array	71.98	25	P	P	15 47 25.6	-0.5
	comp=Z,5.4nm,0.8s,baz=279,slow=5.6,SNR=43						
ILAR				LR	LR	16 21 29.8	
	comp=Z,868nm,18.0s,baz=289,slow=38						
	comp=Z,5.4nm,0.8s						
G26K	Porcupine Rive	72.02	23	IAmb	IAmb	15 47 28.3	
	comp=Z,23nm,0.8s						
G26K	Porcupine Rive	72.02	23	P	P	15 47 26.6	+0.4
	baz=300,SNR=9.2						
CHIR	Chirikof Islan	72.04	36	P	P	15 47 25.8	-0.7
	baz=294						
SQTA	Sankt Quirin	72.06	314	i P	P	15 47 26.8	-0.2
	comp=Z,26nm,0.7s,SNR=9.8						
MOTA	Moosalm	72.08	315	i P	P	15 47 26.8	-0.3
	comp=Z,23nm,0.9s,SNR=11						
M22K	Willow	72.09	29	P	P	15 47 27.0	+0.3
	baz=297,SNR=7.7						
E27K	Coleen River	72.10	21	P	P	15 47 27.6	+0.9
	baz=302,SNR=11						
PRP	Porcupine Dome	72.13	24	P	P	15 47 27.1	+0.1
	baz=299,SNR=51						
HDA	Harding Lake	72.13	26	P	P	15 47 26.3	-0.6
	baz=298,SNR=8.7						
IBBN	Ibbenburen	72.14	320	eP	P	15 47 27.2	0.0
	comp=Z,36nm,1.3s,baz=69,slow=6.0						
KASTN	Kahler Asten	72.20	319	eP	P	15 47 27.5	-0.1
	comp=Z,9.0nm,1.0s,baz=69,slow=6.0						
RETA	Reutte	72.24	315	i P	P	15 47 27.9	-0.1
	comp=Z,4.4nm,0.6s,SNR=5.4						
WAT1	Susitna Watana	72.25	28	P	P	15 47 27.2	-0.5
	baz=298						
INTR	Introdacqua	72.26	309	IAmb	IAmb	15 47 36.1	
	comp=Z,25nm,1.2s						
CEL	Celeste	72.28	304	IAmb	IAmb	15 47 29.4	
	comp=Z,39nm,1.0s						
D28M	Stokes Point	72.35	19	P	P	15 47 28.1	0.0
	baz=304						
FDMO	Fiordimonte	72.43	310	IAmb	IAmb	15 47 30.7	
	comp=Z,43nm,1.3s						
FETA	Feichten	72.44	314	i P	P	15 47 29.2	0.0
	comp=Z,25nm,1.1s,SNR=14						
Q20K	Shuyak Island	72.45	32	P	P	15 47 28.7	-0.2
	baz=296						
SII	Sitkinak Islan	72.46	35	P	P	15 47 29.0	-0.1
	baz=295						
AQU	L'Aquila	72.48	309	P	P	15 47 31.0	+1.5
E28M	Babbage River	72.51	20	IAmb	IAmb	15 47 30.9	
	comp=Z,29nm,1.1s						
E28M	Babbage River	72.51	20	P	P	15 47 30.2	+1.1
	baz=304,SNR=16						
RC01	Rabbit Creek A	72.55	29	P	P	15 47 28.9	-0.5
	baz=297						
UBR	Ueberruh	72.57	315	eP	P	15 47 29.3	-0.6
	comp=Z,13nm,0.8s,baz=69,slow=6.0						
TNS	Taunus Mts	72.57	318	eP	P	15 47 29.7	-0.2
	comp=Z,21nm,1.1s,baz=69,slow=6.0						
PMR	Palmer	72.58	29	P	P	15 47 29.5	-0.1
	baz=298,SNR=8.1						
DHY	Denali Highway	72.61	27	P	P	15 47 29.2	-0.7
	baz=298						
OHAK	Old Harbor	72.62	34	IAmb	IAmb	15 47 31.4	
	comp=Z,24nm,0.7s						
OHAK	Old Harbor	72.62	34	P	P	15 47 32.3	+2.4
OHAK	Old Harbor	72.62	34	P	P	15 47 29.1	-0.8
	baz=295						
J25K	Salcha River,	72.63	25	P	P	15 47 29.3	-0.7
	baz=300,SNR=11						
BRLK	Bradley Lake	72.64	31	IAmb	IAmb	15 47 30.6	
	comp=Z,20nm,0.8s						
WAT6	Susitna Watana	72.69	28	P	P	15 47 30.3	-0.3
	baz=298,SNR=6.2						
STU	Stuttgart	72.70	316	P	P	15 47 31.9	+1.3
STU	Stuttgart	72.70	316	eP	P	15 47 31.1	+0.5
STU	Stuttgart	72.70	316	eP	P	15 47 31.1	+0.5
	comp=Z,111nm,1.2s,baz=69,slow=6.0						
OPO	Ambohidratompo	72.72	237	LR	LR	16 16 21.2	
	comp=Z,273nm,21.7s,baz=172,slow=33						
BRSE	Bradley Lake S	72.72	31	P	P	15 47 30.3	-0.2
	baz=297						
KDAK	Kodiak Island	72.72	33	LR	LR	16 22 51.9	
	comp=Z,508nm,18.9s,baz=310,slow=39						
KDAK	Kodiak Island	72.72	33	ceP	P	15 47 31.0	+0.5
KDAK				pmax	pmax		
	comp=Z,56nm,1.3s						
KDAK	Kodiak Island	72.72	33	P	P	15 47 30.3	-0.2
	baz=296						
BUG	Bochum--Univer	72.77	319	eP	P	15 47 31.3	+0.4
	comp=Z,22nm,1.0s,baz=69,slow=6.0						
G27K	Doyon Strip	72.81	22	IAmb	IAmb	15 47 32.8	
	comp=Z,23nm,0.9s						
G27K	Doyon Strip	72.81	22	P	P	15 47 31.5	+0.5
	baz=302,SNR=31						
SML	Sawmill	72.82	28	P	P	15 47 31.1	0.0
	baz=298,SNR=14						
O22K	Cooper Landing	72.83	30	P	P	15 47 30.3	-0.8
	baz=297						
K24K	Donnelly Dome	72.88	26	P	P	15 47 31.1	-0.4
	baz=300,SNR=13						
KNK	Knik Glacier	72.95	29	IAmb	IAmb	15 47 33.3	
	comp=Z,29nm,1.0s						
KNK	Knik Glacier	72.95	29	P	P	15 47 31.8	-0.1
	baz=298,SNR=5.9						
F28M	Old Crow	72.96	21	P	P	15 47 32.1	+0.3
	baz=304,SNR=8.5						
ABPO	Ambohimpanom	72.97	237	P	P	15 47 31.7	-1.0
ABPO				IAmb	IAmb	15 47 33.2	
	comp=Z,25nm,1.1s						
ABPO	Ambohimpanom	72.97	237	P	P	15 47 31.7	-1.0
ABPO				pmax	pmax		
	comp=Z,25nm,1.1s						
M23K	Glacier View	73.08	28	P	P	15 47 32.7	+0.1
	baz=299,SNR=8.6						
I26K	Coal Creek Min	73.09	24	IAmb	IAmb	15 47 33.9	
	comp=Z,28nm,1.1s						
I26K	Coal Creek Min	73.09	24	P	P	15 47 32.6	0.0
	baz=301,SNR=24						
SEW	Seward	73.13	30	P	P	15 47 32.6	-0.3
	baz=298						
E29M	Blow River	73.13	20	IAmb	IAmb	15 47 34.6	
	comp=Z,47nm,1.2s						
E29M	Blow River	73.13	20	P	P	15 47 33.2	+0.4
	baz=305,SNR=32						
H27K	Steamboat Moun	73.17	23	IAmb	IAmb	15 47 35.2	
	comp=Z,41nm,1.0s						
H27K	Steamboat Moun	73.17	23	P	P	15 47 33.9	+0.8
	baz=302,SNR=51						
SCM	Sheep Creek Mo	73.22	28	IAmb	IAmb	15 47 35.1	
	comp=Z,25nm,0.8s						
SCM	Sheep Creek Mo	73.22	28	P	P	15 47 33.9	+0.3
	baz=299,SNR=8.0						
PWL	Port Wells	73.26	29	IAmb	IAmb	15 47 35.0	
	comp=Z,25nm,1.0s						
PWL	Port Wells	73.26	29	P	P	15 47 33.9	+0.2
	baz=298,SNR=5.7						
RIDG	Independent Ri	73.27	26	IAmb	IAmb	15 47 34.3	
	comp=Z,28nm,0.9s						
RIDG	Independent Ri	73.27	26	P	P	15 47 33.1	-0.7
	baz=300,SNR=12						
ZCCA	Zocca	73.33	312	IAmb	IAmb	15 47 46.7	
	comp=Z,49nm,1.1s						
J26L	Joseph Creek	73.36	25	IAmb	IAmb	15 47 35.2	
	comp=Z,40nm,0.8s						
J26L	Joseph Creek	73.36	25	P	P	15 47 33.6	-0.7
	baz=301,SNR=48						
NEEM	North Greenlan	73.39	355	i P	P	15 47 35.3	+0.8
NEEM				IAmb	IAmb	15 47 36.7	
	comp=Z,92nm,1.2s						
BFO	Black Forest	73.41	316	P	P	15 47 34.0	-0.8
BFO				IAmb	IAmb	15 47 36.0	
	comp=Z,25nm,1.1s						
BFO	Black Forest	73.41	316	P	P	15 47 34.0	-0.8
BFO				pmax	pmax		
	comp=Z,25nm,1.1s						
BFO	Black Forest	73.41	316	eP	P	15 47 34.3	-0.5
	comp=Z,23nm,1.1s,baz=69,slow=6.0						
PAX	Paxson	73.42	27	P	P	15 47 34.5	-0.2
	baz=300,SNR=7.2						
SCRK	Sand Creek	73.48	25	P	P	15 47 35.3	+0.2
	baz=301,SNR=20						
I27K	Kandik River	73.48	23	P	P	15 47 35.7	+0.8
	baz=303,SNR=25						
TUE	Stuetta	73.53	314	IAmb	IAmb	15 47 40.4	
	comp=Z,13nm,0.7s						
ARPS	Mount Arapiles	73.56	150	P	P	15 47 36.3	+0.7
M24K	Tolsona, Glenn	73.56	28	P	P	15 47 36.6	+1.1
	baz=300,SNR=11						
BTNL	Ternell	73.78	319	dP	P	15 47 36.9	-0.1
	comp=Z,7.3nm,1.2s						
GLI	Glacier Island	73.78	29	P	P	15 47 36.1	-0.7
	baz=299						
HARP	HAARP	73.83	27	P	P	15 47 37.1	+0.1
	baz=300						
MEM	Membach	73.83	319	dP	P	15 47 37.7	+0.5
	comp=Z,6.6nm,0.0s						
G29M	Pine Creek	73.95	21	IAmb	IAmb	15 47 39.1	
	comp=Z,37nm,1.3s						
G29M	Pine Creek	73.95	21	P	P	15 47 37.8	+0.1
	baz=305,SNR=8.5						
KLU	Klutina	73.97	28	IAmb	IAmb	15 47 39.8	
	comp=Z,44nm,0.9s						
KLU	Klutina	73.97	28	P	P	15 47 38.3	+0.3
	baz=300,SNR=18						
P23K	Montague Islan	74.08	30	P	P	15 47 37.2	-1.3
	baz=299						
A36M	Sachs Harbour	74.10	14	P	P	15 47 39.2	+0.8
	baz=315,SNR=11						
BSTI	Sart Tilman	74.10	319	dP	P	15 47 39.0	+0.2
FID	Port Fidalgo	74.11	29	IAmb	IAmb	15 47 40.2	
	comp=Z,59nm,1.4s						
I28M	Miner Creek	74.15	23	IAmb	IAmb	15 47 40.6	
	comp=Z,25nm,1.1s						
I28M	Miner Creek	74.15	23	P	P	15 47 38.9	-0.1
	baz=304,SNR=19						
WLF	Walferdange	74.15	318	dP	P	15 47 40.4	+1.3
	comp=Z,30nm,1.0s						
WLF	Walferdange	74.15	318	eP	P	15 47 39.5	+0.4
	comp=Z,60nm,1.1s,baz=69,slow=6.0						
K27K	Chicken	74.16	25	IAmb	IAmb	15 47 40.9	
	comp=Z,31nm,1.0s						
K27K	Chicken	74.16	25	P	P	15 47 39.0	+0.1
	baz=303						
L26K	Log Cabin Wild	74.22	26	P	P	15 47 39.6	+0.3
	baz=302						
F30M	Barrier River	74.24	20	IAmb	IAmb	15 47 41.0	
	comp=Z,46nm,1.2s						
F30M	Barrier River	74.24	20	P	P	15 47 39.9	+0.6
	baz=307,SNR=20						
H29M	Whitestone	74.24	22	P	P	15 47 39.8	+0.5
	baz=305,SNR=12						
BCLA	Clavier	74.32	319	dP	P	15 47 40.3	+0.2
	comp=Z,12nm,1.1s						
SANVU	Saraoutou	74.39	118	P	P	15 47 41.1	+0.2
N25K	Chitina, Valde	74.46	28	IAmb	IAmb	15 47 42.9	
	comp=Z,29nm,0.8s						
N25K	Chitina, Valde	74.46	28	P	P	15 47 40.8	-0.1
	baz=301,SNR=15						
BGES	Gesves	74.46	319	dP	P	15 47 41.5	+0.6
	comp=Z,7.1nm,1.2s						
INK	Inuvik	74.48	19	IAmb	IAmb	15 47 41.8	
	comp=Z,32nm,0.9s						
INK	Inuvik	74.48	19	P	P	15 47 41.2	+0.5
	baz=309,SNR=17						
G30M	tAoh Zraii Nji	74.48	21	IAmb	IAmb	15 47 42.2	
	comp=Z,57nm,1.1s						
G30M	tAoh Zraii Nji	74.48	21	P	P	15 47 40.1	-0.7
	baz=307,SNR=19						
EYAK	Cordova Ski Ar	74.52	29	IAmb	IAmb	15 47 43.6	
	comp=Z,33nm,0.9s						
EYAK	Cordova Ski Ar	74.52	29	P	P	15 47 41.9	+0.8
	baz=300,SNR=8.7						
BMRD	Maredsous	74.68	319	dP	P	15 47 41.5	-0.7
	comp=Z,9.1nm,1.1s						
M26K	Nabesna, AK	74.69	27	IAmb	IAmb	15 47 44.1	
	comp=Z,25nm,0.9s						
M26K	Nabesna, AK	74.69	27	P	P	15 47 43.4	+1.3
	baz=302,SNR=15						
EPYK	Eagle Plains	74.69	22	IAmb	IAmb	15 47 42.6	
	comp=Z,24nm,1.1s						
EPYK	Eagle Plains	74.69	22	P	P	15 47 41.9	-0.1
	baz=307,SNR=12						
I29M	Ogilvie Camp,	74.76	23	P	P	15 47 42.5	+0.1
	baz=306,SNR=9.7						
L27K	Beaver Creek,	74.78	26	IAmb	IAmb	15 47 44.8	
	comp=Z,21nm,0.8s						
L27K	Beaver Creek,	74.78	26	P	P	15 47 43.4	+0.8
	baz=303,SNR=27						
BMRM	Bremner River	74.79	28	P	P	15 47 43.6	+0.9
	baz=301,SNR=15						
BCAR	Beaver Creek A	74.80	26	P	P	15 47 43.1	+0.4
GLB	Gilahina Butte	74.87	28	IAmb	IAmb	15 47 44.9	
	comp=Z,28nm,0.8s						
DOU	Dourbes	74.87	319	dP	P	15 47 43.2	-0.1
	comp=Z,6.8nm,1.1s						
F31M	Tsiigehtchic	74.96	20	P	P	15 47 43.2	-0.3
	baz=309						
VOI	Vohitsoka	75.09	235	P	P	15 47 43.3	-1.8
VOI				IAmb	IAmb	15 47 44.9	
	comp=Z,28nm,0.9s						
DAWY	Dawson	75.13	24	P	P	15 47 45.0	+0.5
	baz=305,SNR=19						
G31M	Satah River	75.13	20	P	P	15 47 44.4	0.0
	baz=309,SNR=8.4						
VRDI	Verde Repeater	75.13	28	IAmb	IAmb	15 47 46.5	
	comp=Z,17nm,0.8s						
M27K	Edge Creek, AK	75.15	26	IAmb	IAmb	15 47 47.6	
	comp=Z,29nm,1.0s						
M27K	Edge Creek, AK	75.15	26	P	P	15 47 45.7	+0.8
	baz=303,SNR=19						
MCARA	McCarthy VSAT	75.22	27	IAmb	IAmb	15 47 47.1	
	comp=Z,31nm,0.9s						
MCARA	McCarthy VSAT	75.22	27	P	P	15 47 46.6	+1.4
	baz=302,SNR=6.8						
J29N	Klondike Camp	75.32	24	P	P	15 47 46.4	+0.6
	baz=306						
KAIM	Kayak Island	75.42	29	P	P	15 47 46.1	-0.2
	baz=302						
I30M	Mount Dempster	75.49	22	P	P	15 47 47.0	+0.2
	baz=307,SNR=22						
BVCY	Beaver Creek	75.51	26	P	P	15 47 48.0	+1.2
	baz=304,SNR=16						
CRQE	Cirque	75.53	28	P	P	15 47 47.4	+0.3
	baz=303						
TGL	Tana Glacier	75.64	28	IAmb	IAmb	15 47 49.3	
	comp=Z,25nm,0.8s						
H31M	Peel River	75.80	21	IAmb	IAmb	15 47 49.1	
	comp=Z,22nm,0.8s						
H31M	Peel River	75.80	21	P	P	15 47 48.5	+0.1
	baz=309,SNR=14						
CAN	Canberra	75.84	144	P	P	15 47 49.1	+0.1
J30M	Hart River	75.90	23	P	P	15 47 49.8	+0.6
	baz=307,SNR=15						
K29M	Barlow Dome	75.93	24	IAmb	IAmb	15 47 50.9	
	comp=Z,32nm,0.9s						
K29M	Barlow Dome	75.93	24	P	P	15 47 49.6	+0.4
	baz=306,SNR=41						
BARN	Barnard Glacie	75.95	27	IAmb	IAmb	15 47 51.6	
	comp=Z,19nm,0.7s						
CNB	Canberra Magne	76.03	144	P	P	15 47 51.1	+1.0
YUK3	Moose Creek	76.03	26	P	P	15 47 50.6	+0.6
	baz=304,SNR=9.8						
CTG	Chitna Glacier	76.14	27	P	P	15 47 51.2	+0.7
	baz=304,SNR=8.5						
CTGM	Chitina Glacie	76.14	27	IAmb	IAmb	15 47 52.7	
	comp=Z,24nm,0.8s						
L29M	L29M	76.14	25	IAmb	IAmb	15 47 53.0	
	comp=Z,47nm,1.0s						
L29M	L29M	76.14	25	P	P	15 47 51.0	+0.6
	baz=306,SNR=38						
SUMG	Summit	76.21	349	i P	P	15 47 51.0	-0.1
SUMG				IAmb	IAmb	15 47 52.5	
	comp=Z,63nm,1.1s						
C36M	Paulatuk	76.28	16	P	P	15 47 51.1	0.0
	baz=317,SNR=17						
MESA	MESA	76.32	28	P	P	15 47 52.2	+0.5
	baz=304						
MBAR	Mbarara	76.34	262	P	P	15 47 52.2	-0.3
MBAR				IAmb	IAmb	15 47 54.4	
	comp=Z,34nm,1.2s						
MBAR	Mbarara	76.34	262	d iP	P	15 47 52.8	+0.3
MBAR				pmax	pmax		
	comp=Z,23nm,1.1s						
LOGN	Logan Glacier	76.35	27	IAmb	IAmb	15 47 53.9	
	comp=Z,55nm,1.6s						
RES	Resolute Bay	76.36	5	IAmb	IAmb	15 47 53.2	
	comp=Z,20nm,1.0s						
M29M	Somme Creek	76.41	25	P	P	15 47 53.5	+1.5
	baz=306,SNR=9.9						
EKA	Eskdalemuir Ar	76.55	326	P	P	15 47 53.0	+0.3
	comp=Z,7.6nm,0.9s,baz=57,slow=6.1,SNR=7.9						
	comp=Z,7.6nm,0.9s						
YUK8	Steele Glacier	76.58	27	P	P	15 47 54.5	+1.2
	baz=305,SNR=6.1						
KULLO	Kullorsuaq	76.60	355	i P	P	15 47 52.9	+0.1
KULLO				IAmb	IAmb	15 47 54.4	
	comp=Z,42nm,1.0s						

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MAYO  Mayo, Yukon       76.66  24   P       P       15 47 54.0 +0.7
      baz=308
O28M  Mount Upton       76.71  27   P       P       15 47 55.3 +1.3
      baz=305,SNR=6.9
YUK4  Talbot Arm        76.99  26   P       P       15 47 55.9 +0.4
      baz=306
PCA   Pinnacle          77.07  28   IAmb    IAmb    15 47 58.0
      comp=Z,23nm,0.8s
PINM  Pinnacle          77.07  28   P       P       15 47 56.7 +1.0
      baz=305
CLF   Chambon-Foret     77.19 318   IAmb    IAmb    15 47 58.0
      comp=Z,50nm,1.3s
YUK6  Outpost Mounta    77.34  27   P       P       15 47 58.4 +1.0
      baz=306,SNR=5.1
N30M  Aishikik Lake     77.52  26   IAmb    IAmb    15 48 00.3
      comp=Z,20nm,0.9s
N30M  Aishikik Lake     77.52  26   P       P       15 47 59.3 +1.1
      baz=307,SNR=14
O29M  Mount Kennedy     77.63  27   P       P       15 47 60.0 +1.0
      baz=306
PNL   Peninsula         77.67  28   P       P       15 48 01.5 +2.4
PNL   Peninsula         77.67  28   P       P       15 47 59.9 +0.8
      baz=306
HYT   Haines Junctio    77.74  26   IAmb    IAmb    15 48 01.6
      comp=Z,30nm,1.2s
HYT   Haines Junctio    77.74  26   P       P       15 48 00.9 +1.3
      baz=307,SNR=9.1
DZM   Mont Dzumac       77.76 123   P       P       15 48 00.8 +0.7
DZM                                 IAmb    IAmb    15 48 03.1
      comp=Z,24nm,1.0s
DZM   Mont Dzumac       77.76 123   P       P       15 48 02.1 +1.9
N31M  Braeburn, Yuko    78.00  25   IAmb    IAmb    15 48 02.7
      comp=Z,26nm,0.8s
N31M  Braeburn, Yuko    78.00  25   P       P       15 48 02.1 +1.3
      baz=308,SNR=12
M31M  Drury Creek, Y    78.06  24   P       P       15 48 01.8 +0.6
      baz=309,SNR=5.9
KEST  Kesra             78.09 304   P       P       15 48 01.5 -0.4
      comp=Z,3.4nm,0.5s,baz=67,slow=7.5,SNR=4.3
      comp=Z,3.4nm,0.5s
O30N  Mendenhall        78.33  26   IAmb    IAmb    15 48 04.7
      comp=Z,45nm,1.4s
O30N  Mendenhall        78.33  26   P       P       15 48 04.1 +1.3
      baz=308,SNR=13
P29M  Windy Craggy      78.37  27   P       P       15 48 04.0 +1.0
      baz=307
SOEG  Soedalen          78.38 345 i P       P       15 48 02.9 +0.1
SOEG                                IAmb    IAmb    15 48 04.1
      comp=Z,42nm,0.8s
P30M  Million Dollar    78.39  27   P       P       15 48 04.1 +1.0
      baz=308
FARO  Faro, Yukon       78.42  24   P       P       15 48 03.6 +0.4
      baz=310
WHY   Whitehorse        78.86  26   P       P       15 48 06.3 +0.5
      baz=309
MMPY  Sheldon Lake,     78.90  23   P       P       15 48 07.0 +1.2
      baz=312,SNR=13
PLBC  Pleasant Camp     79.03  27   P       P       15 48 07.3 +0.8
      baz=308
POIN  Pond Inlet        79.15   1   IAmb    IAmb    15 48 08.9
      comp=Z,22nm,0.9s
N32M  Quiet Lake        79.22  25   P       P       15 48 08.1 +0.5
      baz=311
ICESG Greenland Ices    79.39 348 i P       P       15 48 07.7 -1.0
ICESG                               IAmb    IAmb    15 48 09.9
      comp=Z,67nm,1.2s
SKAG  Skagway           79.44  27   IAmb    IAmb    15 48 11.1
      comp=Z,27nm,0.8s
SKAG  Skagway           79.44  27   P       P       15 48 09.3 +0.5
      baz=309,SNR=9.0
P33M  Teslin, Yukon     79.93  25   P       P       15 48 12.4 +0.8
      baz=311,SNR=8.4
P32M  Atlin             80.00  26   P       P       15 48 13.2 +1.3
      baz=310,SNR=5.1
S31K  Pelican           80.02  28   P       P       15 48 12.9 +1.0
      baz=308
R32K  Eaglecrest        80.53  27   P       P       15 48 15.3 +0.6
      baz=310,SNR=6.7
TGTN  Hyland Airport    80.68  23   P       P       15 48 17.1 +1.6
      baz=314
SIT   Sitka             80.97  29   P       P       15 48 18.8 +1.8
      baz=309
Q32M  Nakina River      80.97  26   P       P       15 48 18.8 +1.4
      baz=312
WRGLY Wrigley           80.99  20   P       P       15 48 18.8 +1.8
      baz=318
S32K  Killisnoo         81.02  28   P       P       15 48 18.8 +1.6
      baz=310
R33M  Jennings River    81.18  25   P       P       15 48 19.9 +1.6
      baz=312,SNR=11
S34M  Telegraph Cree    82.12  27   P       P       15 48 24.7 +1.6
      baz=313,SNR=6.6
DLBC  Dease Lake        82.19  26   IAmb    IAmb    15 48 26.1
      comp=Z,37nm,1.4s
DLBC  Dease Lake        82.19  26   P       P       15 48 24.7 +1.1
      baz=313,SNR=8.3
ILON  Igloolik, Nuna    82.39   2   IAmb    IAmb    15 48 25.7
      comp=Z,30nm,1.1s
U33K  Whale Pass        82.51  29   P       P       15 48 26.7 +1.5
      baz=311
WRAK  Wrangell Islan    82.63  28   IAmb    IAmb    15 48 28.0
      comp=Z,27nm,0.8s
WRAK  Wrangell Islan    82.63  28   P       P       15 48 26.3 +0.4
      baz=312,SNR=5.7
BEAVL Fort Liard        82.74  23   P       P       15 48 27.2 +0.8
      baz=317
CRAG  Craig             82.93  29   P       P       15 48 28.8 +1.4
CRAG  Craig             82.93  29   P       P       15 48 28.6 +1.2
      baz=311
LIRD  Liard River Hi    82.94  24   P       P       15 48 28.2 +0.8
      baz=316
SFJD  Kangerlussuaq     83.10 351   P       P       15 48 28.0 -0.1
SFJD  Kangerlussuaq     83.10 351   P       P       15 48 28.0 -0.1
SFJD                                pmax    pmax
      comp=Z,45nm,0.8s
SFJD  Kangerlussuaq     83.10 351 i P       P       15 48 27.9 -0.1
SFJD                                IAmb    IAmb    15 48 29.2
      comp=Z,45nm,0.8s
T35M  Bob Quinn         83.10  27   IAmb    IAmb    15 48 31.0
      comp=Z,34nm,1.4s
T35M  Bob Quinn         83.10  27   P       P       15 48 29.2 +0.8
      baz=313,SNR=7.6
KOTAN Kotaneelee Air    83.12  22   P       P       15 48 28.9 +0.6
      baz=318
TOAD  Toad River Com    83.66  24   P       P       15 48 31.6 +0.4
      baz=317,SNR=18
YKA   Yellowknife Ar    84.07  17   P       P       15 48 32.1 -1.1
YKA   Yellowknife Ar    84.07  17   P       P       15 48 33.9 +0.7
      comp=Z,10nm,0.8s,baz=328,slow=5.2,SNR=22
      comp=Z,10nm,0.8s
MSVF  Nonsavu           84.29 114   LR      LR      16 21 27.3
      comp=Z,344nm,21.6s,baz=314,slow=32
ESDC  Sonseca Array     85.32 313   P       P       15 48 38.8 -1.2
ESDC  Sonseca Array     85.32 313   P       P       15 48 40.1 +0.1
      comp=Z,3.7nm,0.9s,baz=42,slow=5.7,SNR=26
ESDC                                PP      PP      15 51 57.0 -0.3
      comp=Z,3.8nm,1.2s,baz=57,slow=8.6,SNR=7.0
      comp=Z,3.7nm,0.9s
LSZ   Lusaka            85.86 250   P       P       15 48 42.3 -0.7
LSZ   Lusaka            85.86 250   P       P       15 48 42.3 -0.7
LSZ                                 pmax    pmax
      comp=Z,63nm,1.1s
MVO   Moncorvo          86.42 315   eP      P       15 48 46.1 +0.7
MVO                                 i Amb           15 48 51.1
      comp=Z,12nm,1.2s
PGAV  Gavieira, Arco    86.72 317   eP      P       15 48 50.5 +3.5
PGAV                                i Amb           15 49 06.2
      comp=Z,22nm,1.8s
PCAB  Cabril            86.72 316   eP      P       15 48 47.8 +0.9
PCAB                                i Amb           15 49 05.5
      comp=Z,24nm,1.6s
POLO  Lamas de Olo      86.78 316   eP      P       15 48 47.8 +0.6
POLO                                i Amb           15 48 49.8
      comp=Z,22nm,1.7s
MTE   Manteigas         87.18 315   eP      P       15 48 50.1 +1.0
MTE                                 i Amb           15 48 51.1
      comp=Z,16nm,1.0s
PVIS  Viseu             87.22 315   eP      P       15 48 50.5 +1.2
BBB   Bella Bella       87.35  29   LR      LR      16 29 30.4
      comp=Z,359nm,18.5s,baz=345,slow=37
PCBR  Castelo Branco    87.47 315   eP      P       15 48 52.0 +1.6
PCBR                                i Amb           15 49 16.7
      comp=Z,12nm,1.6s
PMRV  Marv??o           87.65 314   eP      P       15 48 52.1 +0.7
PMRV                                i Amb           15 48 55.6
      comp=Z,18nm,1.7s
PSARD Sardoal           88.03 315   eP      P       15 48 54.0 +0.7
PSARD                               i Amb           15 48 56.1
      comp=Z,24nm,1.3s
IVI   Ivigtut           88.06 347 i P       P       15 48 52.1 -0.7
IVI                                 IAmb    IAmb    15 48 53.4
      comp=Z,19nm,0.7s
PBAR  Barrancos         88.15 313   eP      P       15 48 54.8 +1.1
PBAR                                i Amb           15 48 56.9
      comp=Z,40nm,1.6s
MATP  Matopo            88.24 246   LR      LR      16 27 30.5
      comp=Z,122nm,20.5s,baz=11,slow=35
PMTG  Montargil         88.39 314   eP      P       15 48 55.5 +0.6
PMTG                                i Amb           15 48 59.2
      comp=Z,13nm,1.2s
EVO   Evora             88.56 314   eP      P       15 48 56.9 +1.2
EVO                                 i Amb           15 49 00.1
      comp=Z,14nm,1.4s
PBEJ  Beja              88.76 313   eP      P       15 48 57.5 +0.8
PBEJ                                i Amb           15 49 16.5
      comp=Z,16nm,1.4s
MESJ  Messejana         89.10 313   eP      P       15 48 58.9 +0.7
MESJ                                IAmb    IAmb    15 48 59.8
      comp=Z,14nm,0.8s
MESJ  Messejana         89.10 313   eP      P       15 48 59.3 +1.0
MESJ                                i Amb           15 49 00.3
      comp=Z,21nm,1.1s
LLLB  Lillooet          91.14  28   IAmb    IAmb    15 49 10.1
      comp=Z,20nm,1.1s
FCC   Fort Churchill    91.74  10   IAmb    IAmb    15 49 11.6
      comp=Z,21nm,1.1s
KDWAN Kaudwane          92.80 245   IAmb    IAmb    15 50 06.8
      comp=Z,23nm,1.6s
LBTB  Lobatse           92.87 243   IAmb    IAmb    15 49 18.9
      comp=Z,12nm,1.1s
LBTB  Lobatse           92.87 243   LR      LR      16 28 53.1
      comp=Z,432nm,21.6s,baz=0.5,slow=34
FFC   Flin Flon         94.05  15   P       P       15 49 19.8 -1.0
FFC   Flin Flon         94.05  15   P       P       15 49 19.8 -1.0
FFC                                 pmax    pmax
      comp=Z,9.0nm,1.1s
CASY  Casey             94.48 178   P       P       15 49 21.4 -0.9
CASY                                IAmb    IAmb    15 49 23.4
      comp=Z,10nm,0.9s
BOSA  Boshof            94.91 240   P       P       15 49 23.9 -1.5
      comp=Z,4.4nm,0.7s,baz=67,slow=3.0,SNR=14
BOSA                                LR      LR      16 31 08.5
      comp=Z,152nm,19.9s,baz=0.5,slow=35
      comp=Z,4.4nm,0.7s
TORD  Torodi Ar. Bea    95.07 288   P       P       15 49 24.5 -1.8
TSUM  Tsumeb            96.61 252   LR      LR      16 33 55.1
      comp=Z,318nm,20.1s,baz=346,slow=36
SCHQ  Schefferville     96.80 355   P       P       15 49 33.0 -0.4
      comp=Z,4.2nm,0.7s,baz=22,slow=7.7,SNR=5.8
      comp=Z,4.2nm,0.7s
EGMT  Eagleton          97.81  23   IAmb    IAmb    15 49 42.1
      comp=Z,11nm,1.3s
TXAR  Lajitas Array    116.44  28   PKP     PKPdf   15 54 46.6 -0.5
      comp=Z,1.6nm,0.8s,baz=204,slow=1.0,SNR=18
QSPA  South Pole Qui   118.19 180   PKP     PKPdf   15 54 48.4 -0.8
      comp=Z,11nm,0.9s,baz=300,slow=0.9,SNR=23
TROLL Troll, Antarti   120.55 201 ⇓PKPdf    PKPdf   15 54 53.1 -0.5
      comp=Z,349nm,0.5s
SNAA  Sanae            122.25 201 ⇓PKPdf    PKPdf   15 54 55.2 -1.6
      comp=Z,97nm,0.6s
SNAA  Sanae            122.25 201   PKP     PKPdf   15 54 55.6 -1.2
      comp=Z,4.1nm,0.6s,baz=177,slow=4.5,SNR=48
SNAA  Sanae            122.25 201⇓iPKIKP    PKPdf   15 54 56.5 -0.3
SNAA                                pmax    pmax
      comp=Z,8.0nm,1.3s
VNA2  Neumayer--Watz   123.82 201 ⇓PKPdf    PKPdf   15 54 58.8 -0.9
      comp=Z,21nm,0.6s,baz=106,slow=1.9
VNA1  Neumayer--Stat   124.16 202 ⇑PKPdf    PKiKP   15 55 00.9 +0.2
      comp=Z,17nm,0.8s
VNA3  Neumayer Olymp   124.48 201 ⇓PKPdf    PKPdf   15 54 59.8 -1.2
      comp=Z,17nm,0.8s
BAUV  El Baul          142.24 348           PKPpre  15 55 30.5
SDV   Santo Domingo    142.67 353   eP      PKPdf   15 55 35.9 -1.1
ROSC  El Rosal         146.94 358   PKPbc   PKPbc   15 55 46.4 -0.1
      comp=Z,183nm,0.9s,baz=70,slow=2.2,SNR=17
JANB  Januaria         148.54 288   eP      PKPdf   15 55 46.0 -0.7
OTAV  Otavalo          151.34   7   eP      PKPdf   15 55 50.9 -0.9
BDFB  Brasilia         151.90 291   PKP     PKPdf   15 55 51.8 -0.3
      comp=Z,3.1nm,0.7s,baz=136,slow=4.4,SNR=3.6
SIV   San Ignacio      162.07 311   PKP     PKPdf   15 56 05.3 +0.4
      comp=Z,3.3nm,0.8s,baz=101,slow=4.1,SNR=12
SIV                                 PKPab   PKPab   15 56 50.3 -0.9
      comp=Z,1.6nm,0.5s,baz=69,slow=5.3,SNR=5.4
CPUP  Villa Florida    164.04 273   PKP     PKPdf   15 56 06.2 -0.3
      comp=Z,3.1nm,1.2s,baz=89,slow=0.5,SNR=7.6
CPUP                                PKPab   PKPab   15 56 59.2 -0.5
      comp=Z,0.9nm,0.9s,baz=298,slow=5.3,SNR=3.9
LPAZ  La Paz           166.31 330   PKP     PKPdf   15 56 10.1 +0.6
      comp=Z,6.2nm,1.0s,baz=28,slow=1.9,SNR=16
PLCA  Paso Flores      167.13 196   PKP     PKPdf   15 56 08.1 -0.6
      comp=Z,4.8nm,1.0s,baz=186,slow=4.1,SNR=7.2
PLCA                                PKPab   PKPab   15 57 12.1 -0.7
      comp=Z,2.0nm,0.7s,baz=174,slow=5.7,SNR=5.1
PLCA  Paso Flores      167.13 196   eP      PKPdf   15 56 09.1 +0.4
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*IDC **17** 15:41:36.3±1.5, 28°.29N×104°.92E, h0^{km}, mb3.8/4, mbtmp3.8/4, MS4.8/1, Error ellipse: s-maj=53.0km s-min=28.7km az=66.0*

*NEIC **17** 15:41:37.7±0.9, 28°.32N±0°.10×104°.8E±0°.1, h10^{km}±1^{km}, mb4.7/12, Error ellipse: s-maj=22.2km s-min=14.5km az=119.0*

ISC 17 15:41:38.9±0.7**, 28°.31N**±0°.10×**104°.8E**±0°.1**, h19^{km}, n23, σ0^{s}.60**/22**, mb4.6**/10**, Sichuan**

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Code  Station Name         Δ°   AZ°    Phase ID          Time      Res
                                    Op      ISC       h  m  s     ISC
ENH   Enshi              4.53  63   Pn      Pn      15 42 47.5 +1.1
SLVN  Son La             6.99 187   Pn      Pn      15 43 20.5 +0.1
MKAR  Makanchi Array    25.53 322   P       P       15 47 06.4 +0.2
MKAR  Makanchi Array    25.53 322   P       P       15 47 07.2 +1.0
      0.9nm,0.7s,baz=131,slow=9.5,SNR=2.1
      0.9nm,0.7s
USRK  Ussuriysk Ar.     26.88  47   P       P       15 47 18.3 -0.1
      1.2nm,0.6s,baz=251,slow=8.6,SNR=2.7
      1.2nm,0.6s
ARTI  Arti              43.11 324   P       P       15 49 38.0 +0.3
BELG  Belogornoye       48.27 316   LR      LR      16 10 43.3
      comp=Z,923nm,19.9s,baz=57,slow=36
WB0   Warramunga Arr    55.70 146   P       P       15 51 13.9 -0.3
WRA   Warramunga Arr    55.82 146   P       P       15 51 14.9 -0.1
      0.7nm,0.6s,baz=336,slow=7.6,SNR=6.7
      0.7nm,0.6s
WR8   Warramunga Arr    55.91 146   P       P       15 51 15.6 -0.1
WR8                                 IAmb    IAmb    15 51 29.1
      comp=Z,14nm,1.4s
ASAR  Alice Springs     58.79 149   P       P       15 51 36.2 +0.1
      comp=Z,0.6nm,0.7s,baz=335,slow=8.3,SNR=2.0
      comp=Z,0.6nm,0.7s
ARCES ARCESS Array B    60.06 336   P       P       15 51 44.1 -0.1
BORA  Eskisehir         61.04 302   P       P       15 51 51.1 -0.4
BORA                                IAmb    IAmb    15 52 32.2
      comp=Z,5.9nm,1.1s
KIWB  Kanaga Island     61.09  44   P       P       15 51 50.1 -1.4
GSTR  Great Sitkin T    61.71  43   P       P       15 51 54.6 -1.1
C19K  Lookout Ridge     65.83  23   P       P       15 52 22.3 -0.3
C19K                                IAmb    IAmb    15 52 58.6
      comp=Z,6.2nm,1.3s
B20K  Meade River       66.38  22   P       P       15 52 26.3 +0.3
D20K  Etivluk River     66.97  23   P       P       15 52 29.9  0.0
D20K                                IAmb    IAmb    15 53 05.8
      comp=Z,10nm,1.5s
G21K  Allakaket         68.86  25   P       P       15 52 41.7 -0.1
G21K                                IAmb    IAmb    15 52 49.9
      comp=Z,8.0nm,1.4s
SKT   Skwentna          71.48  29   P       P       15 52 57.5 -0.5
BMAR  Burnt Mountain    71.61  22   P       P       15 52 59.1 +0.4
SUA   Susitna One       72.05  29   P       P       15 53 01.4 -0.2
VOI   Vohitsoka         75.01 235   P       P       15 53 19.8 +0.3
VOI                                 IAmb    IAmb    15 53 45.8
      comp=Z,15nm,1.2s
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*IDC **17** 16:01:58.1±1.4, 31°.10S×177°.26W, h0^{km}, mb3.9/4, mbtmp4.0/7, ML3.4/3, Error ellipse: s-maj=35.9km s-min=30.1km az=69.0*

ISC 17 16:02:03.5±1.2**, 31°.2S**±0°.1×**177°.5W**±0°.2**, h27^{km}, n14, σ1^{s}.45**/15**, mb3.9**/7**, 5C, Kermadec Islands region**

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Code  Station Name         Δ°   AZ°    Phase ID          Time      Res
                                    Op      ISC       h  m  s     ISC
URZ   Urewera            8.29 211   Pn      Pn      16 04 02.2 +0.2
      0.5nm,0.3s,baz=354,slow=4.1,SNR=7.8
URZ                                 Sn      Sn      16 05 33.6 -1.1
      1.5nm,0.3s,baz=222,slow=18,SNR=11
      7.7nm,0.9s
RPZ   Rata Peaks        15.40 213   Pn      Pn      16 05 39.3 +0.4
      0.4nm,0.3s,baz=53,slow=14,SNR=1.3
      21nm,1.0s
DZM   Mont Dzumac       16.98 299   P       Pn      16 05 59.1 -0.1
      baz=116,slow=16,SNR=2.3
      3.2nm,1.0s
STKA  Stephens Creek    34.70 258   P       P       16 08 52.1 +0.9
      2.3nm,0.7s,baz=99,slow=13,SNR=6.2
      2.3nm,0.7s
ASAR  Alice Springs     43.48 268   P       P       16 10 05.1 +0.3
      0.7nm,0.4s,baz=106,slow=7.4,SNR=30
      0.7nm,0.4s
QSPA  South Pole Qui    58.89 180   P       P       16 11 59.5 -0.3
      0.7nm,0.7s,baz=18,slow=7.6,SNR=1.6
      0.7nm,0.7s
TROLL Troll, Antarti    77.05 180 ⇑P        P       16 13 52.1 -1.7
      comp=Z,40nm,1.0s
SNAA  Sanae             77.32 178 ⇑P        P       16 13 57.9 +2.6
      comp=Z,12nm,0.8s
SNAA  Sanae             77.32 178   P       P       16 13 55.3  0.0
      comp=Z,0.6nm,0.9s,baz=212,slow=9.5,SNR=2.2
      comp=Z,0.6nm,0.9s
VNA3  Neumayer Olymp    77.46 176 ⇑P        P       16 13 57.3 +1.3
      comp=Z,2.1nm,0.8s
VNA2  Neumayer--Watz    77.89 177 ⇑P        P       16 13 58.9 +0.5
      comp=Z,0.8nm,0.7s,baz=164,slow=4.0
VNA1  Neumayer--Stat    78.12 176 ⇑P        P       16 14 01.9 +2.3
      comp=Z,3.5nm,0.9s
FINES FINESS Array B   146.06 340   PKPbc   PKPdf   16 21 39.1 -0.2
      comp=Z,1.0nm,0.4s,baz=56,slow=3.4,SNR=14
AKASG Malin Array Be   152.21 322   PKPbc   PKPbc   16 21 53.8 -2.4
      comp=Z,0.3nm,0.5s,baz=53,slow=2.9,SNR=4.4
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*IDC **17** 16:06:44.5±0.8, 6°.27S×130°.93E, h0^{km}, mb3.9/7, mbtmp4.1/12, ML4.4/5, Error ellipse: s-maj=23.4km s-min=16.7km az=83.0*

*NEIC **17** 16:06:53.7±1.3, 6°.26S±0°.07×130°.8E±0°.2, h77^{km}±15^{km}, mb4.1/3, Error ellipse: s-maj=25.0km s-min=10.3km az=96.0*

*DJA **17** 16:06:54.4±0.3, 6°S±2°×13°1E±°, h58^{km}±27^{km}, M4.6/13, mB5.2/5, mb4.6/8, MLv4.6/13, Mw(mB)4.7/5*

ISC 17 16:06:52.3±0.6**, 6°.28S**±0°.05×**130°.92E**±0°.06**, h62^{km}, n42, σ2^{s}.38**/47**, mb3.9**/9**, Banda Sea**

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Code  Station Name         Δ°   AZ°    Phase ID          Time      Res
                                    Op      ISC       h  m  s     ISC
SAUI  Saumlaki           1.73 168   Pn      Pn      16 07 23.9 +3.7
SAUI                                Sn      Sn      16 07 43.9 +2.6
SAUI  Saumlaki           1.73 168   P       Pn      16 07 23.3 +3.1
SAUI                                S       Sn      16 07 44.1 +2.8
BNDI  Bandanaira         2.02 330   P       Pn      16 07 25.2 +1.2
MSAI  Masohi             3.53 326   P       Pn      16 07 46.9 +2.3
FAKI  Fak Fak            3.59  22   Pn      Pn      16 07 46.6 +1.1
FAKI  Fak Fak            3.59  22   P       Pn      16 07 46.0 +0.5
FAKI                                S       Sn      16 08 26.3 -0.4
AAI   Ambon              3.75 313   P       Pn      16 07 49.6 +2.0
NLAI  Namlea             4.86 308   P       Pn      16 08 07.4 +4.5
SWI   Sorong             5.39   4   P       Pn      16 08 09.8 -0.4
      0.5nm3µm58nm,0.5s
RKPI  Ransiki, Papua     5.74  35   P       Pn      16 08 16.6 +1.6
SANI  Sanana             6.47 310   P       Pn      16 08 27.8 +2.8
      0.1nm42nm,0.9s
MTN   Manton Dam         6.53 178           Pn      16 08 26.4 +0.7
BAKI  Biak               7.23  46   P       Pn      16 08 38.4 +3.0
      0.3nm50nm,0.6s
SOEI  Soe                7.44 242   Pn      Pn      16 08 38.8 +0.4
BATI  Baumata            8.18 241   Pn      Pn      16 08 46.3 -2.1
      2.7nm,0.3s,baz=149,slow=3.2,SNR=10
BATI                                Sn      Sn      16 10 17.6 -1.7
      4.3nm,0.3s,baz=258,slow=23,SNR=2.3
      5.9nm,0.4s
BATI  Baumata            8.18 241   P       Pn      16 08 51.6 +3.2
EDFI  Ende, Flores       9.48 254   P       Pn      16 09 09.3 +3.1
KNRA  Kununurra          9.58 193           Pn      16 09 06.5 -1.0
JAY   Jayapura          10.44  69   Pn      Pn      16 09 16.2 -3.1
      0.6nm,0.3s,baz=219,slow=10,SNR=5.0
JAY                                 Sn      Sn      16 11 14.2 -0.7
      0.1nm,0.3s,baz=147,slow=12,SNR=2.9
      4.6nm,0.8s
FITZ  Fitzroy Crossi    12.83 203           Pn      16 09 47.9 -4.0
FITZ  Fitzroy Crossi    12.83 203   Pn      Pn      16 09 48.9 -3.1
      3.3nm,0.3s,baz=23,slow=8.1,SNR=60
FITZ                                Sn      Sn      16 12 00.3  -13
      3.7nm,0.3s,baz=99,slow=20,SNR=8.5
      12nm,0.4s
WB0   Warramunga Arr    13.82 166           Pn      16 10 01.6 -3.8
WRA   Warramunga Arr    13.98 167           Pn      16 10 03.1 -4.4
WRA   Warramunga Arr    13.98 167   Pn      Pn      16 10 03.6 -3.8
      3.1nm,0.3s,baz=337,slow=14,SNR=73
WRA                                 Sn      Sn      16 12 30.2  -11
      1.5nm,0.3s,baz=338,slow=24,SNR=6.4
      5.8nm,0.5s
WR8   Warramunga Arr    14.03 166           Pn      16 10 04.1 -4.0
COEN  Coen              14.26 123           Pn      16 10 10.5 -0.7
ASAR  Alice Springs     17.52 171   Pn      Pn      16 10 49.6 -2.9
ASAR  Alice Springs     17.52 171   P       Pn      16 10 50.6 -1.9
      2.5nm,0.3s,baz=346,slow=13,SNR=75
ASAR                                S       Sn      16 13 53.3  -14
      4.0nm,0.5s,baz=358,slow=27,SNR=8.9
      5.0nm,0.5s
MBWA  Marble Bar        18.34 215   P       P       16 11 01.1 -0.8
MBWA                                IAmb    IAmb    16 11 03.1
      comp=Z,11nm,0.4s
PSA00 Pilbara Seismi    18.60 214   P       P       16 11 03.5 -1.2
PSA00                               IAmb    IAmb    16 11 06.6
      comp=Z,4.8nm,0.6s
STKA  Stephens Creek    27.35 160   P       P       16 12 32.6 +1.0
      comp=Z,1.0nm,0.5s,baz=324,slow=14,SNR=1.4
      comp=Z,1.0nm,0.5s
CMAR  Chiang Mai Arr    39.99 309   P       P       16 14 21.4 +0.2
      comp=Z,0.8nm,0.6s,baz=134,slow=7.7,SNR=6.1
      comp=Z,0.8nm,0.6s
PZH   PanZhiHua         43.15 320   P       P       16 14 49.6 +2.4
KSRS  Korea Array       43.60 357   P       P       16 14 49.4 -0.9
      comp=Z,0.6nm,0.5s,baz=179,slow=7.6,SNR=4.2
      comp=Z,0.6nm,0.5s
HHC   Hu-ho-hao-te      50.16 341   eP      P       16 15 44.1 +2.4
HHC                                 pmax    pmax
      comp=Z,17nm,0.5s
HHC                                 pmax    pmax
      comp=Z,210nm,6.2s
USRK  Ussuriysk Ar.     50.25   1   P       P       16 15 42.9 +0.7
      comp=Z,0.8nm,0.6s,baz=177,slow=6.7,SNR=5.4
      comp=Z,0.8nm,0.6s
MKAR  Makanchi Array    68.13 326   P       P       16 17 45.0 -0.8
MKAR  Makanchi Array    68.13 326   P       P       16 17 46.6 +0.7
      comp=Z,0.9nm,0.4s,baz=111,slow=8.5,SNR=16
      comp=Z,0.9nm,0.4s
MAKZ  Makanchi          68.32 326   P       P       16 17 46.5 -0.5
MAKZ                                IAmb    IAmb    16 18 13.8
      comp=Z,1.6nm,0.7s
KURBB Kurchatov Arra    72.38 328   P       P       16 18 12.2 +0.6
      comp=Z,0.5nm,0.8s,baz=127,slow=4.7,SNR=4.7
      comp=Z,0.5nm,0.8s
QSPA  South Pole Qui    83.69 180   P       P       16 19 14.0 -0.2
      comp=Z,3.6nm,1.2s,baz=139,slow=0.5,SNR=7.9
      comp=Z,3.6nm,1.2s
LPAZ  La Paz           150.70 140   PKPbc   PKiKP   16 26 40.6 +0.7
      comp=Z,1.1nm,0.4s,baz=208,slow=1.5,SNR=6.6
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*JMA **17** 16:07:33.1±0.1, 23°.8N±0°.6×122°.9E±0°.5, h45^{km}, MV2.3/13, NEAR ISHIGAKIJIMA ISLAND*

*TAP **17** 16:07:33.2, 23°.81N×122°.98E, h51^{km}, ML2.8, D*

ISC 17 16:07:33.0±1.2**, 23°.68N**±0°.03×**122°.98E**±0°.03**, h35^{km}, n62, σ1^{s}.30**/102**, 1C, Taiwan region**

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Code  Station Name         Δ°   AZ°    Phase ID          Time      Res
                                    Op      ISC       h  m  s     ISC
EOS4  EOS4               0.75 306   P       Pn      16 07 46.6 -0.1
EOS4                                S       Sn      16 07 56.7 -0.1
JYNG  Yonagunijimaku     0.77 358   P       Pn      16 07 46.3 -1.1
JYNG                                eS      Sn      16 07 55.4 -2.4
YOJ   Yonaguni jima      0.78   2   eP      Pn      16 07 46.7 -0.8
YOJ                                 eS      Sn      16 07 56.2 -1.8
YOJ   Yonaguni jima      0.78   2 ⇑iP       Pn      16 07 46.7 -0.8
YOJ                                 S       Sn      16 07 56.7 -1.3
HATJ  Hateruma jima      0.84  63   P       Pn      16 07 48.9 +0.5
HATJ                                eS      Sn      16 07 59.9 +0.3
EOS3  EOS3               0.86 315   P       Pn      16 07 48.5 +0.1
EOS3                                S       Sn      16 07 59.9 +0.2
IRIF  Iriomote-Funau     0.95  46   P       Pn      16 07 50.1 +0.2
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EOS2	EOS2	1.01	317	*e*P	Pn	16 07 51.5	+1.0
EOS2				*e*S	Sn	16 08 04.3	+0.9
JKRS	Kuro-shima	1.09	59	*e*P	Pn	16 07 52.6	+0.8
JKRS				*e*S	Sn	16 08 07.3	+1.6
JIJ	Ishigaki jima	1.26	57	*e*P	Pn	16 07 54.3	+0.1
JIJ				*e*S	Sn	16 08 09.9	0.0
TEYL	Yanliau Villag	1.28	279	*e*S	Sn	16 08 09.6	-0.8
SHUL	Shoufeng	1.30	275	*e*P	Pn	16 07 55.1	+0.3
SHUL				*e*S	Sn	16 08 10.2	-0.8
TWD	Chiawan	1.33	288	*e*P	Pn	16 07 55.0	-0.1
TWD				*e*S	Sn	16 08 09.6	-2.0
EWUT	Wuta	1.34	305	*e*P	Pn	16 07 54.9	-0.3
EWUT				*e*S	Sn	16 08 11.3	-0.5
ENA	Nanau	1.36	304	*e*P	Pn	16 07 55.3	-0.2
NACB	Ninganchiao	1.36	291	*e*P	Pn	16 07 55.1	-0.5
NACB				*e*S	Sn	16 08 10.4	-2.0
TWC	Suao	1.39	312	*e*P	Pn	16 07 56.7	+0.8
HGSD	Ruisui	1.44	263	*e*P	Pn	16 07 56.0	-0.7
HGSD				*e*S	Sn	16 08 12.4	-2.0
WARBT	Fenglin Townsh	1.46	272	*e*P	Pn	16 07 56.3	-0.7
WARBT				*e*S	Sn	16 08 13.0	-1.9
ETLH	Xiulin Townshi	1.47	291	*e*P	Pn	16 07 57.1	0.0
ETLH				*e*S	Sn	16 08 13.4	-1.7
LXIB	Xiulin Townshi	1.48	284	*e*P	Pn	16 07 57.1	-0.1
EHYH	Wanrong	1.51	263	*e*P	Pn	16 07 57.6	0.0
EHYH				*e*S	Sn	16 08 15.5	-0.6
JISG	Ishigakijimahi	1.51	53	*e*P	Pn	16 07 57.4	-0.2
JISG				*e*S	Sn	16 08 15.0	-1.2
EHY	Hungye	1.53	264	*e*P	Pn	16 07 57.9	0.0
EHY				*e*S	Sn	16 08 15.8	-0.9
YULB	Yu-li	1.57	260	*e*P	Pn	16 07 58.4	-0.1
YULB				*e*S	Sn	16 08 17.0	-0.6
LATG	Datong	1.58	303	*e*P	Pn	16 07 58.9	+0.3
LATG				*e*S	Sn	16 08 17.3	-0.7
TWF1	Yuli	1.58	258	*e*P	Pn	16 07 58.3	-0.3
TWF1				*e*S	Sn	16 08 17.2	-0.6
TWE	Neicheng	1.59	311	*e*P	Pn	16 07 58.9	+0.3
ENTT	Nioudou	1.61	307	*e*P	Pn	16 07 59.3	+0.3
FULB	Fuli	1.62	253	*e*P	Pn	16 07 58.7	-0.5
FULB				*e*S	Sn	16 08 17.6	-1.3
WHF	Hehuan Shan	1.64	287	*e*P	Pn	16 07 59.5	-0.3
WHF				*e*S	Sn	16 08 17.9	-2.0
NNSB	Datong	1.64	297	*e*P	Pn	16 07 59.7	+0.2
NNSB				*e*S	Sn	16 08 18.7	-0.8
NNS	Nan Shan	1.65	298	*e*S	Sn	16 08 18.9	-0.9
TIPB	Shuangxi	1.66	321	*e*P	Pn	16 08 00.0	+0.3
FUSB	Fushanzhiwuyua	1.67	310	*e*P	Pn	16 08 00.4	+0.5
FUSB				*e*S	Sn	16 08 19.9	-0.1
OWD	Renai	1.68	280	*e*P	Pn	16 07 59.9	-0.1
OWD				*e*S	Sn	16 08 18.7	-1.7
FUSS	Fushou	1.69	290	*e*P	Pn	16 08 00.3	0.0
FUSS				*e*S	Sn	16 08 20.4	-0.4
VWDT	VWDT	1.69	273	*e*P	Pn	16 07 60.0	-0.1
VWDT				*e*S	Sn	16 08 19.6	-0.9
EDH	Donghe	1.69	246	*e*P	Pn	16 08 00.2	+0.1
EDH				*e*S	Sn	16 08 18.7	-1.9
EHD	Haiduan	1.71	252	*e*P	Pn	16 08 00.5	0.0
EHD				*e*S	Sn	16 08 20.1	-1.0
SXI1	Grass Mountain	1.73	325	*e*P	Pn	16 08 00.8	+0.1
WUSB	Renai	1.73	281	*e*P	Pn	16 08 01.0	+0.2
WUSB				*e*S	Sn	16 08 19.9	-1.9
YHNB	Yeheng	1.77	304	*e*P	Pn	16 08 01.4	+0.2
NSK	Sanguang	1.78	304	*e*P	Pn	16 08 01.8	+0.3
JTJ	Tarama	1.84	58	*e*P	Pn	16 08 02.9	+0.7
WCS	Beigang Elemen	1.93	282	*e*P	Pn	16 08 06.3	+2.9
WCS				*e*S	Sn	16 08 30.3	+3.9
NFF	Wufeng Townshi	1.95	300	*e*P	Pn	16 08 05.3	+1.6
NFF				*e*S	Sn	16 08 27.9	+0.9
WHP	Taichung City	1.96	288	*e*P	Pn	16 08 05.7	+1.9
WHP				*e*S	Sn	16 08 27.5	+0.4
KSHI	Guanxi Townshi	1.98	304	*e*P	Pn	16 08 05.1	+1.1
LIOB	Emei	2.04	299	*e*P	Pn	16 08 06.4	+1.5
LIOB				*e*S	Sn	16 08 29.3	+0.2
LAY	Lan-yu	2.10	219	*e*P	Pn	16 08 05.5	-0.3
LAY				*e*S	Sn	16 08 27.1	-3.5
LYUB	Lan-yu	2.11	218	*e*P	Pn	16 08 06.2	+0.3
LYUB				*e*S	Sn	16 08 28.5	-2.3
PCYT	Pengchaiyu	2.11	337	*e*P	Pn	16 08 06.0	+0.1
ECL	Taimali	2.15	240	*e*S	Sn	16 08 30.6	-1.4
TPUB	Ta-pu	2.19	261	*e*P	Pn	16 08 09.3	+2.3
TPUB				*e*S	Sn	16 08 34.4	+1.5
WTP	Ta-pu	2.22	259	*e*P	Pn	16 08 09.3	+1.9
TWK	Hsinying	2.33	260	*e*P	Pn	16 08 10.7	+1.8
SNST	Tainan City	2.33	259	*e*P	Pn	16 08 11.9	+3.1
SNST				*e*S	Sn	16 08 38.9	+2.7
EAST	Anshuo	2.35	237	*e*P	Pn	16 08 10.6	+1.4
SSD	Sandimen	2.35	247	*e*P	Pn	16 08 12.4	+3.2
MASBT	Mashibuluo	2.41	244	*e*P	Pn	16 08 10.9	+1.0
SLIU	Shizi	2.48	235	*e*P	Pn	16 08 12.3	+1.3

IDC ***17*** *16:29:06.1±0.5, 28°.34N×104°.83E, h0^{km}, mb4.4/23, mbtmp4.4/24, ML4.2/1, MS4.0/3, Error ellipse: s-maj=20.5km s-min=11.4km az=48.0*

BJI ***17*** *16:29:08.0, 28°.43N×104°.93E, h8^{km}, mB4.7/10, mb4.5/44, ML4.4/21, Ms4.2/41, Ms7 4.1/47*

NEIC ***17*** *16:29:08.7±1.5, 28°.49N±0°.07×104°.92E±0°.08, h10^{km}±1^{km}, mb4.7/94, Error ellipse: s-maj=12.0km s-min=11.6km az=117.0*

ISC 17 16:29:09.3±0.3**, 28°.39N**±0°.03×**104°.92E**±0°.04**, h19**^{km}**, n377,** σ**1**^{s}.**17**/361**, mb4.6**/70**, MS4.0**/5**, 3C-1D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GYA	Guiyang	2.47	141	⇓Pn	Pb	16 29 51.3	-1.9
GYA				smax	smax		
	comp=N,3µm,0.6s						
GYA				smax	smax		
	comp=E,3µm,0.9s						
CD2	Chengdu	2.71	338	Pn	Pn	16 29 53.0	+1.0
CD2				Pg	Pb	16 29 58.1	+0.8
CD2				Sn	Sb	16 30 26.8	-3.4
CD2				Sg	Sg	16 30 33.6	-3.0
PZH	PanZhiHua	3.39	237	Pn	Pn	16 30 04.0	+2.6
PZH				Sg	Sg	16 30 59.0	+0.7
PZH				smax	smax		
	comp=N,380nm,1.5s						
PZH				smax	smax		
	comp=E,500nm,1.3s						
KMI	Kunming	3.79	211	Pn	Pn	16 30 10.3	+3.3
KMI				Pg	Pg	16 30 20.3	-1.7
KMI				Sn	Sn	16 30 55.5	+4.3
KMI				smax	smax		
	comp=N,220nm,1.3s						
KMI				smax	smax		
	comp=E,210nm,1.3s						
KMI				LR	LR		
	comp=N,3µm,5.1s						
KMI				LR	LR		
	comp=E,4µm,5.1s						
KMI				LR	LR		
	comp=Z,3µm,6.8s						
ENH	Enshi	4.41	64		Pn	16 30 16.0	+0.7
GULI	GuiLin	5.76	121	Pn	Pn	16 30 34.3	+0.5
GULI				Sn	Sn	16 31 41.9	+2.5
GULI				smax	smax		
	comp=N,400nm,1.1s						
GULI				smax	smax		
	comp=E,300nm,0.8s						
GULI				LR	LR		
	comp=N,2µm,6.1s						
GULI				LR	LR		
	comp=E,2µm,5.2s						
GULI				LR	LR		
	comp=Z,2µm,10.0s						
XAN	Xi'an	6.59	30	Pn	Pn	16 30 46.6	+1.3
XAN				smax	smax		
	comp=N,1µm,1.0s						
XAN				smax	smax		
	comp=E,2µm,1.0s						
XAN				LR	LR		
	comp=N,2µm,6.9s						
XAN				LR	LR		
	comp=E,2µm,5.0s						
XAN				LR	LR		
	comp=Z,3µm,5.3s						
TNCH	TengChong	6.63	241	Pn	Pn	16 30 48.5	+2.5
TNCH				Sn	Sn	16 32 02.1	+1.0
TNCH				Sg	Sg	16 32 39.6	-2.5
TNCH				smax	smax		
	comp=N,250nm,1.5s						
TNCH				smax	smax		
	comp=E,200nm,1.4s						
TNCH				LR	LR		
	comp=N,1µm,5.5s						
TNCH				LR	LR		
	comp=Z,1µm,9.7s						
CNSH	ChangSha	7.07	90	Pn	Pn	16 30 53.3	+1.5
CNSH				Sn	Sn	16 32 09.8	-1.8
CNSH				smax	smax		
	comp=N,360nm,0.9s						
CNSH				smax	smax		
	comp=E,230nm,1.0s						
SLVN	Son La	7.08	188		Pn	16 30 54.3	+2.2
LZH	Lanzhou	7.73	354	*e*Pn	Pn	16 31 08.3	+7.2
LZH				Pg	Pb	16 31 35.1	+12
LZH				Sn	Sn	16 32 37.3	+9.1
LZH				Sg	Sb	16 33 15.0	+20
LZH				smax	smax		
	comp=N,360nm,1.3s						
LZH				smax	smax		
	comp=E,530nm,1.3s						
LZH				LR	LR		
	comp=N,2µm,8.6s						
LZH				LR	LR		
	comp=E,3µm,8.6s						
LZH				LR	LR		
	comp=Z,810nm,9.6s						
WHN	Wuhan	8.50	73	⇑P	Pn	16 31 13.3	+1.9
WHN				pmax	pmax		
	comp=Z,160nm,0.6s						
WHN				LR	LR		
	comp=Z,4µm,9.3s						
WHN				LR	LR		
	comp=Z,6µm,6.5s						
WHN				LR	LR		
	comp=Z,6µm,9.4s						
LYN	LuoYang	8.90	44	⇑P	Pn	16 31 16.9	0.0
LYN				S	Sn	16 32 58.8	+2.1
LYN				smax	smax		
	comp=Z,220nm,1.6s						
LYN				smax	smax		
	comp=Z,170nm,1.1s						
GZH	Guangzhou	9.24	123	P	Pn	16 31 20.6	-1.1
GZH				S	Sn	16 33 06.6	+1.4
GZH				smax	smax		
	comp=Z,200nm,0.9s						
GZH				smax	smax		
	comp=Z,180nm,0.9s						
HKPS	Hong Kong Po S	10.32	124	Pn	Pn	16 31 36.9	+0.5
QIZ	Qiongzhong	10.35	153	Pn	Pn	16 31 37.7	+0.9
QIZ	Qiongzhong	10.35	153	P	Pn	16 31 37.5	+0.7
QIZ				S	Sn	16 33 33.5	+1.2
QIZ				pmax	pmax		
	comp=Z,39nm,1.5s						
QIZ				LR	LR		
	comp=Z,780nm,6.6s						
QIZ				LR	LR		
	comp=Z,800nm,11.1s						
CHTO	Chiang Mai	10.99	211		Pn	16 31 48.3	+2.7
CM31	Chiang Mai Arr	11.30	210		Pn	16 31 52.4	+2.5
CMAR	Chiang Mai Arr	11.30	210	Pn	Pn	16 31 53.4	+3.5
	comp=Z,0.3nm,0.3s,baz=19,slow=11,SNR=32						
CMAR				Lg	Lg	16 34 59.1	
	baz=22,slow=29						
CMAR				LR	LR	16 36 46.8	
	comp=Z,344nm,20.2s,baz=40,slow=41						
GOMU	GeErMu	11.56	315	P	Pn	16 31 53.1	-0.6
GOMU				pP		16 31 56.3	
GOMU				sP		16 32 00.3	
GOMU				S	Sn	16 34 04.3	+1.8
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GOMU				LR	LR		
	comp=Z,1µm,14.6s						
GOMU				LR	LR		
	comp=Z,660nm,14.6s						
GOMU				LR	LR		
	comp=Z,3µm,14.2s						
GTA	Gaotai	11.78	340	P	Pn	16 31 58.9	+2.4
GTA				sP		16 32 06.8	
GTA				pmax	pmax		
	comp=Z,11nm,1.1s						
GTA				LR	LR		
	comp=Z,710nm,11.6s						
GTA				LR	LR		
	comp=Z,670nm,17.1s						
LSA	Lhasa	12.12	280		Pn	16 32 02.8	+1.3
LSA	Lhasa	12.12	280	P	Pn	16 32 02.1	+0.6
LSA				LR	LR		
	comp=Z,620nm,14.4s						
LSA				LR	LR		
	comp=Z,210nm,7.9s						
HNS	HongShan	12.17	40	*e*P	Pn	16 32 02.8	+1.1
HNS				LR	LR		
	comp=Z,710nm,10.1s						
HNS				LR	LR		
	comp=Z,980nm,13.6s						
NJ2	Nanjing	12.59	70	*e*P	Pn	16 32 06.6	-0.8
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
NJ2				LR	LR		
	comp=Z,1µm,9.4s						
BTO	Baotou	12.89	18	*e*P	Pn	16 32 14.8	+3.2
BTO				pP	P	16 32 22.0	-0.3
BTO				PP	PnPn	16 32 25.4	+5.8
BTO				sP		16 32 27.1	
BTO				S	Sn	16 34 38.6	+4.0
BTO				sS		16 34 50.6	
BTO				SS	SnSn	16 34 54.0	+6.9
BTO				LR	LR		
	comp=Z,2µm,13.4s						
BTO				LR	LR		
	comp=Z,2µm,12.3s						
TIA	Tai'an	12.93	50	P	Pn	16 32 13.3	+1.2
TIA				pmax	pmax		
	comp=Z,6.0nm,0.4s						
TIA				LR	LR		
	comp=Z,750nm,10.7s						
TIA				LR	LR		
	comp=Z,740nm,11.8s						
TIA				LR	LR		
	comp=Z,1µm,9.8s						
UBPT	Khong Chiam	13.05	178		Pn	16 32 15.6	+1.8
HHC	Hu-ho-hao-te	13.58	22	*e*P	Pn	16 32 20.8	-0.2
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				pmax	pmax		
	comp=Z,58nm,3.7s						
HHC				LR	LR		
	comp=Z,380nm,13.0s						
HHC				LR	LR		
	comp=Z,330nm,12.8s						
EVN	Everest	15.97	273		Pn	16 32 51.8	-1.9
XLT	XiLinHaoTe	17.89	27	*e*P	P	16 33 18.9	+1.2
XLT				sP	sP	16 33 29.4	+3.6
XLT				pmax	pmax		
	comp=Z,12nm,0.8s						
XLT				LR	LR		
	comp=Z,47nm,9.7s						
XLT				LR	LR		
	comp=Z,350nm,7.3s						
XLT				LR	LR		
	comp=Z,390nm,8.4s						
SONM	Songino Array	19.45	3		P	16 33 34.3	-0.6
SONM	Songino Array	19.45	3	P	Pn	16 33 36.6	+0.5
	comp=Z,0.7nm,0.3s,baz=186,slow=12,SNR=19						
SONM				Lg	Lg	16 39 20.2	
	comp=Z,0.1nm,0.3s,baz=195,slow=35,SNR=0.9						
	comp=Z,4.6nm,0.8s						
TJN	Taejon	20.53	61		P	16 33 45.8	-0.7
WMQ	Urumqi	20.70	323	*e*P	Pn	16 33 50.9	+0.1
WMQ				LR	LR		
	comp=Z,250nm,24.0s						
JOW	Kunigami	20.75	89	P	P	16 33 48.5	-0.6
JOW				IAmb	IAmb	16 33 54.8	
	comp=Z,15nm,0.6s						
JOW	Kunigami	20.75	89	P	Pn	16 33 50.1	-1.4
	comp=Z,16nm,0.6s,baz=264,slow=8.1,SNR=17						
	comp=Z,16nm,0.6s						
KSAR	Wonju Array Be	21.25	59		P	16 33 53.8	-0.5
KS19	Wonju Array Si	21.25	59	P	P	16 33 53.8	-0.6
KSRS	Korea Array	21.28	59	P	P	16 33 55.0	+0.4
	comp=Z,11nm,0.7s,baz=245,slow=9.8,SNR=67						
	comp=Z,11nm,0.7s						
CN2	Changchun	22.53	41	P	P	16 34 08.9	+0.9
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
CN2				LR	LR		
	comp=Z,300nm,13.0s						
CN2				LR	LR		
	comp=Z,400nm,14.0s						
KULM	Kulim	23.33	191	P	P	16 34 18.4	+1.9
KKM	Kota Kinabalu	24.66	152	P	P	16 34 29.9	+0.7
KKM				IAmb	IAmb	16 34 34.3	
	comp=Z,15nm,0.8s						
BNX	BinXian	24.80	40	⇑P	P	16 34 30.9	+0.8
BNX				pmax	pmax		
	comp=Z,13nm,0.8s						
MKAR	Makanchi Array	25.52	322		P	16 34 36.3	-0.4
MKAR	Makanchi Array	25.52	322	P	P	16 34 36.5	-0.2
	comp=Z,13nm,0.9s,baz=127,slow=11,SNR=44						
MKAR				ScP	ScP	16 41 46.0	-0.2
	comp=Z,1.4nm,0.9s,baz=122,slow=5.9,SNR=7.8						
	comp=Z,13nm,0.9s						
PRZ	Przheval'sk	25.65	310	IAmb	IAmb	16 34 47.2	
	comp=Z,10nm,0.8s						
MAKZ	Makanchi	25.70	322		P	16 34 37.8	-0.5
MAKZ				IAmb	IAmb	16 34 41.6	
	comp=Z,19nm,1.0s						
KDJ	Kajisay	26.34	309	IAmb	IAmb	16 34 48.3	
	comp=Z,19nm,1.4s						
KSH	Kashi	26.35	302	P	P	16 34 47.0	+2.7
KSH				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KSH				LR	LR		
	comp=Z,350nm,16.1s						
KSH				LR	LR		
	comp=Z,300nm,16.8s						
MYLDM	Lahad Datu	26.44	148		P	16 34 46.7	+1.5
MYLDM				IAmb	IAmb	16 34 48.6	
	comp=Z,17nm,0.8s						
USA0B	Ussuriysk Arra	26.76	47	IAmb	IAmb	16 34 48.9	
	comp=Z,15nm,0.8s						
USRK	Ussuriysk Ar.	26.76	47		P	16 34 48.0	+0.2
USRK	Ussuriysk Ar.	26.76	47	P	P	16 34 48.2	+0.4
	comp=Z,13nm,0.6s,baz=250,slow=8.9,SNR=66						
	comp=Z,13nm,0.6s						
BOOM	Boomskoye usch	27.33	309		P	16 34 53.5	+0.3
HEH	HeiHe	27.72	32	*e*P	P	16 34 56.8	+0.4
HEH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KLR	Kul'dur	29.24	37	LR	LR	16 48 41.2	
	comp=Z,300nm,18.7s,baz=358,slow=40						
ZALV	Zalesovo Beam	29.48	336		P	16 35 09.9	-2.0
ZALV	Zalesovo Beam	29.48	336	P	P	16 35 11.9	0.0
	comp=Z,3.2nm,0.6s,baz=134,slow=11,SNR=9.9						
	comp=Z,3.2nm,0.6s						
KURBB	Kurchatov Arra	29.85	325	P	P	16 35 15.6	+0.3
	comp=Z,3.2nm,0.6s,baz=132,slow=9.3,SNR=27						
KURBB				PcP	PcP	16 38 18.6	+0.4
	comp=Z,0.7nm,0.7s,baz=126,slow=2.1,SNR=4.2						
	comp=Z,3.2nm,0.6s						
KURK	Kurchatov	29.86	326		P	16 35 15.0	-0.4
KURK				IAmb	IAmb	16 35 16.9	
	comp=Z,12nm,1.2s						
TOLI2	Tolitoli	31.07	148	P	P	16 35 27.1	+0.6
TOLI2				IAmb	IAmb	16 35 28.6	
	comp=Z,11nm,0.8s						
KKAR	Karatay Array	31.30	307		P	16 35 27.6	-0.8
BVAR	Borovoye Array	35.38	324	P	P	16 36 03.5	-0.1
	comp=Z,1.2nm,0.5s,baz=134,slow=10,SNR=8.0						
BVAR				PcP	PcP	16 38 33.5	+0.1
	comp=Z,1.0nm,0.5s,baz=148,slow=4.0,SNR=4.3						
BVAR				ScP	ScP	16 42 18.9	+0.6
	comp=Z,0.7nm,0.7s,baz=79,slow=3.1,SNR=3.3						
	comp=Z,1.2nm,0.5s						
BRVK	Borovoye	35.45	324		P	16 36 03.2	-1.0
YAK	Yakutsk	37.41	19		P	16 36 20.4	-0.4
YAK				IAmb	IAmb	16 36 23.9	
	comp=Z,13nm,0.8s						
AB31	Akbulak array	40.03	314		P	16 36 42.6	-0.5
ABKAR	Akbulak array	40.03	314		P	16 36 42.4	-0.6
ABKAR	Akbulak array	40.03	314	IAmb	IAmb	16 36 47.7	
	comp=Z,4.9nm,0.8s						
TIXI	Tiksi	45.28	10	P	P	16 37 24.5	-0.8
TIXI				IAmb	IAmb	16 37 26.0	
	comp=Z,6.3nm,0.8s						
KNRA	Kununurra	49.51	149		P	16 37 58.6	-0.2
KNRA				IAmb	IAmb	16 37 59.9	
	comp=Z,10nm,0.8s						
KIV	Kislovodsk	51.42	305		P	16 38 13.6	+0.3
RAYN	Ar Rayn	53.19	279		P	16 38 25.4	-1.3
RAYN				IAmb	IAmb	16 38 29.1	
	comp=Z,6.7nm,0.8s						
BILL	Bilibino	53.34	24		P	16 38 26.6	-0.3
PMG	Port Moresby	55.47	126		P	16 38 42.7	-0.4
PMG	Port Moresby	55.47	126	P	P	16 38 43.0	-0.1
	comp=Z,25nm,0.8s,baz=350,slow=6.1,SNR=5.5						
	comp=Z,25nm,0.8s						
WRAB	Tennant Creek	55.83	146	P	P	16 38 45.1	-0.4
WRA	Warramunga Arr	55.83	146		P	16 38 44.9	-0.7
WRA	Warramunga Arr	55.83	146	P	P	16 38 45.7	+0.1
	comp=Z,7.9nm,0.7s,baz=336,slow=8.1,SNR=69						
	comp=Z,7.9nm,0.7s						
WR8	Warramunga Arr	55.92	146	IAmb	IAmb	16 38 47.8	
	comp=Z,8.2nm,0.7s						
BR131	Keskin Array S	58.73	301	IAmb	IAmb	16 39 08.4	
	comp=Z,9.5nm,1.5s						
BRTR	Keskin Array B	58.73	301		P	16 39 04.7	-1.5
BRTR	Keskin Array B	58.73	301	P	P	16 39 05.5	-0.6
	comp=Z,1.7nm,0.6s,baz=114,slow=6.1,SNR=10.0						
	comp=Z,1.7nm,0.6s						
ASAR	Alice Springs	58.81	149	P	P	16 39 07.3	+0.7
	comp=Z,5.3nm,0.7s,baz=333,slow=6.4,SNR=88						
	comp=Z,5.3nm,0.7s						
AKASG	Malin Array Be	59.77	315	P	P	16 39 12.5	-0.5
	comp=Z,1.3nm,0.6s,baz=77,slow=6.1,SNR=10						
	comp=Z,1.3nm,0.6s						
AKBB	Malin Array Si	59.77	315	IAmb	IAmb	16 39 14.7	
	comp=Z,4.5nm,1.0s						
KIEV	Kiev	59.78	315		P	16 39 12.2	-0.9
ARCES	ARCESS Array B	60.02	336	P	P	16 39 14.8	+0.4
	comp=Z,1.1nm,0.6s,baz=97,slow=7.9,SNR=6.7						
	comp=Z,1.1nm,0.6s						
FINES	FINESS Array B	60.22	327	P	P	16 39 15.7	-0.2
	comp=Z,2.3nm,0.7s,baz=95,slow=6.3,SNR=5.9						
	comp=Z,2.3nm,0.7s						
GAMB	Gambell	62.04	30	P	P	16 39 26.8	-1.3
	baz=278						
ELL	Elmali	62.31	299	P	P	16 39 29.6	-1.1
TNA	Tin City	63.37	28	P	P	16 39 35.7	-1.3
	baz=280						
C16K	Lisburne Hills	63.87	24	P	P	16 39 39.6	-0.6
	baz=281						
SPIA	Saint Paul Isl	63.90	37	P	P	16 39 39.2	-1.5
	baz=282						
F14K	Arctic Creek	64.04	28	P	P	16 39 40.1	-1.4
	baz=282						
P08K	Saint George I	64.41	38	P	P	16 39 42.6	-1.4
	baz=283						
C17K	DeLong Mountai	64.61	24	P	P	16 39 44.3	-0.9
	baz=283						
ANM	Nome	64.63	29	P	P	16 39 45.1	-0.2
	baz=283						
F15K	North Star Dit	64.67	27	P	P	16 39 45.4	-0.2
	baz=283						
D17K	Noatak River	64.82	25	P	P	16 39 46.0	-0.5
	baz=283,SNR=5.2						
B18K	Kokolik River	64.89	23	P	P	16 39 46.3	-0.6
	baz=284						
A19K	Wainwright	64.93	22	P	P	16 39 46.5	-0.7
	baz=284						
G15K	Niukluk	65.08	28	P	P	16 39 47.0	-1.2
	baz=284						
M11K	Mekoryuk	65.22	33	P	P	16 39 48.3	-0.9
	baz=284						
C18K	Utukok River	65.28	24	P	P	16 39 48.5	-1.1
	baz=285						
E17K	Hotham Inlet	65.44	25	P	P	16 39 49.7	-0.9
	baz=285						
K13K	Kusilvak Mount	65.57	31	P	P	16 39 50.8	-0.7
	baz=285						
G16K	Koyuk River	65.67	27	P	P	16 39 51.4	-0.7
	baz=285						
NIKH	Nikolski High	65.69	41	P	P	16 39 51.8	-0.6
	baz=285						
C19K	Lookout Ridge	65.72	23		P	16 39 53.1	+0.7
C19K	Lookout Ridge	65.72	23	P	P	16 39 51.6	-0.9
	baz=286						
E18K	Tukpahlearik C	65.81	25	P	P	16 39 52.0	-1.0
	baz=286						
J14K	Nanvaranak Lak	65.85	30	P	P	16 39 52.4	-0.9
	baz=285						

H16K	Elim baz=286	65.92	28	P	P	16 39 52.2	-1.5
A21K	Barrow baz=288	66.05	20	P	P	16 39 53.1	-1.3
B20K	Meade River	66.28	22		P	16 39 56.3	+0.4
B20K	Meade River baz=288,SNR=9.2	66.28	22	P	P	16 39 55.0	-0.9
G17K	Kiwalik Mounta baz=286	66.33	27	P	P	16 39 55.4	-0.9
F18K	Selawik baz=287	66.40	26	P	P	16 39 55.7	-1.0
D19K	Kuna River baz=287	66.41	24	P	P	16 39 56.3	-0.5
HFS	Hagfors comp=Z,1.7nm,0.7s,baz=69,slow=8.1,SNR=6.6 comp=Z,1.7nm,0.7s	66.42	327	P	P	16 39 56.6	-0.4
M13K	Dall Lake baz=286	66.58	33	P	P	16 39 57.0	-1.0
L14K	Kuka Creek baz=286,SNR=5.6	66.63	32	P	P	16 39 57.3	-1.0
A22K	Sinclair Lake baz=289	66.66	21	P	P	16 39 57.4	-0.8
I17K	Unalakleet baz=287	66.78	29	P	P	16 39 57.8	-1.4
H17K	Granite Mounta baz=287	66.79	27	P	P	16 39 59.0	-0.3
UNV	Unalaska Valle baz=287	66.80	40	P	P	16 39 58.4	-1.1
VYHS	Vyhne	66.85	314	*e*P	P	16 40 01.0	+1.0
D20K	Etivluk River baz=289	66.86	23	P	P	16 39 59.3	-0.4
K15K	Wolf Creek Mou baz=287	66.88	30	P	P	16 39 59.5	-0.4
J16K	Anvik River baz=288	67.00	29	P	P	16 40 00.0	-0.6
G18K	Tagagawik baz=288	67.00	26	P	P	16 40 00.2	-0.4
F19K	Shaleruckik Mo baz=288	67.04	25	P	P	16 40 00.1	-0.8
E19K	Redstone River baz=289	67.05	25	P	P	16 40 00.2	-0.7
L15K	Ungalak Mounta baz=287	67.08	31	P	P	16 40 00.5	-0.7
M14K	Bethel baz=287	67.14	32	P	P	16 40 01.0	-0.6
E20K	Nigu River baz=289	67.16	24	P	P	16 40 01.0	-0.7
B21K	Ikpikpuk River baz=290	67.24	22	P	P	16 40 01.4	-0.6
NB2	NORSAR Subarra comp=Z,2.4nm,0.7s,baz=74,slow=6.9	67.33	328	P	P	16 40 02.6	-0.2
NOA	NORSAR Array B comp=Z,1.8nm,0.7s,baz=72,slow=6.7,SNR=6.9 comp=Z,1.8nm,0.7s	67.33	328	P	P	16 40 02.6	-0.2
C21K	Knifeblade Rid baz=290	67.34	22	P	P	16 40 02.3	-0.5
H18K	Honhosa River baz=289	67.35	27	P	P	16 40 01.7	-1.2
B22K	Teshekpuk Lake baz=291,SNR=5.9	67.37	21	P	P	16 40 01.9	-1.0
N14K	Kuskokwak Cree baz=288	67.52	33	P	P	16 40 03.2	-0.8
G19K	Purcell Mounta baz=289	67.53	26	P	P	16 40 03.4	-0.6
J17K	VABM Dome baz=289	67.61	29	P	P	16 40 03.6	-0.9
F20K	Avaraart Lake comp=Z,4.5nm,1.1s	67.73	25	IAmb	IAmb	16 40 11.6	
F20K	Avaraart Lake baz=290	67.73	25	P	P	16 40 04.9	-0.3
M15K	Kasigluk River baz=288	67.75	32	P	P	16 40 04.7	-0.7
E21K	Killik River baz=291	67.87	23	P	P	16 40 05.5	-0.6
O14K	Tigyukauivet M baz=288	67.94	34	P	P	16 40 06.0	-0.6
H19K	Roundabout Mou baz=290,SNR=5.8	67.98	26	P	P	16 40 06.0	-0.8
L16K	Owhat River baz=289	67.99	31	P	P	16 40 05.7	-1.2
GCSA	Galena City Sc baz=290	68.08	27	P	P	16 40 05.8	-1.6
D22K	Ayikyak River baz=292	68.15	22	P	P	16 40 07.0	-0.8
K17K	Iditarod baz=290,SNR=6.6	68.17	30	P	P	16 40 07.9	-0.2
N15K	Kwethluk River baz=289	68.20	32	P	P	16 40 08.0	-0.3
FALS	False Pass baz=289	68.22	38	P	P	16 40 08.2	-0.3
L17K	Donlin baz=290	68.37	30	P	P	16 40 08.7	-0.6
M16K	Timber Creek baz=290,SNR=5.1	68.45	31	P	P	16 40 09.4	-0.4
C23K	Itkillik River baz=294	68.45	21	P	P	16 40 09.2	-0.4
F21K	Alatna River baz=292	68.49	24	P	P	16 40 09.2	-0.9
J18K	Innoko River comp=Z,6.0nm,0.9s	68.59	29	IAmb	IAmb	16 40 12.4	
J18K	Innoko River baz=291	68.59	29	P	P	16 40 09.8	-0.9
H20K	Anotleneega Mo baz=291	68.61	26	P	P	16 40 10.2	-0.5
O15K	Ungalikthiuk R baz=290	68.66	33	P	P	16 40 10.8	-0.4
N16K	Nishlik Lake baz=290,SNR=7.5	68.72	32	P	P	16 40 11.6	0.0
E22K	Anaktuvuk Pass baz=293,SNR=8.0	68.73	23	P	P	16 40 11.2	-0.3
G21K	Allakaket baz=292	68.75	25	P	P	16 40 11.6	0.0
D23K	Nanushuk River baz=294	68.78	22	P	P	16 40 12.4	+0.7
F22K	John River baz=293	68.85	24	P	P	16 40 12.1	-0.2
J19K	Poorman comp=Z,5.8nm,0.9s	68.86	28	IAmb	IAmb	16 40 14.4	
J19K	Poorman baz=291	68.86	28	P	P	16 40 13.0	+0.6
M17K	Holitna River baz=291,SNR=5.7	69.01	31	P	P	16 40 13.9	+0.6
L18K	Granite Mounta baz=291	69.05	30	P	P	16 40 13.2	-0.3
C24K	Franklin Bluff baz=295	69.11	21	P	P	16 40 13.2	-0.5
TOLK	Toolik Lake Re baz=295	69.28	22	P	P	16 40 13.9	-1.0
D24K	Happy Valley baz=295	69.31	22	P	P	16 40 14.7	-0.3
G22K	Bettles baz=294	69.32	24	P	P	16 40 14.4	-0.7
H21K	Melozitna Rive baz=293	69.34	26	P	P	16 40 14.2	-1.1
O16K	Kokwok River B baz=291,SNR=5.5	69.35	33	P	P	16 40 14.3	-1.1
STKA	Stephens Creek comp=Z,2.6nm,0.7s,baz=323,slow=5.6,SNR=4.7 comp=Z,2.6nm,0.7s	69.35	147	P	P	16 40 15.0	-0.7
J20K	Nowinta River baz=292	69.39	27	P	P	16 40 14.9	-0.7
N17K	Nushagak Hills baz=291	69.44	32	P	P	16 40 15.1	-0.9
E23K	Chandalar comp=Z,4.0nm,0.8s	69.51	23	IAmb	IAmb	16 40 19.3	
E23K	Chandalar baz=295,SNR=5.3	69.51	23	P	P	16 40 15.3	-1.2
CLL	Collm	69.53	318	*e*P	P	16 40 16.0	-0.7
P16K	Nushagak River baz=291	69.60	33	P	P	16 40 16.4	-0.6
SDPT	Sand Point baz=291	69.64	37	P	P	16 40 16.5	-0.8
COLD	Coldfoot baz=295	69.66	24	P	P	16 40 16.8	-0.5
M18K	Stony River baz=292	69.70	30	P	P	16 40 17.2	-0.4
K20K	Telida baz=293	69.74	28	P	P	16 40 16.9	-0.9
O17K	Koliganek Bris baz=292	69.76	32	P	P	16 40 16.7	-1.2
H22K	Ishtalitna Cre baz=294	69.79	25	P	P	16 40 16.9	-1.2
S14K	Fog Glacier baz=291	69.80	36	P	P	16 40 17.1	-1.3
L19K	White Mountain baz=293	69.86	29	P	P	16 40 17.5	-1.1
E24K	Your Creek comp=Z,5.9nm,0.7s	69.89	23	IAmb	IAmb	16 40 20.1	
E24K	Your Creek baz=296,SNR=8.4	69.89	23	P	P	16 40 17.7	-1.0
G23K	Bananza Creek comp=Z,3.9nm,0.9s	69.94	24	IAmb	IAmb	16 40 22.0	
G23K	Bananza Creek baz=295	69.94	24	P	P	16 40 17.9	-1.1
GERES	GERESS Array B comp=Z,1.1nm,0.7s,baz=58,slow=7.5,SNR=4.9 comp=Z,1.1nm,0.7s	69.96	315	P	P	16 40 19.1	-0.4
N18K	Kilae Creek baz=292	69.97	31	P	P	16 40 18.1	-1.2
D25K	Kavik River baz=297	70.02	21	P	P	16 40 18.1	-1.3
L20K	Farewell, AK baz=293	70.16	29	P	P	16 40 19.0	-1.5
M19K	Big River Lodg baz=293	70.17	30	P	P	16 40 19.1	-1.3
C26K	Camden Bay baz=298	70.19	20	P	P	16 40 18.8	-1.6
CHNA	Chernabura Isl baz=291	70.31	38	P	P	16 40 20.1	-1.3
F24K	Squaw Lake baz=297	70.34	23	P	P	16 40 20.4	-1.1
MLY	Manley comp=Z,5.6nm,0.8s	70.39	26	IAmb	IAmb	16 40 23.8	
MLY	Manley baz=295	70.39	26	P	P	16 40 20.7	-1.2
H23K	Yukon River comp=Z,11nm,1.3s	70.50	25	IAmb	IAmb	16 40 27.1	
H23K	Yukon River baz=296,SNR=7.3	70.50	25	P	P	16 40 21.2	-1.2
CAST	Castle Rocks baz=294	70.53	28	P	P	16 40 21.3	-1.4
N19K	Bonanza Creek baz=293	70.56	31	P	P	16 40 21.9	-1.1
O18K	Koktuh Hills baz=293	70.61	32	P	P	16 40 22.1	-1.1
BPAW	Bear Paw Mtn. comp=Z,6.6nm,0.8s	70.69	27	IAmb	IAmb	16 40 26.0	
BPAW	Bear Paw Mtn. baz=295,SNR=5.4	70.69	27	P	P	16 40 22.6	-1.0
C27K	Jago River baz=300	70.70	20	P	P	16 40 22.6	-0.9
PPLA	Purkeypile baz=295	70.71	28	P	P	16 40 23.1	-0.8
M20K	Styx River baz=294	70.73	29	P	P	16 40 23.0	-1.0
P18K	Big Mountain, baz=293	70.78	32	P	P	16 40 22.9	-1.4
E25K	Arctic Village baz=298	70.84	22	P	P	16 40 23.4	-1.1
G24K	Hadweenzic Riv comp=Z,5.8nm,0.8s	70.86	24	IAmb	IAmb	16 40 39.8	
G24K	Hadweenzic Riv baz=297	70.86	24	P	P	16 40 23.7	-0.9
I23K	Minto, Yukon-K comp=Z,3.2nm,0.8s	70.87	26	IAmb	IAmb	16 40 26.2	
I23K	Minto, Yukon-K baz=296	70.87	26	P	P	16 40 24.3	-0.4
Q17K	Contact Creek baz=293	70.91	34	P	P	16 40 24.4	-0.8
KMBO	Kilima Mbogo	71.00	258	P	P	16 40 26.2	-0.4
KMBO	comp=Z,4.5nm,0.8s			IAmb	IAmb	16 40 28.7	
F25K	Christian Rive baz=299	71.07	22	P	P	16 40 25.4	-0.6
H24K	Noodor Dome baz=297	71.11	25	P	P	16 40 25.4	-0.8
Q18K	Katmai Hardscr baz=294	71.18	33	P	P	16 40 25.9	-0.9
NEA2	Nenana comp=Z,7.4nm,0.7s	71.23	26	IAmb	IAmb	16 40 28.6	
NEA2	Nenana baz=297,SNR=6.2	71.23	26	P	P	16 40 26.2	-0.6
TRF	Thorofare Moun baz=296	71.25	27	P	P	16 40 26.2	-1.1
G25K	Bearman Lake baz=298	71.31	23	P	P	16 40 26.5	-0.8
SKT	Skwentna baz=295	71.37	29	P	P	16 40 27.1	-0.7
BMAR	Burnt Mountain	71.51	22		P	16 40 29.9	+1.3
F26K	Sheenjek River baz=300	71.52	22	P	P	16 40 27.6	-1.0
COLA	College baz=298	71.56	25	P	P	16 40 27.3	-1.5
P19K	Oil Pt baz=295	71.60	32	P	P	16 40 28.2	-1.0
POKR	Poker Plat Res comp=Z,8.6nm,0.8s	71.61	25	IAmb	IAmb	16 40 31.1	
POKR	Poker Plat Res baz=298	71.61	25	P	P	16 40 28.2	-1.0
MCK	McKinley baz=297	71.67	27	P	P	16 40 28.4	-1.1
O20K	Slope Mountain baz=295	71.70	31	P	P	16 40 29.0	-0.9
D27M	Malcolm River baz=302	71.73	20	P	P	16 40 29.4	-0.5
R18K	Karluk baz=294	71.89	34	P	P	16 40 29.7	-1.2
SUA	Susitna One baz=296,SNR=5.0	71.93	29	P	P	16 40 30.6	-0.7
ILAR	Eielson Array comp=Z,1.6nm,0.9s,baz=304,slow=5.0,SNR=9.3 comp=Z,1.6nm,0.9s	71.98	25	P	P	16 40 31.2	-0.2
G26K	Porcupine Rive baz=300	72.02	23	P	P	16 40 31.1	-0.5
E27K	Coleen River baz=302	72.09	21	P	P	16 40 31.2	-0.9
PRP	Porcupine Dome comp=Z,8.7nm,0.8s	72.12	24	IAmb	IAmb	16 40 34.2	
PRP	Porcupine Dome baz=299,SNR=8.1	72.12	24	P	P	16 40 31.0	-1.4
HDA	Harding Lake baz=298	72.13	26	P	P	16 40 30.9	-1.3
RC01	Rabbit Creek A baz=297	72.54	29	P	P	16 40 34.2	-0.5
PMR	Palmer baz=298	72.57	29	P	P	16 40 34.4	-0.5
DHY	Denali Highway baz=298	72.59	27	P	P	16 40 33.5	-1.8
OHAK	Old Harbor baz=295	72.61	34	P	P	16 40 34.0	-1.2
J25K	Salcha River, baz=300	72.62	25	P	P	16 40 33.9	-1.4
WAT6	Susitna Watana baz=298	72.68	28	P	P	16 40 34.4	-1.4
BRSE	Bradley Lake S baz=297	72.70	31	P	P	16 40 34.7	-1.1
SML	Sawmill baz=298	72.81	28	P	P	16 40 36.0	-0.4
G27K	Doyon Strip comp=Z,3.9nm,0.8s	72.81	22	IAmb	IAmb	16 40 38.3	
G27K	Doyon Strip baz=302,SNR=7.2	72.81	22	P	P	16 40 36.4	0.0
O22K	Cooper Landing baz=297	72.82	30	P	P	16 40 35.8	-0.6
K24K	Donnelly Dome baz=300	72.87	26	P	P	16 40 35.9	-0.8
KNK	Knik Glacier baz=298	72.94	29	P	P	16 40 36.7	-0.5
F28M	Old Crow baz=304	72.95	21	P	P	16 40 36.6	-0.5
M23K	Glacier View baz=298	73.06	28	P	P	16 40 37.2	-0.7
I26K	Coal Creek Min comp=Z,6.1nm,1.1s	73.08	24	IAmb	IAmb	16 40 42.2	
I26K	Coal Creek Min baz=301	73.08	24	P	P	16 40 37.2	-0.7
SEW	Seward baz=298	73.12	30	P	P	16 40 38.0	-0.2
E29M	Blow River comp=Z,3.7nm,0.8s	73.13	20	IAmb	IAmb	16 40 40.0	
E29M	Blow River baz=305	73.13	20	P	P	16 40 37.7	-0.5
H27K	Steamboat Moun comp=Z,6.1nm,0.8s	73.16	23	IAmb	IAmb	16 40 40.7	
H27K	Steamboat Moun baz=302	73.16	23	P	P	16 40 38.0	-0.5
SCM	Sheep Creek Mo baz=299	73.21	28	P	P	16 40 38.2	-0.6
PWL	Port Wells baz=298	73.25	29	P	P	16 40 38.2	-0.8
RIDG	Independent Ri baz=300	73.26	26	P	P	16 40 38.8	-0.3
J26L	Joseph Creek baz=301	73.35	25	P	P	16 40 38.9	-0.8
PAX	Paxson baz=300	73.41	27	P	P	16 40 39.5	-0.6
SCRK	Sand Creek baz=301	73.47	25	P	P	16 40 39.5	-0.9
I27K	Kandik River baz=303	73.47	23	P	P	16 40 39.4	-0.9
M24K	Tolsona, Glenn baz=300	73.55	28	P	P	16 40 39.9	-1.0
TUE	Stuetta	73.58	314		P	16 40 41.7	+0.2
TUE	comp=Z,3.4nm,0.7s			IAmb	IAmb	16 40 46.8	
GLI	Glacier Island baz=299	73.77	29	P	P	16 40 41.0	-1.1
HARP	HAARP baz=300	73.82	27	P	P	16 40 41.7	-0.7
G29M	Pine Creek baz=305	73.95	21	P	P	16 40 42.5	-0.6
KLU	Klutina baz=300	73.96	28	P	P	16 40 42.8	-0.5
P23K	Montague Islan baz=299	74.07	30	P	P	16 40 42.3	-1.6
A36M	Sachs Harbour baz=315	74.10	14	P	P	16 40 43.0	-0.8
I28M	Miner Creek baz=304	74.14	23	P	P	16 40 43.3	-1.0
K27K	Chicken baz=303	74.16	25	P	P	16 40 43.7	-0.5
L26K	Log Cabin Wild baz=302	74.21	26	P	P	16 40 44.2	-0.5
F30M	Barrier River comp=Z,6.4nm,1.1s	74.23	20	IAmb	IAmb	16 40 46.8	
F30M	Barrier River baz=307	74.23	20	P	P	16 40 44.7	0.0
H29M	Whitestone baz=305	74.23	22	P	P	16 40 44.3	-0.4
N25K	Chitina, Valde baz=301	74.45	28	P	P	16 40 45.5	-0.7
INK	Inuvik baz=309	74.48	19	P	P	16 40 46.1	+0.1
G30M	tAoh Zraii Nji comp=Z,6.4nm,1.0s	74.48	21	IAmb	IAmb	16 40 50.4	
G30M	tAoh Zraii Nji baz=307	74.48	21	P	P	16 40 45.3	-0.8
EYAK	Cordova Ski Ar baz=300	74.51	29	P	P	16 40 45.9	-0.5
M26K	Nabesna, AK baz=302	74.68	27	P	P	16 40 46.8	-0.6
EPYK	Eagle Plains baz=307	74.69	22	P	P	16 40 46.3	-1.0
I29M	Ogilvie Camp, baz=305	74.75	23	P	P	16 40 47.4	-0.3
L27K	Beaver Creek, baz=303	74.77	26	P	P	16 40 47.8	-0.1
BMRM	Bremner River baz=301	74.78	28	P	P	16 40 47.2	-0.9
BCAR	Beaver Creek A	74.79	26		P	16 40 48.6	+0.6
Q23K	Middleton Isla baz=300	74.82	30	P	P	16 40 47.7	-0.5
F31M	Tsiigehtchic baz=309	74.96	20	P	P	16 40 47.9	-0.9
DAWY	Dawson baz=305	75.12	24	P	P	16 40 49.2	-0.7
G31M	Satah River baz=308	75.12	21	P	P	16 40 49.0	-0.8
M27K	Edge Creek, AK comp=Z,6.7nm,1.0s	75.14	26	IAmb	IAmb	16 40 54.0	
M27K	Edge Creek, AK baz=303	75.14	26	P	P	16 40 49.5	-0.7
MCARA	McCarthy VSAT baz=302	75.21	27	P	P	16 40 49.7	-0.8
I30M	Mount Dempster baz=307	75.49	22	P	P	16 40 51.9	-0.2
BVCY	Beaver Creek baz=304	75.50	26	P	P	16 40 52.2	+0.1
CRQE	Cirque baz=302	75.52	28	P	P	16 40 51.9	-0.5
BGLC	Bering Glacier baz=302	75.78	29	P	P	16 40 53.9	+0.2
H31M	Peel River comp=Z,3.7nm,0.7s	75.80	21	IAmb	IAmb	16 40 54.9	
H31M	Peel River baz=309	75.80	21	P	P	16 40 53.1	-0.7
J30M	Hart River baz=307	75.90	23	P	P	16 40 53.8	-0.7
K29M	Barlow Dome comp=Z,6.6nm,0.8s	75.92	24	IAmb	IAmb	16 40 56.8	
K29M	Barlow Dome baz=306	75.92	24	P	P	16 40 53.8	-0.8
YUK3	Moose Creek baz=304	76.02	26	P	P	16 40 54.2	-1.2
CTG	Chitna Glacier baz=304	76.12	27	P	P	16 40 54.1	-1.8
L29M	L29M comp=Z,5.3nm,0.8s	76.14	25	IAmb	IAmb	16 40 57.9	
L29M	L29M baz=306	76.14	25	P	P	16 40 55.5	-0.3
SUMG	Summit	76.23	349		P	16 40 57.2	+0.6
SUMG	comp=Z,9.4nm,1.2s			IAmb	IAmb	16 40 58.6	
C36M	Paulatuk baz=317	76.29	16	P	P	16 40 55.8	-0.6
M29M	Somme Creek baz=306	76.40	25	P	P	16 40 56.4	-0.9
YUK8	Steele Glacier baz=305	76.57	27	P	P	16 40 58.1	-0.4
MAYO	Mayo, Yukon baz=308	76.65	24	P	P	16 40 58.6	0.0
O28M	Mount Upton baz=305	76.70	27	P	P	16 40 58.0	-1.3
YUK4	Talbot Arm baz=306	76.98	26	P	P	16 40 59.9	-0.9
PINM	Pinnacle baz=305	77.06	28	P	P	16 41 00.5	-0.5
YUK6	Outpost Mounta baz=306	77.33	27	P	P	16 41 02.2	-0.5
N30M	Aishikik Lake baz=307	77.51	26	P	P	16 41 02.9	-0.7
O29M	Mount Kennedy baz=306	77.62	27	P	P	16 41 03.8	-0.5
PNL	Peninsula baz=306	77.66	28	P	P	16 41 03.9	-0.5
DZM	Mont Dzumac comp=Z,6.0nm,0.9s,baz=109,slow=22,SNR=4.4 comp=Z,6.0nm,0.9s	77.70	123	P	P	16 41 05.2	0.0
HYT	Haines Junctio baz=307	77.73	26	P	P	16 41 04.2	-0.7
N31M	Braeburn, Yuko comp=Z,7.2nm,0.8s	77.99	25	IAmb	IAmb	16 41 08.1	
N31M	Braeburn, Yuko baz=308	77.99	25	P	P	16 41 06.2	0.0
M31M	Drury Creek, Y baz=309	78.06	24	P	P	16 41 06.4	-0.2
O30N	Mendenhall comp=Z,4.9nm,0.8s	78.32	26	IAmb	IAmb	16 41 15.6	
O30N	Mendenhall baz=308	78.32	26	P	P	16 41 07.5	-0.5
P29M	Windy Craggy baz=307	78.36	27	P	P	16 41 08.2	-0.1
P30M	Million Dollar baz=308	78.38	27	P	P	16 41 08.4	0.0
FARO	Faro, Yukon baz=310	78.42	24	P	P	16 41 08.5	-0.1
WHY	Whitehorse baz=309	78.85	26	P	P	16 41 10.8	-0.3
MMPY	Sheldon Lake, baz=312	78.89	23	P	P	16 41 11.0	-0.2
PLBC	Pleasant Camp baz=308	79.02	27	P	P	16 41 11.4	-0.4
N32M	Quiet Lake baz=311	79.21	25	P	P	16 41 12.6	-0.3
P33M	Teslin, Yukon baz=311	79.92	25	P	P	16 41 16.5	-0.4
R31K	City Hall, Gus baz=309	79.93	28	P	P	16 41 16.3	-0.4
P32M	Atlin baz=310	79.99	26	P	P	16 41 16.4	-0.8
R32K	Eaglecrest baz=310	80.51	27	P	P	16 41 19.3	-0.7
TGTN	Hyland Airport baz=314	80.67	23	P	P	16 41 19.8	-1.0
SIT	Sitka baz=309	80.96	29	P	P	16 41 21.9	-0.4
Q32M	Nakina River baz=312	80.96	26	P	P	16 41 21.4	-1.2
S32K	Killisnoo baz=310	81.01	28	P	P	16 41 21.4	-1.2
R33M	Jennings River baz=312	81.17	25	P	P	16 41 23.1	-0.6
DLBC	Dease Lake baz=313	82.18	26	P	P	16 41 28.5	-0.4

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U33K  Whale Pass         82.50  29   P       P       16 41 29.9 -0.6
      baz=311
WRAK  Wrangell Islan     82.62  28   P       P       16 41 30.9 -0.2
      baz=312
TOAD  Toad River Com     83.65  24   P       P       16 41 36.7 +0.2
      baz=317
V35K  Ketchikan          83.66  29   P       P       16 41 36.4 -0.1
      baz=312
YKA   Yellowknife Ar     84.07  17   P       P       16 41 36.9 -1.6
      comp=Z,1.9nm,0.7s,baz=327,slow=5.5,SNR=4.0
      comp=Z,1.9nm,0.7s
ESDC  Sonseca Array      85.38 313   P       P       16 41 44.5 -1.1
      comp=Z,0.4nm,0.6s,baz=52,slow=5.1,SNR=4.3
      comp=Z,0.4nm,0.6s
LSZ   Lusaka             85.91 250           P       16 41 49.1 +0.5
LSZ                                  IAmb    IAmb    16 41 50.4
      comp=Z,7.5nm,1.0s
FRB   Frobisher Bay      88.03 357   LR      LR      17 21 42.9
      comp=Z,137nm,21.9s,baz=210,slow=36
BOSA  Boshof             94.95 240   P       P       16 42 30.3 -0.6
      comp=Z,0.7nm,0.5s,baz=75,slow=3.5,SNR=1.6
      comp=Z,0.7nm,0.5s
TXAR  Lajitas Array     116.43  28   PKP     PKPdf   16 47 51.0 -1.4
      comp=Z,0.2nm,0.6s,baz=7.3,slow=0.4,SNR=4.0
SNAA  Sanae             122.25 201   PKP     PKPdf   16 48 01.8 -0.4
      comp=Z,0.8nm,0.8s,baz=205,slow=3.7,SNR=5.2
ROSC  El Rosal          146.96 359   PKPbc   PKPbc   16 48 51.9  0.0
      comp=Z,39nm,0.9s,baz=164,slow=16,SNR=5.1
LPAZ  La Paz            166.36 330   PKP     PKPdf   16 49 16.2 +1.4
      comp=Z,0.4nm,0.3s,baz=40,slow=9.9,SNR=3.6
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*IDC **17** 16:36:46.5±1.9, 31°.09S×177°.64W, h0km, mb3.8/4, mbtmp3.8/5, ML3.5/1, Error ellipse: s-maj=43.5km s-min=37.1km az=66.0*

*NEIC **17** 16:36:47.7±0.7, 30°.86S±0°.07×177°.7W±0°.2, h10km±2km, mb4.4/8, Error ellipse: s-maj=25.4km s-min=9.8km az=76.0*

ISC 17 16:36:49.2±0.9**, 31°.01S**±0°.09×**177°.7W**±0°.1**, h27**km**, n18, σ1ˢ52**/19**, mb4.2**/8**, Kermadec Islands region**

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Code  Station Name        Δ°   AZ°     Phase ID           Time     Res
                                     Op      ISC        h  m  s    ISC
RAO   Raoul Island        1.77 353   Pn      Pn      16 37 16.6 -1.4
URZ   Urewera             8.41 209   Pn      Pn      16 38 46.8 -2.4
      0.5nm,0.3s,baz=336,slow=3.6,SNR=6.2
URZ                                  Sn      Sn      16 40 22.9 -0.3
      1.5nm,0.3s,baz=274,slow=11,SNR=9.9
      4.7nm,0.8s
RTZ   Ruatahuna           8.76 209   Pn      Pn      16 38 51.8 -2.3
BKZ   Black Stump Fm      9.43 209   Pn      Pn      16 39 01.0 -2.3
PPTF  Pamatai, Papee     28.80  69   P       P       16 42 44.7 -0.4
CTAO  Charters Tower     34.18 280   P       P       16 43 31.9 -0.5
CTAO                                 IAmb    IAmb    16 44 12.3
      comp=Z,8.0nm,1.3s
STKA  Stephens Creek     34.62 258   P       P       16 43 37.7 +1.6
STKA  Stephens Creek     34.62 258   P       P       16 43 37.9 +1.8
      comp=Z,1.5nm,0.8s,baz=80,slow=6.1,SNR=3.0
      comp=Z,1.5nm,0.8s
PMG   Port Moresby       39.12 296   P       P       16 44 14.2 -0.4
PMG                                  IAmb    IAmb    16 44 18.9
      comp=Z,19nm,1.1s
ASAR  Alice Springs      43.36 267   P       P       16 44 49.7 +0.3
ASAR  Alice Springs      43.36 267   P       P       16 44 51.4 +2.0
      comp=Z,0.3nm,0.4s,baz=106,slow=7.0,SNR=9.2
      comp=Z,0.3nm,0.4s
WRA   Warramunga Arr     44.41 273   P       P       16 44 58.0 +0.2
WRA   Warramunga Arr     44.41 273   P       P       16 44 59.1 +1.3
      comp=Z,1.1nm,0.5s,baz=112,slow=8.0,SNR=15
      comp=Z,1.1nm,0.5s
WB0   Warramunga Arr     44.43 273   P       P       16 44 58.3 +0.3
WB0                                  IAmb    IAmb    16 45 13.5
      comp=Z,6.8nm,1.2s
CASY  Casey              54.73 208   P       P       16 46 16.2 +0.5
CASY                                 IAmb    IAmb    16 46 34.3
      comp=Z,6.0nm,1.5s
QSPA  South Pole Qui     59.10 180   P       P       16 46 48.8 +1.9
QSPA                                 IAmb    IAmb    16 47 14.5
      comp=Z,2.6nm,1.0s
QSPA  South Pole Qui     59.10 180   P       P       16 46 48.3 +1.4
      comp=Z,1.1nm,1.0s,baz=34,slow=3.4,SNR=1.8
      comp=Z,1.1nm,1.0s
FINES FINESS Array B    145.82 340   PKPbc   PKPab   16 56 26.0 +0.5
      comp=Z,0.7nm,0.3s,baz=50,slow=4.3,SNR=13
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*IDC **17** 16:37:53.6±0.5, 28°.35N×104°.88E, h0km, mb4.5/25, mbtmp4.5/26, ML4.1/1, MS3.8/5, Error ellipse: s-maj=17.7km s-min=10.9km az=44.0*

*MOS **17** 16:37:53.8±0.8, 28°.39N×104°.95E, h11km, mb4.8/37, Error ellipse: s-maj=7.9km s-min=5.2km az=111.9*

*BGR **17** 16:37:54.7, 27°.59N×105°.18E, h33km, mb4.7*

*BJI **17** 16:37:56.2, 28°.41N×104°.95E, h8km, mB4.7/11, mb4.4/44, ML4.6/23, Ms4.3/50, Ms7 4.1/52*

*NEIC **17** 16:37:56.1±1.7, 28°.45N±0°.08×104°.96E±0°.08, h10km±1km, mb4.9/167, Error ellipse: s-maj=13.1km s-min=11.9km az=156.0*

ISC 17 16:37:55.5±1.2**, 28°.46N**±0°.03×**105°.00E**±0°.04**, h8**km±7km**, n565, σ1ˢ07**/515**, mb4.8**/160**, MS4.0**/8**, 25C-27D, Sichuan**

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Code  Station Name        Δ°   AZ°     Phase ID           Time     Res
                                     Op      ISC        h  m  s    ISC
GYA   Guiyang             2.48 143 ⇑Pn      Pn      16 38 38.4 +2.2
GYA                                  smax    smax
      comp=N,4µm,0.9s
GYA                                  smax    smax
      comp=E,3µm,0.9s
CD2   Chengdu             2.67 336   Pn      Pb      16 38 40.9 -2.7
CD2                                  Pg      Pg      16 38 48.3 +1.5
CD2                                  Sn      Sb      16 39 15.3 -1.3
CD2                                  Sg      Sg      16 39 23.5 +2.1
CD2                                  smax    smax
      comp=N,4µm,0.9s
CD2                                  smax    smax
      comp=E,5µm,0.9s
PZH   PanZhiHua           3.49 237   Pn      Pn      16 38 51.9 +1.7
PZH                                  Sg      Sb      16 39 46.4 +6.2
PZH                                  smax    smax
      comp=N,690nm,1.1s
PZH                                  smax    smax
      comp=E,690nm,1.1s
KMI   Kunming             3.89 212 ⇑Pn      Pn      16 38 57.9 +2.2
KMI                                  Pg      Pb      16 39 07.4 +3.0
KMI                                  Sn      Sn      16 39 41.5 -0.2
KMI                                  smax    smax
      comp=N,230nm,1.1s
KMI                                  smax    smax
      comp=E,220nm,1.0s
KMI                                  LR      LR
      comp=N,3µm,5.8s
KMI                                  LR      LR
      comp=E,3µm,5.0s
KMI                                  LR      LR
      comp=Z,3µm,7.1s
ENH   Enshi               4.31  64           Pn      16 39 03.5 +2.2
GULI  GuiLin              5.73 122   Pn      Pn      16 39 21.3 +0.4
GULI                                 Sn      Sn      16 40 26.8 -0.1
GULI                                 smax    smax
      comp=N,500nm,1.1s
GULI                                 smax    smax
      comp=E,300nm,1.1s
GULI                                 LR      LR
      comp=Z,1µm,7.2s
XAN   Xi'an               6.50  30   Pn      Pn      16 39 33.4 +2.0
XAN                                  Sg      Sg      16 41 23.9 -0.2
XAN                                  LR      LR
      comp=N,3µm,5.5s
XAN                                  LR      LR
      comp=Z,2µm,5.2s
TNCH  TengChong           6.73 241   Pn      Pn      16 39 35.8 +1.1
TNCH                                 Sn      Sn      16 40 52.3 +0.6
TNCH                                 Sg      Sg      16 41 28.1 -3.5
TNCH                                 smax    smax
      comp=N,400nm,1.3s
TNCH                                 smax    smax
      comp=E,310nm,1.6s
TNCH                                 LR      LR
      comp=N,2µm,4.9s
TNCH                                 LR      LR
      comp=E,1µm,5.6s
TNCH                                 LR      LR
      comp=Z,1µm,8.6s
CNSH  ChangSha            6.99  90   Pn      Pn      16 39 40.6 +2.4
CNSH                                 Sn      Sn      16 40 58.3 +0.4
CNSH                                 smax    smax
      comp=N,350nm,0.9s
CNSH                                 smax    smax
      comp=E,330nm,1.0s
SLVN  Son La              7.16 188           Pn      16 39 39.7 -0.9
LZH   Lanzhou             7.67 353   Pn      Pn      16 39 51.8 +4.2
LZH                                  Sn      Sn      16 41 19.8 +5.0
LZH                                  Sg      Sg      16 41 56.0 -5.7
LZH                                  smax    smax
      comp=N,270nm,1.4s
LZH                                  smax    smax
      comp=E,340nm,1.4s
LZH                                  LR      LR
      comp=N,890nm,8.6s
LZH                                  LR      LR
      comp=E,2µm,9.3s
LZH                                  LR      LR
      comp=Z,740nm,9.6s
WHN   Wuhan               8.41  73 ⇑P       Pn      16 40 00.8 +3.2
WHN                                  S       Sn      16 41 34.9 +2.3
WHN                                  LR      LR
      comp=N,4µm,6.5s
WHN                                  LR      LR
      comp=E,6µm,12.4s
WHN                                  LR      LR
      comp=Z,7µm,10.7s
LYN   LuoYang             8.80  44 ⇓P       Pn      16 40 04.3 +1.3
LYN                                  S       Sn      16 41 45.1 +2.8
LYN                                  smax    smax
      comp=N,480nm,1.2s
LYN                                  smax    smax
      comp=E,250nm,1.2s
LYN                                  LR      LR
      comp=N,2µm,6.5s
LYN                                  LR      LR
      comp=E,3µm,5.8s
LYN                                  LR      LR
      comp=Z,3µm,6.5s
GZH   Guangzhou           9.22 124   P       Pn      16 40 08.4 -0.4
GZH                                  S       Sn      16 41 52.6 -0.2
HKPS  Hong Kong Po S     10.30 125           Pn      16 40 23.9 +0.3
QIZ   Qiongzhong         10.38 154   P       Pn      16 40 24.1 -0.5
QIZ                                  pmax    pmax
      comp=Z,15nm,1.9s
QIZ                                  LR      LR
      comp=E,320nm,5.0s
QIZ                                  LR      LR
      comp=Z,350nm,9.5s
CHTO  Chiang Mai         11.09 211           Pn      16 40 34.4  0.0
CHTO  Chiang Mai         11.09 211   P       Pn      16 40 34.4  0.0
TIY   Taiyuan            11.13  32  eP       Pn      16 40 36.3 +1.3
TIY                                  S       Sn      16 42 43.3 +3.6
TIY                                  pmax    pmax
      comp=Z,18nm,0.8s
TIY                                  LR      LR
      comp=N,830nm,9.7s
TIY                                  LR      LR
      comp=E,680nm,8.4s
TIY                                  LR      LR
      comp=Z,700nm,11.5s
CM31  Chiang Mai Arr     11.40 210           Pn      16 40 39.9 +1.3
CMAR  Chiang Mai Arr     11.40 210           Pn      16 40 40.2 +1.5
CMAR  Chiang Mai Arr     11.40 210   Pn      Pn      16 40 41.1 +2.4
      0.3nm,0.3s,baz=20,slow=12,SNR=69
CMAR                                 Lg      Lg      16 43 53.6
      baz=202,slow=36
CMAR                                 LR      LR      16 45 24.4
      comp=Z,329nm,18.5s,baz=40,slow=40
CMAR  Chiang Mai Arr     11.40 210   P       Pn      16 40 40.2 +1.5
GOMU  GeErMu             11.56 314   P       Pn      16 40 40.6 -0.6
GOMU                                 sP              16 40 48.3
GOMU                                 S       Sn      16 42 56.3 +5.6
GOMU                                 pmax    pmax
      comp=Z,3.0nm,0.8s
GOMU                                 LR      LR
      comp=N,470nm,8.6s
GOMU                                 LR      LR
      comp=E,840nm,8.7s
GOMU                                 LR      LR
      comp=Z,2µm,8.6s
GTA   Gaotai             11.74 340  eP       Pn      16 40 46.5 +3.1
GTA                                  pP              16 40 52.4
GTA                                  pmax    pmax
      comp=Z,9.0nm,1.1s
GTA                                  LR      LR
      comp=N,370nm,14.7s
GTA                                  LR      LR
      comp=E,390nm,13.9s
GTA                                  LR      LR
      comp=Z,400nm,15.9s
HNS   HongShan           12.07  40  eP       Pn      16 40 50.3 +2.5
HNS                                  LR      LR
      comp=N,1µm,8.9s
HNS                                  LR      LR
      comp=Z,810nm,12.5s
NJ2   Nanjing            12.50  70  eP       Pn      16 40 54.3 +0.7
NJ2                                  pmax    pmax
      comp=Z,12nm,1.3s
NJ2                                  LR      LR
      comp=N,840nm,6.8s
NJ2                                  LR      LR
      comp=E,2µm,8.9s
NJ2                                  LR      LR
      comp=Z,2µm,8.9s
BTO   Baotou             12.80  17  eP       Pn      16 41 00.1 +2.3
BTO                                  pP              16 41 08.4
BTO                                  PP      PnPn    16 41 11.3 +5.5
BTO                                  sP              16 41 15.3
BTO                                  S       Sn      16 43 24.8 +4.3
BTO                                  sS              16 43 37.3
BTO                                  LR      LR
      comp=N,900nm,10.0s
BTO                                  LR      LR
      comp=E,1µm,10.7s
BTO                                  LR      LR
      comp=Z,1µm,11.7s
TIA   Tai'an             12.83  50   P       Pn      16 40 59.1 +1.0
TIA                                  LR      LR
      comp=N,490nm,9.2s
TIA                                  LR      LR
      comp=E,870nm,10.3s
TIA                                  LR      LR
      comp=Z,1µm,9.1s
UBPT  Khong Chiam        13.12 178           Pn      16 41 03.0 +0.8
HHC   Hu-ho-hao-te       13.48  22  eP       Pn      16 41 09.8 +2.7
HHC                                  pmax    pmax
      comp=Z,15nm,0.9s
HHC                                  pmax    pmax
      comp=Z,95nm,5.0s
HHC                                  LR      LR
      comp=N,440nm,12.5s
HHC                                  LR      LR
      comp=E,740nm,11.2s
HHC                                  LR      LR
      comp=Z,490nm,14.3s
BJI   Beijing            14.78  36   P       Pn      16 41 25.1 +0.4
BJI                                  pmax    pmax
      comp=Z,5.0nm,1.3s
BJI                                  pmax    pmax
      comp=Z,69nm,4.1s
BJI                                  LR      LR
      comp=N,220nm,13.6s
BJI                                  LR      LR
      comp=E,170nm,12.0s
BJI                                  LR      LR
      comp=Z,280nm,14.6s
EVN   Everest            16.04 273           Pn      16 41 40.6 -1.5
XLT   XiLinHaoTe         17.79  27  eP       P       16 42 05.3 +1.0
XLT                                  sP      sP      16 42 20.5  +13
XLT                                  pmax    pmax
      comp=Z,18nm,1.4s
XLT                                  LR      LR
      comp=N,39nm,11.0s
XLT                                  LR      LR
      comp=E,290nm,7.5s
XLT                                  LR      LR
      comp=Z,370nm,9.2s
SONM  Songino Array      19.38   3   P       Pn      16 42 22.4 -0.4
SONM  Songino Array      19.38   3   P       Pn      16 42 23.2 +0.4
      0.6nm,0.3s,baz=178,slow=11,SNR=14
SONM                                 Lg      Lg      16 48 09.1
      0.1nm,0.3s,baz=126,slow=48,SNR=1.6
      7.1nm,0.9s
ULN   Ulaanbaatar        19.44   4   P       Pn      16 42 24.1 +0.5
ULN   Ulaanbaatar        19.44   4ceP       Pn      16 42 23.7 +0.1
ULN                                  pmax    pmax
      comp=Z,12nm,1.2s
SNY   Shenyang           20.16  44 ⇑P       Pn      16 42 32.5 +0.5
SNY                                  pmax    pmax
      comp=Z,21nm,0.8s
SNY                                  pmax    pmax
      comp=Z,190nm,5.8s
SNY                                  LR      LR
      comp=Z,310nm,14.6s
SNY                                  LR      LR
      comp=Z,380nm,12.7s
SNY                                  LR      LR
      comp=Z,430nm,14.3s
INCN  Inchon             20.22  58           Pn      16 42 32.4 -0.5
INCN  Inchon             20.22  58   P       Pn      16 42 32.4 -0.4
INCN                                 pmax    pmax
      comp=Z,43nm,1.2s
TJN   Taejon             20.43  62           Pn      16 42 34.1 -1.1
TJN   Taejon             20.43  62deP       Pn      16 42 34.9 -0.4
JOW   Kunigami           20.68  89           P       16 42 35.9  0.0
JOW   Kunigami           20.68  89   P       Pn      16 42 37.0 -1.2
      comp=Z,8.3nm,0.4s,baz=272,slow=10,SNR=15
JOW                                  LR      LR      16 51 13.0
      comp=Z,247nm,19.3s,baz=332,slow=38
      comp=Z,8.3nm,0.4s
WMQ   Urumqi             20.68 322  eP       Pn      16 42 38.9 +0.7
KSAR  Wonju Array Be     21.15  59           P       16 42 42.0 +1.1
KSAR  Wonju Array Be     21.15  59   P       P       16 42 42.0 +1.1
KS19  Wonju Array Si     21.15  59   P       P       16 42 41.8 +0.8
KSRS  Korea Array        21.18  59   P       P       16 42 42.1 +0.9
      comp=Z,15nm,0.9s,baz=242,slow=9.7,SNR=53
      comp=Z,15nm,0.9s
ZAK   Zakamensk          21.93 357  eP       P       16 42 50.5 +1.1
ZAK                                  pmax    pmax
      comp=Z,24nm,1.1s
CN2   Changchun          22.43  42   P       P       16 42 56.0 +1.4
CN2                                  pmax    pmax
      comp=Z,20nm,0.9s
CN2                                  LR      LR
      comp=Z,200nm,14.0s
CN2                                  LR      LR
      comp=Z,400nm,14.0s
CN2                                  LR      LR
      comp=Z,500nm,14.0s
JNU   Nakatsue           22.68  72   IAmb    IAmb    16 43 00.0
      comp=Z,30nm,1.0s
JNU   Nakatsue           22.68  72   P       P       16 42 58.8 +1.2
      comp=Z,24nm,1.0s,baz=297,slow=3.6,SNR=10
JNU                                  LR      LR      16 52 30.7
      comp=Z,282nm,18.3s,baz=309,slow=38
      comp=Z,24nm,1.0s
MOY   Mondy              23.38 354  eP       P       16 43 05.2 +0.7
IRK   Irkutsk            23.77 359  eP       P       16 43 05.1 -3.1
IRK                                  pmax    pmax
      comp=Z,49nm,2.2s
BSI   Banda Aceh         24.62 204   P       P       16 43 17.6 +1.1
      comp=Z,36nm,1.4s
KKM   Kota Kinabalu      24.69 152           P       16 43 16.9 -0.3
KKM                                  IAmb    IAmb    16 43 18.7
      comp=Z,49nm,1.0s
BNX   BinXian            24.70  40 ⇑P       P       16 43 17.3 +0.3
BNX                                  pmax    pmax
      comp=Z,8.0nm,0.9s
BNX                                  pmax    pmax
      comp=Z,180nm,5.2s
BNX                                  LR      LR
      comp=Z,620nm,20.8s
BNX                                  LR      LR
      comp=Z,550nm,15.5s
BNX                                  LR      LR
      comp=Z,1µm,19.5s
JMN   Monobe             25.23  71   IAmb    IAmb    16 43 24.4
      comp=Z,28nm,1.2s
MK31  Makanchi Array     25.51 322 i P       P       16 43 24.0 -0.3
MK31                                 pmax    pmax
      comp=Z,11nm,0.9s
MKAR  Makanchi Array     25.51 322           P       16 43 24.9 +0.5
MKAR  Makanchi Array     25.51 322   P       P       16 43 24.7 +0.4
      comp=Z,5.3nm,0.6s,baz=113,slow=9.3,SNR=37
MKAR                                 PcP     PcP     16 46 54.7 -1.1
      comp=Z,2.6nm,0.8s,baz=106,slow=4.4,SNR=6.1
MKAR                                 ScP     ScP     16 50 33.9 -1.5
      comp=Z,1.1nm,1.0s,baz=113,slow=3.3,SNR=5.5
      comp=Z,5.3nm,0.6s
MKAR  Makanchi Array     25.51 322 i P       P       16 43 23.8 -0.5
MKAR                                 pmax    pmax
      comp=Z,7.0nm,0.8s
PRZ   Przheval'sk        25.66 310   IAmb    IAmb    16 43 29.7
      comp=Z,14nm,0.7s
PRZ   Przheval'sk        25.66 310   P       P       16 43 28.8 +2.9
PRZ                                  pmax    pmax
      comp=Z,10.0nm,0.7s
MAKZ  Makanchi           25.69 322           P       16 43 26.6 +0.6
MAKZ  Makanchi           25.69 322   P       P       16 43 26.6 +0.6
MAKZ                                 pmax    pmax
      comp=Z,16nm,1.1s
VLA   Vladivostok        26.12  49⇓eP       P       16 43 30.3 +0.5
VLA                                  pmax    pmax
      comp=Z,17nm,1.1s
PSI   Prapat             26.16 194   P       P       16 43 30.6  0.0
PSI                                  pmax    pmax
      comp=Z,17nm,0.9s
KSH   Kashi              26.37 302   P       P       16 43 35.1 +2.8
KSH                                  pP      sP      16 43 38.3 +2.2
KSH                                  pmax    pmax
      comp=Z,5.0nm,1.0s
KSH                                  LR      LR
      comp=Z,290nm,15.1s
KSH                                  LR      LR
      comp=Z,260nm,14.1s
KSH                                  LR      LR
      comp=Z,220nm,17.5s
MYLDM Lahad Datu         26.46 149           P       16 43 34.0 +0.9
USA0B Ussuriysk Arra     26.66  47c iP       P       16 43 35.0 +0.3
USRK  Ussuriysk Ar.      26.66  47   P       P       16 43 35.3 +0.6
USRK  Ussuriysk Ar.      26.66  47   P       P       16 43 34.8 +0.1
      comp=Z,13nm,0.8s,baz=247,slow=8.8,SNR=42
      comp=Z,13nm,0.8s
USRK  Ussuriysk Ar.      26.66  47   P       P       16 43 35.3 +0.6
BOOM  Boomskoye usch     27.34 309   P       P       16 43 40.5 -0.6
BOOM  Boomskoye usch     27.34 309   P       P       16 43 40.5 -0.6
BOOM                                 pmax    pmax
      comp=Z,12nm,1.4s
HEH   HeiHe              27.62  32  eP       P       16 43 43.8 +0.5
HEH                                  PcP     PcP     16 47 00.8 +0.2
HEH                                  pmax    pmax
      comp=Z,6.0nm,1.4s
AAK   Ala-Archa          28.39 308⇓eP       P       16 43 51.1 +0.6
AAK                                  pmax    pmax
      comp=Z,3.0nm,1.4s
MJAR  Matsushiro Arr     29.03  65   LR      LR      16 57 51.3
      comp=Z,191nm,18.7s,baz=296,slow=41
KLR   Kul'dur            29.14  37⇑eP       P       16 43 58.1 +1.3
KLR                                  pmax    pmax
      comp=Z,12nm,2.5s
ZALV  Zalesovo Beam      29.44 335   P       P       16 43 59.0 -0.5
ZALV  Zalesovo Beam      29.44 335   P       P       16 43 59.7 +0.3
      comp=Z,2.6nm,0.6s,baz=134,slow=11,SNR=12
ZALV                                 PcP     PcP     16 47 03.0 -2.0
      comp=Z,0.8nm,0.7s,baz=151,slow=3.3,SNR=1.9
      comp=Z,2.6nm,0.6s
KURBB Kurchatov Arra     29.83 325   P       P       16 44 03.2 +0.3
      comp=Z,5.0nm,0.9s,baz=134,slow=9.3,SNR=33
KURBB                                PcP     PcP     16 47 05.7 -0.4
      comp=Z,3.1nm,0.9s,baz=120,slow=2.1,SNR=11
      comp=Z,5.0nm,0.9s
KURK  Kurchatov          29.85 325           P       16 44 02.6 -0.5
KURK                                         PcP     16 47 06.1  0.0
KURK  Kurchatov          29.85 325deP       P       16 44 03.1 +0.1
KURK                                 pmax    pmax
      comp=Z,11nm,1.3s
ZEA   Zeya               30.06  27⇓eP       P       16 44 06.6 +1.6
TOLI2 Tolitoli           31.10 148           P       16 44 14.1 -0.4
TOLI2                                IAmb    IAmb    16 44 15.7
      comp=Z,13nm,0.9s
KK31  Karatay Array      31.32 307  eP       P       16 44 16.3 +0.1
KKAR  Karatay Array      31.32 307           P       16 44 15.4 -0.8
KKAR  Karatay Array      31.32 307   P       P       16 44 15.4 -0.8
BVAR  Borovoye Array     35.36 324   P       P       16 44 51.2 -0.2
      comp=Z,1.1nm,0.5s,baz=127,slow=9.5,SNR=7.3
BVAR                                 PcP     PcP     16 47 20.4 -0.9
      comp=Z,2.6nm,0.8s,baz=151,slow=3.4,SNR=7.2
      comp=Z,1.1nm,0.5s
BRVK  Borovoye           35.44 324           P       16 44 51.9  0.0
BRVK  Borovoye           35.44 324deP       P       16 44 52.2 +0.3
BRVK                                 pmax    pmax
      comp=Z,3.0nm,0.8s
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YAK	**Yakutsk**	**37.32**	**19**		**P**	**16 45 08.0**	**+0.1**
YAK				IAmb	IAmb	16 45 09.5	
	comp=Z,18nm,0.8s						
YAK	**Yakutsk**	**37.32**	**19**	*e*P	**P**	**16 45 07.6**	**-0.3**
YAK				pmax	pmax		
	comp=Z,19nm,0.9s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.5s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.1s						
AB31	**Akbulak array**	**40.04**	**314**	P	**P**	**16 45 31.0**	**+0.1**
AB31	**Akbulak array**	**40.04**	**314**	*i* P	**P**	**16 45 31.2**	**+0.3**
ABKAR	**Akbulak array**	**40.04**	**314**		**P**	**16 45 30.8**	**0.0**
SVE	**Sverdlovsk**	**42.10**	**325**	*e*P	**P**	**16 45 48.6**	**+0.9**
ARTI	**Arti**	**43.09**	**324**	*d i*P	**P**	**16 45 55.5**	**-0.3**
ARTI						16 47 34.2	
ARTI				S	**S**	**16 52 25.2**	**+3.4**
ARTI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TIXI	**Tiksi**	**45.20**	**10**	P	**P**	**16 46 11.9**	**-0.6**
TIXI				IAmb	IAmb	16 46 13.2	
	comp=Z,17nm,1.1s						
TIXI	**Tiksi**	**45.20**	**10**	⇑*e*P	**P**	**16 46 12.3**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,17nm,1.0s						
AKT	**Akhty**	**47.90**	**302**	*e*P	**P**	**16 46 32.2**	**-2.1**
AKT				*e*		16 48 01.3	
AKT				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BELG	**Belogornoye**	**48.28**	**316**	*de*P	**P**	**16 46 37.1**	**+0.2**
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KIRV	**Kirov**	**48.36**	**325**	*c i*P	**P**	**16 46 37.3**	**-0.1**
KNRA	**Kununurra**	**49.53**	**149**		**P**	**16 46 46.0**	**-0.8**
KNRA				IAmb	IAmb	16 46 47.5	
	comp=Z,16nm,0.9s						
GNI	**Garni**	**50.27**	**300**	⇓*e*P	**P**	**16 46 53.4**	**+0.9**
GNI				pmax	pmax		
	comp=Z,11nm,1.5s						
FITZ	**Fitzroy Crossi**	**50.40**	**154**	P	**P**	**16 46 52.5**	**-0.9**
KBZ	**Khabaz**	**51.31**	**305**	P	**P**	**16 46 58.2**	**-1.9**
	comp=Z,2.1nm,0.8s,baz=105,slow=12,SNR=4.8						
	comp=Z,2.1nm,0.8s						
KBZ	**Khabaz**	**51.31**	**305**	⇓*e*P	**P**	**16 47 00.1**	**0.0**
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KIV	**Kislovodsk**	**51.44**	**305**		**P**	**16 47 01.4**	**+0.2**
KIV	**Kislovodsk**	**51.44**	**305**	*e*P	**P**	**16 47 01.3**	**+0.1**
KIV				pmax	pmax		
	comp=Z,18nm,1.1s						
SHA1	**Shidzhatmaz**	**51.48**	**305**	*c i*P	**P**	**16 47 02.0**	**+0.3**
BILL	**Bilibino**	**53.24**	**24**		**P**	**16 47 14.0**	**-0.1**
BILL	**Bilibino**	**53.24**	**24**	*de*P	**P**	**16 47 14.5**	**+0.4**
BILL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
RAYN	**Ar Rayn**	**53.25**	**279**	P	**P**	**16 47 13.4**	**-1.5**
RAYN				IAmb	IAmb	16 47 16.0	
	comp=Z,13nm,0.7s						
RAYN	**Ar Rayn**	**53.25**	**279**	P	**P**	**16 47 13.4**	**-1.5**
RAYN				pmax	pmax		
	comp=Z,13nm,0.7s						
KLMR	**Klimovskoe**	**53.69**	**326**	*e*P	**P**	**16 47 15.8**	**-1.6**
KLMR				*e*		16 48 21.9	
KLMR				pmax	pmax		
	comp=Z,19nm,0.9s						
OBN	**Obninsk**	**54.98**	**319**	*i* P	**P**	**16 47 27.6**	**+0.7**
OBN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PMG	**Port Moresby**	**55.45**	**126**	P	**P**	**16 47 30.3**	**-0.6**
PMG	**Port Moresby**	**55.45**	**126**	P	**P**	**16 47 30.3**	**-0.6**
PMG				pmax	pmax		
	comp=Z,35nm,0.9s						
WB0	**Warramunga Arr**	**55.73**	**146**	IAmb	IAmb	16 47 33.0	
	comp=Z,14nm,1.0s						
WRAB	**Tennant Creek**	**55.84**	**146**	P	**P**	**16 47 32.1**	**-1.4**
WRAB	**Tennant Creek**	**55.84**	**146**	*ce*P	**P**	**16 47 33.0**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,25nm,0.9s						
WRA	**Warramunga Arr**	**55.85**	**146**	P	**P**	**16 47 32.5**	**-1.1**
WRA	**Warramunga Arr**	**55.85**	**146**	P	**P**	**16 47 33.1**	**-0.5**
	comp=Z,14nm,0.8s,baz=334,slow=7.7,SNR=66						
WRA				PcP	**PcP**	**16 48 32.2**	**-0.3**
	comp=Z,3.1nm,0.9s,baz=331,slow=3.9,SNR=7.2						
	comp=Z,14nm,0.8s						
WRA	**Warramunga Arr**	**55.85**	**146**	*i* P	**P**	**16 47 33.0**	**-0.6**
WRA				pmax	pmax		
	comp=Z,15nm,0.8s						
WR8	**Warramunga Arr**	**55.94**	**146**	IAmb	IAmb	16 47 34.6	
	comp=Z,18nm,0.9s						
BR131	**Keskin Array S**	**58.75**	**301**	*ce*P	**P**	**16 47 54.0**	**-0.2**
BRTR	**Keskin Array B**	**58.75**	**301**	P	**P**	**16 47 53.2**	**-1.0**
BRTR	**Keskin Array B**	**58.75**	**301**	P	**P**	**16 47 53.6**	**-0.6**
	comp=Z,2.4nm,0.9s,baz=106,slow=5.8,SNR=12						
	comp=Z,2.4nm,0.9s						
BRTR	**Keskin Array B**	**58.75**	**301**	*i* P	**P**	**16 47 54.0**	**-0.2**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ASAR	**Alice Springs**	**58.83**	**149**	P	**P**	**16 47 54.3**	**-0.3**
ASAR	**Alice Springs**	**58.83**	**149**	P	**P**	**16 47 54.5**	**-0.1**
	comp=Z,6.8nm,0.8s,baz=331,slow=6.6,SNR=71						
ASAR				PcP	**PcP**	**16 48 44.0**	**-0.1**
	comp=Z,2.0nm,0.7s,baz=331,slow=4.0,SNR=5.5						
	comp=Z,6.8nm,0.8s						
MMAI	**Mount Meron Ar**	**59.01**	**293**	P	**P**	**16 47 55.7**	**-0.3**
	comp=Z,2.8nm,0.8s,baz=28,slow=5.7,SNR=4.0						
	comp=Z,2.8nm,0.8s						
AKASG	**Malin Array Be**	**59.78**	**314**	P	**P**	**16 48 00.5**	**-0.4**
	comp=Z,2.0nm,0.6s,baz=75,slow=6.2,SNR=13						
	comp=Z,2.0nm,0.6s						
AKASG	**Malin Array Be**	**59.78**	**314**	*i* P	**P**	**16 48 00.5**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKBB	**Malin Array Si**	**59.78**	**314**	*ce*P	**P**	**16 48 00.0**	**-0.9**
KIEV	**Kiev**	**59.79**	**314**	P	**P**	**16 48 00.1**	**-0.9**
KIEV	**Kiev**	**59.79**	**314**	⇓P	**P**	**16 48 00.5**	**-0.4**
KIEV	**Kiev**	**59.79**	**314**	⇓P	**P**	**16 48 00.5**	**-0.4**
ARCES	**ARCESS Array B**	**59.99**	**336**	P	**P**	**16 48 02.2**	**+0.2**
	comp=Z,8.0nm,1.0s,baz=71,slow=9.1,SNR=6.2						
	comp=Z,8.0nm,1.0s						
VSU	**Vasula**	**60.17**	**324**	*de*P	**P**	**16 48 02.6**	**-0.9**
VSU				pmax	pmax		
	comp=Z,11nm,1.0s						
FINES	**FINESS Array B**	**60.20**	**327**	P	**P**	**16 48 03.4**	**-0.2**
	comp=Z,4.8nm,0.8s,baz=108,slow=10,SNR=12						
	comp=Z,4.8nm,0.8s						
NACGM	**Naroch**	**60.61**	**320**	*e*P	**P**	**16 48 05.5**	**-1.0**
	comp=Z,15nm,0.9s,baz=82						
TPGR	**Topolog**	**61.41**	**308**	⇓P	**P**	**16 48 13.1**	**+0.9**
HARR	**Harsova**	**61.79**	**308**	⇑P	**P**	**16 48 15.0**	**+0.3**
HARR	**Harsova**	**61.79**	**308**	⇑P	**P**	**16 48 15.0**	**+0.3**
GAMB	**Gambell**	**61.94**	**30**	P	**P**	**16 48 14.9**	**-0.5**
	baz=278						
VRI	**Vrincioaia**	**62.35**	**309**	⇓P	**P**	**16 48 19.3**	**+0.8**
VRI	**Vrincioaia**	**62.35**	**309**	⇓P	**P**	**16 48 19.3**	**+0.8**
PLOR	**Plostina**	**62.40**	**309**	⇓P	**P**	**16 48 20.5**	**+1.6**
PLOR	**Plostina**	**62.40**	**309**	⇓P	**P**	**16 48 20.5**	**+1.6**
CTAO	**Charters Tower**	**62.59**	**136**	P	**P**	**16 48 20.1**	**-0.2**
CTAO				IAmb	IAmb	16 48 21.5	
	comp=Z,12nm,1.0s						
CTAO	**Charters Tower**	**62.59**	**136**	P	**P**	**16 48 20.1**	**-0.2**
CTAO				pmax	pmax		
	comp=Z,12nm,1.0s						
BURAR	**Bucovina Array**	**62.95**	**312**	⇑P	**P**	**16 48 23.0**	**+0.4**
BURAR	**Bucovina Array**	**62.95**	**312**	⇑P	**P**	**16 48 23.0**	**+0.4**
BUR08	**Bucovina Ar. S**	**62.96**	**312**	IAmb	IAmb	16 48 24.0	
	comp=Z,17nm,2.0s						
MLR	**Muntele Rosu**	**62.97**	**309**	IAmb	IAmb	16 48 30.3	
	comp=Z,5.9nm,0.7s						
MLR	**Muntele Rosu**	**62.97**	**309**	⇑P	**P**	**16 48 24.0**	**+1.2**
MLR	**Muntele Rosu**	**62.97**	**309**	⇑P	**P**	**16 48 24.0**	**+1.2**
DOPR	**Dopca**	**63.23**	**310**	⇓P	**P**	**16 48 26.2**	**+1.8**
TNA	**Tin City**	**63.27**	**28**	P	**P**	**16 48 23.4**	**-0.8**
	baz=280						
C16K	**Lisburne Hills**	**63.77**	**25**	P	**P**	**16 48 26.4**	**-1.1**
	baz=281						
SPIA	**Saint Paul Isl**	**63.80**	**37**	P	**P**	**16 48 27.4**	**-0.5**
	baz=282						
F14K	**Arctic Creek**	**63.94**	**28**	P	**P**	**16 48 27.8**	**-0.9**
	baz=282						
P08K	**Saint George I**	**64.30**	**38**	P	**P**	**16 48 30.4**	**-0.8**
	baz=283						
C17K	**DeLong Mountai**	**64.52**	**24**	P	**P**	**16 48 31.5**	**-0.9**
	baz=283						
ANM	**Nome**	**64.53**	**29**	P	**P**	**16 48 31.8**	**-0.8**
	baz=283						
KOLS	**Kolonicke sedl**	**64.54**	**314**	*e*P	**P**	**16 48 33.2**	**+0.2**
KOLS	**Kolonicke sedl**	**64.54**	**314**	*e*P	**P**	**16 48 33.2**	**+0.2**
F15K	**North Star Dit**	**64.57**	**27**	P	**P**	**16 48 31.9**	**-0.9**
	baz=283						
D17K	**Noatak River**	**64.73**	**25**	P	**P**	**16 48 33.3**	**-0.5**
	baz=283						
B18K	**Kokolik River**	**64.80**	**23**	P	**P**	**16 48 33.5**	**-0.8**
	baz=284						
A19K	**Wainwright**	**64.84**	**22**	P	**P**	**16 48 32.6**	**-1.9**
	baz=284						
G15K	**Niukluk**	**64.99**	**28**	P	**P**	**16 48 34.4**	**-1.1**
	baz=284						
M11K	**Mekoryuk**	**65.13**	**33**	P	**P**	**16 48 35.6**	**-0.9**
	baz=284						
C18K	**Utukok River**	**65.18**	**24**	P	**P**	**16 48 36.4**	**-0.4**
	baz=285						
E17K	**Hotham Inlet**	**65.35**	**25**	P	**P**	**16 48 37.4**	**-0.4**
	baz=285						
K13K	**Kusilvak Mount**	**65.47**	**31**	P	**P**	**16 48 38.3**	**-0.4**
	baz=285						
SURR	**Surduc**	**65.49**	**310**	⇑P	**P**	**16 48 39.5**	**+0.3**
HERR	**Herculane**	**65.54**	**309**	⇓P	**P**	**16 48 40.0**	**+0.6**
G16K	**Koyuk River**	**65.58**	**27**	P	**P**	**16 48 38.7**	**-0.7**
	baz=285						
NIKH	**Nikolski High**	**65.58**	**42**	P	**P**	**16 48 38.6**	**-1.0**
	baz=285						
C19K	**Lookout Ridge**	**65.62**	**23**	IAmb	IAmb	16 48 41.6	
	comp=Z,16nm,1.1s						
C19K	**Lookout Ridge**	**65.62**	**23**	P	**P**	**16 48 39.2**	**-0.5**
	baz=286						
NIE	**Niedzica**	**65.67**	**314**	*e*P	**P**	**16 48 41.1**	**+0.8**
E18K	**Tukpahlearik C**	**65.72**	**25**	P	**P**	**16 48 39.6**	**-0.7**
	baz=286						
F17K	**Baldwin Pennin**	**65.74**	**26**	P	**P**	**16 48 39.5**	**-0.9**
	baz=286						
J14K	**Nanvaranak Lak**	**65.76**	**30**	P	**P**	**16 48 39.7**	**-0.8**
	baz=285						
OJC	**Ojcow**	**65.76**	**315**	*e*P	**P**	**16 48 40.9**	**+0.1**
H16K	**Elim**	**65.82**	**28**	P	**P**	**16 48 40.1**	**-0.8**
	baz=286						
A21K	**Barrow**	**65.96**	**20**	P	**P**	**16 48 40.4**	**-1.3**
	baz=288						
MDVR	**Moldovita**	**66.04**	**309**	⇓P	**P**	**16 48 43.1**	**+0.3**
B20K	**Meade River**	**66.18**	**22**	P	**P**	**16 48 42.2**	**-1.0**
	baz=288,SNR=9.2						
G17K	**Kiwalik Mounta**	**66.23**	**27**	P	**P**	**16 48 42.4**	**-1.2**
	baz=286						
F18K	**Selawik**	**66.31**	**26**	P	**P**	**16 48 42.9**	**-1.1**
	baz=287						
D19K	**Kuna River**	**66.31**	**24**	P	**P**	**16 48 43.5**	**-0.6**
	baz=287						
NOR	**Nord**	**66.37**	**352**	*e*	**P**	**16 48 44.7**	**+0.5**
BOVS	**Bovan**	**66.39**	**308**	⇑P	**P**	**16 48 45.3**	**+0.4**
HFS	**Hagfors**	**66.40**	**327**	P	**P**	**16 48 44.4**	**-0.3**
	comp=Z,3.2nm,0.7s,baz=80,slow=3.6,SNR=5.8						
	comp=Z,3.2nm,0.7s						
M13K	**Dall Lake**	**66.48**	**33**	P	**P**	**16 48 44.6**	**-0.6**
	baz=286						
L14K	**Kuka Creek**	**66.53**	**32**	P	**P**	**16 48 44.8**	**-0.7**
	baz=286,SNR=8.5						
A22K	**Sinclair Lake**	**66.56**	**21**	P	**P**	**16 48 44.4**	**-1.2**
	baz=289						
I17K	**Unalakleet**	**66.68**	**29**	P	**P**	**16 48 45.3**	**-1.1**
	baz=287						
H17K	**Granite Mounta**	**66.69**	**28**	IAmb	IAmb	16 48 48.5	
	comp=Z,11nm,0.9s						
H17K	**Granite Mounta**	**66.69**	**28**	P	**P**	**16 48 45.2**	**-1.3**
	baz=287,SNR=5.8						
UNV	**Unalaska Valle**	**66.70**	**40**	P	**P**	**16 48 45.3**	**-1.4**
	baz=287						
D20K	**Etivluk River**	**66.77**	**23**	P	**P**	**16 48 46.7**	**-0.3**
	baz=289						
K15K	**Wolf Creek Mou**	**66.78**	**31**	P	**P**	**16 48 46.4**	**-0.7**
	baz=287						
VYHS	**Vyhne**	**66.85**	**314**	*e*P	**P**	**16 48 48.7**	**+0.8**
J16K	**Anvik River**	**66.90**	**29**	P	**P**	**16 48 46.6**	**-1.3**
	baz=287						
G18K	**Tagagawik**	**66.90**	**26**	IAmb	IAmb	16 48 59.2	
	comp=Z,19nm,1.8s						
G18K	**Tagagawik**	**66.90**	**26**	P	**P**	**16 48 46.9**	**-1.0**
	baz=288						
F19K	**Shaleruckik Mo**	**66.95**	**25**	P	**P**	**16 48 48.1**	**0.0**
	baz=288						
E19K	**Redstone River**	**66.95**	**25**	P	**P**	**16 48 48.0**	**-0.2**
	baz=289						
L15K	**Ungalak Mounta**	**66.99**	**31**	P	**P**	**16 48 47.7**	**-0.7**
	baz=287						
M14K	**Bethel**	**67.04**	**32**	P	**P**	**16 48 47.7**	**-1.0**
	baz=287,SNR=6.4						
E20K	**Nigu River**	**67.07**	**24**	P	**P**	**16 48 48.0**	**-0.9**
	baz=289						
STEB	**Steborice**	**67.09**	**316**	*e*P	**P**	**16 48 50.2**	**+0.8**
B21K	**Ikpikpuk River**	**67.14**	**22**	P	**P**	**16 48 48.3**	**-1.0**
	baz=290						
C21K	**Knifeblade Rid**	**67.25**	**22**	P	**P**	**16 48 49.0**	**-1.1**
	baz=290						
H18K	**Honhosa River**	**67.25**	**27**	P	**P**	**16 48 49.1**	**-1.0**
	baz=289						
B22K	**Teshekpuk Lake**	**67.28**	**21**	P	**P**	**16 48 49.8**	**-0.3**
	baz=291,SNR=7.3						
MORC	**Moravsky Berou**	**67.28**	**315**	*e*P	**P**	**16 48 50.8**	**+0.2**
NB2	**NORSAR Subarra**	**67.31**	**328**	P	**P**	**16 48 49.6**	**-1.0**
	comp=Z,2.9nm,0.8s,baz=73,slow=6.5						
NOA	**NORSAR Array B**	**67.31**	**328**	P	**P**	**16 48 49.8**	**-0.7**
	comp=Z,2.3nm,0.8s,baz=77,slow=6.1,SNR=8.2						
	comp=Z,2.3nm,0.8s						
N14K	**Kuskokwak Cree**	**67.42**	**33**	IAmb	IAmb	16 48 54.2	
	comp=Z,13nm,0.9s						
N14K	**Kuskokwak Cree**	**67.42**	**33**	P	**P**	**16 48 49.9**	**-1.3**
	baz=288						
JAVC	**Velka Javorina**	**67.48**	**314**	*e*P	**P**	**16 48 53.3**	**+1.4**
J17K	**VABM Dome**	**67.52**	**29**	IAmb	IAmb	16 48 53.9	
	comp=Z,6.6nm,0.9s						
J17K	**VABM Dome**	**67.52**	**29**	P	**P**	**16 48 50.9**	**-0.9**
	baz=289						
F20K	**Avaraart Lake**	**67.64**	**25**	IAmb	IAmb	16 48 53.8	
	comp=Z,7.1nm,0.9s						
F20K	**Avaraart Lake**	**67.64**	**25**	P	**P**	**16 48 52.0**	**-0.5**
	baz=290,SNR=6.9						
M15K	**Kasigluk River**	**67.66**	**32**	P	**P**	**16 48 51.7**	**-1.0**
	baz=288						
KRLC	**Kraliky**	**67.66**	**316**	*e*P	**P**	**16 48 53.6**	**+0.6**
KRLC	**Kraliky**	**67.66**	**316**	*e*P	**P**	**16 48 53.6**	**+0.6**
MORH	**Mrgy, Hungar**	**67.67**	**311**	⇑P	**P**	**16 48 53.4**	**+0.3**
KSP	**Ksiaz**	**67.72**	**317**	*e*P	**P**	**16 48 54.2**	**+0.9**
E21K	**Killik River**	**67.78**	**23**	P	**P**	**16 48 52.6**	**-0.8**
	baz=291						
O14K	**Tigyukauivet M**	**67.84**	**34**	P	**P**	**16 48 53.2**	**-0.6**
	baz=288						
DPC	**Dobruska-Polom**	**67.85**	**316**	*e*P	**P**	**16 48 54.8**	**+0.6**
DPC	**Dobruska-Polom**	**67.85**	**316**	*e*P	**P**	**16 48 54.8**	**+0.6**
H19K	**Roundabout Mou**	**67.89**	**26**	P	**P**	**16 48 53.9**	**-0.1**
	baz=290,SNR=13						
L16K	**Owhat River**	**67.89**	**31**	IAmb	IAmb	16 48 56.3	
	comp=Z,5.3nm,0.9s						
L16K	**Owhat River**	**67.89**	**31**	P	**P**	**16 48 53.6**	**-0.5**
	baz=289						
GCSA	**Galena City Sc**	**67.98**	**27**	P	**P**	**16 48 54.9**	**+0.2**
	baz=290						
VRAC	**Vranov**	**68.01**	**315**	*e*P	**P**	**16 48 55.7**	**+0.5**
VRAC	**Vranov**	**68.01**	**315**	⇑P	**P**	**16 48 55.9**	**+0.7**
VRAC	**Vranov**	**68.01**	**315**	⇑P	**P**	**16 48 55.9**	**+0.7**
D22K	**Ayikyak River**	**68.05**	**22**	P	**P**	**16 48 54.8**	**-0.3**
	baz=292,SNR=12						
K17K	**Iditarod**	**68.08**	**30**	P	**P**	**16 48 55.0**	**-0.3**
	baz=290,SNR=9.3						
N15K	**Kwethluk River**	**68.11**	**32**	P	**P**	**16 48 55.6**	**0.0**
	baz=289,SNR=6.2						
KRUC	**Moravsky**	**68.22**	**315**	*e*P	**P**	**16 48 56.6**	**+0.1**
L17K	**Donlin**	**68.27**	**30**	P	**P**	**16 48 55.9**	**-0.7**
	baz=290,SNR=8.2						
M16K	**Timber Creek**	**68.35**	**31**	P	**P**	**16 48 56.8**	**-0.3**
	baz=290,SNR=7.7						
C23K	**Itkillik River**	**68.36**	**21**	P	**P**	**16 48 56.5**	**-0.5**
	baz=294,SNR=7.1						
F21K	**Alatna River**	**68.40**	**24**	IAmb	IAmb	16 49 46.1	
	comp=Z,6.6nm,0.9s						
F21K	**Alatna River**	**68.40**	**24**	P	**P**	**16 48 57.1**	**-0.2**
	baz=292						
PDG	**Podgorica**	**68.47**	**307**	P	**P**	**16 48 57.7**	**-0.4**
PDG				IAmb	IAmb	16 48 58.8	
	comp=Z,6.9nm,0.8s						
J18K	**Innoko River**	**68.50**	**29**	IAmb	IAmb	16 49 00.0	
	comp=Z,12nm,0.8s						
J18K	**Innoko River**	**68.50**	**29**	P	**P**	**16 48 57.8**	**-0.2**
	baz=291,SNR=12						
H20K	**Anotleneega Mo**	**68.51**	**26**	P	**P**	**16 48 57.8**	**-0.2**
	baz=291,SNR=8.6						
O15K	**Ungalikthiuk R**	**68.56**	**33**	P	**P**	**16 48 57.9**	**-0.6**
	baz=290,SNR=5.1						
S12K	**Black Hills**	**68.58**	**37**	P	**P**	**16 48 58.5**	**-0.1**
	baz=289						
N16K	**Nishlik Lake**	**68.62**	**32**	P	**P**	**16 48 58.5**	**-0.4**
	baz=290,SNR=9.8						
E22K	**Anaktuvuk Pass**	**68.64**	**23**	P	**P**	**16 48 58.1**	**-0.7**
	baz=293,SNR=15						
G21K	**Allakaket**	**68.65**	**25**	P	**P**	**16 48 58.5**	**-0.4**
	baz=292						
D23K	**Nanushuk River**	**68.69**	**22**	P	**P**	**16 48 58.4**	**-0.6**
	baz=294,SNR=9.6						
RONA	**Rosalia, Austr**	**68.72**	**314**	*i* P	**P**	**16 48 59.1**	**-0.6**
	comp=Z,5.5nm,1.1s						
J19K	**Poorman**	**68.76**	**28**	IAmb	IAmb	16 49 02.1	
	comp=Z,9.5nm,0.9s						
J19K	**Poorman**	**68.76**	**28**	P	**P**	**16 48 59.3**	**-0.3**
	baz=291,SNR=8.0						
IMAR	**Indian Mountai**	**68.76**	**26**	P	**P**	**16 48 59.3**	**-0.3**
M17K	**Holitna River**	**68.91**	**31**	P	**P**	**16 49 00.5**	**-0.1**
	baz=291,SNR=12						
CONA	**Conrad Observa**	**68.92**	**314**	*i* P	**P**	**16 49 00.7**	**-0.2**
	comp=Z,3.3nm,0.8s						
I20K	**Naaghedeneel**	**68.93**	**27**	P	**P**	**16 49 00.3**	**-0.3**
	baz=292						
L18K	**Granite Mounta**	**68.95**	**30**	IAmb	IAmb	16 49 03.8	
	comp=Z,13nm,1.4s						
L18K	**Granite Mounta**	**68.95**	**30**	P	**P**	**16 49 00.5**	**-0.3**
	baz=291						
C24K	**Franklin Bluff**	**69.01**	**21**	P	**P**	**16 49 00.5**	**-0.6**
	baz=295						
BRG	**Berggiesshubel**	**69.12**	**317**	*e*P	**P**	**16 49 02.6**	**+0.5**
	comp=Z,3.1nm,0.8s,baz=69,slow=6.0						
TOLK	**Toolik Lake Re**	**69.19**	**22**	IAmb	IAmb	16 49 03.8	
	comp=Z,9.3nm,0.9s						
TOLK	**Toolik Lake Re**	**69.19**	**22**	P	**P**	**16 49 01.7**	**-0.6**
	baz=295						
D24K	**Happy Valley**	**69.22**	**22**	P	**P**	**16 49 01.7**	**-0.6**
	baz=295						
G22K	**Bettles**	**69.23**	**24**	P	**P**	**16 49 01.8**	**-0.6**
	baz=294						
H21K	**Melozitna Rive**	**69.25**	**26**	IAmb	IAmb	16 49 05.0	
	comp=Z,12nm,1.3s						
H21K	**Melozitna Rive**	**69.25**	**26**	P	**P**	**16 49 02.1**	**-0.6**
	baz=293,SNR=9.6						
O16K	**Kokwok River B**	**69.25**	**33**	P	**P**	**16 49 02.6**	**-0.1**
	baz=291,SNR=9.4						
J20K	**Nowinta River**	**69.29**	**27**	IAmb	IAmb	16 49 05.5	
	comp=Z,8.5nm,0.9s						
J20K	**Nowinta River**	**69.29**	**27**	P	**P**	**16 49 02.5**	**-0.4**
	baz=292,SNR=7.9						
N17K	**Nushagak Hills**	**69.34**	**32**	IAmb	IAmb	16 49 06.5	
	comp=Z,9.7nm,1.0s						
N17K	**Nushagak Hills**	**69.34**	**32**	P	**P**	**16 49 02.6**	**-0.7**
	baz=291,SNR=6.4						
ARSA	**Arzberg**	**69.36**	**313**	*i* P	**P**	**16 49 03.3**	**-0.4**
	comp=Z,3.4nm,0.8s						
STKA	**Stephens Creek**	**69.37**	**147**	P	**P**	**16 49 03.0**	**-0.7**
	comp=Z,3.9nm,0.7s,baz=322,slow=8.8,SNR=5.8						
	comp=Z,3.9nm,0.7s						
E23K	**Chandalar**	**69.42**	**23**	IAmb	IAmb	16 49 06.1	
	comp=Z,22nm,1.4s						
E23K	**Chandalar**	**69.42**	**23**	P	**P**	**16 49 03.4**	**-0.3**
	baz=295,SNR=8.3						
ZVC	**Zvikov**	**69.45**	**316**	*e*P	**P**	**16 49 05.2**	**+1.0**
P16K	**Nushagak River**	**69.50**	**33**	P	**P**	**16 49 03.2**	**-1.0**
	baz=291						
CLL	**Collm**	**69.53**	**318**	*e*P	**P**	**16 49 05.0**	**+0.4**
CLL	**Collm**	**69.53**	**318**	*e*P	**P**	**16 49 05.2**	**+0.7**
	baz=69,slow=6.0						
CLL	**Collm**	**69.53**	**318**	*e*P	**P**	**16 49 05.0**	**+0.4**
SDPT	**Sand Point**	**69.55**	**37**	P	**P**	**16 49 03.3**	**-1.2**
	baz=290						
COLD	**Coldfoot**	**69.57**	**24**	P	**P**	**16 49 04.5**	**-0.1**
	baz=295						
CKRC	**Cesky Krumlov**	**69.59**	**315**	*e*P	**P**	**16 49 05.9**	**+0.8**
CKRC	**Cesky Krumlov**	**69.59**	**315**	*e*P	**P**	**16 49 05.9**	**+0.8**
M18K	**Stony River**	**69.60**	**30**	P	**P**	**16 49 04.6**	**-0.2**
	baz=292,SNR=5.1						
K20K	**Telida**	**69.64**	**28**	P	**P**	**16 49 05.0**	**-0.1**
	baz=293,SNR=7.6						
O17K	**Koliganek Bris**	**69.66**	**32**	P	**P**	**16 49 05.1**	**-0.1**
	baz=292,SNR=5.4						
H22K	**Ishtalitna Cre**	**69.69**	**25**	P	**P**	**16 49 04.8**	**-0.6**
	baz=294,SNR=6.2						
S14K	**Fog Glacier**	**69.70**	**36**	P	**P**	**16 49 04.8**	**-0.8**
	baz=291						
L19K	**White Mountain**	**69.76**	**29**	IAmb	IAmb	16 49 08.9	
	comp=Z,19nm,1.2s						
L19K	**White Mountain**	**69.76**	**29**	P	**P**	**16 49 05.8**	**0.0**
	baz=293,SNR=10						
E24K	**Your Creek**	**69.80**	**23**	IAmb	IAmb	16 49 07.8	
	comp=Z,14nm,1.0s						
E24K	**Your Creek**	**69.80**	**23**	P	**P**	**16 49 05.3**	**-0.7**
	baz=296,SNR=16						
G23K	**Bananza Creek**	**69.85**	**24**	P	**P**	**16 49 05.6**	**-0.7**
	baz=295,SNR=6.6						
SOKA	**Soboth**	**69.88**	**313**	*i* P	**P**	**16 49 06.9**	**0.0**
	comp=Z,3.4nm,0.6s						
N18K	**Kilae Creek**	**69.88**	**31**	P	**P**	**16 49 06.0**	**-0.6**
	baz=292						
D25K	**Kavik River**	**69.92**	**21**	IAmb	IAmb	16 49 08.3	
	comp=Z,10nm,1.1s						
D25K	**Kavik River**	**69.92**	**21**	P	**P**	**16 49 06.3**	**-0.5**
	baz=297,SNR=5.3						
KHC	**Kasperske Hory**	**69.94**	**316**	*e*P	**P**	**16 49 07.9**	**+0.7**
KHC	**Kasperske Hory**	**69.94**	**316**	*de*P	**P**	**16 49 07.4**	**+0.2**
KHC				pmax	pmax		
	comp=Z,9.0nm,1.7s						
GEC2	**GERESS Array S**	**69.96**	**315**	*e*P	**P**	**16 49 07.6**	**+0.2**
	comp=Z,3.9nm,0.8s,baz=69,slow=6.0						
GERES	**GERESS Array B**	**69.96**	**315**	P	**P**	**16 49 07.3**	**-0.1**
	comp=Z,4.4nm,0.3s,baz=69,slow=5.7,SNR=47						
	comp=Z,4.4nm,0.3s						
L20K	**Farewell, AK**	**70.07**	**29**	P	**P**	**16 49 07.4**	**-0.4**
	baz=293,SNR=5.1						
M19K	**Big River Lodg**	**70.07**	**30**	P	**P**	**16 49 07.2**	**-0.6**
	baz=293						
C26K	**Camden Bay**	**70.10**	**20**	P	**P**	**16 49 07.5**	**-0.3**
	baz=298						
BSEG	**Bad Segeberg**	**70.14**	**321**	*e*P	**P**	**16 49 09.2**	**+0.9**
	comp=Z,9.2nm,0.9s,baz=69,slow=6.0						
CHUM	**Lake Minchumin**	**70.15**	**27**	P	**P**	**16 49 07.7**	**-0.4**
	baz=294						
TANN	**Tannenbergstha**	**70.16**	**317**	*e*P	**P**	**16 49 09.3**	**+0.7**
	comp=Z,4.7nm,1.2s,baz=69,slow=6.0						
P17K	**Kvichak River**	**70.18**	**33**	P	**P**	**16 49 07.6**	**-0.8**
	baz=292						
CHNA	**Chernabura Isl**	**70.21**	**38**	P	**P**	**16 49 07.6**	**-1.0**
	baz=291						
F24K	**Squaw Lake**	**70.25**	**23**	P	**P**	**16 49 08.3**	**-0.5**
	baz=297						
Q16K	**King Salmon**	**70.28**	**33**	P	**P**	**16 49 08.9**	**-0.1**
	baz=292						
NEUB	**Neuenburg**	**70.29**	**318**	*e*P	**P**	**16 49 09.7**	**+0.5**
	comp=Z,14nm,1.4s,baz=69,slow=6.0						
MLY	**Manley**	**70.30**	**26**	IAmb	IAmb	16 49 11.6	
	comp=Z,10nm,0.9s						
MLY	**Manley**	**70.30**	**26**	P	**P**	**16 49 08.6**	**-0.5**
	baz=295,SNR=13						
WET	**Wettzell**	**70.36**	**316**	*e*P	**P**	**16 49 10.1**	**+0.3**
	comp=Z,3.3nm,0.9s,baz=69,slow=6.0						
H23K	**Yukon River**	**70.41**	**25**	IAmb	IAmb	16 49 12.6	
	comp=Z,13nm,1.1s						
H23K	**Yukon River**	**70.41**	**25**	P	**P**	**16 49 09.2**	**-0.6**
	baz=296,SNR=13						
CAST	**Castle Rocks**	**70.44**	**28**	P	**P**	**16 49 09.0**	**-1.0**
	baz=294						
N19K	**Bonanza Creek**	**70.46**	**31**	IAmb	IAmb	16 49 13.1	
	comp=Z,13nm,0.8s						
N19K	**Bonanza Creek**	**70.46**	**31**	P	**P**	**16 49 09.4**	**-0.8**
	baz=293,SNR=7.3						
O18K	**Koktuh Hills**	**70.51**	**32**	IAmb	IAmb	16 49 12.9	
	comp=Z,12nm,0.8s						
O18K	**Koktuh Hills**	**70.51**	**32**	P	**P**	**16 49 09.6**	**-0.9**
	baz=293,SNR=5.3						
ROTZ	**Rotzenmuhle**	**70.55**	**317**	*e*P	**P**	**16 49 11.4**	**+0.5**
	comp=Z,1.6nm,0.9s,baz=69,slow=6.0						
BPAW	**Bear Paw Mtn.**	**70.59**	**27**	IAmb	IAmb	16 49 13.7	
	comp=Z,15nm,1.0s						
BPAW	**Bear Paw Mtn.**	**70.59**	**27**	P	**P**	**16 49 10.3**	**-0.6**
	baz=295,SNR=14						
C27K	**Jago River**	**70.61**	**20**	IAmb	IAmb	16 49 13.4	
	comp=Z,14nm,0.9s						
C27K	**Jago River**	**70.61**	**20**	P	**P**	**16 49 09.9**	**-1.0**
	baz=300						
PPLA	**Purkeypile**	**70.61**	**28**	P	**P**	**16 49 10.3**	**-0.9**

	baz=294,SNR=7.5						
M20K	Styx River	70.63	29	P	P	16 49 10.7	-0.6
	baz=294						
P18K	Big Mountain,	70.68	32	IAmb	IAmb	16 49 14.1	
	comp=Z,16nm,1.1s						
P18K	Big Mountain,	70.68	32	P	P	16 49 10.8	-0.8
	baz=293,SNR=5.1						
E25K	Arctic Village	70.75	22	P	P	16 49 10.9	-0.9
	baz=298						
G24K	Hadweenzic Riv	70.76	24	IAmb	IAmb	16 49 13.8	
	comp=Z,11nm,1.0s						
G24K	Hadweenzic Riv	70.76	24	P	P	16 49 11.9	0.0
	baz=297,SNR=6.0						
I23K	Minto, Yukon-K	70.77	26	IAmb	IAmb	16 49 13.8	
	comp=Z,7.4nm,0.9s						
I23K	Minto, Yukon-K	70.77	26	P	P	16 49 11.2	-0.8
	baz=296,SNR=7.0						
NRDL	Niedersach Rie	70.78	320	*e*P	P	16 49 12.8	+0.6
	comp=Z,5.7nm,0.9s,baz=69,slow=6.0						
Q17K	Contact Creek	70.81	34	P	P	16 49 11.7	-0.7
	baz=293						
KTH	Kantishna Hill	70.85	27	IAmb	IAmb	16 49 15.2	
	comp=Z,10nm,1.1s						
RJOB	Jochberg	70.92	314	*e*P	P	16 49 13.2	0.0
	comp=Z,4.9nm,1.2s,baz=69,slow=6.0						
F25K	Christian Rive	70.98	22	P	P	16 49 13.1	-0.2
	baz=299,SNR=7.6						
H24K	Noodor Dome	71.01	25	IAmb	IAmb	16 49 15.4	
	comp=Z,6.3nm,0.9s						
H24K	Noodor Dome	71.01	25	P	P	16 49 13.1	-0.4
	baz=297,SNR=10.0						
Q18K	Katmai Hardscr	71.08	33	P	P	16 49 14.1	0.0
	baz=294						
KMBO	Kilima Mbogo	71.09	258	P	P	16 49 14.3	-0.7
KMBO				IAmb	IAmb	16 49 16.0	
	comp=Z,6.3nm,0.9s						
KMBO	Kilima Mbogo	71.09	258	P	P	16 49 14.3	-0.7
KMBO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
LESA	Schwarzleotal	71.11	314	*i* P	P	16 49 13.7	-0.7
	comp=Z,7.4nm,1.2s						
RETH	Rethem/Aller,	71.11	320	*e*P	P	16 49 14.7	+0.5
	comp=Z,2.1nm,0.9s,baz=69,slow=6.0						
NEA2	Nenana	71.13	26	P	P	16 49 14.1	0.0
	baz=297,SNR=18						
TRF	Thorofare Moun	71.15	27	IAmb	IAmb	16 49 19.2	
	comp=Z,6.6nm,1.0s						
TRF	Thorofare Moun	71.15	27	P	P	16 49 14.2	-0.4
	baz=296						
GRF	Grafenberg Arr	71.17	317	*e*P	P	16 49 15.5	+0.8
	comp=Z,6.1nm,0.8s,baz=69,slow=6.0						
G25K	Bearman Lake	71.22	23	P	P	16 49 14.3	-0.3
	baz=298						
GTTG	Gottingen	71.22	319	*e*P	P	16 49 15.6	+0.7
	comp=Z,11nm,1.1s,baz=69,slow=6.0						
SKT	Skwentna	71.28	29	IAmb	IAmb	16 49 16.9	
	comp=Z,13nm,1.0s						
SKT	Skwentna	71.28	29	P	P	16 49 14.9	-0.2
	baz=295,SNR=7.0						
ILSW	Iliamna Southw	71.41	31	IAmb	IAmb	16 49 19.3	
	comp=Z,12nm,1.2s						
BMAR	Burnt Mountain	71.41	22	P	P	16 49 16.8	+0.9
F26K	Sheenjek River	71.43	22	P	P	16 49 15.4	-0.5
	baz=300,SNR=5.6						
DBG	Daneborg	71.46	346	*e*P	P	16 49 16.6	+0.6
ABTA	Abfaltersbach	71.47	314	*i* P	P	16 49 15.8	-0.8
	comp=Z,2.9nm,0.9s						
COLA	College	71.47	25	*d i*P	P	16 49 17.0	+0.9
COLA				pmax	pmax		
	comp=Z,18nm,1.0s						
COLA	College	71.47	25	P	P	16 49 16.4	+0.2
	baz=298						
P19K	Oil Pt	71.50	32	P	P	16 49 16.1	-0.4
	baz=295						
POKR	Poker Plat Res	71.51	25	P	P	16 49 16.5	+0.1
	baz=298,SNR=5.4						
WRH	Wood River Hil	71.56	26	IAmb	IAmb	16 49 19.8	
	comp=Z,22nm,1.8s						
MCK	McKinley	71.57	27	P	P	16 49 16.8	-0.1
	baz=297						
O20K	Slope Mountain	71.60	31	P	P	16 49 16.2	-0.9
	baz=295						
Q19K	Cape Douglas,	71.61	32	P	P	16 49 16.2	-1.0
	baz=295						
D27M	Malcolm River	71.64	20	P	P	16 49 16.4	-0.8
	baz=302						
FUR	Furstenfeldbru	71.71	315	*e*P	P	16 49 18.8	+0.8
	comp=Z,15nm,0.9s,baz=69,slow=6.0						
RND	Reindeer	71.75	27	IAmb	IAmb	16 49 20.1	
	comp=Z,10nm,1.0s						
WTTA	Wattenberg	71.83	314	*i* P	P	16 49 18.4	-0.5
	comp=Z,6.9nm,0.6s						
SUA	Susitna One	71.84	29	P	P	16 49 18.2	-0.4
	baz=296,SNR=9.2						
ILAR	Eielson Array	71.88	25	P	P	16 49 18.1	-0.6
ILAR	Eielson Array	71.88	25	P	P	16 49 18.5	-0.2
	comp=Z,2.8nm,1.0s,baz=281,slow=5.2,SNR=19						
	comp=Z,2.8nm,1.0s						
G26K	Porcupine Rive	71.92	23	P	P	16 49 18.7	-0.2
	baz=300						
M22K	Willow	71.98	29	P	P	16 49 18.8	-0.4
	baz=297						
E27K	Coleen River	72.00	21	P	P	16 49 18.9	-0.5
	baz=302						
PRP	Porcupine Dome	72.03	24	IAmb	IAmb	16 49 21.4	
	comp=Z,15nm,0.9s						
PRP	Porcupine Dome	72.03	24	P	P	16 49 19.2	-0.6
	baz=299,SNR=18						
HDA	Harding Lake	72.03	26	P	P	16 49 19.4	-0.2
	baz=298						
SQTA	Sankt Quirin	72.11	314	*i* P	P	16 49 20.0	-0.5
	comp=Z,8.5nm,0.7s						
MOTA	Moosalm	72.13	315	*i* P	P	16 49 20.1	-0.6
	comp=Z,5.7nm,0.8s						
WAT1	Susitna Watana	72.14	28	P	P	16 49 20.3	0.0
	baz=298						
D28M	Stokes Point	72.25	20	P	P	16 49 20.6	-0.2
	baz=304						
Q20K	Shuyak Island	72.34	32	P	P	16 49 20.6	-0.9
	baz=296						
SII	Sitkinak Islan	72.34	35	P	P	16 49 21.2	-0.4
	baz=295						
CEL	Celeste	72.36	304	P	P	16 49 21.8	-0.3
CEL				IAmb	IAmb	16 49 22.8	
	comp=Z,9.2nm,0.8s						
E28M	Babbage River	72.42	20	IAmb	IAmb	16 49 24.1	
	comp=Z,15nm,1.4s						
E28M	Babbage River	72.42	20	P	P	16 49 21.4	-0.5
	baz=304						
RC01	Rabbit Creek A	72.44	29	IAmb	IAmb	16 49 23.6	
	comp=Z,11nm,1.0s						
RC01	Rabbit Creek A	72.44	29	P	P	16 49 21.8	-0.3
	baz=297						
PMR	Palmer	72.47	29	P	P	16 49 22.0	-0.2
	baz=297						
FETA	Feichten	72.49	314	*i* P	P	16 49 22.8	-0.1
	comp=Z,8.9nm,1.1s						
DHY	Denali Highway	72.50	27	P	P	16 49 22.0	-0.6
	baz=298						
OHAK	Old Harbor	72.51	34	P	P	16 49 22.4	-0.1
	baz=295						
J25K	Salcha River,	72.53	25	P	P	16 49 21.8	-0.8
	baz=300						
WAT6	Susitna Watana	72.59	28	P	P	16 49 22.7	-0.5
	baz=298						
BRSE	Bradley Lake S	72.61	31	P	P	16 49 22.6	-0.5
	baz=297						
KDAK	Kodiak Island	72.61	33	P	P	16 49 22.3	-0.8
	baz=296						
TNS	Taunus Mts	72.62	318	*e*P	P	16 49 23.6	+0.2
	comp=Z,3.4nm,0.7s,baz=69,slow=6.0						
UBR	Ueberruh	72.62	315	*e*P	P	16 49 23.1	-0.5
	comp=Z,11nm,1.4s,baz=69,slow=6.0						
SML	Sawmill	72.71	28	P	P	16 49 23.3	-0.5
	baz=298						
G27K	Doyon Strip	72.72	22	IAmb	IAmb	16 49 25.5	
	comp=Z,7.5nm,0.9s						
G27K	Doyon Strip	72.72	22	P	P	16 49 23.3	-0.4
	baz=302,SNR=11						
K24K	Donnelly Dome	72.77	26	P	P	16 49 23.9	-0.2
	baz=300,SNR=6.4						
KNK	Knik Glacier	72.84	29	P	P	16 49 24.5	0.0
	baz=298						
F28M	Old Crow	72.86	21	P	P	16 49 24.1	-0.4
	baz=304						
M23K	Glacier View	72.97	28	P	P	16 49 24.8	-0.4
	baz=298						
I26K	Coal Creek Min	72.99	24	IAmb	IAmb	16 49 26.7	
	comp=Z,9.5nm,1.0s						
I26K	Coal Creek Min	72.99	24	P	P	16 49 25.0	-0.3
	baz=301,SNR=7.8						
E29M	Blow River	73.04	20	IAmb	IAmb	16 49 27.3	
	comp=Z,7.4nm,0.9s						
E29M	Blow River	73.04	20	P	P	16 49 25.5	0.0
	baz=305,SNR=6.2						
H27K	Steamboat Moun	73.07	23	IAmb	IAmb	16 49 28.4	
	comp=Z,12nm,0.9s						
H27K	Steamboat Moun	73.07	23	P	P	16 49 25.8	0.0
	baz=302,SNR=15						
SCM	Sheep Creek Mo	73.11	28	P	P	16 49 26.2	+0.1
	baz=299						
PWL	Port Wells	73.15	29	P	P	16 49 26.3	-0.1
	baz=298						
RIDG	Independent Ri	73.17	26	IAmb	IAmb	16 49 27.0	
	comp=Z,11nm,1.0s						
RIDG	Independent Ri	73.17	26	P	P	16 49 25.6	-0.8
	baz=300						
J26L	Joseph Creek	73.26	25	IAmb	IAmb	16 49 28.3	
	comp=Z,15nm,0.8s						
J26L	Joseph Creek	73.26	25	P	P	16 49 26.7	-0.3
	baz=301,SNR=22						
PAX	Paxson	73.31	27	P	P	16 49 26.4	-1.0
	baz=300						
NEEM	North Greenlan	73.35	355	*e*P	P	16 49 28.9	+1.3
SCRK	Sand Creek	73.37	25	P	P	16 49 26.7	-1.0
	baz=301,SNR=5.5						
I27K	Kandik River	73.38	23	P	P	16 49 26.6	-1.0
	baz=303,SNR=9.5						
BFO	Black Forest	73.46	316	*e*P	P	16 49 28.8	+0.4
	comp=Z,61nm,2.4s,baz=69,slow=6.0						
M24K	Tolsona, Glenn	73.46	28	P	P	16 49 27.2	-0.9
	baz=300						
TUE	Stuetta	73.58	314	IAmb	IAmb	16 49 33.8	
	comp=Z,18nm,1.8s						
GLI	Glacier Island	73.68	29	P	P	16 49 28.5	-0.9
	baz=299						
HARP	HAARP	73.72	27	P	P	16 49 29.0	-0.7
	baz=300						
G29M	Pine Creek	73.85	21	P	P	16 49 29.6	-0.8
	baz=305						
KLU	Klutina	73.87	28	IAmb	IAmb	16 49 33.0	
	comp=Z,22nm,1.0s						
KLU	Klutina	73.87	28	P	P	16 49 30.1	-0.5
	baz=300,SNR=6.1						
A36M	Sachs Harbour	74.02	14	P	P	16 49 31.1	-0.1
	baz=315						
I28M	Miner Creek	74.05	23	P	P	16 49 30.9	-0.8
	baz=304,SNR=10.0						
K27K	Chicken	74.06	25	IAmb	IAmb	16 49 33.5	
	comp=Z,8.9nm,0.9s						
K27K	Chicken	74.06	25	P	P	16 49 30.4	-1.2
	baz=303						
H29M	Whitestone	74.14	22	IAmb	IAmb	16 49 32.5	
	comp=Z,27nm,1.9s						
H29M	Whitestone	74.14	22	P	P	16 49 30.6	-1.4
	baz=305						
F30M	Barrier River	74.14	20	IAmb	IAmb	16 49 34.2	
	comp=Z,17nm,1.2s						
F30M	Barrier River	74.14	20	P	P	16 49 31.2	-0.9
	baz=307						
WLF	Walferdange	74.20	318	P	P	16 49 32.8	+0.1
WLF				IAmb	IAmb	16 49 34.8	
	comp=Z,15nm,0.9s						
WLF	Walferdange	74.20	318	P	P	16 49 32.8	+0.1
WLF				pmax	pmax		
	comp=Z,15nm,0.9s						
WLF	Walferdange	74.20	318	*d*P	P	16 49 33.5	+0.9
	comp=Z,11nm,0.9s						
WLF	Walferdange	74.20	318	*e*P	P	16 49 32.9	+0.3
	comp=Z,13nm,0.8s,baz=69,slow=6.0						
N25K	Chitina, Valde	74.36	28	IAmb	IAmb	16 49 35.5	
	comp=Z,11nm,0.9s						
N25K	Chitina, Valde	74.36	28	P	P	16 49 32.5	-1.0
	baz=301						
G30M	tAoh Zraii Nji	74.39	21	IAmb	IAmb	16 49 34.8	
	comp=Z,12nm,0.9s						
G30M	tAoh Zraii Nji	74.39	21	P	P	16 49 32.8	-0.7
	baz=307						
INK	Inuvik	74.39	19	IAmb	IAmb	16 49 34.5	
	comp=Z,7.6nm,0.9s						
INK	Inuvik	74.39	19	P	P	16 49 32.9	-0.5
	baz=309,SNR=5.5						
EYAK	Cordova Ski Ar	74.42	29	P	P	16 49 33.2	-0.5
	baz=300						
BGES	Gesves	74.51	319	*d*P	P	16 49 34.7	+0.2
M26K	Nabesna, AK	74.58	27	IAmb	IAmb	16 49 37.2	
	comp=Z,9.3nm,0.9s						
M26K	Nabesna, AK	74.58	27	P	P	16 49 34.2	-0.5
	baz=302,SNR=6.9						
EPYK	Eagle Plains	74.59	22	P	P	16 49 34.3	-0.5
	baz=306						
I29M	Ogilvie Camp,	74.66	23	P	P	16 49 35.0	-0.1
	baz=305						
L27K	Beaver Creek,	74.68	26	P	P	16 49 35.2	0.0
	baz=303,SNR=10						
BMRM	Bremner River	74.68	28	P	P	16 49 34.5	-0.8
	baz=301						
BCAR	Beaver Creek A	74.69	26	P	P	16 49 36.3	+0.9
Q23K	Middleton Isla	74.72	30	P	P	16 49 35.3	-0.1
	baz=300						
GLB	Gilahina Butte	74.76	28	IAmb	IAmb	16 49 38.0	
	comp=Z,11nm,0.8s						
F31M	Tsiigehtchic	74.87	20	P	P	16 49 35.8	-0.4
	baz=309						
DAWY	Dawson	75.02	24	P	P	16 49 37.6	+0.3
DAWY				IAmb	IAmb	16 49 38.8	
	comp=Z,11nm,1.3s						
DAWY	Dawson	75.02	24	P	P	16 49 36.7	-0.6
	baz=305						
G31M	Satah River	75.03	21	P	P	16 49 37.1	0.0
	baz=308						
M27K	Edge Creek, AK	75.04	26	IAmb	IAmb	16 49 40.2	
	comp=Z,14nm,1.0s						
M27K	Edge Creek, AK	75.04	26	P	P	16 49 37.0	-0.5
	baz=303,SNR=10						
MCARA	McCarthy VSAT	75.11	28	P	P	16 49 37.6	-0.2
	baz=302						
KAIM	Kayak Island	75.31	29	P	P	16 49 38.7	-0.2
	baz=302						
I30M	Mount Dempster	75.39	22	P	P	16 49 39.4	-0.1
	baz=307,SNR=6.8						
BVCY	Beaver Creek	75.41	26	P	P	16 49 39.7	+0.2
	baz=304,SNR=6.1						
H31M	Peel River	75.71	21	IAmb	IAmb	16 49 41.8	
	comp=Z,7.0nm,0.8s						
H31M	Peel River	75.71	21	P	P	16 49 40.8	-0.4
	baz=309						
J30M	Hart River	75.80	23	P	P	16 49 41.6	-0.3
	baz=307						
K29M	Barlow Dome	75.83	24	IAmb	IAmb	16 49 44.0	
	comp=Z,11nm,0.8s						
K29M	Barlow Dome	75.83	24	P	P	16 49 41.7	-0.3
	baz=306,SNR=16						
YUK3	Moose Creek	75.92	26	P	P	16 49 42.4	-0.3
	baz=304,SNR=5.4						
CTG	Chitna Glacier	76.03	27	P	P	16 49 43.2	0.0
	baz=304						
L29M	L29M	76.04	25	IAmb	IAmb	16 49 45.7	
	comp=Z,14nm,0.9s						
L29M	L29M	76.04	25	P	P	16 49 42.8	-0.3
	baz=306,SNR=16						
SUMG	Summit	76.18	349	P	P	16 49 44.2	0.0
SUMG				IAmb	IAmb	16 49 46.1	
	comp=Z,18nm,1.1s						
SUMG	Summit	76.18	349	P	P	16 49 44.2	0.0
SUMG				pmax	pmax		
	comp=Z,18nm,1.1s						
SUMG	Summit	76.18	349	*i* P	P	16 49 43.0	-1.2
C36M	Paulatuk	76.20	16	P	P	16 49 43.5	-0.3
	baz=317						
MESA	MESA	76.21	28	P	P	16 49 44.0	-0.4
	baz=304						
RES	Resolute Bay	76.29	5	IAmb	IAmb	16 49 46.4	
	comp=Z,6.7nm,0.9s						
RES	Resolute Bay	76.29	5	LR	LR	17 24 34.0	
	comp=Z,91nm,20.0s,baz=198,slow=37						
M29M	Somme Creek	76.31	25	P	P	16 49 44.5	-0.2
	baz=306,SNR=5.5						
YUK8	Steele Glacier	76.48	27	P	P	16 49 45.6	-0.3
	baz=305						
O28M	Mount Upton	76.60	27	P	P	16 49 46.2	-0.5
	baz=305						
YUK4	Talbot Arm	76.88	26	P	P	16 49 48.6	+0.4
	baz=306						
PINM	Pinnacle	76.96	28	P	P	16 49 48.5	+0.1
	baz=305						
YUK6	Outpost Mounta	77.23	27	P	P	16 49 50.0	-0.1
	baz=306						
N30M	Aishikik Lake	77.42	26	P	P	16 49 51.3	+0.3
	baz=307						
O29M	Mount Kennedy	77.53	27	P	P	16 49 51.5	-0.2
	baz=306						
PNL	Peninsula	77.56	28	P	P	16 49 52.0	+0.3
	baz=306						
HYT	Haines Junctio	77.64	26	IAmb	IAmb	16 49 54.8	
	comp=Z,11nm,1.3s						
HYT	Haines Junctio	77.64	26	P	P	16 49 51.8	-0.4
	baz=307						
DZM	Mont Dzumac	77.68	123	P	P	16 49 53.2	+0.2
	comp=Z,7.4nm,0.9s,baz=12,slow=11,SNR=5.1						
	comp=Z,7.4nm,0.9s						
N31M	Braeburn, Yuko	77.90	25	IAmb	IAmb	16 49 55.8	
	comp=Z,9.2nm,0.8s						
N31M	Braeburn, Yuko	77.90	25	P	P	16 49 53.9	+0.3
	baz=308						
M31M	Drury Creek, Y	77.96	24	P	P	16 49 54.1	+0.2
	baz=309						
O30N	Mendenhall	78.22	26	P	P	16 49 55.9	+0.5
	baz=308						
P29M	Windy Craggy	78.27	27	P	P	16 49 56.1	+0.5
	baz=307						
P30M	Million Dollar	78.28	27	P	P	16 49 55.9	+0.1
	baz=308						
FARO	Faro, Yukon	78.32	24	P	P	16 49 56.6	+0.7
	baz=310						
WHY	Whitehorse	78.76	26	P	P	16 49 59.0	+0.6
	baz=309						
MMPY	Sheldon Lake,	78.80	23	P	P	16 49 59.4	+0.8
	baz=312						
PLBC	Pleasant Camp	78.93	27	P	P	16 49 59.3	+0.1
	baz=308						
POIN	Pond Inlet	79.09	1	IAmb	IAmb	16 50 02.1	
	comp=Z,9.2nm,0.9s						
N32M	Quiet Lake	79.12	25	P	P	16 50 00.6	+0.2
	baz=310						
SKAG	Skagway	79.34	27	IAmb	IAmb	16 50 03.8	
	comp=Z,19nm,1.1s						
SKAG	Skagway	79.34	27	P	P	16 50 01.8	+0.3
	baz=309						
ICESG	Greenland Ices	79.36	348	*e*P	P	16 50 02.1	+0.2
P33M	Teslin, Yukon	79.83	25	P	P	16 50 04.1	-0.2
	baz=311						
R31K	City Hall, Gus	79.83	28	P	P	16 50 04.4	+0.2
	baz=309						
P32M	Atlin	79.89	26	P	P	16 50 03.5	-1.1
	baz=310						
S31K	Pelican	79.91	28	P	P	16 50 03.9	-0.7
	baz=308						
TGTN	Hyland Airport	80.58	23	P	P	16 50 08.3	+0.1
	baz=314						
SIT	Sitka	80.86	29	P	P	16 50 09.6	-0.2
	baz=309						
Q32M	Nakina River	80.86	26	P	P	16 50 09.9	-0.1
	baz=312						
R33M	Jennings River	81.07	25	P	P	16 50 10.9	-0.2
	baz=312						
DLBC	Dease Lake	82.08	26	P	P	16 50 15.9	-0.5
	baz=313						
U33K	Whale Pass	82.40	29	P	P	16 50 17.3	-0.5
	baz=311						
WRAK	Wrangell Islan	82.52	28	P	P	16 50 18.9	+0.4
	baz=312						
BEAVL	Fort Liard	82.64	23	P	P	16 50 19.5	+0.4
	baz=317						
T35M	Bob Quinn	83.00	27	P	P	16 50 21.2	+0.2
	baz=313						
SFJD	Kangerlussuaq	83.07	351	*e*	P	16 50 21.3	+0.1
TOAD	Toad River Com	83.56	24	P	P	16 50 23.6	-0.3
	baz=317						
YKA	Yellowknife Ar	83.98	17	P	P	16 50 26.2	+0.3
	comp=Z,2.7nm,0.8s,baz=325,slow=4.8,SNR=5.4						
	comp=Z,2.7nm,0.8s						
YKA	Yellowknife Ar	83.98	17	*i* P	P	16 50 27.6	+1.7
YKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ESDC	Sonseca Array	85.38	313	P	P	16 50 32.6	-1.0
	comp=Z,1.0nm,0.9s,baz=40,slow=5.3,SNR=9.1						
	comp=Z,1.0nm,0.9s						
LSZ	Lusaka	86.00	250	P	P	16 50 36.2	-0.8
LSZ				IAmb	IAmb	16 50 37.7	
	comp=Z,9.0nm,0.8s						
LSZ	Lusaka	86.00	250	P	P	16 50 36.2	-0.8
LSZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BOSA	Boshof	95.05	240	P	P	16 51 17.4	-1.8
	comp=Z,1.5nm,0.7s,baz=205,slow=6.1,SNR=3.6						
	comp=Z,1.5nm,0.7s						
TXAR	Lajitas Array	116.33	28	PKP	PKiKP	16 56 38.6	-1.5
	comp=Z,0.6nm,0.7s,baz=195,slow=2.2,SNR=8.3						
QSPA	South Pole Qui	118.24	180	PKP	PKPdf	16 56 40.7	-1.9
	comp=Z,2.4nm,1.1s,baz=270,slow=1.1,SNR=5.6						
SNAA	Sanae	122.35	201	PKP	PKPdf	16 56 48.6	-1.7
	comp=Z,0.7nm,0.7s,baz=191,slow=4.6,SNR=11						
ROSC	El Rosal	146.89	359	PKPbc	PKPdf	16 57 37.6	-0.2
	comp=Z,55nm,0.9s,baz=139,slow=3.5,SNR=8.3						
LPAZ	La Paz	166.33	331	PKP	PKPdf	16 58 03.3	+0.6
	comp=Z,0.8nm,0.7s,baz=9.5,slow=6.1,SNR=3.7						

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*IDC **17** 16:39:08.6±0.8, 28°.43N×104°.96E, h0^{km}, mb4.1/11, mbtmp4.0/12, ML3.7/1, MS4.4/1, Error ellipse: s-maj=47.4km s-min=17.5km az=56.0*

*NEIC **17** 16:39:11.4±1.9, 28°.39N±0°.05×105°.05E±0°.08, h10^{km}±1^{km}, mb4.6/23, Error ellipse: s-maj=14.9km s-min=3.6km az=235.0*

ISC 17 16:39:12.2±0.6, **28°.45N**±0°.08×**104°.94E**±0°.07, **h19**^{km}, **n47**, σ1^{s}.**34**/50, **mb4.5**/24, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENH	Enshi	4.36	64	Pn	Pn	16 40 17.1	-0.4
TNCH	TengChong	6.68	241	Pn	Pn	16 40 50.9	+1.4
TNCH				Pg	Pg	16 41 19.1	-1.0
TNCH				Sn	Sn	16 42 07.3	+2.2
TNCH				Sg	Sg	16 42 42.8	-3.7
TNCH				smax	smax		
	comp=N,140nm,1.5s						
TNCH				smax	smax		
	comp=E,100nm,1.7s						
TNCH				LR	LR		
	comp=N,520nm,3.8s						
TNCH				LR	LR		
	comp=E,520nm,6.6s						
TNCH				LR	LR		
	comp=Z,370nm,14.8s						
CMAR	Chiang Mai Arr	11.36	210	Pn	Pn	16 41 55.1	+1.5
CMAR	Chiang Mai Arr	11.36	210	Pn	Pn	16 41 56.5	+2.9
	comp=Z,0.1nm,0.3s,baz=17,slow=12,SNR=5.4						
LSA	Lhasa	12.13	279	Pn	Pn	16 42 06.4	+1.9
EVN	Everest	15.99	273	Pn	P	16 42 59.0	-1.3
SONM	Songino Array	19.39	3	P	Pn	16 43 37.5	-0.7
SONM	Songino Array	19.39	3	P	Pn	16 43 37.9	-0.4
	comp=Z,0.2nm,0.3s,baz=174,slow=9.5,SNR=0.8						
	comp=Z,1.4nm,0.7s						
WMQ	Urumqi	20.66	323	*e*P	Pn	16 43 53.8	+0.6
MKAR	Makanchi Array	25.49	322	P	P	16 44 39.5	+0.3
	comp=Z,6.5nm,1.0s,baz=121,slow=8.9,SNR=4.3						
MKAR				PcP	PcP	16 48 10.6	0.0
	comp=Z,1.2nm,0.9s,baz=126,slow=3.7,SNR=3.8						
	comp=Z,6.5nm,1.0s						
MAKZ	Makanchi	25.67	322	P	P	16 44 43.0	+2.2
ZAA0	Zalesovo Array	29.43	336	P	P	16 45 14.6	+0.1
ZALV	Zalesovo Beam	29.43	336	P	P	16 45 14.7	+0.3
ZALV	Zalesovo Beam	29.43	336	P	P	16 45 14.1	-0.3
	comp=Z,1.5nm,0.6s,baz=141,slow=7.1,SNR=1.7						
	comp=Z,1.5nm,0.6s						
KURBB	Kurchatov Arra	29.81	325	P	P	16 45 17.4	-0.5
	comp=Z,2.5nm,0.9s,baz=131,slow=9.2,SNR=4.3						
KURBB				PcP	PcP	16 48 20.5	-0.4
	comp=Z,1.1nm,0.8s,baz=108,slow=3.0,SNR=3.4						
	comp=Z,2.5nm,0.9s						
BVAR	Borovoye Array	35.34	324	PcP	PcP	16 48 35.5	-0.7
	comp=Z,0.8nm,0.6s,baz=98,slow=4.4,SNR=2.6						
MTN	Manton Dam	48.24	145	P	P	16 47 50.2	-1.8
KNRA	Kununurra	49.55	149	P	P	16 48 00.2	-1.9
KBZ	Khabaz	51.27	305	LR	LR	17 13 11.3	
	comp=Z,333nm,19.1s,baz=340,slow=40						
PSA00	Pilbara Seismi	51.77	162	P	P	16 48 19.0	+0.3
PSA00				IAmb	IAmb	16 48 26.3	
	comp=Z,11nm,1.4s						
RAYN	Ar Rayn	53.20	279	P	P	16 48 29.8	+0.2
RAYN				IAmb	IAmb	16 48 29.9	
	comp=Z,4.4nm,0.8s						

WB0	Warramunga Arr	55.74	146	P	P	16 48 46.4	-1.5
WB0				IAmb	IAmb	16 48 48.0	
	comp=Z,6.6nm,1.1s						
WRA	Warramunga Arr	55.87	146	P	P	16 48 47.1	-1.6
WRA	Warramunga Arr	55.87	146	P	P	16 48 47.9	-0.9
	comp=Z,4.4nm,0.8s,baz=337,slow=8.3,SNR=11						
	comp=Z,4.4nm,0.8s						
WR8	Warramunga Arr	55.96	146	P	P	16 48 48.1	-1.3
WR8				IAmb	IAmb	16 48 48.9	
	comp=Z,3.7nm,0.7s						
BRTR	Keskin Array B	58.71	301	P	P	16 49 08.7	-0.2
	comp=Z,0.4nm,0.3s,baz=115,slow=9.7,SNR=1.8						
	comp=Z,0.4nm,0.3s						
ASAR	Alice Springs	58.85	149	P	P	16 49 10.0	+0.2
ASAR	Alice Springs	58.85	149	P	P	16 49 09.2	-0.5
	comp=Z,1.4nm,0.4s,baz=328,slow=6.7,SNR=5.7						
	comp=Z,1.4nm,0.4s						
AKASG	Malin Array Be	59.74	314	P	P	16 49 14.9	-0.7
	comp=Z,0.7nm,0.6s,baz=77,slow=5.5,SNR=5.0						
	comp=Z,0.7nm,0.6s						
AKBB	Malin Array Si	59.74	314	P	P	16 49 16.6	+0.9
AKBB				IAmb	IAmb	16 49 16.9	
	comp=Z,7.4nm,1.4s						
KIEV	Kiev	59.76	314	P	P	16 49 16.6	+0.9
KIEV				IAmb	IAmb	16 49 16.9	
	comp=Z,6.6nm,1.4s						
FINES	FINESS Array B	60.18	327	P	P	16 49 16.5	-2.0
	comp=Z,0.5nm,0.4s,baz=111,slow=6.8,SNR=3.8						
	comp=Z,0.5nm,0.4s						
C19K	Lookout Ridge	65.66	23	P	P	16 49 55.5	+0.7
C19K				IAmb	IAmb	16 50 11.1	
	comp=Z,4.3nm,1.0s						
D19K	Kuna River	66.34	24	P	P	16 49 59.4	+0.1
HFS	Hagfors	66.38	327	P	P	16 49 59.1	-0.5
	comp=Z,4.5nm,1.0s,baz=82,slow=5.1,SNR=4.2						
	comp=Z,4.5nm,1.0s						
D20K	Etivluk River	66.80	23	P	P	16 50 02.5	+0.3
D20K				IAmb	IAmb	16 50 03.5	
	comp=Z,4.7nm,0.9s						
B22K	Teshekpuk Lake	67.31	21	P	P	16 50 08.0	+2.7
B22K				IAmb	IAmb	16 50 28.4	
	comp=Z,5.7nm,1.1s						
NC204	NORSAR Array S	67.42	329	P	P	16 50 06.4	+0.1
C23K	Itkillik River	68.39	21	P	P	16 50 12.8	+0.7
O16K	Kokwok River B	69.29	33	P	P	16 50 19.1	+1.2
O16K				IAmb	IAmb	16 50 19.9	
	comp=Z,6.7nm,1.2s						
GERES	GERESS Array B	69.93	315	P	P	16 50 22.1	-0.1
	comp=Z,0.8nm,0.7s,baz=59,slow=6.3,SNR=3.1						
	comp=Z,0.8nm,0.7s						
I23K	Minto, Yukon-K	70.80	26	P	P	16 50 28.5	+1.4
I23K				IAmb	IAmb	16 50 31.8	
	comp=Z,8.3nm,1.5s						
BMAR	Burnt Mountain	71.44	22	P	P	16 50 32.1	+1.1
ILSW	Iliamna Southw	71.44	31	P	P	16 50 32.1	+0.8
ILSW				IAmb	IAmb	16 50 42.4	
	comp=Z,7.9nm,1.0s						
ILAR	Eielson Array	71.91	25	P	P	16 50 32.9	-0.9
	comp=Z,1.0nm,1.0s,baz=274,slow=5.3,SNR=2.5						
	comp=Z,1.0nm,1.0s						
G26K	Porcupine Rive	71.95	23	P	P	16 50 36.0	+2.0
G26K				IAmb	IAmb	16 50 36.3	
	comp=Z,3.1nm,0.6s						
BCAR	Beaver Creek A	74.72	26	P	P	16 50 51.7	+1.2

JMA ***17*** *16:43:40.5±0.1, 23°.8N±0°.7×122°.9E±0°.5, h51^{km}, MV2.5/10, NEAR ISHIGAKIJIMA ISLAND*

TAP ***17*** *16:43:41.0, 23°.84N×122°.98E, h54^{km}, ML2.9, D*

ISC 17 16:43:40.6±1.2**, 23°.73N**±0°.04×**122°.95E**±0°.03**, h30**^{km}±12^{km}**, n73,** σ**1^{s}07**/101**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS4	EOS4	0.70	304	iP	Pb	16 43 54.4	+0.2
EOS4				S	Sb	16 44 04.5	+1.2
JYNG	Yonagunijimaku	0.72	359	iP	Pb	16 43 54.0	-0.7
JYNG				S	Sb	16 44 03.3	-1.0
YOJ	Yonaguni jima	0.73	4	P	Pb	16 43 54.3	-0.6
YOJ				S	Sb	16 44 03.8	-0.9
YOJ	Yonaguni jima	0.73	4⇑	iP	Pb	16 43 54.3	-0.6
YOJ				S	Sb	16 44 03.4	-1.3
EOS3	EOS3	0.81	314	iP	Pb	16 43 56.1	+0.1
EOS3				iS	Sb	16 44 07.5	+1.0
HATJ	Hateruma jima	0.85	67	P	Pn	16 43 56.5	0.0
HATJ				eS	Sb	16 44 09.1	+1.3
IRIF	Iriomote-Funau	0.94	49	P	Pn	16 43 57.6	0.0
IRIF				S	Sb	16 44 10.9	+0.5
EOS2	EOS2	0.95	316	P	Pn	16 43 59.0	+1.2
EOS2				S	Sn	16 44 12.3	+2.0
JKRS	Kuro-shima	1.09	62	P	Pn	16 44 00.2	+0.4
JKRS				eS	Sn	16 44 15.1	+1.2
TEYL	Yanliau Villag	1.25	277	eP	Pn	16 44 02.0	0.0
TEYL				eS	Sn	16 44 16.8	-0.9
JIJ	Ishigaki jima	1.26	59	P	Pn	16 44 02.1	0.0
SHUL	Shoufeng	1.27	273	eP	Pn	16 44 01.1	-1.2
SHUL				eS	Sn	16 44 18.0	-0.4
ETL	Fush Village	1.29	290	eS	Sn	16 44 18.3	-0.6
EWUT	Wuta	1.29	304	eP	Pn	16 44 03.1	+0.5
EWUT				eS	Sn	16 44 19.4	+0.6
TWD	Chiawan	1.29	286	eP	Pn	16 44 02.0	-0.5
TWD				S	Sn	16 44 17.1	-1.7
TEGC	Jichi Village	1.29	270	eS	Sn	16 44 18.7	-0.2
ENA	Nanau	1.31	303	iP	Pn	16 44 02.7	-0.1
ENA				S	Sn	16 44 19.4	+0.2
ESAO	Su ao	1.32	310	eP	Pn	16 44 04.2	+1.3
NACB	Ninganchiao	1.32	290	eP	Pn	16 44 02.2	-0.7
NACB				eS	Sn	16 44 18.7	-0.8
TWC	Suao	1.34	311	P	Pn	16 44 04.1	+0.9
ETM	Tongmen	1.36	280	eP	Pn	16 44 02.9	-0.6
ETM				eS	Sn	16 44 18.4	-2.0
ESL	Shilin	1.40	274	eP	Pn	16 44 03.7	-0.3
HGSD	Ruisui	1.42	261	P	Pn	16 44 03.7	-0.6
ETLH	Xiulin Townshi	1.43	290	eP	Pn	16 44 04.3	-0.3
ETLH				eS	Sn	16 44 21.9	-0.5
WARBT	Fenglin Townsh	1.44	270	P	Pn	16 44 04.3	-0.3
WARBT				S	Sn	16 44 21.1	-1.3
ECBN	Changbin	1.44	254	eP	Pn	16 44 04.0	-0.6
ECBN				eS	Sn	16 44 21.2	-1.2
LXIB	Xiulin Townshi	1.44	282	eP	Pn	16 44 05.5	+0.8
LXIB				eS	Sn	16 44 21.7	-1.0
NDS	Dongshan	1.45	309	eP	Pn	16 44 05.0	+0.3
EGS		1.45	320	eP	Pn	16 44 04.3	-0.4
EHYH	Wanrong	1.49	261	iP	Pn	16 44 05.7	+0.3
EHYH				eS	Sn	16 44 23.4	-0.4
JISG	Ishigakijimahi	1.51	55	P	Pn	16 44 05.3	-0.3
EHY	Hungye	1.51	262	P	Pn	16 44 05.6	0.0
EHY				S	Sn	16 44 23.4	-0.9
CHKH	Chenggong	1.52	250	eP	Pn	16 44 05.3	-0.4
LATG	Datong	1.53	302	eP	Pn	16 44 06.4	+0.4
TWE	Neicheng	1.54	310	eP	Pn	16 44 06.3	+0.4
YULB	Yu-li	1.56	258	eP	Pn	16 44 06.3	+0.1
YULB				iS	Sn	16 44 24.8	-0.5
ENTT	Nioudou	1.56	306	P	Pn	16 44 07.0	+0.7
TWF1	Yuli	1.56	257	eP	Pn	16 44 05.4	-0.9
CHKT	Chengkung	1.59	247	eP	Pn	16 44 06.3	-0.3
NNSB	Datong	1.60	296	eP	Pn	16 44 07.3	+0.5
NNSB				iS	Sn	16 44 26.6	0.0
WHF	Hehuan Shan	1.60	285	eP	Pn	16 44 07.4	+0.2
WHF				S	Sn	16 44 25.7	-1.3
FULB	Fuli	1.61	251	eP	Pn	16 44 06.8	-0.2
TIPB	Shuangxi	1.61	321	eP	Pn	16 44 06.7	-0.3
FUSB	Fushanzhiwuyua	1.62	310	eP	Pn	16 44 07.3	+0.2
OWD	Renai	1.64	278	eP	Pn	16 44 07.7	+0.1
FUSS	Fushou	1.65	289	eP	Pn	16 44 07.3	-0.4
VWDT	VWDT	1.66	271	P	Pn	16 44 08.1	+0.5
VWDT				eS	Sn	16 44 27.9	0.0
SXI1	Grass Mountain	1.68	324	eP	Pn	16 44 08.0	0.0
EDH	Donghe	1.69	244	eP	Pn	16 44 08.3	+0.3
EDH				iS	Sn	16 44 26.1	-2.5
WUSB	Renai	1.70	279	eP	Pn	16 44 08.2	-0.1
EHD	Haiduan	1.70	251	eP	Pn	16 44 08.1	-0.2
EHD				S	Sn	16 44 27.4	-1.6
YHNB	Yeheng	1.72	303	eP	Pn	16 44 08.8	+0.2
NSK	Sanguang	1.74	303	eP	Pn	16 44 08.7	-0.1
ELDTW	Lidau	1.86	254	eP	Pn	16 44 08.9	-1.5
LONT	Longtian	1.86	244	eP	Pn	16 44 11.5	+1.1
SMLT	Sun Moon Lake	1.89	275	eP	Pn	16 44 11.3	+0.5
WCS	Beigang Elemen	1.90	280	eP	Pn	16 44 13.2	+2.3
NFF	Wufeng Townshi	1.90	299	iP	Pn	16 44 13.1	+2.1
WHP	Taichung City	1.92	287	eP	Pn	16 44 13.2	+2.0
ZUZH	Zhuzihu	1.92	318	eP	Pn	16 44 10.1	-1.1
WHYT	Xinyi Township	1.92	270	eP	Pn	16 44 13.4	+2.1
TYC	Yuchr	1.93	276	eP	Pn	16 44 13.7	+2.4
KSHI	Guanxi Townshi	1.93	303	eP	Pn	16 44 12.0	+0.6
ALS	Alishan	1.98	264	eP	Pn	16 44 13.6	+1.2
LIOB	Emei	1.99	298	iP	Pn	16 44 14.3	+2.1
PCYT	Pengchaiyu	2.06	337	eP	Pn	16 44 13.7	+0.5
WTP	Ta-pu	2.20	258	eP	Pn	16 44 17.4	+2.3
CHN1	Nanshi	2.29	257	eP	Pn	16 44 17.6	+1.3
TWK	Hsinying	2.31	259	eP	Pn	16 44 18.4	+1.8
SNST	Tainan City	2.31	258	eP	Pn	16 44 18.2	+1.6
TAWH	Dawu Township	2.35	234	eP	Pn	16 44 18.7	+1.6
TSMG	Majia	2.35	245	eP	Pn	16 44 20.1	+2.9
EAST	Anshuo	2.35	236	eP	Pn	16 44 18.0	+0.8

JMA ***17*** *16:49:05.7±0.2, 23°.8N±0°.8×122°.9E±0°.6, h47^{km}, MV1.9/11, NEAR ISHIGAKIJIMA ISLAND*

TAP ***17*** *16:49:05.6, 23°.80N×122°.98E, h53^{km}, ML2.5, D*

ISC 17 16:49:05.0±1.3**, 23°.69N**±0°.05×**122°.95E**±0°.03**, h29**^{km}±12^{km}**, n50,** σ**1^{s}07**/81**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS4	EOS4	0.72	307	iP	Pb	16 49 19.1	+0.3
EOS4				iS	Sb	16 49 29.6	+1.3
JYNG	Yonagunijimaku	0.76	360	P	Pb	16 49 19.0	-0.7
JYNG				eS	Sb	16 49 27.9	-1.8
YOJ	Yonaguni jima	0.77	4	eS	Sb	16 49 28.7	-1.4
YOJ	Yonaguni jima	0.77	4	iP	Pn	16 49 19.4	-0.5
YOJ				iS	Sb	16 49 29.3	-0.8
EOS3	EOS3	0.83	316	iP	Pn	16 49 21.1	+0.5
EOS3				S	Sb	16 49 32.4	+0.8
HATJ	Hateruma jima	0.86	65	eP	Pn	16 49 21.5	+0.3
HATJ				eS	Sb	16 49 34.6	+1.9
IRIF	Iriomote-Funau	0.96	48	P	Pn	16 49 22.7	+0.2
IRIF				eS	Sn	16 49 34.5	-0.7
EOS2	EOS2	0.98	318	P	Pn	16 49 24.0	+1.4
EOS2				S	Sn	16 49 37.1	+1.6
JKRS	Kuro-shima	1.11	60	eP	Pn	16 49 25.2	+0.6
JKRS				eS	Sn	16 49 39.9	+0.9
TEYL	Yanliau Villag	1.25	279	eS	Sn	16 49 42.3	-0.1
SHUL	Shoufeng	1.28	275	eP	Pn	16 49 26.9	+0.1
SHUL				eS	Sn	16 49 43.2	+0.3
JIJ	Ishigaki jima	1.28	58	eP	Pn	16 49 27.2	+0.3
EWUT	Wuta	1.31	305	eP	Pn	16 49 28.5	+1.2
ENA	Nanau	1.33	304	P	Pn	16 49 28.2	+0.7
ENA				S	Sn	16 49 43.4	-0.9
NACB	Ninganchiao	1.33	292	eP	Pn	16 49 26.8	-0.8
NACB				eS	Sn	16 49 42.0	-2.3
TWC	Suao	1.36	313	P	Pn	16 49 29.3	+1.2
ETM	Tongmen	1.36	282	eP	Pn	16 49 28.1	0.0
ETM				eS	Sn	16 49 43.2	-1.9
EGFH	Guangfu	1.40	270	eP	Pn	16 49 28.6	+0.1
EGFH				eS	Sn	16 49 46.0	0.0
ESL	Shilin	1.40	275	eP	Pn	16 49 27.6	-0.9
HGSD	Ruisui	1.41	262	P	Pn	16 49 28.3	-0.4
ECBN	Changbin	1.43	255	eP	Pn	16 49 27.9	-1.0
ECBN				eS	Sn	16 49 45.3	-1.4
WARBT	Fenglin Townsh	1.44	272	P	Pn	16 49 28.8	-0.2
WARBT				S	Sn	16 49 45.8	-1.2
ETLH	Xiulin Townshi	1.44	291	eP	Pn	16 49 29.5	+0.3
ETLH				eS	Sn	16 49 46.0	-1.2
EHYH	Wanrong	1.49	263	eP	Pn	16 49 30.5	+0.8
EHYH				S	Sn	16 49 48.5	+0.3
EHY	Hungye	1.50	263	P	Pn	16 49 30.5	+0.5
EHY				S	Sn	16 49 47.7	-0.9
JISG	Ishigakijimahi	1.53	54	P	Pn	16 49 30.3	0.0
YULB	Yu-li	1.55	259	eP	Pn	16 49 31.0	+0.4
YULB				S	Sn	16 49 49.6	0.0
LATG	Datong	1.55	303	eP	Pn	16 49 31.1	+0.3
TWF1	Yuli	1.55	258	eP	Pn	16 49 30.4	-0.3
TWF1				eS	Sn	16 49 48.8	-1.1
TWE	Neicheng	1.56	312	eP	Pn	16 49 31.3	+0.6
CHKT	Chengkung	1.57	248	eP	Pn	16 49 32.4	+1.5
CHKT				eS	Sn	16 49 48.2	-2.0
ENTT	Nioudou	1.58	307	eP	Pn	16 49 31.5	+0.4
FULB	Fuli	1.60	253	eP	Pn	16 49 32.3	+1.0
FULB				eS	Sn	16 49 50.0	-1.0
WHF	Hehuan Shan	1.61	287	eP	Pn	16 49 31.6	-0.2
WHF				eS	Sn	16 49 50.2	-1.6
NNSB	Datong	1.61	298	eP	Pn	16 49 32.5	+0.9
NNSB				eS	Sn	16 49 51.2	-0.3
NNS	Nan Shan	1.63	298	eP	Pn	16 49 32.9	+1.2
NNS				eS	Sn	16 49 51.3	-0.5
FUSB	Fushanzhiwuyua	1.64	311	eP	Pn	16 49 32.2	+0.2
TIPB	Shuangxi	1.64	321	eP	Pn	16 49 31.6	-0.3
OWD	Renai	1.65	280	eP	Pn	16 49 32.8	+0.7
OWD				eS	Sn	16 49 51.6	-0.7
VWDT	VWDT	1.66	273	eP	Pn	16 49 33.3	+1.2
VWDT				eS	Sn	16 49 52.8	+0.3
EDH	Donghe	1.67	245	eP	Pn	16 49 32.7	+0.4
EHD	Haiduan	1.69	252	eP	Pn	16 49 32.0	-0.6
EHD				eS	Sn	16 49 52.7	-0.6
WUSB	Renai	1.71	281	P	Pn	16 49 33.8	+0.9
WUSB				eS	Sn	16 49 54.2	+0.4
SXI1	Grass Mountain	1.71	325	P	Pn	16 49 33.1	+0.2
YHNB	Yeheng	1.74	305	eP	Pn	16 49 34.2	+0.9
YHNB				eS	Sn	16 49 54.0	-0.6
NSK	Sanguang	1.76	304	eP	Pn	16 49 32.6	-0.9
NFF	Wufeng Townshi	1.92	300	eP	Pn	16 49 38.1	+2.4
NFF				iS	Sn	16 50 01.0	+2.0
WHP	Taichung City	1.93	288	eP	Pn	16 49 38.0	+2.2
ALS	Alishan	1.98	265	eP	Pn	16 49 38.7	+2.0
LIOB	Emei	2.01	299	P	Pn	16 49 39.2	+2.3

IDC ***17*** *16:53:00.9±0.4, 30°.90S×177°.45W, h0^{km}, mb5.0/20, mbtmp4.9/21, ML5.4/1, MS5.3/51, Error ellipse: s-maj=16.9km s-min=14.0km az=74.0*

BJI ***17*** *16:53:01.3, 30°.66S×177°.15W, h17^{km}, mB5.8/38, mb5.4/42, Ms5.5/55, Ms7 5.3/53*

NEIC ***17*** *16:53:03, 30°.81S×177°.48W, h22^{km}*

NOU ***17*** *16:53:03.5, 31°.26S×176°.98W, h31^{km}, mb5.4/83, Kermadec Islands Region*

MOS ***17*** *16:53:03.8±0.8, 30°.84S×177°.59W, h24^{km}, mb5.6/32, MS5.5/16, Error ellipse: s-maj=10.8km s-min=8.0km az=110.8*

NEIC ***17*** *16:53:03, 31°.01S×177°.13W, h22^{km}, Moment Tensor Solution. Duration: 2^{s}5 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.65; M$_{\theta\theta}$-0.12; M$_{\phi\phi}$-1.53; M$_{r\theta}$0.17; M$_{\theta\phi}$-0.79; M$_{\phi r}$0.88; Fault plane solution: M$_0$1.99000×10^{17} NP1: φ$_s$211.56000°, δ32.22000°, λ101.96000°. NP2: φ$_s$17.50000°, δ58.56000°, λ82.56000°. Principal axes: T 1.8773, Plg75.0000°, Azm266.0000°; N 0.2074, Plg6.0000°, Azm21.0000°; P -2.0847, Plg13.0000°, Azm113.0000°;*

ISC-PP ***17*** *16:53:05, 30°.79S×177°.53W, h35^{km}±1^{km}, Mwppsm6.0, Moment Tensor Solution. s25 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.67±.15; M$_{\theta\theta}$-0.64±.17; M$_{\phi\phi}$0.00±.18; M$_{r\theta}$-0.01±.19; M$_{\theta\phi}$-0.18±.16; M$_{\phi r}$0.20±.32; Fault plane solution: M$_0$1.16000×10^{18} NP1: φ$_s$120.00000°, δ48.40000°, λ109.90000°. NP2: φ$_s$271.40000°, δ45.30000°, λ69.10000°.*

NEIC ***17*** *16:53:05±1.4, 30°.79S±0°.09×177°.5W±0°.1, h22^{km}±5^{km}, mb5.7/246, Ms_20 5.7/593, Mww5.5/34 Error ellipse: s-maj=16.7km s-min=12.3km az=80.0*

GCMT ***17*** *16:53:08.0±0.1, 30°.95S±0°.01×177°.12W±0°.01, h18^{km}, MW5.6/144, Moment Tensor Solution. s115, c193; s144, c266; Duration: 1^{s}5 Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.63±.04; M$_{\theta\theta}$-0.22±.02; M$_{\phi\phi}$-1.41±.03; M$_{r\theta}$0.65±.07; M$_{\theta\phi}$-0.67±.02; M$_{\phi r}$2.49±.11; Best double couple: M$_0$3.06900×10^{17} NP1: φ$_s$213.00000°, δ17.00000°, λ106.00000°. NP2: φ$_s$16.00000°, δ74.00000°, λ85.00000°. Principal axes: T 3.0450, Plg61.0000°, Azm279.0000°; N 0.0440, Plg5.0000°, Azm18.0000°; P -3.0930, Plg28.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 16:53:04.3±0.4**, 30°.98S**±0°.04×**177°.46W**±0°.04**, h24**^{km}±2^{km}**, h24**^{km}**:pP-P, n1023,** σ**2^{s}05**/682**, mb5.6**/187**, MS5.6**/385**, 75C-33D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.76	347	P	Pn	16 53 31.4	-1.9
RAO	Raoul Island	1.77	347		Pn	16 53 31.2	-2.2
RAO	Raoul Island	1.77	347	P	Pn	16 53 31.2	-2.2
RIZ	Raoul Island	1.78	347	P	Pn	16 53 32.1	-1.5
RIZ				S	Sb	16 53 58.5	+0.4
MXZ	Matakaoa Point	7.44	207	P	Pn	16 54 48.0	-3.4
MXZ				S	Sn	16 56 13.2	-1.7
WMGZ	Waiomatatini S	7.62	205	P	Pn	16 54 50.8	-3.0
WMGZ				S	Sn	16 56 18.2	-1.3
PKGZ	Pakihiroa	7.79	207	P	Pn	16 54 52.3	-3.9
PKGZ				S	Sn	16 56 22.4	-1.3
HAZ	Te Kaha	7.81	209	P	Pn	16 54 53.6	-2.9
HAZ				S	Sn	16 56 27.6	+3.4
PUZ	Puketiti	7.90	205	P	Pn	16 54 53.7	-4.0
PUZ				S	Sn	16 56 24.7	-1.7
RUGZ	Raukumara Rang	8.04	209	P	Pn	16 54 56.7	-3.0
RUGZ				S	Sn	16 56 29.2	-0.7
KUZ	Kuaotunu	8.07	223	P	Pn	16 54 59.0	-1.0
TWGZ	Tauwhareparae	8.10	206	P	Pn	16 54 56.6	-3.9
TWGZ				S	Sn	16 56 29.5	-1.8
CNGZ	Carnagh Statio	8.29	204	P	Pn	16 54 58.8	-4.2
TKGZ	Te Karaka	8.38	206	P	Pn	16 54 59.9	-4.4
TKGZ				S	Sn	16 56 34.5	-3.6
MWZ	Matawai	8.41	208	P	Pn	16 55 00.4	-4.4
MWZ				S	Sn	16 56 37.5	-1.5
WCZ	Waipu Caves	8.44	232	P	Pn	16 55 09.8	+4.7
URZ	Urewera	8.52	210	Pn	Pn	16 55 02.8	-3.4
	3.7nm,0.3s,baz=355,slow=3.9,SNR=34						
URZ				Sn	Sn	16 56 37.8	-3.8
	20nm,0.3s,baz=330,slow=23,SNR=9.6						
URZ	Urewera	8.52	210	P	Pn	16 55 02.1	-4.1
URZ	Urewera	8.52	210	P	Pn	16 55 02.2	-4.1
URZ				S	Sn	16 56 38.4	-3.2
RAGZ	Rawiri	8.60	208	P	Pn	16 55 02.8	-4.5
RAGZ				S	Sn	16 56 41.3	-2.3
OUZ	Omahuta	8.61	238	P	Pn	16 55 09.2	+1.8
OUZ	Omahuta	8.61	238	P	Pn	16 55 13.5	+6.1
RIGZ	Rimuhau	8.64	206	P	Pn	16 55 04.9	-3.0
RIGZ				S	Sn	16 56 41.9	-2.8
PRGZ	Paritu Road	8.79	204	P	Pn	16 54 59.6	-10
PRGZ				S	Sn	16 56 43.5	-4.8
MUGZ	Murupara	8.85	211	P	Pn	16 55 05.7	-5.1
SNGZ	Shannon Statio	8.87	207	P	Pn	16 55 06.8	-4.2
SNGZ				S	Sn	16 56 48.9	-1.4
RTZ	Ruatahuna	8.88	209		Pn	16 55 06.8	-4.4
RTZ	Ruatahuna	8.88	209	P	Pn	16 55 06.9	-4.2
RAHZ	Arahi	9.09	208	P	Pn	16 55 10.8	-3.2
RAHZ				S	Sn	16 56 52.9	-2.7
MTHZ	Maungataniwha	9.14	209	P	Pn	16 55 11.2	-3.5
MTHZ				S	Sn	16 56 53.8	-3.0
MRHZ	Matea Rd	9.30	211	P	Pn	16 55 13.0	-3.9
MRHZ				S	Sn	16 56 56.9	-4.0
TLZ	Tolley Road	9.32	216	P	Pn	16 55 22.9	+5.7
NMHZ	Naumai	9.36	209	P	Pn	16 55 15.6	-2.2
NMHZ				S	Sn	16 56 59.4	-2.8
ARHZ	Aropaoanui	9.42	207	P	Pn	16 55 15.2	-3.4
ARHZ				S	Sn	16 56 60.0	-3.8
BKZ	Black Stump Fm	9.55	210		Pn	16 55 15.6	-4.7
BKZ	Black Stump Fm	9.55	210	P	Pn	16 55 16.4	-3.9
RATZ	Rangitukua	9.62	213	P	Pn	16 55 23.7	+2.3
MCHZ	McNeill Hill	9.70	208	P	Pn	16 55 18.8	-3.5
MCHZ				S	Sn	16 57 07.0	-3.5
KWHZ	Kaweka Forest	9.79	209	P	Pn	16 55 20.8	-2.9
KWHZ				S	Sn	16 57 08.2	-4.7
TMVZ	Te Maari	9.86	213	P	Pn	16 55 21.9	-2.7
ETVZ	East Tongariro	9.87	213	P	Pn	16 55 23.1	-1.7
ETVZ				S	Sn	16 57 15.4	+0.5
NNVZ	North Ngauruho	9.91	213	P	Pn	16 55 26.2	+0.8
OTVZ	Oturere	9.91	213	P	Pn	16 55 22.8	-2.6
SNVZ	South Ngauruho	9.94	213	P	Pn	16 55 23.2	-2.6
KRHZ	Kereru	10.00	209	P	Pn	16 55 23.0	-3.4
WNVZ	Wahianoa	10.07	212	P	Pn	16 55 24.1	-3.5
TRVZ	Turoa	10.07	213	P	Pn	16 55 26.2	-1.5
PNHZ	Pukenui	10.30	208	P	Pn	16 55 25.8	-4.8
TSZ	Takapari Road	10.52	209	P	Pn	16 55 28.0	-5.6
DVHZ	Dannevirke	10.64	207	P	Pn	16 55 29.3	-5.9
NEZ	North Egmont	10.77	218	P	Pn	16 55 40.4	+3.3
PRWZ	Pori Road	10.94	207	P	Pn	16 55 37.0	-2.3
BFZ	Birch Farm	10.94	206	P	Pn	16 55 35.1	-4.2
MRZ	Mangatainoka R	11.18	208		Pn	16 55 37.4	-5.2
HOWZ	Holdsworth Sta	11.41	208	P	Pn	16 55 40.5	-5.3
QRZ	Quartz Range	12.73	217	P	Pn	16 56 01.3	-2.5
CTZ	Chatham Island	12.75	177	P	Pn	16 55 59.4	-4.6
LKBA	Tubou, Lakemba	12.75	354	P	Pn	16 56 07.7	+3.5
NFK	Norfolk Island	12.80	275	P	P	16 56 10.7	-4.9
MRNZ	Matariki Terra	13.04	214		P	16 56 14.5	-3.8
KHZ	Kahutara	13.49	210	P	Pn	16 56 10.6	-3.6
MSVF	Nonsavu	13.81	342		Pn	16 56 18.1	-0.6
MSVF	Nonsavu	13.81	342	Pn	Pn	16 56 18.3	-0.4
	0.7nm,0.3s,baz=150,slow=14,SNR=12						
MSVF				LR	LR	17 00 13.7	
	comp=Z,8µm,20.7s,baz=170,slow=32						
	24nm,0.8s						
MSVF	Nonsavu	13.81	342	P	Pn	16 56 20.9	+2.2
MSVF	Nonsavu	13.81	342⇑	eP	Pn	16 56 17.3	-1.4
MSVF				pmax	pmax		
	comp=Z,32nm,1.0s						
LTZ	Lake Taylor	14.34	212		Pn	16 56 23.3	-2.6
TAVE	Taveuni	14.39	351	P	Pn	16 56 29.6	+3.1
DGTI	Dogotuki	14.84	349	P	Pn	16 56 33.8	+1.1
RPZ	Rata Peaks	15.63	212	Pn	Pn	16 56 38.8	-4.2
	comp=Z,4.4nm,0.3s,baz=60,slow=3.4,SNR=18						
RPZ				Sn	Sn	16 59 20.2	-15
	comp=Z,1.8nm,0.3s,baz=64,slow=12,SNR=3.1						
RPZ	Rata Peaks	15.63	212	P	Pn	16 56 43.2	+0.2
PINNC	Pines Island,	15.83	298	P	P	16 56 51.6	+2.3
MARNC	Mare, Loyalty	16.08	303	P	P	16 56 55.9	+3.8
OUENC	Ouen Island, N	16.40	298	P	P	16 56 57.9	+2.2
INH	Isangel	16.52	310	P	P	16 57 00.5	+3.5
ONTNC	Ouen Toro	16.76	297	P	P	16 57 00.5	+0.9
ODZ	Otahua Downs	16.85	210	P	Pn	16 56 57.6	-0.9
DZM	Mont Dzumac	16.90	298	P	P	16 57 01.8	+0.5
DZM				IAmb	IAmb	16 57 06.2	
	comp=Z,662nm,1.5s						
DZM	Mont Dzumac	16.90	298	ePn	P	16 57 01.9	+0.6
	comp=Z,2µm,1.6s						
DZM				eLR	LR	17 00 51.9	
	comp=Z,29µm,22.9s						
DZM	Mont Dzumac	16.90	298	Pn	P	16 57 03.9	+2.6
	comp=Z,1.0nm,0.3s,baz=128,slow=12,SNR=58						
DZM				LR	LR	17 02 30.7	
	comp=Z,39µm,18.4s,baz=158,slow=34						
DZM	Mont Dzumac	16.90	298	P	P	16 57 03.5	+2.2
JCZ	Jackson Bay	16.99	216	P	P	16 57 01.5	-0.6
AFI	Afiamalu	17.78	18	Pn	Pn	16 57 04.5	-5.8
AFI	Afiamalu	17.78	18	P	Pn	16 57 09.1	-1.3
AFI	Afiamalu	17.78	18	P	Pn	16 57 05.8	-4.6
AFI				pmax	pmax		
	comp=Z,342nm,1.2s						
MLZ	Mavora Lakes	18.25	214		P	16 57 16.6	+0.6
RAR	Rarotonga	18.61	63	P	P	16 57 15.4	-4.6
	comp=Z,155nm,1.0s,baz=219,slow=6.5,SNR=14						
RAR				S	Sn	17 00 24.0	-24
	comp=Z,118nm,1.0s,baz=75,slow=22,SNR=4.9						
RAR				LR	LR	17 04 55.8	
	comp=Z,6µm,18.1s,baz=246,slow=38						
RAR	Rarotonga	18.61	63	P	P	16 57 15.4	-4.6
RAR	Rarotonga	18.61	63	P	P	16 57 19.8	-0.2
RAR				pmax	pmax		
	comp=Z,387nm,1.7s						
WHZ	Wether Hill Ro	18.72	213		P	16 57 20.3	-0.8
KOUNC	Koumac, New Ca	19.42	298	P	Pn	16 57 33.2	+3.0
LHI	Lord Howe Isla	20.07	262	P	Pn	16 57 40.8	+2.9
VLAKA	Lakatoro	20.25	314	P	Pn	16 57 42.7	+2.7
SANVU	Saraoutou	20.89	314	P	Pn	16 57 51.0	+3.5
GC1S	Gold Coast 1 S	25.37	269	P	P	16 58 33.5	+3.8
TBI	Tubuai	26.00	80	eP	P	16 58 36.3	+0.9
	comp=Z,2µm,27.0s						
TBI				eS	S	17 03 03.1	-1.8
	comp=Z,25µm,25.0s						
TBI				eLR	LR	17 04 57.7	
	comp=Z,9µm,27.5s						
TBI				eLR	LR	17 05 01.4	
	comp=Z,37µm,25.8s						
ARMA	Armidale	26.55	263		P	16 58 40.5	0.0
ARMA				IAmb	IAmb	16 59 07.7	
	comp=Z,287nm,1.6s						
ARMA	Armidale	26.55	263	P	P	16 58 43.4	+2.9
ARMA	Armidale	26.55	263	P	P	16 58 43.7	+3.2
CNB	Canberra Magne	28.03	252	P	P	16 58 57.1	+3.3
EIDS	Eidsvold	28.23	274	P	P	16 58 55.9	+0.4
EIDS	Eidsvold	28.23	274	P	P	16 58 56.1	+0.6
	comp=Z,0.0nmcomp=Z,81nm,1.8s						
EIDS	Eidsvold	28.23	274	P	P	16 58 56.6	+1.1

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CAN   Canberra         28.33 252   P        P        16 58 57.6 +1.2
CAN   Canberra         28.33 252   P        P        16 58 57.7 +1.2
      comp=Z,46nm,1.2s
CAN   Canberra         28.33 252   P        P        16 58 58.6 +2.2
CAN   Canberra         28.33 252   P        P        16 58 57.6 +1.2
CAN                                pmax     pmax
      comp=Z,80nm,1.3s
CAN                                MLR      MLR
      comp=Z,8µm,20.0s
PPT2  Papeete2         28.61  69  ePKP1     P        16 58 54.3 -4.7
      comp=Z,575nm,24.8s
PPT2                              eS        S        17 03 43.6 -2.7
      comp=Z,5µm,23.8s
PPT2                              eLR       LR       17 06 09.1
      comp=Z,5µm,21.8s
PPT2                              eLR       LR       17 06 11.3
      comp=Z,4µm,22.0s
PPT   Papeete          28.62  69   P        P        16 58 54.8 -4.3
      comp=Z,71nm,0.9s,baz=69,slow=9.6,SNR=4.2
PPT                                LR       LR       17 09 54.1
      comp=Z,6µm,18.5s,baz=248,slow=36
GD1S  Gladstone Soft   28.68 277   P        P        16 59 03.2 +3.7
YNG   Young            28.86 254   P        P        16 58 57.6 -3.5
MOO   Moorlands        30.35 238   P        P        16 59 20.5 +6.4
TOO   Toolangi         31.17 248   P        P        16 59 21.9 +0.4
TOO   Toolangi         31.17 248   P        P        16 59 23.5 +2.1
      comp=Z,27nm,1.9s
TOO   Toolangi         31.17 248   P        P        16 59 21.9 +0.4
TOO                                pmax     pmax
      comp=Z,74nm,1.7s
CMSA  Cobar Meteorol   31.41 259   P        P        16 59 24.9 +1.3
      comp=Z,65nm,0.8s
CMSA  Cobar Meteorol   31.41 259   P        P        16 59 25.5 +1.9
GEXS  Deakin Univers   32.13 247   P        P        16 59 32.7 +2.8
QLP   Quilpie          33.75 268   P        P        16 59 44.9 +0.8
      comp=Z,138nm,1.2s
QLP   Quilpie          33.75 268   P        P        16 59 45.5 +1.4
ARPS  Mount Arapiles   34.09 249   P        P        16 59 48.1 +1.1
      comp=Z,49nm,1.1s
ARPS  Mount Arapiles   34.09 249   P        P        16 59 48.8 +1.8
CTAO  Charters Tower   34.35 280   P        P        16 59 49.8 +0.3
CTAO  Charters Tower   34.35 280   P        P        16 59 51.0 +1.5
CTAO  Charters Tower   34.35 280   P        P        16 59 49.8 +0.3
CTAO                               pmax     pmax
      comp=Z,382nm,1.6s
CTAO                               MLR      MLR
      comp=Z,20µm,18.0s
STKA  Stephens Creek   34.80 258            P        16 59 54.3 +1.0
STKA  Stephens Creek   34.80 258   P        P        16 59 54.2 +1.0
      comp=Z,541nm,1.6s
STKA  Stephens Creek   34.80 258   P        P        16 59 53.9 +0.6
      comp=Z,139nm,1.3s,baz=105,slow=12,SNR=39
STKA                               LR       LR       17 13 35.5
      comp=Z,10µm,18.1s,baz=89,slow=35
      comp=Z,139nm,1.3s
STKA  Stephens Creek   34.80 258   P        P        16 59 54.7 +1.4
STKA  Stephens Creek   34.80 258c iP        P        16 59 54.4 +1.1
HTT   Hallett          36.79 254   P        P        17 00 11.0 +0.7
      comp=Z,22nm,1.3s
HTT   Hallett          36.79 254   P        P        17 00 11.4 +1.1
MTSU  Mount Surprise   36.86 281   P        P        17 00 12.5 +1.5
      comp=Z,54nm,1.0s
MTSU  Mount Surprise   36.86 281   P        P        17 00 13.3 +2.2
WHYH  Whyalla          37.97 255   P        P        17 00 21.3 +1.1
XMAS  Kiritimati       37.97  34   IAMs_20  IAMs_20  17 15 58.0
      comp=Z,8µm,18.0s
BBOO  Buckleboo        39.26 255   P        P        17 00 31.0 -0.1
BBOO                               IAmb     IAmb     17 01 21.8
      comp=Z,145nm,1.4s
BBOO  Buckleboo        39.26 255   P        P        17 00 30.1 -1.0
      comp=Z,83nm,1.2s
BBOO  Buckleboo        39.26 255   P        P        17 00 32.2 +1.1
PMG   Port Moresby     39.27 296   P        P        17 00 30.8 -0.6
PMG   Port Moresby     39.27 296   P        P        17 00 32.0 +0.7
PMG   Port Moresby     39.27 296   P        P        17 00 32.1 +0.7
PMG   Port Moresby     39.27 296   P        P        17 00 30.8 -0.6
PMG                                pmax     pmax
      comp=Z,154nm,1.8s
QIS   Mount Isa        39.82 275   P        P        17 00 36.6 +0.7
      comp=Z,50nm,2.4s
QIS   Mount Isa        39.82 275   P        P        17 00 36.9 +0.9
COEN  Coen             39.88 286   P        P        17 00 37.3 +0.9
COEN  Coen             39.88 286   P        P        17 00 37.5 +1.1
      comp=Z,64nm,1.2s
COEN  Coen             39.88 286   P        P        17 00 38.0 +1.6
TAOE  Nuku Hiva Isla   41.12  66  eS        S        17 07 01.9 +3.2
      comp=Z,973nm,24.4s
TAOE                              eLR       LR       17 11 55.3
      comp=Z,3µm,22.1s
AS01  Alice Springs    43.50 267   P        P        17 01 06.6 +0.5
ASAR  Alice Springs    43.54 267   P        P        17 01 05.3 -1.1
ASAR  Alice Springs    43.54 267   P        P        17 01 06.3 -0.1
      comp=Z,9.4nm,0.7s,baz=104,slow=6.6,SNR=91
ASAR                               PcP      PcP      17 02 53.7 -0.4
      comp=Z,9.5nm,0.8s,baz=126,slow=4.3,SNR=6.4
ASAR                               ScP      ScP      17 06 46.6 +2.5
      comp=Z,19nm,1.2s,baz=112,slow=3.3,SNR=13
      comp=Z,9.4nm,0.7s
MANU  Manus Island     43.97 304   P        P        17 01 08.3 -1.5
MANU                               IAmb     IAmb     17 01 33.2
      comp=Z,140nm,1.6s
WR8   Warramunga Arr   44.44 273   IAmb     IAmb     17 01 20.5
      comp=Z,76nm,1.0s
WRAB  Tennant Creek    44.58 272   P        P        17 01 14.0 -0.8
WRAB                               IAmb     IAmb     17 01 22.2
      comp=Z,212nm,1.4s
WRAB  Tennant Creek    44.58 272c iP        P        17 01 13.9 -0.8
WRAB                               pmax     pmax
      comp=Z,62nm,1.1s
WRA   Warramunga Arr   44.59 272   P        P        17 01 14.8  0.0
WRA   Warramunga Arr   44.59 272   P        P        17 01 14.3 -0.5
      comp=Z,38nm,0.8s,baz=112,slow=7.9,SNR=105
WRA                                PcP      PcP      17 02 58.0 +0.4
      comp=Z,16nm,1.0s,baz=115,slow=3.4,SNR=4.7
WRA                                ScP      ScP      17 06 51.0 +2.6
      comp=Z,11nm,1.2s,baz=118,slow=3.9,SNR=11
WRA                                S        S        17 07 44.5 -5.1
      comp=Z,2.2nm,0.9s,baz=106,slow=14,SNR=3.5
WRA                                LR       LR       17 19 33.9
      comp=Z,16µm,18.1s,baz=125,slow=36
      comp=Z,38nm,0.8s
WRA   Warramunga Arr   44.59 272   P        P        17 01 14.8  0.0
WRA                                pmax     pmax
      comp=Z,15nm,1.4s
WB0   Warramunga Arr   44.61 273   IAmb     IAmb     17 01 22.4
      comp=Z,225nm,1.4s
FORT  Forrest          46.35 255   P        P        17 01 29.8 +1.2
FORT  Forrest          46.35 255   P        P        17 01 27.2 -1.5
      comp=Z,145nm,1.7s
FORT  Forrest          46.35 255   P        P        17 01 28.1 -0.5
SBA   Scott Base       47.49 184   P        P        17 01 40.3 +3.4
SBA                                IAmb     IAmb     17 01 46.8
      comp=Z,150nm,1.4s
SBA   Scott Base       47.49 184   P        P        17 01 40.3 +3.4
SBA                                pmax     pmax
      comp=Z,150nm,1.5s
SBA                                MLR      MLR
      comp=Z,4µm,19.0s
VNDA  Vanda            47.56 186   P        P        17 01 39.6 +2.1
VNDA  Vanda            47.56 186   P        P        17 01 39.4 +2.0
      comp=Z,4.4nm,0.9s,baz=16,slow=6.7,SNR=9.5
VNDA                               LR       LR       17 18 05.0
      comp=Z,3µm,20.5s,baz=24,slow=32
      comp=Z,4.4nm,0.9s
VNDA  Vanda            47.56 186   P        P        17 01 39.6 +2.1
VNDA                               pmax     pmax
      comp=Z,64nm,1.6s
JAY   Jayapura         48.58 297   LR       LR       17 20 07.1
      comp=Z,2µm,21.5s,baz=134,slow=34
GENI  Genyem           48.94 297   P        P        17 01 49.0 +0.1
KDU   Kakadu           49.48 280   P        P        17 01 52.2 -0.8
      comp=Z,65nm,1.6s
KDU   Kakadu           49.48 280   P        P        17 01 53.7 +0.7
MTN   Manton Dam       50.53 279   IAmb     IAmb     17 02 02.5
      comp=Z,160nm,1.6s
MTN   Manton Dam       50.53 279   P        P        17 02 00.7 -0.4
      comp=Z,75nm,1.7s
MTN   Manton Dam       50.53 279   P        P        17 02 01.5 +0.5
KNRA  Kununurra        51.21 274   IAmb     IAmb     17 02 07.6
      comp=Z,120nm,1.4s
KNRA  Kununurra        51.21 274   P        P        17 02 05.4 -0.8
      comp=Z,60nm,1.9s
KMBL  Kambalda         51.29 253   P        P        17 02 05.2 -1.4
      comp=Z,55nm,1.8s
KMBL  Kambalda         51.29 253   P        P        17 02 05.6 -1.0
WAKE  Wake Island      52.26 341   IAMs_20  IAMs_20  17 21 37.6
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      comp=Z,5µm,20.0s
FITZ  Fitzroy Crossi   52.82 270   P        P        17 02 17.5 -0.7
      comp=Z,13nm,1.4s
FITZ  Fitzroy Crossi   52.82 270   LR       LR       17 24 43.7
      comp=Z,11µm,18.1s,baz=102,slow=36
FITZ  Fitzroy Crossi   52.82 270   P        P        17 02 18.0 -0.1
HMH   Humu‘ula Sheep   54.55  26   P        P        17 02 31.4 +0.4
KLBR  Kellerberrin     54.60 251   P        P        17 02 28.8 -2.3
KLBR  Kellerberrin     54.60 251   P        P        17 02 31.3 +0.3
NWAO  Narrogin (SRO)   54.63 250   LR       LR       17 24 36.5
      comp=Z,2µm,19.5s,baz=90,slow=35
POHA  Pohakuloa        54.67  26   IAMs_20  IAMs_20  17 28 03.2
      comp=Z,4µm,18.0s
CASY  Casey            54.84 208   P        P        17 02 32.7 +0.5
CASY                               IAmb     IAmb     17 02 50.5
      comp=Z,86nm,1.1s
CASY  Casey            54.84 208   IAMs_20  IAMs_20  17 25 46.0
      comp=Z,5µm,18.0s
KIP   Kipapa           55.35  22   P        P        17 02 37.5 +1.2
KIP   Kipapa           55.35  22   P        P        17 02 36.5 +0.2
KIP   Kipapa           55.35  22⇑eP        P        17 02 36.2 -0.1
KIP                                pmax     pmax
      comp=Z,162nm,1.3s
MEEK  Meekatharra      55.51 257   P        P        17 02 35.4 -2.3
MEEK  Meekatharra      55.51 257   P        P        17 02 36.6 -1.1
PSA00 Pilbara Seismi   56.36 263   IAmb     IAmb     17 02 43.6
      comp=Z,95nm,1.6s
PSA00 Pilbara Seismi   56.36 263   P        P        17 02 42.3 -1.5
      comp=Z,37nm,2.0s
PSA00 Pilbara Seismi   56.36 263   P        P        17 02 42.7 -1.1
MBWA  Marble Bar       56.62 264   P        P        17 02 43.6 -2.0
MBWA                               IAmb     IAmb     17 02 45.6
      comp=Z,90nm,1.5s
MBWA  Marble Bar       56.62 264   P        P        17 02 43.7 -2.0
MBWA  Marble Bar       56.62 264   P        P        17 02 44.6 -1.1
MORW  Morawa           56.81 254   IAmb     IAmb     17 02 47.0
      comp=Z,109nm,1.7s
MORW  Morawa           56.81 254   P        P        17 02 45.3 -1.6
MORW  Morawa           56.81 254   P        P        17 02 45.8 -1.1
GUMO  Guam             57.22 315   LR       LR       17 25 41.4
      comp=Z,2µm,18.6s,baz=132,slow=34
SOEI  Soe              57.90 278   P        P        17 02 56.0 +1.1
BATI  Baumata          58.19 277   LR       LR       17 28 42.3
      comp=Z,18µm,18.5s,baz=125,slow=37
MIDW  Midway           58.87   0   IAMs_20  IAMs_20  17 29 38.6
      comp=Z,5µm,18.0s
QSPA  South Pole Qui   59.13 180   IAMs_20  IAMs_20  17 29 34.6
      comp=Z,5µm,18.0s
QSPA  South Pole Qui   59.13 180   P        P        17 03 04.6 +1.8
      comp=Z,13nm,0.6s,baz=344,slow=1.2,SNR=45
QSPA                               LR       LR       17 28 18.1
      comp=Z,3µm,18.1s,baz=42,slow=36
      comp=Z,13nm,0.6s
MMRI  Maumere          60.19 278   P        P        17 03 09.3 -1.4
MMRI                               IAMs_20  IAMs_20  17 30 40.7
      comp=Z,5µm,18.0s
MMRI  Maumere          60.19 278   P        P        17 03 10.5 -0.1
PLAI  Plampang         63.90 275   P        P        17 03 35.6  0.0
KAPI  Kappang          64.17 280   LR       LR       17 31 39.8
      comp=Z,2µm,18.9s,baz=112,slow=36
KAPI  Kappang          64.17 280c iP        P        17 03 36.6 -0.7
KAPI                               pmax     pmax
      comp=Z,37nm,1.4s
DAV   Davao City (W)   66.29 295   LR       LR       17 32 09.2
      comp=Z,676nm,19.9s,baz=136,slow=35
JAGI  Jajag, Banyuwa   67.18 274   P        P        17 03 56.1 -0.7
JAGI                               IAMs_20  IAMs_20  17 32 58.1
      comp=Z,5µm,20.0s
JAGI  Jajag, Banyuwa   67.18 274   P        P        17 03 56.5 -0.3
SMAI  San Martin Ant   68.71 158   IAmb     IAmb     17 04 12.2
      comp=Z,67nm,1.0s
BELA  Belgrano 2       69.14 172   P        P        17 04 09.3 +1.2
BELA                               IAmb     IAmb     17 04 23.4
      comp=Z,80nm,1.2s
JCJ   Chichijima       69.43 322   LR       LR       17 33 19.8
      comp=Z,553nm,18.0s,baz=135,slow=35
UGM   Wanagama         70.57 272   IAMs_20  IAMs_20  17 35 23.0
      comp=Z,3µm,20.0s
PMSA  Palmer Station   71.54 156   LR       LR       17 31 54.7
      comp=Z,2µm,18.7s,baz=236,slow=33
MAW   Mawson           71.93 201   P        P        17 04 27.1 +2.0
      comp=Z,11nm,1.3s
MAW   Mawson           71.93 201   P        P        17 04 25.9 +0.7
      comp=Z,13nm,0.9s,baz=102,slow=8.1,SNR=13
MAW                                LR       LR       17 36 31.0
      comp=Z,5µm,18.6s,baz=115,slow=36
      comp=Z,13nm,0.9s
LEM   Lembang          73.60 272   LR       LR       17 38 29.4
      comp=Z,4µm,18.8s,baz=114,slow=37
TGY   Tagaytay City    74.20 298   P        P        17 04 40.2 +0.7
      comp=Z,125nm,0.3s,baz=30,slow=0.5,SNR=8.8
TGY                                LR       LR       17 34 08.2
      comp=Z,799nm,21.5s,baz=114,slow=33
MG05  Puerto Natales   74.76 141   IAmb     IAmb     17 04 50.4
      comp=Z,92nm,1.3s
GO09  Cerro Castillo   75.06 141   P        P        17 04 44.4 +0.5
GO09                               IAmb     IAmb     17 04 59.8
      comp=Z,149nm,1.4s
USHA  Ushuaia          75.18 146   LR       LR       17 29 42.6
      comp=Z,1µm,21.2s,baz=235,slow=29
KSM   Kuching          75.59 281   P        P        17 04 48.6 +1.0
SYO   Syowa Base       76.65 193⇑eP        P        17 04 53.3 +0.6
SYO   Syowa Base       76.65 193⇑epP       pP       17 05 01.1 +2.6
SYO   Syowa Base       76.65 193⇑ePcP      PcP      17 05 05.5 +1.4
AY03  Cochrane         77.00 137   IAmb     IAmb     17 05 04.8
      comp=Z,93nm,1.3s
TROLL Troll, Antarti   77.29 180 ⇑P        P        17 04 57.5 +1.1
      comp=Z,404nm,0.7s
TROLL                            ⇑SKSac    S        17 14 47.7 +3.0
JOW   Kunigami         77.40 312   P        P        17 04 58.0 +0.5
      comp=Z,8.1nm,0.7s,baz=146,slow=8.0,SNR=4.1
JOW                                LR       LR       17 34 36.5
      comp=Z,2µm,20.9s,baz=130,slow=32
      comp=Z,8.1nm,0.7s
SNAA  Sanae            77.56 178 ⇑P        P        17 04 58.0 +0.1
      comp=Z,101nm,0.7s
SNAA                             ⇑SKSac    S        17 14 49.0 +1.5
SNAA  Sanae            77.56 178   P        P        17 04 58.8 +0.9
SNAA                               IAMs_20  IAMs_20  17 38 31.6
      comp=Z,2µm,18.0s
SNAA  Sanae            77.56 178   P        P        17 04 57.4 -0.5
      comp=Z,5.5nm,0.9s,baz=190,slow=9.6,SNR=22
SNAA                               LR       LR       17 38 05.8
      comp=Z,2µm,18.8s,baz=178,slow=35
      comp=Z,5.5nm,0.9s
SNAA  Sanae            77.56 178   P        P        17 04 58.8 +0.9
SNAA                               pmax     pmax
      comp=Z,286nm,1.9s
SNAA                               MLR      MLR
      comp=Z,2µm,18.0s
VNA3  Neumayer Olymp   77.69 176 ⇑P        P        17 04 59.0 +0.4
      comp=Z,18nm,0.7s
VNA2  Neumayer--Watz   78.13 177 ⇑P        P        17 05 01.8 +0.8
      comp=Z,10nm,0.6s,baz=186,slow=6.0
VNA2                             ⇑SKSac    S        17 14 52.9 -0.7
      baz=158,slow=0.4
COYC  Coyhaique        78.19 136   P        P        17 05 03.4 +1.6
COYC                               IAmb     IAmb     17 05 08.9
      comp=Z,70nm,0.9s
NVL   N'lazarevskaya   78.32 183  eP        P        17 05 15.2  +13
NVL                               e                  17 05 27.9
NVL                               e                  17 08 01.6
NVL                               e                  17 09 52.0
NVL                               eS        S        17 14 58.8 +3.3
NVL                                pmax     pmax
      comp=Z,9.0nm,0.9s
NVL                                smax     smax
      comp=E,1µm,12.7s
NVL                                MLR      MLR
      comp=Z,106nm,19.0s
VNA1  Neumayer--Stat   78.36 176 ⇑P        P        17 05 03.3 +1.1
      comp=Z,23nm,1.2s
INU   Inuyama          78.65 323   P        P        17 05 03.1 -1.1
INU   Inuyama          78.65 323   P        P        17 05 05.4 +1.2
JGF   Kuroka           78.67 324   P        P        17 05 04.4  0.0
MJAR  Matsushiro Arr   78.98 325   P        P        17 05 05.1 -1.0
      comp=Z,20nm,1.0s,baz=160,slow=5.5,SNR=26
MJAR                               LR       LR       17 38 04.3
      comp=Z,684nm,19.1s,baz=140,slow=34
      comp=Z,20nm,1.0s
MAJO  Matsushiro       78.99 325   P        P        17 05 05.0 -1.1
MAJO  Matsushiro       78.99 325   P        P        17 05 05.9 -0.2
MAJO  Matsushiro       78.99 325c iP        P        17 05 05.1 -1.0
MAJO                               pmax     pmax
      comp=Z,33nm,1.1s
TWGBT Beinan           79.57 304   P        P        17 05 08.9 -0.7
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LL02  Futaleuf         79.61 134   IAmb     IAmb     17 05 15.9
      comp=Z,58nm,1.0s
LL01  San Ignacio de   79.70 133   IAmb     IAmb     17 05 26.7
      comp=Z,100nm,1.7s
NACB  Ninganchiao      80.08 306   P        P        17 05 14.1 +1.8
TPUB  Ta-pu            80.19 305   P        P        17 05 11.1 -1.9
TPUB  Ta-pu            80.19 305   P        P        17 05 12.3 -0.7
SSLB  Suanglung        80.28 305   P        P        17 05 11.6 -1.8
SSLB                               IAMs_20  IAMs_20  17 40 21.3
      comp=Z,2µm,19.0s
SSLB  Suanglung        80.28 305   P        P        17 05 12.4 -1.0
JNU   Nakatsue         80.30 318   P        P        17 05 11.4 -1.9
JNU   Nakatsue         80.30 318   P        P        17 05 12.4 -0.9
      comp=Z,19nm,1.1s,baz=92,slow=5.2,SNR=5.8
JNU                                LR       LR       17 39 00.4
      comp=Z,357nm,18.4s,baz=116,slow=34
      comp=Z,19nm,1.1s
JNU   Nakatsue         80.30 318   P        P        17 05 12.4 -0.9
LR04  Corral           80.39 131   IAmb     IAmb     17 05 30.7
      comp=Z,94nm,1.4s
JTM   Tenmabayashi     81.07 329   P        P        17 05 18.5 +1.3
ERM   Erimo            81.19 331⇑eP        P        17 05 18.8 +1.0
ERM                                pmax     pmax
      comp=Z,60nm,0.9s
PLCA  Paso Flores      81.77 133   P        P        17 05 22.6 +1.2
PLCA                               IAmb     IAmb     17 05 31.0
      comp=Z,185nm,1.9s
PLCA  Paso Flores      81.77 133   P        P        17 05 21.5 +0.1
      comp=Z,13nm,0.9s,baz=218,slow=5.8,SNR=28
PLCA                               LR       LR       17 33 53.2
      comp=Z,2µm,20.4s,baz=244,slow=30
      comp=Z,13nm,0.9s
PLCA  Paso Flores      81.77 133   P        P        17 05 22.6 +1.2
PLCA                               pmax     pmax
      comp=Z,185nm,2.0s
EFI   East Falkland    82.05 147   P        P        17 05 24.0 +1.5
EFI   East Falkland    82.05 147d iP        P        17 05 23.0 +0.6
EFI                                pmax     pmax
      comp=Z,40nm,1.1s
KIWB  Kanaga Island    82.48   0   P        P        17 05 24.8 +0.4
ADK   Adak             82.51   0   P        P        17 05 24.4  0.0
ADK                                IAmb     IAmb     17 05 25.7
      comp=Z,80nm,1.0s
ADK   Adak             82.51   0   P        P        17 05 25.4 +0.9
ADK   Adak             82.51   0   P        P        17 05 24.5  0.0
ADK                                pmax     pmax
      comp=Z,80nm,1.0s
ADK                                MLR      MLR
      comp=Z,2µm,20.0s
QZH   Quanzhou         82.67 305   P        P        17 05 25.6 -0.4
QZH                                S        S        17 15 42.3  0.0
QZH                                SS       SS       17 21 01.0 -4.2
QZH                                pmax     pmax
      comp=Z,710nm,10.6s
QZH                                LR       LR
      comp=Z,560nm,19.2s
QZH                                LR       LR
      comp=Z,1µm,19.6s
QZH                                LR       LR
      comp=Z,1µm,20.6s
BKNI  Bangkinang       82.87 275   IAMs_20  IAMs_20  17 45 16.1
      comp=Z,4µm,19.0s
ATKA  Atka Island      82.88   2   P        P        17 05 26.5 +0.1
ATKA  Atka Island      82.88   2   P        P        17 05 26.9 +0.5
JKA   Kamikawa-asahi   83.17 332   IAmb     IAmb     17 05 30.8
      comp=Z,87nm,1.1s
ASAJ  Asahikawa        83.17 332   LR       LR       17 41 32.8
      comp=Z,2µm,18.2s,baz=172,slow=35
BI02  San Fabin de     83.57 129   IAmb     IAmb     17 05 34.3
      comp=Z,47nm,1.1s
SHEM  Shemya Is, Ala   83.68 355   LR       LR       17 36 21.9
      comp=Z,2µm,22.0s,baz=146,slow=31
LPIG  La Paz           84.45  58   LR       LR       17 37 41.3
      comp=Z,5µm,18.3s,baz=214,slow=32
SKR   Severo-Kuril’s   84.60 343  eP        P        17 05 48.6  +13
TJN   Taejon           84.65 318   P        P        17 05 37.0 +1.1
TJN   Taejon           84.65 318ceP         P        17 05 35.8 -0.1
SSE   Sheshan          84.84 311   P        P        17 05 33.4 -3.6
SSE                                S        S        17 16 04.4 +0.5
SSE                                pmax     pmax
      comp=Z,6.0nm,0.7s
SSE                                pmax     pmax
      comp=Z,260nm,9.7s
SSE                                LR       LR
      comp=Z,280nm,19.1s
SSE                                LR       LR
      comp=Z,420nm,19.0s
BO02  Sierra Bellavi   84.95 128   IAmb     IAmb     17 05 43.6
      comp=Z,53nm,1.0s
BO01  Tunca            84.96 127   IAmb     IAmb     17 05 52.4
      comp=Z,42nm,1.2s
VA05  Santo Domingo    85.01 126   IAmb     IAmb     17 05 43.3
      comp=Z,67nm,1.2s
SRIG  Santa Rosalia    85.04  54   IAmb     IAmb     17 05 53.6
      comp=Z,48nm,1.2s
KSRS  Korea Array      85.09 319   P        P        17 05 38.7 +0.6
      comp=Z,14nm,1.0s,baz=145,slow=5.7,SNR=30
KSRS                               LR       LR       17 41 36.3
      comp=Z,315µm,19.0s,baz=155,slow=34
      comp=Z,14nm,1.0s
KSAR  Wonju Array Be   85.11 319   P        P        17 05 38.1 -0.1
KSAR  Wonju Array Be   85.11 319   P        P        17 05 38.1 -0.1
KS19  Wonju Array Si   85.16 319   IAmb     IAmb     17 05 47.7
      comp=Z,43nm,1.3s
MT09  Talagante        85.38 127   IAmb     IAmb     17 05 45.5
      comp=Z,60nm,1.1s
SAO   San Andreas Ge   85.40  42   IAmb     IAmb     17 05 55.7
      comp=Z,60nm,1.4s
YSS   Yuzhno-Sakhali   85.47 334   P        P        17 05 39.5 -0.3
YSS                                IAMs_20  IAMs_20  17 39 57.2
      comp=Z,2µm,20.0s
YSS   Yuzhno-Sakhali   85.47 334   P        P        17 05 40.1 +0.4
YSS   Yuzhno-Sakhali   85.47 334  eP        P        17 05 41.4 +1.7
YSS                               eS        S        17 16 10.3 +0.8
YSS                                pmax     pmax
      comp=Z,60nm,1.1s
YSS                                pmax     pmax
      comp=Z,400nm,4.3s
YSS                                pmax     pmax
      comp=N,200nm,6.1s
YSS                                pmax     pmax
      comp=E,200nm,5.4s
YSS                                MLR      MLR
      comp=N,2µm,14.0s
BO04  La Punta         85.52 127   IAmb     IAmb     17 05 55.9
      comp=Z,53nm,1.2s
ESJX  Sierra Juarez    85.53  49   IAmb     IAmb     17 05 47.4
      comp=Z,61nm,1.5s
PASC  Pasadena Art C   85.56  46   IAMs_20  IAMs_20  17 43 59.5
      comp=Z,3µm,18.0s
MT02  Curacav          85.56 126   IAmb     IAmb     17 05 47.8
      comp=Z,46nm,1.1s
QIZ   Qiongzhong       85.66 295   P        P        17 05 42.3 +0.9
QIZ                                PP       PP       17 08 58.8 -2.0
QIZ                                S        S        17 16 10.3 -2.3
QIZ                                pmax     pmax
      comp=Z,530nm,8.3s
QIZ                                LR       LR
      comp=Z,630nm,16.5s
QIZ                                LR       LR
      comp=Z,910nm,15.7s
ELS   Elsinore Mount   85.68  46   P        P        17 05 41.7 +0.5
ELS                                IAmb     IAmb     17 05 45.3
      comp=Z,46nm,1.2s
KULM  Kulim            85.77 279   P        P        17 05 43.1 +1.0
LMEL  Las Melosas      85.87 127   IAmb     IAmb     17 05 50.6
      comp=Z,45nm,1.1s
RPSI  Rantau Prapat    85.90 276   P        P        17 05 42.0 -0.7
RPSI                               IAMs_20  IAMs_20  17 45 04.3
      comp=Z,3µm,20.0s
PEL   Peldehue         85.94 126   IAmb     IAmb     17 05 48.6
      comp=Z,75nm,1.0s
PEL   Peldehue         85.94 126   P        P        17 05 44.1 +1.3
PSI   Prapat           85.96 276   LR       LR       17 45 05.7
      comp=Z,3µm,20.2s,baz=133,slow=36
PSI   Prapat           85.96 276   P        P        17 05 42.8 -0.4
PSI   Prapat           85.96 276   P        P        17 05 42.0 -1.2
PSI                                pmax     pmax
      comp=Z,169nm,1.9s
PSI                                MLR      MLR
      comp=Z,3µm,20.0s
MT08  Bocatoma Ro      86.23 127   IAmb     IAmb     17 05 51.4
      comp=Z,47nm,1.3s
PFO   Pinyon Flats O   86.26  47   P        P        17 05 44.0 -0.2
PFO                                IAmb     IAmb     17 06 00.4
      comp=Z,56nm,1.4s
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PFO	**Pinyon Flats O**	**86.26**	**47**	LR	LR	17 39 01.1	
	comp=Z,4µm,18.2s,baz=240,slow=32						
PFO	**Pinyon Flats O**	**86.26**	**47**	*de*P	**P**	**17 05 45.4**	**+1.2**
PFO				pmax	pmax		
	comp=Z,33nm,1.1s						
FALS	**False Pass**	**86.34**	**8**	IAMs_20	IAMs_20	17 43 08.8	
	comp=Z,2µm,19.0s						
GSI	**Gunungsitoli**	**86.34**	**274**	P	**P**	**17 05 46.5**	**+1.6**
PEA0B	**Petropavlovsk-**	**86.49**	**345**	*ce*P	**P**	**17 05 44.8**	**+0.1**
PETK	**Petropavlovsk-**	**86.49**	**345**	P	**P**	**17 05 44.3**	**-0.3**
PETK	**Petropavlovsk-**	**86.49**	**345**	P	**P**	**17 05 44.7**	**0.0**
	comp=Z,10nm,0.8s,baz=90,slow=10,SNR=16						
PETK				LR	LR	17 41 42.9	
	comp=Z,1µm,19.4s,baz=160,slow=34						
	comp=Z,10nm,0.8s						
CO02	**Combarbal**	**86.81**	**125**	IAmb	IAmb	17 05 50.4	
	comp=Z,48nm,0.9s						
CNBA	**Chernabura Isl**	**86.83**	**10**	IAMs_20	IAMs_20	17 44 54.1	
	comp=Z,2µm,19.0s						
CMB	**Columbia Colle**	**86.89**	**42**	IAmb	IAmb	17 06 02.7	
	comp=Z,90nm,1.4s						
CMB				IAMs_20	IAMs_20	17 43 52.3	
	comp=Z,4µm,18.0s						
NJ2	**Nanjing**	**86.98**	**310**	*e*P	**P**	**17 05 48.0**	**+0.5**
NJ2				S	**S**	**17 16 27.8**	**+3.0**
NJ2				pmax	pmax		
	comp=Z,16nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,520nm,8.5s						
NJ2				LR	LR		
	comp=Z,850nm,18.7s						
NJ2				LR	LR		
	comp=Z,710nm,19.6s						
NJ2				LR	LR		
	comp=Z,1µm,21.1s						
UBPT	**Khong Chiam**	**87.06**	**290**	P	**P**	**17 05 49.6**	**+1.3**
MSHR	**Mys Shultsa**	**87.10**	**325**	*ce*P	**P**	**17 05 47.7**	**-0.2**
MSHR				pmax	pmax		
	comp=Z,60nm,1.2s						
VLA	**Vladivostok**	**87.14**	**325**	*d i*P	**P**	**17 05 48.3**	**+0.2**
VLA				pmax	pmax		
	comp=Z,27nm,1.1s						
GSC	**Goldstone, Bar**	**87.16**	**46**	IAmb	IAmb	17 06 04.6	
	comp=Z,97nm,1.4s						
AFDM	**Forest Hills D**	**87.19**	**41**	IAmb	IAmb	17 06 04.1	
	comp=Z,58nm,1.3s						
PAYG	**Puerto Ayora**	**87.23**	**89**	IAMs_20	IAMs_20	17 36 30.0	
	comp=Z,2µm,19.0s						
CO03	**El Pedregal**	**87.24**	**124**	IAmb	IAmb	17 06 04.4	
	comp=Z,79nm,1.5s						
ORV	**Oroville**	**87.32**	**40**	IAmb	IAmb	17 05 55.1	
	comp=Z,79nm,1.6s						
ORV				IAMs_20	IAMs_20	17 40 16.6	
	comp=Z,3µm,19.0s						
PSTR	**Posyet**	**87.33**	**325**	*de*P	**P**	**17 05 49.9**	**+0.9**
S12K	**Black Hills**	**87.34**	**9**	IAMs_20	IAMs_20	17 43 59.2	
	comp=Z,2µm,19.0s						
113A	**Mohawk Valley,**	**87.44**	**49**	IAmb	IAmb	17 05 56.5	
	comp=Z,61nm,1.6s						
GO04	**Tololo Observa**	**87.54**	**124**	IAmb	IAmb	17 05 59.2	
	comp=Z,57nm,1.4s						
GWY	**Greenwater Val**	**87.83**	**45**	P	**P**	**17 05 52.2**	**+0.4**
DSP	**Deep Springs**	**87.84**	**43**	IAmb	IAmb	17 06 08.5	
	comp=Z,89nm,1.6s						
USA0B	**Ussuriysk Arra**	**87.90**	**326**	IAmb	IAmb	17 05 53.9	
	comp=Z,45nm,1.1s						
USA0B	**Ussuriysk Arra**	**87.90**	**326**	*de*P	**P**	**17 05 51.6**	**-0.1**
USRK	**Ussuriysk Ar.**	**87.90**	**326**	P	**P**	**17 05 52.4**	**+0.7**
	comp=Z,23nm,0.9s,baz=144,slow=3.5,SNR=37						
USRK				LR	LR	17 39 01.6	
	comp=Z,1µm,22.0s,baz=146,slow=31						
	comp=Z,23nm,0.9s						
CO01	**Juntas del Tor**	**88.15**	**124**	IAmb	IAmb	17 06 03.2	
	comp=Z,107nm,1.9s						
YBH	**Yreka Blue Hor**	**88.21**	**38**	IAmb	IAmb	17 06 25.5	
	comp=Z,114nm,2.0s						
YBH	**Yreka Blue Hor**	**88.21**	**38**	LR	LR	17 40 56.2	
	comp=Z,196nm,18.5s,baz=244,slow=33						
GMN	**Gold Mountain**	**88.21**	**44**	IAmb	IAmb	17 06 10.3	
	comp=Z,55nm,1.4s						
LCO	**Las Campanas**	**88.27**	**123**	IAMs_20	IAMs_20	17 42 57.9	
	comp=Z,2µm,18.0s						
NVAR	**Mina Array Bea**	**88.35**	**42**	P	**P**	**17 05 54.7**	**+0.4**
NVAR	**Mina Array Bea**	**88.35**	**42**	P	**P**	**17 05 54.2**	**-0.1**
	comp=Z,19nm,1.1s,baz=219,slow=6.2,SNR=47						
NVAR				LR	LR	17 38 52.9	
	comp=Z,3µm,19.3s,baz=214,slow=31						
	comp=Z,19nm,1.1s						
RYN	**Ryan**	**88.36**	**42**	IAmb	IAmb	17 06 01.4	
	comp=Z,68nm,1.4s						
NV11	**Mina Array Sit**	**88.44**	**42**	IAmb	IAmb	17 06 10.4	
	comp=Z,89nm,1.6s						
CFA	**Coronel Fontan**	**88.52**	**126**	LR	LR	17 39 56.8	
	comp=Z,864nm,18.2s,baz=214,slow=32						
TPNV	**Topopah Spring**	**88.58**	**45**	IAMs_20	IAMs_20	17 45 50.4	
	comp=Z,3µm,18.0s						
PAHR	**Pah Rah Range**	**88.60**	**41**	IAmb	IAmb	17 06 11.8	
	comp=Z,46nm,1.3s						
TYV	**Tymovskoe**	**88.78**	**336**	*e*P	**P**	**17 05 51.5**	**-4.1**
TYV				*e*S	**S**	**17 16 33.0**	**-8.1**
TYV				pmax	pmax		
	comp=Z,16nm,1.0s						
TYV				pmax	pmax		
	comp=Z,500nm,2.3s						
TYV				smax	smax		
	comp=N,200nm,2.2s						
TYV				smax	smax		
	comp=E,300nm,2.2s						
W13A	**Hualapai Mount**	**88.84**	**47**	IAmb	IAmb	17 06 13.1	
	comp=Z,75nm,1.5s						
LHMI	**Lhok Sumawe**	**88.89**	**277**	IAMs_20	IAMs_20	17 48 10.5	
	comp=Z,3µm,20.0s						
SHPR	**Sheep Range**	**88.95**	**46**	IAmb	IAmb	17 06 13.7	
	comp=Z,49nm,1.4s						
BBOR	**Butler Butte**	**89.05**	**37**	IAmb	IAmb	17 06 48.0	
	comp=Z,39nm,1.5s						
WHN	**Wuhan**	**89.07**	**307**	⇓P	**P**	**17 05 58.3**	**+0.8**
WHN				S	**S**	**17 16 38.5**	**-6.3**
WHN				pmax	pmax		
	comp=Z,65nm,1.2s						
WHN				LR	LR		
	comp=Z,2µm,14.3s						
WHN				LR	LR		
	comp=Z,2µm,16.8s						
WHN				LR	LR		
	comp=Z,2µm,21.7s						
TUC	**Tucson**	**89.11**	**51**	IAMs_20	IAMs_20	17 44 38.1	
	comp=Z,2µm,18.0s						
SII	**Sitkinak Islan**	**89.42**	**13**	IAMs_20	IAMs_20	17 45 47.2	
	comp=Z,3µm,20.0s						
HPIG		**89.50**	**58**	IAmb	IAmb	17 06 15.5	
	comp=Z,46nm,1.4s						
319A	**Douglas**	**89.56**	**53**	IAmb	IAmb	17 06 16.5	
	comp=Z,66nm,1.4s						
DL2	**Dalian**	**89.69**	**317**	P	**P**	**17 06 00.3**	**0.0**
DL2				SKS	**SKSac**	**17 16 29.5**	**+0.3**
DL2				S	**S**	**17 16 49.8**	**-0.5**
DL2				pmax	pmax		
	comp=Z,52nm,1.6s						
DL2				pmax	pmax		
	comp=Z,510nm,6.6s						
DL2				LR	LR		
	comp=Z,890nm,19.7s						
DL2				LR	LR		
	comp=Z,660nm,20.9s						
DL2				LR	LR		
	comp=Z,1µm,23.9s						
X16A	**Lo Mia Camp, P**	**89.98**	**49**	IAmb	IAmb	17 06 06.8	
	comp=Z,41nm,1.1s						
J05D	**Fort Rock, OR**	**90.08**	**37**	IAmb	IAmb	17 06 18.2	
	comp=Z,104nm,1.4s						
SNY	**Shenyang**	**90.54**	**320**	⇑P	**P**	**17 06 04.3**	**+0.2**
SNY				pmax	pmax		
	comp=Z,34nm,1.4s						
SNY				pmax	pmax		
	comp=Z,290nm,10.6s						
SNY				LR	LR		
	comp=Z,430nm,18.6s						
SNY				LR	LR		
	comp=Z,480nm,21.6s						
SNY				LR	LR		
	comp=Z,720nm,21.9s						
WUAZ	**Wupatki**	**90.70**	**48**	IAmb	IAmb	17 06 12.1	
	comp=Z,54nm,1.1s						
TIA	**Tai'an**	**90.71**	**313**	P	**P**	**17 06 05.6**	**+0.5**
TIA				SKS	**SKSac**	**17 16 36.8**	**+1.5**
TIA				pmax	pmax		
	comp=Z,56nm,1.2s						
TIA				pmax	pmax		
	comp=Z,580nm,6.4s						
TIA				LR	LR		
	comp=Z,530nm,18.5s						
TIA				LR	LR		
	comp=Z,950nm,17.4s						
TIA				LR	LR		
	comp=Z,2µm,17.9s						
KDAK	**Kodiak Island**	**90.87**	**13**	LR	LR	17 43 38.3	
	comp=Z,1µm,18.5s,baz=205,slow=34						
WVOR	**Wild Horse Val**	**90.87**	**39**	IAmb	IAmb	17 06 21.7	
	comp=Z,53nm,1.3s						
WVOR	**Wild Horse Val**	**90.87**	**39**	P	**P**	**17 06 07.8**	**+1.9**
CN2	**Changchun**	**90.89**	**323**	P	**P**	**17 06 05.9**	**+0.2**
CN2				pP	pP	17 06 10.8	-0.8
CN2				SKS	**SKSac**	**17 16 35.1**	**-0.8**
CN2				S	**S**	**17 17 00.8**	**-0.3**
CN2				pmax	pmax		
	comp=Z,80nm,1.1s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,600nm,17.0s						
CN2				LR	LR		
	comp=Z,800nm,17.0s						
CN2				LR	LR		
	comp=Z,1µm,18.0s						
O14K	**Tigyukauivet M**	**90.90**	**8**	IAMs_20	IAMs_20	17 47 49.4	
	comp=Z,2µm,20.0s						
GRNR	**Gornyy**	**91.01**	**333**	⇑*i*P	**P**	**17 06 07.3**	**+1.1**
GRNR				pmax	pmax		
	comp=Z,20nm,1.1s						
GRNR				MLR	MLR		
	comp=E,470nm,15.0s						
GRNR				MLR	MLR		
	comp=N,540nm,16.0s						
X18A	**Snowflake**	**91.02**	**50**	IAmb	IAmb	17 06 13.7	
	comp=Z,46nm,1.3s						
PSUT	**Pine Spring**	**91.05**	**45**	IAmb	IAmb	17 06 23.8	
	comp=Z,31nm,1.3s						
SPR3	**Spring Creek 3**	**91.06**	**44**	IAmb	IAmb	17 06 23.2	
	comp=Z,34nm,1.3s						
P16K	**Nushagak River**	**91.13**	**10**	IAMs_20	IAMs_20	17 47 29.5	
	comp=Z,2µm,20.0s						
BNX	**BinXian**	**91.25**	**325**	⇓P	**P**	**17 06 07.4**	**0.0**
BNX				pP	**pP**	**17 06 11.5**	**-1.8**
BNX				pmax	pmax		
	comp=Z,49nm,1.1s						
BNX				pmax	pmax		
	comp=Z,380nm,5.6s						
BNX				LR	LR		
	comp=Z,640nm,15.2s						
BNX				LR	LR		
	comp=Z,780nm,18.6s						
BNX				LR	LR		
	comp=Z,1µm,19.1s						
HOOD	**Mount Hood Mea**	**91.29**	**36**	IAmb	IAmb	17 06 30.1	
	comp=Z,60nm,1.2s						
N14K	**Kuskokwak Cree**	**91.50**	**8**	IAMs_20	IAMs_20	17 48 10.3	
	comp=Z,2µm,20.0s						
I07A	**Izee**	**91.53**	**38**	IAmb	IAmb	17 06 24.7	
	comp=Z,48nm,1.3s						
J08A	**Circle Bar Ran**	**91.59**	**39**	IAmb	IAmb	17 06 24.9	
	comp=Z,55nm,1.2s						
O16K	**Kokwok River B**	**91.66**	**10**	IAMs_20	IAMs_20	17 47 47.4	
	comp=Z,2µm,19.0s						
ELK	**Elko**	**91.66**	**42**	IAmb	IAmb	17 06 26.1	
	comp=Z,62nm,1.9s						
ELK	**Elko**	**91.66**	**42**	LR	LR	17 41 06.5	
	comp=Z,3µm,19.4s,baz=234,slow=32						
ELK	**Elko**	**91.66**	**42**	P	**P**	**17 06 10.9**	**+1.2**
SYI	**Shuyak Island**	**91.68**	**13**	IAMs_20	IAMs_20	17 50 01.1	
	comp=Z,2µm,19.0s						
NLWA	**Neilton Lookou**	**91.69**	**33**	IAmb	IAmb	17 06 28.2	
	comp=Z,27nm,1.2s						
NLWA				IAMs_20	IAMs_20	17 41 19.7	
	comp=Z,3µm,20.0s						
EPT	**El Paso**	**91.70**	**54**	IAMs_20	IAMs_20	17 42 56.9	
	comp=Z,2µm,18.0s						
Q19K	**Cape Douglas,**	**91.75**	**12**	IAMs_20	IAMs_20	17 47 35.9	
	comp=Z,2µm,20.0s						
KLR	**Kul'dur**	**91.77**	**329**	LR	LR	17 46 18.1	
	comp=Z,820nm,18.4s,baz=160,slow=35						
KLR	**Kul'dur**	**91.77**	**329**	*ce*P	**P**	**17 06 10.3**	**+0.6**
KLR				pmax	pmax		
	comp=Z,19nm,1.0s						
M13K	**Dall Lake**	**91.80**	**7**	IAMs_20	IAMs_20	17 50 07.1	
	comp=Z,2µm,19.0s						
P18K	**Big Mountain,**	**91.91**	**11**	IAMs_20	IAMs_20	17 48 02.1	
	comp=Z,2µm,20.0s						
N15K	**Kwethluk River**	**91.94**	**9**	IAmb	IAmb	17 06 26.7	
	comp=Z,78nm,1.6s						
N15K				IAMs_20	IAMs_20	17 48 29.8	
	comp=Z,2µm,20.0s						
VHRN	**Van Horn**	**92.20**	**55**	IAmb	IAmb	17 06 41.2	
	comp=Z,36nm,1.7s						
M14K	**Bethel**	**92.28**	**8**	IAMs_20	IAMs_20	17 48 44.8	
	comp=Z,2µm,19.0s						
GNW	**Green Mountain**	**92.31**	**34**	IAmb	IAmb	17 06 28.8	
	comp=Z,36nm,1.6s						
TX31	**Lajitas Ar. Si**	**92.31**	**57**	IAmb	IAmb	17 06 28.7	
	comp=Z,52nm,1.6s						
TXAR	**Lajitas Array**	**92.31**	**57**	P	**P**	**17 06 12.9**	**0.0**
TXAR	**Lajitas Array**	**92.31**	**57**	P	**P**	**17 06 12.6**	**-0.3**
	comp=Z,4.0nm,1.0s,baz=207,slow=5.2,SNR=18						
TXAR				LR	LR	17 42 46.6	
	comp=Z,2µm,18.1s,baz=232,slow=32						
	comp=Z,4.0nm,1.0s						
TXAR	**Lajitas Array**	**92.31**	**57**	P	**P**	**17 06 12.9**	**0.0**
O18K	**Koktuh Hills**	**92.35**	**11**	IAmb	IAmb	17 06 26.8	
	comp=Z,30nm,1.0s						
O18K				IAMs_20	IAMs_20	17 51 16.8	
	comp=Z,2µm,19.0s						
MNTX	**Cornudas Mount**	**92.44**	**54**	IAmb	IAmb	17 06 19.2	
	comp=Z,45nm,1.9s						
MNTX				IAMs_20	IAMs_20	17 46 38.5	
	comp=Z,2µm,18.0s						
F07A	**Phinny Hill Vi**	**92.56**	**36**	IAmb	IAmb	17 06 29.2	
	comp=Z,29nm,1.2s						
HMU	**Henry Mountain**	**92.59**	**47**	IAmb	IAmb	17 06 29.8	
	comp=Z,29nm,1.2s						
G08A	**Pilot Rock**	**92.64**	**37**	IAmb	IAmb	17 06 29.6	
	comp=Z,55nm,1.2s						
LYN	**LuoYang**	**92.73**	**309**	P	**P**	**17 06 15.5**	**+1.0**
LYN				pP	pP	17 06 20.5	-0.2
LYN				SKS	**SKSac**	**17 16 47.4**	**+0.7**
LYN				sS	sS	17 17 32.4	+4.0
LYN				pmax	pmax		
	comp=Z,43nm,1.0s						
LYN				pmax	pmax		
	comp=Z,620nm,9.4s						
LYN				LR	LR		
	comp=Z,1µm,18.9s						
LYN				LR	LR		
	comp=Z,1µm,18.6s						
LYN				LR	LR		
	comp=Z,2µm,17.9s						
CNPM	**China Poot**	**92.75**	**13**	IAMs_20	IAMs_20	17 45 51.5	
	comp=Z,3µm,19.0s						
Y22D	**IRIS PASSCAL I**	**92.76**	**52**	IAMs_20	IAMs_20	17 44 24.7	
	comp=Z,3µm,18.0s						
HOM	**Homer**	**92.80**	**13**	IAMs_20	IAMs_20	17 45 53.7	
	comp=Z,2µm,20.0s						
NNA	**Nana**	**92.82**	**106**	LR	LR	17 42 53.7	
	comp=Z,1µm,18.0s,baz=232,slow=32						
O19K	**Port Alsworth**	**92.82**	**11**	IAMs_20	IAMs_20	17 48 30.3	
	comp=Z,2µm,19.0s						
ILSW	**Iliamna Southw**	**92.83**	**12**	IAmb	IAmb	17 06 29.4	
	comp=Z,44nm,1.3s						
MXC	**Moxie City**	**92.85**	**35**	IAmb	IAmb	17 06 30.6	
	comp=Z,37nm,1.2s						
M16K	**Timber Creek**	**92.91**	**9**	IAmb	IAmb	17 06 42.0	
	comp=Z,53nm,1.8s						
M16K				IAMs_20	IAMs_20	17 48 58.6	
	comp=Z,2µm,20.0s						
HNS	**HongShan**	**92.97**	**312**	⇑P	**P**	**17 06 16.3**	**+0.8**
HNS				SKS	**SKSac**	**17 16 47.5**	**-0.4**
HNS				pmax	pmax		
	comp=Z,30nm,1.4s						
HNS				pmax	pmax		
	comp=Z,370nm,11.2s						
HNS				LR	LR		
	comp=Z,800nm,17.6s						
HNS				LR	LR		
	comp=Z,820nm,16.2s						
HNS				LR	LR		
	comp=Z,1µm,24.1s						
BGU	**Big Grassy Mou**	**93.06**	**43**	IAmb	IAmb	17 06 32.5	
	comp=Z,31nm,1.5s						
MFID	**Camas Ranch**	**93.06**	**40**	IAmb	IAmb	17 06 31.5	
	comp=Z,52nm,1.3s						
MFID				IAMs_20	IAMs_20	17 41 59.7	
	comp=Z,2µm,19.0s						
HAWA	**Hanford**	**93.10**	**36**	IAmb	IAmb	17 06 31.7	
	comp=Z,52nm,1.3s						
TMUT	**Trail Mountain**	**93.14**	**45**	IAmb	IAmb	17 06 32.2	
	comp=Z,40nm,1.2s						
WAH2	**Wahluke Slope**	**93.33**	**36**	IAmb	IAmb	17 06 33.5	
	comp=Z,44nm,1.2s						
N19K	**Bonanza Creek**	**93.38**	**11**	IAMs_20	IAMs_20	17 51 59.0	
	comp=Z,2µm,19.0s						
BBB	**Bella Bella**	**93.39**	**28**	LR	LR	17 43 56.9	
	comp=Z,2µm,18.2s,baz=222,slow=33						
SRU	**San Rafael Swe**	**93.44**	**46**	IAmb	IAmb	17 06 34.3	
	comp=Z,40nm,1.4s						
M17K	**Holitna River**	**93.49**	**10**	IAmb	IAmb	17 06 33.1	
	comp=Z,23nm,1.1s						
ANMO	**Albuquerque**	**93.58**	**51**	P	**P**	**17 06 19.1**	**+0.4**
ANMO	**Albuquerque**	**93.58**	**51**	LR	LR	17 44 02.7	
	comp=Z,4µm,18.1s,baz=320,slow=33						
ANMO	**Albuquerque**	**93.58**	**51**	*de*P	**P**	**17 06 19.3**	**+0.6**
ANMO				pmax	pmax		
	comp=Z,13nm,1.4s						
SEW	**Seward**	**93.64**	**14**	IAMs_20	IAMs_20	17 46 23.0	
	comp=Z,2µm,19.0s						
BJI	**Beijing**	**93.66**	**315**	P	**P**	**17 06 18.8**	**+0.2**
BJI				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BJI				pmax	pmax		
	comp=Z,140nm,9.0s						
BJI				LR	LR		
	comp=Z,260nm,17.6s						
BJI				LR	LR		
	comp=Z,320nm,18.6s						
BJI				LR	LR		
	comp=Z,460nm,19.2s						
Q23K	**Middleton Isla**	**93.69**	**15**	IAMs_20	IAMs_20	17 45 40.6	
	comp=Z,2µm,19.0s						
HVU	**Hansel Valley**	**93.75**	**43**	IAmb	IAmb	17 06 35.6	
	comp=Z,63nm,1.5s						
K15K	**Wolf Creek Mou**	**93.83**	**7**	IAmb	IAmb	17 06 35.3	
	comp=Z,42nm,1.4s						
K15K				IAMs_20	IAMs_20	17 49 33.9	
	comp=Z,2µm,19.0s						
SLKM	**Skilak Lake**	**93.86**	**13**	IAMs_20	IAMs_20	17 46 43.9	
	comp=Z,2µm,19.0s						
D08A	**Wollman Farm,**	**93.86**	**36**	IAmb	IAmb	17 06 36.0	
	comp=Z,41nm,1.4s						
E09A	**Wood Farm, Sta**	**93.89**	**37**	IAmb	IAmb	17 06 34.8	
	comp=Z,37nm,1.2s						
PV19	**Morning Glory**	**93.92**	**47**	IAmb	IAmb	17 06 36.3	
	comp=Z,59nm,1.5s						
CAPN	**Captain Cook N**	**93.92**	**13**	IAMs_20	IAMs_20	17 51 33.4	
	comp=Z,3µm,19.0s						
PV18	**Skein Mesa, Pa**	**93.93**	**47**	IAmb	IAmb	17 06 26.0	
	comp=Z,36nm,1.3s						
HLID	**Hailey**	**93.94**	**41**	IAMs_20	IAMs_20	17 48 09.0	
	comp=Z,2µm,18.0s						
PV20	**West Nyswonger**	**93.95**	**47**	IAmb	IAmb	17 06 35.6	
	comp=Z,47nm,1.5s						
P23K	**Montague Islan**	**93.97**	**15**	IAMs_20	IAMs_20	17 46 06.9	
	comp=Z,2µm,19.0s						
PV23	**Carpenter Ridg**	**93.99**	**47**	IAmb	IAmb	17 06 36.1	
	comp=Z,80nm,1.9s						
PV02	**Paradox Valley**	**94.02**	**47**	IAmb	IAmb	17 06 49.2	
	comp=Z,28nm,1.3s						
PV04	**Paradox Valley**	**94.02**	**47**	IAmb	IAmb	17 06 36.2	
	comp=Z,30nm,1.4s						
CMAR	**Chiang Mai Arr**	**94.03**	**289**	P	**P**	**17 06 20.7**	**-0.2**
CMAR	**Chiang Mai Arr**	**94.03**	**289**	P	**P**	**17 06 21.6**	**+0.8**
	comp=Z,2.8nm,1.0s,baz=132,slow=3.6,SNR=11						
	comp=Z,2.8nm,1.0s						
CMAR	**Chiang Mai Arr**	**94.03**	**289**	*i* P	**P**	**17 06 22.1**	**+1.2**
CMAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PV12	**Saucer Basin,**	**94.04**	**47**	IAmb	IAmb	17 06 36.3	
	comp=Z,42nm,1.3s						
J14K	**Nanvaranak Lak**	**94.07**	**6**	IAMs_20	IAMs_20	17 48 08.1	
	comp=Z,2µm,19.0s						
PV21	**Cone Mtn., Par**	**94.08**	**47**	IAmb	IAmb	17 06 27.6	
	comp=Z,45nm,1.8s						
ATAH	**Atahualpa**	**94.08**	**101**	LR	LR	17 39 47.5	
	comp=Z,843nm,21.2s,baz=241,slow=30						
TCUT	**Toone Canyon**	**94.14**	**44**	IAmb	IAmb	17 06 28.9	
	comp=Z,55nm,1.4s						
CHTO	**Chiang Mai**	**94.21**	**289**	P	**P**	**17 06 21.6**	**-0.1**
CHTO	**Chiang Mai**	**94.21**	**289**	P	**P**	**17 06 22.6**	**+0.9**
CHTO	**Chiang Mai**	**94.21**	**289**	P	**P**	**17 06 21.6**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,13nm,1.2s						
CHTO				MLR	MLR		
	comp=Z,1µm,20.0s						
HWUT	**Hardware Ranch**	**94.35**	**43**	IAMs_20	IAMs_20	17 44 18.0	
	comp=Z,3µm,20.0s						
M19K	**Big River Lodg**	**94.42**	**11**	IAMs_20	IAMs_20	17 49 42.6	
	comp=Z,2µm,19.0s						
HEH	**HeiHe**	**94.45**	**328**	*e*P	**P**	**17 06 22.3**	**+0.3**
HEH				sP	**pwP**	**17 06 33.0**	**-2.2**
HEH				SKS	**SKSac**	**17 16 56.4**	**+1.0**
HEH				pmax	pmax		
	comp=Z,13nm,1.9s						
HEH				LR	LR		
	comp=Z,1µm,18.7s						
HEH				LR	LR		
	comp=Z,690nm,20.6s						
HEH				LR	LR		
	comp=Z,2µm,20.6s						
KMI	**Kunming**	**94.50**	**297**	P	**P**	**17 06 24.1**	**+0.9**
KMI				SKS	**SKSac**	**17 16 58.9**	**+1.5**
KMI				pmax	pmax		
	comp=Z,12nm,1.6s						
KMI				LR	LR		
	comp=Z,690nm,18.6s						
KMI				LR	LR		
	comp=Z,920nm,18.5s						
KMI				LR	LR		
	comp=Z,1µm,18.4s						
V35K	**Ketchikan**	**94.50**	**24**	IAMs_20	IAMs_20	17 45 17.4	
	comp=Z,2µm,19.0s						
HIN	**Hinchinbrook I**	**94.53**	**15**	IAMs_20	IAMs_20	17 46 21.6	
	comp=Z,2µm,19.0s						
PWL	**Port Wells**	**94.56**	**14**	IAMs_20	IAMs_20	17 46 49.3	
	comp=Z,2µm,20.0s						
KAIM	**Kayak Island**	**94.59**	**16**	IAMs_20	IAMs_20	17 46 27.1	
	comp=Z,3µm,18.0s						
TIY	**Taiyuan**	**94.60**	**312**	*e*P	**P**	**17 06 24.1**	**+0.9**
TIY				SKS	**SKSac**	**17 16 59.9**	**+2.9**
TIY				S	**S**	**17 17 30.8**	**-3.9**
TIY				sS	**pS**	**17 17 41.8**	**-0.7**
TIY				pmax	pmax		
	comp=Z,22nm,1.2s						
TIY				LR	LR		
	comp=Z,650nm,17.9s						
TIY				LR	LR		
	comp=Z,490nm,21.3s						
TIY				LR	LR		
	comp=Z,860nm,19.9s						
M20K	**Styx River**	**94.61**	**11**	IAMs_20	IAMs_20	17 52 36.6	
	comp=Z,2µm,18.0s						
L19K	**White Mountain**	**94.61**	**10**	IAMs_20	IAMs_20	17 49 57.6	
	comp=Z,2µm,20.0s						
SUA	**Susitna One**	**94.64**	**13**	IAMs_20	IAMs_20	17 51 57.5	
	comp=Z,3µm,18.0s						
EYAK	**Cordova Ski Ar**	**94.83**	**15**	IAMs_20	IAMs_20	17 48 00.6	
	comp=Z,2µm,19.0s						
XAN	**Xi'an**	**94.83**	**307**	P	P	17 06 36.6	+12
XAN	**Xi'an**	**94.83**	**307**	S	S	17 17 51.3	+15
XAN				pmax	pmax		
	comp=Z,26nm,1.3s						
XAN				pmax	pmax		
	comp=Z,510nm,6.5s						
XAN				LR	LR		
	comp=N,540nm,18.0s						
XAN				LR	LR		
	comp=E,1µm,18.2s						
XAN				LR	LR		
	comp=Z,2µm,18.7s						
GLI	**Glacier Island**	**94.84**	**14**	IAMs_20	IAMs_20	17 46 44.7	
	comp=Z,2µm,19.0s						
FID	**Port Fidalgo**	**94.85**	**15**	IAMs_20	IAMs_20	17 46 31.9	
	comp=Z,2µm,19.0s						
SUCK	**Suckling Hills**	**94.87**	**16**	IAMs_20	IAMs_20	17 46 35.6	
	comp=Z,3µm,19.0s						
J16K	**Anvik River**	**94.90**	**8**	IAMs_20	IAMs_20	17 50 25.1	

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             comp=Z,2µm,19.0s
SKT   Skwentna          94.98  12  IAMs_20  IAMs_20  17 49 19.3
             comp=Z,2µm,20.0s
M22K  Willow            95.03  13  IAMs_20  IAMs_20  17 51 59.6
             comp=Z,2µm,18.0s
KNK   Knik Glacier      95.04  14  IAMs_20  IAMs_20  17 52 15.0
             comp=Z,2µm,19.0s
WRAK  Wrangell Islan    95.11  23  IAMs_20  IAMs_20  17 47 48.4
             comp=Z,2µm,18.0s
J17K  VABM Dome         95.19   8  IAMs_20  IAMs_20  17 50 31.8
             comp=Z,2µm,19.0s
AHID  Auburn Hatcher    95.33  43  IAmb     IAmb     17 06 42.1
             comp=Z,57nm,1.4s
AHID                               IAMs_20  IAMs_20  17 49 25.0
             comp=Z,3µm,18.0s
DIV   Divide            95.35  15  IAMs_20  IAMs_20  17 48 57.2
             comp=Z,2µm,19.0s
MESA  MESA              95.41  17  IAMs_20  IAMs_20  17 46 12.9
             comp=Z,2µm,19.0s
WAX   Waxell Ridge      95.42  16  IAMs_20  IAMs_20  17 51 08.2
             comp=Z,3µm,18.0s
SML   Sawmill           95.42  13  IAMs_20  IAMs_20  17 49 18.1
             comp=Z,2µm,19.0s
BMRM  Bremner River     95.47  15  IAMs_20  IAMs_20  17 47 08.4
             comp=Z,2µm,19.0s
O20A  White River Ci    95.47  46  IAMs_20  IAMs_20  17 53 24.8
             comp=Z,2µm,18.0s
I17K  Unalakleet        95.48   7  IAMs_20  IAMs_20  17 50 35.3
             comp=Z,2µm,19.0s
U35K  Hyder             95.53  25  IAMs_20  IAMs_20  17 45 39.5
             comp=Z,2µm,19.0s
MSTX  Muleshoe          95.53  54  IAMs_20  IAMs_20  17 45 31.3
             comp=Z,2µm,18.0s
NEW   Newport           95.57  36  LR       LR       17 46 27.1
             comp=Z,3µm,18.1s,baz=222,slow=34
CUT   Chulitna          95.60  12  IAMs_20  IAMs_20  17 47 27.8
             comp=Z,2µm,19.0s
YAH   Yahtse            95.62  17  IAMs_20  IAMs_20  17 46 20.4
             comp=Z,2µm,20.0s
CRQM  Cirque            95.62  16  IAMs_20  IAMs_20  17 46 40.7
             comp=Z,3µm,19.0s
KLU   Klutina           95.64  15  IAMs_20  IAMs_20  17 48 57.9
             comp=Z,2µm,19.0s
ISLE  Juniper Island    95.68  17  IAMs_20  IAMs_20  17 46 32.1
             comp=Z,3µm,20.0s
TGL   Tana Glacier      95.70  16  IAMs_20  IAMs_20  17 46 42.4
             comp=Z,3µm,20.0s
ANM   Nome              95.70   5  IAMs_20  IAMs_20  17 47 29.2
             comp=Z,2µm,20.0s
PPLA  Purkeypile        95.72  11  IAMs_20  IAMs_20  17 53 22.8
             comp=Z,2µm,19.0s
PCA   Pinnacle          95.77  18  IAMs_20  IAMs_20  17 46 02.6
             comp=Z,2µm,20.0s
BCPM  Bancas Point      95.81  18  IAMs_20  IAMs_20  17 46 02.7
             comp=Z,2µm,19.0s
SDCO  Great Sand Dun    95.82  49  IAMs_20  IAMs_20  17 47 13.5
             comp=Z,2µm,18.0s
FXWY  Fox Creek         95.91  42  IAmb     IAmb     17 06 45.0
             comp=Z,30nm,1.6s
FXWY                               IAMs_20  IAMs_20  17 49 52.1
             comp=Z,3µm,18.0s
GRNC  Granite Creek     95.94  17  IAMs_20  IAMs_20  17 46 29.9
             comp=Z,2µm,20.0s
VRDI  Verde Repeater    95.96  16  IAMs_20  IAMs_20  17 47 13.5
             comp=Z,3µm,19.0s
PZH   PanZhiHua         95.99 297  P        P        17 06 30.4 +0.6
N25K  Chitina, Valde    96.03  15  IAMs_20  IAMs_20  17 52 00.3
             comp=Z,2µm,18.0s
GLB   Gilahina Butte    96.07  16  IAMs_20  IAMs_20  17 47 27.2
             comp=Z,2µm,19.0s
DLMT  Dillon            96.09  40  IAmb     IAmb     17 06 45.6
             comp=Z,41nm,1.4s
DLMT                               IAMs_20  IAMs_20  17 45 43.7
             comp=Z,3µm,19.0s
M24K  Tolsona, Glenn    96.14  14  IAMs_20  IAMs_20  17 49 26.0
             comp=Z,2µm,19.0s
T25A  Trinidad          96.19  50  IAmb     IAmb     17 06 46.6
             comp=Z,35nm,1.9s
MCARA McCarthy VSAT     96.20  16  IAMs_20  IAMs_20  17 47 19.8
             comp=Z,2µm,19.0s
LOGN  Logan Glacier     96.20  17  IAMs_20  IAMs_20  17 46 39.0
             comp=Z,2µm,20.0s
CAST  Castle Rocks      96.22  11  IAMs_20  IAMs_20  17 50 40.2
             comp=Z,2µm,20.0s
BW06  Boulder Array     96.24  43  IAMs_20  IAMs_20  17 45 47.9
             comp=Z,3µm,19.0s
PDAR  Pinedale Array    96.24  43  P        P        17 06 30.6 -0.1
             comp=Z,2.6nm,1.0s,baz=204,slow=3.3,SNR=11
PDAR                               LR       LR       17 45 40.5
             comp=Z,2µm,18.4s,baz=226,slow=33
             comp=Z,2.6nm,1.0s
CTGM  Chitina Glacie    96.24  17  IAMs_20  IAMs_20  17 46 49.9
             comp=Z,2µm,20.0s
BARN  Barnard Glacie    96.25  17  IAMs_20  IAMs_20  17 46 50.0
             comp=Z,2µm,20.0s
T35M  Bob Quinn         96.27  24  IAMs_20  IAMs_20  17 46 31.2
             comp=Z,2µm,19.0s
735A  Kenedy            96.35  60  IAMs_20  IAMs_20  17 48 09.6
             comp=Z,2µm,18.0s
O28M  Mount Upton       96.37  17  IAMs_20  IAMs_20  17 44 40.3
             comp=Z,2µm,20.0s
KTH   Kantishna Hill    96.55  12  IAMs_20  IAMs_20  17 53 30.7
             comp=Z,3µm,19.0s
TRF   Thorofare Moun    96.56  12  IAmb     IAmb     17 06 46.8
             comp=Z,62nm,2.0s
TRF                                IAMs_20  IAMs_20  17 50 09.1
             comp=Z,3µm,20.0s
YHL   Hebgen Lake       96.56  41  IAmb     IAmb     17 06 49.3
             comp=Z,45nm,1.3s
H17K  Granite Mounta    96.58   7  IAMs_20  IAMs_20  17 51 28.6
             comp=Z,2µm,19.0s
J20K  Nowinta River     96.61  10  IAMs_20  IAMs_20  17 50 52.3
             comp=Z,2µm,19.0s
SEY   Seymchan          96.65 347  LR       LR       17 46 29.0
             comp=Z,2µm,20.2s,baz=153,slow=33
SEY   Seymchan          96.65 347⇑iP       P        17 06 31.4 -0.3
SEY                                pmax     pmax
             comp=Z,2.0nm,0.8s
DHY   Denali Highway    96.77  13  IAMs_20  IAMs_20  17 53 08.6
             comp=Z,1µm,18.0s
G16K  Koyuk River       96.78   6  IAMs_20  IAMs_20  17 50 00.7
             comp=Z,2µm,20.0s
RND   Reindeer          96.78  13  IAMs_20  IAMs_20  17 53 03.0
             comp=Z,2µm,19.0s
AMTX  Amarillo          96.79  53  IAMs_20  IAMs_20  17 46 37.5
             comp=Z,3µm,19.0s
CD2   Chengdu           96.79 302  P        P        17 06 34.8 +1.5
CD2                                LR       LR
             comp=Z,1µm,18.7s
CD2                                LR       LR
             comp=Z,880nm,17.4s
CD2                                LR       LR
             comp=Z,870nm,18.2s
F15K  North Star Dit    96.89   5  IAMs_20  IAMs_20  17 49 57.5
             comp=Z,2µm,19.0s
ISCO  Idaho Springs     96.92  48  IAMs_20  IAMs_20  17 50 46.4
             comp=Z,3µm,18.0s
H18K  Honhosa River     96.97   8  IAMs_20  IAMs_20  17 51 37.8
             comp=Z,2µm,19.0s
HHC   Hu-ho-hao-te      96.97 314  eP       P        17 06 34.8 +0.9
HHC                                SKS      SKSac    17 17 12.1 +2.6
HHC                                sS       sS       17 18 06.0 +0.6
HHC                                pmax     pmax
             comp=Z,9.0nm,0.6s
HHC                                pmax     pmax
             comp=Z,190nm,7.0s
HHC                                LR       LR
             comp=Z,520nm,18.5s
HHC                                LR       LR
             comp=Z,610nm,20.2s
HHC                                LR       LR
             comp=Z,870nm,20.2s
ZEA   Zeya              96.98 331⇑eP       P        17 06 33.3 -0.2
BPAW  Bear Paw Mtn.     97.04  11  IAMs_20  IAMs_20  17 50 55.8
             comp=Z,2µm,19.0s
MCK   McKinley          97.06  12  IAMs_20  IAMs_20  17 53 31.5
             comp=Z,2µm,18.0s
M26K  Nabesna, AK       97.10  15  IAMs_20  IAMs_20  17 48 03.5
             comp=Z,2µm,19.0s
M27K  Edge Creek, AK    97.32  16  IAMs_20  IAMs_20  17 48 07.3
             comp=Z,2µm,19.0s
YNE   Yellowstone No    97.32  41  IAmb     IAmb     17 06 51.5
             comp=Z,23nm,1.3s
JTS   Las Juntas de     97.35  82  LR       LR       17 41 16.5
             comp=Z,1µm,20.6s,baz=289,slow=30
BWN   Browne            97.37  12  IAMs_20  IAMs_20  17 48 44.4
             comp=Z,3µm,19.0s
LPAZ  La Paz            97.48 114  P        P        17 06 37.4 -0.1
LPAZ                               IAmb     IAmb     17 06 55.4
             comp=Z,34nm,2.0s
LPAZ  La Paz            97.48 114  P        Pdif     17 06 38.1 +0.6
             comp=Z,1.1nm,0.8s,baz=224,slow=6.5,SNR=4.8
LPAZ                               LR       LR       17 42 21.1
             comp=Z,631nm,20.9s,baz=228,slow=30
             comp=Z,1.1nm,0.8s
L26K  Log Cabin Wild    97.56  15  IAMs_20  IAMs_20  17 48 39.8
             comp=Z,2µm,19.0s
G18K  Tagagawik         97.65   8  IAMs_20  IAMs_20  17 52 00.8
             comp=Z,2µm,20.0s
TNCH  TengChong         97.72 294  P        P        17 06 37.4 -0.4
TNCH                               pP       pP       17 06 43.3 -0.7
TNCH                               sP       sP       17 06 45.5 -0.3
TNCH                               PP       PP       17 10 35.1 -1.1
TNCH                               SKS      SKSac    17 17 18.1 +3.9
TNCH                               S        S        17 18 00.9 -1.5
TNCH                               sS       pS       17 18 10.9 +0.7
TNCH                               pmax     pmax
             comp=Z,11nm,1.8s
TNCH                               pmax     pmax
             comp=Z,170nm,4.9s
TNCH                               LR       LR
             comp=Z,330nm,13.9s
TNCH                               LR       LR
             comp=Z,620nm,16.2s
TNCH                               LR       LR
             comp=Z,980nm,17.6s
K24K  Donnelly Dome     97.74  14  IAMs_20  IAMs_20  17 48 31.3
             comp=Z,2µm,19.0s
RLMT  Red Lodge         97.81  42  IAMs_20  IAMs_20  17 50 46.4
             comp=Z,3µm,18.0s
BOAB  BOACO BROADBAN97.82  80  IAMs_20  IAMs_20  17 41 40.0
             comp=Z,3µm,20.0s
NEA2  Nenana            97.83  12  IAMs_20  IAMs_20  17 50 46.6
             comp=Z,2µm,20.0s
RIDG  Independent Ri    97.87  14  IAMs_20  IAMs_20  17 50 32.9
             comp=Z,2µm,19.0s
WRH   Wood River Hil    97.89  12  IAmb     IAmb     17 06 59.2
             comp=Z,29nm,1.6s
WRH                                IAMs_20  IAMs_20  17 48 19.4
             comp=Z,2µm,19.0s
L27K  Beaver Creek,     97.94  16  IAMs_20  IAMs_20  17 48 37.7
             comp=Z,2µm,19.0s
MLY   Manley            97.94  11  IAMs_20  IAMs_20  17 51 32.6
             comp=Z,2µm,19.0s
DOT   Dot Lake          97.96  14  IAMs_20  IAMs_20  17 53 24.1
             comp=Z,2µm,18.0s
M29M  Somme Creek       98.23  17  IAMs_20  IAMs_20  17 48 04.4
             comp=Z,2µm,20.0s
SCRK  Sand Creek        98.26  14  IAMs_20  IAMs_20  17 53 25.2
             comp=Z,2µm,19.0s
COLA  College           98.30  12  IAMs_20  IAMs_20  17 49 01.2
             comp=Z,2µm,19.0s
COLA  College           98.30  12⇑eP       Pdif     17 06 39.5 +0.3
COLA                               pmax     pmax
             comp=Z,4.0nm,1.0s
HKT   Hockley           98.39  60  IAMs_20  IAMs_20  17 44 58.7
             comp=Z,2µm,20.0s
ILAR  Eielson Array     98.39  13  P        P        17 06 38.9 -0.7
ILAR  Eielson Array     98.39  13  P        P        17 06 39.4 -0.2
             comp=Z,1.4nm,1.0s,baz=230,slow=4.1,SNR=8.2
ILAR                               LR       LR       17 47 46.5
             comp=Z,700nm,19.0s,baz=196,slow=33
             comp=Z,1.4nm,1.0s
KSCO  Kaye Shedlock'    98.40  49  IAMs_20  IAMs_20  17 48 09.8
             comp=Z,2µm,18.0s
J25K  Salcha River,     98.54  13  IAMs_20  IAMs_20  17 54 14.6
             comp=Z,2µm,19.0s
POKR  Poker Plat Res    98.60  12  IAMs_20  IAMs_20  17 49 00.1
             comp=Z,2µm,20.0s
F19K  Shaleruckik Mo    98.66   8  IAMs_20  IAMs_20  17 52 51.4
             comp=Z,2µm,19.0s
K27K  Chicken           98.72  15  IAMs_20  IAMs_20  17 50 46.4
             comp=Z,2µm,19.0s
WMOK  Wichita Mounta    98.73  55  IAMs_20  IAMs_20  17 50 16.0
             comp=Z,2µm,18.0s
L29M  L29M              98.87  17  IAMs_20  IAMs_20  17 48 15.4
             comp=Z,2µm,20.0s
H23K  Yukon River       98.88  11  IAMs_20  IAMs_20  17 52 02.3
             comp=Z,2µm,19.0s
E18K  Tukpahlearik C    98.92   7  IAMs_20  IAMs_20  17 51 08.4
             comp=Z,2µm,20.0s
H24K  Noodor Dome       99.17  12  IAMs_20  IAMs_20  17 54 50.2
             comp=Z,2µm,20.0s
CPUP  Villa Florida     99.26 128  LR       LR       17 45 41.2
             comp=Z,307nm,18.9s,baz=95,slow=32
E19K  Redstone River    99.32   8  IAMs_20  IAMs_20  17 53 12.9
             comp=Z,2µm,19.0s
RDOG  Red Dog Mine      99.33   5  IAMs_20  IAMs_20  17 49 44.2
             comp=Z,2µm,19.0s
C16K  Lisburne Hills    99.37   5  IAMs_20  IAMs_20  17 51 28.1
             comp=Z,2µm,20.0s
BILL  Bilibino          99.47 354  IAMs_20  IAMs_20  17 46 21.9
             comp=Z,2µm,20.0s
BILL  Bilibino          99.47 354⇑eP       Pdif     17 06 43.1 -1.2
BILL                               pmax     pmax
             comp=Z,5.0nm,1.4s
F21K  Alatna River      99.57   9  IAMs_20  IAMs_20  17 53 05.6
             comp=Z,2µm,20.0s
I26K  Coal Creek Min    99.60  14  IAMs_20  IAMs_20  17 54 47.7
             comp=Z,2µm,19.0s
G23K  Bananza Creek     99.61  11  IAMs_20  IAMs_20  17 52 36.7
             comp=Z,2µm,19.0s
K29M  Barlow Dome       99.63  17  IAMs_20  IAMs_20  17 48 48.6
             comp=Z,2µm,20.0s
OK038 West end E0370    99.66  53  IAMs_20  IAMs_20  17 48 12.5
             comp=Z,3µm,19.0s
J29N  Klondike Camp     99.97  16  IAMs_20  IAMs_20  17 49 30.5
             comp=Z,2µm,19.0s
G24K  Hadweenzic Riv   100.03  12  IAMs_20  IAMs_20  17 55 44.7
             comp=Z,2µm,19.0s
C18K  Utukok River     100.06   6  IAMs_20  IAMs_20  17 50 28.5
             comp=Z,2µm,19.0s
OK029 Liberty Lake     100.20  54  IAMs_20  IAMs_20  17 48 51.0
             comp=Z,2µm,19.0s
D19K  Kuna River       100.22   7  IAMs_20  IAMs_20  17 52 17.6
             comp=Z,2µm,20.0s
I28M  Miner Creek      100.42  15  IAMs_20  IAMs_20  17 49 58.2
             comp=Z,2µm,19.0s
LAO   LASA Array       100.45  42  IAMs_20  IAMs_20  17 52 37.2
             comp=Z,2µm,19.0s
J30M  Hart River       100.53  17  IAMs_20  IAMs_20  17 54 30.4
             comp=Z,2µm,19.0s
D20K  Etivluk River    100.59   8  IAMs_20  IAMs_20  17 54 14.5
             comp=Z,2µm,19.0s
C19K  Lookout Ridge    100.66   6  IAMs_20  IAMs_20  17 52 28.2
             comp=Z,2µm,20.0s
R32A  Long Quarter,    100.69  52  IAMs_20  IAMs_20  17 50 02.5
             comp=Z,3µm,18.0s
F24K  Squaw Lake       100.70  11  IAMs_20  IAMs_20  17 56 10.4
             comp=Z,3µm,19.0s
I29M  Ogilvie Camp,    100.71  16  IAMs_20  IAMs_20  17 54 29.0
             comp=Z,1µm,19.0s
H27K  Steamboat Moun   100.74  14  IAMs_20  IAMs_20  17 55 14.8
             comp=Z,2µm,19.0s
OK052 Battle Ridge R   100.76  55  IAMs_20  IAMs_20  17 48 58.7
             comp=Z,2µm,18.0s
441A  DeRidder         100.77  61  IAMs_20  IAMs_20  17 48 42.6
             comp=Z,1µm,19.0s
E23K  Chandalar        100.91  10  IAMs_20  IAMs_20  17 51 53.1
             comp=Z,2µm,19.0s
G26K  Porcupine Rive   100.92  13  IAMs_20  IAMs_20  17 53 19.4
             comp=Z,1µm,19.0s
I30M  Mount Dempster   101.06  16  IAMs_20  IAMs_20  17 49 46.1
             comp=Z,2µm,19.0s
E24K  Your Creek       101.10  11  IAMs_20  IAMs_20  17 53 34.2
             comp=Z,3µm,19.0s
F25K  Christian Rive   101.15  12  IAMs_20  IAMs_20  17 56 50.4
             comp=Z,1µm,19.0s
G27K  Doyon Strip      101.22  14  IAMs_20  IAMs_20  17 50 31.3
             comp=Z,2µm,19.0s
D22K  Ayikyak River    101.23   9  IAMs_20  IAMs_20  17 52 24.5
             comp=Z,2µm,20.0s
TOLK  Toolik Lake Re   101.45  10  IAMs_20  IAMs_20  17 53 59.4
             comp=Z,1µm,19.0s
F26K  Sheenjek River   101.51  12  IAMs_20  IAMs_20  17 54 14.9
             comp=Z,2µm,19.0s
E25K  Arctic Village   101.63  12  IAMs_20  IAMs_20  17 56 56.1
             comp=Z,2µm,19.0s
B21K  Ikpikpuk River   101.69   8  IAMs_20  IAMs_20  17 54 51.5
             comp=Z,2µm,20.0s
B20K  Meade River      101.77   7  IAMs_20  IAMs_20  17 52 50.6
             comp=Z,2µm,20.0s
YAK   Yakutsk          101.96 337  IAMs_20  IAMs_20  17 56 46.1
             comp=Z,2µm,18.0s
H31M  Peel River       102.03  17  IAMs_20  IAMs_20  17 50 24.8
             comp=Z,2µm,20.0s
D24K  Happy Valley     102.03  10  IAMs_20  IAMs_20  17 52 30.7
             comp=Z,2µm,19.0s
G29M  Pine Creek       102.07  15  IAMs_20  IAMs_20  17 50 60.0
             comp=Z,2µm,20.0s
F28M  Old Crow         102.27  14  IAMs_20  IAMs_20  17 51 32.1
             comp=Z,3µm,19.0s
MIAR  Mount Ida        102.33  57  IAMs_20  IAMs_20  17 46 22.7
             comp=Z,2µm,20.0s
KSU1  Kansas State U   102.45  52  IAMs_20  IAMs_20  17 53 32.1
             comp=Z,3µm,18.0s
B22K  Teshekpuk Lake   102.51   8  IAMs_20  IAMs_20  17 53 22.2
             comp=Z,2µm,19.0s
D25K  Kavik River      102.57  11  IAMs_20  IAMs_20  17 52 22.9
             comp=Z,2µm,20.0s
C24K  Franklin Bluff   102.57  10  IAMs_20  IAMs_20  17 54 54.8
             comp=Z,2µm,19.0s
BGNE  Belgrade         102.57  49  IAMs_20  IAMs_20  17 53 35.2
             comp=Z,2µm,18.0s
U38A  Gravette         102.68  55  IAMs_20  IAMs_20  17 53 13.6
             comp=Z,3µm,18.0s
G31M  Satah River      102.94  16  IAMs_20  IAMs_20  17 55 37.0
             comp=Z,2µm,19.0s
143A  Socs Landing,    103.04  60  IAMs_20  IAMs_20  17 47 43.7
             comp=Z,2µm,20.0s
F30M  Barrier River    103.15  15  IAMs_20  IAMs_20  17 56 24.3
             comp=Z,1µm,18.0s
E28M  Babbage River    103.18  13  IAMs_20  IAMs_20  17 52 20.0
             comp=Z,2µm,19.0s
C27K  Jago River       103.28  12  IAMs_20  IAMs_20  17 50 37.7
             comp=Z,2µm,20.0s
E29M  Blow River       103.33  14  IAMs_20  IAMs_20  17 53 44.1
             comp=Z,2µm,19.0s
VBMS  Vicksburg        103.47  61  IAMs_20  IAMs_20  17 49 09.2
             comp=Z,2µm,20.0s
F31M  Tsiigehtchic     103.48  16  IAMs_20  IAMs_20  17 49 28.2
             comp=Z,2µm,20.0s
SUSD  Miller           103.58  46  IAMs_20  IAMs_20  17 55 13.6
             comp=Z,2µm,18.0s
E28A  Huff             103.61  44  IAMs_20  IAMs_20  17 50 32.9
             comp=Z,2µm,19.0s
SONM  Songino Array    103.89 318  Pdiff    Pdif     17 07 04.3 -0.4
             comp=Z,1.1nm,1.1s,baz=114,slow=3.5,SNR=2.3
SONM                               PKKPbc   PKKPbc   17 22 54.4 -1.5
             comp=Z,0.4nm,0.5s,baz=343,slow=4.5,SNR=2.3
L34A  Svendsen Farm,   104.00  49  IAMs_20  IAMs_20  17 52 45.1
             comp=Z,2µm,18.0s
P38A  Dawn             104.79  53  IAMs_20  IAMs_20  17 51 29.2
             comp=Z,2µm,19.0s
Y45A  Yeager Farm, C   104.96  59  IAMs_20  IAMs_20  18 03 21.5
             comp=Z,2µm,21.0s
Z47A  Carrollton       105.75  61  IAMs_20  IAMs_20  17 50 11.6
             comp=Z,2µm,19.0s
P40A  Paris            105.76  53  IAMs_20  IAMs_20  17 51 52.0
             comp=Z,2µm,18.0s
GOMU  GeErMu           105.88 303  Pdif     Pdif     17 07 16.5 +2.4
GOMU                               AMB      AMB
             comp=Z,140nm,4.5s
GOMU                               LR       LR
             comp=Z,450nm,17.2s
GOMU                               LR       LR
             comp=Z,650nm,17.5s
GOMU                               LR       LR
             comp=Z,990nm,17.3s
SCIA  State Center     106.06  51  IAMs_20  IAMs_20  17 56 01.6
             comp=Z,3µm,18.0s
LRAL  Lakeview Retre   106.48  61  IAMs_20  IAMs_20  17 52 22.1
             comp=Z,2µm,19.0s
I37A  Lemond, Waseca   106.89  49  IAMs_20  IAMs_20  17 54 51.4
             comp=Z,2µm,18.0s
WVT   Waverly          107.23  58  IAMs_20  IAMs_20  17 56 22.4
             comp=Z,2µm,18.0s
Y49A  Blount Mountai   107.29  61  IAMs_20  IAMs_20  17 51 56.2
             comp=Z,2µm,19.0s
C36M  Paulatuk         107.29  17  IAMs_20  IAMs_20  17 53 32.0
             comp=Z,1µm,20.0s
AGMN  Agassiz Nation   107.31  44  IAMs_20  IAMs_20  17 51 39.9
             comp=Z,2µm,19.0s
L40A  Anamosa          107.45  51  IAMs_20  IAMs_20  17 54 47.6
             comp=Z,2µm,18.0s
MTDJ  Mount Denham     107.45  79  IAMs_20  IAMs_20  17 46 56.4
             comp=Z,2µm,20.0s
P43A  Skaggs, Pawnee   107.56  54  IAMs_20  IAMs_20  17 52 49.6
             comp=Z,3µm,18.0s
Q44A  Meyer Farm, Va   107.59  55  IAMs_20  IAMs_20  17 53 18.6
             comp=Z,3µm,21.0s
SPB   Sao Paulo        107.63 133  IAMs_20  IAMs_20  17 51 59.6
             comp=Z,1µm,19.0s
SPMN  Marine on St.    107.81  48  IAMs_20  IAMs_20  17 55 02.7
             comp=Z,2µm,18.0s
HDIL  Hopedale         108.11  53  IAMs_20  IAMs_20  17 57 26.2
             comp=Z,1µm,18.0s
JFWS  Jewell Farm      108.47  51  IAMs_20  IAMs_20  17 54 18.5
             comp=Z,3µm,18.0s
I40A  Norwalk          108.64  50  IAMs_20  IAMs_20  17 55 29.9
             comp=Z,2µm,18.0s
A36M  Sachs Harbour    108.85  15  IAMs_20  IAMs_20  17 55 05.1
             comp=Z,1µm,19.0s
U49A  Red Boiling Sp   108.89  58  IAMs_20  IAMs_20  17 52 42.4
             comp=Z,2µm,19.0s
SDV   Santo Domingo    108.92  91  IAMs_20  IAMs_20  17 51 59.9
             comp=Z,2µm,19.0s
Y52A  Lilburn          109.06  61  IAMs_20  IAMs_20  17 52 18.1
             comp=Z,1µm,19.0s
M44A  Midewin, Midew   109.32  53  IAMs_20  IAMs_20  18 00 07.1
             comp=Z,2µm,19.0s
G40A  Rib Lake         109.49  48  IAMs_20  IAMs_20  17 56 15.3
             comp=Z,2µm,18.0s
HQIL  Hanson Quary C   109.62  53  IAMs_20  IAMs_20  18 00 19.0
             comp=Z,2µm,18.0s
I42A  Draeger Farm,    109.77  50  IAMs_20  IAMs_20  17 57 58.6
             comp=Z,2µm,18.0s
T50A  Nancy            109.79  58  IAMs_20  IAMs_20  17 56 44.2
             comp=Z,1µm,18.0s
EYMN  Ely              109.79  45  IAMs_20  IAMs_20  17 58 44.8
             comp=Z,3µm,18.0s
HYB   Hyderabad        110.52 278  ePKiKP   PKiKP    17 11 36.1 +0.8
HYB                                ePP      PP       17 12 10.8 -0.7
HYB                                eSKSac   SKSac    17 18 13.1  0.0
HYB                                eSP      SP       17 21 38.2 -0.8
HYB                                eSS      SS       17 27 39.0 -0.3
N47A  Urbana           110.73  54  IAMs_20  IAMs_20  17 54 55.8
             comp=Z,3µm,19.0s
H43A  Windswept, Lux   110.75  50  IAMs_20  IAMs_20  17 56 26.7
             comp=Z,2µm,18.0s
L46A  Eue Claire       110.77  53  IAMs_20  IAMs_20  18 01 21.5
             comp=Z,2µm,18.0s
S51A  Beattyville      110.95  58  IAMs_20  IAMs_20  17 57 00.8
             comp=Z,2µm,18.0s
F42A  Maple Grove Fa   111.02  49  IAMs_20  IAMs_20  17 57 02.7
             comp=Z,2µm,18.0s
I45A  Fountain         111.60  51  IAMs_20  IAMs_20  17 57 07.2
             comp=Z,2µm,18.0s
KMSC  Kings Mountain   111.63  61  IAMs_20  IAMs_20  17 58 08.3
             comp=Z,2µm,18.0s
NHSC  New Hope         111.71  64  IAMs_20  IAMs_20  18 00 04.6
             comp=Z,1µm,18.0s
Y57A  Sumter           111.90  63  IAMs_20  IAMs_20  17 54 00.7
             comp=Z,2µm,19.0s
J47A  Sunmer           112.25  52  IAMs_20  IAMs_20  17 59 24.5
             comp=Z,2µm,18.0s
Y58A  Scranton         112.41  63  IAMs_20  IAMs_20  17 56 19.2
             comp=Z,1µm,19.0s
W57A  Gilead           112.65  62  IAMs_20  IAMs_20  17 56 32.3
             comp=Z,2µm,19.0s
X58A  Rowland          112.92  63  IAMs_20  IAMs_20  17 58 10.4
             comp=Z,1µm,18.0s
Y60A  Bolivia          113.56  63  IAMs_20  IAMs_20  17 55 04.7
             comp=Z,1µm,20.0s
K50A  Casco            113.58  53  IAMs_20  IAMs_20  17 58 11.8
             comp=Z,2µm,18.0s
E46A  Sault Ste Mari   113.72  49  IAMs_20  IAMs_20  18 01 57.2
             comp=Z,2µm,18.0s
R55A  Marlinton        113.73  58  IAMs_20  IAMs_20  17 59 05.5
             comp=Z,2µm,18.0s
W59A  Clinton          113.83  62  IAMs_20  IAMs_20  17 59 30.6
             comp=Z,2µm,18.0s
WMQ   Urumqi           113.95 308  ePKP     PKiKP    17 11 42.3 +1.1
WMQ                                LR       LR
             comp=Z,520nm,18.3s
WMQ                                LR       LR
             comp=Z,490nm,18.3s
WMQ                                LR       LR
             comp=Z,420nm,22.7s
S57A  Dark Hollow, R   114.40  59  IAMs_20  IAMs_20  18 00 41.3
             comp=Z,2µm,18.0s
ERPA  Erie             115.17  55  IAMs_20  IAMs_20  18 00 43.3
             comp=Z,1µm,18.0s
R58B  Mineral          115.27  60  IAMs_20  IAMs_20  17 57 27.3
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       comp=Z,2µm,18.0s
V61A  Roper              115.47  62    IAMs_20  IAMs_20  17 59 53.1
       comp=Z,2µm,18.0s
BOSA  Boshof             116.90 202    PKP      PKPdf    17 11 47.3 -0.3
       comp=Z,2.5nm,1.0s,baz=153,slow=2.3,SNR=3.0
ZSN   Zaisan             117.00 311   ePKIKP    PKPdf    17 11 46.8  0.0
ZSN   Zaisan             117.00 311   ePKP      PKPdf    17 11 46.9  0.0
P61A  Hammonton          118.11  59    IAMs_20  IAMs_20  18 01 30.4
       comp=Z,2µm,18.0s
MK31  Makanchi Array     118.50 310d  iPKIKP    PKPdf    17 11 49.3 -0.5
MKAR  Makanchi Array     118.50 310    PKP      PKPdf    17 11 49.5 -0.3
       comp=Z,1.3nm,0.6s,baz=79,slow=2.6,SNR=17
MKAR                                   PKKPbc   PKKPbc   17 22 06.0 -1.4
       comp=Z,0.6nm,0.7s,baz=289,slow=3.7,SNR=4.4
ZALV  Zalesovo Beam      118.78 318    PKP      PKPdf    17 11 49.8 -0.2
       comp=Z,1.3nm,0.6s,baz=163,slow=1.5,SNR=5.6
SABA  Saba               119.35  86    IAMs_20  IAMs_20  17 53 40.0
       comp=Z,1µm,20.0s
SHLS  Shalkode           119.43 305   ePKIKP    PKPdf    17 11 50.9 -0.9
SHLS  Shalkode           119.43 305   ePKP      PKPdf    17 11 50.9 -0.9
LONY  Lake Ozonia        119.69  53    IAMs_20  IAMs_20  18 04 28.6
       comp=Z,2µm,18.0s
UZB   Uzynbulak          119.73 305   ePKIKP    PKPdf    17 11 52.0 -0.4
UZB   Uzynbulak          119.73 305   ePKP      PKPdf    17 11 52.1 -0.4
MPOM  Morne Pois Mar     119.97  91    IAMs_20  IAMs_20  17 58 58.8
       comp=Z,1µm,20.0s
KPKS  Kokpek             120.06 305   ePKIKP    PKPdf    17 11 52.6 -0.3
KPKS  Kokpek             120.06 305   ePKP      PKPdf    17 11 52.7 -0.3
SATY  Saty               120.14 305   ePKIKP    PKPdf    17 11 52.8 -0.3
SATY  Saty               120.14 305   ePKP      PKPdf    17 11 52.9 -0.3
ARXS  Arharly            120.85 306   i PKIKP   PKiKP    17 11 55.5 +0.9
KSH   Kashi              120.94 300    PKP      PKiKP    17 11 56.0 +1.1
KSH                                    SKKS              17 20 13.8
KSH                                    LR       LR
       comp=Z,510nm,17.5s
KSH                                    LR       LR
       comp=Z,350nm,19.6s
KSH                                    LR       LR
       comp=Z,540nm,19.9s
MDOK  Medeo              121.13 305   ePKIKP    PKPdf    17 11 54.5 -0.6
MDOK  Medeo              121.13 305   ePKP      PKPdf    17 11 54.5 -0.6
AAA   Alma-Ata           121.24 305   ePKIKP    PKPdf    17 11 54.9 -0.3
AAA   Alma-Ata           121.24 305   ePKP      PKPdf    17 11 54.9 -0.3
M65A  Busby, Falmout     121.67  58    IAMs_20  IAMs_20  17 58 30.5
       comp=Z,2µm,20.0s
I62A  Tamworth           121.75  55    IAMs_20  IAMs_20  18 04 18.5
       comp=Z,2µm,18.0s
KURK  Kurchatov          121.79 313c  iPKIKP    PKPdf    17 11 54.9 -1.0
KURK                                   pmax     pmax
       comp=Z,8.0nm,1.0s
KURBB Kurchatov Arra     121.82 313    PKP      PKPdf    17 11 55.0 -0.9
       comp=Z,4.2nm,0.8s,baz=105,slow=1.9,SNR=28
TKM2  Tokmak 2           122.10 304    P        PKPdf    17 11 56.6 -0.5
       SNR=5.7
G62A  West of Eustis     122.62  53    IAMs_20  IAMs_20  18 03 30.3
       comp=Z,2µm,18.0s
CHMS  Chumysh            122.72 304    P        PKPdf    17 11 57.8 -0.3
       SNR=5.4
AAK   Ala-Archa          122.82 303c  iPKIKP    PKPdf    17 11 58.1 -0.3
AAK                                    pmax     pmax
       comp=Z,5.0nm,1.3s
SGDS  Sogindy            122.91 304   ePKP      PKPdf    17 11 58.1 -0.3
USP   Ospenovka          122.96 304    P        PKPdf    17 11 58.3 -0.2
       SNR=7.1
AML   Almayashu          123.28 303    P        PKiKP    17 12 00.2 +0.3
       SNR=5.8
EKS2  Erkin-Say          123.34 303    P        PKiKP    17 11 59.5  0.0
       SNR=5.8
BTLS  Baital             123.67 306   ePKIKP    PKPdf    17 11 59.4 -0.3
BTLS  Baital             123.67 306   ePKP      PKPdf    17 11 59.5 -0.3
D62A  Allapoint, All     124.01  51    IAMs_20  IAMs_20  18 04 01.7
       comp=Z,2µm,19.0s
G65A  Princeton          124.67  54    IAMs_20  IAMs_20  18 04 17.6
       comp=Z,2µm,18.0s
DZA   Taraz              125.15 303   ePKIKP    PKPdf    17 12 02.3 -0.4
DZA   Taraz              125.15 303   ePKP      PKPdf    17 12 02.3 -0.4
KK31  Karatay Array      125.78 303   i PKIKP   PKPdf    17 12 03.1 -0.8
IUG   Iuzhnay            125.94 302   ePKIKP    PKPdf    17 12 03.8 -0.5
IUG   Iuzhnay            125.94 302   ePKP      PKPdf    17 12 03.9 -0.5
BRLS  Borolday           126.25 303   ePKIKP    PKPdf    17 12 04.5 -0.2
BRLS                                  e                  17 13 58.9
BRLS  Borolday           126.25 303   ePKP      PKPdf    17 12 04.6 -0.2
BRLS                                  ePP       PP       17 13 59.0 -1.1
SCHQ  Schefferville      126.36  42    PKP      PKPdf    17 12 04.1 -0.4
       comp=Z,11nm,1.2s,baz=8.6,slow=0.9,SNR=5.2
BVA0  Borovoye Array     127.15 315   i PKIKP   PKPdf    17 12 05.8 -0.3
BVAR  Borovoye Array     127.15 315    PKP      PKPdf    17 12 06.0 -0.1
       comp=Z,4.9nm,0.7s,baz=98,slow=3.0,SNR=30
BRVK  Borovoye           127.21 315c  iPKIKP    PKPdf    17 12 05.7 -0.5
BRVK                                   pmax     pmax
       comp=Z,13nm,1.0s
LSZ   Lusaka             127.81 212    IAMs_20  IAMs_20  18 03 22.7
       comp=Z,2µm,19.0s
RCBR  Riachuelo          128.14 128    IAMs_20  IAMs_20  18 04 01.2
       comp=Z,2µm,19.0s
SPITS Spitsbergen Ar     132.31 356    PKP      PKiKP    17 12 16.0 -0.3
       comp=Z,8.9nm,0.8s,baz=132,slow=16,SNR=4.7
KIBK  Kibwezi            132.67 232    IAMs_20  IAMs_20  18 02 17.0
       comp=Z,1µm,20.0s
SUMG  Summit             133.14  16    IAMs_20  IAMs_20  18 12 47.8
       comp=Z,2µm,19.0s
SUMG  Summit             133.14  16   i P       PKPdf    17 12 15.0 -2.5
AB31  Akbulak array      133.64 310   i PKHKP   PKPpre   17 12 07.1
ARTI  Arti               133.94 320    IAMs_20  IAMs_20  18 09 58.9
       comp=Z,1µm,20.0s
ARTI  Arti               133.94 320   i PKIKP   PKPdf    17 12 19.2 +0.3
ARTI                                                     17 14 46.8
ARTI                                   PPP      PPP      17 17 41.0
KMBO  Kilima Mbogo       134.09 232    IAMs_20  IAMs_20  18 09 05.0
       comp=Z,2µm,18.0s
ATD   Arta Tunnel        138.04 251    IAMs_20  IAMs_20  18 09 14.0
       comp=Z,2µm,20.0s
KIRV  Kirov              138.06 325⇑  iPKIKP    PKiKP    17 12 28.8 +0.4
SCO   Scoresbysund       138.17  12    IAMs_20  IAMs_20  18 19 27.6
       comp=Z,1µm,18.0s
LVZ   Lovozero           138.54 342             PKPpre   17 12 18.1
LVZ   Lovozero           138.54 342    PKHKP    PKPpre   17 12 18.1
LODK  Lodwar             138.66 235    IAMs_20  IAMs_20  18 16 02.2
       comp=Z,861nm,18.0s
ARCES ARCESS Array B     139.26 348    PKhKP    PKPpre   17 12 21.4
       comp=Z,2.2nm,0.7s,baz=100,slow=2.8,SNR=6.7
ARCES                                  PKP      PKPdf    17 12 28.6 +0.2
       comp=Z,7.5nm,0.9s,baz=51,slow=1.9,SNR=6.9
RAYN  Ar Rayn            141.28 270   ⇓PKIKP    PKPdf    17 12 30.1 -3.4
KLMR  Klimovskoe         141.49 332   ePKIKP    PKPdf    17 12 31.6 -1.0
KLMR                                   pmax     pmax
       comp=Z,26nm,1.1s
KLMR                                   MLR      MLR
       comp=Z,1µm,18.0s
AKT   Akhty              142.45 299   ePKIKP    PKPdf    17 12 30.9 -4.2
AKT                                   e                  17 15 40.2
AKT                                    pmax     pmax
       comp=Z,41nm,1.4s
MAK   Makhachkala        142.55 301   ePKIKP    PKPdf    17 12 32.0 -3.1
MAK                                   e                  17 15 38.3
MAK                                   e                  17 19 37.8
MAK                                   eSS       SS       17 34 14.4 -4.2
MAK                                   eSSS      SSS      17 39 39.8
MAK                                    pmax     pmax
       comp=Z,24nm,0.3s
FAUS  Fauske             142.79 352   ePKPdf    PKPdf    17 12 34.4 -0.4
VAGH  Vaagaholmen        143.64 353   eP        PKPdf    17 12 35.6 -0.7
MOR8  Moi Rana           144.05 352   eP        PKPab    17 12 34.0 -0.5
STOK  Stokkvaagen        144.06 353   eP        PKiKP    17 12 38.8 -1.7
LEIR  Leirfjorden        144.26 353   eP        PKPbc    17 12 36.4 +0.8
GNI   Garni              144.75 297c  iPKIKP    PKPbc    17 12 38.3  0.0
VRH   Novokhopyorsk      144.78 316   ePKIKP    PKPab    17 12 36.7 -1.0
VRH                                    pmax     pmax
       comp=Z,76nm,1.8s
MOS   Moscow             145.08 325   i PKIKP   PKPbc    17 12 37.0 -1.6
MOS                                    pmax     pmax
       comp=Z,244nm,1.4s
GOF   Gofitskoye         145.51 306c  iPKIKP    PKPab    17 12 40.5 -0.1
PUL   Pulkovo            145.72 335c  ePKIKP    PKPdf    17 12 40.0 -0.1
KBZ   Khabaz             145.82 303    PKPbc    PKPab    17 12 41.8  0.0
       comp=Z,48nm,1.1s,baz=91,slow=1.9,SNR=85
FINES FINESS Array B     145.85 340    PKPbc    PKPbc    17 12 40.6 -0.2
       comp=Z,63nm,1.0s,baz=49,slow=3.3,SNR=97
LPSR  Galich'ya Gora     145.86 320   ePKIKP    PKPdf    17 12 39.5 -1.0
LPSR                                   pmax     pmax
       comp=Z,190nm,1.0s
OBN   Obninsk            145.91 325   ⇓P        PKPbc    17 12 41.5 +0.3
OBN   Obninsk            145.91 325c  iPKP2     PKPdf    17 12 40.7 +0.2
OBN                                    pmax     pmax
       comp=Z,234nm,1.2s
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NSS   Namsos             145.92 353   eP        PKPab    17 12 42.6 +1.1
KIV   Kislovodsk         145.94 304   ⇓P        PKPab    17 12 42.4  0.0
KIV   Kislovodsk         145.94 304   i PKP2    PKPdf    17 12 40.9 -0.2
KIV                                    pmax     pmax
       comp=Z,61nm,1.0s
KARS  Kars               146.00 298    PKPbc    PKPbc    17 12 42.3 +0.1
KARS  Kars               146.00 298    PKP2     PKPbc    17 12 42.3 +0.1
VORR  Voronezh           146.08 318   ePKIKP    PKPdf    17 12 39.4 -1.5
VORR                                   pmax     pmax
       comp=Z,190nm,1.0s
VSR   Storozhevoye       146.28 317   ePKIKP    PKPdf    17 12 40.2 -1.1
VSR                                    pmax     pmax
       comp=Z,170nm,1.0s
VORD  Divnogorie         146.30 317   ePKIKP    PKPdf    17 12 40.2 -1.1
VORD                                   pmax     pmax
       comp=Z,140nm,1.0s
ERBR  Yeremizino-Bor     147.14 307   i PKP2    PKPbc    17 12 45.2  0.0
ERBR                                   pmax     pmax
       comp=Z,368nm,1.3s
LABN  Labinsk            147.21 305   i PKP2    PKPab    17 12 46.3 -0.8
LABN                                   pmax     pmax
       comp=Z,92nm,0.9s
VSU   Vasula             147.95 336d  ePKIKP    PKPdf    17 12 44.3 +0.5
SOC   Sochi              148.12 304   i PKP2    PKPbc    17 12 47.7 -0.2
SOC                                   eSS       SS       17 35 22.7 +0.7
SOC                                    pmax     pmax
       comp=Z,71nm,1.1s
DOMB  Dombas             148.64 354   ePKPbc    PKPbc    17 12 49.2 +0.5
AKN   Aaknes             148.66 356   eP        PKPab    17 12 52.7 +0.3
FOO   Floro              149.33 358   eP        PKPab    17 12 56.4 +1.4
NB2   NORSAR Subarra     149.40 352    PKP      PKPbc    17 12 50.3 -0.3
       comp=Z,96nm,1.4s,baz=20,slow=2.7
NB2   NORSAR Subarra     149.40 352    PKP      PKPbc    17 12 50.3 -0.3
       baz=20,slow=2.7
NOA   NORSAR Array B     149.40 352    PKPbc    PKPbc    17 12 50.1 -0.5
       comp=Z,14nm,0.9s,baz=14,slow=4.3,SNR=22
ANN   Anapa              149.46 307   i PKP2    PKPbc    17 12 51.2  0.0
ANN                                    pmax     pmax
       comp=Z,133nm,1.0s
NC602 NORSAR Array S     149.65 351   eP        PKPbc    17 12 49.8 -1.4
HYA   Hoyanger           149.72 356   eP        PKPab    17 12 55.8 -0.8
SUE   Sulen              149.88 358   eP        PKPab    17 12 56.0 -1.3
HFS   Hagfors            149.91 349    PKP      PKPdf    17 12 46.5 -0.4
       comp=Z,9.9nm,1.1s,baz=158,slow=4.7,SNR=3.7
HFS                                    PKPbc    PKPbc    17 12 52.3 +0.4
       comp=Z,19nm,0.9s,baz=52,slow=5.7,SNR=15
SKAR  Skarslia           150.05 354   eP        PKPbc    17 12 51.9 -0.3
MNK   Minsk              150.32 330   i PKiKP   PKiKP    17 12 53.9  0.0
       comp=E,17nm,1.2s
MNK                                   i PKiKP   PKiKP    17 12 53.9  0.0
       comp=N,14nm,0.9s
MNK                                   i PKiKP   PKiKP    17 12 53.9  0.0
       comp=Z,51nm,0.9s,baz=48
MNK                                   i PP      PP       17 16 28.2 -0.2
MNK                                   i PPP     PPP      17 19 27.5
MNK                                   i SKS     SKSdf    17 20 01.5 +7.6
MNK                                   i SKKS    SKKSdf   17 28 20.6  -27
MNK                                   i SS      SS       17 35 45.0 -0.1
MNK                                   i SSS     SSS      17 41 32.4
MNK                                   i LR      LR       18 23 48.8
MNK   Minsk              150.32 330   i PKIKP   PKiKP    17 12 53.8  0.0
MNK                                   i                  17 16 28.2
MNK                                   i                  17 20 01.4
MNK                                   i SS      SS       17 35 45.0 -0.1
MNK                                   i SSS     SSS      17 41 32.3
MNK                                    pmax     pmax
       comp=Z,51nm,0.9s
MNK                                    pmax     pmax
       comp=E,17nm,1.2s
MNK                                    pmax     pmax
       comp=N,14nm,0.9s
NACGM Naroch             150.51 331⇑  iPKP      PKPbc    17 12 53.1 -0.3
       comp=Z,107nm,1.1s,baz=46
OSL   Oslo               150.53 352   eP        PKPbc    17 12 52.3 -1.0
KONO  Kongsberg          150.94 353   ⇑PKIKP    PKiKP    17 12 54.9  0.0
KONO  Kongsberg          150.94 353   eP        PKiKP    17 12 55.0 +0.1
PABE  Paberze            151.18 334    IAMs_20  IAMs_20  18 27 30.1
       comp=Z,1µm,19.0s
STRU  Stroemstad         151.34 351   eP        PKPbc    17 12 55.1 -0.1
BEIL  Beino              151.56 286   eP        PKiKP    17 12 57.5 +0.4
SIM   Simferopol'        151.67 308   ePKIKP    PKPbc    17 12 56.0 -0.5
SIM                                    pmax     pmax
       comp=Z,37nm,1.1s
DIKM  Dikmen             151.72 301   ⇑P        PKiKP    17 12 58.3 +1.2
HWQ   Hawqa              151.75 286   eP        PKiKP    17 12 57.4 -0.2
GHAJ  Ghor Haditha       151.79 279    IAMs_20  IAMs_20  18 24 47.6
       comp=Z,1µm,19.0s
RCY   Rachaya            151.79 284   eP        PKiKP    17 12 58.2 +0.5
SHBL  Chebaa             151.86 284   eP        PKiKP    17 12 58.5 +0.6
QRWL  Qaraoun            151.92 284   eP        PKiKP    17 12 58.5 +0.6
BHL   Bhannes            151.97 285   eP        PKiKP    17 12 58.3 +0.3
DQRL  Deir Qamar         152.03 284   eP        PKiKP    17 12 59.3 +1.1
AKASG Malin Array Be     152.04 322    PKP      PKPdf    17 12 50.1 -0.5
       comp=Z,0.7nm,0.7s,baz=55,slow=1.0,SNR=7.3
AKASG                                  PKPbc    PKPbc    17 12 57.2  0.0
       comp=Z,18nm,0.9s,baz=48,slow=2.6,SNR=66
KIEV  Kiev               152.06 322    IAMs_20  IAMs_20  18 20 57.5
       comp=Z,1µm,21.0s
KIEV  Kiev               152.06 322   ⇑P        PKPbc    17 12 57.0 -0.2
KIEV  Kiev               152.06 322   ⇑PKIKP    PKPbc    17 12 57.0 -0.2
MMAI  Mount Meron Ar     152.12 283    PKPbc    PKiKP    17 12 59.6 +1.3
       comp=Z,42nm,0.9s,baz=76,slow=5.2,SNR=43
HOMB  Homborsund         152.41 353   epPKPdf   pPKPdf   17 12 56.6 -0.3
HOMB                                  ePKPbc    sPKPdf   17 12 58.8 -0.2
HOMB  Homborsund         152.41 353   i P       PKiKP    17 12 58.1 +0.2
BORU  Boraas             152.43 348   eP        PKPbc    17 12 56.3 -1.5
SNART Snartemo           152.46 355   i P       PKPbc    17 12 56.0 -1.8
BZK   Bozkurt            152.57 302   ⇑P        PKiKP    17 12 60.0 +1.1
SUW   Suwalki            152.61 333   ePKP      PKiKP    17 12 58.9 +0.4
SUW   Suwalki            152.61 333    IAMs_20  IAMs_20  18 27 58.0
       comp=Z,1µm,19.0s
BLEU  Blekinge           153.03 344   eP        PKiKP    17 12 59.3  0.0
FABU  Falkenberg         153.04 348   eP        PKiKP    17 12 59.3  0.0
KIRS  Kirsehir-Merke     153.16 296   ⇑P        PKiKP    17 13 01.1 +0.8
BRTR  Keskin Array B     153.28 298    PKP      PKPdf    17 12 52.3 -0.7
       comp=Z,0.4nm,0.4s,baz=146,slow=2.4,SNR=5.1
BRTR                                   PKPbc    sPKPdf   17 13 00.8 -0.3
       comp=Z,10.0nm,1.0s,baz=127,slow=3.3,SNR=34
DEL   Delary             153.31 346   i P       PKPbc    17 12 59.0 -0.8
CIDE  Kastamonu/Cide     153.36 303   ⇑P        PKiKP    17 13 01.3 +0.8
ANTO  Ankara             153.90 298   ⇑P        PKiKP    17 13 03.0 +1.2
CSS   Mathiatis          153.92 287    IAMs_20  IAMs_20  18 22 18.1
       comp=Z,1µm,20.0s
MILM  Milestii Mici      154.27 316   ePKP      PKPdf    17 12 50.0 -3.9
MILM  Milestii Mici      154.27 316    PKM               17 13 03.0
       comp=Z,650nm,1.5s
MILM  Milestii Mici      154.27 316   i PP      PP       17 16 38.0  -13
MILM                                  eL        L        18 12 44.0
MILM                                   LRM      MLR      18 25 38.0
       comp=Z,750nm,20.0s
DBIC  Dimbokro           154.84 162    PKP      PKPdf    17 12 56.1 +0.4
       baz=183,slow=3.6
DBIC                                   PKPbc    PKiKP    17 13 06.8 +2.4
       comp=Z,12nm,1.0s,baz=181,slow=3.4,SNR=5.5
SAHE  Sakarya_HENDEK     155.14 301   ⇑P        PKPab    17 13 11.7 -8.5
BEL   Belsk              155.20 332   ePKP      PKPdf    17 13 04.9  +10
RGN   Rugen              155.21 345    IAMs_20  IAMs_20  18 33 22.0
       comp=Z,1µm,18.0s
GKP   Gorka Klasztor     155.30 339   ePKP      PKPab    17 13 17.0 -3.3
EKA   Eskdalemuir Ar     155.33   8    PKP      PKPdf    17 12 56.2 +1.1
       comp=Z,0.2nm,0.3s,baz=344,slow=3.0,SNR=1.4
EKA                                    PKPab    PKPab    17 13 19.4 -0.9
       comp=Z,7.6nm,1.1s,baz=24,slow=2.9,SNR=6.0
TPGR  Topolog            155.46 312   ⇑P        PKPab    17 13 22.3 +0.9
CFR   Carcaliu           155.50 313   ⇓P        PKPab    17 13 09.3  -12
TESR  Tescani            155.76 317   ⇑P        PKPab    17 13 18.7 -3.9
HARR  Harsova            155.84 312   ⇑P        PKPab    17 13 23.8 +0.8
HARR  Harsova            155.84 312   ⇑PKP2     PKPab    17 13 23.8 +0.8
ODBI  Odobesti           155.90 315   ⇓P        PKPab    17 13 25.6 +2.4
BURAR Bucovina Array     155.97 320   ⇓P        PKPab    17 13 17.6 -6.0
BURAR Bucovina Array     155.97 320   ⇓PKP2     PKPab    17 13 17.6 -6.0
KWP   Kalwaria Pacla     155.98 327   ePKP      PKPab    17 13 22.5 -0.9
ISP   Isparta            155.98 294    IAMs_20  IAMs_20  18 24 56.9
       comp=Z,899nm,20.0s
ONER  Baraj Valea Uz     156.01 316   ⇓P        PKPab    17 13 23.3 -0.3
PLOR  Plostina           156.10 315   ⇑P        PKPab    17 13 24.8 +0.7
PLOR  Plostina           156.10 315   ⇑PKP2     PKPab    17 13 24.8 +0.7
OZUR                     156.49 316   ⇓P        PKPab    17 13 25.7 -0.1
ISR   Istrita            156.53 314   ⇓P        PKPab    17 13 27.9 +1.9
ISR   Istrita            156.53 314   ⇓PKP2     PKPab    17 13 27.9 +1.9
KOLS  Kolonicke sedl     156.66 326   e         PKPab    17 13 26.4  0.0
KOLS  Kolonicke sedl     156.66 326   ePKP      PKPab    17 13 12.5  -14
MLR   Muntele Rosu       156.71 315    IAMs_20  IAMs_20  18 37 39.9
       comp=Z,1µm,20.0s
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MLR   Muntele Rosu       156.71 315   ⇓P        PKPab    17 13 28.1 +1.2
MLR   Muntele Rosu       156.71 315   ⇓PKP2     PKPab    17 13 28.1 +1.2
ARCR  ARCALIA            156.76 320   ⇑P        PKPab    17 13 28.5 +1.6
DOPR  Dopca              156.79 317   ⇑P        PKPab    17 13 28.1 +1.0
STHS  Stebnicka Huta     156.81 328   ePKP      PKPab    17 13 27.7 +0.7
OJC   Ojcow              156.84 331   ePKP      PKPdf    17 12 57.9 +0.6
BMR   Baia Mare          156.87 322   ⇑P        PKPab    17 13 28.4 +1.1
BMR   Baia Mare          156.87 322   ⇑PKP2     PKPab    17 13 28.4 +1.1
SULR                     156.91 313   ⇑P        PKPab    17 13 29.0 +1.4
NIE   Niedzica           157.23 329   ePKP      PKPdf    17 12 58.5 +0.7
TNR   Turnu Rosu         157.62 317   ⇑P        PKPab    17 13 32.1 +1.4
TNR   Turnu Rosu         157.62 317   ⇑PKP2     PKPab    17 13 32.1 +1.4
KSP   Ksiaz              157.67 337   ePKP      PKPdf    17 12 58.3  0.0
RETH  Rethem/Aller,      157.70 349   epPKPdf   pPKPdf   17 13 05.8 +1.5
       baz=23,slow=1.1
RETH                                  ePKPab    PKPab    17 13 29.4 -1.2
       baz=17,slow=4.5
FLTG  Flechtingen        157.74 346   epPKPdf   pPKPdf   17 13 06.0 +1.6
       baz=23,slow=1.1
FLTG                                  ePKPab    PKPab    17 13 29.8 -1.0
       baz=17,slow=4.5
FLTG                                  ePKP      sPKPab   17 13 41.2 +2.4
HUMR  Humele             157.78 314   ⇑P        PKPab    17 13 31.4  0.0
LANS  Liptovska Anna     157.79 330   ePKP2     PKPab    17 13 32.4 +1.1
LANS  Liptovska Anna     157.79 330   ePKP      PKPab    17 13 32.4 +1.1
NRDL  Niedersach Rie     157.80 348   epPKPdf   pPKPdf   17 13 06.7 +2.3
       baz=23,slow=1.1
OKC   Ostrava-Krasne     157.81 333    AMS      AMS      18 31 20.0
       comp=Z,1µm,18.4s
COPA  Copaceanca         157.83 313   ⇓P        PKPab    17 13 32.6 +1.0
DRGR                     157.83 321   ⇑P        PKPab    17 13 32.2 +0.6
DRGR                     157.83 321   ⇑PKP2     PKPab    17 13 32.2 +0.6
OSTC  Ostas              157.94 336    AMS      AMS      18 26 10.0
       comp=Z,1µm,21.2s
CHVC  Chvalec            157.97 337    AMS      AMS      18 26 20.0
       comp=Z,1µm,20.8s
ASSE  Asse, Remlinge     158.04 347   epPKPdf   pPKPdf   17 13 07.1 +2.4
       baz=23,slow=1.1
ASSE                                  ePKPab    PKPab    17 13 30.7 -1.3
       baz=17,slow=4.5
UPC   Upice              158.05 337    AMS      AMS      18 26 30.0
       comp=Z,2µm,21.1s
DPC   Dobruska-Polom     158.08 336   ePKPAB    PKPab    17 13 33.7 +1.3
DPC                                    AMS      AMS      18 36 40.0
       comp=Z,1µm,17.5s
DPC   Dobruska-Polom     158.08 336   ePKP2     PKPab    17 13 33.7 +1.3
DPC                                    MLR      MLR
       comp=Z,1µm,17.5s
MORC  Moravsky Berou     158.10 333   ePKP      PKPdf    17 12 58.2 -0.7
MORC                                  e                  17 13 07.0
MORC                                  e                  17 13 33.1
MORC                                  ePP       PP       17 17 09.1 -3.0
MORC  Moravsky Berou     158.10 333   ⇑P        PKPdf    17 13 11.8  +13
KRLC  Kraliky            158.14 335   ePKPAB    PKPab    17 13 33.1 +0.4
KRLC                                   AMS      AMS      18 39 00.0
       comp=Z,1µm,17.4s
KRLC  Kraliky            158.14 335   ePKP2     PKPab    17 13 33.1 +0.4
KRLC                                   MLR      MLR
       comp=Z,1µm,17.4s
CLL   Collm              158.26 342    IAMs_20  IAMs_20  18 31 51.8
       comp=Z,1µm,19.0s
CLL   Collm              158.26 342   ePKIKP    PKPdf    17 13 00.0 +1.0
CLL                                   i                  17 13 32.3
CLL                                    pmax     pmax
       comp=Z,32nm,1.3s
CLL                                    MLR      MLR
       comp=Z,1µm,19.1s
CLL   Collm              158.26 342   epPKPdf   pPKPdf   17 13 07.2 +2.1
       baz=23,slow=1.1
CLL                                   ePKPab    PKPab    17 13 32.4 -0.7
       baz=17,slow=4.5
CLL   Collm              158.26 342   ePKPdf    PKPdf    17 13 00.0 +1.0
CLL                                   i PKPab   PKPab    17 13 32.3 -0.8
       comp=Z,32nm,1.3s
CLL                                   i x       x        17 13 42.3
       comp=Z,36nm,1.2s
CLL                                   ePP       PP       17 17 06.0 -6.7
CLL                                   ePPP      PPP      17 20 52.0
CLL                                   eSKKSac   SKKSac   17 24 06.0 +5.5
CLL                                   ePSKS              17 27 42.0
CLL                                   ePPS      PPS      17 30 33.0
CLL                                   ex        x        17 31 48.0
CLL                                   ex        x        17 35 36.0
CLL                                   eSS       SS       17 37 06.0 -4.9
CLL                                   ePSS      PSS      17 38 12.0
CLL                                   ePSPS              17 38 42.0
CLL                                   eSSS      SSS      17 43 18.0
CLL                                   ex        x        17 45 42.0
CLL                                   eSSSS              17 47 30.0
CLL                                   ex        x        17 49 30.0
CLL                                    AMS      AMS      18 32 00.0
       comp=N,900nm,19.1s
CLL                                    AMS      AMS      18 32 00.0
       comp=E,600nm,18.3s
CLL                                    AMS      AMS      18 32 00.0
       comp=Z,1µm,19.1s
IBBN  Ibbenburen         158.35 351   ePKP      PKPab    17 13 43.5  +10
BRG   Berggiesshubel     158.39 340   ePKPab    PKPab    17 13 33.3 -0.4
       baz=17,slow=4.5
BRG                                   ePKP      sPKPab   17 13 44.2 +2.4
BRG   Berggiesshubel     158.39 340⇓  ePKPf              17 12 59.8
BRG                                    Amp               17 13 14.6
       comp=Z,7.3nm,1.1s
BRG                                    PKPab    PKPab    17 13 33.6 -0.1
BRG                                    Amp               17 13 45.6
       comp=Z,27nm,1.2s
BRG                                    PP       PP       17 17 23.6  +10
BRG                                    Amp               17 17 25.4
       comp=Z,3.9nm,1.0s
PSZ   Piszkesteto        158.50 327    IAMs_20  IAMs_20  18 27 33.8
       comp=Z,1µm,21.0s
PSZ   Piszkesteto        158.50 327   ⇑P        PKPab    17 13 34.9 +0.4
PSZ   Piszkesteto        158.50 327   ⇑PKP2     PKPab    17 13 34.9 +0.4
PVCC  Panska Ves         158.51 339    AMS      AMS      18 33 10.0
       comp=Z,1µm,18.8s
VYHS  Vyhne              158.56 329   ePKP      PKPab    17 13 35.2 +0.6
RICC  Richard            158.64 339    AMS      AMS      18 31 50.0
       comp=Z,1µm,17.6s
GTTG  Gottingen          158.73 347   ePKP      PKPab    17 13 45.7  +11
JAVC  Velka Javorina     158.78 332   ePKP      PKPdf    17 12 58.2 -1.6
JAVC                                  e                  17 13 09.1
JAVC                                  e                  17 13 37.0
SURR  Surduc             158.79 320   ⇑P        PKPab    17 13 36.2 +0.5
VRAC  Vranov             158.84 334   ePKP      PKPdf    17 12 58.6 -1.2
VRAC                                  e                  17 13 08.2
VRAC                                  e                  17 13 36.5
VRAC                                  ePP       PP       17 17 13.4 -2.7
KARP  Karpathos          158.93 289    IAMs_20  IAMs_20  18 26 41.6
       comp=Z,980nm,20.0s
PRA   Prague             158.95 338    AMS      AMS      18 30 30.0
       comp=Z,1µm,19.7s
GOPC  GO Pecny, Ondr     158.97 338    AMS      AMS      18 31 20.0
       comp=Z,900nm,20.8s
PRU   Pruhonice          158.99 338    AMS      AMS      18 35 10.0
       comp=Z,1µm,17.4s
KRUC  Moravsky           159.12 334   ePKP      PKPdf    17 12 58.9 -1.2
KRUC                                  e                  17 13 08.1
KRUC                                  e                  17 13 36.4
HERR  Herculane          159.14 317   ⇑P        PKPab    17 13 37.7 +0.5
BZS   Buzias             159.16 320   ⇑P        PKPab    17 13 37.5 +0.2
BZS   Buzias             159.16 320   ⇑PKP2     PKPab    17 13 37.5 +0.2
TANN  Tannenbergstha     159.22 342   ePKPab    PKPab    17 13 37.0 -0.3
       baz=17,slow=4.5
MOX   Moxa               159.22 344   epPKPdf   pPKPdf   17 13 08.4 +2.1
       baz=23,slow=1.1
MOX                                   eL        L        18 34 44.6
       comp=Z,1µm,18.4s
TREC  Trest              159.26 336    AMS      AMS      18 27 00.0
       comp=Z,1µm,20.5s
BUG   Bochum--Univer     159.26 352   epPKPdf   pPKPdf   17 13 08.3 +2.0
       baz=23,slow=1.1
MODS  Modra-Piesok       159.32 331   e         PKPab    17 13 38.3 +0.4
MODS  Modra-Piesok       159.32 331   ePKP      PKPdf    17 13 08.7 +8.3
KASTN Kahler Asten       159.33 349   epPKPdf   pPKPdf   17 13 08.2 +1.7
       baz=23,slow=1.1
NKC   Novy Kostel        159.39 342    AMS      AMS      18 39 50.0
       comp=Z,1µm,16.5s
UBBA  Unterbreizbach     159.42 346   ePKPdf    PKPdf    17 12 59.6 -0.6
       baz=25,slow=1.8
UBBA                                  epPKPdf   sPKPdf   17 13 08.3 -0.2
       baz=23,slow=1.1
ZVC   Zvikov             159.57 338   ePKPAB    PKPab    17 13 39.8 +0.9
ZVC                                    AMS      AMS      18 37 20.0
       comp=Z,1µm,16.7s
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MDVR	Moldovita	159.60	318	⇑P	PKPab	17 13 39.8	+0.5
MANZ	Manzenberg	159.70	342	*e*PKPdf	PKPdf	17 13 00.0	-0.8
	baz=25,slow=1.8						
MANZ				*e*pPKPdf	sPKPdf	17 13 09.1	+0.1
	baz=23,slow=1.1						
MANZ				*e*PKP	sPKPab	17 13 49.3	+1.8
ROTZ	Rotzenmuhle	159.88	342	*e*PKPab	PKPab	17 13 39.8	-0.4
	baz=17,slow=4.5						
KHC	Kasperske Hory	160.04	338	*e*PKPDF	PKPdf	17 13 04.5	+3.3
KHC				*e*PKPAB	PKPab	17 13 41.8	+0.8
KHC				*e*SKKS		17 24 06.8	
KHC				AMS	AMS	18 38 30.0	
	comp=Z,1µm,17.0s						
KHC	Kasperske Hory	160.04	338	*e*PKIKP	PKPdf	17 13 04.5	+3.3
KHC				MLR	MLR		
	comp=Z,1µm,17.0s						
CKRC	Cesky Krumlov	160.07	337	*e*PKPAB	PKPab	17 13 42.2	+1.1
CKRC				*e*x	x	17 24 16.0	
CKRC				*e*x	x	17 30 39.8	
CKRC				AMS	AMS	18 39 10.0	
	comp=Z,1µm,17.3s						
CKRC	Cesky Krumlov	160.07	337	*e*PKP2	PKPab	17 13 42.2	+1.1
CKRC				*e*		17 30 39.8	
CKRC				MLR	MLR		
	comp=Z,1µm,17.3s						
GRA1	Grafenberg Arr	160.20	343	IAMs_20	IAMs_20	18 29 58.0	
	comp=Z,1µm,20.0s						
GRF	Grafenberg Arr	160.20	343	*e*L	L	18 30 08.4	
	comp=Z,1µm,19.8s						
GRFO	Grafenberg	160.20	343	IAMs_20	IAMs_20	18 30 08.1	
	comp=Z,1µm,20.0s						
BTNL	Ternell	160.23	353	*d*PKP	PKPab	17 13 40.4	-1.4
WET	Wettzell	160.25	340	*e*PKPdf	PKPdf	17 13 01.0	-0.4
	baz=25,slow=1.8						
WET				*e*pPKPdf	sPKPdf	17 13 09.6	0.0
	baz=23,slow=1.1						
WET				*e*PKPab	PKPab	17 13 42.2	+0.4
	baz=17,slow=4.5						
WET				*e*PKP	sPKPab	17 13 52.8	+2.9
CONA	Conrad Observa	160.25	333	*i* PKP	PKPab	17 13 41.8	-0.2
	comp=Z,24nm,1.2s,SNR=7.6						
GEC2	GERESS Array S	160.25	338	*e*pPKPdf	pPKPdf	17 13 09.2	+1.5
	baz=23,slow=1.1						
GEC2				*e*PKPab	PKPab	17 13 42.5	+0.5
	baz=17,slow=4.5						
GERES	GERESS Array B	160.25	338	PKP	PKPdf	17 13 02.1	+0.6
	comp=Z,0.2nm,0.3s,baz=69,slow=3.6,SNR=1.9						
GERES				PKPab	PKPab	17 13 42.5	+0.5
	comp=Z,4.6nm,0.9s,baz=41,slow=2.5,SNR=12						
RONA	Rosalia, Austr	160.26	332	*i* PKP	PKPab	17 13 41.5	-0.5
	comp=Z,25nm,1.2s,SNR=7.4						
BOVS	Bovan	160.26	315	⇑P	PKPab	17 13 41.0	-1.2
MORH	Mrgy, Hungar	160.32	325	⇑P	PKPdf	17 13 01.7	+0.1
BCLA	Clavier	160.47	355	*d*PKP	PKPab	17 13 42.3	-0.4
BGES	Gesves	160.53	355	*d*PKP	PKPab	17 13 42.4	-0.6
BMRD	Maredsous	160.63	356	*d*PKPdf	PKPdf	17 13 01.4	-0.3
BMRD				*d*PKP	PKPab	17 13 43.2	-0.2
DOU	Dourbes	160.84	356	*d*PKPdf	PKPdf	17 13 02.9	+0.9
DOU				*d*PKP	PKPab	17 13 44.0	-0.3
MOA	Molln	160.91	335	*i* PKP	PKPab	17 13 44.5	-0.4
	comp=Z,17nm,1.2s						
ARSA	Arzberg	160.93	332	*i* PKP	PKPab	17 13 44.3	-0.6
	comp=Z,19nm,1.9s,SNR=5.3						
WLF	Walferdange	161.14	353	*d*PKP	PKPab	17 13 46.1	+0.4
WLF	Walferdange	161.14	353	*e*PKP	PKPab	17 13 56.7	+11
BIOA	Bad Ischl, Aus	161.27	336	*i* PKP	PKPab	17 13 46.2	-0.2
	comp=Z,34nm,1.4s,SNR=6.5						
SKO	Skopje	161.30	311	*i* P	PKPab	17 13 46.9	+0.1
RJOB	Jochberg	161.51	338	*e*PKPab	PKPab	17 13 47.8	+0.3
	baz=17,slow=4.5						
STU	Stuttgart	161.53	346	*e*pPKPdf	pPKPdf	17 13 10.8	+1.9
	baz=23,slow=1.1						
FUR	Furstenfeldbru	161.59	341	*e*PKP	PKPab	17 13 58.7	+11
SOKA	Soboth	161.59	332	*i* PKP	PKPab	17 13 47.2	-0.7
	comp=Z,23nm,1.3s,SNR=7.5						
LESA	Schwarzleotal	161.83	337	*i* PKP	PKPab	17 13 48.5	-0.4
	comp=Z,40nm,1.8s,SNR=5.3						
OBKA	Obir	161.92	332	*i* PKP	PKPab	17 13 48.3	-1.1
	comp=Z,13nm,1.4s						
BFO	Black Forest	162.12	347	*e*pPKPdf	pPKPdf	17 13 10.7	+1.1
	baz=23,slow=1.1						
OHR	Ohrid	162.14	309	*i* P	PKPab	17 13 50.0	-0.5
MYKA	Terra Mystica	162.17	334	*i* PKP	PKPab	17 13 49.3	-1.1
	comp=Z,13nm,1.1s						
TORD	Torodi Ar. Bea	162.23	177	PKP	PKPdf	17 13 04.2	-0.3
	comp=Z,112nm,0.4s,baz=348,slow=1.5,SNR=1.9						
TORD				PKPab	PKPab	17 13 52.3	+1.1
	comp=Z,51nm,0.4s,baz=202,slow=1.6,SNR=1.1						
WATA	Walderalm	162.25	339	*i* PKP	PKPab	17 13 50.6	-0.2
	comp=Z,31nm,1.2s,SNR=6.6						
WTTA	Wattenberg	162.30	339	*i* PKP	PKPab	17 13 50.8	-0.2
	comp=Z,33nm,1.2s						
RETA	Reutte	162.35	341	*i* PKP	PKPab	17 13 50.7	-0.4
	comp=Z,18nm,1.2s,SNR=5.8						
MOTA	Moosalm	162.38	340	*i* PKP	PKPab	17 13 51.0	-0.4
	comp=Z,30nm,1.2s,SNR=7.3						
PDG	Podgorica	162.42	315	⇑P	PKPab	17 13 52.2	+0.6
SQTA	Sankt Quirin	162.47	340	*i* PKP	PKPab	17 13 51.6	-0.2
	comp=Z,23nm,1.3s						
ABTA	Abfaltersbach	162.47	337	*i* PKP	PKPab	17 13 50.6	-1.2
	comp=Z,21nm,1.3s						
DAVA	Damuels	162.77	343	*i* PKP	PKPab	17 13 52.8	-0.3
	comp=Z,12nm,0.9s						
FETA	Feichten	162.78	341	*i* PKP	PKPab	17 13 52.8	-0.4
	comp=Z,21nm,1.5s						
PMOZ	Porto Moniz, M	163.14	79	*e*LR	LR	18 14 41.9	
PMOZ				*i* AMs_20		18 30 30.1	
	comp=Z,1µm,18.0s						
TUE	Stuetta	163.66	343		PKPab	17 13 58.0	+0.9
PMPST	Porto Santo, M	163.86	78	*e*PKPdf	PKPdf	17 13 15.4	+10
PMPST				*e*PP	PP	17 17 51.2	+6.8
TIP	Timpagrande	165.79	309	⇑P	PKPab	17 14 07.5	+0.9
PGAV	Gavieira, Arco	166.02	35	*e*PKPdf	PKPdf	17 13 12.5	+5.2
PGAV				*e*LR	LR	18 19 52.7	
PGAV				*i* AMs_20		18 26 31.7	
	comp=Z,2µm,18.0s						
PCAB	Cabril	166.34	36	*e*PKPdf	PKPdf	17 13 09.2	+1.7
POLO	Lamas de Olo	166.70	36	*e*PKPdf	PKPdf	17 13 08.7	+0.9
POLO				*e*PKPab	PKPab	17 14 11.6	+1.1
POLO				*e*PP	PP	17 18 10.5	+12
PVIS	Viseu	167.13	38	*e*PKPdf	PKPdf	17 13 13.5	+5.4
PVIS				*e*PKPab	PKPab	17 14 13.2	+0.8
PVIS				*e*PP	PP	17 18 04.0	+3.6
COI	Coimbra	167.20	41	*e*PKPdf	PKPdf	17 13 18.4	+10
COI				*e*PP	PP	17 18 27.8	+27
MVO	Moncorvo	167.24	35	*e*PKPdf	PKPdf	17 13 09.2	+1.0
MVO				*e*PKPab	PKPab	17 14 15.5	+2.6
MVO				*e*LR	LR	18 17 48.5	
MVO				*i* AMs_20		18 27 55.0	
	comp=Z,2µm,20.0s						
PCAS	Casmilo, Conde	167.25	42	*e*PKPdf	PKPdf	17 13 10.4	+2.3
PCAS				*e*PKPab	PKPab	17 14 13.8	+0.9
PSBE	So Bento	167.43	44	*e*PKPdf	PKPdf	17 13 09.5	+1.2
PSBE				*e*PKPab	pPKPab	17 14 16.7	-3.1
MTE	Manteigas	167.54	38	*e*PKPdf	PKPdf	17 13 13.9	+5.5
MTE				*e*LR	LR	18 19 13.5	
MTE				*i* AMs_20		18 27 00.1	
	comp=Z,2µm,18.0s						
PSARD	Sardoal	167.75	43	*e*PKPdf	PKPdf	17 13 11.5	+3.0
PSARD				*e*PKPab	PKPab	17 14 14.7	-0.5
PSARD				*e*PP	PP	17 18 09.4	+5.8
PCBR	Castelo Branco	167.97	40	*e*PKPdf	PKPdf	17 13 10.6	+1.9
PCBR				*e*PP	PP	17 18 18.3	+14
PMTG	Montargil	168.05	45	*e*PKPdf	PKPdf	17 13 12.0	+3.3
PMTG				*e*PKPab	PKPab	17 14 18.6	+2.1
PMRV	Marv??o	168.31	41	*e*PKPdf	PKPdf	17 13 12.8	+3.8
PMRV				*e*PKPab	PKPab	17 14 18.5	+0.8
PMRV				*e*PP	PP	17 18 09.3	+2.8
PMRV				*e*LR	LR	18 17 50.5	
PMRV				*i* AMs_20		18 31 50.1	
	comp=Z,1µm,18.0s						
EVO	Evora	168.52	46	*e*PKPdf	PKPdf	17 13 13.1	+4.0
PESTR	Estremoz	168.56	44	*e*PKPdf	PKPdf	17 13 14.8	+5.6
PESTR				*e*PKPab	PKPab	17 14 19.5	+0.7
PTEO	Sao Teotonio	168.62	52	*e*PKPdf	PKPdf	17 13 11.1	+1.9
PTEO				*e*PKPab	PKPab	17 14 21.7	+2.6
PTEO				*e*PP	PP	17 18 22.4	+14
PFVI	Vila Bisbo	168.76	54	*e*PKPdf	PKPdf	17 13 15.0	+5.7
MORF	Marmelete	168.79	53	*e*PKPdf	PKPdf	17 13 18.8	+9.4
MORF				*e*PP	PP	17 18 16.0	+6.7
MESJ	Messejana	168.79	50	*e*PKPdf	PKPdf	17 13 16.6	+7.3
PBEJ	Beja	168.91	48	*e*PP	PP	17 18 28.9	+19
PCVE	Castro Verde	169.03	50	*e*PKPdf	PKPdf	17 13 11.1	+1.7
PCVE				*e*PKPab	PKPab	17 14 22.6	+1.6
PCVE				*e*PP	PP	17 18 17.9	+7.4
PBDV	Barranco-do-Ve	169.31	51	*e*PKPdf	PKPdf	17 13 14.3	+4.6
PBDV				*e*PKPab	PKPab	17 14 17.0	-5.2
PBDV				*e*PP	PP	17 18 20.6	+8.6
PBAR	Barrancos	169.34	45	*e*PKPdf	PKPdf	17 13 10.5	+0.8
PVAQ	Vaqueiros	169.37	50	*e*PKPdf	PKPdf	17 13 13.4	+3.8
PVAQ				*e*PKPab	PKPab	17 14 16.4	-6.0
PVAQ				*e*PP	PP	17 18 19.2	+7.1
ESDC	Sonseca Array	169.84	30	PKP	PKPdf	17 13 10.8	+0.8
	comp=Z,0.8nm,0.7s,baz=351,slow=4.1,SNR=10						
ESDC				PKPab	PKPab	17 14 25.9	+1.5
	comp=Z,3.5nm,1.1s,baz=316,slow=4.1,SNR=5.0						
KEST	Kesra	172.60	312	PKPab	PKPab	17 14 37.9	+1.0
	comp=Z,3.0nm,0.8s,baz=80,slow=6.1,SNR=4.0						

*IDC **17** 16:57:54.9±4.5, 32°.81S×179°.75E, h230^{km}±35^{km}, mb3.6/5, mbtmp4.2/6, Error ellipse: s-maj=42.7km s-min=18.5km az=51.0*

*WEL **17** 16:57:58.6±0.6, 33°S±7°×17°9E±1°5, h208^{km}, M4.5/9, mB4.8/7, ML5.2/18, MLv4.8/9, Mw(mB)4.1/7, Error ellipse: s-maj=21.4km s-min=4.3km az=112.0, confirmed*

ISC 17 16:57:57.5±0.6, **33°.10S**±0°.06×**180°.0E**±0°.1, **h250^{km}, n73, σ2^{s}00**/92, **mb3.8**/8, **5D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.22	26	P	Pn	16 59 01.2	-2.8
GLKZ				S	S	16 59 56.6	-0.1
MXZ	Matakaoa Point	4.66	197	P	Pn	16 59 13.5	+4.5
MXZ				S	S	17 00 06.2	+0.1
WMGZ	Waiomatatini S	4.88	195	P	Pn	16 59 13.7	+2.0
WMGZ				S	S	17 00 12.6	+1.6
GRZ	Great Barrier	4.88	229	P	Pn	16 59 15.1	+3.3
HAZ	Te Kaha	4.98	201	P	Pn	16 59 15.2	+2.2
HAZ				S	S	17 00 14.9	+1.8
PKGZ	Pakihiroa	5.00	198	P	Pn	16 59 15.0	+1.7
PKGZ				S	S	17 00 12.0	-1.8
KUZ	Kuaotunu	5.06	223	P	Pn	16 59 17.7	+3.8
PUZ	Puketiti	5.16	195	P	Pn	16 59 15.9	+0.8
PUZ				S	S	17 00 17.0	-0.1
RUGZ	Raukumara Rang	5.21	201	P	Pn	16 59 17.2	+1.3
RUGZ				S	S	17 00 17.1	-1.3
TWGZ	Tauwhareparae	5.32	197	P	Pn	16 59 19.6	+2.4
TWGZ				S	S	17 00 22.3	+1.5
WCZ	Waipu Caves	5.46	237	P	Pn	16 59 22.0	+3.2
CNGZ	Carnagh Statio	5.56	195	P	Pn	16 59 21.1	+1.0
MWZ	Matawai	5.59	200	P	Pn	16 59 20.9	+0.4
MWZ				S	S	17 00 26.3	-0.6
TKGZ	Te Karaka	5.61	198	P	Pn	16 59 20.7	+0.1
TKGZ				S	S	17 00 26.0	-1.1
URZ	Urewera	5.66	204	P	Pn	16 59 21.4	+0.2
	25nm,0.3s,baz=350,slow=4.4,SNR=37						
URZ				S	S	17 00 27.1	-1.2
	67nm,0.5s,baz=351,slow=22,SNR=8.4						
URZ	Urewera	5.66	204	P	Pn	16 59 21.8	+0.6
URZ				S	S	17 00 28.6	+0.3
OUZ	Omahuta	5.71	247	P	Pn	16 59 24.3	+2.3
RAGZ	Rawiri	5.78	201	P	Pn	16 59 23.0	+0.2
RAGZ				S	S	17 00 30.5	-0.6
KARZ	Kaharoa	5.78	211	P	Pn	16 59 26.4	+3.5
RIGZ	Rimuhau	5.88	197	P	Pn	16 59 24.0	-0.1
RIGZ				S	S	17 00 32.0	-1.3
MUGZ	Murupara	5.97	205	P	Pn	16 59 24.9	-0.3
MUGZ				S	S	17 00 36.0	+0.6
RTZ	Ruatahuna	6.02	203	P	Pn	16 59 26.8	+0.9
RTZ				S	S	17 00 33.9	-2.7
HSRZ	Hossack Road	6.03	209	P	Pn	16 59 30.8	+4.9
PRGZ	Paritu Road	6.06	196	P	Pn	16 59 29.5	+3.3
SNGZ	Shannon Statio	6.06	200	P	Pn	16 59 26.2	-0.2
SNGZ				S	S	17 00 36.9	-0.6
HRRZ	Handcock Road	6.08	209	P	Pn	16 59 29.7	+3.1
GRRZ	Galatos Road	6.12	210	P	Pn	16 59 30.7	+3.6
KNZ	Kokohu	6.20	197	P	Pn	16 59 29.1	+1.1
ALRZ	Allen Road	6.21	208	P	Pn	16 59 30.7	+2.6
WPRZ	Whakapapatarin	6.24	209	P	Pn	16 59 31.4	+2.9
RAHZ	Arahi	6.26	201	P	Pn	16 59 28.2	-0.6
MHGZ	Mahia Peninsul	6.27	195	P	Pn	16 59 31.6	+2.7
MTHZ	Maungataniwha	6.28	203	P	Pn	16 59 31.4	+2.3
TLZ	Tolley Road	6.35	214	P	Pn	16 59 33.9	+3.9
KUTZ	Kaahu Road	6.36	211	P	Pn	16 59 33.3	+3.3
MRHZ	Matea Rd	6.41	206	P	Pn	16 59 32.2	+1.5
NMHZ	Naumai	6.52	202	P	Pn	16 59 31.5	-0.6
WATZ	Wairara	6.58	211	P	Pn	16 59 35.9	+3.1
ARHZ	Aropaoanui	6.61	201	P	Pn	16 59 33.7	+0.6
BKZ	Black Stump Fm	6.68	204	P	Pn	16 59 33.4	-0.8
MCHZ	McNeill Hill	6.87	202	P	Pn	16 59 37.1	+0.7
TMVZ	Te Maari	6.93	209	P	Pn	16 59 38.5	+1.1
KWHZ	Kaweka Forest	6.94	204	P	Pn	16 59 38.5	+1.1
ETVZ	East Tongariro	6.95	209	P	Pn	16 59 38.6	+1.0
CKHZ	Cape Kidnapper	6.95	199	P	Pn	16 59 35.8	-1.6
TWVZ	Taurewa	7.01	210	P	Pn	16 59 40.1	+1.8
TUVZ	Tukino	7.08	208	P	Pn	16 59 39.9	+0.7
FWVZ	Far West T-bar	7.11	209	P	Pn	16 59 40.9	+1.1
MAVZ	Matarangi	7.12	209	P	Pn	16 59 40.4	+0.5
KAHZ	Kahuranaki	7.14	200	P	Pn	16 59 38.7	-1.2
KRHZ	Kereru	7.15	203	P	Pn	16 59 39.5	-0.5
KRHZ				S	S	17 00 58.5	-3.9
WNVZ	Wahianoa	7.16	209	P	Pn	16 59 40.9	+0.7
WNVZ				S	S	17 01 00.7	-2.0
MOVZ	Moawhango	7.17	207	P	Pn	16 59 39.8	-0.4
MOVZ				S	S	17 00 57.4	-5.3
RPZ	Rata Peaks	12.70	211	P	Pn	17 00 46.2	-3.3
	7.7nm,0.3s,baz=225,slow=1.9,SNR=6.8						
RPZ				S	S	17 02 56.4	-14
	8.6nm,0.6s,baz=269,slow=1.4,SNR=1.5						
MSVF	Nonsavu	15.40	353	P	Pn	17 01 23.8	+1.1
	9.5nm,0.7s,baz=214,slow=6.4,SNR=9.4						
ASAR	Alice Springs	41.35	271	P	P	17 05 17.6	-1.8
	1.8nm,0.7s,baz=109,slow=8.1,SNR=2.1 1.8nm,0.7s						
WRA	Warramunga Arr	42.59	276	P	P	17 05 27.4	-2.0
	0.9nm,0.3s,baz=116,slow=7.9,SNR=8.8 0.9nm,0.3s						
QSPA	South Pole Qui	57.02	180	P	P	17 07 19.9	+2.8
	2.8nm,0.6s,baz=349,slow=5.2,SNR=10 2.8nm,0.6s						
TROLL	Troll, Antarti	75.17	181	⇓P	P	17 09 12.9	+0.8
	comp=Z,16nm,0.2s						
SNAA	Sanae	75.50	179	⇓P	P	17 09 14.9	+0.9
	comp=Z,19nm,0.3s						
SNAA	Sanae	75.50	179	P	P	17 09 14.8	+0.9
	comp=Z,0.7nm,0.3s,baz=338,slow=3.2,SNR=28 comp=Z,0.7nm,0.3s						
VNA3	Neumayer Olymp	75.72	177	⇓P	P	17 09 16.2	+1.1
	comp=Z,0.7nm,0.2s						
VNA2	Neumayer--Watz	76.13	178	⇓P	P	17 09 18.8	+1.4
	comp=Z,0.7nm,0.2s,baz=182,slow=5.7						
VNA1	Neumayer--Stat	76.37	177	⇓P	P	17 09 20.4	+1.7
	comp=Z,0.3nm,0.3s						
PLCA	Paso Flores	81.90	134	P	P	17 09 52.4	+3.1
	comp=Z,0.7nm,0.5s,baz=196,slow=7.4,SNR=3.4 comp=Z,0.7nm,0.5s						
KURBB	Kurchatov Arra	121.69	313	PKP	PKPdf	17 16 19.2	-1.8
	comp=Z,0.6nm,0.4s,baz=117,slow=1.8,SNR=5.8						
BVAR	Borovoye Array	127.11	314	PKP	PKPdf	17 16 30.4	-1.0
	comp=Z,0.6nm,0.4s,baz=75,slow=1.6,SNR=5.2						
FINES	FINESS Array B	147.03	337	PKPbc	PKPdf	17 17 08.3	+0.9
	comp=Z,1.6nm,0.6s,baz=63,slow=4.3,SNR=4.1						
HFS	Hagfors	151.49	346	PKPbc	PKPbc	17 17 19.4	-1.6
	comp=Z,1.6nm,0.7s,baz=159,slow=4.3,SNR=1.9						
BRTR	Keskin Array B	152.24	293	PKPbc	PKPbc	17 17 21.3	-2.3
	comp=Z,0.7nm,0.5s,baz=154,slow=3.8,SNR=4.9						
AKASG	Malin Array Be	152.29	318	PKPbc	PKPbc	17 17 21.2	-1.9
	comp=Z,0.2nm,0.4s,baz=44,slow=3.2,SNR=4.2						
DBIC	Dimbokro	153.32	169	PKPbc	PKPbc	17 17 26.0	-0.5
	baz=183,slow=2.1						
TORD	Torodi Ar. Bea	160.08	185	PKPab	PKPab	17 18 07.5	-0.9
	comp=Z,75nm,0.3s,baz=173,slow=3.7,SNR=2.3						

IDC 17 17:01:23.4±1.1, **28°.13N**×**104°.42E, h0^{km}, mb3.7**/4, **mbtmp3.6**/5, **ML3.2**/1, **Error ellipse: s-maj=85.0km s-min=19.8km az=60.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	19.74	4	P	Pn	17 05 55.7	-0.5
	0.1nm,0.3s,baz=171,slow=10,SNR=1.4 0.5nm,0.5s						
MKAR	Makanchi Array	25.46	323	P	P	17 06 52.5	-0.6
	1.2nm,0.9s,baz=120,slow=10,SNR=8.7 1.2nm,0.9s						
KURBB	Kurchatov Arra	29.82	326	P	P	17 07 32.1	+0.2
	0.5nm,0.7s,baz=140,slow=8.4,SNR=5.2 0.5nm,0.7s						
WRA	Warramunga Arr	55.86	145	P	P	17 11 02.4	-0.6
	0.6nm,0.5s,baz=337,slow=8.2,SNR=7.2 0.6nm,0.5s						
ASAR	Alice Springs	58.82	148	P	P	17 11 24.1	+0.3
	0.4nm,0.5s,baz=331,slow=6.9,SNR=15 0.4nm,0.5s						

IDC 17 17:04:08.1±2.0, **30°.76S**×**177°.36W, h0^{km}, mb3.7**/3, **mbtmp3.7**/3, **Error ellipse: s-maj=57.3km s-min=42.1km az=39.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.64	267	P	P	17 12 14.5	-0.1
	0.6nm,0.6s,baz=107,slow=7.8,SNR=11 0.6nm,0.6s						
WRA	Warramunga Arr	44.66	272	P	P	17 12 22.8	0.0
	0.7nm,0.7s,baz=112,slow=7.9,SNR=5.8 0.7nm,0.7s						
QSPA	South Pole Qui	59.36	180	P	P	17 14 11.6	-0.2
	0.6nm,0.6s,baz=36,slow=6.0,SNR=1.8 0.6nm,0.6s						
FINES	FINESS Array B	145.67	340	PKPbc	PKPdf	17 23 47.2	-0.5
	1.0nm,0.5s,baz=65,slow=4.7,SNR=9.9						

*WEL **17** 17:05:37.9±0.9, 32°S±4°×17°7W±1°4, h33^{km}, mB5.3/3, ML5.0/14, MLv4.8/9, Mw(mB)4.7/3, Error ellipse: s-maj=18.6km s-min=3.2km az=103.9, confirmed*

*IDC **17** 17:05:38.3±1.1, 32°.08S×178°.00W, h0^{km}, mb3.9/5, mbtmp3.9/6, ML3.2/1, Error ellipse: s-maj=31.5km s-min=27.2km az=110.0*

*NEIC **17** 17:05:39.7±2.2, 31°.95S±0°.06×178°.1W±0°.3, h10^{km}±2^{km}, mb4.4/7, Error ellipse: s-maj=36.5km s-min=10.7km az=91.0*

ISC 17 17:05:40.9±0.8, **32°.04S**±0°.07×**178°.0W**±0°.2, **h24^{km}, n45, σ1^{s}58**/63, **mb4.2**/9, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.77	1	P	Pn	17 06 22.4	-1.5
GLKZ				S	Sn	17 06 57.5	+1.0
RAO	Raoul Island	2.78	1	Pn	Pn	17 06 22.5	-1.4
RIZ	Raoul Island	2.79	1	P	Pn	17 06 22.9	-1.2
RIZ				S	Sn	17 06 58.9	+2.0
MXZ	Matakaoa Point	6.30	208	S	Sn	17 08 24.7	+1.3
WMGZ	Waiomatatini S	6.48	206	P	Pn	17 07 13.0	-1.8
WMGZ				S	Sn	17 08 30.1	+2.2
PKGZ	Pakihiroa	6.65	208	P	Pn	17 07 15.2	-2.0
PKGZ				S	Sn	17 08 33.3	+1.2
HAZ	Te Kaha	6.68	210	P	Pn	17 07 14.9	-2.6
HAZ				S	Sn	17 08 34.3	+1.5
PUZ	Puketiti	6.76	206	P	Pn	17 07 13.9	-4.7
PUZ				S	Sn	17 08 33.6	-1.2
RUGZ	Raukumara Rang	6.90	210	P	Pn	17 07 19.6	-1.0
RUGZ				S	Sn	17 08 40.4	+2.0
TWGZ	Tauwhareparae	6.96	207	P	Pn	17 07 19.7	-1.7
TWGZ				S	Sn	17 08 39.2	-0.6
CNGZ	Carnagh Statio	7.14	205	P	Pn	17 07 21.6	-2.3
CNGZ				S	Sn	17 08 43.9	-0.4
TKGZ	Te Karaka	7.24	207	P	Pn	17 07 24.6	-0.6
TKGZ				S	Sn	17 08 44.5	-2.0
MWZ	Matawai	7.27	209	P	Pn	17 07 23.7	-2.0
MWZ				S	Sn	17 08 47.1	-0.5
URZ	Urewera	7.39	212	Pn	Pn	17 07 25.4	-1.9
	0.4nm,0.3s,baz=47,slow=15,SNR=7.3						
URZ				Sn	Sn	17 08 50.9	+0.6
	5.5nm,0.3s,baz=318,slow=4.7,SNR=9.7 9.2nm,0.8s						
URZ	Urewera	7.39	212	P	Pn	17 07 27.1	-0.2
URZ				S	Sn	17 08 50.9	+0.6
RAGZ	Rawiri	7.46	209	P	Pn	17 07 26.2	-2.1
RAGZ				S	Sn	17 08 50.5	-1.6
RIGZ	Rimuhau	7.50	206	P	Pn	17 07 26.8	-2.1
RIGZ				S	Sn	17 08 52.4	-0.7
PRGZ	Paritu Road	7.65	205	P	Pn	17 07 24.6	-6.3
PRGZ				S	Sn	17 08 57.2	+0.5
OUZ	Omahuta	7.71	243	P	Pn	17 07 38.1	+6.5
SNGZ	Shannon Statio	7.73	208	P	Pn	17 07 28.7	-3.3
SNGZ				S	Sn	17 08 57.2	-1.6
RTZ	Ruatahuna	7.74	211	Pn	Pn	17 07 32.0	-0.3
RTZ	Ruatahuna	7.74	211	P	Pn	17 07 31.9	-0.3
RTZ				S	Sn	17 08 57.8	-1.3
MTHZ	Maungataniwha	8.00	210	P	Pn	17 07 36.9	+1.2
MTHZ				S	Sn	17 09 05.7	+0.3
BKZ	Black Stump Fm	8.41	211	Pn	Pn	17 07 39.6	-1.8
BKZ	Black Stump Fm	8.41	211	P	Pn	17 07 41.7	+0.3
BKZ				S	Sn	17 09 14.8	-0.7
BFZ	Birch Farm	9.79	207	Pn	Pn	17 07 59.9	-0.4
STKA	Stephens Creek	34.16	259	P	P	17 12 25.5	+1.2
	1.8nm,0.7s,baz=84,slow=9.2,SNR=3.8 1.8nm,0.7s						
ASAR	Alice Springs	43.06	269	P	P	17 13 37.3	-1.9
ASAR	Alice Springs	43.06	269	P	P	17 13 40.4	+1.3
	1.0nm,0.6s,baz=104,slow=7.1,SNR=12 1.0nm,0.6s						
WR8	Warramunga Arr	44.05	274	P	P	17 13 45.9	-1.3
WR8				IAmb	IAmb	17 14 01.9	
	comp=Z,7.8nm,1.1s						
WRA	Warramunga Arr	44.20	274	P	P	17 13 48.0	-0.3
WRA	Warramunga Arr	44.20	274	P	P	17 13 48.8	+0.5
	comp=Z,2.4nm,0.5s,baz=113,slow=7.9,SNR=15 comp=Z,2.4nm,0.5s						
WB0	Warramunga Arr	44.23	274	P	P	17 13 49.6	+1.1
KNRA	Kununurra	50.86	276	P	P	17 14 39.0	-1.1
KNRA				IAmb	IAmb	17 15 16.6	
	comp=Z,7.3nm,1.1s						
FITZ	Fitzroy Crossi	52.39	271	P	P	17 14 50.0	-1.5
FITZ				IAmb	IAmb	17 15 28.2	
	comp=Z,1.1nm,1.2s						
CASY	Casey	53.70	208		P	17 15 01.5	+1.0
CASY				IAmb	IAmb	17 15 18.9	
	comp=Z,7.1nm,1.3s						
QSPA	South Pole Qui	58.07	180	P	P	17 15 33.9	+1.8
QSPA				IAmb	IAmb	17 16 01.3	
	comp=Z,5.5nm,1.1s						
QSPA	South Pole Qui	58.07	180	P	P	17 15 33.4	+1.4
	comp=Z,0.8nm,0.8s,baz=90,slow=22,SNR=1.3 comp=Z,0.8nm,0.8s						
SNAA	Sanae	76.52	178	P	P	17 17 30.1	+1.5
	comp=Z,0.7nm,0.9s,baz=214,slow=7.3,SNR=1.4 comp=Z,0.7nm,0.9s						
KURBB	Kurchatov Arra	122.22	313	PKP	PKiKP	17 24 33.8	+0.3
	comp=Z,0.4nm,0.5s,baz=104,slow=2.0,SNR=2.8						
BVAR	Borovoye Array	127.58	315	PKP	PKiKP	17 24 44.9	+0.8
	comp=Z,0.4nm,0.4s,baz=90,slow=3.0,SNR=3.7						
KBZ	Khabaz	146.01	302	PKPbc	PKiKP	17 25 19.4	-2.4
	comp=Z,2.0nm,0.9s,baz=91,slow=4.2,SNR=2.1						
FINES	FINESS Array B	146.68	339	PKPbc	PKiKP	17 25 20.8	-1.8
	comp=Z,2.4nm,0.6s,baz=42,slow=3.5,SNR=14						
HFS	Hagfors	150.85	348	PKPbc	PKiKP	17 25 31.3	0.0
	comp=Z,1.0nm,0.7s,baz=22,slow=1.6,SNR=1.5						
AKASG	Malin Array Be	152.59	321	PKPbc	PKiKP	17 25 35.5	+0.3
	comp=Z,0.2nm,0.4s,baz=50,slow=3.7,SNR=0.9						

*IDC **17** 17:10:36.3±1.4, 28°.61N×105°.17E, h0^{km}, mb3.4/3, mbtmp3.4/4, ML3.5/1, Error ellipse: s-maj=92.5km s-min=24.1km az=63.0*

ISC 17 17:10:39.5±1.2, **28°.40N**±0°.06×**105°.1E**±0°.1, **h19^{km}, n6, σ1^{s}39**/10, **mb3.6**/3, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	Chengdu	2.74	336	Pn	Pn	17 11 23.1	+0.6
CD2				Pg	Pb	17 11 29.0	+1.1
CD2				Sn	Sn	17 11 56.4	+1.3
CD2				Sg	Sg	17 12 06.3	-1.3
CD2				smax	smax		
	comp=N,260nm,0.7s						
CD2				smax	smax		
	comp=E,380nm,0.8s						
PZH	PanZhiHua	3.50	238	Pg	Pb	17 11 40.6	-0.3
PZH				Sg	Sb	17 12 24.1	+1.0
PZH				smax	smax		
	comp=N,40nm,0.9s						
PZH				smax	smax		
	comp=E,30nm,0.9s						
SONM	Songino Array	19.43	3	P	P	17 15 02.7	-2.0
	comp=E,0.1nm,0.3s,baz=192,slow=12,SNR=1.7						

	comp=E,0.4nm,0.6s						
MKAR	Makanchi Array	25.58	322	P	P	17 16 05.8	-1.6
	comp=E,0.3nm,0.5s,baz=126,slow=11,SNR=4.5						
	comp=E,0.3nm,0.5s						
WRA	Warramunga Arr	55.78	146	P	P	17 20 15.8	+0.5
	comp=E,0.6nm,0.8s,baz=337,slow=8.3,SNR=7.1						
	comp=E,0.6nm,0.8s						
ASAR	Alice Springs	58.76	149	P	P	17 20 37.4	+0.9
	comp=E,0.4nm,0.6s,baz=333,slow=6.8,SNR=8.2						
	comp=E,0.4nm,0.6s						

TIR 17 17:11:09.3, 40°.50N×20°.81E, h11^{km}±2^{km}, Md2.7/3, Ml2.1/4, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.12	352	Pg	Pg	17 11 11.6	-0.8
KBN				Sg	Sg	17 11 14.2	-0.4
KBN				AML	AML	17 11 14.9	
	3.0nm,0.1s						
NEST	Nestorio	0.20	115	Pg	Pg	17 11 13.9	+0.2
NEST				Sg	Sg	17 11 17.5	+0.8
NEST				AML	AML	17 11 18.1	
	1.0nm,0.2s						
NEST				AMd		17 12 03.3	
SRN	Sarande	0.88	225	Pg	Pb	17 11 26.4	-0.1
SRN				Sg	Sn	17 11 40.4	+0.1
SRN				AML	AML	17 11 42.3	
	0.1nm,0.6s						
SRN				AMd		17 12 18.8	
IGT	Igoumenitsa	1.03	201	Pn	Pn	17 11 29.8	0.0
IGT				Sn	Sn	17 11 45.1	+0.8
IGT				AMd		17 12 26.9	
SCTE	Santa Cesarea	1.84	257	AML	AML	17 12 05.5	
	0.1nm,1.0s						

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*IDC **17** 17:13:27.2±25.0, 13°.79S×166°.08E, h0^{km}, mb3.8/3, mbtmp3.9/4, ML3.7/1, Error ellipse: s-maj=437.3km s-min=47.5km az=52.0*

*NEIC **17** 17:13:29.7±2.3, 14°.1S±0°.1×166°.3E±0°.1, h10^{km}±2^{km}, mb4.4/8, Error ellipse: s-maj=27.6km s-min=10.3km az=50.0*

ISC 17 17:13:31.5±1.9, 14°.0S±0°.1×166°.5E±0°.2, h43^{km}, n15, σ1^{s}63/17, mb4.1/6, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.65	155	Pn	Pn	17 13 58.5	+0.5
SANVU				Sn	Sn	17 14 18.0	-0.1
HNR	Honiara	7.81	304	Pn	Pn	17 15 22.5	-0.1
DZM	Mont Dzumac	8.08	180	Pn	Pn	17 15 27.2	+0.8
DZM	Mont Dzumac	8.08	180	Pn	Pn	17 15 28.0	+1.6
	1.1nm,0.3s,baz=27,slow=5.9,SNR=23						
DZM				Sn	Sn	17 16 53.5	-3.0
	0.2nm,0.3s,baz=219,slow=22,SNR=1.4						
	3.3nm,0.3s						
EIDS	Eidsvold	18.39	230	P	Pn	17 17 47.2	+3.9
EIDS				IAmb	IAmb	17 18 28.8	
	comp=Z,18nm,1.4s						
CTAO	Charters Tower	20.26	250	P	P	17 18 03.5	0.0
STKA	Stephens Creek	28.93	228	P	P	17 19 26.3	-0.4
STKA	Stephens Creek	28.93	228	P	P	17 19 26.3	-0.4
	comp=Z,1.6nm,0.5s,baz=47,slow=9.7,SNR=6.5						
	comp=Z,1.6nm,0.5s						
WR8	Warramunga Arr	31.12	254	P	P	17 19 44.4	-1.9
WR8				IAmb	IAmb	17 20 08.4	
	comp=Z,15nm,1.4s						
WB0	Warramunga Arr	31.21	255	P	P	17 19 45.9	-1.2
WB0				IAmb	IAmb	17 19 46.2	
	comp=Z,9.1nm,1.4s						
WRA	Warramunga Arr	31.27	255	P	P	17 19 46.5	-1.1
	comp=Z,0.5nm,0.6s,baz=84,slow=9.2,SNR=6.0						
	comp=Z,0.5nm,0.6s						
AS31	Alice Springs	32.24	248	P	P	17 19 54.9	-1.2
ASAR	Alice Springs	32.24	248	P	P	17 19 55.1	-1.0
	comp=Z,0.5nm,0.5s,baz=73,slow=9.8,SNR=27						
	comp=Z,0.5nm,0.5s						
BBOO	Buckleboo	33.46	231	P	P	17 20 06.7	+0.1
KNRA	Kununurra	36.47	262	P	P	17 20 31.6	-1.1
KNRA				IAmb	IAmb	17 21 05.9	
	comp=Z,5.8nm,1.1s						

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*IDC **17** 17:15:40.1±1.0, 28°.25N×104°.55E, h0^{km}, mb3.4/7, mbtmp3.4/8, ML4.0/1, MS4.1/1, Error ellipse: s-maj=40.0km s-min=18.9km az=54.0*

ISC 17 17:15:41.6±1.2, 28°.3N±0°.2×104°.6E±0°.2, h10^{km}, n9, σ0^{s}42/8, mb3.4/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	19.59	4	P	P	17 20 10.3	+0.3
	0.5nm,0.3s,baz=182,slow=10.0,SNR=2.5						
	0.5nm,0.5s						
KSRS	Korea Array	21.60	59	P	P	17 20 31.4	-0.2
	0.5nm,0.4s,baz=239,slow=11,SNR=4.0						
	0.5nm,0.4s						
MKAR	Makanchi Array	25.44	323	P	P	17 21 09.6	+0.1
	0.6nm,0.5s,baz=129,slow=10,SNR=8.2						
	0.6nm,0.5s						
KURBB	Kurchatov Arra	29.79	326	P	P	17 21 47.6	-0.8
	0.3nm,0.5s,baz=132,slow=8.9,SNR=2.9						
	0.3nm,0.5s						
BVAR	Borovoye Array	35.30	324	P	P	17 22 36.9	+0.2
	0.2nm,0.4s,baz=140,slow=7.0,SNR=2.2						
	0.2nm,0.4s						
KBZ	Khabaz	51.12	305	LR	LR	17 51 47.2	
	comp=Z,178nm,19.7s,baz=82,slow=42						
WRA	Warramunga Arr	55.89	146	P	P	17 25 19.6	-0.1
	0.3nm,0.5s,baz=337,slow=8.1,SNR=5.0						
	0.3nm,0.5s						
ASAR	Alice Springs	58.86	148	P	P	17 25 41.0	+0.3
	0.3nm,0.6s,baz=331,slow=6.8,SNR=6.8						
	0.3nm,0.6s						
AKASG	Malin Array Be	59.65	315	P	P	17 25 45.7	-0.2
	0.1nm,0.3s,baz=48,slow=4.0,SNR=5.9						
	0.1nm,0.3s						

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*GCG **17** 17:36:05.1±2.1, 15°.66N×93°.79W, h36^{km}±999^{km}, MD4.3, ML3.7*

*MEX **17** 17:36:06.6±0.8, 15°.70N×93°.79W, h85^{km}±9^{km}, MD4.1*

ISC 17 17:36:04.4±1.3, 15°.62N±0°.05×93°.78W±0°.03, h87^{km}±13^{km}, n24, σ2^{s}04/47, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.54	81	*e*P	Pn	17 36 19.8	+0.6
PCIG				*e*S	Sn	17 36 30.4	+0.3
TGIG		1.31	29	*i* P	Pn	17 36 27.9	+0.3
TGIG				*e*S	Sn	17 36 43.7	-1.5
TGIG		1.31	29	*i* P	Pn	17 36 27.8	+0.1
TGIG				*i* S	Sn	17 36 43.5	-1.7
TGIG				IAML		17 36 44.4	
	comp=E,2μm,0.2s						
TGBT	Tuxtla Gutierr	1.32	30	*e*P	Pn	17 36 27.4	-0.3
TGBT				*e*S	Sn	17 36 44.1	-1.3
PATR	El Naranjo	1.57	109	*e*P	Pn	17 36 31.9	+0.8
PATR				*e*S	Sn	17 36 52.4	+1.0
PAVE	Pavencul	1.60	105	*e*P	Pn	17 36 32.6	+1.1
PAVE				*e*S	Sn	17 36 53.6	+1.6
THIG		1.62	116	*e*P	Pn	17 36 33.2	+1.6
THIG				*e*S	Sn	17 36 53.5	+1.3
CCIG	Comitan	1.71	67	*e*P	Pn	17 36 33.4	+0.6
CCIG				*e*S	Sn	17 36 52.8	-1.6
CCIG	Comitan	1.71	67	*i* P	Pn	17 36 33.4	+0.6
CCIG				*i* S	Sn	17 36 52.9	-1.6
CCIG				IAML		17 36 58.6	
	comp=N,502nm,0.4s						
HUIG	Huatulco	2.25	274	*e*P	Pn	17 36 39.9	+0.1
HUIG				*e*S	Sn	17 37 03.9	-3.0
HUIG	Huatulco	2.25	274	*i* P	Pn	17 36 40.2	+0.4
HUIG				*i* S	Sn	17 37 05.4	-1.5
HUIG				IAML		17 37 09.6	
	comp=N,117nm,0.2s						
RTAL	Retalhuleu	2.29	118	*e*P	Pn	17 36 42.8	+2.5
RTAL				*e*S	Sn	17 37 09.5	+1.6
STG8	El Palmar, Qui	2.62	116	*i* P	Pn	17 36 42.3	-2.6
STG8				*i* S	Sn	17 37 09.6	-6.5
STG8				IAML		17 37 11.8	
	comp=E,570nm,0.2s						
VHO	Vista Hermosa	3.18	297	*e*P	Pn	17 36 55.0	+2.5
VHO				*e*S	Sn	17 37 30.1	+0.5
PEIG	Puerto Escondi	3.27	277	*e*P	Pn	17 36 54.1	+0.6
PEIG				*e*S	Sn	17 37 29.4	-2.0
YOIG	Yosondua	3.82	289	*e*P	Pn	17 37 03.8	+2.6
YOIG				*e*S	Sn	17 37 40.7	-4.6
PETF	Flores	3.97	71	*e*P	Pn	17 37 04.2	+1.3
PETF				*e*S	Sn	17 37 46.3	-2.1
PETF	Flores	3.97	71	*i* P	Pn	17 37 04.2	+1.3
PETF				IAML		17 37 50.2	
	comp=E,234nm,0.6s						
TOIG	Toxpalan	3.99	308	*e*P	Pn	17 37 05.8	+2.4
TOIG				*e*S	Sn	17 37 47.4	-1.8
TXIG	Tlaxiaco	4.16	293	*e*P	Pn	17 37 05.2	-0.6
TXIG				*e*S	Sn	17 37 55.9	+2.5
PNIG	Pinotepa	4.25	281	*e*P	Pn	17 37 07.5	+0.6
PNIG				*e*S	Sn	17 37 53.3	-2.0
HLIG	Huajuapan de L	4.44	300	*e*P	Pn	17 37 09.7	+0.1
HLIG				*e*S	Sn	17 37 59.2	-0.9
FTIG	Fresnillo de T	4.75	299	*e*P	Pn	17 37 17.6	+3.8
FTIG				*e*S	Sn	17 38 06.7	-1.0
CXUV	Coxquihui	5.80	322	*e*P	Pn	17 37 29.9	+1.9
CXUV				*e*S	Sn	17 38 33.2	+0.1

IDC 17 17:38:04.3±1.6, 28°.58N×104°.68E, h0^{km}, mb3.1/3, mbtmp3.1/4, ML3.8/1, Error ellipse: s-maj=61.6km s-min=29.1km az=59.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.36	209	Pn	Pn	17 40 47.9	-0.1
	0.2nm,0.3s,baz=11,slow=8.3,SNR=5.4						
	0.2nm,0.3s						
MKAR	Makanchi Array	25.24	322	P	P	17 43 32.0	0.0
	0.1nm,0.4s,baz=131,slow=10,SNR=3.6						
	0.1nm,0.4s						
WRA	Warramunga Arr	56.11	146	P	P	17 47 45.5	-0.2
	0.3nm,0.7s,baz=335,slow=7.5,SNR=2.3						
	0.3nm,0.7s						
ASAR	Alice Springs	59.08	149	P	P	17 48 06.6	0.0
	0.2nm,0.5s,baz=333,slow=7.1,SNR=7.0						
	0.2nm,0.5s						

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*IDC **17** 17:47:28.4±2.2, 5°.66S×152°.33E, h0^{km}, mb3.7/8, mbtmp3.7/9, ML2.0/1, Error ellipse: s-maj=78.1km s-min=22.6km az=118.0*

ISC 17 17:47:35.4±2.0, 5°.7S±0°.3×152°.1E±0°.4, h45^{km}, n9, σ0^{s}77/10, mb3.7/8, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.16	233	Pn	Pn	17 49 05.0	+1.0
	2.1nm,0.3s,baz=102,slow=2.4,SNR=11						
PMG				Sn	Sn	17 50 12.1	-1.1
	5.1nm,0.3s,baz=214,slow=12,SNR=8.1						
	27nm,1.0s						
WRA	Warramunga Arr	22.37	229	P	P	17 52 29.8	-0.1
	3.3nm,1.2s,baz=53,slow=9.4,SNR=4.9						
	3.3nm,1.2s						
ASAR	Alice Springs	25.05	223	P	P	17 52 55.7	-0.1
	2.6nm,0.8s,baz=55,slow=8.7,SNR=20						
	2.6nm,0.8s						
SONM	Songino Array	66.72	328	P	P	17 58 22.5	+0.4
	0.3nm,0.4s,baz=141,slow=5.0,SNR=2.1						
	0.3nm,0.4s						
MKAR	Makanchi Array	80.56	319	P	P	17 59 43.8	+0.6
	0.3nm,0.7s,baz=106,slow=4.7,SNR=3.1						
	0.3nm,0.7s						
ZALV	Zalesovo Beam	81.52	327	P	P	17 59 47.3	-0.8
	0.3nm,0.3s,baz=139,slow=4.9,SNR=2.1						
	0.3nm,0.3s						
ILAR	Eielson Array	83.22	22	P	P	17 59 56.5	-0.3
	0.5nm,0.7s,baz=259,slow=5.4,SNR=4.9						
	0.5nm,0.7s						
KURBB	Kurchatov Arra	84.09	322	P	P	18 00 01.6	+0.1
	0.2nm,0.4s,baz=120,slow=5.5,SNR=2.1						
	0.2nm,0.4s						
BVAR	Borovoye Array	89.55	323	P	P	18 00 27.3	-0.8
	0.2nm,0.4s,baz=85,slow=3.5,SNR=2.1						
	0.2nm,0.4s						

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*IDC **17** 17:58:08.8±0.7, 28°.15N×87°.15E, h0^{km}, mb4.1/22, mbtmp4.1/25, ML4.0/3, Error ellipse: s-maj=20.6km s-min=12.5km az=32.0*

*BJI **17** 17:58:12.7, 28°.25N×87°.28E, h24^{km}, mB4.2/1, mb4.4/21*

*MOS **17** 17:58:12.1±0.8, 28°.14N×87°.16E, h33^{km}, mb4.6/9, Error ellipse: s-maj=11.0km s-min=4.5km az=122.8*

*DMN **17** 17:58:18.5±0.0, 28°.23N×87°.21E, h108^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

*NDI **17** 17:58:20.1±2.9, 28°.22N×87°.22E, h60^{km}, ML4.5, MW4.5, mb4.6(NEIC)*

*NEIC **17** 17:58:20.6±1.8, 28°.4N±0°.1×87°.17E±0°.09, h85^{km}±9^{km}, mb4.6/37, Error ellipse: s-maj=19.7km s-min=9.1km az=156.0*

ISC 17 17:58:19.3±0.7, 28°.35N±0°.05×87°.20E±0°.04, h84^{km}±7^{km}, n168, σ1^{s}91/189, mb4.3/43, 20C-12D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVN	Everest	0.51	221		Pn	17 58 36.2	+1.8
EVN				Sn	Sn	17 58 47.3	+1.9
GUN	Gumba	1.24	250	Pg	Pn	17 58 44.2	+2.3
	baz=255,slow=0.0						
GUN	Gumba	1.24	250	Pg	Pn	17 58 44.9	+3.0
	baz=255,slow=0.0						
GUN				Sg	Sn	17 59 01.9	+3.1
	baz=255,slow=0.0						
GUN				Sg	Sn	17 59 01.9	+3.1
	baz=255,slow=0.0						
GUN				Sg	Sn	17 59 01.9	+3.1
	baz=255,slow=0.0						
GUN				Sg	Sn	17 59 01.9	+3.1
	4μm,0.3s,baz=255,slow=0.0						
RAMN	Ramite	1.49	201	Pg	Pn	17 58 45.5	+0.6
	baz=203,slow=0.0						
RAMN				Sg	Sn	17 59 04.6	+0.4
	12μm,0.4s,baz=203,slow=0.0						
ODAN	Odare	1.49	173	Pg	Pn	17 58 45.5	+0.5
	baz=173,slow=0.0						
ODAN				Sg	Sn	17 59 03.5	-0.8
	11μm,0.2s,baz=173,slow=0.0						
GTK	Tadong	1.61	129	*e*P	Pn	17 58 45.4	-1.0
GTK				IAML		17 59 06.1	
	comp=E,2μm,0.2s						
PKI	Pulchoki	1.76	244	Pg	Pn	17 58 50.5	+2.0
	baz=248,slow=0.0						
PKI				Sn	Sn	17 59 12.7	+2.1
	comp=E,3μm,0.5s,baz=248,slow=0.0						
PKIN	Phulchoki	1.77	245	Pg	Pn	17 58 50.3	+1.8
	baz=248,slow=0.0						
PKIN				Sn	Sn	17 59 12.8	+2.1
	comp=E,3μm,0.3s,baz=248,slow=0.0						
KKN	Kakani	1.78	252	Pg	Pn	17 58 51.3	+2.6
	baz=256,slow=0.0						
KKN				Sg	Sn	17 59 13.5	+2.5
	comp=E,6μm,0.2s,baz=256,slow=0.0						
DMN	Daman	1.99	249	Pg	Pn	17 58 53.2	+1.8
	baz=252,slow=0.0						
DMN				Sn	Sn	17 59 17.9	+2.0
	comp=E,4μm,0.4s,baz=252,slow=0.0						
GKN	Gorkha	2.29	262	Pg	Pn	17 58 56.1	+0.8
	baz=265,slow=0.0						
GKN				Sn	Sn	17 59 24.7	+1.9
	comp=E,3μm,0.4s,baz=265,slow=0.0						
DANN	Dangsing	3.03	271	Pn	Pn	17 59 05.6	+0.2
	baz=273,slow=0.0						
DANN				Sn	Sn	17 59 40.8	-0.1
	comp=E,5μm,0.5s,baz=273,slow=0.0						
KOLN	Koldanda	3.23	261	Pg	Pn	17 59 08.1	+0.1
	baz=263,slow=0.0						
KOLN				Sg	Sn	17 59 45.4	-0.2
	comp=E,2μm,0.5s,baz=263,slow=0.0						
LSA	Lhasa	3.72	68		Pn	17 59 16.2	+1.4
LSA				Sn	Sn	17 59 58.0	+0.3
LSA	Lhasa	3.72	68	Pg	Pn	17 59 16.3	+1.4
PYUN	Piuthan	3.72	267	Pn	Pn	17 59 14.1	-0.6
	baz=269,slow=0.0						
PYUN				Sn	Sn	17 59 56.1	-1.4
	comp=E,3μm,0.5s,baz=269,slow=0.0						
TAWA	Tawang	4.20	99	*e*P	Pn	17 59 21.0	-0.4
TAWA				*e*S	Sn	18 00 06.3	-3.1
TAWA				IAML		18 00 08.8	
	comp=E,1μm,0.3s						
TAWA				IAML		18 00 08.8	
	comp=N,2μm,0.4s						
KNTI	KHUNTI	5.54	199	*e*P	Pn	17 59 32.2	-7.2
KNTI				*e*S	Sn	18 00 24.3	-18
KNTI				IAML		18 00 41.6	
	comp=E,2μm,0.2s						
KNTI				IAML		18 00 42.2	
	comp=N,2μm,0.2s						
ALBI	Allahabad	5.69	239	*e*P	Pn	17 59 40.6	-0.7
ALBI				*e*S	Sn	18 00 41.0	-4.1
ALBI				IAML		18 00 46.3	
	comp=E,237nm,0.4s						
ALBI				IAML		18 00 48.0	
	comp=N,368nm,0.4s						
ZIRO	ZIRO	5.94	96	*e*P	Pn	17 59 43.7	-1.2
ZIRO				*e*S	Sn	18 00 46.0	-5.7
ZIRO				IAML		18 00 48.6	
	comp=N,4μm,0.4s						
ZIRO				IAML		18 00 49.0	
	comp=E,8μm,0.8s						
PTH	Pithoragarh	6.23	283	*e*P	Pn	17 59 49.5	+0.6
PTH				*e*S	Sn	18 00 56.3	-2.4
PTH				IAML		18 00 58.7	
	comp=N,188nm,0.7s						
PTH				IAML		18 00 59.6	
	comp=E,254nm,0.4s						
IMP	Imphal	6.98	119	*e*P	Pn	17 59 58.3	-0.7
IMP				*e*S	Sn	18 01 10.4	-6.7
IMP				IAML		18 01 18.3	
	comp=N,189nm,0.6s						
IMP				IAML		18 01 18.3	
	comp=E,99nm,0.7s						
JOSI	Joshimath	7.01	290	*e*P	Pn	18 00 01.3	+1.7
JOSI				IAML		18 01 23.6	
	comp=E,354nm,0.6s						
JHSG	JHARSUGUGA	7.25	206	*e*P	Pn	18 00 01.5	-1.2
JHSG				*e*S	Sn	18 01 16.2	-7.4
JHSG				*e*S		18 01 16.3	
JHSG				IAML		18 01 20.2	
	comp=E,1μm,0.6s						
JHSG				IAML		18 01 22.8	
	comp=N,822nm,0.4s						
BLSP	Bilaspur	7.70	218	*e*P	Pn	18 00 08.3	-0.6
BLSP				*e*S	Sn	18 01 26.9	-7.7
BLSP				IAML		18 01 32.4	
	comp=E,167nm,0.3s						
BLSP				IAmb	IAmb	18 01 36.3	
	comp=N,200nm,1.0s						
DDI	Dehra Dun	8.22	286	*e*P	Pn	18 00 16.9	+1.1
DDI				IAML		18 01 48.0	
	comp=E,1μm,0.5s						
JHNI	Jhansi	8.24	252	*e*P	Pn	18 00 13.7	-2.5
JHNI				*e*S	Sn	18 01 37.7	-10
JHNI				IAmb	IAmb	18 01 41.6	
	comp=N,230nm,0.7s						
JHNI				IAmb	IAmb	18 01 43.5	
	comp=E,165nm,0.6s						
KLP	Kalpa	8.38	294	*e*P	Pn	18 00 19.1	+0.7
KLP				*e*S	Sn	18 01 49.5	-2.1
KLP				IAML		18 01 58.0	
	comp=N,241nm,1.0s						
KLP				IAML		18 01 59.5	
	comp=E,213nm,0.8s						
NPLP	NPLP New Delhi	8.83	274	*e*P	Pn	18 00 24.4	+0.2
NPLP				*e*S	Sn	18 01 55.0	-6.9
NPLP				IAML		18 01 57.3	
	comp=N,428nm,0.3s						
NPLP				IAML		18 01 59.4	
	comp=E,250nm,0.3s						
SMLA	Simla	9.15	290	*e*P	Pn	18 00 28.3	-0.1
SMLA				IAML		18 02 11.4	
	comp=E,295nm,0.4s						
KUDL	Kundal	9.45	271	*e*P	Pn	18 00 32.5	0.0
KUDL				*e*S	Sn	18 02 09.3	-7.6
KUDL				IAML		18 02 14.1	
	comp=E,84nm,0.5s						
KUDL				IAML		18 02 16.6	
	comp=N,102nm,0.4s						
GUNA	GUNA	9.57	250	*e*P	Pn	18 00 31.4	-2.9
GUNA				*e*S	Sn	18 02 13.1	-7.1
GUNA				IAML		18 02 14.7	
	comp=N,266nm,0.3s						
GUNA				IAML		18 02 15.4	
	comp=E,203nm,0.4s						
GOMU	GeErMu	10.14	38	P	Pn	18 00 41.8	-0.5
GOMU				pP		18 00 44.1	
GOMU				sP		18 00 48.8	
GOMU				pmax	pmax		
	comp=E,3.0nm,0.8s						
BHPL	Bhopal	10.16	242	*e*P	Pn	18 00 40.0	-2.4
BHPL				*e*S	Sn	18 02 25.4	-9.3
BHPL				IAML		18 02 28.6	
	comp=E,123nm,0.3s						
BHPL				IAML		18 02 28.9	
	comp=N,241nm,0.9s						
DHRM	DHARAMSHALA	10.19	295	*e*P	Pn	18 00 41.8	-1.1
DHRM				*e*S	Sn	18 02 30.2	-5.2
DHRM				IAML		18 02 33.9	
	comp=E,282nm,0.6s						
DHRM				IAML		18 02 40.4	
	comp=N,344nm,1.0s						
AKL	Akola	11.99	233	*e*P	Pn	18 01 03.9	-3.3
AKL				*e*S	Sn	18 03 08.4	-11
AKL				IAML		18 03 11.6	
	comp=E,56nm,0.4s						
NIL	Nilore	13.07	297		Pn	18 01 18.4	-3.3
NIL	Nilore	13.07	297	P	Pn	18 01 18.4	-3.3
HYB	Hyderabad	13.48	218	*e*P	P	18 01 36.0	+2.6
KSH	Kashi	14.51	323	P	Pn	18 01 37.6	-2.9
KSH				pP	P	18 01 45.6	+0.8
CMAR	Chiang Mai Arr	14.59	130	Pn	Pn	18 01 36.7	-4.9
	baz=316,slow=10,SNR=2.7						
	comp=E,0.6nm,0.7s						
CD2	Chengdu	14.63	76	P	Pn	18 01 40.4	-1.7
CD2				pmax	pmax		
	comp=E,20nm,0.9s						
GTA	Gaotai	15.20	40	*e*P	Pn	18 01 47.0	-2.4
GTA				sP	P	18 01 53.9	+1.4
GTA				pmax	pmax		
	comp=E,7.0nm,1.1s						
TARG	Taragay, Kyrgy	15.39	333		Pn	18 01 51.9	-0.1
TARG	Taragay, Kyrgy	15.39	333	P	Pn	18 01 51.9	-0.1
TARG				pmax	pmax		
	comp=Z,9.0nm,0.8s						
WMQ	Urumqi	15.45	1	*e*P	P	18 01 56.4	+1.3
PRZ	Przheval'sk	15.81	335		P	18 02 00.6	+1.3
PRZ				IAmb	IAmb	18 02 03.5	
	comp=Z,30nm,0.8s						
PRZ	Przheval'sk	15.81	335	P	P	18 02 00.6	+1.3
PRZ				pmax	pmax		
	comp=Z,30nm,0.8s						
NRN	Naryn	15.94	328		Pn	18 01 57.8	-1.1
NRN	Naryn	15.94	328	P	Pn	18 01 57.8	-1.1
NRN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KDJ	Kajisay	15.98	332		Pn	18 01 58.1	-1.1
KDJ				IAmb	IAmb	18 02 05.9	
	comp=Z,18nm,0.7s						
KDJ	Kajisay	15.98	332	P	Pn	18 01 58.1	-1.1
KDJ				pmax	pmax		
	comp=Z,18nm,0.7s						
LZH	Lanzhou	16.05	57	*e*P	P	18 02 02.8	+0.8
LZH				pmax	pmax		
	comp=Z,36nm,1.3s						
KBL	Kabul	16.67	296		Pn	18 02 05.2	-2.7
KBL				IAmb	IAmb	18 02 11.7	
	comp=Z,20nm,0.7s						
KBL	Kabul	16.67	296	P	Pn	18 02 05.2	-2.7
KBL				pmax	pmax		
	comp=Z,20nm,0.7s						
BOOM	Boomskoye usch	16.81	330		Pn	18 02 08.7	-0.8
BOOM				IAmb	IAmb	18 02 15.2	
	comp=Z,13nm,0.6s						
BOOM	Boomskoye usch	16.81	330	P	Pn	18 02 08.7	-0.8
BOOM				pmax	pmax		
	comp=Z,13nm,0.6s						
OHH	Osh	16.97	319	P	Pn	18 02 09.5	-1.9
OHH				pmax	pmax		
	comp=Z,20nm,0.9s						
ARSB	Arslanbob	17.40	322	P	Pn	18 02 16.2	-0.5
ARSB				IAmb	IAmb	18 02 20.6	
	comp=Z,21nm,0.6s						
ARSB	Arslanbob	17.40	322	P	Pn	18 02 16.2	-0.5
ARSB				pmax	pmax		
	comp=Z,21nm,0.6s						
AAK	Ala-Archa	17.58	328		Pn	18 02 19.5	+0.5

AAK	**Ala-Archa**	**17.58**	**328**	P	**P**	**18 02 18.8**	**0.0**
	comp=Z,1.0nm,0.3s,baz=149,slow=5.4,SNR=26						
	comp=Z,8.1nm,0.7s						
AAK	**Ala-Archa**	**17.58**	**328**	⇑*e*P	**P**	**18 02 18.6**	**-0.3**
AAK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
GAR	**Garm**	**17.59**	**312**		**P**	**18 02 15.7**	**-3.2**
GAR				IAmb	IAmb	18 02 27.2	
	comp=Z,14nm,0.4s						
BTK	**Batken**	**17.85**	**315**		**P**	**18 02 20.0**	**-1.8**
BTK				IAmb	IAmb	18 02 26.4	
	comp=Z,29nm,0.5s						
BTK	**Batken**	**17.85**	**315**	P	**P**	**18 02 20.0**	**-1.8**
BTK				pmax	pmax		
	comp=Z,29nm,0.5s						
ARK	**Arkit**	**18.28**	**321**	P	**P**	**18 02 26.0**	**-0.5**
ARK				pmax	pmax		
	comp=Z,23nm,0.9s						
SIMJ	**Simiganj**	**18.29**	**309**		**P**	**18 02 24.0**	**-2.7**
SIMJ				IAmb	IAmb	18 02 30.8	
	comp=Z,22nm,0.6s						
DZET	**Dzherino**	**18.49**	**309**	P	**P**	**18 02 29.4**	**+0.6**
DZET				pmax	pmax		
	comp=Z,20nm,0.9s						
TRKS	**Terek-Say**	**18.57**	**319**	P	**P**	**18 02 28.6**	**-1.1**
TRKS				pmax	pmax		
	comp=Z,11nm,0.9s						
MK31	**Makanchi Array**	**18.81**	**350**	*de*P	**P**	**18 02 33.2**	**+1.0**
MK31				pmax	pmax		
	comp=Z,1.0nm,0.2s						
MKAR	**Makanchi Array**	**18.81**	**350**		**P**	**18 02 33.1**	**+0.9**
MKAR	**Makanchi Array**	**18.81**	**350**	P	**Pn**	**18 02 33.5**	**-0.1**
	comp=Z,2.1nm,0.3s,baz=170,slow=9.8,SNR=82						
	comp=Z,6.5nm,0.5s						
MAKZ	**Makanchi**	**18.88**	**349**		**P**	**18 02 28.9**	**-4.0**
MAKZ	**Makanchi**	**18.88**	**349**	P	**P**	**18 02 28.9**	**-4.0**
MAKZ				pmax	pmax		
	comp=Z,11nm,0.6s						
ENH	**Enshi**	**19.53**	**79**		**P**	**18 02 39.3**	**-0.9**
ENH				IAmb	IAmb	18 02 46.8	
	comp=Z,17nm,0.8s						
KK31	**Karatay Array**	**19.95**	**322**		**P**	**18 02 45.8**	**+1.2**
KK31	**Karatay Array**	**19.95**	**322**	*i* P	**P**	**18 02 46.2**	**+1.6**
KKAR	**Karatay Array**	**19.95**	**322**		**P**	**18 02 45.8**	**+1.3**
KKAR	**Karatay Array**	**19.95**	**322**		**P**	**18 02 46.0**	**+1.4**
KKAR	**Karatay Array**	**19.95**	**322**	P	**P**	**18 02 46.0**	**+1.4**
LYN	**LuoYang**	**22.40**	**68**	P	**P**	**18 03 12.0**	**+1.1**
LYN				pmax	pmax		
	comp=Z,13nm,0.9s						
KURBB	**Kurchatov Arra**	**23.20**	**346**	P	**P**	**18 03 19.6**	**+0.8**
	comp=Z,3.2nm,0.5s,baz=162,slow=10,SNR=33						
	comp=Z,3.2nm,0.5s						
KURK	**Kurchatov**	**23.27**	**346**		**P**	**18 03 19.7**	**+0.3**
KURK	**Kurchatov**	**23.27**	**346**	⇑*e*P	**P**	**18 03 20.5**	**+1.1**
KURK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SONM	**Songino Array**	**24.51**	**32**	P	**P**	**18 03 32.2**	**+1.4**
	comp=Z,2.1nm,0.3s,baz=219,slow=10,SNR=19						
	comp=Z,2.1nm,0.3s						
ULN	**Ulaanbaatar**	**24.85**	**33**	P	**P**	**18 03 33.7**	**-0.2**
ULN	**Ulaanbaatar**	**24.85**	**33**	⇓*e*P	**P**	**18 03 35.4**	**+1.5**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ZAK	**Zakamensk**	**25.17**	**25**	*e*P	**P**	**18 03 39.8**	**+3.0**
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ZALV	**Zalesovo Beam**	**25.64**	**357**		**P**	**18 03 41.4**	**+0.5**
ZALV	**Zalesovo Beam**	**25.64**	**357**	P	**P**	**18 03 42.2**	**+1.4**
	comp=Z,2.7nm,0.4s,baz=182,slow=7.9,SNR=14						
	comp=Z,2.7nm,0.4s						
BVA0	**Borovoye Array**	**27.61**	**338**	*i* P	**P**	**18 03 59.9**	**+1.3**
BVAR	**Borovoye Array**	**27.61**	**338**	P	**P**	**18 03 60.0**	**+1.4**
	comp=Z,1.4nm,0.4s,baz=143,slow=10.0,SNR=14						
	comp=Z,1.4nm,0.4s						
BVAR	**Borovoye Array**	**27.61**	**338**	P	**P**	**18 04 00.0**	**+1.4**
BRVK	**Borovoye**	**27.67**	**338**	⇑*e*P	**P**	**18 04 00.0**	**+0.8**
AB31	**Akbulak array**	**29.51**	**322**		**P**	**18 04 15.2**	**-0.3**
AB31				IAmb	IAmb	18 04 18.2	
	comp=Z,8.4nm,0.6s						
AB31	**Akbulak array**	**29.51**	**322**	*e*P	**P**	**18 04 17.5**	**+2.0**
ABKAR	**Akbulak array**	**29.51**	**322**		**P**	**18 04 16.5**	**+1.0**
ABKAR	**Akbulak array**	**29.51**	**322**	IAmb	IAmb	18 04 18.2	
	comp=Z,8.4nm,0.6s						
ARTI	**Arti**	**34.71**	**332**	*d i*P	**P**	**18 05 02.2**	**+1.3**
ARTI						18 06 16.6	
ARTI						18 07 36.6	
ARTI				S	S	18 10 34.0	+9.4
ARTI				SS	**SnSn**	**18 12 41.6**	**-4.1**
ARTI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KSRS	**Korea Array**	**35.16**	**64**	P	**P**	**18 05 04.5**	**-0.5**
	comp=Z,2.0nm,0.5s,baz=262,slow=8.6,SNR=11						
	comp=Z,2.0nm,0.5s						
KSRS	**Korea Array**	**35.16**	**64**	*e*P	**P**	**18 05 04.4**	**-0.5**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KBZ	**Khabaz**	**38.49**	**306**	⇓*e*P	**P**	**18 05 33.1**	**-0.1**
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SHA1	**Shidzhatmaz**	**38.67**	**306**	⇑*e*P	**P**	**18 05 35.9**	**+0.9**
USRK	**Ussuriysk Ar.**	**38.92**	**54**	P	**P**	**18 05 37.3**	**+0.5**
	comp=Z,2.3nm,0.6s,baz=254,slow=11,SNR=5.8						
	comp=Z,2.3nm,0.6s						
KLR	**Kul'dur**	**39.79**	**46**	P	**P**	**18 05 44.5**	**+0.5**
	comp=Z,2.0nm,0.7s,baz=270,slow=11,SNR=4.3						
	comp=Z,2.0nm,0.7s						
KLR	**Kul'dur**	**39.79**	**46**	⇑*e*P	**P**	**18 05 44.7**	**+0.8**
KLR				pmax	pmax		
	comp=Z,7.0nm,1.7s						
KIRV	**Kirov**	**39.89**	**330**	*de*P	**P**	**18 05 46.0**	**+1.4**
MJAR	**Matsushiro Arr**	**43.40**	**66**	P	**P**	**18 06 13.6**	**-0.1**
	comp=Z,2.0nm,0.7s,baz=274,slow=9.6,SNR=6.6						
	comp=Z,2.0nm,0.7s						
MMAI	**Mount Meron Ar**	**44.42**	**289**	P	**P**	**18 06 21.0**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=87,slow=8.8,SNR=2.2						
	comp=Z,0.3nm,0.3s						
BR131	**Keskin Array S**	**45.21**	**299**	⇓*e*P	**P**	**18 06 28.8**	**+0.6**
BRTR	**Keskin Array B**	**45.21**	**299**	P	**P**	**18 06 29.1**	**+0.9**
	comp=Z,1.5nm,0.7s,baz=98,slow=8.0,SNR=10.0						
	comp=Z,1.5nm,0.7s						
BRTR	**Keskin Array B**	**45.21**	**299**	*e*P	**P**	**18 06 29.5**	**+1.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**48.56**	**314**	P	**P**	**18 06 54.3**	**+0.4**
	comp=Z,1.3nm,0.3s,baz=83,slow=6.6,SNR=22						
	comp=Z,1.3nm,0.3s						
AKBB	**Malin Array Si**	**48.56**	**314**		**P**	**18 06 53.6**	**-0.4**
AKBB				IAmb	IAmb	18 06 55.8	
	comp=Z,5.8nm,0.5s						
AKBB	**Malin Array Si**	**48.56**	**314**	*de*P	**P**	**18 06 54.1**	**+0.1**
KIEV	**Kiev**	**48.57**	**314**		**P**	**18 06 53.7**	**-0.4**
KIEV				IAmb	IAmb	18 06 55.8	
	comp=Z,5.1nm,0.5s						
KIEV	**Kiev**	**48.57**	**314**	⇑P	**P**	**18 06 54.5**	**+0.5**
KIEV	**Kiev**	**48.57**	**314**	⇑P	**P**	**18 06 54.5**	**+0.5**
TIXI	**Tiksi**	**48.96**	**16**	P	**P**	**18 06 56.6**	**-0.1**
TIXI				IAmb	IAmb	18 07 39.1	
	comp=Z,5.3nm,1.4s						
TIXI	**Tiksi**	**48.96**	**16**	⇓P	**P**	**18 06 58.0**	**+1.3**
SORM	**Soroca**	**48.99**	**311**	⇑P	**P**	**18 06 57.9**	**+0.6**
SORM	**Soroca**	**48.99**	**311**	⇑P	**P**	**18 06 57.9**	**+0.6**
CFR	**Carcaliu**	**49.12**	**307**	⇑P	**P**	**18 06 59.6**	**+1.3**
CFR	**Carcaliu**	**49.12**	**307**	⇑P	**P**	**18 06 59.6**	**+1.3**
VRI	**Vrincioaia**	**50.10**	**308**	⇑P	**P**	**18 07 08.1**	**+2.3**
VRI	**Vrincioaia**	**50.10**	**308**	⇑P	**P**	**18 07 08.1**	**+2.3**
PLOR	**Plostina**	**50.15**	**308**	⇑P	**P**	**18 07 08.7**	**+2.5**
PLOR	**Plostina**	**50.15**	**308**	⇑P	**P**	**18 07 08.7**	**+2.5**
NACGM	**Naroch**	**50.44**	**319**	*e*P	**P**	**18 07 08.9**	**+0.8**
	comp=Z,9.0nm,0.9s,baz=96						
TURR	**Turia**	**50.59**	**308**	⇑P	**P**	**18 07 11.6**	**+2.1**
MLR	**Muntele Rosu**	**50.66**	**307**		**P**	**18 07 11.7**	**+1.6**
MLR	**Muntele Rosu**	**50.66**	**307**	⇓P	**P**	**18 07 12.6**	**+2.4**
MLR	**Muntele Rosu**	**50.66**	**307**	⇓P	**P**	**18 07 12.6**	**+2.4**
DOPR	**Dopca**	**51.03**	**308**	⇓P	P	18 07 06.3	-6.5
BURAR	**Bucovina Array**	**51.10**	**310**	⇑P	**P**	**18 07 14.8**	**+1.4**
BURAR	**Bucovina Array**	**51.10**	**310**	⇑P	**P**	**18 07 14.8**	**+1.4**
FINES	**FINESS Array B**	**51.77**	**328**	P	**P**	**18 07 18.9**	**+0.9**
	comp=Z,4.0nm,0.4s,baz=109,slow=8.2,SNR=66						
	comp=Z,4.0nm,0.4s						
PABE	**Paberze**	**52.10**	**320**	P	**P**	**18 07 20.2**	**-0.3**
KWP	**Kalwaria Pacla**	**52.72**	**312**	P	**P**	**18 07 26.6**	**+1.3**
KWP				pmax	pmax		
	comp=Z,14nm,1.0s						
PAIG	**Paliouri**	**52.83**	**300**	P	**P**	**18 07 27.6**	**+1.4**
PAIG				pmax	pmax		
	comp=Z,21nm,1.3s						
DRGR		**52.84**	**309**	P	**P**	**18 07 27.9**	**+1.6**
DRGR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KNT	**Kendrikon**	**53.25**	**302**	P	**P**	**18 07 30.1**	**+0.8**
KNT				pmax	pmax		
	comp=Z,13nm,0.9s						
SURR	**Surduc**	**53.32**	**308**	⇑P	**P**	**18 07 31.9**	**+2.1**
MDVR	**Moldovita**	**53.70**	**306**	⇓P	**P**	**18 07 32.5**	**-0.1**
ARCES	**ARCESS Array B**	**53.90**	**337**	P	**P**	**18 07 34.9**	**+1.3**
	comp=Z,3.5nm,0.7s,baz=100,slow=7.9,SNR=15						
ARCES				PcP	**PcP**	**18 08 38.9**	**+0.9**
	comp=Z,2.2nm,0.8s,baz=100,slow=3.8,SNR=1.6						
	comp=Z,3.5nm,0.7s						
HFS	**Hagfors**	**57.71**	**325**	P	**P**	**18 08 01.6**	**+0.6**
	comp=Z,5.0nm,0.4s,baz=98,slow=9.1,SNR=29						
	comp=Z,5.0nm,0.4s						
SPITS	**Spitsbergen Ar**	**58.54**	**347**	P	**P**	**18 08 07.9**	**+1.4**
	comp=Z,0.8nm,0.4s,baz=116,slow=9.7,SNR=5.7						
	comp=Z,0.8nm,0.4s						
GERES	**GERESS Array B**	**58.66**	**312**	P	**P**	**18 08 08.8**	**+0.9**
	comp=Z,1.4nm,0.8s,baz=74,slow=5.7,SNR=9.1						
	comp=Z,1.4nm,0.8s						
KHC	**Kasperske Hory**	**58.70**	**312**	⇑*e*P	**P**	**18 08 09.5**	**+1.3**
KHC				pmax	pmax		
	comp=Z,12nm,2.5s						
NORES	**NORESS Array B**	**58.75**	**326**	P	**P**	**18 08 08.5**	**+0.3**
CLL	**Collm**	**58.77**	**315**	IAmb	IAmb	18 08 10.0	
	comp=Z,3.7nm,0.8s						
NB2	**NORSAR Subarra**	**58.90**	**327**	P	**P**	**18 08 09.3**	**0.0**
	comp=Z,1.8nm,0.5s,baz=86,slow=6.9						
NB2	**NORSAR Subarra**	**58.90**	**327**	P	**P**	**18 08 09.6**	**+0.3**
NOA	**NORSAR Array B**	**58.90**	**327**	P	**P**	**18 08 09.4**	**+0.1**
	comp=Z,1.6nm,0.5s,baz=90,slow=6.7,SNR=7.9						
	comp=Z,1.6nm,0.5s						
NOA	**NORSAR Array B**	**58.90**	**327**	*e*P	**P**	**18 08 09.4**	**+0.1**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NRCA	**Norcia**	**60.15**	**305**		**P**	**18 08 19.0**	**+0.7**
NRCA				IAmb	IAmb	18 08 19.9	
	comp=Z,4.7nm,0.6s						
MURB	**Monte Urbino**	**60.48**	**306**	P	**P**	**18 08 22.3**	**+1.8**
FUORN	**Ofenpass-Fuorn**	**61.34**	**310**	P	**P**	**18 08 26.3**	**-0.2**
FUORN				IAmb	IAmb	18 08 28.4	
	comp=Z,5.0nm,1.2s						
MSSA	**Maissana**	**62.36**	**308**	P	**P**	**18 08 33.5**	**+0.3**
WRA	**Warramunga Arr**	**66.18**	**131**	P	**P**	**18 08 58.3**	**0.0**
	comp=Z,0.6nm,0.5s,baz=326,slow=6.6,SNR=15						
	comp=Z,0.6nm,0.5s						
EKA	**Eskdalemuir Ar**	**67.39**	**322**	P	**P**	**18 09 06.0**	**+0.5**
	comp=Z,0.9nm,0.4s,baz=73,slow=5.8,SNR=6.6						
	comp=Z,0.9nm,0.4s						
EKA	**Eskdalemuir Ar**	**67.39**	**322**	P	**P**	**18 09 06.0**	**+0.5**
ASAR	**Alice Springs**	**68.56**	**134**	P	**P**	**18 09 13.3**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=318,slow=5.9,SNR=26						
	comp=Z,0.8nm,0.7s						
ESDC	**Sonseca Array**	**73.34**	**306**	P	**P**	**18 09 42.9**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=48,slow=6.4,SNR=6.5						
	comp=Z,0.6nm,0.7s						
ILAR	**Eielson Array**	**78.16**	**21**	P	**P**	**18 10 10.1**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=318,slow=5.9,SNR=4.2						
	comp=Z,0.4nm,0.6s						
ILAR	**Eielson Array**	**78.16**	**21**	*e*P	**P**	**18 10 11.3**	**+2.2**
KOOLE	**Kule**	**82.31**	**239**	P	**P**	**18 10 31.7**	**-0.5**
KOOLE				IAmb	IAmb	18 10 37.8	
	comp=Z,17nm,1.5s						

IDC 17 18:06:13.0±2.3**, 30°.40S**×**178°.49W, h0**^{km}**, mb3.7**/3**,**
mbtmp3.7/3**, Error ellipse: s-maj=65.2km s-min=41.9km**
az=40.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.64**	**204**	Pn	Pn	18 08 11.7	-7.6
	0.2nm,0.3s,baz=0.0,slow=6.1,SNR=3.0						
URZ				Sn	Sn	18 09 45.9	-12
	0.6nm,0.3s,baz=14,slow=19,SNR=6.7						
ASAR	**Alice Springs**	**42.69**	**267**	P	P	18 14 11.6	-0.2
	0.6nm,0.6s,baz=112,slow=7.6,SNR=12						
	0.6nm,0.6s						
WRA	**Warramunga Arr**	**43.68**	**272**	P	P	18 14 20.6	+0.7
	0.4nm,0.4s,baz=115,slow=7.9,SNR=5.7						
	0.4nm,0.4s						
QSPA	**South Pole Qui**	**59.71**	**180**	P	P	18 16 19.5	+0.3
	0.8nm,0.7s,baz=29,slow=1.2,SNR=2.2						
	0.8nm,0.7s						
H03S2	**Juan Fernandez**	**80.81**	**124**	T	T	19 48 50.2	
	baz=243,slow=74,SNR=10.0						
H03S1	**Juan Fernandez**	**80.83**	**124**	T	T	19 48 58.5	
	baz=243,slow=74,SNR=10						
H03S3	**Juan Fernandez**	**80.83**	**124**	T	T	19 48 58.6	
	baz=243,slow=74,SNR=11						
H03N3	**Juan Fernandez**	**81.01**	**123**	T	T	19 48 58.7	
	baz=242						
H03N2	**Juan Fernandez**	**81.01**	**123**	T	T	19 48 53.8	
	baz=242,slow=74,SNR=4.9						
H03N1	**Juan Fernandez**	**81.02**	**123**	T	T	19 48 59.1	
	baz=242,slow=74,SNR=4.9						
FINES	**FINESS Array B**	**145.00**	**340**	PKPbc	PKPbc	18 25 48.6	-2.2
	0.6nm,0.6s,baz=24,slow=3.8,SNR=3.4						

SSNC ***17*** *18:07:51.2*±*1.5, 19°.85N*×*75°.60W, h18*^{km}±*4*^{km}*, MD2.6,*
ML2.2, MW2.7
SDD ***17*** *18:07:52.3*±*1.9, 19°.89N*×*75°.58W, h32*^{km}±*93*^{km}*, MD3.2,*
ML2.3, MW2.7
ISC 17 18:07:49.3±1.1**, 19°.85N**±0°.07×**75°.57W**±0°.03**, h26**^{km}±8^{km}**,**
n18, σ**0**^{s}**.81**/30**, 3C-6D, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCC	**Rio Carpintero**	**0.19**	**321**	*e*P	**Pb**	**18 07 55.3**	**+0.4**
RCC				*e*S	**Sb**	**18 07 58.5**	**-0.2**
RCC				IAML		18 07 58.6	
	comp=E,2µm,0.2s						
MARVS	**Santiago de Cu**	**0.35**	**296**	*e*P	**Pb**	**18 07 57.2**	**+0.2**
MARVS				⇑*e*S	**Sb**	**18 08 01.9**	**-0.5**
MARVS				IAML		18 08 02.8	
	comp=N,659nm,0.2s						
MARVS				IAML		18 08 02.9	
	comp=E,248nm,0.1s						
GTBY	**Guantanamo Bay**	**0.44**	**80**	*e*P	**Pn**	**18 08 00.2**	**+0.3**
GTBY				*e*S	**Sn**	**18 08 06.8**	**-0.3**
GTBY				IAML		18 08 08.6	
	comp=E,183nm,0.2s						
GTBY				IAML		18 08 08.6	
	comp=E,211nm,0.1s						
GTBY	**Guantanamo Bay**	**0.44**	**80**	⇓*e*Pg	**Pn**	**18 08 00.3**	**+0.3**
GTBY				⇑*e*Sg	**Sn**	**18 08 07.6**	**+0.5**
GTBY				IAML		18 08 07.8	
	comp=N,261nm,0.5s						
GTBY				IAML		18 08 07.9	
	comp=E,352nm,0.6s						
PINC	**Pinares de May**	**0.67**	**342**	*e*P	**Pb**	**18 08 02.5**	**+0.2**
PINC				*e*S	**Sb**	**18 08 11.1**	**-0.2**
PINC				IAML		18 08 13.5	
	comp=E,320nm,0.1s						
PINC				IAML		18 08 13.8	
	comp=N,349nm,0.1s						
QMBU	**Quimbuelo**	**0.79**	**64**	*e*P	**Pn**	**18 08 04.8**	**0.0**
QMBU				*e*S	**Sn**	**18 08 15.8**	**-0.1**
QMBU				IAML		18 08 17.3	
	comp=N,89nm,0.2s						
QMBU				IAML		18 08 17.4	
	comp=E,174nm,0.1s						
QMBU	**Quimbuelo**	**0.79**	**64**	⇓*e*Pg	**Pn**	**18 08 04.9**	**0.0**
QMBU				*e*Sg	**Sn**	**18 08 16.6**	**+0.7**
QMBU				IAML		18 08 18.7	
	comp=E,195nm,0.2s						
QMBU				IAML		18 08 20.8	
	comp=N,135nm,0.2s						
QMBU				IAML		18 08 20.8	
	comp=N,135nm,0.2s						
CHIV	**Chivirico**	**0.81**	**279**	*e*P	**Pn**	**18 08 04.5**	**-0.5**
CHIV				⇑*e*S	**Sb**	**18 08 14.9**	**-0.3**
CHIV				IAML		18 08 17.7	
	comp=E,107nm,0.2s						
CHIV				IAML		18 08 17.8	
	comp=N,88nm,0.2s						
NMDO	**Nuevo Mundo**	**0.90**	**38**	*e*P	**Pb**	**18 08 06.7**	**+0.5**
NMDO				*e*S	**Sb**	**18 08 17.0**	**-0.8**
NMDO				IAML		18 08 19.9	
	comp=E,37nm,0.2s						
NMDO				IAML		18 08 20.4	
	comp=N,21nm,0.1s						
NMDO	**Nuevo Mundo**	**0.90**	**38**	*e*Pg	**Pb**	**18 08 06.7**	**+0.5**
NMDO				⇓*e*Sg	**Sn**	**18 08 18.7**	**+0.3**
NMDO				IAML		18 08 22.4	
	comp=N,33nm,0.2s						
NMDO				IAML		18 08 25.7	
	comp=E,47nm,0.5s						
NMDO				IAML		18 08 29.0	
	comp=N,40nm,1.0s						
YAR	**Yar**	**0.91**	**305**	*e*P	**Pn**	**18 08 05.9**	**-0.5**
YAR				⇓*e*S	**Sb**	**18 08 17.9**	**-0.2**
YAR				IAML		18 08 20.3	
	comp=E,23nm,0.1s						
YAR				IAML		18 08 20.9	
	comp=N,38nm,0.2s						
HLGC	**Holguin**	**1.13**	**336**	*e*P	**Pb**	**18 08 12.3**	**+2.1**
MASC	**Masc**	**1.30**	**75**	⇓*e*P	**Pn**	**18 08 12.2**	**+0.4**
MASC	**Masc**	**1.30**	**75**	*e*Pg	**Pb**	**18 08 12.4**	**-0.6**
MASC				IAML		18 08 36.5	
	comp=N,37nm,0.5s						
MASC				IAML		18 08 36.5	
	comp=N,37nm,0.5s						
MASC				IAML		18 08 37.7	
	comp=E,43nm,0.2s						
LMGC	**Las Mercedes**	**1.37**	**279**	*e*P	**Pn**	**18 08 12.3**	**-0.4**
LMGC				*e*S	**Sn**	**18 08 28.6**	**-1.4**
LMGC				IAML		18 08 33.6	
	comp=E,70nm,0.1s						
LMGC				IAML		18 08 33.7	
	comp=N,110nm,0.1s						
PILO	**Pilon**	**1.73**	**272**	⇓*e*P	**Pn**	**18 08 16.8**	**-0.9**
MTDJ	**Mount Denham**	**2.46**	**229**	*e*Pg	**Pn**	**18 08 29.8**	**+2.0**
MTDJ				IAML		18 09 35.0	
	comp=N,53nm,1.8s						
REDR	**Restauracion**	**4.00**	**99**	*e*Pg	**Pn**	**18 08 47.5**	**-1.3**
REDR				IAML		18 09 35.7	
	comp=N,9.8nm,0.2s						

IDC ***17*** *18:21:58.0*±*1.4, 21°.97S*×*169°.10E, h0*^{km}*, mb3.9/4,*
mbtmp3.9/5, ML3.5/1, Error ellipse: s-maj=43.5km
s-min=26.3km az=12.0
ISC 17 18:22:02.1±1.3**, 21°.8S**±0°.3×**169°.1E**±0°.1**, h31**^{km}**, n7,**
σ**0**^{s}**.44**/8**, mb4.0**/4**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.48**	**264**	Pn	**Pn**	**18 22 40.4**	**-0.1**
	9.6nm,0.3s,baz=85,slow=18,SNR=290						
DZM				Sn	**Sn**	**18 23 10.0**	**+0.1**
	16nm,0.3s,baz=75,slow=20,SNR=6.2						
	24nm,0.3s						
ASAR	**Alice Springs**	**32.47**	**260**	P	**P**	**18 28 30.5**	**+0.5**
	1.3nm,0.9s,baz=84,slow=9.1,SNR=13						
	1.3nm,0.9s						
WRA	**Warramunga Arr**	**32.50**	**267**	P	**P**	**18 28 29.6**	**-0.6**
	0.3nm,0.6s,baz=99,slow=8.8,SNR=5.2						
	0.3nm,0.6s						
QSPA	**South Pole Qui**	**68.23**	**180**	P	**P**	**18 32 59.7**	**+0.1**
	1.9nm,0.9s,baz=24,slow=2.8,SNR=4.5						
	1.9nm,0.9s						
SNAA	**Sanae**	**86.58**	**183**	P	**P**	**18 34 41.7**	**-0.3**
	1.9nm,1.0s,baz=173,slow=8.1,SNR=5.2						
	1.9nm,1.0s						
EKA	**Eskdalemuir Ar**	**146.05**	**352**	PKPbc	**PKPbc**	**18 41 38.5**	**-0.1**
	1.1nm,0.8s,baz=352,slow=1.4,SNR=1.8						
GERES	**GERESS Array B**	**146.69**	**330**	PKPbc	**PKPab**	**18 41 42.4**	**+0.4**
	0.6nm,0.7s,baz=35,slow=2.4,SNR=4.3						

TEH ***17*** *18:24:01.8, 38°.85N*×*44°.56E, h8*^{km}±*126*^{km}
AFAD ***17*** *18:24:02.4, 38°.93N*×*44°.58E, h7*^{km}±*3*^{km}*, ML2.3*
ISK ***17*** *18:24:02.4, 38°.97N*×*44°.49E, h5*^{km}*, ML2.5/7*
AZER ***17*** *18:24:03.3, 38°.92N*×*44°.60E, h8*^{km}*, ml2.6*
ISC 17 18:24:02.8±1.1**, 38°.93N**±0°.02×**44°.58E**±0°.02**, h6**^{km}±10^{km}**,**
n36, σ**1**^{s}**.58**/56**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAKU	**Maku**	**0.43**	**11**	Pg	**Pb**	**18 24 12.0**	**-1.1**
OZAP	**Van, Ozalp-Mer**	**0.53**	**240**	P	**Pg**	**18 24 12.7**	**-0.4**
OZAP				*i* IAML		18 24 21.0	
	comp=N,395nm,0.7s						
OZAP				S	**Sb**	**18 24 21.2**	**-1.6**
OZAP				*i* IAML		18 24 27.0	
	comp=E,321nm,0.5s						
CLDR	**Caldiran**	**0.56**	**293**	Pg	**Pg**	**18 24 12.1**	**-1.5**
CLDR				Sg	**Sg**	**18 24 20.7**	**-0.3**
CLDR	**Caldiran**	**0.56**	**293**	P	**Pg**	**18 24 12.2**	**-1.4**
CLDR				S	**Sg**	**18 24 21.8**	**+0.8**
CLDR				*i* IAML		18 24 29.0	
	comp=N,395nm,0.4s						
NAX	**Nakhchivan**	**0.75**	**71**	P	**Pn**	**18 24 18.7**	**-1.4**
NAX				S	**Sn**	**18 24 31.4**	**-0.6**
HYR	**Heyderabad**	**0.82**	**15**	P	**Pn**	**18 24 20.0**	**-1.0**
HYR				S	**Sn**	**18 24 34.2**	**+0.7**
SBZ	**Shahbuz**	**0.89**	**58**	P	**Pn**	**18 24 21.3**	**-0.8**
SBZ				S	**Sn**	**18 24 35.0**	**-0.4**
VANB	**Van**	**0.99**	**251**	Pg	**Pb**	**18 24 22.0**	**-0.5**
TVAN	**Van**	**1.00**	**247**	P	**Pb**	**18 24 22.1**	**-0.6**
TVAN				*i* IAML		18 24 44.0	
	comp=N,94nm,0.5s						
TVAN				*i* IAML		18 24 52.0	
	comp=E,94nm,0.5s						
IGDI	**IGDIR**	**1.02**	**338**	P	**Pb**	**18 24 22.2**	**-0.7**
IGDI				S	**Sn**	**18 24 42.4**	**+3.9**
IGDI				*i* IAML		18 24 43.0	
	comp=N,40nm,0.5s						
IGDI				*i* IAML		18 24 47.0	
	comp=E,68nm,1.0s						
ISHB	**Shabestar**	**1.04**	**128**	Pg	**Pg**	**18 24 21.4**	**-1.4**
TASB	**TASBURUN-IGDIR**	**1.09**	**346**	Pg	**Pg**	**18 24 23.4**	**-0.3**
ORD	**Ordubad**	**1.10**	**90**	P	**Pn**	**18 24 25.6**	**+0.6**
ORD				S	**Sn**	**18 24 43.0**	**+2.4**
GEVA	**Gevas**	**1.34**	**243**	P	**Pb**	**18 24 27.9**	**-0.6**
GEVA				S	**Sn**	**18 24 48.1**	**+1.5**
GEVA				*i* IAML		18 24 54.0	
	comp=N,54nm,0.7s						
GEVA				*i* IAML		18 24 56.0	
	comp=E,49nm,0.5s						
YOVA	**Hakkari_Yksek**	**1.36**	**190**	P	**Pg**	**18 24 28.9**	**0.0**
YOVA				S	**Sn**	**18 24 49.3**	**+2.3**
YOVA				*i* IAML		18 24 54.0	
	comp=E,36nm,0.6s						
YOVA				*i* IAML		18 24 55.0	
	comp=N,64nm,0.5s						
KOTA	**Agri, Merkez-K**	**1.38**	**310**	P	**Pg**	**18 24 28.7**	**-0.5**
KOTA				*i* IAML		18 24 57.0	
	comp=N,24nm,0.9s						
KOTA				*i* IAML		18 24 59.0	
	comp=E,28nm,1.0s						
AKDM	**Akdamar-Van**	**1.39**	**245**	Pn	**Pg**	**18 24 29.2**	**-0.3**
AKDM				Sn	**Sg**	**18 24 48.9**	**+1.4**
AGRB	**Hanur-Agry**	**1.39**	**298**	Pn	**Pb**	**18 24 28.7**	**-0.7**
ITBZ	**Tabriz**	**1.41**	**119**	Pg	**Pn**	**18 24 27.9**	**-1.3**
ADCV	**BITLIS_Adilcev**	**1.45**	**266**	P	**Pb**	**18 24 30.0**	**-0.4**
ADCV				S	**Sg**	**18 24 51.7**	**+2.2**
ADCV				*i* IAML		18 24 55.0	
	comp=N,34nm,0.5s						
ADCV				*i* IAML		18 24 55.0	
	comp=E,50nm,0.7s						
DORK	**Agr/Tutak/Do**	**1.47**	**289**	P	**Pg**	**18 24 30.5**	**-0.6**
DORK				S	**Sn**	**18 24 46.5**	**-3.4**
DORK				*i* IAML		18 25 08.0	
	comp=E,39nm,0.5s						
DORK				*i* IAML		18 25 16.0	
	comp=N,31nm,0.6s						
HAKT	**HAKKARI**	**1.53**	**207**	P	**Pn**	**18 24 30.4**	**-0.6**
HAKT				S	**Sg**	**18 24 53.9**	**+1.9**
HAKT				*i* IAML		18 24 54.0	
	comp=N,83nm,0.5s						
HAKT				*i* IAML		18 24 56.0	
	comp=E,64nm,0.6s						
MLAZ	**Malazgirt-MUS**	**1.59**	**278**	Pn	**Pb**	**18 24 31.8**	**-1.1**
IAZR	**Azarshahr**	**1.67**	**138**	Pg	**Pb**	**18 24 33.3**	**-0.8**
CUKT	**Cukurca**	**1.84**	**205**	Pn	**Pb**	**18 24 36.7**	**-0.4**
PERV	**Siirt/Pervari-**	**1.88**	**239**	P	**Pg**	**18 24 38.7**	**-0.1**
PERV				S	**Sg**	**18 25 05.9**	**+2.8**
PERV				*i* IAML		18 25 09.0	
	comp=N,79nm,0.5s						
GDB	**GEDABAY**	**2.01**	**26**	Pn	**Pg**	**18 24 41.7**	**+0.4**
GDB				Sn	**Sg**	**18 25 09.8**	**+2.5**
IHRS	**Heris**	**2.02**	**107**	Pn	**Pb**	**18 24 39.8**	**-0.4**
GANJ	**Ganja**	**2.18**	**37**	Pn	**Pg**	**18 24 44.2**	**-0.4**
GANJ				Sn	**Sg**	**18 25 14.9**	**+2.1**
QRD	**Qoradiz**	**2.19**	**75**	Pn	**Pg**	**18 24 43.7**	**-1.2**

QRD				Sn	**Sg**	**18 25 15.0**	**+1.7**
QZX	**Qazax, Azerbai**	**2.21**	**16**	Pn	**Pg**	**18 24 46.0**	**+0.7**
QZX				Sn	**Sg**	**18 25 17.3**	**+3.3**
GRMI	**Germi**	**2.59**	**92**	Pn	**Pb**	**18 24 48.2**	**-1.6**
YRD	**Yardimli**	**2.86**	**89**	Pn	**Pb**	**18 24 52.9**	**-1.5**
YRD				Sn	**Sb**	**18 25 31.0**	**+1.3**
LRK	**Lerik**	**2.95**	**94**	Pn	**Pb**	**18 24 54.5**	**-1.5**
ASTR	**Astara**	**3.31**	**95**	Pn	**Pb**	**18 24 58.5**	**-3.5**
IDHR	**Dehrash**	**4.46**	**160**	Pn	**Pn**	**18 25 11.0**	**-0.3**

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*IDC **17** 18:34:07.0±0.9, 10°.40N×62°.56W, h0^{km}, mb3.7/7, mbtmp3.8/10, ML3.6/3, MS3.3/3, Error ellipse: s-maj=25.1km s-min=14.2km az=173.0*

*TRN **17** 18:34:09.4, 10°.38N×62°.60W, h3^{km}, MD3.8, Gulf of Paria.*

*FUNV **17** 18:34:11.0, 10°.35N×62°.52W, h10^{km}, MW3.7*

ISC 17 18:34:08.2±1.6, **10°.34N**±0°.05×**62°.62W**±0°.04, **h8**^{km}±10^{km}, **n39**, σ**1^{s}.57**/57, **mb3.6**/7, **Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSMG	**Mucurapo Girls**	**1.12**	**73**	*e*P	**Pn**	**18 34 31.6**	**+1.2**
PSKH	**Kent House, Po**	**1.13**	**72**	*e*P	**Pn**	**18 34 31.9**	**+1.5**
PSKH				*e*S	**Sb**	**18 34 45.4**	**+0.4**
TPP	**Pointe-a-Pierr**	**1.15**	**91**	*e*P	**Pn**	**18 34 32.0**	**+1.3**
TPP				*e*S	**Sn**	**18 34 47.1**	**+0.4**
TRN	**Trinidad (W)**	**1.24**	**75**	*e*P	**Pg**	**18 34 31.9**	**-0.1**
TRN				*e*S	**Sn**	**18 34 48.5**	**-0.4**
TBH	**Brigand Hill**	**1.54**	**84**	*e*P	**Pg**	**18 34 38.2**	**+0.4**
GRFF	**Grenada Fort F**	**1.91**	**27**	*e*P	**Pn**	**18 34 42.4**	**+1.2**
GRFF				*e*S	**Sb**	**18 35 07.1**	**-0.4**
PCRV	**Puerto La Cruz**	**1.99**	**266**	Pn	**Pn**	**18 34 42.9**	**+0.5**
	12nm,0.3s,baz=83,slow=5.9,SNR=48						
PCRV				Lg	Lg	18 35 11.2	
	41nm,0.3s,baz=190,slow=18,SNR=8.2						
PCRV				LR	LR	18 35 52.7	
	comp=Z,306nm,18.2s,slow=52						
	45nm,0.4s						
TPR	**Prospect**	**2.00**	**65**	*e*P	**Pn**	**18 34 44.1**	**+1.7**
TPR				*e*S	**Sg**	**18 35 11.0**	**-1.5**
GRGR	**Grenville**	**2.02**	**28**	*e*P	**Pn**	**18 34 44.2**	**+1.5**
GRGR				*e*S	**Sb**	**18 35 09.6**	**-1.1**
GRW	**Mount Saint Ca**	**2.04**	**27**	*e*P	**Pn**	**18 34 44.7**	**+1.7**
GRW				*e*S	**Sg**	**18 35 12.0**	**-2.0**
GRSS	**Sisters**	**2.19**	**27**	*e*P	**Pn**	**18 34 46.9**	**+1.9**
GRSS				*e*S	**Sn**	**18 35 13.6**	**+1.3**
GCMP	**Grenada, Carri**	**2.44**	**29**	*e*P	**Pn**	**18 34 49.5**	**+1.1**
GCMP				*e*S	**Sn**	**18 35 20.0**	**+1.6**
SVT	**Saint Vincent**	**3.12**	**25**	*e*P	**Pn**	**18 34 58.5**	**+0.6**
SVT				*e*S	**Sn**	**18 35 36.1**	**+0.7**
SVB	**Belmont**	**3.21**	**25**	*e*P	**Pn**	**18 34 59.3**	**+0.2**
SVB				*e*S	**Sn**	**18 35 37.7**	**+0.1**
SLBI	**Saint Lucia, B**	**4.00**	**24**	*e*P	**Pn**	**18 35 12.2**	**+2.2**
SLBI				*e*S	**Sn**	**18 35 58.3**	**+1.2**
TACV	**Tcata**	**4.34**	**268**	*e*P	**Pn**	**18 35 16.6**	**+1.9**
TACV				*e*S	**Sn**	**18 36 06.0**	**+0.4**
H05S1	**Guadeloupe/Mar**	**4.42**	**23**	Pn	**Pn**	**18 35 16.3**	**+0.5**
H05S1				Sn	**Sn**	**18 36 08.4**	**+0.9**
CACV	**CAICARA DEL OR**	**4.75**	**235**	*e*P	Pn	18 35 16.6	-3.7
CACV				*e*S	Sn	18 36 05.5	-10
BENV	**Beln**	**4.92**	**266**	*e*P	**Pn**	**18 35 26.3**	**+3.7**
BAUV	**El Baul**	**5.52**	**256**	*e*P	**Pn**	**18 35 32.3**	**+1.4**
BAUV				*e*S	**Sn**	**18 36 33.4**	**-1.2**
BAUV	**El Baul**	**5.52**	**256**	*e*P	**Pn**	**18 35 33.3**	**+2.4**
BAUV				*e*S	**Sn**	**18 36 34.9**	**+0.2**
TBG	**Guadaloupe-3**	**5.56**	**10**	*e*P	**Pn**	**18 35 33.7**	**+2.2**
MAGL	**Barre de l'ile**	**5.73**	**13**	*e*P	**Pn**	**18 35 35.5**	**+1.8**
MAPV	**Macapo**	**5.77**	**266**	*e*P	**Pn**	**18 35 37.3**	**+3.0**
MAPV				*e*S	**Sn**	**18 36 39.4**	**-1.4**
H05N1	**Guadeloupe/Mar**	**6.14**	**14**	Pn	**Pn**	**18 35 39.7**	**+0.4**
TEPV	**Terepaima**	**6.48**	**267**	*e*P	**Pn**	**18 35 45.2**	**+1.2**
ANBD	**Bethesda, Anti**	**6.72**	**7**	*e*P	**Pn**	**18 35 50.0**	**+2.6**
ANWB	**Willy Bob**	**7.33**	**6**	*e*P	**Pn**	**18 35 59.3**	**+3.6**
SDV	**Santo Domingo**	**8.03**	**260**	Pn	**Pn**	**18 36 07.9**	**+2.3**
	7.6nm,0.3s,baz=50,slow=13,SNR=3.6						
SDV				Sn	**Sn**	**18 37 35.0**	**-1.8**
	5.9nm,0.3s,baz=29,slow=18,SNR=5.7						
SDV				LR	LR	18 39 17.9	
	comp=Z,219nm,19.1s,baz=81,slow=38						
	21nm,0.4s						
MDP	**Montagnes des**	**11.17**	**117**	Pn	**Pn**	**18 36 48.7**	**+0.3**
	0.9nm,0.3s,baz=301,slow=15,SNR=4.3						
MDP				Sn	Sn	18 38 42.6	-11
	1.8nm,0.3s,baz=358,slow=18,SNR=6.4						
	4.5nm,0.7s						
LPAZ	**La Paz**	**27.01**	**192**	P	**P**	**18 39 52.3**	**+0.6**
	1.1nm,0.8s,baz=38,slow=8.4,SNR=3.8						
LPAZ				LR	LR	18 52 50.0	
	comp=Z,140nm,19.8s,baz=1.5,slow=42						
	1.1nm,0.8s						
TXAR	**Lajitas Array**	**42.70**	**302**	P	**P**	**18 42 05.4**	**-0.8**
	0.2nm,0.5s,baz=107,slow=7.1,SNR=4.0						
	0.2nm,0.5s						
ULM	**Lac du Bonnet**	**48.32**	**332**	P	**P**	**18 42 49.3**	**-1.0**
	1.1nm,0.5s,baz=123,slow=8.1,SNR=2.4						
	1.1nm,0.5s						
PDAR	**Pinedale Array**	**52.02**	**317**	P	**P**	**18 43 20.5**	**+1.7**
	0.5nm,0.8s,baz=117,slow=4.7,SNR=3.5						
	0.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**62.89**	**80**	P	**P**	**18 44 35.3**	**-0.3**
	102nm,0.4s,baz=288,slow=6.4,SNR=2.5						
HFS	**Hagfors**	**74.29**	**30**	P	**P**	**18 45 47.0**	**+1.0**
	1.5nm,0.8s,baz=259,slow=6.8,SNR=2.2						
	1.5nm,0.8s						
ILAR	**Eielson Array**	**78.28**	**334**	P	**P**	**18 46 06.6**	**-2.0**
	0.4nm,0.5s,baz=128,slow=21,SNR=4.2						
	0.4nm,0.5s						
AKASG	**Malin Array Be**	**83.26**	**40**	P	**P**	**18 46 35.0**	**-0.5**
	0.1nm,0.3s,baz=306,slow=3.1,SNR=3.0						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**159.41**	**228**	PKP	**PKPdf**	**18 54 06.9**	**-1.6**
	0.2nm,0.8s,baz=119,slow=1.2,SNR=1.2						
ASAR				PKPab	**PKPab**	**18 54 44.7**	**-1.2**
	0.3nm,0.9s,baz=134,slow=3.3,SNR=1.5						

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*IDC **17** 18:57:22.2±1.3, 23°.07N×118°.24E, h0^{km}, mb3.4/4, mbtmp3.4/5, ML2.8/1, MS3.6/2, Error ellipse: s-maj=63.9km s-min=23.2km az=64.0*

ISC 17 18:57:26.8±1.2, **23°.2N**±0°.1×**118°.4E**±0°.1, **h35**^{km}, **n13**, σ**1^{s}.19**/11, **mb3.4**/4, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TPUB	**Ta-pu**	**2.02**	**85**	P	**Pn**	**18 57 58.2**	**-0.2**
SSLB	**Suanglung**	**2.39**	**74**	P	**Pn**	**18 58 01.9**	**-1.7**
TWGBT	**Beinan**	**2.45**	**97**	P	**Pn**	**18 58 04.7**	**+0.4**
YULB	**Yu-li**	**2.63**	**84**	P	**Pn**	**18 58 07.7**	**+0.8**
NACB	**Ninganchiao**	**3.06**	**70**	P	**Pn**	**18 58 12.6**	**-0.2**
TATO	**Taipei**	**3.33**	**56**	P	**Pn**	**18 58 18.3**	**+1.9**
KSRS	**Korea Array**	**16.43**	**28**	Pn	**P**	**19 01 16.6**	**-0.5**
	baz=212,slow=12,SNR=7.9						
	1.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**18.82**	**259**	LR	LR	19 08 26.7	
	comp=Z,42nm,20.4s,baz=295,slow=36						
MKAR	**Makanchi Array**	**37.38**	**318**	P	**P**	**19 04 37.0**	**+0.8**
	0.4nm,0.7s,baz=114,slow=8.4,SNR=6.6						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**41.32**	**322**	P	**P**	**19 05 07.5**	**-1.5**
	0.7nm,0.9s,baz=129,slow=9.9,SNR=4.1						
	0.7nm,0.9s						
WRA	**Warramunga Arr**	**45.55**	**159**	P	**P**	**19 05 43.3**	**-0.1**
	0.6nm,1.0s,baz=342,slow=8.1,SNR=2.7						
	0.6nm,1.0s						
SEY	**Seymchan**	**45.82**	**21**	LR	LR	19 24 54.0	
	comp=Z,249nm,18.2s,baz=339,slow=36						
ASAR	**Alice Springs**	**48.90**	**161**	P	**P**	**19 06 10.2**	**+0.8**
	0.2nm,0.7s,baz=342,slow=8.1,SNR=4.1						
	0.2nm,0.7s						

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*IDC **17** 18:58:17.5±1.0, 28°.38N×104°.91E, h0^{km}, mb3.8/7, mbtmp3.7/8, ML3.4/1, Error ellipse: s-maj=32.5km s-min=18.1km az=63.0*

ISC 17 18:58:20.4±1.1, **28°.4N**±0°.2×**104°.9E**±0°.2, **h19**^{km}, **n8**, σ**0^{s}.76**/9, **mb3.9**/7, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**19.42**	**3**	P	**P**	**19 02 44.3**	**-1.2**
	0.1nm,0.3s,baz=183,slow=12,SNR=4.4						
	0.4nm,0.6s						
KSRS	**Korea Array**	**21.25**	**59**	P	**P**	**19 03 05.9**	**+0.5**
	1.9nm,0.8s,baz=248,slow=9.9,SNR=6.9						
	1.9nm,0.8s						
MKAR	**Makanchi Array**	**25.51**	**322**	P	**P**	**19 03 48.5**	**+0.9**
	0.6nm,0.6s,baz=128,slow=11,SNR=8.2						
	0.6nm,0.6s						
USRK	**Ussuriysk Ar.**	**26.73**	**47**	P	**P**	**19 03 59.2**	**+0.6**
	2.0nm,0.8s,baz=265,slow=9.7,SNR=4.9						
	2.0nm,0.8s						
KURBB	**Kurchatov Arra**	**29.83**	**325**	P	**P**	**19 04 25.9**	**-0.3**
	0.6nm,0.8s,baz=130,slow=9.8,SNR=4.8						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**55.85**	**146**	P	**P**	**19 07 56.6**	**-0.3**
	1.6nm,0.8s,baz=334,slow=7.6,SNR=14						
	1.6nm,0.8s						
ASAR	**Alice Springs**	**58.83**	**149**	P	**P**	**19 08 17.8**	**0.0**
	0.8nm,0.7s,baz=333,slow=7.7,SNR=12						
ASAR				PcP	**PcP**	**19 09 06.9**	**-0.3**
	0.5nm,0.9s,baz=334,slow=3.9,SNR=4.1						
	0.8nm,0.7s						
ARCES	**ARCESS Array B**	**60.00**	**336**	P	**P**	**19 08 25.9**	**+0.5**
	2.2nm,0.8s,baz=80,slow=10,SNR=1.7						
	2.2nm,0.8s						

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*KRNET **17** 19:03:06.8±0.1, 41°.73N×72°.46E, h30^{km}, mb3.3*

*SOME **17** 19:03:07.3, 41°.70N×72°.48E, h20^{km}*

*NNC **17** 19:03:08.5±1.6, 41°.73N×72°.47E, h0^{km}, mb3.5, mpv3.3, Error ellipse: s-maj=16.7km s-min=3.8km az=3.0*

*ISU **17** 19:03:09, 41°.66N×72°.39E, h10^{km}*

*KNET **17** 19:03:10.7±0.6, 41°.86N×72°.68E, h5^{km}±3^{km}, ml2.7, Error ellipse: s-maj=5.6km s-min=3.7km az=157.0*

ISC 17 19:03:07.0±1.0, **41°.76N**±0°.02×**72°.48E**±0°.02, **h16**^{km}±9^{km}, **n65**, σ**1^{s}.28**/112, **36C-33D**, **Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARSB	**Arslanbob**	**0.58**	**139**	⇓*e*P	**Pg**	**19 03 18.0**	**-0.6**
ARSB				⇓*e*S	**Sb**	**19 03 26.3**	**-0.7**
MNAS	**Manas**	**0.72**	**2**	⇑*e*P	**Pb**	**19 03 21.5**	**+0.1**
MNAS				⇑*e*S	**Sb**	**19 03 32.0**	**+0.9**
KSNS	**Kasansay**	**0.94**	**230**	P	**Pb**	**19 03 24.0**	**-0.9**
KSNS				S	**Sb**	**19 03 36.7**	**-0.5**
AML	**Almayashu**	**0.98**	**68**	⇑P	**Pb**	**19 03 26.2**	**+0.3**
	22nm,0.2s,SNR=21						
AML				⇑S	**Sb**	**19 03 39.2**	**+0.5**
	44nm,0.2s						
AML	**Almayashu**	**0.98**	**68**	⇑*e*P	**Pg**	**19 03 25.7**	**-0.4**
AML				⇑*e*S	**Sb**	**19 03 39.3**	**+0.5**
TRKS	**Terek-Say**	**1.03**	**257**	⇑*e*P	**Pb**	**19 03 25.7**	**-0.8**
TRKS				⇑*e*S	**Sb**	**19 03 39.3**	**-0.5**
MRKS	**Merke**	**1.13**	**29**	*e*P	**Pn**	**19 03 28.5**	**+0.2**
	2.1nm,0.1s						
MRKS				*e*S	**Sb**	**19 03 42.8**	**+0.1**
	128nm,0.3s						
TSTA	**Tashata**	**1.18**	**180**	P	**Pg**	**19 03 29.6**	**-0.3**
TSTA				S	**Sn**	**19 03 45.8**	**+1.1**
OHH	**Osh**	**1.26**	**169**	⇑*e*P	**Pn**	**19 03 29.4**	**-0.6**
OHH				⇑*e*S	**Sb**	**19 03 45.8**	**-0.6**
EKS2	**Erkin-Say**	**1.32**	**47**	⇑P	**Pg**	**19 03 32.5**	**0.0**
	8.1nm,0.2s,SNR=7.0						
EKS2				⇓S	**Sn**	**19 03 49.2**	**+1.0**
	9.7nm,0.2s						
EKS2	**Erkin-Say**	**1.32**	**47**	⇓*e*P	**Pb**	**19 03 31.5**	**0.0**
EKS2				⇓*e*S	**Sn**	**19 03 49.3**	**+1.0**
SALK	**Salom-Alik**	**1.34**	**130**	⇑*e*P	**Pn**	**19 03 31.2**	**-0.1**
SALK				⇑*e*S	**Sb**	**19 03 48.8**	**-0.1**
ARLS	**Aral**	**1.39**	**85**	⇓*i*P	**Pn**	**19 03 32.3**	**+0.4**
ARLS				⇓*e*S	**Sb**	**19 03 50.8**	**+0.6**
FRG	**Fergana**	**1.48**	**201**	P	**Pg**	**19 03 37.2**	**+1.7**
FRG				S	**Sg**	**19 03 56.4**	**+1.6**
CHDK	**Chadak**	**1.52**	**239**	P	**Pg**	**19 03 35.1**	**-1.1**
CHDK				S	**Sg**	**19 03 54.2**	**-1.8**
PSK	**Pskem**	**1.58**	**277**	P	**Pg**	**19 03 38.9**	**+1.5**
PSK				S	**Sg**	**19 04 00.3**	**+2.3**
UCH	**Uchtor**	**1.59**	**72**	⇓P	**Pg**	**19 03 37.9**	**+0.2**
	7.1nm,0.2s,SNR=7.4						
UCH				⇑S	**Sg**	**19 03 58.5**	**+0.1**
	20nm,0.2s						
UCH	**Uchtor**	**1.59**	**72**	⇓*e*P	**Pb**	**19 03 35.8**	**-0.5**
UCH				⇓*e*S	**Sb**	**19 03 56.7**	**+0.4**
CHMI	**Chimion**	**1.66**	**206**	P	**Pg**	**19 03 39.0**	**+0.1**
CHMI				S	**Sg**	**19 04 00.4**	**0.0**
AAK	**Ala-Archa**	**1.74**	**59**	⇓P	**Pg**	**19 03 40.5**	**+0.1**
	17nm,0.3s,SNR=27						
AAK				⇑S	**Sg**	**19 04 02.5**	**-0.5**
	33nm,0.3s						
AAK	**Ala-Archa**	**1.74**	**59**	⇓Pn	**Pg**	**19 03 40.8**	**+0.4**
	2.3nm,0.5s						
AAK				⇑Sn	**Sg**	**19 04 05.9**	**+2.9**
	2.5nm,0.4s						
AAK	**Ala-Archa**	**1.74**	**59**	⇓*e*P	**Pb**	**19 03 37.8**	**-0.8**
AAK				⇓*e*S	**Sn**	**19 04 00.1**	**+1.5**
CHMG	**Chimgan**	**1.86**	**264**	P	**Pg**	**19 03 42.8**	**+0.1**
CHMG				S	**Sg**	**19 04 07.0**	**+0.1**
CHRV	**Charvak**	**1.89**	**267**	P	**Pg**	**19 03 43.9**	**+0.5**
CHRV				S	**Sg**	**19 04 08.4**	**+0.4**
FRU1	**Bishkek**	**1.91**	**56**	⇓*e*P	**Pn**	**19 03 40.1**	**+1.1**
FRU1				⇓*e*S	**Sn**	**19 04 04.3**	**+1.5**
SFK	**Sufi-Kurgan**	**1.91**	**156**	⇓*e*P	**Pn**	**19 03 39.5**	**+0.3**
SFK				⇓*e*S	**Sn**	**19 04 03.2**	**+0.1**
KK31	**Karatay Array**	**1.98**	**313**	⇑Pn	**Pg**	**19 03 43.3**	**-1.7**
	3.6nm,0.2s,baz=133,slow=15,SNR=176						
KK31				⇓Sn	**Sg**	**19 04 10.5**	**-0.2**
	11nm,0.2s,baz=125,slow=26,SNR=11						
KKAR	**Karatay Array**	**1.98**	**313**	⇑*e*P	**Pb**	**19 03 40.8**	**-1.8**
KKAR				⇑*e*S	**Sb**	**19 04 05.5**	**-1.5**
KBK	**Karagaybulak**	**2.04**	**63**	⇑P	**Pg**	**19 03 46.4**	**+0.1**
	18nm,0.2s,SNR=30						
KBK				⇓S	**Sg**	**19 04 13.2**	**+0.5**
	136nm,0.4s						
KBK	**Karagaybulak**	**2.04**	**63**	⇓*e*P	**Pn**	**19 03 42.0**	**+1.1**
KBK				⇓*e*S	**Sn**	**19 04 07.4**	**+1.2**
CHMS	**Chumysh**	**2.09**	**53**	⇑P	**Pg**	**19 03 46.4**	**-0.7**
	7.2nm,0.2s,SNR=11						
CHMS	**Chumysh**	**2.09**	**53**	⇑*e*P	**Pn**	**19 03 42.6**	**+1.2**
CHMS				⇑*e*S	**Sn**	**19 04 08.4**	**+1.2**
BTK	**Batken**	**2.12**	**217**	⇓*e*P	**Pn**	**19 03 42.1**	**+0.3**
BTK				⇓*e*S	**Sn**	**19 04 07.7**	**-0.1**
USP	**Ospenovka**	**2.12**	**44**	⇑P	**Pg**	**19 03 46.7**	**-1.0**
	14nm,0.3s,SNR=15						
USP				⇓S	**Sg**	**19 04 15.1**	**-0.2**
	53nm,0.4s						
USP	**Ospenovka**	**2.12**	**44**	⇑*e*P	**Pn**	**19 03 43.1**	**+1.2**
USP				⇑*e*S	**Sn**	**19 04 09.2**	**+1.3**
CHM	**Chimkent**	**2.21**	**286**	*e*P	**Pg**	**19 03 50.3**	**+0.9**
	87nm,0.1s						
CHM				*e*S	**Sg**	**19 04 19.9**	**+1.8**
	150nm,0.2s						
TGS	**TashGRES**	**2.24**	**262**	S	**Sg**	**19 04 22.7**	**+3.6**
SGDS	**Sogindy**	**2.32**	**43**	Pg	**Pg**	**19 03 50.0**	**-1.5**
	7.3nm,0.2s						
SGDS				Lg	Lg	19 04 22.0	
	22nm,0.4s						
BRLS	**Borolday**	**2.33**	**304**	Pg	**Pg**	**19 03 50.2**	**-1.5**
	15nm,0.2s						
BRLS				Lg	Lg	19 04 21.6	
	53nm,0.4s						
BRLS	**Borolday**	**2.33**	**304**	*e*P	**Pg**	**19 03 50.3**	**-1.4**
	15nm,0.2s						
BRLS				*e*S	**Sg**	**19 04 20.0**	**-1.9**
	55nm,0.3s						
DRK	**Karamyk**	**2.34**	**193**	⇑*e*P	**Pn**	**19 03 45.4**	**+0.3**
DRK				⇑*e*S	**Sn**	**19 04 13.2**	**-0.4**
NZBK	**Nazarbek**	**2.58**	**259**	S	**Sg**	**19 04 30.5**	**+0.6**
TKM2	**Tokmak 2**	**2.59**	**62**	⇑P	**Pb**	**19 03 54.1**	**+0.9**
	11nm,0.2s,SNR=17						
TKM2	**Tokmak 2**	**2.59**	**62**	⇑Pg	**Pb**	**19 03 53.8**	**+0.6**
	11nm,0.8s						
TKM2				⇑Lg	Lg	19 04 29.6	
	54nm,1.0s						
TKM2	**Tokmak 2**	**2.59**	**62**	⇓*e*P	**Pn**	**19 03 49.5**	**+1.1**
TKM2				⇓*e*S	**Sn**	**19 04 20.6**	**+0.9**
NRN	**Naryn**	**2.66**	**96**	⇑*e*P	**Pn**	**19 03 50.1**	**+0.5**
NRN				⇑*e*S	**Sn**	**19 04 21.5**	**-0.2**
BOOM	**Boomskoye usch**	**2.68**	**73**	⇓*e*P	**Pn**	**19 03 50.7**	**+1.1**
BOOM				⇓*e*S	**Sn**	**19 04 22.6**	**+0.8**
ULHL	**Ulahol**	**2.85**	**79**	⇑P	**Pb**	**19 03 57.4**	**-0.3**
	4.5nm,0.2s,SNR=8.8						
ULHL	**Ulahol**	**2.85**	**79**	⇓*e*P	**Pn**	**19 03 53.1**	**+1.1**
ULHL				⇓*e*S	**Sn**	**19 04 26.6**	**+0.5**
KST	**Kastek**	**2.88**	**62**	Pg	**Pg**	**19 04 00.4**	**-2.0**
	4.1nm,0.7s						
KST				Lg	Lg	19 04 39.0	
	32nm,0.5s						
KST	**Kastek**	**2.88**	**62**	*e*P	**Pg**	**19 04 00.3**	**-2.0**
	3.9nm,0.4s						
KST				*e*S	**Sg**	**19 04 38.6**	**-1.0**
	49nm,0.5s						
GAR	**Garm**	**3.21**	**212**	⇑*e*P	**Pn**	**19 03 57.4**	**+0.4**
GAR				⇑*e*S	**Sn**	**19 04 34.1**	**-0.9**
MTBS	**Maitube**	**3.23**	**64**	Pg	**Pg**	**19 04 07.7**	**-1.2**
	3.1nm,0.4s						
MTBS				Lg	Lg	19 04 49.8	
	20nm,0.4s						
MTBS	**Maitube**	**3.23**	**64**	*e*P	**Pg**	**19 04 07.3**	**-1.6**
	3.1nm,0.4s						
MTBS				*e*S	**Sg**	**19 04 49.8**	**-1.0**
	20nm,0.4s						
KDJ	**Kajisay**	**3.53**	**82**	⇓*e*P	**Pn**	**19 04 02.7**	**+1.4**
KDJ				⇓*e*S	**Sn**	**19 04 43.2**	**+0.4**
KUU	**Kurty**	**3.55**	**52**	Pg	**Pg**	**19 04 12.4**	**-2.7**
	1.7nm,0.1s						
KUU				Lg	Lg	19 04 57.8	
	13nm,0.5s						
KUU	**Kurty**	**3.55**	**52**	*e*P	**Pb**	**19 04 11.9**	**+2.4**
	1.7nm,0.1s						
KUU				*e*S	**Sg**	**19 04 58.6**	**-2.5**
	13nm,0.5s						
KTBS	**Karatobe**	**3.66**	**56**	Pg	**Pg**	**19 04 15.1**	**-2.0**
	4.0nm,0.5s						
KTBS				Lg	Lg	19 05 02.5	
	17nm,0.4s						
MDOK	**Medeo**	**3.66**	**66**	Pg	**Pg**	**19 04 15.2**	**-1.9**
	5.5nm,0.4s						
MDOK				Lg	Lg	19 05 02.7	
	4.6nm,0.7s						
KOTS	**Kotyrbulak**	**3.73**	**65**	Pg	**Pg**	**19 04 17.3**	**-1.2**
	3.2nm,0.5s						
KOTS				Lg	Lg	19 05 07.0	
	14nm,0.3s						
KOTS	**Kotyrbulak**	**3.73**	**65**	*e*P	**Pg**	**19 04 17.3**	**-1.2**
	3.2nm,0.5s						
KOTS				*e*S	**Sg**	**19 05 07.0**	**+0.2**
	14nm,0.3s						
SATY	**Saty**	**4.58**	**72**	Pg	**Pg**	**19 04 32.1**	**-2.6**
	5.5nm,0.7s						
SATY				Lg	Lg	19 05 31.7	
	7.2nm,0.5s						
ARXS	**Arharly**	**4.63**	**56**	Pg	**Pg**	**19 04 32.2**	**-3.4**
	1.6nm,0.2s						
ARXS				Lg	Lg	19 05 31.8	
	14nm,0.7s						
KPKS	**Kokpek**	**4.89**	**68**	Pg	**Pg**	**19 04 37.1**	**-3.5**
	0.7nm,0.5s						
KPKS				Lg	Lg	19 05 40.2	
	9.3nm,0.4s						
BLB	**Baldybastay**	**4.99**	**60**	Pg	**Pg**	**19 04 40.2**	**-2.3**
	9.9nm,0.4s						
BLB				Lg	Lg	19 05 45.5	
	23nm,0.7s						

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*VAO **17** 19:13:58.7±1.5, 21°.32S×69°.93W, h10^{km}, mb4.2*

*SJA **17** 19:14:17.9±0.8, 21°.14S×68°.96W, h117^{km}±3^{km}, ML4.0, MW3.9*

*IDC **17** 19:14:18.8±2.4, 21°.25S×68°.29W, h95^{km}±22^{km}, mb3.7/1, mbtmp3.6/6, Error ellipse: s-maj=41.9km s-min=19.9km az=102.0*

*NEIC **17** 19:14:18.4±1.3, 21°.13S±0°.04×68°.97W±0°.08, h122^{km}±8^{km}, mb3.7/4, ML4.0(GUC), Error ellipse: s-maj=11.0km s-min=5.2km az=87.0*

*GUC **17** 19:14:19.3±0.8, 21°.14S×68°.84W, h105^{km}±4^{km}, ML4.0*

ISC 17 19:14:17.1±0.6, **21°.17S**±0°.03×**68°.91W**±0°.05, **h112**^{km}±6^{km}, **n98**, σ**2^{s}.13**/126, **3C-2D**, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	**IPOC Station P**	**0.56**	**282**		**Pn**	**19 14 35.7**	**+1.1**
PB01				Sn	**Sn**	**19 14 49.2**	**+1.4**
PB01	**IPOC Station P**	**0.56**	**282**	⇑*i*P	**Pn**	**19 14 35.9**	**+1.1**
PB01				*e*S	**Sn**	**19 14 48.6**	**+0.8**
PB01				IAML		19 14 50.6	
	comp=E,5μm,0.2s						
PB01	**IPOC Station P**	**0.56**	**282**	*e*P	**Pn**	**19 14 35.8**	**+1.1**
PB01				*e*S	**Sn**	**19 14 49.5**	**+1.6**
PB01				IAML		19 14 50.7	
	comp=Z,3μm,0.1s						
PB09	**IPOC Station P**	**0.70**	**206**		**Pn**	**19 14 37.7**	**+1.8**
PB09				Sn	**Sn**	**19 14 52.8**	**+2.7**
PB09	**IPOC Station P**	**0.70**	**206**	*e*P	**Pn**	**19 14 37.9**	**+2.0**
PB09				*e*S	**Sn**	**19 14 52.7**	**+2.7**
PB09				IAML		19 14 55.0	
	comp=N,2μm,0.4s						
PB09	**IPOC Station P**	**0.70**	**206**	*e*P	**Pn**	**19 14 37.5**	**+1.7**
PB09				*e*S	**Sn**	**19 14 53.0**	**+2.9**
PB09				IAML		19 14 53.5	
	comp=Z,2μm,0.5s						
PB08	**IPOC Station P**	**1.04**	**347**		**Pn**	**19 14 40.3**	**+0.9**
PB08				Sn	**Sn**	**19 14 57.9**	**+1.8**
PB08	**IPOC Station P**	**1.04**	**347**	⇑*e*P	**Pn**	**19 14 40.9**	**+1.5**
PB08				*e*S	**Sn**	**19 14 57.3**	**+1.2**
PB08				IAML		19 14 59.3	
	comp=E,5μm,0.4s						
PB08	**IPOC Station P**	**1.04**	**347**	*e*P	**Pn**	**19 14 40.7**	**+1.4**
PB08				*e*S	**Sn**	**19 14 58.0**	**+2.0**
PB08				IAML		19 14 59.6	
	comp=Z,4μm,0.3s						
PB03	**IPOC Station P**	**1.18**	**222**		**Pn**	**19 14 42.0**	**+1.4**
PB03	**IPOC Station P**	**1.18**	**222**	⇓*e*P	**Pn**	**19 14 42.5**	**+1.9**
PB03				*e*S	**Sn**	**19 15 00.4**	**+2.1**
PB03				IAML		19 15 01.0	
	comp=E,2μm,0.2s						
PB03	**IPOC Station P**	**1.18**	**222**	*e*P	**Pn**	**19 14 41.8**	**+1.2**
PB03				*e*S	**Sn**	**19 15 00.7**	**+2.4**
PB03				IAML		19 15 04.5	
	comp=Z,2μm,0.2s						
PATCX	**Punta Patache**	**1.21**	**286**		**Pn**	**19 14 42.6**	**+1.8**
HMBC	**Humberstone**	**1.27**	**314**		**Pn**	**19 14 42.5**	**+0.9**
HMBC	**Humberstone**	**1.27**	**314**	*e*P	**Pn**	**19 14 43.0**	**+1.4**
HMBC				*e*S	**Sn**	**19 15 02.4**	**+2.3**
HMBC				IAML		19 15 04.6	
	comp=Z,3μm,0.3s						
TA01	**Diego Aracena**	**1.33**	**296**		**Pn**	**19 14 43.7**	**+1.7**
TA01	**Diego Aracena**	**1.33**	**296**	*e*P	**Pn**	**19 14 43.8**	**+1.7**
TA01				*e*S	**Sn**	**19 15 02.8**	**+1.8**
TA01				IAML		19 15 04.2	
	comp=E,4μm,0.4s						
TA01	**Diego Aracena**	**1.33**	**296**	*e*P	**Pn**	**19 14 43.8**	**+1.7**
TA01				IAML		19 15 05.4	
	comp=Z,1μm,0.3s						
TA02	**Huaiquique**	**1.45**	**308**		**Pn**	**19 14 44.7**	**+1.2**
TA02	**Huaiquique**	**1.45**	**308**	*e*P	**Pn**	**19 14 45.0**	**+1.5**
TA02				*e*S	**Sn**	**19 15 04.8**	**+1.3**
TA02				IAML		19 15 09.5	
	comp=N,12μm,0.1s						
TA02	**Huaiquique**	**1.45**	**308**	*e*P	**Pn**	**19 14 45.0**	**+1.5**
TA02				*e*S	**Sn**	**19 15 08.4**	**+5.0**
TA02				IAML		19 15 09.2	
	comp=Z,2μm,0.1s						
GO01	**Chusmiza**	**1.51**	**350**		**Pn**	**19 14 46.1**	**+1.4**
GO01	**Chusmiza**	**1.51**	**350**	*e*P	**Pn**	**19 14 46.1**	**+1.4**
GO01				*e*S	**Sn**	**19 15 07.0**	**+1.4**
GO01				IAML		19 15 09.3	
	comp=N,8μm,0.2s						
GO01	**Chusmiza**	**1.51**	**350**	*e*P	**Pn**	**19 14 46.2**	**+1.5**
GO01				*e*S	**Sn**	**19 15 07.9**	**+2.4**
PB11	**IPOC Station P**	**1.56**	**333**		**Pn**	**19 14 46.3**	**+1.4**
PB11	**IPOC Station P**	**1.56**	**333**	⇑*e*P	**Pn**	**19 14 46.4**	**+1.4**
PB11				*e*S	**Sn**	**19 15 07.7**	**+1.6**
PB11				IAML		19 15 09.2	
	comp=N,4μm,0.2s						
PB11	**IPOC Station P**	**1.56**	**333**	*e*P	**Pn**	**19 14 45.5**	**+0.5**
PB11				*e*S	**Sn**	**19 15 08.4**	**+2.2**
PB11				IAML		19 15 10.9	
	comp=Z,2μm,0.3s						
PB06	**IPOC Station P**	**1.65**	**202**		**Pn**	**19 14 48.0**	**+1.9**
PB06				Sn	**Sn**	**19 15 10.9**	**+2.8**
PB06	**IPOC Station P**	**1.65**	**202**	⇓*e*P	**Pn**	**19 14 48.2**	**+2.1**
PB06				*e*S	**Sn**	**19 15 10.5**	**+2.5**
PB06				IAML		19 15 11.6	
	comp=N,2μm,0.2s						
PB06	**IPOC Station P**	**1.65**	**202**	*e*P	**Pn**	**19 14 48.1**	**+2.1**
PB06				*e*S	**Sn**	**19 15 11.1**	**+3.0**
PB06				IAML		19 15 13.9	
	comp=Z,1μm,0.3s						
AF01	**San Pedro de A**	**1.90**	**159**		**Pn**	**19 14 52.0**	**+2.8**
AF01	**San Pedro de A**	**1.90**	**159**	*e*P	**Pn**	**19 14 52.3**	**+3.0**
AF01				*e*S	**Sn**	**19 15 17.3**	**+3.5**
AF01				IAML		19 15 35.2	

	comp=Z,916nm,0.9s						
PB05	**IPOC Station P**	**2.07**	**215**		**Pn**	**19 14 52.8**	**+1.7**
PB05	**IPOC Station P**	**2.07**	**215**	*e*P	**Pn**	**19 14 52.9**	**+1.7**
PB05				IAML		19 15 26.0	
	comp=E,448nm,0.2s						
PB05	**IPOC Station P**	**2.07**	**215**	*e*P	**Pn**	**19 14 52.9**	**+1.7**
PB05				*e*S	**Sn**	**19 15 11.4**	**-5.7**
PB10	**IPOC Station P**	**2.79**	**213**		**Pn**	**19 15 02.2**	**+1.8**
PB10	**IPOC Station P**	**2.79**	**213**	*e*P	**Pn**	**19 15 02.0**	**+1.6**
PB10				IAML		19 15 57.4	
	comp=E,174nm,0.6s						
PB10	**IPOC Station P**	**2.79**	**213**	*e*P	**Pn**	**19 15 02.1**	**+1.6**
PB10				*e*S	**Sn**	**19 15 33.7**	**0.0**
PB16	**IPOC Station P**	**2.87**	**349**		**Pn**	**19 15 03.7**	**+1.6**
PB16	**IPOC Station P**	**2.87**	**349**	*e*P	**Pn**	**19 15 04.4**	**+2.3**
PB16				IAML		19 16 08.3	
	comp=N,184nm,0.4s						
PB16	**IPOC Station P**	**2.87**	**349**	*e*P	**Pn**	**19 15 04.3**	**+2.3**
AP01	**Chacalluta**	**3.09**	**334**		**Pn**	**19 15 05.8**	**+1.4**
AP01	**Chacalluta**	**3.09**	**334**	*e*P	**Pn**	**19 15 05.1**	**+0.7**
AP01				IAML		19 15 53.0	
	comp=N,1μm,0.5s						
AP01	**Chacalluta**	**3.09**	**334**	*e*P	**Pn**	**19 15 05.9**	**+1.5**
AP01				IAML		19 15 50.1	
	comp=Z,581nm,0.4s						
YJA	**Yavi**	**3.31**	**108**	*e*P	**Pn**	**19 15 10.9**	**+3.1**
PB14	**IPOC Station P**	**3.71**	**202**		**Pn**	**19 15 13.6**	**+0.7**
PB14	**IPOC Station P**	**3.71**	**202**	*e*P	**Pn**	**19 15 15.5**	**+2.6**
PB14				*e*S	Sn	19 16 11.2	+15
PB14				IAML		19 16 12.9	
	comp=Z,101nm,0.3s						
GO02	**Mina Guanaco**	**4.03**	**189**		**Pn**	**19 15 18.3**	**+1.1**
GO02	**Mina Guanaco**	**4.03**	**189**	*e*P	**Pn**	**19 15 19.1**	**+1.9**
GO02				*e*S	**Sn**	**19 16 06.7**	**+3.0**
AZAP	**Zapla**	**4.67**	**131**	*e*P	**Pn**	**19 15 28.2**	**+2.4**
SLA	**San Lorenzo**	**4.73**	**139**	*e*P	**Pn**	**19 15 29.6**	**+3.2**
LPAZ	**La Paz**	**4.91**	**9**		**Pn**	**19 15 30.3**	**+0.9**
LPAZ	**La Paz**	**4.91**	**9**	P	**Pn**	**19 15 31.5**	**+2.1**
	comp=Z,7.2nm,0.3s,baz=184,slow=5.6,SNR=26						
LPAZ	**La Paz**	**4.91**	**9**	*e*P	**Pn**	**19 15 32.1**	**+2.8**
LPAZ				*e*S	Sn	19 16 13.7	-12
AC01	**Pan de Azucar**	**5.20**	**197**	Pn	**Pn**	**19 15 32.5**	**-0.1**
AC01	**Pan de Azucar**	**5.20**	**197**	*e*P	**Pn**	**19 15 32.5**	**-0.1**
AC01				*e*S	**Sn**	**19 16 29.0**	**-2.4**
AC01				IAML		19 16 55.8	
	comp=Z,62nm,0.8s						
AC02	**Maricunga**	**5.65**	**182**	Pn	**Pn**	**19 15 40.4**	**+1.2**
AC06	**Mina Casimiro**	**6.30**	**192**	Pn	**Pn**	**19 15 48.9**	**+1.3**
SIV	**San Ignacio**	**9.04**	**57**	P	**Pn**	**19 16 21.4**	**-3.3**
	comp=Z,3.9nm,0.4s,baz=225,slow=13,SNR=20						
CFA	**Coronel Fontan**	**10.41**	**177**	P	**Pn**	**19 16 42.4**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=353,slow=17,SNR=2.2						
CFA				S	**Sn**	**19 18 31.2**	**-6.9**
	comp=Z,1.7nm,0.4s,baz=56,slow=18,SNR=6.8						
MURT	**Porto Murtinho**	**10.54**	**95**	*e*P	**Pn**	**19 16 42.3**	**-2.7**
PTLB	**Pontes e Lacer**	**10.88**	**60**	Pn	**Pn**	**19 16 48.5**	**-1.1**
VILB	**Vilhena**	**11.66**	**47**		**Pn**	**19 17 01.0**	**+0.9**
VILB	**Vilhena**	**11.66**	**47**	*e*P	**Pn**	**19 16 57.2**	**-2.9**
CPUP	**Villa Florida**	**11.78**	**118**	Pn	**Pn**	**19 17 01.2**	**-0.5**
CPUP	**Villa Florida**	**11.78**	**118**	P	Pn	19 16 55.8	-5.9
	comp=Z,0.3nm,0.7s,baz=212,slow=19,SNR=3.1						
CPUP	**Villa Florida**	**11.78**	**118**	*e*P	**Pn**	**19 16 58.8**	**-2.8**
TRCB	**Terra Rica**	**15.18**	**99**	*e*P	**Pn**	**19 17 46.5**	**+0.7**
PTGB	**Pitanga**	**15.91**	**106**	*e*P	**Pn**	**19 17 54.5**	**-0.3**
PCMB	**Pacaembu**	**16.44**	**95**	*e*P	**P**	**19 18 02.1**	**+0.1**
ITAB	**Concordia**	**16.45**	**115**	P	**P**	**19 18 02.4**	**+0.3**
ITAB	**Concordia**	**16.45**	**115**	*e*P	**Pn**	**19 18 00.8**	**-0.6**
LDASE	**Londrina, Braz**	**16.61**	**101**	*e*P	**Pn**	**19 18 03.3**	**-0.2**
CPSB	**Cacapava Do Su**	**16.68**	**127**	*e*P	**Pn**	**19 18 01.0**	**-3.2**
ARAG	**Araguaiana, MT**	**17.10**	**74**	*e*P	**Pn**	**19 18 11.4**	**+2.0**
PLTB	**Pedras Altas**	**17.27**	**131**	*e*P	**P**	**19 18 07.4**	**-3.8**
TRQA	**Tornquist**	**17.87**	**162**		**Pn**	**19 18 18.9**	**+0.4**
TRQA				IAmb	IAmb	19 18 21.1	
	comp=Z,9.3nm,1.1s						
FRTB	**Fartura**	**18.04**	**101**	*e*P	**P**	**19 18 20.4**	**+0.7**
CNLB	**Canela**	**18.22**	**120**	*e*P	**P**	**19 18 21.7**	**0.0**
BB19B	**Bebedouro**	**19.01**	**93**	*e*P	**P**	**19 18 30.3**	**-0.1**
MAJ01	**Sao Joao Batis**	**19.16**	**113**	*e*P	**P**	**19 18 31.6**	**-0.3**
SNDB	**Serra Nova Dou**	**19.18**	**64**	*e*P	**P**	**19 18 32.0**	**-0.1**
PLCA	**Paso Flores**	**19.56**	**184**	P	**P**	**19 18 37.5**	**+1.4**
PLCA				IAmb	IAmb	19 18 43.9	
	comp=Z,2.0nm,0.8s						
PLCA	**Paso Flores**	**19.56**	**184**	P	**Pn**	**19 18 38.9**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=354,slow=12,SNR=5.2						
IPMB	**Ipameri, GO**	**19.75**	**84**	*e*P	**P**	**19 18 38.3**	**-0.2**
PET01	**Itanhaem-SP**	**20.19**	**103**	*e*P	**P**	**19 18 43.5**	**+0.5**
ITTB	**Itaituba**	**21.04**	**39**	*e*P	**P**	**19 18 51.0**	**-1.2**
COHC	**Cochancay**	**21.14**	**330**	P	**P**	**19 18 48.8**	**-4.5**
PMNB	**Patos De Minas**	**21.29**	**87**	*e*P	**P**	**19 18 54.5**	**-0.5**
SMTB	**Santa Maria do**	**23.91**	**62**	*e*P	**P**	**19 19 22.3**	**+1.4**
DIAM	**Diamantina, MG**	**23.92**	**88**	*e*P	**P**	**19 19 22.6**	**+1.5**
JANB	**Januaria**	**24.14**	**80**	*e*P	**P**	**19 19 23.9**	**+0.9**
SDBA	**SAO DESIDERIO**	**24.55**	**73**	*e*P	**P**	**19 19 27.7**	**+1.0**
GDU01	**Guandu, BA**	**28.91**	**80**	*e*P	**P**	**19 20 07.2**	**+1.4**
QSPA	**South Pole Qui**	**69.03**	**180**	P	**P**	**19 25 14.3**	**+3.8**
	comp=Z,0.9nm,0.6s,baz=196,slow=3.9,SNR=9.1						
	comp=Z,0.9nm,0.6s						
TORD	**Torodi Ar. Bea**	**77.24**	**70**	P	**P**	**19 26 00.1**	**+0.5**
	comp=Z,98nm,0.3s,baz=252,slow=5.3,SNR=2.1						
TORD				pP	**pP**	**19 26 23.8**	**-5.5**
	comp=Z,57nm,0.3s,baz=253,slow=5.1,SNR=1.6						
ASAR	**Alice Springs**	**130.21**	**208**	PKP	**PKiKP**	**19 33 17.5**	**+1.8**
	comp=Z,0.1nm,0.5s,baz=103,slow=1.9,SNR=1.5						
MKAR	**Makanchi Array**	**145.36**	**36**	PKPbc	**PKPab**	**19 33 43.4**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=307,slow=3.3,SNR=2.8						
MKAR				pPKPbc	pPKPab	19 34 09.5	-3.9
	comp=Z,0.7nm,0.7s,baz=348,slow=4.5,SNR=2.5						

IDC ***17*** *19:20:05.0±0.7, 30°.89S×177°.29W, h0^{km}, mb4.3/8, mbtmp4.3/9, ML3.4/1, MS3.8/4, Error ellipse: s-maj=25.2km s-min=24.1km az=53.0*

NEIC ***17*** *19:20:08.4±1.2, 30°.9S±0°.1×177°.5W±0°.2, h10^{km}±1^{km}, mb4.6/13, Error ellipse: s-maj=29.6km s-min=17.3km az=76.0*

ISC 17 19:20:09.8±0.6**, 31°.12S**±0°.08×**177°.5W**±0°.1**, h27**^{km}**, n56,** σ**1^{s}41**/50**, mb4.6**/17**, MS3.7**/3**, 5D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.90**	**348**		Pn	19 20 37.1	-3.3
URZ	**Urewera**	**8.41**	**211**	Pn	**Pn**	**19 22 07.0**	**-2.8**
	1.0nm,0.3s,baz=45,slow=2.9,SNR=2.0						
URZ				Sn	**Sn**	**19 23 42.8**	**-1.1**
	3.5nm,0.3s,baz=0.0,slow=20,SNR=8.7						
RTZ	**Ruatahuna**	**8.76**	**210**	Pn	**Pn**	**19 22 13.1**	**-1.8**
BKZ	**Black Stump Fm**	**9.43**	**210**	Pn	**Pn**	**19 22 22.6**	**-1.3**
MRZ	**Mangatainoka R**	**11.07**	**209**	Pn	**Pn**	**19 22 43.6**	**-2.6**
THZ	**Tophouse**	**13.14**	**213**	Pn	**Pn**	**19 23 12.6**	**-2.1**
KHZ	**Kahutara**	**13.38**	**210**	Pn	**Pn**	**19 23 15.0**	**-2.8**
LTZ	**Lake Taylor**	**14.23**	**212**	Pn	**Pn**	**19 23 26.6**	**-2.9**
DZM	**Mont Dzumac**	**16.97**	**298**	Pn	**Pn**	**19 24 06.0**	**+0.6**
	0.1nm,0.3s,baz=122,slow=17,SNR=5.6						
	9.0nm,1.1s						
MLZ	**Mavora Lakes**	**18.15**	**214**		**P**	**19 24 20.8**	**+0.8**
MLZ				IAmb	IAmb	19 24 53.4	
	comp=Z,49nm,1.5s						
RAR	**Rarotonga**	**18.67**	**62**	LR	LR	19 30 43.5	
	comp=Z,268nm,18.9s,baz=229,slow=35						
PPT	**Papeete**	**28.66**	**68**	LR	LR	19 35 11.5	
	comp=Z,166nm,19.2s,baz=247,slow=32						
CTAO	**Charters Tower**	**34.38**	**280**	P	**P**	**19 26 55.7**	**+1.0**
CTAO				IAmb	IAmb	19 27 13.6	
	comp=Z,19nm,1.2s						
STKA	**Stephens Creek**	**34.78**	**258**	P	**P**	**19 26 58.6**	**+0.5**
STKA	**Stephens Creek**	**34.78**	**258**	P	**P**	**19 27 00.1**	**+2.0**
	comp=Z,3.0nm,0.6s,baz=97,slow=12,SNR=6.1						
STKA				LR	LR	19 39 50.6	
	comp=Z,85nm,20.9s,baz=211,slow=34						
	comp=Z,3.0nm,0.6s						
AS31	**Alice Springs**	**43.54**	**267**		**P**	**19 28 11.6**	**+0.1**
ASAR	**Alice Springs**	**43.54**	**267**	P	**P**	**19 28 11.1**	**-0.4**
	comp=Z,2.4nm,0.6s,baz=110,slow=7.9,SNR=53						
ASAR				PcP	**PcP**	**19 29 59.3**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=121,slow=4.4,SNR=2.3						
	comp=Z,2.4nm,0.6s						
WR8	**Warramunga Arr**	**44.45**	**273**	P	**P**	**19 28 18.8**	**0.0**
WR8				IAmb	IAmb	19 28 37.8	
	comp=Z,12nm,1.2s						
WRA	**Warramunga Arr**	**44.59**	**273**		**P**	**19 28 20.1**	**+0.2**
WRA	**Warramunga Arr**	**44.59**	**273**	P	**P**	**19 28 19.8**	**-0.1**
	comp=Z,2.7nm,0.6s,baz=113,slow=8.1,SNR=44						
WRA				PcP	**PcP**	**19 30 03.1**	**+0.4**
	comp=Z,1.2nm,0.4s,baz=113,slow=3.0,SNR=52						
	comp=Z,2.7nm,0.6s						
WB0	**Warramunga Arr**	**44.62**	**273**		**P**	**19 28 20.0**	**-0.1**
WB0				IAmb	IAmb	19 28 33.1	
	comp=Z,6.6nm,0.8s						
SBA	**Scott Base**	**47.36**	**184**	P	**P**	**19 28 44.1**	**+3.2**
SBA				IAmb	IAmb	19 29 05.2	
	comp=Z,5.4nm,1.1s						
MTN	**Manton Dam**	**50.55**	**279**	P	**P**	**19 29 05.4**	**-0.8**
KNRA	**Kununurra**	**51.23**	**275**	P	**P**	**19 29 08.9**	**-2.4**
KNRA				IAmb	IAmb	19 29 51.7	
	comp=Z,20nm,1.5s						
FITZ	**Fitzroy Crossi**	**52.83**	**270**	P	**P**	**19 29 23.4**	**+0.2**
CASY	**Casey**	**54.73**	**208**	P	**P**	**19 29 37.3**	**+0.9**
CASY				IAmb	IAmb	19 29 59.7	
	comp=Z,5.5nm,0.9s						
BATI	**Baumata**	**58.20**	**277**	LR	LR	19 54 31.6	
	comp=Z,226nm,18.4s,baz=142,slow=35						
QSPA	**South Pole Qui**	**59.00**	**180**	P	**P**	**19 30 08.6**	**+1.7**
	comp=Z,6.5nm,1.2s,baz=34,slow=5.9,SNR=9.9						
	comp=Z,6.5nm,1.2s						
GIRL	**Giralia**	**60.68**	**260**	P	**P**	**19 30 19.9**	**+0.9**
TROLL	**Troll, Antarti**	**77.16**	**180**	⇓P	**P**	**19 32 00.7**	**-0.1**
	comp=Z,86nm,1.0s						
SNAA	**Sanae**	**77.43**	**178**	⇓P	**P**	**19 32 00.5**	**-1.6**
	comp=Z,37nm,0.9s						
SNAA	**Sanae**	**77.43**	**178**	P	**P**	**19 32 02.3**	**+0.1**
	comp=Z,1.8nm,0.9s,baz=191,slow=14,SNR=4.9						
	comp=Z,1.8nm,0.9s						
VNA3	**Neumayer Olymp**	**77.56**	**176**	⇓P	**P**	**19 32 02.8**	**0.0**
	comp=Z,5.4nm,0.8s						
VNA2	**Neumayer--Watz**	**78.00**	**177**	⇓P	**P**	**19 32 05.7**	**+0.4**
	comp=Z,3.9nm,0.7s,baz=171,slow=5.2						
VNA1	**Neumayer--Stat**	**78.23**	**176**	⇓P	**P**	**19 32 07.2**	**+0.7**
	comp=Z,5.5nm,0.8s						
H03S2	**Juan Fernandez**	**79.68**	**123**	T	T	21 00 45.3	
	baz=243,slow=74,SNR=81						
H03S1	**Juan Fernandez**	**79.69**	**123**	T	T	21 00 46.5	
	baz=243,slow=74,SNR=88						
H03S3	**Juan Fernandez**	**79.70**	**123**	T	T	21 00 45.3	
	baz=243,slow=74,SNR=66						
H03N3	**Juan Fernandez**	**79.88**	**123**	T	T	21 00 55.3	
	baz=247,slow=72,SNR=22						
H03N2	**Juan Fernandez**	**79.88**	**123**	T	T	21 00 54.0	
	baz=247,slow=72,SNR=32						
H03N1	**Juan Fernandez**	**79.89**	**123**	T	T	21 00 54.8	
	baz=247,slow=72,SNR=30						
KSRS	**Korea Array**	**85.19**	**319**	P	**P**	**19 32 43.3**	**-0.3**
	comp=Z,1.1nm,0.8s,baz=152,slow=5.5,SNR=3.1						
	comp=Z,1.1nm,0.8s						
PETK	**Petropavlovsk-**	**86.62**	**345**	P	**P**	**19 32 50.0**	**-0.3**
	comp=Z,5.5nm,1.0s,baz=153,slow=5.7,SNR=4.0						
	comp=Z,5.5nm,1.0s						
NVAR	**Mina Array Bea**	**88.45**	**42**	P	**P**	**19 32 59.1**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=240,slow=4.2,SNR=4.9						
	comp=Z,0.6nm,0.6s						
MKAR	**Makanchi Array**	**118.59**	**310**	PKP	**PKPdf**	**19 38 53.9**	**-1.0**
	comp=Z,0.2nm,0.6s,baz=104,slow=3.7,SNR=2.5						
KURBB	**Kurchatov Arra**	**121.92**	**313**	PKP	**PKPdf**	**19 38 59.8**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=116,slow=2.0,SNR=6.2						
BVAR	**Borovoye Array**	**127.24**	**315**	PKP	**PKPdf**	**19 39 10.9**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=95,slow=1.0,SNR=3.1						
KBZ	**Khabaz**	**145.89**	**303**	PKPbc	**PKPdf**	**19 39 45.2**	**-0.6**
	comp=Z,1.5nm,0.5s,baz=29,slow=1.2,SNR=4.5						
FINES	**FINESS Array B**	**145.97**	**340**	PKPbc	**PKPdf**	**19 39 44.1**	**-1.3**
	comp=Z,3.5nm,0.5s,baz=46,slow=4.0,SNR=38						
NB2	**NORSAR Subarra**	**149.53**	**352**	PKP	**PKPbc**	**19 39 54.8**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=11,slow=2.6						
NOA	**NORSAR Array B**	**149.53**	**352**	PKPbc	**PKPbc**	**19 39 54.4**	**-1.6**
	comp=Z,0.6nm,0.6s,baz=15,slow=2.7,SNR=3.6						
HFS	**Hagfors**	**150.03**	**349**	PKPbc	**PKPbc**	**19 39 55.1**	**-2.0**
	comp=Z,1.1nm,0.5s,baz=47,slow=2.6,SNR=5.9						
MMAI	**Mount Meron Ar**	**152.15**	**283**	PKPbc	**PKiKP**	**19 40 03.7**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=76,slow=6.1,SNR=7.1						
AKASG	**Malin Array Be**	**152.15**	**322**	PKPbc	**PKPbc**	**19 40 00.8**	**-1.6**
	comp=Z,2.0nm,0.8s,baz=49,slow=3.5,SNR=13						
BRTR	**Keskin Array B**	**153.34**	**297**	PKPbc	**PKiKP**	**19 40 07.1**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=48,slow=2.1,SNR=2.2						
BRTR				PKPab	**sPKPbc**	**19 40 16.5**	**+1.3**
	comp=Z,1.0nm,0.7s,baz=90,slow=2.7,SNR=6.7						
TORD	**Torodi Ar. Bea**	**162.10**	**177**	PKPab	**PKPab**	**19 40 55.4**	**-0.2**
	comp=Z,55nm,0.3s,baz=186,slow=4.5,SNR=1.6						

RSNC ***17*** *19:28:06.5±0.0, 7°N±1°×7°3W±°, h123^{km}±1^{km}, M3.0, ML2.7*

IDC ***17*** *19:28:07.5±7.7, 6°.66N×73°.17W, h164^{km}±54^{km}, mbtmp3.2/1, Error ellipse: s-maj=232.8km s-min=94.6km az=126.0*

ISC 17 19:28:03.9±1.0**, 6°.92N**±0°.03×**73°.28W**±0°.04**, h134**^{km}±6^{km}**, n38,** σ**1^{s}56**/70**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VMM09	**Lebrija**	**0.21**	**356**	P	**Pn**	**19 28 23.0**	**+0.6**
VMM09				S	**Sn**	**19 28 36.2**	**-0.3**
BARC	**Barichara**	**0.34**	**164**	P	**Pn**	**19 28 23.3**	**+0.3**
BARC				S	**Sn**	**19 28 36.4**	**-1.0**
BRJC	**Barrancabermej**	**0.47**	**277**	P	**Pn**	**19 28 23.5**	**+0.3**
BRJC				S	**Sn**	**19 28 37.6**	**-0.3**
VMM10	**El Carmen**	**0.47**	**251**	P	**Pn**	**19 28 23.4**	**+0.1**
VMM10				S	**Sn**	**19 28 37.3**	**-0.6**
EZNC	**La Esperanza**	**0.70**	**357**	P	**Pn**	**19 28 25.6**	**+0.8**
EZNC				S	**Sn**	**19 28 40.9**	**+0.2**
PAMC	**Pamplona, Colo**	**0.71**	**54**	P	**Pn**	**19 28 26.6**	**+1.3**
PAMC				S	**Sn**	**19 28 42.5**	**+1.0**
VMM07	**Puerto Wilches**	**0.72**	**307**	P	**Pn**	**19 28 25.7**	**+0.9**
VMM07				S	**Sn**	**19 28 41.8**	**+1.1**
VMM05	**San Martn**	**1.02**	**344**	P	**Pn**	**19 28 28.8**	**+1.4**
RUSC	**La Rusia**	**1.04**	**169**	P	**Pn**	**19 28 28.4**	**+0.3**
RUSC				S	**Sn**	**19 28 45.5**	**-0.9**
PTBC	**PUERTO BERRIO,**	**1.23**	**252**	P	**Pn**	**19 28 28.6**	**-0.8**
PTBC				S	**Sn**	**19 28 45.9**	**-3.0**
OCAC	**Ocana**	**1.31**	**358**	P	**Pn**	**19 28 31.4**	**+1.0**
OCAC				S	**Sn**	**19 28 51.5**	**+0.8**
SPBC	**San Pablo de B**	**1.49**	**212**	P	**Pn**	**19 28 32.5**	**+0.2**
SPBC				S	**Sn**	**19 28 52.5**	**-1.4**
TAMC	**Tame, Arauca**	**1.55**	**108**	P	**Pn**	**19 28 34.2**	**+1.3**
TAMC				S	**Sn**	**19 28 56.2**	**+1.2**
AGCC	**Aguachica**	**1.61**	**349**	P	**Pn**	**19 28 34.2**	**+0.6**
AGCC				S	**Sn**	**19 28 57.0**	**+0.7**
ZARC	**Zaragoza, Cauc**	**1.67**	**290**	P	**Pn**	**19 28 34.9**	**+0.7**
ZARC				S	**Sn**	**19 28 58.6**	**+1.2**
NORC	**Norcasia**	**2.08**	**230**	P	**Pn**	**19 28 38.5**	**-0.6**
NORC				S	**Sn**	**19 29 05.3**	**-0.8**
ROSC	**El Rosal**	**2.31**	**207**	P	**Pn**	**19 28 45.5**	**+3.2**
	13nm,0.3s,baz=90,slow=18,SNR=3.4						
ROSC				S	**Sn**	**19 29 15.2**	**+3.4**
	38nm,0.3s,baz=37,slow=20,SNR=10.0						
ROSC	**El Rosal**	**2.31**	**207**	P	**Pn**	**19 28 45.6**	**+3.2**
ROSC				S	**Sn**	**19 29 15.0**	**+3.2**
CHIC	**Chingaza**	**2.32**	**191**	P	**Pn**	**19 28 43.2**	**+0.8**
CHIC				S	**Sn**	**19 29 11.7**	**-0.3**
UREC	**San Jos de Ur**	**2.39**	**290**	P	**Pn**	**19 28 42.9**	**0.0**
UREC				S	**Sn**	**19 29 11.4**	**-1.4**
GUY2C	**Guyana, Caldas**	**2.67**	**231**	P	**Pn**	**19 28 48.1**	**+1.1**
GUY2C				S	**Sn**	**19 29 16.7**	**-3.3**
VILC	**Villavicencio,**	**2.82**	**189**	P	**Pn**	**19 28 49.0**	**+0.5**
VILC				S	**Sn**	**19 29 20.3**	**-2.6**
DBBC	**Dabeiba**	**2.91**	**272**	P	**Pn**	**19 28 50.3**	**+0.7**
DBBC				S	**Sn**	**19 29 23.9**	**-1.0**
CBOC	**Ciudad Bolivar**	**2.92**	**249**	P	**Pn**	**19 28 50.9**	**+1.2**
CBOC				S	**Sn**	**19 29 25.1**	**0.0**
PTGC	**Puerto Gaitan,**	**2.93**	**157**	P	**Pn**	**19 28 49.4**	**-0.4**
PTGC				S	**Sn**	**19 29 23.1**	**-2.2**
ARGC	**Ariguani, Magd**	**3.07**	**342**	P	**Pn**	**19 28 54.2**	**+2.6**
ARGC				S	**Sn**	**19 29 27.1**	**-1.4**
ANIL	**Santa Ana**	**3.21**	**221**	P	**Pn**	**19 28 55.9**	**+2.2**
ANIL				S	**Sn**	**19 29 30.8**	**-1.3**
SDV	**Santo Domingo**	**3.27**	**53**	S	**Sn**	**19 29 33.9**	**+0.6**
	66nm,0.4s,baz=252,slow=20,SNR=9.8						
APAC	**Apartado, Choc**	**3.42**	**287**	P	**Pn**	**19 28 56.9**	**+0.8**
APAC				S	**Sn**	**19 29 36.0**	**-0.5**
SJCC	**San Jacinto, C**	**3.51**	**328**	P	**Pn**	**19 28 57.3**	**0.0**
SJCC				S	**Sn**	**19 29 37.2**	**-1.5**
PRAC	**Prado**	**3.57**	**207**	P	**Pn**	**19 28 58.9**	**+0.8**
PRAC				S	**Sn**	**19 29 40.4**	**+0.3**
ORTC	**Ortega, Tolima**	**3.58**	**213**	P	**Pn**	**19 28 59.7**	**+1.5**
ORTC				S	**Sn**	**19 29 41.7**	**+1.4**
PLMC	**San Jos del P**	**3.60**	**236**	P	**Pn**	**19 28 59.4**	**+0.8**
PLMC				S	**Sn**	**19 29 38.9**	**-2.0**
CRJC	**Cerrejon, Guaj**	**4.09**	**5**	P	**Pn**	**19 29 06.1**	**+1.0**
CRJC				S	**Sn**	**19 29 53.4**	**+0.8**
YOTC	**Yotoco, Valle**	**4.22**	**226**	P	**Pn**	**19 29 07.3**	**+0.4**
PCRV	**Puerto La Cruz**	**9.13**	**69**	S	**Sn**	**19 31 48.7**	**-5.2**
	3.6nm,0.6s,baz=236,slow=7.3,SNR=1.0						
ASAR	**Alice Springs**	**149.04**	**235**	PKPbc	**PKPbc**	**19 47 36.4**	**-0.7**
	0.4nm,0.6s,baz=110,slow=3.6,SNR=6.3						
WRA	**Warramunga Arr**	**150.25**	**241**	PKPbc	**PKPbc**	**19 47 39.9**	**-0.3**
	0.3nm,0.4s,baz=107,slow=2.6,SNR=7.4						

IDC 17 19:41:57.2±3.8**, 2°.59S**×**101°.06E, h0**^{km}**, mb3.2**/5**, mbtmp3.2**/5**, Error ellipse: s-maj=147.0km s-min=23.6km az=59.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**21.02**	**354**	P	P	19 46 42.4	-0.3
	0.4nm,0.8s,baz=181,slow=8.8,SNR=4.2						
	0.4nm,0.8s						
H08S2	**Diego Garcia H**	**28.89**	**259**	T	T	20 16 15.4	
	baz=82,slow=75,SNR=99						
H08S3	**Diego Garcia H**	**28.89**	**259**	T	T	20 16 15.8	
	baz=82,slow=75,SNR=142						
H08S1	**Diego Carcia H**	**28.90**	**259**	T	T	20 16 16.4	
	baz=82,slow=75,SNR=97						
H01W3	**Cape Leeuwin H**	**34.35**	**161**	T	T	20 24 40.0	
	baz=336,slow=76,SNR=21						
H01W2	**Cape Leeuwin H**	**34.36**	**161**	T	T	20 24 44.6	
	baz=336,slow=76,SNR=23						
H01W1	**Cape Leeuwin H**	**34.37**	**161**	T	T	20 24 44.1	
	baz=336,slow=76,SNR=17						
WRA	**Warramunga Arr**	**36.78**	**120**	P	P	19 49 06.8	-0.2
	0.8nm,1.2s,baz=298,slow=8.5,SNR=1.9						
	0.8nm,1.2s						
ASAR	**Alice Springs**	**38.05**	**126**	P	P	19 49 17.6	-0.1
	0.2nm,0.7s,baz=296,slow=8.6,SNR=4.6						
	0.2nm,0.7s						
SONM	**Songino Array**	**50.44**	**5**	P	P	19 50 57.6	+0.9
	0.1nm,0.4s,baz=187,slow=7.3,SNR=2.9						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**51.89**	**344**	P	P	19 51 07.0	-0.6
	0.7nm,0.9s,baz=155,slow=7.2,SNR=4.4						
	0.7nm,0.9s						
H04N2	**CROZET ISLANDS**	**60.96**	**217**	T	T	20 56 40.4	
	baz=59,slow=75,SNR=9.8						
H04N1	**CROZET ISLANDS**	**60.97**	**217**	T	T	20 56 49.3	
	baz=59,slow=75,SNR=11						
H04N3	**CROZET ISLANDS**	**60.98**	**217**	T	T	20 56 38.8	
	baz=59,slow=75,SNR=10						
H04S1	**CROZET ISLANDS**	**61.23**	**216**	T	T	20 57 07.9	
	baz=58,slow=75,SNR=6.0						
H04S3	**CROZET ISLANDS**	**61.25**	**216**	T	T	20 56 57.1	
	baz=58,slow=75,SNR=10						
H04S2	**CROZET ISLANDS**	**61.25**	**216**	T	T	20 57 01.2	
	baz=58,slow=75,SNR=5.7						

BGR ***17*** *20:03:02.9, 0°.99S×25°.55W, h33^{km}, mb4.7, Ms4.7*

MOS ***17*** *20:03:07.7±1.3, 0°.85N×26°.08W, h10^{km}, mb5.0/39, MS4.7/14, Error ellipse: s-maj=11.4km s-min=6.3km az=53.6*

IDC ***17*** *20:03:07.5±0.4, 0°.74N×26°.14W, h0^{km}, mb4.3/29, mbtmp4.3/30, ML5.2/1, MS4.8/74, Error ellipse: s-maj=12.8km s-min=6.8km az=131.0*

BJI ***17*** *20:03:08.8, 0°.89N×26°.20W, h12^{km}, mB5.4/1, Ms5.4/8, Ms7 5.0/8*

NEIC ***17*** *20:03:09.7±2.1, 0°.79N±0°.09×26°.08W±0°.09, h10^{km}±1^{km}, mb5.0/182, Mwb5.5/22, Mww5.4/46, Error ellipse: s-maj=15.8km s-min=15.2km az=137.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.46; M$_{\theta\theta}$0.00; M$_{\phi\phi}$-0.46; M$_{r\theta}$-0.10; M$_{\theta\phi}$-2.05; M$_{\phi r}$-0.36; Fault plane solution: M$_0$2.14000×10^{17} NP1:φ$_s$86.92000°, δ80.15000°, λ179.94000°. NP2:φ$_s$176.93000°, δ89.94000°, λ9.85000°. Principal axes: T 1.8567, Plg7.0000°, Azm42.0000°; N 0.4773, Plg80.0000°, Azm177.0000°; P -2.3340, Plg7.0000°, Azm311.0000°;*

NEIC ***17*** *20:03:10.9, 0°.80N×26°.13W, h10^{km}*

NEIC ***17*** *20:03:11, 0°.78N×26°.14W, h12^{km}*

NEIC ***17*** *20:03:11, 0°.68N×26°.04W, h12^{km}, Moment Tensor Solution. Duration: 2^{s}8 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.18; M$_{\theta\theta}$0.65; M$_{\phi\phi}$-0.47; M$_{r\theta}$0.65; M$_{\theta\phi}$-1.45; M$_{\phi r}$-0.32; Fault plane solution: M$_0$1.72000×10^{17} NP1: φ$_s$171.26000°, δ72.62000°, λ9.88000°. NP2:φ$_s$78.28000°, δ80.57000°, λ162.38000°. Principal axes: T 1.8937, Plg19.0000°, Azm34.0000°; N -0.4217, Plg70.0000°, Azm231.0000°; P -1.4721, Plg5.0000°, Azm126.0000°;*

INMG ***17*** *20:03:12.0±6.9, 0°.56N×26°.20W, h10^{km}, mb4.8, Ms4.7, MW5.0, #DIST_RANGE: DISTANT*

GCMT ***17*** *20:03:12.7±0.1, 0°.77N±0°.01×26°.03W±0°.01, h13^{km}, MW5.5/157, Moment Tensor Solution. s119,c212; s157,c314; Duration: 1^{s}5 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.34±.03; M$_{\theta\theta}$0.52±.03; M$_{\phi\phi}$-0.18±.03; M$_{r\theta}$0.56±.07; M$_{\theta\phi}$-2.58±.03; M$_{\phi r}$-0.23±.07; Best double couple: M$_0$2.66400×10^{17} NP1:φ$_s$177.00000°, δ79.00000°, λ3.00000°. NP2:φ$_s$86.00000°, δ87.00000°, λ169.00000°. Principal axes: T 2.8740, Plg10.0000°, Azm41.0000°; N -0.4190, Plg78.0000°, Azm250.0000°; P -2.4550, Plg6.0000°, Azm132.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 20:03:10.1±0.3**, 0°.67N**±0°.05×**26°.13W**±0°.05**, h14**^{km}**, n449,** σ**2^{s}01**/382**, mb4.9**/183**, MS4.8**/98**, 10C-15D, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NBPV	**Pedro Velho**	**11.54**	**232**	*e*P	**Pn**	**20 05 50.6**	**-3.9**
NBPV				*e*S	Sn	20 07 47.3	-16
RCBR	**Riachuelo**	**11.70**	**236**		**Pn**	**20 05 54.9**	**-1.9**
RCBR	**Riachuelo**	**11.70**	**236**	P	**Pn**	**20 05 58.7**	**+1.9**
RCBR	**Riachuelo**	**11.70**	**236**	*e*P	Pn	20 05 51.9	-4.9
RCBR				*e*S	Sn	20 07 48.8	-18
NBCL	**Cascavel-CE**	**13.09**	**248**	*e*P	Pn	20 06 08.7	-7.0
NBCL				*e*S	Sn	20 08 18.7	-23
H10N3	**ASCENSION HYDR**	**14.35**	**126**	T	T	20 21 08.6	
	baz=306						
H10N2	**ASCENSION HYDR**	**14.36**	**126**	T	T	20 21 09.1	
	baz=306						
H10N1	**ASCENSION HYDR**	**14.37**	**126**	T	T	20 21 15.3	
	baz=306						
NBAN	**Anadia - AL**	**14.40**	**224**	*e*P	**Pn**	**20 06 30.1**	**-3.6**
NBAN				*e*S	Sn	20 08 59.8	-14
SACV	**Santiago Islan**	**14.42**	**10**		**Pn**	**20 06 31.4**	**-2.7**
ASCN	**Ascension**	**14.52**	**126**	Pn	**Pn**	**20 06 33.5**	**-1.8**
NBPB	**Pedra_Branca-C**	**14.78**	**245**	*e*P	Pn	20 06 32.8	-6.2
NBPB				*e*S	Sn	20 09 01.3	-21
MBO	**M'Bour**	**16.38**	**33**		**Pn**	**20 06 57.4**	**-2.3**
MBO				IAmb	IAmb	20 07 04.1	
	comp=Z,116nm,1.0s						
BBTS	**Babate**	**16.83**	**34**	Pn	**Pn**	**20 07 05.0**	**-0.5**
	comp=Z,8.6nm,0.3s,baz=242,slow=6.7,SNR=13						
BBTS				Sn	Sn	20 09 56.8	-16
	comp=Z,3.4nm,0.3s,baz=242,slow=17,SNR=1.8						
BBTS				LR	LR	20 12 03.3	
	comp=Z,6μm,21.0s,baz=107,slow=32						
	comp=Z,27nm,0.3s						
DBIC	**Dimbokro**	**22.04**	**74**		**P**	**20 08 02.1**	**-2.5**
DBIC	**Dimbokro**	**22.04**	**74**	P	**P**	**20 08 02.9**	**-1.8**
	comp=Z,43nm,1.0s,baz=261,slow=12,SNR=17						
DBIC				S	S	20 11 55.8	-12
	comp=Z,22nm,0.8s,baz=180,slow=20,SNR=6.2						
DBIC				LR	LR	20 14 39.7	
	comp=Z,3μm,20.8s,baz=254,slow=31						
	comp=Z,43nm,1.0s						
ACRG	**Accra**	**26.34**	**79**	P	**P**	**20 08 45.5**	**-0.5**
MDP	**Montagnes des**	**26.83**	**280**	LR	LR	20 18 22.6	
	comp=Z,604nm,18.8s,baz=96,slow=34						
BDFB	**Brasilia**	**27.02**	**232**		**P**	**20 08 52.4**	**+0.2**
BDFB	**Brasilia**	**27.02**	**232**	P	**P**	**20 08 52.4**	**+0.2**
	comp=Z,9.3nm,0.9s,baz=53,slow=11,SNR=8.8						
BDFB				S	**S**	**20 13 33.5**	**+3.7**
	comp=Z,1.2nm,0.4s,baz=110,slow=15,SNR=1.7						
BDFB				LR	LR	20 18 29.1	
	comp=Z,8μm,20.2s,baz=64,slow=34						
	comp=Z,9.3nm,0.9s						
TORD	**Torodi Ar. Bea**	**30.23**	**65**		**P**	**20 09 18.6**	**-2.1**
TORD				IAmb	IAmb	20 09 35.7	
	comp=Z,32nm,1.4s						
TORD	**Torodi Ar. Bea**	**30.23**	**65**	P	**P**	**20 09 18.6**	**-2.1**
	comp=Z,54nm,0.3s,baz=251,slow=8.6,SNR=1.3						
TORD				S	**S**	**20 14 22.2**	**+2.2**
	comp=Z,51nm,0.3s,baz=239,slow=25,SNR=1.5						

TORD				LR	LR	20 20 10.1	
	comp=Z,3µm,18.8s,baz=242,slow=34						
PMAR	**Madeira**	**33.04**	**14**	*e*T	T	20 43 54.4	
PMOZ	**Porto Moniz, M**	**33.07**	**14**	*e*S	**S**	**20 15 10.4**	**+6.2**
PMOZ				*e*LR	LR	20 18 01.5	
PMOZ				*i* AMs_20		20 20 12.4	
	comp=Z,2µm,20.0s						
PMOZ				*e*T	T	20 43 39.7	
BOAV	**Boa Vista**	**34.42**	**273**	P	**P**	**20 09 56.9**	**-0.5**
BOAV				IAmb	IAmb	20 10 14.8	
	comp=Z,28nm,1.4s						
TRCB	**Terra Rica**	**34.78**	**226**	P	**P**	**20 10 01.8**	**+1.3**
AQDB	**Aquidauana**	**35.77**	**232**		**P**	**20 10 09.5**	**+0.5**
PTLB	**Pontes e Lacer**	**36.34**	**242**	P	**P**	**20 10 13.5**	**-0.4**
H05S1	**Guadeloupe/Mar**	**36.93**	**293**	T	T	20 49 27.3	
	SNR=8.9						
ITAB	**Concordia**	**37.35**	**220**	P	**P**	**20 10 24.3**	**+1.9**
H05N1	**Guadeloupe/Mar**	**37.77**	**296**	T	T	20 50 25.9	
	SNR=3.0						
TAM	**Tamanrasset**	**37.82**	**52**		**P**	**20 10 25.8**	**-0.8**
TAM				IAmb	IAmb	20 10 31.0	
	comp=Z,27nm,0.7s						
TAM	**Tamanrasset**	**37.82**	**52**	P	**P**	**20 10 25.8**	**-0.8**
TAM				pmax	pmax		
	comp=Z,27nm,0.7s						
MDT	**Midelt**	**37.85**	**30**	LR	LR	20 25 28.7	
	comp=Z,4µm,19.7s,baz=246,slow=36						
SIV	**San Ignacio**	**38.26**	**243**	LR	LR	20 25 42.9	
	comp=Z,5µm,18.3s,baz=85,slow=35						
PCRV	**Puerto La Cruz**	**39.43**	**285**	LR	LR	20 26 36.8	
	comp=Z,454nm,18.9s,slow=36						
PFVI	**Vila Bisbo**	**39.65**	**22**	*e*P	**P**	**20 10 46.0**	**+4.4**
PFVI				*i* Amb		20 11 21.2	
	comp=Z,58nm,1.6s						
PFVI				*e*PP	**PP**	**20 12 13.8**	**+1.0**
MORF	**Marmelete**	**39.87**	**22**	*e*P	**P**	**20 10 43.1**	**-0.4**
MORF				*e*PP	**PP**	**20 12 14.2**	**-1.0**
MORF				IAMs_20	IAMs_20	20 22 04.2	
	comp=Z,2µm,32.5s						
MORF	**Marmelete**	**39.87**	**22**	*e*P	**P**	**20 10 44.5**	**+1.1**
MORF				*i* Amb		20 10 46.2	
	comp=Z,29nm,1.5s						
MORF				*e*PP	**PnPn**	**20 12 18.5**	**0.0**
PTEO	**Sao Teotonio**	**40.05**	**22**	*e*P	**P**	**20 10 46.4**	**+1.5**
PTEO				*i* Amb		20 10 57.6	
	comp=Z,40nm,1.4s						
PTEO				*e*PP	**PnPn**	**20 12 21.5**	**+0.8**
PBDV	**Barranco-do-Ve**	**40.09**	**23**	*e*P	**P**	**20 10 45.0**	**-0.2**
PBDV				*i* Amb		20 11 11.2	
	comp=Z,35nm,1.5s						
PBDV				*e*PP	**PnPn**	**20 12 24.5**	**+3.4**
PVAQ	**Vaqueiros**	**40.31**	**23**	P	**P**	**20 10 45.5**	**-1.6**
PVAQ	**Vaqueiros**	**40.31**	**23**	*e*P	**P**	**20 10 47.6**	**+0.6**
PVAQ				*i* Amb		20 10 56.3	
	comp=Z,29nm,1.7s						
PVAQ				*e*PP	**PnPn**	**20 12 27.8**	**+4.1**
PVAQ				*e*LR	LR	20 20 20.3	
PVAQ				*i* AMs_20		20 25 09.3	
	comp=Z,1µm,18.0s						
CPUP	**Villa Florida**	**40.32**	**226**		**P**	**20 10 48.4**	**+1.1**
CPUP	**Villa Florida**	**40.32**	**226**	P	**P**	**20 10 47.1**	**-0.2**
	comp=Z,1.1nm,0.9s,baz=317,slow=13,SNR=4.3						
CPUP				S	**S**	**20 16 58.1**	**+3.3**
	comp=Z,0.1nm,0.4s,baz=45,slow=7.1,SNR=1.1						
CPUP				LR	LR	20 27 17.7	
	comp=Z,1µm,18.2s,baz=276,slow=36						
	comp=Z,1.1nm,0.9s						
CPUP	**Villa Florida**	**40.32**	**226**	P	**P**	**20 10 48.4**	**+1.1**
CPUP				pmax	pmax		
	comp=Z,10.0nm,1.8s						
PCVE	**Castro Verde**	**40.38**	**22**	*e*P	**P**	**20 10 48.4**	**+0.7**
PCVE				*i* Amb		20 11 00.7	
	comp=Z,25nm,1.2s						
PCVE				*e*PP	**PnPn**	**20 12 26.5**	**+1.9**
MESJ	**Messejana**	**40.50**	**22**	*e*P	**P**	**20 10 47.9**	**-0.7**
MESJ				*e*PP	**PP**	**20 12 21.0**	**-1.1**
MESJ				*e*S	**S**	**20 16 57.9**	**+0.7**
MESJ				IAMs_20	IAMs_20	20 22 36.6	
	comp=Z,2µm,30.3s						
MESJ	**Messejana**	**40.50**	**22**	P	**P**	**20 10 44.9**	**-3.8**
MESJ	**Messejana**	**40.50**	**22**	*e*P	**P**	**20 10 48.3**	**-0.4**
MESJ				*i* Amb		20 10 57.9	
	comp=Z,26nm,1.6s						
MESJ				*e*PP	**PnPn**	**20 12 26.3**	**+0.4**
MESJ	**Messejana**	**40.50**	**22**	*e*P	**P**	**20 10 47.9**	**-0.7**
MESJ				*e*		20 12 21.0	
MESJ				*e*S	**S**	**20 16 57.9**	**+0.7**
PBEJ	**Beja**	**40.80**	**22**	*e*PP	PP	20 12 13.1	-12
EVO	**Evora**	**41.19**	**22**	*e*P	**P**	**20 10 54.7**	**+0.4**
EVO				*i* Amb		20 11 03.8	
	comp=Z,20nm,1.8s						
EVO				*e*PP	**PnPn**	**20 12 38.2**	**+4.2**
PBAR	**Barrancos**	**41.24**	**23**	*e*P	**P**	**20 10 55.0**	**+0.2**
PBAR				*i* Amb		20 10 57.7	
	comp=Z,15nm,1.6s						
PBAR				*e*PP	**PnPn**	**20 12 33.5**	**-1.2**
PLTB	**Pedras Altas**	**41.45**	**216**		**P**	**20 10 58.1**	**+1.6**
PMTG	**Montargil**	**41.58**	**21**	*e*P	**P**	**20 10 59.5**	**+2.0**
PMTG				*i* Amb		20 11 12.8	
	comp=Z,27nm,1.7s						
PMTG				*e*PP	**PnPn**	**20 12 37.8**	**-0.8**
PESTR	**Estremoz**	**41.64**	**22**	*e*P	**P**	**20 10 59.3**	**+1.2**
PESTR				*i* Amb		20 11 10.3	
	comp=Z,19nm,2.1s						
PESTR				*e*PP	**PnPn**	**20 12 38.3**	**-1.0**
PSBE	**So Bento**	**41.78**	**20**	*e*P	**P**	**20 10 60.0**	**+0.8**
PSBE				*i* Amb		20 11 41.0	
	comp=Z,48nm,1.5s						
PSBE				*e*PP	**PnPn**	**20 12 41.0**	**+0.1**
ITQB	**Itaqui**	**41.91**	**221**		**P**	**20 11 01.9**	**+1.5**
ITQB				IAmb	IAmb	20 11 10.9	
	comp=Z,44nm,1.2s						
PSARD	**Sardoal**	**42.08**	**21**	*e*P	**P**	**20 11 03.4**	**+1.8**
PSARD				*i* Amb		20 11 32.6	
	comp=Z,29nm,1.7s						
PSARD				*e*PP	**PcP**	**20 12 49.9**	**-6.4**
PMRV	**Marv??o**	**42.20**	**22**	*e*P	**P**	**20 11 04.2**	**+1.5**
PMRV				*i* Amb		20 11 12.6	
	comp=Z,41nm,1.6s						
PMRV				*e*PP	**PP**	**20 12 45.3**	**+4.8**
PMRV				*e*S	**S**	**20 17 30.9**	**+8.4**
PMRV				*e*LR	LR	20 23 02.9	
PMRV				*i* AMs_20		20 27 45.2	
	comp=Z,906nm,18.0s						
PCAS	**Casmilo, Conde**	**42.36**	**20**	*e*P	**P**	**20 11 04.7**	**+0.8**
PCAS				*i* Amb		20 11 42.5	
	comp=Z,32nm,1.8s						
PCAS				*e*PP	**PP**	**20 12 46.6**	**+4.4**
BAUV	**El Baul**	**42.52**	**282**		**P**	**20 11 04.4**	**-1.2**
BAUV				IAmb	IAmb	20 11 12.8	
	comp=Z,34nm,1.1s						
COI	**Coimbra**	**42.53**	**20**	*e*P	P	20 11 12.3	+7.0
COI				*i* Amb		20 11 16.3	
	comp=Z,32nm,1.8s						
PCBR	**Castelo Branco**	**42.53**	**21**	*e*P	**P**	**20 11 08.8**	**+3.4**
PCBR				*i* Amb		20 11 11.2	
	comp=Z,19nm,1.5s						
PCBR				*e*PP	**PP**	**20 12 47.8**	**+3.7**
SJG	**San Juan**	**42.95**	**296**	LR	LR	20 25 08.1	
	comp=Z,472nm,21.7s,baz=112,slow=31						
MTE	**Manteigas**	**43.00**	**21**	*e*P	**P**	**20 11 09.9**	**+0.7**
MTE				*i* Amb		20 11 21.0	
	comp=Z,20nm,1.2s						
MTE				*e*PP	**PP**	**20 12 52.4**	**+3.2**
MTE				*e*S	**S**	**20 17 35.2**	**+0.9**
MTE				*e*LR	LR	20 23 01.8	
MTE				*i* AMs_20		20 27 49.2	
	comp=Z,806nm,18.0s						
PVIS	**Viseu**	**43.16**	**20**	*e*P	P	20 11 18.1	+7.7
PVIS				*e*PP	**PcP**	**20 12 58.6**	**-1.4**
ESDC	**Sonseca Array**	**43.77**	**25**	P	**P**	**20 11 14.7**	**-0.7**
ESDC	**Sonseca Array**	**43.77**	**25**	P	**P**	**20 11 14.5**	**-0.9**
	comp=Z,1.7nm,0.9s,baz=216,slow=7.5,SNR=11						
ESDC				S	**S**	**20 17 45.5**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=220,slow=20,SNR=1.7						
ESDC				LR	LR	20 29 18.0	
	comp=Z,683nm,19.0s,baz=225,slow=36						
	comp=Z,1.7nm,0.9s						
ESBB	**Sonseca Array**	**43.77**	**25**	P	**P**	**20 11 14.0**	**-1.4**
POLO	**Lamas de Olo**	**43.78**	**20**	*e*P	**P**	**20 11 16.6**	**+1.1**
POLO				*i* Amb		20 11 32.6	
	comp=Z,9.7nm,1.8s						
POLO				*e*PP	**PcP**	**20 13 04.8**	**+2.7**
MVO	**Moncorvo**	**43.86**	**21**	*e*P	**P**	**20 11 17.6**	**+1.4**
MVO				*i* Amb		20 11 25.2	
	comp=Z,24nm,1.8s						
MVO				*e*PP	**PcP**	**20 13 03.6**	**+1.2**
MVO				*e*S	**S**	**20 17 49.9**	**+2.9**
MVO				*e*LR	LR	20 21 38.3	
MVO				*i* AMs_20		20 28 34.7	
	comp=Z,853nm,18.0s						
PCAB	**Cabril**	**44.00**	**20**	*e*P	**P**	**20 11 18.8**	**+1.6**
PCAB				*i* Amb		20 11 26.0	
	comp=Z,32nm,1.5s						
PGAV	**Gavieira, Arco**	**44.15**	**19**	*e*P	**P**	**20 11 20.9**	**+2.4**
PGAV				*i* Amb		20 11 50.1	
	comp=Z,25nm,1.6s						
PGAV				*e*S	**S**	**20 17 53.0**	**+1.9**
PGAV				*e*LR	LR	20 23 45.1	
PGAV				*i* AMs_20		20 28 17.6	
	comp=Z,904nm,18.0s						
LPAZ	**La Paz**	**44.73**	**246**		**P**	**20 11 23.0**	**-1.1**
LPAZ	**La Paz**	**44.73**	**246**	P	**P**	**20 11 22.7**	**-1.4**
	comp=Z,8.9nm,1.0s,baz=68,slow=7.4,SNR=15						
LPAZ				S	**S**	**20 18 02.0**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=139,slow=20,SNR=1.2						
LPAZ				LR	LR	20 29 38.9	
	comp=Z,3µm,18.2s,baz=72,slow=36						
	comp=Z,8.9nm,1.0s						
LPAZ	**La Paz**	**44.73**	**246**	P	**P**	**20 11 23.0**	**-1.1**
LPAZ				pmax	pmax		
	comp=Z,13nm,1.1s						
SDV	**Santo Domingo**	**45.05**	**282**	LR	LR	20 29 55.6	
	comp=Z,780nm,19.7s,baz=93,slow=36						
TSUM	**Tsumeb**	**47.22**	**117**		**P**	**20 11 43.1**	**-0.1**
TSUM				IAmb	IAmb	20 11 49.5	
	comp=Z,12nm,1.0s						
TSUM	**Tsumeb**	**47.22**	**117**	LR	LR	20 27 07.1	
	comp=Z,2µm,21.4s,baz=280,slow=30						
KEST	**Kesra**	**47.99**	**39**		**P**	**20 11 47.6**	**-1.2**
KEST				IAmb	IAmb	20 12 01.4	
	comp=Z,18nm,1.1s						
KEST	**Kesra**	**47.99**	**39**	P	**P**	**20 11 47.8**	**-1.0**
	comp=Z,3.9nm,0.7s,baz=249,slow=15,SNR=4.9						
KEST				S	**S**	**20 18 50.7**	**+4.1**
	comp=Z,5.6nm,1.1s,baz=288,slow=20,SNR=2.5						
KEST				LR	LR	20 31 48.2	
	comp=Z,3µm,20.6s,baz=243,slow=36						
	comp=Z,3.9nm,0.7s						
WIN	**Windhoek**	**48.01**	**122**	P	**P**	**20 11 48.4**	**-1.0**
WIN				IAmb	IAmb	20 11 54.4	
	comp=Z,22nm,1.2s						
WIN	**Windhoek**	**48.01**	**122**	P	**P**	**20 11 48.4**	**-1.0**
WIN				pmax	pmax		
	comp=Z,22nm,1.2s						
ROSC	**El Rosal**	**48.30**	**276**	LR	LR	20 31 31.8	
	comp=Z,2µm,18.8s,baz=98,slow=35						
CEST	**Esterri de Car**	**48.44**	**27**	P	**P**	**20 11 51.7**	**-0.6**
KOOLE	**Kule**	**50.82**	**121**		**P**	**20 12 11.3**	**+0.5**
KOOLE				IAmb	IAmb	20 12 17.5	
	comp=Z,15nm,0.9s						
GRTLG	**Ghanzi**	**51.15**	**118**		**P**	**20 12 13.2**	**0.0**
CFA	**Coronel Fontan**	**51.18**	**227**	P	**P**	**20 12 12.2**	**-1.0**
	comp=Z,5.6nm,1.1s,baz=63,slow=10.0,SNR=7.9						
CFA				LR	LR	20 34 25.4	
	comp=Z,1µm,20.2s,baz=60,slow=37						
	comp=Z,5.6nm,1.1s						
CO01	**Juntas del Tor**	**51.78**	**230**	IAmb	IAmb	20 12 22.8	
	comp=Z,23nm,1.2s						
NNA	**Nana**	**51.89**	**254**	LR	LR	20 34 56.6	
	comp=Z,381nm,20.1s,baz=70,slow=37						
VAE	**Valguarnera**	**52.30**	**41**	LR	LR	20 35 27.5	
	comp=Z,7µm,18.7s,baz=322,slow=37						
ISO	**Isola**	**52.40**	**30**	P	**P**	**20 12 24.8**	**+2.7**
ISO				pmax	pmax		
	comp=Z,8.0nm,1.5s						
CO03	**El Pedregal**	**52.63**	**229**	IAmb	IAmb	20 12 27.0	
	comp=Z,38nm,1.5s						
ATAH	**Atahualpa**	**52.71**	**261**	LR	LR	20 34 19.3	
	comp=Z,824nm,19.5s,baz=84,slow=36						
BNI	**Bardonecchia**	**52.85**	**29**	P	**P**	**20 12 24.3**	**-1.2**
BNI	**Bardonecchia**	**52.85**	**29**	P	**P**	**20 12 24.3**	**-1.2**
BNI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
COHC	**Cochancay**	**53.20**	**266**		**P**	**20 12 27.9**	**-0.6**
LOR	**Lormes**	**53.25**	**25**	P	**P**	**20 12 27.4**	**-0.9**
LOR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CEL	**Celeste**	**53.70**	**41**	P	**P**	**20 12 31.6**	**-0.3**
CEL				IAmb	IAmb	20 12 57.8	
	comp=Z,15nm,1.1s						
LMEL	**Las Melosas**	**53.74**	**226**	IAmb	IAmb	20 12 55.2	
	comp=Z,19nm,1.3s						
MT01	**Popeta**	**54.50**	**226**	IAmb	IAmb	20 12 39.3	
	comp=Z,16nm,0.9s						
HAL	**Halifax**	**54.91**	**328**	P	**P**	**20 12 39.9**	**-0.5**
HAL	**Halifax**	**54.91**	**328**	P	**P**	**20 12 39.9**	**-0.5**
HAL				pmax	pmax		
	comp=Z,23nm,0.9s						
DAVOX	**Davos/Dischmat**	**55.64**	**29**	LR	LR	20 35 36.3	
	comp=Z,863nm,19.5s,baz=238,slow=35						
DOU	**Dourbes**	**55.77**	**23**	*d*P	**P**	**20 12 45.6**	**-0.9**
	comp=Z,6.4nm,1.0s						
BI02	**San Fabin de**	**55.93**	**223**	IAmb	IAmb	20 12 49.6	
	comp=Z,16nm,0.9s						
LSZ	**Lusaka**	**55.96**	**109**		**P**	**20 12 49.6**	**+1.0**
LSZ				IAmb	IAmb	20 12 58.3	
	comp=Z,20nm,1.4s						
LSZ	**Lusaka**	**55.96**	**109**	LR	LR	20 32 07.0	
	comp=Z,1µm,21.5s,baz=287,slow=31						
LSZ	**Lusaka**	**55.96**	**109**	P	**P**	**20 12 49.6**	**+1.0**
LSZ				pmax	pmax		
	comp=Z,20nm,1.4s						
DAVA	**Damuels**	**56.00**	**29**	*i* P	**P**	**20 12 48.1**	**-0.4**
	comp=Z,10.0nm,1.2s						
BFO	**Black Forest**	**56.02**	**27**	*e*P	**P**	**20 12 48.2**	**-0.2**
	comp=Z,5.3nm,1.0s,baz=224,slow=6.9						
CTI	**Castel Tesino**	**56.03**	**31**	IAmb	IAmb	20 12 56.4	
	comp=Z,25nm,1.7s						
LBTB	**Lobatse**	**56.15**	**121**		**P**	**20 12 49.9**	**+0.1**
LBTB	**Lobatse**	**56.15**	**121**	LR	LR	20 33 40.6	
	comp=Z,1µm,18.7s,baz=284,slow=33						
FETA	**Feichten**	**56.23**	**30**	*i* P	**P**	**20 12 48.9**	**-1.1**
	comp=Z,13nm,1.1s						
LMN	**Caledonia Moun**	**56.36**	**328**	P	**P**	**20 12 49.3**	**-1.5**
LMN				IAmb	IAmb	20 12 51.2	
	comp=Z,16nm,1.0s						
UBR	**Ueberruh**	**56.39**	**29**	*e*P	**P**	**20 12 50.8**	**-0.3**
	comp=Z,9.0nm,0.9s,baz=224,slow=6.9						
RETA	**Reutte**	**56.57**	**29**	*e*P	**P**	**20 12 50.6**	**-1.8**
	comp=Z,2.9nm,0.8s						
SQTA	**Sankt Quirin**	**56.60**	**30**	*e*P	**P**	**20 12 51.2**	**-1.5**
	comp=Z,8.2nm,1.0s						
MOTA	**Moosalm**	**56.64**	**30**	*e*P	**P**	**20 12 51.3**	**-1.7**
	comp=Z,6.5nm,0.9s						
PSDA	**Pessada-Kefalo**	**56.77**	**43**	P	**P**	**20 12 56.0**	**+2.1**
VLS	**Valsamata**	**56.81**	**43**	P	**P**	**20 12 53.2**	**-1.1**
WTTA	**Wattenberg**	**56.85**	**30**	*i* P	**P**	**20 12 53.1**	**-1.4**
	comp=Z,4.0nm,0.7s						
WATA	**Walderalm**	**56.87**	**30**	*i* P	**P**	**20 12 54.6**	**0.0**
	comp=Z,4.5nm,1.1s						
MBAR	**Mbarara**	**56.88**	**91⇑**	*e*P	**P**	**20 12 56.9**	**+1.5**
MBAR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
FSK	**Fiskardo**	**56.93**	**43**	P	**P**	**20 12 57.9**	**+2.8**
ABTA	**Abfaltersbach**	**56.94**	**31**	*e*P	**P**	**20 12 53.7**	**-1.4**
	comp=Z,18nm,1.2s						
PYL	**PYLOS**	**57.00**	**45**	P	**P**	**20 12 55.2**	**-0.4**
KEK	**Kerkira**	**57.05**	**41**	P	P	20 13 01.2	+5.3
BOSA	**Boshof**	**57.11**	**125**		**P**	**20 12 56.3**	**-0.3**
BOSA	**Boshof**	**57.11**	**125**	P	**P**	**20 12 56.0**	**-0.6**
	comp=Z,3.8nm,0.7s,baz=287,slow=9.0,SNR=9.4						
BOSA				S	**S**	**20 20 54.2**	**+2.5**
	comp=Z,1.7nm,1.1s,baz=270,slow=18,SNR=1.7						
BOSA				LR	LR	20 32 49.2	
	comp=Z,2µm,20.3s,baz=277,slow=31						
	comp=Z,3.8nm,0.7s						
BOSA	**Boshof**	**57.11**	**125**	P	**P**	**20 12 56.3**	**-0.3**
BOSA				pmax	pmax		
	comp=Z,41nm,1.7s						
LKD2	**Lefkada island**	**57.16**	**43**	P	**P**	**20 12 59.5**	**+2.8**
ITM	**Ithomi**	**57.26**	**45**		**P**	**20 12 56.8**	**-0.7**
ITM				IAmb	IAmb	20 13 12.3	
	comp=Z,25nm,1.4s						
ITM	**Ithomi**	**57.26**	**45**	P	**P**	**20 12 57.2**	**-0.2**
FUR	**Furstenfeldbru**	**57.29**	**29**	*e*P	**P**	**20 12 56.7**	**-0.7**
	comp=Z,12nm,0.6s,baz=224,slow=6.9						
IGT	**Igoumenitsa**	**57.31**	**42**	P	**P**	**20 12 57.6**	**-0.1**
MATP	**Matopo**	**57.40**	**115**	LR	LR	20 33 52.4	
	comp=Z,566nm,19.3s,baz=282,slow=32						
MYKA	**Terra Mystica**	**57.45**	**32**	*e*P	**P**	**20 12 59.0**	**+0.3**
	comp=Z,4.5nm,0.9s						
TNS	**Taunus Mts**	**57.47**	**26**	*e*P	**P**	**20 12 58.3**	**-0.3**
	comp=Z,4.7nm,0.8s,baz=224,slow=6.9						
DRO	**Drossia**	**57.47**	**44**	P	**P**	**20 12 59.3**	**+0.4**
LESA	**Schwarzleotal**	**57.48**	**30**	*i* P	**P**	**20 12 57.4**	**-1.4**
	comp=Z,5.8nm,0.8s						
AMPL	**Ampelaki**	**57.60**	**43**	P	**P**	**20 12 59.9**	**+0.1**
EKA	**Eskdalemuir Ar**	**57.62**	**15**	P	**P**	**20 12 58.4**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=206,slow=7.9,SNR=2.8						
EKA				S	**S**	**20 21 00.8**	**+3.7**
	comp=Z,1.4nm,0.9s,baz=191,slow=21,SNR=1.8						
	comp=Z,0.8nm,0.6s						
PLCA	**Paso Flores**	**57.65**	**219**	P	**P**	**20 12 59.1**	**-1.0**
	comp=Z,1.4nm,0.7s,baz=51,slow=14,SNR=2.1						
PLCA				S	**S**	**20 21 01.6**	**+3.3**
	comp=Z,1.0nm,0.9s,baz=312,slow=15,SNR=1.9						
PLCA				LR	LR	20 36 50.3	
	comp=Z,893nm,20.1s,baz=46,slow=35						
	comp=Z,1.4nm,0.7s						
KTHA	**Kythira Island**	**57.65**	**46**	P	**P**	**20 12 58.2**	**-2.1**
ANKY	**Antikythira Is**	**57.66**	**47**	P	**P**	**20 13 01.6**	**+1.4**
PVO	**Paravola**	**57.67**	**43**	P	**P**	**20 12 59.1**	**-1.1**
VLX	**Vlachokerasia**	**57.67**	**45**	P	**P**	**20 13 00.9**	**+0.5**
RJOB	**Jochberg**	**57.75**	**30**	*e*P	**P**	**20 13 00.2**	**-0.5**
	comp=Z,7.7nm,0.6s,baz=224,slow=6.9						
VLI	**Veliai**	**57.77**	**46**	P	**P**	**20 13 01.6**	**+0.6**
KLV	**Kalavryta, Ach**	**57.82**	**44**	P	**P**	**20 13 01.3**	**-0.1**
GUR	**Goura**	**57.91**	**44**	P	**P**	**20 13 03.9**	**+1.8**
ANX	**Ano Chora**	**57.93**	**43**	P	**P**	**20 13 03.2**	**+1.0**
SERG	**Sergoula**	**57.93**	**44**	P	**P**	**20 13 02.6**	**+0.4**
BATG	**Bathurst New B**	**57.95**	**329**	P	**P**	**20 13 00.8**	**-1.2**
KALE	**Kalithea**	**57.98**	**44**	P	**P**	**20 13 01.8**	**-0.7**
IMMV	**Iera Moni Meta**	**57.98**	**48**	P	**P**	**20 13 03.8**	**+1.3**
EVR	**Evrytania**	**58.00**	**43**	P	**P**	**20 13 04.9**	**+2.2**
BIOA	**Bad Ischl, Aus**	**58.14**	**31**	*e*P	**P**	**20 13 03.1**	**-0.4**
	comp=Z,5.4nm,1.0s						
KBN	**Korca**	**58.17**	**41**	P	**P**	**20 13 04.6**	**+0.8**
KASTN	**Kahler Asten**	**58.18**	**25**	*e*P	**P**	**20 13 03.6**	**0.0**
	comp=Z,9.8nm,1.2s,baz=224,slow=6.9						
HRV	**Adam Dziewonsk**	**58.21**	**322**	P	**P**	**20 13 03.6**	**-0.4**
HRV	**Adam Dziewonsk**	**58.21**	**322**	P	**P**	**20 13 03.6**	**-0.4**
HRV				pmax	pmax		
	comp=Z,22nm,0.9s						
KPRO	**Kipourio**	**58.21**	**42**	P	**P**	**20 13 04.4**	**+0.3**
SOKA	**Soboth**	**58.21**	**32**	*e*P	**P**	**20 13 03.3**	**-0.8**
	comp=Z,7.7nm,1.0s						
NEST	**Nestorio**	**58.23**	**41**	P	**P**	**20 13 05.3**	**+1.0**
MAKR	**Makrakomi, Fth**	**58.27**	**43**	P	**P**	**20 13 04.6**	**+0.1**
GRF	**Grafenberg Arr**	**58.33**	**28**	*e*P	**P**	**20 13 04.3**	**-0.4**
	comp=Z,5.6nm,0.9s,baz=224,slow=6.9						
GRF				*e*L	L	20 38 17.9	
	comp=Z,621nm,19.9s						
LTK	**Loutraki**	**58.38**	**45**	P	**P**	**20 13 06.3**	**+1.0**
THL	**Klokotos Trika**	**58.46**	**42**	P	**P**	**20 13 06.4**	**+0.7**
MOA	**Molln**	**58.56**	**31**	*i* P	**P**	**20 13 06.0**	**-0.4**
	comp=Z,4.5nm,0.8s						
UBBA	**Unterbreizbach**	**58.58**	**26**	*e*P	**P**	**20 13 06.5**	**+0.2**
	comp=Z,7.1nm,1.1s,baz=224,slow=6.9						
IDI	**Anoyia**	**58.58**	**48**	P	**P**	**20 13 05.6**	**-1.2**
IDI	**Anoyia**	**58.58**	**48**	LR	LR	20 38 51.1	
	comp=Z,820nm,21.6s,baz=280,slow=37						
WET	**Wettzell**	**58.73**	**29**	*e*P	**P**	**20 13 06.8**	**-0.8**
	comp=Z,29nm,1.7s,baz=224,slow=6.9						
ARSA	**Arzberg**	**58.84**	**32**	*i* P	**P**	**20 13 05.6**	**-2.7**
	comp=Z,7.3nm,1.7s						
ROTZ	**Rotzenmuhle**	**58.84**	**28**	*e*P	**P**	**20 13 07.8**	**-0.5**
	comp=Z,2.3nm,1.2s,baz=224,slow=6.9						
VLY	**Voula,Athens**	**58.89**	**45**	P	P	20 13 00.9	-7.9
PAL	**Palisades**	**58.92**	**319**	P	**P**	**20 13 09.0**	**+0.1**
PAL	**Palisades**	**58.92**	**319**	P	**P**	**20 13 09.0**	**+0.1**
PAL				pmax	pmax		
	comp=Z,21nm,1.0s						
GEC2	**GERESS Array S**	**58.94**	**30**	IAmb	IAmb	20 13 18.3	
	comp=Z,22nm,1.7s						
GEC2	**GERESS Array S**	**58.94**	**30**	*e*P	**P**	**20 13 08.3**	**-0.8**
	comp=Z,5.7nm,0.9s,baz=224,slow=6.9						
GERES	**GERESS Array B**	**58.94**	**30**	P	**P**	**20 13 07.0**	**-2.0**
	comp=Z,1.4nm,0.6s,baz=233,slow=5.7,SNR=39						
GERES				S	**S**	**20 21 17.4**	**+2.5**
	comp=Z,445nm,0.4s,baz=252,slow=28,SNR=18						
GERES				LR	LR	20 38 23.6	
	comp=Z,582nm,19.2s,baz=242,slow=36						
	comp=Z,1.4nm,0.6s						
MANZ	**Manzenberg**	**58.95**	**28**	*e*P	**P**	**20 13 08.2**	**-0.8**
	comp=Z,3.0nm,1.2s,baz=224,slow=6.9						
KHC	**Kasperske Hory**	**59.07**	**29**	*e*P	**P**	**20 13 08.4**	**-1.5**
KHC				*e*S	**S**	**20 21 19.3**	**+2.9**
KHC				AMS	AMS	20 43 30.0	
	comp=Z,600nm,13.4s						
KHC	**Kasperske Hory**	**59.07**	**29**	*de*P	**P**	**20 13 08.4**	**-1.5**
KHC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MOX	**Moxa**	**59.18**	**27**	*e*P	**P**	**20 13 10.6**	**0.0**
	comp=Z,17nm,1.4s,baz=224,slow=6.9						
MOX				*e*L	L	20 35 24.6	
	comp=Z,484nm,21.7s						
CKRC	**Cesky Krumlov**	**59.22**	**30**	*e*P	**P**	**20 13 14.3**	**+3.4**
CKRC				AMS	AMS	20 44 30.0	
	comp=Z,600nm,15.6s						
CKRC	**Cesky Krumlov**	**59.22**	**30**	*e*P	**P**	**20 13 14.3**	**+3.4**
CKRC				MLR	MLR		
	comp=Z,600nm,15.6s						
JTS	**Las Juntas de**	**59.23**	**282**	LR	LR	20 42 10.4	
	comp=Z,216nm,18.0s,baz=122,slow=40						
NKC	**Novy Kostel**	**59.27**	**28**	*e*P	**P**	**20 13 15.6**	**+4.3**
NKC				AMS	AMS	20 44 10.0	
	comp=Z,700nm,13.5s						
NKC	**Novy Kostel**	**59.27**	**28**	*e*P	**P**	**20 13 15.6**	**+4.3**
NKC				MLR	MLR		
	comp=Z,700nm,13.5s						
HNH	**Hanover**	**59.31**	**323**	IAmb	IAmb	20 13 13.4	
	comp=Z,18nm,1.0s						
TANN	**Tannenbergstha**	**59.41**	**28**	*e*P	**P**	**20 13 12.1**	**-0.1**
	comp=Z,18nm,1.4s,baz=224,slow=6.9						
CONA	**Conrad Observa**	**59.44**	**32**	*e*P	**P**	**20 13 11.6**	**-0.9**
	comp=Z,5.4nm,1.2s						
KYMI	**Kymi, Euboea I**	**59.45**	**44**	P	**P**	**20 13 10.8**	**-1.9**
RONA	**Rosalia, Austr**	**59.53**	**32**	*i* P	**P**	**20 13 11.7**	**-1.4**
	comp=Z,6.9nm,0.9s						
WUPA	**West Chester U**	**59.53**	**317**	P	**P**	**20 13 11.1**	**-2.1**
ZVC	**Zvikov**	**59.57**	**29**	*e*S	**S**	**20 21 27.0**	**+4.1**
ZVC				AMS	AMS	20 44 00.0	
	comp=Z,600nm,12.6s						
T59A	**Double "B" Far**	**59.58**	**313**	P	**P**	**20 13 13.2**	**-0.3**
T59A				IAmb	IAmb	20 13 24.8	
	comp=Z,17nm,1.3s						
NEUB	**Neuenburg**	**59.65**	**27**	*e*P	**P**	**20 13 14.2**	**+0.5**
	comp=Z,7.0nm,0.7s,baz=224,slow=6.9						
RETH	**Rethem/Aller,**	**59.72**	**24**	*e*P	**P**	**20 13 14.8**	**+0.6**
	comp=Z,40nm,1.8s,baz=224,slow=6.9						
LL01	**San Ignacio de**	**59.72**	**218**	IAmb	IAmb	20 13 23.9	
	comp=Z,20nm,1.2s						
PLG	**Polygyros**	**59.81**	**42**	P	**P**	**20 13 13.0**	**-2.2**
ASSE	**Asse, Remlinge**	**59.82**	**25**	*e*P	**P**	**20 13 14.6**	**-0.2**
	comp=Z,7.4nm,1.2s,baz=224,slow=6.9						
LL02	**Futaleuf**	**59.82**	**217**	IAmb	IAmb	20 13 16.7	
	comp=Z,14nm,0.9s						
NRDL	**Niedersach Rie**	**59.85**	**25**	*e*P	**P**	**20 13 15.7**	**+0.7**
	comp=Z,20nm,1.5s,baz=224,slow=6.9						
PRU	**Pruhonice**	**60.10**	**29**	*e*S	**S**	**20 21 32.3**	**+2.6**
PRU				AMS	AMS	20 44 20.0	
	comp=Z,600nm,13.2s						
PRA	**Prague**	**60.11**	**29**	*e*S	**S**	**20 21 34.0**	**+4.3**
PRA				AMS	AMS	20 45 50.0	
	comp=Z,600nm,16.4s						
TREC	**Trest**	**60.12**	**30**	*e*P	**P**	**20 13 17.0**	**-0.1**
TREC	**Trest**	**60.12**	**30**	*e*P	**P**	**20 13 17.0**	**-0.1**
OUR	**Ouranopolis**	**60.15**	**43**	P	**P**	**20 13 18.6**	**+1.1**
FLTG	**Flechtingen**	**60.21**	**25**	*e*P	**P**	**20 13 17.4**	**-0.2**
	comp=Z,18nm,1.4s,baz=224,slow=6.9						
V58A	**Windy Hill, Pi**	**60.25**	**312**	IAmb	IAmb	20 13 32.7	
	comp=Z,17nm,1.3s						
SRS	**Serrai**	**60.26**	**42**	P	**P**	**20 13 18.9**	**+0.7**
CLL	**Collm**	**60.27**	**27**	*i* P	**P**	**20 13 18.5**	**+0.5**
CLL				*i*		20 13 21.9	
CLL				*e*S	**S**	**20 21 36.0**	**+4.2**
CLL				MLR	MLR		
	comp=Z,500nm,19.8s						
CLL	**Collm**	**60.27**	**27**	*e*P	**P**	**20 13 17.8**	**-0.3**
	comp=Z,6.8nm,1.1s,baz=224,slow=6.9						
CLL	**Collm**	**60.27**	**27**	*i* P	**P**	**20 13 18.5**	**+0.5**
CLL				*i* x	x	20 13 21.9	
	comp=Z,12nm,1.6s						
CLL				*i* x	x	20 13 27.0	
	comp=Z,11nm,1.4s						

CLL				ePcP	PcP	20 14 04.0	+0.7
CLL				ePP	PP	20 15 31.0	-0.1
CLL				ePPP	PPP	20 16 59.0	
CLL				eS	S	20 21 36.0	+4.2
	comp=N,700nm,27.5s						
CLL				eS	S	20 21 36.0	+4.2
	comp=E,500nm,24.5s						
CLL				ex	x	20 24 24.0	
CLL				eSSS	SSS	20 28 02.0	
CLL				AMS	AMS	20 36 00.0	
	comp=Z,500nm,19.8s						
KKB	Krupnik	60.31	41	P	P	20 13 13.9	-4.6
BRG	Berggiesshubel	60.41	28	eP	P	20 13 18.2	-0.8
	comp=Z,2.7nm,0.9s,baz=224,slow=6.9						
BRG	Berggiesshubel	60.41	28	eP	P	20 13 20.0	+0.9
BRG				Amp		20 13 24.2	
	comp=Z,2.8nm,0.9s						
BRG	Berggiesshubel	60.41	28	PP	PP	20 15 30.0	-2.3
BRG	Berggiesshubel	60.41	28	S	S	20 21 41.0	+7.4
KRUC	Moravsky	60.43	31	eP	P	20 13 18.6	-0.6
MODS	Modra-Piesok	60.46	32	eP	P	20 13 18.7	-0.8
PVCC	Panska Ves	60.48	29	AMS	AMS	20 46 00.0	
	comp=Z,700nm,15.4s						
J59A	Piesco	60.55	321	IAmb	IAmb	20 13 21.5	
	comp=Z,11nm,1.0s						
MMB	Musomishta	60.57	41	P	P	20 13 17.1	-3.3
SRO	Srobarova	60.67	33	eP	P	20 13 21.7	+0.8
VRAC	Vranov	60.69	31	LR	LR	20 39 06.9	
	comp=Z,416nm,18.2s,baz=236,slow=36						
VRAC	Vranov	60.69	31	eP	P	20 13 20.3	-0.7
GORT1	Trebel	60.71	25	eP	P	20 13 21.3	+0.3
	comp=Z,30nm,1.4s,baz=224,slow=6.9						
VTS	Vitosha	60.76	40	P	P	20 13 21.9	+0.1
JAVC	Velka Javorina	60.96	32	eP	P	20 13 22.7	-0.2
BSEG	Bad Segeberg	60.99	24	eP	P	20 13 22.3	-0.6
	comp=Z,13nm,0.9s,baz=224,slow=6.9						
UPC	Upice	61.16	29	eS	S	20 21 46.8	+3.6
UPC				AMS	AMS	20 45 20.0	
	comp=Z,700nm,14.6s						
DPC	Dobruska-Polom	61.21	30	eP	P	20 13 24.4	-0.2
DPC				AMS	AMS	20 45 10.0	
	comp=Z,600nm,15.1s						
DPC	Dobruska-Polom	61.21	30	eP	P	20 13 24.4	-0.2
DPC				MLR	MLR		
	comp=Z,600nm,15.1s						
CHVC	Chvalec	61.23	29	eP	P	20 13 24.4	-0.3
CHVC				AMS	AMS	20 45 30.0	
	comp=Z,700nm,14.3s						
CHVC	Chvalec	61.23	29	eP	P	20 13 24.4	-0.3
CHVC				MLR	MLR		
	comp=Z,700nm,14.3s						
KRLC	Kraliky	61.27	30	eP	P	20 13 24.5	-0.4
KRLC				eS	S	20 21 49.6	+4.9
KRLC				AMS	AMS	20 45 00.0	
	comp=Z,600nm,17.2s						
KRLC	Kraliky	61.27	30	eP	P	20 13 24.5	-0.4
KRLC				eS	S	20 21 49.6	+4.9
KRLC				MLR	MLR		
	comp=Z,600nm,17.2s						
OSTC	Ostas	61.29	29	eS	S	20 21 49.7	+4.8
OSTC				AMS	AMS	20 45 00.0	
	comp=Z,600nm,13.6s						
RZN	Rozhen	61.29	41	P	P	20 13 24.8	-0.7
MAUC	Maruska	61.35	31	eS	S	20 21 49.6	+3.8
VYHS	Vyhne	61.36	32	eP	P	20 13 25.4	-0.2
ARG	Arkhangelos	61.37	48	P	P	20 13 22.2	-3.7
MORC	Moravsky Berou	61.46	31	eP	P	20 13 25.0	-1.3
J57A	Williamstown	61.46	321	IAmb	IAmb	20 13 27.6	
	comp=Z,8.9nm,0.8s						
KSP	Ksiaz	61.51	29	eP	P	20 13 27.6	+1.0
PLD	Plovdiv	61.51	41	P	P	20 13 26.3	-0.4
RDO	Rodhopi	61.58	42	P	P	20 13 29.5	+2.4
PSZ	Piszkesteto	61.60	33	IAmb	IAmb	20 13 32.5	
	comp=Z,17nm,1.0s						
PSZ	Piszkesteto	61.60	33	P	P	20 13 23.5	-3.8
Q56A	Snyder Ridge,	61.62	315	IAmb	IAmb	20 13 29.3	
	comp=Z,10.0nm,0.9s						
ALN	Alexandroupoli	61.81	43	P	P	20 13 28.4	-0.3
V55A	Taylorsville	61.85	311	IAmb	IAmb	20 14 35.3	
	comp=Z,14nm,1.1s						
TRQ	Mont Tremblant	62.02	324		P	20 13 29.3	-0.9
TRQ				IAmb	IAmb	20 13 31.1	
	comp=Z,12nm,0.8s						
LANS	Liptovska Anna	62.09	32	eP	P	20 13 31.0	+0.5
LANS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LANS	Liptovska Anna	62.09	32	eP	P	20 13 31.0	+0.5
RGN	Rugen	62.66	25	eP	P	20 13 34.2	+0.1
	comp=Z,15nm,1.1s,baz=224,slow=6.9						
NIE	Niedzica	62.68	32	eP	P	20 13 35.2	+0.8
SZH	Strazhitsa	62.83	40	P	P	20 13 34.5	-1.0
OJC	Ojcow	62.89	31	eP	P	20 13 34.6	-1.2
DELO	Deloro Mine	63.03	321	IAmb	IAmb	20 13 38.0	
	comp=Z,14nm,1.0s						
SCHQ	Schefferville	63.38	335	P	P	20 13 39.0	0.0
	comp=Z,4.3nm,0.8s,baz=140,slow=7.9,SNR=5.3						
SCHQ				S	S	20 22 10.6	-0.5
	comp=Z,1.1nm,0.7s,baz=108,slow=20,SNR=1.6						
SCHQ				LR	LR	20 38 04.8	
	comp=Z,784nm,19.0s,baz=136,slow=33						
	comp=Z,4.3nm,0.8s						
TKL	Tuckaleechee C	63.73	310	LR	LR	20 35 30.9	
	comp=Z,854nm,21.3s,baz=114,slow=30						
MLR	Muntele Rosu	63.86	38	LR	LR	20 44 38.1	
	comp=Z,1µm,18.8s,baz=240,slow=39						
O52A	Adamsville	63.92	315	IAmb	IAmb	20 13 44.3	
	comp=Z,17nm,1.0s						
BORG	Borgarnes	64.03	2	LR	LR	20 36 34.6	
	comp=Z,314nm,18.1s,baz=175,slow=31						
KWP	Kalwaria Pacla	64.10	33	eP	P	20 13 44.0	+0.1
SADO	Sadowa	64.10	321	LR	LR	20 35 13.9	
	comp=Z,858nm,21.6s,baz=137,slow=30						
BURAR	Bucovina Array	64.46	36		P	20 13 45.4	-1.0
BURAR	Bucovina Array	64.46	36	P	P	20 13 47.0	+0.7
BURAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
VRI	Vrincioaia	64.52	38	P	P	20 13 49.3	+2.6
EIL	Elat	64.75	57	LR	LR	20 40 42.5	
	comp=Z,1µm,21.2s,baz=256,slow=35						
R50A	Paris	65.04	312	IAmb	IAmb	20 14 01.8	
	comp=Z,18nm,1.3s						
USHA	Ushuaia	65.27	205	LR	LR	20 38 09.3	
	comp=Z,1µm,20.4s,baz=55,slow=32						
U49A	Red Boiling Sp	65.55	310	IAmb	IAmb	20 14 10.8	
	comp=Z,11nm,1.1s						
MMAI	Mount Meron Ar	66.00	54	P	P	20 13 54.3	-2.3
	comp=Z,2.5nm,0.8s,baz=280,slow=0.9,SNR=5.0						
MMAI				S	S	20 22 47.1	+2.8
	comp=Z,0.4nm,0.5s,baz=265,slow=32,SNR=1.5						
MMAI				LR	LR	20 44 17.0	
	comp=Z,573nm,19.0s,baz=283,slow=37						
	comp=Z,2.5nm,0.8s						
ANTO	Ankara	66.13	46	P	P	20 13 56.4	-0.9
ANTO				IAmb	IAmb	20 14 06.9	
	comp=Z,15nm,1.0s						
ANTO	Ankara	66.13	46	P	P	20 13 56.4	-0.9
ANTO				pmax	pmax		
	comp=Z,15nm,1.0s						
MILM	Milestii Mici	66.29	38	⇑iP	P	20 13 55.0	-3.0
	comp=Z,36nm,1.0s						
MILM				eL	L	20 35 10.0	
MILM				LRM	MLR	20 44 17.0	
	comp=Z,700nm,21.0s						
MILM	Milestii Mici	66.29	38	c iP	P	20 13 55.0	-3.0
MILM				pmax	pmax		
	comp=Z,36nm,1.0s						
NB2	NORSAR Subarra	66.61	19	P	P	20 14 00.3	+0.4
	comp=Z,0.9nm,0.7s,baz=219,slow=6.9						
NOA	NORSAR Array B	66.61	19	P	P	20 13 59.1	-0.8
	comp=Z,2.5nm,0.9s,baz=222,slow=6.2,SNR=4.6						
NOA				LR	LR	20 39 42.9	
	comp=Z,421nm,19.7s,baz=205,slow=33						
	comp=Z,2.5nm,0.9s						
BR131	Keskin Array S	66.69	47		P	20 13 58.9	-2.1
BR131				IAmb	IAmb	20 14 10.3	
	comp=Z,12nm,1.1s						
BR131	Keskin Array S	66.69	47	deP	P	20 14 00.2	-0.8
BRTR	Keskin Array B	66.69	47		P	20 13 58.6	-2.4
BRTR	Keskin Array B	66.69	47	P	P	20 13 59.3	-1.7
	comp=Z,4.3nm,0.7s,baz=234,slow=6.2,SNR=27						
BRTR				LR	LR	20 44 21.2	
	comp=Z,896nm,19.6s,baz=232,slow=37						
	comp=Z,4.3nm,0.7s						
BRTR	Keskin Array B	66.69	47	i P	P	20 13 59.5	-1.5
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HFS	Hagfors	66.77	20	P	P	20 13 59.0	-1.9
	comp=Z,1.6nm,0.6s,baz=211,slow=7.9,SNR=4.5						
HFS				S	S	20 22 57.1	+4.6
	comp=Z,0.5nm,0.6s,baz=238,slow=13,SNR=0.9						
HFS				LR	LR	20 39 16.1	
	comp=Z,699nm,21.7s,baz=227,slow=32						
	comp=Z,1.6nm,0.6s						
SUW	Suwalki	66.79	29	eP	P	20 14 00.9	-0.1
ASF	Jabal al Asfar	67.00	55	LR	LR	20 45 24.1	
	comp=Z,639nm,18.0s,baz=269,slow=38						
E46A	Sault Ste Mari	68.06	321		P	20 14 08.0	-1.4
E46A				IAmb	IAmb	20 14 10.2	
	comp=Z,15nm,1.0s						
KIEV	Kiev	68.24	34		P	20 14 07.8	-2.6
KIEV	Kiev	68.24	34	P	P	20 14 09.0	-1.4
KIEV				pmax	pmax		
	comp=Z,21nm,0.9s						
AKASG	Malin Array Be	68.25	34		P	20 14 08.0	-2.5
AKASG	Malin Array Be	68.25	34	P	P	20 14 08.6	-1.9
	comp=Z,12nm,0.8s,baz=244,slow=5.9,SNR=25						
AKASG				S	S	20 23 11.4	+0.7
	comp=Z,0.2nm,0.2s,baz=245,slow=9.8,SNR=1.2						
AKASG				LR	LR	20 44 52.2	
	comp=Z,360nm,19.7s,baz=240,slow=37						
	comp=Z,12nm,0.8s						
AKBB	Malin Array Si	68.25	34	ceP	P	20 14 09.0	-1.4
SFJD	Kangerlussuaq	68.39	350	LR	LR	20 37 39.7	
	comp=Z,722nm,19.0s,baz=164,slow=30						
ICESG	Greenland Ices	68.91	355	i P	P	20 14 15.6	+1.0
NACGM	Naroch	69.04	30	eP	P	20 14 14.7	-0.5
	comp=Z,14nm,0.9s,baz=239						
ATD	Arta Tunnel	69.28	78	LR	LR	20 43 02.1	
	comp=Z,13nm,19.9s,baz=276,slow=35						
MNK	Minsk	69.38	30	i P	P	20 14 14.4	-3.0
	comp=Z,7.0nm,0.9s,baz=240						
MNK				i PP	PP	20 16 31.7	-19
MNK				i PPP	PPP	20 18 19.7	
MNK				i S	S	20 23 21.7	-2.2
MNK				i SS	SS	20 27 48.2	-3.0
MNK				i SSS	SSS	20 31 05.2	
MNK				i LR	LR	20 45 01.3	
MNK				i LRM	MLR	20 46 53.0	
	comp=Z,538nm,15.6s						
MNK				i LRM	MLR	20 46 56.0	
	comp=E,380nm,16.5s						
MNK				i LRM	MLR	20 46 56.0	
	comp=N,443nm,19.3s						
MNK	Minsk	69.38	30	i P	P	20 14 14.3	-3.0
MNK				i S	S	20 23 21.7	-2.2
MNK				i SS	SS	20 27 48.1	-3.0
MNK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MNK				MLR	MLR		
	comp=Z,538nm,16.0s						
MNK				MLR	MLR		
	comp=E,380nm,16.0s						
MNK				MLR	MLR		
	comp=N,443nm,19.0s						
LCAR	Lake Charles	69.58	308	IAmb	IAmb	20 14 34.4	
	comp=Z,14nm,1.3s						
CCM	Cathedral Cave	70.16	310	P	P	20 14 20.8	-1.7
CCM				IAmb	IAmb	20 14 32.2	
	comp=Z,11nm,1.1s						
CCM	Cathedral Cave	70.16	310	P	P	20 14 20.8	-1.7
CCM				pmax	pmax		
	comp=Z,11nm,1.1s						
I42A	Draeger Farm,	70.20	317	IAmb	IAmb	20 14 23.5	
	comp=Z,14nm,1.0s						
WHAR	Wooly Hollow	70.28	307	IAmb	IAmb	20 14 36.8	
	comp=Z,20nm,1.5s						
MGMO	Mountain Grove	70.72	309	IAmb	IAmb	20 14 36.0	
	comp=Z,7.8nm,0.8s						
PMSA	Palmer Station	70.88	196	LR	LR	20 38 32.4	
	comp=Z,605nm,20.6s,baz=24,slow=30						
ANN	Anapa	71.03	42	eP	P	20 14 24.5	-3.2
ANN				eS	S	20 23 40.8	-2.7
ANN				pmax	pmax		
	comp=Z,36nm,1.0s						
ANN				MLR	MLR		
	comp=Z,579nm,22.0s						
JMIC	Jan Mayen	71.13	6	LR	LR	20 39 34.4	
	comp=Z,554nm,18.9s,baz=186,slow=31						
MARD	Mardin	71.36	51	IAmb	IAmb	20 14 39.4	
	comp=Z,17nm,1.2s						
S39A	Bolivar	71.66	310	IAmb	IAmb	20 15 01.4	
	comp=Z,18nm,1.5s						
VNA1	Neumayer--Stat	72.17	174	⇓P	P	20 14 39.4	+5.4
	comp=Z,6.7nm,0.8s						
SUMG	Summit	72.22	356		P	20 14 34.2	-0.6
SUMG				IAmb	IAmb	20 15 04.7	
	comp=Z,23nm,1.2s						
SUMG	Summit	72.22	356	P	P	20 14 34.2	-0.6
SUMG				pmax	pmax		
	comp=Z,23nm,1.2s						
SUMG	Summit	72.22	356	i P	P	20 14 36.0	+1.2
SOC	Sochi	72.22	44	eP	P	20 14 33.0	-1.9
SOC				e		20 17 13.1	
SOC				ePPP	PPP	20 18 54.4	
SOC				eS	S	20 23 56.8	-0.6
SOC				eSS	SS	20 28 28.5	-6.8
SOC				pmax	pmax		
	comp=Z,19nm,0.9s						
SOC				MLR	MLR		
	comp=Z,282nm,22.0s						
FINES	FINESS Array B	72.26	23	P	P	20 14 34.0	-0.8
	comp=Z,5.2nm,1.0s,baz=224,slow=3.8,SNR=8.6						
FINES				S	S	20 23 59.0	+1.8
	comp=Z,2.0nm,0.9s,baz=203,slow=24,SNR=1.5						
FINES				LR	LR	20 44 40.2	
	comp=Z,667nm,19.4s,baz=235,slow=34						
	comp=Z,5.2nm,1.0s						
FINES	FINESS Array B	72.26	23	P	P	20 14 34.0	-0.8
FINES				S	S	20 23 59.0	+1.8
VNA2	Neumayer--Watz	72.52	174	⇓P	P	20 14 41.0	+4.8
	comp=Z,6.9nm,0.7s,baz=332,slow=6.1						
VNA3	Neumayer Olymp	72.59	174	⇓P	P	20 14 41.2	+4.6
	comp=Z,2.7nm,0.9s						
GURO	Guroymak-BITLI	72.61	50	IAmb	IAmb	20 14 55.7	
	comp=Z,24nm,1.3s						
RAYN	Ar Rayn	72.92	66		P	20 14 38.3	-1.2
RAYN				IAmb	IAmb	20 14 52.6	
	comp=Z,24nm,1.5s						
RAYN	Ar Rayn	72.92	66	P	P	20 14 38.3	-1.2
RAYN				pmax	pmax		
	comp=Z,24nm,1.5s						
LABN	Labinsk	73.22	43	eP	P	20 14 44.0	+3.2
LABN				pmax	pmax		
	comp=Z,18nm,0.6s						
GEVA	Gevas	73.34	50	IAmb	IAmb	20 14 59.6	
	comp=Z,20nm,1.2s						
ERBR	Yeremizino-Bor	73.36	42	eP	P	20 14 41.1	-0.5
ERBR				pmax	pmax		
	comp=Z,28nm,1.3s						
SNAA	Sanae	73.77	173	⇓P	P	20 14 48.7	+5.1
	comp=Z,40nm,0.7s						
SNAA	Sanae	73.77	173		P	20 14 44.2	+0.6
SNAA	Sanae	73.77	173	P	P	20 14 44.5	+0.9
	comp=Z,2.5nm,0.9s,baz=329,slow=6.8,SNR=8.3						
SNAA				LR	LR	20 40 21.3	
	comp=Z,167nm,19.2s,baz=326,slow=30						
	comp=Z,2.5nm,0.9s						
SNAA	Sanae	73.77	173	deP	P	20 14 47.2	+3.6
QUOK	Quay	73.98	307	P	P	20 14 43.4	-2.1
OK052	Battle Ridge R	74.02	307	P	P	20 14 41.1	-4.6
OK052				IAmb	IAmb	20 14 55.4	
	comp=Z,17nm,0.9s						
OBN	Obninsk	74.16	32	LR	LR	20 48 37.5	
	comp=Z,397nm,18.2s,baz=198,slow=37						
OBN	Obninsk	74.16	32	eP	P	20 14 44.8	-1.3
OBN				i		20 14 55.3	
OBN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
VORD	Divnogorie	74.22	37	eP	P	20 14 46.3	-0.2
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSR	Storozhevoye	74.22	36	eP	P	20 14 44.3	-2.3
VSR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SHA1	Shidzhatmaz	74.32	45	d iP	P	20 14 48.2	+0.6
KIV	Kislovodsk	74.39	44	eP	P	20 14 48.6	+0.7
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,199nm,18.0s						
VORR	Voronezh	74.40	36	eP	P	20 14 46.6	-1.0
VORR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KVAR	Kislovodsk Arr	74.40	44	LR	LR	20 49 17.3	
	comp=Z,249nm,21.9s,baz=110,slow=37						
KBZ	Khabaz	74.49	45	P	P	20 14 46.5	-1.8
	comp=Z,2.7nm,0.8s,baz=225,slow=5.7,SNR=4.3						
KBZ				S	S	20 24 25.3	+2.3
	comp=Z,0.4nm,0.3s,baz=311,slow=3.1,SNR=1.0						
KBZ				LR	LR	20 49 56.0	
	comp=Z,424nm,20.5s,baz=252,slow=38						
	comp=Z,2.7nm,0.8s						
KBZ	Khabaz	74.49	45	deP	P	20 14 49.2	+1.0
KBZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
LPSR	Galich'ya Gora	74.55	35	eP	P	20 14 46.0	-2.4
LPSR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TROLL	Troll, Antarti	74.84	171	⇓P	P	20 14 54.8	+4.8
	comp=Z,92nm,0.7s						
GOF	Gofitskoye	74.92	43	ceP	P	20 14 50.8	0.0
NCK	Nalchik	74.92	45	⇑eP	P	20 14 51.4	+0.5
NCK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MOS	Moscow	74.95	32	eP	P	20 14 48.5	-2.2
MOS				e		20 15 10.0	
MOS				pmax	pmax		
	comp=Z,27nm,0.7s						
833A	Chaparral WMA,	74.97	299	IAmb	IAmb	20 15 08.3	
	comp=Z,25nm,1.1s						
GNI	Garni	75.01	49	LR	LR	20 50 35.2	
	comp=Z,298nm,18.4s,baz=268,slow=38						
GNI	Garni	75.01	49	ceP	P	20 14 52.0	+0.4
GNI				pmax	pmax		
	comp=Z,14nm,1.4s						
HNDO	Hondo	75.03	300	IAmb	IAmb	20 15 06.3	
	comp=Z,23nm,1.3s						
BRDY	Brady	75.04	302	IAmb	IAmb	20 15 04.9	
	comp=Z,16nm,1.1s						
ECSD	EROS Data Cent	75.51	315		P	20 14 53.3	-0.9
ECSD				IAmb	IAmb	20 15 07.5	
	comp=Z,19nm,1.3s						
JCT	Junction City	75.61	301	IAmb	IAmb	20 15 20.5	
	comp=Z,11nm,0.8s						
VRH	Novokhopyorsk	75.75	37	eP	P	20 14 50.8	-4.6
VRH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ABTX	Abilene, Hawle	75.77	303	IAmb	IAmb	20 15 33.4	
	comp=Z,19nm,1.2s						
AGMN	Agassiz Nation	76.11	320	IAmb	IAmb	20 14 58.0	
	comp=Z,12nm,0.9s						
DAG	Danmarks Havn	76.13	2	eP	P	20 14 57.8	+0.7
DRIO	Del Rio	76.17	300	IAmb	IAmb	20 15 12.4	
	comp=Z,12nm,1.1s						
ULM	Lac du Bonnet	76.63	322	P	P	20 14 59.3	-1.1
	comp=Z,2.3nm,0.6s,baz=125,slow=16,SNR=3.0						
ULM				LR	LR	20 42 59.4	
	comp=Z,746nm,21.1s,baz=102,slow=31						
	comp=Z,2.3nm,0.6s						
ULM	Lac du Bonnet	76.63	322	⇓eP	P	20 15 00.3	-0.1
SMWD	Samnorwood	76.64	306	IAmb	IAmb	20 15 11.1	
	comp=Z,15nm,0.7s						
ARCES	ARCESS Array B	76.75	16	P	P	20 14 58.6	-2.2
	comp=Z,3.2nm,0.9s,baz=243,slow=5.9,SNR=3.7						
ARCES				LR	LR	20 44 13.5	
	comp=Z,673nm,20.6s,baz=236,slow=32						
	comp=Z,3.2nm,0.9s						
OZNA	Ozona	76.79	302	IAmb	IAmb	20 15 18.4	
	comp=Z,13nm,0.9s						
SN05	Snyder 5	76.84	304	IAmb	IAmb	20 15 27.3	
	comp=Z,14nm,1.2s						
DKNS	Dickens	76.98	304	IAmb	IAmb	20 15 10.8	
	comp=Z,10nm,0.9s						
POST	Post	77.38	304	IAmb	IAmb	20 15 25.2	
	comp=Z,14nm,0.8s						
AKT	Akhty	77.50	48	eP	P	20 15 03.0	-2.7
AKT				e		20 15 13.3	
AKT				ePPP	PPP	20 19 45.3	
AKT				eS	S	20 24 51.5	-5.1
AKT				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AKT				MLR	MLR		
	comp=Z,508nm,23.0s						
MAK	Makhachkala	77.60	46	eP	P	20 14 59.8	-6.2
MAK				e		20 17 54.6	
MAK				ePPP	PPP	20 19 47.5	
MAK				eS	S	20 24 48.0	-9.4
MAK				eSSS	SSS	20 33 14.7	
MAK				pmax	pmax		
	comp=Z,137nm,1.3s						
MAK				MLR	MLR		
	comp=Z,370nm,18.0s						
KLMR	Klimovskoe	77.76	27	eP	P	20 15 04.9	-1.6
KLMR				SS	SS	20 30 00.7	+2.1
KLMR				pmax	pmax		
	comp=Z,36nm,1.5s						
KLMR				MLR	MLR		
	comp=Z,652nm,19.0s						
NEEM	North Greenlan	77.89	355	eP	P	20 15 08.4	+1.0
MSTX	Muleshoe	78.55	304	IAmb	IAmb	20 15 25.2	
	comp=Z,30nm,1.3s						
BELA	Belgrano 2	78.60	182		P	20 15 10.6	-0.3
BELA				IAmb	IAmb	20 15 32.6	
	comp=Z,18nm,1.3s						
TXAR	Lajitas Array	78.81	300	P	P	20 15 13.3	+0.2
	comp=Z,2.8nm,0.9s,baz=96,slow=6.0,SNR=10						
TXAR				LR	LR	20 46 07.5	
	comp=Z,174nm,22.0s,baz=73,slow=33						
	comp=Z,2.8nm,0.9s						
TX31	Lajitas Ar. Si	78.81	300	IAmb	IAmb	20 15 21.0	
	comp=Z,24nm,1.9s						
PECS	Pecos	79.18	302	IAmb	IAmb	20 15 31.6	
	comp=Z,14nm,0.8s						
BELG	Belogornoye	79.59	37	LR	LR	20 53 31.5	
	comp=Z,557nm,19.6s,baz=301,slow=38						
SPITS	Spitsbergen Ar	80.59	8	LR	LR	20 44 47.8	
	comp=Z,694nm,18.5s,baz=190,slow=31						
RSSD	Black Hills	80.85	314		P	20 15 24.4	+0.3
RSSD	Black Hills	80.85	314	P	P	20 15 24.4	+0.3
RSSD				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ANMO	Albuquerque	81.68	305	P	P	20 15 28.7	+0.1
ANMO	Albuquerque	81.68	305	IAmb	IAmb	20 16 18.7	
	comp=Z,12nm,0.6s						
ANMO	Albuquerque	81.68	305	LR	LR	20 46 55.0	
	comp=Z,556nm,22.0s,baz=188,slow=32						
ANMO	Albuquerque	81.68	305	⇑eP	P	20 15 29.9	+1.2
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KIRV	Kirov	81.92	31	⇑eP	P	20 15 29.0	-0.1
SYO	Syowa Base	82.11	161	⇓eP	P	20 15 29.2	-0.7
PV13	Radium Mtn., P	83.83	308	IAmb	IAmb	20 15 55.2	
	comp=Z,14nm,1.2s						
RES	Resolute Bay	83.83	346	LR	LR	20 49 09.6	
	comp=Z,173nm,18.3s,baz=163,slow=33						
PV05	Paradox Valley	84.04	308	IAmb	IAmb	20 15 45.6	
	comp=Z,8.6nm,0.9s						
LPIG	La Paz	84.41	294	LR	LR	20 51 42.8	
	comp=Z,186nm,19.2s,baz=66,slow=35						
RLMT	Red Lodge	84.67	315	IAmb	IAmb	20 16 07.7	
	comp=Z,9.1nm,1.0s						
PDAR	Pinedale Array	84.71	313	P	P	20 15 43.2	-1.0
	comp=Z,1.4nm,0.8s,baz=91,slow=3.1,SNR=6.8						
PDAR				LR	LR	20 47 55.3	
	comp=Z,559nm,21.9s,baz=102,slow=32						
	comp=Z,1.4nm,0.8s						
AKTO	Aktyubinsk	85.75	40	LR	LR	20 57 03.8	
	comp=Z,372nm,21.8s,baz=264,slow=38						
TPAW	Teton Pass	85.77	313	IAmb	IAmb	20 16 00.1	
	comp=Z,9.0nm,0.9s						
FXWY	Fox Creek	85.83	314	IAmb	IAmb	20 16 19.6	
	comp=Z,27nm,1.7s						
YHL	Hebgen Lake	86.01	315	IAmb	IAmb	20 15 53.4	
	comp=Z,10nm,1.0s						
HWUT	Hardware Ranch	86.13	311	IAmb	IAmb	20 16 05.7	
	comp=Z,14nm,1.2s						
CTU	Camp Tracy	86.23	311	IAmb	IAmb	20 16 03.5	
	comp=Z,8.5nm,0.6s						
ARTI	Arti	86.40	34	P	P	20 15 50.9	-1.1
ARTI				IAmb	IAmb	20 16 03.3	
	comp=Z,19nm,1.4s						
ARTI	Arti	86.40	34	LR	LR	20 55 12.2	
	comp=Z,287nm,21.1s,baz=266,slow=36						
ARTI	Arti	86.40	34	d iP	P	20 15 52.8	+0.8
ARTI				S	SKSac	20 26 19.1	+1.1
ARTI				SS	SS	20 32 03.9	-3.3
ARTI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
AB31	Akbulak array	86.92	41	IAmb	IAmb	20 16 05.3	

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               comp=Z,19nm,1.7s
ABKAR Akbulak array     86.92  41               P       20 15 54.2 -0.5
ABKAR Akbulak array     86.92  41   IAmb        IAmb    20 16 05.3
               comp=Z,19nm,1.7s
DUG   Dugway, Tooele    87.03 310   IAmb        IAmb    20 16 10.7
               comp=Z,11nm,1.3s
YKA   Yellowknife Ar    88.70 332   P           P       20 16 03.1 +0.2
               comp=Z,0.6nm,0.7s,baz=92,slow=4.3,SNR=2.4
YKA                                 LR          LR      20 50 57.2
               comp=Z,835nm,21.8s,baz=80,slow=32
               comp=Z,0.6nm,0.7s
PRN   Pahroc Range      88.73 307   IAmb        IAmb    20 16 20.4
               comp=Z,15nm,1.4s
ELK   Elko              88.89 311   LR          LR      20 52 05.1
               comp=Z,430nm,19.5s,baz=96,slow=33
PFO   Pinyon Flats O    89.91 303   LR          LR      20 54 21.8
               comp=Z,309nm,19.1s,baz=84,slow=34
PFO   Pinyon Flats O    89.91 303⇑eP            P       20 16 09.8 +0.4
PFO                                 pmax        pmax
               comp=Z,10.0nm,1.7s
NEW   Newport           90.16 318   LR          LR      20 51 26.4
               comp=Z,639nm,21.8s,baz=85,slow=32
MAW   Mawson            90.23 157   P           P       20 16 11.3 +1.3
               comp=Z,0.4nm,0.4s,baz=270,slow=11,SNR=3.9
MAW                                 LR          LR      20 48 11.2
               comp=Z,334nm,20.7s,baz=282,slow=30
               comp=Z,0.4nm,0.4s
BMO   Blue Mountains    90.36 315   IAmb        IAmb    20 16 39.5
               comp=Z,18nm,1.8s
QSPA  South Pole Qui    90.74 180               P       20 16 12.7 +0.1
QSPA  South Pole Qui    90.74 180   P           P       20 16 12.9 +0.4
               comp=Z,7.1nm,1.0s,baz=211,slow=5.8,SNR=12
QSPA                                LR          LR      20 53 11.1
               comp=Z,237nm,18.8s,baz=186,slow=33
               comp=Z,7.1nm,1.0s
NVAR  Mina Array Bea    91.29 308   P           P       20 16 16.4 +0.5
               comp=Z,0.3nm,0.6s,baz=64,slow=2.0,SNR=1.9
NVAR                                LR          LR      20 52 26.8
               comp=Z,343nm,21.6s,baz=90,slow=32
               comp=Z,0.3nm,0.6s
BVAR  Borovoye Array    93.40  37   LR          LR      20 59 43.6
               comp=Z,370nm,20.5s,baz=269,slow=36
INK   Inuvik            95.76 339   LR          LR      20 55 53.7
               comp=Z,573nm,20.6s,baz=82,slow=33
AAK   Ala-Archa         97.36  47   LR          LR      21 05 24.8
               comp=Z,206nm,19.3s,baz=277,slow=38
AAK   Ala-Archa         97.36  47⇓eP            Pdif    20 16 45.7 +2.0
AAK                                 pmax        pmax
               comp=Z,1.0nm,1.1s
KURBB Kurchatov Arra    98.76  39   P           Pdif    20 16 49.6 +0.2
               comp=Z,0.2nm,0.5s,baz=282,slow=4.6,SNR=3.0
KURBB                               LR          LR      21 07 34.8
               comp=Z,229nm,18.6s,baz=170,slow=39
               comp=Z,0.2nm,0.5s
KURK  Kurchatov         98.79  38   P           P       20 16 49.6 +0.1
WMQ   Urumqi           106.52  44   Pdif        Pdif    20 17 26.3 +2.1
WMQ                                 LR          LR
               comp=Z,380nm,20.5s
WMQ                                 LR          LR
               comp=Z,360nm,23.7s
WMQ                                 LR          LR
               comp=Z,560nm,23.9s
SONM  Songino Array    116.54  34   PKP         PKiKP   20 21 55.1 +1.0
               comp=Z,0.5nm,0.8s,baz=270,slow=1.4,SNR=3.3
TBI   Tubuai           120.63 243  eSS          SS      20 39 55.8 -4.3
               comp=Z,2μm,34.2s
TBI   Tubuai           120.63 243  eLQ          LQ      20 53 58.6
               comp=Z,4μm,38.2s
TBI                                eLR          LR      20 59 07.1
               comp=Z,1μm,29.0s
TBI                                eLR          LR      20 59 07.6
               comp=Z,2μm,23.2s
PPT2  Papeete2         121.95 250  eSS          SS      20 40 15.0 -2.4
               comp=Z,224nm,25.8s
PPT2  Papeete2         121.95 250  eLQ          LQ      20 54 18.7
               comp=Z,2μm,31.5s
PPT2                               eLR          LR      20 59 32.5
               comp=Z,316nm,25.2s
PPT2                               eLR          LR      20 59 35.9
               comp=Z,257nm,25.0s
CMAR  Chiang Mai Arr   122.80  68   PKP         PKiKP   20 22 08.1 +1.1
               comp=Z,0.8nm,0.7s,baz=269,slow=3.3,SNR=5.5
PZH   PanZhiHua        123.02  58   PKP         PKPdf   20 22 07.3 +0.2
HHC   Hu-ho-hao-te     123.60  38  ePKP         PKPdf   20 22 04.8 -3.0
QIZ   Qiongzhong       132.56  63   PKP         PKiKP   20 22 27.3 +0.8
QIZ                                 SS          SS      20 42 29.1 -0.2
QIZ                                 LR          LR
               comp=Z,240nm,11.3s
QIZ                                 LR          LR
               comp=Z,280nm,19.2s
NJ2   Nanjing          133.57  42  ePKP         PKPdf   20 22 26.6 -0.3
ASAR  Alice Springs    150.04 141               PKPdf   20 22 58.5 +2.1
ASAR  Alice Springs    150.04 141   PKPbc       PKPbc   20 23 01.4 +0.1
               comp=Z,5.4nm,0.8s,baz=215,slow=1.6,SNR=28
ASAR  Alice Springs    150.04 141   PKIKP       PKPdf   20 22 58.5 +2.1
AS31  Alice Springs    150.04 141               PKiKP   20 23 02.1 -0.1
WRA   Warramunga Arr   152.94 136               PKPbc   20 23 07.9 -0.1
WRA   Warramunga Arr   152.94 136   PKPbc       PKPbc   20 23 08.1  0.0
               comp=Z,2.0nm,0.9s,baz=241,slow=2.5,SNR=5.2
DZM   Mont Dzumac      155.46 209  eLR          LR      21 15 09.4
               comp=Z,447nm,25.1s
```

IDC ***17*** *20:04:28.2±1.0, 28°.32N×104°.91E, h0km, mb3.5/6, mbtmp3.5/7, ML3.6/1, MS2.9/2, Error ellipse: s-maj=40.8km s-min=19.5km az=60.0*

ISC 17 20:04:31.4±0.9**, 28°.5N**±0°.1×**105°.1E**±0°.2**, h19km, n8, σ0s.96**/9**, mb3.5**/6**, Sichuan**

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Code  Station Name       Δ°   AZ°   Phase ID            Time     Res
                                    Op          ISC     h  m  s  ISC
CMAR  Chiang Mai Arr    11.42 211   Pn          Pn      20 07 14.2 +0.7
               0.1nm,0.3s,baz=21,slow=12,SNR=4.9
CMAR                                LR          LR      20 11 58.1
               comp=Z,51nm,18.8s,baz=40,slow=40
SONM  Songino Array     19.38   3   P           Pn      20 08 57.2 -0.1
               0.2nm,0.3s,baz=183,slow=13,SNR=5.3
SONM                                LR          LR      20 17 11.9
               comp=Z,38nm,19.4s,baz=148,slow=39
               0.6nm,0.5s
KSRS  Korea Array       21.14  59   P           P       20 09 16.5 +1.3
               1.2nm,0.8s,baz=241,slow=9.3,SNR=6.0
               1.2nm,0.8s
MKAR  Makanchi Array    25.54 322   P           P       20 09 59.7 +0.8
               0.4nm,0.6s,baz=128,slow=11,SNR=5.4
               0.4nm,0.6s
KURBB Kurchatov Arra    29.86 325   P           P       20 10 37.8 +0.4
               0.3nm,0.5s,baz=128,slow=10.0,SNR=4.0
               0.3nm,0.5s
WRA   Warramunga Arr    55.82 146   P           P       20 14 06.5 -1.1
               0.7nm,0.8s,baz=330,slow=7.4,SNR=4.9
               0.7nm,0.8s
ASAR  Alice Springs     58.81 149   P           P       20 14 28.6  0.0
               0.6nm,0.7s,baz=338,slow=7.9,SNR=7.6
ASAR                                PcP         PcP     20 15 17.9 -0.3
               0.2nm,0.7s,baz=341,slow=5.0,SNR=1.3
               0.6nm,0.7s
NOA   NORSAR Array B    67.33 328   P           P       20 15 23.7 -1.2
               0.4nm,0.6s,baz=70,slow=5.6,SNR=2.3
               0.4nm,0.6s
```

NEIC ***17*** *20:09:08.4±0.4, 43°.72N±0°.06×105°.36W±0°.05, h0km±1km, ML3.0/18, Error ellipse: s-maj=11.1km s-min=3.9km az=329.0*

IDC ***17*** *20:09:10.8±2.1, 43°.96N×105°.80W, h0km, mbtmp3.1/2, ML3.0/2, Error ellipse: s-maj=67.1km s-min=10.5km az=148.0*

ISC 17 20:09:05.5±1.3**, 43°.91N**±0°.06×**105°.55W**±0°.05**, h0km, n14, σ0s.90**/12**, Wyoming**

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Code  Station Name       Δ°   AZ°   Phase ID            Time     Res
                                    Op          ISC     h  m  s  ISC
RSSD  Black Hills        1.11  79               Pb      20 09 28.6 +0.9
K22A  Casper             1.45 210               Pb      20 09 34.5 +1.1
LAO   LASA Array         2.82 350               Pb      20 09 57.1 +0.5
RLMT  Red Lodge          2.92 296               Pb      20 09 59.2 +0.6
RLMT                                IAML                20 11 34.4
               27nm,2.2s
RLMT                                IAML                20 11 36.7
               34nm,1.6s
PD31  Pinedale Array     3.14 250   Pn          Pb      20 10 01.8 -0.6
PDAR  Pinedale Array     3.14 250   Pn          Pb      20 10 03.3 +1.0
PDAR  Pinedale Array     3.14 250   Pn          Pb      20 10 02.3 -0.1
               1.8nm,0.3s,baz=60,slow=15,SNR=17
PDAR                                Lg          Lg      20 10 44.9
               1.9nm,0.3s,baz=67,slow=27,SNR=3.3
               1.3nm,0.3s
YNE   Yellowstone No     3.38 290   Pn          Pb      20 10 06.7 +0.4
YNE                                 IAML                20 11 03.3
               comp=N,23nm,0.2s
YNE                                 IAML                20 11 03.4
               comp=E,22nm,0.3s
YMP   Mirror Lake Pl     3.41 286   Pn          Pb      20 10 07.2 +0.3
YMP                                 IAML                20 11 15.4
               comp=E,42nm,1.9s
YMP                                 IAML                20 11 43.2
               comp=N,33nm,2.0s
GCMT  Greycliff          3.48 304   Pn          Pb      20 10 08.6 +0.5
LOHW  Long Hollow        3.68 267   Pn          Pb      20 10 12.8 +1.4
LOHW                                IAML                20 11 16.6
               comp=N,20nm,2.0s
LOHW                                IAML                20 11 30.6
               comp=N,16nm,2.0s
OGNE  Ogallala           3.94 138               Pn      20 10 06.3 -1.1
ULM   Lac du Bonnet      9.14  43   Pn          Pn      20 11 24.2 +5.7
               comp=N,0.3nm,0.3s,baz=239,slow=12,SNR=1.9
ULM                                 Lg          Lg      20 13 52.7
               comp=N,0.1nm,0.3s,baz=146,slow=21,SNR=3.0
               comp=N,0.7nm,0.3s
I56US NEWPORT INFRAS     9.15 302   I           I       21 08 30.0
               baz=115,slow=313,SNR=3.6
```

IDC ***17*** *20:11:06.3±0.6, 28°.39N×104°.74E, h0km, mb3.9/16, mbtmp3.9/17, ML3.7/1, Error ellipse: s-maj=22.8km s-min=13.9km az=51.0*

ISC 17 20:11:09.6±0.6**, 28°.47N**±0°.10×**104°.8E**±0°.1**, h19km, n22, σ0s.80**/26**, mb4.0**/17**, Sichuan**

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Code  Station Name       Δ°   AZ°   Phase ID            Time     Res
                                    Op          ISC     h  m  s  ISC
CMAR  Chiang Mai Arr    11.34 210   Pn          Pn      20 13 51.3 +0.7
               0.2nm,0.3s,baz=26,slow=12,SNR=5.6
SONM  Songino Array     19.37   3   P           Pn      20 15 35.7 +0.3
               0.2nm,0.3s,baz=184,slow=11,SNR=7.6
               1.1nm,0.7s
KSRS  Korea Array       21.30  59   P           P       20 15 55.7 +0.6
               4.1nm,0.9s,baz=249,slow=9.9,SNR=13
               4.1nm,0.9s
JNU   Nakatsue          22.82  72   P           P       20 16 11.5  0.0
               4.2nm,0.9s,baz=270,slow=1.0,SNR=4.4
               4.2nm,0.9s
MKAR  Makanchi Array    25.41 322   P           P       20 16 36.3 +0.5
               1.9nm,0.7s,baz=128,slow=11,SNR=24
MKAR                                PcP         PcP     20 20 07.9 +0.1
               0.4nm,0.8s,baz=102,slow=2.1,SNR=2.2
               1.9nm,0.7s
USRK  Ussuriysk Ar.     26.76  47   P           P       20 16 48.5 +0.5
               2.9nm,0.6s,baz=241,slow=8.1,SNR=7.8
               2.9nm,0.6s
ZALV  Zalesovo Beam     29.37 336   P           P       20 17 11.0 -0.2
               0.8nm,0.5s,baz=159,slow=8.6,SNR=4.6
               0.8nm,0.5s
ZALV  Zalesovo Beam     29.37 336   P           P       20 17 11.0 -0.2
KURBB Kurchatov Arra    29.74 325   P           P       20 17 14.6 +0.1
               1.4nm,0.8s,baz=133,slow=9.1,SNR=8.7
KURBB                               PcP         PcP     20 20 18.2 +0.1
               0.2nm,0.5s,baz=116,slow=2.1,SNR=4.3
               1.4nm,0.8s
BVAR  Borovoye Array    35.26 324   P           P       20 18 04.6 +1.7
               0.7nm,0.6s,baz=142,slow=7.2,SNR=2.6
BVAR                                PcP         PcP     20 20 31.4 -1.9
               0.4nm,0.3s,baz=122,slow=1.9,SNR=3.0
               0.7nm,0.6s
WRA   Warramunga Arr    55.94 146   P           P       20 20 46.2 -0.5
               1.4nm,0.7s,baz=335,slow=7.7,SNR=21
               1.4nm,0.7s
ASAR  Alice Springs     58.92 149   P           P       20 21 07.4 -0.2
               1.0nm,0.6s,baz=324,slow=6.8,SNR=18
ASAR                                PcP         PcP     20 21 57.3 +0.6
               0.4nm,0.8s,baz=336,slow=4.4,SNR=4.2
               1.0nm,0.6s
AKASG Malin Array Be    59.66 314   P           P       20 21 11.7 -0.7
               0.3nm,0.3s,baz=69,slow=7.2,SNR=2.2
               0.3nm,0.3s
ARCES ARCESS Array B    59.91 336   P           P       20 21 12.9 -1.0
               2.6nm,1.0s,baz=75,slow=6.0,SNR=1.8
               2.6nm,1.0s
FINES FINESS Array B    60.11 327   P           P       20 21 14.5 -0.8
               3.6nm,1.1s,baz=76,slow=5.8,SNR=4.2
               3.6nm,1.1s
SPITS Spitsbergen Ar    62.04 347   P           P       20 21 27.7 -0.5
               3.9nm,1.0s,baz=89,slow=18,SNR=1.3
               3.9nm,1.0s
HFS   Hagfors           66.31 327   P           P       20 21 56.4 -0.1
               1.7nm,0.9s,baz=69,slow=8.4,SNR=2.2
               1.7nm,0.9s
NOA   NORSAR Array B    67.22 328   P           P       20 22 01.8 -0.6
               0.6nm,0.9s,baz=74,slow=5.6,SNR=4.6
               0.6nm,0.9s
GERES GERESS Array B    69.85 315   P           P       20 22 19.5 +0.5
               222nm,0.4s,baz=55,slow=5.7,SNR=8.6
ILAR  Eielson Array     71.93  25   P           P       20 22 32.9 +1.6
               0.1nm,0.3s,baz=282,slow=5.5,SNR=1.8
               0.1nm,0.3s
QSPA  South Pole Qui   118.25 180   PKP         PKPdf   20 29 54.0 -0.8
               0.3nm,0.5s,baz=333,slow=2.6,SNR=1.2
SNAA  Sanae            122.31 201   PKP         PKPdf   20 30 01.8 -0.6
               0.6nm,0.7s,baz=127,slow=5.1,SNR=7.5
```

IDC ***17*** *20:13:52.9±1.0, 28°.31N×104°.91E, h0km, mb3.6/6, mbtmp3.6/8, ML3.8/2, Error ellipse: s-maj=34.9km s-min=19.2km az=66.0*

ISC 17 20:13:55.8±1.0**, 28°.3N**±0°.1×**104°.9E**±0°.2**, h19km, n8, σ0s.52**/8**, mb3.5**/6**, Sichuan**

```
Code  Station Name       Δ°   AZ°   Phase ID            Time     Res
                                    Op          ISC     h  m  s  ISC
CMAR  Chiang Mai Arr    11.26 211   Pn          Pn      20 16 35.9 +0.1
               0.4nm,0.3s,baz=26,slow=12,SNR=5.9
               0.7nm,0.4s
SONM  Songino Array     19.50   3   P           Pn      20 18 23.4 +0.2
               0.1nm,0.3s,baz=183,slow=12,SNR=2.8
               0.4nm,0.5s
KSRS  Korea Array       21.29  59   P           P       20 18 41.0 -0.3
               0.7nm,0.8s,baz=246,slow=9.7,SNR=2.9
               0.7nm,0.8s
MKAR  Makanchi Array    25.58 322   P           P       20 19 23.1 -0.6
               0.4nm,0.5s,baz=123,slow=12,SNR=4.8
               0.4nm,0.5s
ZALV  Zalesovo Beam     29.53 336   P           P       20 19 59.6 +0.7
               0.5nm,0.4s,baz=157,slow=7.8,SNR=1.8
               0.5nm,0.4s
KURBB Kurchatov Arra    29.91 325   P           P       20 20 01.7 -0.5
               0.3nm,0.6s,baz=126,slow=9.4,SNR=2.5
               0.3nm,0.6s
WRA   Warramunga Arr    55.77 146   P           P       20 23 31.4 -0.3
               1.4nm,0.8s,baz=335,slow=7.6,SNR=7.1
               1.4nm,0.8s
ASAR  Alice Springs     58.75 149   P           P       20 23 53.0 +0.3
               1.5nm,0.8s,baz=344,slow=7.9,SNR=5.6
               1.5nm,0.8s
```

ISK ***17*** *20:17:47.9, 37°.69N×26°.93E, h3km, ML2.7/26*

ATH ***17*** *20:17:48.9, 37°.73N×26°.95E, h11km±2km, ML2.7/5, Manual Solution by F.Xalaris First location: 2019/06/17 20:19:39, This location: 2019/06/18 04:19:31 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*

THE ***17*** *20:17:49.2, 38°N±2°×2°7E±°, h8km±3km, M2.7/7, MLh2.7/7*

AFAD ***17*** *20:17:49.0, 37°.71N×26°.96E, h7km±2km, ML2.5*

ISC 17 20:17:49.2±0.9**, 37°.71N**±0°.02×**26°.96E**±0°.02**, h12km**±7km**, n54, σ0s.62**/83**, Dodecanese Islands**

```
Code  Station Name       Δ°   AZ°   Phase ID            Time     Res
                                    Op          ISC     h  m  s  ISC
GCAM  G?zelcaml?         0.22  93   Pg          Pg      20 17 53.8 -0.1
GCAM                                Sg          Sg      20 17 57.9 +0.8
GCAM  G?zelcaml?         0.22  93   P           Pg      20 17 53.8 -0.1
GCAM                                S           Sg      20 17 56.5 -0.6
GCAM                               i IAML               20 17 57.0
               comp=E,618nm,0.4s
GCAM                               i IAML               20 18 01.0
               comp=N,721nm,0.4s
DDIM  Aydin, Didim       0.34 138   P           Pg      20 17 55.8 -0.2
DDIM                                S           Sg      20 18 01.4 +0.8
DDIM                               i IAML               20 18 02.0
               comp=N,477nm,0.3s
DDIM                               i IAML               20 18 06.0
               comp=E,415nm,0.4s
DGB   zmir               0.34 350   P           Pg      20 17 55.9 -0.2
DGB                                 S           Sg      20 18 01.4 +0.6
DGB                                i IAML               20 18 04.0
               comp=E,333nm,0.3s
DGB                                i IAML               20 18 06.0
               comp=N,269nm,0.3s
GMLD  Gumuldur           0.36 355   Pg          Pg      20 17 56.6 +0.1
GMLD                                Sg          Sg      20 18 01.9 +0.5
DIDI  Didim-Aydin        0.41 146   Pg          Pg      20 17 57.1 -0.1
DIDI                                Sg          Sg      20 18 02.9 +0.3
ZEYE  Izmir, Urla-Ze     0.64 326   P           Pg      20 18 01.4 -0.2
ZEYE                                S           Sb      20 18 11.1  0.0
ZEYE                               i IAML               20 18 13.0
               comp=N,561nm,0.6s
ZEYE                               i IAML               20 18 13.0
               comp=E,350nm,0.4s
YKAV  Yalikavak-Bodr     0.64 156   Pg          Pg      20 18 00.9 -0.8
BLCB  Balcova            0.67   6   Pg          Pg      20 18 01.9 -0.4
BLCB  Balcova            0.67   6   P           Pg      20 18 02.0 -0.4
URLA  Izmir              0.70 336   Pg          Pg      20 18 02.5 -0.4
URLA                                Sg          Sb      20 18 13.3 +0.2
URLA  Izmir              0.70 336   P           Pg      20 18 02.5 -0.4
URLA                                S           Sb      20 18 13.4 +0.2
URLA                               i IAML               20 18 17.0
               comp=N,408nm,0.8s
URLA                               i IAML               20 18 18.0
               comp=E,413nm,0.6s
BODT  Bodrum             0.71 156   Pg          Pg      20 18 02.2 -0.8
BODT                                Sg          Sb      20 18 12.7 -0.5
BODT  Bodrum             0.71 156   P           Pg      20 18 02.3 -0.6
BODT                                S           Sb      20 18 13.2  0.0
KLNA  Kalymnos           0.76 179   P           Pg      20 18 03.6 -0.2
KLNA                                S           Sb      20 18 14.3 -0.2
MLSB  Milas              0.78 122   Pg          Pg      20 18 03.1 -1.1
MLSB                                Sg          Sb      20 18 15.2  0.0
AYDB  Zeytinkoy-Aydi     0.78  72   Pg          Pg      20 18 04.2 -0.1
AYDB                                Sg          Sb      20 18 16.3 +1.0
IZMR  zmir-demi          0.90  62   P           Pg      20 18 05.9 -0.6
IZMR                                S           Sg      20 18 16.7 -1.4
IZMR                               i IAML               20 18 20.0
               comp=N,146nm,0.5s
IZMR                               i IAML               20 18 21.0
               comp=E,146nm,0.4s
CHOS  Chios island       0.98 314   Pg          Pg      20 18 08.0 -0.1
CHOS                                Sg          Sb      20 18 22.1 +1.0
CHOS  Chios island       0.98 314   P           Pg      20 18 07.9 -0.2
CHOS                                S           Sn      20 18 22.7  0.0
CHOS  Chios island       0.98 314   P           Pg      20 18 07.7 -0.4
CHOS                                S           Sg      20 18 20.4 -0.5
KARB  zmir-Karabur       1.04 336   P           Pg      20 18 08.5 -0.8
KARB                                S           Sn      20 18 24.2  0.0
KARB                               i IAML               20 18 27.0
               comp=N,189nm,0.4s
KARB                               i IAML               20 18 27.0
               comp=E,188nm,0.3s
ODEM  Odemis-Izmir       1.05  57   Pg          Pg      20 18 09.0 -0.4
NAZL  Nazilli-Aydin      1.09  76   Pn          Pg      20 18 09.7 -0.5
DAT   Datca              1.10 153   Pn          Pg      20 18 09.7 -0.7
ESEN  Aydn-Nazilli       1.11  85   P           Pg      20 18 10.1 -0.4
ESEN                                S           Sb      20 18 25.2 +0.5
ESEN                               i IAML               20 18 27.0
               comp=N,44nm,0.3s
ESEN                               i IAML               20 18 32.0
               comp=E,41nm,0.5s
GOMA  Golmarmara-Man     1.25  37   Pn          Pg      20 18 13.3 +0.1
ZEDA  zmir-Bergama       1.25   4   P           Pn      20 18 12.7 +0.1
ZEDA                                S           Sn      20 18 31.0 +1.5
ZEDA                               i IAML               20 18 32.0
               comp=E,104nm,0.5s
ZEDA                               i IAML               20 18 36.0
               comp=N,97nm,0.4s
IZMD  zmir-Dikili-       1.27 359   P           Pn      20 18 12.1 -0.8
IZMD                                S           Sn      20 18 30.7 +0.8
IZMD                               i IAML               20 18 34.0
               comp=E,48nm,0.6s
APE   Apeiranthos        1.30 241   Pn          Pn      20 18 13.2 -0.1
APE   Apeiranthos        1.30 241   P           Pg      20 18 14.0 -0.2
APE                                 S           Sb      20 18 30.7 +0.3
APE   Apeiranthos        1.30 241   P           Pn      20 18 13.4 +0.1
APE                                 S           Sb      20 18 30.4 -0.1
AKHS  Akhisar            1.35  30   P           Pb      20 18 14.2 -0.1
AKHS                               i IAML               20 18 35.0
               comp=E,115nm,0.3s
DKL   Dikili             1.36 358   Pn          Pn      20 18 13.7 -0.3
TURN  Turunc             1.39 132   Pn          Pn      20 18 14.2 -0.2
SOMA  Soma-Manisa        1.51  17   Pn          Pb      20 18 17.3 +0.1
GORD  Gordes-Manisa      1.53  38   Pn          Pb      20 18 17.7 +0.1
KULA  Kula-Manisa        1.56  59   Pn          Pb      20 18 18.1 -0.1
KULA  Kula-Manisa        1.56  59   P           Pn      20 18 16.3 -0.6
KULA                                S           Sn      20 18 37.2  0.0
PRK   Paraskevi          1.62 341   P           Pb      20 18 18.7 -0.4
PRK                                 S           Sn      20 18 38.7 +0.2
DALY  Dalyan (Mula)      1.62 123   Pn          Pb      20 18 18.5 -0.6
SIGR  SIGRI              1.73 330   Pn          Pb      20 18 20.4 -0.5
SIGR  SIGRI              1.73 330   P           Pn      20 18 20.0 +0.9
SIGR                                S           Sb      20 18 42.3 -0.3
SIGR  SIGRI              1.73 330   P           Pn      20 18 18.5 -0.6
SIGR                                S           Sn      20 18 40.4 -0.6
ARG   Arkhangelos        1.76 148   Pn          Pn      20 18 20.3 +0.7
ARG   Arkhangelos        1.76 148   P           Pn      20 18 19.6  0.0
ARG                                 S           Sn      20 18 42.8 +0.8
ARG   Arkhangelos        1.76 148   P           Pn      20 18 19.7 +0.1
SNT5  Nea Kammeni, S     1.81 224   P           Pn      20 18 19.8 -0.4
APMY  Acipayam-Deniz     1.88  97   Pn          Pn      20 18 22.3 +1.0
FETY  Fethiye            2.01 122   Pn          Pn      20 18 24.2 +1.2
CAME  Cameli-Denizli     2.02 112   Pn          Pn      20 18 24.3 +1.0
SIMA  Simav-Kutahya      2.10  49   Pn          Pb      20 18 25.9 -1.4
IDI   Anoyia             2.94 215   P           Pn      20 18 37.9 +2.1
ALN   Alexandroupoli     3.26 348   P           Pn      20 18 40.2 +0.1
```

IDC ***17*** *20:24:09.2±8.0, 5°.26N×124°.21E, h508km±111km, mb2.7/6, mbtmp3.6/6, Error ellipse: s-maj=144.3km s-min=23.0km az=68.0*

ISC 17 20:24:08.7±1.3**, 5°.3N**±0°.5×**12°4E**±°**, h500km, n6, σ0s.75**/7**, mb3.3**/6**, Mindanao**

```
Code  Station Name       Δ°   AZ°   Phase ID            Time     Res
                                    Op          ISC     h  m  s  ISC
WRA   Warramunga Arr    26.96 159   P           P       20 29 08.6 -1.0
               0.2nm,0.7s,baz=339,slow=9.0,SNR=0.9
               0.2nm,0.7s
ASAR  Alice Springs     30.27 162   P           P       20 29 39.2 +0.7
               0.1nm,0.3s,baz=344,slow=8.8,SNR=5.3
               0.1nm,0.3s
SONM  Songino Array     45.08 343   P           P       20 31 39.9 +0.4
               0.4nm,0.6s,baz=163,slow=10,SNR=2.3
               0.4nm,0.6s
MKAR  Makanchi Array    54.88 326   P           P       20 32 51.3 -0.3
               1.0nm,0.4s,baz=122,slow=7.4,SNR=33
MKAR                                PcP         PcP     20 33 45.8 -0.4
               0.1nm,0.4s,baz=120,slow=2.3,SNR=2.4
               1.0nm,0.4s
KURBB Kurchatov Arra    59.11 328   P           P       20 33 19.9 -0.6
               1.1nm,0.6s,baz=127,slow=6.4,SNR=12
               1.1nm,0.6s
BVAR  Borovoye Array    64.68 327   P           P       20 33 57.0 +0.2
               0.9nm,0.7s,baz=116,slow=6.6,SNR=3.9
               0.9nm,0.7s
```

NNC ***17*** *20:34:35.1±0.3, 43°.08N×77°.86E, h0km, mb3.5, mpv3.8, Error ellipse: s-maj=3.7km s-min=1.1km az=174.0*

SOME ***17*** *20:34:35.3, 43°.03N×77°.87E, h20km*

KRNET ***17*** *20:34:36.5±0.1, 43°.02N×77°.73E, h16km, mb3.4*

KNET ***17*** *20:34:37.3±0.5, 43°.06N×77°.66E, h13km±4km, ml2.9, Error ellipse: s-maj=6.2km s-min=3.9km az=129.0*

ISC 17 20:34:35.8±1.0**, 43°.04N**±0°.02×**77°.78E**±0°.01**, h11km**±8km**, n72, σ1s.86**/133**, 54C-22D, Lake Issyk-Kul region**

```
Code  Station Name       Δ°   AZ°   Phase ID            Time     Res
                                    Op          ISC     h  m  s  ISC
SATY  Saty               0.46  88   P           Pg      20 34 43.7 -1.2
               389nm,0.1s
SATY                                S           Sg      20 34 49.4 -1.6
               5μm,0.1s
KOTS  Kotyrbulak         0.52 292   P           Pg      20 34 46.6 +0.7
               270nm,0.1s
KOTS                                S           Sb      20 34 54.7  0.0
               616nm,0.2s
KOTS  Kotyrbulak         0.52 292  eP           Pg      20 34 46.6 +0.7
               270nm,0.1s
KOTS                               eS           Sb      20 34 54.7  0.0
```

	616nm,0.2s						
KURS	Kuram	0.53	33	P	Pg	20 34 45.2	-1.0
	21nm,0.1s						
KURS				S	Sg	20 34 51.9	-1.3
	230nm,0.3s						
MDOK	Medeo	0.55	283	⇓P	Pg	20 34 46.7	+0.3
	56nm,0.4s						
MDOK				Pg	Pb	20 34 46.9	-0.6
	122nm,0.1s						
MDOK				Lg	Lg	20 34 54.8	
	199nm,0.3s						
MDOK				⇑S	Sb	20 34 54.9	-0.6
	102nm,0.4s						
KNDC	Almaty	0.62	287	⇓P	Pg	20 34 48.3	+0.5
	26nm,0.3s						
KNDC				⇑S	Sb	20 34 58.1	+0.6
	113nm,0.3s						
AAA	Alma-Ata	0.65	285	P	Pb	20 34 49.3	+0.1
	99nm,0.1s						
AAA				S	Sn	20 34 59.4	-2.1
	45nm,0.1s						
AAA	Alma-Ata	0.65	285	eP	Pb	20 34 49.3	+0.1
	99nm,0.1s						
AAA				eS	Sn	20 34 59.4	-2.1
	45nm,0.1s						
PRZ	Przheval'sk	0.72	140	⇑eP	Pg	20 34 50.1	+0.3
PRZ				⇑iS	Sg	20 35 00.2	+0.9
KPKS	Kokpek	0.79	57	P	Pb	20 34 49.3	-2.3
	14nm,0.2s						
KPKS				S	Sb	20 34 58.9	-3.4
	357nm,0.3s						
UZB	Uzynbulak	0.92	83	P	Pb	20 34 51.6	-2.3
	359nm,0.1s						
UZB				S	Sb	20 35 02.8	-3.4
	360nm,0.1s						
UZB	Uzynbulak	0.92	83	eP	Pb	20 34 51.5	-2.3
UZB				eS	Sb	20 35 02.8	-3.4
MTBS	Maitube	0.99	276	P	Pg	20 34 55.0	+0.1
	31nm,0.1s						
MTBS				S	Sn	20 35 08.9	-0.9
	78nm,0.3s						
MTBS	Maitube	0.99	276	eP	Pg	20 34 55.0	+0.1
	31nm,0.1s						
MTBS				eS	Sn	20 35 08.9	-0.9
	78nm,0.3s						
KDJ	Kajisay	1.01	206	⇑eP	Pb	20 34 54.9	-0.5
KDJ				⇑eS	Sg	20 35 08.4	0.0
KTBS	Karatobe	1.04	310	P	Pb	20 34 55.7	-0.2
	86nm,0.1s						
KTBS				S	Sg	20 35 09.9	+0.5
	207nm,0.3s						
ARXS	Arharly	1.17	2	P	Pn	20 34 56.9	-1.3
	65nm,0.2s						
ARXS				S	Sb	20 35 12.3	-1.1
	169nm,0.2s						
BLB	Baldybastay	1.17	26	P	Pn	20 34 56.6	-1.7
	76nm,0.1s						
BLB				S	Sb	20 35 11.3	-2.1
	697nm,0.2s						
SHLS	Shalkode	1.24	84	P	Pg	20 35 02.8	+3.1
	86nm,0.1s						
SHLS				S	Sg	20 35 23.1	+7.4
	217nm,0.3s						
SHLS	Shalkode	1.24	84	eP	Pg	20 35 02.8	+3.1
	86nm,0.1s						
SHLS				eS	Sg	20 35 23.1	+7.4
	217nm,0.3s						
PDGK	Podgornoye	1.29	77	⇑P	Pn	20 34 57.6	-2.2
	33nm,0.3s						
PDGK				⇑S	Sb	20 35 14.0	-2.8
	42nm,0.4s						
KST	Kastek	1.33	271	P	Pb	20 35 00.9	0.0
	30nm,0.2s						
KST				S	Sg	20 35 19.7	+1.1
	91nm,0.4s						
KST	Kastek	1.33	271	eP	Pb	20 35 00.9	0.0
	30nm,0.2s						
KST				eS	Sg	20 35 19.7	+1.1
	91nm,0.4s						
KUU	Kurty	1.35	310	P	Pn	20 35 00.8	+0.1
	28nm,0.2s						
KUU				S	Sg	20 35 18.8	-0.3
	251nm,0.2s						
KUU	Kurty	1.35	310	eP	Pn	20 35 00.8	+0.1
	28nm,0.2s						
KUU				eS	Sg	20 35 18.8	-0.3
	251nm,0.2s						
ULHL	Ulahol	1.38	235	⇑P	Pg	20 35 02.0	-0.3
	31nm,0.1s,SNR=6.3						
ULHL				⇓S	Sg	20 35 21.1	+0.8
	112nm,0.2s						
ULHL	Ulahol	1.38	235	⇓eP	Pb	20 35 01.5	-0.3
ULHL				⇓eS	Sg	20 35 19.6	-0.7
BOOM	Boomskoye usch	1.46	248	⇑eP	Pb	20 35 02.8	-0.3
BOOM				⇑iS	Sg	20 35 21.9	-0.8
TKM2	Tokmak 2	1.60	266	⇑P	Pb	20 35 05.5	-0.1
	15nm,0.1s,SNR=28						
TKM2				⇓S	Sg	20 35 28.4	+1.0
	168nm,0.1s						
TKM2	Tokmak 2	1.60	266	⇑P	Pb	20 35 05.6	+0.1
	7.4nm,0.4s						
TKM2				⇑S	Sg	20 35 28.4	+1.0
	67nm,0.4s						
TKM2	Tokmak 2	1.60	266	⇓eP	Pb	20 35 05.5	-0.1
TKM2				⇓eS	Sg	20 35 26.6	-0.8
KNOS	Konyrlen	1.67	37	P	Pn	20 35 05.0	-0.1
	18nm,0.2s						
KNOS				S	Sn	20 35 26.7	+0.1
	212nm,0.2s						
KTMS	Ketmen	1.93	77	P	Pn	20 35 08.4	-0.3
	19nm,0.2s						
KTMS				S	Sn	20 35 33.3	+0.3
	31nm,0.2s						
KTMS	Ketmen	1.93	77	eP	Pn	20 35 08.4	-0.3
	19nm,0.2s						
KTMS				eS	Sn	20 35 33.3	+0.3
	31nm,0.2s						
DJR	Jarkent	1.95	48	P	Pn	20 35 09.5	+0.5
	19nm,0.1s						
DJR				S	Sn	20 35 34.7	+1.2
	108nm,0.3s						
DJR	Jarkent	1.95	48	eP	Pn	20 35 09.4	+0.5
	19nm,0.1s						
DJR				eS	Sn	20 35 34.7	+1.2
	108nm,0.3s						
TDK	Taldyqorghan	2.01	13	P	Pn	20 35 11.1	+1.3
	42nm,0.1s						
TDK				S	Sn	20 35 36.6	+1.7
	439nm,0.5s						
TDK	Taldyqorghan	2.01	13	eP	Pn	20 35 11.1	+1.3
	42nm,0.1s						
TDK				eS	Sn	20 35 36.6	+1.7
	439nm,0.5s						
NRN	Naryn	2.08	220	⇑eP	Pb	20 35 13.6	-0.1
NRN				⇑eS	Sg	20 35 40.6	-2.0
KBK	Karagaybulak	2.12	260	⇓P	Pb	20 35 14.4	+0.2
	58nm,0.2s,SNR=58						
KBK				⇓S	Sg	20 35 43.2	-0.5
	121nm,0.3s						
KBK	Karagaybulak	2.12	260	⇑eP	Pb	20 35 13.7	-0.6
KBK				⇑iS	Sb	20 35 40.8	+0.2
CHMS	Chumysh	2.22	270	⇑P	Pb	20 35 15.4	-0.5
	16nm,0.2s,SNR=50						
CHMS				⇑S	Sg	20 35 45.7	-1.4
	112nm,0.2s						
CHMS	Chumysh	2.22	270	⇑Pn	Pb	20 35 15.5	-0.4
	5.6nm,0.3s						
CHMS				⇓Sn	Sg	20 35 46.1	-1.0
	22nm,0.2s						
CHMS	Chumysh	2.22	270	⇑eP	Pb	20 35 15.1	-0.8
CHMS				⇑eS	Sb	20 35 43.1	-0.3
FRU1	Bishkek	2.32	265	⇑eP	Pb	20 35 16.6	-1.1
FRU1				⇑eS	Sb	20 35 45.8	-0.7
SGDS	Sogindy	2.33	281	Pg	Pb	20 35 17.6	-0.4
	12nm,0.1s						
SGDS				Lg	Lg	20 35 48.8	
	53nm,0.3s						
USP	Ospenovka	2.41	276	⇓P	Pb	20 35 17.5	-1.6
	14nm,0.2s,SNR=29						
USP				⇑S	Sb	20 35 49.1	+0.2
	62nm,0.2s						
USP	Ospenovka	2.41	276	⇑eP	Pb	20 35 17.7	-1.5
USP				⇑eS	Sb	20 35 47.8	-1.1
AAK	Ala-Archa	2.45	262	⇑P	Pb	20 35 18.9	-1.0
	34nm,0.3s,SNR=40						
AAK				⇑S	Sb	20 35 51.3	+1.1
	31nm,0.2s						
AAK	Ala-Archa	2.45	262	⇑Pn	Pb	20 35 19.3	-0.6
	1.2nm,0.3s						
AAK				⇑Lg	Lg	20 35 54.1	
	16nm,0.8s						
AAK	Ala-Archa	2.45	262	⇑eP	Pb	20 35 18.3	-1.6
AAK				⇑eS	Sb	20 35 48.7	-1.4
UCH	Uchtor	2.54	252	⇓eP	Pb	20 35 19.8	-1.9
UCH				⇓eS	Sb	20 35 51.4	-1.7
ARLS	Aral	2.81	246	⇑eP	Pb	20 35 23.3	-2.9
ARLS				⇑eS	Sb	20 35 57.4	-3.3
EKS2	Erkin-Say	2.96	264	⇑P	Pb	20 35 26.1	-2.7
	9.0nm,0.2s,SNR=7.3						
EKS2	Erkin-Say	2.96	264	⇑eP	Pb	20 35 25.5	-3.2
EKS2				⇑eS	Sb	20 36 01.2	-3.8
AML	Almayashu	3.15	255	⇓P	Pb	20 35 29.0	-3.0
	4.2nm,0.2s,SNR=6.4						
AML	Almayashu	3.15	255	⇓eP	Pn	20 35 28.2	+2.5
AML				⇓eS	Sb	20 36 05.9	-4.6
BTLS	Baital	3.35	308	Pg	Pb	20 35 35.4	+0.2
	4.8nm,0.4s						
BTLS				Lg	Lg	20 36 18.4	
	7.2nm,0.6s						
BTLS	Baital	3.35	308	eP	Pb	20 35 35.4	+0.2
	4.8nm,0.4s						
BTLS				eS	Sb	20 36 18.4	+2.4
	7.2nm,0.6s						
MRKS	Merke	3.36	266	Pg	Pb	20 35 36.5	+1.1
	7.6nm,0.5s						
MRKS				Lg	Lg	20 36 21.1	
	25nm,0.2s						
MRKS	Merke	3.36	266	eP	Pb	20 35 36.5	+1.1
	7.6nm,0.5s						
MRKS				eS	Sg	20 36 21.1	-2.4
	25nm,0.2s						
SALK	Salom-Alik	3.65	235	⇑eP	Pn	20 35 35.1	+2.7
SALK				⇑eS	Sn	20 36 17.7	+2.1
MNAS	Manas	3.92	264	⇓eP	Pn	20 35 38.7	+2.6
MNAS				⇓eS	Sn	20 36 24.1	+1.9
ARSB	Arslanbob	3.95	246	⇑eP	Pn	20 35 39.2	+2.6
ARSB				⇑eS	Sn	20 36 24.9	+1.9
SFK	Sufi-Kurgan	4.41	228	⇓eP	Pn	20 35 45.5	+2.6
SFK				⇓eS	Sn	20 36 35.9	+1.5
MAKZ	Makanchi	4.80	37	⇑Pg	Pb	20 36 00.7	+0.8
	1.6nm,0.8s						
MAKZ				⇓Lg	Lg	20 37 02.4	
	3.9nm,0.5s						
MK31	Makanchi Array	4.94	39	Pn	Pn	20 35 50.4	+0.5
	0.3nm,0.2s,baz=214,slow=15,SNR=18						
MK31				⇑Pg	Pb	20 36 02.0	-0.2
	0.3nm,0.2s,baz=216,slow=16,SNR=2.9						
MK31				⇑Lg	Lg	20 37 06.5	
	1.7nm,0.3s,baz=217,slow=26,SNR=12						
TRKS	Terek-Say	5.15	255	⇑eP	Pn	20 35 55.6	+2.6
TRKS				⇑eS	Sn	20 36 53.5	+1.0
KK31	Karatay Array	5.32	273	⇑Pg	Pg	20 36 14.0	-3.7
	1.1nm,0.5s,baz=87,slow=14,SNR=28						
KK31				⇑Lg	Lg	20 37 25.4	
	5.4nm,0.5s,baz=85,slow=29,SNR=14						
KKAR	Karatay Array	5.32	273	⇑eP	Pn	20 35 58.1	+2.9
KKAR				⇑eS	Sn	20 36 57.6	+1.1
KURBB	Kurchatov Arra	7.60	4	⇑Lg	Lg	20 38 34.5	
	11nm,0.7s						
KURK	Kurchatov	7.70	4	⇑Lg	Lg	20 38 35.1	
	5.4nm,0.9s						

IDC ***17*** *20:40:48.6±5.5, 36°.14N×70°.84E, h203^{km}±48^{km}, mb3.2/5, mbtmp3.7/10, MS4.0/3, Error ellipse: s-maj=54.0km s-min=36.3km az=153.0*

ISC 17 20:40:50.5±2.2**, 36°.4N**±0°.2×**70°.7E**±0°.2**, h200**^{km}**, n21, σ0^{s}.94**/19**, mb3.5**/4**, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.15	21	P	Pn	20 42 20.6	+0.6
	SNR=50						
EKS2	Erkin-Say	6.66	20	P	Pn	20 42 27.0	+0.6
	SNR=15						
AAK	Ala-Archa	6.86	24	P	Pn	20 42 29.8	+0.8
	SNR=12						
AAK	Ala-Archa	6.86	24	P	Pn	20 42 29.5	+0.5
	5.8nm,0.3s,baz=200,slow=9.0,SNR=21						
AAK				S	Sn	20 43 44.8	-2.4
	7.1nm,0.8s,baz=127,slow=20,SNR=6.7						
KBK	Karagaybulak	7.04	27	P	Pn	20 42 32.1	+0.8
	SNR=11						
CHMS	Chumysh	7.27	24	P	Pn	20 42 34.8	+0.7
	SNR=7.5						
USP	Ospenovka	7.43	22	P	Pn	20 42 36.5	+0.2
	SNR=8.5						
TKM2	Tokmak 2	7.51	29	P	Pn	20 42 37.6	+0.2
	SNR=24						
MKAR	Makanchi Array	13.50	36	P	Pn	20 43 54.7	+0.7
	0.2nm,0.4s,baz=217,slow=12,SNR=8.0						
KURBB	Kurchatov Arra	15.27	19	P	P	20 44 17.4	+1.3
	0.5nm,0.4s,baz=208,slow=11,SNR=4.6						
BVAR	Borovoye Array	16.59	359	P	P	20 44 31.2	+0.5
	0.5nm,0.5s,baz=184,slow=8.7,SNR=4.7						
AKTO	Aktyubinsk	16.71	331	P	Pn	20 44 33.7	+0.6
	2.4nm,0.4s,baz=136,slow=10,SNR=5.9						
ZALV	Zalesovo Beam	20.08	25	P	P	20 45 08.6	+0.1
	1.2nm,0.4s,baz=209,slow=12,SNR=5.6						
	1.2nm,0.4s						
PALK	Pallekele	30.43	160	LR	LR	20 59 59.0	
	comp=Z,185nm,22.0s,baz=262,slow=38						
FINES	FINESS Array B	37.40	326	P	P	20 47 44.4	+0.7
	0.7nm,0.5s,baz=111,slow=7.9,SNR=6.0						
	0.7nm,0.5s						
ARCES	ARCESS Array B	41.11	338	P	P	20 48 14.3	-0.1
	3.9nm,1.1s,baz=120,slow=9.0,SNR=4.1						
	3.9nm,1.1s						
PSI	Prapat	42.41	136	LR	LR	21 08 48.4	
	comp=Z,350nm,21.0s,baz=252,slow=40						
HFS	Hagfors	42.96	322	P	P	20 48 30.1	+0.6
	0.8nm,0.5s,baz=99,slow=15,SNR=1.7						
	0.8nm,0.5s						
NOA	NORSAR Array B	44.28	323	P	P	20 48 39.6	-0.4
	0.6nm,0.8s,baz=102,slow=8.6,SNR=1.5						
	0.6nm,0.8s						
KAPI	Kappang	61.64	121	LR	LR	21 21 04.7	
	comp=Z,164nm,20.3s,baz=272,slow=39						
TORD	Torodi Ar. Bea	65.46	268	P	P	20 51 11.0	-1.4
	49nm,0.3s,baz=53,slow=8.2,SNR=1.4						

SNET ***17*** *20:42:36.7±0.7, 13°.34N×90°.46W, h18^{km}±10^{km}, ML2.9*
GCG ***17*** *20:42:37.2±0.5, 13°.83N×90°.32W, h89^{km}±14^{km}, MD3.5, ML3.5*

ISC 17 20:42:41.8±2.3**, 13°.5N**±0°.2×**90°.26W**±0°.06**, h38**^{km}**, n8, σ2^{s}.05**/12**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NUBE	Las Nubes	0.62	49	eP	Pn	20 42 52.2	-2.2
NUBE	Las Nubes	0.62	49	i P	Pn	20 42 52.2	-2.2
CEVE	Cerro Verde	0.70	62	eP	Pn	20 42 53.9	-1.6
CEVE				eS	Sn	20 43 08.3	+3.1
CEVE				IAML		20 43 10.5	
	comp=Z,299nm,0.2s						
JAYA	Jayaque - finc	0.81	79	eP	Pn	20 42 55.3	-1.5
JAYA				eS	Sn	20 43 09.2	+1.5
JAYA				IAML		20 43 10.0	
	comp=Z,415nm,0.1s						
FG16	Alotenango, Sa	0.81	343	eP	Pn	20 42 55.6	-1.3
LFRS	El Faro	1.18	84	eP	Pn	20 43 01.3	-0.6
STG0	El Palmar, Qui	1.40	312	i P	Pn	20 43 03.6	-1.3
STG0				i S	Sn	20 43 23.9	+1.7
STG0				IAML		20 43 26.8	
	comp=E,748nm,0.2s						
STG8	El Palmar, Qui	1.42	312	i P	Pn	20 43 04.1	-1.2
STG8				i S	Sn	20 43 24.9	+2.0
STG8				IAML		20 43 29.5	
	comp=N,330nm,0.2s						

DNK ***17*** *20:56:08.0±1.4, 80°.86N×1°.94W, h0^{km}±11^{km}, ML1.8*
BER ***17*** *20:56:09.7±3.0, 80°.84N×2°.01W, h1^{km}±17^{km}, Mw3.5, ML3.0(NAO), Confirmed Earthquake*
KOLA ***17*** *20:56:12.3, 81°.30N×1°.18E, h0^{km}, ML2.1, Error ellipse: s-maj=169.1km s-min=41.3km az=30.0, Arctic Ocean*
FCIAR ***17*** *20:56:12.0, 80°.79N×0°.29W, h10^{km}, station OMEGA has station magnitude of 3.30 station ZFI2 has station magnitude of 3.30*

ISC 17 20:56:05.3±0.8**, 80°.94N**±0°.05×**2°.13W**±0°.04**, h10**^{km}**, n35, σ2^{s}.83**/64**, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NOR	Nord	2.32	294	Pn	Pn	20 56 46.2	+2.9
NOR				Sn	Sn	20 57 12.2	+0.4
NOR	Nord	2.32	294	i P	Pb	20 56 47.4	+0.3
NOR				i S	Sb	20 57 17.3	+1.7
NOR				IAML		20 57 35.1	
	comp=Z,8.2nm,1.4s						
NOR	Nord	2.32	294	i P	Pb	20 56 47.4	+0.3
NOR				eS	Sn	20 57 13.0	+1.1
NOR				IAML		20 57 35.1	
	comp=Z,8.2nm,1.4s						
KBS	Kingsbay	3.18	122	Pn	Pn	20 56 57.9	+2.6
KBS				Sn	Sn	20 57 31.5	-1.6
KBS	Kingsbay	3.18	122	P	Pn	20 56 57.8	+2.5
KBS				S	Sn	20 57 31.6	-1.6
KBS	Kingsbay	3.18	122	eP	Pn	20 56 57.9	+2.6
KBS				eS	Sn	20 57 31.9	-1.3
KBS				IAML		20 57 36.5	
	comp=Z,22nm,0.3s						
KBS	Kingsbay	3.18	122	i P	Pn	20 56 58.0	+2.6
KBS				i S	Sn	20 57 31.2	-2.0
BRBB	Barentsburg B	4.11	125	S	Sn	20 57 57.6	+1.5
BRBB	Barentsburg B	4.11	125	eP	Pn	20 57 10.3	+2.3
BRBA	Barentsburg A	4.14	126	Pn	Pn	20 57 12.7	+4.3
BRBA				Sn	Sn	20 57 56.6	-0.1
BRBA	Barentsburg A	4.14	126	Pn	Pn	20 57 12.7	+4.3
BRBA				Sn	Sn	20 57 56.6	-0.1
BRBA				IAML		20 57 59.7	
	comp=Z,14nm,0.3s						
SPA0	Spitsbergen Ar	4.34	120	Pn	Pn	20 57 14.5	+3.4
	baz=319,slow=11						
SPA0				Sn	Sn	20 58 00.6	-1.0
	baz=314,slow=16						
SPA0				Sn	Sn	20 58 00.6	-1.0
	baz=320,slow=37						
SPA0	Spitsbergen Ar	4.34	120	eP	Pn	20 57 14.6	+3.4
SPA0				eS	Sn	20 58 00.5	-1.2
SPA0	Spitsbergen Ar	4.34	120	Pn	Pn	20 57 14.5	+3.4
	baz=319,slow=11						
SPA0				Sn	Sn	20 58 00.6	-1.0
	baz=314,slow=16						
SPA0				IAML		20 58 05.3	
	comp=Z,5.0nm,0.4s						
SPITS	Spitsbergen Ar	4.34	120	P	Pn	20 57 14.6	+3.4
SPITS				S	Sn	20 58 00.4	-1.2
HSPB	Hornsund (broa	5.17	130	Pn	Pn	20 57 26.3	+3.7
HSPB				Sn	Sn	20 58 19.9	-2.3
HSPB	Hornsund (broa	5.17	130	eP	Pn	20 57 24.8	+2.2
HSPB				eS	Sn	20 58 20.0	-2.3
HSPB	Hornsund (broa	5.17	130	eP	Pn	20 57 26.3	+3.7
HSPB				eS	Sn	20 58 21.8	-0.5
HSPB				IAML		20 58 23.8	
	comp=Z,3.7nm,0.5s						
DAG	Danmarks Havn	5.24	226	i P	Pn	20 57 25.5	+2.0
DAG				i S	Sn	20 58 23.2	-0.7
DAG				IAML		20 58 27.0	
	comp=Z,5.2nm,0.5s						
DAG	Danmarks Havn	5.24	226	i P	Pn	20 57 25.5	+2.0
DAG				i S	Sn	20 58 23.2	-0.7
DAG				IAML		20 58 27.0	
	comp=Z,5.2nm,0.5s						
HOPEN	Hopen	6.84	116	Pn	Pn	20 57 47.7	+2.3
HOPEN				Sn	Sn	20 59 00.4	-2.7
HOPEN	Hopen	6.84	116	eP	Pn	20 57 46.2	+0.8
HOPEN				eS	Sn	20 58 57.0	-6.2
HOPEN	Hopen	6.84	116	eP	Pn	20 57 47.0	+1.6
HOPEN				eS	Sn	20 58 59.9	-3.2
HOPEN				IAML		20 59 01.4	
	comp=Z,3.3nm,0.4s						
DBG	Daneborg	7.65	219	Pn	Pn	20 57 58.6	+2.0
DBG				Sn	Sn	20 59 16.9	-6.2
DBG	Daneborg	7.65	219	eP	Pn	20 57 57.6	+1.1
DBG				eS	Sn	20 59 16.9	-6.2
DBG				IAML		20 59 45.3	
	comp=Z,2.7nm,0.6s						
DBG	Daneborg	7.65	219	i P	Pn	20 57 58.3	+1.8
DBG				i S	Sn	20 59 19.6	-3.5
DBG				IAML		20 59 45.3	
	comp=Z,2.7nm,0.6s						
ZFI2	Zemlya Franca-	7.71	66	eP	Pn	20 57 59.5	+2.2
ZFI2				eS	Sn	20 59 20.3	-4.2
	comp=Z,7.8nm,2.6s						
OMEGA	Omega	7.73	66	eP	Pn	20 57 59.5	+1.9
OMEGA				eS	Sn	20 59 20.3	-4.7
	comp=Z,7.9nm,2.6s						
NEEM	North Greenlan	9.52	274	i P	Pn	20 58 23.8	+1.4
NEEM				i S	Sn	21 00 04.6	-4.9
NEEM				IAML		21 00 54.0	
	comp=Z,2.0nm,0.5s						
NEEM	North Greenlan	9.52	274	i P	Pn	20 58 23.8	+1.4
NEEM				i S	Sn	21 00 04.6	-4.9
NEEM				IAML		21 00 54.0	
	comp=Z,2.0nm,0.5s						
JNE	Jan Mayen East	10.10	192	eP	Pn	20 58 33.8	+3.7
JMIC	Jan Mayen	10.11	192	eP	Pn	20 58 33.8	+3.6
JMI	Jan Mayen	10.18	192	eP	Pn	20 58 32.6	+1.4
SUMG	Summit	11.49	244	i P	Pn	20 58 49.9	+0.4
SUMG				i S	Sn	21 00 48.6	-9.1
SUMG				IAML		21 01 10.2	
	comp=Z,2.3nm,0.5s						
SUMG	Summit	11.49	244	i P	Pn	20 58 49.9	+0.4
SUMG				i S	Sn	21 00 48.6	-9.1
SUMG				IAML		21 01 10.2	
	comp=Z,2.3nm,0.5s						

MDD ***17*** *20:57:54.6±0.8, 35°.46N×5°.02W, h18^{km}±5^{km}, mb_Lg2.3/11, Error ellipse: s-maj=4.4km s-min=3.2km az=106.0*
SFS ***17*** *20:57:56.8, 35°.47N×4°.96W, h53^{km}, ML2.7/8, ML2.3/14, MLv2.0/14*
CNRM ***17*** *20:57:58.3, 35°.24N×4°.75W, h83^{km}, ML1.4*
INMG ***17*** *20:57:59.1±1.4, 35°.57N×5°.12W, h35^{km}, ML1.8, Error ellipse: s-maj=5.1km s-min=3.2km az=103.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE Tetuan*
IGIL ***17*** *20:57:59.1, 35°.54N×5°.13W, h32^{km}, ML1.7*

ISC 17 20:57:55.2±1.2**, 35°.47N**±0°.03×**5°.02W**±0°.03**, h35**^{km}**, n51, σ1^{s}.41**/80**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	Palemas	0.92	105	P	Pn	20 58 12.6	+0.9
PALE	Palemas	0.92	105	S	Sn	20 58 26.2	+2.5
EMIJ	Mijas	1.11	10	Sn	Sn	20 58 28.8	+0.3
EMIJ	Mijas	1.11	10	Pg	Pn	20 58 14.5	+0.1
EMIJ				Sg	Sn	20 58 29.2	+0.7
AKLM	AKL	1.35	135	P	Pn	20 58 17.7	+0.1
ESPR	Espera	1.55	334	Sn	Sn	20 58 41.9	+2.6
GOG	Mont Gurugu	1.67	98	P	Pn	20 58 22.5	+0.4
GOG	Mont Gurugu	1.67	98	S	Sn	20 58 42.2	-0.2
ELGU	Los Guajares,	1.80	38	Pn	Pn	20 58 24.4	+0.6
ELGU				Sn	Sn	20 58 43.8	-1.6
ELGU	Los Guajares,	1.80	38	Pn	Pn	20 58 23.9	+0.1
ELGU				Sn	Sn	20 58 44.5	-0.9
ELGU				i IVmb_Lg		20 58 47.7	
EGOR	Sierra Gorda,	1.80	24	Pn	Pn	20 58 24.1	+0.2
EGOR				Sn	Sn	20 58 45.6	+0.1
IFR	Ifrane	1.95	183	Pn	Pn	20 58 26.4	+0.4
MD31	MD31	2.60	175	P	Pn	20 58 35.9	+1.0
MD31	MD31	2.60	175	S	Sn	20 59 03.8	-1.5
ECAB	El Cabril	2.62	353	Pn	Pn	20 58 36.3	+1.2
ECAB	El Cabril	2.62	353	Pn	Pn	20 58 35.4	+0.3
ECAB				Sn	Sn	20 59 05.0	-0.7
ECAB				i IVmb_Lg		20 59 16.8	
EMIN	Mina Concepcio	2.65	330	Pn	Pn	20 58 36.8	+1.3
EMIN	Mina Concepcio	2.65	330	Pn	Pn	20 58 35.3	-0.2
EMIN				Sn	Sn	20 59 06.6	+0.2
EMIN				i IVmb_Lg		20 59 06.9	
MDT	Midelt	2.67	172	P	Pn	20 58 36.8	+1.0
MDT	Midelt	2.67	172	S	Sn	20 59 05.3	-1.7
EADA	Adamuz	2.72	7	Sn	Sn	20 59 08.1	0.0
EADA				i IVmb_Lg		20 59 17.4	
EQES	Quesada	2.81	33	Pn	Pn	20 58 38.0	+0.3
EQES				Sn	Sn	20 59 10.1	-0.4
EQES				i IVmb_Lg		20 59 17.9	
EGRO	El Granado	2.86	317	Pn	Pn	20 58 38.6	+0.2
EGRO				Sn	Sn	20 59 10.7	-0.8
EGRO				i IVmb_Lg		20 59 11.3	
PVAQ	Vaqueiros	2.91	312	Pn	Pn	20 58 40.5	+1.5
PVAQ	Vaqueiros	2.91	312	eP	Pn	20 58 40.6	+1.5

PVAQ				*e*S	Sn	20 59 12.0	-0.7
PVAQ				*i* AML	AML	20 59 12.6	
PBDV	Barranco-do-Ve	2.94	308	*e*P	Pn	20 58 41.0	+1.5
PBDV				*e*S	Sn	20 59 13.0	-0.6
PBDV				*i* AML	AML	20 59 13.1	
PBDV				*i* AML	AML	20 59 13.7	
PBDV				*i* AML	AML	20 59 14.6	
PBAR	Barrancos	3.15	330	Pn	Pn	20 58 43.7	+1.4
PBAR				Sn	Sn	20 59 17.2	-1.5
PBAR	Barrancos	3.15	330	*e*P	Pn	20 58 43.7	+1.4
PBAR				*e*S	Sn	20 59 17.8	-0.9
PBAR				*i* AML	AML	20 59 19.0	
PBAR				*i* AML	AML	20 59 19.6	
PBAR				*i* AML	AML	20 59 19.9	
PCVE	Castro Verde	3.25	313	Pn	Pn	20 58 45.9	+2.2
PCVE				Sn	Sn	20 59 19.4	-1.8
PCVE	Castro Verde	3.25	313	*e*P	Pn	20 58 45.9	+2.2
PCVE				*e*S	Sn	20 59 20.3	-0.9
PCVE				*i* AML	AML	20 59 21.2	
PCVE				*i* AML	AML	20 59 24.2	
PCVE				*i* AML	AML	20 59 25.0	
PBEJ	Beja	3.43	319	*e*S	Sn	20 59 24.2	-1.3
PBEJ				*i* AML	AML	20 59 26.5	
PBEJ				*i* AML	AML	20 59 27.3	
PBEJ				*i* AML	AML	20 59 27.5	
MORF	Marmelete	3.46	303	*e*P	Pn	20 58 48.2	+1.6
MORF				*e*S	Sn	20 59 23.7	-2.6
MORF				IAML		20 59 26.6	
	comp=N,2.6nm,0.2s						
MORF	Marmelete	3.46	303	*e*P	Pn	20 58 48.8	+2.2
MORF				*e*S	Sn	20 59 25.2	-1.1
MORF				*i* AML	AML	20 59 27.5	
MORF				*i* AML	AML	20 59 27.7	
MORF				*i* AML	AML	20 59 32.6	
PFVI	Vila Bisbo	3.50	300	Pn	Pn	20 58 48.3	+1.3
PFVI	Vila Bisbo	3.50	300	*e*P	Pn	20 58 48.4	+1.3
PFVI				*e*S	Sn	20 59 25.8	-1.4
PFVI				*i* AML	AML	20 59 26.1	
PFVI				*i* AML	AML	20 59 27.6	
PFVI				*i* AML	AML	20 59 37.0	
MESJ	Messejana	3.50	314	*e*P	Pn	20 58 48.6	+1.5
MESJ				*e*S	Sn	20 59 24.6	-2.6
MESJ				IAML		20 59 26.7	
	comp=N,2.0nm,0.1s						
MESJ	Messejana	3.50	314	*e*P	Pn	20 58 49.3	+2.2
MESJ				*e*S	Sn	20 59 25.5	-1.7
MESJ				*i* AML	AML	20 59 27.9	
MESJ				*i* AML	AML	20 59 28.1	
MESJ				*i* AML	AML	20 59 30.4	
PSIM	Granatula de C	3.50	16	Pn	Pn	20 58 47.4	+0.2
PSIM				Sn	Sn	20 59 26.2	-1.2
PTEO	Sao Teotonio	3.63	306	*e*P	Pn	20 58 51.1	+2.1
PTEO				*e*S	Sn	20 59 29.7	-0.9
PTEO				*i* AML	AML	20 59 31.2	
PTEO				*i* AML	AML	20 59 32.8	
PTEO				*i* AML	AML	20 59 33.4	
EBAD	Badajoz	3.65	335	Pn	Pn	20 58 51.1	+1.9
EBAD				Sn	Sn	20 59 29.8	-1.2
EBAD	Badajoz	3.65	335	Pn	Pn	20 58 50.4	+1.3
EBAD				Sn	Sn	20 59 30.1	-0.9
EBAD				*i* IVmb_Lg		20 59 31.6	
EVO	Evora	3.88	323	Sn	Sn	20 59 35.1	-1.7
EVO	Evora	3.88	323	*e*S	Sn	20 59 36.3	-0.5
EVO				*i* AML	AML	20 59 42.4	
EVO				*i* AML	AML	20 59 42.4	
PESTR	Estremoz	3.97	330	*e*P	Pn	20 58 53.3	-0.3
PESTR				*e*S	Sn	20 59 37.0	-1.8
PESTR				*i* AML	AML	20 59 42.0	
PESTR				*i* AML	AML	20 59 42.6	
PAB	San Pablo	4.11	7	Pn	Pn	20 58 55.4	-0.2
PAB				Sn	Sn	20 59 40.5	-1.9
PAB				*i* IVmb_Lg		20 59 49.9	
PMRV	Marv??o	4.38	335	*e*P	Pn	20 59 01.2	+1.9
PMRV				*e*S	Sn	20 59 47.0	-2.1
PMRV				*i* AML	AML	20 59 59.7	
PMRV				*i* AML	AML	21 00 00.1	
PMRV				*i* AML	AML	21 00 02.9	
PMTG	Montargil	4.41	326	*e*P	Pn	20 59 01.2	+1.6
PMTG				*e*S	Sn	20 59 47.9	-1.9
PMTG				*i* AML	AML	20 59 49.5	
PMTG				*i* AML	AML	21 00 03.4	
PMTG				*i* AML	AML	21 00 10.7	
PARRA	Arraiolos	4.63	317	*e*P	Pn	20 58 57.2	-5.5
PARRA				*e*S	Sn	20 59 40.5	-15
PARRA				*i* AML	AML	20 59 43.7	
PARRA				*i* AML	AML	20 59 49.6	
PARRA				*i* AML	AML	20 59 50.7	
EPLA	Plasencia	4.67	350	Pn	Pn	20 59 03.0	-0.2
EPLA				Sn	Sn	20 59 54.3	-1.8
EPLA				*i* IVmb_Lg		20 59 55.9	
PSARD	Sardoal	4.82	330	*e*P	Pn	20 59 07.4	+2.1
PSARD				*e*S	Sn	20 59 58.3	-1.7
PSARD				*i* AML	AML	20 59 58.9	
PSARD				*i* AML	AML	20 59 59.8	
PSARD				*i* AML	AML	21 00 03.3	
TIO	Tiouine	4.90	203	Pn	Pn	20 59 07.6	+1.1
TIO				Sn	Sn	20 59 59.8	-2.4

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*IDC **17** 21:00:06.4±0.6, 28°.18N×140°.26E, h369^{km}±8^{km}, mb3.1/11, mbtmp3.9/16, Error ellipse: s-maj=23.8km s-min=10.5km az=73.0*

*JMA **17** 21:00:08.3±0.1, 28°N±2°×14°1E±°, h372^{km}, MV3.8/32, W OFF OGASAWARA*

ISC 17 21:00:07.2±0.7**, 28°.27N**±0°.07×**140°.5E**±0°.1**, h400^{km}, n30,** σ**2^s.38**/32**, mb3.3**/11**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.89	128	P	Pn	21 01 01.7	-0.8
CBIJ				*e*S	S	21 01 43.7	-3.4
JCJ	Chichijima	1.89	128	P	Pn	21 01 00.3	-2.2
	66nm,0.3s						
JCJ				S	S	21 01 42.4	-4.7
JHH2	Haha-jima-NKT2	2.20	138	P	Pn	21 01 04.0	-0.5
JHH2				S	S	21 01 48.6	-2.1
JHCJ	Hachijojimakas	4.83	353	*e*P	Pn	21 01 24.9	-2.4
JHJ2	Mitsune	4.86	353	*e*P	Pn	21 01 25.3	-2.4
JMKN	Mikurajimanish	5.66	352	*e*P	Pn	21 01 38.8	+2.8
JMYK	Miyake Tsubota	5.83	352	*e*S	S	21 02 46.4	-5.4
BSO1	Boso 1	6.37	3	*e*S	S	21 02 59.4	-2.3
BSO3	Boso 3	6.51	360	*e*S	S	21 03 02.0	-2.9
JIE	Ise	6.92	333	P	P	21 01 50.2	-0.2
JTNC	Tanabenakahech	6.95	324	*e*P	P	21 01 49.7	-1.1
JAG	Ashikaga	8.18	354	P	Pn	21 02 02.7	-1.4
MJAR	Matsushiro Arr	8.47	347	P	Pn	21 02 06.3	-1.2
	1.2nm,0.3s,baz=157,slow=10.0,SNR=10						
MJAR				S	S	21 03 43.0	-3.2
	0.7nm,0.3s,baz=87,slow=28,SNR=1.5						
JHS	Saijyo	9.21	319	*e*P	Pn	21 02 15.7	-0.3
JNU	Nakatsue	9.60	303	P	Pn	21 02 19.3	-1.3
	5.4nm,0.8s,baz=153,slow=6.4,SNR=4.6						
JOI	OKI	10.09	324	*e*P	Pn	21 02 26.4	+0.3
JMK	Ichinoseki	10.67	3	*e*P	Pn	21 02 35.4	+2.7
JMK				*e*S	S	21 04 31.2	-0.3
JOW	Kunigami	10.96	265	P	Pn	21 02 32.8	-3.6
	9.5nm,0.7s,baz=82,slow=15,SNR=2.4						
USRK	Ussuriysk Ar.	17.30	339	P	P	21 03 45.4	+1.3
	12nm,0.6s,baz=139,slow=10.0,SNR=26						
SONM	Songino Array	32.84	316	P	P	21 06 08.0	+2.5
	0.4nm,0.5s,baz=108,slow=9.8,SNR=2.4 0.4nm,0.5s						
WRA	Warramunga Arr	48.30	188	P	P	21 08 11.3	+1.0
	0.7nm,0.2s,baz=6.2,slow=7.7,SNR=38						
WRA				PcP	pwP	21 09 32.2	-0.8
	0.7nm,0.4s,baz=0.1,slow=3.9,SNR=6.3 0.7nm,0.2s						
KURBB	Kurchatov Arra	51.16	314	P	P	21 08 31.1	0.0
	0.4nm,0.4s,baz=92,slow=7.9,SNR=5.0 0.4nm,0.4s						
ASAR	Alice Springs	52.03	188	P	P	21 08 38.3	+0.5
	0.3nm,0.5s,baz=358,slow=5.2,SNR=9.1 0.3nm,0.5s						
BVAR	Borovoye Array	56.18	317	P	P	21 09 08.0	+1.0
	0.6nm,0.4s,baz=93,slow=6.7,SNR=4.2 0.6nm,0.4s						
ILAR	Eielson Array	57.40	29	P	P	21 09 19.6	+4.4
	0.2nm,0.6s,baz=292,slow=2.8,SNR=1.2 0.2nm,0.6s						
ARCES	ARCESS Array B	71.94	340	P	P	21 10 50.4	+2.4
	2.4nm,0.9s,baz=63,slow=6.8,SNR=1.7 2.4nm,0.9s						
FINES	FINESS Array B	76.24	333	P	P	21 11 14.7	+2.1
	0.5nm,0.3s,baz=61,slow=4.8,SNR=14 0.5nm,0.3s						
AKASG	Malin Array Be	80.80	323	P	P	21 11 38.3	+0.9
	0.3nm,0.4s,baz=85,slow=1.1,SNR=2.5 0.3nm,0.4s						
HFS	Hagfors	81.76	336	P	P	21 11 43.8	+1.6
	1.0nm,0.6s,baz=90,slow=4.3,SNR=5.5 1.0nm,0.6s						
NOA	NORSAR Array B	81.97	338	P	P	21 11 45.8	+2.4
	0.5nm,0.8s,baz=48,slow=5.9,SNR=2.0 0.5nm,0.8s						

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*IDC **17** 21:03:23.4±0.4, 28°.35N×104°.85E, h0^{km}, mb4.4/28, mbtmp4.4/30, ML4.4/2, MS4.0/13, Error ellipse: s-maj=14.8km s-min=11.0km az=47.0*

*BJI **17** 21:03:24.4, 28°.37N×104°.99E, h8^{km}, mB4.7/16, mb4.5/46, ML4.7/24, Ms4.6/54, Ms7 4.3/45*

*MOS **17** 21:03:24.1±0.9, 28°.39N×104°.95E, h12^{km}, mb4.9/48, Error ellipse: s-maj=6.8km s-min=4.0km az=124.1*

*NEIC **17** 21:03:26.4±1.5, 28°.47N±0°.07×104°.93E±0°.08, h10^{km}±1^{km}, mb4.9/131, Error ellipse: s-maj=12.2km s-min=11.0km az=150.0*

*BGR **17** 21:03:28.7, 28°.05N×104°.63E, h33^{km}, mb4.7*

ISC 17 21:03:26.1±0.7**, 28°.43N**±0°.03×**104°.97E**±0°.03**, h12^{km}**±4^{km}**, n716,** σ**1^s.19**/712**, mb4.7**/181**, MS4.0**/17**, 33C-28D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GYA	Guiyang	2.48	142	⇑Pn	Pn	21 04 08.8	+2.4
GYA				smax	smax		
	comp=N,4μm,0.6s						
GYA				smax	smax		
	comp=E,5μm,0.7s						
CD2	Chengdu	2.68	337	Pn	Pn	21 04 11.1	+2.0
CD2				Pg	Pg	21 04 17.1	-0.4
CD2				Sn	Sb	21 04 45.3	-1.6
CD2				Sg	Sg	21 04 54.0	+1.7
CD2				smax	smax		
	comp=N,14μm,3.8s						
CD2				smax	smax		
	comp=E,18μm,5.1s						
PZH	PanZhiHua	3.45	237	Pn	Pn	21 04 20.6	+0.9
PZH				Pg	Pb	21 04 28.8	+1.6
PZH				Sg	Sb	21 05 12.3	+3.2
PZH				smax	smax		
	comp=N,900nm,0.8s						
PZH				smax	smax		
	comp=E,690nm,0.8s						
KMI	Kunming	3.85	212	⇑Pn	Pn	21 04 27.5	+2.2
KMI				Sn	Sn	21 05 11.9	+1.3
KMI				smax	smax		
	comp=N,550nm,0.9s						
KMI				smax	smax		
	comp=E,390nm,0.9s						
KMI				LR	LR		
	comp=Z,2μm,3.9s						
ENH	Enshi	4.35	64		Pn	21 04 35.4	+3.3
ENH	Enshi	4.35	64	P	Pn	21 04 36.0	+4.0
GULI	GuiLin	5.75	122	Pn	Pn	21 04 51.5	+0.3
GULI				Sn	Sn	21 05 56.9	-0.2
GULI				smax	smax		
	comp=N,800nm,1.0s						
GULI				smax	smax		
	comp=E,500nm,0.9s						
GULI				LR	LR		
	comp=N,2μm,4.2s						
GULI				LR	LR		
	comp=E,2μm,3.6s						
GULI				LR	LR		
	comp=Z,800nm,5.6s						
XAN	Xi'an	6.53	30	Pn	Pn	21 05 03.1	+1.1
XAN				Sn	Sn	21 06 14.0	-2.5
XAN				smax	smax		
	comp=N,4μm,0.9s						
XAN				smax	smax		
	comp=E,2μm,0.9s						
XAN				LR	LR		
	comp=N,4μm,4.0s						
XAN				LR	LR		
	comp=E,3μm,4.1s						
XAN				LR	LR		
	comp=Z,4μm,5.5s						
TNCH	TengChong	6.69	241	Pn	Pn	21 05 06.1	+1.8
TNCH				Sn	Sn	21 06 19.5	-1.0
TNCH				Sg	Sg	21 06 58.0	-2.8
TNCH				LR	LR		
	comp=Z,2μm,11.1s						
CNSH	ChangSha	7.03	90	Pn	Pn	21 05 11.0	+2.2
CNSH				Sn	Sn	21 06 26.8	-1.8
CNSH				smax	smax		
	comp=N,820nm,1.0s						
CNSH				smax	smax		
	comp=E,550nm,0.9s						
SLVN	Son La	7.13	188		Pn	21 05 11.3	+1.0
SLVN	Son La	7.13	188	P	Pn	21 05 13.9	+3.6
LZH	Lanzhou	7.69	353	Pn	Pn	21 05 22.6	+4.6
LZH				Sn	Sn	21 06 50.3	+5.2
LZH				Sg	Sg	21 07 32.3	-0.6
LZH				smax	smax		
	comp=N,380nm,1.4s						
LZH				smax	smax		
	comp=E,560nm,1.4s						
LZH				LR	LR		
	comp=N,2μm,8.9s						
LZH				LR	LR		
	comp=E,4μm,8.9s						
LZH				LR	LR		
	comp=Z,2μm,9.3s						
WHN	Wuhan	8.45	73	⇑P	Pn	21 05 30.8	+2.6
WHN				LR	LR		
	comp=N,7μm,5.7s						
WHN				LR	LR		
	comp=E,2μm,5.0s						
WHN				LR	LR		
	comp=Z,5μm,16.2s						
LYN	LuoYang	8.84	45	⇑P	Pn	21 05 34.6	+0.9
LYN				S	Sn	21 07 14.5	+1.3
LYN				smax	smax		
	comp=N,690nm,0.9s						
LYN				smax	smax		
	comp=E,550nm,1.2s						
LYN				LR	LR		
	comp=N,2μm,5.1s						
LYN				LR	LR		
	comp=E,2μm,4.8s						
LYN				LR	LR		
	comp=Z,3μm,5.7s						
GZH	Guangzhou	9.24	123	P	Pn	21 05 37.6	-1.5
GZH				S	Sn	21 07 21.5	-1.5
GZH				smax	smax		
	comp=N,370nm,1.0s						
GZH				smax	smax		
	comp=E,310nm,1.0s						
HKPS	Hong Kong Po S	10.31	124	Pn	Pn	21 05 54.4	+0.5
QIZ	Qiongzhong	10.37	153	Pn	Pn	21 05 54.6	0.0
QIZ	Qiongzhong	10.37	153	P	Pn	21 05 54.0	-0.7
QIZ				S	Sn	21 07 49.1	-1.8
QIZ				pmax	pmax		
	comp=Z,23nm,1.7s						
QIZ				LR	LR		
	comp=E,1μm,6.6s						
CHTO	Chiang Mai	11.05	211	Pn	Pn	21 06 05.8	+1.9
CHTO	Chiang Mai	11.05	211	P	Pn	21 06 08.6	+4.6
CHTO	Chiang Mai	11.05	211	P	Pn	21 06 05.9	+1.9
TIY	Taiyuan	11.17	32	*e*P	Pn	21 06 07.8	+2.2
TIY				S	Sn	21 08 18.1	+7.7
TIY				pmax	pmax		
	comp=Z,21nm,0.7s						
TIY				LR	LR		
	comp=N,730nm,4.5s						
TIY				LR	LR		
	comp=E,1μm,5.8s						
TIY				LR	LR		
	comp=Z,1μm,13.2s						
CM31	Chiang Mai Arr	11.36	210	Pn	Pn	21 06 10.2	+2.0
CMAR	Chiang Mai Arr	11.36	210	Pn	Pn	21 06 10.8	+2.6
CMAR	Chiang Mai Arr	11.36	210	Pn	Pn	21 06 07.2	-1.1
	0.4nm,0.3s,baz=19,slow=11,SNR=84						
CMAR				LR	LR	21 10 54.6	
	comp=Z,765nm,19.5s,baz=5.0,slow=40						
CMAR				ScP	ScP	21 15 35.0	+0.2
	0.6nm,0.6s,baz=303,slow=1.0,SNR=6.2 1.3nm,0.6s						
CMAR	Chiang Mai Arr	11.36	210	P	Pn	21 06 10.8	+2.6
GOMU	GeErMu	11.55	315	P	Pn	21 06 10.8	-0.4
GOMU				pP		21 06 14.4	
GOMU				sP		21 06 18.6	
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GOMU				LR	LR		
	comp=N,900nm,9.4s						
GOMU				LR	LR		
	comp=E,590nm,9.5s						
GOMU				LR	LR		
	comp=Z,880nm,9.4s						
GTA	Gaotai	11.75	340	P	Pn	21 06 16.5	+2.9
GTA				sP		21 06 24.4	
GTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GTA				LR	LR		
	comp=N,1μm,11.6s						
GTA				LR	LR		
	comp=E,2μm,12.4s						
GTA				LR	LR		
	comp=Z,1μm,15.3s						
HNS	HongShan	12.11	40	*e*P	Pn	21 06 20.1	+1.7
HNS				LR	LR		
	comp=E,960nm,12.8s						
LSA	Lhasa	12.15	279		Pn	21 06 20.3	+0.8
LSA	Lhasa	12.15	279	P	Pn	21 06 20.8	+1.3
LSA				LR	LR		
	comp=N,360nm,7.2s						
LSA	Lhasa	12.15	279	P	Pn	21 06 20.3	+0.8
NJ2	Nanjing	12.54	70	*e*P	Pn	21 06 26.4	+2.1
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NJ2				LR	LR		
	comp=N,3μm,8.9s						
NJ2				LR	LR		
	comp=E,1μm,9.8s						
NJ2				LR	LR		
	comp=Z,1μm,11.9s						
BTO	Baotou	12.83	18	*e*P	Pn	21 06 30.3	+1.9
BTO				pP		21 06 38.6	
BTO				sP		21 06 41.5	
BTO				S	Sn	21 08 50.8	-0.4
BTO				sS		21 09 08.3	
BTO				SS	SnSn	21 09 11.3	+7.7
BTO				pmax	pmax		
	comp=Z,62nm,0.8s						
BTO				pmax	pmax		
	comp=Z,140nm,4.3s						
BTO				LR	LR		
	comp=N,2μm,12.9s						
BTO				LR	LR		
	comp=E,2μm,9.8s						
BTO				LR	LR		
	comp=Z,4μm,13.1s						
TIA	Tai'an	12.87	50	P	Pn	21 06 32.3	+3.5
TIA				pmax	pmax		
	comp=Z,9.0nm,1.3s						
TIA				LR	LR		
	comp=N,840nm,11.8s						
TIA				LR	LR		
	comp=E,1μm,12.4s						
TIA				LR	LR		
	comp=Z,1μm,16.9s						
UBPT	Khong Chiam	13.10	178	Pn	Pn	21 06 33.5	+1.5
UBPT	Khong Chiam	13.10	178	P	Pn	21 06 34.3	+2.3
BRDH	Bariadhala	13.32	248	LR	LR	21 12 11.3	
	comp=Z,427nm,20.7s,baz=36,slow=40						
HHC	Hu-ho-hao-te	13.52	22	*e*P	Pn	21 06 40.8	+3.1
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,100nm,4.6s						
HHC				LR	LR		
	comp=N,1μm,14.5s						
HHC				LR	LR		
	comp=E,670nm,11.5s						
HHC				LR	LR		
	comp=Z,1μm,15.7s						
BJT	Baijiatuau	14.80	36	Pn	Pn	21 06 55.4	+0.3
BJT	Baijiatuau	14.80	36	P	P	21 06 59.6	-1.4
BJT	Baijiatuau	14.80	36	P	Pn	21 06 55.4	+0.3
BJI	Beijing	14.82	36	P	Pn	21 06 54.3	-1.0
BJI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BJI				pmax	pmax		
	comp=Z,51nm,4.3s						
BJI				LR	LR		
	comp=N,360nm,13.5s						
BJI				LR	LR		
	comp=E,290nm,13.3s						
SSLB	Suanglung	15.09	104	Pn	Pn	21 06 59.6	+0.4
SSLB	Suanglung	15.09	104	P	Pn	21 07 01.8	+2.7
EVN	Everest	16.01	273	Pn	Pn	21 07 10.3	-1.4
DL2	Dalian	17.34	49	P	Pn	21 07 24.3	-3.5
DL2				S	Sn	21 10 38.3	-2.3
DL2				pmax	pmax		
	comp=Z,24nm,0.9s						
DL2				LR	LR		
	comp=N,600nm,8.1s						
DL2				LR	LR		
	comp=E,400nm,13.7s						
DL2				LR	LR		
	comp=Z,810nm,19.0s						
XLT	XiLinHaoTe	17.83	27	*e*P	P	21 07 36.6	+1.9
XLT				pmax	pmax		
	comp=Z,20nm,0.8s						
XLT				LR	LR		
	comp=N,70nm,9.4s						
XLT				LR	LR		
	comp=E,300nm,8.8s						
XLT				LR	LR		
	comp=Z,750nm,17.1s						
SONM	Songino Array	19.40	3	P	P	21 07 52.1	0.0
SONM	Songino Array	19.40	3	P	Pn	21 07 53.1	-0.1
	2.0nm,0.3s,baz=183,slow=10,SNR=28						
SONM				LR	LR	21 16 10.5	
	comp=Z,972nm,19.4s,baz=295,slow=39 6.2nm,0.5s						
ULN	Ulaanbaatar	19.47	4	P	P	21 07 52.8	0.0
ULN	Ulaanbaatar	19.47	4	*de*P	Pn	21 07 54.0	0.0
ULN				pmax	pmax		
	comp=Z,11nm,0.8s						
SNY	Shenyang	20.20	44	⇑P	P	21 08 02.1	+1.5
SNY				S	S	21 11 40.3	-6.7
SNY				pmax	pmax		
	comp=Z,17nm,0.9s						
SNY				pmax	pmax		
	comp=Z,130nm,4.9s						
SNY				LR	LR		
	comp=Z,350nm,6.8s						
SNY				LR	LR		
	comp=Z,740nm,16.3s						
SNY				LR	LR		
	comp=Z,690nm,16.9s						
INCN	Inchon	20.26	58	P	P	21 08 02.2	+0.9
INCN	Inchon	20.26	58	P	P	21 08 02.3	+0.9
INCN				pmax	pmax		
	comp=Z,18nm,0.7s						
SRIT	Nakonsritamara	20.37	195	P	P	21 08 03.9	+1.3
SRIT				IAmb	IAmb	21 08 14.6	
	comp=Z,62nm,1.6s						
TJN	Taejon	20.47	62	P	P	21 08 04.3	+0.6
TJN	Taejon	20.47	62	P	Pn	21 08 07.4	+1.6
TJN	Taejon	20.47	62	⇓*e*P	P	21 08 04.9	+1.3
WMQ	Urumqi	20.68	323	*e*P	P	21 08 05.4	-0.5
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
JOW	Kunigami	20.71	89	P	P	21 08 07.6	+1.3
JOW				IAmb	IAmb	21 08 12.1	
	comp=Z,22nm,0.6s						
JOW	Kunigami	20.71	89	P	P	21 08 06.9	+0.6
	comp=Z,21nm,0.5s,baz=208,slow=8.0,SNR=18 comp=Z,21nm,0.5s						
JOW	Kunigami	20.71	89	P	P	21 08 08.2	+1.9
KSAR	Wonju Array Be	21.19	59	P	P	21 08 13.2	+1.8
KSAR	Wonju Array Be	21.19	59	P	P	21 08 13.2	+1.8
KS19	Wonju Array Si	21.20	59	P	P	21 08 12.3	+0.9
KSRS	Korea Array	21.22	59	P	P	21 08 12.1	+0.4
	comp=Z,17nm,0.8s,baz=243,slow=10,SNR=54 comp=Z,17nm,0.8s						
ZAK	Zakamensk	21.96	357	*e*P	P	21 08 20.7	+1.1
CN2	Changchun	22.47	42	P	P	21 08 26.8	+1.7
CN2				S	S	21 12 28.6	-2.8
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						

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CN2                                LR     LR
      comp=Z,400nm,14.0s
CN2                                LR     LR
      comp=Z,500nm,14.0s
CN2                                LR     LR
      comp=Z,700nm,15.0s
JNU   Nakatsue        22.73  72    P      P      21 08 28.0 +0.1
JNU                                IAmb   IAmb   21 08 35.8
      comp=Z,16nm,0.7s
JNU   Nakatsue        22.73  72    P      P      21 08 28.6 +0.6
      comp=Z,18nm,0.9s,baz=286,slow=2.4,SNR=13
      comp=Z,18nm,0.9s
JNU   Nakatsue        22.73  72    P      P      21 08 32.0 +4.1
JNU   Nakatsue        22.73  72    S      S      21 12 39.8 +3.4
MOY   Mondy           23.40 354   eP      P      21 08 37.2 +2.4
MOY                                pmax   pmax
      comp=Z,17nm,2.6s
HIA   Hailar          23.69  25           P      21 08 38.3 +0.7
HIA                                IAmb   IAmb   21 08 42.4
      comp=Z,26nm,1.1s
HIA   Hailar          23.69  25    P      P      21 08 41.6 +4.0
HIA   Hailar          23.69  25    P      P      21 08 38.3 +0.7
HIA                                pmax   pmax
      comp=Z,26nm,1.1s
IRK   Irkutsk         23.79 359   eP      P      21 08 39.2 +0.7
IRK                                pmax   pmax
      comp=Z,89nm,2.1s
ZSN   Zaisan          24.61 326   eP      P      21 08 46.0 -0.1
ZSN                                pmax   pmax
      comp=Z,19nm,1.2s
ZSN   Zaisan          24.61 326   eP      P      21 08 46.1 -0.1
      comp=Z,19nm,1.2s
KKM   Kota Kinabalu   24.69 152    P      P      21 08 47.1  0.0
KKM                                IAmb   IAmb   21 08 48.2
      comp=Z,31nm,0.9s
BNX   BinXian         24.74  40   ⇑P      P      21 08 48.5 +1.2
BNX                                sP     sP     21 08 52.3 -0.5
BNX                                S      S      21 13 11.0 +1.9
BNX                                pmax   pmax
      comp=Z,12nm,1.0s
BNX                                pmax   pmax
      comp=Z,140nm,6.3s
BNX                                LR     LR
      comp=Z,700nm,19.0s
BNX                                LR     LR
      comp=Z,420nm,20.1s
BNX                                LR     LR
      comp=Z,570nm,14.6s
SHLS  Shalkode        25.24 312   eP      P      21 08 49.1 -2.9
SHLS                               pmax   pmax
      comp=Z,10.0nm,0.8s
SHLS  Shalkode        25.24 312   eP      P      21 08 49.2 -2.9
      comp=Z,9.8nm,0.8s
MSHR  Mys Shultsa     25.44  49⇑eP        P      21 08 54.5 +0.8
MSHR                               pmax   pmax
      comp=Z,19nm,1.0s
MK31  Makanchi Array  25.51 322    P      P      21 08 54.2 -0.1
MK31  Makanchi Array  25.51 322c iP       P      21 08 54.4 +0.1
MK31                               pmax   pmax
      comp=Z,8.0nm,0.6s
MKAR  Makanchi Array  25.51 322    P      P      21 08 53.8 -0.5
MKAR  Makanchi Array  25.51 322    P      P      21 08 54.6 +0.3
      comp=Z,5.9nm,0.6s,baz=125,slow=9.5,SNR=40
      comp=Z,5.9nm,0.6s
UZB   Uzynbulak       25.53 312   eP      P      21 08 54.2 -0.4
UZB                                pmax   pmax
      comp=Z,14nm,1.3s
UZB   Uzynbulak       25.53 312   eP      P      21 08 54.2 -0.4
      comp=Z,14nm,1.3s
TSI   Tuntungan       25.53 195    P      P      21 08 56.4 +1.7
      comp=Z,131nm,1.0s
PRZ   Przheval'sk     25.65 310    P      P      21 08 55.6 -0.2
PRZ                                IAmb   IAmb   21 09 01.1
      comp=Z,13nm,0.8s
PRZ   Przheval'sk     25.65 310    P      P      21 08 55.6 -0.2
PRZ                                pmax   pmax
      comp=Z,13nm,0.8s
MAKZ  Makanchi        25.69 322    P      P      21 08 55.4 -0.5
MAKZ                               IAmb   IAmb   21 09 00.9
      comp=Z,14nm,1.0s
MAKZ  Makanchi        25.69 322    P      P      21 08 55.4 -0.5
MAKZ                               pmax   pmax
      comp=Z,14nm,1.0s
TARG  Taragay, Kyrgy  25.76 308    P      P      21 08 57.1 +0.1
TARG  Taragay, Kyrgy  25.76 308    P      P      21 08 57.2 +0.1
TARG                               pmax   pmax
      comp=Z,11nm,0.8s
KPKS  Kokpek          25.89 312   eP      P      21 08 57.5 -0.3
KPKS  Kokpek          25.89 312   eP      P      21 08 57.6 -0.3
SATY  Saty            25.89 311   eP      P      21 08 57.6 -0.3
SATY  Saty            25.89 311   eP      P      21 08 57.6 -0.3
PSI   Prapat          26.13 194    P      P      21 09 03.7 +3.4
KDJ   Kajisay         26.34 309    P      P      21 09 02.7 +0.6
KDJ                                IAmb   IAmb   21 09 07.6
      comp=Z,22nm,1.4s
KDJ   Kajisay         26.34 309    P      P      21 09 02.7 +0.6
KDJ                                pmax   pmax
      comp=Z,22nm,1.4s
KSH   Kashi           26.35 302    P      P      21 09 04.9 +2.8
KSH                                pmax   pmax
      comp=Z,7.0nm,1.1s
KSH                                LR     LR
      comp=Z,270nm,16.8s
KSH                                LR     LR
      comp=Z,260nm,14.1s
MYLDM Lahad Datu      26.46 148    P      P      21 09 03.8 +0.7
MYLDM Lahad Datu      26.46 148    P      P      21 09 06.5 +3.5
USA0B Ussuriysk Arra  26.70  47    P      P      21 09 05.8 +0.8
USA0B                              IAmb   IAmb   21 09 08.1
      comp=Z,12nm,0.8s
USA0B Ussuriysk Arra  26.70  47ceP        P      21 09 06.0 +1.0
USRK  Ussuriysk Ar.   26.70  47    P      P      21 09 05.2 +0.1
USRK  Ussuriysk Ar.   26.70  47    P      P      21 09 05.8 +0.8
      comp=Z,14nm,0.8s,baz=249,slow=8.5,SNR=18
      comp=Z,14nm,0.8s
ARXS  Arharly         26.78 313   eP      P      21 09 05.7 -0.2
TDK   Taldyqorghan    26.79 315   eP      P      21 09 05.6 -0.2
TDK                                pmax   pmax
      comp=Z,12nm,0.6s
TDK   Taldyqorghan    26.79 315   eP      P      21 09 05.7 -0.2
      comp=Z,12nm,0.6s
MDOK  Medeo           26.84 311   eP      P      21 09 06.1 -0.4
MDOK                              eS      S      21 13 43.1 +0.4
MDOK  Medeo           26.84 311   eP      P      21 09 06.2 -0.3
MDOK                              eS      S      21 13 43.1 +0.4
NRN   Naryn           26.92 306    P      P      21 09 07.0 -0.5
NRN   Naryn           26.92 306    P      P      21 09 07.0 -0.5
NRN                                pmax   pmax
      comp=Z,8.0nm,1.1s
AAA   Alma-Ata        26.95 311   eP      P      21 09 07.1 -0.3
AAA                                pmax   pmax
      comp=Z,7.0nm,0.4s
AAA   Alma-Ata        26.95 311   eP      P      21 09 07.1 -0.3
      comp=Z,7.0nm,0.4s
BOOM  Boomskoye usch  27.33 309    P      P      21 09 11.4 +0.4
BOOM  Boomskoye usch  27.33 309    P      P      21 09 11.4 +0.4
BOOM                               pmax   pmax
      comp=Z,8.0nm,1.2s
NIL   Nilore          27.60 289    P      P      21 09 14.5 +1.2
NIL                                IAmb   IAmb   21 09 36.2
      comp=Z,11nm,0.8s
NIL   Nilore          27.60 289    P      P      21 09 14.5 +1.2
NIL                                pmax   pmax
      comp=Z,11nm,0.9s
HEH   HeiHe           27.66  32   eP      P      21 09 14.9 +1.3
JGF   Kuroka          28.29  67    P      P      21 09 22.3 +2.8
AAK   Ala-Archa       28.38 308⇑eP        P      21 09 22.5 +2.1
AAK                                pmax   pmax
      comp=Z,7.0nm,1.7s
SGDS  Sogindy         28.58 310   eP      P      21 09 21.7 -0.3
ARSB  Arslanbob       29.05 305    P      P      21 09 26.1 -0.2
ARSB  Arslanbob       29.05 305    P      P      21 09 26.1 -0.2
ARSB                               pmax   pmax
      comp=Z,8.0nm,1.3s
KLR   Kul'dur         29.18  37    P      P      21 09 27.2  0.0
      comp=Z,3.1nm,0.9s,baz=271,slow=9.0,SNR=6.6
KLR                                LR     LR     21 22 59.5
      comp=Z,437nm,19.8s,baz=305,slow=40
      comp=Z,3.1nm,0.9s
KLR   Kul'dur         29.18  37⇓eP        P      21 09 27.4 +0.2
KLR                                pmax   pmax
      comp=Z,4.0nm,1.0s
ZAA0  Zalesovo Array  29.45 336    P      P      21 09 28.2 -1.2
ZALV  Zalesovo Beam   29.45 336    P      P      21 09 28.4 -1.1
ZALV  Zalesovo Beam   29.45 336    P      P      21 09 29.0 -0.5
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      comp=Z,2.0nm,0.4s,baz=131,slow=8.3,SNR=11
ZALV                               PcP    PcP    21 12 34.5 -0.4
      comp=Z,1.5nm,0.7s,baz=204,slow=1.4,SNR=2.2
ZALV                               LR     LR     21 22 20.0
      comp=Z,178nm,20.3s,baz=130,slow=38
      comp=Z,2.0nm,0.4s
BTLS  Baital          29.57 312   eP      P      21 09 30.5 -0.2
BTLS  Baital          29.57 312   eP      P      21 09 30.6 -0.2
KURBB Kurchatov Arra  29.83 325    P      P      21 09 31.5 -1.4
      comp=Z,4.7nm,0.6s,baz=132,slow=9.5,SNR=35
KURBB                              PcP    PcP    21 12 36.1 +0.1
      comp=Z,1.9nm,0.7s,baz=117,slow=2.2,SNR=6.6
      comp=Z,4.7nm,0.6s
KURK  Kurchatov       29.85 325    P      P      21 09 33.0 -0.1
KURK  Kurchatov       29.85 325ceP        P      21 09 32.9 -0.1
KURK                               pmax   pmax
      comp=Z,25nm,2.1s
ZEA   Zeya            30.10  27⇑eP        P      21 09 36.8 +1.5
GAR   Garm            30.52 299    P      P      21 09 40.0 +0.6
GAR                                IAmb   IAmb   21 10 22.1
      comp=Z,28nm,1.8s
KK31  Karatay Array   31.31 307    P      P      21 09 45.2 -0.9
KK31                               PcP    PcP    21 12 39.6 -0.5
KK31  Karatay Array   31.31 307    P      P      21 09 45.4 -0.7
KKAR  Karatay Array   31.31 307    P      P      21 09 45.9 -0.2
KKAR                                      PcP    21 12 39.6 -0.5
KKAR  Karatay Array   31.31 307    P      P      21 09 45.9 -0.2
KKAR                                             21 12 39.6
IUG   Iuzhnay         31.39 305   eP      P      21 09 46.4 -0.6
IUG   Iuzhnay         31.39 305   eP      P      21 09 46.4 -0.6
BRLS  Borolday        31.76 307   eP      P      21 09 50.0 -0.1
BRLS  Borolday        31.76 307   eP      P      21 09 50.1 -0.1
BRZS  Berezniki       32.61 320   eP      P      21 09 57.1 -0.3
BRZS  Berezniki       32.61 320   eP      P      21 09 57.1 -0.3
BVA0  Borovoye Array  35.36 324  i P      P      21 10 20.8 -0.5
BVAR  Borovoye Array  35.36 324    P      P      21 10 20.9 -0.4
      comp=Z,1.6nm,0.5s,baz=122,slow=9.5,SNR=10.0
BVAR                               PcP    PcP    21 12 50.5 -0.7
      comp=Z,1.9nm,0.6s,baz=140,slow=1.9,SNR=5.7
BVAR                               LR     LR     21 26 04.2
      comp=Z,120nm,20.5s,baz=138,slow=38
      comp=Z,1.6nm,0.5s
YAK   Yakutsk         37.35  19    P      P      21 10 38.4 +0.2
YAK                                IAmb   IAmb   21 10 39.5
      comp=Z,19nm,0.8s
YAK   Yakutsk         37.35  19    P      P      21 10 38.4 +0.2
      comp=Z,11nm,0.4s,baz=203,slow=2.6,SNR=8.4
      comp=Z,11nm,0.4s
YAK   Yakutsk         37.35  19   eP      P      21 10 37.9 -0.2
YAK                               e              21 12 55.7
YAK                               eS      S      21 16 23.1 -2.4
YAK                               eSS     SnSn   21 19 00.7 -1.1
YAK                               eSSS    SSS    21 19 27.3
YAK                               e              21 20 47.8
YAK                                pmax   pmax
      comp=Z,18nm,0.9s
YAK                                pmax   pmax
      comp=E,4.0nm,0.9s
YAK                                pmax   pmax
      comp=N,5.0nm,1.1s
YAK                                smax   smax
      comp=N,102nm,3.7s
YAK                                smax   smax
      comp=E,94nm,3.7s
AB31  Akbulak array   40.03 314  i P      P      21 11 01.4 +0.6
ABKAR Akbulak array   40.03 314    P      P      21 11 00.6 -0.2
SVE   Sverdlovsk      42.10 325   eP      P      21 11 18.8 +1.1
SVE                                pmax   pmax
      comp=Z,17nm,1.5s
ARTI  Arti            43.09 324    P      P      21 11 26.3 +0.5
ARTI                               IAmb   IAmb   21 11 29.2
      comp=Z,17nm,1.3s
ARTI  Arti            43.09 324d iP       P      21 11 27.0 +1.2
ARTI                                             21 13 05.6
ARTI                               PPP    PPP    21 13 39.6
ARTI                               S      S      21 17 55.8 +4.5
ARTI                               pmax   pmax
      comp=Z,14nm,1.5s
TIXI  Tiksi           45.23  10    P      P      21 11 41.9 -0.8
TIXI                               IAmb   IAmb   21 11 43.7
      comp=Z,19nm,1.1s
TIXI  Tiksi           45.23  10    LR     LR     21 32 06.3
      comp=Z,412nm,18.2s,baz=246,slow=38
TIXI  Tiksi           45.23  10⇑eP        P      21 11 42.6 -0.1
TIXI                               pmax   pmax
      comp=Z,18nm,1.1s
LKRN  Lenkeran, Azer  47.28 298    P      P      21 12 02.0 +2.7
AKT   Akhty           47.88 302   eP      P      21 12 03.2 -0.9
AKT                                pmax   pmax
      comp=Z,14nm,1.4s
BELG  Belogornoye     48.27 316deP        P      21 12 07.0 +0.2
BELG                               pmax   pmax
      comp=Z,3.0nm,1.0s
SEKA  Sheki           48.30 301    P      P      21 12 08.3 +1.0
KIRV  Kirov           48.36 325deP        P      21 12 07.9 +0.6
MNGR  Mingechevir, A  48.41 301    P      P      21 12 10.0 +1.9
GANJ  Ganja           49.00 301    P      P      21 12 14.6 +1.9
KNRA  Kununurra       49.53 149    IAmb   IAmb   21 12 17.6
      comp=Z,15nm,0.9s
NAX   Nakhchivan      49.78 299    P      P      21 12 21.5 +2.8
GOF   Gofitskoye      51.10 307ceP        P      21 12 29.2 +0.7
KBZ   Khabaz          51.29 305    P      P      21 12 28.1 -1.8
      comp=Z,1.9nm,0.5s,baz=170,slow=5.2,SNR=5.3
      comp=Z,1.9nm,0.5s
KBZ   Khabaz          51.29 305ceP        P      21 12 32.0 +2.1
KIV   Kislovodsk      51.43 305    P      P      21 12 31.4 +0.3
KIV                                IAmb   IAmb   21 12 34.6
      comp=Z,20nm,0.9s
KIV   Kislovodsk      51.43 305   eP      P      21 12 31.8 +0.7
KIV                                pmax   pmax
      comp=Z,17nm,1.0s
KIV                                MLR    MLR
      comp=Z,37nm,16.0s
KIV   Kislovodsk      51.43 305    P      P      21 12 30.9 -0.2
      comp=Z,19nm,1.1s
SHA1  Shidzhatmaz     51.47 305c iP       P      21 12 32.1 +0.6
VRH   Novokhopyorsk   51.86 314   eP      P      21 12 33.5 -0.5
VRH                                pmax   pmax
      comp=Z,10.0nm,0.8s
RAYN  Ar Rayn         53.22 279    P      P      21 12 43.7 -1.0
RAYN                               IAmb   IAmb   21 12 45.7
      comp=Z,13nm,0.7s
RAYN  Ar Rayn         53.22 279    P      P      21 12 43.7 -1.0
RAYN                               pmax   pmax
      comp=Z,13nm,0.7s
BILL  Bilibino        53.28  24⇓eP        P      21 12 44.6 +0.3
BILL                               pmax   pmax
      comp=Z,7.0nm,1.1s
VSR   Storozhevoye    53.46 314   eP      P      21 12 44.3 -1.6
VSR                                pmax   pmax
      comp=Z,7.0nm,0.8s
KLMR  Klimovskoe      53.69 326   eP      P      21 12 37.3  -10
KLMR                               pmax   pmax
      comp=Z,18nm,1.1s
MOS   Moscow          54.37 320   eP      P      21 12 50.9 -1.6
MOS                                pmax   pmax
      comp=Z,23nm,0.8s
OBN   Obninsk         54.97 319   eP      P      21 12 57.3 +0.5
OBN                               i              21 13 05.0
OBN                                pmax   pmax
      comp=Z,8.0nm,0.9s
OBN                                MLR    MLR
      comp=Z,68nm,22.0s
PMG   Port Moresby    55.46 126    P      P      21 13 00.3 -0.6
PMG   Port Moresby    55.46 126    P      P      21 13 00.3 -0.6
PMG                                pmax   pmax
      comp=Z,28nm,0.9s
WB0   Warramunga Arr  55.72 146    IAmb   IAmb   21 13 03.1
      comp=Z,11nm,0.8s
WRAB  Tennant Creek   55.84 146    P      P      21 13 02.9 -0.6
WRAB  Tennant Creek   55.84 146d iP       P      21 13 03.4 -0.1
WRAB                               pmax   pmax
      comp=Z,21nm,0.9s
WRA   Warramunga Arr  55.85 146    P      P      21 13 02.0 -1.5
WRA   Warramunga Arr  55.85 146    P      P      21 13 02.4 -1.1
      comp=Z,16nm,0.8s,baz=337,slow=8.2,SNR=162
WRA                                PcP    PcP    21 14 02.3 -0.1
      comp=Z,2.1nm,0.5s,baz=324,slow=4.1,SNR=5.7
      comp=Z,16nm,0.8s
WB2   Warramunga Arr  55.85 146    P      P      21 13 02.7 -0.9
WR8   Warramunga Arr  55.94 146    P      P      21 13 03.3 -0.8
KIRS  Kirsehir-Merke  58.66 301   ⇓P      P      21 13 23.4  0.0
BR131 Keskin Array S  58.73 301    P      P      21 13 22.5 -1.6
BR131                              IAmb   IAmb   21 13 25.8
      comp=Z,7.6nm,1.2s
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BR131 Keskin Array S  58.73 301deP        P      21 13 23.7 -0.3
BRTR  Keskin Array B  58.73 301    P      P      21 13 23.1 -1.0
BRTR  Keskin Array B  58.73 301    P      P      21 13 23.6 -0.4
      comp=Z,2.1nm,0.6s,baz=101,slow=5.3,SNR=16
      comp=Z,2.1nm,0.6s
BR104 Keskin Array S  58.74 301    P      P      21 13 23.0 -1.0
      comp=Z,31nmcomp=Z,3.5nm,0.9s
BR106 Keskin Array S  58.75 301    P      P      21 13 23.5 -0.6
      comp=Z,35nmcomp=Z,3.9nm,0.9s
BR105 Keskin Array S  58.75 301    P      P      21 13 23.7 -0.5
      comp=Z,3.6nm,0.8s
ASAR  Alice Springs   58.83 149    P      P      21 13 24.3 -0.3
      comp=Z,8.8nm,0.7s,baz=335,slow=6.7,SNR=132
ASAR                               PcP    PcP    21 14 14.0  0.0
      comp=Z,2.2nm,0.5s,baz=335,slow=4.1,SNR=5.7
      comp=Z,8.8nm,0.7s
MMAI  Mount Meron Ar  58.99 293    P      P      21 13 24.9 -0.9
      comp=Z,0.3nm,0.3s,baz=70,slow=13,SNR=4.1
      comp=Z,0.3nm,0.3s
ANTO  Ankara          59.34 302    P      P      21 13 27.9 -0.2
      comp=Z,4.7nm,0.8s
AK09  Malin Array Si  59.74 314    P      P      21 13 29.7 -0.9
AK08  Malin Array Si  59.76 314    P      P      21 13 30.2 -0.5
AK03  Malin Array Si  59.77 315    P      P      21 13 29.7 -1.1
AK10  Malin Array Si  59.77 314    P      P      21 13 29.9 -0.9
AKASG Malin Array Be  59.77 314    P      P      21 13 30.0 -0.8
      comp=Z,1.8nm,0.6s,baz=71,slow=7.2,SNR=17
      comp=Z,1.8nm,0.6s
AKBB  Malin Array Si  59.77 314    IAmb   IAmb   21 13 31.5
      comp=Z,15nm,1.4s
AKBB  Malin Array Si  59.77 314deP        P      21 13 30.6 -0.2
AKBB  Malin Array Si  59.77 314    P      P      21 13 30.0 -0.8
AK01  Malin Array Si  59.78 314    P      P      21 13 29.8 -1.0
KIEV  Kiev            59.78 314    P      P      21 13 30.0 -0.9
KIEV                               IAmb   IAmb   21 13 31.5
      comp=Z,13nm,1.4s
KIEV  Kiev            59.78 314    P      P      21 13 30.0 -0.9
KIEV                               pmax   pmax
      comp=Z,13nm,1.5s
KIEV  Kiev            59.78 314    P      P      21 13 29.8 -1.0
      comp=Z,31nm,0.6s
AK02  Malin Array Si  59.79 314    P      P      21 13 29.9 -1.0
AK05  Malin Array Si  59.79 314    P      P      21 13 30.4 -0.6
AK04  Malin Array Si  59.80 315    P      P      21 13 29.9 -1.1
AK06  Malin Array Si  59.80 314    P      P      21 13 30.3 -0.7
AK07  Malin Array Si  59.80 314    P      P      21 13 30.3 -0.7
AK11  Malin Array Si  59.81 314    P      P      21 13 30.1 -0.9
AK12  Malin Array Si  59.82 314    P      P      21 13 29.8 -1.3
AK15  Malin Array Si  59.83 314    P      P      21 13 30.3 -0.9
AK16  Malin Array Si  59.85 314    P      P      21 13 30.0 -1.3
AK14  Malin Array Si  59.85 314    P      P      21 13 30.3 -1.1
ARCES ARCESS Array B  60.00 336    P      P      21 13 31.8 -0.3
      comp=Z,3.1nm,0.6s,baz=85,slow=7.4,SNR=22
ARCES                              LR     LR     21 41 44.8
      comp=Z,72nm,19.0s,baz=91,slow=38
      comp=Z,3.1nm,0.6s
MNK   Minsk           60.03 319  i P      P      21 13 32.1 -0.5
      comp=Z,10.0nm,0.7s,baz=82
MNK                              i PP     PP     21 15 44.4 -0.2
MNK                              i PPP    PPP    21 17 06.3
MNK                              i S      S      21 21 44.1 -0.7
MNK                              i SS     SS     21 25 36.8 -4.2
MNK                              i SSS    SSS    21 28 25.7
MNK                              i LR     LR     21 38 47.8
MNK                              i LRM    MLR    21 40 58.3
      comp=Z,45nm,16.9s
MNK   Minsk           60.03 319  i P      P      21 13 32.0 -0.5
MNK                              i               21 15 44.4
MNK                              i S      S      21 21 44.1 -0.7
MNK                              i SS     SS     21 25 36.8 -4.2
MNK                                pmax   pmax
      comp=Z,10.0nm,0.7s
MNK                                MLR    MLR
      comp=Z,45nm,17.0s
PURM  Purcari         60.06 310    P      P      21 13 32.3 -0.5
      comp=Z,23nm,0.9s
CSS   Mathiatis       60.12 296    P      P      21 13 33.0 -0.5
CSS                                IAmb   IAmb   21 13 44.1
      comp=Z,15nm,1.1s
VSU   Vasula          60.17 324⇓eP        P      21 13 31.6 -1.8
VSU                                pmax   pmax
      comp=Z,17nm,1.0s
FIA1  FINESS Array S  60.20 327    P      P      21 13 33.5  0.0
FINES FINESS Array B  60.20 327    P      P      21 13 33.1 -0.5
FINES FINESS Array B  60.20 327    P      P      21 13 33.5 -0.1
      comp=Z,4.2nm,0.8s,baz=111,slow=10,SNR=10.0
      comp=Z,4.2nm,0.8s
EIL   Elat            60.31 290    LR     LR     21 43 36.9
      comp=Z,69nm,18.0s,baz=246,slow=40
NACGM Naroch          60.60 320   eP      P      21 13 37.2 +0.8
      comp=Z,9.0nm,0.9s,baz=82
MI28  Mi28,Pidlybu    60.70 315    P      P      21 13 36.4 -0.8
SORM  Soroca          60.77 312    P      P      21 13 36.0 -1.7
      comp=Z,7.8nm,0.9s
SORM                               pP     pP     21 13 39.4 -2.4
      comp=Z,7.8nm,0.9s
LUBAR Lubar, Ukraine  60.83 314    P      P      21 13 37.2 -0.8
BORA  Eskisehir       61.09 302    IAmb   IAmb   21 13 41.3
      comp=Z,5.5nm,0.6s
TPGR  Topolog         61.40 308   ⇓P      P      21 13 42.6 +0.6
RNPP9 Sopachiv        61.72 316    P      P      21 13 43.3 -0.7
YLV   Yalova          61.72 303    P      P      21 13 42.9 -1.5
      comp=Z,13nm,0.8s
RNPP8 Varash          61.76 316    P      P      21 13 43.3 -1.0
HARR  Harsova         61.77 308   ⇑P      P      21 13 44.8 +0.3
HARR  Harsova         61.77 308   ⇑P      P      21 13 44.8 +0.3
HORU  Horodok         61.81 313    P      P      21 13 44.2 -0.5
KMPD  K-Podol'skiy    61.92 312    P      P      21 13 44.0 -1.5
GAMB  Gambell         61.98  30    P      P      21 13 45.0 -0.6
      baz=278
SPITS Spitsbergen Ar  62.10 347    P      P      21 13 46.0 -0.3
      comp=Z,4.9nm,0.8s,baz=103,slow=6.3,SNR=5.4
SPITS                              PcP    PcP    21 14 25.6 -0.8
      comp=Z,1.7nm,0.5s,baz=94,slow=7.7,SNR=5.3
      comp=Z,4.9nm,0.8s
TESR  Tescani         62.24 310    P      P      21 13 47.1 -0.6
      comp=Z,5.4nm,1.0s
ELL   Elmali          62.32 299    P      P      21 13 47.8 -0.7
ELL   Elmali          62.32 299    P      P      21 13 47.8 -0.7
ELL                                pmax   pmax
      comp=Z,99nm,1.6s
VRI   Vrincioaia      62.34 309   ⇓P      P      21 13 48.9 +0.5
VRI   Vrincioaia      62.34 309   ⇓P      P      21 13 48.9 +0.5
VRI   Vrincioaia      62.34 309    P      P      21 13 48.7 +0.4
      comp=Z,13nm,0.9s
PLOR  Plostina        62.39 309   ⇓P      P      21 13 49.7 +0.9
PLOR  Plostina        62.39 309   ⇓P      P      21 13 49.7 +0.9
CTAO  Charters Tower  62.60 136    P      P      21 13 49.9 -0.4
CTAO                               IAmb   IAmb   21 13 51.2
      comp=Z,9.2nm,0.8s
CTAO  Charters Tower  62.60 136    P      P      21 13 49.9 -0.4
CTAO                               pmax   pmax
      comp=Z,9.0nm,0.9s
TURR  Turia           62.77 310   ⇑P      P      21 13 52.1 +0.8
SUW   Suwalki         62.83 319   eP      P      21 13 50.3 -1.1
SUW   Suwalki         62.83 319    P      P      21 13 51.4  0.0
SUW                                pmax   pmax
      comp=Z,28nm,0.9s
KSV   Kosov           62.88 312    P      P      21 13 51.3 -0.7
BURAR Bucovina Array  62.95 312    P      P      21 13 52.6 +0.1
BURAR Bucovina Array  62.95 312   ⇓P      P      21 13 52.6 +0.1
BURAR Bucovina Array  62.95 312   ⇓P      P      21 13 52.6 +0.1
BUR08 Bucovina Ar. S  62.95 312    IAmb   IAmb   21 14 31.0
      comp=Z,9.8nm,1.7s
MLR   Muntele Rosu    62.96 309   ⇑P      P      21 13 53.1 +0.5
MLR   Muntele Rosu    62.96 309   ⇑P      P      21 13 53.1 +0.5
MLR   Muntele Rosu    62.96 309    P      P      21 13 52.3 -0.3
      comp=Z,8.4nm,0.8s
STNU  Starunia        63.16 313    P      P      21 13 53.0 -0.8
TNA   Tin City        63.31  28    P      P      21 13 53.9 -0.5
      baz=280
VOIR                  63.58 309    P      P      21 13 55.4 -1.3
      comp=Z,2.6nm,0.9s
C16K  Lisburne Hills  63.81  25    P      P      21 13 56.9 -0.8
      baz=281
SPIA  Saint Paul Isl  63.84  37    P      P      21 13 58.2 +0.1
      baz=282
TNR   Turnu Rosu      64.05 310   ⇑P      P      21 14 00.6 +0.9
TNR   Turnu Rosu      64.05 310   ⇑P      P      21 14 00.6 +0.9
KWP   Kalwaria Pacla  64.09 314   eP      P      21 14 00.4 +0.5
KWP   Kalwaria Pacla  64.09 314    P      P      21 14 00.6 +0.7
KWP                                pmax   pmax
      comp=Z,21nm,1.0s
KWP   Kalwaria Pacla  64.09 314    P      P      21 14 00.1 +0.2
      comp=Z,15nm,0.8s
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KORU  Korolevo          64.18 313   P      P      21 13 59.7 -0.8
BRIU  Brid              64.20 313   P      P      21 14 00.7 +0.1
P08K  Saint George I    64.34  38   P      P      21 14 01.4  0.0
      baz=283
MUKU  Mukachevo         64.39 313   P      P      21 14 02.0 +0.1
LOT   Lotru             64.45 310  ⇑P      P      21 14 00.7 -1.8
BERU  Beregovo          64.47 313   P      P      21 14 02.4  0.0
KOLS  Kolonicke sedl    64.53 314  eP      P      21 14 03.3 +0.5
KOLS  Kolonicke sedl    64.53 314  eP      P      21 14 03.3 +0.5
C17K  DeLong Mountai    64.55  24   P      P      21 14 02.6  0.0
      baz=283
ANM   Nome              64.57  29   P      P      21 14 03.0 +0.3
      baz=283
HOLU  Holmets           64.57 313   P      P      21 14 03.1 +0.1
UZHM  Uzhgorod          64.60 313   P      P      21 14 02.6 -0.6
F15K  North Star Dit    64.61  27   P      P      21 14 03.4 +0.4
      baz=283
D17K  Noatak River      64.76  25   P      P      21 14 04.5 +0.5
      baz=283,SNR=7.1
B18K  Kokolik River     64.83  23   P      P      21 14 04.7 +0.3
      baz=284
A19K  Wainwright        64.88  22   P      P      21 14 05.3 +0.7
      baz=284
G15K  Niukluk           65.02  28   P      P      21 14 05.4 -0.3
      baz=284
M11K  Mekoryuk          65.17  33   P      P      21 14 07.0 +0.4
      baz=284
C18K  Utukok River      65.22  24   IAmb   IAmb   21 14 08.7
      comp=Z,13nm,1.1s
C18K  Utukok River      65.22  24   P      P      21 14 07.3 +0.2
      baz=285
E17K  Hotham Inlet      65.39  25   P      P      21 14 08.4 +0.4
      baz=285
SURR  Surduc            65.48 310  ⇑P      P      21 14 09.5 +0.5
K13K  Kusilvak Mount    65.51  31   P      P      21 14 10.3 +1.4
      baz=285
HERR  Herculane         65.53 309  ⇓P      P      21 14 10.0 +0.7
G16K  Koyuk River       65.61  27   P      P      21 14 09.7 +0.1
      baz=285
NIKH  Nikolski High     65.62  41   P      P      21 14 11.0 +1.2
      baz=285
NIE   Niedzica          65.66 314  eP      P      21 14 11.2 +1.1
NIE   Niedzica          65.66 314   P      P      21 14 11.6 +1.4
NIE                                 pmax   pmax
      comp=Z,3.0nm,1.2s
NIE   Niedzica          65.66 314   P      P      21 14 10.0 -0.2
      comp=Z,3.3nm,1.2s
C19K  Lookout Ridge     65.66  23   P      P      21 14 10.9 +1.0
C19K  Lookout Ridge     65.66  23   P      P      21 14 10.7 +0.9
      baz=286,SNR=16
OJC   Ojcow             65.75 315  eP      P      21 14 10.6 -0.1
OJC   Ojcow             65.75 315   P      P      21 14 10.7 -0.1
OJC   Ojcow             65.75 315   P      P      21 14 10.7 -0.1
OJC   Ojcow             65.75 315   P      P      21 14 10.4 -0.3
      comp=Z,6.4nm,1.0s
E18K  Tukpahlearik C    65.75  25   P      P      21 14 10.8 +0.4
      baz=286
J14K  Nanvaranak Lak    65.79  30   P      P      21 14 11.5 +0.8
      baz=285
BZS   Buzias            65.86 310  ⇓P      P      21 14 11.3 -0.2
BZS   Buzias            65.86 310  ⇓P      P      21 14 11.3 -0.2
H16K  Elim              65.86  28   P      P      21 14 11.5 +0.4
      baz=286
A21K  Barrow            65.99  20   P      P      21 14 12.5 +0.7
      baz=288
MDVR  Moldovita         66.03 309  ⇑P      P      21 14 13.1 +0.5
B20K  Meade River       66.22  22   P      P      21 14 13.9 +0.6
      baz=288,SNR=16
G17K  Kiwalik Mounta    66.27  27   P      P      21 14 14.1 +0.3
      baz=286
D19K  Kuna River        66.35  24   P      P      21 14 14.8 +0.5
      baz=287
BOVS  Bovan             66.37 308  ⇑P      P      21 14 14.9 +0.1
HFS   Hagfors           66.40 327   P      P      21 14 14.1 -0.6
      comp=Z,5.4nm,0.9s,baz=90,slow=5.9,SNR=12
      comp=Z,5.4nm,0.9s
M13K  Dall Lake         66.52  33   P      P      21 14 15.7 +0.2
      baz=286
L14K  Kuka Creek        66.57  32   P      P      21 14 16.6 +0.9
      baz=286,SNR=5.9
A22K  Sinclair Lake     66.60  21   P      P      21 14 16.2 +0.4
      baz=289,SNR=6.9
I17K  Unalakleet        66.72  29   P      P      21 14 16.4 -0.2
      baz=287
H17K  Granite Mounta    66.73  28   P      P      21 14 17.2 +0.4
      baz=287
UNV   Unalaska Valle    66.74  40   P      P      21 14 17.0 +0.1
      baz=287
D20K  Etivluk River     66.81  23   P      P      21 14 16.8 -0.3
D20K  Etivluk River     66.81  23   P      P      21 14 17.8 +0.6
      baz=289,SNR=14
K15K  Wolf Creek Mou    66.82  30   P      P      21 14 17.8 +0.4
      baz=287
VYHS  Vyhne             66.84 314  eP      P      21 14 18.0 +0.2
J16K  Anvik River       66.94  29   P      P      21 14 18.4 +0.3
      baz=287
G18K  Tagagawik         66.94  26   P      P      21 14 17.9 -0.1
      baz=288
F19K  Shaleruckik Mo    66.98  25   P      P      21 14 18.8 +0.5
      baz=288
E19K  Redstone River    66.99  25   P      P      21 14 19.2 +0.9
      baz=289
L15K  Ungalak Mounta    67.02  31   P      P      21 14 19.2 +0.5
      baz=287
M14K  Bethel            67.08  32   P      P      21 14 19.5 +0.6
      baz=287
E20K  Nigu River        67.10  24   P      P      21 14 19.8 +0.7
      baz=289
B21K  Ikpikpuk River    67.18  22   P      P      21 14 20.1 +0.6
      baz=290,SNR=12
NORES NORESS Array B    67.25 328   P      P      21 14 21.5 +1.4
MORC  Moravsky Berou    67.27 315   P      P      21 14 20.4 -0.1
MORC  Moravsky Berou    67.27 315  eP      P      21 14 20.8 +0.3
MORC  Moravsky Berou    67.27 315   P      P      21 14 20.4 -0.1
MORC                                pmax   pmax
      comp=Z,4.0nm,0.9s
C21K  Knifeblade Rid    67.28  22   P      P      21 14 20.7 +0.6
      baz=290,SNR=5.5
H18K  Honhosa River     67.29  27   P      P      21 14 20.6 +0.3
      baz=289
NB2   NORSAR Subarra    67.31 328   P      P      21 14 19.7 -0.8
      comp=Z,8.3nm,1.1s,baz=75,slow=6.9
NB2   NORSAR Subarra    67.31 328   P      P      21 14 20.0 -0.5
NOA   NORSAR Array B    67.31 328   P      P      21 14 19.1 -1.4
      comp=Z,1.9nm,0.7s,baz=74,slow=6.5,SNR=8.7
      comp=Z,1.9nm,0.7s
B22K  Teshekpuk Lake    67.31  21   P      P      21 14 21.3 +1.0
      baz=291,SNR=11
NC204 NORSAR Array S    67.45 329   P      P      21 14 20.6 -0.8
N14K  Kuskokwak Cree    67.46  33   P      P      21 14 22.2 +0.8
      baz=288
G19K  Purcell Mounta    67.47  26   P      P      21 14 21.9 +0.5
      baz=289
JAVC  Velka Javorina    67.47 314  eP      P      21 14 23.1 +1.3
J17K  VABM Dome         67.56  29   P      P      21 14 22.5 +0.5
      baz=289
KRLC  Kraliky           67.65 316  eP      P      21 14 23.2 +0.3
KRLC  Kraliky           67.65 316  eP      P      21 14 23.2 +0.3
MORH  Mrgy, Hungar      67.66 311  ⇓P      P      21 14 23.2 +0.3
MORH  Mrgy, Hungar      67.66 311   P      P      21 14 22.3 -0.6
      comp=Z,6.2nm,0.8s
F20K  Avaraart Lake     67.68  25   P      P      21 14 22.6 -0.1
      baz=290
M15K  Kasigluk River    67.69  32   P      P      21 14 23.3 +0.4
      baz=288
KSP   Ksiaz             67.71 317  eP      P      21 14 23.6 +0.4
KSP   Ksiaz             67.71 317   P      P      21 14 23.4 +0.2
      comp=Z,6.3nm,0.9s
E21K  Killik River      67.81  23   P      P      21 14 23.6 +0.1
      baz=291
DPC   Dobruska-Polom    67.85 316  eP      P      21 14 24.7 +0.6
DPC   Dobruska-Polom    67.85 316  eP      P      21 14 24.7 +0.6
DPC   Dobruska-Polom    67.85 316   P      P      21 14 24.5 +0.4
      comp=Z,5.5nm,1.6s
MODS  Modra-Piesok      67.87 314  eP      P      21 14 26.9 +2.6
O14K  Tigyukauivet M    67.88  34   P      P      21 14 23.7 -0.3
      baz=288
H19K  Roundabout Mou    67.92  26   P      P      21 14 24.8 +0.6
      baz=290,SNR=7.2
L16K  Owhat River       67.93  31   P      P      21 14 25.1 +0.7
      baz=289
VRAC  Vranov            68.01 315  eP      P      21 14 25.5 +0.4
VRAC  Vranov            68.01 315  ⇑P      P      21 14 26.1 +1.0
VRAC  Vranov            68.01 315  ⇑P      P      21 14 26.1 +1.0
GCSA  Galena City Sc    68.02  27   P      P      21 14 25.6 +0.7
      baz=290
MPLH  Magyarpolny       68.08 313   P      P      21 14 25.7 +0.1
      comp=Z,18nm,1.1s
D22K  Ayikyak River     68.09  22   P      P      21 14 25.8 +0.5
D22K  Ayikyak River     68.09  22   P      P      21 14 26.3 +1.0
      baz=292,SNR=7.9
K17K  Iditarod          68.11  30   P      P      21 14 26.7 +1.2
      baz=290,SNR=13
N15K  Kwethluk River    68.14  32   P      P      21 14 26.9 +1.1
      baz=289,SNR=7.4
KRUC  Moravsky          68.21 315  eP      P      21 14 25.6 -0.8
L17K  Donlin            68.31  30   P      P      21 14 28.4 +1.7
      baz=290
M16K  Timber Creek      68.39  31   P      P      21 14 28.0 +0.7
      baz=290,SNR=7.1
C23K  Itkillik River    68.39  21   P      P      21 14 27.7 +0.6
      baz=294,SNR=7.5
F21K  Alatna River      68.43  24   P      P      21 14 28.2 +0.7
      baz=292
J18K  Innoko River      68.53  29   IAmb   IAmb   21 14 30.4
      comp=Z,7.4nm,0.7s
J18K  Innoko River      68.53  29   P      P      21 14 29.0 +0.9
      baz=291,SNR=6.4
H20K  Anotleneega Mo    68.55  26   P      P      21 14 29.2 +1.0
      baz=291,SNR=7.2
O15K  Ungalikthiuk R    68.60  33   P      P      21 14 29.6 +1.0
      baz=290,SNR=6.9
S12K  Black Hills       68.62  37   P      P      21 14 29.7 +0.9
      baz=289
N16K  Nishlik Lake      68.66  32   P      P      21 14 30.4 +1.4
      baz=290,SNR=10
E22K  Anaktuvuk Pass    68.67  23   P      P      21 14 29.6 +0.6
      baz=293
G21K  Allakaket         68.69  25   P      P      21 14 29.9 +0.8
      baz=292,SNR=7.1
TREC  Trest             68.70 315   P      P      21 14 30.1 +0.7
TREC                                pmax   pmax
      comp=Z,3.0nm,0.9s
RONA  Rosalia, Austr    68.71 314  i P     P      21 14 29.5 -0.1
      comp=Z,3.8nm,1.0s
D23K  Nanushuk River    68.72  22   IAmb   IAmb   21 14 34.6
      comp=Z,10nm,0.9s
D23K  Nanushuk River    68.72  22   P      P      21 14 29.8 +0.6
      baz=294,SNR=7.5
F22K  John River        68.79  24   P      P      21 14 30.3 +0.6
      baz=293
J19K  Poorman           68.80  28   P      P      21 14 30.3 +0.5
      baz=291
CONA  Conrad Observa    68.91 314  i P     P      21 14 31.3 +0.5
      comp=Z,4.7nm,1.0s
M17K  Holitna River     68.95  31   P      P      21 14 32.2 +1.4
M17K  Holitna River     68.95  31   P      P      21 14 33.0 +2.2
      baz=291,SNR=9.6
I20K  Naaghedeneel      68.96  27   P      P      21 14 31.5 +0.7
      baz=292
L18K  Granite Mounta    68.99  30   P      P      21 14 31.7 +0.8
      baz=291
C24K  Franklin Bluff    69.05  21   P      P      21 14 31.2  0.0
      baz=295
BRG   Berggiesshubel    69.11 317  eP      P      21 14 31.8 -0.1
      comp=Z,4.2nm,0.9s,baz=69,slow=6.0
BRG   Berggiesshubel    69.11 317  eP      P      21 14 32.0 +0.1
BRG                                 Amp           21 14 32.6
      comp=Z,4.2nm,0.9s
TOLK  Toolik Lake Re    69.22  22   IAmb   IAmb   21 14 36.0
      comp=Z,4.8nm,0.7s
TOLK  Toolik Lake Re    69.22  22   P      P      21 14 33.0 +0.6
      baz=295
D24K  Happy Valley      69.25  22   P      P      21 14 33.6 +1.1
      baz=295
G22K  Bettles           69.26  24   P      P      21 14 33.9 +1.3
      baz=294
H21K  Melozitna Rive    69.28  26   P      P      21 14 33.5 +0.7
      baz=293
O16K  Kokwok River B    69.29  33   P      P      21 14 34.4 +1.6
      baz=291,SNR=10
J20K  Nowinta River     69.33  27   P      P      21 14 33.7 +0.7
      baz=292
STKA  Stephens Creek    69.37 147   P      P      21 14 33.0 -0.7
      comp=Z,4.1nm,0.7s,baz=326,slow=8.2,SNR=5.3
      comp=Z,4.1nm,0.7s
STKA  Stephens Creek    69.37 147   P      P      21 14 33.0 -0.7
N17K  Nushagak Hills    69.38  32   P      P      21 14 34.1 +0.7
      baz=291
E23K  Chandalar         69.45  23   P      P      21 14 33.9  0.0
      baz=295,SNR=8.4
CLL   Collm             69.53 318  i P     P      21 14 34.4 -0.1
CLL                                i              21 14 40.4
CLL   Collm             69.53 318  eP      P      21 14 34.5 -0.1
      comp=Z,2.8nm,1.0s,baz=69,slow=6.0
CLL   Collm             69.53 318  i P     P      21 14 34.4 -0.1
CLL                                i x     x      21 14 40.4
P16K  Nushagak River    69.54  33   P      P      21 14 35.1 +0.7
      baz=291
SDPT  Sand Point        69.58  37   P      P      21 14 35.3 +0.6
      baz=291
CKRC  Cesky Krumlov     69.59 315  eP      P      21 14 35.3 +0.3
CKRC  Cesky Krumlov     69.59 315  eP      P      21 14 35.3 +0.3
COLD  Coldfoot          69.60  24   P      P      21 14 35.1 +0.4
      baz=295
M18K  Stony River       69.64  30   P      P      21 14 36.0 +1.0
      baz=292
K20K  Telida            69.68  28   P      P      21 14 36.4 +1.2
      baz=293
O17K  Koliganek Bris    69.69  32   P      P      21 14 36.0 +0.6
      baz=292
H22K  Ishtalitna Cre    69.73  25   P      P      21 14 36.2 +0.7
      baz=294
S14K  Fog Glacier       69.74  36   P      P      21 14 36.8 +0.9
      baz=291
L19K  White Mountain    69.80  29   P      P      21 14 36.5 +0.5
      baz=293,SNR=5.5
E24K  Your Creek        69.83  23   IAmb   IAmb   21 14 38.0
      comp=Z,15nm,1.2s
E24K  Your Creek        69.83  23   P      P      21 14 36.5 +0.4
      baz=296,SNR=10
SOKA  Soboth            69.87 313  i P     P      21 14 36.9 +0.1
      comp=Z,2.1nm,0.5s
G23K  Bananza Creek     69.89  24   P      P      21 14 37.1 +0.6
      baz=295
N18K  Kilae Creek       69.91  31   P      P      21 14 37.1 +0.3
      baz=292
GORT1 Trebel            69.92 320  eP      P      21 14 38.0 +1.2
      comp=Z,16nm,1.3s,baz=69,slow=6.0
KHC   Kasperske Hory    69.93 316  eP      P      21 14 38.1 +1.0
KHC   Kasperske Hory    69.93 316  eP      P      21 14 38.1 +1.0
GEC2  GERESS Array S    69.95 315   P      P      21 14 37.7 +0.4
GEC2                                pmax   pmax
      comp=Z,5.0nm,1.1s
GEC2  GERESS Array S    69.95 315  eP      P      21 14 37.5 +0.2
      comp=Z,4.4nm,1.1s,baz=69,slow=6.0
GERES GERESS Array B    69.95 315   P      P      21 14 36.9 -0.4
GERES GERESS Array B    69.95 315   P      P      21 14 37.0 -0.4
      comp=Z,2.1nm,0.6s,baz=76,slow=5.6,SNR=21
      comp=Z,2.1nm,0.6s
D25K  Kavik River       69.96  21   IAmb   IAmb   21 15 03.3
      comp=Z,28nm,2.0s
D25K  Kavik River       69.96  21   P      P      21 14 37.1 +0.1
      baz=297
L20K  Farewell, AK      70.10  29   P      P      21 14 38.5 +0.6
      baz=293
M19K  Big River Lodg    70.11  30   P      P      21 14 38.9 +0.9
      baz=293
C26K  Camden Bay        70.13  20   P      P      21 14 38.8 +0.9
      baz=298
BSEG  Bad Segeberg      70.14 321  eP      P      21 14 39.2 +1.0
      comp=Z,11nm,1.0s,baz=69,slow=6.0
TANN  Tannenbergstha    70.16 317  eP      P      21 14 38.7 +0.2
      comp=Z,2.2nm,0.9s,baz=69,slow=6.0
CHUM  Lake Minchumin    70.19  27   P      P      21 14 38.7 +0.4
      baz=294
P17K  Kvichak River     70.22  33   P      P      21 14 39.4 +0.8
      baz=292
CHNA  Chernabura Isl    70.25  38   P      P      21 14 39.1 +0.3
      baz=291
NEUB  Neuenburg         70.28 318  eP      P      21 14 38.6 -0.6
      comp=Z,8.5nm,0.7s,baz=69,slow=6.0
F24K  Squaw Lake        70.28  23   IAmb   IAmb   21 14 42.9
      comp=Z,18nm,1.6s
F24K  Squaw Lake        70.28  23   P      P      21 14 39.7 +0.8
      baz=297
MLY   Manley            70.33  26   P      P      21 14 39.9 +0.6
      baz=295
WET   Wettzell          70.36 316  eP      P      21 14 39.9 +0.2
      comp=Z,3.5nm,1.1s,baz=69,slow=6.0
BIOA  Bad Ischl, Aus    70.40 314  i P     P      21 14 40.4 +0.4
      comp=Z,2.6nm,0.6s
H23K  Yukon River       70.44  25   P      P      21 14 40.0 +0.1
      baz=296
CAST  Castle Rocks      70.47  28   P      P      21 14 40.5 +0.4
      baz=294
N19K  Bonanza Creek     70.50  31   P      P      21 14 41.1 +0.6
      baz=293,SNR=7.2
MANZ  Manzenberg        70.52 317  eP      P      21 14 41.0 +0.3
      comp=Z,1.6nm,1.2s,baz=69,slow=6.0
ROTZ  Rotzenmuhle       70.54 317  eP      P      21 14 41.4 +0.6
      comp=Z,1.8nm,1.1s,baz=69,slow=6.0
O18K  Koktuh Hills      70.55  32   P      P      21 14 41.8 +1.2
O18K                                IAmb   IAmb   21 14 43.2
      comp=Z,9.5nm,0.9s
O18K  Koktuh Hills      70.55  32   P      P      21 14 41.3 +0.7
      baz=293,SNR=6.6
JMIC  Jan Mayen         70.58 341   LR     LR     21 48 09.2
      comp=Z,47nm,20.4s,baz=14,slow=38
MOX   Moxa              70.58 318  eP      P      21 14 41.8 +0.8
      comp=Z,4.8nm,1.2s,baz=69,slow=6.0
ASSE  Asse, Remlinge    70.59 319  eP      P      21 14 40.7 -0.2
      comp=Z,3.7nm,0.9s,baz=69,slow=6.0
BPAW  Bear Paw Mtn.     70.63  27   P      P      21 14 41.9 +0.8
      baz=295,SNR=10.0
C27K  Jago River        70.64  20   IAmb   IAmb   21 14 45.1
      comp=Z,11nm,0.8s
C27K  Jago River        70.64  20   P      P      21 14 41.2 +0.2
      baz=300
PPLA  Purkeypile        70.65  28   P      P      21 14 41.7 +0.3
      baz=295,SNR=8.5
M20K  Styx River        70.67  29   P      P      21 14 42.1 +0.7
      baz=294
P18K  Big Mountain,     70.72  32   P      P      21 14 42.2 +0.5
      baz=293
E25K  Arctic Village    70.78  22   P      P      21 14 42.3 +0.3
      baz=298
G24K  Hadweenzic Riv    70.80  24   P      P      21 14 42.4 +0.4
      baz=297
I23K  Minto, Yukon-K    70.81  26   P      P      21 14 42.7 +0.6
      baz=296
Q17K  Contact Creek     70.85  34   P      P      21 14 43.6 +1.0
      baz=293
RJOB  Jochberg          70.92 314  eP      P      21 14 44.2 +1.0
      comp=Z,5.9nm,1.1s,baz=69,slow=6.0
F25K  Christian Rive    71.01  22   P      P      21 14 43.9 +0.5
      baz=299
H24K  Noodor Dome       71.05  25   IAmb   IAmb   21 14 47.0
      comp=Z,12nm,1.4s
H24K  Noodor Dome       71.05  25   P      P      21 14 44.0 +0.3
      baz=297,SNR=5.8
KMBO  Kilima Mbogo      71.05 258   P      P      21 14 43.8 -0.9
KMBO                                IAmb   IAmb   21 14 46.4
      comp=Z,5.2nm,0.8s
KMBO  Kilima Mbogo      71.05 258   P      P      21 14 43.8 -0.9
KMBO                                pmax   pmax
      comp=Z,5.0nm,0.8s
LESA  Schwarzleotal     71.10 314  i P     P      21 14 44.3 -0.1
      comp=Z,2.8nm,0.5s
RETH  Rethem/Aller,     71.11 320  eP      P      21 14 45.6 +1.5
      comp=Z,35nm,2.0s,baz=69,slow=6.0
Q18K  Katmai Hardscr    71.12  33   P      P      21 14 45.1 +0.9
      baz=294
GRF   Grafenberg Arr    71.17 317  eP      P      21 14 44.8 +0.2
      comp=Z,6.7nm,0.9s,baz=69,slow=6.0
NEA2  Nenana            71.17  26   IAmb   IAmb   21 14 48.0
      comp=Z,9.6nm,0.7s
NEA2  Nenana            71.17  26   P      P      21 14 44.7 +0.4
      baz=297,SNR=14
TRF   Thorofare Moun    71.19  27   P      P      21 14 44.7  0.0
      baz=296
GTTG  Gottingen         71.22 319  eP      P      21 14 45.3 +0.4
      comp=Z,8.4nm,1.1s,baz=69,slow=6.0
G25K  Bearman Lake      71.25  23   P      P      21 14 44.7  0.0
      baz=298
SKT   Skwentna          71.31  29   IAmb   IAmb   21 14 48.7
      comp=Z,9.7nm,1.0s
SKT   Skwentna          71.31  29   P      P      21 14 45.9 +0.6
      baz=295,SNR=7.7
SPCR  Spurr Chakacha    71.35  30   P      P      21 14 46.0 +0.4
      baz=295
TIP   Timpagrande       71.37 305  ⇓P      P      21 14 44.4 -1.7
BMAR  Burnt Mountain    71.45  22   P      P      21 14 46.8 +0.7
ABTA  Abfaltersbach     71.46 314  i P     P      21 14 46.2 -0.3
      comp=Z,2.1nm,0.5s
F26K  Sheenjek River    71.46  22   IAmb   IAmb   21 14 47.6
      comp=Z,29nm,2.0s
F26K  Sheenjek River    71.46  22   P      P      21 14 45.9 -0.2
      baz=300
COLA  College           71.50  25deP      P      21 14 47.1 +0.8
COLA                                pmax   pmax
      comp=Z,9.0nm,1.0s
COLA  College           71.50  25   P      P      21 14 46.6 +0.3
      baz=298
P19K  Oil Pt            71.54  32   P      P      21 14 47.3 +0.6
      baz=295
POKR  Poker Plat Res    71.55  25   P      P      21 14 46.9 +0.3
      baz=298
H25L  Birch Creek       71.59  24   P      P      21 14 47.2 +0.3
      baz=299
MCK   McKinley          71.61  27   P      P      21 14 46.7 -0.3
      baz=297
O20K  Slope Mountain    71.64  31   P      P      21 14 47.4 +0.1
      baz=295
Q19K  Cape Douglas,     71.65  32   P      P      21 14 47.4  0.0
      baz=295
D27M  Malcolm River     71.67  20   P      P      21 14 46.9 -0.5
      baz=302
FUR   Furstenfeldbru    71.70 315  eP      P      21 14 48.4 +0.5
      comp=Z,16nm,0.8s,baz=69,slow=6.0
RND   Reindeer          71.79  27   IAmb   IAmb   21 14 54.1
      comp=Z,9.7nm,1.1s
WTTA  Wattenberg        71.82 314  i P     P      21 14 47.4 -1.4
      comp=Z,3.3nm,0.5s
WATA  Walderalm         71.83 314  i P     P      21 14 48.4 -0.4
      comp=Z,3.2nm,0.7s
SUA   Susitna One       71.87  29   P      P      21 14 49.0 +0.2
      baz=296,SNR=10
ILAR  Eielson Array     71.92  25   P      P      21 14 48.3 -0.5
      comp=Z,1.4nm,0.4s,baz=286,slow=4.4,SNR=27
      comp=Z,1.4nm,0.4s
ILAR  Eielson Array     71.92  25   P      P      21 14 48.4 -0.4
CHIR  Chirikof Islan    71.96  36   P      P      21 14 49.5 +0.3
      baz=294
G26K  Porcupine Rive    71.96  23   P      P      21 14 49.3 +0.3
      baz=300
CAPN  Captain Cook N    72.00  30   P      P      21 14 49.4 +0.1
      baz=296
E27K  Coleen River      72.04  21   P      P      21 14 49.5 -0.1
      baz=302
PRP   Porcupine Dome    72.06  24   P      P      21 14 50.4 +0.5
PRP                                 IAmb   IAmb   21 14 53.5
      comp=Z,8.4nm,0.7s
PRP   Porcupine Dome    72.06  24   P      P      21 14 50.0 +0.1
      baz=299,SNR=12
HDA   Harding Lake      72.07  26   P      P      21 14 50.1 +0.3
      baz=298
SQTA  Sankt Quirin      72.11 314  i P     P      21 14 50.2 -0.3
      comp=Z,5.3nm,0.5s
MOTA  Moosalm           72.12 315  i P     P      21 14 50.2 -0.4
      comp=Z,5.2nm,0.8s
WAT1  Susitna Watana    72.18  28   P      P      21 14 50.7 +0.2
      baz=298
IBBN  Ibbenburen        72.18 320  eP      P      21 14 50.9 +0.3
      comp=Z,6.2nm,0.4s,baz=69,slow=6.0
KASTN Kahler Asten      72.24 319  eP      P      21 14 51.0 -0.1
      comp=Z,8.9nm,1.7s,baz=69,slow=6.0
RETA  Reutte            72.28 315  i P     P      21 14 51.1 -0.4
      comp=Z,0.7nm,0.4s
D28M  Stokes Point      72.29  20   P      P      21 14 51.0 +0.1
      baz=304
CEL   Celeste           72.34 304   IAmb   IAmb   21 14 52.5
      comp=Z,7.7nm,0.9s
CEL   Celeste           72.34 304   P      P      21 14 50.8 -1.1
      comp=Z,9.3nm,0.8s
Q20K  Shuyak Island     72.38  32   P      P      21 14 51.8 +0.2
      baz=296
SII   Sitkinak Islan    72.38  35   P      P      21 14 51.9 +0.2
      baz=295
E28M  Babbage River     72.45  20   IAmb   IAmb   21 14 55.8
      comp=Z,15nm,1.5s
E28M  Babbage River     72.45  20   P      P      21 14 52.0  0.0
      baz=304
RC01  Rabbit Creek A    72.48  29   P      P      21 14 51.7 -0.5
      baz=297
FETA  Feichten          72.49 314  i P     P      21 14 52.6 -0.2
      comp=Z,7.3nm,1.1s
PMR   Palmer            72.51  29   IAmb   IAmb   21 14 53.6
      comp=Z,10nm,0.8s
PMR   Palmer            72.51  29   P      P      21 14 52.2 -0.1
      baz=297
TEOL  Teolo             72.53 312   P      P      21 14 52.5 -0.4
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DHY	Denali Highway	72.54	27	IAmb	IAmb	21 14 55.4	
	comp=Z,12nm,1.4s						
DHY	Denali Highway	72.54	27	P	P	21 14 52.3	-0.4
	baz=298						
OHAK	Old Harbor	72.55	34	P	P	21 14 52.7	0.0
	baz=295						
J25K	Salcha River,	72.56	25	P	P	21 14 52.5	-0.3
	baz=300						
TNS	Taunus Mts	72.61	318	*e*P	P	21 14 53.5	+0.2
	comp=Z,4.0nm,0.9s,baz=69,slow=6.0						
UBR	Ueberruh	72.62	315	*e*P	P	21 14 52.9	-0.5
	comp=Z,3.3nm,0.9s,baz=69,slow=6.0						
WAT6	Susitna Watana	72.62	28	P	P	21 14 52.5	-0.8
	baz=298						
BRSE	Bradley Lake S	72.64	31	P	P	21 14 52.8	-0.5
	baz=297						
KDAK	Kodiak Island	72.65	33	P	P	21 14 53.2	-0.1
	baz=296						
SML	Sawmill	72.75	28	IAmb	IAmb	21 14 55.1	
	comp=Z,13nm,0.8s						
SML	Sawmill	72.75	28	P	P	21 14 53.1	-0.8
	baz=298						
STU	Stuttgart	72.75	316	*e*P	P	21 14 54.4	+0.3
	comp=Z,33nm,0.8s,baz=69,slow=6.0						
G27K	Doyon Strip	72.75	22	P	P	21 14 53.3	-0.5
	baz=302						
O22K	Cooper Landing	72.76	30	P	P	21 14 54.0	+0.1
	baz=297						
MURB	Monte Urbino	72.78	310	P	P	21 14 54.6	+0.1
MURB				IAmb	IAmb	21 15 37.0	
	comp=Z,19nm,1.1s						
BUG	Bochum--Univer	72.81	320	*e*P	P	21 14 54.7	+0.3
	comp=Z,6.4nm,0.9s,baz=69,slow=6.0						
K24K	Donnelly Dome	72.81	26	P	P	21 14 53.9	-0.3
	baz=300						
KNK	Knik Glacier	72.88	29	P	P	21 14 54.5	-0.1
	baz=298						
F28M	Old Crow	72.90	21	P	P	21 14 54.3	-0.3
	baz=304						
M23K	Glacier View	73.00	28	P	P	21 14 55.6	+0.2
	baz=298						
I26K	Coal Creek Min	73.02	24	IAmb	IAmb	21 15 00.2	
	comp=Z,5.1nm,0.9s						
I26K	Coal Creek Min	73.02	24	P	P	21 14 55.6	+0.2
	baz=301,SNR=7.4						
SEW	Seward	73.06	30	P	P	21 14 55.1	-0.6
	baz=298						
E29M	Blow River	73.07	20	P	P	21 14 55.1	-0.5
	baz=305,SNR=7.6						
H27K	Steamboat Moun	73.11	23	IAmb	IAmb	21 15 00.0	
	comp=Z,8.5nm,0.9s						
H27K	Steamboat Moun	73.11	23	P	P	21 14 55.4	-0.6
	baz=302,SNR=8.4						
SCM	Sheep Creek Mo	73.15	28	P	P	21 14 55.9	-0.5
	baz=299						
PWL	Port Wells	73.19	29	P	P	21 14 56.5	0.0
	baz=298						
RIDG	Independent Ri	73.20	26	IAmb	IAmb	21 14 57.4	
	comp=Z,22nm,1.4s						
RIDG	Independent Ri	73.20	26	P	P	21 14 56.6	0.0
	baz=300,SNR=9.6						
J26L	Joseph Creek	73.29	25	P	P	21 14 56.7	-0.5
	baz=301,SNR=22						
PAX	Paxson	73.35	27	P	P	21 14 57.1	-0.4
	baz=300,SNR=5.1						
SCRK	Sand Creek	73.41	25	IAmb	IAmb	21 15 00.1	
	comp=Z,14nm,1.4s						
SCRK	Sand Creek	73.41	25	P	P	21 14 57.2	-0.7
	baz=301,SNR=7.1						
I27K	Kandik River	73.41	23	P	P	21 14 57.0	-0.8
	baz=303						
BFO	Black Forest	73.45	316	*e*P	P	21 14 57.9	-0.4
	comp=Z,5.7nm,1.0s,baz=69,slow=6.0						
M24K	Tolsona, Glenn	73.49	28	P	P	21 14 57.2	-1.2
	baz=300						
DOT	Dot Lake	73.55	26	IAmb	IAmb	21 16 05.2	
	comp=Z,13nm,1.8s						
TUE	Stuetta	73.58	314	P	P	21 14 58.5	-0.8
	comp=Z,15nm,0.6s						
GLI	Glacier Island	73.71	29	P	P	21 14 58.8	-0.7
	baz=299						
HARP	HAARP	73.76	27	P	P	21 14 59.4	-0.4
	baz=300						
MEM	Membach	73.88	319	*d*P	P	21 15 00.5	-0.2
	comp=Z,4.3nm,0.9s						
G29M	Pine Creek	73.89	21	IAmb	IAmb	21 15 03.4	
	comp=Z,16nm,1.4s						
G29M	Pine Creek	73.89	21	P	P	21 14 59.4	-1.1
	baz=305						
KLU	Klutina	73.90	28	P	P	21 15 01.1	+0.3
KLU				IAmb	IAmb	21 15 02.8	
	comp=Z,22nm,1.2s						
KLU	Klutina	73.90	28	P	P	21 14 59.6	-1.2
	baz=300,SNR=6.8						
P23K	Montague Islan	74.01	30	P	P	21 15 01.1	-0.2
	baz=299						
A36M	Sachs Harbour	74.05	14	P	P	21 15 00.8	-0.5
	baz=315						
I28M	Miner Creek	74.08	23	P	P	21 15 01.3	-0.5
	baz=304						
K27K	Chicken	74.10	25	P	P	21 15 01.1	-0.7
	baz=303						
L26K	Log Cabin Wild	74.15	26	P	P	21 15 01.6	-0.5
	baz=302						
H29M	Whitestone	74.17	22	P	P	21 15 01.6	-0.6
	baz=305						
F30M	Barrier River	74.18	20	IAmb	IAmb	21 15 05.3	
	comp=Z,12nm,0.8s						
F30M	Barrier River	74.18	20	P	P	21 15 01.6	-0.5
	baz=307						
WLF	Walferdange	74.19	318	IAmb	IAmb	21 15 04.4	
	comp=Z,11nm,0.9s						
WLF	Walferdange	74.19	318	P	P	21 15 03.9	+1.3
WLF				pmax	pmax		
	comp=Z,14nm,0.9s						
WLF	Walferdange	74.19	318	*d*P	P	21 15 03.3	+0.7
WLF	Walferdange	74.19	318	*e*P	P	21 15 03.5	+0.9
	comp=Z,10nm,0.9s,baz=69,slow=6.0						
BCLA	Clavier	74.36	319	*d*P	P	21 15 03.6	+0.1
	comp=Z,3.5nm,1.1s						
N25K	Chitina, Valde	74.39	28	P	P	21 15 04.9	+1.2
N25K				IAmb	IAmb	21 15 07.2	
	comp=Z,12nm,1.2s						
N25K	Chitina, Valde	74.39	28	P	P	21 15 03.0	-0.7
	baz=301						
INK	Inuvik	74.42	19	IAmb	IAmb	21 15 06.6	
	comp=Z,5.5nm,0.7s						
INK	Inuvik	74.42	19	P	P	21 15 02.8	-0.8
	baz=309						
G30M	tAoh Zraii Nji	74.42	21	IAmb	IAmb	21 15 06.5	
	comp=Z,9.2nm,0.8s						
G30M	tAoh Zraii Nji	74.42	21	P	P	21 15 02.6	-1.0
	baz=307						
EYAK	Cordova Ski Ar	74.45	29	P	P	21 15 03.9	+0.1
	baz=300						
M26K	Nabesna, AK	74.62	27	P	P	21 15 04.5	-0.4
	baz=302,SNR=5.9						
EPYK	Eagle Plains	74.63	22	P	P	21 15 04.5	-0.3
	baz=306						
I29M	Ogilvie Camp,	74.69	23	P	P	21 15 05.2	-0.1
	baz=305						
L27K	Beaver Creek,	74.72	26	P	P	21 15 05.8	+0.4
	baz=303,SNR=10						
BMRM	Bremner River	74.72	28	P	P	21 15 05.8	+0.3
	baz=301,SNR=6.0						
BCAR	Beaver Creek A	74.73	26	P	P	21 15 05.4	-0.2
Q23K	Middleton Isla	74.76	30	P	P	21 15 06.2	+0.6
	baz=300						
F31M	Tsiigehtchic	74.90	20	P	P	21 15 06.8	+0.5
	baz=309						
DAWY	Dawson	75.06	24	P	P	21 15 08.0	+0.6
	baz=305						
G31M	Satah River	75.06	21	P	P	21 15 07.2	-0.1
	baz=308						
M27K	Edge Creek, AK	75.08	26	P	P	21 15 08.2	+0.5
	baz=303,SNR=7.2						
MCARA	McCarthy VSAT	75.15	28	P	P	21 15 08.0	+0.1
	baz=302						
J29N	Klondike Camp	75.25	24	P	P	21 15 09.3	+0.8
	baz=306						
I30M	Mount Dempster	75.43	22	P	P	21 15 10.0	+0.4
	baz=307,SNR=7.8						
BVCY	Beaver Creek	75.44	26	P	P	21 15 10.5	+0.9
	baz=304						
CRQE	Cirque	75.46	28	P	P	21 15 10.3	+0.4
	baz=302						
BGLC	Bering Glacier	75.72	29	P	P	21 15 11.2	0.0
	baz=302						
H31M	Peel River	75.74	21	IAmb	IAmb	21 15 14.9	
	comp=Z,4.8nm,0.6s						
H31M	Peel River	75.74	21	P	P	21 15 11.1	-0.2
	baz=309						
J30M	Hart River	75.84	23	P	P	21 15 11.4	-0.6
	baz=307						
K29M	Barlow Dome	75.86	24	IAmb	IAmb	21 15 13.9	
	comp=Z,7.8nm,0.9s						
K29M	Barlow Dome	75.86	24	P	P	21 15 12.4	+0.2
	baz=306,SNR=8.6						
YUK3	Moose Creek	75.96	26	P	P	21 15 12.6	-0.3
	baz=304						
CTG	Chitna Glacier	76.06	27	P	P	21 15 13.6	+0.3
	baz=304						
L29M	L29M	76.08	25	P	P	21 15 13.8	+0.5
L29M				IAmb	IAmb	21 15 17.3	
	comp=Z,7.7nm,0.7s						
L29M	L29M	76.08	25	P	P	21 15 13.7	+0.5
	baz=306,SNR=8.0						
SUMG	Summit	76.20	349	P	P	21 15 14.5	+0.3
SUMG				IAmb	IAmb	21 15 17.2	
	comp=Z,14nm,1.0s						
SUMG	Summit	76.20	349	P	P	21 15 14.5	+0.3
SUMG				pmax	pmax		
	comp=Z,14nm,1.0s						
C36M	Paulatuk	76.23	16	P	P	21 15 14.1	+0.2
	baz=317						
MESA	MESA	76.25	28	P	P	21 15 14.9	+0.5
	baz=304						
RES	Resolute Bay	76.32	5	IAmb	IAmb	21 15 17.6	
	comp=Z,8.6nm,1.4s						
M29M	Somme Creek	76.34	25	P	P	21 15 15.3	+0.5
	baz=306						
YUK8	Steele Glacier	76.52	27	P	P	21 15 16.3	+0.2
	baz=305						
EKA	Eskdalemuir Ar	76.57	326	P	P	21 15 15.7	-0.4
	comp=Z,1.4nm,0.7s,baz=52,slow=5.4,SNR=4.1						
	comp=Z,1.4nm,0.7s						
MAYO	Mayo, Yukon	76.59	24	P	P	21 15 16.5	+0.4
	baz=308						
O28M	Mount Upton	76.64	27	P	P	21 15 17.2	+0.4
	baz=305						
YUK4	Talbot Arm	76.92	26	P	P	21 15 18.9	+0.6
	baz=306						
PINM	Pinnacle	77.00	28	P	P	21 15 19.1	+0.6
	baz=305						
YUK6	Outpost Mounta	77.27	27	P	P	21 15 19.9	-0.3
	baz=306						
N30M	Aishikik Lake	77.45	26	P	P	21 15 21.4	+0.4
	baz=307						
O29M	Mount Kennedy	77.56	27	P	P	21 15 22.2	+0.4
	baz=306						
PNL	Peninsula	77.60	28	P	P	21 15 22.5	+0.6
	baz=306						
HYT	Haines Junctio	77.68	26	P	P	21 15 22.7	+0.3
	baz=307						
N31M	Braeburn, Yuko	77.93	25	P	P	21 15 24.2	+0.5
	baz=308						
M31M	Drury Creek, Y	78.00	24	P	P	21 15 24.4	+0.3
	baz=309						
O30N	Mendenhall	78.26	26	P	P	21 15 25.7	+0.1
	baz=308						
P29M	Windy Craggy	78.30	27	P	P	21 15 26.1	+0.3
	baz=307						
FARO	Faro, Yukon	78.36	24	P	P	21 15 26.4	+0.3
	baz=310						
WHY	Whitehorse	78.79	26	P	P	21 15 28.7	+0.1
	baz=309						
MMPY	Sheldon Lake,	78.83	23	P	P	21 15 28.1	-0.6
	baz=312						
POIN	Pond Inlet	79.12	1	IAmb	IAmb	21 15 33.3	
	comp=Z,11nm,1.4s						
SKAG	Skagway	79.38	27	P	P	21 15 32.0	+0.4
	baz=309						
P33M	Teslin, Yukon	79.87	25	P	P	21 15 34.4	0.0
	baz=311						
P32M	Atlin	79.93	26	P	P	21 15 34.4	-0.3
	baz=310						
S31K	Pelican	79.95	28	P	P	21 15 35.5	+0.8
	baz=308						
R32K	Eaglecrest	80.45	27	P	P	21 15 38.3	+0.8
	baz=310						
TGTN	Hyland Airport	80.61	23	P	P	21 15 38.9	+0.5
	baz=314						
Q32M	Nakina River	80.90	26	P	P	21 15 40.6	+0.4
	baz=312						
WRGLY	Wrigley	80.93	20	P	P	21 15 40.8	+0.9
	baz=318						
R33M	Jennings River	81.11	25	P	P	21 15 41.2	0.0
	baz=312						
S34M	Telegraph Cree	82.05	27	P	P	21 15 46.6	+0.7
	baz=312						
U33K	Whale Pass	82.44	29	P	P	21 15 48.9	+0.9
	baz=311						
WRAK	Wrangell Islan	82.56	28	P	P	21 15 49.7	+1.0
	baz=312						
BEAVL	Fort Liard	82.67	23	P	P	21 15 49.6	+0.3
	baz=317						
CRAG	Craig	82.86	29	P	P	21 15 50.9	+0.7
	baz=311						
T35M	Bob Quinn	83.03	27	P	P	21 15 51.9	+0.8
	baz=313						
SFJD	Kangerlussuaq	83.09	351	LR	LR	21 54 54.9	
	comp=Z,59nm,20.6s,baz=3.0,slow=37						
TOAD	Toad River Com	83.59	24	P	P	21 15 54.7	+0.6
	baz=317						
YKA	Yellowknife Ar	84.01	17	P	P	21 15 56.0	-0.1
	comp=Z,1.2nm,0.6s,baz=321,slow=6.1,SNR=8.6						
	comp=Z,1.2nm,0.6s						
YKA	Yellowknife Ar	84.01	17	P	P	21 15 56.0	-0.1
ESDC	Sonseca Array	85.37	313	P	P	21 16 02.4	-1.0
	comp=Z,0.9nm,0.9s,baz=50,slow=5.6,SNR=9.4						
	comp=Z,0.9nm,0.9s						
LSZ	Lusaka	85.96	250	P	P	21 16 06.0	-0.7
LSZ	Lusaka	85.96	250	P	P	21 16 06.0	-0.7
LSZ				pmax	pmax		
	comp=Z,17nm,1.2s						
NEW	Newport	94.84	27	LR	LR	22 02 00.1	
	comp=Z,91nm,20.6s,baz=318,slow=37						
BOSA	Boshof	95.01	240	P	P	21 16 46.9	-2.1
	comp=Z,1.7nm,0.6s,baz=96,slow=0.5,SNR=5.6						
BOSA				LR	LR	22 02 40.6	
	comp=Z,51nm,18.0s,baz=128,slow=38						
	comp=Z,1.7nm,0.6s						
NVAR	Mina Array Bea	102.15	33	PKKPbc	PKKPbc	21 33 21.1	-3.3
	comp=Z,0.5nm,0.2s,baz=174,slow=16,SNR=9.0						
VNDA	Vanda	110.96	169	Pdiff	Pdif	21 17 56.8	-2.1
	comp=Z,2.0nm,0.5s,baz=313,slow=4.3,SNR=20						
PPT2	Papeete2	111.48	99	*e*LR	LR	21 54 55.3	
	comp=Z,144nm,29.0s						
PPT2				*e*LR	LR	21 55 00.0	
	comp=Z,111nm,27.0s						
TXAR	Lajitas Array	116.37	28	PKP	PKiKP	21 22 08.8	-1.4
	comp=Z,0.3nm,0.5s,baz=323,slow=0.7,SNR=5.8						
TXAR				PKKPbc	PKKPbc	21 32 38.1	-0.5
	comp=Z,0.4nm,0.7s,baz=148,slow=7.4,SNR=4.6						
QSPA	South Pole Qui	118.22	180	PKP	PKPdf	21 22 10.0	-2.3
	comp=Z,1.5nm,0.7s,baz=339,slow=0.2,SNR=8.8						
TROLL	Troll, Antarti	120.61	201	⇑PKPdf	PKPdf	21 22 16.8	-0.2
	comp=Z,180nm,0.4s						
SNAA	Sanae	122.31	201	⇑PKPdf	PKPdf	21 22 19.2	-0.9
	comp=Z,36nm,0.5s						
SNAA	Sanae	122.31	201	PKP	PKPdf	21 22 18.4	-1.7
	comp=Z,1.3nm,0.5s,baz=182,slow=2.9,SNR=15						
VNA2	Neumayer--Watz	123.88	201	⇑PKPdf	PKPdf	21 22 22.3	-0.8
	comp=Z,8.4nm,0.6s,baz=80,slow=1.9						
VNA3	Neumayer Olymp	124.54	201	⇑PKPdf	PKPdf	21 22 23.5	-0.9
	comp=Z,5.8nm,0.7s						
SDV	Santo Domingo	142.66	353	PKPpre	PKPpre	21 22 55.6	
SDV	Santo Domingo	142.66	353	PKhKP	PKPpre	21 22 55.9	
	comp=Z,15nm,0.5s,baz=18,slow=2.8,SNR=8.0						
RUSC	La Rusia	145.82	357	PKPdf	PKPdf	21 23 05.6	-0.5
BOAV	Boa Vista	146.33	333	PKPdf	PKPdf	21 23 06.6	+0.3
ROSC	El Rosal	146.91	359	PKPbc	PKPbc	21 23 10.2	+0.5
	comp=Z,51nm,0.8s,baz=81,slow=7.9,SNR=12						
MACA	Manacapuru-AM	151.39	329	PKPbc	PKPbc	21 23 19.4	-1.1
BDFB	Brasilia	151.98	291	PKPbc	PKPbc	21 23 20.2	-1.7
	comp=Z,2.5nm,0.5s,baz=119,slow=6.1,SNR=4.2						

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*IDC **17** 21:08:12.8±2.8, 11°.73N×89°.37W, h0^{km}, mb3.7/5, mbtmp3.8/6, ML4.2/1, MS3.6/3, Error ellipse: s-maj=83.9km s-min=27.4km az=31.0*

*CATAC **17** 21:08:15.4±0.3, 12°N±2°×8°9W±°, h15^{km}, M4.4/37, MLv4.4/37, Error ellipse: s-maj=5.1km s-min=2.2km az=35.5, confirmed*

*SNET **17** 21:08:17.2±1.0, 11°.99N×89°.00W, h15^{km}±59^{km}, ML4.1*

*NEIC **17** 21:08:17.0±1.9, 11°.94N±0°.08×88°.85W±0°.07, h10^{km}±1^{km}, mb4.3/31, Error ellipse: s-maj=14.2km s-min=9.1km az=35.0*

*GCG **17** 21:08:18.6±1.4, 12°.08N×89°.27W, h8^{km}±29^{km}, MD4.2, ML4.5, MW3.5*

ISC 17 21:08:14.3±2.9**, 11°.88N**±0°.05×**89°.01W**±0°.04**, h2**^{km}±19^{km}**, n161, σ1**^{s}**.23**/172**, mb4.3**/21**, MS3.8**/3**, 9C-2D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALJI	Alcalda de J	1.50	17	P	Pn	21 08 42.0	-0.3
ALJI	Alcalda de J	1.50	17	S	Sn	21 09 02.3	-0.1
LALI	Alcalda de L	1.63	349	P	Pn	21 08 42.4	-1.6
LALI	Alcalda de L	1.63	349	S	Sn	21 09 04.3	-1.3
TECO	Alcaldia de Te	1.67	8	P	Pn	21 08 43.5	-1.1
TECO	Alcaldia de Te	1.67	8	S	Sn	21 09 05.0	-1.5
LCY	Lacayo	1.69	24	*e*P	Pn	21 08 44.6	-0.3
PACA	Pacayal	1.72	23	S	Sn	21 09 07.4	-0.6
PACA	Pacayal	1.72	23	⇑P	Pn	21 08 45.2	-0.2
BLLM	Bellamira	1.73	26	*e*P	Pn	21 08 45.3	-0.1
PANCS	Alcalda de	1.73	355	P	Pn	21 08 45.4	-0.1
PANCS	Alcalda de	1.73	355	S	Sn	21 09 05.8	-2.4
LFRS	El Faro	1.74	358	*e*P	Pn	21 08 44.8	-0.8
UESV	Universidad de	1.76	7	P	Pn	21 08 45.6	-0.3
UESV	Universidad de	1.76	7	S	Sn	21 09 07.7	-1.2
LOMA	Loma Larga	1.76	355	S	Sn	21 09 07.6	-1.5
LOMA	Loma Larga	1.76	355	P	Pn	21 08 45.7	-0.2
CNRM	Centro Naciona	1.79	27	P	Pn	21 08 46.2	0.0
CNRM	Centro Naciona	1.79	27	S	Sb	21 09 10.1	-0.6
PQSS	Presa 15 de Se	1.79	14	S	Sn	21 09 09.3	-0.3
PQSS	Presa 15 de Se	1.79	14	P	Pn	21 08 46.2	-0.1
LCND	La Caada	1.80	38	*i* P	Pn	21 08 45.8	-0.6
LCND				IAML		21 08 59.9	
	comp=Z,662nm,0.3s						
LCND	La Caada	1.80	38	⇓P	Pn	21 08 45.8	-0.6
ITCA	Escuela Especi	1.80	352	*e*S	Sn	21 09 08.5	-1.6
ITCA	Escuela Especi	1.80	352	P	Pn	21 08 46.0	-0.5
ITCA	Escuela Especi	1.80	352	S	Sn	21 09 08.4	-1.6
CNCH	Conchagua	1.81	40	*e*P	Pn	21 08 46.3	-0.2
CNCH	Conchagua	1.81	40	⇑P	Pn	21 08 45.7	-0.9
JAYA	Jayaque - finc	1.82	347	*e*P	Pn	21 08 46.1	-0.6
JAYA				IAML		21 09 08.7	
	comp=Z,3μm,0.2s						
JAYA	Jayaque - finc	1.82	347	*i* P	Pn	21 08 46.2	-0.5
JAYA	Jayaque - finc	1.82	347	S	Sn	21 09 08.2	-2.2
JAYA	Jayaque - finc	1.82	347	⇑P	Pn	21 08 46.2	-0.5
UTEC	Universidad Te	1.82	354	P	Pn	21 08 46.3	-0.4
UTEC	Universidad Te	1.82	354	S	Sn	21 09 10.0	-0.4
PAVA	Las Pavas	1.83	2	*e*P	Pn	21 08 46.3	-0.5
PAVA	Las Pavas	1.83	2	P	Pn	21 08 46.1	-0.7
PAVA	Las Pavas	1.83	2	S	Sn	21 09 09.9	-0.7
SEMO	Seminario San	1.83	354	P	Pn	21 08 46.2	-0.6
SEMO	Seminario San	1.83	354	S	Sn	21 09 08.9	-1.7
IGN	Direccin Gen	1.83	355	P	Pn	21 08 46.7	-0.2
UDBS	Universidad Do	1.83	356	P	Pn	21 08 46.5	-0.4
UDBS	Universidad Do	1.83	356	S	Sn	21 09 09.1	-1.6
SCLA	Alcaldia de Sa	1.83	9	S	Sn	21 09 10.0	-0.7
SCLA	Alcaldia de Sa	1.83	9	⇑P	Pn	21 08 46.8	-0.1
UEES	Universidad Ev	1.84	353	P	Pn	21 08 46.6	-0.4
UEES	Universidad Ev	1.84	353	S	Sn	21 09 09.1	-1.9
PMON	Piamonte	1.85	351	*e*S	Sn	21 09 09.7	-1.4
PMON	Piamonte	1.85	351	S	Sn	21 09 08.9	-2.2
PMON	Piamonte	1.85	351	⇑P	Pn	21 08 46.8	-0.3
POTN	Potosi Cosigui	1.85	53	P	Pn	21 08 46.3	-0.7
POTN				S	Sn	21 09 11.5	+0.5
BOQS	Boqueron	1.86	352	*e*P	Pn	21 08 47.1	-0.3
CEDA	San Andres	1.95	349	*e*P	Pn	21 08 48.1	-0.4
CEDA				*e*S	Sn	21 09 11.8	-1.8
CEDA				IAML		21 09 19.6	
	comp=Z,3μm,0.2s						
CEDA	San Andres	1.95	349	P	Pn	21 08 48.7	+0.3
CEVE	Cerro Verde	2.03	343	*e*P	Pn	21 08 49.8	0.0
CEVE				*e*S	Sn	21 09 16.1	+0.4
CEVE				IAML		21 09 16.5	
	comp=Z,3μm,0.3s						
CEVE	Cerro Verde	2.03	343	P	Pn	21 08 49.8	0.0
CEVE	Cerro Verde	2.03	343	S	Sn	21 09 13.8	-2.0
CAHU	Cacacuatique	2.04	23	*e*P	Pn	21 08 50.3	+0.4
CRIN	San Cristobal	2.09	67	Pn	Pn	21 08 49.6	-0.7
CRIN	San Cristobal	2.09	67	P	Pn	21 08 49.8	-0.6
CRIN	San Cristobal	2.09	67	S	Sn	21 09 17.5	+0.6
PKGN	Cerro Pekin	2.14	68	P	Pn	21 08 50.2	-0.8
PKGN				S	Sn	21 09 18.4	+0.1
NUBE	Las Nubes	2.15	340	*e*P	Pn	21 08 50.1	-1.2
NUBE	Las Nubes	2.15	340	*i* P	Pn	21 08 50.7	-0.6
NUBE				*i* S	Sn	21 09 15.7	-2.9
NUBE	Las Nubes	2.15	340	S	Sn	21 09 16.1	-2.5
NUBE	Las Nubes	2.15	340	⇑P	Pn	21 08 50.7	-0.6
UNIC	Universidad Ca	2.16	346	P	Pn	21 08 51.3	0.0
UNIC	Universidad Ca	2.16	346	S	Sn	21 09 17.9	-0.8
ALEN	Leon	2.17	74	S	Sn	21 09 17.8	-1.3
FAME	Alcaldia de Sa	2.18	334	P	Pn	21 08 51.3	-0.4
FAME	Alcaldia de Sa	2.18	334	S	Sn	21 09 16.4	-2.9
QUEN	Al S del Volca	2.23	71	P	Pn	21 08 51.3	-1.1
QUEN				S	Sn	21 09 20.1	-0.4
LOAL	Lomas de Alarc	2.24	341	P	Pn	21 08 52.1	-0.3
LOAL	Lomas de Alarc	2.24	341	S	Sn	21 09 20.3	-0.4
HOYN	Al Sur del Vol	2.25	71	P	Pn	21 08 51.6	-1.1
HOYN				S	Sn	21 09 20.9	-0.3
HERN	Volcan Telica	2.25	71	Pn	Pn	21 08 51.3	-1.4
HERN	Volcan Telica	2.25	71	P	Pn	21 08 51.6	-1.1
PACN	Al O del Volca	2.26	74	P	Pn	21 08 51.0	-1.7
SLOZ	Alcaldia de Sa	2.26	341	S	Sn	21 09 20.5	-0.9
SLOZ	Alcaldia de Sa	2.26	341	P	Pn	21 08 53.1	+0.3
LLGN	La Laguna	2.27	2	*e*S	Sn	21 09 20.2	-1.4
LLGN	La Laguna	2.27	2	P	Pn	21 08 53.8	+0.8
LLGN	La Laguna	2.27	2	S	Sn	21 09 21.1	-0.5
POLN	Al Sur del Vol	2.29	70	P	Pn	21 08 51.8	-1.2
POLN				S	Sn	21 09 20.7	-1.1
CNGA	Al SSO del Vol	2.34	75	P	Pn	21 08 53.3	-0.5
CNGN	Cerro Negro	2.35	74	Pn	Pn	21 08 52.9	-1.0
CNGN	Cerro Negro	2.35	74	⇓P	Pn	21 08 53.3	-0.6
COPN	Copaltepe	2.39	83	⇑P	Pn	21 08 53.8	-0.7
MTO3	Montecristo	2.53	352	Pn	Pn	21 08 56.9	+0.2
MTO3	Montecristo	2.53	352	*i* P	Pn	21 08 57.0	+0.4
	comp=Z,208nm,0.8s						
MTO3	Montecristo	2.53	352	S	Sn	21 09 27.0	-1.1
MTO3	Montecristo	2.53	352	⇑P	Pn	21 08 57.0	+0.4
ESQI	Esquipulas	2.69	353	Pn	Pn	21 08 59.3	+0.7
ESQI	Esquipulas	2.69	353	*e*P	Pn	21 08 59.4	+0.7
ESQI				*e*S	Sn	21 09 30.9	-0.9
USIM	UNAN	2.69	85	Pn	Pn	21 08 57.9	-0.8
MGAN	Managua	2.72	84	Pn	Pn	21 08 58.4	-0.6
TGUH	Tegucigalpa,Un	2.75	38	Pn	Pn	21 08 59.8	+0.2
TGUH	Tegucigalpa,Un	2.75	38	⇑P	Pn	21 08 59.9	+0.2
TGUH				S	Sn	21 09 33.8	+0.3
FG16	Alotenango, Sa	2.79	329	*i* P	Pb	21 09 04.1	-0.9
	comp=Z,456nm,0.2s						
FG16				*i* S	Sb	21 09 41.0	+1.2
FG16				IAML		21 09 45.4	
	comp=N,3μm,0.3s						
MASN	Masaya	2.80	87	P	Pn	21 09 00.0	-0.2
MASN				S	Sn	21 09 32.5	-2.1
FG8	Yepocapa, Chim	2.81	328	*e*P	Pb	21 09 05.9	+0.6
ESSG	Sabana Grande	3.06	325	*i* S	Sn	21 09 37.7	-3.2
MATN	Matagalpa	3.19	71	P	Pn	21 09 04.0	-1.6
MATN	Matagalpa	3.19	71	S	Sn	21 09 43.3	-1.0
BOAB	BOACO BROADBAN	3.32	80	Pn	Pn	21 09 05.9	-1.4
BOAB	BOACO BROADBAN	3.32	80	P	Pn	21 09 06.5	-0.8
BOAB	BOACO BROADBAN	3.32	80	S	Sn	21 09 46.2	-1.2
STG0	El Palmar, Qui	3.40	318	*i* P	Pb	21 09 12.9	-2.5
STG0				IAML		21 09 59.2	
	comp=E,1μm,0.3s						
STG8	El Palmar, Qui	3.42	319	*e*P	Pn	21 09 12.8	+3.9
STG8				*e*S	Sb	21 09 56.5	-1.5
STG8				IAML		21 10 02.0	
	comp=E,602nm,0.2s						
RTAL	Retalhuleu	3.71	316	Pn	Pn	21 09 15.8	+3.2
ACON	Acoyapa	3.76	88	Pn	Pn	21 09 12.4	-0.9
JTS	Las Juntas de	4.29	111	Pn	Pn	21 09 20.8	+0.2
JTS	Las Juntas de	4.29	111	Pn	Pn	21 09 21.1	+0.5
	comp=E,12nm,0.3s,baz=294,slow=20,SNR=15						
JTS				Sn	Sn	21 10 10.2	-1.1
	comp=E,13nm,0.3s,baz=291,slow=21,SNR=6.1						
	comp=E,18nm,0.3s						
CCIG	Comitan	5.33	326	Pn	Pn	21 09 37.7	+2.7
LCR2	La Lucha 2	5.36	113	Pn	Pn	21 09 35.3	-0.2
TEIG	Tepich	8.33	5	Pn	Pn	21 10 17.2	+1.1
TLIG	Tlapa	10.83	303	Pn	Pn	21 10 52.4	+1.8
FLOC	Florencia	16.74	127	P	P	21 12 13.0	+0.5

352A	**Blakely**	**19.87**	**10**	P	**P**	**21 12 47.5**	**+0.7**
VBMS	**Vicksburg**	**20.29**	**356**	Pn	Pn	21 12 53.8	+0.4
435B	**Jarrell**	**20.42**	**338**	P	**P**	**21 12 51.8**	**-1.0**
BAUV	**El Baul**	**20.83**	**96**	P	**P**	**21 12 56.2**	**-1.2**
BAUV				IAmb	IAmb	21 12 59.5	
	comp=Z,14nm,0.8s						
JCT	**Junction City**	**21.04**	**333**	P	**P**	**21 13 02.0**	**+2.4**
152A	**Waverly Hall**	**21.07**	**10**	P	**P**	**21 12 59.8**	**0.0**
152A				IAmb	IAmb	21 13 07.1	
	comp=Z,11nm,1.1s						
LRAL	**Lakeview Retre**	**21.14**	**5**	P	**P**	**21 13 01.1**	**+0.5**
BRDY	**Brady**	**21.41**	**336**	P	**P**	**21 13 05.0**	**+1.5**
WHTX	**Lake Whitney,**	**21.48**	**340**	P	**P**	**21 13 06.4**	**+2.1**
WHTX				IAmb	IAmb	21 13 30.2	
	comp=Z,9.7nm,0.8s						
FW13	**Cleburne**	**21.80**	**341**	P	**P**	**21 13 09.2**	**+1.5**
FW13				IAmb	IAmb	21 13 19.6	
	comp=Z,8.7nm,0.8s						
TXAR	**Lajitas Array**	**22.09**	**324**	P	**P**	**21 13 10.9**	**0.0**
TXAR	**Lajitas Array**	**22.09**	**324**	P	**P**	**21 13 08.8**	**-2.2**
	comp=Z,1.4nm,0.9s,baz=143,slow=11,SNR=13						
	comp=Z,1.4nm,0.9s						
TX31	**Lajitas Ar. Si**	**22.09**	**324**	P	**P**	**21 13 10.9**	**-0.1**
Y52A	**Lilburn**	**22.35**	**11**	P	**P**	**21 13 12.4**	**-1.2**
MIAR	**Mount Ida**	**22.95**	**350**	P	**P**	**21 13 22.3**	**+2.4**
MIAR				IAmb	IAmb	21 13 30.2	
	comp=Z,7.3nm,0.8s						
JSC	**Jenkinsville**	**23.40**	**16**	P	**P**	**21 13 23.2**	**-1.3**
JSC				IAmb	IAmb	21 13 34.9	
	comp=Z,9.2nm,1.0s						
WHAR	**Wooly Hollow**	**23.50**	**353**	P	**P**	**21 13 26.8**	**+1.2**
BG3	**Lake Jocassee**	**23.67**	**13**	P	**P**	**21 13 28.0**	**+0.8**
BG3				IAmb	IAmb	21 13 49.8	
	comp=Z,7.5nm,1.1s						
FCAR	**Ozark Folk Cen**	**24.07**	**354**	P	**P**	**21 13 33.0**	**+1.9**
FCAR				IAmb	IAmb	21 13 35.1	
	comp=Z,9.2nm,0.8s						
TKL	**Tuckaleechee C**	**24.15**	**10**	LR	LR	21 24 51.7	
	comp=Z,48nm,18.2s,baz=50,slow=41						
V53A	**Saluda**	**24.34**	**12**	P	**P**	**21 13 33.6**	**-0.1**
V53A				IAmb	IAmb	21 13 39.9	
	comp=Z,5.5nm,0.8s						
MGMO	**Mountain Grove**	**25.34**	**354**	P	**P**	**21 13 45.1**	**+2.5**
SIUC	**Southern Illin**	**25.73**	**360**	P	**P**	**21 13 47.4**	**+1.3**
SIUC				IAmb	IAmb	21 14 19.0	
	comp=Z,12nm,1.2s						
CCM	**Cathedral Cave**	**26.15**	**356**	P	**P**	**21 13 51.0**	**+1.1**
CCM				IAmb	IAmb	21 13 57.5	
	comp=Z,6.5nm,0.8s						
WCI	**Wyandotte Cave**	**26.36**	**5**	P	**P**	**21 13 52.4**	**+0.6**
WCI				IAmb	IAmb	21 13 55.8	
	comp=Z,5.5nm,0.6s						
V12A	**Nelson**	**33.31**	**320**	P	**P**	**21 14 53.9**	**+0.3**
V12A				IAmb	IAmb	21 14 55.6	
	comp=Z,3.7nm,1.0s						
NVAR	**Mina Array Bea**	**37.15**	**320**	P	**P**	**21 15 27.5**	**+0.6**
WVOR	**Wild Horse Val**	**39.88**	**325**	P	**P**	**21 15 51.8**	**+2.2**
WVOR				IAmb	IAmb	21 16 06.2	
	comp=Z,8.9nm,1.1s						
SCHQ	**Schefferville**	**46.27**	**18**	P	**P**	**21 16 41.2**	**+0.1**
	comp=Z,3.1nm,0.9s,baz=221,slow=13,SNR=3.1						
	comp=Z,3.1nm,0.9s						
YKA	**Yellowknife Ar**	**53.77**	**346**	P	**P**	**21 17 36.1**	**-1.8**
	comp=Z,0.7nm,0.6s,baz=131,slow=7.8,SNR=4.7						
	comp=Z,0.7nm,0.6s						
FRB	**Frobisher Bay**	**53.77**	**11**	LR	LR	21 42 38.8	
	comp=Z,73nm,18.6s,baz=139,slow=38						
ILON	**Igloolik, Nuna**	**57.63**	**3**	P	**P**	**21 18 05.6**	**+0.1**
ILON				IAmb	IAmb	21 18 13.4	
	comp=Z,4.0nm,0.9s						
M29M	**Somme Creek**	**61.51**	**336**	P	**P**	**21 18 33.2**	**+0.6**
M29M				IAmb	IAmb	21 18 33.7	
	comp=Z,2.4nm,0.8s						
ILAR	**Eielson Array**	**65.93**	**337**	P	**P**	**21 19 00.6**	**-1.0**
	comp=Z,1.4nm,0.9s,baz=131,slow=4.8,SNR=10						
ILAR				LR	LR	21 53 17.9	
	comp=Z,66nm,18.1s,baz=282,slow=41						
	comp=Z,1.4nm,0.9s						
BMAR	**Burnt Mountain**	**66.28**	**340**	P	**P**	**21 19 03.1**	**-0.8**
CAST	**Castle Rocks**	**67.54**	**334**	P	**P**	**21 19 14.0**	**+2.1**
G21K	**Allakaket**	**69.13**	**337**	P	**P**	**21 19 21.5**	**-0.2**
G21K				IAmb	IAmb	21 19 25.3	
	comp=Z,3.1nm,1.1s						
F21K	**Alatna River**	**69.35**	**338**	P	**P**	**21 19 23.2**	**+0.1**
K15K	**Wolf Creek Mou**	**71.44**	**332**	P	**P**	**21 19 36.0**	**-0.1**
ESDC	**Sonseca Array**	**78.74**	**52**	P	**P**	**21 20 20.9**	**+2.2**
	comp=Z,0.2nm,0.4s,baz=286,slow=5.3,SNR=7.6						
	comp=Z,0.2nm,0.4s						
QSPA	**South Pole Qui**	**101.84**	**180**	Pdif	**Pdif**	**21 22 10.8**	**+1.8**
PZH	**PanZhiHua**	**140.44**	**345**	PKP	**PKPdf**	**21 27 46.3**	**+0.2**
FITZ	**Fitzroy Crossi**	**146.00**	**255**	PKPdf	**PKPdf**	**21 27 54.9**	**-1.0**
CMAR	**Chiang Mai Arr**	**148.85**	**345**	PKPbc	**PKPbc**	**21 28 03.0**	**-1.5**
	comp=Z,1.3nm,0.8s,baz=357,slow=3.9,SNR=7.0						

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*TEH **17** 21:14:24.7, 27°.55N×55°.96E, h8^{km}±81^{km}*

*DSN **17** 21:14:27.0±1.4, 27°.53N×56°.66E, h10^{km}, ML2.6/4, Error ellipse: s-maj=55.0km s-min=8.4km az=114.0*

ISC 17 21:14:26.0±1.0, 27°.53N±0°.03×55°.92E±0°.05, h15^{km}, n19, σ2^{s}.36/20, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	**0.26**	**119**	Pg	**Pg**	**21 14 30.9**	**-0.8**
IBND	**Bandar-abas**	**0.56**	**98**	Pg	**Pb**	**21 14 36.2**	**-1.2**
LAR1	**LAR**	**1.38**	**276**	Pg	**Pg**	**21 14 52.2**	**-0.4**
SHME	**Shamm**	**1.48**	**172**	P	**Pg**	**21 14 54.8**	**+0.3**
SHME				S	**Sg**	**21 15 15.7**	**+1.9**
KHNJ	**Kahnooj**	**1.64**	**75**	Pg	**Pb**	**21 14 54.8**	**-1.1**
MSFE	**Esma-Masafi**	**2.17**	**174**	P	**Pn**	**21 15 03.0**	**+1.4**
NGRK	**Negar Kerman**	**2.23**	**18**	Pn	**Pb**	**21 15 04.6**	**-1.6**
KRBR	**Kerman**	**2.56**	**17**	Pn	**Pb**	**21 15 09.6**	**-2.1**
UOSS	**Minazif**	**2.58**	**174**	P	**Pb**	**21 15 09.5**	**-2.6**
HATD	**Hatta, Dubai**	**2.70**	**176**	P	**Pb**	**21 15 11.3**	**-2.7**
CHMN	**Cheshme madani**	**2.73**	**31**	Pn	**Pb**	**21 15 11.7**	**-3.0**
KBAM	**BAM**	**2.75**	**54**	Pn	**Pb**	**21 15 12.0**	**-2.9**
ASHO	**Ashiyiah**	**2.83**	**177**	P	**Pb**	**21 15 13.6**	**-2.7**
KHGB	**Koh Gabri**	**2.88**	**10**	Pn	**Pb**	**21 15 13.5**	**-3.7**
KRM1	**Kerman Provinc**	**3.19**	**21**	Pn	**Pn**	**21 15 18.0**	**+2.1**
ZRDN	**Zarand Kerman**	**3.47**	**9**	Pn	**Pn**	**21 15 21.9**	**+2.2**
IMEH	**Mehriz**	**4.01**	**344**	Pn	**Pn**	**21 15 29.4**	**+2.3**
IRAM	**Ramesheh**	**5.26**	**325**	Pn	**Pn**	**21 15 47.2**	**+2.9**
IKOO	**Kooshah**	**5.57**	**28**	Pn	**Pn**	**21 15 50.5**	**+1.9**

IDC 17 21:39:45.5±3.0, 31°.14S×177°.21W, h0^{km}, mb3.5/2, mbtmp3.6/3, ML3.1/1, Error ellipse: s-maj=74.8km s-min=36.8km az=119.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**8.50**	**212**	Pn	Pn	21 41 49.3	-0.6
	0.2nm,0.3s,baz=354,slow=4.4,SNR=1.5						
URZ				Sn	Sn	21 43 27.9	+1.4
	0.8nm,0.3s,baz=348,slow=20,SNR=1.3						
	7.6nm,1.0s						
ASAR	**Alice Springs**	**43.75**	**267**	P	P	21 47 52.8	-0.2
	0.3nm,0.6s,baz=101,slow=6.9,SNR=4.1						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**44.80**	**272**	P	P	21 48 01.4	-0.1
	0.4nm,0.4s,baz=111,slow=8.0,SNR=9.5						
	0.4nm,0.4s						
FINES	**FINESS Array B**	**146.07**	**340**	PKPbc	PKPdf	21 59 25.9	+0.1
	1.2nm,0.6s,baz=57,slow=3.8,SNR=10						

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*FUNV **17** 21:48:18.4, 9°.37N×69°.77W, h15^{km}, MW3.2*

*RSNC **17** 21:48:28.9±0.0, 10°N±14°×7°0W±1°4, h217^{km}±26^{km}, M2.7, ML2.6*

ISC 17 21:48:17.2±1.0, 9°.24N±0°.06×69°.70W±0°.04, h8^{km}, n8, σ0^{s}.65/14, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEPV	**Terepaima**	**0.88**	**35**	*e*P	**Pg**	**21 48 33.1**	**-1.0**
TEPV				*e*S	**Sg**	**21 48 45.3**	**-0.2**
MAPV	**Macapo**	**1.36**	**64**	*e*P	**Pb**	**21 48 42.9**	**0.0**
MAPV				*e*S	**Sb**	**21 49 00.1**	**-0.4**
SOCV	**Socops**	**1.49**	**230**	*e*P	**Pb**	**21 48 44.8**	**-0.4**
SOCV				*e*S	**Sb**	**21 49 04.2**	**-0.1**
BAUV	**El Baul**	**1.66**	**100**	*e*P	**Pb**	**21 48 47.7**	**-0.4**
BAUV				*e*S	**Sb**	**21 49 09.5**	**+0.3**
BENV	**Beln**	**2.19**	**71**	*e*P	**Pn**	**21 48 54.7**	**+0.7**
URIC	**Uribia, Colomb**	**3.33**	**317**	P	**Pn**	**21 49 10.2**	**+0.5**
URIC				S	**Sn**	**21 49 50.5**	**+1.1**
CRJC	**Cerrejon, Guaj**	**3.60**	**300**	P	**Pn**	**21 49 13.9**	**+0.4**
CRJC				S	**Sn**	**21 49 56.5**	**+0.2**
PCRV	**Puerto La Cruz**	**5.07**	**79**	*e*P	**Pn**	**21 49 34.6**	**+0.9**

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*IDC **17** 21:49:13.8±0.9, 28°.36N×104°.91E, h0^{km}, mb4.0/8, mbtmp4.0/10, ML3.7/2, MS3.3/3, Error ellipse: s-maj=23.9km s-min=17.3km az=59.0*

*NEIC **17** 21:49:25.1±2.2, 29°.9N±0°.1×105°.0E±0°.1, h10^{km}±1^{km}, mb4.4/18, Error ellipse: s-maj=22.5km s-min=15.3km az=136.0*

ISC 17 21:49:17.3±0.5, 28°.35N±0°.04×104°.97E±0°.04, h19^{km}, n50, σ1^{s}.55/59, mb4.2/17, MS3.2/3, 1C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**2.76**	**338**	Pn	**Pn**	**21 50 00.3**	**-0.3**
CD2				Pg	**Pb**	**21 50 06.8**	**+0.7**
CD2				Sn	**Sn**	**21 50 34.8**	**+1.3**
CD2				Sg	**Sb**	**21 50 42.4**	**+2.8**
CD2				smax	smax		
	comp=N,2µm,0.6s						
CD2				smax	smax		
	comp=E,3µm,0.7s						
PZH	**PanZhiHua**	**3.41**	**238**	Pn	**Pn**	**21 50 10.3**	**+0.7**
PZH				Pg	**Pb**	**21 50 17.8**	**+0.6**
PZH				Sg	**Sb**	**21 51 00.4**	**+2.1**
PZH				smax	smax		
	comp=N,290nm,0.9s						
PZH				smax	smax		
	comp=E,210nm,1.0s						
ENH	**Enshi**	**4.38**	**63**		**Pn**	**21 50 25.4**	**+2.5**
GULI	**GuiLin**	**5.70**	**121**	Pn	**Pn**	**21 50 41.8**	**+0.8**
GULI				Sn	**Sn**	**21 51 48.3**	**+2.4**
GULI				smax	smax		
	comp=N,300nm,1.1s						
GULI				smax	smax		
	comp=E,100nm,1.2s						
GULI				LR	LR		
	comp=N,2µm,5.6s						
GULI				LR	LR		
	comp=E,1µm,6.1s						
GULI				LR	LR		
	comp=Z,280nm,6.3s						
XAN	**Xi'an**	**6.60**	**30**	Pn	**Pn**	**21 50 53.8**	**+0.4**
XAN				Pg	Pb	21 51 18.1	+6.5
XAN				Sn	**Sn**	**21 52 03.3**	**-4.9**
XAN				Sg	Sg	21 52 41.8	-7.4
XAN				smax	smax		
	comp=N,540nm,1.1s						
XAN				smax	smax		
	comp=E,580nm,1.1s						
XAN				LR	LR		
	comp=N,940nm,5.8s						
XAN				LR	LR		
	comp=E,700nm,5.8s						
XAN				LR	LR		
	comp=Z,840nm,6.7s						
TNCH	**TengChong**	**6.65**	**242**	Pn	**Pn**	**21 50 54.3**	**+0.1**
TNCH				Pg	Pb	21 51 20.8	+8.3
TNCH				Sn	**Sn**	**21 52 11.4**	**+1.8**
TNCH				Sg	**Sg**	**21 52 46.4**	**-4.4**
TNCH				smax	smax		
	comp=N,98nm,1.5s						
TNCH				smax	smax		
	comp=E,120nm,1.4s						
TNCH				LR	LR		
	comp=N,330nm,4.8s						
TNCH				LR	LR		
	comp=E,360nm,4.8s						
TNCH				LR	LR		
	comp=Z,380nm,9.1s						
CNSH	**ChangSha**	**7.02**	**89**	P	**Pn**	**21 51 00.6**	**+1.5**
CNSH				S	**Sn**	**21 52 17.4**	**-1.0**
CNSH				smax	smax		
	comp=N,170nm,0.9s						
CNSH				smax	smax		
	comp=E,84nm,0.8s						
SLVN	**Son La**	**7.05**	**188**	Pn	**Pg**	**21 51 30.7**	**-1.6**
LZH	**Lanzhou**	**7.77**	**353**	Pn	**Pn**	**21 51 11.9**	**+2.3**
LZH				Pg	Pb	21 51 41.6	+10
LZH				Sn	Sn	21 52 48.8	+12
LZH				Sg	Sb	21 53 17.0	+13
LZH				smax	smax		
	comp=N,86µm,1.3s						
LZH				smax	smax		
	comp=E,91µm,1.5s						
LZH				LR	LR		
	comp=N,490nm,8.2s						
LZH				LR	LR		
	comp=E,820nm,9.3s						
LZH				LR	LR		
	comp=Z,450nm,9.6s						
WHN	**Wuhan**	**8.46**	**73**	⇓P	**Pn**	**21 51 20.9**	**+2.0**
WHN				S	**Sn**	**21 52 51.0**	**-2.9**
WHN				pmax	pmax		
	comp=Z,72nm,0.7s						
WHN				LR	LR		
	comp=N,670nm,3.0s						
WHN				LR	LR		
	comp=E,660nm,3.9s						
LYN	**LuoYang**	**8.90**	**44**	⇑P	**Pn**	**21 51 24.3**	**-0.5**
LYN				pmax	pmax		
	comp=Z,130nm,0.7s						
LYN				smax	smax		
	comp=N,92nm,1.2s						
LYN				smax	smax		
	comp=E,70nm,0.8s						
LYN				LR	LR		
	comp=N,460nm,4.5s						
LYN				LR	LR		
	comp=E,630nm,5.5s						
LYN				LR	LR		
	comp=Z,780nm,10.7s						
QIZ	**Qiongzhong**	**10.29**	**153**	P	**Pn**	**21 51 44.6**	**+0.6**
QIZ				S	**Sn**	**21 53 41.5**	**+2.6**
QIZ				smax	smax		
	comp=E,21nm,1.2s						
QIZ				LR	LR		
	comp=E,250nm,6.2s						
QIZ				LR	LR		
	comp=Z,240nm,8.2s						
CMAR	**Chiang Mai Arr**	**11.29**	**211**	Pn	**Pn**	**21 51 57.0**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=13,slow=14,SNR=5.5						
	comp=Z,0.5nm,0.5s						
GTA	**Gaotai**	**11.83**	**340**	*e*P	**Pn**	**21 52 06.1**	**+0.9**
GTA				sP		21 52 13.8	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				LR	LR		
	comp=N,250nm,11.6s						
GTA				LR	LR		
	comp=E,160nm,10.5s						
GTA				LR	LR		
	comp=Z,200nm,14.5s						
SONM	**Songino Array**	**19.49**	**3**		P	21 53 38.0	-5.2
SONM	**Songino Array**	**19.49**	**3**	P	**P**	**21 53 42.4**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=175,slow=10.0,SNR=7.7						
	comp=Z,1.8nm,0.7s						
JOW	**Kunigami**	**20.70**	**89**	P	**P**	**21 53 57.0**	**+0.5**
	comp=Z,7.0nm,0.7s,baz=280,slow=12,SNR=2.2						
	comp=Z,7.0nm,0.7s						
WMQ	**Urumqi**	**20.75**	**323**	*e*P	**P**	**21 53 58.9**	**+1.9**
KSAR	**Wonju Array Be**	**21.23**	**59**	P	**P**	**21 54 01.8**	**-0.3**
KS19	**Wonju Array Si**	**21.23**	**59**	P	**P**	**21 54 02.8**	**+0.6**
KS19				IAmb	IAmb	21 54 03.3	
	comp=Z,6.8nm,0.7s						
KSRS	**Korea Array**	**21.26**	**59**	P	**P**	**21 54 01.9**	**-0.5**
	comp=Z,5.2nm,0.7s,baz=246,slow=10.0,SNR=22						
	comp=Z,5.2nm,0.7s						
JNU	**Nakatsue**	**22.75**	**71**	LR	LR	22 04 12.4	
	comp=Z,75nm,20.6s,baz=222,slow=39						
MKAR	**Makanchi Array**	**25.58**	**322**	P	**P**	**21 54 45.5**	**+0.3**
MKAR	**Makanchi Array**	**25.58**	**322**	P	**P**	**21 54 44.9**	**-0.3**
	comp=Z,2.1nm,0.7s,baz=127,slow=9.8,SNR=16						
	comp=Z,2.1nm,0.7s						
MAKZ	**Makanchi**	**25.76**	**322**	P	**P**	**21 54 46.1**	**-0.6**
USA0B	**Ussuriysk Arra**	**26.75**	**47**	P	**P**	**21 54 55.1**	**-0.7**
USA0B				IAmb	IAmb	21 54 56.4	
	comp=Z,5.2nm,0.7s						
USRK	**Ussuriysk Ar.**	**26.75**	**47**	P	**P**	**21 54 55.3**	**-0.4**
	comp=Z,5.2nm,0.6s,baz=253,slow=8.4,SNR=11						
USRK				LR	LR	22 04 57.1	
	comp=Z,75nm,20.4s,baz=179,slow=35						
	comp=Z,5.2nm,0.6s						
MJAR	**Matsushiro Arr**	**29.10**	**65**	LR	LR	22 08 05.0	
	comp=Z,60nm,18.8s,baz=210,slow=39						
KURBB	**Kurchatov Arra**	**29.91**	**325**	P	**P**	**21 55 22.5**	**-1.3**
	comp=Z,0.9nm,0.6s,baz=130,slow=9.9,SNR=11						
	comp=Z,0.9nm,0.6s						
KURK	**Kurchatov**	**29.92**	**326**	P	**P**	**21 55 23.1**	**-0.7**
KURK				IAmb	IAmb	21 56 06.1	
	comp=Z,3.9nm,1.3s						
AB31	**Akbulak array**	**40.09**	**314**	P	**P**	**21 56 51.6**	**+0.1**
ABKAR	**Akbulak array**	**40.09**	**314**	P	**P**	**21 56 51.4**	**-0.1**
TIXI	**Tiksi**	**45.31**	**10**	P	**P**	**21 57 31.8**	**-1.7**
TIXI				IAmb	IAmb	21 57 32.5	
	comp=Z,2.2nm,0.6s						
WRA	**Warramunga Arr**	**55.77**	**146**	P	**P**	**21 58 53.0**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=337,slow=8.2,SNR=15						
	comp=Z,1.6nm,0.8s						
ASAR	**Alice Springs**	**58.75**	**149**	P	**P**	**21 59 13.8**	**-0.5**
	comp=Z,1.4nm,0.8s,baz=326,slow=6.3,SNR=13						
	comp=Z,1.4nm,0.8s						
FINES	**FINESS Array B**	**60.27**	**327**	P	**P**	**21 59 26.9**	**+2.6**
C16K	**Lisburne Hills**	**63.88**	**24**	P	**P**	**21 59 47.5**	**-0.8**
C19K	**Lookout Ridge**	**65.73**	**23**	P	**P**	**21 59 59.1**	**-1.4**
C19K				IAmb	IAmb	22 00 00.6	
	comp=Z,2.8nm,0.7s						
D19K	**Kuna River**	**66.42**	**24**	P	**P**	**22 00 04.3**	**-0.6**
D19K				IAmb	IAmb	22 00 06.3	
	comp=Z,6.6nm,1.3s						
D20K	**Etivluk River**	**66.88**	**23**	P	**P**	**22 00 07.1**	**-0.7**
D20K				IAmb	IAmb	22 00 07.8	
	comp=Z,2.9nm,0.6s						
B22K	**Teshekpuk Lake**	**67.39**	**21**	P	**P**	**22 00 10.3**	**-0.6**
K17K	**Iditarod**	**68.18**	**30**	P	**P**	**22 00 16.4**	**+0.3**
J19K	**Poorman**	**68.87**	**28**	P	**P**	**22 00 20.6**	**+0.3**
J19K				IAmb	IAmb	22 01 01.7	
	comp=Z,6.4nm,1.4s						
IMAR	**Indian Mountai**	**68.87**	**25**	P	**P**	**22 00 19.8**	**-0.5**
E24K	**Your Creek**	**69.91**	**23**	P	**P**	**22 00 26.0**	**-0.8**
E24K				IAmb	IAmb	22 00 41.5	
	comp=Z,2.5nm,1.1s						
GERES	**GERESS Array B**	**70.02**	**315**	P	**P**	**22 00 26.6**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=64,slow=2.3,SNR=2.8						
	comp=Z,0.3nm,0.5s						
PPLA	**Purkeypile**	**70.72**	**28**	P	**P**	**22 00 31.4**	**-0.5**
BMAR	**Burnt Mountain**	**71.52**	**22**	P	**P**	**22 00 36.6**	**0.0**
J26L	**Joseph Creek**	**73.37**	**25**	P	**P**	**22 00 46.4**	**-1.3**
J26L				IAmb	IAmb	22 01 00.3	
	comp=Z,1.4nm,0.8s						
BCAR	**Beaver Creek A**	**74.80**	**26**	P	**P**	**22 00 56.0**	**-0.1**

IDC 17 21:56:43.5±3.3, 31°.63S×177°.97W, h0^{km}, mb3.4/2, mbtmp3.6/3, ML3.1/1, Error ellipse: s-maj=77.8km s-min=48.3km az=120.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**7.75**	**210**	Pn	Pn	21 58 37.3	-0.3
	0.3nm,0.3s,baz=45,slow=8.6,SNR=2.2						
URZ				Sn	Sn	21 59 59.3	-6.7
	0.6nm,0.3s,baz=34,slow=12,SNR=6.3						
	10nm,0.9s						
ASAR	**Alice Springs**	**43.09**	**268**	P	P	22 04 45.6	0.0
	0.5nm,0.9s,baz=113,slow=7.6,SNR=4.9						
	0.5nm,0.9s						
WRA	**Warramunga Arr**	**44.19**	**273**	P	P	22 04 54.3	-0.2
	0.3nm,0.4s,baz=114,slow=7.9,SNR=4.9						
	0.3nm,0.4s						
FINES	**FINESS Array B**	**146.31**	**339**	PKPbc	PKPdf	22 16 24.5	+0.3
	1.5nm,0.9s,baz=52,slow=4.0,SNR=4.3						

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*IDC **17** 22:01:50.6±0.8, 4°.73S×152°.67E, h0^{km}, mb3.8/10, mbtmp3.9/11, ML2.3/1, Error ellipse: s-maj=29.7km s-min=19.4km az=106.0*

*NEIC **17** 22:01:57.0±1.7, 5°.0S±0°.1×152°.8E±0°.1, h33^{km}±6^{km}, mb4.4/23, Error ellipse: s-maj=22.4km s-min=17.0km az=65.0*

ISC 17 22:01:58.9±0.7, 4°.87S±0°.09×152°.6E±0°.1, h55^{km}, n40, σ0^{s}.77/41, mb4.2/22, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**0.78**	**329**	Pn	**Pn**	**22 02 14.2**	**+0.3**
PMG	**Port Moresby**	**7.01**	**230**	Pn	**Pn**	**22 03 38.8**	**-0.2**
	2.7nm,0.3s,baz=46,slow=7.1,SNR=3.0						
PMG				Sn	**Sn**	**22 04 58.6**	**+1.2**
	1.4nm,0.3s,baz=24,slow=10.0,SNR=1.6						
	2.7nm,0.3s						
DZM	**Mont Dzumac**	**21.75**	**143**	P	**P**	**22 06 46.5**	**+0.4**
	4.5nm,1.0s,baz=326,slow=16,SNR=2.2						
	4.5nm,1.0s						
MTN	**Manton Dam**	**22.60**	**248**	P	**P**	**22 06 54.5**	**-0.7**
MTN				IAmb	IAmb	22 07 28.6	
	comp=Z,16nm,1.1s						
WB0	**Warramunga Arr**	**23.08**	**229**	P	**P**	**22 07 00.3**	**+0.3**
WB0				IAmb	IAmb	22 07 15.8	
	comp=Z,13nm,1.5s						
WR8	**Warramunga Arr**	**23.12**	**228**	P	**P**	**22 07 00.4**	**0.0**
WRA	**Warramunga Arr**	**23.23**	**228**	P	**P**	**22 07 01.5**	**0.0**
WRA	**Warramunga Arr**	**23.23**	**228**	P	**P**	**22 07 01.7**	**+0.2**
	comp=Z,2.5nm,0.6s,baz=51,slow=10,SNR=28						
	comp=Z,2.5nm,0.6s						
KNRA	**Kununurra**	**25.74**	**244**	P	**P**	**22 07 25.9**	**+1.4**
KNRA				IAmb	IAmb	22 07 53.3	
	comp=Z,8.3nm,1.1s						
ASAR	**Alice Springs**	**25.95**	**222**	P	**P**	**22 07 26.4**	**0.0**
	comp=Z,0.7nm,0.4s,baz=46,slow=9.2,SNR=14						
	comp=Z,0.7nm,0.4s						
FITZ	**Fitzroy Crossi**	**29.43**	**241**	P	**P**	**22 07 57.0**	**-0.5**
MBWA	**Marble Bar**	**35.74**	**240**	P	**P**	**22 08 52.5**	**-0.2**
VNDA	**Vanda**	**72.77**	**178**	P	**P**	**22 13 20.5**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=302,slow=9.5,SNR=3.5						
	comp=Z,0.4nm,0.6s						
M16K	**Timber Creek**	**75.63**	**22**	P	**P**	**22 13 37.8**	**0.0**
M16K				IAmb	IAmb	22 13 56.8	
	comp=Z,7.9nm,1.2s						
CNPM	**China Poot**	**77.87**	**26**	P	**P**	**22 13 50.9**	**+0.4**
K20K	**Telida**	**78.88**	**22**	P	**P**	**22 13 56.5**	**+0.5**
SUA	**Susitna One**	**79.11**	**24**	P	**P**	**22 13 57.2**	**-0.2**
SUA				IAmb	IAmb	22 14 31.5	
	comp=Z,7.7nm,1.4s						
PWL	**Port Wells**	**79.80**	**25**	P	**P**	**22 14 01.1**	**0.0**
MKAR	**Makanchi Array**	**80.22**	**319**	P	**P**	**22 14 04.0**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=106,slow=8.2,SNR=2.9						
	comp=Z,0.4nm,0.7s						
E19K	**Redstone River**	**80.32**	**17**	P	**P**	**22 14 03.5**	**-0.2**
E19K				IAmb	IAmb	22 14 05.6	
	comp=Z,5.7nm,1.2s						
IMAR	**Indian Mountai**	**80.52**	**20**	P	**P**	**22 14 05.2**	**+0.4**
MLY	**Manley**	**81.03**	**21**	P	**P**	**22 14 07.7**	**+0.1**
MLY				IAmb	IAmb	22 14 08.7	
	comp=Z,3.6nm,0.5s						
ZALV	**Zalesovo Beam**	**81.08**	**326**	P	**P**	**22 14 06.7**	**-1.3**
	comp=Z,1.0nm,0.6s,baz=98,slow=4.5,SNR=3.8						
	comp=Z,1.0nm,0.6s						
ILAR	**Eielson Array**	**82.31**	**22**	P	**P**	**22 14 13.7**	**-0.6**
ILAR	**Eielson Array**	**82.31**	**22**	P	**P**	**22 14 12.8**	**-1.4**
	comp=Z,1.0nm,0.6s,baz=249,slow=5.2,SNR=11						
	comp=Z,1.0nm,0.6s						
RIDG	**Independent Ri**	**82.61**	**23**	P	**P**	**22 14 16.1**	**+0.1**
RIDG				IAmb	IAmb	22 14 16.6	
	comp=Z,2.9nm,0.9s						
J25K	**Salcha River,**	**82.80**	**23**	P	**P**	**22 14 16.5**	**-0.5**
M27K	**Edge Creek, AK**	**83.23**	**25**	P	**P**	**22 14 21.0**	**+1.6**
KURBB	**Kurchatov Arra**	**83.71**	**322**	P	**P**	**22 14 20.7**	**-1.1**
	comp=Z,0.3nm,0.7s,baz=102,slow=3.9,SNR=2.6						
	comp=Z,0.3nm,0.7s						
K27K	**Chicken**	**83.84**	**24**	P	**P**	**22 14 23.9**	**+1.7**
QSPA	**South Pole Qui**	**85.10**	**180**	P	**P**	**22 14 29.0**	**+0.3**
QSPA				IAmb	IAmb	22 14 48.9	
	comp=Z,3.4nm,1.3s						
QSPA	**South Pole Qui**	**85.10**	**180**	P	**P**	**22 14 27.9**	**-0.9**
	comp=Z,1.6nm,1.1s,baz=323,slow=7.8,SNR=6.6						
	comp=Z,1.6nm,1.1s						
L29M	**L29M**	**85.12**	**25**	P	**P**	**22 14 29.9**	**+1.1**
L29M				IAmb	IAmb	22 14 31.0	
	comp=Z,3.6nm,1.2s						
I28M	**Miner Creek**	**85.25**	**23**	P	**P**	**22 14 30.0**	**+0.6**
I28M				IAmb	IAmb	22 14 44.3	
	comp=Z,4.8nm,1.5s						
I30M	**Mount Dempster**	**86.56**	**24**	P	**P**	**22 14 36.6**	**+0.6**
I30M				IAmb	IAmb	22 14 37.0	
	comp=Z,4.1nm,1.3s						
MMPY	**Sheldon Lake,**	**87.97**	**27**	P	**P**	**22 14 44.3**	**+1.5**
MMPY				IAmb	IAmb	22 14 58.0	

```
             comp=Z,3.4nm,1.4s
BVAR  Borovoye Array    89.16 323  P      P        22 14 48.5  0.0
             comp=Z,0.5nm,0.6s,baz=67,slow=8.7,SNR=2.7
             comp=Z,0.5nm,0.6s
Q54A  Coxs Mills       121.05  47  PKPdf  PKiKP    22 20 46.6 +0.8
GERES GERESS Array B   123.99 328  PKP    PKPdf    22 20 51.0 -0.3
             comp=Z,0.3nm,0.5s,baz=75,slow=1.1,SNR=4.1
TORD  Torodi Ar. Bea   150.11 288  PKPbc  PKPbc    22 21 44.2 -0.4
```

VAO ***17*** *22:08:20.0, 18°.50S×38°.90W, h0km±2km, mbR3.8*
OSUNB ***17*** *22:08:21.7±0.3, 18°.45S×39°.21W, h0km, mR3.8/27, Error ellipse: s-maj=1.4km s-min=2.4km az=0.0*
ISC 17 22:08:21.9±2.4**, 18°.46S**±0°.04×**39°.16W**±0°.07**, h12**km±15km**,**
n59, σ1s.61/96**, Brazil**

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Code  Station Name        Δ°   AZ°  Phase ID           Time      Res
                                    Op     ISC       h  m  s     ISC
RIB01 Linhares ES        1.44 234   P      Pb       22 08 49.7 +0.9
RIB01                               S      Sn       22 09 08.7 +1.9
RIB01 Linhares ES        1.44 234   eP     Pb       22 08 49.2 +0.4
RIB01                               eS     Sn       22 09 09.7 +2.9
SJMB  Sao Joao De Ma     1.94 263   P      Pb       22 08 56.8 -0.4
SJMB  Sao Joao De Ma     1.94 263   eP     Pb       22 08 56.8 -0.4
SJMB                                eS     Sg       22 09 24.2  0.0
GUA01 Guaratinga, BA     1.97 342   P      Pn       22 08 56.6 +1.4
GUA01                               S      Sb       22 09 22.2 -0.1
GUA01 Guaratinga, BA     1.97 342   eP     Pn       22 08 56.2 +1.0
GUA01                               eS     Sb       22 09 22.1 -0.2
CAR01 Carai MG           2.51 303   P      Pn       22 09 04.7 +2.0
CAR01                               S      Sb       22 09 37.5 -0.5
CMC01 Camacan, BA        3.11 354   P      Pn       22 09 11.0 +0.2
CMC01                               S      Sn       22 09 48.8 +0.9
CMC01 Camacan, BA        3.11 354   eP     Pn       22 09 11.1 +0.2
CMC01                               eS     Sn       22 09 48.5 +0.6
NBIT  Itapeh - BA        3.52 356   P      Pn       22 09 16.4 -0.1
CAM01 Campos-RJ          4.09 215   P      Pn       22 09 24.6 +0.4
CAM01                               S      Sn       22 10 13.0 +0.9
CAM01 Campos-RJ          4.09 215   eP     Pn       22 09 24.4 +0.1
CAM01                               eS     Sn       22 10 11.2 -0.9
ANA01 Lindo Horizont     4.20 339   P      Pn       22 09 27.5 +1.6
ANA01                               S      Sn       22 10 16.0 +1.1
DIAM  Diamantina, MG     4.29 272   P      Pn       22 09 29.5 +2.3
DIAM  Diamantina, MG     4.29 272   eP     Pn       22 09 29.6 +2.3
DIAM                                eS     Sn       22 10 20.2 +2.8
DUB01 Friburgo-RJ        4.70 219   P      Pn       22 09 33.0 +0.2
DUB01                               S      Sn       22 10 25.8 -1.5
DUB01 Friburgo-RJ        4.70 219   eP     Pn       22 09 32.9 +0.1
DUB01                               eS     Sn       22 10 25.5 -1.7
SIM2  UHE Simplicio      4.85 224   P      Pn       22 09 35.8 +1.0
SIM2                                S      Sn       22 10 30.8 -0.2
JQT1  Jequitai-MG        5.10 283   P      Pn       22 09 40.3 +2.0
JQT1                                S      Sn       22 10 40.6 +3.4
VAS01 Vassouras-RJ       5.53 226   P      Pn       22 09 45.0 +0.8
VAS01                               S      Sn       22 10 50.0 +2.3
VAS01 Vassouras-RJ       5.53 226   eP     Pn       22 09 45.4 +1.3
VAS01                               eS     Sn       22 10 44.6 -3.1
BSCB  Bom Sucesso        5.86 244   P      Pn       22 09 49.9 +1.1
BSCB                                S      Sn       22 10 57.3 +1.3
BSCB  Bom Sucesso        5.86 244   eP     Pn       22 09 49.7 +0.9
BSCB                                eS     Sn       22 10 57.1 +1.1
JANB  Januaria           5.99 304   P      Pn       22 09 51.7 +1.2
JANB                                S      Sn       22 11 00.4 +1.4
JANB  Januaria           5.99 304   eP     Pn       22 09 51.5 +1.0
JANB                                eS     Sn       22 10 59.2 +0.1
MAN01 Angra dos Reis     6.28 225   P      Pn       22 09 55.0 +0.6
MAN01                               S      Sn       22 11 04.7 -1.5
MAN01 Angra dos Reis     6.28 225   eP     Pn       22 09 54.9 +0.4
MAN01                               eS     Sn       22 11 04.5 -1.7
PMNB  Patos De Minas     6.91 268   P      Pn       22 10 04.9 +1.7
PMNB                                S      Sn       22 11 22.5 +0.7
PMNB  Patos De Minas     6.91 268   eP     Pn       22 10 05.0 +1.7
PMNB                                eS     Sn       22 11 22.3 +0.5
CANS  Sao Roque de M     7.07 254   P      Pn       22 10 06.0 +0.7
CANS                                S      Sn       22 11 26.8 +1.0
SLP01 Ubatuba-SP         7.40 228   P      Pn       22 10 11.0 +1.0
SLP01 Ubatuba-SP         7.40 228   eP     Pn       22 10 11.0 +1.0
SLP01                               eS     Sn       22 11 31.6 -2.4
PARB  Paraibuna          7.75 230   P      Pn       22 10 16.5 +1.8
PARB  Paraibuna          7.75 230   eP     Pn       22 10 16.2 +1.6
PARB                                eS     Sn       22 11 37.2 -5.3
BAT2  UHE Batalha        7.99 277   P      Pn       22 10 20.1 +2.0
BAT2                                S      Sn       22 11 49.2 +0.7
BAT3  Ipameri            8.05 276   P      Pn       22 10 21.0 +2.2
BAT3                                S      Sn       22 11 51.1 +1.2
SFA1  Serra Facao        8.13 272   P      Pn       22 10 20.7 +0.7
SFA1                                S      Sn       22 11 52.4 +0.4
SDBA  SAO DESIDERIO      8.18 317   P      Pn       22 10 21.2 +0.5
SDBA                                S      Sn       22 11 50.1 -3.0
SDBA  SAO DESIDERIO      8.18 317   eP     Pn       22 10 20.9 +0.3
SDBA                                eS     Sn       22 11 49.8 -3.4
IPMB  Ipameri, GO        8.62 272   P      Pn       22 10 27.0 +0.4
IPMB                                S      Sn       22 12 04.9 +1.0
IPMB  Ipameri, GO        8.62 272   eP     Pn       22 10 26.8 +0.2
IPMB                                eS     Sn       22 12 00.7 -3.2
BDFB  Brasilia           8.92 287   P      Pn       22 10 32.9 +2.0
BDFB                                S      Sn       22 12 11.6 +0.1
NBAN  Anadia - AL        9.18  18   eP     Pn       22 10 30.1 -4.2
NBAN                                eS     Sn       22 12 06.5  -11
CAN3  Cana Brava        10.28 300   P      Pn       22 10 49.7 +0.3
SSV2  Sao Salvador      10.35 301   P      Pn       22 10 51.0 +0.6
SSV2                                S      Sn       22 12 42.6 -3.9
FRTB  Fartura           10.87 242   P      Pn       22 10 57.9 +0.4
PCMB  Pacaembu          11.80 253   P      Pn       22 11 09.4 -0.8
LAJE  UHE Lajeado       12.24 312   P      Pn       22 11 15.7 -0.6
ARAG  Araguaiana, MT    12.40 281   P      Pn       22 11 17.5 -1.0
ARAG  Araguaiana, MT    12.40 281   eP     Pn       22 11 17.7 -0.8
SMTB  Santa Maria do    12.57 318   eP     Pn       22 11 19.0 -1.9
NBPB  Pedra_Branca-C    12.85 358   P      Pn       22 11 21.9 -2.7
SNDB  Serra Nova Dou    13.37 297   P      Pn       22 11 30.4 -1.2
SNDB  Serra Nova Dou    13.37 297   eP     Pn       22 11 30.3 -1.4
PAL2  UHE Estreito -    14.11 325   P      Pn       22 11 41.9 +0.1
AQDB  Aquidauana        15.73 260   P      Pn       22 12 04.4 +0.9
SALV  Santo Antonio     16.00 277   P      Pn       22 12 08.7 +1.6
PDRB  Porto dos Gac     18.28 289   P      P        22 12 37.9 +2.2
PDRB  Porto dos Gac     18.28 289   eP     Pn       22 12 34.8 -0.9
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BJI ***17*** *22:19:55.5, 11°.53N×92°.73E, h50km, mB4.8/16, mb4.5/53, Ms4.2/40, Ms7 3.9/40*
DJA ***17*** *22:19:59.1±0.6, 12°N±3°×9°3E±°, h12km±4km, M5.3/19, mb4.9/19, mB5.7/6, MLv5.6/4, Mw(mB)5.2/6*
NEIC ***17*** *22:19:59.5±2.2, 12°.12N±0°.05×92°.71E±0°.08, h30km±4km, mb4.9/127, Error ellipse: s-maj=11.3km s-min=7.8km az=93.0*
BGR ***17*** *22:19:59.5, 12°.00N×92°.48E, h35km±2km, mb4.8*
IDC ***17*** *22:19:59.3±1.8, 12°.08N×92°.81E, h38km±14km, mb4.0/26, mbtmp4.2/29, ML4.2/3, MS3.9/48, Error ellipse: s-maj=15.1km s-min=11.5km az=62.0*
GCMT ***17*** *22:20:01.5±0.4, 12°.14N±0°.02×92°.77E±0°.02, h31km±1km, MW4.9/76, Moment Tensor Solution. s19,c20; s76,c109; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.76±.19; $M_{\theta\theta}$-1.08±.12; $M_{\phi\phi}$1.83±.12; $M_{r\theta}$0.64±.16; $M_{\theta\phi}$1.68±.08; $M_{\phi r}$-0.43±.13; Best double couple: $M_0$2.42100×10^{16} NP1:ϕ_s246.00000°,δ69.00000°,λ-18.00000°. NP2: ϕ_s343.00000°,δ73.00000°,λ-158.00000°. Principal axes: T 2.6020, Plg2.0000°, Azm114.0000°; N -0.3690, Plg63.0000°, Azm20.0000°; P -2.2390, Plg27.0000°, Azm205.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NDI ***17*** *22:20:01.3±2.1, 12°.29N×92°.63E, h30km, ML4.6, MW4.9, mb4.9(NEIC)*
ISC 17 22:20:00.2±0.3**, 12°.15N**±0°.03×**92°.68E**±0°.04**, h40**km±2km**,**
h40km:pP-P, n380, σ1s.50/372**, mb4.8**/150**, MS4.0**/56**,**
15C-6D, Andaman Islands region

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Code  Station Name        Δ°   AZ°  Phase ID           Time      Res
                                    Op     ISC       h  m  s     ISC
PBA   Port Blair         0.50 173          Pn       22 20 10.0 -1.0
PBA   Port Blair         0.50 173   eP     Pn       22 20 14.2 +3.3
PBA                                 IAML            22 20 20.9
             comp=E,55µm,0.5s
PBA                                 IAML            22 20 23.2
             comp=N,60µm,0.4s
PBA                                 eS     Sn       22 20 24.1 +5.6
DGPR  DIGLIPUR           1.05  13   eP     Pn       22 20 17.9 -0.5
DGPR                                eS     Sn       22 20 30.6 -1.2
DGPR                                IAML            22 20 34.7
             comp=E,8µm,0.4s
DGPR                                IAML            22 20 36.7
             comp=N,7µm,0.4s
CMBY  CAMPBELL BAY       5.26 166   eP     Pn       22 21 17.2 +1.0
CMBY                                eS     Sn       22 22 14.3 -1.3
CMBY                                IAML            22 22 34.4
             comp=E,1µm,0.8s
BSI   Banda Aceh         7.10 158   P      Pn       22 21 41.5 -0.2
             comp=E,0.4nmcomp=E,75nm,1.8s
SRIT  Nakonsritamara     7.67 117          Pn       22 21 50.0 +0.5
MLSI  Meulaboh, Aceh     8.66 155   P      Pn       22 22 03.1 +0.1
             comp=E,147nm,0.8s
CM31  Chiang Mai Arr     8.70  43   Pn     Pn       22 22 04.0 +0.4
CMAR  Chiang Mai Arr     8.70  43   Pn     Pn       22 22 02.4 -1.2
CMAR  Chiang Mai Arr     8.70  43   Pn     Pn       22 22 03.0 -0.7
             comp=E,1.7nm,0.3s,baz=233,slow=15,SNR=32
CMAR                                Sn     Sn       22 23 36.8 -3.7
             comp=E,0.8nm,0.3s,baz=233,slow=26,SNR=1.7
CMAR                                LR     LR       22 25 59.2
             comp=E,478nm,21.2s,baz=210,slow=42
             comp=E,3.0nm,0.4s
CHTO  Chiang Mai         8.96  42   Pn     Pn       22 22 08.7 +1.5
BRDH  Bariadhala        10.51 355   LR     LR       22 27 35.9
             comp=E,342nm,20.4s,baz=172,slow=43
PSI   Prapat            11.16 146   Pn     Pn       22 22 36.2 -1.2
             comp=E,1.4nm,0.3s,baz=321,slow=12,SNR=4.3
PSI                                 LR     LR       22 27 37.7
             comp=E,580nm,20.2s,baz=312,slow=41
             comp=E,2.3nm,0.3s
RPSI  Rantau Prapat     11.25 146   Pn     Pn       22 22 38.5  0.0
RPSI  Rantau Prapat     11.25 146          Pn       22 22 36.2 -2.3
PALK  Pallekele         12.76 249   Pn     Pn       22 22 59.7 +0.5
PALK  Pallekele         12.76 249   Pn     Pn       22 22 59.9 +0.7
             comp=E,0.6nm,0.3s,baz=77,slow=14,SNR=9.6
PALK                                Sn     Sn       22 25 08.5  -12
             comp=E,14nm,0.3s,baz=53,slow=5.1,SNR=12
PALK                                LR     LR       22 27 27.6
             comp=E,771nm,22.0s,baz=66,slow=35
             comp=E,10.0nm,0.8s
UBPT  Khong Chiam       12.81  75   Pn     Pn       22 23 00.3 +0.5
TNCH  TengChong         13.95  23   P      Pn       22 23 16.8 +1.3
TNCH                                S      Sn       22 25 53.9 +4.8
TNCH                                pmax   pmax
             comp=E,18nm,0.8s
TNCH                                pmax   pmax
             comp=E,63nm,4.0s
TNCH                                LR     LR
             comp=E,460nm,11.3s
TNCH                                LR     LR
             comp=E,570nm,10.8s
TNCH                                LR     LR
             comp=E,440nm,15.2s
SLVN  Son La            14.10  48          P        22 23 23.7 -0.6
BLSP  Bilaspur          14.13 316   eP     Pn       22 23 16.8 -1.1
BLSP                                eS     Sn       22 25 51.8 -1.7
BKNI  Bangkinang        14.38 144          P        22 23 25.5 -2.1
HYB   Hyderabad         14.62 293   eP     P        22 23 30.7 +0.4
HYB                                 eS     S        22 26 25.0 +1.7
KMI   Kunming           16.03  35   P      P        22 23 47.3 +1.3
KMI                                 S      Sn       22 26 45.8 +6.0
KMI                                 pmax   pmax
             comp=E,12nm,1.0s
KMI                                 pmax   pmax
             comp=E,230nm,9.6s
KMI                                 LR     LR
             comp=E,530nm,18.7s
KMI                                 LR     LR
             comp=E,380nm,18.8s
KMI                                 LR     LR
             comp=E,380nm,18.5s
PZH   PanZhiHua         16.63  30   P      P        22 23 52.3 -0.2
PZH                                 S      Sn       22 26 55.1 +0.9
PZH                                 pmax   pmax
             comp=E,40nm,1.6s
PZH                                 pmax   pmax
             comp=E,60nm,3.6s
PZH                                 LR     LR
             comp=E,230nm,13.5s
PZH                                 LR     LR
             comp=E,260nm,11.2s
PZH                                 LR     LR
             comp=E,280nm,19.8s
EVN   Everest           16.65 342          P        22 23 52.4 -0.9
LSA   Lhasa             17.52 356   Pn     Pn       22 24 00.5 -1.4
QIZ   Qiongzhong        17.88  65   P      P        22 24 06.8 +0.5
QIZ                                 S      Sn       22 27 23.3 -1.2
QIZ                                 pmax   pmax
             comp=E,29nm,1.6s
QIZ                                 LR     LR
             comp=E,310nm,10.5s
QIZ                                 LR     LR
             comp=E,330nm,11.7s
JHNI  Jhansi            18.80 317   eP     P        22 24 16.5 +0.1
JHNI                                eS     Sn       22 27 43.3 -3.4
MNAI  Manna             19.33 147   P      Pn       22 24 27.9 +4.4
             comp=E,321nm,1.8s
KSM   Kuching           20.45 120   P      P        22 24 33.2 -1.2
PTH   Pithoragarh       20.83 328   eP     P        22 24 39.0 +0.4
PTH                                 eS     S        22 28 30.7 +1.6
CD2   Chengdu           21.29  27   P      P        22 24 47.3 +3.8
CD2                                 pP     pP       22 24 54.3 +0.7
CD2                                 PP     PnPn     22 25 11.3 +7.1
CD2                                 S      S        22 28 35.4 -2.6
CD2                                 pmax   pmax
             comp=E,50nm,0.8s
CD2                                 pmax   pmax
             comp=E,2µm,9.0s
CD2                                 LR     LR
             comp=E,410nm,20.3s
CD2                                 LR     LR
             comp=E,500nm,23.9s
CD2                                 LR     LR
             comp=E,430nm,20.6s
KUDL  Kundal            21.96 319   eP     P        22 24 51.4 +0.8
KUDL                                eS     S        22 28 52.0 +1.1
STKI  Sintang           22.19 121   P      P        22 24 55.6 +2.4
             comp=E,32nm,1.0s
SMLA  Simla             23.70 325   eP     P        22 25 09.6 +1.1
SMLA                                eS     S        22 29 22.2 +1.4
ENH   Enshi             23.83  38   P      P        22 25 07.3 -2.3
ENH                                 IAmb   IAmb     22 25 18.1
             comp=Z,48nm,0.8s
KKM   Kota Kinabalu     24.01 103   P      P        22 25 10.8 -0.8
KKM                                 IAmb   IAmb     22 25 24.8
             comp=Z,85nm,1.4s
GOMU  GeErMu            24.02   4   P      P        22 25 12.8 +1.0
GOMU                                pmax   pmax
             comp=Z,5.0nm,0.8s
GOMU                                LR     LR
             comp=Z,390nm,10.2s
GOMU                                LR     LR
             comp=Z,420nm,10.5s
GOMU                                LR     LR
             comp=Z,180nm,10.4s
LZH   Lanzhou           25.87  21   eP     P        22 25 31.1 +2.7
LZH                                 sP     sP       22 25 45.4 +1.2
LZH                                 S      S        22 29 54.6 -1.1
LZH                                 pmax   pmax
             comp=Z,20nm,1.3s
LZH                                 LR     LR
             comp=Z,320nm,13.4s
LZH                                 LR     LR
             comp=Z,500nm,13.7s
LZH                                 LR     LR
             comp=Z,480nm,13.7s
XAN   Xi'an             26.34  32   P      P        22 25 30.8 -1.7
XAN                                 pP     pP       22 25 41.3 -2.2
XAN                                 S      S        22 30 00.6 -2.4
XAN                                 pmax   pmax
             comp=Z,26nm,0.8s
XAN                                 pmax   pmax
             comp=Z,110nm,4.1s
XAN                                 LR     LR
             comp=Z,460nm,12.9s
XAN                                 LR     LR
             comp=Z,470nm,13.9s
XAN                                 LR     LR
             comp=Z,430nm,13.2s
MYLDM Lahad Datu        26.43 103   P      P        22 25 34.3 +0.8
TGY   Tagaytay City     27.58  83   LR     LR       22 36 07.5
             comp=Z,241nm,20.2s,baz=216,slow=35
GTA   Gaotai            27.88  12   eP     P        22 25 48.5 +2.2
GTA                                 pP     pP       22 25 58.0 +0.6
GTA                                 sP     sP       22 26 04.3 +2.1
GTA                                 pmax   pmax
             comp=Z,5.0nm,0.7s
GTA                                 LR     LR
             comp=Z,140nm,16.0s
GTA                                 LR     LR
             comp=Z,200nm,20.7s
GTA                                 LR     LR
             comp=Z,190nm,18.5s
H08S3 Diego Garcia H    28.10 227   T      T        22 54 33.4
             baz=45,slow=75,SNR=227
H08S2 Diego Garcia H    28.10 227   T      T        22 54 33.8
             baz=45,slow=75,SNR=143
H08S1 Diego Carcia H    28.12 227   T      T        22 54 36.6
             baz=45,slow=75,SNR=141
LYN   LuoYang           28.65  36   P      P        22 25 55.0 +1.9
LYN                                 pmax   pmax
             comp=Z,23nm,0.6s
LYN                                 LR     LR
             comp=Z,580nm,18.9s
LYN                                 LR     LR
             comp=Z,380nm,17.5s
LYN                                 LR     LR
             comp=Z,520nm,18.9s
TTSI  Tana Toraja       30.91 118   P      P        22 26 18.0 +4.6
KSH   Kashi             31.01 334   P      P        22 26 14.1 -0.1
KSH                                 pP     pP       22 26 23.8 -1.4
KSH                                 pmax   pmax
             comp=Z,4.0nm,1.1s
KSH                                 LR     LR
             comp=Z,270nm,14.8s
KSH                                 LR     LR
             comp=Z,360nm,16.5s
KSH                                 LR     LR
             comp=Z,260nm,14.8s
WMQ   Urumqi            31.85 353   eP     P        22 26 24.4 +3.0
WMQ                                 LR     LR
             comp=Z,200nm,24.2s
WMQ                                 LR     LR
             comp=Z,440nm,24.1s
WMQ                                 LR     LR
             comp=Z,150nm,24.3s
HNS   HongShan          31.96  34  ⇓P      P        22 26 22.3  0.0
HNS                                 S      S        22 31 31.5 +0.5
HNS                                 pmax   pmax
             comp=Z,17nm,0.8s
HNS                                 LR     LR
             comp=Z,250nm,19.5s
HNS                                 LR     LR
             comp=Z,250nm,17.7s
HNS                                 LR     LR
             comp=Z,390nm,21.6s
BTO   Baotou            32.19  25   eP     P        22 26 24.3 -0.2
BTO                                 pP     pP       22 26 36.3 +0.7
BTO                                 sP     sP       22 26 41.6 +1.2
BTO                                 PP     PnPn     22 27 33.4 +2.0
BTO                                 S      S        22 31 34.6 -0.2
BTO                                 sS     sS       22 31 56.6 +3.3
BTO                                 SS     SnSn     22 33 32.0 +4.0
BTO                                 pmax   pmax
             comp=Z,16nm,0.9s
BTO                                 pmax   pmax
             comp=Z,200nm,3.7s
BTO                                 LR     LR
             comp=Z,350nm,17.7s
BTO                                 LR     LR
             comp=Z,450nm,22.6s
BTO                                 LR     LR
             comp=Z,350nm,19.1s
TARG  Taragay, Kyrgy    32.21 339   P      P        22 26 26.2 +1.2
NRN   Naryn             32.62 336   P      P        22 26 28.7 +0.2
PRZ   Przheval'sk       32.67 340   P      P        22 26 28.2 -0.6
PRZ                                 IAmb   IAmb     22 26 45.9
             comp=Z,18nm,1.1s
KDJ   Kajisay           32.78 338   P      P        22 26 29.7  0.0
KDJ                                 IAmb   IAmb     22 26 41.8
             comp=Z,9.4nm,0.7s
DRK   Karamyk           32.90 329   P      P        22 26 31.9 +0.9
HHC   Hu-ho-hao-te      33.05  27   eP     P        22 26 32.4 +0.4
HHC                                 pmax   pmax
             comp=Z,10.0nm,1.4s
HHC                                 pmax   pmax
             comp=Z,70nm,3.7s
GAR   Garm              33.30 327   P      P        22 26 34.6 +0.3
BOOM  Boomskoye usch    33.55 337   P      P        22 26 37.4 +0.9
BOOM                                IAmb   IAmb     22 26 47.9
             comp=Z,20nm,1.6s
SIMJ  Simiganj          33.77 326   P      P        22 26 38.2 -0.1
SIMJ                                IAmb   IAmb     22 26 49.9
             comp=Z,16nm,0.9s
SIMJ  Simiganj          33.77 326   P      P        22 26 38.9 +0.6
SIMJ                                pP     pP       22 26 47.8 -1.7
ARSB  Arslanbob         33.80 333   P      P        22 26 40.1 +1.5
ARSB                                IAmb   IAmb     22 26 51.3
             comp=Z,20nm,0.9s
BTK   Batken            33.83 329   P      P        22 26 40.0 +1.1
AAK   Ala-Archa         34.24 336   P      P        22 26 44.0 +1.6
AAK                                 IAmb   IAmb     22 26 54.8
             comp=Z,29nm,1.5s
AAK   Ala-Archa         34.24 336   P      P        22 26 43.7 +1.3
             comp=Z,3.1nm,0.8s,baz=196,slow=6.0,SNR=5.7
AAK                                 LR     LR       22 43 11.1
             comp=Z,178nm,18.0s,baz=148,slow=40
             comp=Z,3.1nm,0.8s
AAK   Ala-Archa         34.24 336   P      P        22 26 44.6 +2.2
AAK                                 pP     pP       22 26 53.4 -0.1
FRU1  Bishkek           34.33 336   P      P        22 26 43.0 -0.1
MKAR  Makanchi Array    35.62 348   P      P        22 26 53.9 -0.2
MKAR  Makanchi Array    35.62 348   P      P        22 26 54.6 +0.4
             comp=Z,5.8nm,0.9s,baz=167,slow=8.8,SNR=30
MKAR                                LR     LR       22 46 42.8
             comp=Z,137nm,18.2s,baz=72,slow=45
             comp=Z,5.8nm,0.9s
MAKZ  Makanchi          35.70 347   P      P        22 26 55.2 +0.4
MAKZ  Makanchi          35.70 347   P      P        22 26 55.1 +0.4
MAKZ                                pP     pP       22 27 03.9 -2.1
KK31  Karatay Array     36.32 332   P      P        22 27 00.2  0.0
KK31                                IAmb   IAmb     22 27 11.9
             comp=Z,15nm,1.2s
KKAR  Karatay Array     36.32 332   P      P        22 27 00.3 +0.2
JOW   Kunigami          36.44  61   LR     LR       22 42 22.8
             comp=Z,136nm,21.4s,baz=268,slow=37
SONM  Songino Array     37.38  15   P      P        22 27 09.5 +0.3
SONM  Songino Array     37.38  15   P      P        22 27 08.7 -0.5
             comp=Z,2.2nm,0.9s,baz=198,slow=8.4,SNR=10
SONM                                PcP    PcP      22 29 28.4 +0.8
             comp=Z,1.0nm,0.7s,baz=211,slow=4.4,SNR=2.6
SONM                                ScP    ScP      22 33 11.2 -0.6
             comp=Z,0.7nm,0.5s,baz=182,slow=4.5,SNR=3.7
SONM                                LR     LR       22 45 03.9
             comp=Z,226nm,19.1s,baz=195,slow=40
             comp=Z,2.2nm,0.9s
XLT   XiLinHaoTe        37.51  28   eP     P        22 27 10.5 +0.2
XLT                                 pmax   pmax
             comp=Z,10.0nm,0.9s
XLT                                 LR     LR
             comp=Z,210nm,13.9s
XLT                                 LR     LR
             comp=Z,160nm,16.7s
ULN   Ulaanbaatar       37.58  16   P      P        22 27 11.1 +0.2
TJN   Taejon            39.42  46   P      P        22 27 25.2 -1.1
KURBB Kurchatov Arra    40.07 346   P      P        22 27 32.2 +0.7
             comp=Z,1.6nm,0.3s,baz=160,slow=7.8,SNR=12
KURBB                               PcP    PcP      22 29 34.3 -1.4
             comp=Z,0.3nm,0.3s,baz=153,slow=8.3,SNR=1.3
KURBB                               ScP    ScP      22 33 22.4 +0.6
             comp=Z,0.2nm,0.5s,baz=157,slow=4.1,SNR=2.1
             comp=Z,1.6nm,0.3s
KURK  Kurchatov         40.14 346   P      P        22 27 32.2 +0.1
KSAR  Wonju Array Be    40.30  45   P      P        22 27 32.5 -1.2
KSRS  Korea Array       40.34  45   P      P        22 27 32.3 -1.6
             comp=Z,5.0nm,0.7s,baz=243,slow=8.8,SNR=11
             comp=Z,5.0nm,0.7s
JNU   Nakatsue          40.65  53   LR     LR       22 45 50.3
             comp=Z,151nm,19.1s,baz=251,slow=38
ZAA0  Zalesovo Array    42.16 353   P      P        22 27 49.0 +0.4
ZALV  Zalesovo Beam     42.16 353   P      P        22 27 48.1 -0.5
ZALV  Zalesovo Beam     42.16 353   P      P        22 27 49.2 +0.6
             comp=Z,1.3nm,0.4s,baz=175,slow=8.9,SNR=12
             comp=Z,1.3nm,0.4s
CN2   Changchun         42.30  36   P      P        22 27 47.6 -2.4
CN2                                 PcP    PcP      22 29 41.3 -1.9
CN2                                 S      S        22 34 06.6 -1.5
CN2                                 pmax   pmax
             comp=Z,20nm,0.7s
CN2                                 LR     LR
             comp=Z,300nm,18.0s
CN2                                 LR     LR
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	comp=Z,200nm,18.0s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
FITZ	Fitzroy Crossi	44.29	132	P	P	22 28 04.0	-2.3
FITZ	Fitzroy Crossi	44.29	132	P	P	22 28 03.8	-2.6
	comp=Z,4.0nm,0.9s						
BVAR	Borovoye Array	44.50	341	P	P	22 28 06.9	-0.7
	comp=Z,3.3nm,0.8s,baz=140,slow=7.8,SNR=17						
	comp=Z,3.3nm,0.8s						
BRVK	Borovoye	44.56	341	P	P	22 28 07.4	-0.6
BRVK	Borovoye	44.56	341	P	P	22 28 09.2	+1.1
BRVK				pP	pP	22 28 18.0	-1.4
BRVK				sP	sP	22 28 22.0	-2.3
BNX	BinXian	44.59	35	⇓P	P	22 28 07.3	-1.1
BNX				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AB31	Akbulak array	45.82	330	P	P	22 28 18.6	+0.5
ABKAR	Akbulak array	45.82	330	P	P	22 28 18.4	+0.3
USRK	Ussuriysk Ar.	46.41	39	P	P	22 28 22.0	-0.8
	comp=Z,0.7nm,0.5s,baz=251,slow=5.8,SNR=9.2						
USRK				LR	LR	22 50 43.4	
	comp=Z,120nm,18.5s,baz=230,slow=40						
	comp=Z,0.7nm,0.5s						
HEH	HeiHe	47.45	30	eP	P	22 28 30.5	-0.3
MJAR	Matsushiro Arr	47.49	51	P	P	22 28 30.9	-0.6
	comp=Z,1.0nm,0.7s,baz=275,slow=9.5,SNR=4.5						
MJAR				ScP	ScP	22 33 51.5	-0.9
	comp=Z,1.4nm,0.7s,baz=251,slow=4.1,SNR=4.0						
MJAR				LR	LR	22 49 48.7	
	comp=Z,105nm,20.7s,baz=250,slow=38						
	comp=Z,1.0nm,0.7s						
KLR	Kul'dur	49.03	33	P	P	22 28 41.9	-1.2
	comp=Z,1.3nm,0.8s,baz=215,slow=4.6,SNR=3.5						
KLR				LR	LR	22 53 20.5	
	comp=Z,243nm,18.6s,baz=234,slow=41						
	comp=Z,1.3nm,0.8s						
GNI	Garni	50.47	312	P	P	22 28 55.8	+1.3
GNI	Garni	50.47	312	LR	LR	22 53 41.2	
	comp=Z,96nm,20.1s,baz=114,slow=40						
GNI	Garni	50.47	312	P	P	22 28 58.4	+4.0
GNI				pP	pP	22 29 07.3	+1.4
GNI				sP	sP	22 29 10.9	+0.3
NWAO	Narrogin (SRO)	50.59	153	LR	LR	22 50 25.5	
	comp=Z,116nm,19.8s,baz=342,slow=36						
GUMO	Guam	50.82	82	LR	LR	22 51 29.7	
	comp=Z,41nm,18.1s,baz=64,slow=37						
JTM	Tenmabayashi	51.01	47	P	P	22 28 57.1	-1.1
ARTI	Arti	51.45	336	P	P	22 29 01.9	+0.6
ARTI				IAmb	IAmb	22 29 12.2	
	comp=Z,24nm,1.3s						
ARTI	Arti	51.45	336	LR	LR	22 53 37.7	
	comp=Z,167nm,18.9s,baz=144,slow=39						
ARTI	Arti	51.45	336	P	P	22 29 01.8	+0.5
ARTI				pP	pP	22 29 10.9	-2.0
ARTI				sP	sP	22 29 14.7	-2.9
WB0	Warramunga Arr	51.89	127	P	P	22 29 04.5	-0.6
WB0				IAmb	IAmb	22 29 28.8	
	comp=Z,12nm,1.1s						
WRA	Warramunga Arr	51.95	127	P	P	22 29 03.9	-1.6
WRA	Warramunga Arr	51.95	127	P	P	22 29 02.9	-2.7
	comp=Z,1.8nm,0.3s,baz=302,slow=10.0,SNR=50						
	comp=Z,1.8nm,0.3s						
GURO	Guroymak-BITLI	51.98	310	P	P	22 29 07.6	+1.9
GURO				IAmb	IAmb	22 29 18.3	
	comp=Z,17nm,1.6s						
WR8	Warramunga Arr	52.08	127	P	P	22 29 05.2	-1.3
WR8				IAmb	IAmb	22 29 10.2	
	comp=Z,17nm,1.2s						
KVAR	Kislovodsk Arr	53.22	316	LR	LR	22 54 51.1	
	comp=Z,93nm,21.1s,baz=283,slow=39						
KIV	Kislovodsk	53.22	316	P	P	22 29 15.3	+0.6
ASAJ	Asahikawa	53.23	43	LR	LR	22 53 55.3	
	comp=Z,103nm,19.8s,baz=218,slow=38						
AS31	Alice Springs	53.78	131	P	P	22 29 16.6	-2.5
ASAR	Alice Springs	53.78	132	P	P	22 29 17.0	-2.1
	comp=Z,2.7nm,0.7s,baz=308,slow=6.6,SNR=18						
ASAR				ScP	ScP	22 34 17.2	-2.4
	comp=Z,0.5nm,0.7s,baz=328,slow=4.6,SNR=4.2						
ASAR				LR	LR	22 54 36.8	
	comp=Z,108nm,18.8s,baz=292,slow=39						
	comp=Z,2.7nm,0.7s						
ASF	Jabal al Asfar	54.75	301	LR	LR	22 56 27.8	
	comp=Z,89nm,18.2s,baz=130,slow=40						
MMAI	Mount Meron Ar	56.11	302	LR	LR	22 55 59.9	
	comp=Z,123nm,20.6s,baz=86,slow=38						
EIL	Elat	56.12	298	LR	LR	22 55 48.7	
	comp=Z,50nm,21.7s,baz=74,slow=38						
TOKA	Tokat	56.58	310	P	P	22 29 40.0	+0.9
BR131	Keskin Array S	58.59	309	P	P	22 29 53.0	-0.3
BRTR	Keskin Array B	58.59	309	P	P	22 29 52.2	-1.1
BRTR	Keskin Array B	58.59	309	P	P	22 29 52.5	-0.9
	comp=Z,1.8nm,0.8s,baz=116,slow=6.8,SNR=13						
	comp=Z,1.8nm,0.8s						
OBN	Obninsk	61.02	327	LR	LR	23 01 25.1	
	comp=Z,139nm,18.4s,baz=120,slow=41						
ELL	Elmali	61.05	305	P	P	22 30 09.5	-0.8
TIXI	Tiksi	63.36	12	P	P	22 30 23.4	-1.6
TIXI				IAmb	IAmb	22 30 41.2	
	comp=Z,14nm,0.9s						
TIXI	Tiksi	63.36	12	LR	LR	23 01 54.1	
	comp=Z,82nm,19.1s,baz=210,slow=40						
TIXI	Tiksi	63.36	12	P	P	22 30 24.6	-0.3
MILM	Milestii Mici	63.41	317	⇑iP	P	22 30 35.4	+10
	comp=Z,40nm,1.0s						
MILM	Milestii Mici	63.41	317	⇑P	P	22 30 35.5	+10
CFR	Carcaliu	63.57	315	⇑P	P	22 30 36.2	+9.5
VLDR	Vladesti	63.72	315	⇑P	P	22 30 37.8	+10
AKASG	Malin Array Be	63.94	321	P	P	22 30 28.6	-0.6
AKASG	Malin Array Be	63.94	321	P	P	22 30 28.6	-0.6
	comp=Z,0.2nm,0.3s,baz=88,slow=5.3,SNR=11						
AKASG				LR	LR	23 04 03.6	
	comp=Z,51nm,18.3s,baz=80,slow=41						
	comp=Z,0.2nm,0.3s						
AKBB	Malin Array Si	63.94	321	P	P	22 30 28.6	-0.6
AKBB				IAmb	IAmb	22 30 39.8	
	comp=Z,14nm,1.0s						
KIEV	Kiev	63.95	321	P	P	22 30 27.7	-1.4
KIEV				IAmb	IAmb	22 30 39.8	
	comp=Z,13nm,1.0s						
KIEV	Kiev	63.95	321	⇑P	P	22 30 28.0	-1.2
KIEV	Kiev	63.95	321	P	P	22 30 29.2	0.0
KIEV				pP	pP	22 30 38.6	-2.4
STKA	Stephens Creek	64.10	135	P	P	22 30 29.6	-0.8
	comp=Z,1.7nm,0.7s,baz=315,slow=12,SNR=3.4						
STKA				PcP	PcP	22 31 04.7	-0.7
	comp=Z,2.7nm,0.8s,baz=249,slow=5.6,SNR=3.1						
STKA				LR	LR	22 59 35.3	
	comp=Z,124nm,19.0s,baz=238,slow=37						
	comp=Z,1.7nm,0.7s						
VRI	Vrincioaia	64.65	315	⇑P	P	22 30 35.1	+1.1
PLOR	Plostina	64.71	315	⇑P	P	22 30 35.9	+1.6
TESR	Tescani	64.81	316	⇓P	P	22 30 35.0	+0.1
MLR	Muntele Rosu	65.14	315	P	P	22 30 38.1	+0.8
MLR	Muntele Rosu	65.14	315	⇑P	P	22 30 38.7	+1.4
TURR	Turia	65.17	315	⇓P	P	22 30 38.3	+0.9
PETK	Petropavlovsk-	65.43	37	LR	LR	23 03 55.0	
	comp=Z,104nm,18.0s,baz=243,slow=40						
DOPR	Dopca	65.59	315	⇓P	P	22 30 41.6	+1.5
MNK	Minsk	65.62	325	i P	P	22 30 50.5	+10
	comp=E,15nm,0.9s						
MNK				i P	P	22 30 50.5	+10
	comp=N,35nm,1.0s						
MNK				i P	P	22 30 50.5	+10
	comp=Z,58nm,0.8s,baz=103						
MNK				i PP	PP	22 33 17.7	+13
MNK				i PPP	PPP	22 35 08.2	
MNK				i S	S	22 39 44.0	+21
MNK				i SS	SS	22 44 07.7	+31
MNK				i SSS	SSS	22 47 14.7	
MNK				i LR	LR	23 00 28.9	
SEY	Seymchan	65.69	26	LR	LR	23 03 28.4	
	comp=Z,93nm,21.0s,baz=229,slow=40						
VOIR		65.76	314	⇓P	P	22 30 42.2	+1.0
BURAR	Bucovina Array	65.94	317	P	P	22 30 42.9	+0.4
BURAR				IAmb	IAmb	22 30 54.6	
	comp=Z,9.6nm,0.9s						
BURAR	Bucovina Array	65.94	317	⇑P	P	22 30 42.3	-0.1
BUR08	Bucovina Ar. S	65.96	317	IAmb	IAmb	22 30 54.5	
	comp=Z,10nm,1.1s						
NACGM	Naroch	66.33	325	eP	P	22 30 45.6	+1.0
	comp=Z,10.0nm,0.9s,baz=103						
JOF	Joensuu	66.39	334	eP	P	22 30 45.5	+0.6
IDID	Didziasalis	66.45	325	eP	P	22 30 46.0	+0.7
VSU	Vasula	67.20	329	eP	P	22 30 50.1	0.0
ITM	Ithomi	67.46	305	IAmb	IAmb	22 31 02.2	
	comp=Z,10nm,0.8s						
HERR	Herculane	67.55	314	⇑P	P	22 30 52.8	+0.2
SURR	Surduc	67.83	315	⇑P	P	22 30 55.2	+0.9
KWP	Kalwaria Pacla	67.87	319	eP	P	22 30 55.5	+1.0
BOVS	Bovan	67.96	312	⇑P	P	22 30 55.1	0.0
PABE	Paberze	68.04	325	eP	P	22 30 55.9	+0.5
MDVR	Moldovita	68.04	313	⇑P	P	22 30 56.1	+0.4
KOLS	Kolonicke sedl	68.07	318	eP	P	22 30 56.6	+0.8
KOLS				e		22 31 07.1	
SUW	Suwalki	68.22	323	eP	P	22 30 56.9	+0.3
SUW	Suwalki	68.22	323	eP	P	22 30 57.1	+0.5
FIA1	FINESS Array S	68.28	332	P	P	22 30 55.8	-1.0
FINES	FINESS Array B	68.28	332	P	P	22 30 56.1	-0.7
FINES	FINESS Array B	68.28	332	P	P	22 30 56.6	-0.2
	comp=Z,3.0nm,0.7s,baz=102,slow=4.7,SNR=15						
	comp=Z,3.0nm,0.7s						
H04N2	CROZET ISLANDS	68.69	209	T	T	23 45 22.3	
	baz=42,slow=74,SNR=20						
H04N1	CROZET ISLANDS	68.69	209	T	T	23 45 23.2	
	baz=42,slow=74,SNR=19						
H04N3	CROZET ISLANDS	68.70	209	T	T	23 45 21.8	
	baz=42,slow=74,SNR=23						
MTSE	Matsula	68.75	329	eP	P	22 31 00.5	+0.8
MEF	Metsahovi	68.78	330	eP	P	22 31 00.5	+0.6
STHS	Stebnicka Huta	68.79	318	e	pP	22 31 10.7	-1.6
KEF	Keuruu	69.02	332	eP	P	22 31 01.8	+0.4
PBUR	Paburge	69.26	325	eP	P	22 31 03.8	+0.8
BEL	Belsk	69.35	321	eP	pP	22 31 13.0	-2.6
NIE	Niedzica	69.41	318	eP	P	22 31 05.6	+1.4
LSZ	Lusaka	69.41	249	P	P	22 31 05.0	+0.2
LSZ				IAmb	IAmb	22 31 07.3	
	comp=Z,27nm,1.7s						
LSZ	Lusaka	69.41	249	LR	LR	22 57 58.9	
	comp=Z,185nm,18.7s,baz=101,slow=33						
LSZ	Lusaka	69.41	249	P	P	22 31 06.3	+1.5
LSZ				pP	pP	22 31 15.7	-1.1
PSZ	Piszkesteto	69.55	317	P	P	22 31 05.1	+0.1
PSZ				IAmb	IAmb	22 31 16.6	
	comp=Z,10nm,1.1s						
PSZ	Piszkesteto	69.55	317	eP	P	22 31 05.6	+0.5
OJC	Ojcow	69.81	319	eP	P	22 31 07.3	+0.8
LANS	Liptovska Anna	69.93	318	e	pP	22 31 18.8	-0.5
VAF	Ylistaro	70.21	333	eP	P	22 31 09.3	+0.6
RAF	Rauma	70.22	331	eP	P	22 31 09.7	+1.0
MORH	Mrgy, Hungar	70.29	315	⇑P	P	22 31 09.3	-0.2
VYHS	Vyhne	70.29	317	eP	P	22 31 10.0	+0.4
VYHS				e		22 31 19.8	
SRO	Srobarova	70.60	317	e	pP	22 31 23.1	-0.3
ARCES	ARCESS Array B	70.78	340	P	P	22 31 12.7	+0.6
	comp=Z,5.7nm,1.0s,baz=84,slow=6.5,SNR=8.1						
ARCES				LR	LR	23 05 28.8	
	comp=Z,107nm,18.8s,baz=114,slow=38						
	comp=Z,5.7nm,1.0s						
STEB	Steborice	71.08	319	epP	pP	22 31 25.0	-1.3
JAVC	Velka Javorina	71.09	318	eP	P	22 31 15.9	+1.5
JAVC				epP	pP	22 31 25.5	-1.0
MORC	Moravsky Berou	71.22	319	IAmb	IAmb	22 31 27.2	
	comp=Z,14nm,0.8s						
MORC	Moravsky Berou	71.22	319	eP	P	22 31 16.2	+1.0
MORC				epP	pP	22 31 25.8	-1.5
MORC	Moravsky Berou	71.22	319	⇑P	P	22 31 15.8	+0.6
MODS	Modra-Piesok	71.32	317	eP	P	22 31 17.7	+1.9
MODS				e		22 31 26.4	
BEHE	Becsehely	71.59	315	P	P	22 31 18.4	+1.0
BEHE				IAmb	IAmb	22 31 29.4	
	comp=Z,8.9nm,1.0s						
GKP	Gorka Klasztor	71.65	322	eP	pP	22 31 28.3	-1.3
KRLC	Kraliky	71.73	319	epP	pP	22 31 29.1	-1.2
VRAC	Vranov	71.82	318	LR	LR	23 08 44.4	
	comp=Z,40nm,18.7s,baz=76,slow=41						
VRAC	Vranov	71.82	318	eP	P	22 31 18.6	-0.2
VRAC				epP	pP	22 31 29.2	-1.6
KRUC	Moravsky	71.94	318	eP	P	22 31 19.5	0.0
KRUC				epP	pP	22 31 29.6	-1.9
RONA	Rosalia, Austr	71.96	316	i P	P	22 31 20.2	+0.5
	comp=Z,3.0nm,1.1s						
RONA				epP	pP	22 31 30.3	-1.5
	comp=Z,4.3nm,0.9s						
DPC	Dobruska-Polom	72.04	319	epP	pP	22 31 31.4	-0.8
KSP	Ksiaz	72.08	320	eP	P	22 31 21.5	+1.2
ACER	Acerenza	72.15	309	IAmb	IAmb	22 31 32.2	
	comp=Z,13nm,0.9s						
BROLN	Tlhalogang	72.18	243	i P	P	22 31 22.8	+1.3
CHVC	Chvalec	72.22	319	epP	pP	22 31 32.0	-1.2
CONA	Conrad Observa	72.25	317	i P	P	22 31 22.0	+0.5
	comp=Z,1.5nm,0.8s						
CONA				i pP	pP	22 31 31.5	-2.1
	comp=Z,5.7nm,1.0s						
CUC	Castrocucco	72.26	308	P	P	22 31 21.9	+0.2
ARSA	Arzberg	72.47	316	i P	P	22 31 23.0	+0.3
	comp=Z,2.5nm,1.0s						
ARSA				i pP	pP	22 31 32.9	-1.9
	comp=Z,9.0nm,1.1s						
JETT	Jettan, Norway	72.51	339	eP	pP	22 31 32.7	-1.9
MREMI	Moremi	72.61	242	i P	P	22 31 25.3	+1.3
BILL	Bilibino	72.68	22	P	P	22 31 24.4	+0.9
SOKA	Soboth	72.80	315	eP	P	22 31 25.5	+0.7
	comp=Z,6.2nm,1.1s						
SOKA				i pP	pP	22 31 35.0	-1.9
	comp=Z,14nm,1.0s						
KSANE	Kasane	72.98	247	P	P	22 31 26.9	+0.6
TRO	Tromso	73.04	339	eP	pP	22 31 35.5	-2.2
OBKA	Obir	73.13	315	eP	P	22 31 27.3	+0.5
	comp=Z,6.2nm,1.0s						
OBKA				i pP	pP	22 31 36.6	-2.2
	comp=Z,10nm,0.8s						
PVCC	Panska Ves	73.17	319	epP	pP	22 31 37.7	-1.1
PRU	Pruhonice	73.17	319	epP	pP	22 31 37.8	-1.1
CKRC	Cesky Krumlov	73.31	317	epP	pP	22 31 38.6	-1.1
MOA	Molln	73.33	316	i P	P	22 31 28.4	+0.5
	comp=Z,3.0nm,1.1s						
MOA				i pP	pP	22 31 37.7	-2.2
	comp=Z,9.1nm,1.0s						
BRG	Berggiesshubel	73.57	320	eP	P	22 31 29.9	+0.7
	comp=Z,11nm,0.8s,baz=89,slow=5.7						
BRG				epP	pP	22 31 39.9	-1.3
	baz=89,slow=5.7						
BRG	Berggiesshubel	73.57	320	eP	P	22 31 29.8	+0.7
BRG				Amp		22 31 32.0	
	comp=Z,3.4nm,0.9s						
BRG				pP	pP	22 31 40.2	-1.0
BRG				Amp		22 31 41.0	
	comp=Z,11nm,0.8s						
RUE	Ruedersdorf	73.70	321	eP	P	22 31 30.5	+0.7
	comp=Z,42nm,0.8s,baz=89,slow=5.7						
RUE				epP	pP	22 31 40.7	-1.2
	baz=89,slow=5.7						
GEC2	GERESS Array S	73.71	318	IAmb	IAmb	22 31 41.8	
	comp=Z,14nm,0.8s						
GEC2	GERESS Array S	73.71	318	eP	P	22 31 31.1	+0.9
	comp=Z,14nm,0.8s,baz=89,slow=5.7						
GEC2				epP	pP	22 31 40.8	-1.4
	baz=89,slow=5.7						
GERES	GERESS Array B	73.71	318	P	P	22 31 30.4	+0.2
GERES	GERESS Array B	73.71	318	P	P	22 31 30.6	+0.5
	comp=Z,2.0nm,0.7s,baz=89,slow=5.4,SNR=18						
GERES				LR	LR	23 08 45.9	
	comp=Z,39nm,18.4s,baz=72,slow=40						
	comp=Z,2.0nm,0.7s						
BIOA	Bad Ischl, Aus	73.75	316	eP	P	22 31 30.5	+0.2
	comp=Z,3.5nm,1.0s						
BIOA				epP	pP	22 31 40.0	-2.4
	comp=Z,8.3nm,1.0s						
DEL	Delary	73.78	325	i P	P	22 31 30.0	-0.2
KHC	Kasperske Hory	73.79	318	eP	P	22 31 30.5	0.0
KHC				ex	x	22 31 40.9	
PRED	Cave del Predi	73.81	315	P	P	22 31 30.8	0.0
PRED				IAmb	IAmb	22 31 42.4	
	comp=Z,16nm,0.8s						
LUNU	Lund	73.98	325	eP	P	22 31 32.0	+0.6
FAUS	Fauske	74.01	337	eP	pP	22 31 41.3	-2.1
RGN	Rugen	74.03	323	eP	P	22 31 32.4	+0.8
	comp=Z,13nm,0.7s,baz=89,slow=5.7						
RGN				epP	pP	22 31 42.8	-0.9
	baz=89,slow=5.7						
HFS	Hagfors	74.06	329	P	P	22 31 31.9	0.0
	comp=Z,3.2nm,0.8s,baz=133,slow=6.3,SNR=4.9						
	comp=Z,3.2nm,0.8s						
STEI	Steigen	74.09	337	eP	pP	22 31 41.8	-2.1
CLL	Collm	74.17	320	eP	P	22 31 32.8	+0.2
	comp=Z,7.0nm,0.9s,baz=89,slow=5.7						
CLL				epP	pP	22 31 43.1	-1.6
	baz=89,slow=5.7						
CLL	Collm	74.17	320	eP	P	22 31 33.0	+0.4
CLL				i pP	pP	22 31 42.6	-2.1
	comp=Z,10.0nm,0.9s						
WET	Wettzell	74.25	318	eP	P	22 31 33.9	+0.7
	comp=Z,6.7nm,0.8s,baz=89,slow=5.7						
WET				epP	pP	22 31 43.8	-1.5
	baz=89,slow=5.7						
LPHEP	Lephephe	74.26	241	P	P	22 31 34.4	+0.6
LPHEP				IAmb	IAmb	22 31 54.9	
	comp=Z,26nm,1.4s						
LPHEP	Lephephe	74.26	241	i P	P	22 31 35.3	+1.5
RJOB	Jochberg	74.32	316	eP	P	22 31 33.6	-0.1
	comp=Z,6.5nm,0.8s,baz=89,slow=5.7						
RJOB				epP	pP	22 31 44.1	-1.7
	baz=89,slow=5.7						
PHDHD	Phuduhudu	74.33	245	IAmb	IAmb	22 31 36.6	
	comp=Z,16nm,1.1s						
LESA	Schwarzleotal	74.41	316	i P	P	22 31 34.2	0.0
	comp=Z,1.9nm,0.6s						
LESA				i pP	pP	22 31 43.9	-2.4
	comp=Z,7.9nm,0.8s						
TANN	Tannenbergstha	74.51	319	eP	P	22 31 35.4	+0.7
	comp=Z,6.0nm,1.0s,baz=89,slow=5.7						
TANN				epP	pP	22 31 45.3	-1.5
	baz=89,slow=5.7						
ABTA	Abfaltersbach	74.53	315	i P	P	22 31 34.7	-0.2
	comp=Z,2.4nm,1.1s						
ABTA				i pP	pP	22 31 44.7	-2.3
	comp=Z,5.8nm,1.1s						
ROTZ	Rotzenmuhle	74.68	318	eP	P	22 31 36.7	+1.1
	comp=Z,2.8nm,1.0s,baz=89,slow=5.7						
ROTZ				epP	pP	22 31 46.3	-1.4
	baz=89,slow=5.7						
VAGH	Vaagaholmen	74.73	336	eP	pP	22 31 45.6	-2.0
LEIR	Leirfjorden	74.74	335	eP	pP	22 31 45.7	-2.0
MANZ	Manzenberg	74.74	319	eP	P	22 31 37.3	+1.3
	comp=Z,1.9nm,0.8s,baz=89,slow=5.7						
MANZ				epP	pP	22 31 46.7	-1.4
	baz=89,slow=5.7						
LOF	Lofoten	74.75	338	eP	pP	22 31 45.3	-2.4
NEUB	Neuenburg	74.94	320	eP	P	22 31 37.5	+0.4
	comp=Z,12nm,0.9s,baz=89,slow=5.7						
NEUB				epP	pP	22 31 48.0	-1.2
	baz=89,slow=5.7						
MOX	Moxa	75.05	319	eP	P	22 31 38.3	+0.5
	comp=Z,5.3nm,0.7s,baz=89,slow=5.7						
MOX				epP	pP	22 31 48.5	-1.4
	baz=89,slow=5.7						
LBTB	Lobatse	75.08	240	LR	LR	22 59 31.0	
	comp=Z,142nm,19.2s,baz=72,slow=32						
WTTA	Wattenberg	75.12	316	eP	P	22 31 38.1	-0.3
	comp=Z,3.2nm,0.7s						
WTTA				i pP	pP	22 31 47.7	-2.9
	comp=Z,9.7nm,0.6s						
NC602	NORSAR Array S	75.16	330	eP	pP	22 31 47.9	-2.3
WATA	Walderalm	75.16	316	i P	P	22 31 38.2	-0.4
	comp=Z,2.7nm,1.0s						
WATA				i pP	pP	22 31 47.6	-3.1
	comp=Z,6.6nm,0.7s						
GORT1	Trebel	75.21	322	eP	P	22 31 39.4	+0.8
	comp=Z,12nm,1.0s,baz=89,slow=5.7						
GORT1				epP	pP	22 31 49.4	-1.2
	baz=89,slow=5.7						
SHEM	Shemya Is, Ala	75.24	38	LR	LR	23 07 54.8	
	comp=Z,37nm,18.7s,baz=304,slow=38						
FLTG	Flechtingen	75.26	321	eP	P	22 31 38.9	0.0
	comp=Z,5.4nm,0.8s,baz=89,slow=5.7						
FLTG				epP	pP	22 31 48.8	-2.2
	baz=89,slow=5.7						
GRF	Grafenberg Arr	75.32	318	eP	P	22 31 40.6	+1.2
	comp=Z,12nm,0.9s,baz=89,slow=5.7						
GRF				epP	pP	22 31 50.1	-1.4
	baz=89,slow=5.7						
NB2	NORSAR Subarra	75.32	330	P	P	22 31 38.7	-0.5
	comp=Z,5.7nm,0.7s,baz=90,slow=6.2						
NB2	NORSAR Subarra	75.32	330	P	P	22 31 38.7	-0.5
	baz=90,slow=6.2						
NOA	NORSAR Array B	75.32	330	P	P	22 31 38.5	-0.7
	comp=Z,3.4nm,1.0s,baz=90,slow=5.7,SNR=5.4						
NOA				LR	LR	23 07 30.2	
	comp=Z,66nm,20.1s,baz=105,slow=38						
	comp=Z,3.4nm,1.0s						
FUR	Furstenfeldbru	75.33	317	eP	P	22 31 40.0	+0.5
	comp=Z,8.4nm,0.8s,baz=89,slow=5.7						
FUR				epP	pP	22 31 49.8	-1.8
	baz=89,slow=5.7						
SPITS	Spitsbergen Ar	75.38	348	P	P	22 31 39.9	+0.7
	comp=Z,1.6nm,0.7s,baz=104,slow=10,SNR=10						
SPITS				LR	LR	23 11 54.2	
	comp=Z,52nm,18.3s,baz=87,slow=41						
	comp=Z,1.6nm,0.7s						
SQTA	Sankt Quirin	75.41	316	i P	P	22 31 39.8	-0.2
	comp=Z,1.7nm,0.4s						
SQTA				i pP	pP	22 31 49.2	-3.0
	comp=Z,14nm,0.8s						
MOTA	Moosalm	75.48	316	eP	P	22 31 40.0	-0.5
	comp=Z,7.3nm,1.4s						
MOTA				epP	pP	22 31 49.6	-3.0
	comp=Z,9.5nm,0.7s,SNR=5.1						
ASSE	Asse, Remlinge	75.61	321	eP	P	22 31 41.3	+0.5
	comp=Z,8.2nm,1.0s,baz=89,slow=5.7						
ASSE				epP	pP	22 31 51.4	-1.5
	baz=89,slow=5.7						
RETA	Reutte	75.70	316	i P	P	22 31 41.6	0.0
	comp=Z,4.9nm,1.1s						
RETA				epP	pP	22 31 51.1	-2.7
	comp=Z,14nm,0.8s,SNR=5.3						
FETA	Feichten	75.75	316	i P	P	22 31 42.1	0.0
	comp=Z,2.2nm,0.8s						
FETA				epP	pP	22 31 52.3	-1.9
	comp=Z,11nm,0.9s,SNR=5.5						
BSEG	Bad Segeberg	75.79	323	eP	P	22 31 43.0	+1.1
	comp=Z,16nm,0.9s,baz=89,slow=5.7						
BSEG				epP	pP	22 31 52.8	-1.2
	baz=89,slow=5.7						
NRDL	Niedersach Rie	75.95	321	eP	P	22 31 44.0	+1.3
	comp=Z,14nm,1.2s,baz=89,slow=5.7						
NRDL				epP	pP	22 31 53.5	-1.3
	baz=89,slow=5.7						
GTTG	Gottingen	76.06	320	eP	P	22 31 44.2	+0.6
	comp=Z,14nm,0.8s,baz=89,slow=5.7						
GTTG				epP	pP	22 31 54.1	-1.6
	baz=89,slow=5.7						
UBBA	Unterbreizbach	76.07	320	eP	P	22 31 44.3	+0.8
	baz=89,slow=5.7						
UBR	Ueberruh	76.14	316	eP	P	22 31 44.1	0.0
	comp=Z,8.8nm,0.8s,baz=89,slow=5.7						
UBR				epP	PcP	22 31 54.0	-2.1
	baz=89,slow=5.7						
DAVA	Damuels	76.31	316	i P	P	22 31 45.5	+0.2
	comp=Z,5.5nm,0.9s						
DAVA				i pP	PcP	22 31 54.6	-2.5
	comp=Z,16nm,0.7s						
RETH	Rethem/Aller,	76.39	322	eP	P	22 31 46.0	+0.6
	comp=Z,5.7nm,0.9s,baz=89,slow=5.7						
RETH				epP	PcP	22 31 55.6	-1.4
	baz=89,slow=5.7						
BOSA	Boshof	76.68	237	P	P	22 31 47.9	+0.4
	comp=Z,3.6nm,0.8s,baz=43,slow=7.0,SNR=7.8						
BOSA				LR	LR	23 02 13.3	
	comp=Z,136nm,18.4s,baz=62,slow=33						
	comp=Z,3.6nm,0.8s						
STU	Stuttgart	76.69	318	eP	P	22 31 47.5	+0.4
	comp=Z,18nm,0.7s,baz=89,slow=5.7						
STU				epP	PcP	22 31 57.6	-0.8
	baz=89,slow=5.7						
TUE	Stuetta	76.72	315	P	P	22 31 47.3	-0.4
TUE				IAmb	IAmb	22 32 02.4	
	comp=Z,8.3nm,0.8s						
KASTN	Kahler Asten	77.05	320	eP	P	22 31 49.8	+0.7
	comp=Z,6.1nm,1.1s,baz=89,slow=5.7						
KASTN				epP	PcP	22 31 59.5	-0.5
	baz=89,slow=5.7						
TNS	Taunus Mts	77.09	319	eP	P	22 31 50.1	+0.7
	comp=Z,2.9nm,0.7s,baz=89,slow=5.7						
TNS				epP	PcP	22 31 59.9	-0.3
	baz=89,slow=5.7						
KGCAE	Kacgae	77.25	243	i P	P	22 31 52.4	+1.5
BFO	Black Forest	77.29	317	eP	P	22 31 50.7	+0.1
	comp=Z,10nm,1.3s,baz=89,slow=5.7						
BFO				epP	PcP	22 32 01.0	-0.1
	baz=89,slow=5.7						
IBBN	Ibbenburen	77.39	321	eP	P	22 31 52.0	+1.0
	comp=Z,16nm,0.8s,baz=89,slow=5.7						
IBBN				epP	PcP	22 32 01.7	+0.3
	baz=89,slow=5.7						
PHPEN	Phepeng	77.56	240	P	P	22 31 52.6	+0.1
PHPEN				IAmb	IAmb	22 31 54.7	
	comp=Z,15nm,1.1s						
BUG	Bochum--Univer	77.75	320	eP	P	22 31 53.9	+0.8
	comp=Z,11nm,1.1s,baz=89,slow=5.7						

BUG				epP	PcP	22 32 03.9	+0.9
	baz=89,slow=5.7						
SENIN	Lac Senin/Sane	78.14	315	P	P	22 31 55.2	-0.4
LKGWB	Lokgwabe	78.52	242	P	P	22 31 55.7	-2.2
WLF	Walferdange	78.61	319	eP	P	22 31 59.2	+1.3
	baz=89,slow=5.7						
BNI	Bardonecchia	78.70	314	IAmb	IAmb	22 32 13.1	
	comp=Z,16nm,1.1s						
KOOLE	Kule	79.05	244	i P	P	22 32 02.3	+1.4
CASY	Casey	79.33	173	P	P	22 32 00.6	-0.6
DZM	Mont Dzumac	79.89	115	eLR	LR	22 56 51.4	
	comp=Z,90nm,23.8s						
DZM	Mont Dzumac	79.89	115	LR	LR	23 14 17.0	
	comp=Z,60nm,18.1s,baz=202,slow=41						
TSUM	Tsumeb	80.25	248	LR	LR	23 05 38.9	
	comp=Z,124nm,18.1s,baz=115,slow=34						
JMIC	Jan Mayen	82.22	341	LR	LR	23 11 57.4	
	comp=Z,68nm,19.3s,baz=43,slow=38						
MAW	Mawson	82.42	191	P	P	22 32 17.6	-0.1
	comp=Z,2.4nm,0.7s,baz=9.8,slow=11,SNR=4.1						
	comp=Z,2.4nm,0.7s						
TAM	Tamanrasset	82.80	292	IAmb	IAmb	22 34 59.6	
	comp=Z,7.9nm,0.6s						
CEST	Esterri de Car	82.93	312	P	P	22 32 20.9	-0.4
EKA	Eskdalemuir Ar	83.41	325	P	P	22 32 23.6	+0.3
	comp=Z,2.3nm,0.8s,baz=103,slow=3.6,SNR=3.4						
	comp=Z,2.3nm,0.8s						
C18K	Utukok River	84.54	21	IAmb	IAmb	22 32 41.4	
	comp=Z,17nm,1.3s						
D19K	Kuna River	85.65	20	IAmb	IAmb	22 32 51.5	
	comp=Z,12nm,1.1s						
D20K	Etivluk River	86.07	20	IAmb	IAmb	22 32 54.5	
	comp=Z,11nm,1.0s						
E19K	Redstone River	86.36	21	IAmb	IAmb	22 32 48.0	
	comp=Z,6.6nm,0.9s						
B22K	Teshekpuk Lake	86.40	18	IAmb	IAmb	22 32 41.6	
	comp=Z,14nm,1.2s						
J16K	Anvik River	86.59	26	IAmb	IAmb	22 32 53.4	
	comp=Z,9.3nm,1.0s						
F20K	Avaraart Lake	87.06	21	IAmb	IAmb	22 32 44.1	
	comp=Z,5.8nm,0.9s						
E21K	Killik River	87.07	20	IAmb	IAmb	22 32 57.7	
	comp=Z,9.3nm,0.9s						
D22K	Ayikyak River	87.29	19	IAmb	IAmb	22 33 04.0	
	comp=Z,9.4nm,1.1s						
ESDC	Sonseca Array	87.38	310	P	P	22 32 43.2	-0.3
ESDC	Sonseca Array	87.38	310	P	P	22 32 43.7	+0.2
	comp=Z,1.3nm,1.0s,baz=40,slow=4.5,SNR=7.1						
	comp=Z,1.3nm,1.0s						
H19K	Roundabout Mou	87.42	23	IAmb	IAmb	22 33 01.0	
	comp=Z,5.2nm,0.9s						
D23K	Nanushuk River	87.89	19	P	P	22 32 45.6	+0.3
D23K				IAmb	IAmb	22 33 08.3	
	comp=Z,11nm,1.1s						
E22K	Anaktuvuk Pass	87.92	20	P	P	22 32 46.7	+1.2
E22K				IAmb	IAmb	22 32 48.4	
	comp=Z,12nm,1.4s						
TORD	Torodi Ar. Bea	88.23	283	P	P	22 32 47.6	-0.3
IMAR	Indian Mountai	88.23	22	P	P	22 32 48.6	+1.6
J19K	Poorman	88.37	24	P	P	22 32 48.8	+1.1
J19K				IAmb	IAmb	22 33 07.4	
	comp=Z,8.2nm,1.1s						
TOLK	Toolik Lake Re	88.40	19	P	P	22 32 48.8	+1.0
TOLK				IAmb	IAmb	22 33 04.3	
	comp=Z,8.5nm,0.9s						
E23K	Chandalar	88.68	19	IAmb	IAmb	22 33 19.9	
	comp=Z,7.5nm,1.2s						
H21K	Melozitna Rive	88.73	22	IAmb	IAmb	22 32 53.3	
	comp=Z,11nm,1.2s						
J20K	Nowinta River	88.88	24	IAmb	IAmb	22 33 06.6	
	comp=Z,5.2nm,1.0s						
G23K	Bananza Creek	89.22	21	IAmb	IAmb	22 33 10.4	
	comp=Z,6.7nm,1.2s						
K20K	Telida	89.27	24	IAmb	IAmb	22 32 55.4	
	comp=Z,10.0nm,1.1s						
MVO	Moncorvo	89.28	312	epP	pP	22 33 03.7	-1.2
MDT	Midelt	89.52	303	LR	LR	23 21 33.1	
	comp=Z,41nm,18.4s,baz=90,slow=41						
H23K	Yukon River	89.83	21	IAmb	IAmb	22 33 11.5	
	comp=Z,5.3nm,1.0s						
PCAB	Cabril	89.85	313	epP	pP	22 33 06.5	-1.0
MTE	Manteigas	89.86	311	eP	P	22 32 58.5	+3.2
MTE				i Amb		22 33 06.9	
	comp=Z,14nm,1.8s						
PMRV	Marv??o	90.01	310	epP	pP	22 33 07.5	-0.7
CAST	Castle Rocks	90.04	24	P	P	22 32 55.7	+0.1
PBAR	Barrancos	90.08	309	eP	P	22 32 57.6	+1.4
PBAR				i Amb		22 33 08.6	
	comp=Z,20nm,1.4s						
BPAW	Bear Paw Mtn.	90.15	23	IAmb	IAmb	22 32 59.0	
	comp=Z,6.9nm,0.9s						
M20K	Styx River	90.32	26	IAmb	IAmb	22 33 10.7	
	comp=Z,4.3nm,0.7s						
PSARD	Sardoal	90.53	311	eP	P	22 32 56.0	-2.3
PSARD				i Amb		22 33 01.1	
	comp=Z,20nm,1.5s						
PSARD				epP	pP	22 33 10.3	-0.4
F26K	Sheenjek River	90.62	19	IAmb	IAmb	22 33 12.2	
	comp=Z,4.3nm,0.8s						
NEA2	Nenana	90.63	22	IAmb	IAmb	22 33 14.9	
	comp=Z,6.2nm,1.0s						
BMAR	Burnt Mountain	90.64	19	P	P	22 32 58.9	+0.6
EVO	Evora	90.72	310	eP	P	22 33 01.5	+2.3
PMTG	Montargil	90.73	310	epP	pP	22 33 10.4	-1.2
PVAQ	Vaqueiros	90.80	308	epP	pP	22 33 11.6	-0.4
PBDV	Barranco-do-Ve	91.01	308	epP	pP	22 33 12.8	-0.1
ILAR	Eielson Array	91.33	22	P	P	22 32 59.0	-2.5
	comp=Z,0.9nm,0.8s,baz=287,slow=4.3,SNR=8.5						
ILAR				LR	LR	23 18 14.5	
	comp=Z,65nm,18.3s,baz=308,slow=38						
	comp=Z,0.9nm,0.8s						
PFVI	Vila Bisbo	91.73	308	eP	P	22 33 07.2	+3.3
J25K	Salcha River,	91.97	21	IAmb	IAmb	22 33 19.2	
	comp=Z,3.8nm,1.0s						
H27K	Steamboat Moun	92.33	19	P	P	22 33 06.9	+0.8
H27K				IAmb	IAmb	22 33 22.9	
	comp=Z,4.1nm,0.9s						
KDAK	Kodiak Island	92.44	29	LR	LR	23 19 15.4	
	comp=Z,67nm,19.6s,baz=298,slow=38						
J26L	Joseph Creek	92.67	21	IAmb	IAmb	22 33 17.4	
	comp=Z,3.7nm,0.8s						
SCRK	Sand Creek	92.83	22	IAmb	IAmb	22 33 11.1	
	comp=Z,4.3nm,0.8s						
DOT	Dot Lake	92.99	22	IAmb	IAmb	22 33 20.5	
	comp=Z,3.8nm,1.0s						
URZ	Urewera	93.11	128	LR	LR	23 18 07.7	
	comp=Z,99nm,18.2s,baz=36,slow=38						
INK	Inuvik	93.29	16	LR	LR	23 21 20.5	
	comp=Z,36nm,20.6s,baz=270,slow=39						
I28M	Miner Creek	93.33	19	IAmb	IAmb	22 33 27.0	
	comp=Z,4.7nm,0.9s						
H29M	Whitestone	93.33	18	P	P	22 33 10.4	-0.3
H29M				IAmb	IAmb	22 33 34.3	
	comp=Z,4.7nm,1.0s						
DAWY	Dawson	94.38	20	P	P	22 33 16.6	+1.0
DAWY				IAmb	IAmb	22 33 35.0	
	comp=Z,7.1nm,1.3s						
I30M	Mount Dempster	94.61	19	P	P	22 33 16.2	-0.5
I30M				IAmb	IAmb	22 33 34.8	
	comp=Z,4.1nm,0.9s						
DBIC	Dimbokro	95.93	278	LR	LR	23 18 02.3	
	comp=Z,56nm,18.3s,baz=134,slow=36						
SFJD	Kangerlussuaq	96.65	346	LR	LR	23 27 19.9	
	comp=Z,61nm,18.1s,baz=32,slow=42						
PPT2	Papeete2	119.80	103	eLR	LR	23 15 21.7	
	comp=Z,107nm,29.0s						
PPT2				eLR	LR	23 15 23.6	
	comp=Z,44nm,23.2s						
TBI	Tubuai	120.16	110	eLR	LR	23 15 35.1	
	comp=Z,979nm,41.2s						
PDAR	Pinedale Array	121.67	19	PKP	PKiKP	22 38 51.1	+0.6
	comp=Z,0.6nm,0.7s,baz=352,slow=3.0,SNR=5.0						
ECSD	EROS Data Cent	123.74	8	PKPdf	PKPdf	22 38 53.0	-1.0
TAOE	Nuku Hiva Isla	128.02	92	eLR	LR	23 19 09.0	
	comp=Z,328nm,27.0s						
TXAR	Lajitas Array	135.84	21	PKP	PKPdf	22 39 14.3	-3.2
	comp=Z,0.5nm,0.6s,baz=67,slow=1.0,SNR=6.0						
JCT	Junction City	135.94	16	PKPdf	PKiKP	22 39 18.8	-0.4
LL02	Futaleuf	146.30	201	PKPdf	PKPdf	22 39 35.7	+0.1
PLCA	Paso Flores	147.94	204	PKPbc	PKPbc	22 39 42.0	+0.4
PLCA	Paso Flores	147.94	204	PKPbc	PKPbc	22 39 40.3	-1.2
	comp=Z,2.0nm,0.8s,baz=91,slow=5.1,SNR=4.4						
CPUP	Villa Florida	148.47	239	PKPbc	PKPdf	22 39 41.3	+1.6
	comp=Z,1.1nm,1.0s,baz=94,slow=2.2,SNR=6.0						

*IDC **17** 22:22:06.3±1.2, 40°.12N×140°.48E, h0^{km}, mb3.8/6, mbtmp3.8/10, ML3.8/3, Error ellipse: s-maj=22.3km s-min=18.7km az=108.0*

*JMA **17** 22:22:06.8±0.0, 40°.1N±0°.1×140°.6E±0°.2, h6^{km}±1^{km}, MD3.9/20, MV3.8/20, NORTHERN AKITA PREF*

JMA Felt II J1 at NORTHERN AKITA PREF .

*NIED **17** 22:22:06.8, 40°.05N×140°.60E, h6^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.02; $M_{\theta\theta}$1.97; $M_{\phi\phi}$-2.99; $M_{r\theta}$0.39; $M_{\theta\phi}$1.27; $M_{\phi r}$0.37; Fault plane solution: $M_0$2.87000×10^{14} NP1: ϕ_s123.00000°, δ74.00000°, λ11.00000°. NP2: ϕ_s30.00000°, δ80.00000°, λ164.00000°.*

ISC 17 22:22:07.0±1.3**, 40°.10N**±0°.07×**140°.50E**±0°.09**, h7**^{km}±10^{km}**, n21,** σ2^{s}04/17**, mb3.9**/6**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAH	Hinai	0.14	49	P	Pg	22 22 09.9	0.0
JAH				S	Sg	22 22 12.0	+0.1
JAH	Hinai	0.14	49	A	A	22 22 09.9	
	comp=N,73nm,0.5s,comp=E,102nm,1.1s						
JNTW	Noshirotokiwa	0.31	303	A	A	22 22 14.8	
	comp=N,57nm,3.2s,comp=E,45nm,3.7s						
JSZI	Iwateshizukuis	0.50	136	A	A	22 22 15.0	
	comp=N,14nm,2.4s,comp=E,17nm,2.5s						
JHHS	Hirosakihyakuz	0.56	349	A	A	22 22 19.0	
	comp=N,14nm,2.5s,comp=E,8.0nm,2.4s						
JYW	Yuwa	0.60	202	A	A	22 22 18.3	
	comp=N,17nm,0.3s,comp=E,39nm,0.4s						
JIW	Iwasaki	0.62	323	A	A	22 22 20.5	
	comp=N,5.0nm,2.2s,comp=E,5.0nm,0.5s						
JRG	Rokugo	0.71	172	A	A	22 22 19.5	
	comp=N,5.0nm,2.2s,comp=E,7.0nm,3.8s						
JSI2	Shiura 2	0.96	356	A	A	22 22 26.2	
	comp=N,2.0nm,3.1s,comp=E,3.0nm,0.7s						
JOG3	Oga3	1.11	261	A	A	22 22 18.9	
	comp=N,3.0nm,1.9s,comp=E,5.0nm,2.5s						
MJAR	Matsushiro Arr	3.98	208	Pn	Pn	22 23 09.0	+0.5
	comp=E,1.0nm,0.3s,baz=38,slow=13,SNR=6.5						
MJAR				Sn	Sn	22 23 56.7	+1.2
	comp=E,0.2nm,0.3s,baz=18,slow=17,SNR=4.9						
MJAR				Lg	Lg	22 24 07.2	
	comp=E,0.5nm,0.3s,baz=360,slow=26,SNR=7.1						
ASAJ	Asahikawa	4.30	21	Pn	Pn	22 23 14.2	+1.3
	comp=E,2.7nm,0.3s,baz=228,slow=11,SNR=11						
ASAJ				Sn	Sn	22 24 04.0	+0.6
	comp=E,0.7nm,0.3s,baz=201,slow=31,SNR=1.6						
	comp=E,6.3nm,0.3s						
USRK	Ussuriysk Ar.	7.53	306	Pn	Pn	22 23 57.7	+0.5
	comp=E,2.0nm,0.3s,baz=112,slow=14,SNR=23						
USRK				Sn	Sn	22 25 22.5	-0.4
	comp=E,0.6nm,0.3s,baz=117,slow=26,SNR=6.1						
USRK				Lg	Lg	22 26 03.7	
	baz=117,slow=25						
	comp=E,5.1nm,0.4s						
KSRS	Korea Array	10.17	259	Pn	Pn	22 24 35.9	+2.5
	comp=E,1.8nm,0.3s,baz=66,slow=14,SNR=22						
KSRS				Sn	Sn	22 26 30.1	+2.5
	comp=E,1.4nm,0.3s,baz=74,slow=24,SNR=14						
	comp=E,7.4nm,0.6s						
NJ2	Nanjing	19.22	252	eP	P	22 26 25.6	-6.0
NJ2				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NJ2				LR	LR		
	comp=N,420nm,17.9s						
NJ2				LR	LR		
	comp=E,230nm,17.0s						
NJ2				LR	LR		
	comp=Z,340nm,21.7s						
ZALV	Zalesovo Beam	39.37	310	P	P	22 29 37.5	+0.7
	comp=Z,0.8nm,0.5s,baz=90,slow=12,SNR=1.4						
	comp=Z,0.8nm,0.5s						
KURBB	Kurchatov Arra	43.60	305	P	P	22 30 11.1	-0.5
	comp=Z,1.2nm,0.5s,baz=79,slow=8.6,SNR=4.1						
	comp=Z,1.2nm,0.5s						
ILAR	Eielson Array	47.32	34	P	P	22 30 41.4	+0.4
	comp=Z,0.4nm,0.7s,baz=255,slow=6.2,SNR=4.6						
	comp=Z,0.4nm,0.7s						
BVAR	Borovoye Array	48.02	310	P	P	22 30 46.7	+0.2
	comp=Z,0.7nm,0.5s,baz=71,slow=8.1,SNR=1.8						
	comp=Z,0.7nm,0.5s						
WRA	Warramunga Arr	60.01	187	P	P	22 32 14.4	+0.1
	comp=Z,0.5nm,0.7s,baz=3.7,slow=6.9,SNR=2.5						
	comp=Z,0.5nm,0.7s						
FINES	FINESS Array B	65.78	331	P	P	22 32 51.8	-0.5
	comp=Z,0.8nm,0.6s,baz=22,slow=7.0,SNR=1.3						
	comp=Z,0.8nm,0.6s						

*IDC **17** 22:28:20.4±0.7, 31°.64N×141°.91E, h0^{km}, mb3.9/16, mbtmp3.9/20, ML3.3/3, Error ellipse: s-maj=26.3km s-min=15.2km az=70.0*

*NEIC **17** 22:28:22.2±1.4, 31°.65N±0°.09×141°.9E±0°.1, h10^{km}±1^{km}, mb4.4/14, Error ellipse: s-maj=20.2km s-min=10.3km az=230.0*

*JMA **17** 22:28:23.7±0.5, 32°N±2°×14°2E±°, h50^{km}, MV3.6/18, NEAR TORISHIMA IS*

ISC 17 22:28:24.7±0.6**, 31°.64N**±0°.06×**141°.87E**±0°.09**, h29**^{km}**, n53,** σ**1**^{s}**09**/57**, mb4.0**/24**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAOM	Aogashimamukai	1.97	295	eP	Pn	22 28 56.1	0.0
JHCJ	Hachijojimakas	2.26	310	eP	Pn	22 29 00.0	-0.1
JHJ2	Mitsune	2.27	311	Pn	Pn	22 28 58.9	-1.3
JHJ2	Mitsune	2.27	311	eP	Pn	22 28 59.0	-1.3
JHJ2				eS	Sn	22 29 25.8	-1.5
BSO1	Boso 1	3.09	346	eP	Pn	22 29 10.2	-1.0
BSO4	Boso 4	3.58	339	eP	Pn	22 29 17.6	-0.6
CBIJ	Chichi jima	4.54	176	eP	Pn	22 29 32.4	+0.9
JCJ	Chichijima	4.54	176	Pn	Pn	22 29 29.4	-2.1
	26nm,0.4s						
JCJ				Sn	Sn	22 30 19.7	-3.6
JRY	Ryogami san	5.01	331	P	Pn	22 29 38.1	+0.1
JAG	Ashikaga	5.17	338	eP	Pn	22 29 39.3	-0.9
JGF	Kuroka	5.45	318	Pn	Pn	22 29 45.4	+1.3
MJAR	Matsushiro Arr	5.75	329	Pn	Pn	22 29 48.3	+0.1
	0.4nm,0.3s,baz=160,slow=13,SNR=15						
MJAR				Sn	Sn	22 30 49.2	-4.0
	0.3nm,0.3s,baz=216,slow=5.6,SNR=4.6						
	3.3nm,0.5s						
MAJO	Matsushiro	5.75	329	Pn	Pn	22 29 47.4	-0.8
MJB9	Matsu-Tunnel	5.76	329	Pn	Pn	22 29 49.0	+0.7
JMM	Marumori	6.27	352	Pn	Pn	22 29 53.0	-2.3
JSD	Sado	7.03	336	Pn	Pn	22 30 04.6	-1.1
JMK	Ichinoseki	7.31	356	eP	Pn	22 30 08.7	-0.8
KSRS	Korea Array	12.87	301	Pn	Pn	22 31 26.5	+0.8
	0.3nm,0.3s,baz=109,slow=14,SNR=1.4						
	0.3nm,0.3s						
KLR	Kul'dur	19.15	339	P	P	22 32 45.1	-0.5
	0.1nm,0.3s,baz=160,slow=13,SNR=2.4						
	1.3nm,0.7s						
SONM	Songino Array	31.38	311	P	P	22 34 44.3	+1.3
	1.0nm,0.4s,baz=115,slow=9.7,SNR=4.0						
	1.0nm,0.4s						
ZALV	Zalesovo Beam	45.95	316	P	P	22 36 44.9	+0.1
	0.8nm,0.6s,baz=102,slow=9.9,SNR=2.9						
	0.8nm,0.6s						
MKAR	Makanchi Array	47.46	306	P	P	22 36 56.9	0.0
MKAR	Makanchi Array	47.46	306	P	P	22 36 57.2	+0.4
	0.6nm,0.5s,baz=84,slow=9.6,SNR=14						
	0.6nm,0.5s						
MAKZ	Makanchi	47.68	307	P	P	22 36 58.4	-0.1
MAKZ				IAmb	IAmb	22 37 07.1	
	comp=Z,4.1nm,1.1s						
P18K	Big Mountain,	49.66	37	P	P	22 37 14.2	+0.7
O18K	Koktuh Hills	49.71	36	P	P	22 37 15.4	+1.5
KURBB	Kurchatov Arra	49.74	312	P	P	22 37 14.4	+0.1
	comp=Z,1.5nm,0.6s,baz=88,slow=6.9,SNR=21						
	comp=Z,1.5nm,0.6s						
WB0	Warramunga Arr	51.62	189	P	P	22 37 28.5	-0.2
WR8	Warramunga Arr	51.79	189	P	P	22 37 30.0	+0.1
WR8				IAmb	IAmb	22 37 42.3	
	comp=Z,5.0nm,0.8s						
WRA	Warramunga Arr	51.80	189	P	P	22 37 30.1	0.0
WRA	Warramunga Arr	51.80	189	P	P	22 37 30.0	0.0
	comp=Z,3.6nm,0.7s,baz=5.9,slow=7.7,SNR=27						
WRA				PcP	PcP	22 38 44.3	+1.4
	comp=Z,0.6nm,0.8s,baz=12,slow=4.0,SNR=1.7						
	comp=Z,3.6nm,0.7s						
AAK	Ala-Archa	53.53	302	P	P	22 37 42.3	-0.6
	comp=Z,1.0nm,0.6s,baz=124,slow=7.3,SNR=1.3						
	comp=Z,1.0nm,0.6s						
ILAR	Eielson Array	53.90	30	P	P	22 37 45.2	+0.2
	comp=Z,0.6nm,0.8s,baz=268,slow=7.0,SNR=4.3						
	comp=Z,0.6nm,0.8s						
BVAR	Borovoye Array	54.57	315	P	P	22 37 50.8	+0.6
	comp=Z,0.5nm,0.5s,baz=98,slow=8.7,SNR=6.0						
	comp=Z,0.5nm,0.5s						
ASAR	Alice Springs	55.52	189	P	P	22 37 57.3	0.0
	comp=Z,0.7nm,0.5s,baz=18,slow=14,SNR=6.5						
	comp=Z,0.7nm,0.5s						
KK31	Karatay Array	56.28	303	P	P	22 38 02.1	-0.5
KKAR	Karatay Array	56.28	303	P	P	22 38 02.4	-0.3
AB31	Akbulak array	61.78	313	P	P	22 38 40.5	-0.1
AB31				IAmb	IAmb	22 39 02.5	
	comp=Z,3.2nm,1.3s						
ABKAR	Akbulak array	61.78	313	P	P	22 38 40.4	-0.2
ABKAR				IAmb	IAmb	22 39 02.5	
	comp=Z,3.2nm,1.3s						
FINES	FINESS Array B	73.77	333	P	P	22 39 56.1	+0.2
	comp=Z,1.1nm,0.7s,baz=69,slow=5.5,SNR=4.9						
	comp=Z,1.1nm,0.7s						
BLKN	Baker Lake	74.20	23	P	P	22 39 58.8	+0.4
BLKN				IAmb	IAmb	22 39 59.1	
	comp=Z,2.1nm,0.6s						
AKASG	Malin Array Be	78.81	323	P	P	22 40 24.5	-0.2
	comp=Z,0.6nm,0.4s,baz=53,slow=5.3,SNR=8.6						
	comp=Z,0.6nm,0.4s						
AKBB	Malin Array Si	78.81	323	P	P	22 40 24.1	-0.7
AKBB				IAmb	IAmb	22 40 53.2	
	comp=Z,4.5nm,1.4s						
KIEV	Kiev	78.82	323	P	P	22 40 24.1	-0.7
KIEV				IAmb	IAmb	22 40 53.2	
	comp=Z,4.4nm,1.4s						
HFS	Hagfors	79.16	336	P	P	22 40 25.7	-0.8
	comp=Z,1.5nm,0.8s,baz=78,slow=9.0,SNR=2.4						
	comp=Z,1.5nm,0.8s						
NOA	NORSAR Array B	79.30	338	P	P	22 40 27.2	-0.1
	comp=Z,0.5nm,0.6s,baz=42,slow=5.5,SNR=3.7						
	comp=Z,0.5nm,0.6s						
PDAR	Pinedale Array	81.19	45	P	P	22 40 38.5	+0.5
	comp=Z,0.3nm,0.5s,baz=267,slow=5.8,SNR=1.8						
	comp=Z,0.3nm,0.5s						
SRU	San Rafael Swe	82.69	48	P	P	22 40 46.4	+0.4
SRU				IAmb	IAmb	22 40 47.5	
	comp=Z,2.1nm,0.8s						
BRTR	Keskin Array B	82.73	312	P	P	22 40 47.0	+0.8
	comp=Z,0.2nm,0.3s,baz=119,slow=10,SNR=4.0						
	comp=Z,0.2nm,0.3s						
BURAR	Bucovina Array	82.78	322	P	P	22 40 46.7	+0.5
TXAR	Lajitas Array	93.09	53	P	P	22 41 37.0	+0.7
	comp=Z,0.8nm,0.7s,baz=298,slow=2.7,SNR=8.4						
	comp=Z,0.8nm,0.7s						
QSPA	South Pole Qui	121.40	180	PKPdf	PKiKP	22 47 14.3	-0.2
QSPA	South Pole Qui	121.40	180	PKP	PKiKP	22 47 14.6	+0.1
	comp=Z,0.7nm,0.9s,baz=43,slow=6.3,SNR=1.9						

*MDD **17** 22:43:46.4±1.0, 36°.79N×11°.08W, h3^{km}±6^{km}, mb_Lg2.7/9, Error ellipse: s-maj=8.1km s-min=4.3km az=75.0*

*INMG **17** 22:43:50.3±1.3, 36°.78N×11°.20W, h30^{km}, ML1.9, Error ellipse: s-maj=5.4km s-min=2.9km az=90.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe*

*CNRM **17** 22:43:54.3, 36°.46N×10°.59W, h34^{km}*

ISC 17 22:43:47.4±2.5**, 36°.77N**±0°.07×**11°.2W**±0°.1**, h35**^{km}**, n58,** σ**1**^{s}**93**/90**, 1D, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	Vila Bisbo	1.91	78	Pn	Pn	22 44 19.3	+1.9
PFVI				Sn	Sn	22 44 40.9	+0.7
PFVI	Vila Bisbo	1.91	78	⇓eP	Pn	22 44 19.3	+1.9
PFVI				eS	Sn	22 44 41.0	+0.8
PFVI				i AML	AML	22 44 41.6	
PFVI				i AML	AML	22 44 41.7	
PFVI				i AML	AML	22 44 42.0	
PFVI	Vila Bisbo	1.91	78	P	Pn	22 44 19.0	+1.5
PFVI	Vila Bisbo	1.91	78	S	Sn	22 44 38.3	-1.8
MORF	Marmelete	2.08	74	eP	Pn	22 44 22.0	+2.2
MORF				eS	Sn	22 44 45.5	+1.0
MORF				i AML	AML	22 44 47.0	
MORF				i AML	AML	22 44 47.0	
MORF				i AML	AML	22 44 48.9	
PTEO	Sao Teotonio	2.10	67	eP	Pn	22 44 22.5	+2.5
PTEO				eS	Sn	22 44 45.9	+1.0
PTEO				i AML	AML	22 44 46.7	
PTEO				i AML	AML	22 44 47.2	
PTEO				i AML	AML	22 44 47.5	
MESJ	Messejana	2.58	65	eP	Pn	22 44 29.4	+2.7
MESJ				eS	Sn	22 44 58.0	+1.2
MESJ				i AML	AML	22 45 00.5	
MESJ				i AML	AML	22 45 01.2	
MESJ				i AML	AML	22 45 04.8	
PBDV	Barranco-do-Ve	2.63	79	eP	Pn	22 44 29.7	+2.3
PBDV				eS	Sn	22 44 58.9	+0.9
PBDV				i AML	AML	22 45 02.9	
PBDV				i AML	AML	22 45 03.5	
PBDV				i AML	AML	22 45 09.3	
PCVE	Castro Verde	2.64	70	Pn	Pn	22 44 30.5	+3.1
PCVE				Sn	Sn	22 44 58.9	+0.6
PCVE	Castro Verde	2.64	70	eP	Pn	22 44 29.3	+1.8
PCVE				eS	Sn	22 44 59.1	+0.8
PCVE				i AML	AML	22 44 59.5	
PCVE				i AML	AML	22 45 00.5	
PCVE				i AML	AML	22 45 00.7	
PMAFR	Mafra	2.65	34	Sn	Sn	22 44 57.9	-0.6
PMAFR	Mafra	2.65	34	eP	Pn	22 44 29.7	+2.1
PMAFR				eS	Sn	22 44 58.5	+0.1
PMAFR				i AML	AML	22 44 58.6	
PMAFR				i AML	AML	22 45 00.6	
PMAFR				i AML	AML	22 45 05.8	
PARRA	Arraiolos	2.65	39	eP	Pn	22 44 37.2	+10
PARRA				eS	Sn	22 45 11.9	+13
PARRA				i AML	AML	22 45 15.8	
PARRA				i AML	AML	22 45 16.6	
PARRA				i AML	AML	22 45 18.2	
PVAQ	Vaqueiros	2.83	76	Pn	Pn	22 44 32.6	+2.5
PVAQ	Vaqueiros	2.83	76	eP	Pn	22 44 32.7	+2.6
PVAQ				eS	Sn	22 45 03.5	+0.6
PVAQ				i AML	AML	22 45 08.6	
PVAQ	Vaqueiros	2.83	76	P	Pn	22 44 31.8	+1.8
PBEJ	Beja	2.91	63	eS	Sn	22 45 05.9	+0.9
PBEJ				i AML	AML	22 45 07.7	
PBEJ				i AML	AML	22 45 08.9	
PBEJ				i AML	AML	22 45 16.7	
EGRO	El Granado	3.04	74	Pn	Pn	22 44 35.5	+2.5
EGRO				Sn	Sn	22 45 07.6	-0.5
EGRO	El Granado	3.04	74	Pn	Pn	22 44 32.6	-0.4
EGRO				Sn	Sn	22 45 07.6	-0.5
EGRO				i IVmb_Lg		22 45 21.0	
EVO	Evora	3.06	54	Sn	Sn	22 45 08.0	-0.6
EVO	Evora	3.06	54	eP	Pn	22 44 34.2	+1.0
EVO				eS	Sn	22 45 08.5	-0.2
EVO				i AML	AML	22 45 11.9	
EVO				i AML	AML	22 45 12.7	
EVO				i AML	AML	22 45 17.2	
PMTG	Montargil	3.27	44	eP	Pn	22 44 37.7	+1.6
PMTG				eS	Sn	22 45 13.5	-0.3
PMTG				i AML	AML	22 45 18.4	
PMTG				i AML	AML	22 45 18.8	
PMTG				i AML	AML	22 45 22.1	
PSBE	So Bento	3.32	33	eP	Pn	22 44 39.8	+2.9
PSBE				eS	Sn	22 45 15.0	-0.1
PSBE				i AML	AML	22 45 18.0	
PSBE				i AML	AML	22 45 19.0	
PSBE				i AML	AML	22 45 34.0	
PESTR	Estremoz	3.52	52	Sn	Sn	22 45 19.9	-0.2
PESTR	Estremoz	3.52	52	eS	Sn	22 45 20.0	-0.1
PESTR				i AML	AML	22 45 33.9	
PESTR				i AML	AML	22 45 42.7	
PBAR	Barrancos	3.57	66	Pn	Pn	22 44 43.1	+2.8
PBAR				Sn	Sn	22 45 21.7	+0.5
PBAR	Barrancos	3.57	66	eP	Pn	22 44 42.6	+2.4
PBAR				eS	Sn	22 45 20.9	-0.3
PBAR				i AML	AML	22 45 22.9	
PBAR				i AML	AML	22 45 26.5	
PBAR				i AML	AML	22 45 28.0	
PSARD	Sardoal	3.69	39	eP	Pn	22 44 43.6	+1.7
PSARD				eS	Sn	22 45 23.3	-0.9
PSARD				i AML	AML	22 45 25.5	
PSARD				i AML	AML	22 45 25.8	
PSARD				i AML	AML	22 45 27.4	
EMIN	Mina Concepcio	3.72	73	Pn	Pn	22 44 44.0	+1.7
EMIN				Sn	Sn	22 45 24.7	-0.3
EMIN	Mina Concepcio	3.72	73	Pn	Pn	22 44 43.2	+0.9
EMIN				Sn	Sn	22 45 24.6	-0.3

EMIN				*i* lVmb_Lg		22 45 27.8	
EBAD	Badajoz	3.84	58	Pn	Pn	22 44 45.8	+1.8
EBAD				Sn	Sn	22 45 27.4	-0.5
EBAD	Badajoz	3.84	58	Pn	Pn	22 44 44.5	+0.5
EBAD				Sn	Sn	22 45 27.0	-0.9
EBAD				*i* lVmb_Lg		22 45 33.0	
PCAS	Casmilo, Conde	3.89	32	*e*P	Pn	22 44 48.0	+3.3
PCAS				*e*S	Sn	22 45 28.5	-0.7
PCAS				*i* AML	AML	22 45 31.0	
PCAS				*i* AML	AML	22 45 31.3	
PCAS				*i* AML	AML	22 45 34.2	
PMRV	Marv??o	3.99	47	*e*P	Pn	22 44 46.9	+0.9
PMRV				*e*S	Sn	22 45 30.4	-1.2
PMRV				*i* AML	AML	22 45 31.2	
PMRV				*i* AML	AML	22 45 32.6	
PMRV				*i* AML	AML	22 45 33.3	
PCBR	Castelo Branco	4.22	42	*e*P	Pn	22 44 50.8	+1.6
PCBR				*e*S	Sn	22 45 36.0	-1.3
ESPR	Espera	4.26	87	Sn	Sn	22 45 37.9	-0.3
PVIS	Viseu	4.70	32	*e*P	Pn	22 44 56.7	+0.9
PVIS				*e*S	Sn	22 45 47.5	-1.7
ECAB	El Cabril	4.75	72	Pn	Pn	22 44 58.4	+1.8
ECAB	El Cabril	4.75	72	Pn	Pn	22 44 56.6	0.0
ECAB				*i* lVmb_Lg		22 45 46.4	
ECAB				Sn	Sn	22 45 48.8	-1.7
EPLA	Plasencia	5.17	49	Sn	Sn	22 45 58.9	-1.9
EPLA				*i* lVmb_Lg		22 46 15.8	
PVRL	Vila Real	5.24	30	*e*S	Sn	22 45 59.9	-2.6
POLO	Lamas de Olo	5.30	29	*e*P	Pn	22 45 04.8	+0.7
POLO				*e*S	Sn	22 46 01.1	-2.8
POLO				*i* AML	AML	22 46 01.5	
POLO				*i* AML	AML	22 46 05.6	
EADA	Adamuz	5.42	73	Pn	Pn	22 45 06.7	+1.0
EADA	Adamuz	5.42	73	Pn	Pn	22 45 06.3	+0.6
EADA				Sn	Sn	22 46 04.6	-2.3
EADA				*i* lVmb_Lg		22 46 09.2	
MVO	Moncorvo	5.45	35	*e*S	Sn	22 46 05.8	-1.8
MVO				*i* AML	AML	22 46 07.5	
MVO				*i* AML	AML	22 46 08.0	
ELOB	Lobios	5.63	24	Pn	Pn	22 45 09.2	+0.5
ELOB				Sn	Sn	22 46 09.4	-2.9
ELOB				*i* lVmb_Lg		22 46 13.8	
PGAV	Gavieira, Arco	5.66	22	*e*P	Pn	22 45 09.7	+0.6
PGAV				*e*S	Sn	22 46 09.7	-3.1
PGAV				*i* AML	AML	22 46 16.3	
PGAV				*i* AML	AML	22 46 16.3	
PGAV				*i* AML	AML	22 46 18.0	
EZAM	Zamans	5.71	19	Sn	Sn	22 46 11.1	-2.8
EZAM				*i* lVmb_Lg		22 46 28.2	
PAB	San Pablo	6.04	61	Sn	Sn	22 46 19.5	-2.8
PSIM	Granatula de C	6.21	68	Pn	Pn	22 45 17.1	+0.4
PSIM				Sn	Sn	22 46 23.0	-3.5
EAGO	Agolada(Pontev	6.48	20	Sn	Sn	22 46 30.6	-2.3
EAGO				*i* lVmb_Lg		22 46 39.2	
MD31	MD31	6.54	125	P	Pn	22 45 22.7	+1.4
MD31	MD31	6.54	125	S	Sn	22 46 27.5	-7.2
TIO	Tiouine	6.67	150	P	Pn	22 45 23.2	+0.2
TIO	Tiouine	6.67	150	S	Sn	22 46 34.1	-3.7
OUZM	OUZ	6.89	147	P	Pn	22 45 26.0	-0.1
OUZM	OUZ	6.89	147	S	Sn	22 46 39.9	-3.5
EPON	Pontenova	7.24	24	Pn	Pn	22 45 30.7	0.0
EPON				Sn	Sn	22 46 48.0	-3.7

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*TIR **17** 22:52:05.6, 40°.11N×19°.86E, h1^{km}±1^{km}, Ml2.4/6*

*ATH **17** 22:52:05.5, 40°.29N×19°.74E, h4^{km}±1^{km}, ML2.5/7, Manual Solution by A.Moschou First location: 2019/06/17 22:53:15, This location: 2020/10/13 05:51:51 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*THE **17** 22:52:06.8, 40°N±2°×2°0E±°, h0^{km}±1^{km}, M2.2/15, MLh2.2/15*

ISC 17 22:52:06.2±1.1**, 40°.17N**±0°.02×**19°.88E**±0°.02**, h5**^{km}±10^{km}**, n37, σ1^{s}27**/70**, 6C-2D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRN	Sarande	0.30	163	⇑*i*Pg	Pg	22 52 11.5	-0.4
SRN				Sg	Sg	22 52 16.2	+0.3
SRN				AML	AML	22 52 17.0	
	1.7nm,0.2s						
SRN	Sarande	0.30	163	P	Pg	22 52 11.6	-0.4
SRN				S	Sg	22 52 16.3	+0.3
VLO	Vlora	0.42	315	⇑*i*Pg	Pb	22 52 14.9	-1.2
VLO				Sg	Sb	22 52 22.0	-0.8
VLO				AML	AML	22 52 29.2	
	3.5nm,0.2s						
VLO	Vlora	0.42	315	P	Pn	22 52 17.1	-1.8
VLO				S	Sb	22 52 23.8	+1.0
KEK	Kerkira	0.46	188	P	Pb	22 52 16.7	-0.1
KEK				S	Sb	22 52 23.9	0.0
KEK	Kerkira	0.46	188	P	Pb	22 52 16.7	-0.1
KEK				S	Sb	22 52 24.3	+0.4
IGT	Igoumenitsa	0.72	151	⇓*e*Pn	Pg	22 52 19.4	-0.7
IGT				Sn	Sb	22 52 30.3	-1.2
IGT				AML	AML	22 52 37.2	
	0.4nm,0.2s						
IGT	Igoumenitsa	0.72	151	P	Pg	22 52 19.3	-0.7
IGT				S	Sb	22 52 31.7	+0.2
IGT	Igoumenitsa	0.72	151	P	Pb	22 52 21.3	0.0
IGT				S	Sn	22 52 34.1	-0.5
LFKM	Lefkimmi	0.73	169	P	Pg	22 52 20.3	0.0
LFKM				S	Sb	22 52 31.5	-0.3
KBN	Korca	0.83	56	⇓*e*Pn	Pg	22 52 21.1	-1.0
KBN				Sn	Sn	22 52 35.8	-1.4
KBN				AML	AML	22 52 39.2	
	0.6nm,0.6s						
KBN	Korca	0.83	56	P	Pg	22 52 20.9	-1.1
KBN				S	Sb	22 52 35.0	+0.4
JAN	Janina	0.90	124	P	Pb	22 52 23.8	-0.6
JAN				S	Sb	22 52 37.0	+0.2
JAN	Janina	0.90	124	P	Pn	22 52 24.8	-0.8
JAN				S	Sn	22 52 39.7	+0.6
NEST	Nestorio	0.93	74	⇑*e*Pn	Pg	22 52 24.0	+0.1
NEST				Sn	Sn	22 52 39.7	0.0
NEST				AML	AML	22 52 42.4	
	0.3nm,0.5s						
NEST	Nestorio	0.93	74	P	Pg	22 52 22.8	-1.1
PENT	Pentalofos	0.96	88	P	Pg	22 52 24.0	-0.6
SCTE	Santa Cesarea	1.09	265	⇑*e*Pn	Pn	22 52 27.2	-1.0
SCTE				Sn	Sn	22 52 43.1	-0.5
SCTE				AML	AML	22 52 46.0	
	1.6nm,0.2s						
KPRO	Kipourio	1.16	100	P	Pb	22 52 27.8	-0.9
KPRO				S	Sn	22 52 45.1	-0.3
OHR	Ohrid	1.17	36	*i* Pn	Pg	22 52 29.6	+0.9
OHR				*i* Sn	Sn	22 52 52.6	+6.9
KZN	Kozani	1.45	84	P	Pb	22 52 33.6	-0.1
KZN				S	Sg	22 52 54.8	+2.0
TSLK	Tsoukalades, L	1.47	156	P	Pb	22 52 33.8	-0.2
TSLK				S	Sg	22 52 53.8	+0.4
TSLK	Tsoukalades, L	1.47	156	P	Pg	22 52 34.9	+0.5
TSLK				S	Sg	22 52 56.4	+3.1
LKD2	Lefkada island	1.50	156	⇑*e*Pn	Pb	22 52 34.5	-0.1
LKD2				Sn	Sg	22 52 55.9	+1.4
LKD2	Lefkada island	1.50	156	P	Pb	22 52 33.9	-0.7
LKD2				S	Sg	22 52 55.8	+1.3
LKD2	Lefkada island	1.50	156	P	Pg	22 52 35.5	+0.6
LKD2				S	Sg	22 52 57.0	+2.6
NYDR	Nydri-Lefkada	1.58	156	P	Pn	22 52 34.8	-0.2
NYDR				S	Sg	22 52 56.7	-0.4
NYDR	Nydri-Lefkada	1.58	156	P	Pg	22 52 36.5	0.0
NYDR				S	Sg	22 52 59.0	+1.9
EVGI	Lefkada island	1.66	159	P	Pb	22 52 37.0	-0.3
EVGI	Lefkada island	1.66	159	P	Pg	22 52 37.6	-0.3
EVGI				S	Sg	22 53 01.4	+2.0
THL	Klokotos Trika	1.75	110	P	Pb	22 52 37.9	-0.8
THL				S	Sg	22 53 01.5	-0.8
THL	Klokotos Trika	1.75	110	P	Pb	22 52 38.7	0.0
THL				S	Sg	22 53 03.3	+1.0
FSK	Fiskardo	1.79	163	P	Pn	22 52 37.5	-0.2
FSK				S	Sb	22 53 01.1	-1.0
TYRN	Tyrnavos	1.86	103	P	Pb	22 52 40.1	-0.6
TYRN				S	Sb	22 53 04.7	+0.3
TYRN	Tyrnavos	1.86	103	P	Pb	22 52 40.3	-0.4
TYRN				S	Sg	22 53 05.5	-0.5
EVR	Evrytania	1.94	129	P	Pg	22 52 42.8	-0.7
NOCI	Noci	2.24	287	⇑*e*Pn	Pb	22 52 47.4	+0.3
NOCI				Sn	Sg	22 53 19.1	+1.1

JMA 17 22:52:55.0±0.2**, 37°.6N**±0°.9×**14°5E**±°**, h50**^{km}**, MV3.5**/22**, FAR E OFF NORTH HONSHU, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.67	287	P	Pn	22 53 36.9	+1.4
JIKH				S	Sn	22 54 08.0	+1.3
JIO	Ouri	2.80	289	P	Pn	22 53 38.7	+1.5
JIO				S	Sn	22 54 11.5	+1.6
OFUJ	Ofunato	2.83	303	P	Pn	22 53 38.9	+1.2
OFUJ				*e*S	Sn	22 54 11.7	+1.2
JKMT	Kesennumamotoy	2.84	297	P	Pn	22 53 39.4	+1.6
JKMT				S	Sn	22 54 12.1	+1.4
JMK	Ichinoseki	3.08	297	P	Pn	22 53 42.8	+1.7
JMK				*e*S	Sn	22 54 18.1	+1.6
JOM	Ohasama	3.29	306	P	Pn	22 53 45.9	+2.0
JOM				*e*S	Sn	22 54 23.8	+2.0
BSO1	Boso 1	4.21	227	*e*S	Sn	22 54 45.4	+1.7
JRY	Ryogami san	4.92	253	P	Pn	22 54 07.6	+1.1
JRY				*e*S	Sn	22 55 02.2	0.0
JHJ2	Mitsune	6.00	223	*e*P	Pn	22 54 20.4	-0.7
JTKR	Abashiri--Toko	6.41	355	*e*P	Pn	22 54 24.9	-1.8

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*AEIC **17** 23:31:27.9±1.5, 53°.83N±0°.03×166°.57W±0°.03, h7^{km}±2^{km}, Error ellipse: s-maj=4.8km s-min=1.3km az=155.0*

NEIC 17 23:31:28.1±1.1**, 53°.76N**±0°.05×**166°.47W**±0°.04**, h10**^{km}±4^{km}**, ML2.8**/6**, ML2.6**(AEIC)**, Error ellipse: s-maj=8.7km s-min=1.1km az=155.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UNV	Unalaska Valle	0.09	346		Pg	23 31 30.6	+0.1
UNV					Sg	23 31 32.1	-0.1
UNV				IAML		23 31 32.3	
	comp=E,4μm,0.1s						
MREP	Makushin Rep't	0.17	286		Pb	23 31 33.8	+0.4
MGOD	Makushin Gods	0.24	278		Pg	23 31 33.0	-0.1
MGOD	Makushin Gods	0.24	278		Sg	23 31 36.3	-0.1
MTBL	Makushin Table	0.24	329		Pg	23 31 32.7	-0.4
MTBL	Makushin Table	0.24	329		Sg	23 31 36.0	-0.5
MAPS	Pakushin South	0.28	279		Pg	23 31 33.4	-0.4
MAPS	Pakushin South	0.28	279		Sg	23 31 37.1	-0.5
MCIR	Makushin Cirqu	0.31	307		Pg	23 31 34.0	-0.4
MCIR					Sg	23 31 38.0	-0.6
AKMO	Akutan Morgan	0.43	39		Pg	23 31 36.9	+0.4
AKMO	Akutan Morgan	0.43	39		Sg	23 31 42.9	+0.7
AKRB	Akutan Reef Bi	0.44	33		Pg	23 31 37.0	+0.3
AKRB	Akutan Reef Bi	0.44	33		Sg	23 31 43.5	+0.9
ZRO	Akutan Zero	0.44	41		Pg	23 31 37.1	+0.4
ZRO					Sb	23 31 43.6	-1.0
AKBBA	Akutan Broad B	0.46	43		Pg	23 31 37.6	+0.4
AKV	Akutan Volcano	0.47	39		Pg	23 31 37.6	+0.3
LVA	Lava Point	0.47	33		Pg	23 31 37.6	+0.2
LVA				Sg	Sg	23 31 44.2	+0.5
LVA				IAML		23 31 49.8	
	comp=N,515nm,0.6s						
AKGG	Akutan Green G	0.52	33		Pg	23 31 38.3	0.0
AKGG					Sg	23 31 45.6	+0.5
AHB	Akutan Harbor	0.52	47		Pg	23 31 38.6	+0.3
AKUT	Akutan	0.56	48		Pg	23 31 39.1	+0.1
AKUT				Sg	Sb	23 31 47.1	-0.8
AKUT				IAML		23 31 47.4	
	comp=E,619nm,0.2s						
AKUT				IAML		23 31 47.5	
	comp=N,575nm,0.2s						
OKFG	Magazine Ridge	0.93	248		Pg	23 31 45.4	-0.6
OKFG	Magazine Ridge	0.93	248		Sg	23 31 57.0	-1.1
WECS	Westdahl Cape	1.26	52		Pn	23 31 51.4	-0.4
WEBT	Westdahl Beart	1.31	50		Pn	23 31 52.0	-0.4
WEBT					Sg	23 32 10.9	+0.8
WESE	West Dahl East	1.32	57		Pn	23 31 52.2	-0.4
NIKH	Nikolski High	1.63	242		Pn	23 31 56.5	-0.4
NIKH	Nikolski High	1.63	242	Sn	Sn	23 32 17.6	-0.3
SSBA	Shishaldin	1.71	53		Pn	23 31 58.2	+0.2
SSLS	Shishaldin Sou	1.73	56		Pn	23 31 58.9	+0.6
ISNN	Isanotski Nort	1.91	55		Pn	23 32 01.3	+0.6
FALS	False Pass	2.10	57	Pn	Pn	23 32 03.6	+0.4

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*BJI **17** 23:34:32.9, 28°.39N×104°.95E, h9^{km}, mB5.1/32, mb4.8/58, ML5.4/26, Ms5.1/79, Ms7 4.8/80*

*MOS **17** 23:34:32.2±0.8, 28°.36N×104°.95E, h11^{km}, mb5.2/92, MS4.4/11, Error ellipse: s-maj=5.5km s-min=3.3km az=124.7*

*NEIC **17** 23:34:34.3, 28°.40N×104°.98E, h12^{km}*

*NEIC **17** 23:34:34.3, 28°.40N×104°.98E, h12^{km}, Moment Tensor Solution. Duration: 1^{s}2 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.32; M$_{\theta\theta}$-0.63; M$_{\phi\phi}$-0.68; M$_{r\theta}$0.13; M$_{\theta\phi}$0.60; M$_{\phi r}$-0.22; Fault plane solution: M$_0$1.31000×10^{16} NP1: φ$_s$313.64000°, δ39.68000°, λ86.13000°. NP2: φ$_s$138.66000°, δ50.42000°, λ93.20000°. Principal axes: T 1.3415, Plg84.0000°, Azm71.0000°; N -0.0553, Plg2.0000°, Azm317.0000°; P -1.2862, Plg5.0000°, Azm226.0000°;*

*NEIC **17** 23:34:34.3±1.1, 28°.40N±0°.07×104°.99E±0°.06, h10^{km}±1^{km}, mb5.2/386, Mww4.7/19 Error ellipse: s-maj=11.2km s-min=9.1km az=170.0*

*GCMT **17** 23:34:34.3±0.3, 28°.45N±0°.03×104°.93E±0°.02, h12^{km}±1^{km}, MW4.8/90, Moment Tensor Solution. s17,c20; s90,c124; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.55±.11; M$_{\theta\theta}$-0.62±.07; M$_{\phi\phi}$-0.93±.07; M$_{r\theta}$-0.92±.22; M$_{\theta\phi}$0.65±.04; M$_{\phi r}$0.23±.17; Best double couple: M$_0$1.76000×10^{16} NP1: φ$_s$155.00000°, δ33.00000°, λ116.00000°. NP2: φ$_s$305.00000°, δ61.00000°, λ74.00000°. Principal axes: T 1.8870, Plg70.0000°, Azm179.0000°; N -0.2560, Plg14.0000°, Azm313.0000°; P -1.6320, Plg14.0000°, Azm46.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **17** 23:34:35.0±1.6, 28°.35N×104°.94E, h19^{km}±9^{km}, mb4.7/34, mbtmp4.8/37, ML4.9/3, MS4.1/61 Error ellipse: s-maj=12.3km s-min=8.5km az=51.0*

*BGR **17** 23:34:44.1, 28°.18N×103°.11E, h33^{km}, mb5.1, Ms4.1*

ISC 17 23:34:34.4±0.5**, 28°.36N**±0°.02×**104°.93E**±0°.03**, h14**^{km}±2^{km}**, h14**^{km}**:pP-P, n1320, σ1^{s}09**/1355**, mb5.1**/384**, MS4.2**/82**, 41C-63D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GYA	Guiyang	2.44	141	⇑Pn	Pb	23 35 16.3	-1.9
GYA				smax	smax		
	comp=N,9μm,0.7s						
GYA				smax	smax		
	comp=E,12μm,0.7s						
CD2	Chengdu	2.73	338	Pn	Pn	23 35 19.0	+1.1
CD2				Pg	Pg	23 35 26.3	-0.6
CD2				Sn	Sb	23 35 53.8	-2.7
CD2				Sg	Sg	23 36 02.6	+0.3
CD2				smax	smax		
	comp=N,36μm,0.8s						
CD2				smax	smax		
	comp=E,53μm,0.8s						
PZH	PanZhiHua	3.38	238	Pn	Pn	23 35 29.3	+2.4
PZH				Pg	Pg	23 35 37.8	-1.5
PZH				Sg	Sg	23 36 22.1	-1.1
PZH				smax	smax		
	comp=N,4μm,1.2s						
PZH				smax	smax		
	comp=E,2μm,0.9s						
KMI	Kunming	3.77	212	⇑Pn	Pn	23 35 33.8	+1.4
KMI				Sn	Sn	23 36 16.3	-0.4
KMI				smax	smax		
	comp=N,1μm,1.2s						
KMI				smax	smax		
	comp=E,1μm,1.3s						
KMI				LR	LR		
	comp=Z,12μm,3.9s						
ENH	Enshi	4.41	63		Pn	23 35 42.9	+2.0
GULI	GuiLin	5.74	121	Pn	Pn	23 35 59.3	+0.1
GULI				Sn	Sn	23 37 04.8	-0.1
GULI				smax	smax		
	comp=N,2μm,0.9s						
GULI				smax	smax		
	comp=E,900nm,0.9s						
GULI				LR	LR		
	comp=N,14μm,5.2s						
GULI				LR	LR		
	comp=E,12μm,4.4s						
GULI				LR	LR		
	comp=Z,5μm,4.7s						
XAN	Xi'an	6.61	30	Pn	Pn	23 36 12.5	+1.3
XAN				Sn	Sn	23 37 24.4	-2.0
XAN				Sg	Sg	23 38 00.6	-6.0
XAN				smax	smax		
	comp=N,8μm,1.3s						
XAN				smax	smax		
	comp=E,4μm,1.3s						
XAN				LR	LR		
	comp=N,21μm,4.9s						
XAN				LR	LR		
	comp=E,24μm,4.3s						
XAN				LR	LR		
	comp=Z,26μm,7.4s						
TNCH	TengChong	6.62	241	Pn	Pn	23 36 13.8	+2.3
TNCH				Sn	Sn	23 37 33.1	+6.1
TNCH				Sg	Sg	23 38 02.3	-4.8
TNCH				smax	smax		
	comp=N,3μm,1.5s						
TNCH				smax	smax		
	comp=E,2μm,1.9s						
TNCH				LR	LR		
	comp=N,8μm,4.7s						
TNCH				LR	LR		
	comp=E,10μm,3.9s						
TNCH				LR	LR		
	comp=Z,10μm,9.9s						
CNSH	ChangSha	7.06	90	Pn	Pn	23 36 18.8	+1.5
CNSH				Sn	Sn	23 37 34.0	-3.3
CNSH				smax	smax		
	comp=N,800nm,1.0s						
CNSH				smax	smax		
	comp=E,660nm,0.8s						
SLVN	Son La	7.06	188	Pn	Pn	23 36 18.3	+0.8
LZH	Lanzhou	7.76	353	Pn	Pn	23 36 27.9	+0.9
LZH				Sn	Sn	23 37 54.0	-0.7
LZH				Sg	Sg	23 38 35.3	-8.0
LZH				smax	smax		
	comp=N,2μm,1.4s						
LZH				smax	smax		
	comp=E,2μm,1.4s						
LZH				LR	LR		
	comp=N,9μm,8.6s						
LZH				LR	LR		
	comp=E,8μm,9.3s						
LZH				LR	LR		
	comp=Z,11μm,9.6s						
WHN	Wuhan	8.49	73	⇑P	Pn	23 36 38.5	+1.5
WHN				S	Sn	23 38 12.9	+0.2
WHN				LR	LR		
	comp=N,27μm,13.1s						
WHN				LR	LR		
	comp=E,32μm,14.2s						
WHN				LR	LR		
	comp=Z,28μm,13.4s						
LYN	LuoYang	8.91	44	⇓P	Pn	23 36 42.0	-0.7
LYN				S	Sn	23 38 22.0	-0.9
LYN				smax	smax		
	comp=N,840nm,1.1s						
LYN				smax	smax		
	comp=E,820nm,1.3s						
LYN				LR	LR		
	comp=N,18μm,5.5s						
LYN				LR	LR		
	comp=E,18μm,6.2s						
LYN				LR	LR		
	comp=Z,23μm,5.8s						
GZH	Guangzhou	9.23	123	P	Pn	23 36 46.9	-0.2
GZH				S	Sn	23 38 29.3	-1.4
GZH				smax	smax		
	comp=N,910nm,0.8s						
GZH				smax	smax		
	comp=E,490nm,1.2s						
HKPS	Hong Kong Po S	10.30	124		Pn	23 37 02.5	+0.7
QIZ	Qiongzhong	10.32	153	Pn	Pn	23 37 03.1	+1.0
QIZ	Qiongzhong	10.32	153	P	Pn	23 37 02.3	+0.2
QIZ				S	Sn	23 38 59.3	+1.6
QIZ				pmax	pmax		
	comp=Z,25nm,1.5s						
QIZ				LR	LR		
	comp=E,5μm,4.3s						
QIZ				LR	LR		
	comp=Z,2μm,11.1s						
CHTO	Chiang Mai	10.97	211		Pn	23 37 13.3	+2.3
CHTO	Chiang Mai	10.97	211	P	Pn	23 37 13.3	+2.3
TIY	Taiyuan	11.24	32	*e*P	Pn	23 37 13.8	-1.0
TIY				S	Sn	23 39 28.1	+7.8
TIY				pmax	pmax		
	comp=Z,34nm,1.0s						
TIY				LR	LR		
	comp=N,4μm,9.6s						
TIY				LR	LR		
	comp=E,6μm,9.6s						
TIY				LR	LR		
	comp=Z,7μm,12.2s						
CM31	Chiang Mai Arr	11.29	210		Pn	23 37 17.7	+2.4
CMAR	Chiang Mai Arr	11.29	210		Pn	23 37 17.8	+2.5
CMAR	Chiang Mai Arr	11.29	210	Pn	Pn	23 37 17.1	+1.8
	1.3nm,0.3s,baz=18,slow=11,SNR=163						
CMAR				Lg	Lg	23 40 34.5	
	baz=12,slow=26						
CMAR				LR	LR	23 42 01.1	
	comp=Z,3μm,18.6s,baz=30,slow=40						
CMAR				ScP	ScP	23 46 43.1	+0.7
	1.6nm,0.4s,baz=320,slow=1.6,SNR=9.4						
	108nm,1.1s						
CMAR	Chiang Mai Arr	11.29	210	P	Pn	23 37 17.8	+2.5
GOMU	GeErMu	11.58	315	P	Pn	23 37 22.4	+2.8
GOMU				pP		23 37 26.1	
GOMU				sP		23 37 29.9	
GOMU				S	Sn	23 39 35.4	+6.4
GOMU				pmax	pmax		
	comp=Z,12nm,0.8s						
GOMU				LR	LR		
	comp=N,5μm,8.5s						
GOMU				LR	LR		
	comp=E,2μm,8.2s						
GOMU				LR	LR		
	comp=Z,3μm,8.3s						
GTA	Gaotai	11.81	340	P	Pn	23 37 24.3	+1.8
GTA				sP		23 37 35.3	
GTA				S	Sn	23 39 41.3	+7.2
GTA				pmax	pmax		
	comp=Z,41nm,1.5s						
GTA				pmax	pmax		
	comp=Z,290nm,3.6s						
GTA				LR	LR		
	comp=N,3μm,12.4s						
GTA				LR	LR		
	comp=E,4μm,12.4s						
GTA				LR	LR		
	comp=Z,4μm,11.6s						
LSA	Lhasa	12.13	280		Pn	23 37 27.7	+0.4
LSA	Lhasa	12.13	280	P	Pn	23 37 28.3	+1.0
LSA				S	Sn	23 39 40.9	-1.8
LSA				LR	LR		
	comp=N,1μm,6.9s						
LSA				LR	LR		
	comp=Z,4μm,10.6s						
LSA	Lhasa	12.13	280	P	Pn	23 37 27.7	+0.4
LSA	Lhasa	12.13	280	*i* P	Pn	23 37 29.0	+1.7
	SNR=8.5						
HNS	HongShan	12.19	40	⇓P	Pn	23 37 27.9	+0.4
HNS				S	Sn	23 39 48.9	+5.7
HNS				pmax	pmax		
	comp=Z,28nm,1.6s						
HNS				LR	LR		
	comp=N,4μm,11.5s						
HNS				LR	LR		
	comp=E,5μm,11.8s						
HNS				LR	LR		
	comp=Z,6μm,12.4s						
NJ2	Nanjing	12.59	70	*e*P	Pn	23 37 32.5	-0.6
NJ2				sP	P	23 37 43.9	-0.7
NJ2				pmax	pmax		
	comp=Z,20nm,2.0s						
NJ2				LR	LR		
	comp=N,3μm,7.7s						
NJ2				LR	LR		
	comp=E,8μm,8.5s						
NJ2				LR	LR		

	comp=Z,10µm,9.4s						
QZH	**Quanzhou**	**12.68**	**102**	*e*P	**Pn**	**23 37 37.0**	**+2.6**
QZH				S	**Sn**	**23 39 57.1**	**+1.6**
QZH				LR	LR		
	comp=N,8µm,7.2s						
QZH				LR	LR		
	comp=E,5µm,6.2s						
QZH				LR	LR		
	comp=Z,2µm,8.2s						
BTO	**Baotou**	**12.91**	**18**	⇑*i*P	**Pn**	**23 37 37.3**	**-0.2**
BTO				pP	**P**	**23 37 45.4**	**-2.8**
BTO				PP	**PnPn**	**23 37 48.0**	**+2.5**
BTO				S	**Sn**	**23 39 59.6**	**-1.4**
BTO				sS		23 40 14.3	
BTO				SS	**SnSn**	**23 40 17.8**	**+4.3**
BTO				pmax	pmax		
	comp=Z,130nm,1.6s						
BTO				pmax	pmax		
	comp=Z,900nm,4.3s						
BTO				LR	LR		
	comp=N,7µm,7.4s						
BTO				LR	LR		
	comp=E,9µm,6.6s						
BTO				LR	LR		
	comp=Z,6µm,6.9s						
TIA	**Tai'an**	**12.94**	**50**	P	**Pn**	**23 37 37.6**	**-0.3**
TIA				pmax	pmax		
	comp=Z,20nm,1.4s						
TIA				pmax	pmax		
	comp=Z,270nm,4.2s						
TIA				LR	LR		
	comp=N,4µm,10.5s						
TIA				LR	LR		
	comp=E,6µm,11.6s						
TIA				LR	LR		
	comp=Z,7µm,9.4s						
UBPT	**Khong Chiam**	**13.03**	**178**	Pn	**Pn**	**23 37 40.2**	**+1.1**
BRDH	**Bariadhala**	**13.26**	**248**	Pn	**Pn**	**23 37 43.8**	**+1.5**
	14nm,0.3s,baz=62,slow=7.9,SNR=3.6						
BRDH				LR	LR	23 43 32.2	
	comp=Z,1µm,21.0s,baz=55,slow=40						
	91nm,0.3s						
HHC	**Hu-ho-hao-te**	**13.59**	**22**	⇑*i*P	**Pn**	**23 37 44.8**	**-2.1**
HHC				pP	P	23 37 48.3	-7.6
HHC				PP	**PnPn**	**23 37 58.3**	**+3.4**
HHC				pmax	pmax		
	comp=Z,29nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,5.0s						
HHC				LR	LR		
	comp=N,4µm,12.9s						
HHC				LR	LR		
	comp=E,2µm,14.6s						
HHC				LR	LR		
	comp=Z,4µm,16.3s						
SSE	**Sheshan**	**14.39**	**75**	P	**Pn**	**23 37 58.1**	**+0.5**
SSE				S	**Sn**	**23 40 37.5**	**+0.5**
SSE				pmax	pmax		
	comp=Z,15nm,0.6s						
SSE				pmax	pmax		
	comp=Z,97nm,4.2s						
SSE				LR	LR		
	comp=N,2µm,7.3s						
SSE				LR	LR		
	comp=E,3µm,7.6s						
BJT	**Baijiatuau**	**14.87**	**36**	P	**Pn**	**23 38 04.1**	**-0.1**
BJT	**Baijiatuau**	**14.87**	**36**	P	**Pn**	**23 38 04.1**	**-0.1**
BJI	**Beijing**	**14.89**	**36**	P	**Pn**	**23 38 04.3**	**-0.2**
BJI				pmax	pmax		
	comp=Z,17nm,1.1s						
BJI				pmax	pmax		
	comp=Z,130nm,4.6s						
BJI				LR	LR		
	comp=N,2µm,12.0s						
BJI				LR	LR		
	comp=E,1µm,12.0s						
BJI				LR	LR		
	comp=Z,2µm,12.7s						
TPUB	**Ta-pu**	**15.01**	**106**		**Pn**	**23 38 06.0**	**-0.1**
SSLB	**Suanglung**	**15.10**	**104**		**Pn**	**23 38 07.3**	**-0.1**
YHNB	**Yeheng**	**15.17**	**100**	P	**P**	**23 38 12.9**	**-0.5**
NACB	**Ninganchiao**	**15.52**	**102**	Pn	**Pn**	**23 38 12.7**	**-0.2**
YULB	**Yu-li**	**15.54**	**105**		**Pn**	**23 38 12.6**	**-0.5**
TWG	**Pinlang**	**15.57**	**107**	Pn	**Pn**	**23 38 13.3**	**-0.2**
EVN	**Everest**	**15.98**	**273**	Pn	**Pn**	**23 38 17.6**	**-1.9**
DL2	**Dalian**	**17.41**	**49**	P	**Pn**	**23 38 37.3**	**+0.5**
DL2				S	**Sn**	**23 41 53.0**	**+2.7**
DL2				pmax	pmax		
	comp=Z,74nm,1.4s						
DL2				pmax	pmax		
	comp=Z,760nm,3.7s						
DL2				LR	LR		
	comp=N,2µm,12.5s						
DL2				LR	LR		
	comp=E,2µm,14.9s						
DL2				LR	LR		
	comp=Z,2µm,11.2s						
XLT	**XiLinHaoTe**	**17.90**	**27**	*e*P	**Pn**	**23 38 42.5**	**-0.5**
XLT				S	**Sn**	**23 42 03.4**	**+1.0**
XLT				pmax	pmax		
	comp=Z,61nm,1.2s						
XLT				pmax	pmax		
	comp=Z,380nm,3.8s						
XLT				LR	LR		
	comp=N,250nm,8.8s						
XLT				LR	LR		
	comp=E,2µm,7.3s						
XLT				LR	LR		
	comp=Z,3µm,9.4s						
SONM	**Songino Array**	**19.47**	**3**	P	**P**	**23 39 00.9**	**0.0**
SONM	**Songino Array**	**19.47**	**3**	P	**Pn**	**23 39 01.6**	**-0.5**
	3.1nm,0.3s,baz=184,slow=12,SNR=54						
SONM				Lg	Lg	23 44 51.7	
	0.2nm,0.3s,baz=125,slow=47,SNR=1.7						
SONM				LR	LR	23 47 28.6	
	comp=Z,1µm,21.5s,baz=181,slow=40						
	17nm,0.6s						
ULN	**Ulaanbaatar**	**19.54**	**4**	P	**P**	**23 39 01.6**	**0.0**
ULN	**Ulaanbaatar**	**19.54**	**4**	*d i*P	**P**	**23 39 02.0**	**+0.4**
ULN				pmax	pmax		
	comp=Z,19nm,0.9s						
SNY	**Shenyang**	**20.27**	**44**	⇓P	**P**	**23 39 09.8**	**+0.4**
SNY				S	**S**	**23 42 52.3**	**-4.1**
SNY				pmax	pmax		
	comp=Z,38nm,1.1s						
SNY				pmax	pmax		
	comp=Z,360nm,3.8s						
SNY				LR	LR		
	comp=Z,1µm,16.1s						
SNY				LR	LR		
	comp=Z,2µm,15.9s						
SNY				LR	LR		
	comp=Z,2µm,17.7s						
SRIT	**Nakonsritamara**	**20.30**	**195**	P	Pn	23 39 11.4	-0.5
SRIT				IAmb	IAmb	23 39 21.1	
	comp=Z,97nm,1.2s						
INCN	**Inchon**	**20.33**	**58**	P	**P**	**23 39 10.6**	**+0.5**
INCN				IAmb	IAmb	23 39 13.6	
	comp=Z,157nm,1.5s						
INCN	**Inchon**	**20.33**	**58**	P	**P**	**23 39 10.6**	**+0.5**
INCN				pmax	pmax		
	comp=Z,157nm,1.5s						
TJN	**Taejon**	**20.53**	**61**	P	**P**	**23 39 12.8**	**+0.5**
TJN	**Taejon**	**20.53**	**61**	*d i*P	**P**	**23 39 12.8**	**+0.5**
WMQ	**Urumqi**	**20.72**	**323**	*e*P	**P**	**23 39 15.0**	**+0.6**
WMQ				S	**S**	**23 43 03.5**	**-1.9**
WMQ				pmax	pmax		
	comp=Z,31nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,140nm,3.6s						
WMQ				LR	LR		
	comp=Z,1µm,10.7s						
WMQ				LR	LR		
	comp=Z,780nm,11.3s						
WMQ				LR	LR		
	comp=Z,330nm,13.3s						
JOW	**Kunigami**	**20.74**	**89**	P	**P**	**23 39 14.5**	**-0.2**
JOW	**Kunigami**	**20.74**	**89**	P	**P**	**23 39 14.7**	**-0.1**
	comp=Z,34nm,0.5s,baz=246,slow=4.1,SNR=24						
JOW				LR	LR	23 47 53.0	
	comp=Z,890nm,19.7s,baz=290,slow=38						
	comp=Z,34nm,0.5s						
KSAR	**Wonju Array Be**	**21.25**	**59**	P	**P**	**23 39 19.9**	**-0.2**
KSAR	**Wonju Array Be**	**21.25**	**59**	P	**P**	**23 39 19.9**	**-0.2**
KS19	**Wonju Array Si**	**21.26**	**59**	P	**P**	**23 39 20.5**	**+0.3**
KSRS	**Korea Array**	**21.29**	**59**	P	**P**	**23 39 20.5**	**+0.1**
	comp=Z,40nm,0.9s,baz=243,slow=10,SNR=92						
KSRS				Sn	**S**	**23 43 16.8**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=328,slow=20,SNR=1.4						
KSRS				Lg	Lg	23 45 53.5	
	comp=Z,0.2nm,0.3s,baz=228,slow=38,SNR=1.3						
	comp=Z,40nm,0.9s						
ZAK	**Zakamensk**	**22.03**	**357**	*e*P	**P**	**23 39 28.4**	**0.0**
ZAK				pmax	pmax		
	comp=Z,102nm,1.2s						
CN2	**Changchun**	**22.54**	**41**	P	**P**	**23 39 33.5**	**-0.4**
CN2				S	**S**	**23 43 33.9**	**-6.8**
CN2				pmax	pmax		
	comp=Z,50nm,0.8s						
CN2				pmax	pmax		
	comp=Z,600nm,4.0s						
CN2				LR	LR		
	comp=Z,1µm,12.0s						
CN2				LR	LR		
	comp=Z,2µm,12.0s						
CN2				LR	LR		
	comp=Z,2µm,14.0s						
JNU	**Nakatsue**	**22.78**	**72**	P	**P**	**23 39 36.2**	**-0.4**
JNU	**Nakatsue**	**22.78**	**72**	P	**P**	**23 39 36.5**	**0.0**
	comp=Z,35nm,0.8s,baz=272,slow=3.9,SNR=21						
JNU				LR	LR	23 49 10.3	
	comp=Z,997nm,18.9s,baz=264,slow=38						
	comp=Z,35nm,0.8s						
MOY	**Mondy**	**23.46**	**354**	*e*P	**P**	**23 39 42.8**	**-0.7**
MOY				pmax	pmax		
	comp=Z,115nm,2.8s						
HIA	**Hailar**	**23.77**	**25**	P	**P**	**23 39 46.4**	**0.0**
HIA				IAmb	IAmb	23 39 51.0	
	comp=Z,98nm,1.5s						
HIA	**Hailar**	**23.77**	**25**	*d i*P	**P**	**23 39 46.7**	**+0.3**
HIA				pmax	pmax		
	comp=Z,23nm,1.4s						
IRK	**Irkutsk**	**23.86**	**359**	*e*P	**P**	**23 39 47.0**	**-0.2**
IRK				*e*S	**S**	**23 44 07.2**	**+4.6**
IRK				pmax	pmax		
	comp=Z,505nm,2.2s						
LHMI	**Lhok Sumawe**	**24.23**	**200**	P	**P**	**23 39 52.3**	**+1.5**
CIT	**Chita**	**24.50**	**13**	*e*P	**P**	**23 39 52.8**	**-0.3**
CIT				*e*		23 40 21.8	
CIT				*e*		23 40 36.2	
CIT				*e*		23 43 25.6	
CIT				*e*		23 44 15.6	
CIT				*e*		23 45 18.4	
CIT				*e*		23 50 52.8	
CIT				pmax	pmax		
	comp=Z,186nm,2.2s						
BSI	**Banda Aceh**	**24.51**	**204**	P	**P**	**23 39 56.0**	**+2.5**
	comp=Z,66nm,1.1s						
KKM	**Kota Kinabalu**	**24.64**	**152**	P	**P**	**23 39 55.0**	**+0.3**
KKM				IAmb	IAmb	23 39 59.2	
	comp=Z,77nm,0.9s						
ZSN	**Zaisan**	**24.65**	**326**	*e*P	**P**	**23 39 54.6**	**+0.1**
ZSN				pmax	pmax		
	comp=Z,13nm,0.5s						
ZSN	**Zaisan**	**24.65**	**326**	*e*P	**P**	**23 39 54.6**	**+0.1**
	comp=Z,13nm,0.5s						
BNX	**BinXian**	**24.82**	**40**	⇑P	**P**	**23 39 56.8**	**+0.8**
BNX				pP	**pP**	**23 39 58.3**	**-2.2**
BNX				S	**S**	**23 44 17.9**	**-0.2**
BNX				sS	**pS**	**23 44 23.8**	**+1.1**
BNX				pmax	pmax		
	comp=Z,16nm,0.5s						
BNX				pmax	pmax		
	comp=Z,350nm,3.7s						
BNX				LR	LR		
	comp=Z,1µm,16.3s						
BNX				LR	LR		
	comp=Z,2µm,10.7s						
BNX				LR	LR		
	comp=Z,3µm,13.1s						
SHLS	**Shalkode**	**25.27**	**313**	*e*P	**P**	**23 39 58.1**	**-2.2**
SHLS				*e*S	**S**	**23 44 22.4**	**-3.3**
SHLS				pmax	pmax		
	comp=Z,15nm,0.7s						
SHLS	**Shalkode**	**25.27**	**313**	*e*P	**P**	**23 39 58.1**	**-2.2**
	comp=Z,15nm,0.7s						
SHLS				*e*S	**S**	**23 44 22.5**	**-3.3**
PSTR	**Posyet**	**25.31**	**49**	⇓*e*P	**P**	**23 40 00.8**	**+0.3**
JMN	**Monobe**	**25.33**	**71**	P	**P**	**23 40 00.7**	**-0.2**
TSI	**Tuntungan**	**25.46**	**195**	P	**P**	**23 40 03.4**	**+1.4**
MDJ	**Mudanjiang**	**25.47**	**44**	P	**P**	**23 40 01.8**	**-0.2**
MDJ				pmax	pmax		
	comp=Z,12nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,410nm,4.0s						
MDJ				LR	LR		
	comp=Z,2µm,11.8s						
MDJ				LR	LR		
	comp=Z,2µm,17.4s						
MDJ				LR	LR		
	comp=Z,3µm,16.0s						
MSHR	**Mys Shultsa**	**25.51**	**49**	*ce*P	**P**	**23 40 03.2**	**+0.9**
MSHR				pmax	pmax		
	comp=Z,30nm,1.1s						
MK31	**Makanchi Array**	**25.55**	**322**	P	**P**	**23 40 02.5**	**-0.2**
MK31				IAmb	IAmb	23 40 08.0	
	comp=Z,34nm,0.7s						
MK31	**Makanchi Array**	**25.55**	**322**	*de*P	**P**	**23 40 03.2**	**+0.5**
MK31				pmax	pmax		
	comp=Z,29nm,0.5s						
MKAR	**Makanchi Array**	**25.55**	**322**	P	**P**	**23 40 03.0**	**+0.3**
	comp=Z,35nm,0.6s,baz=130,slow=9.6,SNR=104						
MKAR				S	**S**	**23 44 29.8**	**-0.1**
	comp=Z,2.5nm,1.1s,baz=134,slow=10,SNR=1.4						
MKAR				ScP	**ScP**	**23 47 12.1**	**-0.7**
	comp=Z,5.4nm,1.0s,baz=141,slow=4.1,SNR=9.1						
MKAR				LR	LR	23 51 10.7	
	comp=Z,405nm,19.2s,baz=154,slow=39						
	comp=Z,35nm,0.6s						
UZB	**Uzynbulak**	**25.55**	**312**	*e*P	**P**	**23 40 03.1**	**+0.2**
UZB				pmax	pmax		
	comp=Z,13nm,0.8s						
UZB	**Uzynbulak**	**25.55**	**312**	*e*P	**P**	**23 40 03.2**	**+0.2**
	comp=Z,13nm,0.8s						
PRZ	**Przheval'sk**	**25.67**	**310**	P	**P**	**23 40 05.0**	**+1.0**
PRZ				IAmb	IAmb	23 40 12.1	
	comp=Z,60nm,0.8s						
PRZ	**Przheval'sk**	**25.67**	**310**	P	**P**	**23 40 05.0**	**+1.0**
PRZ				pmax	pmax		
	comp=Z,60nm,0.8s						
MAKZ	**Makanchi**	**25.73**	**322**	P	**P**	**23 40 04.6**	**+0.3**
MAKZ				IAmb	IAmb	23 40 08.9	
	comp=Z,35nm,0.7s						
MAKZ	**Makanchi**	**25.73**	**322**	P	**P**	**23 40 04.6**	**+0.3**
MAKZ				pmax	pmax		
	comp=Z,35nm,0.7s						
TARG	**Taragay, Kyrgy**	**25.78**	**308**	P	**P**	**23 40 05.4**	**+0.1**
TARG				IAmb	IAmb	23 40 12.4	
	comp=Z,39nm,0.7s						
TARG	**Taragay, Kyrgy**	**25.78**	**308**	P	**P**	**23 40 05.4**	**+0.1**
TARG				pmax	pmax		
	comp=Z,39nm,0.7s						
KPKS	**Kokpek**	**25.91**	**313**	*e*P	**P**	**23 40 06.4**	**+0.3**
KPKS				*e*S	**S**	**23 44 37.0**	**+1.2**
KPKS	**Kokpek**	**25.91**	**313**	*e*P	**P**	**23 40 06.4**	**+0.3**
KPKS				*e*S	**S**	**23 44 37.1**	**+1.2**
SATY	**Saty**	**25.91**	**312**	*e*P	**P**	**23 40 06.5**	**+0.3**
SATY				pmax	pmax		
	comp=Z,16nm,0.9s						
SATY	**Saty**	**25.91**	**312**	*e*P	**P**	**23 40 06.5**	**+0.3**
	comp=Z,16nm,0.9s						
PSI	**Prapat**	**26.06**	**194**	LR	LR	23 52 16.5	
	comp=Z,321nm,18.9s,baz=342,slow=41						
PSI	**Prapat**	**26.06**	**194**	P	**P**	**23 40 07.7**	**+0.1**
PSI				pmax	pmax		
	comp=Z,35nm,1.0s						
RPSI	**Rantau Prapat**	**26.16**	**194**	P	**P**	**23 40 07.7**	**-0.7**
RPSI				IAmb	IAmb	23 40 09.3	
	comp=Z,35nm,1.0s						
VLA	**Vladivostok**	**26.23**	**49**	⇑*e*P	**P**	**23 40 10.1**	**+1.3**
VLA				pmax	pmax		
	comp=Z,32nm,1.0s						
KDJ	**Kajisay**	**26.36**	**309**	P	**P**	**23 40 10.6**	**+0.3**
KDJ	**Kajisay**	**26.36**	**309**	P	**P**	**23 40 10.6**	**+0.3**
KDJ				pmax	pmax		
	comp=Z,25nm,0.8s						
KSH	**Kashi**	**26.36**	**303**	P	**P**	**23 40 13.4**	**+3.1**
KSH				pmax	pmax		
	comp=Z,16nm,1.0s						
KSH				pmax	pmax		
	comp=Z,130nm,3.9s						
KSH				LR	LR		
	comp=Z,600nm,14.1s						
KSH				LR	LR		
	comp=Z,440nm,15.1s						
KSH				LR	LR		
	comp=Z,420nm,11.7s						
MYLDM	**Lahad Datu**	**26.41**	**148**	P	**P**	**23 40 11.6**	**+0.9**
HYB	**Hyderabad**	**26.57**	**251**	*e*P	**P**	**23 40 13.0**	**+0.8**
HYB				*e*sP	**sP**	**23 40 21.1**	**+2.6**
HYB				*e*S	S	23 44 59.4	+13
USA0B	**Ussuriysk Arra**	**26.77**	**47**	P	**P**	**23 40 13.7**	**-0.1**
USA0B				IAmb	IAmb	23 40 20.3	
	comp=Z,36nm,0.8s						
USA0B	**Ussuriysk Arra**	**26.77**	**47**	*ce*P	**P**	**23 40 14.0**	**+0.3**
USRK	**Ussuriysk Ar.**	**26.77**	**47**	P	**P**	**23 40 13.6**	**-0.1**
USRK	**Ussuriysk Ar.**	**26.77**	**47**	P	**P**	**23 40 13.9**	**+0.2**
	comp=Z,27nm,0.7s,baz=249,slow=8.9,SNR=47						
USRK				PP	**PnPn**	**23 40 56.8**	**+1.7**
	comp=Z,18nm,1.0s,baz=252,slow=7.8,SNR=4.2						
USRK				LR	LR	23 52 10.9	
	comp=Z,544nm,19.2s,baz=237,slow=39						
	comp=Z,27nm,0.7s						
ARXS	**Arharly**	**26.80**	**313**	*e*P	**P**	**23 40 14.8**	**+0.6**
TDK	**Taldyqorghan**	**26.81**	**315**	*e*P	**P**	**23 40 14.5**	**+0.4**
TDK				pmax	pmax		
	comp=Z,18nm,0.6s						
TDK	**Taldyqorghan**	**26.81**	**315**	*e*P	**P**	**23 40 14.5**	**+0.4**
	comp=Z,18nm,0.6s						
MDOK	**Medeo**	**26.86**	**311**	*e*P	**P**	**23 40 15.0**	**+0.3**
MDOK				*e*S	**S**	**23 44 52.0**	**+1.1**
MDOK	**Medeo**	**26.86**	**311**	*e*P	**P**	**23 40 15.0**	**+0.3**
MDOK				*e*S	**S**	**23 44 52.0**	**+1.1**
NRN	**Naryn**	**26.93**	**307**	P	**P**	**23 40 16.4**	**+0.8**
NRN				IAmb	IAmb	23 40 23.7	
	comp=Z,33nm,0.9s						
NRN	**Naryn**	**26.93**	**307**	P	**P**	**23 40 16.4**	**+0.8**
NRN				pmax	pmax		
	comp=Z,33nm,0.9s						
ULHL	**Ulahol**	**27.05**	**308**	P	**P**	**23 40 19.6**	**+3.0**
	SNR=7.3						
KSM	**Kuching**	**27.23**	**168**	P	**P**	**23 40 17.6**	**-0.5**
BOOM	**Boomskoye usch**	**27.35**	**309**	P	**P**	**23 40 19.9**	**+0.7**
BOOM	**Boomskoye usch**	**27.35**	**309**	P	**P**	**23 40 19.9**	**+0.7**
BOOM				pmax	pmax		
	comp=Z,18nm,0.8s						
NIL	**Nilore**	**27.59**	**289**	P	**P**	**23 40 22.5**	**+1.2**
NIL				IAmb	IAmb	23 40 54.7	
	comp=Z,37nm,0.9s						
NIL	**Nilore**	**27.59**	**289**	P	**P**	**23 40 22.5**	**+1.2**
NIL				pmax	pmax		
	comp=Z,37nm,0.9s						
KUU	**Kurty**	**27.63**	**312**	*e*P	**P**	**23 40 21.8**	**+0.3**
KUU	**Kurty**	**27.63**	**312**	*e*P	**P**	**23 40 21.8**	**+0.3**
HEH	**HeiHe**	**27.74**	**32**	*e*P	**P**	**23 40 22.3**	**0.0**
HEH				PcP	**PcP**	**23 43 39.6**	**+0.8**
HEH				ScP	**ScP**	**23 47 19.8**	**+0.7**
HEH				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HEH				LR	LR		
	comp=Z,2µm,10.1s						
HEH				LR	LR		
	comp=Z,2µm,12.9s						
HEH				LR	LR		
	comp=Z,3µm,11.4s						
INU	**Inuyama**	**28.05**	**67**	P	**P**	**23 40 24.8**	**-0.5**
KBK	**Karagaybulak**	**28.09**	**308**	P	**P**	**23 40 27.8**	**+1.9**
	SNR=10.0						
BKNI	**Bangkinang**	**28.13**	**188**	P	**P**	**23 40 27.0**	**+0.9**
BKNI				IAmb	IAmb	23 40 42.8	
	comp=Z,37nm,0.6s						
JGF	**Kuroka**	**28.35**	**67**	P	**P**	**23 40 26.6**	**-1.4**
FRU1	**Bishkek**	**28.37**	**309**	P	**P**	**23 40 28.9**	**+0.8**
FRU1	**Bishkek**	**28.37**	**309**	P	**P**	**23 40 28.9**	**+0.8**
FRU1				pmax	pmax		
	comp=Z,14nm,0.9s						
AAK	**Ala-Archa**	**28.40**	**308**	P	**P**	**23 40 31.6**	**+2.9**
	SNR=5.7						
AAK	**Ala-Archa**	**28.40**	**308**	P	**P**	**23 40 28.6**	**+0.1**
AAK	**Ala-Archa**	**28.40**	**308**	LR	LR	23 54 08.8	
	comp=Z,253nm,19.3s,baz=116,slow=41						
AAK	**Ala-Archa**	**28.40**	**308**	*ce*P	**P**	**23 40 30.9**	**+2.3**
AAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
AAK	**Ala-Archa**	**28.40**	**308**	*i* P	**P**	**23 40 31.5**	**+2.9**
	SNR=6.2						
SGDS	**Sogindy**	**28.60**	**310**	*e*P	**P**	**23 40 30.5**	**+0.2**
USP	**Ospenovka**	**28.62**	**309**	P	**P**	**23 40 31.9**	**+1.6**
	SNR=14						
AML	**Almayashu**	**28.79**	**307**	P	**P**	**23 40 34.2**	**+1.9**
	SNR=11						
DAV	**Davao City (W)**	**28.80**	**133**	LR	LR	23 53 54.3	
	comp=Z,225nm,18.4s,baz=356,slow=40						
EKS2	**Erkin-Say**	**28.91**	**308**	P	**P**	**23 40 34.8**	**+1.7**
	SNR=8.7						
ARSB	**Arslanbob**	**29.06**	**305**	P	**P**	**23 40 35.0**	**+0.5**
ARSB	**Arslanbob**	**29.06**	**305**	P	**P**	**23 40 35.0**	**+0.5**
ARSB				pmax	pmax		
	comp=Z,13nm,0.9s						
MJB9	**Matsu-Tunnel**	**29.13**	**65**	P	**P**	**23 40 34.7**	**-0.3**
MAJO	**Matsushiro**	**29.13**	**65**	P	**P**	**23 40 34.6**	**-0.3**
MAJO	**Matsushiro**	**29.13**	**65**	P	**P**	**23 40 34.6**	**-0.3**
MAJO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MJAR	**Matsushiro Arr**	**29.13**	**65**	P	**P**	**23 40 36.7**	**+1.7**
	comp=Z,0.7nm,0.4s,baz=268,slow=8.0,SNR=1.7						
MJAR				ScP	**ScP**	**23 47 22.1**	**-1.6**
	comp=Z,0.9nm,0.4s,baz=278,slow=3.9,SNR=6.2						
MJAR				LR	LR	23 53 33.2	
	comp=Z,674nm,20.4s,baz=253,slow=39						
	comp=Z,0.7nm,0.4s						
KLR	**Kul'dur**	**29.25**	**37**	LR	LR	23 53 50.1	
	comp=Z,1µm,18.7s,baz=233,slow=40						
KLR	**Kul'dur**	**29.25**	**37**	*de*P	**P**	**23 40 35.6**	**-0.3**
KLR				pmax	pmax		
	comp=Z,1.0nm,0.2s						
DRK	**Karamyk**	**29.49**	**301**	P	**P**	**23 40 37.8**	**-0.6**
DRK				IAmb	IAmb	23 40 42.2	
	comp=Z,70nm,1.5s						
DRK	**Karamyk**	**29.49**	**301**	P	**P**	**23 40 37.8**	**-0.6**
DRK				pmax	pmax		
	comp=Z,70nm,1.5s						
ZAA0	**Zalesovo Array**	**29.50**	**336**	P	**P**	**23 40 36.6**	**-1.4**
ZAA0				IAmb	IAmb	23 40 59.2	
	comp=Z,25nm,0.9s						
ZALV	**Zalesovo Beam**	**29.50**	**336**	P	**P**	**23 40 37.5**	**-0.5**
	comp=Z,12nm,0.6s,baz=136,slow=7.5,SNR=42						
ZALV				PcP	**PcP**	**23 43 42.3**	**-0.8**
	comp=Z,1.7nm,0.6s,baz=134,slow=6.4,SNR=1.6						
ZALV				S	**S**	**23 45 32.8**	**+0.9**
	comp=Z,4.2nm,0.9s,baz=126,slow=15,SNR=3.7						
ZALV				ScP	**ScP**	**23 47 23.0**	**-1.6**
	comp=Z,4.2nm,0.9s,baz=134,slow=4.3,SNR=6.2						
ZALV				LR	LR	23 53 19.3	
	comp=Z,338nm,21.4s,baz=154,slow=38						
	comp=Z,12nm,0.6s						
ZALV	**Zalesovo Beam**	**29.50**	**336**	*i* P	**P**	**23 40 38.2**	**+0.2**
ZALV				pmax	pmax		
	comp=Z,12nm,0.6s						
BTLS	**Baital**	**29.60**	**313**	*e*P	**P**	**23 40 39.2**	**+0.3**
BTLS	**Baital**	**29.60**	**313**	*e*P	**P**	**23 40 39.3**	**+0.3**
KURBB	**Kurchatov Arra**	**29.87**	**325**	P	**P**	**23 40 41.0**	**-0.3**
	comp=Z,22nm,0.9s,baz=132,slow=9.6,SNR=101						
KURBB				PcP	**PcP**	**23 43 42.5**	**-1.6**
	comp=Z,2.7nm,0.8s,baz=91,slow=1.4,SNR=4.5						
KURBB				S	**S**	**23 45 38.5**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=124,slow=18,SNR=3.5						
KURBB				ScP	**ScP**	**23 47 23.9**	**-1.9**
	comp=Z,1.0nm,0.8s,baz=136,slow=3.1,SNR=5.7						
KURBB				LR	LR	23 53 58.6	
	comp=Z,261nm,20.4s,baz=168,slow=39						
	comp=Z,22nm,0.9s						
KURK	**Kurchatov**	**29.89**	**326**	P	**P**	**23 40 41.3**	**-0.1**
KURK				IAmb	IAmb	23 40 43.4	
	comp=Z,32nm,1.1s						
KURK	**Kurchatov**	**29.89**	**326**	*ce*P	**P**	**23 40 41.6**	**+0.2**
KURK				pmax	pmax		
	comp=Z,16nm,1.0s						
ZEA	**Zeya**	**30.18**	**27**	*e*P	**P**	**23 40 44.9**	**+0.9**
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,900nm,15.0s						
BTK	**Batken**	**30.35**	**302**	P	**P**	**23 40 46.1**	**+0.3**
BTK	**Batken**	**30.35**	**302**	P	**P**	**23 40 46.1**	**+0.3**
BTK				pmax	pmax		
	comp=Z,13nm,0.9s						
GAR	**Garm**	**30.53**	**299**	P	**P**	**23 40 47.5**	**0.0**

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DZA   Taraz             30.69 307  eP     P      23 40 49.0 +0.4
DZA   Taraz             30.69 307  eP     P      23 40 49.1 +0.4
TOLI2 Tolitoli          31.05 148   P     P      23 40 51.2 -0.8
PALK  Pallekele         31.05 232   LR    LR     23 55 15.7
      comp=Z,251nm,18.1s,baz=44,slow=40
KBL   Kabul             31.11 291   P     P      23 40 52.6 -0.2
KBL                                 IAmb  IAmb   23 41 18.7
      comp=Z,25nm,1.1s
KBL   Kabul             31.11 291   P     P      23 40 52.6 -0.2
KBL                                 pmax  pmax
      comp=Z,25nm,1.2s
KK31  Karatay Array     31.32 307   P     P      23 40 54.5 +0.2
KK31  Karatay Array     31.32 307  eP     P      23 40 55.0 +0.7
KKAR  Karatay Array     31.32 307   P     P      23 40 54.5 +0.2
KKAR  Karatay Array     31.32 307         PcP    23 43 48.1  0.0
KKAR  Karatay Array     31.32 307   P     P      23 40 54.5 +0.2
KKAR                                pmax  pmax
      comp=Z,15nm,1.2s
IUG   Iuzhnay           31.41 305  eP     P      23 40 55.4 +0.3
IUG                                 pmax  pmax
      comp=Z,14nm,1.5s
IUG   Iuzhnay           31.41 305  eP     P      23 40 55.5 +0.3
      comp=Z,14nm,1.5s
SIMJ  Simiganj          31.49 298   P     P      23 40 55.6 -0.3
BKB   Balikpapan        31.61 157   P     P      23 40 54.9 -2.1
DZET  Dzherino          31.65 299   P     P      23 40 56.7 -0.6
CHM   Chimkent          31.76 305  eP     P      23 40 58.5 +0.4
CHM                                 pmax  pmax
      comp=Z,7.0nm,0.7s
CHM   Chimkent          31.76 305  eP     P      23 40 58.6 +0.4
      comp=Z,7.2nm,0.7s
BRLS  Borolday          31.78 307  eP     P      23 40 58.4 +0.1
BRLS  Borolday          31.78 307  eP     P      23 40 58.5 +0.1
MRSI  Marisa            32.16 147   P     P      23 41 06.4 +4.6
      comp=Z,910nmcomp=Z,36nm,0.8s
BRZS  Berezniki         32.64 320  eP     P      23 41 06.1 +0.4
BRZS  Berezniki         32.64 320  eP     P      23 41 06.2 +0.4
MDSI  Maura Dua         32.67 181   P     P      23 41 07.7 +1.5
      comp=Z,1µmcomp=Z,20nm,1.3s
ASAJ  Asahikawa         33.87  52   LR    LR     23 54 57.5
      comp=Z,206nm,20.7s,baz=332,slow=36
LUWI  Luwuk             33.88 147   P     P      23 41 16.3 -0.5
LUWI  Luwuk             33.88 147   P     P      23 41 19.9 +3.1
TTSI  Tana Toraja       34.35 153   P     P      23 41 25.8 +4.9
      comp=Z,618nmcomp=Z,23nm,1.5s
LEM   Lembang           35.08 175   LR    LR     23 55 55.8
      comp=Z,212nm,20.5s,baz=340,slow=36
SPSI  Sidrap Palu       35.17 154   P     P      23 41 32.7 +4.7
      comp=Z,976nmcomp=Z,42nm,1.8s
BVAR  Borovoye Array    35.40 324   P     P      23 41 29.9 +0.2
      comp=Z,3.9nm,0.4s,baz=124,slow=9.6,SNR=27
BVAR                                PcP   PcP    23 43 59.3  0.0
      comp=Z,3.6nm,0.6s,baz=146,slow=0.5,SNR=3.8
BVAR                                ScP   ScP    23 47 43.9 -0.9
      comp=Z,1.7nm,0.6s,baz=149,slow=4.4,SNR=5.2
BVAR                                LR    LR     23 56 25.6
      comp=Z,153nm,18.3s,baz=115,slow=37
      comp=Z,3.9nm,0.4s
BRVK  Borovoye          35.47 324   P     P      23 41 30.4 +0.2
BRVK  Borovoye          35.47 324deP     P      23 41 31.0 +0.7
BRVK                                pmax  pmax
      comp=Z,30nm,1.7s
SMRI  Semarang          35.60 171   P     P      23 41 31.4 -0.3
KAPI  Kappang           36.13 154   P     P      23 41 36.8 +0.6
      comp=Z,13nm,0.7s,baz=344,slow=1.7,SNR=5.2
      comp=Z,13nm,0.7s
TYV   Tymovskoe         36.17  41  eP     P      23 41 29.3 -6.9
TYV                                 pmax  pmax
      comp=Z,9.0nm,1.1s
TYV                                 pmax  pmax
      comp=Z,200nm,2.2s
BKSI  Bulukumba         36.55 154   P     P      23 41 43.4 +3.6
      comp=Z,29nm,1.0s
YAK   Yakutsk           37.43  19   P     P      23 41 46.7 -0.1
YAK   Yakutsk           37.43  19   LR    LR     23 58 33.5
      comp=Z,1µm,18.1s,baz=214,slow=38
YAK   Yakutsk           37.43  19  eP     P      23 41 46.5 -0.3
YAK                                e*PP   sP     23 41 55.9 +2.7
YAK                                e             23 43 11.0
YAK                                ePPP   PPP    23 43 31.3
YAK                                e             23 44 04.6
YAK                                eS     S      23 47 33.2 -1.3
YAK                                eSS    SnSn   23 50 08.6 -3.0
YAK                                e             23 51 54.8
YAK                                 pmax  pmax
      comp=Z,47nm,0.9s
YAK                                 pmax  pmax
      comp=N,11nm,1.3s
YAK                                 pmax  pmax
      comp=E,12nm,1.1s
YAK                                 pmax  pmax
      comp=Z,171nm,4.6s
YAK                                 pmax  pmax
      comp=N,100nm,4.1s
YAK                                 pmax  pmax
      comp=E,61nm,4.3s
YAK                                 smax  smax
      comp=E,119nm,1.4s
YAK                                 smax  smax
      comp=N,45nm,1.8s
YAK                                 MLR   MLR
      comp=Z,1µm,19.0s
YAK                                 MLR   MLR
      comp=E,735nm,21.0s
YAK                                 MLR   MLR
      comp=N,888nm,22.0s
GUMO  Guam              39.88 103   LR    LR     23 59 13.0
      comp=N,111nm,19.1s,baz=350,slow=37
AB31  Akbulak array     40.06 314   P     P      23 42 10.1 +1.0
AB31  Akbulak array     40.06 314  i P    P      23 42 10.3 +1.3
ABKAR Akbulak array     40.06 314   P     P      23 42 09.9 +0.9
WBSI  Waikabubak, Su    40.29 158   P     P      23 42 11.0 -0.3
EDFI  Ende, Flores      40.29 154   P     P      23 42 15.3 +3.9
      comp=N,326nmcomp=N,19nm,0.8s
MMRI  Maumere           40.41 153   P     P      23 42 12.1 -0.1
MMRI                                IAmb  IAmb   23 42 20.1
      comp=Z,52nm,0.9s
KAAM  Kaadhehdhoo       41.24 233   P     P      23 42 20.0 +0.8
AKTO  Aktyubinsk        41.56 315   LR    LR     00 01 28.9
      comp=Z,172nm,19.1s,baz=33,slow=39
SVE   Sverdlovsk        42.14 325  eP     P      23 42 27.3 +1.2
SVE                                eS     S      23 48 45.7 +0.5
SVE                                 pmax  pmax
      comp=Z,51nm,1.6s
SOEI  Soe               42.26 151   P     P      23 42 28.1 +0.5
SOEI                                IAmb  IAmb   23 42 57.1
      comp=Z,83nm,1.4s
BATI  Baumata           42.41 152   LR    LR     00 01 31.5
      comp=Z,120nm,18.5s,baz=105,slow=38
ARTI  Arti              43.12 324   P     P      23 42 34.1  0.0
ARTI  Arti              43.12 324   LR    LR     00 01 56.4
      comp=Z,125nm,18.5s,baz=98,slow=38
ARTI  Arti              43.12 324d iP     P      23 42 34.8 +0.7
ARTI                                             23 44 16.5
ARTI                                             23 44 28.3
ARTI                                PPP   PPP    23 44 45.5
ARTI                                S     S      23 49 02.6 +2.8
ARTI                                pmax  pmax
      comp=Z,59nm,1.7s
SOHO  SOHO              43.38 276   P     P      23 42 36.2 -0.5
UOSS  Minazif           43.45 277   P     P      23 42 36.2 -1.0
HATD  Hatta, Dubai      43.55 277   P     P      23 42 37.1 -0.9
ASHO  Ashiyiah          43.65 277   P     P      23 42 38.9 +0.1
MA2   Magadan           44.01  32   LR    LR     00 00 48.3
      comp=Z,153nm,21.8s,baz=271,slow=36
ALNE  Al Ain            44.09 276  i P    P      23 42 43.2 +0.8
      SNR=18
ASUD  Al Ashush, Dub    44.30 277   P     P      23 42 44.9 +0.9
TIXI  Tiksi             45.30  10   P     P      23 42 50.8 -0.5
TIXI  Tiksi             45.30  10   LR    LR     00 03 26.0
      comp=Z,888nm,21.0s,baz=216,slow=38
TIXI  Tiksi             45.30  10deP     P      23 42 50.6 -0.7
TIXI                                pmax  pmax
      comp=Z,41nm,1.0s
PETK  Petropavlovsk-    45.69  42   P     P      23 42 53.5 -1.2
      comp=Z,4.9nm,0.8s,baz=274,slow=7.3,SNR=2.2
PETK                                LR    LR     00 04 30.5
      comp=Z,461nm,19.4s,baz=250,slow=39
      comp=Z,4.9nm,0.8s
SEY   Seymchan          46.14  28   LR    LR     00 02 57.6
      comp=Z,333nm,19.0s,baz=246,slow=37
SEY   Seymchan          46.14  28⇑eP     P      23 42 58.5 +0.4
SEY                                 pmax  pmax
      comp=Z,5.0nm,1.0s
MZR   Muzera            46.40 276   P     P      23 42 59.9 -0.8
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LKRN  Lenkeran, Azer    47.28 298   P     P      23 43 08.8 +1.4
AKT   Akhty             47.89 302  eP     P      23 43 12.2  0.0
AKT                                e             23 45 02.1
AKT                                ePPP   PPP    23 45 49.4
AKT                                eS     S      23 50 08.4 -0.8
AKT                                 pmax  pmax
      comp=Z,21nm,0.6s
MAK   Makhachkala       47.99 304  eP     P      23 43 07.2 -5.6
MAK                                eS     S      23 50 02.0 -8.3
MAK                                eSS    SS     23 53 34.2 -4.8
MAK                                eSSS   SSS    23 54 42.0
MAK                                 pmax  pmax
      comp=Z,118nm,1.1s
MAK                                 MLR   MLR
      comp=Z,137nm,14.0s
BELG  Belogornoye       48.30 316deP     P      23 43 15.4 +0.3
BELG                                pmax  pmax
      comp=Z,4.0nm,1.0s
SEKA  Sheki             48.31 301   P     P      23 43 16.4 +1.0
KIRV  Kirov             48.40 325deP     P      23 43 15.8 +0.1
MNGR  Mingechevir, A    48.42 301   P     P      23 43 17.8 +1.6
GANJ  Ganja             49.01 301   P     P      23 43 22.1 +1.3
KNRA  Kununurra         49.49 149   P     P      23 43 24.1 -0.4
KNRA                                IAmb  IAmb   23 43 28.1
      comp=Z,24nm,1.0s
NAX   Nakhchivan        49.78 299   P     P      23 43 27.8 +1.0
GNI   Garni             50.26 300   P     P      23 43 30.9 +0.4
GNI                                 IAmb  IAmb   23 44 00.3
      comp=Z,41nm,1.1s
GNI   Garni             50.26 300   LR    LR     00 08 14.9
      comp=Z,73nm,19.1s,baz=94,slow=40
GNI   Garni             50.26 300ceP     P      23 43 30.5 +0.1
GNI                                 pmax  pmax
      comp=Z,19nm,1.5s
GNI   Garni             50.26 300   P     P      23 43 31.1 +0.6
FITZ  Fitzroy Crossi    50.35 154   P     P      23 43 30.8 -0.2
TRLG  Trialeti          50.60 302   P     P      23 43 33.4 +0.4
GOF   Gofitskoye        51.12 307ceP     P      23 43 37.7 +1.0
MBWA  Marble Bar        51.27 162         P      23 43 38.5 +0.6
MBWA  Marble Bar        51.27 162   P     P      23 43 38.4 +0.5
MBWA                                IAmb  IAmb   23 43 41.8
      comp=Z,59nm,1.4s
KBZ   Khabaz            51.31 305   P     P      23 43 38.6 +0.6
      comp=Z,5.9nm,0.7s,baz=88,slow=5.9,SNR=9.8
KBZ                                 LR    LR     00 07 03.5
      comp=Z,105nm,19.9s,baz=92,slow=38
      comp=Z,5.9nm,0.7s
KBZ   Khabaz            51.31 305  eP     P      23 43 38.6 +0.6
KBZ                                 pmax  pmax
      comp=Z,10.0nm,1.1s
KIV   Kislovodsk        51.44 305   P     P      23 43 39.4 +0.2
KIV   Kislovodsk        51.44 305  eP     P      23 43 39.6 +0.4
KIV                                eS     S      23 50 59.8 +1.0
KIV                                 pmax  pmax
      comp=Z,9.0nm,2.7s
KIV                                 pmax  pmax
      comp=Z,51nm,1.0s
KIV                                 MLR   MLR
      comp=Z,82nm,17.0s
KIV   Kislovodsk        51.44 305  i P    P      23 43 40.4 +1.1
      SNR=17
KIV   Kislovodsk        51.44 305   P     P      23 43 39.7 +0.5
      comp=Z,562nmcomp=Z,57nm,1.1s
KARS  Kars              51.47 301   P     P      23 43 40.0 +0.5
KARS                                IAmb  IAmb   23 43 50.4
      comp=Z,42nm,0.9s
KARS  Kars              51.47 301   P     P      23 43 40.0 +0.5
KARS                                pmax  pmax
      comp=Z,43nm,0.9s
SHA1  Shidzhatmaz       51.48 305ceP     P      23 43 40.0 +0.3
PSA00 Pilbara Seismi    51.69 162   P     P      23 43 41.7 +0.6
VRH   Novokhopyorsk     51.88 314  eP     P      23 43 41.8 -0.4
VRH                                 pmax  pmax
      comp=Z,10.0nm,0.8s
GURO  Guroymak-BITLI    52.55 298   P     P      23 43 48.5 +0.9
GURO                                IAmb  IAmb   23 43 54.7
      comp=Z,18nm,0.8s
RAYN  Ar Rayn           53.20 279   P     P      23 43 51.2 -1.3
RAYN  Ar Rayn           53.20 279   P     P      23 43 51.2 -1.3
RAYN                                pmax  pmax
      comp=Z,47nm,1.0s
RAYN  Ar Rayn           53.20 279  i P    P      23 43 52.1 -0.4
      SNR=41
BILL  Bilibino          53.35  24   P     P      23 43 52.6 -0.2
BILL                                IAmb  IAmb   23 43 55.5
      comp=Z,17nm,0.9s
BILL  Bilibino          53.35  24⇑eP     P      23 43 52.7 -0.2
BILL                                pmax  pmax
      comp=Z,40nm,1.7s
VORR  Voronezh          53.46 315  eP     P      23 43 54.1 +0.2
VORR                                pmax  pmax
      comp=Z,44nm,1.8s
VSR   Storozhevoye      53.49 314  eP     P      23 43 51.7 -2.5
VSR                                 pmax  pmax
      comp=Z,10.0nm,0.8s
LPSR  Galich'ya Gora    53.62 316  eP     P      23 43 52.1 -3.0
LPSR                                pmax  pmax
      comp=Z,10.0nm,0.8s
KLMR  Klimovskoe        53.73 326  eP     P      23 43 54.2 -1.5
KLMR                                pmax  pmax
      comp=Z,64nm,1.5s
KLMR                                MLR   MLR
      comp=Z,278nm,15.0s
MOS   Moscow            54.41 320  eP     P      23 44 00.3 -0.4
MOS                                eS     S      23 51 37.5 -1.1
MOS                                 pmax  pmax
      comp=Z,200nm,1.5s
MOS                                 pmax  pmax
      comp=Z,84nm,1.1s
MOS                                 smax  smax
      comp=E,300nm,2.7s
OBN   Obninsk           55.00 319   P     P      23 44 05.3 +0.2
OBN   Obninsk           55.00 319   LR    LR     00 09 04.6
      comp=E,211nm,20.4s,baz=26,slow=38
OBN   Obninsk           55.00 319  i P    P      23 44 04.8 -0.3
OBN                                 pmax  pmax
      comp=Z,27nm,1.4s
OBN                                 MLR   MLR
      comp=Z,173nm,19.0s
OBN   Obninsk           55.00 319   P     P      23 44 05.6 +0.5
      comp=Z,36nm,1.3s
PMG   Port Moresby      55.45 126   P     P      23 44 08.7 -0.1
PMG   Port Moresby      55.45 126   P     P      23 44 08.6 -0.2
      comp=Z,39nm,0.9s,baz=14,slow=6.9,SNR=5.3
      comp=Z,39nm,0.9s
PMG   Port Moresby      55.45 126   P     P      23 44 08.7 -0.1
PMG                                 pmax  pmax
      comp=Z,34nm,0.8s
WB0   Warramunga Arr    55.68 146   P     P      23 44 10.0 -0.4
WB0                                 IAmb  IAmb   23 44 14.7
      comp=Z,23nm,1.1s
WRAB  Tennant Creek     55.80 146   P     P      23 44 11.0 -0.2
WRAB  Tennant Creek     55.80 146d iP     P      23 44 11.6 +0.3
WRAB                                pmax  pmax
      comp=Z,28nm,1.0s
WRA   Warramunga Arr    55.81 146   P     P      23 44 10.4 -0.9
WRA   Warramunga Arr    55.81 146   P     P      23 44 10.7 -0.5
      comp=Z,12nm,0.6s,baz=337,slow=8.2,SNR=92
WRA                                 PcP   PcP    23 45 08.1 -2.1
      comp=Z,7.7nm,0.7s,baz=337,slow=8.0,SNR=2.9
      comp=Z,12nm,0.6s
WRA   Warramunga Arr    55.81 146  i P    P      23 44 11.0 -0.3
WRA                                 pmax  pmax
      comp=Z,13nm,0.5s
WB2   Warramunga Arr    55.81 146   P     P      23 44 10.9 -0.4
WR8   Warramunga Arr    55.90 146   P     P      23 44 11.5 -0.4
WR8                                 IAmb  IAmb   23 44 15.7
      comp=Z,50nm,1.4s
WR0   Warramunga Arr    55.92 146   P     P      23 44 11.7 -0.4
WR0                                 IAmb  IAmb   23 44 16.5
      comp=Z,28nm,1.1s
COEN  Coen              56.03 134   P     P      23 44 13.1 +0.1
COEN                                IAmb  IAmb   23 44 17.4
      comp=Z,19nm,1.1s
GAZ   Gaziantep         56.55 298   P     P      23 44 17.0 +0.4
GAZ                                 IAmb  IAmb   23 44 18.4
      comp=Z,25nm,1.1s
DIKM  Dikmen            57.16 303   P     P      23 44 21.6 +0.8
      comp=Z,16nm,0.8s
BNN   Bunyan            57.25 300   P     P      23 44 21.4 -0.3
SIM   Simferopol'       57.42 307  eP     P      23 44 23.9 +1.3
SIM                                 pmax  pmax
      comp=Z,42nm,0.8s
JOF   Joensuu           57.73 329  eP     P      23 44 24.2 -0.1
ASF   Jabal al Asfar    57.99 292   LR    LR     00 14 47.1
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      comp=Z,130nm,18.9s,baz=117,slow=42
VADS  Vadso             58.72 337  eP     P      23 44 31.7 +0.5
BR131 Keskin Array S    58.74 301   P     P      23 44 31.5 -0.6
BR131 Keskin Array S    58.74 301ceP     P      23 44 31.4 -0.7
BRTR  Keskin Array B    58.74 301   P     P      23 44 31.1 -1.0
BRTR  Keskin Array B    58.74 301   P     P      23 44 31.9 -0.2
      comp=Z,3.4nm,0.6s,baz=122,slow=6.7,SNR=29
      comp=Z,3.4nm,0.6s
BRTR  Keskin Array B    58.74 301   P     P      23 44 32.0 -0.2
BR104 Keskin Array S    58.75 301   P     P      23 44 31.9 -0.2
      comp=Z,46nmcomp=Z,5.6nm,0.8s
BR106 Keskin Array S    58.76 301   P     P      23 44 31.8 -0.4
      comp=Z,44nmcomp=Z,6.4nm,0.9s
BR105 Keskin Array S    58.76 301   P     P      23 44 32.2 -0.1
      comp=Z,58nmcomp=Z,7.7nm,0.9s
AS31  Alice Springs     58.78 149   P     P      23 44 31.6 -0.7
ASAR  Alice Springs     58.78 149   P     P      23 44 32.9 +0.6
ASAR  Alice Springs     58.78 149   P     P      23 44 32.1 -0.2
      comp=Z,8.8nm,0.5s,baz=332,slow=6.6,SNR=105
ASAR                                PcP   PcP    23 45 20.0 -1.9
      comp=Z,3.2nm,0.5s,baz=336,slow=5.2,SNR=4.2
      comp=Z,8.8nm,0.5s
ASAR  Alice Springs     58.78 149   P     P      23 44 32.9 +0.6
MMAI  Mount Meron Ar    58.98 293   P     P      23 44 34.0 +0.2
      comp=Z,7.3nm,0.9s,baz=78,slow=8.6,SNR=12
MMAI                                LR    LR     00 15 26.5
      comp=Z,121nm,18.3s,baz=74,slow=42
      comp=Z,7.3nm,0.9s
GHAJ  Ghor Haditha      59.32 291   P     P      23 44 36.0 -0.1
GHAJ                                IAmb  IAmb   23 44 37.5
      comp=Z,28nm,1.0s
ANTO  Ankara            59.35 302   P     P      23 44 35.3 -0.9
ANTO                                IAmb  IAmb   23 44 38.0
      comp=Z,16nm,0.7s
ANTO  Ankara            59.35 302   P     P      23 44 35.3 -0.9
ANTO                                pmax  pmax
      comp=Z,16nm,0.7s
ANTO  Ankara            59.35 302   P     P      23 44 36.5 +0.3
      comp=Z,10nm,0.9s
KEV   Kevo              59.52 337   P     P      23 44 36.9 +0.1
KEV   Kevo              59.52 337   P     P      23 44 36.9 +0.1
KEV                                 pmax  pmax
      comp=Z,24nm,0.8s
AK09  Malin Array Si    59.77 314   P     P      23 44 38.6 -0.2
AK08  Malin Array Si    59.79 314   P     P      23 44 38.6 -0.3
AK08                                pP    pP     23 44 41.7 -2.0
AK03  Malin Array Si    59.79 315   P     P      23 44 38.5 -0.5
AK10  Malin Array Si    59.79 314   P     P      23 44 38.2 -0.8
AKASG Malin Array Be    59.80 315   P     P      23 44 38.9 -0.1
AKASG                               IAmb  IAmb   23 44 40.3
      comp=Z,16nm,0.9s
AKASG Malin Array Be    59.80 315   P     P      23 44 38.5 -0.5
      comp=Z,6.5nm,0.6s,baz=68,slow=7.2,SNR=33
      comp=Z,6.5nm,0.6s
AKASG Malin Array Be    59.80 315  i P    P      23 44 38.9 -0.1
AKASG                               pmax  pmax
      comp=Z,10.0nm,0.6s
AKBB  Malin Array Si    59.80 315   P     P      23 44 38.6 -0.4
AKBB                                IAmb  IAmb   23 44 42.1
      comp=Z,15nm,0.7s
AKBB  Malin Array Si    59.80 315deP     P      23 44 38.8 -0.2
AKBB  Malin Array Si    59.80 315   P     P      23 44 38.5 -0.4
AK01  Malin Array Si    59.80 315   P     P      23 44 38.4 -0.6
KIEV  Kiev              59.81 315   P     P      23 44 38.8 -0.3
KIEV                                IAmb  IAmb   23 44 42.1
      comp=Z,14nm,0.7s
KIEV  Kiev              59.81 315  ⇑P     P      23 44 37.9 -1.2
KIEV  Kiev              59.81 315   P     P      23 44 38.8 -0.3
KIEV                                pmax  pmax
      comp=Z,14nm,0.7s
KIEV  Kiev              59.81 315  i P    P      23 44 38.7 -0.3
      SNR=14
KIEV  Kiev              59.81 315   P     P      23 44 38.7 -0.3
      comp=Z,79nm,1.3s
AK02  Malin Array Si    59.81 314   P     P      23 44 38.7 -0.4
AK05  Malin Array Si    59.82 314   P     P      23 44 38.2 -1.0
AK04  Malin Array Si    59.83 315   P     P      23 44 38.6 -0.6
BAL3X Bal3x, Balta      60.01 311   P     P      23 44 40.5  0.0
ARA0  ARCESS Array S    60.05 336  eP     P      23 44 40.9 +0.4
ARCES ARCESS Array B    60.05 336   P     P      23 44 40.3 -0.1
ARCES ARCESS Array B    60.05 336   P     P      23 44 40.1 -0.3
      comp=Z,7.0nm,0.6s,baz=84,slow=7.0,SNR=26
ARCES                               LR    LR     00 12 54.3
      comp=Z,177nm,18.8s,baz=86,slow=38
      comp=Z,7.0nm,0.6s
ARCES ARCESS Array B    60.05 336   P     P      23 44 40.3 -0.1
MNK   Minsk             60.06 319  i P    P      23 44 42.0 +1.3
      comp=Z,13nm,0.8s,baz=82
MNK                                i PP   PP     23 46 54.8 +1.9
MNK                                i PPP  PPP    23 48 17.5
MNK                                i S    S      23 52 52.0 -1.0
MNK                                i SS   SS     23 56 51.5 +2.1
MNK                                i SSS  SSS    23 59 35.5
MNK                                i LR   LR     00 11 02.8
MNK                                i LRM  MLR    00 13 12.3
      comp=E,269nm,20.1s
MNK                                i LRM  MLR    00 13 12.3
      comp=N,373nm,24.7s
MNK                                i LRM  MLR    00 13 12.3
      comp=Z,79nm,21.3s
MNK   Minsk             60.06 319  eP     P      23 44 42.0 +1.3
PURM  Purcari           60.08 310  ⇓P     P      23 44 41.1 +0.1
PURM  Purcari           60.08 310   P     P      23 44 40.6 -0.4
      comp=Z,44nm,0.9s
ATD   Arta Tunnel       60.12 267   P     P      23 44 42.1 +0.3
ATD   Arta Tunnel       60.12 267   LR    LR     00 08 48.3
      comp=Z,5.5nm,21.8s,baz=130,slow=34
CSS   Mathiatis         60.13 296   P     P      23 44 41.2 -0.4
CSS                                 IAmb  IAmb   23 44 44.0
      comp=Z,16nm,0.8s
CSS   Mathiatis         60.13 296   P     P      23 44 40.9 -0.7
      comp=Z,24nm,1.6s
VSU   Vasula            60.21 324deP     P      23 44 41.3 -0.4
VSU                                 pmax  pmax
      comp=Z,27nm,0.6s
VSU   Vasula            60.21 324  eP     P      23 44 40.9 -0.8
FIA1  FINESS Array S    60.24 327   P     P      23 44 42.4 +0.5
FINES FINESS Array B    60.24 327   P     P      23 44 41.9  0.0
      comp=Z,7.5nm,0.7s,baz=93,slow=5.8,SNR=27
      comp=Z,7.5nm,0.7s
FINES FINESS Array B    60.24 327  i P    P      23 44 42.2 +0.3
FINES                               pmax  pmax
      comp=Z,8.0nm,0.7s
HOPEN Hopen             60.29 345  eP     P      23 44 42.9 +0.9
EIL   Elat              60.31 290   LR    LR     00 14 04.5
      comp=Z,138nm,21.4s,baz=66,slow=39
MDUB  Mudurnu           60.40 303   P     P      23 44 43.8 +0.3
IDID  Didziasalis       60.60 320  eP     P      23 44 45.5 +1.0
NACGM Naroch            60.64 320⇓iP     P      23 44 44.9 +0.2
      comp=Z,15nm,0.9s,baz=82
HAMF  Hammerfest        60.64 338  eP     P      23 44 45.4 +0.9
MILM  Milestii Mici     60.72 310  eP     P      23 44 45.0 -0.4
      comp=Z,28nm,0.9s
MILM  Milestii Mici     60.72 310  ⇑P     P      23 44 44.7 -0.7
MILM  Milestii Mici     60.72 310  eP     P      23 44 45.0 -0.4
MILM                               e             23 44 51.0
MILM                               i             23 53 00.0
MILM                                pmax  pmax
      comp=Z,28nm,0.9s
MI28  Mi28,Pidlybu      60.73 315   P     P      23 44 45.4  0.0
KEF   Keuruu            60.74 328  eP     P      23 44 45.0 -0.3
SORM  Soroca            60.80 312  ⇓P     P      23 44 45.4 -0.5
SORM  Soroca            60.80 312  ⇓P     P      23 44 45.4 -0.5
SORM  Soroca            60.80 312   P     P      23 44 45.3 -0.5
      comp=Z,17nm,0.8s
LUBAR Lubar, Ukraine    60.85 314   P     P      23 44 45.9 -0.3
ISAL  Salakas           60.91 320  eP     P      23 44 47.0 +0.5
TLCR                    61.07 308  ⇓P     P      23 44 49.2 +1.4
TLCR                    61.07 308  ⇓P     P      23 44 49.2 +1.4
MEF   Metsahovi         61.19 326  eP     P      23 44 49.0 +0.6
TPGR  Topolog           61.42 308  ⇓P     P      23 44 50.8 +0.6
VLDR  Vladesti          61.44 309  ⇓P     P      23 44 51.1 +0.8
TIRR  Tirgusor          61.51 308   P     P      23 44 50.4 -0.4
TIRR                                IAmb  IAmb   23 45 11.2
      comp=Z,23nm,1.2s
TIRR  Tirgusor          61.51 308  ⇑P     P      23 44 51.9 +1.1
TIRR  Tirgusor          61.51 308  ⇑P     P      23 44 51.9 +1.1
TIRR  Tirgusor          61.51 308   P     P      23 44 51.1 +0.3
      comp=Z,15nm,1.2s
CFR   Carcaliu          61.54 308  ⇓P     P      23 44 51.1 +0.1
CFR   Carcaliu          61.54 308  ⇓P     P      23 44 51.1 +0.1
ISP   Isparta           61.56 300   P     P      23 44 50.9 -0.5
ISP   Isparta           61.56 300   P     P      23 44 50.9 -0.5
ISP                                 pmax  pmax
      comp=Z,24nm,0.7s
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VAF	Ylistaro	61.66	329	eP	P	23 44 51.9	+0.5
MTSE	Matsula	61.70	324	eP	P	23 44 52.6	+0.9
YLV	Yalova	61.73	303	P	P	23 44 52.1	-0.4
	comp=Z,290nmcomp=Z,33nm,0.9s						
RNPP9	Sopachiv	61.75	316	P	P	23 44 52.3	0.0
RNPP8	Varash	61.78	316	P	P	23 44 51.9	-0.6
RNPP5	Staryi Chortor	61.78	316	P	P	23 44 52.7	+0.2
HARR	Harsova	61.79	308	⇑P	P	23 44 53.5	+0.8
HARR	Harsova	61.79	308	⇑P	P	23 44 53.5	+0.8
JETT	Jettan, Norway	61.83	337	eP	P	23 44 53.6	+1.0
HORU	Horodok	61.84	313	P	P	23 44 52.7	-0.2
KMPD	K-Podol'skiy	61.95	312	P	P	23 44 53.1	-0.6
ICOR	Ion Corvin	62.02	307	⇓P	P	23 44 55.1	+0.9
GAMB	Gambell	62.05	30	P	P	23 44 53.5	-0.6
	baz=278						
NWAO	Narrogin (SRO)	62.06	168	LR	LR	00 16 55.1	
	comp=Z,131nm,18.1s,baz=16,slow=41						
VSVD	Vaisvydziai	62.07	321	eP	P	23 44 55.2	+0.9
PABE	Paberze	62.13	321	P	P	23 44 54.9	+0.1
PABE	Paberze	62.13	321	eP	P	23 44 55.5	+0.7
ODBI	Odobesti	62.16	309	⇑P	P	23 44 58.4	+3.3
ODBI	Odobesti	62.16	309	P	P	23 44 55.9	+0.8
	comp=Z,607nmcomp=Z,15nm,0.7s						
SPB2	Spitsbergen Ar	62.16	347	P	P	23 44 55.4	+0.8
SPB2				IAmb	IAmb	23 45 39.4	
	comp=Z,20nm,1.2s						
SPA0	Spitsbergen Ar	62.16	347	eP	P	23 44 55.4	+0.7
SPITS	Spitsbergen Ar	62.16	347	P	P	23 44 55.0	+0.3
	comp=Z,3.9nm,0.6s,baz=100,slow=8.6,SNR=15						
SPITS				PcP	PcP	23 45 35.7	+1.0
	comp=Z,4.1nm,0.5s,baz=92,slow=7.0,SNR=6.9						
SPITS				LR	LR	00 15 49.8	
	comp=Z,107nm,18.5s,baz=48,slow=40						
	comp=Z,3.9nm,0.6s						
TESR	Tescani	62.26	310	⇑P	P	23 44 55.8	0.0
TESR	Tescani	62.26	310	P	P	23 44 55.4	-0.5
	comp=Z,16nm,1.3s						
ELL	Elmali	62.32	299	P	P	23 44 56.0	-0.6
ELL	Elmali	62.32	299	P	P	23 44 56.0	-0.6
ELL				pmax	pmax		
	comp=Z,63nm,0.7s						
TRO	Tromso	62.34	337	eP	P	23 44 56.6	+0.7
VRI	Vrincioaia	62.36	309	⇓P	P	23 44 57.6	+1.1
VRI	Vrincioaia	62.36	309	⇓P	P	23 44 57.6	+1.1
VRI	Vrincioaia	62.36	309	P	P	23 44 57.0	+0.5
	comp=Z,475nmcomp=Z,40nm,0.9s						
PRAR	RASCA	62.36	311	⇓P	P	23 44 56.6	+0.1
PLOR	Plostina	62.41	309	⇓P	P	23 44 58.2	+1.3
PLOR	Plostina	62.41	309	⇓P	P	23 44 58.2	+1.3
ROCAM	Rodrigues Isla	62.46	225	P	P	23 44 56.9	-0.6
ONER	Baraj Valea Uz	62.48	310	⇑P	P	23 44 58.2	+0.9
CTAO	Charters Tower	62.57	136	P	P	23 44 58.3	+0.2
CTAO				IAmb	IAmb	23 45 03.2	
	comp=Z,28nm,1.4s						
CTAO	Charters Tower	62.57	136	P	P	23 44 58.3	+0.2
CTAO				pmax	pmax		
	comp=Z,28nm,1.4s						
ISR	Istrita	62.66	309	⇓P	P	23 44 57.5	-1.1
ISR	Istrita	62.66	309	⇓P	P	23 44 57.5	-1.1
ISR	Istrita	62.66	309	P	P	23 44 58.7	+0.1
	comp=Z,43nm,1.0s						
NEHR	Nehoiu	62.75	309	⇓P	P	23 45 00.7	+1.5
TURR	Turia	62.80	310	⇑P	P	23 45 00.9	+1.4
SUW	Suwalki	62.86	319	eP	P	23 45 00.0	+0.3
SUW	Suwalki	62.86	319	P	P	23 44 59.6	-0.1
SUW	Suwalki	62.86	319	P	P	23 44 59.6	-0.1
SUW	Suwalki	62.86	319	eP	P	23 45 00.4	+0.7
KSV	Kosov	62.91	312	P	P	23 44 59.6	-0.5
OZUR		62.94	310	⇓P	P	23 45 01.3	+0.8
BURAR	Bucovina Array	62.97	312	P	P	23 45 00.5	-0.2
BURAR	Bucovina Array	62.97	312	P	P	23 45 00.5	-0.2
BURAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BUR08	Bucovina Ar. S	62.97	312	P	P	23 45 01.2	+0.5
MLR	Muntele Rosu	62.98	309	P	P	23 45 01.5	+0.7
MLR				IAmb	IAmb	23 45 10.1	
	comp=Z,20nm,0.8s						
MLR	Muntele Rosu	62.98	309	LR	LR	00 15 23.7	
	comp=Z,168nm,21.4s,baz=82,slow=39						
MLR	Muntele Rosu	62.98	309	⇓P	P	23 45 01.6	+0.8
MLR	Muntele Rosu	62.98	309	⇓P	P	23 45 01.6	+0.8
MLR	Muntele Rosu	62.98	309	P	P	23 45 01.0	+0.2
	comp=Z,367nmcomp=Z,30nm,0.8s						
BOSR	Bodos	63.03	310	⇓P	P	23 45 02.2	+1.2
STNU	Starunia	63.18	313	P	P	23 45 01.8	-0.2
DOPR	Dopca	63.24	310	⇑P	P	23 45 03.6	+1.2
TNA	Tin City	63.38	28	P	P	23 45 02.5	-0.4
	baz=280						
VOIR		63.60	309	⇑P	P	23 45 06.0	+1.1
VOIR		63.60	309	⇑P	P	23 45 06.0	+1.1
VOIR		63.60	309	P	P	23 45 04.8	-0.1
	comp=Z,8.8nm,0.7s						
MEZ	Mezhgor'ye	63.87	313	P	P	23 45 06.2	-0.3
C16K	Lisburne Hills	63.88	24	P	P	23 45 06.1	-0.1
C16K	Lisburne Hills	63.88	24	P	P	23 45 06.2	0.0
	baz=281						
STEI	Steigen	63.94	335	eP	P	23 45 06.0	-0.6
FAUS	Fauske	64.03	335	eP	P	23 45 07.0	-0.2
F14K	Arctic Creek	64.05	28	P	P	23 45 07.1	-0.3
	baz=282						
BMR	Baia Mare	64.08	312	⇑P	P	23 45 09.1	+1.2
BMR	Baia Mare	64.08	312	⇑P	P	23 45 09.1	+1.2
ALN	Alexandroupoli	64.09	304	P	P	23 45 08.6	+0.6
ALN	Alexandroupoli	64.09	304	P	P	23 45 08.6	+0.6
ALN				pmax	pmax		
	comp=Z,51nm,1.3s						
KWP	Kalwaria Pacla	64.11	314	eP	P	23 45 08.8	+0.7
KWP	Kalwaria Pacla	64.11	314	P	P	23 45 08.9	+0.8
KWP	Kalwaria Pacla	64.11	314	P	P	23 45 08.4	+0.3
	comp=Z,47nm,1.0s						
EZN	Ezine	64.18	303	P	P	23 45 08.6	0.0
KORU	Korolevo	64.20	313	P	P	23 45 09.1	+0.5
BRIU	Brid	64.23	313	P	P	23 45 09.3	+0.5
RDO	Rodhopi	64.39	305	P	P	23 45 10.4	+0.5
RDO				IAmb	IAmb	23 45 12.7	
	comp=Z,14nm,1.1s						
MUKU	Mukachevo	64.42	313	P	P	23 45 10.3	+0.3
VLAD	Vladila	64.42	308	⇑P	P	23 45 09.5	-0.6
P08K	Saint George I	64.42	38	P	P	23 45 08.8	-1.1
	baz=283						
LOT	Lotru	64.47	310	⇓P	P	23 45 11.1	+0.5
BERU	Beregovo	64.50	313	P	P	23 45 10.8	+0.2
LOF	Lofoten	64.52	335	eP	P	23 45 10.1	-0.3
KOLS	Kolonicke sedl	64.56	314	eP	P	23 45 12.1	+1.1
KOLS				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KOLS	Kolonicke sedl	64.56	314	eP	P	23 45 12.1	+1.1
MESR	Meseseni	64.58	312	⇓P	P	23 45 12.3	+1.2
HOLU	Holmets	64.59	313	P	P	23 45 11.6	+0.4
MOR8	Moi Rana	64.61	333	eP	P	23 45 10.2	-0.8
UZHM	Uzhgorod	64.63	313	P	P	23 45 12.0	+0.6
C17K	DeLong Mountai	64.63	24	P	P	23 45 11.3	+0.1
	baz=283,SNR=6.7						
ANM	Nome	64.64	29	P	P	23 45 11.1	-0.1
	baz=283						
F15K	North Star Dit	64.69	27	P	P	23 45 11.3	-0.2
	baz=283						
BEL	Belsk	64.76	317	eP	P	23 45 14.8	+2.6
KARP	Karpathos	64.80	298	P	P	23 45 13.2	+0.4
KARP	Karpathos	64.80	298	P	P	23 45 12.5	-0.4
	comp=Z,82nm,0.9s						
RDOG	Red Dog Mine	64.82	25	P	P	23 45 11.3	-1.1
RDOG				IAmb	IAmb	23 45 15.3	
	comp=Z,8.5nm,0.6s						
RDOG	Red Dog Mine	64.82	25	P	P	23 45 12.0	-0.4
	baz=283						
DRGR		64.83	311	⇓P	P	23 45 13.7	+0.8
DRGR		64.83	311	⇓P	P	23 45 13.7	+0.8
D17K	Noatak River	64.84	25	P	P	23 45 12.6	+0.2
	baz=283,SNR=11						
B18K	Kokolik River	64.91	23	P	P	23 45 13.0	+0.1
	baz=284						
DEV	Deva	64.94	310	⇓P	P	23 45 14.6	+1.1
DEV	Deva	64.94	310	⇓P	P	23 45 14.6	+1.1
VAGH	Vaagaholmen	64.94	334	eP	P	23 45 12.2	-0.9
A19K	Wainwright	64.95	22	P	P	23 45 12.8	-0.4
	baz=284						
KONS	Konsvik	65.05	334	eP	P	23 45 13.7	-0.2
STHS	Stebnicka Huta	65.09	314	eP	P	23 45 13.9	-0.6
G15K	Niukluk	65.10	28	P	P	23 45 14.2	0.0
	baz=284						
STOK	Stokkvaagen	65.13	334	eP	P	23 45 13.9	-0.5
LEIR	Leirfjorden	65.15	333	eP	P	23 45 14.4	-0.1
GZR	Gura Zlata	65.16	310	⇓P	P	23 45 15.8	+0.8
GZR	Gura Zlata	65.16	310	⇓P	P	23 45 15.8	+0.8
M11K	Mekoryuk	65.24	33	P	P	23 45 14.2	-0.9
	baz=284						
C18K	Utukok River	65.30	24	P	P	23 45 15.2	-0.3
C18K				IAmb	IAmb	23 45 19.2	
	comp=Z,18nm,0.8s						
C18K	Utukok River	65.30	24	P	P	23 45 15.0	-0.5
	baz=285						
E17K	Hotham Inlet	65.46	25	P	P	23 45 16.8	+0.2
	baz=285,SNR=6.4						
SURR	Surduc	65.50	310	⇑P	P	23 45 18.2	+1.0
HERR	Herculane	65.55	309	⇑P	P	23 45 18.5	+1.0
K13K	Kusilvak Mount	65.58	31	P	P	23 45 18.2	+0.8
K13K	Kusilvak Mount	65.58	31	P	P	23 45 17.8	+0.4
	baz=285,SNR=9.4						
NIE	Niedzica	65.69	314	eP	P	23 45 19.4	+1.0
NIE	Niedzica	65.69	314	P	P	23 45 20.1	+1.7
NIE	Niedzica	65.69	314	P	P	23 45 19.1	+0.7
	comp=Z,6.7nm,1.1s						
G16K	Koyuk River	65.69	27	P	P	23 45 17.7	-0.3
G16K				IAmb	IAmb	23 45 22.1	
	comp=Z,15nm,0.9s						
G16K	Koyuk River	65.69	27	P	P	23 45 17.7	-0.3
	baz=285						
NIKH	Nikolski High	65.70	41	P	P	23 45 18.0	-0.3
	baz=285						
C19K	Lookout Ridge	65.74	23	P	P	23 45 17.7	-0.7
C19K	Lookout Ridge	65.74	23	P	P	23 45 18.7	+0.3
	baz=286,SNR=21						
OJC	Ojcow	65.78	315	eP	P	23 45 19.2	+0.2
OJC	Ojcow	65.78	315	P	P	23 45 19.1	+0.1
OJC	Ojcow	65.78	315	P	P	23 45 19.1	+0.1
OJC	Ojcow	65.78	315	P	P	23 45 19.0	+0.1
	comp=Z,16nm,1.1s						
KECS	Kecovo	65.82	313	eP	P	23 45 21.8	+2.6
KECS				pmax	pmax		
	comp=Z,24nm,0.7s						
KECS	Kecovo	65.82	313	eP	P	23 45 21.8	+2.6
E18K	Tukpahlearik C	65.83	25	P	P	23 45 18.8	-0.2
E18K				IAmb	IAmb	23 45 22.8	
	comp=Z,14nm,0.8s						
E18K	Tukpahlearik C	65.83	25	P	P	23 45 19.2	+0.2
	baz=286,SNR=5.3						
J14K	Nanvaranak Lak	65.87	30	P	P	23 45 19.8	+0.6
J14K	Nanvaranak Lak	65.87	30	P	P	23 45 19.4	+0.2
	baz=285,SNR=7.8						
H16K	Elim	65.94	28	P	P	23 45 19.6	0.0
	baz=285						
NSS	Namsos	66.02	332	eP	P	23 45 20.6	+0.4
MDVR	Moldovita	66.05	309	⇑P	P	23 45 21.4	+0.6
A21K	Barrow	66.07	20	P	P	23 45 20.2	-0.1
	baz=288						
PEHC	Pehcevo	66.10	306	i P	P	23 45 28.6	+7.3
LANS	Liptovska Anna	66.28	314	eP	P	23 45 23.0	+0.8
LANS	Liptovska Anna	66.28	314	eP	P	23 45 23.0	+0.8
B20K	Meade River	66.29	22	P	P	23 45 22.0	+0.2
B20K	Meade River	66.29	22	P	P	23 45 22.1	+0.2
	baz=288,SNR=31						
G17K	Kiwalik Mounta	66.34	27	P	P	23 45 21.9	-0.4
	baz=286						
PSZ	Piszkesteto	66.36	313	P	P	23 45 22.7	-0.1
PSZ	Piszkesteto	66.36	313	P	P	23 45 22.7	-0.1
PSZ				pmax	pmax		
	comp=Z,11nm,1.1s						
PSZ	Piszkesteto	66.36	313	eP	P	23 45 23.9	+1.1
BOVS	Bovan	66.39	308	⇑P	P	23 45 23.5	+0.6
F18K	Selawik	66.42	26	P	P	23 45 22.7	0.0
	baz=287						
D19K	Kuna River	66.42	24	P	P	23 45 22.4	-0.4
D19K	Kuna River	66.42	24	P	P	23 45 23.0	+0.2
	baz=287,SNR=22						
HFS	Hagfors	66.44	327	P	P	23 45 23.0	0.0
	comp=Z,5.9nm,0.5s,baz=90,slow=4.9,SNR=37						
	comp=Z,5.9nm,0.5s						
NOR	Nord	66.45	352	i P	P	23 45 22.4	-0.4
NOR				IAmb	IAmb	23 45 25.9	
	comp=Z,11nm,0.9s						
GKP	Gorka Klasztor	66.47	319	eP	P	23 45 23.5	+0.2
GKP	Gorka Klasztor	66.47	319	eP	P	23 45 23.5	+0.2
VAY	Valandovo	66.48	305	i P	P	23 45 23.9	+0.3
M13K	Dall Lake	66.60	33	P	P	23 45 25.1	+1.2
M13K	Dall Lake	66.60	33	P	P	23 45 24.6	+0.7
	baz=286						
IDI	Anoyia	66.64	299	P	P	23 45 24.1	-0.6
IDI				IAmb	IAmb	23 45 37.7	
	comp=Z,20nm,0.8s						
L14K	Kuka Creek	66.65	32	P	P	23 45 25.4	+1.2
L14K	Kuka Creek	66.65	32	P	P	23 45 24.7	+0.4
	baz=286						
A22K	Sinclair Lake	66.67	21	P	P	23 45 24.7	+0.4
	baz=289						
I17K	Unalakleet	66.79	29	P	P	23 45 24.8	-0.3
I17K				IAmb	IAmb	23 45 29.5	
	comp=Z,22nm,1.1s						
I17K	Unalakleet	66.79	29	P	P	23 45 25.5	+0.3
	baz=287						
H17K	Granite Mounta	66.81	27	P	P	23 45 25.6	+0.3
H17K				IAmb	IAmb	23 45 29.4	
	comp=Z,10.0nm,0.7s						
H17K	Granite Mounta	66.81	27	P	P	23 45 25.3	+0.1
	baz=287						
UNV	Unalaska Valle	66.81	40	P	P	23 45 25.5	+0.1
	baz=287						
VYHS	Vyhne	66.87	314	eP	P	23 45 26.6	+0.6
D20K	Etivluk River	66.88	23	P	P	23 45 25.9	+0.2
D20K	Etivluk River	66.88	23	P	P	23 45 25.9	+0.2
	baz=289						
K15K	Wolf Creek Mou	66.90	30	P	P	23 45 26.9	+1.0
K15K	Wolf Creek Mou	66.90	30	P	P	23 45 26.6	+0.7
	baz=287,SNR=7.8						
OKC	Ostrava-Krasne	66.91	315	eP	P	23 45 28.5	+2.4
OKC				AMS	AMS	00 15 50.0	
	comp=Z,200nm,14.2s						
OKC	Ostrava-Krasne	66.91	315	eP	P	23 45 28.5	+2.4
OKC				MLR	MLR		
	comp=Z,200nm,14.2s						
J16K	Anvik River	67.01	29	P	P	23 45 27.6	+1.0
J16K	Anvik River	67.01	29	P	P	23 45 27.0	+0.4
	baz=287,SNR=6.2						
G18K	Tagagawik	67.02	26	P	P	23 45 26.6	0.0
G18K	Tagagawik	67.02	26	P	P	23 45 25.7	-0.8
	baz=288						
F19K	Shaleruckik Mo	67.06	25	P	P	23 45 26.5	-0.3
F19K				IAmb	IAmb	23 45 30.2	
	comp=Z,23nm,1.0s						
F19K	Shaleruckik Mo	67.06	25	P	P	23 45 26.4	-0.4
	baz=288						
E19K	Redstone River	67.06	25	P	P	23 45 27.2	+0.3
E19K				IAmb	IAmb	23 45 30.5	
	comp=Z,12nm,0.8s						
E19K	Redstone River	67.06	25	P	P	23 45 26.9	+0.1
	baz=289,SNR=13						
SKO	Skopje	67.08	306	i P	P	23 45 27.6	+0.1
NC405	NORSAR Array S	67.10	328	P	P	23 45 27.1	0.0
NC405				IAmb	IAmb	23 45 52.0	
	comp=Z,16nm,1.1s						
L15K	Ungalak Mounta	67.10	31	P	P	23 45 27.1	0.0
	baz=287						
STEB	Steborice	67.11	316	eP	P	23 45 27.6	+0.1
M14K	Bethel	67.16	32	P	P	23 45 27.2	-0.3
M14K	Bethel	67.16	32	P	P	23 45 27.8	+0.3
	baz=287						
E20K	Nigu River	67.18	24	P	P	23 45 27.8	+0.1
	baz=289						
NC303	NORSAR Array S	67.23	328	P	P	23 45 28.1	+0.1
NC303				IAmb	IAmb	23 45 36.4	
	comp=Z,19nm,1.1s						
FRGS	Fruska Gora	67.23	310	eP	P	23 45 28.2	-0.1
MAUC	Maruska	67.25	315	eP	P	23 45 30.3	+1.9
B21K	Ikpikpuk River	67.26	22	P	P	23 45 28.3	+0.3
B21K	Ikpikpuk River	67.26	22	P	P	23 45 28.4	+0.4
	baz=290,SNR=22						
NC602	NORSAR Array S	67.29	328	P	P	23 45 28.1	-0.3
NC602	NORSAR Array S	67.29	328	eP	P	23 45 28.9	+0.5
NORES	NORESS Array B	67.29	328	P	P	23 45 28.4	0.0
MORC	Moravsky Berou	67.30	315	P	P	23 45 28.1	-0.6
MORC				IAmb	IAmb	23 45 37.5	
	comp=Z,8.5nm,0.8s						
MORC	Moravsky Berou	67.30	315	eP	P	23 45 29.8	+1.1
MORC	Moravsky Berou	67.30	315	P	P	23 45 28.1	-0.6
MORC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
NB201	NORSAR Array S	67.31	328	P	P	23 45 28.1	-0.5
NB201				IAmb	IAmb	23 45 36.8	
	comp=Z,12nm,1.1s						
NB2	NORSAR Subarra	67.35	328	P	P	23 45 28.6	-0.2
	comp=Z,9.8nm,0.8s,baz=75,slow=6.9						
NB2	NORSAR Subarra	67.35	328	P	P	23 45 28.6	-0.2
	baz=75,slow=6.9						
NOA	NORSAR Array B	67.35	328	P	P	23 45 28.8	0.0
	comp=Z,4.1nm,0.7s,baz=74,slow=6.5,SNR=29						
NOA				PP	PP	23 47 57.1	+0.3
	comp=Z,1.4nm,0.8s,baz=68,slow=8.2,SNR=3.4						
NOA				LR	LR	00 17 16.4	
	comp=Z,95nm,18.9s,baz=65,slow=38						
	comp=Z,4.1nm,0.7s						
C21K	Knifeblade Rid	67.36	22	P	P	23 45 28.8	+0.1
	baz=290,SNR=22						
H18K	Honhosa River	67.37	27	P	P	23 45 28.6	-0.2
H18K				IAmb	IAmb	23 45 32.4	
	comp=Z,7.0nm,0.5s						
H18K	Honhosa River	67.37	27	P	P	23 45 28.9	+0.1
	baz=288						
B22K	Teshekpuk Lake	67.39	21	P	P	23 45 28.6	-0.2
B22K	Teshekpuk Lake	67.39	21	P	P	23 45 29.2	+0.4
	baz=291,SNR=26						
SRO	Srobarova	67.41	313	eP	P	23 45 30.0	+0.7
DEL	Delary	67.41	323	i P	P	23 45 29.0	-0.2
NC204	NORSAR Array S	67.49	329	P	P	23 45 29.4	-0.4
JAVC	Velka Javorina	67.50	314	eP	P	23 45 31.6	+1.6
N14K	Kuskokwak Cree	67.54	33	P	P	23 45 30.1	+0.2
N14K				IAmb	IAmb	23 46 06.4	
	comp=Z,19nm,0.9s						
N14K	Kuskokwak Cree	67.54	33	P	P	23 45 29.9	0.0
	baz=288						
G19K	Purcell Mounta	67.55	26	P	P	23 45 30.1	+0.2
G19K				IAmb	IAmb	23 45 33.0	
	comp=Z,30nm,1.4s						
G19K	Purcell Mounta	67.55	26	P	P	23 45 29.6	-0.3
	baz=289						
NBO00	NORSAR Array S	67.56	328	P	P	23 45 29.6	-0.4
NBO00				IAmb	IAmb	23 45 33.1	
	comp=Z,21nm,1.3s						
NAO01	NORSAR Array S	67.57	328	P	P	23 45 29.8	-0.3
NAO01				IAmb	IAmb	23 45 56.0	
	comp=Z,11nm,1.1s						
TEKS	Tekeris	67.61	310	eP	P	23 45 29.9	-0.8
J17K	VABM Dome	67.63	29	P	P	23 45 30.8	+0.3
J17K				IAmb	IAmb	23 45 34.3	
	comp=Z,14nm,0.9s						
J17K	VABM Dome	67.63	29	P	P	23 45 31.0	+0.5
	baz=289,SNR=7.3						
KRLC	Kraliky	67.68	316	AMS	AMS	00 16 10.0	
	comp=Z,200nm,15.1s						
MORH	Mrgy, Hungar	67.68	311	⇑P	P	23 45 31.4	+0.3
MORH	Mrgy, Hungar	67.68	311	P	P	23 45 30.6	-0.5
	comp=Z,231nmcomp=Z,17nm,0.9s						
SJES	Sjenica	67.71	308	eP	P	23 45 31.2	-0.3
KSP	Ksiaz	67.74	317	eP	P	23 45 31.8	+0.3
KSP	Ksiaz	67.74	317	P	P	23 45 32.7	+1.3
KSP	Ksiaz	67.74	317	P	P	23 45 31.2	-0.2
	comp=Z,9.8nm,0.8s						
F20K	Avaraart Lake	67.75	25	P	P	23 45 31.0	-0.1
F20K				IAmb	IAmb	23 45 34.8	
	comp=Z,12nm,0.8s						
F20K	Avaraart Lake	67.75	25	P	P	23 45 31.3	+0.1
	baz=290,SNR=19						
M15K	Kasigluk River	67.77	32	P	P	23 45 32.1	+0.7
	baz=288,SNR=8.6						
OHR	Ohrid	67.81	306	i P	P	23 45 33.8	+1.7
DPC	Dobruska-Polom	67.88	316	eP	P	23 45 33.6	+1.3
DPC				AMS	AMS	00 16 30.0	
	comp=Z,200nm,17.3s						
DPC	Dobruska-Polom	67.88	316	eP	P	23 45 33.6	+1.3
DPC				MLR	MLR		
	comp=Z,200nm,17.3s						
DPC	Dobruska-Polom	67.88	316	P	P	23 45 32.6	+0.3
	comp=Z,10nm,1.1s						
OSTC	Ostas	67.88	316	eP	P	23 45 34.1	+1.8
OSTC				AMS	AMS	00 16 30.0	
	comp=Z,200nm,16.0s						
OSTC	Ostas	67.88	316	eP	P	23 45 34.1	+1.8
OSTC				MLR	MLR		
	comp=Z,200nm,16.0s						
E21K	Killik River	67.89	23	P	P	23 45 32.0	-0.1
MODS	Modra-Piesok	67.90	314	eP	P	23 45 33.2	+0.7
BBLS	Lazi&#263i	67.91	309	eP	P	23 45 32.6	-0.1
OSL	Oslo	67.93	327	eP	P	23 45 33.2	+0.8
O14K	Tigyukauivet M	67.95	34	P	P	23 45 33.4	+0.8
	baz=288						
CHVC	Chvalec	67.97	317	eP	P	23 45 34.0	+1.1
CHVC				AMS	AMS	00 16 30.0	
	comp=Z,200nm,16.7s						
CHVC	Chvalec	67.97	317	eP	P	23 45 34.0	+1.1
CHVC				MLR	MLR		
	comp=Z,200nm,16.7s						
H19K	Roundabout Mou	68.00	26	P	P	23 45 33.0	+0.3
H19K	Roundabout Mou	68.00	26	P	P	23 45 33.2	+0.5
	baz=290,SNR=27						
L16K	Owhat River	68.00	31	P	P	23 45 33.4	+0.6
L16K				IAmb	IAmb	23 45 37.4	
	comp=Z,13nm,1.1s						
L16K	Owhat River	68.00	31	P	P	23 45 33.6	+0.7
	baz=289						
RUDO	Rudo	68.01	309	eP	P	23 45 32.9	-0.4
UPC	Upice	68.02	316	AMS	AMS	00 16 40.0	
	comp=Z,200nm,16.5s						
VRAC	Vranov	68.03	315	LR	LR	00 17 03.1	
	comp=Z,161nm,19.3s,baz=78,slow=37						
VRAC	Vranov	68.03	315	eP	P	23 45 33.7	+0.4
VRAC	Vranov	68.03	315	⇑P	P	23 45 33.9	+0.6
VRAC	Vranov	68.03	315	⇑P	P	23 45 33.9	+0.6
GCSA	Galena City Sc	68.10	27	P	P	23 45 33.5	+0.1
	baz=290						
MPLH	Magyarpolny	68.11	313	P	P	23 45 33.3	-0.5
	comp=Z,556nmcomp=Z,33nm,1.5s						
HAPS	Han Pijesak,BI	68.15	309	eP	P	23 45 34.2	0.0
D22K	Ayikyak River	68.17	22	P	P	23 45 33.6	-0.2
D22K	Ayikyak River	68.17	22	P	P	23 45 34.2	+0.4
	baz=292,SNR=25						
K17K	Iditarod	68.19	30	P	P	23 45 34.7	+0.7
K17K	Iditarod	68.19	30	P	P	23 45 34.6	+0.7
	baz=290,SNR=17						
N15K	Kwethluk River	68.22	32	P	P	23 45 34.3	+0.1
N15K				IAmb	IAmb	23 45 39.2	
	comp=Z,16nm,0.8s						
N15K	Kwethluk River	68.22	32	P	P	23 45 35.2	+0.9
	baz=289,SNR=10						
FALS	False Pass	68.23	38	P	P	23 45 35.5	+1.2
	baz=288						
KRUC	Moravsky	68.23	315	eP	P	23 45 35.1	+0.6
ITM	Ithomi	68.28	301	P	P	23 45 32.8	-2.3
ITM				IAmb	IAmb	23 45 48.1	
	comp=Z,14nm,0.8s						
RGN	Rugen	68.30	321	P	P	23 45 34.7	-0.1
RGN	Rugen	68.30	321	eP	P	23 45 35.8	+1.0
	comp=Z,80nm,1.5s,baz=70,slow=6.1						
L17K	Donlin	68.39	30	P	P	23 45 36.3	+1.1
	baz=290,SNR=12						
TIR	Tirane	68.40	306	P	P	23 45 36.5	+0.8
TIR				IAmb	IAmb	23 45 53.7	
	comp=Z,17nm,0.8s						
TIR	Tirane	68.40	306	P	P	23 45 36.5	+0.8
TIR				pmax	pmax		
	comp=Z,17nm,0.8s						
M16K	Timber Creek	68.46	31	P	P	23 45 35.8	+0.1
M16K	Timber Creek	68.46	31	P	P	23 45 36.7	+0.9
	baz=290,SNR=14						
C23K	Itkillik River	68.47	21	P	P	23 45 36.0	+0.3
C23K	Itkillik River	68.47	21	P	P	23 45 36.2	+0.6
	baz=294,SNR=26						
PDG	Podgorica	68.48	307	P	P	23 45 35.8	-0.3
PDG				IAmb	IAmb	23 45 45.0	
	comp=Z,18nm,0.9s						
PDG	Podgorica	68.48	307	eP	P	23 45 35.5	-0.6
PDG	Podgorica	68.48	307	⇑P	P	23 45 36.0	-0.2
F21K	Alatna River	68.51	24	P	P	23 45 36.1	+0.1
F21K				IAmb	IAmb	23 45 39.8	
	comp=Z,16nm,1.1s						
F21K	Alatna River	68.51	24	P	P	23 45 36.4	+0.4
	baz=292,SNR=16						
DRME	Dracevica, Mon	68.61	307	eP	P	23 45 37.7	+0.7
J18K	Innoko River	68.61	29	P	P	23 45 36.5	-0.1
J18K				IAmb	IAmb	23 45 40.5	
	comp=Z,19nm,1.0s						
J18K	Innoko River	68.61	29	P	P	23 45 36.9	+0.3
	baz=291,SNR=19						
H20K	Anotleneega Mo	68.62	26	P	P	23 45 36.6	-0.1
	baz=291,SNR=28						
O15K	Ungalikthiuk R	68.68	33	P	P	23 45 38.0	+0.9

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O15K                              IAmb   IAmb    23 45 40.4
      comp=Z,16nm,0.7s
O15K  Ungalikthiuk R   68.68  33  P      P       23 45 37.6 +0.5
      baz=290,SNR=8.6
S12K  Black Hills      68.69  37  P      P       23 45 37.0 -0.3
      baz=289
RUE   Ruedersdorf      68.71 319 eP      P       23 45 37.4 +0.1
      comp=Z,19nm,0.4s,baz=70,slow=6.1
TREC  Trest            68.72 315 eP      P       23 45 39.3 +1.7
TREC  Trest            68.72 315 eP      P       23 45 39.3 +1.7
RONA  Rosalia, Austr   68.74 314 eP      P       23 45 38.4 +0.6
      comp=Z,6.6nm,0.9s,SNR=6.5
N16K  Nishlik Lake     68.74  32  P      P       23 45 38.5 +1.0
      baz=290,SNR=14
E22K  Anaktuvuk Pass   68.75  23  P      P       23 45 37.6 +0.1
E22K  Anaktuvuk Pass   68.75  23  P      P       23 45 37.7 +0.3
      baz=293,SNR=33
G21K  Allakaket        68.77  25  P      P       23 45 37.6 +0.1
G21K                              IAmb   IAmb    23 45 41.2
      comp=Z,17nm,0.8s
G21K  Allakaket        68.77  25  P      P       23 45 37.5  0.0
      baz=292,SNR=25
D23K  Nanushuk River   68.80  22  P      P       23 45 38.1 +0.4
D23K  Nanushuk River   68.80  22  P      P       23 45 38.1 +0.4
      baz=294,SNR=35
SKAR  Skarslia         68.82 328 eP      P       23 45 38.6 +0.6
BRY   Bratogost        68.82 308 eP      P       23 45 38.5  0.0
BEHE  Becsehely        68.83 312  P      P       23 45 38.8 +0.5
F22K  John River       68.86  24  P      P       23 45 39.1 +1.0
      baz=293,SNR=11
J19K  Poorman          68.88  28  P      P       23 45 38.3  0.0
J19K  Poorman          68.88  28  P      P       23 45 38.3  0.0
      baz=291,SNR=16
IMAR  Indian Mountai   68.88  25  P      P       23 45 38.0 -0.2
PVCC  Panska Ves       68.88 317 eP      P       23 45 39.9 +1.3
PVCC                              AMS    AMS     00 17 00.0
      comp=Z,200nm,17.1s
PVCC  Panska Ves       68.88 317 eP      P       23 45 39.9 +1.3
PVCC                              MLR    MLR
      comp=Z,200nm,17.1s
CONA  Conrad Observa   68.94 314 eP      P       23 45 39.8 +0.8
      comp=Z,9.4nm,0.8s,SNR=9.2
GOPC  GO Pecny, Ondr   68.95 316  AMS    AMS     00 17 10.0
      comp=Z,200nm,13.6s
KEK   Kerkira          69.00 305  P      P       23 45 39.3 -0.2
KEK                               IAmb   IAmb    23 45 58.6
      comp=Z,14nm,1.0s
TREB  Trebinje         69.01 308 eP      P       23 45 39.0 -0.5
M17K  Holitna River    69.02  31  P      P       23 45 39.6 +0.4
M17K  Holitna River    69.02  31  P      P       23 45 40.4 +1.2
      baz=291,SNR=21
I20K  Naaghedeneel     69.04  27  P      P       23 45 39.9 +0.7
I20K  Naaghedeneel     69.04  27  P      P       23 45 39.9 +0.7
      baz=292
L18K  Granite Mounta   69.06  30  P      P       23 45 40.3 +0.8
L18K                              IAmb   IAmb    23 45 43.4
      comp=Z,19nm,1.3s
L18K  Granite Mounta   69.06  30  P      P       23 45 40.3 +0.8
      baz=291,SNR=9.8
PRU   Pruhonice        69.08 316 eP      P       23 45 40.9 +1.1
PRU                               AMS    AMS     00 17 10.0
      comp=Z,200nm,13.6s
PRU   Pruhonice        69.08 316 eP      P       23 45 40.9 +1.1
PRU                               MLR    MLR
      comp=Z,200nm,13.6s
PRA   Prague           69.12 316  AMS    AMS     00 17 10.0
      comp=Z,200nm,13.7s
C24K  Franklin Bluff   69.12  21  P      P       23 45 39.9 +0.2
C24K  Franklin Bluff   69.12  21  P      P       23 45 39.7  0.0
      baz=295
BLY   Banja Luka       69.13 310 eP      P       23 45 40.5 +0.3
BRG   Berggiesshubel   69.14 317 eP      P       23 45 39.8 -0.4
      comp=Z,7.7nm,0.8s,baz=70,slow=6.1
BRG   Berggiesshubel   69.14 317 eP      P       23 45 40.4 +0.3
BRG                               Amp            23 45 41.6
      comp=Z,6.9nm,0.9s
BRG   Berggiesshubel   69.14 317  P      P       23 45 45.9 +5.7
BRG                               Amp            23 45 48.8
      comp=Z,7.8nm,0.8s
A051A Mrakovica        69.23 311 eP      P       23 45 42.7 +1.8
TOLK  Toolik Lake Re   69.30  22  P      P       23 45 40.9  0.0
TOLK  Toolik Lake Re   69.30  22  P      P       23 45 41.0 +0.1
      baz=295,SNR=11
STKA  Stephens Creek   69.33 147  P      P       23 45 41.6 +0.2
STKA  Stephens Creek   69.33 147  P      P       23 45 41.0 -0.4
      comp=Z,3.6nm,0.5s,baz=326,slow=6.5,SNR=9.0
STKA                              LR     LR      00 18 48.8
      comp=Z,99nm,18.3s,baz=215,slow=38
      comp=Z,3.6nm,0.5s
STKA  Stephens Creek   69.33 147  P      P       23 45 41.6 +0.2
STKA                              pmax   pmax
      comp=Z,36nm,0.9s
D24K  Happy Valley     69.33  22  P      P       23 45 40.7 -0.3
D24K                              IAmb   IAmb    23 45 47.9
      comp=Z,30nm,1.2s
D24K  Happy Valley     69.33  22  P      P       23 45 41.6 +0.6
      baz=295,SNR=9.5
G22K  Bettles          69.34  24  P      P       23 45 41.4 +0.3
      baz=294
H21K  Melozitna Rive   69.36  26  P      P       23 45 41.0 -0.2
H21K                              IAmb   IAmb    23 45 44.8
      comp=Z,14nm,0.9s
H21K  Melozitna Rive   69.36  26  P      P       23 45 42.1 +0.8
      baz=293,SNR=16
O16K  Kokwok River B   69.36  33  P      P       23 45 42.1 +0.8
O16K  Kokwok River B   69.36  33  P      P       23 45 42.5 +1.2
      baz=291,SNR=20
ARSA  Arzberg          69.38 313  P      P       23 45 41.5 -0.3
ARSA  Arzberg          69.38 313 eP      P       23 45 42.1 +0.4
      comp=Z,6.9nm,1.2s
J20K  Nowinta River    69.41  27  P      P       23 45 42.0 +0.4
J20K                              IAmb   IAmb    23 45 46.0
      comp=Z,12nm,0.8s
J20K  Nowinta River    69.41  27  P      P       23 45 42.2 +0.6
      baz=292,SNR=21
STON  Ston             69.41 308 eP      P       23 45 41.1 -0.8
N17K  Nushagak Hills   69.45  32  P      P       23 45 42.8 +0.9
N17K                              IAmb   IAmb    23 45 46.4
      comp=Z,18nm,1.0s
N17K  Nushagak Hills   69.45  32  P      P       23 45 43.5 +1.6
      baz=291,SNR=9.9
ZVC   Zvikov           69.48 316 eP      P       23 45 43.1 +0.8
E23K  Chandalar        69.53  23  P      P       23 45 42.7 +0.3
E23K                              IAmb   IAmb    23 45 45.8
      comp=Z,21nm,1.1s
E23K  Chandalar        69.53  23  P      P       23 45 42.7 +0.3
      baz=295,SNR=24
CLL   Collm            69.56 318 eP      P       23 45 42.0 -0.7
CLL                              i *SP   PcP     23 45 59.5 -6.3
CLL                              eS      S       23 54 50.0 -0.1
CLL                               pmax   pmax
      comp=Z,34nm,1.9s
CLL   Collm            69.56 318 eP      P       23 45 42.2 -0.5
      comp=Z,7.2nm,0.9s,baz=70,slow=6.1
CLL   Collm            69.56 318 eP      P       23 45 42.0 -0.7
      comp=Z,34nm,1.9s
CLL                              i x     x       23 45 50.1
CLL                              i x     x       23 45 59.5
CLL                              i PcP   PcP     23 46 06.6 +0.8
CLL                              ePP     PP      23 48 18.0 +1.9
CLL                              eS      S       23 54 50.0 -0.1
CKRC  Cesky Krumlov    69.61 315 eP      P       23 45 44.2 +1.0
CKRC  Cesky Krumlov    69.61 315 eP      P       23 45 44.2 +1.0
P16K  Nushagak River   69.61  33  P      P       23 45 43.6 +0.7
P16K  Nushagak River   69.61  33  P      P       23 45 43.2 +0.3
      baz=291
A050A Klekovaca        69.66 310 eP      P       23 45 43.6  0.0
DAG   Danmarks Havn    69.66 348 i P     P       23 45 42.6 -0.3
DAG                               IAmb   IAmb    23 45 45.0
      comp=Z,6.2nm,0.8s
SDPT  Sand Point       69.66  37  P      P       23 45 43.8 +0.6
      baz=290
GROS  Grobnik          69.66 313 eP      P       23 45 43.2 -0.3
COLD  Coldfoot         69.68  24  P      P       23 45 43.4 +0.2
COLD                              IAmb   IAmb    23 45 46.6
      comp=Z,34nm,1.4s
COLD  Coldfoot         69.68  24  P      P       23 45 44.0 +0.8
      baz=295
M18K  Stony River      69.71  30  P      P       23 45 44.7 +1.2
      baz=292,SNR=7.3
K20K  Telida           69.76  28  P      P       23 45 44.0 +0.3
K20K                              IAmb   IAmb    23 45 47.8
      comp=Z,31nm,1.2s
K20K  Telida           69.76  28  P      P       23 45 44.0 +0.3
      baz=293
O17K  Koliganek Bris   69.77  32  P      P       23 45 44.6 +0.7
      baz=292,SNR=11
H22K  Ishtalitna Cre   69.81  25  P      P       23 45 45.0 +0.9
      baz=294,SNR=6.6
S14K  Fog Glacier      69.82  36  P      P       23 45 44.3  0.0
      baz=291
SCTE  Santa Cesarea    69.83 305  P      P       23 45 44.1 -0.5
PERS  Pernice          69.85 313 eP      P       23 45 44.4 -0.3
L19K  White Mountain   69.88  29  P      P       23 45 45.3 +0.8
L19K                              IAmb   IAmb    23 45 48.6
      comp=Z,30nm,1.1s
L19K  White Mountain   69.88  29  P      P       23 45 45.7 +1.1
      baz=293,SNR=13
SOKA  Soboth           69.89 313 eP      P       23 45 45.4 +0.4
      comp=Z,7.7nm,0.7s,SNR=7.5
E24K  Your Creek       69.91  23  P      P       23 45 44.9 +0.2
E24K  Your Creek       69.91  23  P      P       23 45 44.9 +0.2
      baz=296,SNR=35
GORT1 Trebel           69.95 320 eP      P       23 45 46.3 +1.3
      comp=Z,29nm,1.2s,baz=70,slow=6.1
KHC   Kasperske Hory   69.96 316 eP      P       23 45 46.0 +0.7
KHC                               AMS    AMS     00 17 50.0
      comp=Z,200nm,14.0s
KHC   Kasperske Hory   69.96 316d iP     P       23 45 45.3  0.0
KHC                               pmax   pmax
      comp=Z,27nm,1.7s
KHC   Kasperske Hory   69.96 316  P      P       23 45 44.6 -0.7
      comp=Z,6.4nm,1.6s
G23K  Bananza Creek    69.96  24  P      P       23 45 45.0  0.0
G23K                              IAmb   IAmb    23 45 48.3
      comp=Z,18nm,1.1s
G23K  Bananza Creek    69.96  24  P      P       23 45 45.0  0.0
      baz=295,SNR=16
MOA   Molln            69.97 314 i P     P       23 45 45.3 -0.1
      comp=Z,9.0nm,0.9s,SNR=5.4
GEC2  GERESS Array S   69.98 315  P      P       23 45 45.8 +0.3
GEC2                              IAmb   IAmb    23 45 54.2
      comp=Z,10nm,0.9s
GEC2  GERESS Array S   69.98 315 eP      P       23 45 45.8 +0.3
      comp=Z,11nm,0.9s,baz=70,slow=6.1
GERES GERESS Array B   69.98 315  P      P       23 45 45.0 -0.5
GERES GERESS Array B   69.98 315  P      P       23 45 45.5  0.0
      comp=Z,4.0nm,0.6s,baz=64,slow=6.2,SNR=33
      comp=Z,4.0nm,0.6s
N18K  Kilae Creek      69.99  31  P      P       23 45 46.2 +1.0
N18K                              IAmb   IAmb    23 45 50.1
      comp=Z,15nm,1.1s
N18K  Kilae Creek      69.99  31  P      P       23 45 45.5 +0.2
      baz=292,SNR=6.1
D25K  Kavik River      70.03  21  P      P       23 45 45.7 +0.2
D25K                              IAmb   IAmb    23 45 49.4
      comp=Z,24nm,1.1s
D25K  Kavik River      70.03  21  P      P       23 45 45.7 +0.2
      baz=297,SNR=15
BSEG  Bad Segeberg     70.17 321 eP      P       23 45 47.1 +0.7
      comp=Z,25nm,1.0s,baz=70,slow=6.1
L20K  Farewell, AK     70.18  29  P      P       23 45 47.2 +0.8
      baz=293,SNR=9.7
SNART Snartemo         70.18 326 i P     P       23 45 45.0 -1.4
M19K  Big River Lodg   70.19  30  P      P       23 45 47.6 +1.2
M19K                              IAmb   IAmb    23 45 50.8
      comp=Z,14nm,0.9s
M19K  Big River Lodg   70.19  30  P      P       23 45 47.1 +0.7
      baz=293
TANN  Tannenbergstha   70.19 317 eP      P       23 45 46.4 -0.3
      comp=Z,14nm,1.4s,baz=70,slow=6.1
C26K  Camden Bay       70.21  20  P      P       23 45 47.1 +0.7
      baz=298
FLTG  Flechtingen      70.23 319 eP      P       23 45 46.9 +0.1
      comp=Z,15nm,1.3s,baz=70,slow=6.1
OBKA  Obir             70.26 313 eP      P       23 45 47.5 +0.2
OBKA  Obir             70.26 313 i P     P       23 45 47.8 +0.6
      comp=Z,8.0nm,0.7s
P17K  Kvichak River    70.30  33  P      P       23 45 47.9 +0.8
      baz=292,SNR=8.6
NEUB  Neuenburg        70.31 318 eP      P       23 45 47.2 -0.2
      comp=Z,15nm,0.9s,baz=70,slow=6.1
CHNA  Chernabura Isl   70.32  38  P      P       23 45 47.8 +0.5
      baz=291
CNBA  Chernabura Isl   70.33  38  P      P       23 45 46.8 -0.5
F24K  Squaw Lake       70.36  23  P      P       23 45 47.5 +0.1
F24K                              IAmb   IAmb    23 45 50.8
      comp=Z,28nm,1.5s
F24K  Squaw Lake       70.36  23  P      P       23 45 47.8 +0.4
      baz=297,SNR=14
WET   Wettzell         70.39 316 eP      P       23 45 48.4 +0.5
      comp=Z,23nm,1.7s,baz=70,slow=6.1
MLY   Manley           70.41  26  P      P       23 45 48.1 +0.3
MLY                               IAmb   IAmb    23 45 51.4
      comp=Z,24nm,1.1s
MLY   Manley           70.41  26  P      P       23 45 48.2 +0.4
      baz=295,SNR=13
LODK  Lodwar           70.42 263  P      P       23 45 48.6 -0.1
BIOA  Bad Ischl, Aus   70.43 314 i P     P       23 45 49.0 +0.8
      comp=Z,8.5nm,0.8s,SNR=8.7
GBRS  Gornja Briga     70.44 312 eP      P       23 45 48.7 +0.4
H23K  Yukon River      70.52  25  P      P       23 45 49.3 +0.9
H23K  Yukon River      70.52  25  P      P       23 45 49.1 +0.7
      baz=296,SNR=24
CAST  Castle Rocks     70.55  28  P      P       23 45 49.1 +0.4
CAST                              IAmb   IAmb    23 45 52.5
      comp=Z,30nm,1.4s
CAST  Castle Rocks     70.55  28  P      P       23 45 49.0 +0.3
      baz=294,SNR=10
MANZ  Manzenberg       70.55 317 eP      P       23 45 49.6 +0.7
      comp=Z,1.6nm,1.2s,baz=70,slow=6.1
ROTZ  Rotzenmuhle      70.57 317 eP      P       23 45 49.6 +0.6
      comp=Z,3.2nm,1.0s,baz=70,slow=6.1
N19K  Bonanza Creek    70.58  31  P      P       23 45 49.0 +0.1
N19K                              IAmb   IAmb    23 45 52.3
      comp=Z,13nm,0.8s
N19K  Bonanza Creek    70.58  31  P      P       23 45 49.2 +0.2
      baz=293,SNR=11
MOX   Moxa             70.61 318 eP      P       23 45 48.8 -0.4
      comp=Z,29nm,1.8s,baz=70,slow=6.1
MOX                              eL      L       00 21 55.7
      comp=Z,80nm,19.7s
ASSE  Asse, Remlinge   70.62 319 eP      P       23 45 49.3 +0.1
      comp=Z,6.9nm,1.1s,baz=70,slow=6.1
O18K  Koktuh Hills     70.62  32  P      P       23 45 49.7 +0.5
O18K                              IAmb   IAmb    23 45 53.8
      comp=Z,18nm,0.8s
O18K  Koktuh Hills     70.62  32  P      P       23 45 49.9 +0.8
      baz=293,SNR=11
JMIC  Jan Mayen        70.63 341  LR     LR      00 21 05.0
      comp=Z,126nm,18.8s,baz=50,slow=40
BPAW  Bear Paw Mtn.    70.71  27  P      P       23 45 49.9 +0.3
BPAW  Bear Paw Mtn.    70.71  27  P      P       23 45 49.9 +0.3
      baz=295,SNR=25
C27K  Jago River       70.72  20  P      P       23 45 49.5  0.0
C27K                              IAmb   IAmb    23 45 53.8
      comp=Z,28nm,1.0s
C27K  Jago River       70.72  20  P      P       23 45 50.1 +0.5
      baz=300,SNR=5.2
PPLA  Purkeypile       70.72  28  P      P       23 45 49.7 -0.1
PPLA  Purkeypile       70.72  28  P      P       23 45 50.5 +0.6
      baz=294,SNR=20
M20K  Styx River       70.74  29  P      P       23 45 50.4 +0.4
M20K  Styx River       70.74  29  P      P       23 45 50.6 +0.7
      baz=294,SNR=17
P18K  Big Mountain,    70.79  32  P      P       23 45 50.5 +0.3
P18K                              IAmb   IAmb    23 45 54.6
      comp=Z,27nm,1.2s
P18K  Big Mountain,    70.79  32  P      P       23 45 50.7 +0.5
      baz=293,SNR=5.5
NRDL  Niedersach Rie   70.81 320 eP      P       23 45 51.4 +1.1
      comp=Z,27nm,1.3s,baz=70,slow=6.1
E25K  Arctic Village   70.86  22  P      P       23 45 51.4 +0.9
E25K  Arctic Village   70.86  22  P      P       23 45 50.6 +0.1
      baz=298
G24K  Hadweenzic Riv   70.88  24  P      P       23 45 50.9 +0.3
G24K  Hadweenzic Riv   70.88  24  P      P       23 45 51.1 +0.5
      baz=297
I23K  Minto, Yukon-K   70.88  26  P      P       23 45 50.0 -0.5
I23K                              IAmb   IAmb    23 45 54.1
      comp=Z,27nm,1.4s
I23K  Minto, Yukon-K   70.88  26  P      P       23 45 50.8 +0.2
      baz=296,SNR=13
MATE  Matera           70.89 306 ⇓P      P       23 45 50.4 -0.6
MATE  Matera           70.89 306 eP      P       23 45 48.5 -2.5
O19K  Port Alsworth    70.90  31  P      P       23 45 51.2 +0.5
O19K                              IAmb   IAmb    23 45 54.4
      comp=Z,35nm,1.4s
O19K  Port Alsworth    70.90  31  P      P       23 45 50.5 -0.2
      baz=294
PRED  Cave del Predi   70.92 313  P      P       23 45 51.3 +0.1
Q17K  Contact Creek    70.92  34  P      P       23 45 50.7 -0.4
      baz=293
KIBK  Kibwezi          70.94 256  P      P       23 45 52.1 +0.2
KIBK                              IAmb   IAmb    23 45 55.1
      comp=Z,26nm,1.4s
RJOB  Jochberg         70.94 314 eP      P       23 45 51.6 +0.2
      comp=Z,13nm,1.2s,baz=70,slow=6.1
KTH   Kantishna Hill   70.97  27  P      P       23 45 51.8 +0.5
KTH                               IAmb   IAmb    23 45 56.3
      comp=Z,22nm,1.3s
KMBO  Kilima Mbogo     71.01 258  P      P       23 45 52.5  0.0
KMBO                              IAmb   IAmb    23 45 55.9
      comp=Z,13nm,0.8s
KMBO  Kilima Mbogo     71.01 258  P      P       23 45 52.5  0.0
KMBO                              pmax   pmax
      comp=Z,13nm,0.8s
KMBO  Kilima Mbogo     71.01 258 i P     P       23 45 53.3 +0.8
      SNR=15
TRI   Trieste          71.06 312  P      P       23 45 50.4 -1.6
TRI                               IAmb   IAmb    23 46 03.5
      comp=Z,12nm,0.9s
TRI   Trieste          71.06 312  P      P       23 45 50.4 -1.6
TRI                               pmax   pmax
      comp=Z,12nm,0.9s
SABO  M.te Sabotino    71.07 313  P      P       23 45 52.4 +0.3
SABO                              IAmb   IAmb    23 46 16.6
      comp=Z,30nm,1.3s
F25K  Christian Rive   71.09  22  P      P       23 45 53.0 +1.1
F25K                              IAmb   IAmb    23 45 55.8
      comp=Z,30nm,1.4s
F25K  Christian Rive   71.09  22  P      P       23 45 52.1 +0.2
      baz=299,SNR=16
H24K  Noodor Dome      71.13  25  P      P       23 45 52.5 +0.3
H24K                              IAmb   IAmb    23 46 00.2
      comp=Z,12nm,0.9s
H24K  Noodor Dome      71.13  25  P      P       23 45 52.5 +0.3
      baz=297,SNR=13
LESA  Schwarzleotal    71.13 314 eP      P       23 45 53.0 +0.5
      comp=Z,17nm,1.0s,SNR=13
RETH  Rethem/Aller,    71.14 320 eP      P       23 45 53.2 +0.9
      comp=Z,28nm,1.6s,baz=70,slow=6.1
GRF   Grafenberg Arr   71.19 317 eP      P       23 45 53.1 +0.3
      comp=Z,34nm,1.4s,baz=70,slow=6.1
GRF                              eL      L       00 19 02.6
      comp=Z,170nm,19.4s
Q18K  Katmai Hardscr   71.19  33  P      P       23 45 52.4 -0.4
      baz=294
GRFO  Grafenberg       71.20 317  P      P       23 45 53.5 +0.7
GRFO                              IAmb   IAmb    23 45 56.3
      comp=Z,18nm,0.9s
GRFO  Grafenberg       71.20 317  P      P       23 45 53.5 +0.7
GRFO                              pmax   pmax
      comp=Z,18nm,0.9s
ACHA  Angle Creek He   71.22  33  P      P       23 45 53.8 +1.0
ACHA                              IAmb   IAmb    23 45 55.3
      comp=Z,26nm,1.4s
NEA2  Nenana           71.24  26  P      P       23 45 53.0 +0.2
NEA2  Nenana           71.24  26  P      P       23 45 52.7 -0.1
      baz=297,SNR=31
GTTG  Gottingen        71.25 319 eP      P       23 45 53.6 +0.5
      comp=Z,9.9nm,0.8s,baz=70,slow=6.1
TRF   Thorofare Moun   71.27  27  P      P       23 45 53.3 +0.1
TRF   Thorofare Moun   71.27  27  P      P       23 45 53.2 +0.1
      baz=296
BWN   Browne           71.28  26  P      P       23 45 53.4 +0.4
G25K  Bearman Lake     71.33  23  P      P       23 45 53.9 +0.7
      baz=298
ACER  Acerenza         71.38 307  P      P       23 45 53.8 -0.3
ACER                              IAmb   IAmb    23 45 58.0
      comp=Z,16nm,0.7s
TIP   Timpagrande      71.39 305  P      P       23 45 53.4 -0.8
TIP   Timpagrande      71.39 305 ⇓P      P       23 45 53.9 -0.3
TIP   Timpagrande      71.39 305  P      P       23 45 53.7 -0.5
      comp=Z,9.7nm,1.2s
SKT   Skwentna         71.39  29  P      P       23 45 53.4 -0.3
SKT                               IAmb   IAmb    23 45 57.4
      comp=Z,34nm,1.3s
SKT   Skwentna         71.39  29  P      P       23 45 53.7  0.0
      baz=295,SNR=23
N20K  Mount Spurr      71.43  30  P      P       23 45 54.0 -0.1
      baz=295
SPCR  Spurr Chakacha   71.43  30  P      P       23 45 54.2 +0.1
      baz=295
STLK  Strandline Lak   71.47  30  P      P       23 45 54.4 +0.1
ABTA  Abfaltersbach    71.48 314 eP      P       23 45 54.0 -0.7
      comp=Z,6.8nm,0.6s,SNR=6.9
UBBA  Unterbreizbach   71.50 318 eP      P       23 45 54.9 +0.5
      comp=Z,44nm,1.8s,baz=70,slow=6.1
RED   Redoubt Volcan   71.51  31  P      P       23 45 53.9 -0.7
ILSW  Iliamna Southw   71.52  31  P      P       23 45 54.7  0.0
ILSW                              IAmb   IAmb    23 45 57.3
      comp=Z,40nm,1.4s
BMAR  Burnt Mountain   71.53  22  P      P       23 45 54.8 +0.3
F26K  Sheenjek River   71.54  22  P      P       23 45 55.0 +0.4
F26K                              IAmb   IAmb    23 45 58.9
      comp=Z,19nm,1.3s
F26K  Sheenjek River   71.54  22  P      P       23 45 54.9 +0.4
      baz=300,SNR=13
STAL  STALIGIAL        71.54 313  P      P       23 45 53.3 -1.6
COLA  College          71.58  25  P      P       23 45 54.3 -0.5
COLA  College          71.58  25d iP     P       23 45 54.8  0.0
COLA                              pmax   pmax
      comp=Z,36nm,1.2s
P19K  Oil Pt           71.62  32  P      P       23 45 54.8 -0.4
P19K  Oil Pt           71.62  32  P      P       23 45 55.3 +0.1
      baz=295
POKR  Poker Plat Res   71.62  25  P      P       23 45 55.8 +0.6
POKR  Poker Plat Res   71.62  25  P      P       23 45 55.4 +0.2
      baz=298,SNR=13
EUNU  Eureka           71.63   2  P      P       23 45 55.4 +0.4
EUNU                              IAmb   IAmb    23 45 58.8
      comp=Z,14nm,0.9s
H25L  Birch Creek      71.67  24  P      P       23 45 55.6 +0.3
      baz=299
WRH   Wood River Hil   71.68  26  P      P       23 45 55.5 +0.1
MCK   McKinley         71.68  27  P      P       23 45 55.4 -0.1
MCK                               IAmb   IAmb    23 46 19.4
      comp=Z,23nm,1.4s
MCK   McKinley         71.68  27  P      P       23 45 55.4 -0.1
MCK                               pmax   pmax
      comp=Z,23nm,1.4s
CCB   Clear Creek Bu   71.70  26  P      P       23 45 55.7 +0.1
Q19K  Cape Douglas,    71.73  32  P      P       23 45 55.6 -0.3
Q19K  Cape Douglas,    71.73  32  P      P       23 45 55.6 -0.3
      baz=295
FUR   Furstenfeldbru   71.73 315 eP      P       23 45 56.6 +0.5
      comp=Z,29nm,0.8s,baz=70,slow=6.1
CUT   Chulitna         71.74  28  P      P       23 45 56.0 +0.2
CUT   Chulitna         71.74  28  P      P       23 45 55.7  0.0
      baz=296
D27M  Malcolm River    71.75  20  P      P       23 45 55.0 -0.8
D27M  Malcolm River    71.75  20  P      P       23 45 55.7 -0.1
      baz=302
CUC   Castrocucco      71.76 306  P      P       23 45 56.2 -0.3
WTTA  Wattenberg       71.85 314 eP      P       23 45 57.1 +0.2
      comp=Z,9.8nm,0.6s,SNR=8.0
WATA  Walderalm        71.86 314 i P     P       23 45 56.6 -0.4
      comp=Z,6.6nm,0.7s,SNR=6.1
RND   Reindeer         71.86  27  P      P       23 45 56.0 -0.7
RND   Reindeer         71.86  27  P      P       23 45 56.0 -0.7
RND                               pmax   pmax
      comp=Z,47nm,1.4s
R18K  Karluk           71.91  34  P      P       23 45 56.8 -0.1
      baz=294
SUA   Susitna One      71.95  29  P      P       23 45 56.8 -0.4
SUA   Susitna One      71.95  29  P      P       23 45 56.9 -0.4
      baz=296,SNR=13
IL31                   71.99  25  P      P       23 45 56.8 -0.5
IL31                              IAmb   IAmb    23 46 00.1
      comp=Z,22nm,1.4s
ILAR  Eielson Array    71.99  25  P      P       23 45 56.3 -1.1
ILAR  Eielson Array    71.99  25  P      P       23 45 56.4 -0.9
      comp=Z,2.9nm,0.6s,baz=285,slow=4.4,SNR=36
ILAR                              LR     LR      00 22 31.0
      comp=Z,171nm,18.2s,baz=279,slow=40
      comp=Z,2.9nm,0.6s
CHIR  Chirikof Islan   72.03  36  P      P       23 45 57.8 +0.1
      baz=294
G26K  Porcupine Rive   72.03  23  P      P       23 45 58.1 +0.6
G26K                              IAmb   IAmb    23 46 01.4
      comp=Z,41nm,1.5s
G26K  Porcupine Rive   72.03  23  P      P       23 45 57.7 +0.2
      baz=300
M22K  Willow           72.09  29  P      P       23 45 58.1 +0.2
E27K  Coleen River     72.11  21  P      P       23 45 58.6 +0.5
E27K  Coleen River     72.11  21  P      P       23 45 57.9 -0.1
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	baz=302,SNR=5.4						
SQTA	Sankt Quirin	72.13	314	*i* P	P	23 45 58.5	-0.1
	comp=Z,13nm,0.5s						
PRP	Porcupine Dome	72.14	24	P	P	23 45 58.6	+0.2
PRP	Porcupine Dome	72.14	24	P	P	23 45 58.5	+0.2
	baz=299,SNR=5.9						
HDA	Harding Lake	72.14	26	P	P	23 45 58.0	-0.2
HDA	Harding Lake	72.14	26	P	P	23 45 59.2	+0.9
	baz=298,SNR=5.8						
MOTA	Moosalm	72.15	315	*e*P	P	23 45 58.6	-0.1
	comp=Z,7.5nm,0.7s,SNR=6.9						
IBBN	Ibbenburen	72.22	320	*e*P	P	23 45 59.4	+0.5
	comp=Z,16nm,1.1s,baz=70,slow=6.1						
WAT1	Susitna Watana	72.25	28	P	P	23 45 58.5	-0.5
	baz=298						
KASTN	Kahler Asten	72.28	319	*e*P	P	23 45 59.9	+0.6
	comp=Z,5.5nm,1.3s,baz=70,slow=6.1						
CTI	Castel Tesino	72.30	313	P	P	23 45 59.1	-0.6
CTI	Castel Tesino	72.30	313	P	P	23 45 59.1	-0.6
CTI				pmax	pmax		
	comp=Z,14nm,1.2s						
RETA	Reutte	72.31	315	*e*P	P	23 45 59.5	-0.1
	comp=Z,3.3nm,0.6s						
INTR	Introdacqua	72.34	309	P	P	23 46 00.5	+0.6
INTR				IAmb	IAmb	23 46 18.1	
	comp=Z,19nm,1.2s						
HOM	Homer	72.35	31	P	P	23 45 59.8	+0.3
	baz=296						
CEL	Celeste	72.36	304	P	P	23 45 59.4	-0.7
CEL				IAmb	IAmb	23 46 03.1	
	comp=Z,22nm,1.0s						
CEL	Celeste	72.36	304	P	P	23 45 59.5	-0.5
	comp=Z,25nm,1.0s						
D28M	Stokes Point	72.36	20	P	P	23 45 59.6	+0.2
	baz=304						
Q20K	Shuyak Island	72.45	32	P	P	23 45 59.7	-0.4
	baz=296						
SII	Sitkinak Islan	72.46	35	P	P	23 46 00.1	-0.2
	baz=295						
CAMP	Campotosto	72.48	309	P	P	23 46 01.0	+0.2
CAMP				IAmb	IAmb	23 46 08.1	
	comp=Z,12nm,0.8s						
FDMO	Fiordimonte	72.51	310	P	P	23 46 00.9	0.0
FDMO				IAmb	IAmb	23 46 20.7	
	comp=Z,19nm,1.2s						
FETA	Feichten	72.51	314	*i* P	P	23 46 00.9	0.0
	comp=Z,17nm,0.9s,SNR=7.5						
E28M	Babbage River	72.53	20	P	P	23 46 00.9	+0.4
E28M				IAmb	IAmb	23 46 03.9	
	comp=Z,26nm,1.3s						
E28M	Babbage River	72.53	20	P	P	23 46 00.6	+0.2
	baz=304,SNR=9.2						
TEOL	Teolo	72.55	312	P	P	23 46 01.1	+0.1
TEOL				IAmb	IAmb	23 46 03.8	
	comp=Z,23nm,0.8s						
AQU	L'Aquila	72.55	309	P	P	23 46 02.3	+1.1
	comp=Z,15nm,0.9s						
RC01	Rabbit Creek A	72.55	29	P	P	23 46 00.4	-0.3
RC01				IAmb	IAmb	23 46 04.0	
	comp=Z,17nm,1.2s						
RC01	Rabbit Creek A	72.55	29	P	P	23 46 01.2	+0.5
	baz=297						
NRCA	Norcia	72.57	310	P	P	23 46 01.0	-0.3
PMR	Palmer	72.58	29	P	P	23 46 00.9	+0.1
PMR				IAmb	IAmb	23 46 04.2	
	comp=Z,20nm,0.8s						
PMR	Palmer	72.58	29	P	P	23 46 00.9	+0.1
PMR				pmax	pmax		
	comp=Z,21nm,0.8s						
PMR	Palmer	72.58	29	P	P	23 46 01.0	+0.1
	baz=297						
GHO	Glory Hole Cre	72.59	29	P	P	23 46 00.3	-0.7
GHO				IAmb	IAmb	23 46 14.5	
	comp=Z,13nm,0.8s						
DHY	Denali Highway	72.61	27	P	P	23 46 01.1	-0.2
DHY				IAmb	IAmb	23 46 03.7	
	comp=Z,24nm,1.4s						
DHY	Denali Highway	72.61	27	P	P	23 46 00.7	-0.5
	baz=298,SNR=6.1						
OHAK	Old Harbor	72.62	34	P	P	23 46 01.1	0.0
OHAK				IAmb	IAmb	23 46 04.6	
	comp=Z,30nm,1.0s						
OHAK	Old Harbor	72.62	34	P	P	23 46 00.9	-0.2
	baz=295						
J25K	Salcha River,	72.64	25	P	P	23 46 00.4	-0.9
J25K				IAmb	IAmb	23 46 04.9	
	comp=Z,20nm,1.4s						
J25K	Salcha River,	72.64	25	P	P	23 46 00.1	-1.1
	baz=300,SNR=14						
BRLK	Bradley Lake	72.64	31	P	P	23 46 00.8	-0.6
BRLK				IAmb	IAmb	23 46 05.2	
	comp=Z,18nm,0.7s						
UBR	Ueberruh	72.64	315	*e*P	P	23 46 01.2	-0.4
	comp=Z,6.4nm,0.8s,baz=70,slow=6.1						
TNS	Taunus Mts	72.64	318	*e*P	P	23 46 02.4	+0.9
	comp=Z,7.2nm,1.1s,baz=70,slow=6.1						
WAT6	Susitna Watana	72.70	28	P	P	23 46 01.2	-0.5
	baz=298,SNR=9.2						
BRSE	Bradley Lake S	72.72	31	P	P	23 46 01.3	-0.5
	baz=297						
KDAK	Kodiak Island	72.72	33	P	P	23 46 01.4	-0.3
KDAK	Kodiak Island	72.72	33	P	P	23 46 01.3	-0.5
	comp=Z,18nm,0.4s,baz=286,slow=2.9,SNR=66						
KDAK				LR	LR	00 20 04.6	
	comp=Z,191nm,19.2s,baz=293,slow=38						
	comp=Z,18nm,0.4s						
KDAK	Kodiak Island	72.72	33	P	P	23 46 01.4	-0.3
KDAK				pmax	pmax		
	comp=Z,35nm,1.0s						
KDAK	Kodiak Island	72.72	33	P	P	23 46 02.1	+0.4
	baz=296						
STU	Stuttgart	72.77	316	P	P	23 46 02.3	0.0
STU				IAmb	IAmb	23 46 13.9	
	comp=Z,14nm,0.8s						
STU	Stuttgart	72.77	316	P	P	23 46 02.3	0.0
STU				pmax	pmax		
	comp=Z,14nm,0.8s						
STU	Stuttgart	72.77	316	*e*P	P	23 46 02.8	+0.5
	comp=Z,36nm,0.9s,baz=70,slow=6.1						
MURB	Monte Urbino	72.80	310	P	P	23 46 03.5	+0.9
SML	Sawmill	72.82	28	P	P	23 46 02.5	+0.1
SML	Sawmill	72.82	28	P	P	23 46 02.5	+0.1
SML				pmax	pmax		
	comp=Z,93nm,1.4s						
SML	Sawmill	72.82	28	P	P	23 46 02.3	-0.1
	baz=298,SNR=6.4						
G27K	Doyon Strip	72.83	22	P	P	23 46 03.0	+0.7
G27K				IAmb	IAmb	23 46 06.5	
	comp=Z,17nm,1.1s						
G27K	Doyon Strip	72.83	22	P	P	23 46 02.6	+0.3
	baz=302,SNR=13						
BUG	Bochum--Univer	72.84	320	*e*P	P	23 46 03.4	+0.8
	comp=Z,8.2nm,0.8s,baz=70,slow=6.1						
K24K	Donnelly Dome	72.89	26	P	P	23 46 02.5	-0.2
K24K	Donnelly Dome	72.89	26	P	P	23 46 02.5	-0.2
	baz=300,SNR=12						
DAVA	Damuels	72.94	315	*i* P	P	23 46 03.4	-0.1
	comp=Z,6.2nm,1.0s						
KNK	Knik Glacier	72.95	29	P	P	23 46 02.7	-0.5
KNK				IAmb	IAmb	23 46 06.3	
	comp=Z,35nm,1.2s						
KNK	Knik Glacier	72.95	29	P	P	23 46 02.0	-1.2
	baz=298						
FUORN	Ofenpass-Fuorn	72.96	314	P	P	23 46 03.4	-0.4
FUORN				IAmb	IAmb	23 46 20.2	
	comp=Z,24nm,1.4s						
F28M	Old Crow	72.97	21	P	P	23 46 03.1	-0.1
F28M				IAmb	IAmb	23 46 06.5	
	comp=Z,30nm,1.5s						
F28M	Old Crow	72.97	21	P	P	23 46 03.6	+0.5
	baz=304,SNR=6.2						
CESX	Cesi	73.02	310	P	P	23 46 03.3	-0.5
M23K	Glacier View	73.08	28	P	P	23 46 03.7	-0.1
	baz=298,SNR=5.5						
I26K	Coal Creek Min	73.10	24	P	P	23 46 04.0	+0.1
I26K				IAmb	IAmb	23 46 06.9	
	comp=Z,12nm,0.8s						
I26K	Coal Creek Min	73.10	24	P	P	23 46 03.6	-0.3
	baz=301,SNR=18						
SEW	Seward	73.13	30	P	P	23 46 03.4	-0.8
	baz=298						
DAVOX	Davos/Dischmat	73.14	314	LR	LR	00 21 10.3	
	comp=Z,144nm,19.4s,baz=82,slow=38						
E29M	Blow River	73.15	20	P	P	23 46 04.2	+0.1
E29M				IAmb	IAmb	23 46 08.3	
	comp=Z,36nm,1.2s						
E29M	Blow River	73.15	20	P	P	23 46 04.9	+0.7
	baz=305,SNR=19						
H27K	Steamboat Moun	73.18	23	P	P	23 46 04.6	+0.2
H27K				IAmb	IAmb	23 46 08.2	
	comp=Z,31nm,1.2s						
H27K	Steamboat Moun	73.18	23	P	P	23 46 04.6	+0.2
	baz=302,SNR=24						
SCM	Sheep Creek Mo	73.23	28	P	P	23 46 05.2	+0.4
SCM				IAmb	IAmb	23 46 40.4	
	comp=Z,16nm,0.9s						
SCM	Sheep Creek Mo	73.23	28	P	P	23 46 05.2	+0.4
SCM				pmax	pmax		
	comp=Z,15nm,0.9s						
SCM	Sheep Creek Mo	73.23	28	P	P	23 46 04.3	-0.6
	baz=299						
PWL	Port Wells	73.27	29	P	P	23 46 04.7	-0.3
PWL				IAmb	IAmb	23 46 07.9	
	comp=Z,42nm,1.3s						
PWL	Port Wells	73.27	29	P	P	23 46 03.9	-1.1
	baz=298						
RIDG	Independent Ri	73.28	26	P	P	23 46 04.4	-0.7
RIDG				IAmb	IAmb	23 46 08.0	
	comp=Z,37nm,1.2s						
RIDG	Independent Ri	73.28	26	P	P	23 46 04.2	-0.9
	baz=300,SNR=25						
PLONS	Plons/SG	73.35	315	*e*P	P	23 46 05.7	-0.1
	comp=Z,6.0nm,0.8s,baz=70,slow=6.1						
J26L	Joseph Creek	73.37	25	P	P	23 46 05.3	-0.3
J26L				IAmb	IAmb	23 46 08.7	
	comp=Z,39nm,1.2s						
J26L	Joseph Creek	73.37	25	P	P	23 46 04.6	-1.0
	baz=301,SNR=40						
ZCCA	Zocca	73.40	312	P	P	23 46 06.3	+0.2
ZCCA				IAmb	IAmb	23 46 25.4	
	comp=Z,33nm,1.1s						
PAX	Paxson	73.42	27	P	P	23 46 05.4	-0.5
PAX				IAmb	IAmb	23 46 07.9	
	comp=Z,22nm,1.4s						
PAX	Paxson	73.42	27	P	P	23 46 05.4	-0.5
PAX				pmax	pmax		
	comp=Z,22nm,1.4s						
PAX	Paxson	73.42	27	P	P	23 46 05.6	-0.3
	baz=300,SNR=16						
NEEM	North Greenlan	73.44	355	*i* P	P	23 46 06.7	+0.7
NEEM				IAmb	IAmb	23 46 09.9	
	comp=Z,60nm,1.0s						
BFO	Black Forest	73.48	316	P	P	23 46 06.6	+0.1
BFO	Black Forest	73.48	316	P	P	23 46 06.6	+0.1
BFO				pmax	pmax		
	comp=Z,11nm,0.9s						
BFO	Black Forest	73.48	316	*e*P	P	23 46 07.3	+0.8
	comp=Z,11nm,0.9s,baz=70,slow=6.1						
SCRK	Sand Creek	73.48	25	P	P	23 46 05.8	-0.5
SCRK				IAmb	IAmb	23 46 09.7	
	comp=Z,43nm,1.5s						
SCRK	Sand Creek	73.48	25	P	P	23 46 05.7	-0.7
	baz=301,SNR=21						
I27K	Kandik River	73.49	23	P	P	23 46 06.9	+0.6
	baz=302,SNR=14						
WILA	Wila	73.50	315	*e*P	P	23 46 06.5	-0.1
	comp=Z,22nm,1.4s,baz=70,slow=6.1						
OSSC	Osservatorio P	73.55	311	P	P	23 46 06.8	-0.2
M24K	Tolsona, Glenn	73.57	28	P	P	23 46 07.5	+0.7
M24K	Tolsona, Glenn	73.57	28	P	P	23 46 07.3	+0.5
	baz=300,SNR=8.3						
TUE	Stuetta	73.60	314	P	P	23 46 06.9	-0.6
TUE	Stuetta	73.60	314	P	P	23 46 06.7	-0.8
	comp=Z,55nm,0.7s						
SLE	Schleitheim	73.61	316	*e*P	P	23 46 07.9	+0.6
	comp=Z,46nm,0.8s,baz=70,slow=6.1						
DOT	Dot Lake	73.62	26	P	P	23 46 06.8	-0.3
PRMA	PARMA	73.67	312	P	P	23 46 07.5	-0.1
PRMA				IAmb	IAmb	23 46 13.0	
	comp=Z,16nm,0.7s						
VAE	Valguarnera	73.74	304	LR	LR	00 26 38.2	
	comp=Z,43nm,18.5s,baz=138,slow=42						
GLI	Glacier Island	73.79	29	P	P	23 46 07.6	-0.5
	baz=299						
HARP	HAARP	73.83	27	P	P	23 46 08.2	-0.1
	baz=300						
BTNL	Ternell	73.85	319	*d*P	P	23 46 09.8	+1.2
	comp=Z,5.4nm,1.0s						
MEM	Membach	73.91	319	*d*P	P	23 46 10.9	+2.0
SULZ	Cheisacher	73.94	316	*e*P	P	23 46 09.5	+0.2
	comp=Z,65nm,1.0s,baz=70,slow=6.1						
G29M	Pine Creek	73.96	21	P	P	23 46 08.9	-0.1
G29M				IAmb	IAmb	23 46 12.1	
	comp=Z,17nm,1.1s						
G29M	Pine Creek	73.96	21	P	P	23 46 08.7	-0.3
	baz=305,SNR=11						
KLU	Klutina	73.98	28	P	P	23 46 09.5	+0.2
KLU				IAmb	IAmb	23 46 13.4	
	comp=Z,28nm,0.9s						
KLU	Klutina	73.98	28	P	P	23 46 08.9	-0.3
	baz=300,SNR=13						
FID	Port Fidalgo	74.12	29	P	P	23 46 10.3	+0.4
FID				IAmb	IAmb	23 46 15.7	
	comp=Z,37nm,1.3s						
A36M	Sachs Harbour	74.12	14	P	P	23 46 09.9	+0.1
A36M				IAmb	IAmb	23 46 21.1	
	comp=Z,22nm,0.8s						
A36M	Sachs Harbour	74.12	14	P	P	23 46 09.7	-0.1
	baz=315						
MENT	Mentasta	74.13	26	P	P	23 46 10.4	+0.4
I28M	Miner Creek	74.16	23	P	P	23 46 10.0	-0.2
I28M	Miner Creek	74.16	23	P	P	23 46 10.5	+0.2
	baz=304,SNR=17						
K27K	Chicken	74.17	25	P	P	23 46 10.7	+0.5
K27K				IAmb	IAmb	23 46 14.6	
	comp=Z,36nm,1.2s						
K27K	Chicken	74.17	25	P	P	23 46 10.3	+0.1
	baz=303						
BSTI	Sart Tilman	74.17	319	*d*P	P	23 46 11.3	+0.9
DIV	Divide	74.22	28	P	P	23 46 10.9	+0.3
DIV				IAmb	IAmb	23 46 14.7	
	comp=Z,35nm,1.3s						
L26K	Log Cabin Wild	74.22	26	P	P	23 46 11.4	+0.8
L26K	Log Cabin Wild	74.22	26	P	P	23 46 11.3	+0.8
	baz=302						
WLF	Walferdange	74.23	318	P	P	23 46 11.3	+0.5
WLF				IAmb	IAmb	23 46 14.5	
	comp=Z,22nm,0.9s						
WLF	Walferdange	74.23	318	P	P	23 46 11.3	+0.5
WLF				pmax	pmax		
	comp=Z,22nm,0.9s						
WLF	Walferdange	74.23	318	*d*P	P	23 46 11.7	+0.9
	comp=Z,15nm,1.0s						
WLF	Walferdange	74.23	318	*e*P	P	23 46 12.1	+1.3
	comp=Z,23nm,0.9s,baz=70,slow=6.1						
ECH	Echery	74.24	316	P	P	23 46 10.3	-0.6
ECH	Echery	74.24	316	P	P	23 46 10.3	-0.6
ECH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
F30M	Barrier River	74.25	20	P	P	23 46 10.9	+0.3
F30M				IAmb	IAmb	23 46 13.9	
	comp=Z,43nm,1.4s						
F30M	Barrier River	74.25	20	P	P	23 46 10.8	+0.2
	baz=307,SNR=8.7						
H29M	Whitestone	74.25	22	P	P	23 46 10.5	-0.2
H29M				IAmb	IAmb	23 46 14.2	
	comp=Z,23nm,1.5s						
H29M	Whitestone	74.25	22	P	P	23 46 10.1	-0.5
	baz=305						
BALST	Balsthal	74.28	315	*e*P	P	23 46 11.2	0.0
	comp=Z,6.0nm,0.7s,baz=70,slow=6.1						
BCLA	Clavier	74.40	319	*d*P	P	23 46 12.7	+0.9
N25K	Chitina, Valde	74.47	28	P	P	23 46 12.6	+0.5
N25K	Chitina, Valde	74.47	28	P	P	23 46 12.2	+0.1
	baz=301						
SCO	Scoresbysund	74.49	344	P	P	23 46 12.3	+0.4
SCO	Scoresbysund	74.49	344	P	P	23 46 12.3	+0.4
SCO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
INK	Inuvik	74.50	19	P	P	23 46 11.9	-0.1
INK				IAmb	IAmb	23 46 14.8	
	comp=Z,40nm,1.4s						
INK	Inuvik	74.50	19	P	P	23 46 11.6	-0.4
	comp=Z,7.6nm,0.5s,baz=303,slow=6.7,SNR=13						
INK				LR	LR	00 23 52.8	
	comp=Z,252nm,18.2s,baz=254,slow=40						
	comp=Z,7.6nm,0.5s						
INK	Inuvik	74.50	19	P	P	23 46 11.9	-0.1
INK				pmax	pmax		
	comp=Z,40nm,1.5s						
INK	Inuvik	74.50	19	P	P	23 46 11.9	-0.1
	baz=309,SNR=8.7						
G30M	tAoh Zraii Nji	74.50	21	P	P	23 46 11.5	-0.6
G30M	tAoh Zraii Nji	74.50	21	P	P	23 46 11.5	-0.6
	baz=307,SNR=10.0						
EYAK	Cordova Ski Ar	74.53	29	P	P	23 46 12.4	+0.1
	baz=300						
BGES	Gesves	74.54	319	*d*P	P	23 46 14.2	+1.7
M26K	Nabesna, AK	74.69	27	P	P	23 46 13.2	-0.2
M26K				IAmb	IAmb	23 46 17.0	
	comp=Z,33nm,1.4s						
M26K	Nabesna, AK	74.69	27	P	P	23 46 13.6	+0.3
	baz=302,SNR=10						
EPYK	Eagle Plains	74.70	22	P	P	23 46 13.4	+0.1
EPYK				IAmb	IAmb	23 46 15.5	
	comp=Z,20nm,1.3s						
EPYK	Eagle Plains	74.70	22	P	P	23 46 12.7	-0.6
	baz=306						
BMRD	Maredsous	74.76	319	*d*P	P	23 46 14.8	+1.0
I29M	Ogilvie Camp,	74.77	23	P	P	23 46 13.6	-0.1
UCC	Uccle	74.77	320	P	P	23 46 14.0	+0.1
UCC	Uccle	74.77	320	P	P	23 46 14.0	+0.1
UCC				pmax	pmax		
	comp=Z,10.0nm,1.3s						
UCC	Uccle	74.77	320	*d*P	P	23 46 14.8	+0.9
L27K	Beaver Creek,	74.79	26	P	P	23 46 14.2	+0.3
L27K				IAmb	IAmb	23 46 18.4	
	comp=Z,22nm,1.1s						
L27K	Beaver Creek,	74.79	26	P	P	23 46 14.1	+0.2
	baz=303,SNR=15						
BMRM	Bremner River	74.80	28	P	P	23 46 14.3	+0.4
BMRM	Bremner River	74.80	28	P	P	23 46 14.0	0.0
	baz=301,SNR=11						
BCAR	Beaver Creek A	74.81	26	P	P	23 46 14.3	+0.3
GLB	Gilahina Butte	74.88	28	P	P	23 46 14.4	0.0
GLB				IAmb	IAmb	23 46 17.9	
	comp=Z,34nm,1.3s						
SENIN	Lac Senin/Sane	74.94	315	P	P	23 46 15.0	-0.3
DOU	Dourbes	74.95	319	*d*P	P	23 46 15.0	0.0
F31M	Tsiigehtchic	74.98	20	P	P	23 46 14.0	-0.8
	baz=309						
VOI	Vohitsoka	75.12	235	P	P	23 46 15.5	-1.0
VOI				IAmb	IAmb	23 46 16.2	
	comp=Z,17nm,0.9s						
DAWY	Dawson	75.14	24	P	P	23 46 15.6	-0.3
DAWY	Dawson	75.14	24	P	P	23 46 15.1	-0.7
	baz=305,SNR=9.0						
VRDI	Verde Repeater	75.14	28	P	P	23 46 16.1	0.0
VRDI				IAmb	IAmb	23 46 21.8	
	comp=Z,21nm,1.4s						
G31M	Satah River	75.14	21	P	P	23 46 14.9	-0.8
G31M				IAmb	IAmb	23 46 17.9	
	comp=Z,29nm,1.4s						
G31M	Satah River	75.14	21	P	P	23 46 15.3	-0.5
	baz=308,SNR=8.9						
M27K	Edge Creek, AK	75.16	26	P	P	23 46 16.6	+0.5
M27K				IAmb	IAmb	23 46 20.6	
	comp=Z,21nm,1.1s						
M27K	Edge Creek, AK	75.16	26	P	P	23 46 16.6	+0.5
	baz=303,SNR=12						
MCARA	McCarthy VSAT	75.23	27	P	P	23 46 17.0	+0.6
MCARA				IAmb	IAmb	23 46 20.1	
	comp=Z,42nm,1.2s						
MCARA	McCarthy VSAT	75.23	27	P	P	23 46 16.5	+0.1
	baz=302						
J29N	Klondike Camp	75.33	24	P	P	23 46 18.0	+1.0
J29N				IAmb	IAmb	23 46 19.8	
	comp=Z,15nm,0.6s						
J29N	Klondike Camp	75.33	24	P	P	23 46 17.1	0.0
	baz=306						
KAIM	Kayak Island	75.42	29	P	P	23 46 16.8	-0.7
	baz=302						
I30M	Mount Dempster	75.51	22	P	P	23 46 17.0	-1.1
I30M	Mount Dempster	75.51	22	P	P	23 46 17.4	-0.7
	baz=307,SNR=16						
BVCY	Beaver Creek	75.52	26	P	P	23 46 18.5	+0.4
	baz=304,SNR=12						
CRQE	Cirque	75.54	28	P	P	23 46 18.3	-0.1
	baz=302						
TGL	Tana Glacier	75.65	28	P	P	23 46 19.3	+0.3
TGL				IAmb	IAmb	23 46 22.3	
	comp=Z,35nm,1.3s						
BGLC	Bering Glacier	75.80	29	P	P	23 46 19.2	-0.4
	baz=302						
H31M	Peel River	75.82	21	P	P	23 46 19.2	-0.5
H31M	Peel River	75.82	21	P	P	23 46 18.7	-1.0
	baz=309,SNR=14						
BNI	Bardonecchia	75.89	314	P	P	23 46 20.2	-0.5
BNI	Bardonecchia	75.89	314	P	P	23 46 20.2	-0.5
BNI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
J30M	Hart River	75.92	23	P	P	23 46 19.9	-0.5
J30M				IAmb	IAmb	23 46 23.4	
	comp=Z,23nm,1.4s						
J30M	Hart River	75.92	23	P	P	23 46 20.3	-0.2
	baz=307,SNR=12						
K29M	Barlow Dome	75.94	24	P	P	23 46 20.5	-0.1
K29M				IAmb	IAmb	23 46 23.8	
	comp=Z,23nm,1.1s						
K29M	Barlow Dome	75.94	24	P	P	23 46 20.8	+0.2
	baz=306,SNR=23						
BARN	Barnard Glacie	75.96	27	P	P	23 46 21.2	+0.4
BARN				IAmb	IAmb	23 46 26.1	
	comp=Z,12nm,0.5s						
YUK3	Moose Creek	76.04	26	P	P	23 46 21.5	+0.2
	baz=304,SNR=8.5						
GRNC	Granite Creek	76.10	28	P	P	23 46 22.0	+0.3
GRNC				IAmb	IAmb	23 46 25.4	
	comp=Z,37nm,1.3s						
CTG	Chitna Glacier	76.14	27	P	P	23 46 21.6	-0.2
	baz=304,SNR=5.5						
CTGM	Chitina Glacie	76.14	27	P	P	23 46 22.1	+0.3
CTGM				IAmb	IAmb	23 46 26.3	
	comp=Z,12nm,0.8s						
L29M	L29M	76.15	25	P	P	23 46 22.1	+0.4
L29M	L29M	76.15	25	P	P	23 46 21.9	+0.2
	baz=306,SNR=28						
SUMG	Summit	76.26	349	P	P	23 46 23.3	+0.7
SUMG	Summit	76.26	349	P	P	23 46 23.3	+0.7
SUMG				pmax	pmax		
	comp=Z,55nm,1.4s						
SUMG	Summit	76.26	349	*i* P	P	23 46 23.0	+0.4
SUMG				IAmb	IAmb	23 46 25.4	
	comp=Z,47nm,1.3s						
C36M	Paulatuk	76.31	16	P	P	23 46 22.3	0.0
C36M	Paulatuk	76.31	16	P	P	23 46 22.0	-0.3
	baz=317,SNR=7.3						
MESA	MESA	76.33	28	P	P	23 46 21.6	-1.3
MESA				IAmb	IAmb	23 46 22.2	
	comp=Z,29nm,1.1s						
MESA	MESA	76.33	28	P	P	23 46 21.6	-1.3
	baz=304						
LOGN	Logan Glacier	76.36	27	P	P	23 46 23.5	+0.4
LOGN				IAmb	IAmb	23 46 51.9	
	comp=Z,17nm,1.2s						
RES	Resolute Bay	76.39	5	P	P	23 46 22.6	-0.2
RES				IAmb	IAmb	23 46 26.2	
	comp=Z,13nm,1.0s						
RES	Resolute Bay	76.39	5	LR	LR	00 22 41.7	
	comp=Z,72nm,18.5s,baz=15,slow=38						
RES	Resolute Bay	76.39	5	P	P	23 46 22.6	-0.2
RES				pmax	pmax		
	comp=Z,13nm,1.0s						
MBAR	Mbarara	76.40	262	P	P	23 46 23.7	-0.4
MBAR	Mbarara	76.40	262	P	P	23 46 23.7	-0.4
MBAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
M29M	Somme Creek	76.42	25	P	P	23 46 23.8	+0.5
M29M				IAmb	IAmb	23 46 27.1	
	comp=Z,21nm,1.4s						
M29M	Somme Creek	76.42	25	P	P	23 46 24.0	+0.6
	baz=306,SNR=8.9						
TABL	Table Mountain	76.52	28	P	P	23 46 24.1	0.0
TABL				IAmb	IAmb	23 46 27.8	
	comp=Z,37nm,1.3s						
YUK8	Steele Glacier	76.59	27	P	P	23 46 24.7	+0.2
	baz=305,SNR=5.4						
EKA	Eskdalemuir Ar	76.61	326	P	P	23 46 24.1	-0.3
	comp=Z,2.5nm,0.6s,baz=62,slow=5.2,SNR=6.6						
	comp=Z,2.5nm,0.6s						
KULLO	Kullorsuaq	76.65	355	*i* P	P	23 46 24.5	+0.3
KULLO				IAmb	IAmb	23 46 27.5	
	comp=Z,31nm,1.0s						
O28M	Mount Upton	76.72	27	P	P	23 46 25.3	+0.1
O28M				IAmb	IAmb	23 46 27.6	
	comp=Z,25nm,1.4s						
O28M	Mount Upton	76.72	27	P	P	23 46 25.8	+0.5
	baz=305,SNR=8.3						
PINM	Pinnacle	77.08	28	P	P	23 46 27.0	0.0

	baz=305						
CLF	Chambon-Foret	77.26	318	P	P	23 46 28.1	-0.1
CLF				IAmb	IAmb	23 46 33.0	
	comp=Z,17nm,0.8s						
YUK6	Outpost Mounta	77.34	27	P	P	23 46 28.5	-0.2
	baz=306						
N30M	Aishikik Lake	77.53	26	P	P	23 46 29.9	+0.4
N30M				IAmb	IAmb	23 46 33.3	
	comp=Z,29nm,1.4s						
N30M	Aishikik Lake	77.53	26	P	P	23 46 29.6	+0.1
	baz=307,SNR=8.4						
O29M	Mount Kennedy	77.64	27	P	P	23 46 29.6	-0.7
O29M				IAmb	IAmb	23 46 34.4	
	comp=Z,20nm,1.4s						
O29M	Mount Kennedy	77.64	27	P	P	23 46 29.9	-0.3
	baz=306						
PNL	Peninsula	77.68	28	P	P	23 46 29.6	-0.8
	baz=306						
DZM	Mont Dzumac	77.68	123	eLR	LR	00 10 31.6	
	comp=Z,285nm,32.8s						
HYT	Haines Junctio	77.75	26	P	P	23 46 30.3	-0.6
HYT				IAmb	IAmb	23 46 34.5	
	comp=Z,21nm,1.3s						
HYT	Haines Junctio	77.75	26	P	P	23 46 30.9	0.0
	baz=307,SNR=9.3						
N31M	Braeburn, Yuko	78.01	25	P	P	23 46 32.6	+0.4
N31M	Braeburn, Yuko	78.01	25	P	P	23 46 31.5	-0.6
	baz=308,SNR=5.7						
M31M	Drury Creek, Y	78.08	24	P	P	23 46 32.4	-0.1
M31M	Drury Creek, Y	78.08	24	P	P	23 46 32.3	-0.1
	baz=309						
KEST	Kesra	78.17	304	P	P	23 46 33.7	+0.1
	comp=Z,2.6nm,0.7s,baz=102,slow=2.7,SNR=4.9						
KEST				LR	LR	00 27 51.1	
	comp=Z,34nm,18.4s,baz=308,slow=41						
	comp=Z,2.6nm,0.7s						
BORG	Borgarnes	78.27	339	LR	LR	00 25 10.5	
	comp=Z,71nm,18.4s,baz=355,slow=39						
UPNV	Upernavik	78.29	354	i P	P	23 46 35.6	+2.2
UPNV				IAmb	IAmb	23 46 37.3	
	comp=Z,20nm,0.8s						
O30N	Mendenhall	78.33	26	P	P	23 46 34.4	+0.4
O30N				IAmb	IAmb	23 46 37.7	
	comp=Z,14nm,0.9s						
O30N	Mendenhall	78.33	26	P	P	23 46 34.5	+0.4
	baz=308,SNR=8.2						
P29M	Windy Craggy	78.38	27	P	P	23 46 34.4	+0.1
P29M				IAmb	IAmb	23 46 38.6	
	comp=Z,30nm,1.4s						
P29M	Windy Craggy	78.38	27	P	P	23 46 34.7	+0.5
	baz=307						
P30M	Million Dollar	78.39	27	P	P	23 46 34.6	+0.2
	baz=308						
FARO	Faro, Yukon	78.43	24	P	P	23 46 34.5	0.0
FARO	Faro, Yukon	78.43	24	P	P	23 46 34.6	+0.2
	baz=310						
SOEG	Soedalen	78.44	345	i P	P	23 46 35.0	+0.7
SOEG				IAmb	IAmb	23 46 37.2	
	comp=Z,32nm,0.9s						
WHY	Whitehorse	78.87	26	P	P	23 46 37.4	+0.3
WHY	Whitehorse	78.87	26	P	P	23 46 36.6	-0.4
	baz=309						
MMPY	Sheldon Lake,	78.91	23	P	P	23 46 37.1	0.0
MMPY	Sheldon Lake,	78.91	23	P	P	23 46 36.6	-0.6
	baz=312						
PLBC	Pleasant Camp	79.04	27	P	P	23 46 37.7	-0.1
	baz=308						
POIN	Pond Inlet	79.19	1	P	P	23 46 39.3	+1.0
POIN				IAmb	IAmb	23 46 42.0	
	comp=Z,22nm,1.0s						
N32M	Quiet Lake	79.23	25	P	P	23 46 38.7	-0.2
N32M				IAmb	IAmb	23 46 42.5	
	comp=Z,22nm,1.1s						
N32M	Quiet Lake	79.23	25	P	P	23 46 38.2	-0.7
	baz=310						
ICESG	Greenland Ices	79.44	348	i P	P	23 46 40.8	+0.5
ICESG				IAmb	IAmb	23 46 42.8	
	comp=Z,89nm,1.7s						
SKAG	Skagway	79.45	27	P	P	23 46 40.7	+0.7
SKAG				IAmb	IAmb	23 46 44.7	
	comp=Z,41nm,1.4s						
SKAG	Skagway	79.45	27	P	P	23 46 40.4	+0.3
	baz=309						
P33M	Teslin, Yukon	79.94	25	P	P	23 46 43.1	+0.2
P33M	Teslin, Yukon	79.94	25	P	P	23 46 42.9	+0.1
	baz=311						
P32M	Atlin	80.00	26	P	P	23 46 43.4	+0.2
P32M	Atlin	80.00	26	P	P	23 46 42.6	-0.6
	baz=310						
S31K	Pelican	80.02	28	P	P	23 46 42.5	-0.7
	baz=308						
BESE	Bessie Mountai	80.20	27	P	P	23 46 44.6	+0.4
CEST	Esterri de Car	80.51	313	P	P	23 46 46.1	-0.3
R32K	Eaglecrest	80.53	27	P	P	23 46 46.8	+0.9
R32K	Eaglecrest	80.53	27	P	P	23 46 45.8	-0.2
	baz=310						
TGTN	Hyland Airport	80.69	23	P	P	23 46 46.9	+0.1
	baz=314						
SIT	Sitka	80.97	29	P	P	23 46 48.1	-0.1
	baz=309						
Q32M	Nakina River	80.98	26	P	P	23 46 48.6	0.0
	baz=312						
WRGLY	Wrigley	81.01	20	P	P	23 46 50.2	+1.9
S32K	Killisnoo	81.02	28	P	P	23 46 48.0	-0.5
S32K	Killisnoo	81.02	28	P	P	23 46 48.7	+0.2
	baz=310						
ILULI	Ilulissat	81.14	352	P	P	23 46 50.0	+1.0
ILULI				IAmb	IAmb	23 46 52.1	
	comp=Z,21nm,0.9s						
ILULI	Ilulissat	81.14	352	P	P	23 46 50.0	+1.0
ILULI				pmax	pmax		
	comp=Z,21nm,0.9s						
ILULI	Ilulissat	81.14	352	i P	P	23 46 49.3	+0.3
ILULI				IAmb	IAmb	23 46 51.8	
	comp=Z,24nm,1.0s						
R33M	Jennings River	81.19	25	P	P	23 46 50.8	+1.2
R33M	Jennings River	81.19	25	P	P	23 46 49.5	-0.1
	baz=312,SNR=7.8						
WTLY	Watson Lake, Y	81.49	24	P	P	23 46 50.8	-0.3
WTLY				IAmb	IAmb	23 46 54.2	
	comp=Z,22nm,1.2s						
WTLY	Watson Lake, Y	81.49	24	P	P	23 46 51.4	+0.3
	baz=314						
S34M	Telegraph Cree	82.12	27	P	P	23 46 54.4	0.0
S34M	Telegraph Cree	82.12	27	P	P	23 46 54.5	+0.2
	baz=312						
ILON	Igloolik, Nuna	82.43	2	P	P	23 46 56.2	+0.4
ILON				IAmb	IAmb	23 46 58.8	
	comp=Z,20nm,1.1s						
U33K	Whale Pass	82.51	29	P	P	23 46 56.6	+0.2
	baz=311						
WRAK	Wrangell Islan	82.64	28	P	P	23 46 57.5	+0.5
WRAK	Wrangell Islan	82.64	28	P	P	23 46 56.8	-0.3
	baz=312						
CRAG	Craig	82.94	29	P	P	23 46 58.8	+0.2
	baz=311						
T35M	Bob Quinn	83.11	27	P	P	23 47 00.1	+0.5
T35M				IAmb	IAmb	23 47 04.6	
	comp=Z,18nm,1.3s						
T35M	Bob Quinn	83.11	27	P	P	23 46 59.6	0.0
	baz=313						
SFJD	Kangerlussuaq	83.15	351	P	P	23 47 00.4	+0.9
SFJD	Kangerlussuaq	83.15	351	LR	LR	00 26 40.7	
	comp=Z,116nm,20.5s,baz=26,slow=38						
SFJD	Kangerlussuaq	83.15	351	P	P	23 47 00.4	+0.9
SFJD				pmax	pmax		
	comp=Z,26nm,0.8s						
SFJD	Kangerlussuaq	83.15	351	i P	P	23 47 00.8	+1.3
SFJD				IAmb	IAmb	23 47 02.3	
	comp=Z,29nm,0.8s						
TOAD	Toad River Com	83.67	24	P	P	23 47 02.9	+0.4
	baz=317						
V35K	Ketchikan	83.67	29	P	P	23 47 01.6	-0.9
	baz=312						
YKAW3	Yellowknife Wh	84.03	17	P	P	23 47 04.0	-0.1
YKAW3				IAmb	IAmb	23 47 08.1	
	comp=Z,13nm,1.2s						
YKA	Yellowknife Ar	84.09	17	P	P	23 47 04.2	-0.3
YKA	Yellowknife Ar	84.09	17	P	P	23 47 04.3	-0.1
	comp=Z,4.1nm,0.9s,baz=322,slow=5.9,SNR=19						
YKA				LR	LR	00 29 39.4	
	comp=Z,114nm,18.1s,baz=308,slow=39						
	comp=Z,4.1nm,0.9s						
YKAW1	Yellowknife Wh	84.13	17	P	P	23 47 05.1	+0.4
YKAW1				IAmb	IAmb	23 47 07.9	
	comp=Z,21nm,1.3s						
ESDC	Sonseca Array	85.40	313	P	P	23 47 11.4	-0.2
ESDC	Sonseca Array	85.40	313	P	P	23 47 11.2	-0.4
	comp=Z,1.4nm,0.8s,baz=43,slow=5.7,SNR=15						
ESDC				LR	LR	00 29 52.7	
	comp=Z,63nm,18.3s,baz=55,slow=39						
	comp=Z,1.4nm,0.8s						
LSZ	Lusaka	85.91	250	P	P	23 47 14.2	-0.3
LSZ				IAmb	IAmb	23 47 17.6	
	comp=Z,18nm,0.8s						
LSZ	Lusaka	85.91	250	LR	LR	00 25 32.8	
	comp=Z,62nm,18.2s,baz=102,slow=36						
LSZ	Lusaka	85.91	250	P	P	23 47 14.2	-0.3
LSZ				pmax	pmax		
	comp=Z,18nm,0.8s						
NUUK	Nuuk	85.96	350	i P	P	23 47 15.2	+1.5
NUUK				IAmb	IAmb	23 47 16.6	
	comp=Z,72nm,1.4s						
BLKN	Baker Lake	86.17	9	P	P	23 47 14.8	-0.1
MVO	Moncorvo	86.50	315	eP	P	23 47 19.9	+2.9
MVO				i Amb		23 47 30.8	
	comp=Z,16nm,1.6s						
PGAV	Gavieira, Arco	86.79	317	eP	P	23 47 20.5	+2.0
PGAV				i Amb		23 47 34.5	
	comp=Z,20nm,2.1s						
PCAB	Cabril	86.80	316	eP	P	23 47 18.9	+0.4
PCAB				i Amb		23 47 22.7	
	comp=Z,24nm,1.3s						
TAM	Tamanrasset	87.19	294	P	P	23 47 20.8	0.0
TAM	Tamanrasset	87.19	294	P	P	23 47 20.8	0.0
TAM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MTE	Manteigas	87.26	315	P	P	23 47 21.6	+0.8
MTE				IAmb	IAmb	23 48 04.4	
	comp=Z,12nm,1.0s						
MTE	Manteigas	87.26	315	eP	P	23 47 21.5	+0.8
MTE				i Amb		23 47 26.3	
	comp=Z,27nm,1.5s						
PVIS	Viseu	87.29	315	eP	P	23 47 22.0	+1.1
BBB	Bella Bella	87.35	30	LR	LR	00 29 46.1	
	comp=Z,101nm,18.2s,baz=326,slow=38						
PTO	Porto	87.48	316	eP	P	23 47 22.0	+0.3
PTO				i Amb		23 47 32.5	
	comp=Z,26nm,1.5s						
PCBR	Castelo Branco	87.54	315	eP	P	23 47 22.9	+0.8
PCBR				i Amb		23 47 44.7	
	comp=Z,20nm,1.6s						
NRS	Narsarsuaq	87.59	346	i P	P	23 47 22.1	+0.3
NRS				IAmb	IAmb	23 47 23.8	
	comp=Z,18nm,1.0s						
PMRV	Marv??o	87.72	314	eP	P	23 47 24.5	+1.6
PMRV				i Amb		23 47 26.3	
	comp=Z,14nm,1.5s						
COI	Coimbra	87.91	315	eP	P	23 47 26.2	+2.4
COI				i Amb		23 47 28.9	
	comp=Z,30nm,1.1s						
FRB	Frobisher Bay	88.06	357	LR	LR	00 29 13.1	
	comp=Z,74nm,19.3s,baz=321,slow=37						
IVI	Ivigtut	88.11	347	P	P	23 47 24.1	-0.1
IVI	Ivigtut	88.11	347	i P	P	23 47 24.6	+0.3
IVI				IAmb	IAmb	23 47 27.0	
	comp=Z,20nm,0.4s						
PSARD	Sardoal	88.11	315	eP	P	23 47 25.8	+1.0
PSARD				i Amb		23 47 27.2	
	comp=Z,30nm,1.6s						
PESTR	Estremoz	88.17	314	eP	P	23 47 30.7	+5.6
PESTR				i Amb		23 47 31.6	
	comp=Z,9.7nm,1.1s						
PBAR	Barrancos	88.22	313	eP	P	23 47 27.0	+1.7
PBAR				i Amb		23 47 27.6	
	comp=Z,19nm,1.8s						
MATP	Matopo	88.28	246	LR	LR	00 25 09.6	
	comp=Z,50nm,21.2s,baz=75,slow=34						
KKH	Kailua Kona	88.43	69	P	P	23 47 26.2	-0.4
KKH	Kailua Kona	88.43	69	P	P	23 47 26.2	-0.4
KKH				pmax	pmax		
	comp=Z,1.0nm,1.0s						
PMTG	Montargil	88.46	314	eP	P	23 47 33.3	+6.9
PMTG				i Amb		23 47 43.4	
	comp=Z,12nm,1.8s						
EVO	Evora	88.64	314	eP	P	23 47 28.1	+0.8
EVO				i Amb		23 47 32.5	
	comp=Z,14nm,1.2s						
PBEJ	Beja	88.84	313	eP	P	23 47 29.2	+0.9
PBEJ				i Amb		23 47 40.2	
	comp=Z,15nm,1.5s						
MESJ	Messejana	89.17	313	eP	P	23 47 32.0	+2.2
MESJ				i Amb		23 47 44.7	
	comp=Z,17nm,1.4s						
MDT	Midelt	89.61	307	LR	LR	00 34 48.9	
	comp=Z,59nm,18.3s,baz=124,slow=40						
FCC	Fort Churchill	91.77	10	P	P	23 47 42.0	+0.6
FCC				IAmb	IAmb	23 47 45.2	
	comp=Z,17nm,1.2s						
FCC	Fort Churchill	91.77	10	P	P	23 47 42.0	+0.6
FCC				pmax	pmax		
	comp=Z,17nm,1.2s						
LBTB	Lobatse	92.91	243	LR	LR	00 29 21.9	
	comp=Z,33nm,19.8s,baz=70,slow=35						
B08A	Colville Reser	93.95	28	P	P	23 47 52.1	+0.3
FFC	Flin Flon	94.07	15	P	P	23 47 51.9	-0.3
FFC				IAmb	IAmb	23 47 55.7	
	comp=Z,7.6nm,1.1s						
FFC	Flin Flon	94.07	15	P	P	23 47 51.9	-0.3
NEW	Newport	94.91	27	LR	LR	00 35 04.8	
	comp=Z,160nm,18.2s,baz=326,slow=38						
BOSA	Boshof	94.95	240	P	P	23 47 54.9	-1.8
	comp=Z,1.4nm,0.5s,baz=74,slow=3.6,SNR=7.7						
BOSA				LR	LR	00 30 00.5	
	comp=Z,65nm,19.7s,baz=39,slow=35						
	comp=Z,1.4nm,0.5s						
TORD	Torodi Ar. Bea	95.15	288	P	P	23 47 56.6	-1.3
SCHQ	Schefferville	96.84	355	P	P	23 48 04.3	-0.6
	comp=Z,2.9nm,0.5s,baz=294,slow=2.0,SNR=8.0						
	comp=Z,2.9nm,0.5s						
ULM	Lac du Bonnet	99.59	13	LR	LR	00 38 38.7	
	comp=Z,92nm,18.1s,baz=344,slow=39						
DBIC	Dimbokro	103.99	286	PP	PP	23 52 53.2	-1.7
	comp=Z,10nm,1.0s,baz=91,slow=8.9,SNR=5.3						
PPT2	Papeete2	111.50	99	eLR	LR	00 26 05.9	
	comp=Z,119nm,25.0s						
PPT2				eLR	LR	00 26 06.9	
	comp=Z,68nm,24.2s						
TBI	Tubuai	113.84	105	eLR	LR	00 27 13.3	
	comp=Z,699nm,38.2s						
TXAR	Lajitas Array	116.44	28	PKP	PKiKP	23 53 19.0	+0.7
	comp=Z,0.8nm,0.8s,baz=318,slow=0.7,SNR=6.5						
TXAR				PKKPbc	PKKPbc	00 03 46.0	-0.4
	comp=Z,0.5nm,0.7s,baz=148,slow=7.4,SNR=5.6						
JCT	Junction City	116.90	24		PKiKP	23 53 20.5	+1.4
JCT	Junction City	116.90	24	PKIKP	PKiKP	23 53 20.5	+1.4
Y49A	Blount Mountai	117.19	11		PKiKP	23 53 20.1	+0.6
QSPA	South Pole Qui	118.15	180		PKPdf	23 53 19.5	-0.8
QSPA	South Pole Qui	118.15	180	PKP	PKPdf	23 53 19.2	-1.1
	comp=Z,3.7nm,0.9s,baz=271,slow=1.0,SNR=16						
TROLL	Troll, Antarti	120.53	201	⇓PKPdf	PKPdf	23 53 24.8	0.0
	comp=Z,159nm,0.4s						
SNAA	Sanae	122.24	201	⇓PKPdf	PKPdf	23 53 27.6	-0.4
	comp=Z,44nm,0.6s						
SNAA	Sanae	122.24	201	PKP	PKPdf	23 53 27.6	-0.4
	comp=Z,1.8nm,0.6s,baz=190,slow=3.4,SNR=17						
SNAA	Sanae	122.24	201	PKIKP	PKPdf	23 53 27.7	-0.3
BELA	Belgrano 2	127.14	190		PKPdf	23 53 36.5	-0.7
SDV	Santo Domingo	142.72	353		PKPdf	23 54 06.4	-1.9
SDV	Santo Domingo	142.72	353	eP	PKPdf	23 54 07.1	-1.2
GUA01	Guaratinga, BA	145.49	282	eP	PKPbc	23 54 12.8	0.0
BOAV	Boa Vista	146.37	333	eP	PKPab	23 54 16.4	0.0
ROSC	El Rosal	146.98	359	PKPbc	PKPbc	23 54 17.1	-0.8
	comp=Z,48nm,0.6s,baz=85,slow=2.7,SNR=16						
MAL2	Monte Alegre,	147.07	319		PKPbc	23 54 16.7	-1.0
RIB01	Linhares ES	147.12	278	eP	PKPbc	23 54 17.0	-0.6
PRPB	Parauapebas	147.45	308	eP	PKPdf	23 54 17.5	+1.2
SJMB	Sao Joao De Ma	147.57	280	eP	PKPbc	23 54 18.5	-0.4
SMTB	Santa Maria do	147.67	302	eP	PKPdf	23 54 17.3	+0.8
SDBA	SAO DESIDERIO	147.70	293	eP	PKPbc	23 54 19.1	-0.2
JANB	Januaria	148.61	288	eP	PKPdf	23 54 18.6	+0.5
DUB01	Friburgo-RJ	149.83	275	eP	PKPbc	23 54 23.1	-1.5
ITTB	Itaituba	149.88	319	eP	PKPdf	23 54 20.7	+0.5
OTAV	Otavalo	151.38	7		PKPdf	23 54 25.2	+2.1
OTAV	Otavalo	151.38	7	PKIKP	PKPdf	23 54 25.2	+2.1
OTAV	Otavalo	151.38	7	eP	PKPdf	23 54 25.0	+1.9
MACA	Manacapuru-AM	151.43	329	eP	PKPdf	23 54 24.6	+2.0
NPGB	Novo Progresso	151.77	315	eP	PKPdf	23 54 23.9	+0.8
BDFB	Brasilia	151.98	291		PKiKP	23 54 30.6	+0.3
BDFB	Brasilia	151.98	291	PKPbc	PKPbc	23 54 28.0	-1.9
	comp=Z,2.8nm,0.4s,baz=99,slow=2.7,SNR=5.9						
BDFB	Brasilia	151.98	291	PKIKP	PKPbc	23 54 28.0	-1.9
PMNB	Patos De Minas	152.03	284	eP	PKPdf	23 54 24.3	+0.9
VILB	Vilhena	159.33	315	eP	PKPdf	23 54 34.8	+1.6
CZSB	Cruzeiro do Su	159.35	353	eP	PKPdf	23 54 35.6	+2.4
PTLB	Pontes e Lacer	160.44	308	eP	PKPdf	23 54 34.8	+0.5
BBSD	Serra de San D	162.66	307	eP	PKPdf	23 54 36.9	+0.2
CPUP	Villa Florida	164.10	273	PKP	PKPdf	23 54 37.6	-0.1
	comp=Z,0.3nm,0.6s,baz=77,slow=2.8,SNR=3.4						
LPAZ	La Paz	166.38	330	PKP	PKPdf	23 54 41.3	+0.6
	comp=Z,1.2nm,0.6s,baz=312,slow=1.8,SNR=6.6						
LPAZ	La Paz	166.38	330	eP	PKPdf	23 54 42.8	+2.1

RSNC 17 23:53:11.4±0.0,5°N±2°×7°6W±°,h53km±5km,M1.9,ML1.6, Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLMC	San Jos del P	0.39	283	P	Pn	23 53 20.6	-1.2
PLMC				S	Sn	23 53 29.8	+0.6
NIZA	Niza - Manizal	0.49	61	P	Pn	23 53 22.2	-0.8
NIZA				S	Sn	23 53 31.7	+0.3
ANIL	Santa Ana	0.59	123	P	Pn	23 53 23.5	-0.8
ANIL				S	Sn	23 53 33.9	+0.4
GUY2C	Guyana, Caldas	0.67	53	P	Pn	23 53 24.5	-0.8
GUY2C				S	Sn	23 53 35.2	-0.2
YOTC	Yotoco, Valle	0.94	208	P	Pn	23 53 27.2	-1.4
YOTC				S	Sn	23 53 39.7	-1.5
CBOC	Ciudad Bolivar	1.04	354	P	Pn	23 53 29.5	-0.5
CBOC				S	Sn	23 53 43.4	-0.3
ORTC	Ortega, Tolima	1.11	144	P	Pn	23 53 30.4	-0.4
ORTC				S	Sn	23 53 45.9	+0.7
NORC	Norcasia	1.27	54	P	Pn	23 53 33.6	+0.8
PRAC	Prado	1.49	137	P	Pn	23 53 36.4	+0.5
PRAC				S	Sn	23 53 56.7	+2.3
JAMC	Jamundi, Valle	1.77	206	P	Pn	23 53 40.1	+0.2
JAMC				S	Sn	23 54 02.4	+1.0

NEIC 17 23:55:55.0±1.5,4°0S±0°2×128°64E±0°09,h117km±22km, mb4.3/9,Error ellipse: s-maj=28.3km s-min=11.4km az=196.0

DJA 17 23:55:55.9±0.5,4°S±6°×12°9E±°,h115km±4km,M4.2/10, mb4.8/1,MLv3.9/10

IDC 17 23:56:00.1±4.0,3°87S×128°77E,h202km±38km,mb3.3/3, mbtmp4.1/5,Error ellipse: s-maj=80.2km s-min=14.4km az=71.0

ISC 17 23:55:54.2±0.8,4°13S±0°07×128°66E±0°05,h100km,n25, σ1^{s}54/28,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAI	Ambon	0.64	313	P	Pn	23 56 14.5	+3.4
AAI				S	Sn	23 56 27.2	+3.4
MSAI	Masohi	0.82	19	P	Pn	23 56 15.1	+2.3
MSAI				S	Sn	23 56 28.7	+1.9
BNDI	Bandanaira	1.30	107	P	Pn	23 56 23.6	+5.6
NLAI	Namlea	1.79	300	P	Pn	23 56 24.6	+0.5
NLAI				S	Sn	23 56 46.5	-0.4
SANI	Sanana	3.38	308	P	Pn	23 56 42.7	-2.3
FAKI	Fak Fak	3.78	72		Pn	23 56 51.1	+0.7
FAKI				Sn	Sn	23 57 33.0	-0.9
FAKI	Fak Fak	3.78	72	P	Pn	23 56 51.2	+0.8
SWI	Sorong	4.16	39	P	Pn	23 56 53.5	-2.0
KMPI	Kaimana, Papua	5.05	85	P	Pn	23 57 08.2	+0.5
FITZ	Fitzroy Crossi	14.19	192	P	P	23 59 16.4	+1.4
FITZ	Fitzroy Crossi	14.19	192	P	P	23 59 16.7	+1.6
	5.0nm,0.6s,baz=18,slow=14,SNR=15						
WB0	Warramunga Arr	16.52	161	P	P	23 59 40.9	0.0
WB0				IAmb	IAmb	23 59 41.8	
	comp=Z,11nm,0.8s						
WRA	Warramunga Arr	16.66	161		Pn	23 59 41.5	-0.3
WRA	Warramunga Arr	16.66	161	P	P	23 59 42.7	+0.3
	comp=Z,4.0nm,0.3s,baz=339,slow=11,SNR=62						
WRA				S	Sn	00 02 47.2	+0.4
	comp=Z,0.6nm,0.5s,baz=335,slow=21,SNR=2.1						
WR8	Warramunga Arr	16.73	161	P	P	23 59 43.8	+0.6
WR8				IAmb	IAmb	23 59 44.2	
	comp=Z,8.8nm,0.4s						
COEN	Coen	17.33	125		P	23 59 50.2	+0.3
COEN				IAmb	IAmb	00 00 19.0	
	comp=Z,25nm,1.5s						
MBWA	Marble Bar	19.02	206	P	P	00 00 07.5	-0.9
MBWA				IAmb	IAmb	00 00 19.6	
	comp=Z,34nm,1.5s						
PSA00	Pilbara Seismi	19.34	206	P	P	00 00 11.3	-0.5
PSA00				IAmb	IAmb	00 00 47.6	
	comp=Z,25nm,1.4s						
AS31	Alice Springs	20.07	166		P	00 00 20.6	+0.9
ASAR	Alice Springs	20.07	166		P	00 00 20.6	+0.8
ASAR	Alice Springs	20.07	166	P	P	00 00 20.8	+1.0
	comp=Z,9.0nm,0.5s,baz=347,slow=12,SNR=76						
ASAR				S	S	00 03 58.5	-1.5
	comp=Z,0.2nm,0.3s,baz=354,slow=23,SNR=2.5						
	comp=Z,9.0nm,0.5s						
BKNI	Bangkinang	27.95	278	P	P	00 01 33.6	-1.9
BBOO	Buckleboo	29.36	167	P	P	00 01 46.9	-0.9
MKAR	Makanchi Array	65.11	327	P	P	00 06 18.9	-5.5
	comp=Z,0.2nm,0.4s,baz=127,slow=7.1,SNR=1.5						
	comp=Z,0.2nm,0.4s						
KURBB	Kurchatov Arra	69.38	329	P	P	00 06 44.4	-6.7
	comp=Z,0.4nm,0.8s,baz=134,slow=7.8,SNR=2.7						
	comp=Z,0.4nm,0.8s						

IDC 18 00:02:18.5±1.2,37°16S×52°38E,h0km,mb3.7/4, mbtmp3.7/4,Error ellipse: s-maj=49.1km s-min=30.3km az=4.0,South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H04N1	CROZET ISLANDS	9.01	183	T	T	00 13 31.9	
	baz=2.6,slow=75,SNR=268						
H04N2	CROZET ISLANDS	9.01	183	T	T	00 13 29.1	
	baz=2.6,slow=75,SNR=286						
H04N3	CROZET ISLANDS	9.03	183	T	T	00 13 30.0	
	baz=2.6,slow=75,SNR=266						
BOSA	Boshof	24.26	283	P	P	00 07 37.5	+0.1
	1.9nm,0.8s,baz=103,slow=13,SNR=3.2						
	1.9nm,0.8s						
SNAA	Sanae	44.38	202	P	P	00 10 30.1	-0.2
	1.1nm,0.8s,baz=56,slow=7.3,SNR=2.6						
	1.1nm,0.8s						
H01W2	Cape Leeuwin H	49.20	107	T	T	01 04 09.3	
	baz=248,slow=75,SNR=19						
H01W3	Cape Leeuwin H	49.21	107	T	T	01 04 02.8	
	baz=248,slow=75,SNR=18						
H01W1	Cape Leeuwin H	49.22	107	T	T	01 04 03.4	
	baz=248,slow=75,SNR=17						
ASAR	Alice Springs	69.63	105	P	P	00 13 30.2	+0.2
	0.6nm,0.7s,baz=230,slow=5.9,SNR=7.2						
	0.6nm,0.7s						
WRA	Warramunga Arr	72.00	102	P	P	00 13 44.2	-0.2
	0.6nm,0.8s,baz=212,slow=7.8,SNR=1.8						
	0.6nm,0.8s						
ILAR	Eielson Array	150.06	16	PKPbc	PKPbc	00 22 09.7	-0.5
	0.9nm,0.7s,baz=311,slow=3.1,SNR=7.0						

JMA 18 00:14:22.7±0.5,22°N±2°×12°6E±°,h138km,MV3.5/8,FAR S OFF ISHIGAKIJIMA,Southeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTJ	Tarama	2.40	336	P	Pn	00 15 02.4	+0.5
JTJ				eS	Sn	00 15 32.9	+0.8
JKRS	Kuro-shima	2.41	318	S	Sn	00 15 33.2	+0.8
HATJ	Hateruma jima	2.42	312	eS	Sn	00 15 32.5	-0.2
JIJ	Ishigaki jima	2.43	322	P	Pn	00 15 02.7	+0.4
JIJ				eS	Sn	00 15 33.0	+0.1
JISG	Ishigakijimahi	2.52	328	P	Pn	00 15 04.0	+0.6
JISG				eS	Sn	00 15 36.1	+1.2
JMZ	Minamidaito 2	6.00	55	eP	Pn	00 15 45.9	-3.3
JKDJ	Kitadaitoujima	6.13	54	P	Pn	00 15 47.7	-3.3

IDC 18 00:14:51.9±0.8,28°39N×104°91E,h0km,mb3.7/11, mbtmp3.7/13,ML3.6/1,MS3.0/4,Error ellipse: s-maj=24.0km s-min=16.7km az=56.0

ISC 18 00:14:54.4±0.6,28°42N±0°04×104°91E±0°05,h19km,n21, σ1^{s}78/29,mb3.8/11,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC

CD2	Chengdu	2.67	338	Pn	Pn	00 15 38.1	+1.6
CD2				Pg	Pg	00 15 44.0	-1.7
CD2				Sn	Sn	00 16 10.6	+2.2
CD2				Sg	Sg	00 16 19.5	-0.9
CD2				smax	smax		
	comp=N,940nm,0.8s						
CD2				smax	smax		
	comp=E,1µm,0.9s						
XAN	Xi'an	6.57	31	Pn	Pn	00 16 30.8	+0.8
XAN				Pg	Pg	00 16 55.6	-4.5
XAN				Sn	Sn	00 17 44.9	+0.5
XAN				Sg	Sg	00 18 21.3	-3.8
XAN				smax	smax		
	comp=N,340nm,1.0s						
XAN				smax	smax		
	comp=E,270nm,1.1s						
XAN				LR	LR		
	comp=N,980nm,4.1s						
XAN				LR	LR		
	comp=E,840nm,4.4s						
XAN				LR	LR		
	comp=Z,620nm,5.7s						
TNCH	TengChong	6.64	241	Pg	Pg	00 16 59.9	-1.6
TNCH				Sg	Sg	00 18 23.8	-3.7
TNCH				LR	LR		
	comp=N,700nm,4.2s						
TNCH				LR	LR		
	comp=E,400nm,4.2s						
CNSH	ChangSha	7.08	90	P	Pn	00 16 39.3	+2.4
CNSH				S	Sn	00 17 55.5	-1.4
CNSH				smax	smax		
	comp=N,84nm,1.8s						
CNSH				smax	smax		
	comp=E,63nm,0.8s						
WHN	Wuhan	8.49	73	P	Pn	00 16 58.5	+2.1
WHN				S	Sn	00 18 32.5	+0.7
QIZ	Qiongzhong	10.38	153	P	Pn	00 17 22.6	+0.2
QIZ				S	Sn	00 19 19.5	+1.2
QIZ				smax	smax		
	comp=E,25nm,1.2s						
QIZ				LR	LR		
	comp=E,320nm,7.9s						
QIZ				LR	LR		
	comp=Z,140nm,7.9s						
CMAR	Chiang Mai Arr	11.33	210	Pn	Pn	00 17 36.0	+0.6
	comp=Z,0.8nm,0.3s,baz=24,slow=10,SNR=5.0						
CMAR				LR	LR	00 22 24.4	
	comp=Z,33nm,21.9s,baz=245,slow=40						
SONM	Songino Array	19.41	3	P	Pn	00 19 21.4	+0.6
	comp=Z,0.2nm,0.3s,baz=184,slow=13,SNR=4.8						
SONM				LR	LR	00 27 44.3	
	comp=Z,51nm,19.4s,baz=150,slow=40						
	comp=Z,0.9nm,0.6s						
KSRS	Korea Array	21.27	59	P	P	00 19 40.3	+0.7
	comp=Z,2.7nm,0.7s,baz=245,slow=10,SNR=9.1						
	comp=Z,2.7nm,0.7s						
JNU	Nakatsue	22.77	72	LR	LR	00 29 20.5	
	comp=Z,34nm,21.6s,baz=260,slow=38						
MKAR	Makanchi Array	25.49	322	P	P	00 20 22.2	+0.8
	comp=Z,1.6nm,0.7s,baz=130,slow=11,SNR=14						
	comp=Z,1.6nm,0.7s						
USRK	Ussuriysk Ar.	26.74	47	P	P	00 20 32.9	+0.2
	comp=Z,2.6nm,0.7s,baz=249,slow=10,SNR=6.5						
	comp=Z,2.6nm,0.7s						
AAK	Ala-Archa	28.35	308	LR	LR	00 32 55.5	
	comp=Z,48nm,19.2s,baz=74,slow=38						
ZALV	Zalesovo Beam	29.44	336	P	P	00 20 57.0	+0.3
	comp=Z,0.6nm,0.4s,baz=145,slow=5.3,SNR=2.4						
	comp=Z,0.6nm,0.4s						
KURBB	Kurchatov Arra	29.82	325	P	P	00 21 00.5	+0.5
	comp=Z,1.4nm,0.8s,baz=133,slow=8.9,SNR=9.4						
	comp=Z,1.4nm,0.8s						
BVAR	Borovoye Array	35.34	324	P	P	00 21 48.9	+0.5
	comp=Z,0.5nm,0.6s,baz=106,slow=11,SNR=4.1						
	comp=Z,0.5nm,0.6s						
WRA	Warramunga Arr	55.86	146	P	P	00 24 30.8	-0.1
	comp=Z,1.0nm,0.7s,baz=337,slow=8.2,SNR=7.3						
	comp=Z,1.0nm,0.7s						
BRTR	Keskin Array B	58.70	301	P	P	00 24 51.7	+0.7
	comp=Z,0.6nm,1.0s,baz=97,slow=5.8,SNR=2.3						
	comp=Z,0.6nm,1.0s						
ASAR	Alice Springs	58.84	149	P	P	00 24 52.4	+0.4
	comp=Z,0.9nm,0.7s,baz=334,slow=6.9,SNR=7.9						
	comp=Z,0.9nm,0.7s						
GERES	GERESS Array B	69.93	315	P	P	00 26 05.2	+0.8
	comp=Z,0.3nm,0.6s,baz=90,slow=4.3,SNR=3.3						
	comp=Z,0.3nm,0.6s						
ILAR	Eielson Array	71.95	25	P	P	00 26 17.1	+0.8
	comp=Z,0.2nm,0.8s,baz=346,slow=1.9,SNR=2.3						
	comp=Z,0.2nm,0.8s						

IDC 18 00:27:34.3±3.0**, 29°.81S**×**178°.02W, h0^{km}, mb3.6**/3**, mbtmp3.6**/3**, Error ellipse: s-maj=87.7km s-min=39.4km az=40.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.12	266	P	P	00 35 36.5	-0.2
	0.2nm,0.3s,baz=112,slow=8.2,SNR=4.1						
	0.2nm,0.3s						
WRA	Warramunga Arr	44.06	272	P	P	00 35 44.3	0.0
	0.3nm,0.4s,baz=115,slow=8.1,SNR=2.3						
	0.3nm,0.4s						
QSPA	South Pole Qui	60.30	180	P	P	00 37 44.7	+0.1
	0.5nm,0.5s,baz=117,slow=2.3,SNR=7.5						
	0.5nm,0.5s						
FINES	FINESS Array B	144.58	340	PKP	PKPbc	00 47 11.2	+0.3
	0.4nm,0.4s,baz=46,slow=4.0,SNR=7.0						

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*IDC **18** 00:39:54.7±1.1, 28°.35N×105°.05E, h0^{km}, mb3.6/6, mbtmp3.6/8, ML4.2/2, MS2.5/1, Error ellipse: s-maj=34.5km s-min=19.3km az=66.0*

ISC 18 00:39:57.6±1.0**, 28°.4N**±0°.1×**105°.1E**±0°.2**, h19^{km}, n8, σ0^{s}.78**/8**, mb3.6**/6**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	11.39	211	Pn	Pn	00 42 39.5	+0.3
	0.8nm,0.3s,baz=13,slow=12,SNR=6.8						
CMAR				LR	LR	00 47 12.2	
	comp=Z,23nm,19.9s,baz=150,slow=39						
	1.2nm,0.3s						
SONM	Songino Array	19.42	3	P	Pn	00 44 23.6	-0.4
	0.3nm,0.3s,baz=187,slow=11,SNR=5.4						
	0.9nm,0.7s						
KSRS	Korea Array	21.16	59	P	P	00 44 42.5	+1.0
	0.6nm,0.3s,baz=245,slow=12,SNR=2.1						
	0.6nm,0.3s						
MKAR	Makanchi Array	25.59	322	P	P	00 45 26.4	+0.9
	0.7nm,0.6s,baz=127,slow=12,SNR=6.9						
	0.7nm,0.6s						
ZALV	Zalesovo Beam	29.51	335	P	P	00 45 59.9	-0.6
	0.5nm,0.5s,baz=142,slow=7.3,SNR=1.4						
	0.5nm,0.5s						
KURBB	Kurchatov Arra	29.91	325	P	P	00 46 04.0	0.0
	0.4nm,0.5s,baz=130,slow=9.2,SNR=2.7						
	0.4nm,0.5s						
WRA	Warramunga Arr	55.77	146	P	P	00 49 32.7	-0.8
	0.9nm,0.8s,baz=337,slow=8.1,SNR=5.1						
	0.9nm,0.8s						
ASAR	Alice Springs	58.76	149	P	P	00 49 54.4	-0.2
	0.4nm,0.5s,baz=330,slow=6.8,SNR=5.4						
	0.4nm,0.5s						

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*IDC **18** 00:48:22.2±1.7, 30°.97S×178°.09W, h0^{km}, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=49.0km s-min=34.5km az=36.0*

ISC 18 00:48:27.4±2.0**, 31°.0S**±0°.4×**178°.1W**±0°.3**, h35^{km}, n7, σ0^{s}.20**/6**, mb4.1**/4**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	8.28	207	Pn	Pn	00 50 17.4	-7.5
	baz=63,slow=2.3						
URZ				Sn	Sn	00 51 40.1	-17
	4.2nm,0.3s,baz=237,slow=20,SNR=18						
STKA	Stephens Creek	34.25	258	P	P	00 55 10.0	-0.1
	2.0nm,0.7s,baz=99,slow=12,SNR=3.4						
	2.0nm,0.7s						
ASAR	Alice Springs	42.97	268	P	P	00 56 23.6	+0.1
	1.1nm,0.5s,baz=108,slow=7.5,SNR=12						
	1.1nm,0.5s						
WRA	Warramunga Arr	44.01	273	P	P	00 56 31.9	+0.1
	1.8nm,0.5s,baz=114,slow=7.8,SNR=18						
	1.8nm,0.5s						
QSPA	South Pole Qui	59.16	180	P	P	00 58 24.6	0.0
	0.8nm,0.7s,baz=40,slow=1.7,SNR=8.1						
	0.8nm,0.7s						
FINES	FINESS Array B	145.62	340	PKPbc	PKPdf	01 08 01.4	+0.1
	2.2nm,0.7s,baz=64,slow=4.4,SNR=8.3						
MMAI	Mount Meron Ar	151.55	283	PKPbc	PKPbc	01 08 17.9	-0.2
	1.1nm,0.6s,baz=95,slow=4.2,SNR=3.9						

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*SOME **18** 01:01:07.7, 40°.18N×68°.32E, h5^{km}*
*ISU **18** 01:01:12, 39°.82N×68°.39E, h19^{km}*
*NNC **18** 01:01:12.1±2.9, 40°.27N×68°.41E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=22.0km s-min=19.3km az=159.0*

ISC 18 01:01:10.2±1.3**, 39°.91N**±0°.03×**68°.39E**±0°.03**, h15^{km}**±10^{km}**, n32, σ2^{s}.40**/48**, 3C-1D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
BXML	Bakhmal	0.36	231	P	Pb	01 01 19.7	+1.4
BXML				S	Sb	01 01 27.9	+4.1
DZI	Dzhizak	0.48	295	P	Pb	01 01 19.5	-0.8
DZI				S	Sb	01 01 27.7	+0.5
SAM	Samarkand	1.14	258	P	Pb	01 01 31.3	-0.2
SAM				S	Sg	01 01 46.4	-0.6
KTAB	Kitab	1.40	237	P	Pn	01 01 33.1	-2.1
KTAB				S	Sn	01 01 51.1	-2.3
NZBK	Nazarbek	1.42	23	S	Sg	01 01 59.4	+3.4
TAS	Tashkent	1.57	26	P	Pg	01 01 41.0	+0.7
TGS	TashGRES	1.73	29	P	Pn	01 01 40.1	+0.4
TGS				S	Sn	01 02 01.5	-0.1
BAYS	Baysun	1.94	209	P	Pb	01 01 44.9	-0.3
BAYS				S	Sn	01 02 07.2	+0.5
CHMG	Chimgan	2.05	36	P	Pn	01 01 45.2	+1.1
CHMG				S	Sn	01 02 10.1	+0.7
MINT	Mingtut	2.05	74	S	Sg	01 02 15.5	-0.7
PKMR	Pachkamar	2.07	229	S	Sb	01 02 14.9	+1.9
CHRV	Charvak	2.09	34	P	Pb	01 01 47.7	-0.1
CHRV				S	Sb	01 02 13.3	-0.3
NUT	Nurota	2.17	288	P	Pb	01 01 49.3	+0.1
CHMI	Chimion	2.43	81	P	Pb	01 01 53.0	-0.5
CHMI				S	Sb	01 02 21.7	-1.5
ZRB	Zarabog	2.45	223	S	Sb	01 02 23.9	+0.1
IUG	Iuzhnay	2.55	29	Pg	Pn	01 01 52.3	+1.2
	32nm,0.2s						
IUG				Lg	Lg	01 02 24.7	
	118nm,0.4s						
CHM	Chimkent	2.57	20	*e*P	Pn	01 01 51.2	-0.1
	65nm,0.2s						
CHM				*e*S	Sn	01 02 22.9	+0.7
	83nm,0.3s						
FRG	Fergana	2.64	79	P	Pb	01 01 56.2	-0.9
KSNS	Kasansay	2.69	61	S	Sb	01 02 32.1	+1.3
BRLS	Borolday	3.30	19	Pg	Pn	01 01 58.8	-2.4
	3.0nm,0.2s						
BRLS				Lg	Lg	01 02 35.5	
	14nm,0.2s						
BRLS	Borolday	3.30	19	*e*P	Pn	01 01 58.8	-2.4
	3.0nm,0.2s						
BRLS				*e*S	Sn	01 02 35.5	-4.7
	14nm,0.2s						
TMD	Tamdy-Bulak	3.39	304	S	Sn	01 02 43.3	+1.0
KK31	Karatay Array	3.56	26	Pn	Pn	01 02 05.6	+0.7
	0.5nm,0.2s,baz=195,slow=10,SNR=27						
KK31				⇑Pg	Pb	01 02 12.1	-0.7
	2.7nm,0.3s,baz=208,slow=15,SNR=19						
KK31				⇑Sn	Sn	01 02 46.6	-0.1
	4.7nm,0.2s,baz=218,slow=26,SNR=4.5						
KK31				Lg	Lg	01 02 58.4	
	23nm,0.3s,baz=206,slow=30,SNR=8.2						
GZLY	Gazly	3.80	275	S	Sn	01 02 53.3	+0.7
MRKS	Merke	4.61	51	Pg	Pb	01 02 30.4	-0.3
	2.4nm,0.4s						
MRKS				Lg	Lg	01 03 29.4	
	13nm,0.5s						
MRKS	Merke	4.61	51	*e*P	Pb	01 02 30.4	-0.3
	2.4nm,0.4s						
MRKS				*e*S	Sb	01 03 29.4	+3.4
	13nm,0.5s						
AAK	Ala-Archa	5.34	57	⇑Sn	Sn	01 03 32.1	+1.3
	2.7nm,0.9s						
AAK				⇓Lg	Lg	01 03 54.2	
	2.4nm,0.7s						
SGDS	Sogindy	5.86	51	Pg	Pb	01 02 54.6	+2.6
	2.0nm,0.2s						
SGDS				Lg	Lg	01 04 11.4	
	7.2nm,0.4s						
KST	Kastek	6.49	59	Pg	Pb	01 03 06.7	+4.0
	3.2nm,0.3s						
KST				Lg	Lg	01 04 32.1	
	7.4nm,0.6s						
KST	Kastek	6.49	59	*e*P	Pb	01 03 06.7	+4.0
	3.2nm,0.3s						
KST				*e*S	Sg	01 04 32.1	-6.2
	7.4nm,0.6s						
BTLS	Baital	6.61	37	Pg	Pb	01 03 08.1	+3.4
	2.0nm,0.5s						
BTLS				Lg	Lg	01 04 35.2	
	6.0nm,0.6s						
BTLS	Baital	6.61	37	*e*P	Pb	01 03 08.1	+3.4
	2.0nm,0.5s						
BTLS				*e*S	Sg	01 04 35.2	-7.0
	6.0nm,0.6s						

KRSC 18 01:05:42.3±1.0**, 54°.65N**×**166°.16E, h16^{km}**±14^{km}**, Ml3.9, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	0.57	349	*e*P	Pb	01 05 54.2	+0.4
BKI				*e*S	Sb	01 06 01.5	-0.2
KBTR	Krutoberegovo	2.46	311	*e*P	Pn	01 06 22.4	+0.7
MKZ	Mys Kozlova	2.58	270	*e*P	Pb	01 06 26.1	-2.0
MKZ				*e*S	Sn	01 06 55.8	+1.5
SMKR	Semkarok	3.29	308	*e*P	Pn	01 06 36.0	+2.8
SMKR				*e*S	Sb	01 07 16.5	-3.6
TUMD	Tumrok D	3.37	282	*e*P	Pn	01 06 37.4	+3.2
TUMD				*e*S	Sn	01 07 17.4	+3.5
BZGR	Bezymyannyi-Gr	3.38	295	*e*P	Pb	01 06 38.3	-3.5
BZGR				*e*S	Sn	01 07 17.8	+3.6
BZMR	Bezymyannaya	3.49	294	*e*P	Pb	01 06 39.8	-3.8
BZWR	Bezymyannyi-We	3.49	294	*e*P	Pn	01 06 39.7	+3.7
KRSR	Krestovskiy	3.55	299	*e*P	Pn	01 06 40.7	+3.8
KMNR	Kamenistaya	3.57	291	*e*P	Pn	01 06 40.4	+3.3
KMNR				*e*S	Sn	01 07 22.5	+3.6
KIRR	Kirishev	3.57	294	*e*P	Pn	01 06 39.1	+1.9
KPT	Kopyto	3.64	294	*e*P	Pn	01 06 41.2	+3.2
SDLR	Sedlovina	4.51	255	*e*P	Pn	01 06 53.7	+3.7
SMAR	Somma	4.56	255	*e*P	Pn	01 06 55.2	+4.4
UGLR	Uglovaya	4.57	255	*e*P	Pn	01 06 54.8	+4.1
KRER	Koryakskii	4.58	256	*e*P	Pn	01 06 55.2	+4.3
AVH	Avacha	4.60	255	*e*P	Pn	01 06 55.4	+4.3
KRX	Arik	4.61	257	*e*P	Pn	01 06 55.4	+3.9
KOK	Koryaka	4.64	256	*e*P	Pn	01 06 55.8	+4.0
GNL	Ganaly	4.92	262	*e*P	Pn	01 07 00.0	+4.4
MTVR	Mutnovka	5.22	249	*e*P	Pn	01 07 03.8	+3.9
GRL	Gorelyy	5.25	250	*e*P	Pn	01 07 04.7	+4.5
ASAK	Asacha	5.42	249	*e*P	Pn	01 07 07.1	+4.6

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*SNET **18** 01:10:05.8±1.3, 13°.02N×89°.44W, h48^{km}, ML3.6*
*CATAC **18** 01:10:05.7±0.6, 13°N±4°×8°9W±°, h30^{km}±3^{km}, M3.6/18, MLv3.6/18, Error ellipse: s-maj=8.0km s-min=3.7km az=20.0, confirmed*
*GCG **18** 01:10:07.0±0.5, 13°.15N×89°.41W, h56^{km}±6^{km}, MD4.1, MW2.7*

ISC 18 01:10:05.0±1.7**, 12°.96N**±0°.07×**89°.42W**±0°.04**, h28^{km}**±12^{km}**, n66, σ0^{s}.35**/82**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.53	10	*e*P	Pn	01 10 17.1	+0.4
LALI				*e*S	Sn	01 10 25.5	+0.7
LALI	Alcalda de L	0.53	10	*i* P	Pn	01 10 17.1	+0.4
LALI				*i* S	Sn	01 10 24.8	0.0
LALI	Alcalda de L	0.53	10	P	Pn	01 10 17.1	+0.4
PANCS	Alcalda de	0.69	20	P	Pn	01 10 18.8	-0.1
PANCS	Alcalda de	0.69	20	S	Sn	01 10 28.1	-0.6
JAYA	Jayaque - finc	0.69	357	*e*P	Pn	01 10 18.8	-0.2
JAYA				*e*S	Sn	01 10 29.3	+0.4
JAYA	Jayaque - finc	0.69	357	*e*P	Pn	01 10 18.8	-0.2
JAYA	Jayaque - finc	0.69	357	P	Pn	01 10 18.9	-0.2
LOMA	Loma Larga	0.72	19	*e*P	Pn	01 10 19.5	+0.1
LOMA				*e*S	Sn	01 10 30.0	+0.4
LOMA	Loma Larga	0.72	19	P	Pn	01 10 19.5	+0.1
LOMA	Loma Larga	0.72	19	S	Sn	01 10 29.8	+0.2
ITCA	Escuela Especi	0.72	11	S	Sn	01 10 29.6	0.0
LFRS	El Faro	0.74	28	*e*P	Pn	01 10 19.9	+0.1
PMON	Piamonte	0.75	7	*e*P	Pn	01 10 19.8	-0.1
PMON				*e*S	Sn	01 10 30.7	+0.3
PMON	Piamonte	0.75	7	P	Pn	01 10 19.7	-0.1
SEMO	Seminario San	0.76	14	S	Sn	01 10 30.2	-0.4
UTEC	Universidad Te	0.77	16	S	Sn	01 10 30.8	+0.2
UEES	Universidad Ev	0.77	13	*e*P	Pn	01 10 20.0	-0.1
UEES				*e*S	Sn	01 10 31.2	+0.4
UEES	Universidad Ev	0.77	13	P	Pn	01 10 19.9	-0.1
BOQS	Boqueron	0.78	10	*i* P	Pn	01 10 20.4	+0.1
BOQS				*e*S	Sn	01 10 30.3	-0.9
AEIL	Aeropuerto Ilo	0.79	22	*e*P	Pn	01 10 20.6	+0.3
AEIL				*e*S	Sn	01 10 31.8	+0.6
UDBS	Universidad Do	0.79	19	P	Pn	01 10 20.5	+0.1
UDBS	Universidad Do	0.79	19	S	Sn	01 10 31.5	+0.2
PIC2	El Picacho	0.79	11	*e*P	Pn	01 10 20.9	+0.3
PIC2				*e*S	Sn	01 10 32.2	+0.6
LFU	La Fuente	0.84	21	*e*P	Pb	01 10 21.4	+0.4
CEDA	San Andres	0.84	1	P	Pn	01 10 20.7	-0.2
CEDA	San Andres	0.84	1	S	Sn	01 10 32.4	0.0
TECO	Alcaldia de Te	0.84	47	P	Pn	01 10 20.7	-0.3
TECO	Alcaldia de Te	0.84	47	S	Sn	01 10 31.8	-0.7
LBRS	Las Brisas	0.85	25	*e*P	Pb	01 10 21.7	+0.4
PAVA	Las Pavas	0.88	32	*e*P	Pb	01 10 21.8	0.0
PAVA				*e*S	Sn	01 10 34.0	+0.5
PAVA	Las Pavas	0.88	32	P	Pn	01 10 21.5	-0.1
PAVA	Las Pavas	0.88	32	S	Sn	01 10 33.6	0.0
CEVE	Cerro Verde	0.89	347	*e*P	Pn	01 10 21.8	-0.1
CEVE	Cerro Verde	0.89	347	P	Pn	01 10 21.7	-0.1
SBLS	San Blas	0.90	347	*e*P	Pn	01 10 21.9	-0.1
ALJI	Alcalda de J	0.90	66	S	Sn	01 10 34.2	+0.3
UESV	Universidad de	0.91	42	P	Pn	01 10 21.8	-0.1
UESV	Universidad de	0.91	42	S	Sn	01 10 33.7	-0.5
SNJE	San Jose	0.92	348	*e*P	Pn	01 10 22.1	-0.2
RTR	El Retiro	0.96	346	*e*P	Pn	01 10 22.8	+0.1
SCLA	Alcaldia de Sa	0.99	42	*e*P	Pb	01 10 23.6	-0.1
SCLA	Alcaldia de Sa	0.99	42	P	Pb	01 10 23.6	-0.1
SCLA	Alcaldia de Sa	0.99	42	S	Sb	01 10 36.4	-0.1
NUBE	Las Nubes	1.00	339	*e*P	Pn	01 10 22.9	-0.4
NUBE				*e*S	Sn	01 10 35.8	-0.7
NUBE	Las Nubes	1.00	339	*e*P	Pn	01 10 22.9	-0.4
NUBE				*e*S	Sn	01 10 35.9	-0.7
NUBE	Las Nubes	1.00	339	P	Pn	01 10 22.9	-0.4
UNIC	Universidad Ca	1.02	353	P	Pn	01 10 23.6	0.0
UNIC	Universidad Ca	1.02	353	S	Sb	01 10 37.1	-0.1
TECA	Tecapa	1.03	59	*e*P	Pn	01 10 24.0	+0.2
TECA				*e*P	Pb	01 10 24.2	-0.3
TECA				*e*S	Sb	01 10 37.5	-0.3
FAME	Alcaldia de Sa	1.05	326	P	Pn	01 10 23.4	-0.5
LOAL	Lomas de Alarc	1.09	341	P	Pn	01 10 24.5	0.0
SLOZ	Alcaldia de Sa	1.12	341	P	Pn	01 10 24.7	-0.1
SLOZ	Alcaldia de Sa	1.12	341	S	Sb	01 10 39.8	-0.2
PACA	Pacayal	1.18	64	*e*P	Pb	01 10 26.8	0.0
PACA				*e*S	Sb	01 10 41.8	+0.1
PACA	Pacayal	1.18	64	P	Pb	01 10 26.6	-0.2
BLLM	Bellamira	1.24	67	*e*P	Pb	01 10 27.4	-0.4
MTO3	Montecristo	1.43	2	*i* P	Pn	01 10 29.0	-0.3
MTO3	Montecristo	1.43	2	P	Pn	01 10 29.0	-0.3
LCND	La Caada	1.53	77	P	Pn	01 10 31.0	+0.6
CNCH	Conchagua	1.57	78	*e*P	Pn	01 10 31.6	+0.5
CNCH				*e*S	Sn	01 10 50.8	+0.1
CNCH	Conchagua	1.57	78	P	Pn	01 10 31.5	+0.3
ESQI	Esquipulas	1.59	3	P	Pn	01 10 31.5	+0.1
POTN	Potosi Cosigui	1.86	89	S	Sn	01 10 57.0	-0.6
STG0	El Palmar, Qui	2.37	308	*i* P	Pb	01 10 47.5	+0.3
STG8	El Palmar, Qui	2.39	308	*i* P	Pb	01 10 48.3	+0.7

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*IDC **18** 01:15:56.0±0.4, 30°.78S×177°.56W, h0^{km}, mb4.7/18, mbtmp4.7/20, ML5.1/1, MS4.6/46, Error ellipse: s-maj=17.4km s-min=15.2km az=84.0*
*BJI **18** 01:15:58.4, 30°.68S×177°.14W, h28^{km}, mB5.5/9, mb5.2/19, Ms4.9/10, Ms7 4.7/12*
*NEIC **18** 01:15:58.5±1.4, 30°.72S±0°.02×177°.4W±0°.1, h10^{km}±1^{km}, mb5.1/80, Error ellipse: s-maj=18.8km s-min=3.6km az=83.0*
*MOS **18** 01:16:00.8±1.1, 30°.69S×177°.51W, h37^{km}, mb5.2/19, MS4.8/6, Error ellipse: s-maj=11.5km s-min=9.2km az=99.8*
*GCMT **18** 01:16:02.5±0.2, 30°.87S±0°.02×177°.08W±0°.02, h21^{km}±1^{km}, MW5.0/100, Moment Tensor Solution. s59,c69; s100,c125; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.29±.17; $M_{\theta\theta}$-0.55±.11; $M_{\phi\phi}$-2.74±.11; $M_{r\theta}$0.29±.20; $M_{\theta\phi}$-0.84±.07; $M_{\phi r}$3.61±.23; Best double couple: $M_0$4.80100×10^{16} NP1:ϕ_s207.00000°, δ21.00000°, λ107.00000°. NP2:ϕ_s9.00000°, δ70.00000°, λ84.00000°. Principal axes: T 4.9800, Plg65.0000°, Azm268.0000°; N -0.3560, Plg6.0000°, Azm11.0000°; P -4.6220, Plg24.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NOU **18** 01:17:00.5, 34°.78S×179°.55E, h74^{km}, MLv4.6/5, South of Kermadec Islands*

ISC 18 01:15:59.8±0.5**, 30°.88S**±0°.04×**177°.44W**±0°.05**, h26^{km}**±3^{km}**, h27^{km}:pP-P, n434, σ1^{s}.68**/409**, mb5.1**/95**, MS4.8**/64**, 30C-22D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	1.66	345	P	Pn	01 16 25.8	-1.5
GLKZ				S	Sb	01 16 48.1	-2.2
RAO	Raoul Island	1.67	345		Pn	01 16 25.7	-1.7
RAO	Raoul Island	1.67	345	P	Pn	01 16 25.7	-1.7
RIZ	Raoul Island	1.68	345	P	Pn	01 16 26.0	-1.5
RIZ				S	Sn	01 16 47.3	-0.8
MXZ	Matakaoa Point	7.54	207	P	Pn	01 17 45.0	-3.0
MXZ	Matakaoa Point	7.54	207	P	Pn	01 17 44.1	-3.9
MXZ				S	Sn	01 19 10.2	-2.4
WMGZ	Waiomatatini S	7.73	205	P	Pn	01 17 47.8	-2.7
WMGZ				S	Sn	01 19 16.9	-0.3
PKGZ	Pakihiroa	7.89	207	P	Pn	01 17 49.6	-3.3
PKGZ				S	Sn	01 19 19.6	-1.8
HAZ	Te Kaha	7.92	209	S	Sn	01 19 21.0	-0.8
PUZ	Puketiti	8.01	205	P	Pn	01 17 48.9	-5.6
PUZ				S	Sn	01 19 22.4	-1.7
RUGZ	Raukumara Rang	8.14	208	P	Pn	01 17 53.1	-3.3
RUGZ				S	Sn	01 19 23.5	-4.0
KUZ	Kuaotunu	8.16	222	P	Pn	01 17 57.8	+1.3
TWGZ	Tauwhareparae	8.20	206	P	Pn	01 17 54.0	-3.1
TWGZ				S	Sn	01 19 25.1	-3.8
CNGZ	Carnagh Statio	8.39	204	P	Pn	01 17 55.1	-4.5
CNGZ				S	Sn	01 19 31.0	-2.5
TKGZ	Te Karaka	8.48	206	P	Pn	01 17 56.3	-4.6
TKGZ				S	Sn	01 19 33.1	-2.6
MWZ	Matawai	8.52	208	P	Pn	01 17 56.6	-4.8
MWZ				S	Sn	01 19 34.2	-2.4
WCZ	Waipu Caves	8.52	232	P	Pn	01 18 05.8	+4.3
URZ	Urewera	8.63	210	Pn	Pn	01 17 57.8	-5.1
	2.7nm,0.3s,baz=57,slow=0.9,SNR=16						
URZ				Sn	Sn	01 19 34.7	-4.5
	7.7nm,0.3s,baz=204,slow=22,SNR=9.3						
URZ	Urewera	8.63	210	P	Pn	01 17 59.2	-3.7
URZ	Urewera	8.63	210	P	Pn	01 17 58.4	-4.4
URZ				S	Sn	01 19 37.4	-1.9
OUZ	Omahuta	8.68	238	P	Pn	01 18 11.7	+8.1
OUZ	Omahuta	8.68	238	P	Pn	01 18 11.0	+7.4
RAGZ	Rawiri	8.70	208	P	Pn	01 18 03.1	-0.9
RAGZ				S	Sn	01 19 38.4	-2.8
RIGZ	Rimuhau	8.75	206	P	Pn	01 18 04.1	-0.6
RIGZ				S	Sn	01 19 39.3	-3.1
PRGZ	Paritu Road	8.90	204	P	Pn	01 18 02.1	-4.5
SNGZ	Shannon Statio	8.98	207	P	Pn	01 18 06.6	-1.1
SNGZ				S	Sn	01 19 46.0	-1.9
RTZ	Ruatahuna	8.98	209		Pn	01 18 11.6	+3.8
MHGZ	Mahia Peninsul	9.09	204	P	Pn	01 18 05.8	-3.5
MHGZ				S	Sn	01 19 46.2	-4.6
RAHZ	Arahi	9.19	208	P	Pn	01 18 07.4	-3.3
RAHZ				S	Sn	01 19 49.2	-4.1
MTHZ	Maungataniwha	9.24	209	P	Pn	01 18 09.0	-2.3
MTHZ				S	Sn	01 19 51.6	-2.8
NMHZ	Naumai	9.46	208	P	Pn	01 18 11.6	-2.7
NMHZ				S	Sn	01 19 56.5	-3.4
BKZ	Black Stump Fm	9.65	209	P	Pn	01 18 13.0	-3.9

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BKZ    Black Stump Fm    9.65 209  P       Pn      01 18 12.1 -4.8
BKZ                                S       Sn      01 19 59.4 -5.1
WNVZ   Wahianoa         10.18 212  P       Pn      01 18 23.6 -0.7
PNHZ   Pukenui          10.40 208  P       Pn      01 18 22.5 -4.7
DVHZ   Dannevirke       10.74 207  P       Pn      01 18 28.6 -3.3
BFZ    Birch Farm       11.04 206  P       Pn      01 18 32.7 -3.3
BFZ    Birch Farm       11.04 206  P       Pn      01 18 33.2 -2.8
MRZ    Mangatainoka R   11.29 208  P       Pn      01 18 33.4 -5.9
HOWZ   Holdsworth Sta   11.51 208  P       Pn      01 18 36.7 -5.7
NFK    Norfolk Island   12.81 275  P       P       01 19 07.4 -3.5
       comp=Z,202nm,1.4s
CTZ    Chatham Island   12.85 177          Pn      01 19 05.3 +4.7
THZ    Tophouse         13.35 213          Pn      01 19 10.6 +3.0
MSVF   Nonsavu          13.71 342          Pn      01 19 10.8 -1.9
MSVF   Nonsavu          13.71 342  Pn      Pn      01 19 08.4 -4.3
       comp=Z,0.4nm,0.3s,baz=152,slow=12,SNR=6.1
MSVF                               LR      LR      01 23 06.8
       comp=Z,2µm,20.4s,baz=170,slow=32
       comp=Z,1.5nm,0.4s
MSVF   Nonsavu          13.71 342⇑eP      Pn      01 19 12.5 -0.2
MSVF                               pmax    pmax
       comp=Z,8.0nm,0.8s
LTZ    Lake Taylor      14.45 212          Pn      01 19 16.5 -6.0
OXZ    Oxford           14.98 211          Pn      01 19 23.2 -6.5
OXZ                                IAmb    IAmb    01 19 33.3
       comp=Z,50nm,0.7s
RPZ    Rata Peaks       15.73 212  Pn      Pn      01 19 32.5 -7.0
RPZ    Rata Peaks       15.73 212  Pn      Pn      01 19 36.0 -3.5
       comp=Z,3.8nm,0.3s,baz=123,slow=1.0,SNR=14
PINNC  Pines Island,    15.80 298  Pn      Pn      01 19 41.1 +0.6
PINNC                              IAmb    IAmb    01 19 48.7
       comp=Z,175nm,1.2s
FOZ    Fox Glacier      16.18 215  Pn      Pn      01 19 40.3 -5.0
ONTNC  Ouen Toro        16.73 297  P       P       01 19 54.6 +0.1
ONTNC                              IAmb    IAmb    01 19 58.4
       comp=Z,165nm,1.4s
DZM    Mont Dzumac      16.87 297          P       01 19 56.0 -0.1
DZM                                IAmb    IAmb    01 20 01.6
       comp=Z,218nm,1.4s
DZM    Mont Dzumac      16.87 297 ePn      P       01 19 57.4 +1.2
       comp=Z,415nm,1.3s
DZM                               eLR      LR      01 23 49.9
       comp=Z,6µm,23.1s
DZM    Mont Dzumac      16.87 297  Pn      P       01 19 57.3 +1.1
       comp=Z,0.8nm,0.3s,baz=137,slow=9.7,SNR=23
DZM                                LR      LR      01 25 25.2
       comp=Z,7µm,18.4s,baz=146,slow=34
ODZ    Otahua Downs     16.95 210  Pn      Pn      01 19 49.9 -5.1
MLZ    Mavora Lakes     18.35 214  P       P       01 20 08.3 -4.0
RAR    Rarotonga        18.54  63  P       P       01 20 12.5 -1.9
RAR    Rarotonga        18.54  63  P       P       01 20 13.9 -0.6
       comp=Z,69nm,0.9s,baz=199,slow=5.1,SNR=7.3
RAR                                LR      LR      01 27 49.2
       comp=Z,1µm,18.3s,baz=251,slow=38
WHZ    Wether Hill Ro   18.82 213  P       P       01 20 11.9 -5.5
TBI    Tubuai           25.96  80 eP       P       01 21 29.2 -1.0
       comp=Z,750nm,33.2s
TBI                               eS       S       01 25 57.2 -2.0
       comp=Z,4µm,26.5s
TBI                               eLR      LR      01 27 52.5
       comp=Z,2µm,27.0s
TBI                               eLR      LR      01 27 56.0
       comp=Z,7µm,25.0s
ARMA   Armidale         26.58 263          P       01 21 38.2 +2.3
ARMA                               IAmb    IAmb    01 21 53.5
       comp=Z,41nm,1.1s
ARMA   Armidale         26.58 263  P       P       01 21 39.1 +3.2
       comp=Z,47nm,1.0s
CNB    Canberra Magne   28.09 252  P       P       01 21 51.2 +1.9
       comp=Z,25nm,1.8s
EIDS   Eidsvold         28.25 273          P       01 21 51.9 +1.1
EIDS                               IAmb    IAmb    01 21 53.4
       comp=Z,23nm,0.8s
EIDS   Eidsvold         28.25 273  P       P       01 21 52.6 +1.8
       comp=Z,33nm,1.2s
CAN    Canberra         28.38 252  P       P       01 21 54.3 +2.3
CAN                                IAmb    IAmb    01 22 13.3
       comp=Z,68nm,1.7s
CAN    Canberra         28.38 252  P       P       01 21 53.6 +1.6
       comp=Z,23nm,1.1s
CAN    Canberra         28.38 252  P       P       01 21 54.3 +2.3
CAN                                pmax    pmax
       comp=Z,68nm,1.7s
PPT2   Papeete2         28.55  69 eP       P       01 21 50.9 -2.7
       comp=Z,84nm,22.2s
PPT2                              eS       S       01 26 38.7 -1.5
       comp=Z,631nm,24.2s
PPT2                              eLR      LR      01 28 56.9
       comp=Z,952nm,25.5s
PPT2                              eLR      LR      01 29 03.4
       comp=Z,1µm,24.2s
PPT    Papeete          28.56  69  LR      LR      01 32 38.1
       comp=Z,923nm,19.4s,baz=194,slow=35
YNG    Young            28.91 254  P       P       01 21 58.8 +2.1
       comp=Z,21nm,1.1s
TAU    Tasmania Unive   30.42 237  P       P       01 22 11.6 +1.7
TAU    Tasmania Unive   30.42 237  P       P       01 22 11.6 +1.7
TAU                                pmax    pmax
       comp=Z,263nm,2.0s
TOO    Toolangi         31.23 248  P       P       01 22 15.9 -1.3
       comp=Z,16nm,2.8s
CMSA   Cobar Meteorol   31.45 259  P       P       01 22 21.0 +1.9
       comp=Z,35nm,1.5s
QLP    Quilpie          33.77 268  P       P       01 22 40.7 +1.2
       comp=Z,65nm,0.8s
ARPS   Mount Arapiles   34.15 249  P       P       01 22 44.0 +1.3
       comp=Z,30nm,0.9s
CTAO   Charters Tower   34.35 280  P       P       01 22 46.2 +1.6
CTAO   Charters Tower   34.35 280  P       P       01 22 46.2 +1.6
CTAO                               pmax    pmax
       comp=Z,43nm,0.9s
STKA   Stephens Creek   34.85 257          P       01 22 50.1 +1.3
STKA   Stephens Creek   34.85 257  P       P       01 22 50.3 +1.6
       comp=Z,281nm,1.0s
STKA   Stephens Creek   34.85 257  P       P       01 22 48.1 -0.6
       comp=Z,47nm,0.8s,baz=90,slow=9.3,SNR=50
STKA                               LR      LR      01 36 22.4
       comp=Z,2µm,18.4s,baz=84,slow=35
       comp=Z,47nm,0.8s
STKA   Stephens Creek   34.85 257deP       P       01 22 49.9 +1.1
HTT    Hallett          36.84 254  P       P       01 23 06.5 +0.7
       comp=Z,9.5nm,1.2s
MTSU   Mount Surprise   36.86 281  P       P       01 23 07.7 +1.5
       comp=Z,19nm,0.8s
BBOO   Buckleboo        39.31 255  P       P       01 23 26.5 -0.1
BBOO                               IAmb    IAmb    01 24 03.4
       comp=Z,75nm,1.4s
BBOO   Buckleboo        39.31 255  P       P       01 23 26.5 -0.1
       comp=Z,31nm,0.6s
QIS    Mount Isa        39.83 274  P       P       01 23 31.7 +0.5
       comp=Z,16nm,1.1s
COEN   Coen             39.87 286  P       P       01 23 32.8 +1.3
COEN                               IAmb    IAmb    01 23 40.3
       comp=Z,65nm,1.7s
COEN   Coen             39.87 286  P       P       01 23 33.0 +1.5
       comp=Z,25nm,1.6s
TAOE   Nuku Hiva Isla   41.05  66 eLR      LR      01 34 50.4
       comp=Z,721nm,26.0s
AS17   Alice Springs    43.49 267  P       P       01 24 01.2 +0.1
       comp=Z,36nm,0.8s
AS31   Alice Springs    43.57 267          P       01 24 02.4 +0.6
ASAR   Alice Springs    43.57 267          P       01 24 01.8  0.0
ASAR   Alice Springs    43.57 267  P       P       01 24 01.6 -0.2
       comp=Z,9.1nm,0.6s,baz=105,slow=7.5,SNR=99
ASAR                               PcP     PcP     01 25 48.9 -0.3
       comp=Z,6.6nm,0.7s,baz=122,slow=4.2,SNR=6.2
ASAR                               ScP     ScP     01 29 41.3 +2.3
       comp=Z,1.6nm,0.8s,baz=106,slow=4.1,SNR=4.1
ASAR                               LR      LR      01 42 17.7
       comp=Z,2µm,18.3s,baz=114,slow=36
       comp=Z,9.1nm,0.6s
ASAR   Alice Springs    43.57 267  P       P       01 24 01.8  0.0
WR0    Warramunga Arr   44.42 272  P       P       01 24 08.3 -0.3
WR0                                IAmb    IAmb    01 24 09.8
       comp=Z,29nm,0.8s
WR8    Warramunga Arr   44.46 272          P       01 24 08.8 -0.1
WR5    Warramunga Arr   44.52 272  P       P       01 24 09.2 -0.2
WRAB   Tennant Creek    44.60 272  P       P       01 24 10.0  0.0
WRAB   Tennant Creek    44.60 272deP       P       01 24 10.5 +0.5
WRAB                               pmax    pmax
       comp=Z,40nm,0.9s
WRA    Warramunga Arr   44.60 272          P       01 24 09.7 -0.4
WRA    Warramunga Arr   44.60 272  P       P       01 24 09.4 -0.6
       comp=Z,41nm,0.7s,baz=113,slow=7.6,SNR=166
WRA                                PcP     PcP     01 25 52.0 -0.8
       comp=Z,5.9nm,0.8s,baz=120,slow=3.7,SNR=5.3
WRA                                LR      LR      01 42 29.3
       comp=Z,3µm,18.1s,baz=130,slow=36
       comp=Z,41nm,0.7s
WRA    Warramunga Arr   44.60 272  P       P       01 24 09.7 -0.4
WRA                                pmax    pmax
       comp=Z,3.0nm,0.8s
WB0    Warramunga Arr   44.63 273          P       01 24 09.9 -0.3
FORT   Forrest          46.40 255          P       01 24 24.0 -0.2
FORT   Forrest          46.40 255  P       P       01 24 23.6 -0.5
       comp=Z,70nm,0.8s
SBA    Scott Base       47.60 184          P       01 24 36.6 +3.8
SBA                                IAmb    IAmb    01 24 51.3
       comp=Z,26nm,1.1s
SBA    Scott Base       47.60 184  P       P       01 24 36.6 +3.8
SBA                                pmax    pmax
       comp=Z,27nm,1.1s
VNDA   Vanda            47.67 186          P       01 24 36.6 +3.2
VNDA   Vanda            47.67 186  P       P       01 24 34.9 +1.5
       comp=Z,2.8nm,0.8s,baz=36,slow=5.5,SNR=12
VNDA                               LR      LR      01 41 11.6
       comp=Z,508nm,20.3s,baz=20,slow=32
       comp=Z,2.8nm,0.8s
VNDA   Vanda            47.67 186  P       P       01 24 36.6 +3.2
VNDA                               pmax    pmax
       comp=Z,11nm,1.3s
JOHN   Johnston Islan   47.94  10  P       P       01 24 35.2 -0.9
KDU    Kakadu           49.48 280  P       P       01 24 47.2 -0.9
       comp=Z,28nm,1.1s
MTN    Manton Dam       50.54 279  P       P       01 24 56.7 +0.5
MTN                                IAmb    IAmb    01 26 18.3
       comp=Z,22nm,1.0s
KNRA   Kununurra        51.23 274          P       01 25 01.6 +0.3
KNRA                               IAmb    IAmb    01 25 02.6
       comp=Z,20nm,0.9s
KNRA   Kununurra        51.23 274  P       P       01 25 00.9 -0.4
       comp=Z,24nm,1.9s
KMBL   Kambalda         51.34 253  P       P       01 25 00.9 -1.2
       comp=Z,24nm,1.4s
FITZ   Fitzroy Crossi   52.84 270          P       01 25 13.4  0.0
FITZ   Fitzroy Crossi   52.84 270  P       P       01 25 12.8 -0.6
       comp=Z,3.5nm,1.2s
FITZ   Fitzroy Crossi   52.84 270  LR      LR      01 47 30.0
       comp=Z,2µm,18.1s,baz=102,slow=36
JOKA   Jonika Flow      54.47  26  P       P       01 25 22.8 -2.4
KLBR   Kellerberrin     54.66 251  P       P       01 25 25.7 -0.8
       comp=Z,27nm,1.0s
NWAO   Narrogin (SRO)   54.68 249  LR      LR      01 46 21.6
       comp=Z,425nm,19.6s,baz=84,slow=33
CASY   Casey            54.95 208  P       P       01 25 28.7 +0.7
KIP    Kipapa           55.25  22⇑eP      P       01 25 29.3 -1.4
KIP                                pmax    pmax
       comp=Z,46nm,1.5s
MEEK   Meekatharra      55.55 257  P       P       01 25 32.0 -1.1
       comp=Z,35nm,1.4s
PSAB2  Pilbara Seismi   56.39 263  P       P       01 25 38.5 -0.6
       comp=Z,16nm,1.4s
MORW   Morawa           56.86 254  P       P       01 25 40.3 -2.1
MORW   Morawa           56.86 254  P       P       01 25 40.1 -2.3
       comp=Z,29nm,2.1s
GUMO   Guam             57.16 315  LR      LR      01 48 35.5
       comp=Z,348nm,18.6s,baz=122,slow=34
BATI   Baumata          58.19 277  LR      LR      01 51 37.3
       comp=Z,3µm,18.5s,baz=128,slow=37
QSPA   South Pole Qui   59.23 180  P       P       01 26 00.0 +1.4
       comp=Z,7.2nm,0.7s,baz=41,slow=1.8,SNR=50
QSPA                               LR      LR      01 51 15.2
       comp=Z,530nm,18.1s,baz=40,slow=36
       comp=Z,7.2nm,0.7s
KAPI   Kappang          64.17 280  LR      LR      01 54 25.4
       comp=Z,362nm,19.6s,baz=105,slow=36
DAV    Davao City (W)   66.27 295  LR      LR      01 55 04.2
       comp=Z,132nm,19.6s,baz=159,slow=36
SMAI   San Martin Ant   68.80 158          P       01 27 03.5 +2.3
PCJI   Pacitan          69.88 272  P       P       01 27 09.5 +0.7
PMSA   Palmer Station   71.63 156  LR      LR      01 54 04.5
       comp=Z,517nm,18.8s,baz=256,slow=32
MAW    Mawson           72.03 200  P       P       01 27 21.1 +0.1
       comp=Z,6.3nm,0.8s,baz=152,slow=6.6,SNR=8.1
MAW                                LR      LR      01 59 28.0
       comp=Z,1µm,18.3s,baz=114,slow=36
       comp=Z,6.3nm,0.8s
LEM    Lembang          73.62 272  LR      LR      02 00 56.6
       comp=Z,807nm,19.1s,baz=103,slow=37
USHA   Ushuaia          75.25 146  LR      LR      01 53 11.9
       comp=Z,339nm,19.1s,baz=237,slow=30
SYO    Syowa Base       76.76 193⇑eP      P       01 27 49.0 +0.6
SYO    Syowa Base       76.76 193⇑epP     pP      01 27 53.0 -2.1
AY03   Cochrane         77.07 137          P       01 27 51.7 +1.1
AY03                               IAmb    IAmb    01 27 55.3
       comp=Z,18nm,1.0s
JOW    Kunigami         77.34 312  LR      LR      01 57 30.8
       comp=Z,267nm,21.0s,baz=212,slow=32
TROLL  Troll, Antarti   77.40 180 ⇓P       P       01 27 53.0 +0.8
       comp=Z,428nm,0.7s
TROLL                              sP      pwP     01 28 05.5 -0.3
SNAA   Sanae            77.67 178 ⇓P       P       01 27 53.9 +0.3
       comp=Z,79nm,0.6s
SNAA   Sanae            77.67 178          P       01 27 54.7 +1.1
SNAA                               IAmb    IAmb    01 28 06.9
       comp=Z,17nm,1.0s
SNAA   Sanae            77.67 178  P       P       01 27 53.4 -0.1
       comp=Z,3.8nm,0.7s,baz=203,slow=5.9,SNR=23
SNAA                               LR      LR      02 01 02.3
       comp=Z,270nm,18.7s,baz=197,slow=35
       comp=Z,3.8nm,0.7s
SNAA   Sanae            77.67 178ceP       P       01 27 54.1 +0.5
MDSI   Maura Dua        77.75 272  P       P       01 27 53.6 -1.3
       comp=Z,33nm,0.9s
VNA3   Neumayer Olymp   77.80 176 ⇓P       P       01 27 54.4 +0.2
       comp=Z,21nm,0.6s
VNA2   Neumayer--Watz   78.24 177 ⇓P       P       01 27 57.3 +0.6
       comp=Z,14nm,0.6s,baz=167,slow=5.0
COYC   Coyhaique        78.25 136          P       01 27 58.8 +1.6
COYC                               IAmb    IAmb    01 27 59.8
       comp=Z,26nm,1.0s
VNA1   Neumayer--Stat   78.46 176 ⇓P       P       01 27 58.3 +0.4
       comp=Z,8.8nm,0.6s
VNA1                               sP      pwP     01 28 12.2 +0.7
MJAR   Matsushiro Arr   78.91 325  P       P       01 27 59.6 -1.1
       comp=Z,7.5nm,1.0s,baz=164,slow=5.4,SNR=11
       comp=Z,7.5nm,1.0s
MAJO   Matsushiro       78.91 325  P       P       01 28 00.5 -0.3
MAJO   Matsushiro       78.91 325  P       P       01 28 00.5 -0.3
MAJO                               pmax    pmax
       comp=Z,11nm,1.0s
LL02   Futaleuf         79.67 134          P       01 28 06.4 +1.4
LL02                               IAmb    IAmb    01 28 12.5
       comp=Z,20nm,1.0s
H03S2  Juan Fernandez   79.80 123  T       T       02 55 59.3
       baz=243,slow=74,SNR=5.1
H03S1  Juan Fernandez   79.81 123  T       T       02 56 00.4
       baz=243,slow=74,SNR=5.5
H03S3  Juan Fernandez   79.81 123  T       T       02 55 57.0
       baz=243,slow=74,SNR=4.5
JNU    Nakatsue         80.24 318  LR      LR      01 59 18.1
       comp=Z,82nm,20.9s,baz=114,slow=32
JTM    Tenmabayashi     80.99 329          P       01 28 12.0 +0.1
LR05   Currie           81.18 132          P       01 28 14.2 +1.1
LR05                               IAmb    IAmb    01 28 16.3
       comp=Z,16nm,1.1s
PLCA   Paso Flores      81.83 133          P       01 28 17.8 +1.1
PLCA   Paso Flores      81.83 133  P       P       01 28 17.6 +0.9
       comp=Z,5.3nm,0.9s,baz=212,slow=4.8,SNR=9.1
PLCA                               LR      LR      01 58 25.5
       comp=Z,265nm,18.2s,baz=246,slow=31
       comp=Z,5.3nm,0.9s
PLCA   Paso Flores      81.83 133  P       P       01 28 17.8 +1.1
PLCA                               pmax    pmax
       comp=Z,9.0nm,1.0s
KIWB   Kanaga Island    82.38   0          P       01 28 19.4 +0.6
ADK    Adak             82.41   0          P       01 28 19.5 +0.4
ADK    Adak             82.41   0  P       P       01 28 19.5 +0.4
ADK                                pmax    pmax
       comp=Z,61nm,1.3s
QZH    Quanzhou         82.63 305  P       P       01 28 20.3 -0.6
QZH                                S       SKSac   01 38 42.5 +2.0
QZH                                LR      LR
       comp=Z,310nm,18.9s
QZH                                LR      LR
       comp=Z,270nm,21.3s
ASAJ   Asahikawa        83.09 332  LR      LR      02 00 33.4
       comp=Z,306nm,20.5s,baz=154,slow=32
SHEM   Shemya Is, Ala   83.58 355  LR      LR      01 59 15.4
       comp=Z,424nm,21.9s,baz=122,slow=31
BI02   San Fabin de     83.62 129          P       01 28 27.4 +1.2
BI02                               IAmb    IAmb    01 28 30.0
       comp=Z,11nm,0.9s
LPIG   La Paz           84.38  58  LR      LR      02 00 43.6
       comp=Z,925nm,18.1s,baz=202,slow=32
TJN    Taejon           84.58 318⇓eP      P       01 28 30.7 +0.1
BO02   Sierra Bellavi   84.99 128          P       01 28 33.8 +0.6
BO02                               IAmb    IAmb    01 28 34.8
       comp=Z,14nm,0.9s
KSRS   Korea Array      85.03 319  P       P       01 28 32.1 -0.7
       comp=Z,3.8nm,0.9s,baz=141,slow=5.7,SNR=9.0
       comp=Z,3.8nm,0.9s
MT01   Popeta           85.19 127          P       01 28 34.8 +0.7
YSS    Yuzhno-Sakhali   85.39 334 eP       P       01 28 36.0 +1.6
YSS                                pmax    pmax
       comp=Z,30nm,1.3s
YSS                                MLR     MLR
       comp=Z,500nm,16.0s
QIZ    Qiongzhong       85.64 295  P       P       01 28 38.1 +1.8
QIZ                                S       S       01 39 12.3 +5.2
QIZ                                LR      LR
       comp=Z,180nm,15.1s
QIZ                                LR      LR
       comp=Z,230nm,13.7s
PSI    Prapat           85.97 276  LR      LR      02 07 50.8
       comp=Z,524nm,20.3s,baz=132,slow=36
PSI    Prapat           85.97 276  P       P       01 28 37.3 -1.0
PSI                                pmax    pmax
       comp=Z,12nm,1.2s
PEL    Peldehue         85.99 126          P       01 28 38.9 +0.8
PEL    Peldehue         85.99 126  P       P       01 28 38.9 +0.8
PEL                                pmax    pmax
       comp=Z,93nm,1.7s
PFO    Pinyon Flats O   86.17  47  LR      LR      02 01 54.3
       comp=Z,631nm,18.2s,baz=238,slow=32
PFO    Pinyon Flats O   86.17  47⇓eP      P       01 28 39.3 +0.5
PFO                                pmax    pmax
       comp=Z,14nm,2.0s
PETK   Petropavlovsk-   86.40 345  P       P       01 28 39.5 +0.2
       comp=Z,6.9nm,0.7s,baz=163,slow=1.5,SNR=8.8
PETK                               LR      LR      02 04 36.0
       comp=Z,188nm,18.8s,baz=169,slow=34
       comp=Z,6.9nm,0.7s
CMB    Columbia Colle   86.79  42          P       01 28 43.4 +1.7
CMB    Columbia Colle   86.79  42  P       P       01 28 43.4 +1.7
CMB                                pmax    pmax
       comp=Z,8.0nm,1.0s
NJ2    Nanjing          86.92 310 eP       P       01 28 44.4 +2.0
NJ2                                pmax    pmax
       comp=Z,5.0nm,0.6s
O02D   Mt. Diablo Mer   86.96  39          P       01 28 44.4 +1.9
AFDM   Forest Hills D   87.09  41          P       01 28 43.6 +0.5
AFDM                               IAmb    IAmb    01 28 57.4
       comp=Z,16nm,1.4s
PSTR   Posyet           87.26 325⇑eP      P       01 28 41.3 -2.4
QSM    Queen of Sheba   87.47  45          P       01 28 46.0 +1.1
QSM                                IAmb    IAmb    01 28 59.5
       comp=Z,10nm,1.0s
WAKR   Walker           87.66  42          P       01 28 47.3 +1.3
GWY    Greenwater Val   87.74  45          P       01 28 46.8 +0.4
GWY                                IAmb    IAmb    01 29 09.2
       comp=Z,9.4nm,1.1s
USA0B  Ussuriysk Arra   87.83 326⇓eP      P       01 28 47.0 +0.6
USRK   Ussuriysk Ar.    87.83 326          P       01 28 46.8 +0.4
USRK   Ussuriysk Ar.    87.83 326  P       P       01 28 46.6 +0.2
       comp=Z,8.7nm,0.7s,baz=121,slow=3.5,SNR=16
       comp=Z,8.7nm,0.7s
USRK   Ussuriysk Ar.    87.83 326  P       P       01 28 46.8 +0.4
BEKR   Beckworth        88.07  40          P       01 28 47.5 -0.4
YBH    Yreka Blue Hor   88.11  38  LR      LR      02 04 08.3
       comp=Z,31nm,18.5s,baz=241,slow=33
NVAR   Mina Array Bea   88.26  42  P       P       01 28 50.5 +1.6
       comp=Z,4.1nm,0.8s,baz=225,slow=8.3,SNR=16
NVAR                               LR      LR      02 03 12.7
       comp=Z,490nm,18.9s,baz=212,slow=32
       comp=Z,4.1nm,0.8s
TPNV   Topopah Spring   88.49  45          P       01 28 50.2 +0.3
TPNV                               IAmb    IAmb    01 29 04.8
       comp=Z,9.1nm,0.9s
TPNV   Topopah Spring   88.49  45  P       P       01 28 50.3 +0.3
TPNV                               pmax    pmax
       comp=Z,9.0nm,0.9s
V12A   Nelson           88.55  46          P       01 28 50.8 +0.6
V12A                               IAmb    IAmb    01 28 55.1
       comp=Z,23nm,1.7s
W13A   Hualapai Mount   88.76  47          P       01 28 51.9 +0.5
SHPR   Sheep Range      88.87  46          P       01 28 52.6 +0.8
TUC    Tucson           89.03  51          P       01 28 53.3 +0.7
TUC                                IAmb    IAmb    01 29 17.3
       comp=Z,16nm,1.4s
TUC    Tucson           89.03  51  P       P       01 28 53.3 +0.7
TUC                                pmax    pmax
       comp=Z,16nm,1.5s
MDJ    Mudanjiang       89.29 325  P       P       01 28 54.4 +1.1
MDJ                                pmax    pmax
       comp=Z,11nm,0.7s
X16A   Lo Mia Camp, P   89.89  49          P       01 28 56.6 -0.1
X16A                               IAmb    IAmb    01 29 11.9
       comp=Z,15nm,1.3s
J05D   Fort Rock, OR    89.98  37          P       01 28 57.7 +0.9
PINE   Pine Mountain    90.48  37          P       01 29 00.5 +1.2
PINE                               IAmb    IAmb    01 29 14.0
       comp=Z,13nm,1.0s
U15A   North Rim        90.60  47          P       01 29 00.1 +0.1
U15A                               IAmb    IAmb    01 29 15.3
       comp=Z,11nm,0.9s
WUAZ   Wupatki          90.62  48          P       01 29 00.1 +0.1
WUAZ                               IAmb    IAmb    01 29 15.6
       comp=Z,10nm,0.9s
KNB    Kanab            90.64  46          P       01 29 01.2 +1.2
KNB                                IAmb    IAmb    01 29 15.2
       comp=Z,16nm,1.0s
KNB    Kanab            90.64  46  P       P       01 29 01.3 +1.2
KNB                                pmax    pmax
       comp=Z,16nm,1.0s
TIA    Tai'an           90.65 313  P       P       01 29 01.1 +1.2
TIA                                S       S       01 40 00.0 +5.9
TIA                                pmax    pmax
       comp=Z,19nm,0.7s
TIA                                pmax    pmax
       comp=Z,120nm,4.7s
TIA                                LR      LR
       comp=Z,81nm,15.9s
TIA                                LR      LR
       comp=Z,140nm,15.7s
TIA                                LR      LR
       comp=Z,130nm,21.0s
KDAK   Kodiak Island    90.76  13  LR      LR      02 05 16.7
       comp=Z,179nm,18.8s,baz=197,slow=33
CN2    Changchun        90.81 323 eP       P       01 29 01.3 +0.8
CN2                               eS       S       01 39 50.4 -4.8
CN2                                pmax    pmax
       comp=Z,30nm,0.8s
CN2                                pmax    pmax
       comp=Z,100nm,3.0s
CN2                                LR      LR
       comp=Z,300nm,11.0s
CN2                                LR      LR
       comp=Z,200nm,11.0s
CN2                                LR      LR
       comp=Z,200nm,12.0s
PSUT   Pine Spring      90.96  45          P       01 29 00.7 -0.9
SPR3   Spring Creek 3   90.97  44          P       01 29 00.8 -1.0
BNX    BinXian          91.18 325 ⇓P       P       01 29 02.3 +0.2
BNX                                pmax    pmax
       comp=Z,17nm,0.9s
I07A   Izee             91.44  38          P       01 29 03.7 +0.1
I07A                               IAmb    IAmb    01 29 18.0
       comp=Z,7.5nm,1.0s
J08A   Circle Bar Ran   91.49  39          P       01 29 03.9 +0.1
J08A                               IAmb    IAmb    01 29 18.2
       comp=Z,14nm,1.3s
ELK    Elko             91.57  42          P       01 29 05.0 +0.6
ELK    Elko             91.57  42  LR      LR      02 05 26.4
       comp=Z,501nm,18.8s,baz=239,slow=32
ELK    Elko             91.57  42  P       P       01 29 05.0 +0.6
ELK                                pmax    pmax
       comp=Z,3.0nm,0.8s
G06A   Carlson Farm,    91.65  36          P       01 29 04.1 -0.3
G06A                               IAmb    IAmb    01 29 09.2
       comp=Z,11nm,1.1s
KLR    Kul'dur          91.69 329  LR      LR      02 09 11.2
       comp=Z,128nm,18.1s,baz=160,slow=35
KLR    Kul'dur          91.69 329deP       P       01 29 04.2 -0.2
KLR                                pmax    pmax
       comp=Z,5.0nm,0.9s
O18K   Koktuh Hills     92.24  11  IAmb    IAmb    01 29 20.4
       comp=Z,12nm,0.9s
G08A   Pilot Rock       92.54  37          P       01 29 10.5 +1.9
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G08A                               IAmb     IAmb     01 29 22.9
       comp=Z,8.4nm,1.0s
LYN    LuoYang           92.68 309 eP       P        01 29 10.1 +0.8
LYN                                pmax     pmax
       comp=Z,11nm,0.9s
LYN                                pmax     pmax
       comp=Z,170nm,7.0s
LYN                                LR       LR
       comp=Z,220nm,16.5s
LYN                                LR       LR
       comp=Z,320nm,16.5s
LYN                                LR       LR
       comp=Z,440nm,17.9s
NNA    Nana              92.83 106 LR       LR       02 01 16.4
       comp=Z,262nm,21.6s,baz=238,slow=29
HNS    HongShan          92.91 312 ⇑P       P        01 29 10.9 +0.6
HNS                                SKS      SKSac    01 39 44.9 +2.6
HNS                                S        ScS      01 40 16.6 +0.4
HNS                                pmax     pmax
       comp=Z,12nm,0.8s
HNS                                LR       LR
       comp=Z,140nm,18.6s
HNS                                LR       LR
       comp=Z,150nm,17.5s
HNS                                LR       LR
       comp=Z,230nm,24.3s
MFID   Camas Ranch       92.97  40          P        01 29 09.4 -1.2
MFID                               IAmb     IAmb     01 29 25.3
       comp=Z,7.1nm,0.8s
TMUT   Trail Mountain    93.05  45 IAmb     IAmb     01 29 26.1
       comp=Z,4.6nm,0.8s
BBB    Bella Bella       93.29  28 LR       LR       02 06 40.5
       comp=Z,356nm,18.4s,baz=197,slow=33
ANMO   Albuquerque       93.50  51 LR       LR       02 07 04.7
       comp=Z,662nm,18.1s,baz=324,slow=33
ANMO   Albuquerque       93.50  51⇓eP       P        01 29 10.6 -2.8
ANMO                               pmax     pmax
       comp=Z,3.0nm,0.9s
HLID   Hailey            93.85  40          P        01 29 13.9 -0.9
MA2    Magadan           93.88 344 LR       LR       02 06 38.0
       comp=Z,217nm,21.1s,baz=134,slow=32
PLID   Pearl Lake        93.97  39          P        01 29 15.4  0.0
PLID                               IAmb     IAmb     01 29 29.7
       comp=Z,6.5nm,0.9s
CMAR   Chiang Mai Arr    94.02 289 P        P        01 29 16.4 +0.5
       comp=Z,0.7nm,0.3s,baz=138,slow=4.0,SNR=5.0
       comp=Z,0.7nm,0.3s
ATAH   Atahualpa         94.08 101 LR       LR       02 02 41.8
       comp=Z,170nm,21.4s,baz=237,slow=30
NEW    Newport           95.47  36 LR       LR       02 05 34.9
       comp=Z,583nm,20.0s,baz=226,slow=31
PZH    PanZhiHua         95.96 297 P        P        01 29 25.5 +0.7
PZH                                pmax     pmax
       comp=Z,10.0nm,0.7s
PZH                                pmax     pmax
       comp=Z,100nm,5.1s
XLT    XiLinHaoTe        96.02 318 eP       P        01 29 14.0  -11
XLT                                pP       PcP      01 29 25.6 +0.8
XLT                                sP       pP       01 29 28.6 -2.7
XLT                                PP       PP       01 33 11.8 -6.0
XLT                                pmax     pmax
       comp=Z,7.0nm,0.5s
PDAR   Pinedale Array    96.15  43 P        P        01 29 26.7 +1.3
       comp=Z,0.8nm,0.8s,baz=267,slow=3.0,SNR=4.1
PDAR                               LR       LR       02 07 47.0
       comp=Z,271nm,18.7s,baz=228,slow=32
       comp=Z,0.8nm,0.8s
YHL    Hebgen Lake       96.47  41          P        01 29 27.5 +0.6
YHL                                IAmb     IAmb     01 29 50.8
       comp=Z,10.0nm,1.3s
SEY    Seymchan          96.55 347 LR       LR       02 09 12.2
       comp=Z,259nm,20.4s,baz=150,slow=33
SEY    Seymchan          96.55 347⇑eP       P        01 29 25.1 -1.3
SEY                                pmax     pmax
       comp=Z,4.0nm,1.0s
JTS    Las Juntas de     97.31  82 LR       LR       02 04 10.0
       comp=Z,197nm,20.6s,baz=262,slow=30
LPAZ   La Paz            97.51 114 P        Pdif     01 29 34.8 +2.0
       comp=Z,0.7nm,0.7s,baz=218,slow=8.3,SNR=3.6
LPAZ                               LR       LR       02 05 16.1
       comp=Z,106nm,21.3s,baz=244,slow=30
       comp=Z,0.7nm,0.7s
ILAR   Eielson Array     98.28  13 P        P        01 29 33.5 -0.7
       comp=Z,0.4nm,0.7s,baz=201,slow=6.4,SNR=3.4
ILAR                               LR       LR       02 09 42.3
       comp=Z,137nm,19.2s,baz=198,slow=33
       comp=Z,0.4nm,0.7s
CPUP   Villa Florida     99.31 128 P        Pdif     01 29 41.1 +1.3
       comp=Z,0.3nm,0.7s,baz=78,slow=10,SNR=3.3
CPUP                               LR       LR       02 09 04.6
       comp=Z,56nm,18.3s,baz=101,slow=32
       comp=Z,0.3nm,0.7s
WMQ    Urumqi           113.90 308 ePKP     PKiKP    01 34 36.3 +0.2
WMQ                                LR       LR
       comp=Z,120nm,24.2s
MKAR   Makanchi Array   118.45 310 PKP      PKPdf    01 34 43.8 -0.9
       comp=Z,0.8nm,0.6s,baz=225,slow=0.5,SNR=9.1
ZALV   Zalesovo Beam    118.71 318 PKP      PKPdf    01 34 44.0 -0.9
       comp=Z,0.9nm,0.6s,baz=132,slow=2.2,SNR=3.9
SKOMA  Sekoma           121.24 203 i P      PKiKP    01 34 52.3 +1.2
NRN    Naryn            121.40 302          PKPdf    01 34 51.1 +0.1
NRN    Naryn            121.40 302 PKIKP    PKPdf    01 34 51.1 +0.1
BOOM   Boomskoye usch   121.71 304          PKPdf    01 34 50.7 -0.6
BOOM   Boomskoye usch   121.71 304 PKIKP    PKPdf    01 34 50.7 -0.6
KURK   Kurchatov        121.73 313          PKPdf    01 34 50.7 -0.1
KURK   Kurchatov        121.73 313⇓iPKIKP   PKPdf    01 34 50.1 -0.7
KURBB  Kurchatov Arra   121.77 313 PKP      PKPdf    01 34 50.5 -0.4
       comp=Z,2.0nm,0.6s,baz=110,slow=1.8,SNR=25
AAK    Ala-Archa        122.78 303⇑iPKIKP   PKPdf    01 34 52.9 -0.5
BROLN  Tlhalogang       123.11 208 i P      PKPdf    01 34 54.8 +0.2
KGCAE  Kacgae           123.35 202 i P      PKPdf    01 34 55.3 +0.1
KOOLE  Kule             123.83 200 i P      PKiKP    01 34 57.2 +0.8
SOOWA  Sowa             124.03 207 i P      PKiKP    01 34 57.7 +1.0
GRTLG  Ghanzi           125.06 201 i P      PKiKP    01 34 59.5 +0.7
KK31   Karatay Array    125.74 303          PKiKP    01 34 59.4 +0.1
KK31   Karatay Array    125.74 303 PKIKP    PKiKP    01 34 59.4 +0.1
KKAR   Karatay Array    125.74 303          PKPdf    01 34 58.2 -0.7
KKAR   Karatay Array    125.74 303 PKIKP    PKPdf    01 34 58.2 -0.7
BVAR   Borovoye Array   127.08 315 PKP      PKPdf    01 35 01.2 +0.1
       comp=Z,3.2nm,0.7s,baz=78,slow=2.0,SNR=15
BRVK   Borovoye         127.15 316⇑iPKIKP   PKPdf    01 35 00.9 -0.3
ARTI   Arti             133.87 320          PKiKP    01 35 14.8 -0.3
ARTI   Arti             133.87 320 i PKIKP  PKPdf    01 35 14.4 +0.6
ARTI                                                 01 37 43.1
ARTI                               SS       SS       01 55 25.8 -4.0
ARTI                               MLR      MLR
       comp=Z,220nm,21.0s
ARCES  ARCESS Array B   139.16 348 PKhKP    PKPpre   01 35 16.6
       comp=Z,1.7nm,0.7s,baz=15,slow=5.0,SNR=7.1
ARCES                              PKP      PKPdf    01 35 23.9 +0.6
       comp=Z,4.8nm,0.9s,baz=0.0,slow=1.2,SNR=5.7
RAYN   Ar Rayn          141.30 270          PKPdf    01 35 28.9 +0.3
RAYN   Ar Rayn          141.30 270 PKIKP    PKPdf    01 35 28.9 +0.3
KLMR   Klimovskoe       141.41 332 ePKIKP   PKPdf    01 35 25.5 -2.0
KLMR                               pmax     pmax
       comp=Z,12nm,1.0s
AKT    Akhty            142.42 299 ePKIKP   PKPdf    01 35 28.0 -2.1
AKT                                pmax     pmax
       comp=Z,13nm,1.3s
GNI    Garni            144.72 297          PKPdf    01 35 34.5 +0.2
GNI    Garni            144.72 297 PKIKP    PKPdf    01 35 34.5 +0.2
VRH    Novokhopyorsk    144.72 317 ePKIKP   PKPdf    01 35 33.4 -0.3
VRH                                pmax     pmax
       comp=Z,10.0nm,0.7s
MOS    Moscow           145.00 325 i PKIKP  PKPab    01 35 31.2 -2.2
MOS                                pmax     pmax
       comp=Z,42nm,1.1s
GOF    Gofitskoye       145.46 306cePKIKP   PKPdf    01 35 35.4 +0.2
PUL    Pulkovo          145.63 335⇓iPKIKP   PKiKP    01 35 37.7 -1.3
PUL                                pmax     pmax
       comp=Z,50nm,0.5s
FINES  FINESS Array B   145.76 340 PKPbc    PKPdf    01 35 35.3 +0.1
       comp=Z,18nm,0.5s,baz=43,slow=3.1,SNR=121
KBZ    Khabaz           145.78 303 PKPbc    PKPab    01 35 37.1 +0.4
       comp=Z,13nm,0.9s,baz=71,slow=3.2,SNR=15
LPSR   Galich'ya Gora   145.79 320 ePKP2    PKPdf    01 35 35.1 -0.4
LPSR                               pmax     pmax
       comp=Z,50nm,0.9s
OBN    Obninsk          145.84 325          PKPbc    01 35 36.2 +0.1
OBN    Obninsk          145.84 325c iPKP2   PKPbc    01 35 35.9 -0.2
OBN                                e                 01 42 34.0
OBN                                pmax     pmax
       comp=Z,103nm,1.4s
KIV    Kislovodsk       145.90 304          PKPab    01 35 37.3  0.0
KIV    Kislovodsk       145.90 304 ⇑P       PKPbc    01 35 36.8  0.0
KIV    Kislovodsk       145.90 304 i PKP2   PKPbc    01 35 37.0 +0.2
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KIV                                pmax     pmax
       comp=Z,19nm,1.1s
VORR   Voronezh         146.01 318 ePKP2    PKPbc    01 35 36.8 +0.1
VORR                               pmax     pmax
       comp=Z,92nm,0.9s
VSR    Storozhevoye     146.22 318 ePKIKP   PKPdf    01 35 34.2 -2.1
VSR                                pmax     pmax
       comp=Z,40nm,1.0s
VORD   Divnogorie       146.24 317 ePKIKP   PKPdf    01 35 34.8 -1.5
VORD                               pmax     pmax
       comp=Z,30nm,1.0s
ERBR   Yeremizino-Bor   147.10 308 i PKP2   PKPbc    01 35 40.3 +0.2
ERBR                               pmax     pmax
       comp=Z,66nm,0.9s
LABN   Labinsk          147.16 306 i PKP2   PKPbc    01 35 41.0 +0.7
LABN                               pmax     pmax
       comp=Z,16nm,0.8s
VSU    Vasula           147.86 336c iPKP2   PKPbc    01 35 40.6 -1.1
VSU                                pmax     pmax
       comp=Z,30nm,1.0s
NB2    NORSAR Subarra   149.29 352 PKP      PKPbc    01 35 45.3 -0.2
       comp=Z,21nm,1.1s,baz=13,slow=4.3
NOA    NORSAR Array B   149.29 352 PKPbc    PKPbc    01 35 44.0 -1.5
       comp=Z,4.1nm,0.8s,baz=14,slow=4.2,SNR=16
NOA    NORSAR Array B   149.29 352 PKHKP    PKPpre   01 35 44.0
ANN    Anapa            149.41 307 i PKP2   PKPbc    01 35 46.3 +0.1
ANN                                pmax     pmax
       comp=Z,36nm,0.7s
HFS    Hagfors          149.81 349 PKPbc    PKPbc    01 35 46.4 -0.3
       comp=Z,8.7nm,0.8s,baz=90,slow=3.0,SNR=15
MNK    Minsk            150.24 330 i PKiKP  PKiKP    01 35 49.3 +0.6
       comp=E,14nm,0.7s
MNK                                i PKiKP  PKiKP    01 35 49.3 +0.6
       comp=Z,15nm,0.8s,baz=47
MNK                                i PP     PP       01 39 24.0 +1.0
MNK                                i PPP    PPP      01 42 45.0
MNK                                i SKS    SKSdf    01 42 47.8 -0.8
MNK                                i SS     SS       01 58 52.2  +13
MNK                                i SSS    SSS      02 04 02.0
MNK    Minsk            150.24 330 i PKIKP  PKiKP    01 35 49.3 +0.6
MNK                                i                 01 39 24.0
MNK                                i PPP    PPP      01 42 44.9
MNK                                i                 01 42 47.7
MNK                                pmax     pmax
       comp=Z,15nm,0.8s
MNK                                pmax     pmax
       comp=E,14nm,0.7s
MNK                                pmax     pmax
       comp=N,9.0nm,0.9s
NACGM  Naroch           150.43 331⇑iPKiKP   PKPbc    01 35 48.5 +0.1
       comp=Z,16nm,0.9s,baz=45
KONO   Kongsberg        150.84 353          PKPdf    01 35 45.6 +2.1
KONO   Kongsberg        150.84 353 PKIKP    PKPdf    01 35 45.6 +2.1
STRU   Stroemstad       151.24 351 i P      PKiKP    01 35 50.8 +0.2
GHAJ   Ghor Haditha     151.79 279          PKPab    01 36 02.1 +0.8
AKASG  Malin Array Be   151.97 323          PKiKP    01 35 52.5 +0.1
AKASG  Malin Array Be   151.97 323 PKPbc    PKPbc    01 35 52.0  0.0
       comp=Z,7.0nm,0.7s,baz=50,slow=2.8,SNR=48
AKBB   Malin Array Si   151.97 323c iPKIKP  PKPbc    01 35 51.6 -0.5
KIEV   Kiev             151.99 323          PKPbc    01 35 52.1  0.0
KIEV   Kiev             151.99 323 ⇓P       PKPbc    01 35 52.0  0.0
KIEV   Kiev             151.99 323 PKIKP    PKPbc    01 35 52.1  0.0
MMAI   Mount Meron Ar   152.11 283 PKPbc    PKiKP    01 35 54.5 +1.2
       comp=Z,14nm,0.7s,baz=80,slow=5.2,SNR=30
MMAI                               PKPab    sPKPbc   01 36 03.1 +0.7
       comp=Z,57nm,1.1s,baz=86,slow=3.4,SNR=14
HOMB   Homborsund       152.31 353 i P      PKiKP    01 35 53.2 +0.4
BORU   Boraas           152.33 348 i P      PKPbc    01 35 52.5 -0.1
SNART  Snartemo         152.36 355 i P      PKiKP    01 35 53.1 +0.1
ONAU   Onsala           152.70 349 i P      PKPbc    01 35 53.4 -0.1
BLEU   Blekinge         152.93 344 i P      PKPbc    01 35 53.7 -0.3
FABU   Falkenberg       152.94 348 i P      PKPbc    01 35 53.7 -0.3
DEL    Delary           153.21 346 i P      PKPbc    01 35 54.3 -0.3
BRTR   Keskin Array B   153.25 298 PKPdf    PKPdf    01 35 46.8 -1.2
BRTR   Keskin Array B   153.25 298 PKP      PKPdf    01 35 48.1 +0.2
       comp=Z,0.6nm,0.8s,baz=221,slow=4.9,SNR=3.6
BRTR                               PKPbc    PKPbc    01 35 55.5  0.0
       comp=Z,3.0nm,0.9s,baz=134,slow=3.6,SNR=14
BRTR                               PKPab    sPKPbc   01 36 06.2 +1.3
       comp=Z,7.2nm,0.9s,baz=139,slow=4.8,SNR=8.9
COP    Copenhagen       154.24 347 i P      PKPbc    01 35 56.2 -0.7
VLDR   Vladesti         155.17 314 ⇑P       PKPab    01 36 14.7 -0.5
EKA    Eskdalemuir Ar   155.22   8 PKPab    PKPab    01 36 14.4 -0.5
       comp=Z,2.6nm,1.0s,baz=9.1,slow=2.1,SNR=3.1
TPGR   Topolog          155.41 312 ⇑P       PKPab    01 36 16.8 +0.5
TESR   Tescani          155.70 317 ⇑P       PKPab    01 36 17.7 +0.3
KWP    Kalwaria Pacla   155.90 327 ePKP     PKPab    01 36 18.3 +0.2
BURAR  Bucovina Array   155.91 320 ⇑P       PKPab    01 36 14.8 -3.6
BURAR  Bucovina Array   155.91 320 ⇑PKP2    PKPab    01 36 14.8 -3.6
VRI    Vrincioaia       155.99 315 ⇑P       PKPab    01 36 19.6 +0.9
VRI    Vrincioaia       155.99 315 ⇑PKP2    PKPab    01 36 19.6 +0.9
PLOR   Plostina         156.04 315 ⇓P       PKPab    01 36 19.5 +0.5
PLOR   Plostina         156.04 315 ⇓PKP2    PKPab    01 36 19.5 +0.5
TURR   Turia            156.31 316 ⇓P       PKPab    01 36 21.0 +0.9
OZUR                    156.43 317 ⇑P       PKPab    01 36 21.5 +0.9
KOLS   Kolonicke sedl   156.59 326 ePKIKP   PKPdf    01 35 52.8 +0.7
KOLS   Kolonicke sedl   156.59 326 ePKP     PKPdf    01 35 52.8 +0.7
KOLS                               e                 01 36 21.6
STHS   Stebnicka Huta   156.73 328 ePKIKP   PKPdf    01 35 54.2 +1.9
STHS   Stebnicka Huta   156.73 328 ePKP     PKPdf    01 35 54.2 +1.9
STHS                               e                 01 36 22.6
OJC    Ojcow            156.76 331 ePKP     PKPab    01 36 21.9 +0.1
SULR                    156.86 313 ⇓P       PKPab    01 36 23.4 +1.0
NIE    Niedzica         157.15 329 ePKP     PKPab    01 36 24.7 +1.1
KSP    Ksiaz            157.58 337 ePKP     PKPab    01 36 26.0 +0.7
FLTG   Flechtingen      157.64 346 ePKPab   PKPab    01 36 25.2 -0.2
       baz=21,slow=4.5
FLTG                               epPKPab  sPKPab   01 36 36.7 +2.0
       baz=27,slow=4.4
HUMR   Humele           157.73 314 ⇑P       PKPab    01 36 26.7 +0.5
OKC    Ostrava-Krasne   157.73 333 AMS      AMS      02 54 40.0
       comp=Z,200nm,17.1s
DRGR                    157.76 321 ⇑P       PKPab    01 36 26.5 +0.1
DRGR                    157.76 321 ⇑PKP2    PKPab    01 36 26.5 +0.1
OSTC   Ostas            157.85 336 AMS      AMS      02 48 40.0
       comp=Z,300nm,24.0s
CHVC   Chvalec          157.88 337 ePKPAB   PKPab    01 36 26.1 -0.5
CHVC                               AMS      AMS      02 49 00.0
       comp=Z,200nm,17.7s
CHVC   Chvalec          157.88 337 ePKP2    PKPab    01 36 26.1 -0.5
CHVC                               MLR      MLR
       comp=Z,200nm,17.7s
UPC    Upice            157.96 337 AMS      AMS      02 49 10.0
       comp=Z,300nm,22.1s
LOT    Lotru            157.97 317 ⇑P       PKPab    01 36 28.2 +0.9
DPC    Dobruska-Polom   157.99 336 ePKPAB   PKPab    01 36 29.8 +2.7
DPC                                AMS      AMS      02 59 30.0
       comp=Z,200nm,16.6s
DPC    Dobruska-Polom   157.99 336 ePKP2    PKPab    01 36 29.8 +2.7
DPC                                MLR      MLR
       comp=Z,200nm,16.6s
MORC   Moravsky Berou   158.01 333 ePKP     PKPab    01 36 30.0 +2.7
KRLC   Kraliky          158.05 335 ePKPAB   PKPab    01 36 27.2 -0.2
KRLC                               ex       x        01 36 38.9
KRLC   Kraliky          158.05 335 ePKP2    PKPab    01 36 27.2 -0.2
CLL    Collm            158.17 342 ePKPab   PKPab    01 36 28.2 +0.4
       baz=21,slow=4.5
CLL                                epPKPab  sPKPab   01 36 38.8 +1.8
       baz=27,slow=4.4
IBBN   Ibbenburen       158.25 351 ePKPab   PKPab    01 36 28.7 +0.7
       baz=21,slow=4.5
BRG    Berggiesshubel   158.30 340 ePKPab   PKPab    01 36 28.1 -0.3
       baz=21,slow=4.5
BRG    Berggiesshubel   158.30 340 ePKP     PKPdf    01 35 58.3 +4.2
BRG                                Amp               01 36 08.5
       comp=Z,1.6nm,0.7s
BRG    Berggiesshubel   158.30 340 P        PKPab    01 36 28.4  0.0
BRG                                Amp               01 36 30.1
       comp=Z,4.9nm,0.8s
BRG    Berggiesshubel   158.30 340 P        PKPab    01 36 37.0 +8.7
BRG                                Amp               01 36 40.7
       comp=Z,8.3nm,1.0s
BRG    Berggiesshubel   158.30 340 P        PKPab    01 36 49.6  +21
BRG                                Amp               01 36 51.1
       comp=Z,5.0nm,1.0s
PSZ    Piszkesteto      158.43 327 ⇑P       PKPab    01 36 29.3 +0.1
PSZ    Piszkesteto      158.43 327 ⇑PKP2    PKPab    01 36 29.3 +0.1
VYHS   Vyhne            158.48 329 ePKP2    PKPab    01 36 30.0 +0.7
VYHS   Vyhne            158.48 329 ePKP     PKPab    01 36 30.0 +0.7
GTTG   Gottingen        158.64 347 ePKPab   PKPab    01 36 30.3 +0.6
       baz=21,slow=4.5
JAVC   Velka Javorina   158.69 332 ePKP     PKPab    01 36 31.8 +1.5
SURR   Surduc           158.72 320 ⇓P       PKPab    01 36 30.7 +0.2
VRAC   Vranov           158.75 334 ePKP     PKPab    01 36 31.0 +0.5
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PRA    Prague           158.86 338 AMS      AMS      02 53 00.0
       comp=Z,300nm,22.2s
GOPC   GO Pecny, Ondr   158.88 338 AMS      AMS      02 54 20.0
       comp=Z,100nm,16.0s
PRU    Pruhonice        158.90 338 AMS      AMS      02 53 20.0
       comp=Z,200nm,20.0s
KRUC   Moravsky         159.03 334 ePKP     PKPab    01 36 31.7 +0.1
MOX    Moxa             159.13 344 eL       L        02 57 29.0
       comp=Z,208nm,19.0s
TREC   Trest            159.17 336 AMS      AMS      02 47 20.0
       comp=Z,200nm,21.0s
MODS   Modra-Piesok     159.24 331 ePKIKP   PKPdf    01 35 58.3 +2.9
MODS                               e                 01 36 33.0
MODS   Modra-Piesok     159.24 331 ePKP     PKPdf    01 35 58.3 +2.9
MODS                               e                 01 36 33.0
ZVC    Zvikov           159.49 338 AMS      AMS      02 49 00.0
       comp=Z,200nm,20.9s
MDVR   Moldovita        159.54 318 ⇓P       PKPab    01 36 34.1  0.0
KHC    Kasperske Hory   159.95 339 ePKPAB   PKPab    01 36 36.3 +0.6
KHC                                ex       x        01 36 46.9
KHC                                AMS      AMS      02 58 20.0
       comp=Z,200nm,20.5s
KHC    Kasperske Hory   159.95 339 ePKP2    PKPab    01 36 36.3 +0.6
KHC                                MLR      MLR
       comp=Z,200nm,20.5s
CKRC   Cesky Krumlov    159.98 337 ePKPAB   PKPab    01 36 38.5 +2.7
CKRC                               ex       x        01 36 47.4
CKRC                               AMS      AMS      03 01 50.0
       comp=Z,200nm,16.4s
CKRC   Cesky Krumlov    159.98 337 ePKP2    PKPab    01 36 38.5 +2.7
CKRC                               MLR      MLR
       comp=Z,200nm,16.4s
GRF    Grafenberg Arr   160.11 343 eL       L        02 52 51.6
       comp=Z,161nm,20.2s
WET    Wettzell         160.15 340 ePKPab   PKPab    01 36 37.2 +0.7
       baz=21,slow=4.5
GERES  GERESS Array B   160.16 338 PKPab    PKPab    01 36 36.1 -0.5
       comp=Z,0.7nm,0.5s,baz=29,slow=3.0,SNR=5.5
CONA   Conrad Observa   160.16 333 ePKP     PKPab    01 36 34.7 -2.0
       comp=Z,4.1nm,1.0s
RONA   Rosalia, Austr   160.17 332 ePKP     PKPab    01 36 37.3 +0.6
       comp=Z,4.2nm,0.9s
TNS    Taunus Mts       160.18 349 ePKPab   PKPab    01 36 36.4 -0.3
       baz=21,slow=4.5
TNS                                epPKPab  sPKPab   01 36 49.0 +3.1
       baz=27,slow=4.4
MOA    Molln            160.83 335 ePKP     PKPab    01 36 39.5  0.0
       comp=Z,7.9nm,1.4s
ARSA   Arzberg          160.85 332 ePKP     PKPab    01 36 38.5 -1.1
       comp=Z,4.1nm,1.3s
WLF    Walferdange      161.04 353 ePKPab   PKPab    01 36 41.9 +1.6
       baz=21,slow=4.5
BIOA   Bad Ischl, Aus   161.18 336 i PKP    PKPab    01 36 41.7 +0.6
       comp=Z,7.3nm,1.1s
RJOB   Jochberg         161.42 338 ePKPab   PKPab    01 36 42.9 +0.7
       baz=21,slow=4.5
FUR    Furstenfeldbru   161.50 341 ePKPab   PKPab    01 36 42.5 +0.1
       baz=21,slow=4.5
SOKA   Soboth           161.51 332 ePKP     PKPab    01 36 42.1 -0.6
       comp=Z,4.6nm,1.2s
LESA   Schwarzleotal    161.74 338 ePKP     PKPab    01 36 44.0 +0.4
       comp=Z,5.5nm,1.3s
OBKA   Obir             161.84 333 ePKP     PKPab    01 36 43.7 -0.4
       comp=Z,2.9nm,0.9s
BFO    Black Forest     162.02 347 ePKPab   PKPab    01 36 44.9 +0.2
       baz=21,slow=4.5
BFO                                epPKPab  sPKPab   01 36 56.3 +2.3
       baz=27,slow=4.4
MYKA   Terra Mystica    162.09 335 ePKP     PKPab    01 36 45.0 -0.1
       comp=Z,4.8nm,0.9s
WATA   Walderalm        162.16 340 ePKP     PKPab    01 36 46.4 +0.9
       comp=Z,7.0nm,1.1s
WTTA   Wattenberg       162.21 339 ePKP     PKPab    01 36 47.3 +1.5
       comp=Z,2.7nm,0.6s
RETA   Reutte           162.26 341 ePKP     PKPab    01 36 46.3 +0.5
       comp=Z,5.3nm,1.0s
MOTA   Moosalm          162.29 341 ePKP     PKPab    01 36 46.7 +0.6
       comp=Z,9.0nm,1.4s
SQTA   Sankt Quirin     162.37 340 ePKP     PKPab    01 36 47.5 +1.1
       comp=Z,6.4nm,1.1s
ABTA   Abfaltersbach    162.38 337 ePKP     PKPab    01 36 46.2 -0.2
       comp=Z,3.7nm,1.0s
DAVA   Damuels          162.67 343 i PKP    PKPab    01 36 47.6 -0.2
       comp=Z,2.6nm,0.7s
FETA   Feichten         162.69 341 ePKP     PKPab    01 36 47.4 -0.4
       comp=Z,3.8nm,1.1s
ESDC   Sonseca Array    169.73  29 PKP      PKPdf    01 36 05.7 +0.7
       comp=Z,1.1nm,1.1s,baz=1.9,slow=4.5,SNR=4.2
ESDC                               PKPab    PKPab    01 37 19.7 +0.7
       comp=Z,1.0nm,1.1s,baz=18,slow=2.9,SNR=2.2
TAM    Tamanrasset      171.52 199          PKPab    01 37 25.5 -1.9
TAM    Tamanrasset      171.52 199 PKP2     PKPab    01 37 25.5 -1.9
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*CATAC **18** 01:42:08.1±0.3, 12°N±2°×8°8W±°, h36^{km}±3^{km}, M3.7/28, MLv3.7/28, Error ellipse: s-maj=5.9km s-min=2.3km az=28.8, confirmed*

*SNET **18** 01:42:11.7±3.5, 12°.62N×87°.58W, h30^{km}, ML3.5*

ISC 18 01:42:07.9±1.4**, 12°.35N**±0°.06×**87°.57W**±0°.04**, h59**^{km}±14^{km}**, n51, σ0^{s}.61**/68**, 10D, Near coast of Nicaragua**

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Code   Station Name       Δ°   AZ°    Phase ID             Time       Res
                                   Op       ISC        h  m  s       ISC
CRIN   San Cristobal      0.61  55 S        Sn       01 42 32.2 +1.4
CRIN   San Cristobal      0.61  55 ⇓P       Pn       01 42 21.5 +0.3
POTN   Potosi Cosigui     0.65   5 ⇓P       Pn       01 42 21.2 -0.3
POTN                               S        Sn       01 42 31.2 -0.3
PKGN   Cerro Pekin        0.66  61 ⇓P       Pn       01 42 21.6  0.0
PKGN                               S        Sn       01 42 32.1 +0.5
QUEN   Al S del Volca     0.74  71 P        Pn       01 42 22.4 -0.2
QUEN                               S        Sn       01 42 33.3 -0.1
TEL3   Telica 3           0.74  72 P        Pn       01 42 22.5 -0.1
HOYN   Al Sur del Vol     0.76  71 ⇓P       Pn       01 42 22.6 -0.4
HOYN                               S        Sn       01 42 33.9 -0.1
HERN   Volcan Telica      0.76  70 S        Sn       01 42 33.8 -0.2
HERN   Volcan Telica      0.76  70 P        Pn       01 42 22.5 -0.4
POLN   Al Sur del Vol     0.79  68 P        Pn       01 42 23.0 -0.3
POLN                               S        Sn       01 42 34.4 -0.2
CNGA   Al SSO del Vol     0.86  80 P        Pn       01 42 23.9 -0.3
CNGA                               S        Sn       01 42 36.0  0.0
CNGN   Cerro Negro        0.86  80 S        Sn       01 42 36.4 +0.3
CNGN   Cerro Negro        0.86  80 P        Pn       01 42 23.8 -0.4
CNCH   Conchagua          0.96 344 eP       Pn       01 42 25.3 -0.3
CNCH                               eS       Sn       01 42 38.5 -0.1
CNCH   Conchagua          0.96 344 ⇓P       Pn       01 42 25.3 -0.3
COPN   Copaltepe          0.97 100 ⇓P       Pn       01 42 25.1 -0.4
BC84   Volcan Momotom     1.00  87 P        Pn       01 42 26.1 +0.1
MOMN   Momotombo          1.00  86 ⇓P       Pn       01 42 25.8 -0.2
MOMN                               S        Sn       01 42 38.9 -0.5
LCND   La Caada           1.01 342 eP       Pn       01 42 25.8 -0.3
LCND                               eS       Sn       01 42 39.4 -0.1
LCND   La Caada           1.01 342 ⇓P       Pn       01 42 25.8 -0.3
MOM2   El Cardon          1.06  85 P        Pn       01 42 26.9 +0.2
MOM2                               S        Sn       01 42 40.9 +0.3
SAPS   Ciudad Sandino     1.15  99 S        Sn       01 42 42.6 -0.2
SAPS   Ciudad Sandino     1.15  99 P        Pn       01 42 28.0 +0.1
APQ3   Volcan Apoyequ     1.17  94 P        Pn       01 42 28.2  0.0
APQ3                               S        Sn       01 42 43.5 +0.2
APQ2   Apoyeque           1.22  97 P        Pn       01 42 29.0 +0.1
APQ2                               S        Sn       01 42 44.2 -0.3
CNRM   Centro Naciona     1.27 332 P        Pn       01 42 30.0 +0.5
TISN   Laguna Tiscapa     1.28  99 P        Pn       01 42 28.8 -0.9
LCY    Lacayo             1.28 326 eP       Pn       01 42 30.1 +0.2
UNAN   Cigeo UNAN         1.29 100 P        Pn       01 42 29.9 +0.2
UNAN                               S        Sn       01 42 46.1  0.0
MGAN   Managua            1.30  99 S        Sn       01 42 46.4  0.0
PACA   Pacayal            1.34 327 eP       Pn       01 42 30.8 +0.3
PACA                               eS       Sn       01 42 47.5 +0.1
PACA   Pacayal            1.34 327 P        Pn       01 42 30.9 +0.3
WILN   Americas 2         1.36  98 S        Sn       01 42 47.9 +0.1
LIMN   Finca el Limon     1.37  59 P        Pn       01 42 30.9  0.0
MAS3   Al N del Volca     1.40 103 P        Pn       01 42 31.2  0.0
MAS3                               S        Sn       01 42 48.2 -0.5
MASN   Masaya             1.43 104 S        Sn       01 42 49.4 -0.1
NANN   Nandasmo           1.47 106 S        Sn       01 42 51.1 +0.7
NANN   Nandasmo           1.47 106 P        Pn       01 42 32.8 +0.6
TECO   Alcaldia de Te     1.67 315 S        Sn       01 42 54.1 -1.4
MATN   Matagalpa          1.70  70 P        Pn       01 42 34.3 -1.1
MATN   Matagalpa          1.70  70 S        Sn       01 42 55.3 -0.9
TGUH   Tegucigalpa,Un     1.72   9 ⇓P       Pn       01 42 36.2 +0.4
TGUH                               S        Sn       01 42 57.1 +0.3
SCLA   Alcaldia de Sa     1.76 320 P        Pn       01 42 36.8 +0.6
RCVN   Varillal2          1.81  47 P        Pn       01 42 37.7 +0.7
RCVN   Varillal2          1.81  47 S        Sn       01 42 60.0 +0.9
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RCPN	Sur Rio San Ju	1.85	51	⇓P	Pn	01 42 37.1	-0.4
RCPN	Sur Rio San Ju	1.85	51	S	Sn	01 42 59.9	0.0
BOAB	BOACO BROADBAN	1.86	87	P	Pn	01 42 37.1	-0.3
JAYA	Jayaque - finc	2.25	305	eP	Pn	01 42 43.7	+0.8
JAYA				eS	Sn	01 43 07.9	-1.8
JAYA	Jayaque - finc	2.25	305	S	Sn	01 43 08.1	-1.6
JAYA	Jayaque - finc	2.25	305	P	Pn	01 42 45.1	+2.2

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*NEIC **18** 01:48:16.3±1.3, 29°.42N±0°.02×104°.05W±0°.02, h5^{km}±1^{km}, mb4.0/2, mb_Lg3.5/123, ML3.4/4, ML3.9/22, Mwr3.6/24, Error ellipse: s-maj=3.8km s-min=3.4km az=294.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.48; $M_{\theta\theta}$-0.12; $M_{\phi\phi}$1.60; $M_{r\theta}$0.73; $M_{\theta\phi}$-1.59; $M_{\phi r}$-1.86; Fault plane solution: $M_0$2.98000×10^{14} NP1: ϕ_s129.45000°, δ24.99000°, λ-118.60000°. NP2: ϕ_s340.48000°, δ68.23000°, λ-77.42000°. Principal axes: T 3.3558, Plg22.0000°, Azm61.0000°; N -1.0057, Plg12.0000°, Azm156.0000°; P -2.3501, Plg65.0000°, Azm272.0000°;*

*NEIC **18** 01:48:16.7, 29°.48N×104°.05W, h5^{km}*

*NEIC **18** 01:48:17.2±1.2, 29°.45N±0°.02×104°.10W±0°.03, h4^{km}±5^{km}, Error ellipse: s-maj=3.4km s-min=3.0km az=82.0*

*IDC **18** 01:48:17.6±0.9, 29°.49N×104°.09W, h0^{km}, mb3.6/2, mbtmp3.4/7, ML3.5/5, MS3.8/6, Error ellipse: s-maj=7.4km s-min=5.4km az=49.0*

*TXNET **18** 01:48:17.2, 29°N±1°×10°4W±°, h4^{km}±2^{km}, ML4.1/3, Error ellipse: s-maj=2.2km s-min=2.0km az=72.2, final*

*MEX **18** 01:48:20.1±0.4, 29°.45N×104°.09W, h3^{km}, MD4.5*

ISC 18 01:48:15.8±1.2**, 29°.42N**±0°.02×**104°.08W**±0°.02**, h3**^{km}±9^{km}**, n169, σ1^{s}53**/204**, mb3.8**/3**, MS4.0**/5**, 12C-2D, Texas-Mexico border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TX31	Lajitas Ar. Si	0.37	103		Pb	01 48 24.8	-0.2
TX31				Sg	Sb	01 48 29.1	-2.1
TX31	Lajitas Ar. Si	0.37	103	⇑P	Pb	01 48 24.8	-0.2
TX31				S	Sb	01 48 30.3	-0.9
TXAR	Lajitas Array	0.37	103		Pb	01 48 24.4	-0.7
TXAR	Lajitas Array	0.37	103	Pg	Pb	01 48 24.8	-0.2
	1μm,0.3s,baz=289,slow=16,SNR=8913						
TXAR				Lg	Lg	01 48 30.0	
	4μm,0.3s,baz=289,slow=30,SNR=114						
TXAR				LR	LR	01 48 51.8	
	comp=Z,8μm,20.4s,baz=268,slow=85						
ALPN	Alpine	1.02	22		Pg	01 48 35.0	-0.5
ALPN				Sg	Sg	01 48 46.7	-2.0
ALPN	Alpine	1.02	22	⇑P	Pg	01 48 35.0	-0.5
ALPN				S	Sg	01 48 48.0	-0.8
TPB01	Permian Basin	1.54	9	P	Pn	01 48 44.4	+0.1
TPB01				Pg	Pg	01 48 45.5	+0.2
TPB01				S	Sb	01 49 05.2	+0.1
TPB01				Sg	Sg	01 49 07.3	+2.0
VHRN	Van Horn	1.57	330		Pn	01 48 45.2	+0.4
VHRN					Sn	01 49 06.1	+0.3
VHRN				IAML		01 49 09.8	
	1μm,0.7s						
VHRN				IAmb_Lg		01 49 10.5	
	comp=Z,500nm,0.7s						
VHRN				IAML		01 49 11.4	
	comp=Z,1μm,0.8s						
VHRN	Van Horn	1.57	330	⇓P	Pb	01 48 45.4	-0.2
VHRN				Pg	Pg	01 48 46.4	+0.4
VHRN				S	Sn	01 49 06.1	+0.3
VHRN				Sg	Sg	01 49 08.4	+2.0
TPB05	Hovey Rd	1.63	23	⇑P	Pb	01 48 46.3	-0.3
TPB05				Pg	Pg	01 48 47.8	+0.7
TPB05				S	Sb	01 49 07.5	-0.1
TPB03	Saragosa	1.73	16	⇑P	Pb	01 48 48.0	-0.3
TPB03				Sg	Sg	01 49 12.7	+1.3
SAND	Sanderson	1.78	72		Pb	01 48 48.6	-0.6
SAND				Sg	Sg	01 49 14.5	+1.5
SAND				IAmb_Lg		01 49 16.3	
	comp=Z,209nm,0.8s						
SAND	Sanderson	1.78	72	⇑P	Pb	01 48 48.7	-0.4
SAND				Sg	Sg	01 49 14.5	+1.5
TPB08	Permian Basin	1.78	34	⇑P	Pb	01 48 49.2	0.0
TPB08				S	Sg	01 49 12.7	-0.4
TPB08				Sg	Sb	01 49 14.8	+2.8
TPB12	Southwest of T	1.79	3	⇑P	Pb	01 48 48.9	-0.4
TPB12				Pg	Pg	01 48 49.7	-0.4
TPB12				Sg	Sg	01 49 14.5	+1.2
TPB16	Coyonosa	1.84	23	⇑P	Pb	01 48 50.1	-0.1
TPB16				Pg	Pg	01 48 52.8	+1.7
TPB16				S	Sb	01 49 14.0	+0.3
TPB10	Southeast of T	1.88	8	P	Pb	01 48 50.6	-0.2
TPB10				Sg	Sg	01 49 17.5	+1.3
TPB04	Verhalen	1.90	21	⇑P	Pb	01 48 50.8	-0.3
PECS	Pecos	1.95	5		Pn	01 48 50.6	+0.7
PECS					Sb	01 49 16.2	-0.7
PECS				IAmb_Lg		01 49 20.1	
	comp=Z,158nm,0.7s						
PECS	Pecos	1.95	5	P	Pn	01 48 50.9	+0.9
PECS				S	Sb	01 49 16.2	-0.7
PECS				Sg	Sg	01 49 19.3	+0.7
PCOS	Crockett Middl	2.04	14		Pb	01 48 52.8	-0.8
PCOS	Crockett Middl	2.04	14	P	Pb	01 48 52.8	-0.8
TPB19	West of Imperi	2.06	24	⇑P	Pb	01 48 52.9	-1.0
TPB19				S	Sb	01 49 19.9	0.0
TPB07	Mentone	2.18	9	P	Pb	01 48 55.2	-0.7
TPB07				S	Sb	01 49 23.8	+0.3
BCIG	La Boquilla	2.21	213		Pb	01 48 55.1	-1.3
BCIG					Sn	01 49 22.3	+0.9
BCIG	La Boquilla	2.21	213	iP	Pb	01 48 55.1	-1.3
BCIG				eS	Sn	01 49 22.3	+0.9
MNHN	Monahans	2.23	30		Pn	01 48 54.9	+1.2
MNHN					Sb	01 49 23.2	-1.5
MNHN				IAmb_Lg		01 49 30.4	
	comp=Z,361nm,0.9s						
MNHN	Monahans	2.23	30	⇑P	Pn	01 48 54.9	+1.2
MNHN				S	Sb	01 49 23.2	-1.5
TPB06	Permian Basin	2.34	18	Sg	Sb	01 49 29.2	+1.1
TPB09	Culberson Coun	2.35	355	Sg	Sg	01 49 30.6	-0.9
TMB02	Rankin	2.50	44	P	Pn	01 48 58.8	+1.4
TMB02				Pg	Pb	01 49 01.6	+0.2
TMB02				Sg	Sg	01 49 35.2	-0.9
MNTX	Cornudas Mount	2.54	334		Pn	01 48 58.6	+0.7
MNTX				IAML		01 49 40.2	
	comp=Z,381nm,0.5s						
MNTX				IAmb_Lg		01 49 41.8	
	comp=Z,238nm,0.8s						
MNTX	Cornudas Mount	2.54	334	eP	Pn	01 48 58.3	+0.4
MNTX				eS	Sn	01 49 29.1	-0.2
MNTX	Cornudas Mount	2.54	334	⇓P	Pn	01 48 58.5	+0.6
MCIG	Muzquiz	2.75	123		Pn	01 49 02.4	+1.5
MCIG					Sn	01 49 35.8	+1.2
MCIG	Muzquiz	2.75	123	eP	Pn	01 49 02.4	+1.5
MCIG				eS	Sn	01 49 35.8	+1.2
GDL2	Guadalupe Moun	2.78	355		Pn	01 49 02.9	+1.5
TMB01	Midkiff	2.83	37	Pg	Pb	01 49 06.9	0.0
CLNB	Carlsbad	2.84	3		Pn	01 49 04.1	+2.0
HPIG		2.84	210		Pn	01 49 04.4	+2.1
HPIG				Pg	Pg	01 49 12.0	+1.7
HPIG					Sn	01 49 39.3	+2.0
HPIG					LR	01 49 46.7	
HPIG				IAmb_Lg		01 49 50.7	
	comp=Z,268nm,0.7s						
HPIG				IAML		01 49 54.7	
	comp=E,529nm,0.4s						
HPIG				IAML		01 49 55.7	
	comp=N,380nm,0.5s						
HPIG		2.84	210	iP	Pn	01 49 03.1	+0.8
HPIG				iS	Sn	01 49 37.6	+0.4
HPIG		2.84	210	P	Pn	01 49 04.0	+1.7
HPIG				Pg	Pg	01 49 12.0	+1.7
HPIG				S	Sn	01 49 39.3	+2.0
HPIG				Sg	Sg	01 49 46.7	-0.5
OZNA	Ozona	2.96	59		Pn	01 49 05.3	+1.5
OZNA				Sg	Sg	01 49 48.0	-2.9
OZNA				IAmb_Lg		01 49 57.1	
	comp=Z,240nm,0.8s						
OZNA	Ozona	2.96	59	P	Pn	01 49 05.5	+1.7
OZNA				Pg	Pb	01 49 09.9	+0.7
OZNA				Sg	Sg	01 49 48.1	-2.9
CLN7	Carlsbad 7	2.99	4		Pn	01 49 05.0	+0.8
ODSA	Odessa	3.00	26		Pn	01 49 05.0	+0.7
ODSA					Sn	01 49 42.6	+1.8
ODSA					LR	01 49 48.2	
ODSA				IAmb_Lg		01 49 51.1	
	comp=Z,203nm,0.9s						
ODSA	Odessa	3.00	26	P	Pn	01 49 05.5	+1.2
ODSA				S	Sn	01 49 42.6	+1.8
ODSA				Sg	Sb	01 49 48.2	+1.2
DRIO	Del Rio	3.02	89		Pn	01 49 05.4	+0.9
DRIO				Pg	Pg	01 49 12.4	-1.2
DRIO				IAmb_Lg		01 49 57.6	
	comp=Z,228nm,0.7s						
DRIO	Del Rio	3.02	89	⇑P	Pn	01 49 05.5	+1.0
DRIO				Pg	Pg	01 49 12.4	-1.2
HTMS	Hat Mesa	3.07	7		Pn	01 49 06.4	+1.1
HTMS	Hat Mesa	3.07	7	Sg	Sb	01 49 51.1	+2.1
EPT	El Paso	3.14	319		Pn	01 49 06.9	+0.5
EPT				IAmb_Lg		01 50 03.5	
	comp=Z,132nm,1.1s						
SGCY	Sterling City	3.56	45		Pn	01 49 13.2	+1.3
CPRX	Cap Rock	3.60	3	Pn	Pn	01 49 13.4	+0.7
JCT	Junction City	3.86	73		Pn	01 49 17.3	+1.2
JCT	Junction City	3.86	73	eP	Pn	01 49 18.6	+2.5
JCT				iS	Sn	01 50 03.6	+1.6
HNDO	Hondo	4.18	87		Pn	01 49 22.3	+1.7
HNDO				IAmb_Lg		01 50 35.0	
	comp=Z,148nm,0.9s						
833A	Chaparral WMA,	4.25	104		Pn	01 49 20.9	-0.5
833A				IAmb_Lg		01 50 41.0	
	comp=Z,107nm,1.1s						
POST	Post	4.25	31		Pn	01 49 21.4	-0.1
POST				IAmb_Lg		01 50 39.5	
	comp=Z,174nm,1.2s						
SN05	Snyder 5	4.40	38		Pn	01 49 24.6	+1.0
SN05				IAmb_Lg		01 50 42.4	
	comp=Z,125nm,0.8s						
PDIG	Papasquiaro	4.52	195		Pn	01 49 27.1	+1.7
PDIG	Papasquiaro	4.52	195	eP	Pn	01 49 27.1	+1.7
PDIG				iS	Sn	01 50 21.1	+2.6
SN07	Snyder 07	4.56	36		Pn	01 49 26.3	+0.5
CSIG	Choix	4.59	237		Pn	01 49 30.4	+4.3
CSIG	Choix	4.59	237	eP	Pn	01 49 30.4	+4.3
CSIG				eS	Sn	01 50 15.4	-4.5
MSTX	Muleshoe	4.67	13		Pn	01 49 27.8	+0.5
BRDY	Brady	4.77	66		Pn	01 49 29.0	+0.5
NZIG	Nacozari, Sono	4.85	283		Pn	01 49 26.5	-3.4
NZIG	Nacozari, Sono	4.85	283	eP	Pn	01 49 26.5	-3.4
NZIG				iS	Sn	01 50 27.0	+0.4
319A	Douglas	4.90	295		Pn	01 49 30.2	-0.3
319A				IAmb_Lg		01 51 05.3	
	comp=Z,137nm,0.9s						
ABTX	Abilene, Hawle	4.97	49		Pn	01 49 31.7	+0.3
DKNS	Dickens	5.02	32		Pn	01 49 32.2	+0.2
CRNM	Carthage	5.05	334		Pn	01 49 31.5	-1.1
MNIG	Monterrey	5.07	138		Pn	01 49 35.4	+2.6
MNIG	Monterrey	5.07	138	eP	Pn	01 49 35.4	+2.6
MNIG				iS	Sn	01 50 33.6	+1.7
APMT	Aspermont	5.16	40		Pn	01 49 34.2	+0.3
BNM	Barren Site	5.19	336		Pn	01 49 35.7	+1.0
Y22D	IRIS PASSCAL I	5.23	333	IAmb_Lg		01 51 12.0	
	comp=Z,115nm,0.8s						
SBM	South Baldy	5.26	331		Pn	01 49 35.8	+0.2
HBVL	Hebbronville	5.32	115		Pn	01 49 36.4	+0.3
SSIG	Sanalona	5.33	211		Pn	01 49 42.1	+5.7
SSIG	Sanalona	5.33	211	eP	Pn	01 49 42.1	+5.7
LENM	Lemitar	5.33	333	Pn	Pn	01 49 37.2	+0.7
735A	Kenedy	5.51	94	Pn	Pn	01 49 38.0	-0.7
735A				IAmb_Lg		01 51 23.6	
	comp=Z,110nm,0.9s						
435B	Jarrell	5.79	75		Pn	01 49 43.5	+0.9
AMTX	Amarillo	5.81	20		Pn	01 49 42.7	-0.3
TSIG	Topolobambo	5.82	230	eS	Sn	01 50 52.1	+1.8
ANMO	Albuquerque	5.87	341	Pn	Pn	01 49 43.5	-0.4
ANMO				IAmb_Lg		01 51 28.3	
	comp=Z,48nm,0.9s						
ANMO	Albuquerque	5.87	341	Pn	Pn	01 49 43.2	-0.6
ANMO				IAmb_Lg		01 51 34.7	
	comp=Z,70nm,1.1s						
ANMO	Albuquerque	5.87	341	Pn	Pn	01 49 43.1	-0.8
ANMO				IAmb_Lg		01 51 26.3	
	comp=Z,49nm,0.9s						
ANMO	Albuquerque	5.87	341	Pn	Pn	01 49 46.8	+2.9
	comp=Z,0.2nm,0.3s,baz=136,slow=12,SNR=2.4						
ANMO				Pg	Pb	01 50 03.6	+4.7
	comp=Z,2.0nm,0.3s,baz=238,slow=16,SNR=13						
ANMO				Lg	Lg	01 51 20.8	
	comp=Z,4.4nm,0.3s,baz=303,slow=23,SNR=8.2						
	comp=Z,0.6nm,0.5s						
ANMO	Albuquerque	5.87	341	eP	Pn	01 49 46.4	+2.6
ANMO				eS	Sb	01 51 01.0	-8.7
PLPT	Palo Pinto	5.99	54		Pn	01 49 44.9	-0.4
HSIG		6.02	268		Pn	01 49 46.6	+0.8
HSIG				IAmb_Lg		01 51 27.2	
	comp=Z,75nm,1.0s						
HSIG		6.02	268	eP	Pn	01 49 46.8	+1.0
HSIG				eS	Sn	01 50 53.0	-2.2
MLDN	Muldoon	6.11	85		Pn	01 49 45.7	-1.3
GUYB	Guaymas	6.16	257	eP	Pn	01 49 47.6	-0.1
WHTX	Lake Whitney,	6.25	64		Pn	01 49 49.0	+0.1
WHTX				IAmb_Lg		01 51 51.5	
	comp=Z,90nm,0.9s						
FW03	Perrin-Whitt E	6.29	53		Pn	01 49 49.0	-0.4
FW07	Weatherford	6.31	57		Pn	01 49 48.7	-1.1
FW13	Cleburne	6.42	61	Pn	Pn	01 49 50.1	-1.1
FW13				IAmb_Lg		01 51 54.7	
	comp=Z,91nm,0.9s						
TUC	Tucson	6.45	298		Pn	01 49 52.5	+0.8
TUC	Tucson	6.45	298	eP	Pn	01 49 52.8	+1.1
TUC				eS	Sn	01 50 38.7	-27
WTFS	Witchita Falls	6.46	46		Pn	01 49 51.8	0.0
WTFS				IAmb_Lg		01 51 45.0	
	comp=Z,54nm,0.8s						
SMWD	Samnorwood	6.53	29		Pn	01 49 53.2	+0.3
FW06	Azle	6.61	56		Pn	01 49 53.4	-0.5
FW14	Alvarado	6.62	62	Pn	Pn	01 49 53.1	-0.9
FW16	Waxahatchie	6.88	62	Pn	Pn	01 49 57.5	-0.1
WMOK	Wichita Mounta	6.95	39		Pn	01 49 57.8	-0.7
WMOK				IAmb_Lg		01 51 57.2	
	comp=Z,67nm,0.8s						
Z35A	Perchaven, San	7.02	55	Pn	Pn	01 49 58.7	-0.7
RTBA	Rita Blanca	7.09	9		Pn	01 49 60.0	-0.6
X18A	Snowflake	7.13	317		Pn	01 50 00.7	-0.5
HKT	Hockley	7.19	84	Pn	Pn	01 50 01.1	-0.7
X34A	Smith Ranch, M	7.40	44		Pn	01 50 04.5	-0.2
W18A	Petrified Fore	7.43	321		Pn	01 50 05.4	+0.1
237A	Washetta, Mont	7.57	68		Pn	01 50 06.8	-0.2
HNVL	Huntsville, TX	7.58	78		Pn	01 50 06.8	-0.3
TREL	Terrell	7.60	62	Pn	Pn	01 50 06.2	-1.3
CSTR	Hydro, Custer	7.70	35		Pn	01 50 07.7	-1.1
ELIS	Ellis County	7.70	29		Pn	01 50 07.8	-1.0
ELIS				IAmb_Lg		01 52 43.0	
	comp=Z,54nm,0.9s						
T25A	Trinidad	7.70	358	IAmb_Lg		01 52 27.8	
	comp=Z,63nm,0.8s						
214A	Organ Pipe Nat	7.94	291		Pn	01 50 12.1	-0.1
X16A	Lo Mia Camp, P	8.00	310		Pn	01 50 13.0	-0.1
FNO	Franklin	8.11	42		Pn	01 50 13.5	-0.9
OK038	West end E0370	8.34	31		Pn	01 50 18.2	+0.5
OK038				IAmb_Lg		01 52 48.0	
	comp=Z,44nm,0.7s						
NATX	Nacogdoches	8.45	72	IAmb_Lg		01 53 02.7	
	comp=Z,33nm,0.9s						
OK029	Liberty Lake	8.46	40		Pn	01 50 18.7	-0.6
OK029				IAmb_Lg		01 53 05.6	
	comp=Z,44nm,0.8s						
WUAZ	Wupatki	8.66	316	IAmb_Lg		01 53 01.3	
	comp=Z,36nm,1.2s						
Z38A	Mt. Pleasant	8.67	61	IAmb_Lg		01 53 14.8	
	comp=Z,66nm,0.9s						
CROK	Carrier	8.72	34	IAmb_Lg		01 53 14.5	
	comp=Z,45nm,1.0s						
Y14A	Wickenburg	8.84	303		Pn	01 50 24.9	+0.4
OK052	Battle Ridge R	8.97	41	IAmb_Lg		01 53 09.0	
	comp=Z,37nm,0.9s						
DEOK	Depew	9.04	43	IAmb_Lg		01 53 09.5	
	comp=Z,36nm,0.8s						
KAN14	Manchester OK	9.09	33		Pn	01 50 27.6	-0.4
QUOK	Quay	9.15	41		Pn	01 50 27.5	-1.2
QUOK				IAmb_Lg		01 53 20.8	
	comp=Z,35nm,0.9s						
OK051	E0350 and S346	9.32	39		Pn	01 50 29.5	-1.5
OK051				IAmb_Lg		01 53 21.1	
	comp=Z,30nm,1.1s						
KAN13	South Haven SW	9.37	34		Pn	01 50 31.0	-0.8
PV02	Paradox Valley	9.58	337	IAmb_Lg		01 53 37.9	
	comp=Z,27nm,1.1s						
KSCO	Kaye Shedlock’	9.64	7	IAmb_Lg		01 53 48.0	
	comp=Z,45nm,0.8s						
PV18	Skein Mesa, Pa	9.68	337	IAmb_Lg		01 53 48.0	
	comp=Z,33nm,1.1s						
PV12	Saucer Basin,	9.70	337	IAmb_Lg		01 53 41.8	
	comp=Z,50nm,1.2s						
PV19	Morning Glory	9.76	337	IAmb_Lg		01 53 45.5	
	comp=Z,23nm,1.0s						
PV20	West Nyswonger	9.78	337	IAmb_Lg		01 53 47.9	
	comp=Z,48nm,1.1s						
T35A	Sooner Cattle	9.80	38		Pn	01 50 36.4	-1.2
PV04	Paradox Valley	9.81	337	IAmb_Lg		01 53 41.1	
	comp=Z,31nm,1.2s						
PV10	Paradox Valley	9.84	337	IAmb_Lg		01 53 48.0	
	comp=Z,35nm,1.0s						
PV23	Carpenter Ridg	9.89	337	IAmb_Lg		01 53 45.6	
	comp=Z,39nm,1.2s						
MIAR	Mount Ida	10.28	58		Pn	01 50 42.4	-1.7
WLAR	White Oak Lake	10.28	63		Pn	01 50 43.5	-0.6
U38A	Gravette	10.73	47		Pn	01 50 49.2	-1.3
X40A	Basin Creek Fa	10.80	59		Pn	01 50 50.4	-1.0
HHAR	Hobbs	10.93	49		Pn	01 50 52.2	-0.9
FCAR	Ozark Folk Cen	11.96	54		Pn	01 51 06.3	-0.8
MGMO	Mountain Grove	12.53	49		Pn	01 51 14.2	-0.7
T42A	Van Buren	13.25	52		Pn	01 51 23.5	-1.3
PDAR	Pinedale Array	14.03	343	Pn	P	01 51 40.9	-2.9
	comp=Z,0.1nm,0.3s,baz=182,slow=12,SNR=1.9						
	comp=Z,0.2nm,0.4s						
P40A	Paris	14.13	41		Pn	01 51 34.6	-2.3
ELK	Elko	14.52	324	Pn	P	01 51 46.3	-2.9
	comp=Z,0.1nm,0.3s,baz=163,slow=12,SNR=3.6						
	comp=Z,0.5nm,0.5s						
NVAR	Mina Array Bea	14.83	311	Pn	P	01 51 51.2	-1.5
	comp=Z,0.1nm,0.3s,baz=120,slow=12,SNR=5.2						
	comp=Z,0.2nm,0.4s						
L42A	Oliver, Polo	17.13	39	P	Pn	01 52 14.1	-2.1
L42A				IAmb	IAmb	01 52 15.4	
	comp=Z,8.1nm,0.8s						
TKL	Tuckaleechee C	18.20	65	P	P	01 52 31.4	+1.6
	comp=Z,0.2nm,0.3s,baz=231,slow=6.8,SNR=3.9						
TKL				LR	LR	01 59 16.4	
	comp=Z,38nm,20.9s,baz=178,slow=36						
	comp=Z,2.0nm,0.8s						
EPLO	Experimental L	21.71	18	P	P	01 53 07.7	-0.2
EPLO				IAmb	IAmb	01 53 14.3	
	comp=Z,4.8nm,0.7s						
ULM	Lac du Bonnet	21.71	14	P	P	01 53 08.9	+1.0
	comp=Z,2.8nm,0.7s,baz=198,slow=12,SNR=5.3						
	comp=Z,2.8nm,0.7s						
YKA	Yellowknife Ar	33.79	351	LR	LR	02 09 08.1	
	comp=Z,175nm,21.4s,baz=256,slow=37						
SDV	Santo Domingo	37.40	116	LR	LR	02 15 05.3	
	comp=Z,234nm,18.5s,baz=248,slow=43						
PCRV	Puerto La Cruz	41.49	109	LR	LR	02 15 29.3	
	comp=Z,161nm,21.1s,slow=39						
ILAR	Eielson Array	44.29	335	P	P	01 56 28.2	+1.7
	comp=Z,0.4nm,0.6s,baz=122,slow=6.9,SNR=4.3						
	comp=Z,0.4nm,0.6s						
MDP	Montagnes des	54.20	106	LR	LR	02 23 34.2	
	comp=Z,157nm,18.1s,baz=237,slow=39						
FINES	FINESS Array B	80.89	22	LR	LR	02 36 27.4	
	comp=Z,74nm,20.6s,baz=52,slow=36						

IDC 18 02:43:19.3±2.2**, 31°.75S**×**178°.14W, h0**^{km}**, mb3.7**/3**, mbtmp3.7**/3**, MS3.3**/1**, Error ellipse: s-maj=62.8km s-min=42.1km az=43.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	7.57	210	Pn	Pn	02 45 07.2	-3.6
	baz=67,slow=14						
URZ				Sn	Sn	02 46 28.3	-9.1
	1.8nm,0.3s,baz=182,slow=21,SNR=9.5						
DZM	Mont Dzumac	16.77	301	LR	LR	02 52 44.6	
	comp=Z,107nm,18.4s,baz=190,slow=34						
ASAR	Alice Springs	42.93	268	P	P	02 51 19.8	-0.3
	0.3nm,0.3s,baz=107,slow=7.8,SNR=2.5						
	0.3nm,0.3s						
WRA	Warramunga Arr	44.04	274	P	P	02 51 29.0	0.0
	0.9nm,0.5s,baz=113,slow=7.9,SNR=9.0						
	0.9nm,0.5s						
QSPA	South Pole Qui	58.37	180	P	P	02 53 15.8	-0.4
	0.5nm,0.8s,baz=109,slow=5.0,SNR=1.3						
	0.5nm,0.8s						
FINES	FINESS Array B	146.36	339	PKPbc	PKPbc	03 03 00.8	-0.5
	2.1nm,1.0s,baz=35,slow=5.1,SNR=5.8						

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*IDC **18** 02:44:22.6±1.2, 2°.76S×126°.68E, h0^{km}, mb3.9/4, mbtmp4.0/7, ML4.1/3, Error ellipse: s-maj=49.0km s-min=20.5km az=69.0*

ISC 18 02:44:27.2±1.3**, 3°.0S**±0°.1×**126°.6E**±0°.2**, h32**^{km}**, n7, σ1^{s}12**/7**, mb3.9**/4**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	Kappang	7.10	253	Pn	Pn	02 46 09.3	+0.4
	2.3nm,0.3s,baz=86,slow=14,SNR=5.2						
	7.9nm,0.4s						
FITZ	Fitzroy Crossi	15.07	183	Pn	P	02 48 01.1	-1.8
	1.1nm,0.3s,baz=16,slow=8.4,SNR=22						
	7.7nm,0.6s						
WRA	Warramunga Arr	18.51	156	P	Pn	02 48 42.1	+0.8
	0.4nm,0.3s,baz=336,slow=12,SNR=10						
	4.0nm,0.9s						
ASAR	Alice Springs	21.78	162	P	P	02 49 17.2	+0.7
	3.8nm,0.7s,baz=339,slow=9.8,SNR=29						
	3.8nm,0.7s						
MKAR	Makanchi Array	63.00	327	P	P	02 54 51.1	+0.1
	0.7nm,0.7s,baz=133,slow=8.5,SNR=7.0						
	0.7nm,0.7s						
KURBB	Kurchatov Arra	67.30	329	P	P	02 55 18.4	-0.4
	0.7nm,0.6s,baz=140,slow=6.1,SNR=7.4						
	0.7nm,0.6s						
BVAR	Borovoye Array	72.85	328	P	P	02 55 52.5	-0.3
	0.9nm,0.7s,baz=126,slow=7.3,SNR=2.6						
	0.9nm,0.7s						

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*SJA **18** 02:59:57.4±0.6, 24°.05S×66°.62W, h205^{km}±4^{km}, ML3.9, MW3.8*

*IDC **18** 03:00:01.0±1.9, 24°.07S×66°.80W, h188^{km}±20^{km}, mb3.4/3, mbtmp3.9/7, MS3.5/1, Error ellipse: s-maj=23.8km s-min=21.3km az=83.0*

*NEIC **18** 03:00:01.9±1.8, 24°.06S±0°.07×67°.0W±0°.1, h207^{km}±10^{km}, mb4.2/9, ML4.1(GUC), Error ellipse: s-maj=16.9km s-min=10.1km az=91.0*

*GUC **18** 03:00:03.0±0.7, 23°.97S×67°.46W, h234^{km}±11^{km}, ML4.1*

*VAO **18** 03:00:06.2±0.8, 24°.05S×66°.81W, h255^{km}, mb4.0*

ISC 18 03:00:00.2±0.6**, 24°.05S**±0°.04×**66°.83W**±0°.04**, h186**^{km}±7^{km}**, n111, σ1^{s}67**/135**, mb4.0**/8**, 4C-4D, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALTA		0.48	112	eP	Pn	03 00 24.0	-2.2
SALTA				eS	Sn	03 00 46.2	0.0
SLA	San Lorenzo	1.38	119	eP	Pn	03 00 30.0	-1.7
AZAP	Zapla	1.62	97	eP	Pn	03 00 31.6	-2.4
AF01	San Pedro de A	1.65	311		Pn	03 00 37.8	+3.4
AF01	San Pedro de A	1.65	311	eP	Pn	03 00 33.2	-1.2
AF01				eS	Sn	03 01 10.9	+10
YJA	Yavi	2.22	33	eP	Pn	03 00 38.8	-1.7
YJA				eS	Sn	03 01 10.3	-1.5
GO02	Mina Guanaco	2.75	246		Pn	03 00 48.5	+2.1
GO02	Mina Guanaco	2.75	246	⇑iP	Pn	03 00 48.6	+2.2
GO02				iS	Sn	03 01 24.0	+1.5
GO02				IAML		03 01 24.8	
	comp=E,942nm,0.3s						
GO02	Mina Guanaco	2.75	246	eP	Pn	03 00 43.7	-2.8
GO02				eS	Sn	03 01 24.6	+2.1
PB06	IPOC Station P	2.85	297		Pn	03 00 49.6	+2.1
PB06	IPOC Station P	2.85	297	⇑iP	Pn	03 00 49.6	+2.1
PB06				iS	Sn	03 01 24.4	0.0
PB06				IAML		03 01 26.5	
	comp=N,404nm,0.4s						
PB06	IPOC Station P	2.85	297	eP	Pn	03 00 49.6	+2.1
PB06				eS	Sn	03 01 26.1	+1.7
PB06				IAML		03 01 27.3	
	comp=Z,211nm,0.1s						
PB09	IPOC Station P	3.16	315		Pn	03 00 53.3	+2.0
PB09	IPOC Station P	3.16	315	eP	Pn	03 00 53.4	+2.2
PB09				iS	Sn	03 01 31.9	+0.8
PB09				IAML		03 01 35.0	
	comp=E,188nm,0.6s						

PB09	IPOC Station P	3.16	315	eP	Pn	03 00 53.0	+1.8
PB09				eS	Sn	03 01 33.1	+2.1
PB09				IAML		03 01 36.2	
	comp=Z,146nm,0.5s						
PB14	IPOC Station P	3.31	259		Pn	03 00 54.5	+1.3
PB14	IPOC Station P	3.31	259	eP	Pn	03 00 54.6	+1.3
PB14				i S	Sn	03 01 33.2	-1.4
PB14				IAML		03 01 37.1	
	comp=E,180nm,0.3s						
PB14	IPOC Station P	3.31	259	eP	Pn	03 00 54.3	+1.1
PB14				eS	Sn	03 01 34.9	+0.2
PB14				IAML		03 01 37.1	
	comp=Z,188nm,0.5s						
PB05	IPOC Station P	3.32	290		Pn	03 00 54.3	+1.2
PB05	IPOC Station P	3.32	290	eP	Pn	03 00 54.3	+1.2
PB05				i S	Sn	03 01 32.9	-1.5
PB05				IAML		03 01 37.3	
	comp=E,210nm,0.4s						
PB05	IPOC Station P	3.32	290	eP	Pn	03 00 54.6	+1.4
PB05				eS	Sn	03 01 35.7	+1.3
PB05				IAML		03 01 37.7	
	comp=Z,87nm,0.3s						
PB03	IPOC Station P	3.35	306		Pn	03 00 54.9	+1.4
PB03	IPOC Station P	3.35	306	⇑iP	Pn	03 00 55.0	+1.5
PB03				i S	Sn	03 01 34.1	-1.1
PB03				IAML		03 01 38.1	
	comp=E,320nm,0.2s						
PB03	IPOC Station P	3.35	306	eP	Pn	03 00 54.5	+0.9
PB03				eS	Sn	03 01 34.9	-0.2
PB03				IAML		03 01 39.5	
	comp=Z,277nm,0.2s						
PB10	IPOC Station P	3.46	278		Pn	03 00 56.1	+1.4
PB10	IPOC Station P	3.46	278	⇑iP	Pn	03 00 56.3	+1.7
PB10				i S	Sn	03 01 35.6	-1.7
PB10				IAML		03 01 39.2	
	comp=E,173nm,0.3s						
PB10	IPOC Station P	3.46	278	eP	Pn	03 00 56.4	+1.7
PB10				eS	Sn	03 01 38.5	+1.2
PB10				IAML		03 01 40.6	
	comp=Z,98nm,0.4s						
AC02	Maricunga	3.47	216		Pn	03 00 57.6	+2.2
AC02	Maricunga	3.47	216	eP	Pn	03 00 57.9	+2.6
AC02	Maricunga	3.47	216	eP	Pn	03 00 58.0	+2.6
AC02				eS	Sn	03 01 37.5	-1.0
PB01	IPOC Station P	3.87	320		Pn	03 01 01.1	+1.1
PB01	IPOC Station P	3.87	320	eP	Pn	03 01 00.9	+1.0
PB01				i S	Sn	03 01 44.9	-1.9
PB01	IPOC Station P	3.87	320	eP	Pn	03 01 00.6	+0.6
PB01				eS	Sn	03 01 46.2	-0.6
PB01				IAML		03 01 47.4	
	comp=Z,209nm,0.2s						
AC01	Pan de Azucar	4.01	238		Pn	03 01 02.0	+0.4
AC01	Pan de Azucar	4.01	238	eP	Pn	03 01 02.0	+0.4
AC01				i S	Sn	03 01 47.6	-2.1
AC01	Pan de Azucar	4.01	238	eP	Pn	03 01 02.0	+0.4
AC01				eS	Sn	03 01 47.6	-2.1
AC01				IAML		03 01 48.5	
	comp=Z,82nm,0.6s						
PB08	IPOC Station P	4.44	331		Pn	03 01 09.3	+1.7
PB08	IPOC Station P	4.44	331	eP	Pn	03 01 05.1	-2.5
PATCX	Punta Patache	4.45	316		Pn	03 01 07.4	+0.1
PATCX	Punta Patache	4.45	316	eP	Pn	03 01 07.2	-0.1
PATCX				i S	Sn	03 01 56.0	-3.9
PATCX	Punta Patache	4.45	316	eP	Pn	03 01 07.2	-0.1
PATCX				eS	Sn	03 01 59.5	-0.4
PATCX				IAML		03 02 03.5	
	comp=Z,130nm,0.3s						
AC06	Mina Casimiro	4.58	223	Pn	Pn	03 01 09.4	+0.5
TA01	Diego Aracena	4.65	317		Pn	03 01 09.2	-0.6
TA01	Diego Aracena	4.65	317	eS	Sn	03 02 02.5	-1.9
TA01				IAML		03 02 06.3	
	comp=Z,50nm,0.3s						
GO03	Copiapo	4.68	220	Pn	Pn	03 01 10.9	+0.7
GO03	Copiapo	4.68	220	eP	Pn	03 01 10.9	+0.7
GO03				eS	Sn	03 02 04.5	-0.8
VCA	Vinchina	4.83	195	eP	Pn	03 01 10.4	-1.9
VCA				eS	Sn	03 02 13.5	+4.6
TA02	Huaiquique	4.85	320		Pn	03 01 11.7	-0.6
GO01	Chusmiza	4.88	333		Pn	03 01 14.1	+0.8
GO01	Chusmiza	4.88	333	eS	Sn	03 02 09.4	-1.1
PB11	IPOC Station P	5.01	328		Pn	03 01 13.5	-1.1
PB11	IPOC Station P	5.01	328	eS	Sn	03 02 11.1	-1.9
PB11				IAML		03 02 11.8	
	comp=Z,184nm,0.4s						
ACLC	CERRO LA CRUZ	5.36	181	eP	Pn	03 01 20.7	+1.7
ACLC				eS	Sn	03 02 23.0	+1.8
AC04	Llanos de Chal	5.63	222	Pn	Pn	03 01 22.1	-0.3
LCO	Las Campanas	6.04	214	Pn	Pn	03 01 27.0	-1.0
PB16	IPOC Station P	6.21	336		Pn	03 01 30.9	+0.3
CO01	Juntas del Tor	6.59	206	Pn	Pn	03 01 36.1	+0.9
PB18	Visviri	6.88	338	Pn	Pn	03 01 40.1	+0.7
GO04	Tololo Observa	7.05	209	Pn	Pn	03 01 39.8	-1.5
CO03	El Pedregal	7.59	206	Pn	Pn	03 01 47.0	-1.1
CFA	Coronel Fontan	7.63	189	P	Pn	03 01 49.1	+0.5
	comp=Z,2.1nm,0.3s,baz=5.4,slow=12,SNR=52						
CFA				S	Sn	03 03 10.2	-4.5
	comp=Z,6.0nm,0.3s,baz=165,slow=16,SNR=20						
LPAZ	La Paz	7.81	351		Pn	03 01 52.3	+0.6
LPAZ	La Paz	7.81	351	P	Pn	03 01 53.3	+1.6
	comp=Z,2.2nm,0.3s,baz=161,slow=5.3,SNR=21						
LPAZ				S	Sn	03 03 18.3	-1.6
	comp=Z,2.2nm,0.8s,baz=61,slow=1.0,SNR=4.2						
CO06	Fray Jorge	7.86	212	Pn	Pn	03 01 50.9	-0.8
CPUP	Villa Florida	8.90	107	P	Pn	03 02 05.7	+0.4
	comp=Z,0.4nm,0.5s,baz=128,slow=16,SNR=2.9						
BBSD	Serra de San D	8.97	42	eP	Pn	03 02 12.1	+5.8
SIV	San Ignacio	9.66	35	P	Pn	03 02 16.5	+1.1
	comp=Z,0.5nm,0.4s,baz=202,slow=13,SNR=3.9						
MT03	Universidad Ad	9.95	198	Pn	Pn	03 02 20.1	+1.1
TRCB	Terra Rica	13.09	87	P	P	03 03 04.4	+1.5
TRCB	Terra Rica	13.09	87	eP	P	03 03 03.6	+0.6
PTGB	Pitanga	13.47	96	eP	P	03 03 09.6	+2.4
CPSB	Cacapava Do Su	13.48	121	eP	P	03 03 08.3	+1.1
ITAB	Concordia	13.63	107		P	03 03 10.4	+1.5
ITAB	Concordia	13.63	107	eP	P	03 03 08.9	+0.1
PLTB	Pedras Altas	13.98	126		P	03 03 13.9	+1.2
PLTB	Pedras Altas	13.98	126	eP	P	03 03 13.2	+0.5
LDASE	Londrina, Braz	14.40	91	eP	P	03 03 19.8	+2.3
PDRB	Porto dos Gac	15.65	40	eP	P	03 03 32.8	+1.5
FRTB	Fartura	15.83	91	eP	Pn	03 03 35.9	+2.7
ARAG	Araguaiana, MT	16.37	62	eP	Pn	03 03 41.8	+2.0
MAJ01	Sao Joao Batis	16.40	106	eP	Pn	03 03 40.1	+0.1
PLCA	Paso Flores	16.93	190		P	03 03 43.8	-1.4
CZSB	Cruzeiro do Su	17.17	340		P	03 03 46.5	-1.6
CZSB				IAmb	IAmb	03 03 53.0	
	comp=Z,5.6nm,0.6s						
PET01	Itanhaem-SP	17.84	95	eP	P	03 03 56.0	+0.7
VAO	Valinhos	18.25	91	P	P	03 04 00.5	+0.6
VAO	Valinhos	18.25	91	eP	P	03 04 00.1	+0.3
IPMB	Ipameri, GO	18.39	74	eP	P	03 04 02.3	+0.9
SNDB	Serra Nova Dou	19.01	54	eP	P	03 04 07.8	-0.3
PARB	Paraibuna	19.43	92	eP	P	03 04 13.8	+1.1
BDFB	Brasilia	19.56	68	P	P	03 04 14.8	+0.8
BDFB				IAmb	IAmb	03 04 15.9	
	comp=Z,8.1nm,0.8s						
BDFB	Brasilia	19.56	68	P	P	03 04 14.0	0.0
	comp=Z,7.7nm,0.7s,baz=237,slow=12,SNR=15						
PMNB	Patos De Minas	19.77	78	eP	P	03 04 16.7	+0.4
TBTG	Tabatinga, AM	19.97	351	eP	Pn	03 04 21.5	-0.8
TEFE	Tefe	20.53	6	eP	P	03 04 23.9	-0.4
SMTB	Santa Maria do	23.79	54	eP	P	03 04 57.0	+0.8
BOAV	Boa Vista	26.99	14	P	P	03 05 25.1	+0.2
BOAV				IAmb	IAmb	03 05 33.4	
	comp=Z,6.7nm,1.3s						
TUMC	Tumaco	28.20	334	P	P	03 05 30.4	-5.2
PMSA	Palmer Station	40.76	178	LR	LR	03 22 53.1	
	comp=Z,69nm,19.9s,baz=20,slow=34						
VNA3	Neumayer Olymp	57.06	161	⇓P	P	03 09 28.1	+1.7
	comp=Z,1.1nm,0.7s						
VNA1	Neumayer--Stat	57.25	160	⇓P	P	03 09 27.3	-0.4
	comp=Z,2.0nm,0.7s						
VNA2	Neumayer--Watz	57.62	160	⇓P	P	03 09 31.9	+1.5
	comp=Z,0.0nm,0.5s,baz=276,slow=8.0						
SNAA	Sanae	59.26	161	⇓P	P	03 09 37.7	-4.1
	comp=Z,14nm,0.6s						
SNAA	Sanae	59.26	161	P	P	03 09 41.7	0.0
SNAA				IAmb	IAmb	03 09 51.5	
	comp=Z,5.2nm,1.5s						
GOGA	Godfrey	59.30	344	P	P	03 09 41.7	-0.7
GOGA				IAmb	IAmb	03 09 43.2	
	comp=Z,5.2nm,1.2s						
TXAR	Lajitas Array	63.81	324	P	P	03 10 13.3	+0.5
	comp=Z,0.5nm,0.6s,baz=152,slow=5.7,SNR=4.1						
	comp=Z,0.5nm,0.6s						
QSPA	South Pole Qui	66.16	180	P	P	03 10 28.0	+0.5
PDAR	Pinedale Array	77.27	329	P	P	03 11 35.0	+0.9
	comp=Z,0.3nm,0.6s,baz=128,slow=9.6,SNR=3.5						
	comp=Z,0.3nm,0.6s						
ULM	Lac du Bonnet	78.32	341	P	P	03 11 39.8	+0.4
	comp=Z,1.0nm,0.3s,baz=160,slow=4.9,SNR=4.5						
	comp=Z,1.0nm,0.3s						
ZALV	Zalesovo Beam	143.36	28	PKP	PKPbc	03 19 10.6	+0.8
	comp=Z,0.6nm,0.4s,baz=338,slow=3.5,SNR=3.5						
MKAR	Makanchi Array	146.46	40	PKPbc	PKPab	03 19 20.3	-0.4
	comp=Z,0.8nm,0.5s,baz=300,slow=3.7,SNR=8.0						
PZH	PanZhiHua	169.37	74	PKP	PKPdf	03 19 39.8	-6.1

IDC 18 03:22:54.9±1.9, 31°.57S×177°.39W, h0km, mb3.9/3, mbtmp3.9/4, MS3.8/3, Error ellipse: s-maj=43.0km s-min=33.6km az=90.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
URZ	Urewera	8.06	213	Pn	Pn	03 24 53.2	+0.1
	2.5nm,0.5s,baz=328,slow=6.2						
URZ				Sn	Sn	03 26 25.2	+0.2
	1.5nm,0.3s,baz=276,slow=20,SNR=7.5						
DZM	Mont Dzumac	17.23	299	LR	LR	03 32 23.3	
	comp=Z,90nm,19.8s,baz=200,slow=33						
ASAR	Alice Springs	43.58	268	P	P	03 31 01.2	+0.4
	1.2nm,0.6s,baz=106,slow=7.6,SNR=18						
	1.2nm,0.6s						
WRA	Warramunga Arr	44.67	273	P	P	03 31 09.1	-0.6
	1.2nm,0.5s,baz=113,slow=7.7,SNR=14						
	1.2nm,0.5s						
BATI	Baumata	58.32	278	LR	LR	03 58 13.5	
	comp=Z,120nm,18.9s,baz=122,slow=36						
QSPA	South Pole Qui	58.55	180	P	P	03 32 52.9	-0.1
	0.8nm,0.7s,baz=200,slow=2.8,SNR=3.1						
	0.8nm,0.7s						
LPAZ	La Paz	97.20	114	LR	LR	04 11 00.3	
	comp=Z,80nm,20.1s,baz=333,slow=30						
FINES	FINESS Array B	146.41	340	PKPbc	PKPdf	03 42 36.2	+0.5
	1.2nm,0.7s,baz=52,slow=3.4,SNR=7.8						

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*NEIC **18** 03:29:03.7±1.5, 18°.5S±0°.1×177°.8W±0°.2, h587km±8km, mb4.5/21, Error ellipse: s-maj=24.4km s-min=14.0km az=114.0*

*IDC **18** 03:29:03.8±1.6, 18°.51S×177°.88W, h586km±18km, mb3.3/11, mbtmp4.2/12, Error ellipse: s-maj=20.0km s-min=13.2km az=149.0*

ISC 18 03:29:01.2±0.6, 18°.5S±0°.1×177°.8W±0°.1, h557km, n45, σ1^{s}04/45, mb4.2/21, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.98	280	P	P	03 30 28.2	+4.6
	4.1nm,0.5s,baz=354,slow=23,SNR=2.4						
URZ	Urewera	20.22	192	P	P	03 32 57.5	-1.3
	12nm,0.4s,baz=81,slow=4.7,SNR=3.6						
	12nm,0.4s						
TCW	Tory Channel	23.66	195	P	P	03 33 29.4	-0.2
QRZ	Quartz Range	23.78	198	P	P	03 33 30.7	+0.1
TKNZ	Takaka Hill	23.85	197	P	P	03 33 30.9	-0.3
THZ	Tophouse	24.54	197	P	P	03 33 37.4	0.0
DSZ	Denniston Nort	24.84	199	P	P	03 33 39.8	-0.4
LTZ	Lake Taylor	25.66	197	P	P	03 33 45.7	-1.6
LTZ				IAmb	IAmb	03 33 49.6	
	comp=Z,22nm,1.2s						
OXZ	Oxford	26.23	197	P	P	03 33 52.2	0.0
OXZ				IAmb	IAmb	03 34 04.5	
	comp=Z,16nm,0.8s						
FOZ	Fox Glacier	27.08	200	P	P	03 33 59.9	+0.2
WKZ	Wanaka	28.50	200	P	P	03 34 11.4	-0.7
WKZ				IAmb	IAmb	03 34 20.6	
	comp=Z,28nm,1.1s						
DCZ	Deep Cove	29.68	202	P	P	03 34 23.0	+0.6
DCZ				IAmb	IAmb	03 34 28.7	
	comp=Z,22nm,1.3s						
WHZ	Wether Hill Ro	29.79	200	P	P	03 34 23.6	+0.3
WHZ				IAmb	IAmb	03 34 41.9	
	comp=Z,22nm,1.2s						
CTAO	Charters Tower	33.90	261	P	P	03 34 58.2	-0.5
CTAO				IAmb	IAmb	03 35 00.1	
	comp=Z,5.5nm,0.8s						
JAY	Jayapura	43.58	286	P	P	03 36 17.7	+0.7
	comp=Z,6.1nm,0.5s,baz=112,slow=23,SNR=4.2						
	comp=Z,6.1nm,0.5s						
WR8	Warramunga Arr	44.92	260	P	P	03 36 27.5	+0.3
WR8				IAmb	IAmb	03 36 36.0	
	comp=Z,13nm,1.5s						
WB0	Warramunga Arr	45.04	260	P	P	03 36 28.2	+0.1
WB0				IAmb	IAmb	03 36 29.1	
	comp=Z,8.6nm,1.4s						
WRA	Warramunga Arr	45.07	260	P	P	03 36 27.9	-0.4
WRA	Warramunga Arr	45.07	260	P	P	03 36 28.5	+0.1
	comp=Z,2.0nm,0.4s,baz=98,slow=6.9,SNR=37						
	comp=Z,2.0nm,0.4s						
AS31	Alice Springs	45.17	255	P	P	03 36 29.4	+0.3
ASAR	Alice Springs	45.17	255	P	P	03 36 29.2	+0.1
ASAR	Alice Springs	45.17	255	P	P	03 36 29.5	+0.4
	comp=Z,3.3nm,0.5s,baz=90,slow=8.2,SNR=43						
ASAR				PcP	PcP	03 37 56.9	-0.6
	comp=Z,0.7nm,0.5s,baz=104,slow=4.0,SNR=7.2						
ASAR				S	S	03 42 26.1	-2.6
	comp=Z,0.2nm,0.3s,baz=95,slow=14,SNR=5.8						
	comp=Z,3.3nm,0.5s						
KNRA	Kununurra	50.98	265	P	P	03 37 12.8	+0.5
KNRA				IAmb	IAmb	03 37 29.0	
	comp=Z,10nm,1.2s						
FITZ	Fitzroy Crossi	53.48	261	P	P	03 37 30.5	+0.2
FITZ	Fitzroy Crossi	53.48	261	P	P	03 37 30.3	+0.1
	comp=Z,0.9nm,0.5s,baz=66,slow=6.4,SNR=7.8						
	comp=Z,0.9nm,0.5s						
MBWA	Marble Bar	58.47	256	P	P	03 38 03.9	-0.8
MBWA				IAmb	IAmb	03 38 20.1	
	comp=Z,27nm,1.4s						
NWAO	Narrogin (SRO)	59.44	242	P	P	03 38 10.1	-0.9
SBA	Scott Base	59.91	184	P	P	03 38 14.2	+0.9
ADK	Adak	70.05	1	P	P	03 39 16.3	-0.9
ADK				IAmb	IAmb	03 39 20.0	
	comp=Z,27nm,1.3s						
UGM	Wanagama	70.17	268	P	P	03 39 18.4	-0.5
QSPA	South Pole Qui	71.60	180	P	P	03 39 27.1	+0.6
QSPA	South Pole Qui	71.60	180	P	P	03 39 27.0	+0.5
	comp=Z,0.9nm,0.7s,baz=273,slow=1.6,SNR=7.9						
	comp=Z,0.9nm,0.7s						
PETK	Petropavlovsk-	74.35	345	P	P	03 39 41.7	-0.4
	comp=Z,3.5nm,0.7s,baz=128,slow=6.3,SNR=5.7						
	comp=Z,3.5nm,0.7s						
NVAR	Mina Array Bea	79.44	44	P	P	03 40 10.9	+0.4
	comp=Z,1.0nm,0.8s,baz=231,slow=9.0,SNR=5.3						
	comp=Z,1.0nm,0.8s						
TXAR	Lajitas Array	85.83	57	P	P	03 40 44.0	+1.4
	comp=Z,1.0nm,0.7s,baz=220,slow=5.8,SNR=6.8						
	comp=Z,1.0nm,0.7s						
ILAR	Eielson Array	86.30	13	P	P	03 40 42.7	-1.2
	comp=Z,0.6nm,0.4s,baz=216,slow=5.1,SNR=15						
	comp=Z,0.6nm,0.4s						
PDAR	Pinedale Array	87.37	43	P	P	03 40 49.6	-0.2
	comp=Z,0.2nm,0.3s,baz=281,slow=7.0,SNR=2.2						
	comp=Z,0.2nm,0.3s						
ARCES	ARCESS Array B	126.95	350	PKP	PKPdf	03 47 00.5	-1.1
	comp=Z,2.1nm,1.0s,baz=16,slow=2.5,SNR=8.7						
AKASG	Malin Array Be	141.30	332	PKhKP	PKPpre	03 47 22.6	
	comp=Z,0.4nm,0.3s,baz=45,slow=4.0,SNR=5.6						
EKA	Eskdalemuir Ar	142.97	5	PKhKP	PKPpre	03 47 27.8	
	comp=Z,0.5nm,0.4s,baz=333,slow=3.2,SNR=5.7						
BRTR	Keskin Array B	145.56	315	PKPbc	PKPbc	03 47 37.9	-0.4
	comp=Z,1.8nm,1.0s,baz=42,slow=2.0,SNR=6.1						
CLL	Collm	146.12	348		PKPbc	03 47 38.4	-0.8
CLL	Collm	146.12	348	⇓iPKPbc	PKPbc	03 47 38.9	-0.3
	comp=Z,6.0nm,0.6s						
MMAI	Mount Meron Ar	146.90	303	PKPbc	PKPbc	03 47 42.1	+0.1
	comp=Z,1.7nm,0.6s,baz=57,slow=5.3,SNR=2.3						
GERES	GERESS Array B	148.28	345	PKPbc	PKPbc	03 47 44.4	-0.7
	comp=Z,1.1nm,0.6s,baz=30,slow=3.2,SNR=9.1						

IDC 18 03:37:39.9±2.1, 7°.40S×129°.64E, h0km, mb3.7/1, mbtmp3.6/3, ML3.6/2, Error ellipse: s-maj=108.2km s-min=28.9km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.27	160	Pn	Pn	03 40 48.9	-0.9
	0.3nm,0.3s,baz=339,slow=13,SNR=10						
WRA				Sn	Sn	03 43 17.4	-0.8
	0.2nm,0.3s,baz=357,slow=23,SNR=1.4						
	0.8nm,0.5s						
ASAR	Alice Springs	16.68	166	Pn	P	03 41 37.0	-0.8
	0.2nm,0.3s,baz=349,slow=9.5,SNR=7.2						
	0.3nm,0.3s						
MKAR	Makanchi Array	68.37	327	P	P	03 48 43.3	0.0
	0.5nm,0.6s,baz=114,slow=7.1,SNR=4.9						
	0.5nm,0.6s						

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*WEL **18** 03:45:42.9±1.0, 33°S±5°×17°8W±1°6, h33km, M4.8/13, mB5.2/8, ML5.1/15, MLv5.0/13, Mw(mB)4.6/8, Error ellipse: s-maj=21.7km s-min=3.5km az=104.9, confirmed*

*IDC **18** 03:45:43.4±0.7, 32°.38S×178°.40W, h0km, mb4.0/6, mbtmp4.0/6, MS3.8/9, Error ellipse: s-maj=30.5km s-min=22.7km az=77.0*

*NEIC **18** 03:45:44.4±1.3, 32°.69S±0°.05×178°.1W±0°.1, h10km±1km, mb4.6/15, Error ellipse: s-maj=22.2km s-min=6.1km az=108.0*

*NOU **18** 03:46:14.8, 34°.43S×179°.75W, h59km, mb4.6/5, South of Kermadec Islands*

ISC 18 03:45:47.2±0.6, 32°.71S±0°.05×178°.03W±0°.10, h35km, n83, σ2^{s}19/78, mb4.4/15, MS3.8/6, 6D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.44	2	P	Pn	03 46 34.9	-3.3
GLKZ				S	Sn	03 47 14.7	-3.0
RAO	Raoul Island	3.45	2		Pn	03 46 36.4	-2.1
RIZ	Raoul Island	3.45	2	P	Pn	03 46 36.3	-2.2
RIZ				S	Sn	03 47 14.6	-3.6
MXZ	Matakaoa Point	5.70	211	Pn	Pn	03 47 06.7	-2.6
MXZ	Matakaoa Point	5.70	211	P	Pn	03 47 06.7	-2.6
MXZ	Matakaoa Point	5.70	211	P	Pn	03 47 06.1	-3.2
MXZ				S	Sn	03 48 09.6	-3.8
WMGZ	Waiomatatini S	5.87	209	P	Pn	03 47 09.6	-2.1
WMGZ				S	Sn	03 48 16.8	-0.9
HAZ	Te Kaha	6.09	213	P	Pn	03 47 12.4	-2.3
HAZ				S	Sn	03 48 22.2	-0.9
PUZ	Puketiti	6.15	208	P	Pn	03 47 12.4	-3.1
PUZ				S	Sn	03 48 21.7	-3.0
RUGZ	Raukumara Rang	6.31	213	P	Pn	03 47 14.9	-2.9
RUGZ				S	Sn	03 48 27.3	-1.3
TWGZ	Tauwhareparae	6.35	210	P	Pn	03 47 16.1	-2.2
TWGZ				S	Sn	03 48 28.3	-1.4
GRZ	Great Barrier	6.43	235	P	Pn	03 47 25.2	+5.8
CNGZ	Carnagh Statio	6.52	207	P	Pn	03 47 18.1	-2.5
CNGZ				S	Sn	03 48 32.6	-1.2
WHRZ	Whale Island	6.56	217	P	Pn	03 47 21.4	+0.3
TKGZ	Te Karaka	6.63	209	P	Pn	03 47 21.6	-0.5
MWZ	Matawai	6.68	212	P	Pn	03 47 20.2	-2.7
URZ	Urewera	6.81	214	Pn	Pn	03 47 21.5	-3.1
	3.3nm,0.3s,baz=39,slow=1.6,SNR=31						
URZ				Sn	Sn	03 48 37.3	-3.4
	9.9nm,0.3s,baz=178,slow=19,SNR=8.6						
URZ	Urewera	6.81	214	P	Pn	03 47 21.3	-3.2
URZ	Urewera	6.81	214	P	Pn	03 47 20.7	-3.8
RIGZ	Rimuhau	6.89	209	P	Pn	03 47 24.5	-1.2
WCZ	Waipu Caves	7.08	241	P	Pn	03 47 31.7	+3.4
SNGZ	Shannon Statio	7.13	211	P	Pn	03 47 26.6	-2.4
RTZ	Ruatahuna	7.15	213	Pn	Pn	03 47 26.9	-2.4
RTZ	Ruatahuna	7.15	213	P	Pn	03 47 27.3	-2.1
TOZ	Tahuroa Road	7.29	225		Pn	03 47 30.5	-0.6
OUZ	Omahuta	7.39	248	P	Pn	03 47 34.5	+1.9
OUZ	Omahuta	7.39	248	P	Pn	03 47 34.9	+2.3
BKZ	Black Stump Fm	7.82	213		Pn	03 47 35.5	-3.1
BKZ	Black Stump Fm	7.82	213	P	Pn	03 47 35.8	-2.7
BKZ	Black Stump Fm	7.82	213	P	Pn	03 47 35.5	-3.1
BFZ	Birch Farm	9.19	208	P	Pn	03 47 54.5	-2.7
RPZ	Rata Peaks	13.93	215	Pn	Pn	03 48 57.0	-5.0
	1.0nm,0.3s,baz=328,slow=15,SNR=2.1						
RPZ				Sn	Sn	03 51 20.4	-15
	1.1nm,0.3s,baz=42,slow=21,SNR=5.6						
MSVF	Nonsavu	15.32	346	LR	LR	03 54 23.4	
	comp=Z,352nm,18.9s,baz=150,slow=35						
PINNC	Pines Island,	16.31	304	Pn	Pn	03 49 32.6	-1.0
PINNC				IAmb	IAmb	03 49 39.7	
	comp=Z,39nm,1.0s						
DZM	Mont Dzumac	17.36	304	Pn	Pn	03 49 45.4	-1.6
DZM	Mont Dzumac	17.36	304	Pn	Pn	03 49 45.4	-1.6
	comp=Z,0.2nm,0.3s,baz=115,slow=14,SNR=5.8						
DZM				LR	LR	03 55 19.4	
	comp=Z,797nm,18.3s,baz=194,slow=34						
RAR	Rarotonga	19.87	59	LR	LR	03 58 47.2	
	comp=Z,96nm,18.2s,baz=236,slow=39						
EIDS	Eidsvold	27.91	277	P	P	03 51 33.8	-0.2
EIDS				IAmb	IAmb	03 51 36.1	
	comp=Z,13nm,1.1s						
PPT	Papeete	29.73	66	LR	LR	04 03 33.1	
	comp=Z,53nm,18.4s,baz=284,slow=36						
STKA	Stephens Creek	33.99	260	LR	LR	04 05 09.3	
	comp=Z,265nm,18.7s,baz=61,slow=34						
CTAO	Charters Tower	34.20	283	P	P	03 52 31.3	+1.7
COEN	Coen	39.93	289	P	P	03 53 18.4	+0.1
COEN				IAmb	IAmb	03 53 35.6	
	comp=Z,30nm,1.3s						
ASAR	Alice Springs	43.01	269	P	P	03 53 42.3	-1.1
ASAR	Alice Springs	43.01	269	P	P	03 53 42.5	-1.0
	comp=Z,5.0nm,0.6s,baz=104,slow=7.4,SNR=64						
	comp=Z,5.0nm,0.6s						
WR8	Warramunga Arr	44.06	275		P	03 53 51.0	-1.0
WR8				IAmb	IAmb	03 53 52.8	
	comp=Z,8.0nm,0.8s						
WRA	Warramunga Arr	44.20	275		P	03 53 52.1	-1.0
WRA	Warramunga Arr	44.20	275	P	P	03 53 52.0	-1.1
	comp=Z,7.4nm,0.4s,baz=115,slow=7.7,SNR=70						
WRA				LR	LR	04 10 50.5	
	comp=Z,154nm,18.4s,baz=148,slow=34						
	comp=Z,7.4nm,0.4s						
WB0	Warramunga Arr	44.23	275		P	03 53 52.3	-1.0
VNDA	Vanda	45.80	186	P	P	03 54 09.3	+4.3
	comp=Z,0.3nm,0.5s,baz=28,slow=5.4,SNR=3.0						
	comp=Z,0.3nm,0.5s						
JAY	Jayapura	48.96	299	LR	LR	04 13 00.9	
	comp=Z,70nm,20.1s,baz=344,slow=34						
MTN	Manton Dam	50.35	281	P	P	03 54 40.2	-0.7
KNRA	Kununurra	50.89	276	P	P	03 54 45.0	0.0
KNRA				IAmb	IAmb	03 54 51.1	
	comp=Z,19nm,1.5s						
FITZ	Fitzroy Crossi	52.36	272	P	P	03 54 54.9	-1.1
CASY	Casey	53.10	209	P	P	03 55 00.5	-0.3
CASY				IAmb	IAmb	03 55 03.6	
	comp=Z,4.8nm,0.8s						
NWAO	Narrogin (SRO)	53.59	251	LR	LR	04 14 55.5	
	comp=Z,42nm,19.8s,baz=102,slow=33						
QSPA	South Pole Qui	57.41	180	P	P	03 55 33.0	+0.9
QSPA				IAmb	IAmb	03 55 51.1	
	comp=Z,5.8nm,0.8s						
QSPA	South Pole Qui	57.41	180	P	P	03 55 35.7	+3.6
	comp=Z,0.9nm,0.9s,baz=248,slow=0.8,SNR=30						
	comp=Z,0.9nm,0.9s						
BELA	Belgrano 2	67.51	172	P	P	03 56 48.0	+8.8
BELA				IAmb	IAmb	03 57 06.1	
	comp=Z,5.0nm,1.1s						
TROLL	Troll, Antarti	75.57	180	⇓P	P	03 57 33.7	+5.8
	comp=Z,31nm,0.6s						
SNAA	Sanae	75.86	178	⇓P	P	03 57 33.2	+3.7
	comp=Z,13nm,0.7s						
SNAA	Sanae	75.86	178	P	P	03 57 30.9	+1.4
SNAA				IAmb	IAmb	03 57 41.7	
	comp=Z,3.8nm,0.9s						
SNAA	Sanae	75.86	178	P	P	03 57 33.0	+3.5
	comp=Z,0.8nm,0.9s,baz=179,slow=8.7,SNR=14						
	comp=Z,0.8nm,0.9s						
VNA3	Neumayer Olymp	76.01	176	⇓P	P	03 57 31.9	+1.5
	comp=Z,2.1nm,0.6s						
VNA2	Neumayer--Watz	76.44	177	⇓P	P	03 57 34.7	+1.9
	comp=Z,2.3nm,0.6s,baz=169,slow=5.5						
VNA1	Neumayer--Stat	76.67	177	⇓P	P	03 57 39.9	+5.9
	comp=Z,2.0nm,0.7s						
JOW	Kunigami	78.19	313	LR	LR	04 27 09.4	
	comp=Z,376nm,21.3s,baz=338,slow=32						
H03S2	Juan Fernandez	79.22	123	T	T	05 26 13.3	
	baz=243,slow=75,SNR=13						
H03S1	Juan Fernandez	79.23	123	T	T	05 26 15.6	
	baz=243,slow=75,SNR=10						
H03S3	Juan Fernandez	79.24	123	T	T	05 26 14.1	
	baz=243,slow=75,SNR=11						
NVAR	Mina Array Bea	89.95	43	P	P	03 58 46.1	+3.1
	comp=Z,0.3nm,0.5s,baz=193,slow=4.0,SNR=2.7						
	comp=Z,0.3nm,0.5s						
KURBB	Kurchatov Arra	122.64	313	PKP	PKiKP	04 04 38.0	-0.9
	comp=Z,0.9nm,0.5s,baz=118,slow=1.9,SNR=8.5						

BVAR	Borovoye Array	128.02	315	PKP	PKiKP	04 04 50.0	+0.5
	comp=Z,1.4nm,0.5s,baz=256,slow=0.6,SNR=7.4						
ARCES	ARCESS Array B	140.83	347	PKP	PKPdf	04 05 11.3	-1.0
	comp=Z,4.7nm,1.2s,baz=44,slow=3.7,SNR=4.5						
KBZ	Khabaz	146.32	301	PKPbc	PKPbc	04 05 23.1	-0.9
	comp=Z,0.9nm,0.4s,baz=126,slow=8.7,SNR=3.5						
FINES	FINESS Array B	147.29	339	PKPbc	PKPab	04 05 27.1	-0.9
	comp=Z,12nm,0.7s,baz=47,slow=4.0,SNR=32						
NB2	NORSAR Subarra	151.02	351	PKP	PKiKP	04 05 36.7	+0.4
	comp=Z,2.3nm,0.7s,baz=16,slow=4.1						
NOA	NORSAR Array B	151.02	351	PKPbc	PKiKP	04 05 35.6	-0.7
	comp=Z,1.0nm,0.8s,baz=19,slow=4.7,SNR=8.5						
HFS	Hagfors	151.49	348	PKPbc	PKiKP	04 05 37.5	+0.3
	comp=Z,4.2nm,0.7s,baz=57,slow=5.5,SNR=12						
NACGM	Naroch	151.76	329	⇓*i*PKiKP	PKiKP	04 05 37.9	+0.1
	comp=Z,9.0nm,0.8s,baz=47						
MMAI	Mount Meron Ar	151.97	280	PKPbc	PKiKP	04 05 39.9	+0.7
	comp=Z,4.1nm,0.6s,baz=190,slow=3.4,SNR=8.3						
AKASG	Malin Array Be	153.08	320	PKPbc	PKiKP	04 05 41.4	+0.6
	comp=Z,1.3nm,0.6s,baz=63,slow=2.6,SNR=8.2						
BRTR	Keskin Array B	153.60	294	PKPbc	PKiKP	04 05 42.9	+0.4
	comp=Z,1.9nm,0.5s,baz=154,slow=4.4,SNR=15						
GERES	GERESS Array B	161.63	335	PKPab	PKPab	04 06 28.5	-0.7
	comp=Z,0.2nm,0.3s,baz=359,slow=5.3,SNR=4.2						

RSNC 18 03:55:25.5±0.5**,2°N**±4°×**8°4W**±°**,h0^{km},M4.5,mB5.1, mb4.4,ML3.4,MLv4.5,Mw(mB)4.5,Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FLF1	Flavio Alfaro-	5.05	116	P	Pn	03 56 42.2	-0.4
	0.4nm132nm,1.2s						
FLF1				S	Sn	03 57 41.2	-0.6
	0.4nm132nm,1.2s						
PAC1	Pacto, Paraso	5.82	106	P	Pn	03 56 51.9	-1.4
PAC1				S	Sn	03 58 01.2	+0.4
OTAV	Otavalo	6.15	105	P	Pn	03 56 56.8	-1.3
	17nm,1.1s						
OTAV				S	Sn	03 58 08.6	-0.9
	17nm,1.1s						
GR1C	Gorgona, Isla	6.32	80	P	Pn	03 56 59.3	-0.7
GR1C				S	Sn	03 58 09.5	-3.5
BBAC	Balboa, Cauca	7.14	89	P	Pn	03 57 11.9	+0.4
	588nm12nm,0.7s						
BBAC				S	Sn	03 58 35.1	+1.6
	588nm12nm,0.7s						
MALC	Bahia Malaga	7.36	73	P	Pn	03 57 15.0	+0.6
MALC				S	Sn	03 58 38.2	-0.5
MCRA	Macar, Loja	7.61	144	P	Pn	03 57 16.2	-1.6
	10nm,0.7s						
MCRA				S	Sn	03 58 39.8	-5.1
	10nm,0.7s						
POPC	Popayan, Colom	7.74	85	P	Pn	03 57 19.6	-0.1
	15nm,0.8s						
POPC				S	Sn	03 58 46.5	-1.8
	15nm,0.8s						
JAMC	Jamundi, Valle	7.83	80	P	Pn	03 57 20.9	0.0
	10nm,1.2s						
JAMC				S	Sn	03 58 49.7	-0.7
	10nm,1.2s						
YOTC	Yotoco, Valle	8.31	75	P	Pn	03 57 26.8	-0.6
	11nm,0.7s						
YOTC				S	Sn	03 59 01.8	-0.3
	11nm,0.7s						
JTS	Las Juntas de	8.39	356	P	Pn	03 57 23.8	-4.8
	12nm,0.8s						
JTS				S	Sn	03 58 52.5	-12
	12nm,0.8s						
PLMC	San Jos del P	8.64	69	P	Pn	03 57 31.6	-0.4
	889nm21nm,0.8s						
FLOC	Florencia	8.74	92	P	Pn	03 57 34.7	+1.4
	18nm,1.2s						
CBOC	Ciudad Bolivar	9.26	64	P	Pn	03 57 41.3	+0.8
	34nm,1.2s						
ANIL	Santa Ana	9.35	74	P	Pn	03 57 45.3	+3.4
ORTC	Ortega, Tolima	9.36	77	P	Pn	03 57 43.8	+2.0
	437nm48nm,1.2s						
GUY2C	Guyana, Caldas	9.61	69	P	Pn	03 57 46.3	+0.7
	20nm,0.7s						
DBBC	Dabeiba	9.63	58	P	Pn	03 57 48.4	+2.8
APAC	Apartado, Choc	9.82	52	P	Pn	03 57 50.8	+2.6
NORC	Norcasia	10.19	69	P	Pn	03 57 54.4	+1.2

IDC 18 04:00:27.5±8.3**,21°.52S**×**148°.67E,h0^{km},mbtmp3.4**/3**, ML3.3**/3**,Error ellipse: s-maj=86.5km s-min=48.8km az=52.0,Queensland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	12.09	210	Pn	Pn	04 03 21.6	+0.4
	0.1nm,0.3s,baz=27,slow=16,SNR=3.3						
	4.2nm,1.0s						
WRA	Warramunga Arr	13.50	274	Pn	Pn	04 03 42.0	+1.5
	0.1nm,0.3s,baz=99,slow=13,SNR=8.9						
WRA				Lg	Lg	04 07 35.0	
	0.1nm,0.3s,baz=96,slow=29,SNR=4.6						
	0.3nm,0.6s						
ASAR	Alice Springs	13.80	258	Pn	Pn	04 03 42.8	-1.9
	0.1nm,0.3s,baz=88,slow=12,SNR=2.1						
ASAR				Sn	Sn	04 06 12.8	-5.9
	0.1nm,0.3s,baz=88,slow=22,SNR=4.2						
ASAR				Lg	Lg	04 07 41.7	
	0.1nm,0.3s,baz=92,slow=30,SNR=4.5						
	0.3nm,0.4s						
I22FR	PORTLAGUERRE I	16.89	96	I	I	05 33 50.0	
	baz=267,slow=319,SNR=1.8						

RSNC 18 04:02:56.7±0.0**,7°N**±1°×**7°3W**±°**,h148^{km}**±2^{km}**,M2.6,ML2.5, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.24	185	P	Pn	04 03 16.4	-0.8
BARC				S	Sn	04 03 32.4	-0.3
BRJC	Barrancabermej	0.60	284	P	Pn	04 03 18.1	-0.2
BRJC				S	Sn	04 03 35.5	+0.7
PAMC	Pamplona, Colo	0.68	42	P	Pn	04 03 19.5	0.0
PAMC				S	Sn	04 03 36.4	-0.4
RUSC	La Rusia	0.94	175	P	Pn	04 03 20.5	-0.8
RUSC				S	Sn	04 03 39.2	-0.9
PTBC	PUERTO BERRIO,	1.32	257	P	Pn	04 03 23.2	-1.1
PTBC				S	Sn	04 03 44.5	-0.8
OCAC	Ocana	1.41	354	P	Pn	04 03 25.0	-0.4
OCAC				S	Sn	04 03 46.8	-0.5
TAMC	Tame, Arauca	1.42	106	P	Pn	04 03 24.9	-0.4
TAMC				S	Sn	04 03 46.7	-0.4
SPBC	San Pablo de B	1.48	218	P	Pn	04 03 25.4	-0.6
SPBC				S	Sn	04 03 47.7	-0.8
ZARC	Zaragoza, Cauc	1.81	291	P	Pn	04 03 29.1	-0.4
ZARC				S	Sn	04 03 54.6	-0.1
NORC	Norcasia	2.11	234	P	Pn	04 03 26.1	-7.0
NORC				S	Sn	04 04 00.2	-0.9
CHIC	Chingaza	2.26	195	P	Pn	04 03 34.4	-0.8
CHIC				S	Sn	04 04 02.5	-2.3
ROSC	El Rosal	2.29	210	P	Pn	04 03 36.5	+0.9
ROSC				S	Sn	04 04 06.7	+1.3
UREC	San Jos de Ur	2.53	291	P	Pn	04 03 36.8	-1.3
UREC				S	Sn	04 04 07.1	-2.8
GUY2C	Guyana, Caldas	2.71	234	P	Pn	04 03 41.8	+1.0
GUY2C				S	Sn	04 04 13.5	-1.3
VILC	Villavicencio,	2.75	191	P	Pn	04 03 40.4	-0.6
CBOC	Ciudad Bolivar	2.99	251	P	Pn	04 03 44.7	+0.6
PRAC	Prado	3.54	209	P	Pn	04 03 50.2	-0.8
ORTC	Ortega, Tolima	3.57	216	P	Pn	04 03 51.0	-0.4

RSNC 18 04:03:53.0±0.0**,5°N**±1°×**7°4W**±°**,h148^{km}**±2^{km}**,M3.0,mb3.8, ML2.8,Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPBC	San Pablo de B	0.47	318	P	Pn	04 04 14.0	-0.1
SPBC				S	Sn	04 04 30.3	+0.1
CHIC	Chingaza	0.67	178	P	Pn	04 04 15.3	-0.3
CHIC				S	Sn	04 04 31.5	-1.3
ROSC	El Rosal	0.73	231	P	Pn	04 04 16.7	+0.7
ROSC				S	Sn	04 04 35.2	+1.8
CVER	Cruz Verde, Cu	0.84	203	P	Pn	04 04 17.1	+0.2
CVER				S	Sn	04 04 34.4	-0.6
RUSC	La Rusia	0.89	48	P	Pn	04 04 17.2	0.0
RUSC				S	Sn	04 04 35.6	0.0
NORC	Norcasia	1.15	283	P	Pn	04 04 18.5	-0.4
NORC				S	Sn	04 04 37.5	-1.2
VILC	Villavicencio,	1.18	177	P	Pn	04 04 18.6	-0.8
VILC				S	Sn	04 04 37.3	-2.3
BARC	Barichara	1.40	24	P	Pn	04 04 21.2	-0.5
BARC				S	Sn	04 04 42.5	-1.1
PTBC	PUERTO BERRIO,	1.42	330	P	Pn	04 04 20.7	-0.9
PTBC				S	Sn	04 04 43.0	-0.5
GUY2C	Guyana, Caldas	1.61	267	P	Pn	04 04 23.6	-0.5
GUY2C				S	Sn	04 04 47.5	-0.3
BRJC	Barrancabermej	1.66	0	P	Pn	04 04 24.1	-0.1
BRJC				S	Sn	04 04 48.5	+0.3
NIZA	Niza - Manizal	1.73	262	P	Pn	04 04 26.4	+1.2
NIZA				S	Sn	04 04 51.5	+1.6
ANIL	Santa Ana	1.83	244	P	Pn	04 04 26.0	-0.4
ANIL				S	Sn	04 04 51.5	-0.4
PRAC	Prado	1.94	216	P	Pn	04 04 26.9	-0.5
PRAC				S	Sn	04 04 52.7	-1.1
ORTC	Ortega, Tolima	2.03	227	P	Pn	04 04 27.6	-0.9
ORTC				S	Sn	04 04 54.5	-1.2
URMC	La Uribe, Meta	2.13	197	P	Pn	04 04 29.7	0.0
URMC				S	Sn	04 04 57.6	-0.3
TAMC	Tame, Arauca	2.25	60	P	Pn	04 04 30.8	-0.3
TAMC				S	Sn	04 04 58.6	-1.7
PAMC	Pamplona, Colo	2.28	27	P	Pn	04 04 32.4	+0.6
PAMC				S	Sn	04 05 01.5	-0.2
CBOC	Ciudad Bolivar	2.32	284	P	Pn	04 04 32.0	0.0
CBOC				S	Sn	04 05 01.5	-0.5
ZARC	Zaragoza, Cauc	2.44	333	P	Pn	04 04 31.7	-1.6
ZARC				S	Sn	04 05 02.5	-1.9
PLMC	San Jos del P	2.55	261	P	Pn	04 04 35.1	+0.3
PLMC				S	Sn	04 05 06.3	-0.6
YOTC	Yotoco, Valle	2.90	243	P	Pn	04 04 38.1	-1.0
OCAC	Ocana	2.95	8	P	Pn	04 04 39.7	-0.1
OCAC				S	Sn	04 05 15.7	-0.4
GUVC	San Jose del G	2.96	158	P	Pn	04 04 39.9	+0.1
GUVC				S	Sn	04 05 13.1	-2.9
DBBC	Dabeiba	2.98	305	P	Pn	04 04 40.2	0.0
DBBC				S	Sn	04 05 16.6	0.0
UREC	San Jos de Ur	3.01	324	P	Pn	04 04 38.2	-2.3
UREC				S	Sn	04 05 14.3	-2.9
MACC	Macarena, Meta	3.13	182	P	Pn	04 04 39.8	-2.3
MACC				S	Sn	04 05 16.1	-4.0
GARC	Garzon, Huila	3.55	209	P	Pn	04 04 46.0	-1.6
MALC	Bahia Malaga	3.79	250	P	Pn	04 04 51.1	+0.5
MALC				S	Sn	04 05 35.9	+0.7
POPC	Popayan, Colom	4.00	227	P	Pn	04 04 53.0	-0.5
FLOC	Florencia	4.15	207	P	Pn	04 04 54.2	-1.1
FLOC				S	Sn	04 05 43.3	-0.4
ARGC	Ariguani, Magd	4.55	354	P	Pn	04 04 59.6	-0.9
ARGC				S	Sn	04 05 51.4	-1.8
SJCC	San Jacinto, C	4.78	343	P	Pn	04 05 00.7	-2.9
SJCC				S	Sn	04 05 52.8	-5.8
CRJC	Cerrejon, Guaj	5.75	9	P	Pn	04 05 13.8	-2.7
	14nm,0.9s						
CRJC				S	Sn	04 06 15.4	-6.3
	14nm,0.9s						
URIC	Uribia, Colomb	6.59	15	P	Pn	04 05 25.4	-2.3
URIC				S	Sn	04 06 34.9	-6.9
SGC2	Sao Gabriel da	8.66	128	P	Pn	04 05 50.3	-5.0
SGC2				S	Sn	04 07 22.3	-9.4

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*NOU **18** 04:22:14.8, 39°.66S×176°.88E, h15^{km}, MLv3.6/9, North Island, New Zealand*

*WEL **18** 04:22:16.7±0.5, 40°S±2°×17°7E±°, h22^{km}±5^{km}, M3.6/24, ML4.0/13, MLv3.6/24, Error ellipse: s-maj=3.9km s-min=2.9km az=97.0, confirmed*

ISC 18 04:22:17.2±1.0**,39°.62S**±0°.02×**176°.80E**±0°.03**,h33^{km}**±3^{km}**, n82,**σ**0^{s}.72**/93**,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAHZ	Kahuranaki	0.18	161	P	Pb	04 22 23.6	-0.1
KAHZ				S	Sb	04 22 29.6	+1.5
MCHZ	McNeill Hill	0.19	335	P	Pb	04 22 22.9	-0.8
CKHZ	Cape Kidnapper	0.22	101	P	Pb	04 22 23.9	-0.1
CKHZ				S	Sb	04 22 30.0	+1.4
KRHZ	Kereru	0.33	266	P	Pb	04 22 24.7	-0.6
KRHZ				S	Sb	04 22 30.8	-0.2
KWHZ	Kaweka Forest	0.35	304	P	Pb	04 22 24.8	-0.9
KWHZ				S	Sb	04 22 31.1	-0.3
ARHZ	Aropaoanui	0.39	23	P	Pb	04 22 25.8	-0.3
ARHZ				S	Sn	04 22 33.0	+0.4
PXZ	Pawanui	0.41	173	P	Pb	04 22 26.9	+0.4
PXZ				S	Sn	04 22 35.3	+1.9
BKZ	Black Stump Fm	0.51	332	P	Pb	04 22 27.2	-0.8
BKZ	Black Stump Fm	0.51	332	P	Pb	04 22 27.2	-0.8
BKZ				S	Sb	04 22 35.1	-0.3
NMHZ	Naumai	0.52	1	P	Pb	04 22 27.8	-0.3
NMHZ				S	Sn	04 22 36.3	+0.2
WPHZ	Waipukurau	0.52	212	P	Pb	04 22 28.5	+0.4
PNHZ	Pukenui	0.55	237	P	Pb	04 22 28.4	-0.2
WHHZ	Waihua	0.64	32	P	Pb	04 22 29.9	-0.1
PRHZ	Porangahau	0.66	191	P	Pb	04 22 30.3	-0.1
RAHZ	Arahi	0.74	18	P	Pb	04 22 31.1	-0.5
RAHZ				S	Sn	04 22 42.1	+0.8
MTHZ	Maungataniwha	0.77	2	P	Pb	04 22 31.3	-0.8
MTHZ				S	Sn	04 22 42.7	+0.6
TSZ	Takapari Road	0.78	235	P	Pb	04 22 31.8	-0.6
TSZ				S	Sn	04 22 43.1	+0.6
DVHZ	Dannevirke	0.84	215	P	Pb	04 22 32.3	-1.0
MOVZ	Moawhango	0.84	284	P	Pb	04 22 32.6	-0.7
MRHZ	Matea Rd	0.84	339	P	Pb	04 22 32.5	-0.9
ANWZ	Angora Road	0.88	196	P	Pb	04 22 33.1	-0.9
KNZ	Kokohu	0.90	49	P	Pb	04 22 34.4	0.0
HATZ	Hinemaiaia	0.91	323	P	Pb	04 22 33.9	-0.7
SNGZ	Shannon Statio	0.94	27	P	Pb	04 22 33.7	-1.2
TUVZ	Tukino	0.95	291	P	Pb	04 22 35.1	-0.3
RITZ	Rihia Road	0.97	311	P	Pn	04 22 35.4	+0.9
WNVZ	Wahianoa	0.97	287	P	Pb	04 22 35.3	-0.4
MHGZ	Mahia Peninsul	0.98	62	P	Pn	04 22 33.8	-0.7
TMVZ	Te Maari	0.99	300	P	Pb	04 22 35.4	-0.5
OTVZ	Oturere	0.99	297	P	Pb	04 22 35.5	-0.5
SNVZ	South Ngauruho	1.00	295	P	Pb	04 22 35.5	-0.5
WHVZ	Whangaehu Hut	1.00	289	P	Pb	04 22 35.6	-0.5
RTZ	Ruatahuna	1.01	8	P	Pn	04 22 35.0	-0.2
NTVZ	North Tongarir	1.01	300	P	Pn	04 22 35.8	+0.6
MAVZ	Matarangi	1.02	290	P	Pb	04 22 35.8	-0.7
TRVZ	Turoa	1.02	288	P	Pn	04 22 35.9	+0.5
NGZ	Ngauruhoe	1.03	295	P	Pn	04 22 36.0	+0.6
FWVZ	Far West T-bar	1.03	290	P	Pn	04 22 35.9	+0.4
KRVZ	Karewarewa	1.04	300	P	Pn	04 22 36.1	+0.6
NNVZ	North Ngauruho	1.04	298	P	Pn	04 22 36.1	+0.6
MTVZ	Mangateitei	1.05	282	P	Pb	04 22 36.7	-0.2
COVZ	Chateau Observ	1.06	293	P	Pn	04 22 36.3	+0.5
WTVZ	West Tongariro	1.06	298	P	Pn	04 22 36.7	+0.8
KATZ	Kakaramea	1.07	307	P	Pn	04 22 36.5	+0.6
PRGZ	Paritu Road	1.09	51	P	Pn	04 22 35.9	-0.2
RATZ	Rangitukua	1.10	313	P	Pn	04 22 36.9	+0.6
POWZ	Post Office Ro	1.11	225	P	Pn	04 22 36.2	-0.2
ALRZ	Allen Road	1.11	341	P	Pn	04 22 36.5	+0.1
PRWZ	Pori Road	1.13	214	P	Pn	04 22 36.5	-0.2
MUGZ	Murupara	1.14	359	P	Pn	04 22 36.8	0.0
BFZ	Birch Farm	1.14	202	P	Pn	04 22 36.1	-0.8
BFZ	Birch Farm	1.14	202	P	Pn	04 22 36.1	-0.8
WHTZ	Whakaora	1.16	325	P	Pn	04 22 37.5	+0.5
PRRZ	Plateau Road	1.16	344	P	Pn	04 22 37.5	+0.4
PKVZ	Pokaka	1.17	286	P	Pn	04 22 37.8	+0.5
RIGZ	Rimuhau	1.18	40	P	Pn	04 22 36.8	-0.6
TWVZ	Taurewa	1.19	297	P	Pn	04 22 37.9	+0.3
WPRZ	Whakapapatarin	1.20	335	P	Pn	04 22 37.1	-0.6
RAGZ	Rawiri	1.22	23	P	Pn	04 22 37.6	-0.4
WATZ	Wairara	1.23	317	P	Pn	04 22 38.1	0.0
HRRZ	Handcock Road	1.29	342	P	Pn	04 22 39.9	+1.0
RRRZ	Republican Roa	1.30	350	P	Pn	04 22 38.7	-0.3
TIWZ	Tintock	1.35	211	P	Pn	04 22 39.5	-0.2
KUTZ	Kaahu Road	1.36	326	P	Pn	04 22 40.1	+0.2
HSRZ	Hossack Road	1.38	341	P	Pn	04 22 40.4	+0.4
GRRZ	Galatos Road	1.38	337	P	Pn	04 22 40.5	+0.4
URZ	Urewera	1.38	10	P	Pn	04 22 39.4	-0.7
URZ	Urewera	1.38	10	P	Pn	04 22 39.4	-0.7
MRZ	Mangatainoka R	1.40	222	P	Pn	04 22 39.5	-0.9
TARZ	Mount Tarawera	1.40	350	P	Pn	04 22 40.5	0.0
MWZ	Matawai	1.40	24	P	Pn	04 22 39.6	-0.8
MKRZ	Makatiti	1.50	350	P	Pb	04 22 45.0	+0.5
HOWZ	Holdsworth Sta	1.61	217	P	Pn	04 22 42.1	-1.3
TMWZ	Te Maipa	1.64	205	P	Pn	04 22 42.3	-1.4
WHRZ	Whale Island	1.77	5	P	Pn	04 22 45.0	-0.4
RUGZ	Raukumara Rang	1.79	23	P	Pn	04 22 45.0	-0.8
MTW	Mount Morrison	1.83	212	P	Pn	04 22 44.6	-1.7
KHEZ	Kahui Hut	2.18	278	P	Pn	04 22 52.8	+1.6
SNZO	South Karori	2.33	223	P	Pn	04 22 52.6	-0.5
MXZ	Matakaoa Point	2.37	30	P	Pn	04 22 53.1	-0.6
QRZ	Quartz Range	3.48	248	P	Pn	04 23 07.5	-1.5
KHZ	Kahutara	3.73	220	P	Pn	04 23 11.5	-0.8

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*IDC **18** 04:23:47.9±0.4, 31°.07S×177°.56W, h0^{km}, mb4.6/17, mbtmp4.6/18, ML5.4/1, MS4.8/51, Error ellipse: s-maj=19.0km s-min=15.9km az=83.0*

*NEIC **18** 04:23:50.2±1.4, 31°.07S±0°.09×177°.61W±0°.07, h10^{km}±1^{km}, mb5.1/79, Error ellipse: s-maj=17.4km s-min=4.2km az=34.0*

*MOS **18** 04:23:52.3±0.9, 31°.08S×177°.65W, h33^{km}, mb5.4/22, MS5.1/6, Error ellipse: s-maj=13.8km s-min=9.3km az=102.4*

*GCMT **18** 04:23:55.2±0.1, 31°.17S±0°.01×177°.27W±0°.01, h14^{km}, MW5.2/128, Moment Tensor Solution. s91,c139; s128,c207; Duration: 1^{s}.0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.57±.02; $M_{\theta\theta}$0.04±.01; $M_{\phi\phi}$-0.61±.01; $M_{r\theta}$0.17±.03; $M_{\theta\phi}$-0.14±.01; $M_{\phi r}$0.61±.04; Best double couple: $M_0$0.87900×10^{17} NP1:ϕ_s187.00000°,δ22.00000°, λ83.00000°. NP2:ϕ_s15.00000°,δ68.00000°,λ93.00000°. Principal axes: T 0.8460, Plg67.0000°, Azm289.0000°; N 0.0670, Plg2.0000°, Azm194.0000°; P -0.9130, Plg23.0000°, Azm103.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 04:23:49.0±0.3**,31°.21S**±0°.04×**177°.46W**±0°.05**,h10^{km}, n378,**σ**1^{s}.81**/360**,mb5.1**/97**,MS4.9**/71**,11C-16D,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.98	348	P	Pn	04 24 21.2	-1.4
GLKZ				S	Sn	04 24 43.6	-3.9
RAO	Raoul Island	1.99	348		Pn	04 24 21.2	-1.5
RAO	Raoul Island	1.99	348	P	Pn	04 24 21.2	-1.5
RIZ	Raoul Island	2.00	348	P	Pn	04 24 19.8	-3.0
RIZ				S	Sn	04 24 44.8	-3.1
MXZ	Matakaoa Point	7.24	208	Pn	Pn	04 25 32.5	-2.3
MXZ	Matakaoa Point	7.24	208	P	Pn	04 25 32.1	-2.7
MXZ				S	Sn	04 26 53.2	-3.8
WMGZ	Waiomatatini S	7.42	206	P	Pn	04 25 34.8	-2.5
WMGZ				S	Sn	04 26 58.8	-2.7
PKGZ	Pakihiroa	7.59	208	P	Pn	04 25 37.7	-2.0
PKGZ				S	Sn	04 27 03.5	-2.3
HAZ	Te Kaha	7.62	210	P	Pn	04 25 38.0	-2.0
HAZ				S	Sn	04 27 03.5	-2.9
PUZ	Puketiti	7.70	206	P	Pn	04 25 36.9	-4.3
PUZ				S	Sn	04 27 05.2	-3.3
RUGZ	Raukumara Rang	7.84	209	P	Pn	04 25 40.7	-2.5
RUGZ				S	Sn	04 27 09.1	-2.9
TWGZ	Tauwhareparae	7.90	207	S	Sn	04 27 10.3	-3.0
KUZ	Kuaotunu	7.91	224	P	Pn	04 25 49.4	+5.4
WHRZ	Whale Island	8.06	213	P	Pn	04 25 44.7	-1.4
WHRZ				S	Sn	04 27 16.0	-1.4
CNGZ	Carnagh Statio	8.08	205	P	Pn	04 25 43.1	-3.3
CNGZ				S	Sn	04 27 15.6	-2.2
TKGZ	Te Karaka	8.18	207	P	Pn	04 25 45.2	-2.5
TKGZ				S	Sn	04 27 15.8	-4.3
MWZ	Matawai	8.21	209	P	Pn	04 25 45.0	-3.2
MWZ				S	Sn	04 27 17.0	-4.2
WCZ	Waipu Caves	8.30	233	P	Pn	04 25 55.0	+5.6
URZ	Urewera	8.33	211	Pn	Pn	04 25 46.0	-3.8
	3.9nm,0.3s,baz=358,slow=5.6,SNR=6.8						
URZ				Sn	Sn	04 27 19.3	-4.6
	20nm,0.3s,baz=256,slow=23,SNR=14						
URZ	Urewera	8.33	211	P	Pn	04 25 46.4	-3.3
RAGZ	Rawiri	8.40	209	P	Pn	04 25 48.8	-2.0
RIGZ	Rimuhau	8.44	206	P	Pn	04 25 50.1	-1.3
OUZ	Omahuta	8.49	240	P	Pn	04 25 55.9	+3.9
PRGZ	Paritu Road	8.59	205	P	Pn	04 25 49.7	-3.7
SNGZ	Shannon Statio	8.67	208	P	Pn	04 25 52.3	-2.2
RTZ	Ruatahuna	8.68	210		Pn	04 25 51.8	-2.9
RTZ	Ruatahuna	8.68	210	P	Pn	04 25 53.6	-1.1
TOZ	Tahuroa Road	8.72	220		Pn	04 25 56.0	+0.9
MHGZ	Mahia Peninsul	8.78	204	P	Pn	04 25 52.0	-4.0
MHGZ				S	Sn	04 27 30.9	-4.2
RAHZ	Arahi	8.89	209	P	Pn	04 25 57.3	-0.3
MTHZ	Maungataniwha	8.94	210	P	Pn	04 25 56.1	-2.1
BKZ	Black Stump Fm	9.35	210	Pn	Pn	04 26 00.2	-3.7
HIZ	Hauiti	9.63	219	Pn	Pn	04 26 08.8	+1.1
BFZ	Birch Farm	10.73	207	Pn	Pn	04 26 19.1	-3.7
MRZ	Mangatainoka R	10.98	209	Pn	Pn	04 26 21.2	-4.9
NNZ	Nelson	12.42	214	Pn	Pn	04 26 44.4	-1.4
CTZ	Chatham Island	12.52	177	Pn	Pn	04 26 44.3	-2.8
NFK	Norfolk Island	12.82	276	P	Pn	04 26 54.3	+3.0
	comp=Z,294nm,1.9s						
THZ	Tophouse	13.06	214		Pn	04 26 53.2	-1.5
KHZ	Kahutara	13.29	210	Pn	Pn	04 26 54.5	-3.2
DSZ	Denniston Nort	13.59	216	Pn	Pn	04 26 59.9	-1.9
NIUE	Niue	13.87	31	Pn	Pn	04 26 57.6	-8.1
NIUE	Niue	13.87	31	P	Pn	04 26 59.5	-6.2
	comp=Z,169nm,1.9s						
NIUE				S	Sn	04 29 21.9	-18
GVZ	Greta Valley S	13.96	210	Pn	Pn	04 27 02.9	-4.0
MSVF	Nonsavu	14.02	342	Pn	Pn	04 26 58.4	-9.5
MSVF	Nonsavu	14.02	342	Pn	Pn	04 27 07.1	-0.8
	comp=Z,0.7nm,0.3s,baz=184,slow=23,SNR=5.3						
MSVF				LR	LR	04 31 05.5	
	comp=Z,3µm,19.5s,baz=172,slow=32						
	comp=Z,7.7nm,0.8s						
MSVF	Nonsavu	14.02	342	⇓*e*P	Pn	04 27 09.5	+1.6
MSVF				pmax	pmax		
	comp=Z,8.0nm,0.8s						
RPZ	Rata Peaks	15.44	213	Pn	Pn	04 27 23.0	-3.8
	comp=Z,4.2nm,0.3s,baz=95,slow=3.0,SNR=6.2						
RPZ				Sn	Sn	04 30 01.9	-16
	comp=Z,2.0nm,0.3s,baz=200,slow=23,SNR=5.8						
PINNC	Pines Island,	15.94	299	Pn	Pn	04 27 31.4	-2.0
LBZ	Lake Benmore	16.35	213	Pn	Pn	04 27 34.6	-4.0
ODZ	Otahua Downs	16.66	211	P	Pn	04 27 38.8	-3.6
ONTNC	Ouen Toro	16.86	298		Pn	04 27 44.3	-1.0
DZM	Mont Dzumac	17.01	298	Pn	Pn	04 27 45.8	-1.4
DZM				IAmb	IAmb	04 27 54.0	
	comp=Z,178nm,1.4s						
DZM	Mont Dzumac	17.01	298	*e*Pn	P	04 27 49.9	+0.9
	comp=Z,299nm,1.5s						
DZM				*e*LR	LR	04 31 43.6	
	comp=Z,9µm,22.9s						
DZM	Mont Dzumac	17.01	298	Pn	P	04 27 48.9	-0.1
	comp=Z,0.4nm,0.3s,baz=123,slow=12,SNR=22						
DZM				LR	LR	04 33 18.9	
	comp=Z,11µm,18.4s,baz=148,slow=34						
WHZ	Wether Hill Ro	18.53	214		P	04 27 59.9	-5.7
RAR	Rarotonga	18.71	62	LR	LR	04 34 53.7	
	comp=Z,1µm,19.5s,baz=244,slow=36						
LHI	Lord Howe Isla	20.05	263	P	Pn	04 28 26.0	+2.0
	comp=Z,135nm,1.4s						
TBI	Tubuai	26.04	79	*e*P	P	04 29 25.6	+3.1
	comp=Z,585nm,31.2s						
TBI				*e*S	S	04 33 51.5	-2.0
	comp=Z,8µm,24.0s						
TBI				*e*LR	LR	04 35 48.6	
	comp=Z,11µm,27.5s						
TBI				*e*LR	LR	04 35 51.5	
	comp=Z,3µm,29.5s						
ARMA	Armidale	26.52	264	P	P	04 29 26.1	-0.9
ARMA				IAmb	IAmb	04 29 44.2	
	comp=Z,109nm,1.8s						
ARMA	Armidale	26.52	264	P	P	04 29 29.7	+2.8
	comp=Z,30nm,1.6s						
CNB	Canberra Magne	27.96	253	P	P	04 29 40.1	+0.2
	comp=Z,20nm,1.3s						
EIDS	Eidsvold	28.25	274		P	04 29 40.9	-1.4
EIDS				IAmb	IAmb	04 29 45.9	
	comp=Z,28nm,1.1s						
EIDS	Eidsvold	28.25	274	P	P	04 29 43.7	+1.4
	comp=Z,29nm,1.1s						
PPT2	Papeete2	28.69	68	*e*P	P	04 29 45.3	-1.1
	comp=Z,55nm,22.2s						
PPT2				*e*LR	LR	04 37 13.6	
	comp=Z,1µm,22.2s						
PPT	Papeete	28.70	68	LR	LR	04 40 26.5	
	comp=Z,1µm,18.2s,baz=246,slow=35						
YNG	Young	28.80	255	P	P	04 29 48.2	+0.9
	comp=Z,25nm,1.2s						
TOO	Toolangi	31.08	248	P	P	04 30 06.7	-0.7
	comp=Z,9.9nm,1.3s						
CMSA	Cobar Meteorol	31.37	260	P	P	04 30 11.4	+1.4

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       comp=Z,43nm,0.9s
QLP   Quilpie            33.74 268   P      P       04 30 31.8 +1.1
       comp=Z,53nm,0.7s
ARPS  Mount Arapiles     34.01 249   P      P       04 30 34.1 +1.0
       comp=Z,35nm,1.1s
CTAO  Charters Tower     34.39 280          P       04 30 35.2  -1.3
CTAO  Charters Tower     34.39 280   P      P       04 30 35.2  -1.3
CTAO                                 pmax   pmax
       comp=Z,43nm,1.0s
STKA  Stephens Creek     34.75 258          P       04 30 39.9 +0.4
STKA  Stephens Creek     34.75 258   P      P       04 30 38.9  -0.6
       comp=Z,118nm,1.0s
STKA  Stephens Creek     34.75 258   P      P       04 30 40.3 +0.8
       comp=Z,11nm,0.7s,baz=97,slow=12,SNR=21
STKA                                 LR     LR      04 44 09.3
       comp=Z,3µm,18.2s,baz=86,slow=35
       comp=Z,11nm,0.7s
HTT   Hallett            36.73 255   P      P       04 30 56.8 +0.2
       comp=Z,9.2nm,1.1s
MTSU  Mount Surprise     36.91 282   P      P       04 30 59.1 +0.9
       comp=Z,19nm,0.9s
BBOO  Buckleboo          39.20 255   P      P       04 31 17.0  -0.3
BBOO                                 IAmb   IAmb    04 32 10.2
       comp=Z,78nm,1.1s
BBOO  Buckleboo          39.20 255   P      P       04 31 16.9  -0.5
       comp=Z,45nm,1.7s
PMG   Port Moresby       39.37 296   LR     LR      04 46 45.1
       comp=Z,1µm,18.0s,baz=136,slow=35
QIS   Mount Isa          39.84 275   P      P       04 31 22.8   0.0
       comp=Z,11nm,0.9s
COEN  Coen               39.94 286   P      P       04 31 23.1  -0.6
COEN  Coen               39.94 286   P      P       04 31 25.1 +1.4
       comp=Z,29nm,0.9s
TAOE  Nuku Hiva Isla     41.21  65  eP      P       04 31 31.0  -3.3
       comp=Z,375nm,29.7s
TAOE                                eS      S       04 37 40.9  -7.3
       comp=Z,303nm,23.4s
TAOE                                eSS     SS      04 40 49.4  -1.9
       comp=Z,243nm,23.4s
TAOE                                eLR     LR      04 42 43.9
       comp=Z,1µm,27.0s
AS17  Alice Springs      43.46 268   P      P       04 31 52.8 +0.2
       comp=Z,33nm,0.7s
AS31  Alice Springs      43.53 268   P      P       04 31 52.7  -0.4
ASAR  Alice Springs      43.53 268   P      P       04 31 52.6  -0.5
ASAR  Alice Springs      43.53 268   P      P       04 31 52.7  -0.4
       comp=Z,12nm,0.8s,baz=104,slow=7.4,SNR=87
ASAR                                 ScP    ScP     04 37 33.0 +0.5
       comp=Z,6.8nm,1.0s,baz=116,slow=3.9,SNR=19
ASAR                                 LR     LR      04 49 38.4
       comp=Z,2µm,18.9s,baz=110,slow=36
       comp=Z,12nm,0.8s
WR0   Warramunga Arr     44.41 273   P      P       04 32 00.2 +0.1
WR8   Warramunga Arr     44.45 273   P      P       04 31 59.8  -0.7
WR8                                  IAmb   IAmb    04 32 14.0
       comp=Z,22nm,0.9s
WB2   Warramunga Arr     44.58 273   P      P       04 32 00.3  -1.3
WB2                                  IAmb   IAmb    04 32 20.6
       comp=Z,26nm,0.9s
WRAB  Tennant Creek      44.59 273d iP      P       04 32 01.3  -0.3
WRAB                                 pmax   pmax
       comp=Z,27nm,1.1s
WRA   Warramunga Arr     44.59 273   P      P       04 32 01.0  -0.6
       comp=Z,13nm,0.7s,baz=111,slow=8.0,SNR=69
WRA                                  ScP    ScP     04 37 38.3 +1.4
       comp=Z,6.9nm,1.2s,baz=114,slow=3.8,SNR=8.9
WRA                                  LR     LR      04 50 27.3
       comp=Z,5µm,18.0s,baz=122,slow=36
       comp=Z,13nm,0.7s
FORT  Forrest            46.29 256   P      P       04 32 13.8  -1.1
       comp=Z,39nm,0.8s
SBA   Scott Base         47.27 184          P       04 32 25.4 +3.5
SBA                                  IAmb   IAmb    04 32 36.6
       comp=Z,41nm,1.4s
SBA   Scott Base         47.27 184   P      P       04 32 25.4 +3.5
SBA                                  pmax   pmax
       comp=Z,41nm,1.5s
VNDA  Vanda              47.34 186   P      P       04 32 24.5 +2.0
VNDA  Vanda              47.34 186   P      P       04 32 25.2 +2.7
       comp=Z,2.5nm,1.1s,baz=10.0,slow=7.4,SNR=3.8
VNDA                                 LR     LR      04 48 44.1
       comp=Z,1µm,20.6s,baz=20,slow=32
       comp=Z,2.5nm,1.1s
JAY   Jayapura           48.68 297   LR     LR      04 53 18.5
       comp=Z,550nm,18.4s,baz=163,slow=36
KDU   Kakadu             49.51 280   P      P       04 32 40.1 +0.1
       comp=Z,18nm,1.5s
MTN   Manton Dam         50.57 279   P      P       04 32 48.3 +0.2
       comp=Z,21nm,0.6s
KMBL  Kambalda           51.23 253   P      P       04 32 51.7  -1.2
       comp=Z,26nm,2.0s
KNRA  Kununurra          51.23 275   P      P       04 32 51.3  -1.8
KNRA  Kununurra          51.23 275   P      P       04 32 53.5 +0.4
       comp=Z,21nm,0.8s
FITZ  Fitzroy Crossi     52.82 270          P       04 33 04.5  -0.4
FITZ  Fitzroy Crossi     52.82 270   P      P       04 33 03.8  -1.1
       comp=Z,4.1nm,1.1s
FITZ  Fitzroy Crossi     52.82 270   LR     LR      04 55 45.9
       comp=Z,3µm,18.3s,baz=121,slow=36
KLBR  Kellerberrin       54.53 251   P      P       04 33 15.8  -1.5
       comp=Z,34nm,1.0s
NWAO  Narrogin (SRO)     54.55 250   LR     LR      04 53 18.4
       comp=Z,627nm,21.1s,baz=98,slow=32
CASY  Casey              54.64 208   P      P       04 33 17.3  -0.3
CASY                                 IAmb   IAmb    04 33 40.4
       comp=Z,33nm,1.2s
MEEK  Meekatharra        55.46 257   P      P       04 33 23.2  -0.9
KIP   Kipapa             55.56  22⇑eP      P       04 33 25.1 +0.5
KIP                                  pmax   pmax
       comp=Z,42nm,1.3s
PSAA1 Pilbara Seismi     56.34 264   P      P       04 33 29.7  -0.8
       comp=Z,22nm,1.4s
PSAC1 Pilbara Seismi     56.38 264   P      P       04 33 29.4  -1.3
       comp=Z,29nm,2.3s
MORW  Morawa             56.75 254   P      P       04 33 33.0  -0.2
       comp=Z,22nm,2.3s
GUMO  Guam               57.38 315   LR     LR      04 56 41.5
       comp=Z,802nm,18.9s,baz=128,slow=34
BATI  Baumata            58.21 278   LR     LR      04 59 37.0
       comp=Z,4µm,18.4s,baz=144,slow=37
QSPA  South Pole Qui     58.90 180          P       04 33 49.6 +1.6
QSPA  South Pole Qui     58.90 180   P      P       04 33 49.7 +1.6
       comp=Z,31nm,1.2s,baz=347,slow=0.9,SNR=32
QSPA                                 LR     LR      04 56 41.8
       comp=Z,1µm,19.4s,baz=40,slow=33
       comp=Z,31nm,1.2s
KAPI  Kappang            64.21 280   LR     LR      05 03 40.1
       comp=Z,1µm,18.2s,baz=117,slow=37
DAV   Davao City (W)     66.38 295   LR     LR      05 03 17.0
       comp=Z,254nm,20.0s,baz=158,slow=36
SMAI  San Martin Ant     68.51 158   P      P       04 34 52.3 +1.2
BELA  Belgrano 2         68.92 172   P      P       04 34 55.0 +1.4
BELA                                 IAmb   IAmb    04 34 55.6
       comp=Z,24nm,1.3s
PMSA  Palmer Station     71.34 155   LR     LR      05 02 36.2
       comp=Z,1µm,18.4s,baz=243,slow=33
MAW   Mawson             71.71 201   P      P       04 35 12.5 +1.7
       comp=Z,10nm,1.1s,baz=100,slow=7.1,SNR=8.6
MAW                                  LR     LR      05 07 09.8
       comp=Z,2µm,18.5s,baz=116,slow=36
       comp=Z,10nm,1.1s
LEM   Lembang            73.61 272   LR     LR      05 07 57.2
       comp=Z,1µm,20.0s,baz=156,slow=36
TGY   Tagaytay City      74.30 298   LR     LR      05 05 07.2
       comp=Z,235nm,21.7s,baz=188,slow=33
USHA  Ushuaia            74.99 146   LR     LR      05 01 09.9
       comp=Z,419nm,19.5s,baz=225,slow=30
SYO   Syowa Base         76.43 193⇑eP      P       04 35 39.0 +0.7
SYO   Syowa Base         76.43 193⇓epP     pP      04 35 42.4 +2.6
AY03  Cochrane           76.84 137   P      P       04 35 42.4 +1.3
AY03                                 IAmb   IAmb    04 35 45.1
       comp=Z,22nm,1.1s
TROLL Troll, Antarti     77.06 180 ⇓P       P       04 35 42.6 +0.5
       comp=Z,410nm,1.4s
SNAA  Sanae              77.33 178 ⇓P       P       04 35 43.8 +0.3
       comp=Z,52nm,0.6s
SNAA  Sanae              77.33 178   P      P       04 35 44.0 +0.5
SNAA                                 IAmb   IAmb    04 36 23.7
       comp=Z,23nm,1.3s
SNAA  Sanae              77.33 178   P      P       04 35 43.9 +0.3
       comp=Z,3.9nm,0.9s,baz=179,slow=14,SNR=12
SNAA                                 LR     LR      05 08 55.9
       comp=Z,588nm,18.8s,baz=162,slow=35
       comp=Z,3.9nm,0.9s
SNAA  Sanae              77.33 178deP       P       04 35 44.9 +1.4
VNA3  Neumayer Olymp     77.47 176 ⇓P       P       04 35 44.0  -0.2
       comp=Z,7.9nm,0.8s
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JOW   Kunigami           77.55 312   LR     LR      05 05 05.7
       comp=Z,449nm,20.7s,baz=222,slow=32
MDSI  Maura Dua          77.74 272   P      P       04 35 46.7 +0.1
       comp=Z,715nmcomp=Z,20nm,1.0s
VNA2  Neumayer--Watz     77.91 177 ⇓P       P       04 35 47.3 +0.7
       comp=Z,3.4nm,0.6s,baz=170,slow=5.5
COYC  Coyhaique          78.03 136          P       04 35 50.0 +2.3
VNA1  Neumayer--Stat     78.13 176 ⇓P       P       04 35 49.5 +1.7
       comp=Z,21nm,1.6s
GO07  Milladeo Hill,     78.38 133   P      P       04 35 51.0 +1.3
LL06  Loncomilla         78.87 133          P       04 35 54.6 +2.1
MJAR  Matsushiro Arr     79.17 325   P      P       04 35 52.9  -1.1
       comp=Z,5.5nm,1.0s,baz=165,slow=4.8,SNR=8.2
MJAR                                 LR     LR      05 06 13.8
       comp=Z,215nm,21.1s,baz=132,slow=32
       comp=Z,5.5nm,1.0s
MAJO  Matsushiro         79.17 325⇓eP      P       04 35 53.2  -0.8
MAJO                                 pmax   pmax
       comp=Z,13nm,1.3s
LL02  Futaleuf           79.46 134          P       04 35 57.1 +1.5
LL02                                 IAmb   IAmb    04 36 04.0
       comp=Z,48nm,1.4s
LL01  San Ignacio de     79.55 133   P      P       04 35 57.7 +1.5
LL01                                 IAmb   IAmb    04 35 59.0
       comp=Z,34nm,1.6s
JNU   Nakatsue           80.47 318   LR     LR      05 06 24.9
       comp=Z,221nm,22.0s,baz=136,slow=32
LR05  Currie             80.97 132          P       04 36 05.4 +1.5
LR03  Panguipulli        81.08 131          P       04 36 06.9 +2.4
PLCA  Paso Flores        81.62 133          P       04 36 09.5 +2.1
PLCA                                 IAmb   IAmb    04 36 10.7
       comp=Z,44nm,1.6s
PLCA  Paso Flores        81.62 133   P      P       04 36 08.1 +0.6
       comp=Z,8.3nm,1.0s,baz=226,slow=6.0,SNR=12
PLCA                                 LR     LR      05 05 26.1
       comp=Z,764nm,19.1s,baz=234,slow=31
       comp=Z,8.3nm,1.0s
PLCA  Paso Flores        81.62 133   P      P       04 36 09.5 +2.1
PLCA                                 pmax   pmax
       comp=Z,44nm,1.6s
EFI   East Falkland      81.86 147deP       P       04 36 09.5 +1.2
EFI                                  pmax   pmax
       comp=Z,64nm,1.4s
QZH   Quanzhou           82.80 305  eP      P       04 36 17.0 +3.5
QZH                                  S      SKSac   04 46 35.3   0.0
QZH                                  LR     LR
       comp=Z,250nm,19.2s
QZH                                  LR     LR
       comp=Z,320nm,17.5s
QZH                                  LR     LR
       comp=Z,330nm,22.0s
ASAJ  Asahikawa          83.37 332   LR     LR      05 12 07.7
       comp=Z,381nm,18.2s,baz=158,slow=35
BI02  San Fabin de       83.43 129          P       04 36 18.3 +1.3
BI02                                 IAmb   IAmb    04 36 24.3
       comp=Z,13nm,0.9s
LPIG  La Paz             84.57  58   LR     LR      05 08 25.0
       comp=Z,1µm,18.4s,baz=210,slow=32
BO02  Sierra Bellavi     84.81 128   P      P       04 36 24.1 +0.1
TJN   Taejon             84.81 318⇑eP      P       04 36 23.1  -0.5
MT01  Popeta             85.01 127          P       04 36 25.3 +0.3
KSRS  Korea Array        85.26 319   P      P       04 36 25.6  -0.3
       comp=Z,2.3nm,0.6s,baz=140,slow=5.3,SNR=8.3
       comp=Z,2.3nm,0.6s
KSAR  Wonju Array Be     85.28 319   P      P       04 36 25.4  -0.4
KSAR  Wonju Array Be     85.28 319   P      P       04 36 25.5  -0.4
BCW   Bitter Crk WRg     85.50  44          P       04 36 28.0 +0.7
YSS   Yuzhno-Sakhali     85.68 334  eP      P       04 36 29.2 +1.6
YSS                                 e               04 39 48.5
YSS                                 eS      SKSac   04 46 55.5 +2.7
YSS                                  pmax   pmax
       comp=Z,30nm,0.9s
YSS                                  MLR    MLR
       comp=Z,600nm,16.0s
YSS                                  MLR    MLR
       comp=N,500nm,15.0s
YSS                                  MLR    MLR
       comp=E,400nm,13.0s
QIZ   Qiongzhong         85.76 295   P      P       04 36 29.0 +0.3
QIZ                                  S      S       04 47 01.1  -0.7
QIZ                                  LR     LR
       comp=E,240nm,16.7s
QIZ                                  LR     LR
       comp=E,270nm,15.8s
PEL   Peldehue           85.81 126          P       04 36 30.1 +1.1
PEL   Peldehue           85.81 126   P      P       04 36 30.1 +1.1
PEL                                  pmax   pmax
       comp=Z,69nm,1.3s
PSI   Prapat             85.98 276   LR     LR      05 16 19.4
       comp=Z,786nm,18.8s,baz=118,slow=37
PFO   Pinyon Flats O     86.42  47   P      P       04 36 33.2 +1.4
PFO                                  IAmb   IAmb    04 36 35.2
       comp=Z,13nm,1.3s
PFO   Pinyon Flats O     86.42  47   LR     LR      05 10 03.6
       comp=Z,1µm,18.2s,baz=240,slow=32
PFO   Pinyon Flats O     86.42  47ceP       P       04 36 33.5 +1.7
PFO                                  pmax   pmax
       comp=Z,19nm,1.3s
PET   Petropavlovsk      86.43 346  eP      P       04 36 28.5  -2.7
PET                                 eS      S       04 47 01.6  -5.2
PET                                  pmax   pmax
       comp=Z,100nm,14.8s
ISA   Isabella, Lake     86.55  44          P       04 36 32.9 +0.5
ISA                                  IAmb   IAmb    04 36 35.8
       comp=Z,15nm,1.1s
ISA   Isabella, Lake     86.55  44   P      P       04 36 32.9 +0.5
ISA                                  pmax   pmax
       comp=Z,15nm,1.1s
PETK  Petropavlovsk-     86.71 345   P      P       04 36 32.7 +0.1
       comp=Z,4.6nm,0.7s,baz=120,slow=5.8,SNR=7.0
PETK                                 LR     LR      05 08 52.0
       comp=Z,222nm,20.9s,baz=164,slow=31
       comp=Z,4.6nm,0.7s
CMB   Columbia Colle     87.06  42          P       04 36 35.0 +0.3
CMB                                  IAmb   IAmb    04 36 37.6
       comp=Z,10nm,1.1s
CMB   Columbia Colle     87.06  42   P      P       04 36 35.1 +0.3
CMB                                  pmax   pmax
       comp=Z,10.0nm,1.1s
CO03  El Pedregal        87.11 124   P      P       04 36 35.6   0.0
NJ2   Nanjing            87.12 310  eP      P       04 36 37.3 +2.2
NJ2                                  pmax   pmax
       comp=Z,10.0nm,0.6s
AFDM  Forest Hills D     87.36  41          P       04 36 37.1 +0.9
AFDM                                 IAmb   IAmb    04 36 49.1
       comp=Z,26nm,1.7s
113A  Mohawk Valley,     87.58  49          P       04 36 38.9 +1.5
113A                                 IAmb   IAmb    04 36 40.9
       comp=Z,12nm,1.3s
QSM   Queen of Sheba     87.72  45          P       04 36 39.5 +1.5
QSM                                  IAmb   IAmb    04 36 44.3
       comp=Z,16nm,1.1s
WAKR  Walker             87.92  42          P       04 36 39.7 +0.6
GWY   Greenwater Val     87.99  45          P       04 36 40.6 +1.1
GWY                                  IAmb   IAmb    04 36 43.0
       comp=Z,27nm,1.8s
USA0B Ussuriysk Arra     88.09 326⇓eP      P       04 36 40.1 +0.6
USRK  Ussuriysk Ar.      88.09 326   P      P       04 36 39.6 +0.1
       comp=Z,6.3nm,0.8s,baz=113,slow=4.0,SNR=9.7
USRK                                 LR     LR      05 13 36.8
       comp=Z,188nm,18.7s,baz=148,slow=34
       comp=Z,6.3nm,0.8s
ZON   Zonda              88.11 126          P       04 36 41.6 +1.3
ZON   Zonda              88.11 126   P      P       04 36 41.6 +1.3
ZON                                  pmax   pmax
       comp=Z,24nm,1.3s
BEKR  Beckworth          88.34  40          P       04 36 41.5 +0.4
BEKR                                 IAmb   IAmb    04 36 44.6
       comp=Z,22nm,1.8s
YBH   Yreka Blue Hor     88.39  38   LR     LR      05 11 59.8
       comp=Z,57nm,18.4s,baz=238,slow=33
NVAR  Mina Array Bea     88.52  42   P      P       04 36 43.3 +1.3
       comp=Z,2.9nm,0.8s,baz=221,slow=7.0,SNR=22
NVAR                                 LR     LR      05 09 55.9
       comp=Z,780nm,19.1s,baz=214,slow=31
       comp=Z,2.9nm,0.8s
TPNV  Topopah Spring     88.74  45          P       04 36 44.1 +1.1
TPNV                                 IAmb   IAmb    04 36 49.5
       comp=Z,19nm,1.4s
TPNV  Topopah Spring     88.74  45   P      P       04 36 44.1 +1.1
TPNV                                 pmax   pmax
       comp=Z,19nm,1.4s
V12A  Nelson             88.80  46          P       04 36 44.4 +1.2
V12A                                 IAmb   IAmb    04 36 46.8
       comp=Z,16nm,1.4s
Y14A  Wickenburg         88.82  49          P       04 36 44.8 +1.5
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Y14A                                 IAmb   IAmb    04 36 46.9
       comp=Z,16nm,1.3s
TYV   Tymovskoe          88.98 336  eP      P       04 36 44.9 +1.4
TYV                                  pmax   pmax
       comp=Z,19nm,1.0s
TYV                                  pmax   pmax
       comp=Z,200nm,2.6s
W13A  Hualapai Mount     89.00  47          P       04 36 45.6 +1.3
W13A                                 IAmb   IAmb    04 36 47.9
       comp=Z,14nm,1.3s
SHPR  Sheep Range        89.11  46          P       04 36 46.4 +1.6
WHN   Wuhan              89.20 307   P      P       04 36 45.0  -0.1
TUC   Tucson             89.26  51          P       04 36 46.0 +0.6
TUC                                  IAmb   IAmb    04 36 49.4
       comp=Z,15nm,1.3s
TUC   Tucson             89.26  51   P      P       04 36 46.0 +0.6
TUC                                  pmax   pmax
       comp=Z,15nm,1.3s
MDJ   Mudanjiang         89.55 325   P      P       04 36 46.4   0.0
MDJ                                  S      S       04 47 36.0  -1.1
MDJ                                  sS     ScS     04 47 47.0 +5.4
MDJ                                  pmax   pmax
       comp=Z,12nm,1.5s
MDJ                                  pmax   pmax
       comp=Z,200nm,8.4s
MDJ                                  LR     LR
       comp=Z,220nm,15.0s
MDJ                                  LR     LR
       comp=Z,270nm,20.7s
MDJ                                  LR     LR
       comp=Z,440nm,19.5s
X16A  Lo Mia Camp, P     90.13  49          P       04 36 50.0 +0.4
X16A                                 IAmb   IAmb    04 36 54.1
       comp=Z,9.7nm,1.0s
H04A  Detroit Lake       90.76  36          P       04 36 52.9 +0.8
H04A                                 IAmb   IAmb    04 36 57.4
       comp=Z,23nm,1.5s
PINE  Pine Mountain      90.76  37          P       04 36 53.6 +1.3
PINE                                 IAmb   IAmb    04 37 05.8
       comp=Z,19nm,1.4s
U15A  North Rim          90.84  47          P       04 36 53.3 +0.3
U15A                                 IAmb   IAmb    04 36 57.3
       comp=Z,9.2nm,0.9s
WUAZ  Wupatki            90.85  48          P       04 36 53.6 +0.7
WUAZ                                 IAmb   IAmb    04 36 57.1
       comp=Z,10nm,1.1s
TIA   Tai'an             90.86 313   P      P       04 36 53.5 +0.8
TIA                                  pP     pwP     04 37 06.3 +4.8
TIA                                  SKS    SKSac   04 47 24.3  -0.3
TIA                                  S      S       04 47 47.6  -2.0
TIA                                  pmax   pmax
       comp=Z,16nm,1.2s
TIA                                  LR     LR
       comp=Z,120nm,16.1s
TIA                                  LR     LR
       comp=Z,300nm,18.3s
TIA                                  LR     LR
       comp=Z,340nm,21.0s
KNB   Kanab              90.88  46          P       04 36 53.0   0.0
KNB                                  IAmb   IAmb    04 37 06.9
       comp=Z,19nm,1.4s
KNB   Kanab              90.88  46   P      P       04 36 53.0   0.0
KNB                                  pmax   pmax
       comp=Z,19nm,1.4s
WVOR  Wild Horse Val     91.05  39   P      P       04 36 55.6 +2.0
WVOR                                 pmax   pmax
       comp=Z,6.0nm,1.5s
CN2   Changchun          91.06 323  eP      P       04 36 53.3  -0.2
CN2                                 eS      S       04 47 55.6 +4.5
CN2                                  pmax   pmax
       comp=Z,10.0nm,0.9s
CN2                                  pmax   pmax
       comp=Z,100nm,4.0s
CN2                                  LR     LR
       comp=Z,300nm,16.0s
CN2                                  LR     LR
       comp=Z,300nm,16.0s
CN2                                  LR     LR
       comp=Z,200nm,17.0s
KDAK  Kodiak Island      91.09  13   LR     LR      05 14 22.2
       comp=Z,347nm,18.5s,baz=209,slow=33
X18A  Snowflake          91.17  50          P       04 36 55.1 +0.7
SPR3  Spring Creek 3     91.23  44          P       04 36 53.7  -1.1
BNX   BinXian            91.44 325 ⇑P       P       04 36 55.4 +0.3
BNX                                  sP     pwP     04 37 09.3 +5.4
BNX                                  pmax   pmax
       comp=Z,17nm,1.0s
BNX                                  pmax   pmax
       comp=Z,130nm,8.3s
BNX                                  LR     LR
       comp=Z,2µm,21.7s
BNX                                  LR     LR
       comp=Z,2µm,18.1s
BNX                                  LR     LR
       comp=Z,340nm,20.1s
J08A  Circle Bar Ran     91.76  39          P       04 36 57.2 +0.3
J08A                                 IAmb   IAmb    04 37 00.2
       comp=Z,8.2nm,1.2s
ELK   Elko               91.83  42          P       04 36 57.8 +0.4
ELK   Elko               91.83  42   LR     LR      05 12 09.6
       comp=Z,737nm,19.1s,baz=236,slow=32
ELK   Elko               91.83  42   P      P       04 36 57.8 +0.4
ELK                                  pmax   pmax
       comp=Z,6.0nm,1.4s
KLR   Kul'dur            91.97 329   LR     LR      05 15 52.7
       comp=Z,336nm,19.3s,baz=138,slow=34
KLR   Kul'dur            91.97 329deP       P       04 36 58.5 +1.0
KLR                                  pmax   pmax
       comp=Z,17nm,1.7s
MVU   Marysvale          92.19  45          P       04 36 59.8 +0.6
MVU                                  IAmb   IAmb    04 37 02.8
       comp=Z,8.3nm,1.3s
TXAR  Lajitas Array      92.44  57   P      P       04 37 00.9 +0.6
       comp=Z,1.6nm,1.0s,baz=257,slow=4.0,SNR=9.9
TXAR                                 LR     LR      05 13 39.3
       comp=Z,451nm,18.0s,baz=226,slow=32
       comp=Z,1.6nm,1.0s
O18K  Koktuh Hills       92.57  11          P       04 37 00.2 +0.1
NNA   Nana               92.76 106   LR     LR      05 11 30.2
       comp=Z,440nm,18.7s,baz=234,slow=31
G08A  Pilot Rock         92.82  37          P       04 37 01.6  -0.1
G08A                                 IAmb   IAmb    04 37 05.0
       comp=Z,7.1nm,1.1s
ALPN  Alpine             93.05  56          P       04 37 03.9 +0.7
ALPN                                 IAmb   IAmb    04 37 26.6
       comp=Z,10nm,1.5s
HNS   HongShan           93.12 312 ⇓P       P       04 37 04.1 +1.0
HNS                                  SKS    SKSac   04 47 33.1  -4.1
HNS                                  S      S       04 48 07.9  -1.9
HNS                                  pmax   pmax
       comp=Z,11nm,1.3s
HNS                                  LR     LR
       comp=Z,220nm,17.3s
HNS                                  LR     LR
       comp=Z,280nm,18.2s
HNS                                  LR     LR
       comp=Z,370nm,19.2s
MFID  Camas Ranch        93.24  40          P       04 37 04.2 +0.5
TMUT  Trail Mountain     93.30  45          P       04 37 04.9 +0.5
TMUT                                 IAmb   IAmb    04 37 14.9
       comp=Z,9.1nm,1.4s
BBB   Bella Bella        93.59  28   LR     LR      05 14 14.1
       comp=Z,623nm,18.8s,baz=212,slow=32
ANMO  Albuquerque        93.72  51   P      P       04 37 07.0 +0.7
ANMO  Albuquerque        93.72  51          P       04 37 06.7 +0.4
ANMO                                 IAmb   IAmb    04 37 19.3
       comp=Z,3.5nm,1.2s
ANMO  Albuquerque        93.72  51   LR     LR      05 15 23.3
       comp=Z,1µm,18.0s,baz=333,slow=33
ANMO  Albuquerque        93.72  51⇓eP      P       04 37 08.0 +1.7
ANMO                                 pmax   pmax
       comp=Z,2.0nm,1.1s
ATAH  Atahualpa          94.04 101   LR     LR      05 12 01.8
       comp=Z,221nm,18.5s,baz=244,slow=31
CMAR  Chiang Mai Arr     94.10 289   LR     LR      05 20 09.2
       comp=Z,112nm,21.2s,baz=130,slow=36
HLID  Hailey             94.12  41          P       04 37 07.8   0.0
MA2   Magadan            94.19 344   LR     LR      05 15 16.3
       comp=Z,391nm,20.2s,baz=154,slow=33
PLID  Pearl Lake         94.24  39          P       04 37 08.4   0.0
XAN   Xi'an              94.97 307   P      P       04 37 11.3  -0.5
XAN                                  SKS    SKSac   04 47 45.6  -2.0
XAN                                  S      S       04 48 23.0  -3.3
XAN                                  pmax   pmax
       comp=Z,180nm,5.2s
XAN                                  LR     LR
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            comp=Z,150nm,18.2s
XAN                                     LR       LR
            comp=Z,290nm,17.3s
XAN                                     LR       LR
            comp=Z,490nm,17.4s
NEW    Newport           95.76  36      LR       LR        05 17 30.8
            comp=Z,975nm,18.1s,baz=223,slow=34
XLT    XiLinHaoTe        96.25 318    eP         P         04 37 21.3 +3.8
XLT                                     pP       pwP       04 37 33.0 +6.7
XLT                                     sP       sP        04 37 36.3  +17
XLT                                     PP       PP        04 41 19.1 +7.9
XLT                                     pmax     pmax
            comp=Z,7.0nm,0.8s
XLT                                     pmax     pmax
            comp=Z,97nm,4.8s
PDAR   Pinedale Array    96.40  43      P        P         04 37 19.1 +0.7
            comp=Z,0.3nm,0.6s,baz=222,slow=2.0,SNR=4.0
PDAR                                    LR       LR        05 15 56.6
            comp=Z,403nm,18.7s,baz=232,slow=32
            comp=Z,0.3nm,0.6s
YHL    Hebgen Lake       96.73  41               P         04 37 20.9 +1.0
YHL                                     IAmb     IAmb      04 37 24.4
            comp=Z,7.2nm,1.4s
HHC    Hu-ho-hao-te      97.13 314    eP         Pdif      04 37 22.0 +0.4
HHC                                     SKS      SKSac     04 47 58.8 +0.1
HHC                                     S        S         04 48 40.3 -4.5
HHC                                     pmax     pmax
            comp=Z,19nm,0.6s
HHC                                     pmax     pmax
            comp=Z,350nm,5.6s
HHC                                     LR       LR
            comp=Z,120nm,13.8s
HHC                                     LR       LR
            comp=Z,140nm,15.3s
HHC                                     LR       LR
            comp=Z,240nm,13.8s
JTS    Las Juntas de     97.38  82      LR       LR        05 12 27.6
            comp=Z,285nm,19.7s,baz=252,slow=30
LPAZ   La Paz            97.39 114      LR       LR        05 13 56.0
            comp=Z,212nm,18.9s,baz=222,slow=31
ILAR   Eielson Array     98.61  13      P        P         04 37 27.6 +0.1
            comp=Z,0.4nm,0.8s,baz=214,slow=5.8,SNR=4.8
ILAR                                    LR       LR        05 17 52.1
            comp=Z,247nm,19.3s,baz=209,slow=33
            comp=Z,0.4nm,0.8s
CPUP   Villa Florida     99.12 128      P        Pdif      04 37 31.6 +0.7
            comp=Z,0.6nm,1.1s,baz=54,slow=9.6,SNR=2.9
CPUP                                    LR       LR        05 17 45.9
            comp=Z,175nm,18.2s,baz=89,slow=33
            comp=Z,0.6nm,1.1s
WMQ    Urumqi           114.09 308    ePKP       PKiKP     04 42 28.5 +0.1
WMQ                                     LR       LR
            comp=Z,140nm,23.7s
MK31   Makanchi Array   118.64 310⇑ i PKIKP      PKPdf     04 42 36.9 -0.1
MKAR   Makanchi Array   118.64 310      PKP      PKPdf     04 42 36.3 -0.7
            comp=Z,1.3nm,0.5s,baz=195,slow=1.3,SNR=12
ZALV   Zalesovo Beam    118.94 318      PKP      PKPdf     04 42 37.3 +0.1
            comp=Z,0.7nm,0.5s,baz=50,slow=2.3,SNR=2.0
BOOM   Boomskoye usch   121.87 303               PKPdf     04 42 43.2 -0.3
BOOM   Boomskoye usch   121.87 303      PKIKP    PKPdf     04 42 43.2 -0.3
KURK   Kurchatov        121.94 313⇑ i PKIKP      PKPdf     04 42 43.2 +0.1
KURBB  Kurchatov Arra   121.98 313      PKP      PKPdf     04 42 42.6 -0.6
            comp=Z,1.9nm,0.6s,baz=111,slow=1.9,SNR=14
KKAR   Karatay Array    125.90 303               PKPdf     04 42 50.6 -0.4
KKAR   Karatay Array    125.90 303      PKIKP    PKPdf     04 42 50.6 -0.4
SCHQ   Schefferville    126.53  42      PKP      PKiKP     04 42 52.4 +0.1
            comp=Z,3.6nm,1.0s,baz=270,slow=1.1,SNR=4.1
BVAR   Borovoye Array   127.31 315      PKP      PKPdf     04 42 53.4  0.0
            comp=Z,2.3nm,0.5s,baz=141,slow=1.8,SNR=12
BRVK   Borovoye         127.37 315d i PKIKP      PKPdf     04 42 52.9 -0.6
ARTI   Arti             134.11 320    i PKIKP    PKiKP     04 43 07.9 +0.4
ARTI                                                       04 45 36.0
ARTI                                    SS       SS        05 03 20.5 -5.6
ARCES  ARCESS Array B   139.48 348      PKhKP    PKPpre    04 43 08.0
            comp=Z,2.7nm,0.8s,baz=67,slow=3.2,SNR=7.0
KLMR   Klimovskoe       141.69 332    ePKIKP     PKPdf     04 43 18.9 -1.0
KLMR                                  e                    04 43 31.8
KLMR                                    pmax     pmax
            comp=Z,9.0nm,1.2s
KLMR                                    MLR      MLR
            comp=Z,373nm,21.0s
AKT    Akhty            142.56 299    ePKIKP     PKPdf     04 43 21.1 -1.2
AKT                                   ePPP       PPP       04 49 35.9
AKT                                     pmax     pmax
            comp=Z,17nm,1.3s
MAK    Makhachkala      142.67 301    ePKHKP     PKPpre    04 43 18.1
MAK                                     pmax     pmax
            comp=Z,122nm,1.3s
GNI    Garni            144.85 297      PKPdf    PKPbc     04 43 25.5 -0.1
GNI    Garni            144.85 297c i PKIKP      PKPbc     04 43 25.4 -0.1
VRH    Novokhopyorsk    144.95 316    ePKHKP     PKPpre    04 43 22.5
VRH                                     pmax     pmax
            comp=Z,10.0nm,1.0s
MOS    Moscow           145.26 325    i PKP2     PKPbc     04 43 24.8 -1.3
MOS                                     pmax     pmax
            comp=Z,96nm,0.7s
GOF    Gofitskoye       145.64 305c ePKIKP       PKPbc     04 43 27.6 -0.1
KBZ    Khabaz           145.94 303      PKPbc    PKPdf     04 43 28.2 +0.3
            comp=Z,18nm,1.1s,baz=66,slow=4.6,SNR=18
KBZ    Khabaz           145.94 303c ePKP2        PKPdf     04 43 27.8 -0.1
LPSR   Galich'ya Gora   146.03 320    ePKP2      PKPdf     04 43 27.8  0.0
LPSR                                    pmax     pmax
            comp=Z,90nm,0.9s
FIA1   FINESS Array S   146.06 340               PKPdf     04 43 27.7 +0.1
KIV    Kislovodsk       146.06 303      PKPdf    PKPdf     04 43 28.5 +0.2
KIV    Kislovodsk       146.06 303    i PKP2     PKPab     04 43 29.7 -0.1
KIV                                     pmax     pmax
            comp=Z,19nm,1.1s
FINES  FINESS Array B   146.06 340      PKPbc    PKPdf     04 43 27.9 +0.3
            comp=Z,14nm,0.6s,baz=43,slow=2.8,SNR=82
OBN    Obninsk          146.10 325      PKPdf    PKPdf     04 43 28.2 +0.4
OBN    Obninsk          146.10 325c i PKP2       PKPbc     04 43 28.5 -0.2
OBN                                     pmax     pmax
            comp=Z,169nm,1.1s
OBN                                     pmax     pmax
            comp=Z,188nm,1.9s
KARS   Kars             146.10 297      PKPdf    PKPbc     04 43 29.0 -0.5
KARS   Kars             146.10 297      PKP2     PKPbc     04 43 29.0 -0.5
VORR   Voronezh         146.24 318    ePKP2      PKPbc     04 43 29.3  0.0
VORR                                    pmax     pmax
            comp=Z,125nm,0.7s
VSR    Storozhevoye     146.44 317    ePKIKP     PKPdf     04 43 27.8 -0.7
VSR                                     pmax     pmax
            comp=Z,90nm,1.0s
VORD   Divnogorie       146.46 317    ePKIKP     PKPdf     04 43 27.8 -0.8
VORD                                    pmax     pmax
            comp=Z,70nm,1.0s
ERBR   Yeremizino-Bor   147.28 307    i PKP2     PKPab     04 43 33.7 -0.6
ERBR                                    pmax     pmax
            comp=Z,58nm,0.8s
LABN   Labinsk          147.34 305    i PKP2     PKPab     04 43 34.0 -0.6
LABN                                    pmax     pmax
            comp=Z,42nm,0.6s
SOC    Sochi            148.25 303    ePKHKP     PKPpre    04 43 27.4
SOC                                   eSSS       SSS       05 11 36.7
ANN    Anapa            149.59 306    i PKP2     PKPbc     04 43 38.5  0.0
ANN                                     pmax     pmax
            comp=Z,95nm,2.0s
NB2    NORSAR Subarra   149.62 352      PKP      PKPbc     04 43 37.7 -0.4
            comp=Z,70nm,2.0s,baz=12,slow=2.6
NB2    NORSAR Subarra   149.62 352      PKP      PKPbc     04 43 37.7 -0.4
            baz=12,slow=2.6
NOA    NORSAR Array B   149.62 352      PKPbc    PKPbc     04 43 37.9 -0.3
            comp=Z,2.2nm,0.6s,baz=14,slow=4.1,SNR=12
HFS    Hagfors          150.13 349      PKPbc    PKPbc     04 43 38.8 -0.6
            comp=Z,14nm,0.9s,baz=77,slow=3.2,SNR=13
MNK    Minsk            150.51 330    ePKIKP     PKPdf     04 43 31.0 -4.1
NACGM  Naroch           150.71 331    ePKP       PKPbc     04 43 40.9  0.0
            comp=Z,18nm,1.0s,baz=46
MMAI   Mount Meron Ar   152.16 282      PKPbc    PKiKP     04 43 45.7 +0.3
            comp=Z,6.2nm,0.5s,baz=79,slow=4.3,SNR=13
AKASG  Malin Array Be   152.22 322      PKPbc    PKPbc     04 43 44.5 -0.1
            comp=Z,3.4nm,0.6s,baz=49,slow=2.4,SNR=26
SUW    Suwalki          152.81 333    ePKP       PKiKP     04 43 46.3 +0.4
BLEU   Blekinge         153.24 343    i P        PKPdf     04 43 28.1  -11
BR131  Keskin Array S   153.39 297               PKPdf     04 43 40.0 -0.1
BR131  Keskin Array S   153.39 297      PKIKP    PKPdf     04 43 40.0 -0.1
BRTR   Keskin Array B   153.39 297      PKPdf    PKPdf     04 43 39.3 -0.8
BRTR                                             PKPbc     04 43 47.0 -0.6
BRTR   Keskin Array B   153.39 297      PKPbc    PKPbc     04 43 46.9 -0.8
            comp=Z,2.1nm,0.6s,baz=131,slow=3.4,SNR=15
BRTR   Keskin Array B   153.39 297      PKIKP    PKPdf     04 43 39.3 -0.8
BRTR                                                       04 43 47.1
DEL    Delary           153.53 346    i P        PKPdf     04 43 27.1  -12
DBIC   Dimbokro         154.62 163      PKPbc    PKiKP     04 43 52.7 +1.8
            comp=Z,3.6nm,0.7s,baz=242,slow=3.7,SNR=4.7
EKA    Eskdalemuir Ar   155.55   8      PKPab    PKPab     04 44 07.9 -0.3
            comp=Z,0.9nm,0.6s,baz=316,slow=3.5,SNR=3.5
KWP    Kalwaria Pacla   156.16 326    ePKP       PKPab     04 44 11.4 +0.3
KOLS   Kolonicke sedl   156.85 326    ePKP2      PKPab     04 44 14.8 +0.7
KOLS   Kolonicke sedl   156.85 326    ePKP       PKPab     04 44 14.8 +0.7
STHS   Stebnicka Huta   157.00 328    ePKP       PKPab     04 44 15.8 +1.1
OJC    Ojcow            157.04 331    ePKP       PKPab     04 44 15.0 +0.2
NIE    Niedzica         157.42 329    ePKP       PKPab     04 44 16.9 +0.4
KSP    Ksiaz            157.88 336    ePKP       PKPab     04 44 18.8 +0.4
FLTG   Flechtingen      157.95 346    ePKPab     PKPab     04 44 17.6 -1.1
            baz=30,slow=4.9
OKC    Ostrava-Krasne   158.01 332      AMS      AMS       06 10 30.0
            comp=Z,300nm,17.5s
OSTC   Ostas            158.15 336      AMS      AMS       06 07 20.0
            comp=Z,300nm,20.4s
CHVC   Chvalec          158.18 336      AMS      AMS       05 58 20.0
            comp=Z,300nm,22.0s
UPC    Upice            158.26 336      AMS      AMS       06 07 30.0
            comp=Z,300nm,21.3s
DPC    Dobruska-Polom   158.28 336    ePKPAB     PKPab     04 44 21.0 +0.8
DPC                                     AMS      AMS       06 09 10.0
            comp=Z,400nm,17.6s
DPC    Dobruska-Polom   158.28 336    ePKP2      PKPab     04 44 21.0 +0.8
DPC                                     MLR      MLR
            comp=Z,400nm,17.6s
MORC   Moravsky Berou   158.30 333    ePKP       PKPab     04 44 20.4 +0.1
KRLC   Kraliky          158.34 335      AMS      AMS       06 10 40.0
            comp=Z,300nm,15.8s
CLL    Collm            158.48 342    ePKIKP     PKPdf     04 43 47.0 +0.8
CLL                                   i                    04 44 20.3
CLL                                     pmax     pmax
            comp=Z,24nm,1.7s
CLL                                     MLR      MLR
            comp=Z,400nm,18.2s
CLL    Collm            158.48 342    ePKPdf     PKPdf     04 43 47.0 +0.8
CLL                                   i PKPab    PKPab     04 44 20.3 -0.7
            comp=Z,24nm,1.7s
CLL                                   i pPKPab   sPKPab    04 44 31.9 +8.9
CLL                                   ePP        PP        04 48 01.0 +0.2
CLL                                   ePPP       PPP       04 51 48.0
CLL                                   ePSKS                04 58 24.0
CLL                                   ex         x         04 59 06.0
CLL                                   ePPS       PPS       05 01 13.0
CLL                                   eSS        SS        05 07 54.0 -7.5
CLL                                   eSSS       SSS       05 13 54.0
CLL                                   ex         x         05 17 54.0
CLL                                   ex         x         05 19 04.0
CLL                                     AMS      AMS       06 04 00.0
            comp=Z,400nm,18.2s
BRG    Berggiesshubel   158.60 340    ePKPab     PKPab     04 44 21.3 -0.2
            baz=30,slow=4.9
BRG    Berggiesshubel   158.60 340    ePKP       PKPab     04 44 21.2 -0.3
BRG                                     Amp                04 44 23.6
            comp=Z,12nm,1.3s
BRG    Berggiesshubel   158.60 340      P        PKPab     04 44 27.0 +5.5
BRG                                     Amp                04 44 29.2
            comp=Z,3.4nm,0.8s
VYHS   Vyhne            158.76 329    ePKP2      PKPab     04 44 22.7 +0.4
VYHS   Vyhne            158.76 329    ePKP       PKPab     04 44 22.7 +0.4
VYHS                                  e                    04 53 27.8
JAVC   Velka Javorina   158.97 331    ePKP       PKPab     04 44 24.2 +0.9
VRAC   Vranov           159.04 334    ePKP       PKPab     04 44 23.5  0.0
GOPC   GO Pecny, Ondr   159.18 337      AMS      AMS       06 05 40.0
            comp=Z,300nm,16.0s
PRU    Pruhonice        159.19 338      AMS      AMS       06 09 00.0
            comp=Z,300nm,16.9s
KRUC   Moravsky         159.32 334    ePKP       PKPab     04 44 24.3 -0.4
TANN   Tannenbergstha   159.43 342    ePKPab     PKPab     04 44 25.0 -0.3
            baz=30,slow=4.9
MOX    Moxa             159.44 343    ePKPab     PKPab     04 44 24.8 -0.4
            baz=30,slow=4.9
MOX                                   eL         L         06 14 48.5
            comp=Z,320nm,18.8s
TREC   Trest            159.46 335      AMS      AMS       06 09 50.0
            comp=Z,400nm,16.3s
MODS   Modra-Piesok     159.52 331    ePKP2      PKPab     04 44 26.0 +0.4
MODS   Modra-Piesok     159.52 331    ePKP       PKPab     04 44 26.0 +0.4
ZVC    Zvikov           159.78 338    ePKPAB     PKPab     04 44 27.8 +1.1
ZVC                                     AMS      AMS       06 12 10.0
            comp=Z,500nm,15.7s
MANZ   Manzenberg       159.92 342    ePKPab     PKPab     04 44 28.2 +0.9
            baz=30,slow=4.9
ROTZ   Rotzenmuhle      160.09 341    ePKPab     PKPab     04 44 28.6 +0.6
            baz=30,slow=4.9
KHC    Kasperske Hory   160.25 338    ePKPAB     PKPab     04 44 28.6 -0.2
KHC                                     AMS      AMS       06 09 50.0
            comp=Z,500nm,16.8s
KHC    Kasperske Hory   160.25 338    ePKP2      PKPab     04 44 28.6 -0.2
KHC                                     MLR      MLR
            comp=Z,500nm,16.8s
CKRC   Cesky Krumlov    160.28 336    ePKPAB     PKPab     04 44 30.4 +1.5
CKRC                                    AMS      AMS       06 04 20.0
            comp=Z,400nm,18.6s
CKRC   Cesky Krumlov    160.28 336    ePKP2      PKPab     04 44 30.4 +1.5
CKRC                                    MLR      MLR
            comp=Z,400nm,18.6s
GRF    Grafenberg Arr   160.42 343    ePKPab     PKPab     04 44 30.3 +0.8
            baz=30,slow=4.9
GRF                                   eL         L         06 01 20.2
            comp=Z,443nm,19.3s
CONA   Conrad Observa   160.45 332    i PKP      PKPab     04 44 30.5 +0.7
            comp=Z,9.6nm,1.3s
RONA   Rosalia, Austr   160.45 331    i PKP      PKPab     04 44 31.2 +1.4
            comp=Z,15nm,1.3s
WET    Wettzell         160.46 339    ePKPab     PKPab     04 44 30.2 +0.6
            baz=30,slow=4.9
GEC2   GERESS Array S   160.46 338    ePKPab     PKPab     04 44 29.6 -0.2
            baz=30,slow=4.9
GERES  GERESS Array B   160.46 338      PKPab    PKPab     04 44 29.2 -0.6
            comp=Z,1.4nm,0.7s,baz=34,slow=3.6,SNR=9.4
MOA    Molln            161.12 335    i PKP      PKPab     04 44 33.5 +0.9
            comp=Z,9.4nm,1.4s
ARSA   Arzberg          161.13 332    i PKP      PKPab     04 44 33.9 +1.2
            comp=Z,1.4nm,0.5s
BIOA   Bad Ischl, Aus   161.48 336    i PKP      PKPab     04 44 35.5 +1.3
            comp=Z,13nm,1.1s
RJOB   Jochberg         161.72 337    ePKPab     PKPab     04 44 35.7 +0.4
            baz=30,slow=4.9
SOKA   Soboth           161.79 332    ePKP       PKPab     04 44 36.6 +1.0
            comp=Z,8.6nm,1.3s
TORD   Torodi Ar. Bea   162.01 177      PKPdf    PKPdf     04 43 50.7 -0.5
TORD                                             PKPab     04 44 37.9 +0.7
LESA   Schwarzleotal    162.03 337    ePKP       PKPab     04 44 37.4 +0.7
            comp=Z,6.7nm,1.1s
MYKA   Terra Mystica    162.37 334    ePKP       PKPab     04 44 38.4 +0.2
            comp=Z,2.1nm,0.9s
WATA   Walderalm        162.46 339    ePKP       PKPab     04 44 39.3 +0.6
            comp=Z,10nm,0.8s
WTTA   Wattenberg       162.51 339    i PKP      PKPab     04 44 40.2 +1.3
            comp=Z,10nm,1.0s
RETA   Reutte           162.56 341    i PKP      PKPab     04 44 40.0 +1.0
            comp=Z,7.2nm,1.0s
MOTA   Moosalm          162.59 340    ePKP       PKPab     04 44 39.8 +0.5
            comp=Z,16nm,1.1s
SQTA   Sankt Quirin     162.68 340    ePKP       PKPab     04 44 40.2 +0.6
            comp=Z,14nm,1.1s
ABTA   Abfaltersbach    162.68 336    i PKP      PKPab     04 44 39.7 +0.1
            comp=Z,4.8nm,0.9s
DAVA   Damuels          162.98 343    i PKP      PKPab     04 44 41.0 +0.1
            comp=Z,5.9nm,0.9s
FETA   Feichten         163.00 341    i PKP      PKPab     04 44 41.8 +0.8
            comp=Z,8.0nm,1.4s
FUORN  Ofenpass-Fuorn   163.49 341      PKPab    PKPab     04 44 43.0 -0.3
TUE    Stuetta          163.87 343      PKPab    PKPab     04 44 43.7 -1.2
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NDI ***18*** *04:27:01.9±0.2, 17°.85N×96°.14E, h15km, ML3.8, MW3.8*
IDC ***18*** *04:28:17.6±2.2, 17°.80N×95°.96E, h0km, mb4.0/15, mbtmp4.0/15, ML4.2/1, Error ellipse: s-maj=53.0km s-min=14.7km az=180.0*
NEIC ***18*** *04:28:20.6±1.6, 17°.90N±0°.06×96°.13E±0°.08, h16km±4km, mb4.8/15, Error ellipse: s-maj=12.3km s-min=7.9km az=62.0*
BKK ***18*** *04:28:22.7±1.7, 18°N±3°×9°6E±1°1, h8km±8km, M4.1/17, Mjma3.9/17, ML4.2/6, MLv4.2/13*
ISC 18 04:28:19.5±0.5**, 17°.92N**±0°.06×**96°.11E**±0°.06**, h10**km**, n52, σ1ˢ02**/55**, mb4.2**/24**, 1D, Myanmar**

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Code   Station Name        Δ°   AZ°     Phase ID             Time      Res
                                      Op         ISC       h  m  s    ISC
CM13   Chiang Mai Arr     2.71  79    Pg         Pg        04 29 11.4  0.0
CM15   Chiang Mai Arr     2.73  78    Pg         Pg        04 29 12.4 +0.5
CM05   Chiang Mai Arr     2.74  80    Pg         Pg        04 29 11.8 -0.3
CM02   Chiang Mai Arr     2.75  79    Pg         Pg        04 29 12.6 +0.4
CM31   Chiang Mai Arr     2.75  78    Pn         Pn        04 29 03.6 -0.1
CMAR   Chiang Mai Arr     2.75  78               Pn        04 29 04.3 +0.6
CMAR   Chiang Mai Arr     2.75  78    Pn         Pn        04 29 06.8 +3.1
            8.6nm,0.3s,baz=253,slow=13,SNR=18
CMAR                                  Pg         Pg        04 29 11.5 -0.7
            16nm,0.3s,baz=254,slow=17,SNR=42
CMAR                                  Lg         Lg        04 29 48.6
            30nm,0.3s,baz=250,slow=30,SNR=13
CM01   Chiang Mai Arr     2.76  79    Pg         Pg        04 29 12.6 +0.2
CM04   Chiang Mai Arr     2.77  80    Pg         Pg        04 29 13.0 +0.3
CM09   Chiang Mai Arr     2.79  79    Pg         Pg        04 29 13.6 +0.6
CHTO   Chiang Mai         2.83  71               Pn        04 29 04.5 -0.5
LAMP   Lampang            3.40  79    Pg         Pg        04 29 24.6 -0.2
CMAI   Chiengmai2         3.42  54    Pg         Pg        04 29 25.8 +0.6
CMAI                                  Pn         Pn        04 29 15.0 +1.9
KHLT   Khaolaem Dam       3.92 142    Pg         Pg        04 29 35.7 +1.1
KULM   Kulim             13.32 160    Pn         Pn        04 31 27.2 -1.6
HYB    Hyderabad         16.74 271   eP          Pn        04 32 16.7 +2.4
HYB                                  eS          S         04 35 31.6 +0.1
MKAR   Makanchi Array    30.97 341               P         04 34 36.5 -0.4
MKAR   Makanchi Array    30.97 341    P          P         04 34 37.1 +0.2
            1.7nm,0.4s,baz=161,slow=8.5,SNR=24
            1.7nm,0.4s
SONM   Songino Array     31.00  14    P          P         04 34 39.5 +2.2
            0.2nm,0.3s,baz=189,slow=8.3,SNR=1.5
            0.2nm,0.3s
KURBB  Kurchatov Arra    35.52 341    P          P         04 35 16.6 +0.2
            3.1nm,0.6s,baz=148,slow=8.8,SNR=18
            3.1nm,0.6s
KURK   Kurchatov         35.57 341    P          P         04 35 16.5 -0.4
KURK                                  IAmb       IAmb      04 35 17.6
            comp=Z,3.6nm,0.6s
ZALV   Zalesovo Beam     37.00 349    P          P         04 35 28.7 -0.4
ZALV   Zalesovo Beam     37.00 349    P          P         04 35 29.5 +0.4
            comp=Z,2.4nm,0.6s,baz=165,slow=9.2,SNR=7.6
            comp=Z,2.4nm,0.6s
BVAR   Borovoye Array    40.37 336    P          P         04 35 57.4  0.0
            comp=Z,0.8nm,0.4s,baz=139,slow=13,SNR=3.1
            comp=Z,0.8nm,0.4s
MJAR   Matsushiro Arr    41.39  55    P          P         04 36 04.8 -1.3
MJAR                                  IAmb       IAmb      04 36 45.6
            comp=Z,6.8nm,1.4s
AB31   Akbulak array     42.72 325               P         04 36 16.7  0.0
ABKAR  Akbulak array     42.72 325               P         04 36 15.6 -1.1
ABKAR  Akbulak array     42.72 325               P         04 36 16.8 +0.1
ABKAR                                 IAmb       IAmb      04 36 17.3
            comp=Z,2.6nm,0.7s
MSEY   Mahe Island       45.94 245    P          P         04 36 41.9 -1.1
KBZ    Khabaz            51.39 312    P          P         04 37 25.1 +0.6
            comp=Z,1.4nm,0.5s,baz=117,slow=2.3,SNR=2.6
            comp=Z,1.4nm,0.5s
TIXI   Tiksi             57.06  12    P          P         04 38 05.4  0.0
TIXI                                  IAmb       IAmb      04 38 05.8
            comp=Z,5.5nm,0.5s
BRTR   Keskin Array B    57.72 306    P          P         04 38 10.9 +0.1
BRTR   Keskin Array B    57.72 306    P          P         04 38 10.6 -0.3
            comp=Z,1.4nm,0.8s,baz=127,slow=7.9,SNR=8.2
            comp=Z,1.4nm,0.8s
ELL    Elmali            60.60 302    P          P         04 38 30.9  0.0
AKASG  Malin Array Be    61.72 318    P          P         04 38 37.0 -1.0
            comp=Z,0.6nm,0.5s,baz=80,slow=6.7,SNR=7.0
            comp=Z,0.6nm,0.5s
IDI    Anoyia            64.74 301    P          P         04 38 58.6 +0.1
IDI                                   IAmb       IAmb      04 38 59.5
            comp=Z,25nm,1.5s
FIA1   FINESS Array S    64.88 330    P          P         04 38 59.2 +0.5
FIA1                                  IAmb       IAmb      04 39 15.5
            comp=Z,32nm,1.4s
FINES  FINESS Array B    64.88 330    P          P         04 38 58.7  0.0
            comp=Z,1.9nm,0.6s,baz=100,slow=6.8,SNR=12
            comp=Z,1.9nm,0.6s
ARCES  ARCESS Array B    66.57 339    P          P         04 39 09.6  0.0
ARCES  ARCESS Array B    66.57 339    P          P         04 39 09.2 -0.3
            comp=Z,2.2nm,0.7s,baz=74,slow=5.2,SNR=8.6
            comp=Z,2.2nm,0.7s
ITM    Ithomi            66.96 303    P          P         04 39 11.6 -1.0
ITM                                   IAmb       IAmb      04 39 12.1
            comp=Z,5.1nm,0.5s
SPB2   Spitsbergen Ar    70.47 348    P          P         04 39 32.3 -1.5
SPB2                                  IAmb       IAmb      04 39 35.1
            comp=Z,25nm,1.4s
HFS    Hagfors           70.87 328    P          P         04 39 36.5  0.0
            comp=Z,1.4nm,0.5s,baz=129,slow=4.0,SNR=9.0
            comp=Z,1.4nm,0.5s
GERES  GERESS Array B    71.77 316    P          P         04 39 42.3  0.0
            comp=Z,0.8nm,0.6s,baz=77,slow=5.8,SNR=6.6
            comp=Z,0.8nm,0.6s
NC405  NORSAR Array S    71.78 329    P          P         04 39 40.1 -1.9
NC405                                 IAmb       IAmb      04 40 04.0
            comp=Z,20nm,1.5s
NB2    NORSAR Subarra    72.03 329    P          P         04 39 42.9 -0.7
            comp=Z,0.9nm,0.5s,baz=91,slow=6.2
NOA    NORSAR Array B    72.03 329    P          P         04 39 42.3 -1.3
            comp=Z,1.1nm,0.7s,baz=82,slow=6.2,SNR=5.5
            comp=Z,1.1nm,0.7s
F20K   Avaraart Lake     80.50  22    P          P         04 40 32.5 +0.9
F20K                                  IAmb       IAmb      04 41 00.2
            comp=Z,3.6nm,1.4s
EKA    Eskdalemuir Ar    80.59 325    P          P         04 40 32.2  0.0
            comp=Z,0.7nm,0.6s,baz=79,slow=4.3,SNR=3.5
            comp=Z,0.7nm,0.6s
BWN    Browne            84.12  24    P          P         04 40 49.9 -0.6
ILAR   Eielson Array     84.77  23    P          P         04 40 53.9  0.0
            comp=Z,0.3nm,0.7s,baz=324,slow=8.3,SNR=3.3
            comp=Z,0.3nm,0.7s
SYO    Syowa Base        95.51 198⇓ePcP          PcP       04 41 47.2 +2.8
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IDC ***18*** *04:29:53.8±0.8, 32°.09S×177°.94W, h0km, mb4.4/9, mbtmp4.3/12, ML5.1/1, Error ellipse: s-maj=25.4km s-min=20.7km az=85.0*
NEIC ***18*** *04:29:55.1±1.3, 32°.03S±0°.07×178°.0W±0°.2, h10km±1km, mb4.7/21, Error ellipse: s-maj=25.1km s-min=10.6km az=106.0*
ISC 18 04:29:57.3±0.6**, 32°.06S**±0°.06×**178°.1W**±0°.1**, h24**km**, n58, σ1ˢ09**/55**, mb4.6**/20**, 4D, South of Kermadec Islands**

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Code   Station Name        Δ°   AZ°     Phase ID             Time      Res
                                      Op         ISC       h  m  s    ISC
RAO    Raoul Island       2.80   3    Pn         Pn        04 30 38.4 -2.1
MXZ    Matakaoa Point     6.25 207    Pn         Pn        04 31 27.2 -0.7
MXZ                                              Sn        04 32 40.1 +1.5
URZ    Urewera            7.34 211    Pn         Pn        04 31 41.5 -1.4
            3.9nm,0.3s,baz=350,slow=12
URZ                                   Sn         Sn        04 33 03.1 -2.3
            9.1nm,0.3s,baz=156,slow=23,SNR=9.8
RTZ    Ruatahuna          7.69 210    Pn         Pn        04 31 45.4 -2.4
BKZ    Black Stump Fm     8.36 210    Pn         Pn        04 31 56.0 -1.0
MSVF   Nonsavu           14.69 345    Pn         Pn        04 33 22.9 -0.8
            0.3nm,0.3s,baz=154,slow=14,SNR=3.7
            11nm,1.0s
DZM    Mont Dzumac       16.99 302    Pn         P         04 33 55.9 +0.7
            2.2nm,0.8s,baz=86,slow=20,SNR=4.1
WHZ    Wether Hill Ro    17.54 214    Pn         Pn        04 33 58.9 -1.3
CTAO   Charters Tower    34.04 282    P          P         04 36 41.2 +1.5
CTAO                                  IAmb       IAmb      04 36 44.9
            comp=Z,17nm,1.2s
STKA   Stephens Creek    34.08 259    P          P         04 36 41.5 +1.6
            comp=Z,2.5nm,0.7s,baz=120,slow=6.0,SNR=3.5
            comp=Z,2.5nm,0.7s
MGBR   Mount Gambier     34.19 249    P          P         04 36 40.9 +0.1
BBOO   Buckleboo         38.49 256    P          P         04 37 17.6  0.0
BBOO                                  IAmb       IAmb      04 37 29.3
            comp=Z,33nm,1.2s
AS31   Alice Springs     42.99 269    P          P         04 37 55.6 +0.7
ASAR   Alice Springs     42.99 269    P          P         04 37 54.4 -0.5
ASAR   Alice Springs     42.99 269    P          P         04 37 55.5 +0.6
            comp=Z,2.8nm,0.7s,baz=106,slow=7.7,SNR=9.6
            comp=Z,2.8nm,0.7s
WR0    Warramunga Arr    43.95 274    P          P         04 38 02.3 -0.3
WR0                                   IAmb       IAmb      04 38 05.1
            comp=Z,16nm,1.2s
WR8    Warramunga Arr    43.98 274    P          P         04 38 02.6 -0.4
WR8                                   IAmb       IAmb      04 38 18.0
            comp=Z,9.4nm,1.1s
WB2    Warramunga Arr    44.12 274    P          P         04 38 04.2 +0.2
WB2                                   IAmb       IAmb      04 38 07.0
            comp=Z,14nm,1.1s
WRA    Warramunga Arr    44.13 274    P          P         04 38 04.2 +0.2
WRA    Warramunga Arr    44.13 274    P          P         04 38 04.4 +0.4
            comp=Z,4.0nm,0.5s,baz=114,slow=7.9,SNR=26
            comp=Z,4.0nm,0.5s
WB0    Warramunga Arr    44.16 274    P          P         04 38 04.1 -0.2
WB0                                   IAmb       IAmb      04 38 06.7
            comp=Z,16nm,1.2s
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SBA	Scott Base	46.39	184	P	P	04 38 21.6	+0.4
SBA				IAmb	IAmb	04 38 26.3	
	comp=Z,4.4nm,1.1s						
VNDA	Vanda	46.45	186	P	P	04 38 25.1	+3.5
VNDA	Vanda	46.45	186	P	P	04 38 21.7	0.0
	comp=Z,0.5nm,0.5s,baz=34,slow=3.6,SNR=5.6						
	comp=Z,0.5nm,0.5s						
FITZ	Fitzroy Crossi	52.32	271	P	P	04 39 07.4	+0.1
CASY	Casey	53.66	208	P	P	04 39 16.5	0.0
CASY				IAmb	IAmb	04 39 19.3	
	comp=Z,8.4nm,0.9s						
PSA00	Pilbara Seismi	55.73	264	P	P	04 39 32.0	-0.2
QSPA	South Pole Qui	58.06	180	P	P	04 39 48.4	+0.1
QSPA				IAmb	IAmb	04 40 01.6	
	comp=Z,8.6nm,0.9s						
QSPA	South Pole Qui	58.06	180	P	P	04 39 49.0	+0.8
	comp=Z,5.7nm,1.1s,baz=80,slow=2.1,SNR=3.7						
	comp=Z,5.7nm,1.1s						
BELA	Belgrano 2	68.16	172	P	P	04 40 54.6	-0.3
BELA				IAmb	IAmb	04 40 58.1	
	comp=Z,3.5nm,1.1s						
TROLL	Troll, Antarti	76.22	180	⇓x	P	04 41 43.5	+0.2
	comp=Z,241nm,1.0s						
SNAA	Sanae	76.51	178	P	P	04 41 44.9	+0.1
SNAA				IAmb	IAmb	04 41 45.9	
	comp=Z,5.1nm,1.1s						
SNAA	Sanae	76.51	178	P	P	04 41 45.0	+0.1
	comp=Z,3.8nm,1.0s,baz=179,slow=5.6,SNR=7.1						
	comp=Z,3.8nm,1.0s						
SNAA	Sanae	76.51	178	⇓x	P	04 41 44.6	-0.2
	comp=Z,71nm,1.0s						
VNA3	Neumayer Olymp	76.66	176	⇓x	P	04 41 45.3	-0.4
	comp=Z,11nm,0.9s						
VNA2	Neumayer--Watz	77.09	177	⇓x	P	04 41 48.1	0.0
	comp=Z,7.7nm,0.9s,baz=193,slow=5.5						
GSI	Gunungsitoli	85.90	274	P	P	04 42 33.5	-2.2
PETK	Petropavlovsk-	87.40	346	P	P	04 42 41.7	-0.3
USA0B	Ussuriysk Arra	88.51	327	P	P	04 42 49.1	+1.6
USRK	Ussuriysk Ar.	88.51	327	P	P	04 42 47.2	-0.3
USRK	Ussuriysk Ar.	88.51	327	P	P	04 42 49.2	+1.8
	comp=Z,2.1nm,0.8s,baz=213,slow=6.6,SNR=4.5						
	comp=Z,2.1nm,0.8s						
P08K	Saint George I	88.60	5	P	P	04 42 48.6	+1.0
NVAR	Mina Array Bea	89.49	43	P	P	04 42 52.8	+0.2
	comp=Z,1.6nm,0.9s,baz=216,slow=7.7,SNR=6.8						
	comp=Z,1.6nm,0.9s						
CMAR	Chiang Mai Arr	93.89	289	P	P	04 43 15.3	+2.2
	comp=Z,1.6nm,0.3s,baz=116,slow=8.5,SNR=5.7						
	comp=Z,1.6nm,0.3s						
BVAR	Borovoye Array	127.54	315	PKP	PKiKP	04 49 00.6	+0.2
	comp=Z,0.5nm,0.4s,baz=127,slow=3.8,SNR=3.6						
H10S2	ASCENSION HYDR	136.25	156	T	T	07 20 46.3	
	baz=16,slow=74,SNR=19						
H10S3	ASCENSION HYDR	136.25	156	T	T	07 20 45.3	
	baz=204,slow=74,SNR=20						
H10N3	ASCENSION HYDR	137.34	156	T	T	07 22 20.2	
	baz=202,slow=75,SNR=21						
H10N1	ASCENSION HYDR	137.34	156	T	T	07 22 12.0	
	baz=202,slow=75,SNR=20						
H10N2	ASCENSION HYDR	137.35	156	T	T	07 22 24.8	
	baz=202,slow=75,SNR=20						
KBZ	Khabaz	145.96	302	PKPbc	PKPab	04 49 35.4	+0.2
	comp=Z,6.2nm,1.1s,baz=279,slow=5.2,SNR=4.0						
FINES	FINESS Array B	146.67	339	PKPbc	PKPbc	04 49 35.9	-0.3
	comp=Z,8.1nm,0.8s,baz=50,slow=3.5,SNR=26						
NB2	NORSAR Subarra	150.37	351	PKP	PKPbc	04 49 45.1	-0.8
	comp=Z,0.4nm,0.7s,baz=16,slow=3.2						
NOA	NORSAR Array B	150.37	351	PKPbc	PKPbc	04 49 45.4	-0.5
	comp=Z,0.5nm,0.8s,baz=20,slow=4.7,SNR=3.8						
HFS	Hagfors	150.85	348	PKPbc	PKiKP	04 49 47.5	-0.1
	comp=Z,2.9nm,0.7s,baz=329,slow=1.7,SNR=5.4						
AKASG	Malin Array Be	152.56	321	PKPbc	PKPbc	04 49 51.2	0.0
	comp=Z,0.6nm,0.6s,baz=55,slow=2.9,SNR=4.5						
BRTR	Keskin Array B	153.30	296	PKPbc	PKiKP	04 49 53.5	-0.1
	comp=Z,1.6nm,1.0s,baz=131,slow=3.4,SNR=4.7						
CLL	Collm	159.11	340	*e*PKPab	PKPab	04 50 29.0	-0.7

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*IDC **18** 04:32:41.4±0.6, 31°.08S×177°.55W, h0^{km}, mb4.4/8, mbtmp4.4/9, ML3.6/1, MS4.2/1, Error ellipse: s-maj=25.4km s-min=21.0km az=10.0*

*NEIC **18** 04:32:44.3±1.4, 31°.11S±0°.07×177°.6W±0°.1, h10^{km}±1^{km}, mb4.7/38, Error ellipse: s-maj=20.2km s-min=11.6km az=274.0*

ISC 18 04:32:46.0±0.5**, 31°.21S**±0°.08×**177°.63W**±0°.10**, h27^{km}, n69, σ1ˢ09**/70**, mb4.7**/25**, 5D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.97	353		Pn	04 33 15.5	-2.1
URZ	Urewera	8.26	210	Pn	Pn	04 34 40.0	-4.0
	baz=304,slow=15						
URZ				Sn	Sn	04 36 13.3	-3.0
	3.6nm,0.3s,baz=230,slow=16,SNR=5.5						
RTZ	Ruatahuna	8.61	209	Pn	Pn	04 34 49.7	+0.8
TOZ	Tahuroa Road	8.63	219	Pn	Pn	04 34 49.8	+0.7
BKZ	Black Stump Fm	9.28	210	Pn	Pn	04 34 58.5	+0.4
HIZ	Hauiti	9.54	218	Pn	Pn	04 35 03.5	+1.8
MRNZ	Matariki Terra	12.78	215	Pn	Pn	04 35 46.6	+0.7
PINNC	Pines Island,	15.81	299	Pn	Pn	04 36 27.4	+0.5
PINNC				IAmb	IAmb	04 36 35.8	
	comp=Z,63nm,1.1s						
DZM	Mont Dzumac	16.88	299	Pn	Pn	04 36 40.8	+0.2
DZM	Mont Dzumac	16.88	299	Pn	Pn	04 36 40.8	+0.2
	comp=Z,0.2nm,0.3s,baz=135,slow=11,SNR=6.7						
DZM				LR	LR	04 41 43.9	
	comp=Z,842nm,20.4s,baz=142,slow=32						
	comp=Z,3.3nm,0.8s						
CTAO	Charters Tower	34.25	280	P	P	04 39 31.1	+1.2
STKA	Stephens Creek	34.61	258	P	P	04 39 33.3	+0.4
	comp=Z,4.4nm,0.7s,baz=110,slow=12,SNR=8.6						
	comp=Z,4.4nm,0.7s						
AS31	Alice Springs	43.39	268		P	04 40 46.3	-0.1
ASAR	Alice Springs	43.39	268	P	P	04 40 46.0	-0.4
	comp=Z,5.9nm,0.7s,baz=106,slow=7.3,SNR=30						
ASAR				ScP	ScP	04 46 28.1	+3.8
	comp=Z,1.9nm,0.9s,baz=117,slow=4.9,SNR=7.8						
	comp=Z,5.9nm,0.7s						
WR8	Warramunga Arr	44.31	273		P	04 40 54.0	+0.1
WR8				IAmb	IAmb	04 41 22.1	
	comp=Z,10nm,0.9s						
WRA	Warramunga Arr	44.45	273		P	04 40 55.3	+0.3
WRA	Warramunga Arr	44.45	273	P	P	04 40 54.1	-0.9
	comp=Z,4.8nm,0.3s,baz=111,slow=8.0,SNR=42						
	comp=Z,4.8nm,0.3s						
WB0	Warramunga Arr	44.48	273	P	P	04 40 54.5	-0.7
WB0				IAmb	IAmb	04 41 13.2	
	comp=Z,11nm,0.8s						
QSPA	South Pole Qui	58.90	180	P	P	04 42 44.1	+1.7
QSPA	South Pole Qui	58.90	180	P	P	04 42 43.9	+1.4
	comp=Z,5.3nm,0.8s,baz=39,slow=2.4,SNR=8.9						
	comp=Z,5.3nm,0.8s						
TROLL	Troll, Antarti	77.06	180	⇓P	P	04 44 35.9	-0.6
	comp=Z,85nm,0.6s						
SNAA	Sanae	77.34	178	⇓P	P	04 44 38.1	+0.2
	comp=Z,25nm,0.7s						
SNAA	Sanae	77.34	178	P	P	04 44 37.8	-0.1
SNAA				IAmb	IAmb	04 45 00.8	
	comp=Z,7.0nm,0.9s						
SNAA	Sanae	77.34	178	P	P	04 44 38.2	+0.3
	comp=Z,1.4nm,0.8s,baz=191,slow=5.6,SNR=3.6						
	comp=Z,1.4nm,0.8s						
VNA3	Neumayer Olymp	77.48	176	⇓P	P	04 44 37.1	-1.5
	comp=Z,3.8nm,0.7s						
VNA2	Neumayer--Watz	77.92	177	⇓P	P	04 44 40.1	-0.9
	comp=Z,2.6nm,0.6s,baz=170,slow=5.6						
COYC	Coyhaique	78.13	136		P	04 44 43.9	+1.2
VNA1	Neumayer--Stat	78.14	176	⇓P	P	04 44 41.9	-0.3
	comp=Z,2.9nm,0.6s						
LL02	Futaleuf	79.56	134		P	04 44 51.2	+0.6
LL02				IAmb	IAmb	04 44 51.6	
	comp=Z,10nm,0.8s						
PLCA	Paso Flores	81.72	133		P	04 45 02.9	+0.5
PLCA				IAmb	IAmb	04 45 03.5	
	comp=Z,4.8nm,0.9s						
PLCA	Paso Flores	81.72	133	P	P	04 45 01.5	-0.8
	comp=Z,3.8nm,0.8s,baz=215,slow=5.9,SNR=10						
	comp=Z,3.8nm,0.8s						
BI02	San Fabin de	83.54	129		P	04 45 12.2	+0.4
BI02				IAmb	IAmb	04 45 12.4	
	comp=Z,8.1nm,0.8s						
BO02	Sierra Bellavi	84.92	128		P	04 45 19.0	+0.1
PEL	Peldehue	85.92	126	P	P	04 45 24.2	+0.3
CO02	Combarbal	86.81	125	P	P	04 45 28.5	+0.1
GSC	Goldstone, Bar	87.42	46	P	P	04 45 31.7	+0.7
GSC				IAmb	IAmb	04 45 32.2	
	comp=Z,3.9nm,0.9s						
GMN	Gold Mountain	88.47	44	P	P	04 45 36.5	+0.3
NVAR	Mina Array Bea	88.62	43	P	P	04 45 36.5	-0.3
NVAR	Mina Array Bea	88.62	43	P	P	04 45 36.3	-0.5
	comp=Z,1.6nm,0.8s,baz=221,slow=8.0,SNR=9.6						
	comp=Z,1.6nm,0.8s						
V12A	Nelson	88.90	46		P	04 45 38.5	+0.4
V12A				IAmb	IAmb	04 45 59.7	
	comp=Z,5.9nm,1.4s						
Y14A	Wickenburg	88.93	49	P	P	04 45 38.4	+0.3
Y14A				IAmb	IAmb	04 45 40.2	
	comp=Z,4.9nm,1.2s						
TPH	Tonopah	89.01	43	P	P	04 45 38.8	+0.1
W13A	Hualapai Mount	89.10	47		P	04 45 39.7	+0.5
SHPR	Sheep Range	89.22	46		P	04 45 40.4	+0.8
PRN	Pahroc Range	89.87	45	P	P	04 45 43.3	+0.7
PRN				IAmb	IAmb	04 45 45.4	
	comp=Z,8.2nm,1.3s						
X16A	Lo Mia Camp, P	90.24	49		P	04 45 45.3	+0.8
X16A				IAmb	IAmb	04 45 46.2	
	comp=Z,3.7nm,0.9s						
LCMT	Little Creek M	90.72	46	P	P	04 45 46.8	+0.3
U15A	North Rim	90.95	47		P	04 45 48.2	+0.4
U15A				IAmb	IAmb	04 45 49.5	
	comp=Z,3.9nm,0.9s						
WUAZ	Wupatki	90.96	48		P	04 45 48.4	+0.6
WUAZ				IAmb	IAmb	04 45 49.7	
	comp=Z,4.6nm,1.1s						
KNB	Kanab	90.99	46		P	04 45 48.2	+0.4
KNB				IAmb	IAmb	04 45 49.4	
	comp=Z,3.0nm,0.8s						
MVU	Marysvale	92.30	46	P	P	04 45 53.3	-0.6
TXAR	Lajitas Array	92.56	57	P	P	04 45 54.8	-0.5
	comp=Z,0.7nm,1.0s,baz=230,slow=4.6,SNR=2.8						
	comp=Z,0.7nm,1.0s						
G08A	Pilot Rock	92.91	37		P	04 45 56.6	+0.1
G08A				IAmb	IAmb	04 46 14.1	
	comp=Z,4.6nm,1.2s						
MFID	Camas Ranch	93.33	40	P	P	04 45 58.6	+0.2
MFID				IAmb	IAmb	04 45 59.0	
	comp=Z,2.5nm,0.9s						
HLID	Hailey	94.21	41		P	04 46 02.8	+0.2
MESA	MESA	95.67	17	P	P	04 46 09.2	+0.4
MKAR	Makanchi Array	118.53	310	PKP	PKPdf	04 51 30.7	-0.4
	comp=Z,1.0nm,0.8s,baz=140,slow=0.6,SNR=4.2						
KURBB	Kurchatov Arra	121.87	313	PKP	PKPdf	04 51 36.8	-0.4
	comp=Z,1.6nm,0.7s,baz=113,slow=2.1,SNR=7.1						
BVAR	Borovoye Array	127.20	315	PKP	PKPdf	04 51 47.5	+0.1
	comp=Z,1.3nm,0.7s,baz=116,slow=3.4,SNR=5.0						
ARCES	ARCESS Array B	139.45	348	PKhKP	PKPpre	04 52 02.6	
	comp=Z,3.3nm,1.0s,baz=54,slow=2.1,SNR=3.9						
KBZ	Khabaz	145.82	303	PKPbc	PKPbc	04 52 22.7	+0.1
	comp=Z,2.2nm,0.7s,baz=197,slow=5.6,SNR=4.2						
FINES	FINESS Array B	146.01	340	PKPbc	PKPdf	04 52 21.6	-0.2
	comp=Z,6.8nm,0.7s,baz=53,slow=3.6,SNR=29						
NOA	NORSAR Array B	149.60	351	PKPbc	PKPbc	04 52 30.6	-1.7
	comp=Z,0.5nm,0.5s,baz=13,slow=4.1,SNR=4.7						
HFS	Hagfors	150.10	349	PKPbc	PKPbc	04 52 32.1	-1.4
	comp=Z,1.4nm,0.5s,baz=96,slow=4.5,SNR=4.4						
MMAI	Mount Meron Ar	152.02	282	PKPbc	PKPbc	04 52 38.9	-0.1
	comp=Z,2.6nm,0.5s,baz=80,slow=5.2,SNR=4.2						
AKASG	Malin Array Be	152.13	322	PKPbc	PKPbc	04 52 37.6	-0.9
	comp=Z,3.0nm,0.6s,baz=52,slow=2.6,SNR=14						
BRTR	Keskin Array B	153.26	297	PKPbc	PKPbc	04 52 41.0	-0.6
	comp=Z,0.7nm,0.8s,baz=156,slow=3.4,SNR=4.3						
CLL	Collm	158.43	342	*e*PKPab	PKPab	04 53 17.0	+1.9
GERES	GERESS Array B	160.40	337	PKPab	PKPab	04 53 23.4	-0.5
	comp=Z,0.3nm,0.5s,baz=32,slow=3.8,SNR=3.1						

IDC 18 05:07:03.4±7.6**, 1°.26N×123°.13E, h0^{km}, mb3.8**/3**, mbtmp3.9**/3**, Error ellipse: s-maj=203.8km s-min=119.0km az=62.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.77	153	P	P	05 12 17.6	-0.2
	1.1nm,0.5s,baz=331,slow=10,SNR=18						
	1.1nm,0.5s						
ASAR	Alice Springs	26.90	158	P	P	05 12 47.5	+1.1
	0.3nm,0.3s,baz=330,slow=9.0,SNR=8.3						
	0.3nm,0.3s						
STKA	Stephens Creek	37.32	154	P	P	05 14 16.3	-1.3
	1.0nm,0.3s,baz=312,slow=12,SNR=1.8						
	1.0nm,0.3s						

IDC 18 05:08:54.4±2.8**, 30°.23S×178°.08W, h0^{km}, mb3.8**/3**, mbtmp3.8**/3**, MS3.7**/4**, Error ellipse: s-maj=79.9km s-min=34.9km az=39.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.05	267	P	P	05 16 56.0	-0.2
	0.6nm,0.5s,baz=107,slow=7.8,SNR=12						
	0.6nm,0.5s						
WRA	Warramunga Arr	44.02	272	P	P	05 17 04.0	0.0
	1.2nm,0.5s,baz=113,slow=7.9,SNR=12						
	1.2nm,0.5s						
GUMO	Guam	56.31	315	LR	LR	05 41 16.7	
	comp=Z,62nm,18.5s,baz=114,slow=34						
QSPA	South Pole Qui	59.88	180	P	P	05 19 01.8	0.0
	1.0nm,1.0s,baz=33,slow=8.6,SNR=10						
	1.0nm,1.0s						
JNU	Nakatsue	79.39	318	LR	LR	05 53 08.6	
	comp=Z,38nm,18.2s,baz=191,slow=33						
ASAJ	Asahikawa	82.26	333	LR	LR	05 58 30.3	
	comp=Z,23nm,18.2s,baz=26,slow=36						
ATAH	Atahualpa	94.74	101	LR	LR	05 57 03.2	
	comp=Z,46nm,20.6s,baz=200,slow=30						
FINES	FINESS Array B	144.96	340	PKP	PKPab	05 28 31.9	-0.1
	0.7nm,0.5s,baz=62,slow=5.5,SNR=4.9						

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*ASRS **18** 05:11:14.2±0.4, 47°N±1°×8°2E±°, h9^{km}, MLh3.0/3, Error ellipse: s-maj=5.0km s-min=3.1km az=99.8, confirmed*

*NNC **18** 05:11:17.1±1.4, 47°.37N×81°.92E, h0^{km}, mpv1.7, Error ellipse: s-maj=7.8km s-min=6.3km az=149.0*

ISC 18 05:11:15.2±1.5**, 47°.12N**±0°.05×**81°.29E**±0°.07**, h10^{km}, n12, σ1ˢ40**/16**, 5C-1D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAKZ	Makanchi	0.57	123	⇑P	Pb	05 11 28.0	+0.8
	1.7nm,0.3s						
MAKZ				⇑S	Sb	05 11 35.6	+0.2
	3.4nm,0.3s						
MAKZ	Makanchi	0.57	123	Pg	Pb	05 11 28.1	+0.9
MAKZ				Sg	Sb	05 11 35.9	+0.5
MK31	Makanchi Array	0.76	115	⇓P	Pg	05 11 29.6	-0.3
	0.2nm,0.1s,baz=338,slow=18,SNR=176						
MK31				⇑S	Sg	05 11 38.5	-1.3
	1.3nm,0.2s,baz=339,slow=29,SNR=39						
MKAR	Makanchi Array	0.76	115	Pg	Pg	05 11 29.6	-0.3
MKAR				Sg	Sg	05 11 38.5	-1.3
KURBB	Kurchatov Arra	3.95	334	⇑Lg	Lg	05 13 23.1	
	10nm,0.6s						
KURK	Kurchatov	4.01	335	⇑Lg	Lg	05 13 22.6	
	3.9nm,0.7s						
KURK	Kurchatov	4.01	335	Pg	Pb	05 12 26.8	+0.9
KURK				Sg	Sg	05 13 22.1	-1.7
DGZ	Jazzator, Alta	4.84	55	Sg	Sb	05 13 39.7	+1.2
ELDR	Elanda	5.17	36	Sg	Sb	05 13 49.1	+1.2
CHBI	Chibit, Altay	5.21	50	Sg	Sb	05 13 46.1	-3.0
AKAR	Aktash	5.28	50	Pg	Pb	05 12 49.0	+1.5
AKAR				Sg	Sb	05 13 52.3	+1.3
ULGR	Ulagan, Altay	5.63	49	Sg	Sb	05 14 00.2	-0.9

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*NEIC **18** 05:14:46.8, 25°.30S×178°.43E, h580^{km}, Moment Tensor Solution. Duration: 3ˢ0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.02; M$_{\theta\theta}$-0.02; M$_{\phi\phi}$1.03; M$_{r\theta}$-0.66; M$_{\theta\phi}$-1.76; M$_{\phi r}$-1.42; Fault plane solution: M$_0$2.57000×10^{17} NP1: φ$_s$106.65000°, δ49.80000°, λ-155.87000°. NP2: φ$_s$0.53000°, δ71.81000°, λ-42.79000°. Principal axes: T 2.5263, Plg14.0000°, Azm58.0000°; N 0.0798, Plg44.0000°, Azm162.0000°; P -2.6061, Plg43.0000°, Azm315.0000°;*

*NEIC **18** 05:14:46.8, 25°.50S×178°.20E, h580^{km}*

*BJI **18** 05:14:46.2, 25°.10S×178°.37E, h599^{km}, mB5.4/30, mb5.6/66*

*MOS **18** 05:14:46.1±0.8, 25°.40S×178°.20E, h594^{km}, mb5.5/29, Error ellipse: s-maj=8.5km s-min=7.4km az=113.3*

*NEIC **18** 05:14:46.1±1.8, 25°.46S±0°.09×178°.21E±0°.10, h579^{km}±4^{km}, mb5.1/410, Mww5.5/22, Error ellipse: s-maj=13.1km s-min=12.1km az=138.0*

*IDC **18** 05:14:46.9±0.7, 25°.48S×178°.25E, h597^{km}±6^{km}, mb4.5/26, mbtmp5.4/30, Error ellipse: s-maj=8.9km s-min=8.3km az=127.0*

*NOU **18** 05:14:48.0, 25°.45S×178°.27E, h609^{km}, ML5.2/169, South of Fiji Islands*

*GCMT **18** 05:14:51.1±0.2, 25°.52S±0°.02×178°.24E±0°.02, h611^{km}±1^{km}, MW5.6/116, Moment Tensor Solution. s116,c181; Duration: 1ˢ5 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.12±.04; M$_{\theta\theta}$0.33±.07; M$_{\phi\phi}$0.78±.07; M$_{r\theta}$-0.91±.07; M$_{\theta\phi}$-2.43±.06; M$_{\phi r}$-1.36±.07; Best double couple: M$_0$3.09200×10^{17} NP1: φ$_s$100.00000°, δ59.00000°, λ-155.00000°. NP2: φ$_s$356.00000°, δ69.00000°, λ-34.00000°. Principal axes: T 3.0410, Plg6.0000°, Azm50.0000°; N 0.0970, Plg51.0000°, Azm147.0000°; P -3.1420, Plg38.0000°, Azm315.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

*BGR **18** 05:14:52.3, 24°.52S×178°.68E, h634^{km}±4^{km}*

ISC 18 05:14:47.5±0.3**, 25°.54S**±0°.03×**178°.27E**±0°.03**, h610^{km}**±2^{km}**, h611^{km}:pP-P, n1533, σ1ˢ21**/1564**, mb5.3**/407**, 105C-83D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	5.00	138	P	P	05 16 21.5	+0.7
RIZ				S	S	05 17 40.2	+3.0
RAO	Raoul Island	5.01	138		P	05 16 19.6	-1.3
RAO	Raoul Island	5.01	138	P	P	05 16 21.5	+0.6
	15µm,1.1s						
RAO	Raoul Island	5.01	138	P	P	05 16 19.6	-1.3
GLKZ	Green Lake	5.02	138	P	P	05 16 21.3	+0.3
GLKZ				S	S	05 17 38.5	+1.1
LKBA	Tubou, Lakemba	7.76	21	P	P	05 16 44.3	-0.7
	3µm,1.0s						
MSVF	Nonsavu	7.78	358		P	05 16 43.7	-1.6
MSVF	Nonsavu	7.78	358	P	P	05 16 44.0	-1.3
	34nm,0.3s,baz=248,slow=23,SNR=37						
MSVF				S	S	05 18 18.2	-3.4
	56nm,0.8s,baz=116,slow=22,SNR=1.7						
MSVF	Nonsavu	7.78	358	P	P	05 16 44.4	-0.9
	160nm,1.0s						
MSVF	Nonsavu	7.78	358	*ce*P	P	05 16 43.5	-1.8
MSVF				pmax	pmax		
	comp=Z,120nm,1.0s						
TAVE	Taveuni	8.96	11	P	P	05 16 56.2	-0.2
	comp=Z,4µm,1.1s						
DGTI	Dogotuki	9.30	9	P	P	05 16 58.9	-0.8
	comp=Z,959nm,1.5s						
NFK	Norfolk Island	9.83	247	P	P	05 17 06.3	+1.6
	comp=Z,1µm,1.1s						
MARNC	Mare, Loyalty	10.23	291	P	P	05 17 09.8	+1.1
	comp=Z,19nm,1.1s						
INH	Isangel	10.23	304	P	P	05 17 08.8	0.0
	comp=Z,690nm,1.4s						
PINNC	Pines Island,	10.31	284	P	P	05 17 09.4	-0.1
PINNC	Pines Island,	10.31	284	P	P	05 17 10.9	+1.4
	comp=Z,288nm,1.1s						
OUZ	Omahuta	10.45	202	P	P	05 17 13.0	+2.3
	comp=Z,2µm,1.0s						
OUZ	Omahuta	10.45	202	P	P	05 17 13.2	+2.5
WCZ	Waipu Caves	10.90	197	P	P	05 17 17.8	+2.6
OUENC	Ouen Island, N	10.90	284	P	P	05 17 16.5	+1.1
	comp=Z,194nm,1.1s						
GRZ	Great Barrier	10.94	192	P	P	05 17 17.3	+1.8
YATNC	Mamie plateau,	10.98	286	P	P	05 17 17.0	+0.8
	comp=Z,475nm,0.9s						
ONTNC	Ouen Toro	11.28	284		P	05 17 17.6	-1.5
ONTNC	Ouen Toro	11.28	284	P	P	05 17 19.6	+0.5
	comp=Z,194nm,0.9s						
DZM	Mont Dzumac	11.36	285		P	05 17 18.7	-1.5
DZM	Mont Dzumac	11.36	285	*e*P	P	05 17 19.2	-0.9
	comp=Z,750nm,1.0s						
DZM				*e*S	S	05 19 22.4	-3.0
	comp=Z,526nm,1.6s						
DZM	Mont Dzumac	11.36	285	P	P	05 17 20.2	+0.1
	comp=Z,307nm,0.9s,baz=99,slow=15,SNR=195						
DZM	Mont Dzumac	11.36	285	P	P	05 17 21.3	+1.2
	comp=Z,390nm,0.9s						
KUZ	Kuaotunu	11.38	190	P	P	05 17 21.6	+1.7
	comp=Z,508nm,1.0s						
KUZ	Kuaotunu	11.38	190	P	P	05 17 21.6	+1.7
ABAZ	Army Bay	11.41	194	P	P	05 17 22.5	+2.4
WIAZ	Waiheke Island	11.53	193	P	P	05 17 23.4	+2.1
MBAZ	Motutapu North	11.55	194	P	P	05 17 23.8	+2.2
HBAZ	Herne Bay Bore	11.67	194	P	P	05 17 22.8	+0.1
FUTU	Fugatoga	11.68	18		P	05 17 21.1	-2.2
FUTU	Fugatoga	11.68	18	P	P	05 17 22.5	-0.7
	comp=Z,2µm,1.1s						
ETAZ	East Tamaki Re	11.73	193	P	P	05 17 25.6	+2.2
WTAZ	Waiatarua	11.78	195	P	P	05 17 25.7	+1.8
MKAZ	Moumakai	11.83	192	P	P	05 17 25.5	+1.2
KBAZ	Karaka Road Bo	11.87	193	P	P	05 17 26.6	+1.9
AWAZ	Awhitu Peninsu	11.89	194	P	P	05 17 26.8	+1.8
MXZ	Matakaoa Point	11.98	180	P	P	05 17 23.3	-2.6
MXZ				S	S	05 19 28.2	-7.7
HAZ	Te Kaha	12.18	182	P	P	05 17 25.8	-2.0
HAZ				S	S	05 19 35.8	-3.7
WMGZ	Waiomatatini S	12.24	179	P	P	05 17 26.2	-2.2
WMGZ				S	S	05 19 34.5	-6.1
PKGZ	Pakihiroa	12.29	181	P	P	05 17 26.3	-2.6
PKGZ				S	S	05 19 35.7	-5.8
TOZ	Tahuroa Road	12.38	190		P	05 17 29.6	-0.2
RUGZ	Raukumara Rang	12.39	182	P	P	05 17 27.7	-2.4
RUGZ				S	S	05 19 37.7	-5.9
TWGZ	Tauwhareparae	12.60	181	P	P	05 17 29.4	-2.5
TWGZ				S	S	05 19 42.7	-4.5
NIUE	Niue	12.67	62		P	05 17 31.6	-1.4
NIUE	Niue	12.67	62	P	P	05 17 32.0	-1.0
	comp=Z,2µm,1.2s						
NIUE	Niue	12.67	62	P	P	05 17 33.2	+0.2
	comp=Z,2µm,1.2s						
NIUE	Niue	12.67	62	P	P	05 17 32.4	-0.6
NIUE				S	S	05 19 52.1	+3.1
URZ	Urewera	12.72	184	P	P	05 17 31.5	-1.5
	comp=Z,138nm,0.6s,baz=348,slow=4.2,SNR=74						
URZ				S	S	05 19 43.0	-6.2
	comp=Z,130nm,0.4s,baz=167,slow=21,SNR=15						
URZ				ScP	ScP	05 24 52.5	-0.2
	comp=Z,4.6nm,0.5s,baz=345,slow=19,SNR=6.1						
TKGZ	Te Karaka	12.86	181	P	P	05 17 32.8	-1.7
TKGZ				S	S	05 19 44.6	-7.2
RTZ	Ruatahuna	13.08	184		P	05 17 34.7	-2.1
RIGZ	Rimuhau	13.13	182	P	P	05 17 35.9	-1.4
RIGZ				S	S	05 19 50.1	-6.6
HIZ	Hauiti	13.25	192	P	P	05 17 38.6	+0.2
HIZ	Hauiti	13.25	192	P	P	05 17 40.0	+1.6
BKZ	Black Stump Fm	13.67	186		P	05 17 41.6	-1.1
BKZ	Black Stump Fm	13.67	186	P	P	05 17 42.7	0.0
	comp=Z,120nm,0.6s						
VLAKA	Lakatoro	13.81	311	P	P	05 17 44.7	+0.3
	comp=Z,517nm,1.0s						
KHEZ	Kahui Hut	14.17	194	P	P	05 17 49.0	+1.4
	comp=Z,3µm,0.8s						
SANVU	Saraoutou	14.43	312		P	05 17 47.9	-2.3
SANVU	Saraoutou	14.43	312	P	P	05 17 50.3	+0.1
	comp=Z,667nm,0.8s						
AFI	Afiamalu	14.88	41		P	05 17 51.4	-3.0
AFI	Afiamalu	14.88	41	P	P	05 17 52.4	-2.0
	comp=Z,465nm,1.1s						
AFI	Afiamalu	14.88	41	P	P	05 17 51.4	-3.0
BFZ	Birch Farm	15.19	186	P	P	05 17 54.4	-2.4
BFZ	Birch Farm	15.19	186	P	P	05 17 56.3	-0.5
	comp=Z,475nm,0.8s						
MRZ	Mangatainoka R	15.24	188		P	05 17 55.8	-1.4
QRZ	Quartz Range	15.97	196	P	P	05 18 05.3	+1.3
QRZ	Quartz Range	15.97	196	P	P	05 18 05.3	+1.3
	comp=Z,1µm,0.8s						
TCW	Tory Channel	15.97	191		P	05 18 04.3	+0.4
SNZO	South Karori	16.00	190	P	P	05 18 03.6	-0.5
SNZO	South Karori	16.00	190	P	P	05 18 04.7	+0.6
	comp=Z,472nm,1.1s						
MSWZ	Moikau Station	16.03	188	P	P	05 18 03.7	-0.8
TKNZ	Takaka Hill	16.07	195	P	P	05 18 05.5	+0.7
PLWZ	Palliser	16.18	188	P	P	05 18 05.4	-0.4
FUNA	Funafuti	16.95	3		P	05 18 11.9	-1.3
FUNA	Funafuti	16.95	3	P	P	05 18 13.0	-0.2
	comp=Z,201nm,1.1s						
LHI	Lord Howe Isla	17.89	246	P	P	05 18 24.4	+2.8
LHI	Lord Howe Isla	17.89	246	P	P	05 18 24.3	+2.7
	comp=Z,957nm,0.8s						
LUES	Luesalemba Tem	18.87	319	P	P	05 18 30.7	0.0

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      comp=Z,234nm,1.0s
RPZ   Rata Peaks      19.06 196  P       P        05 18 31.9 -0.1
      comp=Z,49nm,0.4s,baz=327,slow=1.8,SNR=26
RPZ                              S       S        05 21 31.5 -2.4
      comp=Z,76nm,0.8s,baz=303,slow=23,SNR=3.8
RPZ                              ScP     ScP      05 25 04.9 -0.1
      comp=Z,54nm,0.7s,baz=334,slow=0.1,SNR=6.6
RPZ   Rata Peaks      19.06 196  P       P        05 18 33.7 +1.6
      comp=Z,145nm,0.6s
JCZ   Jackson Bay     20.03 200  P       P        05 18 41.6 +0.7
      comp=Z,412nm,0.5s
ODZ   Otahua Downs    20.41 196          P        05 18 43.9 -0.3
ODZ   Otahua Downs    20.41 196  P       P        05 18 44.8 +0.6
      comp=Z,60nm,1.2s
RAR   Rarotonga       20.61  82          P        05 18 46.7 +0.4
RAR   Rarotonga       20.61  82  P       P        05 18 46.6 +0.3
      comp=Z,97nm,0.9s,baz=238,slow=6.7,SNR=7.9
      comp=Z,97nm,0.9s
RAR   Rarotonga       20.61  82  P       P        05 18 47.0 +0.7
      comp=Z,120nm,1.2s
RAR   Rarotonga       20.61  82  P       P        05 18 46.7 +0.4
WKZ   Wanaka          20.65 199  P       P        05 18 46.1 -0.3
HURO  Huro Makira     21.58 311  P       P        05 18 54.2 -0.9
      comp=Z,1µm,0.7s
DCZ   Deep Cove       21.80 201          P        05 18 57.5 +0.9
WHZ   Wether Hill Ro  21.93 200          P        05 18 58.4 +0.6
NGOA  Tingoa Renbel   22.13 306  P       P        05 19 00.5 +0.5
      comp=Z,598nm,0.9s
SYZ   Scrubby Hill    22.18 197  P       P        05 19 00.8 +0.8
      comp=Z,163nm,0.9s
GC1S  Gold Coast 1 S  22.23 258  P       P        05 19 02.4 +1.7
      comp=Z,101nm,0.7s
PYZ   Puysegur Point  22.57 201  P       P        05 19 04.6 +1.1
      comp=Z,163nm,0.9s
ALEG  Aligegeo Malai  23.63 312  P       P        05 19 12.4 -0.9
      comp=Z,2µm,0.9s
HNR   Honiara         23.66 309          P        05 19 12.5 -1.0
HNR   Honiara         23.66 309  P       P        05 19 13.0 -0.5
      comp=Z,810nm,0.9s
HNR   Honiara         23.66 309  P       P        05 19 12.5 -1.0
ARMA  Armidale        24.00 252          P        05 19 18.6 +2.1
ARMA  Armidale        24.00 252  P       P        05 19 18.5 +1.9
      comp=Z,131nm,0.8s
ARMA  Armidale        24.00 252  P       P        05 19 18.7 +2.2
NTLH  Newcastle Hard  24.27 246  P       P        05 19 20.7 +1.9
      comp=Z,387nm,0.7s
TATA  Tatamba Isabel  24.50 311  P       P        05 19 19.5 -1.5
      comp=Z,254nm,0.8s
EIDS  Eidsvold        24.54 264  P       P        05 19 22.0 +0.8
      comp=Z,155nm,1.1s
EIDS  Eidsvold        24.54 264  P       P        05 19 22.3 +1.1
      comp=Z,155nm,1.1s
GD1S  Gladstone Soft  24.67 268  P       P        05 19 23.6 +1.2
MGCD  Mangrove Creek  24.82 246  P       P        05 19 25.9 +2.4
      comp=Z,379nm,0.6s
MGCD  Mangrove Creek  24.82 246  P       P        05 19 26.0 +2.4
      comp=Z,379nm,0.6s
RIV   Riverview       24.91 244  P       P        05 19 26.3 +2.0
      comp=Z,146nm,1.0s
SYDH  Sydney Hard Ro  25.23 245  P       P        05 19 28.6 +1.4
      comp=Z,220nm,1.0s
WOLH  Wollongong Har  25.26 243  P       P        05 19 29.0 +1.6
      comp=Z,346nm,0.7s
RMQ   Roma            26.52 261  P       P        05 19 40.1 +1.5
      comp=Z,57nm,1.3s
CNB   Canberra Magne  26.68 242  P       P        05 19 42.0 +2.0
      comp=Z,179nm,1.2s
CNB   Canberra Magne  26.68 242  P       P        05 19 41.4 +1.4
      comp=Z,179nm,1.2s
CAN   Canberra        26.97 242          P        05 19 44.2 +1.7
CAN   Canberra        26.97 242  P       P        05 19 44.0 +1.5
      comp=Z,204nm,1.1s
CAN   Canberra        26.97 242  P       P        05 19 44.1 +1.7
      comp=Z,312nm,1.1s
CAN   Canberra        26.97 242  P       P        05 19 44.2 +1.7
YNG   Young           27.25 244  P       P        05 19 46.6 +1.7
      comp=Z,141nm,0.8s
MILA  Mila            27.29 238  P       P        05 19 47.2 +1.9
      comp=Z,89nm,1.1s
CMSA  Cobar Meteorol  29.17 251  P       P        05 20 02.4 +0.9
      comp=Z,226nm,0.7s
CMSA  Cobar Meteorol  29.17 251  P       P        05 20 02.2 +0.7
TBI   Tubuai          29.42  93 eP       P        05 20 04.9 +1.1
      comp=Z,276nm,0.8s
TBI                             eS       S        05 24 13.1 -3.5
      comp=Z,3µm,43.0s
TBI                             esS      sS       05 27 17.8 +2.7
      comp=Z,3µm,31.0s
GLAD  Gladstone       29.44 231  P       P        05 20 05.2 +1.5
      comp=Z,214nm,0.8s
TV1H  Townsville Har  29.72 276  P       P        05 20 07.0 +0.6
      comp=Z,277nm,0.9s
CTAO  Charters Tower  29.96 274          P        05 20 09.4 +0.9
CTAO  Charters Tower  29.96 274  P       P        05 20 09.0 +0.5
      comp=Z,205nm,0.8s
CTAO  Charters Tower  29.96 274  P       P        05 20 09.4 +0.9
CTAO                             pmax    pmax
      comp=Z,357nm,0.7s
CORO  Coronation Par  30.22 231  P       P        05 20 12.3 +2.0
      comp=Z,425nm,0.8s
TOO   Toolangi        30.25 239          P        05 20 12.4 +1.6
TOO                              IAmb    IAmb     05 20 13.2
      comp=Z,50nm,0.8s
TOO   Toolangi        30.25 239  P       P        05 20 12.2 +1.4
      comp=Z,90nm,1.0s
TOO   Toolangi        30.25 239  P       P        05 20 12.4 +1.6
TOO                              pmax    pmax
      comp=Z,50nm,0.8s
QLP   Quilpie         30.54 261  P       P        05 20 13.4  0.0
      comp=Z,197nm,0.8s
QLP   Quilpie         30.54 261  P       P        05 20 14.6 +1.2
      comp=Z,197nm,0.8s
MOO   Moorlands       30.57 229  P       P        05 20 15.1 +1.7
      comp=Z,255nm,1.1s
MOO   Moorlands       30.57 229  P       P        05 20 15.1 +1.7
      comp=Z,255nm,1.1s
MOO   Moorlands       30.57 229  P       P        05 20 15.3 +1.9
TAU   Tasmania Unive  30.67 228          P        05 20 15.4 +1.2
TAU   Tasmania Unive  30.67 228  P       P        05 20 15.9 +1.7
      comp=Z,284nm,0.9s
TAU   Tasmania Unive  30.67 228  P       P        05 20 15.4 +1.2
TAU                              pmax    pmax
      comp=Z,167nm,0.7s
TAU   Tasmania Unive  30.67 228  P       P        05 20 15.7 +1.5
TAU                              PcP     PcP      05 22 52.8 +0.3
TAU                              ScP     ScP      05 25 40.4 +2.2
MLBS  Spotswood, Mel  30.77 238  P       P        05 20 16.9 +1.8
PAE   Paea            30.84  82 eP       P        05 20 16.9 +0.9
      comp=Z,107nm,1.2s
PPT2  Papeete2        30.87  82 eS       S        05 24 31.8 -7.3
      comp=Z,214nm,31.5s
PPT2                            esS      sS       05 27 40.3 +1.3
      comp=Z,1µm,26.0s
PPT   Papeete         30.88  82  P       P        05 20 16.6 +0.2
      comp=Z,283nm,1.0s,baz=312,slow=7.7,SNR=12
PPT                              ScP     ScP      05 25 40.7 +1.3
      comp=Z,107nm,0.9s,baz=293,slow=2.2,SNR=6.6
      comp=Z,283nm,1.0s
PPTF  Pamatai, Papee  30.88  82          P        05 20 16.9 +0.4
PPTF  Pamatai, Papee  30.88  82  P       P        05 20 18.2 +1.7
      comp=Z,352nm,1.1s
PPTF  Pamatai, Papee  30.88  82  P       P        05 20 16.9 +0.4
PPTF                             ScP     ScP      05 25 40.9 +1.4
TVO   Taravao         31.10  82 eP       P        05 20 18.8 +0.5
      comp=Z,111nm,0.9s
GEXS  Deakin Univers  31.32 238  P       P        05 20 21.6 +1.8
      comp=Z,545nm,0.8s
MTSU  Mount Surprise  32.30 276  P       P        05 20 29.4 +1.0
      comp=Z,553nm,0.8s
MTSU  Mount Surprise  32.30 276  P       P        05 20 29.5 +1.0
      comp=Z,553nm,0.8s
STKA  Stephens Creek  32.67 250  P       P        05 20 32.3 +0.9
      comp=Z,564nm,1.1s
STKA  Stephens Creek  32.67 250  P       P        05 20 32.4 +1.1
      comp=Z,89nm,0.5s,baz=94,slow=10,SNR=218
STKA                             PcP     PcP      05 22 57.9 -0.4
      comp=Z,22nm,0.5s,baz=112,slow=12,SNR=3.6
STKA                             S       S        05 25 05.7 -0.4
      comp=Z,20nm,0.9s,baz=240,slow=19,SNR=5.2
STKA                             PKiKP   PKiKP    05 30 22.6 -1.0
      comp=Z,2.6nm,0.5s,baz=69,slow=1.3,SNR=3.5
      comp=Z,89nm,0.5s
STKA  Stephens Creek  32.67 250  P       P        05 20 32.6 +1.2
      comp=Z,28nm,1.1s
STKA  Stephens Creek  32.67 250diP       P        05 20 32.2 +0.9
RABL  Rabaul          32.84 306  P       P        05 20 31.9 -1.1
ARPS  Mount Arapiles  32.94 241  P       P        05 20 34.6 +1.0
      comp=Z,314nm,0.8s
ARPS  Mount Arapiles  32.94 241  P       P        05 20 35.0 +1.4
PMOR  Pomariorio Ree  33.34  78 eP       P        05 20 37.8 +0.7
      comp=Z,340nm,1.0s
PMG   Port Moresby    33.61 293          P        05 20 38.6 -0.9
PMG   Port Moresby    33.61 293  P       P        05 20 39.1 -0.4
      comp=Z,684nm,1.1s
PMG   Port Moresby    33.61 293  P       P        05 20 38.6 -0.9
PMG                              pmax    pmax
      comp=Z,585nm,1.0s
PMG   Port Moresby    33.61 293  P       P        05 20 38.4 -1.1
PMG                              PcP     PcP      05 23 01.5 +0.2
PMG                              ScP     ScP      05 25 51.8 +2.9
COEN  Coen            34.88 283  P       P        05 20 50.7 +0.7
      comp=Z,578nm,1.1s
COEN  Coen            34.88 283  P       P        05 20 50.7 +0.7
      comp=Z,578nm,1.1s
HTT   Hallett         34.98 248  P       P        05 20 51.3 +0.7
      comp=Z,65nm,0.7s
HTT   Hallett         34.98 248  P       P        05 20 51.4 +0.7
      comp=Z,257nm,0.7s
HTT   Hallett         34.98 248  P       P        05 20 51.4 +0.7
PTPS  Port Pirie      35.75 248  P       P        05 20 58.2 +1.3
      comp=Z,329nm,0.6s
QIS   Mount Isa       35.84 270  P       P        05 20 57.9  0.0
      comp=Z,221nm,1.1s
QIS   Mount Isa       35.84 270  P       P        05 20 57.6 -0.3
      comp=Z,221nm,1.1s
WHYH  Whyalla         36.10 248  P       P        05 21 00.4 +0.6
      comp=Z,228nm,0.7s
XMAS  Kiritimati      36.13  44  P       P        05 21 01.0 +0.8
XMAS  Kiritimati      36.13  44  P       P        05 21 01.4 +1.1
      comp=Z,479nm,0.9s
XMAS  Kiritimati      36.13  44  P       P        05 21 00.7 +0.5
BBOO  Buckleboo       37.37 249  P       P        05 21 10.2 -0.1
BBOO  Buckleboo       37.37 249  P       P        05 21 10.1 -0.1
      comp=Z,180nm,0.8s
BBOO  Buckleboo       37.37 249  P       P        05 21 10.3 +0.1
AS17  Alice Springs   40.16 263  P       P        05 21 33.3 +0.4
      comp=Z,414nm,0.8s
AS01  Alice Springs   40.20 263  P       P        05 21 33.7 +0.6
AS31  Alice Springs   40.24 263  IAmb    IAmb     05 21 35.1
      comp=Z,154nm,1.2s
ASAR  Alice Springs   40.24 263  P       P        05 21 34.0 +0.5
ASAR  Alice Springs   40.24 263  P       P        05 21 33.9 +0.4
      comp=Z,306nm,0.9s,baz=101,slow=8.1,SNR=1044
ASAR                             PcP     PcP      05 23 21.3 -0.6
      comp=Z,39nm,0.9s,baz=101,slow=4.7,SNR=7.8
ASAR                             S       S        05 26 50.9 -7.6
      comp=Z,8.2nm,0.9s,baz=89,slow=15,SNR=6.0
ASAR                             PKiKP   PKiKP    05 30 28.9 -1.0
      comp=Z,5.6nm,0.9s,baz=114,slow=0.6,SNR=5.1
ASAR                             P3KPbc           05 51 06.3
      comp=Z,0.5nm,0.5s,baz=287,slow=3.4,SNR=4.5
      comp=Z,306nm,0.9s
ASAR  Alice Springs   40.24 263  P       P        05 21 34.0 +0.5
WR0   Warramunga Arr  40.57 269  P       P        05 21 35.8 -0.3
WRAB  Tennant Creek   40.75 269  P       P        05 21 37.1 -0.4
WRAB  Tennant Creek   40.75 269diP       P        05 21 37.2 -0.4
WRAB                             pmax    pmax
      comp=Z,372nm,0.9s
WRA   Warramunga Arr  40.76 269  P       P        05 21 37.3 -0.3
      comp=Z,395nm,0.8s,baz=104,slow=8.0,SNR=531
WRA                              PcP     PcP      05 23 23.9 +0.3
      comp=Z,33nm,0.9s,baz=101,slow=4.0,SNR=8.6
WRA                              ScP     ScP      05 26 18.4 +2.3
      comp=Z,18nm,0.9s,baz=103,slow=4.3,SNR=6.3
WRA                              S       S        05 27 01.6 -4.3
      comp=Z,73nm,1.0s,baz=102,slow=12,SNR=7.3
WRA                              PKiKP   PKiKP    05 30 28.9 -1.5
      comp=Z,4.9nm,0.8s,baz=66,slow=0.2,SNR=5.1
WRA                              P3KPbc           05 51 06.2
      comp=Z,0.3nm,0.5s,baz=294,slow=2.9,SNR=5.9
WRA                              P4KPbc           05 59 33.6
      comp=Z,1.6nm,0.7s,baz=97,slow=4.2,SNR=14
JAY   Jayapura        42.77 296  P       P        05 21 53.0 -0.4
      comp=Z,171nm,0.8s,baz=133,slow=3.5,SNR=57
      comp=Z,171nm,0.8s
JAY   Jayapura        42.77 296  P       P        05 21 52.7 -0.7
      comp=Z,3µmcomp=Z,275nm,1.1s
TAOE  Nuku Hiva Isla  42.83  75  P       P        05 21 54.3 +0.3
TAOE  Nuku Hiva Isla  42.83  75⇑iP       P        05 21 55.1 +1.2
      comp=Z,1µm,1.0s
TAOE  Nuku Hiva Isla  42.83  75  P       P        05 21 55.2 +1.3
      comp=Z,513nm,0.9s
TAOE  Nuku Hiva Isla  42.83  75  P       P        05 21 55.1 +1.2
GENI  Genyem          43.16 296  P       P        05 21 56.6 +0.2
      comp=Z,890nm,0.9s
GENI  Genyem          43.16 296  P       P        05 21 56.0 -0.4
      comp=Z,7µmcomp=Z,884nm,0.9s
JOHN  Johnston Islan  43.67  17  P       P        05 22 00.8 +0.6
FORT  Forrest         44.28 251  P       P        05 22 04.3 -0.5
      comp=Z,681nm,0.7s
FORT  Forrest         44.28 251  P       P        05 22 05.0 +0.2
      comp=Z,682nm,0.7s
SMPI  Sarmi           44.70 295  P       P        05 22 07.3 -0.9
KDU   Kakadu          44.91 278  P       P        05 22 09.1 -0.7
      comp=Z,513nm,1.0s
KDU   Kakadu          44.91 278  P       P        05 22 09.3 -0.5
      comp=Z,513nm,1.0s
H11S2 WAKE ISLAND Hy  45.19 344  P       P        05 22 11.6 +0.1
      baz=208,slow=5.1,SNR=5.0
H11S3 WAKE ISLAND Hy  45.20 344  P       P        05 22 11.3 -0.4
      baz=208,slow=5.1,SNR=6.7
H11S1 WAKE ISLAND Hy  45.21 344  P       P        05 22 11.4 -0.3
      baz=208,slow=5.1,SNR=5.6
MTN   Manton Dam      46.05 277  P       P        05 22 17.6 -0.8
      comp=Z,150nm,0.7s
MTN   Manton Dam      46.05 277  P       P        05 22 18.0 -0.4
      comp=Z,150nm,0.7s
H11N1 WAKE ISLAND Hy  46.33 345  P       P        05 22 19.8 -0.3
      SNR=9.4
H11N3 WAKE ISLAND Hy  46.33 345  P       P        05 22 20.7 +0.6
      baz=312,slow=75,SNR=14
H11N2 WAKE ISLAND Hy  46.34 345  P       P        05 22 20.9 +0.7
      baz=322,slow=75,SNR=11
SRPI  Serui, Papua    46.80 293  P       P        05 22 24.2 +0.1
      comp=Z,7µmcomp=Z,811nm,0.8s
KNRA  Kununurra       47.14 272  P       P        05 22 26.9 +0.3
      comp=Z,1µm,1.0s
BAKI  Biak            47.29 294  P       P        05 22 29.4 +1.7
      comp=Z,8µmcomp=Z,991nm,0.9s
DRV   Dumont d'Urvil  47.48 200  P       P        05 22 28.6 +0.3
DRV                              ScP     ScP      05 26 42.4 -0.3
KMPI  Kaimana, Papua  47.97 289  P       P        05 22 33.7 +0.9
      comp=Z,6µmcomp=Z,859nm,1.1s
FITZ  Fitzroy Crossi  49.16 268  P       P        05 22 41.8 +0.2
FITZ                             IAmb    IAmb     05 22 43.1
      comp=Z,82nm,0.8s
FITZ  Fitzroy Crossi  49.16 268  P       P        05 22 41.9 +0.3
FITZ  Fitzroy Crossi  49.16 268  P       P        05 22 41.9 +0.3
      comp=Z,384nm,0.8s,baz=113,slow=3.0,SNR=421
FITZ                             S       S        05 29 02.3 -1.1
      comp=Z,20nm,0.9s,baz=282,slow=19,SNR=19
      comp=Z,384nm,0.8s
KMBL  Kambalda        49.47 250  P       P        05 22 42.7 -1.0
      comp=Z,54nm,1.0s
KMBL  Kambalda        49.47 250  P       P        05 22 44.3 +0.6
      comp=Z,70nm,1.0s
FAKI  Fak Fak         49.59 289  P       P        05 22 43.8 -1.0
FAKI  Fak Fak         49.59 289  P       P        05 22 44.6 -0.3
      comp=Z,284nm,1.1s
FAKI  Fak Fak         49.59 289  P       P        05 22 44.5 -0.3
      comp=Z,3µmcomp=Z,285nm,1.0s
GUMO  Guam            50.71 316  P       P        05 22 52.1 -0.7
GUMO  Guam            50.71 316  P       P        05 22 52.5 -0.3
      comp=Z,616nm,1.0s
GUMO  Guam            50.71 316  P       P        05 22 52.1 -0.7
GUMO                             pmax    pmax
      comp=Z,988nm,0.9s
GUMO  Guam            50.71 316  P       P        05 22 52.1 -0.7
SWI   Sorong          51.51 291  P       P        05 22 58.2 -0.5
HUH   Hualalai        51.52  32  IAmb    IAmb     05 23 01.6
      comp=Z,177nm,1.1s
POHA  Pohakuloa       51.73  32  P       P        05 23 00.6 +0.2
POHA                             IAmb    IAmb     05 23 01.8
      comp=Z,161nm,0.9s
POHA  Pohakuloa       51.73  32  P       P        05 23 00.8 +0.4
      comp=Z,107nm,1.3s
MHA   Mahukona        51.93  31  P       P        05 23 02.4 +1.0
MHA   Mahukona        51.93  31  P       P        05 23 02.4 +1.0
KIP   Kipapa          52.05  28deP       P        05 23 02.9 +0.6
KIP                              pmax    pmax
      comp=Z,55nm,1.0s
MSAI  Masohi          52.23 287  P       P        05 23 03.1 -0.7
      comp=Z,4µmcomp=Z,471nm,0.8s
VNDA  Vanda           52.62 184  P       P        05 23 07.1 +1.5
VNDA  Vanda           52.62 184  P       P        05 23 07.1 +1.5
      comp=Z,6.9nm,0.6s,baz=4.5,slow=8.1,SNR=51
VNDA                             ScP     ScP      05 27 05.9 +1.1
      comp=Z,27nm,0.8s,baz=341,slow=4.1,SNR=18
      comp=Z,6.9nm,0.6s
VNDA  Vanda           52.62 184  P       P        05 23 06.9 +1.3
VNDA                             PcP     PcP      05 24 06.6 +1.4
VNDA                             ScP     ScP      05 27 06.1 +1.3
SBA   Scott Base      52.66 183  P       P        05 23 08.4 +2.6
SBA   Scott Base      52.66 183  P       P        05 23 08.4 +2.6
SBA                              pmax    pmax
      comp=Z,36nm,0.8s
SBA   Scott Base      52.66 183  P       P        05 23 08.2 +2.4
SBA                              ScP     ScP      05 27 06.1 +1.2
AAI   Ambon           52.70 286  P       P        05 23 06.8 -0.4
      comp=Z,4µmcomp=Z,354nm,1.2s
KLBR  Kellerberrin    52.91 249  P       P        05 23 08.1 -0.4
      comp=Z,514nm,0.7s
KLBR  Kellerberrin    52.91 249  P       P        05 23 08.1 -0.4
      comp=Z,514nm,0.7s
RKGY  Rocky Gully     53.10 245  P       P        05 23 09.4 -0.3
      comp=Z,18nm,1.0s
NWAO  Narrogin (SRO)  53.13 247  P       P        05 23 09.9 -0.1
NWAO                             IAmb    IAmb     05 23 10.8
      comp=Z,98nm,1.4s
NWAO  Narrogin (SRO)  53.13 247  P       P        05 23 09.6 -0.4
      comp=Z,84nm,1.1s
NWAO  Narrogin (SRO)  53.13 247  P       P        05 23 10.2 +0.2
NWAO  Narrogin (SRO)  53.13 247  P       P        05 23 09.6 -0.4
      comp=Z,29nm,1.2s
NWAO  Narrogin (SRO)  53.13 247  P       P        05 23 09.9 -0.1
NWAO                             pmax    pmax
      comp=Z,98nm,1.4s
NWAO  Narrogin (SRO)  53.13 247  P       P        05 23 09.6 -0.4
NWAO                             ScP     ScP      05 27 08.7 +0.7
MEEK  Meekatharra     53.15 255  P       P        05 23 09.2 -1.0
      comp=Z,60nm,1.0s
MEEK  Meekatharra     53.15 255  P       P        05 23 09.1 -1.2
      comp=Z,60nm,1.0s
PSAC2 Pilbara Seismi  53.29 261  P       P        05 23 10.5 -0.8
      comp=Z,108nm,0.7s
PSA00 Pilbara Seismi  53.34 261  IAmb    IAmb     05 23 11.5
      comp=Z,65nm,0.7s
PSA00 Pilbara Seismi  53.34 261  P       P        05 23 10.4 -1.2
      comp=Z,125nm,0.8s
SOEI  Soe             53.45 277  P       P        05 23 13.5 +0.9
      comp=Z,563nm,1.0s
SOEI  Soe             53.45 277  P       P        05 23 13.8 +1.2
      comp=Z,6µmcomp=Z,644nm,1.1s
MBWA  Marble Bar      53.56 262  P       P        05 23 12.7 -0.5
MBWA  Marble Bar      53.56 262  P       P        05 23 12.6 -0.6
      comp=Z,157nm,1.3s
MBWA  Marble Bar      53.56 262  P       P        05 23 13.1 -0.1
MBWA  Marble Bar      53.56 262  P       P        05 23 12.2 -1.0
      comp=Z,90nm,1.3s
MBWA  Marble Bar      53.56 262  P       P        05 23 12.4 -0.8
BATI  Baumata         53.80 276  P       P        05 23 16.3 +1.3
      comp=Z,4µmcomp=Z,489nm,0.7s
NLAI  Namlea          53.87 286  P       P        05 23 15.1 -0.3
      comp=Z,5µmcomp=Z,511nm,1.1s
BLDU  Ballidu         53.97 250  P       P        05 23 15.4 -0.5
      comp=Z,145nm,0.8s
BLDU  Ballidu         53.97 250  P       P        05 23 15.9  0.0
MUN   Mundaring       54.15 248  P       P        05 23 16.9 -0.3
      comp=Z,83nm,1.1s
MUN   Mundaring       54.15 248  P       P        05 23 18.2 +1.1
      comp=Z,83nm,1.1s
MTKN  Mount Kenneth   54.52 248  P       P        05 23 21.2 +1.5
      comp=Z,303nm,0.8s
MORW  Morawa          54.85 251  IAmb    IAmb     05 23 22.7
      comp=Z,60nm,0.8s
MORW  Morawa          54.85 251  P       P        05 23 21.5 -0.5
      comp=Z,100nm,0.9s
MORW  Morawa          54.85 251  P       P        05 23 22.0 -0.1
      comp=Z,101nm,0.9s
SANI  Sanana          55.42 286  P       P        05 23 26.0 -0.2
      comp=Z,442nm,0.8s
SANI  Sanana          55.42 286  P       P        05 23 25.2 -1.0
      comp=Z,4µmcomp=Z,444nm,0.8s
TNTI  Ternate         55.67 290  P       P        05 23 28.3 +0.3
      comp=Z,424nm,1.0s
TNTI  Ternate         55.67 290  P       P        05 23 27.4 -0.6
      comp=Z,4µmcomp=Z,421nm,1.0s
MMRI  Maumere         55.73 277  P       P        05 23 28.7 +0.3
      comp=Z,538nm,1.0s
MMRI  Maumere         55.73 277  P       P        05 23 28.1 -0.3
      comp=Z,5µmcomp=Z,536nm,0.9s
EDFI  Ende, Flores    56.17 277  P       P        05 23 30.8 -0.7
      comp=Z,4µmcomp=Z,506nm,1.1s
BASI  Baing, Sumba    56.57 275  P       P        05 23 34.8 +0.7
CCD   Concordia, Ant  56.74 195  P       P        05 23 35.3 +0.5
CCD                              ScP     ScP      05 27 23.4 -0.1
WSI   Waingapu        57.05 275  P       P        05 23 37.5 +0.1
WBSI  Waikabubak, Su  57.88 275  P       P        05 23 42.7 -0.3
      comp=Z,3µmcomp=Z,216nm,0.6s
CASY  Casey           57.95 206  P       P        05 23 43.1 +0.5
CASY                             IAmb    IAmb     05 23 43.3
      comp=Z,58nm,0.6s
CASY  Casey           57.95 206  P       P        05 23 42.8 +0.2
CASY                             ScP     ScP      05 27 27.9 -0.6
GIRL  Giralia         58.03 258  P       P        05 23 44.5 +0.6
      comp=Z,557nm,1.1s
GIRL  Giralia         58.03 258  P       P        05 23 45.3 +1.4
      comp=Z,556nm,1.1s
BSSI  Bau Bau, Buton  58.36 279  P       P        05 23 48.4 +2.1
      comp=Z,186nm,1.3s
KMSI  Cibinong        58.47 288  P       P        05 23 46.5 -0.4
LUWI  Luwuk           58.71 285  P       P        05 23 49.1 +0.5
      comp=Z,667nm,1.0s
LUWI  Luwuk           58.71 285  P       P        05 23 48.5 -0.1
      comp=Z,5µmcomp=Z,670nm,1.0s
SGSI  Sangihe         58.77 292  P       P        05 23 49.3 +0.3
      comp=Z,445nm,0.8s
BNSI  Bone            59.48 280  P       P        05 23 53.4 -0.3
      comp=Z,4µmcomp=Z,428nm,1.1s
KAPI  Kappang         59.52 280  P       P        05 23 53.8 -0.2
KAPI  Kappang         59.52 280  P       P        05 23 54.3 +0.3
KAPI  Kappang         59.52 280  P       P        05 23 54.5 +0.5
      comp=Z,70nm,0.9s
KAPI  Kappang         59.52 280diP       P        05 23 53.8 -0.2
KAPI                             pmax    pmax
      comp=Z,111nm,1.1s
KAPI  Kappang         59.52 280  P       P        05 23 53.3 -0.7
PLAI  Plampang        59.66 275  P       P        05 23 54.8 -0.1
      comp=Z,1µm,0.8s
PLAI  Plampang        59.66 275  P       P        05 23 54.3 -0.6
APSI  Ampana          59.75 285  P       P        05 23 55.7 +0.2
      comp=Z,3µmcomp=Z,280nm,1.0s
SPSI  Sidrap Palu     59.98 281  P       P        05 23 55.6 -1.4
      comp=Z,7µmcomp=Z,244nm,1.0s
MRSI  Marisa          60.18 286  P       P        05 23 56.7 -1.6
      comp=Z,154nm,0.7s
TTSI  Tana Toraja     60.35 282  P       P        05 23 58.7 -0.8
DAV   Davao City (W)  60.59 295  P       P        05 24 00.6 -0.4
DAV   Davao City (W)  60.59 295  P       P        05 24 01.1 +0.1
      comp=Z,750nm,0.8s
PCI   Palu            61.34 284  P       P        05 24 06.7 +0.7
      comp=Z,414nm,1.1s
TOLI2 Tolitoli        61.50 286  P       P        05 24 06.0 -0.9
TOLI2                            IAmb    IAmb     05 24 07.0
      comp=Z,186nm,1.0s
TOLI2 Tolitoli        61.50 286  P       P        05 24 07.2 +0.3
      comp=Z,159nm,0.8s
MPSI  Mapaga          61.89 285  P       P        05 24 08.2 -1.3
      comp=Z,2µmcomp=Z,170nm,0.8s
DNP   Denpasar        62.03 274  P       P        05 24 11.8 +1.4
      comp=Z,776nm,1.3s
SRBI  Singaraja       62.27 274  P       P        05 24 11.7 -0.3
      comp=Z,5µmcomp=Z,502nm,1.0s
JCJ   Chichijima      62.84 324  P       P        05 24 15.4 +0.1
      comp=Z,170nm,0.9s
JAGI  Jajag, Banyuwa  63.07 273  P       P        05 24 16.2 -0.9
      comp=Z,525nm,0.9s
JAGI  Jajag, Banyuwa  63.07 273  P       P        05 24 15.8 -1.3
      comp=Z,4µmcomp=Z,521nm,0.9s
BKB   Balikpapan      63.76 282  P       P        05 24 23.0 +1.5
BKB   Balikpapan      63.76 282  P       P        05 24 23.3 +1.8
      comp=Z,257nm,0.9s
BKB   Balikpapan      63.76 282  P       P        05 24 24.2 +2.7
      comp=Z,3µmcomp=Z,256nm,0.9s
GMJI  Gumukmas        63.79 273  P       P        05 24 20.9 -0.8
      comp=Z,3µmcomp=Z,443nm,0.8s
KMMI  Kalianget       63.83 275  P       P        05 24 22.5 +0.6
      comp=Z,6µmcomp=Z,690nm,1.2s
SMKI  Samarinda       63.87 283  P       P        05 24 24.0 +1.8
      comp=Z,579nm,1.0s
QSPA  South Pole Qui  64.55 180  P       P        05 24 27.3 +1.6
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QSPA				IAmb	IAmb	05 24 28.2	
	comp=Z,43nm,0.8s						
QSPA	**South Pole Qui**	**64.55**	**180**	P	**P**	**05 24 27.3**	**+1.6**
	comp=Z,46nm,0.8s,baz=344,slow=0.6,SNR=278						
QSPA				S	**S**	**05 32 19.9**	**+1.5**
	comp=Z,2.7nm,1.1s,baz=328,slow=23,SNR=7.9						
	comp=Z,46nm,0.8s						
QSPA	**South Pole Qui**	**64.55**	**180**	P	**P**	**05 24 27.1**	**+1.4**
QSPA				PcP	**PcP**	**05 24 54.7**	**+1.3**
GRJI	**Gresik**	**65.22**	**274**	P	**P**	**05 24 31.0**	**+0.3**
MYLDM	**Lahad Datu**	**65.51**	**289**	IAmb	IAmb	05 25 05.8	
	comp=Z,104nm,0.9s						
MYLDM	**Lahad Datu**	**65.51**	**289**	P	**P**	**05 24 34.2**	**+1.8**
	comp=Z,119nm,1.0s						
PCJI	**Pacitan**	**65.87**	**272**	P	**P**	**05 24 34.8**	**+0.1**
WOJI	**Wonogiri, Jawa**	**66.25**	**273**	P	**P**	**05 24 37.0**	**0.0**
	comp=Z,6µmcomp=Z,619nm,1.0s						
UGM	**Wanagama**	**66.58**	**272**	P	**P**	**05 24 39.2**	**0.0**
UGM	**Wanagama**	**66.58**	**272**	P	**P**	**05 24 39.4**	**+0.3**
	comp=Z,266nm,1.0s						
UGM	**Wanagama**	**66.58**	**272**	P	**P**	**05 24 39.1**	**0.0**
	comp=Z,265nm,1.0s						
YOGI	**Yogyakarta**	**66.82**	**272**	P	**P**	**05 24 41.1**	**+0.5**
	comp=Z,309nm,1.7s						
SMRI	**Semarang**	**67.00**	**273**	IAmb	IAmb	05 24 42.6	
	comp=Z,125nm,0.8s						
SMRI	**Semarang**	**67.00**	**273**	P	**P**	**05 24 42.2**	**+0.5**
	comp=Z,236nm,0.8s						
SMRI	**Semarang**	**67.00**	**273**	P	**P**	**05 24 42.4**	**+0.7**
	comp=Z,233nm,0.8s						
KKM	**Kota Kinabalu**	**67.90**	**289**	P	**P**	**05 24 47.9**	**+0.6**
	comp=Z,277nm,1.3s						
JMZ	**Minamidaito 2**	**68.34**	**315**	P	**P**	**05 24 49.9**	**+0.4**
	comp=Z,209nm,0.8s						
JHJ2	**Mitsune**	**68.86**	**326**	P	**P**	**05 24 52.4**	**-0.1**
	comp=Z,314nm,0.8s						
STKI	**Sintang**	**69.18**	**280**	P	**P**	**05 24 55.3**	**+0.5**
	comp=Z,571nm,0.9s						
BBJI	**Bungbulang**	**69.35**	**272**	P	**P**	**05 24 55.5**	**-0.5**
	comp=Z,171nm,0.8s						
CNJI	**Cibinong**	**69.89**	**271**	P	**P**	**05 24 58.1**	**-0.9**
	comp=Z,2µmcomp=Z,193nm,0.8s						
XMI	**Christmas Isla**	**69.92**	**268**	P	**P**	**05 24 59.7**	**+0.4**
	comp=Z,400nm,0.8s						
XMIS	**Christmas Isla**	**69.94**	**268**	P	**P**	**05 24 59.4**	**0.0**
	comp=Z,378nm,0.9s						
SKJI	**Sukabumi**	**70.53**	**271**	P	**P**	**05 25 02.2**	**-0.6**
KSM	**Kuching**	**70.86**	**281**	P	**P**	**05 25 05.3**	**+0.5**
	comp=Z,476nm,1.0s						
JSG	**Sagara**	**70.93**	**326**	P	**P**	**05 25 05.0**	**+0.4**
	comp=Z,502nm,1.1s						
SBJI	**Serang**	**71.28**	**272**	P	**P**	**05 25 07.5**	**+0.3**
	comp=Z,208nm,0.6s						
TPI	**Tanjungpandan**	**71.34**	**276**	P	**P**	**05 25 07.5**	**-0.1**
	comp=Z,2µmcomp=Z,185nm,1.0s						
CGJI	**Cibinong**	**71.47**	**271**	P	**P**	**05 25 07.2**	**-1.1**
	comp=Z,5µmcomp=Z,601nm,0.9s						
INU	**Inuyama**	**72.05**	**325**	P	**P**	**05 25 11.1**	**0.0**
	comp=Z,166nm,0.9s						
JGF	**Kuroka**	**72.07**	**326**	IAmb	IAmb	05 25 11.8	
	comp=Z,92nm,0.7s						
JGF	**Kuroka**	**72.07**	**326**	P	**P**	**05 25 11.1**	**-0.2**
	comp=Z,141nm,0.9s						
JMM	**Marumori**	**72.22**	**330**	IAmb	IAmb	05 25 13.1	
	comp=Z,135nm,1.2s						
JMM	**Marumori**	**72.22**	**330**	P	**P**	**05 25 12.6**	**+0.5**
	comp=Z,97nm,1.2s						
MJAR	**Matsushiro Arr**	**72.39**	**327**	P	**P**	**05 25 12.4**	**-0.7**
	comp=Z,70nm,0.8s,baz=160,slow=5.6,SNR=120						
	comp=Z,70nm,0.8s						
MAJO	**Matsushiro**	**72.39**	**327**	P	**P**	**05 25 12.9**	**-0.2**
MAJO				IAmb	IAmb	05 25 13.7	
	comp=Z,114nm,0.9s						
MAJO	**Matsushiro**	**72.39**	**327**	P	**P**	**05 25 12.3**	**-0.8**
	comp=Z,154nm,1.4s						
MAJO	**Matsushiro**	**72.39**	**327**	*d i*P	**P**	**05 25 12.3**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,97nm,0.9s						
MJB9	**Matsu-Tunnel**	**72.39**	**327**	IAmb	IAmb	05 25 14.7	
	comp=Z,111nm,0.9s						
BLSI	**Bandar Lampung**	**72.39**	**272**	P	**P**	**05 25 13.2**	**-0.5**
	comp=Z,7µmcomp=Z,301nm,0.9s						
JMN	**Monobe**	**72.48**	**322**	IAmb	IAmb	05 25 15.1	
	comp=Z,103nm,0.9s						
JMN	**Monobe**	**72.48**	**322**	P	**P**	**05 25 14.3**	**+0.5**
	comp=Z,156nm,1.0s						
YOJ	**Yonaguni jima**	**72.99**	**308**	P	**P**	**05 25 16.9**	**+0.1**
	comp=Z,717nm,1.1s						
TWGBT	**Beinan**	**73.36**	**306**	P	**P**	**05 25 17.5**	**-1.5**
	comp=Z,180nm,0.7s						
JSD	**Sado**	**73.55**	**328**	P	**P**	**05 25 19.9**	**+0.3**
	comp=Z,143nm,1.1s						
YULB	**Yu-li**	**73.56**	**307**	IAmb	IAmb	05 25 19.2	
	comp=Z,57nm,0.6s						
YULB	**Yu-li**	**73.56**	**307**	P	**P**	**05 25 18.8**	**-1.2**
	comp=Z,79nm,0.7s						
LWLI	**Liwa**	**73.61**	**272**	P	**P**	**05 25 19.8**	**-1.0**
MDSI	**Maura Dua**	**73.73**	**273**	P	**P**	**05 25 19.5**	**-1.8**
	comp=Z,4µmcomp=Z,526nm,0.9s						
JNU	**Nakatsue**	**73.74**	**320**	P	**P**	**05 25 20.7**	**-0.2**
	comp=Z,159nm,1.1s						
NACB	**Ninganchiao**	**73.82**	**307**	IAmb	IAmb	05 25 21.4	
	comp=Z,116nm,0.9s						
NACB	**Ninganchiao**	**73.82**	**307**	P	**P**	**05 25 21.0**	**-0.5**
	comp=Z,143nm,1.1s						
TPUB	**Ta-pu**	**73.99**	**306**	P	**P**	**05 25 21.1**	**-1.4**
	comp=Z,354nm,0.8s						
SSLB	**Suanglung**	**74.05**	**307**	P	**P**	**05 25 21.3**	**-1.5**
	comp=Z,239nm,0.8s						
YHNB	**Yeheng**	**74.28**	**308**	P	**P**	**05 25 24.6**	**+0.4**
	comp=Z,114nm,1.2s						
TATO	**Taipei**	**74.39**	**308**	P	**P**	**05 25 23.8**	**-0.8**
TATO	**Taipei**	**74.39**	**308**	P	**P**	**05 25 23.5**	**-1.2**
TATO	**Taipei**	**74.39**	**308**	P	**P**	**05 25 24.9**	**+0.2**
	comp=Z,338nm,1.2s						
JTM	**Tenmabayashi**	**74.50**	**332**	P	**P**	**05 25 25.8**	**+0.9**
	comp=Z,322nm,1.0s						
ERM	**Erimo**	**74.65**	**334**	P	**P**	**05 25 26.8**	**+1.0**
ERM				IAmb	IAmb	05 25 29.3	
	comp=Z,89nm,1.0s						
ERM	**Erimo**	**74.65**	**334**	P	**P**	**05 25 27.0**	**+1.3**
	comp=Z,128nm,1.0s						
ERM	**Erimo**	**74.65**	**334**	*de*P	**P**	**05 25 26.6**	**+0.9**
ERM				pmax	pmax		
	comp=Z,78nm,1.0s						
JEM	**Erimo**	**74.65**	**334**	P	**P**	**05 25 27.4**	**+1.7**
	comp=Z,67nm,1.0s						
MNAI	**Manna**	**74.89**	**272**	P	**P**	**05 25 29.0**	**+1.2**
	comp=Z,547nm,0.8s						
BELA	**Belgrano 2**	**75.00**	**173**	P	**P**	**05 25 27.6**	**+0.4**
KSI	**Kapahiang**	**75.51**	**273**	P	**P**	**05 25 30.3**	**-1.0**
MAW	**Mawson**	**75.66**	**201**	P	**P**	**05 25 31.8**	**+0.7**
	comp=Z,4.8nm,0.6s						
MAW	**Mawson**	**75.66**	**201**	P	**P**	**05 25 31.9**	**+0.9**
	comp=Z,13nm,0.5s,baz=132,slow=4.9,SNR=81						
	comp=Z,13nm,0.5s						
QZH	**Quanzhou**	**76.46**	**306**	⇓*i*P	**P**	**05 25 36.0**	**-0.1**
QZH				S	**S**	**05 34 33.4**	**-0.1**
QZH				pmax	pmax		
	comp=Z,140nm,1.2s						
JKA	**Kamikawa-asahi**	**76.64**	**334**	IAmb	IAmb	05 25 39.6	
	comp=Z,121nm,1.0s						
COCO	**West Island**	**77.20**	**263**	P	**P**	**05 25 41.1**	**+0.7**
COCO	**West Island**	**77.20**	**263**	P	**P**	**05 25 42.5**	**+2.1**
COCO				pmax	pmax		
	comp=Z,378nm,1.3s						
ADK	**Adak**	**77.22**	**3**	P	**P**	**05 25 39.6**	**+0.1**
ADK	**Adak**	**77.22**	**3**	P	**P**	**05 25 39.8**	**+0.2**
	comp=Z,120nm,1.0s						
ADK	**Adak**	**77.22**	**3**	P	**P**	**05 25 39.7**	**+0.1**
ADK				pmax	pmax		
	comp=Z,173nm,0.8s						
DLV	**Lat**	**77.45**	**290**	P	**P**	**05 25 42.3**	**+0.3**
	comp=Z,285nm,1.3s						
ATKA	**Atka Island**	**77.69**	**5**	IAmb	IAmb	05 25 43.0	
	comp=Z,142nm,0.8s						
ATKA	**Atka Island**	**77.69**	**5**	P	**P**	**05 25 42.5**	**+0.4**
SMY	**Shemya**	**78.02**	**357**	P	**P**	**05 25 44.6**	**+0.7**
TJN	**Taejon**	**78.08**	**320**	P	**P**	**05 25 45.1**	**+0.5**
	comp=Z,702nm,1.0s						
TJN	**Taejon**	**78.08**	**320**	*de*P	**P**	**05 25 44.5**	**-0.1**
HKPS	**Hong Kong Po S**	**78.26**	**302**	IAmb	IAmb	05 25 47.6	
	comp=Z,92nm,0.9s						
KSRS	**Korea Array**	**78.52**	**321**	P	**P**	**05 25 47.4**	**+0.4**
	comp=Z,50nm,0.7s,baz=137,slow=5.7,SNR=155						
KSRS				PP	**PP**	**05 28 59.0**	**+2.5**
	comp=Z,2.9nm,0.9s,baz=141,slow=8.6,SNR=5.5						
	comp=Z,50nm,0.7s						
KSAR	**Wonju Array Be**	**78.53**	**321**	P	**P**	**05 25 47.6**	**+0.6**
KSAR	**Wonju Array Be**	**78.53**	**321**	P	**P**	**05 25 47.6**	**+0.6**
KS19	**Wonju Array Si**	**78.58**	**321**	IAmb	IAmb	05 25 48.6	
	comp=Z,74nm,0.8s						
BKNI	**Bangkinang**	**78.62**	**276**	P	**P**	**05 25 48.5**	**+0.4**
	comp=Z,311nm,1.0s						
BKNI	**Bangkinang**	**78.62**	**276**	P	**P**	**05 25 47.9**	**-0.2**
	comp=Z,311nm,1.0s						
PPI	**Padang Panjang**	**78.86**	**275**	P	**P**	**05 25 47.9**	**-1.4**
	comp=Z,89nm,1.0s						
YSS	**Yuzhno-Sakhali**	**78.97**	**336**	P	**P**	**05 25 50.6**	**+1.5**
YSS	**Yuzhno-Sakhali**	**78.97**	**336**	P	**P**	**05 25 50.4**	**+1.3**
	comp=Z,416nm,1.0s						
YSS	**Yuzhno-Sakhali**	**78.97**	**336**	κ*e*P	**P**	**05 25 50.6**	**+1.5**
YSS				*e*S	**S**	**05 34 59.7**	**+0.9**
YSS				pmax	pmax		
	comp=Z,800nm,4.6s						
YSS				pmax	pmax		
	comp=N,500nm,5.4s						
YSS				pmax	pmax		
	comp=Z,350nm,0.9s						
NIKH	**Nikolski High**	**78.98**	**8**	P	**P**	**05 25 49.4**	**+0.4**
NIKH	**Nikolski High**	**78.98**	**8**	P	**P**	**05 25 49.1**	**+0.1**
	baz=192						
INCN	**Inchon**	**79.27**	**321**	P	**P**	**05 25 51.4**	**+0.5**
INCN				IAmb	IAmb	05 25 52.5	
	comp=Z,70nm,1.0s						
INCN	**Inchon**	**79.27**	**321**	P	**P**	**05 25 50.1**	**-0.9**
INCN	**Inchon**	**79.27**	**321**	P	**P**	**05 25 51.3**	**+0.3**
	comp=Z,62nm,1.4s						
INCN	**Inchon**	**79.27**	**321**	P	**P**	**05 25 51.4**	**+0.5**
INCN				pmax	pmax		
	comp=Z,70nm,1.0s						
GZH	**Guangzhou**	**79.32**	**302**	P	**P**	**05 25 52.3**	**+0.8**
SISI	**Saibi**	**79.67**	**273**	P	**P**	**05 25 54.3**	**+0.7**
	comp=Z,172nm,1.2s						
QIZ	**Qiongzhong**	**79.91**	**297**	IAmb	IAmb	05 25 56.0	
	comp=Z,53nm,1.0s						
QIZ	**Qiongzhong**	**79.91**	**297**	P	**P**	**05 25 55.0**	**+0.3**
QIZ				S	**S**	**05 35 11.8**	**+2.2**
QIZ				sS	**sS**	**05 38 50.3**	**-4.1**
QIZ				pmax	pmax		
	comp=Z,54nm,0.9s						
QIZ	**Qiongzhong**	**79.91**	**297**	P	**P**	**05 25 54.8**	**+0.1**
	comp=Z,63nm,1.0s						
PET	**Petropavlovsk**	**80.08**	**348**	*e*P	**P**	**05 25 55.1**	**+0.4**
PET				pmax	pmax		
	comp=Z,72nm,0.6s						
MNSI	**Mandailing Nat**	**80.14**	**276**	P	**P**	**05 25 54.5**	**-1.5**
	comp=Z,172nm,0.9s						
UNV	**Unalaska Valle**	**80.15**	**9**	IAmb	IAmb	05 25 55.8	
	comp=Z,67nm,1.0s						
UNV	**Unalaska Valle**	**80.15**	**9**	P	**P**	**05 25 55.5**	**+0.4**
UNV	**Unalaska Valle**	**80.15**	**9**	P	**P**	**05 25 54.8**	**-0.2**
	baz=194						
PEA0B	**Petropavlovsk-**	**80.34**	**348**	*de*P	**P**	**05 25 56.5**	**+0.4**
PETK	**Petropavlovsk-**	**80.34**	**348**	P	**P**	**05 25 56.5**	**+0.4**
PETK	**Petropavlovsk-**	**80.34**	**348**	P	**P**	**05 25 56.1**	**-0.1**
	comp=Z,101nm,0.8s,baz=128,slow=6.5,SNR=74						
PETK				PKiKP	**PKiKP**	**05 31 18.4**	**-0.3**
	comp=Z,2.1nm,0.5s,baz=110,slow=5.3,SNR=5.5						
	comp=Z,101nm,0.8s						
PETK	**Petropavlovsk-**	**80.34**	**348**	P	**P**	**05 25 56.5**	**+0.4**
MSHR	**Mys Shultsa**	**80.50**	**327**	*de*P	**P**	**05 25 57.0**	**-0.2**
MSHR				pmax	pmax		
	comp=Z,92nm,1.0s						
VLA	**Vladivostok**	**80.55**	**327**	*ce*P	**P**	**05 25 57.9**	**+0.5**
VLA				pmax	pmax		
	comp=Z,82nm,1.0s						
NJ2	**Nanjing**	**80.57**	**312**	⇓*i*P	**P**	**05 25 58.0**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,91nm,0.8s						
PSTR	**Posyet**	**80.73**	**327**	*d i*P	**P**	**05 25 58.8**	**+0.4**
UGL	**Uglegorsk**	**81.01**	**337**	*e*P	P	05 25 53.6	-6.0
UGL				pmax	pmax		
	comp=Z,200nm,0.9s						
SYO	**Syowa Base**	**81.05**	**194**	⇓*e*P	**P**	**05 25 59.6**	**-0.1**
KULM	**Kulim**	**81.17**	**280**	IAmb	IAmb	05 26 02.5	
	comp=Z,100nm,0.8s						
KULM	**Kulim**	**81.17**	**280**	P	**P**	**05 26 01.8**	**+0.5**
	comp=Z,185nm,1.7s						
USA0B	**Ussuriysk Arra**	**81.31**	**328**	*d i*P	**P**	**05 26 01.8**	**+0.5**
USRK	**Ussuriysk Ar.**	**81.31**	**328**	P	**P**	**05 26 02.2**	**+0.9**
USRK	**Ussuriysk Ar.**	**81.31**	**328**	P	**P**	**05 26 01.9**	**+0.6**
	comp=Z,114nm,0.8s,baz=136,slow=3.5,SNR=187						
	comp=Z,114nm,0.8s						
USRK	**Ussuriysk Ar.**	**81.31**	**328**	P	**P**	**05 26 02.2**	**+0.9**
FALS	**False Pass**	**81.60**	**11**	P	**P**	**05 26 02.3**	**-0.2**
	baz=197						
PSI	**Prapat**	**81.61**	**277**	P	**P**	**05 26 02.8**	**-0.9**
	comp=Z,185nm,1.1s						
GSI	**Gunungsitoli**	**82.16**	**275**	P	**P**	**05 26 07.0**	**+0.6**
	comp=Z,339nm,1.0s						
GSI	**Gunungsitoli**	**82.16**	**275**	P	**P**	**05 26 06.8**	**+0.4**
	comp=Z,337nm,0.9s						
CNBA	**Chernabura Isl**	**82.27**	**13**	IAmb	IAmb	05 26 07.3	
	comp=Z,95nm,1.3s						
CHNA	**Chernabura Isl**	**82.28**	**13**	P	**P**	**05 26 06.6**	**+0.7**
CHNA	**Chernabura Isl**	**82.28**	**13**	P	**P**	**05 26 06.2**	**+0.3**
	baz=200						
TYV	**Tymovskoe**	**82.32**	**338**	*e*P	**P**	**05 26 07.6**	**+1.4**
TYV				*e*S	**SKSac**	**05 35 25.6**	**-3.6**
TYV				pmax	pmax		
	comp=Z,138nm,0.8s						
TYV				pmax	pmax		
	comp=Z,600nm,4.2s						
TYV				smax	smax		
	comp=N,600nm,3.5s						
TYV				smax	smax		
	comp=E,400nm,3.5s						
CNSH	**ChangSha**	**82.46**	**306**	P	**P**	**05 26 07.8**	**+0.3**
CNSH				pmax	pmax		
	comp=E,100nm,1.0s						
P08K	**Saint George I**	**82.47**	**7**	P	**P**	**05 26 07.2**	**+0.3**
	baz=191						
SDPT	**Sand Point**	**82.60**	**12**	IAmb	IAmb	05 26 10.0	
	comp=Z,54nm,0.9s						
SDPT	**Sand Point**	**82.60**	**12**	P	**P**	**05 26 07.7**	**+0.2**
SDPT	**Sand Point**	**82.60**	**12**	P	**P**	**05 26 07.7**	**+0.2**
	baz=199						
S12K	**Black Hills**	**82.64**	**11**	IAmb	IAmb	05 26 08.9	
	comp=Z,92nm,0.8s						
S12K	**Black Hills**	**82.64**	**11**	P	**P**	**05 26 08.0**	**+0.2**
	baz=198						
TROLL	**Troll, Antarti**	**82.67**	**181**	⇓P	**P**	**05 26 08.2**	**+0.2**
	comp=Z,2µm,0.6s						
MDJ	**Mudanjiang**	**82.77**	**327**	P	**P**	**05 26 09.3**	**+0.6**
MDJ				pmax	pmax		
	comp=Z,210nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,780nm,4.3s						
WHN	**Wuhan**	**82.77**	**309**	⇓P	**P**	**05 26 09.3**	**+0.3**
WHN				sP	**sP**	**05 29 17.8**	**+0.9**
WHN				pmax	pmax		
	comp=Z,290nm,0.9s						
GULI	**GuiLin**	**82.80**	**302**	P	**P**	**05 26 10.0**	**+0.7**
GULI				pmax	pmax		
	comp=Z,160nm,0.9s						
SPIA	**Saint Paul Isl**	**82.96**	**6**	P	**P**	**05 26 10.3**	**+1.0**
	baz=190						
SNAA	**Sanae**	**83.05**	**180**	⇓P	**P**	**05 26 09.7**	**-0.2**
	comp=Z,378nm,0.6s						
SNAA	**Sanae**	**83.05**	**180**	P	**P**	**05 26 09.9**	**+0.1**
SNAA	**Sanae**	**83.05**	**180**	P	**P**	**05 26 10.0**	**+0.2**
	comp=Z,19nm,0.7s,baz=207,slow=8.7,SNR=131						
SNAA				S	**SKSac**	**05 35 31.9**	**-2.0**
	comp=Z,3.1nm,1.1s,baz=18,slow=23,SNR=12						
	comp=Z,19nm,0.7s						
SNAA	**Sanae**	**83.05**	**180**	*d i*P	**P**	**05 26 09.8**	**-0.1**
DL2	**Dalian**	**83.15**	**319**	P	**P**	**05 26 10.9**	**+0.2**
DL2				pP	**pP**	**05 28 16.4**	**-1.6**
DL2				sP	**sP**	**05 29 20.5**	**+1.8**
DL2				SKS	**SKSac**	**05 35 32.9**	**-2.2**
DL2				S	**ScS**	**05 35 46.3**	**-4.3**
DL2				pmax	pmax		
	comp=Z,120nm,1.1s						
DL2				pmax	pmax		
	comp=Z,560nm,3.9s						
VNA3	**Neumayer Olymp**	**83.32**	**177**	⇓P	**P**	**05 26 10.9**	**-0.2**
	comp=Z,12nm,0.4s						
SRIT	**Nakonsritamara**	**83.58**	**283**	P	**P**	**05 26 14.9**	**+1.5**
	comp=Z,190nm,1.2s						
S14K	**Fog Glacier**	**83.65**	**12**	P	**P**	**05 26 13.7**	**+0.8**
	baz=200						
VNA2	**Neumayer--Watz**	**83.72**	**178**	⇓P	**P**	**05 26 13.0**	**-0.1**
	comp=Z,11nm,0.5s,baz=182,slow=5.7						
VNA1	**Neumayer--Stat**	**83.96**	**178**	⇓P	**P**	**05 26 14.5**	**+0.2**
	comp=Z,15nm,0.9s						
CHIR	**Chirikof Islan**	**84.04**	**14**	P	**P**	**05 26 15.4**	**+0.7**
	baz=204						
TIA	**Tai'an**	**84.24**	**315**	P	**P**	**05 26 16.8**	**+0.6**
TIA				SKS	**SKSac**	**05 35 41.3**	**-1.0**
TIA				pmax	pmax		
	comp=Z,230nm,1.0s						
TIA				pmax	pmax		
	comp=Z,710nm,3.8s						
BCW	**Bitter Crk WRg**	**84.24**	**47**	IAmb	IAmb	05 26 19.1	
	comp=Z,46nm,0.9s						
CN2	**Changchun**	**84.29**	**325**	*e*P	**P**	**05 26 16.3**	**+0.1**
CN2				*e*S	**S**	**05 35 52.5**	**+0.4**
CN2				pmax	pmax		
	comp=Z,200nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
LHMI	**Lhok Sumawe**	**84.44**	**278**	P	**P**	**05 26 19.5**	**+1.8**
	comp=Z,512nm,0.8s						
LHMI	**Lhok Sumawe**	**84.44**	**278**	P	**P**	**05 26 18.0**	**+0.3**
GDXM	**Geysers**	**84.46**	**42**	IAmb	IAmb	05 26 20.3	
	comp=Z,48nm,1.4s						
GRNR	**Gornyy**	**84.49**	**335**	⇓*i*P	**P**	**05 26 18.6**	**+1.6**
GRNR				pmax	pmax		
	comp=Z,70nm,1.0s						
MLSI	**Meulaboh, Aceh**	**84.50**	**277**	P	**P**	**05 26 17.4**	**-0.6**
CBX	**Cerro Bola**	**84.59**	**50**	IAmb	IAmb	05 26 20.7	
	comp=Z,31nm,0.9s						
BNX	**BinXian**	**84.65**	**327**	⇓P	**P**	**05 26 17.8**	**-0.1**
BNX				S	**SKSac**	**05 35 44.3**	**0.0**
BNX				pmax	pmax		
	comp=Z,130nm,1.1s						
BNX				pmax	pmax		
	comp=Z,160nm,3.9s						
TKX	**Tecate**	**84.77**	**50**	IAmb	IAmb	05 26 22.2	
	comp=Z,58nm,1.2s						
ESJX	**Sierra Juarez**	**84.91**	**51**	IAmb	IAmb	05 26 22.8	
	comp=Z,66nm,1.6s						
SLBS	**Sierra La Lagu**	**84.98**	**61**	P	**P**	**05 26 21.5**	**+1.4**
SLBS				IAmb	IAmb	05 26 23.1	
	comp=Z,34nm,0.8s						
SII	**Sitkinak Islan**	**85.05**	**15**	P	**P**	**05 26 20.6**	**+1.0**
	baz=205						
SRIG	**Santa Rosalia**	**85.08**	**57**	IAmb	IAmb	05 26 23.2	
	comp=Z,83nm,1.2s						
KLR	**Kul'dur**	**85.20**	**331**	*d i*P	**P**	**05 26 21.4**	**+0.9**
KLR				pmax	pmax		
	comp=Z,204nm,1.7s						
YUH	**Yuha Desert**	**85.29**	**51**	IAmb	IAmb	05 26 24.1	
	comp=Z,39nm,1.4s						
O02D	**Mt. Diablo Mer**	**85.32**	**41**	IAmb	IAmb	05 26 24.6	
	comp=Z,83nm,1.5s						
PFO	**Pinyon Flats O**	**85.46**	**49**	P	**P**	**05 26 23.4**	**+1.1**
PFO	**Pinyon Flats O**	**85.46**	**49**	*ce*P	**P**	**05 26 23.5**	**+1.1**
PFO				pmax	pmax		
	comp=Z,13nm,1.0s						
OHAK	**Old Harbor**	**85.86**	**15**	IAmb	IAmb	05 26 25.1	
	comp=Z,24nm,0.8s						
OHAK	**Old Harbor**	**85.86**	**15**	P	**P**	**05 26 24.4**	**+1.0**
OHAK	**Old Harbor**	**85.86**	**15**	P	**P**	**05 26 24.2**	**+0.8**
	baz=206						
SLVN	**Son La**	**85.88**	**296**	P	**P**	**05 26 25.9**	**+1.4**
	comp=Z,57nm,1.5s						
R18K	**Karluk**	**85.90**	**14**	P	**P**	**05 26 24.0**	**+0.4**
	baz=204						
BSI	**Banda Aceh**	**86.03**	**278**	P	**P**	**05 26 24.5**	**-0.8**
	comp=Z,3µmcomp=Z,258nm,1.1s						
LL02	**Futaleuf**	**86.11**	**136**	P	**P**	**05 26 26.2**	**+1.0**
O14K	**Tigyukauivet M**	**86.16**	**10**	IAmb	IAmb	05 26 27.4	
	comp=Z,25nm,0.9s						
O14K	**Tigyukauivet M**	**86.16**	**10**	P	**P**	**05 26 25.2**	**+0.5**
	baz=198						
LL01	**San Ignacio de**	**86.18**	**136**	P	**P**	**05 26 26.8**	**+1.3**
Q17K	**Contact Creek**	**86.23**	**13**	P	**P**	**05 26 25.3**	**0.0**
	baz=203						
GLA	**Glamis**	**86.28**	**51**	IAmb	IAmb	05 26 29.1	
	comp=Z,28nm,0.8s						
O15K	**Ungalikthiuk R**	**86.33**	**11**	P	**P**	**05 26 25.6**	**0.0**
	baz=200						
WAKR	**Walker**	**86.35**	**44**	IAmb	IAmb	05 26 29.0	
	comp=Z,68nm,1.8s						
YBH	**Yreka Blue Hor**	**86.35**	**40**	P	**P**	**05 26 27.4**	**+1.1**
	comp=Z,0.6nm,0.8s,baz=146,slow=0.6,SNR=8.5						
LYN	**LuoYang**	**86.36**	**311**	⇓*i*P	**P**	**05 26 26.8**	**+0.5**
LYN				pP	pP	05 28 36.0	+1.0
LYN				sP	sP	05 29 32.0	-3.3
LYN				PP	**PP**	**05 30 03.0**	**+3.3**
LYN				S	**S**	**05 36 13.9**	**+1.7**
LYN				pmax	pmax		
	comp=Z,240nm,0.9s						
LYN				pmax	pmax		
	comp=Z,790nm,4.1s						
Q16K	**King Salmon**	**86.46**	**13**	P	**P**	**05 26 26.8**	**+0.7**
	baz=203						
HNS	**HongShan**	**86.51**	**314**	⇓P	**P**	**05 26 27.8**	**+0.9**
HNS				SKS	**SKSac**	**05 35 57.9**	**+1.9**
HNS				S	**ScS**	**05 36 16.9**	**-1.6**
HNS				pmax	pmax		
	comp=Z,120nm,1.2s						
HATC	**Hat Creek Radi**	**86.51**	**41**	IAmb	IAmb	05 26 29.7	
	comp=Z,38nm,1.2s						
P16K	**Nushagak River**	**86.53**	**12**	IAmb	IAmb	05 26 27.5	
	comp=Z,65nm,1.2s						
P16K	**Nushagak River**	**86.53**	**12**	P	**P**	**05 26 26.4**	**-0.1**
	baz=201						
KDAK	**Kodiak Island**	**86.53**	**15**	P	**P**	**05 26 27.7**	**+1.2**
KDAK				IAmb	IAmb	05 26 28.2	
	comp=Z,30nm,1.1s						
KDAK	**Kodiak Island**	**86.53**	**15**	P	**P**	**05 26 27.4**	**+0.9**
	comp=Z,11nm,0.8s,baz=216,slow=4.9,SNR=11						
	comp=Z,11nm,0.8s						
KDAK	**Kodiak Island**	**86.53**	**15**	⇑*i*P	**P**	**05 26 27.4**	**+0.9**
KDAK				pmax	pmax		
	comp=Z,70nm,1.8s						
KDAK	**Kodiak Island**	**86.53**	**15**	P	**P**	**05 26 27.0**	**+0.5**
	baz=206						
M11K	**Mekoryuk**	**86.55**	**8**	P	**P**	**05 26 26.4**	**-0.1**
	baz=194						
BEKR	**Beckworth**	**86.60**	**43**	IAmb	IAmb	05 26 29.6	
	comp=Z,37nm,1.6s						
PNTR	**Pine Nut**	**86.60**	**44**	IAmb	IAmb	05 26 30.0	
	comp=Z,27nm,0.8s						
N14K	**Kuskokwak Cree**	**86.73**	**10**	P	**P**	**05 26 28.3**	**+0.9**
	baz=198,SNR=11						
Q18K	**Katmai Hardscr**	**86.77**	**14**	P	**P**	**05 26 27.9**	**0.0**
	baz=204,SNR=28						
GRAC	**Grapevine Rang**	**86.79**	**46**	IAmb	IAmb	05 26 31.0	
	comp=Z,24nm,1.1s						
L04D	**Klamath Falls**	**86.89**	**40**	IAmb	IAmb	05 26 30.8	
	comp=Z,20nm,0.7s						
M13K	**Dall Lake**	**86.95**	**9**	IAmb	IAmb	05 26 30.8	
	comp=Z,40nm,1.0s						
M13K	**Dall Lake**	**86.95**	**9**	P	**P**	**05 26 28.7**	**+0.2**
	baz=197						
P17K	**Kvichak River**	**86.98**	**13**	P	**P**	**05 26 28.8**	**+0.1**
	baz=203,SNR=19						
NVAR	**Mina Array Bea**	**87.02**	**45**	P	**P**	**05 26 31.1**	**+1.4**
NVAR	**Mina Array Bea**	**87.02**	**45**	P	**P**	**05 26 30.7**	**+1.0**
	comp=Z,6.1nm,0.6s,baz=223,slow=8.1,SNR=62						
NVAR				PKKPbc	**PKKPbc**	**05 44 20.6**	**+1.6**
	comp=Z,0.6nm,0.7s,baz=103,slow=1.2,SNR=3.7						
NVAR				PKPPKP	**P'P'df**	**05 52 24.0**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=80,slow=3.8,SNR=6.5						
	comp=Z,6.1nm,0.6s						
O16K	**Kokwok River B**	**87.03**	**12**	P	**P**	**05 26 28.4**	**-0.5**
	baz=201,SNR=8.6						
PAHR	**Pah Rah Range**	**87.10**	**43**	IAmb	IAmb	05 26 32.1	
	comp=Z,29nm,1.3s						
214A	**Organ Pipe Nat**	**87.11**	**53**	IAmb	IAmb	05 26 33.1	
	comp=Z,29nm,1.1s						
BJT	**Baijiatuau**	**87.14**	**317**	IAmb	IAmb	05 26 31.7	
	comp=Z,62nm,1.1s						
BJT	**Baijiatuau**	**87.14**	**317**	P	**P**	**05 26 31.5**	**+1.6**
	comp=Z,78nm,1.6s						
BJI	**Beijing**	**87.15**	**317**	P	**P**	**05 26 30.6**	**+0.7**
BJI				SKS	**SKSac**	**05 35 56.9**	**-2.9**
BJI				S	**ScS**	**05 36 22.3**	**-1.4**
BJI				pmax	pmax		
	comp=Z,30nm,1.0s						
BJI				pmax	pmax		
	comp=Z,200nm,4.3s						
N15K	**Kwethluk River**	**87.22**	**11**	P	**P**	**05 26 30.8**	**+1.0**
	baz=200,SNR=34						
I03D	**Drain, OR**	**87.23**	**38**	IAmb	IAmb	05 29 04.9	
	comp=Z,60nm,1.6s						

Q20K	**Shuyak Island**	**87.32**	**15**	P	**P**	**05 26 30.8**	**+0.6**
	baz=206						
Q19K	**Cape Douglas,**	**87.32**	**14**	IAmb	IAmb	05 26 31.5	
	comp=Z,73nm,0.9s						
Q19K	**Cape Douglas,**	**87.32**	**14**	P	**P**	**05 26 30.4**	**+0.1**
	baz=205,SNR=11						
O17K	**Koliganek Bris**	**87.39**	**12**	P	**P**	**05 26 30.2**	**-0.3**
	baz=202						
P18K	**Big Mountain,**	**87.41**	**13**	IAmb	IAmb	05 26 31.5	
	comp=Z,129nm,1.6s						
P18K	**Big Mountain,**	**87.41**	**13**	P	**P**	**05 26 30.5**	**-0.2**
	baz=204,SNR=20						
M14K	**Bethel**	**87.48**	**10**	IAmb	IAmb	05 26 32.8	
	comp=Z,39nm,1.0s						
M14K	**Bethel**	**87.48**	**10**	P	**P**	**05 26 31.6**	**+0.6**
	baz=198,SNR=9.1						
M15K	**Kasigluk River**	**87.62**	**10**	P	**P**	**05 26 32.4**	**+0.8**
	baz=199,SNR=14						
J04A	**Umpqua Nationa**	**87.64**	**39**	IAmb	IAmb	05 26 35.0	
	comp=Z,59nm,0.7s						
N16K	**Nishlik Lake**	**87.74**	**11**	P	**P**	**05 26 33.3**	**+1.1**
	baz=201,SNR=30						
BUCK	**Buck Mountain**	**87.75**	**38**	IAmb	IAmb	05 26 54.4	
	comp=Z,56nm,1.5s						
MA2	**Magadan**	**87.78**	**346**	P	**P**	**05 26 32.7**	**+0.3**
MA2	**Magadan**	**87.78**	**346**	P	**P**	**05 26 32.7**	**+0.3**
	comp=Z,114nm,0.9s						
MA2	**Magadan**	**87.78**	**346**	*ce*P	**P**	**05 26 31.6**	**-0.8**
MA2				pmax	pmax		
	comp=Z,72nm,0.9s						
O18K	**Koktuh Hills**	**87.83**	**13**	P	**P**	**05 26 32.7**	**0.0**
	baz=204,SNR=47						
HEH	**HeiHe**	**87.86**	**330**	*e*P	**P**	**05 26 32.8**	**-0.2**
HEH				PP	**PP**	**05 30 16.0**	**+4.7**
HEH				S	**S**	**05 36 29.1**	**+3.6**
HEH				pmax	pmax		
	comp=Z,66nm,1.3s						
L14K	**Kuka Creek**	**87.94**	**9**	IAmb	IAmb	05 26 35.0	
	comp=Z,39nm,1.0s						
L14K	**Kuka Creek**	**87.94**	**9**	P	**P**	**05 26 33.7**	**+0.6**
	baz=197,SNR=9.8						
P19K	**Oil Pt**	**88.07**	**14**	P	**P**	**05 26 33.9**	**+0.1**
	baz=206,SNR=13						
N17K	**Nushagak Hills**	**88.07**	**12**	P	**P**	**05 26 34.1**	**+0.3**
	baz=202						
H04D	**Lebanon**	**88.10**	**38**	IAmb	IAmb	05 26 45.1	
	comp=Z,17nm,0.8s						
TIY	**Taiyuan**	**88.16**	**314**	*e*P	**P**	**05 26 35.8**	**+1.0**
TIY				SKS	**SKSac**	**05 36 05.6**	**-0.5**
TIY				S	**ScS**	**05 36 31.8**	**-0.7**
TIY				pmax	pmax		
	comp=Z,140nm,0.7s						
J05D	**Fort Rock, OR**	**88.17**	**39**	IAmb	IAmb	05 26 37.4	
	comp=Z,23nm,0.8s						
M16K	**Timber Creek**	**88.22**	**11**	IAmb	IAmb	05 26 36.8	
	comp=Z,42nm,1.1s						
M16K	**Timber Creek**	**88.22**	**11**	P	**P**	**05 26 35.6**	**+1.2**
	baz=200,SNR=16						
PLCA	**Paso Flores**	**88.24**	**135**	P	**P**	**05 26 36.8**	**+1.5**
	comp=Z,1.4nm,0.6s,baz=229,slow=4.8,SNR=12						
PLCA				PKKPbc	**PKKPbc**	**05 44 15.1**	**-0.6**
	comp=Z,3.8nm,0.9s,baz=71,slow=1.5,SNR=12						
	comp=Z,1.4nm,0.6s						
PLCA	**Paso Flores**	**88.24**	**135**	*e*P	**P**	**05 26 37.0**	**+1.6**
K13K	**Kusilvak Mount**	**88.25**	**8**	IAmb	IAmb	05 26 36.6	
	comp=Z,41nm,1.1s						
K13K	**Kusilvak Mount**	**88.25**	**8**	P	**P**	**05 26 35.4**	**+0.9**
	baz=195,SNR=6.9						
O19K	**Port Alsworth**	**88.33**	**13**	P	**P**	**05 26 34.9**	**0.0**
	baz=205,SNR=16						
CNPM	**China Poot**	**88.41**	**15**	IAmb	IAmb	05 26 36.9	
	comp=Z,56nm,1.0s						
HOM	**Homer**	**88.43**	**15**	P	**P**	**05 26 36.0**	**+0.6**
	baz=207						
L15K	**Ungalak Mounta**	**88.44**	**10**	P	**P**	**05 26 35.8**	**+0.4**
	baz=198,SNR=20						
N18K	**Kilae Creek**	**88.46**	**12**	P	**P**	**05 26 35.5**	**-0.1**
	baz=203,SNR=9.4						
H04A	**Detroit Lake**	**88.50**	**38**	IAmb	IAmb	05 26 37.9	
	comp=Z,10.0nm,0.6s						
XAN	**Xi'an**	**88.53**	**309**	⇑P	**P**	**05 26 37.9**	**+1.3**
XAN				SKS	**SKSac**	**05 36 06.5**	**-1.9**
XAN				S	**S**	**05 36 33.9**	**+1.4**
XAN				pmax	pmax		
	comp=Z,220nm,0.9s						
XAN				pmax	pmax		
	comp=Z,690nm,3.5s						
PRN	**Pahroc Range**	**88.55**	**47**	IAmb	IAmb	05 26 40.3	
	comp=Z,20nm,1.1s						
O20K	**Slope Mountain**	**88.59**	**14**	P	**P**	**05 26 36.2**	**-0.1**
	baz=206,SNR=7.8						
CM31	**Chiang Mai Arr**	**88.63**	**291**	P	**P**	**05 26 38.9**	**+1.5**
	SNR=24						
CMAR	**Chiang Mai Arr**	**88.63**	**291**	P	**P**	**05 26 37.6**	**+0.3**
CMAR	**Chiang Mai Arr**	**88.63**	**291**	P	**P**	**05 26 38.9**	**+1.5**
	comp=Z,50nm,0.9s,baz=140,slow=3.3,SNR=132						
CMAR				PP	**PP**	**05 30 17.3**	**-0.6**
	comp=Z,6.3nm,0.7s,baz=127,slow=5.8,SNR=10						
	comp=Z,50nm,0.9s						
CMAR	**Chiang Mai Arr**	**88.63**	**291**	*i* P	**P**	**05 26 38.9**	**+1.5**
CMAR				pmax	pmax		
	comp=Z,54nm,0.9s						
KMI	**Kunming**	**88.65**	**299**	⇓P	**P**	**05 26 38.6**	**+1.0**
KMI				pmax	pmax		
	comp=Z,130nm,0.8s						
PINE	**Pine Mountain**	**88.65**	**39**	IAmb	IAmb	05 26 39.7	
	comp=Z,20nm,0.7s						
G04A	**Mulino**	**88.67**	**37**	IAmb	IAmb	05 26 39.7	
	comp=Z,33nm,0.7s						
BRLK	**Bradley Lake**	**88.70**	**15**	IAmb	IAmb	05 26 38.1	
	comp=Z,84nm,1.3s						
BRSE	**Bradley Lake S**	**88.72**	**15**	P	**P**	**05 26 37.1**	**+0.3**
	baz=208						
TUC	**Tucson**	**88.76**	**53**	P	**P**	**05 26 38.6**	**+0.8**
TUC				IAmb	IAmb	05 26 41.0	
	comp=Z,19nm,1.0s						
TUC	**Tucson**	**88.76**	**53**	P	**P**	**05 26 38.6**	**+0.8**
TUC				pmax	pmax		
	comp=Z,19nm,1.0s						
I05D	**Terrebonne, OR**	**88.76**	**39**	IAmb	IAmb	05 26 39.6	
	comp=Z,10.0nm,0.7s						
L16K	**Owhat River**	**88.78**	**10**	IAmb	IAmb	05 26 38.8	
	comp=Z,34nm,1.0s						
L16K	**Owhat River**	**88.78**	**10**	P	**P**	**05 26 37.9**	**+0.9**
	baz=200,SNR=17						
CHTO	**Chiang Mai**	**88.80**	**291**	P	**P**	**05 26 38.1**	**0.0**
CHTO	**Chiang Mai**	**88.80**	**291**	P	**P**	**05 26 39.2**	**+1.1**
CHTO	**Chiang Mai**	**88.80**	**291**	P	**P**	**05 26 39.8**	**+1.7**
	comp=Z,101nm,1.1s						
CHTO	**Chiang Mai**	**88.80**	**291**	P	**P**	**05 26 38.1**	**0.0**
CHTO				pmax	pmax		
	comp=Z,133nm,1.0s						
M17K	**Holitna River**	**88.84**	**11**	IAmb	IAmb	05 26 39.6	
	comp=Z,45nm,0.8s						
M17K	**Holitna River**	**88.84**	**11**	P	**P**	**05 26 38.6**	**+1.3**
	baz=202,SNR=22						
N19K	**Bonanza Creek**	**88.86**	**13**	IAmb	IAmb	05 26 38.0	
	comp=Z,20nm,0.8s						
N19K	**Bonanza Creek**	**88.86**	**13**	P	**P**	**05 26 37.0**	**-0.6**
	baz=204,SNR=14						
RED	**Redoubt Volcan**	**88.86**	**14**	IAmb	IAmb	05 26 38.1	
	comp=Z,50nm,1.0s						
E03A	**Lebam**	**88.94**	**36**	IAmb	IAmb	05 26 40.5	
	comp=Z,21nm,0.7s						
K15K	**Wolf Creek Mou**	**89.02**	**9**	IAmb	IAmb	05 26 40.2	
	comp=Z,55nm,1.1s						
K15K	**Wolf Creek Mou**	**89.02**	**9**	P	**P**	**05 26 39.2**	**+1.1**
	baz=198,SNR=18						
J14K	**Nanvaranak Lak**	**89.17**	**8**	IAmb	IAmb	05 26 40.5	
	comp=Z,17nm,1.0s						
J14K	**Nanvaranak Lak**	**89.17**	**8**	P	**P**	**05 26 39.5**	**+0.7**
	baz=196						
WVOR	**Wild Horse Val**	**89.18**	**41**	P	**P**	**05 26 40.8**	**+1.3**
M18K	**Stony River**	**89.22**	**12**	P	**P**	**05 26 39.8**	**+0.8**
	baz=203,SNR=34						
SEW	**Seward**	**89.34**	**16**	IAmb	IAmb	05 26 41.3	
	comp=Z,35nm,1.0s						
SEW	**Seward**	**89.34**	**16**	P	**P**	**05 26 39.6**	**0.0**
	baz=209						
GAMB	**Gambell**	**89.37**	**4**	IAmb	IAmb	05 26 41.9	
	comp=Z,61nm,1.1s						
GAMB	**Gambell**	**89.37**	**4**	P	**P**	**05 26 40.6**	**+1.0**
	baz=189,SNR=6.8						
L17K	**Donlin**	**89.38**	**11**	P	**P**	**05 26 41.0**	**+1.3**
	baz=201,SNR=20						
319A	**Douglas**	**89.38**	**55**	IAmb	IAmb	05 26 44.0	
	comp=Z,34nm,1.2s						
X16A	**Lo Mia Camp, P**	**89.39**	**51**	IAmb	IAmb	05 26 43.5	
	comp=Z,15nm,0.8s						
XLT	**XiLinHaoTe**	**89.52**	**320**	*e*P	**P**	**05 26 41.3**	**+0.3**
XLT				SKS	**SKSac**	**05 36 10.9**	**-2.8**
XLT				S	**ScS**	**05 36 43.0**	**-0.5**
XLT				pmax	pmax		
	comp=Z,110nm,0.9s						
N20K	**Mount Spurr**	**89.69**	**14**	P	**P**	**05 26 40.6**	**-0.7**
	baz=206,SNR=6.8						
SPCR	**Spurr Chakacha**	**89.69**	**14**	P	**P**	**05 26 40.4**	**-0.9**
	baz=206,SNR=5.4						
SPU	**Mount Spurr**	**89.70**	**14**	IAmb	IAmb	05 26 41.6	
	comp=Z,17nm,0.8s						
L18K	**Granite Mounta**	**89.73**	**11**	IAmb	IAmb	05 26 43.3	
	comp=Z,28nm,0.8s						
L18K	**Granite Mounta**	**89.73**	**11**	P	**P**	**05 26 42.2**	**+0.8**
	baz=202,SNR=24						
P23K	**Montague Islan**	**89.76**	**16**	P	**P**	**05 26 41.8**	**+0.3**
	baz=211						
KNB	**Kanab**	**89.82**	**48**	IAmb	IAmb	05 26 45.3	
	comp=Z,14nm,0.9s						
U15A	**North Rim**	**89.87**	**49**	IAmb	IAmb	05 26 45.7	
	comp=Z,25nm,0.7s						
M19K	**Big River Lodg**	**89.88**	**13**	IAmb	IAmb	05 26 43.2	
	comp=Z,20nm,0.8s						
M19K	**Big River Lodg**	**89.88**	**13**	P	**P**	**05 26 42.1**	**0.0**
	baz=204						
K17K	**Iditarod**	**89.92**	**11**	IAmb	IAmb	05 26 44.0	
	comp=Z,20nm,0.9s						
K17K	**Iditarod**	**89.92**	**11**	P	**P**	**05 26 42.8**	**+0.5**
	baz=201,SNR=11						
HPIG		**89.94**	**60**	IAmb	IAmb	05 26 45.6	
	comp=Z,16nm,0.8s						
STLK	**Strandline Lak**	**90.04**	**14**	IAmb	IAmb	05 26 43.0	
	comp=Z,23nm,0.8s						
L19K	**White Mountain**	**90.04**	**12**	P	**P**	**05 26 43.5**	**+0.7**
	baz=204,SNR=56						
J16K	**Anvik River**	**90.10**	**9**	IAmb	IAmb	05 26 44.9	
	comp=Z,35nm,0.9s						
J16K	**Anvik River**	**90.10**	**9**	P	**P**	**05 26 44.0**	**+0.9**
	baz=199,SNR=11						
PZH	**PanZhiHua**	**90.10**	**299**	P	**P**	**05 26 44.1**	**0.0**
PZH				pmax	pmax		
	comp=Z,60nm,1.1s						
PZH				pmax	pmax		
	comp=Z,130nm,5.1s						
M20K	**Styx River**	**90.11**	**13**	P	**P**	**05 26 42.8**	**-0.5**
	baz=206						
DUN6	**Lazy B Ranch**	**90.12**	**54**	IAmb	IAmb	05 26 47.0	
	comp=Z,42nm,1.1s						
RC01	**Rabbit Creek A**	**90.14**	**15**	IAmb	IAmb	05 26 44.5	
	comp=Z,42nm,0.8s						
RC01	**Rabbit Creek A**	**90.14**	**15**	P	**P**	**05 26 43.4**	**+0.1**
	baz=209,SNR=8.2						
SUA	**Susitna One**	**90.24**	**14**	P	**P**	**05 26 43.7**	**-0.2**
	baz=208,SNR=16						
PWL	**Port Wells**	**90.28**	**16**	P	**P**	**05 26 44.1**	**+0.1**
	baz=210						
ELK	**Elko**	**90.29**	**44**	P	**P**	**05 26 46.0**	**+1.2**
	comp=Z,6.2nm,0.7s,baz=318,slow=1.8,SNR=6.0						
	comp=Z,6.2nm,0.7s						
ZEA	**Zeya**	**90.42**	**332**	*e*P	**P**	**05 26 45.4**	**+0.6**
ZEA				pmax	pmax		
	comp=E,10.0nm,1.1s						
ZEA				pmax	pmax		
	comp=N,50nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,80nm,0.8s						
J17K	**VABM Dome**	**90.43**	**10**	IAmb	IAmb	05 26 46.4	
	comp=Z,23nm,0.8s						
J17K	**VABM Dome**	**90.43**	**10**	P	**P**	**05 26 45.2**	**+0.5**
	baz=200						
BBB	**Bella Bella**	**90.46**	**30**	P	**P**	**05 26 46.8**	**+1.9**
	comp=Z,11nm,0.6s,baz=264,slow=5.4,SNR=6.5						
	comp=Z,11nm,0.6s						
HHC	**Hu-ho-hao-te**	**90.48**	**316**	*e*P	**P**	**05 26 46.3**	**+0.8**
HHC				SKS	**SKSac**	**05 36 16.3**	**-3.0**
HHC				S	**ScS**	**05 36 51.4**	**-0.3**
HHC				pmax	pmax		
	comp=Z,70nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,4.5s						
KAIM	**Kayak Island**	**90.49**	**18**	P	**P**	**05 26 45.7**	**+0.8**
	baz=213						
L20K	**Farewell, AK**	**90.50**	**13**	P	**P**	**05 26 45.1**	**+0.2**
	baz=205,SNR=15						
X18A	**Snowflake**	**90.50**	**52**	IAmb	IAmb	05 26 48.3	
	comp=Z,10nm,0.7s						
SKT	**Skwentna**	**90.53**	**14**	IAmb	IAmb	05 29 59.5	
	comp=Z,20nm,0.5s						
SKT	**Skwentna**	**90.53**	**14**	P	**P**	**05 26 43.9**	**-1.2**
	baz=207,SNR=8.8						
SEY	**Seymchan**	**90.55**	**348**	*d i*P	**P**	**05 26 45.4**	**+0.3**
SEY				pmax	pmax		
	comp=Z,46nm,0.9s						
GLI	**Glacier Island**	**90.60**	**16**	P	**P**	**05 26 45.5**	**+0.1**
	baz=211,SNR=7.5						
M22K	**Willow**	**90.64**	**14**	P	**P**	**05 26 45.6**	**0.0**
	baz=208,SNR=8.3						
I17K	**Unalakleet**	**90.65**	**9**	P	**P**	**05 26 46.4**	**+0.8**
	baz=199						
EYAK	**Cordova Ski Ar**	**90.66**	**17**	IAmb	IAmb	05 26 47.0	
	comp=Z,26nm,0.8s						
EYAK	**Cordova Ski Ar**	**90.66**	**17**	P	**P**	**05 26 45.9**	**+0.2**
EYAK	**Cordova Ski Ar**	**90.66**	**17**	P	**P**	**05 26 46.1**	**+0.4**
	baz=212,SNR=5.7						
CRAG	**Craig**	**90.71**	**25**	P	**P**	**05 26 46.0**	**-0.1**
	baz=223						
ANM	**Nome**	**90.71**	**7**	P	**P**	**05 26 46.1**	**+0.2**
	baz=195						
PMR	**Palmer**	**90.73**	**15**	IAmb	IAmb	05 26 47.1	
	comp=Z,28nm,1.0s						
PMR	**Palmer**	**90.73**	**15**	P	**P**	**05 26 46.4**	**+0.4**
PMR	**Palmer**	**90.73**	**15**	P	**P**	**05 26 46.0**	**0.0**
	baz=209,SNR=12						
KNK	**Knik Glacier**	**90.73**	**15**	IAmb	IAmb	05 26 47.3	
	comp=Z,31nm,0.7s						
KNK	**Knik Glacier**	**90.73**	**15**	P	**P**	**05 26 46.2**	**+0.2**
	baz=210,SNR=6.2						
HIA	**Hailar**	**90.86**	**326**	IAmb	IAmb	05 26 48.0	
	comp=Z,51nm,1.0s						
HIA	**Hailar**	**90.86**	**326**	P	**P**	**05 26 47.1**	**+0.1**
	comp=Z,54nm,1.1s						
HIA	**Hailar**	**90.86**	**326**	*d i*P	**P**	**05 26 46.7**	**-0.3**
HIA				pmax	pmax		
	comp=Z,47nm,1.0s						
J18K	**Innoko River**	**90.89**	**11**	P	**P**	**05 26 47.1**	**+0.4**
	baz=202,SNR=43						
BGLC	**Bering Glacier**	**90.97**	**18**	P	**P**	**05 26 47.7**	**+0.6**
	baz=214						
SIT	**Sitka**	**91.08**	**23**	P	**P**	**05 26 48.0**	**+0.3**
	baz=221						
BERG	**Berg Lake**	**91.08**	**18**	IAmb	IAmb	05 26 49.5	
	comp=Z,28nm,0.8s						
SML	**Sawmill**	**91.10**	**15**	IAmb	IAmb	05 26 50.0	
	comp=Z,9.5nm,0.8s						
SML	**Sawmill**	**91.10**	**15**	P	**P**	**05 26 47.7**	**-0.1**
	baz=210						
DIV	**Divide**	**91.15**	**17**	IAmb	IAmb	05 29 08.3	
	comp=Z,41nm,0.9s						
H16K	**Elim**	**91.16**	**8**	P	**P**	**05 26 48.4**	**+0.5**
	baz=198,SNR=12						
CUT	**Chulitna**	**91.18**	**14**	P	**P**	**05 26 47.9**	**-0.1**
	baz=208,SNR=6.7						
U33K	**Whale Pass**	**91.19**	**25**	P	**P**	**05 26 48.4**	**+0.2**
	baz=223						
V35K	**Ketchikan**	**91.20**	**26**	P	**P**	**05 26 48.5**	**+0.2**
	baz=224						
PPLA	**Purkeypile**	**91.22**	**13**	IAmb	IAmb	05 26 50.9	
	comp=Z,13nm,1.2s						
PPLA	**Purkeypile**	**91.22**	**13**	P	**P**	**05 26 48.2**	**-0.2**
	baz=206						
M23K	**Glacier View**	**91.23**	**15**	P	**P**	**05 26 48.1**	**-0.3**
	baz=210						
K20K	**Telida**	**91.26**	**12**	IAmb	IAmb	05 26 49.7	
	comp=Z,56nm,1.6s						
K20K	**Telida**	**91.26**	**12**	P	**P**	**05 26 48.6**	**+0.1**
	baz=205,SNR=19						
G15K	**Niukluk**	**91.28**	**7**	P	**P**	**05 26 49.1**	**+0.6**
	baz=196						
BMRM	**Bremner River**	**91.32**	**17**	IAmb	IAmb	05 26 50.2	
	comp=Z,29nm,0.8s						
BMRM	**Bremner River**	**91.32**	**17**	P	**P**	**05 26 49.1**	**+0.3**
	baz=213,SNR=7.5						
BTO	**Baotou**	**91.33**	**315**	*e*P	**P**	**05 26 50.9**	**+1.5**
BTO				pP	**pP**	**05 29 01.6**	**+2.2**
BTO				sP	**sP**	**05 30 00.4**	**+1.1**
BTO				PP	**PP**	**05 30 42.9**	**+4.3**
BTO				S	S	05 36 46.9	-10
BTO				SS	**SS**	**05 43 26.9**	**+4.1**
BTO				pmax	pmax		
	comp=Z,53nm,1.3s						
BTO				pmax	pmax		
	comp=Z,620nm,10.7s						
SCM	**Sheep Creek Mo**	**91.36**	**16**	P	**P**	**05 26 49.3**	**+0.3**
	baz=211,SNR=16						
WAX	**Waxell Ridge**	**91.37**	**18**	IAmb	IAmb	05 26 51.0	
	comp=Z,28nm,0.8s						
MESA	**MESA**	**91.40**	**19**	P	**P**	**05 26 50.6**	**+1.1**
	baz=215,SNR=5.6						
KLU	**Klutina**	**91.42**	**16**	P	**P**	**05 26 49.5**	**+0.2**
	baz=212,SNR=6.3						
TNA	**Tin City**	**91.43**	**6**	P	**P**	**05 26 50.0**	**+0.8**
	baz=192						
S31K	**Pelican**	**91.45**	**22**	P	**P**	**05 26 50.4**	**+1.0**
	baz=220						
F14K	**Arctic Creek**	**91.50**	**6**	P	**P**	**05 26 50.1**	**+0.7**
	baz=194						
CRQM	**Cirque**	**91.54**	**18**	IAmb	IAmb	05 26 51.5	
	comp=Z,21nm,0.9s						
CRQE	**Cirque**	**91.55**	**18**	P	**P**	**05 26 50.1**	**+0.1**
	baz=214,SNR=6.1						
J19K	**Poorman**	**91.56**	**11**	IAmb	IAmb	05 26 51.5	
	comp=Z,18nm,1.1s						
J19K	**Poorman**	**91.56**	**11**	P	**P**	**05 26 50.2**	**+0.3**
	baz=203,SNR=11						
YAH	**Yahtse**	**91.61**	**19**	IAmb	IAmb	05 26 52.2	
	comp=Z,25nm,0.8s						
TGL	**Tana Glacier**	**91.62**	**18**	IAmb	IAmb	05 26 51.9	
	comp=Z,23nm,1.0s						
CAST	**Castle Rocks**	**91.71**	**13**	IAmb	IAmb	05 26 50.4	
	comp=Z,18nm,0.8s						
CAST	**Castle Rocks**	**91.71**	**13**	P	**P**	**05 26 49.2**	**-1.3**
	baz=207,SNR=21						
PNL	**Peninsula**	**91.75**	**20**	P	**P**	**05 26 51.2**	**+0.4**
	baz=218						
H17K	**Granite Mounta**	**91.76**	**9**	IAmb	IAmb	05 26 52.0	
	comp=Z,13nm,0.9s						
H17K	**Granite Mounta**	**91.76**	**9**	P	**P**	**05 26 51.1**	**+0.3**
	baz=200,SNR=6.2						
PINM	**Pinnacle**	**91.83**	**19**	P	**P**	**05 26 51.8**	**+0.6**
	baz=217						
VRDI	**Verde Repeater**	**91.84**	**17**	IAmb	IAmb	05 26 52.9	
	comp=Z,16nm,0.9s						
TABL	**Table Mountain**	**91.85**	**19**	IAmb	IAmb	05 26 53.0	
	comp=Z,24nm,0.8s						
N25K	**Chitina, Valde**	**91.86**	**17**	IAmb	IAmb	05 26 52.8	
	comp=Z,18nm,0.8s						
N25K	**Chitina, Valde**	**91.86**	**17**	P	**P**	**05 26 51.7**	**+0.4**
	baz=213,SNR=9.7						
G16K	**Koyuk River**	**91.87**	**8**	IAmb	IAmb	05 26 52.8	
	comp=Z,25nm,0.9s						
G16K	**Koyuk River**	**91.87**	**8**	P	**P**	**05 26 51.7**	**+0.5**
	baz=198,SNR=6.5						
M24K	**Tolsona, Glenn**	**91.88**	**16**	IAmb	IAmb	05 29 30.2	
	comp=Z,17nm,0.8s						
M24K	**Tolsona, Glenn**	**91.88**	**16**	P	**P**	**05 26 51.9**	**+0.5**
	baz=212						
F15K	**North Star Dit**	**91.90**	**7**	P	**P**	**05 26 51.5**	**+0.2**
	baz=195						
GRNC	**Granite Creek**	**91.91**	**18**	IAmb	IAmb	05 26 53.3	
	comp=Z,21nm,1.0s						
WAT6	**Susitna Watana**	**91.91**	**15**	P	**P**	**05 26 51.6**	**0.0**
	baz=210,SNR=16						
GLB	**Gilahina Butte**	**91.93**	**17**	IAmb	IAmb	05 26 53.0	
	comp=Z,16nm,0.8s						
Q16A	**Castle Valley**	**91.93**	**47**	IAmb	IAmb	05 26 55.8	
	comp=Z,9.5nm,0.7s						
WAT1	**Susitna Watana**	**91.94**	**15**	P	**P**	**05 26 51.3**	**-0.4**
	baz=210						
TNCH	**TengChong**	**91.98**	**297**	P	**P**	**05 26 53.3**	**+0.4**
TNCH				pmax	pmax		
	comp=Z,190nm,2.1s						
J20K	**Nowinta River**	**92.00**	**12**	IAmb	IAmb	05 26 53.2	
	comp=Z,49nm,1.6s						
J20K	**Nowinta River**	**92.00**	**12**	P	**P**	**05 26 52.0**	**+0.2**
	baz=205,SNR=12						
GCSA	**Galena City Sc**	**92.05**	**10**	P	**P**	**05 26 52.6**	**+0.6**
	baz=202,SNR=7.6						
KTH	**Kantishna Hill**	**92.06**	**13**	IAmb	IAmb	05 26 54.2	
	comp=Z,17nm,0.8s						
CHUM	**Lake Minchumin**	**92.08**	**13**	P	**P**	**05 26 51.4**	**-0.7**
	baz=206,SNR=6.6						
MCARA	**McCarthy VSAT**	**92.09**	**18**	IAmb	IAmb	05 26 55.1	
	comp=Z,34nm,1.0s						
MCARA	**McCarthy VSAT**	**92.09**	**18**	P	**P**	**05 26 52.4**	**+0.1**
	baz=214,SNR=8.8						
TRF	**Thorofare Moun**	**92.11**	**14**	IAmb	IAmb	05 26 53.6	
	comp=Z,26nm,0.7s						
TRF	**Thorofare Moun**	**92.11**	**14**	P	**P**	**05 26 51.8**	**-0.7**
	baz=208,SNR=30						
TMUT	**Trail Mountain**	**92.11**	**47**	IAmb	IAmb	05 26 55.9	
	comp=Z,16nm,0.8s						
G17K	**Kiwalik Mounta**	**92.19**	**9**	P	**P**	**05 26 53.0**	**+0.3**
	baz=199,SNR=16						
H18K	**Honhosa River**	**92.19**	**10**	P	**P**	**05 26 52.6**	**-0.1**
	baz=201						
LOGN	**Logan Glacier**	**92.20**	**19**	IAmb	IAmb	05 26 56.0	
	comp=Z,15nm,0.8s						
BARN	**Barnard Glacie**	**92.20**	**18**	IAmb	IAmb	05 26 54.7	
	comp=Z,21nm,0.8s						
CTG	**Chitna Glacier**	**92.22**	**18**	P	**P**	**05 26 53.8**	**+0.7**
	baz=216,SNR=7.2						
CTGM	**Chitina Glacie**	**92.22**	**18**	IAmb	IAmb	05 26 54.6	
	comp=Z,16nm,0.8s						
P29M	**Windy Craggy**	**92.24**	**21**	IAmb	IAmb	05 26 55.2	
	comp=Z,15nm,1.1s						
P29M	**Windy Craggy**	**92.24**	**21**	P	**P**	**05 26 54.2**	**+1.1**
	baz=219						
VHRN	**Van Horn**	**92.30**	**57**	IAmb	IAmb	05 27 06.7	
	comp=Z,24nm,1.9s						
RND	**Reindeer**	**92.38**	**14**	IAmb	IAmb	05 26 54.5	
	comp=Z,33nm,0.8s						
HARP	**HAARP**	**92.38**	**16**	P	**P**	**05 26 54.1**	**+0.5**
	baz=213						
O28M	**Mount Upton**	**92.39**	**19**	IAmb	IAmb	05 26 55.6	
	comp=Z,17nm,0.8s						
O28M	**Mount Upton**	**92.39**	**19**	P	**P**	**05 26 54.8**	**+0.7**
	baz=217,SNR=12						
DHY	**Denali Highway**	**92.42**	**15**	P	**P**	**05 26 54.0**	**0.0**
	baz=211,SNR=6.5						
SRU	**San Rafael Swe**	**92.47**	**47**	IAmb	IAmb	05 26 56.8	
	comp=Z,12nm,0.9s						
I20K	**Naaghedeneel**	**92.50**	**11**	P	**P**	**05 26 54.7**	**+0.6**
	baz=204						
O29M	**Mount Kennedy**	**92.51**	**20**	P	**P**	**05 26 55.3**	**+0.9**
	baz=218						
BPAW	**Bear Paw Mtn.**	**92.54**	**13**	P	**P**	**05 26 53.3**	**-1.0**
	baz=208						
PLBC	**Pleasant Camp**	**92.55**	**21**	P	**P**	**05 26 54.3**	**-0.1**
	baz=220						
TX31	**Lajitas Ar. Si**	**92.63**	**59**	IAmb	IAmb	05 26 58.1	
	comp=Z,10nm,1.0s						
TXAR	**Lajitas Array**	**92.63**	**59**	P	**P**	**05 26 56.4**	**+0.7**
TXAR	**Lajitas Array**	**92.63**	**59**	P	**P**	**05 26 57.0**	**+1.3**
	comp=Z,5.8nm,0.8s,baz=214,slow=6.6,SNR=63						
TXAR				PP	**PP**	**05 30 49.1**	**+0.3**
	comp=Z,2.0nm,1.0s,baz=231,slow=7.9,SNR=4.0						
TXAR				PKKPbc	**PKKPbc**	**05 44 05.5**	**+1.0**
	comp=Z,2.0nm,0.7s,baz=93,slow=3.2,SNR=15						
	comp=Z,5.8nm,0.8s						
TXAR	**Lajitas Array**	**92.63**	**59**	P	**P**	**05 26 57.0**	**+1.3**
JLU	**Jordanelle**	**92.63**	**46**	IAmb	IAmb	05 26 57.8	
	comp=Z,26nm,1.8s						
MCK	**McKinley**	**92.64**	**14**	IAmb	IAmb	05 26 56.9	
	comp=Z,12nm,0.8s						
MCK	**McKinley**	**92.64**	**14**	P	**P**	**05 26 54.5**	**-0.3**
	baz=209						
PAX	**Paxson**	**92.79**	**16**	IAmb	IAmb	05 26 56.3	
	comp=Z,12nm,1.1s						
PAX	**Paxson**	**92.79**	**16**	P	**P**	**05 26 55.1**	**-0.5**
	baz=212,SNR=9.6						
H19K	**Roundabout Mou**	**92.84**	**10**	P	**P**	**05 26 55.8**	**+0.2**
	baz=203,SNR=6.5						
G18K	**Tagagawik**	**92.85**	**9**	P	**P**	**05 26 55.5**	**-0.1**
	baz=201,SNR=7.2						
P30M	**Million Dollar**	**92.87**	**21**	P	**P**	**05 26 56.7**	**+0.7**
	baz=220						
BWN	**Browne**	**92.92**	**14**	IAmb	IAmb	05 27 07.0	
	comp=Z,23nm,0.8s						
TCUT	**Toone Canyon**	**92.93**	**45**	IAmb	IAmb	05 30 50.5	
	comp=Z,35nm,1.5s						
YUK8	**Steele Glacier**	**92.93**	**19**	P	**P**	**05 26 57.2**	**+0.7**
	baz=217,SNR=15						
M26K	**Nabesna, AK**	**92.94**	**17**	IAmb	IAmb	05 26 57.8	
	comp=Z,14nm,1.1s						

M26K	Nabesna, AK	92.94	17	P	P	05 26 56.7	+0.5
	baz=214,SNR=7.1						
F17K	Baldwin Pennin	93.01	8	P	P	05 26 56.9	+0.6
	baz=198						
BSUT	Blindstream Ca	93.05	46	IAmb	IAmb	05 26 59.7	
	comp=Z,9.8nm,0.7s						
H20K	Anotleneega Mo	93.07	11	P	P	05 26 57.3	+0.6
	baz=204,SNR=13						
YUK6	Outpost Mounta	93.08	20	P	P	05 26 57.7	+0.5
	baz=218						
PV19	Morning Glory	93.09	49	IAmb	IAmb	05 30 50.5	
	comp=Z,15nm,1.2s						
PV20	West Nyswonger	93.12	49	IAmb	IAmb	05 30 50.5	
	comp=Z,13nm,1.1s						
YUK3	Moose Creek	93.12	18	P	P	05 26 57.7	+0.4
	baz=217,SNR=27						
ALPN	Alpine	93.13	58	IAmb	IAmb	05 27 00.1	
	comp=Z,18nm,1.4s						
PV23	Carpenter Ridg	93.15	49	IAmb	IAmb	05 27 05.1	
	comp=Z,9.4nm,0.7s						
LZH	Lanzhou	93.15	309	⇓P	P	05 26 59.0	+1.0
LZH				pP	pwP	05 29 11.3	-2.9
LZH				sP	sP	05 30 06.8	-1.2
LZH				pmax	pmax		
	comp=Z,90nm,1.3s						
LZH				pmax	pmax		
	comp=Z,180nm,5.2s						
MENT	Mentasta	93.20	16	IAmb	IAmb	05 26 58.8	
	comp=Z,12nm,0.8s						
MENT	Mentasta	93.20	16	P	P	05 26 58.0	+0.6
ANMO	Albuquerque	93.20	53	P	P	05 26 58.6	+0.3
ANMO	Albuquerque	93.20	53	ceP	P	05 26 59.0	+0.7
ANMO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
M27K	Edge Creek, AK	93.20	17	IAmb	IAmb	05 26 59.3	
	comp=Z,22nm,1.0s						
M27K	Edge Creek, AK	93.20	17	P	P	05 26 58.4	+0.9
	baz=215,SNR=16						
PV12	Saucer Basin,	93.22	49	IAmb	IAmb	05 27 07.4	
	comp=Z,14nm,1.2s						
S34M	Telegraph Cree	93.24	24	P	P	05 26 58.4	+0.7
	baz=224						
HYT	Haines Junctio	93.25	20	P	P	05 26 58.1	+0.3
HYT	Haines Junctio	93.25	20	P	P	05 26 58.4	+0.7
	baz=219						
YUK4	Talbot Arm	93.31	19	P	P	05 26 57.9	-0.3
	baz=218						
G19K	Purcell Mounta	93.31	10	P	P	05 26 58.3	+0.5
	baz=202						
L26K	Log Cabin Wild	93.37	16	P	P	05 26 58.6	+0.5
	baz=214,SNR=9.2						
NEA2	Nenana	93.37	13	P	P	05 26 57.2	-0.9
	baz=209,SNR=5.9						
F18K	Selawik	93.37	9	P	P	05 26 57.9	-0.1
	baz=200						
MLY	Manley	93.42	13	IAmb	IAmb	05 26 58.5	
	comp=Z,7.7nm,0.7s						
MLY	Manley	93.42	13	P	P	05 26 57.6	-0.8
	baz=208,SNR=9.3						
K24K	Donnelly Dome	93.42	15	IAmb	IAmb	05 26 59.6	
	comp=Z,23nm,0.8s						
K24K	Donnelly Dome	93.42	15	P	P	05 26 58.7	+0.3
	baz=212,SNR=11						
WRH	Wood River Hil	93.47	14	IAmb	IAmb	05 26 59.1	
	comp=Z,22nm,0.9s						
BVCY	Beaver Creek	93.53	18	P	P	05 26 59.3	+0.4
	baz=216,SNR=10						
P32M	Atlin	93.54	22	P	P	05 26 58.4	-0.6
	baz=222						
E17K	Hotham Inlet	93.55	8	P	P	05 26 59.5	+0.6
	baz=198,SNR=12						
Q32M	Nakina River	93.58	23	IAmb	IAmb	05 30 24.6	
	comp=Z,34nm,1.8s						
Q32M	Nakina River	93.58	23	P	P	05 27 00.4	+1.0
	baz=223,SNR=5.2						
H21K	Melozitna Rive	93.58	12	IAmb	IAmb	05 27 01.5	
	comp=Z,7.4nm,0.7s						
H21K	Melozitna Rive	93.58	12	P	P	05 26 59.4	+0.3
	baz=206,SNR=10						
RIDG	Independent Ri	93.59	16	IAmb	IAmb	05 27 00.3	
	comp=Z,13nm,0.9s						
RIDG	Independent Ri	93.59	16	P	P	05 26 59.1	-0.1
	baz=213,SNR=12						
O30N	Mendenhall	93.65	21	P	P	05 26 59.0	-0.5
	baz=220						
HDA	Harding Lake	93.67	14	IAmb	IAmb	05 26 60.0	
	comp=Z,11nm,0.7s						
HDA	Harding Lake	93.67	14	P	P	05 26 59.3	-0.2
	baz=211,SNR=14						
CCB	Clear Creek Bu	93.69	14	IAmb	IAmb	05 26 59.8	
	comp=Z,15nm,0.8s						
DOT	Dot Lake	93.71	16	IAmb	IAmb	05 27 00.8	
	comp=Z,12nm,1.0s						
IMAR	Indian Mountai	93.71	11	P	P	05 27 00.3	+0.7
BILL	Bilibino	93.72	356	P	P	05 26 60.0	+0.4
BILL	Bilibino	93.72	356	d iP	P	05 26 59.8	+0.2
BILL				pmax	pmax		
	comp=Z,18nm,0.9s						
L27K	Beaver Creek,	93.79	17	P	P	05 27 00.2	+0.1
	baz=216,SNR=11						
I23K	Minto, Yukon-K	93.80	13	P	P	05 26 59.8	-0.2
	baz=209						
BCAR	Beaver Creek A	93.81	17	P	P	05 27 00.9	+0.7
F19K	Shaleruckik Mo	93.85	9	IAmb	IAmb	05 27 01.4	
	comp=Z,16nm,0.8s						
F19K	Shaleruckik Mo	93.85	9	P	P	05 27 00.2	0.0
	baz=202						
N30M	Aishikik Lake	93.87	20	P	P	05 27 00.5	0.0
	baz=220						
COLA	College	93.87	14	P	P	05 27 00.0	-0.3
COLA				IAmb	IAmb	05 27 00.6	
	comp=Z,15nm,0.7s						
COLA	College	93.87	14	P	P	05 27 00.1	-0.3
	comp=Z,13nm,1.2s						
COLA	College	93.87	14	d iP	P	05 26 59.2	-1.1
COLA				pmax	pmax		
	comp=Z,19nm,0.9s						
COLA	College	93.87	14	P	P	05 26 59.6	-0.8
	baz=210						
WHY	Whitehorse	93.95	21	IAmb	IAmb	05 27 02.7	
	comp=Z,8.9nm,0.8s						
WHY	Whitehorse	93.95	21	P	P	05 27 01.3	+0.3
	baz=221						
D17K	Noatak River	94.00	7	P	P	05 27 01.5	+0.6
	baz=197						
IL31		94.00	14	P	P	05 27 00.3	-0.6
IL31				IAmb	IAmb	05 27 01.4	
	comp=Z,8.3nm,0.9s						
ILAR	Eielson Array	94.00	14	P	P	05 27 00.2	-0.7
	comp=Z,5.3nm,0.8s,baz=228,slow=5.4,SNR=46						
ILAR				PP	PP	05 30 53.4	-5.1
	comp=Z,3.3nm,0.9s,baz=225,slow=6.7,SNR=6.2						
ILAR				PKiKP	PKiKP	05 31 41.6	+0.7
	comp=Z,1.0nm,0.7s,baz=214,slow=4.8,SNR=5.8						
ILAR				S	SKSac	05 36 34.0	-3.2
	comp=Z,0.5nm,0.9s,baz=214,slow=8.9,SNR=4.4						
ILAR				PKKPbc	PKKPdf	05 43 59.5	-1.8
	comp=Z,0.6nm,0.5s,baz=334,slow=2.0,SNR=7.5						
ILAR				SKKPbc	SKKPbc	05 46 42.1	-5.3
	comp=Z,0.6nm,0.8s,baz=360,slow=1.8,SNR=5.6						
ILAR				PKPPKP	P'P'df	05 52 14.4	+5.2
	comp=Z,0.7nm,1.1s,baz=323,slow=2.1,SNR=4.3						
	comp=Z,5.3nm,0.8s						
SCRK	Sand Creek	94.00	16	IAmb	IAmb	05 27 02.3	
	comp=Z,7.8nm,1.0s						
SCRK	Sand Creek	94.00	16	P	P	05 27 01.2	+0.1
	baz=214,SNR=13						
E18K	Tukpahlearik C	94.02	8	IAmb	IAmb	05 27 02.6	
	comp=Z,28nm,0.9s						
E18K	Tukpahlearik C	94.02	8	P	P	05 27 01.5	+0.5
	baz=199,SNR=12						
H22K	Ishtalitna Cre	94.06	12	P	P	05 27 01.2	0.0
	baz=207,SNR=8.6						
SAND	Sanderson	94.11	59	IAmb	IAmb	05 27 03.9	
	comp=Z,8.7nm,1.2s						
POKR	Poker Plat Res	94.17	14	IAmb	IAmb	05 27 04.2	
	comp=Z,8.0nm,0.8s						
POKR	Poker Plat Res	94.17	14	P	P	05 27 00.9	-0.9
	baz=211						
J25K	Salcha River,	94.20	15	IAmb	IAmb	05 27 02.8	
	comp=Z,26nm,1.8s						
J25K	Salcha River,	94.20	15	P	P	05 27 01.8	-0.2
	baz=212,SNR=11						
M29M	Somme Creek	94.23	19	IAmb	IAmb	05 27 03.8	
	comp=Z,12nm,0.8s						
M29M	Somme Creek	94.23	19	P	P	05 27 02.8	+0.6
	baz=218,SNR=12						
G21K	Allakaket	94.24	11	IAmb	IAmb	05 27 03.3	
	comp=Z,7.8nm,0.8s						
G21K	Allakaket	94.24	11	P	P	05 27 02.3	+0.3
	baz=205,SNR=11						
N31M	Braeburn, Yuko	94.29	20	IAmb	IAmb	05 27 05.5	
	comp=Z,8.7nm,0.9s						
N31M	Braeburn, Yuko	94.29	20	P	P	05 27 03.1	+0.7
	baz=221						
S22A	4UR Ranch, Cre	94.29	50	IAmb	IAmb	05 27 05.4	
	comp=Z,9.9nm,1.2s						
P33M	Teslin, Yukon	94.31	22	P	P	05 27 02.7	+0.2
	baz=223						
C16K	Lisburne Hills	94.32	6	P	P	05 27 02.9	+0.6
	baz=195						
H23K	Yukon River	94.36	13	P	P	05 27 02.9	+0.3
	baz=209						
RDOG	Red Dog Mine	94.36	7	P	P	05 27 03.1	+0.6
	baz=197						
F20K	Avaraart Lake	94.36	10	P	P	05 27 02.8	+0.3
	baz=203						
R33M	Jennings River	94.36	23	P	P	05 27 03.2	+0.3
	baz=225						
E19K	Redstone River	94.52	9	IAmb	IAmb	05 27 04.8	
	comp=Z,23nm,0.8s						
E19K	Redstone River	94.52	9	P	P	05 27 03.7	+0.5
	baz=202,SNR=20						
K27K	Chicken	94.52	16	P	P	05 27 04.1	+0.7
	baz=215						
J26L	Joseph Creek	94.54	16	IAmb	IAmb	05 27 05.2	
	comp=Z,18nm,0.9s						
J26L	Joseph Creek	94.54	16	P	P	05 27 04.0	+0.5
	baz=214,SNR=29						
H24K	Noodor Dome	94.70	13	P	P	05 27 04.5	+0.3
	baz=210						
C17K	DeLong Mountai	94.73	7	P	P	05 27 04.3	+0.1
	baz=197						
CFA	Coronel Fontan	94.80	128	P	P	05 27 06.1	+0.5
	comp=Z,0.8nm,0.6s,baz=241,slow=4.2,SNR=5.1						
	comp=Z,0.8nm,0.6s						
L29M	L29M	94.84	18	IAmb	IAmb	05 27 07.3	
	comp=Z,18nm,0.9s						
L29M	L29M	94.84	18	P	P	05 27 05.9	+1.0
	baz=219,SNR=18						
F21K	Alatna River	94.88	11	IAmb	IAmb	05 27 07.0	
	comp=Z,14nm,1.7s						
F21K	Alatna River	94.88	11	P	P	05 27 05.1	+0.1
	baz=205,SNR=5.7						
N32M	Quiet Lake	94.91	21	P	P	05 27 07.7	+2.5
	baz=223						
PRP	Porcupine Dome	94.94	14	IAmb	IAmb	05 27 07.4	
	comp=Z,7.6nm,0.9s						
PRP	Porcupine Dome	94.94	14	P	P	05 27 05.0	-0.3
	baz=212						
G22K	Bettles	94.95	11	P	P	05 27 05.7	+0.5
	baz=207						
PDAR	Pinedale Array	94.96	45	P	P	05 27 06.5	+0.3
PDAR	Pinedale Array	94.96	45	P	P	05 27 06.0	-0.1
	comp=Z,1.4nm,0.7s,baz=209,slow=2.3,SNR=14						
PDAR				PP	PP	05 31 05.3	-1.3
	comp=Z,6.1nm,1.1s,baz=246,slow=7.3,SNR=13						
PDAR				PKKPbc	PKKPbc	05 43 59.1	0.0
	comp=Z,0.4nm,0.6s,baz=86,slow=4.6,SNR=4.1						
PDAR				PKPPKP	P'P'df	05 52 08.8	-0.7
	comp=Z,0.8nm,0.8s,baz=108,slow=4.8,SNR=5.0						
	comp=Z,1.4nm,0.7s						
G23K	Bananza Creek	95.04	12	P	P	05 27 05.2	-0.5
	baz=208						
C18K	Utukok River	95.12	7	IAmb	IAmb	05 27 07.4	
	comp=Z,15nm,1.1s						
C18K	Utukok River	95.12	7	P	P	05 27 06.1	+0.1
	baz=199						
DAWY	Dawson	95.25	17	IAmb	IAmb	05 27 08.1	
	comp=Z,11nm,0.9s						
DAWY	Dawson	95.25	17	P	P	05 27 07.3	+0.6
	baz=218,SNR=14						
M31M	Drury Creek, Y	95.27	20	P	P	05 27 07.5	+0.7
	baz=222						
I26K	Coal Creek Min	95.31	15	IAmb	IAmb	05 27 10.3	
	comp=Z,6.5nm,0.9s						
I26K	Coal Creek Min	95.31	15	P	P	05 27 07.1	+0.3
	baz=214,SNR=10.0						
D19K	Kuna River	95.36	9	IAmb	IAmb	05 27 09.1	
	comp=Z,25nm,1.1s						
D19K	Kuna River	95.36	9	P	P	05 27 07.7	+0.6
	baz=201,SNR=9.6						
E20K	Nigu River	95.41	9	P	P	05 27 08.0	+0.6
	baz=203,SNR=18						
COLD	Coldfoot	95.47	12	IAmb	IAmb	05 27 09.2	
	comp=Z,6.3nm,0.9s						
COLD	Coldfoot	95.47	12	P	P	05 27 08.0	+0.5
	baz=208						
G24K	Hadweenzic Riv	95.53	13	IAmb	IAmb	05 30 43.9	
	comp=Z,11nm,1.4s						
G24K	Hadweenzic Riv	95.53	13	P	P	05 27 08.3	+0.4
	baz=211						
YAK	Yakutsk	95.54	339	P	P	05 27 07.6	-0.3
YAK	Yakutsk	95.54	339	eP	P	05 27 06.5	-1.4
YAK				e		05 31 06.8	
YAK				eS	SKSac	05 36 42.7	-2.6
YAK				e		05 37 32.7	
YAK				eSS	SS	05 44 17.0	-3.8
YAK				eSSS	SSS	05 48 14.8	
YAK				pmax	pmax		
	comp=Z,49nm,1.0s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,155nm,3.1s						
YAK				pmax	pmax		
	comp=N,163nm,4.5s						
YAK				pmax	pmax		
	comp=E,202nm,4.8s						
YAK				smax	smax		
	comp=N,216nm,4.1s						
YAK				smax	smax		
	comp=E,66nm,3.2s						
K29M	Barlow Dome	95.59	18	IAmb	IAmb	05 27 10.6	
	comp=Z,10.0nm,0.9s						
K29M	Barlow Dome	95.59	18	P	P	05 27 08.7	+0.4
	baz=219,SNR=14						
B18K	Kokolik River	95.73	7	P	P	05 27 09.4	+0.7
	baz=198						
C19K	Lookout Ridge	95.75	8	IAmb	IAmb	05 27 10.7	
	comp=Z,20nm,1.0s						
C19K	Lookout Ridge	95.75	8	P	P	05 27 09.5	+0.6
	baz=200						
D20K	Etivluk River	95.77	9	IAmb	IAmb	05 27 10.6	
	comp=Z,13nm,0.9s						
D20K	Etivluk River	95.77	9	P	P	05 27 09.4	+0.5
	baz=203,SNR=9.2						
MAYO	Mayo, Yukon	95.87	19	IAmb	IAmb	05 27 11.9	
	comp=Z,31nm,1.0s						
G25K	Bearman Lake	95.87	13	P	P	05 27 09.9	+0.6
	baz=212						
E21K	Killik River	95.91	10	P	P	05 27 09.6	0.0
	baz=205						
I27K	Kandik River	95.92	16	P	P	05 27 10.0	+0.3
	baz=216						
E22K	Anaktuvuk Pass	95.99	11	IAmb	IAmb	05 27 11.4	
	comp=Z,7.1nm,0.9s						
E22K	Anaktuvuk Pass	95.99	11	P	P	05 27 10.1	+0.2
	baz=207,SNR=6.8						
TOAD	Toad River Com	96.15	26	P	P	05 27 11.0	+0.2
	baz=229						
F24K	Squaw Lake	96.16	12	IAmb	IAmb	05 27 12.3	
	comp=Z,5.0nm,0.8s						
F24K	Squaw Lake	96.16	12	P	P	05 27 11.4	+0.7
	baz=210,SNR=12						
I28M	Miner Creek	96.21	16	IAmb	IAmb	05 27 12.1	
	comp=Z,5.7nm,0.8s						
I28M	Miner Creek	96.21	16	P	P	05 27 11.2	+0.1
	baz=217,SNR=8.3						
E23K	Chandalar	96.31	12	P	P	05 27 11.9	+0.5
	baz=209,SNR=5.3						
C21K	Knifeblade Rid	96.44	9	P	P	05 27 12.7	+0.8
	baz=204,SNR=8.9						
H27K	Steamboat Moun	96.45	15	IAmb	IAmb	05 27 13.7	
	comp=Z,7.7nm,1.1s						
H27K	Steamboat Moun	96.45	15	P	P	05 27 12.7	+0.6
	baz=216,SNR=6.9						
J30M	Hart River	96.49	18	P	P	05 27 12.8	+0.5
	baz=220						
D22K	Ayikyak River	96.51	10	IAmb	IAmb	05 27 14.1	
	comp=Z,8.9nm,0.8s						
D22K	Ayikyak River	96.51	10	P	P	05 27 13.1	+0.9
	baz=206						
G26K	Porcupine Rive	96.53	14	P	P	05 27 12.9	+0.6
	baz=214						
E24K	Your Creek	96.53	12	P	P	05 27 12.8	+0.5
	baz=210						
I29M	Ogilvie Camp,	96.56	17	P	P	05 27 13.0	+0.4
	baz=219						
MMPY	Sheldon Lake,	96.57	21	P	P	05 27 13.2	+0.6
	baz=224						
A19K	Wainwright	96.61	7	P	P	05 27 13.4	+0.8
	baz=199						
F25K	Christian Rive	96.67	13	P	P	05 27 13.4	+0.4
	baz=212						
BMAR	Burnt Mountain	96.76	14	P	P	05 27 14.6	+1.2
TGTN	Hyland Airport	96.81	23	P	P	05 27 14.4	+0.6
	baz=227						
TOLK	Toolik Lake Re	96.83	11	P	P	05 27 14.6	+1.0
	baz=209						
G27K	Doyon Strip	96.89	15	P	P	05 27 14.9	+0.9
	baz=216						
B21K	Ikpikpuk River	96.89	9	P	P	05 27 14.6	+0.8
	baz=204						
B20K	Meade River	96.90	8	P	P	05 27 14.8	+0.9
	baz=202						
D23K	Nanushuk River	96.92	11	IAmb	IAmb	05 27 15.9	
	comp=Z,7.8nm,0.9s						
D23K	Nanushuk River	96.92	11	P	P	05 27 14.5	+0.5
	baz=208,SNR=7.2						
ULN	Ulaanbaatar	96.96	320	P	P	05 27 15.0	+0.1
ULN	Ulaanbaatar	96.96	320	P	P	05 27 14.3	-0.6
ULN	Ulaanbaatar	96.96	320	d iP	P	05 27 14.5	-0.4
ULN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
I30M	Mount Dempster	96.97	18	IAmb	IAmb	05 27 15.7	
	comp=Z,9.3nm,0.9s						
I30M	Mount Dempster	96.97	18	P	P	05 27 14.4	-0.1
	baz=220,SNR=17						
F26K	Sheenjek River	97.07	14	P	P	05 27 15.3	+0.5
	baz=214						
BEAVL	Fort Liard	97.08	25	P	P	05 27 15.2	+0.3
	baz=230						
E25K	Arctic Village	97.14	13	P	P	05 27 15.5	+0.5
	baz=212						
H29M	Whitestone	97.22	16	IAmb	IAmb	05 27 16.8	
	comp=Z,9.6nm,0.8s						
H29M	Whitestone	97.22	16	P	P	05 27 15.7	+0.3
	baz=219,SNR=7.8						
SONM	Songino Array	97.33	320	P	Pdif	05 27 15.7	-0.8
SONM				IAmb	IAmb	05 31 21.6	
	comp=Z,31nm,1.4s						
SONM	Songino Array	97.33	320	P	Pdif	05 27 16.1	-0.4
	comp=Z,4.1nm,0.7s,baz=139,slow=4.9,SNR=28						
SONM				PP	PP	05 31 19.8	-4.5
	comp=Z,6.4nm,1.0s,baz=134,slow=6.5,SNR=10						
	comp=Z,4.1nm,0.7s						
D24K	Happy Valley	97.41	11	P	P	05 27 16.6	+0.4
	baz=210						
GTA	Gaotai	97.53	310	P	P	05 27 18.4	+0.8
GTA				pmax	pmax		
	comp=Z,32nm,1.2s						
C23K	Itkillik River	97.70	10	P	P	05 27 18.2	+0.7
	baz=208						
B22K	Teshekpuk Lake	97.72	9	P	P	05 27 17.8	+0.3
	baz=206						
EPYK	Eagle Plains	97.76	17	P	Pdif	05 27 17.6	-0.2
	baz=220,SNR=6.9						
G29M	Pine Creek	97.85	16	P	P	05 27 18.4	+0.1
	baz=219						
C24K	Franklin Bluff	97.92	11	P	P	05 27 18.6	+0.2
	baz=210						
F28M	Old Crow	97.96	15	P	P	05 27 18.9	+0.2
	baz=218						
H31M	Peel River	97.97	18	P	Pdif	05 27 18.4	-0.4
	baz=222						
D25K	Kavik River	98.00	12	P	P	05 27 19.7	+0.8
	baz=212						
E27K	Coleen River	98.03	14	P	P	05 27 19.6	+0.6
	baz=216						
A22K	Sinclair Lake	98.11	9	P	P	05 27 20.0	+0.7
	baz=204						
A21K	Barrow	98.19	8	P	P	05 27 19.9	+0.3
	baz=203						
G30M	tAoh Zraii Nji	98.36	16	P	P	05 27 20.7	+0.2
	baz=221,SNR=7.8						
C27K	Jago River	98.77	13	P	P	05 27 22.7	+0.4
	baz=214						
C26K	Camden Bay	98.78	12	P	P	05 27 22.8	+0.5
	baz=213						
G31M	Satah River	98.82	17	P	P	05 27 22.7	+0.2
	baz=222						
E28M	Babbage River	98.82	14	P	P	05 27 22.9	+0.4
	baz=218,SNR=12						
F30M	Barrier River	98.94	16	P	P	05 27 23.6	+0.5
	baz=221						
D27M	Malcolm River	99.02	14	P	Pdif	05 27 24.2	+0.8
	baz=217						
E29M	Blow River	99.03	15	P	Pdif	05 27 24.0	+0.6
	baz=219						
GOMU	GeErMu	99.72	305	Pdif	Pdif	05 27 28.9	+1.1
GOMU				PP	PP	05 31 37.9	-4.9
GOMU	GeErMu	99.72	305	SS	SS	05 45 18.5	-2.1
GOMU				AMB	AMB		
	comp=Z,190nm,4.2s						
GOMU				LR	LR		
	comp=N,120nm,15.0s						
GOMU				LR	LR		
	comp=E,110nm,15.9s						
GOMU				LR	LR		
	comp=Z,120nm,15.3s						
PALK	Pallekele	99.90	273	P	Pdif	05 27 29.5	+0.9
INK	Inuvik	100.03	16	P	Pdif	05 27 27.9	+0.1
	comp=Z,4.6nm,0.9s,baz=208,slow=6.5,SNR=5.0						
INK				PKiKP	PKiKP	05 31 51.3	-0.2
	comp=Z,2.4nm,0.8s,baz=150,slow=1.6,SNR=4.3						
	comp=Z,4.6nm,0.9s						
INK	Inuvik	100.03	16	P	Pdif	05 27 28.0	+0.1
	baz=223						
ZAK	Zakamensk	100.35	321	eP	Pdif	05 27 29.3	-0.5
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
YKA	Yellowknife Ar	102.52	26	PKKPbc	PKKPbc	05 43 36.4	-2.0
	comp=Z,1.1nm,0.6s,baz=35,slow=2.9,SNR=9.0						
TIXI	Tiksi	102.74	346	⇓eP	Pdif	05 27 38.7	-1.1
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
LPAZ	La Paz	103.17	115	PKKPbc	PKKPbc	05 43 35.9	-0.4
	comp=Z,2.4nm,0.7s,baz=32,slow=3.5,SNR=8.5						
A36M	Sachs Harbour	104.62	16	P	Pdif	05 27 49.5	+1.4
	baz=231						
CPUP	Villa Florida	105.60	130	PKKPbc	PKKPbc	05 43 28.4	-0.3
	comp=Z,0.4nm,0.6s,baz=303,slow=2.3,SNR=4.1						
ULM	Lac du Bonnet	106.67	42	PKiKP	PKiKP	05 32 03.0	-1.2
	comp=Z,2.2nm,0.9s,baz=267,slow=4.8,SNR=4.2						
ULM				PP	PP	05 32 30.4	-2.5
	comp=Z,10nm,1.1s,baz=280,slow=6.5,SNR=3.2						
ULM				PKKPbc	PKKPbc	05 43 22.6	-3.1
	comp=Z,2.7nm,0.7s,baz=123,slow=4.2,SNR=6.3						
WMQ	Urumqi	107.61	311	Pdif	Pdif	05 28 03.4	+1.2
ZSN	Zaisan	110.57	314	i PKIKP	PKiKP	05 32 11.3	-0.3
ZSN	Zaisan	110.57	314	ePKiKP	PKiKP	05 32 11.3	-0.3
MK31	Makanchi Array	112.10	312	c iPKIKP	PKiKP	05 32 13.8	-0.8
MKAR	Makanchi Array	112.10	312	Pdiff	Pdif	05 28 23.7	+1.6
	comp=Z,1.8nm,0.6s,baz=95,slow=4.7,SNR=12						
MKAR				PKiKP	PKiKP	05 32 14.1	-0.6
	comp=Z,5.5nm,0.7s,baz=89,slow=0.7,SNR=20						
MKAR				PP	PP	05 33 13.1	+1.6
	comp=Z,5.9nm,0.9s,baz=106,slow=7.7,SNR=5.8						
MKAR				SKiKP	SKiKP	05 34 53.5	+0.4
	comp=Z,11nm,0.8s,baz=77,slow=2.6,SNR=12						
MKAR				PKKPbc	PKKPbc	05 43 07.9	-0.6
	comp=Z,0.9nm,0.5s,baz=259,slow=3.9,SNR=9.1						
MKAR				SKKPbc	SKKPbc	05 45 52.7	-4.1
	comp=Z,2.0nm,0.7s,baz=293,slow=2.9,SNR=10						
ZALV	Zalesovo Beam	112.21	320	Pdiff	Pdif	05 28 24.4	+2.1
	comp=Z,0.7nm,0.4s,baz=97,slow=4.6,SNR=4.1						
ZALV				PKiKP	PKiKP	05 32 13.8	-0.7
	comp=Z,8.3nm,0.6s,baz=148,slow=1.3,SNR=26						
ZALV				SKiKP	SKiKP	05 34 54.0	+1.1
	comp=Z,5.0nm,0.7s,baz=132,slow=2.2,SNR=6.2						
VOI	Vohitsoka	113.36	229	P	PKiKP	05 32 18.2	+0.2
UZB	Uzynbulak	113.48	308	i PKIKP	PKiKP	05 32 16.8	-0.7
UZB				e		05 33 19.4	
UZB	Uzynbulak	113.48	308	ePKiKP	PKiKP	05 32 16.8	-0.7
UZB				ePP	PP	05 33 19.5	-2.0
SATY	Saty	113.90	308	i PKIKP	PKiKP	05 32 17.6	-0.7
SATY				e		05 33 22.4	
SATY	Saty	113.90	308	ePKiKP	PKiKP	05 32 17.7	-0.7
SATY				ePP	PP	05 33 22.4	-1.9
TDK	Taldyqorghan	114.33	310	ePKIKP	PKPdf	05 32 18.5	-0.4

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TDK   Taldyqorghan     114.33 310  ePKP     PKPdf    05 32 18.5 -0.4
KSH   Kashi            114.87 304   PKP     PKiKP    05 32 21.1 +0.8
MDOK  Medeo            114.89 308  ePKIKP   PKPdf    05 32 19.5 -0.8
MDOK  Medeo            114.89 308  ePKP     PKPdf    05 32 19.6 -0.7
ULHL  Ulahol           115.28 307   P       PKiKP    05 32 21.3 +0.2
      SNR=10
KURK  Kurchatov        115.30 316           PKPdf    05 32 20.1 -0.4
KURK  Kurchatov        115.30 316   P       PKPdf    05 32 20.1 -0.4
KURK  Kurchatov        115.30 316d iPKIKP   PKPdf    05 32 19.5 -1.0
KURK                                pmax    pmax
      comp=Z,37nm,1.0s
KURBB Kurchatov Arra   115.34 316   PKP     PKPdf    05 32 19.8 -0.8
      comp=Z,24nm,0.9s,baz=103,slow=1.9,SNR=89
KURBB                               PP      PP       05 33 30.7 -3.2
      comp=Z,6.3nm,0.9s,baz=99,slow=6.0,SNR=5.5
KURBB                               SKP              05 34 59.9
      comp=Z,18nm,0.8s,baz=107,slow=2.0,SNR=24
KURBB                               PKKPbc  PKKPbc   05 42 58.2 +0.5
      comp=Z,1.2nm,0.8s,baz=280,slow=3.6,SNR=7.1
KURBB                               SKKPbc  SKKPbc   05 45 44.6 -2.7
      comp=Z,1.1nm,0.8s,baz=285,slow=3.7,SNR=8.2
NIL   Nilore           115.58 297           PKPdf    05 32 21.0 -0.7
NIL   Nilore           115.58 297   P       PKPdf    05 32 21.3 -0.4
NIL   Nilore           115.58 297   PKIKP   PKPdf    05 32 21.0 -0.7
TKM2  Tokmak 2         115.89 307   P       PKPdf    05 32 21.8 -0.4
      SNR=12
KBK   Karagaybulak     116.30 307   P       PKiKP    05 32 23.1 +0.1
      SNR=5.8
AAK   Ala-Archa        116.62 307   P       PKiKP    05 32 23.7 +0.1
      SNR=6.5
AAK   Ala-Archa        116.62 307           PKPdf    05 32 23.6  0.0
AAK   Ala-Archa        116.62 307   PKP     PKPdf    05 32 22.9 -0.7
      comp=Z,8.2nm,0.6s,baz=117,slow=3.5,SNR=15
AAK                                 SKP              05 35 03.2
      comp=Z,8.9nm,0.7s,baz=140,slow=4.3,SNR=9.1
AAK   Ala-Archa        116.62 307   P       PKPdf    05 32 23.1 -0.4
AAK   Ala-Archa        116.62 307d iPKIKP   PKPdf    05 32 23.2 -0.4
AAK                                 pmax    pmax
      comp=Z,11nm,0.8s
AAK   Ala-Archa        116.62 307  i PKPdf  PKPdf    05 32 23.3 -0.3
      SNR=6.7
SGDS  Sogindy          116.68 308  ePKP     PKPdf    05 32 22.1 -1.5
USP   Ospenovka        116.74 307   P       PKPdf    05 32 23.2 -0.5
      SNR=15
MSEY  Mahe Island      116.93 250   P       PKiKP    05 32 25.4 +0.5
EKS2  Erkin-Say        117.15 307   P       PKPdf    05 32 24.1 -0.5
      SNR=10
BTLS  Baital           117.37 309  ePKIKP   PKPdf    05 32 24.3 -0.4
BTLS                               e                 05 33 46.4
BTLS  Baital           117.37 309  ePKP     PKPdf    05 32 24.3 -0.4
BTLS                               ePP      PP       05 33 46.4 -1.6
SUR   Sutherland       118.52 202           PKiKP    05 32 28.6 +0.8
SUR   Sutherland       118.52 202   P       PKiKP    05 32 27.9 +0.1
DZA   Taraz            118.96 307  ePKIKP   PKPdf    05 32 27.3 -0.6
DZA   Taraz            118.96 307  ePKP     PKPdf    05 32 27.3 -0.6
BDFB  Brasilia         119.12 127   PKPdf   PKiKP    05 32 29.3 +0.1
BDFB  Brasilia         119.12 127   PKP     PKPdf    05 32 28.9 -0.2
      comp=Z,5.5nm,0.7s,baz=201,slow=4.6,SNR=10
BDFB                                PKKPbc  PKKPbc   05 42 44.7  0.0
      comp=Z,10nm,0.7s,baz=76,slow=1.7,SNR=13
BDFB  Brasilia         119.12 127   PKIKP   PKiKP    05 32 29.3 +0.1
KBL   Kabul            119.18 297           PKiKP    05 32 29.1 +0.1
KBL   Kabul            119.18 297   P       PKiKP    05 32 29.4 +0.4
      SNR=16
KBL   Kabul            119.18 297   PKIKP   PKiKP    05 32 29.1 +0.1
KKAR  Karatay Array    119.59 307           PKPdf    05 32 29.0 -0.1
KKAR  Karatay Array    119.59 307   PKIKP   PKPdf    05 32 29.0 -0.1
IUG   Iuzhnay          119.80 306  ePKIKP   PKPdf    05 32 29.0 -0.7
IUG                                e                 05 34 02.9
IUG   Iuzhnay          119.80 306  ePKP     PKPdf    05 32 29.0 -0.7
IUG                                ePP      PP       05 34 02.9 -1.8
SIMJ  Simiganj         120.01 301           PKPdf    05 32 29.5 -0.7
BRLS  Boroldav         120.07 307  ePKIKP   PKPdf    05 32 29.7 -0.3
BRLS  Boroldav         120.07 307  ePKP     PKPdf    05 32 29.7 -0.3
CHM   Chimkent         120.14 306  ePKIKP   PKPdf    05 32 29.6 -0.6
CHM   Chimkent         120.14 306  ePKP     PKPdf    05 32 29.6 -0.6
BOSA  Boshof           120.23 208   PKP     PKiKP    05 32 31.4 +0.3
      comp=Z,19nm,0.8s,baz=149,slow=1.8,SNR=40
BOSA                                SKP              05 35 11.1
      comp=Z,8.2nm,0.8s,baz=201,slow=2.9,SNR=6.9
BOSA                                PKKPbc  PKKPbc   05 42 41.1 -0.2
      comp=Z,4.1nm,0.5s,baz=338,slow=5.4,SNR=6.8
BVAR  Borovoye Array   120.62 318   PKP     PKPdf    05 32 30.3 -0.4
      comp=Z,62nm,0.6s,baz=104,slow=1.3,SNR=181
BVAR                                PP      PP       05 34 09.8 +0.1
      comp=Z,21nm,1.0s,baz=92,slow=8.2,SNR=8.7
BVAR                                SKP              05 35 11.1
      comp=Z,41nm,0.9s,baz=96,slow=3.0,SNR=15
BRVK  Borovoye         120.68 318           PKPdf    05 32 30.9  0.0
BRVK  Borovoye         120.68 318   P       PKPdf    05 32 30.9  0.0
BRVK  Borovoye         120.68 318d iPKIKP   PKPdf    05 32 30.2 -0.6
BRVK                                pmax    pmax
      comp=Z,57nm,1.0s
SJMB  Sao Joao De Ma   121.63 135  eP       PKPdf    05 32 32.8 -0.9
RIB01 Linhares ES      121.68 136  eP       PKPdf    05 32 33.0 -0.8
MAL2  Monte Alegre,    122.36 110           PKiKP    05 32 35.6 +0.1
NEEM  North Greenlan   123.18  11  i P      PKPdf    05 32 35.1 -0.3
KULLO Kullorsuaq       123.38  15  i P      PKPdf    05 32 34.6 -0.8
NOR   Nord             123.54   3  i P      PKPdf    05 32 34.6 -1.0
PRPB  Parauapebas      123.66 117  eP       PKPdf    05 32 36.6 -1.2
NGCH  Negor - Chabah   123.74 284   P       PKiKP    05 32 38.0 +0.1
SMTB  Santa Maria do   123.79 121  eP       PKPdf    05 32 37.2 -0.9
SKOMA Sekoma           124.39 209  i P      PKiKP    05 32 39.7 +0.3
JLN   Jalan Bani Buh   124.40 280   P       PKiKP    05 32 39.4 +0.1
MREMI Moremi           124.43 213  i P      PKiKP    05 32 39.5 -0.1
UPNV  Upernavik        124.47  17  i P      PKPdf    05 32 37.2 -0.4
LPHEP Lephephe         124.52 211  i P      PKiKP    05 32 39.9 +0.2
SCHQ  Schefferville    124.74  40   PKP     PKPdf    05 32 38.2 -0.3
      comp=Z,13nm,0.9s,baz=2.7,slow=2.1,SNR=17
GGN   Saint George     124.89  52           PKPdf    05 32 38.5 -0.7
WBK   Wadi Bani Khal   124.92 281   P       PKiKP    05 32 40.4  0.0
MHTO  MHTO             125.35 278   P       PKPdf    05 32 41.0 +0.2
WSAR  Wadi Sarin       125.39 281   PKP     PKPdf    05 32 40.6 -0.2
      comp=Z,0.1nm,0.8s,baz=223,slow=24,SNR=6.3
WSAR  Wadi Sarin       125.39 281   P       PKiKP    05 32 41.1 -0.2
DQM   DQM              125.42 277   P       PKiKP    05 32 41.2 -0.1
JMDO  Jabal Madar      125.62 280   P       PKPdf    05 32 41.5 +0.2
BROLN Tlhalogang       125.72 214  i P      PKPdf    05 32 41.3 -0.4
NUUG  Nuugaatsiaq      125.86  18  i P      PKPdf    05 32 39.4 -0.8
SMDO  Samad            125.86 281   P       PKPdf    05 32 41.9 +0.1
BIDO  Bidbid           125.91 281   P       PKiKP    05 32 42.2 -0.1
SVE   Sverdlovsk       126.06 323  ePKIKP   PKPdf    05 32 41.0  0.0
SVE                                 pmax    pmax
      comp=Z,69nm,1.1s
KBS   Kingsbay         126.19 357           PKiKP    05 32 41.9 +0.7
KBS   Kingsbay         126.19 357   PKIKP   PKiKP    05 32 41.9 +0.7
KBS   Kingsbay         126.19 357  eP       PKPdf    05 32 40.2 -0.6
KBS   Kingsbay         126.19 357  i P      PKPdf    05 32 40.8 +0.1
BSY   Bisya            126.53 280   P       PKPdf    05 32 43.2 +0.2
KGCAE Kacgae           126.59 208  i P      PKiKP    05 32 43.9  0.0
SPA0  Spitsbergen Ar   126.63 355  eP       PKPdf    05 32 41.7 +0.1
SPITS Spitsbergen Ar   126.63 355   PKP     PKPdf    05 32 41.7 +0.1
      comp=Z,56nm,0.7s,baz=92,slow=5.8,SNR=60
SPITS Spitsbergen Ar   126.63 355   PKIKP   PKiKP    05 32 42.9 +0.7
HOQ   Hoqain           126.65 281   P       PKPdf    05 32 43.4 +0.2
SOOWA Sowa             126.73 213  i P      PKiKP    05 32 44.7 +0.5
DMTO  DMTO             127.07 273   P       PKiKP    05 32 44.6 -0.1
ARQ   Araqi            127.29 281   P       PKPdf    05 32 44.7 +0.3
ARTI  Arti             127.35 323           PKPdf    05 32 43.8 +0.3
ARTI  Arti             127.35 323  i PKIKP  PKPdf    05 32 43.1 -0.4
ARTI                                                 05 34 51.3
ARTI                                                 05 38 57.4
ARTI                                SS      SS       05 51 12.1 -5.4
SOHO  SOHO             127.48 282   P       PKPdf    05 32 45.0 +0.3
SOHO  SOHO             127.48 282  i PKPdf  PKPdf    05 32 44.4 -0.4
      SNR=20
ILULI Ilulissat        127.63  20  i P      PKPdf    05 32 43.5 -0.2
RBK   Rabkut           127.67 273   P       PKiKP    05 32 45.7 -0.2
UOSS  Minazif          127.97 283           PKPdf    05 32 45.4 -0.3
UOSS  Minazif          127.97 283   P       PKPdf    05 32 45.8 +0.1
UOSS  Minazif          127.97 283  i PKPdf  PKPdf    05 32 44.8 -0.9
      SNR=10
MDH   Madha            127.97 283   P       PKPdf    05 32 45.9 +0.2
MDH   Madha            127.97 283   PKPdf   PKPdf    05 32 45.0 -0.6
HATD  Hatta, Dubai     128.00 282   P       PKiKP    05 32 46.2 -0.2
      SNR=5.6
HATD  Hatta, Dubai     128.00 282  i PKPdf  PKPdf    05 32 45.5 -0.3
      SNR=12
ASHO  Ashiyiah         128.04 282   P       PKPdf    05 32 46.1 +0.2
ASHO  Ashiyiah         128.04 282  i PKPdf  PKPdf    05 32 45.4 -0.5
      SNR=12
DAG   Danmarks Havn    128.05   5  i P      PKPdf    05 32 43.0 -1.3
DOK   Doka             128.09 274   P       PKPdf    05 32 46.1  0.0
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MSFE  Esma-Masafi      128.11 283  i PKPdf  PKPdf    05 32 45.6 -0.4
      SNR=6.5
MASF  Masafi           128.11 283   P       PKPdf    05 32 46.3 +0.3
ALNE  Al Ain           128.15 281   P       PKiKP    05 32 46.5 -0.2
      SNR=6.2
ALNE  Al Ain           128.15 281  i PKiKP  PKPdf    05 32 46.3 +0.3
      SNR=9.5
WHFO  Wadi Hawf        128.19 273   P       PKiKP    05 32 47.0  0.0
SHME  Shamm            128.28 284   P       PKPdf    05 32 46.6 +0.3
GRTLG Ghanzi           128.33 208  i P      PKPdf    05 32 47.1 +0.4
UMZA  Um Al Zommool    128.34 280   P       PKPdf    05 32 46.7 +0.2
ABTO  Aybut            128.44 272   P       PKPdf    05 32 47.1 +0.3
NAZ   Nazwa, Dubai     128.46 283   P       PKPdf    05 32 47.0 +0.4
      SNR=5.5
NAZ   Nazwa, Dubai     128.46 283  i PKPdf  PKPdf    05 32 46.5 -0.1
      SNR=6.6
FAQ   Al Faqa, Dubai   128.46 282   PKiKP   PKPdf    05 32 46.7 +0.1
UMQ   Umm Al-Quwin     128.58 283   P       PKPdf    05 32 47.2 +0.4
ASUD  Al Ashush, Dub   128.67 282   P       PKPdf    05 32 47.4 +0.4
ASUD  Al Ashush, Dub   128.67 282  i PKiKP  PKPdf    05 32 47.2 +0.2
      SNR=7.4
SUMG  Summit           128.83  13  i P      PKPdf    05 32 46.1 -0.3
SFJD  Kangerlussuaq    128.89  22           PKPdf    05 32 46.0 -0.1
SFJD  Kangerlussuaq    128.89  22   PKIKP   PKPdf    05 32 46.0 -0.1
AJN   Ajban            128.95 282   P       PKPdf    05 32 47.7 +0.1
KSANE Kasane           129.59 214  i P      PKiKP    05 32 50.2 +0.2
MZWR  Madinat Zayed    129.74 280   P       PKPdf    05 32 49.3 +0.2
NUUK  Nuuk             129.78  26  i P      PKiKP    05 32 48.5 -0.2
MZR   Muzera           129.91 279   P       PKiKP    05 32 50.5 +0.2
      SNR=5.1
MZR   Muzera           129.91 279  i PKiKP  PKPdf    05 32 49.9 +0.5
      SNR=9.7
LSZ   Lusaka           130.04 219   P       PKPdf    05 32 50.0 -0.1
DBG   Daneborg         130.23   6  i P      PKPdf    05 32 48.1 -0.4
GHWR  Ruwais           130.68 280   P       PKiKP    05 32 51.4 -0.4
JRN   Qarnain Island   130.93 282   P       PKPdf    05 32 51.6 +0.3
ICESG Greenland Ices   131.00  17  i P      PKPdf    05 32 49.7 -0.9
KIRV  Kirov            131.46 327d iPKIKP   PKPdf    05 32 51.0 -0.2
TSUM  Tsumeb           131.72 205   SKPbc   SKPab    05 35 24.2 -0.1
      comp=Z,50nm,0.8s,baz=148,slow=4.5,SNR=47
SLWR  Sila             131.76 280   P       PKPdf    05 32 53.4 +0.6
VADS  Vadso            131.88 346  eP       PKPdf    05 32 52.0 +0.2
TRNA  Turayna          132.34 281   P       PKPdf    05 32 54.2 +0.3
KIBK  Kibwezi          132.56 240   P       PKPdf    05 32 55.0 +0.1
HAMF  Hammerfest       132.56 349  eP       PKPdf    05 32 51.9 -1.1
IVI   Ivigtut          132.58  28  i P      PKPdf    05 32 53.3 +0.1
SMRA  Abu-Samra        132.68 281   P       PKPdf    05 32 55.2 +0.6
SHMA  Al-Shehemyia     132.79 282   P       PKPdf    05 32 55.4 +0.7
APA   Apatity          132.81 342⇓iPKIKP    PKPdf    05 32 51.9 -1.6
APA                                i                 05 35 27.7
APA                                 pmax    pmax
      comp=Z,22nm,0.7s
ARCES ARCESS Array B   133.15 347   PKhKP   PKPpre   05 32 45.3
      comp=Z,4.0nm,0.3s,baz=111,slow=1.4,SNR=28
ARCES                               PKP     PKiKP    05 32 55.1 -0.4
      comp=Z,3.4nm,0.4s,baz=103,slow=1.6,SNR=6.9
ARCES                               SKPbc   SKPbc    05 35 27.5 +1.5
      comp=Z,33nm,0.5s,baz=30,slow=3.1,SNR=36
ARCES                               SKKPbc  SKKPbc   05 44 45.1 -3.5
      comp=Z,2.7nm,0.6s,baz=202,slow=1.3,SNR=11
SAKB  Bahrain          133.19 282   P       PKPdf    05 32 56.2 +0.7
SCO   Scoresbysund     133.53   9  i P      PKPdf    05 32 54.8  0.0
ISOG  Isortoq, Green   133.57  20  i P      PKPdf    05 32 54.7 -0.2
NRS   Narsarsuaq       133.77  28  i P      PKiKP    05 32 56.4 -0.5
KMBO  Kilima Mbogo     133.93 241           PKiKP    05 32 58.8 -0.2
KMBO  Kilima Mbogo     133.93 241   P       PKPdf    05 32 58.2 +0.6
KMBO  Kilima Mbogo     133.93 241   PKIKP   PKiKP    05 32 58.8 -0.2
KMBO  Kilima Mbogo     133.93 241  i PKiKP  PKiKP    05 32 58.9 -0.2
      SNR=6.6
ANGG  Ammassalik, Gr   133.94  20  i P      PKPdf    05 32 55.8 +0.2
JMIC  Jan Mayen        134.36   3  eP       PKiKP    05 32 57.6 -0.3
KLMR  Klimovskoe       134.95 333  ePKHKP   PKPpre   05 32 51.0
KLMR                                pmax    pmax
      comp=Z,54nm,0.8s
ATD   Arta Tunnel      135.71 260   P       PKiKP    05 33 02.5 +0.1
KBD   Kabd             136.21 286   P       PKPdf    05 33 01.6 +0.6
MAK   Makhachkala      136.40 306  i P      Pdif     05 30 05.9 -4.3
MAK                                i                 05 33 01.8
MAK                                e                 05 35 49.8
MAK                                 pmax    pmax
      comp=Z,98nm,1.0s
RAYN  Ar Rayn          137.16 278   P       PKPdf    05 33 03.9 +0.9
LODK  Lodwar           138.14 244   P       PKiKP    05 33 06.6 -0.8
STOK  Stokkvaagen      138.16 351  eP       PKPdf    05 32 57.7 -5.8
VRH   Novokhopyorsk    138.24 319  ePKHKP   PKPpre   05 32 55.7
VRH                                 pmax    pmax
      comp=Z,15nm,0.6s
MOS   Moscow           138.48 327  i PKIKP  PKPdf    05 33 03.0 -1.4
MOS                                e                 05 35 13.0
MOS                                 pmax    pmax
      comp=Z,59nm,0.8s
GNI   Garni            138.79 302   P       PKPdf    05 33 06.3 +0.6
GOF   Gofitskoye       139.21 310cePKIKP    PKPdf    05 33 06.4 +0.3
MBAR  Mbarara          139.26 235           PKPdf    05 33 07.6 +0.3
MBAR  Mbarara          139.26 235   P       PKPdf    05 33 08.0 +0.6
MBAR  Mbarara          139.26 235   PKIKP   PKPdf    05 33 07.6 +0.3
LPSR  Galich'ya Gora   139.27 322  ePKHKP   PKPpre   05 32 57.8
LPSR                                pmax    pmax
      comp=Z,30nm,1.0s
OBN   Obninsk          139.32 327c iPKIKP   PKiKP    05 33 08.1 -0.3
OBN                                 PS               05 46 51.0
OBN                                 pmax    pmax
      comp=Z,65nm,0.8s
FINES FINESS Array B   139.47 340   PKhKP   PKPpre   05 32 57.6
      comp=Z,31nm,0.7s,baz=56,slow=4.3,SNR=95
FINES                               PKP     PKiKP    05 33 07.5 -1.1
      comp=Z,11nm,0.7s,baz=9.4,slow=3.7,SNR=5.5
FINES                               SKPbc   SKPbc    05 35 46.0 +1.1
      comp=Z,87nm,0.7s,baz=82,slow=4.0,SNR=34
FINES                               SKKPbc  SKKPbc   05 44 22.0 -2.4
      comp=Z,3.2nm,0.8s,baz=355,slow=2.3,SNR=5.2
VORR  Voronezh         139.51 321  ePKHKP   PKPpre   05 32 59.5
VORR                                pmax    pmax
      comp=Z,30nm,1.0s
KBZ   Khabaz           139.59 308   PKhKP   PKPpre   05 32 59.9
      comp=Z,2.6nm,0.7s,baz=128,slow=5.5,SNR=5.6
KBZ                                 SKPbc   SKiKP    05 35 47.8 -0.6
      comp=Z,12nm,0.8s,baz=72,slow=3.1,SNR=9.3
KIV   Kislovodsk       139.70 309           PKPdf    05 33 07.2 +0.1
KIV   Kislovodsk       139.70 309   P       PKPdf    05 33 07.7 +0.6
KIV   Kislovodsk       139.70 309  i PKIKP  PKPdf    05 33 06.7 -0.4
KIV                                e                 05 36 07.3
KIV                                eSS      SS       05 53 39.2 -5.9
KIV                                 pmax    pmax
      comp=Z,34nm,1.1s
VSR   Storozhevoye     139.72 320  ePKHKP   PKPpre   05 32 58.5
VSR                                 pmax    pmax
      comp=Z,10.0nm,0.9s
VORD  Divnogorie       139.75 320  ePKHKP   PKPpre   05 32 59.0
VORD                                pmax    pmax
      comp=Z,10.0nm,0.7s
NSS   Namsos           140.01 351  eP       PKPdf    05 32 59.4 -7.4
ERBR  Yeremizino-Bor   140.78 312  i PKIKP  PKPdf    05 33 09.4 +0.5
ERBR                                pmax    pmax
      comp=Z,53nm,0.9s
LABN  Labinsk          140.91 310  i PKIKP  PKiKP    05 33 11.8 -0.2
LABN                                pmax    pmax
      comp=Z,29nm,0.6s
SOC   Sochi            141.88 309  ePKHKP   PKPpre   05 33 05.1
SOC                                ePPP     PPP      05 39 35.1
SOC                                eSS      SS       05 54 16.4 +6.5
SOC                                eSSS     SSS      05 59 32.7
SOC                                 pmax    pmax
      comp=Z,38nm,0.8s
MOL   Molde            142.46 353  eP       PKPdf    05 33 08.8 -2.5
DOMB  Dombas           142.79 352  eP       PKPdf    05 33 09.5 -2.5
AKN   Aaknes           142.91 353  eP       PKPdf    05 33 10.2 -2.0
ANN   Anapa            143.11 311  i PKHKP  PKPpre   05 33 10.4
ANN                                 pmax    pmax
      comp=Z,307nm,0.9s
NB2   NORSAR Subarra143.43 349      PKP     PKPab    05 33 11.4 -0.5
      comp=Z,175nm,0.8s,baz=16,slow=3.2
NB2                                 pPKP    pPKPdf   05 35 56.2 +24
      comp=Z,60nm,1.7s,baz=15,slow=2.6
NB2                                 SKKP             05 44 06.2
      comp=Z,24nm,1.4s,baz=192,slow=4.8
NB2   NORSAR Subarra143.43 349      PKPab   PKPab    05 33 11.4 -0.5
      baz=16,slow=3.2
NOA   NORSAR Array B 143.43 349     PKP     PKPab    05 33 11.5 -0.4
      comp=Z,239nm,0.8s,baz=21,slow=3.8,SNR=776
NOA                                 SKPbc   SKiKP    05 35 56.7 +0.9
      comp=Z,6.7nm,0.7s,baz=15,slow=4.1,SNR=5.0
NOA                                 SKKPbc  SKKPab   05 44 06.6 -0.6
      comp=Z,6.7nm,1.0s,baz=200,slow=4.4,SNR=6.6
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H10S2 ASCENSION HYDR143.47 158      PKP     PKPdf    05 33 14.0 -0.3
      baz=40,slow=74,SNR=4.1
H10S3 ASCENSION HYDR143.47 158      PKP     PKPdf    05 33 13.9 -0.4
      baz=180,slow=74,SNR=3.8
NC602 NORSAR Array S 143.66 349    eP       PKPbc    05 33 12.1 -0.5
FOO   Floro            143.66 355  eP       PKPbc    05 33 12.4 -0.2
HFS   Hagfors          143.81 347   PKP     PKPbc    05 33 12.5 -0.7
      comp=Z,151nm,0.3s,baz=64,slow=3.5,SNR=776
HFS                                 SKKPbc  SKKPbc   05 44 05.0 -2.1
      comp=Z,2.6nm,0.9s,baz=133,slow=6.5,SNR=4.4
HYA   Hoyanger         143.98 353  eP       PKPbc    05 33 13.4 -0.2
SKAR  Skarslia         144.21 352  eP       PKPbc    05 33 14.4  0.0
SUE   Sulen            144.22 355  eP       PKPdf    05 33 14.6 +0.2
OSL   Oslo             144.55 349  eP       PKPbc    05 33 15.4 +0.1
ASK   Askoy            144.75 354  eP       PKPbc    05 33 16.0  0.0
BER   Bergen           144.84 354  eP       PKPbc    05 33 16.2  0.0
KONO  Kongsberg        145.01 350           PKPdf    05 33 16.0 +0.1
KONO  Kongsberg        145.01 350   PKIKP   PKPdf    05 33 16.0 +0.1
KONO  Kongsberg        145.01 350  eP       PKPbc    05 33 16.4 -0.3
ODD1  Odda             145.16 353  eP       PKPbc    05 33 17.5 +0.2
SIM   Simferopol'      145.28 313  ePKIKP   PKPbc    05 33 18.3 +0.2
SIM                                 pmax    pmax
      comp=Z,425nm,1.0s
SIM                                 pmax    pmax
      comp=Z,88nm,0.4s
STRU  Stroemstad       145.32 348  i P      PKPbc    05 33 17.3 -0.4
LRW   Lerwick          145.42 360  eP       PKPbc    05 33 18.0  0.0
AKASG Malin Array Be   145.45 325   PKPbc   PKPdf    05 33 16.4 -0.4
      comp=Z,79nm,0.7s,baz=44,slow=4.1,SNR=242
AKASG                               SKPbc   SKiKP    05 36 01.7 +1.5
      comp=Z,16nm,0.6s,baz=46,slow=2.3,SNR=15
AKASG                               SKKPbc  SKKPab   05 43 58.0 -0.2
      comp=Z,2.0nm,0.6s,baz=246,slow=3.9,SNR=11
KIEV  Kiev             145.46 325           PKPdf    05 33 16.8 -0.1
KIEV  Kiev             145.46 325 ⇑P        PKPdf    05 33 16.5 -0.4
KIEV  Kiev             145.46 325 ⇑PKIKP    PKPdf    05 33 16.5 -0.4
KIEV  Kiev             145.46 325  i PKPdf  PKPdf    05 33 16.3 -0.5
      SNR=105
DIKM  Dikmen           145.56 307 ⇑P        PKPbc    05 33 19.7 +0.7
BLS5  Blasjo           145.66 353  eP       PKPbc    05 33 18.9 +0.2
FKH   Fakeheh          145.97 294  eP       PKPbc    05 33 21.4 +0.9
KMY   Karmoy           146.00 354  eP       PKPbc    05 33 20.1 +0.5
SUW   Suwalki          146.07 334  ePKP     PKPbc    05 33 19.8 -0.2
BEIL  Beino            146.14 294  eP       PKPbc    05 33 21.8 +0.9
BORU  Boraas           146.30 346  i P      PKPbc    05 33 19.7 -0.8
HWQ   Hawqa            146.35 294  eP       PKPbc    05 33 21.9 +0.3
BZK   Bozkurt          146.37 308 ⇑P        PKPbc    05 33 20.9 -0.3
HOMB  Homborsund       146.50 350  eP       PKPbc    05 33 21.0  0.0
HOMB  Homborsund       146.50 350  i P      PKPbc    05 33 21.0  0.0
RCY   Rachaya          146.50 293  eP       PKPbc    05 33 23.0 +0.9
SHBL  Chebaa           146.59 292  eP       PKPbc    05 33 23.3 +1.0
SNART Snartemo         146.62 351  eP       PKPbc    05 33 21.7 +0.3
SNART Snartemo         146.62 351  i P      PKPbc    05 33 21.3  0.0
BHL   Bhannes          146.63 293  eP       PKPbc    05 33 23.0 +0.7
QRWL  Qaraoun          146.63 293  eP       PKPbc    05 33 23.2 +0.9
ONAU  Onsala           146.70 347  i P      PKPbc    05 33 20.9 -0.6
DQRL  Deir Qamar       146.71 293  eP       PKPbc    05 33 23.4 +0.9
BLEU  Blekinge         146.74 342  i P      PKPbc    05 33 20.9 -0.8
FABU  Falkenberg       146.89 346  i P      PKPbc    05 33 21.5 -0.6
MMAI  Mount Meron Ar   146.90 292   PKPbc   PKPbc    05 33 23.7 +0.7
      comp=Z,188nm,0.7s,baz=57,slow=3.1,SNR=180
MMAI                                SKPbc   SKiKP    05 36 06.5 +2.5
      comp=Z,2.3nm,0.3s,baz=83,slow=4.9,SNR=3.7
BIGH  Upper Bighouse   147.04   2  eP       PKPbc    05 33 22.6 +0.2
DEL   Delary           147.10 344  i P      PKPbc    05 33 22.4 -0.2
LEWI  Lewis, Hebride   147.22   5  eP       PKPbc    05 33 23.1 +0.2
BR131 Keskin Array S   147.26 304   P       PKPdf    05 33 20.3 -0.2
      SNR=60
BRTR  Keskin Array B   147.26 304   PKP     PKPdf    05 33 20.1 -0.4
      comp=Z,57nm,0.9s,baz=142,slow=2.0,SNR=39
BRTR                                PKPbc   PKPbc    05 33 23.8  0.0
      comp=Z,52nm,0.6s,baz=143,slow=5.5,SNR=74
BRTR                                SKPbc   SKiKP    05 36 05.6 +1.0
      comp=Z,9.2nm,1.0s,baz=116,slow=2.9,SNR=4.3
BRTR                                SKKPbc           05 43 49.0
      comp=Z,1.4nm,0.8s,baz=344,slow=6.0,SNR=4.0
PURM  Purcari          147.29 318 ⇓P        PKPdf    05 33 21.7 +1.6
LINV  Loch Inver, As   147.33   3  eP       PKPbc    05 33 23.3 +0.1
SORM  Soroca           147.36 322 ⇑P        PKPdf    05 33 19.5 -0.6
SORM  Soroca           147.36 322 ⇑PKHKP    PKPpre   05 33 19.5
MILM  Milestii Mici    147.73 319 ⇑P        PKPbc    05 33 24.0 -0.6
MILM  Milestii Mici    147.73 319 ⇑PKIKP    PKPbc    05 33 24.0 -0.6
ANTO  Ankara           147.85 305           PKPdf    05 33 21.4 +0.1
ANTO  Ankara           147.85 305   P       PKPdf    05 33 21.8 +0.5
ANTO  Ankara           147.85 305 ⇑P        PKPbc    05 33 25.6 +0.3
ANTO  Ankara           147.85 305   PKIKP   PKPdf    05 33 21.4 +0.1
LUNU  Lund             147.96 344  i P      PKPbc    05 33 24.5 -0.3
MCD   Coleburn Disti   147.97   2  eP       PKPbc    05 33 24.1 -0.8
KPL   Plockton         148.10   4  eP       PKPbc    05 33 25.0 -0.2
COP   Copenhagen       148.16 345  i P      PKPbc    05 33 25.2 -0.2
R9F13 Warsaw-Wawer     148.23 333  ePKPdf   PKPbc    05 33 26.2 +0.6
R9F13                              e                 05 33 31.7
DRBR  Darabani         148.28 323 ⇑P        PKPbc    05 33 24.7 -1.3
VASR  Vaslui           148.48 320 ⇑P        PKPbc    05 33 26.8 +0.3
TLCR                   148.58 316 ⇑P        PKiKP    05 33 27.5 -0.3
TLCR                   148.58 316 ⇑PKP2     PKiKP    05 33 27.5 -0.3
DRUM  Mains of Drumt   148.65   1  eP       PKPbc    05 33 26.3 -0.3
BEL   Belsk            148.66 333  ePKP     PKPbc    05 33 27.3 +0.6
VLDR  Vladesti         148.71 318 ⇑P        PKPbc    05 33 25.9 -1.2
JURR  Jurilovca        148.74 316 ⇑P        PKPbc    05 33 27.3 +0.2
GIUM  Giurgiulesti     148.81 317 ⇑P        PKiKP    05 33 28.1 -0.1
VARL  Varlezi          148.82 318 ⇑P        PKiKP    05 33 28.4 +0.1
SCTR  Scanteiesti      148.85 318 ⇑P        PKPbc    05 33 26.3 -1.2
TATR  Tatarca          148.85 318 ⇑P        PKPbc    05 33 27.9 +0.5
GKP   Gorka Klasztor   148.87 338  ePKP     PKPbc    05 33 27.5 +0.3
RGN   Rugen            148.96 343  ePKPbc   PKPbc    05 33 27.8 +0.4
      baz=26,slow=2.2
RGN                                ePKPab   PKPab    05 33 34.7 +0.7
      baz=25,slow=4.3
PRAR  RASCA            148.98 322 ⇑P        PKPbc    05 33 27.9 +0.2
TPGR  Topolog          148.99 316 ⇑P        PKPbc    05 33 28.2 +0.4
NEGRR Negrea           148.99 318 ⇑P        PKPbc    05 33 27.9 +0.1
CFR   Carcaliu         149.01 317 ⇓P        PKiKP    05 33 28.8 +0.1
CFR   Carcaliu         149.01 317 ⇓PKP2     PKiKP    05 33 28.8 +0.1
SCHL  Schela           149.04 318 ⇓P        PKPbc    05 33 28.2 +0.4
SCHLR Schela           149.05 318 ⇓P        PKiKP    05 33 28.4 -0.3
IZVR  Izvoarele        149.06 318 ⇑P        PKPbc    05 33 28.1 +0.2
TUDR                   149.09 318 ⇑P        PKiKP    05 33 29.2 +0.4
INVG  Invergeldie, C   149.10   3  eP       PKPbc    05 33 27.6 -0.1
COSR  Cosmesti PH      149.17 319 ⇓P        PKiKP    05 33 29.8 +0.8
TIRR  Tirgusor         149.18 315 ⇑P        PKPbc    05 33 27.8 -0.4
TIRR  Tirgusor         149.18 315 ⇑PKHKP    PKPpre   05 33 27.8
LAWE  Loch Awe, Argy   149.20   4  eP       PKPbc    05 33 28.0 +0.1
TESR  Tescani          149.21 320 ⇑P        PKPbc    05 33 27.2 -1.1
MFTR  Murfatlar        149.30 315 ⇑P        PKiKP    05 33 29.2 -0.1
TLBR  Topalu           149.37 316 ⇑P        PKiKP    05 33 29.6 +0.2
ODBI  Odobesti         149.37 319 ⇓P        PKiKP    05 33 30.0 +0.6
HARR  Harsova          149.37 316 ⇑P        PKPbc    05 33 28.7  0.0
HARR  Harsova          149.37 316 ⇑PKHKP    PKPpre   05 33 28.7
KWP   Kalwaria Pacla   149.38 328  ePKP     PKPbc    05 33 29.0 +0.4
BURAR Bucovina Array   149.39 323 ⇑P        PKPdf    05 33 23.8 +0.2
BURAR Bucovina Array   149.39 323 ⇑PKIKP    PKPdf    05 33 23.8 +0.2
ONER  Baraj Valea Uz   149.46 320 ⇑P        PKiKP    05 33 29.5 -0.1
VRI   Vrincioaia       149.51 319 ⇑P        PKPbc    05 33 28.4 -0.6
VRI   Vrincioaia       149.51 319 ⇑PKHKP    PKPpre   05 33 28.4
PLOR  Plostina         149.57 319 ⇑P        PKPbc    05 33 27.6 -1.6
PLOR  Plostina         149.57 319 ⇑PKHKP    PKPpre   05 33 27.6
EDI   Edinburgh        149.63   2  eP       PKPbc    05 33 29.2 +0.3
ESY   Stoneypath       149.65   1  eP       PKPbc    05 33 28.4 -0.6
PGBU  Gleniﬀerbraes    149.69   3  eP       PKPbc    05 33 29.0 -0.1
SILT  Sile             149.72 309 ⇑P        PKiKP    05 33 30.4 +0.1
ICOR  Ion Corvin       149.73 315 ⇑P        PKPbc    05 33 29.5  0.0
OZUR                   149.94 320 ⇓P        PKPbc    05 33 29.4 -0.7
NEHR  Nehoiu           150.00 319 ⇓P        PKPbc    05 33 30.3 +0.1
ISR   Istrita          150.01 318 ⇑P        PKPbc    05 33 30.4 +0.1
ISR   Istrita          150.01 318 ⇑PKHKP    PKPpre   05 33 30.4
BOSR  Bodos            150.02 320 ⇑P        PKiKP    05 33 31.5 +0.7
KOLS  Kolonicke sedl   150.06 327  ePKIKP   PKPdf    05 33 25.2 +0.7
KOLS                               e                 05 33 38.7
KOLS  Kolonicke sedl   150.06 327  ePKP     PKPdf    05 33 25.2 +0.7
KOLS                               e                 05 33 31.6
KOLS                               e                 05 33 38.7
LEHL  Lehliu           150.17 317 ⇑P        PKiKP    05 33 31.6 +0.6
ARCR  ARCALIA          150.18 323 ⇑P        PKiKP    05 33 31.3 +0.2
MLR   Muntele Rosu     150.18 319 ⇑P        PKPbc    05 33 30.7 -0.1
MLR   Muntele Rosu     150.18 319 ⇑PKIKP    PKPbc    05 33 30.7 -0.1
IDGL  Inch Island, C   150.20   7   PKP     PKPbc    05 33 30.0 -0.3
STHS  Stebnicka Huta   150.22 329  ePKIKP   PKPbc    05 33 30.9 +0.3
STHS                               e                 05 33 40.3
STHS  Stebnicka Huta   150.22 329  ePKP     PKPbc    05 33 30.9 +0.3
STHS                               e                 05 33 40.3
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EKA	**Eskdalemuir Ar**	**150.22**	**2**	PKP	**PKPdf**	**05 33 23.5**	**-1.0**
	comp=Z,2.5nm,0.6s,baz=343,slow=1.8,SNR=13						
EKA				PKPbc	**PKPbc**	**05 33 29.8**	**-0.6**
	comp=Z,23nm,0.5s,baz=340,slow=2.5,SNR=197						
EKA				PKPab	**PKPab**	**05 33 38.8**	**-0.5**
	comp=Z,24nm,0.7s,baz=330,slow=2.5,SNR=9.7						
ESK	**Eskdalemuir**	**150.24**	**2**		**PKPbc**	**05 33 29.8**	**-0.6**
ESK	**Eskdalemuir**	**150.24**	**2**	*e*P	**PKPbc**	**05 33 30.4**	**0.0**
ESK	**Eskdalemuir**	**150.24**	**2**	PKIKP	**PKPbc**	**05 33 29.8**	**-0.6**
DOPR	**Dopca**	**150.24**	**320**	⇑P	**PKiKP**	**05 33 31.5**	**+0.2**
BSEG	**Bad Segeberg**	**150.25**	**346**	*e*PKPbc	**PKiKP**	**05 33 31.1**	**+0.2**
	baz=26,slow=2.2						
BSEG				*e*PKPab	**PKPab**	**05 33 39.8**	**+0.3**
	baz=25,slow=4.3						
BMR	**Baia Mare**	**150.27**	**324**	⇑P	**PKiKP**	**05 33 31.5**	**+0.3**
BMR	**Baia Mare**	**150.27**	**324**	⇑PKIKP	**PKiKP**	**05 33 31.5**	**+0.3**
OJC	**Ojcow**	**150.28**	**332**	*e*PKP	**PKiKP**	**05 33 31.1**	**-0.1**
CLGH	**Cloghs, Cushen**	**150.32**	**5**	*e*P	**PKPbc**	**05 33 30.7**	**+0.2**
NEWG	**New Galloway**	**150.40**	**3**	*e*P	**PKPbc**	**05 33 30.4**	**-0.3**
HLG	**Helgoland**	**150.51**	**348**	*e*PKPbc	**PKiKP**	**05 33 31.8**	**+0.3**
	baz=26,slow=2.2						
CTYL	**Yalikoy Yolu**	**150.54**	**310**	⇑P	**PKPab**	**05 33 41.9**	**+0.7**
GAL1	**Galloway**	**150.63**	**4**	*e*P	**PKPbc**	**05 33 30.9**	**-0.3**
NIE	**Niedzica**	**150.65**	**330**	*e*PKP	**PKiKP**	**05 33 32.8**	**+0.8**
RUE	**Ruedersdorf**	**150.65**	**341**	*e*PKPdf	**PKPdf**	**05 33 26.0**	**+0.8**
	baz=31,slow=1.4						
RUE				*e*PKPbc	**PKiKP**	**05 33 32.1**	**+0.3**
	baz=26,slow=2.2						
MDB	**Medias**	**150.72**	**321**	⇑P	**PKPbc**	**05 33 31.4**	**-0.4**
MDB	**Medias**	**150.72**	**321**	⇑PKIKP	**PKPbc**	**05 33 31.4**	**-0.4**
VOIR		**150.73**	**320**	⇑P	**PKiKP**	**05 33 32.5**	**+0.1**
VOIR		**150.73**	**320**	⇑PKIKP	**PKiKP**	**05 33 32.5**	**+0.1**
EDMD	**Edmundbyers**	**150.74**	**0**	*e*P	**PKPbc**	**05 33 31.4**	**-0.2**
CBBR	**Cluj-Babes-Bol**	**150.81**	**323**	⇑P	**PKiKP**	**05 33 32.8**	**+0.5**
GORT1	**Trebel**	**150.88**	**344**	*e*PKPbc	**PKiKP**	**05 33 32.6**	**+0.4**
	baz=26,slow=2.2						
GORT1				*e*PKPab	**PKPab**	**05 33 42.5**	**+0.4**
	baz=25,slow=4.3						
GORT1				*e*pPKPbc	**pPKPab**	**05 35 56.1**	**+1.6**
	baz=23,slow=2.4						
MESR	**Meseseni**	**150.89**	**324**	⇑P	**PKiKP**	**05 33 33.3**	**+0.8**
KESW	**Keswick, Cumbr**	**150.97**	**2**	*e*P	**PKPbc**	**05 33 32.0**	**-0.1**
TNR	**Turnu Rosu**	**151.06**	**321**	⇑P	**PKiKP**	**05 33 33.1**	**+0.2**
TNR	**Turnu Rosu**	**151.06**	**321**	⇑PKIKP	**PKiKP**	**05 33 33.1**	**+0.2**
GDLE	**Glaisdale, N Y**	**151.15**	**359**	*e*P	**PKiKP**	**05 33 32.8**	**0.0**
KSP	**Ksiaz**	**151.20**	**336**	*e*PKP	**PKiKP**	**05 33 33.5**	**+0.5**
LANS	**Liptovska Anna**	**151.22**	**330**	*e*PKIKP	**PKPdf**	**05 33 27.2**	**+0.9**
LANS	**Liptovska Anna**	**151.22**	**330**	*e*PKP	**PKPdf**	**05 33 27.1**	**+0.8**
LANS				*e*		05 33 34.5	
LANS				*e*		05 33 45.4	
KECS	**Kecovo**	**151.23**	**328**	*e*PKIKP	**PKPab**	**05 33 44.9**	**+1.1**
KECS	**Kecovo**	**151.23**	**328**	*e*PKP	**PKPab**	**05 33 44.9**	**+1.1**
DRGR		**151.24**	**324**	⇓P	**PKPbc**	**05 33 33.2**	**+0.1**
DRGR		**151.24**	**324**	⇓PKIKP	**PKPbc**	**05 33 33.2**	**+0.1**
OKC	**Ostrava-Krasne**	**151.27**	**333**	⇑*e*PKP	**PKiKP**	**05 33 33.7**	**+0.5**
OKC	**Ostrava-Krasne**	**151.27**	**333**	*e*PKIKP	**PKiKP**	**05 33 33.7**	**+0.5**
HUMR	**Humele**	**151.27**	**318**	⇑P	**PKPbc**	**05 33 33.3**	**+0.2**
COPA	**Copaceanca**	**151.33**	**317**	⇑P	**PKPbc**	**05 33 33.1**	**-0.1**
ILTH	**Belurgan, Co L**	**151.34**	**6**	PKP	**PKPbc**	**05 33 32.7**	**-0.2**
STEB	**Steborice**	**151.35**	**333**	*e*PKPDF	**PKPdf**	**05 33 26.8**	**+0.4**
STEB				⇑*e*PKP	**PKiKP**	**05 33 33.7**	**+0.3**
OSTC	**Ostas**	**151.46**	**336**	*e*PKPDF	**PKPdf**	**05 33 27.2**	**+0.6**
OSTC				⇑*e*PKP	**PKiKP**	**05 33 34.4**	**+0.8**
OSTC	**Ostas**	**151.46**	**336**	*e*PKIKP	**PKPdf**	**05 33 27.2**	**+0.6**
LOT	**Lotru**	**151.47**	**321**	⇓P	**PKPbc**	**05 33 32.0**	**-1.7**
CHVC	**Chvalec**	**151.49**	**336**	⇑*e*PKP	**PKiKP**	**05 33 34.3**	**+0.6**
CHVC	**Chvalec**	**151.49**	**336**	*e*PKIKP	**PKiKP**	**05 33 34.3**	**+0.6**
FLTG	**Flechtingen**	**151.50**	**343**	*e*PKPdf	**PKPdf**	**05 33 26.8**	**+0.3**
	baz=31,slow=1.4						
FLTG				*e*PKPbc	**PKiKP**	**05 33 33.5**	**0.0**
	baz=26,slow=2.2						
FLTG				*e*PKPab	**PKPab**	**05 33 45.0**	**+0.2**
	baz=25,slow=4.3						
FLTG				*e*pPKPbc	**pPKPab**	**05 35 58.1**	**+1.0**
	baz=23,slow=2.4						
MORC	**Moravsky Berou**	**151.56**	**333**	*e*PKP	**PKPdf**	**05 33 27.2**	**+0.4**
MORC				*e*		05 33 34.4	
MORC				*e*		05 33 45.8	
MORC	**Moravsky Berou**	**151.56**	**333**	⇑P	**PKiKP**	**05 33 34.7**	**+0.8**
MORC	**Moravsky Berou**	**151.56**	**333**	⇑PKIKP	**PKiKP**	**05 33 34.7**	**+0.8**
UPC	**Upice**	**151.57**	**336**	⇑*e*PKP	**PKiKP**	**05 33 34.5**	**+0.7**
UPC	**Upice**	**151.57**	**336**	*e*PKIKP	**PKiKP**	**05 33 34.5**	**+0.7**
IGLA	**Glengowla, Co**	**151.57**	**10**	PKP	**PKPbc**	**05 33 33.0**	**-0.4**
RETH	**Rethem/Aller,**	**151.58**	**346**	*e*PKPdf	**PKPdf**	**05 33 27.2**	**+0.7**
	baz=31,slow=1.4						
RETH				*e*PKPbc	**PKiKP**	**05 33 33.9**	**+0.3**
	baz=26,slow=2.2						
RETH				*e*PKPab	**PKPab**	**05 33 45.4**	**+0.4**
	baz=25,slow=4.3						
RETH				*e*pPKPbc	**pPKPab**	**05 35 57.8**	**+0.5**
	baz=23,slow=2.4						
DPC	**Dobruska-Polom**	**151.59**	**335**	⇑*e*PKP	**PKiKP**	**05 33 34.8**	**+0.9**
DPC				*e*PKPAB	**PKPab**	**05 33 46.4**	**+1.1**
DPC	**Dobruska-Polom**	**151.59**	**335**	*e*PKIKP	**PKiKP**	**05 33 34.8**	**+0.9**
HPK	**Haverah Park**	**151.62**	**360**	*e*P	**PKiKP**	**05 33 33.8**	**0.0**
KRLC	**Kraliky**	**151.63**	**334**	⇑*e*PKP	**PKiKP**	**05 33 34.5**	**+0.5**
KRLC	**Kraliky**	**151.63**	**334**	*e*PKIKP	**PKiKP**	**05 33 34.5**	**+0.5**
NRDL	**Niedersach Rie**	**151.63**	**345**	*e*PKPdf	**PKPdf**	**05 33 27.3**	**+0.7**
	baz=31,slow=1.4						
NRDL				*e*PKPbc	**PKiKP**	**05 33 34.2**	**+0.4**
	baz=26,slow=2.2						
DEV	**Deva**	**151.70**	**322**	⇓P	**PKPbc**	**05 33 33.0**	**-1.0**
DEV	**Deva**	**151.70**	**322**	⇓PKIKP	**PKPbc**	**05 33 33.0**	**-1.0**
MAUC	**Maruska**	**151.76**	**332**	⇑*e*PKP	**PKiKP**	**05 33 35.0**	**+0.7**
ASSE	**Asse, Remlinge**	**151.83**	**344**	*e*PKPdf	**PKPdf**	**05 33 26.9**	**0.0**
	baz=31,slow=1.4						
ASSE				*e*PKPbc	**PKiKP**	**05 33 34.5**	**+0.4**
	baz=26,slow=2.2						
ASSE				*e*PKPab	**PKPab**	**05 33 46.2**	**+0.1**
	baz=25,slow=4.3						
ASSE				*e*pPKPbc	**pPKPab**	**05 35 59.0**	**+0.7**
	baz=23,slow=2.4						
PSZ	**Piszkesteto**	**151.91**	**328**	⇑P	**PKPbc**	**05 33 31.9**	**-2.6**
PSZ	**Piszkesteto**	**151.91**	**328**	⇑PKIKP	**PKPbc**	**05 33 31.9**	**-2.6**
CLL	**Collm**	**151.91**	**340**	⇓*e*PKIKP	**PKPdf**	**05 33 27.0**	**-0.1**
CLL				*i*		05 33 46.8	
CLL				pmax	pmax		
	comp=Z,35nm,1.5s						
CLL				pmax	pmax		
	comp=Z,105nm,0.7s						
CLL	**Collm**	**151.91**	**340**	*e*PKPdf	**PKPdf**	**05 33 27.3**	**+0.1**
	baz=31,slow=1.4						
CLL				*e*PKPbc	**PKiKP**	**05 33 34.7**	**+0.2**
	baz=26,slow=2.2						
CLL				*e*PKPab	**PKPab**	**05 33 46.7**	**+0.1**
	baz=25,slow=4.3						
CLL				*e*pPKPbc	**pPKPab**	**05 35 59.0**	**+0.1**
	baz=23,slow=2.4						
CLL	**Collm**	**151.91**	**340**	*e*PKPdf	**PKPdf**	**05 33 27.0**	**-0.1**
	comp=Z,35nm,1.5s						
CLL				⇓*i*PKPbc	**PKiKP**	**05 33 34.8**	**+0.3**
	comp=Z,211nm,0.8s						
CLL				⇑*i*PKPab	**PKPab**	**05 33 46.8**	**+0.2**
	comp=Z,105nm,0.7s						
CLL				*e*pPKPab	**pPKPbc**	**05 35 53.0**	**+0.4**
CLL				*e*x	x	05 35 59.0	
VYHS	**Vyhne**	**151.99**	**330**	*e*PKIKP	**PKPdf**	**05 33 27.3**	**-0.1**
VYHS				*e*		05 33 47.7	
VYHS	**Vyhne**	**151.99**	**330**	*e*PKP	**PKPdf**	**05 33 27.3**	**-0.1**
VYHS				*e*		05 33 35.2	
VYHS				*e*		05 33 47.7	
BRG	**Berggiesshubel**	**151.99**	**339**	*e*PKPdf	**PKPdf**	**05 33 27.2**	**-0.1**
	baz=31,slow=1.4						
BRG				*e*PKPbc	**PKiKP**	**05 33 35.0**	**+0.4**
	baz=26,slow=2.2						
BRG	**Berggiesshubel**	**151.99**	**339**	P	**PKPab**	**05 33 41.8**	**-5.1**
BRG				Amp		05 33 42.7	
	comp=Z,30nm,0.9s						
BRG				PKPab	PKiKP	05 33 47.4	+13
BRG				Amp		05 33 48.3	
	comp=Z,30nm,0.8s						
BRG	**Berggiesshubel**	**151.99**	**339**	P	**PKPab**	**05 33 52.6**	**+5.7**
BRG				Amp		05 33 54.2	
	comp=Z,17nm,0.9s						
BRG				pPKP	**pPKPdf**	**05 35 37.0**	**-10**
BRG				Amp		05 35 39.9	
	comp=Z,5.4nm,0.7s						
GZR	**Gura Zlata**	**152.07**	**321**	⇑P	**PKPbc**	**05 33 34.4**	**-0.5**
GZR	**Gura Zlata**	**152.07**	**321**	⇑PKIKP	**PKPbc**	**05 33 34.4**	**-0.5**
PVCC	**Panska Ves**	**152.07**	**338**	*e*PKPDF	**PKPdf**	**05 33 28.0**	**+0.6**
PVCC				⇑*e*PKP	**PKiKP**	**05 33 35.4**	**+0.6**
PVCC	**Panska Ves**	**152.07**	**338**	*e*PKIKP	**PKPdf**	**05 33 28.0**	**+0.6**
DSB	**Dublin**	**152.11**	**6**	PKP	**PKPbc**	**05 33 34.3**	**-0.4**
SURR	**Surduc**	**152.21**	**323**	⇑P	**PKPbc**	**05 33 34.5**	**-0.6**
JAVC	**Velka Javorina**	**152.22**	**332**	*e*PKP	**PKPdf**	**05 33 29.0**	**+1.2**
JAVC				*e*		05 33 37.1	
JAVC				*e*		05 33 49.7	
RICC	**Richard**	**152.22**	**338**	⇑*e*PKP	**PKiKP**	**05 33 36.1**	**+1.0**
VRAC	**Vranov**	**152.31**	**334**	*e*PKP	**PKPdf**	**05 33 27.7**	**-0.1**
VRAC				*e*		05 33 35.7	
VRAC				*e*		05 33 48.9	
IBBN	**Ibbenburen**	**152.32**	**347**	*e*PKPdf	**PKPdf**	**05 33 28.0**	**+0.3**
	baz=31,slow=1.4						
IBBN				*e*PKPbc	**PKiKP**	**05 33 35.7**	**+0.5**
	baz=26,slow=2.2						
IBBN				*e*PKPab	**PKPab**	**05 33 48.6**	**+0.4**
	baz=25,slow=4.3						
IBBN				*e*pPKPbc	**pPKPab**	**05 36 00.2**	**-0.3**
	baz=23,slow=2.4						
PRA	**Prague**	**152.50**	**337**	⇑*e*PKP	**PKiKP**	**05 33 36.5**	**+0.8**
PRA	**Prague**	**152.50**	**337**	*e*PKIKP	**PKiKP**	**05 33 36.5**	**+0.8**
GOPC	**GO Pecny, Ondr**	**152.51**	**337**	⇑*e*PKP	**PKiKP**	**05 33 36.2**	**+0.4**
GOPC	**GO Pecny, Ondr**	**152.51**	**337**	*e*PKIKP	**PKiKP**	**05 33 36.2**	**+0.4**
PRU	**Pruhonice**	**152.53**	**337**	⇑*e*PKP	**PKiKP**	**05 33 36.2**	**+0.4**
PRU				*e*PKPAB	**PKPab**	**05 33 50.1**	**+0.8**
PRU	**Pruhonice**	**152.53**	**337**	*e*PKIKP	**PKiKP**	**05 33 36.2**	**+0.4**
PRU				*e*		05 33 50.1	
GTTG	**Gottingen**	**152.54**	**344**	*e*PKPdf	**PKPdf**	**05 33 28.4**	**+0.3**
	baz=31,slow=1.4						
GTTG				*e*PKPbc	**PKiKP**	**05 33 36.0**	**+0.3**
	baz=26,slow=2.2						
GTTG				*e*PKPab	**PKPab**	**05 33 49.9**	**+0.7**
	baz=25,slow=4.3						
EZN	**Ezine**	**152.56**	**308**	⇑P	**PKiKP**	**05 33 36.4**	**+0.2**
EZN	**Ezine**	**152.56**	**308**	⇑PKIKP	**PKiKP**	**05 33 36.4**	**+0.2**
BZS	**Buzias**	**152.57**	**323**	⇑P	**PKPdf**	**05 33 30.2**	**+1.9**
BZS	**Buzias**	**152.57**	**323**	⇑PKIKP	**PKPdf**	**05 33 30.2**	**+1.9**
HERR	**Herculane**	**152.58**	**321**	⇓P	**PKiKP**	**05 33 36.1**	**+0.1**
SMOL	**Smolenice**	**152.59**	**332**	*e*PKIKP	**PKiKP**	**05 33 37.0**	**+1.0**
SMOL				*e*		05 33 50.6	
KRUC	**Moravsky**	**152.59**	**334**	*e*PKP	**PKPdf**	**05 33 28.3**	**+0.1**
KRUC				*e*		05 33 36.1	
KRUC				*e*		05 33 49.5	
FOEL	**Foel Wylfa**	**152.67**	**2**	*e*P	**PKiKP**	**05 33 36.1**	**+0.1**
SRO	**Srobarova**	**152.72**	**330**	*e*PKIKP	**PKiKP**	**05 33 37.2**	**+1.0**
SRO				*e*		05 33 50.4	
SRO	**Srobarova**	**152.72**	**330**	*e*PKP	**PKiKP**	**05 33 37.2**	**+1.0**
SRO				*e*		05 33 50.4	
TREC	**Trest**	**152.76**	**335**	⇑*e*PKP	**PKiKP**	**05 33 36.9**	**+0.6**
TREC				*e*PKPAB	**PKPab**	**05 33 50.7**	**+0.4**
TREC	**Trest**	**152.76**	**335**	*e*PKIKP	**PKiKP**	**05 33 36.9**	**+0.6**
TREC				*e*		05 33 50.7	
MODS	**Modra-Piesok**	**152.76**	**332**	*e*PKIKP	**PKPdf**	**05 33 28.0**	**-0.6**
MODS				*e*		05 33 50.5	
MODS	**Modra-Piesok**	**152.76**	**332**	*e*PKP	**PKPdf**	**05 33 27.9**	**-0.6**
MODS				*e*		05 33 36.8	
MODS				*e*		05 33 50.5	
VAL	**Valentia**	**152.86**	**12**	PKP	**PKPbc**	**05 33 36.3**	**0.0**
TANN	**Tannenbergstha**	**152.86**	**340**	*e*PKPdf	**PKPdf**	**05 33 28.5**	**-0.2**
	baz=31,slow=1.4						
TANN				*e*PKPbc	**PKiKP**	**05 33 36.9**	**+0.4**
	baz=26,slow=2.2						
TANN				*e*PKPab	**PKPab**	**05 33 51.2**	**+0.4**
	baz=25,slow=4.3						
MOX	**Moxa**	**152.91**	**341**	*e*PKPdf	**PKPdf**	**05 33 28.6**	**-0.1**
	baz=31,slow=1.4						
MOX				*e*PKPbc	**PKiKP**	**05 33 36.8**	**+0.2**
	baz=26,slow=2.2						
MOX				*e*PKPab	**PKPab**	**05 33 51.1**	**+0.2**
	baz=25,slow=4.3						
IWEX	**Carrickbyrne,**	**152.93**	**7**	PKP	**PKPbc**	**05 33 36.1**	**-0.4**
MDVR	**Moldovita**	**153.04**	**321**	⇑P	**PKPbc**	**05 33 36.1**	**-0.9**
ZVC	**Zvikov**	**153.12**	**337**	⇑*e*PKP	**PKiKP**	**05 33 37.6**	**+0.6**
ZVC				*e*PKPAB	**PKPab**	**05 33 52.7**	**+0.9**
UBBA	**Unterbreizbach**	**153.20**	**343**	*e*PKPdf	**PKPdf**	**05 33 28.9**	**0.0**
	baz=31,slow=1.4						
UBBA				*e*PKPbc	**PKiKP**	**05 33 37.5**	**+0.5**
	baz=26,slow=2.2						
UBBA				*e*PKPab	**PKPab**	**05 33 52.2**	**+0.2**
	baz=25,slow=4.3						
KASTN	**Kahler Asten**	**153.23**	**346**	*e*PKPdf	**PKPdf**	**05 33 29.2**	**+0.1**
	baz=31,slow=1.4						
KASTN				*e*PKPbc	**PKiKP**	**05 33 37.3**	**+0.1**
	baz=26,slow=2.2						
KASTN				*e*PKPab	**PKPab**	**05 33 52.2**	**0.0**
	baz=25,slow=4.3						
KASTN				*e*pPKPbc	**pPKPab**	**05 36 01.5**	**-2.7**
	baz=23,slow=2.4						
BUG	**Bochum--Univer**	**153.24**	**347**	*e*PKPdf	**PKPdf**	**05 33 29.5**	**+0.5**
	baz=31,slow=1.4						
BUG				*e*PKPbc	**PKiKP**	**05 33 37.4**	**+0.2**
	baz=26,slow=2.2						
BUG				*e*PKPab	**PKPab**	**05 33 52.0**	**-0.2**
	baz=25,slow=4.3						
MANZ	**Manzenberg**	**153.35**	**340**	*e*PKPdf	**PKPdf**	**05 33 29.0**	**-0.3**
	baz=31,slow=1.4						
MANZ				*e*PKPbc	**PKPbc**	**05 33 37.4**	**-0.1**
	baz=26,slow=2.2						
MANZ				*e*PKPab	**PKPab**	**05 33 53.4**	**+0.6**
	baz=25,slow=4.3						
MANZ				*e*pPKPbc	**pPKPab**	**05 36 02.5**	**-2.3**
	baz=23,slow=2.4						
ROTZ	**Rotzenmuhle**	**153.51**	**340**	*e*PKPdf	**PKPdf**	**05 33 29.3**	**-0.3**
	baz=31,slow=1.4						
ROTZ				*e*PKPbc	**PKiKP**	**05 33 38.2**	**+0.3**
	baz=26,slow=2.2						
ROTZ				*e*PKPab	**PKPab**	**05 33 54.3**	**+0.8**
	baz=25,slow=4.3						
CKRC	**Cesky Krumlov**	**153.59**	**336**	*e*PKPDF	**PKPdf**	**05 33 29.7**	**0.0**
CKRC				*e*PKPAB	**PKPab**	**05 33 54.7**	**+0.8**
CKRC	**Cesky Krumlov**	**153.59**	**336**	*e*PKIKP	**PKPdf**	**05 33 29.7**	**0.0**
CKRC				*e*		05 33 54.7	
KHC	**Kasperske Hory**	**153.60**	**337**	*e*PKPDF	**PKPdf**	**05 33 30.1**	**+0.4**
KHC				⇑*e*PKP	**PKiKP**	**05 33 38.7**	**+0.6**
KHC				*e*PKPAB	**PKPab**	**05 33 54.7**	**+0.8**
KHC	**Kasperske Hory**	**153.60**	**337**	*e*PKIKP	**PKPdf**	**05 33 30.1**	**+0.4**
KHC				*e*		05 33 54.7	
RONA	**Rosalia, Austr**	**153.70**	**332**	*i* PKP	**PKPdf**	**05 33 29.7**	**-0.2**
	comp=Z,10nm,0.9s,SNR=6.2						
RONA				*i* PKP	**PKiKP**	**05 33 38.9**	**+0.6**
	comp=Z,48nm,0.7s						
RONA				*i* PKP	**PKPab**	**05 33 55.1**	**+0.7**
	comp=Z,48nm,0.8s						
CONA	**Conrad Observa**	**153.70**	**333**	*i* PKP	**PKPdf**	**05 33 30.1**	**+0.1**
	comp=Z,12nm,0.9s,SNR=9.1						
CONA				*i* PKP	**PKiKP**	**05 33 38.8**	**+0.4**
	comp=Z,33nm,0.8s						
CONA				*i* PKP	**PKPab**	**05 33 55.2**	**+0.7**
	comp=Z,42nm,0.7s						
BOVS	**Bovan**	**153.72**	**319**	⇑P	**PKPbc**	**05 33 37.6**	**-0.8**
GEC2	**GERESS Array S**	**153.79**	**337**	*e*PKPdf	**PKPdf**	**05 33 29.7**	**-0.4**
	baz=31,slow=1.4						
GEC2				*e*PKPbc	**PKPbc**	**05 33 38.6**	**0.0**
	baz=26,slow=2.2						
GEC2				*e*PKPab	**PKPab**	**05 33 55.0**	**+0.2**
	baz=25,slow=4.3						
GERES	**GERESS Array B**	**153.79**	**337**	PKPdf	**PKPdf**	**05 33 30.0**	**-0.1**
GERES	**GERESS Array B**	**153.79**	**337**	PKP	**PKPdf**	**05 33 29.4**	**-0.7**
	comp=Z,6.7nm,0.9s,baz=27,slow=0.3,SNR=40						
GERES				PKPbc	**PKPbc**	**05 33 38.3**	**-0.3**
	comp=Z,24nm,0.9s,baz=45,slow=2.1,SNR=38						
GERES				PKPab	**PKPab**	**05 33 55.2**	**+0.4**
	comp=Z,23nm,0.7s,baz=34,slow=5.0,SNR=20						
WET	**Wettzell**	**153.83**	**338**	*e*PKPdf	**PKPdf**	**05 33 29.8**	**-0.2**
	baz=31,slow=1.4						
WET				*e*PKPbc	**PKiKP**	**05 33 38.9**	**+0.4**
	baz=26,slow=2.2						
WET				*e*PKPab	**PKPab**	**05 33 55.4**	**+0.6**
	baz=25,slow=4.3						
GRF	**Grafenberg Arr**	**153.88**	**341**	*e*PKPdf	**PKPdf**	**05 33 30.2**	**+0.1**
	baz=31,slow=1.4						
GRF				*e*PKPbc	**PKiKP**	**05 33 39.3**	**+0.7**
	baz=26,slow=2.2						
GRF				*e*PKPab	**PKPab**	**05 33 55.7**	**+0.7**
	baz=25,slow=4.3						
GRFO	**Grafenberg**	**153.88**	**341**		**PKPab**	**05 33 55.8**	**+0.7**
GRFO	**Grafenberg**	**153.88**	**341**	PKP2	**PKPab**	**05 33 55.8**	**+0.7**
PEHC	**Pehcevo**	**154.01**	**315**	*i* P	**PKPab**	**05 34 00.7**	**+4.6**
TNS	**Taunus Mts**	**154.13**	**345**	*e*PKPdf	**PKPdf**	**05 33 30.6**	**+0.1**
	baz=31,slow=1.4						
TNS				*e*PKPbc	**PKiKP**	**05 33 39.3**	**+0.1**
	baz=26,slow=2.2						
TNS				*e*PKPab	**PKPab**	**05 33 56.6**	**+0.5**
	baz=25,slow=4.3						
BEBN	**Eben Emael**	**154.15**	**349**	*d*PKP	**PKPab**	**05 33 55.9**	**-0.2**
BTNL	**Ternell**	**154.27**	**348**	*d*PKPdf	**PKPdf**	**05 33 30.5**	**0.0**
BTNL				*d*PKP	**PKPbc**	**05 33 39.5**	**+0.1**
BTNL				*d*PKPab	**PKPab**	**05 33 55.2**	**-1.5**
MEM	**Membach**	**154.27**	**349**	*d*PKPdf	**PKPdf**	**05 33 30.8**	**+0.2**
MEM				*d*PKPab	**PKPab**	**05 33 56.7**	**+0.1**
UCC	**Uccle**	**154.35**	**351**	*d*PKP	**PKPbc**	**05 33 40.1**	**+0.6**
UCC				*d*PKPab	**PKPab**	**05 33 57.2**	**+0.2**
BSTI	**Sart Tilman**	**154.37**	**349**	*d*PKPdf	**PKPdf**	**05 33 30.6**	**-0.1**
BSTI				*d*PKP	**PKPbc**	**05 33 40.1**	**+0.6**
BSTI				*d*PKPab	**PKPab**	**05 33 56.3**	**-0.7**
ARSA	**Arzberg**	**154.38**	**332**	*i* PKP	**PKPdf**	**05 33 30.4**	**-0.5**
	comp=Z,5.7nm,0.7s						
ARSA				*i* PKiKP	**PKPbc**	**05 33 41.2**	**+1.4**
	comp=Z,13nm,1.5s						
ARSA				*i* PKP	**PKPab**	**05 33 57.1**	**-0.2**
	comp=Z,8.9nm,0.6s						
MOA	**Molln**	**154.41**	**335**	*i* PKP	**PKPdf**	**05 33 30.6**	**-0.2**
	comp=Z,8.9nm,0.8s,SNR=5.1						
MOA				*e*PKP	**PKPbc**	**05 33 39.9**	**+0.1**
	comp=Z,7.2nm,0.7s						
MOA				*i* PKP	**PKPab**	**05 33 58.0**	**+0.5**
	comp=Z,33nm,1.0s,SNR=6.4						
MOA	**Molln**	**154.41**	**335**	*i* P	**PKPab**	**05 33 58.0**	**+0.5**
	comp=Z,33nm,1.0s,SNR=6.4						
VAY	**Valandovo**	**154.45**	**314**	*i* P	**PKiKP**	**05 33 39.5**	**-0.6**
BCLA	**Clavier**	**154.58**	**349**	*d*PKPdf	**PKPdf**	**05 33 30.9**	**-0.1**
BCLA				*d*PKP	**PKiKP**	**05 33 39.5**	**-0.5**
BCLA				*d*PKPab	**PKPab**	**05 33 57.4**	**-0.5**
BGES	**Gesves**	**154.65**	**350**	*d*PKPdf	**PKPdf**	**05 33 31.1**	**+0.1**
BGES				*d*PKPab	**PKPab**	**05 33 57.9**	**-0.4**
BMRD	**Maredsous**	**154.78**	**350**	*d*PKPdf	**PKPdf**	**05 33 31.1**	**-0.1**
BMRD				*d*PKP	**PKPbc**	**05 33 40.8**	**+0.3**
BMRD				*d*PKPab	**PKPab**	**05 33 58.6**	**-0.2**
BIOA	**Bad Ischl, Aus**	**154.78**	**335**	*i* PKP	**PKPdf**	**05 33 30.6**	**-0.7**
	comp=Z,17nm,1.1s						
BIOA				*e*PKP	**PKPab**	**05 33 59.1**	**+0.1**
	comp=Z,59nm,0.9s,SNR=8.4						
BIOA	**Bad Ischl, Aus**	**154.78**	**335**	*e*P	**PKPab**	**05 33 59.1**	**+0.1**
	comp=Z,59nm,0.9s,SNR=8.4						
DOU	**Dourbes**	**155.00**	**350**	*d*PKPdf	**PKPdf**	**05 33 31.7**	**+0.2**
DOU				*d*x	x	05 33 41.4	
DOU				*d*PKP	**PKPab**	**05 33 59.4**	**-0.4**
GROS	**Grobnik**	**155.00**	**331**	*i* PKPdf	**PKPdf**	**05 33 30.7**	**-1.1**
GROS				*e*PKPab	**PKPab**	**05 33 59.4**	**-0.7**
SOKA	**Soboth**	**155.04**	**332**	*i* PKP	**PKPdf**	**05 33 31.1**	**-0.7**
	comp=Z,12nm,0.9s,SNR=6.6						
SOKA				*e*PKP	**PKPab**	**05 34 00.4**	**+0.1**
	comp=Z,58nm,1.0s,SNR=6.4						
SOKA	**Soboth**	**155.04**	**332**	*e*P	**PKPab**	**05 34 00.4**	**+0.1**
	comp=Z,58nm,1.0s,SNR=6.4						
RJOB	**Jochberg**	**155.05**	**336**	*e*PKPdf	**PKPdf**	**05 33 31.3**	**-0.5**
	baz=31,slow=1.4						
RJOB				*e*PKPab	**PKPab**	**05 34 00.7**	**+0.5**
	baz=25,slow=4.3						
WLF	**Walferdange**	**155.15**	**348**	*d*PKPdf	**PKPdf**	**05 33 32.0**	**+0.3**
WLF				*d*PKP	PKPab	05 33 42.0	-18
WLF				*d*PKPab	PKPab	05 34 00.5	+0.1
WLF	**Walferdange**	**155.15**	**348**	*e*PKPdf	**PKPdf**	**05 33 32.7**	**+0.9**
	baz=31,slow=1.4						
WLF				*e*PKPbc	PKPab	05 33 42.1	-18
	baz=26,slow=2.2						
WLF				*e*PKPab	PKPab	05 34 01.2	+0.8
	baz=25,slow=4.3						
FUR	**Furstenfeldbru**	**155.21**	**339**	*e*PKPab	**PKPab**	**05 34 01.7**	**+0.9**
	baz=25,slow=4.3						
STU	**Stuttgart**	**155.28**	**343**	*e*PKPdf	**PKPdf**	**05 33 32.1**	**+0.1**
	baz=31,slow=1.4						
STU				*e*PKPbc	PKPab	05 33 42.0	-19
	baz=26,slow=2.2						
STU				*e*PKPab	PKPab	05 34 01.7	+0.6
	baz=25,slow=4.3						
LESA	**Schwarzleotal**	**155.36**	**336**	*e*PKP	**PKPdf**	**05 33 31.9**	**-0.4**
	comp=Z,19nm,0.9s						
LESA				*i* PKP	**PKPab**	**05 34 02.3**	**+0.7**
	comp=Z,32nm,0.8s						
OBKA	**Obir**	**155.37**	**332**	*i* PKP	**PKPdf**	**05 33 32.4**	**+0.1**
	comp=Z,6.6nm,1.1s						
OBKA				*i* PKP	**PKPab**	**05 34 01.4**	**-0.4**
	comp=Z,34nm,0.8s,SNR=5.6						
OBKA	**Obir**	**155.37**	**332**	*i* P	**PKPab**	**05 34 01.4**	**-0.4**
	comp=Z,34nm,0.8s,SNR=5.6						
MYKA	**Terra Mystica**	**155.65**	**334**	*i* PKP	**PKPdf**	**05 33 31.7**	**-0.9**
	comp=Z,8.3nm,0.9s						
MYKA				*i* PKP	**PKPab**	**05 34 02.4**	**-0.5**
	comp=Z,44nm,0.7s,SNR=7.8						
MYKA	**Terra Mystica**	**155.65**	**334**	*i* P	**PKPab**	**05 34 02.4**	**-0.5**
	comp=Z,44nm,0.7s,SNR=7.8						
OHR	**Ohrid**	**155.70**	**315**	*i* P	PKPdf	05 33 43.5	+11
LJU	**Ljubljana**	**155.75**	**332**	*e*PKPdf	**PKPdf**	**05 33 32.4**	**-0.3**
LJU				*e*PKPbc	PKPab	05 33 42.8	-20
LJU				*i* PKPab	PKPab	05 34 02.4	-0.9
WATA	**Walderalm**	**155.83**	**338**	*i* PKP	**PKPdf**	**05 33 32.6**	**-0.3**
	comp=Z,22nm,1.5s						
WATA				*i* PKP	**PKPab**	**05 34 04.1**	**+0.4**
	comp=Z,28nm,0.7s,SNR=5.2						
WATA	**Walderalm**	**155.83**	**338**	*i* P	**PKPab**	**05 34 04.1**	**+0.4**
	comp=Z,28nm,0.7s,SNR=5.2						
CRNS	**Crni Vrh**	**155.84**	**332**	*e*PKPbc	PKPdf	05 33 42.5	+10
CRNS				*e*PKPab	**PKPab**	**05 34 02.7**	**-0.9**
WTTA	**Wattenberg**	**155.87**	**337**	*e*PKP	**PKPdf**	**05 33 32.8**	**-0.2**
	comp=Z,18nm,1.1s,SNR=8.2						
WTTA				*i* PKP	**PKPab**	**05 34 04.6**	**+0.6**
	comp=Z,33nm,0.7s						
BFO	**Black Forest**	**155.92**	**343**		**PKPdf**	**05 33 32.4**	**-0.5**
BFO				PKPab	**PKPab**	**05 34 03.6**	**-0.2**
BFO	**Black Forest**	**155.92**	**343**	PKIKP	**PKPdf**	**05 33 32.4**	**-0.5**
BFO						05 34 03.6	
BFO	**Black Forest**	**155.92**	**343**	*e*PKPdf	**PKPdf**	**05 33 32.4**	**-0.5**
	baz=31,slow=1.4						
BFO				*e*PKPbc	PKPab	05 33 43.3	-21
	baz=26,slow=2.2						
BFO				*e*PKPab	PKPab	05 34 04.1	+0.2
	baz=25,slow=4.3						
RETA	**Reutte**	**155.97**	**339**	*i* PKP	**PKPdf**	**05 33 32.6**	**-0.4**
	comp=Z,8.9nm,1.3s						
RETA				*i* PKP	**PKPab**	**05 34 04.8**	**+0.6**
	comp=Z,62nm,1.1s,SNR=9.2						
RETA	**Reutte**	**155.97**	**339**	*i* P	**PKPab**	**05 34 04.8**	**+0.6**
	comp=Z,62nm,1.1s,SNR=9.2						
MOTA	**Moosalm**	**155.98**	**338**	*i* PKP	**PKPdf**	**05 33 32.6**	**-0.6**
	comp=Z,15nm,1.0s,SNR=6.5						
MOTA				*i* PKP	**PKPab**	**05 34 04.9**	**+0.5**
	comp=Z,45nm,0.9s,SNR=5.7						
MOTA	**Moosalm**	**155.98**	**338**	*i* P	**PKPab**	**05 34 04.9**	**+0.5**
	comp=Z,45nm,0.9s,SNR=5.7						
ABTA	**Abfaltersbach**	**155.99**	**335**	*i* PKP	**PKPdf**	**05 33 32.5**	**-0.6**
	comp=Z,17nm,1.0s,SNR=8.6						
ABTA				*e*PKP	**PKPab**	**05 34 03.9**	**-0.5**
	comp=Z,57nm,0.8s,SNR=8.2						
ABTA	**Abfaltersbach**	**155.99**	**335**	*e*P	**PKPab**	**05 34 03.9**	**-0.5**
	comp=Z,57nm,0.8s,SNR=8.2						
UBR	**Ueberruh**	**156.00**	**340**	*e*PKPdf	**PKPdf**	**05 33 32.8**	**-0.3**
	baz=31,slow=1.4						
UBR				*e*PKPbc	PKPab	05 33 43.3	-21
	baz=26,slow=2.2						
UBR				*e*PKPab	PKPab	05 34 04.6	+0.3
	baz=25,slow=4.3						
SQTA	**Sankt Quirin**	**156.05**	**338**	*i* PKP	**PKPdf**	**05 33 33.1**	**-0.1**
	comp=Z,11nm,0.8s,SNR=5.2						
SQTA				*i* PKP	**PKPab**	**05 34 05.1**	**+0.5**
	comp=Z,45nm,0.8s,SNR=5.9						
SQTA	**Sankt Quirin**	**156.05**	**338**	*i* P	**PKPab**	**05 34 05.1**	**+0.5**
	comp=Z,45nm,0.8s,SNR=5.9						
FETA	**Feichten**	**156.39**	**338**	*i* PKP	**PKPdf**	**05 33 33.8**	**+0.1**
	comp=Z,26nm,1.1s,SNR=10						
FETA				*i* PKP	**PKPab**	**05 34 06.9**	**+0.8**
	comp=Z,31nm,0.9s						
DAVA	**Damuels**	**156.43**	**340**	*e*PKP	**PKPdf**	**05 33 33.1**	**-0.6**
	comp=Z,16nm,1.1s						
DAVA				*i* PKP	**PKPab**	**05 34 06.7**	**+0.4**
	comp=Z,66nm,1.0s,SNR=7.4						
DAVA	**Damuels**	**156.43**	**340**	*i* P	**PKPab**	**05 34 06.7**	**+0.4**
	comp=Z,66nm,1.0s,SNR=7.4						
DAVOX	**Davos/Dischmat**	**156.88**	**339**	PKP	**PKPdf**	**05 33 34.0**	**-0.3**
	comp=Z,6.0nm,0.6s,baz=326,slow=1.1,SNR=12						
DAVOX				PKPab	**PKPab**	**05 34 09.1**	**+0.8**
	comp=Z,30nm,0.7s,baz=356,slow=2.9,SNR=14						
TIP	**Timpagrande**	**159.35**	**316**	⇑P	**PKPdf**	**05 33 37.2**	**-0.2**
DBIC	**Dimbokro**	**161.00**	**170**	PKP	**PKPdf**	**05 33 39.9**	**+0.1**
	comp=Z,18nm,1.0s,baz=198,slow=3.9,SNR=8.0						
DBIC	**Dimbokro**	**161.00**	**170**	⇑PKIKP	**PKPdf**	**05 33 40.0**	**+0.2**
PGAV	**Gavieira, Arco**	**162.75**	**17**	*e*PKPdf	**PKPdf**	**05 33 40.5**	**-0.4**
POLO	**Lamas de Olo**	**163.43**	**16**	*e*PKPdf	**PKPdf**	**05 33 42.2**	**+0.6**
POLO				*e*PKPab	**PKPab**	**05 34 37.6**	**+0.6**
PVRL	**Vila Real**	**163.54**	**16**	*e*PKPab	**PKPab**	**05 34 38.2**	**+0.7**
MVO	**Moncorvo**	**163.81**	**14**	*e*PKPdf	**PKPdf**	**05 33 43.6**	**+1.8**
MVO				*e*PKPab	**PKPab**	**05 34 39.2**	**+0.6**
PVIS	**Viseu**	**164.02**	**17**	*e*PKPab	**PKPab**	**05 34 40.3**	**+0.8**
MTE	**Manteigas**	**164.41**	**17**	*e*PKPab	**PKPab**	**05 34 41.9**	**+0.6**
PCAS	**Casmilo, Conde**	**164.46**	**20**	*e*PKPdf	**PKPdf**	**05 33 43.3**	**+0.9**

PCAS				ePKPab	PKPab	05 34 42.2	+0.7
PCBR	Castelo Branco	164.95	17	ePKPdf	PKPdf	05 33 44.0	+1.2
PCBR				ePKPab	PKPab	05 34 44.1	+0.5
PSARD	Sardoal	164.98	20	ePKPdf	PKPdf	05 33 43.8	+0.9
PSARD				ePKPab	PKPab	05 34 43.9	+0.2
PMPS	Porto Santo	165.23	56	ePKPdf	PKPdf	05 33 42.7	-0.5
PMPS				ePKPab	PKPab	05 34 44.6	-0.6
PMRV	Marv??o	165.36	18	ePKPdf	PKPdf	05 33 44.4	+1.2
PMRV				ePKPab	PKPab	05 34 46.0	+0.6
PMTG	Montargil	165.45	21	ePKPdf	PKPdf	05 33 44.0	+0.8
ESDC	Sonseca Array	165.78	7	PKP	PKPdf	05 33 44.4	+0.8
	comp=Z,3.3nm,0.8s,baz=349,slow=2.5,SNR=28						
ESDC				PKPab	PKPab	05 34 47.4	+0.1
	comp=Z,5.6nm,0.8s,baz=349,slow=4.3,SNR=17						
ESDC				PP	PP	05 38 37.0	+1.6
	comp=Z,3.4nm,1.2s,baz=337,slow=5.9,SNR=6.5						
PESTR	Estremoz	165.82	19	ePKPdf	PKPdf	05 33 44.3	+0.7
PESTR				ePKPab	PKPab	05 34 48.5	+0.9
PAB	San Pablo	165.87	8		PKPdf	05 33 44.1	+0.5
PAB	San Pablo	165.87	8	⇑PKIKP	PKPdf	05 33 44.6	+0.9
EVO	Evora	166.00	21	ePKPdf	PKPdf	05 33 45.2	+1.5
KEST	Kesra	166.08	319	PKP	PKPdf	05 33 44.7	+0.8
	comp=Z,7.4nm,0.8s,baz=296,slow=7.6,SNR=7.3						
KEST				PKPab	PKPab	05 34 49.4	+0.4
	comp=Z,40nm,0.9s,baz=334,slow=1.8,SNR=19						
KEST	Kesra	166.08	319	P	PKPdf	05 33 43.8	-0.1
PBEJ	Beja	166.51	21	ePKPdf	PKPdf	05 33 45.8	+1.7
MESJ	Messejana	166.56	23	ePKPdf	PKPdf	05 33 44.8	+0.6
MESJ	Messejana	166.56	23	ePKPdf	PKPdf	05 33 45.4	+1.3
MESJ				ePKPab	PKPab	05 34 51.1	+0.3
PBAR	Barrancos	166.63	18	ePKPdf	PKPdf	05 33 45.2	+1.0
PBAR				ePKPab	PKPab	05 34 51.6	+0.6
PTEO	Sao Teotonio	166.64	25	ePKPdf	PKPdf	05 33 45.9	+1.8
PCVE	Castro Verde	166.81	22	ePKPdf	PKPdf	05 33 45.9	+1.6
PCVE				ePKPab	PKPab	05 34 52.5	+0.6
MORF	Marmelete	166.88	25	ePKPdf	PKPdf	05 33 44.9	+0.5
MORF	Marmelete	166.88	25	ePKPdf	PKPdf	05 33 45.8	+1.4
MORF				ePKPab	PKPab	05 34 52.6	+0.3
PFVI	Vila Bisbo	166.96	26	ePKPdf	PKPdf	05 33 46.0	+1.6
PFVI				ePKPab	PKPab	05 34 53.4	+0.8
PVAQ	Vaqueiros	167.12	22	ePKPdf	PKPdf	05 33 46.0	+1.5
PVAQ				ePKPab	PKPab	05 34 53.9	+0.6
PBDV	Barranco-do-Ve	167.20	23	ePKPdf	PKPdf	05 33 46.1	+1.5
PBDV				ePKPab	PKPab	05 34 54.7	+1.1
TORD	Torodi Ar. Bea	167.25	195		PKPdf	05 33 44.6	-0.7
MDT	Midelt	172.33	18	PKP	PKPdf	05 33 48.4	+0.6
	comp=Z,16nm,0.9s,baz=70,slow=1.4,SNR=42						
MDT				PKPab	PKPab	05 35 17.9	+1.3
	comp=Z,19nm,0.9s,baz=354,slow=5.0,SNR=21						
TAM	Tamanrasset	172.83	249		PKPdf	05 33 49.2	+0.8
TAM	Tamanrasset	172.83	249	PKIKP	PKPdf	05 33 49.2	+0.8

JMA ***18*** *05:31:13.8±0.7, 44°N±3°×14°8E±°, h24^{km}, MV3.5/11, SE OFF ETOROFU*

SKHL ***18*** *05:31:21.4±0.6, 43°.80N×147°.80E, h40^{km}±2^{km}, mb3.6/2*

ISC 18 05:31:20.3±2.8**, 43°.9N**±0°.1×**147°.8E**±0°.1**, h26^{km}**±20^{km}**, n9, σ1^{s}63**/17**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	0.69	268	eP	Pn	05 31 33.8	-0.5
SHO				AMB	AMB	05 31 34.2	
	60nm,0.4s						
SHO				eS	Sn	05 31 43.5	-0.7
SHO				A	A	05 31 45.8	
	230nm,0.3s						
SHO				A	A	05 31 45.8	
	250nm,0.3s						
KUR	Kuril'sk	1.34	3	eP	Pb	05 31 44.5	-0.2
KUR				AMB	AMB	05 31 46.4	
	20nm,0.3s						
KUR				eS	Sb	05 32 01.7	+0.3
KUR				A	A	05 32 04.6	
	200nm,0.5s						
KUR				A	A	05 32 04.6	
	90nm,0.5s						
NEM2	Nemuro 2	1.57	251	eP	Pn	05 31 45.6	-0.9
NEM2				eS	Sb	05 32 08.4	+0.3
NMR	Nemuro--Hokkai	1.58	251	eP	Pn	05 31 45.9	-0.7
NMR				eS	Sn	05 32 04.4	-1.8
JRA	Rausu	1.92	272	eP	Pn	05 31 51.8	+0.5
JRA				eS	Sb	05 32 19.0	+0.8
JNK	Nakash	2.24	263	eP	Pn	05 31 55.9	+0.2
JNK				eS	Sb	05 32 26.5	-0.9
AKK	Akkeshi	2.31	249	eP	Pn	05 31 56.3	-0.4
AKK				eS	Sn	05 32 22.0	-2.3
JCH	Churui	3.47	250	eP	Pn	05 32 14.2	+1.6
JCH				eS	Sn	05 32 57.2	+4.4
JNBK	Urakawa-nobuka	4.02	248	eP	Pn	05 32 20.6	+0.5

IDC 18 05:46:56.9±1.3**, 55°.60S**×**126°.98W, h0^{km}, mb3.8**/3**, mbtmp3.8**/3**, Error ellipse: s-maj=275.2km s-min=32.8km az=162.0, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	Juan Fernandez	39.45	77	T	T	06 36 16.4	
	baz=221,slow=74,SNR=7.7						
H03S1	Juan Fernandez	39.46	77	T	T	06 36 17.1	
	baz=221,slow=74,SNR=6.3						
H03S3	Juan Fernandez	39.47	77	T	T	06 36 17.2	
	baz=221,slow=74,SNR=4.0						
H03N3	Juan Fernandez	39.74	77	T	T	06 36 38.7	
	baz=223,slow=72,SNR=17						
H03N2	Juan Fernandez	39.75	77	T	T	06 36 43.9	
	baz=223,slow=72,SNR=30						
H03N1	Juan Fernandez	39.76	77	T	T	06 36 47.1	
	baz=223,slow=72,SNR=21						
LPAZ	La Paz	59.24	73	P	P	05 57 00.5	-0.1
	1.7nm,0.9s,baz=209,slow=1.8,SNR=5.2 1.7nm,0.9s						
ASAR	Alice Springs	75.75	249	P	P	05 58 44.5	+0.1
	0.6nm,0.8s,baz=142,slow=6.3,SNR=4.5 0.6nm,0.8s						
H01W1	Cape Leeuwin H	75.90	228	T	T	07 23 31.4	
	baz=148,slow=76,SNR=9.0						
H01W2	Cape Leeuwin H	75.91	228	T	T	07 23 25.4	
	baz=148,slow=76,SNR=7.2						
H01W3	Cape Leeuwin H	75.92	228	T	T	07 23 22.3	
	baz=148,slow=76,SNR=6.7						
WRA	Warramunga Arr	78.55	252	P	P	05 59 00.0	-0.1
	0.9nm,1.0s,baz=138,slow=5.5,SNR=3.2 0.9nm,1.0s						
H11S2	WAKE ISLAND Hy	92.47	300	T	T	07 42 14.7	
	baz=148,slow=76,SNR=9.4						
H11S3	WAKE ISLAND Hy	92.49	300	T	T	07 42 12.5	
	baz=148,slow=76,SNR=5.7						
H11S1	WAKE ISLAND Hy	92.49	300	T	T	07 42 16.3	
	baz=148,slow=76,SNR=5.7						
SONM	Songino Array	146.78	279	PKPbc	PKPbc	06 06 39.3	-0.7
	0.9nm,0.7s,baz=145,slow=3.8,SNR=4.9						

ASRS ***18*** *06:00:15.0±1.5, 54°.17N×87°.20E, h0^{km}, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 18 06:00:15.0±3.5**, 54°.20N**×**87°.51E, h0^{km}, mbtmp2.7**/2**, ML2.2**/2**, Error ellipse: s-maj=30.8km s-min=20.1km az=36.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.61	262	I	I	06 09 40.0	
	0.1nm,0.9s,baz=79,slow=318,SNR=20						
ZALV	Zalesovo Beam	1.61	262	Pg	Pn	06 00 43.8	-0.8
	2.0nm,0.3s,baz=76,slow=12,SNR=14						
ZALV				Lg	Lg	06 01 05.4	
	2.5nm,0.3s,baz=81,slow=20,SNR=13						
KURBB	Kurchatov Arra	6.56	241	Pn	Pn	06 01 54.0	+1.5
	0.1nm,0.3s,baz=54,slow=14,SNR=3.6						
KURBB				Lg	Lg	06 03 44.1	
	baz=45,slow=28,SNR=2.9 0.5nm,0.4s						
MKAR	Makanchi Array	8.12	206	Pn	Pn	06 02 14.5	+0.4
	baz=29,slow=14,SNR=2.0 0.2nm,0.5s						

IDC ***18*** *06:15:54.7±1.6, 30°.99S×177°.64W, h0^{km}, mb4.1/3, mbtmp4.1/3, MS3.4/6, Error ellipse: s-maj=47.3km s-min=35.3km az=44.0*

ISC 18 06:15:59.2±1.3**, 31°.18S**±0°.08×**177°.9W**±0°.3**, h46^{km}, n26, σ2^{s}52**/23**, mb4.0**/3**, MS3.9**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.92	358	P	Pn	06 16 26.8	-2.5
RIZ	Raoul Island	1.93	358	P	Pn	06 16 26.3	-3.2
RIZ				S	Sn	06 16 51.6	-1.1
MXZ	Matakaoa Point	7.11	205	S	Sn	06 18 59.5	-0.5
WMGZ	Waiomatatini S	7.30	204	P	Pn	06 17 40.9	-2.3
HAZ	Te Kaha	7.48	208	P	Pn	06 17 43.9	-1.7
PUZ	Puketiti	7.58	204	P	Pn	06 17 42.9	-4.2
RUGZ	Raukumara Rang	7.70	207	P	Pn	06 17 48.3	-0.6
TWGZ	Tauwhareparae	7.77	205	P	Pn	06 17 47.5	-2.2
MWZ	Matawai	8.08	207	P	Pn	06 17 52.4	-1.6
URZ	Urewera	8.18	209	Pn	Pn	06 17 53.9	-1.4
URZ				Sn	Sn	06 19 25.0	-1.4
	5.4nm,0.3s,baz=202,slow=22,SNR=11						
URZ	Urewera	8.18	209	P	Pn	06 17 54.4	-0.9
OUZ	Omahuta	8.21	238	P	Pn	06 18 03.9	+8.1
MTHZ	Maungataniwha	8.80	208	P	Pn	06 18 04.3	+0.5
MTHZ				P	Sn	06 19 41.2	-0.4
BKZ	Black Stump Fm	9.21	209	P	Pn	06 18 08.2	-1.2
BKZ				P	Sn	06 19 42.7	-8.9
PNHZ	Pukenui	9.96	207	P	Pn	06 18 15.9	-3.9
PNHZ				P	Sn	06 20 05.9	-4.3
MSVF	Nonsavu	13.90	344	LR	LR	06 23 12.1	
	comp=Z,91nm,18.5s,baz=160,slow=32						
DZM	Mont Dzumac	16.70	299	LR	LR	06 25 23.2	
	comp=Z,192nm,19.1s,baz=166,slow=34						
RAR	Rarotonga	19.00	63	LR	LR	06 25 49.0	
	comp=Z,59nm,19.4s,baz=346,slow=32						
PPT	Papeete	29.01	69	LR	LR	06 30 57.4	
	comp=Z,34nm,19.2s,baz=48,slow=31						
ASAR	Alice Springs	43.20	268	P	P	06 23 59.2	+3.4
	2.0nm,0.6s,baz=105,slow=7.6,SNR=23 2.0nm,0.6s						
WRA	Warramunga Arr	44.26	273	P	P	06 24 07.3	+2.9
	1.4nm,0.3s,baz=111,slow=7.9,SNR=25 1.4nm,0.3s						
QSPA	South Pole Qui	58.93	180	P	P	06 25 56.4	+2.9
	0.9nm,0.7s,baz=27,slow=2.3,SNR=8.4 0.9nm,0.7s						
JNU	Nakatsue	80.22	318	LR	LR	07 02 00.8	
	comp=Z,52nm,18.9s,baz=325,slow=34						
LPIG	La Paz	84.84	58	LR	LR	06 58 15.9	
	comp=Z,46nm,21.0s,baz=10,slow=30						
FINES	FINESS Array B	145.92	340	PKPbc	PKPab	06 35 34.2	+0.8
	1.9nm,0.5s,baz=33,slow=3.4,SNR=10						
AKASG	Malin Array Be	151.99	322	PKPbc	PKiKP	06 35 51.6	+2.5
	1.5nm,0.7s,baz=49,slow=3.2,SNR=4.7						

IDC ***18*** *06:24:47.8±3.4, 15°.85N×98°.32W, h0^{km}, mb4.0/8, mbtmp3.9/10, ML3.0/2, MS3.3/5, Error ellipse: s-maj=60.6km s-min=31.3km az=12.0*

MEX ***18*** *06:24:49.8±0.5, 15°.87N×98°.47W, h14^{km}±14^{km}, MD4.8*

NEIC ***18*** *06:24:52.2±2.7, 16°.01N±0°.07×98°.28W±0°.04, h20^{km}±8^{km}, mb4.2/150, Md4.8/161(MEX), Error ellipse: s-maj=10.2km s-min=4.8km az=186.0*

ISC 18 06:24:47.1±1.1**, 15°.91N**±0°.03×**98°.40W**±0°.02**, h2^{km}**±7^{km}**, n226, σ2^{s}48**/255**, mb4.3**/64**, MS3.4**/3**, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.55	28		Pb	06 24 59.5	0.0
PNIG					Sb	06 25 08.0	+0.1
PNIG	Pinotepa	0.55	28	eP	Pb	06 24 59.5	0.0
PNIG				eS	Sb	06 25 08.0	+0.1
CRIG	Cruz Grande	1.08	320		Sg	06 25 22.7	+0.7
CRIG	Cruz Grande	1.08	320	eP	Pg	06 25 06.2	-1.8
CRIG				eS	Sg	06 25 22.7	+0.7
PEIG	Puerto Escondi	1.21	85		Pb	06 25 09.7	-1.0
PEIG					Sg	06 25 24.5	-1.5
PEIG	Puerto Escondi	1.21	85	eP	Pb	06 25 09.7	-1.0
PEIG				eS	Sg	06 25 24.5	-1.5
YOIG	Yosondua	1.25	41		Pg	06 25 10.5	-0.7
YOIG					Sg	06 25 27.3	-0.1
YOIG	Yosondua	1.25	41	eP	Pg	06 25 10.5	-0.7
YOIG				eS	Sg	06 25 27.3	-0.1
MGIG	Malinaltepec	1.34	350		Pn	06 25 11.1	-2.0
MGIG					Sb	06 25 28.7	-2.2
MGIG	Malinaltepec	1.34	350	eP	Pn	06 25 11.1	-2.0
MGIG				eS	Sb	06 25 28.7	-2.2
TXIG	Tlaxiaco	1.47	24		Pn	06 25 13.9	-1.0
TXIG					Sn	06 25 32.6	-2.4
TXIG	Tlaxiaco	1.47	24	eP	Pn	06 25 13.9	-1.0
TXIG				eS	Sn	06 25 32.6	-2.4
DAIG	Los Arroyos	1.64	313	eP	Pn	06 25 14.1	-3.0
DAIG				eS	Sn	06 25 32.2	-6.4
TLIG	Tlapa	1.66	354	Pn	Pb	06 25 19.3	+0.8
TLIG				Sn	Sg	06 25 41.3	+0.9
TLIG	Tlapa	1.66	354	eP	Pn	06 25 16.0	-1.4
TLIG				eS	Sn	06 25 35.7	-3.6
VNTA	La Mica	1.69	307	eP	Pn	06 25 18.2	+0.4
VNTA				eS	Sn	06 25 38.4	-1.6
ACP2	Acapulco	1.72	304		Pb	06 25 20.4	+0.9
ACP2					Sn	06 25 38.8	-2.0
ACP2	Acapulco	1.72	304	eP	Pb	06 25 20.4	+0.9
ACP2				eS	Sn	06 25 38.8	-2.0
HMTT	Tlapaneco	1.89	355		Pb	06 25 22.8	+0.3
HMTT					Sn	06 25 41.7	-3.3
HMTT	Tlapaneco	1.89	355	eP	Pb	06 25 22.8	+0.3
HMTT				eS	Sn	06 25 41.7	-3.3
OXIG	Oaxaca	1.97	54		Pn	06 25 21.1	-0.8
OXIG					Sn	06 25 44.2	-3.2
VHO	Vista Hermosa	1.97	54	eP	Pn	06 25 21.1	-0.8
VHO				eS	Sn	06 25 44.2	-3.1
OXBJ	Oaxaca	1.98	54		Pn	06 25 22.8	+0.9
OXBJ					Sn	06 25 46.2	-1.2
OXBJ	Oaxaca	1.98	54	eP	Pn	06 25 22.8	+0.9
OXBJ				eS	Sn	06 25 46.2	-1.2
OXLC	Oaxaca	1.99	54	eP	Pn	06 25 22.8	+0.7
OXLC				eS	Sn	06 25 48.3	+0.5
HLIG	Huajuapan de L	2.00	16		Pn	06 25 21.3	-0.9
HLIG					Sn	06 25 45.0	-2.9
HLIG	Huajuapan de L	2.00	16	eP	Pn	06 25 21.3	-0.9
HLIG				eS	Sn	06 25 45.0	-2.9
FTIG	Fresnillo de T	2.01	7		Pn	06 25 21.4	-0.8
FTIG					Sn	06 25 49.1	+1.0
FTIG	Fresnillo de T	2.01	7	eP	Pn	06 25 21.4	-0.8
FTIG				eS	Sn	06 25 49.1	+1.0
CAIG	El Cayaco	2.12	303	eP	Pn	06 25 21.5	-2.2
CAIG				eS	Sn	06 25 44.5	-6.2
HUIG	Huatulco	2.21	93		Pn	06 25 23.1	-1.8
HUIG	Huatulco	2.21	93	eP	Pn	06 25 23.1	-1.8
HUIG				eS	Sn	06 25 47.4	-5.5
MEIG	Mezcala	2.32	330		Pb	06 25 29.7	-0.1
MEIG					Sn	06 25 52.5	-3.3
MEIG	Mezcala	2.32	330	eP	Pb	06 25 29.7	-0.1
MEIG				eS	Sn	06 25 52.5	-3.3
ATYC	Atoyac	2.34	304	eP	Pn	06 25 18.4	-8.3
ATYC				eS	Sn	06 25 51.0	-5.2
TOIG	Toxpalan	2.52	30		Pn	06 25 28.4	-1.0
TOIG					Sn	06 26 01.1	+0.3
TOIG	Toxpalan	2.52	30	eP	Pn	06 25 28.4	-1.0
TOIG				eS	Sn	06 26 01.1	+0.3
PLIG	Platanillo	2.69	337		Pn	06 25 34.5	+2.9
PLIG					Sn	06 26 01.9	-2.9
PLIG	Platanillo	2.69	337	eP	Pn	06 25 34.5	+2.9
PLIG				eS	Sn	06 26 01.9	-2.9
TPIG	Tehuac#an	2.69	21		Pn	06 25 30.9	-0.8
TPIG					Sn	06 26 03.8	-1.1
TPIG	Tehuac#an	2.69	21	eP	Pn	06 25 30.9	-0.8
TPIG				eS	Sn	06 26 03.8	-1.1
THEZ	Tehuacan	2.73	21	eP	Pb	06 25 36.2	-0.8
THEZ				eS	Sb	06 26 09.5	-1.6
ARIG	Puente Sto Nin	3.01	322		Pb	06 25 40.4	-1.1
ARIG	Puente Sto Nin	3.01	322	eP	Pb	06 25 40.4	-1.1
ARIG				eS	Sn	06 26 08.0	-4.6
YAIG	Yautepec	3.01	348		Pb	06 25 40.0	-1.5
YAIG					Sn	06 26 11.3	-1.5
YAIG	Yautepec	3.01	348	eP	Pb	06 25 40.0	-1.5
YAIG				eS	Sn	06 26 11.3	-1.5
PBCV	Popocatepetl	3.07	357	eP	Pn	06 25 37.2	+0.2
PBCV				eS	Sn	06 26 14.0	-0.5
PBXN	Popocatepetl	3.10	355	eP	Pb	06 25 44.0	+0.7
PBXN				eS	Sn	06 26 15.6	+0.1
PHPU	Puebla	3.13	4		Pb	06 25 44.3	+0.6
PHPU					Sb	06 26 20.2	-2.3
PHPU	Puebla	3.13	4	eP	Pb	06 25 44.3	+0.6
PHPU				eS	Sb	06 26 20.2	-2.3
PPIG	Popocatepetl	3.15	356		Pn	06 25 37.0	-1.3
PPIG					Sn	06 26 15.8	-1.1
PPM	Popocatepetl	3.15	356	eP	Pn	06 25 37.0	-1.3
PPM				eS	Sn	06 26 15.8	-1.1
PET2	Petatlan	3.19	301	eS	Sn	06 26 20.2	+3.2
AMVM	AMECAMECA	3.23	353		Pn	06 25 37.7	-1.5
AMVM					Sn	06 26 17.5	-0.9
AMVM	AMECAMECA	3.23	353	eP	Pn	06 25 37.7	-1.5
AMVM				eS	Sn	06 26 17.5	-0.9
MPVM	San Francisco	3.33	350	eP	Pn	06 25 43.9	+3.4
MPVM				eS	Sn	06 26 19.7	-1.1
TLVM	San Miguel Top	3.36	348	eP	Pb	06 25 47.6	-0.1
TLVM				eS	Sn	06 26 21.4	-0.4
ZIIG	Zihuatanejo	3.39	300	eP	Pn	06 25 39.2	-1.9
ZIIG				eS	Sn	06 26 17.7	-4.2
XCVM	Xochimilco	3.40	348	eP	Pn	06 25 44.1	+2.6
XCVM				eS	Sn	06 26 20.1	-2.5
AOVM	Tlapan	3.46	345		Pb	06 25 49.6	+0.2
AOVM					Sn	06 26 24.9	+0.5
AOVM	Tlapan	3.46	345	eP	Pb	06 25 49.6	+0.2
AOVM				eS	Sn	06 26 24.9	+0.5
CNCY	Coyoacan	3.47	348	eP	Pb	06 25 47.1	-2.4
CNCY				eS	Sn	06 26 22.5	-1.9
UNM	Universidad Na	3.48	348		Pn	06 25 46.2	+3.5
UNM	Universidad Na	3.48	348	eP	Pb	06 25 47.5	-2.3
UNM				eS	Sn	06 26 28.7	+3.9
CUP5	Mexico City	3.49	348	eP	Pb	06 25 47.0	-2.8
CUP5				eS	Sn	06 26 21.4	-3.4
INVM	La Marquesa	3.50	345	eP	Pn	06 25 44.5	+1.6
INVM				eS	Sn	06 26 21.4	-3.7
COVM	Coyoacan	3.50	348	eP	Pn	06 25 43.7	+0.8
COVM				eS	Sn	06 26 25.6	+0.5
BJVM	Benito Juarez	3.53	348	eP	Pb	06 25 47.6	-2.9
BJVM				eS	Sn	06 26 25.5	-0.3
CJVM	Cuajimalpa	3.54	346	eP	Pb	06 25 52.3	+1.6
CJVM				eS	Sn	06 26 26.2	+0.1
SCT2	Benito Juarez	3.54	348	eS	Sn	06 26 20.4	-5.7
TXVM	Universitario	3.54	352	eP	Pb	06 25 49.0	-1.8
TXVM				eS	Sn	06 26 22.9	-3.3
VRVM	Mexico City	3.56	349	eS	Sn	06 26 29.3	+2.8
PBVM	Pinon	3.58	350		Pb	06 25 48.6	-2.5
PBVM	Pinon	3.58	350	eP	Pb	06 25 48.6	-2.5
PBVM				eS	Sn	06 26 21.8	-4.8
CTVM	Cuauhtemoc	3.59	348	eS	Sb	06 26 32.2	-3.7
AZVM	Cuida Lopez Ma	3.75	347		Pn	06 25 49.6	+3.2
AZVM					Sn	06 26 32.8	+1.4
AZVM	Cuida Lopez Ma	3.75	347	eP	Pn	06 25 49.6	+3.2
AZVM				eS	Sn	06 26 32.8	+1.4
VTVM	Tizayuca	3.86	355		Sn	06 26 32.1	-1.9
VTVM	Tizayuca	3.86	355	eP	Pb	06 25 53.9	-2.3
VTVM				eS	Sn	06 26 32.1	-1.9
ZUVM	ZUMPANGO	3.95	351		Pb	06 25 57.8	0.0
ZUVM					Sn	06 26 38.9	+2.6
ZUVM	ZUMPANGO	3.95	351	eP	Pb	06 25 57.8	0.0
ZUVM				eS	Sn	06 26 38.9	+2.6
ATVM	ATLACOMULCO	4.07	340		Sn	06 26 39.5	+0.2
ATVM	ATLACOMULCO	4.07	340	eP	Pb	06 25 56.9	-2.9
ATVM				eS	Sn	06 26 39.5	+0.2
MIHL	Minatitlan	4.23	60	eS	Sn	06 26 37.1	-5.6
ACIG	Acambay	4.29	341		Pn	06 25 58.5	+4.7
ACIG					Sn	06 26 47.4	+3.0
ACIG	Acambay	4.29	341	eP	Pn	06 25 58.5	+4.7
ACIG				eS	Sn	06 26 47.4	+3.0
CXUV	Coxquihui	4.31	10	eP	Pn	06 25 54.6	+0.7
CXUV				eS	Sn	06 26 36.2	-8.6
TUIG	Tuzandepetl	4.35	60	eP	Pn	06 25 52.9	-1.5
TUIG				eS	Sn	06 26 47.6	+1.8
DHIG	Demacu	4.41	352		Pn	06 26 00.6	+5.2
DHIG					Sn	06 26 45.2	-2.4
DEIG	Demacu	4.41	352	eP	Pn	06 26 00.6	+5.1
DEIG				eS	Sn	06 26 45.2	-2.4
MOIG	Morelia	4.60	325		Pn	06 26 00.3	+2.3
MOIG	Morelia	4.60	325	eP	Pn	06 26 00.9	+2.9
MOIG				eS	Sn	06 26 58.1	+6.0
URUA	Uruapan	4.95	315	eS	Sn	06 26 56.1	-4.7
PCIG		4.99	92		Pn	06 26 02.1	-1.0
PCIG					Sn	06 26 58.5	-3.0
PCIG		4.99	92	eP	Pn	06 26 02.1	-1.0
PCIG				eS	Sn	06 26 58.5	-3.0
TGIG		5.14	80		Pn	06 26 02.7	-2.5
TGIG					Sn	06 27 01.5	-3.7
TGIG		5.14	80	eP	Pn	06 26 02.7	-2.5
TGIG				eS	Sn	06 27 01.5	-3.7
JRQG	Juriquilla Cam	5.15	338	eP	Pb	06 26 13.3	-5.0
JRQG				eS	Sn	06 26 59.1	-6.8
MMIG	Aquila	5.29	297		Pn	06 26 11.9	+4.6
MMIG					Sn	06 27 09.1	+0.2
MMIG	Aquila	5.29	297	eP	Pn	06 26 11.9	+4.6
MMIG				eS	Sn	06 27 09.1	+0.2
CTUV	Llano Grande	5.54	0	eP	Pn	06 26 18.2	+7.5
CTUV				eS	Sn	06 27 15.9	+0.9
IGIG	Irapuato, Guan	5.57	330	eS	Sn	06 27 21.2	+5.2
THIG		6.00	99	eS	Sn	06 27 30.4	+4.0
CCIG	Comitan	6.03	86		Pn	06 26 20.2	+2.6
CCIG	Comitan	6.03	86	eP	Pn	06 26 19.4	+1.8
CCIG				eS	Sn	06 27 23.9	-3.5
MNGA	Volcan de Coli	6.11	306	eP	Pn	06 26 14.2	-4.5
MNGA				eS	Sn	06 27 28.6	-0.8
INCO	Volcan de Coli	6.13	307	eP	Pn	06 26 17.2	-2.0
INCO				eS	Sn	06 27 26.0	-4.2
RPIG	Rio Verde	6.13	346		Pn	06 26 23.0	+4.0
RPIG					Sn	06 27 28.1	-1.8
RPIG	Rio Verde	6.13	346	eP	Pn	06 26 23.0	+4.0
RPIG				eS	Sn	06 27 28.1	-1.8
CDAR	Ciudad de Arme	6.15	300	eP	Pn	06 26 10.9	-8.2
CDAR				eS	Sn	06 27 27.3	-2.8
SOMAC	Volcano de Col	6.15	307	eP	Pn	06 26 18.2	-1.2
SOMAC				eS	Sn	06 27 27.3	-3.3
CEGR	Campo Tres	6.25	304	eP	Pn	06 26 24.2	+3.5
CEGR				eS	Sn	06 27 32.0	-0.9
CIHU	Emiliano Zapat	6.91	300	eP	Pn	06 26 27.9	-1.7
CIHU				eS	Sn	06 27 42.1	-6.7
GTIG	Gomez Farias	7.16	354		Pn	06 26 36.3	+3.3
GTIG					Sn	06 27 50.7	-4.3
GTIG	Gomez Farias	7.16	354	eP	Pn	06 26 36.3	+3.3
GTIG				eS	Sn	06 27 50.7	-4.3
CJM	Chamela	7.27	300	eS	Sn	06 27 52.2	-5.6
ANIG	Ahuacatlan	7.74	312		Pn	06 26 39.5	-1.6
ANIG					Sn	06 28 10.3	+0.8
ANIG	Ahuacatlan	7.74	312	eP	Pn	06 26 39.5	-1.6
ANIG				eS	Sn	06 28 10.3	+0.8
ZAIG	Zacatecas	7.88	331	Pn	Pn	06 26 46.0	+2.9
LNIG	Linares	9.00	354	eP	Pn	06 26 59.3	+1.1
LNIG				eS	Sn	06 28 45.8	+5.5
TEIG	Tepich	10.54	64	Pn	Pn	06 27 18.9	-0.4
TEIG	Tepich	10.54	64	Pn	Pn	06 27 20.6	+1.2
	0.1nm,0.3s,baz=269,slow=3.4,SNR=3.2 0.4nm,0.4s						
TEIG	Tepich	10.54	64	eP	Pn	06 27 12.7	-6.7
TEIG				eS	Sn	06 29 14.3	-3.8
LPIG	La Paz	13.84	308	LR	LR	06 32 45.1	
	comp=Z,132nm,19.3s,baz=72,slow=34						
TXAR	Lajitas Array	14.22	341	Pn	Pn	06 28 12.0	+2.2
	baz=157,slow=13,SNR=6.2						
TXAR				Lg	Lg	06 32 21.7	
	baz=165,slow=30,SNR=5.9						
TXAR				LR	LR	06 33 18.9	
	comp=Z,61nm,18.9s,baz=151,slow=36 0.5nm,0.8s						
TX31	Lajitas Ar. Si	14.22	341		Pn	06 28 11.8	+2.1
SAND	Sanderson	14.40	347		Pn	06 28 13.7	+1.6
HDC	Heredia	15.10	111	Pn	Pn	06 28 24.4	+2.5
OZNA	Ozona	15.15	351	P	P	06 28 28.7	+1.0
OZNA				IAmb	IAmb	06 28 31.8	
	comp=Z,9.2nm,1.0s						
LCR2	La Lucha 2	15.31	112	Pn	Pn	06 28 26.8	+2.1
LCR2				IAmb	IAmb	06 28 49.6	
	comp=Z,18nm,1.2s						
BRDY	Brady	15.32	358	Pn	Pn	06 28 25.6	+1.1
NATX	Nacogdoches	16.15	12	Pn	Pn	06 28 37.0	+1.7
PECS	Pecos	16.18	343	P	P	06 28 39.6	+0.4
237A	Washetta, Mont	16.20	8		Pn	06 28 37.7	+1.8
FW13	Cleburne	16.40	3	Pn	Pn	06 28 40.3	+1.8
ABTX	Abilene, Hawle	16.68	356	P	P	06 28 45.9	+1.2
PLPT	Palo Pinto	16.83	0	P	P	06 28 47.3	+0.9
PLPT				IAmb	IAmb	06 28 48.8	
	comp=Z,24nm,0.8s						
MIAR	Mount Ida	19.06	12		P	06 29 10.1	-0.7
DUN6	Lazy B Ranch	19.21	332	IAmb	IAmb	06 29 22.5	

	comp=Z,19nm,1.0s						
TUL3	Leonard	20.06	6	P	P	06 29 22.8	+1.0
TUL3				IAmb	IAmb	06 29 28.0	
	comp=Z,9.2nm,0.8s						
ANMO	Albuquerque	20.29	341		Pn	06 29 27.1	+0.6
ANMO	Albuquerque	20.29	341		Pn	06 29 26.0	-0.4
ANMO				IAmb	IAmb	06 29 27.7	
	comp=Z,6.0nm,0.8s						
ANMO	Albuquerque	20.29	341	P	Pn	06 29 26.2	-0.3
	comp=Z,10nm,1.0s,baz=244,slow=11,SNR=28						
	comp=Z,10nm,1.0s						
ANMO	Albuquerque	20.29	341	*e*P	P	06 29 25.6	+1.0
OK038	West end E0370	20.49	359	P	P	06 29 27.1	+0.6
U38A	Gravette	20.76	9	P	P	06 29 30.5	+1.1
U38A				IAmb	IAmb	06 29 34.1	
	comp=Z,8.1nm,0.9s						
152A	Waverly Hall	20.80	34	P	P	06 29 29.8	0.0
RTBA	Rita Blanca	20.81	350	IAmb	IAmb	06 29 34.1	
	comp=Z,16nm,1.0s						
Y49A	Blount Mountai	20.89	29	IAmb	IAmb	06 29 36.7	
	comp=Z,10nm,1.0s						
T35A	Sooner Cattle	20.99	4	P	P	06 29 31.5	-0.5
T35A				IAmb	IAmb	06 29 37.0	
	comp=Z,7.8nm,0.7s						
KAN13	South Haven SW	21.04	2	IAmb	IAmb	06 29 38.2	
	comp=Z,13nm,0.9s						
LCAR	Lake Charles	21.09	16	P	P	06 29 32.6	-0.4
X48A	Hartselle	21.10	27	P	P	06 29 32.2	-0.9
X48A				IAmb	IAmb	06 29 38.6	
	comp=Z,11nm,1.1s						
KAN05	Bluff City Nor	21.12	1	IAmb	IAmb	06 29 38.4	
	comp=Z,16nm,1.1s						
PLAL	Pickwick Lake	21.13	24	IAmb	IAmb	06 29 38.8	
	comp=Z,10nm,1.1s						
KAN01	Argonia South	21.17	1	IAmb	IAmb	06 29 40.2	
	comp=Z,12nm,1.0s						
X18A	Snowflake	21.25	333	P	P	06 29 36.6	+1.6
X18A				IAmb	IAmb	06 29 51.7	
	comp=Z,16nm,1.4s						
T25A	Trinidad	21.81	347	IAmb	IAmb	06 29 46.5	
	comp=Z,16nm,1.0s						
X16A	Lo Mia Camp, P	21.85	330	IAmb	IAmb	06 29 51.4	
	comp=Z,13nm,0.9s						
MGMO	Mountain Grove	21.85	13	IAmb	IAmb	06 29 46.0	
	comp=Z,6.9nm,0.8s						
GOGA	Godfrey	22.04	35	IAmb	IAmb	06 29 44.0	
	comp=Z,13nm,0.9s						
WVT	Waverly	22.24	23		P	06 29 45.5	+0.3
WVT				IAmb	IAmb	06 29 47.8	
	comp=Z,13nm,0.8s						
SWET	Sewanee	22.24	28	IAmb	IAmb	06 29 47.2	
	comp=Z,12nm,0.8s						
Y14A	Wickenburg	22.27	326	IAmb	IAmb	06 30 02.0	
	comp=Z,8.6nm,1.1s						
V48A	Smith Brothers	22.30	25	IAmb	IAmb	06 30 08.5	
	comp=Z,9.9nm,0.7s						
R32A	Long Quarter,	22.43	359		P	06 29 48.1	+0.7
R32A				IAmb	IAmb	06 29 51.6	
	comp=Z,9.0nm,1.0s						
CGM3	Cape Girardeau	22.67	18	IAmb	IAmb	06 29 52.1	
	comp=Z,10nm,0.9s						
WUAZ	Wupatki	22.72	332		P	06 29 53.6	+3.0
WUAZ				IAmb	IAmb	06 30 01.6	
	comp=Z,9.0nm,0.9s						
CCM	Cathedral Cave	22.95	15	P	P	06 29 53.8	+1.0
CCM				IAmb	IAmb	06 30 00.8	
	comp=Z,6.3nm,0.9s						
S22A	4UR Ranch, Cre	23.00	343	IAmb	IAmb	06 30 03.6	
	comp=Z,5.6nm,0.9s						
MVCO	Mesa Verde	23.03	339	IAmb	IAmb	06 29 57.1	
	comp=Z,8.3nm,0.8s						
CPCT	Cooper Cave	23.08	30	IAmb	IAmb	06 30 02.0	
	comp=Z,6.7nm,0.8s						
FVM	French Village	23.09	16	IAmb	IAmb	06 29 55.9	
	comp=Z,6.4nm,0.9s						
KSCO	Kaye Shedlock'	23.32	352		P	06 29 58.0	+1.3
U49A	Red Boiling Sp	23.39	26	IAmb	IAmb	06 30 03.8	
	comp=Z,9.8nm,1.2s						
BG3	Lake Jocassee	23.53	33	IAmb	IAmb	06 29 59.5	
	comp=Z,9.5nm,0.9s						
TKL	Tuckaleechee C	23.61	31	P	P	06 30 01.3	+1.7
	comp=Z,4.2nm,0.9s,baz=199,slow=11,SNR=6.4						
	comp=Z,4.2nm,0.9s						
U15A	North Rim	23.89	331	IAmb	IAmb	06 30 13.7	
	comp=Z,6.9nm,1.0s						
PV01	Paradox Valley	23.89	340	IAmb	IAmb	06 30 11.2	
	comp=Z,6.0nm,0.9s						
JSC	Jenkinsville	23.93	37	IAmb	IAmb	06 30 03.2	
	comp=Z,6.6nm,0.7s						
PV13	Radium Mtn., P	24.00	339	IAmb	IAmb	06 30 11.4	
	comp=Z,5.8nm,0.9s						
P38A	Dawn	24.01	9	IAmb	IAmb	06 30 04.3	
	comp=Z,6.0nm,0.8s						
PV02	Paradox Valley	24.01	340	IAmb	IAmb	06 30 06.0	
	comp=Z,9.6nm,1.0s						
PV15	Paradox Valley	24.05	340	IAmb	IAmb	06 30 09.9	
	comp=Z,10nm,1.1s						
PV18	Skein Mesa, Pa	24.11	339	IAmb	IAmb	06 30 21.7	
	comp=Z,8.8nm,0.9s						
PV17	East Wray Mesa	24.15	339	IAmb	IAmb	06 30 40.5	
	comp=Z,5.9nm,1.1s						
P40A	Paris	24.18	12	IAmb	IAmb	06 30 13.3	
	comp=Z,7.8nm,0.9s						
PV19	Morning Glory	24.19	339	IAmb	IAmb	06 30 11.4	
	comp=Z,11nm,1.2s						
PV20	West Nyswonger	24.21	339	IAmb	IAmb	06 30 36.9	
	comp=Z,12nm,1.3s						
T50A	Nancy	24.23	27	IAmb	IAmb	06 30 07.3	
	comp=Z,10nm,1.1s						
PV04	Paradox Valley	24.24	340	IAmb	IAmb	06 30 14.3	
	comp=Z,6.7nm,1.0s						
PV10	Paradox Valley	24.27	339	IAmb	IAmb	06 30 44.1	
	comp=Z,7.6nm,0.9s						
PV22	Blue Mesa, Par	24.32	340	IAmb	IAmb	06 30 15.3	
	comp=Z,7.6nm,1.2s						
PV23	Carpenter Ridg	24.32	339	IAmb	IAmb	06 30 23.7	
	comp=Z,9.1nm,1.0s						
KMSC	Kings Mountain	24.51	35	IAmb	IAmb	06 30 09.4	
	comp=Z,11nm,1.1s						
ISCO	Idaho Springs	24.63	347	IAmb	IAmb	06 30 20.7	
	comp=Z,8.1nm,0.8s						
WCI	Wyandotte Cave	24.66	23		P	06 30 09.7	+0.3
GSC	Goldstone, Bar	25.39	323	IAmb	IAmb	06 30 27.5	
	comp=Z,7.0nm,1.3s						
SRU	San Rafael Swe	25.45	338	IAmb	IAmb	06 30 27.0	
	comp=Z,8.5nm,1.2s						
R50A	Paris	25.50	26	IAmb	IAmb	06 30 21.3	
	comp=Z,7.1nm,0.9s						
Q16A	Castle Valley	25.52	336	IAmb	IAmb	06 30 28.3	
	comp=Z,7.9nm,1.0s						
MVU	Marysvale	25.58	334	IAmb	IAmb	06 30 29.5	
	comp=Z,7.3nm,1.1s						
P18A	Preston Nutter	25.80	339	IAmb	IAmb	06 30 30.9	
	comp=Z,6.1nm,1.0s						
TMUT	Trail Mountain	25.86	337	IAmb	IAmb	06 30 29.4	
	comp=Z,5.9nm,1.0s						
GWY	Greenwater Val	25.94	325	IAmb	IAmb	06 30 30.1	
	comp=Z,3.9nm,0.9s						
L40A	Anamosa	26.79	12	IAmb	IAmb	06 30 32.5	
	comp=Z,6.3nm,0.8s						
T57A	Hurt	27.01	35	IAmb	IAmb	06 30 33.8	
	comp=Z,10nm,1.2s						
TCUT	Toone Canyon	27.53	338	IAmb	IAmb	06 30 45.5	
	comp=Z,8.9nm,1.2s						
PDAR	Pinedale Array	28.43	343	P	P	06 30 45.7	+2.1
PDAR	Pinedale Array	28.43	343	P	P	06 30 44.5	+0.9
	comp=Z,1.5nm,1.0s,baz=146,slow=11,SNR=7.1						
PDAR				LR	LR	06 42 56.2	
	comp=Z,97nm,18.4s,baz=119,slow=38						
	comp=Z,1.5nm,1.0s						
NVAR	Mina Array Bea	28.46	326	P	P	06 30 46.2	+2.3
NVAR	Mina Array Bea	28.46	326	P	P	06 30 47.0	+3.0
	comp=Z,2.0nm,0.9s,baz=151,slow=9.5,SNR=8.3						
	comp=Z,2.0nm,0.9s						
DLMT	Dillon	31.70	341	IAmb	IAmb	06 31 23.8	
	comp=Z,6.0nm,1.1s						
AGMN	Agassiz Nation	32.37	3	IAmb	IAmb	06 31 25.0	
	comp=Z,4.0nm,0.9s						
PLID	Pearl Lake	32.66	337	IAmb	IAmb	06 31 28.1	
	comp=Z,3.4nm,1.1s						
ULM	Lac du Bonnet	34.32	3	P	P	06 31 37.5	+2.4
	comp=Z,1.2nm,0.6s,baz=157,slow=7.3,SNR=4.0						
	comp=Z,1.2nm,0.6s						
FFC	Flin Flon	38.84	357		P	06 32 14.3	+0.7
SCHQ	Schefferville	45.85	25	P	P	06 33 10.6	-0.2
	comp=Z,4.7nm,0.9s,baz=217,slow=7.2,SNR=5.8						
	comp=Z,4.7nm,0.9s						
YKA	Yellowknife Ar	47.92	350	P	P	06 33 27.1	+0.4
	comp=Z,1.3nm,0.9s,baz=160,slow=6.7,SNR=4.5						
	comp=Z,1.3nm,0.9s						
BLKN	Baker Lake	48.39	1	P	P	06 33 31.1	+0.8
H03N2	Juan Fernandez	52.47	159	T	T	07 30 55.0	
	baz=338,slow=77,SNR=162						
H03N1	Juan Fernandez	52.48	159	T	T	07 30 56.3	
	baz=338,slow=77,SNR=146						
H03N3	Juan Fernandez	52.49	159	T	T	07 30 55.2	
	baz=338,slow=77,SNR=160						
ILAR	Eielson Array	58.71	338	P	P	06 34 47.5	+1.4
	comp=Z,1.1nm,0.9s,baz=148,slow=5.6,SNR=9.5						
	comp=Z,1.1nm,0.9s						
SPITS	Spitsbergen Ar	79.43	11	LR	LR	07 13 26.2	
	comp=Z,30nm,18.5s,baz=84,slow=37						
NOA	NORSAR Array B	85.37	27	LR	LR	07 16 31.4	
	comp=Z,5.6nm,19.6s,baz=110,slow=36						

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*IDC **18** 06:26:07.6±3.2, 19°.34S×177°.63W, h584^{km}±34^{km}, mb3.3/4, mbtmp4.3/5, Error ellipse: s-maj=33.4km s-min=20.3km az=17.0*

ISC 18 06:26:08.3±1.8**, 19°.3S**±0°.3×**177°.6W**±0°.2**, h600**^{km}**, n6, σ0^{s}.81**/8**, mb3.9**/4**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	19.46	193	P	P	06 29 55.8	-1.1
	4.9nm,0.3s,baz=4.1,slow=2.4,SNR=9.2						
STKA	Stephens Creek	38.70	243	P	P	06 32 43.0	+0.6
	4.2nm,0.8s,baz=92,slow=9.1,SNR=5.2						
	4.2nm,0.8s						
WRA	Warramunga Arr	45.20	261	P	P	06 33 32.5	-0.9
	1.8nm,0.9s,baz=98,slow=7.5,SNR=12						
	1.8nm,0.9s						
ASAR	Alice Springs	45.22	256	P	P	06 33 33.5	0.0
	4.5nm,0.8s,baz=85,slow=8.7,SNR=36						
ASAR				PcP	PcP	06 35 01.2	+0.5
	0.9nm,0.7s,baz=102,slow=3.8,SNR=5.0						
ASAR				S	S	06 39 31.4	+0.2
	0.9nm,0.6s,baz=92,slow=16,SNR=10						
	4.5nm,0.8s						
QSPA	South Pole Qui	70.77	180	P	P	06 36 25.7	+0.7
	3.4nm,0.9s,baz=60,slow=1.4,SNR=13						
	3.4nm,0.9s						
ARCES	ARCESS Array B	127.82	350	PKP	PKiKP	06 44 06.2	-0.4
	0.6nm,0.7s,baz=35,slow=4.4,SNR=4.3						

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*ASRS **18** 06:38:01.0±1.1, 54°.12N×87°.13E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 18 06:38:02.4±3.2**, 54°.21N×87°.23E, h0**^{km}**, mbtmp2.6**/2**, ML2.1**/2**, Error ellipse: s-maj=27.9km s-min=19.2km az=57.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.45	261	I	I	06 47 10.0	
	baz=80,slow=319,SNR=8.3						
ZALV	Zalesovo Beam	1.45	261	Pg	Pn	06 38 28.3	-1.5
	1.9nm,0.3s,baz=82,slow=18,SNR=19						
ZALV				Lg	Lg	06 38 48.6	
	0.7nm,0.3s,baz=82,slow=28,SNR=4.5						
KURBB	Kurchatov Arra	6.42	240	Pn	Pn	06 39 37.9	-0.2
	baz=55,slow=13,SNR=4.1						
KURBB				Lg	Lg	06 41 27.8	
	0.1nm,0.3s,baz=50,slow=29,SNR=5.7						
	0.5nm,0.5s						
MKAR	Makanchi Array	8.06	205	Pn	Pn	06 40 02.7	+2.1
	baz=25,slow=13,SNR=1.9						
	0.1nm,0.3s						

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*IDC **18** 06:38:34.0±0.7, 28°.43N×104°.82E, h0^{km}, mb4.1/13, mbtmp4.0/15, ML3.9/1, MS3.5/1, Error ellipse: s-maj=24.1km s-min=14.4km az=58.0*

*NEIC **18** 06:38:36.9±1.8, 28°.41N±0°.08×104°.7E±0°.1, h10^{km}±1^{km}, mb4.3/8, Error ellipse: s-maj=17.1km s-min=13.7km az=277.0*

ISC 18 06:38:36.2±0.6**, 28°.47N**±0°.08×**104°.70E**±0°.08**, h10**^{km}**, n33, σ1^{s}.26**/32**, mb4.1**/17**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENH	Enshi	4.55	66		Pn	06 39 47.5	+2.4
SLVN	Son La	7.14	186		Pn	06 40 22.4	+1.6
CMAR	Chiang Mai Arr	11.27	209	Pn	Pn	06 41 17.2	-0.2
	0.6nm,0.3s,baz=21,slow=12,SNR=1.4						
EVN	Everest	15.78	272	Pn	Pn	06 42 20.8	+1.7
TWG	Pinlang	15.79	107	P	Pn	06 42 20.1	+1.3
SONM	Songino Array	19.38	3	P	P	06 43 02.5	+0.2
SONM	Songino Array	19.38	3	P	P	06 43 01.4	-0.9
	0.3nm,0.3s,baz=188,slow=12,SNR=7.4						
	0.8nm,0.4s						
WMQ	Urumqi	20.52	323	*e*P	Pn	06 43 19.9	+3.2
TJN	Taejon	20.66	62	P	P	06 43 14.2	-1.9
KSRS	Korea Array	21.41	59	P	P	06 43 21.4	-2.7
	3.7nm,0.8s,baz=238,slow=11,SNR=12						
	3.7nm,0.8s						
MKAR	Makanchi Array	25.34	322		P	06 44 03.9	+0.6
MKAR	Makanchi Array	25.34	322	P	P	06 44 03.8	+0.5
	2.6nm,0.7s,baz=126,slow=10,SNR=20						
	2.6nm,0.7s						
MAKZ	Makanchi	25.52	322	P	P	06 44 02.8	-2.1
MAKZ				IAmb	IAmb	06 44 10.1	
	comp=Z,3.7nm,0.8s						
USRK	Ussuriysk Ar.	26.85	47	P	P	06 44 16.8	-0.1
USRK	Ussuriysk Ar.	26.85	47	P	P	06 44 16.6	-0.3
	comp=Z,5.0nm,0.6s,baz=233,slow=8.4,SNR=8.5						
	comp=Z,5.0nm,0.6s						
ZALV	Zalesovo Beam	29.32	336	P	P	06 44 38.5	-0.3
	comp=Z,1.4nm,0.6s,baz=139,slow=12,SNR=4.9						
	comp=Z,1.4nm,0.6s						
KURBB	Kurchatov Arra	29.68	325	P	P	06 44 42.8	+0.8
	comp=Z,1.3nm,0.2s,baz=130,slow=9.4,SNR=6.0						
	comp=Z,1.3nm,0.2s						
BVAR	Borovoye Array	35.20	324	P	P	06 45 30.7	+0.4
	comp=Z,0.6nm,0.4s,baz=125,slow=9.3,SNR=4.7						
	comp=Z,0.6nm,0.4s						
AB31	Akbulak array	39.84	314		P	06 46 10.9	+1.2
ABKAR	Akbulak array	39.84	314	P	P	06 46 10.9	+1.3
ABKAR	Akbulak array	39.84	314		P	06 46 11.0	+1.3
ABKAR				IAmb	IAmb	06 46 11.5	
	comp=Z,2.7nm,0.9s						
AKTO	Aktyubinsk	41.34	315	P	P	06 46 23.1	+1.0
	comp=Z,2.0nm,0.5s,baz=111,slow=16,SNR=5.8						
	comp=Z,2.0nm,0.5s						
MBWA	Marble Bar	51.43	162	P	P	06 47 41.1	-0.4
WB0	Warramunga Arr	55.88	146	P	P	06 48 13.4	-0.9
WB0				IAmb	IAmb	06 48 39.0	
	comp=Z,9.3nm,1.2s						
WRA	Warramunga Arr	56.00	146	P	P	06 48 14.1	-1.1
	comp=Z,2.7nm,0.7s,baz=317,slow=12,SNR=27						
	comp=Z,2.7nm,0.7s						
WR8	Warramunga Arr	56.09	146	P	P	06 48 15.1	-0.7
WR8				IAmb	IAmb	06 48 15.4	
	comp=Z,6.2nm,1.0s						
ASAR	Alice Springs	58.98	149	P	P	06 48 35.5	-0.6
	comp=Z,2.8nm,0.9s,baz=330,slow=6.8,SNR=17						
	comp=Z,2.8nm,0.9s						
AKASG	Malin Array Be	59.58	314	P	P	06 48 39.6	-0.3
	comp=Z,0.2nm,0.3s,baz=68,slow=7.3,SNR=4.4						
	comp=Z,0.2nm,0.3s						
ARCES	ARCESS Array B	59.87	336	P	P	06 48 41.4	-0.4
	comp=Z,3.2nm,0.9s,baz=82,slow=7.3,SNR=5.3						
ARCES				LR	LR	07 17 15.6	
	comp=Z,36nm,18.2s,baz=14,slow=39						
	comp=Z,3.2nm,0.9s						
FINES	FINESS Array B	60.05	327	P	P	06 48 42.8	-0.2
	comp=Z,1.6nm,0.7s,baz=104,slow=6.1,SNR=4.0						
	comp=Z,1.6nm,0.7s						
GERES	GERESS Array B	69.77	315	P	P	06 49 46.5	-0.2
	comp=Z,0.7nm,0.5s,baz=64,slow=3.1,SNR=4.0						
	comp=Z,0.7nm,0.5s						
QSPA	South Pole Qui	118.25	180	PKP	PKPdf	06 57 21.2	-1.8
	comp=Z,1.7nm,0.8s,baz=339,slow=0.9,SNR=8.9						
SNAA	Sanae	122.26	201	PKP	PKPdf	06 57 28.9	-1.6
	comp=Z,0.6nm,0.5s,baz=164,slow=7.5,SNR=12						

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*MOS **18** 06:41:07.5±0.9, 34°.26N×137°.89E, h300^{km}, mb4.4/20, Error ellipse: s-maj=11.5km s-min=5.7km az=111.3*

*NIED **18** 06:41:08.2, 34°.30N×137°.90E, h308^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.31; M$_{\theta\theta}$1.64; M$_{\phi\phi}$-1.33; M$_{r\theta}$-1.30; M$_{\theta\phi}$-0.35; M$_{\phi r}$-0.76; Fault plane solution: M$_0$2.15000×10^{15} NP1: φ$_s$321.00000°, δ44.00000°, λ-7.00000°. NP2: φ$_s$56.00000°, δ85.00000°, λ-134.00000°.*

*JMA **18** 06:41:08.2±0.1, 34°.3N±0°.8×137°.9E±0°.7, h308^{km}±1^{km}, MV3.7/81, ENSYUNADA*

JMA Felt I J1 at ENSYUNADA .

*IDC **18** 06:41:08.2±0.9, 34°.21N×137°.85E, h294^{km}±7^{km}, mb3.8/21, mbtmp4.4/27, Error ellipse: s-maj=14.9km s-min=10.6km az=77.0*

*NEIC **18** 06:41:09.2±0.9, 34°.29N±0°.08×137°.9E±0°.1, h302^{km}±7^{km}, mb4.1/35, Error ellipse: s-maj=12.0km s-min=11.1km az=99.0*

ISC 18 06:41:09.2±0.5**, 34°.34N**±0°.05×**137°.89E**±0°.04**, h300**^{km}±4^{km}**, n168, σ0^{s}.93**/192**, mb4.2**/47**, 10C-13D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTO5	TONANKAI O.B.S	0.17	237	⇓*e*P	Pn	06 41 47.8	+0.6
TTO5				⇓*e*S	S	06 42 18.2	+0.9
JSG	Sagara	0.41	37	Pn	Pn	06 41 47.7	+0.1
JSG	Sagara	0.41	37	*e*P	Pn	06 41 48.1	+0.5
JSG				*e*S	S	06 42 19.8	+1.7
JKKS	Kakegawashinom	0.41	11	*e*S	S	06 42 19.4	+1.3
TTO4	TONANKAI O.B.S	0.44	221	⇓P	Pn	06 41 48.1	+0.6
TTO4				⇓*e*S	S	06 42 18.6	+0.7
JHMK	Hamakita	0.48	347	P	Pn	06 41 48.0	+0.4
JHMK				*e*S	S	06 42 18.3	+0.2
HMMJ	Hamamatsu 2	0.53	345	P	Pn	06 41 48.3	+0.5
HMMJ				*e*S	S	06 42 18.8	+0.2
JIE	Ise	0.98	273	*i* P	Pn	06 41 49.8	+0.3
JIE				S	S	06 42 20.9	-0.6
JNY	Yasuok	1.01	359	*i* P	Pn	06 41 50.4	+0.7
JNY				*e*S	S	06 42 22.5	+0.6
JAO	Obara	1.06	331	*i* P	Pn	06 41 50.5	+0.6
JAO				S	S	06 42 22.8	+0.5
TTO1	TONANKAI O.B.S	1.17	232	⇓P	Pn	06 41 50.4	+0.3
INU	Inuyama	1.23	325		Pn	06 41 51.2	+0.5
INU	Inuyama	1.23	325	P	Pn	06 41 51.2	+0.5
JYN	Shimob	1.27	25	P	Pn	06 41 51.5	+0.4
JGF	Kuroka	1.33	341		Pn	06 41 51.8	+0.5
JGF	Kuroka	1.33	341	P	Pn	06 41 51.5	+0.2
JKN2	Miekihoku	1.34	266	*i* P	Pn	06 41 51.4	0.0
JKN2				S	S	06 42 24.1	-0.9
JOD2	Odawara 2	1.35	47	P	Pn	06 41 51.9	+0.5
JOD2				*e*S	S	06 42 25.5	+0.5
JEG	Eigenji	1.46	303	*i* P	Pn	06 41 52.7	+0.6
JEG				*e*S	S	06 42 26.4	+0.1
JYTA	Yamagatataniai	1.56	323	*i* P	Pn	06 41 53.3	+0.5
JYTA				S	S	06 42 28.4	+1.0
JRY	Ryogami san	1.86	26	*i* P	Pn	06 41 55.8	+0.8
JRY				*e*S	S	06 42 32.8	+1.5
JWY	Kouya	1.90	267	P	Pn	06 41 55.3	0.0
JTNC	Tanabenakahech	1.96	255	P	Pn	06 41 55.8	+0.1
JTNC				*e*S	S	06 42 31.4	-1.3
JHJ2	Mitsune	2.02	127		Pn	06 41 55.8	-0.5
JHJ2	Mitsune	2.02	127	P	Pn	06 41 55.7	-0.5
JHJ2	Mitsune	2.02	127	P	Pn	06 41 55.7	-0.5
BSO4	Boso 4	2.12	72	P	Pn	06 41 56.8	0.0
BSO4				*e*S	S	06 42 34.5	-0.3
MAJO	Matsushiro	2.21	7		Pn	06 41 58.5	+0.8
MAJO	Matsushiro	2.21	7	P	Pn	06 41 58.0	+0.4
MAJO	Matsushiro	2.21	7*c*	*i*P	Pn	06 41 58.1	+0.4
MAT	Matsushiro	2.21	7	*i* P	Pn	06 41 58.1	+0.5
MAT				*e*S	S	06 42 36.0	-0.3
MJAR	Matsushiro Arr	2.21	7	P	Pn	06 41 58.0	+0.4
	408nm,0.7s,baz=188,slow=9.3,SNR=690						
MJAR				S	S	06 42 36.2	0.0
	19nm,0.5s,baz=202,slow=24,SNR=0.9						
BSO3	Boso 3	2.21	77	⇓*i*P	Pn	06 41 56.8	-0.6
BSO3				⇓S	S	06 42 35.6	-0.2
MJB9	Matsu-Tunnel	2.21	7		Pn	06 41 59.4	+1.7
JWT	Wachi	2.25	295	*i* P	Pn	06 41 58.2	+0.2
JWT				S	S	06 42 35.7	-1.2
JKG	Kaga	2.31	327	P	Pn	06 41 59.0	+0.5
JKG				*e*S	S	06 42 37.9	+0.1
JAG	Ashikaga	2.44	31	*i* P	Pn	06 41 59.1	-0.5
JAG				*e*S	S	06 42 37.9	-2.0
JAOM	Aogashimamukai	2.44	140	*e*P	Pn	06 41 59.2	-0.6
BSO1	Boso 1	2.57	82	*i* P	Pn	06 41 59.4	-0.8
BSO1				S	S	06 42 41.3	+0.2
JYT	Yasato	2.66	44	*i* P	Pn	06 42 00.8	-0.8
JYT				S	S	06 42 40.6	-2.9
JAI	Aioi	2.91	260	*e*P	Pn	06 42 03.3	-0.7
JSZ	Suzu	3.13	352	*i* P	Pn	06 42 06.6	+0.5
JHO	Hitachi	3.15	43	*i* P	Pn	06 42 05.8	-0.6
JHO				S	S	06 42 49.1	-2.9
JMN	Monobe	3.38	261		Pn	06 42 08.6	-0.3
JMN	Monobe	3.38	261	P	Pn	06 42 08.5	-0.5
JMN	Monobe	3.38	261	⇓*e*P	Pn	06 42 08.4	-0.5
JMN				⇓*e*S	S	06 42 54.9	-1.7
JSD	Sado	3.70	5	P	Pn	06 42 12.4	+0.3
JMM	Marumori	4.23	33		Pn	06 42 18.0	+0.1
JMM	Marumori	4.23	33	P	Pn	06 42 17.8	-0.1
JNU	Nakatsue	5.97	260	Pn	Pn	06 42 38.0	-0.2
JNU	Nakatsue	5.97	260	P	Pn	06 42 37.0	-1.2
	6.3nm,0.6s,baz=84,slow=4.4,SNR=5.8						
JTM	Tenmabayashi	6.91	20		Pn	06 42 49.3	0.0
JTM	Tenmabayashi	6.91	20	P	Pn	06 42 49.4	0.0
KSRS	Korea Array	8.66	294	P	Pn	06 43 10.8	0.0
	14nm,0.7s,baz=109,slow=13,SNR=40						
KSAR	Wonju Array Be	8.69	294		Pn	06 43 11.1	0.0
KSAR	Wonju Array Be	8.69	294	P	Pn	06 43 11.1	0.0
ERM	Erimo	8.71	27		Pn	06 43 10.2	-1.1
ERM	Erimo	8.71	27	P	Pn	06 43 11.0	-0.3
ERM	Erimo	8.71	27*c*	*i*P	Pn	06 43 10.3	-1.0
ERM				pmax	pmax		
	comp=Z,47nm,0.8s						
JEM	Erimo	8.71	27	P	Pn	06 43 11.0	-0.3
KS19	Wonju Array Si	8.72	294		Pn	06 43 11.6	+0.1
TJN	Taejon	8.83	286		Pn	06 43 13.1	+0.2
TJN	Taejon	8.83	286	*i* P	Pn	06 43 12.6	-0.3
ASAJ	Asahikawa	10.42	19	P	Pn	06 43 32.0	-0.3
	comp=Z,13nm,0.3s,baz=242,slow=14,SNR=5.2						
TEY	Ternei	10.72	355	*e*P	Pn	06 43 36.5	+0.5
USA0B	Ussuriysk Arra	10.85	337	Pn	Pn	06 43 38.4	+0.8
USA0B	Ussuriysk Arra	10.85	337	P	Pn	06 43 38.4	+0.8
USRK	Ussuriysk Ar.	10.85	337	P	Pn	06 43 37.8	+0.2
	comp=Z,2.5nm,0.5s,baz=154,slow=12,SNR=5.4						
YSS	Yuzhno-Sakhali	13.12	15		Pn	06 44 04.7	-0.4
YSS	Yuzhno-Sakhali	13.12	15	⇑*e*P	P	06 44 05.4	+0.1
YSS				*e*S	S	06 46 25.5	-4.6
YSS				pmax	pmax		
	comp=Z,60nm,0.8s						
YSS				smax	smax		
	comp=N,30nm,1.0s						
BNX	BinXian	13.91	328	⇓P	P	06 44 14.3	+0.2
BNX				pmax	pmax		
	comp=Z,67nm,0.7s						
KLR	Kul'dur	15.55	345	P	P	06 44 32.3	+0.2
	comp=Z,2.2nm,0.5s,baz=145,slow=10,SNR=6.7						
KLR	Kul'dur	15.55	345	*i* P	P	06 44 32.0	-0.1
TIA	Tai'an	17.06	282	P	P	06 44 48.5	-0.2
TIA				pmax	pmax		
	comp=Z,31nm,0.7s						
XLT	XiLinHaoTe	19.38	306	*e*P	P	06 45 10.0	-3.5
XLT				sP	sP	06 46 32.3	-4.8
XLT				pmax	pmax		
	comp=Z,12nm,0.5s						
XLT				pmax	pmax		
	comp=Z,61nm,4.7s						
HIA	Hailar	20.05	323		P	06 45 19.3	-1.2
HIA	Hailar	20.05	323	P	P	06 45 19.3	-1.2
HIA				pmax	pmax		
	comp=Z,20nm,0.9s						
ZEA	Zeya	20.80	342	*e*P	P	06 45 28.4	+0.6
ZEA				pmax	pmax		
	comp=N,20nm,0.3s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.6s						
HHC	Hu-ho-hao-te	21.80	295	*e*P	P	06 45 37.6	+0.2
HHC				pmax	pmax		
	comp=Z,30nm,0.6s						
HHC				pmax	pmax		
	comp=Z,98nm,4.6s						
XAN	Xi'an	23.93	278	P	P	06 45 55.5	-1.3
XAN				pmax	pmax		
	comp=Z,19nm,0.7s						
ENH	Enshi	24.31	268	P	P	06 45 58.6	-1.6
MA2	Magadan	26.63	15	⇑*e*P	P	06 46 19.2	-1.3
MA2				pmax	pmax		
	comp=Z,9.0nm,1.4s						

ULN	Ulaanbaatar	26.67	310		P	06 46 21.2	0.0
ULN				IAmb	IAmb	06 46 23.8	
	comp=Z,10nm,0.7s						
ULN	Ulaanbaatar	26.67	310	eP	P	06 46 22.4	+1.1
ULN				pmax	pmax		
	comp=Z,11nm,0.7s						
SONM	Songino Array	27.08	309		P	06 46 25.5	+0.7
SONM				IAmb	IAmb	06 46 27.4	
	comp=Z,8.3nm,0.8s						
SONM	Songino Array	27.08	309	P	P	06 46 25.9	+1.0
	comp=Z,7.4nm,0.6s,baz=112,slow=8.7,SNR=34						
	comp=Z,7.4nm,0.6s						
PZH	PanZhiHua	32.01	266	P	P	06 47 09.3	+0.9
TIXI	Tiksi	37.67	355	P	P	06 47 56.2	+0.5
TIXI				IAmb	IAmb	06 47 56.8	
	comp=Z,4.0nm,0.9s						
TIXI	Tiksi	37.67	355	P	P	06 47 56.2	+0.5
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ZALV	Zalesovo Beam	41.68	315		P	06 48 29.2	+0.4
ZALV	Zalesovo Beam	41.68	315	P	P	06 48 28.4	-0.4
	comp=Z,1.9nm,0.3s,baz=108,slow=9.5,SNR=8.5						
ZALV				PcP	PcP	06 50 18.7	-0.4
	comp=Z,3.8nm,0.6s,baz=78,slow=2.6,SNR=11						
	comp=Z,1.9nm,0.3s						
ZALV	Zalesovo Beam	41.68	315	P	P	06 48 29.2	+0.4
MK31	Makanchi Array	43.18	304	d iP	P	06 48 41.0	+0.1
MKAR	Makanchi Array	43.18	304	P	P	06 48 41.1	+0.2
	comp=Z,5.7nm,0.5s,baz=86,slow=10,SNR=68						
MKAR				PcP	PcP	06 50 23.8	-0.6
	comp=Z,0.6nm,0.7s,baz=72,slow=5.5,SNR=3.7						
	comp=Z,5.7nm,0.5s						
MKAR	Makanchi Array	43.18	304	i P	P	06 48 41.0	+0.1
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.4s						
MAKZ	Makanchi	43.39	304		P	06 48 43.0	+0.3
MAKZ				IAmb	IAmb	06 48 43.7	
	comp=Z,7.8nm,0.8s						
MAKZ	Makanchi	43.39	304	P	P	06 48 43.0	+0.3
MAKZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KURK	Kurchatov	45.39	310		P	06 48 58.2	-0.1
KURK	Kurchatov	45.39	310	ceP	P	06 48 57.7	-0.5
KURK				pmax	pmax		
	comp=Z,14nm,1.0s						
KURBB	Kurchatov Arra	45.45	310	P	P	06 48 58.2	-0.5
	comp=Z,5.0nm,0.6s,baz=88,slow=7.7,SNR=7.6						
	comp=Z,5.0nm,0.6s						
TARG	Taragay, Kyrgy	47.06	298	IAmb	IAmb	06 49 13.0	
	comp=Z,5.4nm,0.8s						
TARG	Taragay, Kyrgy	47.06	298	P	P	06 49 12.2	+0.4
KDJ	Kajisay	47.43	298	IAmb	IAmb	06 49 15.2	
	comp=Z,3.2nm,0.6s						
COEN	Coen	48.30	173	P	P	06 49 20.5	-0.5
COEN				IAmb	IAmb	06 49 58.9	
	comp=Z,22nm,1.4s						
C19K	Lookout Ridge	48.61	25	P	P	06 49 21.1	-1.6
D19K	Kuna River	49.02	26	P	P	06 49 25.4	-0.4
D19K				IAmb	IAmb	06 49 28.5	
	comp=Z,5.9nm,0.8s						
AAK	Ala-Archa	49.27	299	eP	P	06 49 27.2	-1.1
BVAR	Borovoye Array	50.30	314	P	P	06 49 35.6	0.0
	comp=Z,2.1nm,0.5s,baz=94,slow=8.0,SNR=10						
BVAR				PcP	PcP	06 50 49.5	-0.1
	comp=Z,4.0nm,0.5s,baz=89,slow=3.2,SNR=11						
BVAR				ScP	ScP	06 54 16.2	+0.1
	comp=Z,1.2nm,0.9s,baz=90,slow=4.4,SNR=3.9						
	comp=Z,2.1nm,0.5s						
BRVK	Borovoye	50.36	314	⇑iP	P	06 49 35.5	-0.5
KNRA	Kununurra	50.49	191		P	06 49 36.1	-1.3
KDAK	Kodiak Island	51.01	40	P	P	06 49 42.0	+1.3
KDAK				IAmb	IAmb	06 50 04.7	
	comp=Z,19nm,1.4s						
KDAK	Kodiak Island	51.01	40	P	P	06 49 42.0	+1.3
KDAK				pmax	pmax		
	comp=Z,19nm,1.4s						
KK31	Karatay Array	52.01	301	IAmb	IAmb	06 49 49.2	
	comp=Z,8.9nm,0.9s						
KKAR	Karatay Array	52.01	301		P	06 49 48.3	-0.1
KKAR	Karatay Array	52.01	301	P	P	06 49 48.3	-0.1
ILAR	Eielson Array	53.29	31	P	P	06 49 58.3	+1.0
	comp=Z,0.6nm,0.7s,baz=272,slow=6.4,SNR=7.4						
	comp=Z,0.6nm,0.7s						
WB0	Warramunga Arr	53.91	184	IAmb	IAmb	06 50 01.4	
	comp=Z,6.9nm,0.8s						
WRA	Warramunga Arr	54.09	184		P	06 50 01.4	-2.3
WRA	Warramunga Arr	54.09	184	P	P	06 50 01.9	-1.7
	comp=Z,4.5nm,0.5s,baz=0.0,slow=7.7,SNR=41						
	comp=Z,4.5nm,0.5s						
WRA	Warramunga Arr	54.09	184	i P	P	06 50 02.0	-1.7
WRA				pmax	pmax		
	comp=Z,4.0nm,0.3s						
WR8	Warramunga Arr	54.09	184		P	06 50 02.3	-1.4
WR8				IAmb	IAmb	06 50 02.7	
	comp=Z,9.2nm,0.7s						
SIMJ	Simiganj	54.35	296		P	06 50 05.1	-0.6
SIMJ				IAmb	IAmb	06 50 06.0	
	comp=Z,8.0nm,0.8s						
DZET	Dzherino	54.44	296	P	P	06 50 06.1	-0.1
DZET				pmax	pmax		
	comp=Z,27nm,0.5s						
SCRK	Sand Creek	54.61	32	P	P	06 50 07.7	+0.7
J26L	Joseph Creek	54.74	31	IAmb	IAmb	06 50 08.1	
	comp=Z,4.3nm,1.1s						
ARTI	Arti	56.59	319		P	06 50 21.1	+0.1
ARTI	Arti	56.59	319	P	P	06 50 21.0	0.0
	comp=Z,8.5nm,0.6s,baz=81,slow=3.6,SNR=12						
	comp=Z,8.5nm,0.6s						
ARTI	Arti	56.59	319	c iP	P	06 50 20.8	-0.2
ARTI						06 51 12.2	
ARTI				*PP	pP	06 51 25.8	-0.2
ARTI						06 52 29.4	
ARTI				S	S	06 57 51.0	+2.4
ARTI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
EPYK	Eagle Plains	57.27	29	IAmb	IAmb	06 50 28.6	
	comp=Z,6.8nm,1.0s						
AB31	Akbulak array	57.49	311	IAmb	IAmb	06 50 27.9	
	comp=Z,5.0nm,0.6s						
ABKAR	Akbulak array	57.49	311		P	06 50 27.4	0.0
ABKAR	Akbulak array	57.49	311	IAmb	IAmb	06 50 27.9	
	comp=Z,5.1nm,0.6s						
ASAR	Alice Springs	57.81	184	P	P	06 50 28.4	-1.4
	comp=Z,2.0nm,0.4s,baz=0.4,slow=4.5,SNR=38						
	comp=Z,2.0nm,0.4s						
AKTO	Aktyubinsk	58.35	312	P	P	06 50 33.2	0.0
	comp=Z,5.3nm,0.6s,baz=70,slow=11,SNR=11						
	comp=Z,5.3nm,0.6s						
KIRV	Kirov	60.66	323	ceP	P	06 50 49.1	+0.3
ARCES	ARCESS Array B	65.49	339	P	P	06 51 20.7	+0.5
	comp=Z,3.1nm,0.6s,baz=65,slow=8.7,SNR=25						
	comp=Z,3.1nm,0.6s						
RES	Resolute Bay	65.90	13	P	P	06 51 23.6	+1.0
FINES	FINESS Array B	69.83	332	P	P	06 51 47.3	+0.1
	comp=Z,5.4nm,0.5s,baz=68,slow=5.4,SNR=49						
	comp=Z,5.4nm,0.5s						
KBZ	Khabaz	70.45	310	P	P	06 51 51.3	0.0
	comp=Z,5.8nm,0.9s,baz=102,slow=2.2,SNR=8.2						
	comp=Z,5.8nm,0.9s						
KBZ	Khabaz	70.45	310	ceP	P	06 51 52.0	+0.7
KBZ				e*PP	pP	06 53 00.1	+0.9
KBZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KIV	Kislovodsk	70.47	310	i P	P	06 51 50.4	-1.2
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SUMG	Summit	73.34	359		P	06 52 09.9	+1.5
SUMG	Summit	73.34	359	P	P	06 52 09.9	+1.5
SUMG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AKASG	Malin Array Be	74.63	321	P	P	06 52 15.3	-0.4
	comp=Z,1.7nm,0.4s,baz=52,slow=6.4,SNR=14						
	comp=Z,1.7nm,0.4s						
AKBB	Malin Array Si	74.63	321	IAmb	IAmb	06 52 15.7	
	comp=Z,3.7nm,0.6s						
AKBB	Malin Array Si	74.63	321	d iP	P	06 52 15.2	-0.5
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KIEV	Kiev	74.64	321	P	P	06 52 15.5	-0.2
KIEV				IAmb	IAmb	06 52 15.7	
	comp=Z,3.3nm,0.6s						
KIEV	Kiev	74.64	321	P	P	06 52 15.5	-0.2
KIEV				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HFS	Hagfors	75.32	335	P	P	06 52 19.4	0.0
	comp=Z,2.5nm,0.5s,baz=101,slow=3.0,SNR=14						
	comp=Z,2.5nm,0.5s						
NC204	NORSAR Array S	75.50	337	P	P	06 52 20.4	-0.1
NB2	NORSAR Subarra	75.52	336	P	P	06 52 20.4	-0.2
	comp=Z,1.7nm,0.5s,baz=43,slow=5.6						
NB2	NORSAR Subarra	75.52	336	P	P	06 52 20.8	+0.1
NOA	NORSAR Array B	75.52	336	P	P	06 52 20.7	+0.1
	comp=Z,2.0nm,0.5s,baz=43,slow=5.7,SNR=13						
	comp=Z,2.0nm,0.5s						
BR131	Keskin Array S	78.44	310	d iP	P	06 52 38.0	+0.7
BRTR	Keskin Array B	78.44	310	P	P	06 52 37.8	+0.5
	comp=Z,1.9nm,0.8s,baz=100,slow=5.1,SNR=9.6						
	comp=Z,1.9nm,0.8s						
NVAR	Mina Array Bea	78.90	51	P	P	06 52 41.2	+1.3
	comp=Z,0.3nm,0.6s,baz=333,slow=6.1,SNR=3.0						
	comp=Z,0.3nm,0.6s						
STHS	Stebnicka Huta	79.46	324	eP	P	06 52 44.2	+1.7
STHS	Stebnicka Huta	79.46	324	eP	P	06 52 44.2	+1.7
VYHS	Vyhne	81.25	324	eP	P	06 52 53.1	+1.1
VYHS	Vyhne	81.25	324	eP	P	06 52 53.1	+1.1
CLL	Collm	81.94	329	i P	P	06 52 55.5	0.0
CLL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CLL	Collm	81.94	329	i P	P	06 52 55.5	0.0
	comp=Z,4.0nm,1.0s						
MODS	Modra-Piesok	82.09	325	eP	P	06 52 57.6	+1.2
MODS	Modra-Piesok	82.09	325	eP	P	06 52 57.6	+1.2
KHC	Kasperske Hory	83.28	327	ceP	P	06 53 03.4	+0.9
KHC				pmax	pmax		
	comp=Z,9.0nm,2.5s						
GERES	GERESS Array B	83.43	327	P	P	06 53 03.5	+0.2
	comp=Z,2.1nm,0.7s,baz=46,slow=3.9,SNR=10						
	comp=Z,2.1nm,0.7s						
EKA	Eskdalemuir Ar	84.65	339	P	P	06 53 09.4	+0.2
	comp=Z,0.6nm,0.5s,baz=42,slow=4.9,SNR=5.1						
	comp=Z,0.6nm,0.5s						
TXAR	Lajitas Array	94.04	50	P	P	06 53 54.3	+0.4
	comp=Z,0.3nm,0.7s,baz=264,slow=2.7,SNR=5.0						
	comp=Z,0.3nm,0.7s						

CATAC 18 06:41:18.9±0.8,**13°N**±5°×**8°9W**±°,**h27**^{km}±5^{km},**M2.4**/11, **MLv2.4**/11,**Error ellipse: s-maj=10.3km s-min=4.4km az=15.6,confirmed,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALJI	Alcalda de J	0.59	39	P	Pn	06 41 31.3	-0.3
ALJI	Alcalda de J	0.59	39	S	Sn	06 41 40.9	+0.7
TECO	Alcaldia de Te	0.69	14	P	Pb	06 41 32.5	+0.1
TECO	Alcaldia de Te	0.69	14	S	Sn	06 41 42.8	0.0
UESV	Universidad de	0.78	12	P	Pb	06 41 34.0	+0.1
UESV	Universidad de	0.78	12	S	Sn	06 41 45.4	+0.3
LOMA	Loma Larga	0.80	344	S	Sn	06 41 46.0	+0.3
LOMA	Loma Larga	0.80	344	P	Pn	06 41 34.7	+0.1
PQSS	Presa 15 de Se	0.84	27	P	Pn	06 41 35.2	+0.2
PQSS	Presa 15 de Se	0.84	27	S	Sn	06 41 47.5	+1.0
PACA	Pacayal	0.85	45	S	Sn	06 41 47.6	+0.5
PACA	Pacayal	0.85	45	P	Pb	06 41 35.2	-0.1
SCLA	Alcaldia de Sa	0.86	15	P	Pn	06 41 35.5	+0.2
SCLA	Alcaldia de Sa	0.86	15	S	Sn	06 41 48.1	+1.1
PMON	Piamonte	0.91	337	P	Pn	06 41 36.1	0.0
PMON	Piamonte	0.91	337	S	Sn	06 41 48.5	+0.1
JAYA	Jayaque - finc	0.92	328	S	Sb	06 41 48.1	-0.3
JAYA	Jayaque - finc	0.92	328	P	Pn	06 41 36.1	-0.1
LCND	La Caada	1.12	67	P	Pn	06 41 38.2	-0.6
LCND	La Caada	1.12	67	S	Sb	06 41 53.9	0.0
CNCH	Conchagua	1.16	69	P	Pb	06 41 40.1	-0.4
NUBE	Las Nubes	1.31	322	P	Pn	06 41 41.6	+0.1
NUBE	Las Nubes	1.31	322	S	Sn	06 41 58.6	+0.3
TGUH	Tegucigalpa,Un	2.02	54	P	Pn	06 41 51.0	-0.3

STR 18 06:51:07.9±0.6,**48°N**±2°×°±°,**h0**^{km},**MLv1.4**/5,**Error ellipse: s-maj=0.0km s-min=0.0km az=64.5,preliminary, Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OPP	Oppenau	0.35	285	Sg	Sg	06 51 19.0	-0.1
OPP	Oppenau	0.35	285	Pg	Pg	06 51 14.5	-0.1
GUT	Gutenstein	0.44	140	Pg	Pg	06 51 16.3	+0.1
GUT	Gutenstein	0.44	140	Sg	Sg	06 51 22.2	+0.2
BABA	Baden-Baden-Ne	0.46	313	Pg	Pg	06 51 16.3	-0.3
BABA	Baden-Baden-Ne	0.46	313	Sg	Sg	06 51 22.6	+0.1
SLE	Schleitheim	0.66	192	Pg	Pg	06 51 21.0	+0.5
SLE	Schleitheim	0.66	192	Sg	Sg	06 51 29.5	+0.6
KIZ	Kirchzarten	0.69	229	Pg	Pg	06 51 21.0	-0.1
KIZ	Kirchzarten	0.69	229	Sg	Sg	06 51 30.9	+0.9
LEMB	Lembach	0.88	316	Pg	Pg	06 51 25.0	+0.3
LEMB				Sg	Sg	06 51 37.0	+0.8
WLS	Welschbruch	0.89	271	Pg	Pg	06 51 24.8	-0.2
WLS				Sg	Sb	06 51 37.7	-1.1
SULZ	Cheisacher	0.96	204	Pg	Pg	06 51 26.1	-0.2
SULZ	Cheisacher	0.96	204	Sg	Sg	06 51 39.1	+0.4
KTD	Kalmit	1.00	336	Pg	Pg	06 51 27.0	0.0
KTD	Kalmit	1.00	336	Sg	Sg	06 51 40.8	+0.8
ECH	Echery	1.04	260	Pg	Pg	06 51 27.3	-0.5
ECH				Sg	Sg	06 51 41.9	+0.5

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*IDC **18** 06:55:59.4±0.8,30°.86S×177°.43W,h0^{km},mb4.0/9, mbtmp4.0/9,MS3.6/5,Error ellipse: s-maj=26.1km s-min=23.1km az=13.0*

*NEIC **18** 06:56:02.1±0.8,30°.74S±0°.07×177°.41W±0°.09,h10^{km}±2^{km}, mb4.6/9,Error ellipse: s-maj=15.4km s-min=10.1km az=48.0*

ISC 18 06:56:03.5±0.6,**30°.85S**±0°.07×**177°.5W**±0°.1,**h27**^{km},**n33**, σ**1^{s}36**/30,**mb4.2**/13,**MS3.7**/3,**Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.64	346		Pn	06 56 29.6	-0.9
URZ	Urewera	8.64	210	Pn	Pn	06 58 03.0	-3.7
URZ				Sn	Sn	06 59 40.4	-2.8
	2.5nm,0.3s,baz=345,slow=23,SNR=10.0						
HIZ	Hauiti	9.92	217	Pn	Pn	06 58 27.1	+2.9
BFZ	Birch Farm	11.06	206	Pn	Pn	06 58 41.1	+1.2
MSVF	Nonsavu	13.68	342	Pn	Pn	06 59 14.2	-1.6
MSVF	Nonsavu	13.68	342	LR	LR	07 03 08.4	
	comp=Z,121nm,19.1s,baz=159,slow=31						
DZM	Mont Dzumac	16.84	297	Pn	P	07 00 00.2	+0.7
	0.2nm,0.3s,baz=135,slow=11,SNR=6.4						
RAR	Rarotonga	18.55	63	LR	LR	07 06 08.5	
	comp=Z,115nm,22.0s,baz=248,slow=33						
PPT	Papeete	28.57	69	LR	LR	07 12 57.1	
	comp=Z,100nm,18.3s,baz=251,slow=36						
CTAO	Charters Tower	34.33	279	P	P	07 02 48.5	+0.5
CTAO				IAmb	IAmb	07 03 11.4	
	comp=Z,8.2nm,1.1s						
STKA	Stephens Creek	34.83	257	P	P	07 02 53.5	+1.2
STKA	Stephens Creek	34.83	257	P	P	07 02 51.9	-0.4
	comp=Z,5.0nm,0.8s,baz=85,slow=7.6,SNR=5.7						
STKA				LR	LR	07 14 23.4	
	comp=Z,139nm,19.6s,baz=139,slow=32						
	comp=Z,5.0nm,0.8s						
BBOO	Buckleboo	39.29	255	P	P	07 03 31.5	+1.3
ASAR	Alice Springs	43.55	267	P	P	07 04 05.8	+0.6
ASAR	Alice Springs	43.55	267	P	P	07 04 06.2	+0.9
	comp=Z,1.4nm,0.6s,baz=103,slow=7.5,SNR=12						
	comp=Z,1.4nm,0.6s						
WR8	Warramunga Arr	44.43	272	P	P	07 04 11.7	-0.7
WR8				IAmb	IAmb	07 04 16.3	
	comp=Z,5.5nm,1.0s						
WRA	Warramunga Arr	44.58	272	P	P	07 04 14.3	+0.8
WRA	Warramunga Arr	44.58	272	P	P	07 04 13.0	-0.5
	comp=Z,2.4nm,0.6s,baz=110,slow=8.0,SNR=18						
	comp=Z,2.4nm,0.6s						
WB0	Warramunga Arr	44.60	273	P	P	07 04 13.9	+0.2
WB0				IAmb	IAmb	07 04 19.3	
	comp=Z,7.5nm,1.1s						
VNDA	Vanda	47.70	186	P	P	07 04 37.1	-0.2
	comp=Z,0.5nm,0.7s,baz=21,slow=4.6,SNR=2.3						
	comp=Z,0.5nm,0.7s						
KNRA	Kununurra	51.20	274	P	P	07 05 04.9	+0.1
KNRA				IAmb	IAmb	07 05 06.3	
	comp=Z,20nm,1.4s						
FITZ	Fitzroy Crossi	52.82	270	P	P	07 05 17.4	+0.6
FITZ	Fitzroy Crossi	52.82	270	LR	LR	07 26 56.4	
	comp=Z,140nm,19.1s,baz=108,slow=35						
QSPA	South Pole Qui	59.27	180	P	P	07 06 04.5	+2.0
QSPA				IAmb	IAmb	07 06 39.9	
	comp=Z,4.5nm,0.9s						
QSPA	South Pole Qui	59.27	180	P	P	07 06 03.1	+0.7
	comp=Z,1.1nm,0.7s,baz=20,slow=2.3,SNR=17						
	comp=Z,1.1nm,0.7s						
SNAA	Sanae	77.70	178	P	P	07 07 57.4	0.0
	comp=Z,0.7nm,0.6s,baz=175,slow=11,SNR=2.5						
	comp=Z,0.7nm,0.6s						
PLCA	Paso Flores	81.86	133	P	P	07 08 19.5	-1.1
	comp=Z,1.3nm,0.7s,baz=244,slow=6.4,SNR=4.5						
	comp=Z,1.3nm,0.7s						
NVAR	Mina Array Bea	88.25	42	P	P	07 08 53.2	+0.7
	comp=Z,0.5nm,0.8s,baz=216,slow=7.3,SNR=4.2						
	comp=Z,0.5nm,0.8s						
TXAR	Lajitas Array	92.24	57	P	P	07 09 11.9	+0.7
	comp=Z,0.2nm,0.7s,baz=11,slow=2.6,SNR=3.7						
	comp=Z,0.2nm,0.7s						
FINES	FINESS Array B	145.72	340	PKPbc	PKPdf	07 15 38.6	-0.1
	comp=Z,3.4nm,0.4s,baz=69,slow=3.4,SNR=19						
NB2	NORSAR Subarra	149.26	352	PKP	PKPbc	07 15 49.3	+0.3
	comp=Z,1.0nm,0.7s,baz=18,slow=4.4						
HFS	Hagfors	149.77	349	PKPbc	PKiKP	07 15 51.5	+0.3
	comp=Z,1.6nm,0.6s,baz=323,slow=3.6,SNR=3.0						
AKASG	Malin Array Be	151.94	323	PKPbc	PKPbc	07 15 54.6	-1.0
	comp=Z,1.0nm,0.5s,baz=52,slow=2.4,SNR=5.7						

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*IDC **18** 07:09:23.4±2.1,30°.43S×177°.49W,h0^{km},mb3.9/4, mbtmp3.9/4,Error ellipse: s-maj=56.1km s-min=37.1km az=39.0*

ISC 18 07:09:28.7±1.8,**30°.7S**±0°.1×**177°.6W**±0°.3,**h33**^{km},**n6**, σ**1^{s}77**/7,**mb4.0**/4,**Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	8.71	209	Pn	Pn	07 11 30.1	-2.3
	baz=142,slow=8.1						
URZ				Sn	Sn	07 13 10.5	+1.2
	1.6nm,0.3s,baz=159,slow=22,SNR=11						
STKA	Stephens Creek	34.77	257	P	P	07 16 17.8	+1.6
	1.7nm,0.4s,baz=101,slow=11,SNR=3.3						
	1.7nm,0.4s						
ASAR	Alice Springs	43.46	267	P	P	07 17 28.6	-0.3
	0.3nm,0.4s,baz=106,slow=7.0,SNR=4.7						
	0.3nm,0.4s						
WRA	Warramunga Arr	44.48	272	P	P	07 17 36.5	-0.7
	2.6nm,1.0s,baz=112,slow=7.7,SNR=7.7						
	2.6nm,1.0s						
QSPA	South Pole Qui	59.39	180	P	P	07 19 29.1	+1.4
	0.8nm,0.7s,baz=51,slow=4.0,SNR=6.4						
	0.8nm,0.7s						
FINES	FINESS Array B	145.57	340	PKPbc	PKPdf	07 29 01.8	-1.0
	1.9nm,0.8s,baz=64,slow=4.4,SNR=5.2						

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*GCG **18** 07:13:46.7±0.6,14°.27N×91°.32W,h74^{km}±8^{km},MD4.0, ML3.4*

*CATAC **18** 07:13:46.3±1.0,14°N±5°×9°1W±°,h29^{km}±6^{km},M3.2/6, MLv3.2/6,Error ellipse: s-maj=12.8km s-min=5.2km az=26.9,confirmed*

ISC 18 07:13:47.8±1.7,**14°.5N**±0°.2×**91°.19W**±0°.10,**h81**^{km}±11^{km}, **n17**,σ**2^{s}05**/22,**1D,Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG8	El Palmar, Qui	0.16	271	eP	Pn	07 14 00.7	+0.8
STG8				i S	Sn	07 14 11.3	+2.6
STG8				IAML		07 14 12.9	
	comp=E,2µm,0.3s						
ESSG	Sabana Grande	0.35	100	i P	Pn	07 13 59.9	-0.6
ESSG				i S	Sn	07 14 10.1	0.0
SOKI	Kika Raxquin	0.42	331	eP	Pn	07 14 02.2	+0.7
SOKI				i S	Sn	07 14 13.8	+2.2
SOKI				IAML		07 14 14.4	
	comp=N,1µm,0.7s						
FG8	Yepocapa, Chim	0.64	107	i P	Pn	07 13 59.7	-3.3
FG16	Alotenango, Sa	0.68	105	eP	Pn	07 14 00.4	-3.1
FG16				i S	Sn	07 14 11.5	-3.8
FG16				IAML		07 14 15.8	
	comp=N,4µm,0.3s						
SMCA	Catarina	0.95	295	i P	Pn	07 14 04.7	-1.6
THIG		1.14	294	i P	Pn	07 14 07.2	-1.3
THIG				i S	Sn	07 14 23.1	-1.0
THIG				IAML		07 14 26.1	
	comp=N,378nm,0.6s						
FAME	Alcaldia de Sa	1.29	118	P	Pn	07 14 09.9	-0.5
SLOZ	Alcaldia de Sa	1.43	107	S	Sn	07 14 33.4	+2.7
NUBE	Las Nubes	1.47	111	⇓iP	Pn	07 14 12.7	-0.2
NUBE	Las Nubes	1.47	111	P	Pn	07 14 13.2	+0.4
NUBE	Las Nubes	1.47	111	S	Sn	07 14 31.3	-0.6
JAYA	Jayaque - finc	1.86	115	i P	Pn	07 14 17.9	-0.1
JAYA	Jayaque - finc	1.86	115	S	Sn	07 14 42.3	+1.2
JAYA	Jayaque - finc	1.86	115	P	Pn	07 14 17.8	-0.3
PMON	Piamonte	1.96	112	P	Pn	07 14 19.8	+0.5
PMON	Piamonte	1.96	112	S	Sn	07 14 46.6	+3.4

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*IDC **18** 07:15:22.8±1.2,13°.16N×143°.34E,h191^{km}±11^{km},mb3.6/9, mbtmp4.1/9,Error ellipse: s-maj=24.0km s-min=13.2km az=93.0*

*NEIC **18** 07:15:24.3±1.8,13°.1N±0°.1×143°.4E±0°.1,h187^{km}±9^{km}, mb4.0/10,Error ellipse: s-maj=23.8km s-min=15.0km az=129.0*

ISC 18 07:15:23.7±0.7,**13°.1N**±0°.1×**143°.5E**±0°.1,**h200**^{km},**n23**, σ**1^{s}34**/25,**mb3.9**/14,**South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.46	69		Pn	07 15 57.1	+0.1
GUMO				Sn	Sn	07 16 19.5	-3.4
GUMO	Guam	1.46	69	P	Pn	07 15 57.1	+0.1
	356nm,0.4s,baz=192,slow=7.9,SNR=14						
GUMO				S	Sn	07 16 21.8	-1.1
	342nm,0.3s,baz=13,slow=23,SNR=7.8						
FAKI	Fak Fak	19.41	216	P	Pn	07 19 37.5	-0.9
WB0	Warramunga Arr	33.84	195	P	P	07 21 47.0	-0.3
WB0				IAmb	IAmb	07 21 47.3	
	comp=Z,3.9nm,0.9s						
WRA	Warramunga Arr	34.02	195	P	P	07 21 48.3	-0.6
WRA	Warramunga Arr	34.02	195	P	P	07 21 48.4	-0.5
	comp=Z,1.2nm,0.6s,baz=6.9,slow=9.5,SNR=16						
	comp=Z,1.2nm,0.6s						
FITZ	Fitzroy Crossi	35.62	210	P	P	07 22 02.4	-0.2
ASAR	Alice Springs	37.70	194	P	P	07 22 18.6	-1.5
ASAR	Alice Springs	37.70	194	P	P	07 22 20.6	+0.6
	comp=Z,0.3nm,0.5s,baz=16,slow=13,SNR=14						
	comp=Z,0.3nm,0.5s						
DZM	Mont Dzumac	41.57	147	P	P	07 22 53.5	+1.4
DZM				IAmb	IAmb	07 23 29.5	
	comp=Z,9.9nm,1.1s						
DZM	Mont Dzumac	41.57	147	P	P	07 22 53.0	+0.9
	comp=Z,2.8nm,0.4s,baz=272,slow=9.3,SNR=20						
	comp=Z,2.8nm,0.4s						
PINNC	Pines Island,	42.55	146	P	P	07 23 01.1	+1.2
L16K	Owhat River	63.25	27	P	P	07 25 31.7	+1.0
L16K				IAmb	IAmb	07 26 15.3	
	comp=Z,3.5nm,1.1s						
KURBB	Kurchatov Arra	64.14	320	P	P	07 25 37.0	+0.3
	comp=Z,0.7nm,0.2s,baz=105,slow=6.8,SNR=4.0						
	comp=Z,0.7nm,0.2s						
N18K	Kilae Creek	64.48	28	P	P	07 25 39.5	+0.8
N18K				IAmb	IAmb	07 25 40.0	
	comp=Z,3.7nm,1.1s						
J20K	Nowinta River	66.43	25	P	P	07 25 53.4	+2.2
J20K				IAmb	IAmb	07 26 31.2	
	comp=Z,2.6nm,1.1s						
D20K	Etivluk River	67.19	20	P	P	07 25 58.4	+2.4
D20K				IAmb	IAmb	07 26 06.0	
	comp=Z,2.1nm,1.1s						
BVAR	Borovoye Array	69.48	322	P	P	07 26 09.4	-1.0
	comp=Z,1.0nm,0.5s,baz=104,slow=8.6,SNR=6.3						
	comp=Z,1.0nm,0.5s						
ILAR	Eielson Array	69.61	25	P	P	07 26 09.9	-1.1
	comp=Z,0.4nm,0.6s,baz=253,slow=5.8,SNR=9.6						
	comp=Z,0.4nm,0.6s						
ARCES	ARCESS Array B	87.15	342	P	P	07 27 46.3	-0.4
	comp=Z,4.1nm,1.2s,baz=61,slow=6.0,SNR=3.6						
	comp=Z,4.1nm,1.2s						
NVAR	Mina Array Bea	88.30	51	P	P	07 27 54.5	+1.3
	comp=Z,0.9nm,0.6s,baz=257,slow=5.5,SNR=8.0						
	comp=Z,0.9nm,0.6s						
FINES	FINESS Array B	91.04	335	P	P	07 28 03.8	-1.3
	comp=Z,0.6nm,0.3s,baz=54,slow=3.3,SNR=8.3						
	comp=Z,0.6nm,0.3s						
LPAZ	La Paz	149.29	100	PKPbc	PKiKP	07 34 51.5	-0.1
	comp=Z,0.9nm,0.5s,baz=7.5,slow=3.3,SNR=7.0						

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*IDC **18** 07:20:14.3±2.4,17°.47S×178°.41W,h571^{km}±21^{km},mb3.0/5, mbtmp3.8/6,Error ellipse: s-maj=99.4km s-min=19.1km*

az=153.0

ISC 18 07:20:15.7±1.8**, 17°.5S**±0°.6×**178°.6W**±0°.3**, h600^{km}, n11, σ1^{s}.22**/11**, mb3.4**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.22	266	P	P	07 21 33.9	-2.3
	9.2nm,0.7s,baz=141,slow=7.0,SNR=4.7						
WRA	Warramunga Arr	44.54	259	P	P	07 27 37.0	+1.2
	0.3nm,0.5s,baz=96,slow=7.0,SNR=8.4						
	0.3nm,0.5s						
ASAR	Alice Springs	44.73	254	P	P	07 27 39.0	+1.6
	2.5nm,0.5s,baz=89,slow=8.6,SNR=33						
	2.5nm,0.5s						
NVAR	Mina Array Bea	79.27	44	P	P	07 31 20.4	+0.1
	0.7nm,0.7s,baz=215,slow=8.3,SNR=6.9						
	0.7nm,0.7s						
ILAR	Eielson Array	85.56	13	P	P	07 31 51.3	+0.2
	0.4nm,0.4s,baz=219,slow=5.2,SNR=9.1						
	0.4nm,0.4s						
TXAR	Lajitas Array	85.94	58	P	P	07 31 54.1	+0.3
	0.8nm,0.8s,baz=218,slow=6.3,SNR=11						
	0.8nm,0.8s						
ARCES	ARCESS Array B	125.92	350	PKP	PKiKP	07 38 10.1	-0.2
	4.6nm,1.2s,baz=19,slow=4.1,SNR=3.7						
BRTR	Keskin Array B	144.40	315	PKP	PKPab	07 38 46.9	+1.2
	1.3nm,0.6s,baz=132,slow=3.5,SNR=7.7						
CLL	Collm	145.06	347	*i* PKPbc	PKPab	07 38 47.8	+0.2
	comp=Z,5.0nm,0.8s						
MMAI	Mount Meron Ar	145.80	303	PKPbc	PKiKP	07 38 51.5	-0.4
	comp=Z,1.3nm,0.4s,baz=81,slow=5.2,SNR=3.6						
GERES	GERESS Array B	147.21	345	PKPbc	PKiKP	07 38 53.4	-1.0
	comp=Z,1.1nm,0.5s,baz=32,slow=5.2,SNR=6.3						

*WEL **18** 07:20:20.5±1.0, 34°S±6°×17°8W±1°5, h33^{km}, M5.1/20, mB5.5/16, ML5.5/22, MLv5.2/20, Mw(mB)5.0/7, Error ellipse: s-maj=20.9km s-min=5.1km az=105.0, confirmed*

*NEIC **18** 07:20:21.6±1.4, 33°.59S±0°.09×178°.2W±0°.2, h10^{km}±1^{km}, mb4.9/22, Error ellipse: s-maj=23.2km s-min=13.5km az=108.0*

*IDC **18** 07:20:22.2±0.5, 33°.46S×178°.76W, h0^{km}, mb4.3/11, mbtmp4.4/12, ML4.8/1, MS4.2/38, Error ellipse: s-maj=23.9km s-min=17.5km az=85.0*

*GCMT **18** 07:20:26.6±0.3, 33°.56S±0°.03×178°.08W±0°.03, h22^{km}, MW4.9/89, Moment Tensor Solution. s32,c40; s89,c116; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.96±.17; M$_{\theta\theta}$-0.70±.11; M$_{\phi\phi}$-2.26±.11; M$_{r\theta}$0.56±.20; M$_{\theta\phi}$-0.65±.07; M$_{\phi r}$1.45±.16; Best double couple: M$_0$3.14100×10^{16} NP1:φ$_s$200.00000°,δ30.00000°,λ89.00000°. NP2: φ$_s$21.00000°,δ60.00000°,λ91.00000°. Principal axes: T 3.3730, Plg75.0000°, Azm292.0000°; N -0.4630, Plg0.0000°, Azm200.0000°; P -2.9090, Plg15.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NOU **18** 07:20:52.8, 35°.79S×179°.30W, h119^{km}, mb4.7/12, East of North Island, N.Z.*

ISC 18 07:20:26.3±0.4**, 33°.57S**±0°.05×**178°.45W**±0°.07**, h35^{km}, n157, σ2^{s}.05**/125**, mb4.8**/27**, MS4.3**/38**, 5C, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	4.31	6	P	Pn	07 21 24.9	-4.5
GLKZ				S	Sn	07 22 13.7	-4.8
RAO	Raoul Island	4.33	6	Pn	Pn	07 21 26.9	-2.6
MXZ	Matakaoa Point	4.78	213	Pn	Pn	07 21 34.1	-1.7
MXZ	Matakaoa Point	4.78	213	P	Pn	07 21 33.6	-2.2
MXZ	Matakaoa Point	4.78	213	P	Pn	07 21 33.8	-2.0
WMGZ	Waiomatatini S	4.95	210	P	Pn	07 21 36.8	-1.3
WMGZ				S	Sn	07 22 35.6	+1.5
PKGZ	Pakihiroa	5.13	212	P	Pn	07 21 38.6	-2.1
HAZ	Te Kaha	5.18	215	P	Pn	07 21 39.7	-1.6
PUZ	Puketiti	5.23	210	P	Pn	07 21 39.3	-2.7
PUZ				S	Sn	07 22 42.0	+0.9
WIZ	White Island	5.31	221	P	Pn	07 21 44.2	+1.1
RUGZ	Raukumara Rang	5.40	215	P	Pn	07 21 42.4	-2.0
TWGZ	Tauwhareparae	5.44	211	P	Pn	07 21 42.4	-2.4
CNGZ	Carnagh Statio	5.60	208	P	Pn	07 21 44.7	-2.3
WHRZ	Whale Island	5.67	220	P	Pn	07 21 49.0	+1.0
GRZ	Great Barrier	5.67	240	P	Pn	07 21 50.1	+2.0
TKGZ	Te Karaka	5.71	211	P	Pn	07 21 46.6	-2.0
KUZ	Kuaotunu	5.73	235	P	Pn	07 21 49.3	+0.5
MWZ	Matawai	5.77	213	P	Pn	07 21 46.8	-2.6
URZ	Urewera	5.91	216	Pn	Pn	07 21 49.9	-1.3
	26nm,0.3s,baz=103,slow=2.3,SNR=94						
URZ				Sn	Sn	07 22 55.1	-2.6
	38nm,0.3s,baz=294,slow=24,SNR=9.2						
	230nm,0.6s						
URZ	Urewera	5.91	216	P	Pn	07 21 50.3	-0.9
URZ	Urewera	5.91	216	P	Pn	07 21 49.1	-2.1
MARZ	Manawahe	5.93	221	P	Pn	07 21 51.2	-0.3
RAGZ	Rawiri	5.95	213	P	Pn	07 21 51.9	0.0
RIGZ	Rimuhau	5.97	210	P	Pn	07 21 50.2	-2.0
RTZ	Ruatahuna	6.25	215	Pn	Pn	07 21 54.8	-1.3
RTZ	Ruatahuna	6.25	215	P	Pn	07 21 54.7	-1.3
KNZ	Kokohu	6.28	209	P	Pn	07 21 53.7	-2.6
WCZ	Waipu Caves	6.38	246	P	Pn	07 21 58.0	+0.2
TOZ	Tahuroa Road	6.44	228	Pn	Pn	07 21 59.0	+0.4
OUZ	Omahuta	6.78	254	P	Pn	07 22 04.6	+1.4
TLZ	Tolley Road	6.81	224	P	Pn	07 22 03.2	-0.5
BKZ	Black Stump Fm	6.92	215	P	Pn	07 22 02.0	-3.2
BKZ	Black Stump Fm	6.92	215	P	Pn	07 22 02.1	-3.0
HIZ	Hauiti	7.33	226	P	Pn	07 22 10.9	+0.1
HIZ	Hauiti	7.33	226	P	Pn	07 22 11.0	+0.1
NGZ	Ngauruhoe	7.37	219	P	Pn	07 22 10.2	-1.3
PXZ	Pawanui	7.47	209	P	Pn	07 22 10.8	-1.8
VRZ	Vera Road	7.79	223	P	Pn	07 22 15.8	-1.3
TSZ	Takapari Road	7.88	213	P	Pn	07 22 14.4	-3.9
WAZ	Wanganui	8.12	219	P	Pn	07 22 19.3	-2.3
BFZ	Birch Farm	8.27	209	P	Pn	07 22 19.7	-3.9
BFZ	Birch Farm	8.27	209	P	Pn	07 22 18.6	-5.0
KHEZ	Kahui Hut	8.34	225	P	Pn	07 22 24.7	0.0
MRZ	Mangatainoka R	8.53	212	P	Pn	07 22 22.6	-4.7
QRZ	Quartz Range	10.21	222	P	Pn	07 22 44.9	-5.3
CTZ	Chatham Island	10.26	173	P	Pn	07 22 48.9	-1.9
CTZ	Chatham Island	10.26	173	P	Pn	07 22 48.9	-1.9
THZ	Tophouse	10.66	217	P	Pn	07 22 52.4	-4.2
KHZ	Kahutara	10.86	213	P	Pn	07 22 54.1	-5.0
KHZ	Kahutara	10.86	213	P	Pn	07 22 56.1	-3.0
LTZ	Lake Taylor	11.74	216	P	Pn	07 23 05.5	-5.7
INZ	Inchbonnie	12.11	218	P	Pn	07 23 12.5	-3.7
OXZ	Oxford	12.26	215	P	Pn	07 23 13.8	-4.5
MQZ	McQueen’s Vall	12.27	212	P	Pn	07 23 12.7	-5.7
WVZ	Waitaha Valley	12.72	219	P	Pn	07 23 22.0	-2.6
RPZ	Rata Peaks	13.03	216	Pn	Pn	07 23 24.4	-4.3
	4.0nm,0.3s,baz=75,slow=3.8,SNR=13						
RPZ				Sn	Sn	07 25 38.4	-14
	2.8nm,0.3s,baz=318,slow=22,SNR=7.3						
RPZ	Rata Peaks	13.03	216	P	Pn	07 23 24.6	-4.2
RPZ	Rata Peaks	13.03	216	P	Pn	07 23 24.5	-4.2
ODZ	Otahua Downs	14.22	213	P	Pn	07 23 40.7	-4.3
JCZ	Jackson Bay	14.44	220	P	Pn	07 23 43.4	-4.7
SYZ	Scrubby Hill	16.04	212	P	Pn	07 24 03.3	-5.7
MSVF	Nonsavu	16.08	348	LR	LR	07 29 03.9	
	comp=Z,431nm,18.6s,baz=176,slow=33						
PINNC	Pines Island,	16.53	308	P	P	07 24 16.6	-1.1
PINNC				IAmb	IAmb	07 24 22.3	
	comp=Z,83nm,1.2s						
ONTNC	Ouen Toro	17.40	306		P	07 24 28.0	+0.7
ONTNC				IAmb	IAmb	07 24 31.5	
	comp=Z,90nm,1.1s						
DZM	Mont Dzumac	17.57	307		P	07 24 30.4	+1.1
DZM	Mont Dzumac	17.57	307	*e*Pn	P	07 24 30.6	+1.3
	comp=Z,119nm,1.3s						
DZM				*e*LR	LR	07 28 35.5	
	comp=Z,2μm,24.7s						
DZM	Mont Dzumac	17.57	307	P	P	07 24 29.5	+0.2
	comp=Z,30nm,0.9s,baz=127,slow=15,SNR=16						
RAR	Rarotonga	20.61	58	LR	LR	07 32 45.7	
	comp=Z,453nm,18.9s,baz=232,slow=36						
TBI	Tubuai	27.36	76	*e*P	P	07 26 11.4	+3.2
	comp=Z,608nm,38.2s						
TBI				*e*S	S	07 30 41.6	-4.3
	comp=Z,2μm,25.8s						
TBI				*e*LR	LR	07 32 55.9	
	comp=Z,1μm,23.0s						
TBI				*e*LR	LR	07 32 56.0	
	comp=Z,1μm,21.0s						
EIDS	Eidsvold	27.68	279	P	P	07 26 11.0	-0.1
EIDS				IAmb	IAmb	07 26 23.6	
	comp=Z,14nm,0.9s						
PPT2	Papeete2	30.38	66	*e*P	P	07 26 25.4	-10
	comp=Z,34nm,24.8s						
PPT2				*e*S	S	07 31 31.1	-2.5
	comp=Z,427nm,23.0s						
PPT2				*e*LR	LR	07 34 09.9	
	comp=Z,334nm,22.5s						
PPT2				*e*LR	LR	07 34 15.2	
	comp=Z,353nm,20.8s						
PPT	Papeete	30.39	66	LR	LR	07 38 33.4	
	comp=Z,486nm,18.8s,baz=246,slow=36						
STKA	Stephens Creek	33.51	262	LR	LR	07 40 09.3	
	comp=Z,754nm,18.3s,baz=69,slow=36						
CTAO	Charters Tower	34.06	284		P	07 27 07.8	+0.4
BBOO	Buckleboo	37.84	258		P	07 27 39.7	0.0
BBOO				IAmb	IAmb	07 27 52.0	
	comp=Z,25nm,1.2s						
COEN	Coen	39.88	290	P	P	07 27 57.9	+1.1
ASAR	Alice Springs	42.65	271	P	P	07 28 19.3	-0.4
	comp=Z,8.5nm,0.7s,baz=112,slow=7.4,SNR=55						
ASAR				PcP	PcP	07 30 10.8	-0.4
	comp=Z,1.5nm,0.5s,baz=121,slow=3.7,SNR=4.5						
ASAR				S	S	07 34 37.4	-3.3
	comp=Z,2.5nm,0.9s,baz=114,slow=15,SNR=10						
	comp=Z,8.5nm,0.7s						
TAOE	Nuku Hiva Isla	42.97	64	*e*LR	LR	07 40 09.1	
	comp=Z,270nm,22.7s						
WR8	Warramunga Arr	43.79	276		P	07 28 28.7	-0.1
WR8				IAmb	IAmb	07 28 43.6	
	comp=Z,17nm,0.8s						
WRAB	Tennant Creek	43.92	276	P	P	07 28 29.7	-0.2
WRAB				IAmb	IAmb	07 28 44.0	
	comp=Z,16nm,0.9s						
WRA	Warramunga Arr	43.93	276		P	07 28 29.9	-0.1
WRA	Warramunga Arr	43.93	276	P	P	07 28 29.2	-0.7
	comp=Z,13nm,0.8s,baz=117,slow=7.7,SNR=69						
WRA				S	S	07 34 56.6	-2.7
	comp=Z,1.7nm,0.9s,baz=114,slow=15,SNR=5.3						
WRA				LR	LR	07 45 48.6	
	comp=Z,222nm,18.1s,baz=144,slow=35						
	comp=Z,13nm,0.8s						
WB0	Warramunga Arr	43.97	276		P	07 28 29.6	-0.6
WB0				IAmb	IAmb	07 28 44.5	
	comp=Z,28nm,1.1s						
VNDA	Vanda	44.92	186	P	P	07 28 35.4	-1.7
VNDA	Vanda	44.92	186	P	P	07 28 38.8	+1.7
	comp=Z,0.6nm,0.7s,baz=9.8,slow=5.0,SNR=4.5						
	comp=Z,0.6nm,0.7s						
FORT	Forrest	44.95	258	P	P	07 28 37.0	-0.9
JAY	Jayapura	49.08	300	P	P	07 29 07.6	-2.7
	comp=Z,12nm,0.9s,baz=32,slow=1.4,SNR=3.6						
JAY				LR	LR	07 50 35.7	
	comp=Z,196nm,18.0s,baz=352,slow=37						
	comp=Z,12nm,0.9s						
MTN	Manton Dam	50.17	282	P	P	07 29 18.0	-0.7
MTN				IAmb	IAmb	07 29 34.0	
	comp=Z,16nm,1.0s						
KNRA	Kununurra	50.64	277	P	P	07 29 21.8	-0.4
KNRA				IAmb	IAmb	07 29 47.0	
	comp=Z,19nm,1.1s						
FITZ	Fitzroy Crossi	52.04	273		P	07 29 32.5	-0.2
FITZ	Fitzroy Crossi	52.04	273	LR	LR	07 51 59.5	
	comp=Z,609nm,18.2s,baz=128,slow=37						
CASY	Casey	52.18	209	P	P	07 29 32.6	-0.4
CASY				IAmb	IAmb	07 29 46.3	
	comp=Z,16nm,0.8s						
NWAO	Narrogin (SRO)	52.98	252	LR	LR	07 51 58.4	
	comp=Z,132nm,18.1s,baz=100,slow=36						
PSA00	Pilbara Seismi	55.28	266	P	P	07 29 56.7	+0.3
PSA00				IAmb	IAmb	07 30 14.5	
	comp=Z,10nm,1.1s						
MBWA	Marble Bar	55.56	266	P	P	07 29 58.1	-0.3
QSPA	South Pole Qui	56.55	180		P	07 30 04.2	-0.9
QSPA	South Pole Qui	56.55	180	P	P	07 30 07.5	+2.4
	comp=Z,9.0nm,1.1s,baz=45,slow=2.9,SNR=11						
QSPA				LR	LR	07 51 50.0	
	comp=Z,375nm,19.3s,baz=37,slow=33						
	comp=Z,9.0nm,1.1s						
GUMO	Guam	58.49	317	LR	LR	07 55 36.1	
	comp=Z,78nm,18.2s,baz=115,slow=36						
KAPI	Kappang	63.84	282	LR	LR	07 59 41.4	
	comp=Z,217nm,18.9s,baz=117,slow=37						
DAV	Davao City (W)	66.64	296	LR	LR	08 01 53.3	
	comp=Z,28nm,18.1s,baz=163,slow=38						
MAW	Mawson	69.22	201	P	P	07 31 31.4	+2.4
	comp=Z,3.3nm,0.9s,baz=120,slow=5.9,SNR=4.4						
	comp=Z,3.3nm,0.9s						
PMSA	Palmer Station	69.55	155	LR	LR	07 58 41.4	
	comp=Z,213nm,18.5s,baz=251,slow=33						
LEM	Lembang	72.87	273	LR	LR	08 05 25.7	
	comp=Z,188nm,18.8s,baz=182,slow=37						
USHA	Ushuaia	73.53	145	LR	LR	07 59 22.6	
	comp=Z,283nm,20.0s,baz=200,slow=32						
TROLL	Troll, Antarti	74.72	180	⇑P	P	07 32 03.6	+1.5
	comp=Z,168nm,1.1s						
SNAA	Sanae	75.01	179	⇑P	P	07 32 04.8	+1.1
	comp=Z,14nm,0.4s						
SNAA	Sanae	75.01	179		P	07 32 03.6	-0.1
SNAA				IAmb	IAmb	07 32 20.1	
	comp=Z,12nm,1.1s						
SNAA	Sanae	75.01	179	P	P	07 32 04.5	+0.8
	comp=Z,0.8nm,0.6s,baz=212,slow=11,SNR=14						
SNAA				LR	LR	08 03 58.2	
	comp=Z,162nm,18.4s,baz=222,slow=35						
	comp=Z,0.8nm,0.6s						
VNA3	Neumayer Olymp	75.18	176	⇑P	P	07 32 05.5	+0.9
	comp=Z,3.0nm,0.6s						
VNA2	Neumayer--Watz	75.61	177	⇑P	P	07 32 08.4	+1.3
	comp=Z,5.2nm,0.6s,baz=175,slow=4.8						
VNA1	Neumayer--Stat	75.84	177	⇑P	P	07 32 10.6	+2.2
	comp=Z,5.3nm,0.9s						
JOW	Kunigami	78.52	313	LR	LR	08 01 37.8	
	comp=Z,48nm,20.6s,baz=119,slow=32						
MJAR	Matsushiro Arr	80.63	326	P	P	07 32 35.4	+0.1
	comp=Z,0.9nm,0.3s,baz=180,slow=5.5,SNR=4.1						
	comp=Z,0.9nm,0.3s						
PLCA	Paso Flores	80.64	133	LR	LR	08 02 04.2	
	comp=Z,93nm,18.1s,baz=239,slow=31						
JNU	Nakatsue	81.67	319	LR	LR	08 04 22.2	
	comp=Z,22nm,18.4s,baz=112,slow=32						
ASAJ	Asahikawa	85.07	333	LR	LR	08 08 12.2	
	comp=Z,108nm,18.3s,baz=156,slow=34						
PSI	Prapat	85.39	276	LR	LR	08 13 18.5	
	comp=Z,216nm,18.6s,baz=136,slow=37						
SHEM	Shemya Is, Ala	86.18	355	LR	LR	08 04 60.0	
	comp=Z,77nm,21.9s,baz=106,slow=31						
LPIG	La Paz	86.53	58	LR	LR	08 06 01.5	
	comp=Z,281nm,18.6s,baz=200,slow=32						
NJ2	Nanjing	88.02	311	*e*P	P	07 33 14.3	+1.5
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
PFO	Pinyon Flats O	88.63	47	LR	LR	08 09 25.4	
	comp=Z,224nm,18.0s,baz=229,slow=33						
PETK	Petropavlovsk-	88.78	346	P	P	07 33 17.4	+1.6
	comp=Z,5.4nm,0.8s,baz=145,slow=5.4,SNR=4.0						
PETK				LR	LR	08 06 11.9	
	comp=Z,116nm,21.9s,baz=179,slow=31						
	comp=Z,5.4nm,0.8s						
USRK	Ussuriysk Ar.	89.59	327	LR	LR	08 10 53.8	
	comp=Z,100nm,18.8s,baz=124,slow=34						
YBH	Yreka Blue Hor	90.75	38	LR	LR	08 09 12.7	
	comp=Z,9.3nm,18.9s,baz=244,slow=32						
NVAR	Mina Array Bea	90.81	43	P	P	07 33 29.3	+3.2
	comp=Z,0.6nm,0.7s,baz=222,slow=8.5,SNR=5.5						
NVAR				LR	LR	08 10 15.2	
	comp=Z,103nm,18.2s,baz=224,slow=33						
	comp=Z,0.6nm,0.7s						
CN2	Changchun	92.43	323	*e*P	P	07 33 32.5	-0.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NNA	Nana	92.92	106	LR	LR	08 07 47.2	
	comp=Z,227nm,18.5s,baz=226,slow=30						
KLR	Kul'dur	93.57	330	LR	LR	08 12 57.9	
	comp=Z,109nm,19.4s,baz=140,slow=34						
CMAR	Chiang Mai Arr	94.08	289	LR	LR	08 19 17.9	
	comp=Z,45nm,18.9s,baz=125,slow=38						
ATAH	Atahualpa	94.41	101	LR	LR	08 09 48.0	
	comp=Z,83nm,18.4s,baz=215,slow=31						
TXAR	Lajitas Array	94.41	58	P	P	07 33 45.5	+2.7
	comp=Z,0.3nm,0.7s,baz=211,slow=6.4,SNR=4.8						
TXAR				LR	LR	08 11 07.8	
	comp=Z,132nm,18.3s,baz=238,slow=32						
	comp=Z,0.3nm,0.7s						
ANMO	Albuquerque	95.84	52	LR	LR	08 12 18.4	
	comp=Z,163nm,18.2s,baz=342,slow=32						
PZH	PanZhiHua	96.42	297	P	P	07 33 52.8	+0.8
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.3s						
LPAZ	La Paz	97.19	115	LR	LR	08 10 03.2	
	comp=Z,37nm,19.9s,baz=240,slow=31						
HHC	Hu-ho-hao-te	98.15	314	*e*P	Pdif	07 34 00.6	+1.1
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,59nm,5.4s						
NEW	Newport	98.15	36	LR	LR	08 11 44.6	
	comp=Z,333nm,19.7s,baz=232,slow=31						
CPUP	Villa Florida	98.31	129	LR	LR	08 13 51.5	
	comp=Z,65nm,18.2s,baz=92,slow=33						
JTS	Las Juntas de	98.50	83	LR	LR	08 11 31.7	
	comp=Z,157nm,18.6s,baz=269,slow=31						
PDAR	Pinedale Array	98.68	44	LR	LR	08 15 19.1	
	comp=Z,90nm,18.1s,baz=262,slow=33						
APMT	Aspermont	99.18	56	P	Pdif	07 34 02.6	-1.6
MKAR	Makanchi Array	119.48	309		PKiKP	07 39 11.6	-0.2
MKAR	Makanchi Array	119.48	309	PKP	PKPdf	07 39 11.4	-0.4
	comp=Z,0.9nm,0.7s,baz=48,slow=1.8,SNR=6.5						
ZALV	Zalesovo Beam	120.11	317	PKP	PKiKP	07 39 13.6	+0.8
	comp=Z,0.9nm,0.5s,baz=343,slow=1.5,SNR=2.9						
KURBB	Kurchatov Arra	122.96	312	PKP	PKiKP	07 39 18.4	-0.1
	comp=Z,2.5nm,0.6s,baz=113,slow=1.8,SNR=15						
BVAR	Borovoye Array	128.36	314	PKP	PKiKP	07 39 29.6	+0.3
	comp=Z,2.2nm,0.7s,baz=66,slow=1.8,SNR=10						
ARCES	ARCESS Array B	141.58	347	PKhKP	PKPpre	07 39 50.7	
	comp=Z,2.5nm,1.1s,baz=33,slow=2.9,SNR=7.4						
KBZ	Khabaz	146.45	300	PKPbc	PKPbc	07 40 03.1	-0.3
	comp=Z,6.5nm,0.9s,baz=59,slow=6.8,SNR=9.1						
FINES	FINESS Array B	147.95	338	PKPbc	PKiKP	07 40 07.5	-1.3
	comp=Z,18nm,0.6s,baz=44,slow=3.8,SNR=64						
MMAI	Mount Meron Ar	151.76	278	PKPbc	PKiKP	07 40 19.4	+1.6
	comp=Z,7.7nm,0.6s,baz=59,slow=4.1,SNR=14						
NB2	NORSAR Subarra	151.80	350	PKP	PKiKP	07 40 17.2	+0.3
	comp=Z,20nm,1.4s,baz=17,slow=2.6						
NOA	NORSAR Array B	151.80	350	PKPbc	PKiKP	07 40 17.7	+0.8
	comp=Z,2.9nm,0.7s,baz=14,slow=4.1,SNR=16						
HFS	Hagfors	152.25	347	PKPbc	PKiKP	07 40 18.5	+0.7
	comp=Z,6.9nm,0.7s,baz=80,slow=1.8,SNR=13						
HFS				PKPab	PKPab	07 40 26.7	-0.7
	comp=Z,6.4nm,0.7s,baz=70,slow=4.9,SNR=12						
DBIC	Dimbokro	152.59	166	PKPbc	PKiKP	07 40 21.0	+1.1
	comp=Z,5.1nm,0.7s,baz=214,slow=2.6,SNR=5.8						
DBIC				PKPab	sPKPbc	07 40 31.1	-1.3
	comp=Z,3.4nm,0.6s,baz=118,slow=1.8,SNR=4.5						
AKASG	Malin Array Be	153.50	319	PKPbc	PKiKP	07 40 20.6	-0.1
	comp=Z,0.6nm,0.3s,baz=63,slow=2.3,SNR=10						
BRTR	Keskin Array B	153.62	293	PKPbc	PKiKP	07 40 22.6	+1.1
	comp=Z,3.7nm,0.8s,baz=135,slow=4.7,SNR=13						
CLL	Collm	160.40	338	*e*PKPab	PKPab	07 41 02.0	-0.6
CLL				*e*x	x	07 41 08.0	
CLL				*e*x	x	07 41 15.0	
CLL				*e*PP	PP	07 44 43.0	-1.7
CLL				AMS	AMS	09 09 00.0	
	comp=Z,100nm,18.3s						
ESDC	Sonseca Array	172.47	34	PKP	PKPdf	07 40 34.5	+3.0
	comp=Z,1.1nm,1.0s,baz=312,slow=4.6,SNR=5.8						

*IDC **18** 07:24:24.5±3.2, 33°.59S×178°.54W, h0^{km}, mb3.7/2, mbtmp3.9/3, Error ellipse: s-maj=76.8km s-min=36.7km az=118.0*

*WEL **18** 07:24:28.1±0.8, 34°S±7°×17°9W±1°6, h33^{km}, mB5.1/1, ML4.6/12, MLv4.2/6, Mw(mB)4.5/1, Error ellipse: s-maj=22.9km s-min=4.0km az=111.1, confirmed*

ISC 18 07:24:26.5±1.5**, 33°.61S**±0°.08×**178°.1W**±0°.2**, h34^{km}, n22, σ1^{s}.65**/39**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	4.34	2	P	Pn	07 25 32.1	+2.0
GLKZ				S	Sn	07 26 15.5	-3.9
WMGZ	Waiomatatini S	5.07	213	P	Pn	07 25 42.8	+2.8
WMGZ				S	Sn	07 26 38.1	+0.8
PKGZ	Pakihiroa	5.26	215	P	Pn	07 25 42.7	0.0
PKGZ				S	Sn	07 26 42.4	+0.2
HAZ	Te Kaha	5.33	218	P	Pn	07 25 44.7	+1.1
HAZ				S	Sn	07 26 44.3	+0.6
PUZ	Puketiti	5.35	213	P	Pn	07 25 44.5	+0.6
PUZ				S	Sn	07 26 43.2	-1.1
RUGZ	Raukumara Rang	5.54	217	P	Pn	07 25 47.2	+0.6
RUGZ				S	Sn	07 26 49.0	-0.2
TWGZ	Tauwhareparae	5.56	214	P	Pn	07 25 48.4	+1.6
TWGZ				S	Sn	07 26 48.9	-0.6
CNGZ	Carnagh Statio	5.71	211	P	Pn	07 25 48.8	-0.1
CNGZ				S	Sn	07 26 55.3	+2.1
TKGZ	Te Karaka	5.83	213	P	Pn	07 25 51.5	+1.0
TKGZ				S	Sn	07 26 54.4	-1.7
MWZ	Matawai	5.90	216	P	Pn	07 25 51.8	+0.3
MWZ				S	Sn	07 26 56.9	-1.1
URZ	Urewera	6.05	219	Pn	Pn	07 25 52.6	-1.0
	18nm,0.5s,baz=55,slow=1.7						
URZ				Sn	Sn	07 26 59.5	-2.1
	4.0nm,0.3s,baz=204,slow=17,SNR=8.7						
URZ	Urewera	6.05	219	P	Pn	07 25 53.7	+0.2
URZ				S	Sn	07 26 58.9	-2.8
RIGZ	Rimuhau	6.09	212	P	Pn	07 25 54.3	+0.2
RIGZ				S	Sn	07 27 02.0	-0.6
PRGZ	Paritu Road	6.22	210	P	Pn	07 25 57.7	+1.8
SNGZ	Shannon Statio	6.34	214	P	Pn	07 25 58.2	+0.6
SNGZ				S	Sn	07 27 06.6	-2.3
MUGZ	Murupara	6.39	219	P	Pn	07 25 59.0	+0.8
MUGZ				S	Sn	07 27 05.6	-4.4
MTHZ	Maungataniwha	6.64	217	P	Pn	07 26 02.8	+1.1
MTHZ				S	Sn	07 27 15.9	-0.3
NMHZ	Naumai	6.85	215	P	Pn	07 26 04.4	-0.1
NMHZ				S	Sn	07 27 19.8	-1.5
OUZ	Omahuta	7.05	255	P	Pn	07 26 09.9	+2.6
ASAR	Alice Springs	42.96	270	P	P	07 32 22.5	+0.1
	0.8nm,0.8s,baz=110,slow=7.5,SNR=3.2						
	0.8nm,0.8s						
WRA	Warramunga Arr	44.23	275	P	P	07 32 32.8	+0.1
	0.6nm,0.3s,baz=117,slow=8.2,SNR=6.3						
	0.6nm,0.3s						
FINES	FINESS Array B	148.11	338	PKPbc	PKPab	07 44 10.0	-0.7
	0.7nm,0.5s,baz=64,slow=4.4,SNR=4.7						

HEL 18 07:29:25.1±0.9**, 60°.00N**×**23°.88E, h0^{km}, ML1.0, Suspected explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MEF	Metsahovi	0.34	50	PG	Pg	07 29 30.6	-0.9
MEF				SG	Sg	07 29 34.3	-1.5
NUR	Nurmijarvi	0.64	37	PG	Pg	07 29 36.7	-0.6
	baz=216						
NUR				MSG		07 29 45.3	
	comp=Z,1.5nm,0.2s						
PVF	Pernaja	1.13	60	PG	Pg	07 29 45.4	-1.2
	baz=242						
PVF				MSG		07 29 59.3	
	comp=Z,1.2nm,0.2s						
PVF				SN	Sn	07 30 06.5	+2.2
RAF	Rauma	1.47	315	PN	Pn	07 29 52.2	-0.5
RAF				MSG		07 30 09.2	
	comp=Z,1.1nm,0.2s						
FIA0	FINESS Array S	1.80	36	PG	Pn	07 29 57.4	0.0
	baz=220						
FIA0				MSG		07 30 18.8	
	comp=Z,0.8nm,0.2s						
FIA0				SN	Sn	07 30 21.0	0.0
KPF	Kankaanpaa	2.04	335	PG	Pb	07 30 01.9	-1.1
KEF	Keuruu	2.22	12	MSG		07 30 30.9	
	comp=Z,0.5nm,0.2s						
KEF				SG	Sb	07 30 34.3	+0.1
NIF	Nilsia	3.88	27	SN	Sn	07 31 08.5	-3.6

*HEL **18** 07:30:54.6±0.1, 63°.98N×28°.09E, h0^{km}, ML1.3, Suspected explosion*

*IDC **18** 07:30:55.9±2.0, 63°.97N×27°.97E, h0^{km}, mbtmp2.5/2, ML1.4/2, Error ellipse: s-maj=48.0km s-min=11.1km az=96.0*

ISC 18 07:30:53.8±0.8**, 63°.99N**±0°.02×**28°.08E**±0°.04**, h0^{km}, n21, σ1^{s}.06**/31**, Finland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIF	Nilsia	0.61	191	PG	Pg	07 31 05.7	+0.2
NIF				SG	Sg	07 31 13.7	+0.4

OUL	Oulu	1.45	321	PN	Pb	07 31 21.9	+0.3
OUF	Merijarvi	1.51	286	PN	Pn	07 31 22.2	0.0
OUF				MSG		07 31 40.2	
	comp=Z,2.1nm,0.2s						
OUF				SN	Sn	07 31 42.7	+0.2
OBF4	Vikkela, Lumij	1.54	304	PN	Pb	07 31 23.1	0.0
OBF4				MSG		07 31 41.0	
	comp=Z,1.7nm,0.2s						
SUF	Sumiainen	1.54	215	PN	Pn	07 31 23.0	+0.5
SUF				MSG		07 31 40.7	
	comp=Z,1.5nm,0.2s						
SUF				SN	Sg	07 31 43.4	+0.2
KU1	Kurvinen	1.71	21	PN	Pn	07 31 25.3	+0.5
KU1				SN	Sn	07 31 48.0	+0.7
KU2	Taivalkoski	1.73	2	PG	Pn	07 31 25.8	+0.7
OBF0	Syolatti, Pyha	1.75	289	PG	Pb	07 31 26.5	-0.3
OBF0				MSG		07 31 47.2	
	comp=Z,1.5nm,0.2s						
OBF0				SN	Sg	07 31 50.0	-0.1
JOF	Joensuu	1.81	125	PG	Pn	07 31 26.8	+0.6
	baz=309						
JOF				SN	Sn	07 31 50.6	+0.8
KAF	Kangasniemi	2.04	204	PG	Pb	07 31 31.3	-0.5
KAF				MSG		07 31 55.2	
	comp=Z,2.1nm,0.2s						
KAF				SG	Sb	07 31 57.9	+0.2
RANF	Ranua	2.11	346	PG	Pb	07 31 33.1	+0.2
RANF				SG	Sb	07 31 59.7	+0.1
KU6	Riekki	2.19	20	SB	Sn	07 31 59.3	+0.1
KU6				MSG		07 31 59.6	
	comp=Z,1.1nm,0.2s						
KEF	Keuruu	2.34	220	PG	Pb	07 31 36.8	0.0
KEF				MSG		07 32 03.8	
	comp=Z,2.5nm,0.2s						
KEF				SG	Sb	07 32 06.6	+0.5
OLKF	Oulanka, Finla	2.41	13	MSG		07 32 05.9	
	comp=Z,1.1nm,0.2s						
OLKF				SG	Sb	07 32 08.6	+0.3
RUF	Ruokolahti	2.60	171	MSG		07 32 11.0	
	comp=Z,1.1nm,0.2s						
RUF				SG	Sb	07 32 13.8	+0.1
FIA0	FINESS Array S	2.71	201	MSG		07 32 14.4	
	comp=Z,0.9nm,0.2s						
FIA0				SB	Sb	07 32 15.1	-1.8
FINES	FINESS Array B	2.71	201	Pn	Pb	07 31 41.2	-1.9
	comp=Z,0.1nm,0.3s,baz=19,slow=14,SNR=1.5						
FINES				Sn	Sb	07 32 16.4	-0.4
	comp=Z,0.2nm,0.3s,baz=20,slow=25,SNR=10						
	comp=Z,0.5nm,0.6s						
UMAU	Umeaa	3.27	272	SG	Sb	07 32 33.7	+0.8
HEF	Hetta	4.79	340	PB	Pb	07 32 14.7	-3.8
ARCES	ARCESS Array B	5.67	351	Pn	Pn	07 32 20.8	+1.7
	comp=Z,0.1nm,0.3s,baz=170,slow=11,SNR=1.9						
ARCES				Sn	Sn	07 33 23.3	-1.6
	baz=175,slow=24,SNR=1.4						
	comp=Z,1.9nm,1.0s						
I37NO	I37NO	6.35	328	I	I	08 10 20.0	
	baz=140,slow=316,SNR=3.1						

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*ASRS **18** 07:35:14.0±1.3,54°.34N×86°.86E,h0^{km},M2.7,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 18 07:35:15.0±3.1,54°.35N×86°.94E,h0^{km},mbtmp3.1/2, ML2.8/2,Error ellipse: s-maj=27.2km s-min=17.8km az=52.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.31	253	I	I	07 43 40.0	
	baz=70,slow=323,SNR=9.0						
ZALV	Zalesovo Beam	1.31	253	Pg	Pg	07 35 38.5	-1.6
	2.1nm,0.3s,baz=74,slow=17,SNR=9.8						
ZALV				Lg	Lg	07 35 56.6	
	2.1nm,0.3s,baz=76,slow=29,SNR=6.3						
KURBB	Kurchatov Arra	6.35	237	Pn	Pn	07 36 50.3	+0.6
	0.2nm,0.3s,baz=53,slow=13,SNR=4.6						
KURBB				Lg	Lg	07 38 39.8	
	0.2nm,0.3s,baz=52,slow=30,SNR=4.3						
	1.0nm,0.2s						
MKAR	Makanchi Array	8.12	203	Pn	Pn	07 37 15.6	+1.5
	0.2nm,0.3s,baz=24,slow=13,SNR=7.0						
	0.3nm,0.3s						

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*NEIC **18** 08:03:10.5±1.7,20°.6S±0°.1×178°.0W±0°.1,h505^{km}±7^{km}, mb4.4/62,Error ellipse: s-maj=20.9km s-min=17.0km az=155.0*

*IDC **18** 08:03:10.6±1.9,20°.62S×178°.11W,h516^{km}±19^{km}, mb3.5/15,mbtmp4.4/18,Error ellipse: s-maj=17.4km s-min=13.0km az=98.0*

*NOU **18** 08:03:11.0,20°.40S×177°.86W,h550^{km},mb4.4/23,Fiji Islands Region*

ISC 18 08:03:12.1±0.4,20°.56S±0°.08×178°.05W±0°.07,h534^{km}, n190,σ1^{s}21/166,mb4.4/50,6D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKBA	Tubou, Lakemba	2.43	342	P	P	08 04 21.4	-1.2
TAVE	Taveuni	4.22	335	P	P	08 04 34.3	-0.4
MSVF	Nonsavu	4.64	307	P	P	08 04 38.4	+0.2
MSVF	Nonsavu	4.64	307	P	P	08 04 35.9	-2.2
	7.5nm,0.6s,baz=246,slow=23,SNR=4.5						
FUTU	Fugatoga	6.22	359	P	P	08 04 51.8	-0.3
FUTU	Fugatoga	6.22	359	P	P	08 04 52.0	-0.1
NIUE	Niue	7.78	80	P	P	08 05 04.5	-2.7
NIUE	Niue	7.78	80	P	P	08 05 05.4	-1.8
NIUE	Niue	7.78	80	P	P	08 05 06.6	-0.6
NIUE				S	S	08 06 43.1	+1.5
GLKZ	Green Lake	8.66	179	P	P	08 05 15.5	-0.4
AFI	Afiamalu	8.92	43		P	08 05 14.5	-4.4
AFI	Afiamalu	8.92	43	P	P	08 05 14.5	-4.4
AFI	Afiamalu	8.92	43	P	P	08 05 14.5	-4.4
PINNC	Pines Island,	13.65	259	P	P	08 06 07.9	+0.1
YATNC	Mamie plateau,	14.12	261	P	P	08 06 12.9	+0.2
OUENC	Ouen Island, N	14.19	260	P	P	08 06 14.2	+0.8
DZM	Mont Dzumac	14.53	261		P	08 06 16.7	-0.4
DZM	Mont Dzumac	14.53	261	P	P	08 06 14.5	-2.6
	9.1nm,0.6s,baz=81,slow=16,SNR=15						
DZM	Mont Dzumac	14.53	261	P	P	08 06 17.5	+0.4
SANVU	Saraoutou	14.92	288	P	P	08 06 22.1	+1.0
SANVU	Saraoutou	14.92	288	P	P	08 06 20.8	-0.3
OUZ	Omahuta	16.35	205	P	P	08 06 35.8	+0.5
OUZ	Omahuta	16.35	205	P	P	08 06 34.7	-0.6
WCZ	Waipu Caves	16.71	202	P	P	08 06 38.3	-0.3
KUZ	Kuaotunu	17.02	197	P	P	08 06 42.1	+0.6
KUZ	Kuaotunu	17.02	197	P	P	08 06 42.2	+0.6
MXZ	Matakaoa Point	17.23	190	P	P	08 06 44.1	+0.6
MXZ	Matakaoa Point	17.23	190	P	P	08 06 43.0	-0.6
WMGZ	Waiomatatini S	17.47	189	P	P	08 06 46.1	+0.4
HAZ	Te Kaha	17.51	191	P	P	08 06 45.1	-0.9
PKGZ	Pakihiroa	17.57	190	P	P	08 06 46.9	+0.3
RUGZ	Raukumara Rang	17.73	191	P	P	08 06 47.8	-0.5
PUZ	Puketiti	17.74	190	P	P	08 06 49.4	+1.2
TGRZ	Tauranga	17.80	195	P	P	08 06 50.1	+1.3
TWGZ	Tauwhareparae	17.89	190	P	P	08 06 49.2	-0.4
TOZ	Tahuroa Road	18.00	197		P	08 06 50.8	+0.2
TOZ	Tahuroa Road	18.00	197	P	P	08 06 51.3	+0.8
MWZ	Matawai	18.12	191	P	P	08 06 50.0	-1.7
URZ	Urewera	18.13	192	P	P	08 06 49.2	-2.5
	9.1nm,0.3s,baz=358,slow=2.9,SNR=29						
URZ	Urewera	18.13	192	P	P	08 06 50.7	-1.0
URZ	Urewera	18.13	192	P	P	08 06 48.9	-2.8
OMRZ	Omania	18.14	194	P	P	08 06 52.4	+0.5
CNGZ	Carnagh Statio	18.15	189	P	P	08 06 52.3	+0.4
TKGZ	Te Karaka	18.16	190	P	P	08 06 51.6	-0.4
RTZ	Ruatahuna	18.50	192	P	P	08 06 53.5	-1.7
PRRZ	Plateau Road	18.51	194	P	P	08 06 54.3	-0.9
TLZ	Tolley Road	18.55	196	P	P	08 06 57.0	+1.3
SNGZ	Shannon Statio	18.59	191	P	P	08 06 55.2	-0.7
MTHZ	Maungataniwha	18.75	193	P	P	08 06 57.6	+0.1
RAHZ	Arahi	18.77	192	P	P	08 06 56.5	-1.0
HIZ	Hauiti	18.91	197	P	P	08 06 58.5	-0.3
HIZ	Hauiti	18.91	197	P	P	08 06 59.0	+0.1
HIZ	Hauiti	18.91	197	P	P	08 07 00.5	+1.6
NMHZ	Naumai	19.00	192	P	P	08 06 59.5	-0.2
BKZ	Black Stump Fm	19.13	193	P	P	08 06 59.0	-2.0
BKZ	Black Stump Fm	19.13	193	P	P	08 06 59.4	-1.5
BKZ	Black Stump Fm	19.13	193	P	P	08 06 58.9	-2.0
NTVZ	North Tongarir	19.25	195	P	P	08 07 02.0	-0.1
TMVZ	Te Maari	19.26	195	P	P	08 07 01.6	-0.6
VRZ	Vera Road	19.51	197	P	P	08 07 06.0	+1.7
KHEZ	Kahui Hut	19.88	198	P	P	08 07 08.0	+0.2
PXZ	Pawanui	19.89	192	P	P	08 07 06.6	-1.2
WAZ	Wanganui	20.04	196	P	P	08 07 09.9	+0.7
TSZ	Takapari Road	20.10	193	P	P	08 07 09.0	-0.7
BFZ	Birch Farm	20.64	192	P	P	08 07 13.3	-1.2
BFZ	Birch Farm	20.64	192	P	P	08 07 14.3	-0.2
BFZ	Birch Farm	20.64	192	P	P	08 07 13.0	-1.5
MRZ	Mangatainoka R	20.76	194	P	P	08 07 13.9	-1.7
MRZ	Mangatainoka R	20.76	194	P	P	08 07 13.5	-2.1
TCW	Tory Channel	21.59	196	P	P	08 07 23.3	+0.1
QRZ	Quartz Range	21.73	200	P	P	08 07 24.0	-0.5
QRZ	Quartz Range	21.73	200	P	P	08 07 25.2	+0.8
QRZ	Quartz Range	21.73	200	P	P	08 07 23.6	-0.8
NNZ	Nelson	21.84	198	P	P	08 07 23.9	-1.5
TUWZ	Tuamarina	21.88	196	P	P	08 07 25.7	0.0
THZ	Tophouse	22.48	198	P	P	08 07 29.9	-1.3
DSZ	Denniston Nort	22.80	200	P	P	08 07 32.5	-1.5
KHZ	Kahutara	22.91	196	P	P	08 07 34.6	-0.3
KHZ	Kahutara	22.91	196	P	P	08 07 33.1	-1.8
GVZ	Greta Valley S	23.56	197	P	P	08 07 38.6	-2.1
LTZ	Lake Taylor	23.60	198		P	08 07 38.7	-2.4
LTZ	Lake Taylor	23.60	198	P	P	08 07 38.6	-2.6
INZ	Inchbonnie	23.80	199	P	P	08 07 40.6	-2.2
WVZ	Waitaha Valley	24.34	200	P	P	08 07 46.0	-1.6
TATA	Tatamba Isabel	24.59	296	P	P	08 07 48.9	-1.3
RPZ	Rata Peaks	24.82	199	P	P	08 07 51.9	0.0
FOZ	Fox Glacier	25.05	201	P	P	08 07 52.1	-1.8
JCZ	Jackson Bay	25.88	202	P	P	08 08 00.8	-0.6
JCZ	Jackson Bay	25.88	202	P	P	08 07 59.9	-1.4
GC1S	Gold Coast 1 S	26.95	248	P	P	08 08 10.3	-0.6
WHZ	Wether Hill Ro	27.76	201	P	P	08 08 18.2	+0.5
EIDS	Eidsvold	28.79	255	P	P	08 08 27.2	+0.2
CTAO	Charters Tower	33.44	264		P	08 09 07.2	+0.2
CTAO				IAmb	IAmb	08 09 07.7	
	comp=Z,13nm,1.1s						
COEN	Coen	37.54	274	P	P	08 09 41.4	+0.2
COEN				IAmb	IAmb	08 09 59.3	
	comp=Z,22nm,1.5s						
BBOO	Buckleboo	42.48	244	P	P	08 10 20.3	-0.1
BBOO				IAmb	IAmb	08 10 24.1	
	comp=Z,29nm,1.4s						
WR8	Warramunga Arr	44.40	262	P	P	08 10 34.7	-0.8
WR8				IAmb	IAmb	08 10 35.3	
	comp=Z,26nm,1.5s						
AS31	Alice Springs	44.46	257		P	08 10 36.0	-0.1
ASAR	Alice Springs	44.46	257	P	P	08 10 35.6	-0.4
	comp=Z,12nm,0.7s,baz=96,slow=7.9,SNR=122						
ASAR				PcP	PcP	08 12 08.2	+0.1
	comp=Z,3.4nm,0.8s,baz=98,slow=3.7,SNR=13						
	comp=Z,12nm,0.7s						
WB0	Warramunga Arr	44.53	262		P	08 10 35.9	-0.6
WRA	Warramunga Arr	44.55	262	P	P	08 10 35.8	-0.9
WRA	Warramunga Arr	44.55	262	P	P	08 10 35.4	-1.3
	comp=Z,6.2nm,0.6s,baz=96,slow=6.6,SNR=97						
WRA				PcP	PcP	08 12 08.2	-0.2
	comp=Z,1.6nm,0.7s,baz=94,slow=4.0,SNR=5.1						
	comp=Z,6.2nm,0.6s						
MTN	Manton Dam	49.12	271	P	P	08 11 10.8	-0.4
MTN				IAmb	IAmb	08 11 11.1	
	comp=Z,13nm,0.7s						
KNRA	Kununurra	50.61	266	P	P	08 11 21.9	-0.3
KNRA				IAmb	IAmb	08 11 22.6	
	comp=Z,9.5nm,0.6s						
FITZ	Fitzroy Crossi	52.98	262	P	P	08 11 39.4	+0.2
PSA00	Pilbara Seismi	57.61	257	P	P	08 12 11.6	+0.1
PSA00				IAmb	IAmb	08 12 11.7	
	comp=Z,12nm,0.8s						
MBWA	Marble Bar	57.80	257	P	P	08 12 12.7	0.0
MBWA				IAmb	IAmb	08 12 12.9	
	comp=Z,15nm,0.8s						
QSPA	South Pole Qui	69.50	180	P	P	08 13 28.3	+1.4
QSPA	South Pole Qui	69.50	180	P	P	08 13 27.3	+0.5
	comp=Z,1.7nm,0.6s,baz=299,slow=1.2,SNR=19						
	comp=Z,1.7nm,0.6s						
MJAR	Matsushiro Arr	70.24	324	P	P	08 13 30.5	-1.0
	comp=Z,2.2nm,0.5s,baz=150,slow=6.2,SNR=7.8						
	comp=Z,2.2nm,0.5s						
PETK	Petropavlovsk-	76.32	345	P	P	08 14 05.4	-0.5
	comp=Z,5.3nm,0.7s,baz=132,slow=6.3,SNR=5.2						
	comp=Z,5.3nm,0.7s						
KSRS	Korea Array	76.91	319	P	P	08 14 10.2	+0.8
	comp=Z,0.9nm,0.5s,baz=106,slow=8.0,SNR=4.9						
	comp=Z,0.9nm,0.5s						
USRK	Ussuriysk Ar.	78.99	326	P	P	08 14 22.0	+1.5
	comp=Z,4.5nm,0.8s,baz=130,slow=2.5,SNR=6.1						
	comp=Z,4.5nm,0.8s						
NVAR	Mina Array Bea	81.10	43	P	P	08 14 33.4	+1.4
	comp=Z,0.8nm,0.7s,baz=228,slow=10.0,SNR=7.9						
	comp=Z,0.8nm,0.7s						
MAW	Mawson	81.49	200	P	P	08 14 33.2	+0.1
	comp=Z,1.6nm,0.8s,baz=114,slow=10.0,SNR=3.3						
	comp=Z,1.6nm,0.8s						
P18K	Big Mountain,	81.84	12	P	P	08 14 35.0	0.0
P18K				IAmb	IAmb	08 14 36.1	
	comp=Z,15nm,1.4s						
KLR	Kul'dur	82.56	329	P	P	08 14 39.8	+0.9
	comp=Z,1.7nm,0.8s,baz=96,slow=8.1,SNR=3.3						
	comp=Z,1.7nm,0.8s						
PINE	Pine Mountain	82.66	38	P	P	08 14 40.7	+0.9
M16K	Timber Creek	82.75	9		P	08 14 41.0	+1.4
M16K				IAmb	IAmb	08 14 41.8	
	comp=Z,19nm,1.2s						
O19K	Port Alsworth	82.76	12	IAmb	IAmb	08 14 40.2	
	comp=Z,18nm,0.8s						
ILSW	Iliamna Southw	82.79	12	IAmb	IAmb	08 14 40.4	
	comp=Z,13nm,0.8s						
U15A	North Rim	84.04	48	P	P	08 14 48.9	+2.0
GHO	Glory Hole Cre	85.30	13	IAmb	IAmb	08 14 53.1	
	comp=Z,12nm,0.8s						
CAST	Castle Rocks	86.15	11	IAmb	IAmb	08 14 55.8	
	comp=Z,4.6nm,0.7s						
TMUT	Trail Mountain	86.23	46	P	P	08 14 56.0	-1.5
TRF	Thorofare Moun	86.52	12	IAmb	IAmb	08 14 58.4	
	comp=Z,8.8nm,0.8s						
RND	Reindeer	86.77	13	IAmb	IAmb	08 14 60.0	
	comp=Z,10nm,0.7s						
TXAR	Lajitas Array	87.13	57	P	P	08 15 03.5	+1.8
	comp=Z,0.6nm,0.6s,baz=216,slow=6.9,SNR=9.5						
	comp=Z,0.6nm,0.6s						
TROLL	Troll, Antarti	87.67	180	⇓P	P	08 15 03.4	-0.2
	comp=Z,44nm,0.4s						
MLY	Manley	87.87	11	IAmb	IAmb	08 15 04.2	
	comp=Z,3.9nm,0.5s						
WRH	Wood River Hil	87.87	13	IAmb	IAmb	08 15 04.3	
	comp=Z,5.7nm,0.6s						
SNAA	Sanae	87.95	178	⇓P	P	08 15 04.2	-0.5
	comp=Z,8.9nm,0.5s						
SNAA	Sanae	87.95	178	P	P	08 15 04.0	-0.8
	comp=Z,0.8nm,1.0s,baz=205,slow=10,SNR=11						
	comp=Z,0.8nm,1.0s						
MCMT	McKenzie Canyo	88.03	40	P	P	08 15 07.4	+1.6
HDA	Harding Lake	88.06	13	IAmb	IAmb	08 15 05.6	
	comp=Z,7.0nm,0.6s						
H21K	Melozitna Rive	88.08	10	IAmb	IAmb	08 15 07.3	
	comp=Z,3.1nm,0.7s						
VNA3	Neumayer Olymp	88.08	176	⇓P	P	08 15 05.1	-0.2
	comp=Z,8.3nm,0.6s						
COLA	College	88.28	12	P	P	08 15 06.0	-0.1
IL31		88.39	13	IAmb	IAmb	08 15 06.5	
	comp=Z,2.9nm,0.6s						
ILAR	Eielson Array	88.39	13	P	P	08 15 06.0	-0.6
	comp=Z,2.3nm,0.6s,baz=214,slow=5.3,SNR=28						
	comp=Z,2.3nm,0.6s						
M29M	Somme Creek	88.47	17	IAmb	IAmb	08 15 08.8	
	comp=Z,4.6nm,0.7s						
VNA2	Neumayer--Watz	88.52	177	⇓P	P	08 15 07.4	+0.1
	comp=Z,3.6nm,0.6s,baz=182,slow=5.1						
VNA1	Neumayer--Stat	88.75	177	⇓P	P	08 15 09.0	+0.6
	comp=Z,3.5nm,0.8s						
G21K	Allakaket	88.76	10	IAmb	IAmb	08 15 09.8	
	comp=Z,4.2nm,0.8s						
J26L	Joseph Creek	88.88	14	IAmb	IAmb	08 15 10.7	
	comp=Z,4.3nm,0.8s						
PDAR	Pinedale Array	89.04	43	P	P	08 15 11.2	+0.8
	comp=Z,0.6nm,0.5s,baz=194,slow=3.1,SNR=6.6						
	comp=Z,0.6nm,0.5s						
L29M	L29M	89.09	17	IAmb	IAmb	08 15 11.8	
	comp=Z,7.6nm,0.8s						
E19K	Redstone River	89.11	8	IAmb	IAmb	08 15 11.1	
	comp=Z,5.2nm,0.8s						
DAWY	Dawson	89.53	16	IAmb	IAmb	08 15 13.4	
	comp=Z,3.9nm,0.8s						
K29M	Barlow Dome	89.85	17	IAmb	IAmb	08 15 15.2	
	comp=Z,3.9nm,0.8s						
CMAR	Chiang Mai Arr	90.10	290	P	P	08 15 17.3	+1.7
	comp=Z,2.0nm,0.3s,baz=128,slow=3.0,SNR=11						
	comp=Z,2.0nm,0.3s						
E22K	Anaktuvuk Pass	90.51	10	IAmb	IAmb	08 15 17.6	
	comp=Z,3.3nm,1.0s						
I28M	Miner Creek	90.53	15	IAmb	IAmb	08 15 17.6	
	comp=Z,2.6nm,0.7s						
H29M	Whitestone	91.53	15	IAmb	IAmb	08 15 22.3	
	comp=Z,2.9nm,0.7s						
C23K	Itkillik River	92.24	9	IAmb	IAmb	08 15 27.9	
	comp=Z,4.6nm,1.2s						
MDND	Maddock	97.56	42	P	Pdif	08 15 46.7	-2.3
ZALV	Zalesovo Beam	110.52	321	PKiKP	PKiKP	08 20 42.4	-1.1
	comp=Z,0.9nm,0.4s,baz=308,slow=0.4,SNR=5.4						
MKAR	Makanchi Array	111.21	313	PKiKP	PKiKP	08 20 44.3	-0.8
	comp=Z,0.9nm,0.5s,baz=117,slow=0.4,SNR=14						
KURBB	Kurchatov Arra	114.06	317	PKiKP	PKPdf	08 20 49.4	-1.0
	comp=Z,1.2nm,0.6s,baz=91,slow=1.8,SNR=14						
BVAR	Borovoye Array	119.10	320	PKP	PKPdf	08 20 59.3	-0.8
	comp=Z,3.9nm,0.4s,baz=98,slow=1.2,SNR=20						
SPITS	Spitsbergen Ar	121.93	357	PKP	PKPdf	08 21 04.0	-0.8
	comp=Z,3.6nm,0.8s,baz=294,slow=2.5,SNR=5.2						
ARCES	ARCESS Array B	128.98	350	PKP	PKPdf	08 21 17.7	-0.8
	comp=Z,1.1nm,0.5s,baz=22,slow=1.3,SNR=14						
FINES	FINESS Array B	135.82	344	PKhKP	PKPpre	08 21 21.6	
	comp=Z,0.6nm,0.4s,baz=129,slow=2.7,SNR=6.6						
FINES				PKP	sPdif	08 21 29.6	-1.0
	comp=Z,0.9nm,0.6s,baz=108,slow=4.2,SNR=5.5						
NOA	NORSAR Array B	139.04	353	PKhKP	PKPpre	08 21 30.8	
	comp=Z,0.4nm,0.5s,baz=7.8,slow=2.4,SNR=3.4						
HFS	Hagfors	139.60	351	PKhKP	PKPpre	08 21 30.6	
	comp=Z,2.4nm,0.4s,baz=67,slow=3.9,SNR=20						
AKASG	Malin Array Be	143.05	331	PKhKP	PKPpre	08 21 42.0	
	comp=Z,13nm,0.5s,baz=44,slow=4.3,SNR=92						
LODK	Lodwar	143.28	247		PKPbc	08 21 45.8	+0.9
EKA	Eskdalemuir Ar	145.07	5	PKPbc	PKPdf	08 21 48.3	0.0
	comp=Z,1.5nm,0.4s,baz=325,slow=2.9,SNR=11						
BNN	Bunyan	145.64	310		PKPbc	08 21 51.9	+0.3
ASF	Jabal al Asfar	146.77	298	PKPbc	PKPbc	08 21 54.4	-0.4
	comp=Z,7.6nm,0.8s,baz=32,slow=2.6,SNR=9.8						
BRTR	Keskin Array B	146.85	312		PKPdf	08 21 53.3	+1.3
BRTR	Keskin Array B	146.85	312	PKPbc	PKPbc	08 21 54.9	0.0
	comp=Z,3.7nm,0.6s,baz=130,slow=4.5,SNR=19						
BUR08	Bucovina Ar. S	147.08	331		PKPbc	08 21 56.0	+0.9
BURAR	Bucovina Array	147.10	331		PKPbc	08 21 56.2	+1.0
MMAI	Mount Meron Ar	147.81	300	PKPbc	PKPbc	08 21 58.5	+1.0
	comp=Z,5.3nm,0.4s,baz=49,slow=2.5,SNR=11						
OSTC	Ostas	148.02	343	*e*PKP	PKPbc	08 21 58.5	+1.1
STEB	Steborice	148.11	341	*e*PKP	PKPbc	08 21 58.0	+0.4
CLL	Collm	148.12	347		PKPbc	08 21 58.2	+0.7
CLL	Collm	148.12	347	⇓*i*PKPbc	PKPbc	08 21 57.7	+0.2
	comp=Z,15nm,0.6s						
CLL				*i* PKPab	PKPab	08 22 02.2	-0.2
	comp=Z,9.0nm,0.8s						
DPC	Dobruska-Polom	148.18	342	*e*PKP	PKPbc	08 21 58.5	+0.7
BRG	Berggiesshubel	148.31	345	*i* PKP	PKPbc	08 21 58.4	+0.3
BRG				Amp		08 21 58.9	
	comp=Z,6.3nm,0.7s						
MORC	Moravsky Berou	148.32	341	*e*PKP	PKPbc	08 21 58.7	+0.5
MORC				*e*		08 22 04.0	
MAUC	Maruska	148.59	340	*e*PKP	PKPbc	08 21 59.6	+0.7
GOPC	GO Pecny, Ondr	148.99	344	*e*PKP	PKPbc	08 21 59.8	0.0
VRAC	Vranov	149.03	341	*e*PKP	PKPbc	08 22 00.1	+0.2
VRAC				*e*		08 22 06.9	
JAVC	Velka Javorina	149.08	340	*e*PKP	PKiKP	08 22 01.7	+0.7
KRUC	Moravsky	149.31	341	*e*PKP	PKPbc	08 22 01.1	+0.6
KRUC				*e*		08 22 07.6	
KHC	Kasperske Hory	150.02	345	*e*PKP	PKPbc	08 22 03.0	+0.7
KHC				*e*x	x	08 22 11.3	
GERES	GERESS Array B	150.25	344		PKPbc	08 22 03.0	+0.1
GERES	GERESS Array B	150.25	344	PKPbc	PKPbc	08 22 03.0	+0.1
	comp=Z,2.2nm,0.6s,baz=41,slow=2.6,SNR=15						
GERES				PKPab	PKPab	08 22 11.2	-0.3
	comp=Z,1.1nm,0.6s,baz=343,slow=4.2,SNR=5.6						
DAVOX	Davos/Dischmat	153.06	348	PKPbc	PKPbc	08 22 09.5	+0.1
	comp=Z,3.3nm,0.4s,baz=87,slow=5.2,SNR=5.0						

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*ASRS **18** 08:04:20.0±0.7,54°.06N×86°.48E,h0^{km},M2.5,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 18 08:04:22.1±2.7,54°.11N×86°.48E,h0^{km},mbtmp3.0/2, ML2.8/2,Error ellipse: s-maj=22.4km s-min=13.5km az=55.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.99	262	I	I	08 11 22.0	
	baz=81,slow=323,SNR=4.0						
ZALV	Zalesovo Beam	0.99	262	Pg	Pg	08 04 40.2	-0.9
	0.7nm,0.3s,baz=79,slow=16,SNR=7.7						
ZALV				Lg	Lg	08 04 55.1	
	2.1nm,0.3s,baz=80,slow=29,SNR=12						
KURBB	Kurchatov Arra	5.99	238	Pn	Pn	08 05 53.0	+1.0
	0.1nm,0.3s,baz=55,slow=14,SNR=8.6						
	1.5nm,0.7s						
MKAR	Makanchi Array	7.79	202	Pn	Pn	08 06 17.6	+0.9
	0.2nm,0.3s,baz=24,slow=14,SNR=8.2						
	0.3nm,0.3s						

ASRS 18 08:04:35.0±0.2,53°.46N×87°.25E,h0^{km},M2.4,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.,Southwestern Siberia

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*NEIC **18** 08:10:04.6±0.9,17°.81S±0°.02×167°.9E±0°.2,h10^{km}±2^{km}, mb4.6/14,Error ellipse: s-maj=28.3km s-min=3.3km az=87.0*

*NOU **18** 08:10:05.4,17°.83S×167°.57E,h5^{km},MLv4.7/11,Vanuatu Islands*

*IDC **18** 08:10:05.9±0.8,17°.84S×167°.40E,h0^{km},mb4.3/11, mbtmp4.3/12,ML3.8/1,MS3.6/17,Error ellipse: s-maj=25.9km s-min=17.6km az=89.0*

ISC 18 08:10:08.4±0.5,17°.81S±0°.05×167°.56E±0°.09,h23^{km},n66, σ1^{s}45/51,mb4.5/20,MS3.7/18,6C-2D,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLAKA	Lakatoro	1.70	356	P	Pn	08 10 35.5	-1.1
SANVU	Saraoutou	2.37	352		Pn	08 10 44.0	-1.9
SANVU	Saraoutou	2.37	352	P	Pn	08 10 44.6	-1.3
INH	Isangel	2.37	137	P	Pn	08 10 44.2	-1.7
DZM	Mont Dzumac	4.37	194	*e*Pn	Pn	08 11 07.9	-5.6
	122nm,1.2s						
DZM	Mont Dzumac	4.37	194	Pn	Pn	08 11 11.2	-2.3
	5.2nm,0.3s,baz=139,slow=21,SNR=15						
DZM				Sn	Sn	08 12 04.9	+1.2
	5.8nm,0.3s,baz=322,slow=23,SNR=4.4						
	16nm,0.4s						
DZM	Mont Dzumac	4.37	194	P	Pn	08 11 12.5	-1.0
ONTNC	Ouen Toro	4.60	193		Pn	08 11 14.8	-1.8
ONTNC	Ouen Toro	4.60	193	P	Pn	08 11 15.0	-1.5
OUENC	Ouen Island, N	4.64	188	P	Pn	08 11 16.7	-0.4
EIDS	Eidsvold	17.06	241	P	P	08 14 07.5	+0.3
ARMA	Armidale	19.18	226		Pn	08 14 30.6	-1.0
ARMA				IAmb	IAmb	08 14 39.3	
	comp=Z,23nm,1.3s						
CTAO	Charters Tower	20.28	260		Pn	08 14 42.9	-1.8
CTAO				IAmb	IAmb	08 14 46.6	
	comp=Z,11nm,0.9s						
URZ	Urewera	22.02	160	P	P	08 15 02.9	+1.7
	comp=Z,2.7nm,0.5s,baz=194,slow=7.0,SNR=3.3						
URZ				LR	LR	08 21 48.8	
	comp=Z,268nm,19.7s,baz=70,slow=32						
	comp=Z,2.7nm,0.5s						
STKA	Stephens Creek	27.32	234		P	08 15 51.2	-0.4
STKA	Stephens Creek	27.32	234	P	P	08 15 52.9	+1.3
	comp=Z,9.1nm,1.0s,baz=50,slow=5.4,SNR=6.7						
STKA				LR	LR	08 25 31.6	
	comp=Z,141nm,20.6s,baz=27,slow=34						
	comp=Z,9.1nm,1.0s						
WR8	Warramunga Arr	31.33	261	P	P	08 16 27.5	+0.2
WR8				IAmb	IAmb	08 16 43.9	
	comp=Z,5.8nm,1.1s						
WB0	Warramunga Arr	31.43	261	P	P	08 16 28.2	-0.1
WB0				IAmb	IAmb	08 16 37.8	
	comp=Z,16nm,1.4s						
WRA	Warramunga Arr	31.48	261	P	P	08 16 27.9	-0.8
	comp=Z,2.7nm,0.9s,baz=89,slow=8.5,SNR=11						
WRA				LR	LR	08 28 30.5	
	comp=Z,164nm,18.3s,baz=106,slow=35						
	comp=Z,2.7nm,0.9s						
AS31	Alice Springs	31.96	254		P	08 16 33.3	+0.4
ASAR	Alice Springs	31.96	254	P	P	08 16 32.6	-0.3
	comp=Z,2.9nm,0.7s,baz=78,slow=8.4,SNR=20						

ASAR				LR	LR	08 28 56.3	
	comp=Z,200nm,19.2s,baz=88,slow=36						
	comp=Z,2.9nm,0.7s						
KNRA	Kununurra	37.17	267	P	P	08 17 17.1	-0.9
KNRA				IAmb	IAmb	08 17 19.4	
	comp=Z,13nm,1.2s						
FORT	Forrest	38.05	243	P	P	08 17 25.2	-0.1
FORT				IAmb	IAmb	08 17 34.3	
	comp=Z,43nm,1.5s						
GUMO	Guam	38.40	323	LR	LR	08 32 55.6	
	comp=Z,75nm,20.9s,baz=146,slow=36						
FITZ	Fitzroy Crossi	39.82	263	P	P	08 17 39.7	-0.6
FITZ	Fitzroy Crossi	39.82	263	LR	LR	08 33 08.4	
	comp=Z,149nm,19.1s,baz=86,slow=35						
TBI	Tubuai	40.50	105	eLQ	LQ	08 27 02.1	
	comp=Z,2μm,26.8s						
TBI				eLR	LR	08 28 49.2	
	comp=Z,519nm,40.2s						
PPT2	Papeete2	40.77	96	eLQ	LQ	08 27 04.2	
	comp=Z,304nm,26.2s						
PPT2				eLR	LR	08 28 42.5	
	comp=Z,89nm,26.2s						
PPT2				eLR	LR	08 28 51.8	
	comp=Z,95nm,26.8s						
NWAO	Narrogin (SRO)	47.47	241	P	P	08 18 41.5	-0.2
NWAO	Narrogin (SRO)	47.47	241	LR	LR	08 37 49.6	
	comp=Z,121nm,18.1s,baz=30,slow=35						
JOW	Kunigami	58.51	318	LR	LR	08 45 54.0	
	comp=Z,28nm,18.2s,baz=202,slow=37						
MJAR	Matsushiro Arr	60.76	333	P	P	08 20 18.1	-0.3
	comp=Z,3.7nm,1.1s,baz=168,slow=6.7,SNR=5.9						
MJAR				LR	LR	08 42 41.4	
	comp=Z,17nm,21.8s,baz=148,slow=32						
	comp=Z,3.7nm,1.1s						
JNU	Nakatsue	61.59	325	LR	LR	08 44 40.9	
	comp=Z,20nm,19.4s,baz=100,slow=34						
ASAJ	Asahikawa	65.72	341	LR	LR	08 47 44.8	
	comp=Z,47nm,19.5s,baz=131,slow=34						
KSRS	Korea Array	66.44	326	LR	LR	08 48 17.4	
	comp=Z,7μm,19.7s,baz=60,slow=34						
SHEM	Shemya Is, Ala	70.47	4	LR	LR	08 46 22.3	
	comp=Z,31nm,19.7s,baz=174,slow=31						
PETK	Petropavlovsk-	71.13	354	P	P	08 21 26.3	+1.5
	comp=Z,13nm,1.0s,baz=123,slow=5.5,SNR=5.3						
PETK				LR	LR	08 49 00.0	
	comp=Z,33nm,18.4s,baz=199,slow=33						
	comp=Z,13nm,1.0s						
QSPA	South Pole Qui	72.24	180	P	P	08 21 30.3	-1.4
QSPA				IAmb	IAmb	08 21 40.5	
	comp=Z,5.6nm,0.8s						
QSPA	South Pole Qui	72.24	180	P	P	08 21 32.6	+0.9
	comp=Z,1.8nm,0.7s,baz=355,slow=1.1,SNR=15						
	comp=Z,1.8nm,0.7s						
CN2	Changchun	72.42	329	eP	P	08 21 34.8	+2.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BNX	BinXian	72.97	332	⇑P	P	08 21 37.6	+1.6
BNX				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KLR	Kul'dur	73.92	336	LR	LR	08 49 49.8	
	comp=Z,17nm,21.9s,baz=228,slow=32						
CMAR	Chiang Mai Arr	76.47	295	P	P	08 21 57.3	+0.4
	comp=Z,2.0nm,0.2s,baz=136,slow=4.9,SNR=7.2						
	comp=Z,2.0nm,0.2s						
MA2	Magadan	78.31	351	LR	LR	08 49 47.4	
	comp=Z,56nm,21.9s,baz=124,slow=30						
SEY	Seymchan	81.35	353	LR	LR	08 53 55.6	
	comp=Z,57nm,20.4s,baz=94,slow=32						
YAK	Yakutsk	85.04	343	LR	LR	08 54 47.7	
	comp=Z,36nm,21.9s,baz=140,slow=32						
SONM	Songino Array	85.13	324	P	P	08 22 44.1	+1.4
	comp=Z,2.4nm,0.9s,baz=135,slow=4.7,SNR=11						
	comp=Z,2.4nm,0.9s						
MESA	MESA	87.73	23	P	P	08 22 51.5	-3.8
NVAR	Mina Array Bea	89.06	49	P	P	08 23 05.0	+2.9
	comp=Z,0.1nm,0.3s,baz=230,slow=12,SNR=3.5						
	comp=Z,0.1nm,0.3s						
TROLL	Troll, Antarti	89.83	185	⇑P	P	08 23 05.7	+0.6
	comp=Z,134nm,1.2s						
SNAA	Sanae	90.51	183	⇑P	P	08 23 07.9	-0.3
	comp=Z,34nm,1.2s						
SNAA	Sanae	90.51	183	P	P	08 23 07.1	-1.1
SNAA				IAmb	IAmb	08 23 36.3	
	comp=Z,6.5nm,1.3s						
SNAA	Sanae	90.51	183	P	P	08 23 08.4	+0.2
	comp=Z,1.9nm,1.1s,baz=202,slow=11,SNR=7.7						
	comp=Z,1.9nm,1.1s						
VNA3	Neumayer Olymp	91.16	181	⇑P	P	08 23 11.2	0.0
	comp=Z,1.7nm,1.0s						
VNA2	Neumayer--Watz	91.43	182	⇑P	P	08 23 12.9	+0.5
	comp=Z,1.7nm,0.7s,baz=169,slow=3.5						
VNA1	Neumayer--Stat	91.73	181	⇑P	P	08 23 14.1	+0.4
	comp=Z,3.5nm,1.2s						
ARCES	ARCESS Array B	123.28	345	PKP	PKiKP	08 29 04.2	+1.1
	comp=Z,1.8nm,0.9s,baz=48,slow=3.6,SNR=3.6						
LESA	Schwarzleotal	143.99	331	i PKP	PKPdf	08 29 42.0	-0.2
	comp=Z,3.1nm,0.7s						
ABTA	Abfaltersbach	144.55	330	ePKP	PKPdf	08 29 43.0	-0.2
	comp=Z,1.7nm,0.5s						
WTTA	Wattenberg	144.58	331	ePKP	PKPdf	08 29 43.6	+0.3
	comp=Z,4.4nm,0.7s						
MOTA	Moosalm	144.76	332	ePKP	PKPdf	08 29 43.6	-0.1
	comp=Z,3.7nm,0.8s						
SQTA	Sankt Quirin	144.81	332	i PKP	PKiKP	08 29 44.4	-3.0
	comp=Z,3.2nm,0.5s						
WLF	Walferdange	144.86	339	dPKiKP	PKiKP	08 29 45.0	-2.3
DOU	Dourbes	145.00	341	dPKiKP	PKiKP	08 29 44.6	-2.9
FETA	Feichten	145.18	332	epPKP	PKiKP	08 29 45.7	-2.6
	comp=Z,9.7nm,0.9s						
DAVA	Damuels	145.35	333	i PKP	PKPab	08 29 45.4	+0.7
	comp=Z,10nm,1.1s						

IDC 18 08:17:51.5±47.0, 16°.60S×175°.12W, h0^{km}, mb4.1/3, mbtmp4.1/3, Error ellipse: s-maj=897.7km s-min=173.9km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.01	241	P	P	08 25 45.2	+0.4
	0.7nm,0.4s,baz=74,slow=9.6,SNR=4.4						
	0.7nm,0.4s						
WRA	Warramunga Arr	47.97	258	P	P	08 26 32.1	-0.3
	0.5nm,0.5s,baz=96,slow=7.4,SNR=12						
	0.5nm,0.5s						
ASAR	Alice Springs	48.18	253	P	P	08 26 33.8	-0.3
	6.6nm,0.6s,baz=89,slow=8.2,SNR=121						
	6.6nm,0.6s						

IDC 18 08:30:21.4±2.8, 53°.91N×86°.41E, h0^{km}, mbtmp2.6/2, ML2.4/2, Error ellipse: s-maj=21.6km s-min=13.4km az=65.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.94	273	I	I	08 37 20.0	
	baz=93,slow=324,SNR=8.7						
ZALV	Zalesovo Beam	0.94	273	Pg	Pg	08 30 37.6	-1.8
	0.6nm,0.3s,baz=87,slow=18,SNR=6.2						
ZALV				Lg	Lg	08 30 53.4	
	1.7nm,0.3s,baz=95,slow=27,SNR=11						
KURBB	Kurchatov Arra	5.85	239	Pn	Pn	08 31 50.4	+1.1
	0.1nm,0.3s,baz=51,slow=15,SNR=2.3						
	0.3nm,0.3s						
MKAR	Makanchi Array	7.59	202	Pn	Pn	08 32 14.6	+1.4
	0.1nm,0.3s,baz=26,slow=14,SNR=2.2						
	0.1nm,0.4s						

IDC 18 08:30:40.1±5.3, 30°.43S×177°.60W, h0^{km}, mb4.1/3, mbtmp4.1/3, MS3.2/2, Error ellipse: s-maj=209.5km s-min=48.3km az=151.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.95	208	Sn	Sn	08 34 20.6	-11
	2.1nm,0.3s,baz=159,slow=22,SNR=5.6						
RAR	Rarotonga	18.47	64	LR	LR	08 41 51.7	
	comp=Z,62nm,18.7s,baz=236,slow=36						
STKA	Stephens Creek	34.80	257	P	P	08 37 33.0	+0.3
	1.3nm,0.4s,baz=106,slow=14,SNR=4.1						
	1.3nm,0.4s						
ASAR	Alice Springs	43.45	267	P	P	08 38 44.7	-0.5
	1.2nm,0.6s,baz=105,slow=7.5,SNR=17						
	1.2nm,0.6s						
WRA	Warramunga Arr	44.44	272	P	P	08 38 53.1	-0.1
	2.0nm,0.5s,baz=111,slow=8.1,SNR=12						
	2.0nm,0.5s						
CMAR	Chiang Mai Arr	93.73	289	LR	LR	09 28 47.3	
	comp=Z,13nm,18.6s,baz=175,slow=37						
FINES	FINESS Array B	145.29	340	PKPbc	PKPbc	08 50 18.1	-0.8
	1.9nm,0.4s,baz=53,slow=2.7,SNR=16						

*ASRS **18** 08:31:10.0±1.2, 53°.72N×91°.08E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*IDC **18** 08:31:14.3±3.7, 53°.72N×90°.85E, h0^{km}, mbtmp2.8/3, ML2.5/3, Error ellipse: s-maj=33.9km s-min=25.3km az=26.0*

*NNC **18** 08:31:21.2±7.5, 53°.60N×90°.15E, h0^{km}, mb2.8, mpv2.5, Error ellipse: s-maj=52.0km s-min=27.9km az=99.0, Suspected Mining explosion.*

ISC 18 08:31:18.3±4.1, 53°.6N±0°.2×90°.4E±0°.2, h0^{km}, n7, σ1^{s}39/8, 4C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	3.34	278	I	I	08 52 50.0	
	0.1nm,0.9s,baz=91,slow=324,SNR=30						
ZAA0	Zalesovo Array	3.34	278	⇑Pg	Pb	08 32 17.7	-0.6
	0.5nm,0.6s,baz=90,slow=18						
ZAA0				⇑Lg	Lg	08 33 04.6	
	2.4nm,0.7s,baz=96,slow=27						
ZALV	Zalesovo Beam	3.34	278	Pn	Pn	08 32 11.7	0.0
	0.7nm,0.3s,baz=89,slow=18,SNR=6.9						
ZALV				Lg	Lg	08 33 07.1	
	1.5nm,0.3s,baz=91,slow=25,SNR=9.3						
	0.6nm,0.4s						
KURK	Kurchatov	7.81	253	⇑Pn	Pn	08 33 15.8	+2.7
	0.5nm,0.8s						
KURK				⇓Sn	Sn	08 34 41.8	-0.4
	2.0nm,1.1s						
KURK				⇑Lg	Lg	08 35 26.8	
	4.6nm,1.1s						
KURBB	Kurchatov Arra	7.91	253	Pn	Pn	08 33 14.1	-0.3
	0.1nm,0.3s,baz=67,slow=14,SNR=3.1						
KURBB				Sn	Sn	08 34 45.4	+0.9
	0.1nm,0.3s,baz=67,slow=25,SNR=9.3						
KURBB				Lg	Lg	08 35 35.8	
	baz=66,slow=30						
	0.4nm,0.3s						
KURBB	Kurchatov Arra	7.91	253	⇓Sn	Sn	08 34 43.4	-1.1
	9.9nm,0.8s						
KURBB				⇓Lg	Lg	08 35 30.0	
	24nm,1.4s						
MKAR	Makanchi Array	8.59	221	Pn	Pn	08 33 23.6	-0.2
	0.1nm,0.3s,baz=32,slow=12,SNR=5.2						
MKAR				Lg	Lg	08 35 55.8	
	baz=26,slow=30,SNR=2.7						
	0.3nm,0.4s						

*IDC **18** 08:42:21.1±0.6, 8°.30S×116°.71E, h0^{km}, mb4.1/12, mbtmp4.1/14, ML4.1/2, MS3.2/6, Error ellipse: s-maj=29.3km s-min=14.4km az=63.0*

*NEIC **18** 08:42:23.1±1.5, 8°.28S±0°.07×116°.71E±0°.07, h10^{km}±1^{km}, mb4.8/19, Error ellipse: s-maj=11.6km s-min=10.5km az=325.0*

*DJA **18** 08:42:23.5±0.3, 8°S±2°×11°7E±°, h11^{km}±2^{km}, M4.7/24, mb4.7/22, mB5.3/6, MLv4.6/24, Mw(mB)4.8/6*

ISC 18 08:42:22.9±0.4, 8°.31S±0°.04×116°.75E±0°.04, h10^{km}, n90, σ1^{s}25/87, mb4.5/25, MS3.1/3, 4C, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWSI	Taliwang, Sumb	0.45	163	P	Pg	08 42 32.9	+1.2
TWSI				S	Sg	08 42 39.0	+1.4
PLAI	Plampang	1.14	117	P	Pb	08 42 44.7	0.0
SRBI	Singaraja	1.54	278	P	Pb	08 42 50.7	-0.8
DNP	Denpasar	1.56	256	P	Pb	08 42 51.9	-0.1
ABJI	Asem Bagus	2.54	281	P	Pn	08 43 05.7	+1.5
JAGI	Jajag, Banyuwa	2.57	266		Pn	08 43 04.6	-0.1
JAGI	Jajag, Banyuwa	2.57	266	P	Pn	08 43 04.5	-0.1
WBSI	Waikabubak, Su	2.93	117	P	Pn	08 43 10.0	+0.4
KMMI	Kalianget	3.03	294	P	Pn	08 43 13.1	+2.2
GMJI	Gumukmas	3.27	270	P	Pn	08 43 14.7	+0.5
WSI	Waingapu	3.76	111	P	Pn	08 43 24.1	+3.1
BASI	Baing, Sumba	4.23	117	P	Pn	08 43 28.4	+0.9
BSSI	Bau Bau, Buton	4.29	60	P	Pn	08 43 28.5	+0.2
KAPI	Kappang	4.43	43		Pn	08 43 30.2	0.0
KAPI	Kappang	4.43	43	Pn	Pn	08 43 29.4	-0.8
	7.5nm,0.3s,baz=208,slow=6.9,SNR=19						
KAPI				Sn	Sn	08 44 20.6	-1.2
	15nm,0.3s,baz=347,slow=21,SNR=14						
	17nm,0.3s						
GRJI	Gresik	4.45	288	P	Pn	08 43 31.0	+0.5
EDFI	Ende, Flores	4.91	95	P	Pn	08 43 37.2	+0.3
BNSI	Bone	5.12	41	P	Pn	08 43 40.4	+0.7
	0.6nm52nm,0.9s						
SPSI	Sidrap Palu	5.26	35	P	Pn	08 43 42.7	+1.1
	0.3nm3μm23nm,0.7s						
MMRI	Maumere	5.44	94	Pn	Pn	08 43 43.4	-0.7
MMRI	Maumere	5.44	94	P	Pn	08 43 45.5	+1.4
PCJI	Pacitan	5.51	271	P	Pn	08 43 45.1	0.0
	0.5nm79nm,0.8s						
WOJI	Wonogiri, Jawa	5.79	274	P	Pn	08 43 49.9	+1.0
	0.4nm60nm,0.5s						
TTSI	Tana Toraja	6.06	30	P	Pn	08 43 52.8	+0.2
	0.2nm35nm,0.7s						
UGM	Wanagama	6.18	273	Pn	Pn	08 43 51.9	-2.4
UGM	Wanagama	6.18	273	P	Pn	08 43 54.6	+0.3
	0.5nm93nm,1.7s						
BATI	Baumata	7.08	106	LR	LR	08 47 11.5	
	comp=Z,221nm,21.1s,baz=56,slow=41						
SOEI	Soe	7.56	102	Pn	Pn	08 44 12.0	-1.5
SOEI	Soe	7.56	102	P	Pn	08 44 14.1	+0.7
	62nm,0.7s						
LEM	Lembang	9.17	279	LR	LR	08 48 35.2	
	comp=Z,190nm,21.4s,baz=152,slow=41						
FITZ	Fitzroy Crossi	13.02	139		Pn	08 45 26.8	-1.3
FITZ	Fitzroy Crossi	13.02	139	Pn	Pn	08 45 27.2	-0.9
	0.8nm,0.3s,baz=322,slow=6.8,SNR=18						
FITZ				Sn	Sn	08 47 50.5	-2.6
	1.1nm,0.3s,baz=160,slow=17,SNR=4.8						
	4.0nm,0.5s						
KNRA	Kununurra	13.84	123		Pn	08 45 38.9	-0.4
MTN	Manton Dam	14.84	109		Pn	08 45 51.2	-1.8
DAV	Davao City (W)	17.63	30	LR	LR	08 54 02.5	
	comp=Z,40nm,20.1s,baz=195,slow=40						
WB0	Warramunga Arr	20.54	126		P	08 47 01.4	-0.3
WB0				IAmb	IAmb	08 47 02.0	
	comp=Z,15nm,0.6s						
WRA	Warramunga Arr	20.58	126		P	08 47 01.6	-0.6
WRA	Warramunga Arr	20.58	126	P	P	08 47 01.9	-0.4
	comp=Z,12nm,0.7s,baz=300,slow=12,SNR=216						
	comp=Z,12nm,0.7s						
WRAB	Tennant Creek	20.59	126	P	P	08 47 02.1	-0.2
WRAB				IAmb	IAmb	08 47 14.9	
	comp=Z,24nm,1.2s						
WR8	Warramunga Arr	20.72	126		P	08 47 03.6	-0.1
WR8				IAmb	IAmb	08 47 04.2	
	comp=Z,23nm,0.5s						
AS31	Alice Springs	22.43	135	P	P	08 47 22.1	-0.1
ASAR	Alice Springs	22.43	135	P	P	08 47 22.1	-0.1
ASAR	Alice Springs	22.43	135	P	P	08 47 21.8	-0.4
	comp=Z,12nm,0.6s,baz=310,slow=9.6,SNR=260						
	comp=Z,12nm,0.6s						
NWAO	Narrogin (SRO)	24.50	179	P	P	08 47 42.9	+0.4
NWAO				IAmb	IAmb	08 47 43.6	
	comp=Z,44nm,1.5s						
NWAO	Narrogin (SRO)	24.50	179	LR	LR	08 58 30.5	
	comp=Z,72nm,19.0s,baz=220,slow=40						
FORT	Forrest	24.73	156		P	08 47 44.8	+0.2
FORT				IAmb	IAmb	08 47 46.2	
	comp=Z,26nm,0.6s						
BBOO	Buckleboo	30.24	146	P	P	08 48 33.2	-0.8
BBOO				IAmb	IAmb	08 48 57.7	
	comp=Z,62nm,1.5s						
CMAR	Chiang Mai Arr	31.88	327	P	P	08 48 49.2	+0.7
	comp=Z,0.6nm,0.3s,baz=152,slow=8.4,SNR=6.4						
CMAR				LR	LR	09 02 47.9	
	comp=Z,41nm,18.9s,baz=195,slow=38						
	comp=Z,0.6nm,0.3s						
STKA	Stephens Creek	32.92	139	P	P	08 48 57.8	+0.2
STKA	Stephens Creek	32.92	139	P	P	08 48 57.7	+0.2
	comp=Z,5.3nm,0.5s,baz=310,slow=9.9,SNR=26						
	comp=Z,5.3nm,0.5s						
JOW	Kunigami	36.68	17		P	08 49 29.9	-0.2
JOW				IAmb	IAmb	08 49 34.1	
	comp=Z,61nm,1.3s						
PZH	PanZhiHua	37.55	338	P	P	08 49 40.8	+3.2
PZH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,4.4s						
TOO	Toolangi	39.05	143	P	P	08 49 50.2	+0.1
TOO				IAmb	IAmb	08 49 52.7	
	comp=Z,13nm,1.4s						
NJ2	Nanjing	40.18	3	eP	P	08 50 02.5	+3.0
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LZH	Lanzhou	45.80	345	eP	P	08 50 47.8	+2.7
LZH				pP	sP	08 50 53.5	+3.9
LZH				pmax	pmax		
	comp=Z,13nm,1.3s						
MJAR	Matsushiro Arr	48.96	23	LR	LR	09 12 26.6	
	comp=Z,19nm,19.8s,baz=161,slow=37						
HHC	Hu-ho-hao-te	49.15	355	eP	P	08 51 13.8	+2.7
HHC				pmax	pmax		
	comp=Z,17nm,0.6s						
HHC				pmax	pmax		
	comp=Z,64nm,4.5s						
GTA	Gaotai	50.01	343	eP	P	08 51 20.1	+2.4
GTA				sP	sP	08 51 27.8	+5.7
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
JTM	Tenmabayashi	53.75	23	P	P	08 51 45.3	-0.1
SONM	Songino Array	56.65	352	P	P	08 52 06.7	+0.4
	comp=Z,0.6nm,0.4s,baz=181,slow=8.2,SNR=4.6						
	comp=Z,0.6nm,0.4s						
WKZ	Wanaka	57.87	138	P	P	08 52 14.3	-0.8
CASY	Casey	58.04	183		P	08 52 15.9	+0.1
CASY				IAmb	IAmb	08 52 42.8	
	comp=Z,11nm,1.1s						
WMQ	Urumqi	58.19	336	eP	P	08 52 19.5	+2.2
HEH	HeiHe	59.05	8	eP	P	08 52 30.0	+7.0
HEH				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BKZ	Black Stump Fm	61.45	130		P	08 52 39.6	-0.3
MKAR	Makanchi Array	62.85	334		P	08 52 47.7	-1.3
MKAR	Makanchi Array	62.85	334	P	P	08 52 47.6	-1.4
	comp=Z,0.6nm,0.7s,baz=141,slow=7.8,SNR=5.7						
	comp=Z,0.6nm,0.7s						
KURBB	Kurchatov Arra	67.38	335	P	P	08 53 18.5	+0.2
	comp=Z,0.3nm,0.5s,baz=139,slow=4.8,SNR=1.5						
	comp=Z,0.3nm,0.5s						
ZALV	Zalesovo Beam	67.62	340	P	P	08 53 18.7	-1.1
	comp=Z,0.5nm,0.4s,baz=151,slow=6.4,SNR=4.6						
	comp=Z,0.5nm,0.4s						
PETK	Petropavlovsk-	70.36	25	P	P	08 53 36.7	-0.1
VNDA	Vanda	73.02	171	P	P	08 53 53.0	+0.5
VNDA	Vanda	73.02	171	P	P	08 53 52.8	+0.2
	comp=Z,0.6nm,0.4s,baz=314,slow=8.4,SNR=6.1						
	comp=Z,0.6nm,0.4s						
AB31	Akbulak array	75.73	326	P	P	08 54 06.5	-2.1
ABKAR	Akbulak array	75.73	326	P	P	08 54 06.5	-2.2
QSPA	South Pole Qui	81.68	180	P	P	08 54 41.8	+0.4
	comp=Z,1.4nm,1.0s,baz=151,slow=4.9,SNR=6.9						
	comp=Z,1.4nm,1.0s						
BOSA	Boshof	87.38	242	P	P	08 55 09.6	-1.4
BOSA				IAmb	IAmb	08 55 24.0	
	comp=Z,7.2nm,1.4s						
BOSA	Boshof	87.38	242	P	P	08 55 09.7	-1.3
	comp=Z,2.4nm,0.8s,baz=97,slow=5.5,SNR=5.1						
	comp=Z,2.4nm,0.8s						
TROLL	Troll, Antarti	89.41	196	⇑P	P	08 55 20.4	+0.6
	comp=Z,61nm,0.4s						
SNAA	Sanae	91.06	196	⇑P	P	08 55 27.7	+0.3
	comp=Z,20nm,0.4s						
SNAA	Sanae	91.06	196	P	P	08 55 28.0	+0.6
SNAA				IAmb	IAmb	08 55 33.6	
	comp=Z,6.0nm,1.4s						
SNAA	Sanae	91.06	196	P	P	08 55 27.2	-0.1
	comp=Z,0.8nm,0.5s,baz=202,slow=4.9,SNR=18						
	comp=Z,0.8nm,0.5s						
VNA2	Neumayer--Watz	92.69	196	⇑P	P	08 55 35.1	+0.2
	comp=Z,1.2nm,0.6s,baz=106,slow=3.9						
VNA3	Neumayer Olymp	93.11	195	⇑P	P	08 55 36.6	-0.2
	comp=Z,0.9nm,0.8s						
TORD	Torodi Ar. Bea	116.15	281	PKPdf	PKPdf	09 01 05.4	-2.1
PLCA	Paso Flores	130.74	173	PKP	PKPdf	09 01 35.4	+0.5
	comp=Z,1.4nm,0.9s,baz=2.1,slow=1.7,SNR=3.1						
TXAR	Lajitas Array	136.71	56	PKPdf	PKPdf	09 01 46.2	-0.2
CPUP	Villa Florida	145.09	189	PKPbc	PKPbc	09 02 00.8	-0.1
	comp=Z,2.0nm,0.7s,baz=16,slow=3.0,SNR=19						
U49A	Red Boiling Sp	145.24	33		PKPbc	09 01 59.5	-1.6
T50A	Nancy	145.34	31	PKPbc	PKPbc	09 01 59.9	-1.4
BDFB	Brasilia	151.82	212	PKPbc	PKPbc	09 02 17.0	-2.2
	comp=Z,1.3nm,0.4s,baz=100,slow=6.1,SNR=3.5						

*IDC **18** 08:44:15.2±2.0, 6°.91S×127°.23E, h416^{km}±25^{km}, mb3.3/2, mbtmp4.3/6, Error ellipse: s-maj=32.6km s-min=17.8km az=66.0*

ISC 18 08:44:14.6±1.1, 6°.9S±0°.1×127°.4E±0°.1, h400^{km}, n6, σ1^{s}26/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	4.92	228	P	Pn	08 45 36.7	+0.9
	197nm,0.5s,baz=47,slow=4.6,SNR=10						
BATI				S	S	08 46 41.6	-0.1
	220nm,0.6s,baz=327,slow=12,SNR=7.2						
JAY	Jayapura	13.99	73	P	P	08 47 17.1	+0.8
	2.1nm,0.3s,baz=197,slow=12,SNR=4.5						
WRA	Warramunga Arr	14.63	153	P	P	08 47 22.8	-0.4
	2.5nm,0.3s,baz=336,slow=8.4,SNR=5.2						
WRA				S	S	08 49 57.4	-1.9
	3.0nm,0.7s,baz=325,slow=19,SNR=4.9						
ASAR	Alice Springs	17.82	160	P	P	08 47 58.2	+0.9
	3.4nm,0.5s,baz=346,slow=11,SNR=4.3						
ASAR				S	S	08 51 01.1	-0.6
	1.4nm,0.5s,baz=344,slow=26,SNR=5.9						
STKA	Stephens Creek	28.19	154	P	P	08 49 33.4	+0.9
	2.7nm,0.5s,baz=324,slow=8.1,SNR=7.8						
	2.7nm,0.5s						
KURBB	Kurchatov Arra	71.07	330	P	P	08 54 49.0	-1.5
	0.3nm,0.4s,baz=123,slow=7.8,SNR=1.8						
	0.3nm,0.4s						

CATAC 18 09:00:42.2±0.7, 12°N±5°×8°7W±°, h30^{km}±4^{km}, M2.5/12, MLv2.5/12, Error ellipse: s-maj=12.3km s-min=3.5km az=35.9, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIN	San Cristobal	0.49	42	P	Pn	09 00 54.4	+1.2
PKGN	Cerro Pekin	0.52	50	P	Pn	09 00 54.5	+0.9
PKGN				S	Sn	09 01 04.6	+3.1
QUEN	Al S del Volca	0.58	64	P	Pn	09 00 55.1	+0.7
QUEN				S	Sn	09 01 05.9	+2.9
HOYN	Al Sur del Vol	0.60	64	P	Pn	09 00 55.4	+0.5
HOYN				S	Sn	09 01 05.9	+2.3
HERN	Volcan Telica	0.60	63	S	Sb	09 00 55.4	-7.4
POLN	Al Sur del Vol	0.64	61	P	Pb	09 00 54.5	-0.4
POLN				S	Sn	09 01 05.5	+1.1
POTN	Potosi Cosigui	0.67	350	P	Pn	09 00 55.8	+0.1
POTN				S	Sn	09 01 06.5	+1.4
CNGA	Al SSO del Vol	0.69	77	S	Sn	09 01 07.5	+1.9
CNGN	Cerro Negro	0.69	76	P	Pn	09 00 57.1	+1.1
CNGN	Cerro Negro	0.69	76	S	Sn	09 01 08.7	+3.0
COPN	Copaltepe	0.79	101	P	Pn	09 00 57.0	-0.4
COPN				S	Sn	09 01 08.4	+0.2
MOMN	Momotombo	0.83	85	P	Pb	09 00 58.2	0.0
MOMN				S	Sn	09 01 10.4	+1.2
MOM2	El Cardon	0.89	83	P	Pb	09 00 59.3	+0.3
MOM2				S	Sb	09 01 12.1	+1.5
SAPS	Ciudad Sandino	0.97	100	P	Pn	09 00 59.7	-0.2
APQ3	Volcan Apoyequ	0.99	94	S	Sb	09 01 14.2	+0.5
CNCH	Conchagua	1.03	335	P	Pn	09 01 00.5	-0.3
CNCH	Conchagua	1.03	335	S	Sb	09 01 15.1	+0.3
LCND	La Caada	1.08	333	P	Pn	09 01 00.8	-0.6
LCND	La Caada	1.08	333	S	Sb	09 01 15.9	-0.3
TISN	Laguna Tiscapa	1.11	100	P	Pn	09 01 00.6	-1.1
UNAN	Cigeo UNAN	1.11	102	S	Sn	09 01 16.4	+0.3

*ASRS **18** 09:04:44.0±0.7, 53°.38N×87°.20E, h0^{km}, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 18 09:04:46.7±3.1, 53°.42N×87°.25E, h0^{km}, mbtmp2.8/2, ML2.4/1, Error ellipse: s-maj=29.6km s-min=16.4km az=66.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.54	291	I	I	09 14 40.0	
	baz=107,slow=314,SNR=6.8						
ZALV	Zalesovo Beam	1.54	291	Pg	Pn	09 05 13.9	-1.4
	0.4nm,0.3s,baz=110,slow=17,SNR=6.3						
ZALV				Lg	Lg	09 05 35.7	
	0.6nm,0.3s,baz=113,slow=29,SNR=5.6						
KURBB	Kurchatov Arra	6.07	246	Pn	Pn	09 06 18.4	+0.8
	0.3nm,0.3s,baz=64,slow=14,SNR=2.0						
MKAR	Makanchi Array	7.36	208	Pn	Pn	09 06 36.6	+1.3
	0.1nm,0.3s,baz=29,slow=14,SNR=4.0						
	0.2nm,0.3s						

PRE ***18*** *09:05:23.0±0.8, 22°.80S×24°.95E, h5km, ML2.6*

BUL ***18*** *09:05:27.3±0.8, 22°.64S×25°.23E, h23km±10km, MD3.5*

BGSI ***18*** *09:05:28.2±1.6, 22°.83S×25°.23E, h80km±22km, ML3.1*

ISC 18 09:05:22.1±0.8**, 22°.76S**±0°.04×**24°.99E**±0°.04**, h10**km**, n29, σ2s.89**/52**, Botswana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPHEP	Lephephe	1.00	127	i P	Pn	09 05 43.6	+1.3
LPHEP				i S	Sb	09 05 56.0	+1.1
LPHEP				IAML		09 06 01.7	
	comp=E,237nm,0.3s						
SKOMA	Sekoma	2.00	209	i P	Pg	09 06 00.7	+0.2
SKOMA				IAML		09 06 38.6	
	comp=E,137nm,0.3s						
LBTB	Lobatse	2.31	166	i P	Pb	09 06 05.5	+1.5
LBTB				i S	Sb	09 06 33.4	+0.7
SOOWA	Sowa	2.47	28	i P	Pn	09 06 05.3	+2.8
SOOWA				IAML		09 06 43.8	
	comp=N,308nm,0.4s						
KGCAE	Kacgae	2.57	267	i P	Pb	09 06 09.1	+0.7
KGCAE				i S	Sb	09 06 39.3	-0.9
KGCAE				IAML		09 06 56.3	
	comp=N,146nm,0.8s						
PHDHD	Phuduhudu	2.59	351	i P	Pb	09 06 09.3	+0.7
PHDHD				i S	Sn	09 06 38.3	+2.5
PHDHD				IAML		09 06 48.0	
	comp=N,280nm,0.5s						
BROLN	Tlhalogang	2.73	53	i P	Pn	09 06 06.3	+0.2
BROLN				i S	Sn	09 06 35.4	-3.9
BROLN				IAML		09 06 38.5	
	comp=N,117nm,0.1s						
HRAO	HartRAO	3.97	142	eP	Pn	09 06 25.7	+2.5
HRAO				eS	Sn	09 07 11.5	+1.6
HRAO				IAML		09 07 31.5	
	comp=Z,29nm,0.2s						
BLWY	Bulawayo	4.26	53	i P	Pn	09 06 25.7	-1.6
BLWY				i S	Sn	09 07 08.2	-9.0
MUSN	Musina, Limpop	4.53	85	eP	Pn	09 06 34.2	+3.4
MUSN				eS	Sn	09 07 24.6	+1.1
MUSN				IAML		09 07 41.8	
	comp=Z,38nm,0.4s						
MUSN	Musina, Limpop	4.53	85	i P	Pn	09 06 31.0	+0.2
MUSN				i S	Sn	09 07 17.5	-6.1
KSANE	Kasane	4.94	2	i P	Pn	09 06 37.8	+1.3
KSANE				IAML		09 08 03.6	
	comp=N,182nm,0.1s						
BOSA	Boshof	5.83	178	eP	Pn	09 06 50.8	+2.0
BOSA				eS	Sn	09 07 55.6	-0.3
BOSA				IAML		09 08 34.7	
	comp=Z,13nm,0.6s						
BOSA	Boshof	5.83	178	i P	Pn	09 06 52.9	+4.1
BOSA				i S	Sn	09 07 55.8	0.0
MOPA	Mopani	5.94	99	eP	Pn	09 06 52.3	+2.0
MOPA				eS	Sn	09 07 58.9	+0.4
MOPA				IAML		09 08 25.7	
	comp=Z,46nm,0.7s						
MOPA	Mopani	5.94	99	i P	Pn	09 06 50.6	+0.3
MOPA				i S	Sn	09 07 51.2	-7.2
ARMS	Ukamas	7.08	221	eP	Pn	09 07 08.0	+2.1
ARMS				eS	Sn	09 08 24.2	-2.4
KRI	Karoi	7.33	37	i P	Pn	09 07 06.4	-3.1
KRI				i S	Sn	09 08 18.8	-14
CHIPN	CHIPINGE	7.56	72	i P	Pn	09 07 16.0	+3.5
ALKP	Alkanpan, Nort	7.56	198	eP	Pn	09 07 15.3	+2.7
ALKP				eS	Sn	09 08 36.5	-2.0
ALKP				IAML		09 09 28.7	
	comp=Z,12nm,0.4s						
HVD	Gariep Dam	7.83	177	eP	Pn	09 07 19.2	+2.9
HVD				eS	Sn	09 08 42.3	-2.7
AUSN	Aus	8.84	242	eP	Pn	09 07 32.5	+2.4
AUSN				eS	Sn	09 09 06.9	-3.1
BFON	Badsfontein, M	9.08	187	eP	Pn	09 07 35.9	+2.5
BFON				eS	Sn	09 09 12.2	-3.5
BFON				IAML		09 09 27.3	
	comp=Z,3.3nm,1.1s						
BRAK	Brakfontein	9.18	191	eP	Pn	09 07 37.4	+2.7
BRAK				eS	Sn	09 09 14.0	-4.1
BRAK				IAML		09 09 32.2	
	comp=Z,2.4nm,0.4s						
GRAF	Camdeboo Natio	9.49	183	eP	Pn	09 07 41.3	+2.2
GRAF				eS	Sn	09 09 22.1	-3.8
GRAF				IAML		09 09 41.4	
	comp=Z,1.8nm,0.3s						
FRAZ	Fraserburg	9.67	198	eP	Pn	09 07 43.6	+2.1
FRAZ				eS	Sn	09 09 25.7	-4.6
FRAZ				IAML		09 09 31.0	
	comp=Z,2.1nm,0.2s						
KOMG	Komaggas	9.72	222	eP	Pn	09 07 43.6	+1.5
KOMG				eS	Sn	09 09 27.0	-4.3
KOMG				IAML		09 09 43.1	
	comp=Z,1.4nm,0.6s						
GRAN	Grantham	9.83	194	eP	Pn	09 07 46.1	+2.5
GRAN				eS	Sn	09 09 30.1	-4.0
GRAN				IAML		09 09 36.5	
	comp=Z,1.5nm,0.4s						
MERW	Merweville	10.34	197	eP	Pn	09 07 53.3	+2.6
MERW				eS	Sn	09 09 42.1	-4.6
MERW				IAML		09 09 49.7	
	comp=Z,2.4nm,0.4s						

IDC 18 09:08:27.1±4.9**, 29°.77S×178°.76W, h0**km**, mb3.8**/2**, mbtmp3.8**/2**, Error ellipse: s-maj=218.8km s-min=77.9km az=165.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.49	267	P	P	09 16 23.9	-0.4
	0.9nm,0.6s,baz=106,slow=7.5,SNR=17						
	0.9nm,0.6s						
WRA	Warramunga Arr	43.42	272	P	P	09 16 32.2	+0.2
	0.6nm,0.3s,baz=112,slow=8.0,SNR=14						
	0.6nm,0.3s						
FINES	FINESS Array B	144.33	340	PKP	PKPdf	09 28 03.7	-0.8
	0.5nm,0.4s,baz=62,slow=5.5,SNR=5.1						

RSNC 18 09:29:44.9±0.0**, 7°N**±1°×**7°3W**±°**, h151**km±2km**, M3.1, mb3.4, mB5.9, ML2.9, Mw(mB)5.5, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.25	185	P	Pn	09 30 05.1	-0.7
BARC				S	Sn	09 30 20.4	-1.2
BRJC	Barrancabermej	0.59	283	P	Pn	09 30 06.7	-0.2
BRJC				S	Sn	09 30 23.9	+0.3
PAMC	Pamplona, Colo	0.68	43	P	Pn	09 30 08.1	+0.2
PAMC				S	Sn	09 30 25.0	-0.5
RUSC	La Rusia	0.94	175	P	Pn	09 30 09.2	-0.7
RUSC				S	Sn	09 30 27.6	-1.4
PTBC	PUERTO BERRIO,	1.32	257	P	Pn	09 30 11.6	-1.2
PTBC				S	Sn	09 30 33.0	-1.0
OCAC	Ocana	1.40	354	P	Pn	09 30 13.4	-0.3
OCAC				S	Sn	09 30 36.0	+0.2
TAMC	Tame, Arauca	1.42	106	P	Pn	09 30 13.4	-0.3
TAMC				S	Sn	09 30 35.4	-0.4
SPBC	San Pablo de B	1.49	218	P	Pn	09 30 13.9	-0.6
SPBC				S	Sn	09 30 36.2	-1.0
ZARC	Zaragoza, Cauc	1.81	291	P	Pn	09 30 17.3	-0.6
ZARC				S	Sn	09 30 42.8	-0.4
NORC	Norcasia	2.12	233	P	Pn	09 30 20.8	-0.8
NORC				S	Sn	09 30 49.0	-0.8
CHIC	Chingaza	2.27	195	P	Pn	09 30 23.2	-0.5
CHIC				S	Sn	09 30 53.1	-0.5
ROSC	El Rosal	2.30	210	P	Pn	09 30 24.9	+0.9
ROSC				S	Sn	09 30 55.0	+0.9
CVER	Cruz Verde, Cu	2.48	202	P	Pn	09 30 26.0	-0.3
UREC	San Jos de Ur	2.52	291	P	Pn	09 30 24.6	-1.8
UREC				S	Sn	09 30 56.4	-1.9
GUY2C	Guyana, Caldas	2.72	234	P	Pn	09 30 29.7	+0.5
GUY2C				S	Sn	09 31 05.7	+2.3
VILC	Villavicencio,	2.76	191	P	Pn	09 30 28.7	-0.8
VILC				S	Sn	09 31 04.0	+0.1
NIZA	Niza - Manizal	2.90	233	P	Pn	09 30 34.8	+3.4
NIZA				S	Sn	09 31 09.2	+2.0
CBOC	Ciudad Bolivar	3.00	251	P	Pn	09 30 32.5	+0.1
CBOC				S	Sn	09 31 08.9	-0.3
DBBC	Dabeiba	3.03	274	P	Pn	09 30 31.5	-1.3
DBBC				S	Sn	09 31 08.2	-1.7
ARGC	Ariguani, Magd	3.19	340	P	Pn	09 30 34.9	+0.2
ARGC				S	Sn	09 31 13.4	+0.1
SDV	Santo Domingo	3.23	51	P	Pn	09 30 34.2	-1.2
SDV				S	Sn	09 31 11.8	-2.6
ANIL	Santa Ana	3.23	224	P	Pn	09 30 36.8	+1.3
ANIL				S	Sn	09 31 16.9	+2.2
PRAC	Prado	3.55	209	P	Pn	09 30 38.1	-1.3
PRAC				S	Sn	09 31 20.9	-0.8
APAC	Apartado, Choc	3.55	287	P	Pn	09 30 38.8	-0.6
APAC				S	Sn	09 31 21.7	+0.1
ORTC	Ortega, Tolima	3.58	216	P	Pn	09 30 39.3	-0.5
ORTC				S	Sn	09 31 22.4	+0.1
SJCC	San Jacinto, C	3.63	327	P	Pn	09 30 38.7	-1.8
SJCC				S	Sn	09 31 20.3	-3.4
PLMC	San Jos del P	3.65	238	P	Pn	09 30 40.5	-0.3
PLMC				S	Sn	09 31 23.7	-0.4
LCBC	Los crdobas,	3.76	302	P	Pn	09 30 40.9	-1.1
LCBC				S	Sn	09 31 26.0	-0.4
CRJC	Cerrejon, Guaj	4.16	4	P	Pn	09 30 45.6	-1.8
CRJC				S	Sn	09 31 32.6	-3.5
YOTC	Yotoco, Valle	4.25	228	P	Pn	09 30 48.0	-0.7
YOTC				S	Sn	09 31 38.5	+0.2
SMRC	Santa Marta, M	4.42	346	P	Pn	09 30 50.6	-0.2
SMRC				S	Sn	09 31 37.8	-4.3
MACC	Macarena, Meta	4.71	188	P	Pn	09 30 52.4	-2.2
MACC				S	Sn	09 31 43.8	-5.2
URIC	Uribia, Colomb	4.97	13	P	Pn	09 30 55.1	-2.8
URIC				S	Sn	09 31 52.2	-2.7
MALC	Bahia Malaga	5.02	236	P	Pn	09 30 59.1	+0.5
MALC				S	Sn	09 31 56.6	+0.5
POPC	Popayan, Colom	5.52	220	P	Pn	09 31 05.2	-0.4
	3.2nm,0.8s						
POPC				S	Sn	09 32 07.8	-0.7
	3.2nm,0.8s						
FLOC	Florencia	5.78	206	P	Pn	09 31 08.0	-0.8
FLOC				S	Sn	09 32 14.3	-0.2

GCG ***18*** *09:41:26.9±0.9, 13°.68N×89°.89W, h111km±8km, MD3.4, ML3.4*

SNET ***18*** *09:41:27.8±0.7, 13°.78N×89°.98W, h101km, ML2.6*

CATAC ***18*** *09:41:29.3±0.8, 14°N±8°×9°0W±°, h86km±5km, M2.5/8, MLv2.5/8, Error ellipse: s-maj=19.0km s-min=8.4km az=30.6, confirmed*

ISC 18 09:41:32.4±2.7**, 13°.77N**±0°.09×**89°.82W**±0°.07**, h80**km±15km**, n25, σ1s.50**/29**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NUBE	Las Nubes	0.14	16	eP	Pn	09 41 43.0	-1.3
NUBE	Las Nubes	0.14	16	P	Pn	09 41 43.3	-1.0
FAME	Alcaldia de Sa	0.20	293	P	Pn	09 41 42.0	-2.3
FAME	Alcaldia de Sa	0.20	293	S	Sn	09 41 53.0	0.0
SBLS	San Blas	0.21	69	eP	Pn	09 41 43.7	-0.9
SBLS				eS	Sn	09 41 55.3	+1.8
SLOZ	Alcaldia de Sa	0.26	8	S	Sn	09 41 53.8	+0.2
JAYA	Jayaque - finc	0.38	107	eP	Pn	09 41 44.1	-1.4
JAYA				eS	Sn	09 41 56.2	+1.2
JAYA	Jayaque - finc	0.38	107	i P	Pn	09 41 44.1	-1.4
JAYA				i S	Sn	09 41 55.8	+0.8
JAYA	Jayaque - finc	0.38	107	P	Pn	09 41 44.0	-1.4
PMON	Piamonte	0.49	96	P	Pn	09 41 45.1	-1.1
PMON	Piamonte	0.49	96	S	Sn	09 41 58.2	+1.7
UEES	Universidad Ev	0.57	95	S	Sn	09 42 00.2	+2.5
UEES	Universidad Ev	0.57	95	P	Pn	09 41 45.6	-1.3
PANCS	Alcalda de	0.64	104	S	Sn	09 42 00.2	+1.3
LOMA	Loma Larga	0.64	101	eP	Pn	09 41 47.1	-0.6
LOMA				eS	Sn	09 42 01.9	+2.9
LOMA	Loma Larga	0.64	101	P	Pn	09 41 47.1	-0.6
MTO3	Montecristo	0.77	35	eP	Pn	09 41 47.9	-1.3
MTO3				eS	Sn	09 42 03.0	+1.4
MTO3	Montecristo	0.77	35	i P	Pn	09 41 47.9	-1.3
MTO3	Montecristo	0.77	35	P	Pn	09 41 47.9	-1.3
MTO3	Montecristo	0.77	35	S	Sn	09 42 01.8	+0.2
FG16	Alotenango, Sa	0.84	307	i P	Pn	09 41 50.7	+0.9
FG16				i S	Sn	09 42 10.7	+7.9
FG16				IAML		09 42 16.8	
	comp=N,836nm,0.2s						
PAVA	Las Pavas	0.86	93	P	Pn	09 41 48.9	-1.1
SCLA	Alcaldia de Sa	1.06	93	P	Pn	09 41 51.0	-1.3
PQSS	Presa 15 de Se	1.23	96	P	Pn	09 41 52.6	-1.8
STG0	El Palmar, Qui	1.61	294	eP	Pn	09 41 59.9	+0.5

ASRS ***18*** *09:47:07.0±0.6, 53°.78N×88°.21E, h0km, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 18 09:47:10.6±3.3**, 53°.83N×88°.18E, h0**km**, mbtmp2.9**/2**, ML2.7**/2**, Error ellipse: s-maj=31.1km s-min=20.6km az=44.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	2.00	275	I	I	09 59 43.2	
	0.3nm,1.3s,baz=91,slow=322,SNR=6.9						
ZALV	Zalesovo Beam	2.00	275	Pn	Pn	09 47 45.2	-0.3
	2.1nm,0.3s,baz=91,slow=14,SNR=23						
ZALV				Lg	Lg	09 48 14.2	
	4.1nm,0.3s,baz=93,slow=25,SNR=20						
KURBB	Kurchatov Arra	6.74	245	Pn	Pn	09 48 51.1	+0.4
	0.2nm,0.3s,baz=62,slow=14,SNR=8.1						
KURBB				Lg	Lg	09 50 43.7	
	0.1nm,0.3s,baz=63,slow=30,SNR=5.8						
	0.9nm,0.3s						
MKAR	Makanchi Array	7.98	211	Pn	Pn	09 49 09.1	+1.2
	0.1nm,0.3s,baz=26,slow=13,SNR=2.6						
	0.1nm,0.3s						

IDC 18 09:47:17.8±2.6**, 31°.19S×177°.25W, h0**km**, mb3.6**/2**, mbtmp3.7**/3**, ML3.3**/1**, Error ellipse: s-maj=68.2km s-min=35.8km az=120.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.44	212	Pn	Pn	09 49 20.9	-0.5
	0.4nm,0.3s,baz=354,slow=4.3,SNR=7.2						
URZ				Sn	Sn	09 50 58.3	+0.9
	1.3nm,0.3s,baz=178,slow=21,SNR=9.3						
	8.3nm,0.9s						
ASAR	Alice Springs	43.71	267	P	P	09 55 24.9	-0.1
	0.3nm,0.5s,baz=101,slow=7.5,SNR=7.0						
ASAR				PcP	PcP	09 57 12.3	+0.2
	0.6nm,1.0s,baz=113,slow=3.8,SNR=4.3						
	0.3nm,0.5s						
WRA	Warramunga Arr	44.77	273	P	P	09 55 33.3	-0.2
	1.0nm,0.6s,baz=111,slow=8.0,SNR=12						
	1.0nm,0.6s						
FINES	FINESS Array B	146.10	340	PKPbc	PKPdf	10 06 58.0	-0.2
	1.6nm,0.6s,baz=51,slow=4.2,SNR=9.7						

DJA 18 09:55:31.0±0.5**, 0°S**±4°×**12°3E**±°**, h150**km±6km**, M3.8**/9**, MLv3.8**/9**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	0.89	207	P	Pn	09 55 55.6	+0.7
LUWI				S	Sn	09 56 13.0	-0.1
KMSI	Cibinong	1.15	45	P	Pn	09 55 58.6	+1.5
KMSI				S	Sn	09 56 18.3	+1.3
MRSI	Marisa	1.42	300	P	Pn	09 55 58.5	-1.2
APSI	Ampana	1.66	246	P	Pn	09 56 03.0	+0.7
MPSI	Mapaga	3.32	280	P	Pn	09 56 23.1	+0.6
SANI	Sanana	3.34	123	P	Pn	09 56 21.6	-1.1
TTSI	Tana Toraja	4.36	230	P	Pn	09 56 35.0	-1.0
SPSI	Sidrap Palu	5.02	223	P	Pn	09 56 44.9	+0.1

NOU ***18*** *09:56:34.3, 33°.39S×177°.10W, h162km, mb4.5/7, South of Kermadec Islands*

WEL ***18*** *09:56:42.5±0.8, 34°S±6°×17°8W±1°4, h12km, mB5.1/9, ML4.6/15, MLv4.7/14, Mw(mB)4.4/9, Error ellipse: s-maj=18.7km s-min=4.1km az=109.9, confirmed*

IDC ***18*** *09:56:43.2±0.9, 33°.33S×178°.67W, h0km, mb4.2/5, mbtmp4.3/6, ML4.5/1, MS3.5/7, Error ellipse: s-maj=31.0km s-min=26.3km az=62.0*

NEIC ***18*** *09:56:45.3±1.7, 33°.71S±0°.09×178°.5W±0°.2, h10km±1km, mb4.4/13, Error ellipse: s-maj=25.7km s-min=14.5km az=104.0*

ISC 18 09:56:48.5±0.7**, 33°.74S**±0°.07×**178°.39W**±0°.10**, h41**km**, n71, σ1s.38**/82**, mb4.3**/13**, MS3.7**/5**, 5C, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.48	5	P	Pn	09 57 47.0	-6.9
GLKZ				S	Sn	09 58 34.0	-11
RAO	Raoul Island	4.49	5	Pn	Pn	09 57 53.0	-1.0
MXZ	Matakaoa Point	4.67	214	P	Pn	09 57 56.4	0.0
MXZ	Matakaoa Point	4.67	214	P	Pn	09 57 56.6	+0.2
MXZ				S	Sn	09 58 48.0	-1.3
WMGZ	Waiomatatini S	4.83	212	P	Pn	09 57 59.3	+0.6
WMGZ				S	Sn	09 58 55.9	+2.7
PKGZ	Pakihiroa	5.02	214	P	Pn	09 57 59.6	-1.7
PKGZ				S	Sn	09 58 58.6	+0.7
HAZ	Te Kaha	5.07	217	P	Pn	09 58 01.3	-0.7
HAZ				S	Sn	09 59 00.5	+1.2
PUZ	Puketiti	5.11	211	P	Pn	09 58 00.7	-1.8
PUZ				S	Sn	09 58 59.2	-1.0
RUGZ	Raukumara Rang	5.29	216	P	Pn	09 58 03.7	-1.4
RUGZ				S	Sn	09 59 05.3	+0.5
TWGZ	Tauwhareparae	5.32	213	P	Pn	09 58 05.4	0.0
TWGZ				S	Sn	09 59 06.5	+1.1
CNGZ	Carnagh Statio	5.48	209	P	Pn	09 58 08.5	+0.9
CNGZ				S	Sn	09 59 10.9	+1.7
TKGZ	Te Karaka	5.59	212	P	Pn	09 58 09.6	+0.5
TKGZ				S	Sn	09 59 11.7	-0.3
MWZ	Matawai	5.65	215	P	Pn	09 58 07.7	-2.3
MWZ				S	Sn	09 59 13.0	-0.7
KUZ	Kuaotunu	5.67	236	P	Pn	09 58 10.5	+0.3
KUZ	Kuaotunu	5.67	236	P	Pn	09 58 10.1	-0.2
URZ	Urewera	5.80	218	Pn	Pn	09 58 11.2	-0.7
	14nm,0.3s,baz=125,slow=5.0,SNR=70						
URZ				Sn	Sn	09 59 16.7	-0.4
	20nm,0.3s,baz=329,slow=21,SNR=11						
	57nm,0.6s						
URZ	Urewera	5.80	218	P	Pn	09 58 10.9	-1.1
URZ	Urewera	5.80	218	P	Pn	09 58 11.0	-0.9
URZ				S	Sn	09 59 16.6	-0.5
RIGZ	Rimuhau	5.85	211	S	Sn	09 59 16.7	-1.8
SNGZ	Shannon Statio	6.10	213	P	Pn	09 58 15.0	-1.1
WIAZ	Waiheke Island	6.11	238	P	Pn	09 58 16.3	0.0
MUGZ	Murupara	6.14	218	P	Pn	09 58 15.1	-1.6
MUGZ				S	Sn	09 59 24.6	-0.9
RTZ	Ruatahuna	6.14	216	Pn	Pn	09 58 15.5	-1.2
MKAZ	Moumakai	6.24	236	P	Pn	09 58 19.5	+1.5
WCZ	Waipu Caves	6.36	248	P	Pn	09 58 20.5	+0.8
OUZ	Omahuta	6.78	255	P	Pn	09 58 26.6	+1.2
OUZ	Omahuta	6.78	255	P	Pn	09 58 26.6	+1.2
BKZ	Black Stump Fm	6.80	216	P	Pn	09 58 23.4	-2.4
HIZ	Hauiti	7.25	227	P	Pn	09 58 32.2	+0.4
CTZ	Chatham Island	10.08	173	P	Pn	09 58 58.4	-12
RPZ	Rata Peaks	12.91	216	Pn	Pn	09 59 45.9	-3.5
	1.5nm,0.3s,baz=43,slow=5.1,SNR=7.4						
RPZ				Sn	Sn	10 02 00.6	-11
	1.2nm,0.3s,baz=301,slow=19,SNR=5.3						
MSVF	Nonsavu	16.25	348	LR	LR	10 04 53.3	
	comp=Z,72nm,18.3s,baz=147,slow=31						
PINNC	Pines Island,	16.67	308		P	10 00 40.2	-0.8
PINNC				IAmb	IAmb	10 00 42.0	
	comp=Z,42nm,1.4s						
DZM	Mont Dzumac	17.71	307	P	P	10 00 51.4	-1.3
	comp=Z,9.2nm,0.7s,baz=110,slow=14,SNR=15						
DZM				LR	LR	10 05 22.5	
	comp=Z,136nm,18.6s,baz=160,slow=30						
RAR	Rarotonga	20.66	58	LR	LR	10 10 09.2	
	comp=Z,74nm,18.0s,baz=210,slow=39						
EIDS	Eidsvold	27.75	279	P	P	10 02 34.2	+0.8
EIDS				IAmb	IAmb	10 02 48.7	
	comp=Z,5.8nm,0.9s						
STKA	Stephens Creek	33.54	262	LR	LR	10 16 47.2	
	comp=Z,191nm,18.0s,baz=191,slow=36						
CTAO	Charters Tower	34.15	284		P	10 03 30.2	+0.3
COEN	Coen	39.98	290	P	P	10 04 19.4	0.0
AS31	Alice Springs	42.70	271		P	10 04 40.7	-1.0
ASAR	Alice Springs	42.70	271	P	P	10 04 40.4	-1.3
	comp=Z,4.7nm,0.7s,baz=111,slow=7.3,SNR=58						
ASAR				PcP	PcP	10 06 32.5	-0.4
	comp=Z,1.2nm,0.7s,baz=115,slow=3.7,SNR=5.9						
ASAR				LR	LR	10 21 36.2	
	comp=Z,46nm,18.3s,baz=102,slow=35						
	comp=Z,4.7nm,0.7s						
WR8	Warramunga Arr	43.85	276		P	10 04 49.8	-1.2
WR8				IAmb	IAmb	10 05 02.5	
	comp=Z,6.2nm,0.8s						
WRAB	Tennant Creek	43.99	276	P	P	10 04 51.1	-1.0
WRAB				IAmb	IAmb	10 04 51.7	
	comp=Z,13nm,1.3s						
WRA	Warramunga Arr	43.99	276		P	10 04 50.3	-1.8
WRA	Warramunga Arr	43.99	276	P	P	10 04 50.4	-1.7
	comp=Z,5.0nm,0.5s,baz=117,slow=8.0,SNR=59						
	comp=Z,5.0nm,0.5s						
WB0	Warramunga Arr	44.03	276		P	10 04 51.1	-1.3
WB0				IAmb	IAmb	10 04 51.7	
	comp=Z,10nm,0.9s						
KNRA	Kununurra	50.71	277	P	P	10 05 43.2	-1.2
KNRA				IAmb	IAmb	10 06 09.5	
	comp=Z,8.4nm,1.3s						
FITZ	Fitzroy Crossi	52.10	273	P	P	10 05 54.0	-0.7
FITZ	Fitzroy Crossi	52.10	273	P	P	10 05 53.6	-1.2
	comp=Z,2.7nm,0.8s,baz=136,slow=10,SNR=5.9						
	comp=Z,2.7nm,0.8s						
QSPA	South Pole Qui	56.38	180	P	P	10 06 28.9	+3.5
QSPA	South Pole Qui	56.38	180	P	P	10 06 29.0	+3.6
	comp=Z,1.8nm,0.9s,baz=6.8,slow=0.4,SNR=5.8						
	comp=Z,1.8nm,0.9s						
TROLL	Troll, Antarti	74.54	180	⇑P	P	10 08 24.9	+2.2
	comp=Z,55nm,0.8s						
SNAA	Sanae	74.84	179	⇑P	P	10 08 24.7	+0.4
	comp=Z,11nm,0.8s						
SNAA	Sanae	74.84	179	P	P	10 08 25.2	+1.0
SNAA				IAmb	IAmb	10 08 49.4	
	comp=Z,2.2nm,0.9s						
SNAA	Sanae	74.84	179	P	P	10 08 28.0	+3.7
	comp=Z,0.8nm,1.0s,baz=212,slow=9.2,SNR=9.6						
	comp=Z,0.8nm,1.0s						
VNA3	Neumayer Olymp	75.00	176	⇑P	P	10 08 26.8	+1.6
	comp=Z,1.8nm,0.8s						
VNA2	Neumayer--Watz	75.43	177	⇑P	P	10 08 29.5	+1.8
	comp=Z,0.9nm,0.6s,baz=168,slow=5.5						
VNA1	Neumayer--Stat	75.67	177	⇑P	P	10 08 26.8	-2.1
	comp=Z,2.0nm,0.6s						
NNA	Nana	92.82	106	LR	LR	10 44 08.9	
	comp=Z,29nm,18.8s,baz=297,slow=30						
ELK	Elko	94.22	43	LR	LR	10 44 09.2	
	comp=Z,27nm,20.7s,baz=172,slow=30						
KURBB	Kurchatov Arra	123.11	312	PKP	PKPdf	10 15 39.0	-1.1
	comp=Z,1.5nm,0.9s,baz=110,slow=2.3,SNR=12						
BVAR	Borovoye Array	128.52	314	PKP	PKiKP	10 15 51.0	-0.1
	comp=Z,1.0nm,0.6s,baz=75,slow=6.4,SNR=5.1						
ARCES	ARCESS Array B	141.76	347	PKP	PKPdf	10 16 14.5	-0.1
	comp=Z,1.1nm,0.7s,baz=11,slow=2.5,SNR=4.4						
FIA1	FINESS Array S	148.13	338	PKPbc	PKPbc	10 16 28.9	-0.1
FINES	FINESS Array B	148.13	338	PKPbc	PKPbc	10 16 28.8	-0.2
	comp=Z,4.3nm,0.5s,baz=38,slow=4.3,SNR=33						
NC303	NORSAR Array S	151.78	350	PKPdf	PKPdf	10 16 32.4	+0.9
NC303				PKPbc	PKiKP	10 16 38.5	+0.2
NC303				PKPab	pPKPbc	10 16 48.1	-0.5
MMAI	Mount Meron Ar	151.84	278	PKPbc	PKiKP	10 16 39.9	+0.5
	comp=Z,1.1nm,0.3s,baz=114,slow=2.1,SNR=5.0						
BNN	Bunyan	152.04	290	PKPdf	PKPdf	10 16 31.3	-1.5
BNN				PKPbc	PKPbc	10 16 39.5	+0.1
BNN				PKPab	PKPab	10 16 48.6	-0.4
HFS	Hagfors	152.43	347	PKPbc	PKPbc	10 16 38.6	-0.8
	comp=Z,1.3nm,0.6s,baz=179,slow=7.1,SNR=5.1						
AKASG	Malin Array Be	153.66	318	PKPbc	PKiKP	10 16 42.6	+0.1
	comp=Z,0.8nm,0.6s,baz=64,slow=2.0,SNR=6.3						
BRTR	Keskin Array B	153.73	292	PKPbc	PKPbc	10 16 42.5	-0.6
	comp=Z,1.2nm,0.6s,baz=134,slow=5.3,SNR=7.3						

NEIC ***18*** *10:04:20.6±2.2, 36°.2S±0°.1×99°.3W±0°.1, h10km±1km, mb4.7/115, Error ellipse: s-maj=21.8km s-min=16.5km*

az=234.0

*IDC **18** 10:04:20.1±0.7, 36°.34S×99°.11W, h0^{km}, mb4.2/11, mbtmp4.3/11, MS3.9/31, Error ellipse: s-maj=24.3km s-min=16.6km az=67.0*

*GCMT **18** 10:04:22.6±0.3, 36°.23S±0°.02×99°.17W±0°.02, h22^{km}±1^{km}, MW4.9/93, Moment Tensor Solution. s22,c26; s93,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.84±.14; M$_{\theta\theta}$0.04±.11; M$_{\phi\phi}$0.80±.11; M$_{r\theta}$0.71±.16; M$_{\theta\phi}$-2.38±.08; M$_{\phi r}$-0.30±.16; Best double couple: M$_0$2.52700×10^{16} NP1:ϕ_s185.00000°,δ71.00000°,λ-5.00000°. NP2: ϕ_s276.00000°,δ86.00000°,λ-161.00000°. Principal axes: T 2.9550, Plg10.0000°, Azm49.0000°; N -0.8560, Plg70.0000°, Azm288.0000°; P -2.0990, Plg17.0000°, Azm142.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 10:04:20.8±0.6**, 36°.17S**±0°.09×**99°.24W**±0°.09**, h10**^{km}**, n189, σ1^{s}19**/150**, mb4.6**/65**, MS4.0**/31**, 5C, Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	12.45	314	Pn	Pn	10 07 16.0	-2.0
H03S2	Juan Fernandez	16.81	88	T	T	10 25 21.8	
	baz=254,slow=75,SNR=45						
H03S1	Juan Fernandez	16.82	88	T	T	10 25 25.0	
	baz=254,slow=75,SNR=34						
H03S3	Juan Fernandez	16.82	88	T	T	10 25 37.9	
	baz=254,slow=75,SNR=34						
H03N2	Juan Fernandez	16.90	87	T	T	10 25 26.1	
	baz=247,slow=72,SNR=51						
H03N3	Juan Fernandez	16.90	87	T	T	10 25 27.5	
	baz=247,slow=72,SNR=52						
H03N1	Juan Fernandez	16.92	87	T	T	10 25 29.0	
	baz=247,slow=72,SNR=50						
VA04	Juan Fernndez	16.93	87	Pn	Pn	10 08 16.7	-1.1
VA04				IAmb	IAmb	10 08 20.0	
	comp=Z,82nm,1.3s						
LL06	Loncomilla	20.71	115	P	P	10 09 00.1	-1.1
LL05	Los Muermos	20.72	112	P	P	10 08 59.4	-2.0
GO07	Milladeo Hill,	20.84	117	P	P	10 09 02.0	-0.5
LL07	Hotel Espejo d	20.92	116	P	P	10 09 03.1	-0.4
LL03	Petrohue	21.50	112	P	P	10 09 09.7	0.0
LL01	San Ignacio de	21.63	115	P	P	10 09 11.6	+0.5
LL01				IAmb	IAmb	10 09 15.1	
	comp=Z,24nm,0.9s						
LR05	Currie	21.75	109		P	10 09 13.2	+0.8
LR05				IAmb	IAmb	10 09 14.6	
	comp=Z,35nm,1.2s						
LL02	Futaleuf	22.16	117		P	10 09 17.4	+0.6
LL02				IAmb	IAmb	10 09 20.6	
	comp=Z,28nm,1.0s						
BI02	San Fabin de	22.49	100		P	10 09 19.9	-0.5
BI02				IAmb	IAmb	10 09 22.8	
	comp=Z,24nm,1.1s						
COYC	Coyhaique	22.50	123	P	P	10 09 19.4	-1.0
ML02	Panimavida	22.50	97	P	P	10 09 19.0	-1.5
ML02				IAmb	IAmb	10 09 31.3	
	comp=Z,30nm,1.0s						
AY03	Cochrane	22.66	128		P	10 09 22.0	-0.1
AY03				IAmb	IAmb	10 09 23.6	
	comp=Z,24nm,1.1s						
PLCA	Paso Flores	22.88	110		P	10 09 24.6	0.0
PLCA				IAmb	IAmb	10 09 27.3	
	comp=Z,30nm,1.1s						
PLCA	Paso Flores	22.88	110	P	P	10 09 24.5	-0.1
	comp=Z,13nm,1.0s,baz=275,slow=9.1,SNR=13						
PLCA				LR	LR	10 16 03.6	
	comp=Z,313nm,20.2s,baz=274,slow=31						
	comp=Z,13nm,1.0s						
PLCA	Paso Flores	22.88	110	*e*P	P	10 09 25.1	+0.6
MT01	Popeta	23.01	93	P	P	10 09 24.6	-1.3
MT01				IAmb	IAmb	10 09 28.0	
	comp=Z,26nm,1.5s						
BO01	Tunca	23.02	94		P	10 09 25.2	-0.9
BO01				IAmb	IAmb	10 09 31.0	
	comp=Z,22nm,1.1s						
BO02	Sierra Bellavi	23.19	95		P	10 09 27.1	-0.6
MT09	Talagante	23.24	92	P	P	10 09 25.6	-2.9
VA06	Catapilco	23.31	89	P	P	10 09 28.1	-0.9
VA06				IAmb	IAmb	10 09 36.9	
	comp=Z,28nm,1.3s						
BO04	La Punta	23.50	93	P	P	10 09 28.5	-2.4
BO04				IAmb	IAmb	10 09 56.8	
	comp=Z,30nm,1.4s						
MT05	Renca	23.54	92	P	P	10 09 31.0	-0.3
MT05				IAmb	IAmb	10 09 42.9	
	comp=Z,27nm,1.1s						
CO06	Fray Jorge	23.64	85	P	P	10 09 32.2	-0.1
CO06				IAmb	IAmb	10 09 43.3	
	comp=Z,36nm,1.4s						
VA03	San Esteban	23.86	90	P	P	10 09 33.7	-0.8
VA03				IAmb	IAmb	10 09 45.4	
	comp=Z,11nm,0.7s						
LMEL	Las Melosas	23.86	93	P	P	10 09 34.9	+0.4
LMEL				IAmb	IAmb	10 09 36.6	
	comp=Z,18nm,0.9s						
CO02	Combarbal	23.97	86	P	P	10 09 34.6	-0.9
CO02				IAmb	IAmb	10 09 39.3	
	comp=Z,21nm,1.2s						
MT08	Bocatoma Ro	24.11	92	P	P	10 09 37.2	+0.2
MT08				IAmb	IAmb	10 09 42.4	
	comp=Z,15nm,0.8s						
CO03	El Pedregal	24.35	86	P	P	10 09 38.4	-0.6
ZON	Zonda	25.74	89	P	P	10 09 50.4	-1.2
ZON				IAmb	IAmb	10 10 03.4	
	comp=Z,17nm,1.3s						
AC01	Pan de Azucar	26.38	76	P	P	10 09 55.8	-1.7
AC02	Maricunga	27.22	79	P	P	10 10 02.9	-2.6
AC02				IAmb	IAmb	10 10 32.7	
	comp=Z,24nm,1.5s						
PB08	IPOC Station P	30.80	67	P	P	10 10 36.1	-1.1
PB08				IAmb	IAmb	10 10 48.5	
	comp=Z,9.1nm,0.8s						
GO01	Chusmiza	31.06	66	P	P	10 10 38.4	-1.2
GO01				IAmb	IAmb	10 10 56.6	
	comp=Z,17nm,1.4s						
NNA	Nana	31.43	46	LR	LR	10 20 12.9	
	comp=Z,222nm,19.3s,baz=202,slow=30						
PB16	IPOC Station P	31.66	64	P	P	10 10 43.8	-1.3
PB16				IAmb	IAmb	10 10 52.0	
	comp=Z,10nm,1.1s						
LPAZ	La Paz	33.99	63	P	P	10 11 05.3	-0.2
LPAZ				IAmb	IAmb	10 11 09.6	
	comp=Z,8.7nm,0.9s						
LPAZ	La Paz	33.99	63	P	P	10 11 05.8	+0.3
	comp=Z,5.8nm,0.7s,baz=176,slow=2.8,SNR=19						
LPAZ				LR	LR	10 21 55.1	
	comp=Z,105nm,21.0s,baz=216,slow=31						
	comp=Z,5.8nm,0.7s						
LPAZ	La Paz	33.99	63	*e*P	P	10 11 06.8	+1.3
ATAH	Atahualpa	34.62	38	LR	LR	10 21 47.8	
	comp=Z,286nm,20.0s,baz=212,slow=30						
PMSA	Palmer Station	35.49	155	LR	LR	10 22 25.5	
	comp=Z,296nm,18.3s,baz=289,slow=31						
ITQB	Itaqui	36.13	92	*e*P	P	10 11 24.7	+1.5
CPUP	Villa Florida	36.91	87	P	P	10 11 29.6	-0.2
	comp=Z,0.8nm,0.8s,baz=215,slow=1.0,SNR=5.5						
CPUP				LR	LR	10 23 21.4	
	comp=Z,26nm,20.6s,baz=111,slow=31						
	comp=Z,0.8nm,0.8s						
CPUP	Villa Florida	36.91	87	*e*P	P	10 11 32.2	+2.3
CZSB	Cruzeiro do Su	37.25	47	P	P	10 11 31.9	-0.9
CZSB	Cruzeiro do Su	37.25	47	*e*P	P	10 11 33.7	+0.9
PLTB	Pedras Altas	37.84	97	P	P	10 11 36.2	-1.5
PLTB				IAmb	IAmb	10 11 46.9	
	comp=Z,10nm,1.0s						
PLTB	Pedras Altas	37.84	97	*e*P	P	10 11 39.5	+1.8
CPSB	Cacapava Do Su	38.44	95	*e*P	P	10 11 44.1	+1.3
SJPY	San Joaquin	38.49	85	*e*P	P	10 11 44.7	+1.4
MURT	Porto Murtinho	38.90	80	*e*P	P	10 11 47.9	+1.2
BBSD	Serra de San D	39.03	71	*e*P	P	10 11 47.8	0.0
SIV	San Ignacio	39.40	69	LR	LR	10 25 52.9	
	comp=Z,95nm,19.4s,baz=292,slow=33						
ITAB	Concordia	40.73	91	P	P	10 12 01.7	-0.2
ITAB	Concordia	40.73	91	*e*P	P	10 12 01.6	-0.2
AQDB	Aquidauana	41.04	80	P	P	10 12 03.9	-0.6
AQDB	Aquidauana	41.04	80	*e*P	P	10 12 06.0	+1.5
OTAV	Otavalo	41.05	33	P	P	10 12 03.3	-1.8
OTAV	Otavalo	41.05	33	*e*P	P	10 12 04.1	-1.0
PTLB	Pontes e Lacer	41.20	71	P	P	10 12 05.4	-0.5
PTLB	Pontes e Lacer	41.20	71	*e*P	P	10 12 07.9	+2.1
PTGB	Pitanga	41.88	88	*e*P	P	10 12 12.7	+1.2
VILB	Vilhena	41.96	67		P	10 12 12.0	-0.1
VILB				IAmb	IAmb	10 12 16.1	
	comp=Z,10nm,0.8s						
VILB	Vilhena	41.96	67	*e*P	P	10 12 13.8	+1.7
SALV	Santo Antonio	43.59	74	*e*P	P	10 12 26.9	+1.6
PCMB	Pacaembu	44.01	84	*e*P	P	10 12 28.7	0.0
FRTB	Fartura	44.54	87	*e*P	P	10 12 34.2	+1.3
PDRB	Porto dos Gac	45.42	68	*e*P	P	10 12 39.9	0.0
TEFE	Tefe	45.53	53	*e*P	P	10 12 41.6	+0.8
CLDB	Colider	46.59	68	*e*P	P	10 12 51.3	+2.1
ARAG	Araguaiana, MT	46.74	77	*e*P	P	10 12 50.7	+0.3
ROSC	El Rosal	47.00	35	LR	LR	10 29 35.7	
	comp=Z,156nm,19.0s,baz=242,slow=32						
PPT2	Papeete2	48.00	279	*e*LR	LR	10 26 31.8	
	comp=Z,104nm,22.5s						
PPT2				*e*LR	LR	10 26 36.4	
	comp=Z,121nm,23.0s						
PPT	Papeete	48.01	279	LR	LR	10 27 47.3	
	comp=Z,130nm,18.5s,baz=134,slow=29						
JTS	Las Juntas de	48.13	19	LR	LR	10 28 13.3	
	comp=Z,256nm,21.6s,baz=191,slow=30						
SOCE	Pocosol	48.31	19	P	P	10 13 02.7	+0.2
MACA	Manacapuru-AM	48.39	56	P	P	10 13 03.3	+0.1
MACA	Manacapuru-AM	48.39	56	*e*P	P	10 13 03.9	+0.7
RUSC	La Rusia	48.50	36	P	P	10 13 04.0	-0.5
RUSC				IAmb	IAmb	10 13 05.0	
	comp=Z,11nm,1.2s						
SNDB	Serra Nova Dou	49.34	73	*e*P	P	10 13 10.3	-0.3
NPGB	Novo Progresso	49.42	65	*e*P	P	10 13 11.0	-0.2
BELA	Belgrano 2	49.64	165	P	P	10 13 12.3	+0.3
BDFB	Brasilia	49.79	80	P	P	10 13 15.3	+1.2
	comp=Z,1.4nm,0.4s,baz=236,slow=9.4,SNR=3.1						
BDFB				LR	LR	10 32 02.9	
	comp=Z,133nm,21.1s,baz=188,slow=34						
	comp=Z,1.4nm,0.4s						
ITTB	Itaituba	50.97	62	*e*P	P	10 13 23.8	+0.9
SDV	Santo Domingo	52.28	37	LR	LR	10 33 30.8	
	comp=Z,106nm,19.4s,baz=166,slow=33						
QSPA	South Pole Qui	54.05	180	P	P	10 13 45.9	+0.7
	comp=Z,2.1nm,0.8s,baz=174,slow=1.4,SNR=13						
QSPA				LR	LR	10 33 27.2	
	comp=Z,84nm,19.0s,baz=112,slow=32						
	comp=Z,2.1nm,0.8s						
RAR	Rarotonga	54.35	268	LR	LR	10 30 43.5	
	comp=Z,41nm,20.7s,baz=170,slow=29						
VNA3	Neumayer Olymp	56.09	157	⇑P	P	10 13 59.3	-0.5
	comp=Z,5.3nm,0.8s						
PCRV	Puerto La Cruz	56.46	42	LR	LR	10 36 50.6	
	comp=Z,244nm,18.3s,slow=34						
VNA1	Neumayer--Stat	56.68	156	⇑P	P	10 14 04.0	+0.1
	comp=Z,5.5nm,0.9s						
VNA2	Neumayer--Watz	56.89	157	⇑P	P	10 14 05.0	-0.4
	comp=Z,2.0nm,0.6s,baz=241,slow=7.0						
VNDA	Vanda	56.89	195	LR	LR	10 32 25.6	
	comp=Z,106nm,21.8s,baz=94,slow=30						
SNAA	Sanae	58.08	158	⇑P	P	10 14 13.1	-0.7
	comp=Z,35nm,0.7s						
SNAA	Sanae	58.08	158	P	P	10 14 13.5	-0.3
SNAA	Sanae	58.08	158	P	P	10 14 11.6	-2.3
	comp=Z,1.9nm,0.9s,baz=263,slow=7.7,SNR=10						
SNAA				LR	LR	10 34 30.7	
	comp=Z,127nm,20.9s,baz=338,slow=31						
	comp=Z,1.9nm,0.9s						
ZAIG	Zacatecas	58.70	356	P	P	10 14 20.5	+1.6
TROLL	Troll, Antarti	59.53	159	⇑P	P	10 14 23.9	-0.1
	comp=Z,205nm,0.8s						
MDP	Montagnes des	59.87	57	LR	LR	10 37 53.9	
	comp=Z,137nm,19.4s,baz=232,slow=34						
SOR	Soroa	60.61	17	P	P	10 14 31.5	-0.3
BANI	BANI	60.76	32	P	P	10 14 33.8	+0.8
SJG	San Juan	62.40	36	LR	LR	10 39 31.8	
	comp=Z,47nm,19.5s,baz=148,slow=34						
URZ	Urewera	64.36	240	LR	LR	10 38 25.1	
	comp=Z,86nm,18.2s,baz=218,slow=32						
TX31	Lajitas Ar. Si	65.28	356	P	P	10 15 01.9	-1.0
TX31				IAmb	IAmb	10 15 18.9	
	comp=Z,5.4nm,1.2s						
TXAR	Lajitas Array	65.28	356	P	P	10 15 02.3	-0.6
TXAR	Lajitas Array	65.28	356	P	P	10 15 03.8	+0.9
	comp=Z,1.2nm,1.0s,baz=170,slow=8.2,SNR=7.2						
TXAR				LR	LR	10 38 06.6	
	comp=Z,40nm,19.0s,baz=175,slow=31						
	comp=Z,1.2nm,1.0s						
HNDO	Hondo	65.35	360	P	P	10 15 03.9	+0.7
JCT	Junction City	66.30	359	P	P	10 15 10.5	+1.2
JCT				IAmb	IAmb	10 15 19.1	
	comp=Z,6.4nm,1.1s						
ALPN	Alpine	66.32	356	P	P	10 15 08.8	-0.7
ALPN				IAmb	IAmb	10 15 19.5	
	comp=Z,4.0nm,0.9s						
BRDY	Brady	67.10	0		P	10 15 13.7	-0.7
MNHN	Monahans	67.23	357	P	P	10 15 16.4	+1.1
MNHN				IAmb	IAmb	10 15 25.0	
	comp=Z,3.7nm,0.6s						
319A	Douglas	67.84	351	P	P	10 15 19.1	-0.1
319A				IAmb	IAmb	10 15 27.3	
	comp=Z,3.9nm,0.9s						
237A	Washetta, Mont	67.89	3	P	P	10 15 19.6	+0.3
AMTX	Amarillo	70.72	358	P	P	10 15 38.0	+1.0
AMTX				IAmb	IAmb	10 16 13.3	
	comp=Z,4.9nm,0.9s						
ANMO	Albuquerque	71.07	354	LR	LR	10 42 27.1	
	comp=Z,96nm,19.0s,baz=264,slow=32						
DEOK	Depew	71.69	2	P	P	10 15 43.0	+0.3
TKL	Tuckaleechee C	72.89	13	LR	LR	10 43 33.5	
	comp=Z,47nm,20.3s,baz=180,slow=32						
GSC	Goldstone, Bar	72.96	345	P	P	10 15 51.0	+0.6
GSC				IAmb	IAmb	10 15 55.4	
	comp=Z,6.3nm,1.1s						
KAN01	Argonia South	72.96	1	P	P	10 15 51.2	+0.9
KAN01				IAmb	IAmb	10 16 28.9	
	comp=Z,9.0nm,1.3s						
QSM	Queen of Sheba	73.61	345		P	10 15 55.6	+1.4
QSM				IAmb	IAmb	10 16 02.5	
	comp=Z,8.3nm,1.3s						
CCM	Cathedral Cave	74.22	7	P	P	10 15 57.8	+0.1
TPNV	Topopah Spring	74.44	346		P	10 16 00.0	+0.9
TPNV				IAmb	IAmb	10 16 04.5	
	comp=Z,8.2nm,1.2s						
PV02	Paradox Valley	74.52	352	IAmb	IAmb	10 16 19.6	
	comp=Z,9.9nm,1.2s						
PV16	Nyswonger Mesa	74.64	352	P	P	10 15 58.0	-2.4
PRN	Pahroc Range	74.66	347	P	P	10 15 57.8	-2.6
PRN				IAmb	IAmb	10 16 06.5	
	comp=Z,10nm,1.3s						
PV04	Paradox Valley	74.72	352	P	P	10 16 00.5	-0.3
PV04				IAmb	IAmb	10 16 06.1	
	comp=Z,9.8nm,1.4s						
PV22	Blue Mesa, Par	74.85	352	P	P	10 16 00.3	-1.3
GMN	Gold Mountain	74.98	345	P	P	10 15 59.8	-2.6
DSP	Deep Springs	75.20	345	P	P	10 16 01.9	-1.4
DSP				IAmb	IAmb	10 16 08.7	
	comp=Z,10nm,1.3s						
Q44A	Meyer Farm, Va	75.29	8	P	P	10 16 03.4	-0.4
Q44A				IAmb	IAmb	10 16 04.9	
	comp=Z,8.9nm,1.0s						
MZP	Montezuma Peak	75.39	345	P	P	10 16 03.6	-1.1
PSUT	Pine Spring	75.55	348	P	P	10 16 04.6	-1.0
MAW	Mawson	75.67	173	P	P	10 16 05.2	-0.6
	comp=Z,5.1nm,0.9s,baz=206,slow=7.8,SNR=6.6						
	comp=Z,5.1nm,0.9s						
R11B	Troy Canyon, C	75.67	347		P	10 16 04.5	-1.8
TPH	Tonopah	75.72	345	P	P	10 16 05.1	-1.5
TMUT	Trail Mountain	75.90	350		P	10 16 06.1	-1.6
TMUT				IAmb	IAmb	10 16 19.5	
	comp=Z,4.9nm,0.9s						
SPR3	Spring Creek 3	76.08	348		P	10 16 07.7	-1.1
SPR3				IAmb	IAmb	10 16 13.0	
	comp=Z,6.6nm,1.2s						
LHV	Little Huntoon	76.16	344	P	P	10 16 07.5	-1.2
NV11	Mina Array Sit	76.26	345	P	P	10 16 08.6	-1.0
NV11				IAmb	IAmb	10 16 14.7	
	comp=Z,6.6nm,1.1s						
NVAR	Mina Array Bea	76.29	345	P	P	10 16 11.9	+2.1
	comp=Z,4.2nm,0.9s,baz=185,slow=6.7,SNR=21						
	comp=Z,4.2nm,0.9s						
O52A	Adamsville	77.58	14	P	P	10 16 17.7	+0.9
BW06	Boulder Array	79.12	352	IAmb	IAmb	10 16 30.2	
	comp=Z,9.0nm,1.2s						
PD31	Pinedale Array	79.12	352	P	P	10 16 26.9	+1.3
PD31				IAmb	IAmb	10 16 30.2	
	comp=Z,9.5nm,1.2s						
PDAR	Pinedale Array	79.12	352		P	10 16 26.7	+1.2
PDAR	Pinedale Array	79.12	352	P	P	10 16 27.1	+1.6
	comp=Z,1.6nm,0.7s,baz=165,slow=6.2,SNR=13						
	comp=Z,1.6nm,0.7s						
AAM	Ann Arbor	79.38	12	P	P	10 16 27.2	+0.5
TPAW	Teton Pass	79.99	351	IAmb	IAmb	10 16 35.5	
	comp=Z,11nm,1.1s						
LOHW	Long Hollow	80.07	352	P	P	10 16 30.6	-0.1
FXWY	Fox Creek	80.15	351	P	P	10 16 29.9	-1.2
WVOR	Wild Horse Val	80.21	346	P	P	10 16 29.7	-1.6
YBH	Yreka Blue Hor	80.45	342	P	P	10 16 35.2	+2.6
	comp=Z,0.2nm,0.9s,baz=167,slow=4.3,SNR=3.7						
HLID	Hailey	80.55	349		P	10 16 32.6	-0.6
HLID				IAmb	IAmb	10 16 38.3	
	comp=Z,9.9nm,1.1s						
DZM	Mont Dzumac	80.62	250	*e*LR	LR	10 41 32.0	
	comp=Z,119nm,26.9s						
DZM	Mont Dzumac	80.62	250	LR	LR	10 49 30.7	
	comp=Z,55nm,18.2s,baz=188,slow=34						
MFID	Camas Ranch	80.63	348		P	10 16 32.4	-1.2
J08A	Circle Bar Ran	81.06	346		P	10 16 35.1	-0.8
J08A				IAmb	IAmb	10 16 41.7	
	comp=Z,9.0nm,1.1s						
YMP	Mirror Lake Pl	81.14	352	P	P	10 16 35.7	-0.7
SPMN	Marine on St.	81.22	5	P	P	10 16 37.3	+0.8
SPMN				IAmb	IAmb	10 16 42.6	
	comp=Z,5.7nm,0.9s						
YNE	Yellowstone No	81.38	352	P	P	10 16 37.6	-0.1
RLMT	Red Lodge	81.42	353	P	P	10 16 37.2	-0.6
G40A	Rib Lake	81.47	6	P	P	10 16 38.5	+0.6
J05D	Fort Rock, OR	81.58	344		P	10 16 40.0	+1.3
PLID	Pearl Lake	82.29	348	IAmb	IAmb	10 16 47.7	
	comp=Z,7.2nm,1.1s						
SADO	Sadowa	82.59	14	LR	LR	10 51 49.9	
	comp=Z,55nm,18.1s,baz=178,slow=34						
BUKO	Buck Lake	83.19	14	IAmb	IAmb	10 16 49.8	
	comp=Z,7.9nm,1.4s						
BPMT	Black Pine Rid	83.22	350		P	10 16 46.7	-0.6
AGMN	Agassiz Nation	84.14	2		P	10 16 51.5	-0.1
AGMN				IAmb	IAmb	10 17 01.6	
	comp=Z,6.5nm,1.2s						
HAWA	Hanford	84.19	346	P	P	10 16 52.3	+0.4
EGMT	Eagleton	84.34	353		P	10 16 52.8	0.0
NEW	Newport	85.56	348		P	10 16 58.6	-0.2
NEW	Newport	85.56	348	P	P	10 17 01.2	+2.4
	comp=Z,5.3nm,0.9s,baz=157,slow=2.9,SNR=9.5						
NEW				LR	LR	10 48 47.1	
	comp=Z,73nm,19.4s,baz=226,slow=31						
	comp=Z,5.3nm,0.9s						
STKA	Stephens Creek	91.53	228	LR	LR	10 54 32.0	
	comp=Z,68nm,18.7s,baz=201,slow=33						
SCHQ	Schefferville	94.82	18	LR	LR	10 56 39.5	
	comp=Z,62nm,18.1s,baz=240,slow=33						
BOSA	Boshof	97.07	133	LR	LR	10 58 49.6	
	comp=Z,41nm,18.1s,baz=206,slow=34						
YKA	Yellowknife Ar	99.10	353	LR	LR	11 01 12.6	
	comp=Z,43nm,18.6s,baz=194,slow=34						
LBTB	Lobatse	99.92	131	LR	LR	10 58 30.6	
	comp=Z,27nm,18.8s,baz=169,slow=33						
H01W1	Cape Leeuwin H	102.75	208	T	T	12 13 44.8	
	baz=151,slow=76,SNR=54						
H01W2	Cape Leeuwin H	102.76	208	T	T	12 13 50.4	
	baz=151,slow=76,SNR=61						
H01W3	Cape Leeuwin H	102.77	208	T	T	12 13 46.1	
	baz=151,slow=76,SNR=55						
SONM	Songino Array	157.77	310	PKPab	PKPab	10 24 52.9	+2.8
	comp=Z,0.3nm,0.3s,baz=103,slow=3.2,SNR=4.0						
ZAA0	Zalesovo Array	161.99	352	PKPdf	PKPdf	10 24 20.8	-1.0
MKAR	Makanchi Array	169.32	354	PKPdf	PKPdf	10 24 26.4	-1.6
MKAR	Makanchi Array	169.32	354	PKPab	PKPab	10 25 41.8	+1.4
	comp=Z,0.2nm,0.5s,baz=18,slow=6.2,SNR=3.9						

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*IDC **18** 10:49:22.0±2.0, 5°.04N×127°.66E, h0^{km}, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=162.7km s-min=22.5km az=67.0*

*DJA **18** 10:49:41.5±1.0, 5°N±8°×12°8E±°, h161^{km}±9^{km}, M4.1/6, mb4.3/1, MLv4.0/6*

ISC 18 10:49:39.1±1.5**, 4°.9N**±0°.2×**127°.7E**±0°.2**, h150**^{km}**, n5, σ1^{s}46**/6**, mb3.4**/4**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	2.45	241	P	Pn	10 50 21.4	+1.7
SGSI				S	Sn	10 50 49.3	-1.7
WRA	Warramunga Arr	25.54	165	P	P	10 54 54.0	-0.1
	0.3nm,0.5s,baz=345,slow=10,SNR=10						
	0.3nm,0.5s						
ASAR	Alice Springs	29.04	168	P	P	10 55 25.0	-0.4
	0.3nm,0.9s,baz=346,slow=8.0,SNR=2.2						
	0.3nm,0.9s						
MKAR	Makanchi Array	57.15	324	P	P	10 59 10.3	+0.1
	0.4nm,0.4s,baz=115,slow=6.8,SNR=5.5						
	0.4nm,0.4s						
KURBB	Kurchatov Arra	61.27	327	P	P	10 59 37.7	-0.8
	0.5nm,0.5s,baz=126,slow=5.9,SNR=6.8						
	0.5nm,0.5s						

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*BUT **18** 10:52:45.3±1.2, 45°.86N±0°.01×111°.36W±0°.02, h6^{km}±2^{km}, Error ellipse: s-maj=2.1km s-min=1.8km az=109.0*

NEIC 18 10:52:45.1±1.1**, 45°.87N**±0°.01×**111°.36W**±0°.02**, h6**^{km}±5^{km}**, ML2.0**/2(BUT)**, Error ellipse: s-maj=2.2km s-min=2.0km az=86.0, Montana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NQMA	Gallatin River	0.04	32		Pg	10 52 46.8	+0.3
NQMA					Sg	10 52 48.1	+0.6
SXM	Sixmile	0.30	21		Pg	10 52 51.3	+0.3
SXM					Sg	10 52 55.7	+0.7
BZMT	Bozeman Pass	0.45	119		Pg	10 52 54.3	+0.4
MSMT	Mission Creek	0.75	108		Pg	10 52 59.5	+0.1
LRM	Limekiln Ridge	0.76	267		Pg	10 52 59.5	-0.2
BGMT	Barton Gulch	0.80	217		Pg	10 53 00.4	0.0
BUT	Butte	0.85	280		Pg	10 53 01.5	+0.1
HBMT	Mount Humbug	0.87	265		Pg	10 53 01.8	-0.1
HRY	Holter Researc	0.90	339		Pg	10 53 02.5	0.0
CRMT	Chrome Mountai	0.95	115		Pg	10 53 02.7	-0.7
DLMT	Dillon	1.00	240		Pg	10 53 04.1	-0.3
DLMT				Sg	Sg	10 53 17.2	-0.2
YHL	Hebgen Lake	1.03	173		Pg	10 53 04.3	-0.6
YHB	Horse Butte	1.13	174	Pg	Pg	10 53 06.3	-0.4
YHB				Sg	Sg	10 53 20.9	-0.4
YMC	Maple Creek	1.14	167		Pg	10 53 06.4	-0.5
YHH	Holmes Hill	1.14	161		Pg	10 53 06.3	-0.7
YPDC	Denny Creek	1.17	176		Pg	10 53 07.5	+0.1
GCMT	Greycliff	1.19	93		Pg	10 53 07.7	-0.2
YNM	Yellowstone No	1.23	158	Pg	Pg	10 53 08.0	-0.8
YNR	Norris Junctio	1.25	157		Pg	10 53 08.4	-0.7
YPM	Purple Mountai	1.26	164		Pb	10 53 09.4	0.0
LYMT	Lyon Mountain	1.27	330		Pn	10 53 09.8	+0.1
YPWB	West Boundary	1.28	172		Pg	10 53 09.4	-0.2
YNE	Yellowstone No	1.29	132		Pg	10 53 09.2	-0.6
CMI	Centennial Mou	1.36	188		Pn	10 53 10.5	-0.4
YMP	Mirror Lake Pl	1.42	143		Pn	10 53 11.1	-0.6
YFT	Old Faithful	1.47	165		Pn	10 53 11.1	-1.2
MOMT	Monida	1.47	210		Pb	10 53 13.1	+0.1
MCMT	McKenzie Canyo	1.48	226		Pn	10 53 12.1	-0.4
BPMT	Black Pine Rid	1.56	292		Pb	10 53 14.3	-0.2
H17A	Grant Village	1.58	159		Pn	10 53 13.2	-0.7
OVMT	Ovando	1.64	317		Pb	10 53 15.8	-0.1
RLMT	Red Lodge	1.65	116		Pn	10 53 15.2	+0.3
CHMT	Chamberlain Mo	1.67	309		Pg	10 53 17.0	-0.2
MCID	Moose Creek	1.69	176		Pb	10 53 16.6	-0.1
SLMT	Seeley Lake	2.01	314		Pg	10 53 23.1	-0.6
MSO	Missoula	2.03	299	Pn	Pn	10 53 20.7	+0.7
VCMT	Victor	2.04	287		Pg	10 53 23.6	-0.7
FXWY	Fox Creek	2.25	174	Pn	Pb	10 53 25.5	-0.7
LOHW	Long Hollow	2.32	166	Pn	Pb	10 53 27.1	-0.4
TPAW	Teton Pass	2.40	173	Pn	Pb	10 53 28.4	-0.5
EGMT	Eagleton	2.42	27	Pn	Pn	10 53 25.9	+0.6
ALMT	Alberton, Mont	2.42	300		Pg	10 53 30.9	-0.7
SNOW	Snow King Moun	2.45	170	Pn	Pn	10 53 26.2	+0.3
FBMT	Ferry Basin	2.61	307		Pn	10 53 28.8	+0.8
YBMT	Yellow Bay	2.70	319		Pn	10 53 30.2	+1.0
JTMT	Jette	2.75	314	Pn	Pn	10 53 29.8	0.0
AHID	Auburn Hatcher	3.11	176	Pn	Pn	10 53 35.3	+0.4
HLID	Hailey	3.17	224	Pn	Pn	10 53 36.4	+0.7
PD31	Pinedale Array	3.36	157	Pn	Pn	10 53 38.2	-0.2

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*BUT **18** 10:53:00.3±1.0, 45°.86N±0°.01×111°.37W±0°.02, h5^{km}±1^{km}, Error ellipse: s-maj=1.9km s-min=1.5km az=148.0*

NEIC 18 10:53:00.2±1.1**, 45°.86N**±0°.01×**111°.37W**±0°.02**, h6**^{km}±2^{km}**, ML3.1**/24**, ML3.3**/21(BUT)**, Error ellipse: s-maj=2.0km**

s-min=1.0km az=137.0, Montana

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NQMA	Gallatin River	0.05	28		Pg	10 53 01.9	+0.1
NQMA					Sg	10 53 03.1	0.0
SXM	Sixmile	0.31	21		Pg	10 53 06.3	+0.1
SXM					Sg	10 53 10.8	+0.4
BZMT	Bozeman Pass	0.45	118		Pg	10 53 08.9	0.0
MSMT	Mission Creek	0.74	108		Pg	10 53 14.6	0.0
LRM	Limekiln Ridge	0.76	267		Pg	10 53 14.5	-0.3
BGMT	Barton Gulch	0.79	217		Pg	10 53 15.6	+0.3
BUT	Butte	0.85	281		Pg	10 53 16.0	-0.5
HBMT	Mount Humbug	0.87	266		Pg	10 53 16.6	-0.3
HRY	Holter Researc	0.91	339		Pg	10 53 17.4	-0.2
CRMT	Chrome Mountai	0.95	115		Pg	10 53 17.9	-0.5
DLMT	Dillon	1.00	240	Pg	Pg	10 53 18.9	-0.4
DLMT				Sg	Sg	10 53 31.0	-1.3
DLMT				IAML		10 53 36.4	
	480nm,0.6s						
DLMT				IAML		10 53 36.6	
	560nm,0.5s						
YMV	Mammoth Vault	1.01	152		Pg	10 53 19.3	-0.2
YHL	Hebgen Lake	1.02	173		Pg	10 53 18.8	-0.9
YHL				Sg	Sg	10 53 33.1	+0.2
YHL				IAML		10 53 37.7	
	comp=E,610nm,0.5s						
YHL				IAML		10 53 37.8	
	comp=N,583nm,0.5s						
GCR	Grayling Creek	1.08	170		Pg	10 53 20.1	-0.8
BEMT	Mount Belmont	1.11	323		Pg	10 53 21.0	-0.5
YHB	Horse Butte	1.12	174	Pg	Pg	10 53 21.4	-0.2
YHB				Sg	Sg	10 53 35.3	-0.8
YHB				IAML		10 53 39.6	
	comp=E,385nm,0.7s						
YHB				IAML		10 53 39.8	
	comp=N,407nm,0.4s						
YMC	Maple Creek	1.13	167		Pg	10 53 21.5	-0.4
YHH	Holmes Hill	1.13	161	Pg	Pg	10 53 21.4	-0.6
YPDC	Denny Creek	1.16	176		Pb	10 53 22.5	-0.1
GCMT	Greycliff	1.19	93		Pg	10 53 22.6	-0.4
YNM	Yellowstone No	1.23	157	Pg	Pg	10 53 22.5	-1.2
YNM				IAML		10 53 42.9	
	comp=N,207nm,0.3s						
YNM				IAML		10 53 43.6	
	comp=E,293nm,0.5s						
YNR	Norris Junctio	1.25	157		Pg	10 53 23.6	-0.4
YPM	Purple Mountai	1.25	164		Pg	10 53 24.2	-0.1
YPWB	West Boundary	1.27	171		Pg	10 53 24.2	-0.3
LYMT	Lyon Mountain	1.28	330		Pb	10 53 25.0	+0.2
YNE	Yellowstone No	1.28	131		Pg	10 53 24.2	-0.6
YPSB	Soda Butte	1.30	138		Pb	10 53 25.1	0.0
CMI	Centennial Mou	1.35	188		Pn	10 53 25.5	-0.2
YMP	Mirror Lake Pl	1.41	142		Pn	10 53 26.7	+0.1
YMP				IAML		10 53 48.1	
	comp=E,482nm,0.5s						
YFT	Old Faithful	1.46	165		Pn	10 53 27.2	-0.1
MCMT	McKenzie Canyo	1.47	226		Pn	10 53 27.5	0.0
BPMT	Black Pine Rid	1.56	292		Pb	10 53 29.6	+0.1
H17A	Grant Village	1.57	159		Pg	10 53 30.6	+0.3
OVMT	Ovando	1.65	317		Pg	10 53 31.5	-0.3
RLMT	Red Lodge	1.65	116		Pb	10 53 31.1	0.0
RLMT				IAML		10 53 56.2	
	comp=E,360nm,0.3s						
MSO	Missoula	2.03	299	Pn	Pn	10 53 35.3	+0.4
MSO				IAML		10 54 05.4	
	comp=E,153nm,0.7s						
MSO				IAML		10 54 07.3	
	comp=E,148nm,0.7s						
EGMT	Eagleton	2.43	26	Pn	Pn	10 53 41.1	+0.7
JTMT	Jette	2.75	314	Pn	Pn	10 53 45.9	+1.0
TCUT	Toone Canyon	4.74	180	Pn	Pn	10 54 10.2	-2.2
BGU	Big Grassy Mou	5.08	194	Pn	Pn	10 54 15.7	-1.3

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*IDC **18** 10:53:56.8±0.9, 28°.34N×104°.81E, h0^{km}, mb3.7/7, mbtmp3.7/8, ML3.8/1, MS3.2/9, Error ellipse: s-maj=38.6km s-min=17.2km az=57.0*

*NEIC **18** 10:53:58.9±0.7, 28°.4N±0°.1×104°.8E±0°.1, h10^{km}±1^{km}, mb4.4/35, Error ellipse: s-maj=20.2km s-min=17.4km az=128.0*

ISC 18 10:53:59.8±0.7**, 28°.37N**±0°.08×**104°.88E**±0°.07**, h19^{km}, n60,** σ**1^{s}07**/57**, mb4.3**/26**, MS3.0**/7**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENH	Enshi	4.45	64		Pn	10 55 08.0	+1.7
CNSH	ChangSha	7.10	90	P	Pn	10 55 44.3	+1.6
CNSH				S	Sn	10 56 59.4	-3.5
CNSH				smax	smax		
	comp=N,100nm,1.0s						
CNSH				smax	smax		
	comp=E,68nm,0.9s						
WHN	Wuhan	8.53	73	P	Pn	10 56 04.8	+2.4
WHN				S	Sn	10 57 35.0	-3.1
GZH	Guangzhou	9.27	123	P	Pn	10 56 12.0	-0.4
GZH				S	Sn	10 57 58.4	+2.2
GZH				smax	smax		
	comp=N,78nm,0.9s						
GZH				smax	smax		
	comp=E,47nm,1.0s						
CMAR	Chiang Mai Arr	11.27	210	LR	LR	11 01 27.8	
	comp=E,115nm,19.9s,baz=30,slow=40						
SONM	Songino Array	19.47	3	P	Pn	10 58 26.0	-0.8
	comp=E,0.3nm,0.3s,baz=177,slow=9.8,SNR=5.0						
SONM				LR	LR	11 06 39.9	
	comp=E,85nm,18.6s,baz=193,slow=39						
	comp=E,0.8nm,0.4s						
JOW	Kunigami	20.78	89	LR	LR	11 07 17.7	
	comp=E,61nm,18.9s,baz=296,slow=38						
KSAR	Wonju Array Be	21.28	59	P	P	10 58 46.1	+0.9
KSRS	Korea Array	21.32	59	P	P	10 58 45.2	-0.3
	comp=E,2.0nm,0.8s,baz=251,slow=9.4,SNR=7.2						
	comp=E,2.0nm,0.8s						
JNU	Nakatsue	22.82	72	LR	LR	11 08 44.9	
	comp=E,48nm,19.9s,baz=246,slow=39						
MKAR	Makanchi Array	25.52	322	P	P	10 59 26.4	-0.7
MKAR	Makanchi Array	25.52	322	P	P	10 59 27.8	+0.7
	comp=E,1.1nm,0.6s,baz=125,slow=11,SNR=10						
MKAR				LR	LR	11 10 23.9	
	comp=E,35nm,20.9s,baz=111,slow=39						
	comp=E,1.1nm,0.6s						
PRZ	Przheval'sk	25.64	310	P	P	10 59 27.0	-1.5
MAKZ	Makanchi	25.70	322	P	P	10 59 28.5	-0.2
TARG	Taragay, Kyrgy	25.74	308	P	P	10 59 28.3	-1.3
RPSI	Rantau Prapat	26.16	194	P	P	10 59 31.8	-1.3
RPSI				IAmb	IAmb	10 59 43.6	
	comp=Z,7.5nm,0.9s						
KDJ	Kajisay	26.33	309	P	P	10 59 33.8	-0.9
USA0B	Ussuriysk Arra	26.80	47	P	P	10 59 39.2	+0.6
USA0B				IAmb	IAmb	10 59 58.6	
	comp=Z,6.5nm,1.2s						
USRK	Ussuriysk Ar.	26.80	47	P	P	10 59 38.9	+0.2
DAV	Davao City (W)	28.84	133	LR	LR	11 11 23.0	
	comp=Z,36nm,19.7s,baz=182,slow=36						
KLR	Kul'dur	29.28	37	LR	LR	11 13 13.0	
	comp=Z,89nm,19.2s,baz=178,slow=39						
ZALV	Zalesovo Beam	29.48	336	P	P	11 00 03.2	+0.8
	comp=Z,0.4nm,0.3s,baz=139,slow=9.2,SNR=2.0						
ZALV				LR	LR	11 12 29.2	
	comp=Z,26nm,18.3s,baz=119,slow=38						
	comp=Z,0.4nm,0.3s						
KURBB	Kurchatov Arra	29.84	325	P	P	11 00 04.7	-1.0
	comp=Z,0.9nm,0.8s,baz=133,slow=9.7,SNR=7.4						
	comp=Z,0.9nm,0.8s						
AB31	Akbulak array	40.02	314		P	11 01 34.0	+0.6
ABKAR	Akbulak array	40.02	314		P	11 01 33.9	+0.4
MA2	Magadan	44.02	32	P	P	11 02 05.2	-0.7
TIXI	Tiksi	45.30	10	P	P	11 02 16.1	+0.1
TIXI				IAmb	IAmb	11 02 20.0	
	comp=Z,5.5nm,1.4s						
TIXI	Tiksi	45.30	10	LR	LR	11 22 38.1	
	comp=Z,61nm,18.2s,baz=207,slow=38						
WB0	Warramunga Arr	55.71	146	P	P	11 03 35.4	+0.1
WB0				IAmb	IAmb	11 03 44.7	
	comp=Z,8.7nm,1.4s						
WRA	Warramunga Arr	55.83	146	P	P	11 03 35.9	-0.2
WRA	Warramunga Arr	55.83	146	P	P	11 03 36.1	-0.1
	comp=Z,1.3nm,0.6s,baz=337,slow=8.2,SNR=25						
	comp=Z,1.3nm,0.6s						
WR8	Warramunga Arr	55.92	146	P	P	11 03 36.9	+0.1
WR8				IAmb	IAmb	11 03 45.8	
	comp=Z,9.4nm,1.4s						
BR131	Keskin Array S	58.71	301	P	P	11 03 56.9	+0.4
BR131				IAmb	IAmb	11 04 12.7	
	comp=Z,2.7nm,1.1s						
AS31	Alice Springs	58.81	149	P	P	11 03 57.8	+0.7
ASAR	Alice Springs	58.81	149	P	P	11 03 57.5	+0.3
	comp=Z,1.0nm,0.7s,baz=332,slow=6.7,SNR=25						
	comp=Z,1.0nm,0.7s						
AKASG	Malin Array Be	59.76	315	P	P	11 04 02.3	-1.1
	comp=Z,0.1nm,0.3s,baz=75,slow=4.8,SNR=3.3						
	comp=Z,0.1nm,0.3s						
AKBB	Malin Array Si	59.76	315	P	P	11 04 03.3	-0.1
AKBB				IAmb	IAmb	11 04 05.6	
	comp=Z,6.1nm,1.4s						
KIEV	Kiev	59.77	315	P	P	11 04 03.3	-0.2
KIEV				IAmb	IAmb	11 04 05.6	
	comp=Z,5.0nm,1.4s						
C19K	Lookout Ridge	65.75	23	P	P	11 04 43.8	+0.7
D19K	Kuna River	66.44	24	P	P	11 04 47.9	+0.3
D20K	Etivluk River	66.89	23	P	P	11 04 51.1	+0.7
D20K				IAmb	IAmb	11 04 51.9	
	comp=Z,3.0nm,0.8s						
B22K	Teshekpuk Lake	67.40	21	P	P	11 04 53.9	+0.4
B22K				IAmb	IAmb	11 04 54.6	
	comp=Z,4.0nm,0.9s						
K17K	Iditarod	68.20	30	P	P	11 04 59.8	+1.1
C23K	Itkillik River	68.48	21	P	P	11 05 00.8	+0.4
F21K	Alatna River	68.52	24	P	P	11 05 01.3	+0.7
F21K				IAmb	IAmb	11 05 09.4	
	comp=Z,4.3nm,1.5s						
J18K	Innoko River	68.62	28	P	P	11 05 01.9	+0.6
J18K				IAmb	IAmb	11 05 02.5	
	comp=Z,3.2nm,0.9s						
E22K	Anaktuvuk Pass	68.76	23	P	P	11 05 02.6	+0.4
E22K				IAmb	IAmb	11 05 06.8	
	comp=Z,2.3nm,1.1s						
G21K	Allakaket	68.78	25	P	P	11 05 02.7	+0.4
G21K				IAmb	IAmb	11 05 12.7	
	comp=Z,2.8nm,1.1s						
IMAR	Indian Mountai	68.89	25	P	P	11 05 03.1	+0.1
E23K	Chandalar	69.54	23	P	P	11 05 07.8	+0.7
E23K				IAmb	IAmb	11 05 10.6	
	comp=Z,6.0nm,1.4s						
BMAR	Burnt Mountain	71.54	22	P	P	11 05 20.1	+0.9
PMR	Palmer	72.60	29	P	P	11 05 26.4	+0.8
KDAK	Kodiak Island	72.74	33	P	P	11 05 26.8	+0.3
E29M	Blow River	73.16	20	P	P	11 05 29.6	+0.8
E29M				IAmb	IAmb	11 05 32.5	
	comp=Z,2.9nm,1.2s						
RIDG	Independent Ri	73.29	26	P	P	11 05 29.3	-0.5
RIDG				IAmb	IAmb	11 05 34.1	
	comp=Z,2.2nm,0.9s						
A36M	Sachs Harbour	74.13	14	P	P	11 05 35.0	+0.6
L27K	Beaver Creek,	74.80	26	P	P	11 05 38.8	+0.2
L27K				IAmb	IAmb	11 05 50.7	
	comp=Z,2.9nm,1.4s						
BCAR	Beaver Creek A	74.82	26	P	P	11 05 39.7	+1.0
I30M	Mount Dempster	75.52	22	P	P	11 05 43.1	+0.3
I30M				IAmb	IAmb	11 05 44.9	
	comp=Z,4.3nm,1.2s						
K29M	Barlow Dome	75.95	24	P	P	11 05 45.9	+0.6

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*BUT **18** 10:58:49.7±1.1, 45°.86N±0°.01×111°.36W±0°.02, h0^{km}±1^{km}, Error ellipse: s-maj=1.8km s-min=1.7km az=87.0*

NEIC 18 10:58:49.5±1.0**, 45°.88N**±0°.01×**111°.36W**±0°.02**, h5^{km}**±1^{km}**, ML2.6**/42**, ML2.9**/26(BUT)**, Error ellipse: s-maj=3.0km s-min=2.3km az=33.0, Montana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SXM	Sixmile	0.29	21		Pg	10 58 55.7	+0.4
SXM					Sg	10 59 00.2	+1.0
BZMT	Bozeman Pass	0.45	120		Pg	10 58 58.8	+0.5
MSMT	Mission Creek	0.74	109		Pg	10 59 04.1	+0.2
LRM	Limekiln Ridge	0.77	266		Pg	10 59 04.2	0.0
BGMT	Barton Gulch	0.80	217		Pg	10 59 04.9	0.0
BUT	Butte	0.85	280		Pg	10 59 06.0	+0.1
HBMT	Mount Humbug	0.88	265		Pg	10 59 06.3	-0.1
HRY	Holter Researc	0.90	339		Pg	10 59 06.8	0.0
CRMT	Chrome Mountai	0.95	116		Pg	10 59 07.2	-0.6
DLMT	Dillon	1.01	240		Pg	10 59 08.6	-0.3
DLMT				Sg	Sg	10 59 21.7	-0.3
DLMT				IAML		10 59 25.9	
	214nm,0.4s						
DLMT				IAML		10 59 25.9	
	207nm,0.3s						
YHL	Hebgen Lake	1.03	173		Pg	10 59 08.8	-0.5
YHL				Sg	Sg	10 59 22.7	0.0
YHL				IAML		10 59 26.9	
	comp=N,192nm,0.5s						
YHL				IAML		10 59 27.9	
	comp=E,146nm,0.3s						
GCR	Grayling Creek	1.09	171		Pg	10 59 10.4	-0.1
BEMT	Mount Belmont	1.10	323		Pn	10 59 11.8	-0.1
YHB	Horse Butte	1.13	174		Pg	10 59 10.8	-0.4
YHB				Sg	Sg	10 59 25.1	-0.7
YHB				IAML		10 59 28.6	
	comp=N,173nm,0.4s						
YHB				IAML		10 59 28.8	
	comp=E,197nm,0.6s						
YMC	Maple Creek	1.14	167		Pg	10 59 11.0	-0.5
YHH	Holmes Hill	1.14	162		Pg	10 59 10.9	-0.6
YPDC	Denny Creek	1.17	176		Pg	10 59 11.8	-0.2
GCMT	Greycliff	1.18	93		Pg	10 59 11.9	-0.3
YNR	Norris Junctio	1.25	157	Pg	Pg	10 59 13.3	-0.3
YNR				IAML		10 59 33.2	
	comp=E,77nm,0.3s						
YNR				IAML		10 59 34.1	
	comp=N,75nm,0.3s						
YPM	Purple Mountai	1.27	164		Pg	10 59 13.8	0.0
LYMT	Lyon Mountain	1.27	330		Pg	10 59 14.0	+0.1
YPWB	West Boundary	1.28	172		Pg	10 59 13.9	-0.2
YNE	Yellowstone No	1.29	132		Pg	10 59 13.4	-0.8
YNE				Sg	Sg	10 59 30.4	-0.4
YNE				IAML		10 59 32.9	
	comp=N,224nm,0.4s						
YPSB	Soda Butte	1.31	139		Pg	10 59 14.0	-0.5
YMP	Mirror Lake Pl	1.42	143		Pn	10 59 16.1	-0.1
YMP				Sg	Sg	10 59 34.7	-0.4
YMP				IAML		10 59 38.2	
	comp=N,187nm,0.3s						
YMP				IAML		10 59 39.6	
	comp=E,182nm,0.3s						
YFT	Old Faithful	1.47	165		Pn	10 59 16.2	-0.7
MOMT	Monida	1.48	210		Pb	10 59 17.5	-0.1
MCMT	McKenzie Canyo	1.48	226		Pn	10 59 16.8	-0.4
BPMT	Black Pine Rid	1.56	292		Pb	10 59 19.1	+0.1
H17A	Grant Village	1.58	159		Pg	10 59 20.3	+0.5
OVMT	Ovando	1.64	317		Pn	10 59 19.0	-0.2
RLMT	Red Lodge	1.65	116		Pb	10 59 20.4	-0.2
CHMT	Chamberlain Mo	1.67	309		Pg	10 59 21.3	-0.3
MCID	Moose Creek	1.69	176		Pb	10 59 21.0	-0.2
ICI	Italian Canyon	1.91	217		Pn	10 59 23.6	+0.6
SLMT	Seeley Lake	2.01	314		Pn	10 59 24.0	-0.3
MSO	Missoula	2.03	299	Pn	Pn	10 59 24.5	0.0
MSO				IAML		10 59 56.6	
	comp=E,63nm,0.6s						
MSO				IAML		10 59 58.0	
	comp=E,58nm,0.8s						
VCMT	Victor	2.05	287		Pb	10 59 27.5	+0.3
BCYI	Bear Canyon	2.13	224		Pn	10 59 26.9	+0.8
FXWY	Fox Creek	2.25	174		Pb	10 59 29.9	-0.8
LOHW	Long Hollow	2.33	166		Pn	10 59 26.7	-2.0
TPAW	Teton Pass	2.40	173	Pn	Pn	10 59 30.3	+0.6
TPAW				IAML		11 00 08.9	
	comp=E,14nm,0.6s						
TPAW				IAML		11 00 17.7	
	comp=E,20nm,0.8s						
EGMT	Eagleton	2.41	26	Pn	Pn	10 59 29.9	+0.2
ALMT	Alberton, Mont	2.43	300		Pg	10 59 35.4	-0.7
SWMT	Swartz Lake	2.44	313		Pn	10 59 30.0	-0.2
SNOW	Snow King Moun	2.45	170		Pn	10 59 30.4	0.0
FBMT	Ferry Basin	2.61	307		Pg	10 59 38.8	-0.7
YBMT	Yellow Bay	2.70	318		Pn	10 59 34.7	+1.0
JTMT	Jette	2.75	314	Pn	Pn	10 59 33.0	-1.4
AHID	Auburn Hatcher	3.12	177	Pn	Pn	10 59 37.8	-1.7
AHID				IAML		11 00 32.2	
	comp=E,9.3nm,0.6s						
AHID				IAML		11 00 33.2	
	comp=E,9.3nm,0.7s						
HLID	Hailey	3.18	224	Pn	Pn	10 59 40.4	+0.1
HLID				IAML		11 00 29.2	
	comp=E,20nm,0.5s						
PLID	Pearl Lake	3.36	258	Pn	Pn	10 59 42.5	-0.4
PLID				IAML		11 00 37.7	
	comp=E,7.0nm,0.8s						
PLID				IAML		11 00 42.2	
	comp=E,9.9nm,0.6s						
PDAR	Pinedale Array	3.37	157	Pn	Pn	10 59 42.5	-0.4
LAO	LASA Array	3.65	75	Pn	Pn	10 59 47.3	+0.6
MFID	Camas Ranch	4.03	234	Pn	Pn	10 59 52.3	+0.3
HVU	Hansel Valley	4.22	195	Pn	Pn	10 59 54.4	-0.2
BMO	Blue Mountains	4.32	258	Pn	Pn	10 59 54.4	-1.5
BMO				IAML		11 01 07.6	
	comp=E,2.8nm,0.3s						
BMO				IAML		11 01 10.0	
	comp=E,3.5nm,1.1s						
E09A	Wood Farm, Sta	4.76	280	Pn	Pn	11 00 00.7	-1.2
J08A	Circle Bar Ran	5.67	246	Pn	Pn	11 00 15.4	+0.9

IDC 18 11:12:08.7±2.8**, 29°.19N**×**106°.34E, h0^{km}, mb3.4**/3**, mbtmp3.4**/3**, Error ellipse: s-maj=522.5km s-min=28.1km az=54.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	25.69	320	P	P	11 17 40.5	0.0
	0.4nm,0.7s,baz=128,slow=9.9,SNR=4.4						
	0.4nm,0.7s						
WRA	Warramunga Arr	55.82	148	P	P	11 21 47.7	-0.3
	0.5nm,0.6s,baz=337,slow=8.3,SNR=6.4						
	0.5nm,0.6s						
ASAR	Alice Springs	58.86	150	P	P	11 22 09.6	+0.1
	0.2nm,0.6s,baz=326,slow=6.7,SNR=7.9						
	0.2nm,0.6s						

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*VAO **18** 11:28:20.9±1.1, 10°.63N×62°.29W, h10^{km}, mb4.4*

*NEIC **18** 11:28:23.2±2.0, 10°.84N±0°.07×62°.42W±0°.07, h78^{km}±6^{km}, mb4.4/41, Error ellipse: s-maj=10.1km s-min=9.8km az=147.0*

*FUNV **18** 11:28:25.5, 10°.83N×62°.27W, h28^{km}, MW4.3*

*TRN **18** 11:28:25.9, 10°.88N×62°.31W, h54^{km}, MD4.6, North of the Paria peninsua. Felt in Trinidad, MMI IV, V, VI.*

*IDC **18** 11:28:26.1±1.6, 10°.95N×62°.45W, h113^{km}±13^{km}, mb3.7/8, mbtmp4.1/10, Error ellipse: s-maj=18.9km s-min=11.8km az=114.0*

ISC 18 11:28:23.4±0.7**, 10°.86N**±0°.04×**62°.37W**±0°.04**, h88^{km}**±7^{km}**, n134,** σ**1^{s}62**/169**, mb4.2**/25**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSKH	Kent House, Po	0.85	102	*e*P	Pn	11 28 41.2	0.0
PSKH				*e*S	Sn	11 28 52.3	-2.3
TRN	Trinidad (W)	0.97	102	*e*P	Pn	11 28 42.4	-0.2
TRN				*e*S	Sn	11 28 54.2	-2.8
TPP	Pointe-a-Pierr	1.05	121	*e*P	Pn	11 28 44.9	+1.4
TPP				*e*S	Sn	11 28 57.6	-1.0
TBH	Brigand Hill	1.33	106	*e*P	Pn	11 28 47.7	+0.8
TBH				*e*S	Sn	11 29 05.0	+0.3
GRFF	Grenada Fort F	1.33	28	*e*P	Pn	11 28 47.5	+0.5
GRFF				*e*S	Sn	11 29 05.0	+0.2
GRGR	Grenville	1.45	29		Pn	11 28 48.9	+0.6
GRGR				Sn	Sn	11 29 07.1	-0.2
GRGR	Grenville	1.45	29	*e*P	Pn	11 28 49.0	+0.6
GRGR				*e*S	Sn	11 29 07.4	+0.2
GRW	Mount Saint Ca	1.47	28	*e*P	Pn	11 28 50.1	+1.4
GRW				*e*S	Sn	11 29 08.5	+0.7
TPR	Prospect	1.60	78	*e*P	Pn	11 28 50.9	+0.6
TPR				*e*S	Sn	11 29 09.7	-0.9
GRSS	Sisters	1.61	27	*e*P	Pn	11 28 51.5	+1.0
GRSS				*e*S	Sn	11 29 11.5	+0.5
GCMP	Grenada, Carri	1.86	30	*e*P	Pn	11 28 54.4	+0.7
GCMP				*e*S	Sn	11 29 16.1	-0.7
PCRV	Puerto La Cruz	2.33	253	P	Pn	11 29 02.6	+2.6
	327nm,0.4s,baz=60,slow=4.4,SNR=703						
PCRV				S	Sn	11 29 30.7	+2.7
	466nm,0.7s,baz=188,slow=23,SNR=18						
PCRV	Puerto La Cruz	2.33	253	*e*P	Pn	11 29 02.8	+2.9
PCRV				*e*S	Sn	11 29 28.1	+0.2
PCRV	Puerto La Cruz	2.33	253	*e*P	Pn	11 29 03.4	+3.4
PCRV				*e*S	Sn	11 29 30.4	+2.5
SVOC	Richmond Hill,	2.54	26	*e*P	Pn	11 29 03.9	+1.2
SVOC				*e*S	Sn	11 29 32.4	-0.4
SVT	Saint Vincent	2.55	26	*e*P	Pn	11 29 03.4	+0.6
SVT				*e*S	Sn	11 29 31.7	-1.3
SVB	Belmont	2.63	24	*e*P	Pn	11 29 05.2	+1.3
SVB				*e*S	Sn	11 29 35.1	-0.1
SLBI	Saint Lucia, B	3.43	23	*e*P	Pn	11 29 16.5	+1.8
SLBI				*e*S	Sn	11 29 53.5	-0.7
BBGH	Gun Hill	3.56	50	Pn	Pn	11 29 17.4	+0.8
BBGH				Sn	Sn	11 29 56.3	-1.3
BBGH	Gun Hill	3.56	50	*e*P	Pn	11 29 18.2	+1.6
BBGH				*e*S	Sn	11 29 58.5	+0.9
H05S1	Guadeloupe/Mar	3.85	23	P	Pn	11 29 22.3	+1.9
H05S1				S	Sn	11 30 03.9	-0.5
	SNR=84						
BIM	Bigot	3.85	19		Pn	11 29 20.6	+0.2
BIM	Bigot	3.85	19	*e*P	Pn	11 29 21.5	+1.1
BIM				*e*S	Sn	11 30 03.2	-1.4
MPOM	Morne Pois Mar	3.86	22	Pn	Pn	11 29 20.9	+0.5
MPOM				Sn	Sn	11 30 04.1	-0.6
FDF	Fort de France	4.03	17		Pn	11 29 23.6	+0.8
FDF				Sn	Sn	11 30 06.4	-2.6
SVN	Savane Anatole	4.13	16	Pn	Pn	11 29 23.1	-1.1
ILAM	Ilet Lapin Mar	4.16	20	Pn	Pn	11 29 23.3	-1.2
FUNV	FUNVISIS	4.38	265	*e*P	Pn	11 29 30.8	+3.1
FUNV				*e*S	Sn	11 30 17.6	0.0
MDN	Morne-Daniel	4.53	12	*e*S	Sn	11 30 20.5	-0.7
TACV	Tcata	4.64	262	*e*P	Pn	11 29 33.7	+2.6
TACV				*e*S	Sn	11 30 24.2	+0.5
DSLB	Salisbury	4.64	11	*e*P	Pn	11 29 34.1	+3.0
DSLB				*e*S	Sn	11 30 23.2	-0.7
MAGL	Barre de l'ile	5.17	12	Pn	Pn	11 29 38.5	+0.2
MAGL	Barre de l'ile	5.17	12	*e*P	Pn	11 29 41.8	+3.5
BENV	Beln	5.22	261	*e*P	Pn	11 29 41.9	+2.9
BENV				*e*S	Sn	11 30 37.7	-0.4
CBE	Ff, Capester	5.23	8		Pn	11 29 39.3	+0.1
CACV	CAICARA DEL OR	5.26	232	*e*P	Pn	11 29 36.3	-3.2
CACV				*e*S	Sn	11 30 28.5	-10
GDHS	Morne Mazeau,	5.41	6	Pn	Pn	11 29 41.1	-0.6
GDSD	La Dsirade Is	5.57	13	Pn	Pn	11 29 42.2	-1.6
H05N1	Guadeloupe/Mar	5.57	13	P	Pn	11 29 47.2	+3.4
	SNR=28						
ABD	La Joyeuse, An	5.65	9	Pn	Pn	11 29 44.6	-0.2
BAUV	El Baul	5.90	252		Pn	11 29 49.2	+0.9
BAUV	El Baul	5.90	252	*e*P	Pn	11 29 49.8	+1.5
BAUV				*e*S	Sn	11 30 53.6	-1.0
BAUV	El Baul	5.90	252	*e*P	Pn	11 29 49.9	+1.5
BAUV				*e*S	Sn	11 30 55.7	+1.1
ANBD	Bethesda, Anti	6.18	5	*e*P	Pn	11 29 55.3	+3.3
ANBD				*e*S	Sn	11 31 00.5	-0.8
SKI	Saint Kitts	6.45	357	*e*P	Pn	11 29 58.8	+3.1
TEPV	Terepaima	6.77	263	*e*P	Pn	11 30 02.0	+1.8
TEPV				*e*S	Sn	11 31 13.2	-2.7
SABA	Saba	6.77	353	Pn	Pn	11 29 59.9	-0.3
ANWB	Willy Bob	6.79	5	*e*P	Pn	11 30 03.6	+3.2
ANWB				*e*S	Sn	11 31 15.6	-0.7
IGPR	InterUniversit	7.94	333	Pn	Pn	11 30 15.1	-1.0
PDPR	Patillas Dam,	7.95	334	Pn	Pn	11 30 16.6	+0.4
SJG	San Juan	8.09	334	Pn	Pn	11 30 15.3	-2.8
OBIP	Obispado Ponce	8.23	331	Pn	Pn	11 30 18.2	-1.9
CELP	Cerrillos	8.25	331	Pn	Pn	11 30 19.5	-0.8
SDV	Santo Domingo	8.38	257		Pn	11 30 21.1	-1.1
SDV	Santo Domingo	8.38	257	P	Pn	11 30 22.7	+0.5
	20nm,0.4s,baz=84,slow=9.0,SNR=7.8						
SDV				S	Sn	11 31 53.4	-1.9
	28nm,0.3s,baz=0.7,slow=18,SNR=9.1						
SDV	Santo Domingo	8.38	257	*e*P	Pn	11 30 22.7	+0.5
CRPR	Cabo Rojo, PR	8.46	328	Pn	Pn	11 30 22.7	-0.5
UUPR	Utuado, UPR, P	8.47	331	Pn	Pn	11 30 23.5	+0.2
AOPR	Arecibo Observ	8.57	331		Pn	11 30 23.4	-1.3
AOPR	Arecibo Observ	8.57	331	*e*P	Pn	11 30 28.6	+4.0
EMPR	Esperanza - Ma	8.57	332	Pn	Pn	11 30 23.8	-1.0
BOAV	Boa Vista	8.61	168		Pn	11 30 23.3	-1.9
BOAV	Boa Vista	8.61	168	*e*P	Pn	11 30 22.8	-2.4
CAPV	Capacho	10.25	254	*e*P	Pn	11 30 49.2	+1.3
CAPV				*e*S	Sn	11 32 34.7	-6.4
MDP	Montagnes des	11.20	120	P	Pn	11 30 54.8	-5.8
	11nm,0.3s,baz=310,slow=14,SNR=39						
MDP				S	Sn	11 32 49.0	-15
	83nm,0.4s,baz=48,slow=18,SNR=23						
SMRC	Santa Marta, M	11.64	273	Pn	Pn	11 31 05.5	-1.1
RUSC	La Rusia	11.69	246		Pn	11 31 06.8	-0.8
SDDR	Presa de Saban	11.81	314	*e*P	Pn	11 31 11.7	+2.9

PAPH	**Port-au-Prince**	**12.26**	**310**	Pn	**Pn**	**11 31 13.7**	**-1.1**
ROSC	**El Rosal**	**13.26**	**244**	Pn	**Pn**	**11 31 27.0**	**-1.6**
MACA	**Manacapuru-AM**	**14.03**	**173**		**Pn**	**11 31 35.7**	**-2.5**
MACA	**Manacapuru-AM**	**14.03**	**173**	*e*P	**Pn**	**11 31 36.0**	**-2.2**
FLOC	**Florencia**	**16.09**	**236**		**P**	**11 32 07.2**	**+1.0**
FLOC				IAmb	IAmb	11 32 10.4	
	comp=Z,28nm,0.7s						
NPGB	**Novo Progresso**	**19.11**	**158**	*e*P	**P**	**11 32 39.7**	**+0.3**
OTAV	**Otavalo**	**19.15**	**238**	P	**P**	**11 32 39.1**	**-1.3**
OTAV				IAmb	IAmb	11 32 52.3	
	comp=Z,21nm,1.4s						
OTAV	**Otavalo**	**19.15**	**238**	*e*P	**Pn**	**11 32 44.5**	**+2.3**
SLOR	**San Lorenzo -**	**19.74**	**235**	P	**P**	**11 32 45.8**	**-1.0**
SLOR				IAmb	IAmb	11 32 52.4	
	comp=Z,20nm,0.7s						
PRPB	**Parauapebas**	**21.04**	**143**	*e*P	**P**	**11 33 02.6**	**+2.3**
CZSB	**Cruzeiro do Su**	**21.14**	**210**	*e*P	**P**	**11 33 04.7**	**+3.3**
LCR2	**La Lucha 2**	**21.32**	**269**	P	**P**	**11 33 01.7**	**-1.9**
LCR2				IAmb	IAmb	11 33 12.0	
	comp=Z,25nm,1.5s						
CLDB	**Colider**	**22.56**	**163**	*e*P	**P**	**11 33 18.8**	**+2.4**
PDRB	**Porto dos Gac**	**23.02**	**166**	*e*P	**P**	**11 33 25.1**	**+4.0**
ATAH	**Atahualpa**	**23.96**	**222**	P	**P**	**11 33 30.9**	**+0.7**
	comp=Z,10nm,0.6s,baz=32,slow=6.7,SNR=7.4						
	comp=Z,10nm,0.6s						
SNDB	**Serra Nova Dou**	**25.21**	**154**	*e*P	**P**	**11 33 44.5**	**+3.4**
SIV	**San Ignacio**	**26.71**	**177**	P	**P**	**11 33 55.6**	**+0.9**
	comp=Z,1.6nm,0.7s,baz=356,slow=11,SNR=8.3						
	comp=Z,1.6nm,0.7s						
LPAZ	**La Paz**	**27.57**	**192**	P	**P**	**11 34 04.8**	**+1.8**
	comp=Z,2.6nm,0.8s,baz=359,slow=7.5,SNR=8.9						
	comp=Z,2.6nm,0.8s						
LPAZ	**La Paz**	**27.57**	**192**	*e*P	**P**	**11 34 05.0**	**+2.0**
PB16	**IPOC Station P**	**29.85**	**194**	P	**P**	**11 34 24.2**	**+1.0**
PB16				IAmb	IAmb	11 34 33.3	
	comp=Z,17nm,1.4s						
GO01	**Chusmiza**	**31.07**	**193**	P	**P**	**11 34 32.6**	**-1.2**
GO01				IAmb	IAmb	11 35 03.6	
	comp=Z,13nm,1.4s						
PB11	**IPOC Station P**	**31.26**	**193**	P	**P**	**11 34 34.1**	**-1.1**
PB08	**IPOC Station P**	**31.52**	**192**	P	**P**	**11 34 37.3**	**-0.4**
PB08				IAmb	IAmb	11 34 48.3	
	comp=Z,9.1nm,1.0s						
PB01	**IPOC Station P**	**32.47**	**192**	P	**P**	**11 34 45.9**	**+0.3**
GO02	**Mina Guanaco**	**36.49**	**191**	P	**P**	**11 35 19.2**	**-1.3**
FCAR	**Ozark Folk Cen**	**36.70**	**318**	P	**P**	**11 35 22.2**	**+0.2**
FCAR				IAmb	IAmb	11 35 23.2	
	comp=Z,3.2nm,1.0s						
HBVL	**Hebbronville**	**37.75**	**300**	P	**P**	**11 35 32.7**	**+1.8**
BRDY	**Brady**	**39.50**	**307**		**P**	**11 35 46.1**	**+0.6**
BRDY				IAmb	IAmb	11 35 46.4	
	comp=Z,6.3nm,1.1s						
KAN14	**Manchester OK**	**41.24**	**315**	P	**P**	**11 35 59.5**	**-0.4**
SAND	**Sanderson**	**41.55**	**303**	P	**P**	**11 36 03.4**	**+0.8**
POST	**Post**	**42.14**	**308**	P	**P**	**11 36 07.3**	**0.0**
TXAR	**Lajitas Array**	**42.64**	**302**	P	**P**	**11 36 11.4**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=112,slow=9.7,SNR=9.5						
TXAR				PcP	**PcP**	**11 38 02.1**	**0.0**
	comp=Z,0.6nm,0.6s,baz=123,slow=5.6,SNR=7.7						
	comp=Z,0.2nm,0.5s						
SCHQ	**Schefferville**	**44.00**	**356**	P	**P**	**11 36 21.0**	**-0.9**
	comp=Z,1.0nm,0.6s,baz=196,slow=4.9,SNR=3.6						
	comp=Z,1.0nm,0.6s						
RTBA	**Rita Blanca**	**44.42**	**312**	P	**P**	**11 36 25.7**	**0.0**
RTBA				IAmb	IAmb	11 36 25.8	
	comp=Z,3.2nm,0.7s						
MT02	**Curacav**	**44.66**	**190**	P	**P**	**11 36 27.9**	**+0.5**
MNTX	**Cornudas Mount**	**44.75**	**304**	P	**P**	**11 36 29.3**	**+1.0**
MT09	**Talagante**	**45.14**	**190**	P	**P**	**11 36 31.2**	**-0.2**
BO04	**La Punta**	**45.28**	**190**	P	**P**	**11 36 32.0**	**-0.4**
T25A	**Trinidad**	**45.93**	**312**	P	**P**	**11 36 38.0**	**+0.2**
T25A				IAmb	IAmb	11 36 45.0	
	comp=Z,4.7nm,1.3s						
BO02	**Sierra Bellavi**	**46.10**	**190**	P	**P**	**11 36 39.9**	**+1.0**
BO02				IAmb	IAmb	11 36 40.5	
	comp=Z,6.1nm,0.9s						
BNM	**Barren Site**	**46.52**	**307**	P	**P**	**11 36 42.6**	**+0.1**
EPLO	**Experimental L**	**46.59**	**332**	P	**P**	**11 36 42.0**	**-0.4**
EPLO				IAmb	IAmb	11 37 04.5	
	comp=Z,5.3nm,1.4s						
AGMN	**Agassiz Nation**	**46.66**	**330**	P	**P**	**11 36 42.4**	**-0.6**
AGMN				IAmb	IAmb	11 37 17.9	
	comp=Z,5.4nm,1.3s						
ANMO	**Albuquerque**	**46.66**	**308**	P	**P**	**11 36 42.6**	**-0.9**
SDCO	**Great Sand Dun**	**46.97**	**312**	P	**P**	**11 36 45.9**	**-0.1**
ULM	**Lac du Bonnet**	**47.98**	**332**	P	**P**	**11 36 51.6**	**-1.6**
	comp=Z,0.9nm,0.4s,baz=137,slow=7.0,SNR=2.6						
	comp=Z,0.9nm,0.4s						
PV01	**Paradox Valley**	**49.36**	**311**	P	**P**	**11 37 05.3**	**+1.0**
PV01				IAmb	IAmb	11 37 05.7	
	comp=Z,1.8nm,0.6s						
PV02	**Paradox Valley**	**49.51**	**311**	P	**P**	**11 37 06.7**	**+1.2**
PV02				IAmb	IAmb	11 37 06.8	
	comp=Z,4.2nm,0.6s						
PV03	**Paradox Valley**	**49.61**	**311**	P	**P**	**11 37 07.0**	**+0.8**
PV19	**Morning Glory**	**49.73**	**311**	P	**P**	**11 37 07.9**	**+0.7**
PV19				IAmb	IAmb	11 37 08.8	
	comp=Z,2.1nm,0.6s						
P18A	**Preston Nutter**	**51.12**	**313**	P	**P**	**11 37 18.2**	**+0.6**
P18A				IAmb	IAmb	11 37 22.3	
	comp=Z,2.3nm,1.0s						
BSUT	**Blindstream Ca**	**51.81**	**314**	P	**P**	**11 37 22.4**	**-0.5**
BW06	**Boulder Array**	**51.81**	**317**	P	**P**	**11 37 22.6**	**-0.1**
BW06				IAmb	IAmb	11 37 22.6	
	comp=Z,1.7nm,0.7s						
PD31	**Pinedale Array**	**51.81**	**317**	P	**P**	**11 37 22.3**	**-0.4**
PD31				IAmb	IAmb	11 37 22.6	
	comp=Z,1.7nm,0.7s						
PDAR	**Pinedale Array**	**51.81**	**317**	P	**P**	**11 37 22.5**	**-0.2**
PDAR	**Pinedale Array**	**51.81**	**317**	P	**P**	**11 37 22.1**	**-0.7**
	comp=Z,1.5nm,0.6s,baz=108,slow=9.2,SNR=14						
	comp=Z,1.5nm,0.6s						
PLCA	**Paso Flores**	**51.89**	**188**	P	**P**	**11 37 23.6**	**+0.7**
	comp=Z,1.7nm,0.8s,baz=352,slow=6.8,SNR=4.2						
	comp=Z,1.7nm,0.8s						
DUG	**Dugway, Tooele**	**53.16**	**312**	P	**P**	**11 37 32.1**	**-0.6**
BGU	**Big Grassy Mou**	**53.56**	**313**	P	**P**	**11 37 35.6**	**+0.1**
YHL	**Hebgen Lake**	**53.72**	**318**	P	**P**	**11 37 37.7**	**+0.9**
YHL				IAmb	IAmb	11 37 38.2	
	comp=Z,3.8nm,0.6s						
DLMT	**Dillon**	**54.84**	**318**	P	**P**	**11 37 45.2**	**+0.4**
HLID	**Hailey**	**55.41**	**316**	P	**P**	**11 37 49.6**	**+0.7**
HOPS	**Hopland Field**	**60.53**	**309**	P	**P**	**11 38 24.2**	**-0.4**
CMAR	**Chiang Mai Arr**	**145.52**	**32**	PKPbc	**PKPdf**	**11 47 51.0**	**-1.2**
	comp=Z,0.4nm,0.5s,baz=301,slow=5.3,SNR=4.3						
ASAR	**Alice Springs**	**159.94**	**228**	PKP	**PKPdf**	**11 48 11.9**	**-1.2**
	comp=Z,0.1nm,0.6s,baz=129,slow=1.3,SNR=4.5						
WRA	**Warramunga Arr**	**161.55**	**239**	PKPab	**PKPab**	**11 48 58.5**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=106,slow=4.2,SNR=7.2						

IDC 18 11:48:21.9±2.3**, 27°.37N**×**99°.06E, h0**^{km}**, mb3.4**/4**,**
mbtmp3.4/4**, MS3.2**/2**, Error ellipse: s-maj=433.8km**
s-min=23.3km az=57.0, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**23.46**	**330**	P	P	11 53 34.0	+0.9
	0.6nm,0.7s,baz=134,slow=10,SNR=1.9						
	0.6nm,0.7s						
KURBB	**Kurchatov Arra**	**27.99**	**332**	P	P	11 54 13.5	-0.7
	0.5nm,0.6s,baz=144,slow=9.6,SNR=4.5						
	0.5nm,0.6s						
JNU	**Nakatsue**	**28.01**	**70**	LR	LR	12 05 36.2	
	comp=Z,36nm,18.2s,baz=280,slow=37						
JCJ	**Chichijima**	**38.20**	**80**	LR	LR	12 12 19.6	
	comp=Z,38nm,20.0s,baz=225,slow=38						
WRA	**Warramunga Arr**	**58.14**	**140**	P	P	11 58 17.4	-0.2
	0.4nm,0.6s,baz=331,slow=7.6,SNR=5.2						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**60.88**	**143**	P	P	11 58 36.7	+0.1
	0.2nm,0.6s,baz=317,slow=6.3,SNR=5.0						
	0.2nm,0.6s						

IDC ***18*** *11:50:09.5±1.3, 28°.04N×100°.55E, h0^{km}, mb3.4/6,*
mbtmp3.5/6, MS3.5/2, Error ellipse: s-maj=76.2km
s-min=20.1km az=62.0

ISC 18 11:50:14.8±1.5**, 28°.1N**±0°.2×**100°.7E**±0°.4**, h35**^{km}**, n8,**
σ**0^{s}.12**/6**, mb3.4**/5**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**20.20**	**11**	P	**P**	**11 54 46.7**	**+0.1**
	0.7nm,0.7s,baz=200,slow=13,SNR=4.6						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**23.57**	**327**	P	**P**	**11 55 22.2**	**+0.1**
	1.1nm,0.9s,baz=133,slow=8.4,SNR=4.6						
	1.1nm,0.9s						
PALK	**Pallekele**	**28.02**	**226**	LR	LR	12 08 54.3	
	comp=Z,52nm,18.6s,baz=94,slow=40						
KURBB	**Kurchatov Arra**	**28.05**	**329**	P	**P**	**11 56 02.6**	**0.0**
	0.6nm,0.8s,baz=141,slow=9.1,SNR=5.4						
	0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**28.31**	**340**	P	**P**	**11 56 04.8**	**-0.2**
	0.4nm,0.3s,baz=134,slow=6.2,SNR=1.9						
	0.4nm,0.3s						
WRA	**Warramunga Arr**	**57.82**	**142**	P	**P**	**12 00 03.0**	**0.0**
	0.3nm,0.6s,baz=332,slow=7.6,SNR=4.8						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**60.64**	**145**	P	**P**	**12 00 22.4**	**0.0**
	0.2nm,0.7s,baz=315,slow=6.5,SNR=5.0						
	0.2nm,0.7s						
VAE	**Valguarnera**	**70.73**	**303**	LR	LR	12 35 49.7	
	comp=Z,45nm,18.6s,baz=291,slow=39						

IDC ***18*** *12:12:44.1±0.7, 55°.16S×28°.16W, h0^{km}, mb4.3/6,*
mbtmp4.3/7, ML4.3/1, MS3.9/13, Error ellipse:
s-maj=31.8km s-min=17.9km az=58.0

NEIC ***18*** *12:12:46.5±1.4, 55°.2S±0°.1×28°.2W±0°.2, h10^{km}±1^{km},*
mb4.9/37, Error ellipse: s-maj=20.9km s-min=15.9km
az=202.0

ISC 18 12:12:45.7±0.5**, 55°.16S**±0°.09×**28°.17W**±0°.09**, h10**^{km}**, n102,**
σ**0^{s}.54**/93**, mb4.8**/23**, MS3.8**/13**, 5C, South Sandwich**
Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**4.90**	**277**	Pn	**Pn**	**12 13 58.7**	**-0.7**
VNA1	**Neumayer--Stat**	**17.83**	**158**	⇑P	**P**	**12 16 54.7**	**+0.5**
	comp=Z,9.3nm,0.9s						
VNA3	**Neumayer Olymp**	**18.02**	**161**	⇑P	**Pn**	**12 16 55.6**	**-0.3**
	comp=Z,4.7nm,0.6s						
VNA2	**Neumayer--Watz**	**18.23**	**158**	⇑P	**P**	**12 16 58.7**	**+0.1**
	comp=Z,3.4nm,0.5s,baz=316,slow=11						
SNAA	**Sanae**	**19.78**	**156**	⇑P	**P**	**12 17 14.9**	**-0.8**
	comp=Z,250nm,0.9s						
SNAA	**Sanae**	**19.78**	**156**		**P**	**12 17 15.6**	**-0.1**
SNAA	**Sanae**	**19.78**	**156**	P	**P**	**12 17 15.4**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=304,slow=10,SNR=53						
	comp=Z,8.2nm,0.7s						
PMSA	**Palmer Station**	**20.08**	**227**	P	**P**	**12 17 19.8**	**+0.8**
PMSA	**Palmer Station**	**20.08**	**227**	LR	LR	12 23 30.6	
	comp=Z,263nm,20.4s,baz=75,slow=32						
TROLL	**Troll, Antarti**	**21.29**	**154**	⇑P	**P**	**12 17 31.4**	**-0.8**
	comp=Z,539nm,0.9s						
BELA	**Belgrano 2**	**22.93**	**184**		**P**	**12 17 49.1**	**-0.3**
TRQA	**Tornquist**	**28.46**	**293**	P	**P**	**12 18 41.4**	**+0.7**
TRQA				IAmb	IAmb	12 19 33.2	
	comp=Z,29nm,1.6s						
PLCA	**Paso Flores**	**31.30**	**280**	LR	LR	12 32 18.8	
	comp=Z,104nm,18.7s,baz=89,slow=38						
QSPA	**South Pole Qui**	**35.09**	**180**	P	**P**	**12 19 39.2**	**+0.4**
QSPA				IAmb	IAmb	12 19 42.9	
	comp=Z,39nm,1.9s						
QSPA	**South Pole Qui**	**35.09**	**180**	P	**P**	**12 19 38.7**	**-0.1**
	comp=Z,5.5nm,0.7s,baz=336,slow=0.5,SNR=43						
QSPA				LR	LR	12 32 55.4	
	comp=Z,178nm,19.8s,baz=192,slow=34						
	comp=Z,5.5nm,0.7s						
BO02	**Sierra Bellavi**	**35.63**	**287**	P	**P**	**12 19 44.2**	**+0.6**
BO02				IAmb	IAmb	12 20 05.5	
	comp=Z,37nm,1.9s						
CPUP	**Villa Florida**	**35.80**	**312**		**P**	**12 19 44.5**	**-0.6**
CPUP	**Villa Florida**	**35.80**	**312**	P	**P**	**12 19 44.1**	**-0.9**
	comp=Z,1.5nm,0.7s,baz=13,slow=7.8,SNR=13						
CPUP				LR	LR	12 36 08.5	
	comp=Z,54nm,18.1s,baz=353,slow=39						
	comp=Z,1.5nm,0.7s						
MT09	**Talagante**	**36.51**	**288**	P	**P**	**12 19 50.9**	**-0.2**
MT09				IAmb	IAmb	12 19 52.8	
	comp=Z,9.7nm,0.8s						
MT01	**Popeta**	**36.59**	**288**	P	**P**	**12 19 51.2**	**-0.5**
MT01				IAmb	IAmb	12 20 02.6	
	comp=Z,13nm,0.9s						
PEL	**Peldehue**	**36.82**	**289**	P	**P**	**12 19 54.0**	**+0.2**
PEL				IAmb	IAmb	12 19 55.1	
	comp=Z,14nm,0.7s						
VA05	**Santo Domingo**	**36.94**	**287**	P	**P**	**12 19 54.6**	**-0.1**
ZON	**Zonda**	**36.98**	**293**	P	**P**	**12 19 54.2**	**-0.9**
ZON				IAmb	IAmb	12 21 06.3	
	comp=Z,7.5nm,0.4s						
MT02	**Curacav**	**36.98**	**288**	P	**P**	**12 19 54.5**	**-0.5**
MT02				IAmb	IAmb	12 20 06.9	
	comp=Z,19nm,1.2s						
VA03	**San Esteban**	**37.04**	**289**	P	**P**	**12 19 56.3**	**+0.6**
VA03				IAmb	IAmb	12 20 08.4	
	comp=Z,34nm,1.4s						
VA06	**Catapilco**	**37.60**	**289**	P	**P**	**12 19 59.7**	**-0.6**
VA06				IAmb	IAmb	12 20 12.4	
	comp=Z,30nm,1.1s						
CO03	**El Pedregal**	**38.60**	**291**	P	**P**	**12 20 08.7**	**-0.2**
CO01	**Juntas del Tor**	**38.96**	**293**	P	**P**	**12 20 13.1**	**+1.0**
AQDB	**Aquidauana**	**40.37**	**318**	P	**P**	**12 20 23.3**	**-0.2**
MAW	**Mawson**	**41.20**	**144**	P	**P**	**12 20 29.2**	**-0.7**
	comp=Z,2.7nm,0.9s,baz=276,slow=8.9,SNR=3.8						
	comp=Z,2.7nm,0.9s						
BDFB	**Brasilia**	**42.31**	**331**	LR	LR	12 37 33.1	
	comp=Z,241nm,18.1s,baz=172,slow=35						
GO02	**Mina Guanaco**	**42.59**	**298**	P	**P**	**12 20 42.9**	**+0.8**
GO02				IAmb	IAmb	12 20 44.1	
	comp=Z,70nm,1.7s						
PB01	**IPOC Station P**	**45.98**	**301**	P	**P**	**12 21 09.5**	**+0.5**
PTLB	**Pontes e Lacer**	**46.27**	**317**	P	**P**	**12 21 11.1**	**-0.1**
PTLB				IAmb	IAmb	12 21 22.3	
	comp=Z,12nm,0.8s						
BOSA	**Boshof**	**46.30**	**78**	P	**P**	**12 21 11.5**	**-0.1**
BOSA	**Boshof**	**46.30**	**78**	P	**P**	**12 21 11.4**	**-0.2**
	comp=Z,5.1nm,1.1s,baz=60,slow=22,SNR=4.5						
BOSA				LR	LR	12 37 55.0	
	comp=Z,236nm,18.2s,baz=205,slow=33						
	comp=Z,5.1nm,1.1s						
PB08	**IPOC Station P**	**46.58**	**302**	P	**P**	**12 21 12.6**	**-1.5**
PB08				IAmb	IAmb	12 21 26.6	
	comp=Z,11nm,1.0s						
GO01	**Chusmiza**	**47.00**	**302**	P	**P**	**12 21 18.3**	**+0.8**
GO01				IAmb	IAmb	12 21 29.7	
	comp=Z,14nm,0.9s						
PB11	**IPOC Station P**	**47.15**	**302**	P	**P**	**12 21 17.9**	**-0.4**
VNDA	**Vanda**	**47.44**	**183**		**P**	**12 21 20.5**	**+0.8**
VNDA	**Vanda**	**47.44**	**183**	P	**P**	**12 21 19.7**	**0.0**
	comp=Z,5.1nm,0.8s,baz=190,slow=6.3,SNR=26						
	comp=Z,5.1nm,0.8s						
VILB	**Vilhena**	**48.95**	**317**	P	**P**	**12 21 32.9**	**+0.8**
VILB				IAmb	IAmb	12 21 42.9	
	comp=Z,12nm,0.9s						
KGCAE	**Kacgae**	**49.17**	**70**		**P**	**12 21 34.0**	**+0.1**
LBTB	**Lobatse**	**49.30**	**75**	P	**P**	**12 21 35.3**	**+0.5**
LBTB				IAmb	IAmb	12 21 36.2	
	comp=Z,20nm,1.6s						
LBTB	**Lobatse**	**49.30**	**75**	LR	LR	12 39 47.5	
	comp=Z,103nm,18.0s,baz=206,slow=33						
LPAZ	**La Paz**	**49.41**	**306**		**P**	**12 21 36.2**	**-0.1**
LPAZ				IAmb	IAmb	12 21 48.3	
	comp=Z,7.1nm,0.8s						
LPAZ	**La Paz**	**49.41**	**306**	P	**P**	**12 21 36.5**	**+0.2**
	comp=Z,2.9nm,0.6s,baz=115,slow=4.9,SNR=12						
	comp=Z,2.9nm,0.6s						
GRTLG	**Ghanzi**	**49.85**	**68**	P	**P**	**12 21 38.7**	**-0.4**
GRTLG				IAmb	IAmb	12 21 39.7	
	comp=Z,19nm,1.6s						
QNGWA	**Qangwa**	**51.33**	**66**		**P**	**12 21 50.6**	**+0.3**
QNGWA				IAmb	IAmb	12 21 51.3	
	comp=Z,23nm,1.5s						
MREMI	**Moremi**	**52.26**	**75**	P	**P**	**12 21 57.3**	**+0.1**
MATP	**Matopo**	**54.56**	**74**	LR	LR	12 42 57.0	
	comp=Z,66nm,18.2s,baz=231,slow=33						
LSZ	**Lusaka**	**58.58**	**70**	LR	LR	12 45 46.8	
	comp=Z,181nm,18.1s,baz=156,slow=34						
ATAH	**Atahualpa**	**62.27**	**300**	LR	LR	12 52 25.2	
	comp=Z,53nm,19.2s,baz=215,slow=38						
MDP	**Montagnes des**	**63.39**	**333**	LR	LR	12 50 04.3	
	comp=Z,114nm,18.1s,baz=134,slow=35						
DBIC	**Dimbokro**	**64.59**	**26**	LR	LR	12 46 12.4	
	comp=Z,106nm,18.8s,baz=200,slow=31						
AIS	**Amsterdam Isla**	**67.88**	**125**	P	**P**	**12 23 44.1**	**+0.1**
TORD	**Torodi Ar. Bea**	**72.56**	**31**		**P**	**12 24 12.6**	**-0.2**
SJG	**San Juan**	**79.80**	**324**	LR	LR	13 04 33.0	
	comp=Z,42nm,18.1s,baz=155,slow=39						
NMDO	**Nuevo Mundo**	**85.29**	**317**	P	**P**	**12 25 22.5**	**0.0**
NMDO				IAmb	IAmb	12 25 23.6	
	comp=Z,81nm,1.6s						
ASAR	**Alice Springs**	**100.00**	**163**	Pdif	**Pdif**	**12 26 30.5**	**-0.6**
ASAR	**Alice Springs**	**100.00**	**163**	P	**Pdif**	**12 26 29.9**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=179,slow=3.4,SNR=6.6						
CMAR	**Chiang Mai Arr**	**125.90**	**111**	PKP	**PKPdf**	**12 31 47.9**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=229,slow=3.7,SNR=5.2						
BVAR	**Borovoye Array**	**134.77**	**57**	PKP	**PKPdf**	**12 32 03.8**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=222,slow=2.0,SNR=3.9						
YKA	**Yellowknife Ar**	**135.13**	**319**	PKP	**PKPdf**	**12 32 03.7**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=119,slow=1.7,SNR=5.0						
K29M	**Barlow Dome**	**144.93**	**313**		**PKPdf**	**12 32 21.6**	**0.0**
L29M	**L29M**	**144.93**	**312**		**PKPdf**	**12 32 21.7**	**+0.1**
EPYK	**Eagle Plains**	**145.39**	**318**		**PKPab**	**12 32 23.4**	**+0.9**
YAH	**Yahtse**	**145.56**	**306**	PKPdf	**PKPab**	**12 32 24.0**	**+0.5**
DAWY	**Dawson**	**145.78**	**313**	PKPdf	**PKPbc**	**12 32 23.7**	**+0.2**
H29M	**Whitestone**	**145.99**	**317**	PKPdf	**PKPbc**	**12 32 24.0**	**-0.1**
G29M	**Pine Creek**	**146.04**	**318**	PKPdf	**PKPbc**	**12 32 24.6**	**+0.3**
M27K	**Edge Creek, AK**	**146.31**	**310**	PKPdf	**PKPbc**	**12 32 25.8**	**+0.5**
E29M	**Blow River**	**146.35**	**321**	PKPdf	**PKPdf**	**12 32 24.6**	**+0.8**
I28M	**Miner Creek**	**146.40**	**315**	PKPdf	**PKPbc**	**12 32 26.0**	**+0.5**
BCAR	**Beaver Creek A**	**146.49**	**311**	PKPdf	**PKPbc**	**12 32 25.5**	**-0.3**
L27K	**Beaver Creek,**	**146.51**	**311**	PKPdf	**PKPdf**	**12 32 24.8**	**+0.5**
F28M	**Old Crow**	**146.91**	**319**	PKPdf	**PKPbc**	**12 32 26.2**	**-0.6**
E28M	**Babbage River**	**146.99**	**321**	PKPdf	**PKPbc**	**12 32 26.3**	**-0.6**
D27M	**Malcolm River**	**147.61**	**322**	PKPdf	**PKPdf**	**12 32 26.4**	**+0.4**
DOT	**Dot Lake**	**147.64**	**311**	PKPbc	**PKPbc**	**12 32 29.1**	**+0.2**
E27K	**Coleen River**	**147.66**	**320**	PKPbc	**PKPbc**	**12 32 29.3**	**+0.5**
SCRK	**Sand Creek**	**147.69**	**312**	PKPdf	**PKPdf**	**12 32 27.5**	**+1.2**
F26K	**Sheenjek River**	**148.53**	**319**	PKPbc	**PKPbc**	**12 32 31.6**	**+0.5**
SCM	**Sheep Creek Mo**	**148.60**	**307**	PKPbc	**PKPbc**	**12 32 32.1**	**+0.6**
C27K	**Jago River**	**148.62**	**323**	PKPbc	**PKiKP**	**12 32 32.2**	**-0.6**
BMAR	**Burnt Mountain**	**148.65**	**318**	PKPbc	**PKPbc**	**12 32 32.2**	**+0.7**
PRP	**Porcupine Dome**	**148.69**	**315**	PKPbc	**PKPbc**	**12 32 32.5**	**+0.7**
DHY	**Denali Highway**	**148.94**	**310**	PKPbc	**PKiKP**	**12 32 33.4**	**-0.4**
SML	**Sawmill**	**149.05**	**307**	PKPbc	**PKiKP**	**12 32 33.5**	**-0.5**
F25K	**Christian Rive**	**149.08**	**319**	PKPbc	**PKiKP**	**12 32 34.0**	**+0.1**
IL31		**149.10**	**313**	PKPbc	**PKPbc**	**12 32 32.7**	**+0.1**
ILAR	**Eielson Array**	**149.10**	**313**	PKPbc	**PKPbc**	**12 32 32.8**	**+0.2**
ILAR	**Eielson Array**	**149.10**	**313**	PKPbc	**PKPbc**	**12 32 32.5**	**-0.1**
	comp=Z,6.1nm,0.7s,baz=131,slow=2.0,SNR=69						
WRH	**Wood River Hil**	**149.56**	**312**	PKPbc	**PKPbc**	**12 32 34.4**	**+0.6**
G24K	**Hadweenzic Riv**	**149.67**	**317**	PKPbc	**PKiKP**	**12 32 34.9**	**-0.1**
H24K	**Noodor Dome**	**149.70**	**315**	PKPbc	**PKPbc**	**12 32 34.7**	**+0.5**
MCK	**McKinley**	**149.77**	**311**	PKPbc	**PKPbc**	**12 32 34.9**	**+0.6**
BWN	**Browne**	**150.09**	**311**	PKPbc	**PKPbc**	**12 32 35.5**	**+0.4**
SKT	**Skwentna**	**150.57**	**307**	PKPbc	**PKPbc**	**12 32 36.6**	**+0.3**
KTH	**Kantishna Hill**	**150.61**	**310**	PKPbc	**PKPbc**	**12 32 36.5**	**+0.1**
TOLK	**Toolik Lake Re**	**150.64**	**320**	PKPdf	**PKPdf**	**12 32 30.7**	**-0.2**
TOLK				PKPab	**sPKPab**	**12 32 45.2**	**+0.1**
SONM	**Songino Array**	**151.22**	**86**	PKPbc	**PKPbc**	**12 32 38.1**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=221,slow=2.6,SNR=8.7						

IDC ***18*** *12:28:52.2±0.6, 20°.09S×174°.03W, h0^{km}, mb4.3/15,*
mbtmp4.3/17, ML4.2/2, MS3.8/13, Error ellipse:
s-maj=22.5km s-min=15.9km az=113.0

NEIC ***18*** *12:28:53.1±1.8, 20°.02S±0°.10×173°.30W±0°.07, h10^{km}±1^{km},*
mb4.8/68, Error ellipse: s-maj=17.0km s-min=11.0km
az=182.0

ISC 18 12:28:54.5±0.4**, 20°.13S**±0°.08×**173°.47W**±0°.06**, h25**^{km}**,**
n113, σ**1^{s}.78**/93**, mb4.7**/48**, MS3.7**/9**, 4C, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**3.50**	**73**		**Pn**	**12 29 46.1**	**-1.2**
NIUE				Sn	**Sn**	**12 30 24.3**	**-3.6**
AFI	**Afiamalu**	**6.39**	**15**		**Pn**	**12 30 25.3**	**-1.8**
FUTU	**Fugatoga**	**7.30**	**322**	Pn	**Pn**	**12 30 40.2**	**+0.6**
MSVF	**Nonsavu**	**8.37**	**285**		**Pn**	**12 30 57.6**	**+3.2**
MSVF	**Nonsavu**	**8.37**	**285**	Pn	**Pn**	**12 30 53.7**	**-0.7**
	1.8nm,0.3s,baz=107,slow=18,SNR=12						
MSVF				LR	LR	12 33 42.8	
	comp=Z,2µm,18.9s,baz=90,slow=37						
RAR	**Rarotonga**	**12.87**	**97**		**Pn**	**12 31 54.7**	**-1.1**
RAR	**Rarotonga**	**12.87**	**97**	Pn	**Pn**	**12 31 54.9**	**-0.9**
	1.9nm,0.3s,baz=275,slow=11,SNR=9.1						
RAR				LR	LR	12 37 50.9	
	comp=Z,189nm,18.0s,baz=282,slow=40						
PINNC	**Pines Island,**	**17.95**	**259**		**P**	**12 33 03.4**	**+0.5**
DZM	**Mont Dzumac**	**18.84**	**261**		**P**	**12 33 11.7**	**-1.1**
DZM	**Mont Dzumac**	**18.84**	**261**	P	**P**	**12 33 08.5**	**-4.4**
	0.4nm,0.3s,baz=73,slow=17,SNR=12						
DZM				LR	LR	12 39 11.1	
	comp=Z,527nm,19.6s,baz=91,slow=34						
	12nm,0.8s						
URZ	**Urewera**	**19.83**	**202**	P	**Pn**	**12 33 23.2**	**-1.9**
	1.3nm,0.3s,baz=50,slow=2.7,SNR=8.8						
URZ				LR	LR	12 39 01.0	
	comp=Z,166nm,19.9s,baz=90,slow=31						
	5.1nm,0.4s						
PPT	**Papeete**	**22.75**	**88**	LR	LR	12 42 16.5	
	comp=Z,120nm,18.5s,baz=264,slow=35						
RPZ	**Rata Peaks**	**26.85**	**205**	P	**P**	**12 34 33.6**	**+0.5**
	5.5nm,0.7s,baz=281,slow=3.0,SNR=5.1						
	5.5nm,0.7s						
CAN	**Canberra**	**36.27**	**237**	P	**P**	**12 35 53.8**	**-2.2**
CAN				IAmb	IAmb	12 36 20.4	
	comp=Z,18nm,1.4s						
CTAO	**Charters Tower**	**37.76**	**263**	P	**P**	**12 36 06.2**	**-2.6**
PMG	**Port Moresby**	**39.44**	**280**	LR	LR	12 50 06.3	
	comp=Z,167nm,19.4s,baz=138,slow=33						
TOO	**Toolangi**	**39.57**	**235**	P	**P**	**12 36 21.7**	**-2.1**
STKA	**Stephens Creek**	**41.78**	**244**	P	**P**	**12 36 39.6**	**-2.5**
STKA	**Stephens Creek**	**41.78**	**244**	P	**P**	**12 36 38.8**	**-3.3**
	comp=Z,2.8nm,0.7s,baz=88,slow=10.0,SNR=6.7						
	comp=Z,2.8nm,0.7s						
COEN	**Coen**	**41.82**	**271**	P	**P**	**12 36 41.6**	**-0.9**
MANU	**Manus Island**	**42.25**	**290**	P	**P**	**12 36 46.9**	**+0.8**
MANU				IAmb	IAmb	12 36 55.3	
	comp=Z,19nm,1.1s						
JAY	**Jayapura**	**48.01**	**285**	LR	LR	12 57 38.2	
	comp=Z,79nm,18.0s,baz=24,slow=36						
WR8	**Warramunga Arr**	**48.71**	**261**	P	**P**	**12 37 33.5**	**-3.8**
WR8				IAmb	IAmb	12 37 47.0	
	comp=Z,11nm,1.4s						
ASAR	**Alice Springs**	**48.74**	**256**	P	**P**	**12 37 35.0**	**-2.5**
ASAR				PcP	**PcP**	**12 39 02.7**	**+0.3**
ASAR	**Alice Springs**	**48.74**	**256**	P	**P**	**12 37 34.0**	**-3.5**
	comp=Z,2.6nm,0.6s,baz=100,slow=7.6,SNR=32						
ASAR				PcP	**PcP**	**12 39 03.0**	**+0.6**
	comp=Z,1.9nm,0.7s,baz=100,slow=4.4,SNR=7.9						
ASAR				LR	LR	12 57 28.8	
	comp=Z,178nm,18.0s,baz=98,slow=36						
	comp=Z,2.6nm,0.6s						
WB0	**Warramunga Arr**	**48.84**	**261**	P	**P**	**12 37 35.0**	**-3.3**
WB0				IAmb	IAmb	12 37 38.5	
	comp=Z,11nm,1.2s						
WRA	**Warramunga Arr**	**48.86**	**261**	P	**P**	**12 37 35.7**	**-2.7**
WRA	**Warramunga Arr**	**48.86**	**261**	P	**P**	**12 37 34.8**	**-3.6**
	comp=Z,2.7nm,0.6s,baz=98,slow=6.1,SNR=20						
	comp=Z,2.7nm,0.6s						
GUMO	**Guam**	**52.93**	**306**	LR	LR	12 57 47.0	
	comp=Z,55nm,21.1s,baz=150,slow=33						
MTN	**Manton Dam**	**53.42**	**269**	P	**P**	**12 38 10.2**	**-2.5**
MTN				IAmb	IAmb	12 38 10.8	
	comp=Z,10nm,0.8s						
FITZ	**Fitzroy Crossi**	**57.29**	**261**	P	**P**	**12 38 40.1**	**-0.4**
FITZ	**Fitzroy Crossi**	**57.29**	**261**	LR	LR	13 02 08.1	
	comp=Z,166nm,18.8s,baz=133,slow=35						
SBA	**Scott Base**	**58.56**	**185**	P	**P**	**12 38 49.9**	**+1.4**
SBA				IAmb	IAmb	12 39 00.5	
	comp=Z,5.3nm,0.9s						
VNDA	**Vanda**	**58.70**	**186**		**P**	**12 38 49.0**	**-0.5**
VNDA	**Vanda**	**58.70**	**186**	P	**P**	**12 38 52.1**	**+2.6**
	comp=Z,1.7nm,0.9s,baz=33,slow=4.5,SNR=5.0						
VNDA				LR	LR	13 01 27.0	
	comp=Z,36nm,19.2s,baz=322,slow=33						
	comp=Z,1.7nm,0.9s						
SOEI	**Soe**	**60.75**	**270**		**P**	**12 39 04.1**	**-0.7**
NWAO	**Narrogin (SRO)**	**62.33**	**243**	LR	LR	13 05 06.3	
	comp=Z,122nm,18.2s,baz=344,slow=35						
MORW	**Morawa**	**63.90**	**247**	P	**P**	**12 39 26.1**	**+0.5**
QSPA	**South Pole Qui**	**69.94**	**180**	P	**P**	**12 40 06.0**	**+2.4**
QSPA				IAmb	IAmb	12 40 26.9	
	comp=Z,6.6nm,1.0s						
QSPA	**South Pole Qui**	**69.94**	**180**	P	**P**	**12 40 05.5**	**+2.0**
	comp=Z,2.9nm,1.1s,baz=59,slow=1.2,SNR=7.6						
QSPA				LR	LR	13 09 54.7	
	comp=Z,39nm,18.1s,baz=10.0,slow=35						
	comp=Z,2.9nm,1.1s						
JAGI	**Jajag, Banyuwa**	**70.64**	**268**	P	**P**	**12 40 08.5**	**0.0**
JMM	**Marumori**	**71.94**	**323**	P	**P**	**12 40 17.1**	**+1.3**
JGF	**Kuroka**	**72.40**	**320**	P	**P**	**12 40 19.5**	**+0.8**
JGF				IAmb	IAmb	12 40 19.8	

	comp=Z,5.5nm,0.7s						
MJAR	Matsushiro Arr	72.52	321	P	P	12 40 20.0	+0.7
MJAR				IAmb	IAmb	12 40 20.6	
	comp=Z,5.1nm,0.7s						
MJAR	Matsushiro Arr	72.52	321	P	P	12 40 18.8	-0.5
	comp=Z,8.9nm,0.7s,baz=151,slow=5.7,SNR=22						
	comp=Z,8.9nm,0.7s						
MAJO	Matsushiro	72.52	321		P	12 40 20.2	+0.9
MJB9	Matsu-Tunnel	72.52	321	P	P	12 40 21.2	+1.8
MJB9				IAmb	IAmb	12 40 21.4	
	comp=Z,9.1nm,0.7s						
JNU	Nakatsue	75.00	314	P	P	12 40 35.1	+1.1
JKA	Kamikawa-asahi	75.51	329	P	P	12 40 39.0	+2.4
JKA				IAmb	IAmb	12 40 39.9	
	comp=Z,8.9nm,0.8s						
YOJ	Yonaguni jima	76.06	303	P	P	12 40 41.2	+1.0
YULB	Yu-li	76.90	301	P	P	12 40 45.0	0.0
PEA0B	Petropavlovsk-	77.09	343	P	P	12 40 45.9	+0.5
PETK	Petropavlovsk-	77.09	343	P	P	12 40 45.1	-0.3
PETK	Petropavlovsk-	77.09	343	P	P	12 40 45.9	+0.5
	comp=Z,7.1nm,0.8s,baz=107,slow=8.0,SNR=9.6						
	comp=Z,7.1nm,0.8s						
TPUB	Ta-pu	77.40	301		P	12 40 47.6	-0.1
YSS	Yuzhno-Sakhali	77.55	331	P	P	12 40 50.5	+2.4
NVAR	Mina Array Bea	77.89	41	P	P	12 40 53.6	+3.2
	comp=Z,0.9nm,0.8s,baz=226,slow=9.5,SNR=7.6						
	comp=Z,0.9nm,0.8s						
KSRS	Korea Array	79.49	316	P	P	12 41 00.7	+1.7
	comp=Z,4.8nm,0.9s,baz=130,slow=6.1,SNR=15						
	comp=Z,4.8nm,0.9s						
KSAR	Wonju Array Be	79.51	316		P	12 41 00.5	+1.4
KDAK	Kodiak Island	79.54	11	P	P	12 40 59.8	+1.0
MG04	Isla Riesco	81.11	143	P	P	12 41 07.5	0.0
USRK	Ussuriysk Ar.	81.12	324	P	P	12 41 08.3	+0.7
MNTX	Cornudas Mount	83.10	53	P	P	12 41 18.0	-0.4
SRU	San Rafael Swe	83.24	44	P	P	12 41 18.2	-0.9
TX31	Lajitas Ar. Si	83.30	56	P	P	12 41 17.5	-2.1
TXAR	Lajitas Array	83.30	56	P	P	12 41 18.9	-0.7
TXAR	Lajitas Array	83.30	56	P	P	12 41 23.6	+4.0
	comp=Z,0.9nm,0.9s,baz=224,slow=5.2,SNR=4.8						
	comp=Z,0.9nm,0.9s						
PV05	Paradox Valley	83.64	46	P	P	12 41 20.4	-0.9
PV05				IAmb	IAmb	12 41 36.9	
	comp=Z,6.3nm,1.3s						
PV19	Morning Glory	83.84	46	P	P	12 41 21.4	-0.8
PV19				IAmb	IAmb	12 41 28.0	
	comp=Z,5.2nm,0.9s						
ANMO	Albuquerque	83.89	50	P	P	12 41 20.6	-1.9
ANMO	Albuquerque	83.89	50	P	P	12 41 20.9	-1.7
ANMO				IAmb	IAmb	12 41 34.7	
	comp=Z,5.8nm,1.4s						
GHO	Glory Hole Cre	83.94	11	P	P	12 41 21.4	-0.7
GHO				IAmb	IAmb	12 41 38.2	
	comp=Z,7.9nm,0.8s						
MESA	MESA	84.02	15	P	P	12 41 22.1	-0.5
TRF	Thorofare Moun	85.26	10	P	P	12 41 27.8	-1.0
TRF				IAmb	IAmb	12 41 49.1	
	comp=Z,9.1nm,1.1s						
J20K	Nowinta River	85.36	8		P	12 41 30.3	+1.3
J20K				IAmb	IAmb	12 41 32.7	
	comp=Z,9.9nm,1.2s						
RND	Reindeer	85.47	11		P	12 41 29.7	0.0
MCK	McKinley	85.75	11	IAmb	IAmb	12 41 50.0	
	comp=Z,7.3nm,0.8s						
WRH	Wood River Hil	86.58	11	IAmb	IAmb	12 41 54.6	
	comp=Z,8.8nm,1.0s						
DOT	Dot Lake	86.60	13	IAmb	IAmb	12 41 55.2	
	comp=Z,5.7nm,1.0s						
MLY	Manley	86.66	9	IAmb	IAmb	12 41 54.0	
	comp=Z,5.2nm,1.0s						
HDA	Harding Lake	86.73	11	IAmb	IAmb	12 41 55.7	
	comp=Z,5.3nm,0.9s						
CCB	Clear Creek Bu	86.79	11	IAmb	IAmb	12 41 54.9	
	comp=Z,7.6nm,1.2s						
H21K	Melozitna Rive	86.95	8	IAmb	IAmb	12 41 55.9	
	comp=Z,5.7nm,1.1s						
ILAR	Eielson Array	87.07	11	P	P	12 41 39.2	+1.7
	comp=Z,0.8nm,0.9s,baz=215,slow=5.2,SNR=5.9						
	comp=Z,0.8nm,0.9s						
IMAR	Indian Mountai	87.14	8	P	P	12 41 38.4	+0.6
J25K	Salcha River,	87.21	12	P	P	12 41 38.3	+0.1
J26L	Joseph Creek	87.46	12	IAmb	IAmb	12 41 59.6	
	comp=Z,5.8nm,1.1s						
L29M	L29M	87.48	15	IAmb	IAmb	12 42 04.8	
	comp=Z,9.8nm,1.4s						
F19K	Shaleruckik Mo	87.49	6	IAmb	IAmb	12 41 42.9	
	comp=Z,6.5nm,1.1s						
F20K	Avaraart Lake	87.92	7	IAmb	IAmb	12 41 45.7	
	comp=Z,3.8nm,1.0s						
DAWY	Dawson	87.99	14	IAmb	IAmb	12 42 02.5	
	comp=Z,5.2nm,1.3s						
TROLL	Troll, Antarti	88.06	179	⇑P	P	12 41 44.4	+1.8
	comp=Z,85nm,0.6s						
E19K	Redstone River	88.15	6	IAmb	IAmb	12 41 47.7	
	comp=Z,6.8nm,1.1s						
VNA3	Neumayer Olymp	88.18	175	⇑P	P	12 41 46.5	+3.5
	comp=Z,1.1nm,0.4s						
SNAA	Sanae	88.22	177	⇑P	P	12 41 44.8	+1.6
	comp=Z,42nm,1.2s						
SNAA	Sanae	88.22	177	P	P	12 41 44.9	+1.7
	comp=Z,2.2nm,1.1s,baz=243,slow=1.6,SNR=4.9						
	comp=Z,2.2nm,1.1s						
K29M	Barlow Dome	88.25	15		P	12 41 43.6	+0.4
VNA2	Neumayer--Watz	88.67	175	⇑P	P	12 41 47.5	+2.3
	comp=Z,1.7nm,0.9s,baz=198,slow=3.3						
D19K	Kuna River	89.07	6	IAmb	IAmb	12 41 51.2	
	comp=Z,6.5nm,0.9s						
D20K	Etivluk River	89.43	6	IAmb	IAmb	12 41 52.7	
	comp=Z,5.0nm,0.9s						
C19K	Lookout Ridge	89.54	5	IAmb	IAmb	12 41 52.9	
	comp=Z,7.1nm,1.0s						
G27K	Doyon Strip	89.88	12	P	P	12 41 51.3	+0.6
BMAR	Burnt Mountain	89.88	11	P	P	12 41 51.4	+0.6
D22K	Ayikyak River	90.02	7	P	P	12 41 51.5	+0.1
D22K				IAmb	IAmb	12 41 56.3	
	comp=Z,4.0nm,1.0s						
CMAR	Chiang Mai Arr	94.02	288	P	P	12 42 11.8	+0.8
	comp=Z,2.9nm,0.9s,baz=113,slow=2.7,SNR=13						
	comp=Z,2.9nm,0.9s						
SONM	Songino Array	98.30	318	P	Pdif	12 42 31.6	+1.6
	comp=Z,0.3nm,0.4s,baz=51,slow=4.6,SNR=1.8						
	comp=Z,0.3nm,0.4s						
BVAR	Borovoye Array	121.51	321	PKP	PKiKP	12 47 45.7	0.0
	comp=Z,1.0nm,0.4s,baz=113,slow=1.9,SNR=6.7						
ARCES	ARCESS Array B	129.25	352	PKP	PKiKP	12 48 01.4	+0.7
	comp=Z,1.2nm,0.8s,baz=48,slow=1.8,SNR=4.7						
EKA	Eskdalemuir Ar	144.09	9	PKP	PKPdf	12 48 27.2	-0.5
	comp=Z,1.6nm,0.8s,baz=336,slow=3.8,SNR=3.6						
MORC	Moravsky Berou	149.14	346	*e*PKP	PKiKP	12 48 41.5	-0.4
BRTR	Keskin Array B	149.64	316	PKPbc	PKPbc	12 48 42.5	+0.2
	comp=Z,4.3nm,0.9s,baz=104,slow=1.5,SNR=6.3						
MLR	Muntele Rosu	150.06	332	PKPbc	PKPbc	12 48 43.5	+0.3
	comp=Z,5.4nm,0.8s,baz=216,slow=2.6,SNR=6.2						
GERES	GERESS Array B	150.77	350	PKPbc	PKiKP	12 48 45.9	+0.5
	comp=Z,1.4nm,0.7s,baz=4.4,slow=1.7,SNR=9.7						

IDC 18 12:42:05.4±999.0, 54°.93N×40°.96E, h0^{km}, Error ellipse: s-maj=411.4km s-min=60.2km az=131.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	2.77	312	I	I	12 58 30.0	
	0.2nm,0.6s,baz=129,slow=325,SNR=6.1						
I37NO	I37NO	17.47	333	I	I	14 28 30.0	
	baz=133,slow=322,SNR=1.2						
I26DE	FREYUNG INFRAS	17.81	261	I	I	14 30 20.0	
	baz=61,slow=319,SNR=1.7						

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*NNC **18** 12:45:21.8±3.8, 51°.54N×82°.45E, h0^{km}, mb3.0, mpv2.5, Error ellipse: s-maj=38.0km s-min=19.8km az=23.0, Suspected Mining explosion.*

*IDC **18** 12:45:21.1±1.4, 51°.57N×82°.41E, h0^{km}, mbtmp3.0/2, ML2.7/2, Error ellipse: s-maj=14.2km s-min=11.9km az=120.0*

ISC 18 12:45:20.1±1.2, 51°.67N±0°.06×82°.37E±0°.09, h0^{km}, n8, σ1^{s}.25/8, 1C-6D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	Kurchatov	2.54	249	⇓Pn	Pn	12 46 03.7	+1.1
	0.7nm,0.9s						
KURK				⇓Lg	Lg	12 46 41.9	
	3.4nm,0.5s						
KURBB	Kurchatov Arra	2.63	248	Pg	Pb	12 46 07.3	-0.8
	0.2nm,0.3s,baz=70,slow=17,SNR=7.1						
KURBB				Lg	Lg	12 46 45.2	
	0.5nm,0.3s,baz=68,slow=29,SNR=11						
KURBB	Kurchatov Arra	2.63	248	⇓Lg	Lg	12 46 47.7	
	10nm,0.5s						
ZALV	Zalesovo Beam	2.73	32	Pn	Pn	12 46 05.8	+0.7
	3.3nm,0.3s,baz=212,slow=15,SNR=37						
ZALV				Sn	Sn	12 46 38.2	-0.6
	1.1nm,0.3s,baz=220,slow=24,SNR=5.9						
ZALV				Lg	Lg	12 46 50.8	
	1.5nm,0.3s,baz=208,slow=26,SNR=5.5						
	7.7nm,0.3s						
I46RU	ZALESOVO INFRA	2.73	32	I	I	12 59 40.0	
	baz=210,slow=319,SNR=39						
MAKZ	Makanchi	4.87	183	⇓Pn	Pn	12 46 34.7	+0.1
	1.0nm,0.4s						
MAKZ				⇑Lg	Lg	12 47 50.6	
	3.1nm,0.5s						
MK31	Makanchi Array	4.88	181	⇓Pn	Pn	12 46 36.0	+1.3
	0.6nm,0.5s,baz=13,slow=12,SNR=21						
MK31				⇓Lg	Lg	12 47 50.0	
	1.7nm,0.4s,baz=13,slow=28,SNR=7.6						
MKAR	Makanchi Array	4.88	181	Pn	Pn	12 46 36.2	+1.5
	0.6nm,0.3s,baz=8.4,slow=12,SNR=16						
MKAR				Sn	Sn	12 47 30.7	-1.1
	0.3nm,0.3s,baz=8.4,slow=21,SNR=5.1						
MKAR				Lg	Lg	12 47 49.1	
	0.6nm,0.3s,baz=10,slow=28,SNR=7.2						
	0.9nm,0.4s						

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*NEIC **18** 12:47:50.6±1.6, 18°.94S±0°.08×169°.3E±0°.1, h216^{km}±8^{km}, mb4.4/50, Error ellipse: s-maj=15.0km s-min=11.5km az=103.0*

*NOU **18** 12:47:50.4, 19°.01S×169°.30E, h204^{km}, MLv4.2/12, Vanuatu Islands*

*IDC **18** 12:47:50.6±2.0, 18°.98S×169°.31E, h231^{km}±19^{km}, mb3.7/10, mbtmp4.2/12, Error ellipse: s-maj=21.1km s-min=14.6km az=148.0*

ISC 18 12:47:48.5±0.5, 18°.96S±0°.05×169°.31E±0°.08, h200^{km}, n80, σ1^{s}.30/81, mb4.3/34, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INH	Isangel	0.58	183	P	Pn	12 48 18.9	+2.9
MARNC	Mare, Loyalty	2.78	205	P	Pn	12 48 36.9	+1.3
MARNC	Mare, Loyalty	2.78	205	P	Sn	12 49 13.3	+0.9
VLAKA	Lakatoro	3.36	327	P	Pn	12 48 44.8	+2.3
YATNC	Mamie plateau,	3.82	216	P	Pn	12 48 48.8	+0.7
PINNC	Pines Island,	4.03	205	Pn	Pn	12 48 52.7	+2.1
PINNC	Pines Island,	4.03	205	P	Pn	12 48 52.9	+2.3
SANVU	Saraoutou	4.03	330	Pn	Pn	12 48 52.4	+1.7
SANVU	Saraoutou	4.03	330	P	Pn	12 48 52.9	+2.2
DZM	Mont Dzumac	4.09	220	Pn	Pn	12 48 53.9	+2.4
DZM	Mont Dzumac	4.09	220	P	Pn	12 48 54.0	+2.4
	33nm,0.5s,baz=48,slow=20,SNR=106						
DZM				S	Sn	12 49 43.7	+2.6
	23nm,0.5s,baz=154,slow=21,SNR=5.9						
DZM	Mont Dzumac	4.09	220	P	Pn	12 48 53.9	+2.4
OUENC	Ouen Island, N	4.14	213	P	Pn	12 48 54.3	+2.2
ONTNC	Ouen Toro	4.27	218	Pn	Pn	12 48 54.7	+1.1
ONTNC	Ouen Toro	4.27	218	P	Pn	12 48 54.5	+0.9
MSVF	Nonsavu	8.39	83	Pn	Pn	12 49 51.3	+4.2
MSVF	Nonsavu	8.39	83	P	Pn	12 49 49.2	+2.2
	9.2nm,0.7s,baz=162,slow=17,SNR=5.4						
EIDS	Eidsvold	18.04	246	P	P	12 51 45.4	+0.6
EIDS				IAmb	IAmb	12 51 47.9	
	comp=Z,9.6nm,0.7s						
ARMA	Armidale	19.67	231	P	P	12 52 02.8	+0.3
ARMA				IAmb	IAmb	12 52 07.1	
	comp=Z,6.2nm,0.8s						
CTAO	Charters Tower	21.75	263	P	P	12 52 25.4	+0.9
PMG	Port Moresby	23.45	291	P	P	12 52 40.8	+0.7
STKA	Stephens Creek	28.05	237	P	P	12 53 21.9	+0.6
STKA	Stephens Creek	28.05	237	P	P	12 53 22.0	+0.7
	comp=Z,3.4nm,0.6s,baz=74,slow=8.5,SNR=8.9						
	comp=Z,3.4nm,0.6s						
BBOO	Buckleboo	32.78	239	P	P	12 54 03.3	+0.4
BBOO				IAmb	IAmb	12 54 06.7	
	comp=Z,24nm,1.4s						
WR8	Warramunga Arr	32.80	262	P	P	12 54 02.4	-0.9
WB0	Warramunga Arr	32.91	263	P	P	12 54 03.1	-1.1
WB0				IAmb	IAmb	12 54 03.6	
	comp=Z,5.0nm,0.5s						
WRA	Warramunga Arr	32.95	262	P	P	12 54 03.8	-0.8
WRA	Warramunga Arr	32.95	262	P	P	12 54 03.4	-1.2
	comp=Z,2.6nm,0.5s,baz=83,slow=6.6,SNR=55						
	comp=Z,2.6nm,0.5s						
AS31	Alice Springs	33.26	256	P	P	12 54 06.8	-0.4
ASAR	Alice Springs	33.26	256	P	P	12 54 07.0	-0.2
ASAR	Alice Springs	33.26	256	P	P	12 54 06.5	-0.7
	comp=Z,16nm,0.5s,baz=81,slow=8.8,SNR=629						
	comp=Z,16nm,0.5s						
MTN	Manton Dam	37.16	274	P	P	12 54 40.5	0.0
MTN				IAmb	IAmb	12 54 46.6	
	comp=Z,14nm,1.1s						
KNRA	Kununurra	38.78	268	P	P	12 54 53.6	-0.4
KNRA				IAmb	IAmb	12 54 56.8	
	comp=Z,21nm,1.4s						
FITZ	Fitzroy Crossi	41.33	264	P	P	12 55 15.5	+0.4
MBWA	Marble Bar	46.47	259	P	P	12 55 55.7	-0.1
MBWA				IAmb	IAmb	12 56 10.3	
	comp=Z,16nm,1.4s						
JTM	Tenmabayashi	64.98	337	P	P	12 58 06.1	-0.8
JKA	Kamikawa-asahi	67.36	339	P	P	12 58 22.7	+0.7
QSPA	South Pole Qui	71.09	180	P	P	12 58 44.1	-0.7
QSPA	South Pole Qui	71.09	180	P	P	12 58 43.3	-1.5
	comp=Z,0.9nm,0.6s,baz=240,slow=1.5,SNR=14						
	comp=Z,0.9nm,0.6s						
SHEM	Shemya Is, Ala	71.51	3	P	P	12 58 46.9	-0.3
SMY	Shemya	71.51	3	P	P	12 58 46.9	-0.3
PEA0B	Petropavlovsk-	72.47	353	P	P	12 58 53.6	+0.7
PETK	Petropavlovsk-	72.47	353	P	P	12 58 51.6	-1.3
	comp=Z,2.3nm,0.6s,baz=139,slow=6.4,SNR=8.5						
	comp=Z,2.3nm,0.6s						
O14K	Tigyukauivet M	81.58	15	P	P	12 59 44.3	+0.8
OHAK	Old Harbor	82.07	19	P	P	12 59 46.7	+0.5
OHAK				IAmb	IAmb	12 59 47.1	
	comp=Z,8.1nm,0.8s						
ACHA	Angle Creek He	82.27	18	P	P	12 59 47.3	0.0
ACHA				IAmb	IAmb	13 00 14.8	
	comp=Z,7.1nm,1.4s						
BELA	Belgrano 2	82.37	175	P	P	12 59 45.9	-1.7
N15K	Kwethluk River	82.67	15	P	P	12 59 49.5	+0.3
O16K	Kokwok River B	82.68	16	P	P	12 59 47.4	-1.8
O16K				IAmb	IAmb	13 00 14.1	
	comp=Z,7.0nm,1.1s						
KDAK	Kodiak Island	82.75	19	P	P	12 59 49.6	0.0
KDAK				IAmb	IAmb	12 59 54.3	
	comp=Z,13nm,1.1s						
O18K	Koktuh Hills	83.68	17	P	P	12 59 53.7	-0.7
O18K				IAmb	IAmb	13 00 06.9	
	comp=Z,6.3nm,0.9s						
M16K	Timber Creek	83.69	15	P	P	12 59 55.0	+0.6
M16K				IAmb	IAmb	12 59 55.8	
	comp=Z,11nm,0.9s						
N18K	Kilae Creek	84.18	16	P	P	12 59 56.4	-0.5
N18K				IAmb	IAmb	13 00 05.5	
	comp=Z,7.3nm,1.4s						
M17K	Holitna River	84.40	15	P	P	12 59 58.9	+0.9
M17K				IAmb	IAmb	13 00 22.0	
	comp=Z,16nm,1.4s						
K17K	Iditarod	85.32	14	P	P	13 00 03.1	+0.6
K17K				IAmb	IAmb	13 00 04.3	
	comp=Z,12nm,1.1s						
O02D	Mt. Diablo Mer	86.26	45	P	P	13 00 07.6	-0.2
SUA	Susitna One	86.27	18	P	P	13 00 07.4	+0.1
J18K	Innoko River	86.33	15	P	P	13 00 07.0	-0.5
J18K				IAmb	IAmb	13 00 07.8	
	comp=Z,3.0nm,0.8s						
H17K	Granite Mounta	86.90	13	P	P	13 00 10.6	+0.4
SONM	Songino Array	87.04	323	P	P	13 00 10.2	-1.3
	comp=Z,1.3nm,0.8s,baz=144,slow=5.3,SNR=5.1						
	comp=Z,1.3nm,0.8s						
YBH	Yreka Blue Hor	87.06	44	P	P	13 00 12.3	+0.7
J20K	Nowinta River	87.56	15	P	P	13 00 12.7	-0.7
TRF	Thorofare Moun	87.98	17	P	P	13 00 16.3	+0.7
NVAR	Mina Array Bea	88.57	48	P	P	13 00 18.9	-0.2
	comp=Z,0.6nm,0.7s,baz=237,slow=9.7,SNR=5.1						
	comp=Z,0.6nm,0.7s						
J05D	Fort Rock, OR	88.75	43	P	P	13 00 20.1	+0.5
J05D				IAmb	IAmb	13 00 20.3	
	comp=Z,5.0nm,0.5s						
H04A	Detroit Lake	88.80	42	P	P	13 00 19.8	+0.1
H04A				IAmb	IAmb	13 00 19.9	
	comp=Z,9.3nm,1.4s						
IMAR	Indian Mountai	89.15	14	P	P	13 00 20.2	-0.6
PINE	Pine Mountain	89.17	43		P	13 00 22.2	+0.5
PINE				IAmb	IAmb	13 00 22.8	
	comp=Z,13nm,1.4s						
SNAA	Sanae	89.44	182	P	P	13 00 20.0	-2.4
	comp=Z,0.5nm,0.6s,baz=203,slow=12,SNR=8.6						
	comp=Z,0.5nm,0.6s						
ILAR	Eielson Array	89.95	17	P	P	13 00 22.1	-2.5
	comp=Z,0.6nm,0.6s,baz=242,slow=4.9,SNR=8.6						
	comp=Z,0.6nm,0.6s						
I07A	Izee	90.23	43	P	P	13 00 26.8	+0.3
I07A				IAmb	IAmb	13 00 27.0	
	comp=Z,3.6nm,1.0s						
F21K	Alatna River	90.23	14	P	P	13 00 25.6	-0.2
J08A	Circle Bar Ran	90.58	44		P	13 00 27.9	-0.3
J08A				IAmb	IAmb	13 00 28.8	
	comp=Z,3.0nm,0.8s						
J26L	Joseph Creek	90.71	18	P	P	13 00 28.9	+0.6
D20K	Etivluk River	90.83	12	P	P	13 00 28.8	+0.2
D20K				IAmb	IAmb	13 00 46.1	
	comp=Z,6.2nm,1.4s						
K27K	Chicken	90.83	19	P	P	13 00 29.4	+0.7
K27K				IAmb	IAmb	13 00 36.4	
	comp=Z,4.4nm,1.4s						
WHY	Whitehorse	91.10	24	P	P	13 00 29.2	-0.9
WHY				IAmb	IAmb	13 00 42.7	
	comp=Z,5.4nm,1.0s						
TOLK	Toolik Lake Re	92.25	14	P	P	13 00 35.1	-0.1
TOLK				IAmb	IAmb	13 00 35.3	
	comp=Z,5.5nm,1.4s						
TXAR	Lajitas Array	96.58	61	P	P	13 00 56.0	0.0
	comp=Z,0.1nm,0.4s,baz=226,slow=1.9,SNR=2.1						
	comp=Z,0.1nm,0.4s						
ARCES	ARCESS Array B	124.82	345	PKP	PKPdf	13 06 21.8	-2.0
	comp=Z,0.5nm,0.3s,baz=89,slow=1.5,SNR=11						

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*IDC **18** 12:50:56.0±1.6, 12°.18N×85°.74W, h0^{km}, mb3.4/4, mbtmp3.5/5, ML3.5/1, MS2.7/2, Error ellipse: s-maj=141.1km s-min=13.6km az=64.0*

*UCR **18** 12:50:56.1±2.1, 11°.18N×86°.76W, h0^{km}±11^{km}, MW4.3*

*CATAC **18** 12:50:57.3±0.6, 11°N±3°×8°7W±°, h21^{km}±5^{km}, M3.9/31, MLv3.9/31, Error ellipse: s-maj=6.5km s-min=3.9km az=18.2, Moment Tensor Solution. Moment tensor: Scale 10^{22}Nm; M_{rr}0.11; $M_{\theta\theta}$0.08; $M_{\phi\phi}$-0.19; $M_{r\theta}$0.41; $M_{\theta\phi}$5.86; $M_{\phi r}$2.48; Fault plane solution: $M_0$6.38074×10^{22} NP1: ϕ_s91.38900°, δ67.13960°, λ3.25210°. NP2: ϕ_s0.12445°, δ87.00359°, λ157.10653°. Principal axes: T 6.4734, Plg18.1596°, Azm313.4036°; N -0.1896, Plg66.9217°, Azm173.0678°; P -6.2839, Plg13.7531°, Azm48.0083°; Moment Tensor Solution. Moment tensor: Scale 10^{22} Nm; M_{rr}0.16; $M_{\theta\theta}$0.13; $M_{\phi\phi}$-0.29; $M_{r\theta}$0.43; $M_{\theta\phi}$6.25; $M_{\phi r}$2.84; Fault plane solution: $M_0$6.87969×10^{22} NP1: ϕ_s91.70665°, δ65.58707°, λ3.11536°. NP2: ϕ_s0.41799°, δ87.16342°, λ155.55517°. Principal axes: T 6.9624, Plg19.1018°, Azm313.3579°; N -0.1686, Plg65.4012°, Azm174.2048°; P -6.7938, Plg14.9076°, Azm48.6479°; confirmed*

ISC 18 12:50:56.1±1.6, 11°.18N±0°.04×86°.77W±0°.04, h5^{km}±11^{km}, n75, σ1^{s}.15/84, mb3.4/4, 13D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NADN	Granada	0.92	52	⇓P	Pn	12 51 16.2	+0.5
CRUN	El Crucero	0.93	30	P	Pb	12 51 15.2	+0.5
SABN	Sabanita	0.98	38	⇓P	Pb	12 51 15.8	+0.2
NANN	Nandasmo	0.99	40	⇓P	Pn	12 51 18.0	+1.3
MASN	Masaya	1.01	37	P	Pn	12 51 18.3	+1.3
COPN	Copaltepe	1.01	10	⇓P	Pn	12 51 17.5	+0.6
MAS3	Al N del Volca	1.03	35	P	Pn	12 51 18.2	+1.0
SAPS	Ciudad Sandino	1.05	20	S	Sn	12 51 33.8	+1.3
SAPS	Ciudad Sandino	1.05	20	⇓P	Pn	12 51 17.9	+0.4
UNAN	Cigeo UNAN	1.05	28	P	Pn	12 51 17.8	+0.3
UNAN				S	Sb	12 51 31.6	+0.8
TISN	Laguna Tiscapa	1.08	27	⇓P	Pb	12 51 17.5	+0.2
MGAN	Managua	1.09	28	P	Pn	12 51 18.9	+0.9
LCRUZ	La Cruz	1.13	95	*e*S	Sb	12 51 34.0	+1.0
JAPN	Al SSO del Vol	1.13	72	P	Pb	12 51 18.1	0.0
WILN	Americas 2	1.13	30	P	Pn	12 51 19.1	+0.4
APQ3	Volcan Apoyequ	1.16	20	P	Pn	12 51 19.5	+0.6
APQ3				S	Sn	12 51 35.3	+0.1
MORN	Al O del Volca	1.16	72	P	Pg	12 51 18.3	-0.1
CARN	Rivas	1.23	89	P	Pg	12 51 18.6	-1.1
CARN				S	Sb	12 51 35.9	-0.1
MOMN	Momotombo	1.25	11	⇓P	Pb	12 51 20.5	+0.4
MOMN				S	Sn	12 51 38.4	+1.0
MOM2	El Cardon	1.28	13	P	Pn	12 51 21.2	+0.5
MOM2				S	Sn	12 51 38.9	+0.6
CNGA	Al SSO del Vol	1.31	3	P	Pn	12 51 21.8	+0.7
CNGN	Cerro Negro	1.32	3	S	Sn	12 51 41.6	+2.4
CNGN	Cerro Negro	1.32	3	⇓P	Pb	12 51 21.7	+0.3
TEL3	Telica 3	1.39	357	P	Pb	12 51 23.2	+0.6
ILCN	San Idelfonso	1.39	3	P	Pg	12 51 22.7	-0.1
ILCN				S	Sn	12 51 42.3	+1.3
QUEN	Al S del Volca	1.41	357	P	Pb	12 51 23.3	+0.5
BUAI	Buenos Aires	1.45	102	*e*P	Pb	12 51 27.7	+4.2
POLN	Al Sur del Vol	1.46	359	P	Pn	12 51 22.7	-0.5
POLN				S	Sn	12 51 45.9	+3.2
PKGN	Cerro Pekin	1.50	352	⇓P	Pn	12 51 24.4	+0.8
PKGN				S	Sn	12 51 45.7	+2.2
CRIN	San Cristobal	1.54	350	*e*P	Pn	12 51 24.8	+0.5
CRIN	San Cristobal	1.54	350	S	Sn	12 51 46.9	+2.2
CRIN	San Cristobal	1.54	350	⇓P	Pn	12 51 25.0	+0.7
PLVR	Palo Verde	1.62	120	*e*P	Pn	12 51 24.8	-0.7
PLVR				*e*S	Sg	12 51 48.1	-0.2
BOAB	BOACO BROADBAN	1.67	41	⇓P	Pn	12 51 25.7	-0.2
VMAR	Armenia, Volca	1.67	102	*e*P	Pn	12 51 24.6	-1.5
MOTZ	Rio Naranjo	1.74	106	*e*P	Pn	12 51 28.2	+1.2
ACON	Acoyapa	1.75	63	*e*P	Pn	12 51 26.6	-0.5
ACON	Acoyapa	1.75	63	P	Pn	12 51 27.2	0.0
INVE	Universidad In	1.82	112	*e*P	Pn	12 51 27.9	-0.1
TIMP	Tierras Morena	1.82	109	*e*P	Pn	12 51 29.5	+1.3
QUEB	Quebradon, Cot	1.93	106	*e*P	Pn	12 51 28.8	-0.8
MATN	Matagalpa	1.93	25	S	Sn	12 51 55.3	+1.0
MATN	Matagalpa	1.93	25	⇓P	Pn	12 51 29.0	-0.6
POTN	Potosi Cosigui	1.95	338	*e*P	Pn	12 51 30.2	+0.4
POTN	Potosi Cosigui	1.95	338	P	Pn	12 51 30.2	+0.4
JTS	Las Juntas de	2.00	116	Pn	Pn	12 51 30.2	-0.3
	16nm,0.3s,baz=302,slow=7.7,SNR=38						
JTS				LR	LR	12 51 54.6	
	comp=Z,44nm,21.1s,baz=324,slow=29						
JTS				Lg	Lg	12 52 01.3	
	18nm,0.3s,baz=184,slow=9.3,SNR=8.5						
	59nm,0.4s						
JTS	Las Juntas de	2.00	116	*e*P	Pn	12 51 29.5	-1.0
TABAC	Tabacon	2.08	109	*e*P	Pn	12 51 32.6	+0.9
ARE1	Arenal 1	2.14	109	*e*P	Pn	12 51 33.1	+0.6
VARE2	V. Arenal	2.14	109	*e*P	Pn	12 51 33.8	+1.3
CEDE	Laguna Cedeo	2.15	108	*e*P	Pn	12 51 34.0	+1.4
VACR	Volcan Arenal	2.17	109	*e*P	Pn	12 51 34.1	+1.2
SOCE	Pocosol	2.26	110	*e*P	Pn	12 51 35.1	+0.9
CBL1	Cabuya	2.29	134	*e*P	Pn	12 51 36.4	+1.9
CNCH	Conchagua	2.33	334	S	Sn	12 52 05.0	+0.7
CNCH	Conchagua	2.33	334	⇓P	Pn	12 51 35.6	+0.4
LCND	La Caada	2.38	333	P	Pn	12 51 36.4	+0.6
RCPN	Sur Rio San Ju	2.43	16	P	Pn	12 51 36.9	+0.4
ESPN	Las Esperanzas	2.63	67	*e*P	Pn	12 51 38.9	-0.2
PACA	Pacayal	2.73	327	S	Sn	12 52 15.2	+0.9
PACA	Pacayal	2.73	327	P	Pn	12 51 41.7	+0.9
PAR1A	Puntarenas Pro	2.94	122	*e*P	Pn	12 51 41.7	-1.7
PICV	PH. Pirrs	2.97	121	*e*P	Pn	12 51 43.5	-0.4
PQSS	Presa 15 de Se	2.99	325	S	Sn	12 52 19.7	-0.7
PQSS	Presa 15 de Se	2.99	325	P	Pn	12 51 45.1	+0.9
LCR2	La Lucha 2	3.07	117	*e*P	Pn	12 51 44.8	-0.7
ABRB	Las Abras (San	3.22	111	*e*P	Pn	12 51 48.2	+0.6
PMON	Piamonte	3.54	316	P	Pn	12 51 53.0	+1.3
NUBE	Las Nubes	3.99	313	P	Pn	12 51 58.9	+0.8
MTO3	Montecristo	4.08	322	P	Pn	12 52 00.7	+1.3
TXAR	Lajitas Array	23.97	321	P	P	12 56 11.1	-0.6
	1.1nm,0.7s,baz=135,slow=10,SNR=13						
	1.1nm,0.7s						
ANMO	Albuquerque	29.68	326	LR	LR	13 10 14.5	
	comp=Z,69nm,18.8s,baz=1.0,slow=39						
PDAR	Pinedale Array	37.20	332	P	P	12 58 06.3	-2.3
	0.3nm,0.6s,baz=118,slow=4.6,SNR=2.9						
	0.3nm,0.6s						
NVAR	Mina Array Bea	39.09	319	P	P	12 58 24.7	+0.1

	0.5nm,0.8s,baz=112,slow=4.8,SNR=3.9						
NVAR				PcP	PcP	13 00 35.2	+0.7
	0.7nm,0.7s,baz=145,slow=3.6,SNR=6.0						
	0.5nm,0.8s						
ILAR	Eielson Array	67.44	336	P	P	13 01 50.0	-2.5
	0.4nm,0.9s,baz=137,slow=4.6,SNR=4.4						
	0.4nm,0.9s						

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*IDC **18** 12:59:49.2±1.0, 30°.84S×177°.30W, h0km, mb4.0/6, mbtmp4.0/6, MS3.1/2, Error ellipse: s-maj=31.2km s-min=28.2km az=12.0*

*NEIC **18** 12:59:52.2±0.4, 30°.77S±0°.08×177°.3W±0°.2, h10km±1km, mb4.5/10, Error ellipse: s-maj=34.4km s-min=4.9km az=69.0*

ISC 18 12:59:53.6±0.8, 31°.01S±0°.09×177°.4W±0°.1, h27km, n27, σ1s.49/27, mb4.3/11, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.81	346		Pn	13 00 20.9	-2.0
URZ	Urewera	8.52	210	Pn	Pn	13 01 52.6	-2.6
	baz=274,slow=19						
URZ				Sn	Sn	13 03 28.3	-2.0
	2.2nm,0.3s,baz=208,slow=14,SNR=4.4						
RPZ	Rata Peaks	15.63	213	Pn	Pn	13 03 29.7	-2.2
	1.1nm,0.3s,baz=123,slow=19,SNR=2.1						
RAR	Rarotonga	18.59	63	LR	LR	13 10 26.9	
	comp=Z,57nm,18.4s,baz=273,slow=35						
PPT	Papeete	28.59	69	LR	LR	13 14 55.3	
	comp=Z,34nm,18.6s,baz=246,slow=32						
HNR	Honiara	30.08	311	P	P	13 05 59.8	-1.0
CTAO	Charters Tower	34.39	280	P	P	13 06 39.8	+1.2
CTAO				IAmb	IAmb	13 06 50.6	
	comp=Z,9.6nm,1.2s						
STKA	Stephens Creek	34.84	258	P	P	13 06 44.4	+2.1
STKA	Stephens Creek	34.84	258	P	P	13 06 43.7	+1.3
	comp=Z,3.6nm,0.9s,baz=102,slow=15,SNR=4.2						
	comp=Z,3.6nm,0.9s						
BBOO	Buckleboo	39.29	255	P	P	13 07 21.9	+1.7
BBOO				IAmb	IAmb	13 07 58.2	
	comp=Z,26nm,1.3s						
AS31	Alice Springs	43.58	267	P	P	13 07 57.0	+1.5
ASAR	Alice Springs	43.58	267	P	P	13 07 56.6	+1.1
ASAR	Alice Springs	43.58	267	P	P	13 07 56.0	+0.4
	comp=Z,1.4nm,0.7s,baz=105,slow=7.3,SNR=26						
ASAR				PcP	PcP	13 09 43.8	+0.8
	comp=Z,0.9nm,0.9s,baz=117,slow=4.0,SNR=4.5						
	comp=Z,1.4nm,0.7s						
WR8	Warramunga Arr	44.48	273	P	P	13 08 04.0	+1.3
WR8				IAmb	IAmb	13 08 20.3	
	comp=Z,7.5nm,1.4s						
WRA	Warramunga Arr	44.62	272	P	P	13 08 05.3	+1.4
WRA	Warramunga Arr	44.62	272	P	P	13 08 04.2	+0.2
	comp=Z,1.3nm,0.4s,baz=111,slow=8.1,SNR=28						
	comp=Z,1.3nm,0.4s						
WB0	Warramunga Arr	44.65	273	P	P	13 08 05.4	+1.3
WB0				IAmb	IAmb	13 08 05.8	
	comp=Z,7.4nm,1.1s						
FITZ	Fitzroy Crossi	52.86	270	P	P	13 09 08.7	+1.5
FITZ				IAmb	IAmb	13 09 40.3	
	comp=Z,2.3nm,1.4s						
QSPA	South Pole Qui	59.10	180	P	P	13 09 54.1	+2.7
QSPA				IAmb	IAmb	13 10 12.2	
	comp=Z,5.1nm,1.2s						
QSPA	South Pole Qui	59.10	180	P	P	13 09 52.7	+1.3
	comp=Z,2.1nm,0.8s,baz=242,slow=1.5,SNR=13						
	comp=Z,2.1nm,0.8s						
SNAA	Sanae	77.53	178	P	P	13 11 46.7	+0.2
	comp=Z,1.4nm,1.1s,baz=184,slow=16,SNR=2.2						
	comp=Z,1.4nm,1.1s						
NVAR	Mina Array Bea	88.35	42	P	P	13 12 42.8	-0.3
	comp=Z,0.1nm,0.3s,baz=236,slow=2.2,SNR=2.9						
	comp=Z,0.1nm,0.3s						
FIA1	FINESS Array S	145.89	340		PKPab	13 19 30.1	-0.1
FINES	FINESS Array B	145.89	340		PKPab	13 19 30.0	-0.2
FINES	FINESS Array B	145.89	340	PKPbc	PKPdf	13 19 28.6	-0.4
	comp=Z,1.5nm,0.4s,baz=53,slow=3.6,SNR=18						
NOA	NORSAR Array B	149.43	352	PKPbc	PKPbc	13 19 38.8	-0.7
	comp=Z,1.6nm,0.9s,baz=15,slow=4.2,SNR=3.5						
AKASG	Malin Array Be	152.09	322	PKPbc	PKPbc	13 19 44.9	-1.1
	comp=Z,1.0nm,0.6s,baz=55,slow=2.4,SNR=4.7						

GCG 18 13:05:37.9±1.8, 15°.63N×91°.06W, h15km±32km, MD4.1, ML3.0, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUEH	Huehuetenango	0.53	235	*e*P	Pg	13 05 48.0	-0.5
HUEH				*i* S	Sb	13 05 56.7	+0.1
HUEH				IAML		13 05 58.4	
	comp=N,1μm,0.4s						
STG8	El Palmar, Qui	1.20	194	*i* P	Pn	13 05 56.7	-3.7
STG0	El Palmar, Qui	1.22	193	*e*P	Pn	13 05 57.5	-3.2
CCIG	Comitan	1.23	302	*i* P	Pn	13 06 00.7	0.0
CCIG				IAML		13 06 22.8	
	comp=N,186nm,1.1s						
PETF	Flores	1.72	41	*i* S	Sn	13 06 28.3	-0.7
TGIG		2.29	300	*i* P	Pn	13 06 16.1	+0.9

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*IDC **18** 13:18:58.1±1.2, 28°.24N×100°.73E, h0km, mb3.5/6, mbtmp3.5/6, Error ellipse: s-maj=74.4km s-min=19.6km az=62.0*

ISC 18 13:19:03.3±1.5, 28°.3N±0°.2×100°.8E±0°.4, h35km, n6, σ0s.77/6, mb3.4/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	19.97	11	P	P	13 23 32.1	-0.6
	0.6nm,0.4s,baz=198,slow=11,SNR=5.9						
	0.6nm,0.4s						
MKAR	Makanchi Array	23.48	327	P	P	13 24 09.4	-0.4
	0.7nm,0.6s,baz=151,slow=9.0,SNR=8.1						
	0.7nm,0.6s						
KURBB	Kurchatov Arra	27.95	329	P	P	13 24 50.2	-0.1
	0.5nm,0.8s,baz=142,slow=9.0,SNR=4.8						
	0.5nm,0.8s						
ZALV	Zalesovo Beam	28.17	340	P	P	13 24 53.2	+0.9
	0.4nm,0.5s,baz=134,slow=4.2,SNR=1.6						
	0.4nm,0.5s						
WRA	Warramunga Arr	57.89	142	P	P	13 28 52.4	+0.4
	0.6nm,0.6s,baz=330,slow=7.6,SNR=7.1						
	0.6nm,0.6s						
ASAR	Alice Springs	60.72	145	P	P	13 29 11.1	-0.5
	0.2nm,0.6s,baz=329,slow=7.2,SNR=4.7						
	0.2nm,0.6s						

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*IDC **18** 13:22:17.9±0.3, 38°.68N×139°.25E, h0km, mb5.7/29, mbtmp5.6/33, ML4.6/6, MS6.3/82, Error ellipse: s-maj=11.9km s-min=9.9km az=71.0*

*MOS **18** 13:22:18.7±1.3, 38°.64N×139°.43E, h18km, mb6.5/91, MS6.6/77, Error ellipse: s-maj=4.9km s-min=3.2km az=108.0*

*NIED **18** 13:22:20.0, 38°.61N×139°.48E, h14km, MW6.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{18}Nm; M_{rr}3.88; $M_{\theta\theta}$-0.69; $M_{\phi\phi}$-3.19; $M_{r\theta}$-0.71; $M_{\theta\phi}$-1.54; $M_{\phi r}$-1.09; Fault plane solution: $M_0$4.11000×10^{18} NP1: ϕ_s23.00000°, δ36.00000°, λ86.00000°. NP2:ϕ_s208.00000°, δ54.00000°, λ93.00000°.*

*JMA **18** 13:22:20.0±0.1, 38°.6N±0°.2×139°.5E±0°.3, h14km±1km, MD6.7/40, MW6.5/40, W OFF YAMAGATA PREF*

JMA Felt VI-VII J1 at W OFF YAMAGATA PREF .

*NEIC **18** 13:22:19.0±1.8, 38°.64N±0°.05×139°.48E±0°.07, h12km±1km, mb6.5/937, Ms_20 6.3/928, Mwb6.3/121, Mwr6.4/28, Mww6.4/42, Error ellipse: s-maj=8.7km s-min=8.0km az=289.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}3.12; $M_{\theta\theta}$-0.85; $M_{\phi\phi}$-2.28; $M_{r\theta}$-0.78; $M_{\theta\phi}$-2.36; $M_{\phi r}$-1.61; Fault plane solution: $M_0$4.07000×10^{18} NP1:ϕ_s44.67000°, δ32.39000°, λ102.35000°. NP2: ϕ_s210.13000°, δ58.45000°, λ82.28000°. Principal axes: T 3.5730, Plg75.0000°, Azm98.0000°; N 0.8608, Plg7.0000°, Azm214.0000°; P -4.4338, Plg13.0000°, Azm306.0000°; Moment Tensor Solution. Moment tensor: Scale 10^{18} Nm; M_{rr}4.13; $M_{\theta\theta}$-0.82; $M_{\phi\phi}$-3.31; $M_{r\theta}$-0.88; $M_{\theta\phi}$-1.23; $M_{\phi r}$-1.73; Fault plane solution: $M_0$4.43000×10^{18} NP1: ϕ_s20.64000°, δ32.06000°, λ86.91000°. NP2:ϕ_s204.28000°, δ58.00000°, λ91.93000°. Principal axes: T 4.5776, Plg77.0000°, Azm120.0000°; N -0.3133, Plg2.0000°, Azm23.0000°; P -4.2643, Plg13.0000°, Azm293.0000°;*

*BJI **18** 13:22:19.0, 38°.56N×139°.52E, h20km, mB6.7/82, mb5.6/80, Ms6.9/82, Ms7 6.9/46*

*NEIC **18** 13:22:20.2, 38°.62N×139°.74E, h20km, Moment Tensor Solution. Duration: 8s.2 Moment tensor: Scale 10^{18}Nm; M_{rr}5.33; $M_{\theta\theta}$-1.20; $M_{\phi\phi}$-4.13; $M_{r\theta}$-0.75; $M_{\theta\phi}$-2.21; $M_{\phi r}$-1.11; Fault plane solution: $M_0$5.48000×10^{18} NP1: ϕ_s26.76000°, δ38.00000°, λ87.74000°. NP2:ϕ_s209.62000°, δ52.03000°, λ91.77000°. Principal axes: T 5.4927, Plg83.0000°, Azm130.0000°; N -0.0171, Plg1.0000°, Azm29.0000°; P -5.4756, Plg7.0000°, Azm298.0000°;*

*IPGP **18** 13:22:20.0, 38°.64N×139°.45E, h13km, Mw6.5, Fault plane solution: NP1:ϕ_s19.00000°, δ32.00000°, λ81.00000°. NP2:ϕ_s209.00000°, δ59.00000°, λ95.00000°.*

*NEIC **18** 13:22:20.2, 38°.62N×139°.48E, h20km*

*NEIC **18** 13:22:20.2, 38°.62N×139°.48E, h19km*

*NEIC **18** 13:22:20.2, 38°.62N×139°.48E, h19km*

*GCMT **18** 13:22:25.0±0.0, 38°.64N×139°.41E, h14km, MW6.5/169, Moment Tensor Solution. s167,c426; s169,c765; Duration: 4s.3 Moment tensor: Scale 10^{18}Nm; M_{rr}5.03±.02; $M_{\theta\theta}$-0.94±.02; $M_{\phi\phi}$-4.09±.02; $M_{r\theta}$-2.39±.05; $M_{\theta\phi}$-2.33±.02; $M_{\phi r}$-3.97±.06; Best double couple: $M_0$6.94900×10^{18} NP1:ϕ_s26.00000°, δ24.00000°, λ86.00000°. NP2:ϕ_s210.00000°, δ66.00000°, λ92.00000°. Principal axes: T 6.8050, Plg69.0000°, Azm124.0000°; N 0.2930, Plg2.0000°, Azm29.0000°; P -7.0940, Plg21.0000°, Azm299.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*BGR **18** 13:22:26.6, 39°.42N×139°.82E, h33km, mb6.4, mB_BB6.9, Ms6.5*

ISC 18 13:22:21.0±0.3, 38°.62N±0°.02×139°.47E±0°.02, h18km±1km, h18km:pP-P, n3101, σ1s.95/2875, mb6.4/716, MS6.4/624, 198C-91D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYA	Atsumi	0.19	99	⇓P	Pg	13 22 24.2	-1.6
JYA	Atsumi	0.19	99	A	A	13 22 24.2	
	comp=N,26μm,0.6s,comp=E,53μm,4.9s						
JAW	Awa shima	0.24	226	⇓P	Pg	13 22 25.1	-1.5
JAW	Awa shima	0.24	226	A	A	13 22 25.1	
	comp=N,14μm,10.4s,comp=E,9μm,4.9s						
JYYZ	Yamagatayuza	0.53	42	⇓*i*P	Pg	13 22 31.3	-0.4
JYYZ	Yamagatayuza	0.53	42	A	A	13 22 31.3	
	comp=N,17μm,8.0s,comp=E,21μm,6.5s						
JTB	Tobi-shima	0.57	7	⇓P	Pg	13 22 31.2	-1.3
JTB	Tobi-shima	0.57	7	A	A	13 22 31.2	
	comp=N,5μm,5.1s,comp=E,7μm,1.4s						
JYS	Shirataka	0.62	131	⇓P	Pg	13 22 31.2	-2.0
JYS	Shirataka	0.62	131	A	A	13 22 31.2	
	comp=N,5μm,11.1s,comp=E,9μm,7.2s						
JYK	Kaneyama	0.75	67	⇓P	Pb	13 22 34.1	-1.5
JYK	Kaneyama	0.75	67	A	A	13 22 34.1	
	comp=N,3μm,5.8s,comp=E,4μm,4.4s						
JNS	Sasagawa	0.81	189	P	Pb	13 22 34.9	-1.7
JNS				*e*S	Sb	13 22 45.9	-1.4
JNS	Sasagawa	0.81	189	A	A	13 22 34.9	
	comp=N,2μm,12.5s,comp=E,2μm,6.3s						
JYAR	Yonezawaarcadi	0.89	143	A	A	13 22 36.4	
	comp=N,6μm,4.4s,comp=E,4μm,3.5s						
JOU	Okura	0.97	105	⇓P	Pb	13 22 37.7	-1.7
JOU	Okura	0.97	105	A	A	13 22 37.7	
	comp=N,4μm,4.7s,comp=E,4μm,6.9s						
JYW	Yuwa	1.08	32	A	A	13 22 40.2	
	comp=N,5μm,2.7s,comp=E,5μm,1.5s						
JSD	Sado	1.12	239	P	Pn	13 22 40.2	-1.6
JSD	Sado	1.12	239	S	Sb	13 22 56.3	+0.2
JSD	Sado	1.12	239	⇓P	Pn	13 22 39.0	-2.8
JSD	Sado	1.12	239	A	A	13 22 39.0	
	comp=N,3μm,1.9s,comp=E,2μm,2.1s						
JSD	Sado	1.12	239	⇓P	Pn	13 22 39.2	-2.6
JOFO	Osakifurukawao	1.13	91	A	A	13 22 40.7	
	comp=N,14μm,3.1s,comp=E,15μm,5.3s						
JRG	Rokugo	1.19	49	A	A	13 22 41.9	
	comp=N,3μm,2.0s,comp=E,4μm,2.0s						
JRG	Rokugo	1.19	49	P	Pn	13 22 41.3	-1.5
JFY	Yanaizu	1.23	171	A	A	13 22 42.1	
	comp=N,4μm,5.7s,comp=E,2μm,2.9s						
JFY	Yanaizu	1.23	171	P	Pn	13 22 41.8	-1.6
JIZZ	Izumozaki	1.25	209	A	A	13 22 42.5	
	comp=N,6μm,12.3s,comp=E,5μm,3.3s						
JIZZ	Izumozaki	1.25	209	P	Pn	13 22 42.1	-1.4
JOTO	OTAMA OYAMA	1.26	147	A	A	13 22 42.7	
	comp=N,5μm,5.9s,comp=E,3μm,6.6s						
JMM	Marumori	1.29	126		Pn	13 22 42.7	-1.4
JMM	Marumori	1.29	126	P	Pn	13 22 43.7	-0.4
JMM	Marumori	1.29	126	S	Sg	13 23 04.2	+1.5
JMM	Marumori	1.29	126	A	A	13 22 43.1	
	comp=N,3μm,5.5s,comp=E,3μm,7.9s						
JMM	Marumori	1.29	126	⇓P	Pn	13 22 42.8	-1.4
JMM	Marumori	1.29	126	⇓P	Pn	13 22 42.8	-1.4
JOG3	Oga3	1.33	347	A	A	13 22 44.1	
	comp=N,4μm,1.5s,comp=E,8μm,2.3s						
JMK	Ichinoseki	1.41	76	A	A	13 22 45.2	
	comp=N,1μm,8.5s,comp=E,1μm,8.4s						
JMK	Ichinoseki	1.41	76	P	Pn	13 22 44.4	-1.4
JMST	Minamisoumatoc	1.43	128	A	A	13 22 45.4	
	comp=N,2μm,6.9s,comp=E,2μm,14.2s						
JUON	Uonuma	1.45	193	A	A	13 22 45.7	
	comp=N,617nm,5.6s,comp=E,944nm,7.3s						
JUON	Uonuma	1.45	193	*i* P	Pn	13 22 44.4	-2.0
JIO	Ouri	1.48	96	A	A	13 22 46.3	
	comp=N,1μm,7.0s,comp=E,2μm,7.4s						
JKMT	Kesennumamotoy	1.58	83	A	A	13 22 47.8	
	comp=N,1μm,5.6s,comp=E,2μm,6.6s						
JIKH	Ishinomakikobu	1.60	101	A	A	13 22 48.0	
	comp=N,2μm,1.4s,comp=E,3μm,6.6s						
JSZI	Iwateshizukuis	1.60	45	A	A	13 22 48.4	
	comp=N,4μm,1.9s,comp=E,5μm,5.3s						
JOM	Ohasama	1.65	59	A	A	13 22 49.0	
	comp=N,1μm,3.0s,comp=E,1μm,8.0s						
JOM	Ohasama	1.65	59	P	Pn	13 22 48.2	-1.0
JFK	Kawauchi	1.67	138	A	A	13 22 49.0	
	comp=N,3μm,6.1s,comp=E,2μm,4.5s						
JSB	Shiboa	1.69	168	A	A	13 22 49.3	
	comp=N,3μm,4.3s,comp=E,4μm,7.3s						
JNTW	Noshirotokiwa	1.73	18	A	A	13 22 50.4	
	comp=N,4μm,6.2s,comp=E,3μm,3.3s						
JFFD	Fukushimafurud	1.76	150	A	A	13 22 50.3	
	comp=N,2μm,7.7s,comp=E,3μm,6.7s						
OFUJ	Ofunato	1.78	74	A	A	13 22 50.8	
	comp=N,2μm,4.6s,comp=E,967nm,5.1s						
JAH	Hinai	1.81	30	A	A	13 22 51.4	
	comp=N,1μm,1.2s,comp=E,2μm,3.7s						
JAH	Hinai	1.81	30	P	Pn	13 22 50.0	-1.3
JJN	Nakama	1.84	215	A	A	13 22 51.6	
	comp=N,2μm,6.5s,comp=E,1μm,2.5s						
ONAJ	Iwakimizuishiy	1.85	145	A	A	13 22 51.6	
	comp=N,1μm,7.1s,comp=E,3μm,6.5s						
JKT	Katashina	1.86	186	A	A	13 22 51.9	
	comp=N,684nm,5.5s,comp=E,659nm,5.4s						
JKT	Katashina	1.86	186	*i* P	Pn	13 22 51.1	-1.0
JKZ	Kuzumaki	1.98	46	A	A	13 22 53.9	
	comp=N,955nm,7.7s,comp=E,1μm,9.2s						
JIW	Iwasaki	2.01	12	A	A	13 22 54.5	
	comp=N,1μm,2.6s,comp=E,958nm,6.4s						
JIW	Iwasaki	2.01	12	P	Pn	13 22 52.4	-1.7
JSZ	Suzu	2.04	235	A	A	13 22 54.6	
	comp=N,1μm,2.7s,comp=E,1μm,9.6s						
JSZ	Suzu	2.04	235	⇓P	Pn	13 22 52.4	-2.0
MIYJ	Miyakonagasawa	2.06	62	A	A	13 22 55.0	
	comp=N,1μm,9.3s,comp=E,921nm,8.0s						
JHHS	Hirosakihyakuz	2.14	18	A	A	13 22 56.3	
	comp=N,3μm,4.3s,comp=E,2μm,5.4s						
JHG	Hegura jima	2.15	250	A	A	13 22 56.4	
	comp=N,1μm,3.6s,comp=E,2μm,7.5s						
JHG	Hegura jima	2.15	250	⇓P	Pn	13 22 54.2	-1.8
JGK	Kuni	2.16	198	A	A	13 22 56.2	
	comp=N,1μm,7.3s,comp=E,744nm,2.9s						
JHO	Hitachi	2.19	156	A	A	13 22 56.6	
	comp=N,2μm,7.8s,comp=E,2μm,8.4s						
JAG	Ashikaga	2.19	180	A	A	13 22 56.7	
	comp=N,976nm,8.7s,comp=E,1μm,5.6s						
JAG	Ashikaga	2.19	180	P	Pn	13 22 56.0	-0.7
JTH	Tanohata	2.27	54	A	A	13 22 58.1	
	comp=N,733nm,8.3s,comp=E,746nm,10.0s						
MJB9	Matsu-Tunnel	2.31	206		Pn	13 22 57.9	-0.3
MAJO	Matsushiro	2.31	206		Pn	13 22 57.0	-1.2
MAJO	Matsushiro	2.31	206	P	Pn	13 22 59.8	+1.6
MAJO	Matsushiro	2.31	206	*c i*P	Pn	13 22 57.0	-1.2
MAJO	Matsushiro	2.31	206	P	Pn	13 22 56.9	-1.3
MAJO	Matsushiro	2.31	206	⇑P	Pn	13 22 57.0	-1.2
MAT	Matsushiro	2.31	206	P	Pn	13 22 56.9	-1.3
MJAR	Matsushiro Arr	2.31	206	Pn	Pn	13 22 56.5	-1.7
	comp=E,30nm,0.3s,baz=19,slow=15,SNR=262						
MJAR				Sn	Sb	13 23 31.7	+1.4
	comp=E,1μm,0.3s,baz=157,slow=13,SNR=3.7						
MJAR				LR	LR	13 24 04.2	
	comp=E,624μm,20.9s,baz=92,slow=46						
MJAR				P3KPbc		14 02 04.2	
	comp=E,2.8nm,0.8s,baz=236,slow=1.2,SNR=4.4						
	comp=E,566nm,0.4s						
JKEN	Kujiedanarisaw	2.35	47	A	A	13 22 59.2	
	comp=N,1μm,7.3s,comp=E,933nm,12.6s						
JANG	Nango	2.36	41	A	A	13 22 59.4	
	comp=N,927nm,6.6s,comp=E,724nm,10.3s						
JANG	Nango	2.36	41	P	Pn	13 22 58.1	-0.7
JHYU	Hitachinakayam	2.44	158	A	A	13 23 00.3	
	comp=N,2μm,7.2s,comp=E,2μm,5.5s						
JYT	Yasato	2.46	166	A	A	13 23 00.5	
	comp=N,2μm,7.1s,comp=E,770nm,6.8s						
JNG	Nsakai	2.47	207	A	A	13 23 00.7	
	comp=N,514nm,7.0s,comp=E,444nm,10.4s						
JTM	Tenmabayashi	2.49	29		Pn	13 22 59.8	-0.9
JTM	Tenmabayashi	2.49	29	P	Pn	13 23 02.1	+1.5
JTM	Tenmabayashi	2.49	29	A	A	13 23 01.3	
	comp=N,461nm,7.4s,comp=E,539nm,6.1s						
JTM	Tenmabayashi	2.49	29	⇑P	Pn	13 22 59.8	-0.9
JSI2	Shiura 2	2.54	16	A	A	13 23 02.1	
	comp=N,643nm,2.6s,comp=E,988nm,2.3s						
JTT	Ttatey	2.63	221	A	A	13 23 03.2	
	comp=N,683nm,3.8s,comp=E,678nm,4.2s						
JRY	Ryogami san	2.64	190	A	A	13 23 03.1	
	comp=N,370nm,5.8s,comp=E,490nm,9.7s						
JRY	Ryogami san	2.64	190	P	Pn	13 23 01.9	-0.9
JJH	Hakui	2.72	232	A	A	13 23 04.5	
	comp=N,677nm,12.4s,comp=E,596nm,10.2s						
JIHU	Itakohorinouch	2.78	162	A	A	13 23 05.2	
	comp=N,5μm,6.0s,comp=E,4μm,4.9s						
JARK	Aomorirokkasho	2.79	31	A	A	13 23 05.7	
	comp=N,1μm,9.3s,comp=E,454nm,5.0s						
JOMM	Oshimamatsumae	2.93	8	A	A	13 23 07.7	
	comp=N,495nm,11.7s,comp=E,410nm,6.0s						
TOK	Tokyo	2.94	175	A	A	13 23 07.4	
	comp=N,4μm,6.4s,comp=E,3μm,4.8s						
JNT	Takato	2.94	202	A	A	13 23 07.5	
	comp=N,402nm,6.3s,comp=E,546nm,12.5s						
JGN	Niukaw	2.95	216	A	A	13 23 07.6	
	comp=N,394nm,6.4s,comp=E,305nm,7.1s						
JSR	Shiriuchi	2.99	14	A	A	13 23 08.6	
	comp=N,654nm,8.4s,comp=E,607nm,5.3s						
JAHD	Aomorihigashid	3.00	28	A	A	13 23 08.7	
	comp=N,813nm,12.0s,comp=E,847nm,1.5s						
JOT	Ohata	3.01	23	A	A	13 23 08.8	
	comp=N,656nm,12.4s,comp=E,371nm,5.8s						
JSGW	Sagamiharawaka	3.02	184	A	A	13 23 08.6	
	comp=N,439nm,7.9s,comp=E,684nm,7.7s						
JSMT	Sammumatsuo	3.08	165	A	A	13 23 09.3	
	comp=N,5μm,6.4s,comp=E,7μm,8.0s						
JYN	Shimob	3.21	194	A	A	13 23 11.2	
	comp=N,510nm,6.6s,comp=E,663nm,7.9s						
JYN	Shimob	3.21	194	P	Pn	13 23 10.5	-0.2
JOD2	Odawara 2	3.37	185	A	A	13 23 13.5	
	comp=N,525nm,7.5s,comp=E,578nm,6.3s						
JOD2	Odawara 2	3.37	185	P	Pn	13 23 14.2	+1.4
I30JP	ISUMI INFRASON	3.38	168	Pn	Pn	13 23 15.8	+2.9
	baz=321,slow=19						
I30JP				I	I	13 34 00.0	
	baz=15,slow=318,SNR=1.3						
JYO	Yokosk	3.40	177	A	A	13 23 13.9	
	comp=N,2μm,12.6s,comp=E,2μm,6.7s						
JKG	Kaga	3.42	228	A	A	13 23 14.4	
	comp=N,249nm,5.8s,comp=E,261nm,9.2s						
JOSM	Okushiri--Mats	3.46	0	A	A	13 23 15.2	
	comp=N,603nm,10.4s,comp=E,391nm,8.5s						
JGF	Kuroka	3.46	210		Pn	13 23 13.8	-0.3
JGF	Kuroka	3.46	210	P	Pn	13 23 15.4	+1.4
JGF	Kuroka	3.46	210	A	A	13 23 14.8	
	comp=N,293nm,7.3s,comp=E,326nm,15.5s						
JGF	Kuroka	3.46	210	⇑P	Pn	13 23 13.9	-0.1
JKB	Kayabe	3.47	20	A	A	13 23 15.4	
	comp=N,381nm,9.5s,comp=E,368nm,3.4s						
JFNN	Fujinakano	3.48	191	A	A	13 23 15.1	
	comp=N,707nm,5.2s,comp=E,781nm,5.4s						
JNY	Yasuok	3.50	202	A	A	13 23 15.4	
	comp=N,387nm,16.7s,comp=E,423nm,6.8s						
JKUC	kamogawauchiur	3.51	170	A	A	13 23 15.5	
	comp=N,1μm,6.4s,comp=E,1μm,7.9s						
JYM2	Yakumo 2	3.56	11	A	A	13 23 16.6	
	comp=N,382nm,7.1s,comp=E,515nm,3.9s						
TATJ	Tateyama 2	3.60	175	A	A	13 23 16.7	
	comp=N,2μm,8.3s,comp=E,2μm,8.5s						
JHTM	Izuhatsuma	3.68	186	A	A	13 23 17.9	
	comp=N,531nm,8.5s,comp=E,561nm,7.5s						
SHZ3	Shizuoka 3	3.69	196	A	A	13 23 18.1	
	comp=N,364nm,8.9s,comp=E,272nm,6.0s						
JYTA	Yamagatataniai	3.73	217	A	A	13 23 18.8	
	comp=N,241nm,7.0s,comp=E,246nm,7.0s						
JAO	Obara	3.79	209	A	A	13 23 19.6	
	comp=N,236nm,10.3s,comp=E,348nm,7.2s						
JHST	Hiyamasetana	3.81	5	A	A	13 23 20.2	
	comp=N,467nm,10.8s,comp=E,441nm,10.8s						
INU	Inuyama	3.81	212		Pn	13 23 18.4	-0.4
INU	Inuyama	3.81	212	P	Pn	13 23 19.9	+1.0
INU	Inuyama	3.81	212	⇑P	Pn	13 23 18.8	-0.1
JIM2	Oshima 3	3.90	180	A	A	13 23 21.0	
	comp=N,791nm,6.9s,comp=E,759nm,5.8s						
JICN	Ichinomiyachia	3.93	213	A	A	13 23 21.5	
	comp=N,302nm,6.5s,comp=E,347nm,6.0s						
JIZS	Izushimoda	3.93	187	A	A	13 23 21.4	
	comp=N,293nm,5.4s,comp=E,380nm,7.1s						
HMMJ	Hamamatsu 2	4.01	201	A	A	13 23 22.7	
	comp=N,323nm,9.9s,comp=E,336nm,7.4s						
JNB	Noboribetsu	4.02	17	A	A	13 23 23.2	
	comp=N,330nm,10.8s,comp=E,275nm,5.3s						
JSSY	Shinshiroyabe	4.02	204	A	A	13 23 22.8	
	comp=N,231nm,8.4s,comp=E,252nm,7.4s						
JSH	Shimam	4.04	6	A	A	13 23 23.5	
	comp=N,476nm,10.8s,comp=E,335nm,10.2s						
JKKS	Kakegawashinom	4.04	198	A	A	13 23 23.1	
	comp=N,871nm,11.8s,comp=E,667nm,6.0s						
JSG	Sagara	4.07	195		Pn	13 23 21.0	-1.4
JSG	Sagara	4.07	195	P	Pn	13 23 25.6	+3.1
JSG	Sagara	4.07	195	A	A	13 23 23.5	
	comp=N,797nm,8.4s,comp=E,837nm,6.8s						
JSG	Sagara	4.07	195	⇑P	Pn	13 23 24.0	+1.5
JTHY	Toshimahigashi	4.09	182	A	A	13 23 23.8	
	comp=N,1μm,6.0s,comp=E,783nm,5.3s						
JFM	Mihama	4.16	223	A	A	13 23 24.8	
	comp=N,169nm,7.1s,comp=E,196nm,9.6s						
JNIO	Niijimaoohara	4.26	182	A	A	13 23 26.2	
	comp=N,654nm,5.6s,comp=E,669nm,9.8s						
JEG	Eigenji	4.27	216	A	A	13 23 26.3	
	comp=N,229nm,8.0s,comp=E,298nm,13.3s						
JSKK	Shikinejimakit	4.29	183	A	A	13 23 26.5	
	comp=N,447nm,6.7s,comp=E,491nm,5.6s						
JAA	Atsumi	4.40	206	A	A	13 23 28.2	
	comp=N,250nm,6.4s,comp=E,251nm,7.4s						
ERM	Erimo	4.41	39		Pn	13 23 26.4	-0.6
ERM	Erimo	4.41	39	P	Pn	13 23 29.6	+2.6
ERM	Erimo	4.41	39	*c i*P	Pn	13 23 28.2	+1.2
ERM				pmax	pmax		
	comp=Z,3μm,0.8s						
ERM	Erimo	4.41	39	P	Pn	13 23 27.7	+0.8
ERM	Erimo	4.41	39	⇑P	Pn	13 23 27.8	+0.8
JEM	Erimo	4.41	39	P	Pn	13 23 28.8	+1.8
JEM	Erimo	4.41	39	A	A	13 23 28.5	
	comp=N,233nm,8.1s,comp=E,195nm,6.1s						
JIAM	Iburiatsuma	4.41	24	A	A	13 23 28.6	
	comp=N,506nm,6.2s,comp=E,568nm,5.6s						
JSHD	Hidakashinhida	4.42	30	A	A	13 23 28.7	
	comp=N,473nm,4.8s,comp=E,420nm,2.3s						
JNBK	Urakawa-nobuka	4.43	33	A	A	13 23 28.8	
	comp=N,349nm,14.2s,comp=E,308nm,4.5s						
JKO	Kozu shima	4.44	184	A	A	13 23 28.6	
	comp=N,492nm,9.8s,comp=E,857nm,4.0s						
JEW	Eniwo	4.47	19	A	A	13 23 29.5	
	comp=N,413nm,9.5s,comp=E,395nm,9.4s						
JMYK	Miyake Tsubota	4.55	179	A	A	13 23 30.3	
	comp=N,687nm,6.8s,comp=E,886nm,6.1s						
TTO5	TONANKAI O.B.S	4.59	198	A	A	13 23 30.8	
	comp=N,1μm,7.5s,comp=E,1μm,5.4s						
JKY	Yasaka	4.59	231	A	A	13 23 31.0	
	comp=N,270nm,9.6s,comp=E,166nm,12.4s						
TSUJ	Tsu 2	4.61	213	A	A	13 23 31.1	
	comp=N,274nm,12.9s,comp=E,248nm,8.2s						
JWT	Wachi	4.66	226	A	A	13 23 31.9	

	comp=N,189nm,11.5s,comp=E,142nm,7.2s						
JTHR	Tokachihiroo	4.68	37	A	A	13 23 32.4	
	comp=N,182nm,5.4s,comp=E,218nm,4.4s						
JBT2	Biratori 2	4.70	27	A	A	13 23 32.6	
	comp=N,250nm,9.1s,comp=E,368nm,6.6s						
JMKN	Mikurajimanish	4.72	179	A	A	13 23 32.6	
	comp=N,520nm,10.1s,comp=E,405nm,7.2s						
JIE	Ise	4.77	209	A	A	13 23 33.4	
	comp=N,208nm,17.1s,comp=E,314nm,7.9s						
JSK	Shakotan	4.79	9	A	A	13 23 34.0	
	comp=N,283nm,11.9s,comp=E,336nm,9.3s						
TTO4	TONANKAI O.B.S	4.86	199	A	A	13 23 34.6	
	comp=N,1µm,5.9s,comp=E,1µm,7.3s						
JISS	Ishikarishitsu	4.88	17	A	A	13 23 35.2	
	comp=N,518nm,13.2s,comp=E,432nm,6.9s						
JKSM	Kasumi	4.89	233	A	A	13 23 35.2	
	comp=N,383nm,11.2s,comp=E,139nm,9.6s						
JCH	Churui	4.96	35	A	A	13 23 36.4	
	comp=N,177nm,6.4s,comp=E,267nm,4.8s						
JHE	Heguri	5.00	219	A	A	13 23 36.6	
	comp=N,207nm,7.4s,comp=E,214nm,7.3s						
TTO3	TONANKAI O.B.S	5.04	200	A	A	13 23 37.1	
	comp=N,1µm,9.8s,comp=E,1µm,7.7s						
JKN2	Miekihoku	5.08	211	A	A	13 23 37.7	
	comp=N,247nm,12.3s,comp=E,180nm,5.6s						
JFR	Furan	5.12	27	A	A	13 23 38.5	
	comp=N,139nm,5.8s,comp=E,134nm,7.8s						
JKS	Kasai	5.19	227	A	A	13 23 39.4	
	comp=N,183nm,6.0s,comp=E,154nm,12.8s						
JMIK	Miki	5.21	224	A	A	13 23 39.5	
	comp=N,216nm,8.4s,comp=E,226nm,7.2s						
JNTK	Naratenkawa	5.22	215	A	A	13 23 39.7	
	comp=N,213nm,7.0s,comp=E,178nm,6.8s						
TTO2	TONANKAI O.B.S	5.26	203	A	A	13 23 40.3	
	comp=N,1µm,12.4s,comp=E,1µm,4.9s						
JAB	Ashibetsu	5.30	22	A	A	13 23 41.1	
	comp=N,194nm,6.8s,comp=E,283nm,9.5s						
JHR	Hokuryu	5.39	18	A	A	13 23 42.4	
	comp=N,289nm,6.9s,comp=E,371nm,9.8s						
JWY	Kouya	5.39	217	A	A	13 23 42.1	
	comp=N,204nm,10.2s,comp=E,143nm,14.4s						
JOB	Onbets	5.41	36	A	A	13 23 42.6	
	comp=N,268nm,13.2s,comp=E,199nm,12.6s						
TTO1	TONANKAI O.B.S	5.44	204	A	A	13 23 42.8	
	comp=N,2µm,7.4s,comp=E,1µm,7.8s						
JOI	OKI	5.47	247	A	A	13 23 43.3	
	comp=N,194nm,8.8s,comp=E,369nm,11.9s						
JHJ2	Mitsune	5.51	177		Pn	13 23 40.9	-1.2
JHJ2	Mitsune	5.51	177	P	Pn	13 23 43.7	+1.5
JHJ2	Mitsune	5.51	177	A	A	13 23 43.6	
	comp=N,373nm,8.5s,comp=E,385nm,7.7s						
JHJ2	Mitsune	5.51	177	⇑P	Pn	13 23 42.1	0.0
JAWN	Awajishima-nag	5.53	223	A	A	13 23 44.1	
	comp=N,235nm,7.9s,comp=E,203nm,7.3s						
JMMH	Miemihama	5.54	211	A	A	13 23 44.2	
	comp=N,165nm,12.6s,comp=E,160nm,8.3s						
JHCJ	Hachijojimakas	5.55	177	A	A	13 23 44.2	
	comp=N,337nm,9.3s,comp=E,254nm,8.4s						
JKR	Kurayoshi	5.56	236	A	A	13 23 44.6	
	comp=N,232nm,8.0s,comp=E,184nm,15.7s						
JAD	Aida	5.62	231	A	A	13 23 45.4	
	comp=N,126nm,9.0s,comp=E,195nm,12.2s						
JAR	Ashorobuto	5.69	33	A	A	13 23 46.5	
	comp=N,138nm,13.5s,comp=E,165nm,5.5s						
JTNC	Tanabenakahech	5.72	214	A	A	13 23 46.7	
	comp=N,189nm,7.4s,comp=E,173nm,7.8s						
JKK2	Kamakawa 2	5.80	24	A	A	13 23 48.1	
	comp=N,120nm,4.9s,comp=E,115nm,8.3s						
JWM	Minabe	5.81	216	A	A	13 23 48.0	
	comp=N,184nm,8.0s,comp=E,162nm,9.2s						
JAK	Akkeshi	5.90	41	A	A	13 23 49.4	
	comp=N,181nm,6.9s,comp=E,147nm,9.7s						
ASAJ	Asahikawa	5.97	22	Pn	Pn	13 23 49.1	+0.7
	comp=E,24nm,0.3s,baz=228,slow=14,SNR=94						
ASAJ				LR	LR	13 26 29.3	
	comp=E,352µm,18.3s,baz=211,slow=42						
	comp=E,245nm,0.9s						
ASAJ	Asahikawa	5.97	22	A	A	13 23 50.5	
	comp=N,91nm,6.1s,comp=E,139nm,8.9s						
JKA	Kamikawa-asahi	5.97	22		Pn	13 23 49.6	+1.1
JWKM	Wakayamakushim	5.97	211	A	A	13 23 50.3	
	comp=N,166nm,8.3s,comp=E,273nm,8.0s						
JYG	Yagishiri	5.98	14	A	A	13 23 50.7	
	comp=N,290nm,12.4s,comp=E,249nm,16.5s						
JNM	Ikuma	6.02	241	A	A	13 23 51.0	
	comp=N,322nm,11.5s,comp=E,205nm,14.3s						
JSS	Shosan	6.04	16	A	A	13 23 51.5	
	comp=N,441nm,8.4s,comp=E,396nm,9.3s						
JMP	Maruseppu	6.12	27	A	A	13 23 52.6	
	comp=N,108nm,11.6s,comp=E,139nm,7.7s						
JISK	Izumosakaura	6.14	242	A	A	13 23 52.7	
	comp=N,275nm,14.5s,comp=E,183nm,12.4s						
JAOM	Aogashimamukai	6.15	178	A	A	13 23 52.6	
	comp=N,494nm,8.2s,comp=E,361nm,7.6s						
JJS	Sakaide	6.16	228	A	A	13 23 52.8	
	comp=N,125nm,10.7s,comp=E,129nm,8.2s						
JKHN	Kushirohamanak	6.20	42	A	A	13 23 53.6	
	comp=N,124nm,8.9s,comp=E,145nm,8.1s						
JHS	Saijyo	6.25	237	A	A	13 23 54.2	
	comp=N,190nm,12.6s,comp=E,235nm,10.5s						
JMAF	Mimaanabuki	6.27	225	A	A	13 23 54.4	
	comp=N,174nm,7.9s,comp=E,102nm,8.8s						
JAI	Aioi	6.30	222	A	A	13 23 54.8	
	comp=N,130nm,12.7s,comp=E,186nm,9.0s						
JTKR	Abashiri--Toko	6.30	31	A	A	13 23 55.1	
	comp=N,90nm,11.8s,comp=E,76nm,8.7s						
JNK	Nakash	6.35	37	A	A	13 23 55.7	
	comp=N,117nm,15.1s,comp=E,71nm,13.1s						
JJG	Jouge	6.45	234	A	A	13 23 57.0	
	comp=N,190nm,12.4s,comp=E,156nm,13.2s						
JGT2	ShimaneMisato	6.62	240	A	A	13 23 59.3	
	comp=N,224nm,13.0s,comp=E,175nm,11.4s						
JNSB	Nemuroshibetsu	6.62	37	A	A	13 23 59.6	
	comp=N,192nm,15.2s,comp=E,122nm,5.3s						
JRR	Rishiri	6.65	11	A	A	13 24 00.1	
	comp=N,728nm,7.5s,comp=E,872nm,8.6s						
JMN	Monobe	6.66	224		Pn	13 23 57.9	0.0
JMN	Monobe	6.66	224	P	Pn	13 23 59.5	+1.5
JMN	Monobe	6.66	224	A	A	13 23 59.8	
	comp=N,108nm,6.5s,comp=E,157nm,9.3s						
JMN	Monobe	6.66	224	⇑P	Pn	13 23 59.1	+1.1
NMR	Nemuro--Hokkai	6.70	43	⇓iP	Pn	13 23 56.5	-2.0
NMR				iS	Sn	13 25 12.2	-2.1
NEM2	Nemuro 2	6.70	43	A	A	13 24 00.7	
	comp=N,62nm,7.7s,comp=E,110nm,22.2s						
JSE	Soyaes	6.74	19	A	A	13 24 01.3	
	comp=N,175nm,14.3s,comp=E,162nm,12.7s						
TEY	Ternei	6.76	342	⇑eP	Pn	13 23 56.9	-2.4
TEY				eS	Sn	13 25 12.8	-2.9
TEY				MLR	MLR		
	comp=N,113µm,13.0s						
TEY				MLR	MLR		
	comp=E,58µm,13.0s						
TEY				MLR	MLR		
	comp=Z,191µm,13.0s						
MRT2	Murotomisaki 2	6.78	221	A	A	13 24 01.5	
	comp=N,121nm,8.6s,comp=E,187nm,8.2s						
JRA	Rausu	6.80	37	A	A	13 24 02.1	
	comp=N,126nm,9.1s,comp=E,141nm,10.3s						
GLVR	Golovnino	6.85	40	eP	Pn	13 24 00.8	+0.3
GLVR				eS	Sn	13 25 16.6	-1.4
GLVR				pmax	pmax		
	comp=Z,2µm,0.7s						
GLVR				pmax	pmax		
	comp=Z,13µm,1.3s						
JRBN	Rebuntou	6.90	9	A	A	13 24 03.5	
	comp=N,165nm,10.3s,comp=E,148nm,10.0s						
JHT	Toyohira	6.91	237	A	A	13 24 03.4	
	comp=N,206nm,12.3s,comp=E,201nm,11.5s						
JWK2	Keihoku	6.93	14	A	A	13 24 03.9	
	comp=N,187nm,8.5s,comp=E,289nm,9.8s						
RUSJ	Misakicho	6.99	37	eP	Pn	13 24 02.8	+0.3
RUSJ				iS	Sn	13 25 23.2	+1.8
JKHR	Kochiharuno	7.03	225	A	A	13 24 05.0	
	comp=N,112nm,9.1s,comp=E,171nm,7.4s						
JET	Tanbara	7.09	229	A	A	13 24 05.9	
	comp=N,141nm,9.6s,comp=E,113nm,9.9s						
YUK	Yuzh-Kuril'sk	7.23	40	d iP	Pn	13 24 04.9	-0.9
YUK				eS	Sn	13 25 26.8	-0.7
YUK				pmax	pmax		
	comp=Z,3µm,0.3s						
YUK				pmax	pmax		
	comp=Z,18µm,1.2s						
YUK				MLR	MLR		
	comp=E,541µm,18.0s						
YUK				MLR	MLR		
	comp=Z,362µm,18.0s						
YUK				MLR	MLR		
	comp=N,277µm,16.0s						
VLA	Vladivostok	7.29	310	eP	Pn	13 24 05.9	-0.8
VLA				iS	Sn	13 25 24.4	-4.6
JHIK	Hikimi	7.31	238	A	A	13 24 09.0	
	comp=N,219nm,12.3s,comp=E,196nm,9.7s						
JKU	Kubokawa	7.42	226	A	A	13 24 10.5	
	comp=N,108nm,18.7s,comp=E,181nm,8.0s						
MSHR	Mys Shultsa	7.46	305	eP	Pn	13 24 06.7	-2.2
JNA	Nagahama	7.59	230	A	A	13 24 12.8	
	comp=N,152nm,12.5s,comp=E,65nm,14.7s						
SHO	Shikotan	7.63	44	c iP	Pn	13 24 10.9	-0.3
SHO				eS	Sn	13 25 34.6	-2.6
SHO				pmax	pmax		
	comp=Z,434nm,0.4s						
SHO				pmax	pmax		
	comp=N,95nm,0.3s						
SHO				pmax	pmax		
	comp=Z,3µm,1.7s						
JKD	Kudamatsu	7.64	236	A	A	13 24 13.6	
	comp=N,196nm,13.5s,comp=E,163nm,13.4s						
JHGM	Hagimishima	7.71	243	A	A	13 24 14.6	
	comp=N,202nm,9.5s,comp=E,176nm,12.4s						
PSTR	Posyet	7.72	304	eP	Pn	13 24 11.9	-0.6
UWA2	Uwa jima 2	7.74	228	A	A	13 24 15.0	
	comp=N,95nm,10.1s,comp=E,106nm,6.9s						
JTO	Tosashimizu	7.90	225	A	A	13 24 17.2	
	comp=N,162nm,14.1s,comp=E,175nm,8.2s						
USA0B	Ussuriysk Arra	7.91	317		Pn	13 24 13.2	-2.0
USA0B	Ussuriysk Arra	7.91	317	d iP	Pn	13 24 13.9	-1.3
USRK	Ussuriysk Ar.	7.91	317	Pn	Pn	13 24 13.7	-1.5
	comp=E,33nm,0.3s,baz=123,slow=14,SNR=78						
USRK				Sn	Sn	13 25 41.9	-2.4
	comp=E,43nm,0.3s,baz=122,slow=26,SNR=6.0						
USRK				LR	LR	13 27 09.5	
	comp=E,523µm,18.4s,baz=156,slow=38						
	comp=E,185nm,0.3s						
I45RU	USSURIYSK INFR	7.92	317	I	I	14 02 40.0	
	comp=E,0.1nm,0.9s,baz=128,slow=319,SNR=2.7						
JTY	Toyota	8.05	240	A	A	13 24 19.3	
	comp=N,173nm,14.2s,comp=E,146nm,11.2s						
JKI	Kunimi	8.10	234	A	A	13 24 20.0	
	comp=N,207nm,12.3s,comp=E,126nm,14.3s						
JUS	Usuki	8.37	231	A	A	13 24 23.6	
	comp=N,90nm,14.6s,comp=E,126nm,11.6s						
JBEP	Beppuamama	8.40	234	A	A	13 24 24.1	
	comp=N,207nm,14.7s,comp=E,131nm,13.1s						
JSKE	Saikikamae	8.46	229	A	A	13 24 25.0	
	comp=N,90nm,9.8s,comp=E,79nm,14.4s						
JFA	Akaike	8.56	238	A	A	13 24 26.3	
	comp=N,243nm,10.6s,comp=E,133nm,14.0s						
YSS	Yuzhno-Sakhali	8.67	15		Pn	13 24 26.3	+0.8
YSS	Yuzhno-Sakhali	8.67	15	P	Pn	13 24 28.5	+3.0
YSS	Yuzhno-Sakhali	8.67	15	ceP	Pn	13 24 27.9	+2.4
YSS				eS	Sn	13 26 04.6	+1.9
YSS				pmax	pmax		
	comp=Z,20µm,6.7s						
YSS				pmax	pmax		
	comp=N,19µm,7.7s						
YSS				pmax	pmax		
	comp=Z,2µm,1.2s						
YSS				pmax	pmax		
	comp=N,1µm,1.0s						
YSS				smax	smax		
	comp=N,240nm,1.0s						
YSS				smax	smax		
	comp=E,250nm,1.1s						
YSS				smax	smax		
	comp=N,11µm,3.8s						
YSS				smax	smax		
	comp=E,11µm,5.0s						
YSS				MLR	MLR		
	comp=Z,483µm,14.0s						
YSS				MLR	MLR		
	comp=N,221µm,13.0s						
YSS				MLR	MLR		
	comp=E,149µm,13.0s						
YSS	Yuzhno-Sakhali	8.67	15	⇑P	Pn	13 24 28.2	+2.8
JKIT	Kitakata	8.85	230	A	A	13 24 30.4	
	comp=N,62nm,14.4s,comp=E,110nm,8.7s						
JNU	Nakatsue	8.87	234		Pn	13 24 28.4	0.0
JNU	Nakatsue	8.87	234	Pn	Pn	13 24 27.6	-0.8
	comp=E,14nm,0.3s,baz=51,slow=7.3,SNR=78						
JNU				LR	LR	13 28 10.4	
	comp=E,299µm,19.8s,baz=28,slow=40						
JNU	Nakatsue	8.87	234	P	Pn	13 24 30.2	+1.8
JNU	Nakatsue	8.87	234	A	A	13 24 30.6	
	comp=N,163nm,10.1s,comp=E,156nm,16.2s						
JNU	Nakatsue	8.87	234	⇓P	Pn	13 24 30.2	+1.8
JHHC	Hyugahichiya	8.87	228	A	A	13 24 30.6	
	comp=N,68nm,6.4s,comp=E,84nm,9.3s						
JFI	Itaya	9.00	238	A	A	13 24 32.4	
	comp=N,215nm,12.4s,comp=E,126nm,15.0s						
JTU	Tsushima	9.07	246	A	A	13 24 33.5	
	comp=N,113nm,14.2s,comp=E,110nm,14.6s						
JTU	Tsushima	9.07	246	⇓P	Pn	13 24 31.9	+0.8
JTSN	Tsuno	9.09	228	A	A	13 24 33.7	
	comp=N,56nm,6.7s,comp=E,82nm,11.1s						
KUR	Kuril'sk	9.09	41	c iP	Pn	13 24 30.8	-0.5
KUR				S	Sn	13 26 11.0	-2.2
KUR				pmax	pmax		
	comp=Z,55µm,5.2s						
KUR				pmax	pmax		
	comp=E,1µm,1.0s						
KUR				pmax	pmax		
	comp=Z,5µm,1.0s						
KUR				pmax	pmax		
	comp=N,832nm,0.8s						
KUR				smax	smax		
	comp=N,1µm,1.0s						
KUR				smax	smax		
	comp=E,410nm,1.0s						
KUR				smax	smax		
	comp=E,65µm,9.4s						
KUR				smax	smax		
	comp=N,45µm,8.3s						
KUR				MLR	MLR		
	comp=Z,324µm,15.0s						
JTSM	Tsushimamitsus	9.18	245	A	A	13 24 34.9	
	comp=N,97nm,16.7s,comp=E,96nm,10.3s						
KSRS	Korea Array	9.19	266	Pn	Pn	13 24 33.7	+1.1
	comp=E,158nm,0.3s,baz=79,slow=12,SNR=322						
KSRS				Sn	Sn	13 26 18.7	+3.2
	comp=E,97nm,0.3s,baz=75,slow=24,SNR=12						
KSRS				LR	LR	13 27 48.4	
	comp=E,158623µm,19.9s,baz=70,slow=36						
KSRS				PcP	PcP	13 30 51.9	-1.8
	comp=E,12nm,0.9s,baz=102,slow=1.0,SNR=6.0						
JTA	Tamana	9.20	235	A	A	13 24 35.1	
	comp=N,148nm,12.5s,comp=E,126nm,15.9s						
KSAR	Wonju Array Be	9.22	266		Pn	13 24 32.5	-0.6
KSAR	Wonju Array Be	9.22	266	P	Pn	13 24 32.5	-0.6
KS19	Wonju Array Si	9.22	267		Pn	13 24 33.5	+0.4
JII	Iki	9.22	241	A	A	13 24 35.5	
	comp=N,156nm,10.6s,comp=E,152nm,11.3s						
JIU3	Izumi3	9.29	232	A	A	13 24 36.5	
	comp=N,78nm,15.4s,comp=E,79nm,12.6s						
JUR	Ureshino	9.49	237	A	A	13 24 39.2	
	comp=N,197nm,11.2s,comp=E,206nm,9.9s						
MDJ	Mudanjiang	9.51	312	P	Pn	13 24 36.8	-0.3
MDJ				pP		13 24 44.5	
MDJ				S	Sn	13 26 21.5	-2.0
MDJ				pmax	pmax		
	comp=E,31µm,10.3s						
MDJ				LR	LR		
	comp=E,330µm,15.8s						
MDJ				LR	LR		
	comp=E,175µm,16.8s						
MDJ				LR	LR		
	comp=E,542µm,14.8s						
JTZ	Takazaki	9.59	228	A	A	13 24 40.4	
	comp=N,93nm,10.3s,comp=E,124nm,10.0s						
JNKG	Nichinankitago	9.60	226	A	A	13 24 40.6	
	comp=N,78nm,11.0s,comp=E,81nm,10.7s						
JZO	Okuchi	9.71	231	A	A	13 24 42.1	
	comp=N,75nm,10.6s,comp=E,104nm,10.3s						
JNAR	Kushima--Naru	9.76	226	A	A	13 24 42.8	
	comp=N,81nm,13.6s,comp=E,93nm,9.6s						
JHD	Hondo	9.77	234	A	A	13 24 43.1	
	comp=N,138nm,11.6s,comp=E,155nm,11.7s						
TJN	Taejon	9.88	261		Pn	13 24 40.6	-1.5
TJN	Taejon	9.88	261	P	Pn	13 24 43.4	+1.3
TJN	Taejon	9.88	261	eP	Pn	13 24 42.3	+0.2
NGSJ	Nagasakinomoza	9.88	236	A	A	13 24 44.5	
	comp=N,123nm,12.6s,comp=E,123nm,9.5s						
INCN	Inchon	10.19	268	P	Pn	13 24 48.7	+2.3
INCN				P	Pn	13 24 48.7	+2.3
INCN				S	Sn	13 26 47.0	+6.7
INCN				S	Sn	13 26 47.0	+6.7
INCN	Inchon	10.19	268	P	Pn	13 24 48.9	+2.5
INCN	Inchon	10.19	268	S	Sn	13 26 41.7	+1.5
INCN	Inchon	10.19	268	P	Pn	13 24 49.3	+2.9
INCN				pmax	pmax		
	comp=Z,769nm,1.0s						
INCN	Inchon	10.19	268	⇓P	Pn	13 24 47.1	+0.7
JTSR	Tashiro 2	10.22	226	A	A	13 24 49.2	
	comp=N,51nm,17.6s,comp=E,56nm,6.4s						
JSU	Suzuyama	10.24	229	A	A	13 24 49.5	
	comp=N,58nm,14.4s,comp=E,72nm,6.9s						
JFU	Fukue jima 2	10.56	239	A	A	13 24 53.8	
	comp=N,127nm,11.9s,comp=E,142nm,12.2s						
UGL	Uglegorsk	10.62	9	deP	Pn	13 24 47.9	-4.3
UGL				eS	Sn	13 26 46.2	-4.3
UGL				pmax	pmax		
	comp=Z,31µm,7.3s						
UGL				pmax	pmax		
	comp=Z,501nm,0.9s						
UGL				smax	smax		
	comp=E,48µm,8.9s						
UGL				smax	smax		
	comp=N,25µm,7.9s						
UGL				MLR	MLR		
	comp=N,201µm,12.0s						
UGL				MLR	MLR		
	comp=Z,140µm,12.0s						
UGL				MLR	MLR		
	comp=E,332µm,14.0s						
BNX	BinXian	11.42	312	⇑P	Pn	13 25 07.8	+4.5
BNX				pmax	pmax		
	comp=E,360nm,1.0s						
BNX				pmax	pmax		
	comp=E,25µm,10.3s						
BNX				LR	LR		
	comp=E,198µm,10.9s						
BNX				LR	LR		
	comp=E,215µm,13.1s						
BNX				LR	LR		
	comp=E,462µm,15.1s						
JCJ	Chichijima	11.72	168		Pn	13 25 03.0	-4.4
JCJ	Chichijima	11.72	168	Pn	Pn	13 25 03.5	-3.9
JCJ				LR	LR	13 29 32.8	
	comp=E,46µm,19.2s,baz=314,slow=37						
JCJ	Chichijima	11.72	168	P	Pn	13 25 06.3	-1.1
JCJ	Chichijima	11.72	168	⇑P	Pn	13 25 03.8	-3.6
CN2	Changchun	11.76	301	eP	Pn	13 25 10.3	+2.5
CN2				eS	Sn	13 27 25.3	+6.8
CN2				pmax	pmax		
	comp=E,50nm,1.4s						
CN2				pmax	pmax		
	comp=E,29µm,9.0s						
CN2				LR	LR		
	comp=E,194µm,13.0s						
CN2				LR	LR		
	comp=E,305µm,13.0s						
CN2				LR	LR		
	comp=E,288µm,16.6s						
KLR	Kul'dur	11.97	335	Pn	Pn	13 25 09.8	-0.9
	comp=E,1.9nm,0.3s,baz=160,slow=15,SNR=22						
KLR				LR	LR	13 29 38.2	
	comp=E,240µm,19.4s,baz=156,slow=37						
KLR	Kul'dur	11.97	335	ceP	Pn	13 25 10.1	-0.6
KLR				pmax	pmax		
	comp=Z,447nm,2.5s						
GRNR	Gornyy	12.34	351	⇑iP	Pn	13 25 18.6	+2.9
GRNR				eS	Sn	13 27 41.2	+8.6
GRNR				pmax	pmax		
	comp=E,9.0nm,1.2s						
GRNR				pmax	pmax		
	comp=N,20nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,30nm,1.2s						
GRNR				smax	smax		
	comp=E,8.0nm,1.0s						
GRNR				MLR	MLR		
	comp=E,127µm,16.0s						
GRNR				MLR	MLR		
	comp=N,93µm,13.0s						
GRNR				MLR	MLR		
	comp=Z,157µm,14.0s						
TYV	Tymovskoe	12.44	9	eP	Pn	13 25 20.9	+3.8
TYV				eS	Sn	13 27 42.3	+7.1
TYV				pmax	pmax		
	comp=Z,8µm,2.4s						
TYV				pmax	pmax		
	comp=Z,1µm,1.3s						
TYV				smax	smax		
	comp=N,102nm,2.0s						
TYV				smax	smax		
	comp=E,180nm,2.0s						
TYV				smax	smax		
	comp=N,7µm,3.3s						
TYV				smax	smax		
	comp=E,12µm,3.3s						
TYV				MLR	MLR		
	comp=Z,170µm,15.0s						
TYV				MLR	MLR		
	comp=N,159µm,15.0s						
SNY	Shenyang	12.56	290	⇓P	Pn	13 25 22.3	+3.5
SNY				pmax	pmax		
	comp=N,610nm,2.1s						
SNY				pmax	pmax		
	comp=N,24µm,9.4s						
SNY				LR	LR		
	comp=N,155µm,10.6s						
SNY				LR	LR		
	comp=N,580µm,13.5s						
DL2	Dalian	13.93	277	⇓iP	Pn	13 25 40.4	+2.9
DL2				pP	P	13 25 49.4	+3.9
DL2				pmax	pmax		
	comp=N,420nm,2.1s						
DL2				pmax	pmax		
	comp=N,30µm,6.6s						
DL2				LR	LR		
	comp=N,278µm,11.1s						
DL2				LR	LR		
	comp=N,160µm,11.4s						
DL2				LR	LR		
	comp=N,516µm,12.3s						
HEH	HeiHe	14.45	327	eP	Pn	13 25 44.1	-0.4
HEH				sP	P	13 25 56.3	+5.1
HEH				S	Sn	13 28 22.3	-1.8
HEH				pmax	pmax		
	comp=N,290nm,2.1s						
HEH				pmax	pmax		
	comp=N,42µm,7.8s						
HEH				LR	LR		
	comp=N,317µm,13.3s						
HEH				LR	LR		
	comp=N,400µm,13.9s						
HEH				LR	LR		
	comp=N,373µm,14.1s						
JMZ	Minamidaito 2	14.54	211	P	Pn	13 25 47.6	+1.7
JMZ	Minamidaito 2	14.54	211	⇑P	Pn	13 25 48.1	+2.2
NKL	Nikolayevsk	14.55	3	eP	Pn	13 25 43.5	-2.4
NKL				eS	Sn	13 28 25.7	-1.0
NKL				pmax	pmax		
	comp=N,623nm,1.4s						
NKL				pmax	pmax		
	comp=E,2µm,1.4s						
NKL				pmax	pmax		
	comp=Z,4µm,1.4s						
NKL				smax	smax		
	comp=E,3µm,4.7s						
NKL				smax	smax		
	comp=N,6µm,8.0s						
NKL				MLR	MLR		
	comp=E,432µm,11.0s						
NKL				MLR	MLR		
	comp=N,206µm,12.0s						
NKL				MLR	MLR		
	comp=Z,549µm,14.0s						
JOW	Kunigami	15.05	222	Pn	Pn	13 25 51.7	-1.1
JOW	Kunigami	15.05	222	Pn	Pn	13 25 53.9	+1.0
	comp=Z,4.6nm,0.3s,baz=47,slow=8.9,SNR=11						
JOW				LR	LR	13 32 24.2	
	comp=Z,125µm,19.7s,baz=38,slow=40						
JOW	Kunigami	15.05	222	P	Pn	13 25 55.2	+2.4
JOW	Kunigami	15.05	222	⇑P	Pn	13 25 52.1	-0.7
OKH	Okha	15.12	8	c iP	Pn	13 25 50.2	-3.3
OKH				iS	Sn	13 28 41.4	+1.0
OKH				pmax	pmax		
	comp=Z,9µm,12.1s						
OKH				MLR	MLR		
	comp=Z,113µm,13.0s						

OKH				MLR	MLR		
	comp=N,138µm,14.0s						
OKH				MLR	MLR		
	comp=E,275µm,14.0s						
SSE	**Sheshan**	**16.77**	**249**	P	**P**	**13 26 17.9**	**+0.8**
SSE				S	**Sn**	**13 29 21.3**	**+0.6**
SSE				pmax	pmax		
	comp=E,170nm,1.0s						
SKR	**Severo-Kuril's**	**16.85**	**39**	*e*P	**Pn**	**13 26 16.6**	**+0.7**
SKR				pmax	pmax		
	comp=Z,2µm,1.6s						
SKR				pmax	pmax		
	comp=Z,20µm,5.2s						
SKR				MLR	MLR		
	comp=Z,138µm,15.0s						
ZEA	**Zeya**	**17.28**	**335**	*e*P	**P**	**13 26 22.8**	**+0.1**
ZEA				*e*S	**Sn**	**13 29 26.9**	**-6.1**
ZEA				pmax	pmax		
	comp=E,9µm,5.7s						
ZEA				pmax	pmax		
	comp=N,12µm,5.3s						
ZEA				pmax	pmax		
	comp=Z,17µm,5.2s						
ZEA				pmax	pmax		
	comp=E,300nm,1.2s						
ZEA				pmax	pmax		
	comp=N,560nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,980nm,1.3s						
ZEA				smax	smax		
	comp=N,20µm,14.7s						
ZEA				smax	smax		
	comp=E,28µm,8.9s						
ZEA				MLR	MLR		
	comp=E,93µm,11.0s						
ZEA				MLR	MLR		
	comp=N,88µm,14.0s						
ZEA				MLR	MLR		
	comp=Z,130µm,12.0s						
HIA	**Hailar**	**17.70**	**313**	P	**Pn**	**13 26 26.1**	**-0.4**
HIA	**Hailar**	**17.70**	**313**	P	**P**	**13 26 28.2**	**+0.9**
HIA	**Hailar**	**17.70**	**313**	P	**Pn**	**13 26 26.1**	**-0.4**
HIA				pmax	pmax		
	comp=Z,1µm,1.5s						
TIA	**Tai'an**	**17.91**	**269**	P	**P**	**13 26 30.5**	**+0.8**
TIA				pmax	pmax		
	comp=Z,720nm,2.4s						
TIA				pmax	pmax		
	comp=Z,85µm,9.5s						
TIA				LR	LR		
	comp=Z,282µm,11.7s						
TIA				LR	LR		
	comp=Z,159µm,12.0s						
NJ2	**Nanjing**	**18.04**	**255**	⇑P	**P**	**13 26 32.9**	**+1.8**
NJ2				sP	**sP**	**13 26 41.4**	**+3.0**
NJ2				S	**S**	**13 29 57.5**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,330nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,47µm,7.7s						
NJ2				LR	LR		
	comp=Z,129µm,13.2s						
NJ2				LR	LR		
	comp=Z,204µm,11.1s						
NJ2				LR	LR		
	comp=Z,290µm,11.9s						
BJI	**Beijing**	**18.07**	**282**	P	**P**	**13 26 32.4**	**+1.0**
BJI				S	**S**	**13 29 57.0**	**-0.9**
BJI				pmax	pmax		
	comp=Z,510nm,1.8s						
BJI				pmax	pmax		
	comp=Z,28µm,11.0s						
BJI				LR	LR		
	comp=Z,106µm,14.2s						
BJI				LR	LR		
	comp=Z,36µm,15.4s						
BJI				LR	LR		
	comp=Z,90µm,11.1s						
XLT	**XiLinHaoTe**	**18.33**	**294**	*e*P	**Pn**	**13 26 34.3**	**-0.1**
XLT				sP	sP	13 26 42.5	+0.8
XLT				PP	**PnPn**	**13 26 52.0**	**+6.2**
XLT				S	**Sn**	**13 29 58.8**	**+0.1**
XLT				sS	S	13 30 06.0	+2.6
XLT				SS	**SnSn**	**13 30 17.4**	**+5.1**
XLT				PcP	**PcP**	**13 31 03.4**	**-2.0**
XLT				pmax	pmax		
	comp=Z,1µm,2.0s						
XLT				pmax	pmax		
	comp=Z,53µm,6.7s						
XLT				LR	LR		
	comp=Z,227µm,11.5s						
XLT				LR	LR		
	comp=Z,341µm,11.9s						
PEA0B	**Petropavlovsk-**	**19.18**	**35**	P	**P**	**13 26 42.4**	**-1.1**
PEA0B	**Petropavlovsk-**	**19.18**	**35**	P	**P**	**13 26 42.4**	**-1.1**
PEA0B				pmax	pmax		
	comp=Z,374nm,1.0s						
PETK	**Petropavlovsk-**	**19.18**	**35**	P	**P**	**13 26 42.8**	**-0.7**
PETK	**Petropavlovsk-**	**19.18**	**35**	P	**Pn**	**13 26 44.0**	**-0.5**
	comp=Z,2.0nm,0.3s,baz=214,slow=9.0,SNR=44						
PETK				PcP	**PcP**	**13 31 07.3**	**+0.7**
	comp=Z,15nm,0.8s,baz=253,slow=8.7,SNR=4.7						
PETK				LR	LR	13 34 37.0	
	comp=Z,79µm,18.3s,baz=211,slow=38						
	comp=Z,93nm,0.8s						
PETK	**Petropavlovsk-**	**19.18**	**35**	P	**P**	**13 26 42.8**	**-0.7**
HNS	**HongShan**	**19.54**	**274**	⇓P	**Pn**	**13 26 48.4**	**-0.5**
HNS				S	**S**	**13 30 22.6**	**-4.9**
HNS				pmax	pmax		
	comp=Z,810nm,1.0s						
HNS				pmax	pmax		
	comp=Z,38µm,9.6s						
HNS				LR	LR		
	comp=Z,143µm,14.3s						
HNS				LR	LR		
	comp=Z,292µm,14.1s						
PET	**Petropavlovsk**	**19.56**	**36**	P	**P**	**13 26 46.5**	**-1.1**
PET	**Petropavlovsk**	**19.56**	**36**	P	**Pn**	**13 26 50.1**	**+1.1**
PET	**Petropavlovsk**	**19.56**	**36**	*e*P	**P**	**13 26 44.6**	**-3.0**
PET				*e*S	**S**	**13 30 24.8**	**-2.9**
PET				pmax	pmax		
	comp=Z,22µm,9.3s						
PET				pmax	pmax		
	comp=Z,520nm,1.4s						
PET				pmax	pmax		
	comp=Z,33µm,10.0s						
PET				MLR	MLR		
	comp=Z,97µm,14.0s						
PET				MLR	MLR		
	comp=Z,102µm,14.0s						
PET	**Petropavlovsk**	**19.56**	**36**	P	**Pn**	**13 26 50.0**	**+1.1**
	comp=Z,33µmcomp=Z,502nm,1.5s						
PET	**Petropavlovsk**	**19.56**	**36**	⇑P	**P**	**13 26 44.8**	**-2.9**
YOJ	**Yonaguni jima**	**19.86**	**229**	P	**P**	**13 26 44.8**	**-6.3**
YOJ	**Yonaguni jima**	**19.86**	**229**	P	**Pn**	**13 26 52.4**	**-0.4**
TATO	**Taipei**	**20.41**	**233**	P	**P**	**13 26 54.5**	**-2.7**
TATO	**Taipei**	**20.41**	**233**	IAMs_20	IAMs_20	13 35 06.3	
	comp=Z,155µm,18.0s						
TATO	**Taipei**	**20.41**	**233**	P	**P**	**13 26 57.0**	**-0.2**
TATO				P	**P**	**13 26 57.0**	**-0.2**
TATO				S	Sn	13 30 49.9	+1.0
TATO				S	Sn	13 30 49.9	+1.0
TATO	**Taipei**	**20.41**	**233**	P	Pn	13 26 59.1	-0.2
YHNB	**Yeheng**	**20.70**	**233**	IAMs_20	IAMs_20	13 35 15.5	
	comp=Z,160µm,18.0s						
YHNB	**Yeheng**	**20.70**	**233**	P	**P**	**13 27 00.1**	**-0.3**
NACB	**Ninganchiao**	**20.93**	**232**	P	**P**	**13 27 02.6**	**-0.2**
TIY	**Taiyuan**	**21.25**	**276**	*e*P	**P**	**13 27 06.8**	**+0.5**
TIY				pP	**sP**	**13 27 13.0**	**-0.6**
TIY				PP	**PnPn**	**13 27 30.9**	**+5.0**
TIY				S	**S**	**13 31 02.3**	**+0.5**
TIY				SS	**SnSn**	**13 31 34.5**	**+10**
TIY				pmax	pmax		
	comp=Z,43nm,0.5s						
TIY				pmax	pmax		
	comp=Z,14µm,7.7s						
TIY				LR	LR		
	comp=Z,146µm,13.7s						
TIY				LR	LR		
	comp=Z,175µm,15.8s						
TIY				LR	LR		
	comp=Z,227µm,15.1s						
HHC	**Hu-ho-hao-te**	**21.54**	**285**	*e*P	**P**	**13 27 09.3**	**-0.1**
HHC				sP	sP	13 27 16.1	-0.7
HHC				PP	**PnPn**	**13 27 34.0**	**+4.2**
HHC				S	**S**	**13 31 03.3**	**-4.2**
HHC				sS	sS	13 31 10.9	-4.5
HHC				pmax	pmax		
	comp=Z,290nm,1.4s						
HHC				pmax	pmax		
	comp=Z,16µm,5.4s						
HHC				LR	LR		
	comp=Z,115µm,10.7s						
HHC				LR	LR		
	comp=Z,454µm,11.5s						
SSLB	**Suanglung**	**21.61**	**232**	P	**P**	**13 27 03.5**	**-6.6**
SSLB	**Suanglung**	**21.61**	**232**	P	**P**	**13 27 09.4**	**-0.7**
YULB	**Yu-li**	**21.69**	**231**	P	**P**	**13 27 10.3**	**-0.7**
LYN	**LuoYang**	**22.03**	**268**	⇓*i*P	**P**	**13 27 13.8**	**-0.7**
LYN				sP	sP	13 27 20.8	-1.1
LYN				S	**S**	**13 31 09.3**	**-7.5**
LYN				SS	**SnSn**	**13 31 53.0**	**+10**
LYN				pmax	pmax		
	comp=Z,150nm,1.2s						
LYN				pmax	pmax		
	comp=Z,19µm,8.6s						
LYN				LR	LR		
	comp=Z,253µm,14.8s						
LYN				LR	LR		
	comp=Z,425µm,13.1s						
WHN	**Wuhan**	**22.15**	**256**	⇓P	**P**	**13 27 14.9**	**-1.0**
WHN				pP	**pP**	**13 27 21.3**	**+0.5**
WHN				sP	**sP**	**13 27 24.9**	**+1.7**
WHN				S	**S**	**13 31 15.3**	**-3.9**
WHN				pmax	pmax		
	comp=Z,420nm,0.9s						
TPUB	**Ta-pu**	**22.17**	**232**	P	**P**	**13 27 12.4**	**-3.7**
TPUB	**Ta-pu**	**22.17**	**232**	P	**P**	**13 27 13.5**	**-2.6**
MA2	**Magadan**	**22.18**	**15**	P	**P**	**13 27 12.7**	**-3.2**
MA2	**Magadan**	**22.18**	**15**	LR	LR	13 36 26.0	
	comp=Z,78µm,19.1s,baz=202,slow=38						
MA2	**Magadan**	**22.18**	**15**	P	**P**	**13 27 15.0**	**-0.9**
MA2	**Magadan**	**22.18**	**15**	⇓*i*P	**P**	**13 27 14.7**	**-1.2**
MA2				pmax	pmax		
	comp=Z,4µm,1.5s						
MA2				MLR	MLR		
	comp=Z,108µm,15.0s						
MA2	**Magadan**	**22.18**	**15**	P	**P**	**13 27 15.0**	**-0.9**
	comp=Z,49µmcomp=Z,2µm,2.0s						
MA2	**Magadan**	**22.18**	**15**	⇓P	**P**	**13 27 14.7**	**-1.2**
TWGBT	**Beinan**	**22.25**	**230**	P	**P**	**13 27 16.1**	**-0.9**
TWG	**Pinlang**	**22.26**	**230**	IAMs_20	IAMs_20	13 36 30.1	
	comp=Z,139µm,19.0s						
QZH	**Quanzhou**	**22.32**	**238**	⇑*i*P	**P**	**13 27 16.9**	**-0.8**
QZH				S	**S**	**13 31 19.3**	**-3.0**
QZH				pmax	pmax		
	comp=Z,230nm,1.2s						
QZH				pmax	pmax		
	comp=Z,17µm,9.3s						
QZH				LR	LR		
	comp=Z,328µm,12.7s						
QZH				LR	LR		
	comp=Z,307µm,13.1s						
CIT	**Chita**	**22.47**	**315**	*e*P	**P**	**13 27 17.4**	**-1.8**
CIT				*e*S	**S**	**13 31 25.4**	**+0.5**
CIT				*e*		13 32 11.8	
CIT				pmax	pmax		
	comp=Z,5µm,2.4s						
BTO	**Baotou**	**22.73**	**284**	*e*P	**P**	**13 27 21.8**	**-0.3**
BTO				sP	**sP**	**13 27 28.8**	**-0.7**
BTO				PP	**PnPn**	**13 27 51.3**	**+5.2**
BTO				S	**S**	**13 31 30.8**	**+0.8**
BTO				sS	**pS**	**13 31 35.5**	**-0.3**
BTO				SS	**SnSn**	**13 32 12.8**	**+13**
BTO				pmax	pmax		
	comp=Z,170nm,1.2s						
BTO				pmax	pmax		
	comp=Z,39µm,7.4s						
YAK	**Yakutsk**	**24.20**	**349**	P	**P**	**13 27 33.6**	**-2.6**
YAK				IAmb	IAmb	13 27 47.2	
	comp=Z,1µm,1.1s						
YAK	**Yakutsk**	**24.20**	**349**	LR	LR	13 37 02.1	
	comp=Z,52µm,20.7s,baz=153,slow=37						
YAK	**Yakutsk**	**24.20**	**349**	*e*P	**P**	**13 27 33.8**	**-2.4**
YAK				*e*PPP	PPP	13 28 06.3	
YAK				*e*S	**S**	**13 31 53.0**	**-0.4**
YAK				*e*SS	**SnSn**	**13 32 34.7**	**-1.0**
YAK				*e*		13 38 42.9	
YAK				pmax	pmax		
	comp=Z,842nm,1.1s						
YAK				pmax	pmax		
	comp=N,284nm,1.3s						
YAK				pmax	pmax		
	comp=E,141nm,1.4s						
YAK				smax	smax		
	comp=E,51µm,9.9s						
YAK				smax	smax		
	comp=N,150µm,11.0s						
YAK				MLR	MLR		
	comp=Z,163µm,16.0s						
YAK				MLR	MLR		
	comp=N,94µm,18.0s						
YAK				MLR	MLR		
	comp=E,116µm,18.0s						
YAK	**Yakutsk**	**24.20**	**349**	⇑P	**P**	**13 27 34.2**	**-2.1**
CNSH	**ChangSha**	**24.40**	**253**	P	**P**	**13 27 37.3**	**-1.1**
CNSH				S	**S**	**13 31 54.6**	**-2.7**
CNSH				pmax	pmax		
	comp=E,170nm,1.3s						
CNSH				pmax	pmax		
	comp=E,15µm,7.2s						
CNSH				LR	LR		
	comp=E,222µm,11.7s						
CNSH				LR	LR		
	comp=E,242µm,12.3s						
XAN	**Xi'an**	**24.97**	**269**	P	**P**	**13 27 41.5**	**-2.1**
XAN				S	**S**	**13 32 04.3**	**-2.3**
XAN				SS	**SnSn**	**13 33 06.1**	**+11**
XAN				pmax	pmax		
	comp=E,140nm,1.3s						
XAN				pmax	pmax		
	comp=E,18µm,7.4s						
XAN				LR	LR		
	comp=E,263µm,12.9s						
XAN				LR	LR		
	comp=E,330µm,12.7s						
ULN	**Ulaanbaatar**	**25.20**	**302**	P	**P**	**13 27 43.4**	**-2.3**
ULN	**Ulaanbaatar**	**25.20**	**302**	IAMs_20	IAMs_20	13 37 46.8	
	comp=Z,91µm,18.0s						
ULN	**Ulaanbaatar**	**25.20**	**302**	P	**P**	**13 27 44.7**	**-1.0**
ULN				P	**P**	**13 27 44.7**	**-1.0**
ULN				S	**S**	**13 32 09.6**	**-0.6**
ULN				S	**S**	**13 32 09.6**	**-0.6**
ULN	**Ulaanbaatar**	**25.20**	**302**	*d i*P	**P**	**13 27 43.9**	**-1.8**
ULN				pmax	pmax		
	comp=Z,795nm,1.7s						
ULN				MLR	MLR		
	comp=Z,156µm,15.0s						
ULN	**Ulaanbaatar**	**25.20**	**302**	⇑P	**P**	**13 27 43.9**	**-1.8**
BOD	**Bodaibo**	**25.37**	**328**	*e*P	**P**	**13 27 45.5**	**-1.4**
BOD				pmax	pmax		
	comp=Z,363nm,1.8s						
GUMO	**Guam**	**25.39**	**168**	P	**P**	**13 27 44.9**	**-2.5**
GUMO	**Guam**	**25.39**	**168**	LR	LR	13 36 23.7	
	comp=Z,52µm,18.6s,baz=10,slow=33						
GUMO	**Guam**	**25.39**	**168**	P	**P**	**13 27 49.7**	**+2.3**
GUMO	**Guam**	**25.39**	**168**	P	**P**	**13 27 44.9**	**-2.5**
GUMO				pmax	pmax		
	comp=Z,3µm,1.2s						
GUMO	**Guam**	**25.39**	**168**	⇑P	**P**	**13 27 45.5**	**-1.8**
SEY	**Seymchan**	**25.57**	**14**	LR	LR	13 39 13.8	
	comp=Z,111µm,18.1s,baz=200,slow=40						
SEY	**Seymchan**	**25.57**	**14**	*c i*P	**P**	**13 27 49.7**	**+1.0**
SEY				pmax	pmax		
	comp=Z,1µm,1.2s						
SEY				MLR	MLR		
	comp=Z,104µm,17.0s						
I34MN	**SONGINO INFRAS**	**25.62**	**302**	I	I	15 49 00.0	
	baz=100,slow=320,SNR=3.6						
SONM	**Songino Array**	**25.63**	**302**	P	**P**	**13 27 47.0**	**-2.6**
SONM	**Songino Array**	**25.63**	**302**	P	**P**	**13 27 47.7**	**-1.9**
	comp=Z,45nm,1.0s,baz=102,slow=6.4,SNR=85						
SONM				ScP	**ScP**	**13 34 59.7**	**+1.3**
	comp=Z,8.2nm,1.1s,baz=153,slow=0.7,SNR=3.6						
SONM				LR	LR	13 38 10.7	
	comp=Z,77µm,18.3s,baz=56,slow=37						
SONM				P3KPbc		14 00 45.9	
	comp=Z,0.5nm,0.4s,baz=255,slow=4.5,SNR=5.7						
	comp=Z,45nm,1.0s						
SONM	**Songino Array**	**25.63**	**302**	P	**P**	**13 27 47.0**	**-2.6**
SONM				pmax	pmax		
	comp=Z,403nm,1.3s						
HKC	**Hong Kong Obse**	**27.08**	**240**	⇑P	**P**	**13 28 04.0**	**+1.3**
HKPS	**Hong Kong Po S**	**27.12**	**240**	P	**P**	**13 28 01.3**	**-1.7**
GZH	**Guangzhou**	**27.13**	**243**	P	**P**	**13 27 58.8**	**-4.3**
GZH				S	**S**	**13 32 31.8**	**-8.9**
GZH				pmax	pmax		
	comp=Z,18µm,7.5s						
GZH				LR	LR		
	comp=Z,285µm,14.2s						
GZH				LR	LR		
	comp=Z,180µm,14.2s						
SHEM	**Shemya Is, Ala**	**27.69**	**48**	IAmb	IAmb	13 28 39.2	
	comp=Z,1µm,1.4s						
SMY	**Shemya**	**27.69**	**48**	P	**P**	**13 28 06.1**	**-1.8**
SMY				IAmb	IAmb	13 28 39.2	
	comp=Z,1µm,1.4s						
SMY	**Shemya**	**27.69**	**48**	P	**P**	**13 28 10.6**	**+2.7**
SMY	**Shemya**	**27.69**	**48**	P	**P**	**13 28 06.1**	**-1.8**
SMY				pmax	pmax		
	comp=Z,1µm,1.4s						
IRK	**Irkutsk**	**27.89**	**311**	*e*P	**P**	**13 28 08.6**	**-1.2**
IRK				pmax	pmax		
	comp=Z,677nm,2.1s						
GULI	**GuiLin**	**27.91**	**250**	P	**P**	**13 28 10.3**	**+0.1**
GULI				S	**S**	**13 32 50.8**	**-2.3**
GULI				pmax	pmax		
	comp=Z,100nm,1.1s						
GULI				LR	LR		
	comp=Z,189µm,15.4s						
GULI				LR	LR		
	comp=Z,123µm,15.0s						
GULI				LR	LR		
	comp=Z,186µm,12.2s						
ZAK	**Zakamensk**	**28.08**	**307**	*e*P	**P**	**13 28 10.0**	**-1.6**
ZAK				pmax	pmax		
	comp=Z,112nm,1.7s						
LZH	**Lanzhou**	**28.33**	**276**	*e*P	**P**	**13 28 13.0**	**-1.0**
LZH				pP	pP	13 28 17.6	-1.8
LZH				sP	sP	13 28 20.1	-1.5
LZH				S	**S**	**13 32 56.3**	**-3.5**
LZH				pmax	pmax		
	comp=Z,65nm,1.3s						
LZH				pmax	pmax		
	comp=Z,9µm,5.2s						
LZH				LR	LR		
	comp=Z,258µm,13.7s						
LZH				LR	LR		
	comp=Z,263µm,13.4s						
MOY	**Mondy**	**29.74**	**309**	*e*P	**P**	**13 28 25.5**	**-0.8**
MOY				pmax	pmax		
	comp=Z,218nm,2.3s						
GYA	**Guiyang**	**30.04**	**256**	⇑P	**P**	**13 28 28.6**	**-0.6**
GYA				sP	sP	13 28 36.8	0.0
GYA				S	**S**	**13 33 25.0**	**-1.8**
GYA				pmax	pmax		
	comp=Z,390nm,0.9s						
GYA				pmax	pmax		
	comp=Z,8µm,7.6s						
GYA				LR	LR		
	comp=Z,154µm,14.1s						
GYA				LR	LR		
	comp=Z,163µm,16.0s						
GYA				LR	LR		
	comp=Z,210µm,16.4s						
CD2	**Chengdu**	**30.19**	**266**	P	**P**	**13 28 29.3**	**-1.1**
CD2				PcP	**PcP**	**13 31 30.3**	**-0.9**
CD2				S	**S**	**13 33 26.3**	**-2.6**
CD2				PcS	**PcS**	**13 35 12.8**	**-2.1**
CD2				pmax	pmax		
	comp=Z,60nm,0.9s						
CD2				pmax	pmax		
	comp=Z,8µm,10.5s						
CD2				LR	LR		
	comp=Z,286µm,15.1s						
CD2				LR	LR		
	comp=Z,301µm,12.9s						
CD2				LR	LR		
	comp=Z,294µm,12.6s						
H11N2	**WAKE ISLAND Hy**	**30.28**	**121**	P	**P**	**13 28 34.5**	**+3.5**
	baz=296,slow=8.0,SNR=4.6						
H11N1	**WAKE ISLAND Hy**	**30.29**	**121**	P	**P**	**13 28 34.5**	**+3.5**
	baz=296,slow=8.0,SNR=3.4						
H11N3	**WAKE ISLAND Hy**	**30.30**	**121**	P	**P**	**13 28 34.2**	**+3.1**
	baz=296,slow=8.0,SNR=4.7						
GTA	**Gaotai**	**30.65**	**284**	P	**P**	**13 28 34.1**	**-0.4**
GTA				PcP	**PcP**	**13 31 35.5**	**+3.1**
GTA				S	**S**	**13 33 36.3**	**+0.1**
GTA				PcS	**PcS**	**13 35 18.6**	**+2.3**
GTA				pmax	pmax		
	comp=Z,48nm,1.3s						
GTA				pmax	pmax		
	comp=Z,5µm,10.2s						
GTA				LR	LR		
	comp=Z,65µm,16.4s						
GTA				LR	LR		
	comp=Z,216µm,15.6s						
H11S1	**WAKE ISLAND Hy**	**31.01**	**123**	P	**P**	**13 28 41.1**	**+3.7**
	baz=279,slow=5.3,SNR=5.8						
H11S3	**WAKE ISLAND Hy**	**31.01**	**123**	P	**P**	**13 28 41.1**	**+3.6**
	baz=279,slow=5.3,SNR=5.1						
H11S2	**WAKE ISLAND Hy**	**31.03**	**123**	P	**P**	**13 28 41.2**	**+3.6**
	baz=279,slow=5.3,SNR=5.1						
QIZ	**Qiongzhong**	**32.26**	**241**	P	**P**	**13 28 50.0**	**+1.3**
QIZ				S	**S**	**13 34 01.8**	**+0.4**
QIZ				sS	**sS**	**13 34 16.9**	**+6.5**
QIZ				pmax	pmax		
	comp=Z,8µm,6.8s						
QIZ				LR	LR		
	comp=Z,89µm,13.1s						
BILL	**Bilibino**	**32.97**	**18**	P	**P**	**13 28 52.2**	**-2.2**
BILL				IAmb	IAmb	13 29 04.0	
	comp=Z,663nm,1.4s						
BILL				IAMs_20	IAMs_20	13 43 35.1	
	comp=Z,79µm,19.0s						
BILL	**Bilibino**	**32.97**	**18**	*c i*P	**P**	**13 28 54.2**	**-0.2**
BILL				*i* *PP	**pP**	**13 28 59.5**	**-0.3**
BILL				pmax	pmax		
	comp=Z,664nm,1.6s						
BILL				MLR	MLR		
	comp=Z,75µm,18.0s						
ADK	**Adak**	**33.07**	**52**	P	**P**	**13 28 54.3**	**-1.1**
ADK	**Adak**	**33.07**	**52**	P	**P**	**13 28 56.2**	**+0.8**
ADK	**Adak**	**33.07**	**52**	P	**P**	**13 28 54.3**	**-1.1**
ADK				pmax	pmax		
	comp=Z,347nm,1.4s						
ADK				MLR	MLR		
	comp=Z,27µm,20.0s						
ADK	**Adak**	**33.07**	**52**	⇑P	**P**	**13 28 55.2**	**-0.3**
TIXI	**Tiksi**	**33.54**	**354**	P	**P**	**13 28 57.1**	**-2.2**
TIXI				IAmb	IAmb	13 29 09.3	
	comp=Z,872nm,1.8s						
TIXI	**Tiksi**	**33.54**	**354**	LR	LR	13 42 50.0	
	comp=Z,15µm,20.9s,baz=140,slow=37						
TIXI	**Tiksi**	**33.54**	**354**	*c i*P	**P**	**13 28 59.3**	**0.0**
TIXI				pmax	pmax		
	comp=Z,491nm,1.6s						
TIXI				MLR	MLR		
	comp=Z,54µm,15.0s						
TIXI	**Tiksi**	**33.54**	**354**	⇑P	**P**	**13 28 58.8**	**-0.5**
KMI	**Kunming**	**33.74**	**257**	⇑P	**P**	**13 29 01.4**	**-0.5**
KMI				S	**S**	**13 34 19.8**	**-4.9**
KMI				pmax	pmax		
	comp=Z,190nm,1.1s						
KMI				pmax	pmax		
	comp=Z,7µm,7.3s						
KMI				LR	LR		
	comp=Z,141µm,14.7s						
KMI				LR	LR		
	comp=Z,177µm,14.6s						
KMI				LR	LR		
	comp=Z,177µm,15.1s						
PZH	**PanZhiHua**	**33.79**	**260**	P	**P**	**13 29 01.3**	**-0.9**
PZH				pP	**pP**	**13 29 07.3**	**-0.3**
PZH				PP	**PP**	**13 30 18.3**	**-0.4**
PZH				S	**S**	**13 34 21.4**	**-3.9**
PZH				sS	**sS**	**13 34 36.8**	**+2.5**
PZH				SS	**SnSn**	**13 36 24.6**	**-5.7**
PZH				pmax	pmax		
	comp=Z,260nm,1.2s						
PZH				LR	LR		
	comp=Z,119µm,18.6s						
PZH				LR	LR		
	comp=Z,136µm,16.2s						
PZH				LR	LR		
	comp=Z,169µm,17.2s						
DAV	**Davao City (W)**	**33.83**	**205**	IAMs_20	IAMs_20	13 43 20.3	

	comp=Z,57µm,19.0s						
DAV	Davao City (W)	33.83	205	LR	LR	13 43 51.6	
	comp=Z,51µm,18.1s,baz=60,slow=38						
DAV	Davao City (W)	33.83	205	P	P	13 29 04.5	+2.2
DAV				P	P	13 29 04.5	+2.2
DAV				P	P	13 29 04.5	+2.2
DAV	Davao City (W)	33.83	205	P	P	13 29 01.7	-0.7
DAV	Davao City (W)	33.83	205	P	P	13 29 00.0	-2.4
ATKA	Atka Island	34.63	52	P	P	13 29 09.6	+0.6
ATKA	Atka Island	34.63	52	⇑P	P	13 29 08.7	-0.3
SLVN	Son La	35.03	251	P	P	13 29 10.6	-2.3
SLVN				IAMs_20	IAMs_20	13 44 28.1	
	comp=Z,55µm,19.0s						
SLVN	Son La	35.03	251	P	P	13 29 13.3	+0.5
GOMU	GeErMu	35.29	280	P	P	13 29 13.1	-2.3
GOMU				S	S	13 34 49.9	+1.1
GOMU				pmax	pmax		
	comp=Z,36nm,0.9s						
GOMU				LR	LR		
	comp=Z,255µm,13.8s						
GOMU				LR	LR		
	comp=Z,120µm,13.7s						
GOMU				LR	LR		
	comp=Z,124µm,13.4s						
SGSI	Sangihe	37.02	204	P	P	13 29 29.5	-0.3
TNCH	TengChong	37.04	261	P	P	13 29 30.4	+0.2
TNCH				sP	pP	13 29 36.3	+0.7
TNCH				S	S	13 35 08.9	-6.4
TNCH				pmax	pmax		
	comp=Z,9µm,6.5s						
TNCH				LR	LR		
	comp=Z,63µm,13.3s						
TNCH				LR	LR		
	comp=Z,136µm,14.2s						
MIDW	Midway	37.19	93	P	P	13 29 30.3	-0.9
MIDW				IAmb	IAmb	13 29 42.6	
	comp=Z,1µm,1.4s						
MIDW	Midway	37.19	93	P	P	13 29 34.0	+2.8
SPIA	Saint Paul Isl	37.44	44	P	P	13 29 28.4	-4.6
SPIA				IAmb	IAmb	13 29 37.4	
	comp=Z,2µm,1.9s						
SPIA	Saint Paul Isl	37.44	44	P	P	13 29 35.2	+2.2
SPIA	Saint Paul Isl	37.44	44	P	P	13 29 31.1	-1.8
	baz=262						
SPIA				S	S	13 35 16.8	-3.6
	baz=262						
P08K	Saint George I	37.75	45	P	P	13 29 34.3	-1.3
	baz=264						
P08K				S	S	13 35 21.3	-3.7
	baz=264						
NIKH	Nikolski High	37.92	51	P	P	13 29 33.6	-3.5
NIKH	Nikolski High	37.92	51	P	P	13 29 39.1	+2.0
NIKH	Nikolski High	37.92	51	P	P	13 29 35.4	-1.7
	baz=269						
NIKH				S	S	13 35 21.8	-6.0
	baz=269						
GAMB	Gambell	38.18	33	P	P	13 29 38.3	-0.8
GAMB	Gambell	38.18	33	P	P	13 29 39.9	+0.7
	baz=252,SNR=6.0						
GAMB				S	S	13 35 33.5	+2.1
	baz=252						
DLV	Lat	38.28	234	P	P	13 29 41.3	+0.6
DLV	Lat	38.28	234	⇑P	P	13 29 40.4	-0.3
MYLDM	Lahad Datu	38.35	215	IAmb	IAmb	13 29 52.1	
	comp=Z,1µm,1.3s						
MYLDM				IAMs_20	IAMs_20	13 40 33.4	
	comp=Z,50µm,18.0s						
MYLDM	Lahad Datu	38.35	215	P	P	13 29 42.3	+1.2
KKM	Kota Kinabalu	38.67	219	IAMs_20	IAMs_20	13 46 38.8	
	comp=Z,53µm,19.0s						
KKM	Kota Kinabalu	38.67	219	P	P	13 29 45.3	+1.4
KKM	Kota Kinabalu	38.67	219	⇑P	P	13 29 43.0	-0.9
WMQ	Urumqi	38.76	295	P	P	13 29 44.8	+0.4
WMQ				sP	pP	13 29 50.9	+1.0
WMQ				PP	PnPn	13 31 15.8	+0.5
WMQ				S	S	13 35 41.3	+0.4
WMQ				pmax	pmax		
	comp=Z,28nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,5µm,4.1s						
WMQ				LR	LR		
	comp=Z,75µm,12.9s						
WMQ				LR	LR		
	comp=Z,92µm,14.1s						
WMQ				LR	LR		
	comp=Z,41µm,10.5s						
TNTI	Ternate	39.27	199	P	P	13 29 46.6	-2.2
TNTI				IAmb	IAmb	13 30 00.6	
	comp=Z,2µm,1.7s						
TNTI	Ternate	39.27	199	P	P	13 29 49.9	+1.1
TNTI	Ternate	39.27	199	P	P	13 29 49.5	+0.7
	comp=Z,13µmcomp=Z,499nm,1.5s						
TNTI	Ternate	39.27	199	⇑P	P	13 29 47.7	-1.1
UNV	Unalaska Valle	39.34	49	P	P	13 29 47.0	-1.9
	baz=270						
UNV				S	S	13 35 42.4	-6.7
	baz=270						
ZIRO	ZIRO	39.44	268	*e*P	P	13 29 47.6	-2.8
ZIRO				IAmb	IAmb	13 29 59.5	
	comp=Z,698nm,0.9s						
ZALV	Zalesovo Beam	39.71	311	P	P	13 29 49.1	-3.0
ZALV	Zalesovo Beam	39.71	311	P	P	13 29 51.2	-0.9
	comp=Z,62nm,0.9s,baz=86,slow=4.6,SNR=64						
ZALV				PcP	PcP	13 31 59.1	+0.7
	comp=Z,34nm,0.6s,baz=91,slow=2.9,SNR=5.6						
ZALV				LR	LR	13 46 14.8	
	comp=Z,28µm,18.4s,baz=91,slow=36						
ZALV				P3KPbc		13 59 49.2	
	comp=Z,2.1nm,0.8s,baz=269,slow=6.8,SNR=4.5						
ZALV				PKPPKP	P'P'df	14 02 08.1	-18
	comp=Z,2.4nm,0.8s,baz=308,slow=4.9,SNR=4.4						
	comp=Z,62nm,0.9s						
ZALV	Zalesovo Beam	39.71	311	*i* P	P	13 29 51.9	-0.2
ZALV				pmax	pmax		
	comp=Z,32nm,0.6s						
BAKI	Biak	39.74	185	P	P	13 29 57.0	+4.3
	comp=Z,49µmcomp=Z,23µmcomp=Z,483nm,1.6s						
M11K	Mekoryuk	39.97	39	P	P	13 29 53.8	-0.3
	baz=262,SNR=7.4						
M11K				S	S	13 35 53.7	-4.6
	baz=262						
SWI	Sorong	40.01	193	P	P	13 29 54.8	-0.1
	comp=Z,38µmcomp=Z,21µmcomp=Z,566nm,1.1s						
KOHI	KOHIMA	40.11	265	*e*P	P	13 29 53.0	-3.0
KOHI				IAmb	IAmb	13 30 05.4	
	comp=Z,987nm,2.0s						
ZSN	Zaisan	40.14	301	*e*P	P	13 29 55.0	-0.8
ZSN	Zaisan	40.14	301	*e*P	P	13 29 55.1	-0.8
RKPI	Ransiki, Papua	40.23	188	P	P	13 29 57.7	+0.9
	comp=Z,36µmcomp=Z,19µmcomp=Z,531nm,1.4s						
CHTO	Chiang Mai	40.25	252	P	P	13 29 55.0	-2.0
CHTO	Chiang Mai	40.25	252	P	P	13 29 57.4	+0.4
CHTO				P	P	13 29 57.4	+0.4
CHTO	Chiang Mai	40.25	252	P	P	13 29 57.9	+0.9
CHTO	Chiang Mai	40.25	252	P	P	13 29 55.0	-2.0
CHTO				pmax	pmax		
	comp=Z,113nm,1.0s						
CHTO				MLR	MLR		
	comp=Z,37µm,22.0s						
CHTO	Chiang Mai	40.25	252	P	P	13 29 57.8	+0.8
CHTO	Chiang Mai	40.25	252	⇓P	P	13 29 55.7	-1.3
TNA	Tin City	40.25	31	P	P	13 29 56.2	-0.2
TNA				IAMs_20	IAMs_20	13 48 11.0	
	comp=Z,48µm,18.0s						
TNA	Tin City	40.25	31	P	P	13 29 55.3	-1.2
	baz=254,SNR=11						
TNA				S	S	13 36 00.6	-1.9
	baz=254						
SRPI	Serui, Papua	40.40	185	P	P	13 30 00.5	+2.3
	comp=Z,27µmcomp=Z,11µmcomp=Z,314nm,1.2s						
SMPI	Sarmi	40.42	181	P	P	13 29 59.5	+1.2
	comp=Z,867nm,1.5s						
KMSI	Cibinong	40.45	204	P	P	13 29 58.7	+0.2
CM31	Chiang Mai Arr	40.47	252	P	P	13 30 00.2	+1.4
	SNR=15						
CM31				P	P	13 30 00.2	+1.4
	SNR=15						
CMAR	Chiang Mai Arr	40.47	252	P	P	13 29 57.4	-1.4
	comp=Z,15nm,0.6s,baz=43,slow=8.1,SNR=65						
CMAR				PcP	PcP	13 32 01.9	+0.4
	comp=Z,8.9nm,0.6s,baz=27,slow=1.4,SNR=8.0						
CMAR				PKiKP	PKiKP	13 39 11.8	+0.6
	comp=Z,1.3nm,0.8s,baz=275,slow=1.8,SNR=4.3						
CMAR				LR	LR	13 47 21.0	
	comp=Z,34µm,18.1s,baz=50,slow=37						
CMAR				PKPPKP	P'P'df	14 02 03.7	-15
	comp=Z,0.4nm,0.4s,baz=270,slow=5.8,SNR=4.3						
	comp=Z,15nm,0.6s						
CMAR	Chiang Mai Arr	40.47	252	*i* P	P	13 29 57.4	-1.4
CMAR				pmax	pmax		
	comp=Z,14nm,0.5s						
LSA	Lhasa	40.57	272	P	P	13 29 59.8	-0.3
LSA				S	S	13 35 57.8	-11
LSA				LR	LR		
	comp=Z,66µm,14.3s						
LSA				LR	LR		
	comp=Z,88µm,14.9s						
LSA	Lhasa	40.57	272	P	P	13 29 60.0	-0.1
IMP	Imphal	40.69	264	*e*P	P	13 29 59.0	-1.6
IMP				IAmb	IAmb	13 30 04.2	
	comp=Z,886nm,0.8s						
F14K	Arctic Creek	40.87	31	P	P	13 30 01.9	+0.3
	baz=256						
F14K				S	S	13 36 11.7	-0.1
	baz=256						
K13K	Kusilvak Mount	40.93	37	P	P	13 30 02.8	+0.8
	baz=262,SNR=60						
K13K				S	S	13 36 14.0	+1.3
	baz=262						
JAY	Jayapura	40.95	178	LR	LR	13 44 16.6	
	comp=Z,65µm,20.4s,baz=357,slow=32						
JAY	Jayapura	40.95	178	P	P	13 30 03.6	+0.9
	comp=Z,33µmcomp=Z,15µmcomp=Z,335nm,1.6s						
TAWA	Tawang	40.96	269	*e*P	P	13 30 00.2	-3.0
TAWA				IAmb	IAmb	13 30 10.0	
	comp=Z,712nm,0.8s						
GENI	Genyem	41.02	179	P	P	13 30 05.1	+1.9
GENI	Genyem	41.02	179	P	P	13 30 04.5	+1.3
	comp=Z,942nm,1.2s						
GENI	Genyem	41.02	179	⇑P	P	13 30 04.6	+1.3
ANM	Nome	41.07	33	IAMs_20	IAMs_20	13 49 11.6	
	comp=Z,34µm,18.0s						
ANM	Nome	41.07	33	P	P	13 30 04.7	+1.5
	baz=258						
ANM				S	S	13 36 16.4	+1.7
	baz=258						
TOLI2	Tolitoli	41.08	209	P	P	13 30 00.9	-2.8
TOLI2	Tolitoli	41.08	209	P	P	13 30 03.9	+0.1
MANU	Manus Island	41.12	168	⇑P	P	13 30 03.2	-0.9
FALS	False Pass	41.14	48	P	P	13 30 02.8	-1.1
	baz=271						
FALS				S	S	13 36 16.8	+0.9
	baz=271						
MRSI	Marisa	41.23	207	P	P	13 30 04.3	-0.7
	comp=Z,34µmcomp=Z,26µmcomp=Z,1µm,1.3s						
M13K	Dall Lake	41.38	39	P	P	13 30 06.9	+1.1
	baz=265,SNR=25						
M13K				S	S	13 36 21.4	+2.1
	baz=265						
J14K	Nanvaranak Lak	41.55	36	IAmb	IAmb	13 30 12.1	
	comp=Z,2µm,2.0s						
J14K				IAMs_20	IAMs_20	13 49 47.5	
	comp=Z,32µm,18.0s						
J14K	Nanvaranak Lak	41.55	36	P	P	13 30 09.0	+1.9
	baz=262,SNR=48						
J14K				S	S	13 36 22.0	+0.1
	baz=262						
F15K	North Star Dit	41.61	31	IAMs_20	IAMs_20	13 47 25.9	
	comp=Z,48µm,20.0s						
F15K	North Star Dit	41.61	31	P	P	13 30 09.6	+1.9
	baz=258,SNR=43						
F15K				S	S	13 36 23.3	+0.5
	baz=258						
G15K	Niukluk	41.71	32	P	P	13 30 09.4	+0.9
	baz=259,SNR=74						
G15K				S	S	13 36 27.0	+2.7
	baz=259						
L14K	Kuka Creek	41.79	38	IAmb	IAmb	13 30 14.1	
	comp=Z,2µm,2.0s						
L14K	Kuka Creek	41.79	38	P	P	13 30 09.7	+0.6
	baz=264,SNR=82						
L14K				S	S	13 36 29.7	+4.3
	baz=264						
FAKI	Fak Fak	41.87	191	P	P	13 30 08.2	-2.1
FAKI				IAmb	IAmb	13 30 14.4	
	comp=Z,2µm,1.3s						
FAKI	Fak Fak	41.87	191	P	P	13 30 10.0	-0.3
FAKI	Fak Fak	41.87	191	P	P	13 30 10.0	-0.3
	comp=Z,42µmcomp=Z,1µm,1.4s						
FAKI	Fak Fak	41.87	191	⇑P	P	13 30 09.2	-1.0
S12K	Black Hills	41.90	46	P	P	13 30 08.9	-1.3
	baz=271						
S12K				S	S	13 36 22.0	-5.2
	baz=271						
C16K	Lisburne Hills	41.97	27	P	P	13 30 11.1	+0.5
	baz=254,SNR=30						
C16K				S	S	13 36 23.6	-4.4
	baz=254						
MK31	Makanchi Array	41.98	300*c*	*i*P	P	13 30 10.3	-0.7
MKAR	Makanchi Array	41.98	300	P	P	13 30 07.6	-3.3
MKAR	Makanchi Array	41.98	300	P	P	13 30 08.5	-2.5
	comp=Z,37nm,0.8s,baz=83,slow=12,SNR=78						
MKAR				PcP	PcP	13 32 06.2	+0.3
	comp=Z,24nm,0.9s,baz=69,slow=4.0,SNR=3.7						
MKAR				ScP	ScP	13 35 57.8	+2.3
	comp=Z,2.6nm,0.8s,baz=98,slow=4.4,SNR=2.0						
MKAR				LR	LR	13 47 17.8	
	comp=Z,38µm,18.8s,baz=78,slow=36						
MKAR				P3KPbc		13 59 39.8	
	comp=Z,1.5nm,1.0s,baz=15,slow=2.9,SNR=4.5						
MKAR				PKPPKP	P'P'df	14 02 07.3	-15
	comp=Z,0.5nm,0.6s,baz=270,slow=2.4,SNR=3.8						
	comp=Z,37nm,0.8s						
M14K	Bethel	42.09	39	P	P	13 30 12.3	+0.8
	baz=266,SNR=77						
M14K				S	S	13 36 32.1	+2.3
	baz=266						
MPSI	Mapaga	42.13	210	P	P	13 30 11.4	-1.0
	comp=Z,28µmcomp=Z,17µmcomp=Z,538nm,1.3s						
N14K	Kuskokwak Cree	42.17	40	P	P	13 30 12.6	+0.3
	baz=267,SNR=19						
N14K				S	S	13 36 32.0	+0.9
	baz=267						
MAKZ	Makanchi	42.19	300	P	P	13 30 10.6	-2.1
MAKZ				IAMs_20	IAMs_20	13 47 14.1	
	comp=Z,38µm,18.0s						
MAKZ	Makanchi	42.19	300	P	P	13 30 10.6	-2.1
MAKZ				pmax	pmax		
	comp=Z,111nm,1.1s						
MAKZ				MLR	MLR		
	comp=Z,38µm,18.0s						
SANI	Sanana	42.34	200	P	P	13 30 13.9	-0.2
SANI	Sanana	42.34	200	P	P	13 30 11.8	-2.3
SANI	Sanana	42.34	200	P	P	13 30 13.1	-1.0
	comp=Z,36µmcomp=Z,21µmcomp=Z,496nm,1.9s						
SANI	Sanana	42.34	200	⇑P	P	13 30 11.4	-2.7
O14K	Tigyukauivet M	42.35	41	P	P	13 30 13.5	-0.2
O14K	Tigyukauivet M	42.35	41	P	P	13 30 14.2	+0.4
	baz=268,SNR=23						
O14K				S	S	13 36 36.4	+2.5
	baz=268						
LUWI	Luwuk	42.36	205	P	P	13 30 12.9	-1.3
LUWI	Luwuk	42.36	205	P	P	13 30 10.3	-4.0
LUWI				IAMs_20	IAMs_20	13 46 05.6	
	comp=Z,40µm,21.0s						
LUWI	Luwuk	42.36	205	P	P	13 30 13.4	-0.8
LUWI	Luwuk	42.36	205	P	P	13 30 13.0	-1.3
	comp=Z,21µmcomp=Z,18µmcomp=Z,1µm,1.4s						
LUWI	Luwuk	42.36	205	⇑P	P	13 30 10.6	-3.6
L15K	Ungalak Mounta	42.39	37	P	P	13 30 14.6	+0.5
	baz=265,SNR=41						
L15K				S	S	13 36 34.6	+0.2
	baz=265						
KMPI	Kaimana, Papua	42.41	189	P	P	13 30 17.3	+2.7
K15K	Wolf Creek Mou	42.43	36	P	P	13 30 15.0	+0.6
	baz=264,SNR=52						
K15K				S	S	13 36 37.4	+2.5
	baz=264						
G16K	Koyuk River	42.48	32	IAMs_20	IAMs_20	13 48 16.3	
	comp=Z,41µm,20.0s						
G16K	Koyuk River	42.48	32	P	P	13 30 15.2	+0.5
	baz=260						
G16K				S	S	13 36 39.4	+3.8
	baz=260						
APSI	Ampana	42.62	207	P	P	13 30 16.8	+0.4
D17K	Noatak River	42.66	28	P	P	13 30 17.0	+0.9
	baz=257,SNR=51						
D17K				S	S	13 36 38.0	-0.1
	baz=257						
M15K	Kasigluk River	42.71	39	P	P	13 30 18.1	+1.4
	baz=267,SNR=127						
M15K				S	S	13 36 40.5	+1.4
	baz=267						
RDOG	Red Dog Mine	42.80	28	IAMs_20	IAMs_20	13 50 43.3	
	comp=Z,51µm,18.0s						
RDOG	Red Dog Mine	42.80	28	P	P	13 30 18.3	+1.0
	baz=257,SNR=16						
RDOG				S	S	13 36 38.7	-1.6
	baz=257						
C17K	DeLong Mountai	42.80	27	P	P	13 30 17.1	-0.2
	baz=256,SNR=53						
C17K				S	S	13 36 39.6	-0.8
	baz=256						
SDPT	Sand Point	42.81	47	P	P	13 30 17.4	-0.1
SDPT	Sand Point	42.81	47	P	P	13 30 15.9	-1.6
	baz=273,SNR=11						
SDPT				S	S	13 36 38.8	-1.8
	baz=273						
MSAI	Masohi	42.88	196	P	P	13 30 21.1	+2.6
J16K	Anvik River	42.95	35	P	P	13 30 19.2	+0.6
	baz=264,SNR=29						
J16K				S	S	13 36 46.1	+3.5
	baz=264						
I17K	Unalakleet	42.98	34	IAmb	IAmb	13 30 24.0	
	comp=Z,2µm,2.0s						
I17K	Unalakleet	42.98	34	P	P	13 30 19.4	+0.7
	baz=263,SNR=22						
I17K				S	S	13 36 46.7	+3.9
	baz=263						
N15K	Kwethluk River	42.98	40	P	P	13 30 19.7	+0.8
	baz=268,SNR=75						
N15K				S	S	13 36 44.7	+1.6
	baz=268						
E17K	Hotham Inlet	43.00	29	P	P	13 30 19.0	+0.1
	baz=259,SNR=93						
E17K				S	S	13 36 44.9	+1.7
	baz=259						
O15K	Ungalikthiuk R	43.09	41	P	P	13 30 20.1	+0.4
	baz=269,SNR=96						
O15K				S	S	13 36 45.4	+0.6
	baz=269						
F17K	Baldwin Pennin	43.11	30	IAMs_20	IAMs_20	13 49 19.8	
	comp=Z,46µm,19.0s						
F17K	Baldwin Pennin	43.11	30	P	P	13 30 19.7	-0.1
	baz=260						
F17K				S	S	13 36 45.5	+0.7
	baz=260						
NLAI	Namlea	43.20	198	P	P	13 30 23.9	+2.9
	comp=Z,42µmcomp=Z,24µmcomp=Z,599nm,1.6s						
G17K	Kiwalik Mounta	43.20	32	P	P	13 30 20.9	+0.3
	baz=262,SNR=188						
G17K				S	S	13 36 49.0	+2.8
	baz=262						
S14K	Fog Glacier	43.29	45	P	P	13 30 20.7	-0.8
	baz=273						
S14K				S	S	13 36 47.6	-0.2
	baz=273						
PCI	Palu	43.29	209	P	P	13 30 20.6	-1.2
CHNA	Chernabura Isl	43.35	47	P	P	13 30 21.6	-0.3
CHNA	Chernabura Isl	43.35	47	P	P	13 30 22.0	+0.1
	baz=274,SNR=38						
CHNA				S	S	13 36 48.1	-0.4
	baz=274						
L16K	Owhat River	43.35	37	IAmb	IAmb	13 30 33.5	
	comp=Z,924nm,1.6s						
L16K	Owhat River	43.35	37	P	P	13 30 21.6	-0.2
	baz=267,SNR=81						
L16K				S	S	13 36 50.6	+2.1
	baz=267						
CNBA	Chernabura Isl	43.35	47	IAMs_20	IAMs_20	13 47 53.2	
	comp=Z,34µm,21.0s						
AAI	Ambon	43.37	197	P	P	13 30 24.2	+1.8
	comp=Z,40µmcomp=Z,25µmcomp=Z,1µm,1.6s						
H17K	Granite Mounta	43.44	33	IAmb	IAmb	13 30 28.5	
	comp=Z,1µm,1.6s						
H17K	Granite Mounta	43.44	33	P	P	13 30 23.0	+0.5
	baz=263,SNR=93						
H17K				S	S	13 36 52.1	+2.4
	baz=263						
B18K	Kokolik River	43.50	26	P	P	13 30 23.0	+0.1
	baz=257,SNR=57						
B18K				S	S	13 36 47.6	-2.8
	baz=257						
E18K	Tukpahlearik C	43.53	29	IAMs_20	IAMs_20	13 50 02.7	
	comp=Z,36µm,19.0s						
E18K	Tukpahlearik C	43.53	29	P	P	13 30 23.5	+0.3
	baz=260,SNR=89						
E18K				S	S	13 36 52.4	+1.5
	baz=260						
C18K	Utukok River	43.55	27	IAMs_20	IAMs_20	13 51 19.2	
	comp=Z,38µm,18.0s						
C18K	Utukok River	43.55	27	P	P	13 30 24.4	+0.9
	baz=258,SNR=179						
C18K				S	S	13 36 51.0	-0.4
	baz=258						
M16K	Timber Creek	43.57	38	IAMs_20	IAMs_20	13 49 01.9	
	comp=Z,33µm,20.0s						
M16K	Timber Creek	43.57	38	P	P	13 30 25.1	+1.4
	baz=268,SNR=63						
M16K				S	S	13 36 54.4	+2.7
	baz=268						
BRDH	Bariadhala	43.62	263	LR	LR	13 47 56.3	
	comp=Z,49µm,18.9s,baz=77,slow=35						
GTK	Tadong	43.65	271	*e*P	P	13 30 22.2	-2.6
GTK				IAML		13 30 32.0	
	comp=Z,475nm,2.1s						
J17K	VABM Dome	43.65	35	IAmb	IAmb	13 30 35.8	
	comp=Z,812nm,1.3s						
J17K				IAMs_20	IAMs_20	13 50 54.9	
	comp=Z,30µm,18.0s						
J17K	VABM Dome	43.65	35	P	P	13 30 25.0	+0.8
	baz=266,SNR=103						
J17K				S	S	13 36 55.8	+3.1
	baz=266						
N16K	Nishlik Lake	43.65	39	P	P	13 30 24.5	+0.2
	baz=269,SNR=134						
N16K				S	S	13 36 55.4	+2.5
	baz=269						
KURK	Kurchatov	43.75	307	P	P	13 30 23.2	-1.9
KURK	Kurchatov	43.75	307	IAMs_20	IAMs_20	13 47 53.1	
	comp=Z,45µm,19.0s						
KURK	Kurchatov	43.75	307	P	P	13 30 24.3	-0.9
KURK	Kurchatov	43.75	307*c*	*i*P	P	13 30 22.2	-3.0
KURK				pmax	pmax		
	comp=Z,459nm,1.3s						
KURK				MLR	MLR		
	comp=Z,107µm,16.0s						
KURK	Kurchatov	43.75	307	⇓P	P	13 30 22.8	-2.4
F18K	Selawik	43.77	30	P	P	13 30 25.5	+0.5
	baz=262,SNR=112						
F18K				S	S	13 36 56.8	+2.4
	baz=262						
KURBB	Kurchatov Arra	43.82	306	P	P	13 30 22.5	-3.2
	comp=Z,192nm,1.1s,baz=84,slow=8.8,SNR=134						
KURBB				LR	LR	13 48 06.7	
	comp=Z,41µm,19.7s,baz=83,slow=36						
KURBB				P3KPbc		13 59 33.0	
	comp=Z,0.8nm,0.9s,baz=258,slow=4.3,SNR=4.9						
KURBB				PKPPKP	P'P'df	14 02 08.5	-12
	comp=Z,0.4nm,0.5s,baz=303,slow=2.1,SNR=4.8						
	comp=Z,192nm,1.1s						
BNDI	Bandanaira	43.83	194	P	P	13 30 27.6	+1.4
BNDI	Bandanaira	43.83	194	P	P	13 30 27.8	+1.6
BNDI	Bandanaira	43.83	194	⇑P	P	13 30 25.5	-0.7
CHGN	Chignik	43.92	45	S	S	13 36 55.2	-1.7
	baz=274						
L17K	Donlin	43.93	37	P	P	13 30 27.1	+0.6
	baz=268,SNR=93						
L17K				S	S	13 36 58.5	+1.6
	baz=268						
SMKI	Samarinda	43.94	213	P	P	13 30 32.7	+5.7
	comp=Z,820nm,1.4s						
A19K	Wainwright	43.94	25	P	P	13 30 27.6	+1.2
	baz=256,SNR=29						
A19K				S	S	13 36 54.9	-1.9
	baz=256						
K17K	Iditarod	43.95	36	IAmb	IAmb	13 30 38.1	
	comp=Z,689nm,1.1s						
K17K				IAMs_20	IAMs_20	13 51 21.0	
	comp=Z,31µm,18.0s						
K17K	Iditarod	43.95	36	P	P	13 30 27.5	+0.8
	baz=267,SNR=101						
K17K				S	S	13 37 00.8	+3.5
	baz=267						
O16K	Kokwok River B	43.98	40	P	P	13 30 25.2	-1.7
O16K	Kokwok River B	43.98	40	P	P	13 30 28.3	+1.4
	baz=270,SNR=82						
O16K				S	S	13 37 00.2	+2.5
	baz=270						
P16K	Nushagak River	44.04	41	IAmb	IAmb	13 30 33.3	
	comp=Z,854nm,0.9s						

P16K	**Nushagak River**	**44.04**	**41**	P	**P**	**13 30 28.9**	**+1.5**
	baz=271,SNR=20						
P16K				S	**S**	**13 37 01.1**	**+2.5**
	baz=271						
G18K	**Tagagawik**	**44.07**	**31**	IAmb	IAmb	13 30 38.5	
	comp=Z,1µm,1.2s						
G18K				IAMs_20	IAMs_20	13 50 48.1	
	comp=Z,43µm,18.0s						
G18K	**Tagagawik**	**44.07**	**31**	P	**P**	**13 30 28.7**	**+1.1**
	baz=263,SNR=566						
G18K				S	**S**	**13 37 01.7**	**+2.8**
	baz=263						
H18K	**Honhosa River**	**44.11**	**32**	IAmb	IAmb	13 30 33.5	
	comp=Z,2µm,1.8s						
H18K				IAMs_20	IAMs_20	13 49 07.4	
	comp=Z,36µm,20.0s						
H18K	**Honhosa River**	**44.11**	**32**	P	**P**	**13 30 28.5**	**+0.6**
	baz=264,SNR=182						
H18K				S	**S**	**13 37 02.3**	**+2.7**
	baz=264						
RABL	**Rabaul**	**44.19**	**162**	IAmb	IAmb	13 30 41.6	
	comp=Z,625nm,1.1s						
RABL	**Rabaul**	**44.19**	**162**	⇑P	**P**	**13 30 28.1**	**-1.0**
C19K	**Lookout Ridge**	**44.21**	**27**	IAmb	IAmb	13 30 39.4	
	comp=Z,748nm,1.1s						
C19K				IAMs_20	IAMs_20	13 48 40.7	
	comp=Z,44µm,19.0s						
C19K	**Lookout Ridge**	**44.21**	**27**	P	**P**	**13 30 29.4**	**+0.7**
	baz=259,SNR=122						
C19K				S	**S**	**13 37 01.2**	**+0.2**
	baz=259						
R16K	**Pilot Point**	**44.31**	**43**	P	**P**	**13 30 30.2**	**+0.7**
	baz=273						
R16K				S	**S**	**13 37 04.5**	**+2.0**
	baz=273						
M17K	**Holitna River**	**44.31**	**38**	IAMs_20	IAMs_20	13 50 04.6	
	comp=Z,30µm,19.0s						
M17K	**Holitna River**	**44.31**	**38**	P	**P**	**13 30 30.1**	**+0.6**
	baz=269,SNR=126						
M17K				S	**S**	**13 37 07.0**	**+4.4**
	baz=269						
N17K	**Nushagak Hills**	**44.43**	**39**	P	**P**	**13 30 31.2**	**+0.7**
	baz=270,SNR=73						
N17K				S	**S**	**13 37 07.1**	**+2.8**
	baz=270						
O17K	**Koliganek Bris**	**44.48**	**40**	P	**P**	**13 30 31.3**	**+0.3**
	baz=271,SNR=90						
O17K				S	**S**	**13 37 07.9**	**+2.9**
	baz=271						
F19K	**Shaleruckik Mo**	**44.54**	**30**	IAMs_20	IAMs_20	13 50 13.6	
	comp=Z,39µm,19.0s						
F19K	**Shaleruckik Mo**	**44.54**	**30**	P	**P**	**13 30 31.2**	**0.0**
	baz=263						
F19K				S	**S**	**13 37 06.7**	**+1.0**
	baz=263						
D19K	**Kuna River**	**44.64**	**28**	IAMs_20	IAMs_20	13 49 47.1	
	comp=Z,32µm,19.0s						
D19K	**Kuna River**	**44.64**	**28**	P	**P**	**13 30 32.1**	**0.0**
	baz=261						
D19K				S	**S**	**13 37 05.5**	**-1.6**
	baz=261						
PDGK	**Podgornoye**	**44.68**	**296**	P	**P**	**13 30 31.0**	**-2.0**
L18K	**Granite Mounta**	**44.69**	**37**	IAmb	IAmb	13 30 37.9	
	comp=Z,2µm,1.9s						
L18K	**Granite Mounta**	**44.69**	**37**	P	**P**	**13 30 32.9**	**+0.3**
	baz=269,SNR=131						
L18K				S	**S**	**13 37 12.0**	**+4.1**
	baz=269						
GCSA	**Galena City Sc**	**44.71**	**33**	P	**P**	**13 30 32.1**	**-0.5**
	baz=266,SNR=61						
GCSA				S	**S**	**13 37 11.3**	**+3.2**
	baz=266						
J18K	**Innoko River**	**44.71**	**35**	P	**P**	**13 30 32.8**	**+0.1**
	baz=268,SNR=100						
J18K				S	**S**	**13 37 10.1**	**+1.8**
	baz=268						
G19K	**Purcell Mounta**	**44.74**	**31**	IAMs_20	IAMs_20	13 50 22.6	
	comp=Z,35µm,19.0s						
G19K	**Purcell Mounta**	**44.74**	**31**	P	**P**	**13 30 32.9**	**0.0**
	baz=264,SNR=67						
G19K				S	**S**	**13 37 11.6**	**+3.0**
	baz=264						
Q16K	**King Salmon**	**44.74**	**42**	P	**P**	**13 30 33.7**	**+0.7**
	baz=272,SNR=12						
Q16K				S	**S**	**13 37 10.8**	**+2.0**
	baz=272						
BKB	**Balikpapan**	**44.80**	**213**	P	**P**	**13 30 34.3**	**+0.4**
BKB	**Balikpapan**	**44.80**	**213**	P	**P**	**13 30 37.7**	**+3.8**
	comp=Z,1µm,1.3s						
BKB	**Balikpapan**	**44.80**	**213**	⇑P	**P**	**13 30 34.5**	**+0.5**
E19K	**Redstone River**	**44.82**	**29**	IAMs_20	IAMs_20	13 50 53.1	
	comp=Z,34µm,18.0s						
E19K	**Redstone River**	**44.82**	**29**	P	**P**	**13 30 33.4**	**-0.2**
	baz=263						
E19K				S	**S**	**13 37 10.9**	**+1.1**
	baz=263						
P17K	**Kvichak River**	**44.84**	**41**	P	**P**	**13 30 33.4**	**-0.3**
	baz=272,SNR=63						
P17K				S	**S**	**13 37 13.2**	**+3.1**
	baz=272						
H19K	**Roundabout Mou**	**44.95**	**32**	IAMs_20	IAMs_20	13 49 51.1	
	comp=Z,44µm,20.0s						
H19K	**Roundabout Mou**	**44.95**	**32**	P	**P**	**13 30 34.8**	**+0.3**
	baz=266,SNR=579						
H19K				S	**S**	**13 37 14.0**	**+2.5**
	baz=266						
TDK	**Taldyqorghan**	**45.01**	**299**	*e*P	**P**	**13 30 34.5**	**-0.9**
TDK				*e*S	**S**	**13 37 12.7**	**-0.4**
TDK				pmax	pmax		
	comp=Z,702nm,1.9s						
TDK				MLR	MLR		
	comp=Z,83µm,12.0s						
TDK	**Taldyqorghan**	**45.01**	**299**	*e*P	**P**	**13 30 34.5**	**-0.9**
	comp=Z,702nm,1.9s						
TDK				*e*S	**S**	**13 37 12.7**	**-0.4**
TDK				LR	LR	13 51 23.0	
	comp=Z,83µm,11.9s						
UZB	**Uzynbulak**	**45.06**	**296**	*e*P	**P**	**13 30 35.0**	**-1.0**
UZB	**Uzynbulak**	**45.06**	**296**	*e*P	**P**	**13 30 35.0**	**-1.0**
N18K	**Kilae Creek**	**45.07**	**39**	IAmb	IAmb	13 30 47.1	
	comp=Z,615nm,1.3s						
N18K	**Kilae Creek**	**45.07**	**39**	P	**P**	**13 30 35.8**	**+0.2**
	baz=271,SNR=102						
N18K				S	**S**	**13 37 16.7**	**+3.1**
	baz=271						
M18K	**Stony River**	**45.09**	**38**	P	**P**	**13 30 35.4**	**-0.4**
	baz=270,SNR=89						
M18K				S	**S**	**13 37 18.1**	**+4.3**
	baz=270						
Q17K	**Contact Creek**	**45.17**	**42**	P	**P**	**13 30 36.3**	**-0.3**
	baz=274,SNR=67						
Q17K				S	**S**	**13 37 16.2**	**+1.0**
	baz=274						
B20K	**Meade River**	**45.21**	**26**	IAmb	IAmb	13 30 47.1	
	comp=Z,1µm,1.4s						
B20K	**Meade River**	**45.21**	**26**	P	**P**	**13 30 36.2**	**-0.4**
	baz=261,SNR=365						
B20K				S	**S**	**13 37 14.5**	**-0.8**
	baz=261						
D20K	**Etivluk River**	**45.21**	**28**	P	**P**	**13 30 36.1**	**-0.6**
	baz=262						
D20K				S	**S**	**13 37 12.0**	**-3.4**
	baz=262						
KPKS	**Kokpek**	**45.21**	**296**	*e*P	**P**	**13 30 36.3**	**-0.8**
KPKS				*e*S	**S**	**13 37 15.8**	**-0.4**
KPKS	**Kokpek**	**45.21**	**296**	*e*P	**P**	**13 30 36.3**	**-0.8**
KPKS				*e*S	**S**	**13 37 15.8**	**-0.4**
J19K	**Poorman**	**45.22**	**34**	IAmb	IAmb	13 30 47.5	
	comp=Z,516nm,1.2s						
J19K	**Poorman**	**45.22**	**34**	P	**P**	**13 30 36.4**	**-0.3**
	baz=268,SNR=217						
J19K				S	**S**	**13 37 17.0**	**+1.4**
	baz=268						
TTSI	**Tana Toraja**	**45.26**	**208**	P	**P**	**13 30 39.4**	**+1.8**
	comp=Z,21µmcomp=Z,10µmcomp=Z,176nm,1.4s						
E20K	**Nigu River**	**45.31**	**28**	P	**P**	**13 30 37.2**	**-0.3**
	baz=263						
E20K				S	**S**	**13 37 14.8**	**-2.2**
	baz=263						
F20K	**Avaraart Lake**	**45.36**	**30**	IAmb	IAmb	13 30 49.6	
	comp=Z,891nm,1.7s						
F20K				IAMs_20	IAMs_20	13 50 49.1	
	comp=Z,44µm,19.0s						
F20K	**Avaraart Lake**	**45.36**	**30**	P	**P**	**13 30 37.9**	**+0.1**
	baz=265,SNR=247						
F20K				S	**S**	**13 37 19.0**	**+1.4**
	baz=265						
O18K	**Koktuh Hills**	**45.44**	**40**	IAmb	IAmb	13 30 44.3	
	comp=Z,1µm,1.8s						
O18K	**Koktuh Hills**	**45.44**	**40**	P	**P**	**13 30 38.8**	**+0.3**
	baz=272,SNR=80						
O18K				S	**S**	**13 37 22.5**	**+3.6**
	baz=272						
P18K	**Big Mountain,**	**45.45**	**41**	P	**P**	**13 30 38.8**	**+0.1**
	baz=273,SNR=56						
P18K				S	**S**	**13 37 20.9**	**+1.8**
	baz=273						
CHIR	**Chirikof Islan**	**45.52**	**46**	IAMs_20	IAMs_20	13 49 05.5	
	comp=Z,32µm,19.0s						
CHIR	**Chirikof Islan**	**45.52**	**46**	P	**P**	**13 30 40.9**	**+1.7**
CHIR	**Chirikof Islan**	**45.52**	**46**	P	**P**	**13 30 39.7**	**+0.5**
	baz=276,SNR=14						
CHIR				S	**S**	**13 37 21.9**	**+1.8**
	baz=276						
SATY	**Saty**	**45.52**	**296**	*e*P	**P**	**13 30 38.8**	**-0.8**
SATY				*e*S	**S**	**13 37 20.1**	**-0.6**
SATY	**Saty**	**45.52**	**296**	*e*P	**P**	**13 30 38.8**	**-0.8**
SATY				*e*S	**S**	**13 37 20.2**	**-0.6**
L19K	**White Mountain**	**45.55**	**37**	P	**P**	**13 30 40.1**	**+0.7**
	baz=270,SNR=101						
L19K				S	**S**	**13 37 23.3**	**+2.9**
	baz=270						
H20K	**Anotleneega Mo**	**45.60**	**32**	P	**P**	**13 30 39.7**	**0.0**
	baz=267,SNR=208						
H20K				S	**S**	**13 37 23.3**	**+2.2**
	baz=267						
KSM	**Kuching**	**45.60**	**223**	IAmb	IAmb	13 30 51.0	
	comp=Z,732nm,1.4s						
KSM	**Kuching**	**45.60**	**223**	P	**P**	**13 30 42.0**	**+1.7**
Q18K	**Katmai Hardscr**	**45.60**	**42**	P	**P**	**13 30 39.7**	**-0.3**
	baz=274,SNR=70						
Q18K				S	**S**	**13 37 22.6**	**+1.0**
	baz=274						
A21K	**Barrow**	**45.62**	**24**	P	**P**	**13 30 39.0**	**-0.8**
	baz=260,SNR=123						
A21K				S	**S**	**13 37 21.4**	**+0.3**
	baz=260						
I20K	**Naaghedeneel**	**45.74**	**33**	IAmb	IAmb	13 31 23.8	
	comp=Z,1µm,1.5s						
I20K	**Naaghedeneel**	**45.74**	**33**	P	**P**	**13 30 41.2**	**+0.4**
	baz=268,SNR=39						
I20K				S	**S**	**13 37 25.7**	**+2.6**
	baz=268						
N19K	**Bonanza Creek**	**45.76**	**39**	P	**P**	**13 30 41.2**	**+0.1**
	baz=272,SNR=43						
N19K				S	**S**	**13 37 24.6**	**+1.0**
	baz=272						
M19K	**Big River Lodg**	**45.77**	**37**	P	**P**	**13 30 41.1**	**-0.1**
	baz=271,SNR=95						
M19K				S	**S**	**13 37 27.1**	**+3.5**
	baz=271						
O19K	**Port Alsworth**	**45.86**	**40**	P	**P**	**13 30 41.9**	**0.0**
	baz=273,SNR=37						
O19K				S	**S**	**13 37 28.3**	**+3.4**
	baz=273						
J20K	**Nowinta River**	**45.87**	**34**	IAmb	IAmb	13 30 47.7	
	comp=Z,537nm,1.2s						
J20K				IAMs_20	IAMs_20	13 51 24.6	
	comp=Z,27µm,18.0s						
J20K	**Nowinta River**	**45.87**	**34**	P	**P**	**13 30 41.7**	**-0.2**
	baz=269,SNR=176						
J20K				S	**S**	**13 37 27.5**	**+2.5**
	baz=269						
K20K	**Telida**	**45.90**	**35**	IAmb	IAmb	13 30 48.0	
	comp=Z,442nm,1.1s						
K20K				IAMs_20	IAMs_20	13 52 24.4	
	comp=Z,30µm,18.0s						
K20K	**Telida**	**45.90**	**35**	P	**P**	**13 30 42.5**	**+0.4**
	baz=270,SNR=214						
K20K				S	**S**	**13 37 28.6**	**+3.1**
	baz=270						
C21K	**Knifeblade Rid**	**45.92**	**27**	P	**P**	**13 30 42.3**	**+0.1**
	baz=264,SNR=377						
C21K				S	**S**	**13 37 26.3**	**+0.6**
	baz=264						
R18K	**Karluk**	**45.99**	**43**	P	**P**	**13 30 42.3**	**-0.6**
	baz=275						
R18K				S	**S**	**13 37 26.9**	**+0.2**
	baz=275						
L20K	**Farewell, AK**	**45.99**	**36**	P	**P**	**13 30 42.8**	**-0.2**
	baz=271,SNR=126						
L20K				S	**S**	**13 37 28.5**	**+1.6**
	baz=271						
B21K	**Ikpikpuk River**	**46.03**	**26**	IAMs_20	IAMs_20	13 50 19.8	
	comp=Z,30µm,20.0s						
B21K	**Ikpikpuk River**	**46.03**	**26**	P	**P**	**13 30 43.2**	**+0.1**
	baz=264						
B21K				S	**S**	**13 37 28.0**	**+0.8**
	baz=264						
IMAR	**Indian Mountai**	**46.09**	**31**	P	**P**	**13 30 42.8**	**-0.8**
A22K	**Sinclair Lake**	**46.09**	**24**	P	**P**	**13 30 43.3**	**-0.2**
	baz=262,SNR=413						
A22K				S	**S**	**13 37 29.7**	**+1.7**
	baz=262						
SPSI	**Sidrap Palu**	**46.13**	**208**	P	**P**	**13 30 45.0**	**+0.6**
	comp=Z,28µmcomp=Z,12µmcomp=Z,259nm,1.5s						
E21K	**Killik River**	**46.15**	**28**	IAMs_20	IAMs_20	13 50 44.1	
	comp=Z,37µm,20.0s						
E21K	**Killik River**	**46.15**	**28**	P	**P**	**13 30 43.8**	**-0.3**
	baz=265						
E21K				S	**S**	**13 37 25.2**	**-3.7**
	baz=265						
STKI	**Sintang**	**46.18**	**221**	P	**P**	**13 30 47.1**	**+2.2**
	comp=Z,37µmcomp=Z,269nm,1.1s						
G21K	**Allakaket**	**46.20**	**31**	IAMs_20	IAMs_20	13 51 26.7	
	comp=Z,35µm,19.0s						
G21K	**Allakaket**	**46.20**	**31**	P	**P**	**13 30 44.6**	**+0.1**
	baz=268						
G21K				S	**S**	**13 37 29.6**	**-0.2**
	baz=268						
SII	**Sitkinak Islan**	**46.24**	**45**	P	**P**	**13 30 46.8**	**+1.9**
SII	**Sitkinak Islan**	**46.24**	**45**	P	**P**	**13 30 45.0**	**+0.1**
	baz=277,SNR=23						
SII				S	**S**	**13 37 30.0**	**-0.5**
	baz=277						
F21K	**Alatna River**	**46.25**	**30**	IAmb	IAmb	13 30 55.6	
	comp=Z,500nm,1.2s						
F21K				IAMs_20	IAMs_20	13 51 00.5	
	comp=Z,32µm,19.0s						
F21K	**Alatna River**	**46.25**	**30**	P	**P**	**13 30 44.6**	**-0.3**
	baz=267,SNR=274						
F21K				S	**S**	**13 37 31.3**	**+0.9**
	baz=267						
Q19K	**Cape Douglas,**	**46.29**	**41**	IAmb	IAmb	13 30 49.0	
	comp=Z,453nm,0.7s						
Q19K	**Cape Douglas,**	**46.29**	**41**	P	**P**	**13 30 45.3**	**0.0**
	baz=275,SNR=44						
Q19K				S	**S**	**13 37 32.1**	**+0.8**
	baz=275						
M20K	**Styx River**	**46.36**	**37**	IAmb	IAmb	13 30 52.4	
	comp=Z,843nm,1.9s						
M20K	**Styx River**	**46.36**	**37**	P	**P**	**13 30 45.9**	**-0.1**
	baz=272,SNR=73						
M20K				S	**S**	**13 37 34.7**	**+2.4**
	baz=272						
BNSI	**Bone**	**46.41**	**207**	P	**P**	**13 30 47.9**	**+1.2**
	comp=Z,34µmcomp=Z,18µmcomp=Z,680nm,1.7s						
MDOK	**Medeo**	**46.45**	**296**	*e*P	**P**	**13 30 45.9**	**-1.0**
MDOK				*e*S	**S**	**13 37 33.4**	**-0.7**
MDOK				MLR	MLR		
	comp=Z,59µm,12.0s						
MDOK	**Medeo**	**46.45**	**296**	*e*P	**P**	**13 30 45.9**	**-1.0**
MDOK				*e*S	**S**	**13 37 33.4**	**-0.7**
MDOK				LR	LR	13 52 55.0	
	comp=Z,59µm,12.1s						
P19K	**Oil Pt**	**46.45**	**40**	IAmb	IAmb	13 30 57.3	
	comp=Z,663nm,1.4s						
P19K	**Oil Pt**	**46.45**	**40**	P	**P**	**13 30 46.8**	**+0.2**
	baz=274,SNR=22						
P19K				S	**S**	**13 37 35.4**	**+1.9**
	baz=274						
H21K	**Melozitna Rive**	**46.47**	**32**	IAmb	IAmb	13 30 57.7	
	comp=Z,610nm,1.2s						
H21K				IAMs_20	IAMs_20	13 50 28.3	
	comp=Z,36µm,20.0s						
H21K	**Melozitna Rive**	**46.47**	**32**	P	**P**	**13 30 46.7**	**+0.1**
	baz=269,SNR=268						
H21K				S	**S**	**13 37 35.5**	**+1.9**
	baz=269						
B22K	**Teshekpuk Lake**	**46.52**	**25**	P	**P**	**13 30 46.8**	**-0.2**
	baz=264,SNR=351						
B22K				S	**S**	**13 37 34.3**	**+0.1**
	baz=264						
AAA	**Alma-Ata**	**46.52**	**297**	*e*P	**P**	**13 30 46.5**	**-0.9**
AAA				MLR	MLR		
	comp=Z,96µm,13.0s						
AAA	**Alma-Ata**	**46.52**	**297**	*e*P	**P**	**13 30 46.5**	**-0.9**
AAA				LR	LR	13 53 01.5	
	comp=Z,96µm,13.1s						
BBSI	**Bau Bau**	**46.60**	**203**	P	**P**	**13 30 51.2**	**+3.0**
	comp=Z,33µmcomp=Z,19µmcomp=Z,766nm,1.5s						
RED	**Redoubt Volcan**	**46.62**	**39**	IAmb	IAmb	13 30 58.4	
	comp=Z,441nm,1.0s						
SRIT	**Nakonsritamara**	**46.62**	**241**	IAmb	IAmb	13 30 52.0	
	comp=Z,451nm,0.8s						
OHAK	**Old Harbor**	**46.65**	**44**	IAmb	IAmb	13 30 52.7	
	comp=Z,1µm,1.7s						
OHAK				IAMs_20	IAMs_20	13 53 38.5	
	comp=Z,27µm,18.0s						
OHAK	**Old Harbor**	**46.65**	**44**	P	**P**	**13 30 49.1**	**+1.0**
OHAK	**Old Harbor**	**46.65**	**44**	P	**P**	**13 30 48.5**	**+0.4**
	baz=277,SNR=75						
OHAK				S	**S**	**13 37 36.1**	**-0.1**
	baz=277						
D22K	**Ayikyak River**	**46.65**	**27**	IAMs_20	IAMs_20	13 51 23.1	
	comp=Z,42µm,19.0s						
D22K	**Ayikyak River**	**46.65**	**27**	P	**P**	**13 30 48.0**	**0.0**
	baz=266,SNR=594						
D22K				S	**S**	**13 37 36.5**	**+0.4**
	baz=266						
CHUM	**Lake Minchumin**	**46.68**	**34**	P	**P**	**13 30 48.2**	**0.0**
	baz=271,SNR=38						
CHUM				S	**S**	**13 37 39.2**	**+2.7**
	baz=271						
O20K	**Slope Mountain**	**46.72**	**40**	P	**P**	**13 30 48.4**	**-0.3**
	baz=274,SNR=24						
O20K				S	**S**	**13 37 37.9**	**+0.5**
	baz=274						
PPLA	**Purkeypile**	**46.76**	**36**	P	**P**	**13 30 49.6**	**+0.4**
	baz=272,SNR=142						
PPLA				S	**S**	**13 37 41.5**	**+3.4**
	baz=272						
F22K	**John River**	**46.77**	**29**	P	**P**	**13 30 49.5**	**+0.5**
	baz=268						
F22K				S	**S**	**13 37 37.9**	**+0.1**
	baz=268						
CAST	**Castle Rocks**	**46.79**	**35**	IAMs_20	IAMs_20	13 53 02.0	
	comp=Z,31µm,18.0s						
CAST	**Castle Rocks**	**46.79**	**35**	P	**P**	**13 30 50.0**	**+0.8**
	baz=272,SNR=308						
CAST				S	**S**	**13 37 41.8**	**+3.5**
	baz=272						
N20K	**Mount Spurr**	**46.84**	**38**	P	**P**	**13 30 49.7**	**+0.1**
	baz=274						
N20K				S	**S**	**13 37 42.6**	**+3.4**
	baz=274						
SPCR	**Spurr Chakacha**	**46.84**	**38**	P	**P**	**13 30 49.7**	**+0.1**
	baz=274,SNR=48						
SPCR				S	**S**	**13 37 40.1**	**+0.9**
	baz=274						
SPU	**Mount Spurr**	**46.92**	**38**	IAmb	IAmb	13 30 55.8	
	comp=Z,449nm,1.2s						
E22K	**Anaktuvuk Pass**	**46.93**	**29**	IAMs_20	IAMs_20	13 52 05.5	
	comp=Z,44µm,18.0s						
E22K	**Anaktuvuk Pass**	**46.93**	**29**	P	**P**	**13 30 50.4**	**+0.1**
	baz=268,SNR=790						
E22K				S	**S**	**13 37 40.3**	**+0.1**
	baz=268						
KDAK	**Kodiak Island**	**46.96**	**43**	P	**P**	**13 30 48.7**	**-1.9**
KDAK	**Kodiak Island**	**46.96**	**43**	IAMs_20	IAMs_20	13 54 13.7	
	comp=Z,37µm,19.0s						
KDAK	**Kodiak Island**	**46.96**	**43**	LR	LR	13 51 12.8	
	comp=Z,23µm,21.6s,baz=230,slow=37						
KDAK	**Kodiak Island**	**46.96**	**43***c*	*i*P	**P**	**13 30 50.6**	**+0.1**
KDAK				pmax	pmax		
	comp=Z,1µm,1.9s						
KDAK				MLR	MLR		
	comp=Z,43µm,18.0s						
KDAK	**Kodiak Island**	**46.96**	**43**	P	**P**	**13 30 50.5**	**-0.1**
	baz=277						
KDAK				S	**S**	**13 37 40.2**	**-0.5**
	baz=277						
Q20K	**Shuyak Island**	**46.97**	**42**	P	**P**	**13 30 50.5**	**-0.1**
	baz=276,SNR=57						
Q20K				S	**S**	**13 37 40.7**	**-0.1**
	baz=276						
SYI	**Shuyak Island**	**46.97**	**42**	IAmb	IAmb	13 31 00.3	
	comp=Z,492nm,1.0s						
SAUI	**Saumlaki**	**46.99**	**191**	P	**P**	**13 30 52.7**	**+1.6**
SAUI	**Saumlaki**	**46.99**	**191**	P	**P**	**13 30 55.4**	**+4.3**
G22K	**Bettles**	**47.01**	**30**	P	**P**	**13 30 50.9**	**+0.1**
	baz=269						
G22K				S	**S**	**13 37 44.7**	**+3.5**
	baz=269						
H22K	**Ishtalitna Cre**	**47.06**	**32**	P	**P**	**13 30 51.3**	**0.0**
	baz=270,SNR=442						
H22K				S	**S**	**13 37 45.0**	**+3.1**
	baz=270						
KAPI	**Kappang**	**47.11**	**207**	P	**P**	**13 30 50.4**	**-1.7**
KAPI	**Kappang**	**47.11**	**207**	LR	LR	13 50 43.3	
	comp=Z,17µm,20.8s,baz=5.5,slow=36						
KAPI	**Kappang**	**47.11**	**207**	P	**P**	**13 30 53.7**	**+1.5**
KAPI				P	**P**	**13 30 53.7**	**+1.5**
KAPI				S	**S**	**13 37 46.4**	**+2.8**
KAPI				S	**S**	**13 37 46.4**	**+2.8**
KAPI	**Kappang**	**47.11**	**207**	P	**P**	**13 30 52.8**	**+0.7**
KAPI	**Kappang**	**47.11**	**207**	*i* P	**P**	**13 30 50.9**	**-1.2**
KAPI				pmax	pmax		
	comp=Z,1µm,1.4s						
KAPI				MLR	MLR		
	comp=Z,17µm,20.0s						
KAPI	**Kappang**	**47.11**	**207**	P	**P**	**13 30 52.0**	**-0.1**
KAPI				S	**S**	**13 37 42.4**	**-1.2**
SKT	**Skwentna**	**47.12**	**37**	P	**P**	**13 30 51.4**	**-0.3**
	baz=274,SNR=54						
SKT				S	**S**	**13 37 44.7**	**+1.8**
	baz=274						
HOM	**Homer**	**47.25**	**40**	IAmb	IAmb	13 30 57.5	
	comp=Z,652nm,0.9s						
HOM	**Homer**	**47.25**	**40**	P	**P**	**13 30 52.6**	**-0.1**
	baz=276,SNR=12						
HOM				S	**S**	**13 37 43.6**	**-1.1**
	baz=276						
BPAW	**Bear Paw Mtn.**	**47.26**	**34**	IAmb	IAmb	13 31 04.7	
	comp=Z,1µm,1.8s						
BPAW				IAMs_20	IAMs_20	13 51 25.3	
	comp=Z,29µm,20.0s						
BPAW	**Bear Paw Mtn.**	**47.26**	**34**	P	**P**	**13 30 52.6**	**-0.2**
	baz=272,SNR=160						
BPAW				S	**S**	**13 37 46.6**	**+1.7**
	baz=272						
KTH	**Kantishna Hill**	**47.31**	**35**	IAmb	IAmb	13 30 58.9	
	comp=Z,622nm,0.9s						
MLY	**Manley**	**47.33**	**33**	IAmb	IAmb	13 31 04.7	
	comp=Z,389nm,1.1s						
MLY	**Manley**	**47.33**	**33**	P	**P**	**13 30 53.6**	**+0.2**
	baz=272,SNR=107						
MLY				S	**S**	**13 37 48.8**	**+2.8**
	baz=272						
D23K	**Nanushuk River**	**47.38**	**27**	IAMs_20	IAMs_20	13 54 23.0	
	comp=Z,40µm,18.0s						
D23K	**Nanushuk River**	**47.38**	**27**	P	**P**	**13 30 53.7**	**0.0**
	baz=268,SNR=355						
D23K				S	**S**	**13 37 46.7**	**+0.2**
	baz=268						
CAPN	**Captain Cook N**	**47.39**	**39**	P	**P**	**13 30 54.9**	**+1.1**
	baz=275						
CAPN				S	**S**	**13 37 45.6**	**-1.1**
	baz=275						
C23K	**Itkillik River**	**47.44**	**26**	IAMs_20	IAMs_20	13 51 06.0	
	comp=Z,33µm,20.0s						
C23K	**Itkillik River**	**47.44**	**26**	P	**P**	**13 30 54.1**	**0.0**
	baz=267,SNR=444						
C23K				S	**S**	**13 37 48.0**	**+0.7**
	baz=267						
CNPM	**China Poot**	**47.47**	**40**	IAmb	IAmb	13 30 59.2	
	comp=Z,314nm,0.8s						
SUA	**Susitna One**	**47.52**	**38**	IAmb	IAmb	13 31 01.2	
	comp=Z,398nm,0.8s						
SUA	**Susitna One**	**47.52**	**38**	P	**P**	**13 30 54.9**	**-0.1**
	baz=275,SNR=87						
SUA				S	**S**	**13 37 50.3**	**+1.4**
	baz=275						
COLD	**Coldfoot**	**47.53**	**30**	IAmb	IAmb	13 31 05.8	
	comp=Z,394nm,1.1s						
COLD				IAMs_20	IAMs_20	13 52 38.2	
	comp=Z,38µm,19.0s						
COLD	**Coldfoot**	**47.53**	**30**	P	**P**	**13 30 54.7**	**-0.1**
	baz=270,SNR=407						
COLD				S	**S**	**13 37 51.6**	**+3.0**
	baz=270						
TKM2	**Tokmak 2**	**47.53**	**297**	P	**P**	**13 30 56.7**	**+1.2**
	SNR=65						
TKM2	**Tokmak 2**	**47.53**	**297**	*i* P	**P**	**13 30 54.4**	**-1.1**

TKM2				pmax	pmax		
	comp=Z,169nm,0.9s						
TRF	**Thorofare Moun**	47.60	35	IAmb	IAmb	13 31 01.9	
	comp=Z,216nm,0.8s						
TRF				IAMs_20	IAMs_20	13 53 36.3	
	comp=Z,25µm,18.0s						
TRF	**Thorofare Moun**	47.60	35	P	P	13 30 55.2	-0.4
	baz=273,SNR=214						
TRF				S	S	13 37 52.5	+2.5
	baz=273						
G23K	**Bananza Creek**	47.60	31	IAmb	IAmb	13 31 06.3	
	comp=Z,669nm,1.1s						
G23K	**Bananza Creek**	47.60	31	P	P	13 30 55.5	0.0
	baz=271,SNR=425						
G23K				S	S	13 37 53.0	+3.2
	baz=271						
BRLK	**Bradley Lake**	47.62	40	IAmb	IAmb	13 31 01.0	
	comp=Z,321nm,0.8s						
BRZS	**Berezniki**	47.62	307	*e*P	P	13 30 55.2	-0.6
BRZS				*e*S	S	13 37 50.2	-0.2
BRZS	**Berezniki**	47.62	307	*e*P	P	13 30 55.2	-0.6
BRZS				*e*S	S	13 37 50.3	-0.2
CUT	**Chulitna**	47.68	36	IAmb	IAmb	13 31 00.6	
	comp=Z,531nm,1.0s						
CUT	**Chulitna**	47.68	36	P	P	13 30 56.1	+0.1
	baz=274,SNR=34						
CUT				S	S	13 37 51.1	+0.3
	baz=274						
BRSE	**Bradley Lake S**	47.69	40	P	P	13 30 56.9	+0.7
	baz=276,SNR=46						
BRSE				S	S	13 37 50.8	-0.4
	baz=276						
E23K	**Chandalar**	47.75	29	IAMs_20	IAMs_20	13 52 23.2	
	comp=Z,38µm,19.0s						
E23K	**Chandalar**	47.75	29	P	P	13 30 57.0	+0.3
	baz=270,SNR=725						
E23K				S	S	13 37 52.9	+0.9
	baz=270						
TOLK	**Toolik Lake Re**	47.77	28	IAMs_20	IAMs_20	13 52 06.8	
	comp=Z,41µm,19.0s						
TOLK	**Toolik Lake Re**	47.77	28	P	P	13 30 57.3	+0.5
	baz=269,SNR=272						
TOLK				S	S	13 37 53.1	+0.9
	baz=269						
M22K	**Willow**	47.80	37	IAmb	IAmb	13 32 36.2	
	comp=Z,340nm,1.2s						
M22K	**Willow**	47.80	37	P	P	13 30 56.9	0.0
	baz=275,SNR=21						
M22K				S	S	13 37 52.9	+0.4
	baz=275						
H23K	**Yukon River**	47.81	32	IAMs_20	IAMs_20	13 51 39.9	
	comp=Z,44µm,20.0s						
H23K	**Yukon River**	47.81	32	P	P	13 30 57.0	-0.1
	baz=272,SNR=595						
H23K				S	S	13 37 57.1	+4.3
	baz=272						
BSSI	**Bau Bau, Buton**	47.90	206	P	P	13 31 01.3	+3.0
	comp=Z,37µmcomp=Z,16µmcomp=Z,484nm,1.3s						
I23K	**Minto, Yukon-K**	47.91	33	IAMs_20	IAMs_20	13 51 03.6	
	comp=Z,32µm,20.0s						
I23K	**Minto, Yukon-K**	47.91	33	P	P	13 30 58.0	+0.2
	baz=273,SNR=199						
I23K				S	S	13 37 56.6	+2.5
	baz=273						
BWN	**Browne**	47.92	34	IAMs_20	IAMs_20	13 53 04.7	
	comp=Z,32µm,18.0s						
BTLS	**Baital**	47.98	300	*e*P	P	13 30 57.9	-0.7
BTLS				*e*S	S	13 37 55.3	-0.3
BTLS				pmax	pmax		
	comp=Z,569nm,3.0s						
BTLS	**Baital**	47.98	300	*e*P	P	13 30 58.0	-0.7
	comp=Z,569nm,3.0s						
BTLS				*e*S	S	13 37 55.3	-0.3
RC01	**Rabbit Creek A**	48.05	38	IAmb	IAmb	13 31 03.4	
	comp=Z,332nm,0.9s						
RC01	**Rabbit Creek A**	48.05	38	P	P	13 30 58.5	-0.5
	baz=276,SNR=48						
RC01				S	S	13 37 54.8	-1.3
	baz=276						
SGDS	**Sogindy**	48.05	298	*e*P	P	13 30 58.5	-0.8
	comp=Z,421nm,2.4s						
SGDS				*e*S	S	13 37 56.3	-0.5
D24K	**Happy Valley**	48.05	27	IAMs_20	IAMs_20	13 52 21.1	
	comp=Z,38µm,19.0s						
D24K	**Happy Valley**	48.05	27	P	P	13 30 58.4	-0.5
	baz=270,SNR=387						
D24K				S	S	13 37 56.9	+0.9
	baz=270						
NEA2	**Nenana**	48.07	33	P	P	13 30 58.5	-0.5
	baz=273,SNR=520						
NEA2				S	S	13 37 59.1	+2.7
	baz=273						
KBK	**Karagaybulak**	48.07	296	P	P	13 31 00.6	+1.0
	SNR=27						
CHMS	**Chumysh**	48.10	297	P	P	13 31 00.4	+0.7
	SNR=5.5						
C24K	**Franklin Bluff**	48.10	26	IAMs_20	IAMs_20	13 51 56.7	
	comp=Z,32µm,20.0s						
C24K	**Franklin Bluff**	48.10	26	P	P	13 30 58.7	-0.6
	baz=269						
C24K				S	S	13 37 54.1	-2.6
	baz=269						
O22K	**Cooper Landing**	48.12	39	IAmb	IAmb	13 31 14.0	
	comp=Z,427nm,0.8s						
O22K	**Cooper Landing**	48.12	39	P	P	13 30 59.4	-0.1
	baz=276						
O22K				S	S	13 37 57.8	+0.7
	baz=276						
E24K	**Your Creek**	48.18	29	IAmb	IAmb	13 31 11.2	
	comp=Z,620nm,0.9s						
E24K				IAMs_20	IAMs_20	13 53 05.4	
	comp=Z,36µm,19.0s						
E24K	**Your Creek**	48.18	29	P	P	13 30 59.7	-0.2
	baz=271,SNR=708						
E24K				S	S	13 37 59.5	+1.5
	baz=271						
MCK	**McKinley**	48.18	35	IAmb	IAmb	13 31 04.9	
	comp=Z,375nm,0.8s						
MCK				IAMs_20	IAMs_20	13 52 14.7	
	comp=Z,37µm,20.0s						
MCK	**McKinley**	48.18	35	P	P	13 30 59.6	-0.4
	baz=274,SNR=132						
MCK				S	S	13 37 57.9	-0.2
	baz=274						
USP	**Ospenovka**	48.19	297	P	P	13 31 01.0	+0.6
	SNR=14						
RND	**Reindeer**	48.24	35	IAmb	IAmb	13 31 05.1	
	comp=Z,378nm,0.8s						
OTUK	**Ortayu**	48.26	304	P	P	13 30 58.6	-2.2
PMR	**Palmer**	48.28	37	IAmb	IAmb	13 31 05.2	
	comp=Z,296nm,1.0s						
PMR	**Palmer**	48.28	37	P	P	13 31 00.8	+0.1
PMR	**Palmer**	48.28	37	P	P	13 31 00.7	-0.1
	baz=276,SNR=146						
PMR				S	S	13 38 00.7	+1.3
	baz=276						
SEW	**Seward**	48.30	39	IAmb	IAmb	13 31 04.6	
	comp=Z,257nm,0.8s						
SEW				IAMs_20	IAMs_20	13 52 32.9	
	comp=Z,35µm,19.0s						
SEW	**Seward**	48.30	39	P	P	13 31 00.2	-0.6
	baz=277,SNR=50						
SEW				S	S	13 38 01.3	+1.7
	baz=277						
PMG	**Port Moresby**	48.31	170	P	P	13 30 59.6	-1.8
PMG	**Port Moresby**	48.31	170	LR	LR	13 50 12.4	
	comp=Z,23µm,18.1s,baz=12,slow=35						
PMG	**Port Moresby**	48.31	170	P	P	13 31 01.6	+0.2
PMG	**Port Moresby**	48.31	170	P	P	13 30 59.6	-1.8
PMG				pmax	pmax		
	comp=Z,182nm,1.0s						
PMG	**Port Moresby**	48.31	170	⇑P	P	13 30 59.1	-2.4
KULM	**Kulim**	48.34	237	P	P	13 31 01.2	-0.6
GHO	**Glory Hole Cre**	48.36	37	IAmb	IAmb	13 31 06.3	
	comp=Z,543nm,0.8s						
BVA0	**Borovoye Array**	48.37	311	*i* P	P	13 30 59.7	-1.9
BVAR	**Borovoye Array**	48.37	311	P	P	13 30 59.1	-2.5
	comp=Z,33nm,0.7s,baz=80,slow=8.0,SNR=70						
BVAR				PcP	PcP	13 32 27.3	-0.6
	comp=Z,53nm,0.8s,baz=98,slow=4.0,SNR=5.5						
BVAR				LR	LR	13 52 53.7	
	comp=Z,63µm,18.1s,baz=73,slow=38						
BVAR				P4KPbc		14 08 41.5	
	comp=Z,2.4nm,1.0s,baz=109,slow=3.6,SNR=9.8						
	comp=Z,33nm,0.7s						
KSH	**Kashi**	48.37	292	P	P	13 31 06.4	+4.5
KSH				sP	sP	13 31 13.0	+3.3
KSH				S	S	13 38 05.3	+3.8
KSH				pmax	pmax		
	comp=Z,42nm,1.6s						
KSH				pmax	pmax		
	comp=Z,8µm,6.3s						
AAK	**Ala-Archa**	48.39	297	P	P	13 31 02.7	+0.6
	SNR=15						
AAK	**Ala-Archa**	48.39	297	P	P	13 31 00.8	-1.3
AAK	**Ala-Archa**	48.39	297	LR	LR	13 52 45.5	
	comp=Z,50µm,20.6s,baz=78,slow=38						
AAK	**Ala-Archa**	48.39	297	P	P	13 31 01.9	-0.2
AAK				P	P	13 31 01.9	-0.2
AAK	**Ala-Archa**	48.39	297	*c i*P	P	13 31 01.5	-0.6
AAK				pmax	pmax		
	comp=Z,144nm,1.4s						
AAK				MLR	MLR		
	comp=Z,79µm,16.0s						
AAK	**Ala-Archa**	48.39	297	*i* P	P	13 31 01.7	-0.4
	SNR=47						
AAK	**Ala-Archa**	48.39	297	P	P	13 31 01.4	-0.6
AAK				S	S	13 38 02.2	+0.3
F24K	**Squaw Lake**	48.42	29	IAMs_20	IAMs_20	13 53 16.8	
	comp=Z,24µm,18.0s						
F24K	**Squaw Lake**	48.42	29	P	P	13 31 01.8	0.0
	baz=272,SNR=251						
F24K				S	S	13 38 02.6	+1.3
	baz=272						
BRVK	**Borovoye**	48.42	311	P	P	13 31 00.0	-1.9
BRVK	**Borovoye**	48.42	311	IAMs_20	IAMs_20	13 49 48.7	
	comp=Z,32µm,20.0s						
BRVK	**Borovoye**	48.42	311	P	P	13 31 01.4	-0.5
BRVK				P	P	13 31 01.4	-0.5
BRVK				P	P	13 31 01.4	-0.5
BRVK	**Borovoye**	48.42	311	*c i*P	P	13 31 01.8	-0.2
BRVK				pmax	pmax		
	comp=Z,296nm,1.2s						
BRVK				MLR	MLR		
	comp=Z,97µm,16.0s						
WAT1	**Susitna Watana**	48.43	36	P	P	13 31 01.1	-0.8
	baz=275						
WAT1				S	S	13 38 03.1	+1.5
	baz=275						
H24K	**Noodor Dome**	48.50	32	IAmb	IAmb	13 31 08.5	
	comp=Z,1µm,1.4s						
H24K				IAMs_20	IAMs_20	13 52 39.9	
	comp=Z,40µm,19.0s						
H24K	**Noodor Dome**	48.50	32	P	P	13 31 01.9	-0.5
	baz=273,SNR=471						
H24K				S	S	13 38 06.9	+4.4
	baz=273						
WRH	**Wood River Hil**	48.50	33	IAmb	IAmb	13 32 31.8	
	comp=Z,617nm,1.4s						
COLA	**College**	48.57	33	IAMs_20	IAMs_20	13 51 00.8	
	comp=Z,29µm,20.0s						
COLA	**College**	48.57	33	P	P	13 31 03.8	+0.9
COLA	**College**	48.57	33	*d i*P	P	13 31 03.7	+0.9
COLA				pmax	pmax		
	comp=Z,977nm,1.9s						
COLA				MLR	MLR		
	comp=Z,28µm,17.0s						
COLA	**College**	48.57	33	P	P	13 31 02.1	-0.7
	baz=274						
COLA				S	S	13 38 04.9	+1.6
	baz=274						
COLA	**College**	48.57	33	P	P	13 31 04.0	+1.1
COLA				S	S	13 38 07.4	+4.0
COLA	**College**	48.57	33	⇑P	P	13 31 02.3	-0.6
CCB	**Clear Creek Bu**	48.61	33	IAmb	IAmb	13 31 33.3	
	comp=Z,489nm,1.6s						
G24K	**Hadweenzic Riv**	48.61	30	IAmb	IAmb	13 31 14.9	
	comp=Z,926nm,1.2s						
G24K	**Hadweenzic Riv**	48.61	30	P	P	13 31 03.3	0.0
	baz=273,SNR=426						
G24K				S	S	13 38 06.1	+2.1
	baz=273						
KNK	**Knik Glacier**	48.62	38	IAmb	IAmb	13 31 07.7	
	comp=Z,272nm,0.8s						
KNK	**Knik Glacier**	48.62	38	P	P	13 31 02.5	-0.9
	baz=277,SNR=82						
KNK				S	S	13 38 05.0	+0.7
	baz=277						
SML	**Sawmill**	48.64	37	IAmb	IAmb	13 31 08.5	
	comp=Z,491nm,0.7s						
SML	**Sawmill**	48.64	37	P	P	13 31 02.8	-0.7
	baz=276,SNR=308						
SML				S	S	13 38 05.1	+0.5
	baz=276						
POKR	**Poker Plat Res**	48.73	33	IAMs_20	IAMs_20	13 52 00.1	
	comp=Z,37µm,20.0s						
POKR	**Poker Plat Res**	48.73	33	P	P	13 31 04.2	0.0
	baz=274,SNR=340						
POKR				S	S	13 38 07.8	+2.2
	baz=274						
PWL	**Port Wells**	48.75	38	IAMs_20	IAMs_20	13 53 31.9	
	comp=Z,41µm,19.0s						
PWL	**Port Wells**	48.75	38	P	P	13 31 04.3	-0.1
	baz=277,SNR=76						
PWL				S	S	13 38 06.4	+0.3
	baz=277						
WAT6	**Susitna Watana**	48.83	36	P	P	13 31 05.2	0.0
	baz=276,SNR=188						
WAT6				S	S	13 38 08.2	+0.8
	baz=276						
EKS2	**Erkin-Say**	48.89	297	P	P	13 31 06.5	+0.6
	SNR=9.4						
D25K	**Kavik River**	48.92	27	IAmb	IAmb	13 31 10.3	
	comp=Z,326nm,0.8s						
D25K				IAMs_20	IAMs_20	13 55 09.1	
	comp=Z,35µm,18.0s						
D25K	**Kavik River**	48.92	27	P	P	13 31 05.5	-0.1
	baz=272,SNR=465						
D25K				S	S	13 38 08.1	-0.3
	baz=272						
M23K	**Glacier View**	48.93	37	P	P	13 31 05.1	-0.6
	baz=277,SNR=169						
M23K				S	S	13 38 09.8	+1.2
	baz=277						
DHY	**Denali Highway**	48.94	35	IAmb	IAmb	13 31 16.2	
	comp=Z,507nm,1.0s						
DHY				IAMs_20	IAMs_20	13 54 28.8	
	comp=Z,24µm,18.0s						
DHY	**Denali Highway**	48.94	35	P	P	13 31 05.0	-1.0
	baz=276,SNR=380						
DHY				S	S	13 38 09.1	+0.1
	baz=276						
IL31		48.99	33	IAmb	IAmb	13 31 10.6	
	comp=Z,334nm,0.8s						
ILAR	**Eielson Array**	48.99	33	P	P	13 31 04.7	-1.5
ILAR	**Eielson Array**	48.99	33	P	P	13 31 05.1	-1.1
	comp=Z,142nm,0.6s,baz=272,slow=5.9,SNR=325						
ILAR				LR	LR	13 52 09.1	
	comp=Z,23µm,21.1s,baz=268,slow=36						
ILAR				PKPPKP	P'P'df	14 02 10.4	-4.7
	comp=Z,3.8nm,1.2s,baz=23,slow=1.0,SNR=4.9						
ILAR				P4KPbc		14 08 42.5	
	comp=Z,0.3nm,0.7s,baz=280,slow=3.3,SNR=4.3						
	comp=Z,142nm,0.6s						
ILAR	**Eielson Array**	48.99	33	P	P	13 31 04.7	-1.5
HDA	**Harding Lake**	49.00	34	IAmb	IAmb	13 31 16.1	
	comp=Z,564nm,1.1s						
HDA				IAMs_20	IAMs_20	13 54 28.2	
	comp=Z,24µm,18.0s						
HDA	**Harding Lake**	49.00	34	P	P	13 31 06.0	-0.2
	baz=275,SNR=387						
HDA				S	S	13 38 11.1	+1.7
	baz=275						
SCM	**Sheep Creek Mo**	49.11	37	IAmb	IAmb	13 31 11.7	
	comp=Z,441nm,0.7s						
SCM	**Sheep Creek Mo**	49.11	37	P	P	13 31 06.8	-0.4
	baz=277,SNR=131						
SCM				S	S	13 38 13.2	+2.0
	baz=277						
AML	**Almayashu**	49.12	296	P	P	13 31 09.2	+1.3
	SNR=44						
G25K	**Bearman Lake**	49.15	30	P	P	13 31 07.1	-0.3
	baz=274,SNR=134						
G25K				S	S	13 38 15.6	+4.1
	baz=274						
E25K	**Arctic Village**	49.27	29	IAMs_20	IAMs_20	13 53 50.6	
	comp=Z,39µm,19.0s						
E25K	**Arctic Village**	49.27	29	P	P	13 31 08.4	+0.1
	baz=273						
E25K				S	S	13 38 11.8	-1.4
	baz=273						
F25K	**Christian Rive**	49.27	29	IAmb	IAmb	13 31 21.2	
	comp=Z,594nm,1.2s						
F25K	**Christian Rive**	49.27	29	P	P	13 31 08.7	+0.3
	baz=274,SNR=447						
F25K				S	S	13 38 17.0	+3.6
	baz=274						
H25L	**Birch Creek**	49.30	31	P	P	13 31 08.6	+0.1
	baz=275,SNR=396						
H25L				S	S	13 38 18.4	+4.8
	baz=275						
P23K	**Montague Islan**	49.33	39	P	P	13 31 08.8	0.0
	baz=279						
P23K				S	S	13 38 16.6	+2.4
	baz=279						
GLI	**Glacier Island**	49.35	38	IAmb	IAmb	13 31 13.0	
	comp=Z,286nm,0.8s						
GLI	**Glacier Island**	49.35	38	P	P	13 31 09.1	+0.2
	baz=278,SNR=107						
GLI				S	S	13 38 17.2	+2.7
	baz=278						
C26K	**Camden Bay**	49.41	26	P	P	13 31 09.6	+0.3
	baz=272						
C26K				S	S	13 38 17.6	+2.5
	baz=272						
JOHN	**Johnston Islan**	49.44	101	P	P	13 31 09.9	-0.2
JOHN				IAmb	IAmb	13 31 17.4	
	comp=Z,559nm,0.8s						
JOHN	**Johnston Islan**	49.44	101	P	P	13 31 12.7	+2.5
JOHN	**Johnston Islan**	49.44	101	⇑P	P	13 31 12.1	+1.9
BWNR	**Bhubaneshwar**	49.46	264	*e*P	P	13 31 08.0	-2.3
BWNR				IAmb	IAmb	13 31 21.6	
	comp=Z,760nm,1.6s						
PRP	**Porcupine Dome**	49.49	32	IAmb	IAmb	13 31 15.6	
	comp=Z,451nm,0.8s						
PRP				IAMs_20	IAMs_20	13 52 01.3	
	comp=Z,33µm,20.0s						
PRP	**Porcupine Dome**	49.49	32	P	P	13 31 09.6	-0.6
	baz=276,SNR=496						
PRP				S	S	13 38 19.9	+3.2
	baz=276						
K24K	**Donnelly Dome**	49.57	34	IAmb	IAmb	13 31 15.2	
	comp=Z,578nm,1.1s						
K24K				IAMs_20	IAMs_20	13 54 22.5	
	comp=Z,33µm,19.0s						
K24K	**Donnelly Dome**	49.57	34	P	P	13 31 09.9	-0.7
	baz=277,SNR=234						
K24K				S	S	13 38 19.2	+1.6
	baz=277						
M24K	**Tolsona, Glenn**	49.61	36	IAmb	IAmb	13 31 16.2	
	comp=Z,349nm,0.8s						
M24K	**Tolsona, Glenn**	49.61	36	P	P	13 31 10.9	-0.1
	baz=278						
M24K				S	S	13 38 21.2	+2.9
	baz=278						
J25K	**Salcha River,**	49.65	33	P	P	13 31 11.4	0.0
	baz=277,SNR=157						
J25K				S	S	13 38 19.9	+1.1
	baz=277						
MMRI	**Maumere**	49.68	203	IAmb	IAmb	13 31 27.2	
	comp=Z,575nm,0.9s						
MMRI	**Maumere**	49.68	203	P	P	13 31 12.9	+1.0
MMRI	**Maumere**	49.68	203	P	P	13 31 12.7	+0.8
	comp=Z,39µmcomp=Z,676nm,0.9s						
MMRI	**Maumere**	49.68	203	⇑P	P	13 31 10.3	-1.7
BMAR	**Burnt Mountain**	49.69	29	P	P	13 31 11.7	+0.2
HIN	**Hinchinbrook I**	49.71	39	IAmb	IAmb	13 31 17.1	
	comp=Z,969nm,1.5s						
PAX	**Paxson**	49.82	35	P	P	13 31 13.4	+0.8
	baz=278,SNR=85						
PAX				S	S	13 38 24.0	+2.8
	baz=278						
KLU	**Klutina**	49.82	37	P	P	13 31 11.9	-0.8
KLU				IAmb	IAmb	13 31 23.4	
	comp=Z,538nm,1.1s						
KLU	**Klutina**	49.82	37	P	P	13 31 12.2	-0.5
	baz=279,SNR=132						
KLU				S	S	13 38 23.6	+2.4
	baz=279						
F26K	**Sheenjek River**	49.84	29	IAmb	IAmb	13 31 24.5	
	comp=Z,791nm,1.0s						
F26K	**Sheenjek River**	49.84	29	P	P	13 31 13.1	+0.4
	baz=275,SNR=1000						
F26K				S	S	13 38 24.1	+2.9
	baz=275						
C27K	**Jago River**	49.85	26	IAmb	IAmb	13 31 24.0	
	comp=Z,749nm,1.2s						
C27K				IAMs_20	IAMs_20	13 53 20.5	
	comp=Z,33µm,19.0s						
C27K	**Jago River**	49.85	26	P	P	13 31 12.9	+0.3
	baz=274,SNR=292						
C27K				S	S	13 38 22.5	+1.3
	baz=274						
ARSB	**Arslanbob**	49.89	295	IAmb	IAmb	13 31 22.8	
	comp=Z,2µm,2.0s						
DIV	**Divide**	49.95	38	IAmb	IAmb	13 31 18.9	
	comp=Z,542nm,1.0s						
Q23K	**Middleton Isla**	49.95	40	P	P	13 31 14.0	+0.5
	baz=280						
Q23K				S	S	13 38 28.4	+5.5
	baz=280						
EDFI	**Ende, Flores**	49.96	203	P	P	13 31 12.2	-2.0
	comp=Z,29µmcomp=Z,15µmcomp=Z,361nm,2.4s						
RIDG	**Independent Ri**	49.99	34	IAmb	IAmb	13 31 18.2	
	comp=Z,258nm,0.8s						
RIDG				IAMs_20	IAMs_20	13 54 43.5	
	comp=Z,26µm,19.0s						
RIDG	**Independent Ri**	49.99	34	P	P	13 31 14.0	+0.1
	baz=278,SNR=313						
RIDG				S	S	13 38 24.9	+1.4
	baz=278						
HARP	**HAARP**	50.04	36	P	P	13 31 14.3	+0.1
	baz=279,SNR=196						
HARP				S	S	13 38 27.8	+3.6
	baz=279						
G26K	**Porcupine Rive**	50.05	30	IAmb	IAmb	13 31 26.0	
	comp=Z,921nm,1.2s						
G26K	**Porcupine Rive**	50.05	30	P	P	13 31 14.6	+0.4
	baz=276,SNR=191						
G26K				S	S	13 38 29.4	+5.4
	baz=276						
EYAK	**Cordova Ski Ar**	50.05	38	P	P	13 31 16.0	+1.7
EYAK	**Cordova Ski Ar**	50.05	38	P	P	13 31 14.8	+0.5
	baz=280,SNR=72						
EYAK				S	S	13 38 26.6	+2.4
	baz=280						
SOEI	**Soe**	50.17	200	P	P	13 31 15.2	-0.6
SOEI	**Soe**	50.17	200	P	P	13 31 12.8	-3.1
SOEI	**Soe**	50.17	200	P	P	13 31 15.8	0.0
SOEI	**Soe**	50.17	200	P	P	13 31 15.5	-0.3
SOEI	**Soe**	50.17	200	⇑P	P	13 31 14.0	-1.8
JHSG	**JHARSUGUGA**	50.25	267	*e*P	P	13 31 14.1	-2.3
JHSG				IAmb	IAmb	13 31 25.6	
	comp=Z,598nm,0.8s						
SCRK	**Sand Creek**	50.34	34	IAmb	IAmb	13 31 26.7	
	comp=Z,820nm,1.3s						
SCRK	**Sand Creek**	50.34	34	P	P	13 31 15.7	-0.9
	baz=278,SNR=738						
SCRK				S	S	13 38 29.9	+1.5
	baz=278						
DOT	**Dot Lake**	50.35	34	P	P	13 31 14.9	-1.7
DOT				IAmb	IAmb	13 31 19.0	
	comp=Z,977nm,1.8s						
N25K	**Chitina, Valde**	50.43	37	P	P	13 31 17.0	-0.3
	baz=280,SNR=198						
N25K				S	S	13 38 33.6	+3.9
	baz=280						
J26L	**Joseph Creek**	50.44	33	IAMs_20	IAMs_20	13 53 12.4	
	comp=Z,26µm,20.0s						
J26L	**Joseph Creek**	50.44	33	P	P	13 31 17.6	+0.2
	baz=278,SNR=173						
J26L				S	S	13 38 30.4	+0.5
	baz=278						
TATA	**Tatamba Isabel**	50.46	154	P	P	13 31 20.4	+2.6
I26K	**Coal Creek Min**	50.50	32	IAMs_20	IAMs_20	13 53 14.0	
	comp=Z,38µm,20.0s						
I26K	**Coal Creek Min**	50.50	32	P	P	13 31 17.9	+0.2
	baz=278,SNR=152						
I26K				S	S	13 38 32.5	+2.0
	baz=278						
DZA	**Taraz**	50.51	298	*e*P	P	13 31 17.3	-0.8
DZA	**Taraz**	50.51	298	*e*P	P	13 31 17.4	-0.8
BMRM	**Bremner River**	50.54	38	IAmb	IAmb	13 31 23.4	
	comp=Z,435nm,0.8s						
BMRM	**Bremner River**	50.54	38	P	P	13 31 18.2	+0.1
	baz=280,SNR=181						
BMRM				S	S	13 38 34.0	+2.8
	baz=280						
TPI	**Tanjungpandan**	50.57	223	P	P	13 31 20.3	+1.6
	comp=Z,28µmcomp=Z,11µmcomp=Z,200nm,1.2s						
RAGM	**Ragged Mountai**	50.61	39	IAmb	IAmb	13 31 24.6	

	comp=Z,1µm,1.6s						
MENT	**Mentasta**	**50.61**	**35**	IAmb	IAmb	13 31 29.2	
	comp=Z,346nm,0.8s						
MENT	**Mentasta**	**50.61**	**35**	P	**P**	**13 31 18.8**	**+0.2**
E27K	**Coleen River**	**50.74**	**28**	IAmb	IAmb	13 31 31.8	
	comp=Z,1µm,1.6s						
E27K				IAMs_20	IAMs_20	13 54 48.3	
	comp=Z,31µm,19.0s						
E27K	**Coleen River**	**50.74**	**28**	P	**P**	**13 31 19.9**	**+0.4**
	baz=277,SNR=292						
E27K				S	**S**	**13 38 37.1**	**+3.3**
	baz=277						
L26K	**Log Cabin Wild**	**50.77**	**35**	IAmb	IAmb	13 31 23.5	
	comp=Z,1µm,1.7s						
L26K				IAMs_20	IAMs_20	13 56 02.0	
	comp=Z,26µm,19.0s						
L26K	**Log Cabin Wild**	**50.77**	**35**	P	**P**	**13 31 19.9**	**+0.2**
	baz=280,SNR=369						
L26K				S	**S**	**13 38 38.6**	**+4.3**
	baz=280						
BATI	**Baumata**	**50.77**	**200**	LR	LR	13 51 31.8	
	comp=Z,23µm,22.0s,baz=28,slow=35						
BATI	**Baumata**	**50.77**	**200**	P	**P**	**13 31 20.2**	**0.0**
HMT	**Hamilton**	**50.82**	**39**	IAmb	IAmb	13 31 24.0	
	comp=Z,560nm,1.5s						
KAIM	**Kayak Island**	**50.82**	**39**	P	**P**	**13 31 21.0**	**+0.9**
	baz=281,SNR=17						
KAIM				S	**S**	**13 38 38.2**	**+3.2**
	baz=281						
D27M	**Malcolm River**	**50.85**	**27**	IAmb	IAmb	13 31 32.4	
	comp=Z,2µm,2.0s						
D27M				IAMs_20	IAMs_20	13 54 33.0	
	comp=Z,25µm,18.0s						
D27M	**Malcolm River**	**50.85**	**27**	P	**P**	**13 31 20.7**	**+0.4**
	baz=277,SNR=213						
D27M				S	**S**	**13 38 38.3**	**+3.0**
	baz=277						
LHMI	**Lhok Sumawe**	**50.86**	**240**	⇑P	**P**	**13 31 22.3**	**+1.3**
G27K	**Doyon Strip**	**50.90**	**30**	P	**P**	**13 31 21.2**	**+0.5**
	baz=278,SNR=252						
G27K				S	**S**	**13 38 40.0**	**+4.0**
	baz=278						
PPBI	**Pangkal Pinang**	**50.90**	**225**	P	**P**	**13 31 25.1**	**+3.9**
KK31	**Karatay Array**	**51.01**	**298**	*i* P	**P**	**13 31 19.6**	**-2.2**
KKAR	**Karatay Array**	**51.01**	**298**	P	**P**	**13 31 19.3**	**-2.5**
KKAR	**Karatay Array**	**51.01**	**298**	P	**P**	**13 31 19.3**	**-2.5**
BNDA	**BANDA**	**51.01**	**273**	*e*P	**P**	**13 31 19.9**	**-2.2**
BNDA				IAmb	IAmb	13 31 30.0	
	comp=Z,642nm,1.1s						
M26K	**Nabesna, AK**	**51.03**	**36**	IAmb	IAmb	13 31 33.2	
	comp=Z,681nm,1.3s						
M26K	**Nabesna, AK**	**51.03**	**36**	P	**P**	**13 31 22.0**	**+0.2**
	baz=280,SNR=129						
M26K				S	**S**	**13 38 41.4**	**+3.4**
	baz=280						
H27K	**Steamboat Moun**	**51.03**	**31**	IAmb	IAmb	13 31 28.2	
	comp=Z,1µm,1.8s						
H27K	**Steamboat Moun**	**51.03**	**31**	P	**P**	**13 31 22.5**	**+0.8**
	baz=279,SNR=357						
H27K				S	**S**	**13 38 42.2**	**+4.3**
	baz=279						
VRDI	**Verde Repeater**	**51.04**	**37**	IAmb	IAmb	13 31 32.8	
	comp=Z,1µm,1.8s						
TSI	**Tuntungan**	**51.05**	**237**	P	**P**	**13 31 23.6**	**+1.2**
	comp=Z,24µmcomp=Z,11µmcomp=Z,372nm,0.9s						
BERG	**Berg Lake**	**51.08**	**38**	IAmb	IAmb	13 31 27.8	
	comp=Z,860nm,1.2s						
I27K	**Kandik River**	**51.09**	**32**	P	**P**	**13 31 23.2**	**+1.0**
	baz=279,SNR=171						
I27K				S	**S**	**13 38 43.5**	**+4.7**
	baz=279						
ALEG	**Aligegeo Malai**	**51.11**	**153**	P	**P**	**13 31 24.3**	**+1.5**
K27K	**Chicken**	**51.16**	**34**	P	**P**	**13 31 22.4**	**-0.3**
	baz=280						
K27K				S	**S**	**13 38 39.8**	**+0.2**
	baz=280						
SAVO	**Savo Central**	**51.17**	**154**	P	**P**	**13 31 25.2**	**+2.0**
MCARA	**McCarthy VSAT**	**51.21**	**37**	IAmb	IAmb	13 31 34.9	
	comp=Z,578nm,1.1s						
MCARA	**McCarthy VSAT**	**51.21**	**37**	P	**P**	**13 31 23.9**	**+0.9**
	baz=281,SNR=140						
MCARA				S	**S**	**13 38 42.8**	**+2.4**
	baz=281						
KMMI	**Kalianget**	**51.25**	**213**	P	**P**	**13 31 26.1**	**+2.3**
	comp=Z,39µmcomp=Z,16µmcomp=Z,344nm,1.3s						
WSI	**Waingapu**	**51.26**	**205**	P	**P**	**13 31 22.7**	**-1.2**
	comp=Z,11µmcomp=Z,456nm,1.1s						
CRQM	**Cirque**	**51.28**	**38**	IAmb	IAmb	13 31 29.4	
	comp=Z,844nm,1.2s						
CRQE	**Cirque**	**51.30**	**38**	P	**P**	**13 31 24.7**	**+0.8**
	baz=282,SNR=100						
CRQE				S	**S**	**13 38 44.3**	**+2.3**
	baz=282						
BGLC	**Bering Glacier**	**51.34**	**39**	P	**P**	**13 31 24.5**	**+0.6**
	baz=282						
BGLC				S	**S**	**13 38 46.2**	**+4.1**
	baz=282						
PSI	**Prapat**	**51.34**	**236**	LR	LR	13 54 16.2	
	comp=Z,23µm,18.5s,baz=31,slow=37						
PSI	**Prapat**	**51.34**	**236**	P	**P**	**13 31 25.8**	**+1.1**
PLAI	**Plampang**	**51.35**	**208**	P	**P**	**13 31 24.1**	**-0.5**
PLAI	**Plampang**	**51.35**	**208**	P	**P**	**13 31 23.5**	**-1.1**
	comp=Z,26µmcomp=Z,11µmcomp=Z,331nm,1.1s						
RPSI	**Rantau Prapat**	**51.42**	**236**	IAMs_20	IAMs_20	13 56 07.7	
	comp=Z,33µm,18.0s						
TGL	**Tana Glacier**	**51.43**	**38**	IAmb	IAmb	13 31 30.3	
	comp=Z,2µm,1.8s						
TGL				IAMs_20	IAMs_20	13 53 24.7	
	comp=Z,29µm,20.0s						
L27K	**Beaver Creek,**	**51.44**	**35**	IAmb	IAmb	13 31 28.7	
	comp=Z,1µm,1.7s						
L27K	**Beaver Creek,**	**51.44**	**35**	P	**P**	**13 31 25.6**	**+0.7**
	baz=281,SNR=753						
L27K				S	**S**	**13 38 47.8**	**+4.2**
	baz=281						
E28M	**Babbage River**	**51.45**	**28**	IAMs_20	IAMs_20	13 55 03.8	
	comp=Z,38µm,20.0s						
E28M	**Babbage River**	**51.45**	**28**	P	**P**	**13 31 25.1**	**+0.4**
	baz=278,SNR=288						
E28M				S	**S**	**13 38 46.5**	**+3.1**
	baz=278						
KDU	**Kakadu**	**51.46**	**189**	P	**P**	**13 31 24.4**	**-0.9**
BCAR	**Beaver Creek A**	**51.46**	**35**	P	**P**	**13 31 24.6**	**-0.4**
F28M	**Old Crow**	**51.47**	**29**	IAmb	IAmb	13 31 31.0	
	comp=Z,498nm,1.2s						
F28M	**Old Crow**	**51.47**	**29**	P	**P**	**13 31 25.4**	**+0.4**
	baz=279,SNR=462						
F28M				S	**S**	**13 38 49.2**	**+5.3**
	baz=279						
HNR	**Honiara**	**51.48**	**154**	IAMs_20	IAMs_20	13 54 28.1	
	comp=Z,22µm,18.0s						
HNR	**Honiara**	**51.48**	**154**	P	**P**	**13 31 28.2**	**+2.7**
HNR	**Honiara**	**51.48**	**154**	⇑P	**P**	**13 31 24.9**	**-0.6**
HNR	**Honiara**	**51.48**	**154**	⇑P	**P**	**13 31 24.9**	**-0.6**
BRLS	**Borolday**	**51.50**	**299**	*e*P	**P**	**13 31 26.2**	**+0.7**
BRLS				pmax	pmax		
	comp=Z,691nm,2.7s						
BRLS	**Borolday**	**51.50**	**299**	*e*P	**P**	**13 31 26.3**	**+0.7**
	comp=Z,691nm,2.7s						
WBSI	**Waikabubak, Su**	**51.54**	**206**	P	**P**	**13 31 24.8**	**-1.2**
	comp=Z,7µmcomp=Z,283nm,1.2s						
M27K	**Edge Creek, AK**	**51.55**	**36**	IAmb	IAmb	13 31 31.4	
	comp=Z,446nm,0.8s						
M27K				IAMs_20	IAMs_20	13 54 22.9	
	comp=Z,25µm,20.0s						
M27K	**Edge Creek, AK**	**51.55**	**36**	P	**P**	**13 31 26.1**	**+0.3**
	baz=281,SNR=600						
M27K				S	**S**	**13 38 50.3**	**+4.9**
	baz=281						
KKR	**Kurukshetra**	**51.60**	**280**	*e*P	**P**	**13 31 24.6**	**-1.8**
TWSI	**Taliwang, Sumb**	**51.60**	**209**	P	**P**	**13 31 25.9**	**-0.5**
	comp=Z,31µmcomp=Z,15µmcomp=Z,333nm,1.3s						
D28M	**Stokes Point**	**51.62**	**27**	P	**P**	**13 31 27.4**	**+1.4**
	baz=278,SNR=5.4						
D28M				S	**S**	**13 38 50.3**	**+4.5**
	baz=278						
SRBI	**Singaraja**	**51.66**	**211**	P	**P**	**13 31 27.7**	**+0.8**
	comp=Z,411nm,1.6s						
IUG	**Iuzhnay**	**51.67**	**297**	*e*P	**P**	**13 31 26.1**	**-0.8**
IUG				pmax	pmax		
	comp=Z,1µm,2.2s						
IUG	**Iuzhnay**	**51.67**	**297**	*e*P	**P**	**13 31 26.1**	**-0.8**
	comp=Z,1µm,2.2s						
BASI	**Baing, Sumba**	**51.69**	**204**	P	**P**	**13 31 27.6**	**+0.5**
	comp=Z,20µmcomp=Z,9µmcomp=Z,731nm,1.3s						
BISR	**Bishrakh**	**51.77**	**279**	*e*P	**P**	**13 31 25.8**	**-1.8**
BISR				IAmb	IAmb	13 31 30.3	
	comp=Z,490nm,0.5s						
GRJI	**Gresik**	**51.78**	**215**	P	**P**	**13 31 30.0**	**+2.2**
	comp=Z,35µmcomp=Z,20µmcomp=Z,555nm,1.6s						
MTN	**Manton Dam**	**51.79**	**190**	P	**P**	**13 31 26.5**	**-1.3**
BSI	**Banda Aceh**	**51.80**	**242**	P	**P**	**13 31 31.2**	**+3.2**
I28M	**Miner Creek**	**51.81**	**32**	IAmb	IAmb	13 31 33.4	
	comp=Z,917nm,1.2s						
I28M				IAMs_20	IAMs_20	13 53 23.6	
	comp=Z,34µm,20.0s						
I28M	**Miner Creek**	**51.81**	**32**	P	**P**	**13 31 27.8**	**+0.1**
	baz=280,SNR=680						
I28M				S	**S**	**13 38 52.6**	**+3.8**
	baz=280						
RAGD	**RAYAGADA**	**51.88**	**265**	*e*P	**P**	**13 31 26.3**	**-2.3**
RAGD				IAmb	IAmb	13 31 38.7	
	comp=Z,462nm,1.1s						
NDI	**New Delhi**	**51.89**	**279**	*e*P	**P**	**13 31 27.3**	**-1.3**
NDI				IAmb	IAmb	13 31 35.1	
	comp=Z,980nm,2.0s						
BKNI	**Bangkinang**	**51.90**	**232**	P	**P**	**13 31 28.0**	**-0.7**
BKNI	**Bangkinang**	**51.90**	**232**	IAMs_20	IAMs_20	13 55 47.3	
	comp=Z,28µm,18.0s						
BKNI	**Bangkinang**	**51.90**	**232**	P	**P**	**13 31 30.3**	**+1.5**
BKNI	**Bangkinang**	**51.90**	**232**	P	**P**	**13 31 30.2**	**+1.5**
CHM	**Chimkent**	**51.91**	**298**	*e*P	**P**	**13 31 27.8**	**-0.8**
CHM				pmax	pmax		
	comp=Z,2µm,2.7s						
CHM				MLR	MLR		
	comp=Z,31µm,12.0s						
CHM	**Chimkent**	**51.91**	**298**	*e*P	**P**	**13 31 27.9**	**-0.8**
	comp=Z,2µm,2.7s						
CHM				LR	LR	13 56 27.3	
	comp=Z,31µm,12.3s						
BARN	**Barnard Glacie**	**51.92**	**37**	IAmb	IAmb	13 31 33.5	
	comp=Z,288nm,0.8s						
MLSI	**Meulaboh, Aceh**	**51.93**	**240**	P	**P**	**13 31 29.0**	**0.0**
	comp=Z,7µmcomp=Z,494nm,0.8s						
NPLP	**NPLP New Delhi**	**51.94**	**279**	*e*P	**P**	**13 31 27.8**	**-1.2**
GRNC	**Granite Creek**	**51.95**	**38**	IAMs_20	IAMs_20	13 53 40.4	
	comp=Z,24µm,20.0s						
MESA	**MESA**	**51.98**	**38**	P	**P**	**13 31 29.4**	**+0.4**
	baz=283,SNR=35						
MESA				S	**S**	**13 38 55.1**	**+3.7**
	baz=283						
TBJI	**Tambak Boyo**	**51.98**	**216**	P	**P**	**13 31 31.4**	**+2.1**
	comp=Z,31µmcomp=Z,16µmcomp=Z,535nm,1.7s						
BVCY	**Beaver Creek**	**52.01**	**36**	P	**P**	**13 31 29.8**	**+0.8**
	baz=282,SNR=622						
BVCY				S	**S**	**13 38 54.9**	**+3.5**
	baz=282						
YAH	**Yahtse**	**52.04**	**38**	IAmb	IAmb	13 31 40.5	
	comp=Z,593nm,1.3s						
E29M	**Blow River**	**52.08**	**28**	IAMs_20	IAMs_20	13 55 22.5	
	comp=Z,37µm,19.0s						
E29M	**Blow River**	**52.08**	**28**	P	**P**	**13 31 29.9**	**+0.5**
	baz=280,SNR=626						
E29M				S	**S**	**13 38 54.1**	**+2.0**
	baz=280						
CTG	**Chitna Glacier**	**52.10**	**37**	P	**P**	**13 31 29.7**	**-0.1**
	baz=283,SNR=145						
CTG				S	**S**	**13 38 56.4**	**+3.5**
	baz=283						
SONA	**Sohna**	**52.19**	**278**	*e*P	**P**	**13 31 29.1**	**-1.8**
SONA				IAmb	IAmb	13 31 41.0	
	comp=Z,584nm,1.1s						
DNP	**Denpasar**	**52.20**	**211**	P	**P**	**13 31 33.5**	**+2.6**
	comp=Z,36µmcomp=Z,675nm,1.3s						
PMBI	**Palembang**	**52.29**	**226**	P	**P**	**13 31 33.9**	**+2.3**
PMBI	**Palembang**	**52.29**	**226**	P	**P**	**13 31 35.0**	**+3.4**
	comp=Z,26µmcomp=Z,17µmcomp=Z,585nm,1.2s						
H29M	**Whitestone**	**52.30**	**31**	IAmb	IAmb	13 31 36.4	
	comp=Z,2µm,2.0s						
H29M				IAMs_20	IAMs_20	13 55 45.4	
	comp=Z,30µm,19.0s						
H29M	**Whitestone**	**52.30**	**31**	P	**P**	**13 31 32.1**	**+1.0**
	baz=281,SNR=242						
H29M				S	**S**	**13 38 59.9**	**+4.7**
	baz=281						
G29M	**Pine Creek**	**52.30**	**30**	IAmb	IAmb	13 31 42.9	
	comp=Z,762nm,1.1s						
G29M	**Pine Creek**	**52.30**	**30**	P	**P**	**13 31 31.8**	**+0.7**
	baz=281,SNR=475						
G29M				S	**S**	**13 39 00.7**	**+5.5**
	baz=281						
DAWY	**Dawson**	**52.31**	**33**	IAMs_20	IAMs_20	13 56 04.8	
	comp=Z,27µm,18.0s						
DAWY	**Dawson**	**52.31**	**33**	P	**P**	**13 31 31.3**	**0.0**
	baz=282,SNR=139						
DAWY				S	**S**	**13 38 58.3**	**+2.8**
	baz=282						
TABL	**Table Mountain**	**52.31**	**38**	IAMs_20	IAMs_20	13 52 24.0	
	comp=Z,29µm,21.0s						
YUK3	**Moose Creek**	**52.33**	**36**	P	**P**	**13 31 31.8**	**+0.1**
	baz=283,SNR=273						
YUK3				S	**S**	**13 38 59.7**	**+3.5**
	baz=283						
COEN	**Coen**	**52.42**	**175**	IAmb	IAmb	13 31 37.1	
	comp=Z,516nm,0.9s						
COEN				IAMs_20	IAMs_20	13 51 23.0	
	comp=Z,33µm,21.0s						
COEN	**Coen**	**52.42**	**175**	P	**P**	**13 31 32.5**	**0.0**
MNSI	**Mandailing Nat**	**52.45**	**234**	P	**P**	**13 31 33.2**	**+0.4**
	comp=Z,18µmcomp=Z,8µmcomp=Z,177nm,0.8s						
JAGI	**Jajag, Banyuwa**	**52.45**	**212**	P	**P**	**13 31 32.8**	**0.0**
JAGI	**Jajag, Banyuwa**	**52.45**	**212**	P	**P**	**13 31 33.3**	**+0.5**
	comp=Z,25µmcomp=Z,10µmcomp=Z,170nm,1.0s						
I29M	**Ogilvie Camp,**	**52.50**	**32**	IAmb	IAmb	13 31 43.7	
	comp=Z,784nm,1.2s						
I29M				IAMs_20	IAMs_20	13 53 54.7	
	comp=Z,41µm,21.0s						
I29M	**Ogilvie Camp,**	**52.50**	**32**	P	**P**	**13 31 33.0**	**+0.4**
	baz=282,SNR=234						
I29M				S	**S**	**13 39 01.4**	**+3.4**
	baz=282						
GMJI	**Gumukmas**	**52.57**	**213**	P	**P**	**13 31 33.5**	**-0.1**
	comp=Z,8µmcomp=Z,164nm,1.2s						
GAR	**Garm**	**52.64**	**294**	IAmb	IAmb	13 31 43.0	
	comp=Z,962nm,1.4s						
NGJI	**Ngawi**	**52.65**	**216**	P	**P**	**13 31 36.2**	**+2.0**
	comp=Z,20µmcomp=Z,235nm,1.6s						
NIL	**Nilore**	**52.68**	**286**	P	**P**	**13 31 34.0**	**-0.5**
NIL	**Nilore**	**52.68**	**286**	IAMs_20	IAMs_20	13 53 56.7	
	comp=Z,26µm,21.0s						
NIL	**Nilore**	**52.68**	**286**	P	**P**	**13 31 33.9**	**-0.5**
NIL	**Nilore**	**52.68**	**286**	P	**P**	**13 31 34.0**	**-0.5**
NIL				pmax	pmax		
	comp=Z,408nm,1.3s						
NIL				MLR	MLR		
	comp=Z,26µm,21.0s						
O28M	**Mount Upton**	**52.69**	**37**	IAMs_20	IAMs_20	13 54 57.0	
	comp=Z,24µm,21.0s						
O28M	**Mount Upton**	**52.69**	**37**	P	**P**	**13 31 34.7**	**+0.3**
	baz=284,SNR=148						
O28M				S	**S**	**13 39 04.0**	**+2.8**
	baz=284						
J29N	**Klondike Camp**	**52.73**	**33**	IAMs_20	IAMs_20	13 54 14.9	
	comp=Z,27µm,20.0s						
J29N	**Klondike Camp**	**52.73**	**33**	P	**P**	**13 31 35.4**	**+1.0**
	baz=283,SNR=9.2						
J29N				S	**S**	**13 39 04.3**	**+3.0**
	baz=283						
YUK8	**Steele Glacier**	**52.77**	**37**	P	**P**	**13 31 35.2**	**+0.3**
	baz=284,SNR=84						
YUK8				S	**S**	**13 39 05.0**	**+2.8**
	baz=284						
PINM	**Pinnacle**	**52.82**	**38**	P	**P**	**13 31 35.9**	**+0.7**
	baz=284,SNR=20						
PINM				S	**S**	**13 39 04.6**	**+1.9**
	baz=284						
SMRI	**Semarang**	**52.84**	**217**	IAmb	IAmb	13 32 08.2	
	comp=Z,1µm,1.7s						
SMRI				IAMs_20	IAMs_20	13 55 14.4	
	comp=Z,24µm,20.0s						
SMRI	**Semarang**	**52.84**	**217**	P	**P**	**13 31 36.8**	**+1.1**
SMRI	**Semarang**	**52.84**	**217**	P	**P**	**13 31 38.6**	**+2.9**
	comp=Z,317nm,1.5s						
PPI	**Padang Panjang**	**52.90**	**232**	P	**P**	**13 31 37.4**	**+1.2**
EPYK	**Eagle Plains**	**52.92**	**30**	IAmb	IAmb	13 31 46.9	
	comp=Z,964nm,1.1s						
EPYK	**Eagle Plains**	**52.92**	**30**	P	**P**	**13 31 36.0**	**+0.3**
	baz=283,SNR=500						
EPYK				S	**S**	**13 39 08.6**	**+4.8**
	baz=283						
SVE	**Sverdlovsk**	**52.94**	**317**	*de*P	**P**	**13 31 36.9**	**+0.9**
SVE				*e*S	**S**	**13 39 04.8**	**+0.6**
SVE				*e*SS	**SS**	**13 42 40.3**	**-2.4**
SVE				pmax	pmax		
	comp=Z,5µm,9.4s						
SVE				pmax	pmax		
	comp=Z,733nm,2.0s						
SVE				MLR	MLR		
	comp=Z,157µm,15.0s						
SVE				MLR	MLR		
	comp=E,123µm,15.0s						
SVE				MLR	MLR		
	comp=N,37µm,14.0s						
G30M	**tAoh Zraii Nji**	**52.98**	**29**	IAmb	IAmb	13 31 47.2	
	comp=Z,1µm,1.1s						
G30M	**tAoh Zraii Nji**	**52.98**	**29**	P	**P**	**13 31 36.3**	**+0.1**
	baz=282,SNR=229						
G30M				S	**S**	**13 39 08.6**	**+4.0**
	baz=282						
F30M	**Barrier River**	**53.01**	**29**	P	**P**	**13 31 36.9**	**+0.6**
	baz=282,SNR=635						
F30M				S	**S**	**13 39 09.6**	**+4.8**
	baz=282						
L29M	**L29M**	**53.08**	**34**	IAmb	IAmb	13 31 43.4	
	comp=Z,474nm,0.9s						
L29M	**L29M**	**53.08**	**34**	P	**P**	**13 31 36.7**	**-0.3**
	baz=284,SNR=535						
L29M				S	**S**	**13 39 11.8**	**+5.8**
	baz=284						
M29M	**Somme Creek**	**53.09**	**35**	P	**P**	**13 31 37.2**	**+0.1**
	baz=284,SNR=407						
M29M				S	**S**	**13 39 12.3**	**+6.0**
	baz=284						
HURO	**Huro Makira**	**53.13**	**152**	P	**P**	**13 31 39.6**	**+1.8**
K29M	**Barlow Dome**	**53.17**	**33**	IAmb	IAmb	13 31 49.0	
	comp=Z,599nm,1.1s						
K29M				IAMs_20	IAMs_20	13 56 56.4	
	comp=Z,29µm,18.0s						
K29M	**Barlow Dome**	**53.17**	**33**	P	**P**	**13 31 37.6**	**-0.1**
	baz=284,SNR=620						
K29M				S	**S**	**13 39 12.9**	**+5.5**
	baz=284						
YUK4	**Talbot Arm**	**53.28**	**37**	P	**P**	**13 31 38.4**	**-0.3**
	baz=285,SNR=235						
WOJI	**Wonogiri, Jawa**	**53.31**	**216**	P	**P**	**13 31 40.8**	**+1.7**
	comp=Z,27µmcomp=Z,13µmcomp=Z,205nm,1.5s						
I30M	**Mount Dempster**	**53.32**	**32**	IAMs_20	IAMs_20	13 54 19.4	
	comp=Z,42µm,21.0s						
I30M	**Mount Dempster**	**53.32**	**32**	P	**P**	**13 31 39.0**	**+0.2**
	baz=284,SNR=1000						
I30M				S	**S**	**13 39 15.6**	**+6.2**
	baz=284						
GSI	**Gunungsitoli**	**53.35**	**236**	P	**P**	**13 31 38.7**	**-0.8**
GSI	**Gunungsitoli**	**53.35**	**236**	P	**P**	**13 31 38.5**	**-1.0**
PNL	**Peninsula**	**53.35**	**39**	P	**P**	**13 31 41.0**	**+2.0**
PNL	**Peninsula**	**53.35**	**39**	P	**P**	**13 31 39.9**	**+0.9**
	baz=285,SNR=23						
PNL				S	**S**	**13 39 15.1**	**+5.3**
	baz=285						
J30M	**Hart River**	**53.49**	**32**	IAMs_20	IAMs_20	13 56 06.1	
	comp=Z,27µm,20.0s						
J30M	**Hart River**	**53.49**	**32**	P	**P**	**13 31 40.3**	**+0.2**
	baz=284,SNR=212						
J30M				S	**S**	**13 39 17.8**	**+6.0**
	baz=284						
NGOA	**Tingoa Renbel**	**53.50**	**155**	P	**P**	**13 31 42.6**	**+2.2**
YUK6	**Outpost Mounta**	**53.51**	**37**	P	**P**	**13 31 40.9**	**+0.5**
	baz=285,SNR=208						
YUK6				S	**S**	**13 39 17.9**	**+5.6**
	baz=285						
UGM	**Wanagama**	**53.56**	**217**	P	**P**	**13 31 41.4**	**+0.4**
UGM	**Wanagama**	**53.56**	**217**	P	**P**	**13 31 41.1**	**+0.1**
	comp=Z,17µmcomp=Z,13µmcomp=Z,574nm,1.4s						
O29M	**Mount Kennedy**	**53.58**	**38**	IAmb	IAmb	13 31 52.6	
	comp=Z,834nm,1.1s						
O29M				IAMs_20	IAMs_20	13 54 21.6	
	comp=Z,33µm,22.0s						
O29M	**Mount Kennedy**	**53.58**	**38**	P	**P**	**13 31 40.5**	**-0.3**
	baz=286,SNR=146						
O29M				S	**S**	**13 39 18.4**	**+5.3**
	baz=286						
YOGI	**Yogyakarta**	**53.58**	**217**	P	**P**	**13 31 42.0**	**+0.9**
	comp=Z,8µmcomp=Z,357nm,1.8s						
INK	**Inuvik**	**53.68**	**27**	IAmb	IAmb	13 31 51.9	
	comp=Z,642nm,1.1s						
INK				IAMs_20	IAMs_20	13 56 24.8	
	comp=Z,25µm,19.0s						
INK	**Inuvik**	**53.68**	**27**	LR	LR	13 56 36.2	
	comp=Z,23µm,18.6s,baz=275,slow=38						
INK	**Inuvik**	**53.68**	**27**	P	**P**	**13 31 40.8**	**-0.4**
	baz=284,SNR=285						
INK				S	**S**	**13 39 17.4**	**+3.6**
	baz=284						
SIMJ	**Simiganj**	**53.71**	**294**	P	**P**	**13 31 41.1**	**-1.1**
G31M	**Satah River**	**53.74**	**29**	IAmb	IAmb	13 31 46.0	
	comp=Z,376nm,0.9s						
G31M	**Satah River**	**53.74**	**29**	P	**P**	**13 31 41.3**	**-0.3**
	baz=284,SNR=320						
G31M				S	**S**	**13 39 17.9**	**+3.2**
	baz=284						
F31M	**Tsiigehtchic**	**53.81**	**29**	P	**P**	**13 31 42.9**	**+0.7**
	baz=284,SNR=160						
F31M				S	**S**	**13 39 19.2**	**+3.6**
	baz=284						
MDSI	**Maura Dua**	**53.91**	**225**	P	**P**	**13 31 42.6**	**-0.9**
	comp=Z,30µmcomp=Z,16µmcomp=Z,406nm,1.4s						
MAYO	**Mayo, Yukon**	**53.93**	**33**	IAmb	IAmb	13 31 49.0	
	comp=Z,598nm,0.9s						
MAYO				IAMs_20	IAMs_20	13 54 51.6	
	comp=Z,22µm,20.0s						
MAYO	**Mayo, Yukon**	**53.93**	**33**	P	**P**	**13 31 43.7**	**+0.6**
	baz=285,SNR=150						
MAYO				S	**S**	**13 39 21.8**	**+4.3**
	baz=285						
HYT	**Haines Junctio**	**53.95**	**37**	IAmb	IAmb	13 31 49.8	
	comp=Z,609nm,0.8s						
HYT	**Haines Junctio**	**53.95**	**37**	P	**P**	**13 31 44.1**	**+0.6**
	baz=286,SNR=743						
HYT				S	**S**	**13 39 23.6**	**+5.5**
	baz=286						
N30M	**Aishikik Lake**	**53.97**	**36**	IAmb	IAmb	13 31 48.7	
	comp=Z,966nm,2.0s						
N30M	**Aishikik Lake**	**53.97**	**36**	P	**P**	**13 31 43.9**	**+0.4**
	baz=286,SNR=117						
N30M				S	**S**	**13 39 22.5**	**+4.3**
	baz=286						
H31M	**Peel River**	**53.99**	**31**	IAMs_20	IAMs_20	13 57 24.3	
	comp=Z,27µm,18.0s						
H31M	**Peel River**	**53.99**	**31**	P	**P**	**13 31 44.3**	**+0.7**
	baz=285,SNR=560						
H31M				S	**S**	**13 39 22.2**	**+3.9**
	baz=285						
LEM	**Lembang**	**54.04**	**220**	LR	LR	13 54 38.7	
	comp=Z,13µm,21.2s,baz=20,slow=36						
BLSI	**Bandar Lampung**	**54.05**	**224**	P	**P**	**13 31 46.0**	**+1.4**
	comp=Z,9µmcomp=Z,278nm,1.8s						
KSI	**Kapahiang**	**54.13**	**228**	P	**P**	**13 31 47.2**	**+2.0**
	comp=Z,27µmcomp=Z,16µmcomp=Z,286nm,1.4s						
P29M	**Windy Craggy**	**54.17**	**38**	IAMs_20	IAMs_20	13 57 24.2	
	comp=Z,23µm,19.0s						
P29M	**Windy Craggy**	**54.17**	**38**	P	**P**	**13 31 45.7**	**+0.6**
	baz=287,SNR=194						
P29M				S	**S**	**13 39 26.1**	**+5.1**
	baz=287						
ARTI	**Arti**	**54.26**	**317**	P	**P**	**13 31 43.8**	**-1.9**
ARTI				IAmb	IAmb	13 31 54.8	
	comp=Z,440nm,0.7s						
ARTI				IAMs_20	IAMs_20	13 53 41.8	
	comp=Z,28µm,20.0s						
ARTI	**Arti**	**54.26**	**317**	LR	LR	13 54 39.7	
	comp=Z,28µm,18.8s,baz=78,slow=36						
ARTI	**Arti**	**54.26**	**317**	*c i*P	**P**	**13 31 44.0**	**-1.6**
ARTI						13 32 47.4	
ARTI						13 33 42.7	
ARTI				S	**S**	**13 39 21.6**	**-0.5**
ARTI						13 41 31.1	
ARTI				SS	**SS**	**13 43 08.2**	**+4.7**
ARTI				pmax	pmax		
	comp=Z,324nm,1.5s						
ARTI				pmax	pmax		
	comp=Z,3µm,5.7s						
ARTI				MLR	MLR		
	comp=Z,91µm,15.0s						
SISI	**Saibi**	**54.39**	**233**	P	**P**	**13 31 47.8**	**+0.7**
	comp=Z,25µmcomp=Z,13µmcomp=Z,303nm,1.3s						
P30M	**Million Dollar**	**54.41**	**38**	P	**P**	**13 31 47.2**	**+0.5**
	baz=287						
P30M				S	**S**	**13 39 29.4**	**+5.3**
	baz=287						
LWLI	**Liwa**	**54.41**	**225**	P	**P**	**13 31 49.5**	**+2.2**
	comp=Z,23µmcomp=Z,12µmcomp=Z,335nm,0.8s						
BBJI	**Bungbulang**	**54.56**	**220**	P	**P**	**13 31 50.1**	**+1.7**

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N31M  Braeburn, Yuko     54.56  36    IAmb     IAmb     13 31 59.5
      comp=Z,560nm,1.1s
N31M  Braeburn, Yuko     54.56  36    P        P        13 31 48.6 +0.8
      baz=287,SNR=261
N31M                                  S        S        13 39 31.0 +4.8
      baz=287
O30N  Mendenhall         54.63  37    P        P        13 31 49.0 +0.6
      baz=287,SNR=146
O30N                                  S        S        13 39 31.0 +3.9
      baz=287
CGJI  Cibinong           54.85 222    P        P        13 31 51.6 +1.2
LUES  Luesalemba Tem     54.89 148    P        P        13 31 52.8 +2.2
PLBC  Pleasant Camp      54.89  38    P        P        13 31 51.2 +1.0
      baz=288,SNR=192
PLBC                                  S        S        13 39 35.8 +5.3
      baz=288
M31M  Drury Creek, Y     54.98  35    IAMs_20  IAMs_20  13 57 39.5
      comp=Z,29µm,18.0s
M31M  Drury Creek, Y     54.98  35    P        P        13 31 52.0 +1.1
      baz=287,SNR=281
M31M                                  S        S        13 39 34.8 +3.0
      baz=287
WHY   Whitehorse         55.23  37    IAmb     IAmb     13 31 58.1
      comp=Z,595nm,0.9s
WHY                                   IAMs_20  IAMs_20  13 56 43.1
      comp=Z,32µm,20.0s
WHY   Whitehorse         55.23  37    P        P        13 31 53.1 +0.3
      baz=288,SNR=268
WHY                                   S        S        13 39 39.9 +4.6
      baz=288
A36M  Sachs Harbour      55.36  22    P        P        13 31 54.3 +0.9
      baz=289,SNR=139
A36M                                  S        S        13 39 38.7 +2.2
      baz=289
KBU   Kabul Universi     55.37 289    P        P        13 31 52.9 -1.4
SKAG  Skagway            55.39  38    IAMs_20  IAMs_20  13 56 32.5
      comp=Z,23µm,21.0s
SKAG  Skagway            55.39  38    P        P        13 31 55.9 +2.1
SKAG  Skagway            55.39  38    P        P        13 31 55.1 +1.3
      baz=288,SNR=38
SKAG                                  S        S        13 39 40.2 +3.1
      baz=288
KBL   Kabul              55.43 289    P        P        13 31 53.2 -1.5
KBL                                   IAmb     IAmb     13 32 07.8
      comp=Z,387nm,1.0s
KBL   Kabul              55.43 289    P        P        13 31 52.7 -2.0
      SNR=182
KBL                                   P        P        13 31 52.7 -2.0
      SNR=182
KBL                                   S        S        13 39 38.2 -0.6
KBL                                   S        S        13 39 38.2 -0.6
KBL   Kabul              55.43 289    P        P        13 31 53.2 -1.5
KBL                                   pmax     pmax
      comp=Z,387nm,1.0s
S31K  Pelican            55.43  40    IAmb     IAmb     13 32 00.1
      comp=Z,383nm,1.2s
S31K  Pelican            55.43  40    P        P        13 31 54.9 +0.8
      baz=289,SNR=44
S31K                                  S        S        13 39 40.9 +3.3
      baz=289
FARO  Faro, Yukon        55.44  35    IAmb     IAmb     13 31 57.9
      comp=Z,944nm,1.7s
FARO                                  IAMs_20  IAMs_20  13 58 01.6
      comp=Z,23µm,19.0s
FARO  Faro, Yukon        55.44  35    P        P        13 31 55.4 +1.2
      baz=288,SNR=289
FARO                                  S        S        13 39 41.4 +3.5
      baz=288
R31K  City Hall, Gus     55.53  39    P        P        13 31 56.0 +1.3
      baz=289,SNR=7.1
R31K                                  S        S        13 39 42.5 +3.5
      baz=289
AB31  Akbulak array      55.74 309    IAmb     IAmb     13 32 06.1
      comp=Z,537nm,1.2s
AB31  Akbulak array      55.74 309  i P        P        13 31 54.3 -2.2
ABKAR Akbulak array      55.74 309    P        P        13 31 54.0 -2.5
ABKAR Akbulak array      55.74 309    IAmb     IAmb     13 32 06.1
      comp=Z,539nm,1.2s
KIP   Kipapa             55.77  89    P        P        13 31 57.1 +0.1
KIP   Kipapa             55.77  89    P        P        13 31 59.6 +2.6
KIP   Kipapa             55.77  89    P        P        13 31 59.7 +2.7
KIP   Kipapa             55.77  89    P        P        13 31 57.1 +0.1
KIP                                   pmax     pmax
      comp=Z,3µm,2.0s
N32M  Quiet Lake         55.91  36    IAMs_20  IAMs_20  13 57 25.9
      comp=Z,20µm,19.0s
N32M  Quiet Lake         55.91  36    P        P        13 31 58.5 +0.9
      baz=289
N32M                                  S        S        13 39 48.4 +4.3
      baz=289
BESE  Bessie Mountai     55.91  39    IAmb     IAmb     13 32 03.7
      comp=Z,896nm,1.5s
BESE                                  IAMs_20  IAMs_20  13 58 38.2
      comp=Z,21µm,19.0s
P32M  Atlin              56.13  38    P        P        13 31 59.5 +0.4
      baz=290,SNR=88
P32M                                  S        S        13 39 50.9 +3.7
      baz=290
R32K  Eaglecrest         56.18  39    IAMs_20  IAMs_20  13 58 38.4
      comp=Z,22µm,19.0s
R32K  Eaglecrest         56.18  39    P        P        13 31 59.6 +0.1
      baz=290,SNR=41
R32K                                  S        S        13 39 54.1 +6.4
      baz=290
SIT   Sitka              56.19  41    P        P        13 32 02.4 +2.9
SIT   Sitka              56.19  41    P        P        13 32 00.7 +1.2
      baz=290,SNR=22
SIT                                   S        S        13 39 53.0 +5.1
      baz=290
MMPY  Sheldon Lake,      56.23  34    IAmb     IAmb     13 32 05.2
      comp=Z,1µm,1.9s
MMPY                                  IAMs_20  IAMs_20  13 58 50.5
      comp=Z,20µm,18.0s
MMPY  Sheldon Lake,      56.23  34    P        P        13 32 00.7 +0.8
      baz=290,SNR=219
MMPY                                  S        S        13 39 52.4 +3.9
      baz=290
JIS   Juneau Island      56.25  39    P        P        13 32 01.8 +1.9
P33M  Teslin, Yukon      56.34  37    IAmb     IAmb     13 32 06.8
      comp=Z,1µm,1.6s
P33M                                  IAMs_20  IAMs_20  13 58 58.6
      comp=Z,28µm,18.0s
P33M  Teslin, Yukon      56.34  37    P        P        13 32 01.2 +0.5
      baz=290,SNR=311
P33M                                  S        S        13 39 53.6 +3.6
      baz=290
S32K  Killisnoo          56.43  40    P        P        13 32 01.8 +0.6
      baz=290,SNR=28
S32K                                  S        S        13 39 55.5 +4.5
      baz=290
AKTO  Aktyubinsk         56.47 311    LR       LR       13 59 24.6
      comp=Z,35µm,18.1s,baz=64,slow=40
AKTO                                  P4KPbc            14 09 17.1
      comp=Z,2.8nm,1.0s,baz=92,slow=3.7,SNR=4.2
AKTO  Aktyubinsk         56.47 311    P        P        13 32 00.3 -1.4
UDPR  Udaipur            56.64 276   eP        P        13 32 01.4 -1.8
C36M  Paulatuk           56.64  25    IAmb     IAmb     13 32 06.8
      comp=Z,378nm,0.9s
C36M  Paulatuk           56.64  25    P        P        13 32 03.3 +0.8
      baz=291,SNR=90
C36M                                  S        S        13 39 54.8 +1.4
      baz=291
MTSU  Mount Surprise     56.64 174    P        P        13 32 03.9 +0.8
HYB   Hyderabad          56.74 266   eP        P        13 32 03.0 -1.1
HYB                                  esP       pP       13 32 08.0 -1.7
HYB                                  ePP       PP       13 34 09.0 -1.2
HYB                                  eScP      ScP      13 36 57.7 -0.9
Q32M  Nakina River       57.04  38    IAmb     IAmb     13 32 12.6
      comp=Z,1µm,1.9s
Q32M  Nakina River       57.04  38    P        P        13 32 06.4 +0.5
      baz=291,SNR=79
Q32M                                  S        S        13 40 04.8 +5.2
      baz=291
T33K  Petersburg         57.49  41    P        P        13 32 09.8 +1.0
      baz=292,SNR=5.8
T33K                                  S        S        13 40 10.0 +5.0
      baz=292
R33M  Jennings River     57.51  37    IAmb     IAmb     13 32 14.7
      comp=Z,1µm,1.9s
R33M  Jennings River     57.51  37    P        P        13 32 09.9 +0.8
      baz=292,SNR=151
R33M                                  S        S        13 40 10.1 +4.6
      baz=292
U33K  Whale Pass         57.67  41    IAmb     IAmb     13 32 16.4
      comp=Z,667nm,1.1s
U33K  Whale Pass         57.67  41    P        P        13 32 11.3 +1.3
      baz=292,SNR=55
U33K                                  S        S        13 40 12.1 +4.8
      baz=292
FITZ  Fitzroy Crossi     57.89 196    LR       LR       13 56 13.0
      comp=Z,10µm,21.4s,baz=32,slow=35
CRAG  Craig              57.91  42    P        P        13 32 14.2 +2.5
CRAG  Craig              57.91  42    P        P        13 32 12.9 +1.1
      baz=293,SNR=15
CRAG                                  S        S        13 40 15.5 +4.9
      baz=293
TGTN  Hyland Airport     57.94  34    P        P        13 32 12.7 +0.8
      baz=293,SNR=76
TGTN                                  S        S        13 40 15.2 +4.2
      baz=293
WRAK  Wrangell Islan     57.95  41    P        P        13 32 13.1 +1.1
      baz=293,SNR=23
WRAK                                  S        S        13 40 13.7 +2.6
      baz=293
S34M  Telegraph Cree     57.99  39    P        P        13 32 13.3 +1.0
      baz=293,SNR=68
S34M                                  S        S        13 40 16.4 +4.8
      baz=293
KIRV  Kirov              58.05 322    LR       LR       13 58 54.7
      comp=Z,35µm,18.9s,baz=69,slow=38
XMI   Christmas Isla     58.10 220    P        P        13 32 14.4 +0.8
HOPEN Hopen              58.12 345   eP        P        13 32 13.1 +0.1
HOPEN                                 IVmB_BB           13 32 23.0
      comp=Z,2µm,2.3s
HOPEN                                eS        S        13 40 15.2 +2.3
HOPEN                                 IVMs_BB  IVMs_BB  14 00 01.9
      comp=Z,50µm,15.2s
XMIS  Christmas Isla     58.15 220    P        P        13 32 15.7 +1.8
WTLY  Watson Lake, Y     58.25  36    IAmb     IAmb     13 32 19.8
      comp=Z,285nm,0.9s
WTLY                                  IAMs_20  IAMs_20  13 59 46.0
      comp=Z,20µm,19.0s
WTLY  Watson Lake, Y     58.25  36    P        P        13 32 15.3 +1.2
      baz=293,SNR=56
WTLY                                  S        S        13 40 14.5 -0.6
      baz=293
WB0   Warramunga Arr     58.28 186    IAmb     IAmb     13 32 18.6
      comp=Z,581nm,0.8s
WRAB  Tennant Creek      58.44 186    P        P        13 32 14.3 -1.5
WRAB                                  IAmb     IAmb     13 32 23.9
      comp=Z,730nm,1.1s
WRAB                                  IAMs_20  IAMs_20  13 55 53.7
      comp=Z,21µm,20.0s
WRAB  Tennant Creek      58.44 186c iP        P        13 32 13.9 -1.9
WRAB                                  pmax     pmax
      comp=Z,955nm,1.3s
WRA   Warramunga Arr     58.45 186    P        P        13 32 13.0 -2.9
WRA   Warramunga Arr     58.45 186    P        P        13 32 14.2 -1.7
      comp=Z,379nm,0.8s,baz=2.5,slow=6.9,SNR=129
WRA                                   S        S        13 40 24.4 +6.1
      comp=Z,5.4nm,1.3s,baz=5.7,slow=14,SNR=5.2
WRA                                   LR       LR       13 56 14.9
      comp=Z,17µm,20.2s,baz=358,slow=35
WRA                                   PKPPKP   P'P'df   14 01 56.1 +9.3
      comp=Z,7.3nm,1.1s,baz=181,slow=2.2,SNR=8.5
WRA                                   P4KPbc            14 09 24.4
      comp=Z,2.0nm,0.9s,baz=1.8,slow=4.2,SNR=4.9
WR8   Warramunga Arr     58.45 185    IAmb     IAmb     13 32 19.9
      comp=Z,557nm,0.8s
POHA  Pohakuloa          58.62  89    P        P        13 32 16.7 -0.8
POHA  Pohakuloa          58.62  89    P        P        13 32 20.2 +2.7
SPA0  Spitsbergen Ar     58.66 348   eP        P        13 32 17.4 +0.7
SPA0                                  IVmB_BB           13 32 26.8
      comp=Z,2µm,2.1s
SPA0                                 eS        S        13 40 18.9 -1.1
SPA0                                  IVMs_BB  IVMs_BB  14 01 11.1
      comp=Z,15µm,13.2s
SPB2  Spitsbergen Ar     58.66 348    P        P        13 32 16.5 -0.2
SPB2                                  IAmb     IAmb     13 32 27.7
      comp=Z,452nm,1.3s
SPITS Spitsbergen Ar     58.66 348    P        P        13 32 16.3 -0.5
      comp=Z,19nm,0.5s,baz=74,slow=8.8,SNR=35
SPITS                                 LR       LR       13 59 01.2
      comp=Z,14µm,18.6s,baz=10,slow=38
      comp=Z,19nm,0.5s
SPITS Spitsbergen Ar     58.66 348    P        P        13 32 16.2 -0.5
SPITS                                 pmax     pmax
      comp=Z,670nm,1.4s
CTAO  Charters Tower     58.75 173    P        P        13 32 16.9 -1.0
CTAO  Charters Tower     58.75 173    P        P        13 32 19.4 +1.5
CTAO  Charters Tower     58.75 173    P        P        13 32 16.9 -1.0
CTAO                                  pmax     pmax
      comp=Z,134nm,1.1s
V35K  Ketchikan          58.76  42    P        P        13 32 18.4 +0.8
      baz=294,SNR=23
V35K                                  S        S        13 40 21.8 +0.2
      baz=294
T35M  Bob Quinn          58.80  40    IAmb     IAmb     13 32 24.8
      comp=Z,501nm,1.2s
T35M  Bob Quinn          58.80  40    P        P        13 32 18.8 +0.8
      baz=294,SNR=97
T35M                                  S        S        13 40 22.4 +0.2
      baz=294
KBS   Kingsbay           58.83 350    P        P        13 32 16.1 -1.7
KBS                                   IAmb     IAmb     13 32 29.2
      comp=Z,1µm,1.7s
KBS                                   IAMs_20  IAMs_20  13 55 39.9
      comp=Z,21µm,20.0s
KBS   Kingsbay           58.83 350c iP        P        13 32 18.9 +1.1
KBS                                   pmax     pmax
      comp=Z,731nm,1.7s
KBS                                   MLR      MLR
      comp=Z,25µm,15.0s
KBS   Kingsbay           58.83 350   eP        P        13 32 18.9 +1.1
KBS                                   IVmB_BB           13 32 28.2
      comp=Z,2µm,2.0s
KBS                                  eS        S        13 40 23.2 +1.3
KBS                                  e                  13 41 52.4
KBS                                  eSS       SS       13 44 20.0 +5.5
KBS                                   IVMs_BB  IVMs_BB  14 01 49.2
      comp=Z,17µm,13.3s
KBS   Kingsbay           58.83 350  i P        P        13 32 18.5 +0.7
KHU   Kahuku             58.84  89    P        P        13 32 17.8 -1.2
KHU   Kahuku             58.84  89    P        P        13 32 17.8 -1.2
KHU                                   pmax     pmax
      comp=Z,4µm,1.7s
EUNU  Eureka             58.84   8    IAmb     IAmb     13 32 28.0
      comp=Z,824nm,1.2s
QIS   Mount Isa          58.87 180    P        P        13 32 18.6 -0.2
RSD   Rainshed           58.98  89    P        P        13 32 18.2 -1.7
PUH   Pauahi             59.08  89    P        P        13 32 19.1 -1.4
DIB   Dawson Inlet,      59.16  44    IAmb     IAmb     13 32 24.0
      comp=Z,676nm,1.5s
H02S1 DAWSON INLET T     59.16  44    P        P        13 32 22.6 +2.1
      SNR=30
WRGLY Wrigley            59.30  32    IAMs_20  IAMs_20  13 59 10.5
      comp=Z,25µm,20.0s
WRGLY Wrigley            59.30  32    P        P        13 32 22.9 +1.6
      baz=295,SNR=14
WRGLY                                 S        S        13 40 26.7 -1.7
      baz=295
U35K  Hyder              59.34  41    P        P        13 32 22.8 +1.1
      baz=294
U35K                                  S        S        13 40 33.7 +4.5
      baz=294
NOR   Nord               59.37 356  i P        P        13 32 21.5  0.0
NOR                                   IAmb     IAmb     13 32 25.3
      comp=Z,180nm,0.8s
FUNA  Funafuti           59.71 133    IAMs_20  IAMs_20  13 55 52.1
      comp=Z,17µm,18.0s
SANVU Saraoutou          59.73 149    P        P        13 32 23.6 -1.2
SANVU                                 IAmb     IAmb     13 32 33.6
      comp=Z,540nm,1.1s
SANVU Saraoutou          59.73 149    P        P        13 32 25.5 +0.7
LIRD  Liard River Hi     59.78  36    P        P        13 32 25.7 +0.9
      baz=295,SNR=296
LIRD                                  S        S        13 40 37.5 +2.6
      baz=295
RUBB  Prince Rupert      59.89  43    IAmb     IAmb     13 32 36.7
      comp=Z,314nm,1.1s
BEAVL Fort Liard         59.92  35    P        P        13 32 27.2 +1.5
      baz=296,SNR=48
BEAVL                                 S        S        13 40 40.1 +3.4
      baz=296
LVZ   Lovozero           60.03 335    P        P        13 32 25.5 -0.8
LVZ   Lovozero           60.03 335c iP        P        13 32 26.1 -0.2
LVZ                                   pmax     pmax
      comp=Z,315nm,1.3s
LVZ                                   MLR      MLR
      comp=Z,79µm,17.0s
LVZ   Lovozero           60.03 335    P        P        13 32 25.9 -0.4
      comp=Z,7µmcomp=Z,207nm,2.2s
HG4B  Hotspring          60.25  45    IAmb     IAmb     13 32 31.3
      comp=Z,521nm,1.4s
KOTAN Kotaneelee Air     60.40  35    P        P        13 32 30.0 +1.1
      baz=296,SNR=25
KOTAN                                 S        S        13 40 47.1 +4.3
      baz=296
VLAKA Lakatoro           60.41 149    P        P        13 32 32.0 +2.6
TOAD  Toad River Com     60.43  37    P        P        13 32 30.3 +1.1
      baz=296,SNR=96
TOAD                                  S        S        13 40 47.3 +4.0
      baz=296
VADS  Vadso              60.53 338   eP        P        13 32 30.1 +0.5
VADS                                  IVmB_BB           13 32 39.5
      comp=Z,3µm,1.7s
VADS                                 ePP       PP       13 34 41.2 -1.4
VADS                                 eS        S        13 40 47.1 +3.0
VADS                                 eScS      ScS      13 42 19.4 +0.3
VADS                                 eSS       SS       13 44 41.2 -0.1
VADS                                  IVMs_BB  IVMs_BB  14 05 41.5
      comp=Z,29µm,13.2s
BJO1  Bjornoya           60.53 345  i          PKiKP    13 39 41.7  +11
APA   Apatity            60.60 335⇓iP        P        13 32 29.4 -0.8
APA                                 i                   13 33 17.0
APA                                 i                   13 34 41.0
APA                                 i PPP      PPP      13 36 14.0
APA                                 i S        S        13 40 44.0 -1.1
APA                                 i PS       PnS      13 40 52.0 -7.0
APA                                 i                   13 42 17.0
APA                                 i SSS      SSS      13 47 16.0
APA                                   pmax     pmax
      comp=Z,146nm,1.1s
APA                                   MLR      MLR
      comp=Z,87µm,15.0s
MALK  Mahakanadarawa     60.65 256    P        P        13 32 31.3  0.0
PALK  Pallekele          61.24 255    P        P        13 32 33.9 -1.5
PALK  Pallekele          61.24 255    IAMs_20  IAMs_20  13 59 53.8
      comp=Z,19µm,20.0s
PALK  Pallekele          61.24 255    LR       LR       14 01 33.0
      comp=Z,17µm,18.3s,baz=46,slow=38
PALK  Pallekele          61.24 255    P        P        13 32 36.5 +1.1
PALK                                  P        P        13 32 36.5 +1.1
PALK                                  S        S        13 40 56.2 +1.4
PALK                                  S        S        13 40 56.2 +1.4
PALK  Pallekele          61.24 255c iP        P        13 32 36.8 +1.4
PALK                                  pmax     pmax
      comp=Z,295nm,1.5s
PALK                                  MLR      MLR
      comp=Z,23µm,18.0s
PALK  Pallekele          61.24 255    P        P        13 32 36.1 +0.8
PALK                                  S        S        13 40 57.1 +2.3
KEV   Kevo               61.41 339    P        P        13 32 34.4 -1.2
KEV                                   IAmb     IAmb     13 32 46.4
      comp=Z,711nm,1.5s
KEV   Kevo               61.41 339    P        P        13 32 34.4 -1.2
KEV                                   pmax     pmax
      comp=Z,711nm,1.5s
KEV                                   MLR      MLR
      comp=Z,32µm,19.0s
KEV   Kevo               61.41 339    P        P        13 32 35.5 -0.1
KEV                                   S        S        13 40 54.8 -0.5
RES   Resolute Bay       61.44  14    IAmb     IAmb     13 32 45.5
      comp=Z,731nm,1.2s
RES                                   IAMs_20  IAMs_20  14 03 43.0
      comp=Z,24µm,19.0s
RES   Resolute Bay       61.44  14    LR       LR       14 02 57.3
      comp=Z,21µm,18.6s,baz=317,slow=40
KLMR  Klimovskoe         61.59 327d iP        P        13 32 34.2 -2.8
KLMR                                 e*SP      pP       13 32 42.8 +0.1
KLMR                                  S        S        13 40 52.2 -5.6
KLMR                                  SS       SS       13 44 53.1 -5.2
KLMR                                  SSS      SSS      13 47 44.3
KLMR                                  pmax     pmax
      comp=Z,421nm,1.3s
KLMR                                  MLR      MLR
      comp=Z,51µm,14.0s
BELG  Belogornoye        61.59 316    LR       LR       14 00 31.4
      comp=Z,26µm,18.3s,baz=65,slow=37
BELG  Belogornoye        61.59 316c iP        P        13 32 35.2 -1.9
BELG                                  pmax     pmax
      comp=Z,180nm,1.1s
BELG                                  MLR      MLR
      comp=Z,16µm,16.0s
HAMF  Hammerfest         61.81 340   eP        P        13 32 38.6 +0.3
HAMF                                  IVmB_BB           13 32 46.1
      comp=Z,4µm,5.2s
HAMF                                  IVMs_BB  IVMs_BB  14 04 09.3
      comp=Z,24µm,13.9s
ARA0  ARCESS Array S     61.96 339   eP        P        13 32 39.9 +0.5
ARA0                                  IVmB_BB           13 32 47.6
      comp=Z,5µm,5.3s
ARA0                                 ePP       PP       13 34 56.3 +1.0
ARA0                                 eS        S        13 41 04.3 +1.9
ARA0                                 eSS       SS       13 45 01.3 -2.6
ARA0                                  IVMs_BB  IVMs_BB  14 03 26.4
      comp=Z,32µm,15.3s
ARCES ARCESS Array B     61.96 339    P        P        13 32 37.2 -2.2
ARCES                                 IAmb     IAmb     13 32 50.3
      comp=Z,528nm,1.4s
ARCES ARCESS Array B     61.96 339    P        P        13 32 39.0 -0.4
      comp=Z,37nm,0.8s,baz=63,slow=7.0,SNR=91
ARCES                                 PP       PP       13 34 55.2 -0.1
      comp=Z,43nm,1.1s,baz=46,slow=6.9,SNR=3.9
ARCES                                 PKPPKP   P'P'df   14 01 53.2 -2.6
      comp=Z,7.2nm,1.1s,baz=105,slow=4.5,SNR=4.9
ARCES                                 LR       LR       14 02 49.7
      comp=Z,43µm,19.0s,baz=52,slow=39
      comp=Z,37nm,0.8s
ARCES ARCESS Array B     61.96 339    P        P        13 32 37.2 -2.2
ARCES                                 pmax     pmax
      comp=Z,528nm,1.5s
AS01  Alice Springs      62.17 186    P        P        13 32 40.2 -1.1
AS31  Alice Springs      62.18 186    P        P        13 32 39.1 -2.2
ASAR  Alice Springs      62.18 186    P        P        13 32 39.4 -1.9
ASAR  Alice Springs      62.18 186    P        P        13 32 40.0 -1.3
      comp=Z,199nm,0.8s,baz=6.4,slow=5.8,SNR=123
ASAR                                  LR       LR       13 58 09.8
      comp=Z,15µm,20.8s,baz=7.5,slow=35
ASAR                                  PKPPKP   P'P'df   14 01 51.1  +10
      comp=Z,8.6nm,1.0s,baz=170,slow=1.8,SNR=10
ASAR                                  P4KPbc            14 09 43.2
      comp=Z,0.3nm,0.5s,baz=2.4,slow=3.3,SNR=5.3
      comp=Z,199nm,0.8s
ASAR  Alice Springs      62.18 186    P        P        13 32 39.4 -1.9
MBWA  Marble Bar         62.28 201    P        P        13 32 40.6 -1.5
MBWA                                  IAmb     IAmb     13 32 45.4
      comp=Z,256nm,1.1s
MBWA  Marble Bar         62.28 201    P        P        13 32 42.9 +0.9
MBWA                                  P        P        13 32 42.9 +0.9
MBWA  Marble Bar         62.28 201    P        P        13 32 40.7 -1.3
MBWA  Marble Bar         62.28 201    P        P        13 32 41.0 -1.1
MBWA                                  S        S        13 41 14.1 +6.7
PSA00 Pilbara Seismi     62.65 201    P        P        13 32 42.4 -2.0
PSA00                                 IAmb     IAmb     13 32 47.9
      comp=Z,307nm,1.1s
PSA00 Pilbara Seismi     62.65 201    P        P        13 32 42.8 -1.6
SGF   Sodankyl           62.89 336    P        P        13 32 45.5 -0.1
MSF   Maaselka           62.96 334    P        P        13 32 46.1  0.0
GD1S  Gladstone Soft     63.10 168    P        P        13 32 48.8 +1.4
YKAW3 Yellowknife Wh     63.17  30    IAmb     IAmb     13 32 51.5
      comp=Z,1µm,1.9s
YKA   Yellowknife Ar     63.20  30    P        P        13 32 46.0 -1.8
YKA   Yellowknife Ar     63.20  30    P        P        13 32 46.7 -1.0
      comp=Z,50nm,0.7s,baz=307,slow=6.8,SNR=186
YKA                                   PKPPKP   P'P'df   14 01 48.6 -4.8
      comp=Z,2.4nm,1.0s,baz=145,slow=2.2,SNR=8.5
YKA                                   P4KPbc            14 09 43.8
      comp=Z,2.2nm,1.0s,baz=310,slow=4.7,SNR=6.9
      comp=Z,50nm,0.7s
YKA   Yellowknife Ar     63.20  30  i P        P        13 32 46.7 -1.0
YKA                                   pmax     pmax
      comp=Z,53nm,0.7s
YKAW1 Yellowknife Wh     63.26  30    IAmb     IAmb     13 32 52.9
      comp=Z,311nm,1.1s
JETT  Jettan, Norway     63.37 340   eP        P        13 32 49.4 +0.7
JETT                                  IVmB_BB           13 32 58.3
      comp=Z,4µm,2.8s
JETT                                 eS        S        13 41 21.8 +1.7
JETT                                 eSS       SS       13 45 28.1 +2.2
JETT                                  IVMs_BB  IVMs_BB  14 04 44.7
      comp=Z,51µm,16.2s
TRO   Tromso             63.71 340   eP        P        13 32 51.4 +0.4
TRO                                   IVmB_BB           13 33 00.4
      comp=Z,4µm,2.4s
TRO                                  eS        S        13 41 25.6 +1.5
TRO                                  eSS       SS       13 45 33.3 +2.3
TRO                                   IVMs_BB  IVMs_BB  14 05 10.6
      comp=Z,36µm,14.9s
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JOF	Joensuu	63.83	331	eP	P	13 32 52.3	+0.4
NEEM	North Greenlan	64.02	3	i P	P	13 32 53.4	+0.1
NEEM				IAmb	IAmb	13 32 57.2	
	comp=Z,298nm,0.8s						
DAG	Danmarks Havn	64.05	355	P	P	13 32 53.1	0.0
DAG	Danmarks Havn	64.05	355	P	P	13 32 51.7	-1.4
DAG	Danmarks Havn	64.05	355	i P	P	13 32 53.4	+0.3
DAG				IAmb	IAmb	13 32 54.9	
	comp=Z,121nm,0.7s						
INH	Isangel	64.26	149	P	P	13 32 56.1	+0.9
COCO	West Island	64.34	227	P	P	13 32 53.5	-2.3
COCO	West Island	64.34	227	IAMs_20	IAMs_20	14 02 00.2	
	comp=Z,15µm,18.0s						
COCO	West Island	64.34	227	P	P	13 32 56.9	+1.1
COCO				P	P	13 32 56.9	+1.1
COCO	West Island	64.34	227	P	P	13 32 57.5	+1.7
COCO	West Island	64.34	227	P	P	13 32 53.5	-2.3
COCO				pmax	pmax		
	comp=Z,1µm,1.6s						
COCO				MLR	MLR		
	comp=Z,16µm,18.0s						
OUL	Oulu	64.51	335	P	P	13 32 56.3	0.0
CBB	Campbell River	64.56	45	IAmb	IAmb	13 33 02.3	
	comp=Z,219nm,1.0s						
EIDS	Eidsvold	64.58	168	P	P	13 32 55.8	-1.3
EIDS				IAmb	IAmb	13 33 01.6	
	comp=Z,279nm,1.0s						
EIDS	Eidsvold	64.58	168	P	P	13 32 56.9	-0.2
QLP	Quilpie	65.02	175	P	P	13 32 59.0	-1.0
MOS	Moscow	65.06	322	eP	P	13 32 59.2	-0.8
MOS				e		13 35 22.8	
MOS				ePPP	PPP	13 36 54.7	
MOS				eS	S	13 41 40.7	-0.5
MOS				eSS	SS	13 45 50.5	-2.1
MOS				pmax	pmax		
	comp=Z,782nm,1.3s						
MOS				pmax	pmax		
	comp=E,223nm,1.2s						
MOS				pmax	pmax		
	comp=N,297nm,1.3s						
MOS				pmax	pmax		
	comp=Z,3µm,1.8s						
MOS				pmax	pmax		
	comp=E,4µm,4.0s						
MOS				pmax	pmax		
	comp=N,2µm,3.1s						
MOS				smax	smax		
	comp=E,9µm,4.2s						
MOS				smax	smax		
	comp=N,5µm,3.9s						
MOS				MLR	MLR		
	comp=E,36µm,14.0s						
MOS				MLR	MLR		
	comp=Z,52µm,14.0s						
RMQ	Roma	65.35	171	P	P	13 33 04.0	+1.8
VRH	Novokhopyorsk	65.37	317	eP	P	13 33 00.1	-2.0
VRH				eS	S	13 41 41.0	-4.2
VRH				pmax	pmax		
	comp=Z,280nm,0.6s						
VRH				smax	smax		
	comp=E,11µm,11.0s						
VRH				MLR	MLR		
	comp=Z,112µm,14.0s						
GIRL	Giralia	65.38	206	P	P	13 33 04.3	+1.9
DZM	Mont Dzumac	65.46	152	P	P	13 33 02.4	-0.7
DZM				IAmb	IAmb	13 33 13.2	
	comp=Z,363nm,1.0s						
DZM	Mont Dzumac	65.46	152	eP	P	13 33 03.0	-0.1
	comp=Z,804nm,1.1s						
DZM	Mont Dzumac	65.46	152	ePP	PP	13 35 24.6	-2.9
	comp=Z,2µm,23.4s						
DZM				eS	S	13 41 45.9	-1.1
	comp=Z,21µm,30.6s						
DZM				eSS	SS	13 45 58.0	-3.1
	comp=Z,17µm,26.0s						
DZM				eLQ	LQ	13 49 46.8	
	comp=Z,47µm,27.9s						
DZM				eLR	LR	13 52 33.0	
	comp=Z,34µm,25.6s						
DZM	Mont Dzumac	65.46	152	P	P	13 33 03.4	+0.3
	comp=Z,105nm,0.9s,baz=35,slow=6.9,SNR=37						
DZM				LR	LR	14 02 58.2	
	comp=Z,15µm,18.5s,baz=348,slow=37						
	comp=Z,105nm,0.9s						
DZM	Mont Dzumac	65.46	152	P	P	13 33 03.6	+0.5
YATNC	Mamie plateau,	65.61	152	P	P	13 33 06.2	+2.3
ONTNC	Ouen Toro	65.68	153	P	P	13 33 03.0	-1.3
ONTNC				IAmb	IAmb	13 33 08.1	
	comp=Z,801nm,1.5s						
ONTNC	Ouen Toro	65.68	153	P	P	13 33 04.6	+0.3
STEI	Steigen	65.86	340	eP	P	13 33 05.4	+0.5
STEI				IVmB_BB		13 33 14.4	
	comp=Z,4µm,2.1s						
STEI				eS	S	13 41 51.5	+0.9
STEI				eSS	SS	13 46 10.7	+6.2
STEI				IVMs_BB	IVMs_BB	14 07 19.8	
	comp=Z,26µm,13.8s						
CLRS	Cowichan Lake	65.87	46	IAmb	IAmb	13 33 10.8	
	comp=Z,592nm,1.3s						
OBN	Obninsk	65.90	322	P	P	13 33 03.0	-2.4
OBN	Obninsk	65.90	322	LR	LR	14 03 05.2	
	comp=Z,37µm,18.1s,baz=8.0,slow=37						
OBN	Obninsk	65.90	322	⇓P	P	13 33 06.1	+0.7
OBN	Obninsk	65.90	322	c iP	P	13 33 05.7	+0.2
OBN				i *PP	pP	13 33 09.4	-1.8
OBN				i *SP	sP	13 33 12.6	-0.7
OBN				e		13 33 34.7	
OBN				e		13 35 30.3	
OBN				i S	S	13 41 51.0	-0.6
OBN				ePS	PnS	13 42 10.6	-1.1
OBN				ePPS	PPS	13 42 18.5	
OBN				i		13 42 25.8	
OBN				i SS	SS	13 46 02.1	-3.6
OBN				pmax	pmax		
	comp=Z,845nm,1.3s						
OBN				MLR	MLR		
	comp=Z,44µm,15.0s						
OBN	Obninsk	65.90	322	P	P	13 33 05.0	-0.5
	comp=Z,12µmcomp=Z,479nm,1.4s						
NGCH	Negor - Chabah	65.92	284	P	P	13 33 09.0	+3.0
NGCH				S	S	13 41 57.6	+5.0
FUTU	Fugatoga	65.92	134	P	P	13 33 08.7	+2.7
OUENC	Ouen Island, N	65.92	152	P	P	13 33 08.0	+2.1
POIN	Pond Inlet	65.98	11	P	P	13 33 03.4	-2.3
POIN				IAmb	IAmb	13 33 15.2	
	comp=Z,615nm,1.3s						
PUL	Pulkovo	66.03	328	⇑iP	P	13 33 07.2	+1.0
PUL				pmax	pmax		
	comp=Z,603nm,1.1s						
PUL				MLR	MLR		
	comp=Z,47µm,16.0s						
LPSR	Galich'ya Gora	66.10	319	eP	P	13 33 07.7	+0.9
LPSR				eS	S	13 41 57.1	+3.1
LPSR				pmax	pmax		
	comp=Z,330nm,0.7s						
LPSR				smax	smax		
	comp=E,2µm,8.4s						
LPSR				MLR	MLR		
	comp=Z,173µm,15.0s						
LOF	Lofoten	66.16	341	eP	P	13 33 06.8	-0.1
LOF				IVmB_BB		13 33 14.6	
	comp=Z,5µm,5.8s						
LOF				eS	S	13 41 56.5	+2.1
LOF				eSS	SS	13 46 07.6	-1.6
LOF				IVMs_BB	IVMs_BB	14 06 06.0	
	comp=Z,32µm,15.0s						
FAUS	Fauske	66.23	340	eP	P	13 33 06.2	-1.2
FAUS				IVmB_BB		13 33 15.6	
	comp=Z,7µm,4.8s						
FAUS				eS	S	13 41 56.4	+1.1
FAUS				IVMs_BB	IVMs_BB	14 05 32.1	
	comp=Z,35µm,16.3s						
MAK	Makhachkala	66.27	307	c iP	P	13 33 04.0	-4.1
MAK				eS	S	13 41 51.1	-5.4
MAK				eSS	SS	13 46 11.8	-0.3
MAK				pmax	pmax		
	comp=Z,392nm,1.1s						
MAK				pmax	pmax		
	comp=Z,9µm,5.0s						
MAK				MLR	MLR		
	comp=E,63µm,17.0s						
MAK				MLR	MLR		
	comp=Z,85µm,14.0s						
MAK				MLR	MLR		
	comp=N,101µm,14.0s						
PINNC	Pines Island,	66.32	152	P	P	13 33 07.1	-1.4
PINNC				IAmb	IAmb	13 33 13.8	
	comp=Z,284nm,1.2s						
PINNC	Pines Island,	66.32	152	P	P	13 33 09.5	+1.0
DGTI	Dogotuki	66.39	137	P	P	13 33 11.2	+2.2
VORR	Voronezh	66.45	318	eP	P	13 33 07.8	-1.3
VORR				eS	S	13 41 53.3	-5.1
VORR				pmax	pmax		
	comp=Z,560nm,1.2s						
VORR				smax	smax		
	comp=E,6µm,9.3s						
VORR				MLR	MLR		
	comp=Z,193µm,15.0s						
DBG	Daneborg	66.53	354	i P	P	13 33 08.3	-0.9
DBG				IAmb	IAmb	13 33 11.7	
	comp=Z,75nm,0.9s						
KULLO	Kullorsuaq	66.53	5	i P	P	13 33 09.3	+0.1
KULLO				IAmb	IAmb	13 33 11.0	
	comp=Z,176nm,0.7s						
KEF	Keuruu	66.68	332	eP	P	13 33 10.5	+0.1
FINES	FINESS Array B	66.69	331	P	P	13 33 08.3	-2.1
FINES	FINESS Array B	66.69	331	P	P	13 33 08.7	-1.7
	comp=Z,67nm,0.6s,baz=64,slow=8.7,SNR=131						
FINES				PKPPKP	P'P'df	14 01 45.0	-2.6
	comp=Z,3.0nm,0.9s,baz=131,slow=10,SNR=3.9						
FINES				LR	LR	14 03 55.7	
	comp=Z,30µm,19.2s,baz=54,slow=38						
	comp=Z,67nm,0.6s						
MSVF	Nonsavu	66.71	140	LR	LR	14 00 12.9	
	comp=Z,15µm,19.0s,baz=344,slow=34						
MSVF	Nonsavu	66.71	140	P	P	13 33 13.5	+2.4
MSVF	Nonsavu	66.71	140	c iP	P	13 33 13.2	+2.1
MSVF				pmax	pmax		
	comp=Z,377nm,1.3s						
VSR	Storozhevoye	66.72	318	eP	P	13 33 09.1	-1.7
VSR				eS	S	13 42 00.0	-1.7
VSR				pmax	pmax		
	comp=Z,490nm,0.9s						
VSR				smax	smax		
	comp=E,10µm,11.6s						
VSR				MLR	MLR		
	comp=Z,152µm,15.0s						
VORD	Divnogorie	66.79	317	eP	P	13 33 09.6	-1.7
VORD				eS	S	13 41 57.1	-5.4
VORD				pmax	pmax		
	comp=Z,640nm,1.4s						
VORD				smax	smax		
	comp=E,14µm,12.6s						
VORD				MLR	MLR		
	comp=Z,57µm,13.0s						
AKT	Akhty	66.90	305	eP	P	13 33 10.9	-1.4
AKT				e		13 33 40.0	
AKT				e		13 35 35.8	
AKT				ePPP	PPP	13 37 13.8	
AKT				eS	S	13 42 02.7	-1.8
AKT				eSS	SS	13 46 19.4	-2.8
AKT				pmax	pmax		
	comp=Z,7µm,5.5s						
AKT				pmax	pmax		
	comp=Z,473nm,1.0s						
AKT				pmax	pmax		
	comp=N,244nm,1.2s						
AKT				pmax	pmax		
	comp=E,455nm,1.3s						
AKT				smax	smax		
	comp=N,5703µm,6.3s						
AKT				smax	smax		
	comp=E,8236µm,11.2s						
AKT				MLR	MLR		
	comp=N,59µm,15.0s						
AKT				MLR	MLR		
	comp=Z,98µm,15.0s						
AKT				MLR	MLR		
	comp=E,67µm,14.0s						
TAVE	Taveuni	66.91	137	P	P	13 33 14.9	+2.5
VAGH	Vaagaholmen	67.25	340	eP	P	13 33 14.1	+0.2
VAGH				IVmB_BB		13 33 23.1	
	comp=Z,3µm,2.6s						
VAGH				eS	S	13 42 08.2	+0.7
VAGH				eSS	SS	13 46 30.2	+4.0
VAGH				i		13 49 38.1	
VAGH				IVMs_BB	IVMs_BB	14 06 12.3	
	comp=Z,28µm,15.0s						
HMDM	Hanimaadhoo	67.32	260	P	P	13 33 14.2	-0.9
HMDM				IAmb	IAmb	13 33 25.2	
	comp=Z,417nm,1.1s						
HMDM				IAMs_20	IAMs_20	14 07 17.6	
	comp=Z,15µm,18.0s						
HMDM	Hanimaadhoo	67.32	260	P	P	13 33 17.5	+2.3
MOR8	Moi Rana	67.33	339	eP	P	13 33 13.7	-0.8
MOR8				eS	S	13 42 07.8	-0.9
MOR8				eSS	SS	13 46 27.5	-0.1
MOR8				IVmB_BB		14 06 02.8	
	comp=Z,22µm,15.2s						
E03A	Lebam	67.40	48	IAmb	IAmb	13 33 21.4	
	comp=Z,721nm,1.3s						
KONS	Konsvik	67.46	340	eP	P	13 33 16.4	+1.2
KONS				IVmB_BB		13 33 24.3	
	comp=Z,3µm,2.9s						
KONS				eS	S	13 42 08.0	-2.1
KONS				IVMs_BB	IVMs_BB	14 06 09.8	
	comp=Z,23µm,14.7s						
STOK	Stokkvaagen	67.61	339	eP	P	13 33 16.2	0.0
STOK				IVmB_BB		13 33 24.1	
	comp=Z,4µm,5.1s						
STOK				eS	S	13 42 12.0	0.0
STOK				i		13 46 49.3	
STOK				e		13 49 47.5	
STOK				IVMs_BB	IVMs_BB	14 07 21.9	
	comp=Z,23µm,14.3s						
GC1S	Gold Coast 1 S	67.72	167	P	P	13 33 19.4	+2.2
LEIR	Leirfjorden	67.75	339	eP	P	13 33 17.0	0.0
LEIR				IVmB_BB		13 33 26.3	
	comp=Z,3µm,3.0s						
LEIR				eS	S	13 42 15.2	+1.6
LEIR				eSS	SS	13 46 33.4	-0.5
LEIR				e		13 49 46.8	
LEIR				IVMs_BB	IVMs_BB	14 07 25.9	
	comp=Z,25µm,15.6s						
MEEK	Meekatharra	67.79	200	P	P	13 33 16.2	-1.6
XMAS	Kiritimati	67.89	106	P	P	13 33 21.6	+2.9
GOF	Gofitskoye	67.89	311	c iP	P	13 33 19.2	+0.8
GOF				eS	S	13 42 16.3	+0.3
MEF	Metsahovi	68.11	331	eP	P	13 33 20.0	+0.6
JNW	Jan Mayen West	68.26	349	eP	P	13 33 20.4	+0.2
JNW				IVmB_BB		13 33 31.0	
	comp=Z,6µm,2.5s						
JNW				eS	S	13 42 24.4	+4.9
JNE	Jan Mayen East	68.27	349	eP	P	13 33 22.0	+1.7
JNE				IVmB_BB		13 33 31.3	
	comp=Z,5µm,2.2s						
JNE				eS	S	13 42 24.9	+5.2
JNE				IVMs_BB	IVMs_BB	14 06 32.0	
	comp=Z,7µm,13.1s						
VSU	Vasula	68.30	329	c eP	P	13 33 20.4	-0.2
VSU				pmax	pmax		
	comp=Z,768nm,1.6s						
VSU				MLR	MLR		
	comp=Z,45µm,16.0s						
VSU	Vasula	68.30	329	eP	P	13 33 20.8	+0.1
JMIC	Jan Mayen	68.31	349	LR	LR	14 04 10.8	
	comp=Z,4µm,18.2s,baz=24,slow=37						
JMIC	Jan Mayen	68.31	349	eP	P	13 33 22.2	+1.7
JMIC				IVmB_BB		13 33 31.3	
	comp=Z,6µm,2.7s						
JMIC				eS	S	13 42 27.4	+7.3
UPNV	Upernavik	68.36	5	i P	P	13 33 20.0	-0.8
UPNV				IAmb	IAmb	13 33 24.9	
	comp=Z,257nm,1.1s						
JMI	Jan Mayen	68.39	349	eP	P	13 33 22.9	+1.9
JMI				IVmB_BB		13 33 31.9	
	comp=Z,5µm,2.5s						
JMI				eS	S	13 42 28.1	+7.0
JMI				IVMs_BB	IVMs_BB	14 07 05.0	
	comp=Z,6µm,19.3s						
NCK	Nalchik	68.41	309	eP	P	13 33 21.8	+0.1
NCK				pmax	pmax		
	comp=Z,357nm,1.6s						
NCK				MLR	MLR		
	comp=Z,32µm,15.0s						
GUDG	Gudauri	68.43	308	P	P	13 33 24.4	+2.4
BLKN	Baker Lake	68.53	23	P	P	13 33 20.4	-1.6
RAF	Rauma	68.56	332	eP	P	13 33 22.6	+0.4
COR	Corvallis	68.62	50	P	P	13 33 22.8	-0.1
COR	Corvallis	68.62	50	P	P	13 33 22.8	-0.1
COR				pmax	pmax		
	comp=Z,854nm,1.2s						
KVAR	Kislovodsk Arr	68.70	310	LR	LR	14 04 45.9	
	comp=Z,21µm,19.0s,slow=37						
KBZ	Khabaz	68.70	309	P	P	13 33 22.4	-1.1
	comp=Z,62nm,0.9s,baz=61,slow=3.6,SNR=50						
KBZ				PKPPKP	P'P'df	14 01 40.5	-2.7
	comp=Z,4.4nm,0.9s,baz=244,slow=2.8,SNR=8.3						
KBZ				LR	LR	14 08 09.0	
	comp=Z,30µm,19.7s,baz=44,slow=40						
	comp=Z,62nm,0.9s						
KBZ	Khabaz	68.70	309	c iP	P	13 33 22.1	-1.3
KBZ				pmax	pmax		
	comp=Z,666nm,2.2s						
KBZ				MLR	MLR		
	comp=Z,52µm,16.0s						
KIV	Kislovodsk	68.71	310	eP	P	13 33 24.9	+1.3
KIV	Kislovodsk	68.71	310	P	P	13 33 21.9	-1.7
KIV				IAMs_20	IAMs_20	14 02 44.3	
	comp=Z,17µm,21.0s						
KIV	Kislovodsk	68.71	310	P	P	13 33 23.6	0.0
KIV				P	P	13 33 23.6	0.0
KIV				S	S	13 42 24.9	-1.0
KIV				S	S	13 42 24.9	-1.0
KIV	Kislovodsk	68.71	310	⇓P	P	13 33 24.7	+1.1
KIV	Kislovodsk	68.71	310	eP	P	13 33 22.7	-0.9
KIV				e		13 35 54.7	
KIV				ePPP	PPP	13 37 35.3	
KIV				eS	S	13 42 25.1	-0.9
KIV				eSS	SS	13 46 51.6	+1.7
KIV				eSSS	SSS	13 49 58.6	
KIV				pmax	pmax		
	comp=Z,806nm,4.0s						
KIV				pmax	pmax		
	comp=Z,425nm,1.1s						
KIV				MLR	MLR		
	comp=Z,30µm,17.0s						
KIV	Kislovodsk	68.71	310	i P	P	13 33 22.6	-0.9
	SNR=195						
KIV	Kislovodsk	68.71	310	P	P	13 33 23.5	0.0
KIV				S	S	13 42 25.8	-0.1
KIV	Kislovodsk	68.71	310	P	P	13 33 23.3	-0.3
	comp=Z,14µmcomp=Z,496nm,1.1s						
LKBA	Tubou, Lakemba	68.75	137	P	P	13 33 25.6	+1.7
SHA1	Shidzhatmaz	68.84	309	d iP	P	13 33 24.0	-0.6
WSAR	Wadi Sarin	68.99	283	LR	LR	14 07 26.1	
	comp=Z,50nm,20.5s,baz=98,slow=39						
WSAR	Wadi Sarin	68.99	283	P	P	13 33 26.4	+0.9
	SNR=17						
WSAR				S	S	13 42 31.8	+2.1
JLN	Jalan Bani Buh	69.00	282	P	P	13 33 24.7	-1.0
	SNR=17						
JLN				P	P	13 33 24.7	-1.0
	SNR=17						
JLN				S	S	13 42 31.2	+1.4
JLN				S	S	13 42 31.2	+1.4
ERBR	Yeremizino-Bor	69.03	312	eP	P	13 33 24.7	-0.8
ERBR				eS	S	13 42 31.2	+1.6
ERBR				eSS	SS	13 46 49.7	-5.0
ERBR				pmax	pmax		
	comp=E,6µm,5.7s						
ERBR				pmax	pmax		
	comp=N,60nm,0.6s						
ERBR				pmax	pmax		
	comp=Z,13µm,4.6s						
ERBR				pmax	pmax		
	comp=Z,620nm,1.0s						
ERBR				pmax	pmax		
	comp=E,147nm,0.9s						
ERBR				pmax	pmax		
	comp=N,432nm,0.9s						
ERBR				smax	smax		
	comp=E,32µm,8.3s						
ERBR				smax	smax		
	comp=N,18µm,7.3s						
ERBR				MLR	MLR		
	comp=Z,43µm,16.0s						
ERBR				MLR	MLR		
	comp=N,77µm,13.0s						
ERBR				MLR	MLR		
	comp=E,26µm,7.0s						
WBK	Wadi Bani Khal	69.08	283	P	P	13 33 27.0	+0.9
	SNR=16						
WBK				S	S	13 42 33.3	+2.5
SUMG	Summit	69.09	359	P	P	13 33 26.2	+0.4
SUMG	Summit	69.09	359	IAMs_20	IAMs_20	14 06 58.9	
	comp=Z,21µm,18.0s						
SUMG	Summit	69.09	359	P	P	13 33 26.6	+0.7
TRLG	Trialeti	69.17	307	P	P	13 33 27.1	+0.5
BIDO	Bidbid	69.21	284	P	P	13 33 27.5	+0.6
	SNR=39						
BIDO				P	P	13 33 27.5	+0.6
	SNR=39						
BIDO				S	S	13 42 32.1	-0.2
BIDO				S	S	13 42 32.1	-0.2
H04A	Detroit Lake	69.23	49	IAmb	IAmb	13 33 32.3	
	comp=Z,458nm,1.1s						
NSS	Namsos	69.25	338	eP	P	13 33 26.7	+0.3
NSS				IVmB_BB		13 33 34.3	
	comp=Z,6µm,5.5s						
NSS				eS	S	13 42 30.4	-1.0
NSS				eSS	SS	13 46 55.8	-1.2
NSS				e		13 50 20.2	
NSS				IVMs_BB	IVMs_BB	14 06 42.5	
	comp=Z,18µm,14.4s						
BANOM	Banah	69.26	287	P	P	13 33 28.0	+0.8
BANOM				P	P	13 33 28.0	+0.8
BANOM				S	S	13 42 32.3	-0.6
BANOM				S	S	13 42 32.3	-0.6
BANOM	Banah	69.26	287	i P	P	13 33 27.5	+0.2
	SNR=49						
SHME	Shamm	69.31	287	P	P	13 33 27.6	+0.1
	SNR=89						
SHME				P	P	13 33 27.6	+0.1
	SNR=89						
SHME				S	S	13 42 32.0	-1.4
SHME				S	S	13 42 32.0	-1.4
SHME	Shamm	69.31	287	i P	P	13 33 27.1	-0.4
	SNR=52						
MTSE	Matsula	69.31	330	eP	P	13 33 27.1	+0.2
AFI	Afiamalu	69.33	129	P	P	13 33 29.6	+1.9
AFI	Afiamalu	69.33	129	P	P	13 33 29.9	+2.2
LABN	Labinsk	69.50	311	eP	P	13 33 29.0	+0.6
LABN				eS	S	13 42 33.6	-1.5
LABN				pmax	pmax		
	comp=Z,10µm,4.4s						
LABN				pmax	pmax		
	comp=N,2µm,3.5s						
LABN				pmax	pmax		
	comp=E,1µm,3.6s						
LABN				pmax	pmax		
	comp=Z,485nm,0.9s						
LABN				pmax	pmax		
	comp=E,157nm,1.2s						
LABN				pmax	pmax		
	comp=N,262nm,1.1s						
LABN				smax	smax		
	comp=N,30µm,7.7s						
LABN				smax	smax		
	comp=E,26µm,7.2s						
LABN				MLR	MLR		
	comp=E,105µm,13.0s						
LABN				MLR	MLR		
	comp=Z,59µm,13.0s						
LABN				MLR	MLR		
	comp=N,83µm,14.0s						
GNI	Garni	69.53	305	eP	P	13 33 30.3	+1.4
GNI	Garni	69.53	305	P	P	13 33 28.1	-0.7
GNI	Garni	69.53	305	LR	LR	14 06 01.7	
	comp=N,12µm,19.4s,baz=60,slow=38						
GNI	Garni	69.53	305	P	P	13 33 29.5	+0.6
GNI				P	P	13 33 29.5	+0.6
GNI				S	S	13 42 35.1	-0.8
GNI				S	S	13 42 35.1	-0.8
GNI	Garni	69.53	305	c iP	P	13 33 30.3	+1.4
GNI				pmax	pmax		
	comp=Z,410nm,1.6s						
GNI				MLR	MLR		
	comp=Z,30µm,14.0s						
GNI	Garni	69.53	305	P	P	13 33 29.6	+0.8
SMDO	Samad	69.53	284	P	P	13 33 28.8	-0.3
	SNR=55						
SMDO				P	P	13 33 28.8	-0.3
	SNR=55						
SMDO				S	S	13 42 37.8	+1.5

SMDO				S	S	13 42 37.8	+1.5
WAH2	Wahluke Slope	69.58	46	IAmb	IAmb	13 33 33.0	
	comp=Z,274nm,0.7s						
MDH	Madha	69.61	286	P	P	13 33 28.3	-1.0
	SNR=30						
MDH				P	P	13 33 28.3	-1.0
	SNR=30						
MDH				S	S	13 42 38.1	+1.2
MDH				S	S	13 42 38.1	+1.2
MDH				S	S	13 42 39.0	+2.1
MDH				S	S	13 42 39.0	+2.1
MDH	Madha	69.61	286	*i* P	P	13 33 28.8	-0.5
	SNR=20						
ARMA	Armidale	69.62	169	IAmb	IAmb	13 33 38.6	
	comp=Z,306nm,1.2s						
ARMA	Armidale	69.62	169	P	P	13 33 30.3	+1.1
AKH	Akhalkalaki	69.62	307	*e*P	P	13 33 28.6	-0.8
MASF	Masafi	69.67	287	P	P	13 33 30.3	+0.5
	SNR=54						
MASF				S	S	13 42 38.1	+0.3
MSFE	Esma-Masafi	69.68	287	*i* P	P	13 33 30.5	+0.6
	SNR=41						
NUUG	Nuugaatsiaq	69.77	4	*i* P	P	13 33 29.2	-0.4
NUUG				IAmb	IAmb	13 33 32.3	
	comp=Z,70nm,0.7s						
HOQ	Hoqain	69.80	284	P	P	13 33 31.1	+0.5
	SNR=66						
HOQ				P	P	13 33 31.1	+0.5
	SNR=66						
HOQ				S	S	13 42 39.0	-0.3
HOQ				S	S	13 42 39.0	-0.3
FORT	Forrest	69.86	190	IAmb	IAmb	13 33 34.3	
	comp=Z,519nm,1.0s						
FORT				IAMs_20	IAMs_20	14 01 48.2	
	comp=Z,20µm,20.0s						
FORT	Forrest	69.86	190	P	P	13 33 29.9	-0.6
F07A	Phinny Hill Vi	69.86	47	IAmb	IAmb	13 33 36.3	
	comp=Z,388nm,0.8s						
UOSS	Minazif	69.87	286	P	P	13 33 29.2	-1.8
UOSS				IAmb	IAmb	13 33 41.5	
	comp=Z,279nm,1.0s						
UOSS	Minazif	69.87	286	IAMs_20	IAMs_20	14 07 17.5	
	comp=Z,19µm,18.0s						
UOSS	Minazif	69.87	286	P	P	13 33 31.2	+0.2
UOSS				P	P	13 33 31.2	+0.2
UOSS				S	S	13 42 40.2	+0.1
UOSS				S	S	13 42 40.2	+0.1
UOSS	Minazif	69.87	286	*i* P	P	13 33 31.1	+0.1
	SNR=46						
UOSS	Minazif	69.87	286	P	P	13 33 30.7	-0.3
UOSS				S	S	13 42 39.6	-0.5
JMDO	Jabal Madar	69.88	283	P	P	13 33 31.5	+0.4
	SNR=32						
JMDO				P	P	13 33 31.5	+0.4
	SNR=32						
JMDO				S	S	13 42 41.3	+1.1
JMDO				S	S	13 42 41.3	+1.1
TASB	TASBURUN-IGDIR	69.94	305	*e*P	P	13 33 32.8	+1.5
BBOR	Butler Butte	69.95	51	IAmb	IAmb	13 33 37.4	
	comp=Z,776nm,1.5s						
UMQ	Umm Al-Quwin	69.96	287	P	P	13 33 32.3	+0.8
	SNR=26						
UMQ				S	S	13 42 42.0	+1.1
UMQ	Umm Al-Quwin	69.96	287	*i* P	P	13 33 32.8	+1.3
	SNR=8.6						
HATD	Hatta, Dubai	69.99	286	P	P	13 33 32.3	+0.5
	SNR=79						
HATD				S	S	13 42 41.9	+0.3
HATD	Hatta, Dubai	69.99	286	*i* P	P	13 33 32.2	+0.4
	SNR=69						
CMSA	Cobar Meteorol	70.04	174	P	P	13 33 32.0	+0.4
NEW	Newport	70.05	44	IAmb	IAmb	13 33 35.2	
	comp=Z,861nm,1.6s						
NEW	Newport	70.05	44	LR	LR	14 04 57.0	
	comp=Z,7µm,19.5s,baz=328,slow=36						
NEW	Newport	70.05	44	P	P	13 33 31.9	+0.1
SOHO	SOHO	70.08	285	P	P	13 33 31.9	-0.4
SOHO				S	S	13 42 43.8	+1.3
SOHO	SOHO	70.08	285	*i* P	P	13 33 32.2	-0.1
	SNR=37						
J04A	Umpqua Nationa	70.09	50	P	P	13 33 31.5	-0.8
ASHO	Ashiyiah	70.13	286	P	P	13 33 34.1	+1.4
	SNR=77						
ASHO				S	S	13 42 44.9	+1.8
ASHO	Ashiyiah	70.13	286	*i* P	P	13 33 33.0	+0.4
	SNR=71						
STKA	Stephens Creek	70.17	178	IAmb	IAmb	13 33 36.5	
	comp=Z,600nm,1.0s						
STKA	Stephens Creek	70.17	178	P	P	13 33 32.4	-0.1
	comp=Z,69nm,0.8s,baz=333,slow=6.8,SNR=24						
STKA				PKPPKP	P'P'df	14 01 36.3	+8.5
	comp=Z,8.8nm,1.2s,baz=161,slow=5.3,SNR=6.4						
STKA				LR	LR	14 03 01.3	
	comp=Z,12µm,20.8s,baz=354,slow=35						
	comp=Z,69nm,0.8s						
STKA	Stephens Creek	70.17	178	P	P	13 33 31.6	-0.8
STKA	Stephens Creek	70.17	178	*e*P	P	13 33 31.6	-0.8
NAZ	Nazwa, Dubai	70.26	287	P	P	13 33 33.9	+0.6
	SNR=68						
NAZ				S	S	13 42 45.7	+1.1
NAZ	Nazwa, Dubai	70.26	287	*i* P	P	13 33 34.0	+0.6
	SNR=28						
IDID	Didziasalis	70.31	326	*e*P	P	13 33 33.2	+0.1
MNK	Minsk	70.31	325	*i* P	P	13 33 34.3	+1.1
	comp=E,192nm,1.0s						
MNK				*i* P	P	13 33 34.3	+1.1
	comp=N,210nm,1.2s						
MNK				*i* P	P	13 33 34.3	+1.1
	comp=Z,126nm,0.7s,baz=50						
MNK				*i* PP	PP	13 36 08.9	+0.6
MNK				*i* PPP	PPP	13 37 52.0	
MNK				*i* S	S	13 42 47.0	+2.6
MNK				*i* SS	SS	13 47 16.7	+2.7
MNK				*i* SSS	SSS	13 50 44.1	
MNK				*i* LQ	LQ	13 58 49.6	
MNK				*i* LR	LR	14 05 01.9	
MNK				*i* LRM	MLR	14 07 16.8	
	comp=N,18µm,13.6s						
MNK				*i* LRM	MLR	14 07 17.5	
	comp=Z,33µm,13.0s						
MNK				*i* LRM	MLR	14 07 20.4	
	comp=E,36µm,15.0s						
MNK	Minsk	70.31	325	*i* P	P	13 33 34.2	+1.1
MNK				*i*		13 36 08.9	
MNK				*i* PPP	PPP	13 37 52.0	
MNK				*i* S	S	13 42 46.9	+2.6
MNK				*i* SS	SS	13 47 16.6	+2.7
MNK				pmax	pmax		
	comp=Z,126nm,0.7s						
MNK				pmax	pmax		
	comp=N,210nm,1.2s						
MNK				pmax	pmax		
	comp=E,192nm,1.0s						
MNK				MLR	MLR		
	comp=N,18µm,14.0s						
MNK				MLR	MLR		
	comp=Z,33µm,13.0s						
MNK				MLR	MLR		
	comp=E,36µm,15.0s						
KARS	Kars	70.32	307	*e*P	P	13 33 34.6	+0.9
YPT	Yellepit	70.32	46	IAmb	IAmb	13 33 39.0	
	comp=Z,282nm,1.0s						
BSY	Bisya	70.35	284	P	P	13 33 34.4	+0.4
	SNR=75						
BSY				S	S	13 42 47.3	+1.5
SCO	Scoresbysund	70.37	353	IAMs_20	IAMs_20	14 08 10.7	
	comp=Z,14µm,18.0s						
SCO	Scoresbysund	70.37	353	*i* P	P	13 33 34.0	+0.7
SCO				IAmb	IAmb	13 33 37.8	
	comp=Z,116nm,0.7s						
ISAL	Salakas	70.41	326	*e*P	P	13 33 37.3	+3.6
FAQ	Al Faqa, Dubai	70.44	286	P	P	13 33 34.8	+0.3
	SNR=54						
FAQ	Al Faqa, Dubai	70.44	286	*i* P	P	13 33 34.9	+0.3
	SNR=26						
ARQ	Araqi	70.53	285	P	P	13 33 35.7	+0.6
	SNR=57						
ARQ				S	S	13 42 49.1	+1.2
ARQ				S	S	13 42 49.3	+1.4
NACGM	Naroch	70.55	326	⇑*i*P	P	13 33 35.6	+1.0
	comp=Z,243nm,1.2s,baz=50						
L04D	Klamath Falls	70.55	51	P	P	13 33 34.3	-0.8
VSLR	Vesyoloye	70.58	310	*c i*P	P	13 33 35.8	+0.8
VSLR				pmax	pmax		
	comp=Z,418nm,1.1s						
YBH	Yreka Blue Hor	70.58	52	LR	LR	14 04 59.4	
	comp=Z,369nm,19.2s,baz=291,slow=36						
CLDR	Caldiran	70.62	305	*e*P	P	13 33 35.7	+0.1
SLIT	Slitere, Latvi	70.64	330	*e*P	P	13 33 35.7	+0.6
UMMG	Uummannaq	70.69	4	*i* P	P	13 33 34.9	-0.3
UMMG				IAmb	IAmb	13 33 39.7	
	comp=Z,310nm,1.2s						
SOC	Sochi	70.69	311	*e*P	P	13 33 33.8	-1.9
SOC				*e*		13 36 11.9	
SOC				*e*PPP	PPP	13 37 47.6	
SOC				*e*S	S	13 42 47.1	-2.0
SOC				*e*SS	SS	13 47 17.7	-2.6
SOC				pmax	pmax		
	comp=Z,328nm,1.1s						
SOC				MLR	MLR		
	comp=Z,19µm,13.0s						
ASUD	Al Ashush, Dub	70.71	286	P	P	13 33 36.7	+0.6
	SNR=48						
ASUD				S	S	13 42 53.2	+3.4
ASUD	Al Ashush, Dub	70.71	286	*i* P	P	13 33 36.9	+0.8
	SNR=29						
ALNE	Al Ain	70.71	286	P	P	13 33 36.5	+0.3
	SNR=84						
ALNE				S	S	13 42 48.6	-1.3
ALNE	Al Ain	70.71	286	*i* P	P	13 33 36.7	+0.6
	SNR=30						
MHTO	MHTO	70.76	282	P	P	13 33 36.4	-0.1
	SNR=48						
MHTO				S	S	13 42 52.0	+1.5
MORW	Morawa	70.81	202	P	P	13 33 35.0	-1.4
SENK	Senkaya-Erzuru	70.81	307	*e*P	P	13 33 37.7	+0.9
KMRM	Mail Ridge	70.81	54	IAMs_20	IAMs_20	14 03 00.2	
	comp=Z,14µm,19.0s						
AGRB	Hanur-Agry	70.97	306	*e*P	P	13 33 38.5	+0.8
AJN	Ajban	71.00	287	P	P	13 33 37.7	-0.2
	SNR=41						
AJN				S	S	13 42 53.1	-0.1
AJN	Ajban	71.00	287	*i* P	P	13 33 37.9	+0.1
	SNR=10						
VSVD	Vaisvydziai	71.08	328	*e*P	P	13 33 38.8	+1.1
BBOO	Buckleboo	71.14	183	IAMs_20	IAMs_20	14 02 14.0	
	comp=Z,19µm,22.0s						
BBOO	Buckleboo	71.14	183	P	P	13 33 38.0	-0.3
I07A	Izee	71.16	48	IAmb	IAmb	13 33 49.9	
	comp=Z,313nm,1.3s						
VANB	Van	71.27	305	*e*P	P	13 33 40.6	+1.1
WHYH	Whyalla	71.31	182	P	P	13 33 40.6	+1.3
ANN	Anapa	71.32	313	*e*P	P	13 33 38.6	-0.9
ANN				*e*S	S	13 42 51.3	-5.0
ANN				pmax	pmax		
	comp=Z,577nm,1.1s						
ANN				pmax	pmax		
	comp=E,162nm,1.1s						
ANN				pmax	pmax		
	comp=N,72nm,1.0s						
ANN				pmax	pmax		
	comp=N,2µm,5.2s						
ANN				pmax	pmax		
	comp=Z,7µm,4.6s						
ANN				pmax	pmax		
	comp=E,2µm,4.3s						
ANN				smax	smax		
	comp=E,10µm,7.3s						
ANN				smax	smax		
	comp=N,6µm,7.3s						
ANN				MLR	MLR		
	comp=N,36µm,16.0s						
ANN				MLR	MLR		
	comp=Z,45µm,15.0s						
ANN				MLR	MLR		
	comp=E,26µm,14.0s						
PABE	Paberze	71.38	327	*e*P	P	13 33 39.6	0.0
O02D	Mt. Diablo Mer	71.42	53	IAmb	IAmb	13 33 46.5	
	comp=Z,722nm,1.4s						
PTPS	Port Pirie	71.44	181	P	P	13 33 43.2	+3.1
KOPR	Koprukoy-ERZUR	71.45	307	*e*P	P	13 33 42.0	+1.4
KAAM	Kaadhehdhoo	71.46	255	IAMs_20	IAMs_20	14 03 10.6	
	comp=Z,19µm,21.0s						
KAAM	Kaadhehdhoo	71.46	255	P	P	13 33 43.5	+2.7
	SNR=5.3						
CHOM	Cayeli-Rize	71.49	308	*e*P	P	13 33 40.9	+0.2
MLAZ	Malazgirt-MUS	71.49	306	*e*P	P	13 33 42.6	+1.7
KMBL	Kambalda	71.53	196	P	P	13 33 40.4	-0.3
AKDM	Akdamar-Van	71.68	305	*e*P	P	13 33 42.7	+0.7
HTT	Hallett	71.69	180	P	P	13 33 42.1	+0.4
HTT	Hallett	71.69	180	P	P	13 33 42.3	+0.6
DQM	DQM	71.70	281	P	P	13 33 42.5	+0.4
	SNR=14						
DQM				S	S	13 43 00.8	-0.5
PBUR	Paburge	71.88	328	*e*P	P	13 33 42.6	0.0
CUKT	Cukurca	71.89	303	*e*P	P	13 33 43.1	-0.2
UMZA	Um Al Zommool	71.92	285	P	P	13 33 44.2	+0.8
UMZA				S	S	13 43 01.5	-2.4
HOPS	Hopland Field	71.92	54	IAMs_20	IAMs_20	14 00 22.2	
	comp=Z,13µm,19.0s						
NC303	NORSAR Array S	71.93	336	IAmb	IAmb	13 33 53.8	
	comp=Z,695nm,1.6s						
BMO	Blue Mountains	71.97	47	IAmb	IAmb	13 33 49.1	
	comp=Z,437nm,1.2s						
DOMB	Dombas	72.00	338	*e*P	P	13 33 42.5	-0.9
DOMB				IVmB_BB		13 33 51.6	
	comp=Z,7µm,5.0s						
DOMB				*e*S	S	13 43 04.8	+1.1
DOMB				*e*SS	SS	13 47 43.4	+3.9
DOMB				IVMs_BB	IVMs_BB	14 08 12.3	
	comp=Z,27µm,16.5s						
HFS	Hagfors	72.00	335	P	P	13 33 41.7	-1.7
	comp=Z,56nm,0.8s,baz=67,slow=5.0,SNR=89						
HFS				LR	LR	14 07 53.2	
	comp=Z,63µm,18.6s,baz=44,slow=38						
	comp=Z,56nm,0.8s						
NTLH	Newcastle Hard	72.06	169	P	P	13 33 46.8	+3.0
BLDU	Ballidu	72.08	201	P	P	13 33 43.2	-0.8
NB201	NORSAR Array S	72.09	336	IAmb	IAmb	13 33 55.5	
	comp=Z,804nm,1.6s						
AKASG	Malin Array Be	72.10	321	P	P	13 33 40.9	-3.1
AKASG				IAmb	IAmb	13 33 53.7	
	comp=Z,399nm,1.1s						
AKASG	Malin Array Be	72.10	321	P	P	13 33 42.2	-1.8
	comp=Z,118nm,0.6s,baz=47,slow=6.4,SNR=121						
AKASG				LR	LR	14 07 16.1	
	comp=Z,34µm,18.2s,baz=48,slow=38						
	comp=Z,118nm,0.6s						
AKASG	Malin Array Be	72.10	321	*i* P	P	13 33 42.2	-1.8
AKASG				pmax	pmax		
	comp=Z,120nm,0.6s						
AKBB	Malin Array Si	72.10	321	*c i*P	P	13 33 42.2	-1.9
AKBB				pmax	pmax		
	comp=Z,538nm,1.5s						
AKBB				MLR	MLR		
	comp=Z,101µm,15.0s						
KIEV	Kiev	72.11	321	P	P	13 33 41.0	-3.1
KIEV	Kiev	72.11	321	⇑P	P	13 33 44.7	+0.6
KIEV	Kiev	72.11	321	P	P	13 33 41.1	-3.1
KIEV				pmax	pmax		
	comp=Z,2µm,1.8s						
KIEV	Kiev	72.11	321	*i* P	P	13 33 43.2	-1.0
	SNR=72						
KIEV	Kiev	72.11	321	P	P	13 33 42.4	-1.7
	comp=Z,33µmcomp=Z,2µm,1.5s						
NB2	NORSAR Subarra	72.12	336	P	P	13 33 42.3	-1.8
	comp=Z,980nm,1.7s,baz=40,slow=6.2						
NB2	NORSAR Subarra	72.12	336	P	P	13 33 42.3	-1.8
	baz=40,slow=6.2						
NOA	NORSAR Array B	72.12	336	P	P	13 33 42.5	-1.6
	comp=Z,64nm,0.7s,baz=40,slow=6.1,SNR=157						
NOA				LR	LR	14 08 02.8	
	comp=Z,47µm,18.4s,baz=40,slow=38						
	comp=Z,64nm,0.7s						
AK02	Malin Array Si	72.14	321	P	P	13 33 42.9	-1.4
GURO	Guroymak-BITLI	72.16	305	*e*P	P	13 33 43.8	-1.1
KTUT	Trabzon	72.17	308	*e*P	P	13 33 43.9	-0.8
VRTB	Varto-Mus	72.18	306	*e*P	P	13 33 46.4	+1.4
J08A	Circle Bar Ran	72.18	49	IAmb	IAmb	13 33 57.0	
	comp=Z,547nm,1.1s						
AK19	Malin Array Si	72.19	321	P	P	13 33 42.8	-1.8
ILULI	Ilulissat	72.19	4	IAmb	IAmb	13 33 47.6	
	comp=Z,1µm,1.8s						
ILULI				IAMs_20	IAMs_20	14 08 16.0	
	comp=Z,12µm,18.0s						
ILULI	Ilulissat	72.19	4	*i* P	P	13 33 44.2	-0.1
ILULI				IAmb	IAmb	13 33 47.2	
	comp=Z,145nm,0.6s						
GDXM	Geysers	72.20	54	IAmb	IAmb	13 33 50.1	
	comp=Z,408nm,1.3s						
GDXM				IAMs_20	IAMs_20	14 00 41.7	
	comp=Z,17µm,20.0s						
NC602	NORSAR Array S	72.25	336	IAmb	IAmb	13 33 55.2	
	comp=Z,579nm,1.6s						
NC602	NORSAR Array S	72.25	336	*e*P	P	13 33 44.1	-0.7
NC602				IVmB_BB		13 33 54.0	
	comp=Z,5µm,2.5s						
NC602				*e*S	S	13 43 05.8	-0.7
NC602				*e*SS	SS	13 47 45.5	+2.2
NC602				*e*		13 51 10.9	
NC602				IVMs_BB	IVMs_BB	14 08 02.5	
	comp=Z,34µm,17.7s						
NORES	NORESS Array B	72.25	336	P	P	13 33 47.4	+2.6
NBO00	NORSAR Array S	72.27	336	IAmb	IAmb	13 33 55.8	
	comp=Z,372nm,1.2s						
KARO	Karliova-Bingo	72.35	306	*e*P	P	13 33 46.7	+0.7
NAO01	NORSAR Array S	72.38	336	IAmb	IAmb	13 33 56.2	
	comp=Z,374nm,1.4s						
JRN	Qarnain Island	72.39	288	P	P	13 33 46.6	+0.4
	SNR=9.1						
MNRC	McLaughlin Min	72.39	54	IAMs_20	IAMs_20	14 00 39.9	
	comp=Z,14µm,20.0s						
AKN	Aaknes	72.49	339	*e*P	P	13 33 45.0	-1.3
AKN				IVmB_BB		13 33 55.0	
	comp=Z,6µm,4.1s						
AKN				*e*S	S	13 43 09.2	-0.1
AKN				IVMs_BB	IVMs_BB	14 10 25.3	
	comp=Z,20µm,13.6s						
PLID	Pearl Lake	72.57	46	IAmb	IAmb	13 33 51.4	
	comp=Z,1µm,1.9s						
ICESG	Greenland Ices	72.60	360	*i* P	P	13 33 47.3	+0.1
ICESG				IAmb	IAmb	13 33 49.6	
	comp=Z,174nm,0.7s						
WVOR	Wild Horse Val	72.64	49	IAmb	IAmb	13 33 59.0	
	comp=Z,642nm,1.4s						
WVOR	Wild Horse Val	72.64	49	P	P	13 33 47.7	+0.1
MSO	Missoula	72.64	44	IAmb	IAmb	13 33 50.7	
	comp=Z,627nm,1.6s						
MSO				IAMs_20	IAMs_20	14 10 00.8	
	comp=Z,15µm,18.0s						
SUW	Suwalki	72.72	326	*e*P	P	13 33 47.5	-0.2
SUW				*e*PP	PP	13 36 33.3	+4.3
SUW				*e*S	S	13 43 11.4	-0.6
SUW				*e*L	L	14 08 12.8	
	comp=Z,66µm,17.0s						
SUW	Suwalki	72.72	326	*e*P	P	13 33 48.4	+0.7
KLBR	Kellerberrin	72.73	199	P	P	13 33 47.3	-0.6
BNGB	Bingl	72.77	306	*e*P	P	13 33 48.7	+0.3
SYDH	Sydney Hard Ro	72.78	170	P	P	13 33 50.5	+2.4
ESPY	Espiye-Giresun	72.85	309	*e*P	P	13 33 48.7	-0.1
RIV	Riverview	72.90	170	P	P	13 33 51.1	+2.3
RIV	Riverview	72.90	170	P	P	13 33 51.1	+2.3
GHWR	Ruwais	72.92	287	P	P	13 33 49.4	0.0
GHWR				S	S	13 43 14.2	-1.1
SVAN	Silvan-Diyarba	72.93	305	*e*P	P	13 33 48.2	-1.1
ERZN	Erzincan	73.02	307	*e*P	P	13 33 50.8	+0.9
MZR	Muzera	73.02	286	P	P	13 33 48.8	-1.3
	SNR=52						
MZR	Muzera	73.02	286	*i* P	P	13 33 50.0	0.0
	SNR=30						
BEKR	Beckworth	73.11	52	IAmb	IAmb	13 33 54.9	
	comp=Z,424nm,1.0s						
SIM	Simferopol'	73.12	314	*e*P	P	13 33 46.3	-4.0
SIM				*e*		13 36 29.9	
SIM				*e*S	S	13 43 11.7	-5.3
SIM				pmax	pmax		
	comp=Z,643nm,1.3s						
SIM				MLR	MLR		
	comp=Z,13µm,16.0s						
OSL	Oslo	73.13	336	*e*P	P	13 33 50.9	+0.9
OSL				IVmB_BB		13 34 00.1	
	comp=Z,7µm,1.9s						
OSL				*e*S	S	13 43 17.0	+0.5
OSL				*e*SS	SS	13 48 04.5	+7.9
OSL				IVMs_BB	IVMs_BB	14 08 37.6	
	comp=Z,31µm,15.4s						
GHSS	Government Hou	73.18	181	P	P	13 33 53.1	+2.7
FFC	Flin Flon	73.19	32	P	P	13 33 49.1	-1.3
FFC				IAmb	IAmb	13 34 00.6	
	comp=Z,464nm,1.1s						
FFC	Flin Flon	73.19	32	IAMs_20	IAMs_20	14 09 07.8	
	comp=Z,18µm,18.0s						
FFC	Flin Flon	73.19	32	P	P	13 33 49.2	-1.3
FFC				pmax	pmax		
	comp=Z,464nm,1.1s						
FFC				MLR	MLR		
	comp=Z,18µm,18.0s						
FCC	Fort Churchill	73.26	26	IAMs_20	IAMs_20	14 09 13.3	
	comp=Z,19µm,20.0s						
SHMA	Al-Shehemyia	73.26	290	P	P	13 33 50.8	-0.6
SHMA				S	S	13 43 16.0	-3.1
SOEG	Soedalen	73.27	356	*i* P	P	13 33 51.0	+0.3
SOEG				IAmb	IAmb	13 33 55.1	
	comp=Z,126nm,0.7s						
AFDM	Forest Hills D	73.28	53	IAmb	IAmb	13 33 55.8	
	comp=Z,1µm,1.9s						
SKAR	Skarslia	73.30	337	*e*P	P	13 33 52.3	+1.1
SKAR				IVmB_BB		13 34 01.4	
	comp=Z,6µm,2.1s						
SKAR				*e*S	S	13 43 19.4	+0.8
SKAR				*e*SS	SS	13 48 08.6	+9.2
SKAR				IVMs_BB	IVMs_BB	14 08 42.2	
	comp=Z,22µm,15.7s						
LUBAR	Lubar, Ukraine	73.32	321	P	P	13 33 49.7	-1.7
WOLH	Wollongong Har	73.43	170	P	P	13 33 54.2	+2.3
MUN	Mundaring	73.50	200	P	P	13 33 53.7	+1.2
MUN	Mundaring	73.50	200	P	P	13 33 53.3	+0.8
SAKB	Bahrain	73.50	290	P	P	13 33 52.2	-0.6
SAKB				S	S	13 43 18.3	-3.6
FOO	Floro	73.51	339	*e*P	P	13 33 53.0	+0.7
FOO				IVmB_BB		13 34 00.8	
	comp=Z,7µm,5.1s						
FOO				*e*S	SKiKP	13 43 22.1	+0.5
FOO				IVMs_BB	IVMs_BB	14 09 23.9	
	comp=Z,19µm,15.7s						
HYA	Hoyanger	73.54	338	*e*P	P	13 33 53.2	+0.8
HYA				IVmB_BB		13 34 02.4	
	comp=Z,6µm,2.2s						
HYA				*e*S	SKiKP	13 43 23.3	+1.7
HYA				*e*SS	SS	13 47 59.5	-3.2
HYA				IVMs_BB	IVMs_BB	14 09 21.3	
	comp=Z,28µm,15.3s						
MTKN	Mount Kenneth	73.58	201	P	P	13 33 55.8	+2.9
MARD	Mardin	73.69	305	IAmb	IAmb	13 34 04.4	
	comp=Z,247nm,0.8s						
KONO	Kongsberg	73.71	336	P	P	13 33 50.6	-2.9
KONO				IAmb	IAmb	13 34 04.4	
	comp=Z,549nm,1.8s						
KONO	Kongsberg	73.71	336	*c i*P	P	13 33 54.1	+0.6
KONO				pmax	pmax		
	comp=Z,377nm,2.0s						
KONO				MLR	MLR		
	comp=Z,68µm,17.0s						
KONO	Kongsberg	73.71	336	*e*P	P	13 33 53.9	+0.5
KONO				IVmB_BB		13 34 01.8	
	comp=Z,8µm,5.4s						
KONO				*e*S	S	13 43 23.5	+0.4
KONO				*e*SS	SS	13 48 05.8	+0.4
KONO				IVMs_BB	IVMs_BB	14 09 04.9	
	comp=Z,32µm,15.0s						
TRNA	Turayna	73.72	289	P	P	13 33 53.3	-0.8
KBD	Kabd	73.73	294	P	P	13 33 54.6	+0.5
KBD				S	SKiKP	13 43 21.5	-1.3
SLWR	Sila	73.75	288	P	P	13 33 54.9	+0.6
SLWR				S	SKiKP	13 43 22.1	-0.9
PAHR	Pah Rah Range	73.81	52	IAmb	IAmb	13 33 59.1	
	comp=Z,378nm,0.9s						
ILIC	ilic-Erzincan	73.82	308	*e*P	P	13 33 56.1	+1.5
SMRA	Abu-Samra	74.00	289	P	P	13 33 55.8	+0.1
	SNR=16						
RSDY	Resadiye-TOKAT	74.01	309	*e*P	P	13 33 56.6	+1.0
SUE	Sulen	74.03	339	*e*P	P	13 33 56.9	+1.6
SUE				IVmB_BB		13 34 05.5	
	comp=Z,6µm,2.7s						
SUE				*e*S	S	13 43 27.0	+0.4
SUE				IVMs_BB	IVMs_BB	14 09 47.1	
	comp=Z,20µm,13.9s						
CAN	Canberra	74.10	172	IAMs_20	IAMs_20	14 04 42.3	
	comp=Z,13µm,20.0s						
CAN	Canberra	74.10	172	P	P	13 33 57.8	+1.8
CAN	Canberra	74.10	172	P	P	13 33 57.4	+1.4
NWAO	Narrogin (SRO)	74.13	199	P	P	13 33 54.4	-1.7
NWAO	Narrogin (SRO)	74.13	199	LR	LR	14 06 10.2	
	comp=Z,6µm,21.5s,baz=18,slow=36						
NWAO	Narrogin (SRO)	74.13	199	P	P	13 33 56.8	+0.7

NWAO				S	S	13 43 29.7	+1.5
NWAO	Narrogin (SRO)	74.13	199	P	P	13 33 57.3	+1.2
NWAO	Narrogin (SRO)	74.13	199	P	P	13 33 57.0	+0.9
NWAO	Narrogin (SRO)	74.13	199	P	P	13 33 54.4	-1.7
NWAO				pmax	pmax		
	comp=Z,218nm,0.9s						
CNB	Canberra Magne	74.14	172	P	P	13 33 58.3	+2.1
SORM	Soroca	74.19	320	⇓P	P	13 33 56.4	-0.1
SORM	Soroca	74.19	320	P	P	13 33 55.0	-1.4
	comp=Z,10µmcomp=Z,265nm,1.2s						
KVT	Kavak	74.37	310	*e*P	P	13 33 59.2	+1.5
ASK	Askoy	74.38	338	*e*P	P	13 33 58.6	+1.3
ASK				IVmB_BB		13 34 06.1	
	comp=Z,10µm,5.4s						
ASK				*e*S	S	13 43 30.2	-0.4
ASK				IVMs_BB	IVMs_BB	14 09 46.5	
	comp=Z,28µm,16.2s						
BER	Bergen	74.42	338	*e*P	P	13 33 58.8	+1.2
BER				IVmB_BB		13 34 06.3	
	comp=Z,8µm,5.4s						
BER				*e*S	S	13 43 29.2	-1.8
BER				IVMs_BB	IVMs_BB	14 09 46.8	
	comp=Z,25µm,17.3s						
ODD1	Odda	74.42	337	*e*P	P	13 33 58.7	+1.0
ODD1				IVmB_BB		13 34 07.9	
	comp=Z,4µm,3.0s						
ODD1				*e*S	S	13 43 31.9	+0.6
ODD1				*e*		13 51 31.5	
ODD1				IVMs_BB	IVMs_BB	14 09 26.1	
	comp=Z,28µm,16.3s						
SFJD	Kangerlussuaq	74.42	4	P	P	13 33 55.8	-1.7
SFJD				IAmb	IAmb	13 34 07.5	
	comp=Z,836nm,1.5s						
SFJD	Kangerlussuaq	74.42	4	IAMs_20	IAMs_20	14 06 55.9	
	comp=Z,15µm,21.0s						
SFJD	Kangerlussuaq	74.42	4	LR	LR	14 07 06.7	
	comp=Z,12µm,21.9s,baz=348,slow=36						
SFJD	Kangerlussuaq	74.42	4	P	P	13 33 55.8	-1.7
SFJD				pmax	pmax		
	comp=Z,836nm,1.5s						
SFJD				MLR	MLR		
	comp=Z,15µm,21.0s						
SFJD	Kangerlussuaq	74.42	4	P	P	13 33 56.8	-0.6
SFJD				S	S	13 43 28.6	-2.3
SFJD	Kangerlussuaq	74.42	4	*i* P	P	13 33 57.4	-0.1
SFJD				IAmb	IAmb	13 34 01.4	
	comp=Z,116nm,0.9s						
PURM	Purcari	74.44	318	⇑P	P	13 33 59.0	+1.1
HORU	Horodok	74.44	321	P	P	13 33 58.6	+0.7
NIUE	Niue	74.44	131	IAMs_20	IAMs_20	14 01 44.3	
	comp=Z,14µm,20.0s						
NIUE	Niue	74.44	131	P	P	13 34 00.7	+2.5
DIKM	Dikmen	74.49	311	*e*P	P	13 33 58.6	+0.2
DIKM	Dikmen	74.49	311	⇑P	P	13 33 59.7	+1.4
DIKM	Dikmen	74.49	311	P	P	13 33 59.3	+0.9
	comp=Z,11µmcomp=Z,310nm,1.1s						
SVSK	Karacayir	74.50	309	*e*P	P	13 33 59.3	+0.9
WAKR	Walker	74.50	53	IAmb	IAmb	13 34 04.8	
	comp=Z,1µm,1.8s						
TOKT	Tokat	74.53	309	*e*P	P	13 33 57.9	-0.8
KIS	Kishinev	74.69	318	⇑*i*P	P	13 34 01.0	+1.6
	comp=Z,4µm,6.4s						
KIS				*e*S	S	13 43 33.0	-1.5
KIS	Kishinev	74.69	318	*c i*P	P	13 34 01.0	+1.6
KIS				*e*S	S	13 43 33.0	-1.5
KIS				*e*PS	PnS	13 44 00.0	-9.4
KIS				MLR	MLR		
	comp=Z,63µm,15.0s						
MILM	Milestii Mici	74.74	318	*e*P	P	13 33 58.0	-1.7
	comp=Z,6µm,5.3s						
MILM	Milestii Mici	74.74	318	*e*PcP	PcP	13 34 12.0	-1.8
MILM				*i* S	S	13 43 30.0	-5.1
MILM				*e*ScS	SKSac	13 44 00.0	-7.3
MILM	Milestii Mici	74.74	318	⇓P	P	13 33 59.9	+0.2
MILM	Milestii Mici	74.74	318	*e*P	P	13 33 58.0	-1.7
MILM				*e*		13 34 12.0	
MILM				*i* S	S	13 43 30.0	-5.1
MILM				*e*		13 44 00.0	
MILM				*e*PS	PnS	13 44 08.0	-2.1
MILM				pmax	pmax		
	comp=Z,6µm,5.3s						
MILM				MLR	MLR		
	comp=N,105µm,15.0s						
MILM				MLR	MLR		
	comp=Z,162µm,15.0s						
MILM				MLR	MLR		
	comp=E,92µm,14.5s						
R9F13	Warsaw-Wawer	74.85	326	*e*P	P	13 34 01.7	+1.5
R9F13				*e*		13 37 12.9	
R9F13				*e*		13 39 02.0	
R9F13				*e*S	S	13 43 40.6	+4.5
BLS5	Blasjo	74.87	337	*e*P	P	13 34 01.8	+1.5
BLS5				IVmB_BB		13 34 09.1	
	comp=Z,8µm,5.3s						
BLS5				*e*S	S	13 43 36.0	-0.2
BLS5				*e*SS	SS	13 48 25.7	+2.6
BLS5				*e*		13 51 45.1	
BLS5				IVMs_BB	IVMs_BB	14 09 39.8	
	comp=Z,33µm,15.5s						
DMTO	DMTO	74.97	281	P	P	13 34 00.8	-0.7
DMTO				S	S	13 43 41.3	+2.8
DRBR	Darabani	75.02	320	⇑P	P	13 34 01.2	-0.1
DARE	Darende-Malaty	75.02	307	*e*P	P	13 34 01.6	0.0
BZK	Bozkurt	75.03	312	*e*P	P	13 34 01.6	+0.1
BZK	Bozkurt	75.03	312	⇓P	P	13 34 02.2	+0.8
BZK	Bozkurt	75.03	312	P	P	13 34 01.6	+0.1
	comp=Z,9µmcomp=Z,383nm,2.0s						
ARPS	Mount Arapiles	75.05	178	P	P	13 34 02.1	+0.7
DOK	Doka	75.07	282	P	P	13 34 00.7	-1.3
	SNR=15						
DOK				S	S	13 43 37.4	-2.2
DOK				S	SKiKP	13 43 38.5	+13
HOMB	Homborsund	75.15	336	*e*P	P	13 34 02.3	+0.5
HOMB				IVmB_BB		13 34 10.1	
	comp=Z,8µm,5.2s						
HOMB				*e*S	S	13 43 39.5	+0.3
HOMB				IVMs_BB	IVMs_BB	14 09 46.9	
	comp=Z,24µm,18.1s						
LVV	L'vov	75.19	323	P	P	13 34 04.3	+2.1
IASR	Iasi	75.21	319	⇓P	P	13 34 03.4	+1.0
NVAR	Mina Array Bea	75.25	53	P	P	13 34 02.5	-0.6
NVAR	Mina Array Bea	75.25	53	P	P	13 34 03.3	+0.2
	comp=Z,149nm,0.7s,baz=289,slow=4.6,SNR=268						
NVAR				PKPPKP	P'P'df	14 01 16.5	-15
	comp=Z,2.6nm,1.2s,baz=125,slow=4.0,SNR=4.0						
	comp=Z,149nm,0.7s						
BEL	Belsk	75.27	326	*e*P	P	13 34 03.1	+0.4
BEL				*e*PP	PP	13 36 56.7	+6.1
BEL				*e*S	S	13 43 44.1	+3.3
OVD	Ostervraa, Den	75.33	334	*i* P	P	13 34 04.2	+1.3
OVD				IAmb	IAmb	13 34 05.6	
	comp=Z,142nm,0.6s						
YHL	Hebgen Lake	75.38	44	IAmb	IAmb	13 34 09.5	
	comp=Z,378nm,1.0s						
KMY	Karmoy	75.40	338	*e*P	P	13 34 04.5	+1.2
KMY				IVmB_BB		13 34 13.6	
	comp=Z,6µm,2.6s						
KMY				*e*S	S	13 43 44.1	+2.1
KMY				IVMs_BB	IVMs_BB	14 10 06.6	
	comp=Z,25µm,15.2s						
YHB	Horse Butte	75.44	44	IAmb	IAmb	13 34 09.7	
	comp=Z,376nm,0.9s						
SNART	Snartemo	75.51	336	*e*P	P	13 34 04.8	+0.9
SNART				IVmB_BB		13 34 12.5	
	comp=Z,10µm,5.9s						
SNART				*e*S	S	13 43 44.6	+1.3
SNART				IVMs_BB	IVMs_BB	14 10 01.2	
	comp=Z,49µm,16.0s						
FRB	Frobisher Bay	75.57	12	LR	LR	14 12 04.3	
	comp=Z,20µm,18.6s,baz=337,slow=40						
RBK	Rabkut	75.67	281	P	P	13 34 04.7	-0.9
	SNR=15						
RBK				S	S	13 43 43.2	-3.2
ELK	Elko	75.69	49	LR	LR	14 05 57.3	
	comp=Z,8µm,20.0s,baz=322,slow=35						
YOZ	Yozgat	75.69	309	*e*P	P	13 34 06.3	+0.8
CIDE	Kastamonu/Cide	75.69	312	⇑P	P	13 34 05.7	+0.4
KSV	Kosov	75.71	321	P	P	13 34 05.2	-0.1
YNR	Norris Junctio	75.74	44	IAMs_20	IAMs_20	14 08 55.0	
	comp=Z,12µm,18.0s						
GKP	Gorka Klasztor	75.75	328	*e*P	P	13 34 05.9	+0.5
GKP				*e*PP	PP	13 36 60.0	+5.3
GKP				*e*S	S	13 43 46.7	+0.6
GKP	Gorka Klasztor	75.75	328	*e*P	P	13 34 06.5	+1.1
WHFO	Wadi Hawf	75.76	282	P	P	13 34 04.5	-1.6
	SNR=9.1						
WHFO				S	S	13 43 46.3	-1.1
CORM	Corum	75.77	310	*e*P	P	13 34 05.5	-0.5
PRAR	RASCA	75.77	320	⇓P	P	13 34 06.0	+0.3
BIR	Birlad	75.79	318	⇑P	P	13 34 07.3	+1.6
COP	Copenhagen	75.81	332	*i* P	P	13 34 07.2	+1.5
COP				IAmb	IAmb	13 34 07.8	
	comp=Z,256nm,0.7s						
VLDR	Vladesti	75.83	318	⇓P	P	13 34 06.1	+0.2
KURC	Kurucasile-Bar	75.84	312	*e*P	P	13 34 05.9	-0.2
BNN	Bunyan	75.86	309	*e*P	P	13 34 05.5	-1.0
BORG	Borgarnes	75.86	352	LR	LR	14 08 29.0	
	comp=Z,6µm,19.2s,baz=12,slow=37						
TLCR		75.87	317	⇑P	P	13 34 06.9	+0.7
VARL	Varlezi	75.91	318	⇓P	P	13 34 07.5	+1.0
KWP	Kalwaria Pacla	75.94	323	*e*P	P	13 34 07.0	+0.4
KWP				*e*PP	PP	13 36 59.3	+2.9
KWP				*e*S	S	13 43 50.8	+2.3
KWP	Kalwaria Pacla	75.94	323	P	P	13 34 06.7	+0.1
	comp=Z,17µmcomp=Z,583nm,1.6s						
SCTR	Scanteiesti	75.98	318	⇓P	P	13 34 08.5	+1.6
TATR	Tatarca	76.01	318	⇑P	P	13 34 08.3	+1.3
H17A	Grant Village	76.01	44	IAmb	IAmb	13 34 20.2	
	comp=Z,688nm,1.1s						
YMP	Mirror Lake Pl	76.01	44	IAMs_20	IAMs_20	14 09 44.1	
	comp=Z,13µm,20.0s						
KMRS	Kahramanmaras	76.04	307	*e*P	P	13 34 06.1	-1.3
GAZ	Gaziantep	76.05	306	*e*P	P	13 34 07.9	+0.4
ANGG	Ammassalik, Gr	76.07	359	IAMs_20	IAMs_20	14 07 31.3	
	comp=Z,16µm,20.0s						
ANGG	Ammassalik, Gr	76.07	359	*i* P	P	13 34 06.5	-0.4
ANGG				IAmb	IAmb	13 34 08.6	
	comp=Z,70nm,0.7s						
BUR08	Bucovina Ar. S	76.10	321	IAmb	IAmb	13 34 26.8	
	comp=Z,439nm,1.5s						
CANT	Cankiri	76.11	311	*e*P	P	13 34 08.5	+0.7
BURAR	Bucovina Array	76.11	321	P	P	13 34 04.8	-2.9
BURAR	Bucovina Array	76.11	321	⇓P	P	13 34 07.0	-0.7
BURAR	Bucovina Array	76.11	321	P	P	13 34 06.3	-1.4
BURAR				pmax	pmax		
	comp=Z,95nm,0.8s						
DSP	Deep Springs	76.11	53	IAmb	IAmb	13 34 12.1	
	comp=Z,1µm,1.6s						
JURR	Jurilovca	76.11	317	⇑P	P	13 34 08.3	+0.7
TESR	Tescani	76.13	319	⇑P	P	13 34 08.8	+1.1
TESR	Tescani	76.13	319	P	P	13 34 06.4	-1.3
	comp=Z,10µmcomp=Z,406nm,1.5s						
NEGRR	Negrea	76.14	318	⇑P	P	13 34 08.5	+0.8
ISOG	Isortoq, Green	76.16	359	*i* P	P	13 34 07.2	-0.3
ISOG				IAmb	IAmb	13 34 10.2	
	comp=Z,82nm,0.8s						
SCHL	Schela	76.19	318	⇑P	P	13 34 08.3	+0.3
IZVR	Izvoarele	76.19	318	⇓P	P	13 34 09.7	+1.6
SCHLR	Schela	76.21	318	⇑P	P	13 34 08.3	+0.2
TUDR		76.21	318	⇑P	P	13 34 09.3	+1.2
KOZK	Kozakli-Nevseh	76.23	309	*e*P	P	13 34 09.4	+0.8
CFR	Carcaliu	76.24	317	⇓P	P	13 34 08.5	+0.2
FXWY	Fox Creek	76.25	45	IAmb	IAmb	13 34 14.9	
	comp=Z,378nm,1.1s						
PANC	Panciu	76.30	318	⇓P	P	13 34 09.3	+0.7
TPGR	Topolog	76.30	317	⇑P	P	13 34 07.7	-1.1
RGN	Rugen	76.35	331	IAmb	IAmb	13 34 18.5	
	comp=Z,1µm,1.6s						
RGN	Rugen	76.35	331	*e*P	P	13 34 07.9	-0.9
	comp=Z,621nm,1.3s,baz=38,slow=5.4						
RGN				*e*S	S	13 43 53.0	+0.4
	baz=37,slow=11						
ONER	Baraj Valea Uz	76.38	319	⇑P	P	13 34 10.4	+1.2
LRW	Lerwick	76.41	341	*e*P	P	13 34 08.9	-0.1
LRW				IAMs_20	IAMs_20	14 11 10.7	
	comp=Z,22µm,16.2s						
ODBI	Odobesti	76.42	318	⇓P	P	13 34 11.2	+1.9
ABTO	Aybut	76.46	281	P	P	13 34 09.2	-0.9
	SNR=20						
ABTO				S	S	13 43 53.7	-1.4
HVU	Hansel Valley	76.47	47	IAmb	IAmb	13 34 15.8	
	comp=Z,360nm,1.2s						
LOHW	Long Hollow	76.50	45	IAmb	IAmb	13 34 16.3	
	comp=Z,398nm,1.4s						
SNOW	Snow King Moun	76.52	45	IAmb	IAmb	13 34 18.1	
	comp=Z,462nm,1.3s						
VRI	Vrincioaia	76.52	318	*e*P	P	13 34 08.6	-1.4
VRI	Vrincioaia	76.52	318	⇑P	P	13 34 09.0	-1.0
VRI	Vrincioaia	76.52	318	P	P	13 34 10.3	+0.3
VRI	Vrincioaia	76.52	318	P	P	13 34 10.3	+0.3
	comp=Z,12µmcomp=Z,388nm,1.4s						
TIRR	Tirgusor	76.56	317	*e*P	P	13 34 10.2	0.0
TIRR	Tirgusor	76.56	317	⇓P	P	13 34 10.9	+0.7
TIRR	Tirgusor	76.56	317	P	P	13 34 10.4	+0.2
TIRR	Tirgusor	76.56	317	P	P	13 34 11.2	+1.0
	comp=Z,7µmcomp=Z,141nm,1.5s						
PLOR	Plostina	76.57	319	⇑P	P	13 34 11.5	+1.3
GEXS	Deakin Univers	76.58	176	P	P	13 34 12.4	+2.4
GMN	Gold Mountain	76.60	53	IAmb	IAmb	13 34 15.7	
	comp=Z,1µm,1.8s						
KOLS	Kolonicke sedl	76.63	323	*e*P	P	13 34 09.6	-0.9
KOLS				pmax	pmax		
	comp=Z,86nm,0.7s						
KOLS	Kolonicke sedl	76.63	323	*e*P	P	13 34 09.6	-0.9
KOLS				*e*PP	PP	13 37 05.5	+3.3
BR131	Keskin Array S	76.65	310	*e*P	P	13 34 09.3	-1.7
BR131	Keskin Array S	76.65	310	IAmb	IAmb	13 34 21.9	
	comp=Z,385nm,1.1s						
BR131	Keskin Array S	76.65	310	P	P	13 34 10.0	-0.9
	SNR=184						
BR131				S	S	13 43 55.7	-1.1
BR131	Keskin Array S	76.65	310	*c i*P	P	13 34 09.4	-1.6
BRTR	Keskin Array B	76.65	310	P	P	13 34 08.9	-2.1
BRTR	Keskin Array B	76.65	310	P	P	13 34 09.6	-1.4
	comp=Z,140nm,1.1s,baz=95,slow=4.1,SNR=72						
BRTR				PKKPbc	PKKPbc	13 53 23.6	+3.4
	comp=Z,1.0nm,0.9s,baz=160,slow=3.9,SNR=3.9						
BRTR				LR	LR	14 12 18.9	
	comp=Z,16µm,19.1s,baz=40,slow=39						
	comp=Z,140nm,1.1s						
BRTR	Keskin Array B	76.65	310	*i* P	P	13 34 09.6	-1.4
BRTR				pmax	pmax		
	comp=Z,142nm,1.1s						
BR106	Keskin Array S	76.66	310	P	P	13 34 10.7	-0.3
	comp=Z,2µmcomp=Z,178nm,1.4s						
BR105	Keskin Array S	76.67	310	P	P	13 34 10.8	-0.3
	comp=Z,2µmcomp=Z,233nm,1.4s						
HARR	Harsova	76.67	317	⇓P	P	13 34 11.7	+0.9
TLBR	Topalu	76.70	317	⇓P	P	13 34 12.4	+1.4
GRER		76.72	318	⇑P	P	13 34 12.0	+1.0
KOZT	Kozan	76.72	307	*e*P	P	13 34 11.5	+0.2
BISRR	Bisoca	76.74	318	⇑P	P	13 34 12.4	+1.1
BISRR	Bisoca	76.74	318	P	P	13 34 12.9	+1.6
	comp=Z,30µmcomp=Z,899nm,1.5s						
MFTR	Murfatlar	76.75	316	⇓P	P	13 34 12.0	+0.8
TURR	Turia	76.76	319	⇓P	P	13 34 11.3	0.0
LAO	LASA Array	76.77	40	IAmb	IAmb	13 34 22.4	
	comp=Z,851nm,1.2s						
LAO				IAMs_20	IAMs_20	14 08 36.8	
	comp=Z,17µm,20.0s						
STHS	Stebnicka Huta	76.77	324	*e*P	P	13 34 10.4	-0.9
STHS				pmax	pmax		
	comp=Z,115nm,0.8s						
STHS	Stebnicka Huta	76.77	324	*e*P	P	13 34 10.4	-0.9
H01W3	Cape Leeuwin H	76.81	201	P	P	13 34 13.4	+2.3
	baz=74,slow=3.0,SNR=6.1						
H01W1	Cape Leeuwin H	76.82	201	P	P	13 34 16.2	+5.0
	baz=74,slow=3.0,SNR=5.1						
H01W2	Cape Leeuwin H	76.83	201	P	P	13 34 13.8	+2.5
	baz=74,slow=3.0,SNR=3.2						
KAMT	Kaman	76.83	310	*e*P	P	13 34 11.8	-0.2
OZUR		76.85	319	⇓P	P	13 34 12.6	+0.7
KIRS	Kirsehir-Merke	76.86	310	⇑P	P	13 34 11.9	-0.2
OJC	Ojcow	76.86	325	*e*P	P	13 34 12.3	+0.5
OJC				*e*PP	PP	13 36 57.4	-6.7
OJC				*e*S	S	13 43 58.9	+0.5
OJC	Ojcow	76.86	325	P	P	13 34 10.8	-1.0
	comp=Z,12µmcomp=Z,425nm,1.4s						
TRSU	Trosnyk	76.89	322	P	P	13 34 13.7	+1.8
MANR	Mangalia	76.89	316	⇑P	P	13 34 13.4	+1.4
ARCR	ARCALIA	76.90	321	⇑P	P	13 34 13.2	+1.2
BMR	Baia Mare	76.92	321	⇑P	P	13 34 13.8	+1.7
BMR	Baia Mare	76.92	321	P	P	13 34 13.2	+1.1
BOSR	Bodos	76.93	319	⇓P	P	13 34 12.9	+0.6
SSRD	Sdr. Stenderup	76.97	333	*i* P	P	13 34 14.1	+1.9
SSRD				IAmb	IAmb	13 34 18.7	
	comp=Z,521nm,1.2s						
PGOR	Pogoanele	77.03	318	⇓P	P	13 34 14.1	+1.3
NEHR	Nehoiu	77.04	318	⇓P	P	13 34 14.1	+1.2
AMRR	Amara	77.04	317	⇓P	P	13 34 13.6	+0.7
ANTO	Ankara	77.06	311	*e*P	P	13 34 14.4	+1.2
ANTO	Ankara	77.06	311	P	P	13 34 10.6	-2.6
ANTO				IAmb	IAmb	13 34 23.7	
	comp=Z,470nm,1.1s						
ANTO	Ankara	77.06	311	IAMs_20	IAMs_20	14 10 56.4	
	comp=Z,11µm,18.0s						
ANTO	Ankara	77.06	311	P	P	13 34 12.0	-1.2
ANTO				S	S	13 43 60.0	-1.2
ANTO	Ankara	77.06	311	⇓P	P	13 34 14.1	+0.9
ANTO	Ankara	77.06	311	P	P	13 34 10.6	-2.6
ANTO				pmax	pmax		
	comp=Z,470nm,1.1s						
ANTO				MLR	MLR		
	comp=Z,11µm,18.0s						
ANTO	Ankara	77.06	311	P	P	13 34 13.9	+0.7
ANTO				S	S	13 44 02.3	+1.1
ANTO	Ankara	77.06	311	P	P	13 34 12.5	-0.7
	comp=Z,4µmcomp=Z,242nm,1.4s						
CEYT	Ceyhan	77.06	307	*e*P	P	13 34 13.9	+0.8
LOD	Lodumlu	77.07	311	*e*P	P	13 34 14.3	+1.1
ISR	Istrita	77.12	318	⇑P	P	13 34 13.7	+0.3
ISR	Istrita	77.12	318	P	P	13 34 13.0	-0.4
	comp=Z,15µmcomp=Z,582nm,1.6s						
ICOR	Ion Corvin	77.12	317	⇓P	P	13 34 13.7	+0.3
CMRD	Camardi-Nigde	77.13	308	*e*P	P	13 34 12.9	-0.8
DOPR	Dopca	77.14	319	⇑P	P	13 34 13.9	+0.4
NUUK	Nuuk	77.15	5	*i* P	P	13 34 14.1	+1.0
NUUK				IAmb	IAmb	13 34 16.5	
	comp=Z,179nm,0.7s						
GULA	Gulagac	77.16	309	*e*P	P	13 34 13.5	-0.3
AFSR	Afar-Bala (An	77.17	310	*e*P	P	13 34 12.7	-1.1
MLR	Muntele Rosu	77.18	319	*e*P	P	13 34 13.8	0.0
MLR	Muntele Rosu	77.18	319	IAmb	IAmb	13 34 24.9	
	comp=Z,557nm,1.4s						
MLR	Muntele Rosu	77.18	319	LR	LR	14 10 16.4	
	comp=Z,51µm,19.9s,baz=40,slow=37						
MLR	Muntele Rosu	77.18	319	⇓P	P	13 34 14.1	+0.2
MLR	Muntele Rosu	77.18	319	P	P	13 34 14.3	+0.5
MLR	Muntele Rosu	77.18	319	P	P	13 34 13.9	+0.1
	comp=Z,7µmcomp=Z,308nm,1.5s						
TAHT	Tahtakopru-Hat	77.19	306	*e*P	P	13 34 15.2	+1.3
SERE	Sereflikochisa	77.19	310	*e*P	P	13 34 14.7	+0.7
H08S3	Diego Garcia H	77.20	249	P	P	13 34 16.0	+2.1
	baz=7.8,slow=11,SNR=22						
H08S2	Diego Garcia H	77.20	249	P	P	13 34 15.0	+1.2
	baz=7.8,slow=11,SNR=31						
NIE	Niedzica	77.21	324	*e*P	P	13 34 14.5	+0.8
NIE				*e*PP	PP	13 37 03.7	-3.4
NIE				*e*S	S	13 44 04.2	+1.9
NIE	Niedzica	77.21	324	P	P	13 34 13.6	-0.2
	comp=Z,4µmcomp=Z,113nm,1.2s						
H08S1	Diego Carcia H	77.22	249	P	P	13 34 16.2	+2.3
	baz=7.8,slow=11,SNR=16						
PSN	Preselentsi	77.26	316	⇑*i*P	P	13 34 14.5	+0.4
S11A	Rachel	77.32	52	IAmb	IAmb	13 34 22.8	
	comp=Z,602nm,0.9s						
KARA	Karaisali	77.34	308	*e*P	P	13 34 15.1	+0.4
YUVA	Yuva-Kibriscik	77.38	312	*e*P	P	13 34 14.3	-0.7
LEHL	Lehliu	77.41	317	⇑P	P	13 34 16.0	+1.1
DUG	Dugway, Tooele	77.46	48	IAmb	IAmb	13 34 19.5	
	comp=Z,640nm,1.4s						
KULU	Kulu	77.46	310	*e*P	P	13 34 15.9	+0.4
CBBR	Cluj-Babes-Bol	77.52	321	⇑P	P	13 34 16.8	+1.3
PLAR	PLOIESTI	77.53	318	⇓P	P	13 34 16.4	+0.8
MESR	Meseseni	77.55	321	⇑P	P	13 34 16.5	+0.8
SAHE	Sakarya_HENDEK	77.56	313	⇑P	P	13 34 17.1	+1.2
SULR		77.57	318	⇑P	P	13 34 17.2	+1.4
MDUB	Mudurnu	77.61	312	*e*P	P	13 34 15.2	-1.1
PDAR	Pinedale Array	77.64	45	P	P	13 34 15.0	-1.6
PDAR	Pinedale Array	77.64	45	P	P	13 34 15.8	-0.7
	comp=Z,54nm,0.8s,baz=275,slow=1.5,SNR=202						
PDAR				PKKPbc	PKKPbc	13 53 22.1	+3.7
	comp=Z,0.5nm,0.7s,baz=116,slow=3.4,SNR=4.1						
PDAR				PKPPKP	P'P'df	14 01 23.7	-4.3
	comp=Z,0.3nm,0.5s,baz=180,slow=3.9,SNR=6.0						
	comp=Z,54nm,0.8s						
VOIR		77.68	319	⇑P	P	13 34 17.6	+1.1
VOIR		77.68	319	P	P	13 34 16.9	+0.3
	comp=Z,7µmcomp=Z,168nm,1.4s						
QSM	Queen of Sheba	77.68	54	IAmb	IAmb	13 34 21.1	
	comp=Z,583nm,1.0s						
SULT	Sultanhani-AKS	77.69	309	*e*P	P	13 34 15.8	-1.0
RUE	Ruedersdorf	77.74	329	*e*P	P	13 34 15.7	-1.0
	comp=Z,1µm,1.7s,baz=38,slow=5.4						
RUE				*e*S	S	13 44 06.9	-0.9
	baz=37,slow=11						
CTU	Camp Tracy	77.76	47	IAmb	IAmb	13 34 28.2	
	comp=Z,407nm,1.4s						
LANS	Liptovska Anna	77.78	324	*e*P	P	13 34 16.8	-0.2
LANS				pmax	pmax		
	comp=Z,125nm,1.3s						
LANS	Liptovska Anna	77.78	324	*e*P	P	13 34 16.8	-0.2
KECS	Kecovo	77.79	323	*e*P	P	13 34 18.3	+1.3
KECS				pmax	pmax		
	comp=Z,110nm,1.7s						
KECS	Kecovo	77.79	323	*e*P	P	13 34 18.3	+1.3
KECS				*e*PP	PP	13 37 14.8	+2.9
MTUR	Matau	77.81	319	⇑P	P	13 34 18.6	+1.3
YESY	Yesilyurt	77.82	309	*e*P	P	13 34 16.5	-1.0
CHBY	Cihanbeyli	77.83	310	*e*P	P	13 34 18.1	+0.6
OKC	Ostrava-Krasne	77.87	326	*e*P	P	13 34 18.5	+1.1
OKC				*e*S	S	13 44 10.3	+0.9
OKC				AMS	AMS	14 14 40.0	
	comp=Z,55µm,12.5s						
OKC	Ostrava-Krasne	77.87	326	*e*P	P	13 34 18.5	+1.1
OKC				*e*S	S	13 44 10.3	+0.9
OKC				MLR	MLR		
	comp=Z,55µm,12.5s						
DRGR		77.92	321	*e*P	P	13 34 18.7	+0.8
DRGR		77.92	321	⇑P	P	13 34 19.0	+1.1
DRGR		77.92	321	P	P	13 34 19.0	+1.1
MERS	Mersin	77.92	308	*e*P	P	13 34 17.8	-0.2
TNR	Turnu Rosu	77.93	320	⇑P	P	13 34 19.2	+1.4
KSP	Ksiaz	77.94	327	*e*P	P	13 34 17.9	+0.1
KSP				*e*PP	PP	13 36 58.6	-14
KSP				*e*S	S	13 44 12.9	+2.8
ARR	Arges	77.94	319	⇑P	P	13 34 18.6	+0.6
SAUV	Serdivan-Sakar	77.94	313	*e*P	P	13 34 18.6	+0.6
BSEG	Bad Segeberg	77.94	332	*e*P	P	13 34 16.7	-1.1
	comp=Z,240nm,1.1s,baz=38,slow=5.4						
BSEG				*e*S	S	13 44 10.5	+0.5
	baz=37,slow=11						
PASC	Pasadena Art C	77.95	56	IAMs_20	IAMs_20	14 07 27.0	
	comp=Z,12µm,19.0s						
STEB	Steborice	77.97	326	*e*P	P	13 34 17.5	-0.5
PRD	Provadia	77.97	316	⇑*i*P	P	13 34 18.1	0.0
SGRR	Singureni	78.02	318	⇓P	P	13 34 18.2	-0.2
GULT	Gulveren	78.03	312	*e*P	P	13 34 19.3	+0.7
SILT	Sile	78.06	313	*e*P	P	13 34 19.6	+1.0
SVRH	Sivrihisar-ESK	78.08	311	*e*P	P	13 34 17.1	-1.8
GSC	Goldstone, Bar	78.13	54	IAmb	IAmb	13 34 23.7	
	comp=Z,1µm,1.9s						
BORR	Bors	78.16	322	⇑P	P	13 34 20.2	+1.1
OSTC	Ostas	78.18	327	*e*P	P	13 34 20.1	+0.9
OSTC				AMS	AMS	14 12 30.0	
	comp=Z,61µm,14.3s						
OSTC	Ostas	78.18	327	*e*P	P	13 34 20.1	+0.9
OSTC				MLR	MLR		
	comp=Z,61µm,14.3s						
MORC	Moravsky Berou	78.19	326	IAmb	IAmb	13 34 30.6	
	comp=Z,730nm,1.7s						
MORC	Moravsky Berou	78.19	326	*e*P	P	13 34 18.1	-1.2
MORC				*e*pP	pP	13 34 20.5	-4.6
MORC				*e*S	S	13 44 12.5	-0.4
MORC	Moravsky Berou	78.19	326	⇑P	P	13 34 20.3	+1.1
MORC	Moravsky Berou	78.19	326	P	P	13 34 18.5	-0.8
CHVC	Chvalec	78.23	327	*e*P	P	13 34 19.1	-0.4
CHVC				*e*S	S	13 44 15.7	+2.4
CHVC				AMS	AMS	14 12 30.0	
	comp=Z,61µm,14.2s						
CHVC	Chvalec	78.23	327	*e*P	P	13 34 19.1	-0.4
CHVC				*e*S	S	13 44 15.7	+2.4
CHVC				MLR	MLR		
	comp=Z,61µm,14.2s						
MPU	Maple Canyon	78.27	48	IAmb	IAmb	13 34 24.7	
	comp=Z,1µm,1.8s						
DPC	Dobruska-Polom	78.29	327	*e*P	P	13 34 19.5	-0.3
DPC				*e*S	S	13 44 13.1	-1.0
DPC				AMS	AMS	14 12 30.0	
	comp=Z,58µm,13.4s						
DPC	Dobruska-Polom	78.29	327	*e*P	P	13 34 19.5	-0.3
DPC				*e*S	S	13 44 13.1	-1.0

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DPC                                MLR      MLR
       comp=Z,58µm,13.4s
DPC    Dobruska-Polom   78.29 327   P       P         13 34 19.7  -0.1
       comp=Z,9µmcomp=Z,173nm,1.4s
KRLC   Kraliky          78.30 326  eP       P         13 34 20.1  +0.2
KRLC                               eS       S         13 44 16.0  +1.9
KRLC                               AMS      AMS       14 13 00.0
       comp=Z,59µm,14.0s
KRLC   Kraliky          78.30 326  eP       P         13 34 20.1  +0.2
KRLC                               eS       S         13 44 16.0  +1.9
KRLC                               MLR      MLR
       comp=Z,59µm,14.0s
UPC    Upice            78.31 327  eP       P         13 34 20.2  +0.3
UPC                                eS       S         13 44 14.1   0.0
UPC                                AMS      AMS       14 12 30.0
       comp=Z,73µm,14.2s
UPC    Upice            78.31 327  eP       P         13 34 20.2  +0.3
UPC                                eS       S         13 44 14.1   0.0
UPC                                MLR      MLR
       comp=Z,73µm,14.2s
GORT1  Trebel           78.31 331  eP       P         13 34 19.0  -0.7
       comp=Z,624nm,1.5s,baz=38,slow=5.4
LOT    Lotru            78.32 320  eP       P         13 34 18.8  -1.4
LOT    Lotru            78.32 320 ⇑P        P         13 34 21.2  +1.0
HUMR   Humele           78.33 318 ⇓P        P         13 34 21.2  +1.1
KLYT   Kilyos           78.33 314  eP       P         13 34 20.5  +0.4
KLYT   Kilyos           78.33 314 ⇓P        P         13 34 21.5  +1.4
MAUC   Maruska          78.36 325  eS       S         13 44 15.6  +0.8
LADK   Ladik-KONYA      78.39 310  eP       P         13 34 18.9  -1.8
KIZK   Mersin           78.40 307  eP       P         13 34 18.9  -1.7
SHPR   Sheep Range      78.41  52   IAmb    IAmb      13 34 25.0
       comp=Z,639nm,1.7s
CIFT   Cifteler, Eski   78.41 311  eP       P         13 34 20.6  -0.1
BORA   Eskisehir        78.43 312   IAmb    IAmb      13 34 31.7
       comp=Z,558nm,1.6s
BORA                                IAMs_20 IAMs_20   14 09 52.5
       comp=Z,14µm,20.0s
ISK    Istanbul-Kandi   78.45 314  eP       P         13 34 21.2  +0.4
ISK    Istanbul-Kandi   78.45 314   P       P         13 34 21.4  +0.6
KAVV   Kandilli-Istan   78.45 314  eP       P         13 34 20.8   0.0
DEV    Deva             78.46 320 ⇑P        P         13 34 21.9  +1.2
PSZ    Piszkesteto      78.47 323 ⇓P        P         13 34 22.0  +1.1
PSZ    Piszkesteto      78.47 323   P       P         13 34 21.4  +0.5
ADVT   Abdulvahap       78.48 313  eP       P         13 34 21.7  +0.7
COPA   Copaceanca       78.48 318 ⇑P        P         13 34 20.8  -0.1
BIGH   Upper Bighouse   78.53 341⇑eP        P         13 34 20.2  -0.6
BGKT   Bogazkoy         78.53 314  eP       P         13 34 21.3  +0.1
VYHS   Vyhne            78.54 324  eP       P         13 34 21.6  +0.4
VYHS                                pmax    pmax
       comp=Z,336nm,1.6s
VYHS   Vyhne            78.54 324  eP       P         13 34 21.6  +0.4
VYHS                               ePP      PP        13 37 20.9  +2.7
VYHS                               eS       S         13 44 14.9  -1.8
VYHS                               eSS      SS        13 49 22.3  +3.2
VYHS                               e                  14 01 19.5
KONT   Konya--Tatoy     78.55 310  eP       P         13 34 19.8  -1.7
CAVI   Cavuskoy         78.57 313  eP       P         13 34 20.3  -1.2
YLV    Yalova           78.60 313  eP       P         13 34 21.5  -0.2
SILI   Silifke-Mersin   78.61 308  eP       P         13 34 19.9  -1.8
CTYL   Yalikoy Yolu     78.61 314  eP       P         13 34 21.6  -0.1
CTYL   Yalikoy Yolu     78.61 314 ⇑P        P         13 34 22.7  +1.0
HLG    Helgoland        78.62 333  eP       P         13 34 20.3  -1.2
       comp=Z,294nm,1.1s,baz=38,slow=5.4
HLG                                eS       S         13 44 16.1  -1.1
       baz=37,slow=11
RAYN   Ar Rayn          78.64 291   P       P         13 34 19.7  -2.5
RAYN   Ar Rayn          78.64 291   P       P         13 34 22.0  -0.2
RAYN   Ar Rayn          78.64 291   P       P         13 34 19.7  -2.5
RAYN                                pmax    pmax
       comp=Z,263nm,1.3s
RAYN                                MLR     MLR
       comp=Z,36µm,19.0s
RAYN   Ar Rayn          78.64 291  i P      P         13 34 22.7  +0.5
       SNR=63
SZH    Strazhitsa       78.67 317⇑iP        P         13 34 22.2  +0.2
KEBE   Keben-Mersin     78.69 308  eP       P         13 34 20.3  -2.0
ELS    Elsinore Mount   78.77  56   IAmb    IAmb      13 34 27.2
       comp=Z,1µm,1.9s
JAVC   Velka Javorina   78.80 325  eP       P         13 34 22.6  -0.1
JAVC                               epP      pP        13 34 25.0  -3.5
JAVC                               eS       S         13 44 20.5  +0.9
SLVT   Silivri          78.82 314  eP       P         13 34 22.3  -0.5
FLTG   Flechtingen      78.85 331  eP       P         13 34 21.1  -1.7
       comp=Z,282nm,1.2s,baz=38,slow=5.4
FLTG                               eS       S         13 44 17.8  -2.0
       baz=37,slow=11
GZR    Gura Zlata       78.86 320 ⇑P        P         13 34 23.3  +0.2
GZR    Gura Zlata       78.86 320   P       P         13 34 23.8  +0.7
ARMT   Armutlu          78.89 313  eP       P         13 34 22.9  -0.4
BRG    Berggiesshubel   78.90 328  eP       P         13 34 21.8  -1.3
       comp=Z,1µm,2.3s,baz=38,slow=5.4
BRG                                eS       S         13 44 19.8  -0.6
       baz=37,slow=11
BRG    Berggiesshubel   78.90 328  eP       P         13 34 21.6  -1.5
BRG                                 Amp               13 34 22.5
       comp=Z,4.2nm,1.0s
BRG    Berggiesshubel   78.90 328   P       P         13 34 23.9  +0.8
BRG                                 Amp               13 34 26.6
       comp=Z,97nm,1.0s
BRG    Berggiesshubel   78.90 328   PP      PP        13 37 14.0  -7.1
BRG    Berggiesshubel   78.90 328   S       S         13 44 22.0  +1.6
BRG    Berggiesshubel   78.90 328   SS      SS        13 49 30.0  +5.7
BRG                                 PKPPKP            14 01 17.1
BRG                                 Amp               14 01 20.9
       comp=Z,1.8nm,0.5s
PVCC   Panska Ves       78.90 328  eP       P         13 34 24.7  +1.6
PVCC                               eS       S         13 44 17.3  -3.1
PVCC                                AMS     AMS       14 12 10.0
       comp=Z,62µm,14.6s
PVCC   Panska Ves       78.90 328  eP       P         13 34 24.7  +1.6
PVCC                               eS       S         13 44 17.3  -3.1
PVCC                                MLR     MLR
       comp=Z,62µm,14.6s
MVU    Marysvale        78.91  49   IAmb    IAmb      13 34 28.1
       comp=Z,615nm,1.5s
PHSR   Pinarhisar       78.93 315  eP       P         13 34 22.7  -0.8
PHSR   Pinarhisar       78.93 315 ⇑P        P         13 34 24.2  +0.8
SURR   Surduc           78.94 321 ⇑P        P         13 34 23.1  -0.2
CLL    Collm            78.95 329   IAmb    IAmb      13 34 32.5
       comp=Z,667nm,1.7s
CLL    Collm            78.95 329  i P      P         13 34 23.8  +0.4
CLL                                eS       S         13 44 24.0  +3.1
CLL                                e                  13 44 38.0
CLL                                 pmax    pmax
       comp=Z,226nm,1.1s
CLL    Collm            78.95 329   P       P         13 34 22.4  -1.0
       comp=Z,8µmcomp=Z,177nm,1.4s
CLL    Collm            78.95 329  eP       P         13 34 21.9  -1.5
       comp=Z,542nm,1.6s,baz=38,slow=5.4
CLL                                eS       S         13 44 19.8  -1.1
       baz=37,slow=11
CLL    Collm            78.95 329  eP       P         13 34 22.0  -1.4
CLL                                i Pmax             13 34 23.8
       comp=Z,226nm,1.1s
CLL                                ePmax              13 34 26.0
CLL                                i x      x         13 34 30.6
       comp=Z,509nm,1.6s
CLL                                ePP      PP        13 37 16.0  -5.5
CLL                                ePPP     PPP       13 39 12.0
CLL                                ePPPP              13 40 24.0
CLL                                eS       S         13 44 24.0  +3.1
CLL                                eSKSac   SKSac     13 44 38.0   0.0
CLL                                ex       x         13 44 46.0
CLL                                ePS      PnS       13 45 03.0  -0.7
CLL                                eSS      SS        13 49 24.0  -1.0
CLL                                eSSS     SSS       13 52 54.0
CLL                                i PKPPKPdP'P'df    14 01 15.7   -10
       comp=Z,97nm,2.8s
CLL                                 AMS     AMS       14 14 00.0
VRAC   Vranov           78.95 326   LR      LR        14 12 00.3
       comp=Z,23µm,18.8s,baz=40,slow=38
VRAC   Vranov           78.95 326  eP       P         13 34 22.4  -1.0
VRAC                               epP      P         13 34 24.4  +1.0
VRAC                               eS       S         13 44 20.9  -0.1
VRAC   Vranov           78.95 326 ⇓P        P         13 34 24.5  +1.0
EREN   Erenkoy          78.99 307  eP       P         13 34 23.8   0.0
VLAD   Vladila          79.00 318 ⇓P        P         13 34 23.4  -0.4
ULM    Lac du Bonnet    79.01  33   IAmb    IAmb      13 34 33.4
       comp=Z,358nm,1.1s
ULM    Lac du Bonnet    79.01  33   P       P         13 34 22.2  -1.5
       comp=Z,128nm,0.8s,baz=315,slow=6.6,SNR=145
ULM                                 PKPPKP  P'P'df    14 01 24.0  -1.5
       comp=Z,1.3nm,0.5s,baz=126,slow=1.8,SNR=3.7
ULM                                 LR      LR        14 12 46.4
       comp=Z,19µm,18.1s,baz=332,slow=38
       comp=Z,128nm,0.8s
ULM    Lac du Bonnet    79.01  33c iP       P         13 34 22.1  -1.6
MDNY   Mudanya-Bursa    79.01 313  eP       P         13 34 24.5  +0.6
BERE   Bereket-Mersin   79.05 308  eP       P         13 34 23.9  -0.5
RICC   Richard          79.08 328  eP       P         13 34 25.5  +1.4
RICC                               eS       S         13 44 22.3  -0.1
RICC                                AMS     AMS       14 13 40.0
       comp=Z,62µm,14.4s
V12A   Nelson           79.10  53   IAmb    IAmb      13 34 30.5
       comp=Z,635nm,1.4s
HDMB   Hadim            79.11 309  eP       P         13 34 24.3  -0.5
MDND   Maddock          79.15  36   IAMs_20 IAMs_20   14 08 49.5
       comp=Z,13µm,20.0s
CRLT   Corlu            79.15 314  eP       P         13 34 25.3  +0.6
LINV   Loch Inver, As   79.16 342⇑eP        P         13 34 24.4  +0.1
LINV                                IAmb    IAmb      13 34 35.0
       comp=Z,537nm,1.9s
LINV                                IAMs_20 IAMs_20   14 14 17.4
       comp=Z,20µm,15.2s
NRDL   Niedersach Rie   79.16 331  eP       P         13 34 23.2  -1.2
       comp=Z,1µm,2.4s,baz=38,slow=5.4
NRDL                               eS       S         13 44 22.2  -0.7
       baz=37,slow=11
SRE    Strehaia         79.16 319 ⇓P        P         13 34 25.7  +1.0
MCD    Coleburn Disti   79.16 341  eP       P         13 34 23.9  -0.5
MCD                                 IAMs_20 IAMs_20   14 12 42.5
       comp=Z,37µm,15.2s
SMOL   Smolenice        79.17 325  eP       P         13 34 26.3  +1.7
SMOL                                pmax    pmax
       comp=Z,73nm,0.9s
BUD    Budapest         79.19 323   P       P         13 34 25.7  +1.0
PVL    Pavlikeni        79.20 317⇑iP        P         13 34 24.7  -0.2
EDRB   Edirne           79.22 315  eP       P         13 34 25.2  +0.2
KRUC   Moravsky         79.22 326  eP       P         13 34 24.0  -0.9
KRUC                               epP      pP        13 34 26.3  -4.4
KRUC                               eS       S         13 44 21.3  -2.6
SEYD   Seydisehir-KON   79.22 309  eP       P         13 34 24.2  -1.1
ASSE   Asse, Remlinge   79.23 331  eP       P         13 34 23.6  -1.2
       comp=Z,508nm,1.9s,baz=38,slow=5.4
ASSE                               eS       S         13 44 23.1  -0.6
       baz=37,slow=11
SHUT   Suhut-Afyon      79.24 311  eP       P         13 34 23.9  -1.5
RETH   Rethem/Aller,    79.24 332  eP       P         13 34 23.8  -1.1
       comp=Z,592nm,1.5s,baz=38,slow=5.4
TEKE   Tekeli-Mersin    79.25 308  eP       P         13 34 24.9  -0.4
Q16A   Castle Valley    79.26  49   IAmb    IAmb      13 34 30.5
       comp=Z,1µm,1.8s
LCMT   Little Creek M   79.26  51   IAmb    IAmb      13 34 30.5
       comp=Z,1µm,1.9s
GOPC   GO Pecny, Ondr   79.27 327  eP       P         13 34 25.0  -0.2
GOPC                               eS       S         13 44 21.5  -3.0
GOPC                                AMS     AMS       14 13 10.0
       comp=Z,74µm,13.8s
GOPC   GO Pecny, Ondr   79.27 327  eP       P         13 34 25.0  -0.2
GOPC                               eS       S         13 44 21.5  -3.0
GOPC                                MLR     MLR
       comp=Z,74µm,13.8s
SRO    Srobarova        79.28 324  eP       P         13 34 26.7  +1.5
SRO                                 pmax    pmax
       comp=Z,205nm,1.0s
SRO    Srobarova        79.28 324  eP       P         13 34 26.7  +1.5
BZS    Buzias           79.28 321  eP       P         13 34 23.6  -1.7
BZS    Buzias           79.28 321 ⇓P        P         13 34 25.1  -0.2
BZS    Buzias           79.28 321   P       P         13 34 23.9  -1.4
TVSB   Tavsanli         79.29 312  eP       P         13 34 24.4  -1.2
PRA    Prague           79.31 328  eS       S         13 44 24.4  -0.3
PRA                                 AMS     AMS       14 13 30.0
       comp=Z,72µm,14.4s
PRU    Pruhonice        79.32 327  eP       P         13 34 24.3  -1.1
PRU                                eS       S         13 44 22.5  -2.4
PRU                                 AMS     AMS       14 13 20.0
       comp=Z,76µm,13.9s
PRU    Pruhonice        79.32 327  eP       P         13 34 24.3  -1.1
PRU                                eS       S         13 44 22.5  -2.4
PRU                                 MLR     MLR
       comp=Z,76µm,13.9s
P18A   Preston Nutter   79.33  47   IAmb    IAmb      13 34 30.8
       comp=Z,1µm,1.7s
MODS   Modra-Piesok     79.34 325  eP       P         13 34 26.6  +1.0
MODS                                pmax    pmax
       comp=Z,861nm,1.7s
MODS   Modra-Piesok     79.34 325  eP       P         13 34 26.6  +1.0
MODS                               ePP      PP        13 37 27.8  +2.9
MODS                               eS       S         13 44 26.5  +1.3
MODS                               eSS      SS        13 49 34.5  +3.4
ASF    Jabal al Asfar   79.35 303   LR      LR        14 13 23.8
       comp=Z,25µm,18.0s,baz=83,slow=39
K22A   Casper           79.36  43   IAmb    IAmb      13 34 30.9
       comp=Z,1µm,1.5s
HERR   Herculane        79.41 320 ⇓P        P         13 34 26.2  +0.3
PFO    Pinyon Flats O   79.42  55   P       P         13 34 25.0  -1.4
PFO                                 IAmb    IAmb      13 34 30.6
       comp=Z,2µm,2.0s
PFO    Pinyon Flats O   79.42  55   LR      LR        14 08 35.2
       comp=Z,9µm,18.2s,baz=297,slow=35
PFO    Pinyon Flats O   79.42  55c iP       P         13 34 25.9  -0.5
PFO                                 pmax    pmax
       comp=Z,1µm,1.9s
TREC   Trest            79.44 326  eP       P         13 34 25.5  -0.6
TREC                               eS       S         13 44 25.5  -0.8
TREC                                AMS     AMS       14 13 40.0
       comp=Z,69µm,14.1s
TREC   Trest            79.44 326  eP       P         13 34 25.5  -0.6
TREC                               eS       S         13 44 25.5  -0.8
TREC                                MLR     MLR
       comp=Z,69µm,14.1s
BAND   Balkesir-Ban     79.47 314 ⇓P        P         13 34 27.9  +1.5
DJES   Djerdap          79.50 320 ⇑P        P         13 34 26.9  +0.4
SRU    San Rafael Swe   79.51  48   IAmb    IAmb      13 34 30.4
       comp=Z,942nm,1.7s
DRUM   Mains of Drumt   79.55 340⇑eP        P         13 34 26.3  -0.2
DRUM                                IAMs_20 IAMs_20   14 13 49.1
       comp=Z,30µm,16.1s
LFK    Lefkose          79.55 307  eP       P         13 34 27.5  +0.5
LEWI   Lewis, Hebride   79.56 343⇑eP        P         13 34 26.4  -0.2
LEWI                                IAMs_20 IAMs_20   14 12 54.4
       comp=Z,20µm,16.3s
E28A   Huff             79.56  37   IAMs_20 IAMs_20   14 12 45.6
       comp=Z,18µm,19.0s
GEDZ   Gediz            79.59 312  eP       P         13 34 27.0  -0.2
EDC    Edincik          79.61 314  eP       P         13 34 27.9  +0.7
GLAD   Gladstone        79.61 173   P       P         13 34 28.7  +1.9
RSSD   Black Hills      79.65  41   P       P         13 34 26.0  -1.6
RSSD                                IAmb    IAmb      13 34 31.4
       comp=Z,2µm,2.0s
RSSD   Black Hills      79.65  41   IAMs_20 IAMs_20   14 09 56.3
       comp=Z,13µm,21.0s
RSSD   Black Hills      79.65  41   P       P         13 34 26.0  -1.6
RSSD                                pmax    pmax
       comp=Z,2µm,2.0s
RSSD                                MLR     MLR
       comp=Z,13µm,21.0s
RSSD   Black Hills      79.65  41   P       P         13 34 27.4  -0.3
GAZI   Gazipasa         79.69 308  eP       P         13 34 26.8  -0.9
VALD   Valchedram       79.72 319   P       P         13 34 29.8  +2.1
TJX    Tijuana          79.73  57   P       P         13 34 30.4  +2.5
ISP    Isparta          79.74 310  eP       P         13 34 27.6  -0.5
ISP    Isparta          79.74 310   IAMs_20 IAMs_20   14 13 45.1
       comp=Z,18µm,19.0s
ISP    Isparta          79.74 310   P       P         13 34 28.9  +0.8
SUSR   Susurluk-Balik   79.74 313  eP       P         13 34 27.9   0.0
RKY    Sarkoy-Tekirda   79.76 314  eP       P         13 34 27.9  -0.2
MPEP   Malo Peshtene    79.79 318⇑iP        P         13 34 29.0  +0.9
MMAI   Mount Meron Ar   79.80 304   P       P         13 34 27.2  -1.2
       comp=Z,235nm,1.1s,baz=46,slow=3.6,SNR=52
MMAI                                LR      LR        14 13 36.7
       comp=Z,33µm,18.2s,baz=41,slow=39
       comp=Z,235nm,1.1s
SIMA   Simav-Kutahya    79.81 312  eP       P         13 34 28.2  -0.2
MDVR   Moldovita        79.83 320 ⇑P        P         13 34 29.3  +0.9
CSS    Mathiatis        79.88 307  eP       P         13 34 28.5  -0.3
CSS    Mathiatis        79.88 307   IAMs_20 IAMs_20   14 13 35.2
       comp=Z,18µm,18.0s
CSS    Mathiatis        79.88 307   P       P         13 34 29.1  +0.3
       comp=Z,9µmcomp=Z,288nm,2.0s
ZVC    Zvikov           79.89 327  eP       P         13 34 28.3  -0.2
ZVC                                eS       S         13 44 31.0   0.0
ZVC                                 AMS     AMS       14 13 30.0
       comp=Z,75µm,14.3s
BCK    Bucak            79.94 310  eP       P         13 34 28.1  -1.0
GTTG   Gottingen        79.96 331  eP       P         13 34 27.8  -1.1
       comp=Z,357nm,1.2s,baz=38,slow=5.4
GTTG                               eS       S         13 44 30.9  -0.7
       baz=37,slow=11
OUZ    Omahuta          79.98 152   IAMs_20 IAMs_20   14 04 48.0
       comp=Z,18µm,21.0s
KPL    Plockton         79.99 342  eP       P         13 34 28.3  -0.6
KPL                                 IAmb    IAmb      13 34 34.5
       comp=Z,362nm,1.2s
KPL                                 IAMs_20 IAMs_20   14 19 52.7
       comp=Z,21µm,14.6s
NKC    Novy Kostel      80.00 329  eP       P         13 34 28.3  -0.9
NKC                                eS       S         13 44 32.0  -0.2
NKC                                 AMS     AMS       14 13 20.0
       comp=Z,82µm,13.7s
NKC    Novy Kostel      80.00 329  eP       P         13 34 28.3  -0.9
NKC                                eS       S         13 44 32.0  -0.2
NKC                                 MLR     MLR
       comp=Z,82µm,13.7s
CORO   Coronation Par   80.00 174   P       P         13 34 31.5  +2.6
MOX    Moxa             80.02 329  eP       P         13 34 28.1  -1.2
       comp=Z,541nm,1.7s,baz=38,slow=5.4
MOX                                eS       S         13 44 31.9  -0.4
       baz=37,slow=11
MOX                                eL       L         14 12 42.8
       comp=Z,25µm,18.7s
PLD    Plovdiv          80.10 317  eP       P         13 34 30.4  +0.6
PLD    Plovdiv          80.10 317⇑iP        P         13 34 30.3  +0.5
W13A   Hualapai Mount   80.10  53   IAmb    IAmb      13 34 34.9
       comp=Z,1µm,2.0s
MPLH   Magyarpolny      80.11 324   P       P         13 34 29.6  -0.1
       comp=Z,18µmcomp=Z,757nm,1.5s
CBX    Cerro Bola       80.11  57   P       P         13 34 31.4  +1.2
O20A   White River Ci   80.13  46   IAmb    IAmb      13 34 35.3
       comp=Z,449nm,1.3s
KDZ    Kurdzhali        80.13 316  eP       P         13 34 30.4  +0.4
KDZ    Kurdzhali        80.13 316⇑iP        P         13 34 30.7  +0.7
ERIK   Erikli-Kesan     80.14 315  eP       P         13 34 28.8  -1.2
MMLI   Mount Malkishu   80.15 304  eP       P         13 34 30.7  +0.4
PGB    Panagyurishte    80.15 317⇑iP        P         13 34 31.1  +1.0
HMU    Henry Mountain   80.16  49   IAmb    IAmb      13 34 41.6
       comp=Z,884nm,1.3s
SOP    Sopron           80.17 325   P       P         13 34 30.9  +0.8
IBBN   Ibbenburen       80.18 332  eP       P         13 34 28.5  -1.5
       comp=Z,1µm,2.0s,baz=38,slow=5.4
IBBN                               eS       S         13 44 31.6  -2.2
       baz=37,slow=11
LPK    Lapseki          80.21 314  eP       P         13 34 31.4  +1.0
ALN    Alexandroupoli   80.25 315  eP       P         13 34 30.3  -0.3
ALN    Alexandroupoli   80.25 315   IAMs_20 IAMs_20   14 08 41.7
       comp=Z,15µm,19.0s
ANTB   Antalya          80.26 310  eP       P         13 34 29.0  -1.8
RONA   Rosalia, Austr   80.28 325  i P      P         13 34 30.8   0.0
       comp=Z,201nm,1.5s,SNR=101
MORH   Mrgy, Hungar     80.29 323 ⇑P        P         13 34 31.2  +0.4
MORH   Mrgy, Hungar     80.29 323   P       P         13 34 29.0  -1.7
       comp=Z,6µmcomp=Z,162nm,1.9s
ENEZ   Enez             80.30 315  eP       P         13 34 30.9   0.0
CONA   Conrad Observa   80.30 325  eP       P         13 34 30.4  -0.5
       comp=Z,223nm,1.2s,SNR=170
CKRC   Cesky Krumlov    80.31 327  eP       P         13 34 30.1  -0.7
CKRC                               eS       S         13 44 35.5   0.0
CKRC                                AMS     AMS       14 14 10.0
       comp=Z,50µm,14.1s
CKRC   Cesky Krumlov    80.31 327  eP       P         13 34 30.1  -0.7
CKRC                               eS       S         13 44 35.5   0.0
CKRC                                MLR     MLR
       comp=Z,50µm,14.1s
CAVK   Edirne/Enez-Ca   80.32 315 ⇓P        P         13 34 31.3  +0.3
IVI    Ivigtut          80.33   4   IAMs_20 IAMs_20   14 12 26.9
       comp=Z,14µm,19.0s
IVI    Ivigtut          80.33   4  i P      P         13 34 30.1  -0.5
IVI                                 IAmb    IAmb      13 34 33.4
       comp=Z,104nm,0.6s
MANZ   Manzenberg       80.33 329  eP       P         13 34 29.9  -1.1
       comp=Z,304nm,2.4s,baz=38,slow=5.4
MANZ                               eS       S         13 44 35.5  -0.2
       baz=37,slow=11
EPLO   Experimental L   80.34  32   IAmb    IAmb      13 34 34.8
       comp=Z,852nm,1.6s
EPLO                                IAMs_20 IAMs_20   14 12 01.0
       comp=Z,15µm,19.0s
GELI   Tayfur-Gelibol   80.35 315  eP       P         13 34 31.0  -0.2
RDO    Rodhopi          80.36 316  eP       P         13 34 31.4  +0.2
RDO    Rodhopi          80.36 316   IAmb    IAmb      13 34 41.7
       comp=Z,500nm,1.2s
KULA   Kula-Manisa      80.38 312  eP       P         13 34 30.9  -0.6
YUH    Yuha Desert      80.38  56   IAmb    IAmb      13 34 35.8
       comp=Z,2µm,2.0s
KORT   Korkueli         80.38 310  eP       P         13 34 30.8  -0.8
KHC    Kasperske Hory   80.38 327  eP       P         13 34 30.7  -0.6
KHC                                epP      PcP       13 34 38.0  -0.3
KHC                                eS       S         13 44 32.9  -3.4
KHC                                 AMS     AMS       14 13 50.0
       comp=Z,76µm,14.5s
KHC    Kasperske Hory   80.38 327c iP       P         13 34 30.1  -1.2
KHC                                 pmax    pmax
       comp=Z,188nm,1.0s
KHC                                 MLR     MLR
       comp=Z,54µm,15.0s
KHC    Kasperske Hory   80.38 327   P       P         13 34 30.6  -0.7
       comp=Z,8µmcomp=Z,175nm,1.2s
CCX    Cicese           80.39  57   IAmb    IAmb      13 34 34.7
       comp=Z,1µm,1.8s
CCX    Cicese           80.39  57   P       P         13 34 32.6  +1.1
GORD   Gordes-Manisa    80.39 312  eP       P         13 34 30.5  -1.0
RZN    Rozhen           80.42 316⇑iP        P         13 34 32.8  +1.0
UJAP   Al Uja           80.43 303  eP       P         13 34 30.5  -1.2
MANT   Manisa           80.45 312   IAmb    IAmb      13 34 43.8
       comp=Z,588nm,1.7s
ROTZ   Rotzenmuhle      80.46 328  eP       P         13 34 30.9  -0.7
       comp=Z,282nm,1.9s,baz=38,slow=5.4
ROTZ                               eS       S         13 44 37.6  +0.6
       baz=37,slow=11
NRS    Narsarsuaq       80.49   2   IAmb    IAmb      13 34 42.2
       comp=Z,725nm,1.7s
NRS                                 IAMs_20 IAMs_20   14 12 07.1
       comp=Z,19µm,19.0s
NRS    Narsarsuaq       80.49   2  i P      P         13 34 31.0  -0.5
NRS                                 IAmb    IAmb      13 34 34.9
       comp=Z,118nm,1.0s
AGMN   Agassiz Nation   80.49  34   IAmb    IAmb      13 34 34.7
       comp=Z,845nm,1.9s
AGMN                                IAMs_20 IAMs_20   14 10 40.0
       comp=Z,15µm,20.0s
FRGS   Fruska Gora      80.50 321⇑iP        P         13 34 32.5  +0.6
UBBA   Unterbreizbach   80.52 330  eP       P         13 34 30.6  -1.2
       comp=Z,739nm,1.9s,baz=38,slow=5.4
UBBA                               eS       S         13 44 37.0  -0.3
       baz=37,slow=11
GEC2   GERESS Array S   80.55 327  eP       P         13 34 30.8  -1.4
       comp=Z,270nm,1.5s,baz=38,slow=5.4
GEC2                               eS       S         13 44 38.7  +0.5
       baz=37,slow=11
GERES  GERESS Array B   80.55 327   P       P         13 34 29.6  -2.6
GERES  GERESS Array B   80.55 327   P       P         13 34 30.8  -1.4
       comp=Z,22nm,0.6s,baz=23,slow=4.5,SNR=83
GERES                               PP      PP        13 37 37.8  +2.8
       comp=Z,12nm,0.9s,baz=47,slow=6.6,SNR=3.6
GERES                               PKKPbc  PKKPbc    13 53 14.7  +2.7
       comp=Z,2.2nm,0.8s,baz=241,slow=2.7,SNR=9.4
GERES                               PKPPKP  P'P'df    14 01 22.4  -0.5
       comp=Z,0.3nm,0.3s,baz=255,slow=4.0,SNR=4.3
GERES                               LR      LR        14 13 57.5
       comp=Z,36µm,18.5s,baz=32,slow=38
       comp=Z,22nm,0.6s
GERES  GERESS Array B   80.55 327   P       P         13 34 29.6  -2.6
COMU   Canakkale        80.56 314  eP       P         13 34 31.0  -1.3
PLNA   Plana            80.57 318⇑iP        P         13 34 32.8  +0.3
VTS    Vitosha          80.57 318⇑iP        P         13 34 33.4  +0.9
EDI    Edinburgh        80.60 340⇑eP        P         13 34 32.2   0.0
EDI                                 IAMs_20 IAMs_20   14 13 19.1
       comp=Z,27µm,17.1s
BOVS   Bovan            80.65 319 ⇑P        P         13 34 33.3  +0.6
WET    Wettzell         80.67 328  eP       P         13 34 31.9  -0.9
       comp=Z,2µm,2.6s,baz=38,slow=5.4
WET                                eS       S         13 44 39.7  +0.5
       baz=37,slow=11
APMY   Acipayam-Deniz   80.69 311  eP       P         13 34 32.6  -0.6
ESJX   Sierra Juarez    80.77  56   IAmb    IAmb      13 34 37.5
       comp=Z,880nm,1.6s
ESJX   Sierra Juarez    80.77  56   P       P         13 34 34.0  +0.2
PV21   Cone Mtn., Par   80.78  48   IAmb    IAmb      13 34 45.7
       comp=Z,1µm,1.8s
GHAJ   Ghor Haditha     80.78 303   IAmb    IAmb      13 34 45.0
       comp=Z,1µm,1.6s
ELL    Elmali           80.81 310  eP       P         13 34 33.5  -0.4
GADA   Gvkgeada         80.81 315  eP       P         13 34 33.3  -0.4
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KASTN	Kahler Asten	80.82	331	*e*P	P	13 34 32.3	-1.3
	comp=Z,936nm,2.1s,baz=38,slow=5.4						
KASTN				*e*S	S	13 44 39.7	-1.0
	baz=37,slow=11						
EZN	Ezine	80.83	314	*e*P	P	13 34 32.3	-1.4
EZN	Ezine	80.83	314	⇑P	P	13 34 34.2	+0.5
EZN	Ezine	80.83	314	P	P	13 34 33.8	+0.1
EZN	Ezine	80.83	314	P	P	13 34 32.7	-1.0
	comp=Z,8µmcomp=Z,294nm,1.4s						
GLA	Glamis	80.83	55	IAMs_20	IAMs_20	14 04 59.1	
	comp=Z,12µm,20.0s						
KUQ	Kuujjuuaa	80.84	15	IAmb	IAmb	13 34 43.2	
	comp=Z,626nm,1.6s						
KUQ				IAMs_20	IAMs_20	14 13 27.6	
	comp=Z,18µm,18.0s						
PV14	Lion Creek, Pa	80.88	48	IAmb	IAmb	13 34 45.5	
	comp=Z,570nm,1.1s						
ODEM	Odemis-Izmir	80.88	312	*e*P	P	13 34 32.3	-1.8
LAWE	Loch Awe, Argy	80.89	341	*e*P	P	13 34 34.5	+0.7
LAWE				IAmb	IAmb	13 34 44.5	
	comp=Z,681nm,1.8s						
LAWE				IAMs_20	IAMs_20	14 15 59.2	
	comp=Z,30µm,13.5s						
PV22	Blue Mesa, Par	80.90	48	IAmb	IAmb	13 34 46.2	
	comp=Z,601nm,1.2s						
GRA1	Grafenberg Arr	80.92	329	IAmb	IAmb	13 34 45.7	
	comp=Z,1µm,1.5s						
GRF	Grafenberg Arr	80.92	329	*e*P	P	13 34 33.4	-0.7
	comp=Z,1µm,1.4s,baz=38,slow=5.4						
GRF				*e*S	S	13 44 42.1	+0.3
	baz=37,slow=11						
GRF				*e*L	L	14 13 12.3	
	comp=Z,19µm,19.3s						
GRFO	Grafenberg	80.92	329	P	P	13 34 32.4	-1.7
GRFO				IAmb	IAmb	13 34 45.7	
	comp=Z,1µm,1.5s						
GRFO	Grafenberg	80.92	329	P	P	13 34 32.4	-1.7
GRFO				pmax	pmax		
	comp=Z,1µm,1.5s						
GRFO				MLR	MLR		
	comp=Z,24µm,21.0s						
CPBX	Cerro Prieto	80.93	56	P	P	13 34 36.9	+2.5
PV04	Paradox Valley	80.93	48	IAmb	IAmb	13 34 46.6	
	comp=Z,724nm,1.2s						
NAZL	Nazilli-Aydin	80.96	312	*e*P	P	13 34 35.5	+1.0
ARSA	Arzberg	80.96	325	IAmb	IAmb	13 34 44.2	
	comp=Z,579nm,1.8s						
ARSA	Arzberg	80.96	325	*e*P	P	13 34 33.8	-0.6
	comp=Z,143nm,1.3s,SNR=54						
BOZC	Bozcaada	80.97	314	*e*P	P	13 34 32.5	-2.0
PV16	Nyswonger Mesa	80.98	48	IAmb	IAmb	13 34 39.5	
	comp=Z,987nm,1.5s						
MOO	Moorlands	80.99	174	P	P	13 34 36.6	+2.4
DKL	Dikili	81.01	313	*e*P	P	13 34 34.3	-0.4
CAME	Cameli-Denizli	81.05	310	*e*P	P	13 34 34.8	-0.4
PV07	Paradox Valley	81.05	48	IAmb	IAmb	13 34 47.0	
	comp=Z,521nm,1.3s						
PGBU	Glenifferbraes	81.05	340	*e*P	P	13 34 34.7	+0.1
PGBU				IAMs_20	IAMs_20	14 14 53.8	
	comp=Z,48µm,15.6s						
MMB	Musomishta	81.05	317	⇑*i*P	P	13 34 35.8	+0.8
BUG	Bochum--Univer	81.06	332	*e*P	P	13 34 33.2	-1.5
	comp=Z,489nm,1.3s,baz=38,slow=5.4						
BUG				*e*S	S	13 44 41.8	-1.3
	baz=37,slow=11						
PV03	Paradox Valley	81.06	48	IAmb	IAmb	13 34 47.1	
	comp=Z,1µm,1.7s						
MOA	Molln	81.06	326	*e*P	P	13 34 35.0	+0.1
	comp=Z,189nm,1.6s,SNR=50						
TEKS	Tekeris	81.08	321	⇑*i*P	P	13 34 35.5	+0.4
EKA	Eskdalemuir Ar	81.11	339	P	P	13 34 34.3	-0.7
	comp=Z,14nm,0.7s,baz=27,slow=4.7,SNR=39						
EKA				PP	PP	13 37 42.4	+3.1
	comp=Z,21nm,1.1s,baz=32,slow=7.9,SNR=5.9						
	comp=Z,14nm,0.7s						
ESK	Eskdalemuir	81.14	339	P	P	13 34 32.9	-2.2
ESK	Eskdalemuir	81.14	339	⇑*e*P	P	13 34 35.2	+0.1
ESK				IAMs_20	IAMs_20	14 16 17.1	
	comp=Z,36µm,15.4s						
ESK	Eskdalemuir	81.14	339	P	P	13 34 32.9	-2.2
ESK				pmax	pmax		
	comp=Z,448nm,2.0s						
ESK				MLR	MLR		
	comp=Z,30µm,18.0s						
AYDB	Zeytinkoy-Aydi	81.20	312	*e*P	P	13 34 35.8	-0.2
PV15	Paradox Valley	81.21	48	IAmb	IAmb	13 34 40.6	
	comp=Z,1µm,1.8s						
EDMD	Edmundbyers	81.22	339	⇑*e*P	P	13 34 35.9	+0.4
EDMD				IAMs_20	IAMs_20	14 14 23.5	
	comp=Z,39µm,17.1s						
KOGS	Kog	81.24	324	*e*P	P	13 34 35.7	-0.1
KOGS				*e*PP	PP	13 37 46.1	+5.6
GDLE	Glaisdale, N Y	81.24	338	⇑*e*P	P	13 34 35.7	0.0
GDLE				IAMs_20	IAMs_20	14 16 49.2	
	comp=Z,38µm,14.8s						
AKAS	Kas	81.34	310	*e*P	P	13 34 35.6	-1.1
PEHC	Pehcevo	81.34	317	*i* P	P	13 34 41.4	+4.8
WUAZ	Wupatki	81.38	51	IAmb	IAmb	13 34 41.0	
	comp=Z,575nm,1.4s						
FETY	Fethiye	81.38	310	*e*P	P	13 34 36.1	-0.7
BLCB	Balcova	81.40	313	*e*P	P	13 34 37.0	+0.2
Y14A	Wickenburg	81.41	53	IAmb	IAmb	13 34 40.7	
	comp=Z,636nm,1.6s						
LIA	Limnos Island	81.41	315	*e*P	P	13 34 38.7	+1.9
SRS	Serrai	81.44	317	*e*P	P	13 34 37.6	+0.6
BIOA	Bad Ischl, Aus	81.46	326	*i* pP	P	13 34 38.1	+1.1
	comp=Z,141nm,1.5s,SNR=36						
TAU	Tasmania Unive	81.47	174	P	P	13 34 38.7	+2.0
SIGR	SIGRI	81.51	314	*e*P	P	13 34 36.7	-0.7
DALY	Dalyan (Mula)	81.52	311	*e*P	P	13 34 37.4	0.0
GRZ	Great Barrier	81.58	151	P	P	13 34 39.4	+1.9
TNS	Taunus Mts	81.59	331	*e*P	P	13 34 36.5	-1.3
	comp=Z,9µm,4.4s,baz=38,slow=5.4						
TNS				*e*S	S	13 44 48.0	-0.9
	baz=37,slow=11						
PERS	Pernice	81.61	325	*e*P	P	13 34 36.5	-1.4
SOKA	Soboth	81.62	325	*e*P	P	13 34 37.2	-0.7
	comp=Z,296nm,1.0s,SNR=188						
BBLS	Lazi&#263i	81.64	321	⇑*i*P	P	13 34 37.3	-0.8
ABAZ	Army Bay	81.66	152	P	P	13 34 42.3	+4.4
URLA	Izmir	81.67	313	*e*P	P	13 34 38.3	0.0
113A	Mohawk Valley,	81.69	55	IAmb	IAmb	13 34 41.8	
	comp=Z,704nm,1.8s						
HAPS	Han Pijesak,BI	81.70	321	⇑*i*P	P	13 34 37.5	-1.0
MLSB	Milas	81.71	312	*e*P	P	13 34 38.9	+0.4
KESW	Keswick, Cumbr	81.75	339	*e*P	P	13 34 38.4	0.0
KESW				IAmb	IAmb	13 34 50.4	
	comp=Z,453nm,1.3s						
KESW				IAMs_20	IAMs_20	14 14 49.8	
	comp=Z,43µm,16.7s						
GCAM	G?zelcaml?	81.75	312	*e*P	P	13 34 39.5	+0.8
OUR	Ouranopolis	81.77	316	*e*P	P	13 34 38.3	-0.4
RJOB	Jochberg	81.79	327	*e*P	P	13 34 38.0	-0.8
	comp=Z,1µm,1.9s,baz=38,slow=5.4						
RJOB				*e*S	S	13 44 50.7	-0.3
	baz=37,slow=11						
TURN	Turunc	81.79	311	*e*P	P	13 34 37.8	-1.1
SJES	Sjenica	81.79	320	⇑*i*P	P	13 34 38.0	-1.0
ISCO	Idaho Springs	81.83	45	IAmb	IAmb	13 34 54.6	
	comp=Z,329nm,1.2s						
ISCO				IAMs_20	IAMs_20	14 15 27.2	
	comp=Z,11µm,18.0s						
MBAZ	Motutapu North	81.83	152	P	P	13 34 41.6	+2.9
RUDO	Rudo	81.84	321	⇑*i*P	P	13 34 37.4	-1.7
VAY	Valandovo	81.84	317	*i* P	P	13 34 40.1	+1.0
WTAZ	Waiatarua	81.86	152	P	P	13 34 43.0	+4.0
HPK	Haverah Park	81.88	338	⇑*e*P	P	13 34 39.2	+0.2
HPK				IAMs_20	IAMs_20	14 15 20.2	
	comp=Z,42µm,15.9s						
WIAZ	Waiheke Island	81.94	152	P	P	13 34 42.8	+3.4
SUSD	Miller	81.95	38	IAmb	IAmb	13 34 49.6	
	comp=Z,773nm,1.1s						
SUSD				IAMs_20	IAMs_20	14 13 13.9	
	comp=Z,15µm,20.0s						
OBKA	Obir	81.96	325	⇑*i*P	P	13 34 38.9	-0.9
OBKA	Obir	81.96	325	*e*P	P	13 34 39.9	+0.2
	comp=Z,68nm,0.9s,SNR=28						
CHOS	Chios island	81.96	313	*e*P	P	13 34 39.1	-0.8
MVCO	Mesa Verde	81.97	48	IAmb	IAmb	13 34 44.8	
	comp=Z,658nm,1.4s						
SKO	Skopje	81.97	318	*i* P	P	13 34 41.4	+1.6
A051A	Mrakovica	82.00	323	⇑*i*P	P	13 34 40.2	+0.2
HORT	Hortiatis	82.07	316	*e*P	P	13 34 39.9	-0.5
BLY	Banja Luka	82.07	323	⇑*i*P	P	13 34 40.6	+0.4
CRES	Cresnjevec Ost	82.07	324	⇑*i*P	P	13 34 38.6	-1.6
LESA	Schwarzleotal	82.08	327	*e*P	P	13 34 39.5	-0.9
	comp=Z,305nm,1.6s,SNR=107						
FUR	Furstenfeldbru	82.09	328	*e*P	P	13 34 39.4	-1.0
	comp=Z,976nm,1.6s,baz=38,slow=5.4						
FUR				*e*S	S	13 44 53.6	-0.5
	baz=37,slow=11						
SFX	San Felipe	82.11	57	P	P	13 34 43.1	+2.5
KUZ	Kuaotunu	82.12	151	P	P	13 34 42.0	+1.7
KUZ	Kuaotunu	82.12	151	P	P	13 34 41.3	+1.0
CLGH	Cloghs, Cushen	82.12	341	*e*P	P	13 34 41.0	+0.7
CLGH				IAmb	IAmb	13 34 42.8	
	comp=Z,2.6nm,0.7s						
CLGH				IAMs_20	IAMs_20	14 15 03.5	
	comp=Z,220nm,15.8s						
BODT	Bodrum	82.14	312	*e*P	P	13 34 41.3	+0.5
F33A	5 Mile Ranch,	82.16	36	IAMs_20	IAMs_20	14 13 48.2	
	comp=Z,13µm,20.0s						
BEBN	Eben Emael	82.16	332	*d*P	P	13 34 40.5	-0.1
	comp=Z,127nm,1.1s						
BTNL	Ternell	82.17	332	*d*P	P	13 34 40.9	+0.2
	comp=Z,58nm,1.1s						
GRG	Griva	82.19	317	*e*P	P	13 34 40.5	-0.5
MEM	Membach	82.19	332	*d*P	P	13 34 39.4	-1.4
	comp=Z,85nm,1.1s						
EIL	Elat	82.23	302	*e*P	P	13 34 39.9	-1.4
EIL	Elat	82.23	302	LR	LR	14 15 17.8	
	comp=Z,16µm,18.4s,baz=76,slow=39						
MKAZ	Moumakai	82.23	152	P	P	13 34 40.9	+0.1
ARG	Arkhangelos	82.23	311	*e*P	P	13 34 41.9	+0.6
ARG	Arkhangelos	82.23	311	IAmb	IAmb	13 34 51.4	
	comp=Z,533nm,1.1s						
WACR	West Acre	82.26	336	*e*P	P	13 34 41.2	+0.2
WACR				IAMs_20	IAMs_20	14 15 13.2	
	comp=Z,42µm,17.6s						
MYKA	Terra Mystica	82.27	326	*e*P	P	13 34 40.8	-0.6
	comp=Z,211nm,1.6s,SNR=80						
LJU	Ljubljana	82.33	325	*e*P	P	13 34 41.3	-0.3
LJU				*e*S	S	13 44 54.8	-1.7
RAR	Rarotonga	82.33	125	LR	LR	14 08 11.1	
	comp=Z,20µm,18.9s,baz=316,slow=33						
RAR	Rarotonga	82.33	125	P	P	13 34 45.2	+3.4
UPM	Unac-Piva	82.37	321	⇑*i*P	P	13 34 42.3	+0.2
BSTI	Sart Tilman	82.38	332	*d*P	P	13 34 41.7	0.0
LBWR	Ladybower, Pea	82.39	338	⇑*e*P	P	13 34 41.9	+0.1
LBWR				IAmb	IAmb	13 34 50.8	
	comp=Z,492nm,1.1s						
LBWR				IAMs_20	IAMs_20	14 17 24.9	
	comp=Z,26µm,15.9s						
BOJS	Bojanci	82.41	324	⇑*i*P	P	13 34 40.6	-1.4
IOMK	Kirk Michael	82.45	340	*e*P	P	13 34 42.4	+0.4
IOMK				IAmb	IAmb	13 34 51.6	
	comp=Z,222nm,1.7s						
IOMK				IAMs_20	IAMs_20	14 15 45.7	
	comp=Z,16µm,15.2s						
PRED	Cave del Predi	82.45	326	IAmb	IAmb	13 34 53.4	
	comp=Z,549nm,1.8s						
STU	Stuttgart	82.46	329	IAmb	IAmb	13 34 53.2	
	comp=Z,417nm,1.3s						
STU				IAMs_20	IAMs_20	14 13 10.2	
	comp=Z,14µm,20.0s						
STU	Stuttgart	82.46	329	P	P	13 34 42.4	+0.2
STU	Stuttgart	82.46	329	*e*P	P	13 34 41.0	-1.3
	comp=Z,951nm,1.3s,baz=38,slow=5.4						
STU				*e*S	S	13 44 57.2	-0.5
	baz=37,slow=11						
IDGL	Inch Island, C	82.48	342	*e*P	P	13 34 42.2	+0.1
IDGL	Inch Island, C	82.48	342	P	P	13 34 42.3	+0.1
S22A	4UR Ranch, Cre	82.57	47	IAmb	IAmb	13 34 48.4	
	comp=Z,1µm,1.9s						
S22A				IAMs_20	IAMs_20	14 16 16.6	
	comp=Z,11µm,19.0s						
A050A	Klekovaca	82.58	323	⇑*i*P	P	13 34 41.7	-1.3
CEY	Cerknica	82.60	325	⇑*i*P	P	13 34 42.3	-0.8
BCLA	Clavier	82.61	332	*d*P	P	13 34 42.2	-0.7
	comp=Z,50nm,1.3s						
BCLA				*d*PP	PP	13 37 48.2	-3.5
EYMN	Ely	82.62	32	IAMs_20	IAMs_20	14 14 54.1	
	comp=Z,16µm,19.0s						
WATA	Walderalm	82.62	327	*i* PcP	P	13 34 44.0	+0.8
	comp=Z,139nm,1.4s,SNR=37						
VOJS	Vojsko	82.62	325	*e*P	P	13 34 42.7	-0.5
UCC	Uccle	82.63	333	*d*P	P	13 34 43.2	+0.2
WTTA	Wattenberg	82.65	327	*i* PcP	P	13 34 43.9	+0.4
	comp=Z,172nm,1.8s,SNR=41						
ABTA	Abfaltersbach	82.68	326	*i* P	P	13 34 43.6	+0.1
	comp=Z,114nm,1.4s,SNR=28						
ELMS	Elmsett, Ipswi	82.68	336	*e*P	P	13 34 43.0	-0.3
ELMS				IAMs_20	IAMs_20	14 15 18.6	
	comp=Z,45µm,16.4s						
BGES	Gesves	82.72	333	*d*P	P	13 34 41.4	-2.1
	comp=Z,62nm,1.1s						
BRY	Bratogost	82.77	321	⇑*i*P	P	13 34 42.6	-1.5
SABO	M.te Sabotino	82.79	325	IAmb	IAmb	13 34 54.0	
	comp=Z,950nm,1.8s						
STNC	Stoke	82.81	338	*e*P	P	13 34 44.6	+0.7
STNC				IAMs_20	IAMs_20	14 15 40.1	
	comp=Z,30µm,16.6s						
MOTA	Moosalm	82.81	327	*i* PcP	P	13 34 44.3	+0.1
	comp=Z,294nm,1.1s,SNR=89						
214A	Organ Pipe Nat	82.83	55	IAmb	IAmb	13 34 50.1	
	comp=Z,356nm,1.3s						
RETA	Reutte	82.84	328	*i* PcP	P	13 34 44.7	+0.4
	comp=Z,282nm,1.5s,SNR=13						
RETA	Reutte	82.84	328	*i* P	P	13 34 44.7	+0.4
	comp=Z,282nm,1.5s,SNR=13						
CWF	Charnwood Fore	82.84	337	⇑*e*P	P	13 34 43.6	-0.5
CWF				IAmb	IAmb	13 34 54.4	
	comp=Z,1µm,2.3s						
CWF				IAMs_20	IAMs_20	14 16 09.2	
	comp=Z,36µm,16.3s						
SQTA	Sankt Quirin	82.86	327	*i* P	P	13 34 44.4	-0.1
	comp=Z,219nm,1.7s,SNR=43						
BMRD	Maredsous	82.90	333	*d*P	P	13 34 43.0	-1.4
	comp=Z,125nm,1.1s						
TBO	Thunder Bay	82.90	30	IAmb	IAmb	13 34 54.1	
	comp=Z,326nm,1.2s						
TBO				IAMs_20	IAMs_20	14 10 09.5	
	comp=Z,16µm,22.0s						
TOZ	Tahuroa Road	82.91	152	IAmb	IAmb	13 34 55.0	
	comp=Z,193nm,0.9s						
TOZ				IAMs_20	IAMs_20	14 06 46.6	
	comp=Z,17µm,22.0s						
TOZ	Tahuroa Road	82.91	152	P	P	13 34 45.0	+0.6
WLF	Walferdange	82.92	332	P	P	13 34 45.3	+0.8
WLF	Walferdange	82.92	332	IAmb	IAmb	13 34 58.0	
	comp=Z,500nm,1.7s						
WLF	Walferdange	82.92	332	P	P	13 34 43.9	-0.7
WLF	Walferdange	82.92	332	*d*P	P	13 34 44.6	+0.1
	comp=Z,64nm,1.8s						
WLF	Walferdange	82.92	332	*e*P	P	13 34 43.5	-1.1
	comp=Z,1µm,2.0s,baz=38,slow=5.4						
WLF				*e*S	SKSac	13 45 02.8	-2.5
	baz=37,slow=11						
OHR	Ohrid	82.92	318	*i* P	P	13 34 46.3	+1.5
TRI	Trieste	82.92	325	IAmb	IAmb	13 34 54.5	
	comp=Z,659nm,1.7s						
K30B	Basset	82.93	40	IAMs_20	IAMs_20	14 13 26.0	
	comp=Z,15µm,21.0s						
SKDS	Skadanscina	82.94	325	⇑*i*P	P	13 34 42.9	-1.9
SKDS	Skadanscina	82.94	325	*e*P	P	13 34 43.9	-0.9
SKDS				*e*PP	PP	13 37 59.8	+5.1
SKDS				*e*S	S	13 45 00.6	-2.2
SKDS				*e*		13 45 46.8	
SKDS				*e*		13 53 59.2	
UBR	Ueberruh	82.96	328	*e*P	P	13 34 43.5	-1.5
	comp=Z,481nm,1.6s,baz=38,slow=5.4						
UBR				*e*S	SKSac	13 45 03.7	-2.2
	baz=37,slow=11						
STAL	STALIGIAL	82.97	326	IAmb	IAmb	13 34 56.4	
	comp=Z,312nm,1.4s						
DRME	Dracevica, Mon	82.97	320	⇑*i*P	P	13 34 43.6	-1.4
TREB	Trebinje	83.00	321	⇑*i*P	P	13 34 44.9	-0.3
ILTH	Belurgan, Co L	83.13	340	P	P	13 34 46.9	+1.4
DOU	Dourbes	83.13	333	*d*P	P	13 34 44.8	-0.9
	comp=Z,39nm,1.8s						
HCY	Herceg Novi	83.13	320	⇑*i*P	P	13 34 46.0	+0.2
BFO	Black Forest	83.16	330	P	P	13 34 43.6	-2.3
BFO	Black Forest	83.16	330	P	P	13 34 43.6	-2.3
BFO				pmax	pmax		
	comp=Z,1µm,1.7s						
BFO				MLR	MLR		
	comp=Z,26µm,18.0s						
BFO	Black Forest	83.16	330	*e*P	P	13 34 44.6	-1.3
	comp=Z,1µm,1.6s,baz=38,slow=5.4						
BFO				*e*S	SKSac	13 45 05.1	-2.0
	baz=37,slow=11						
APE	Apeiranthos	83.17	313	*e*P	P	13 34 43.7	-2.5
APE	Apeiranthos	83.17	313	⇑P	P	13 34 46.7	+0.5
APE	Apeiranthos	83.17	313	P	P	13 34 45.6	-0.6
TGRZ	Tauranga	83.19	151	P	P	13 34 44.2	-1.6
STON	Ston	83.21	321	⇑*i*P	P	13 34 45.8	-0.4
FETA	Feichten	83.22	327	*i* P	P	13 34 45.3	-1.1
	comp=Z,63nm,0.8s,SNR=90						
TIR	Tirane	83.24	319	*e*P	P	13 34 45.6	-0.8
TIR	Tirane	83.24	319	⇓P	P	13 34 47.4	+1.0
TIR	Tirane	83.24	319	P	P	13 34 46.5	+0.1
TIR	Tirane	83.24	319	P	P	13 34 46.8	+0.4
	comp=Z,212nm,2.3s						
WLF1	Llynfaes	83.26	339	*e*P	P	13 34 45.9	-0.4
WLF1				IAMs_20	IAMs_20	14 15 07.5	
	comp=Z,76µm,18.1s						
KARP	Karpathos	83.26	311	*e*P	P	13 34 46.6	-0.1
KARP	Karpathos	83.26	311	IAmb	IAmb	13 35 08.6	
	comp=Z,510nm,1.2s						
FOEL	Foel Wylfa	83.28	338	*e*P	P	13 34 47.2	+0.8
FOEL				IAmb	IAmb	13 34 57.1	
	comp=Z,831nm,1.8s						
FOEL				IAMs_20	IAMs_20	14 16 19.1	
	comp=Z,38µm,16.0s						
SDCO	Great Sand Dun	83.32	46	IAmb	IAmb	13 34 51.9	
	comp=Z,770nm,1.9s						
DAVA	Damuels	83.37	328	*i* P	P	13 34 46.5	-0.6
	comp=Z,139nm,0.8s,SNR=72						
HIZ	Hauiti	83.37	153	IAMs_20	IAMs_20	14 12 00.7	
	comp=Z,13µm,19.0s						
HIZ	Hauiti	83.37	153	P	P	13 34 48.2	+1.5
TLZ	Tolley Road	83.45	152	P	P	13 34 48.5	+1.2
HLM1	Long Mynd	83.51	338	⇑*e*P	P	13 34 47.5	-0.1
HLM1				IAMs_20	IAMs_20	14 16 27.8	
	comp=Z,37µm,15.3s						
SLE	Schleitheim	83.55	329	P	P	13 34 46.5	-1.4
OMRZ	Omania	83.56	152	P	P	13 34 50.4	+2.6
CTI	Castel Tesino	83.59	326	IAmb	IAmb	13 34 57.9	
	comp=Z,543nm,1.5s						
AGG	Agios Georgios	83.60	316	*e*P	P	13 34 46.8	-1.5
ECSD	EROS Data Cent	83.60	37	IAMs_20	IAMs_20	14 11 38.5	
	comp=Z,19µm,22.0s						
ECSD	EROS Data Cent	83.60	37	IAmb	IAmb	13 34 50.6	
	comp=Z,937nm,1.9s						
E38A	The Farm, Brul	83.65	33	IAMs_20	IAMs_20	14 15 16.5	
	comp=Z,17µm,18.0s						
PKE	Pukeiti	83.67	154	P	P	13 34 51.7	+3.4
ECH	Echery	83.72	330	IAmb	IAmb	13 34 59.4	
	comp=Z,456nm,1.4s						
ECH				IAMs_20	IAMs_20	14 14 16.3	
	comp=Z,16µm,18.0s						
FUORN	Ofenpass-Fuorn	83.74	328	IAmb	IAmb	13 35 05.7	
	comp=Z,562nm,1.1s						
KHEZ	Kahui Hut	83.77	154	P	P	13 34 52.0	+3.1
KHEZ	Kahui Hut	83.77	154	P	P	13 34 50.6	+1.7
DAVOX	Davos/Dischmat	83.77	328	LR	LR	14 15 34.0	
	comp=Z,50µm,18.4s,baz=32,slow=38						
NEZ	North Egmont	83.77	154	P	P	13 34 55.0	+6.0
HAZ	Te Kaha	83.79	150	P	P	13 34 47.9	-1.0
MXZ	Matakaoa Point	83.83	150	P	P	13 34 50.7	+1.6
MXZ	Matakaoa Point	83.83	150	P	P	13 34 51.4	+2.2
DSB	Dublin	83.84	340	P	P	13 34 50.1	+0.8
DSB	Dublin	83.84	340	IAMs_20	IAMs_20	14 14 53.1	
	comp=Z,17µm,20.0s						
DSB	Dublin	83.84	340	P	P	13 34 49.6	+0.4
VRZ	Vera Road	83.88	153	P	P	13 34 51.3	+1.9
TUC	Tucson	83.88	53	P	P	13 34 48.9	-1.1
TUC	Tucson	83.88	53	IAMs_20	IAMs_20	14 11 23.8	
	comp=Z,10µm,18.0s						
TUC	Tucson	83.88	53	P	P	13 34 48.9	-1.1
TUC				pmax	pmax		
	comp=Z,1µm,2.0s						
TUC				MLR	MLR		
	comp=Z,10µm,18.0s						
PRRZ	Plateau Road	83.92	152	P	P	13 34 51.8	+2.2
RUGZ	Raukumara Rang	83.93	151	P	P	13 34 48.3	-1.6
HMNX	Herstmonceux	83.94	335	⇑*e*P	P	13 34 49.9	+0.1
HMNX				IAMs_20	IAMs_20	14 16 08.8	
	comp=Z,47µm,18.2s						
STRD	Stroud	83.94	337	*e*P	P	13 34 49.8	0.0
STRD				IAMs_20	IAMs_20	14 14 20.7	
	comp=Z,31µm,17.0s						
URZ	Urewera	83.97	151	LR	LR	14 07 55.5	
	comp=Z,7µm,21.7s,baz=48,slow=33						
URZ	Urewera	83.97	151	P	P	13 34 48.1	-1.7
MCH1	Michaelchurch	84.00	338	⇑*e*P	P	13 34 49.8	-0.3
MCH1				IAmb	IAmb	13 35 00.5	
	comp=Z,789nm,2.4s						
MCH1				IAMs_20	IAMs_20	14 16 58.3	
	comp=Z,20µm,15.3s						
PKGZ	Pakihiroa	84.00	150	P	P	13 34 50.8	+0.7
KSCO	Kaye Shedlock’	84.02	44	IAMs_20	IAMs_20	14 16 17.1	
	comp=Z,13µm,20.0s						
WOL	Wolverton	84.06	336	*e*P	P	13 34 49.7	-0.6
SWN1	Swindon	84.06	337	*e*P	P	13 34 50.5	+0.1
SWN1				IAMs_20	IAMs_20	14 16 37.2	
	comp=Z,36µm,16.9s						
TWVZ	Taurewa	84.07	153	P	P	13 34 55.6	+5.1
MONM	Monmouth	84.08	338	*e*P	P	13 34 50.5	+0.1
MONM				IAmb	IAmb	13 34 59.4	
	comp=Z,540nm,1.6s						
MONM				IAMs_20	IAMs_20	14 16 28.8	
	comp=Z,39µm,15.0s						
WMGZ	Waiomatatini S	84.09	150	P	P	13 34 49.3	-1.1
ZKR	Zakros	84.12	311	*e*P	P	13 34 50.8	-0.2
TEOL	Teolo	84.12	326	IAmb	IAmb	13 35 03.4	
	comp=Z,247nm,1.1s						
OLDB	Oldbury-Upon-S	84.16	337	*e*P	P	13 34 50.4	-0.5
WTVZ	West Tongariro	84.17	153	P	P	13 34 55.9	+4.9
NNVZ	North Ngauruho	84.19	153	P	P	13 34 52.1	+1.0
SPMN	Marine on St.	84.20	34	IAmb	IAmb	13 34 54.4	
	comp=Z,820nm,1.9s						
SPMN				IAMs_20	IAMs_20	14 15 56.1	
	comp=Z,15µm,18.0s						
MWZ	Matawai	84.20	151	P	P	13 34 50.0	-1.0
TMVZ	Te Maari	84.21	152	P	P	13 34 52.0	+0.8
SCHQ	Schefferville	84.22	15	P	P	13 34 51.1	-0.1
	comp=Z,79nm,0.8s,baz=352,slow=5.2,SNR=100						
SCHQ				PKKPbc	PKKPbc	13 53 04.1	+0.4
	comp=Z,4.8nm,0.8s,baz=120,slow=5.4,SNR=5.9						
SCHQ				PKPPKP	P'P'df	14 01 12.4	-3.8
	comp=Z,7.1nm,1.1s,baz=144,slow=3.1,SNR=6.1						
SCHQ				LR	LR	14 15 59.8	
	comp=Z,15µm,18.0s,baz=345,slow=38						
	comp=Z,79nm,0.8s						
COVZ	Chateau Observ	84.22	153	P	P	13 34 54.3	+3.1
NGZ	Ngauruhoe	84.22	153	P	P	13 34 54.1	+2.8
OTVZ	Oturere	84.23	153	P	P	13 34 53.5	+2.1
TWGZ	Tauwhareparae	84.23	150	P	P	13 34 52.3	+1.0
RTZ	Ruatahuna	84.24	151	IAmb	IAmb	13 34 59.8	
	comp=Z,419nm,1.0s						
RTZ				IAMs_20	IAMs_20	14 07 55.7	
	comp=Z,13µm,21.0s						
RTZ	Ruatahuna	84.24	151	P	P	13 34 51.3	0.0
TUE	Stuetta	84.24	328	P	P	13 34 50.6	-1.1
	comp=Z,29µmcomp=Z,1µm,1.5s						
SNVZ	South Ngauruho	84.25	153	P	P	13 34 54.2	+2.8
PUZ	Puketiti	84.25	150	P	P	13 34 53.7	+2.3
FWVZ	Far West T-bar	84.28	153	P	P	13 34 53.9	+2.2
RAGZ	Rawiri	84.30	151	P	P	13 34 53.5	+1.9
WHVZ	Whangaehu Hut	84.31	153	P	P	13 34 53.9	+2.0
WNVZ	Wahianoa	84.36	153	P	P	13 34 56.0	+4.0
MTHZ	Maungataniwha	84.39	152	P	P	13 34 54.6	+2.6
TKGZ	Te Karaka	84.41	151	P	P	13 34 53.5	+1.4
IGLA	Glengowla, Co	84.45	342	*e*P	P	13 34 51.9	-0.4
IGLA	Glengowla, Co	84.45	342	P	P	13 34 52.6	+0.3
KEK	Kerkira	84.46	318	*e*P	P	13 34 53.0	+0.3
KEK	Kerkira	84.46	318	IAmb	IAmb	13 35 26.6	
	comp=Z,619nm,1.3s						
SNGZ	Shannon Statio	84.52	151	P	P	13 34 52.6	-0.1
BKZ	Black Stump Fm	84.54	152	IAMs_20	IAMs_20	14 08 40.7	
	comp=Z,14µm,22.0s						
BKZ	Black Stump Fm	84.54	152	P	P	13 34 54.0	+1.2
BKZ	Black Stump Fm	84.54	152	P	P	13 34 51.5	-1.3
RAHZ	Arahi	84.54	151	P	P	13 34 52.3	-0.5
RSBS	Rosebush, Pemb	84.55	339	*e*P	P	13 34 52.7	-0.2
CNGZ	Carnagh Statio	84.59	150	P	P	13 34 55.4	+2.4
NMHZ	Naumai	84.59	152	P	P	13 34 56.8	+3.7
BGNE	Belgrade	84.60	40	IAMs_20	IAMs_20	14 14 58.1	
	comp=Z,18µm,20.0s						
RIGZ	Rimuhau	84.61	151	P	P	13 34 56.7	+3.6
QRZ	Quartz Range	84.64	155	IAmb	IAmb	13 34 58.5	
	comp=Z,344nm,1.1s						
QRZ	Quartz Range	84.64	155	P	P	13 34 53.1	-0.1
LKD2	Lefkada island	84.67	317	*e*P	P	13 34 53.4	-0.4

ANMO	Albuquerque	84.72	49	P	P	13 34 52.7	-1.6
ANMO				IAmb	IAmb	13 35 05.8	
	comp=Z,304nm,1.1s						
ANMO	Albuquerque	84.72	49	IAmb	IAmb	13 35 05.8	
	comp=Z,335nm,1.1s						
ANMO	Albuquerque	84.72	49	P	P	13 34 52.7	-1.6
ANMO				pmax	pmax		
	comp=Z,304nm,1.1s						
IWEX	Carrickbyrne,	84.73	340	P	P	13 34 54.5	+0.7
KWHZ	Kaweka Forest	84.74	152	P	P	13 34 53.6	-0.2
IDI	Anoyia	84.78	312	eP	P	13 34 52.5	-2.0
IDI	Anoyia	84.78	312	P	P	13 34 54.0	-0.5
IDI	Anoyia	84.78	312	IAmb	IAmb	13 35 03.9	
	comp=Z,612nm,1.3s						
IDI	Anoyia	84.78	312	LR	LR	14 17 50.0	
	comp=Z,7µm,18.9s,baz=40,slow=39						
MCHZ	McNeill Hill	84.86	152	P	P	13 34 59.4	+5.1
I37A	Lemond, Waseca	84.88	35	IAMs_20	IAMs_20	14 11 42.1	
	comp=Z,14µm,22.0s						
SCTE	Santa Cesarea	84.89	319	IAmb	IAmb	13 35 04.5	
	comp=Z,441nm,1.2s						
KRHZ	Kereru	84.91	152	P	P	13 34 57.2	+2.5
SGRT	San Giovanni R	85.01	321	IAmb	IAmb	13 34 58.4	
	comp=Z,730nm,1.5s						
Y22D	IRIS PASSCAL I	85.05	50	IAMs_20	IAMs_20	14 14 24.5	
	comp=Z,11µm,19.0s						
Y22D	IRIS PASSCAL I	85.05	50	P	P	13 34 56.7	+0.7
	baz=314						
Y22D				S	S	13 45 27.8	+3.2
	baz=314						
L34A	Svendsen Farm,	85.06	38	IAmb	IAmb	13 35 05.4	
	comp=Z,364nm,1.0s						
L34A				IAMs_20	IAMs_20	14 14 04.1	
	comp=Z,13µm,20.0s						
COWI	Conover	85.06	32	IAmb	IAmb	13 34 59.0	
	comp=Z,945nm,1.9s						
COWI				IAMs_20	IAMs_20	14 15 53.8	
	comp=Z,15µm,19.0s						
PNHZ	Pukenui	85.09	153	P	P	13 34 57.9	+2.3
TSZ	Takapari Road	85.13	153	P	P	13 34 58.6	+2.9
ITM	Ithomi	85.14	315	eP	P	13 34 53.5	-2.7
ITM	Ithomi	85.14	315	IAMs_20	IAMs_20	14 19 09.9	
	comp=Z,13µm,20.0s						
GUMA	Gualdo di Mace	85.16	324	IAmb	IAmb	13 35 27.8	
	comp=Z,711nm,1.6s						
SENIN	Lac Senin/Sane	85.17	329	IAMs_20	IAMs_20	14 15 59.7	
	comp=Z,17µm,21.0s						
IMMV	Iera Moni Meta	85.19	312	eP	P	13 34 55.7	-0.7
ZCCA	Zocca	85.22	326	IAmb	IAmb	13 35 42.6	
	comp=Z,490nm,1.3s						
DSZ	Denniston Nort	85.24	156	IAmb	IAmb	13 35 02.0	
	comp=Z,277nm,1.0s						
DSZ				IAMs_20	IAMs_20	14 11 17.3	
	comp=Z,11µm,18.0s						
DSZ	Denniston Nort	85.24	156	P	P	13 34 58.0	+1.7
NNZ	Nelson	85.27	155	IAmb	IAmb	13 35 04.4	
	comp=Z,587nm,1.2s						
NNZ	Nelson	85.27	155	P	P	13 34 56.0	-0.4
G40A	Rib Lake	85.29	33	IAmb	IAmb	13 35 00.3	
	comp=Z,1µm,1.9s						
G40A				IAMs_20	IAMs_20	14 16 25.8	
	comp=Z,16µm,19.0s						
FDMO	Fiordimonte	85.29	324	IAmb	IAmb	13 35 07.9	
	comp=Z,566nm,1.3s						
HTL	Hartland	85.32	338⥣	eP	P	13 34 57.0	+0.3
HTL				IAMs_20	IAMs_20	14 17 33.5	
	comp=Z,45µm,15.4s						
MATE	Matera	85.36	320	eP	P	13 34 55.3	-1.9
MATE	Matera	85.36	320	⥣P	P	13 34 57.3	+0.2
MURB	Monte Urbino	85.38	324	IAmb	IAmb	13 35 08.8	
	comp=Z,467nm,1.2s						
319A	Douglas	85.45	53	IAMs_20	IAMs_20	14 08 41.4	
	comp=Z,10µm,20.0s						
KNDR	Palaiochora Ch	85.52	312	eP	P	13 34 58.1	+0.1
MRZ	Mangatainoka R	85.53	153	IAmb	IAmb	13 35 06.3	
	comp=Z,572nm,1.1s						
MRZ				IAMs_20	IAMs_20	14 08 59.9	
	comp=Z,13µm,21.0s						
MRZ	Mangatainoka R	85.53	153	P	P	13 34 57.9	+0.2
CAMP	Campotosto	85.53	323	IAmb	IAmb	13 35 08.3	
	comp=Z,318nm,1.1s						
CAMP				IAMs_20	IAMs_20	14 15 06.7	
	comp=Z,16µm,21.0s						
GVD	Gavdhos	85.57	312	eP	P	13 34 56.3	-2.0
THZ	Tophouse	85.61	156	IAmb	IAmb	13 35 06.6	
	comp=Z,336nm,1.1s						
THZ	Tophouse	85.61	156	P	P	13 34 56.2	-1.9
ACER	Acerenza	85.64	321	IAmb	IAmb	13 35 15.2	
	comp=Z,654nm,1.3s						
DYA	Yadsworthy	85.66	338⥣	eP	P	13 34 58.6	+0.1
DYA				IAMs_20	IAMs_20	14 23 23.0	
	comp=Z,40µm,13.0s						
AQU	L'Aquila	85.67	323	P	P	13 34 59.1	+0.4
AQU	L'Aquila	85.67	323	P	P	13 34 59.2	+0.4
	comp=Z,7µmcomp=Z,261nm,1.5s						
INTR	Introdacqua	85.70	323	IAmb	IAmb	13 35 09.7	
	comp=Z,266nm,1.2s						
CLF	Chambon-Foret	85.70	333	IAmb	IAmb	13 35 09.9	
	comp=Z,784nm,1.6s						
CBKS	Cedar Bluff	85.71	42	IAmb	IAmb	13 35 09.4	
	comp=Z,652nm,1.4s						
CBKS				IAMs_20	IAMs_20	14 16 25.7	
	comp=Z,10µm,19.0s						
F42A	Maple Grove Fa	85.75	31	IAMs_20	IAMs_20	14 16 32.9	
	comp=Z,11µm,19.0s						
BFZ	Birch Farm	85.78	153	IAMs_20	IAMs_20	14 08 53.6	
	comp=Z,17µm,20.0s						
BFZ	Birch Farm	85.78	153	P	P	13 35 01.5	+2.6
BFZ	Birch Farm	85.78	153	P	P	13 35 00.7	+1.7
SNZO	South Karori	85.80	154	IAMs_20	IAMs_20	14 08 35.1	
	comp=Z,11µm,21.0s						
SNZO	South Karori	85.80	154	P	P	13 34 58.8	-0.2
CESX	Cesi	85.86	324	IAmb	IAmb	13 35 11.1	
	comp=Z,632nm,1.9s						
CESX				IAMs_20	IAMs_20	14 16 35.4	
	comp=Z,18µm,20.0s						
MSSA	Maissana	85.89	327	IAmb	IAmb	13 35 07.8	
	comp=Z,371nm,1.7s						
VAL	Valentia	86.02	342	P	P	13 35 00.8	+0.6
VAL	Valentia	86.02	342	P	P	13 35 00.8	+0.6
INZ	Inchbonnie	86.02	157	IAmb	IAmb	13 35 07.8	
	comp=Z,244nm,1.0s						
INZ	Inchbonnie	86.02	157	P	P	13 35 00.1	+0.1
WVZ	Waitaha Valley	86.12	158	P	P	13 34 59.6	-0.9
PAOL	Paolisi	86.13	322	IAmb	IAmb	13 35 11.1	
	comp=Z,510nm,1.8s						
JSA	Saint Aubin	86.21	336⥣	eP	P	13 35 00.6	-0.5
JSA				IAMs_20	IAMs_20	14 17 57.8	
	comp=Z,49µm,17.1s						
I40A	Norwalk	86.21	34	IAmb	IAmb	13 35 04.8	
	comp=Z,1µm,1.9s						
I40A				IAMs_20	IAMs_20	14 17 32.3	
	comp=Z,11µm,18.0s						
PMOR	Pomariorio Ree	86.22	112	eP	P	13 35 01.3	-0.3
	comp=Z,266nm,1.2s						
PMOR	Pomariorio Ree	86.22	112	ePP	PP	13 38 16.7	-6.0
	comp=Z,2µm,22.5s						
PMOR				eS	S	13 45 31.0	-5.0
	comp=Z,8µm,27.9s						
PMOR				eSS	SS	13 51 16.5	+1.0
	comp=Z,9µm,25.7s						
PMOR	Pomariorio Ree	86.22	112	eLR	LR	14 02 08.7	
	comp=Z,17µm,20.6s						
N35A	Tabor	86.25	39	IAmb	IAmb	13 35 11.9	
	comp=Z,624nm,1.2s						
N35A				IAMs_20	IAMs_20	14 16 55.8	
	comp=Z,14µm,20.0s						
CCA1	Carnmenellis	86.26	338	eP	P	13 35 00.4	-1.0
CCA1				IAmb	IAmb	13 35 11.9	
	comp=Z,1µm,2.2s						
CCA1				IAMs_20	IAMs_20	14 18 25.6	
	comp=Z,53µm,15.4s						
FOZ	Fox Glacier	86.27	158	IAmb	IAmb	13 35 10.5	
	comp=Z,254nm,1.0s						
FOZ	Fox Glacier	86.27	158	P	P	13 34 60.0	-1.3
LTZ	Lake Taylor	86.33	156	IAMs_20	IAMs_20	14 12 21.0	
	comp=Z,11µm,19.0s						
LTZ	Lake Taylor	86.33	156	P	P	13 35 01.6	0.0
KHZ	Kahutara	86.40	155	IAmb	IAmb	13 35 12.2	
	comp=Z,349nm,1.4s						
KHZ				IAMs_20	IAMs_20	14 11 27.0	
	comp=Z,10µm,20.0s						
KHZ	Kahutara	86.40	155	P	P	13 35 01.8	-0.1
TIP	Timpagrande	86.44	319	IAmb	IAmb	13 35 14.8	
	comp=Z,637nm,1.9s						
TIP	Timpagrande	86.44	319	⥣P	P	13 35 03.1	+0.4
TIP	Timpagrande	86.44	319	P	P	13 35 01.7	-0.9
	comp=Z,6µmcomp=Z,131nm,2.0s						
JCZ	Jackson Bay	86.48	159	P	P	13 35 04.5	+2.1
JCZ	Jackson Bay	86.48	159	P	P	13 35 00.6	-1.8
BNI	Bardonecchia	86.49	329	P	P	13 35 01.6	-1.3
R32A	Long Quarter,	86.54	42	IAmb	IAmb	13 35 06.3	
	comp=Z,748nm,1.9s						
R32A				IAMs_20	IAMs_20	14 18 06.6	
	comp=Z,13µm,18.0s						
PPT	Papeete	86.71	115	LR	LR	14 08 03.2	
	comp=Z,11µm,20.3s,baz=302,slow=32						
PPT2	Papeete2	86.73	115	ePKP1	P	13 35 01.9	-2.3
	comp=Z,195nm,1.4s						
PPT2	Papeete2	86.73	115	ePP	PP	13 38 18.3	-8.6
	comp=Z,2µm,24.0s						
PPT2				eS	S	13 45 36.4	-4.6
	comp=Z,5µm,24.2s						
PPT2				eSS	SS	13 51 18.5	-4.7
	comp=Z,9µm,25.0s						
PPT2				eLQ	LQ	13 58 15.7	
	comp=Z,8µm,27.0s						
PPT2				eLR	LR	14 02 03.3	
	comp=Z,18µm,21.8s						
PPT2				eLR	LR	14 02 13.2	
	comp=Z,19µm,33.0s						
PPTF	Pamatai, Papee	86.73	115	IAMs_20	IAMs_20	14 10 01.0	
	comp=Z,12µm,20.0s						
GVZ	Greta Valley S	86.74	156	P	P	13 35 03.6	0.0
E46A	Sault Ste Mari	86.74	29	IAmb	IAmb	13 35 13.8	
	comp=Z,420nm,1.2s						
E46A				IAMs_20	IAMs_20	14 15 25.1	
	comp=Z,13µm,21.0s						
OXZ	Oxford	86.75	157	IAmb	IAmb	13 35 12.3	
	comp=Z,467nm,1.2s						
OXZ				IAMs_20	IAMs_20	14 11 57.1	
	comp=Z,13µm,20.0s						
OXZ	Oxford	86.75	157	P	P	13 35 03.0	-0.6
PAE	Paea	86.77	115	ePKP1	P	13 35 02.9	-1.4
	comp=Z,76nm,1.4s						
PAE	Paea	86.77	115	ePP	PP	13 38 21.1	-6.1
	comp=Z,228nm,22.0s						
PAE				eS	S	13 45 35.5	-5.8
	comp=Z,812nm,23.8s						
PAE				eSS	SS	13 51 27.3	+3.6
	comp=Z,1µm,23.7s						
PAE				eLQ	LQ	13 58 40.4	
	comp=Z,1µm,22.8s						
PAE				eLR	LR	14 02 25.1	
	comp=Z,4µm,21.4s						
MSZ	Milford Sound	86.80	160	P	P	13 35 04.5	+0.7
RPZ	Rata Peaks	86.80	158	IAMs_20	IAMs_20	14 13 42.6	
	comp=Z,10µm,19.0s						
RPZ	Rata Peaks	86.80	158	LR	LR	14 10 31.8	
	comp=Z,6µm,21.9s,baz=323,slow=33						
RPZ	Rata Peaks	86.80	158	P	P	13 35 04.5	+0.6
I42A	Draeger Farm,	86.94	33	IAMs_20	IAMs_20	14 17 26.6	
	comp=Z,12µm,18.0s						
TVO	Taravao	87.08	115	ePKP1	P	13 35 06.0	+0.1
	comp=Z,56nm,0.9s						
TVO	Taravao	87.08	115	ePP	PP	13 38 22.4	-7.4
	comp=Z,1µm,30.5s						
TVO				eS	S	13 45 37.3	-7.2
	comp=Z,1µm,24.7s						
TVO				eSS	SS	13 51 30.7	+2.3
	comp=Z,2µm,24.0s						
TVO				eLQ	LQ	13 58 45.9	
	comp=Z,1µm,23.9s						
TVO				eLR	LR	14 02 33.7	
	comp=Z,4µm,21.5s						
KSU1	Kansas State U	87.11	40	IAmb	IAmb	13 35 15.7	
	comp=Z,478nm,1.2s						
JFWS	Jewell Farm	87.15	34	IAMs_20	IAMs_20	14 15 28.2	
	comp=Z,18µm,21.0s						
JFWS	Jewell Farm	87.15	34	IAmb	IAmb	13 35 09.2	
	comp=Z,750nm,1.9s						
LBZ	Lake Benmore	87.16	158	IAmb	IAmb	13 35 11.0	
	comp=Z,417nm,1.1s						
LBZ	Lake Benmore	87.16	158	P	P	13 35 05.0	-0.6
MQZ	McQueen's Vall	87.28	157	P	P	13 35 07.9	+1.7
L40A	Anamosa	87.40	35	IAMs_20	IAMs_20	14 17 57.8	
	comp=Z,14µm,18.0s						
TMZ	Timaru	87.40	158	P	P	13 35 07.4	+0.6
N38A	Joes South For	87.47	37	IAMs_20	IAMs_20	14 13 47.8	
	comp=Z,17µm,21.0s						
MLZ	Mavora Lakes	87.50	160	IAmb	IAmb	13 35 11.7	
	comp=Z,564nm,1.9s						
MLZ	Mavora Lakes	87.50	160	P	P	13 35 09.4	+2.2
MSTX	Muleshoe	87.56	47	IAmb	IAmb	13 35 19.4	
	comp=Z,485nm,1.6s						
MSTX				IAMs_20	IAMs_20	14 19 26.9	
	comp=Z,11µm,19.0s						
CEL	Celeste	87.58	319	IAmb	IAmb	13 35 18.3	
	comp=Z,315nm,1.4s						
CEL	Celeste	87.58	319	P	P	13 35 07.2	-1.0
	comp=Z,6µmcomp=Z,179nm,1.7s						
MNTX	Cornudas Mount	87.63	51	IAmb	IAmb	13 35 12.9	
	comp=Z,524nm,1.9s						
EAZ	Earnscleugh	87.69	159	P	P	13 35 10.1	+1.9
PYZ	Puysegur Point	87.87	161	P	P	13 35 11.5	+2.6
ODZ	Otahua Downs	87.90	158	IAMs_20	IAMs_20	14 09 12.5	
	comp=Z,10µm,21.0s						
ODZ	Otahua Downs	87.90	158	P	P	13 35 09.5	+0.4
WHZ	Wether Hill Ro	87.94	161	P	P	13 35 12.7	+3.4
OK038	West end E0370	87.97	43	IAMs_20	IAMs_20	14 19 07.6	
	comp=Z,13µm,18.0s						
ATD	Arta Tunnel	88.00	283	IAMs_20	IAMs_20	14 20 36.0	
	comp=Z,11µm,18.0s						
ATD	Arta Tunnel	88.00	283	LR	LR	14 18 33.4	
	comp=Z,344nm,18.1s,baz=50,slow=38						
ATD	Arta Tunnel	88.00	283	P	P	13 35 11.2	+0.7
	SNR=8.0						
TAOE	Nuku Hiva Isla	88.03	103	IAMs_20	IAMs_20	14 15 07.3	
	comp=Z,15µm,19.0s						
TAOE	Nuku Hiva Isla	88.03	103	ePKP1	P	13 35 04.0	-6.7
	comp=Z,3µm,25.2s						
TAOE	Nuku Hiva Isla	88.03	103	ePP	PP	13 38 28.0	-9.5
	comp=Z,2µm,24.4s						
TAOE				eS	S	13 45 50.2	-3.7
	comp=Z,8µm,28.1s						
TAOE				eSS	SS	13 51 40.2	-2.2
	comp=Z,6µm,26.2s						
TAOE				eLQ	LQ	13 58 44.7	
	comp=Z,5µm,27.0s						
TAOE				eLR	LR	14 02 48.3	
	comp=Z,36µm,34.7s						
L42A	Oliver, Polo	88.14	34	IAMs_20	IAMs_20	14 15 48.4	
	comp=Z,16µm,20.0s						
K43A	Burlington	88.15	33	IAMs_20	IAMs_20	14 18 14.7	
	comp=Z,10µm,19.0s						
MSEY	Mahe Island	88.20	263	P	P	13 35 08.7	-2.8
MSEY				IAmb	IAmb	13 35 15.2	
	comp=Z,539nm,1.4s						
MSEY	Mahe Island	88.20	263	IAMs_20	IAMs_20	14 16 30.1	
	comp=Z,10µm,18.0s						
MSEY	Mahe Island	88.20	263	P	P	13 35 11.8	+0.4
MSEY				P	PcP	13 35 12.2	-1.0
MSEY	Mahe Island	88.20	263	P	P	13 35 08.7	-2.8
MSEY				pmax	pmax		
	comp=Z,539nm,1.4s						
MSEY				MLR	MLR		
	comp=Z,10µm,18.0s						
MSEY	Mahe Island	88.20	263	i P	P	13 35 12.5	+1.1
	SNR=6.1						
P38A	Dawn	88.23	38	IAmb	IAmb	13 35 21.5	
	comp=Z,434nm,1.2s						
P38A				IAMs_20	IAMs_20	14 19 58.2	
	comp=Z,11µm,19.0s						
TUZ	Tuapeka	88.45	159	P	P	13 35 12.6	+0.9
L44A	Lake County Fo	88.76	33	IAMs_20	IAMs_20	14 18 42.8	
	comp=Z,11µm,20.0s						
APZ	The Paps	88.82	161	P	P	13 35 15.9	+2.4
T35A	Sooner Cattle	88.82	42	IAmb	IAmb	13 35 24.5	
	comp=Z,341nm,1.1s						
T35A				IAMs_20	IAMs_20	14 18 14.0	
	comp=Z,16µm,20.0s						
SYZ	Scrubby Hill	88.85	160	P	P	13 35 15.9	+2.4
SYZ	Scrubby Hill	88.85	160	P	P	13 35 16.6	+3.1
VAE	Valguarnera	88.93	319	LR	LR	14 19 21.4	
	comp=Z,31µm,18.3s,baz=48,slow=38						
OK051	E0350 and S346	88.96	42	IAmb	IAmb	13 35 18.5	
	comp=Z,727nm,2.0s						
P40A	Paris	89.02	37	IAMs_20	IAMs_20	14 14 45.9	
	comp=Z,18µm,22.0s						
ODSA	Odessa	89.02	49	IAmb	IAmb	13 35 19.4	
	comp=Z,835nm,2.0s						
HQIL	Hanson Quary C	89.09	33	IAMs_20	IAMs_20	14 18 52.6	
	comp=Z,11µm,19.0s						
ICQ	Pointe Anglais	89.10	17	IAmb	IAmb	13 35 25.4	
	comp=Z,252nm,1.1s						
J47A	Sunmer	89.17	31	IAMs_20	IAMs_20	14 18 49.3	
	comp=Z,17µm,20.0s						
OK029	Liberty Lake	89.17	43	IAmb	IAmb	13 35 26.4	
	comp=Z,479nm,1.3s						
WMOK	Wichita Mounta	89.25	44	IAmb	IAmb	13 35 20.1	
	comp=Z,612nm,1.9s						
SN07	Snyder 07	89.28	47	IAmb	IAmb	13 35 20.3	
	comp=Z,827nm,1.9s						
QUOK	Quay	89.28	42	IAmb	IAmb	13 35 27.5	
	comp=Z,524nm,1.3s						
QUOK				IAMs_20	IAMs_20	14 19 50.3	
	comp=Z,15µm,19.0s						
M44A	Midewin, Midew	89.35	34	IAMs_20	IAMs_20	14 19 03.4	
	comp=Z,11µm,18.0s						
I49A	Point Hope	89.35	29	IAMs_20	IAMs_20	14 16 12.2	
	comp=Z,10µm,21.0s						
OK052	Battle Ridge R	89.37	42	IAMs_20	IAMs_20	14 20 11.5	
	comp=Z,11µm,18.0s						
SN05	Snyder 5	89.44	47	IAmb	IAmb	13 35 20.8	
	comp=Z,823nm,1.9s						
MNHN	Monahans	89.46	49	IAmb	IAmb	13 35 29.0	
	comp=Z,603nm,2.0s						
HDIL	Hopedale	89.47	35	IAMs_20	IAMs_20	14 17 01.7	
	comp=Z,13µm,20.0s						
LDAQ	Lac Daran	89.56	20	IAmb	IAmb	13 35 27.4	
	comp=Z,298nm,1.1s						
LDAQ				IAMs_20	IAMs_20	14 19 10.1	
	comp=Z,14µm,19.0s						
L46A	Eue Claire	89.58	32	IAMs_20	IAMs_20	14 18 50.4	
	comp=Z,14µm,19.0s						
ALPN	Alpine	89.62	50	IAmb	IAmb	13 35 22.4	
	comp=Z,582nm,2.0s						
DEOK	Depew	89.64	42	IAMs_20	IAMs_20	14 20 18.8	
	comp=Z,16µm,20.0s						
LPIG	La Paz	89.71	59	LR	LR	14 14 54.4	
	comp=Z,6µm,18.0s,baz=299,slow=35						
S39A	Bolivar	89.84	39	IAMs_20	IAMs_20	14 19 08.5	
	comp=Z,12µm,18.0s						
R40A	Maddies Statio	89.89	38	IAmb	IAmb	13 35 22.8	
	comp=Z,142nm,0.7s						
R40A				IAMs_20	IAMs_20	14 14 14.0	
	comp=Z,10µm,21.0s						
TUL3	Leonard	89.96	42	IAmb	IAmb	13 35 23.3	
	comp=Z,751nm,1.8s						
TUL3				IAMs_20	IAMs_20	14 18 49.2	
	comp=Z,17µm,20.0s						
SADO	Sadowa	89.98	26	IAmb	IAmb	13 35 22.7	
	comp=Z,683nm,1.9s						
SADO	Sadowa	89.98	26	LR	LR	14 20 23.2	
	comp=Z,16µm,19.4s,baz=350,slow=39						
SGCY	Sterling City	90.00	48	IAmb	IAmb	13 35 23.7	
	comp=Z,327nm,1.1s						
P43A	Skaggs, Pawnee	90.11	36	IAMs_20	IAMs_20	14 21 09.6	
	comp=Z,12µm,19.0s						
WTFS	Witchita Falls	90.14	45	IAmb	IAmb	13 35 31.3	
	comp=Z,299nm,1.3s						
RLO	Rose Lookout	90.17	41	IAmb	IAmb	13 35 30.7	
	comp=Z,227nm,1.2s						
RLO				IAMs_20	IAMs_20	14 18 48.5	
	comp=Z,15µm,21.0s						
LMQ	La Malbaie	90.18	20	IAmb	IAmb	13 35 30.3	
	comp=Z,388nm,1.2s						
LMQ				IAMs_20	IAMs_20	14 15 52.7	
	comp=Z,14µm,21.0s						
TRQ	Mont Tremblant	90.19	23	IAmb	IAmb	13 35 30.5	
	comp=Z,458nm,1.1s						
SLBS	Sierra La Lagu	90.24	59	IAMs_20	IAMs_20	14 17 29.6	
	comp=Z,12µm,19.0s						
U38A	Gravette	90.28	41	IAmb	IAmb	13 35 31.0	
	comp=Z,212nm,1.1s						
U38A				IAMs_20	IAMs_20	14 19 13.6	
	comp=Z,12µm,19.0s						
ABTX	Abilene, Hawle	90.33	46	IAmb	IAmb	13 35 25.2	
	comp=Z,883nm,1.9s						
ABTX				IAMs_20	IAMs_20	14 21 18.1	
	comp=Z,11µm,18.0s						
TX31	Lajitas Ar. Si	90.35	51	IAmb	IAmb	13 35 24.7	
	comp=Z,530nm,1.9s						
TXAR	Lajitas Array	90.35	51	P	P	13 35 19.5	-1.9
TXAR	Lajitas Array	90.35	51	P	P	13 35 20.9	-0.5
	comp=Z,40nm,0.7s,baz=297,slow=2.6,SNR=169						
TXAR				PP	PP	13 38 57.7	+2.7
	comp=Z,8.8nm,1.0s,baz=307,slow=4.6,SNR=3.4						
TXAR				PKKPbc	PKKPbc	13 52 51.9	+3.3
	comp=Z,0.9nm,0.5s,baz=150,slow=5.9,SNR=7.9						
TXAR				PKPPKP	P'P'df	14 00 57.8	-6.1
	comp=Z,1.4nm,1.0s,baz=100,slow=1.4,SNR=6.3						
	comp=Z,40nm,0.7s						
TXAR	Lajitas Array	90.35	51	P	P	13 35 19.5	-1.9
AAM	Ann Arbor	90.42	30	IAmb	IAmb	13 35 32.2	
	comp=Z,356nm,1.1s						
AAM				IAMs_20	IAMs_20	14 20 17.4	
	comp=Z,15µm,18.0s						
K50A	Casco	90.42	30	IAmb	IAmb	13 35 32.1	
	comp=Z,490nm,1.1s						
K50A				IAMs_20	IAMs_20	14 20 02.5	
	comp=Z,13µm,20.0s						
CCM	Cathedral Cave	90.57	38	P	P	13 35 20.3	-1.9
CCM	Cathedral Cave	90.57	38	IAMs_20	IAMs_20	14 19 51.9	
	comp=Z,10µm,19.0s						
CCM	Cathedral Cave	90.57	38	P	P	13 35 20.3	-1.9
CCM				pmax	pmax		
	comp=Z,1µm,1.9s						
CCM				MLR	MLR		
	comp=Z,10µm,19.0s						
SLM	Saint Louis	90.58	37	IAmb	IAmb	13 35 26.6	
	comp=Z,160nm,0.8s						
SFIN	Lafayette	90.59	34	IAMs_20	IAMs_20	14 17 24.1	
	comp=Z,10µm,20.0s						
HHAR	Hobbs	90.63	40	IAMs_20	IAMs_20	14 19 51.8	
	comp=Z,13µm,19.0s						
TBI	Tubuai	90.65	120	eP	P	13 35 21.8	-0.8
	comp=Z,11µm,26.5s						
TBI	Tubuai	90.65	120	ePP	PP	13 38 53.7	-4.5
	comp=Z,7µm,28.0s						
TBI				eS	S	13 46 16.7	-1.0
	comp=Z,37µm,31.2s						
TBI				eSS	SS	13 52 14.2	-5.9
	comp=Z,29µm,27.8s						
TBI				eLQ	LQ	13 59 46.8	
	comp=Z,24µm,28.8s						
TBI				eLR	LR	14 03 59.5	
	comp=Z,136µm,32.0s						
TBI				eLR	LR	14 04 03.5	
	comp=Z,24µm,30.8s						
OZNA	Ozona	90.72	48	IAmb	IAmb	13 35 26.7	
	comp=Z,599nm,1.9s						
DELO	Deloro Mine	90.72	26	IAmb	IAmb	13 35 33.0	
	comp=Z,285nm,1.2s						
N47A	Urbana	90.77	33	IAMs_20	IAMs_20	14 19 46.0	
	comp=Z,15µm,19.0s						
MGMO	Mountain Grove	90.78	39	IAmb	IAmb	13 35 26.6	
	comp=Z,592nm,1.9s						
MGMO				IAMs_20	IAMs_20	14 17 41.7	
	comp=Z,14µm,21.0s						
FW03	Perrin-Whitt E	90.91	45	IAMs_20	IAMs_20	14 20 28.3	
	comp=Z,12µm,20.0s						
Q44A	Meyer Farm, Va	90.93	36	IAMs_20	IAMs_20	14 17 31.4	
	comp=Z,12µm,20.0s						
PLPT	Palo Pinto	90.94	45	IAmb	IAmb	13 35 27.9	
	comp=Z,646nm,1.8s						
FVM	French Village	91.02	37	IAmb	IAmb	13 35 28.2	
	comp=Z,671nm,1.8s						
FVM				IAMs_20	IAMs_20	14 18 36.8	
	comp=Z,13µm,20.0s						
WBO	Williamsburg	91.06	24	IAmb	IAmb	13 35 34.2	
	comp=Z,285nm,1.2s						
CTZ	Chatham Island	91.10	150	IAMs_20	IAMs_20	14 18 21.4	
	comp=Z,10µm,20.0s						
CTZ	Chatham Island	91.10	150	P	P	13 35 28.2	+4.1
MNTQ	Montreal, Queb	91.12	23	IAmb	IAmb	13 35 34.8	
	comp=Z,254nm,1.1s						
Z35A	Perchaven, San	91.14	44	IAmb	IAmb	13 35 28.2	
	comp=Z,280nm,0.8s						
P46A	Rosedale	91.16	34	IAmb	IAmb	13 35 29.6	
	comp=Z,601nm,1.8s						
P46A				IAMs_20	IAMs_20	14 20 02.4	
	comp=Z,14µm,19.0s						
E62A	Clayton Lake	91.25	20	IAMs_20	IAMs_20	14 16 34.9	
	comp=Z,17µm,21.0s						
FW07	Weatherford	91.31	45	IAMs_20	IAMs_20	14 19 18.1	
	comp=Z,13µm,20.0s						
N49A	Columbus Grove	91.37	32	IAMs_20	IAMs_20	14 19 55.6	
	comp=Z,12µm,20.0s						
M50A	Fremont	91.42	31	IAmb	IAmb	13 35 36.6	
	comp=Z,238nm,1.1s						

PECO	**Prince Edward**	**91.45**	**25**	IAmb	IAmb	13 35 36.3	
	comp=Z,237nm,1.1s						
T42A	**Van Buren**	**91.46**	**38**	IAmb	IAmb	13 35 30.1	
	comp=Z,676nm,1.9s						
T42A				IAMs_20	IAMs_20	14 16 24.5	
	comp=Z,11µm,21.0s						
OLIL	**Olney**	**91.49**	**35**	IAMs_20	IAMs_20	14 18 56.1	
	comp=Z,10µm,20.0s						
BATG	**Bathurst New B**	**91.49**	**17**	IAMs_20	IAMs_20	14 19 53.1	
	comp=Z,13µm,18.0s						
O48B	**Farmland**	**91.52**	**33**	IAMs_20	IAMs_20	14 20 17.7	
	comp=Z,16µm,20.0s						
MEDO	**Medina**	**91.62**	**27**	IAmb	IAmb	13 35 37.4	
	comp=Z,385nm,1.1s						
MEDO				IAMs_20	IAMs_20	14 21 13.2	
	comp=Z,13µm,20.0s						
FRNY	**Flat Rock**	**91.73**	**23**	IAmb	IAmb	13 35 30.8	
	comp=Z,420nm,2.0s						
ROCAM	**Rodrigues Isla**	**91.81**	**246**	IAMs_20	IAMs_20	14 18 32.1	
	comp=Z,8µm,18.0s						
JCT	**Junction City**	**91.82**	**48**	IAMs_20	IAMs_20	14 19 36.7	
	comp=Z,12µm,20.0s						
BLO	**Bloomington**	**91.83**	**34**	IAMs_20	IAMs_20	14 18 02.1	
	comp=Z,15µm,21.0s						
FCAR	**Ozark Folk Cen**	**91.85**	**40**	IAmb	IAmb	13 35 37.9	
	comp=Z,166nm,1.1s						
FCAR				IAMs_20	IAMs_20	14 22 25.0	
	comp=Z,13µm,18.0s						
O49A	**Covington**	**91.92**	**32**	IAmb	IAmb	13 35 32.3	
	comp=Z,624nm,1.9s						
O49A				IAMs_20	IAMs_20	14 18 50.3	
	comp=Z,9µm,18.0s						
CGM3	**Cape Girardeau**	**91.93**	**37**	IAmb	IAmb	13 35 32.2	
	comp=Z,347nm,1.8s						
CGM3				IAMs_20	IAMs_20	14 19 45.9	
	comp=Z,12µm,20.0s						
M52A	**Chesterland**	**91.96**	**29**	IAMs_20	IAMs_20	14 18 27.3	
	comp=Z,14µm,21.0s						
PBMO	**Poplar Bluff**	**91.98**	**38**	IAMs_20	IAMs_20	14 16 51.2	
	comp=Z,12µm,22.0s						
ERPA	**Erie**	**91.98**	**28**	IAmb	IAmb	13 35 39.5	
	comp=Z,262nm,1.1s						
ERPA				IAMs_20	IAMs_20	14 23 08.7	
	comp=Z,8µm,18.0s						
WHTX	**Lake Whitney,**	**92.03**	**45**	IAmb	IAmb	13 35 40.4	
	comp=Z,339nm,1.4s						
WHTX				IAMs_20	IAMs_20	14 20 56.1	
	comp=Z,14µm,20.0s						
P48A	**Milroy**	**92.07**	**33**	IAmb	IAmb	13 35 32.8	
	comp=Z,588nm,1.9s						
P48A				IAMs_20	IAMs_20	14 20 18.3	
	comp=Z,14µm,19.0s						
MIAR	**Mount Ida**	**92.17**	**41**	IAmb	IAmb	13 35 40.1	
	comp=Z,286nm,1.1s						
LCAR	**Lake Charles**	**92.19**	**39**	IAMs_20	IAMs_20	14 18 32.9	
	comp=Z,13µm,21.0s						
MMNY	**Mt. Morris Dam**	**92.20**	**27**	IAMs_20	IAMs_20	14 24 19.3	
	comp=Z,13µm,18.0s						
WHAR	**Wooly Hollow**	**92.24**	**40**	IAmb	IAmb	13 35 40.0	
	comp=Z,257nm,1.2s						
WHAR				IAMs_20	IAMs_20	14 22 32.4	
	comp=Z,12µm,18.0s						
J57A	**Williamstown**	**92.25**	**25**	IAmb	IAmb	13 35 40.1	
	comp=Z,340nm,1.1s						
J57A				IAMs_20	IAMs_20	14 22 06.6	
	comp=Z,12µm,20.0s						
F64A	**Sherman**	**92.26**	**19**	IAmb	IAmb	13 35 33.7	
	comp=Z,417nm,1.9s						
G62A	**West of Eustis**	**92.27**	**21**	IAmb	IAmb	13 35 40.9	
	comp=Z,296nm,1.4s						
G62A				IAMs_20	IAMs_20	14 20 35.0	
	comp=Z,15µm,18.0s						
USIN	**University of**	**92.31**	**35**	IAMs_20	IAMs_20	14 14 58.9	
	comp=Z,15µm,22.0s						
ALLY	**Alegheny Colle**	**92.33**	**29**	IAMs_20	IAMs_20	14 20 56.9	
	comp=Z,16µm,20.0s						
PARMO	**Parma**	**92.39**	**38**	IAmb	IAmb	13 35 33.3	
	comp=Z,219nm,0.8s						
PARMO				IAMs_20	IAMs_20	14 19 09.2	
	comp=Z,10µm,20.0s						
Z38A	**Mt. Pleasant**	**92.42**	**43**	IAmb	IAmb	13 35 41.8	
	comp=Z,316nm,1.2s						
Z38A				IAMs_20	IAMs_20	14 22 00.3	
	comp=Z,14µm,18.0s						
ETOS	**Mallorca**	**92.47**	**328**	P	**P**	**13 35 30.7**	**-0.2**
PKME	**Peaks-Kenny Pk**	**92.57**	**20**	IAmb	IAmb	13 35 35.4	
	comp=Z,611nm,1.9s						
PKME				IAMs_20	IAMs_20	14 19 17.8	
	comp=Z,15µm,19.0s						
X40A	**Basin Creek Fa**	**92.59**	**41**	IAmb	IAmb	13 35 41.1	
	comp=Z,192nm,1.3s						
X40A				IAMs_20	IAMs_20	14 21 03.8	
	comp=Z,13µm,19.0s						
UALR	**University of**	**92.62**	**40**	IAMs_20	IAMs_20	14 20 52.4	
	comp=Z,14µm,19.0s						
PVMO	**Portageville**	**92.62**	**38**	IAMs_20	IAMs_20	14 25 23.2	
	comp=Z,11µm,19.0s						
T45A	**Paducah**	**92.63**	**37**	IAMs_20	IAMs_20	14 18 24.5	
	comp=Z,14µm,20.0s						
K57A	**Scipio Center**	**92.68**	**26**	IAmb	IAmb	13 35 42.2	
	comp=Z,353nm,1.2s						
K57A				IAMs_20	IAMs_20	14 22 02.9	
	comp=Z,15µm,19.0s						
J59A	**Piesco**	**92.69**	**24**	IAmb	IAmb	13 35 42.1	
	comp=Z,288nm,1.1s						
WCI	**Wyandotte Cave**	**92.71**	**34**	P	**P**	**13 35 31.2**	**-0.8**
WCI				IAmb	IAmb	13 35 36.0	
	comp=Z,472nm,1.9s						
WCI	**Wyandotte Cave**	**92.71**	**34**	P	**P**	**13 35 31.3**	**-0.8**
WCI				pmax	pmax		
	comp=Z,472nm,1.9s						
WCI				MLR	MLR		
	comp=Z,17µm,20.0s						
HICK	**Hickman**	**92.74**	**37**	IAMs_20	IAMs_20	14 19 59.4	
	comp=Z,13µm,20.0s						
LBNH	**Lisbon**	**92.77**	**22**	IAmb	IAmb	13 35 36.6	
	comp=Z,479nm,1.8s						
PEBM	**Pemiscott Bayo**	**92.78**	**38**	IAMs_20	IAMs_20	14 22 34.6	
	comp=Z,9µm,19.0s						
N53A	**Lisbon**	**92.79**	**29**	IAmb	IAmb	13 35 36.5	
	comp=Z,476nm,1.7s						
N53A				IAMs_20	IAMs_20	14 19 02.3	
	comp=Z,16µm,20.0s						
HNDO	**Hondo**	**92.83**	**48**	IAmb	IAmb	13 35 36.8	
	comp=Z,219nm,1.5s						
KEST	**Kesra**	**92.83**	**321**	P	**P**	**13 35 32.8**	**0.0**
	comp=Z,41nm,1.1s,baz=46,slow=1.5,SNR=20						
KEST				PP	**PP**	**13 39 17.6**	**+3.3**
	comp=Z,34nm,1.2s,baz=213,slow=4.4,SNR=4.8						
KEST				PKKPbc	**PKKPbc**	**13 52 46.1**	**+3.6**
	comp=Z,4.8nm,0.9s,baz=290,slow=4.0,SNR=5.7						
KEST				LR	LR	14 22 24.1	
	comp=Z,23µm,18.0s,baz=42,slow=39						
	comp=Z,41nm,1.1s						
KEST	**Kesra**	**92.83**	**321**	P	**P**	**13 35 31.2**	**-1.6**
	SNR=15						
FURI	**Furi**	**92.83**	**284**	IAMs_20	IAMs_20	14 22 45.2	
	comp=Z,14µm,20.0s						
HBAR	**Harrisburg**	**92.84**	**39**	IAMs_20	IAMs_20	14 18 11.2	
	comp=Z,10µm,20.0s						
L56A	**Greenwood**	**92.84**	**27**	IAmb	IAmb	13 35 43.0	
	comp=Z,315nm,1.1s						
L56A				IAMs_20	IAMs_20	14 22 54.4	
	comp=Z,12µm,19.0s						
H06S1	**SOCORRO T**	**92.88**	**63**	P	**P**	**13 35 34.9**	**+1.8**
	SNR=10						
GLAT	**Glass**	**92.93**	**37**	IAMs_20	IAMs_20	14 20 16.5	
	comp=Z,16µm,20.0s						
LNXT	**Lenox**	**92.97**	**38**	IAMs_20	IAMs_20	14 23 29.5	
	comp=Z,13µm,18.0s						
O52A	**Adamsville**	**93.00**	**30**	IAmb	IAmb	13 35 36.2	
	comp=Z,189nm,1.5s						
ACCN	**Adirondack Com**	**93.02**	**24**	IAmb	IAmb	13 35 43.9	
	comp=Z,267nm,1.2s						
ACCN				IAMs_20	IAMs_20	14 21 09.9	
	comp=Z,15µm,20.0s						
CMAH	**Djebel Manchou**	**93.03**	**323**	P	**P**	**13 35 33.2**	**-0.5**
P51A	**Williamsport**	**93.04**	**32**	IAMs_20	IAMs_20	14 22 16.9	
	comp=Z,15µm,19.0s						
UTMT	**University of**	**93.08**	**37**	IAMs_20	IAMs_20	14 18 29.1	
	comp=Z,15µm,21.0s						
WLAR	**White Oak Lake**	**93.08**	**42**	IAmb	IAmb	13 35 44.5	
	comp=Z,293nm,1.1s						
WLAR				IAMs_20	IAMs_20	14 18 39.6	
	comp=Z,15µm,21.0s						
WVL	**Waterville**	**93.12**	**20**	IAmb	IAmb	13 35 37.7	
	comp=Z,587nm,1.9s						
WVL				IAMs_20	IAMs_20	14 19 47.3	
	comp=Z,13µm,19.0s						
O53A	**New Philadelph**	**93.13**	**30**	IAmb	IAmb	13 35 38.9	
	comp=Z,201nm,1.4s						
O53A				IAMs_20	IAMs_20	14 18 18.1	
	comp=Z,11µm,20.0s						
R49A	**Shelbyville**	**93.15**	**34**	IAMs_20	IAMs_20	14 17 04.0	
	comp=Z,12µm,21.0s						
HNH	**Hanover**	**93.15**	**22**	IAmb	IAmb	13 35 38.4	
	comp=Z,478nm,1.9s						
HALT	**Halls**	**93.20**	**38**	IAMs_20	IAMs_20	14 24 54.5	
	comp=Z,11µm,18.0s						
ABSA	**Djebel Ababsia**	**93.29**	**323**	P	**P**	**13 35 34.3**	**-0.6**
P52A	**Corning**	**93.29**	**31**	IAmb	IAmb	13 35 38.1	
	comp=Z,346nm,1.9s						
Q51A	**Peebles**	**93.31**	**32**	IAmb	IAmb	13 35 45.2	
	comp=Z,174nm,1.2s						
BINY	**Binghamton**	**93.33**	**26**	IAmb	IAmb	13 35 45.4	
	comp=Z,319nm,1.2s						
BINY				IAMs_20	IAMs_20	14 22 32.2	
	comp=Z,15µm,19.0s						
I63A	**Otisfield**	**93.33**	**21**	IAmb	IAmb	13 35 46.0	
	comp=Z,316nm,1.1s						
I63A				IAMs_20	IAMs_20	14 20 08.1	
	comp=Z,16µm,20.0s						
T47A	**Sharon Grove**	**93.37**	**36**	IAMs_20	IAMs_20	14 19 04.8	
	comp=Z,12µm,20.0s						
J61A	**Chester**	**93.40**	**23**	IAmb	IAmb	13 35 39.4	
	comp=Z,487nm,1.8s						
R50A	**Paris**	**93.52**	**33**	IAmb	IAmb	13 35 39.6	
	comp=Z,332nm,1.8s						
R50A				IAMs_20	IAMs_20	14 21 58.8	
	comp=Z,15µm,19.0s						
CKFL	**Kef-Lekhel**	**93.54**	**324**	P	**P**	**13 35 35.9**	**-0.2**
Z41A	**Richland Creek**	**93.57**	**42**	IAMs_20	IAMs_20	14 22 33.7	
	comp=Z,12µm,18.0s						
CCAR	**Cane Creek**	**93.58**	**41**	IAMs_20	IAMs_20	14 23 17.0	
	comp=Z,14µm,19.0s						
L59A	**Walton**	**93.65**	**25**	IAmb	IAmb	13 35 46.8	
	comp=Z,352nm,1.1s						
L59A				IAMs_20	IAMs_20	14 22 57.7	
	comp=Z,15µm,19.0s						
EIBI	**Ibiza**	**93.70**	**329**	P	**P**	**13 35 36.5**	**-0.1**
M57A	**Sunshine Farm,**	**93.70**	**27**	IAmb	IAmb	13 35 47.3	
	comp=Z,318nm,1.1s						
M57A				IAMs_20	IAMs_20	14 23 29.1	
	comp=Z,14µm,20.0s						
WVT	**Waverly**	**93.73**	**37**	P	**P**	**13 35 35.1**	**-1.7**
WVT				IAmb	IAmb	13 35 40.7	
	comp=Z,436nm,1.9s						
WVT	**Waverly**	**93.73**	**37**	IAMs_20	IAMs_20	14 18 57.6	
	comp=Z,14µm,21.0s						
WVT	**Waverly**	**93.73**	**37**	P	**P**	**13 35 35.1**	**-1.7**
WVT				pmax	pmax		
	comp=Z,436nm,1.9s						
WVT				MLR	MLR		
	comp=Z,14µm,21.0s						
NATX	**Nacogdoches**	**93.75**	**44**	IAMs_20	IAMs_20	14 21 10.5	
	comp=Z,13µm,20.0s						
Q52A	**Bidwell**	**93.81**	**31**	IAMs_20	IAMs_20	14 22 57.2	
	comp=Z,14µm,19.0s						
DFRA	**Djebel Bou Aff**	**93.81**	**324**	P	**P**	**13 35 37.6**	**+0.3**
KSPA	**Keystone Colle**	**93.97**	**26**	IAmb	IAmb	13 35 48.2	
	comp=Z,195nm,1.1s						
SSPA	**Standing Stone**	**94.05**	**28**	P	**P**	**13 35 36.1**	**-2.1**
SSPA				IAmb	IAmb	13 35 48.8	
	comp=Z,192nm,1.3s						
SSPA	**Standing Stone**	**94.05**	**28**	IAMs_20	IAMs_20	14 23 11.3	
	comp=Z,13µm,19.0s						
ECAL	**Calabor**	**94.11**	**335**	P	**P**	**13 35 38.5**	**-0.1**
ECHE	**Chera**	**94.13**	**330**	P	**P**	**13 35 38.5**	**-0.1**
MCWV	**Mont Chateau**	**94.17**	**29**	IAMs_20	IAMs_20	14 19 44.6	
	comp=Z,15µm,21.0s						
735A	**Kenedy**	**94.18**	**48**	IAMs_20	IAMs_20	14 19 44.3	
	comp=Z,9µm,20.0s						
GBN	**Guysborough**	**94.24**	**15**	IAMs_20	IAMs_20	14 22 12.2	
	comp=Z,14µm,18.0s						
N58A	**Sunbury**	**94.28**	**27**	IAmb	IAmb	13 35 43.1	
	comp=Z,519nm,1.9s						
OXF	**Oxford**	**94.29**	**39**	IAmb	IAmb	13 35 49.3	
	comp=Z,217nm,1.1s						
OXF				IAMs_20	IAMs_20	14 23 44.5	
	comp=Z,11µm,19.0s						
T50A	**Nancy**	**94.36**	**34**	IAmb	IAmb	13 35 43.4	
	comp=Z,430nm,1.8s						
U49A	**Red Boiling Sp**	**94.36**	**35**	IAmb	IAmb	13 35 43.3	
	comp=Z,487nm,1.9s						
U49A				IAMs_20	IAMs_20	14 22 02.1	
	comp=Z,13µm,19.0s						
UCM	**Universidad Co**	**94.36**	**332**	P	**P**	**13 35 39.5**	**-0.2**
Q54A	**Coxs Mills**	**94.36**	**30**	IAmb	IAmb	13 35 50.2	
	comp=Z,219nm,1.2s						
Q54A				IAMs_20	IAMs_20	14 22 26.9	
	comp=Z,14µm,18.0s						
S51A	**Beattyville**	**94.37**	**33**	IAMs_20	IAMs_20	14 21 56.3	
	comp=Z,13µm,18.0s						
CLTN	**Cedars of Leba**	**94.46**	**36**	IAMs_20	IAMs_20	14 22 00.7	
	comp=Z,8µm,18.0s						
HRV	**Adam Dziewonsk**	**94.47**	**22**	P	**P**	**13 35 38.5**	**-1.6**
HRV				IAmb	IAmb	13 35 50.9	
	comp=Z,169nm,1.1s						
HRV	**Adam Dziewonsk**	**94.47**	**22**	P	**P**	**13 35 38.5**	**-1.6**
HRV				pmax	pmax		
	comp=Z,169nm,1.1s						
HRV				MLR	MLR		
	comp=Z,26µm,20.0s						
HKT	**Hockley**	**94.48**	**46**	IAMs_20	IAMs_20	14 21 37.7	
	comp=Z,16µm,20.0s						
V48A	**Smith Brothers**	**94.52**	**36**	IAMs_20	IAMs_20	14 19 41.4	
	comp=Z,15µm,20.0s						
HAL	**Halifax**	**94.54**	**16**	IAMs_20	IAMs_20	14 21 15.3	
	comp=Z,14µm,21.0s						
PLAL	**Pickwick Lake**	**94.55**	**37**	IAMs_20	IAMs_20	14 21 24.4	
	comp=Z,13µm,20.0s						
KSCT	**Kent School, K**	**94.58**	**24**	IAmb	IAmb	13 35 50.8	
	comp=Z,330nm,1.1s						
PGAV	**Gavieira, Arco**	**94.58**	**336**	*e*P	**P**	**13 35 41.5**	**+0.8**
PGAV				*e*PP	**PP**	**13 39 31.2**	**+3.5**
PGAV				*e*SKSac	**SKSac**	**13 46 18.8**	**+3.4**
PGAV				*e*S	**ScS**	**13 46 55.9**	**+1.9**
PGAV				*e*SS	SS	13 53 29.0	+15
PGAV				*e*LQ	LQ	14 01 25.8	
PGAV				*e*LR	LR	14 08 12.2	
PGAV				*i* AMs_20		14 24 11.0	
	comp=Z,20µm,18.0s						
WES	**Weston**	**94.65**	**22**	IAmb	IAmb	13 35 51.5	
	comp=Z,177nm,1.1s						
143A	**Socs Landing,**	**94.73**	**41**	IAMs_20	IAMs_20	14 22 39.4	
	comp=Z,12µm,19.0s						
PCAB	**Cabril**	**94.74**	**336**	*e*P	**P**	**13 35 42.2**	**+0.8**
PCAB				*e*PP	PP	13 39 38.3	+10
Y45A	**Yeager Farm, C**	**94.74**	**39**	IAmb	IAmb	13 35 52.0	
	comp=Z,185nm,1.0s						
Y45A				IAMs_20	IAMs_20	14 20 10.5	
	comp=Z,12µm,20.0s						
MVO	**Moncorvo**	**94.91**	**335**	*e*P	**P**	**13 35 42.7**	**+0.5**
MVO				*e*PP	**PP**	**13 39 29.1**	**-1.1**
MVO				*e*SKSac	**SKSac**	**13 46 19.4**	**+2.3**
MVO				*e*S	**S**	**13 46 53.3**	**-2.3**
MVO				*e*SS	**SS**	**13 53 28.9**	**+10**
MVO				*e*LQ	LQ	14 05 01.3	
MVO				*e*LR	LR	14 08 06.0	
MVO				*i* AMs_20		14 23 31.8	
	comp=Z,28µm,18.0s						
UCCT	**U. Connecticut**	**94.91**	**23**	IAmb	IAmb	13 35 52.5	
	comp=Z,155nm,1.1s						
LUPA	**Lehigh Univers**	**94.97**	**26**	IAmb	IAmb	13 35 46.1	
	comp=Z,340nm,2.0s						
LUPA				IAMs_20	IAMs_20	14 23 32.5	
	comp=Z,13µm,19.0s						
POLO	**Lamas de Olo**	**94.97**	**336**	*e*P	**P**	**13 35 42.8**	**+0.2**
POLO				*e*PP	**PP**	**13 39 34.4**	**+3.7**
PAL	**Palisades**	**95.09**	**25**	IAmb	IAmb	13 35 46.8	
	comp=Z,335nm,1.8s						
MVL	**Millersville**	**95.16**	**27**	IAMs_20	IAMs_20	14 23 55.7	
	comp=Z,14µm,20.0s						
BRNJ	**Basking Ridge**	**95.16**	**25**	IAmb	IAmb	13 35 53.8	
	comp=Z,148nm,1.1s						
ESDC	**Sonseca Array**	**95.18**	**333**	P	**P**	**13 35 42.0**	**-1.5**
ESDC	**Sonseca Array**	**95.18**	**333**	P	**P**	**13 35 43.6**	**+0.1**
	comp=Z,2.9nm,0.7s,baz=33,slow=2.4,SNR=18						
ESDC				PP	**PP**	**13 39 36.8**	**+4.5**
	comp=Z,11nm,1.0s,baz=23,slow=7.7,SNR=6.1						
ESDC				PKKPbc	**PKKPbc**	**13 52 39.2**	**+2.8**
	comp=Z,1.2nm,0.8s,baz=266,slow=3.6,SNR=4.1						
ESDC				LR	LR	14 23 02.4	
	comp=Z,32µm,18.2s,baz=17,slow=38						
	comp=Z,2.9nm,0.7s						
S54A	**Dingess, Beckl**	**95.19**	**31**	IAMs_20	IAMs_20	14 24 08.1	
	comp=Z,14µm,18.0s						
L64A	**Middleborough**	**95.20**	**22**	IAmb	IAmb	13 35 53.9	
	comp=Z,203nm,1.2s						
N62A	**Caumsett State**	**95.30**	**24**	IAmb	IAmb	13 35 54.0	
	comp=Z,210nm,1.2s						
TZTN	**Tazewell**	**95.32**	**33**	IAMs_20	IAMs_20	14 19 07.3	
	comp=Z,10µm,20.0s						
M63A	**Gales Ferry**	**95.32**	**23**	IAmb	IAmb	13 35 54.0	
	comp=Z,130nm,1.0s						
PAB	**San Pablo**	**95.43**	**333**	P	**P**	**13 35 43.4**	**-1.3**
PAB	**San Pablo**	**95.43**	**333**	P	**P**	**13 35 43.4**	**-1.3**
PAB				pmax	pmax		
	comp=Z,50nm,1.7s						
X48A	**Hartselle**	**95.47**	**37**	IAMs_20	IAMs_20	14 20 00.7	
	comp=Z,14µm,20.0s						
WUPA	**West Chester U**	**95.48**	**26**	IAMs_20	IAMs_20	14 24 23.1	
	comp=Z,11µm,18.0s						
PVIS	**Viseu**	**95.59**	**336**	*e*P	**P**	**13 35 44.8**	**-0.5**
PVIS				*e*PP	**PP**	**13 39 35.9**	**+0.3**
M65A	**Busby, Falmout**	**95.60**	**22**	P	**P**	**13 35 45.5**	**+0.2**
	baz=337						
M65A				S	**S**	**13 46 58.2**	**-3.1**
	baz=337						
W50A	**Signal Mountai**	**95.66**	**35**	IAmb	IAmb	13 35 49.2	
	comp=Z,219nm,1.9s						
W50A				IAMs_20	IAMs_20	14 21 04.5	
	comp=Z,12µm,20.0s						
ZAIG	**Zacatecas**	**95.73**	**55**	IAMs_20	IAMs_20	14 13 11.7	
	comp=Z,10µm,19.0s						
MTE	**Manteigas**	**95.77**	**335**	*e*P	**P**	**13 35 47.0**	**+0.8**
MTE				*e*PP	**PP**	**13 39 38.0**	**+1.1**
MTE				*e*SKSac	**SKSac**	**13 46 21.2**	**-0.5**
MTE				*e*S	**S**	**13 47 00.9**	**-2.2**
MTE				*e*SS	SS	13 53 42.0	+11
MTE				*e*LQ	LQ	14 05 18.2	
MTE				*e*LR	LR	14 08 35.7	
MTE				*i* AMs_20		14 24 16.4	
	comp=Z,22µm,18.0s						
CPCT	**Cooper Cave**	**95.81**	**35**	IAmb	IAmb	13 35 49.9	
	comp=Z,258nm,1.9s						
CPCT				IAMs_20	IAMs_20	14 19 30.4	
	comp=Z,12µm,21.0s						
CART	**Cartagena**	**95.88**	**329**	P	**P**	**13 35 45.6**	**-1.0**
TKL	**Tuckaleechee C**	**95.96**	**34**	LR	LR	14 23 22.8	
	comp=Z,14µm,18.6s,baz=336,slow=38						
146A	**Union**	**95.97**	**39**	IAMs_20	IAMs_20	14 21 02.1	
	comp=Z,9µm,20.0s						
P61A	**Hammonton**	**95.99**	**26**	IAMs_20	IAMs_20	14 23 55.6	
	comp=Z,14µm,19.0s						
Z47A	**Carrollton**	**96.00**	**38**	IAMs_20	IAMs_20	14 27 35.9	
	comp=Z,10µm,18.0s						
FPAL	**Fort Paine**	**96.07**	**36**	IAMs_20	IAMs_20	14 22 52.4	
	comp=Z,10µm,19.0s						
U54A	**Nelsons Funny**	**96.07**	**32**	IAmb	IAmb	13 35 51.1	
	comp=Z,200nm,1.8s						
COI	**Coimbra**	**96.22**	**336**	*e*P	**P**	**13 35 46.8**	**-1.4**
COI				*e*PP	**PP**	**13 39 41.6**	**+1.3**
PCBR	**Castelo Branco**	**96.25**	**335**	*e*P	**P**	**13 35 47.5**	**-0.8**
PCBR				*e*PP	**PP**	**13 39 45.5**	**+5.0**
Y49A	**Blount Mountai**	**96.26**	**37**	IAmb	IAmb	13 35 51.5	
	comp=Z,261nm,2.0s						
Y49A				IAMs_20	IAMs_20	14 20 24.5	
	comp=Z,15µm,21.0s						
V53A	**Saluda**	**96.37**	**33**	IAMs_20	IAMs_20	14 18 19.3	
	comp=Z,10µm,22.0s						
PCAS	**Casmilo, Conde**	**96.39**	**336**	*e*P	**P**	**13 35 49.1**	**+0.2**
PCAS				*e*PP	**PP**	**13 39 44.3**	**+2.7**
X51A	**Calhoun**	**96.39**	**35**	IAmb	IAmb	13 35 52.5	
	comp=Z,194nm,1.8s						
X51A				IAMs_20	IAMs_20	14 22 17.9	
	comp=Z,11µm,19.0s						
PMRV	**Marv??o**	**96.59**	**335**	*e*P	**P**	**13 35 49.5**	**-0.3**
PMRV				*e*PP	**PP**	**13 39 45.5**	**+2.3**
PMRV				*e*SKSac	**SKSac**	**13 46 27.1**	**+1.1**
PMRV				*e*S	**ScS**	**13 47 10.9**	**+0.2**
PMRV				*e*SS	SS	13 53 58.5	+16
PMRV				*e*LQ	LQ	14 01 40.1	
PMRV				*e*LR	LR	14 10 31.1	
PMRV				*i* AMs_20		14 24 44.0	
	comp=Z,31µm,16.0s						
PSARD	**Sardoal**	**96.69**	**335**	*e*P	**P**	**13 35 49.3**	**-1.0**
PSARD				*e*PP	**PP**	**13 39 43.4**	**-0.6**
T57A	**Hurt**	**96.70**	**30**	IAmb	IAmb	13 35 53.8	
	comp=Z,176nm,1.8s						
EADA	**Adamuz**	**96.73**	**332**	P	**P**	**13 35 50.5**	**0.0**
U56A	**King**	**96.81**	**31**	IAmb	IAmb	13 35 54.5	
	comp=Z,194nm,2.0s						
U56A				IAMs_20	IAMs_20	14 25 15.8	
	comp=Z,14µm,19.0s						
ENIJ	**Nijar**	**96.89**	**330**	P	**P**	**13 35 50.1**	**-1.1**
BG3	**Lake Jocassee**	**96.89**	**34**	IAmb	IAmb	13 35 55.1	
	comp=Z,249nm,1.8s						
V55A	**Taylorsville**	**96.90**	**32**	IAMs_20	IAMs_20	14 25 19.0	
	comp=Z,13µm,20.0s						
PSBE	**So Bento**	**96.97**	**336**	*e*P	**P**	**13 35 50.6**	**-1.0**
PSBE				*e*PP	**PP**	**13 39 48.0**	**+1.9**
R61A	**Willards**	**97.00**	**27**	IAMs_20	IAMs_20	14 24 21.4	
	comp=Z,14µm,19.0s						
EBAD	**Badajoz**	**97.07**	**334**	P	**P**	**13 35 51.8**	**-0.3**
ECAB	**El Cabril**	**97.12**	**333**	P	Pdif	13 35 52.4	0.0
EQTA	**Presa de Quent**	**97.16**	**331**	P	**P**	**13 35 51.6**	**-0.9**
PESTR	**Estremoz**	**97.16**	**335**	P	**P**	**13 35 52.5**	**0.0**
PESTR	**Estremoz**	**97.16**	**335**	*e*P	Pdif	13 35 52.7	+0.2
PESTR				*e*PP	**PP**	**13 39 46.9**	**-0.7**
PMTG	**Montargil**	**97.19**	**335**	*e*P	**P**	**13 35 52.0**	**-0.5**
PMTG				*e*PP	**PP**	**13 39 44.0**	**-3.9**
Y52A	**Lilburn**	**97.34**	**35**	IAmb	IAmb	13 35 57.1	
	comp=Z,178nm,1.9s						
Y52A				IAMs_20	IAMs_20	14 23 24.0	
	comp=Z,12µm,19.0s						
T59A	**Double "B" Far**	**97.39**	**29**	IAmb	IAmb	13 36 04.5	
	comp=Z,138nm,1.7s						
KMSC	**Kings Mountain**	**97.45**	**33**	IAmb	IAmb	13 35 57.1	
	comp=Z,154nm,1.8s						
S61A	**Accomac**	**97.46**	**27**	IAMs_20	IAMs_20	14 25 18.6	
	comp=Z,11µm,19.0s						
EGOR	**Sierra Gorda,**	**97.50**	**331**	P	**P**	**13 35 53.4**	**-0.7**
PAULI	**Pauline**	**97.52**	**33**	IAmb	IAmb	13 35 57.4	
	comp=Z,167nm,1.9s						
ELGU	**Los Guajares,**	**97.53**	**331**	P	**P**	**13 35 53.4**	**-0.8**
PBAR	**Barrancos**	**97.60**	**334**	P	**P**	**13 35 54.0**	**-0.4**
PBAR	**Barrancos**	**97.60**	**334**	*e*P	**P**	**13 35 52.3**	**-2.1**
PBAR				*e*PP	**PP**	**13 39 52.2**	**+1.2**
EVO	**Evora**	**97.61**	**335**	P	**P**	**13 35 53.9**	**-0.6**
EVO	**Evora**	**97.61**	**335**	*e*P	**P**	**13 35 52.9**	**-1.6**
EVO				*e*PP	**PP**	**13 39 53.8**	**+2.8**
PMAFR	**Mafra**	**97.64**	**336**	P	Pdif	13 35 55.2	+0.6
V58A	**Windy Hill, Pi**	**97.81**	**31**	IAMs_20	IAMs_20	14 24 23.0	
	comp=Z,13µm,19.0s						
LIS	**Lisbon**	**97.81**	**336**	*e*P	**P**	**13 35 53.9**	**-1.4**
LIS				*e*PP	**PP**	**13 39 52.2**	**-0.3**
LIS				*e*SKSac	**SKSac**	**13 46 31.3**	**-0.9**
LIS				IAMs_20	IAMs_20	14 23 47.5	
	comp=N,42µm,18.2s						
HODGE	**Hodges**	**97.83**	**34**	IAMs_20	IAMs_20	14 20 34.9	
	comp=Z,13µm,20.0s						
EMIN	**Mina Concepcio**	**97.84**	**334**	P	**P**	**13 35 55.2**	**-0.3**
SBV	**Sambava**	**97.92**	**259**	P	Pdif	13 35 57.9	+1.8
EMAL	**Malaga-Limoner**	**97.92**	**331**	P	**P**	**13 35 54.8**	**-1.1**
GOGA	**Godfrey**	**97.99**	**35**	IAMs_20	IAMs_20	14 18 26.2	
	comp=Z,11µm,21.0s						
GOGA	**Godfrey**	**97.99**	**35**	IAmb	IAmb	13 35 60.0	
	comp=Z,180nm,1.8s						
W57A	**Gilead**	**98.00**	**32**	IAMs_20	IAMs_20	14 24 02.3	
	comp=Z,14µm,19.0s						
PBEJ	**Beja**	**98.02**	**335**	*e*P	Pdif	13 35 58.0	+1.7
PBEJ				*e*PP	**PP**	**13 39 57.2**	**+3.1**
EALB	**Alboran**	**98.11**	**330**	P	**P**	**13 35 56.3**	**-0.4**
EMIJ	**Mijas**	**98.22**	**332**	P	**P**	**13 35 56.5**	**-0.8**
MESJ	**Messejana**	**98.30**	**335**	*e*P	**P**	**13 35 56.2**	**-1.4**
MESJ				*e*PP	**PP**	**13 39 55.9**	**-0.5**
MESJ				*e*SKSac	**SKSac**	**13 46 33.7**	**-1.1**
MESJ				IAMs_20	IAMs_20	14 25 25.8	
	comp=Z,34µm,15.7s						
MESJ	**Messejana**	**98.30**	**335**	*e*P	Pdif	13 35 58.1	+0.5
MESJ				*e*PP	**PP**	**13 39 58.9**	**+2.5**
EGRO	**El Granado**	**98.33**	**334**	P	**P**	**13 35 57.4**	**-0.3**
ESPR	**Espera**	**98.35**	**333**	P	Pdif	13 35 58.0	+0.2
PCVE	**Castro Verde**	**98.43**	**334**	P	Pdif	13 35 59.0	+0.8
PCVE	**Castro Verde**	**98.43**	**334**	*e*P	**P**	**13 35 56.9**	**-1.3**
PCVE				*e*PP	**PP**	**13 39 58.6**	**+1.3**
PVAQ	**Vaqueiros**	**98.53**	**334**	P	**P**	**13 35 58.3**	**-0.3**
PVAQ	**Vaqueiros**	**98.53**	**334**	*e*P	**P**	**13 35 58.3**	**-0.3**

PVAQ				*e*PP	PP	13 39 60.0	+1.9
PVAQ				*e*LR	LR	14 10 41.0	
PVAQ				*i* AMs_20		14 25 36.5	
	comp=Z,36µm,18.0s						
W59A	Clinton	98.62	31	IAMs_20	IAMs_20	14 27 35.5	
	comp=Z,11µm,20.0s						
WMELI	Melilla	98.62	330	P	P	13 35 58.5	-0.5
EMLI	Melilla	98.64	330	P	P	13 35 57.8	-1.2
PTEO	Sao Teotonio	98.74	335	*e*P	P	13 35 58.9	-0.6
PTEO				*e*PP	PP	13 40 01.5	+1.9
V61A	Roper	98.80	29	IAMs_20	IAMs_20	14 23 26.2	
	comp=Z,11µm,21.0s						
154A	Montrose	98.82	35	IAMs_20	IAMs_20	14 26 09.2	
	comp=Z,12µm,18.0s						
MOIG	Morelia	98.83	56	IAMs_20	IAMs_20	14 27 20.1	
	comp=Z,9µm,19.0s						
SFS	San Fernando	98.84	333	P	P	13 35 59.3	-0.7
LODK	Lodwar	98.84	282	IAMs_20	IAMs_20	14 29 17.4	
	comp=Z,8µm,18.0s						
LODK	Lodwar	98.84	282	P	P	13 35 58.6	-1.9
	SNR=15						
352A	Blakely	98.92	37	IAMs_20	IAMs_20	14 22 09.4	
	comp=Z,12µm,20.0s						
MORF	Marmelete	98.93	335	*e*P	P	13 35 58.9	-1.5
MORF				*e*PP	PP	13 40 00.7	-0.5
MORF				*e*SKSac	SKSac	13 46 37.2	-0.9
MORF				IAMs_20	IAMs_20	14 23 53.2	
	comp=E,36µm,15.0s						
MORF	Marmelete	98.93	335	*e*P	Pdif	13 36 02.6	+2.1
MORF	Marmelete	98.93	335	*e*P	Pdif	13 36 01.5	+1.0
ECEU	Ceuta	99.04	332	P	Pdif	13 36 01.2	+0.2
PFVI	Vila Bisbo	99.15	335	P	Pdif	13 36 00.6	-0.8
PFVI	Vila Bisbo	99.15	335	*e*P	Pdif	13 36 02.3	+1.0
PFVI				*e*PP	PP	13 40 04.8	+2.0
Y58A	Scranton	99.22	32	IAMs_20	IAMs_20	14 24 38.4	
	comp=Z,14µm,19.0s						
451A	Vernon	99.25	38	IAMs_20	IAMs_20	14 25 35.7	
	comp=Z,11µm,20.0s						
Y60A	Bolivia	99.72	31	IAMs_20	IAMs_20	14 27 33.8	
	comp=Z,11µm,19.0s						
553A	Crawfordville	100.23	38	IAMs_20	IAMs_20	14 22 16.8	
	comp=Z,10µm,20.0s						
KMBO	Kilima Mbogo	100.25	277	*i* P	Pdif	13 36 07.6	+0.6
	SNR=9.1						
KIBK	Kibwezi	100.38	275	P	Pdif	13 36 07.0	-0.3
KIBK	Kibwezi	100.38	275	P	Pdif	13 36 07.9	+0.6
UNM	Universidad Na	100.39	55	IAMs_20	IAMs_20	14 16 07.2	
	comp=Z,9µm,19.0s						
456A	Hilliard	100.91	36	IAMs_20	IAMs_20	14 23 50.5	
	comp=Z,11µm,20.0s						
IFR	Ifrane	101.06	330	P	Pdif	13 36 10.8	+0.6
RTC	Rabat Centre	101.29	332	P	Pdif	13 36 11.8	+0.8
AVE	Averroes	102.11	332	P	Pdif	13 36 14.5	-0.2
ABPO	Ambohimpanom	103.32	256	IAMs_20	IAMs_20	14 20 57.8	
	comp=Z,8µm,21.0s						
TIO	Tiouine	104.18	331	P	Pdif	13 36 24.4	+0.3
TAM	Tamanrasset	105.20	316	IAMs_20	IAMs_20	14 30 05.0	
	comp=Z,11µm,19.0s						
VOI	Vohitsoka	105.34	254	IAMs_20	IAMs_20	14 26 12.5	
	comp=Z,9µm,18.0s						
PTCN	Pitcairn Islan	105.51	110	IAMs_20	IAMs_20	14 19 51.3	
	comp=Z,11µm,19.0s						
061Z	Ochoppi	105.54	37	IAMs_20	IAMs_20	14 24 58.3	
	comp=Z,12µm,21.0s						
PMOZ	Porto Moniz, M	105.68	340	*e*LR	LR	14 13 12.4	
PMOZ				*i* AMs_20		14 28 13.6	
	comp=Z,11µm,18.0s						
BBSR	BB Station	105.87	21	IAMs_20	IAMs_20	14 30 00.0	
	comp=Z,8µm,19.0s						
TEIG	Tepich	106.32	46	IAMs_20	IAMs_20	14 30 22.6	
	comp=Z,8µm,20.0s						
FOMA	Nahampoana Res	106.97	251	IAMs_20	IAMs_20	14 26 04.7	
	comp=Z,8µm,18.0s						
SOR	Soroa	107.08	41	IAMs_20	IAMs_20	14 32 21.4	
	comp=Z,9µm,19.0s						
CCIG	Comitan	107.10	52	IAMs_20	IAMs_20	14 21 18.7	
	comp=Z,9µm,22.0s						
CAMR	Camarioca	107.68	39	IAMs_20	IAMs_20	14 28 40.1	
	comp=Z,18µm,20.0s						
PETF	Flores	107.99	50	IAMs_20	IAMs_20	14 35 41.1	
	comp=Z,7µm,18.0s						
MACI	Morro de la Ar	109.78	338	IAMs_20	IAMs_20	14 30 10.9	
	comp=Z,9µm,20.0s						
ESQI	Esquipulas	110.13	51	IAMs_20	IAMs_20	14 34 02.0	
	comp=Z,7µm,19.0s						
CHIV	Chivirico	112.69	37	IAMs_20	IAMs_20	14 35 02.8	
	comp=Z,16µm,19.0s						
NMDO	Nuevo Mundo	112.84	35	IAMs_20	IAMs_20	14 34 00.7	
	comp=Z,11µm,18.0s						
GTBY	Guantanamo Bay	113.34	36	IAMs_20	IAMs_20	14 31 24.8	
	comp=Z,8µm,20.0s						
MTDJ	Mount Denham	113.66	39	IAMs_20	IAMs_20	14 30 12.5	
	comp=Z,8µm,21.0s						
BOAB	BOACO BROADBAN	113.99	49	P	Pdif	13 37 08.9	+1.1
SDDR	Presa de Saban	115.85	33	*e*P	PKiKP	13 40 48.9	-14
LSZ	Lusaka	115.92	271	IAMs_20	IAMs_20	14 32 49.6	
	comp=Z,9µm,19.0s						
VNDA	Vanda	116.69	175	PKP	PKiKP	13 41 03.2	+0.4
	comp=Z,6.1nm,0.6s,baz=328,slow=5.1,SNR=33						
VNDA				PP	PP	13 42 14.9	+3.4
	comp=Z,16nm,1.1s,baz=322,slow=12,SNR=4.1						
VNDA				PKKPbc	PKKPbc	13 51 36.4	+4.9
	comp=Z,7.6nm,1.1s,baz=189,slow=4.9,SNR=6.1						
AGPR	Aguadilla, PR	117.98	29	IAMs_20	IAMs_20	14 38 22.2	
	comp=Z,6µm,18.0s						
CRPR	Cabo Rojo, PR	118.40	29	IAMs_20	IAMs_20	14 39 16.4	
	comp=Z,7µm,19.0s						
BRU2	Volcan	118.65	49	IAMs_20	IAMs_20	14 41 31.7	
	comp=Z,7µm,19.0s						
SJG	San Juan	118.66	28	IAMs_20	IAMs_20	14 36 58.3	
	comp=Z,9µm,20.0s						
PDPR	Patillas Dam,	118.80	28	IAMs_20	IAMs_20	14 36 58.7	
	comp=Z,7µm,19.0s						
IGPR	InterUniversit	118.81	28	IAMs_20	IAMs_20	14 37 09.2	
	comp=Z,7µm,19.0s						
SMRT	St. Maarten	119.79	25	IAMs_20	IAMs_20	14 34 58.9	
	comp=Z,7µm,21.0s						
BROLN	Tlhalogang	119.87	266	*i* P	PKPdf	13 41 08.7	-2.0
SABA	Saba	120.14	25	IAMs_20	IAMs_20	14 40 19.0	
	comp=Z,8µm,19.0s						
MAW	Mawson	120.31	206	PKP	PKiKP	13 41 10.0	0.0
	comp=Z,24nm,0.9s,baz=124,slow=2.9,SNR=27						
MAW				PKKPbc	PKKPbc	13 51 18.6	+0.5
	comp=Z,11nm,0.8s,baz=247,slow=5.3,SNR=15						
MAW				SKKPbc	SKKPbc	13 55 09.5	+1.6
	comp=Z,20nm,1.2s,baz=184,slow=1.3,SNR=5.4						
MAW	Mawson	120.31	206	PKIKP	PKiKP	13 41 10.0	0.0
SEUS	St. Eustatius	120.34	25	IAMs_20	IAMs_20	14 37 33.5	
	comp=Z,7µm,21.0s						
PAYG	Puerto Ayora	120.88	63	IAMs_20	IAMs_20	14 38 05.9	
	comp=Z,7µm,18.0s						
GDHS	Morne Mazeau,	121.88	24	IAMs_20	IAMs_20	14 39 08.8	
	comp=Z,7µm,20.0s						
SJCC	San Jacinto, C	121.92	41	P	PKPdf	13 41 14.7	-0.2
CRJC	Cerrejon, Guaj	122.11	38	P	PKPdf	13 41 14.3	-1.0
CBE	Ff, Capester	122.12	24	IAMs_20	IAMs_20	14 35 23.6	
	comp=Z,7µm,21.0s						
LPHEP	Lephephe	122.24	265	*i* P	PKPdf	13 41 14.1	-1.1
TDBA	Terre de Bas,	122.32	24	IAMs_20	IAMs_20	14 39 29.6	
	comp=Z,8µm,21.0s						
APAC	Apartado, Choc	122.85	44	P	PKPdf	13 41 16.2	-0.4
FDF	Fort de France	123.52	24	IAMs_20	IAMs_20	14 33 42.6	
	comp=Z,6µm,21.0s						
UREC	San Jos de Ur	123.54	43	P	PKPdf	13 41 17.6	-0.3
MPOM	Morne Pois Mar	123.88	24	IAMs_20	IAMs_20	14 36 04.2	
	comp=Z,7µm,22.0s						
DBIC	Dimbokro	124.08	316	PKP	PKPdf	13 41 18.9	-0.1
	comp=Z,20nm,0.7s,baz=80,slow=1.8,SNR=22						
DBIC				PP	PP	13 43 03.4	+1.1
	comp=Z,34nm,1.0s,baz=55,slow=8.4,SNR=5.0						
DBIC				PKKPbc	PKKPab	13 51 06.7	+1.1
	comp=Z,11nm,1.0s,baz=202,slow=6.0,SNR=5.0						
DBIC	Dimbokro	124.08	316	PKP	PKiKP	13 41 20.0	+0.8
ZARC	Zaragoza, Cauc	124.12	42	P	PKiKP	13 41 19.2	-0.1
OCAC	Ocana	124.28	40	P	PKPdf	13 41 19.2	-0.3
SKOMA	Sekoma	124.34	265	*i* P	PKPdf	13 41 18.7	-0.5
SACV	Santiago Islan	124.38	340	IAMs_20	IAMs_20	14 39 24.5	
	comp=Z,9µm,19.0s						
GRTLG	Ghanzi	124.80	269	*i* P	PKPdf	13 41 19.6	-0.6
KGCAE	Kacgae	124.82	267	*i* P	PKPdf	13 41 19.3	-0.9
CBOC	Ciudad Bolivar	124.85	45	P	PKPdf	13 41 19.1	-1.6
SDV	Santo Domingo	125.05	37	PKP	PKPdf	13 41 20.9	-0.2
	comp=Z,100nm,0.8s,baz=39,slow=0.9,SNR=31						
SDV	Santo Domingo	125.05	37	PKP	PKPdf	13 41 21.1	+0.1
SDV	Santo Domingo	125.05	37	*e*P	PKiKP	13 41 21.6	+0.2
SDV	Santo Domingo	125.05	37	P	PKPdf	13 41 19.8	-1.2
PTBC	PUERTO BERRIO,	125.13	43	P	PKPdf	13 41 19.8	-1.2
BRJC	Barrancabermej	125.14	42	P	PKPdf	13 41 21.0	0.0
BOSA	Boshof	125.36	259	PKP	PKPdf	13 41 20.5	-0.6
	comp=Z,10nm,0.9s,baz=78,slow=2.7,SNR=3.4						
BOSA				PKKPbc	PKKPbc	13 51 01.2	+3.4
	comp=Z,3.2nm,0.9s,baz=260,slow=4.6,SNR=4.5						
BOSA				SKKPbc	SKKPbc	13 54 48.7	+0.7
	comp=Z,3.8nm,1.1s,baz=284,slow=5.8,SNR=3.7						
BOSA	Boshof	125.36	259	PKP	PKPdf	13 41 20.5	-0.6
PLMC	San Jos del P	125.49	46	P	PKPdf	13 41 21.6	-0.2
MALC	Bahia Malaga	125.62	47	P	PKiKP	13 41 23.3	+1.0
PHPEN	Phepeng	125.67	264	*i* P	PKPdf	13 41 21.8	+0.1
NORC	Norcasia	125.72	44	P	PKPdf	13 41 21.9	-0.3
GUY2C	Guyana, Caldas	125.74	44	P	PKPdf	13 41 22.1	-0.6
BARC	Barichara	125.75	41	P	PKPdf	13 41 22.2	-0.3
GRGR	Grenville	125.78	26	IAMs_20	IAMs_20	14 40 44.8	
	comp=Z,7µm,20.0s						
SPBC	San Pablo de B	126.08	43	P	PKPdf	13 41 22.9	0.0
YOTC	Yotoco, Valle	126.21	46	P	PKPdf	13 41 21.6	-1.6
ANIL	Santa Ana	126.32	45	P	PKiKP	13 41 24.4	+0.3
RUSC	La Rusia	126.40	42	P	PKiKP	13 41 24.4	-0.1
TSUM	Tsumeb	126.46	274	IAMs_20	IAMs_20	14 39 07.7	
	comp=Z,5µm,19.0s						
PCRV	Puerto La Cruz	126.50	30	PKP	PKPdf	13 41 22.7	-0.9
	comp=Z,26nm,0.6s,baz=292,slow=2.3,SNR=15						
PCRV				PP	PP	13 43 21.5	+3.4
	comp=Z,9.8nm,0.9s,baz=5.6,slow=9.6,SNR=4.0						
ROSC	El Rosal	126.63	44	PKP	PKiKP	13 41 25.0	+0.2
	comp=Z,72nm,1.0s,baz=356,slow=3.5,SNR=19						
ROSC	El Rosal	126.63	44	P	PKPdf	13 41 24.1	-0.2
GRHM	Grahamstown, E	126.65	254	IAMs_20	IAMs_20	14 33 42.7	
	comp=Z,7µm,21.0s						
JAMC	Jamundi, Valle	126.65	47	P	PKPdf	13 41 23.5	-0.7
ORTC	Ortega, Tolima	126.89	45	P	PKPdf	13 41 23.4	-1.0
CHIC	Chingaza	127.12	43	P	PKPdf	13 41 23.9	-1.4
POPC	Popayan, Colom	127.20	48	P	PKPdf	13 41 22.8	-2.4
PRAC	Prado	127.25	45	P	PKPdf	13 41 24.6	-0.5
BBAC	Balboa, Cauca	127.28	49	P	PKPdf	13 41 23.0	-2.4
VILC	Villavicencio,	127.57	44	P	PKPdf	13 41 25.2	-0.6
FLF1	Flavio Alfaro-	127.58	53	P	PKPdf	13 41 25.5	-0.2
PAC1	Pacto, Paraso	127.75	52	P	PKiKP	13 41 27.0	+0.3
BETC	Betania	127.79	46	P	PKiKP	13 41 26.8	+0.1
URMC	La Uribe, Meta	127.92	45	P	PKiKP	13 41 26.7	-0.3
OTAV	Otavalo	127.98	51	PKP	PKiKP	13 41 27.7	+0.1
OTAV	Otavalo	127.98	51	*e*P	PKPdf	13 41 27.2	+0.3
OTAV	Otavalo	127.98	51	P	PKPdf	13 41 25.8	-1.2
GARC	Garzon, Huila	128.16	47	P	PKPdf	13 41 27.0	-0.1
PTGC	Puerto Gaitan,	128.33	42	P	PKPdf	13 41 25.5	-1.6
QSPA	South Pole Qui	128.36	180	IAMs_20	IAMs_20	14 32 34.1	
	comp=Z,10µm,22.0s						
QSPA	South Pole Qui	128.36	180	PKP	PKPdf	13 41 25.4	-0.1
	comp=Z,70nm,1.2s,baz=309,slow=0.5,SNR=16						
QSPA				PP	PP	13 43 35.8	+4.9
	comp=Z,48nm,1.1s,baz=11,slow=2.0,SNR=6.3						
FLOC	Florencia	128.56	47	P	PKPdf	13 41 27.2	-0.4
SYO	Syowa Base	128.93	207	⇑*i*PKPdf	PKiKP	13 41 28.0	+0.9
SYO	Syowa Base	128.93	207	⇑*i*pPKPdf	pPKPdf	13 41 30.0	-2.5
MACC	Macarena, Meta	129.12	45	P	PKPdf	13 41 27.1	-1.5
SUR	Sutherland	130.48	257	IAMs_20	IAMs_20	14 37 13.3	
	comp=Z,7µm,19.0s						
SGC2	Sao Gabriel da	134.66	39	PKP	PKPdf	13 41 39.4	+0.4
SGC2	Sao Gabriel da	134.66	39	P	PKPdf	13 41 38.1	-1.0
MDP	Montagnes des	135.07	17	PKP	PKPdf	13 41 40.2	+0.4
	comp=Z,24nm,0.8s,baz=169,slow=0.5,SNR=13						
MDP				PP	PP	13 44 15.4	+1.9
	comp=Z,26nm,1.1s,baz=31,slow=8.7,SNR=4.7						
BOAV	Boa Vista	135.21	29	PKP	PKiKP	13 41 41.0	-0.6
BOAV	Boa Vista	135.21	29	*e*P	PKiKP	13 41 41.6	0.0
BOAV	Boa Vista	135.21	29	P	PKPdf	13 41 37.1	-3.0
TBTG	Tabatinga, AM	136.54	45	PKP	PKPdf	13 41 42.7	+0.2
TBTG	Tabatinga, AM	136.54	45	*e*P	PKiKP	13 41 43.7	-0.5
CZSB	Cruzeiro do Su	137.74	52	PKP	PKPdf	13 41 39.0	-5.8
NNA	Nana	138.23	60	IAMs_20	IAMs_20	14 31 44.6	
	comp=Z,6µm,21.0s						
NNA	Nana	138.23	60	PP	PP	13 44 35.5	+1.1
	comp=Z,6.5nm,0.4s,baz=274,slow=7.4,SNR=3.9						
MACA	Manacapuru-AM	140.20	33	IAMs_20	IAMs_20	14 50 42.4	
	comp=Z,6µm,20.0s						
MACA	Manacapuru-AM	140.20	33	PKP	PKPdf	13 41 41.2	-8.1
TROLL	Troll, Antarti	140.24	199	⇑PKPdf	PKPdf	13 41 39.5	-8.2
	comp=Z,2µm,0.7s						
TROLL				⇑PP	PP	13 44 47.4	+1.3
TROLL				⇑SKPdf	SKPbc	13 45 23.2	+0.3
TROLL				⇓x	x	13 45 24.0	
TROLL				⇓SKKPdf	SKKPdf	13 54 49.7	+1.9
BELA	Belgrano 2	140.56	182		PKPpre	13 41 39.2	
BELA				IAMs_20	IAMs_20	14 41 57.2	
	comp=Z,7µm,22.0s						
MAL2	Monte Alegre,	141.49	22	IAMs_20	IAMs_20	14 55 22.7	
	comp=Z,6µm,20.0s						
MAL2	Monte Alegre,	141.49	22	PKP	PKPdf	13 41 45.0	-6.7
SNAA	Sanae	141.80	198	⇑PKPdf	PKPdf	13 41 43.4	-7.0
	comp=Z,505nm,0.9s						
SNAA				⇑PP	PP	13 44 56.0	+0.6
SNAA				⇓SKPdf	SKiKP	13 45 31.3	+2.8
SNAA	Sanae	141.80	198	IAMs_20	IAMs_20	14 42 02.3	
	comp=Z,7µm,21.0s						
SNAA	Sanae	141.80	198	PKhKP	PKPpre	13 41 42.2	
	comp=Z,7.3nm,0.7s,baz=108,slow=3.7,SNR=23						
SNAA				PP	PP	13 44 56.4	+0.9
	comp=Z,42nm,1.2s,baz=143,slow=4.4,SNR=6.8						
SHEL	Horse Pasture	142.07	297	IAMs_20	IAMs_20	14 54 06.8	
	comp=Z,7µm,20.0s						
LABB	L¡brea	143.11	44	PKP	PKPab	13 41 47.6	-2.2
ITTB	Itaituba	143.20	26	PKP	PKPab	13 41 49.9	-0.3
ITTB	Itaituba	143.20	26	*e*P	PKPbc	13 41 51.6	+0.1
BMO1	UHE Belo Monte	143.24	19	PKP	PKPab	13 41 50.2	-0.2
ATM1	UHE Belo Monte	143.25	20	PKP	PKPbc	13 41 51.3	-0.3
TMAB	Tom-Au,PA,Br	143.26	13	PKP	PKPbc	13 41 51.6	-0.1
TMAB	Tom-Au,PA,Br	143.26	13	*e*P	PKPbc	13 41 52.9	+1.2
BMO2	UHE Belo Monte	143.37	19	PKP	PKPab	13 41 51.2	+0.4
VNA2	Neumayer--Watz	143.39	198	⇑PKPdf	PKPab	13 41 48.1	-1.2
	baz=110,slow=2.9						
VNA2				⇑PP	PP	13 45 05.9	+1.0
	baz=125,slow=1.3						
VNA3	Neumayer Olymp	143.68	196	⇑PKPdf	PKPab	13 41 48.8	-1.7
	comp=Z,37nm,0.8s						
VNA3				⇓PP	PP	13 45 07.5	+0.8
VNA1	Neumayer--Stat	143.79	198	⇑PKPdf	PKPab	13 41 50.3	-0.5
	comp=Z,150nm,1.4s						
SAML	Samuel	144.12	40	IAMs_20	IAMs_20	14 56 00.1	
	comp=Z,5µm,19.0s						
NBMO	Morrinhos-CE	144.85	359	PKP	PKPab	13 41 55.2	-1.3
SBBR	Sobral	145.28	360	PKP	PKPbc	13 41 57.2	-0.8
NBCL	Cascavel-CE	145.70	356	PKP	PKPdf	13 41 59.0	0.0
NPGB	Novo Progresso	145.82	27	PKP	PKPdf	13 41 58.8	-0.4
NPGB	Novo Progresso	145.82	27	*e*P	PKPbc	13 41 59.6	-0.1
NBPS	Pedro II - PI	145.92	2	PKP	PKPdf	13 41 58.7	-0.8
PRPB	Parauapebas	146.62	17	PKP	PKPdf	13 42 00.4	-0.2
PRPB	Parauapebas	146.62	17	*e*P	PKPdf	13 42 01.2	+0.7
NBBC	Barra do Corda	146.77	9	PKP	PKPdf	13 42 01.1	+0.3
NBPB	Pedra_Branca-C	147.06	358	PKP	PKPdf	13 42 00.9	-0.4
NBPB	Pedra_Branca-C	147.06	358	*e*P	PKPdf	13 42 01.7	+0.4
RCBR	Riachuelo	147.08	352	IAMs_20	IAMs_20	14 55 37.7	
	comp=Z,6µm,19.0s						
RCBR	Riachuelo	147.08	352	PKP	PKPdf	13 41 59.5	-1.9
RCBR	Riachuelo	147.08	352	*e*P	PKPbc	13 42 02.5	-0.9
NBPA	Parau_RN	147.13	354	PKP	PKPdf	13 42 00.7	-0.7
LPAZ	La Paz	147.13	55	PKPbc	PKPbc	13 42 03.5	-0.7
	comp=Z,88nm,0.7s,baz=355,slow=2.9,SNR=110						
LPAZ	La Paz	147.13	55	PKP	PKPdf	13 42 01.6	-0.4
LPAZ	La Paz	147.13	55	*e*P	PKPdf	13 42 02.1	0.0
LPAZ	La Paz	147.13	55	P	PKPdf	13 42 03.0	+1.0
AP01	Chacalluta	147.16	61	IAMs_20	IAMs_20	14 43 16.1	
	comp=Z,5µm,20.0s						
PB18	Visviri	147.19	58	IAMs_20	IAMs_20	15 03 08.8	
	comp=Z,6µm,19.0s						
PAL01	Palmeiras do T	147.53	13	PKP	PKPdf	13 42 00.9	-1.1
NBPV	Pedro Velho	147.59	350	PKP	PKPdf	13 42 01.6	-0.6
PAL2	UHE Estreito -	147.68	13	PKP	PKPdf	13 42 00.9	-1.4
PB16	IPOC Station P	147.70	59	IAMs_20	IAMs_20	14 58 29.3	
	comp=Z,6µm,20.0s						
H03N2	Juan Fernandez	148.68	92	PKPbc	PKiKP	13 42 08.2	+0.1
	baz=160,slow=16,SNR=33						
H03N3	Juan Fernandez	148.69	92	PKPbc	PKPbc	13 42 07.5	+0.7
	baz=160,slow=16,SNR=35						
H03N1	Juan Fernandez	148.69	92	PKPbc	PKiKP	13 42 07.8	-0.4
	baz=160,slow=16,SNR=37						
H03S2	Juan Fernandez	148.82	93	PKPbc	PKiKP	13 42 08.6	+0.1
	baz=243,slow=75,SNR=19						
H03S3	Juan Fernandez	148.83	93	PKPbc	PKPbc	13 42 07.6	+0.5
	baz=243,slow=75,SNR=14						
H03S1	Juan Fernandez	148.84	93	PKPbc	PKiKP	13 42 08.1	-0.4
	baz=243,slow=75,SNR=22						
NBMA	Muriti-CE	148.84	357	PKP	PKPdf	13 42 03.1	-1.1
VILB	Vilhena	149.04	40	PKP	PKPdf	13 42 04.5	0.0
VILB	Vilhena	149.04	40	*e*P	PKPdf	13 42 05.6	+1.1
CLDB	Colider	149.18	30	PKP	PKPdf	13 42 03.8	-0.9
CLDB	Colider	149.18	30	*e*P	PKPdf	13 42 04.0	-0.8
PB08	IPOC Station P	149.18	61	PKP	PKPdf	13 42 07.0	+1.9
PB08	IPOC Station P	149.18	61	IAMs_20	IAMs_20	14 41 20.8	
	comp=Z,6µm,21.0s						
NBCA	Caruaru-PE	149.46	351	PKP	PKPdf	13 42 05.1	-0.2
PDRB	Porto dos Gac	149.47	33	PKP	PKPdf	13 42 05.2	+0.1
PDRB	Porto dos Gac	149.47	33	*e*P	PKPdf	13 42 05.6	+0.5
SMTB	Santa Maria do	149.69	14	PKP	PKPdf	13 42 04.5	-1.1
SMTB	Santa Maria do	149.69	14	*e*P	PKPdf	13 42 06.0	+0.5
PB05	IPOC Station P	150.21	67	IAMs_20	IAMs_20	14 42 28.4	
	comp=Z,6µm,20.0s						
PMSA	Palmer Station	150.40	160	IAMs_20	IAMs_20	14 48 52.5	
	comp=Z,6µm,19.0s						
PMSA	Palmer Station	150.40	160	PKPbc	PKPbc	13 42 09.7	-0.5
	comp=Z,33nm,0.5s,baz=207,slow=3.2,SNR=10.0						
PB06	IPOC Station P	150.57	66	IAMs_20	IAMs_20	14 39 15.8	
	comp=Z,6µm,20.0s						
LAJE	UHE Lajeado	150.64	16	PKP	PKPdf	13 42 08.1	+1.1
NBAN	Anadia - AL	150.92	351	PKP	PKPdf	13 42 06.7	-0.8
NBAN	Anadia - AL	150.92	351	*e*P	PKPdf	13 42 06.9	-0.6
SIV	San Ignacio	151.12	44	PKP	PKPdf	13 42 08.0	+0.3
	comp=Z,19nm,0.8s,baz=39,slow=0.4,SNR=63						
SIV				PKPbc	PKiKP	13 42 14.9	+0.7
	comp=Z,113nm,0.8s,baz=309,slow=1.8,SNR=66						
PB14	IPOC Station P	151.13	70	PKP	PKPdf	13 42 09.0	+1.1
PTLB	Pontes e Lacer	151.69	40	IAMs_20	IAMs_20	14 54 39.7	
	comp=Z,8µm,21.0s						
PTLB	Pontes e Lacer	151.69	40	PKP	PKPdf	13 42 08.8	+0.3
PTLB	Pontes e Lacer	151.69	40	*e*P	PKPdf	13 42 09.0	+0.4
SNDB	Serra Nova Dou	151.78	23	PKP	PKPdf	13 42 07.4	-1.3
SNDB	Serra Nova Dou	151.78	23	*e*P	PKPdf	13 42 09.0	+0.2
BBSD	Serra de San D	152.35	45	*e*P	PKPdf	13 42 09.4	-0.1
NBLA	Lagarto - SE	152.38	354	PKP	PKPdf	13 42 08.9	-0.7
CO05	La Serena	153.28	80	IAMs_20	IAMs_20	15 06 29.2	
	comp=Z,4µm,20.0s						
ESPZ	Base Esperanza	153.28	164	IAMs_20	IAMs_20	14 55 05.7	
	comp=Z,7µm,21.0s						
CO06	Fray Jorge	153.30	82	IAMs_20	IAMs_20	14 50 16.0	
	comp=Z,5µm,19.0s						
SDBA	SAO DESIDERIO	153.60	10	PKP	PKPdf	13 42 11.0	-0.5
SDBA	SAO DESIDERIO	153.60	10	*e*P	PKPdf	13 42 11.5	0.0
GO04	Tololo Observa	153.73	80	IAMs_20	IAMs_20	15 07 38.3	
	comp=Z,5µm,19.0s						
SALV	Santo Antonio	153.73	35	PKP	PKPdf	13 42 10.7	-0.9
SALV	Santo Antonio	153.73	35	*e*P	PKPdf	13 42 12.3	+0.8
CO02	Combarbal	154.02	83	IAMs_20	IAMs_20	14 45 26.1	
	comp=Z,6µm,20.0s						
CO03	El Pedregal	154.11	82	IAMs_20	IAMs_20	14 45 37.3	
	comp=Z,5µm,19.0s						
BI05	Punta Hualpn	154.16	96	IAMs_20	IAMs_20	14 40 33.7	
	comp=Z,7µm,19.0s						
MG05	Puerto Natales	154.18	131	IAMs_20	IAMs_20	15 03 22.5	
	comp=Z,7µm,21.0s						
VA01	Torpederas	154.23	87	IAMs_20	IAMs_20	15 02 16.9	
	comp=Z,6µm,18.0s						
VA06	Catapilco	154.33	86	IAMs_20	IAMs_20	14 44 25.4	
	comp=Z,6µm,20.0s						
LL05	Los Muermos	154.70	107	IAMs_20	IAMs_20	14 42 42.8	
	comp=Z,7µm,20.0s						
MT01	Popeta	154.84	89	IAMs_20	IAMs_20	14 44 58.7	
	comp=Z,6µm,19.0s						
MT09	Talagante	155.01	88	IAMs_20	IAMs_20	14 45 04.4	
	comp=Z,6µm,20.0s						
PEL	Peldehue	155.03	87	IAMs_20	IAMs_20	14 44 45.0	
	comp=Z,5µm,20.0s						
MT05	Renca	155.07	87	IAMs_20	IAMs_20	14 44 42.0	
	comp=Z,7µm,20.0s						
ARAG	Araguaiana, MT	155.10	27	PKP	PKPdf	13 42 12.4	-1.0
ARAG	Araguaiana, MT	155.10	27	*e*P	PKPdf	13 42 14.0	+0.5
USHA	Ushuaia	155.17	140	PKPbc	PKPdf	13 42 22.1	+10
	comp=Z,12nm,0.8s,baz=192,slow=4.0,SNR=7.9						
USHA				PKPab	PKPab	13 42 37.8	+0.6
	comp=Z,46nm,0.9s,baz=298,slow=3.3,SNR=5.6						
ML02	Panimavida	155.28	93	IAMs_20	IAMs_20	14 43 44.6	
	comp=Z,6µm,20.0s						
MT03	Universidad Ad	155.29	87	IAMs_20	IAMs_20	14 45 06.9	
	comp=Z,6µm,20.0s						
BO04	La Punta	155.38	88	IAMs_20	IAMs_20	15 01 37.1	
	comp=Z,5µm,21.0s						
LL03	Petrohue	155.48	106	IAMs_20	IAMs_20	14 43 57.5	
	comp=Z,6µm,20.0s						
BO02	Sierra Bellavi	155.50	90	IAMs_20	IAMs_20	14 42 30.4	
	comp=Z,7µm,21.0s						
LMEL	Las Melosas	155.65	88	IAMs_20	IAMs_20	15 06 06.2	
	comp=Z,6µm,20.0s						
LR05	Currie	155.70	104	IAMs_20	IAMs_20	14 50 14.3	
	comp=Z,5µm,20.0s						
ZON	Zonda	155.97	82	IAMs_20	IAMs_20	14 42 17.4	
	comp=Z,6µm,22.0s						
LL02	Futaleuf	155.97	111	IAMs_20	IAMs_20	14 48 54.3	
	comp=Z,5µm,19.0s						
ANA01	Lindo Horizont	156.00	1	PKP	PKPdf	13 42 14.5	-0.3
BDFB	Brasilia	156.18	18	PKP	PKPdf	13 42 15.9	+0.9
	comp=Z,18nm,0.9s,baz=10,slow=4.5,SNR=20						
BDFB				PKPab	PKPab	13 42 43.8	+1.2
	comp=Z,23nm,0.8s,baz=352,slow=7.5,SNR=4.2						
BDFB				PP	PP	13 46 23.6	+4.7
	comp=Z,28nm,1.1s,baz=126,slow=7.8,SNR=3.4						
BDFB	Brasilia	156.18	18	PKP	PKPdf	13 42 15.4	+0.4
JANB	Januaria	156.29	9	PKP	PKPdf	13 42 13.8	-1.3
JANB	Januaria	156.29	9	*e*P	PKPdf	13 42 16.1	+0.9
CFA	Coronel Fontan	156.33	81	PKP	PKPdf	13 42 15.3	+0.5
	comp=Z,3.5nm,0.8s,baz=287,slow=0.9,SNR=19						
CFA				PKPab	PKPab	13 42 44.4	+1.3
	comp=Z,40nm,0.9s,baz=282,slow=5.2,SNR=17						
NBIT	Itapeh - BA	156.38	357	PKP	PKPdf	13 42 14.6	-0.6
CMC01	Camacan, BA	156.81	358	PKP	PKPdf	13 42 15.1	-0.6
CMC01	Camacan, BA	156.81	358	*e*P	PKPdf	13 42 17.3	+1.6
PLCA	Paso Flores	156.85	105	PKP	PKPdf	13 42 15.3	+0.2
	comp=Z,5.0nm,1.2s,baz=310,slow=14,SNR=7.8						
PLCA				PKPab	PKPab	13 42 46.5	+1.5
	comp=Z,37nm,0.9s,baz=265,slow=4.7,SNR=9.7						
PLCA	Paso Flores	156.85	105	PKP	PKPdf	13 42 13.5	-1.7
PLCA	Paso Flores	156.85	105	*e*P	PKPdf	13 42 16.1	+0.9
BDQN	Bodoquena, MS	157.10	42	*e*P	PKPdf	13 42 16.5	+0.5
C2SB	Chapadao do Su	157.50	32	PKP	PKPdf	13 42 16.4	-0.1
C2SB	Chapadao do Su	157.50	32	*e*P	PKPdf	13 42 17.7	+1.2
MURT	Porto Murtinho	157.61	46	*e*P	PKPdf	13 42 16.9	+0.3
AQDB	Aquidauana	157.67	40	PKP	PKPdf	13 42 16.9	+0.2
AQDB	Aquidauana	157.67	40	*e*P	PKPdf	13 42 17.7	+1.0
BAT2	UHE Batalha	157.96	18	PKP	PKPdf	13 42 18.2	+1.0
BAT3	Ipameri	157.98	18	PKP	PKPdf	13 42 16.1	-1.1
GUA01	Guaratinga, BA	158.03	358	PKP	PKPdf	13 42 17.2	0.0
GUA01	Guaratinga, BA	158.03	358	*e*P	PKPdf	13 42 17.7	+0.5
IPMB	Ipameri, GO	158.37	20	PKP	PKPdf	13 42 14.9	-2.8
IPMB	Ipameri, GO	158.37	20	*e*P	PKPdf	13 42 18.1	+0.4
ITU3	Corumbazu	158.41	22	PKP	PKPdf	13 42 17.9	+0.2
JQT1	Jequitai-MG	158.43	10	PKP	PKPdf	13 42 18.5	+0.7
SFA1	Serra Facao	158.49	19	PKP	PKPdf	13 42 17.9	+0.1
CAR01	Carai MG	158.51	2	PKP	PKPdf	13 42 17.0	-0.9
RPRD	Ribas do Rio P	158.64	36	*e*P	PKPdf	13 42 19.0	+1.1
ITRB	Iturama	159.31	27	PKP	PKPdf	13 42 19.5	+0.8
ITRB	Iturama	159.31	27	*e*P	PKPdf	13 42 19.8	+1.1
PMNB	Patos De Minas	159.34	16	PKP	PKPdf	13 42 19.1	+0.2
PMNB	Patos De Minas	159.34	16	*e*P	PKPdf	13 42 19.4	+0.5
DIAM	Diamantina, MG	159.56	9	PKP	PKPdf	13 42 19.5	+0.3
DIAM	Diamantina, MG	159.56	9	*e*P	PKPdf	13 42 19.8	+0.6
SJMB	Sao Joao De Ma	160.14	2	PKP	PKPdf	13 42 19.0	-0.6
SJMB	Sao Joao De Ma	160.14	2	*e*P	PKPdf	13 42 20.6	+1.0
PCMB	Pacaembu	160.69	32	PKP	PKPdf	13 42 20.8	+0.6
PCMB	Pacaembu	160.69	32	*e*P	PKPdf	13 42 21.1	+0.8
RIB01	Linhares ES	160.76	360	PKP	PKPdf	13 42 19.0	-1.3
RIB01	Linhares ES	160.76	360	*e*P	PKPdf	13 42 21.1	+0.7
CANS	Sao Roque de M	161.04	17	PKP	PKPdf	13 42 20.1	-0.6
SJPY	San Joaquin	161.07	49	*e*P	PKPdf	13 42 20.6	+0.1
TRCB	Terra Rica	161.13	37	PKP	PKPdf	13 42 20.9	+0.3
TRCB	Terra Rica	161.13	37	*e*P	PKPdf	13 42 21.9	+1.2
CPUP	Villa Florida	161.30	54	PKP	PKPdf	13 42 21.0	+0.3
	comp=Z,10.0nm,1.2s,baz=217,slow=1.9,SNR=21						
CPUP				PKPab	PKPab	13 43 05.7	+1.1
	comp=Z,13nm,1.1s,baz=182,slow=3.6,SNR=14						
CPUP				PP	PP	13 46 52.9	+5.2
	comp=Z,4.5nm,1.1s,baz=194,slow=4.5,SNR=4.6						
CPUP	Villa Florida	161.30	54	PKP	PKPdf	13 42 20.0	-0.7
CPUP	Villa Florida	161.30	54	*e*P	PKPdf	13 42 23.1	+2.5
BSCB	Bom Sucesso	162.06	13	PKP	PKPdf	13 42 21.4	-0.3
BSCB	Bom Sucesso	162.06	13	*e*P	PKPdf	13 42 22.3	+0.6
LDASE	Londrina, Braz	162.33	34	*e*P	PKPdf	13 42 22.7	+0.8
FRTB	Fartura	162.93	29	PKP	PKPdf	13 42 22.2	-0.3
PTGB	Pitanga	163.03	39	PKP	PKPdf	13 42 23.2	+0.6

PTGB	Pitanga	163.03	39	eP	PKPdf	13 42 23.1	+0.5
CAM01	Campos-RJ	163.23	4	PKP	PKPdf	13 42 23.2	+0.4
CAM01	Campos-RJ	163.23	4	eP	PKPdf	13 42 23.1	+0.4
SIM2	UHE Simplicio	163.23	7	PKP	PKPdf	13 42 24.3	+1.5
DUB01	Friburgo-RJ	163.44	6	PKP	PKPdf	13 42 22.7	-0.4
DUB01	Friburgo-RJ	163.44	6	eP	PKPdf	13 42 23.6	+0.5
VABB	Valinhos	163.48	21	PKP	PKPdf	13 42 23.8	+0.7
VAO	Valinhos	163.49	21	eP	PKPdf	13 42 23.6	+0.5
VAS01	Vassouras-RJ	163.52	10	PKP	PKPdf	13 42 23.7	+0.7
VAS01	Vassouras-RJ	163.52	10	eP	PKPdf	13 42 23.6	+0.5
SPB	Sao Paulo	163.90	23	eP	PKPdf	13 42 24.0	+0.6
ITQB	Itaqui	163.98	61	PKP	PKPdf	13 42 24.1	+0.9
ITQB	Itaqui	163.98	61	eP	PKPdf	13 42 23.6	+0.3
MAN01	Angra dos Reis	164.02	12	PKP	PKPdf	13 42 23.5	0.0
MAN01	Angra dos Reis	164.02	12	eP	PKPdf	13 42 24.4	+0.8
PARB	Paraibuna	164.16	17	PKP	PKPdf	13 42 23.8	+0.2
PARB	Paraibuna	164.16	17	eP	PKPdf	13 42 24.0	+0.3
SLP01	Ubatuba-SP	164.25	16	PKP	PKPdf	13 42 24.4	+0.6
SLP01	Ubatuba-SP	164.25	16	eP	PKPdf	13 42 24.0	+0.1
PET01	Itanhaem-SP	164.60	24	PKP	PKPdf	13 42 23.8	-0.1
PET01	Itanhaem-SP	164.60	24	eP	PKPdf	13 42 24.8	+0.9
TIJ01	Guaruva-PR	164.93	31	PKP	PKPdf	13 42 24.4	+0.1
ITAB	Concordia	165.05	44	PKP	PKPdf	13 42 24.7	+0.5
ITAB	Concordia	165.05	44	eP	PKPdf	13 42 23.1	-1.1
CPSB	Cacapava Do Su	166.57	56	PKP	PKPdf	13 42 25.0	-0.4
CPSB	Cacapava Do Su	166.57	56	eP	PKPdf	13 42 26.1	+0.7
MAJ01	Sao Joao Batis	166.74	35	PKP	PKPdf	13 42 26.8	+1.1
MAJ01	Sao Joao Batis	166.74	35	eP	PKPdf	13 42 25.6	0.0
PLTB	Pedras Altas	167.31	61	PKP	PKPdf	13 42 25.6	-0.3
PLTB	Pedras Altas	167.31	61	eP	PKPdf	13 42 27.3	+1.4
CNLB	Canela	167.38	46	PKP	PKPdf	13 42 26.5	+0.4

CATAC 18 13:31:12.6±0.7, 13°N±4°×8°9W±°, h25km±3km, M3.1/12, MLv3.1/12, Error ellipse: s-maj=8.4km s-min=4.0km az=25.9, confirmed

SNET 18 13:31:13.9±1.0, 13°.07N×89°.42W, h51km±13km, ML3.1, 4C, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.43	13	eP	Pn	13 31 24.6	+0.1
LALI				eS	Sn	13 31 32.3	+0.4
LALI	Alcalda de L	0.43	13	P	Pn	13 31 24.5	+0.1
JAYA	Jayaque - finc	0.58	357	eP	Pn	13 31 26.4	0.0
JAYA				eS	Sn	13 31 36.1	+0.7
JAYA				IAML		13 31 36.7	
	comp=Z,912nm,0.2s						
JAYA	Jayaque - finc	0.58	357	S	Sn	13 31 35.3	-0.1
JAYA	Jayaque - finc	0.58	357	P	Pn	13 31 26.3	-0.1
LOMA	Loma Larga	0.62	23	eP	Pn	13 31 27.1	+0.3
LOMA				eS	Sn	13 31 37.5	+1.3
LOMA				IAML		13 31 38.6	
	comp=Z,776nm,0.1s						
LOMA	Loma Larga	0.62	23	P	Pn	13 31 27.0	+0.1
LOMA	Loma Larga	0.62	23	S	Sn	13 31 38.1	+1.8
PMON	Piamonte	0.65	9	⇑eP	Pn	13 31 27.4	+0.2
PMON	Piamonte	0.65	9	P	Pn	13 31 27.7	+0.5
LFRS	El Faro	0.65	32	eP	Pn	13 31 27.6	+0.3
LFRS				eS	Sn	13 31 37.6	+0.7
BOQS	Boqueron	0.68	12	⇑iP	Pn	13 31 28.0	+0.4
PIC2	El Picacho	0.69	13	eP	Pn	13 31 28.4	+0.5
LFU	La Fuente	0.74	24	eP	Pn	13 31 29.2	+0.9
CEVE	Cerro Verde	0.78	345	eP	Pn	13 31 29.2	+0.2
CEVE	Cerro Verde	0.78	345	P	Pn	13 31 29.0	0.0
CEVE	Cerro Verde	0.78	345	S	Sn	13 31 41.8	+1.8
TECO	Alcaldia de Te	0.78	53	P	Pn	13 31 28.5	-0.2
TECO	Alcaldia de Te	0.78	53	S	Sn	13 31 40.3	+0.7
SBLS	San Blas	0.79	346	eP	Pn	13 31 29.3	+0.2
PAVA	Las Pavas	0.80	36	eP	Pn	13 31 29.6	+0.5
PAVA	Las Pavas	0.80	36	S	Sn	13 31 42.2	+2.1
PAVA	Las Pavas	0.80	36	P	Pn	13 31 29.5	+0.4
SNJE	San Jose	0.81	347	⇑eP	Pn	13 31 29.6	+0.2
UESV	Universidad de	0.84	48	P	Pn	13 31 29.6	0.0
UESV	Universidad de	0.84	48	S	Sn	13 31 41.9	+1.0
ALJI	Alcalda de J	0.87	73	S	Sn	13 31 42.6	+0.9
NUBE	Las Nubes	0.90	337	eP	Pn	13 31 30.4	-0.1
NUBE	Las Nubes	0.90	337	P	Pn	13 31 30.2	-0.3
NUBE	Las Nubes	0.90	337	S	Sn	13 31 43.1	+0.5
FAME	Alcaldia de Sa	0.96	323	S	Sn	13 31 44.0	+0.1
FAME	Alcaldia de Sa	0.96	323	P	Pn	13 31 29.9	-1.3
TECA	Tecapa	0.99	65	eP	Pn	13 31 32.2	+0.5
SLOZ	Alcaldia de Sa	1.01	340	S	Sn	13 31 47.6	+2.5
PACA	Pacayal	1.14	69	eP	Pn	13 31 34.7	+1.0
PACA	Pacayal	1.14	69	S	Sn	13 31 50.2	+1.8
PACA	Pacayal	1.14	69	P	Pn	13 31 33.5	-0.2
LCY	Lacayo	1.15	72	eP	Pn	13 31 33.4	-0.4
LLGN	La Laguna	1.18	23	S	Sn	13 31 52.1	+2.8
LLGN	La Laguna	1.18	23	P	Pn	13 31 35.0	+0.7
MTO3	Montecristo	1.32	3	⇑eP	Pn	13 31 37.0	+0.7
MTO3	Montecristo	1.32	3	P	Pn	13 31 37.4	+1.2
MTO3	Montecristo	1.32	3	S	Sn	13 31 54.4	+1.4
ESQI	Esquipulas	1.48	3	S	Sn	13 31 58.8	+2.1
CNCH	Conchagua	1.56	82	S	Sn	13 32 00.0	+1.5
CNCH	Conchagua	1.56	82	P	Pn	13 31 40.4	+1.1

FUNV 18 13:33:12.8, 10°.54N×62°.70W, h14km, MW3.6

TRN 18 13:33:14.9, 10°.71N×62°.74W, h42km, MD2.8, North of the Paria peninsula.

ISC 18 13:33:12.8±1.2, 10°.56N±0°.05×62°.72W±0°.04, h75km, n12, σ1^{s}72/18, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRN	Trinidad (W)	1.30	86	eP	Pn	13 33 37.9	+2.7
TRN				eS	Sn	13 33 53.0	+0.8
GRFF	Grenada Fort F	1.77	33	eS	Sn	13 34 01.9	-1.4
GRGR	Grenville	1.88	34	eS	Sn	13 34 04.2	-1.8
PCRV	Puerto La Cruz	1.93	259	eP	Pn	13 33 45.6	+2.0
PCRV				eS	Sn	13 34 07.8	+0.8
PCRV	Puerto La Cruz	1.93	259	eP	Pn	13 33 45.7	+2.1
PCRV				eS	Sn	13 34 08.2	+1.2
GRSS	Sisters	2.04	32	eS	Sn	13 34 08.0	-1.8
GCMP	Grenada, Carri	2.30	33	eP	Pn	13 33 49.4	+0.8
GCMP				eS	Sn	13 34 14.2	-1.8
TACV	Tcata	4.26	265	eP	Pn	13 34 16.0	+0.7
CACV	CAICARA DEL OR	4.80	232	eP	Pn	13 34 18.5	-4.1
CACV				eS	Sn	13 35 07.0	-10
BENV	Beln	4.84	263	eP	Pn	13 34 23.5	+0.3
BENV				eS	Sn	13 35 16.7	-1.4
LUEV	Luepa	4.84	165	eP	Pn	13 34 23.0	-0.4
LUEV				eS	Sn	13 35 16.4	-1.9
BAUV	El Baul	5.49	253	eP	Pn	13 34 31.9	-0.1
BAUV				eS	Sn	13 35 31.1	-2.7

JMA 18 13:37:20.9±0.1, 38°.6N±0°.2×139°.5E±0°.2, h12km, MV3.8/38, OFF N NIIGATA PREF

JMA Felt III J1 at OFF N NIIGATA PREF .

IDC 18 13:37:22.5±1.2, 38°.56N×138°.99E, h0km, mb3.4/4, mbtmp3.4/8, ML3.0/4, Error ellipse: s-maj=32.5km s-min=19.0km az=99.0

ISC 18 13:37:21.4±0.7, 38°.62N±0°.03×139°.43E±0°.03, h10km, n17, σ1^{s}57/24, mb3.4/4, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAW	Awa shima	0.22	221	P	Pg	13 37 25.8	-0.1
JAW				S	Sg	13 37 29.3	+0.3
JYA	Atsumi	0.22	97	P	Pg	13 37 25.4	-0.6
JYA				S	Sg	13 37 28.7	-0.4
JYYZ	Yamagatayuza	0.56	44	P	Pb	13 37 32.2	-1.0
JTB	Tobi-shima	0.58	10	P	Pg	13 37 31.8	-0.9
JTB				S	Sg	13 37 39.8	-0.6
JYS	Shirataka	0.64	128	S	Sg	13 37 41.4	-0.8
JYK	Kaneyama	0.78	67	P	Pg	13 37 35.3	-1.2
JYK				S	Sg	13 37 45.7	-1.1
JNS	Sasagawa	0.81	186	P	Pg	13 37 35.9	-1.0
JNS				S	Sg	13 37 46.7	-0.7
JOU	Okura	1.00	104	eP	Pg	13 37 39.6	-1.1
JOU				S	Sg	13 37 52.2	-1.4
JSD	Sado	1.09	238	P	Pb	13 37 40.6	-1.7
JSD				S	Sg	13 37 55.0	-1.4
MJAR	Matsushiro Arr	2.29	205	Pn	Pn	13 37 57.9	-1.4
	1.5nm,0.3s,baz=26,slow=15,SNR=4.3						
MJAR				Sn	Sn	13 38 27.2	-0.3
	2.5nm,0.3s,baz=45,slow=28,SNR=9.5						
	6.1nm,0.3s						
ASAJ	Asahikawa	5.99	22	Pn	Pn	13 38 55.9	+5.9
	0.2nm,0.3s,baz=334,slow=34,SNR=2.1						
	12nm,1.1s						
USRK	Ussuriysk Ar.	7.89	317	Pn	Pn	13 39 14.2	-2.0
	0.4nm,0.3s,baz=123,slow=14,SNR=2.5						
	0.6nm,0.3s						
KSRS	Korea Array	9.15	266	Pn	Pn	13 39 32.0	-1.5
	0.9nm,0.3s,baz=73,slow=14,SNR=7.4						
	1.9nm,0.3s						
KURBB	Kurchatov Arra	43.79	306	P	P	13 45 28.4	+1.3
	0.3nm,0.7s,baz=78,slow=8.6,SNR=1.6						
	0.3nm,0.7s						
ILAR	Eielson Array	49.01	33	P	P	13 46 11.7	+3.8
	0.2nm,0.6s,baz=264,slow=5.2,SNR=4.1						
	0.2nm,0.6s						
WRA	Warramunga Arr	58.45	186	P	P	13 47 19.9	+2.4
	0.6nm,0.7s,baz=6.8,slow=7.1,SNR=3.4						
	0.6nm,0.7s						
ASAR	Alice Springs	62.17	186	P	P	13 47 45.4	+2.5
	0.3nm,0.8s,baz=5.7,slow=10,SNR=2.0						
	0.3nm,0.8s						

JMA 18 13:38:50.0±0.4, 39°N±1°×139°.5E±0°.6, h15km±3km, W OFF YAMAGATA PREF, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYA	Atsumi	0.16	91	eP	Pg	13 38 53.9	-0.1
JYA				eS	Sg	13 38 57.0	+0.4
JYA	Atsumi	0.16	91	eS	Sg	13 38 57.1	+0.5
JAW	Awa shima	0.25	236	eP	Pg	13 38 55.5	+0.1

JMA 18 13:38:50.4±0.1, 38°.6N±0°.4×139°.5E±0°.4, h16km±1km, MV1.8/25, W OFF YAMAGATA PREF, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAW	Awa shima	0.28	231	eP	Pg	13 38 56.4	0.0
JAW				eS	Sg	13 39 00.7	+0.2
JYYZ	Yamagatayuza	0.50	39	eP	Pg	13 39 00.1	-0.1
JYK	Kaneyama	0.71	66	eP	Pg	13 39 03.6	-0.6
JYK				eS	Sg	13 39 13.2	-0.5

IDC 18 13:41:20.8±0.8, 38°.56N×139°.27E, h0km, mb3.9/10, mbtmp3.8/13, ML3.2/3, Error ellipse: s-maj=26.2km s-min=15.0km az=93.0

NEIC 18 13:41:22.3±1.1, 38°.52N±0°.05×139°.30E±0°.06, h10km±1km, mb4.4/22, Error ellipse: s-maj=9.4km s-min=7.3km az=223.0

JMA 18 13:41:23.5±0.1, 38°.6N±0°.2×139°.4E±0°.2, h12km, MV4.1/39, OFF N NIIGATA PREF

JMA Felt III J1 at OFF N NIIGATA PREF .

ISC 18 13:41:23.2±0.8, 38°.57N±0°.03×139°.40E±0°.03, h17km±5km, n56, σ1^{s}13/66, mb4.3/22, 4D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAW	Awa shima	0.16	226	i P	Pg	13 41 27.5	0.0
JAW				S	Sg	13 41 30.7	+0.2
JYA	Atsumi	0.25	85	⇓P	Pg	13 41 28.6	-0.3
JYA				⇓S	Sg	13 41 32.2	-0.5
JYA	Atsumi	0.25	85	A	A	13 41 28.6	
	comp=N,94nm,0.4s,comp=E,102nm,0.3s						
JYYZ	Yamagatayuza	0.61	43	i P	Pb	13 41 35.7	+0.3
JYS	Shirataka	0.63	123	i P	Pg	13 41 35.4	-0.3
JYS				S	Sg	13 41 44.1	0.0
JTB	Tobi-shima	0.64	11	i P	Pg	13 41 35.2	-0.6
JTB				S	Sg	13 41 43.8	-0.5
JNS	Sasagawa	0.75	185	⇓iP	Pb	13 41 37.9	0.0
JNS				⇓S	Sb	13 41 48.4	+0.6
JYK	Kaneyama	0.83	65	i P	Pg	13 41 38.8	-0.6
JYK				S	Sg	13 41 49.7	-0.6
JOU	Okura	1.01	101	i P	Pg	13 41 42.5	-0.4
JSD	Sado	1.04	240	P	Pn	13 41 42.5	-0.5
JSD				S	Sn	13 41 56.2	-0.9
JMM	Marumori	1.30	122	Pn	Pn	13 41 46.8	+0.2
MJB9	Matsu-Tunnel	2.23	206		Pn	13 41 58.6	-0.8
MAJO	Matsushiro	2.23	205		Pn	13 41 58.2	-1.2
MJAR	Matsushiro Arr	2.23	205	Pn	Pn	13 41 59.2	-0.2
MJAR	Matsushiro Arr	2.23	205	Pn	Pn	13 41 59.1	-0.3
	comp=E,3.4nm,0.3s,baz=12,slow=16,SNR=18						
MJAR				Sn	Sb	13 42 28.1	-2.5
	comp=E,1.6nm,0.3s,baz=210,slow=20,SNR=5.2						
	comp=E,8.5nm,0.4s						
JTM	Tenmabayashi	2.56	30		Pn	13 42 04.5	+0.6
ERM	Erimo	4.48	39	Pn	Pn	13 42 32.7	+2.4
ASAJ	Asahikawa	6.04	22	Pn	Pn	13 42 54.0	+2.3
	comp=E,0.5nm,0.3s,baz=239,slow=10,SNR=7.1						
	comp=E,2.2nm,0.5s						
JKA	Kamikawa-asahi	6.04	22	Pn	Pn	13 42 54.8	+3.1
USRK	Ussuriysk Ar.	7.91	318	Pn	Pn	13 43 16.7	-0.7
	comp=E,0.5nm,0.3s,baz=127,slow=14,SNR=7.1						
USRK				Sn	Sn	13 44 42.9	-3.5
	comp=E,0.7nm,0.3s,baz=114,slow=25,SNR=5.2						
	comp=E,1.0nm,0.3s						
KSRS	Korea Array	9.13	267	Pn	Pn	13 43 37.0	+3.0
	comp=E,0.8nm,0.3s,baz=80,slow=14,SNR=10						
KSRS				Sn	Sn	13 45 18.7	+2.4
	comp=E,0.9nm,0.3s,baz=76,slow=24,SNR=9.3						
PET	Petropavlovsk	19.64	36	P	P	13 45 51.6	+0.8
C18K	Utukok River	43.62	27	P	P	13 49 26.6	+0.3
C18K				IAmb	IAmb	13 49 54.3	
	comp=Z,9.2nm,1.4s						
KURK	Kurchatov	43.73	307	P	P	13 49 28.0	+0.6
KURBB	Kurchatov Arra	43.80	307	P	P	13 49 27.9	+0.1
	comp=Z,0.4nm,0.4s,baz=85,slow=7.9,SNR=5.1						
	comp=Z,0.4nm,0.4s						
G18K	Tagagawik	44.15	31	P	P	13 49 31.3	+0.8
G18K				IAmb	IAmb	13 50 02.0	
	comp=Z,5.5nm,1.2s						
F19K	Shaleruckik Mo	44.61	30	P	P	13 49 34.8	+0.6
B20K	Meade River	45.29	26	P	P	13 49 40.3	+0.9
J20K	Nowinta River	45.95	34	P	P	13 49 45.4	+0.6
E23K	Chandalar	47.83	29	P	P	13 50 00.6	+1.1
E23K				IAmb	IAmb	13 50 15.3	
	comp=Z,4.4nm,1.2s						
E24K	Your Creek	48.25	29	P	P	13 50 03.9	+1.1
BVAR	Borovoye Array	48.36	311	P	P	13 50 04.2	+0.4
	comp=Z,0.4nm,0.5s,baz=101,slow=7.5,SNR=2.0						
BVAR				PcP	PcP	13 51 30.8	+0.7
	comp=Z,0.7nm,0.6s,baz=94,slow=2.1,SNR=4.6						
	comp=Z,0.4nm,0.5s						
ILAR	Eielson Array	49.06	33	P	P	13 50 09.3	+0.2
ILAR	Eielson Array	49.06	33	P	P	13 50 09.7	+0.7
	comp=Z,0.9nm,0.6s,baz=269,slow=5.8,SNR=14						
	comp=Z,0.9nm,0.6s						
SCRK	Sand Creek	50.41	34	P	P	13 50 19.9	+0.5
SCRK				IAmb	IAmb	13 50 20.7	
	comp=Z,2.0nm,0.5s						
EPYK	Eagle Plains	52.99	30	P	P	13 50 40.0	+1.4
EPYK				IAmb	IAmb	13 50 40.8	
	comp=Z,6.4nm,1.3s						
I30M	Mount Dempster	53.39	31	P	P	13 50 42.5	+0.9
I30M				IAmb	IAmb	13 50 44.0	
	comp=Z,3.6nm,0.8s						
HYT	Haines Junctio	54.02	37	P	P	13 50 47.2	+0.9
HYT				IAmb	IAmb	13 50 49.4	
	comp=Z,2.7nm,0.8s						
FARO	Faro, Yukon	55.52	35	P	P	13 50 57.6	+0.6
FARO				IAmb	IAmb	13 51 20.7	
	comp=Z,5.9nm,1.5s						
AB31	Akbulak array	55.73	309	P	P	13 50 58.7	+0.1
ABKAR	Akbulak array	55.73	309	P	P	13 50 58.8	+0.1
WRA	Warramunga Arr	58.40	186	P	P	13 51 17.8	0.0
	comp=Z,1.3nm,0.7s,baz=1.5,slow=7.2,SNR=14						
	comp=Z,1.3nm,0.7s						
RES	Resolute Bay	61.51	14	P	P	13 51 38.4	-0.1
RES				IAmb	IAmb	13 51 45.7	
	comp=Z,4.3nm,1.4s						
ASAR	Alice Springs	62.12	186	P	P	13 51 43.1	-0.1
	comp=Z,0.6nm,0.8s,baz=358,slow=6.2,SNR=9.7						
	comp=Z,0.6nm,0.8s						
FINES	FINESS Array B	66.71	331	P	P	13 52 12.7	-0.1
FINES	FINESS Array B	66.71	331	P	P	13 52 11.9	-0.9
	comp=Z,0.9nm,0.5s,baz=72,slow=8.4,SNR=4.6						
	comp=Z,0.9nm,0.5s						
BLKN	Baker Lake	68.60	23	P	P	13 52 24.8	+0.1
BLKN				IAmb	IAmb	13 52 25.6	
	comp=Z,2.5nm,0.9s						
HFS	Hagfors	72.03	335	P	P	13 52 45.4	-0.4
	comp=Z,0.9nm,0.4s,baz=84,slow=4.6,SNR=7.5						
	comp=Z,0.9nm,0.4s						
AKASG	Malin Array Be	72.10	321	P	P	13 52 46.0	-0.3
	comp=Z,2.1nm,0.6s,baz=48,slow=6.0,SNR=11						
	comp=Z,2.1nm,0.6s						
AKBB	Malin Array Si	72.10	321	P	P	13 52 45.9	-0.5
AKBB				IAmb	IAmb	13 52 49.8	
	comp=Z,2.0nm,0.7s						
KIEV	Kiev	72.12	321	P	P	13 52 45.9	-0.5
KIEV				IAmb	IAmb	13 52 49.8	
	comp=Z,1.7nm,0.7s						
NOA	NORSAR Array B	72.15	336	P	P	13 52 46.5	-0.1
	comp=Z,0.6nm,0.5s,baz=41,slow=6.0,SNR=3.7						
	comp=Z,0.6nm,0.5s						
NVAR	Mina Array Bea	75.33	52	P	P	13 53 06.9	+1.0
	comp=Z,0.8nm,0.6s,baz=305,slow=4.1,SNR=5.1						
	comp=Z,0.8nm,0.6s						
GRA1	Grafenberg Arr	80.94	329	P	P	13 53 34.8	-1.7
GRFO	Grafenberg	80.94	329	P	P	13 53 34.8	-1.7
ITM	Ithomi	85.13	315	P	P	13 53 58.2	-0.2

DJA 18 13:49:12.4±0.8, 10°S±8°×12°0E±°, h16km±7km, M3.9/7, mb4.3/1, MLv3.7/7, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BASI	Baing, Sumba	0.50	87	P	Pg	13 49 22.6	+0.2
WSI	Waingapu	0.62	21	P	Pb	13 49 24.9	0.0
WBSI	Waikabubak, Su	0.90	312	P	Pb	13 49 28.3	-1.4
WBSI				S	Sn	13 49 43.6	+0.4
EDFI	Ende, Flores	2.19	47	P	Pn	13 49 48.6	+0.4
PLAI	Plampang	2.67	302	P	Pn	13 49 55.2	+0.4
PLAI				S	Sn	13 50 25.5	-1.3
TWSI	Taliwang, Sumb	3.48	295	P	Pn	13 50 08.0	+2.0
JAGI	Jajag, Banyuwa	6.10	286	P	Pn	13 50 41.5	-0.5

SKHL 18 13:58:10.7±0.6, 43°.10N×146°.70E, h72km±6km, mb5.1/4

JMA 18 13:58:10.2±0.2, 43°.1N±0°.7×14°7E±°, h60km±2km, MV3.6/36, OFF NEMURO PENINSULA

JMA Felt I J1 at OFF NEMURO PENINSULA .

ISC 18 13:58:10.8±2.1, 43°.11N±0°.10×146°.71E±0°.08, h49km±26km, n17, σ0^{s}49/30, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	Nemuro 2	0.75	290	P	Pn	13 58 25.1	-0.1
NEM2				S	Sn	13 58 35.7	+0.1
NMR	Nemuro--Hokkai	0.76	290	i P	Pn	13 58 25.1	-0.2
NMR				i S	Sn	13 58 35.7	-0.2
SHO	Shikotan	0.77	6	i P	Pn	13 58 26.0	+0.6
SHO				AMB	AMB	13 58 26.4	
	2μm,0.3s						
SHO				i S	Sn	13 58 36.2	+0.2
SHO				A	A	13 58 37.1	
	1μm,0.5s						
SHO				A	A	13 58 37.1	
	3μm,0.5s						
GLVR	Golovnino	1.07	306	i P	Pn	13 58 29.2	-0.3
GLVR				AMB	AMB	13 58 29.6	
	740nm,0.3s						
GLVR				eS	Sn	13 58 43.6	+0.3
GLVR				A	A	13 58 48.8	
	3μm,0.3s						
GLVR				A	A	13 58 48.8	
	2μm,0.3s						
YUK	Yuzh-Kuril'sk	1.11	327	i P	Pn	13 58 29.5	-0.5
YUK				AMB	AMB	13 58 30.1	
	1μm,0.3s						
YUK				eS	Sn	13 58 43.5	-0.7
YUK				A	A	13 58 45.0	
	2μm,0.3s						
YUK				A	A	13 58 45.0	
	1μm,0.3s						
JKHN	Kushirohamanak	1.14	269	P	Pn	13 58 30.4	+0.1
JKHN				S	Sn	13 58 45.4	+0.6
AKK	Akkeshi	1.37	267	eP	Pn	13 58 33.3	-0.2
JNSB	Nemuroshibetsu	1.41	299	P	Pn	13 58 33.8	-0.3
JNSB				S	Sn	13 58 51.6	+0.1
JRA	Rausu	1.42	306	P	Pn	13 58 34.2	0.0
JRA				S	Sn	13 58 51.9	+0.2
JAK	Akkeshi	1.48	266	P	Pn	13 58 34.8	-0.2
JAK				S	Sn	13 58 52.7	-0.5
JNK	Nakash	1.53	289	P	Pn	13 58 35.1	-0.6
JNK				S	Sn	13 58 53.5	-1.0
JOB	Onbets	2.12	265	P	Pn	13 58 43.7	0.0
JAR	Ashorobuto	2.16	276	i P	Pn	13 58 44.5	+0.2
JAR				S	Sn	13 59 09.9	0.0
JTKR	Abashiri--Toko	2.21	294	P	Pn	13 58 45.6	+0.6
JTKR				S	Sn	13 59 12.1	+1.0
KUR	Kuril'sk	2.28	21	eP	Pn	13 58 46.0	0.0
KUR				AMB	AMB	13 58 47.4	
	50nm,0.2s						
KUR				eS	Sn	13 59 12.0	-0.8
KUR				A	A	13 59 14.6	
	310nm,0.2s						
KUR				A	A	13 59 14.6	
	180nm,0.2s						
JCH	Churui	2.51	260	eP	Pn	13 58 49.1	0.0
JMP	Maruseppu	2.60	291	P	Pn	13 58 51.2	+0.8

IDC 18 13:59:38.0±1.9, 33°.23S×178°.15W, h0km, mb4.0/3, mbtmp4.1/4, ML4.2/1, Error ellipse: s-maj=46.2km s-min=34.6km az=60.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.33	216	Pn	Pn	14 01 13.0	+0.4
	5.9nm,0.3s,baz=3.7,slow=2.5,SNR=41						
URZ				Sn	Sn	14 02 23.4	-2.1
	8.2nm,0.3s,baz=232,slow=20,SNR=9.1						
	13nm,0.3s						
ASAR	Alice Springs	42.90	270	P	P	14 07 38.5	-0.2
	1.5nm,0.7s,baz=110,slow=7.6,SNR=28						
	1.5nm,0.7s						
WRA	Warramunga Arr	44.15	275	P	P	14 07 48.4	-0.2
	1.0nm,0.4s,baz=114,slow=8.3,SNR=5.0						
	1.0nm,0.4s						
QSPA	South Pole Qui	56.89	180	P	P	14 09 24.3	-0.3
	2.6nm,1.1s,baz=336,slow=1.7,SNR=7.6						
	2.6nm,1.1s						
FINES	FINESS Array B	147.73	338	PKPbc	PKPbc	14 19 23.4	-0.5
	1.1nm,0.5s,baz=52,slow=4.6,SNR=7.1						

IDC 18 14:03:05.5±2.1, 5°.82S×148°.81E, h108km±16km, mb3.9/3, mbtmp4.3/6, Error ellipse: s-maj=35.1km s-min=15.2km az=113.0

NEIC 18 14:03:09.3±1.3, 5°.85S±0°.07×148°.57E±0°.06, h127km±8km, mb4.2/18, Error ellipse: s-maj=12.1km s-min=6.3km az=148.0

ISC 18 14:03:08.9±0.7, 5°.85S±0°.08×148°.55E±0°.09, h127km, n31, σ0^{s}99/33, mb4.1/10, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.80	201		Pn	14 04 05.4	-0.5
PMG	Port Moresby	3.80	201	P	Pn	14 04 05.2	-0.6
	40nm,0.4s,baz=44,slow=5.6,SNR=25						
PMG				S	Sn	14 04 48.7	-1.3
	200nm,0.5s,baz=53,slow=21,SNR=11						
MANU	Manus Island	3.96	343	Pn	Pn	14 04 08.9	+0.8
RABL	Rabaul	3.96	66	Pn	Pn	14 04 08.0	-0.1
JAY	Jayapura	8.49	293	P	Pn	14 05 08.9	-0.1
	2.9nm,0.3s,baz=144,slow=5.2,SNR=7.0						
COEN	Coen	9.64	213	Pn	Pn	14 05 25.2	+0.7
CTAO	Charters Tower	14.33	189	Pn	Pn	14 06 25.9	-0.1
MTN	Manton Dam	18.53	247	P	P	14 07 15.5	-0.2
MTN				IAmb	IAmb	14 07 16.8	
	comp=Z,12nm,0.8s						
WB0	Warramunga Arr	19.52	224		P	14 07 26.9	+0.4
WB0				IAmb	IAmb	14 07 30.5	
	comp=Z,14nm,0.8s						
WR8	Warramunga Arr	19.58	223		P	14 07 27.6	+0.5
WRAB	Tennant Creek	19.66	223	P	P	14 07 28.3	+0.3
WRA	Warramunga Arr	19.68	223	P	P	14 07 28.6	+0.4
	comp=Z,9.5nm,0.5s,baz=50,slow=11,SNR=73						
KNRA	Kununurra	21.73	242	P	P	14 07 48.7	-1.5
KNRA				IAmb	IAmb	14 07 51.2	
	comp=Z,7.1nm,0.7s						
AS31	Alice Springs	22.64	217		P	14 07 59.8	+0.3
ASAR	Alice Springs	22.64	217	P	P	14 07 59.1	-0.4
ASAR	Alice Springs	22.64	217	P	P	14 08 00.1	+0.6

	comp=Z,8.4nm,0.6s,baz=50,slow=9.2,SNR=115						
ASAR				S	S	14 12 01.4	+3.3
	comp=Z,1.0nm,1.0s,baz=28,slow=21,SNR=4.7						
	comp=Z,8.4nm,0.6s						
DZM	Mont Dzumac	23.66	135	P	P	14 08 10.3	+1.3
FITZ	Fitzroy Crossi	25.46	239		P	14 08 24.9	-0.4
PEA0B	Petropavlovsk-	59.24	6	P	P	14 12 56.9	+0.2
PETK	Petropavlovsk-	59.24	6	P	P	14 12 56.8	+0.1
E19K	Redstone River	82.48	18	P	P	14 15 16.8	0.0
E19K				IAmb	IAmb	14 15 38.5	
	comp=Z,6.9nm,1.5s						
F20K	Avaraart Lake	82.72	19	P	P	14 15 18.5	+0.4
E21K	Killik River	84.05	18	P	P	14 15 24.9	0.0
E21K				IAmb	IAmb	14 16 03.6	
	comp=Z,3.4nm,1.4s						
QSPA	South Pole Qui	84.12	180	P	P	14 15 25.1	-0.4
QSPA				IAmb	IAmb	14 15 55.5	
	comp=Z,5.3nm,1.4s						
QSPA	South Pole Qui	84.12	180	P	P	14 15 24.7	-0.8
	comp=Z,1.0nm,0.6s,baz=61,slow=1.0,SNR=11						
	comp=Z,1.0nm,0.6s						
G23K	Bananza Creek	84.47	21	P	P	14 15 27.4	+0.3
G23K				IAmb	IAmb	14 15 28.3	
	comp=Z,3.1nm,1.1s						
ILAR	Eielson Array	84.74	23	P	P	14 15 26.1	-2.3
	comp=Z,1.3nm,0.7s,baz=251,slow=5.2,SNR=16						
	comp=Z,1.3nm,0.7s						
J25K	Salcha River,	85.26	23	P	P	14 15 29.9	-1.2
J25K				IAmb	IAmb	14 15 31.1	
	comp=Z,3.1nm,0.9s						
D23K	Nanushuk River	85.35	18	P	P	14 15 32.4	+1.0
F24K	Squaw Lake	85.59	20	P	P	14 15 33.3	+0.6
F24K				IAmb	IAmb	14 15 33.8	
	comp=Z,2.0nm,0.8s						
K27K	Chicken	86.36	24	P	P	14 15 36.8	+0.3
K27K				IAmb	IAmb	14 15 37.5	
	comp=Z,2.3nm,0.9s						

STR 18 14:06:43.1±1.6,45°N±10°×°±°,h0^{km},MLv1.5/6,Error ellipse: s-maj=0.0km s-min=0.0km az=168.0, preliminary,France

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRN	Grenoble	0.19	102	Pg	Pg	14 06 47.1	+0.2
GRN				Sg	Sg	14 06 50.5	+1.2
RRL	Rocca Remolon	1.00	111	Pg	Pn	14 07 04.5	-0.1
RRL				Sg	Sn	14 07 19.6	0.0

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*IDC **18** 14:09:29.4±4.1,38°.83N×139°.64E,h0^{km},mb3.2/1, mbtmp3.2/3,ML2.7/2,Error ellipse: s-maj=55.9km s-min=53.5km az=71.0*

*JMA **18** 14:09:33.4±0.1,38°.7N±0°.2×139°.4E±0°.3,h10^{km}±1^{km}, MV3.5/40,W OFF YAMAGATA PREF*

JMA Felt I J1 at W OFF YAMAGATA PREF .

ISC 18 14:09:31.6±1.3,**38°.77N**±0°.06×**139°.46E**±0°.04,**h11**^{km}±8^{km}, **n12,**σ**1^{s}31**/20,**3D,Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYA	Atsumi	0.27	131	P	Pg	14 09 38.1	+1.1
JYA				S	Sg	14 09 41.9	+1.1
JAW	Awa shima	0.35	207	P	Pg	14 09 38.6	-0.1
JAW				S	Sg	14 09 42.5	-0.8
JTB	Tobi-shima	0.43	10	P	Pn	14 09 43.9	+0.3
JYYZ	Yamagatayuza	0.44	56	⇓P	Pn	14 09 44.4	+0.6
JYK	Kaneyama	0.72	78	⇓*i*P	Pn	14 09 47.7	0.0
JYK				⇓S	Sn	14 09 57.8	-0.8
JYS	Shirataka	0.73	139	P	Pb	14 09 45.6	-0.6
JYS				*e*S	Sb	14 09 54.7	-1.5
JNS	Sasagawa	0.96	187	*i* P	Pg	14 09 49.1	-0.9
JNS				S	Sg	14 10 00.6	-1.9
JOU	Okura	1.03	113	P	Pn	14 09 52.4	+0.5
JOU				S	Sn	14 10 05.4	-0.9
JSD	Sado	1.19	232	P	Pg	14 09 53.4	-1.1
JSD				S	Sg	14 10 08.2	-1.7
MJAR	Matsushiro Arr	2.44	204	Pn	Pn	14 10 13.2	+2.0
	0.3nm,0.3s,baz=15,slow=15,SNR=7.3						
MJAR				Sn	Sn	14 10 43.1	+2.0
	2.2nm,0.3s,baz=65,slow=30,SNR=23						
	2.0nm,0.3s						
KSRS	Korea Array	9.19	265	Pn	Pn	14 11 45.6	+1.7
	0.3nm,0.3s,baz=74,slow=14,SNR=5.7						
	0.7nm,0.3s						
WRA	Warramunga Arr	58.60	186	P	P	14 19 28.2	-0.3
	0.2nm,0.8s,baz=1.3,slow=7.3,SNR=1.5						
	0.2nm,0.8s						

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*GCG **18** 14:11:44.5±0.3,14°.41N×92°.39W,h60^{km}±107^{km},MD3.8, ML3.4*

*MEX **18** 14:11:45.8±0.4,14°.81N×92°.32W,h82^{km}±5^{km},MD3.7*

ISC 18 14:11:40.1±2.4,**14°.6N**±0°.1×**92°.42W**±0°.09,**h99**^{km}±14^{km}, **n11,**σ**2^{s}40**/21,**1C-1D,Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.35	25	*e*P	Pn	14 11 56.1	+1.4
THIG				*e*S	Sn	14 12 04.7	-1.1
SMCA	Catarina	0.42	51	*i* P	Pn	14 11 56.8	+1.6
PATR	El Naranjo	0.55	18	*e*P	Pn	14 11 57.4	+0.9
PATR				*e*S	Sn	14 12 06.5	-2.1
PAVE	Pavencul	0.64	21	*e*P	Pn	14 11 58.3	+1.1
PAVE				*e*S	Sn	14 12 07.5	-2.4
RTAL	Retalhuleu	0.70	95	*e*P	Pn	14 11 59.9	+2.5
RTAL				*e*S	Sn	14 12 10.9	+0.5
STG8	El Palmar, Qui	1.04	98	⇑*e*P	Pn	14 12 01.4	+0.3
STG8				*i* S	Sn	14 12 14.2	-2.7
STG8				IAML		14 12 16.0	
	comp=N,1µm,0.2s						
STG0	El Palmar, Qui	1.05	99	⇓*e*P	Pn	14 12 01.1	-0.1
STG0				*i* S	Sn	14 12 14.3	-2.7
STG0				IAML		14 12 15.5	
	comp=E,1µm,0.3s						
HUEH	Huehuetenango	1.14	51	*e*P	Pn	14 12 04.2	+2.0
HUEH				*e*S	Sn	14 12 20.4	+1.4
PCIG		1.35	325	*e*P	Pn	14 12 06.8	+2.3
PCIG				*i* S	Sn	14 12 22.6	-0.3
CCIG	Comitan	1.70	9	*e*P	Pn	14 12 12.1	+3.1
CCIG				*i* S	Sn	14 12 29.0	-2.0
TGIG		2.28	343	*e*P	Pn	14 12 17.4	+1.1
TGIG				*e*S	Sn	14 12 38.4	-5.7

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*IDC **18** 14:27:05.5±0.8,20°.70S×169°.71E,h73^{km}±6^{km},mb4.1/9, mbtmp4.4/11,Error ellipse: s-maj=18.7km s-min=11.6km az=148.0*

*NOU **18** 14:27:06.0,20°.81S×169°.74E,h56^{km},mb4.8/29,Vanuatu Islands*

*NEIC **18** 14:27:08.6±0.9,20°.66S±0°.09×169°.39E±0°.07,h99^{km}±8^{km}, mb4.7/9,Error ellipse: s-maj=16.0km s-min=4.1km az=144.0*

ISC 18 14:27:07.8±0.5,**20°.71S**±0°.05×**169°.61E**±0°.06,**h100**^{km}**,n70,** σ**1^{s}83**/71,**mb4.7**/14,**5D,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INH	Isangel	1.19	345	P	Pn	14 27 29.2	-1.3
INH	Isangel	1.19	345	S	Sn	14 27 45.6	-1.9
MARNC	Mare, Loyalty	1.66	242	P	Pn	14 27 34.4	-1.7
MARNC	Mare, Loyalty	1.66	242	S	Sn	14 27 55.0	-2.6
PINNC	Pines Island,	2.76	226		Pn	14 27 49.5	-0.9
PINNC	Pines Island,	2.76	226	P	Pn	14 27 48.6	-1.8
PINNC	Pines Island,	2.76	226	S	Sn	14 28 21.4	-1.8
YATNC	Mamie plateau,	2.87	241	P	Pn	14 27 50.0	-1.8
YATNC	Mamie plateau,	2.87	241	S	Sn	14 28 23.2	-2.5
OUENC	Ouen Island, N	3.09	236	P	Pn	14 27 54.6	-0.1
OUENC	Ouen Island, N	3.09	236	S	Sn	14 28 29.6	-1.3
DZM	Mont Dzumac	3.25	245		Pn	14 27 56.3	-0.6
DZM	Mont Dzumac	3.25	245	P	Pn	14 27 56.4	-0.5
	184nm,0.3s,baz=104,slow=12,SNR=987						
DZM				S	Sn	14 28 33.7	-1.2
	991nm,0.3s,baz=108,slow=16,SNR=22						
DZM	Mont Dzumac	3.25	245	P	Pn	14 27 56.6	-0.4
DZM	Mont Dzumac	3.25	245	S	Sn	14 28 34.2	-0.7
ONTNC	Ouen Toro	3.34	241		Pn	14 27 56.4	-1.8
ONTNC	Ouen Toro	3.34	241	P	Pn	14 27 56.8	-1.3
ONTNC	Ouen Toro	3.34	241	S	Sn	14 28 35.4	-1.6
KOUNC	Koumac, New Ca	4.99	271	P	Pn	14 28 21.5	+1.1
KOUNC	Koumac, New Ca	4.99	271	S	Sn	14 29 17.8	+1.0
VLAKA	Lakatoro	5.02	335	P	Pn	14 28 20.3	-0.6
SANVU	Saraoutou	5.71	336	Pn	Pn	14 28 28.2	-1.9
SANVU	Saraoutou	5.71	336	P	Pn	14 28 29.9	-0.3
MSVF	Nonsavu	8.51	71		Pn	14 29 11.4	+3.1
MSVF	Nonsavu	8.51	71	P	Pn	14 29 09.4	+1.0
	40nm,0.9s,baz=239,slow=7.8,SNR=6.7						
MSVF	Nonsavu	8.51	71	P	Pn	14 29 04.6	-3.7
OUZ	Omahuta	14.88	167	P	Pn	14 30 30.8	-2.2
TOZ	Tahuroa Road	17.72	164		P	14 31 09.1	+1.5
HIZ	Hauiti	18.32	167	P	P	14 31 15.3	+1.2
URZ	Urewera	18.66	161	P	P	14 31 18.5	+0.7
	9.9nm,0.6s,baz=67,slow=7.0,SNR=9.4						
URZ	Urewera	18.66	161	P	P	14 31 17.9	0.0
ARMA	Armidale	18.86	236	P	Pn	14 31 23.7	+1.7
RTZ	Ruatahuna	18.95	162		P	14 31 23.1	+1.9
AFI	Afiamalu	19.01	72	P	P	14 31 21.1	-0.9
AFI	Afiamalu	19.01	72	P	P	14 31 21.5	-0.4
BKZ	Black Stump Fm	19.33	164		P	14 31 27.6	+2.3
BKZ	Black Stump Fm	19.33	164	P	P	14 31 25.2	0.0
MRZ	Mangatainoka R	20.53	167		P	14 31 39.5	+1.3
BFZ	Birch Farm	20.70	166	P	P	14 31 39.8	-0.2
CNB	Canberra Magne	22.98	226	P	P	14 32 06.2	+2.1
JCZ	Jackson Bay	23.31	181	P	P	14 32 08.8	+1.7
CMSA	Cobar Meteorol	23.98	238	P	P	14 32 15.6	+2.5
STKA	Stephens Creek	27.39	240	P	P	14 32 46.3	+2.4
	12nm,0.5s,baz=85,slow=9.2,SNR=25						
	12nm,0.5s						
STKA	Stephens Creek	27.39	240	P	P	14 32 46.6	+2.7
STKA	Stephens Creek	27.39	240		P	14 32 46.3	+2.4
ASAR	Alice Springs	33.14	258	P	P	14 33 35.5	+0.7
	16nm,0.9s,baz=83,slow=8.8,SNR=8.1						
	16nm,0.9s						
VNDA	Vanda	56.98	182	P	P	14 36 43.6	+1.1
VNDA				IAmb	IAmb	14 38 39.3	
	comp=Z,5.4nm,0.7s						
VNDA	Vanda	56.98	182	P	P	14 36 43.0	+0.5
	comp=Z,1.4nm,0.8s,baz=13,slow=10.0,SNR=5.6						
	comp=Z,1.4nm,0.8s						
SBA	Scott Base	57.21	181	P	P	14 36 45.8	+1.8
QSPA	South Pole Qui	69.36	180	P	P	14 38 05.6	+1.1
QSPA	South Pole Qui	69.36	180	P	P	14 38 04.9	+0.3
	comp=Z,15nm,0.9s,baz=21,slow=1.4,SNR=50						
QSPA				pP	PcP	14 38 25.9	-1.5
	comp=Z,2.9nm,0.7s,baz=342,slow=2.4,SNR=2.5						
	comp=Z,15nm,0.9s						
CMAR	Chiang Mai Arr	79.42	294	P	P	14 39 06.5	+3.0
	comp=Z,1.4nm,0.8s,baz=133,slow=4.6,SNR=5.9						
CMAR				pP	pP	14 39 24.9	-3.9
	comp=Z,0.9nm,0.8s,baz=115,slow=5.2,SNR=3.0						
	comp=Z,1.4nm,0.8s						
BELA	Belgrano 2	80.61	175	P	P	14 39 08.9	0.0
BELA				IAmb	IAmb	14 39 09.7	
	comp=Z,9.4nm,0.7s						
L18K	Granite Mounta	86.88	15	P	P	14 39 42.5	+1.6
TROLL	Troll, Antarti	87.11	184	⇓P	P	14 39 42.6	+0.3
	comp=Z,433nm,0.8s						
SNAA	Sanae	87.72	182	⇓P	P	14 39 44.7	-0.4
	comp=Z,63nm,0.6s						
SNAA	Sanae	87.72	182	P	P	14 39 45.2	+0.1
SNAA	Sanae	87.72	182	P	P	14 39 45.2	+0.1
	comp=Z,3.5nm,0.8s,baz=206,slow=8.6,SNR=23						
	comp=Z,3.5nm,0.8s						
VNA3	Neumayer Olymp	88.30	180	⇓P	P	14 39 47.7	-0.1
	comp=Z,9.6nm,0.7s						
VNA2	Neumayer--Watz	88.59	181	⇓P	P	14 39 49.3	+0.2
	comp=Z,10nm,0.6s,baz=170,slow=4.6						
SONM	Songino Array	88.59	323	P	P	14 39 50.4	+0.8
	comp=Z,0.3nm,0.3s,baz=145,slow=5.3,SNR=3.9						
SONM				pP	pP	14 40 10.3	-5.2
	comp=Z,0.5nm,0.5s,baz=139,slow=7.0,SNR=1.7						
	comp=Z,0.3nm,0.3s						
VNA1	Neumayer--Stat	88.88	181	⇓P	P	14 39 50.9	+0.4
	comp=Z,10.0nm,1.0s						
NVAR	Mina Array Bea	89.51	48	P	P	14 39 55.0	+0.7
NVAR	Mina Array Bea	89.51	48	P	P	14 39 54.8	+0.5
	comp=Z,0.7nm,0.6s,baz=228,slow=8.8,SNR=7.3						
	comp=Z,0.7nm,0.6s						
ILAR	Eielson Array	91.52	17	P	P	14 40 01.9	-0.8
	comp=Z,0.3nm,0.7s,baz=230,slow=4.9,SNR=4.6						
ILAR				pP	pP	14 40 21.9	-6.7
	comp=Z,0.4nm,0.8s,baz=271,slow=4.0,SNR=3.9						
	comp=Z,0.3nm,0.7s						
U15A	North Rim	92.99	52	P	P	14 40 11.6	+1.1
U15A				IAmb	IAmb	14 40 13.4	
	comp=Z,4.2nm,1.1s						
BRG	Berggiesshubel	144.33	333	*e*P	PKPbc	14 46 31.2	+0.6
BRG				Amp		14 46 33.8	
	comp=Z,4.0nm,0.8s						
CLL	Collm	144.38	335	*i* PKPdf	PKPbc	14 46 31.4	+0.6
	comp=Z,14nm,1.5s						
EKA	Eskdalemuir Ar	145.00	353	PKPbc	PKPbc	14 46 31.7	-0.9
	comp=Z,1.1nm,0.5s,baz=356,slow=2.3,SNR=7.7						
GERES	GERESS Array B	145.94	331	PKPbc	PKPbc	14 46 36.4	+0.5
	comp=Z,1.3nm,0.6s,baz=33,slow=3.2,SNR=10						

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*BJI **18** 14:27:14.4,7°.93S×129°.01E,h129^{km},mB5.3/1,mb4.9/33*

*IDC **18** 14:27:18.2±1.7,7°.50S×128°.82E,h116^{km}±14^{km},mb4.4/15, mbtmp4.8/18,Error ellipse: s-maj=15.2km s-min=10.1km az=87.0*

*NEIC **18** 14:27:18.3±1.6,7°.53S±0°.04×128°.90E±0°.05,h115^{km}±7^{km}, mb4.9/37,Error ellipse: s-maj=9.3km s-min=2.3km az=125.0*

*DJA **18** 14:27:18.2±0.2,8°S±2°×12°9E±°,h120^{km}±2^{km},M5.1/72, mb5.0/72,mB5.6/18,MLv5.2/18,Mw(mB)5.1/18*

ISC 18 14:27:18.8±0.5,**7°.62S**±0°.04×**128°.91E**±0°.03,**h124**^{km}±4^{km}, **n231,**σ**1^{s}63**/248,**mb4.8**/42,**5C,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.39	99		Pn	14 27 57.2	-0.2
SAUI	Saumlaki	2.39	99	P	Pn	14 27 57.8	+0.4
SAUI	Saumlaki	2.39	99	S	Sn	14 28 25.9	-1.2
SAUI	Saumlaki	2.39	99	P	Pn	14 27 57.8	+0.4
SAUI				S	Sn	14 28 26.3	-0.8
BNDI	Bandanaira	3.23	18	P	Pn	14 28 08.4	+0.1
BNDI	Bandanaira	3.23	18	P	Pn	14 28 08.2	-0.1
AAI	Ambon	3.97	350	P	Pn	14 28 18.1	0.0
MSAI	Masohi	4.25	0	P	Pn	14 28 22.0	+0.2
NLAI	Namlea	4.71	337	P	Pn	14 28 29.1	+1.1
SOEI	Soe	5.06	245		Pn	14 28 32.9	+0.1
SOEI	Soe	5.06	245	P	Pn	14 28 34.0	+1.3
SOEI	Soe	5.06	245	S	Sn	14 29 30.2	-0.1
SOEI	Soe	5.06	245	P	Pn	14 28 33.4	+0.7
	6µm451nm,1.1s						
MTN	Manton Dam	5.63	157		Pn	14 28 39.3	-1.1
MTN	Manton Dam	5.63	157	P	Pn	14 28 39.6	-0.8
MTN	Manton Dam	5.63	157	S	Sn	14 29 39.9	-4.0
MTN	Manton Dam	5.63	157	P	Pn	14 28 39.6	-0.8
MTN	Manton Dam	5.63	157	S	Sn	14 29 41.8	-2.2
FAKI	Fak Fak	5.73	36		Pn	14 28 38.9	-2.8
FAKI	Fak Fak	5.73	36	P	Pn	14 28 40.1	-1.6
FAKI	Fak Fak	5.73	36	P	Pn	14 28 39.1	-2.6
	1.1nm137nm,0.7s						
BATI	Baumata	5.79	243	P	Pn	14 28 43.0	+0.6
	246nm,0.4s,baz=137,slow=4.3,SNR=59						
BATI				S	Sn	14 29 46.2	-1.5
	732nm,0.5s,baz=310,slow=8.9,SNR=14						
BATI	Baumata	5.79	243	P	Pn	14 28 43.1	+0.6
	3.5nm5µm297nm,0.6s						
KDU	Kakadu	6.13	145	P	Pn	14 28 45.8	-1.4
	comp=Z,873nm,0.6s						
KDU	Kakadu	6.13	145	S	Sn	14 29 50.7	-5.4
KDU	Kakadu	6.13	145	P	Pn	14 28 45.7	-1.4
KDU	Kakadu	6.13	145	S	Sn	14 29 52.4	-3.7
KMPI	Kaimana, Papua	6.18	51	P	Pn	14 28 46.0	-1.8
	comp=Z,3.4nmcomp=Z,5µmcomp=Z,252nm,0.5s						
SANI	Sanana	6.25	332	P	Pn	14 28 50.0	+1.3
SANI	Sanana	6.25	332	P	Pn	14 28 50.1	+1.3
	comp=Z,0.6nmcomp=Z,175nm,0.9s						
BBSI	Bau Bau	6.65	288	P	Pn	14 28 54.5	+0.4
	comp=Z,0.6nmcomp=Z,193nm,1.0s						
MMRI	Maumere	6.68	261		Pn	14 28 52.9	-1.7
MMRI	Maumere	6.68	261	P	Pn	14 28 54.2	-0.4
MMRI	Maumere	6.68	261	S	Sn	14 30 09.5	+0.1
MMRI	Maumere	6.68	261	P	Pn	14 28 54.4	-0.2
	comp=Z,1.0nmcomp=Z,154nm,0.7s						
SWI	Sorong	7.11	19	P	Pn	14 28 58.6	-1.7
	comp=Z,0.8nmcomp=Z,79nm,0.8s						
EDFI	Ende, Flores	7.24	261	P	Pn	14 29 02.8	+0.7
KDI	Kendari	7.24	300	P	Pn	14 29 02.2	+0.1
KNRA	Kununurra	8.01	181		Pn	14 29 11.2	-1.2
KNRA	Kununurra	8.01	181	P	Pn	14 29 10.8	-1.6
	comp=Z,945nm,0.6s						
KNRA				S	Sn	14 30 34.6	-6.8
RKPI	Ransiki, Papua	8.02	41	P	Pn	14 29 11.2	-1.5
	comp=Z,4µmcomp=Z,272nm,0.6s						
TNTI	Ternate	8.48	349	P	Pn	14 29 19.8	+1.0
TNTI	Ternate	8.48	349	P	Pn	14 29 18.5	-0.3
	comp=Z,58nm,1.0s						
BSSI	Bau Bau, Buton	8.49	279	P	Pn	14 29 20.1	+1.2
	comp=Z,70nm,0.9s						
BASI	Baing, Sumba	8.63	252	P	Pn	14 29 19.6	-1.2
WSI	Waingapu	8.76	256	P	Pn	14 29 22.0	-0.5
LUWI	Luwuk	8.95	317	Pn	Pn	14 29 24.4	-0.7
LUWI	Luwuk	8.95	317	P	Pn	14 29 27.6	+2.4
LUWI	Luwuk	8.95	317	P	Pn	14 29 26.4	+1.2
	comp=Z,5µmcomp=Z,326nm,0.9s						
BNSI	Bone	9.32	290	P	Pn	14 29 28.8	-1.4
	comp=Z,137nm,1.0s						
KAPI	Kappang	9.46	285	Pn	Pn	14 29 30.1	-2.0
KAPI	Kappang	9.46	285	P	Pn	14 29 31.9	-0.2
	comp=Z,25nm,0.6s,baz=147,slow=8.2,SNR=9.5						
KAPI	Kappang	9.46	285	P	Pn	14 29 33.8	+1.7
KMSI	Cibinong	9.51	329	P	Pn	14 29 32.1	-0.6
BAKI	Biak	9.60	49	P	Pn	14 29 29.8	-4.2
	comp=Z,279nm,1.1s						
WBSI	Waikabubak, Su	9.62	257	P	Pn	14 29 32.8	-1.5
SPSI	Sidrap Palu	9.79	291	P	Pn	14 29 37.0	+0.5
	comp=Z,1µmcomp=Z,123nm,0.9s						
APSI	Ampana	9.84	312	P	Pn	14 29 37.9	+0.8
	comp=Z,2µmcomp=Z,134nm,1.0s						
TTSI	Tana Toraja	10.13	296	P	Pn	14 29 40.6	-0.4
	comp=Z,52nm,0.9s						
WAMI	Wamena	10.43	70	P	Pn	14 29 44.9	-0.2
	comp=Z,6µmcomp=Z,184nm,0.7s						
MRSI	Marisa	10.63	319	P	Pn	14 29 48.5	+0.7
	comp=Z,81nm,1.0s						
FITZ	Fitzroy Crossi	10.89	197		Pn	14 29 47.7	-3.5
FITZ	Fitzroy Crossi	10.89	197	P	Pn	14 29 47.8	-3.5
FITZ	Fitzroy Crossi	10.89	197	P	Pn	14 29 48.0	-3.3
	comp=Z,43nm,0.3s,baz=29,slow=11,SNR=509						
FITZ				S	Sn	14 31 41.4	-10
	comp=Z,390nm,0.8s,baz=71,slow=17,SNR=12						
FITZ	Fitzroy Crossi	10.89	197	P	Pn	14 29 48.5	-2.7
PLAI	Plampang	11.09	263	P	Pn	14 29 52.6	-1.3
PLAI	Plampang	11.09	263	P	Pn	14 29 51.3	-2.6
	comp=Z,2µmcomp=Z,93nm,0.6s						
PCI	Palu	11.24	306	P	Pn	14 29 57.3	+1.4
	comp=Z,74nm,0.9s						
SMPI	Sarmi	11.25	61	P	Pn	14 29 51.9	-4.2
	comp=Z,39nm,1.0s						
SGSI	Sangihe	11.73	343	P	Pn	14 30 01.8	-0.6
TOLI2	Tolitoli	11.87	317		Pn	14 30 02.0	-2.3
TOLI2	Tolitoli	11.87	317	P	Pn	14 30 06.9	+2.6
TWSI	Taliwang, Sumb	11.96	264	P	Pn	14 30 03.5	-1.9
	comp=Z,25nm,0.6s						
MPSI	Mapaga	11.97	311	P	Pn	14 30 05.8	+0.2
	comp=Z,38nm,1.0s						
GENI	Genyem	12.27	67	P	Pn	14 30 10.1	+0.6
GENI	Genyem	12.27	67	P	Pn	14 30 06.0	-3.5
	comp=Z,45nm,1.0s						
JAY	Jayapura	12.79	67	P	Pn	14 30 14.9	-1.4
	comp=Z,12nm,0.8s,baz=219,slow=8.4,SNR=6.2						
JAY	Jayapura	12.79	67	P	Pn	14 30 14.4	-2.0
	comp=Z,21nm,1.0s						
WB0	Warramunga Arr	13.19	157		Pn	14 30 17.9	-3.6
WRAB	Tennant Creek	13.33	157		Pn	14 30 19.7	-3.5
WRA	Warramunga Arr	13.33	157		Pn	14 30 18.0	-5.3
WRA	Warramunga Arr	13.33	157	P	Pn	14 30 19.2	-4.1
	comp=Z,112nm,0.5s,baz=344,slow=13,SNR=362						
WRA				S	Sn	14 32 36.9	-14
	comp=Z,228nm,1.0s,baz=331,slow=23,SNR=8.2						
WR8	Warramunga Arr	13.41	157		Pn	14 30 20.3	-3.9
JAGI	Jajag, Banyuwa	14.64	266	Pn	Pn	14 30 36.0	-4.0
JAGI	Jajag, Banyuwa	14.64	266	P	Pn	14 30 38.9	-1.1
	comp=Z,22nm,0.7s						
GMJI	Gumukmas	15.33	267	P	Pn	14 30 48.1	-0.6
COEN	Coen	15.36	115		Pn	14 30 46.8	-2.3
COEN	Coen	15.36	115	P	Pn	14 30 47.8	-1.2
	comp=Z,87nm,0.6s						
COEN	Coen	15.36	115	P	Pn	14 30 47.8	-1.2
MBWA	Marble Bar	16.12	212	Pn	Pn	14 30 56.7	-1.7
MBWA	Marble Bar	16.12	212	P	Pn	14 30 58.3	-0.1
	comp=Z,32nm,0.7s						
MBWA	Marble Bar	16.12	212	P	P	14 30 58.9	-0.4
PSA00	Pilbara Seismi	16.40	211	Pn	Pn	14 31 00.5	-1.4
PSA00	Pilbara Seismi	16.40	211	P	Pn	14 31 00.9	-0.9
	comp=Z,60nm,0.7s						
PSA00	Pilbara Seismi	16.40	211	P	Pn	14 31 01.6	-0.3
MYLDM	Lahad Datu	16.42	320	P	P	14 31 05.2	+2.6
QIS	Mount Isa	16.51	142	P	Pn	14 31 01.6	-1.7
	comp=Z,114nm,0.6s						
QIS	Mount Isa	16.51	142	P	Pn	14 31 01.9	-1.3
AS31	Alice Springs	16.66	164	Pn	Pn	14 31 02.7	-2.4
AS31	Alice Springs	16.66	164	P	Pn	14 31 02.9	-2.2
	comp=Z,53nm,0.8s						
ASAR	Alice Springs	16.66	164		Pn	14 31 02.5	-2.5
ASAR	Alice Springs	16.66	164	P	Pn	14 31 02.4	-2.6
	comp=Z,101nm,0.8s,baz=331,slow=8.9,SNR=550						
ASAR				S	Sn	14 33 59.0	-12
	comp=Z,47nm,0.8s,baz=338,slow=21,SNR=10						
AS01	Alice Springs	16.67	164	P	Pn	14 31 03.2	-2.0
PCJI	Pacitan	17.57	267	P	P	14 31 12.7	-2.7
	comp=Z,53nm,1.5s						
WOJI	Wonogiri, Jawa	17.83	268	P	P	14 31 17.2	-1.0
	comp=Z,71nm,1.9s						
PMG	Port Moresby	18.13	97	P	P	14 31 19.9	-1.6
PMG	Port Moresby	18.13	97	P	Pn	14 31 23.8	+0.9
PMG	Port Moresby	18.13	97	P	Pn	14 31 22.2	-0.7
MTSU	Mount Surprise	18.28	126	P	Pn	14 31 24.3	-0.3
	comp=Z,138nm,0.5s						
MTSU	Mount Surprise	18.28	126	P	Pn	14 31 24.3	-0.3
KKM	Kota Kinabalu	18.57	317	P	P	14 31 25.0	-1.4
KKM	Kota Kinabalu	18.57	317	P	Pn	14 31 29.8	+1.7
STKI	Sintang	18.99	293	P	P	14 31 30.3	-0.6
	comp=Z,36nm,0.7s						
KSM	Kuching	20.64	295		P	14 31 47.9	-0.8
KSM	Kuching	20.64	295	P	P	14 31 48.3	-0.4
CTAO	Charters Tower	20.88	128		P	14 31 52.2	+0.9
CTAO	Charters Tower	20.88	128	P	P	14 31 52.8	+1.5
MEEK	Meekatharra	21.30	206	P	P	14 31 56.2	+0.5
	comp=Z,41nm,0.7s						
MEEK	Meekatharra	21.30	206	P	P	14 31 56.8	+1.1
TPI	Tanjungpandan	21.71	282	P	P	14 32 00.9	+0.7
FORT	Forrest	23.05	182		P	14 32 14.0	+0.5
FORT	Forrest	23.05	182	P	P	14 32 14.2	+0.8
	comp=Z,198nm,0.8s						
FORT	Forrest	23.05	182	P	P	14 32 14.5	+1.1
KMBL	Kambalda	24.52	195	P	P	14 32 28.1	+1.3
MORW	Morawa	24.54	208		P	14 32 27.9	+0.9
MORW				IAmb	IAmb	14 32 30.2	
	comp=Z,50nm,0.9s						
MORW	Morawa	24.54	208	P	P	14 32 28.3	+1.3
BLDU	Ballidu	25.57	205	P	P	14 32 37.4	+1.1
BBOO	Buckleboo	25.93	166		P	14 32 40.0	+0.5
BBOO				IAmb	IAmb	14 32 41.0	
	comp=Z,44nm,0.7s						
BBOO	Buckleboo	25.93	166	P	P	14 32 40.2	+0.7
KLBR	Kellerberrin	26.02	202	P	P	14 32 41.6	+1.2
WHYH	Whyalla	26.53	164	P	P	14 32 45.7	+0.8
GD1S	Gladstone Soft	26.75	130	P	P	14 32 47.9	+0.9
HTT	Hallett	27.30	162	P	P	14 32 53.1	+1.2
NWAO	Narrogin (SRO)	27.41	202	P	P	14 32 53.9	+1.0
NWAO				IAmb	IAmb	14 32 54.6	
	comp=Z,22nm,0.6s						
NWAO	Narrogin (SRO)	27.41	202	P	P	14 32 53.0	+0.2
	comp=Z,16nm,0.5s,baz=42,slow=7.4,SNR=36						
	comp=Z,16nm,0.5s						
EIDS	Eidsvold	27.55	132		P	14 32 53.7	-0.4
CMSA	Cobar Meteorol	28.48	149	P	P	14 33 03.5	+1.1
BKNI	Bangkinang	28.89	285	P	P	14 33 07.5	+1.3
TATA	Tatamba Isabel	30.60	94	P	P	14 33 21.1	-0.2
SAVO	Savo Central	30.61	95	P	P	14 33 21.3	-0.1
HNR	Honiara	30.74	96	P	P	14 33 22.1	-0.5
KULM	Kulim	30.98	294	P	P	14 33 24.1	-0.5
KULM				IAmb	IAmb	14 34 00.9	
	comp=Z,16nm,1.1s						
ARPS	Mount Arapiles	31.32	160	P	P	14 33 28.8	+1.5
ALEG	Aligegeo Malai	31.48	94	P	P	14 33 27.9	-1.1
RPSI	Rantau Prapat	31.62	288		P	14 33 29.2	-1.1
RPSI				IAmb	IAmb	14 33 33.1	
	comp=Z,19nm,0.9s						
PSI	Prapat	31.66	288	P	P	14 33 30.4	-0.4
UBPT	Khong Chiam	32.52	314	P	P	14 33 37.2	-0.9
CAN	Canberra	33.16	149	P	P	14 33 45.6	+2.1
CAN				pP	pP	14 34 15.2	+4.8
CAN				PcP	PcP	14 36 24.8	+1.1

TOO	Toolangi	33.40	156	P	P	14 33 48.2	+2.6
TOO				IAmb	IAmb	14 33 49.0	
	comp=Z,18nm,1.3s						
SLVN	Son La	37.82	320	P	P	14 34 23.4	-0.2
SANVU	Saraoutou	38.27	105		P	14 34 27.3	0.0
SANVU	Saraoutou	38.27	105	P	P	14 34 28.5	+1.2
SANVU	Saraoutou	38.27	105	P	P	14 34 28.2	+0.9
SANVU				PcP	PcP	14 36 40.2	+1.1
NOUC	Port Laguerre	38.77	116	P	P	14 34 32.3	+0.8
DZM	Mont Dzumac	38.89	116	P	P	14 34 32.4	-0.2
DZM				IAmb	IAmb	14 34 34.1	
	comp=Z,12nm,0.8s						
DZM	Mont Dzumac	38.89	116	P	P	14 34 33.6	+1.0
CMAR	Chiang Mai Arr	39.32	312	P	P	14 34 34.7	-1.3
CMAR	Chiang Mai Arr	39.32	312	P	P	14 34 34.9	-1.1
	comp=Z,3.2nm,0.8s,baz=143,slow=7.4,SNR=15						
CMAR				PcP	PcP	14 36 43.3	+0.9
	comp=Z,1.3nm,0.7s,baz=176,slow=3.1,SNR=4.3						
CMAR				ScP	ScP	14 40 20.6	+0.9
	comp=Z,2.1nm,0.8s,baz=160,slow=3.3,SNR=8.6						
	comp=Z,3.2nm,0.8s						
CHTO	Chiang Mai	39.54	312	P	P	14 34 36.7	-1.1
CHTO	Chiang Mai	39.54	312	P	P	14 34 37.3	-0.6
CHTO	Chiang Mai	39.54	312	P	P	14 34 37.2	-0.7
CHTO				pP	pP	14 35 06.0	+1.1
JNU	Nakatsue	40.56	3	P	P	14 34 44.7	-1.4
JNU				IAmb	IAmb	14 35 40.9	
	comp=Z,51nm,1.9s						
NJ2	Nanjing	40.60	347	*e*P	P	14 34 48.5	+2.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSRS	Korea Array	44.85	359	P	P	14 35 19.8	-0.8
	comp=Z,1.9nm,0.5s,baz=177,slow=9.3,SNR=14						
KSRS				ScP	ScP	14 40 41.7	+0.4
	comp=Z,0.9nm,0.7s,baz=182,slow=3.8,SNR=5.2						
	comp=Z,1.9nm,0.5s						
XAN	Xi'an	45.56	337	P	P	14 35 23.9	-2.5
XAN				pmax	pmax		
	comp=Z,16nm,0.8s						
MSVF	Nonsavu	48.85	107	P	P	14 35 53.0	+0.7
	comp=Z,9.6nm,0.8s,baz=300,slow=23,SNR=4.9						
	comp=Z,9.6nm,0.8s						
MSVF	Nonsavu	48.85	107	P	P	14 35 53.8	+1.5
JTM	Tenmabayashi	49.45	12	P	P	14 35 55.6	-0.6
JTM				IAmb	IAmb	14 35 57.1	
	comp=Z,16nm,1.0s						
LZH	Lanzhou	49.45	333	*e*P	P	14 35 55.6	-1.0
LZH				pP	pP	14 36 23.4	-1.1
LZH				sP	sP	14 36 37.9	0.0
LZH				pmax	pmax		
	comp=Z,34nm,1.3s						
FOZ	Fox Glacier	50.56	142	P	P	14 36 05.7	+1.1
FOZ				IAmb	IAmb	14 36 06.9	
	comp=Z,21nm,0.8s						
MLZ	Mavora Lakes	50.59	145	P	P	14 36 05.8	+0.9
WHZ	Wether Hill Ro	50.80	145		P	14 36 07.7	+1.2
HHC	Hu-ho-hao-te	50.81	343	*e*P	P	14 36 10.8	+4.2
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
USRK	Ussuriysk Ar.	51.65	3	P	P	14 36 12.2	-0.5
	comp=Z,3.0nm,0.5s,baz=197,slow=8.5,SNR=16						
	comp=Z,3.0nm,0.5s						
LSA	Lhasa	51.91	317	P	P	14 36 15.1	-0.4
LSA				IAmb	IAmb	14 36 16.1	
	comp=Z,9.7nm,0.8s						
LSA	Lhasa	51.91	317	P	P	14 36 15.3	-0.2
LSA				pP	pP	14 36 44.7	+0.3
MRZ	Mangatainoka R	52.91	136	P	P	14 36 22.4	+0.2
EVN	Everest	53.90	313		P	14 36 28.7	-1.7
EVN				IAmb	IAmb	14 36 36.5	
	comp=Z,7.6nm,0.7s						
GTA	Gaotai	54.00	332	P	P	14 36 30.0	-0.3
GTA				ScP	ScP	14 41 20.8	+0.2
GTA				pmax	pmax		
	comp=Z,18nm,0.8s						
HEH	HeiHe	57.65	359	*e*P	P	14 36 54.3	-1.6
SONM	Songino Array	58.69	342	P	P	14 37 02.6	-0.8
	comp=Z,2.4nm,0.7s,baz=162,slow=7.9,SNR=14						
SONM				ScP	ScP	14 41 40.2	-0.8
	comp=Z,1.9nm,0.6s,baz=164,slow=6.0,SNR=7.5						
	comp=Z,2.4nm,0.7s						
DRV	Dumont d'Urvil	59.45	175	P	P	14 37 09.6	+1.4
CASY	Casey	59.93	188	P	P	14 37 12.9	+1.5
WMQ	Urumqi	63.33	328	*e*P	P	14 37 35.3	+0.5
PEA0B	Petropavlovsk-	65.25	19	P	P	14 37 47.2	+0.2
PETK	Petropavlovsk-	65.25	19	P	P	14 37 47.1	+0.2
PETK	Petropavlovsk-	65.25	19	P	P	14 37 47.0	0.0
	comp=Z,3.6nm,0.7s,baz=181,slow=4.9,SNR=13						
	comp=Z,3.6nm,0.7s						
CCD	Concordia, Ant	67.52	182	P	P	14 38 03.5	+1.9
CCD				PcP	PcP	14 38 29.3	+1.3
CCD				pP	pP	14 38 35.4	+3.4
MKAR	Makanchi Array	68.16	327	P	P	14 38 05.0	-0.6
	comp=Z,10nm,0.5s,baz=116,slow=8.4,SNR=158						
	comp=Z,10nm,0.5s						
MAKZ	Makanchi	68.33	327	P	P	14 38 06.6	-0.1
MAKZ				IAmb	IAmb	14 38 59.6	
	comp=Z,7.3nm,0.6s						
YAK	Yakutsk	69.44	0	P	P	14 38 13.0	-0.2
AAK	Ala-Archa	70.32	320	P	P	14 38 19.0	-0.2
AAK	Ala-Archa	70.32	320	P	P	14 38 19.3	+0.1
AAK				PcP	PcP	14 38 40.5	+0.5
ARSB	Arslanbob	70.63	319	P	P	14 38 20.6	-0.5
ZAA0	Zalesovo Array	71.66	334		P	14 38 25.2	-1.6
ZAA0				IAmb	IAmb	14 38 27.0	
	comp=Z,8.7nm,0.7s						
ZALV	Zalesovo Beam	71.66	334		P	14 38 25.2	-1.6
ZALV	Zalesovo Beam	71.66	334	P	P	14 38 25.1	-1.7
	comp=Z,11nm,0.7s,baz=122,slow=5.4,SNR=36						
	comp=Z,11nm,0.7s						
VNDA	Vanda	71.97	173	P	P	14 38 28.8	+0.5
VNDA	Vanda	71.97	173	P	P	14 38 29.3	+1.0
	comp=Z,5.8nm,0.7s,baz=319,slow=6.8,SNR=29						
	comp=Z,5.8nm,0.7s						
KURBB	Kurchatov Arra	72.48	329	P	P	14 38 30.9	-0.9
	comp=Z,10nm,0.5s,baz=130,slow=5.0,SNR=121						
	comp=Z,10nm,0.5s						
KURK	Kurchatov	72.49	329		P	14 38 31.0	-0.8
KURK				IAmb	IAmb	14 38 32.4	
	comp=Z,14nm,0.8s						
KKAR	Karatay Array	73.10	319	P	P	14 38 34.7	-1.0
MAW	Mawson	73.98	201	P	P	14 38 40.9	+0.5
	comp=Z,14nm,0.7s,baz=78,slow=6.2,SNR=38						
	comp=Z,14nm,0.7s						
ADK	Adak	75.27	31	P	P	14 38 48.2	+0.2
ADK				IAmb	IAmb	14 39 04.7	
	comp=Z,55nm,1.9s						
BVAR	Borovoye Array	78.01	328	P	P	14 39 03.0	-0.5
	comp=Z,2.6nm,0.4s,baz=122,slow=5.6,SNR=24						
	comp=Z,2.6nm,0.4s						
BRVK	Borovoye	78.09	328	P	P	14 39 03.2	-0.6
TIXI	Tiksi	79.10	360	P	P	14 39 07.5	-1.5
VOI	Vohitsoka	79.92	249	P	P	14 39 14.6	-0.1
VOI				IAmb	IAmb	14 40 25.6	
	comp=Z,44nm,1.8s						
UNV	Unalaska Valle	81.61	33	P	P	14 39 22.9	+0.2
AB31	Akbulak array	82.32	322		P	14 39 25.6	-1.1
ABKAR	Akbulak array	82.32	322		P	14 39 24.9	-1.7
ABKAR	Akbulak array	82.32	322		P	14 39 25.5	-1.1
ABKAR				IAmb	IAmb	14 39 30.3	
	comp=Z,3.0nm,0.8s						
QSPA	South Pole Qui	82.36	180	P	P	14 39 27.2	+0.5
	comp=Z,12nm,0.7s,baz=262,slow=0.2,SNR=25						
	comp=Z,12nm,0.7s						
SYO	Syowa Base	82.70	201	⇑*e*P	P	14 39 29.9	+1.7
N15K	Kwethluk River	87.29	28	P	P	14 39 51.5	+0.2
N15K				IAmb	IAmb	14 41 45.6	
	comp=Z,21nm,1.4s						
C16K	Lisburne Hills	88.32	20	P	P	14 39 55.8	-0.2
C16K				IAmb	IAmb	14 42 57.1	
	comp=Z,38nm,1.4s						
OHAK	Old Harbor	89.81	32	P	P	14 40 03.0	-0.1
TROLL	Troll, Antarti	93.30	195	⇑P	P	14 40 21.3	+1.9
	comp=Z,287nm,0.7s						
ILAR	Eielson Array	94.36	25	PKKPbc	PKKPbc	14 57 24.0	-2.5
	comp=Z,0.5nm,0.7s,baz=35,slow=1.9,SNR=7.1						
SNAA	Sanae	94.81	194	⇑P	P	14 40 27.7	+1.5
	comp=Z,98nm,0.9s						
SNAA	Sanae	94.81	194	P	P	14 40 27.7	+1.5
	comp=Z,4.3nm,0.8s,baz=147,slow=2.5,SNR=8.9						
	comp=Z,4.3nm,0.8s						
VNA2	Neumayer--Watz	96.39	193	⇑P	P	14 40 34.7	+1.4
	comp=Z,4.1nm,0.7s,baz=146,slow=4.8						
VNA3	Neumayer Olymp	96.65	192	⇑P	P	14 40 35.6	+1.0
	comp=Z,4.1nm,0.8s						
ARCES	ARCESS Array B	101.78	340	P	Pdif	14 40 56.0	-1.4
	comp=Z,1.8nm,0.9s,baz=104,slow=5.1,SNR=4.8						
ARCES				PKKPbc	PKKPbc	14 57 03.5	-2.5
	comp=Z,1.1nm,0.6s,baz=264,slow=3.4,SNR=10						
GERES	GERESS Array B	112.20	320	PKiKP	PKiKP	14 45 39.5	-0.5
	comp=Z,0.2nm,0.3s,baz=357,slow=2.7,SNR=4.1						
TXAR	Lajitas Array	126.17	59	PKP	PKPdf	14 46 07.5	+0.1
	comp=Z,0.2nm,0.4s,baz=156,slow=2.7,SNR=4.4						
PLCA	Paso Flores	128.66	161	PKP	PKPdf	14 46 12.2	+0.3
	comp=Z,6.5nm,0.9s,baz=192,slow=4.4,SNR=9.9						
SCHQ	Schefferville	131.26	12	SKPbc	SKPbc	14 49 29.0	-0.8
	comp=Z,7.8nm,0.8s,baz=350,slow=2.5,SNR=15						
DBIC	Dimbokro	134.13	272	SKPbc	SKPbc	14 49 39.8	-1.1
	comp=Z,3.4nm,0.6s,baz=93,slow=1.5,SNR=4.6						
CPUP	Villa Florida	145.71	170	PKPbc	PKPab	14 46 44.8	+0.4
	comp=Z,2.5nm,0.5s,baz=44,slow=2.1,SNR=19						
LPAZ	La Paz	150.87	145	PKP	PKPdf	14 46 54.4	+1.6
	comp=Z,3.4nm,1.0s,baz=44,slow=2.3,SNR=7.4						
LPAZ				PKPbc	PKiKP	14 46 59.7	+0.6
	comp=Z,8.1nm,0.4s,baz=36,slow=5.2,SNR=40						
LPAZ				PKPab	PKPab	14 47 07.1	+1.1
	comp=Z,15nm,0.6s,baz=222,slow=3.3,SNR=19						

IDC ***18*** *14:43:04.1±1.2, 0°.49N×125°.96E, h0*^{km}*, mb4.0/8, mbtmp4.0/9, ML3.4/1, Error ellipse: s-maj=108.8km s-min=16.5km az=67.0*

DJA ***18*** *14:43:08.5±0.3, 1°N±3°×12°6E±°, h10*^{km}*, M3.8/10, MLv3.8/10*

NEIC ***18*** *14:43:11.3±1.1, 0°.71N±0°.08×126°.36E±0°.06, h65*^{km}*±7*^{km}*, mb4.2/13, Error ellipse: s-maj=11.5km s-min=8.6km az=160.0*

ISC 18 14:43:09.8±0.6**, 0°.52N**±0°.07×**126°.29E**±0°.06**, h47**^{km}**, n35,** σ**1^{s}64**/36**, mb4.2**/12**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.11	77		Pn	14 43 29.8	+0.9
TNTI				Sn	Sn	14 43 44.1	+1.0
TNTI	Ternate	1.11	77	P	Pn	14 43 30.6	+1.7
KMSI	Cibinong	2.31	271	P	Pn	14 43 44.0	-1.3
SANI	Sanana	2.57	187	P	Pn	14 43 47.5	-1.4
NLAI	Namlea	3.82	168	P	Pn	14 44 05.8	-0.3
LUWI	Luwuk	3.84	246		Pn	14 44 09.4	+3.0
LUWI	Luwuk	3.84	246	P	Pn	14 44 08.5	+2.1
MRSI	Marisa	4.35	270	P	Pn	14 44 12.9	-0.4
APSI	Ampana	4.85	253	P	Pn	14 44 20.4	+0.1
TOLI2	Tolitoli	5.54	276	Pn	Pn	14 44 31.6	+2.0
FAKI	Fak Fak	6.87	120		Pn	14 44 50.9	+2.9
MYLDM	Lahad Datu	9.05	301		Pn	14 45 20.2	+2.3
MTN	Manton Dam	14.12	160	Pn	P	14 46 31.7	-2.0
KSM	Kuching	16.00	274	P	P	14 46 54.9	+0.2
KSM				IAmb	IAmb	14 46 56.2	
	comp=Z,23nm,0.9s						
KNRA	Kununurra	16.27	171	Pn	P	14 46 57.4	-0.2
KNRA				IAmb	IAmb	14 47 00.1	
	comp=Z,10nm,1.0s						
UGM	Wanagama	17.81	242	P	Pn	14 47 14.3	-0.1
FITZ	Fitzroy Crossi	18.51	182	P	Pn	14 47 22.9	+0.1
FITZ	Fitzroy Crossi	18.51	182	P	P	14 47 21.8	-0.5
	comp=Z,0.1nm,0.3s,baz=354,slow=8.8,SNR=2.1						
	comp=Z,1.5nm,0.7s						
WB0	Warramunga Arr	21.67	159	P	P	14 47 57.5	+0.8
WB0				IAmb	IAmb	14 48 03.6	
	comp=Z,12nm,0.8s						
WRA	Warramunga Arr	21.81	159	P	P	14 47 57.3	-0.8
WRA	Warramunga Arr	21.81	159	P	P	14 47 59.0	+0.9
	comp=Z,10.0nm,0.8s,baz=335,slow=12,SNR=28						
	comp=Z,10.0nm,0.8s						
WR8	Warramunga Arr	21.88	159	P	P	14 47 59.8	+1.0
WR8				IAmb	IAmb	14 48 04.8	
	comp=Z,8.9nm,0.8s						
COEN	Coen	22.06	131	P	P	14 48 00.5	-0.4
COEN				IAmb	IAmb	14 48 13.6	
	comp=Z,18nm,1.3s						
GUMO	Guam	22.52	54	P	P	14 48 03.2	-2.7
AS31	Alice Springs	25.15	163	P	P	14 48 32.5	+1.7
ASAR	Alice Springs	25.15	163	P	P	14 48 32.5	+1.8
	comp=Z,2.5nm,0.6s,baz=343,slow=9.2,SNR=29						
	comp=Z,2.5nm,0.6s						
STKA	Stephens Creek	35.33	157	P	P	14 50 00.5	-0.2
	comp=Z,1.0nm,0.3s,baz=314,slow=9.8,SNR=5.8						
	comp=Z,1.0nm,0.3s						
MKAR	Makanchi Array	59.95	327	P	P	14 53 10.8	-0.5
	comp=Z,0.9nm,0.5s,baz=116,slow=7.9,SNR=11						
	comp=Z,0.9nm,0.5s						
MIDW	Midway	60.44	58	P	P	14 53 11.0	-3.9
KURBB	Kurchatov Arra	64.21	328	P	P	14 53 39.3	-0.4
	comp=Z,0.4nm,0.5s,baz=125,slow=5.8,SNR=6.8						
	comp=Z,0.4nm,0.5s						
BVAR	Borovoye Array	69.77	328	P	P	14 54 16.4	+1.3
	comp=Z,0.4nm,0.4s,baz=146,slow=2.8,SNR=2.4						
	comp=Z,0.4nm,0.4s						
VNDA	Vanda	80.32	173	P	P	14 55 16.9	+1.6
VNDA				IAmb	IAmb	14 56 00.1	
	comp=Z,1.2nm,0.8s						
VNDA	Vanda	80.32	173	P	P	14 55 17.2	+1.9
	comp=Z,0.4nm,0.6s,baz=309,slow=5.4,SNR=3.5						
	comp=Z,0.4nm,0.6s						
J17K	VABM Dome	82.69	26	P	P	14 55 26.6	-1.6
J17K				IAmb	IAmb	14 55 35.8	
	comp=Z,15nm,1.4s						
QSPA	South Pole Qui	90.44	180	P	P	14 56 07.9	+1.6
	comp=Z,0.8nm,0.6s,baz=281,slow=1.8,SNR=8.5						
	comp=Z,0.8nm,0.6s						

IDC ***18*** *14:57:47.7±4.0, 38°.57N×139°.41E, h0*^{km}*, mb3.5/1, mbtmp3.3/3, ML2.8/2, Error ellipse: s-maj=51.7km s-min=35.4km az=28.0*

JMA ***18*** *14:57:49.6±0.1, 38°.6N±0°.2×139°.4E±0°.2, h12*^{km}*, MV3.3/40, OFF N NIIGATA PREF*

JMA Felt II J1 at OFF N NIIGATA PREF .

ISC 18 14:57:49.5±1.0**, 38°.56N**±0°.04×**139°.40E**±0°.04**, h13**^{km}±7^{km}**, n12,** σ**0^{s}83**/19**, 7D, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAW	Awa shima	0.16	228	P	Pg	14 57 53.5	+0.1
JYA	Atsumi	0.25	83	⇓P	Pg	14 57 54.8	+0.1
JYA				⇓S	Sg	14 57 58.8	+0.5
JYYZ	Yamagatayuza	0.61	42	⇓P	Pb	14 58 02.0	0.0
JYS	Shirataka	0.62	123	⇓P	Pb	14 58 01.6	-0.6
JYS				⇓S	Sb	14 58 10.6	-0.3
JTB	Tobi-shima	0.64	11	P	Pb	14 58 01.5	-1.1
JNS	Sasagawa	0.75	185	*e*P	Pb	14 58 04.0	-0.4
JNS				S	Sb	14 58 14.2	-0.2
JYK	Kaneyama	0.83	64	⇓P	Pb	14 58 05.0	-0.8
JYK				⇓S	Sb	14 58 15.9	-0.8
JOU	Okura	1.01	101	P	Pb	14 58 08.3	-0.5
JSD	Sado	1.04	240	P	Pg	14 58 08.4	-1.2
JSD				S	Sg	14 58 22.6	-0.6
MJAR	Matsushiro Arr	2.23	206	Pn	Pn	14 58 26.9	+0.8
	0.7nm,0.3s,baz=23,slow=15,SNR=18						
MJAR				Sn	Sn	14 58 53.7	+0.1
	0.6nm,0.3s,baz=23,slow=16,SNR=6.3						
	3.4nm,0.3s						
KSRS	Korea Array	9.13	267	Pn	Pn	15 00 02.1	+1.3
	0.3nm,0.3s,baz=73,slow=14,SNR=5.8						
KSRS				Sn	Sn	15 01 45.0	+1.6
	0.2nm,0.3s,baz=77,slow=24,SNR=4.0						
	1.0nm,0.5s						
WRA	Warramunga Arr	58.39	186	P	P	15 07 44.4	-0.2
	0.4nm,0.7s,baz=1.2,slow=7.1,SNR=2.3						
	0.4nm,0.7s						

IDC 18 14:58:22.8±3.3**, 33°.42S**×**178°.56W, h0**^{km}**, mb3.8**/2**, mbtmp3.9**/3**, ML4.0**/1**, Error ellipse: s-maj=74.6km s-min=46.7km az=121.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	5.97	215	Pn	Pn	14 59 52.4	-0.1
	4.1nm,0.3s,baz=357,slow=2.3,SNR=38						
URZ				Sn	Sn	15 00 58.9	-2.6
	2.5nm,0.3s,baz=286,slow=22,SNR=7.7						
	8.3nm,0.3s						
ASAR	Alice Springs	42.56	270	P	P	15 06 20.5	-0.1
	0.5nm,0.5s,baz=109,slow=7.0,SNR=8.8						
	0.5nm,0.5s						
WRA	Warramunga Arr	43.83	276	P	P	15 06 30.6	-0.2
	0.6nm,0.3s,baz=117,slow=7.8,SNR=15						
	0.6nm,0.3s						
FINES	FINESS Array B	147.78	338	PKPbc	PKPbc	15 18 08.1	-0.7
	2.4nm,0.9s,baz=28,slow=7.7,SNR=3.9						

NEIC ***18*** *15:10:03.9±0.9, 21°.11N±0°.08×121°.9E±0°.1, h159*^{km}*±7*^{km}*, mb4.3/34, Error ellipse: s-maj=15.5km s-min=11.6km az=66.0*

IDC ***18*** *15:10:03.5±2.9, 21°.13N×122°.09E, h163*^{km}*±28*^{km}*, mb3.5/14, mbtmp4.0/17, Error ellipse: s-maj=20.2km s-min=12.9km az=69.0*

TAP ***18*** *15:10:06.3, 21°.35N×121°.96E, h166*^{km}*, ML4.8, D*

ISC 18 15:10:04.5±0.7**, 21°.24N**±0°.05×**121°.96E**±0°.05**, h171**^{km}±5^{km}**, n181,** σ**1^{s}48**/271**, mb4.1**/31**, 1C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LYUB	Lan-yu	0.84	335	*i* P	Pn	15 10 30.8	+0.7
LYUB				S	Sn	15 10 49.9	-0.1
LAY	Lan-yu	0.89	334	P	Pn	15 10 30.5	0.0
LAY				S	Sn	15 10 48.5	-2.1
TSEB	Hengchuen, Pin	1.19	304	*i* P	Pn	15 10 34.5	+1.6
TSEB				*i* S	Sn	15 10 55.2	+0.5
TWKBT	Hengchun	1.28	303	⇓*i*P	Pn	15 10 34.8	+1.2
TWKBT				*i* S	Sn	15 10 56.0	-0.2
TWK1	Hengchun	1.29	303	⇑*i*P	Pn	15 10 35.0	+1.3
TWK1				*i* S	Sn	15 10 55.8	-0.5
SMST	Manzhou Townsh	1.31	307	*i* P	Pn	15 10 34.8	+0.9
SMST				S	Sn	15 10 56.1	-0.5
HEN	Hengchun	1.37	304	P	Pn	15 10 35.2	+0.7
HEN				S	Sn	15 10 57.5	-0.2
SLIU	Shizi	1.46	312	P	Pn	15 10 36.7	+1.4
SLIU				*e*S	Sn	15 10 58.4	-0.8
TAWH	Dawu Township	1.49	318	P	Pn	15 10 35.7	+0.2
TAWH				S	Sn	15 10 57.8	-1.8
TAW	Tawu	1.49	319	P	Pn	15 10 36.0	+0.4
TAW				S	Sn	15 10 57.9	-1.8
EAST	Anshuo	1.54	318	*i* P	Pn	15 10 36.2	0.0
EAST				*i* S	Sn	15 10 59.7	-1.0
ECL	Taimali	1.65	325	P	Pn	15 10 36.9	-0.3
ECL				S	Sn	15 10 59.7	-2.8
SCZT	Fangliau	1.69	312	*i* P	Pn	15 10 38.1	+0.5
SCZT				*i* S	Sn	15 11 01.6	-1.6
TTN	Taitung	1.69	333	P	Pn	15 10 39.1	+1.5
TTN				S	Sn	15 11 03.3	0.0
TWGBT	Beinan	1.77	333	P	Pn	15 10 38.0	-0.5
TWGBT	Beinan	1.77	333	P	Pn	15 10 38.4	-0.1
TWGBT				S	Sn	15 11 02.1	-2.9
TWG	Pinlang	1.78	332		Pn	15 10 38.0	-0.6
TWG				Sn	Sn	15 11 01.8	-3.3
TWG	Pinlang	1.78	332	P	Pn	15 10 38.2	-0.3
TWG				S	Sn	15 11 02.2	-2.8
EDH	Donghe	1.83	341	*e*P	Pn	15 10 39.2	+0.1
EDH				*i* S	Sn	15 11 04.2	-1.8
LONT	Longtian	1.83	335	*e*P	Pn	15 10 39.1	0.0
LONT				S	Sn	15 11 04.1	-2.0
WLCH	Liuqiu	1.84	307	P	Pn	15 10 41.3	+2.1
WLCH				S	Sn	15 11 08.6	+2.5
MASBT	Mashibuluo	1.84	318	P	Pn	15 10 40.3	+1.1
MASBT				S	Sn	15 11 04.3	-1.9
TWP	Hsiaoliuchiu	1.85	307	P	Pn	15 10 41.5	+2.2
TWP				S	Sn	15 11 07.9	+1.5
TSMG	Majia	1.91	320	P	Pn	15 10 39.8	-0.1
TSMG				S	Sn	15 11 06.0	-1.4
CHKT	Chengkung	1.94	343	*e*S	Sn	15 11 06.5	-1.5
SSD	Sandimen	1.95	321	P	Pn	15 10 40.6	+0.3
SSD				S	Sn	15 11 06.5	-1.7
ECS	Chishang	1.98	340	*e*P	Pn	15 10 41.5	+0.8
ECS				*e*S	Sn	15 11 07.6	-1.3
CHKH	Chenggong	2.02	345	*i* P	Pn	15 10 41.1	0.0
CHKH				*i* S	Sn	15 11 08.6	-1.0
SGLT	Jiouru	2.02	318	P	Pn	15 10 43.0	+1.9
SGLT				S	Sn	15 11 09.2	-0.3
EHD	Haiduan	2.03	340	*i* P	Pn	15 10 40.7	-0.6
EHD				S	Sn	15 11 07.0	-2.9
FULB	Fuli	2.05	342	*e*P	Pn	15 10 42.2	+0.7
FULB				*e*S	Sn	15 11 07.9	-2.4
WSSB	Gushan	2.11	312	P	Pn	15 10 43.0	+0.8
WSSB				*e*S	Sn	15 11 12.6	+1.1
ECBN	Changbin	2.12	347	*e*P	Pn	15 10 42.8	+0.5
TWM1	Shoushan	2.13	318	*i* P	Pn	15 10 43.9	+1.4
TWM1				*i* S	Sn	15 11 12.5	+0.6
ELDTW	Lidau	2.13	336	P	Pn	15 10 42.2	-0.4
ELDTW				S	Sn	15 11 09.4	-2.7
SCST	Cishan	2.13	321	*i* P	Pn	15 10 43.3	+0.9
SCST				*e*S	Sn	15 11 10.7	-1.2
SNJT	Kaohsiung City	2.14	315	*e*P	Pn	15 10 43.7	+1.2
SNJT				*e*S	Sn	15 11 12.3	+0.4
TWF1	Yuli	2.19	344	*e*P	Pn	15 10 43.4	+0.2
TWF1				*i* S	Sn	15 11 10.9	-2.4
STYH	Taoyuan	2.22	330	P	Pn	15 10 43.9	+0.5
STYH				*e*S	Sn	15 11 12.1	-1.5
YULB	Yu-li	2.23	344		Pn	15 10 43.2	-0.4
YULB	Yu-li	2.23	344	P	Pn	15 10 43.8	+0.3
YULB	Yu-li	2.23	344	*e*P	Pn	15 10 43.9	+0.3
YULB				S	Sn	15 11 11.5	-2.5
HGSD	Ruisui	2.30	348	P	Pn	15 10 46.4	+2.1
HGSD				S	Sn	15 11 13.8	-1.5
EHYH	Wanrong	2.32	346	*e*P	Pn	15 10 45.1	+0.5
EHYH				*i* S	Sn	15 11 13.6	-2.2
EHY	Hungye	2.34	345	P	Pn	15 10 45.7	+1.0
EHY				*e*S	Sn	15 11 14.6	-1.5
CHN1	Nanshi	2.35	326	P	Pn	15 10 45.2	+0.2
CHN1				*i* S	Sn	15 11 14.7	-1.7
CHN3	Shinhua	2.36	321	*e*P	Pn	15 10 45.9	+0.9
CHN3				*e*S	Sn	15 11 16.4	-0.1
WTP	Ta-pu	2.36	328	P	Pn	15 10 45.2	+0.1
WTP				*i* S	Sn	15 11 15.3	-1.3
SNST	Tainan City	2.40	326	*e*P	Pn	15 10 45.8	+0.3
SNST				S	Sn	15 11 15.4	-2.0
TPUB	Ta-pu	2.40	329		Pn	15 10 45.1	-0.4
TPUB	Ta-pu	2.40	329	P	Pn	15 10 45.6	+0.1
TPUB	Ta-pu	2.40	329	P	Pn	15 10 45.6	+0.1
TPUB				*i* S	Sn	15 11 15.2	-2.2
TAI1	Yung-k'ang	2.41	318	*e*S	Sn	15 11 17.2	-0.3
TWK	Hsinying	2.44	326	*e*P	Pn	15 10 46.5	+0.5
TWK				*e*S	Sn	15 11 16.1	-2.2
SSHA	Shanhua	2.45	321	*e*P	Pn	15 10 47.2	+1.1
SSHA				*e*S	Sn	15 11 18.1	-0.3
EGFH	Guangfu	2.47	349	*e*S	Sn	15 11 17.6	-1.4
ALS	Alishan	2.50	335	P	Pn	15 10 47.0	-0.1
ALS				*i* S	Sn	15 11 18.7	-1.4
WARBT	Fenglin Townsh	2.53	348	P	Pn	15 10 47.4	+0.3
WARBT				*e*S	Sn	15 11 17.9	-2.3
WCKO	Fanlu	2.53	330	*e*P	Pn	15 10 47.4	+0.4
WCKO				*i* S	Sn	15 11 17.4	-2.8
SCLT	Jiali	2.53	320	*e*P	Pn	15 10 47.6	+0.5
SCLT				*i* S	Sn	15 11 19.2	-0.9
TSCK	Chigu Township	2.58	318	P	Pn	15 10 47.8	+0.2
TSCK				*i* S	Sn	15 11 19.3	-1.8
ESL	Shilin	2.61	349	*e*P	Pn	15 10 49.0	+1.0
ESL				*e*S	Sn	15 11 19.0	-3.0
VWDT	VWDT	2.62	343	*i* P	Pn	15 10 49.6	+1.5
VWDT				*i* S	Sn	15 11 22.1	0.0
ICHU	Yijhu	2.63	324	*e*P	Pn	15 10 48.5	+0.3
ICHU				*e*S	Sn	15 11 19.7	-2.5
CHN5	Tsauling	2.63	333	P	Pn	15 10 48.5	+0.1
CHN5				*i* S	Sn	15 11 20.2	-2.3
CHN8	Yiju	2.65	323	*i* P	Pn	15 10 48.6	+0.1
CHN8				*i* S	Sn	15 11 20.9	-1.9
WHYT	Xinyi Township	2.66	337	*e*P	Pn	15 10 48.6	+0.1
WHYT				S	Sn	15 11 21.2	-1.7
CHY	Chiayi	2.66	328	*e*P	Pn	15 10 48.8	+0.2
CHY				*i* S	Sn	15 11 20.7	-2.3
CHN2	Minshiung	2.67	329	*e*S	Sn	15 11 21.2	-1.9
SSLB	Suanglung	2.71	340		Pn	15 10 48.9	-0.2
SSLB	Suanglung	2.71	340	P	Pn	15 10 49.3	+0.2
SSLB	Suanglung	2.71	340	*e*P	Pn	15 10 49.4	+0.2
SSLB				*e*S	Sn	15 11 21.8	-2.2
WGK	Gukeng	2.76	332	*e*P	Pn	15 10 50.3	+0.5
WGK				S	Sn	15 11 23.5	-1.6
WDLH	Douliu	2.77	332	*e*P	Pn	15 10 50.1	+0.2
WDLH				*i* S	Sn	15 11 23.1	-2.3
WSL	Shuilin Townsh	2.79	325	*i* P	Pn	15 10 49.9	-0.2
WSL				*i* S	Sn	15 11 22.4	-3.2
WDL	Douliou City	2.80	332	P	Pn	15 10 50.5	+0.2
WDL				*e*S	Sn	15 11 24.7	-1.1
OWD	Renai	2.80	345	*e*P	Pn	15 10 51.5	+1.1
OWD				*e*S	Sn	15 11 24.8	-1.4
SMLT	Sun Moon Lake	2.81	340	*e*P	Pn	15 10 51.4	+0.8
SMLT				*i* S	Sn	15 11 24.7	-1.7

WJS	Zhushan	2.82	336	eP	Pn	15 10 51.0	+0.5
WJS				iS	Sn	15 11 25.2	-1.1
LXIB	Xiulin Townshi	2.82	350	eP	Pn	15 10 50.6	0.0
LXIB				eS	Sn	15 11 24.2	-2.4
WTK	Tuku	2.84	329	P	Pn	15 10 50.4	-0.4
WTK				iS	Sn	15 11 24.1	-2.8
TYC	Yuchr	2.85	339	eP	Pn	15 10 51.3	+0.5
TYC				eS	Sn	15 11 25.4	-1.6
TWD	Chiawan	2.85	353	eS	Sn	15 11 25.9	-1.1
WUSB	Renai	2.85	344	eP	Pn	15 10 52.5	+1.5
WUSB				S	Sn	15 11 26.8	-0.5
WNT	Mingjian	2.88	336	iP	Pn	15 10 51.8	+0.5
WNT				iS	Sn	15 11 26.3	-1.5
WSF	Szhu	2.88	326	eP	Pn	15 10 50.9	-0.3
WSF				iS	Sn	15 11 24.6	-3.1
WDGT	Dungji	2.94	314	iP	Pn	15 10 51.8	-0.2
WDGT				S	Sn	15 11 25.9	-3.0
NACB	Ninganchiao	2.94	353	Pn	Pn	15 10 52.0	0.0
NACB	Ninganchiao	2.94	353	P	Pn	15 10 52.4	+0.4
NACB	Ninganchiao	2.94	353	eP	Pn	15 10 52.7	+0.6
WHF	Hehuan Shan	2.97	348	eP	Pn	15 10 54.0	+1.2
WHF				S	Sn	15 11 28.7	-1.6
WCS	Beigang Elemen	2.97	341	P	Pn	15 10 53.3	+0.9
WCS				S	Sn	15 11 28.5	-1.2
ETLH	Xiulin Townshi	2.99	352	eP	Pn	15 10 53.0	+0.3
ETLH				iS	Sn	15 11 27.4	-2.9
WTCT	Ta-ch'eng	3.04	330	eS	Sn	15 11 29.4	-1.9
VCHM	Qimei	3.06	310	eP	Pn	15 10 53.4	-0.1
VCHM				iS	Sn	15 11 29.1	-2.6
FUSS	Fushou	3.07	348	eP	Pn	15 10 55.4	+1.5
FUSS				iS	Sn	15 11 31.3	-1.0
WCHH	Zhanghua	3.11	336	eP	Pn	15 10 55.0	+0.9
WCHH				S	Sn	15 11 31.6	-1.2
TCU	Taichung	3.13	338	eS	Sn	15 11 32.2	-1.1
PHUB	P'eng-hu	3.17	316	iP	Pn	15 10 54.6	-0.2
PHUB				iS	Sn	15 11 30.6	-3.4
WHP	Taichung City	3.17	343	eP	Pn	15 10 55.8	+0.9
WHP				S	Sn	15 11 33.1	-1.1
EWUT	Wuta	3.20	357	eP	Pn	15 10 57.2	+2.0
PNG	Penghu	3.22	317	eP	Pn	15 10 55.1	-0.3
PNG				iS	Sn	15 11 32.2	-2.8
NNSB	Datong	3.22	351	P	Pn	15 10 56.6	+1.0
NNSB				eS	Sn	15 11 34.3	-1.2
NNS	Nan Shan	3.23	350	eP	Pn	15 10 57.6	+1.9
NNS				S	Sn	15 11 34.6	-1.1
TWQ1	Liyutan	3.29	341	eP	Pn	15 10 56.7	+0.4
TWQ1				iS	Sn	15 11 32.7	-4.0
LATG	Datong	3.31	353	eP	Pn	15 10 58.9	+2.2
YOJ	Yonaguni jima	3.35	17		Pn	15 10 58.5	+1.4
YOJ	Yonaguni jima	3.35	17	P	Pn	15 10 58.7	+1.6
YOJ	Yonaguni jima	3.35	17	eP	Pn	15 10 58.8	+1.6
ENTT	Nioudou	3.41	354	eP	Pn	15 10 59.5	+1.7
ENTT				eS	Sn	15 11 37.5	-2.0
YHNB	Yeheng	3.46	351		Pn	15 10 59.4	+0.8
YHNB	Yeheng	3.46	351	P	Pn	15 10 59.9	+1.4
YHNB	Yeheng	3.46	351	iP	Pn	15 11 00.1	+1.6
NFF	Wufeng Townshi	3.47	347	eS	Sn	15 11 39.5	-1.5
LIOB	Emei	3.50	346	eP	Pn	15 10 59.5	+0.5
FUSB	Fushanzhiwuyua	3.52	354	eP	Pn	15 11 01.1	+1.8
TIPB	Shuangxi	3.72	358	eP	Pn	15 11 03.6	+1.9
YM01	YM01	3.91	355	eP	Pn	15 11 06.0	+1.8
ZUZH	Zhuzihu	3.93	354	eP	Pn	15 11 05.5	+1.1
NTST	Danshui	3.94	353	eS	Sn	15 11 48.1	-3.4
VWUC	VWUC	4.40	329	iP	Pn	15 11 10.3	-0.1
VWUC				iS	Sn	15 11 58.4	-3.6
PTMZ	Houxiangcun	4.60	326	eP	Pn	15 11 13.9	+0.9
PTMZ				S	Sn	15 12 04.2	-2.6
KNMB	Chin-men Tao	4.60	315	Pn	Pn	15 11 12.8	-0.3
JOW	Kunigami	8.02	45	Pn	Pn	15 11 58.7	+0.7
JOW	Kunigami	8.02	45	P	Pn	15 11 57.0	-1.0
	18nm,0.7s,baz=189,slow=13,SNR=5.1						
JNU	Nakatsue	14.24	32		Pn	15 13 19.2	+0.6
JNU	Nakatsue	14.24	32	P	Pn	15 13 18.1	-0.4
	13nm,0.9s,baz=230,slow=5.1,SNR=8.5						
KSAR	Wonju Array Be	16.95	16	P	P	15 13 52.2	+1.6
KSRS	Korea Array	16.97	16	P	P	15 13 51.0	+0.2
	2.2nm,0.6s,baz=197,slow=11,SNR=14						
KS19	Wonju Array Si	17.00	16	P	P	15 13 52.7	+1.5
KS19				IAmb	IAmb	15 14 26.0	
	comp=Z,21nm,1.5s						
CMAR	Chiang Mai Arr	21.83	267	P	P	15 14 43.4	-0.1
	comp=Z,0.8nm,0.8s,baz=73,slow=10,SNR=5.7						
	comp=Z,0.8nm,0.8s						
FAKI	Fak Fak	26.03	156	P	P	15 15 19.2	-2.8
KAPI	Kappang	26.18	185	P	P	15 15 19.9	-3.4
KAPI				IAmb	IAmb	15 15 39.1	
	comp=Z,21nm,1.1s						
SONM	Songino Array	29.36	338	P	P	15 15 51.6	+0.2
	comp=Z,0.5nm,0.4s,baz=148,slow=8.5,SNR=2.3						
	comp=Z,0.5nm,0.4s						
MTN	Manton Dam	35.04	164	P	P	15 16 39.0	-2.1
KNRA	Kununurra	37.28	169	P	P	15 16 58.8	-1.3
KNRA				IAmb	IAmb	15 17 01.3	
	comp=Z,5.6nm,1.0s						
FITZ	Fitzroy Crossi	39.26	174	P	P	15 17 15.1	-1.5
COEN	Coen	40.71	147	P	P	15 17 29.0	+0.4
COEN				IAmb	IAmb	15 17 53.3	
	comp=Z,18nm,1.4s						
MKAR	Makanchi Array	40.98	318	P	P	15 17 31.8	+1.3
MKAR	Makanchi Array	40.98	318	P	P	15 17 32.1	+1.6
	comp=Z,2.6nm,0.5s,baz=108,slow=8.9,SNR=17						
	comp=Z,2.6nm,0.5s						
MAKZ	Makanchi	41.18	318	P	P	15 17 33.7	+1.6
MAKZ				IAmb	IAmb	15 17 34.7	
	comp=Z,6.8nm,1.2s						
WB0	Warramunga Arr	42.53	163	P	P	15 17 42.1	-1.2
WB0				IAmb	IAmb	15 18 05.5	
	comp=Z,6.5nm,1.2s						
WRA	Warramunga Arr	42.68	163	P	P	15 17 42.6	-1.9
WRA	Warramunga Arr	42.68	163	P	P	15 17 42.6	-1.9
	comp=Z,1.2nm,0.7s,baz=344,slow=9.0,SNR=8.5						
	comp=Z,1.2nm,0.7s						
WR8	Warramunga Arr	42.74	162	P	P	15 17 43.5	-1.5
WR8				IAmb	IAmb	15 17 44.7	
	comp=Z,4.7nm,0.9s						
ZALV	Zalesovo Beam	43.11	329	P	P	15 17 48.1	+0.5
	comp=Z,0.8nm,0.5s,baz=113,slow=12,SNR=3.7						
	comp=Z,0.8nm,0.5s						
KURK	Kurchatov	44.82	322	P	P	15 18 02.4	+1.1
KURBB	Kurchatov Arra	44.84	322	P	P	15 18 02.8	+1.3
	comp=Z,1.4nm,0.5s,baz=112,slow=8.2,SNR=8.0						
	comp=Z,1.4nm,0.5s						
AS31	Alice Springs	46.12	165	P	P	15 18 11.1	-0.7
ASAR	Alice Springs	46.12	165	P	P	15 18 11.5	-0.3
ASAR	Alice Springs	46.12	165	P	P	15 18 10.9	-0.9
	comp=Z,0.4nm,0.3s,baz=343,slow=7.0,SNR=32						
	comp=Z,0.4nm,0.3s						
BVAR	Borovoye Array	50.42	322	P	P	15 18 45.0	+0.6
	comp=Z,1.3nm,0.6s,baz=112,slow=8.7,SNR=7.9						
BVAR				PcP	PcP	15 19 59.6	-0.5
	comp=Z,0.9nm,0.6s,baz=103,slow=5.2,SNR=4.3						
	comp=Z,1.3nm,0.6s						
BRVK	Borovoye	50.49	322	P	P	15 18 45.5	+0.6
TIXI	Tiksi	50.59	3	P	P	15 18 45.1	-0.2
BBOO	Buckleboo	55.41	166	P	P	15 19 20.6	-0.5
ABKAR	Akbulak array	56.03	316	P	P	15 19 26.2	+0.8
STKA	Stephens Creek	56.06	160	P	P	15 19 25.5	-0.2
J14K	Nanvaranak Lak	64.24	30	P	P	15 20 22.6	+1.6
L14K	Kuka Creek	64.58	31	P	P	15 20 25.2	+2.0
M14K	Bethel	64.92	32	P	P	15 20 26.9	+1.6
K15K	Wolf Creek Mou	65.16	30	P	P	15 20 28.7	+1.8
M16K	Timber Creek	66.38	31	P	P	15 20 36.4	+1.7
M16K				IAmb	IAmb	15 20 37.2	
	comp=Z,4.6nm,0.8s						
D20K	Etivluk River	67.29	23	P	P	15 20 42.0	+1.6
D20K				IAmb	IAmb	15 20 43.4	
	comp=Z,4.7nm,0.8s						
B21K	Ikpikpuk River	67.99	22	P	P	15 20 46.7	+2.0
B21K				IAmb	IAmb	15 20 47.4	
	comp=Z,4.2nm,0.8s						
J20K	Nowinta River	68.46	28	P	P	15 20 49.5	+1.8
J20K				IAmb	IAmb	15 20 50.5	
	comp=Z,4.2nm,0.8s						
K20K	Telida	68.55	29	P	P	15 20 50.1	+1.7
K20K				IAmb	IAmb	15 20 51.2	
	comp=Z,3.1nm,0.8s						
CAST	Castle Rocks	69.44	29	P	P	15 20 55.2	+1.4
CAST				IAmb	IAmb	15 20 56.2	
	comp=Z,4.8nm,0.8s						
E23K	Chandalar	69.92	24	P	P	15 20 58.2	+1.4
E23K				IAmb	IAmb	15 20 59.2	
	comp=Z,2.5nm,0.8s						
F24K	Squaw Lake	70.64	24	P	P	15 21 02.5	+1.4
F24K				IAmb	IAmb	15 21 03.6	
	comp=Z,3.8nm,0.8s						
ILAR	Eielson Array	71.50	27	P	P	15 21 05.7	-0.6
	comp=Z,0.7nm,0.7s,baz=270,slow=5.8,SNR=7.6						
	comp=Z,0.7nm,0.7s						
SCM	Sheep Creek Mo	71.85	30	P	P	15 21 09.3	+0.8
SCM				IAmb	IAmb	15 21 10.1	
	comp=Z,5.8nm,0.7s						
BMAR	Burnt Mountain	71.91	24	P	P	15 21 10.6	+1.8
ARCES	ARCESS Array B	72.53	339	P	P	15 21 12.8	+0.5
	comp=Z,1.5nm,0.9s,baz=81,slow=7.5,SNR=5.1						
	comp=Z,1.5nm,0.9s						
RAGM	Ragged Mountai	73.42	31	P	P	15 21 18.5	+0.8
RAGM				IAmb	IAmb	15 21 19.0	
	comp=Z,16nm,1.3s						
I28M	Miner Creek	74.20	25	P	P	15 21 23.8	+1.5
FINES	FINESS Array B	74.35	330	P	P	15 21 24.6	+1.5
	comp=Z,1.0nm,0.7s,baz=79,slow=9.9,SNR=3.7						
	comp=Z,1.0nm,0.7s						
N30M	Aishikik Lake	76.66	29	P	P	15 21 37.9	+1.6
HFS	Hagfors	80.48	331	P	P	15 21 57.2	+0.1
	comp=Z,0.8nm,0.5s,baz=103,slow=4.7,SNR=6.6						
	comp=Z,0.8nm,0.5s						
NOA	NORSAR Array B	81.16	333	P	P	15 22 01.4	+0.7
	comp=Z,0.6nm,0.6s,baz=59,slow=5.0,SNR=3.3						
	comp=Z,0.6nm,0.6s						
NC204	NORSAR Array S	81.24	333	P	P	15 22 01.6	+0.4
NC204				IAmb	IAmb	15 22 06.3	
	comp=Z,9.2nm,1.1s						
YKA	Yellowknife Ar	85.39	23	P	P	15 22 22.9	+0.6
	comp=Z,1.3nm,0.8s,baz=319,slow=5.3,SNR=13						
	comp=Z,1.3nm,0.8s						

IDC 18 15:14:20.0±4.9**,29°.59S**×**178°.19W,h0^{km},mb3.5**/2**,**
mbtmp3.5/2**,Error ellipse: s-maj=234.4km**
s-min=78.1km az=165.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.99	266	P	P	15 22 20.1	-1.2
	0.3nm,0.7s,baz=108,slow=8.1,SNR=5.4						
	0.3nm,0.7s						
WRA	Warramunga Arr	43.91	271	P	P	15 22 29.6	+0.9
	1.0nm,0.7s,baz=112,slow=8.0,SNR=7.1						
	1.0nm,0.7s						
FINES	FINESS Array B	144.33	340	PKP	PKPdf	15 33 56.5	-0.8
	1.6nm,0.6s,baz=58,slow=5.2,SNR=6.7						

IDC 18 15:22:29.2±339.0**,54°.48N**×**41°.47E,h0^{km},Error ellipse:**
s-maj=138.4km s-min=69.1km az=136.0,Baltic
States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	3.29	315	I	I	15 42 30.0	
	0.3nm,0.6s,baz=130,slow=317,SNR=5.3						
I31KZ	AKTYUBINSK INF	10.90	105	I	I	16 27 55.0	
	baz=295,slow=312,SNR=4.7						
I37NO	I37NO	18.00	333	I	I	17 10 00.0	
	baz=134,slow=324,SNR=1.2						
I26DE	FREYUNG INFRAS	18.05	263	I	I	17 12 10.0	
	baz=60,slow=319,SNR=2.2						

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*IDC **18** 15:23:56.0±4.0,38°.62N×139°.52E,h0^{km},mb3.4/1,*
mbtmp3.5/3,ML3.1/2,Error ellipse: s-maj=53.5km
s-min=41.1km az=33.0
*JMA **18** 15:23:58.7±0.1,38°.6N±0°.2×139°.4E±0°.2,h12^{km},MV3.6/40,*
OFF N NIIGATA PREF
JMA Felt II J1 at OFF N NIIGATA PREF .
ISC 18 15:23:58.2±0.9**,38°.63N**±0°.04×**139°.42E**±0°.03**,h16^{km}**±6^{km}**,**
n12,σ0^{s}.68/22**,8D,Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAW	Awa shima	0.22	217	⇓iP	Pg	15 24 03.2	0.0
JAW				⇓S	Sg	15 24 06.4	-0.2
JYA	Atsumi	0.24	99	iP	Pg	15 24 03.6	+0.2
JYA				S	Sg	15 24 07.2	+0.1
JYYZ	Yamagatayuza	0.56	46	⇓iP	Pn	15 24 10.5	-0.9
JYYZ				⇓S	Sn	15 24 19.2	-1.1
JTB	Tobi-shima	0.57	11	⇓iP	Pb	15 24 10.0	+0.2
JTB				⇓S	Sb	15 24 18.0	+0.3
JYS	Shirataka	0.65	129	P	Pb	15 24 10.7	-0.4
JYS				S	Sb	15 24 19.7	-0.4
JYK	Kaneyama	0.79	68	iP	Pb	15 24 13.6	+0.1
JYK				S	Sb	15 24 24.2	+0.2
JNS	Sasagawa	0.81	186	⇓iP	Pb	15 24 13.6	-0.3
JNS				⇓S	Sb	15 24 24.3	-0.4
JOU	Okura	1.01	105	P	Pn	15 24 17.6	-0.1
JOU				S	Sb	15 24 30.3	-0.1
JSD	Sado	1.09	237	iP	Pg	15 24 17.8	-1.4
JSD				S	Sg	15 24 32.5	-0.8
MJAR	Matsushiro Arr	2.30	205	Pn	Pn	15 24 36.1	+0.7
	1.3nm,0.3s,baz=22,slow=16,SNR=79						
MJAR				Sn	Sn	15 25 04.3	+1.0
	2.2nm,0.3s,baz=29,slow=17,SNR=5.1						
	10nm,0.4s						
KSRS	Korea Array	9.14	266	Pn	Pn	15 26 10.6	+1.2
	0.7nm,0.3s,baz=74,slow=14,SNR=17						
	3.4nm,0.6s						
WRA	Warramunga Arr	58.46	186	P	P	15 33 53.4	+0.1
	0.3nm,0.8s,baz=2.7,slow=6.9,SNR=2.2						
	0.3nm,0.8s						

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*IDC **18** 15:37:57.3±3.9,3°.34N×122°.64E,h574^{km}±55^{km},mb2.7/9,*
mbtmp3.7/10,Error ellipse: s-maj=83.7km s-min=14.3km
az=60.0
ISC 18 15:37:59.0±0.9**,3°.2N**±0°.1×**122°.4E**±0°.3**,h600^{km},n10,**
σ0^{s}.52/11**,mb3.3**/9**,Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	8.60	198	P	P	15 40 03.9	-0.1
	6.5nm,0.4s,baz=13,slow=7.7,SNR=3.6						
FITZ	Fitzroy Crossi	21.41	172	P	P	15 42 05.0	-0.4
	0.7nm,0.8s,baz=12,slow=9.6,SNR=1.0						
	0.7nm,0.8s						
WRA	Warramunga Arr	25.82	154	P	P	15 42 43.9	-0.7
	0.3nm,0.4s,baz=336,slow=9.5,SNR=17						
	0.3nm,0.4s						
ASAR	Alice Springs	28.96	158	P	P	15 43 12.0	+0.1
	0.2nm,0.3s,baz=334,slow=8.2,SNR=5.3						
	0.2nm,0.3s						
STKA	Stephens Creek	39.37	154	P	P	15 44 39.0	+0.6
	0.7nm,0.4s,baz=334,slow=8.0,SNR=4.6						
	0.7nm,0.4s						
SONM	Songino Array	46.55	345	P	P	15 45 33.4	-0.6
	0.1nm,0.4s,baz=171,slow=10,SNR=1.6						
	0.1nm,0.4s						
MKAR	Makanchi Array	55.60	328	P	P	15 46 39.7	+0.5
	1.1nm,0.4s,baz=125,slow=8.0,SNR=23						
MKAR				PcP	PcP	15 47 30.5	+0.7
	0.5nm,0.5s,baz=120,slow=4.3,SNR=4.7						
	1.1nm,0.4s						
ZALV	Zalesovo Beam	59.17	335	P	P	15 47 03.1	-0.1
	0.5nm,0.3s,baz=165,slow=6.0,SNR=2.6						
	0.5nm,0.3s						
KURBB	Kurchatov Arra	59.92	329	P	P	15 47 08.4	+0.2
	1.2nm,0.7s,baz=128,slow=6.6,SNR=12						
	1.2nm,0.7s						
BVAR	Borovoye Array	65.45	328	P	P	15 47 43.9	+0.2
	0.4nm,0.4s,baz=151,slow=6.6,SNR=4.2						
	0.4nm,0.4s						

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*IDC **18** 15:48:03.0±1.0,18°.48S×174°.27W,h0^{km},mb3.9/7,*
mbtmp4.0/7,Error ellipse: s-maj=36.5km s-min=23.9km
az=146.0
*NEIC **18** 15:48:07.6±1.6,18°.51S±0°.08×174°.08W±0°.08,h35^{km}±1^{km},*
mb4.5/10,Error ellipse: s-maj=16.0km s-min=8.7km
az=139.0
ISC 18 15:48:08.0±0.6**,18°.50S**±0°.09×**174°.2W**±0°.1**,h43^{km},n28,**
σ1^{s}.52/26**,mb4.1**/12**,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.05	99	Pn	Pn	15 49 03.9	-3.6
AFI	Afiamalu	5.11	27	Pn	Pn	15 49 20.8	-1.3
FUTU	Fugatoga	5.64	317	Pn	Pn	15 49 27.3	-2.0
RAO	Raoul Island	11.24	197	Pn	Pn	15 50 44.1	-2.0
FUNA	Funafuti	11.83	326	Pn	Pn	15 50 51.8	-2.3
URZ	Urewera	21.11	199	P	P	15 52 48.7	-0.3
	2.3nm,0.3s,baz=316,slow=1.1,SNR=6.9						
	2.3nm,0.3s						
BKZ	Black Stump Fm	22.14	200	P	P	15 53 00.1	+0.1
BKZ				IAmb	IAmb	15 53 09.8	
	comp=Z,43nm,1.3s						
TUWZ	Tuamarina	25.02	201	P	P	15 53 27.6	-0.3
WB0	Warramunga Arr	48.47	260	P	P	15 56 45.5	-1.2
WRA	Warramunga Arr	48.49	259	P	P	15 56 45.5	-1.4
WRA	Warramunga Arr	48.49	259	P	P	15 56 46.6	-0.3
	comp=Z,0.6nm,0.4s,baz=98,slow=7.0,SNR=13						
	comp=Z,0.6nm,0.4s						
AS31	Alice Springs	48.52	254	P	P	15 56 48.2	+1.1
ASAR	Alice Springs	48.52	254	P	P	15 56 47.8	+0.7
ASAR	Alice Springs	48.52	254	P	P	15 56 47.0	-0.1
	comp=Z,1.9nm,0.7s,baz=86,slow=7.6,SNR=27						
ASAR				PcP	PcP	15 58 13.8	+1.1
	comp=Z,0.6nm,0.7s,baz=112,slow=4.2,SNR=4.4						
	comp=Z,1.9nm,0.7s						
FITZ	Fitzroy Crossi	56.91	260	P	P	15 57 50.8	+1.7
	comp=Z,1.0nm,0.7s,baz=79,slow=5.2,SNR=1.9						
	comp=Z,1.0nm,0.7s						
QSPA	South Pole Qui	71.56	180	P	P	15 59 26.5	+2.0
QSPA				IAmb	IAmb	15 59 27.9	
	comp=Z,13nm,1.5s						
QSPA	South Pole Qui	71.56	180	P	P	15 59 26.2	+1.7
	comp=Z,4.4nm,1.1s,baz=119,slow=1.5,SNR=9.5						
	comp=Z,4.4nm,1.1s						
NVAR	Mina Array Bea	77.11	42	P	P	15 59 59.0	+1.7
	comp=Z,0.8nm,0.8s,baz=218,slow=10,SNR=4.7						
	comp=Z,0.8nm,0.8s						
ILSW	Iliamna Southw	80.05	11	P	P	16 00 13.1	+0.3
ILSW				IAmb	IAmb	16 00 29.5	
	comp=Z,12nm,1.4s						
BELA	Belgrano 2	81.05	172	P	P	16 00 18.8	+0.8
BELA				IAmb	IAmb	16 00 19.5	
	comp=Z,1.6nm,0.9s						
S32K	Killisnoo	82.54	20	P	P	16 00 26.4	+0.5
BMRM	Bremner River	82.68	14	P	P	16 00 27.3	+0.7
BMRM				IAmb	IAmb	16 00 28.0	
	comp=Z,9.1nm,1.2s						
TXAR	Lajitas Array	82.94	56	P	P	16 00 30.6	+1.7
	comp=Z,0.2nm,0.3s,baz=230,slow=4.7,SNR=3.6						
	comp=Z,0.2nm,0.3s						
H03S2	Juan Fernandez	84.11	124	T	T	17 33 17.5	
	baz=250,slow=75,SNR=34						
H03S1	Juan Fernandez	84.12	124	T	T	17 33 18.5	
	baz=250,slow=75,SNR=32						
H03S3	Juan Fernandez	84.12	124	T	T	17 33 17.1	
	baz=250,slow=75,SNR=22						
CCB	Clear Creek Bu	85.33	11	P	P	16 00 40.5	+0.6
CCB				IAmb	IAmb	16 00 41.2	
	comp=Z,1.5nm,0.9s						
IMAR	Indian Mountai	85.62	8	P	P	16 00 42.6	+1.1

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*GCG **18** 15:51:19.5±2.0,14°.01N×93°.38W,h35^{km}±999^{km},MD4.3,*
ML3.3
*MEX **18** 15:51:23.5±0.6,14°.27N×93°.25W,h16^{km}±59^{km},MD4.0*
ISC 18 15:51:19.9±3.2**,14°.1N**±0°.1×**93°.2W**±0°.1**,h34^{km}**±3^{km}**,n12,**
σ1^{s}.29/21**,Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.21	50	eP	Pb	15 51 42.2	0.0
THIG				eS	Sb	15 51 58.5	+1.0
THIG		1.21	50	iP	Pb	15 51 41.9	-0.3
PATR	El Naranjo	1.37	44	eP	Pn	15 51 43.4	+0.5
PATR				iS	Sn	15 51 58.6	-1.3
PAVE	Pavencul	1.46	44	eP	Pn	15 51 45.0	+0.8
PAVE				iS	Sn	15 52 01.5	-0.7
RTAL	Retalhuleu	1.53	75	eP	Pn	15 51 46.2	+1.3
RTAL				eS	Sn	15 52 02.9	-0.8
PCIG		1.56	0	eP	Pn	15 51 44.9	-0.4
PCIG				eS	Sn	15 52 02.4	-2.0
STG8	El Palmar, Qui	1.84	80	eP	Pn	15 51 49.5	+0.1
STG0	El Palmar, Qui	1.85	81	eP	Pn	15 51 49.8	+0.4
CCIG	Comitan	2.38	26	eP	Pn	15 51 58.6	+1.9
CCIG				eS	Sn	15 52 24.7	-0.1
CCIG	Comitan	2.38	26	iP	Pb	15 52 00.4	-1.8
CCIG				iS	Sb	15 52 31.6	+0.4
CCIG				IAML		15 52 35.5	
	comp=E,159nm,0.5s						
TGIG		2.63	2	eP	Pn	15 52 01.3	+1.2
TGIG				eS	Sn	15 52 29.7	-1.2
TGIG		2.63	2	eP	Pn	15 52 02.0	+1.9
TGIG				iS	Sn	15 52 32.8	+2.0
TGIG				IAML		15 52 36.1	
	comp=E,107nm,0.7s						

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*IDC **18** 15:57:22.1±0.6,38°.58N×139°.19E,h0^{km},mb3.9/17,*
mbtmp4.0/21,ML3.3/3,Error ellipse: s-maj=18.3km
s-min=13.5km az=90.0
*JMA **18** 15:57:24.5±0.1,38°.6N±0°.2×139°.4E±0°.3,h12^{km},MD4.2/40,*
MV4.3/40,OFF N NIIGATA PREF
JMA Felt IV J1 at OFF N NIIGATA PREF .
*NEIC **18** 15:57:24.9±1.9,38°.57N±0°.05×139°.42E±0°.03,h10^{km}±1^{km},*
mb4.4/42,Error ellipse: s-maj=9.1km s-min=3.6km
az=171.0
ISC 18 15:57:24.3±0.8**,38°.56N**±0°.04×**139°.38E**±0°.03**,h13^{km}**±5^{km}**,**
n104,σ0^{s}.98/82**,mb4.4**/40**,10D,Near west coast of**
eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAW	Awa shima	0.15	224	P	Pg	15 57 28.1	+0.1
JAW				S	Sg	15 57 30.6	+0.2
JAW	Awa shima	0.15	224	A	A	15 57 28.1	
	comp=N,37nm,0.5s,comp=E,30nm,0.5s						
JYA	Atsumi	0.26	84	⇓P	Pg	15 57 29.8	0.0
JYA				⇓S	Sg	15 57 33.4	-0.1
JYA	Atsumi	0.26	84	A	A	15 57 29.8	
	comp=N,136nm,0.7s,comp=E,142nm,0.3s						
JYYZ	Yamagatayuza	0.62	43	iP	Pb	15 57 37.2	+0.2
JYYZ				S	Sb	15 57 46.4	+0.7
JYYZ	Yamagatayuza	0.62	43	A	A	15 57 37.2	
	comp=N,13nm,7.4s,comp=E,11nm,3.8s						
JYS	Shirataka	0.64	122	⇓iP	Pg	15 57 36.3	-0.4
JYS				⇓S	Sg	15 57 45.0	-0.1
JYS	Shirataka	0.64	122	A	A	15 57 36.3	
	comp=N,13nm,1.2s,comp=E,12nm,0.4s						
JTB	Tobi-shima	0.65	12	A	A	15 57 37.0	
	comp=N,14nm,0.5s,comp=E,23nm,0.3s						
JNS	Sasagawa	0.75	184	⇓iP	Pg	15 57 38.3	-0.4
JNS				⇓S	Sg	15 57 48.1	-0.4
JNS	Sasagawa	0.75	184	A	A	15 57 38.3	
	comp=N,16nm,0.3s,comp=E,14nm,0.7s						
JYK	Kaneyama	0.84	65	⇓iP	Pg	15 57 40.1	-0.5
JYK				⇓S	Sg	15 57 51.1	-0.5
JYK	Kaneyama	0.84	65	A	A	15 57 40.1	
	comp=N,5.0nm,0.6s,comp=E,4.0nm,0.7s						
JYAR	Yonezawaarcadi	0.89	137	A	A	15 57 41.0	
	comp=N,10.0nm,0.5s,comp=E,11nm,0.6s						
JOU	Okura	1.03	101	⇓iP	Pg	15 57 43.2	-0.9
JOU				⇓S	Sg	15 57 56.9	-0.6
JOU	Okura	1.03	101	A	A	15 57 43.2	
	comp=N,6.0nm,0.8s,comp=E,11nm,0.8s						
JSD	Sado	1.03	240	iP	Pg	15 57 42.7	-1.3
JSD				S	Sg	15 57 57.1	-0.4
JSD	Sado	1.03	240	A	A	15 57 42.7	
	comp=N,10.0nm,0.9s,comp=E,5.0nm,0.9s						
JIZZ	Izumozaki	1.16	207	A	A	15 57 46.0	
	comp=N,49nm,0.3s,comp=E,35nm,0.3s						
JYW	Yuwa	1.17	33	A	A	15 57 46.1	
	comp=N,16nm,0.9s,comp=E,17nm,1.1s						
JFY	Yanaizu	1.18	167	A	A	15 57 46.2	
	comp=N,5.0nm,0.8s,comp=E,5.0nm,1.7s						
JOFO	Osakifurukawao	1.20	88	A	A	15 57 46.4	
	comp=N,18nm,0.5s,comp=E,22nm,0.7s						
JOTO	OTAMA OYAMA	1.25	143	A	A	15 57 47.4	
	comp=N,7.0nm,1.5s						
JRG	Rokugo	1.28	49	A	A	15 57 47.9	
	comp=N,5.0nm,0.7s,comp=E,8.0nm,0.5s						
JMM	Marumori	1.31	122		Pn	15 57 48.0	-0.3
JMM	Marumori	1.31	122	A	A	15 57 48.2	
	comp=N,6.0nm,0.6s,comp=E,10.0nm,0.6s						
JOG3	Oga3	1.37	350	A	A	15 57 49.7	
	comp=N,12nm,1.4s,comp=E,11nm,1.5s						
JMST	Minamisoumatoc	1.45	125	A	A	15 57 50.5	
	comp=N,6.0nm,0.4s,comp=E,6.0nm,2.8s						
JFK	Kawauchi	1.68	135	A	A	15 57 53.9	
	comp=N,4.0nm,0.4s,comp=E,6.0nm,0.6s						
JSZI	Iwateshizukuis	1.69	46	A	A	15 57 54.3	
	comp=N,6.0nm,3.6s,comp=E,5.0nm,1.1s						

JJN	Nakama	1.75	214	A	A	15 57 55.2	
	comp=N,5.0nm,0.4s,comp=E,4.0nm,0.4s						
JAH	Hinai	1.89	31	A	A	15 57 57.2	
	comp=N,5.0nm,3.2s,comp=E,5.0nm,0.3s						
MJB9	Matsu-Tunnel	2.22	205		Pn	15 58 01.5	+0.6
MAJO	Matsushiro	2.22	205		Pn	15 58 00.7	-0.2
MJAR	Matsushiro Arr	2.22	205	Pn	Pn	15 58 01.1	+0.2
	comp=E,2.8nm,0.3s,baz=10,slow=16,SNR=111						
MJAR				Sn	Sn	15 58 30.5	+2.3
	comp=E,14nm,0.3s,baz=45,slow=29,SNR=16						
	comp=E,23nm,0.3s						
JTM	Tenmabayashi	2.57	30		Pn	15 58 05.8	+0.1
JGF	Kuroka	3.37	209		Pn	15 58 17.3	+0.6
INU	Inuyama	3.73	211	Pn	Pn	15 58 21.9	+0.4
ERM	Erimo	4.50	39		Pn	15 58 33.8	+1.8
ASAJ	Asahikawa	6.05	23	Pn	Pn	15 58 55.3	+1.9
	comp=E,0.7nm,0.3s,baz=224,slow=11,SNR=9.1						
	comp=E,4.9nm,0.8s						
JKA	Kamikawa-asahi	6.05	23	Pn	Pn	15 58 54.7	+1.3
JMN	Monobe	6.56	224	Pn	Pn	15 59 01.0	+0.5
USA0B	Ussuriysk Arra	7.91	318	Pn	Pn	15 59 18.3	-0.6
USRK	Ussuriysk Ar.	7.91	318	Pn	Pn	15 59 18.3	-0.6
USRK	Ussuriysk Ar.	7.91	318	Pn	Pn	15 59 17.6	-1.3
	comp=E,1.3nm,0.3s,baz=124,slow=14,SNR=13						
	comp=E,1.8nm,0.4s						
KSRS	Korea Array	9.11	267	Pn	Pn	15 59 37.4	+1.9
	comp=E,1.8nm,0.3s,baz=75,slow=14,SNR=24						
KSRS				Sn	Sn	16 01 19.6	+1.8
	comp=E,1.4nm,0.3s,baz=76,slow=24,SNR=14						
KSAR	Wonju Array Be	9.14	267	Pn	Pn	15 59 36.6	+0.8
KS19	Wonju Array Si	9.15	267	Pn	Pn	15 59 37.3	+1.3
JCJ	Chichijima	11.68	168	Pn	Pn	16 00 09.0	-1.6
	comp=E,25nm,0.3s,baz=180,slow=0.0						
NJ2	Nanjing	17.95	255	*e*P	P	16 01 35.4	+1.3
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HHC	Hu-ho-hao-te	21.49	285	*e*P	P	16 02 13.3	+0.5
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,400nm,4.6s						
MA2	Magadan	22.25	15	P	P	16 02 22.1	+1.5
MA2				IAmb	IAmb	16 03 04.4	
	comp=Z,30nm,1.3s						
SONM	Songino Array	25.60	302	P	P	16 02 50.8	-2.5
	comp=Z,0.5nm,0.6s,baz=112,slow=11,SNR=3.0						
	comp=Z,0.5nm,0.6s						
MIDW	Midway	37.26	93	P	P	16 04 36.3	+0.5
WMQ	Urumqi	38.73	295	*e*P	P	16 04 50.3	+2.2
ZALV	Zalesovo Beam	39.70	311	PcP	PcP	16 07 01.8	-0.6
	comp=Z,0.9nm,0.5s,baz=93,slow=5.1,SNR=4.4						
FAKI	Fak Fak	41.80	191	P	P	16 05 14.1	+0.4
MKAR	Makanchi Array	41.95	300	P	P	16 05 13.3	-1.4
	comp=Z,0.4nm,0.8s,baz=76,slow=12,SNR=2.4						
MKAR				PcP	PcP	16 07 09.8	-0.2
	comp=Z,0.3nm,0.7s,baz=108,slow=3.2,SNR=2.7						
	comp=Z,0.4nm,0.8s						
M14K	Bethel	42.18	39	P	P	16 05 17.7	+1.4
M14K				IAmb	IAmb	16 05 23.7	
	comp=Z,11nm,1.1s						
N15K	Kwethluk River	43.07	40	P	P	16 05 24.7	+1.1
L16K	Owhat River	43.44	37	P	P	16 05 27.3	+0.8
L16K				IAmb	IAmb	16 05 30.4	
	comp=Z,13nm,1.5s						
C18K	Utukok River	43.64	27	P	P	16 05 28.5	+0.4
C18K				IAmb	IAmb	16 05 55.9	
	comp=Z,9.0nm,1.4s						
KURBB	Kurchatov Arra	43.80	307	P	P	16 05 28.4	-1.2
	comp=Z,1.1nm,0.7s,baz=83,slow=8.1,SNR=11						
	comp=Z,1.1nm,0.7s						
O16K	Kokwok River B	44.07	40	P	P	16 05 32.6	+1.0
O16K				IAmb	IAmb	16 05 50.9	
	comp=Z,11nm,1.4s						
G18K	Tagagawik	44.16	31	P	P	16 05 33.0	+0.7
G18K				IAmb	IAmb	16 05 33.6	
	comp=Z,4.2nm,0.6s						
L18K	Granite Mounta	44.77	37	P	P	16 05 38.5	+1.2
L18K				IAmb	IAmb	16 05 53.4	
	comp=Z,6.8nm,1.4s						
N18K	Kilae Creek	45.16	39	P	P	16 05 41.5	+1.2
N18K				IAmb	IAmb	16 05 43.1	
	comp=Z,4.0nm,1.0s						
J19K	Poorman	45.31	34	P	P	16 05 42.1	+0.7
B21K	Ikpikpuk River	46.12	26	IAmb	IAmb	16 05 49.5	
	comp=Z,3.4nm,0.8s						
IMAR	Indian Mountai	46.17	31	P	P	16 05 48.8	+0.5
E21K	Killik River	46.23	28	IAmb	IAmb	16 05 50.1	
	comp=Z,3.0nm,0.8s						
H21K	Melozitna Rive	46.55	32	P	P	16 05 52.5	+1.3
G23K	Bananza Creek	47.69	30	IAmb	IAmb	16 06 01.8	
	comp=Z,2.9nm,0.9s						
H23K	Yukon River	47.90	32	IAmb	IAmb	16 06 03.9	
	comp=Z,3.5nm,0.6s						
BVAR	Borovoye Array	48.35	311	P	P	16 06 04.6	-0.8
	comp=Z,0.6nm,0.6s,baz=69,slow=9.9,SNR=3.9						
BVAR				PcP	PcP	16 07 32.0	+0.1
	comp=Z,1.3nm,0.6s,baz=57,slow=1.3,SNR=7.0						
	comp=Z,0.6nm,0.6s						
ILAR	Eielson Array	49.08	33	P	P	16 06 10.8	0.0
	comp=Z,1.6nm,0.7s,baz=275,slow=6.4,SNR=19						
	comp=Z,1.6nm,0.7s						
HDA	Harding Lake	49.08	33	IAmb	IAmb	16 06 11.6	
	comp=Z,2.5nm,0.6s						
PRP	Porcupine Dome	49.58	32	IAmb	IAmb	16 06 16.7	
	comp=Z,3.7nm,0.8s						
BMAR	Burnt Mountain	49.78	29	P	P	16 06 17.7	+1.5
F26K	Sheenjek River	49.92	29	IAmb	IAmb	16 06 19.9	
	comp=Z,4.3nm,0.8s						
SCRK	Sand Creek	50.42	34	IAmb	IAmb	16 06 22.1	
	comp=Z,3.0nm,0.6s						
L27K	Beaver Creek,	51.53	35	IAmb	IAmb	16 06 31.5	
	comp=Z,2.8nm,0.7s						
EPYK	Eagle Plains	53.01	30	IAmb	IAmb	16 06 42.3	
	comp=Z,6.3nm,1.0s						
HYT	Haines Junctio	54.04	37	IAmb	IAmb	16 06 50.9	
	comp=Z,4.4nm,0.8s						
WRA	Warramunga Arr	58.39	186		P	16 07 18.7	-0.8
WRA	Warramunga Arr	58.39	186	P	P	16 07 18.9	-0.5
	comp=Z,3.6nm,0.7s,baz=2.6,slow=7.2,SNR=22						
	comp=Z,3.6nm,0.7s						
RES	Resolute Bay	61.52	14		P	16 07 40.0	-0.2
RES				IAmb	IAmb	16 07 40.6	
	comp=Z,2.9nm,0.8s						
ASAR	Alice Springs	62.12	186	P	P	16 07 44.6	-0.3
	comp=Z,1.2nm,0.7s,baz=7.3,slow=5.3,SNR=13						
	comp=Z,1.2nm,0.7s						
YKA	Yellowknife Ar	63.29	30	P	P	16 07 52.5	+0.2
	comp=Z,0.6nm,0.7s,baz=308,slow=7.1,SNR=5.0						
	comp=Z,0.6nm,0.7s						
FINES	FINESS Array B	66.71	331	P	P	16 08 13.5	-1.1
	comp=Z,1.9nm,0.6s,baz=54,slow=7.5,SNR=6.8						
	comp=Z,1.9nm,0.6s						
HFS	Hagfors	72.03	335	P	P	16 08 46.5	-1.0
	comp=Z,1.2nm,0.4s,baz=39,slow=5.7,SNR=8.2						
	comp=Z,1.2nm,0.4s						
AKASG	Malin Array Be	72.10	321	P	P	16 08 47.4	-0.7
	comp=Z,1.3nm,0.5s,baz=49,slow=6.0,SNR=18						
	comp=Z,1.3nm,0.5s						
AKBB	Malin Array Si	72.10	321		P	16 08 47.5	-0.6
AKBB				IAmb	IAmb	16 08 48.4	
	comp=Z,3.1nm,0.7s						
KIEV	Kiev	72.11	321		P	16 08 47.6	-0.6
KIEV				IAmb	IAmb	16 08 48.4	
	comp=Z,2.7nm,0.7s						
NB2	NORSAR Subarra	72.15	336	P	P	16 08 47.4	-0.9
	comp=Z,0.3nm,0.5s,baz=40,slow=6.2						
NOA	NORSAR Array B	72.15	336	P	P	16 08 47.6	-0.6
	comp=Z,0.6nm,0.5s,baz=41,slow=6.0,SNR=5.4						
	comp=Z,0.6nm,0.5s						
FFC	Flin Flon	73.28	32	P	P	16 08 54.8	-0.3
NVAR	Mina Array Bea	75.35	52	P	P	16 09 08.8	+1.1
	comp=Z,1.6nm,0.5s,baz=298,slow=6.6,SNR=7.1						
	comp=Z,1.6nm,0.5s						
DSP	Deep Springs	76.20	53	P	P	16 09 13.0	+0.7
BRTR	Keskin Array B	76.63	310	P	P	16 09 14.2	-0.7
	comp=Z,1.0nm,0.7s,baz=66,slow=3.1,SNR=5.4						
	comp=Z,1.0nm,0.7s						
PDAR	Pinedale Array	77.73	45	P	P	16 09 21.6	+0.5
	comp=Z,0.7nm,0.6s,baz=305,slow=5.2,SNR=6.2						
	comp=Z,0.7nm,0.6s						
GERES	GERESS Array B	80.56	327	P	P	16 09 35.6	-0.7
	comp=Z,0.4nm,0.5s,baz=0.0,slow=5.7,SNR=4.0						
	comp=Z,0.4nm,0.5s						
TXAR	Lajitas Array	90.44	51	P	P	16 10 26.0	+0.1
	comp=Z,0.4nm,0.7s,baz=299,slow=1.3,SNR=5.0						
	comp=Z,0.4nm,0.7s						
LPAZ	La Paz	147.22	55	PKPbc	PKPbc	16 17 08.3	-0.2
	comp=Z,0.8nm,0.6s,baz=253,slow=5.3,SNR=4.3						

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*GCG **18** 16:02:36.5±2.1, 14.°00N×93.°35W, h35^{km}±999^{km}, MD4.0, ML3.5*

*MEX **18** 16:02:38.9±0.7, 14.°11N×93.°25W, h16^{km}±275^{km}, MD4.0*

ISC 18 16:02:33.6±1.8**, 14.°10N**±0.°09×**93.°30W**±0.°04**, h10**^{km}±12^{km}**,**
n17, σ**2**^{s}**12**/29**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.28	51	*e*P	Pg	16 02 59.0	+0.7
THIG				*e*S	Sn	16 03 14.8	0.0
PATR	El Naranjo	1.44	45	*e*P	Pb	16 03 00.2	-0.5
PATR				*e*S	Sn	16 03 17.8	-1.3
PAVE	Pavencul	1.54	45	*e*P	Pb	16 03 02.1	-0.2
PAVE				*e*S	Sn	16 03 19.2	-2.2
PCIG		1.60	3	*e*P	Pn	16 03 02.1	+0.2
PCIG				*e*S	Sn	16 03 19.9	-2.6
RTAL	Retalhuleu	1.61	75	*e*P	Pg	16 03 04.4	-0.1
RTAL				*e*S	Sg	16 03 24.7	-0.8
STG8	El Palmar, Qui	1.92	79	*e*P	Pn	16 03 06.5	-0.1
STG8				IAML		16 03 35.4	
	comp=N,459nm,0.2s						
STG0	El Palmar, Qui	1.92	80	*e*P	Pn	16 03 06.2	-0.3
STG0				IAML		16 03 35.6	
	comp=E,568nm,0.3s						
HUEH	Huehuetenango	2.12	55	*e*P	Pn	16 03 09.3	0.0
HUEH				*e*S	Sn	16 03 35.4	-0.4
CCIG	Comitan	2.44	27	*e*P	Pb	16 03 17.0	-0.7
CCIG				*e*S	Sn	16 03 43.2	-0.5
CCIG	Comitan	2.44	27	*i* P	Pb	16 03 17.1	-0.6
CCIG				*i* S	Sb	16 03 48.8	+0.9
CCIG				IAML		16 03 54.8	
	comp=N,139nm,0.4s						
TGIG		2.67	4	*e*P	Pb	16 03 19.5	-2.1
TGIG				*e*S	Sn	16 03 49.1	0.0
TGIG		2.67	4	*i* P	Pb	16 03 19.4	-2.1
TGIG				*i* S	Sn	16 03 50.1	+1.0
TGIG				IAML		16 03 53.1	
	comp=E,132nm,0.4s						
PETF	Flores	4.33	49	*e*P	Pn	16 03 44.2	+4.6
PETF				*e*S	Sn	16 04 34.9	+4.7
YOIG	Yosondua	4.93	304	*e*P	Pn	16 03 53.8	+5.8
YOIG				*e*S	Sn	16 04 41.4	-3.8
PNIG	Pinotepa	5.19	297	*e*P	Pn	16 03 54.0	+2.6
PNIG				*e*S	Sn	16 04 46.6	-4.7
TXIG	Tlaxiaco	5.33	307	*e*P	Pn	16 03 57.7	+4.2
TXIG				*e*S	Sn	16 04 56.3	+1.3
TOIG	Toxpalan	5.38	318	*e*P	Pb	16 04 02.9	-4.9
TOIG				*e*S	Sn	16 04 55.6	-0.4

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*IDC **18** 16:05:15.0±0.3, 30.°98S×177.°60W, h0^{km}, mb5.4/22, mbtmp5.4/23, ML5.3/1, MS5.9/53, Error ellipse: s-maj=16.5km s-min=13.1km az=70.0*

*NOU **18** 16:05:16.8, 31.°43S×177.°15W, h19^{km}, ML5.8/146, Kermadec Islands Region*

*BJI **18** 16:05:16.1, 30.°96S×177.°25W, h24^{km}, mB6.2/57, mb5.7/65, Ms6.0/85, Ms7 5.9/83*

*ISC-PP **18** 16:05:17, 31.°02S×177.°55W, h15^{km}, Mwppsm6.3, Moment Tensor Solution. s25 Moment tensor: Scale 10^{18}Nm; M_{rr}0.49±.15; $M_{\theta\theta}$-0.03±.16; $M_{\phi\phi}$-0.48±.17; $M_{r\theta}$0.29±.15; $M_{\theta\phi}$-0.35±.21; $M_{\phi r}$0.22±.12; Fault plane solution: $M_0$4.03000×10^{18} NP1:ϕ_s351.30000°, δ26.50000°, λ112.90000°. NP2:ϕ_s146.00000°, δ65.70000°, λ79.00000°.*

*BGR **18** 16:05:17.7, 31.°12S×178.°05W, h33^{km}, Ms6.4*

*PPT **18** 16:05:17.7±0.1, 31.°13S×177.°51W, h10^{km}, mb5.7/58, MLv6.2/3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

*NEIC **18** 16:05:17.4±2.0, 31.°02S±0.°08×177.°55W±0.°09, h15^{km}±1^{km}, mb5.8/422, Ms_20 6.3/995, Mww5.9/52, Error ellipse: s-maj=13.9km s-min=12.1km az=28.0*

*NEIC **18** 16:05:18.8, 31.°28S×177.°19W, h18^{km}, Moment Tensor Solution. Duration: 4^{s}8 Moment tensor: Scale 10^{17}Nm; M_{rr}8.11; $M_{\theta\theta}$-0.46; $M_{\phi\phi}$-7.65; $M_{r\theta}$0.62; $M_{\theta\phi}$-2.31; $M_{\phi r}$5.08; Fault plane solution: $M_0$9.69000×10^{17} NP1: ϕ_s201.47000°, δ29.42000°, λ98.86000°. NP2:ϕ_s11.32000°, δ60.96000°, λ85.03000°. Principal axes: T 9.6075, Plg74.0000°, Azm269.0000°; N 0.1532, Plg4.0000°, Azm14.0000°; P -9.7607, Plg16.0000°, Azm105.0000°;*

*NEIC **18** 16:05:18.8, 31.°08S×177.°54W, h18^{km}*

*MOS **18** 16:05:19.2±1.1, 31.°02S×177.°76W, h32^{km}, mb6.0/39, MS6.1/30, Error ellipse: s-maj=9.3km s-min=7.2km az=105.9*

*GCMT **18** 16:05:22.4±0.1, 31.°11S±0.°01×177.°20W, h14^{km}, MW6.0/159, Moment Tensor Solution. s145,c294; s159,c520; Duration: 2^{s}4 Moment tensor: Scale 10^{18} Nm; M_{rr}0.77±.01; $M_{\theta\theta}$-0.02±.01; $M_{\phi\phi}$-0.74±.01; $M_{r\theta}$0.14±.01; $M_{\theta\phi}$-0.22±.00; $M_{\phi r}$0.85±.02; Best double couple: $M_0$1.16400×10^{18} NP1:ϕ_s201.00000°, δ22.00000°, λ100.00000°. NP2:ϕ_s11.00000°, δ69.00000°, λ86.00000°. Principal axes: T 1.1470, Plg66.0000°, Azm274.0000°; N 0.0330, Plg4.0000°, Azm12.0000°; P -1.1800, Plg24.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 18 16:05:16.8±0.5**, 31.°17S**±0.°03×**177.°43W**±0.°04**, h16**^{km}±2^{km}**,**
h16^{km}**:pP-P, n1861,** σ**1**^{s}**67**/1319**, mb5.8**/317**, MS6.2**/576**,**
123C-81D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	1.94	347	P	Pn	16 05 47.3	-1.9
GLKZ				S	Sn	16 06 13.9	+0.6
RAO	Raoul Island	1.95	347		Pn	16 05 47.2	-2.2
RAO	Raoul Island	1.95	347	P	Pn	16 05 47.2	-2.2
RAO	Raoul Island	1.95	347	P	Pn	16 05 47.4	-1.9
RAO	Raoul Island	1.95	347	⇑P	Pn	16 05 47.3	-2.1
RIZ	Raoul Island	1.96	347	P	Pn	16 05 47.3	-2.2
MXZ	Matakaoa Point	7.29	208		Pn	16 07 03.0	+0.3
MXZ	Matakaoa Point	7.29	208	P	Pn	16 07 01.2	-1.5
MXZ	Matakaoa Point	7.29	208	S	Sn	16 08 22.9	-2.2
MXZ	Matakaoa Point	7.29	208	P	Pn	16 06 59.5	-3.2
MXZ				S	Sn	16 08 23.7	-1.4
WMGZ	Waiomatatini S	7.47	206	P	Pn	16 07 02.0	-3.1
WMGZ				S	Sn	16 08 28.1	-1.5
PKGZ	Pakihiroa	7.64	208	P	Pn	16 07 04.8	-2.7
PKGZ				S	Sn	16 08 31.1	-2.8
HAZ	Te Kaha	7.67	210	P	Pn	16 07 05.0	-2.9
HAZ				S	Sn	16 08 33.9	-0.5
PUZ	Puketiti	7.75	206	P	Pn	16 07 04.8	-4.2
PUZ				S	Sn	16 08 34.6	-1.9
GRZ	Great Barrier	7.80	228	P	Pn	16 07 12.3	+2.7
RUGZ	Raukumara Rang	7.89	209	P	Pn	16 07 07.5	-3.6
TWGZ	Tauwhareparae	7.95	207	P	Pn	16 07 08.4	-3.4
KUZ	Kuaotunu	7.96	224	P	Pn	16 07 11.8	0.0
KUZ	Kuaotunu	7.96	224	P	Pn	16 07 12.5	+0.6
WHRZ	Whale Island	8.11	213	P	Pn	16 07 12.7	-1.3
CNGZ	Carnagh Statio	8.13	205	P	Pn	16 07 10.1	-4.1
TKGZ	Te Karaka	8.23	207	P	Pn	16 07 11.4	-4.2
MWZ	Matawai	8.27	209	P	Pn	16 07 11.6	-4.5
WCZ	Waipu Caves	8.35	233	P	Pn	16 07 20.0	+2.7
MARZ	Manawahe	8.36	214	P	Pn	16 07 15.9	-1.5
URZ	Urewera	8.38	211	Pn	Pn	16 07 13.2	-4.5
	6.2nm,0.3s,baz=345,slow=3.8,SNR=52						
URZ				Sn	Sn	16 08 47.0	-5.0
	30nm,0.3s,baz=246,slow=20,SNR=12						
URZ	Urewera	8.38	211	P	Pn	16 07 14.1	-3.6
URZ	Urewera	8.38	211	S	Sn	16 08 48.6	-3.4
URZ	Urewera	8.38	211	P	Pn	16 07 13.5	-4.1
EDRZ	Edgecumbe	8.43	213	P	Pn	16 07 17.0	-1.3
RAGZ	Rawiri	8.45	209	P	Pn	16 07 15.5	-3.2
RIGZ	Rimuhau	8.49	206	P	Pn	16 07 14.6	-4.6
MKAZ	Moumakai	8.53	224	P	Pn	16 07 21.0	+1.3
OUZ	Omahuta	8.54	239	P	Pn	16 07 21.9	+2.1
OUZ	Omahuta	8.54	239	P	Pn	16 07 23.1	+3.3
OUZ	Omahuta	8.54	239	⇓P	Pn	16 07 24.0	+4.2
OMRZ	Omania	8.60	215	P	Pn	16 07 20.1	-0.6
KMRZ	Kaimai	8.62	218	P	Pn	16 07 20.3	-0.7
PRGZ	Paritu Road	8.64	205	P	Pn	16 07 16.2	-5.1
TARZ	Mount Tarawera	8.64	214	P	Pn	16 07 20.8	-0.5
MUGZ	Murupara	8.71	212	P	Pn	16 07 18.8	-3.4
RRRZ	Republican Roa	8.72	213	P	Pn	16 07 21.3	-1.1
SNGZ	Shannon Statio	8.72	208	P	Pn	16 07 18.8	-3.6
RTZ	Ruatahuna	8.73	210		Pn	16 07 20.2	-2.4
RTZ	Ruatahuna	8.73	210	P	Pn	16 07 19.1	-3.5
TOZ	Tahuroa Road	8.77	220		Pn	16 07 23.9	+0.9
HSRZ	Hossack Road	8.82	214	P	Pn	16 07 23.2	-0.5
MHGZ	Mahia Peninsul	8.83	204	P	Pn	16 07 19.3	-4.6
HRRZ	Handcock Road	8.87	214	P	Pn	16 07 24.8	+0.4
PRRZ	Plateau Road	8.90	213	P	Pn	16 07 23.1	-1.7
RAHZ	Arahi	8.94	209	P	Pn	16 07 22.2	-3.2
ALRZ	Allen Road	8.98	213	P	Pn	16 07 23.7	-2.2
MTHZ	Maungataniwha	8.99	210	P	Pn	16 07 22.9	-3.1
MRHZ	Matea Rd	9.16	212	P	Pn	16 07 26.0	-2.5
KUTZ	Kaahu Road	9.17	215	P	Pn	16 07 28.0	-0.5
TLZ	Tolley Road	9.19	217	P	Pn	16 07 30.7	+1.9
NMHZ	Naumai	9.21	209	P	Pn	16 07 25.5	-3.6
ARHZ	Aropaoanui	9.27	208	P	Pn	16 07 27.2	-2.8
WATZ	Wairara	9.38	215	P	Pn	16 07 29.9	-1.6
BKZ	Black Stump Fm	9.40	210		Pn	16 07 28.9	-2.8
BKZ	Black Stump Fm	9.40	210	P	Pn	16 07 28.7	-3.0
BKZ	Black Stump Fm	9.40	210	S	Sn	16 09 13.9	-3.3
BKZ	Black Stump Fm	9.40	210	P	Pn	16 07 26.6	-5.1
RATZ	Rangitukua	9.49	214	P	Pn	16 07 31.6	-1.3
RITZ	Rihia Road	9.54	213	P	Pn	16 07 32.8	-0.8
MCHZ	McNeill Hill	9.55	209	P	Pn	16 07 29.1	-4.7
KATZ	Kakaramea	9.61	214	P	Pn	16 07 35.0	+0.4
HIZ	Hauiti	9.69	219		Pn	16 07 35.9	+0.3
HIZ	Hauiti	9.69	219	P	Pn	16 07 35.3	-0.3
NTVZ	North Tongarir	9.72	214	P	Pn	16 07 32.3	-3.8
TMVZ	Te Maari	9.72	213	P	Pn	16 07 33.4	-2.7
ETVZ	East Tongariro	9.73	213	P	Pn	16 07 36.1	-0.2
KRVZ	Karewarewa	9.73	214	P	Pn	16 07 35.9	-0.4
NNVZ	North Ngauruho	9.77	214	P	Pn	16 07 35.0	-1.9
WTVZ	West Tongariro	9.77	214	P	Pn	16 07 36.5	-0.4
OTVZ	Oturere	9.77	213	P	Pn	16 07 33.4	-3.5
KAHZ	Kahuranaki	9.78	207	P	Pn	16 07 30.2	-6.7
SNVZ	South Ngauruho	9.80	213	P	Pn	16 07 34.6	-2.7
TWVZ	Taurewa	9.81	215	P	Pn	16 07 36.1	-1.3
NGZ	Ngauruhoe	9.81	214	P	Pn	16 07 35.0	-2.5
KRHZ	Kereru	9.85	209	P	Pn	16 07 32.5	-5.4
COVZ	Chateau Observ	9.86	214	P	Pn	16 07 38.6	+0.6
TUVZ	Tukino	9.86	213	P	Pn	16 07 38.5	+0.4
FWVZ	Far West T-bar	9.90	213	P	Pn	16 07 36.1	-2.6
WHVZ	Whangaehu Hut	9.90	213	P	Pn	16 07 37.0	-1.8
MAVZ	Matarangi	9.91	213	P	Pn	16 07 37.7	-1.2
MOVZ	Moawhango	9.93	212	P	Pn	16 07 35.9	-3.0
WNVZ	Wahianoa	9.94	213	P	Pn	16 07 35.2	-4.0
PXZ	Pawanui	9.99	206	P	Pn	16 07 35.5	-4.2
PKVZ	Pokaka	10.03	214	P	Pn	16 07 40.6	+0.3
PNHZ	Pukenui	10.15	209	P	Pn	16 07 36.2	-5.8
WPHZ	Waipukurau	10.18	208	P	Pn	16 07 35.9	-6.4
VRZ	Vera Road	10.19	217	P	Pn	16 07 41.0	-1.4
PRHZ	Porangahau	10.28	206	P	Pn	16 07 40.3	-3.4
TSZ	Takapari Road	10.37	209	P	Pn	16 07 40.2	-4.8
DVHZ	Dannevirke	10.49	208	P	Pn	16 07 39.7	-6.9
ANWZ	Angora Road	10.51	206	P	Pn	16 07 42.8	-4.0
WAZ	Wanganui	10.56	214	P	Pn	16 07 45.9	-1.7
LREZ	Lake Rotokare	10.62	217	P	Pn	16 07 50.5	+2.1
NEZ	North Egmont	10.64	218	P	Pn	16 07 52.7	+3.9
PKE	Pukeiti	10.65	219	P	Pn	16 07 49.5	+0.7
KHEZ	Kahui Hut	10.71	218	P	Pn	16 07 52.2	+2.6
POWZ	Post Office Ro	10.73	209	P	Pn	16 07 45.3	-4.6
NBEZ	Newall Road No	10.76	219	P	Pn	16 07 57.2	+6.9
BFZ	Birch Farm	10.79	207		Pn	16 07 51.8	+1.1
BFZ	Birch Farm	10.79	207	P	Pn	16 07 43.6	-7.0
PRWZ	Pori Road	10.79	208	P	Pn	16 07 49.2	-1.4
TIWZ	Tintock	11.01	208	P	Pn	16 07 49.3	-4.4
MRZ	Mangatainoka R	11.04	209		Pn	16 07 52.1	-2.0
MRZ	Mangatainoka R	11.04	209	P	Pn	16 07 47.3	-6.8
HOWZ	Holdsworth Sta	11.26	208	P	Pn	16 07 51.0	-6.1
TMWZ	Te Maipa	11.29	207	P	Pn	16 07 51.5	-6.0
OGWZ	Otaki Gorge	11.34	210	P	Pn	16 07 51.9	-6.2
KIW	Kapiti Island	11.48	211	P	Pn	16 07 54.0	-6.2
MTW	Mount Morrison	11.49	208	P	Pn	16 07 54.0	-6.2
TRWZ	Traveller	11.62	207	P	Pn	16 08 00.4	-1.7
CAW	Cannon Point	11.62	209	P	Pn	16 07 55.9	-6.2
PAWZ	Paruwai Farm	11.71	207	P	Pn	16 07 56.3	-7.0
MSWZ	Moikau Station	11.80	208	P	Pn	16 08 02.1	-2.5
DUWZ	D'Urville Isla	11.89	214	P	Pn	16 08 00.9	-4.9
PLWZ	Palliser	11.93	208	P	Pn	16 08 01.6	-4.8
TCW	Tory Channel	12.05	211		Pn	16 08 09.9	+2.0
TCW	Tory Channel	12.05	211	P	Pn	16 08 04.0	-3.9
TUWZ	Tuamarina	12.37	212		Pn	16 08 08.2	-4.1
TUWZ	Tuamarina	12.37	212	P	Pn	16 08 06.8	-5.6
NNZ	Nelson	12.47	214	P	Pn	16 08 10.5	-3.1
TKNZ	Takaka Hill	12.53	216		Pn	16 08 13.0	-1.6
CTZ	Chatham Island	12.56	177		Pn	16 08 11.4	-3.5
CTZ	Chatham Island	12.56	177	P	Pn	16 08 11.9	-3.0
QRZ	Quartz Range	12.60	217	P	Pn	16 08 14.0	-1.4
BSWZ	Blackbirch Sta	12.63	211		Pn	16 08 17.1	+1.2
BSWZ	Blackbirch Sta	12.63	211	P	Pn	16 08 13.0	-2.9
NFK	Norfolk Island	12.84	276	P	Pn	16 08 24.1	+5.3
NFK	Norfolk Island	12.84	276	⇑P	P	16 08 24.5	-5.2
MRNZ	Matariki Terra	12.91	215		Pn	16 08 21.0	+1.3
LKBA	Tubou, Lakemba	12.94	354	P	Pn	16 08 24.0	+3.9
THZ	Tophouse	13.12	214		Pn	16 08 21.8	-0.8
KHZ	Kahutara	13.35	210		Pn	16 08 22.7	-3.0
KHZ	Kahutara	13.35	210	P	Pn	16 08 22.6	-3.0
KHZ	Kahutara	13.35	210	P	Pn	16 08 19.8	-5.8
NIUE	Niue	13.82	31	Pn	Pn	16 08 25.5	-6.6
NIUE	Niue	13.82	31	P	Pn	16 08 26.3	-5.8
	comp=Z,321nm,1.7s						
NIUE	Niue	13.82	31	P	Pn	16 08 31.2	-0.9
MSVF	Nonsavu	13.99	342	Pn	Pn	16 08 33.1	-1.5
MSVF	Nonsavu	13.99	342	Pn	Pn	16 08 33.5	-1.1
	comp=Z,0.5nm,0.3s,baz=145,slow=12,SNR=10						
MSVF				LR	LR	16 12 32.8	
	comp=Z,37µm,19.9s,baz=171,slow=32						
	comp=Z,29nm,0.8s						
MSVF	Nonsavu	13.99	342	P	Pn	16 08 36.1	+1.5
MSVF	Nonsavu	13.99	342	*i* P	Pn	16 08 33.8	-0.8
MSVF	Nonsavu	13.99	342	⇑P	Pn	16 08 34.1	-0.5
GVZ	Greta Valley S	14.01	210		Pn	16 08 33.2	-1.6
LTZ	Lake Taylor	14.20	212		Pn	16 08 34.5	-2.9
TAVE	Taveuni	14.57	351	P	Pn	16 08 44.5	+2.0
MQZ	McQueen's Vall	14.77	209		Pn	16 08 47.6	+2.5
DGTI	Dogotuki	15.02	349	P	P	16 08 52.1	-1.9
RPZ	Rata Peaks	15.49	213	Pn	Pn	16 08 46.5	-8.1
	comp=Z,6.1nm,0.3s,baz=27,slow=4.5,SNR=21						
RPZ				Sn	Sn	16 11 27.4	-18
	comp=Z,5.1nm,0.3s,baz=116,slow=20,SNR=8.4						
RPZ	Rata Peaks	15.49	213	P	Pn	16 08 51.6	-3.0
PINNC	Pines Island,	15.94	299	P	P	16 09 03.9	-0.2
PINNC	Pines Island,	15.94	299	P	P	16 09 04.9	+0.8
MARNC	Mare, Loyalty	16.20	303	P	P	16 09 08.1	+1.1
LBZ	Lake Benmore	16.41	213		Pn	16 09 03.1	-3.3
OUENC	Ouen Island, N	16.51	298	P	P	16 09 12.1	+1.6
INH	Isangel	16.66	311	P	P	16 09 14.1	+2.0
YATNC	Mamie plateau,	16.68	299	P	P	16 09 14.0	+1.6
ODZ	Otahua Downs	16.71	211		Pn	16 09 07.9	-2.4
ODZ	Otahua Downs	16.71	211	P	Pn	16 09 06.9	-3.3
JCZ	Jackson Bay	16.86	216	P	Pn	16 09 10.7	-1.5
ONTNC	Ouen Toro	16.87	298		Pn	16 09 13.3	+0.9
ONTNC				IAmb	IAmb	16 09 17.8	
	comp=Z,1µm,1.6s						
ONTNC	Ouen Toro	16.87	298	P	P	16 09 15.2	+0.8
ONTNC	Ouen Toro	16.87	298	⇑P	P	16 09 14.3	-0.1
DZM	Mont Dzumac	17.01	298	P	P	16 09 17.1	+1.0
DZM				IAmb	IAmb	16 09 21.9	
	comp=Z,1µm,1.3s						
DZM	Mont Dzumac	17.01	298	*e*Pn	P	16 09 15.6	-0.5
	comp=Z,2µm,1.4s						
DZM				*e*LR	LR	16 13 07.4	
	comp=Z,114µm,22.7s						
DZM	Mont Dzumac	17.01	298	Pn	P	16 09 17.6	+1.5
	comp=Z,2.3nm,0.3s,baz=128,slow=11,SNR=70						
DZM				LR	LR	16 14 46.6	
	comp=Z,151µm,18.5s,baz=131,slow=34						
DZM	Mont Dzumac	17.01	298	P	P	16 09 18.0	+1.9
DZM	Mont Dzumac	17.01	298	⇑P	P	16 09 17.4	+1.3
WKZ	Wanaka	17.29	214		Pn	16 09 16.6	-1.0
AFI	Afiamalu	17.95	18	Pn	Pn	16 09 20.6	-5.3
AFI	Afiamalu	17.95	18	P	P	16 09 27.0	+0.6
AFI	Afiamalu	17.95	18	P	Pn	16 09 20.6	-5.3
AFI				pmax	pmax		
	comp=Z,255nm,1.2s						
AFI	Afiamalu	17.95	18	⇑P	Pn	16 09 25.5	-0.4
MLZ	Mavora Lakes	18.12	214	P	Pn	16 09 23.7	-4.2
SYZ	Scrubby Hill	18.53	210	P	P	16 09 31.8	-0.8
WHZ	Wether Hill Ro	18.58	214	P	P	16 09 29.6	-3.6
DCZ	Deep Cove	18.66	216	P	P	16 09 32.4	-1.6
RAR	Rarotonga	18.67	62	P	P	16 09 34.3	0.0
RAR				IAmb	IAmb	16 09 36.6	
	comp=Z,699nm,1.3s						
RAR	Rarotonga	18.67	62	P	P	16 09 30.5	-3.7
	comp=Z,223nm,1.0s,baz=237,slow=5.0,SNR=15						
RAR				S	Sn	16 12 38.9	-24

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      comp=Z,70nm,1.0s,baz=71,slow=19,SNR=3.7
RAR                                LR       LR        16 17 32.7
      comp=Z,22µm,18.2s,baz=245,slow=39
RAR   Rarotonga        18.67  62   P        P         16 09 32.4  -1.9
RAR   Rarotonga        18.67  62   P        P         16 09 34.3   0.0
RAR                                pmax     pmax
      comp=Z,699nm,1.3s
RAR   Rarotonga        18.67  62  ⇓P        P         16 09 32.8  -1.5
PYZ   Puysegur Point   19.39 215   P        P         16 09 41.9  -0.2
LHI   Lord Howe Isla   20.08 263   P        Pn        16 09 52.8  +1.3
      comp=Z,0.0nmcomp=Z,734nm,1.4s
LHI   Lord Howe Isla   20.08 263  ⇑P        Pn        16 09 53.1  +1.6
VLAKA Lakatoro         20.39 314   P        Pn        16 09 56.4  +1.2
SANVU Saraoutou        21.03 315   Pn       P         16 10 00.7  +0.6
SANVU Saraoutou        21.03 315   P        P         16 10 03.7  +3.6
SANVU Saraoutou        21.03 315  ⇑P        P         16 09 57.8  -2.3
GC1S  Gold Coast 1 S   25.40 269   P        P         16 10 46.6  +3.0
TBI   Tubuai           26.00  79  eP        P         16 10 49.0  -0.2
      comp=Z,543nm,1.2s
TBI                               eS        S         16 15 19.4   0.0
      comp=Z,124µm,24.2s
TBI                               eLR       LR        16 17 13.6
      comp=Z,34µm,29.2s
TBI                               eLR       LR        16 17 17.1
      comp=Z,145µm,27.0s
NTLH  Newcastle Hard   26.18 258   P        P         16 10 54.1  +3.4
ARMA  Armidale         26.55 264   IAMs_20  IAMs_20   16 20 21.3
      comp=Z,62µm,18.0s
ARMA  Armidale         26.55 264   P        P         16 10 56.4  +2.2
      comp=Z,0.0nmcomp=Z,127nm,1.7s
ARMA  Armidale         26.55 264   P        P         16 10 56.4  +2.2
ARMA  Armidale         26.55 264  ⇑P        P         16 10 56.8  +2.6
RIV   Riverview        26.57 256   P        P         16 10 56.5  +2.2
      comp=Z,183nm,1.3s
RIV   Riverview        26.57 256   P        P         16 10 55.6  +1.3
RIV   Riverview        26.57 256   P        P         16 10 56.6  +2.4
RIV                                pmax     pmax
      comp=Z,183nm,1.3s
RIV   Riverview        26.57 256  ⇑P        P         16 10 56.7  +2.4
MGCD  Mangrove Creek   26.66 257   P        P         16 10 57.9  +2.9
      comp=Z,206nm,0.9s
MGCD  Mangrove Creek   26.66 257   P        P         16 10 58.3  +3.3
WOLH  Wollongong Har   26.79 255   P        P         16 10 58.9  +2.7
SYDH  Sydney Hard Ro   26.93 256   P        P         16 10 59.5  +2.1
CNB   Canberra Magne   28.00 253   P        P         16 11 09.0  +1.8
      comp=Z,0.0nmcomp=Z,87nm,1.1s
CNB   Canberra Magne   28.00 253   P        P         16 11 09.9  +2.7
HURO  Huro Makira      28.14 313   P        P         16 11 09.2  +0.8
EIDS  Eidsvold         28.27 274   P        P         16 11 10.5  +0.9
EIDS                               IAmb     IAmb      16 11 12.6
      comp=Z,157nm,0.9s
EIDS                               IAMs_20  IAMs_20   16 21 14.6
      comp=Z,85µm,18.0s
EIDS  Eidsvold         28.27 274   P        P         16 11 09.9  +0.3
      comp=Z,0.0nmcomp=Z,198nm,1.1s
EIDS  Eidsvold         28.27 274   P        P         16 11 11.3  +1.7
EIDS  Eidsvold         28.27 274  ⇑P        P         16 11 10.4  +0.9
CAN   Canberra         28.30 253   P        P         16 11 10.1  +0.3
CAN                                IAmb     IAmb      16 11 13.1
      comp=Z,142nm,1.3s
CAN   Canberra         28.30 253   P        P         16 11 11.0  +1.2
      comp=Z,0.0nmcomp=Z,78nm,1.1s
CAN   Canberra         28.30 253   P        P         16 11 11.4  +1.5
CAN   Canberra         28.30 253   P        P         16 11 10.1  +0.3
CAN                                pmax     pmax
      comp=Z,142nm,1.3s
CAN   Canberra         28.30 253  ⇑P        P         16 11 11.3  +1.5
PAE   Paea             28.61  68  eP        P         16 11 12.4  -0.2
      comp=Z,160nm,1.5s
PAE                               eS        S         16 15 56.8  -3.7
      comp=Z,942nm,24.6s
PAE                               eLR       LR        16 18 29.2
      comp=Z,3µm,21.3s
PAE   Paea             28.61  68  eP        P         16 11 12.2  -0.4
      comp=Z,160nm,1.5s
PPT2  Papeete2         28.65  68  eP        P         16 11 10.5  -2.6
      comp=Z,400nm,1.4s
PPT2                              eS        S         16 16 01.7  +0.3
      comp=Z,25µm,23.8s
PPT2                              eLR       LR        16 18 18.2
      comp=Z,19µm,28.0s
PPT2                              eLR       LR        16 18 25.7
      comp=Z,18µm,22.0s
PPTF  Pamatai, Papee   28.66  68   P        P         16 11 13.7  +0.6
PPTF  Pamatai, Papee   28.66  68   P        P         16 11 11.2  -1.9
PPTF  Pamatai, Papee   28.66  68  ⇓P        P         16 11 14.1  +0.9
PPT   Papeete          28.66  68   P        P         16 11 09.9  -3.2
      comp=Z,203nm,1.1s,baz=288,slow=20,SNR=3.8
PPT                                LR       LR        16 22 03.6
      comp=Z,23µm,18.0s,baz=248,slow=35
GD1S  Gladstone Soft   28.72 277   P        P         16 11 15.7  +2.1
TVO   Taravao          28.80  69  eP        P         16 11 10.4  -4.0
      comp=Z,92nm,1.3s
TVO                               eS        S         16 15 50.1   -14
      comp=Z,837nm,25.2s
TVO                               eLR       LR        16 18 34.6
      comp=Z,4µm,20.8s
YNG   Young            28.84 255   P        P         16 11 17.2  +2.6
      comp=Z,102nm,1.1s
GLAD  Gladstone        29.44 241   P        P         16 11 21.0  +1.2
RMQ   Roma             29.92 270   P        P         16 11 27.7  +3.5
HNR   Honiara          30.17 311   P        P         16 11 24.9  -1.5
HNR                                IAmb     IAmb      16 12 07.0
      comp=Z,291nm,1.2s
HNR   Honiara          30.17 311   P        P         16 11 28.9  +2.4
HNR   Honiara          30.17 311   P        P         16 11 25.0  -1.5
HNR                                pmax     pmax
      comp=Z,291nm,1.3s
ALEG  Aligegeo Malai   30.21 313   P        P         16 11 29.6  +2.8
TAU   Tasmania Unive   30.27 237   P        P         16 11 28.1  +1.0
TAU                                IAmb     IAmb      16 11 31.3
      comp=Z,380nm,1.8s
TAU   Tasmania Unive   30.27 237   IAMs_20  IAMs_20   16 23 55.5
      comp=Z,55µm,18.0s
TAU   Tasmania Unive   30.27 237   P        P         16 11 28.1  +1.0
TAU                                pmax     pmax
      comp=Z,380nm,1.8s
TAU                                MLR      MLR
      comp=Z,55µm,18.0s
MOO   Moorlands        30.28 238   P        P         16 11 28.0  +0.8
      comp=Z,188nm,1.5s
MOO   Moorlands        30.28 238   P        P         16 11 27.0  -0.2
TATA  Tatamba Isabel   31.05 312   P        P         16 11 37.0  +2.8
TOO   Toolangi         31.12 248   P        P         16 11 34.5  -0.3
TOO   Toolangi         31.12 248   P        P         16 11 35.7  +0.9
      comp=Z,49nm,1.5s
TOO   Toolangi         31.12 248   P        P         16 11 34.5  -0.3
TOO                                pmax     pmax
      comp=Z,58nm,1.1s
TOO                                MLR      MLR
      comp=Z,16µm,18.0s
TOO   Toolangi         31.12 248  ⇑P        P         16 11 35.9  +1.1
CMSA  Cobar Meteorol   31.40 260   P        P         16 11 37.9  +0.6
      comp=Z,0.0nmcomp=Z,145nm,1.4s
CMSA  Cobar Meteorol   31.40 260   P        P         16 11 38.7  +1.4
PMOR  Pomariorio Ree   31.44  66  eP        P         16 11 36.3  -1.4
      comp=Z,460nm,1.4s
PMOR                              eS        S         16 16 42.7  -2.3
      comp=Z,3µm,22.7s
PMOR                              eLR       LR        16 19 47.2
      comp=Z,17µm,21.8s
PMOR  Pomariorio Ree   31.44  66  eP        P         16 11 37.6  -0.1
      comp=Z,460nm,1.4s
MLBS  Spotswood, Mel   31.60 247   P        P         16 11 40.7  +1.8
GEXS  Deakin Univers   32.08 247   P        P         16 11 44.8  +1.7
QLP   Quilpie          33.77 268   P        P         16 11 58.7  +0.7
      comp=Z,403nm,1.2s
QLP   Quilpie          33.77 268   P        P         16 11 59.5  +1.5
QLP   Quilpie          33.77 268  ⇑P        P         16 11 58.5  +0.5
ARPS  Mount Arapiles   34.05 249   P        P         16 12 01.0  +0.6
      comp=Z,227nm,1.3s
ARPS  Mount Arapiles   34.05 249   P        P         16 12 01.9  +1.5
CTAO  Charters Tower   34.41 280   P        P         16 12 03.5  -0.2
CTAO  Charters Tower   34.41 280   P        P         16 12 05.2  +1.5
CTAO  Charters Tower   34.41 280   P        P         16 12 03.5  -0.2
CTAO                               pmax     pmax
      comp=Z,226nm,0.8s
CTAO                               MLR      MLR
      comp=Z,71µm,18.0s
CTAO  Charters Tower   34.41 280  ⇑P        P         16 12 04.5  +0.9
STKA  Stephens Creek   34.79 258   P        P         16 12 07.7  +0.9
      comp=Z,0.0nmcomp=Z,570nm,1.2s
STKA  Stephens Creek   34.79 258   P        P         16 12 07.5  +0.7
      comp=Z,53nm,0.6s,baz=99,slow=9.7,SNR=80
STKA                               LR       LR        16 25 47.1
      comp=Z,39µm,18.0s,baz=85,slow=36
      comp=Z,53nm,0.6s
STKA  Stephens Creek   34.79 258   P        P         16 12 08.2  +1.4
STKA  Stephens Creek   34.79 258  i P       P         16 12 06.5  -0.3
HTT   Hallett          36.77 255   P        P         16 12 24.0  +0.2
      comp=Z,68nm,1.3s
HTT   Hallett          36.77 255   P        P         16 12 24.7  +0.8
HTT   Hallett          36.77 255   P        P         16 12 23.6  -0.3
HTT   Hallett          36.77 255  ⇑P        P         16 12 24.0  +0.2
GHSS  Government Hou   36.83 252   P        P         16 12 25.3  +1.0
MTSU  Mount Surprise   36.92 281   P        P         16 12 25.6  +0.4
      comp=Z,126nm,1.0s
MTSU  Mount Surprise   36.92 281   P        P         16 12 26.6  +1.3
PTPS  Port Pirie       37.57 255   P        P         16 12 31.8  +1.2
WHYH  Whyalla          37.94 255   P        P         16 12 34.5  +0.8
XMAS  Kiritimati       38.11  34   P        P         16 12 35.0  -0.2
XMAS  Kiritimati       38.11  34   IAMs_20  IAMs_20   16 27 44.1
      comp=Z,28µm,18.0s
XMAS  Kiritimati       38.11  34   P        P         16 12 36.0  +0.8
RABL  Rabaul           39.22 307   P        P         16 12 43.7  -1.0
RABL  Rabaul           39.22 307  ⇑P        P         16 12 42.1  -2.5
BBOO  Buckleboo        39.24 255   IAmb     IAmb      16 12 46.1
      comp=Z,277nm,1.2s
BBOO                               IAMs_20  IAMs_20   16 28 20.1
      comp=Z,32µm,18.0s
BBOO  Buckleboo        39.24 255   P        P         16 12 43.0  -1.7
BBOO  Buckleboo        39.24 255   P        P         16 12 45.8  +1.1
PMG   Port Moresby     39.38 296            PcP       16 14 54.0  -0.3
PMG   Port Moresby     39.38 296   PcP      PcP       16 14 54.6  +0.4
      comp=Z,56nm,0.9s,baz=105,slow=1.7,SNR=5.3
QIS   Mount Isa        39.86 275   P        P         16 12 49.5  -0.5
      comp=Z,0.0nmcomp=Z,73nm,1.1s
QIS   Mount Isa        39.86 275   P        P         16 12 50.6  +0.6
COEN  Coen             39.95 286   P        P         16 12 50.7   0.0
COEN                               IAMs_20  IAMs_20   16 28 15.6
      comp=Z,33µm,18.0s
COEN  Coen             39.95 286   P        P         16 12 50.8  +0.1
      comp=Z,0.0nmcomp=Z,102nm,0.9s
COEN  Coen             39.95 286   P        P         16 12 52.7  +1.9
COEN  Coen             39.95 286  ⇑P        P         16 12 51.2  +0.4
TAOE  Nuku Hiva Isla   41.17  65  eP        P         16 13 02.0  +1.1
      comp=Z,548nm,1.5s
TAOE                              eS        S         16 19 14.0  +0.1
      comp=Z,4µm,24.8s
TAOE                              eSS       SS        16 22 12.9  -4.1
      comp=Z,7µm,25.6s
TAOE                              eLR       LR        16 24 12.8
      comp=Z,13µm,26.6s
AS01  Alice Springs    43.52 268   P        P         16 13 20.5  +0.5
AS31  Alice Springs    43.56 267   P        P         16 13 19.3  -1.0
ASAR  Alice Springs    43.56 267   P        P         16 13 19.2  -1.1
ASAR  Alice Springs    43.56 267   P        P         16 13 19.4  -1.0
      comp=Z,65nm,0.7s,baz=106,slow=7.2,SNR=526
ASAR                               ScP      ScP       16 19 01.7  +2.8
      comp=Z,15nm,0.9s,baz=111,slow=4.4,SNR=11
ASAR                               S        S         16 19 46.9  -2.2
      comp=Z,3.9nm,0.8s,baz=118,slow=14,SNR=4.5
ASAR                               LR       LR        16 31 15.9
      comp=Z,35µm,18.0s,baz=110,slow=36
      comp=Z,65nm,0.7s
DRV   Dumont d'Urvil   43.62 203   P        P         16 13 20.7  +0.6
MANU  Manus Island     44.09 304   P        P         16 13 23.2  -1.4
MANU  Manus Island     44.09 304  ⇑P        P         16 13 23.2  -1.4
WR8   Warramunga Arr   44.48 273   IAmb     IAmb      16 13 30.6
      comp=Z,125nm,0.8s
WRAB  Tennant Creek    44.61 273   P        P         16 13 27.6  -1.1
WRAB  Tennant Creek    44.61 273   P        P         16 13 27.6  -1.1
WRAB                               pmax     pmax
      comp=Z,580nm,1.7s
WRAB                               MLR      MLR
      comp=Z,64µm,18.0s
WRA   Warramunga Arr   44.62 273   P        P         16 13 28.4  -0.4
WRA   Warramunga Arr   44.62 273   P        P         16 13 27.7  -1.1
      comp=Z,98nm,0.7s,baz=114,slow=7.7,SNR=316
WRA                                PcP      PcP       16 15 11.7  +0.1
      comp=Z,26nm,0.9s,baz=111,slow=3.1,SNR=5.3
WRA                                ScP      ScP       16 19 04.0  +0.8
      comp=Z,14nm,1.1s,baz=113,slow=4.3,SNR=7.1
WRA                                S        S         16 20 00.9  -3.6
      comp=Z,3.4nm,0.9s,baz=108,slow=13,SNR=2.2
WRA                                LR       LR        16 31 47.0
      comp=Z,62µm,18.2s,baz=128,slow=36
WRA                                P4KPbc             16 51 21.4
      comp=Z,0.2nm,0.7s,baz=104,slow=4.3,SNR=5.5
      comp=Z,98nm,0.7s
WRA   Warramunga Arr   44.62 273   P        P         16 13 28.4  -0.4
WRA                                pmax     pmax
      comp=Z,19nm,0.9s
WB0   Warramunga Arr   44.65 273   IAmb     IAmb      16 13 30.6
      comp=Z,138nm,0.7s
FORT  Forrest          46.33 256   P        P         16 13 40.7  -1.5
FORT                               IAMs_20  IAMs_20   16 33 42.5
      comp=Z,29µm,18.0s
FORT  Forrest          46.33 256   P        P         16 13 42.5  +0.3
FORT  Forrest          46.33 256  ⇑P        P         16 13 40.6  -1.5
SBA   Scott Base       47.31 185   P        P         16 13 53.0  +3.8
SBA   Scott Base       47.31 185   P        P         16 13 53.0  +3.8
SBA                                pmax     pmax
      comp=Z,205nm,1.2s
SBA                                MLR      MLR
      comp=Z,16µm,19.0s
VNDA  Vanda            47.39 186   P        P         16 13 52.6  +2.8
VNDA                               IAmb     IAmb      16 14 16.7
      comp=Z,124nm,1.9s
VNDA  Vanda            47.39 186   P        P         16 13 52.6  +2.8
      comp=Z,13nm,1.1s,baz=5.7,slow=7.4,SNR=28
VNDA                               LR       LR        16 30 14.1
      comp=Z,15µm,20.6s,baz=21,slow=32
      comp=Z,13nm,1.1s
JAY   Jayapura         48.68 297   LR       LR        16 32 46.4
      comp=Z,3µm,20.3s,baz=138,slow=34
JAY   Jayapura         48.68 297   P        P         16 13 56.4  -4.3
      comp=Z,2µmcomp=Z,74nm,1.1s
GENI  Genyem           49.04 297   P        P         16 14 06.5  +3.1
GENI  Genyem           49.04 297   P        P         16 14 01.8  -1.6
      comp=Z,158nm,1.4s
KDU   Kakadu           49.53 280   P        P         16 14 07.0  -0.2
KDU   Kakadu           49.53 280  ⇑P        P         16 14 05.1  -2.0
SMPI  Sarmi            50.55 296   P        P         16 14 17.2  +2.4
MTN   Manton Dam       50.59 279   IAmb     IAmb      16 14 28.0
      comp=Z,100nm,0.8s
MTN   Manton Dam       50.59 279   P        P         16 14 15.2   0.0
MTN   Manton Dam       50.59 279  ⇑P        P         16 14 14.4  -0.7
KNRA  Kununurra        51.25 275   IAmb     IAmb      16 14 25.9
      comp=Z,61nm,0.7s
KMBL  Kambalda         51.27 253   P        P         16 14 19.4  -0.8
WAKE  Wake Island      52.44 341   IAMs_20  IAMs_20   16 34 15.6
      comp=Z,18µm,20.0s
WAKE  Wake Island      52.44 341   P        P         16 14 30.5  +1.7
FITZ  Fitzroy Crossi   52.85 270   LR       LR        16 37 05.4
      comp=Z,43µm,18.3s,baz=116,slow=36
FITZ  Fitzroy Crossi   52.85 270   P        P         16 14 32.0  -0.1
FITZ  Fitzroy Crossi   52.85 270  ⇑P        P         16 14 31.0  -1.0
BAKI  Biak             53.06 295   P        P         16 14 30.2  -3.4
      comp=Z,3µmcomp=Z,99nm,1.2s
RKPI  Ransiki, Papua   54.37 293   P        P         16 14 42.1  -1.2
      comp=Z,2µmcomp=Z,62nm,0.8s
KLBR  Kellerberrin     54.57 251   P        P         16 14 43.5  -1.0
NWAO  Narrogin (SRO)   54.59 250   P        P         16 14 42.8  -1.9
NWAO                               IAmb     IAmb      16 14 44.9
      comp=Z,122nm,1.4s
NWAO  Narrogin (SRO)   54.59 250   IAMs_20  IAMs_20   16 40 05.2
      comp=Z,17µm,18.0s
NWAO  Narrogin (SRO)   54.59 250   LR       LR        16 34 47.1
      comp=Z,9µm,21.3s,baz=96,slow=32
NWAO  Narrogin (SRO)   54.59 250   P        P         16 14 43.7  -1.0
NWAO  Narrogin (SRO)   54.59 250   P        P         16 14 44.9  +0.2
NWAO  Narrogin (SRO)   54.59 250   P        P         16 14 42.8  -1.9
NWAO                               pmax     pmax
      comp=Z,122nm,1.5s
NWAO                               MLR      MLR
      comp=Z,17µm,18.0s
CASY  Casey            54.70 208   P        P         16 14 45.0  +0.1
CASY                               IAmb     IAmb      16 15 13.2
      comp=Z,138nm,1.1s
CASY  Casey            54.70 208   IAMs_20  IAMs_20   16 37 55.4
      comp=Z,20µm,18.0s
CASY  Casey            54.70 208  ⇑P        P         16 14 45.5  +0.6
JOKA  Jonika Flow      54.73  26   IAmb     IAmb      16 14 51.5
      comp=Z,134nm,1.1s
POHA  Pohakuloa        54.83  25   P        P         16 14 48.6  +2.0
FAKI  Fak Fak          55.06 290   P        P         16 14 46.6  -1.7
FAKI                               IAmb     IAmb      16 14 51.5
      comp=Z,87nm,0.9s
FAKI  Fak Fak          55.06 290   P        P         16 14 48.8  +0.5
FAKI  Fak Fak          55.06 290   P        P         16 14 43.7  -4.6
      comp=Z,2µmcomp=Z,112nm,0.9s
FAKI  Fak Fak          55.06 290  ⇑P        P         16 14 45.7  -2.6
MEEK  Meekatharra      55.49 257   P        P         16 14 50.1  -1.2
KIP   Kipapa           55.51  22   P        P         16 14 51.0  -0.2
KIP   Kipapa           55.51  22   P        P         16 14 53.1  +1.9
KIP   Kipapa           55.51  22   P        P         16 14 53.5  +2.3
KIP   Kipapa           55.51  22ceP        P         16 14 54.0  +2.8
KIP                                pmax     pmax
      comp=Z,376nm,1.3s
MUN   Mundaring        55.70 250   P        P         16 14 52.2  -0.5
MUN   Mundaring        55.70 250   P        P         16 14 51.1  -1.6
BLDU  Ballidu          55.73 252   P        P         16 14 51.6  -1.3
PSA00 Pilbara Seismi   56.37 264   P        P         16 14 55.2  -2.4
PSA00 Pilbara Seismi   56.37 264   IAmb     IAmb      16 14 57.7
      comp=Z,132nm,1.4s
PSA00 Pilbara Seismi   56.37 264   P        P         16 14 56.5  -1.1
MBWA  Marble Bar       56.63 264   P        P         16 14 57.5  -1.9
MBWA                               IAmb     IAmb      16 14 59.6
      comp=Z,124nm,1.2s
MBWA  Marble Bar       56.63 264   P        P         16 14 58.4  -1.1
MBWA  Marble Bar       56.63 264  ⇑P        P         16 14 57.1  -2.3
MORW  Morawa           56.78 254   IAmb     IAmb      16 15 14.9
      comp=Z,70nm,1.1s
MORW                               IAMs_20  IAMs_20   16 38 27.4
      comp=Z,26µm,19.0s
MORW  Morawa           56.78 254   P        P         16 14 59.4  -1.1
MORW  Morawa           56.78 254  ⇑P        P         16 14 58.4  -2.1
SWI   Sorong           57.08 292   P        P         16 14 59.5  -3.2
      comp=Z,3µmcomp=Z,78nm,0.8s
GUMO  Guam             57.37 315   P        P         16 15 02.1  -2.5
GUMO  Guam             57.37 315   LR       LR        16 38 08.9
      comp=Z,11µm,18.8s,baz=130,slow=35
GUMO  Guam             57.37 315   P        P         16 15 06.7  +2.1
GUMO  Guam             57.37 315   P        P         16 15 02.1  -2.5
GUMO                               pmax     pmax
      comp=Z,179nm,0.9s
GUMO                               MLR      MLR
      comp=Z,11µm,19.0s
GUMO  Guam             57.37 315  ⇓P        P         16 15 03.0  -1.6
SOEI  Soe              57.95 278   P        P         16 15 10.1  +1.1
SOEI  Soe              57.95 278   P        P         16 15 08.3  -0.7
      comp=Z,164nm,1.0s
SOEI  Soe              57.95 278  ⇑P        P         16 15 06.5  -2.5
BATI  Baumata          58.23 277   LR       LR        16 41 05.3
      comp=Z,60µm,18.2s,baz=152,slow=37
BATI  Baumata          58.23 277   P        P         16 15 10.0  -0.9
      comp=Z,9µmcomp=Z,3µmcomp=Z,124nm,1.2s
VA02  Isla de Pascua   58.67 105   IAMs_20  IAMs_20   16 36 33.0
      comp=Z,16µm,20.0s
RPN   Rapa Nui         58.76 105   IAMs_20  IAMs_20   16 36 16.5
      comp=Z,16µm,20.0s
QSPA  South Pole Qui   58.95 180   IAMs_20  IAMs_20   16 38 00.3
      comp=Z,17µm,20.0s
QSPA  South Pole Qui   58.95 180   P        P         16 15 17.8  +2.6
      comp=Z,114nm,1.1s,baz=38,slow=1.7,SNR=156
QSPA                               LR       LR        16 38 11.7
      comp=Z,16µm,19.4s,baz=42,slow=33
QSPA                               PKPPKP   P'P'df    16 44 51.1  -5.5
      comp=Z,7.5nm,1.0s,baz=37,slow=2.3,SNR=5.2
      comp=Z,114nm,1.1s
MIDW  Midway           59.05   0   IAMs_20  IAMs_20   16 38 53.9
      comp=Z,18µm,19.0s
MIDW  Midway           59.05   0   P        P         16 15 17.3  +1.2
NLAI  Namlea           59.07 286   P        P         16 15 13.9  -2.7
      comp=Z,2µmcomp=Z,122nm,1.6s
MMRI  Maumere          60.24 278   P        P         16 15 22.9  -1.8
MMRI                               IAMs_20  IAMs_20   16 42 53.8
      comp=Z,20µm,18.0s
MMRI  Maumere          60.24 278   P        P         16 15 25.3  +0.5
MMRI  Maumere          60.24 278   P        P         16 15 20.6  -4.2
      comp=Z,7µmcomp=Z,3µmcomp=Z,196nm,1.2s
MMRI  Maumere          60.24 278  ⇑P        P         16 15 23.4  -1.3
EDFI  Ende, Flores     60.65 278   P        P         16 15 24.1  -3.6
      comp=Z,2µmcomp=Z,82nm,1.2s
SANI  Sanana           60.65 287   P        P         16 15 29.0  +1.4
SANI  Sanana           60.65 287   P        P         16 15 24.7  -2.9
      comp=Z,9µmcomp=Z,2µmcomp=Z,97nm,1.4s
BASI  Baing, Sumba     60.86 276   P        P         16 15 27.5  -1.4
TNTI  Ternate          61.17 290   P        P         16 15 33.4  +2.4
TNTI  Ternate          61.17 290   P        P         16 15 24.7  -6.3
      comp=Z,56nm,1.6s
WSI   Waingapu         61.37 276   P        P         16 15 30.9  -1.5
WBSI  Waikabubak, Su   62.16 276   P        P         16 15 34.8  -3.0
      comp=Z,6µmcomp=Z,2µmcomp=Z,98nm,1.1s
LUWI  Luwuk            63.87 286   P        P         16 15 47.1  -2.0
LUWI  Luwuk            63.87 286   P        P         16 15 49.3  +0.2
LUWI  Luwuk            63.87 286   P        P         16 15 44.8  -4.3
      comp=Z,2µmcomp=Z,91nm,1.1s
PLAI  Plampang         63.94 275   P        P         16 15 49.5  -0.1
PLAI  Plampang         63.94 275   P        P         16 15 47.0  -2.6
      comp=Z,3µmcomp=Z,167nm,1.1s
KAPI  Kappang          64.23 280   P        P         16 15 48.1  -3.3
KAPI                               IAmb     IAmb      16 15 52.3
      comp=Z,82nm,1.2s
KAPI  Kappang          64.23 280   IAMs_20  IAMs_20   16 45 24.4
      comp=Z,23µm,18.0s
KAPI  Kappang          64.23 280   LR       LR        16 45 08.9
      comp=Z,17µm,18.1s,baz=114,slow=37
KAPI  Kappang          64.23 280   P        P         16 15 52.1  +0.6
KAPI  Kappang          64.23 280  i P       P         16 15 50.1  -1.4
KAPI                               pmax     pmax
      comp=Z,88nm,1.2s
KAPI  Kappang          64.23 280  ⇑P        P         16 15 50.3  -1.2
BNSI  Bone             64.25 281   P        P         16 15 48.1  -3.5
      comp=Z,2µmcomp=Z,94nm,1.5s
SPSI  Sidrap Palu      64.77 281   P        P         16 15 51.8  -3.2
      comp=Z,1µmcomp=Z,49nm,1.1s
APSI  Ampana           64.87 285   P        P         16 15 54.6  -1.1
      comp=Z,2µmcomp=Z,124nm,1.5s
TTSI  Tana Toraja      65.22 282   P        P         16 15 54.4  -3.6
      comp=Z,1µmcomp=Z,58nm,1.1s
MRSI  Marisa           65.41 287   P        P         16 15 54.8  -4.4
      comp=Z,37nm,0.6s
DNP   Denpasar         66.21 274   P        P         16 15 58.9  -5.4
PCI   Palu             66.38 284   P        P         16 16 03.2  -2.2
      comp=Z,3µmcomp=Z,188nm,1.4s
DAV   Davao City (W)   66.39 295   LR       LR        16 44 44.9
      comp=Z,3µm,19.9s,baz=140,slow=36
DAV   Davao City (W)   66.39 295   P        P         16 16 04.0  -1.5
SRBI  Singaraja        66.50 275   P        P         16 16 04.1  -2.1
      comp=Z,8µmcomp=Z,3µmcomp=Z,184nm,1.3s
TOLI2 Tolitoli         66.72 286   P        P         16 16 04.8  -2.8
TOLI2                              IAmb     IAmb      16 16 21.0
      comp=Z,70nm,1.5s
TOLI2 Tolitoli         66.72 286   P        P         16 16 07.5  -0.1
MPSI  Mapaga           67.01 285   P        P         16 16 06.3  -3.2
      comp=Z,42nm,1.1s
JAGI  Jajag, Banyuwa   67.22 274   P        P         16 16 09.1  -1.7
JAGI                               IAmb     IAmb      16 16 11.1
      comp=Z,96nm,0.9s
JAGI                               IAMs_20  IAMs_20   16 45 20.7
      comp=Z,17µm,20.0s
JAGI  Jajag, Banyuwa   67.22 274   P        P         16 16 12.4  +1.6
JAGI  Jajag, Banyuwa   67.22 274   P        P         16 16 07.1  -3.7
      comp=Z,7µmcomp=Z,2µmcomp=Z,114nm,0.8s
JAGI  Jajag, Banyuwa   67.22 274  ⇑P        P         16 16 08.8  -2.0
GMJI  Gumukmas         67.92 274   P        P         16 16 12.5  -2.7
      comp=Z,2µmcomp=Z,183nm,1.3s
KMMI  Kalianget        68.09 275   P        P         16 16 14.3  -2.0
      comp=Z,3µmcomp=Z,184nm,1.5s
SMAI  San Martin Ant   68.54 158   IAmb     IAmb      16 16 32.5
      comp=Z,125nm,1.3s
BELA  Belgrano 2       68.96 172   P        P         16 16 21.1  +0.3
BELA                               IAmb     IAmb      16 16 35.1
      comp=Z,80nm,1.0s
JCJ   Chichijima       69.59 322   LR       LR        16 43 04.1
      comp=Z,3µm,20.3s,baz=135,slow=33
PCJI  Pacitan          69.90 273   P        P         16 16 25.0  -2.5
NGJI  Ngawi            70.07 273   P        P         16 16 27.4  -1.2
      comp=Z,122nm,0.8s
WOJI  Wonogiri, Jawa   70.29 273   P        P         16 16 29.2  -0.8
UGM   Wanagama         70.60 272   P        P         16 16 30.7  -1.2
UGM                                IAMs_20  IAMs_20   16 50 05.4
      comp=Z,14µm,19.0s
MYLDM Lahad Datu       70.91 289   P        P         16 16 32.6  -1.0
MYLDM Lahad Datu       70.91 289   P        P         16 16 35.7  +2.0
SMRI  Semarang         71.10 273   IAMs_20  IAMs_20   16 47 59.7
      comp=Z,13µm,20.0s
PMSA  Palmer Station   71.37 155   IAMs_20  IAMs_20   16 43 35.7
      comp=Z,15µm,19.0s
PMSA  Palmer Station   71.37 155   LR       LR        16 43 56.5
      comp=Z,14µm,18.4s,baz=235,slow=32
MAW   Mawson           71.77 201   P        P         16 16 39.8  +1.8
      comp=Z,193nm,1.3s,baz=115,slow=7.5,SNR=61
MAW                                LR       LR        16 48 39.9
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       comp=Z,23µm,18.5s,baz=116,slow=36
       comp=Z,193nm,1.3s
MAW    Mawson           71.77 201 ⇑P       P        16 16 39.3 +1.3
KKM    Kota Kinabalu    73.26 288  IAmb    IAmb     16 17 00.0
       comp=Z,121nm,1.4s
KKM    Kota Kinabalu    73.26 288  P       P        16 16 49.0 +1.1
KKM    Kota Kinabalu    73.26 288 ⇑P       P        16 16 46.4  -1.5
BBJI   Bungbulang       73.29 271  P       P        16 16 48.0  -0.1
XMIS   Christmas Isla   73.51 268  IAMs_20 IAMs_20  16 51 24.4
       comp=Z,11µm,19.0s
LEM    Lembang          73.63 272  LR      LR       16 49 35.5
       comp=Z,14µm,19.7s,baz=118,slow=36
CNJI   Cibinong         73.81 271  P       P        16 16 46.1  -4.9
       comp=Z,3µmcomp=Z,1µmcomp=Z,68nm,1.2s
STKI   Sintang          73.91 280  P       P        16 16 49.7  -1.9
       comp=Z,153nm,1.1s
TGY    Tagaytay City    74.31 298  P       P        16 16 52.3  -1.6
       comp=Z,138nm,0.3s,baz=32,slow=3.5,SNR=11
TGY                                LR      LR       16 46 24.1
       comp=Z,3µm,21.6s,baz=128,slow=33
MG05   Puerto Natales   74.60 141  IAmb    IAmb     16 16 58.2
       comp=Z,114nm,1.1s
MG05                               IAMs_20 IAMs_20  16 44 16.3
       comp=Z,12µm,19.0s
ESPZ   Base Esperanza   74.67 156  IAMs_20 IAMs_20  16 44 45.0
       comp=Z,19µm,20.0s
USHA   Ushuaia          75.01 146  LR      LR       16 45 20.5
       comp=Z,5µm,18.8s,baz=226,slow=32
CGJI   Cibinong         75.39 271  P       P        16 16 56.7  -3.5
       comp=Z,2µmcomp=Z,136nm,1.3s
KSM    Kuching          75.64 281  IAmb    IAmb     16 17 02.9
       comp=Z,65nm,0.8s
KSM    Kuching          75.64 281  P       P        16 17 01.9 +0.2
KSM    Kuching          75.64 281 ⇑P       P        16 17 00.1  -1.6
TPI    Tanjungpandan    75.68 276  P       P        16 16 58.7  -3.2
       comp=Z,2µmcomp=Z,63nm,1.4s
SYO    Syowa Base       76.48 193⇑iP       P        16 17 06.4 +0.9
SYO    Syowa Base       76.48 193⇓epP      pP       16 17 11.2 +2.3
AY03   Cochrane         76.85 137  IAmb    IAmb     16 17 11.9
       comp=Z,101nm,1.1s
AY03                               IAMs_20 IAMs_20  16 44 47.0
       comp=Z,18µm,19.0s
TROLL  Troll, Antarti   77.11 180 ⇑P       P        16 17 10.7 +1.4
       comp=Z,823nm,0.7s
TROLL                             ⇑SKSac   S        16 26 59.8 +2.4
SNAA   Sanae            77.38 178 ⇑P       P        16 17 11.8 +1.2
       comp=N,102nm,0.5s
SNAA                              ⇑SKSac   S        16 27 02.1 +2.0
SNAA   Sanae            77.38 178  P       P        16 17 11.5 +0.9
SNAA                               IAmb    IAmb     16 17 47.9
       comp=Z,114nm,1.1s
SNAA                               IAMs_20 IAMs_20  16 49 56.1
       comp=Z,11µm,19.0s
SNAA   Sanae            77.38 178  P       P        16 17 11.5 +0.9
       comp=Z,42nm,1.2s,baz=203,slow=9.4,SNR=38
SNAA                               PKPPKP  P'P'df   16 44 17.7  -6.9
       comp=Z,2.0nm,1.0s,baz=347,slow=5.8,SNR=3.8
SNAA                               LR      LR       16 50 16.2
       comp=Z,9µm,18.7s,baz=196,slow=35
       comp=Z,42nm,1.2s
SNAA   Sanae            77.38 178ceP       P        16 17 11.9 +1.2
SNAA                               pmax    pmax
       comp=Z,61nm,1.3s
SNAA   Sanae            77.38 178 ⇑P       P        16 17 11.7 +1.0
VNA3   Neumayer Olymp   77.51 176 ⇑P       P        16 17 12.2 +0.9
       comp=Z,33nm,0.6s
VNA3                              ⇑SKSac   S        16 27 02.1 +0.7
JOW    Kunigami         77.54 312  P       P        16 17 11.5  -0.6
       comp=Z,33nm,0.8s,baz=146,slow=5.9,SNR=7.2
JOW                                LR      LR       16 47 34.8
       comp=Z,6µm,20.9s,baz=130,slow=33
       comp=Z,33nm,0.8s
JOW    Kunigami         77.54 312  P       P        16 17 13.7 +1.6
LWLI   Liwa             77.59 272  P       P        16 17 07.1  -5.8
       comp=Z,196nm,1.3s
JSG    Sagara           77.69 324  P       P        16 17 14.2 +1.5
MDSI   Maura Dua        77.76 272  P       P        16 17 10.8  -2.9
       comp=Z,2µmcomp=Z,114nm,1.9s
VNA2   Neumayer--Watz   77.95 177 ⇑P       P        16 17 15.0 +1.2
       comp=Z,26nm,0.6s,baz=171,slow=4.5
VNA2                              ⇓SKSac   S        16 27 06.8 +0.6
       baz=146,slow=0.1
COYC   Coyhaique        78.04 136  P       P        16 17 16.5 +1.7
COYC   Coyhaique        78.04 136  IAMs_20 IAMs_20  16 47 56.6
       comp=Z,11µm,18.0s
COYC   Coyhaique        78.04 136 ⇓P       P        16 17 16.9 +2.1
NVL    N'lazarevskaya   78.14 183 eP       P        16 17 07.4  -7.4
NVL                               e                 16 17 21.5
NVL                               e                 16 20 12.4
NVL                               ePPP     PPP      16 22 00.6
NVL                               eS       S        16 27 08.9 +0.7
NVL                                pmax    pmax
       comp=Z,11nm,1.1s
NVL                                smax    smax
       comp=E,6µm,13.0s
NVL                                MLR     MLR
       comp=Z,75nm,19.0s
VNA1   Neumayer--Stat   78.18 176 ⇑P       P        16 17 16.4 +1.5
       comp=Z,65nm,1.0s
LL07   Hotel Espejo d   78.65 133  IAMs_20 IAMs_20  16 46 11.9
       comp=Z,16µm,19.0s
INU    Inuyama          78.81 323  IAmb    IAmb     16 17 33.9
       comp=Z,62nm,1.0s
INU    Inuyama          78.81 323  P       P        16 17 18.6  -0.3
JGF    Kuroka           78.83 324  P       P        16 17 18.6  -0.5
JGF    Kuroka           78.83 324 ⇑P       P        16 17 17.6  -1.5
LL06   Loncomilla       78.88 133  IAMs_20 IAMs_20  16 44 57.0
       comp=Z,14µm,20.0s
JMM    Marumori         78.98 328  IAmb    IAmb     16 17 51.5
       comp=Z,149nm,1.6s
JMM    Marumori         78.98 328  P       P        16 17 20.7 +0.9
MJAR   Matsushiro Arr   79.15 325  P       P        16 17 18.7  -2.1
       comp=Z,28nm,1.1s,baz=160,slow=5.5,SNR=50
MJAR                               LR      LR       16 49 53.5
       comp=Z,3µm,19.1s,baz=134,slow=34
       comp=Z,28nm,1.1s
MAJO   Matsushiro       79.15 325  P       P        16 17 19.6  -1.2
MAJO                               IAmb    IAmb     16 17 38.2
       comp=Z,76nm,1.1s
MAJO   Matsushiro       79.15 325  P       P        16 17 20.5  -0.3
MAJO   Matsushiro       79.15 325 i P      P        16 17 18.6  -2.2
MAJO                               pmax    pmax
       comp=Z,62nm,1.2s
MAJO   Matsushiro       79.15 325 ⇑P       P        16 17 19.6  -1.2
MJB9   Matsu-Tunnel     79.15 325  IAmb    IAmb     16 17 39.1
       comp=Z,75nm,1.1s
JMN    Monobe           79.22 320  P       P        16 17 20.1  -1.2
JMN                                IAmb    IAmb     16 17 40.0
       comp=Z,83nm,1.4s
JMN    Monobe           79.22 320  P       P        16 17 22.6 +1.3
JMN    Monobe           79.22 320 ⇓P       P        16 17 21.2  -0.1
LL05   Los Muermos      79.41 132  IAmb    IAmb     16 17 28.5
       comp=Z,146nm,1.0s
LL05                               IAMs_20 IAMs_20  16 46 26.0
       comp=Z,10µm,19.0s
LL02   Futaleuf         79.47 134  IAmb    IAmb     16 17 28.1
       comp=Z,98nm,0.8s
LL02                               IAMs_20 IAMs_20  16 46 39.4
       comp=Z,10µm,18.0s
LL02   Futaleuf         79.47 134 ⇓P       P        16 17 24.5 +1.9
KSI    Kapahiang        79.54 272  P       P        16 17 23.7 +0.1
LL01   San Ignacio de   79.56 133  IAmb    IAmb     16 17 34.5
       comp=Z,72nm,1.1s
LL01                               IAMs_20 IAMs_20  16 46 41.9
       comp=Z,13µm,18.0s
LL01   San Ignacio de   79.56 133 ⇑P       P        16 17 24.9 +1.8
H03S2  Juan Fernandez   79.64 123  T       T        17 45 18.2
       baz=243,slow=75,SNR=14
H03S1  Juan Fernandez   79.65 123  T       T        17 45 17.1
       baz=243,slow=75,SNR=13
H03S3  Juan Fernandez   79.65 123  T       T        17 45 07.4
       baz=243,slow=75,SNR=24
TWGBT  Beinan           79.69 305  P       P        16 17 23.6  -0.4
VA04   Juan Fernndez    79.80 123  IAMs_20 IAMs_20  16 46 29.9
       comp=Z,10µm,20.0s
H03N3  Juan Fernandez   79.83 123  T       T        17 45 22.7
       baz=242,slow=72
H03N2  Juan Fernandez   79.83 123  T       T        17 45 09.8
       baz=242,slow=72
H03N1  Juan Fernandez   79.85 123  T       T        17 45 22.4
       baz=242,slow=72
YULB   Yu-li            79.91 305  P       P        16 17 26.2 +1.0
NACB   Ninganchiao      80.20 306  P       P        16 17 29.5 +2.7
LL03   Petrohue         80.23 132  IAmb    IAmb     16 17 32.4
       comp=Z,172nm,1.1s
LL03                               IAMs_20 IAMs_20  16 44 58.8
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       comp=Z,10µm,20.0s
LR04   Corral           80.25 131  IAmb    IAmb     16 17 28.6
       comp=Z,106nm,1.1s
LR04                               IAMs_20 IAMs_20  16 45 24.5
       comp=Z,11µm,20.0s
JSD    Sado             80.31 326  P       P        16 17 26.9  -0.1
TPUB   Ta-pu            80.32 305  IAmb    IAmb     16 17 43.8
       comp=Z,72nm,0.9s
TPUB   Ta-pu            80.32 305  P       P        16 17 28.0 +0.6
SSLB   Suanglung        80.40 305  P       P        16 17 27.7  -0.2
JNU    Nakatsue         80.45 318  IAmb    IAmb     16 17 45.4
       comp=Z,92nm,1.3s
JNU    Nakatsue         80.45 318  LR      LR       16 51 46.4
       comp=Z,2µm,18.2s,baz=134,slow=35
JNU    Nakatsue         80.45 318  P       P        16 17 28.5 +0.5
JNU    Nakatsue         80.45 318 ⇑P       P        16 17 26.9  -1.1
LR05   Currie           80.98 132  IAmb    IAmb     16 17 36.0
       comp=Z,134nm,1.1s
LR05                               IAMs_20 IAMs_20  16 47 23.7
       comp=Z,9µm,19.0s
LR03   Panguipulli      81.09 131  IAmb    IAmb     16 17 34.6
       comp=Z,126nm,1.1s
LR03                               IAMs_20 IAMs_20  16 46 12.6
       comp=Z,11µm,20.0s
JTM    Tenmabayashi     81.24 329  P       P        16 17 32.9 +1.0
JTM    Tenmabayashi     81.24 329 ⇑P       P        16 17 31.7  -0.2
ERM    Erimo            81.37 331  P       P        16 17 32.7 +0.2
ERM                                IAmb    IAmb     16 17 37.4
       comp=Z,108nm,0.8s
ERM    Erimo            81.37 331  IAMs_20 IAMs_20  16 50 58.9
       comp=Z,9µm,19.0s
ERM    Erimo            81.37 331  P       P        16 17 34.4 +1.9
ERM    Erimo            81.37 331ceP       P        16 17 34.8 +2.3
ERM                                pmax    pmax
       comp=Z,269nm,1.7s
ERM    Erimo            81.37 331 ⇑P       P        16 17 33.6 +1.1
JEM    Erimo            81.37 331  P       P        16 17 34.2 +1.7
PLCA   Paso Flores      81.63 133  P       P        16 17 36.2 +1.8
       comp=Z,51nm,1.0s,baz=224,slow=5.9,SNR=40
PLCA                               PKPPKP  P'P'df   16 44 13.0  -3.3
       comp=Z,6.0nm,1.1s,baz=19,slow=10,SNR=3.4
PLCA                               LR      LR       16 47 04.7
       comp=Z,10µm,18.9s,baz=236,slow=31
       comp=Z,51nm,1.0s
EFI    East Falkland    81.88 147  P       P        16 17 36.6 +1.2
EFI                                IAmb    IAmb     16 17 40.5
       comp=Z,142nm,1.1s
EFI    East Falkland    81.88 147ceP       P        16 17 37.0 +1.6
EFI                                pmax    pmax
       comp=Z,181nm,1.3s
EFI    East Falkland    81.88 147 ⇑P       P        16 17 36.8 +1.4
YUK    Yuzh-Kuril'sk    82.01 334d iP      P        16 17 34.8  -1.1
YUK                               eS       S        16 27 40.2  -9.1
YUK                               eSS      SS       16 33 11.0 +1.7
YUK                               eSSS     SSS      16 36 22.0
YUK                                pmax    pmax
       comp=Z,191nm,1.2s
YUK                                pmax    pmax
       comp=E,84nm,0.8s
BI05   Punta Hualpn     82.10 128  IAmb    IAmb     16 17 40.1
       comp=Z,121nm,1.2s
BI05                               IAMs_20 IAMs_20  16 46 46.5
       comp=Z,9µm,19.0s
KUR    Kuril'sk         82.33 336  P       P        16 17 37.7 +0.2
KUR                                pmax    pmax
       comp=Z,340nm,1.6s
KUR                                MLR     MLR
       comp=N,10µm,17.0s
KUR                                MLR     MLR
       comp=Z,8µm,17.0s
ADK    Adak             82.69   0  P       P        16 17 39.2   0.0
ADK    Adak             82.69   0  P       P        16 17 39.5 +0.2
ADK    Adak             82.69   0  P       P        16 17 39.3   0.0
ADK                                pmax    pmax
       comp=Z,304nm,1.3s
ADK                                MLR     MLR
       comp=Z,6µm,20.0s
ADK    Adak             82.69   0 ⇑P       P        16 17 39.3   0.0
QZH    Quanzhou         82.80 305  P       P        16 17 40.4   0.0
QZH                                S       S        16 27 51.4  -6.8
QZH                                pmax    pmax
       comp=Z,2µm,12.0s
QZH                                LR      LR
       comp=Z,2µm,19.2s
QZH                                LR      LR
       comp=Z,3µm,19.6s
QZH                                LR      LR
       comp=Z,4µm,19.9s
DLV     Lat             82.87 288  IAmb    IAmb     16 17 43.3
       comp=Z,85nm,1.0s
DLV     Lat             82.87 288  P       P        16 17 43.1 +1.8
DLV     Lat             82.87 288 ⇑P       P        16 17 41.1  -0.2
BKNI   Bangkinang       82.92 275  IAMs_20 IAMs_20  16 57 46.8
       comp=Z,11µm,18.0s
BKNI   Bangkinang       82.92 275  P       P        16 17 41.6 +0.2
BKNI   Bangkinang       82.92 275  P       P        16 17 37.1  -4.3
       comp=Z,6µmcomp=Z,2µmcomp=Z,120nm,1.5s
ATKA   Atka Island      83.06   2  P       P        16 17 42.2 +1.1
ATKA   Atka Island      83.06   2 ⇑P       P        16 17 41.0  -0.2
PPI    Padang Panjang   83.06 274  P       P        16 17 36.4  -5.8
       comp=Z,19nm,0.6s
JKA    Kamikawa-asahi   83.34 332  IAMs_20 IAMs_20  16 54 18.3
       comp=Z,9µm,19.0s
ASAJ   Asahikawa        83.34 332  LR      LR       16 53 34.5
       comp=Z,5µm,18.3s,baz=176,slow=35
BI02   San Fabin de     83.43 129  IAmb    IAmb     16 17 49.9
       comp=Z,98nm,1.1s
BI02                               IAMs_20 IAMs_20  16 48 53.7
       comp=Z,11µm,18.0s
SISI   Saibi            83.73 272  P       P        16 17 42.6  -3.0
       comp=Z,60nm,1.4s
ML02   Panimavida       83.84 128  IAMs_20 IAMs_20  16 51 31.5
       comp=Z,8µm,18.0s
SHEM   Shemya Is, Ala   83.87 355  P       P        16 17 45.1  -0.1
       comp=Z,65nm,0.9s,baz=100,slow=10,SNR=3.9
SHEM                               LR      LR       16 52 19.0
       comp=Z,7µm,18.8s,baz=162,slow=34
       comp=Z,65nm,0.9s
SMY    Shemya           83.87 355  IAMs_20 IAMs_20  16 51 58.5
       comp=Z,10µm,20.0s
NIKH   Nikolski High    84.12   5  P       P        16 17 46.2  -0.3
NIKH   Nikolski High    84.12   5  P       P        16 17 47.6 +1.0
NIKH   Nikolski High    84.12   5  P       P        16 17 46.7 +0.1
       baz=188
MNSI   Mandailing Nat   84.41 274  P       P        16 17 46.3  -2.7
       comp=Z,58nm,0.8s
LPIG   La Paz           84.53  58  LR      LR       16 50 01.8
       comp=Z,19µm,18.3s,baz=220,slow=32
SLBS   Sierra La Lagu   84.54  58  P       P        16 17 50.8 +1.2
SLBS                               IAmb    IAmb     16 17 57.1
       comp=Z,123nm,1.4s
SLBS   Sierra La Lagu   84.54  58 ⇓P       P        16 17 52.3 +2.7
SKR    Severo-Kuril's   84.78 343 eP       P        16 17 48.8  -1.2
SKR                               eS       S        16 28 18.3 +1.2
SKR                                pmax    pmax
       comp=Z,78nm,1.5s
SKR                                pmax    pmax
       comp=Z,1µm,6.6s
SKR                                pmax    pmax
       comp=Z,1µm,8.9s
TJN    Taejon           84.80 318  P       P        16 17 51.4 +1.0
TJN    Taejon           84.80 318 i P      P        16 17 49.8  -0.6
BO01   Tunca            84.83 127  IAmb    IAmb     16 17 53.8
       comp=Z,91nm,1.3s
BO01                               IAMs_20 IAMs_20  16 51 13.9
       comp=Z,10µm,18.0s
VA05   Santo Domingo    84.88 126  IAMs_20 IAMs_20  16 50 57.3
       comp=Z,10µm,18.0s
SSE    Sheshan          84.98 311  P       P        16 17 51.8 +0.3
SSE                                S       S        16 28 21.0 +1.1
SSE                                pmax    pmax
       comp=Z,770nm,9.0s
SSE                                LR      LR
       comp=Z,1µm,20.2s
SSE                                LR      LR
       comp=Z,1µm,21.6s
CCX    Cicese           85.09  48  IAmb    IAmb     16 18 12.8
       comp=Z,121nm,1.4s
SRIG   Santa Rosalia    85.13  54  IAmb    IAmb     16 17 58.7
       comp=Z,82nm,1.2s
SRIG                               IAMs_20 IAMs_20  16 54 02.0
       comp=Z,14µm,18.0s
UNV    Unalaska Valle   85.19   6  P       P        16 17 51.6  -0.3
       baz=190
MT09   Talagante        85.25 127  IAMs_20 IAMs_20  16 51 00.9
       comp=Z,7µm,18.0s
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KSRS   Korea Array      85.25 319  P       P        16 17 52.6   0.0
       comp=Z,14nm,0.9s,baz=142,slow=5.5,SNR=42
KSRS                               LR      LR       16 51 59.6
       comp=Z,1219µm,20.7s,baz=135,slow=33
       comp=Z,14nm,0.9s
KSAR   Wonju Array Be   85.26 319  P       P        16 17 52.2  -0.5
KSAR   Wonju Array Be   85.26 319  P       P        16 17 52.2  -0.5
TJX    Tijuana          85.26  47  IAMs_20 IAMs_20  16 51 48.2
       comp=Z,13µm,18.0s
CBX    Cerro Bola       85.38  48  IAmb    IAmb     16 18 10.0
       comp=Z,46nm,1.1s
BO04   La Punta         85.39 127  IAmb    IAmb     16 18 11.6
       comp=Z,164nm,1.6s
BO04                               IAMs_20 IAMs_20  16 52 06.6
       comp=Z,9µm,18.0s
MT02   Curacav          85.43 126  IAMs_20 IAMs_20  16 51 48.9
       comp=Z,12µm,18.0s
BCW    Bitter Crk WRg   85.45  44  IAMs_20 IAMs_20  16 56 32.7
       comp=Z,12µm,18.0s
GZH    Guangzhou        85.46 300  P       P        16 17 55.9 +1.8
GZH                                S       SKSac    16 28 20.8 +2.0
GZH                                LR      LR
       comp=Z,2µm,16.5s
GZH                                LR      LR
       comp=Z,3µm,20.2s
GZH                                LR      LR
       comp=Z,4µm,21.0s
PMPB   Monarch Peak     85.50  43  IAMs_20 IAMs_20  16 51 09.2
       comp=Z,12µm,19.0s
SAO    San Andreas Ge   85.52  42  IAmb    IAmb     16 18 00.9
       comp=Z,70nm,1.2s
SAO    San Andreas Ge   85.52  42  P       P        16 17 55.3 +1.2
SAO    San Andreas Ge   85.52  42 ⇓P       P        16 17 56.6 +2.6
TKX    Tecate           85.58  48  IAmb    IAmb     16 18 29.1
       comp=Z,45nm,0.6s
MT05   Renca            85.64 127  IAMs_20 IAMs_20  16 51 39.2
       comp=Z,10µm,18.0s
ESJX   Sierra Juarez    85.64  48  IAmb    IAmb     16 18 02.1
       comp=Z,51nm,1.2s
YSS    Yuzhno-Sakhali   85.65 334  P       P        16 17 55.1 +0.7
YSS                                IAMs_20 IAMs_20  16 52 05.2
       comp=Z,8µm,20.0s
YSS    Yuzhno-Sakhali   85.65 334  P       P        16 17 56.3 +1.9
YSS    Yuzhno-Sakhali   85.65 334 eP       P        16 17 55.7 +1.3
YSS                               eS       S        16 28 25.1  -0.7
YSS                                pmax    pmax
       comp=Z,130nm,1.2s
YSS                                pmax    pmax
       comp=Z,1µm,5.1s
YSS                                smax    smax
       comp=N,1µm,8.3s
YSS    Yuzhno-Sakhali   85.65 334 ⇑P       P        16 17 55.5 +1.1
PASC   Pasadena Art C   85.67  46  IAmb    IAmb     16 18 00.7
       comp=Z,78nm,1.2s
PASC                               IAMs_20 IAMs_20  16 56 03.7
       comp=Z,11µm,18.0s
VA06   Catapilco        85.72 126  IAmb    IAmb     16 18 07.2
       comp=Z,104nm,1.1s
VA06                               IAMs_20 IAMs_20  16 52 03.3
       comp=Z,14µm,18.0s
MT03   Universidad Ad   85.73 127  IAMs_20 IAMs_20  16 51 32.8
       comp=Z,10µm,18.0s
LMEL   Las Melosas      85.74 127  IAMs_20 IAMs_20  16 51 43.0
       comp=Z,10µm,18.0s
MT16   CCHEN            85.76 127  IAMs_20 IAMs_20  16 51 51.6
       comp=Z,10µm,18.0s
QIZ    Qiongzhong       85.76 295  P       P        16 17 56.6 +0.9
QIZ                                S       S        16 28 26.9  -1.3
QIZ                                SS      SS       16 34 05.3  -0.3
QIZ                                pmax    pmax
       comp=Z,20nm,1.1s
QIZ                                pmax    pmax
       comp=Z,1µm,10.0s
QIZ                                LR      LR
       comp=Z,2µm,17.9s
QIZ                                LR      LR
       comp=Z,2µm,15.1s
ELS    Elsinore Mount   85.79  46  IAmb    IAmb     16 18 02.4
       comp=Z,66nm,1.2s
ELS                                IAMs_20 IAMs_20  16 54 49.9
       comp=Z,12µm,18.0s
PEL    Peldehue         85.81 126  IAMs_20 IAMs_20  16 51 53.1
       comp=Z,10µm,18.0s
PEL    Peldehue         85.81 126  P       P        16 17 56.5 +0.6
PEL    Peldehue         85.81 126 ⇓P       P        16 17 57.4 +1.5
KULM   Kulim            85.82 279  IAmb    IAmb     16 17 57.1
       comp=Z,96nm,1.2s
KULM                               IAMs_20 IAMs_20  17 00 44.9
       comp=Z,10µm,19.0s
KULM   Kulim            85.82 279  P       P        16 17 56.6 +0.4
KULM   Kulim            85.82 279 ⇑P       P        16 17 55.3  -0.9
RPSI   Rantau Prapat    85.94 276  IAmb    IAmb     16 17 58.7
       comp=Z,62nm,1.2s
RPSI                               IAMs_20 IAMs_20  16 57 27.1
       comp=Z,13µm,19.0s
INCN   Inchon           85.99 319  P       P        16 17 57.6 +1.2
PSI    Prapat           86.00 276  LR      LR       16 57 38.5
       comp=Z,11µm,19.1s,baz=122,slow=37
PSI    Prapat           86.00 276  P       P        16 17 56.3  -0.9
YUH    Yuha Desert      86.07  48  IAmb    IAmb     16 18 03.8
       comp=Z,63nm,1.2s
MT08   Bocatoma Ro      86.10 127  IAmb    IAmb     16 18 05.4
       comp=Z,75nm,1.2s
MT08                               IAMs_20 IAMs_20  16 51 46.5
       comp=Z,9µm,18.0s
VA03   San Esteban      86.12 126  IAmb    IAmb     16 18 16.7
       comp=Z,84nm,1.1s
VA03                               IAMs_20 IAMs_20  16 52 19.1
       comp=Z,13µm,18.0s
CPBX   Cerro Prieto     86.32  49  IAMs_20 IAMs_20  16 54 48.2
       comp=Z,11µm,18.0s
PFO    Pinyon Flats O   86.37  47  P       P        16 17 59.8 +1.3
PFO                                IAmb    IAmb     16 18 05.4
       comp=Z,59nm,1.2s
PFO    Pinyon Flats O   86.37  47  LR      LR       16 51 22.3
       comp=Z,15µm,18.4s,baz=240,slow=32
PFO    Pinyon Flats O   86.37  47 i P      P        16 17 59.8 +1.3
PFO                                pmax    pmax
       comp=Z,89nm,1.3s
GSI    Gunungsitoli     86.38 274  P       P        16 17 59.3 +0.4
GSI    Gunungsitoli     86.38 274  P       P        16 17 57.3  -1.6
GSI    Gunungsitoli     86.38 274 ⇑P       P        16 17 58.6  -0.3
PET    Petropavlovsk    86.39 346 eP       P        16 17 53.4  -4.5
PET                               eS       SKSac    16 28 22.1  -1.1
PET                                pmax    pmax
       comp=Z,1µm,12.9s
PET                                pmax    pmax
       comp=Z,2µm,13.7s
CCAC   Calif City Air   86.43  45  IAmb    IAmb     16 18 05.7
       comp=Z,91nm,1.2s
CCAC                               IAMs_20 IAMs_20  16 56 46.9
       comp=Z,11µm,18.0s
ISA    Isabella, Lake   86.50  44  IAMs_20 IAMs_20  16 56 41.6
       comp=Z,8µm,18.0s
FALS   False Pass       86.52   8  IAMs_20 IAMs_20  16 57 16.2
       comp=Z,9µm,20.0s
FALS   False Pass       86.52   8  P       P        16 17 58.6 +0.1
       baz=192
CO06   Fray Jorge       86.54 124  IAmb    IAmb     16 18 32.0
       comp=Z,77nm,1.4s
CO06                               IAMs_20 IAMs_20  16 49 56.2
       comp=Z,12µm,19.0s
TEY    Ternei           86.60 329⇓eP       P        16 18 00.0 +0.8
TEY                                pmax    pmax
       comp=E,10.0nm,1.1s
TEY                                pmax    pmax
       comp=N,10.0nm,1.0s
PEA0B  Petropavlovsk-   86.67 345ceP       P        16 18 00.9 +1.5
PETK   Petropavlovsk-   86.67 345  P       P        16 17 59.3   0.0
PETK   Petropavlovsk-   86.67 345  P       P        16 17 59.7 +0.4
       comp=N,39nm,0.9s,baz=111,slow=8.5,SNR=21
PETK                               LR      LR       16 49 46.1
       comp=N,4µm,21.9s,baz=161,slow=31
       comp=N,39nm,0.9s
PETK   Petropavlovsk-   86.67 345  P       P        16 17 59.3   0.0
CO02   Combarbal        86.69 125  IAMs_20 IAMs_20  16 52 56.2
       comp=Z,9µm,18.0s
CO02   Combarbal        86.69 125 ⇓P       P        16 18 01.2 +0.8
KMRM   Mail Ridge       86.72  38  IAmb    IAmb     16 18 07.2
       comp=Z,104nm,1.2s
CNBA   Chernabura Isl   87.00  10  P       P        16 18 01.3 +0.4
CNBA                               IAmb    IAmb     16 18 23.6
       comp=Z,144nm,1.6s
CNBA                               IAMs_20 IAMs_20  16 57 05.5
       comp=Z,9µm,19.0s
CMB    Columbia Colle   87.00  42  IAmb    IAmb     16 18 07.8
       comp=Z,66nm,1.2s
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CMB				IAMs_20	IAMs_20	16 53 54.8	
	comp=Z,13µm,18.0s						
CHNA	Chernabura Isl	87.02	10	P	P	16 18 02.0	+1.1
CHNA	Chernabura Isl	87.02	10	P	P	16 18 01.4	+0.5
	baz=195						
GLA	Glamis	87.03	48	IAmb	IAmb	16 18 09.0	
	comp=Z,96nm,1.2s						
GLA				IAMs_20	IAMs_20	16 52 36.1	
	comp=Z,13µm,18.0s						
HSIG		87.07	54	IAmb	IAmb	16 18 08.3	
	comp=Z,90nm,1.4s						
HSIG				IAMs_20	IAMs_20	16 52 17.5	
	comp=Z,11µm,18.0s						
NJ2	Nanjing	87.11	310	eP	P	16 18 02.3	+0.3
NJ2				S	S	16 28 34.1	-6.7
NJ2				pmax	pmax		
	comp=Z,25nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,2µm,8.2s						
NJ2				LR	LR		
	comp=Z,3µm,18.7s						
NJ2				LR	LR		
	comp=Z,2µm,17.9s						
NJ2				LR	LR		
	comp=Z,4µm,18.7s						
CO03	El Pedregal	87.12	124	IAMs_20	IAMs_20	16 50 05.5	
	comp=Z,9µm,19.0s						
PAYG	Puerto Ayora	87.21	89	IAMs_20	IAMs_20	16 49 26.3	
	comp=Z,8µm,19.0s						
CO05	La Serena	87.25	123	IAMs_20	IAMs_20	16 52 04.0	
	comp=Z,12µm,18.0s						
MSHR	Mys Shultsa	87.27	325	ceP	P	16 18 03.4	+0.9
MSHR				pmax	pmax		
	comp=Z,189nm,1.3s						
GSC	Goldstone, Bar	87.27	46	IAmb	IAmb	16 18 09.7	
	comp=Z,71nm,1.1s						
GSC				IAMs_20	IAMs_20	16 56 48.1	
	comp=Z,14µm,18.0s						
AFDM	Forest Hills D	87.31	41	IAmb	IAmb	16 18 09.2	
	comp=Z,55nm,1.2s						
VLA	Vladivostok	87.31	325	i P	P	16 18 03.0	+0.3
VLA				pmax	pmax		
	comp=Z,89nm,1.7s						
SDPT	Sand Point	87.39	10	IAMs_20	IAMs_20	16 57 38.3	
	comp=Z,7µm,19.0s						
SDPT	Sand Point	87.39	10	P	P	16 18 03.2	+0.5
	baz=195						
GO04	Tololo Observa	87.42	124	IAmb	IAmb	16 18 09.3	
	comp=Z,54nm,1.0s						
GO04				IAMs_20	IAMs_20	16 50 31.5	
	comp=Z,11µm,19.0s						
ORV	Oroville	87.44	40	IAmb	IAmb	16 18 12.1	
	comp=Z,93nm,1.6s						
ORV				IAMs_20	IAMs_20	16 52 30.3	
	comp=Z,13µm,19.0s						
PSTR	Posyet	87.49	325	i P	P	16 18 03.8	+0.2
S12K	Black Hills	87.52	9	IAMs_20	IAMs_20	16 56 20.6	
	comp=Z,9µm,19.0s						
S12K	Black Hills	87.52	9	P	P	16 18 03.7	+0.3
	baz=193						
113A	Mohawk Valley,	87.54	49	IAmb	IAmb	16 18 11.1	
	comp=Z,59nm,1.4s						
214A	Organ Pipe Nat	87.64	50	IAmb	IAmb	16 18 11.8	
	comp=Z,86nm,1.5s						
QSM	Queen of Sheba	87.67	45	IAMs_20	IAMs_20	16 56 53.6	
	comp=Z,10µm,18.0s						
UGL	Uglegorsk	87.67	335	eP	P	16 18 11.3	+7.0
UGL				eS	S	16 28 43.3	-2.0
UGL				smax	smax		
	comp=N,6µm,14.0s						
UGL				smax	smax		
	comp=E,3µm,14.0s						
P08K	Saint George I	87.68	4	P	P	16 18 04.5	+0.4
	baz=187						
BLYC	Blythe	87.68	48	IAmb	IAmb	16 18 14.9	
	comp=Z,101nm,1.5s						
BLYC				IAMs_20	IAMs_20	16 55 24.1	
	comp=Z,12µm,18.0s						
GWY	Greenwater Val	87.94	45	IAMs_20	IAMs_20	16 57 12.7	
	comp=Z,10µm,18.0s						
DSP	Deep Springs	87.95	43	IAmb	IAmb	16 18 12.8	
	comp=Z,102nm,1.4s						
DSP				IAMs_20	IAMs_20	16 59 55.9	
	comp=Z,9µm,18.0s						
CO01	Juntas del Tor	88.03	124	IAmb	IAmb	16 18 17.5	
	comp=Z,82nm,1.6s						
CO01				IAMs_20	IAMs_20	16 51 02.7	
	comp=Z,10µm,19.0s						
GRAC	Grapevine Rang	88.06	44	IAMs_20	IAMs_20	16 57 32.8	
	comp=Z,12µm,18.0s						
USA0B	Ussuriysk Arra	88.07	326	IAmb	IAmb	16 18 10.0	
	comp=Z,70nm,0.9s						
USA0B	Ussuriysk Arra	88.07	326	i P	P	16 18 06.4	+0.1
USRK	Ussuriysk Ar.	88.07	326	P	P	16 18 06.8	+0.5
	comp=Z,36nm,0.8s,baz=138,slow=3.0,SNR=82						
USRK				LR	LR	16 51 20.2	
	comp=Z,3µm,21.6s,baz=146,slow=32						
	comp=Z,36nm,0.8s						
ZON	Zonda	88.12	126	IAmb	IAmb	16 18 13.5	
	comp=Z,83nm,1.3s						
ZON				IAMs_20	IAMs_20	16 51 22.8	
	comp=Z,13µm,19.0s						
ZON	Zonda	88.12	126	⇑P	P	16 18 09.2	+2.0
ZON	Zonda	88.12	126	⇑P	P	16 18 09.2	+2.0
LCO	Las Campanas	88.15	123	P	P	16 18 08.3	+0.7
LCO				IAmb	IAmb	16 18 13.4	
	comp=Z,63nm,1.2s						
LCO	Las Campanas	88.15	123	IAMs_20	IAMs_20	16 53 22.9	
	comp=Z,12µm,18.0s						
LCO	Las Campanas	88.15	123	P	P	16 18 08.3	+0.7
LCO				pmax	pmax		
	comp=Z,63nm,1.3s						
LCO				MLR	MLR		
	comp=Z,12µm,18.0s						
SPIA	Saint Paul Isl	88.21	4	P	P	16 18 07.4	+0.8
SPIA	Saint Paul Isl	88.21	4	P	P	16 18 07.2	+0.6
	baz=186						
LHV	Little Huntoon	88.23	42	IAmb	IAmb	16 18 18.2	
	comp=Z,72nm,1.2s						
LHV				IAMs_20	IAMs_20	16 53 05.4	
	comp=Z,15µm,19.0s						
BEKR	Beckworth	88.29	40	P	P	16 18 08.5	+0.8
BEKR				IAmb	IAmb	16 18 14.0	
	comp=Z,100nm,1.7s						
BEKR				IAMs_20	IAMs_20	16 52 37.7	
	comp=Z,13µm,19.0s						
GMN	Gold Mountain	88.32	44	IAmb	IAmb	16 18 14.6	
	comp=Z,97nm,1.4s						
AC04	Llanos de Chal	88.33	122	IAMs_20	IAMs_20	16 50 20.9	
	comp=Z,9µm,19.0s						
YBH	Yreka Blue Hor	88.33	38	IAmb	IAmb	16 18 13.7	
	comp=Z,54nm,1.4s						
YBH				IAMs_20	IAMs_20	16 53 43.7	
	comp=Z,10µm,19.0s						
YBH	Yreka Blue Hor	88.33	38	LR	LR	16 53 55.1	
	comp=Z,649nm,18.4s,baz=244,slow=33						
CFA	Coronel Fontan	88.39	126	P	P	16 18 09.6	+1.2
	comp=Z,22nm,1.0s,baz=238,slow=3.2,SNR=15						
CFA				LR	LR	16 52 09.8	
	comp=Z,5µm,18.1s,baz=221,slow=32						
	comp=Z,22nm,1.0s						
S14K	Fog Glacier	88.43	10	P	P	16 18 08.5	+0.7
	baz=195						
SRIT	Nakonsritamara	88.44	281	P	P	16 18 10.0	+1.2
NVAR	Mina Array Bea	88.47	42	P	P	16 18 09.9	+1.2
NVAR	Mina Array Bea	88.47	42	P	P	16 18 10.1	+1.4
	comp=Z,38nm,1.1s,baz=219,slow=7.7,SNR=58						
NVAR				PKPPKP	P'P'df	16 44 01.4	+6.3
	comp=Z,0.3nm,0.4s,baz=66,slow=1.8,SNR=3.7						
NVAR				LR	LR	16 52 50.0	
	comp=Z,11µm,18.8s,baz=228,slow=32						
	comp=Z,38nm,1.1s						
RYN	Ryan	88.48	42	IAmb	IAmb	16 18 23.1	
	comp=Z,73nm,1.5s						
RYN				IAMs_20	IAMs_20	16 52 45.8	
	comp=Z,12µm,19.0s						
TRQA	Tornquist	88.55	135	IAMs_20	IAMs_20	16 53 51.3	
	comp=Z,11µm,18.0s						
NV11	Mina Array Sit	88.56	42	IAmb	IAmb	16 18 15.4	
	comp=Z,92nm,1.4s						
CHIR	Chirikof Islan	88.62	12	IAMs_20	IAMs_20	16 58 01.2	
	comp=Z,11µm,19.0s						
CHIR	Chirikof Islan	88.62	12	P	P	16 18 09.4	+0.8
	baz=199						
TPNV	Topopah Spring	88.69	45	IAmb	IAmb	16 18 16.6	
	comp=Z,83nm,1.5s						
TPNV				IAMs_20	IAMs_20	16 57 28.7	
	comp=Z,9µm,18.0s						

TPNV	Topopah Spring	88.69	45	⇑P	P	16 18 11.9	+2.2
PAHR	Pah Rah Range	88.72	41	IAmb	IAmb	16 18 15.3	
	comp=Z,63nm,1.2s						
V12A	Nelson	88.75	46	IAmb	IAmb	16 18 17.0	
	comp=Z,66nm,1.2s						
V12A				IAMs_20	IAMs_20	16 56 10.3	
	comp=Z,13µm,18.0s						
Y14A	Wickenburg	88.77	49	IAmb	IAmb	16 18 17.1	
	comp=Z,80nm,1.2s						
MOIG	Morelia	88.87	66	IAMs_20	IAMs_20	16 51 25.6	
	comp=Z,9µm,19.0s						
L04D	Klamath Falls	88.89	38	IAmb	IAmb	16 18 16.8	
	comp=Z,109nm,1.4s						
L04D				IAMs_20	IAMs_20	16 54 48.5	
	comp=Z,11µm,19.0s						
MLSI	Meulaboh, Aceh	88.91	276	P	P	16 18 09.1	-1.9
	comp=Z,100nm,1.3s						
LHMI	Lhok Sumawe	88.94	277	IAMs_20	IAMs_20	17 04 09.4	
	comp=Z,12µm,18.0s						
GULI	GuiLin	88.95	300	P	P	16 18 11.9	+1.0
GULI				PP	PP	16 21 42.4	+1.5
GULI				S	SKSac	16 28 44.6	+4.4
GULI				pmax	pmax		
	comp=Z,10.0nm,1.4s						
GULI				LR	LR		
	comp=Z,1µm,16.4s						
GULI				LR	LR		
	comp=Z,2µm,19.1s						
GULI				LR	LR		
	comp=Z,4µm,20.8s						
W13A	Hualapai Mount	88.95	47	IAmb	IAmb	16 18 31.5	
	comp=Z,73nm,1.2s						
W13A				IAMs_20	IAMs_20	16 56 04.5	
	comp=Z,12µm,18.0s						
TYV	Tymovskoe	88.95	336	eP	P	16 18 11.6	+1.3
TYV				pmax	pmax		
	comp=Z,105nm,0.7s						
TYV				pmax	pmax		
	comp=Z,300nm,3.2s						
SHPR	Sheep Range	89.06	46	IAmb	IAmb	16 18 18.7	
	comp=Z,48nm,1.3s						
WHN	Wuhan	89.20	307	⇑P	P	16 18 12.0	0.0
WHN				SKS	SKSac	16 28 42.6	+1.3
WHN				S	S	16 28 58.9	-1.8
WHN				pmax	pmax		
	comp=Z,130nm,3.9s						
GO03	Copiapo	89.29	122	IAMs_20	IAMs_20	16 49 42.3	
	comp=Z,8µm,20.0s						
AC06	Mina Casimiro	89.34	122	IAMs_20	IAMs_20	16 50 12.6	
	comp=Z,8µm,20.0s						
Q09A	Carvers	89.39	43	IAMs_20	IAMs_20	16 52 20.1	
	comp=Z,10µm,20.0s						
I03D	Drain, OR	89.42	36	IAmb	IAmb	16 18 19.3	
	comp=Z,108nm,1.4s						
S11A	Rachel	89.45	44	IAmb	IAmb	16 18 19.9	
	comp=Z,90nm,1.3s						
S11A				IAMs_20	IAMs_20	16 58 45.8	
	comp=Z,12µm,18.0s						
K04D	Chiloquin, OR	89.47	38	IAMs_20	IAMs_20	16 54 41.7	
	comp=Z,11µm,19.0s						
MDJ	Mudanjiang	89.53	325	P	P	16 18 13.8	+0.6
MDJ				pmax	pmax		
	comp=Z,77nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,1µm,8.4s						
MDJ				LR	LR		
	comp=Z,2µm,17.8s						
MDJ				LR	LR		
	comp=Z,3µm,17.6s						
MDJ				LR	LR		
	comp=Z,5µm,18.3s						
SII	Sitkinak Islan	89.59	13	P	P	16 18 14.0	+0.8
SII	Sitkinak Islan	89.59	13	P	P	16 18 14.2	+1.1
	baz=200						
319A	Douglas	89.65	53	IAmb	IAmb	16 18 42.8	
	comp=Z,115nm,1.6s						
PRN	Pahroc Range	89.72	45	IAMs_20	IAMs_20	16 58 10.8	
	comp=Z,11µm,18.0s						
PRN	Pahroc Range	89.72	45	⇑P	P	16 18 17.1	+2.7
TLIG	Tlapa	89.80	69	IAmb	IAmb	16 18 22.9	
	comp=Z,99nm,1.5s						
DL2	Dalian	89.84	317	P	P	16 18 14.9	+0.1
DL2				SKS	SKSac	16 28 44.1	-0.6
DL2				S	S	16 29 06.1	-0.2
DL2				pmax	pmax		
	comp=Z,65nm,1.3s						
DL2				pmax	pmax		
	comp=Z,1µm,7.6s						
DL2				LR	LR		
	comp=Z,2µm,22.3s						
DL2				LR	LR		
	comp=Z,4µm,17.5s						
DL2				LR	LR		
	comp=Z,5µm,23.5s						
AC01	Pan de Azucar	89.85	121	IAMs_20	IAMs_20	16 54 01.2	
	comp=Z,10µm,18.0s						
I04A	Tendick Farm,	89.96	36	IAmb	IAmb	16 18 20.7	
	comp=Z,88nm,1.2s						
R16K	Pilot Point	89.96	11	IAMs_20	IAMs_20	17 00 24.5	
	comp=Z,7µm,19.0s						
R16K	Pilot Point	89.96	11	P	P	16 18 15.5	+0.7
	baz=197						
COR	Corvallis	90.08	35	P	P	16 18 15.8	+0.1
COR				IAmb	IAmb	16 18 22.7	
	comp=Z,76nm,1.2s						
COR	Corvallis	90.08	35	P	P	16 18 15.8	+0.1
COR				pmax	pmax		
	comp=Z,76nm,1.2s						
COR				MLR	MLR		
	comp=Z,16µm,19.0s						
X16A	Lo Mia Camp, P	90.08	49	IAmb	IAmb	16 18 37.7	
	comp=Z,111nm,1.3s						
X16A				IAMs_20	IAMs_20	16 54 29.8	
	comp=Z,13µm,18.0s						
J05D	Fort Rock, OR	90.20	37	IAmb	IAmb	16 18 23.2	
	comp=Z,83nm,1.2s						
UNM	Universidad Na	90.27	68	IAMs_20	IAMs_20	16 54 51.9	
	comp=Z,6µm,18.0s						
OHAK	Old Harbor	90.38	13	P	P	16 18 17.6	+0.8
	baz=201						
R18K	Karluk	90.49	12	P	P	16 18 18.1	+0.8
	baz=200						
AC02	Maricunga	90.53	122	IAmb	IAmb	16 18 27.1	
	comp=Z,48nm,1.3s						
AC02				IAMs_20	IAMs_20	16 51 58.1	
	comp=Z,11µm,19.0s						
G03D	McMinnville, O	90.55	35	IAmb	IAmb	16 18 24.0	
	comp=Z,87nm,1.2s						
LCMT	Little Creek M	90.57	46	IAmb	IAmb	16 18 24.7	
	comp=Z,52nm,1.2s						
SNY	Shenyang	90.69	320	⇓P	P	16 18 19.1	+0.4
SNY				pmax	pmax		
	comp=Z,60nm,1.3s						
SNY				pmax	pmax		
	comp=Z,900nm,10.2s						
SNY				LR	LR		
	comp=Z,930nm,19.6s						
SNY				LR	LR		
	comp=Z,2µm,17.2s						
SNY				LR	LR		
	comp=Z,3µm,18.2s						
H04A	Detroit Lake	90.70	36	IAmb	IAmb	16 18 37.5	
	comp=Z,95nm,1.3s						
U15A	North Rim	90.79	47	IAMs_20	IAMs_20	16 58 47.5	
	comp=Z,12µm,18.0s						
WUAZ	Wupatki	90.80	48	IAMs_20	IAMs_20	16 56 55.9	
	comp=Z,12µm,18.0s						
WUAZ	Wupatki	90.80	48	⇑P	P	16 18 22.1	+2.5
KNB	Kanab	90.83	46	IAMs_20	IAMs_20	16 57 33.5	
	comp=Z,12µm,18.0s						
CRZF	Crozet Islands	90.85	212	IAMs_20	IAMs_20	16 59 21.8	
	comp=Z,9µm,18.0s						
TIA	Tai'an	90.85	313	P	P	16 18 20.1	+0.5
TIA				SKS	SKSac	16 28 51.0	+0.2
TIA				S	S	16 29 16.3	+0.5
TIA				pmax	pmax		
	comp=Z,94nm,1.3s						
TIA				pmax	pmax		
	comp=Z,1µm,7.8s						
TIA				LR	LR		
	comp=Z,3µm,21.4s						
TIA				LR	LR		
	comp=Z,2µm,18.5s						
TIA				LR	LR		
	comp=Z,4µm,23.3s						
Q17K	Contact Creek	90.90	11	P	P	16 18 19.9	+0.5
	baz=198,SNR=17						

WVOR	Wild Horse Val	91.00	39	IAmb	IAmb	16 18 26.7	
	comp=Z,41nm,1.2s						
WVOR	Wild Horse Val	91.00	39	⇑P	P	16 18 21.8	+1.6
WVOR	Wild Horse Val	91.00	39	⇑P	P	16 18 21.8	+1.6
KDAK	Kodiak Island	91.04	13	P	P	16 18 20.2	+0.4
KDAK				IAmb	IAmb	16 18 25.1	
	comp=Z,48nm,1.1s						
KDAK	Kodiak Island	91.04	13	P	P	16 18 20.1	+0.3
	comp=Z,53nm,1.3s,baz=225,slow=4.3,SNR=7.1						
KDAK				LR	LR	16 54 52.9	
	comp=Z,4µm,18.9s,baz=210,slow=33						
	comp=Z,53nm,1.3s						
KDAK	Kodiak Island	91.04	13	P	P	16 18 20.6	+0.8
	baz=201						
KDAK	Kodiak Island	91.04	13	⇑P	P	16 18 21.7	+1.8
CN2	Changchun	91.05	323	eP	P	16 18 19.8	-0.5
CN2				pmax	pmax		
	comp=Z,70nm,1.2s						
CN2				pmax	pmax		
	comp=Z,600nm,5.0s						
CN2				LR	LR		
	comp=Z,2µm,17.0s						
CN2				LR	LR		
	comp=Z,2µm,17.0s						
CN2				LR	LR		
	comp=Z,2µm,17.1s						
O14K	Tigyukauivet M	91.08	8	IAMs_20	IAMs_20	17 00 19.8	
	comp=Z,8µm,20.0s						
O14K	Tigyukauivet M	91.08	8	P	P	16 18 20.9	+0.9
	baz=194						
X18A	Snowflake	91.12	50	IAmb	IAmb	16 18 28.3	
	comp=Z,55nm,1.2s						
X18A				IAMs_20	IAMs_20	16 56 37.3	
	comp=Z,10µm,18.0s						
GO02	Mina Guanaco	91.16	120	IAMs_20	IAMs_20	16 53 57.8	
	comp=Z,10µm,18.0s						
PSUT	Pine Spring	91.16	45	IAmb	IAmb	16 18 27.1	
	comp=Z,47nm,1.4s						
Q16K	King Salmon	91.17	11	P	P	16 18 20.8	+0.3
	baz=198						
SPR3	Spring Creek 3	91.18	44	IAmb	IAmb	16 18 27.5	
	comp=Z,41nm,1.3s						
SPR3				IAMs_20	IAMs_20	17 00 32.4	
	comp=Z,13µm,18.0s						
GRNR	Gornyy	91.19	333	⇑iP	P	16 18 21.9	+1.1
GRNR				pmax	pmax		
	comp=E,9.0nm,1.0s						
GRNR				pmax	pmax		
	comp=N,10.0nm,1.3s						
GRNR				pmax	pmax		
	comp=Z,50nm,1.1s						
O15K	Ungalikthiuk R	91.19	9	P	P	16 18 20.8	+0.3
	baz=195						
P16K	Nushagak River	91.31	10	IAMs_20	IAMs_20	16 59 40.9	
	comp=Z,8µm,19.0s						
P16K	Nushagak River	91.31	10	P	P	16 18 21.7	+0.7
	baz=197						
Q18K	Katmai Hardscr	91.41	12	P	P	16 18 22.4	+0.6
	baz=199,SNR=21						
BNX	BinXian	91.42	325	⇑P	P	16 18 21.3	-0.6
BNX				S	S	16 29 20.6	+0.2
BNX				pmax	pmax		
	comp=Z,96nm,0.9s						
BNX				pmax	pmax		
	comp=Z,1µm,9.0s						
BNX				LR	LR		
	comp=Z,2µm,18.4s						
BNX				LR	LR		
	comp=Z,3µm,18.4s						
BNX				LR	LR		
	comp=Z,4µm,20.6s						
HOOD	Mount Hood Mea	91.42	36	IAmb	IAmb	16 18 27.6	
	comp=Z,67nm,1.2s						
W18A	Petrified Fore	91.62	49	IAmb	IAmb	16 18 30.4	
	comp=Z,88nm,1.3s						
I07A	Izee	91.66	38	IAmb	IAmb	16 18 29.0	
	comp=Z,61nm,1.2s						
I07A				IAMs_20	IAMs_20	16 56 13.7	
	comp=Z,11µm,19.0s						
SLVN	Son La	91.67	294	P	P	16 18 25.9	+2.1
N14K	Kuskokwak Cree	91.68	8	IAMs_20	IAMs_20	16 58 43.7	
	comp=Z,7µm,19.0s						
N14K	Kuskokwak Cree	91.68	8	P	P	16 18 23.0	+0.2
	baz=194						
M11K	Mekoryuk	91.68	6	IAMs_20	IAMs_20	16 56 59.6	
	comp=Z,8µm,19.0s						
M11K	Mekoryuk	91.68	6	P	P	16 18 23.5	+0.8
	baz=190						
P17K	Kvichak River	91.70	11	P	P	16 18 23.1	+0.2
	baz=198,SNR=9.4						
ELK	Elko	91.78	42	IAMs_20	IAMs_20	16 55 20.1	
	comp=Z,12µm,19.0s						
ELK	Elko	91.78	42	LR	LR	16 55 03.7	
	comp=Z,11µm,18.9s,baz=234,slow=33						
ELK	Elko	91.78	42	⇑P	P	16 18 25.5	+1.4
ELK	Elko	91.78	42	⇑P	P	16 18 25.5	+1.4
EPT	El Paso	91.79	54	IAMs_20	IAMs_20	16 55 26.4	
	comp=Z,10µm,19.0s						
NLWA	Neilton Lookou	91.83	33	IAmb	IAmb	16 18 29.9	
	comp=Z,47nm,1.2s						
NLWA				IAMs_20	IAMs_20	16 53 51.4	
	comp=Z,12µm,20.0s						
O16K	Kokwok River B	91.83	10	IAMs_20	IAMs_20	17 00 07.8	
	comp=Z,7µm,19.0s						
O16K	Kokwok River B	91.83	10	P	P	16 18 23.2	-0.3
	baz=197						
Q20K	Shuyak Island	91.85	13	P	P	16 18 23.9	+0.3
	baz=201,SNR=9.7						
SYI	Shuyak Island	91.85	13	IAmb	IAmb	16 18 29.4	
	comp=Z,69nm,1.2s						
Q19K	Cape Douglas,	91.92	12	IAMs_20	IAMs_20	17 05 29.3	
	comp=Z,7µm,18.0s						
Q19K	Cape Douglas,	91.92	12	P	P	16 18 24.3	+0.3
	baz=200,SNR=5.6						
KLR	Kul'dur	91.94	329	LR	LR	16 57 40.0	
	comp=Z,4µm,19.3s,baz=150,slow=34						
KLR	Kul'dur	91.94	329	i P	P	16 18 24.8	+0.5
KLR				pmax	pmax		
	comp=Z,61nm,1.0s						
M13K	Dall Lake	91.98	7	IAMs_20	IAMs_20	17 01 00.5	
	comp=Z,7µm,19.0s						
M13K	Dall Lake	91.98	7	P	P	16 18 24.7	+0.6
	baz=192						
P18K	Big Mountain,	92.08	11	IAmb	IAmb	16 18 31.7	
	comp=Z,36nm,1.1s						
P18K				IAMs_20	IAMs_20	17 03 15.6	
	comp=Z,7µm,19.0s						
P18K	Big Mountain,	92.08	11	P	P	16 18 24.7	0.0
	baz=199,SNR=7.4						
N15K	Kwethluk River	92.11	9	IAmb	IAmb	16 18 30.3	
	comp=Z,57nm,1.1s						
N15K				IAMs_20	IAMs_20	17 00 51.2	
	comp=Z,8µm,20.0s						
N15K	Kwethluk River	92.11	9	P	P	16 18 25.4	+0.6
	baz=195,SNR=8.7						
MVU	Marysvale	92.14	45	IAmb	IAmb	16 18 33.1	
	comp=Z,50nm,1.2s						
MVU				IAMs_20	IAMs_20	16 55 55.1	
	comp=Z,11µm,19.0s						
O17K	Koliganek Bris	92.15	10	P	P	16 18 25.4	+0.4
	baz=197						
GYA	Guiyang	92.36	300	⇑P	P	16 18 26.8	-0.1
GYA				SKS	SKSac	16 29 00.9	+0.9
GYA				S	S	16 29 29.5	-0.6
GYA				pmax	pmax		
	comp=Z,29nm,1.2s						
GYA				pmax	pmax		
	comp=Z,1µm,11.5s						
GYA				LR	LR		
	comp=Z,1µm,16.9s						
GYA				LR	LR		
	comp=Z,1µm,18.5s						
GYA				LR	LR		
	comp=Z,4µm,20.3s						
TXAR	Lajitas Array	92.39	57	PKPPKP		16 43 50.1	
	comp=Z,0.8nm,1.0s,baz=132,slow=1.9,SNR=4.0						
TXAR				LR	LR	16 55 16.4	
	comp=Z,8µm,18.0s,baz=228,slow=32						
ENH	Enshi	92.44	304	P	P	16 18 28.5	+1.4
M14K	Bethel	92.46	8	IAMs_20	IAMs_20	16 59 27.2	
	comp=Z,8µm,19.0s						
M14K	Bethel	92.46	8	P	P	16 18 27.0	+0.7
	baz=193						
O18K	Koktuh Hills	92.53	11	IAmb	IAmb	16 18 31.8	
	comp=Z,66nm,1.1s						
O18K				IAMs_20	IAMs_20	17 03 28.3	
	comp=Z,7µm,19.0s						
O18K	Koktuh Hills	92.53	11	P	P	16 18 27.1	+0.4

	baz=199,SNR=22						
M15K	**Kasigluk River**	**92.55**	**8**	P	**P**	**16 18 27.2**	**+0.4**
	baz=194						
N16K	**Nishlik Lake**	**92.58**	**9**	P	**P**	**16 18 27.8**	**+0.8**
	baz=196,SNR=9.5						
P19K	**Oil Pt**	**92.67**	**12**	IAmb	IAmb	16 18 32.0	
	comp=Z,49nm,1.1s						
P19K	**Oil Pt**	**92.67**	**12**	P	**P**	**16 18 27.9**	**+0.4**
	baz=201						
F07A	**Phinny Hill Vi**	**92.69**	**36**	IAmb	IAmb	16 18 34.1	
	comp=Z,38nm,1.1s						
HMU	**Henry Mountain**	**92.70**	**47**	IAmb	IAmb	16 18 54.4	
	comp=Z,43nm,1.3s						
HMU				IAMs_20	IAMs_20	16 58 49.9	
	comp=Z,7µm,18.0s						
NNA	**Nana**	**92.74**	**106**	LR	LR	16 52 58.4	
	comp=Z,5µm,18.7s,baz=223,slow=31						
G08A	**Pilot Rock**	**92.77**	**37**	IAmb	IAmb	16 18 34.6	
	comp=Z,80nm,1.3s						
Y22D	**IRIS PASSCAL I**	**92.85**	**52**	IAMs_20	IAMs_20	16 56 02.4	
	comp=Z,13µm,19.0s						
Y22D	**IRIS PASSCAL I**	**92.85**	**52**	P	**P**	**16 18 29.5**	**+0.4**
	baz=234						
N17K	**Nushagak Hills**	**92.86**	**10**	P	**P**	**16 18 29.2**	**+0.9**
	baz=197						
LYN	**LuoYang**	**92.86**	**309**	P	**P**	**16 18 29.4**	**+0.5**
LYN				pP	sP	16 18 34.0	+0.4
LYN				sP	pwP	16 18 37.3	-2.2
LYN				SKS	**SKSac**	**16 29 02.5**	**+0.3**
LYN				pmax	pmax		
	comp=Z,59nm,1.3s						
LYN				pmax	pmax		
	comp=Z,1µm,9.0s						
LYN				LR	LR		
	comp=Z,4µm,18.5s						
LYN				LR	LR		
	comp=Z,3µm,19.6s						
LYN				LR	LR		
	comp=Z,6µm,18.9s						
CNPM	**China Poot**	**92.92**	**13**	IAmb	IAmb	16 18 34.2	
	comp=Z,55nm,1.1s						
CNPM				IAMs_20	IAMs_20	16 58 12.0	
	comp=Z,12µm,19.0s						
L14K	**Kuka Creek**	**92.96**	**7**	P	**P**	**16 18 29.6**	**+1.0**
	baz=193						
HOM	**Homer**	**92.97**	**13**	IAMs_20	IAMs_20	16 58 15.1	
	comp=Z,8µm,19.0s						
HOM	**Homer**	**92.97**	**13**	P	**P**	**16 18 29.6**	**+0.8**
	baz=202						
MXC	**Moxie City**	**92.98**	**35**	IAmb	IAmb	16 18 34.9	
	comp=Z,39nm,1.3s						
O19K	**Port Alsworth**	**93.00**	**11**	IAmb	IAmb	16 18 35.0	
	comp=Z,69nm,1.1s						
O19K				IAMs_20	IAMs_20	17 03 52.7	
	comp=Z,7µm,19.0s						
O19K	**Port Alsworth**	**93.00**	**11**	P	**P**	**16 18 29.4**	**+0.5**
	baz=200						
ALPN	**Alpine**	**93.00**	**56**	IAmb	IAmb	16 18 35.9	
	comp=Z,43nm,1.3s						
ILSW	**Iliamna Southw**	**93.00**	**12**	IAmb	IAmb	16 18 33.1	
	comp=Z,74nm,1.3s						
ILSW				IAMs_20	IAMs_20	17 01 03.9	
	comp=Z,7µm,20.0s						
Q16A	**Castle Valley**	**93.04**	**46**	IAmb	IAmb	16 18 50.3	
	comp=Z,26nm,1.2s						
Q16A				IAMs_20	IAMs_20	16 56 13.8	
	comp=Z,10µm,18.0s						
M16K	**Timber Creek**	**93.09**	**9**	IAmb	IAmb	16 18 35.0	
	comp=Z,28nm,1.1s						
M16K	**Timber Creek**	**93.09**	**9**	P	**P**	**16 18 30.4**	**+1.0**
	baz=196,SNR=11						
HNS	**HongShan**	**93.11**	**312**	⇑P	**P**	**16 18 30.8**	**+0.8**
HNS				SKS	**SKSac**	**16 29 04.5**	**+1.1**
HNS				S	**S**	**16 29 34.3**	**-1.7**
HNS				SS	**SS**	**16 35 53.4**	**+1.7**
HNS				pmax	pmax		
	comp=Z,59nm,1.3s						
HNS				pmax	pmax		
	comp=Z,1µm,10.8s						
HNS				LR	LR		
	comp=Z,3µm,17.8s						
HNS				LR	LR		
	comp=Z,3µm,18.4s						
HNS				LR	LR		
	comp=Z,4µm,18.3s						
BGU	**Big Grassy Mou**	**93.18**	**43**	IAmb	IAmb	16 18 55.4	
	comp=Z,37nm,1.4s						
BGU				IAMs_20	IAMs_20	16 55 57.2	
	comp=Z,8µm,19.0s						
O20K	**Slope Mountain**	**93.18**	**12**	P	**P**	**16 18 30.9**	**+1.1**
	baz=201						
E07A	**Sunnyside**	**93.19**	**36**	IAmb	IAmb	16 18 36.7	
	comp=Z,77nm,1.4s						
MFID	**Camas Ranch**	**93.19**	**40**	IAmb	IAmb	16 18 36.5	
	comp=Z,48nm,1.1s						
MFID				IAMs_20	IAMs_20	16 54 30.3	
	comp=Z,8µm,20.0s						
N18K	**Kilae Creek**	**93.20**	**10**	P	**P**	**16 18 30.4**	**+0.6**
	baz=198						
BRLK	**Bradley Lake**	**93.21**	**13**	IAMs_20	IAMs_20	16 58 39.3	
	comp=Z,11µm,19.0s						
BRSE	**Bradley Lake S**	**93.22**	**13**	P	**P**	**16 18 30.4**	**+0.4**
	baz=203						
HAWA	**Hanford**	**93.23**	**36**	IAmb	IAmb	16 18 36.7	
	comp=Z,62nm,1.4s						
TMUT	**Trail Mountain**	**93.25**	**45**	IAmb	IAmb	16 18 37.1	
	comp=Z,36nm,1.1s						
BMO	**Blue Mountains**	**93.34**	**38**	IAmb	IAmb	16 18 36.2	
	comp=Z,34nm,1.4s						
BMO	**Blue Mountains**	**93.34**	**38**	⇑P	**P**	**16 18 31.8**	**+0.8**
BMO	**Blue Mountains**	**93.34**	**38**	⇓P	**P**	**16 18 31.8**	**+0.8**
K13K	**Kusilvak Mount**	**93.34**	**6**	IAMs_20	IAMs_20	16 58 10.6	
	comp=Z,8µm,20.0s						
K13K	**Kusilvak Mount**	**93.34**	**6**	P	**P**	**16 18 31.2**	**+0.7**
	baz=191						
TA01	**Diego Aracena**	**93.34**	**116**	P	**P**	**16 18 31.7**	**+0.1**
TA01				IAMs_20	IAMs_20	16 51 57.1	
	comp=Z,8µm,20.0s						
L15K	**Ungalak Mounta**	**93.42**	**8**	P	**P**	**16 18 31.4**	**+0.6**
	baz=194,SNR=7.7						
MPU	**Maple Canyon**	**93.44**	**45**	IAMs_20	IAMs_20	17 00 39.3	
	comp=Z,9µm,18.0s						
WAH2	**Wahluke Slope**	**93.47**	**36**	IAmb	IAmb	16 18 37.8	
	comp=Z,59nm,1.4s						
RED	**Redoubt Volcan**	**93.47**	**12**	IAmb	IAmb	16 21 59.0	
	comp=Z,37nm,0.7s						
AF01	**San Pedro de A**	**93.49**	**119**	IAMs_20	IAMs_20	16 53 27.6	
	comp=Z,7µm,19.0s						
BBB	**Bella Bella**	**93.54**	**28**	LR	LR	16 55 32.0	
	comp=Z,7µm,18.9s,baz=220,slow=32						
TA02	**Huaiquique**	**93.55**	**116**	IAMs_20	IAMs_20	16 52 03.5	
	comp=Z,8µm,20.0s						
N19K	**Bonanza Creek**	**93.55**	**11**	P	**P**	**16 18 32.7**	**+1.1**
	baz=200						
SRU	**San Rafael Swe**	**93.55**	**46**	IAmb	IAmb	16 18 36.7	
	comp=Z,24nm,1.0s						
SRU				IAMs_20	IAMs_20	16 59 14.5	
	comp=Z,9µm,18.0s						
PB01	**IPOC Station P**	**93.60**	**117**	IAMs_20	IAMs_20	16 53 49.8	
	comp=Z,9µm,19.0s						
M17K	**Holitna River**	**93.66**	**9**	IAmb	IAmb	16 18 34.8	
	comp=Z,42nm,1.2s						
M17K	**Holitna River**	**93.66**	**9**	P	**P**	**16 18 32.9**	**+0.9**
	baz=197,SNR=8.5						
ANMO	**Albuquerque**	**93.67**	**51**	P	**P**	**16 18 33.8**	**+0.8**
ANMO				IAmb	IAmb	16 18 38.4	
	comp=Z,51nm,1.7s						
ANMO	**Albuquerque**	**93.67**	**51**	IAMs_20	IAMs_20	16 56 48.1	
	comp=Z,14µm,19.0s						
ANMO	**Albuquerque**	**93.67**	**51**	IAMs_20	IAMs_20	16 56 48.1	
	comp=Z,14µm,19.0s						
ANMO	**Albuquerque**	**93.67**	**51**	LR	LR	16 56 51.2	
	comp=Z,17µm,18.0s,baz=324,slow=33						
ANMO	**Albuquerque**	**93.67**	**51**	*i* P	**P**	**16 18 33.4**	**+0.5**
ANMO				pmax	pmax		
	comp=Z,19nm,1.2s						
ANMO	**Albuquerque**	**93.67**	**51**	⇑P	**P**	**16 18 34.6**	**+1.7**
L16K	**Owhat River**	**93.69**	**8**	IAmb	IAmb	16 18 37.2	
	comp=Z,31nm,1.3s						
L16K	**Owhat River**	**93.69**	**8**	P	**P**	**16 18 33.0**	**+0.9**
	baz=195,SNR=8.7						
HMBC	**Humberstone**	**93.73**	**116**	IAMs_20	IAMs_20	16 52 08.4	
	comp=Z,9µm,20.0s						
CTU	**Camp Tracy**	**93.79**	**44**	IAMs_20	IAMs_20	17 01 33.5	
	comp=Z,11µm,18.0s						
BJT	**Baijiatuau**	**93.80**	**315**	IAmb	IAmb	16 18 50.1	
	comp=Z,36nm,1.3s						
BJT	**Baijiatuau**	**93.80**	**315**	P	**P**	**16 18 34.3**	**+1.2**
BJI	**Beijing**	**93.81**	**315**	P	**P**	**16 18 33.1**	**0.0**
BJI				SKS	**SKSac**	**16 29 08.3**	**+1.2**
BJI				S	**S**	**16 29 41.9**	**-0.1**
BJI				pmax	pmax		
	comp=Z,11nm,1.2s						
BJI				LR	LR		
	comp=Z,1µm,18.2s						
BJI				LR	LR		
	comp=Z,990nm,20.5s						
BJI				LR	LR		
	comp=Z,2µm,19.0s						
SEW	**Seward**	**93.81**	**14**	IAmb	IAmb	16 18 39.8	
	comp=Z,72nm,1.6s						
SEW				IAMs_20	IAMs_20	16 58 43.9	
	comp=Z,7µm,19.0s						
SEW	**Seward**	**93.81**	**14**	P	**P**	**16 18 33.8**	**+1.2**
	baz=204						
PV05	**Paradox Valley**	**93.81**	**47**	IAmb	IAmb	16 18 39.4	
	comp=Z,37nm,1.2s						
Q23K	**Middleton Isla**	**93.86**	**15**	IAMs_20	IAMs_20	16 58 21.5	
	comp=Z,9µm,18.0s						
Q23K	**Middleton Isla**	**93.86**	**15**	P	**P**	**16 18 33.9**	**+1.1**
	baz=206						
HVU	**Hansel Valley**	**93.86**	**43**	IAmb	IAmb	16 18 39.9	
	comp=Z,62nm,1.2s						
HVU				IAMs_20	IAMs_20	17 00 37.4	
	comp=Z,12µm,18.0s						
M18K	**Stony River**	**93.98**	**10**	P	**P**	**16 18 34.2**	**+0.8**
	baz=198,SNR=7.6						
D08A	**Wollman Farm,**	**93.99**	**36**	IAmb	IAmb	16 18 40.1	
	comp=Z,31nm,1.2s						
K15K	**Wolf Creek Mou**	**94.01**	**7**	IAMs_20	IAMs_20	17 02 13.3	
	comp=Z,7µm,19.0s						
K15K	**Wolf Creek Mou**	**94.01**	**7**	P	**P**	**16 18 34.0**	**+0.5**
	baz=194,SNR=12						
ATAH	**Atahualpa**	**94.02**	**101**	LR	LR	16 53 48.0	
	comp=Z,3µm,18.4s,baz=243,slow=31						
E09A	**Wood Farm, Sta**	**94.02**	**37**	IAmb	IAmb	16 18 39.8	
	comp=Z,61nm,1.4s						
PV19	**Morning Glory**	**94.03**	**47**	IAmb	IAmb	16 18 39.9	
	comp=Z,55nm,1.3s						
PV10	**Paradox Valley**	**94.03**	**47**	IAmb	IAmb	16 19 10.9	
	comp=Z,29nm,0.8s						
SLKM	**Skilak Lake**	**94.03**	**13**	IAmb	IAmb	16 18 39.0	
	comp=Z,71nm,1.3s						
SLKM				IAMs_20	IAMs_20	16 59 05.4	
	comp=Z,8µm,19.0s						
PV18	**Skein Mesa, Pa**	**94.03**	**47**	IAmb	IAmb	16 19 10.1	
	comp=Z,23nm,0.6s						
PV14	**Lion Creek, Pa**	**94.04**	**47**	IAmb	IAmb	16 18 40.0	
	comp=Z,31nm,1.3s						
P18A	**Preston Nutter**	**94.04**	**46**	IAMs_20	IAMs_20	17 00 06.3	
	comp=Z,12µm,18.0s						
PV20	**West Nyswonger**	**94.05**	**47**	IAmb	IAmb	16 18 40.0	
	comp=Z,51nm,1.2s						
HLID	**Hailey**	**94.07**	**40**	IAmb	IAmb	16 18 40.2	
	comp=Z,42nm,1.1s						
HLID				IAMs_20	IAMs_20	17 00 31.6	
	comp=Z,9µm,18.0s						
HLID	**Hailey**	**94.07**	**40**	⇑P	**P**	**16 18 36.2**	**+1.7**
PV23	**Carpenter Ridg**	**94.09**	**47**	IAmb	IAmb	16 18 40.2	
	comp=Z,49nm,1.3s						
CAPN	**Captain Cook N**	**94.09**	**13**	IAMs_20	IAMs_20	16 59 11.9	
	comp=Z,10µm,20.0s						
O22K	**Cooper Landing**	**94.10**	**13**	IAMs_20	IAMs_20	17 03 38.2	
	comp=Z,7µm,18.0s						
O22K	**Cooper Landing**	**94.10**	**13**	P	**P**	**16 18 34.5**	**+0.6**
	baz=204,SNR=8.4						
CMAR	**Chiang Mai Arr**	**94.11**	**289**	P	**P**	**16 18 33.3**	**-1.8**
CMAR	**Chiang Mai Arr**	**94.11**	**289**	P	**P**	**16 18 36.1**	**+1.0**
	comp=Z,3.9nm,0.7s,baz=143,slow=3.8,SNR=21						
CMAR				PP	**PP**	**16 22 17.7**	**-4.2**
	comp=Z,2.5nm,0.9s,baz=117,slow=5.7,SNR=4.9						
CMAR				PKKP	**PKKPbc**	**16 35 36.9**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=284,slow=4.7,SNR=6.4						
	comp=Z,3.9nm,0.7s						
PV02	**Paradox Valley**	**94.12**	**47**	IAmb	IAmb	16 18 40.2	
	comp=Z,57nm,1.3s						
P23K	**Montague Islan**	**94.14**	**15**	IAmb	IAmb	16 18 39.4	
	comp=Z,85nm,1.4s						
P23K				IAMs_20	IAMs_20	16 58 38.8	
	comp=Z,9µm,19.0s						
P23K	**Montague Islan**	**94.14**	**15**	P	**P**	**16 18 34.6**	**+0.4**
	baz=206						
PV12	**Saucer Basin,**	**94.14**	**47**	IAmb	IAmb	16 18 40.5	
	comp=Z,66nm,1.2s						
MA2	**Magadan**	**94.16**	**344**	LR	LR	16 56 43.2	
	comp=Z,5µm,20.1s,baz=160,slow=33						
MA2	**Magadan**	**94.16**	**344**	*ce*P	**P**	**16 18 33.9**	**-0.4**
MA2				pmax	pmax		
	comp=Z,49nm,1.6s						
PLID	**Pearl Lake**	**94.19**	**39**	IAmb	IAmb	16 18 40.2	
	comp=Z,64nm,1.2s						
PB11	**IPOC Station P**	**94.21**	**116**	P	**P**	**16 18 35.6**	**-0.2**
PB11				IAmb	IAmb	16 18 42.3	
	comp=Z,70nm,1.1s						
PB11				IAMs_20	IAMs_20	16 52 21.9	
	comp=Z,7µm,20.0s						
CRAG	**Craig**	**94.25**	**24**	P	**P**	**16 18 35.2**	**+0.5**
	baz=217						
L17K	**Donlin**	**94.25**	**9**	P	**P**	**16 18 35.0**	**+0.3**
	baz=196,SNR=8.0						
J14K	**Nanvaranak Lak**	**94.25**	**6**	IAMs_20	IAMs_20	16 58 38.5	
	comp=Z,8µm,19.0s						
J14K	**Nanvaranak Lak**	**94.25**	**6**	P	**P**	**16 18 35.1**	**+0.5**
	baz=192						
TCUT	**Toone Canyon**	**94.25**	**44**	IAmb	IAmb	16 18 40.1	
	comp=Z,38nm,1.2s						
TCUT				IAMs_20	IAMs_20	17 01 57.8	
	comp=Z,7µm,18.0s						
BSUT	**Blindstream Ca**	**94.28**	**45**	IAmb	IAmb	16 18 42.1	
	comp=Z,31nm,1.2s						
BSUT				IAMs_20	IAMs_20	17 01 36.7	
	comp=Z,9µm,18.0s						
CHTO	**Chiang Mai**	**94.30**	**289**	P	**P**	**16 18 35.7**	**-0.2**
CHTO	**Chiang Mai**	**94.30**	**289**	P	**P**	**16 18 37.6**	**+1.7**
CHTO	**Chiang Mai**	**94.30**	**289**	P	**P**	**16 18 35.7**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,23nm,1.4s						
CHTO				MLR	MLR		
	comp=Z,4µm,20.0s						
CHTO	**Chiang Mai**	**94.30**	**289**	⇓P	**P**	**16 18 36.7**	**+0.8**
N20K	**Mount Spurr**	**94.30**	**12**	P	**P**	**16 18 34.7**	**-0.3**
	baz=202						
SPCR	**Spurr Chakacha**	**94.30**	**12**	P	**P**	**16 18 34.8**	**-0.2**
	baz=202						
PB08	**IPOC Station P**	**94.38**	**117**	IAMs_20	IAMs_20	16 52 50.4	
	comp=Z,9µm,20.0s						
HWUT	**Hardware Ranch**	**94.46**	**43**	IAMs_20	IAMs_20	16 56 30.4	
	comp=Z,11µm,19.0s						
AP01	**Chacalluta**	**94.47**	**114**	IAMs_20	IAMs_20	16 53 26.9	
	comp=Z,7µm,20.0s						
L18K	**Granite Mounta**	**94.55**	**10**	P	**P**	**16 18 36.8**	**+0.8**
	baz=198,SNR=11						
M19K	**Big River Lodg**	**94.60**	**11**	IAMs_20	IAMs_20	17 02 03.5	
	comp=Z,7µm,20.0s						
M19K	**Big River Lodg**	**94.60**	**11**	P	**P**	**16 18 36.4**	**+0.2**
	baz=200						
KMI	**Kunming**	**94.60**	**296**	⇑P	**P**	**16 18 37.8**	**+0.3**
KMI				SS	SS	16 36 13.8	-0.1
KMI				pmax	pmax		
	comp=Z,16nm,1.4s						
KMI				pmax	pmax		
	comp=Z,710nm,8.4s						
KMI				LR	LR		
	comp=Z,1µm,18.1s						
KMI				LR	LR		
	comp=Z,1µm,17.5s						
KMI				LR	LR		
	comp=Z,2µm,24.7s						
GO01	**Chusmiza**	**94.62**	**116**	IAMs_20	IAMs_20	16 52 45.8	
	comp=Z,7µm,20.0s						
HEH	**HeiHe**	**94.62**	**328**	*e*P	**P**	**16 18 36.1**	**-0.5**
HEH				pP	**pwP**	**16 18 47.4**	**+0.2**
HEH				SKS	**SKSac**	**16 29 11.0**	**0.0**
HEH				pmax	pmax		
	comp=Z,23nm,1.3s						
HEH				LR	LR		
	comp=Z,4µm,19.7s						
HEH				LR	LR		
	comp=Z,3µm,19.8s						
HEH				LR	LR		
	comp=Z,8µm,20.3s						
V35K	**Ketchikan**	**94.66**	**24**	IAMs_20	IAMs_20	16 57 57.2	
	comp=Z,6µm,19.0s						
V35K	**Ketchikan**	**94.66**	**24**	P	**P**	**16 18 36.5**	**-0.1**
	baz=218						
RC01	**Rabbit Creek A**	**94.66**	**13**	P	**P**	**16 18 36.5**	**0.0**
	baz=204						
HIN	**Hinchinbrook I**	**94.70**	**15**	IAMs_20	IAMs_20	16 58 44.5	
	comp=Z,9µm,19.0s						
GAMB	**Gambell**	**94.73**	**3**	IAMs_20	IAMs_20	17 00 32.0	
	comp=Z,6µm,19.0s						
GAMB	**Gambell**	**94.73**	**3**	P	**P**	**16 18 37.2**	**+0.5**
	baz=185						
PWL	**Port Wells**	**94.73**	**14**	IAmb	IAmb	16 18 40.8	
	comp=Z,31nm,1.1s						
PWL				IAMs_20	IAMs_20	16 59 20.2	
	comp=Z,8µm,19.0s						
PWL	**Port Wells**	**94.73**	**14**	P	**P**	**16 18 37.3**	**+0.4**
	baz=205,SNR=9.4						
TIY	**Taiyuan**	**94.74**	**312**	*e*P	**P**	**16 18 38.8**	**+1.2**
TIY				pP	**pP**	**16 18 41.4**	**+0.3**
TIY				sP	**pwP**	**16 18 46.4**	**-1.8**
TIY				PP	**PP**	**16 22 30.8**	**+4.2**
TIY				S	**S**	**16 29 48.0**	**-2.5**
TIY				pmax	pmax		
	comp=Z,23nm,0.8s						
TIY				pmax	pmax		
	comp=Z,870nm,8.2s						
TIY				LR	LR		
	comp=Z,2µm,20.6s						
TIY				LR	LR		
	comp=Z,3µm,20.6s						
TIY				LR	LR		
	comp=Z,3µm,19.9s						
KAIM	**Kayak Island**	**94.75**	**16**	IAMs_20	IAMs_20	16 58 49.1	
	comp=Z,11µm,19.0s						
KAIM	**Kayak Island**	**94.75**	**16**	P	**P**	**16 18 36.9**	**0.0**
	baz=208						
U33K	**Whale Pass**	**94.76**	**23**	P	**P**	**16 18 37.8**	**+0.7**
	baz=217						
M20K	**Styx River**	**94.78**	**11**	IAMs_20	IAMs_20	17 04 58.6	
	comp=Z,6µm,19.0s						
M20K	**Styx River**	**94.78**	**11**	P	**P**	**16 18 37.4**	**+0.2**
	baz=201						
L19K	**White Mountain**	**94.79**	**10**	IAmb	IAmb	16 18 42.0	
	comp=Z,50nm,1.4s						
L19K				IAMs_20	IAMs_20	17 02 08.0	
	comp=Z,7µm,19.0s						
L19K	**White Mountain**	**94.79**	**10**	P	**P**	**16 18 37.6**	**+0.5**
	baz=199,SNR=16						
K17K	**Iditarod**	**94.81**	**9**	P	**P**	**16 18 37.7**	**+0.6**
	baz=196						
SIT	**Sitka**	**94.81**	**22**	P	**P**	**16 18 37.7**	**+0.4**
	baz=215						
SUA	**Susitna One**	**94.81**	**12**	IAMs_20	IAMs_20	17 04 17.9	
	comp=Z,10µm,18.0s						
SUA	**Susitna One**	**94.81**	**12**	P	**P**	**16 18 37.3**	**-0.1**
	baz=203						
XAN	**Xi'an**	**94.97**	**307**	⇑P	**P**	**16 18 38.6**	**-0.1**
XAN				PP	**PP**	**16 22 27.3**	**-1.0**
XAN				SKS	**SKSac**	**16 29 10.3**	**-3.5**
XAN				S	**ScS**	**16 29 53.3**	**-0.3**
XAN				pmax	pmax		
	comp=Z,22nm,1.4s						
XAN				pmax	pmax		
	comp=Z,1µm,9.6s						
XAN				LR	LR		
	comp=Z,4µm,18.6s						
XAN				LR	LR		
	comp=Z,4µm,18.7s						
XAN				LR	LR		
	comp=Z,8µm,18.7s						
EYAK	**Cordova Ski Ar**	**95.00**	**15**	IAmb	IAmb	16 18 43.5	
	comp=Z,34nm,1.3s						
EYAK				IAMs_20	IAMs_20	17 06 15.5	
	comp=Z,10µm,18.0s						
EYAK	**Cordova Ski Ar**	**95.00**	**15**	P	**P**	**16 18 38.7**	**+0.6**
EYAK	**Cordova Ski Ar**	**95.00**	**15**	P	**P**	**16 18 37.5**	**-0.6**
	baz=207						
GLI	**Glacier Island**	**95.01**	**14**	IAmb	IAmb	16 18 43.2	
	comp=Z,39nm,1.0s						
GLI				IAMs_20	IAMs_20	16 59 06.6	
	comp=Z,8µm,20.0s						
GLI	**Glacier Island**	**95.01**	**14**	P	**P**	**16 18 38.0**	**-0.2**
	baz=206,SNR=9.0						
FID	**Port Fidalgo**	**95.02**	**15**	IAmb	IAmb	16 18 43.3	
	comp=Z,30nm,1.2s						
FID				IAMs_20	IAMs_20	16 59 03.8	
	comp=Z,9µm,19.0s						
SUCK	**Suckling Hills**	**95.03**	**16**	IAMs_20	IAMs_20	16 58 39.5	
	comp=Z,10µm,20.0s						
J16K	**Anvik River**	**95.08**	**8**	IAMs_20	IAMs_20	17 02 46.5	
	comp=Z,7µm,19.0s						
J16K	**Anvik River**	**95.08**	**8**	P	**P**	**16 18 37.7**	**-0.7**
	baz=194						
PB16	**IPOC Station P**	**95.14**	**115**	IAMs_20	IAMs_20	16 53 58.6	
	comp=Z,8µm,20.0s						
SKT	**Skwentna**	**95.15**	**12**	IAMs_20	IAMs_20	17 04 51.8	
	comp=Z,8µm,19.0s						
SKT	**Skwentna**	**95.15**	**12**	P	**P**	**16 18 39.4**	**+0.6**
	baz=202						
M22K	**Willow**	**95.20**	**13**	IAmb	IAmb	16 19 08.6	
	comp=Z,30nm,0.6s						
M22K				IAMs_20	IAMs_20	17 04 30.1	
	comp=Z,9µm,18.0s						
M22K	**Willow**	**95.20**	**13**	P	**P**	**16 18 39.6**	**+0.7**
	baz=203						
KNK	**Knik Glacier**	**95.21**	**14**	IAMs_20	IAMs_20	17 04 19.5	
	comp=Z,6µm,18.0s						
KNK	**Knik Glacier**	**95.21**	**14**	P	**P**	**16 18 39.4**	**+0.4**
	baz=205						
L20K	**Farewell, AK**	**95.22**	**11**	P	**P**	**16 18 39.5**	**+0.4**
	baz=200						
PMR	**Palmer**	**95.24**	**13**	P	**P**	**16 18 39.7**	**+0.6**
	baz=204						
BERG	**Berg Lake**	**95.34**	**16**	IAmb	IAmb	16 18 47.0	
	comp=Z,76nm,1.7s						
BERG				IAMs_20	IAMs_20	16 59 08.5	
	comp=Z,11µm,19.0s						
J17K	**VABM Dome**	**95.37**	**8**	IAmb	IAmb	16 19 05.5	
	comp=Z,73nm,1.9s						
J17K				IAMs_20	IAMs_20	17 01 16.2	
	comp=Z,7µm,19.0s						
J17K	**VABM Dome**	**95.37**	**8**	P	**P**	**16 18 40.6**	**+0.9**
	baz=196						
S32K	**Killisnoo**	**95.38**	**22**	P	**P**	**16 18 41.5**	**+1.6**
	baz=216						
GHO	**Glory Hole Cre**	**95.45**	**13**	IAmb	IAmb	16 18 45.4	
	comp=Z,22nm,0.9s						
GHO				IAMs_20	IAMs_20	17 04 02.6	
	comp=Z,7µm,19.0s						
AHID	**Auburn Hatcher**	**95.45**	**43**	IAmb	IAmb	16 18 47.1	
	comp=Z,39nm,1.2s						
AHID				IAMs_20	IAMs_20	17 01 47.4	
	comp=Z,11µm,18.0s						
DIV	**Divide**	**95.52**	**15**	IAmb	IAmb	16 18 58.5	
	comp=Z,39nm,1.4s						
MESA	**MESA**	**95.58**	**17**	IAMs_20	IAMs_20	16 58 43.8	
	comp=Z,9µm,20.0s						
MESA	**MESA**	**95.58**	**17**	P	**P**	**16 18 41.9**	**+0.9**
	baz=210						
PB18	**Visviri**	**95.58**	**114**	IAMs_20	IAMs_20	16 54 32.5	
	comp=Z,8µm,19.0s						
WAX	**Waxell Ridge**	**95.59**	**16**	IAMs_20	IAMs_20	16 58 36.1	
	comp=Z,10µm,20.0s						
SML	**Sawmill**	**95.59**	**13**	P	**P**	**16 18 42.3**	**+1.4**
	baz=205						
MSTX	**Muleshoe**	**95.62**	**54**	IAMs_20	IAMs_20	16 57 51.8	
	comp=Z,9µm,19.0s						
BMRM	**Bremner River**	**95.63**	**15**	IAMs_20	IAMs_20	16 59 40.3	
	comp=Z,9µm,19.0s						
BMRM	**Bremner River**	**95.63**	**15**	P	**P**	**16 18 42.3**	**+1.3**
	baz=208,SNR=7.2						
I17K	**Unalakleet**	**95.65**	**7**	IAMs_20	IAMs_20	17 01 17.7	
	comp=Z,8µm,20.0s						
I17K	**Unalakleet**	**95.65**	**7**	P	**P**	**16 18 42.2**	**+1.2**
	baz=194						
KVTX	**Kingsville**	**95.66**	**61**	IAMs_20	IAMs_20	17 00 22.5	
	comp=Z,7µm,18.0s						
U35K	**Hyder**	**95.68**	**25**	IAMs_20	IAMs_20	16 58 20.3	
	comp=Z,8µm,19.0s						
M23K	**Glacier View**	**95.70**	**14**	P	**P**	**16 18 43.0**	**+1.7**
	baz=205						
NEW	**Newport**	**95.71**	**36**	LR	LR	16 55 12.7	
	comp=Z,13µm,20.0s,baz=222,slow=31						
J18K	**Innoko River**	**95.74**	**9**	P	**P**	**16 18 43.1**	**+1.7**
	baz=198,SNR=11						
CUT	**Chulitna**	**95.77**	**12**	IAMs_20	IAMs_20	16 59 57.3	
	comp=Z,10µm,19.0s						
CUT	**Chulitna**	**95.77**	**12**	P	**P**	**16 18 43.2**	**+1.7**
	baz=203						
YAH	**Yahtse**	**95.79**	**17**	IAMs_20	IAMs_20	16 58 51.3	
	comp=Z,9µm,20.0s						
CRQM	**Cirque**	**95.79**	**16**	IAMs_20	IAMs_20	16 59 12.6	

	comp=Z,10µm,20.0s						
CRQE	Cirque	95.80	16	P	P	16 18 43.5	+1.6
	baz=209						
PNL	Peninsula	95.80	18	P	P	16 18 43.4	+1.5
	baz=212						
KLU	Klutina	95.81	15	IAMs_20	IAMs_20	16 59 30.8	
	comp=Z,7µm,20.0s						
KLU	Klutina	95.81	15	P	P	16 18 42.8	+0.9
	baz=207						
SCM	Sheep Creek Mo	95.82	14	P	P	16 18 43.6	+1.7
	baz=206,SNR=9.4						
ISLE	Juniper Island	95.85	17	IAMs_20	IAMs_20	16 58 44.0	
	comp=Z,9µm,20.0s						
TGL	Tana Glacier	95.86	16	IAMs_20	IAMs_20	16 59 14.4	
	comp=Z,9µm,20.0s						
ANM	Nome	95.88	5	IAMs_20	IAMs_20	17 01 32.6	
	comp=Z,7µm,19.0s						
PPLA	Purkeypile	95.89	11	IAMs_20	IAMs_20	17 02 37.3	
	comp=Z,7µm,19.0s						
PPLA	Purkeypile	95.89	11	P	P	16 18 43.5	+1.2
	baz=202						
SDCO	Great Sand Dun	95.92	49	IAMs_20	IAMs_20	16 59 43.4	
	comp=Z,7µm,18.0s						
PCA	Pinnacle	95.94	18	IAMs_20	IAMs_20	16 58 25.5	
	comp=Z,9µm,20.0s						
PINM	Pinnacle	95.94	18	P	P	16 18 43.3	+0.8
	baz=212						
BCPM	Bancas Point	95.98	18	IAMs_20	IAMs_20	16 58 05.6	
	comp=Z,8µm,20.0s						
TPAW	Teton Pass	95.98	42	IAmb	IAmb	16 18 49.0	
	comp=Z,28nm,1.2s						
TPAW				IAMs_20	IAMs_20	17 02 04.3	
	comp=Z,11µm,18.0s						
TABL	Table Mountain	96.00	17	IAMs_20	IAMs_20	16 58 49.2	
	comp=Z,8µm,20.0s						
K20K	Telida	96.02	10	P	P	16 18 43.4	+0.7
	baz=200						
FXWY	Fox Creek	96.03	42	IAmb	IAmb	16 18 49.2	
	comp=Z,28nm,1.4s						
FXWY				IAMs_20	IAMs_20	16 57 37.6	
	comp=Z,10µm,19.0s						
R32K	Eaglecrest	96.05	21	P	P	16 18 44.2	+1.2
	baz=216						
SNOW	Snow King Moun	96.08	42	IAmb	IAmb	16 18 49.3	
	comp=Z,61nm,1.3s						
PZH	PanZhiHua	96.09	297	P	P	16 18 44.3	+0.2
PZH				PP	PP	16 22 38.0	+0.7
PZH				SKS	SKSac	16 29 20.8	+0.5
PZH				S	ScS	16 30 06.3	+2.8
PZH				SS	SS	16 36 37.0	+2.1
PZH				pmax	pmax		
	comp=Z,10.0nm,1.6s						
PZH				pmax	pmax		
	comp=Z,420nm,8.7s						
PZH				LR	LR		
	comp=Z,25µm,20.8s						
PZH				LR	LR		
	comp=Z,2µm,19.6s						
GRNC	Granite Creek	96.10	17	IAMs_20	IAMs_20	16 59 00.8	
	comp=Z,9µm,19.0s						
VRDI	Verde Repeater	96.13	16	IAMs_20	IAMs_20	16 59 45.4	
	comp=Z,9µm,19.0s						
N25K	Chitina, Valde	96.20	15	P	P	16 18 45.2	+1.5
	baz=208						
DLMT	Dillon	96.21	40	IAmb	IAmb	16 18 50.5	
	comp=Z,31nm,1.1s						
DLMT				IAMs_20	IAMs_20	16 57 45.4	
	comp=Z,11µm,19.0s						
P29M	Windy Craggy	96.22	19	P	P	16 18 45.2	+1.4
	baz=214						
GLB	Gilahina Butte	96.23	16	IAMs_20	IAMs_20	16 59 49.2	
	comp=Z,7µm,19.0s						
XLT	XiLinHaoTe	96.24	318	*e*P	P	16 18 43.3	-1.0
XLT				sP	sP	16 18 51.3	+2.3
XLT				SKS	SKSac	16 29 19.0	-1.2
XLT				SS	SS	16 36 32.6	-3.7
XLT				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XLT				pmax	pmax		
	comp=Z,510nm,8.1s						
XLT				LR	LR		
	comp=Z,2µm,17.9s						
XLT				LR	LR		
	comp=Z,3µm,20.4s						
LOHW	Long Hollow	96.25	42	IAmb	IAmb	16 18 50.7	
	comp=Z,40nm,1.6s						
LOHW				IAMs_20	IAMs_20	17 02 22.5	
	comp=Z,12µm,18.0s						
M24K	Tolsona, Glenn	96.31	14	IAmb	IAmb	16 18 51.9	
	comp=Z,32nm,1.2s						
M24K				IAMs_20	IAMs_20	16 59 58.0	
	comp=Z,7µm,19.0s						
M24K	Tolsona, Glenn	96.31	14	P	P	16 18 45.9	+1.7
	baz=207						
BW06	Boulder Array	96.35	43	IAMs_20	IAMs_20	16 58 09.3	
	comp=Z,10µm,19.0s						
BW06	Boulder Array	96.35	43	⇓P	P	16 18 46.2	+1.2
PDAR	Pinedale Array	96.35	43	P	P	16 18 44.5	-0.5
PDAR	Pinedale Array	96.35	43	P	P	16 18 45.6	+0.6
	comp=Z,7.4nm,1.1s,baz=204,slow=3.3,SNR=21						
PDAR				PKKP	PKKPdf	16 35 33.6	+0.4
	comp=Z,2.0nm,0.7s,baz=83,slow=4.0,SNR=10						
PDAR				LR	LR	16 58 01.9	
	comp=Z,6µm,18.5s,baz=228,slow=33						
	comp=Z,7.4nm,1.1s						
MCARA	McCarthy VSAT	96.37	16	IAMs_20	IAMs_20	16 59 32.7	
	comp=Z,7µm,19.0s						
MCARA	McCarthy VSAT	96.37	16	P	P	16 18 46.1	+1.8
	baz=209						
LOGN	Logan Glacier	96.37	17	IAMs_20	IAMs_20	16 59 09.9	
	comp=Z,8µm,20.0s						
J19K	Poorman	96.39	9	P	P	16 18 45.9	+1.5
	baz=199						
CAST	Castle Rocks	96.40	11	IAMs_20	IAMs_20	17 03 10.6	
	comp=Z,7µm,19.0s						
CAST	Castle Rocks	96.40	11	P	P	16 18 44.3	-0.1
	baz=202,SNR=13						
CTGM	Chitina Glacie	96.41	17	IAMs_20	IAMs_20	16 59 20.9	
	comp=Z,7µm,20.0s						
G15K	Niukluk	96.41	6	P	P	16 18 45.6	+1.2
	baz=192						
WAT6	Susitna Watana	96.42	13	P	P	16 18 45.5	+0.8
	baz=205,SNR=17						
T35M	Bob Quinn	96.43	24	IAMs_20	IAMs_20	16 59 11.0	
	comp=Z,7µm,19.0s						
T35M	Bob Quinn	96.43	24	P	P	16 18 46.3	+1.6
	baz=219						
PLBC	Pleasant Camp	96.47	20	P	P	16 18 45.8	+1.0
	baz=215						
WAT1	Susitna Watana	96.48	13	P	P	16 18 45.6	+0.8
	baz=205						
O28M	Mount Upton	96.53	17	IAMs_20	IAMs_20	16 59 05.2	
	comp=Z,8µm,20.0s						
O28M	Mount Upton	96.53	17	P	P	16 18 46.3	+0.9
	baz=212						
O29M	Mount Kennedy	96.56	18	IAMs_20	IAMs_20	17 01 49.9	
	comp=Z,6µm,19.0s						
O29M	Mount Kennedy	96.56	18	P	P	16 18 46.2	+0.8
	baz=213						
YHB	Horse Butte	96.61	41	IAMs_20	IAMs_20	16 59 45.1	
	comp=Z,8µm,18.0s						
YHL	Hebgen Lake	96.68	41	IAmb	IAmb	16 18 53.5	
	comp=Z,54nm,1.4s						
YHL				IAMs_20	IAMs_20	16 56 24.9	
	comp=Z,7µm,20.0s						
TNA	Tin City	96.69	4	P	P	16 18 46.4	+0.7
	baz=188						
F14K	Arctic Creek	96.71	5	P	P	16 18 46.9	+1.2
	baz=190						
KTH	Kantishna Hill	96.72	12	IAMs_20	IAMs_20	17 06 01.1	
	comp=Z,10µm,18.0s						
TRF	Thorofare Moun	96.73	12	IAmb	IAmb	16 18 58.7	
	comp=Z,33nm,1.2s						
TRF				IAMs_20	IAMs_20	17 00 38.6	
	comp=Z,11µm,19.0s						
TRF	Thorofare Moun	96.73	12	P	P	16 18 46.6	+0.5
	baz=203,SNR=11						
H17K	Granite Mounta	96.76	7	IAMs_20	IAMs_20	17 03 58.0	
	comp=Z,7µm,19.0s						
H17K	Granite Mounta	96.76	7	P	P	16 18 47.2	+1.1
	baz=195						
J20K	Nowinta River	96.78	10	P	P	16 18 47.2	+1.0
	baz=200						
CHUM	Lake Minchumin	96.79	11	P	P	16 18 48.4	+2.2
	baz=202						
SEY	Seymchan	96.83	347	LR	LR	16 59 37.6	
	comp=Z,5µm,19.4s,baz=158,slow=34						
SEY	Seymchan	96.83	347	*ce*P	P	16 18 44.9	-1.5
SEY				pmax	pmax		
	comp=Z,23nm,1.5s						
Q24A	Divide	96.84	48	IAMs_20	IAMs_20	16 58 49.7	
	comp=Z,11µm,18.0s						
P30M	Million Dollar	96.85	19	P	P	16 18 48.0	+1.3
	baz=214						
S34M	Telegraph Cree	96.86	23	P	P	16 18 48.6	+2.0
	baz=219						
AMTX	Amarillo	96.88	53	IAMs_20	IAMs_20	16 58 41.0	
	comp=Z,10µm,19.0s						
YNM	Yellowstone No	96.88	41	IAMs_20	IAMs_20	16 58 34.0	
	comp=Z,10µm,19.0s						
YNR	Norris Junctio	96.88	41	IAMs_20	IAMs_20	16 58 25.2	
	comp=Z,9µm,19.0s						
CD2	Chengdu	96.91	302	P	P	16 18 47.9	+0.3
CD2				PP	PP	16 22 43.8	+0.3
CD2				SKS	SKSac	16 29 23.9	-0.3
CD2				S	ScS	16 30 09.8	-0.1
CD2				sS	sS	16 30 18.3	+3.0
CD2				SS	SS	16 36 46.6	+0.4
CD2				pmax	pmax		
	comp=Z,860nm,9.9s						
CD2				LR	LR		
	comp=Z,3µm,19.4s						
CD2				LR	LR		
	comp=Z,3µm,18.9s						
CD2				LR	LR		
	comp=Z,3µm,18.0s						
DHY	Denali Highway	96.94	13	IAMs_20	IAMs_20	17 04 30.1	
	comp=Z,6µm,18.0s						
DHY	Denali Highway	96.94	13	P	P	16 18 49.0	+1.9
	baz=206						
RND	Reindeer	96.95	13	IAmb	IAmb	16 18 51.5	
	comp=Z,35nm,1.2s						
RND				IAMs_20	IAMs_20	17 05 23.4	
	comp=Z,9µm,18.0s						
G16K	Koyuk River	96.96	6	IAMs_20	IAMs_20	17 00 31.6	
	comp=Z,7µm,20.0s						
F15K	North Star Dit	97.07	5	IAMs_20	IAMs_20	17 02 09.9	
	comp=Z,8µm,19.0s						
F15K	North Star Dit	97.07	5	P	Pdif	16 18 49.3	+1.8
	baz=191						
YUK8	Steele Glacier	97.08	17	P	Pdif	16 18 49.0	+1.0
	baz=212						
HHC	Hu-ho-hao-te	97.12	314	*e*P	Pdif	16 18 50.3	+1.8
HHC				sP	pwP	16 18 56.6	-2.4
HHC				SKS	SKSac	16 29 26.6	+1.7
HHC				S	ScS	16 30 12.4	+1.1
HHC				sS	sS	16 30 17.8	+1.1
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				pmax	pmax		
	comp=Z,370nm,4.4s						
HHC				LR	LR		
	comp=Z,790nm,15.3s						
HHC				LR	LR		
	comp=Z,2µm,16.8s						
HHC				LR	LR		
	comp=Z,3µm,16.0s						
H18K	Honhosa River	97.15	8	IAMs_20	IAMs_20	17 03 49.9	
	comp=Z,8µm,20.0s						
ZEA	Zeya	97.15	331	*e*P	Pdif	16 18 48.5	+0.4
ZEA				*e*		16 29 26.2	
ZEA				*e*S	S	16 30 10.5	+0.1
ZEA				*e*		16 31 27.9	
ZEA				pmax	pmax		
	comp=N,10.0nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,200nm,7.8s						
ZEA				smax	smax		
	comp=E,1µm,14.4s						
ZEA				smax	smax		
	comp=N,1µm,14.8s						
YUK6	Outpost Mounta	97.16	18	P	Pdif	16 18 49.5	+1.2
	baz=213						
BPAW	Bear Paw Mtn.	97.21	11	IAMs_20	IAMs_20	17 06 27.2	
	comp=Z,8µm,18.0s						
BPAW	Bear Paw Mtn.	97.21	11	P	Pdif	16 18 49.2	+1.0
	baz=203						
PAX	Paxson	97.23	14	P	Pdif	16 18 48.7	+0.3
	baz=207						
G17K	Kiwalik Mounta	97.23	7	P	Pdif	16 18 49.2	+0.9
	baz=194						
MCK	McKinley	97.24	12	IAmb	IAmb	16 18 52.6	
	comp=Z,20nm,1.0s						
MCK				IAMs_20	IAMs_20	17 00 33.9	
	comp=Z,9µm,19.0s						
MCK	McKinley	97.24	12	P	Pdif	16 18 49.4	+1.1
	baz=204,SNR=5.5						
M26K	Nabesna, AK	97.26	15	IAMs_20	IAMs_20	17 00 15.4	
	comp=Z,8µm,19.0s						
M26K	Nabesna, AK	97.26	15	P	Pdif	16 18 50.3	+1.7
	baz=209						
HYT	Haines Junctio	97.29	18	P	Pdif	16 18 50.5	+1.7
	baz=214						
I20K	Naaghedeneel	97.32	10	IAMs_20	IAMs_20	17 00 14.9	
	comp=Z,6µm,20.0s						
I20K	Naaghedeneel	97.32	10	P	Pdif	16 18 50.2	+1.7
	baz=200						
YUK3	Moose Creek	97.32	17	P	Pdif	16 18 50.5	+1.5
	baz=211						
JTS	Las Juntas de	97.35	82	LR	LR	16 53 45.1	
	comp=Z,4µm,20.2s,baz=228,slow=30						
LPAZ	La Paz	97.39	114	P	Pdif	16 18 52.6	+1.6
	comp=Z,1.3nm,0.6s,baz=236,slow=4.1,SNR=7.3						
LPAZ				LR	LR	16 55 53.2	
	comp=Z,3µm,18.8s,baz=214,slow=31						
	comp=Z,1.3nm,0.6s						
LPAZ	La Paz	97.39	114	*e*P	Pdif	16 18 54.3	+3.3
YUK4	Talbot Arm	97.42	18	P	Pdif	16 18 50.8	+1.4
	baz=213						
YNE	Yellowstone No	97.44	41	IAmb	IAmb	16 18 56.5	
	comp=Z,32nm,1.3s						
M27K	Edge Creek, AK	97.48	16	IAmb	IAmb	16 18 56.2	
	comp=Z,35nm,1.4s						
M27K				IAMs_20	IAMs_20	17 00 29.2	
	comp=Z,8µm,19.0s						
M27K	Edge Creek, AK	97.48	16	P	Pdif	16 18 51.5	+1.8
	baz=210,SNR=19						
BWN	Browne	97.54	12	IAMs_20	IAMs_20	17 00 54.8	
	comp=Z,13µm,20.0s						
O30N	Mendenhall	97.63	19	P	Pdif	16 18 51.1	+0.9
	baz=215						
L26K	Log Cabin Wild	97.73	15	IAMs_20	IAMs_20	17 00 52.7	
	comp=Z,8µm,19.0s						
L26K	Log Cabin Wild	97.73	15	P	Pdif	16 18 51.8	+1.2
	baz=209						
H19K	Roundabout Mou	97.75	9	P	Pdif	16 18 51.6	+1.1
	baz=198						
BVCY	Beaver Creek	97.78	16	P	Pdif	16 18 52.1	+1.3
	baz=211						
OTAV	Otavalo	97.81	94	IAMs_20	IAMs_20	16 57 27.4	
	comp=Z,6µm,18.0s						
TNCH	TengChong	97.82	294	P	Pdif	16 18 52.4	+0.3
TNCH				PP	PP	16 22 49.8	-0.9
TNCH				SKS	SKSac	16 29 28.6	-0.8
TNCH				S	S	16 30 15.8	-2.1
TNCH				SS	SS	16 37 01.0	+1.5
TNCH				pmax	pmax		
	comp=Z,12nm,1.0s						
TNCH				LR	LR		
	comp=Z,2µm,18.1s						
TNCH				LR	LR		
	comp=Z,2µm,18.4s						
TNCH				LR	LR		
	comp=Z,4µm,18.9s						
BOAB	BOACO BROADBAN	97.82	80	IAMs_20	IAMs_20	16 53 48.6	
	comp=Z,10µm,20.0s						
G18K	Tagagawik	97.83	8	IAMs_20	IAMs_20	17 02 35.2	
	comp=Z,7µm,20.0s						
G18K	Tagagawik	97.83	8	P	Pdif	16 18 52.4	+1.5
	baz=196						
PLTB	Pedras Altas	97.86	134	IAMs_20	IAMs_20	16 59 10.2	
	comp=Z,9µm,19.0s						
WHY	Whitehorse	97.89	20	P	Pdif	16 18 52.8	+1.4
	baz=216						
K24K	Donnelly Dome	97.91	14	IAmb	IAmb	16 18 55.5	
	comp=Z,28nm,1.2s						
K24K				IAMs_20	IAMs_20	17 01 02.3	
	comp=Z,8µm,19.0s						
K24K	Donnelly Dome	97.91	14	P	Pdif	16 18 52.7	+1.3
	baz=207						
H20K	Anotleneega Mo	97.92	9	P	Pdif	16 18 52.7	+1.4
	baz=200						
N30M	Aishikik Lake	97.93	18	IAMs_20	IAMs_20	16 59 29.7	
	comp=Z,7µm,20.0s						
RLMT	Red Lodge	97.93	42	IAMs_20	IAMs_20	16 58 40.9	
	comp=Z,10µm,19.0s						
BTO	Baotou	97.94	313	*e*P	Pdif	16 18 54.4	+2.2
BTO				pP	sP	16 18 59.3	+2.5
BTO				sP	pwP	16 19 01.4	-1.3
BTO				S	S	16 30 19.1	+1.1
BTO				sS	sS	16 30 27.8	+4.0
BTO				pmax	pmax		
	comp=Z,20nm,0.9s						
BTO				pmax	pmax		
	comp=Z,2µm,11.2s						
BTO				LR	LR		
	comp=Z,5µm,19.1s						
BTO				LR	LR		
	comp=Z,5µm,19.2s						
BTO				LR	LR		
	comp=Z,9µm,22.2s						
NEA2	Nenana	98.00	12	IAMs_20	IAMs_20	17 01 27.1	
	comp=Z,10µm,19.0s						
NEA2	Nenana	98.00	12	P	Pdif	16 18 53.2	+1.5
	baz=204						
RIDG	Independent Ri	98.04	14	IAMs_20	IAMs_20	17 00 54.8	
	comp=Z,8µm,19.0s						
RIDG	Independent Ri	98.04	14	P	Pdif	16 18 53.1	+1.2
	baz=208,SNR=9.2						
WRH	Wood River Hil	98.07	12	IAmb	IAmb	16 18 55.0	
	comp=Z,16nm,1.0s						
WRH				IAMs_20	IAMs_20	17 01 08.8	
	comp=Z,7µm,19.0s						
R33M	Jennings River	98.07	22	P	Pdif	16 18 53.2	+0.9
	baz=219						
F17K	Baldwin Pennin	98.09	6	IAMs_20	IAMs_20	17 04 41.5	
	comp=Z,6µm,19.0s						
K22A	Casper	98.09	45	IAmb	IAmb	16 18 57.8	
	comp=Z,22nm,1.2s						
L27K	Beaver Creek,	98.11	16	IAMs_20	IAMs_20	17 00 40.7	
	comp=Z,7µm,19.0s						
L27K	Beaver Creek,	98.11	16	P	Pdif	16 18 53.4	+1.2
	baz=210						
MLY	Manley	98.12	11	IAMs_20	IAMs_20	17 08 39.1	
	comp=Z,7µm,18.0s						
MLY	Manley	98.12	11	P	Pdif	16 18 53.3	+1.1
	baz=203						
BCAR	Beaver Creek A	98.12	16	P	Pdif	16 18 52.8	+0.5
DOT	Dot Lake	98.13	14	IAMs_20	IAMs_20	17 01 25.0	
	comp=Z,6µm,19.0s						
P33M	Teslin, Yukon	98.13	21	P	Pdif	16 18 53.3	+0.8
	baz=218						
HDA	Harding Lake	98.22	13	P	Pdif	16 18 53.8	+1.1
	baz=206						
G19K	Purcell Mounta	98.25	8	IAMs_20	IAMs_20	17 04 24.5	
	comp=Z,7µm,20.0s						
G19K	Purcell Mounta	98.25	8	P	Pdif	16 18 54.2	+1.4
	baz=198						
CCB	Clear Creek Bu	98.28	12	IAMs_20	IAMs_20	17 01 25.4	
	comp=Z,8µm,19.0s						
N31M	Braeburn, Yuko	98.31	19	P	Pdif	16 18 54.6	+1.5
	baz=215						
H21K	Melozitna Rive	98.38	10	P	Pdif	16 18 54.9	+1.6
	baz=201						
M29M	Somme Creek	98.39	17	IAMs_20	IAMs_20	17 00 26.3	
	comp=Z,10µm,20.0s						
M29M	Somme Creek	98.39	17	P	Pdif	16 18 54.9	+1.3
	baz=213						
F18K	Selawik	98.40	7	P	Pdif	16 18 54.9	+1.6
	baz=195						
SCRK	Sand Creek	98.43	14	IAMs_20	IAMs_20	17 01 16.1	
	comp=Z,6µm,19.0s						
SCRK	Sand Creek	98.43	14	P	Pdif	16 18 54.9	+1.1
	baz=209,SNR=12						
I23K	Minto, Yukon-K	98.46	12	IAMs_20	IAMs_20	17 06 55.1	
	comp=Z,12µm,19.0s						
I23K	Minto, Yukon-K	98.46	12	P	Pdif	16 18 55.3	+1.6
	baz=204						
COLA	College	98.48	12	IAMs_20	IAMs_20	17 01 21.6	
	comp=Z,10µm,19.0s						
COLA	College	98.48	12	P	Pdif	16 18 54.1	+0.4
COLA	College	98.48	12	*i* P	P	16 18 53.5	-0.2
COLA				pmax	pmax		
	comp=Z,16nm,1.1s						
KSCO	Kaye Shedlock’	98.50	49	IAMs_20	IAMs_20	17 00 12.7	
	comp=Z,6µm,18.0s						
IMAR	Indian Mountai	98.54	10	P	P	16 18 54.0	-0.1
ILAR	Eielson Array	98.56	13	P	P	16 18 53.3	-0.8
ILAR	Eielson Array	98.56	13	P	P	16 18 54.0	-0.2
	comp=Z,4.9nm,1.1s,baz=221,slow=5.4,SNR=18						
ILAR				PP	PP	16 22 51.8	-3.6
	comp=Z,1.7nm,0.9s,baz=210,slow=6.1,SNR=4.3						
ILAR				LR	LR	16 59 10.1	
	comp=Z,3µm,19.3s,baz=195,slow=33						
	comp=Z,4.9nm,1.1s						
ILAR	Eielson Array	98.56	13	P	P	16 18 53.3	-0.8
J25K	Salcha River,	98.71	13	P	Pdif	16 18 55.4	+0.4
	baz=208,SNR=14						
POKR	Poker Plat Res	98.77	12	IAMs_20	IAMs_20	17 01 21.5	
	comp=Z,9µm,20.0s						
POKR	Poker Plat Res	98.77	12	P	Pdif	16 18 56.4	+1.2
	baz=206						
N32M	Quiet Lake	98.81	20	IAMs_20	IAMs_20	17 00 03.6	
	comp=Z,7µm,20.0s						
WMOK	Wichita Mounta	98.81	55	IAMs_20	IAMs_20	16 59 29.4	
	comp=Z,8µm,18.0s						
H22K	Ishtalitna Cre	98.81	11	P	Pdif	16 18 55.6	+0.3
	baz=202						
F19K	Shaleruckik Mo	98.83	8	IAMs_20	IAMs_20	17 05 03.4	
	comp=Z,7µm,19.0s						
F19K	Shaleruckik Mo	98.83	8	P	Pdif	16 18 56.0	+0.7
	baz=197						
K27K	Chicken	98.89	15	IAMs_20	IAMs_20	17 01 19.3	
	comp=Z,9µm,19.0s						
K27K	Chicken	98.89	15	P	Pdif	16 18 55.9	+0.2
	baz=210						
J26L	Joseph Creek	98.98	14	IAmb	IAmb	16 19 02.0	
	comp=Z,20nm,1.1s						
J26L	Joseph Creek	98.98	14	P	Pdif	16 18 57.6	+1.4
	baz=209,SNR=30						
L29M	L29M	99.03	17	IAMs_20	IAMs_20	17 00 56.3	
	comp=Z,8µm,20.0s						
L29M	L29M	99.03	17	P	Pdif	16 18 57.6	+1.3
	baz=213						
H23K	Yukon River	99.05	11	IAMs_20	IAMs_20	17 08 42.7	
	comp=Z,9µm,18.0s						
H23K	Yukon River	99.05	11	P	Pdif	16 18 57.5	+1.1
	baz=204						
G21K	Allakaket	99.08	9	P	Pdif	16 18 57.1	+0.7
	baz=201						
E18K	Tukpahlearik C	99.10	7	P	Pdif	16 18 57.3	+0.8
	baz=195						
CPUP	Villa Florida	99.13	128	P	Pdif	16 19 00.6	+2.8
	comp=Z,2.3nm,1.0s,baz=275,slow=7.2,SNR=7.8						
CPUP				PKKPbc	PKKPbc	16 35 21.6	-0.6
	comp=Z,1.6nm,0.8s,baz=76,slow=1.8,SNR=7.9						
CPUP				LR	LR	16 59 14.6	
	comp=Z,2µm,18.1s,baz=89,slow=33						
	comp=Z,2.3nm,1.0s						
CPUP	Villa Florida	99.13	128	*e*P	Pdif	16 19 02.2	+4.4
D17K	Noatak River	99.15	5	P	Pdif	16 18 58.0	+1.3
	baz=192						
M31M	Drury Creek, Y	99.28	19	IAMs_20	IAMs_20	17 05 10.8	
	comp=Z,7µm,18.0s						
M31M	Drury Creek, Y	99.28	19	P	Pdif	16 18 58.8	+1.4
	baz=216						
F20K	Avaraart Lake	99.29	8	P	Pdif	16 18 58.6	+1.3
	baz=199						
H24K	Noodor Dome	99.34	12	IAMs_20	IAMs_20	17 02 08.6	
	comp=Z,9µm,19.0s						
PRP	Porcupine Dome	99.49	13	P	Pdif	16 18 58.6	+0.1
	baz=207,SNR=8.5						
E19K	Redstone River	99.50	8	IAMs_20	IAMs_20	17 05 23.9	
	comp=Z,6µm,19.0s						
E19K	Redstone River	99.50	8	P	Pdif	16 18 59.2	+0.9
	baz=198						
RDOG	Red Dog Mine	99.51	5	IAMs_20	IAMs_20	17 02 04.6	
	comp=Z,9µm,20.0s						
DAWY	Dawson	99.53	16	P	Pdif	16 19 00.2	+1.6
	baz=212						
C16K	Lisburne Hills	99.55	5	P	Pdif	16 18 59.4	+1.0
	baz=191						
LZH	Lanzhou	99.57	306	*e*P	Pdif	16 19 02.0	+2.4
LZH				sP	pwP	16 19 11.3	+1.1
LZH				SKS	SKSac	16 29 39.4	+1.7
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
LZH				pmax	pmax		
	comp=Z,520nm,5.5s						
LZH				LR	LR		
	comp=Z,2µm,19.9s						

LZH				LR	LR		
	comp=Z,3µm,19.6s						
LZH				LR	LR		
	comp=Z,4µm,19.2s						
TOAD	**Toad River Com**	**99.60**	**25**	P	**Pdif**	**16 19 00.5**	**+1.5**
	baz=223						
BILL	**Bilibino**	**99.65**	**354**	IAMs_20	IAMs_20	16 59 04.0	
	comp=Z,7µm,20.0s						
BILL	**Bilibino**	**99.65**	**354**	*i* P	**Pdif**	**16 18 58.8**	**-0.1**
BILL				pmax	pmax		
	comp=Z,10.0nm,1.3s						
F21K	**Alatna River**	**99.75**	**9**	IAMs_20	IAMs_20	17 08 28.0	
	comp=Z,6µm,18.0s						
F21K	**Alatna River**	**99.75**	**9**	P	**Pdif**	**16 19 00.8**	**+1.3**
	baz=201						
I26K	**Coal Creek Min**	**99.77**	**14**	IAMs_20	IAMs_20	17 05 41.6	
	comp=Z,6µm,19.0s						
I26K	**Coal Creek Min**	**99.77**	**14**	P	**Pdif**	**16 19 01.1**	**+1.5**
	baz=209,SNR=11						
G23K	**Bananza Creek**	**99.78**	**11**	IAMs_20	IAMs_20	17 08 00.1	
	comp=Z,9µm,18.0s						
G23K	**Bananza Creek**	**99.78**	**11**	P	**Pdif**	**16 19 02.0**	**+2.3**
	baz=204						
K29M	**Barlow Dome**	**99.80**	**17**	IAMs_20	IAMs_20	17 01 20.5	
	comp=Z,7µm,20.0s						
K29M	**Barlow Dome**	**99.80**	**17**	P	**Pdif**	**16 19 01.7**	**+1.8**
	baz=214						
C17K	**DeLong Mountai**	**99.91**	**5**	P	**Pdif**	**16 19 02.0**	**+1.9**
	baz=192						
H25L	**Birch Creek**	**100.10**	**12**	P	**Pdif**	**16 19 03.4**	**+2.4**
	baz=207						
J29N	**Klondike Camp**	**100.14**	**16**	IAMs_20	IAMs_20	17 01 53.4	
	comp=Z,7µm,19.0s						
G24K	**Hadweenzic Riv**	**100.20**	**12**	IAMs_20	IAMs_20	17 07 47.1	
	comp=Z,7µm,19.0s						
G24K	**Hadweenzic Riv**	**100.20**	**12**	P	**Pdif**	**16 19 02.5**	**+1.1**
	baz=206						
COLD	**Coldfoot**	**100.23**	**10**	IAMs_20	IAMs_20	17 03 36.9	
	comp=Z,7µm,19.0s						
COLD	**Coldfoot**	**100.23**	**10**	P	**Pdif**	**16 19 02.6**	**+1.0**
	baz=204						
C18K	**Utukok River**	**100.24**	**6**	IAMs_20	IAMs_20	17 02 47.9	
	comp=Z,11µm,19.0s						
C18K	**Utukok River**	**100.24**	**6**	P	**Pdif**	**16 19 02.4**	**+0.7**
	baz=194						
NATX	**Nacogdoches**	**100.24**	**59**	IAMs_20	IAMs_20	17 00 05.7	
	comp=Z,11µm,19.0s						
CROK	**Carrier**	**100.28**	**54**	IAMs_20	IAMs_20	17 00 49.3	
	comp=Z,9µm,18.0s						
OK029	**Liberty Lake**	**100.29**	**54**	IAMs_20	IAMs_20	17 01 12.4	
	comp=Z,9µm,19.0s						
I27K	**Kandik River**	**100.35**	**14**	P	**Pdif**	**16 19 03.1**	**+0.9**
	baz=211						
E20K	**Nigu River**	**100.38**	**8**	P	**Pdif**	**16 19 02.5**	**+0.2**
	baz=198						
D19K	**Kuna River**	**100.39**	**7**	IAMs_20	IAMs_20	17 06 07.5	
	comp=Z,9µm,19.0s						
D19K	**Kuna River**	**100.39**	**7**	P	**Pdif**	**16 19 02.8**	**+0.5**
	baz=197						
RSSD	**Black Hills**	**100.42**	**45**	P	**Pdif**	**16 19 04.0**	**+0.8**
FYU	**Fort Yukon**	**100.48**	**13**	IAMs_20	IAMs_20	17 02 31.6	
	comp=Z,6µm,19.0s						
MMPY	**Sheldon Lake,**	**100.50**	**20**	P	**Pdif**	**16 19 04.4**	**+1.5**
	baz=219						
LAO	**LASA Array**	**100.57**	**42**	IAMs_20	IAMs_20	17 02 11.8	
	comp=Z,6µm,19.0s						
I28M	**Miner Creek**	**100.58**	**15**	IAMs_20	IAMs_20	17 02 30.1	
	comp=Z,7µm,19.0s						
I28M	**Miner Creek**	**100.58**	**15**	P	**Pdif**	**16 19 04.9**	**+1.6**
	baz=212						
BEAVL	**Fort Liard**	**100.63**	**24**	P	**Pdif**	**16 19 05.2**	**+1.7**
	baz=224						
J30M	**Hart River**	**100.70**	**17**	IAMs_20	IAMs_20	17 02 00.3	
	comp=Z,8µm,20.0s						
J30M	**Hart River**	**100.70**	**17**	P	**Pdif**	**16 19 05.7**	**+1.8**
	baz=215						
D20K	**Etivluk River**	**100.77**	**8**	IAMs_20	IAMs_20	17 06 26.5	
	comp=Z,6µm,19.0s						
D20K	**Etivluk River**	**100.77**	**8**	P	**Pdif**	**16 19 04.6**	**+0.6**
	baz=198						
R32A	**Long Quarter,**	**100.78**	**52**	IAMs_20	IAMs_20	17 04 30.2	
	comp=Z,9µm,18.0s						
E21K	**Killik River**	**100.83**	**9**	IAMs_20	IAMs_20	17 02 47.6	
	comp=Z,7µm,20.0s						
E21K	**Killik River**	**100.83**	**9**	P	**Pdif**	**16 19 05.5**	**+1.3**
	baz=200						
E22K	**Anaktuvuk Pass**	**100.83**	**9**	IAMs_20	IAMs_20	17 08 53.7	
	comp=Z,5µm,18.0s						
E22K	**Anaktuvuk Pass**	**100.83**	**9**	P	**Pdif**	**16 19 05.8**	**+1.5**
	baz=202						
C19K	**Lookout Ridge**	**100.83**	**6**	IAMs_20	IAMs_20	17 08 02.6	
	comp=Z,8µm,19.0s						
C19K	**Lookout Ridge**	**100.83**	**6**	P	**Pdif**	**16 19 05.4**	**+1.2**
	baz=196						
OK052	**Battle Ridge R**	**100.84**	**55**	IAMs_20	IAMs_20	17 01 30.2	
	comp=Z,11µm,18.0s						
F24K	**Squaw Lake**	**100.87**	**11**	IAMs_20	IAMs_20	17 08 21.8	
	comp=Z,10µm,18.0s						
F24K	**Squaw Lake**	**100.87**	**11**	P	**Pdif**	**16 19 06.0**	**+1.5**
	baz=206						
I29M	**Ogilvie Camp,**	**100.88**	**16**	P	**Pdif**	**16 19 06.5**	**+2.0**
	baz=214						
B18K	**Kokolik River**	**100.89**	**6**	P	**Pdif**	**16 19 06.1**	**+1.7**
	baz=194						
H27K	**Steamboat Moun**	**100.91**	**14**	IAMs_20	IAMs_20	17 02 45.7	
	comp=Z,6µm,19.0s						
H27K	**Steamboat Moun**	**100.91**	**14**	P	**Pdif**	**16 19 05.9**	**+1.3**
	baz=211						
OK051	**E0350 and S346**	**101.08**	**54**	IAMs_20	IAMs_20	17 01 45.4	
	comp=Z,10µm,19.0s						
E23K	**Chandalar**	**101.09**	**10**	IAMs_20	IAMs_20	17 04 14.5	
	comp=Z,6µm,19.0s						
E23K	**Chandalar**	**101.09**	**10**	P	**Pdif**	**16 19 07.4**	**+1.9**
	baz=204						
G26K	**Porcupine Rive**	**101.09**	**13**	P	**Pdif**	**16 19 07.5**	**+2.2**
	baz=209						
BCIP	**Isla Barro Col**	**101.15**	**86**	IAMs_20	IAMs_20	16 59 02.8	
	comp=Z,7µm,18.0s						
I30M	**Mount Dempster**	**101.22**	**16**	IAMs_20	IAMs_20	17 02 37.1	
	comp=Z,8µm,20.0s						
I30M	**Mount Dempster**	**101.22**	**16**	P	**Pdif**	**16 19 08.2**	**+2.0**
	baz=215						
E24K	**Your Creek**	**101.28**	**11**	IAMs_20	IAMs_20	17 08 57.6	
	comp=Z,11µm,18.0s						
E24K	**Your Creek**	**101.28**	**11**	P	**Pdif**	**16 19 08.0**	**+1.7**
	baz=205						
F25K	**Christian Rive**	**101.32**	**12**	IAMs_20	IAMs_20	17 03 19.8	
	comp=Z,7µm,19.0s						
F25K	**Christian Rive**	**101.32**	**12**	P	**Pdif**	**16 19 08.5**	**+2.0**
	baz=208						
G27K	**Doyon Strip**	**101.39**	**14**	IAMs_20	IAMs_20	17 03 21.2	
	comp=Z,7µm,20.0s						
G27K	**Doyon Strip**	**101.39**	**14**	P	**Pdif**	**16 19 08.5**	**+1.7**
	baz=211						
C21K	**Knifeblade Rid**	**101.40**	**8**	P	**Pdif**	**16 19 08.4**	**+1.7**
	baz=200						
D22K	**Ayikyak River**	**101.41**	**9**	IAMs_20	IAMs_20	17 04 47.9	
	comp=Z,7µm,19.0s						
D22K	**Ayikyak River**	**101.41**	**9**	P	**Pdif**	**16 19 08.6**	**+1.8**
	baz=202						
T35A	**Sooner Cattle**	**101.51**	**54**	IAMs_20	IAMs_20	17 02 14.8	
	comp=Z,10µm,18.0s						
H29M	**Whitestone**	**101.58**	**15**	P	**Pdif**	**16 19 09.4**	**+1.8**
	baz=214						
TOLK	**Toolik Lake Re**	**101.63**	**10**	P	**Pdif**	**16 19 09.5**	**+1.7**
	baz=204						
F26K	**Sheenjek River**	**101.68**	**12**	IAMs_20	IAMs_20	17 03 19.3	
	comp=Z,7µm,20.0s						
F26K	**Sheenjek River**	**101.68**	**12**	P	**Pdif**	**16 19 09.8**	**+1.7**
	baz=209						
D23K	**Nanushuk River**	**101.76**	**10**	P	**Pdif**	**16 19 09.9**	**+1.6**
	baz=203						
A19K	**Wainwright**	**101.77**	**6**	P	**Pdif**	**16 19 09.9**	**+1.6**
	baz=194						
E25K	**Arctic Village**	**101.80**	**12**	IAMs_20	IAMs_20	16 59 29.2	
	comp=Z,6µm,20.0s						
B21K	**Ikpikpuk River**	**101.86**	**8**	IAMs_20	IAMs_20	17 07 10.9	
	comp=Z,6µm,19.0s						
B21K	**Ikpikpuk River**	**101.86**	**8**	P	**Pdif**	**16 19 10.3**	**+1.6**
	baz=200						
B20K	**Meade River**	**101.95**	**7**	IAMs_20	IAMs_20	17 07 28.0	
	comp=Z,8µm,19.0s						
B20K	**Meade River**	**101.95**	**7**	P	**Pdif**	**16 19 10.6**	**+1.5**
	baz=198						
EPYK	**Eagle Plains**	**102.08**	**16**	P	**Pdif**	**16 19 11.1**	**+1.2**
	baz=215						
YAK	**Yakutsk**	**102.14**	**337**	IAMs_20	IAMs_20	17 08 55.3	
	comp=Z,6µm,19.0s						
YAK	**Yakutsk**	**102.14**	**337**	*e*P	**Pdif**	**16 19 07.0**	**-3.1**
YAK				*e*S	**SKSac**	**16 29 43.5**	**-5.0**
YAK				*e*SSS	SSS	16 41 40.6	
YAK				pmax	pmax		
	comp=Z,23nm,1.5s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.5s						
YAK				pmax	pmax		
	comp=E,1.0nm,1.0s						
YAK				smax	smax		
	comp=N,1µm,9.1s						
YAK				smax	smax		
	comp=E,459nm,6.2s						
YAK				MLR	MLR		
	comp=Z,5µm,22.0s						
YAK				MLR	MLR		
	comp=N,2µm,22.0s						
YAK				MLR	MLR		
	comp=E,3µm,22.0s						
H31M	**Peel River**	**102.19**	**17**	IAMs_20	IAMs_20	17 02 46.8	
	comp=Z,7µm,20.0s						
H31M	**Peel River**	**102.19**	**17**	P	**Pdif**	**16 19 11.6**	**+1.2**
	baz=217						
D24K	**Happy Valley**	**102.21**	**10**	IAMs_20	IAMs_20	17 04 52.1	
	comp=Z,8µm,19.0s						
D24K	**Happy Valley**	**102.21**	**10**	P	**Pdif**	**16 19 11.9**	**+1.6**
	baz=205						
G29M	**Pine Creek**	**102.24**	**15**	IAMs_20	IAMs_20	17 10 11.9	
	comp=Z,6µm,18.0s						
G29M	**Pine Creek**	**102.24**	**15**	P	**Pdif**	**16 19 12.1**	**+1.6**
	baz=214						
Z41A	**Richland Creek**	**102.35**	**59**	IAMs_20	IAMs_20	17 01 10.3	
	comp=Z,10µm,19.0s						
MIAR	**Mount Ida**	**102.41**	**57**	IAMs_20	IAMs_20	16 59 32.9	
	comp=Z,7µm,20.0s						
F28M	**Old Crow**	**102.44**	**14**	IAMs_20	IAMs_20	17 03 44.0	
	comp=Z,11µm,19.0s						
F28M	**Old Crow**	**102.44**	**14**	P	**Pdif**	**16 19 13.2**	**+1.8**
	baz=212						
545A	**Edgard**	**102.53**	**62**	IAMs_20	IAMs_20	17 04 33.3	
	comp=Z,9µm,20.0s						
KSU1	**Kansas State U**	**102.54**	**52**	IAMs_20	IAMs_20	17 05 35.8	
	comp=Z,9µm,18.0s						
C23K	**Itkillik River**	**102.58**	**9**	IAMs_20	IAMs_20	17 04 16.8	
	comp=Z,6µm,20.0s						
C23K	**Itkillik River**	**102.58**	**9**	P	**Pdif**	**16 19 13.7**	**+1.8**
	baz=203						
E27K	**Coleen River**	**102.59**	**13**	P	**Pdif**	**16 19 14.2**	**+2.2**
	baz=211						
BGNE	**Belgrade**	**102.67**	**49**	IAMs_20	IAMs_20	17 02 04.2	
	comp=Z,7µm,19.0s						
B22K	**Teshekpuk Lake**	**102.68**	**8**	IAMs_20	IAMs_20	17 05 53.6	
	comp=Z,7µm,19.0s						
B22K	**Teshekpuk Lake**	**102.68**	**8**	P	**Pdif**	**16 19 14.2**	**+1.8**
	baz=201						
G30M	**tAoh Zraii Nji**	**102.70**	**15**	P	**Pdif**	**16 19 14.5**	**+1.9**
	baz=216						
D25K	**Kavik River**	**102.74**	**11**	IAMs_20	IAMs_20	17 09 44.3	
	comp=Z,7µm,19.0s						
D25K	**Kavik River**	**102.74**	**11**	P	**Pdif**	**16 19 14.0**	**+1.2**
	baz=207						
C24K	**Franklin Bluff**	**102.74**	**10**	IAMs_20	IAMs_20	17 10 00.8	
	comp=Z,7µm,19.0s						
ROCAM	**Rodrigues Isla**	**102.76**	**237**	IAMs_20	IAMs_20	17 01 30.9	
	comp=Z,9µm,18.0s						
X40A	**Basin Creek Fa**	**102.92**	**58**	IAMs_20	IAMs_20	17 01 54.4	
	comp=Z,10µm,19.0s						
SIV	**San Ignacio**	**103.00**	**118**	Pdiff	**Pdif**	**16 19 19.2**	**+4.0**
	comp=Z,1.4nm,0.7s,baz=216,slow=8.8,SNR=3.8						
SIV				PP	**PP**	**16 23 28.6**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=206,slow=9.6,SNR=3.1						
G31M	**Satah River**	**103.11**	**16**	IAMs_20	IAMs_20	17 03 45.9	
	comp=Z,8µm,20.0s						
G31M	**Satah River**	**103.11**	**16**	P	**Pdif**	**16 19 15.4**	**+1.1**
	baz=217						
143A	**Socs Landing,**	**103.11**	**60**	IAMs_20	IAMs_20	17 00 03.6	
	comp=Z,8µm,20.0s						
A22K	**Sinclair Lake**	**103.13**	**7**	P	**Pdif**	**16 19 15.7**	**+1.4**
	baz=200						
A21K	**Barrow**	**103.26**	**7**	P	**Pdif**	**16 19 16.8**	**+1.9**
	baz=198						
F30M	**Barrier River**	**103.31**	**15**	IAMs_20	IAMs_20	17 08 38.3	
	comp=Z,6µm,19.0s						
F30M	**Barrier River**	**103.31**	**15**	P	**Pdif**	**16 19 16.1**	**+0.8**
	baz=216						
E28M	**Babbage River**	**103.35**	**13**	IAMs_20	IAMs_20	17 12 03.5	
	comp=Z,7µm,18.0s						
E28M	**Babbage River**	**103.35**	**13**	P	**Pdif**	**16 19 16.0**	**+0.6**
	baz=213						
UALR	**University of**	**103.41**	**57**	IAMs_20	IAMs_20	17 03 20.4	
	comp=Z,9µm,18.0s						
C27K	**Jago River**	**103.45**	**12**	IAMs_20	IAMs_20	17 02 48.2	
	comp=Z,6µm,20.0s						
C27K	**Jago River**	**103.45**	**12**	P	**Pdif**	**16 19 16.9**	**+1.1**
	baz=209						
E29M	**Blow River**	**103.50**	**14**	IAMs_20	IAMs_20	17 04 16.0	
	comp=Z,9µm,19.0s						
E29M	**Blow River**	**103.50**	**14**	P	**Pdif**	**16 19 17.1**	**+1.1**
	baz=214						
C26K	**Camden Bay**	**103.51**	**11**	P	**Pdif**	**16 19 17.3**	**+1.2**
	baz=208						
VBMS	**Vicksburg**	**103.54**	**61**	IAMs_20	IAMs_20	17 01 58.0	
	comp=Z,6µm,19.0s						
D27M	**Malcolm River**	**103.61**	**13**	P	**Pdif**	**16 19 18.2**	**+1.5**
	baz=212						
F31M	**Tsiigehtchic**	**103.65**	**16**	IAMs_20	IAMs_20	17 04 03.1	
	comp=Z,6µm,20.0s						
F31M	**Tsiigehtchic**	**103.65**	**16**	P	**Pdif**	**16 19 18.5**	**+1.8**
	baz=218						
SUSD	**Miller**	**103.69**	**46**	IAMs_20	IAMs_20	17 07 43.8	
	comp=Z,8µm,18.0s						
E28A	**Huff**	**103.72**	**44**	IAMs_20	IAMs_20	17 01 50.3	
	comp=Z,8µm,19.0s						
PALK	**Pallekele**	**103.87**	**270**	IAMs_20	IAMs_20	17 04 43.0	
	comp=Z,8µm,20.0s						
SONM	**Songino Array**	**104.04**	**318**	Pdiff	**Pdif**	**16 19 18.5**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=108,slow=4.8,SNR=6.0						
SONM				PP	**PP**	**16 23 32.5**	**-4.7**
	comp=Z,2.2nm,1.0s,baz=142,slow=7.3,SNR=4.0						
SONM				PKKPbc	**PKKPbc**	**16 35 10.1**	**+0.9**
	comp=Z,3.6nm,1.1s,baz=264,slow=1.4,SNR=8.2						
N35A	**Tabor**	**104.05**	**51**	IAMs_20	IAMs_20	17 04 59.7	
	comp=Z,9µm,18.0s						
L34A	**Svendsen Farm,**	**104.10**	**49**	IAMs_20	IAMs_20	17 05 07.0	
	comp=Z,6µm,18.0s						
PTLB	**Pontes e Lacer**	**104.80**	**119**	IAMs_20	IAMs_20	17 01 46.5	
	comp=Z,5µm,19.0s						
P38A	**Dawn**	**104.88**	**53**	IAMs_20	IAMs_20	17 03 40.8	
	comp=Z,10µm,19.0s						
HBAR	**Harrisburg**	**105.00**	**57**	IAMs_20	IAMs_20	17 07 12.4	
	comp=Z,10µm,18.0s						
Y45A	**Yeager Farm, C**	**105.03**	**59**	IAMs_20	IAMs_20	17 03 07.5	
	comp=Z,6µm,20.0s						
GNAR	**Gosnell**	**105.65**	**57**	IAMs_20	IAMs_20	17 02 03.6	
	comp=Z,10µm,20.0s						
LSA	**Lhasa**	**105.80**	**295**	PKiKP	**PKiKP**	**16 23 45.2**	**+4.6**
Z47A	**Carrollton**	**105.82**	**61**	IAMs_20	IAMs_20	17 02 42.5	
	comp=Z,7µm,20.0s						
PEBM	**Pemiscott Bayo**	**105.83**	**57**	IAMs_20	IAMs_20	17 01 49.3	
	comp=Z,11µm,20.0s						
P40A	**Paris**	**105.85**	**53**	IAMs_20	IAMs_20	17 04 12.5	
	comp=Z,7µm,19.0s						
YKA	**Yellowknife Ar**	**105.92**	**25**	Pdiff	**Pdif**	**16 19 27.8**	**+0.9**
	comp=Z,0.5nm,0.8s,baz=249,slow=3.0,SNR=3.8						
YKA				PP	**PP**	**16 23 46.1**	**-4.6**
	comp=Z,1.1nm,1.0s,baz=257,slow=7.5,SNR=4.1						
YKA				PKKPbc	**PKKPbc**	**16 35 02.9**	**-0.8**
	comp=Z,1.9nm,0.9s,baz=41,slow=3.7,SNR=8.8						
GOMU	**GeErMu**	**106.00**	**303**	Pdif	**Pdif**	**16 19 28.8**	**+0.3**
GOMU				AMB	AMB		
	comp=Z,960nm,10.1s						
GOMU				LR	LR		
	comp=Z,980nm,18.6s						
GOMU				LR	LR		
	comp=Z,3µm,18.7s						
GOMU				LR	LR		
	comp=Z,4µm,18.5s						
F33A	**5 Mile Ranch,**	**106.02**	**46**	IAMs_20	IAMs_20	17 09 01.3	
	comp=Z,9µm,18.0s						
LNXT	**Lenox**	**106.09**	**57**	IAMs_20	IAMs_20	17 02 17.3	
	comp=Z,10µm,20.0s						
HALT	**Halls**	**106.11**	**58**	IAMs_20	IAMs_20	17 04 10.9	
	comp=Z,7µm,19.0s						
FVM	**French Village**	**106.27**	**55**	IAMs_20	IAMs_20	17 04 38.9	
	comp=Z,10µm,19.0s						
CAMR	**Camarioca**	**106.49**	**73**	IAMs_20	IAMs_20	17 02 48.1	
	comp=Z,13µm,18.0s						
LRAL	**Lakeview Retre**	**106.55**	**61**	IAMs_20	IAMs_20	17 05 00.9	
	comp=Z,7µm,19.0s						
SLM	**Saint Louis**	**106.70**	**55**	IAMs_20	IAMs_20	17 04 51.2	
	comp=Z,10µm,18.0s						
I37A	**Lemond, Waseca**	**106.99**	**49**	IAMs_20	IAMs_20	17 07 12.4	
	comp=Z,7µm,18.0s						
N41A	**Harden Midland**	**107.20**	**53**	IAMs_20	IAMs_20	17 05 03.2	
	comp=Z,8µm,19.0s						
WVT	**Waverly**	**107.31**	**58**	IAMs_20	IAMs_20	17 08 43.5	
	comp=Z,9µm,18.0s						
Y49A	**Blount Mountai**	**107.35**	**61**	IAMs_20	IAMs_20	17 03 57.0	
	comp=Z,6µm,19.0s						
AGMN	**Agassiz Nation**	**107.42**	**44**	IAMs_20	IAMs_20	17 04 01.3	
	comp=Z,7µm,19.0s						
C36M	**Paulatuk**	**107.46**	**17**	IAMs_20	IAMs_20	17 05 53.9	
	comp=Z,5µm,20.0s						
C36M	**Paulatuk**	**107.46**	**17**	P	**PKiKP**	**16 23 43.1**	**+1.3**
	baz=226						
MTDJ	**Mount Denham**	**107.46**	**79**	IAMs_20	IAMs_20	17 00 44.1	
	comp=Z,6µm,20.0s						
SPB	**Sao Paulo**	**107.49**	**133**	IAMs_20	IAMs_20	17 04 10.6	
	comp=Z,8µm,19.0s						
Q44A	**Meyer Farm, Va**	**107.67**	**55**	IAMs_20	IAMs_20	17 05 32.0	
	comp=Z,10µm,19.0s						
SPMN	**Marine on St.**	**107.92**	**48**	IAMs_20	IAMs_20	17 07 14.7	
	comp=Z,8µm,19.0s						
VAO	**Valinhos**	**108.21**	**132**	IAMs_20	IAMs_20	17 06 05.6	
	comp=Z,9µm,19.0s						
ULM	**Lac du Bonnet**	**108.30**	**42**	PKKPab	PKKPab	16 35 07.1	+1.0
	comp=Z,10nm,1.0s,baz=69,slow=3.6,SNR=6.9						
CLTN	**Cedars of Leba**	**108.38**	**59**	IAMs_20	IAMs_20	17 04 55.1	
	comp=Z,7µm,19.0s						
JFWS	**Jewell Farm**	**108.57**	**51**	IAMs_20	IAMs_20	17 08 32.3	
	comp=Z,9µm,18.0s						
I40A	**Norwalk**	**108.74**	**50**	IAMs_20	IAMs_20	17 05 56.8	
	comp=Z,6µm,18.0s						
SDV	**Santo Domingo**	**108.89**	**91**	IAMs_20	IAMs_20	17 04 17.1	
	comp=Z,7µm,18.0s						
SDV	**Santo Domingo**	**108.89**	**91**	PP	**PP**	**16 24 12.9**	**-0.7**
	comp=Z,3.1nm,0.2s,baz=257,slow=6.9,SNR=3.7						
U49A	**Red Boiling Sp**	**108.96**	**58**	IAMs_20	IAMs_20	17 05 11.5	
	comp=Z,7µm,19.0s						
A36M	**Sachs Harbour**	**109.02**	**15**	IAMs_20	IAMs_20	17 07 36.0	
	comp=Z,6µm,20.0s						
Y52A	**Lilburn**	**109.12**	**62**	IAMs_20	IAMs_20	17 04 28.9	
	comp=Z,6µm,20.0s						
CHIV	**Chivirico**	**109.20**	**78**	IAMs_20	IAMs_20	17 08 14.1	
	comp=Z,2µm,19.0s						
M44A	**Midewin, Midew**	**109.41**	**53**	IAMs_20	IAMs_20	17 09 21.7	
	comp=Z,6µm,18.0s						
G40A	**Rib Lake**	**109.59**	**48**	IAMs_20	IAMs_20	17 08 45.3	
	comp=Z,7µm,18.0s						
HQIL	**Hanson Quary C**	**109.71**	**53**	IAMs_20	IAMs_20	17 09 46.7	
	comp=Z,7µm,18.0s						
W52A	**Murphy**	**109.73**	**60**	IAMs_20	IAMs_20	17 06 26.8	
	comp=Z,10µm,19.0s						
L44A	**Lake County Fo**	**109.82**	**52**	IAMs_20	IAMs_20	17 06 25.7	
	comp=Z,9µm,19.0s						
EYMN	**Ely**	**109.90**	**45**	IAMs_20	IAMs_20	17 10 41.0	
	comp=Z,8µm,18.0s						
BG3	**Lake Jocassee**	**110.44**	**61**	IAMs_20	IAMs_20	17 07 00.7	
	comp=Z,8µm,19.0s						
HYB	**Hyderabad**	**110.57**	**278**	*e*Pdif	**Pdif**	**16 19 48.7**	**-0.1**
HYB				*e*PKiKP	**PKiKP**	**16 23 49.6**	**+0.3**
HYB				*e*pPKiKP	**pPKiKP**	**16 23 54.3**	**+1.5**
HYB				*e*PP	**PP**	**16 24 26.8**	**+1.1**
HYB				*e*SKSac	**SKSac**	**16 30 27.2**	**-0.8**
HYB				*e*PS	**PS**	**16 33 55.3**	**-0.7**
HYB				IVMs_BB	IVMs_BB	17 10 59.9	
	comp=Z,2µm,19.2s						
NMDO	**Nuevo Mundo**	**110.67**	**78**	IAMs_20	IAMs_20	17 07 49.0	
	comp=Z,4µm,18.0s						
H43A	**Windswept, Lux**	**110.85**	**50**	IAMs_20	IAMs_20	17 08 56.5	
	comp=Z,7µm,18.0s						
L46A	**Eue Claire**	**110.86**	**53**	IAMs_20	IAMs_20	17 09 08.1	
	comp=Z,5µm,19.0s						
MACA	**Manacapuru-AM**	**110.92**	**107**	IAMs_20	IAMs_20	17 07 07.2	
	comp=Z,6µm,18.0s						
S51A	**Beattyville**	**111.02**	**58**	IAMs_20	IAMs_20	17 08 47.9	
	comp=Z,7µm,18.0s						
F42A	**Maple Grove Fa**	**111.12**	**49**	IAMs_20	IAMs_20	17 09 23.7	
	comp=Z,8µm,18.0s						
PAULI	**Pauline**	**111.21**	**61**	IAMs_20	IAMs_20	17 08 16.1	
	comp=Z,5µm,18.0s						
JSC	**Jenkinsville**	**111.41**	**62**	IAMs_20	IAMs_20	17 06 08.6	
	comp=Z,6µm,20.0s						
I45A	**Fountain**	**111.69**	**51**	IAMs_20	IAMs_20	17 10 35.0	
	comp=Z,9µm,18.0s						
KMSC	**Kings Mountain**	**111.70**	**61**	IAMs_20	IAMs_20	17 08 10.2	
	comp=Z,9µm,18.0s						
NHSC	**New Hope**	**111.76**	**64**	IAMs_20	IAMs_20	17 12 17.1	
	comp=Z,5µm,18.0s						
Y57A	**Sumter**	**111.96**	**63**	IAMs_20	IAMs_20	17 06 40.4	
	comp=Z,7µm,20.0s						
GRHM	**Grahamstown, E**	**112.07**	**201**	IAMs_20	IAMs_20	17 04 09.7	
	comp=Z,8µm,19.0s						
VOI	**Vohitsoka**	**112.30**	**224**	IAMs_20	IAMs_20	17 04 10.4	
	comp=Z,6µm,20.0s						
J47A	**Sunmer**	**112.33**	**52**	IAMs_20	IAMs_20	17 08 02.2	
	comp=Z,8µm,19.0s						
Y58A	**Scranton**	**112.47**	**63**	IAMs_20	IAMs_20	17 05 59.9	
	comp=Z,5µm,20.0s						
W57A	**Gilead**	**112.71**	**62**	IAMs_20	IAMs_20	17 08 26.1	
	comp=Z,6µm,19.0s						
S54A	**Dingess, Beckl**	**112.75**	**59**	IAMs_20	IAMs_20	17 10 55.8	
	comp=Z,9µm,18.0s						
AAM	**Ann Arbor**	**112.78**	**53**	IAMs_20	IAMs_20	17 08 37.0	
	comp=Z,7µm,19.0s						
GLMI	**Grayling**	**113.06**	**51**	IAMs_20	IAMs_20	17 09 30.2	
	comp=Z,9µm,18.0s						
Y60A	**Bolivia**	**113.62**	**64**	IAMs_20	IAMs_20	17 07 25.3	
	comp=Z,6µm,20.0s						
K50A	**Casco**	**113.66**	**53**	IAMs_20	IAMs_20	17 09 04.4	
	comp=Z,6µm,19.0s						
E46A	**Sault Ste Mari**	**113.82**	**49**	IAMs_20	IAMs_20	17 09 21.2	
	comp=Z,9µm,19.0s						
W59A	**Clinton**	**113.89**	**62**	IAMs_20	IAMs_20	17 12 01.3	
	comp=Z,6µm,18.0s						
WMQ	**Urumqi**	**114.08**	**308**	*e*PKP	**PKiKP**	**16 23 57.3**	**+2.0**
WMQ				LR	LR		
	comp=Z,2µm,19.7s						
WMQ				LR	LR		
	comp=Z,2µm,21.5s						
WMQ				LR	LR		
	comp=Z,2µm,21.5s						
BOAV	**Boa Vista**	**114.14**	**102**	IAMs_20	IAMs_20	17 06 10.2	
	comp=Z,5µm,19.0s						
ABPO	**Ambohimpanom**	**114.21**	**227**	IAMs_20	IAMs_20	17 10 30.0	
	comp=Z,6µm,18.0s						
S57A	**Dark Hollow, R**	**114.47**	**59**	IAMs_20	IAMs_20	17 08 45.3	
	comp=Z,8µm,19.0s						
Q56A	**Snyder Ridge,**	**114.76**	**58**	IAMs_20	IAMs_20	17 11 28.9	
	comp=Z,8µm,18.0s						
ERPA	**Erie**	**115.26**	**55**	IAMs_20	IAMs_20	17 10 14.8	
	comp=Z,5µm,18.0s						
POGA	**Pongola**	**115.51**	**209**	IAMs_20	IAMs_20	17 08 25.9	
	comp=Z,8µm,20.0s						
V61A	**Roper**	**115.53**	**62**	IAMs_20	IAMs_20	17 10 29.9	
	comp=Z,9µm,18.0s						
P57A	**Homestead Farm**	**115.77**	**58**	IAMs_20	IAMs_20	17 09 48.6	
	comp=Z,8µm,18.0s						
CBN	**Corbin Frederi**	**115.79**	**59**	IAMs_20	IAMs_20	17 12 10.4	
	comp=Z,9µm,18.0s						
BOSA	**Boshof**	**116.74**	**202**	PKP	**PKiKP**	**16 24 01.8**	**+0.7**
	comp=Z,3.8nm,0.9s,baz=182,slow=3.0,SNR=8.8						
BOSA				PKKPab	**PKKPab**	**16 34 32.9**	**-1.6**
	comp=Z,5.3nm,1.2s,baz=45,slow=5.4,SNR=3.6						
ZSN	**Zaisan**	**117.14**	**311**	*e*PKIKP	**PKPdf**	**16 24 00.8**	**-0.1**
ZSN	**Zaisan**	**117.14**	**311**	*e*PKP	**PKPdf**	**16 24 00.9**	**-0.1**
MVL	**Millersville**	**117.14**	**58**	IAMs_20	IAMs_20	17 10 41.1	
	comp=Z,8µm,18.0s						
R61A	**Willards**	**117.34**	**60**	IAMs_20	IAMs_20	17 14 52.5	
	comp=Z,8µm,18.0s						
WUPA	**West Chester U**	**117.67**	**58**	IAMs_20	IAMs_20	17 13 16.9	
	comp=Z,4µm,18.0s						
RES	**Resolute Bay**	**117.83**	**17**	PKIKP	**PKPdf**	**16 24 00.8**	**-0.6**
PECO	**Prince Edward**	**117.92**	**54**	IAMs_20	IAMs_20	17 15 10.1	
	comp=Z,7µm,18.0s						
LUPA	**Lehigh Univers**	**118.05**	**58**	IAMs_20	IAMs_20	17 08 29.9	
	comp=Z,9µm,20.0s						
P61A	**Hammonton**	**118.18**	**59**	IAMs_20	IAMs_20	17 14 35.5	
	comp=Z,6µm,18.0s						
MSEY	**Mahe Island**	**118.27**	**245**	IAMs_20	IAMs_20	17 09 46.3	
	comp=Z,8µm,18.0s						
MK31	**Makanchi Array**	**118.64**	**310**	*i* PKIKP	**PKPdf**	**16 24 02.3**	**-1.6**
MKAR	**Makanchi Array**	**118.64**	**310**	Pdiff	**Pdif**	**16 20 26.3**	**+2.3**
	comp=Z,0.5nm,0.7s,baz=101,slow=6.3,SNR=4.7						
MKAR				PKP	**PKPdf**	**16 24 03.1**	**-0.7**
	comp=Z,8.1nm,0.8s,baz=197,slow=1.0,SNR=33						

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MKAR                             PKKPbc   PKKPab   16 34 21.4 +0.3
      comp=Z,2.9nm,1.1s,baz=299,slow=3.5,SNR=5.5
MKAR                             SKKPbc   SKKPbc   16 38 13.4 +4.4
      comp=Z,1.4nm,1.0s,baz=349,slow=3.1,SNR=3.9
ZALV  Zalesovo Beam    118.93 318  PKP      PKPdf    16 24 02.5 -1.6
      comp=Z,3.4nm,0.8s,baz=90,slow=1.5,SNR=9.6
WBO   Williamsburg     119.41  53  IAMs_20  IAMs_20  17 12 36.3
      comp=Z,8µm,18.0s
UZB   Uzynbulak        119.86 305 ePKIKP    PKPdf    16 24 06.1 -0.4
UZB   Uzynbulak        119.86 305 ePKP      PKPdf    16 24 06.2 -0.4
MPOM  Morne Pois Mar   119.94  91  IAMs_20  IAMs_20  17 11 16.1
      comp=Z,4µm,19.0s
KPKS  Kokpek           120.19 305 ePKIKP    PKPdf    16 24 06.7 -0.3
KPKS  Kokpek           120.19 305 ePKP      PKPdf    16 24 06.8 -0.3
TRQ   Mont Tremblant   120.21  52  IAMs_20  IAMs_20  17 13 17.6
      comp=Z,6µm,19.0s
SATY  Saty             120.27 305 ePKIKP    PKPdf    16 24 06.9 -0.3
SATY  Saty             120.27 305 ePKP      PKPdf    16 24 07.0 -0.3
BBGH  Gun Hill         120.45  93  IAMs_20  IAMs_20  17 16 20.5
      comp=Z,5µm,19.0s
FRNY  Flat Rock        120.52  53  IAMs_20  IAMs_20  17 13 40.8
      comp=Z,7µm,19.0s
MNTQ  Montreal, Queb   120.66  53  IAMs_20  IAMs_20  17 16 42.6
      comp=Z,7µm,18.0s
TDK   Taldyqorghan     120.78 307 ePKIKP    PKPdf    16 24 07.7 -0.3
TDK   Taldyqorghan     120.78 307 ePKP      PKPdf    16 24 07.7 -0.3
SKOMA Sekoma           120.98 203 i P       PKiKP    16 24 10.0 +0.6
KSH   Kashi            121.05 300  PKP      PKiKP    16 24 09.4 +0.4
KSH                                PP       PP       16 25 41.8 +2.8
KSH                                SKS      SKSac    16 31 10.3 +3.6
KSH                                SS       SS       16 42 13.8 +2.4
KSH                                LR       LR
      comp=Z,2µm,17.9s
KSH                                LR       LR
      comp=Z,2µm,20.3s
KSH                                LR       LR
      comp=Z,3µm,18.6s
HNH   Hanover          121.13  55  IAMs_20  IAMs_20  17 13 02.2
      comp=Z,7µm,18.0s
MDOK  Medeo            121.26 304 ePKIKP    PKPdf    16 24 08.7 -0.5
MDOK  Medeo            121.26 304 ePKP      PKPdf    16 24 08.8 -0.5
AAA   Alma-Ata         121.36 304 ePKIKP    PKPdf    16 24 08.9 -0.4
AAA   Alma-Ata         121.36 304 ePKP      PKPdf    16 24 08.9 -0.4
LPHEP Lephephe         121.37 205 i P       PKiKP    16 24 11.4 +1.2
NIL   Nilore           121.37 293  PKIKP    PKPdf    16 24 08.8 -0.8
M65A  Busby, Falmout   121.74  58  IAMs_20  IAMs_20  17 11 00.7
      comp=Z,8µm,20.0s
I62A  Tamworth         121.84  55  IAMs_20  IAMs_20  17 12 12.9
      comp=Z,7µm,19.0s
KURK  Kurchatov        121.93 313 i PKIKP   PKPdf    16 24 08.8 -1.2
KURBB Kurchatov Arra   121.97 313  PKP      PKPdf    16 24 09.5 -0.5
      comp=Z,17nm,0.8s,baz=107,slow=2.0,SNR=57
KURBB                              PKKPbc   PKKPbc   16 34 09.2 +0.9
      comp=Z,1.7nm,1.1s,baz=278,slow=4.8,SNR=5.0
KURBB                              SKKPbc   SKKPbc   16 38 00.2 +1.8
      comp=Z,1.6nm,1.0s,baz=268,slow=4.7,SNR=4.5
TKM2  Tokmak 2         122.22 304  P        PKPdf    16 24 10.9 -0.2
      SNR=19
KBK   Karagaybulak     122.62 303  P        PKiKP    16 24 12.1 +0.1
      SNR=12
CHMS  Chumysh          122.85 304  P        PKiKP    16 24 12.5 +0.2
      SNR=5.2
BROLN Tlhalogang       122.86 208 i P       PKiKP    16 24 13.9 +0.7
AAK   Ala-Archa        122.94 303  P        PKiKP    16 24 13.0 +0.3
      SNR=9.9
AAK   Ala-Archa        122.94 303 i PKIKP   PKPdf    16 24 12.3 -0.2
AAK   Ala-Archa        122.94 303  PKiKP    PKiKP    16 24 12.9 +0.3
SGDS  Sogindy          123.04 304 ePKP      PKPdf    16 24 12.2 -0.3
KGCAE Kacgae           123.08 202 i P       PKiKP    16 24 14.8 +1.2
USP   Ospenovka        123.09 304  P        PKiKP    16 24 12.9 +0.2
      SNR=24
LMQ   La Malbaie       123.34  51  IAMs_20  IAMs_20  17 18 53.2
      comp=Z,7µm,18.0s
AML   Almayashu        123.40 303  P        PKiKP    16 24 14.5 +0.6
      SNR=14
EKS2  Erkin-Say        123.46 303  P        PKiKP    16 24 13.7 +0.1
      SNR=23
KOOLE Kule             123.56 200 i P       PKiKP    16 24 15.9 +1.3
BTLS  Baital           123.80 306 ePKIKP    PKPdf    16 24 13.5 -0.3
BTLS  Baital           123.80 306 ePKP      PKPdf    16 24 13.6 -0.3
D62A  Allapoint, All   124.10  52  IAMs_20  IAMs_20  17 23 21.5
      comp=Z,6µm,18.0s
G65A  Princeton        124.76  54  IAMs_20  IAMs_20  17 15 47.2
      comp=Z,6µm,18.0s
WIN   Windhoek         124.79 196  PKIKP    PKiKP    16 24 17.2 +0.1
GRTLG Ghanzi           124.79 201 i P       PKiKP    16 24 18.0 +0.9
KBL   Kabul            124.97 293  PKIKP    PKiKP    16 24 17.6 +0.6
GAR   Garm             125.15 298  IAMs_20  IAMs_20  17 27 24.0
      comp=Z,5µm,20.0s
DZA   Taraz            125.27 303 ePKIKP    PKPdf    16 24 16.5 -0.2
DZA   Taraz            125.27 303 ePKP      PKPdf    16 24 16.5 -0.2
KUQ   Kuujjuuaa        125.78  38  IAMs_20  IAMs_20  17 16 11.2
      comp=Z,5µm,19.0s
KKAR  Karatay Array    125.90 303  PKIKP    PKPdf    16 24 17.6 -0.3
IUG   Iuzhnay          126.06 302 ePKIKP    PKPdf    16 24 17.9 -0.5
IUG   Iuzhnay          126.06 302 ePKP      PKPdf    16 24 17.9 -0.5
BATG  Bathurst New B   126.15  52  IAMs_20  IAMs_20  17 16 25.5
      comp=Z,7µm,18.0s
BRLS  Borolday         126.37 303 ePKIKP    PKPdf    16 24 18.6 -0.2
BRLS  Borolday         126.37 303 ePKP      PKPdf    16 24 18.7 -0.2
CHM   Chimkent         126.41 302 ePKIKP    PKPdf    16 24 18.5 -0.4
CHM   Chimkent         126.41 302 ePKP      PKPdf    16 24 18.6 -0.4
SCHQ  Schefferville    126.48  42  PKP      PKPdf    16 24 17.4 -1.2
      comp=Z,48nm,1.2s,baz=302,slow=1.4,SNR=16
BVAR  Borovoye Array   127.29 315  PKhKP    PKPpre   16 24 10.8
      comp=Z,0.8nm,0.6s,baz=17,slow=1.5,SNR=4.7
BVAR                               PKP      PKPdf    16 24 20.4 +0.2
      comp=Z,23nm,0.8s,baz=98,slow=3.0,SNR=37
BRVK  Borovoye         127.36 315 i PKIKP   PKPdf    16 24 19.7 -0.6
NEEM  North Greenlan   127.86  13 eP        PKiKP    16 24 21.4 -0.2
RCBR  Riachuelo        128.01 128 eP        PKiKP    16 24 25.2 +1.7
UPNV  Upernavik        128.62  19 eP        PKiKP    16 24 22.6 -0.2
ILULI Ilulissat        131.48  23  IAMs_20  IAMs_20  17 19 14.2
      comp=Z,8µm,20.0s
KBS   Kingsbay         131.97 358 eP        PKiKP    16 24 30.9 +1.4
SOHO  SOHO             132.08 276 i PKPdf   PKPdf    16 24 28.6 -1.6
      SNR=7.8
SHEL  Horse Pasture    132.47 169  IAMs_20  IAMs_20  17 16 00.6
      comp=Z,4µm,20.0s
SPITS Spitsbergen Ar   132.50 356  PKP      PKPdf    16 24 29.9 +0.4
      comp=Z,22nm,0.8s,baz=100,slow=3.2,SNR=13
KIBK  Kibwezi          132.58 232  IAMs_20  IAMs_20  17 14 26.8
      comp=Z,5µm,20.0s
UOSS  Minazif          132.64 276 i PKPdf   PKPdf    16 24 31.2 -0.1
      SNR=8.4
HATD  Hatta, Dubai     132.66 276 i PKPdf   PKPdf    16 24 31.4  0.0
      SNR=9.2
ASHO  Ashiyiah         132.67 276 i PKPdf   PKPdf    16 24 28.4 -3.0
      SNR=11
MDH   Madha            132.68 277 i PKiKP   PKPdf    16 24 31.8 +0.5
      SNR=5.2
ALNE  Al Ain           132.72 275 i PKPdf   PKPdf    16 24 30.2 -1.2
      SNR=5.7
SVE   Sverdlovsk       132.80 321 i PKIKP   PKiKP    16 24 31.2 -0.5
SVE                                pmax     pmax
      comp=Z,24nm,1.1s
SVE                                MLR      MLR
      comp=E,2µm,20.0s
SVE                                MLR      MLR
      comp=Z,3µm,21.0s
MSFE  Esma-Masafi      132.82 277 i PKiKP   PKiKP    16 24 32.6 -0.2
      SNR=9.2
FAQ   Al Faqa, Dubai   133.09 276 i PKiKP   PKPdf    16 24 32.5 +0.4
      SNR=5.9
NAZ   Nazwa, Dubai     133.12 276  PKiKP    PKPdf    16 24 32.4 +0.3
DAG   Danmarks Havn    133.25   7  PKIKP    PKPdf    16 24 29.4 -1.5
DAG   Danmarks Havn    133.25   7 i P       PKPdf    16 24 29.0 -1.9
DAG                               i P       PKiKP    16 24 30.5 -1.6
ASUD  Al Ashush, Dub   133.28 276  PKiKP    PKiKP    16 24 34.3 +0.6
SUMG  Summit           133.31  16  IAMs_20  IAMs_20  17 25 18.7
      comp=Z,7µm,19.0s
SUMG  Summit           133.31  16  PKIKP    PKiKP    16 24 32.7 -0.1
SUMG  Summit           133.31  16 eP        PKiKP    16 24 33.3 +0.5
AB31  Akbulak array    133.78 310           PKPpre   16 24 21.3
ABKAR Akbulak array    133.78 310           PKPpre   16 24 21.3
ABKAR Akbulak array    133.78 310           PKPpre   16 24 20.9
KMBO  Kilima Mbogo     134.00 232  IAMs_20  IAMs_20  17 21 05.9
      comp=Z,5µm,18.0s
KMBO  Kilima Mbogo     134.00 232  PKIKP    PKiKP    16 24 35.4 -0.4
ARTI  Arti             134.09 320           PKPpre   16 24 22.7
ARTI  Arti             134.09 320 i PKIKP   PKPdf    16 24 29.8 -3.2
ARTI                               SS       SS       16 44 51.5 -0.7
MZR   Muzera           134.28 273  PKPdf    PKPdf    16 24 33.9 -0.5
ICESG Greenland Ices   135.12  20 eP        PKPdf    16 24 34.9 -0.1
DBG   Daneborg         135.29   9 eP        PKPdf    16 24 34.5 -0.3
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ASCN  Ascension        137.88 155  IAMs_20  IAMs_20  17 28 14.1
      comp=Z,5µm,19.0s
ATD   Arta Tunnel      138.01 251  IAMs_20  IAMs_20  17 21 25.6
      comp=Z,7µm,20.0s
SCO   Scoresbysund     138.34  12  IAMs_20  IAMs_20  17 31 32.0
      comp=Z,5µm,18.0s
LODK  Lodwar           138.58 235  IAMs_20  IAMs_20  17 24 48.2
      comp=Z,4µm,18.0s
APA   Apatity          139.29 342⇓iPKIKP    PKPdf    16 24 43.1 +0.8
APA                                pmax     pmax
      comp=Z,8.0nm,0.9s
ARCES ARCESS Array B   139.44 348           PKPpre   16 24 36.3
ARCES ARCESS Array B   139.44 348  PKhKP    PKPpre   16 24 34.4
      comp=Z,5.2nm,0.7s,baz=46,slow=3.5,SNR=18
ARCES                              SKP               16 28 20.2
      comp=Z,13nm,1.1s,baz=349,slow=3.7,SNR=4.2
ARCES ARCESS Array B   139.44 348  PKHKP    PKPpre   16 24 36.3
FURI  Furi             139.77 244  IAMs_20  IAMs_20  17 29 06.3
      comp=Z,6µm,18.0s
RAYN  Ar Rayn          141.30 269           PKPpre   16 24 42.4
RAYN  Ar Rayn          141.30 269  IAMs_20  IAMs_20  17 33 54.7
      comp=Z,4µm,18.0s
RAYN  Ar Rayn          141.30 269  PKHKP    PKPpre   16 24 42.4
RAYN                               MLR      MLR
      comp=Z,4µm,18.0s
KLMR  Klimovskoe       141.67 332 ePKIKP    PKPdf    16 24 46.8  0.0
KLMR                              e                  16 27 47.2
KLMR                               SS       SS       16 46 15.1 -6.1
KLMR                               pmax     pmax
      comp=Z,61nm,1.1s
KLMR                               MLR      MLR
      comp=Z,4µm,21.0s
LKRN  Lenkeran, Azer   141.71 294  PKIKP    PKPdf    16 24 45.2 -2.4
AKT   Akhty            142.56 299 ePKIKP    PKPdf    16 24 45.3 -3.9
AKT                               ePPP      PPP      16 31 01.5
AKT                                pmax     pmax
      comp=Z,100nm,1.2s
MAK   Makhachkala      142.67 301 ePKIKP    PKPdf    16 24 45.2 -3.9
MAK                               e                  16 27 54.2
MAK                               eSS       SS       16 46 28.5 -6.0
MAK                               eSSS      SSS      16 51 47.3
MAK                                pmax     pmax
      comp=Z,151nm,1.0s
SEKA  Sheki            142.97 298  PKIKP    PKPdf    16 24 46.6 -3.2
MNGR  Mingechevir, A   143.06 298  PKIKP    PKPbc    16 24 47.1 +0.3
GANJ  Ganja            143.64 297  PKIKP    PKPbc    16 24 48.2 -0.3
NAX   Nakhchivan       144.28 295  PKIKP    PKPab    16 24 49.0 -1.2
GNI   Garni            144.86 297 i PKIKP   PKPab    16 24 52.2 -0.2
GNI   Garni            144.86 297  PKPdf    PKPbc    16 24 52.9 +0.4
VRH   Novokhopyorsk    144.94 316 ePKIKP    PKPab    16 24 51.1 -1.0
VRH                                pmax     pmax
      comp=Z,153nm,1.6s
MOS   Moscow           145.24 325 i PKHKP   PKPpre   16 24 49.9
MOS                                pmax     pmax
      comp=Z,1µm,1.3s
MOS                                pmax     pmax
      comp=N,300nm,1.6s
MOS                                pmax     pmax
      comp=E,200nm,1.5s
MOS                                pmax     pmax
      comp=N,233nm,1.5s
MOS                                pmax     pmax
      comp=E,127nm,1.6s
MOS                                pmax     pmax
      comp=Z,639nm,1.3s
GOF   Gofitskoye       145.63 305c iPKIKP   PKPab    16 24 54.8 -0.1
KBZ   Khabaz           145.94 303  PKPbc    PKPbc    16 24 55.4 -0.1
      comp=Z,91nm,0.9s,baz=86,slow=1.5,SNR=134
KBZ   Khabaz           145.94 303 i PKIKP   PKPdf    16 24 54.2 -0.6
LPSR  Galich'ya Gora   146.01 320 ePKIKP    PKPdf    16 24 53.8 -0.8
LPSR                               pmax     pmax
      comp=Z,580nm,0.9s
FINES FINESS Array B   146.03 340  PKPbc    PKPbc    16 24 55.0 -0.3
      comp=Z,114nm,0.8s,baz=49,slow=3.3,SNR=181
FINES FINESS Array B   146.03 340  PKP2     PKPbc    16 24 55.0 -0.3
KIV   Kislovodsk       146.06 304  IAMs_20  IAMs_20  17 37 42.7
      comp=Z,4µm,19.0s
KIV   Kislovodsk       146.06 304 ⇓P        PKPbc    16 24 55.9 -0.1
KIV   Kislovodsk       146.06 304 i PKIKP   PKPdf    16 24 54.3 -0.9
KIV                                pmax     pmax
      comp=Z,154nm,1.1s
KIV   Kislovodsk       146.06 304  PKPbc    PKPdf    16 24 55.5 +0.3
OBN   Obninsk          146.08 325 ⇓P        PKPab    16 24 56.1 -0.1
OBN   Obninsk          146.08 325c iPKP2    PKPbc    16 24 55.2 -0.3
OBN                               e                  16 28 16.7
OBN                               eSS       SS       16 47 07.2 -5.0
OBN                                pmax     pmax
      comp=Z,2µm,1.9s
OBN                                MLR      MLR
      comp=Z,3µm,20.0s
VORR  Voronezh         146.23 318 ePKIKP    PKPdf    16 24 54.1 -0.9
VORR                               pmax     pmax
      comp=Z,560nm,0.9s
VSR   Storozhevoye     146.43 317 ePKIKP    PKPdf    16 24 54.2 -1.2
VSR                                pmax     pmax
      comp=Z,490nm,1.0s
VORD  Divnogorie       146.45 317 ePKIKP    PKPdf    16 24 54.1 -1.3
VORD                               pmax     pmax
      comp=Z,390nm,1.0s
GURO  Guroymak-BITLI   146.99 294  IAMs_20  IAMs_20  17 42 38.0
      comp=Z,3µm,18.0s
ERBR  Yeremizino-Bor   147.28 307 i PKP2    PKPbc    16 25 00.1 +0.7
ERBR                               pmax     pmax
      comp=Z,533nm,1.0s
LABN  Labinsk          147.33 305 i PKP2    PKPbc    16 24 59.9 +0.3
LABN                               pmax     pmax
      comp=Z,171nm,1.0s
VSU   Vasula           148.12 336  PKIKP    PKPdf    16 24 59.3 +1.3
SOC   Sochi            148.24 304 ePKIKP    PKPdf    16 24 58.1 -0.6
SOC                               e                  16 28 29.4
SOC                                pmax     pmax
      comp=Z,134nm,1.2s
NB2   NORSAR Subarra   149.58 352  PKP      PKPbc    16 25 04.8 -0.1
      comp=Z,116nm,1.2s,baz=18,slow=2.8
NB2   NORSAR Subarra   149.58 352  PKP      PKPbc    16 25 04.8 -0.1
      baz=18,slow=2.8
NOA   NORSAR Array B   149.58 352  PKP      PKPdf    16 25 00.2 -0.2
      comp=Z,10nm,1.1s,baz=15,slow=2.7,SNR=11
NOA                                PKPbc    PKPbc    16 25 04.8 -0.1
      comp=Z,32nm,0.9s,baz=13,slow=4.2,SNR=40
ANN   Anapa            149.59 307 i PKP2    PKPbc    16 25 05.5 +0.1
ANN                               eSS       SS       16 47 51.1 -1.7
ANN                                pmax     pmax
      comp=Z,544nm,1.3s
HFS   Hagfors          150.09 349  PKP      PKPdf    16 25 00.8 -0.3
      comp=Z,49nm,0.8s,baz=64,slow=9.8,SNR=19
HFS                                PKPbc    sPKPdf   16 25 05.7 -0.2
      comp=Z,64nm,0.8s,baz=119,slow=1.9,SNR=42
MNK   Minsk            150.49 330 i PiKP    PKiKP    16 25 06.9 -1.1
      comp=E,122nm,12.3s
MNK                               i PKiKP   PKiKP    16 25 06.9 -1.1
      comp=N,250nm,17.0s
MNK                               i PKiKP   PKiKP    16 25 06.9 -1.1
      comp=Z,820nm,17.3s,baz=48
MNK                               i PP      PP       16 28 44.3 +1.1
MNK                               i SKS     SKSdf    16 32 05.6 -3.2
MNK                               i PPP     PPP      16 32 07.7
MNK                               i SS      SS       16 48 08.5 +6.9
MNK                               i SSS     SSS      16 54 00.2
MNK                               i LQ      LQ       17 24 03.1
MNK   Minsk            150.49 330 i PKIKP   PKiKP    16 25 06.9 -1.1
MNK                               i                  16 28 44.3
MNK                               i                  16 32 05.6
MNK                               i PPP     PPP      16 32 07.7
NACGM Naroch           150.68 331⇑iPKiKP    PKPbc    16 25 07.6 -0.1
KONO  Kongsberg        151.12 353  IAMs_20  IAMs_20  17 41 03.7
      comp=Z,3µm,20.0s
KONO  Kongsberg        151.12 353 ⇑PKIKP    PKPbc    16 25 07.6 -1.0
SACV  Santiago Islan   151.13 118  IAMs_20  IAMs_20  17 42 52.2
      comp=Z,4µm,19.0s
PABE  Paberze          151.35 334  IAMs_20  IAMs_20  17 39 39.6
      comp=Z,4µm,19.0s
DIKM  Dikmen           151.84 301 ⇑P        PKiKP    16 25 12.3 +1.1
MMAI  Mount Meron Ar   152.18 283  PKPbc    PKiKP    16 25 13.0 +0.7
      comp=Z,26nm,0.5s,baz=89,slow=5.9,SNR=38
AKASG Malin Array Be   152.20 322  PKP      PKPdf    16 25 04.2 -0.5
      comp=Z,2.9nm,0.8s,baz=29,slow=1.0,SNR=14
AKASG                              PKPbc    PKPbc    16 25 11.1 -0.2
      comp=Z,50nm,0.9s,baz=48,slow=2.9,SNR=37
AKASG                              PKPab    PKPab    16 25 20.7 -0.4
      comp=Z,114nm,0.8s,baz=52,slow=3.0,SNR=18
KIEV  Kiev             152.22 322  IAMs_20  IAMs_20  17 33 25.1
      comp=Z,5µm,21.0s
KIEV  Kiev             152.22 322 ⇑P        PKiKP    16 25 11.7  0.0
KIEV  Kiev             152.22 322  PKIKP    PKPdf    16 25 05.6 +0.9
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HOMB  Homborsund       152.59 353 i P       PKPbc    16 25 11.0 -0.9
SNART Snartemo         152.64 355 i P       PKPbc    16 25 12.0 -0.1
BZK   Bozkurt          152.69 302 ⇑P        PKPbc    16 25 12.2 -0.6
SUW   Suwalki          152.78 333 ePKP      PKPdf    16 25 05.8 +0.5
SUW   Suwalki          152.78 333  IAMs_20  IAMs_20  17 42 19.5
      comp=Z,4µm,20.0s
SUW   Suwalki          152.78 333  PKIKP    PKPdf    16 25 07.4 +2.0
KIRS  Kirsehir-Merke   153.26 296 ⇓P        PKiKP    16 25 14.9 +0.5
BRTR  Keskin Array B   153.39 297  PKP      PKPdf    16 25 06.4 -0.6
      comp=Z,2.3nm,1.0s,baz=151,slow=2.8,SNR=11
BRTR                               PKPbc    PKPbc    16 25 14.5 -0.1
      comp=Z,20nm,0.9s,baz=140,slow=4.9,SNR=36
BRTR                               PKPab    PKPab    16 25 25.9 -0.9
      comp=Z,30nm,0.9s,baz=149,slow=4.3,SNR=12
CIDE  Kastamonu/Cide   153.48 302 ⇑P        PKPdf    16 25 06.1 -0.7
DEL   Delary           153.49 346 i P       PKPbc    16 25 12.0 -2.0
PURM  Purcari          153.95 314 ⇑P        PKiKP    16 25 16.4 +1.0
ANTO  Ankara           154.01 298 ⇑P        PKiKP    16 25 16.4 +0.5
ANTO  Ankara           154.01 298  PKIKP    PKPdf    16 25 07.6 -0.2
SORM  Soroca           154.08 318 ⇓P        PKiKP    16 25 15.7 +0.1
KIS   Kishinev         154.38 316 ePKP      PKPdf    16 25 07.0 -0.9
KIS                               eL        L        17 35 46.0
      comp=Z,1µm,19.0s
KIS   Kishinev         154.38 316 ePKIKP    PKPdf    16 25 07.0 -0.9
KIS                               i                  16 25 15.8
MILM  Milestii Mici    154.42 315 eL        L        17 36 12.0
MILM  Milestii Mici    154.42 315 ⇓P        PKPbc    16 25 16.0 -0.3
MILM  Milestii Mici    154.42 315 ePKIKP    PKPdf    16 25 06.0 -2.0
MILM                              i                  16 25 15.7
MILM                               pmax     pmax
      comp=Z,180nm,2.1s
MILM  Milestii Mici    154.42 315 ePP       PP       16 30 00.0  +54
MILM  Milestii Mici    154.42 315 eSKKS              16 35 57.0
MILM  Milestii Mici    154.42 315  LRM      MLR      17 29 36.0
      comp=Z,2µm,19.5s
DBIC  Dimbokro         154.66 163  PKP      PKPdf    16 25 10.2 +0.8
      comp=Z,18nm,1.1s,baz=37,slow=1.7,SNR=6.6
DBIC                               PKPbc    PKiKP    16 25 19.2 +1.3
      comp=Z,31nm,1.0s,baz=197,slow=2.7,SNR=7.7
R9F13 Warsaw-Wawer     154.94 332 ePKP      PKPab    16 25 31.7 -0.9
VASR  Vaslui           155.17 316 ⇑P        PKPdf    16 25 19.3  +10
TLCR                   155.21 312 ⇓P        PKPab    16 25 31.7 -2.3
TLCR                   155.21 312 ⇓PKP2     PKPab    16 25 31.7 -2.3
VLDR  Vladesti         155.37 314 ⇑P        PKPab    16 25 33.0 -1.8
BEL   Belsk            155.38 332 ePKP      PKPdf    16 25 19.4  +10
RGN   Rugen            155.40 345 eSS       SS       16 48 56.2 +1.6
      baz=21,slow=11
GIUM  Giurgiulesti     155.46 313 ⇓P        PKPab    16 25 36.2 +1.0
GKP   Gorka Klasztor   155.48 339 ePKP      PKPdf    16 25 09.3 +0.1
EKA   Eskdalemuir Ar   155.50   8  PKP      PKPdf    16 25 10.2 +1.0
      comp=Z,2.4nm,0.7s,baz=321,slow=1.2,SNR=6.2
EKA                                PKPbc    pPKPbc   16 25 19.9 -2.0
      comp=Z,0.8nm,0.6s,baz=345,slow=2.2,SNR=5.1
EKA                                PKPab    PKPab    16 25 34.6 -0.3
      comp=Z,16nm,0.9s,baz=340,slow=2.8,SNR=12
EKA                                PP       PP       16 29 13.1 +2.0
      comp=Z,3.2nm,0.9s,baz=352,slow=3.8,SNR=4.5
SCTR  Scanteiesti      155.50 313 ⇑P        PKPab    16 25 36.9 +1.6
ESK   Eskdalemuir      155.51   8  IAMs_20  IAMs_20  17 35 39.5
      comp=Z,4µm,19.0s
TPGR  Topolog          155.60 311 ⇑P        PKPab    16 25 35.1 -0.7
CFR   Carcaliu         155.64 312 ⇑P        PKPdf    16 25 20.1  +10
PRAR  RASCA            155.71 318 ⇓P        PKPab    16 25 36.3 +0.2
IZVR  Izvoarele        155.71 313 ⇓P        PKPab    16 25 36.5 +0.3
TUDR                   155.75 314 ⇓P        PKPab    16 25 37.0 +0.7
TIRR  Tirgusor         155.77 310  IAMs_20  IAMs_20  17 43 45.0
      comp=Z,4µm,20.0s
TIRR  Tirgusor         155.77 310 ⇑P        PKPab    16 25 33.6 -2.9
TIRR  Tirgusor         155.77 310 ⇑PKP2     PKPab    16 25 33.6 -2.9
BORA  Eskisehir        155.77 299  IAMs_20  IAMs_20  17 41 11.1
      comp=Z,4µm,19.0s
COSR  Cosmesti PH      155.84 314 ⇑P        PKPab    16 25 36.2 -0.6
TESR  Tescani          155.91 316 ⇓P        PKPab    16 25 37.2 +0.1
PANC  Panciu           155.93 315 ⇓P        PKPab    16 25 38.5 +1.4
TLBR  Topalu           155.97 311 ⇓P        PKPab    16 25 36.8 -0.6
HARR  Harsova          155.99 311 ⇑P        PKPab    16 25 34.1 -3.3
HARR  Harsova          155.99 311 ⇑PKP2     PKPab    16 25 34.1 -3.3
ODBI  Odobesti         156.04 314 ⇓P        PKPab    16 25 40.2 +2.6
ISP   Isparta          156.08 294  IAMs_20  IAMs_20  17 36 47.8
      comp=Z,5µm,20.0s
BURAR Bucovina Array   156.13 320 ⇓P        PKPab    16 25 36.0 -2.1
BURAR Bucovina Array   156.13 320 ⇓PKP2     PKPab    16 25 36.0 -2.1
KWP   Kalwaria Pacla   156.14 326 ePKP      PKPab    16 25 37.1 -0.8
VRI   Vrincioaia       156.19 315 ⇓P        PKPab    16 25 37.8 -0.5
VRI   Vrincioaia       156.19 315 ⇓PKP2     PKPab    16 25 37.8 -0.5
PLOR  Plostina         156.25 315 ⇓P        PKPab    16 25 38.4 -0.2
PLOR  Plostina         156.25 315 ⇓PKP2     PKPab    16 25 38.4 -0.2
GRER                   156.28 314 ⇑P        PKPab    16 25 41.1 +2.4
PSN   Preselentsi      156.28 309  P        PKPab    16 25 39.3 +0.6
PGOR  Pogoanele        156.49 313 ⇓P        PKPab    16 25 41.9 +2.3
TURR  Turia            156.53 316 ⇑P        PKPab    16 25 40.7 +1.0
BSEG  Bad Segeberg     156.57 348 ePKPdf    PKPdf    16 25 10.8 +0.2
      baz=27,slow=1.0
BSEG                              ePKPab    PKPab    16 25 39.6 +0.1
      baz=19,slow=4.4
BSEG                              eSS       SS       16 49 09.4 +2.3
      baz=21,slow=11
OZUR                   156.64 316 ⇓P        PKPab    16 25 41.1 +0.8
ISR   Istrita          156.67 313 ⇓P        PKPab    16 25 41.6 +1.1
ISR   Istrita          156.67 313 ⇓PKP2     PKPab    16 25 41.6 +1.1
HLG   Helgoland        156.68 352 eSS       SS       16 49 09.5 +1.2
      baz=21,slow=11
BOSR  Bodos            156.73 316 ⇓P        PKPab    16 25 40.8 +0.2
KOLS  Kolonicke sedl   156.83 326 ePKIKP    PKPdf    16 25 11.6 +0.4
KOLS  Kolonicke sedl   156.83 326 ePKP      PKPdf    16 25 11.6 +0.4
KOLS                              e                  16 25 40.6
MLR   Muntele Rosu     156.86 315  IAMs_20  IAMs_20  17 42 53.3
      comp=Z,4µm,19.0s
MLR   Muntele Rosu     156.86 315 ⇑P        PKPab    16 25 43.3 +2.0
ARCR  ARCALIA          156.91 320 ⇑P        PKPab    16 25 42.9 +1.6
CTYL  Yalikoy Yolu     156.94 304 ⇓P        PKPab    16 25 41.6 -0.1
DOPR  Dopca            156.94 316 ⇑P        PKPab    16 25 43.3 +1.7
PRD   Provadia         156.96 308  P        PKPab    16 25 42.9 +1.3
STHS  Stebnicka Huta   156.97 328 ePKIKP    PKPdf    16 25 12.0 +0.6
STHS  Stebnicka Huta   156.97 328 ePKP      PKPdf    16 25 12.0 +0.6
STHS                              e                  16 25 40.0
DSB   Dublin           157.00  14  IAMs_20  IAMs_20  17 34 48.4
      comp=Z,5µm,20.0s
OJC   Ojcow            157.02 331 ePKP      PKPdf    16 25 10.8 -0.5
OJC   Ojcow            157.02 331  PKIKP    PKPdf    16 25 10.9 -0.5
BMR   Baia Mare        157.03 322 ⇓P        PKPab    16 25 40.9 -0.9
BMR   Baia Mare        157.03 322 ⇓PKP2     PKPab    16 25 40.9 -0.9
SULR                   157.06 313 ⇑P        PKPab    16 25 42.4 +0.4
PLAR  PLOIESTI         157.09 313 ⇑P        PKPab    16 25 37.5 -4.6
RUE   Ruedersdorf      157.18 342 eSS       SS       16 49 12.3 -1.6
      baz=21,slow=11
GORT1 Trebel           157.28 346 ePKPdf    PKPdf    16 25 12.3 +0.8
      baz=27,slow=1.0
GORT1                             ePKPab    PKPab    16 25 42.0 -0.6
      baz=19,slow=4.4
NIE   Niedzica         157.40 329 ePKP      PKPdf    16 25 12.1 +0.2
VOIR                   157.43 315 ⇑P        PKPab    16 25 44.4 +0.7
PHSR  Pinarhisar       157.44 304 ⇑P        PKPab    16 25 44.3 +0.5
MDB   Medias           157.44 318 ⇑P        PKPab    16 25 47.8 +4.2
ARR   Arges            157.71 316 ⇓P        PKPab    16 25 46.0 +1.0
TNR   Turnu Rosu       157.77 317 ⇓P        PKPab    16 25 46.5 +1.3
KSP   Ksiaz            157.85 336 ePKP      PKPdf    16 25 13.0 +0.6
KSP   Ksiaz            157.85 336  PKIKP    PKPdf    16 25 13.4 +1.0
RETH  Rethem/Aller,    157.88 349 ePKPdf    PKPdf    16 25 12.3  0.0
      baz=27,slow=1.0
RETH                              ePKPab    PKPab    16 25 44.6 -0.6
      baz=19,slow=4.4
RETH                              ePP       PP       16 29 23.0 -1.3
      baz=22,slow=5.6
FLTG  Flechtingen      157.92 346 ePKPdf    PKPdf    16 25 12.1 -0.3
      baz=27,slow=1.0
FLTG                              ePKPab    PKPab    16 25 45.0 -0.3
      baz=19,slow=4.4
FLTG                              eSS       SS       16 49 21.9 +0.2
      baz=21,slow=11
HUMR  Humele           157.93 313 ⇑P        PKPab    16 25 46.1 +0.3
LANS  Liptovska Anna   157.96 329 ePKP      PKPab    16 25 47.0 +1.2
COPA  Copaceanca       157.97 312 ⇓P        PKPab    16 25 46.0  0.0
NRDL  Niedersach Rie   157.99 348 ePKPab    PKPab    16 25 45.4 -0.1
      baz=19,slow=4.4
NRDL                              eSS       SS       16 49 22.6 +0.4
      baz=21,slow=11
OKC   Ostrava-Krasne   157.99 332 ePKPAB    PKPab    16 25 46.6 +0.8
OKC                                AMS      AMS      17 51 40.0
      comp=Z,4µm,17.6s
DRGR                   157.99 321 ⇓P        PKPab    16 25 46.6 +0.5
DRGR                   157.99 321 ⇓PKP2     PKPab    16 25 46.6 +0.5
KECS  Kecovo           157.99 327 ePKP2     PKPab    16 25 46.1 +0.2
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KECS	**Kecovo**	157.99	327	ePKP	PKPab	16 25 46.1	+0.2
STEB	**Steborice**	158.06	333	ePKPAB	PKPab	16 25 46.8	+0.7
OSTC	**Ostas**	158.12	336	AMS	AMS	17 49 00.0	
	comp=Z,3µm,18.7s						
CHVC	**Chvalec**	158.15	336	ePKPAB	PKPab	16 25 47.1	+0.6
CHVC				AMS	AMS	17 48 50.0	
	comp=Z,3µm,18.9s						
CHVC	**Chvalec**	158.15	336	ePKP2	PKPab	16 25 47.1	+0.6
CHVC				MLR	MLR		
	comp=Z,3µm,18.9s						
LOT	**Lotru**	158.18	317	⇓P	PKPab	16 25 47.0	0.0
ASSE	**Asse, Remlinge**	158.22	346	ePKPdf	PKPdf	16 25 12.6	-0.1
	baz=27,slow=1.0						
ASSE				ePKPab	PKPab	16 25 46.8	+0.2
	baz=19,slow=4.4						
ASSE				eSS	SS	16 49 23.5	-1.3
	baz=21,slow=11						
UPC	**Upice**	158.23	336	ePKPAB	PKPab	16 25 48.3	+1.4
UPC				AMS	AMS	17 49 00.0	
	comp=Z,4µm,17.9s						
UPC	**Upice**	158.23	336	ePKP2	PKPab	16 25 48.3	+1.4
UPC				MLR	MLR		
	comp=Z,4µm,17.9s						
DPC	**Dobruska-Polom**	158.25	336	ePKPAB	PKPab	16 25 48.3	+1.3
DPC				AMS	AMS	17 50 30.0	
	comp=Z,5µm,18.2s						
DPC	**Dobruska-Polom**	158.25	336	ePKP2	PKPab	16 25 48.3	+1.3
DPC				MLR	MLR		
	comp=Z,5µm,18.2s						
MORC	**Moravsky Berou**	158.27	333	ePKP	PKPdf	16 25 12.4	-0.6
MORC				e		16 25 47.1	
MORC	**Moravsky Berou**	158.27	333	⇑P	PKPab	16 25 47.0	-0.1
MORC	**Moravsky Berou**	158.27	333	⇑PKP2	PKPab	16 25 47.0	-0.1
KRLC	**Kraliky**	158.32	335	AMS	AMS	17 52 00.0	
	comp=Z,5µm,18.3s						
DEV	**Deva**	158.43	319	⇓P	PKPab	16 25 49.5	+1.6
DEV	**Deva**	158.43	319	⇓PKP2	PKPab	16 25 49.5	+1.6
CLL	**Collm**	158.44	342	IAMs_20	IAMs_20	17 46 00.1	
	comp=Z,5µm,18.0s						
CLL	**Collm**	158.44	342	ePKIKP	PKPdf	16 25 13.0	-0.1
CLL				e		16 25 26.0	
CLL				i		16 25 47.4	
CLL				pmax	pmax		
	comp=Z,14nm,1.5s						
CLL				pmax	pmax		
	comp=Z,62nm,1.3s						
CLL				MLR	MLR		
	comp=Z,5µm,18.6s						
CLL	**Collm**	158.44	342	ePKPdf	PKPdf	16 25 12.5	-0.5
	baz=27,slow=1.0						
CLL				ePKPab	PKPab	16 25 48.1	+0.4
	baz=19,slow=4.4						
CLL				ePP	PP	16 29 25.9	-1.7
	baz=22,slow=5.6						
CLL				eSS	SS	16 49 26.9	-0.5
	baz=21,slow=11						
CLL	**Collm**	158.44	342	AMS	AMS	17 49 00.0	
CLL	**Collm**	158.44	342	ePKPdf	PKPdf	16 25 13.0	-0.1
	comp=Z,14nm,1.5s						
CLL	**Collm**	158.44	342	ePKPdif	PKPdf	16 25 26.0	+13
CLL	**Collm**	158.44	342	i PKPab	PKPab	16 25 47.4	-0.3
	comp=Z,62nm,1.3s						
CLL	**Collm**	158.44	342	i x	x	16 26 01.3	
	comp=Z,59nm,1.0s						
CLL	**Collm**	158.44	342	ePP	PP	16 29 26.0	-1.5
CLL	**Collm**	158.44	342	ePPP	PPP	16 33 12.0	
CLL	**Collm**	158.44	342	ePSKS		16 39 54.0	
CLL	**Collm**	158.44	342	ePPS	PPS	16 42 48.0	
CLL	**Collm**	158.44	342	ex	x	16 44 28.0	
CLL	**Collm**	158.44	342	eSS	SS	16 49 24.0	-3.5
CLL	**Collm**	158.44	342	ex	x	16 52 39.0	
CLL	**Collm**	158.44	342	eSSS	SSS	16 55 12.0	
CLL	**Collm**	158.44	342	ex	x	16 57 48.0	
CLL	**Collm**	158.44	342	eSSSS		17 00 06.0	
CLL	**Collm**	158.44	342	AMS	AMS	17 44 00.0	
	comp=N,3µm,19.1s						
CLL	**Collm**	158.44	342	AMS	AMS	17 44 00.0	
	comp=E,2µm,18.7s						
CLL	**Collm**	158.44	342	AMS	AMS	17 45 00.0	
	comp=Z,5µm,18.6s						
PVL	**Pavlikeni**	158.46	310	P	PKPab	16 25 48.6	+0.4
MAUC	**Maruska**	158.49	332	ePKPAB	PKPab	16 25 48.7	+0.6
IBBN	**Ibbenburen**	158.53	351	ePKPdf	PKPdf	16 25 12.6	-0.5
	baz=27,slow=1.0						
IBBN				ePKPab	PKPab	16 25 48.0	-0.1
	baz=19,slow=4.4						
IBBN				eSS	SS	16 49 29.0	+0.9
	baz=21,slow=11						
VLAD	**Vladila**	158.55	313	⇓P	PKPab	16 25 49.8	+1.4
BRG	**Berggiesshubel**	158.57	340	ePKPdf	PKPdf	16 25 12.5	-0.7
	baz=27,slow=1.0						
BRG				ePKPab	PKPab	16 25 47.8	-0.5
	baz=19,slow=4.4						
BRG				eSS	SS	16 49 26.7	-2.2
	baz=21,slow=11						
BRG	**Berggiesshubel**	158.57	340	Amp		16 25 51.6	
	comp=Z,52nm,1.2s						
BRG	**Berggiesshubel**	158.57	340	PP	PP	16 29 31.0	+2.7
BRG	**Berggiesshubel**	158.57	340	⇓ePKPf		16 25 12.7	
BRG	**Berggiesshubel**	158.57	340	Amp		16 25 17.4	
	comp=Z,10nm,1.1s						
BRG	**Berggiesshubel**	158.57	340	PKPab	PKPab	16 25 48.3	0.0
PSZ	**Piszkesteto**	158.67	327	IAMs_20	IAMs_20	17 45 18.8	
	comp=Z,5µm,20.0s						
PSZ	**Piszkesteto**	158.67	327	⇑P	PKPab	16 25 48.7	-0.3
PSZ	**Piszkesteto**	158.67	327	PKIKP	PKPdf	16 25 13.2	-0.4
PVCC	**Panska Ves**	158.69	339	ePKPAB	PKPab	16 25 50.5	+1.7
PVCC				AMS	AMS	17 51 00.0	
	comp=Z,5µm,18.0s						
PVCC	**Panska Ves**	158.69	339	ePKP2	PKPab	16 25 50.5	+1.7
PVCC				MLR	MLR		
	comp=Z,5µm,18.0s						
ALN	**Alexandroupoli**	158.73	304	IAMs_20	IAMs_20	17 42 50.6	
	comp=Z,5µm,20.0s						
VYHS	**Vyhne**	158.73	329	ePKIKP	PKPdf	16 25 14.0	+0.4
VYHS				e		16 25 49.3	
VYHS	**Vyhne**	158.73	329	ePKP	PKPdf	16 25 14.0	+0.4
VYHS				e		16 25 49.3	
RICC	**Richard**	158.82	339	AMS	AMS	17 44 20.0	
	comp=Z,4µm,17.9s						
NEUB	**Neuenburg**	158.84	344	ePKPab	PKPab	16 25 49.1	-0.4
	baz=19,slow=4.4						
NEUB				eSS	SS	16 49 31.6	0.0
	baz=21,slow=11						
GTTG	**Gottingen**	158.92	347	ePKPab	PKPab	16 25 49.7	-0.1
	baz=19,slow=4.4						
GTTG				eSS	SS	16 49 33.1	+0.8
	baz=21,slow=11						
SRE	**Strehaia**	158.94	316	⇓P	PKPab	16 25 51.9	+1.7
SRE	**Strehaia**	158.94	316	⇓PKP2	PKPab	16 25 51.9	+1.7
SURR	**Surduc**	158.95	319	⇑P	PKPab	16 25 49.7	-0.5
JAVC	**Velka Javorina**	158.95	331	ePKP	PKPdf	16 25 14.3	+0.4
JAVC				e		16 25 50.6	
VRAC	**Vranov**	159.01	334	ePKP	PKPdf	16 25 13.4	-0.5
VRAC				e		16 25 50.2	
VRAC	**Vranov**	159.01	334	⇑P	PKPab	16 25 49.2	-1.1
VRAC	**Vranov**	159.01	334	⇑PKP2	PKPab	16 25 49.2	-1.1
KARP	**Karpathos**	159.02	289	IAMs_20	IAMs_20	17 51 35.6	
	comp=Z,5µm,20.0s						
PRA	**Prague**	159.13	338	AMS	AMS	17 50 10.0	
	comp=Z,4µm,17.9s						
GOPC	**GO Pecny, Ondr**	159.15	337	ePKPAB	PKPab	16 25 52.0	+1.1
GOPC				AMS	AMS	17 47 10.0	
	comp=Z,4µm,18.3s						
GOPC	**GO Pecny, Ondr**	159.15	337	ePKP2	PKPab	16 25 52.0	+1.1
GOPC				MLR	MLR		
	comp=Z,4µm,18.3s						
PRU	**Pruhonice**	159.16	338	ePKPAB	PKPab	16 25 51.3	+0.4
PRU				AMS	AMS	17 49 20.0	
PRU	**Pruhonice**	159.16	338	ePKP2	PKPab	16 25 51.3	+0.4
PRU				MLR	MLR		
	comp=N,2µm,18.2s						
MPEP	**Malo Peshtene**	159.28	312	P	PKPab	16 25 52.6	+0.9
HERR	**Herculane**	159.29	317	⇓P	PKPab	16 25 51.9	+0.2
KRUC	**Moravsky**	159.29	334	ePKP	PKPdf	16 25 13.3	-0.9
KRUC				e		16 25 51.5	
VALD	**Valchedram**	159.31	313	P	PKPab	16 25 52.6	+0.8
BZS	**Buzias**	159.31	320	⇓P	PKPab	16 25 52.3	+0.6
BZS	**Buzias**	159.31	320	⇓PKP2	PKPab	16 25 52.3	+0.6
RZN	**Rozhen**	159.35	307	P	PKPab	16 25 52.2	-0.1
PGB	**Panagyurishte**	159.39	309	P	PKPab	16 25 52.7	+0.4
TANN	**Tannenbergstha**	159.40	342	ePKPdf	PKPdf	16 25 13.6	-0.7
	baz=27,slow=1.0						
TANN				ePKPab	PKPab	16 25 52.2	+0.2
	baz=19,slow=4.4						
TANN				ePP	PP	16 29 30.9	-1.9
	baz=22,slow=5.6						
TANN				eSS	SS	16 49 36.6	-1.1
	baz=21,slow=11						
MOX	**Moxa**	159.40	343	ePKPdf	PKPdf	16 25 13.3	-0.9
	baz=27,slow=1.0						
MOX				ePKPab	PKPab	16 25 51.8	-0.1
	baz=19,slow=4.4						
MOX				ePP	PP	16 29 31.4	-1.4
	baz=22,slow=5.6						
MOX				eSS	SS	16 49 36.4	-1.3
	baz=21,slow=11						
MOX				eL	L	17 56 17.7	
	comp=N,4µm,18.4s						
TREC	**Trest**	159.43	335	ePKPAB	PKPab	16 25 52.4	+0.3
TREC				AMS	AMS	17 48 50.0	
	comp=N,5µm,18.0s						
TREC	**Trest**	159.43	335	PKIKP	PKPdf	16 25 13.5	-0.9
BUG	**Bochum--Univer**	159.45	352	ePKPdf	PKPdf	16 25 14.4	+0.2
	baz=27,slow=1.0						
BUG				eSS	SS	16 49 39.7	+1.9
	baz=21,slow=11						
SRO	**Srobarova**	159.47	329	ePKIKP	PKPdf	16 25 14.9	+0.5
SRO				e		16 25 52.8	
SRO	**Srobarova**	159.47	329	ePKP	PKPdf	16 25 14.9	+0.5
SRO				e		16 25 52.8	
MODS	**Modra-Piesok**	159.49	331	ePKIKP	PKPdf	16 25 14.9	+0.4
MODS				e		16 25 52.8	
MODS	**Modra-Piesok**	159.49	331	ePKP	PKPdf	16 25 14.9	+0.4
MODS				e		16 25 52.8	
KASTN	**Kahler Asten**	159.52	349	ePKPdf	PKPdf	16 25 13.4	-1.0
	baz=27,slow=1.0						
KASTN				ePKPab	PKPab	16 25 51.9	-0.5
	baz=19,slow=4.4						
KASTN				eSS	SS	16 49 40.5	+1.7
	baz=21,slow=11						
NKC	**Novy Kostel**	159.57	342	AMS	AMS	17 57 20.0	
	comp=N,5µm,17.3s						
UBBA	**Unterbreizbach**	159.60	346	ePKPdf	PKPdf	16 25 13.6	-0.7
	baz=27,slow=1.0						
UBBA				ePKPab	PKPab	16 25 52.7	+0.1
	baz=19,slow=4.4						
UBBA				eSS	SS	16 49 38.4	-1.0
	baz=21,slow=11						
ZVC	**Zvikov**	159.75	338	ePKPAB	PKPab	16 25 54.2	+0.7
ZVC				AMS	AMS	17 53 30.0	
	comp=N,6µm,17.7s						
MDVR	**Moldovita**	159.76	318	⇑P	PKPab	16 25 53.2	-0.6
MANZ	**Manzenberg**	159.88	342	ePKPab	PKPab	16 25 53.9	-0.1
	baz=19,slow=4.4						
MANZ				eSS	SS	16 49 42.8	0.0
	baz=21,slow=11						
PLNA	**Plana**	159.90	310	P	PKPab	16 25 55.5	+0.9
VTS	**Vitosha**	159.96	311	P	PKPab	16 25 55.9	+1.0
ROTZ	**Rotzenmuhle**	160.06	341	ePKPab	PKPab	16 25 54.9	+0.1
	baz=19,slow=4.4						
ROTZ				eSS	SS	16 49 45.8	+1.2
	baz=21,slow=11						
MMB	**Musomishta**	160.09	307	P	PKPab	16 25 55.2	-0.2
KHC	**Kasperske Hory**	160.22	338	ePKPDF	PKPdf	16 25 14.5	-0.8
KHC				ex	x	16 25 35.1	
KHC				ePKPAB	PKPab	16 25 56.0	+0.4
KHC				AMS	AMS	17 51 10.0	
	comp=N,6µm,17.3s						
KHC	**Kasperske Hory**	160.22	338	PKIKP	PKPdf	16 25 14.8	-0.5
CKRC	**Cesky Krumlov**	160.25	337	ePKPAB	PKPab	16 25 56.0	+0.3
CKRC				AMS	AMS	17 58 00.0	
	comp=N,5µm,17.9s						
CKRC	**Cesky Krumlov**	160.25	337	ePKP2	PKPab	16 25 56.0	+0.3
CKRC				MLR	MLR		
	comp=Z,5µm,17.9s						
UCC	**Uccle**	160.34	357	dPKP	PKPab	16 25 56.3	+0.4
GRF	**Grafenberg Arr**	160.38	343	ePKPab	PKPab	16 25 56.7	+0.5
	baz=19,slow=4.4						
GRF				eSS	SS	16 49 48.0	0.0
	baz=21,slow=11						
GRF				eL	L	17 42 48.1	
	comp=Z,6µm,19.9s						
MEM	**Membach**	160.41	353	dPKP	PKPab	16 25 55.7	-0.5
BTNL	**Ternell**	160.42	353	dPKPdf	PKPdf	16 25 14.9	-0.5
BTNL				dPKP	PKPab	16 25 55.7	-0.6
CONA	**Conrad Observa**	160.42	333	ePKP	PKPdf	16 25 15.4	-0.2
	comp=Z,9.1nm,1.7s,SNR=5.3						
CONA				i PKP	PKPab	16 25 57.2	+0.6
	comp=Z,39nm,1.1s,SNR=7.6						
WET	**Wettzell**	160.42	339	ePKPdf	PKPdf	16 25 15.0	-0.5
	baz=27,slow=1.0						
WET				ePKPab	PKPab	16 25 57.0	+0.6
	baz=19,slow=4.4						
WET				eSS	SS	16 49 50.4	+1.8
	baz=21,slow=11						
RONA	**Rosalia, Austr**	160.43	331	i PKP	PKPdf	16 25 15.7	+0.1
	comp=Z,7.4nm,1.2s						
RONA				i PKP	PKPab	16 25 57.2	+0.7
	comp=Z,113nm,1.9s,SNR=13						
GEC2	**GERESS Array S**	160.43	338	ePKPdf	PKPdf	16 25 14.7	-0.9
	baz=27,slow=1.0						
GEC2				ePKPab	PKPab	16 25 56.5	0.0
	baz=19,slow=4.4						
GEC2				eSS	SS	16 49 50.3	+1.4
	baz=21,slow=11						
GERES	**GERESS Array B**	160.43	338	PKP	PKPdf	16 25 15.7	+0.1
	comp=Z,1.1nm,0.8s,baz=306,slow=0.8,SNR=7.8						
GERES				PKPab	PKPab	16 25 56.6	0.0
	comp=Z,7.4nm,0.8s,baz=35,slow=4.9,SNR=18						
TNS	**Taunus Mts**	160.46	349	ePKPdf	PKPdf	16 25 14.8	-0.7
	baz=27,slow=1.0						
TNS				ePKPab	PKPab	16 25 56.5	-0.1
	baz=19,slow=4.4						
TNS				ePP	PP	16 29 37.5	-1.0
	baz=22,slow=5.6						
TNS				eSS	SS	16 49 49.6	+0.9
	baz=21,slow=11						
BSTI	**Sart Tilman**	160.47	354	dPKP	PKPab	16 25 56.5	0.0
MORH	**Mrgy, Hungar**	160.48	325	⇓P	PKPdf	16 25 14.9	-0.7
FRGS	**Fruska Gora**	160.59	321	eP	PKPab	16 25 57.9	+0.5
BCLA	**Clavier**	160.66	355	dPKP	PKPab	16 25 56.7	-0.7
BGES	**Gesves**	160.71	355	dPKPdf	PKPdf	16 25 15.8	+0.1
BGES				dPKP	PKPab	16 25 55.9	-1.7
BMRD	**Maredsous**	160.81	356	dPKPdf	PKPdf	16 25 16.1	+0.3
BMRD				dPKP	PKPab	16 25 58.1	+0.1
VAY	**Valandovo**	160.99	308	i P	PKPdf	16 25 15.7	-0.6
DOU	**Dourbes**	161.03	356	dPKPdf	PKPdf	16 25 16.5	+0.5
DOU				dPKP	PKPab	16 25 58.5	-0.5
MOA	**Molln**	161.09	335	ePKP	PKPdf	16 25 17.9	+1.6
	comp=Z,5.6nm,1.5s						
MOA				i PKP	PKPab	16 26 00.2	+0.8
	comp=Z,36nm,1.2s,SNR=7.2						
ARSA	**Arzberg**	161.10	332	i PKP	PKPdf	16 25 17.3	+1.0
	comp=Z,4.0nm,1.0s						
ARSA				ePKP	PKPab	16 25 59.9	+0.4
	comp=Z,25nm,1.3s,SNR=7.5						
TEKS	**Tekeris**	161.13	320	eP	PKPab	16 25 58.8	-1.0
WLF	**Walferdange**	161.32	353	dPKPdf	PKPdf	16 25 16.7	+0.3
WLF				dPKP	PKPab	16 26 00.8	+0.5
WLF	**Walferdange**	161.32	353	ePKPdf	PKPdf	16 25 16.8	+0.3
	baz=27,slow=1.0						
WLF				eSS	SS	16 49 59.9	+2.3
	baz=21,slow=11						
SKO	**Skopje**	161.44	311	i P	PKPdf	16 25 16.9	+0.1
BIOA	**Bad Ischl, Aus**	161.45	336	i PKP	PKPdf	16 25 16.6	0.0
	comp=Z,5.5nm,1.2s						
BIOA				i PKP	PKPab	16 26 01.4	+0.4
	comp=Z,64nm,1.2s,SNR=14						
BBLS	**Lazi&#263i**	161.63	318	eP	PKPab	16 26 02.9	+0.9
SJES	**Sjenica**	161.66	316	eP	PKPab	16 26 02.8	+0.6
RJOB	**Jochberg**	161.69	338	ePKPab	PKPab	16 26 02.5	+0.4
	baz=19,slow=4.4						
RJOB				eSS	SS	16 50 04.1	+2.1
	baz=21,slow=11						
STU	**Stuttgart**	161.71	346	eSS	SS	16 50 02.5	+0.7
	baz=21,slow=11						
HAPS	**Han Pijesak,Bl**	161.75	320	eP	PKPab	16 26 03.3	+0.7
SOKA	**Soboth**	161.76	332	i PKP	PKPdf	16 25 17.3	+0.2
	comp=Z,11nm,1.4s,SNR=7.2						
SOKA				i PKP	PKPab	16 26 02.4	0.0
	comp=Z,37nm,1.2s,SNR=9.6						
FUR	**Furstenfeldbru**	161.77	341	ePKPab	PKPab	16 26 03.0	+0.7
	baz=19,slow=4.4						
FUR				eSS	SS	16 50 04.5	+1.9
	baz=21,slow=11						
RUDO	**Rudo**	161.80	318	eP	PKPab	16 26 02.8	+0.1
LESA	**Schwarzleotal**	162.00	337	i PKP	PKPdf	16 25 17.3	0.0
	comp=Z,16nm,1.6s,SNR=8.0						
LESA				i PKP	PKPab	16 26 04.2	+0.7
	comp=Z,33nm,1.2s,SNR=12						
TORD	**Torodi Ar. Bea**	162.05	177	PKP	PKPdf	16 25 18.1	-0.1
	comp=Z,71nm,0.3s,baz=135,slow=2.0,SNR=1.7						
TORD				PKPab	PKPab	16 26 04.8	+0.6
	comp=Z,54nm,0.3s,baz=167,slow=2.6,SNR=1.3						
AGG	**Agios Georgios**	162.05	301	PKIKP	PKPdf	16 25 16.0	-1.6
OBKA	**Obir**	162.09	332	eP	PKPab	16 26 03.4	-0.5
OBKA	**Obir**	162.09	332	i PKP	PKPdf	16 25 17.5	0.0
	comp=Z,8.0nm,2.0s						
OBKA				i PKP	PKPab	16 26 03.7	-0.3
	comp=Z,8.6nm,1.3s						
A051A	**Mrakovica**	162.19	325	eP	PKPab	16 26 04.1	-0.3
BLY	**Banja Luka**	162.24	324	eP	PKPab	16 26 05.0	+0.5
CRES	**Cresnjevec Ost**	162.26	329	eP	PKPab	16 26 03.1	-1.5
OHR	**Ohrid**	162.28	309	i P	PKPdf	16 25 18.3	+0.5
BFO	**Black Forest**	162.30	347	ePKPdf	PKPdf	16 25 16.7	-0.8
	baz=27,slow=1.0						
BFO				ePKPab	PKPab	16 26 04.0	-0.7
	baz=19,slow=4.4						
BFO				eSS	SS	16 50 07.8	-0.2
	baz=21,slow=11						
UPM	**Unac-Piva**	162.32	317	eP	PKPab	16 26 05.3	+0.1
MYKA	**Terra Mystica**	162.35	334	ePKP	PKPdf	16 25 17.3	-0.3
	comp=Z,5.7nm,1.1s						
MYKA				i PKP	PKPab	16 26 04.8	-0.2
	comp=Z,29nm,1.0s,SNR=8.2						
WATA	**Walderalm**	162.43	339	i PKP	PKPdf	16 25 18.8	+1.0
	comp=Z,13nm,1.8s						
WATA				i PKP	PKPab	16 26 06.0	+0.6
	comp=Z,63nm,1.1s,SNR=14						
WTTA	**Wattenberg**	162.48	339	i PKP	PKPdf	16 25 17.4	-0.5
	comp=Z,12nm,1.3s						
WTTA				i PKP	PKPab	16 26 06.0	+0.3
	comp=Z,144nm,2.0s,SNR=7.2						
UBR	**Ueberruh**	162.53	343	ePKPdf	PKPdf	16 25 16.4	-1.3
	baz=27,slow=1.0						
UBR				ePKPab	PKPab	16 26 05.2	-0.5
	baz=19,slow=4.4						
UBR				eSS	SS	16 50 11.6	+1.1
	baz=21,slow=11						
RETA	**Reutte**	162.53	341	i PKP	PKPdf	16 25 15.2	-2.7
	comp=Z,3.3nm,1.5s						
RETA				i PKP	PKPab	16 26 06.2	+0.5
	comp=Z,61nm,1.4s,SNR=12						
MOTA	**Moosalm**	162.56	340	i PKP	PKPdf	16 25 18.8	+0.9
	comp=Z,9.7nm,1.3s						
MOTA				i PKP	PKPab	16 26 06.8	+0.8
	comp=Z,82nm,1.2s,SNR=18						
BOJS	**Bojanci**	162.60	329	eP	PKPab	16 26 05.1	-1.0
SQTA	**Sankt Quirin**	162.65	340	ePKP	PKPdf	16 25 19.8	+1.8
	comp=Z,6.2nm,0.9s						
SQTA				i PKP	PKPab	16 26 07.0	+0.6
	comp=Z,63nm,1.3s,SNR=9.4						
ABTA	**Abfaltersbach**	162.65	337	i PKP	PKPdf	16 25 17.7	-0.2
	comp=Z,10nm,1.6s,SNR=6.2						
ABTA				i PKP	PKPab	16 26 06.1	-0.3
	comp=Z,45nm,1.5s,SNR=6.4						
BRY	**Bratogost**	162.72	317	eP	PKPab	16 26 06.1	-0.8
DRME	**Dracevica, Mon**	162.75	314	eP	PKPab	16 26 06.1	-0.8
A050A	**Klekovaca**	162.76	324	eP	PKPab	16 26 06.6	-0.3
CEY	**Cerknica**	162.77	331	eP	PKPab	16 26 05.6	-1.2
DAVA	**Damuels**	162.95	343	i PKP	PKPdf	16 25 17.3	-1.0
	comp=Z,5.9nm,1.1s						
DAVA				i PKP	PKPab	16 26 08.0	+0.3
	comp=Z,49nm,1.5s,SNR=7.0						
FETA	**Feichten**	162.96	341	i PKP	PKPdf	16 25 18.8	+0.4
	comp=Z,9.7nm,1.2s						
FETA				i PKP	PKPab	16 26 08.7	+0.9
	comp=Z,42nm,1.3s,SNR=8.1						
HCY	**Herceg Novi**	163.02	316	eP	PKPab	16 26 07.7	-0.4
SKDS	**Skadanscina**	163.09	331	eP	PKPab	16 26 07.0	-1.3
PMOZ	**Porto Moniz, M**	163.15	79	eLR	LR	17 32 10.7	
PMOZ				i AMs_20		17 39 41.9	
	comp=Z,4µm,20.0s						
STON	**Ston**	163.22	318	eP	PKPab	16 26 07.2	-1.7
MATE	**Matera**	165.16	313	⇓P	PKPab	16 26 17.2	-0.3
BNI	**Bardonecchia**	165.77	348		PKPab	16 26 20.8	+0.7
BNI	**Bardonecchia**	165.77	348	PKIKP	PKPdf	16 25 21.2	+0.3
TIP	**Timpagrande**	165.92	308	⇓P	PKPab	16 26 21.5	+0.4
PGAV	**Gavieira, Arco**	166.16	36	ePKPab	PKPab	16 26 23.2	+1.2
PGAV				eSS	SS	16 50 59.3	+11
PGAV				eLR	LR	17 32 22.2	
PGAV				i AMs_20		17 47 28.3	
	comp=Z,5µm,16.0s						
POLO	**Lamas de Olo**	166.83	36	ePKPdf	PKPdf	16 25 23.5	+1.7
POLO				ePKPab	pPKPab	16 26 28.9	+0.6
PVIS	**Viseu**	167.25	39	ePKPdf	PKPdf	16 25 23.7	+1.6
PVIS				ePKPab	PKPab	16 26 27.6	+0.8
MVO	**Moncorvo**	167.37	35	ePKPdf	PKPdf	16 25 24.7	+2.6
MVO				ePKPab	PKPab	16 26 27.9	+0.6
MVO				eSS	SS	16 51 10.1	+9.1
MVO				eLR	LR	17 31 03.8	
MVO				i AMs_20		17 45 26.1	
	comp=Z,6µm,18.0s						
MTE	**Manteigas**	167.67	39	ePKPab	PKPab	16 26 31.6	+2.9
MTE				eSS	SS	16 51 14.0	+10
MTE				eLR	LR	17 31 53.5	
MTE				i AMs_20		17 39 46.9	
	comp=Z,9µm,20.0s						
LIS	**Lisbon**	167.79	49	eSS	SS	16 51 07.7	+1.9
LIS				IAMs_20	IAMs_20	17 38 41.2	
	comp=Z,7µm,21.8s						
PSARD	**Sardoal**	167.86	43	ePKPab	PKPab	16 26 32.3	+2.8
PCBR	**Castelo Branco**	168.09	41	ePKPdf	PKPdf	16 25 24.5	+1.9
PCBR				ePKPab	PKPab	16 26 30.8	+0.3
PMTG	**Montargil**	168.16	45	ePKPab	PKPab	16 26 31.1	+0.3
PMRV	**Marv??o**	168.42	42	ePKPab	PKPab	16 26 31.8	-0.2
PMRV				eSS	SS	16 51 16.1	+4.3
PMRV				eLR	LR	17 33 17.7	
PMRV				i AMs_20		17 44 12.6	
	comp=Z,5µm,18.0s						
PESTR	**Estremoz**	168.68	45	ePKPdf	PKPdf	16 25 23.3	+0.3
PESTR				ePKPab	PKPab	16 26 34.2	+1.0
MORF	**Marmelete**	168.88	54	ePKPdf	PKPdf	16 25 24.1	+0.8
MORF				eSS	SS	16 51 19.0	+1.8
MORF				IAMs_20	IAMs_20	17 45 38.8	
	comp=E,7µm,18.4s						
MESJ	**Messejana**	168.89	50	ePKPdf	PKPdf	16 25 24.0	+0.8
MESJ				eSS	SS	16 51 18.9	+1.9
MESJ				IAMs_20	IAMs_20	17 42 34.3	
	comp=Z,6µm,21.2s						
MESJ	**Messejana**	168.89	50	ePKPdf	PKPdf	16 25 27.5	+4.2
PVAQ	**Vaqueiros**	169.46	51	eLR	LR	17 33 59.7	
PVAQ				i AMs_20		17 41 16.2	
	comp=Z,5µm,20.0s						
ESDC	**Sonseca Array**	169.98	30	PKP	PKPdf	16 25 24.8	+0.9
	comp=Z,3.8nm,1.1s,baz=345,slow=2.2,SNR=12						
ESDC				PKPab	PKPab	16 26 38.8	0.0
	comp=Z,12nm,1.2s,baz=320,slow=5.1,SNR=7.1						
ESDC				PP	PP	16 30 28.5	+0.1
	comp=Z,2.2nm,1.1s,baz=335,slow=6.4,SNR=5.0						
TAM	**Tamanrasset**	171.25	198	PKIKP	PKPdf	16 25 25.6	+0.4
KEST	**Kesra**	172.74	311	PKP	PKPdf	16 25 25.6	+0.2
	comp=Z,2.9nm,0.8s,baz=26,slow=3.8,SNR=4.0						
KEST				PKPab	PKPab	16 26 51.4	+0.1
	comp=Z,16nm,1.0s,baz=23,slow=1.1,SNR=8.4						
KEST				PP	PP	16 30 42.1	-0.7
	comp=Z,7.3nm,1.0s,baz=49,slow=10,SNR=4.4						

CATAC ***18*** *16:12:19.4*$\pm$*0.4, 10°N*$\pm$*2°×8°6W*$\pm$*°, h*$4^{km}\pm2^{km}$*, M4.8/31, MLv4.8/31, Error ellipse: s-maj=6.1km s-min=3.3km az=50.5, Moment Tensor Solution. Moment tensor: Scale* 10^{15}*Nm;* M_{rr}*3.92;* $M_{\theta\theta}$*-4.34;* $M_{\phi\phi}$*0.41;* $M_{r\theta}$*1.13;* $M_{\theta\phi}$*0.36;* $M_{\phi r}$*-0.44; Fault plane solution:* $M_0 4.33696\times10^{15}$ *NP1:* ϕ_s*99.64187°,* δ*53.08755°,* λ*96.70996°. NP2:* ϕ_s*268.55865°,* δ*37.43179°,* λ*81.15848°. Principal axes: T 4.1186, Plg80.4640°, Azm39.5568°; N 0.4078, Plg5.3605°, Azm275.6001°; P -4.5265, Plg7.8635°, Azm184.8576°; Moment Tensor Solution. Moment tensor: Scale* 10^{15} *Nm;* M_{rr}*4.13;* $M_{\theta\theta}$*-4.12;* $M_{\phi\phi}$*-0.01;* $M_{r\theta}$*1.53;* $M_{\theta\phi}$*0.11;* $M_{\phi r}$*-0.33; Fault plane solution:* $M_0 4.41183\times10^{15}$ *NP1:* ϕ_s*95.23148°,* δ*55.31644°,* λ*94.27143°. NP2:* ϕ_s*267.75396°,* δ*34.91287°,* λ*83.85686°. Principal axes: T 4.4221, Plg79.1790°, Azm21.5231°; N -0.0206, Plg3.5114°, Azm272.7978°; P -4.4015, Plg10.2224°, Azm182.1638°; Moment Tensor Solution. Moment tensor: Scale* 10^{15} *Nm;* M_{rr}*2.62;* $M_{\theta\theta}$*-2.65;* $M_{\phi\phi}$*0.03;* $M_{r\theta}$*1.54;* $M_{\theta\phi}$*2.28;* $M_{\phi r}$*0.30; Fault plane solution:* $M_0 3.82156\times10^{15}$ *NP1:* ϕ_s*96.45968°,* δ*60.19732°,* λ*59.59164°. NP2:* ϕ_s*326.19983°,* δ*41.55015°,* λ*131.46731°. Principal axes: T 3.3408, Plg61.7177°, Azm317.4016°; N 0.8263, Plg26.0539°,* *Azm112.7213°; P -4.1671, Plg10.2381°, Azm207.7873°; confirmed*

*UCR **18** 16:12:20.0±0.9, 10°.33N×86°.33W, h8km±7km, MW5.3*

*NEIC **18** 16:12:22.2±1.9, 10°.58N±0°.08×86°.08W±0°.08, h10km±1km, mb4.9/224, Error ellipse: s-maj=17.2km s-min=7.7km az=227.0*

*IDC **18** 16:12:25.1±2.0, 11°.02N×85°.80W, h30km±15km, mb4.2/13, mbtmp4.4/13, MS5.0/1, Error ellipse: s-maj=28.4km s-min=13.7km az=49.0*

ISC 18 16:12:21.5±0.9, **10°.47N**±0°.03×**86°.20W**±0°.03, **h16**km±5km, **n289**, σ**1^{s}45**/212, **mb4.9**/116, **42C-1D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SACU	Santa Cruz	0.64	108	eP	Pb	16 12 34.9	+0.5
SACU				eS	Sn	16 12 44.7	-1.2
ALIBA	Liberia Airpor	0.66	79	⇑eP	Pn	16 12 36.8	+0.6
ALIBA				eS	Sn	16 12 48.9	+2.6
ELI1	Hacienda Flor	0.66	74	⇑eP	Pn	16 12 37.3	+1.0
ELI1				eS	Sn	16 12 49.6	+3.2
ERIA	Liberia	0.77	77	eP	Pn	16 12 38.3	+0.6
NICO	Nicoya	0.81	114	⇑eP	Pg	16 12 37.1	-0.2
LAPC	Finca la Perla	0.81	68	⇑eP	Pn	16 12 38.6	+0.2
LCRUZ	La Cruz	0.83	43	⇑eP	Pn	16 12 39.5	+0.9
PLVR	Palo Verde	0.85	98	⇑eP	Pn	16 12 38.5	-0.5
VRLE	La Escondida,	0.88	69	⇑eP	Pn	16 12 39.7	+0.3
CMARA	Lajas Hojancha	0.89	120	eP	Pg	16 12 37.8	-0.9
CMARA	Lajas Hojancha	0.89	120	P	Pg	16 12 38.5	-0.2
CMARA	Lajas Hojancha	0.89	120	S	Sg	16 12 49.6	-0.8
GPS1	Guardaparques	0.89	70	⇑eP	Pn	16 12 39.9	+0.4
INDI	Punta indio, G	0.91	131	S	Sg	16 12 48.6	-2.6
INDI	Punta indio, G	0.91	131	⇓P	Pg	16 12 38.1	-1.1
VORI	VORI	0.91	67	⇑eP	Pn	16 12 40.2	+0.3
BAGA	Bagaces	0.93	86	⇑eP	Pn	16 12 40.4	+0.4
BUAI	Buenos Aires	0.95	64	⇑eP	Pn	16 12 41.0	+0.8
PEJA	Penjamo Buenos	0.97	64	eP	Pn	16 12 41.7	+1.1
CARN	Rivas	0.98	43	⇑eP	Pn	16 12 41.8	+1.1
CARN	Rivas	0.98	43	⇑P	Pn	16 12 41.9	+1.3
CARN				S	Sn	16 12 59.5	+5.2
COLC	Colonia	1.00	78	⇑eP	Pn	16 12 41.4	+0.3
MESS	Mesas	1.03	74	⇑eP	Pn	16 12 41.9	+0.5
HORNC	Hornillas	1.04	76	⇑eP	Pn	16 12 41.9	+0.4
CUI	Cuipilapa	1.04	79	⇑eP	Pn	16 12 42.0	+0.5
CNAS	Canas	1.09	92	eP	Pn	16 12 42.5	+0.3
INVE	Universidad In	1.12	89	⇑eP	Pn	16 12 43.0	+0.4
VMAR	Armenia, Volca	1.12	72	⇑eP	Pn	16 12 43.5	+0.8
MOTZ	Rio Naranjo	1.13	79	⇑eP	Pn	16 12 43.6	+0.8
TIMP	Tierras Morena	1.17	84	⇑eP	Pn	16 12 43.7	+0.3
TILA	Tilaran	1.21	90	eP	Pn	16 12 44.3	+0.4
TENO	El Achiote	1.23	79	⇑eP	Pn	16 12 44.1	0.0
JCR1	Jicaral	1.24	120	⇑eP	Pb	16 12 43.0	-1.5
JUNT	Juntas	1.24	98	eP	Pg	16 12 44.2	-1.1
JTS	Las Juntas de	1.24	98		Pb	16 12 44.0	-0.6
JTS	Las Juntas de	1.24	98	Pg	Pg	16 12 44.3	-1.2
	276nm,0.3s,baz=271,slow=8.1,SNR=299						
JTS				Lg	Lg	16 13 02.4	
	435nm,0.3s,baz=337,slow=24,SNR=6.7						
JTS	Las Juntas de	1.24	98	⇑eP	Pg	16 12 44.2	-1.2
UPAL	Upala	1.25	70	eP	Pn	16 12 45.5	+1.2
QUEB	Quebradon, Cot	1.29	83	⇑eP	Pg	16 12 45.8	-0.6
MTEVE	Monteverde	1.36	96	eP	Pn	16 12 46.0	-0.1
TABAC	Tabacon	1.41	89	⇑eP	Pg	16 12 47.7	-1.0
ARE1	Arenal 1	1.46	90	⇑eP	Pg	16 12 48.5	-1.1
VARE2	V. Arenal	1.46	90	⇑eP	Pg	16 12 48.6	-1.0
NANN	Nandasmo	1.47	3	S	Sg	16 13 12.4	+3.5
NANN	Nandasmo	1.47	3	⇑P	Pg	16 12 49.6	-0.2
REZ	Monterrey de S	1.48	87	eP	Pg	16 12 49.0	-1.0
SABN	Sabanita	1.48	2	P	Pn	16 12 47.7	+0.1
VACR	Volcan Arenal	1.50	90	⇑eP	Pg	16 12 49.0	-1.4
CRUN	El Crucero	1.51	356	P	Pn	16 12 46.8	-1.3
MASN	Masaya	1.51	2	P	Pg	16 12 49.8	-0.9
MAS3	Al N del Volca	1.55	1	⇑P	Pg	16 12 49.6	-1.8
MAS3				S	Sg	16 13 12.7	+1.2
SOCE	Pocosol	1.56	93		Pb	16 12 49.4	-0.7
SOCE	Pocosol	1.56	93	eP	Pb	16 12 49.6	-0.5
SOCE	Pocosol	1.56	93	S	Sg	16 13 18.0	+6.2
SOCE	Pocosol	1.56	93	⇑P	Pb	16 12 49.6	-0.5
LCHIL	Los Chiles	1.57	69	eP	Pg	16 12 49.8	-1.9
UNAN	Cigeo UNAN	1.64	358	⇑P	Pb	16 12 51.0	-0.4
UNAN				S	Sg	16 13 16.2	+1.9
ENAN	Enatrel Managu	1.64	358	P	Pb	16 12 51.3	-0.2
USIM	UNAN	1.64	358		Pn	16 12 49.9	+0.1
USIM	UNAN	1.64	358	P	Pb	16 12 51.0	-0.5
ABCN	Banco Central	1.65	356	P	Pg	16 12 52.7	-0.5
TISN	Laguna Tiscapa	1.67	358	⇑P	Pn	16 12 49.3	-0.8
AERN	Aeropuerto Man	1.67	1	P	Pb	16 12 51.3	-0.7
AERN	Aeropuerto Man	1.67	1	S	Sg	16 13 17.8	+2.5
MGAN	Managua	1.67	359		Pn	16 12 49.9	-0.3
MGAN	Managua	1.67	359	⇑eP	Pb	16 12 51.2	-0.7
MGAN	Managua	1.67	359	P	Pb	16 12 50.8	-1.2
MGAN	Managua	1.67	359	P	Pg	16 12 51.9	-1.8
WILN	Americas 2	1.69	0	P	Pb	16 12 51.7	-0.5
WILN				S	Sg	16 13 15.3	-0.5
SAPS	Ciudad Sandino	1.71	353	S	Sg	16 13 16.6	+0.1
SAPS	Ciudad Sandino	1.71	353	P	Pb	16 12 51.9	-0.7
SRA1	San Ramn	1.74	102	eP	Pn	16 12 51.7	+0.5
COPN	Copaltepe	1.75	347	⇑eP	Pn	16 12 51.9	+0.7
COPN	Copaltepe	1.75	347	⇑P	Pn	16 12 51.9	+0.7
PALD	Palmares	1.79	103	eP	Pn	16 12 52.4	+0.5
COVE	Coope Vega, Sa	1.79	82	P	Pn	16 12 51.9	+0.1
COVE	Coope Vega, Sa	1.79	82	S	Sg	16 13 19.7	+0.5
VPL2	V. Platanar	1.80	95	eP	Pb	16 12 53.3	-0.9
APQ3	Volcan Apoyequ	1.80	355	P	Pb	16 12 53.2	-1.0
VPL1	V. Platanar	1.82	96	eP	Pb	16 12 53.3	-1.3
BC86	Nagarote	1.82	349	P	Pg	16 12 55.7	-0.8
TCS1	Tacares	1.92	102	eP	Pn	16 12 54.3	+0.6
TCS1	Tacares	1.92	102	P	Pb	16 12 55.0	-1.2
VPS8	V Poas	1.95	98	eP	Pn	16 12 55.4	+1.1
ARTO	Ro Cuarto	1.96	93	eP	Pb	16 12 55.2	-1.6
VPS5	V. Poas	1.96	98	eP	Pn	16 12 55.3	+0.8
MOMN	Momotombo	1.96	350	⇑P	Pn	16 12 55.0	+0.8
MOM2	El Cardon	1.98	352	⇑P	Pn	16 12 55.4	+1.0
BOAB	BOACO BROADBAN	2.04	15		Pb	16 12 55.9	-2.3
BOAB	BOACO BROADBAN	2.04	15	⇑P	Pb	16 12 56.5	-1.8
VBV1	V. Barva	2.10	99	eP	Pn	16 12 57.0	+0.6
PAR1A	Puntarenas Pro	2.10	114	eP	Pn	16 12 56.6	+0.4
HDC	Heredia	2.11	102		Pn	16 12 57.1	+0.8
PICV	PH. Pirrs	2.15	113	eP	Pn	16 12 56.8	+0.1
LCR2	La Lucha 2	2.28	108		Pn	16 12 59.0	+0.2
LCR2	La Lucha 2	2.28	108	P	Pn	16 13 00.4	+1.7
PKGN	Cerro Pekin	2.32	341	P	Pn	16 13 00.4	+1.3
PKGN				S	Sn	16 13 28.8	+1.5
PIEC	Cerro El Cedra	2.36	111	eP	Pn	16 13 00.4	+0.5
VICA	Volcano Irazu	2.37	101	eP	Pn	16 13 01.2	+1.1
TRT2	Tortugero	2.43	88	eP	Pn	16 13 01.0	+0.4
TRT2	Tortugero	2.43	88	S	Sb	16 13 34.3	-0.3
TRT2	Tortugero	2.43	88	P	Pb	16 13 02.6	-2.3
CVTQ	Turrialba Volc	2.44	101	eP	Pn	16 13 02.1	+1.0
CVTR	Volcan Turrial	2.44	100	eP	Pn	16 13 01.7	+0.5
MATN	Matagalpa	2.46	6	⇑P	Pn	16 13 01.5	+0.3
ABRB	Las Abras (San	2.49	100	eP	Pn	16 13 02.6	+0.9
VERB	Verbena	2.52	102	eP	Pn	16 13 03.5	+1.5
POTN	Potosi Cosigui	2.82	333	⇑P	Pn	16 13 07.0	+0.9
VERH	Veragua Rainfo	3.01	100	eP	Pn	16 13 09.8	+1.1
RCPN	Sur Rio San Ju	3.04	2	P	Pn	16 13 09.8	+0.7
RCVN	Varillal2	3.10	0	P	Pn	16 13 12.1	+2.1
CNCH	Conchagua	3.22	330	P	Pn	16 13 12.3	+0.7
LCND	La Caada	3.27	330	P	Pn	16 13 13.2	+1.0
SIUN	Universidad Ur	3.52	23	P	Pn	16 13 18.0	+2.4
PACA	Pacayal	3.64	325	P	Pn	16 13 19.3	+1.9
TGUH	Tegucigalpa,Un	3.72	344		Pn	16 13 19.4	+0.9
MTO3	Montecristo	4.98	322		Pn	16 13 37.1	+1.2
CCIG	Comitan	8.17	316		Pn	16 14 21.6	+1.9
TLIG	Tlapa	13.91	302		Pn	16 15 40.5	+2.1
COHC	Cochancay	14.59	151		Pn	16 15 50.0	+2.5
SDV	Santo Domingo	15.43	94	eP	Pn	16 15 51.0	-7.9
060A	Indiantown	17.38	18		Pn	16 16 22.9	-0.6
060A				IAmb	IAmb	16 16 31.2	
	comp=Z,124nm,1.1s						
BAUV	El Baul	17.97	93		Pn	16 16 30.9	0.0
656A	Willston	19.12	10	P	P	16 16 43.5	-0.4
656A				IAmb	IAmb	16 16 51.7	
	comp=Z,52nm,0.7s						
553A	Crawfordville	19.70	5		Pn	16 16 51.9	+0.2
553A				IAmb	IAmb	16 16 58.1	
	comp=Z,70nm,0.7s						
HBVL	Hebbronville	20.27	326		P	16 16 57.7	+1.2
PCRV	Puerto La Cruz	21.22	89	P	P	16 17 06.8	-0.2
	comp=Z,14nm,0.6s,baz=204,slow=3.0,SNR=12						
	comp=Z,14nm,0.6s						
HKT	Hockley	21.37	337		P	16 17 09.2	+1.0
HKT				IAmb	IAmb	16 17 17.4	
	comp=Z,169nm,2.0s						
250A	Grady	21.41	360	IAmb	IAmb	16 17 12.9	
	comp=Z,32nm,0.8s						
833A	Chaparral WMA,	21.66	327	IAmb	IAmb	16 17 15.7	
	comp=Z,32nm,0.7s						
MLDN	Muldoon	21.73	334	IAmb	IAmb	16 17 21.5	
	comp=Z,54nm,1.1s						
HNVL	Huntsville, TX	21.95	338	IAmb	IAmb	16 17 18.4	
	comp=Z,30nm,0.7s						
152A	Waverly Hall	22.14	3	P	P	16 17 16.7	0.0
146A	Union	22.22	354	IAmb	IAmb	16 17 27.4	
	comp=Z,69nm,0.9s						
LRAL	Lakeview Retre	22.48	358		P	16 17 20.4	+0.2
LRAL				IAmb	IAmb	16 17 23.4	
	comp=Z,39nm,0.8s						
NATX	Nacogdoches	22.59	341		P	16 17 21.9	+0.4
Z47A	Carrollton	22.69	356	IAmb	IAmb	16 17 24.5	
	comp=Z,44nm,0.7s						
GOGA	Godfrey	22.98	6	IAmb	IAmb	16 17 27.3	
	comp=Z,19nm,0.7s						
Y49A	Blount Mountai	23.28	360		P	16 17 28.3	-0.3
Y49A				IAmb	IAmb	16 17 30.7	
	comp=Z,42nm,0.7s						
Y52A	Lilburn	23.37	4	IAmb	IAmb	16 17 30.7	
	comp=Z,47nm,0.9s						
Z41A	Richland Creek	23.48	346	IAmb	IAmb	16 17 30.0	
	comp=Z,52nm,1.1s						
BRDY	Brady	23.88	332		P	16 17 33.4	-1.2
BRDY				IAmb	IAmb	16 17 35.6	
	comp=Z,23nm,0.8s						
HODGE	Hodges	23.93	8	P	P	16 17 34.6	-0.3
HODGE				IAmb	IAmb	16 17 35.9	
	comp=Z,38nm,0.7s						
WLAR	White Oak Lake	23.97	346		P	16 17 35.6	+0.3
WLAR				IAmb	IAmb	16 17 36.5	
	comp=Z,38nm,0.8s						
FPAL	Fort Paine	23.97	1		P	16 17 34.4	-1.0
JSC	Jenkinsville	24.13	10	P	P	16 17 36.8	0.0
PLAL	Pickwick Lake	24.46	356	IAmb	IAmb	16 17 40.9	
	comp=Z,32nm,0.8s						
PAULI	Pauline	24.57	9	IAmb	IAmb	16 17 42.0	
	comp=Z,37nm,0.8s						
BG3	Lake Jocassee	24.60	6		P	16 17 40.9	-0.2
BIRD	Birdtown, Kers	24.63	11	IAmb	IAmb	16 17 42.7	
	comp=Z,24nm,1.0s						
FW06	Azle	24.72	337	IAmb	IAmb	16 17 44.5	
	comp=Z,32nm,0.9s						
UALR	University of	24.84	348	IAmb	IAmb	16 17 44.3	
	comp=Z,36nm,0.8s						
TXAR	Lajitas Array	24.88	321		P	16 17 43.8	-0.1
TXAR	Lajitas Array	24.88	321	P	P	16 17 44.6	+0.8
	comp=Z,6.3nm,0.6s,baz=137,slow=10,SNR=80						
TXAR				PcP	PcP	16 21 21.6	+1.9
	comp=Z,2.3nm,0.8s,baz=144,slow=5.2,SNR=7.0						
	comp=Z,6.3nm,0.6s						
PLPT	Palo Pinto	24.89	335	IAmb	IAmb	16 17 46.1	
	comp=Z,20nm,1.0s						
MIAR	Mount Ida	24.90	345	IAmb	IAmb	16 17 44.9	
	comp=Z,27nm,0.8s						
CPCT	Cooper Cave	24.92	3	IAmb	IAmb	16 17 44.8	
	comp=Z,28nm,0.7s						
KMSC	Kings Mountain	24.96	9	IAmb	IAmb	16 17 45.4	
	comp=Z,35nm,0.9s						
V48A	Smith Brothers	25.17	359	IAmb	IAmb	16 17 46.4	
	comp=Z,21nm,0.9s						
TKL	Tuckaleechee C	25.18	5	IAmb	IAmb	16 17 49.2	
	comp=Z,17nm,0.7s						
W57A	Gilead	25.22	12	IAmb	IAmb	16 17 54.4	
	comp=Z,45nm,1.4s						
V53A	Saluda	25.28	6	IAmb	IAmb	16 17 50.7	
	comp=Z,24nm,0.7s						
ABTX	Abilene, Hawle	25.30	333	IAmb	IAmb	16 17 50.0	
	comp=Z,26nm,0.8s						
WHAR	Wooly Hollow	25.33	348	IAmb	IAmb	16 17 47.9	
	comp=Z,24nm,0.9s						
WVT	Waverly	25.59	357		P	16 17 48.1	-2.0
WTFS	Witchita Falls	25.78	336	IAmb	IAmb	16 17 54.5	
	comp=Z,27nm,0.7s						
MNHN	Monahans	25.83	326	IAmb	IAmb	16 17 54.6	
	comp=Z,29nm,0.8s						
FCAR	Ozark Folk Cen	25.88	349	IAmb	IAmb	16 17 53.9	
	comp=Z,14nm,0.7s						
LCAR	Lake Charles	25.88	351	IAmb	IAmb	16 17 52.1	
	comp=Z,17nm,0.9s						
U49A	Red Boiling Sp	25.93	1	IAmb	IAmb	16 17 53.4	
	comp=Z,25nm,0.8s						
V58A	Windy Hill, Pi	26.02	13	IAmb	IAmb	16 18 22.4	
	comp=Z,22nm,0.6s						
APMT	Aspermont	26.10	333	IAmb	IAmb	16 17 57.9	
	comp=Z,20nm,0.8s						
U54A	Nelsons Funny	26.24	8	IAmb	IAmb	16 18 00.5	
	comp=Z,26nm,0.8s						
X34A	Smith Ranch, M	26.27	338	IAmb	IAmb	16 18 00.1	
	comp=Z,17nm,0.9s						
U56A	King	26.30	11	IAmb	IAmb	16 17 57.6	
	comp=Z,15nm,0.8s						
ODSA	Odessa	26.32	327	IAmb	IAmb	16 17 58.4	
	comp=Z,24nm,0.7s						
T47A	Sharon Grove	26.42	358	IAmb	IAmb	16 17 57.3	
	comp=Z,30nm,0.8s						
POST	Post	26.54	330	IAmb	IAmb	16 18 03.4	
	comp=Z,13nm,0.7s						
FNO	Franklin	26.70	339	IAmb	IAmb	16 18 04.2	
	comp=Z,31nm,0.8s						
VHRN	Van Horn	26.71	322	IAmb	IAmb	16 18 29.7	
	comp=Z,54nm,1.9s						
BOAV	Boa Vista	26.73	106		P	16 18 00.7	+0.1
BOAV	Boa Vista	26.73	106	eP	P	16 18 01.2	+0.6
WMOK	Wichita Mounta	26.75	337	IAmb	IAmb	16 18 04.1	
	comp=Z,29nm,0.8s						
TUL3	Leonard	26.79	343	IAmb	IAmb	16 18 00.7	
	comp=Z,22nm,0.8s						
T42A	Van Buren	26.82	351	IAmb	IAmb	16 18 00.8	
	comp=Z,15nm,0.8s						
OK052	Battle Ridge R	27.18	341	P	P	16 18 03.3	-1.1
OK052				IAmb	IAmb	16 18 04.3	
	comp=Z,18nm,0.7s						
S44A	Carbondale	27.25	355	IAmb	IAmb	16 18 04.8	
	comp=Z,23nm,0.8s						
SIUC	Southern Illin	27.27	355	IAmb	IAmb	16 18 04.9	
	comp=Z,26nm,0.8s						
QUOK	Quay	27.31	341	IAmb	IAmb	16 18 05.6	
	comp=Z,20nm,0.7s						
WCI	Wyandotte Cave	27.65	360		P	16 18 07.2	-1.4
R49A	Shelbyville	27.72	2	IAmb	IAmb	16 18 09.1	
	comp=Z,24nm,0.7s						
R50A	Paris	27.75	3	IAmb	IAmb	16 18 09.6	
	comp=Z,21nm,0.8s						
CCM	Cathedral Cave	27.84	351	P	P	16 18 08.1	-2.2
CCM				IAmb	IAmb	16 18 16.1	
	comp=Z,16nm,1.0s						
MSTX	Muleshoe	27.89	330	IAmb	IAmb	16 18 12.8	
	comp=Z,18nm,0.8s						
ELIS	Ellis County	28.17	337	IAmb	IAmb	16 18 18.2	
	comp=Z,16nm,0.8s						
OLIL	Olney	28.20	357	IAmb	IAmb	16 18 13.3	
	comp=Z,22nm,0.8s						
MACA	Manacapuru-AM	28.79	117	eP	P	16 18 18.8	-0.3
Q54A	Coxs Mills	28.80	9	IAmb	IAmb	16 18 19.4	
	comp=Z,21nm,0.8s						
P51A	Williamsport	29.03	5	IAmb	IAmb	16 18 20.9	
	comp=Z,23nm,0.7s						
P46A	Rosedale	29.05	358	IAmb	IAmb	16 18 20.4	
	comp=Z,27nm,0.8s						
Q56A	Snyder Ridge,	29.14	11	IAmb	IAmb	16 18 23.3	
	comp=Z,23nm,0.9s						
O49A	Covington	29.65	3	IAmb	IAmb	16 18 25.9	
	comp=Z,21nm,0.8s						
P38A	Dawn	29.76	349	IAmb	IAmb	16 18 26.8	
	comp=Z,12nm,0.6s						
SFIN	Lafayette	29.80	359	IAmb	IAmb	16 18 26.8	
	comp=Z,24nm,0.8s						
P57A	Homestead Farm	29.81	13	IAmb	IAmb	16 18 29.1	
	comp=Z,16nm,0.8s						
RTBA	Rita Blanca	29.88	333	IAmb	IAmb	16 18 53.4	
	comp=Z,20nm,1.2s						
N53A	Lisbon	30.59	8	IAmb	IAmb	16 18 34.7	
	comp=Z,24nm,0.9s						
MVL	Millersville	30.69	15	IAmb	IAmb	16 18 43.1	
	comp=Z,32nm,1.6s						
M44A	Midewin, Midew	30.84	357	IAmb	IAmb	16 18 35.5	
	comp=Z,16nm,0.9s						
SSPA	Standing Stone	30.94	12		P	16 18 36.6	-1.2
SSPA				IAmb	IAmb	16 18 38.3	
	comp=Z,17nm,0.8s						
T25A	Trinidad	31.23	331	IAmb	IAmb	16 19 05.5	
	comp=Z,36nm,1.6s						
N58A	Sunbury	31.39	14	IAmb	IAmb	16 18 43.5	
	comp=Z,18nm,0.8s						
L40A	Anamosa	31.78	353	IAmb	IAmb	16 18 44.2	
	comp=Z,22nm,1.1s						
LPAZ	La Paz	32.04	146	P	P	16 18 49.8	+1.4
LPAZ				IAmb	IAmb	16 19 05.3	
	comp=Z,36nm,1.8s						
LPAZ	La Paz	32.04	146	eP	P	16 18 49.4	+1.0
KSPA	Keystone Colle	32.30	15	IAmb	IAmb	16 18 50.5	
	comp=Z,10nm,0.9s						
L56A	Greenwood	32.45	12	IAmb	IAmb	16 18 51.2	
	comp=Z,12nm,0.9s						
BINY	Binghamton	32.86	14	IAmb	IAmb	16 18 55.1	
	comp=Z,18nm,0.8s						
L59A	Walton	33.08	15	IAmb	IAmb	16 18 57.2	
	comp=Z,15nm,0.9s						
I42A	Draeger Farm,	33.38	356	IAmb	IAmb	16 18 58.2	
	comp=Z,21nm,1.1s						
I40A	Norwalk	33.52	354	IAmb	IAmb	16 18 59.7	
	comp=Z,16nm,0.8s						
ITTB	Itaituba	33.73	114	eP	P	16 19 03.2	+0.6
H43A	Windswept, Lux	33.91	358	IAmb	IAmb	16 19 03.0	
	comp=Z,26nm,1.1s						
J57A	Williamstown	34.00	13	IAmb	IAmb	16 19 04.2	
	comp=Z,11nm,0.9s						
SADO	Sadowa	34.72	9	IAmb	IAmb	16 19 09.9	
	comp=Z,9.8nm,0.8s						
J61A	Chester	34.84	18	IAmb	IAmb	16 19 12.7	
	comp=Z,15nm,1.2s						
G40A	Rib Lake	34.85	355	IAmb	IAmb	16 19 11.1	
	comp=Z,10nm,0.7s						
SPMN	Marine on St.	35.10	352	IAmb	IAmb	16 19 13.1	
	comp=Z,23nm,0.9s						
NPGB	Novo Progresso	35.30	118	eP	P	16 19 16.1	-0.1
LONY	Lake Ozonia	35.48	14	IAmb	IAmb	16 19 17.0	
	comp=Z,15nm,0.8s						
COWI	Conover	35.60	356	IAmb	IAmb	16 19 17.4	
	comp=Z,9.2nm,0.8s						
SIV	San Ignacio	36.19	136	P	P	16 19 28.3	+4.5
	comp=Z,3.5nm,0.6s,baz=317,slow=8.4,SNR=12						
SIV				PcP	PcP	16 21 50.2	+0.9
	comp=Z,1.2nm,0.7s,baz=258,slow=3.7,SNR=2.6						
SIV				LR	LR	16 33 53.3	
	comp=Z,2µm,18.8s,baz=126,slow=36						
	comp=Z,3.5nm,0.6s						
F33A	5 Mile Ranch,	36.29	348	IAmb	IAmb	16 19 29.0	
	comp=Z,12nm,0.6s						
E38A	The Farm, Brul	36.30	354	IAmb	IAmb	16 19 23.6	
	comp=Z,12nm,0.7s						
PDRB	Porto dos Gac	36.59	126	eP	P	16 19 27.5	+0.3
CLDB	Colider	36.92	124	eP	P	16 19 30.4	+0.3
G62A	West of Eustis	37.16	18	IAmb	IAmb	16 19 32.2	
	comp=Z,12nm,0.7s						
PTLB	Pontes e Lacer	37.17	133	eP	P	16 19 33.0	+0.9
BBSD	Serra de San D	37.35	137	eP	P	16 19 34.5	+0.9
E28A	Huff	38.04	344	IAmb	IAmb	16 19 38.6	
	comp=Z,20nm,1.0s						
PDAR	Pinedale Array	38.09	332	P	P	16 19 39.6	-0.3
	comp=Z,2.6nm,0.6s,baz=127,slow=9.4,SNR=7.0						
PDAR				PcP	PcP	16 21 55.4	+0.5
	comp=Z,0.8nm,0.7s,baz=170,slow=2.2,SNR=3.5						
	comp=Z,2.6nm,0.6s						
G65A	Princeton	38.14	21		P	16 19 39.0	-1.0
SALV	Santo Antonio	39.98	131	eP	P	16 19 55.7	-0.1
NVAR	Mina Array Bea	39.99	320	P	P	16 19 58.0	+2.1
	comp=Z,12nm,0.8s,baz=139,slow=7.3,SNR=12						
NVAR				PcP	PcP	16 22 01.5	+0.5
	comp=Z,2.7nm,0.6s,baz=129,slow=4.0,SNR=5.8						
	comp=Z,12nm,0.8s						
BATG	Bathurst New B	40.45	21		P	16 19 58.1	-1.2
ULM	Lac du Bonnet	40.46	350	P	P	16 19 55.8	-3.5
	comp=Z,6.5nm,0.6s,baz=163,slow=8.8,SNR=12						
ULM				PcP	PcP	16 22 02.0	0.0
	comp=Z,2.3nm,0.6s,baz=104,slow=3.9,SNR=3.9						
	comp=Z,6.5nm,0.6s						
SNDB	Serra Nova Dou	41.23	122	eP	P	16 20 06.8	+0.6
BDQN	Bodoquena, MS	42.23	137	eP	P	16 20 17.5	+3.3
DRLN	Deer Lake	45.44	26	P	P	16 20 37.3	-2.4
BDFB	Brasilia	45.86	124	P	P	16 20 44.4	+0.9
	comp=Z,3.5nm,0.6s,baz=292,slow=7.3,SNR=4.1						
	comp=Z,3.5nm,0.6s						
SJPY	San Joaquin	45.87	141	eP	P	16 20 46.8	+3.4
FFC	Flin Flon	45.89	347		P	16 20 41.6	-1.5
E07A	Sunnyside	45.93	328	IAmb	IAmb	16 20 45.2	
	comp=Z,22nm,1.0s						
H04A	Detroit Lake	46.03	324		P	16 20 44.7	+0.2
H04A				IAmb	IAmb	16 20 45.9	
	comp=Z,8.8nm,0.5s						
SCHQ	Schefferville	46.84	15	P	P	16 20 47.9	-2.7
	comp=Z,7.9nm,0.7s,baz=209,slow=7.1,SNR=12						
	comp=Z,7.9nm,0.7s						
IPMB	Ipameri, GO	46.97	127	eP	P	16 20 55.2	+3.0
DIAM	Diamantina, MG	50.78	124	eP	P	16 21 24.2	+2.6
YKAW1	Yellowknife Wh	55.80	345	IAmb	IAmb	16 23 58.9	
	comp=Z,11nm,1.4s						
YKA	Yellowknife Ar	55.84	345	P	P	16 21 56.0	-1.9
	comp=Z,3.2nm,1.0s,baz=138,slow=6.9,SNR=16						
YKA				PcP	PcP	16 22 56.7	0.0
	comp=Z,0.6nm,0.6s,baz=142,slow=3.2,SNR=5.1						
	comp=Z,3.2nm,1.0s						
YKAW3	Yellowknife Wh	55.90	345		P	16 21 56.1	-2.2
YKAW3				IAmb	IAmb	16 23 58.8	
	comp=Z,22nm,1.6s						
M29M	Somme Creek	63.91	336	IAmb	IAmb	16 22 54.5	
	comp=Z,8.5nm,1.0s						
RES	Resolute Bay	64.38	357	IAmb	IAmb	16 24 04.3	
	comp=Z,12nm,0.9s						
F30M	Barrier River	65.73	341		P	16 23 04.0	-1.3
I26K	Coal Creek Min	67.10	338		P	16 23 13.2	-0.9
I26K				IAmb	IAmb	16 23 18.6	
	comp=Z,10.0nm,1.1s						
E28M	Babbage River	67.46	341	IAmb	IAmb	16 23 33.5	
	comp=Z,16nm,1.4s						
ILAR	Eielson Array	68.32	336	P	P	16 23 20.5	-1.3
	comp=Z,2.2nm,0.9s,baz=113,slow=4.5,SNR=9.0						
	comp=Z,2.2nm,0.9s						
KDAK	Kodiak Island	68.69	328	P	P	16 23 23.8	-0.4
	comp=Z,5.3nm,1.0s,baz=74,slow=2.3,SNR=4.3						
	comp=Z,5.3nm,1.0s						
BPAW	Bear Paw Mtn.	69.75	335	IAmb	IAmb	16 23 30.6	
	comp=Z,10.0nm,1.0s						
MLY	Manley	69.95	336	IAmb	IAmb	16 23 32.4	
	comp=Z,7.7nm,0.9s						
D25K	Kavik River	69.97	341	IAmb	IAmb	16 23 40.7	
	comp=Z,13nm,1.3s						
ESDC	Sonseca Array	77.45	52	P	P	16 24 14.1	-2.5
	comp=Z,1.5nm,0.8s,baz=271,slow=5.9,SNR=9.4						
	comp=Z,1.5nm,0.8s						
EKA	Eskdalemuir Ar	77.52	36	P	P	16 24 12.6	-3.9
	comp=Z,1.8nm,0.8s,baz=260,slow=4.7,SNR=5.3						
	comp=Z,1.8nm,0.8s						
ADK	Adak	82.16	321		P	16 24 42.5	+0.8
GERES	GERESS Array B	88.64	41	P	P	16 25 14.0	-0.2
FDMO	Fiordimonte	89.64	46	P	P	16 25 18.9	-0.1
INTR	Introdacqua	90.48	47	P	P	16 25 20.4	-2.6
KURBB	Kurchatov Arra	117.73	11	PKP	PKPdf	16 31 06.7	-0.5
	comp=Z,0.6nm,0.6s,baz=355,slow=2.1,SNR=6.0						
SONM	Songino Array	120.89	350	PKP	PKPdf	16 31 13.1	-0.5
	comp=Z,0.3nm,0.5s,baz=40,slow=2.5,SNR=3.2						
MKAR	Makanchi Array	122.08	9	PKP	PKPdf	16 31 14.8	-1.0
	comp=Z,0.5nm,0.6s,baz=2.7,slow=2.6,SNR=4.2						
KSRS	Korea Array	122.59	328	PKP	PKPdf	16 31 17.6	+0.7
	comp=Z,2.8nm,0.6s,baz=17,slow=2.1,SNR=15						
HHC	Hu-ho-hao-te	126.37	343	eP	PKPdf	16 31 20.1	-4.2
KSH	Kashi	127.59	17	PKP	PKiKP	16 31 28.9	+1.7
GTA	Gaotai	130.07	354	PKP	PKPdf	16 31 31.5	+0.1
GTA				sPKP		16 31 40.6	
NJ2	Nanjing	131.40	331	eP	PKPdf	16 31 34.4	+0.5
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ASAR	Alice Springs	139.62	246	PKhKP	PKPpre	16 31 43.2	
	comp=Z,0.9nm,0.8s,baz=103,slow=2.5,SNR=8.0						
ASAR				PKP	PKPdf	16 31 49.2	-0.2
	comp=Z,0.8nm,0.7s,baz=92,slow=1.8,SNR=6.8						
WRA	Warramunga Arr	139.85	252	PKhKP	PKPpre	16 31 42.0	
	comp=Z,0.4nm,0.7s,baz=109,slow=3.0,SNR=2.1						
WRA				PKP	PKPdf	16 31 50.1	+0.2
	comp=Z,1.0nm,0.6s,baz=92,slow=1.9,SNR=11						
PZH	PanZhiHua	142.45	348	PKP	PKPdf	16 31 54.8	+0.1
FITZ	Fitzroy Crossi	148.26	253	PKPbc	PKPdf	16 32 08.2	+3.6
	comp=Z,3.4nm,0.9s,baz=186,slow=3.5,SNR=5.7						
CMAR	Chiang Mai Arr	150.82	350	PKP	PKPdf	16 32 09.5	+0.8
	comp=Z,2.3nm,0.8s,baz=66,slow=0.7,SNR=3.4						

CMAR				PKPbc	pPKPdf	16 32 13.8	-0.1
	comp=Z,4.5nm,0.8s,baz=330,slow=3.0,SNR=18						

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*MEX **18** 16:15:30.0±0.4, 14.°28N×93.°41W, h16^{km}±38^{km}, MD4.2*

*GCG **18** 16:15:30.4±1.2, 14.°11N×93.°18W, h37^{km}±107^{km}, MD4.6, ML3.8*

ISC 18 16:15:26.5±1.4**, 14.°08N**±0.°08×**93.°29W**±0.°03**, h22**^{km}**, n17, σ3.^{s}15**/31**, 1D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.29	50	*e*P	Pn	16 15 49.1	-0.1
THIG				*i* S	Sn	16 16 04.1	-1.8
PATR	El Naranjo	1.45	45	*e*P	Pn	16 15 51.5	-0.2
PATR				*e*S	Sn	16 16 08.5	-1.7
PAVE	Pavencul	1.55	44	*e*P	Pn	16 15 53.3	+0.3
PAVE				*e*S	Sn	16 16 10.6	-2.0
RTAL	Retalhuleu	1.61	74	*e*P	Pn	16 15 55.4	+1.7
RTAL				*e*S	Sn	16 16 13.7	-0.1
PCIG		1.62	3	*e*P	Pn	16 15 51.8	-1.9
PCIG				*e*S	Sn	16 16 08.7	-5.2
STG8	El Palmar, Qui	1.92	79	*i* P	Pn	16 15 57.8	-0.3
STG8				IAML		16 16 23.0	
	comp=E,886nm,0.6s						
STG0	El Palmar, Qui	1.92	79	*i* P	Pn	16 15 57.6	-0.5
STG0				*i* S	Sn	16 16 18.2	-3.6
STG0				IAML		16 16 26.9	
	comp=E,2μm,0.3s						
CCIG	Comitan	2.46	27	*e*P	Pn	16 16 08.1	+2.7
CCIG				*e*S	Sn	16 16 32.8	-2.2
CCIG	Comitan	2.46	27	⇓*i*P	Pn	16 16 08.6	+3.1
CCIG				*i* S	Sn	16 16 37.6	+2.7
TGIG		2.69	4	*e*P	Pn	16 16 10.4	+1.9
TGIG				*e*S	Sn	16 16 37.8	-2.7
TGIG		2.69	4	*i* P	Pn	16 16 10.7	+2.2
TGIG				*i* S	Sn	16 16 40.3	-0.2
TGIG				IAML		16 16 44.6	
	comp=E,376nm,0.7s						
HUIG	Huatulco	3.20	302	*e*P	Pn	16 16 17.3	+1.8
HUIG				*e*S	Sn	16 16 45.7	-7.2
PETF	Flores	4.34	49	*e*P	Pn	16 16 35.1	+3.9
PETF				*i* S	Sn	16 17 19.1	-2.1
YOIG	Yosondua	4.94	304	*e*P	Pn	16 16 45.0	+5.2
YOIG				*e*S	Sn	16 17 33.3	-3.1
PNIG	Pinotepa	5.20	297	*e*P	Pn	16 16 46.8	+3.8
PNIG				*e*S	Sn	16 17 38.6	-3.8
TXIG	Tlaxiaco	5.34	307	*e*P	Pn	16 16 50.6	+5.3
TXIG				*e*S	Sn	16 17 50.9	+4.6
JAUV	Jalcomulco	6.24	328	*e*P	Pn	16 16 60.0	+2.6
JAUV				*e*S	Sn	16 18 02.1	-6.0

JMA 18 16:16:42.8±0.1**, 38.°6N**±0.°2×**139.°4E**±0.°2**, h12**^{km}**, MV1.4**/32**, OFF N NIIGATA PREF, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAW	Awa shima	0.17	226	*e*P	Pg	16 16 46.7	0.0
JAW				*e*S	Sg	16 16 49.7	+0.3
JYA	Atsumi	0.24	85	P	Pg	16 16 48.0	+0.1
JYA				*e*S	Sg	16 16 51.8	+0.4
JYS	Shirataka	0.63	124	*e*P	Pg	16 16 54.9	-0.1
JNS	Sasagawa	0.76	185	*e*P	Pg	16 16 57.2	-0.3
JYK	Kaneyama	0.82	65	*e*S	Sg	16 17 09.4	-0.1

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*NEIC **18** 16:19:57.2±0.4, 33.°5S±0.°1×178.°4W±0.°1, h10^{km}±1^{km}, mb4.5/11, Error ellipse: s-maj=21.5km s-min=12.3km az=134.0*

*IDC **18** 16:19:57.8±2.1, 33.°80S×178.°87W, h0^{km}, mb3.8/4, mbtmp3.9/5, ML4.1/1, Error ellipse: s-maj=48.5km s-min=36.0km az=61.0*

*WEL **18** 16:20:01.3±1.1, 34°S±21°×17°9W±3°3, h33^{km}, M4.2/8, ML4.8/16, MLv4.2/8, Error ellipse: s-maj=50.0km s-min=8.4km az=121.3, confirmed*

ISC 18 16:20:01.7±1.1**, 33.°70S**±0.°09×**178.°9W**±0.°2**, h35**^{km}**, n38, σ1.^{s}29**/48**, mb4.2**/7**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	4.51	11	Pn	Pn	16 20 59.0	-8.6
WMGZ	Waiomatatini S	4.66	207	P	Pn	16 21 09.7	+0.2
WMGZ				S	Sn	16 22 03.8	+1.5
HAZ	Te Kaha	4.87	213	P	Pn	16 21 12.9	+0.5
HAZ				S	Sn	16 22 10.1	+2.6
PUZ	Puketiti	4.94	207	P	Pn	16 21 12.8	-0.5
PUZ				S	Sn	16 22 08.4	-0.8
RUGZ	Raukumara Rang	5.09	212	P	Pn	16 21 14.3	-1.2
RUGZ				S	Sn	16 22 14.2	+1.1
TWGZ	Tauwhareparae	5.14	209	P	Pn	16 21 16.7	+0.5
TWGZ				S	Sn	16 22 13.2	-1.0
CNGZ	Carnagh Statio	5.32	205	P	Pn	16 21 18.2	-0.3
TKGZ	Te Karaka	5.42	208	P	Pn	16 21 20.3	+0.5
TKGZ				S	Sn	16 22 19.9	-1.1
MWZ	Matawai	5.46	211	P	Pn	16 21 19.5	-1.0
MWZ				S	Sn	16 22 23.2	+1.1
URZ	Urewera	5.59	214	Pn	Pn	16 21 20.8	-1.4
	6.4nm,0.3s,baz=315,slow=4.3,SNR=27						
URZ				Sn	Sn	16 22 22.1	-3.1
	3.4nm,0.3s,baz=207,slow=20,SNR=7.2						
	15nm,0.3s						
URZ	Urewera	5.59	214	P	Pn	16 21 21.1	-1.1
URZ				S	Sn	16 22 23.8	-1.3
RAGZ	Rawiri	5.64	211	P	Pn	16 21 23.7	+0.6
RIGZ	Rimuhau	5.68	208	P	Pn	16 21 22.1	-1.5
RIGZ				S	Sn	16 22 27.2	-0.3
PRGZ	Paritu Road	5.83	206	P	Pn	16 21 25.0	-0.5
SNGZ	Shannon Statio	5.92	210	P	Pn	16 21 26.0	-0.8
SNGZ				S	Sn	16 22 33.0	-0.3
RTZ	Ruatahuna	5.93	213	Pn	Pn	16 21 25.4	-1.7
RTZ	Ruatahuna	5.93	213	P	Pn	16 21 27.8	+0.7
MTHZ	Maungataniwha	6.19	213	P	Pn	16 21 30.4	-0.1
NMHZ	Naumai	6.41	212	P	Pn	16 21 33.2	-0.3
BKZ	Black Stump Fm	6.60	213	P	Pn	16 21 34.7	-1.5
TMVZ	Te Maari	6.94	217	P	Pn	16 21 41.3	+0.3
OTVZ	Oturere	7.00	217	P	Pn	16 21 41.4	-0.3
PNHZ	Pukenui	7.34	211	P	Pn	16 21 44.2	-2.2
HNR	Honiara	31.03	316	P	P	16 26 15.7	-0.5
ASAR	Alice Springs	42.30	271	P	P	16 27 53.5	+1.4
	0.9nm,0.8s,baz=113,slow=7.9,SNR=9.9						
	0.9nm,0.8s						
WRA	Warramunga Arr	43.59	276	P	P	16 28 04.1	+1.5
WRA	Warramunga Arr	43.59	276	P	P	16 28 03.8	+1.2
	1.1nm,0.7s,baz=116,slow=8.1,SNR=11						
	1.1nm,0.7s						
WB0	Warramunga Arr	43.62	276	P	P	16 28 04.0	+1.1
WB0				IAmb	IAmb	16 29 11.3	
	comp=Z,16nm,1.5s						
VNDA	Vanda	44.74	186	P	P	16 28 12.2	+1.2
VNDA				IAmb	IAmb	16 28 58.2	
	comp=Z,9.3nm,1.9s						
KNRA	Kununurra	50.30	278	P	P	16 28 55.9	+0.9
KNRA				IAmb	IAmb	16 30 06.6	
	comp=Z,16nm,1.4s						
FITZ	Fitzroy Crossi	51.69	273	P	P	16 29 06.5	+1.1
FITZ				IAmb	IAmb	16 29 07.9	
	comp=Z,6.4nm,1.9s						
FITZ	Fitzroy Crossi	51.69	273	P	P	16 29 06.8	+1.3
	comp=Z,1.5nm,0.6s,baz=116,slow=7.5,SNR=2.0						
	comp=Z,1.5nm,0.6s						
NWAO	Narrogin (SRO)	52.60	252	P	P	16 29 10.8	-1.2
QSPA	South Pole Qui	56.41	180	P	P	16 29 39.7	+0.2
QSPA	South Pole Qui	56.41	180	P	P	16 29 39.9	+0.5
	comp=Z,1.2nm,1.0s,baz=64,slow=7.8,SNR=2.5						
	comp=Z,1.2nm,1.0s						
BW06	Boulder Array	99.03	44	P	Pdif	16 33 36.4	-2.5
PD31	Pinedale Array	99.03	44	P	Pdif	16 33 36.3	-2.6
FINES	FINESS Array B	147.94	338	PKPbc	PKiKP	16 39 44.0	-0.2
	comp=Z,1.9nm,0.9s,baz=46,slow=4.0,SNR=4.0						

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*UCR **18** 16:26:17.5±0.8, 10.°30N×86.°35W, h16^{km}±4^{km}, MW5.3*

*CATAC **18** 16:26:18.3±0.4, 10°N±2°×8°6W±°, h2^{km}±2^{km}, M4.8/31, MLv4.8/31, Error ellipse: s-maj=7.3km s-min=3.1km az=57.1, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.62; $M_{\theta\theta}$1.82; $M_{\phi\phi}$-3.43; $M_{r\theta}$2.58; $M_{\theta\phi}$5.23; $M_{\phi r}$0.56; Fault plane solution: $M_0$6.57245×10^{15} NP1: ϕ_s106.82605°, δ75.37699°, λ25.04015°. NP2: ϕ_s10.09974°, δ65.82386°, λ163.93488°. Principal axes: T 6.3651, Plg27.9114°, Azm330.3587°; N 0.3967, Plg61.2425°, Azm135.2132°; P -6.7618, Plg6.3773°, Azm236.9644°; Moment Tensor Solution. Moment tensor: Scale 10^{15} Nm; M_{rr}1.87; $M_{\theta\theta}$1.33; $M_{\phi\phi}$-3.20; $M_{r\theta}$2.14; $M_{\theta\phi}$4.24; $M_{\phi r}$0.05; Fault plane solution: $M_0$5.50414×10^{15} NP1: ϕ_s108.88028°, δ74.40093°, λ29.05295°. NP2: ϕ_s10.38420°, δ62.11289°, λ162.28787°. Principal axes: T 5.0120, Plg31.3913°, Azm332.4844°; N 0.8786, Plg57.3490°, Azm134.7101°; P -5.8906, Plg8.0821°, Azm237.5136°; Moment Tensor Solution. Moment tensor: Scale 10^{15} Nm; M_{rr}3.17; $M_{\theta\theta}$-2.54; $M_{\phi\phi}$-0.63; $M_{r\theta}$2.46; $M_{\theta\phi}$1.52; $M_{\phi r}$-0.39; Fault plane solution: $M_0$4.11577×10^{15} NP1: ϕ_s106.80791°, δ63.86282°, λ78.67266°. NP2: ϕ_s311.26035°, δ28.32688°, λ111.81490°. Principal axes: T 4.0876, Plg69.0560°, Azm353.9442°; N 0.0559, Plg10.1560°, Azm111.8508°; P -4.1434, Plg18.1158°, Azm205.2106°; confirmed*

*NEIC **18** 16:26:20.2±1.5, 10.°52N±0.°07×86.°09W±0.°08, h10^{km}±1^{km}, mb4.9/351 Error ellipse: s-maj=16.6km s-min=7.4km az=228.0*

*IDC **18** 16:26:22.9±1.8, 11.°03N×85.°68W, h34^{km}±15^{km}, mb4.2/11, mbtmp4.4/11, MS5.5/1, Error ellipse: s-maj=33.5km s-min=14.8km az=52.0*

ISC 18 16:26:21.6±0.4**, 10.°48N**±0.°04×**86.°19W**±0.°04**, h33**^{km}**, n506, σ1.^{s}15**/358**, mb4.8**/174**, 14C-2D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALIBA	Liberia Airpor	0.65	80	*e*P	Pn	16 26 34.3	-0.2
ALIBA				*e*S	Sn	16 26 46.7	+3.2
ELI1	Hacienda Flor	0.65	75	*e*P	Pb	16 26 34.6	-0.1
ELI1				*e*S	Sn	16 26 46.9	+3.2
ERIA	Liberia	0.76	78	*e*P	Pn	16 26 35.7	-0.3
LAPC	Finca la Perla	0.80	69	*e*P	Pn	16 26 36.0	-0.6
NICO	Nicoya	0.81	115	*e*P	Pn	16 26 34.4	-2.4
LCRUZ	La Cruz	0.81	43	*e*P	Pb	16 26 36.9	-0.5
VRLE	La Escondida,	0.87	69	*e*P	Pn	16 26 37.1	-0.5
GPS1	Guardaparques	0.88	70	*e*P	Pn	16 26 37.4	-0.4
CMARA	Lajas Hojancha	0.88	121	*e*P	Pn	16 26 35.4	-2.5
CMARA	Lajas Hojancha	0.88	121	S	Sn	16 26 47.4	-2.1
CMARA	Lajas Hojancha	0.88	121	⇑P	Pn	16 26 35.4	-2.5
VORI	VORI	0.90	68	*e*P	Pn	16 26 37.6	-0.5
INDI	Punta indio, G	0.91	132	S	Sn	16 26 47.2	-3.0
INDI	Punta indio, G	0.91	132	⇓P	Pn	16 26 35.5	-2.7
BAGA	Bagaces	0.92	87	*e*P	Pn	16 26 37.7	-0.6
BUAI	Buenos Aires	0.93	65	*e*P	Pn	16 26 38.5	0.0
PEJA	Penjamo Buenos	0.96	64	*e*P	Pn	16 26 38.8	-0.1
CARN	Rivas	0.96	43	*e*P	Pb	16 26 39.3	-0.6
CARN	Rivas	0.96	43	⇑P	Pb	16 26 39.5	-0.4
CARN				S	Sb	16 26 51.9	-0.5
COLC	Colonia	0.99	79	*e*P	Pn	16 26 38.7	-0.5
MESS	Mesas	1.01	75	*e*P	Pn	16 26 39.3	-0.3
HORNC	Hornillas	1.02	77	*e*P	Pn	16 26 39.3	-0.5
CUI	Cuipilapa	1.03	80	*e*P	Pn	16 26 39.4	-0.4
CNAS	Canas	1.08	92	*e*P	Pn	16 26 40.0	-0.5
INVE	Universidad In	1.11	90	*e*P	Pn	16 26 40.4	-0.6
VMAR	Armenia, Volca	1.11	73	*e*P	Pn	16 26 40.9	0.0
MOTZ	Rio Naranjo	1.12	79	*e*P	Pn	16 26 41.0	-0.1
TILA	Tilaran	1.20	90	*e*P	Pn	16 26 41.7	-0.5
TENO	El Achiote	1.22	79	*e*P	Pn	16 26 41.5	-0.9
JUNT	Juntas	1.23	99	*e*P	Pn	16 26 41.6	-1.0
JCR1	Jicaral	1.23	120	*e*P	Pn	16 26 40.3	-2.4
JTS	Las Juntas de	1.23	99		Pn	16 26 41.5	-1.1
JTS	Las Juntas de	1.23	99	Pg	Pn	16 26 41.6	-1.0
	198nm,0.3s,baz=270,slow=7.5,SNR=226						
JTS				Lg	Lg	16 26 58.2	
	294nm,0.3s,baz=288,slow=20,SNR=7.3						
JTS	Las Juntas de	1.23	99	*e*P	Pn	16 26 41.5	-1.1
QUEB	Quebradon, Cot	1.28	83	*e*P	Pn	16 26 43.1	-0.2
MTEVE	Monteverde	1.35	97	*e*P	Pn	16 26 43.7	-0.7
TABAC	Tabacon	1.40	89	*e*P	Pn	16 26 45.0	0.0
ARE1	Arenal 1	1.45	91	*e*P	Pn	16 26 46.0	+0.4
VARE2	V. Arenal	1.45	91	*e*P	Pn	16 26 45.9	+0.3
NANN	Nandasmo	1.45	3	⇑P	Pb	16 26 47.2	-0.9
NANN	Nandasmo	1.45	3	S	Sb	16 27 06.0	-0.4
SABN	Sabanita	1.47	1	⇑P	Pn	16 26 45.4	-0.5
VACR	Volcan Arenal	1.49	90	*e*P	Pn	16 26 46.3	+0.1
CRUN	El Crucero	1.50	356	P	Pn	16 26 44.7	-1.6
MASN	Masaya	1.50	2	S	Sb	16 27 06.1	-1.6
MAS3	Al N del Volca	1.54	1	⇑P	Pn	16 26 47.0	+0.2
MAS3				S	Sb	16 27 07.3	-1.4
SOCE	Pocosol	1.55	93		Pn	16 26 46.9	-0.1
SOCE	Pocosol	1.55	93	S	Sn	16 27 07.2	+1.1
SOCE	Pocosol	1.55	93	⇑P	Pn	16 26 47.1	+0.1
UNAN	Cigeo UNAN	1.62	357	P	Pn	16 26 48.4	+0.4
ENAN	Enatrel Managu	1.63	358	P	Pn	16 26 39.0	-9.0
USIM	UNAN	1.63	357		Pn	16 26 48.6	+0.5
TISN	Laguna Tiscapa	1.66	357	⇑P	Pn	16 26 47.0	-1.5
MGAN	Managua	1.66	358		Pn	16 26 48.8	+0.3
MGAN	Managua	1.66	358	P	Pn	16 26 48.9	+0.5
WILN	Americas 2	1.67	0	⇓P	Pn	16 26 49.0	+0.3
SAPS	Ciudad Sandino	1.69	353	⇑P	Pn	16 26 49.3	+0.4
COPN	Copaltepe	1.74	347	*e*P	Pn	16 26 49.3	-0.2
COPN	Copaltepe	1.74	347	⇑P	Pn	16 26 49.5	-0.1
COVE	Coope Vega, Sa	1.78	82	P	Pn	16 26 49.7	-0.3
APQ3	Volcan Apoyequ	1.79	354	P	Pn	16 26 50.7	+0.5
TCS1	Tacares	1.91	103	P	Pn	16 26 52.6	+0.6
ARTO	Ro Cuarto	1.95	94	*e*P	Pn	16 26 52.5	0.0
MOMN	Momotombo	1.95	350	P	Pn	16 26 52.5	0.0
MOM2	El Cardon	1.97	352	⇑P	Pn	16 26 53.0	+0.3
BOAB	BOACO BROADBAN	2.02	15		Pn	16 26 53.9	+0.4
BOAB	BOACO BROADBAN	2.02	15	⇑P	Pn	16 26 54.1	+0.6
HDC	Heredia	2.10	103		Pn	16 26 54.5	-0.1
HDC	Heredia	2.10	103	*e*P	Pn	16 26 55.2	+0.6
HDC	Heredia	2.10	103	⇑P	Pn	16 26 54.9	+0.2
ILCN	San Idelfonso	2.14	347	P	Pn	16 26 55.4	+0.2
LCR2	La Lucha 2	2.27	109		Pn	16 26 56.7	-0.4
LCR2	La Lucha 2	2.27	109	P	Pn	16 26 56.8	-0.3
PKGN	Cerro Pekin	2.31	341	P	Pn	16 26 57.4	0.0
TRT2	Tortugero	2.42	88	*e*P	Pn	16 26 58.1	-0.7
TRT2	Tortugero	2.42	88	P	Pn	16 26 59.2	+0.3
MATN	Matagalpa	2.45	6	P	Pn	16 26 59.0	-0.4
POTN	Potosi Cosigui	2.82	333	⇑P	Pn	16 27 04.5	+0.1
RCPN	Sur Rio San Ju	3.03	2	P	Pn	16 27 08.0	+0.6
RCVN	Varillal2	3.09	360	P	Pn	16 27 09.2	+1.0
DRK0	Durika	3.15	112	P	Pn	16 27 08.9	-0.1
CNCH	Conchagua	3.21	330	⇑P	Pn	16 27 09.9	0.0
SIUN	Universidad Ur	3.50	23	P	Pb	16 27 21.3	-1.7
PACA	Pacayal	3.63	325	P	Pn	16 27 15.9	+0.2
TGUH	Tegucigalpa,Un	3.71	344		Pn	16 27 17.6	+0.8
TGUH	Tegucigalpa,Un	3.71	344	P	Pn	16 27 17.2	+0.4
PMON	Piamonte	4.43	317	P	Pn	16 27 27.5	+0.7
JAYA	Jayaque - finc	4.48	315	P	Pn	16 27 27.6	+0.1
MTO3	Montecristo	4.98	322		Pn	16 27 34.5	+0.2
ESQI	Esquipulas	5.09	323		Pn	16 27 37.0	+1.2
CCIG	Comitan	8.17	316		Pn	16 28 20.3	+2.1
TLIG	Tlapa	13.91	302		Pn	16 29 38.3	+1.5
BAUV	El Baul	17.96	93	P	Pn	16 30 28.9	-0.1
656A	Willston	19.10	10	P	Pn	16 30 42.8	+0.1
656A				IAmb	IAmb	16 30 49.7	
	comp=Z,65nm,0.9s						
553A	Crawfordville	19.68	5		Pn	16 30 49.8	+0.2
HBVL	Hebbronville	20.26	326		P	16 30 55.3	+0.9
HBVL				IAmb	IAmb	16 31 06.4	
	comp=Z,29nm,0.8s						
352A	Blakely	20.93	3	P	P	16 31 02.4	+0.8
352A				IAmb	IAmb	16 31 06.3	
	comp=Z,50nm,0.8s						
TIGA	Tifton	21.00	6	IAmb	IAmb	16 31 08.4	
	comp=Z,56nm,0.8s						
PCRV	Puerto La Cruz	21.21	89	P	P	16 31 04.4	-0.4
	comp=Z,15nm,0.8s,baz=224,slow=3.1,SNR=8.9						
HKT	Hockley	21.36	336	P	P	16 31 06.7	+0.6
250A	Grady	21.39	360	P	P	16 31 07.3	+0.8
250A				IAmb	IAmb	16 31 10.4	
	comp=Z,40nm,0.8s						
833A	Chaparral WMA,	21.65	327	IAmb	IAmb	16 31 13.2	
	comp=Z,37nm,0.7s						
MLDN	Muldoon	21.72	334	IAmb	IAmb	16 31 12.8	
	comp=Z,73nm,1.1s						
HNVL	Huntsville, TX	21.94	338	IAmb	IAmb	16 31 15.9	
	comp=Z,36nm,0.7s						
152A	Waverly Hall	22.13	3	P	P	16 31 15.2	+0.8
154A	Montrose	22.21	7	P	P	16 31 16.1	+0.7
LRAL	Lakeview Retre	22.46	358	IAmb	IAmb	16 31 21.0	
	comp=Z,50nm,0.8s						
CZSB	Cruzeiro do Su	22.53	143	*e*P	P	16 31 24.9	+5.9
GOGA	Godfrey	22.96	6	IAmb	IAmb	16 31 24.8	
	comp=Z,24nm,0.8s						
DRIO	Del Rio	23.17	326	IAmb	IAmb	16 31 28.5	
	comp=Z,19nm,0.8s						
237A	Washetta, Mont	23.19	339	IAmb	IAmb	16 31 27.5	
	comp=Z,40nm,0.7s						
Z41A	Richland Creek	23.47	346	IAmb	IAmb	16 31 28.1	
	comp=Z,39nm,0.8s						
WHTX	Lake Whitney,	23.81	336	IAmb	IAmb	16 31 40.4	
	comp=Z,25nm,0.8s						
BRDY	Brady	23.87	332	IAmb	IAmb	16 31 33.5	
	comp=Z,29nm,0.7s						
X48A	Hartselle	23.88	358	IAmb	IAmb	16 31 35.1	
	comp=Z,20nm,0.7s						
FPAL	Fort Paine	23.96	1	IAmb	IAmb	16 31 34.2	
	comp=Z,18nm,0.7s						
FW13	Cleburne	24.11	336	IAmb	IAmb	16 31 36.8	
	comp=Z,36nm,0.9s						
BIRD	Birdtown, Kers	24.62	11	IAmb	IAmb	16 31 40.2	
	comp=Z,30nm,0.9s						
TXAR	Lajitas Array	24.87	321	P	P	16 31 42.0	+0.4
TXAR	Lajitas Array	24.87	321	P	P	16 31 41.6	0.0
	comp=Z,9.3nm,0.6s,baz=138,slow=8.7,SNR=104						
TXAR				PcP	PcP	16 35 18.6	+1.5
	comp=Z,2.6nm,0.8s,baz=138,slow=5.4,SNR=9.3						
	comp=Z,9.3nm,0.6s						
TX31	Lajitas Ar. Si	24.87	321	IAmb	IAmb	16 31 44.9	
	comp=Z,14nm,0.7s						
PLPT	Palo Pinto	24.88	335	IAmb	IAmb	16 31 43.6	
	comp=Z,30nm,1.1s						
MIAR	Mount Ida	24.89	345	IAmb	IAmb	16 31 42.5	
	comp=Z,34nm,0.8s						
V48A	Smith Brothers	25.15	359	IAmb	IAmb	16 31 43.9	
	comp=Z,27nm,0.9s						
TKL	Tuckaleechee C	25.16	5	IAmb	IAmb	16 31 46.8	
	comp=Z,26nm,0.8s						
W57A	Gilead	25.20	12	IAmb	IAmb	16 31 44.8	
	comp=Z,18nm,0.9s						
WHAR	Wooly Hollow	25.32	348	IAmb	IAmb	16 31 45.4	
	comp=Z,35nm,0.9s						
SGCY	Sterling City	25.41	329	IAmb	IAmb	16 31 47.8	
	comp=Z,19nm,0.8s						
CLTN	Cedars of Leba	25.50	360	IAmb	IAmb	16 31 49.5	
	comp=Z,18nm,0.8s						
TEFE	Tefe	25.57	122	*e*P	P	16 31 49.0	+1.1
WVT	Waverly	25.58	357	P	P	16 31 45.9	-1.8
WVT				IAmb	IAmb	16 31 49.0	
	comp=Z,51nm,1.6s						
V55A	Taylorsville	25.66	9	IAmb	IAmb	16 31 52.3	
	comp=Z,18nm,0.9s						
FCAR	Ozark Folk Cen	25.86	349	IAmb	IAmb	16 31 51.4	
	comp=Z,18nm,0.8s						
LCAR	Lake Charles	25.87	351	IAmb	IAmb	16 31 49.6	
	comp=Z,22nm,0.9s						
TZTN	Tazewell	26.06	5	IAmb	IAmb	16 31 52.5	
	comp=Z,15nm,0.8s						
APMT	Aspermont	26.10	333	IAmb	IAmb	16 31 55.5	
	comp=Z,26nm,0.8s						
X34A	Smith Ranch, M	26.26	338	IAmb	IAmb	16 31 57.6	
	comp=Z,29nm,1.0s						
U56A	King	26.29	11	IAmb	IAmb	16 31 55.2	
	comp=Z,21nm,0.9s						
ODSA	Odessa	26.31	327	IAmb	IAmb	16 31 56.0	
	comp=Z,31nm,0.8s						
T50A	Nancy	26.45	2	IAmb	IAmb	16 31 55.6	
	comp=Z,13nm,0.8s						
PBMO	Poplar Bluff	26.46	352	IAmb	IAmb	16 31 55.0	
	comp=Z,23nm,1.1s						
POST	Post	26.53	330	IAmb	IAmb	16 32 01.0	
	comp=Z,20nm,0.7s						
HHAR	Hobbs	26.63	346	IAmb	IAmb	16 31 56.5	
	comp=Z,12nm,0.8s						
BOAV	Boa Vista	26.72	106	P	P	16 31 58.6	+0.2
BOAV	Boa Vista	26.72	106	*e*P	P	16 31 56.6	-1.8
DKNS	Dickens	26.75	332	IAmb	IAmb	16 32 01.8	
	comp=Z,16nm,0.8s						
TUL3	Leonard	26.78	343	IAmb	IAmb	16 32 04.6	
	comp=Z,26nm,0.8s						
T42A	Van Buren	26.80	351	IAmb	IAmb	16 31 58.3	
	comp=Z,19nm,0.8s						
CGM3	Cape Girardeau	26.89	354	IAmb	IAmb	16 31 59.0	
	comp=Z,41nm,1.4s						
U38A	Gravette	26.89	345	IAmb	IAmb	16 31 59.3	
	comp=Z,20nm,0.9s						
MGMO	Mountain Grove	27.12	349	IAmb	IAmb	16 32 01.8	
	comp=Z,14nm,0.9s						
BLA	Blacksburg	27.12	10	IAmb	IAmb	16 32 02.6	
	comp=Z,35nm,1.3s						
T57A	Hurt	27.14	12	IAmb	IAmb	16 32 02.4	
	comp=Z,18nm,0.9s						
OK052	Battle Ridge R	27.16	341	IAmb	IAmb	16 32 01.9	
	comp=Z,25nm,0.6s						
S44A	Carbondale	27.24	355	IAmb	IAmb	16 32 02.3	
	comp=Z,29nm,0.9s						
SIUC	Southern Illin	27.25	355	IAmb	IAmb	16 32 02.4	
	comp=Z,34nm,0.9s						
WCI	Wyandotte Cave	27.63	360	P	P	16 32 05.4	-0.8
R50A	Paris	27.73	3	IAmb	IAmb	16 32 07.2	
	comp=Z,27nm,0.8s						
CCM	Cathedral Cave	27.83	351	P	P	16 32 07.0	-1.0
CCM				IAmb	IAmb	16 32 07.7	
	comp=Z,20nm,0.9s						
MSTX	Muleshoe	27.88	330	IAmb	IAmb	16 32 10.3	
	comp=Z,19nm,0.7s						
T35A	Sooner Cattle	27.92	342	IAmb	IAmb	16 32 08.6	
	comp=Z,14nm,1.1s						
ELIS	Ellis County	28.16	337	IAmb	IAmb	16 32 22.5	
	comp=Z,24nm,0.9s						
OLIL	Olney	28.19	357	IAmb	IAmb	16 32 10.9	
	comp=Z,26nm,0.8s						
MACA	Manacapuru-AM	28.78	117	P	P	16 32 17.4	+0.7
MACA				IAmb	IAmb	16 32 18.3	
	comp=Z,24nm,0.7s						
MACA	Manacapuru-AM	28.78	117	*e*P	P	16 32 17.7	+1.0
Q56A	Snyder Ridge,	29.12	11	IAmb	IAmb	16 32 20.8	
	comp=Z,25nm,0.8s						
MCWV	Mont Chateau	29.60	10	IAmb	IAmb	16 32 24.2	
	comp=Z,18nm,0.9s						
P38A	Dawn	29.75	349	IAmb	IAmb	16 32 23.9	
	comp=Z,16nm,0.9s						
P57A	Homestead Farm	29.79	13	IAmb	IAmb	16 32 26.6	
	comp=Z,21nm,0.9s						
DUN6	Lazy B Ranch	30.47	320	IAmb	IAmb	16 32 35.1	
	comp=Z,19nm,1.0s						
ANMO	Albuquerque	30.57	326	P	P	16 32 33.5	+0.8
MVL	Millersville	30.67	15	IAmb	IAmb	16 32 34.2	
	comp=Z,14nm,1.0s						
SSPA	Standing Stone	30.92	12	P	P	16 32 34.4	-1.1
ERPA	Erie	31.98	9	IAmb	IAmb	16 32 44.4	
	comp=Z,14nm,0.7s						
LPAZ	La Paz	32.04	146	P	P	16 32 47.9	+1.7
	comp=Z,1.9nm,0.9s,baz=286,slow=4.4,SNR=3.8						
	comp=Z,1.9nm,0.9s						
LPAZ	La Paz	32.04	146	*e*P	P	16 32 50.6	+4.4
SDCO	Great Sand Dun	32.23	331	IAmb	IAmb	16 32 49.5	
	comp=Z,8.1nm,0.8s						
KSPA	Keystone Colle	32.29	15	IAmb	IAmb	16 32 48.0	
	comp=Z,12nm,0.8s						
L56A	Greenwood	32.43	12	IAmb	IAmb	16 32 48.8	
	comp=Z,14nm,1.0s						
WVNY	West Valley, N	32.49	10	IAmb	IAmb	16 32 49.1	
	comp=Z,18nm,1.1s						
W18A	Petrified Fore	32.58	323	IAmb	IAmb	16 32 54.1	
	comp=Z,11nm,0.7s						
L59A	Walton	33.07	15	IAmb	IAmb	16 32 54.8	
	comp=Z,15nm,0.8s						
K57A	Scipio Center	33.22	13	IAmb	IAmb	16 32 56.5	
	comp=Z,13nm,0.9s						
I42A	Draeger Farm,	33.37	356	IAmb	IAmb	16 32 56.4	
	comp=Z,22nm,0.9s						
ITTB	Itaituba	33.72	114	*e*P	P	16 33 00.8	+0.5
WUAZ	Wupatki	33.84	321	IAmb	IAmb	16 33 05.1	
	comp=Z,10nm,1.1s						
J57A	Williamstown	33.99	13	IAmb	IAmb	16 33 01.8	
	comp=Z,17nm,0.9s						
PECO	Prince Edward	34.27	12	IAmb	IAmb	16 33 03.9	
	comp=Z,13nm,0.9s						
PV03	Paradox Valley	34.31	327	IAmb	IAmb	16 33 07.5	
	comp=Z,10nm,0.8s						
PV05	Paradox Valley	34.31	327	IAmb	IAmb	16 33 07.3	
	comp=Z,9.5nm,0.7s						
ECSD	EROS Data Cent	34.34	347	IAmb	IAmb	16 33 04.4	
	comp=Z,10nm,1.1s						
PV11	David Mesa, Pa	34.36	327	IAmb	IAmb	16 33 08.8	
	comp=Z,11nm,0.7s						
PV16	Nyswonger Mesa	34.39	327	IAmb	IAmb	16 33 07.8	
	comp=Z,8.2nm,0.7s						
PV17	East Wray Mesa	34.39	327	IAmb	IAmb	16 33 08.1	
	comp=Z,17nm,0.7s						

PV19	Morning Glory	34.42	327	IAmb	IAmb	16 33 08.3	
	comp=Z,16nm,0.8s						
PV20	West Nyswonger	34.44	327	IAmb	IAmb	16 33 08.5	
	comp=Z,15nm,0.7s						
PV04	Paradox Valley	34.44	328	IAmb	IAmb	16 33 08.3	
	comp=Z,7.8nm,0.8s						
PV14	Lion Creek, Pa	34.49	327	IAmb	IAmb	16 33 08.9	
	comp=Z,8.5nm,0.8s						
PV10	Paradox Valley	34.50	327	IAmb	IAmb	16 33 08.5	
	comp=Z,18nm,0.8s						
PV23	Carpenter Ridg	34.54	328	IAmb	IAmb	16 33 09.5	
	comp=Z,16nm,1.0s						
SADO	Sadowa	34.70	9	IAmb	IAmb	16 33 07.4	
	comp=Z,14nm,0.8s						
J61A	Chester	34.83	18	IAmb	IAmb	16 33 10.2	
	comp=Z,16nm,1.1s						
G40A	Rib Lake	34.84	355	IAmb	IAmb	16 33 08.7	
	comp=Z,13nm,0.8s						
SPMN	Marine on St.	35.09	352	IAmb	IAmb	16 33 10.6	
	comp=Z,21nm,0.8s						
HMU	Henry Mountain	35.12	325	IAmb	IAmb	16 33 22.2	
	comp=Z,10nm,0.9s						
W13A	Hualapai Mount	35.16	319	IAmb	IAmb	16 33 16.3	
	comp=Z,8.9nm,0.9s						
NPGB	Novo Progresso	35.29	118	*e*P	P	16 33 13.2	-0.7
BUKO	Buck Lake	35.32	8	IAmb	IAmb	16 33 12.8	
	comp=Z,21nm,1.4s						
O20A	White River Ci	35.42	330	IAmb	IAmb	16 33 17.5	
	comp=Z,7.4nm,0.7s						
LONY	Lake Ozonia	35.46	14	IAmb	IAmb	16 33 14.6	
	comp=Z,20nm,0.8s						
COWI	Conover	35.59	356	IAmb	IAmb	16 33 14.9	
	comp=Z,14nm,0.8s						
SRU	San Rafael Swe	35.83	327	IAmb	IAmb	16 33 20.6	
	comp=Z,9.4nm,0.9s						
PFO	Pinyon Flats O	36.05	314	P	P	16 33 22.2	+1.8
V12A	Nelson	36.17	319	IAmb	IAmb	16 33 24.4	
	comp=Z,27nm,1.7s						
F33A	5 Mile Ranch,	36.28	348	IAmb	IAmb	16 33 28.1	
	comp=Z,11nm,0.6s						
E38A	The Farm, Brul	36.29	354	IAmb	IAmb	16 33 21.1	
	comp=Z,15nm,0.7s						
MNTQ	Montreal, Queb	36.52	15	IAmb	IAmb	16 33 23.6	
	comp=Z,18nm,0.7s						
PDRB	Porto dos Gac	36.59	126	*e*P	P	16 33 26.2	+1.2
RSSD	Black Hills	36.91	338	P	P	16 33 26.5	-1.1
CLDB	Colider	36.92	124	*e*P	P	16 33 27.5	-0.3
G62A	West of Eustis	37.14	18	IAmb	IAmb	16 33 29.7	
	comp=Z,13nm,0.8s						
PTLB	Pontes e Lacer	37.17	133	*e*P	P	16 33 33.0	+3.1
GSC	Goldstone, Bar	37.22	316	IAmb	IAmb	16 33 33.3	
	comp=Z,27nm,2.0s						
PKME	Peaks-Kenny Pk	37.58	20	IAmb	IAmb	16 33 33.9	
	comp=Z,14nm,1.1s						
GWY	Greenwater Val	37.63	318	IAmb	IAmb	16 33 36.7	
	comp=Z,30nm,1.9s						
TPNV	Topopah Spring	37.80	319	IAmb	IAmb	16 33 39.0	
	comp=Z,14nm,1.1s						
S11A	Rachel	37.91	320	IAmb	IAmb	16 33 39.9	
	comp=Z,18nm,0.9s						
PDAR	Pinedale Array	38.08	332	P	P	16 33 36.2	-1.4
	comp=Z,3.0nm,0.6s,baz=126,slow=10,SNR=24						
	comp=Z,3.0nm,0.6s						
TBO	Thunder Bay	38.14	357	IAmb	IAmb	16 33 36.5	
	comp=Z,12nm,0.7s						
HWUT	Hardware Ranch	38.19	329	IAmb	IAmb	16 33 39.8	
	comp=Z,13nm,0.7s						
GRAC	Grapevine Rang	38.56	318	IAmb	IAmb	16 33 45.1	
	comp=Z,19nm,0.9s						
AGMN	Agassiz Nation	38.56	350	IAmb	IAmb	16 33 40.0	
	comp=Z,15nm,1.0s						
TPH	Tonopah	39.09	320	P	P	16 33 47.9	+1.8
DSP	Deep Springs	39.17	318	P	P	16 33 48.6	+2.2
D62A	Allapoint, All	39.27	19	IAmb	IAmb	16 33 47.1	
	comp=Z,17nm,0.9s						
EPLO	Experimental L	39.57	352	IAmb	IAmb	16 33 48.1	
	comp=Z,15nm,0.8s						
LMN	Caledonia Moun	39.71	24	IAmb	IAmb	16 33 50.7	
	comp=Z,13nm,0.7s						
NV11	Mina Array Sit	39.90	320	IAmb	IAmb	16 33 56.3	
	comp=Z,22nm,1.0s						
NVAR	Mina Array Bea	39.99	319	P	P	16 33 55.1	+1.5
NVAR	Mina Array Bea	39.99	319	P	P	16 33 55.7	+2.0
	comp=Z,14nm,0.8s,baz=138,slow=7.5,SNR=64						
NVAR				PcP	PcP	16 35 60.0	+1.5
	comp=Z,2.6nm,0.7s,baz=137,slow=4.9,SNR=7.3						
	comp=Z,14nm,0.8s						
LHV	Little Huntoon	40.02	319	IAmb	IAmb	16 33 57.4	
	comp=Z,21nm,0.9s						
RYN	Ryan	40.25	320	P	P	16 33 57.0	+1.3
BATG	Bathurst New B	40.44	21	P	P	16 33 55.7	-1.2
BATG				IAmb	IAmb	16 33 57.0	
	comp=Z,16nm,1.0s						
YHL	Hebgen Lake	40.44	332	P	P	16 33 58.1	+0.8
ULM	Lac du Bonnet	40.45	350	P	P	16 33 53.5	-3.4
	comp=Z,11nm,0.9s,baz=163,slow=7.5,SNR=16						
ULM				PcP	PcP	16 35 59.3	0.0
	comp=Z,3.9nm,0.8s,baz=181,slow=1.8,SNR=3.2						
	comp=Z,11nm,0.9s						
WAKR	Walker	40.76	319	IAmb	IAmb	16 34 03.5	
	comp=Z,16nm,0.8s						
PNTR	Pine Nut	41.20	319	IAmb	IAmb	16 34 06.7	
	comp=Z,15nm,0.8s						
SNDB	Serra Nova Dou	41.23	122	*e*P	P	16 34 03.7	-0.1
PAHR	Pah Rah Range	41.42	320	P	P	16 34 06.8	+1.5
MPK	Martis Peak	41.59	319	P	P	16 34 08.4	+1.5
MPK				IAmb	IAmb	16 34 10.8	
	comp=Z,27nm,1.2s						
MURT	Porto Murtinho	42.51	139	*e*P	P	16 34 17.6	+3.4
ARAG	Araguaiana, MT	42.84	127	*e*P	P	16 34 16.7	-0.3
PLID	Pearl Lake	42.94	329	P	P	16 34 15.8	-1.9
SMTB	Santa Maria do	42.95	115	*e*P	P	16 34 18.0	0.0
AQDB	Aquidauana	42.96	136	*e*P	P	16 34 21.5	+3.6
PINE	Pine Mountain	44.78	324	IAmb	IAmb	16 34 34.2	
	comp=Z,12nm,0.8s						
BBOR	Butler Butte	45.27	322	IAmb	IAmb	16 34 42.7	
	comp=Z,12nm,1.3s						
I04A	Tendick Farm,	45.64	323	IAmb	IAmb	16 34 40.1	
	comp=Z,16nm,0.9s						
HAWA	Hanford	45.64	328	IAmb	IAmb	16 34 40.1	
	comp=Z,9.9nm,0.8s						
BDFB	Brasilia	45.85	124	P	P	16 34 41.3	0.0
BDFB				IAmb	IAmb	16 34 43.0	
	comp=Z,21nm,1.5s						
BDFB	Brasilia	45.85	124	P	P	16 34 41.5	+0.2
	comp=Z,2.6nm,0.4s,baz=25,slow=5.0,SNR=6.9						
	comp=Z,2.6nm,0.4s						
I03D	Drain, OR	46.14	323	IAmb	IAmb	16 34 46.5	
	comp=Z,18nm,1.2s						
MXC	Moxie City	46.16	328	IAmb	IAmb	16 34 45.4	
	comp=Z,10nm,0.8s						
H04D	Lebanon	46.25	324	IAmb	IAmb	16 34 46.5	
	comp=Z,12nm,0.8s						
MT08	Bocatoma Ro	46.32	161	P	P	16 34 46.2	+1.5
MT08				IAmb	IAmb	16 34 50.8	
	comp=Z,10nm,0.9s						
SCHQ	Schefferville	46.82	15	P	P	16 34 45.2	-3.0
	comp=Z,10nm,0.9s,baz=216,slow=7.0,SNR=15						
	comp=Z,10nm,0.9s						
SDBA	SAO DESIDERIO	46.89	118	*e*P	P	16 34 48.9	-0.4
FCC	Fort Churchill	48.55	355	IAmb	IAmb	16 35 02.3	
	comp=Z,6.9nm,0.8s						
LLLB	Lillooet	49.59	331	IAmb	IAmb	16 35 16.9	
	comp=Z,20nm,1.5s						
ITAB	Concordia	49.97	139	*e*P	P	16 35 16.1	+3.3
DIAM	Diamantina, MG	50.78	124	*e*P	P	16 35 20.3	+1.1
CMC01	Camacan, BA	52.88	118	*e*P	P	16 35 34.2	-0.6
SJMB	Sao Joao De Ma	53.02	123	*e*P	P	16 35 35.7	-0.1
YKA	Yellowknife Ar	55.83	345	P	P	16 35 53.5	-2.0
	comp=Z,3.2nm,1.0s,baz=139,slow=6.6,SNR=11						
YKA				LR	LR	17 04 24.8	
	comp=Z,4µm,18.7s,baz=232,slow=41						
	comp=Z,3.2nm,1.0s						
V35K	Ketchikan	57.13	331	P	P	16 36 04.6	-0.3
	baz=123						
BEAVL	Fort Liard	57.37	338	P	P	16 36 06.3	-0.3
	baz=133						
CRAG	Craig	57.93	331	P	P	16 36 10.5	0.0
	baz=122						
U33K	Whale Pass	58.27	331	P	P	16 36 12.4	-0.5
	baz=122						
R33M	Jennings River	59.17	335	P	P	16 36 19.0	-0.3
	baz=126						
Q32M	Nakina River	59.46	334	P	P	16 36 20.8	-0.7
	baz=125						
S32K	Killisnoo	59.67	332	P	P	16 36 21.8	-0.7
	baz=122						
SIT	Sitka	59.80	331	P	P	16 36 23.4	-0.1
	baz=120						
P33M	Teslin, Yukon	60.41	335	P	P	16 36 26.8	-1.0
	baz=125						
MMPY	Sheldon Lake,	61.23	338	P	P	16 36 32.6	-0.6
MMPY				IAmb	IAmb	16 36 34.0	
	comp=Z,5.8nm,1.0s						
MMPY	Sheldon Lake,	61.23	338	P	P	16 36 32.9	-0.4
	baz=127						
PLBC	Pleasant Camp	61.51	333	P	P	16 36 34.5	-0.5
	baz=121						
WHY	Whitehorse	61.51	335	P	P	16 36 34.3	-0.9
	baz=123						
FARO	Faro, Yukon	61.78	337	P	P	16 36 35.9	-1.0
	baz=125						
O30N	Mendenhall	62.07	335	IAmb	IAmb	16 36 45.9	
	comp=Z,6.4nm,1.1s						
O30N	Mendenhall	62.07	335	P	P	16 36 38.3	-0.6
	baz=122						
P30M	Million Dollar	62.10	334	P	P	16 36 38.4	-0.8
	baz=120						
P29M	Windy Craggy	62.20	333	IAmb	IAmb	16 36 47.6	
	comp=Z,12nm,1.0s						
P29M	Windy Craggy	62.20	333	P	P	16 36 39.5	-0.3
	baz=119						
N31M	Braeburn, Yuko	62.32	336	P	P	16 36 40.6	-0.1
	baz=122						
N30M	Aishikik Lake	62.84	335	P	P	16 36 43.8	-0.3
	baz=121						
O29M	Mount Kennedy	62.90	334	P	P	16 36 44.6	+0.1
	baz=119						
PNL	Peninsula	62.96	333	P	P	16 36 45.1	+0.3
	baz=118						
MAYO	Mayo, Yukon	63.51	338	P	P	16 36 48.5	+0.1
	baz=123						
O28M	Mount Upton	63.82	334	P	P	16 36 51.0	+0.2
	baz=118						
YUK8	Steele Glacier	63.88	334	P	P	16 36 51.2	0.0
	baz=118						
M29M	Somme Creek	63.90	336	IAmb	IAmb	16 36 51.6	
	comp=Z,11nm,1.1s						
M29M	Somme Creek	63.90	336	P	P	16 36 51.3	+0.1
	baz=120						
L29M	L29M	64.11	337	P	P	16 36 52.5	0.0
	baz=120						
J30M	Hart River	64.21	338	P	P	16 36 53.3	+0.2
	baz=123						
H31M	Peel River	64.21	340	P	P	16 36 52.7	-0.3
	baz=126						
K29M	Barlow Dome	64.25	337	P	P	16 36 53.8	+0.3
	baz=121						
YUK3	Moose Creek	64.40	335	P	P	16 36 54.4	-0.2
	baz=118						
CTG	Chitna Glacier	64.41	334	P	P	16 36 54.5	-0.1
	baz=116						
I30M	Mount Dempster	64.58	339	IAmb	IAmb	16 36 55.7	
	comp=Z,9.3nm,1.1s						
I30M	Mount Dempster	64.58	339	P	P	16 36 54.7	-0.8
	baz=123,SNR=6.4						
G31M	Satah River	64.84	341	IAmb	IAmb	16 36 56.8	
	comp=Z,6.9nm,1.1s						
G31M	Satah River	64.84	341	P	P	16 36 55.5	-1.5
	baz=126						
BVCY	Beaver Creek	64.87	335	P	P	16 36 56.5	-0.9
	baz=118						
M27K	Edge Creek, AK	65.27	335	P	P	16 36 59.1	-1.0
	baz=116						
EPYK	Eagle Plains	65.33	340	P	P	16 36 59.7	-0.6
	baz=123						
I29M	Ogilvie Camp,	65.34	339	P	P	16 36 59.7	-0.7
	baz=121						
INK	Inuvik	65.44	343	P	P	16 37 00.3	-0.6
	baz=127						
G30M	tAoh Zraii Nji	65.50	341	P	P	16 37 01.4	-0.1
	baz=124						
BCAR	Beaver Creek A	65.55	336	P	P	16 37 01.2	-0.6
L27K	Beaver Creek,	65.56	336	P	P	16 37 01.2	-0.7
	baz=117						
F30M	Barrier River	65.72	341	IAmb	IAmb	16 37 02.9	
	comp=Z,12nm,1.1s						
F30M	Barrier River	65.72	341	P	P	16 37 02.0	-0.8
	baz=125						
M26K	Nabesna, AK	65.75	335	P	P	16 37 03.1	0.0
	baz=115						
H29M	Whitestone	65.81	339	IAmb	IAmb	16 37 03.6	
	comp=Z,8.1nm,1.1s						
H29M	Whitestone	65.81	339	P	P	16 37 02.8	-0.6
	baz=122						
BMRM	Bremner River	65.86	333	P	P	16 37 03.5	-0.4
	baz=113						
I28M	Miner Creek	65.97	338	P	P	16 37 04.5	0.0
	baz=120						
G29M	Pine Creek	66.06	340	P	P	16 37 04.3	-0.7
	baz=122						
K27K	Chicken	66.10	337	P	P	16 37 05.0	-0.3
	baz=117						
N25K	Chitina, Valde	66.11	334	P	P	16 37 05.0	-0.5
	baz=114						
L26K	Log Cabin Wild	66.17	335	P	P	16 37 05.3	-0.4
	baz=115						
EYAK	Cordova Ski Ar	66.21	332	P	P	16 37 05.7	-0.4
	baz=112						
KLU	Klutina	66.65	333	P	P	16 37 08.3	-0.6
	baz=112						
I27K	Kandik River	66.66	338	P	P	16 37 08.6	-0.3
	baz=118,SNR=6.4						
DOT	Dot Lake	66.72	336	IAmb	IAmb	16 37 09.7	
	comp=Z,9.6nm,1.1s						
E29M	Blow River	66.82	342	P	P	16 37 09.0	-0.8
	baz=123						
SCRK	Sand Creek	66.83	336	P	P	16 37 09.5	-0.7
	baz=115						
J26L	Joseph Creek	66.89	337	IAmb	IAmb	16 37 11.2	
	comp=Z,9.7nm,1.2s						
J26L	Joseph Creek	66.89	337	P	P	16 37 10.0	-0.5
	baz=116						
H27K	Steamboat Moun	66.92	339	IAmb	IAmb	16 37 11.1	
	comp=Z,11nm,1.1s						
H27K	Steamboat Moun	66.92	339	P	P	16 37 09.5	-1.1
	baz=118,SNR=8.2						
M24K	Tolsona, Glenn	66.99	334	P	P	16 37 10.3	-0.8
	baz=112						
PAX	Paxson	67.03	335	P	P	16 37 10.4	-1.0
	baz=113						
F28M	Old Crow	67.04	340	IAmb	IAmb	16 37 18.7	
	comp=Z,7.0nm,1.1s						
F28M	Old Crow	67.04	340	P	P	16 37 10.4	-0.8
	baz=120						
RIDG	Independent Ri	67.08	336	IAmb	IAmb	16 37 12.7	
	comp=Z,8.7nm,1.0s						
RIDG	Independent Ri	67.08	336	P	P	16 37 10.6	-1.0
	baz=114,SNR=5.1						
I26K	Coal Creek Min	67.09	338	IAmb	IAmb	16 37 11.7	
	comp=Z,8.1nm,1.1s						
I26K	Coal Creek Min	67.09	338	P	P	16 37 10.7	-0.9
	baz=116,SNR=6.9						
G27K	Doyon Strip	67.25	339	P	P	16 37 11.3	-1.3
	baz=118						
E28M	Babbage River	67.45	341	IAmb	IAmb	16 37 13.3	
	comp=Z,4.6nm,0.9s						
E28M	Babbage River	67.45	341	P	P	16 37 12.8	-1.0
	baz=121						
K24K	Donnelly Dome	67.49	336	P	P	16 37 13.1	-1.0
	baz=113						
PWL	Port Wells	67.51	332	P	P	16 37 13.4	-0.9
	baz=110						
M23K	Glacier View	67.56	333	P	P	16 37 13.7	-0.9
	baz=111						
J25K	Salcha River,	67.65	336	IAmb	IAmb	16 37 15.6	
	comp=Z,5.5nm,1.0s						
J25K	Salcha River,	67.65	336	P	P	16 37 14.5	-0.7
	baz=114,SNR=5.8						
KNK	Knik Glacier	67.75	333	P	P	16 37 15.1	-0.8
	baz=110						
SEW	Seward	67.79	331	P	P	16 37 14.7	-1.3
	baz=108						
SML	Sawmill	67.83	333	P	P	16 37 15.2	-1.2
	baz=110						
WAT6	Susitna Watana	67.85	334	P	P	16 37 15.1	-1.5
	baz=111						
E27K	Coleen River	67.89	341	P	P	16 37 15.8	-0.8
	baz=119						
O22K	Cooper Landing	68.03	331	P	P	16 37 16.5	-1.1
	baz=108						
G26K	Porcupine Rive	68.06	339	P	P	16 37 16.7	-0.9
	baz=116						
PRP	Porcupine Dome	68.08	337	P	P	16 37 16.5	-1.5
	baz=114						
HDA	Harding Lake	68.20	336	IAmb	IAmb	16 37 18.5	
	comp=Z,12nm,1.1s						
HDA	Harding Lake	68.20	336	P	P	16 37 17.6	-1.0
	baz=112,SNR=5.2						
D27M	Malcolm River	68.22	342	P	P	16 37 18.1	-0.7
	baz=120						
BRSE	Bradley Lake S	68.29	331	P	P	16 37 18.6	-0.7
	baz=107						
IL31		68.31	336	IAmb	IAmb	16 37 19.3	
	comp=Z,6.2nm,1.1s						
ILAR	Eielson Array	68.31	336	P	P	16 37 18.2	-1.1
ILAR	Eielson Array	68.31	336	P	P	16 37 17.9	-1.4
	comp=Z,3.0nm,0.9s,baz=107,slow=4.8,SNR=17						
ILAR				PP	PP	16 39 48.2	-1.9
	comp=Z,0.6nm,0.8s,baz=115,slow=7.0,SNR=4.2						
	comp=Z,3.0nm,0.9s						
H25L	Birch Creek	68.50	338	P	P	16 37 19.6	-0.8
	baz=114						
F26K	Sheenjek River	68.52	340	P	P	16 37 20.2	-0.4
	baz=116						
RND	Reindeer	68.61	335	P	P	16 37 21.0	-0.3
POKR	Poker Plat Res	68.66	337	P	P	16 37 21.0	-0.4
	baz=112						
MCK	McKinley	68.76	335	P	P	16 37 21.7	-0.5
	baz=110						
CAPN	Captain Cook N	68.79	332	P	P	16 37 21.9	-0.4
	baz=107						
G25K	Bearman Lake	68.81	338	P	P	16 37 22.2	-0.1
	baz=114						
F25K	Christian Rive	68.99	339	P	P	16 37 23.3	-0.2
	baz=115						
H24K	Noodor Dome	69.10	337	IAmb	IAmb	16 37 31.0	
	comp=Z,5.6nm,1.1s						
H24K	Noodor Dome	69.10	337	P	P	16 37 23.4	-0.9
	baz=112						
NEA2	Nenana	69.12	336	P	P	16 37 23.4	-0.9
	baz=110,SNR=6.0						
E25K	Arctic Village	69.19	340	P	P	16 37 23.7	-1.0
	baz=115						
TRF	Thorofare Moun	69.24	334	IAmb	IAmb	16 37 25.4	
	comp=Z,8.6nm,1.0s						
TRF	Thorofare Moun	69.24	334	P	P	16 37 24.1	-1.2
	baz=109,SNR=5.0						
C27K	Jago River	69.25	342	P	P	16 37 23.9	-1.2
	baz=117						
G24K	Hadweenzic Riv	69.28	338	IAmb	IAmb	16 37 32.5	
	comp=Z,9.6nm,1.4s						
G24K	Hadweenzic Riv	69.28	338	P	P	16 37 24.2	-1.1
	baz=113						
SKT	Skwentna	69.33	333	P	P	16 37 25.2	-0.5
	baz=107						
I23K	Minto, Yukon-K	69.43	336	IAmb	IAmb	16 37 26.6	
	comp=Z,12nm,1.1s						
I23K	Minto, Yukon-K	69.43	336	P	P	16 37 25.1	-1.1
	baz=110,SNR=6.3						
P19K	Oil Pt	69.48	330	P	P	16 37 25.7	-1.0
	baz=105						
Q19K	Cape Douglas,	69.51	329	P	P	16 37 26.1	-0.8
	baz=104						
KTH	Kantishna Hill	69.54	334	IAmb	IAmb	16 37 26.9	
	comp=Z,8.0nm,1.0s						
H23K	Yukon River	69.74	337	P	P	16 37 27.7	-0.5
	baz=110						
BPAW	Bear Paw Mtn.	69.74	335	IAmb	IAmb	16 37 28.1	
	comp=Z,10.0nm,0.9s						
BPAW	Bear Paw Mtn.	69.74	335	P	P	16 37 26.9	-1.3
	baz=108,SNR=8.1						
F24K	Squaw Lake	69.75	339	P	P	16 37 27.2	-1.0
	baz=112						
C26K	Camden Bay	69.76	342	P	P	16 37 27.4	-0.7
	baz=116						
PPLA	Purkeypile	69.89	334	P	P	16 37 27.5	-1.8
	baz=107						
MLY	Manley	69.94	336	IAmb	IAmb	16 37 29.9	
	comp=Z,9.8nm,0.9s						
MLY	Manley	69.94	336	P	P	16 37 28.2	-1.3
	baz=109,SNR=9.3						
D25K	Kavik River	69.96	341	IAmb	IAmb	16 37 29.7	
	comp=Z,7.5nm,0.9s						
D25K	Kavik River	69.96	341	P	P	16 37 28.3	-1.3
	baz=115						
CAST	Castle Rocks	70.00	334	P	P	16 37 28.2	-1.6
	baz=107						
M20K	Styx River	70.02	332	P	P	16 37 28.8	-1.2
	baz=106						
Q18K	Katmai Hardscr	70.13	329	P	P	16 37 29.3	-1.6
	baz=103						
E24K	Your Creek	70.17	339	P	P	16 37 29.2	-1.6
	baz=112						
G23K	Bananza Creek	70.23	338	IAmb	IAmb	16 37 31.9	
	comp=Z,5.7nm,0.9s						
G23K	Bananza Creek	70.23	338	P	P	16 37 29.8	-1.4
	baz=110,SNR=7.4						
N19K	Bonanza Creek	70.38	331	P	P	16 37 31.0	-1.3
	baz=104						
P18K	Big Mountain,	70.41	330	P	P	16 37 31.3	-1.1
	baz=103						
H22K	Ishtalitna Cre	70.47	337	P	P	16 37 31.3	-1.4
	baz=109						
COLD	Coldfoot	70.47	338	P	P	16 37 32.1	-0.5
	baz=110						
Q17K	Contact Creek	70.50	328	P	P	16 37 31.5	-1.6
	baz=102						
L20K	Farewell, AK	70.52	333	P	P	16 37 31.6	-1.4
	baz=105,SNR=7.0						
E23K	Chandalar	70.56	339	IAmb	IAmb	16 37 34.0	
	comp=Z,7.5nm,1.1s						
E23K	Chandalar	70.56	339	P	P	16 37 31.7	-1.6
	baz=111						
M19K	Big River Lodg	70.61	332	P	P	16 37 32.2	-1.3
	baz=104						
TOLK	Toolik Lake Re	70.76	340	P	P	16 37 32.8	-1.6
	baz=111						
K20K	Telida	70.84	334	P	P	16 37 34.1	-0.8
	baz=105						
G22K	Bettles	70.85	338	P	P	16 37 34.1	-0.8
	baz=109						
C24K	Franklin Bluff	70.87	341	P	P	16 37 33.8	-1.2
	baz=112						
L19K	White Mountain	70.89	332	P	P	16 37 33.2	-2.0
	baz=104						
H21K	Melozitna Rive	70.96	336	P	P	16 37 34.1	-1.5
	baz=107						
J20K	Nowinta River	71.09	335	IAmb	IAmb	16 37 36.3	
	comp=Z,13nm,1.4s						
J20K	Nowinta River	71.09	335	P	P	16 37 34.6	-1.8
	baz=105,SNR=5.0						
M18K	Stony River	71.17	332	P	P	16 37 36.0	-0.9
	baz=103						
D23K	Nanushuk River	71.25	340	P	P	16 37 36.9	-0.4
	baz=110						
E22K	Anaktuvuk Pass	71.36	339	IAmb	IAmb	16 37 38.7	
	comp=Z,6.3nm,1.1s						
E22K	Anaktuvuk Pass	71.36	339	P	P	16 37 36.9	-1.2
	baz=109						
I20K	Naaghedeneel	71.39	335	P	P	16 37 37.1	-1.1
	baz=105						
O17K	Koliganek Bris	71.42	330	P	P	16 37 37.2	-1.3
	baz=101						
G21K	Allakaket	71.48	337	P	P	16 37 38.1	-0.7
	baz=107						
C23K	Itkillik River	71.53	341	IAmb	IAmb	16 37 39.8	
	comp=Z,6.0nm,0.9s						
C23K	Itkillik River	71.53	341	P	P	16 37 37.9	-1.1
	baz=111						
N17K	Nushagak Hills	71.61	330	P	P	16 37 38.3	-1.3
	baz=101						
J19K	Poorman	71.67	334	IAmb	IAmb	16 37 40.0	
	comp=Z,6.3nm,1.0s						
J19K	Poorman	71.67	334	P	P	16 37 38.2	-1.7
	baz=104,SNR=6.4						
F21K	Alatna River	71.68	338	IAmb	IAmb	16 37 40.8	
	comp=Z,10nm,0.9s						
F21K	Alatna River	71.68	338	P	P	16 37 39.5	-0.5
	baz=107						
L18K	Granite Mounta	71.73	332	P	P	16 37 38.9	-1.4
	baz=102						
H20K	Anotleneega Mo	71.74	336	P	P	16 37 39.4	-1.0
	baz=105						
D22K	Ayikyak River	71.90	340	P	P	16 37 40.1	-1.2
	baz=108						
M17K	Holitna River	71.91	331	P	P	16 37 40.1	-1.3
	baz=102						
CHNA	Chernabura Isl	71.94	324	P	P	16 37 40.3	-1.3
	baz=97						
J18K	Innoko River	72.02	334	P	P	16 37 40.9	-1.2
	baz=103						
S14K	Fog Glacier	72.12	326	P	P	16 37 41.5	-1.4

	baz=98						
E21K	Killik River	72.22	339	P	P	16 37 42.1	-1.1
	baz=107						
N16K	Nishlik Lake	72.37	330	P	P	16 37 43.5	-0.7
	baz=100						
H19K	Roundabout Mou	72.38	336	P	P	16 37 42.4	-1.7
	baz=104,SNR=5.6						
L17K	Donlin	72.45	332	P	P	16 37 43.9	-0.7
	baz=101						
F20K	Avaraart Lake	72.48	337	P	P	16 37 44.0	-0.7
	baz=105						
SDPT	Sand Point	72.51	325	P	P	16 37 44.1	-1.0
	baz=97						
M16K	Timber Creek	72.56	331	P	P	16 37 44.5	-0.8
	baz=100						
B22K	Teshekpuk Lake	72.61	341	P	P	16 37 44.3	-1.1
	baz=108						
C21K	Knifeblade Rid	72.71	340	P	P	16 37 45.7	-0.4
	baz=106						
G19K	Purcell Mounta	72.78	336	P	P	16 37 45.8	-0.7
	baz=103						
B21K	Ikpikpuk River	72.78	340	P	P	16 37 45.4	-1.1
	baz=107						
E20K	Nigu River	72.96	339	P	P	16 37 47.2	-0.5
	baz=105						
J17K	VABM Dome	73.04	333	P	P	16 37 47.8	-0.3
	baz=101						
H18K	Honhosa River	73.08	335	P	P	16 37 47.5	-0.9
	baz=102						
E19K	Redstone River	73.15	338	P	P	16 37 47.8	-0.9
	baz=104						
F19K	Shaleruckik Mo	73.21	337	P	P	16 37 48.3	-0.7
	baz=103						
D20K	Etivluk River	73.23	339	P	P	16 37 48.4	-0.8
	baz=104						
A22K	Sinclair Lake	73.30	341	P	P	16 37 48.5	-1.0
	baz=107						
M15K	Kasigluk River	73.34	330	P	P	16 37 49.2	-0.8
	baz=98						
G18K	Tagagawik	73.35	336	P	P	16 37 49.5	-0.4
	baz=102						
H17K	Granite Mounta	73.69	335	P	P	16 37 50.8	-1.1
	baz=100						
J16K	Anvik River	73.70	333	P	P	16 37 51.9	-0.1
	baz=99						
D19K	Kuna River	73.71	339	P	P	16 37 51.5	-0.6
	baz=103						
B20K	Meade River	73.74	340	P	P	16 37 51.6	-0.4
	baz=104						
L15K	Ungalak Mounta	73.87	331	P	P	16 37 52.7	-0.3
	baz=98						
K15K	Wolf Creek Mou	73.97	332	P	P	16 37 53.3	-0.3
	baz=98						
G17K	Kiwalik Mounta	74.09	335	P	P	16 37 53.5	-0.7
	baz=100						
FALS	False Pass	74.15	324	P	P	16 37 54.6	-0.2
	baz=94						
C19K	Lookout Ridge	74.37	339	P	P	16 37 54.9	-0.9
	baz=102						
E17K	Hotham Inlet	74.82	337	P	P	16 37 58.4	-0.1
	baz=99						
C18K	Utukok River	74.85	339	P	P	16 37 58.5	-0.2
	baz=100						
J14K	Nanvaranak Lak	74.96	332	P	P	16 37 59.2	-0.1
	baz=96						
A19K	Wainwright	75.09	340	P	P	16 37 59.6	-0.4
	baz=101						
B18K	Kokolik River	75.19	339	P	P	16 38 00.5	-0.1
	baz=100						
K13K	Kusilvak Mount	75.39	331	P	P	16 38 02.0	+0.2
	baz=95						
D17K	Noatak River	75.39	337	P	P	16 38 02.1	+0.4
	baz=98						
G15K	Niukluk	75.43	335	P	P	16 38 02.2	+0.2
	baz=96						
UNV	Unalaska Valle	75.90	323	P	P	16 38 04.7	-0.2
	baz=91						
ANM	Nome	75.95	334	P	P	16 38 05.1	+0.1
	baz=95						
C16K	Lisburne Hills	76.31	338	P	P	16 38 06.9	-0.1
	baz=96						
NIKH	Nikolski High	77.30	322	P	P	16 38 12.7	-0.1
	baz=89						
ESDC	Sonseca Array	77.44	52	P	P	16 38 11.2	-2.8
	comp=Z,1.4nm,0.8s,baz=284,slow=5.6,SNR=7.2						
	comp=Z,1.4nm,0.8s						
EKA	Eskdalemuir Ar	77.50	36	P	P	16 38 10.2	-3.7
	comp=Z,1.7nm,0.7s,baz=267,slow=6.5,SNR=5.7						
	comp=Z,1.7nm,0.7s						
P08K	Saint George I	77.67	326	P	P	16 38 15.1	+0.3
	baz=90						
GAMB	Gambell	78.69	333	P	P	16 38 20.7	+0.4
	baz=89						
ADK	Adak	82.15	321	P	P	16 38 40.0	+0.9
KURBB	Kurchatov Arra	117.71	11	PKP	PKPdf	16 45 02.8	-1.7
	comp=Z,0.3nm,0.5s,baz=344,slow=2.0,SNR=7.4						
SONM	Songino Array	120.88	350	PKP	PKPdf	16 45 10.4	-0.5
	comp=Z,0.3nm,0.5s,baz=63,slow=4.5,SNR=2.5						
MKAR	Makanchi Array	122.06	9	PKP	PKPdf	16 45 12.1	-1.0
	comp=Z,0.4nm,0.7s,baz=287,slow=2.0,SNR=4.9						
KSRS	Korea Array	122.59	328	PKP	PKPdf	16 45 14.6	+0.3
	comp=Z,3.0nm,0.6s,baz=17,slow=2.0,SNR=15						
HHC	Hu-ho-hao-te	126.36	343	eP	PKPdf	16 45 20.4	-1.2
GTA	Gaotai	130.05	354	PKP	PKPdf	16 45 29.0	+0.2
GTA				sPKP		16 45 38.0	
NJ2	Nanjing	131.39	331	eP	PKiKP	16 45 33.1	+0.8
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ASAR	Alice Springs	139.64	246	PKhKP	PKPpre	16 45 38.7	
	comp=Z,0.6nm,0.5s,baz=104,slow=2.4,SNR=7.3						
WRA	Warramunga Arr	139.87	252	PKhKP	PKPpre	16 45 39.5	
	comp=Z,0.5nm,0.8s,baz=98,slow=3.0,SNR=2.7						
WRA				PKP	PKPdf	16 45 47.7	+0.3
	comp=Z,1.1nm,0.7s,baz=92,slow=2.4,SNR=8.4						
PZH	PanZhiHua	142.44	348	PKP	PKPdf	16 45 52.8	+0.8
CMAR	Chiang Mai Arr	150.80	350	PKP	PKPdf	16 46 06.6	+0.5
	comp=Z,1.5nm,0.8s,baz=9.6,slow=1.6,SNR=4.4						
CMAR				PKPbc	PKPbc	16 46 11.3	-0.4
	comp=Z,5.1nm,0.8s,baz=336,slow=3.1,SNR=22						

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*IDC **18** 16:48:12.8±6.9, 28°.21S×67°.69W, h86^{km}±56^{km}, mb3.4/2, mbtmp3.4/3, ML3.4/1, Error ellipse: s-maj=55.6km s-min=32.9km az=87.0*

*SJA **18** 16:48:16.8±0.7, 28°.20S×67°.53W, h137^{km}±3^{km}, ML3.5, MW3.7*

ISC 18 16:48:17.3±0.8**, 28°.14S**±0°.05×**67°.49W**±0°.06**, h131**^{km}±7^{km}**, n28, σ1ˢ.24**/43**, La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VCA	Vinchina	0.86	226	eP	Pn	16 48 39.8	+0.4
VCA				eS	Sn	16 48 56.1	0.0
VCA				IAML		16 48 58.7	
	comp=Z,3µm,0.4s						
ACLC	CERRO LA CRUZ	1.37	160	eP	Pn	16 48 44.6	+0.4
ACLC				eS	Sn	16 49 04.7	0.0
ACLC				IAML		16 49 05.4	
	comp=Z,630nm,0.2s						
CYA	Choya	1.52	102	eP	Pn	16 48 46.9	+1.1
CYA				eS	Sn	16 49 08.4	+0.9
CYA				IAML		16 49 08.4	
	comp=Z,513nm,0.8s						
AGUA	GUANDACOL	1.60	213	eP	Pn	16 48 46.8	0.0
AGUA				eS	Sn	16 49 08.4	-0.9
AGUA				IAML		16 49 10.2	
	comp=Z,1µm,0.2s						
AHML	Horco Molle	2.34	55	eP	Pn	16 48 56.8	+1.1
AHML				eS	Sn	16 49 21.5	-3.7
AHML				IAML		16 49 27.4	
	comp=Z,92nm,1.3s						
FSA	Cafayete	2.43	34	eP	Pn	16 48 59.2	+2.3
FSA				eS	Sn	16 49 25.9	-1.3
ACDV	Cuesta del Vie	2.47	215	eP	Pn	16 48 57.5	+0.1
ACDV				eS	Sn	16 49 23.6	-4.6
ACDV				IAML		16 49 29.9	
	comp=Z,112nm,0.6s						
AVFE	Valle Fertil	2.51	179	eP	Pn	16 48 57.7	-0.1
AVFE				eS	Sn	16 49 28.4	-0.6
AVFE				IAML		16 49 31.1	
	comp=Z,151nm,0.5s						
AROD	Rodeo	2.66	220	eP	Pn	16 49 00.2	+0.2
AROD				eS	Sn	16 49 33.5	+0.8
ACCO	Cerro Coronel	2.80	209	eP	Pn	16 49 01.7	0.0
ACCO				eS	Sn	16 49 35.7	-0.2
ACHE	Chepes	3.10	167	eP	Pn	16 49 05.7	+0.3
ACHE				eS	Sn	16 49 33.0	-9.5
DOCA	Reserva Natura	3.12	206	eP	Pn	16 49 05.6	-0.4
DOCA				eS	Sn	16 49 42.7	-0.7
DOCA				IAML		16 49 46.9	
	comp=Z,50nm,3.4s						
RTLL	Cerro Villicun	3.29	195	eP	Pn	16 49 07.7	-0.1
RTLL				eS	Sn	16 49 46.7	-0.1
SJA	San Juan	3.50	195	eP	Pn	16 49 10.8	+0.2
CFA	Coronel Fontan	3.51	190	eP	Pn	16 49 10.4	-0.3
CFA				eS	Sn	16 49 51.1	-0.9
RTLS	Leoncito	3.97	203	eP	Pn	16 49 16.5	-0.4
RTLS				eS	Sn	16 50 03.2	0.0
RTLS				IAML		16 50 40.5	
	comp=Z,73nm,4.7s						
AZAP	Zapla	4.47	30	eP	Pn	16 49 25.5	+1.8
AZAP				IAML		16 50 56.7	
	comp=Z,38nm,0.8s						
ARCO	CERRO ARCO	4.85	194	eP	Pn	16 49 28.0	-0.6
ARCO				eS	Sn	16 50 24.4	+0.4
ARCO				IAML		16 50 26.8	
	comp=Z,28nm,1.0s						
AAGR	Agrelo	5.06	193	eP	Pn	16 49 30.5	-0.9
CPUP	Villa Florida	9.22	81	P	Pn	16 50 25.4	-1.9
	comp=Z,0.1nm,0.3s,baz=296,slow=7.8,SNR=2.8						
	comp=Z,0.1nm,0.3s						
SNAA	Sanae	55.62	160	P	P	16 57 39.6	+0.5
	comp=Z,0.9nm,1.0s,baz=255,slow=12,SNR=5.9						
	comp=Z,0.9nm,1.0s						
TORD	Torodi Ar. Bea	78.48	68	P	P	17 00 05.2	+0.8
	comp=Z,68nm,0.3s,baz=266,slow=5.5,SNR=1.8						
PDAR	Pinedale Array	80.48	330	P	P	17 00 15.3	+0.5
	comp=Z,0.3nm,0.4s,baz=140,slow=3.9,SNR=3.8						
	comp=Z,0.3nm,0.4s						
ASAR	Alice Springs	124.52	204	PKP	PKPdf	17 07 01.2	-0.5
	comp=Z,0.4nm,0.7s,baz=142,slow=1.8,SNR=3.0						
WRA	Warramunga Arr	127.74	206	PKP	PKiKP	17 07 07.9	-0.6
	comp=Z,0.5nm,0.8s,baz=154,slow=1.7,SNR=2.8						
KURBB	Kurchatov Arra	145.91	39	PKPbc	PKPab	17 07 42.4	+0.6
	comp=Z,0.4nm,0.7s,baz=316,slow=3.9,SNR=4.2						
ZALV	Zalesovo Beam	147.21	30	PKPbc	PKPab	17 07 46.0	-0.8
	comp=Z,0.9nm,0.4s,baz=318,slow=2.0,SNR=5.5						
MKAR	Makanchi Array	149.91	44	PKPbc	PKiKP	17 07 52.9	0.0
	comp=Z,0.6nm,0.7s,baz=325,slow=0.4,SNR=5.8						

SCB 18 16:50:44.8±1.2**, 21°.35S**×**67°.55W, h174**^{km}±20^{km}**, ML2.7**/2**, MW3.8, Error ellipse: s-maj=9.0km s-min=7.2km az=358.0, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	1.64	254	Pg	Pn	16 51 18.2	+0.4
MOCB	Mochara	1.78	87	Pg	Pn	16 51 19.7	+0.1
PB01	IPOC Station P	1.84	279	Pg	Pn	16 51 20.1	+0.3
PB01				Sg	Sn	16 51 47.7	+0.9
PB01				IAML		16 51 52.2	
	23nm,0.2s						
YJA	Yavi	2.06	114	Pg	Pn	16 51 23.6	+1.0
GO01	Chusmiza	2.28	317	Pg	Pn	16 51 26.0	+0.9
PB11	IPOC Station P	2.53	308	Pg	Pn	16 51 27.9	+0.2
PB11				Sg	Sn	16 52 00.4	-0.5
PB11				IAML		16 52 02.5	
	36nm,0.2s						
PB16	IPOC Station P	3.52	328	Pg	Pn	16 51 41.0	+0.8
BBOJ	La Paz, Jacaqu	4.39	352	Pg	Pn	16 51 52.4	+1.1
BBOE	La Paz, Chanca	4.53	355	Pg	Pn	16 51 53.9	+0.7
LPAZ	La Paz	5.07	354	Pg	Pn	16 52 00.1	0.0
BBOB	La Paz, Bander	5.21	354	Pg	Pn	16 52 01.7	-0.2

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*IDC **18** 16:57:08.5±0.8, 12°.92S×45°.40E, h0^{km}, mb3.8/10, mbtmp3.9/12, ML4.5/3, Error ellipse: s-maj=24.3km s-min=20.5km az=109.0*

*NEIC **18** 16:57:09.6±1.1, 12°.85S±0°.08×45°.42E±0°.09, h10^{km}±1^{km}, mb4.5/27, Error ellipse: s-maj=15.2km s-min=13.3km az=241.0*

ISC 18 16:57:08.9±0.4**, 12°.97S**±0°.05×**45°.47E**±0°.06**, h10**^{km}**, n67, σ1ˢ.85**/76**, mb4.3**/26**, Northwest of Madagascar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBV	Sambava	4.36	97	P	Pn	16 58 15.9	+0.6
SBV				S	Sn	16 59 02.1	-4.1
OPO	Ambohidratompo	5.81	164	Pn	Pn	16 58 37.7	+2.4
	4.8nm,0.3s,baz=317,slow=18,SNR=468						
OPO				Sn	Sn	16 59 38.9	-3.3
	24nm,0.3s,baz=253,slow=19,SNR=34						
OPO	Ambohidratompo	5.81	164	P	Pn	16 58 37.8	+2.5
OPO				S	Sn	16 59 39.1	-3.0
FIRM	Firavahana	5.86	167	P	Pn	16 58 38.8	+2.8
FIRM				S	Sn	16 59 40.8	-2.6
ATG	Ambohiby	5.92	173	P	Pn	16 58 38.8	+2.0
ATG				S	Sn	16 59 42.0	-2.7
ABPO	Ambohimpanom	6.25	165		Pn	16 58 43.2	+1.8
ABPO	Ambohimpanom	6.25	165	P	Pn	16 58 43.5	+2.2
ABPO				S	Sn	16 59 49.2	-3.7
MDSM	Mandiavato	6.26	166	P	Pn	16 58 44.0	+2.4
MDSM				S	Sn	16 59 49.9	-3.4
AVY	Angavokely	6.31	160	P	Pn	16 58 44.1	+1.8
AVY				S	Sn	16 59 51.8	-2.8
DGRM	Ambatolahisoa	6.32	172	P	Pn	16 58 45.0	+2.7
ABM	Ambohimiarambe	7.01	165	P	Pn	16 58 54.3	+2.4
ABM				S	Sn	17 00 07.7	-4.2
VOI	Vohitsoka	8.98	172		Pn	16 59 20.5	+1.8
FOMA	Nahampoana Res	12.03	173	Pn	Pn	17 00 02.0	+1.6
RER	Riviere de l'E	12.76	131	Pn	Pn	17 00 12.0	+1.4
KIBK	Kibwezi	12.87	325		Pn	17 00 10.0	-2.0
MSEY	Mahe Island	12.87	51	Pn	Pn	17 00 09.9	-2.2
CHIPN	CHIPINGE	14.25	238	iP	Pn	17 00 28.8	-2.1
CHIPN				iS	Sn	17 02 55.4	-14
KMBO	Kilima Mbogo	14.31	325	Pn	Pn	17 00 28.1	-3.8
KRI	Karoi	15.79	254	iP	Pn	17 00 50.8	-0.9
KRI				iS	Sn	17 03 35.7	-11
LSZ	Lusaka	16.92	260		Pn	17 01 05.5	-0.5
LSZ	Lusaka	16.92	260	Pn	Pn	17 01 05.3	-0.7
	0.8nm,0.3s,baz=80,slow=9.1,SNR=19						
LSZ				Sn	Sn	17 04 01.5	-13
	0.4nm,0.3s,baz=162,slow=20,SNR=1.4						
	7.4nm,0.6s						
MATP	Matopo	17.86	243	P	Pn	17 01 17.4	-0.3
	0.2nm,0.3s,baz=67,slow=12,SNR=19						
MATP				S	Sn	17 04 22.9	-14
	0.5nm,0.4s,baz=315,slow=20,SNR=1.4						
	3.0nm,0.7s						
BROLN	Tlhalogang	19.12	243	iP	Pn	17 01 33.4	+0.3
MREMI	Moremi	19.62	238	P	P	17 01 38.3	+0.6
KSANE	Kasane	20.16	254		P	17 01 43.4	-0.3
LPHEP	Lephephe	21.28	238		P	17 01 57.0	+1.2
LPHEP				IAmb	IAmb	17 02 02.8	
	comp=Z,32nm,1.2s						
LPHEP	Lephephe	21.28	238	iP	P	17 01 57.3	+1.5
PHDHD	Phuduhudu	21.30	248	P	P	17 01 56.6	+0.7
PHDHD				IAmb	IAmb	17 02 01.3	
	comp=Z,9.8nm,0.8s						
LBTB	Lobatse	22.25	235	P	P	17 02 06.8	+0.6
LBTB				IAmb	IAmb	17 02 10.6	
	comp=Z,13nm,1.1s						
KDWAN	Kaudwane	22.29	239	P	P	17 02 06.2	-0.5
KDWAN				IAmb	IAmb	17 02 13.9	
	comp=Z,35nm,1.2s						
SKOMA	Sekoma	23.37	237	iP	P	17 02 18.3	+0.4
KGCAE	Kacgae	24.19	243	P	P	17 02 25.4	-0.4
KGCAE				IAmb	IAmb	17 02 38.3	
	comp=Z,17nm,1.2s						
QNGWA	Qangwa	24.20	251	P	P	17 02 25.1	-1.0
QNGWA				IAmb	IAmb	17 02 40.3	
	comp=Z,10nm,1.1s						
BOSA	Boshof	24.42	227	P	P	17 02 28.2	+0.3
BOSA				IAmb	IAmb	17 02 40.0	
	comp=Z,13nm,1.2s						
BOSA	Boshof	24.42	227	P	P	17 02 28.4	+0.5
	comp=Z,3.0nm,0.7s,baz=61,slow=7.5,SNR=4.6						
	comp=Z,3.0nm,0.7s						
LKGWB	Lokgwabe	25.48	241	P	P	17 02 34.1	-3.5
KOOLE	Kule	25.98	244	P	P	17 02 42.5	+0.3
KOOLE				IAmb	IAmb	17 03 00.1	
	comp=Z,15nm,1.1s						
UOSS	Minazif	39.11	16	P	P	17 04 35.8	-0.8
UOSS				IAmb	IAmb	17 04 36.7	
	comp=Z,8.3nm,1.1s						
CSS	Mathiatis	49.04	347	P	P	17 05 56.2	+0.1
TORD	Torodi Ar. Bea	50.56	299	P	P	17 06 07.2	-0.8
BRTR	Keskin Array B	53.57	349	P	P	17 06 30.9	+0.7
	comp=Z,0.3nm,0.6s,baz=161,slow=11,SNR=2.3						
	comp=Z,0.3nm,0.6s						
TIP	Timpagrande	58.38	334	P	P	17 07 03.9	-0.7
TIP				IAmb	IAmb	17 07 13.0	
	comp=Z,2.3nm,0.9s						
KKAR	Karatay Array	60.33	21	P	P	17 07 17.5	-0.4
FDMO	Fiordimonte	63.13	334	P	P	17 07 36.1	-0.7
FDMO				IAmb	IAmb	17 07 38.4	
	comp=Z,3.2nm,0.9s						
AB31	Akbulak array	63.26	11	P	P	17 07 37.8	+0.3
AB31				IAmb	IAmb	17 07 39.8	
	comp=Z,4.6nm,0.8s						
ABKAR	Akbulak array	63.26	11	P	P	17 07 37.8	+0.3
ABKAR				IAmb	IAmb	17 07 39.8	
	comp=Z,4.6nm,0.8s						
MORW	Morawa	66.94	116	P	P	17 08 03.8	+1.7
PZH	PanZhiHua	67.29	54	P	P	17 08 06.8	+2.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.1s						
GERES	GERESS Array B	67.66	338	P	P	17 08 06.3	+0.1
	comp=Z,0.6nm,0.6s,baz=129,slow=11,SNR=5.2						
	comp=Z,0.6nm,0.6s						
MKAR	Makanchi Array	68.03	26	P	P	17 08 09.5	+1.0
	comp=Z,0.8nm,0.8s,baz=215,slow=6.2,SNR=6.1						
	comp=Z,0.8nm,0.8s						
BVAR	Borovoye Array	69.13	16	P	P	17 08 15.8	+0.7
	comp=Z,0.9nm,0.8s,baz=211,slow=8.1,SNR=4.9						
	comp=Z,0.9nm,0.8s						
KURBB	Kurchatov Arra	69.61	22	P	P	17 08 18.0	-0.2
	comp=Z,0.4nm,0.6s,baz=224,slow=7.4,SNR=6.7						
	comp=Z,0.4nm,0.6s						
ESDC	Sonseca Array	69.67	321	P	P	17 08 21.0	+2.2
	comp=Z,0.7nm,0.8s,baz=134,slow=5.8,SNR=2.9						
	comp=Z,0.7nm,0.8s						
ARTI	Arti	69.94	8	P	P	17 08 20.7	+0.7
ARTI				IAmb	IAmb	17 08 21.8	
	comp=Z,7.0nm,1.2s						
KKM	Kota Kinabalu	72.76	79	P	P	17 08 37.1	-1.1
ZAA0	Zalesovo Array	74.59	23	P	P	17 08 47.9	-0.1
ZALV	Zalesovo Beam	74.59	23	P	P	17 08 48.0	0.0
MMRI	Maumere	75.29	96	P	P	17 08 52.8	-0.1
NB201	NORSAR Array S	78.61	344	P	P	17 09 10.5	-0.1
HHC	Hu-ho-hao-te	81.12	45	eP	P	17 09 24.9	+0.1
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC				pmax	pmax		
	comp=Z,2µm,6.6s						
SONM	Songino Array	81.12	37	P	P	17 09 27.5	+2.8
	comp=Z,0.2nm,0.3s,baz=224,slow=6.0,SNR=1.8						
	comp=Z,0.2nm,0.3s						
ARCES	ARCESS Array B	83.48	353	P	P	17 09 36.1	-0.3
ARCES				IAmb	IAmb	17 09 38.1	
	comp=Z,11nm,1.4s						
ASAR	Alice Springs	83.49	113	P	P	17 09 38.4	+0.8
ASAR	Alice Springs	83.49	113	P	P	17 09 38.8	+1.2
	comp=Z,0.8nm,0.7s,baz=262,slow=4.6,SNR=12						
	comp=Z,0.8nm,0.7s						
AS31	Alice Springs	83.49	113	P	P	17 09 37.0	-0.6
WRA	Warramunga Arr	84.62	109	P	P	17 09 45.2	+1.8
	comp=Z,1.6nm,1.0s,baz=261,slow=4.2,SNR=6.1						
	comp=Z,1.6nm,1.0s						
NVAR	Mina Array Bea	150.83	333	PKPbc	PKiKP	17 17 05.2	+2.2
	comp=Z,0.7nm,0.8s,baz=348,slow=4.3,SNR=2.7						

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*UPP **18** 17:00:37.9±0.1, 67°.08N×20°.95E, h0^{km}, ML2.1, Unknown*

*IDC **18** 17:00:39.2±1.2, 67°.07N×21°.25E, h0^{km}, mbtmp2.7/3, ML2.1/3, Error ellipse: s-maj=20.2km s-min=9.2km az=99.0*

*BER **18** 17:00:40.1±2.6, 66°.98N×20°.95E, h0^{km}, ML1.7, Suspected explosion*

ISC 18 17:00:37.4±0.8**, 67°.06N**±0°.03×**20°.90E**±0°.03**, h0**^{km}**, n22, σ1ˢ.49**/34**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.14	296	P	Pg	17 00 41.1	+0.9
DUNU				S	Sg	17 00 43.5	+1.4
ERTU	Ertsjaerv	0.72	134	P	Pg	17 00 51.5	+0.4
ERTU				S	Sg	17 01 01.4	+0.9
HARU	Harads	0.90	178	P	Pg	17 00 55.1	+0.4
RATU	Laukkuluspa	0.92	327	P	Pg	17 00 54.8	-0.3
RATU				S	Sg	17 01 07.6	+0.7
KUA	Kurravaara	0.93	347	P	Pg	17 00 55.1	-0.1
KUA				S	Sg	17 01 07.0	-0.2
SALU	Saltoluokta	0.99	290	P	Pg	17 00 56.4	+0.2
SALU	Saltoluokta	0.99	290	eP	Pg	17 00 56.5	+0.2
SALU				eS	Sb	17 01 11.3	+0.3
KOVU	Salmi	1.20	347	P	Pg	17 00 59.8	-0.6
KALU	Kalix	1.56	140	P	Pn	17 01 06.5	+0.2
SJUU	Sjulsmark	1.58	169	P	Pn	17 01 07.4	+0.7
HEF	Hetta	1.71	37	eP	Pn	17 01 08.6	+0.1
HEF				eS	Sn	17 01 31.4	+0.2
KIF	Kilpisjarvi	1.96	359	eP	Pb	17 01 13.5	-0.4
KIF				eS	Sg	17 01 40.5	+0.3
I37NO	I37NO	2.20	338	I	I	17 13 59.0	
	baz=156,slow=325,SNR=1.6						
FAUS	Fauske	2.21	281	eP	Pb	17 01 17.6	-0.6
FAUS				eS	Sg	17 01 48.7	+0.4
FAUS				IAML		17 01 52.8	
	comp=Z,13nm,0.3s						
STEI	Steigen	2.35	294	eP	Pb	17 01 19.3	-1.2
JETT	Jettan, Norway	2.52	356	eP	Pb	17 01 22.2	-1.2
JETT				eS	Sb	17 01 55.2	+0.3
JETT				IAML		17 02 01.0	
	comp=Z,16nm,0.7s						
ARA0	ARCESS Array S	3.02	32	eP	Pn	17 01 27.5	+1.0
ARA0				eS	Sn	17 02 04.8	+1.5
ARCES	ARCESS Array B	3.02	32	Pn	Pn	17 01 27.0	+0.6
	comp=Z,0.7nm,0.3s,baz=215,slow=12,SNR=58						
ARCES				Sn	Sn	17 02 04.0	+0.7
	comp=Z,0.7nm,0.3s,baz=210,slow=23,SNR=11						
	comp=Z,1.5nm,0.3s						
VAGH	Vaagaholmen	3.03	267	eP	Pn	17 01 29.0	+2.5
VAGH				IAML		17 02 22.6	
	comp=Z,2.8nm,0.2s						
KEV	Kevo	3.52	37	eP	Pn	17 01 33.9	+0.6
FINES	FINESS Array B	6.07	156	Pn	Pn	17 02 10.3	+2.0
	comp=Z,0.1nm,0.3s,baz=346,slow=11,SNR=5.1						
FINES				Sn	Sn	17 03 17.9	-0.4
	comp=Z,0.3nm,0.3s,baz=346,slow=22,SNR=6.1						
FINES				Lg	Lg	17 03 48.7	
	comp=Z,0.3nm,0.3s,baz=347,slow=30,SNR=3.4						
	comp=Z,1.1nm,0.8s						
NOA	NORSAR Array B	7.38	220	Pn	Pn	17 02 27.9	+1.6
	baz=24,slow=10,SNR=1.0						
NOA				Sn	Sn	17 03 44.2	-6.4
	baz=17,slow=17,SNR=1.0						
	comp=Z,0.3nm,0.7s						

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*IDC **18** 17:14:31.4±0.6, 8°.18S×116°.33E, h0^{km}, mb4.0/15, mbtmp4.1/18, ML4.1/3, Error ellipse: s-maj=21.6km s-min=11.5km az=76.0*

*NEIC **18** 17:14:32.3±2.9, 8°.33S±0°.08×116°.16E±0°.05, h10^{km}±1^{km}, mb4.4/22, Error ellipse: s-maj=13.1km s-min=7.9km az=353.0*

*DJA **18** 17:14:33.6±0.4, 8°S±4°×11°6E±°, h14^{km}±3^{km}, M4.6/22, mB5.0/1, mb4.6/11, MLv4.5/22, Mw(mB)4.4/1*

ISC 18 17:14:32.3±0.4**, 8°.31S**±0°.04×**116°.21E**±0°.03**, h10**^{km}**, n92, σ2ˢ.07**/106**, mb4.2**/24**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRBI	Singaraja	1.01	283	P	Pn	17 14 53.1	+0.5
SRBI				S	Sn	17 15 07.4	+0.5
DNP	Denpasar	1.05	250	P	Pn	17 14 55.0	+1.8
PLAI	Plampang	1.63	108	P	Pn	17 15 01.5	+0.4
PLAI	Plampang	1.63	108	S	Sb	17 15 24.9	+1.7
PLAI	Plampang	1.63	108	P	Pn	17 15 01.9	+0.8
PLAI				S	Sn	17 15 23.2	+1.0
JAGI	Jajag, Banyuwa	2.04	265		Pb	17 15 08.1	-1.5
JAGI				Sn	Sn	17 15 24.5	-7.9
JAGI	Jajag, Banyuwa	2.04	265	P	Pb	17 15 07.5	-2.0
JAGI	Jajag, Banyuwa	2.04	265	S	Sg	17 15 35.5	-2.5
JAGI	Jajag, Banyuwa	2.04	265	P	Pb	17 15 07.9	-1.6
JAGI				S	Sb	17 15 33.8	-1.2
KMMI	Kalianget	2.55	299	P	Pn	17 15 14.6	+0.8
GMJI	Gumukmas	2.74	271	P	Pn	17 15 18.0	+1.7
WBSI	Waikabubak, Su	3.41	113	P	Pn	17 15 26.1	+0.5
GRJI	Gresik	3.95	290	P	Pn	17 15 32.9	-0.1
WSI	Waingapu	4.26	109	P	Pn	17 15 36.8	-0.5

BASI	Baing, Sumba	4.71	114	P	Pn	17 15 46.1	+2.6
BSSI	Bau Bau, Buton	4.76	63	P	Pn	17 15 43.3	-0.9
NGJI	Ngawi	4.80	281	P	Pn	17 15 45.1	+0.4
KAPI	Kappang	4.81	47		Pn	17 15 45.2	+0.4
KAPI				Sn	Sn	17 16 36.6	-4.0
KAPI	Kappang	4.81	47	Pn	Pn	17 15 44.6	-0.2
	5.0nm,0.3s,baz=233,slow=1.8,SNR=6.1						
KAPI				Sn	Sn	17 16 36.4	-4.2
	11nm,0.3s,baz=188,slow=22,SNR=10						
	10nm,0.3s						
KAPI	Kappang	4.81	47	P	Pn	17 15 48.9	+4.1
PCJI	Pacitan	4.98	271	P	Pn	17 15 49.1	+1.9
PCJI				S	Sn	17 16 47.0	+2.1
WOJI	Wonogiri, Jawa	5.25	275	P	Pn	17 15 52.8	+1.8
	0.7nm34nm,0.7s						
EDFI	Ende, Flores	5.44	95	P	Pn	17 15 53.3	-0.3
	0.2nm2µm54nm,0.5s						
BNSI	Bone	5.49	45	P	Pn	17 15 54.4	+0.3
	0.4nm33nm,0.6s						
UGM	Wanagama	5.64	274		Pn	17 15 53.9	-2.5
UGM				Sn	Sn	17 17 06.0	+4.7
UGM	Wanagama	5.64	274	P	Pn	17 15 58.8	+2.4
UGM	Wanagama	5.64	274	P	Pn	17 15 58.0	+1.6
	0.7nm56nm,0.9s						
MMRI	Maumere	5.97	94		Pn	17 16 00.3	-0.6
MMRI	Maumere	5.97	94	P	Pn	17 16 03.0	+2.1
MMRI	Maumere	5.97	94	P	Pn	17 16 00.0	-0.9
	0.5nm129nm,1.4s						
TTSI	Tana Toraja	6.34	35	P	Pn	17 16 06.5	+0.5
BATI	Baumata	7.59	105	Pn	Pn	17 16 23.7	+0.5
	9.1nm,0.3s,baz=320,slow=7.9,SNR=11						
BATI				Sn	Sn	17 17 50.1	+0.7
	0.4nm,0.3s,baz=40,slow=22,SNR=0.9						
	17nm,0.4s						
BATI	Baumata	7.59	105	P	Pn	17 16 22.4	-0.8
	48nm,1.2s						
SOEI	Soe	8.09	101		Pn	17 16 29.3	-0.7
SOEI	Soe	8.09	101	P	Pn	17 16 32.3	+2.3
SOEI	Soe	8.09	101	P	Pn	17 16 29.3	-0.7
BBJI	Bungbulang	8.52	275	P	Pn	17 16 39.1	+3.1
MBWA	Marble Bar	13.22	165		Pn	17 17 38.2	-2.0
MBWA	Marble Bar	13.22	165	P	Pn	17 17 40.6	+0.4
FITZ	Fitzroy Crossi	13.37	138		Pn	17 17 40.6	-1.7
FITZ	Fitzroy Crossi	13.37	138	Pn	Pn	17 17 41.0	-1.2
	0.5nm,0.3s,baz=332,slow=9.9,SNR=16						
FITZ				Sn	Sn	17 20 05.2	-5.9
	0.4nm,0.3s,baz=180,slow=19,SNR=1.8						
	4.8nm,0.7s						
FITZ	Fitzroy Crossi	13.37	138	P	Pn	17 17 41.5	-0.8
PSA00	Pilbara Seismi	13.64	166	Pn	Pn	17 17 44.3	-1.8
PSA00	Pilbara Seismi	13.64	166	P	Pn	17 17 46.4	+0.4
KNRA	Kununurra	14.29	122	Pn	Pn	17 17 54.0	-0.9
GIRL	Giralia	14.38	187	P	Pn	17 17 55.1	-1.0
MTN	Manton Dam	15.34	108	Pn	Pn	17 18 06.4	-2.7
MTN				IAmb	IAmb	17 18 19.2	
	comp=Z,26nm,1.3s						
FAKI	Fak Fak	16.83	72	Pn	Pn	17 18 23.7	-4.6
MORW	Morawa	20.65	180	P	P	17 19 07.7	-4.6
MORW				IAmb	IAmb	17 19 20.1	
	comp=Z,21nm,1.4s						
WB0	Warramunga Arr	20.97	125		P	17 19 15.3	-0.5
WB0				IAmb	IAmb	17 19 16.6	
	comp=Z,13nm,0.7s						
WRA	Warramunga Arr	21.02	125		P	17 19 15.3	-1.0
WRA	Warramunga Arr	21.02	125	P	P	17 19 16.2	-0.1
	comp=Z,12nm,0.7s,baz=301,slow=12,SNR=106						
	comp=Z,12nm,0.7s						
WRAB	Tennant Creek	21.02	125	P	P	17 19 16.3	-0.1
WRAB				IAmb	IAmb	17 19 17.2	
	comp=Z,13nm,0.8s						
WR8	Warramunga Arr	21.15	125		P	17 19 17.5	-0.3
WR8				IAmb	IAmb	17 19 18.7	
	comp=Z,17nm,0.7s						
AS31	Alice Springs	22.81	134		P	17 19 34.8	-0.8
ASAR	Alice Springs	22.81	134	P	P	17 19 35.8	+0.2
	comp=Z,7.9nm,0.8s,baz=309,slow=8.9,SNR=142						
ASAR				PcP	PcP	17 23 26.5	-0.6
	comp=Z,0.4nm,0.5s,baz=294,slow=2.4,SNR=3.6						
	comp=Z,7.9nm,0.8s						
NWAO	Narrogin (SRO)	24.52	178	P	P	17 19 53.1	+1.1
	comp=Z,5.8nm,0.8s,baz=260,slow=13,SNR=1.7						
NWAO				S	S	17 24 18.7	+6.2
	comp=Z,4.9nm,0.9s,baz=34,slow=15,SNR=1.6						
	comp=Z,5.8nm,0.8s						
COEN	Coen	27.03	104	P	P	17 20 15.0	-0.1
BBOO	Buckleboo	30.54	146	P	P	17 20 45.7	-0.4
CMAR	Chiang Mai Arr	31.59	327	P	P	17 20 57.0	+1.6
	comp=Z,0.7nm,0.9s,baz=135,slow=5.8,SNR=4.1						
	comp=Z,0.7nm,0.9s						
STKA	Stephens Creek	33.27	138	P	P	17 21 10.0	-0.1
STKA	Stephens Creek	33.27	138	P	P	17 21 10.6	+0.5
	comp=Z,1.5nm,0.6s,baz=314,slow=7.5,SNR=4.3						
	comp=Z,1.5nm,0.6s						
ARMA	Armidale	39.74	128	P	P	17 22 07.0	+1.5
ARMA				IAmb	IAmb	17 22 50.8	
	comp=Z,27nm,1.4s						
CAN	Canberra	40.27	137	P	P	17 22 10.0	+0.2
KSRS	Korea Array	46.83	13	P	P	17 23 04.7	+2.3
	comp=Z,1.0nm,0.7s,baz=190,slow=6.6,SNR=4.1						
MJAR	Matsushiro Arr	49.17	23	P	P	17 23 19.9	-0.7
MJAR	Matsushiro Arr	49.17	23	P	P	17 23 20.0	-0.6
	comp=Z,0.7nm,0.3s,baz=202,slow=9.1,SNR=5.8						
	comp=Z,0.7nm,0.3s						
MAJO	Matsushiro	49.17	23	P	P	17 23 20.9	+0.3
MAJO				IAmb	IAmb	17 23 28.3	
	comp=Z,8.3nm,1.4s						
MJB9	Matsu-Tunnel	49.17	23	P	P	17 23 21.9	+1.2
MJB9				IAmb	IAmb	17 23 29.3	
	comp=Z,3.7nm,1.0s						
XLT	XiLinHaoTe	51.96	360	*e*P	P	17 23 43.8	+2.1
XLT				sP	sP	17 23 57.5	+11
XLT				PcP	PcP	17 24 54.3	+0.2
XLT				PP	PP	17 25 44.6	+4.7
XLT				pmax	pmax		
	comp=Z,7.0nm,0.7s						
USRK	Ussuriysk Ar.	54.18	14	P	P	17 23 57.4	-0.6
	comp=Z,1.6nm,0.7s,baz=125,slow=7.3,SNR=4.6						
	comp=Z,1.6nm,0.7s						
SONM	Songino Array	56.57	352	P	P	17 24 16.1	+0.8
SONM				IAmb	IAmb	17 24 21.7	
	comp=Z,2.3nm,0.8s						
SONM	Songino Array	56.57	352	P	P	17 24 16.1	+0.8
	comp=Z,2.3nm,0.6s,baz=175,slow=8.5,SNR=18						
	comp=Z,2.3nm,0.6s						
HEH	HeiHe	59.13	8	*e*P	P	17 24 33.1	+0.1
MKAR	Makanchi Array	62.62	334	P	P	17 24 56.1	-0.8
MKAR	Makanchi Array	62.62	334	P	P	17 24 56.3	-0.6
	comp=Z,0.5nm,0.6s,baz=162,slow=8.0,SNR=5.2						
	comp=Z,0.5nm,0.6s						
KURBB	Kurchatov Arra	67.16	335	P	P	17 25 26.1	-0.2
	comp=Z,0.3nm,0.7s,baz=154,slow=6.3,SNR=2.5						
	comp=Z,0.3nm,0.7s						
ZAA0	Zalesovo Array	67.45	341	P	P	17 25 27.2	-0.9
ZAA0				IAmb	IAmb	17 25 31.6	
	comp=Z,3.9nm,1.3s						
ZALV	Zalesovo Beam	67.45	341	P	P	17 25 27.1	-1.0
	comp=Z,1.3nm,0.6s,baz=127,slow=3.9,SNR=4.9						
	comp=Z,1.3nm,0.6s						
MAW	Mawson	68.96	199	P	P	17 25 40.5	+3.1
	comp=Z,1.7nm,0.8s,baz=21,slow=8.6,SNR=2.4						
	comp=Z,1.7nm,0.8s						
BVAR	Borovoye Array	72.41	333	P	P	17 25 56.6	-2.1
	comp=Z,0.4nm,0.5s,baz=157,slow=4.8,SNR=4.3						
VNDA	Vanda	73.10	171	P	P	17 26 03.7	+1.3
VNDA				IAmb	IAmb	17 26 04.4	
	comp=Z,4.9nm,1.5s						
VNDA	Vanda	73.10	171	P	P	17 26 03.7	+1.3
	comp=Z,0.7nm,0.5s,baz=307,slow=6.1,SNR=8.1						
	comp=Z,0.7nm,0.5s						
SBA	Scott Base	74.12	170	P	P	17 26 06.7	-1.7
ABKAR	Akbulak array	75.43	326	P	P	17 26 14.2	-2.2
ABKAR	Akbulak array	75.43	326	P	P	17 26 14.3	-2.1
ABKAR				IAmb	IAmb	17 26 15.6	
	comp=Z,1.7nm,1.0s						
QSPA	South Pole Qui	81.68	180	P	P	17 26 51.8	+1.0
QSPA	South Pole Qui	81.68	180	P	P	17 26 51.5	+0.7
	comp=Z,1.3nm,0.9s,baz=282,slow=2.9,SNR=9.1						
	comp=Z,1.3nm,0.9s						
SNAA	Sanae	90.91	196	P	P	17 27 37.2	+1.1
	comp=Z,0.8nm,0.6s,baz=163,slow=4.4,SNR=7.4						
	comp=Z,0.8nm,0.6s						
CPUP	Villa Florida	145.00	190	PKPbc	PKPdf	17 34 10.6	-0.2
	comp=Z,0.6nm,0.7s,baz=243,slow=2.3,SNR=6.2						
LPAZ	La Paz	155.19	170	PKPab	PKPab	17 34 53.6	+1.5
	comp=Z,2.3nm,0.6s,baz=194,slow=5.9,SNR=8.9						
SIV	San Ignacio	155.71	186	PKPab	PKPab	17 34 54.6	+0.9
	comp=Z,1.0nm,0.6s,baz=171,slow=4.5,SNR=5.1						

IDC ***18*** *17:19:20.1±3.6, 18°.89S×175°.61W, h0^{km}, mb3.8/2, mbtmp3.8/2, Error ellipse: s-maj=206.0km s-min=51.3km az=151.0*

ISC 18 17:19:21.5±2.2**, 18°.7S**±0°.2×**175°.7W**±0°.4**, h10**^{km}**, n11, σ2^{s}.51**/11**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRZ	Great Barrier	19.10	202	P	Pn	17 23 43.0	-2.2
DUWZ	D'Urville Isla	23.72	200	P	P	17 24 30.7	-3.0
QRZ	Quartz Range	24.22	202	P	P	17 24 40.8	+2.5
NNZ	Nelson	24.27	200	P	P	17 24 38.4	-0.5
KHZ	Kahutara	25.31	199	P	P	17 24 50.6	+2.4
GVZ	Greta Valley S	25.96	199	P	P	17 24 58.7	+4.5
MQZ	McQueen's Vall	26.75	199	P	P	17 25 07.6	+6.4
WRA	Warramunga Arr	47.01	260	P	P	17 27 53.2	-0.2
	0.2nm,0.3s,baz=98,slow=7.8,SNR=8.4						
	0.2nm,0.3s						
ASAR	Alice Springs	47.05	255	P	P	17 27 55.0	+1.3
	1.2nm,0.5s,baz=90,slow=8.3,SNR=33						
ASAR				PcP	PcP	17 29 25.3	-0.5
	0.1nm,0.4s,baz=95,slow=3.3,SNR=1.3						
	1.2nm,0.5s						
BVAR	Borovoye Array	119.11	321	PKP	PKiKP	17 38 10.9	+0.4
	0.2nm,0.4s,baz=103,slow=4.6,SNR=2.4						
BRTR	Keskin Array B	147.18	316	PKPbc	PKPab	17 39 05.7	-1.4
	0.7nm,0.6s,baz=72,slow=4.7,SNR=4.7						

JMA ***18*** *17:21:46.0±0.2, 44°N±1°×14°8E±°, h0^{km}, MV4.0/30, E OFF HOKKAIDO*

SKHL ***18*** *17:21:47.3±0.6, 43°.90N×148°.30E, h55^{km}±8^{km}, mb4.8/3*

IDC ***18*** *17:21:50.6±9.7, 44°.27N×148°.19E, h72^{km}±62^{km}, mb3.4/11, mbtmp3.7/12, ML2.8/1, Error ellipse: s-maj=105.4km s-min=25.9km az=175.0*

ISC 18 17:21:45.8±1.7**, 43°.83N**±0°.09×**148°.32E**±0°.10**, h47**^{km}±14^{km}**, n35, σ0^{s}.94**/42**, mb3.6**/11**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	1.08	272	*i* P	Pn	17 22 05.4	+0.9
SHO				AMB	AMB	17 22 06.2	
	190nm,0.2s						
SHO				*i* S	Sn	17 22 18.5	+0.2
SHO				A	A	17 22 19.9	
	1µm,0.3s						
SHO				A	A	17 22 19.9	
	2µm,0.3s						
KUR	Kuril'sk	1.44	347	*i* P	Pn	17 22 09.3	-0.1
KUR				AMB	AMB	17 22 09.5	
	210nm,0.4s						
KUR				*e*S	Sn	17 22 26.5	-0.6
KUR				A	A	17 22 27.0	
	370nm,0.3s						
KUR				A	A	17 22 27.0	
	620nm,0.3s						
YUK	Yuzh-Kuril'sk	1.79	277	*i* P	Pn	17 22 14.2	+0.1
YUK				AMB	AMB	17 22 14.6	
	370nm,0.2s						
YUK				*i* S	Sn	17 22 34.5	-1.1
YUK				A	A	17 22 36.1	
	650nm,0.2s						
YUK				A	A	17 22 36.1	
	1µm,0.2s						
NEM2	Nemuro 2	1.93	257	*e*P	Pn	17 22 16.1	0.0
NEM2				*e*S	Sn	17 22 37.9	-1.2
NMR	Nemuro--Hokkai	1.94	257	*e*P	Pn	17 22 16.3	+0.1
NMR				*e*S	Sn	17 22 37.8	-1.6
JRA	Rausu	2.31	274	*e*P	Pn	17 22 22.3	+0.9
JRA				*e*S	Sn	17 22 49.0	+0.4
JNSB	Nemuroshibetsu	2.40	270	P	Pn	17 22 23.6	+1.0
JNSB				*e*S	Sn	17 22 50.3	-0.5
JKHN	Kushirohamanak	2.42	253	*e*P	Pn	17 22 23.3	+0.5
JKHN				*e*S	Sn	17 22 50.3	-0.9
JNK	Nakash	2.62	266	*e*P	Pn	17 22 26.1	+0.5
JNK				*e*S	Sn	17 22 56.1	-0.1
AKK	Akkeshi	2.66	253	*e*P	Pn	17 22 26.9	+0.8
JAK	Akkeshi	2.77	254	*e*P	Pn	17 22 27.9	+0.3
JAK				*e*S	Sn	17 22 57.9	-1.9
JTKR	Abashiri--Toko	3.19	274	*e*P	Pn	17 22 34.8	+1.4
JAR	Ashorobuto	3.35	262	P	Pn	17 22 37.0	+1.5
JAR				*e*S	Sn	17 23 14.3	+0.2
JOB	Onbets	3.40	256	*e*P	Pn	17 22 37.2	+1.0
JOB				*e*S	Sn	17 23 14.1	-1.3
JCH	Churui	3.82	253	*e*P	Pn	17 22 42.7	+0.7
JCH				*e*S	Sn	17 23 24.1	-1.7
JNBK	Urakawa-nobuka	4.36	251	*e*P	Pn	17 22 50.4	+0.9
JEW	Eniwo	5.11	261	*e*P	Pn	17 23 01.9	+2.1
PETK	Petropavlovsk-	11.16	30	P	Pn	17 24 22.6	-0.1
	0.3nm,0.3s,baz=211,slow=17,SNR=1.3						
	1.0nm,0.4s						
H11N2	WAKE ISLAND Hy	28.62	141	T	T	17 58 29.6	
	baz=332,slow=76,SNR=33						
H11N1	WAKE ISLAND Hy	28.64	141	T	T	17 58 30.5	
	baz=332,slow=76,SNR=46						
H11N3	WAKE ISLAND Hy	28.64	141	T	T	17 58 31.1	
	baz=332,slow=76,SNR=33						
H11S1	WAKE ISLAND Hy	29.61	143	T	T	17 59 43.3	
	baz=333,slow=76,SNR=85						
H11S3	WAKE ISLAND Hy	29.61	143	T	T	17 59 38.6	
	baz=333,slow=76,SNR=54						
H11S2	WAKE ISLAND Hy	29.62	143	T	T	17 59 42.4	
	baz=333,slow=76,SNR=50						
ILAR	Eielson Array	40.92	36	P	P	17 29 23.4	+0.3
	0.4nm,0.6s,baz=271,slow=9.5,SNR=5.0						
	0.4nm,0.6s						
MKAR	Makanchi Array	45.30	298	P	P	17 29 58.8	+0.2
	0.2nm,0.5s,baz=72,slow=9.3,SNR=2.9						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	46.27	304	P	P	17 30 06.1	-0.2
	0.3nm,0.4s,baz=73,slow=9.1,SNR=2.8						
	0.3nm,0.4s						
YKA	Yellowknife Ar	55.26	34	P	P	17 31 13.7	0.0
	0.2nm,0.5s,baz=305,slow=7.2,SNR=2.8						
	0.2nm,0.5s						
FINES	FINESS Array B	65.18	333	P	P	17 32 20.4	-1.1
	1.1nm,0.8s,baz=22,slow=7.0,SNR=1.4						
	1.1nm,0.8s						
NOA	NORSAR Array B	69.83	339	P	P	17 32 50.3	-0.6
	0.6nm,0.7s,baz=29,slow=6.5,SNR=2.7						
	0.6nm,0.7s						
HFS	Hagfors	69.94	338	P	P	17 32 50.8	-0.8
	1.7nm,0.6s,baz=46,slow=6.2,SNR=5.4						
	1.7nm,0.6s						
KBZ	Khabaz	70.38	312	P	P	17 32 54.9	+0.4
	1.8nm,0.7s,baz=95,slow=5.2,SNR=3.8						
	1.8nm,0.7s						
AKASG	Malin Array Be	72.01	324	P	P	17 33 03.7	-0.6
	0.8nm,0.6s,baz=39,slow=6.9,SNR=6.0						
	0.8nm,0.6s						
EKA	Eskdalemuir Ar	78.28	344	P	P	17 33 40.5	+0.2
	0.3nm,0.4s,baz=28,slow=6.1,SNR=3.4						
	0.3nm,0.4s						
TXAR	Lajitas Array	81.90	57	P	P	17 34 01.3	+0.9
	0.2nm,0.5s,baz=312,slow=3.1,SNR=2.7						
	0.2nm,0.5s						

IDC ***18*** *17:21:46.2±0.4, 31°.30S×177°.62W, h0^{km}, mb4.8/20, mbtmp4.7/20, MS5.2/30, Error ellipse: s-maj=17.4km s-min=14.7km az=72.0*

NOU ***18*** *17:21:46.3, 31°.73S×176°.60W, h48^{km}, mb5.2/50, Kermadec Islands Region*

BJI ***18*** *17:21:47.2, 31°.21S×177°.42W, h18^{km}, mB5.7/4, mb5.0/24, Ms5.6/5, Ms7 5.3/5*

NEIC ***18*** *17:21:48.0±2.2, 31°.22S±0°.09×177°.6W±0°.1, h10^{km}±1^{km}, mb5.2/149, Ms_20 5.6/520, Mww5.5/29, Error ellipse: s-maj=17.0km s-min=14.4km az=87.0*

NEIC ***18*** *17:21:48, 31°.36S×176°.98W, h20^{km}, Moment Tensor Solution. Duration: 2^{s}.4 Moment tensor: Scale 10^{17}Nm; M_{rr}1.33; $M_{\theta\theta}$0.13; $M_{\phi\phi}$-1.46; $M_{r\theta}$0.42; $M_{\theta\phi}$-0.36; $M_{\phi r}$1.25; Fault plane solution: $M_0$1.95000×10^{17} NP1: ϕ_s186.12000°, δ24.05000°, λ80.24000°. NP2: ϕ_s16.79000°, δ66.32000°, λ94.33000°. Principal axes: T 1.8458, Plg68.0000°, Azm295.0000°; N 0.1968, Plg4.0000°, Azm195.0000°; P -2.0426, Plg21.0000°, Azm104.0000°;*

NEIC ***18*** *17:21:48, 31°.26S×177°.57W, h20^{km}*

MOS ***18*** *17:21:49.8±1.0, 31°.25S×177°.62W, h32^{km}, mb5.4/21, MS5.4/13, Error ellipse: s-maj=11.2km s-min=8.7km az=98.7*

GCMT ***18*** *17:21:53.0±0.1, 31°.34S±0°.01×177°.32W±0°.01, h14^{km}, MW5.5/138, Moment Tensor Solution. s92,c146; s138,c241; Duration: 1^{s}.3 Moment tensor: Scale 10^{17} Nm; M_{rr}1.43±.04; $M_{\theta\theta}$-0.06±.03; $M_{\phi\phi}$-1.37±.03; $M_{r\theta}$0.27±.06; $M_{\theta\phi}$-0.41±.02; $M_{\phi r}$1.31±.07; Best double couple: $M_0$1.97800×10^{17} NP1: ϕ_s199.00000°, δ24.00000°, λ96.00000°. NP2: ϕ_s13.00000°, δ66.00000°, λ87.00000°. Principal axes: T 1.9520, Plg69.0000°, Azm278.0000°; N 0.0500, Plg2.0000°, Azm14.0000°; P -2.0050, Plg21.0000°, Azm105.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 17:21:49.7±0.2**, 31°.55S**±0°.03×**177°.65W**±0°.05**, h26**^{km}**, n763, σ1^{s}.75**/473**, mb5.2**/122**, MS5.6**/291**, 14C-4D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.29	354	P	Pn	17 22 21.5	-4.5
GLKZ				S	Sn	17 22 51.7	-1.7
RAO	Raoul Island	2.31	354		Pn	17 22 21.2	-4.8
RAO	Raoul Island	2.31	354	P	Pn	17 22 21.2	-4.8
RAO	Raoul Island	2.31	354	P	Pn	17 22 22.0	-4.0
RIZ	Raoul Island	2.31	354	P	Pn	17 22 22.1	-4.1
RIZ				S	Sn	17 22 48.7	-5.1
MXZ	Matakaoa Point	6.86	208	Pn	Pn	17 23 27.5	-1.1
MXZ					Sn	17 24 47.5	+1.7
MXZ	Matakaoa Point	6.86	208	P	Pn	17 23 29.8	+1.2
MXZ	Matakaoa Point	6.86	208	S	Sn	17 24 48.0	+2.2
MXZ	Matakaoa Point	6.86	208	P	Pn	17 23 27.5	-1.1
MXZ				S	Sn	17 24 47.8	+1.9
HAZ	Te Kaha	7.24	210	P	Pn	17 23 33.2	-0.6
HAZ				S	Sn	17 25 01.4	+6.2
PUZ	Puketiti	7.32	206	P	Pn	17 23 33.0	-2.0
PUZ				S	Sn	17 24 59.8	+2.5
KUZ	Kuaotunu	7.55	225	P	Pn	17 23 41.1	+3.0
MWZ	Matawai	7.84	209	P	Pn	17 23 39.6	-2.5
MWZ				S	Sn	17 25 12.9	+2.9
URZ	Urewera	7.95	211	Pn	Pn	17 23 41.1	-2.5
	3.2nm,0.3s,baz=359,slow=5.0,SNR=24						
URZ				Sn	Sn	17 25 12.4	-0.3
	39nm,0.3s,baz=324,slow=23,SNR=19						
URZ	Urewera	7.95	211	P	Pn	17 23 44.1	+0.5
URZ	Urewera	7.95	211	P	Pn	17 23 42.3	-1.3
URZ				S	Sn	17 25 13.8	+1.0
WCZ	Waipu Caves	7.97	235	P	Pn	17 23 50.7	+6.8
OUZ	Omahuta	8.18	241	P	Pn	17 23 53.9	+7.1
OUZ	Omahuta	8.18	241	P	Pn	17 23 53.7	+6.9
RTZ	Ruatahuna	8.31	211		Pn	17 23 48.9	+0.4
RTZ	Ruatahuna	8.31	211	P	Pn	17 23 47.9	-0.7
RTZ				S	Sn	17 25 21.3	-0.2
TOZ	Tahuroa Road	8.36	221		Pn	17 23 49.5	+0.4
TOZ	Tahuroa Road	8.36	221	P	Pn	17 23 54.0	+4.8
TLZ	Tolley Road	8.77	218	P	Pn	17 23 57.6	+2.6
BKZ	Black Stump Fm	8.97	211		Pn	17 23 56.1	-1.6
BKZ	Black Stump Fm	8.97	211	P	Pn	17 23 57.6	-0.1
BKZ	Black Stump Fm	8.97	211	P	Pn	17 23 55.5	-2.2
BKZ				S	Sn	17 25 35.9	-2.0
HIZ	Hauiti	9.27	219	P	Pn	17 24 04.3	+2.6
HIZ	Hauiti	9.27	219	P	Pn	17 24 01.1	-0.6
NGZ	Ngauruhoe	9.39	214	P	Pn	17 24 04.6	+1.1
NGZ				S	Sn	17 25 49.2	+0.9
PXZ	Pawanui	9.56	206	P	Pn	17 24 02.1	-3.6
PXZ				S	Sn	17 25 49.7	-2.5
VRZ	Vera Road	9.77	217	P	Pn	17 24 11.2	+2.7
TSZ	Takapari Road	9.95	210	P	Pn	17 24 07.5	-3.5
TSZ				S	Sn	17 25 59.3	-2.5
WAZ	Wanganui	10.14	214	P	Pn	17 24 15.6	+1.9
WAZ				S	Sn	17 26 06.8	+0.4
NEZ	North Egmont	10.23	219	P	Pn	17 24 21.5	+6.6
KHEZ	Kahui Hut	10.29	219	P	Pn	17 24 18.2	+2.5
BFZ	Birch Farm	10.36	207	P	Pn	17 24 15.6	-1.0
BFZ	Birch Farm	10.36	207	P	Pn	17 24 13.4	-3.2
BFZ				S	Sn	17 26 07.9	-4.0
MRZ	Mangatainoka R	10.61	209	P	Pn	17 24 16.1	-3.9
MRZ				S	Sn	17 26 12.6	-5.4
SNZO	South Karori	11.52	210	P	Pn	17 24 32.6	+0.2
BHW	Baring Head	11.53	209	S	Sn	17 26 34.4	-6.0
QRZ	Quartz Range	12.18	218	P	Pn	17 24 42.7	+1.2
CTZ	Chatham Island	12.19	176		Pn	17 24 40.4	-1.2
CTZ	Chatham Island	12.19	176	P	Pn	17 24 34.4	-7.2
CTZ	Chatham Island	12.19	176	S	Sn	17 26 47.4	-9.2
MRNZ	Matariki Terra	12.49	215	P	Pn	17 24 45.6	-0.1
THZ	Tophouse	12.69	214		Pn	17 24 53.7	+5.1
THZ	Tophouse	12.69	214	P	Pn	17 24 48.5	-0.1
NFK	Norfolk Island	12.71	278	P	P	17 24 56.5	-3.2
KHZ	Kahutara	12.92	210		Pn	17 24 54.0	+2.4
KHZ	Kahutara	12.92	210	P	Pn	17 24 51.6	0.0
DSZ	Denniston Nort	13.22	217	P	Pn	17 24 56.0	+0.2
LTZ	Lake Taylor	13.78	213		Pn	17 25 04.9	+1.5
LTZ	Lake Taylor	13.78	213	P	Pn	17 25 01.0	-2.4
INZ	Inchbonnie	14.13	215		P	17 25 12.4	-3.1
INZ	Inchbonnie	14.13	215	P	Pn	17 25 05.8	-2.3
OKCZ	Okains Bay	14.19	209	P	Pn	17 25 06.5	-2.5
NIUE	Niue	14.24	31	P	Pn	17 25 01.3	-8.5
MSVF	Nonsavu	14.30	343	Pn	Pn	17 25 10.7	+0.1
	0.7nm,0.3s,baz=151,slow=15,SNR=5.5						
MSVF				LR	LR	17 29 07.7	
	comp=Z,6µm,19.0s,baz=171,slow=31						
MSVF	Nonsavu	14.30	343	P	Pn	17 25 11.2	+0.5
MSVF	Nonsavu	14.30	343	*i* P	Pn	17 25 08.3	-2.4
OXZ	Oxford	14.31	212		Pn	17 25 09.1	-1.5
OXZ	Oxford	14.31	212	P	Pn	17 25 08.2	-2.4
WVZ	Waitaha Valley	14.74	215	P	Pn	17 25 14.5	-1.9
RPZ	Rata Peaks	15.06	213		Pn	17 25 20.0	-0.8
RPZ	Rata Peaks	15.06	213	Pn	Pn	17 25 17.3	-3.5
	3.1nm,0.3s,baz=104,slow=0.7,SNR=16						
RPZ				Sn	Sn	17 27 54.5	-12
	4.8nm,0.3s,baz=256,slow=22,SNR=9.4						
RPZ	Rata Peaks	15.06	213	P	Pn	17 25 20.5	-0.3
RPZ	Rata Peaks	15.06	213	P	Pn	17 25 17.5	-3.3
FOZ	Fox Glacier	15.53	216		Pn	17 25 27.6	+0.7
FOZ	Fox Glacier	15.53	216	P	Pn	17 25 24.3	-2.6
TMZ	Timaru	15.60	212	P	Pn	17 25 22.9	-4.9
PINNC	Pines Island,	15.97	300	P	Pn	17 25 30.5	-2.2
PINNC				IAmb	IAmb	17 25 38.9	
	comp=Z,328nm,1.8s						
PINNC	Pines Island,	15.97	300	P	P	17 25 38.5	+2.5
LBZ	Lake Benmore	15.98	213	P	P	17 25 41.6	+5.5
LBZ	Lake Benmore	15.98	213	P	Pn	17 25 31.7	-1.1
ODZ	Otahua Downs	16.28	211	P	P	17 25 41.5	+2.1
ODZ	Otahua Downs	16.28	211	P	Pn	17 25 36.1	-0.4
ODZ	Otahua Downs	16.28	211	P	Pn	17 25 34.2	-2.4
JCZ	Jackson Bay	16.44	217	P	Pn	17 25 37.4	-1.2
JCZ	Jackson Bay	16.44	217	P	Pn	17 25 36.4	-2.2
OUENC	Ouen Island, N	16.54	300	P	P	17 25 45.6	+3.3
YATNC	Mamie plateau,	16.71	301	P	P	17 25 47.6	+3.3
WKZ	Wanaka	16.87	214	P	Pn	17 25 41.6	-2.4
ONTNC	Ouen Toro	16.89	299		Pn	17 25 40.9	-3.5
ONTNC				IAmb	IAmb	17 25 49.4	
	comp=Z,226nm,1.7s						
EAZ	Earnscleugh	17.03	213	P	P	17 25 48.1	+0.4
DZM	Mont Dzumac	17.04	300		Pn	17 25 42.1	-4.2
DZM				IAmb	IAmb	17 25 52.7	
	comp=Z,182nm,1.4s						
DZM	Mont Dzumac	17.04	300	*e*Pn	P	17 25 47.7	-0.3
	comp=Z,331nm,1.3s						
DZM				*e*LR	LR	17 29 44.2	
	comp=Z,19µm,22.8s						
DZM	Mont Dzumac	17.04	300	Pn	P	17 25 47.7	-0.3
	comp=Z,0.6nm,0.3s,baz=118,slow=13,SNR=20						
DZM				LR	LR	17 31 17.9	
	comp=Z,24µm,18.2s,baz=139,slow=34						
DZM	Mont Dzumac	17.04	300	P	P	17 25 50.4	+2.4
MLZ	Mavora Lakes	17.70	215	P	Pn	17 25 54.8	+0.5
SYZ	Scrubby Hill	18.11	211	P	Pn	17 25 58.3	-1.0
WHZ	Wether Hill Ro	18.16	214	P	Pn	17 25 56.5	-3.5
AFI	Afiamalu	18.37	18	P	P	17 25 56.5	-6.2
AFI				IAmb	IAmb	17 26 06.4	
	comp=Z,209nm,1.2s						
AFI	Afiamalu	18.37	18	P	P	17 25 59.4	-3.3
AFI				pmax	pmax		
	comp=Z,209nm,1.2s						
RAR	Rarotonga	19.01	62		P	17 26 07.7	-1.9
RAR	Rarotonga	19.01	62	P	P	17 26 05.4	-4.3
	comp=Z,47nm,0.9s,baz=218,slow=7.7,SNR=6.6						
RAR				LR	LR	17 33 06.0	
	comp=Z,4µm,18.5s,baz=237,slow=36						
RAR	Rarotonga	19.01	62	P	P	17 26 07.7	-1.9

RAR				pmax	pmax		
	comp=Z,120nm,1.4s						
TBI	Tubuai	26.26	79	eS	S	17 31 54.5	+0.6
	comp=Z,23µm,24.8s						
TBI				eLR	LR	17 33 46.4	
	comp=Z,6µm,29.2s						
TBI				eLR	LR	17 33 49.8	
	comp=Z,25µm,27.2s						
ARMA	Armidale	26.32	264	P	P	17 27 23.7	+0.1
ARMA				IAmb	IAmb	17 27 40.1	
	comp=Z,52nm,1.1s						
ARMA	Armidale	26.32	264	P	P	17 27 26.6	+3.0
	comp=Z,60nm,1.6s						
ARMA	Armidale	26.32	264	P	P	17 27 26.1	+2.5
MGCD	Mangrove Creek	26.39	258	P	P	17 27 28.0	+3.9
CNB	Canberra Magne	27.71	253	P	P	17 27 38.0	+2.0
	comp=Z,33nm,1.3s						
CNB	Canberra Magne	27.71	253	P	P	17 27 38.1	+2.0
CAN	Canberra	28.01	253	P	P	17 27 40.5	+1.9
CAN				IAmb	IAmb	17 27 57.9	
	comp=Z,41nm,1.2s						
CAN	Canberra	28.01	253	P	P	17 27 40.9	+2.3
	comp=Z,30nm,2.5s						
CAN	Canberra	28.01	253	P	P	17 27 40.1	+1.4
CAN	Canberra	28.01	253	P	P	17 27 40.6	+1.9
CAN				pmax	pmax		
	comp=Z,41nm,1.2s						
CAN				MLR	MLR		
	comp=Z,7µm,18.0s						
EIDS	Eidsvold	28.11	275	P	P	17 27 39.8	+0.1
EIDS				IAmb	IAmb	17 27 55.1	
	comp=Z,57nm,1.2s						
EIDS	Eidsvold	28.11	275	P	P	17 27 41.2	+1.5
	comp=Z,41nm,1.2s						
EIDS	Eidsvold	28.11	275	P	P	17 27 41.6	+2.0
YNG	Young	28.56	255	P	P	17 27 46.6	+3.1
	comp=Z,32nm,1.0s						
PPT2	Papeete2	28.96	68	eS	S	17 32 32.3	-4.5
	comp=Z,4µm,24.0s						
PPT2				eLR	LR	17 34 52.5	
	comp=Z,3µm,28.5s						
PPT2				eLR	LR	17 34 59.8	
	comp=Z,3µm,20.8s						
PPT	Papeete	28.98	68	LR	LR	17 38 02.1	
	comp=Z,4µm,18.2s,baz=252,slow=34						
ALEG	Aligegeo Malai	30.34	314	P	P	17 28 00.3	+0.9
TOO	Toolangi	30.81	249	P	P	17 28 05.5	+2.1
TOO	Toolangi	30.81	249	P	P	17 28 06.1	+2.6
	comp=Z,11nm,1.0s						
TOO	Toolangi	30.81	249	P	P	17 28 05.5	+2.1
TOO				pmax	pmax		
	comp=Z,15nm,1.1s						
TOO				MLR	MLR		
	comp=Z,3µm,18.0s						
CMSA	Cobar Meteorol	31.15	260	P	P	17 28 08.8	+2.3
	comp=Z,58nm,0.9s						
CMSA	Cobar Meteorol	31.15	260	P	P	17 28 08.7	+2.2
TATA	Tatamba Isabel	31.18	313	P	P	17 28 08.0	+1.2
QLP	Quilpie	33.57	269	P	P	17 28 29.1	+1.4
	comp=Z,96nm,1.4s						
QLP	Quilpie	33.57	269	P	P	17 28 29.8	+2.1
ARPS	Mount Arapiles	33.74	250	P	P	17 28 31.2	+2.0
	comp=Z,75nm,1.0s						
ARPS	Mount Arapiles	33.74	250	P	P	17 28 30.2	+1.0
CTAO	Charters Tower	34.30	281	P	P	17 28 34.1	0.0
CTAO	Charters Tower	34.30	281	IAMs_20	IAMs_20	17 41 31.7	
	comp=Z,11µm,18.0s						
CTAO	Charters Tower	34.30	281	P	P	17 28 34.1	0.0
CTAO				pmax	pmax		
	comp=Z,147nm,1.2s						
CTAO				MLR	MLR		
	comp=Z,11µm,18.0s						
STKA	Stephens Creek	34.53	258	P	P	17 28 37.7	+1.6
STKA	Stephens Creek	34.53	258	P	P	17 28 38.5	+2.4
	comp=Z,190nm,1.0s						
STKA	Stephens Creek	34.53	258	P	P	17 28 38.0	+2.0
	comp=Z,29nm,0.8s,baz=94,slow=9.9,SNR=42						
STKA				LR	LR	17 42 22.6	
	comp=Z,5µm,18.2s,baz=85,slow=36						
	comp=Z,29nm,0.8s						
STKA	Stephens Creek	34.53	258	P	P	17 28 37.5	+1.5
MGBR	Mount Gambier	34.71	248	P	P	17 28 39.5	+2.0
HTT	Hallett	36.49	255	P	P	17 28 54.1	+1.2
	comp=Z,8.9nm,1.3s						
HTT	Hallett	36.49	255	P	P	17 28 53.4	+0.5
MTSU	Mount Surprise	36.82	282	P	P	17 28 57.8	+2.0
	comp=Z,25nm,1.0s						
MTSU	Mount Surprise	36.82	282	P	P	17 28 57.7	+1.9
BBOO	Buckleboo	38.96	256	P	P	17 29 13.4	-0.4
BBOO				IAmb	IAmb	17 29 15.3	
	comp=Z,39nm,0.8s						
BBOO	Buckleboo	38.96	256	P	P	17 29 13.8	+0.1
	comp=Z,53nm,0.9s						
BBOO	Buckleboo	38.96	256	P	P	17 29 14.7	+0.9
PMG	Port Moresby	39.38	296	LR	LR	17 43 26.1	
	comp=Z,2µm,18.7s,baz=136,slow=33						
QIS	Mount Isa	39.71	275	P	P	17 29 20.5	+0.3
	comp=Z,17nm,1.4s						
QIS	Mount Isa	39.71	275	P	P	17 29 22.1	+1.9
COEN	Coen	39.89	287	P	P	17 29 22.9	+1.3
COEN	Coen	39.89	287	P	P	17 29 23.1	+1.5
TAOE	Nuku Hiva Isla	41.50	65	eS	S	17 35 51.1	+1.8
	comp=Z,702nm,25.1s						
TAOE				eLR	LR	17 40 45.8	
	comp=Z,2µm,21.8s						
AS01	Alice Springs	43.32	268	P	P	17 29 50.7	+0.9
AS31	Alice Springs	43.36	268	P	P	17 29 49.9	-0.2
AS31	Alice Springs	43.36	268	P	P	17 29 50.2	+0.1
	comp=Z,16nm,0.6s						
ASAR	Alice Springs	43.36	268	P	P	17 29 49.7	-0.4
ASAR	Alice Springs	43.36	268	P	P	17 29 49.6	-0.5
	comp=Z,35nm,0.7s,baz=104,slow=7.2,SNR=413						
ASAR				S	S	17 36 15.7	-0.9
	comp=Z,2.4nm,1.1s,baz=104,slow=14,SNR=4.0						
ASAR				LR	LR	17 47 43.0	
	comp=Z,5µm,18.2s,baz=114,slow=36						
	comp=Z,35nm,0.7s						
ASAR	Alice Springs	43.36	268	P	P	17 29 49.7	-0.4
WR8	Warramunga Arr	44.31	273	P	P	17 29 58.7	+1.0
WB1	Warramunga Ar.	44.44	273	P	P	17 29 59.7	+0.9
WRAB	Tennant Creek	44.45	273	P	P	17 29 59.4	+0.6
WRAB	Tennant Creek	44.45	273	i P	P	17 29 58.9	+0.1
WRAB				pmax	pmax		
	comp=Z,58nm,0.9s						
WRA	Warramunga Arr	44.45	273		P	17 29 58.4	-0.5
WRA	Warramunga Arr	44.45	273	P	P	17 29 58.6	-0.2
	comp=Z,48nm,0.7s,baz=114,slow=7.7,SNR=216						
WRA				LR	LR	17 48 14.8	
	comp=Z,9µm,18.1s,baz=131,slow=36						
	comp=Z,48nm,0.7s						
WB0	Warramunga Arr	44.48	273		P	17 29 59.0	-0.1
FORT	Forrest	46.05	256	P	P	17 30 11.4	0.0
FORT	Forrest	46.05	256	P	P	17 30 11.2	-0.2
	comp=Z,78nm,0.9s						
FORT	Forrest	46.05	256	P	P	17 30 11.7	+0.3
SBA	Scott Base	46.91	184	P	P	17 30 20.6	+3.1
SBA	Scott Base	46.91	184	P	P	17 30 20.6	+3.1
SBA				pmax	pmax		
	comp=Z,55nm,1.3s						
SBA				MLR	MLR		
	comp=Z,3µm,18.0s						
VNDA	Vanda	46.98	186	P	P	17 30 21.2	+3.2
VNDA				IAmb	IAmb	17 30 49.4	
	comp=Z,54nm,1.9s						
VNDA	Vanda	46.98	186	P	P	17 30 21.7	+3.7
	comp=Z,1.9nm,0.7s,baz=39,slow=5.7,SNR=9.6						
VNDA				LR	LR	17 46 38.4	
	comp=Z,2µm,20.7s,baz=16,slow=32						
	comp=Z,1.9nm,0.7s						
JAY	Jayapura	48.70	298	P	P	17 30 31.7	-0.5
	comp=Z,11nm,0.8s,baz=72,slow=2.4,SNR=4.5						
JAY				LR	LR	17 49 07.7	
	comp=Z,1µm,20.8s,baz=148,slow=34						
	comp=Z,11nm,0.8s						
KDU	Kakadu	49.42	281	P	P	17 30 39.6	+1.9
MTN	Manton Dam	50.47	280	P	P	17 30 45.2	-0.4
MTN				IAmb	IAmb	17 30 46.8	
	comp=Z,77nm,1.6s						
MTN	Manton Dam	50.47	280	P	P	17 30 43.5	-2.2
MTN	Manton Dam	50.47	280	P	P	17 30 46.4	+0.7
KMBL	Kambalda	50.98	253	P	P	17 30 48.8	-0.6
	comp=Z,21nm,1.6s						
KNRA	Kununurra	51.10	275		P	17 30 50.4	0.0
KNRA				IAmb	IAmb	17 31 05.5	
	comp=Z,36nm,1.0s						
KNRA	Kununurra	51.10	275	P	P	17 30 49.7	-0.7
	comp=Z,34nm,0.9s						
FITZ	Fitzroy Crossi	52.67	271		P	17 31 01.9	-0.2
FITZ	Fitzroy Crossi	52.67	271	P	P	17 31 02.2	+0.1
	comp=Z,8.6nm,0.9s						
FITZ	Fitzroy Crossi	52.67	271	LR	LR	17 53 33.3	
	comp=Z,7µm,18.1s,baz=118,slow=36						
FITZ	Fitzroy Crossi	52.67	271	P	P	17 31 02.6	+0.5
CASY	Casey	54.27	208	P	P	17 31 15.0	+1.9
KLBR	Kellerberrin	54.27	252	P	P	17 31 13.3	-0.4
	comp=Z,45nm,1.1s						
NWAO	Narrogin (SRO)	54.28	250	LR	LR	17 52 02.6	
	comp=Z,1µm,19.8s,baz=90,slow=33						
FAKI	Fak Fak	55.02	291	P	P	17 31 19.5	+0.1
HMH	Humu‘ula Sheep	55.13	26	P	P	17 31 18.4	-1.9
MEEK	Meekatharra	55.23	258	P	P	17 31 19.4	-1.3
MEEK	Meekatharra	55.23	258	P	P	17 31 19.5	-1.3
MTKN	Mount Kenneth	55.76	251	P	P	17 31 19.7	-4.8
MTKN	Mount Kenneth	55.76	251	P	P	17 31 22.7	-1.8
PSA00	Pilbara Seismi	56.14	264		P	17 31 26.1	-1.2
PSA00				IAmb	IAmb	17 31 47.8	
	comp=Z,16nm,1.1s						
PSA00	Pilbara Seismi	56.14	264	P	P	17 31 25.9	-1.4
PSA00				IAmb	IAmb	17 32 13.8	
	comp=Z,14nm,1.2s						
PSA00	Pilbara Seismi	56.14	264	P	P	17 31 25.6	-1.7
MBWA	Marble Bar	56.41	264	P	P	17 31 27.7	-1.6
MBWA				IAmb	IAmb	17 31 49.6	
	comp=Z,20nm,1.1s						
MBWA	Marble Bar	56.41	264	P	P	17 31 28.1	-1.2
MORW	Morawa	56.50	254	IAMs_20	IAMs_20	17 55 45.9	
	comp=Z,4µm,18.0s						
MORW	Morawa	56.50	254	P	P	17 31 29.5	-0.3
	comp=Z,16nm,2.2s						
MORW	Morawa	56.50	254	P	P	17 31 29.9	+0.1
GUMO	Guam	57.51	315	LR	LR	17 54 50.6	
	comp=Z,1µm,18.6s,baz=130,slow=35						
BATI	Baumata	58.10	278	LR	LR	17 57 15.4	
	comp=Z,8µm,18.8s,baz=156,slow=37						
QSPA	South Pole Qui	58.56	180	P	P	17 31 46.0	+2.1
	comp=Z,10nm,0.8s,baz=19,slow=0.8,SNR=59						
QSPA				LR	LR	17 54 45.7	
	comp=Z,3µm,19.2s,baz=38,slow=34						
	comp=Z,10nm,0.8s						
KAPI	Kappang	64.11	281	LR	LR	18 01 46.0	
	comp=Z,3µm,18.1s,baz=116,slow=37						
BKB	Balikpapan	68.54	282	IAMs_20	IAMs_20	18 07 21.9	
	comp=Z,4µm,18.0s						
BELA	Belgrano 2	68.61	172	P	P	17 32 50.0	+0.1
PMSA	Palmer Station	71.09	155	LR	LR	18 00 22.1	
	comp=Z,2µm,18.3s,baz=234,slow=32						
MAW	Mawson	71.34	201	P	P	17 33 09.0	+2.2
	comp=Z,4.9nm,1.3s						
MAW	Mawson	71.34	201	P	P	17 33 09.2	+2.4
	comp=Z,16nm,1.0s,baz=104,slow=6.4,SNR=13						
MAW				LR	LR	18 04 54.4	
	comp=Z,3µm,18.6s,baz=114,slow=36						
	comp=Z,16nm,1.0s						
LEM	Lembang	73.46	272	LR	LR	18 06 59.7	
	comp=Z,2µm,18.1s,baz=140,slow=37						
TGY	Tagaytay City	74.32	298	LR	LR	18 07 17.7	
	comp=Z,441nm,18.1s,baz=116,slow=37						
ESPZ	Base Esperanza	74.39	156	P	P	17 33 26.6	+1.6
USHA	Ushuaia	74.80	146	LR	LR	18 01 36.5	
	comp=Z,1µm,18.8s,baz=235,slow=32						
SYO	Syowa Base	76.06	193	⇓eP	P	17 33 36.7	+2.3
SYO	Syowa Base	76.06	193	⇓epP	pP	17 33 39.6	-1.3
AY03	Cochrane	76.69	137	IAmb	IAmb	17 33 45.3	
	comp=Z,29nm,1.3s						
TROLL	Troll, Antarti	76.72	180	⇑P	P	17 33 40.2	+1.9
	comp=Z,760nm,1.0s						
SNAA	Sanae	77.00	178	⇑P	P	17 33 41.0	+1.1
	comp=Z,97nm,0.8s						
SNAA	Sanae	77.00	178	P	P	17 33 41.0	+1.1
SNAA	Sanae	77.00	178	P	P	17 33 40.8	+1.0
	comp=Z,11nm,1.0s,baz=179,slow=11,SNR=15						
SNAA				LR	LR	18 06 59.4	
	comp=Z,1µm,18.8s,baz=172,slow=35						
	comp=Z,11nm,1.0s						
SNAA	Sanae	77.00	178	i P	P	17 33 40.0	+0.2
SNAA				pmax	pmax		
	comp=Z,21nm,1.2s						
VNA3	Neumayer Olymp	77.14	176	⇑P	P	17 33 41.6	+1.0
	comp=Z,36nm,0.7s						
VNA2	Neumayer--Watz	77.58	177	⇑P	P	17 33 44.2	+1.2
	comp=Z,18nm,0.8s,baz=185,slow=5.4						
MDSI	Maura Dua	77.59	272	P	P	17 33 42.9	-1.1
JOW	Kunigami	77.66	312	LR	LR	18 05 19.0	
	comp=Z,990nm,19.8s,baz=142,slow=34						
VNA1	Neumayer--Stat	77.80	176	⇑P	P	17 33 45.9	+1.7
	comp=Z,19nm,0.8s						
COYC	Coyhaique	77.89	136		P	17 33 46.3	+1.1
LL02	Futaleuf	79.33	134		P	17 33 53.8	+0.6
LL02				IAmb	IAmb	17 33 57.9	
	comp=Z,24nm,1.0s						
MJAR	Matsushiro Arr	79.36	325	P	P	17 33 51.7	-1.5
	comp=Z,0.9nm,0.3s,baz=173,slow=4.6,SNR=4.4						
	comp=Z,0.9nm,0.3s						
LL01	San Ignacio de	79.43	133	P	P	17 33 55.5	+1.8
H03S2	Juan Fernandez	79.58	123	T	T	19 01 34.6	
	baz=238,slow=74,SNR=16						
H03S1	Juan Fernandez	79.59	123	T	T	19 01 35.7	
	baz=238,slow=74,SNR=15						
H03S3	Juan Fernandez	79.60	123	T	T	19 01 34.5	
	baz=238,slow=74,SNR=16						
LR05	Currie	80.86	132		P	17 34 03.0	+1.4
LR05				IAmb	IAmb	17 34 26.9	
	comp=Z,43nm,1.2s						
PLCA	Paso Flores	81.50	133	P	P	17 34 06.2	+1.1
	comp=Z,10nm,1.1s,baz=228,slow=6.1,SNR=6.2						
PLCA				LR	LR	18 03 03.9	
	comp=Z,2µm,19.4s,baz=244,slow=30						
	comp=Z,10nm,1.1s						
EFI	East Falkland	81.66	147	P	P	17 34 06.0	+0.6
EFI	East Falkland	81.66	147	P	P	17 34 06.1	+0.6
EFI				pmax	pmax		
	comp=Z,102nm,1.4s						
BKNI	Bangkinang	82.76	275	IAMs_20	IAMs_20	18 14 57.9	
	comp=Z,2µm,18.0s						
ADK	Adak	83.08	1	P	P	17 34 12.2	-0.4
ADK	Adak	83.08	1	P	P	17 34 12.2	-0.4
ADK				pmax	pmax		
	comp=Z,42nm,1.1s						
ADK				MLR	MLR		
	comp=Z,1µm,19.0s						
BO01	Tunca	84.75	127	IAmb	IAmb	17 34 25.8	
	comp=Z,39nm,1.6s						
SLBS	Sierra La Lagu	84.90	58	IAMs_20	IAMs_20	18 05 05.1	
	comp=Z,3µm,19.0s						
TJN	Taejon	84.96	318	i P	P	17 34 21.4	-1.1
BO04	La Punta	85.30	127	IAmb	IAmb	17 34 30.4	
	comp=Z,40nm,1.6s						
MT02	Curacav	85.36	126	IAmb	IAmb	17 34 30.9	
	comp=Z,26nm,1.1s						
KSRS	Korea Array	85.42	320	P	P	17 34 24.3	-0.5
	comp=Z,2.4nm,0.9s,baz=143,slow=5.0,SNR=7.9						
	comp=Z,2.4nm,0.9s						
KSAR	Wonju Array Be	85.43	319	P	P	17 34 23.1	-1.8
KSAR	Wonju Array Be	85.43	319	P	P	17 34 23.1	-1.8
SRIG	Santa Rosalia	85.50	54	IAMs_20	IAMs_20	18 06 16.7	
	comp=Z,3µm,19.0s						
LMEL	Las Melosas	85.66	127	IAmb	IAmb	17 34 33.0	
	comp=Z,29nm,1.1s						
PEL	Peldehue	85.73	126		P	17 34 26.7	-0.1
PEL	Peldehue	85.73	126	P	P	17 34 26.7	-0.1
PEL				pmax	pmax		
	comp=Z,65nm,1.2s						
PEL				MLR	MLR		
	comp=Z,2µm,18.0s						
QIZ	Qiongzhong	85.76	295	P	P	17 34 28.6	+1.7
QIZ				S	S	17 45 01.9	+3.5
CBX	Cerro Bola	85.78	48	IAMs_20	IAMs_20	18 10 20.3	
	comp=Z,2µm,19.0s						
RPSI	Rantau Prapat	85.80	276	IAMs_20	IAMs_20	18 13 46.2	
	comp=Z,2µm,19.0s						
BCW	Bitter Crk WRg	85.85	44	IAmb	IAmb	17 34 31.3	
	comp=Z,22nm,0.9s						
PSI	Prapat	85.85	276	LR	LR	18 13 57.6	
	comp=Z,2µm,19.2s,baz=115,slow=36						
YSS	Yuzhno-Sakhali	85.91	334		P	17 34 25.8	-1.2
YSS	Yuzhno-Sakhali	85.91	334	eP	P	17 34 23.6	-3.4
YSS				pmax	pmax		
	comp=Z,30nm,1.2s						
TKX	Tecate	85.98	48	IAMs_20	IAMs_20	18 10 30.7	
	comp=Z,2µm,19.0s						
MT08	Bocatoma Ro	86.02	127	IAmb	IAmb	17 34 33.3	
	comp=Z,21nm,1.2s						
ESJX	Sierra Juarez	86.03	49	IAmb	IAmb	17 34 31.8	
	comp=Z,18nm,1.3s						
ESJX				IAMs_20	IAMs_20	18 10 12.1	
	comp=Z,2µm,18.0s						
ELS	Elsinore Mount	86.19	47	IAMs_20	IAMs_20	18 11 43.0	
	comp=Z,2µm,18.0s						
GSI	Gunungsitoli	86.22	274	P	P	17 34 28.8	-0.6
GSI	Gunungsitoli	86.22	274	P	P	17 34 30.6	+1.2
YUH	Yuha Desert	86.47	48	IAmb	IAmb	17 34 36.0	
	comp=Z,37nm,2.0s						
CO02	Combarbal	86.62	125	P	P	17 34 31.5	+0.2
PFO	Pinyon Flats O	86.76	47	P	P	17 34 31.5	-0.2
PFO	Pinyon Flats O	86.76	47	IAMs_20	IAMs_20	18 10 52.4	
	comp=Z,2µm,18.0s						
PFO	Pinyon Flats O	86.76	47	i P	P	17 34 30.5	-1.2
PFO				pmax	pmax		
	comp=Z,17nm,1.0s						
ISA	Isabella, Lake	86.90	44		P	17 34 30.9	-1.4
ISA				IAmb	IAmb	17 34 35.7	
	comp=Z,21nm,1.1s						
ISA	Isabella, Lake	86.90	44	P	P	17 34 30.9	-1.4
ISA				pmax	pmax		
	comp=Z,21nm,1.1s						
PETK	Petropavlovsk-	87.00	345		P	17 34 32.2	0.0
PETK	Petropavlovsk-	87.00	345	P	P	17 34 32.5	+0.3
	comp=Z,4.6nm,0.6s,baz=112,slow=8.4,SNR=11						
	comp=Z,4.6nm,0.6s						
PETK	Petropavlovsk-	87.00	345	P	P	17 34 32.2	0.0
UBPT	Khong Chiam	87.10	290	P	P	17 34 34.0	+0.4
NJ2	Nanjing	87.22	310	eP	P	17 34 35.8	+2.0
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
JCC	Jacoby Creek,	87.41	38	IAMs_20	IAMs_20	18 10 40.5	
	comp=Z,3µm,18.0s						
CMB	Columbia Colle	87.42	42		P	17 34 32.3	-2.4
CMB				IAmb	IAmb	17 34 38.1	
	comp=Z,12nm,0.9s						
CMB				IAMs_20	IAMs_20	18 12 53.1	
	comp=Z,2µm,18.0s						
CMB	Columbia Colle	87.42	42	P	P	17 34 32.3	-2.4
CMB				pmax	pmax		
	comp=Z,12nm,1.0s						
CMB				MLR	MLR		
	comp=Z,2µm,18.0s						
CNBA	Chernabura Isl	87.42	10	IAMs_20	IAMs_20	18 13 41.8	
	comp=Z,2µm,19.0s						
GLA	Glamis	87.43	48	IAMs_20	IAMs_20	18 06 27.1	
	comp=Z,2µm,18.0s						
O02D	Mt. Diablo Mer	87.60	39	IAmb	IAmb	17 34 40.0	
	comp=Z,25nm,1.0s						
KHMM	Horse Mountain	87.60	38	IAMs_20	IAMs_20	18 05 52.7	
	comp=Z,2µm,20.0s						
GSC	Goldstone, Bar	87.67	46	IAmb	IAmb	17 34 39.4	
	comp=Z,18nm,1.1s						
GSC				IAMs_20	IAMs_20	18 16 44.2	
	comp=Z,3µm,18.0s						
AFDM	Forest Hills D	87.72	41	IAmb	IAmb	17 34 54.6	
	comp=Z,15nm,1.2s						
ORV	Oroville	87.86	40	IAMs_20	IAMs_20	18 09 15.6	
	comp=Z,3µm,19.0s						
KRMB	Red Mountain	87.98	37	IAMs_20	IAMs_20	18 10 22.7	
	comp=Z,3µm,18.0s						
ZON	Zonda	88.04	126		P	17 34 38.2	+0.1
ZON	Zonda	88.04	126	P	P	17 34 38.2	+0.1
ZON				pmax	pmax		
	comp=Z,39nm,1.7s						
QSM	Queen of Sheba	88.07	45	IAmb	IAmb	17 34 41.0	
	comp=Z,9.6nm,0.9s						
QSM				IAMs_20	IAMs_20	18 13 20.8	
	comp=Z,2µm,18.0s						
LCO	Las Campanas	88.09	123	IAMs_20	IAMs_20	18 07 30.6	
	comp=Z,2µm,18.0s						
KSXB	Camp Six Broad	88.22	37	IAMs_20	IAMs_20	18 10 02.0	
	comp=Z,2µm,19.0s						
WAKR	Walker	88.28	42	IAmb	IAmb	17 34 42.3	
	comp=Z,20nm,1.1s						
WAKR				IAMs_20	IAMs_20	18 09 03.0	
	comp=Z,3µm,19.0s						
USA0B	Ussuriysk Arra	88.29	326	i P	P	17 34 36.6	-2.0
USRK	Ussuriysk Ar.	88.29	326		P	17 34 36.5	-2.1
USRK	Ussuriysk Ar.	88.29	326	P	P	17 34 38.1	-0.5
	comp=Z,3.5nm,0.8s,baz=132,slow=5.4,SNR=6.3						
USRK				LR	LR	18 11 01.7	
	comp=Z,518nm,19.6s,baz=273,slow=34						
	comp=Z,3.5nm,0.8s						
USRK	Ussuriysk Ar.	88.29	326	P	P	17 34 36.5	-2.1
CFA	Coronel Fontan	88.31	126	P	P	17 34 39.3	0.0
	comp=Z,3.2nm,0.7s,baz=234,slow=4.3,SNR=6.8						
	comp=Z,3.2nm,0.7s						
GWY	Greenwater Val	88.34	45	IAmb	IAmb	17 34 42.4	
	comp=Z,16nm,1.2s						
GWY				IAMs_20	IAMs_20	18 13 31.9	
	comp=Z,2µm,19.0s						
DSP	Deep Springs	88.36	43	IAmb	IAmb	17 34 42.5	
	comp=Z,10nm,1.1s						
DSP				IAMs_20	IAMs_20	18 13 46.1	
	comp=Z,3µm,18.0s						
TRQA	Tornquist	88.41	135	IAMs_20	IAMs_20	18 09 50.4	
	comp=Z,2µm,18.0s						
GRAC	Grapevine Rang	88.46	44	IAMs_20	IAMs_20	18 14 01.0	
	comp=Z,3µm,18.0s						
L02F	Cave Junction	88.59	37	IAMs_20	IAMs_20	18 10 04.7	
	comp=Z,3µm,18.0s						
PNTR	Pine Nut	88.59	41	IAmb	IAmb	17 34 44.0	
	comp=Z,16nm,0.9s						
LHV	Little Huntoon	88.64	43	IAmb	IAmb	17 34 47.9	
	comp=Z,23nm,1.3s						
GMN	Gold Mountain	88.73	44	IAmb	IAmb	17 34 44.3	
	comp=Z,8.3nm,1.0s						
KEBM	Edson Butte	88.74	36	IAMs_20	IAMs_20	18 09 48.7	
	comp=Z,2µm,18.0s						
YBH	Yreka Blue Hor	88.75	38	IAMs_20	IAMs_20	18 10 03.2	
	comp=Z,2µm,19.0s						
LHMI	Lhok Sumawe	88.80	277	IAMs_20	IAMs_20	18 20 17.7	
	comp=Z,2µm,18.0s						
NVAR	Mina Array Bea	88.88	43	P	P	17 34 41.8	-0.1
NVAR	Mina Array Bea	88.88	43	P	P	17 34 42.0	+0.2
	comp=Z,5.8nm,0.8s,baz=222,slow=7.6,SNR=26						
	comp=Z,5.8nm,0.8s						
RYN	Ryan	88.89	42	IAmb	IAmb	17 34 44.8	
	comp=Z,11nm,1.2s						
RYN				IAMs_20	IAMs_20	18 09 51.1	
	comp=Z,2µm,19.0s						
NV11	Mina Array Sit	88.97	43	IAmb	IAmb	17 34 45.2	
	comp=Z,9.6nm,1.1s						
CHIR	Chirikof Islan	89.04	12	IAMs_20	IAMs_20	18 14 56.5	
	comp=Z,2µm,19.0s						
TPNV	Topopah Spring	89.10	45	IAmb	IAmb	17 34 46.4	
	comp=Z,12nm,1.1s						
TPNV				IAMs_20	IAMs_20	18 14 30.9	
	comp=Z,2µm,18.0s						
PAHR	Pah Rah Range	89.14	41	IAmb	IAmb	17 34 57.7	
	comp=Z,18nm,1.4s						
V12A	Nelson	89.15	46	IAmb	IAmb	17 34 46.7	
	comp=Z,13nm,1.2s						
V12A				IAMs_20	IAMs_20	18 14 20.4	
	comp=Z,2µm,18.0s						
J01E	Myrtle Point	89.16	36	IAMs_20	IAMs_20	18 10 09.7	
	comp=Z,2µm,20.0s						
Y14A	Wickenburg	89.16	49	IAmb	IAmb	17 34 46.7	
	comp=Z,22nm,1.4s						
TYV	Tymovskoe	89.23	336	eP	P	17 34 42.6	-0.3
TYV				pmax	pmax		
	comp=Z,16nm,1.5s						
TYV				pmax	pmax		
	comp=Z,400nm,3.4s						
L04D	Klamath Falls	89.31	38	IAMs_20	IAMs_20	18 11 08.9	
	comp=Z,2µm,19.0s						
W13A	Hualapai Mount	89.35	47	IAmb	IAmb	17 34 48.4	
	comp=Z,12nm,1.0s						
MDJ	Mudanjiang	89.74	325	P	P	17 34 45.6	+0.1
MDJ				S	S	17 45 42.4	+7.0
MDJ				pmax	pmax		
	comp=Z,13nm,2.4s						
Q09A	Carvers	89.80	43	IAMs_20	IAMs_20	18 14 33.3	
	comp=Z,2µm,19.0s						
I03D	Drain, OR	89.84	36	IAMs_20	IAMs_20	18 10 52.7	
	comp=Z,2µm,19.0s						
K04D	Chiloquin, OR	89.89	38	IAMs_20	IAMs_20	18 11 10.2	
	comp=Z,2µm,18.0s						
PRN	Pahroc Range	90.12	45	IAmb	IAmb	17 34 52.1	
	comp=Z,21nm,1.1s						
PRN				IAMs_20	IAMs_20	18 18 48.0	
	comp=Z,2µm,18.0s						
J04A	Umpqua Nationa	90.14	37	IAMs_20	IAMs_20	18 11 05.8	
	comp=Z,2µm,18.0s						
BUCK	Buck Mountain	90.38	36	IAMs_20	IAMs_20	18 11 10.0	
	comp=Z,2µm,19.0s						

I04A	**Tendick Farm,**	**90.38**	**37**	IAmb	IAmb	17 35 03.1	
	comp=Z,31nm,1.4s						
X16A	**Lo Mia Camp, P**	**90.47**	**49**	IAmb	IAmb	17 34 53.9	
	comp=Z,13nm,0.9s						
X16A				IAMs_20	IAMs_20	18 09 44.7	
	comp=Z,2µm,19.0s						
COR	**Corvallis**	**90.50**	**35**	IAMs_20	IAMs_20	18 07 01.1	
	comp=Z,3µm,20.0s						
J05D	**Fort Rock, OR**	**90.62**	**37**	P	**P**	**17 34 48.2**	**-1.6**
J05D				IAmb	IAmb	17 34 53.5	
	comp=Z,15nm,1.2s						
J05D				IAMs_20	IAMs_20	18 11 33.6	
	comp=Z,3µm,19.0s						
HEBO	**Mount Hebo**	**90.73**	**35**	IAMs_20	IAMs_20	18 07 46.2	
	comp=Z,2µm,20.0s						
H04D	**Lebanon**	**90.73**	**36**	IAMs_20	IAMs_20	18 11 30.5	
	comp=Z,3µm,19.0s						
G03D	**McMinnville, O**	**90.97**	**35**	IAMs_20	IAMs_20	18 07 14.6	
	comp=Z,2µm,20.0s						
LCMT	**Little Creek M**	**90.97**	**46**	IAMs_20	IAMs_20	18 15 35.6	
	comp=Z,2µm,18.0s						
TIA	**Tai'an**	**90.97**	**313**	P	**P**	**17 34 52.0**	**+0.6**
TIA				pmax	pmax		
	comp=Z,11nm,1.1s						
H04A	**Detroit Lake**	**91.13**	**36**	IAMs_20	IAMs_20	18 12 11.8	
	comp=Z,2µm,18.0s						
PINE	**Pine Mountain**	**91.13**	**37**	IAmb	IAmb	17 35 11.2	
	comp=Z,22nm,1.1s						
U15A	**North Rim**	**91.19**	**47**	IAmb	IAmb	17 34 57.2	
	comp=Z,15nm,1.0s						
WUAZ	**Wupatki**	**91.20**	**48**	IAmb	IAmb	17 34 57.0	
	comp=Z,14nm,1.0s						
KNB	**Kanab**	**91.23**	**46**	IAmb	IAmb	17 34 57.1	
	comp=Z,9.5nm,0.9s						
KNB				IAMs_20	IAMs_20	18 15 26.6	
	comp=Z,2µm,18.0s						
CN2	**Changchun**	**91.24**	**323**	*e*P	**P**	**17 34 50.8**	**-1.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WVOR	**Wild Horse Val**	**91.41**	**39**	IAmb	IAmb	17 35 08.3	
	comp=Z,14nm,1.4s						
GRNR	**Gornyy**	**91.44**	**333**	*e*P	**P**	**17 34 53.7**	**+0.5**
X18A	**Snowflake**	**91.51**	**50**	IAmb	IAmb	17 34 58.5	
	comp=Z,7.7nm,0.9s						
PSUT	**Pine Spring**	**91.57**	**45**	IAMs_20	IAMs_20	18 15 35.3	
	comp=Z,2µm,18.0s						
SPR3	**Spring Creek 3**	**91.58**	**44**	IAMs_20	IAMs_20	18 16 16.7	
	comp=Z,2µm,18.0s						
BNX	**BinXian**	**91.62**	**325**	⇑P	**P**	**17 34 56.9**	**+2.7**
BNX				pmax	pmax		
	comp=Z,10.0nm,1.0s						
E03A	**Lebam**	**91.79**	**34**	IAmb	IAmb	17 34 58.7	
	comp=Z,17nm,0.9s						
E03A				IAMs_20	IAMs_20	18 17 34.1	
	comp=Z,2µm,18.0s						
I07A	**Izee**	**92.08**	**38**	IAmb	IAmb	17 34 59.5	
	comp=Z,8.8nm,1.1s						
I07A				IAMs_20	IAMs_20	18 12 22.2	
	comp=Z,2µm,19.0s						
J08A	**Circle Bar Ran**	**92.13**	**39**	IAmb	IAmb	17 35 00.2	
	comp=Z,14nm,1.2s						
KLR	**Kul'dur**	**92.18**	**330**	*ce*P	**P**	**17 34 57.8**	**+1.1**
KLR				pmax	pmax		
	comp=Z,18nm,1.6s						
ELK	**Elko**	**92.19**	**42**	P	**P**	**17 34 56.5**	**-0.7**
ELK	**Elko**	**92.19**	**42**	P	**P**	**17 34 56.5**	**-0.7**
ELK				pmax	pmax		
	comp=Z,9.0nm,1.4s						
ELK				MLR	MLR		
	comp=Z,3µm,18.0s						
NLWA	**Neilton Lookou**	**92.25**	**33**	IAMs_20	IAMs_20	18 09 59.4	
	comp=Z,2µm,20.0s						
N15K	**Kwethluk River**	**92.52**	**9**	IAMs_20	IAMs_20	18 17 18.6	
	comp=Z,2µm,20.0s						
OZB	**Mount Ozzard**	**92.66**	**31**	IAMs_20	IAMs_20	18 11 07.0	
	comp=Z,2µm,19.0s						
TX31	**Lajitas Ar. Si**	**92.76**	**57**		**P**	**17 35 00.3**	**+0.3**
TXAR	**Lajitas Array**	**92.76**	**57**	P	**P**	**17 35 00.5**	**+0.5**
TXAR	**Lajitas Array**	**92.76**	**57**	P	**P**	**17 34 59.6**	**-0.4**
	comp=Z,2.7nm,1.0s,baz=202,slow=6.2,SNR=17						
	comp=Z,2.7nm,1.0s						
NNA	**Nana**	**92.82**	**106**	LR	LR	18 08 12.1	
	comp=Z,1µm,20.5s,baz=256,slow=30						
DIB	**Dawson Inlet,**	**93.09**	**25**	IAMs_20	IAMs_20	18 13 15.0	
	comp=Z,2µm,19.0s						
HMU	**Henry Mountain**	**93.10**	**47**	IAmb	IAmb	17 35 48.0	
	comp=Z,8.1nm,1.2s						
F07A	**Phinny Hill Vi**	**93.11**	**36**	IAMs_20	IAMs_20	18 13 43.4	
	comp=Z,2µm,18.0s						
CLRS	**Cowichan Lake**	**93.17**	**32**	IAMs_20	IAMs_20	18 14 33.6	
	comp=Z,2µm,19.0s						
G08A	**Pilot Rock**	**93.19**	**37**	IAmb	IAmb	17 35 04.9	
	comp=Z,10nm,1.1s						
G08A				IAMs_20	IAMs_20	18 13 23.5	
	comp=Z,2µm,19.0s						
HNS	**HongShan**	**93.23**	**312**	⇑P	P	17 35 07.3	+5.5
HNS				pmax	pmax		
	comp=Z,11nm,1.3s						
DUG	**Dugway, Tooele**	**93.25**	**44**	IAMs_20	IAMs_20	18 16 55.7	
	comp=Z,3µm,19.0s						
CNPM	**China Poot**	**93.34**	**13**	IAMs_20	IAMs_20	18 14 31.3	
	comp=Z,2µm,19.0s						
ALPN	**Alpine**	**93.37**	**56**		**P**	**17 35 02.2**	**-0.7**
ALPN				IAmb	IAmb	17 35 05.9	
	comp=Z,6.6nm,1.0s						
MXC	**Moxie City**	**93.40**	**36**	IAMs_20	IAMs_20	18 08 42.9	
	comp=Z,3µm,20.0s						
Q16A	**Castle Valley**	**93.44**	**46**	IAMs_20	IAMs_20	18 20 18.9	
	comp=Z,2µm,18.0s						
M16K	**Timber Creek**	**93.50**	**9**	IAMs_20	IAMs_20	18 18 06.3	
	comp=Z,2µm,19.0s						
CBB	**Campbell River**	**93.51**	**31**	IAMs_20	IAMs_20	18 12 56.4	
	comp=Z,2µm,18.0s						
BGU	**Big Grassy Mou**	**93.58**	**43**	IAMs_20	IAMs_20	18 16 46.4	
	comp=Z,2µm,18.0s						
MFID	**Camas Ranch**	**93.60**	**40**	IAmb	IAmb	17 35 06.8	
	comp=Z,6.8nm,0.8s						
BRLK	**Bradley Lake**	**93.63**	**13**	IAMs_20	IAMs_20	18 14 56.5	
	comp=Z,2µm,19.0s						
TMUT	**Trail Mountain**	**93.65**	**45**	IAMs_20	IAMs_20	18 17 02.5	
	comp=Z,2µm,18.0s						
K13K	**Kusilvak Mount**	**93.75**	**6**	IAMs_20	IAMs_20	18 15 17.0	
	comp=Z,2µm,19.0s						
BMO	**Blue Mountains**	**93.76**	**38**	IAMs_20	IAMs_20	18 15 01.6	
	comp=Z,2µm,19.0s						
SRU	**San Rafael Swe**	**93.95**	**46**	IAMs_20	IAMs_20	18 19 02.6	
	comp=Z,2µm,18.0s						
E08A	**Dider Farm, El**	**93.96**	**36**	IAMs_20	IAMs_20	18 14 00.8	
	comp=Z,2µm,19.0s						
BBB	**Bella Bella**	**93.97**	**28**	IAMs_20	IAMs_20	18 17 27.4	
	comp=Z,2µm,18.0s						
ANMO	**Albuquerque**	**94.06**	**51**	P	**P**	**17 35 05.5**	**-0.5**
ANMO	**Albuquerque**	**94.06**	**51**	P	**P**	**17 35 04.6**	**-1.4**
ANMO				IAmb	IAmb	17 35 09.3	
	comp=Z,2.9nm,0.9s						
ANMO	**Albuquerque**	**94.06**	**51**	IAMs_20	IAMs_20	18 13 17.0	
	comp=Z,2µm,19.0s						
ANMO	**Albuquerque**	**94.06**	**51**	IAmb	IAmb	17 35 09.2	
	comp=Z,2.6nm,0.9s						
ANMO				IAMs_20	IAMs_20	18 12 40.0	
	comp=Z,2µm,18.0s						
ANMO	**Albuquerque**	**94.06**	**51**	P	**P**	**17 35 05.5**	**-0.5**
ANMO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ANMO				MLR	MLR		
	comp=Z,2µm,19.0s						
CMAR	**Chiang Mai Arr**	**94.06**	**289**	P	**P**	**17 35 07.1**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=121,slow=5.5,SNR=2.8						
CMAR				PP	**PP**	**17 38 57.1**	**+4.2**
	comp=Z,1.8nm,1.1s,baz=146,slow=6.8,SNR=4.1						
	comp=Z,0.4nm,0.5s						
MVCO	**Mesa Verde**	**94.07**	**48**	IAMs_20	IAMs_20	18 10 45.8	
	comp=Z,2µm,19.0s						
ATAH	**Atahualpa**	**94.13**	**101**	LR	LR	18 09 53.2	
	comp=Z,596nm,19.1s,baz=76,slow=31						
HVU	**Hansel Valley**	**94.27**	**43**	IAMs_20	IAMs_20	18 17 15.7	
	comp=Z,2µm,18.0s						
CAPN	**Captain Cook N**	**94.51**	**13**	IAMs_20	IAMs_20	18 15 01.2	
	comp=Z,2µm,18.0s						
PV02	**Paradox Valley**	**94.52**	**48**	IAmb	IAmb	17 35 10.6	
	comp=Z,13nm,1.4s						
PV12	**Saucer Basin,**	**94.54**	**47**	IAmb	IAmb	17 35 14.3	
	comp=Z,8.9nm,1.1s						
P23K	**Montague Islan**	**94.56**	**15**	IAMs_20	IAMs_20	18 13 31.6	
	comp=Z,2µm,20.0s						
PV01	**Paradox Valley**	**94.58**	**48**	IAmb	IAmb	17 37 55.0	
	comp=Z,6.0nm,0.4s						
PLID	**Pearl Lake**	**94.61**	**39**	P	**P**	**17 35 05.2**	**-3.1**
PLID				IAmb	IAmb	17 35 11.2	
	comp=Z,9.1nm,1.1s						
TCUT	**Toone Canyon**	**94.66**	**44**	IAMs_20	IAMs_20	18 18 17.1	
	comp=Z,2µm,18.0s						
BSUT	**Blindstream Ca**	**94.69**	**45**	IAmb	IAmb	17 35 59.8	
	comp=Z,11nm,1.6s						
RUBB	**Prince Rupert**	**94.79**	**26**	IAMs_20	IAMs_20	18 17 44.1	
	comp=Z,2µm,18.0s						
HEH	**HeiHe**	**94.85**	**328**	*e*P	**P**	**17 35 08.3**	**-0.6**
HWUT	**Hardware Ranch**	**94.87**	**43**	IAMs_20	IAMs_20	18 12 48.6	
	comp=Z,2µm,19.0s						
XAN	**Xi'an**	**95.05**	**307**	P	P	17 35 01.8	-8.5
XAN				pmax	pmax		
	comp=Z,6.0nm,1.4s						
XAN				LR	LR		
	comp=N,1µm,17.5s						
XAN				LR	LR		
	comp=E,960nm,17.3s						
XAN				LR	LR		
	comp=Z,2µm,16.5s						
V35K	**Ketchikan**	**95.08**	**24**	IAMs_20	IAMs_20	18 13 48.7	
	comp=Z,2µm,18.0s						
HIN	**Hinchinbrook I**	**95.12**	**15**	IAMs_20	IAMs_20	18 15 12.3	
	comp=Z,2µm,20.0s						
PB16	**IPOC Station P**	**95.14**	**115**	P	**P**	**17 35 12.6**	**+0.7**
PB16				IAmb	IAmb	17 35 21.1	
	comp=Z,20nm,1.3s						
PWL	**Port Wells**	**95.15**	**14**	IAMs_20	IAMs_20	18 16 08.0	
	comp=Z,2µm,19.0s						
KAIM	**Kayak Island**	**95.18**	**16**	IAMs_20	IAMs_20	18 21 29.8	
	comp=Z,2µm,18.0s						
K17K	**Iditarod**	**95.22**	**9**	IAMs_20	IAMs_20	18 17 14.8	
	comp=Z,2µm,19.0s						
SUA	**Susitna One**	**95.23**	**13**	IAMs_20	IAMs_20	18 15 45.2	
	comp=Z,2µm,20.0s						
GLI	**Glacier Island**	**95.43**	**14**	IAMs_20	IAMs_20	18 15 43.4	
	comp=Z,2µm,20.0s						
FID	**Port Fidalgo**	**95.44**	**15**	IAMs_20	IAMs_20	18 15 02.6	
	comp=Z,2µm,19.0s						
LLLB	**Lillooet**	**95.47**	**32**	IAMs_20	IAMs_20	18 12 14.4	
	comp=Z,2µm,20.0s						
KNK	**Knik Glacier**	**95.63**	**14**	IAMs_20	IAMs_20	18 13 53.7	
	comp=Z,2µm,19.0s						
BERG	**Berg Lake**	**95.76**	**16**	IAMs_20	IAMs_20	18 21 58.2	
	comp=Z,2µm,18.0s						
AHID	**Auburn Hatcher**	**95.86**	**43**	IAMs_20	IAMs_20	18 14 17.7	
	comp=Z,2µm,19.0s						
COHC	**Cochancay**	**95.87**	**96**	P	**P**	**17 35 15.1**	**+0.5**
BMRM	**Bremner River**	**96.06**	**16**	IAMs_20	IAMs_20	18 22 30.0	
	comp=Z,2µm,18.0s						
I17K	**Unalakleet**	**96.06**	**7**	IAMs_20	IAMs_20	18 18 15.1	
	comp=Z,2µm,20.0s						
PZH	**PanZhiHua**	**96.10**	**297**	P	**P**	**17 35 17.6**	**+2.2**
PZH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,100nm,4.7s						
J18K	**Innoko River**	**96.15**	**9**	IAMs_20	IAMs_20	18 17 44.4	
	comp=Z,2µm,19.0s						
CUT	**Chulitna**	**96.19**	**12**	IAMs_20	IAMs_20	18 16 34.6	
	comp=Z,2µm,20.0s						
YAH	**Yahtse**	**96.21**	**17**	IAMs_20	IAMs_20	18 26 03.0	
	comp=Z,2µm,18.0s						
ISLE	**Juniper Island**	**96.27**	**17**	IAMs_20	IAMs_20	18 21 56.8	
	comp=Z,2µm,18.0s						
ANM	**Nome**	**96.28**	**5**	IAMs_20	IAMs_20	18 16 18.0	
	comp=Z,2µm,19.0s						
TGL	**Tana Glacier**	**96.28**	**16**	IAMs_20	IAMs_20	18 25 49.1	
	comp=Z,2µm,19.0s						
PPLA	**Purkeypile**	**96.31**	**11**	IAMs_20	IAMs_20	18 20 56.6	
	comp=Z,2µm,18.0s						
PCA	**Pinnacle**	**96.36**	**18**	IAMs_20	IAMs_20	18 24 22.2	
	comp=Z,2µm,19.0s						
TPAW	**Teton Pass**	**96.39**	**42**	IAMs_20	IAMs_20	18 22 46.6	
	comp=Z,2µm,18.0s						
XLT	**XiLinHaoTe**	**96.40**	**318**	*e*P	P	17 35 09.1	-7.2
XLT				pP	PcP	17 35 14.6	-1.9
XLT				PP	**PP**	**17 39 07.6**	**-3.1**
XLT				pmax	pmax		
	comp=Z,8.0nm,0.6s						
TABL	**Table Mountain**	**96.43**	**17**	IAMs_20	IAMs_20	18 13 09.9	
	comp=Z,2µm,19.0s						
FXWY	**Fox Creek**	**96.44**	**42**	IAMs_20	IAMs_20	18 13 56.9	
	comp=Z,2µm,20.0s						
SNOW	**Snow King Moun**	**96.49**	**42**	IAMs_20	IAMs_20	18 18 28.2	
	comp=Z,2µm,19.0s						
VRDI	**Verde Repeater**	**96.55**	**16**	IAMs_20	IAMs_20	18 16 03.1	
	comp=Z,2µm,19.0s						
DLMT	**Dillon**	**96.63**	**40**	IAMs_20	IAMs_20	18 14 13.8	
	comp=Z,2µm,19.0s						
GLB	**Gilahina Butte**	**96.66**	**16**	IAMs_20	IAMs_20	18 17 39.9	
	comp=Z,2µm,18.0s						
LOHW	**Long Hollow**	**96.67**	**42**	IAMs_20	IAMs_20	18 13 25.0	
	comp=Z,2µm,19.0s						
M24K	**Tolsona, Glenn**	**96.73**	**14**	IAMs_20	IAMs_20	18 16 45.8	
	comp=Z,2µm,19.0s						
BW06	**Boulder Array**	**96.76**	**43**	IAMs_20	IAMs_20	18 14 37.6	
	comp=Z,2µm,18.0s						
PDAR	**Pinedale Array**	**96.76**	**43**	P	**P**	**17 35 18.7**	**+0.5**
	comp=Z,1.2nm,0.3s,baz=186,slow=4.5,SNR=4.8						
PDAR				PKKP	**PKKPdf**	**17 52 06.5**	**+2.9**
	comp=Z,0.4nm,0.6s,baz=76,slow=6.3,SNR=4.1						
	comp=Z,1.2nm,0.3s						
MCARA	**McCarthy VSAT**	**96.79**	**16**	IAMs_20	IAMs_20	18 16 20.4	
	comp=Z,2µm,19.0s						
LOGN	**Logan Glacier**	**96.79**	**17**	IAMs_20	IAMs_20	18 15 47.6	
	comp=Z,2µm,19.0s						
CTGM	**Chitina Glacie**	**96.83**	**17**	IAMs_20	IAMs_20	18 25 58.6	
	comp=Z,2µm,19.0s						
T35M	**Bob Quinn**	**96.86**	**24**	IAMs_20	IAMs_20	18 21 23.5	
	comp=Z,2µm,18.0s						
O28M	**Mount Upton**	**96.95**	**17**	IAMs_20	IAMs_20	18 14 43.9	
	comp=Z,2µm,18.0s						
O29M	**Mount Kennedy**	**96.98**	**18**	IAMs_20	IAMs_20	18 23 45.6	
	comp=Z,2µm,19.0s						
YHB	**Horse Butte**	**97.03**	**41**	IAMs_20	IAMs_20	18 14 33.4	
	comp=Z,2µm,19.0s						
YHL	**Hebgen Lake**	**97.09**	**41**	IAmb	IAmb	17 35 40.2	
	comp=Z,9.8nm,1.3s						
YHL				IAMs_20	IAMs_20	18 14 36.2	
	comp=Z,2µm,19.0s						
KTH	**Kantishna Hill**	**97.13**	**12**	IAMs_20	IAMs_20	18 19 49.5	
	comp=Z,2µm,20.0s						
TRF	**Thorofare Moun**	**97.15**	**12**	IAMs_20	IAMs_20	18 20 32.9	
	comp=Z,2µm,19.0s						
SEY	**Seymchan**	**97.17**	**347**	*i* P	**P**	**17 35 18.0**	**-1.1**
SEY				pmax	pmax		
	comp=Z,21nm,2.7s						
H17K	**Granite Mounta**	**97.17**	**8**	IAMs_20	IAMs_20	18 18 49.4	
	comp=Z,2µm,20.0s						
HERN	**Volcan Telica**	**97.17**	**80**	IAMs_20	IAMs_20	18 12 06.7	
	comp=Z,1µm,21.0s						
J20K	**Nowinta River**	**97.19**	**10**	IAMs_20	IAMs_20	18 16 33.1	
	comp=Z,2µm,20.0s						
Q24A	**Divide**	**97.24**	**49**	IAMs_20	IAMs_20	18 15 35.7	
	comp=Z,2µm,21.0s						
HHC	**Hu-ho-hao-te**	**97.25**	**314**	*e*P	Pdif	17 35 22.6	+2.3
AMTX	**Amarillo**	**97.25**	**54**	IAMs_20	IAMs_20	18 15 09.8	
	comp=Z,2µm,18.0s						
YNM	**Yellowstone No**	**97.29**	**41**	IAMs_20	IAMs_20	18 16 06.4	
	comp=Z,2µm,18.0s						
YNR	**Norris Junctio**	**97.30**	**41**	IAMs_20	IAMs_20	18 16 16.6	
	comp=Z,2µm,18.0s						
RND	**Reindeer**	**97.37**	**13**	IAmb	IAmb	17 39 09.4	
	comp=Z,12nm,1.2s						
RND				IAMs_20	IAMs_20	18 20 23.7	
	comp=Z,2µm,18.0s						
ZEA	**Zeya**	**97.40**	**331**	*e*P	Pdif	17 35 26.3	+5.8
LPAZ	**La Paz**	**97.40**	**114**	P	Pdif	17 35 23.8	+1.5
	comp=Z,1.4nm,0.6s,baz=160,slow=5.6,SNR=3.7						
LPAZ				LR	LR	18 12 49.1	
	comp=Z,403nm,18.5s,baz=21,slow=31						
	comp=Z,1.4nm,0.6s						
ISCO	**Idaho Springs**	**97.42**	**48**	IAMs_20	IAMs_20	18 18 45.5	
	comp=Z,2µm,18.0s						
ABTX	**Abilene, Hawle**	**97.45**	**56**	IAMs_20	IAMs_20	18 13 29.3	
	comp=Z,2µm,19.0s						
F15K	**North Star Dit**	**97.47**	**5**	IAMs_20	IAMs_20	18 17 14.3	
	comp=Z,2µm,19.0s						
HYT	**Haines Junctio**	**97.71**	**19**	IAMs_20	IAMs_20	18 25 16.9	
	comp=Z,2µm,19.0s						
BWN	**Browne**	**97.96**	**12**	IAMs_20	IAMs_20	18 17 52.1	
	comp=Z,2µm,19.0s						
L26K	**Log Cabin Wild**	**98.15**	**15**	IAMs_20	IAMs_20	18 17 12.5	
	comp=Z,2µm,19.0s						
K24K	**Donnelly Dome**	**98.33**	**14**	IAMs_20	IAMs_20	18 17 50.1	
	comp=Z,2µm,19.0s						
RLMT	**Red Lodge**	**98.34**	**42**	IAMs_20	IAMs_20	18 15 36.2	
	comp=Z,2µm,19.0s						
N30M	**Aishikik Lake**	**98.35**	**18**	IAMs_20	IAMs_20	18 25 01.8	
	comp=Z,2µm,19.0s						
NEA2	**Nenana**	**98.42**	**12**	IAmb	IAmb	17 38 33.6	
	comp=Z,14nm,1.9s						
NEA2				IAMs_20	IAMs_20	18 17 54.4	
	comp=Z,2µm,19.0s						
RIDG	**Independent Ri**	**98.46**	**14**	IAMs_20	IAMs_20	18 19 31.6	
	comp=Z,2µm,19.0s						
L27K	**Beaver Creek,**	**98.53**	**16**	IAMs_20	IAMs_20	18 18 15.4	
	comp=Z,2µm,18.0s						
MLY	**Manley**	**98.53**	**11**	IAMs_20	IAMs_20	18 15 20.4	
	comp=Z,2µm,19.0s						
DOT	**Dot Lake**	**98.55**	**14**	IAMs_20	IAMs_20	18 23 56.8	
	comp=Z,2µm,19.0s						
N31M	**Braeburn, Yuko**	**98.73**	**19**	IAMs_20	IAMs_20	18 24 34.9	
	comp=Z,2µm,18.0s						
FW03	**Perrin-Whitt E**	**98.80**	**57**	IAMs_20	IAMs_20	18 13 34.0	
	comp=Z,2µm,20.0s						
I23K	**Minto, Yukon-K**	**98.87**	**12**	IAMs_20	IAMs_20	18 14 14.5	
	comp=Z,2µm,20.0s						
COLA	**College**	**98.89**	**12**	IAMs_20	IAMs_20	18 21 03.9	
	comp=Z,2µm,19.0s						
ILAR	**Eielson Array**	**98.98**	**13**	P	Pdif	17 35 28.4	+1.1
	comp=Z,1.6nm,1.1s,baz=205,slow=3.8,SNR=5.3						
	comp=Z,1.6nm,1.1s						
CPUP	**Villa Florida**	**99.03**	**128**	LR	LR	18 15 15.9	
	comp=Z,288nm,18.5s,baz=214,slow=32						
FW14	**Alvarado**	**99.09**	**58**	IAMs_20	IAMs_20	18 15 47.8	
	comp=Z,2µm,18.0s						
POKR	**Poker Plat Res**	**99.19**	**12**	IAMs_20	IAMs_20	18 17 57.8	
	comp=Z,2µm,19.0s						
K27K	**Chicken**	**99.31**	**15**	IAMs_20	IAMs_20	18 17 45.1	
	comp=Z,2µm,19.0s						
J26L	**Joseph Creek**	**99.40**	**14**	IAmb	IAmb	17 35 44.9	
	comp=Z,8.1nm,1.4s						
L29M	**L29M**	**99.46**	**17**	IAMs_20	IAMs_20	18 17 25.0	
	comp=Z,2µm,19.0s						
H24K	**Noodor Dome**	**99.76**	**12**	IAMs_20	IAMs_20	18 15 32.9	
	comp=Z,2µm,20.0s						
C16K	**Lisburne Hills**	**99.95**	**5**	IAMs_20	IAMs_20	18 20 05.9	
	comp=Z,2µm,19.0s						
OK038	**West end E0370**	**100.13**	**53**	IAMs_20	IAMs_20	18 16 53.8	
	comp=Z,2µm,20.0s						
K29M	**Barlow Dome**	**100.22**	**17**	IAMs_20	IAMs_20	18 17 58.3	
	comp=Z,2µm,19.0s						
OGNE	**Ogallala**	**100.33**	**48**	IAMs_20	IAMs_20	18 17 01.5	
	comp=Z,2µm,18.0s						
MAYO	**Mayo, Yukon**	**100.43**	**18**	IAMs_20	IAMs_20	18 15 57.8	
	comp=Z,2µm,19.0s						
J29N	**Klondike Camp**	**100.56**	**16**	IAMs_20	IAMs_20	18 16 37.2	
	comp=Z,2µm,19.0s						
C18K	**Utukok River**	**100.64**	**6**	IAMs_20	IAMs_20	18 19 06.3	
	comp=Z,2µm,20.0s						
CROK	**Carrier**	**100.66**	**54**	IAMs_20	IAMs_20	18 17 46.0	
	comp=Z,2µm,20.0s						
CBKS	**Cedar Bluff**	**100.68**	**51**	IAMs_20	IAMs_20	18 17 18.2	
	comp=Z,2µm,18.0s						
D19K	**Kuna River**	**100.80**	**7**	IAMs_20	IAMs_20	18 20 58.3	
	comp=Z,2µm,19.0s						
LAO	**LASA Array**	**100.98**	**42**	IAMs_20	IAMs_20	18 29 17.1	
	comp=Z,1µm,19.0s						
I28M	**Miner Creek**	**101.01**	**15**	IAMs_20	IAMs_20	18 25 30.9	
	comp=Z,2µm,19.0s						
R32A	**Long Quarter,**	**101.16**	**52**	IAMs_20	IAMs_20	18 26 57.0	
	comp=Z,1µm,19.0s						
OK052	**Battle Ridge R**	**101.22**	**55**	IAMs_20	IAMs_20	18 18 28.8	
	comp=Z,2µm,18.0s						
E22K	**Anaktuvuk Pass**	**101.24**	**10**	IAMs_20	IAMs_20	18 19 50.1	
	comp=Z,1µm,19.0s						
BCIP	**Isla Barro Col**	**101.36**	**86**	IAMs_20	IAMs_20	18 15 29.0	
	comp=Z,2µm,18.0s						
QUOK	**Quay**	**101.37**	**55**	IAMs_20	IAMs_20	18 26 60.0	
	comp=Z,2µm,20.0s						
E24K	**Your Creek**	**101.69**	**11**	IAMs_20	IAMs_20	18 16 25.9	
	comp=Z,2µm,20.0s						
F25K	**Christian Rive**	**101.74**	**12**	IAMs_20	IAMs_20	18 23 11.1	
	comp=Z,2µm,20.0s						
D22K	**Ayikyak River**	**101.82**	**9**	IAMs_20	IAMs_20	18 19 54.3	
	comp=Z,2µm,18.0s						
TUL3	**Leonard**	**101.88**	**55**	IAMs_20	IAMs_20	18 16 18.5	
	comp=Z,2µm,18.0s						
TOLK	**Toolik Lake Re**	**102.04**	**10**	IAMs_20	IAMs_20	18 18 47.1	
	comp=Z,1µm,18.0s						
RLO	**Rose Lookout**	**102.55**	**55**	IAMs_20	IAMs_20	18 29 56.1	
	comp=Z,2µm,20.0s						
WLAR	**White Oak Lake**	**102.69**	**58**	IAMs_20	IAMs_20	18 15 37.3	
	comp=Z,2µm,19.0s						
Z41A	**Richland Creek**	**102.71**	**59**	IAMs_20	IAMs_20	18 17 18.8	
	comp=Z,2µm,19.0s						
K30B	**Basset**	**102.78**	**48**	IAMs_20	IAMs_20	18 16 38.3	
	comp=Z,2µm,20.0s						
B22K	**Teshekpuk Lake**	**103.09**	**8**	IAMs_20	IAMs_20	18 22 08.9	
	comp=Z,2µm,19.0s						
G30M	**tAoh Zraii Nji**	**103.12**	**15**	IAMs_20	IAMs_20	18 12 42.8	
	comp=Z,2µm,19.0s						
U38A	**Gravette**	**103.13**	**55**	IAMs_20	IAMs_20	18 16 47.6	
	comp=Z,2µm,20.0s						
C24K	**Franklin Bluff**	**103.16**	**10**	IAMs_20	IAMs_20	18 19 56.6	
	comp=Z,2µm,19.0s						
X40A	**Basin Creek Fa**	**103.28**	**58**	IAMs_20	IAMs_20	18 16 22.9	
	comp=Z,2µm,19.0s						
HHAR	**Hobbs**	**103.37**	**56**	IAMs_20	IAMs_20	18 29 46.9	
	comp=Z,2µm,18.0s						
143A	**Socs Landing,**	**103.47**	**60**	IAMs_20	IAMs_20	18 17 10.0	
	comp=Z,2µm,19.0s						
G31M	**Satah River**	**103.53**	**16**	IAMs_20	IAMs_20	18 29 50.6	
	comp=Z,2µm,19.0s						
WHAR	**Wooly Hollow**	**104.06**	**57**	IAMs_20	IAMs_20	18 19 42.5	
	comp=Z,2µm,20.0s						
E28A	**Huff**	**104.13**	**44**	IAMs_20	IAMs_20	18 18 26.5	
	comp=Z,2µm,19.0s						
346A	**Big Creek Wild**	**104.28**	**62**	IAMs_20	IAMs_20	18 30 55.9	
	comp=Z,1µm,18.0s						
N35A	**Tabor**	**104.44**	**51**	IAMs_20	IAMs_20	18 19 16.6	
	comp=Z,1µm,19.0s						
MGMO	**Mountain Grove**	**104.96**	**56**	IAMs_20	IAMs_20	18 21 42.1	
	comp=Z,2µm,19.0s						
P38A	**Dawn**	**105.26**	**53**	IAMs_20	IAMs_20	18 17 57.6	
	comp=Z,1µm,20.0s						
HBAR	**Harrisburg**	**105.36**	**58**	IAMs_20	IAMs_20	18 33 49.9	
	comp=Z,2µm,18.0s						
MET	**Memphis--Engin**	**105.68**	**58**	IAMs_20	IAMs_20	18 19 39.6	
	comp=Z,2µm,20.0s						
T42A	**Van Buren**	**105.74**	**56**	IAMs_20	IAMs_20	18 19 54.6	
	comp=Z,2µm,18.0s						
OXF	**Oxford**	**105.78**	**59**	IAMs_20	IAMs_20	18 19 27.3	
	comp=Z,2µm,20.0s						
GNAR	**Gosnell**	**106.01**	**57**	IAMs_20	IAMs_20	18 24 36.1	
	comp=Z,2µm,19.0s						
YKA	**Yellowknife Ar**	**106.35**	**26**	PKKP		17 51 51.4	
	comp=Z,0.7nm,0.8s,baz=40,slow=3.5,SNR=4.9						
LNXT	**Lenox**	**106.45**	**58**	IAMs_20	IAMs_20	18 32 53.8	
	comp=Z,2µm,18.0s						
SCIA	**State Center**	**106.54**	**51**	IAMs_20	IAMs_20	18 20 51.2	
	comp=Z,2µm,18.0s						
CGM3	**Cape Girardeau**	**106.88**	**56**	IAMs_20	IAMs_20	18 18 04.9	
	comp=Z,2µm,21.0s						
LRAL	**Lakeview Retre**	**106.90**	**61**	IAMs_20	IAMs_20	18 21 47.2	
	comp=Z,2µm,19.0s						
SLM	**Saint Louis**	**107.07**	**55**	IAMs_20	IAMs_20	18 20 52.9	
	comp=Z,2µm,19.0s						
I37A	**Lemond, Waseca**	**107.39**	**49**	IAMs_20	IAMs_20	18 30 35.4	
	comp=Z,2µm,20.0s						
FFC	**Flin Flon**	**107.55**	**36**	IAMs_20	IAMs_20	18 22 16.4	
	comp=Z,2µm,19.0s						
553A	**Crawfordville**	**107.58**	**65**	IAMs_20	IAMs_20	18 29 45.6	
	comp=Z,1µm,19.0s						
MTDJ	**Mount Denham**	**107.72**	**79**	IAMs_20	IAMs_20	18 18 42.1	
	comp=Z,2µm,19.0s						
352A	**Blakely**	**107.77**	**64**	IAMs_20	IAMs_20	18 25 01.5	
	comp=Z,2µm,19.0s						
HDIL	**Hopedale**	**108.58**	**53**	IAMs_20	IAMs_20	18 26 46.5	
	comp=Z,2µm,19.0s						
656A	**Willston**	**108.69**	**67**	IAMs_20	IAMs_20	18 24 18.3	
	comp=Z,1µm,20.0s						
L42A	**Oliver, Polo**	**108.95**	**52**	IAMs_20	IAMs_20	18 21 11.2	
	comp=Z,2µm,19.0s						
CHIV	**Chivirico**	**109.47**	**78**	IAMs_20	IAMs_20	18 27 26.3	
	comp=Z,1µm,20.0s						
P46A	**Rosedale**	**109.62**	**55**	IAMs_20	IAMs_20	18 16 34.4	
	comp=Z,1µm,20.0s						
CPCT	**Cooper Cave**	**109.80**	**60**	IAMs_20	IAMs_20	18 21 37.7	
	comp=Z,2µm,20.0s						
SFIN	**Lafayette**	**110.02**	**54**	IAMs_20	IAMs_20	18 22 50.7	
	comp=Z,1µm,19.0s						
T50A	**Nancy**	**110.22**	**58**	IAMs_20	IAMs_20	18 23 12.7	
	comp=Z,2µm,19.0s						
EYMN	**Ely**	**110.30**	**46**	IAMs_20	IAMs_20	18 25 06.1	

	comp=Z,2µm,19.0s						
HYB	Hyderabad	110.45	278	ePdif	Pdif	17 36 19.3	-0.2
HYB				ePKiKP	PKiKP	17 40 20.8	+0.5
HYB				ePP	PP	17 40 56.6	+0.5
HYB				eSKSac	SKSac	17 46 59.1	+1.5
BG3	Lake Jocassee	110.79	61	IAMs_20	IAMs_20	18 21 17.0	
	comp=Z,2µm,20.0s						
TZTN	Tazewell	110.97	59	IAMs_20	IAMs_20	18 23 02.6	
	comp=Z,2µm,19.0s						
O48B	Farmland	111.32	55	IAMs_20	IAMs_20	18 28 59.4	
	comp=Z,2µm,19.0s						
S51A	Beattyville	111.38	58	IAMs_20	IAMs_20	18 27 25.4	
	comp=Z,2µm,18.0s						
F42A	Maple Grove Fa	111.52	49	IAMs_20	IAMs_20	18 24 32.7	
	comp=Z,1µm,18.0s						
JSC	Jenkinsville	111.75	62	IAMs_20	IAMs_20	18 29 20.8	
	comp=Z,2µm,19.0s						
NHSC	New Hope	112.10	64	IAMs_20	IAMs_20	18 19 19.2	
	comp=Z,1µm,20.0s						
CSU	Charleston Sou	112.13	64	IAMs_20	IAMs_20	18 22 51.1	
	comp=Z,2µm,19.0s						
BIRD	Birdtown, Kers	112.50	62	IAMs_20	IAMs_20	18 28 31.6	
	comp=Z,2µm,20.0s						
Q52A	Bidwell	112.86	57	IAMs_20	IAMs_20	18 24 16.5	
	comp=Z,2µm,19.0s						
W57A	Gilead	113.06	62	IAMs_20	IAMs_20	18 26 47.3	
	comp=Z,1µm,18.0s						
S54A	Dingess, Beckl	113.11	59	IAMs_20	IAMs_20	18 26 58.1	
	comp=Z,1µm,19.0s						
GLMI	Grayling	113.45	51	IAMs_20	IAMs_20	18 24 02.1	
	comp=Z,1µm,20.0s						
Q54A	Coxs Mills	113.90	58	IAMs_20	IAMs_20	18 25 16.1	
	comp=Z,2µm,18.0s						
WMQ	Urumqi	114.17	308	ePKP	PKiKP	17 40 29.8	+3.2
WMQ				LR	LR		
	comp=Z,1µm,18.1s						
WMQ				LR	LR		
	comp=Z,810nm,18.1s						
WMQ				LR	LR		
	comp=Z,920nm,22.1s						
M52A	Chesterland	114.47	55	IAMs_20	IAMs_20	18 25 03.7	
	comp=Z,2µm,18.0s						
GRTK	Grand Turk	114.57	79	IAMs_20	IAMs_20	18 23 56.6	
	comp=Z,1µm,19.0s						
ERPA	Erie	115.63	55	IAMs_20	IAMs_20	18 29 33.4	
	comp=Z,1µm,18.0s						
ZSN	Zaisan	117.25	311	ePKIKP	PKPdf	17 40 31.9	-0.5
ZSN	Zaisan	117.25	311	ePKP	PKPdf	17 40 31.9	-0.5
N58A	Sunbury	117.52	57	IAMs_20	IAMs_20	18 24 17.7	
	comp=Z,2µm,20.0s						
MK31	Makanchi Array	118.74	310	i PKIKP	PKPdf	17 40 35.1	-0.2
MKAR	Makanchi Array	118.74	310		PKPdf	17 40 34.4	-0.9
MKAR	Makanchi Array	118.74	310	PKP	PKPdf	17 40 34.7	-0.6
	comp=Z,0.9nm,0.6s,baz=192,slow=0.7,SNR=10						
MKAR				PKKPbc	PKKPab	17 50 54.6	+2.8
	comp=Z,0.5nm,0.6s,baz=305,slow=4.3,SNR=4.6						
MKAR	Makanchi Array	118.74	310	PKIKP	PKPdf	17 40 34.4	-0.9
ZALV	Zalesovo Beam	119.09	318	PKP	PKPdf	17 40 35.3	-0.3
	comp=Z,2.0nm,0.8s,baz=48,slow=2.2,SNR=4.3						
CPNY	Central Park	119.49	58	IAMs_20	IAMs_20	18 35 28.9	
	comp=Z,2µm,21.0s						
SMRT	St. Maarten	119.88	86	IAMs_20	IAMs_20	18 28 13.7	
	comp=Z,2µm,19.0s						
UZB	Uzynbulak	119.93	305	ePKIKP	PKPdf	17 40 37.0	-0.8
UZB	Uzynbulak	119.93	305	ePKP	PKPdf	17 40 37.1	-0.8
KPKS	Kokpek	120.25	305	ePKIKP	PKPdf	17 40 37.7	-0.7
KPKS	Kokpek	120.25	305	ePKP	PKPdf	17 40 37.7	-0.7
SATY	Saty	120.34	304	ePKIKP	PKPdf	17 40 37.8	-0.8
SATY	Saty	120.34	304	ePKP	PKPdf	17 40 37.8	-0.8
KSH	Kashi	121.08	300	PKP	PKPdf	17 40 36.6	-3.6
MDOK	Medeo	121.32	304	ePKIKP	PKPdf	17 40 39.6	-0.9
MDOK	Medeo	121.32	304	ePKP	PKPdf	17 40 39.7	-0.9
AAA	Alma-Ata	121.43	304	ePKIKP	PKPdf	17 40 39.9	-0.7
AAA	Alma-Ata	121.43	304	ePKP	PKPdf	17 40 39.9	-0.7
KURK	Kurchatov	122.06	313		PKPdf	17 40 40.2	-1.3
KURK	Kurchatov	122.06	313c	i PKIKP	PKiKP	17 40 41.7	+0.1
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURBB	Kurchatov Arra	122.10	313	PKP	PKPdf	17 40 40.5	-1.1
	comp=Z,1.9nm,0.5s,baz=112,slow=1.9,SNR=19						
AAK	Ala-Archa	123.00	303	i PKIKP	PKPdf	17 40 41.5	-2.3
SGDS	Sogindy	123.10	304	ePKP	PKPdf	17 40 43.1	-0.8
BTLS	Baital	123.87	306	ePKIKP	PKPdf	17 40 44.5	-0.6
BTLS	Baital	123.87	306	ePKP	PKPdf	17 40 44.6	-0.6
KBL	Kabul	124.94	292		PKiKP	17 40 48.6	+0.4
KBL	Kabul	124.94	292	PKIKP	PKiKP	17 40 48.6	+0.4
DZA	Taraz	125.33	303	ePKIKP	PKPdf	17 40 47.3	-0.8
DZA	Taraz	125.33	303	ePKP	PKPdf	17 40 47.3	-0.8
KKAR	Karatay Array	125.96	303		PKPdf	17 40 48.8	-0.5
KKAR	Karatay Array	125.96	303	PKIKP	PKPdf	17 40 48.8	-0.5
IUG	Iuzhnay	126.11	302	ePKIKP	PKPdf	17 40 48.8	-0.9
IUG	Iuzhnay	126.11	302	ePKP	PKPdf	17 40 48.9	-0.9
BRLS	Borolday	126.43	303	ePKIKP	PKPdf	17 40 49.5	-0.6
BRLS				e		17 42 44.9	
BRLS	Borolday	126.43	303	ePKP	PKPdf	17 40 49.6	-0.6
BRLS				ePP	PP	17 42 44.9	-1.4
SCHQ	Schefferville	126.89	43	PKP	PKPdf	17 40 50.0	-0.6
	comp=Z,2.2nm,0.7s,baz=253,slow=8.3,SNR=5.5						
BVAR	Borovoye Array	127.44	315	PKP	PKPdf	17 40 51.3	-0.4
	comp=Z,1.8nm,0.4s,baz=128,slow=2.3,SNR=17						
BRVK	Borovoye	127.50	315		PKPdf	17 40 50.6	-1.2
BRVK	Borovoye	127.50	315c	i PKIKP	PKPdf	17 40 51.8	0.0
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ABKAR	Akbulak array	133.88	310	PKPdf	PKPdf	17 41 04.7	+0.6
ABKAR					SKPbc	17 44 30.8	-0.6
ARTI	Arti	134.27	320		PKPdf	17 41 04.3	-0.3
ARTI	Arti	134.27	320	PKP	PKiKP	17 41 05.9	-0.1
	comp=Z,5.6nm,0.9s,baz=163,slow=2.1,SNR=4.5						
ARTI	Arti	134.27	320	i PKIKP	PKiKP	17 41 06.6	+0.7
ARTI						17 43 35.0	
AKTO	Aktyubinsk	135.09	312	PKhKP	PKPpre	17 40 54.9	
	comp=Z,1.5nm,0.7s,baz=149,slow=1.0,SNR=2.6						
ARCES	ARCESS Array B	139.78	348	PKhKP	PKPpre	17 41 06.7	
	comp=Z,1.2nm,0.6s,baz=62,slow=2.9,SNR=9.6						
BELG	Belogornoye	141.23	316	PKhKP	PKPpre	17 41 08.0	
	comp=Z,6.8nm,0.8s,baz=200,slow=1.7,SNR=5.2						
KLMR	Klimovskoe	141.92	331	ePKIKP	PKPdf	17 41 16.0	-2.4
KLMR				pmax	pmax		
	comp=Z,16nm,1.3s						
LEIR	Leirfjorden	144.80	352	ePKPdf	PKPdf	17 41 23.0	-0.3
GNI	Garni	144.86	296c	ePKIKP	PKPdf	17 41 25.3	+0.7
GNI				pmax	pmax		
	comp=Z,26nm,1.3s						
VRH	Novokhopyorsk	145.08	316	ePKIKP	PKPbc	17 41 22.6	-1.2
VRH				pmax	pmax		
	comp=Z,16nm,0.5s						
MOS	Moscow	145.45	325	i PKIKP	PKPdf	17 41 23.7	-1.1
MOS				pmax	pmax		
	comp=Z,387nm,2.0s						
NCK	Nalchik	145.52	302	i PKIKP	PKPdf	17 41 25.0	-0.4
GOF	Gofitskoye	145.71	305c	ePKP2	PKPab	17 41 26.2	-0.2
KBZ	Khabaz	146.00	303	PKPbc	PKPbc	17 41 27.0	+0.1
	comp=Z,18nm,0.9s,baz=68,slow=3.1,SNR=20						
KBZ	Khabaz	146.00	303c	ePKP2	PKPab	17 41 27.6	+0.1
KVAR	Kislovodsk Arr	146.11	303	PKPbc	PKPab	17 41 28.2	0.0
	comp=Z,2.5nm,0.7s,baz=104,slow=19,SNR=3.3						
KIV	Kislovodsk	146.12	303		PKPdf	17 41 25.3	-1.2
KIV	Kislovodsk	146.12	303	ePKP2	PKPdf	17 41 26.7	+0.2
KIV				pmax	pmax		
	comp=Z,21nm,1.1s						
SHA1	Shidzhatmaz	146.17	303	i PKIKP	PKPdf	17 41 26.1	-0.7
LPSR	Galich'ya Gora	146.18	319	ePKP2	PKPdf	17 41 26.3	+0.2
LPSR				pmax	pmax		
	comp=Z,50nm,0.9s						
OBN	Obninsk	146.28	324		PKPdf	17 41 26.2	0.0
OBN	Obninsk	146.28	324	PKPbc	PKPbc	17 41 26.9	-0.5
	comp=Z,54nm,0.6s,baz=355,slow=1.8,SNR=31						
OBN	Obninsk	146.28	324c	i PKP2	PKiKP	17 41 29.6	-0.9
OBN						17 44 55.0	
OBN						17 48 26.0	
OBN				pmax	pmax		
	comp=Z,176nm,1.3s						
OBN				MLR	MLR		
	comp=Z,675nm,18.0s						
FIA1	FINESS Array S	146.33	340		PKPdf	17 41 25.4	-0.7
FINES	FINESS Array B	146.33	340		PKPdf	17 41 25.4	-0.7
FINES	FINESS Array B	146.33	340	PKPbc	PKPdf	17 41 26.5	+0.4
	comp=Z,17nm,0.5s,baz=48,slow=2.8,SNR=86						
FINES	FINESS Array B	146.33	340	PKIKP	PKPdf	17 41 25.4	-0.7
VORR	Voronezh	146.39	318	ePKP2	PKPdf	17 41 26.5	0.0
VORR				pmax	pmax		
	comp=Z,50nm,0.8s						
NSS	Namsos	146.46	352	ePKPdf	PKPdf	17 41 26.8	+0.5
VSR	Storozhevoye	146.59	317	ePKIKP	PKPdf	17 41 26.5	-0.4
VSR				pmax	pmax		
	comp=Z,40nm,1.0s						
VORD	Divnogorie	146.60	316	ePKP2	PKPdf	17 41 26.7	-0.2
VORD				pmax	pmax		
	comp=Z,50nm,1.2s						
ERBR	Yeremizino-Bor	147.36	307	i PKP2	PKPbc	17 41 31.1	+0.3
ERBR				pmax	pmax		
	comp=Z,82nm,1.3s						
LABN	Labinsk	147.40	305	i PKP2	PKiKP	17 41 33.5	+0.3
LABN				pmax	pmax		
	comp=Z,24nm,0.6s						
DOMB	Dombas	149.19	354	ePKPbc	PKPbc	17 41 35.1	0.0
AKN	Aaknes	149.22	356	e	PKPab	17 41 38.1	-1.6
ANN	Anapa	149.66	306	i PKP2	PKPab	17 41 41.1	-1.0
ANN				pmax	pmax		
	comp=Z,51nm,0.9s						
NB201	NORSAR Array S	149.91	351		PKPab	17 41 44.2	+1.6
NB2	NORSAR Subarra	149.93	351	PKP	PKPbc	17 41 36.8	-0.2
	comp=Z,58nm,1.4s,baz=21,slow=4.1						
NB2	NORSAR Subarra	149.93	351	PKP	PKPbc	17 41 36.8	-0.2
	baz=21,slow=4.1						
NOA	NORSAR Array B	149.93	351	PKPbc	PKPbc	17 41 36.2	-0.8
	comp=Z,4.1nm,0.8s,baz=14,slow=4.1,SNR=10						
NC602	NORSAR Array S	150.18	351	epPKPdf	PKPbc	17 41 35.8	-1.7
HFS	Hagfors	150.43	348	PKPbc	PKPbc	17 41 36.4	-1.8
	comp=Z,12nm,0.9s,baz=94,slow=4.5,SNR=17						
SKAR	Skarslia	150.60	354	ePKPbc	PKiKP	17 41 39.1	-0.2
MNK	Minsk	150.73	329	i PKiKP	PKiKP	17 41 40.4	+0.7
	comp=E,14nm,0.8s						
MNK				i PKiKP	PKiKP	17 41 40.4	+0.7
	comp=N,10.0nm,0.6s						
MNK				i PKiKP	PKiKP	17 41 40.4	+0.7
	comp=Z,11nm,0.6s,baz=49						
MNK				i PP	PP	17 45 16.1	+0.2
MNK				i PPP	PPP	17 48 39.2	
MNK				i SKS	SKSdf	17 48 41.4	+2.2
MNK				i SS	SS	18 05 00.9	+26
MNK				i SSS	SSS	18 10 19.2	
MNK				i LR	LR	18 53 01.4	
MNK	Minsk	150.73	329	i PKIKP	PKiKP	17 41 40.3	+0.7
MNK				i		17 45 16.0	
MNK				i PPP	PPP	17 48 39.2	
MNK				i		17 48 41.4	
MNK				i SSS	SSS	18 10 19.2	
MNK				pmax	pmax		
	comp=Z,11nm,0.6s						
MNK				pmax	pmax		
	comp=N,10.0nm,0.6s						
MNK				pmax	pmax		
	comp=E,14nm,0.8s						
NACGM	Naroch	150.93	331	ePKiKP	PKPbc	17 41 39.5	0.0
KONO	Kongsberg	151.48	352		PKPdf	17 41 33.4	-1.1
KONO	Kongsberg	151.48	352	PKIKP	PKPdf	17 41 33.4	-1.1
KONO	Kongsberg	151.48	352	ePKPbc	PKiKP	17 41 41.4	+0.2
GHAJ	Ghor Haditha	151.72	278		PKPab	17 41 49.6	-1.4
MMAI	Mount Meron Ar	152.08	282	PKPbc	PKiKP	17 41 44.7	+1.4
	comp=E,5.9nm,0.5s,baz=82,slow=6.2,SNR=17						
AKASG	Malin Array Be	152.39	322	PKPbc	PKPbc	17 41 42.5	-0.5
	comp=E,1.4nm,0.4s,baz=48,slow=3.1,SNR=17						
KIEV	Kiev	152.41	322		PKPdf	17 41 34.9	-1.3
KIEV	Kiev	152.41	322	PKIKP	PKPdf	17 41 34.9	-1.3
BORU	Boraas	152.95	348	eP	PKPbc	17 41 42.3	-1.7
HOMB	Homborsund	152.95	353	ePKPbc	PKiKP	17 41 44.8	+0.7
HOMB	Homborsund	152.95	353	i P	PKPbc	17 41 44.0	0.0
SUW	Suwalki	153.04	332	ePKP	PKiKP	17 41 47.3	+2.8
BRTR	Keskin Array B	153.40	297		PKPdf	17 41 36.7	-1.5
BRTR	Keskin Array B	153.40	297	PKPbc	PKiKP	17 41 46.0	0.0
	comp=E,1.0nm,0.4s,baz=132,slow=3.5,SNR=9.2						
BRTR				PKPab	PKPab	17 41 58.2	+0.2
	comp=E,3.6nm,0.5s,baz=159,slow=4.6,SNR=6.4						
BRTR	Keskin Array B	153.40	297	PKIKP	PKPdf	17 41 36.7	-1.5
BLEU	Blekinge	153.52	343	eP	PKPbc	17 41 44.7	-0.6
DEL	Delary	153.82	345	i P	PKiKP	17 41 47.0	+1.0
CSS	Mathiatis	153.93	286		PKPab	17 41 59.2	-1.0
ANTO	Ankara	154.02	297		PKiKP	17 41 48.1	+1.0
DBIC	Dimbokro	154.34	163	PKPbc	PKiKP	17 41 50.2	+1.8
	comp=E,6.5nm,0.8s,baz=220,slow=2.7,SNR=5.7						
GKP	Gorka Klasztor	155.77	338	ePKP	PKPab	17 42 05.5	-1.9
EKA	Eskdalemuir Ar	155.91	8	PKPab	PKPab	17 42 07.5	-0.5
	comp=E,1.0nm,0.6s,baz=304,slow=2.7,SNR=4.8						
ESK	Eskdalemuir	155.92	8	IAMs_20	IAMs_20	18 52 27.9	
	comp=Z,760nm,19.0s						
ISP	Isparta	156.06	293	IAMs_20	IAMs_20	18 56 59.6	
	comp=Z,901nm,19.0s						
KWP	Kalwaria Pacla	156.36	326	ePKP	PKPab	17 42 09.7	-0.4
MLR	Muntele Rosu	156.99	314	PKPab	PKPab	17 42 14.4	+1.2
	comp=Z,2.8nm,0.6s,baz=249,slow=7.7,SNR=4.0						
KOLS	Kolonicke sedl	157.04	325	ePKP	PKPab	17 42 01.0	-12
KOLS				e		17 42 13.9	
STHS	Stebnicka Huta	157.20	327	ePKP2	PKPab	17 42 05.7	-8.1
STHS	Stebnicka Huta	157.20	327	ePKP	PKPab	17 42 05.7	-8.1
STHS				e		17 42 13.0	
OJC	Ojcow	157.26	330	ePKP	PKPdf	17 41 40.0	-2.9
GORT1	Trebel	157.61	346	ePKPab	PKPab	17 42 16.5	+1.3
	baz=21,slow=4.1						
NIE	Niedzica	157.63	328	ePKP	PKPdf	17 41 54.6	+11
KSP	Ksiaz	158.13	336	ePKP	PKPdf	17 41 58.9	+15
LANS	Liptovska Anna	158.20	329	ePKP	PKPab	17 42 18.8	+0.7
RETH	Rethem/Aller,	158.22	348	ePKPab	PKPab	17 42 17.2	-0.7
	baz=21,slow=4.1						
OKC	Ostrava-Krasne	158.24	332	AMS	AMS	19 02 00.0	
	comp=Z,500nm,19.2s						
STEB	Steborice	158.31	332	ePKPAB	PKPab	17 42 14.6	-3.9
OSTC	Ostas	158.39	335	AMS	AMS	18 57 10.0	
	comp=Z,800nm,19.0s						
CHVC	Chvalec	158.42	336	AMS	AMS	18 57 00.0	
	comp=Z,900nm,20.1s						
UPC	Upice	158.51	336	AMS	AMS	18 56 50.0	
	comp=Z,1µm,20.0s						
DPC	Dobruska-Polom	158.53	335	ePKPAB	PKPab	17 42 19.2	-0.3
DPC				ex	x	17 42 31.0	
DPC				AMS	AMS	19 07 40.0	
	comp=Z,500nm,17.4s						
DPC	Dobruska-Polom	158.53	335	ePKP2	PKPab	17 42 19.2	-0.3
DPC				MLR	MLR		
	comp=Z,500nm,17.4s						
MORC	Moravsky Berou	158.53	332	ePKP	PKPab	17 42 18.4	-1.1
ASSE	Asse, Remlinge	158.55	346	ePKPab	PKPab	17 42 18.6	-0.7
	baz=21,slow=4.1						
KRLC	Kraliky	158.58	334	ePKPAB	PKPab	17 42 20.0	+0.3
KRLC				AMS	AMS	18 57 40.0	
	comp=Z,800nm,20.0s						
KRLC	Kraliky	158.58	334	ePKP2	PKPab	17 42 20.0	+0.3
KRLC				MLR	MLR		
	comp=Z,800nm,20.0s						
CLL	Collm	158.75	341	IAMs_20	IAMs_20	19 07 37.8	
	comp=Z,855nm,20.0s						
CLL	Collm	158.75	341	ePKIKP	PKPdf	17 41 47.0	+2.3
CLL				e		17 42 19.0	
CLL	Collm	158.75	341	ePKPdf	PKPdf	17 41 47.0	+2.3
CLL				ePKPdif	sPKPdf	17 42 05.0	+11
CLL				i x	x	17 42 10.8	
CLL				ePKPab	PKPab	17 42 19.0	-1.3
CLL				i x	x	17 42 27.5	
	comp=Z,22nm,1.4s						
CLL				e(PP)		17 46 09.0	
CLL				AMS	AMS	19 07 00.0	
	comp=Z,900nm,19.4s						
BRG	Berggiesshubel	158.87	339	ePKPab	PKPab	17 42 20.0	-0.8
	baz=21,slow=4.1						
BRG	Berggiesshubel	158.87	339	P	PKPab	17 42 21.0	+0.1
BRG				Amp		17 42 22.7	
	comp=Z,10nm,1.1s						
IBBN	Ibbenburen	158.89	351	ePKPab	PKPab	17 42 21.2	+0.3
	baz=21,slow=4.1						
VYHS	Vyhne	158.97	328	ePKP2	PKPab	17 42 21.9	+0.5
VYHS	Vyhne	158.97	328	ePKP	PKPab	17 42 21.9	+0.5
PVCC	Panska Ves	158.97	338	AMS	AMS	19 01 50.0	
	comp=Z,900nm,19.4s						
RICC	Richard	159.11	339	ePKPAB	PKPab	17 42 25.8	+3.9
RICC				AMS	AMS	19 02 40.0	
	comp=Z,900nm,18.8s						
VRAC	Vranov	159.28	333	PKPab	PKPab	17 42 22.2	-0.6
	comp=Z,1.5nm,0.4s,baz=42,slow=4.5,SNR=6.8						
VRAC	Vranov	159.28	333	ePKP	PKPab	17 42 22.1	-0.6
PRA	Prague	159.41	337	AMS	AMS	19 04 00.0	
	comp=Z,700nm,18.8s						
GOPC	GO Pecny, Ondr	159.43	337	AMS	AMS	19 04 00.0	
	comp=Z,900nm,18.3s						
PRU	Pruhonice	159.45	337	AMS	AMS	19 04 00.0	
	comp=Z,1µm,18.0s						
KRUC	Moravsky	159.55	333	ePKP	PKPab	17 42 22.0	-1.9
TANN	Tannenbergstha	159.71	341	ePKPab	PKPab	17 42 24.4	-0.2
	baz=21,slow=4.1						
TREC	Trest	159.71	335	AMS	AMS	18 58 40.0	
	comp=Z,900nm,20.3s						
UBBA	Unterbreizbach	159.93	346	ePKPab	PKPab	17 42 24.9	-0.4
	baz=21,slow=4.1						
ZVC	Zvikov	160.04	337	ePKPAB	PKPab	17 42 26.5	+0.5
ZVC				AMS	AMS	19 05 00.0	
	comp=Z,800nm,18.7s						
MANZ	Manzenberg	160.19	341	ePKPdf	PKPdf	17 42 00.2	+14
MANZ				ePKPab	PKPab	17 42 26.1	-0.6
	baz=21,slow=4.1						
ROTZ	Rotzenmuhle	160.36	341	ePKPab	PKPab	17 42 27.2	-0.2
	baz=21,slow=4.1						
KHC	Kasperske Hory	160.51	337	ePKPAB	PKPab	17 42 27.5	-0.6
KHC				ex	x	17 42 39.6	
KHC				AMS	AMS	19 08 40.0	
	comp=Z,1µm,17.7s						
KHC	Kasperske Hory	160.51	337	ePKP2	PKPab	17 42 27.5	-0.6
KHC				MLR	MLR		
	comp=Z,1µm,17.7s						
CKRC	Cesky Krumlov	160.53	336	AMS	AMS	19 07 50.0	
	comp=Z,1µm,17.2s						
CONA	Conrad Observa	160.67	332	i PKP	PKPdf	17 41 47.8	+0.7
	comp=Z,0.9nm,0.7s						
CONA				i PKP	PKPab	17 42 28.4	-0.5
	comp=Z,7.6nm,1.4s						
RONA	Rosalia, Austr	160.68	331	i PKP	PKPdf	17 41 47.2	+0.2
	comp=Z,2.9nm,1.3s						
RONA				i PKP	PKPab	17 42 29.1	+0.2
	comp=Z,13nm,1.4s						
GRF	Grafenberg Arr	160.70	342	ePKPab	PKPab	17 42 28.2	-0.7
	baz=21,slow=4.1						
GEC2	GERESS Array S	160.71	337	ePKPab	PKPab	17 42 28.4	-0.7
	baz=21,slow=4.1						
GERES	GERESS Array B	160.71	337	PKPab	PKPab	17 42 28.4	-0.7
	comp=Z,0.9nm,0.6s,baz=7.6,slow=4.0,SNR=5.6						
WET	Wettzell	160.72	339	ePKPab	PKPab	17 42 28.9	-0.1
	baz=21,slow=4.1						
BCLA	Clavier	161.02	354	dPKP	PKPab	17 42 29.1	-1.0
ARSA	Arzberg	161.35	331	epPKP	PKPdf	17 41 51.0	+3.3
	comp=Z,0.1nm,0.3s						
ARSA				i PKP	PKPab	17 42 33.1	+1.2
	comp=Z,5.2nm,1.3s						
TORD	Torodi Ar. Bea	161.67	178	PKP	PKPdf	17 41 51.3	+2.3
	comp=Z,43nm,0.3s,baz=180,slow=1.0,SNR=1.1						
TORD				PKPab	PKPab	17 42 35.7	+1.8
	comp=Z,42nm,0.3s,baz=170,slow=2.6,SNR=1.2						
WLF	Walferdange	161.68	352	dPKP	PKPab	17 42 32.5	-0.6
BIOA	Bad Ischl, Aus	161.72	335	epPKP	pPKPdf	17 41 52.5	-2.4
	comp=Z,0.8nm,0.6s						
BIOA				i PKP	PKPab	17 42 33.2	-0.2
	comp=Z,7.5nm,1.2s						
RJOB	Jochberg	161.97	337	ePKPab	PKPab	17 42 34.0	-0.6
	baz=21,slow=4.1						
SOKA	Soboth	162.01	331	epPKP	pPKPdf	17 41 54.1	-1.2
	comp=Z,0.8nm,0.5s						
SOKA				i PKP	PKPab	17 42 33.6	-1.2
	comp=Z,3.5nm,1.0s						
LESA	Schwarzleotal	162.29	336	epPKP	PKPdf	17 41 51.9	+3.1
	comp=Z,1.2nm,0.7s						
LESA				i PKP	PKPab	17 42 35.2	-0.8
	comp=Z,6.0nm,1.2s						
OBKA	Obir	162.35	331	i pPKP	pPKPdf	17 41 53.4	-2.2
	comp=Z,2.1nm,1.1s						
OBKA				i PKP	PKPab	17 42 35.4	-0.9
	comp=Z,2.0nm,0.6s						
MYKA	Terra Mystica	162.61	333	epPKP	pPKPdf	17 41 53.3	-2.6
	comp=Z,1.1nm,0.4s						
MYKA				i PKP	PKPab	17 42 37.2	-0.2
	comp=Z,3.2nm,0.6s						
WATA	Walderalm	162.72	338	epPKP	pPKPdf	17 41 55.0	-1.1
	comp=Z,1.1nm,0.5s						
WATA				ePKP	PKPab	17 42 38.2	+0.2
	comp=Z,5.9nm,1.2s						
WTTA	Wattenberg	162.77	338	i pPKP	pPKPdf	17 41 53.6	-2.5
	comp=Z,2.3nm,0.6s						
WTTA				i PKP	PKPab	17 42 38.4	+0.2
	comp=Z,4.6nm,0.8s						
RETA	Reutte	162.83	340	epPKP	PKPdf	17 41 51.7	+2.3
	comp=Z,1.0nm,0.6s						
RETA				i PKP	PKPab	17 42 38.2	-0.2
	comp=Z,12nm,1.8s						
MOTA	Moosalm	162.86	339	epPKP	pPKPdf	17 41 54.0	-2.2
	comp=Z,0.8nm,0.4s						
MOTA				i PKP	PKPab	17 42 38.1	-0.5
	comp=Z,10.0nm,1.5s						
ABTA	Abfaltersbach	162.93	336	i pPKP	pPKPdf	17 41 56.5	+0.3
	comp=Z,0.8nm,0.5s						
ABTA				i PKP	PKPab	17 42 37.7	-1.1
	comp=Z,2.0nm,0.6s						
SQTA	Sankt Quirin	162.94	339	epPKP	pPKPdf	17 41 55.5	-0.7
	comp=Z,1.1nm,0.5s						
SQTA				i PKP	PKPab	17 42 39.1	+0.2
	comp=Z,3.5nm,0.8s						
DAVA	Damuels	163.26	342	epPKP	PKPdf	17 41 52.7	+2.8
	comp=Z,1.3nm,0.5s						
DAVA				i PKP	PKPab	17 42 40.7	+0.4
	comp=Z,9.4nm,1.4s						
FETA	Feichten	163.26	340	i pPKP	pPKPdf	17 41 54.0	-2.6
	comp=Z,1.1nm,0.9s						
FETA				ePKP	PKPab	17 42 40.8	+0.4
	comp=Z,9.8nm,1.9s						
PMOZ	Porto Moniz, M	163.40	80	eLR	LR	18 48 28.0	
PMOZ				i AMs_20		18 56 43.6	
	comp=Z,660nm,18.0s						
DAVOX	Davos/Dischmat	163.72	341	PKPab	PKPab	17 42 42.3	-0.1
	comp=Z,2.9nm,0.5s,baz=38,slow=9.1,SNR=6.2						
PGAV	Gavieira, Arco	166.58	36	eLR	LR	18 49 12.1	
PGAV				i AMs_20		18 59 33.5	
	comp=Z,816nm,18.0s						
MVO	Moncorvo	167.79	36	eLR	LR	18 49 33.0	
MVO				i AMs_20		18 52 14.8	
	comp=Z,971nm,20.0s						
MTE	Manteigas	168.08	39	eLR	LR	18 51 44.2	
MTE				i AMs_20		18 53 31.6	
	comp=Z,1µm,18.0s						
PMRV	Marv??o	168.83	43	eLR	LR	18 50 10.5	
PMRV				i AMs_20		18 56 51.2	
	comp=Z,947nm,20.0s						
PVAQ	Vaqueiros	169.85	52	eLR	LR	18 51 01.9	
PVAQ				i AMs_20		19 00 14.8	
	comp=Z,912nm,18.0s						
ESDC	Sonseca Array	170.41	31	PKP	PKPdf	17 41 56.9	+1.5
	comp=Z,0.3nm,0.5s,baz=17,slow=3.1,SNR=2.3						
ESDC				PKPab	PKPab	17 43 12.2	+0.2
	comp=Z,1.0nm,1.0s,baz=311,slow=3.5,SNR=2.0						

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*NEIC **18** 17:26:22.1±2.8, 21°.45S±0°.06×173°.63W±0°.07, h10^{km}±1^{km}, mb5.0/25, Error ellipse: s-maj=13.8km s-min=6.3km az=223.0*

*IDC **18** 17:26:32.8±4.6, 21°.48S×174°.41W, h76^{km}±38^{km}, mb4.1/11, mbtmp4.4/14, ML4.6/2, Error ellipse: s-maj=28.1km s-min=19.1km az=95.0*

ISC 18 17:26:25.4±0.6, **21°.43S**±0°.09×**174°.0W**±0°.1, **h25^{km}, n54,** σ**1ˢ38**/52, **mb4.7**/20, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	4.46	59		Pn	17 27 25.2	-6.3
NIUE				Sn	Sn	17 28 09.8	-13
AFI	Afiamalu	7.77	16	Pn	Pn	17 28 13.6	-3.4
MSVF	Nonsavu	8.37	295		Pn	17 28 27.4	+2.1
MSVF	Nonsavu	8.37	295	P	Pn	17 28 28.6	+3.3
	0.7nm,0.3s,baz=128,slow=12,SNR=11						
	74nm,1.0s						
RAR	Rarotonga	13.23	92		Pn	17 29 24.5	-7.3
PINNC	Pines Island,	17.27	263	P	P	17 30 26.5	+0.2
DZM	Mont Dzumac	18.21	264	P	P	17 30 36.9	+0.1
DZM	Mont Dzumac	18.21	264	P	P	17 30 36.4	-0.4
	0.4nm,0.3s,baz=91,slow=18,SNR=6.5						
	8.7nm,0.7s						
URZ	Urewera	18.45	203	P	Pn	17 30 39.9	+0.5
	11nm,0.7s,baz=51,slow=3.1						
BKZ	Black Stump Fm	19.48	203	P	P	17 30 49.6	-0.9
BKZ				IAmb	IAmb	17 31 19.5	
	comp=Z,86nm,1.7s						
HIZ	Hauiti	19.55	207	P	P	17 30 51.0	-0.4
HIZ				IAmb	IAmb	17 31 16.4	
	comp=Z,231nm,1.9s						
MRZ	Mangatainoka R	21.12	203	P	P	17 31 07.6	-0.7
MRZ				IAmb	IAmb	17 31 13.6	
	comp=Z,76nm,1.6s						
LTZ	Lake Taylor	24.20	205	P	P	17 31 39.8	-0.3
LTZ				IAmb	IAmb	17 32 11.8	
	comp=Z,81nm,2.0s						
FOZ	Fox Glacier	25.84	208	P	P	17 31 54.0	-0.8

FOZ				IAmb	IAmb	17 32 01.9	
	comp=Z,41nm,1.0s						
ARMA	Armidale	32.10	247	P	P	17 32 50.9	-0.1
ARMA				IAmb	IAmb	17 33 22.4	
	comp=Z,22nm,1.4s						
TAU	Tasmania Unive	38.69	227	P	P	17 33 46.6	-0.5
STKA	Stephens Creek	40.81	246	P	P	17 34 03.1	-2.0
	comp=Z,3.4nm,0.3s,baz=90,slow=10,SNR=6.8						
	comp=Z,3.4nm,0.3s						
AS31	Alice Springs	47.97	257	P	P	17 35 00.8	-1.8
ASAR	Alice Springs	47.98	257	P	P	17 35 00.2	-2.3
	comp=Z,8.5nm,0.8s,baz=91,slow=8.3,SNR=18						
	comp=Z,8.5nm,0.8s						
WR8	Warramunga Arr	48.05	262	P	P	17 35 01.4	-1.7
WR8				IAmb	IAmb	17 35 39.1	
	comp=Z,27nm,1.5s						
WRA	Warramunga Arr	48.20	262	P	P	17 35 01.3	-3.0
WRA	Warramunga Arr	48.20	262	P	P	17 35 01.1	-3.2
	comp=Z,6.6nm,0.9s,baz=98,slow=7.2,SNR=9.8						
	comp=Z,6.6nm,0.9s						
KNRA	Kununurra	54.35	266	P	P	17 35 49.7	-0.7
FITZ	Fitzroy Crossi	56.63	262	P	P	17 36 05.2	-1.6
VNDA	Vanda	57.35	186	P	P	17 36 11.8	+0.8
	comp=Z,2.3nm,1.0s,baz=0.6,slow=8.7,SNR=5.0						
	comp=Z,2.3nm,1.0s						
MBWA	Marble Bar	61.32	257	P	P	17 36 37.4	-1.9
MORW	Morawa	62.95	247	P	P	17 36 49.8	-0.4
QSPA	South Pole Qui	68.64	180	P	P	17 37 26.2	-0.2
QSPA				IAmb	IAmb	17 37 31.1	
	comp=Z,7.7nm,1.1s						
QSPA	South Pole Qui	68.64	180	P	P	17 37 29.0	+2.6
	comp=Z,4.8nm,0.9s,baz=36,slow=6.8,SNR=4.4						
	comp=Z,4.8nm,0.9s						
ADK	Adak	73.04	358	P	P	17 37 53.1	+0.2
ADK				IAmb	IAmb	17 38 02.2	
	comp=Z,21nm,1.1s						
MJAR	Matsushiro Arr	73.23	321	P	P	17 37 54.1	-0.4
	comp=Z,4.1nm,0.8s,baz=160,slow=6.0,SNR=7.6						
	comp=Z,4.1nm,0.8s						
KKM	Kota Kinabalu	73.64	283	P	P	17 37 57.1	-0.3
KKM				IAmb	IAmb	17 38 00.9	
	comp=Z,19nm,1.1s						
PEA0B	Petropavlovsk-	78.19	343	P	P	17 38 22.9	+0.4
PETK	Petropavlovsk-	78.19	343	P	P	17 38 22.4	-0.1
PETK	Petropavlovsk-	78.19	343	P	P	17 38 22.9	+0.4
	comp=Z,4.0nm,0.7s,baz=116,slow=6.8,SNR=3.9						
	comp=Z,4.0nm,0.7s						
NVAR	Mina Array Bea	79.17	41	P	P	17 38 30.4	+1.9
	comp=Z,1.0nm,0.7s,baz=244,slow=7.0,SNR=3.8						
	comp=Z,1.0nm,0.7s						
KSRS	Korea Array	80.11	317	P	P	17 38 34.6	+1.4
	comp=Z,3.1nm,1.0s,baz=139,slow=6.1,SNR=6.6						
	comp=Z,3.1nm,1.0s						
KSAR	Wonju Array Be	80.13	317		P	17 38 34.2	+0.8
OHAK	Old Harbor	80.25	11	P	P	17 38 33.9	+0.3
K15K	Wolf Creek Mou	84.03	6	P	P	17 38 54.9	+1.7
WRH	Wood River Hil	87.95	11	P	P	17 39 13.5	+0.9
CCB	Clear Creek Bu	88.16	11	P	P	17 39 13.9	+0.3
CCB				IAmb	IAmb	17 39 15.4	
	comp=Z,22nm,1.8s						
ILAR	Eielson Array	88.44	11	P	P	17 39 15.6	+0.7
	comp=Z,0.6nm,0.9s,baz=233,slow=6.8,SNR=6.1						
	comp=Z,0.6nm,0.9s						
J26L	Joseph Creek	88.84	13	P	P	17 39 18.0	+1.1
J26L				IAmb	IAmb	17 39 35.3	
	comp=Z,9.3nm,1.4s						
CMAR	Chiang Mai Arr	93.98	288	P	P	17 39 42.8	+1.0
	comp=Z,2.3nm,0.9s,baz=107,slow=2.5,SNR=9.3						
	comp=Z,2.3nm,0.9s						
KURBB	Kurchatov Arra	117.29	317	PKP	PKPdf	17 45 08.1	-0.4
	comp=Z,0.5nm,0.7s,baz=90,slow=1.9,SNR=2.4						
BVAR	Borovoye Array	122.21	320	PKP	PKPdf	17 45 18.1	+0.2
	comp=Z,1.3nm,0.7s,baz=90,slow=1.5,SNR=5.4						
AKASG	Malin Array Be	145.58	334		PKPdf	17 46 00.2	-1.1
AKASG	Malin Array Be	145.58	334	PKPbc	PKPdf	17 46 01.1	-0.2
	comp=Z,2.4nm,0.7s,baz=42,slow=4.2,SNR=9.6						
CLL	Collm	149.69	351	*i* PKPbc	PKPbc	17 46 13.3	+0.5
	comp=Z,12nm,1.6s						
CLL				*i* x	x	17 46 21.1	
BRG	Berggiesshubel	149.97	350	P	PKiKP	17 46 14.6	+0.2
BRG				Amp		17 46 16.4	
	comp=Z,3.2nm,0.9s						
BRTR	Keskin Array B	150.22	314	PKPbc	PKiKP	17 46 15.3	-0.2
	comp=Z,1.3nm,0.7s,baz=131,slow=4.5,SNR=5.6						
MMAI	Mount Meron Ar	151.54	300	PKPbc	PKiKP	17 46 19.1	+0.7
	comp=Z,1.6nm,0.6s,baz=99,slow=1.9,SNR=2.2						
GERES	GERESS Array B	151.97	349	PKPbc	PKiKP	17 46 19.1	+0.3
	comp=Z,1.9nm,1.0s,baz=297,slow=0.9,SNR=4.3						

IDC 18 17:30:40.2±3.5**, 31°.48S**×**177°.37W, h0^{km}, mb3.5**/2**, mbtmp3.7**/3**, Error ellipse: s-maj=82.7km s-min=37.8km az=113.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.14	212	Pn	Pn	17 32 38.9	-0.7
	9.2nm,0.8s,baz=329,slow=12						
URZ				Sn	Sn	17 34 15.2	+2.9
	baz=197,slow=19						
ASAR	Alice Springs	43.60	268	P	P	17 38 46.1	-0.3
	0.3nm,0.6s,baz=108,slow=7.3,SNR=4.1						
	0.3nm,0.6s						
WRA	Warramunga Arr	44.69	273	P	P	17 38 55.2	+0.1
	0.7nm,0.7s,baz=114,slow=7.9,SNR=3.2						
	0.7nm,0.7s						
FINES	FINESS Array B	146.34	340	PKPbc	PKPdf	17 50 21.4	+0.4
	0.7nm,0.6s,baz=62,slow=5.5,SNR=1.3						

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*IDC **18** 17:44:50.1±2.8, 31°.38S×177°.41W, h0^{km}, mb4.0/2, mbtmp3.9/3, Error ellipse: s-maj=70.4km s-min=33.6km az=120.0*

ISC 18 17:44:53.3±2.7**, 31°.4S**±0°.2×**177°.3W**±0°.5**, h26^{km}, n5, σ0^s.49**/6**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.25	212	Pn	Pn	17 46 50.8	-0.4
	3.8nm,0.7s,baz=27,slow=4.5						
URZ				Sn	Sn	17 48 24.0	+0.5
	2.7nm,0.3s,baz=352,slow=19,SNR=5.8						
ASAR	Alice Springs	43.67	268	P	P	17 52 56.1	+0.1
	0.5nm,0.4s,baz=106,slow=7.2,SNR=19						
	0.5nm,0.4s						
WRA	Warramunga Arr	44.74	273	P	P	17 53 04.4	-0.3
	1.5nm,0.4s,baz=114,slow=8.0,SNR=26						
	1.5nm,0.4s						
FINES	FINESS Array B	146.28	340	PKPbc	PKPbc	18 04 30.8	0.0
	0.7nm,0.5s,baz=48,slow=2.1,SNR=5.5						
AKASG	Malin Array Be	152.45	322	PKPab	PKPab	18 04 57.4	+0.5
	0.3nm,0.4s,baz=52,slow=3.1,SNR=5.0						

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*IDC **18** 17:45:34.5±0.7, 30°.84S×177°.58W, h0^{km}, mb4.2/6, mbtmp4.2/6, Error ellipse: s-maj=28.2km s-min=24.4km az=81.0*

*NEIC **18** 17:45:43.3±2.4, 30°.7S±0°.1×178°.2W±0°.2, h40^{km}±2^{km}, mb4.6/16, Error ellipse: s-maj=26.2km s-min=15.9km az=91.0*

ISC 18 17:45:40.9±0.6**, 31°.11S**±0°.05×**178°.1W**±0°.1**, h46^{km}, n74, σ2^s.18**/80**, mb4.4**/18**, 5D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.85	4	P	Pn	17 46 10.0	-0.2
GLKZ				S	Sn	17 46 27.8	-4.5
RAO	Raoul Island	1.86	4	Pn	Pn	17 46 06.8	-3.6
RIZ	Raoul Island	1.87	3	P	Pn	17 46 07.6	-2.8
RIZ				S	Sn	17 46 28.7	-4.1
MXZ	Matakaoa Point	7.10	204	S	Sn	17 48 40.9	-0.6
MXZ	Matakaoa Point	7.10	204	P	Pn	17 47 14.9	-7.3
WMGZ	Waiomatatini S	7.29	203	P	Pn	17 47 21.0	-3.8
WMGZ				S	Sn	17 48 46.9	+0.6
PKGZ	Pakihiroa	7.45	204	P	Pn	17 47 25.5	-1.6
PKGZ				S	Sn	17 48 49.5	-0.8
HAZ	Te Kaha	7.46	206	P	Pn	17 47 25.3	-1.8
HAZ				S	Sn	17 48 52.3	+1.9
PUZ	Puketiti	7.58	203	P	Pn	17 47 24.3	-4.5
PUZ				S	Sn	17 48 52.3	-1.0
RUGZ	Raukumara Rang	7.69	206	P	Pn	17 47 27.6	-2.8
RUGZ				S	Sn	17 48 56.6	+0.5
TWGZ	Tauwhareparae	7.76	204	S	Sn	17 48 58.1	+0.2
TWGZ	Tauwhareparae	7.76	204	P	Pn	17 47 25.4	-6.0
WCZ	Waipu Caves	7.96	231	P	Pn	17 47 43.0	+9.0
CNGZ	Carnagh Statio	7.97	202	S	Sn	17 49 03.7	+0.8
CNGZ	Carnagh Statio	7.97	202	P	Pn	17 47 29.3	-4.8
TKGZ	Te Karaka	8.04	204	P	Pn	17 47 34.8	-0.4
TKGZ				S	Sn	17 49 03.6	-1.1
OUZ	Omahuta	8.10	237	P	Pn	17 47 43.8	+7.8
URZ	Urewera	8.16	208	Pn	Pn	17 47 34.1	-2.6
	1.2nm,0.3s,baz=336,slow=4.5,SNR=8.4						
URZ				Sn	Sn	17 49 05.7	-1.9
	8.2nm,0.3s,baz=313,slow=21,SNR=12						
RAGZ	Rawiri	8.25	206	S	Sn	17 49 08.7	-1.2
RAGZ	Rawiri	8.25	206	P	Pn	17 47 34.9	-3.2
RIGZ	Rimuhau	8.31	203	P	Pn	17 47 35.8	-3.1
RIGZ				S	Sn	17 49 09.9	-1.6
MUGZ	Murupara	8.48	209	S	Sn	17 49 14.5	-1.2
SNGZ	Shannon Statio	8.53	205	S	Sn	17 49 13.9	-2.8
SNGZ	Shannon Statio	8.53	205	P	Pn	17 47 38.4	-3.5
MHGZ	Mahia Peninsul	8.67	201	S	Sn	17 49 17.9	-2.3
NMHZ	Naumai	9.01	206	P	Pn	17 47 45.3	-3.1
NMHZ				S	Sn	17 49 27.5	-0.9
KAHZ	Kahuranaki	9.59	204	P	Pn	17 47 50.2	-6.3
KAHZ				S	Sn	17 49 40.2	-2.6
WNVZ	Wahianoa	9.70	211	P	Pn	17 47 59.3	+1.4
WNVZ				S	Sn	17 49 44.5	-1.0
PNHZ	Pukenui	9.95	206	P	Pn	17 47 56.9	-4.3
PNHZ				S	Sn	17 49 45.8	-5.7
TUWZ	Tuamarina	12.14	210	Pn	Pn	17 48 29.4	-1.9
OXZ	Oxford	14.50	210		Pn	17 48 58.3	-5.0
RPZ	Rata Peaks	15.25	211	Pn	Pn	17 49 10.2	-2.9
	1.4nm,0.3s,baz=18,slow=0.9,SNR=6.7						
RPZ				Sn	Sn	17 51 48.5	-12
	0.8nm,0.3s,baz=349,slow=18,SNR=2.0						
ARMA	Armidale	26.02	264	P	P	17 51 10.6	+0.7
ARMA				IAmb	IAmb	17 51 35.3	
	comp=Z,17nm,1.4s						
EIDS	Eidsvold	27.73	274		P	17 51 25.3	+0.1
EIDS				IAmb	IAmb	17 51 30.5	
	comp=Z,7.1nm,0.9s						
CAN	Canberra	27.80	252	P	P	17 51 27.8	+1.9
CAN				IAmb	IAmb	17 51 31.2	
	comp=Z,23nm,1.3s						
CTAO	Charters Tower	33.87	280	P	P	17 52 19.5	+0.1
CTAO				IAmb	IAmb	17 52 36.6	
	comp=Z,26nm,1.4s						
STKA	Stephens Creek	34.27	258	P	P	17 52 23.8	+1.0
STKA	Stephens Creek	34.27	258	P	P	17 52 27.1	+4.3
	comp=Z,6.1nm,0.8s,baz=93,slow=10,SNR=7.7						
	comp=Z,6.1nm,0.8s						
BBOO	Buckleboo	38.73	255	P	P	17 53 01.9	+1.1
AS31	Alice Springs	43.02	268		P	17 53 38.0	+1.7
ASAR	Alice Springs	43.02	268	P	P	17 53 38.2	+2.0
ASAR	Alice Springs	43.02	268	P	P	17 53 39.2	+2.9
	comp=Z,2.5nm,0.5s,baz=107,slow=7.2,SNR=19						
ASAR				PcP	PcP	17 55 27.1	+1.2
	comp=Z,0.6nm,0.5s,baz=110,slow=3.7,SNR=2.5						
	comp=Z,2.5nm,0.5s						
WR8	Warramunga Arr	43.94	273		P	17 53 46.1	+2.5
WR8				IAmb	IAmb	17 53 53.1	
	comp=Z,8.6nm,0.9s						
WRA	Warramunga Arr	44.08	273		P	17 53 46.7	+1.9
WRA	Warramunga Arr	44.08	273	P	P	17 53 47.6	+2.9
	comp=Z,6.3nm,0.4s,baz=112,slow=7.9,SNR=38						
	comp=Z,6.3nm,0.4s						
WB0	Warramunga Arr	44.10	273		P	17 53 47.3	+2.4
WB0				IAmb	IAmb	17 53 48.4	
	comp=Z,11nm,0.6s						
VNDA	Vanda	47.38	186	P	P	17 54 12.8	+2.8
	comp=Z,0.4nm,0.7s,baz=21,slow=8.1,SNR=2.0						
	comp=Z,0.4nm,0.7s						
MTN	Manton Dam	50.05	280	P	P	17 54 32.9	+1.6
KNRA	Kununurra	50.71	275	P	P	17 54 38.1	+1.8
KNRA				IAmb	IAmb	17 54 43.3	
	comp=Z,9.5nm,1.2s						
FITZ	Fitzroy Crossi	52.31	270	P	P	17 54 49.0	+0.8
QSPA	South Pole Qui	59.00	180	P	P	17 55 41.8	+6.1
QSPA	South Pole Qui	59.00	180	P	P	17 55 37.9	+2.1
	comp=Z,2.3nm,0.8s,baz=37,slow=5.2,SNR=10						
	comp=Z,2.3nm,0.8s						
BELA	Belgrano 2	69.09	172	P	P	17 56 47.9	+6.4
BELA				IAmb	IAmb	17 57 12.4	
	comp=Z,5.6nm,1.4s						
MAW	Mawson	71.62	201	P	P	17 56 58.8	+1.6
	comp=Z,1.6nm,0.7s,baz=126,slow=11,SNR=2.2						
	comp=Z,1.6nm,0.7s						
TROLL	Troll, Antarti	77.16	180	⇓P	P	17 57 30.3	+0.8
	comp=Z,63nm,0.8s						
SNAA	Sanae	77.44	178	⇓P	P	17 57 29.5	-1.5
	comp=Z,19nm,0.9s						
SNAA	Sanae	77.44	178	P	P	17 57 36.6	+5.6
SNAA				IAmb	IAmb	17 57 46.9	
	comp=Z,4.0nm,0.9s						
VNA3	Neumayer Olymp	77.60	176	⇓P	P	17 57 31.5	-0.3
	comp=Z,2.4nm,0.7s						
VNA2	Neumayer--Watz	78.03	177	⇓P	P	17 57 35.8	+1.7
	comp=Z,2.0nm,0.7s,baz=174,slow=5.5						
VNA1	Neumayer--Stat	78.26	177	⇓P	P	17 57 37.3	+1.9
	comp=Z,2.4nm,0.7s						
SADO	Sadowa	117.10	52	PKP	PKiKP	18 04 21.3	+0.7
	comp=Z,5.4nm,0.8s,baz=333,slow=2.3,SNR=2.7						
MKAR	Makanchi Array	118.19	310	PKP	PKiKP	18 04 23.4	+0.6
	comp=Z,0.3nm,0.6s,baz=157,slow=0.8,SNR=2.6						
KURBB	Kurchatov Arra	121.54	313	PKP	PKPdf	18 04 28.9	0.0
	comp=Z,0.6nm,0.6s,baz=109,slow=2.0,SNR=7.7						
BVAR	Borovoye Array	126.88	315	PKP	PKPdf	18 04 39.7	+0.5
	comp=Z,0.7nm,0.6s,baz=115,slow=2.4,SNR=2.3						
ARCES	ARCESS Array B	139.27	348	PKP	PKPdf	18 05 01.5	-0.5
	comp=Z,0.9nm,0.7s,baz=72,slow=0.8,SNR=3.7						
KBZ	Khabaz	145.46	303	PKPbc	PKPbc	18 05 14.1	+0.3
	comp=Z,1.9nm,0.9s,baz=356,slow=6.1,SNR=4.4						
FINES	FINESS Array B	145.80	340	PKPbc	PKPdf	18 05 13.8	+0.1
	comp=Z,6.5nm,0.8s,baz=56,slow=4.1,SNR=16						
NB2	NORSAR Subarra	149.45	351	PKP	PKPbc	18 05 23.7	-0.6
	comp=Z,0.8nm,0.7s,baz=27,slow=4.0						
NOA	NORSAR Array B	149.45	351	PKPbc	PKPbc	18 05 23.8	-0.6
	comp=Z,1.0nm,0.7s,baz=17,slow=2.9,SNR=4.0						
HFS	Hagfors	149.93	348	PKPbc	PKPbc	18 05 25.0	-0.5
	comp=Z,1.9nm,0.8s,baz=348,slow=2.1,SNR=3.8						
MMAI	Mount Meron Ar	151.64	283	PKPbc	PKiKP	18 05 32.6	+1.7
	comp=Z,5.2nm,0.8s,baz=64,slow=3.8,SNR=4.8						
AKASG	Malin Array Be	151.83	322	PKPbc	PKPbc	18 05 30.4	+0.2
	comp=Z,1.4nm,0.6s,baz=52,slow=2.3,SNR=8.6						
AKASG				PKPab	PKPab	18 05 40.4	+1.0
	comp=Z,7.4nm,0.8s,baz=53,slow=2.9,SNR=14						
BRTR	Keskin Array B	152.89	297	PKPbc	PKiKP	18 05 33.6	+0.3
	comp=Z,1.1nm,0.8s,baz=124,slow=4.3,SNR=5.1						
TORD	Torodi Ar. Bea	162.12	179	PKPab	PKPab	18 06 26.0	+1.6
	comp=Z,54nm,0.3s,baz=192,slow=2.4,SNR=2.0						

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*IDC **18** 17:51:53.6±1.0, 30°.75S×177°.58W, h0^{km}, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=43.3km s-min=31.3km az=161.0*

*NEIC **18** 17:51:54.8±1.6, 30°.95S±0°.08×177°.5W±0°.2, h7^{km}±8^{km}, mb4.4/7, Error ellipse: s-maj=23.8km s-min=11.5km az=100.0*

ISC 18 17:51:58.2±0.9**, 31°.05S**±0°.08×**177°.8W**±0°.2**, h35^{km}, n22, σ1^s.67**/24**, mb4.2**/8**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.79	356		Pn	17 52 24.9	-1.8
RAO				Sn	Sn	17 52 47.4	-0.9
URZ	Urewera	8.33	209	Pn	Pn	17 53 53.9	-2.5
	baz=336,slow=3.9						
URZ				Sn	Sn	17 55 27.2	-2.0
	1.5nm,0.3s,baz=208,slow=18,SNR=7.1						
RTZ	Ruatahuna	8.69	208		Pn	17 53 53.2	-8.1
BBOO	Buckleboo	38.97	255	P	P	17 59 20.5	-0.6
AS31	Alice Springs	43.26	268	P	P	17 59 57.7	+1.2
ASAR	Alice Springs	43.26	268	P	P	17 59 58.3	+1.8
ASAR	Alice Springs	43.26	268	P	P	17 59 58.1	+1.6
	0.7nm,0.6s,baz=106,slow=7.5,SNR=13						
ASAR				PcP	PcP	18 01 46.7	+1.4
	0.4nm,0.7s,baz=112,slow=3.6,SNR=2.4						
	0.7nm,0.6s						
WR8	Warramunga Arr	44.16	273	P	P	18 00 05.5	+1.8
WR8				IAmb	IAmb	18 00 10.3	
	comp=Z,5.8nm,1.2s						
WRA	Warramunga Arr	44.30	273	P	P	18 00 07.0	+2.1
	comp=Z,1.5nm,0.4s,baz=112,slow=7.9,SNR=30						
	comp=Z,1.5nm,0.4s						
WB0	Warramunga Arr	44.33	273	P	P	18 00 07.2	+2.1
WB0				IAmb	IAmb	18 00 49.3	
	comp=Z,9.7nm,1.4s						
KNRA	Kununurra	50.94	275	P	P	18 00 58.5	+2.1
KNRA				IAmb	IAmb	18 01 13.4	
	comp=Z,7.2nm,1.1s						
FITZ	Fitzroy Crossi	52.54	270	P	P	18 01 10.0	+1.6
FITZ				IAmb	IAmb	18 01 39.3	
	comp=Z,1.6nm,1.3s						
QSPA	South Pole Qui	59.06	180	P	P	18 01 55.4	+0.8
QSPA				IAmb	IAmb	18 02 27.1	
	comp=Z,2.7nm,0.9s						
QSPA	South Pole Qui	59.06	180	P	P	18 01 57.5	+2.8
	comp=Z,1.1nm,0.8s,baz=338,slow=5.4,SNR=3.1						
	comp=Z,1.1nm,0.8s						
NVAR	Mina Array Bea	88.59	43	P	P	18 04 47.0	-0.7
	comp=Z,0.4nm,0.6s,baz=253,slow=4.9,SNR=2.0						
	comp=Z,0.4nm,0.6s						
MKAR	Makanchi Array	118.33	310	PKP	PKiKP	18 10 41.9	+0.2
	comp=Z,0.8nm,1.0s,baz=139,slow=2.9,SNR=2.4						
KURBB	Kurchatov Arra	121.66	313	PKP	PKiKP	18 10 47.8	-0.2
	comp=Z,0.2nm,0.5s,baz=120,slow=1.8,SNR=4.7						
FINES	FINESS Array B	145.81	340	PKPbc	PKPab	18 11 33.5	+0.1
	comp=Z,1.4nm,0.4s,baz=52,slow=3.9,SNR=20						
NOA	NORSAR Array B	149.42	351	PKPbc	PKPbc	18 11 41.7	-1.2
	comp=Z,0.1nm,0.5s,baz=17,slow=2.6,SNR=1.3						
HFS	Hagfors	149.91	349	PKPbc	PKiKP	18 11 44.4	-0.5
	comp=Z,0.9nm,0.6s,baz=57,slow=5.3,SNR=2.0						
MMAI	Mount Meron Ar	151.85	283	PKPbc	PKiKP	18 11 52.4	+2.4
	comp=Z,1.7nm,0.5s,baz=92,slow=4.8,SNR=3.6						
AKASG	Malin Array Be	151.92	322	PKPbc	PKiKP	18 11 49.2	-0.1
	comp=Z,0.4nm,0.5s,baz=62,slow=1.7,SNR=1.7						

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*NEIC **18** 18:04:33.7±2.4, 43°.76N±0°.05×105°.29W±0°.08, h0^{km}±1^{km}, ML3.6/63, Error ellipse: s-maj=10.2km s-min=7.4km az=67.0*

*IDC **18** 18:04:34.3±2.2, 43°.65N×105°.49W, h0^{km}, mb4.0/2, mbtmp3.6/6, ML2.8/3, Error ellipse: s-maj=76.0km s-min=9.2km az=150.0*

ISC 18 18:04:34.5±0.8**, 43°.74N**±0°.06×**105°.31W**±0°.07**, h0^{km}, n82, σ1^s.44**/80**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.00	67		Pb	18 04 54.7	-0.2
K22A	Casper	1.40	220		Pg	18 05 00.8	-0.6
K22A				IAML		18 05 28.8	
	533nm,0.3s						
K22A				IAML		18 05 29.7	
	751nm,0.3s						
LAO	LASA Array	3.02	348		Pn	18 05 25.5	+1.8
LAO				IAML		18 06 15.4	
	145nm,1.0s						
LAO				IAML		18 06 18.3	
	227nm,1.0s						
RLMT	Red Lodge	3.15	297		Pn	18 05 27.0	+1.4
RLMT				IAML		18 06 24.1	
	98nm,1.0s						
BW06	Boulder Array	3.25	254		Pn	18 05 28.7	+1.7
BW06				IAML		18 06 19.5	
	78nm,1.0s						
PD31	Pinedale Array	3.25	254		Pn	18 05 28.3	+1.4
PDAR	Pinedale Array	3.25	254	Pn	Pn	18 05 28.4	+1.4
	6.3nm,0.3s,baz=64,slow=15,SNR=50						
PDAR				Lg	Lg	18 06 10.4	
	12nm,0.3s,baz=61,slow=19,SNR=2.4						
YNE	Yellowstone No	3.60	292		Pn	18 05 33.3	+1.5
YNE				IAML		18 06 33.6	
	comp=E,94nm,0.3s						
YNE				IAML		18 06 34.6	
	comp=N,88nm,1.0s						
YMP	Mirror Lake Pl	3.62	288		Pn	18 05 34.4	+2.2
YMP				IAML		18 06 35.2	
	comp=N,134nm,0.4s						
OGNE	Ogallala	3.70	138		Pn	18 05 35.4	+2.3
LOHW	Long Hollow	3.84	270		Pn	18 05 37.0	+2.0
H17A	Grant Village	3.85	282		Pn	18 05 36.7	+1.4
ISCO	Idaho Springs	3.94	183		Pn	18 05 38.4	+1.9
ISCO				IAML		18 06 42.9	
	comp=N,49nm,1.2s						
SNOW	Snow King Moun	3.96	268		Pn	18 05 38.8	+2.0
SNOW				IAML		18 07 00.1	
	comp=N,81nm,1.2s						
SNOW				IAML		18 07 05.5	
	comp=N,81nm,1.1s						
TPAW	Teton Pass	4.10	269		Pn	18 05 40.5	+1.7
TPAW				IAML		18 07 01.6	
	comp=N,65nm,1.0s						
YHH	Holmes Hill	4.11	287		Pn	18 05 40.5	+1.6
FXWY	Fox Creek	4.14	271		Pn	18 05 41.5	+2.2
O20A	White River Ci	4.21	212		Pn	18 05 42.4	+2.3
O20A				IAML		18 07 02.0	
	comp=N,90nm,1.1s						
K30B	Basset	4.30	102		Pn	18 05 44.1	+2.9
E28A	Huff	4.33	47		Pn	18 05 43.5	+1.9
E28A				IAML		18 06 59.6	
	comp=N,82nm,0.9s						
E28A				IAML		18 07 00.3	
	comp=N,88nm,0.7s						
AHID	Auburn Hatcher	4.34	259		Pn	18 05 44.1	+2.2
AHID				IAML		18 07 06.5	
	comp=N,54nm,1.1s						
AHID				IAML		18 07 20.1	
	comp=N,58nm,1.0s						
YHB	Horse Butte	4.35	286		Pn	18 05 43.1	+1.1
YHL	Hebgen Lake	4.36	287		Pn	18 05 44.0	+1.7
YHL				IAML		18 06 59.0	
	comp=E,57nm,1.1s						
YHL				IAML		18 07 17.1	
	comp=N,55nm,1.1s						
Q24A	Divide	4.77	178		Pn	18 05 49.8	+1.9
Q24A				IAML		18 07 07.6	
	comp=N,29nm,0.3s						
HWUT	Hardware Ranch	5.08	247		Pn	18 05 53.0	+1.0
HWUT				IAML		18 07 15.1	
	comp=N,42nm,1.1s						
HWUT				IAML		18 07 25.8	
	comp=N,46nm,1.4s						
KSCO	Kaye Shedlock’	5.13	156		Pn	18 05 53.7	+0.9
BSUT	Blindstream Ca	5.16	234		Pn	18 05 54.8	+1.4
BSUT				IAML		18 07 23.5	
	comp=N,19nm,1.9s						
BSUT				IAML		18 07 31.3	
	comp=E,26nm,1.0s						
TCUT	Toone Canyon	5.21	242		Pn	18 05 55.1	+1.1
EGMT	Eagleton	5.29	326		Pn	18 05 56.5	+1.6
DLMT	Dillon	5.45	290		Pn	18 05 58.5	+1.3
HRY	Holter Researc	5.48	305		Pn	18 05 59.0	+1.5
LRM	Limekiln Ridge	5.49	295		Pn	18 05 59.2	+1.4
MCMT	McKenzie Canyo	5.52	284		Pn	18 05 59.0	+0.8
P18A	Preston Nutter	5.52	224		Pn	18 05 59.8	+1.6
JLU	Jordanelle	5.53	238		Pn	18 05 59.4	+1.0
MDND	Maddock	5.73	42		Pn	18 06 01.6	+0.7
BGNE	Belgrade	5.78	111		Pn	18 06 00.5	-1.1
PV22	Blue Mesa, Par	5.82	208		Pn	18 06 02.1	-0.2
PV07	Paradox Valley	5.86	207		Pn	18 06 03.6	+0.7
PV15	Paradox Valley	5.90	205		Pn	18 06 04.0	+0.6
PV23	Carpenter Ridg	5.97	209		Pn	18 06 04.0	-0.5
SDCO	Great Sand Dun	5.99	181		Pn	18 06 05.5	+0.8
PV04	Paradox Valley	5.99	208		Pn	18 06 04.4	-0.2
MPU	Maple Canyon	6.00	234		Pn	18 06 02.9	-1.9
PV12	Saucer Basin,	6.02	207		Pn	18 06 06.7	+1.6
PV14	Lion Creek, Pa	6.05	209		Pn	18 06 07.2	+1.8
PV10	Paradox Valley	6.05	209		Pn	18 06 07.7	+2.2
PV20	West Nyswonger	6.05	208		Pn	18 06 06.5	+1.0
SRU	San Rafael Swe	6.06	222		Pn	18 06 06.7	+1.1
PV11	David Mesa, Pa	6.06	208		Pn	18 06 07.2	+1.6
PV16	Nyswonger Mesa	6.06	208		Pn	18 06 07.2	+1.6
PV19	Morning Glory	6.09	208		Pn	18 06 07.2	+1.2
PV03	Paradox Valley	6.09	207		Pn	18 06 07.2	+1.2
PV02	Paradox Valley	6.10	206		Pn	18 06 07.7	+1.6
PV17	East Wray Mesa	6.11	208		Pn	18 06 08.2	+2.0
PV01	Paradox Valley	6.11	205		Pn	18 06 08.3	+2.0
PV18	Skein Mesa, Pa	6.12	208		Pn	18 06 08.2	+1.8
TMUT	Trail Mountain	6.26	227		Pn	18 06 10.1	+1.6
ECSD	EROS Data Cent	6.30	87		Pn	18 06 09.1	+0.4
BPMT	Black Pine Rid	6.36	298		Pn	18 06 09.1	-0.6
CBKS	Cedar Bluff	6.47	138		Pn	18 06 11.6	+0.6
Q16A	Castle Valley	6.53	224		Pn	18 06 11.1	-0.9
DUG	Dugway, Tooele	6.61	240		Pn	18 06 13.4	+0.3
T25A	Trinidad	6.63	174		Pn	18 06 13.9	+0.5
F33A	5 Mile Ranch,	6.75	69		Pn	18 06 15.8	+0.8
L34A	Svendsen Farm,	6.80	102		Pn	18 06 14.1	-1.5
MSO	Missoula	6.83	300	Pn	Pn	18 06 14.3	-1.7
MVCO	Mesa Verde	6.96	201		Pn	18 06 18.2	+0.3
HMU	Henry Mountain	7.10	217		Pn	18 06 19.1	-0.9
MVU	Marysvale	7.38	227		Pn	18 06 23.9	+0.2
RTBA	Rita Blanca	7.55	164		Pn	18 06 25.8	-0.2

ELK	**Elko**	**7.95**	**251**	Pn	**Pn**	**18 06 33.3**	**+1.8**
	comp=E,0.3nm,0.3s,baz=61,slow=17,SNR=4.1						
ELK				Lg	Lg	18 08 33.2	
	comp=E,0.2nm,0.3s,baz=177,slow=13,SNR=1.7						
	comp=E,0.6nm,0.3s						
AGMN	**Agassiz Nation**	**8.00**	**52**		**Pn**	**18 06 32.2**	**+0.1**
PSUT	**Pine Spring**	**8.28**	**234**		**Pn**	**18 06 36.2**	**+0.2**
ANMO	**Albuquerque**	**8.82**	**186**	Lg	Lg	18 09 14.9	
	comp=E,0.2nm,0.3s,baz=81,slow=15,SNR=1.5						
U15A	**North Rim**	**9.04**	**219**		**Pn**	**18 06 46.9**	**+0.3**
ULM	**Lac du Bonnet**	**9.16**	**41**	Pn	**Pn**	**18 06 47.4**	**-0.5**
	comp=E,1.2nm,0.3s,baz=235,slow=12,SNR=7.4						
ULM				Pg		18 07 21.0	
	comp=E,0.8nm,0.3s,baz=228,slow=14,SNR=4.8						
ULM				Lg	Lg	18 09 14.2	
	baz=153,slow=22						
	comp=E,3.1nm,0.4s						
NEW	**Newport**	**9.38**	**303**	Lg	Lg	18 09 17.1	
	comp=E,0.1nm,0.3s,baz=170,slow=19,SNR=3.2						
NVAR	**Mina Array Bea**	**11.14**	**246**	Pn	**Pn**	**18 07 13.5**	**-1.8**
	comp=E,0.1nm,0.3s,baz=46,slow=16,SNR=2.1						
	comp=E,0.2nm,0.5s						
FFC	**Flin Flon**	**11.21**	**10**		**Pn**	**18 07 14.1**	**-1.8**
ARCES	**ARCESS Array B**	**61.43**	**18**	P	**P**	**18 14 52.4**	**+0.3**
	comp=E,1.8nm,1.0s,baz=338,slow=7.1,SNR=5.8						
	comp=E,1.8nm,1.0s						
FINES	**FINESS Array B**	**68.05**	**23**	P	**P**	**18 15 35.9**	**+0.6**
	comp=E,1.7nm,0.9s,baz=309,slow=7.0,SNR=3.8						
	comp=E,1.7nm,0.9s						

NEIC ***18*** *18:07:29.4±1.0, 19°.30N±0°.07×68°.15W±0°.02, h10^{km}±1^{km}, ML2.5/16, Md3.2/6(RSPR), Error ellipse: s-maj=12.1km s-min=2.9km az=7.0*

SDD ***18*** *18:07:30.5±2.0, 19°.31N×68°.08W, h22^{km}±121^{km}, MD3.5, ML2.0, MW2.4*

RSPR ***18*** *18:07:30.1, 19°.45N×68°.16W, h86^{km}±4^{km}, MD3.2/6*

ISC 18 18:07:29.1±1.6**, 19°.22N**±0°.08×**68°.12W**±0°.03**, h2**^{km}±11^{km}**,**
n31, σ**0^{s}66**/36**, 5C-2D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCDR	**Punta Cana, DR**	**0.75**	**199**	*e*Sg	**Sb**	**18 07 56.0**	**+0.6**
PCDR				IAML		18 08 00.4	
	comp=N,139nm,1.8s						
MIDR	**Miches**	**0.91**	**255**	*e*Pg	**Pg**	**18 07 46.9**	**+0.4**
MIDR				*e*Sg	**Sb**	**18 08 00.6**	**+0.5**
MIDR				IAML		18 08 00.7	
	comp=N,23nm,0.6s						
MIDR				IAML		18 08 01.4	
	comp=E,13nm,0.2s						
SMDR	**Samana, DR**	**1.01**	**274**	⇑*e*P	**Pg**	**18 07 48.4**	**0.0**
SMDR	**Samana, DR**	**1.01**	**274**	*e*S	**Sb**	**18 08 03.7**	**+0.7**
SMDR	**Samana, DR**	**1.01**	**274**	⇓*e*Sg	**Sb**	**18 08 03.6**	**+0.7**
SMDR				IAML		18 08 10.8	
	comp=N,62nm,0.6s						
IDE	**Isla Desecheo**	**1.03**	**143**		**Pg**	**18 07 48.4**	**-0.6**
IDE					**Sn**	**18 08 05.4**	**-0.2**
IDE	**Isla Desecheo**	**1.03**	**143**	⇑*e*P	**Pg**	**18 07 48.4**	**-0.6**
IDE	**Isla Desecheo**	**1.03**	**143**	*e*S	**Sn**	**18 08 05.4**	**-0.2**
AGPR	**Aguadilla, PR**	**1.22**	**128**		**Pn**	**18 07 54.0**	**+0.9**
AGPR				IAML		18 08 31.9	
	comp=N,100nm,2.8s						
AGPR	**Aguadilla, PR**	**1.22**	**128**		**Sn**	**18 08 10.8**	**+0.6**
AGPR	**Aguadilla, PR**	**1.22**	**128**	IAML		18 08 10.3	
	comp=E,103nm,2.4s						
AGPR	**Aguadilla, PR**	**1.22**	**128**	⇑*e*P	**Pn**	**18 07 54.0**	**+0.9**
AGPR	**Aguadilla, PR**	**1.22**	**128**	*e*S	**Sn**	**18 08 10.8**	**+0.6**
DR12	**Loma Pena Alta**	**1.27**	**250**	Pn	**Pn**	**18 07 52.2**	**-1.6**
DR12				Sn	**Sg**	**18 08 10.2**	**+0.4**
HATOM	**Hato Mayor del**	**1.27**	**250**	*e*Pg	**Pn**	**18 07 52.9**	**-0.9**
HATOM				*e*Sg	**Sb**	**18 08 11.3**	**+0.9**
HATOM				IAML		18 08 13.1	
	comp=E,24nm,0.7s						
HATOM				IAML		18 08 13.4	
	comp=N,24nm,2.3s						
HATOM				IAML		18 08 30.9	
	comp=N,27nm,2.1s						
PRSN	**Puerto Rico Se**	**1.36**	**137**	Pn	**Pb**	**18 07 55.1**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.55**	**141**	Pn	**Pb**	**18 07 57.9**	**-0.6**
AOPR	**Arecibo Observ**	**1.56**	**124**		**Pb**	**18 07 58.3**	**-0.5**
AOPR					**Sg**	**18 08 19.7**	**+0.3**
AOPR	**Arecibo Observ**	**1.56**	**124**	IAML		18 08 44.8	
	comp=N,44nm,1.8s						
AOPR				IAML		18 08 48.0	
	comp=E,58nm,0.5s						
AOPR	**Arecibo Observ**	**1.56**	**124**	⇓*e*P	**Pb**	**18 07 58.3**	**-0.5**
AOPR	**Arecibo Observ**	**1.56**	**124**	*e*S	**Sg**	**18 08 19.7**	**+0.3**
MLPR	**Magueyes Islan**	**1.61**	**140**	⇑*e*P	**Pb**	**18 07 59.4**	**-0.2**
MLPR	**Magueyes Islan**	**1.61**	**140**	*e*S	**Sg**	**18 08 22.0**	**+1.0**
MLPR	**Magueyes Islan**	**1.61**	**140**	*e*Pg	**Pb**	**18 07 58.8**	**-0.7**
MLPR				*e*Sg	**Sg**	**18 08 21.6**	**+0.6**
MLPR				IAML		18 08 27.1	
	comp=N,10nm,1.6s						
EMPR	**Esperanza - Ma**	**1.68**	**116**	Pn	**Pn**	**18 07 59.1**	**-0.4**
CELP	**Cerrillos**	**1.86**	**128**		**Pn**	**18 08 02.5**	**+0.5**
CELP					**Sb**	**18 08 27.0**	**-0.5**
CELP	**Cerrillos**	**1.86**	**128**	⇑*e*P	**Pn**	**18 08 02.5**	**+0.5**
CELP	**Cerrillos**	**1.86**	**128**	*e*S	**Sb**	**18 08 27.0**	**-0.5**
BANI	**BANI**	**2.27**	**249**	Pn	**Pn**	**18 08 07.1**	**-0.7**
IGPR	**InterUniversit**	**2.29**	**123**	Pn	**Pn**	**18 08 07.4**	**-0.4**
IGPR				IAML		18 08 34.4	
	comp=N,25nm,2.0s						
IGPR				IAML		18 08 51.1	
	comp=E,26nm,0.5s						
SDDR	**Presa de Saban**	**3.00**	**266**	Pn	**Pn**	**18 08 17.4**	**-0.3**
SDDR				IAML		18 08 55.3	
	comp=E,20nm,2.5s						
SDDR				IAML		18 09 37.0	
	comp=E,17nm,3.1s						

IDC ***18*** *18:12:02.8±0.4, 30°.56S×178°.03W, h0^{km}, mb4.7/17, mbtmp4.7/17, MS4.5/14, Error ellipse: s-maj=18.7km s-min=14.7km az=86.0*

MOS ***18*** *18:12:08.8±0.9, 30°.62S×178°.14W, h47^{km}, mb5.3/19, Error ellipse: s-maj=12.2km s-min=10.2km az=94.9*

NEIC ***18*** *18:12:09.6±2.0, 30°.65S±0°.07×178°.0W±0°.1, h44^{km}±4^{km}, mb5.2/136, Error ellipse: s-maj=17.3km s-min=9.5km az=85.0*

GCMT ***18*** *18:12:11.6±0.5, 30°.74S±0°.03×177°.96W±0°.04, h51^{km}±1^{km}, MW5.2/56, Moment Tensor Solution. s45,c50; s56,c65; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$7.61±.43; M$_{\theta\theta}$-2.77±.27; M$_{\phi\phi}$-4.84±.26; M$_{r\theta}$-0.73±.19; M$_{\theta\phi}$-2.03±.22; M$_{\phi r}$0.77±.23; Best double couple: M$_0$6.91000×10^{16} NP1:φ$_s$218.00000°, δ44.00000°, λ99.00000°. NP2: φ$_s$25.00000°, δ47.00000°, λ81.00000°. Principal axes: T 7.7300, Plg84.0000°, Azm222.0000°; N -1.6410, Plg6.0000°, Azm31.0000°; P -6.0890, Plg1.0000°, Azm121.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NOU ***18*** *18:12:20.2, 31°.88S×177°.87W, h112^{km}, mb4.8/18, Kermadec Islands Region*

ISC 18 18:12:05.5±0.9**, 30°.73S**±0°.04×**177°.98W**±0°.06**, h19**^{km}±3^{km}**,**
n432, σ**1^{s}52**/409**, mb5.2**/111**, MS4.7**/13**, 11C-13D,**
Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**1.47**	**2**	P	**Pb**	**18 12 32.4**	**+0.3**
GLKZ				S	**Sn**	**18 12 48.2**	**-1.4**
RAO	**Raoul Island**	**1.48**	**2**		**Pb**	**18 12 32.3**	**0.0**
RAO				Sn	**Sn**	**18 12 48.7**	**-1.2**
RAO	**Raoul Island**	**1.48**	**2**	P	**Pb**	**18 12 32.3**	**0.0**
RAO						18 12 48.7	
RIZ	**Raoul Island**	**1.48**	**2**	P	**Pb**	**18 12 32.7**	**+0.3**
RIZ				S	**Sb**	**18 12 51.3**	**+0.4**
MXZ	**Matakaoa Point**	**7.48**	**203**	Pn	**Pn**	**18 13 52.6**	**-1.0**
MXZ	**Matakaoa Point**	**7.48**	**203**	P	**Pn**	**18 13 53.1**	**-0.4**
MXZ	**Matakaoa Point**	**7.48**	**203**	P	**Pn**	**18 13 52.0**	**-1.6**
MXZ				S	**Sn**	**18 15 14.6**	**-3.2**
WMGZ	**Waiomatatini S**	**7.67**	**202**	P	**Pn**	**18 13 55.3**	**-0.9**
WMGZ				S	**Sn**	**18 15 21.2**	**-1.4**
PKGZ	**Pakihiroa**	**7.83**	**204**	P	**Pn**	**18 13 57.8**	**-0.6**
PKGZ				S	**Sn**	**18 15 26.4**	**-0.1**
HAZ	**Te Kaha**	**7.83**	**205**	P	**Pn**	**18 13 57.9**	**-0.5**
HAZ				S	**Sn**	**18 15 28.0**	**+1.4**
PUZ	**Puketiti**	**7.95**	**202**	P	**Pn**	**18 13 58.6**	**-1.5**
PUZ				S	**Sn**	**18 15 26.3**	**-3.3**
TWGZ	**Tauwhareparae**	**8.14**	**203**	P	**Pn**	**18 14 01.6**	**-1.1**
TWGZ				S	**Sn**	**18 15 33.2**	**-1.0**
WCZ	**Waipu Caves**	**8.26**	**229**	P	Pn	18 14 12.0	+7.7
CNGZ	**Carnagh Statio**	**8.35**	**201**	P	**Pn**	**18 14 04.4**	**-1.1**
CNGZ				S	**Sn**	**18 15 37.7**	**-1.6**
OUZ	**Omahuta**	**8.37**	**235**	P	Pn	18 14 12.8	+6.9
OUZ	**Omahuta**	**8.37**	**235**	P	Pn	18 14 13.4	+7.5
TKGZ	**Te Karaka**	**8.42**	**203**	P	**Pn**	**18 14 04.0**	**-2.5**
TKGZ				S	**Sn**	**18 15 39.6**	**-1.4**
MWZ	**Matawai**	**8.44**	**205**	P	**Pn**	**18 14 04.7**	**-2.1**
MWZ				S	**Sn**	**18 15 40.2**	**-1.4**
URZ	**Urewera**	**8.53**	**207**	Pn	**Pn**	**18 14 06.1**	**-1.9**
	1.7nm,0.3s,baz=321,slow=2.9,SNR=39						
URZ				Sn	**Sn**	**18 15 40.7**	**-3.0**
	29nm,0.3s,baz=297,slow=23,SNR=17						
URZ	**Urewera**	**8.53**	**207**	P	**Pn**	**18 14 07.0**	**-1.0**
URZ	**Urewera**	**8.53**	**207**	P	**Pn**	**18 14 06.6**	**-1.4**
URZ				S	**Sn**	**18 15 43.0**	**-0.7**
RIGZ	**Rimuhau**	**8.69**	**203**	P	**Pn**	**18 14 08.4**	**-1.8**
RIGZ				S	**Sn**	**18 15 45.2**	**-2.6**
TOZ	**Tahuroa Road**	**8.82**	**216**	Pn	**Pn**	**18 14 12.8**	**+0.8**
MUGZ	**Murupara**	**8.85**	**208**	P	**Pn**	**18 14 10.3**	**-2.1**
MUGZ				S	**Sn**	**18 15 47.2**	**-4.5**
RTZ	**Ruatahuna**	**8.89**	**206**	Pn	**Pn**	**18 14 10.5**	**-2.6**
BKZ	**Black Stump Fm**	**9.56**	**207**		**Pn**	**18 14 19.9**	**-2.3**
BKZ	**Black Stump Fm**	**9.56**	**207**	P	**Pn**	**18 14 20.5**	**-1.7**
HIZ	**Hauiti**	**9.75**	**215**	Pn	**Pn**	**18 14 27.9**	**+3.1**
HIZ	**Hauiti**	**9.75**	**215**	P	**Pn**	**18 14 26.3**	**+1.6**
BFZ	**Birch Farm**	**10.98**	**204**	Pn	**Pn**	**18 14 42.1**	**+0.5**
BFZ	**Birch Farm**	**10.98**	**204**	P	**Pn**	**18 14 39.5**	**-2.1**
MRZ	**Mangatainoka R**	**11.20**	**206**	Pn	**Pn**	**18 14 45.0**	**+0.4**
MSWZ	**Moikau Station**	**11.98**	**205**	Pn	**Pn**	**18 14 54.9**	**-0.4**
SNZO	**South Karori**	**12.10**	**207**	Pn	**Pn**	**18 14 56.9**	**+0.1**
SNZO	**South Karori**	**12.10**	**207**	P	**Pn**	**18 14 55.9**	**-0.9**
PLWZ	**Palliser**	**12.11**	**205**	Pn	**Pn**	**18 14 57.3**	**+0.2**
NFK	**Norfolk Island**	**12.34**	**274**	P	**P**	**18 15 08.6**	**-3.7**
QRZ	**Quartz Range**	**12.67**	**215**	P	**Pn**	**18 15 05.2**	**+0.5**
CTZ	**Chatham Island**	**13.03**	**176**	Pn	**Pn**	**18 15 08.4**	**-1.1**
CTZ	**Chatham Island**	**13.03**	**176**	P	**Pn**	**18 15 06.6**	**-2.9**
THZ	**Tophouse**	**13.23**	**211**		**P**	**18 15 19.2**	**-2.9**
MSVF	**Nonsavu**	**13.44**	**343**		**Pn**	**18 15 14.4**	**-0.9**
MSVF	**Nonsavu**	**13.44**	**343**	Pn	**Pn**	**18 15 18.0**	**+2.7**
	0.7nm,0.3s,baz=149,slow=14,SNR=7.8						
MSVF				LR	LR	18 19 39.2	
	comp=Z,981nm,19.0s,baz=181,slow=34						
MSVF	**Nonsavu**	**13.44**	**343**	*i* P	**Pn**	**18 15 13.2**	**-2.1**
KHZ	**Kahutara**	**13.50**	**208**	P	**Pn**	**18 15 14.5**	**-1.4**
OXZ	**Oxford**	**14.87**	**210**		**Pn**	**18 15 34.7**	**0.0**
PINNC	**Pines Island,**	**15.32**	**298**	P	**P**	**18 15 47.5**	**+2.0**
RPZ	**Rata Peaks**	**15.61**	**211**	Pn	**Pn**	**18 15 40.6**	**-3.8**
	1.0nm,0.3s,baz=87,slow=2.9,SNR=6.7						
RPZ				Sn	Sn	18 18 19.3	-18
	3.6nm,0.3s,baz=171,slow=22,SNR=9.6						
RPZ	**Rata Peaks**	**15.61**	**211**	P	**Pn**	**18 15 42.8**	**-1.7**
OUENC	**Ouen Island, N**	**15.89**	**298**	P	P	18 16 05.8	+14
YATNC	**Mamie plateau,**	**16.06**	**299**	P	P	18 16 07.5	+14
ONTNC	**Ouen Toro**	**16.25**	**297**	P	**Pn**	**18 15 53.5**	**+0.7**
DZM	**Mont Dzumac**	**16.39**	**298**		**P**	**18 15 56.9**	**-0.5**
DZM	**Mont Dzumac**	**16.39**	**298**	*e*Pn	**P**	**18 15 59.1**	**+1.6**
	156nm,1.1s						
DZM				*e*LR	LR	18 19 42.6	
	2μm,25.6s						
DZM	**Mont Dzumac**	**16.39**	**298**	Pn	**P**	**18 15 58.4**	**+0.9**
	0.1nm,0.3s,baz=143,slow=16,SNR=14						
DZM				LR	LR	18 20 39.7	
	comp=Z,2μm,20.1s,baz=142,slow=32						
DZM	**Mont Dzumac**	**16.39**	**298**	P	P	18 16 11.0	+14
ODZ	**Otahua Downs**	**16.85**	**209**	P	**Pn**	**18 15 57.8**	**-2.5**
RAR	**Rarotonga**	**18.89**	**64**	LR	LR	18 21 07.5	
	comp=Z,501nm,21.6s,baz=271,slow=29						
ARMA	**Armidale**	**26.13**	**263**		**P**	**18 17 41.2**	**+2.5**
ARMA	**Armidale**	**26.13**	**263**	P	**P**	**18 17 42.8**	**+4.1**
	comp=Z,34nm,1.5s						
ARMA	**Armidale**	**26.13**	**263**	P	**P**	**18 17 42.9**	**+4.2**
TBI	**Tubuai**	**26.39**	**81**	*e*S	**S**	**18 22 06.0**	**-7.5**
	comp=Z,2μm,27.2s						
TBI				*e*LR	LR	18 24 19.1	
	comp=Z,739nm,23.5s						
TBI				*e*LR	LR	18 24 19.4	
	comp=Z,4μm,27.2s						
CNB	**Canberra Magne**	**27.69**	**252**	P	**P**	**18 17 55.7**	**+3.1**
EIDS	**Eidsvold**	**27.77**	**273**		**P**	**18 17 54.9**	**+1.5**
EIDS	**Eidsvold**	**27.77**	**273**	P	**P**	**18 17 55.5**	**+2.2**
	comp=Z,29nm,1.0s						
CAN	**Canberra**	**27.99**	**252**		**P**	**18 17 57.3**	**+2.1**
CAN				IAmb	IAmb	18 17 58.9	
	comp=Z,65nm,1.3s						
CAN	**Canberra**	**27.99**	**252**	P	**P**	**18 17 55.8**	**+0.5**
	comp=Z,42nm,1.7s						
CAN	**Canberra**	**27.99**	**252**	P	**P**	**18 17 58.0**	**+2.8**
CAN	**Canberra**	**27.99**	**252**	P	**P**	**18 17 57.3**	**+2.1**
CAN				pmax	pmax		
	comp=Z,65nm,1.3s						
YNG	**Young**	**28.50**	**254**	P	**P**	**18 18 02.7**	**+2.9**
	comp=Z,34nm,1.1s						
PPT2	**Papeete2**	**28.93**	**70**	*e*S	**S**	**18 22 52.4**	**-1.4**
	comp=Z,266nm,24.2s						
PPT2				*e*LR	LR	18 25 17.3	
	comp=Z,549nm,27.0s						
PPT2				*e*LR	LR	18 25 25.5	
	comp=Z,666nm,25.0s						
PPT	**Papeete**	**28.95**	**70**	LR	LR	18 26 18.7	
	comp=Z,330nm,20.2s,baz=256,slow=30						
RMQ	**Roma**	**29.44**	**270**	P	P	18 18 02.0	-6.2
TAU	**Tasmania Unive**	**30.11**	**236**	P	**P**	**18 18 15.4**	**+1.6**
TAU	**Tasmania Unive**	**30.11**	**236**	P	**P**	**18 18 15.5**	**+1.6**
TAU				pmax	pmax		
	comp=Z,122nm,1.4s						
TOO	**Toolangi**	**30.85**	**247**	P	**P**	**18 18 22.5**	**+1.9**
TOO	**Toolangi**	**30.85**	**247**	P	**P**	**18 18 22.6**	**+1.9**
	comp=Z,11nm,1.1s						
TOO	**Toolangi**	**30.85**	**247**	P	**P**	**18 18 22.5**	**+1.9**
TOO				pmax	pmax		
	comp=Z,29nm,1.7s						
CMSA	**Cobar Meteorol**	**31.02**	**259**	P	**P**	**18 18 24.9**	**+2.8**
	comp=Z,128nm,0.9s						
QLP	**Quilpie**	**33.31**	**268**	P	**P**	**18 18 43.7**	**+1.4**
	comp=Z,54nm,1.4s						
ARPS	**Mount Arapiles**	**33.77**	**249**	P	**P**	**18 18 46.1**	**0.0**
	comp=Z,28nm,0.9s						
CTAO	**Charters Tower**	**33.87**	**280**		**P**	**18 18 48.7**	**+1.5**
CTAO	**Charters Tower**	**33.87**	**280**	P	**P**	**18 18 48.7**	**+1.5**
CTAO				pmax	pmax		
	comp=Z,61nm,0.8s						
CTAO	**Charters Tower**	**33.87**	**280**	P	**P**	**18 18 49.1**	**+1.9**
STKA	**Stephens Creek**	**34.42**	**257**		**P**	**18 18 53.8**	**+1.9**
STKA	**Stephens Creek**	**34.42**	**257**	P	**P**	**18 18 53.9**	**+2.0**
	comp=Z,717nm,0.9s						
STKA	**Stephens Creek**	**34.42**	**257**	P	**P**	**18 18 53.7**	**+1.9**
	comp=Z,132nm,0.9s,baz=90,slow=9.7,SNR=165						
STKA				LR	LR	18 30 49.2	
	comp=Z,551nm,19.9s,baz=115,slow=33						
STKA	**Stephens Creek**	**34.42**	**257**	*e*P	**P**	**18 18 54.0**	**+2.1**
STKA				pmax	pmax		
	comp=Z,132nm,0.9s						
MGBR	**Mount Gambier**	**34.76**	**247**	P	**P**	**18 18 56.5**	**+1.8**
MTSU	**Mount Surprise**	**36.38**	**281**	P	**P**	**18 19 10.7**	**+1.8**
	comp=Z,34nm,0.8s						
HTT	**Hallett**	**36.43**	**254**	P	**P**	**18 19 10.4**	**+1.3**
	comp=Z,16nm,1.1s						
BBOO	**Buckleboo**	**38.90**	**255**		**P**	**18 19 30.2**	**+0.2**
BBOO				IAmb	IAmb	18 19 32.9	
	comp=Z,54nm,0.8s						
BBOO	**Buckleboo**	**38.90**	**255**	P	**P**	**18 19 30.2**	**+0.2**
	comp=Z,86nm,1.0s						
QIS	**Mount Isa**	**39.36**	**275**	P	**P**	**18 19 34.3**	**+0.3**
	comp=Z,21nm,1.0s						
COEN	**Coen**	**39.38**	**286**		**P**	**18 19 34.8**	**+0.6**
COEN				IAmb	IAmb	18 19 37.1	
	comp=Z,34nm,0.9s						
COEN	**Coen**	**39.38**	**286**	P	**P**	**18 19 35.6**	**+1.4**
	comp=Z,42nm,0.9s						
TAOE	**Nuku Hiva Isla**	**41.42**	**66**	*e*LR	LR	18 31 09.0	
	comp=Z,456nm,24.8s						
AS31	**Alice Springs**	**43.11**	**267**		**P**	**18 20 04.8**	**0.0**
AS31	**Alice Springs**	**43.11**	**267**	P	**P**	**18 20 05.0**	**+0.1**
	comp=Z,7.3nm,0.8s						
ASAR	**Alice Springs**	**43.11**	**267**		**P**	**18 20 04.3**	**-0.5**
ASAR	**Alice Springs**	**43.11**	**267**	P	**P**	**18 20 04.7**	**-0.2**
	comp=Z,18nm,0.8s,baz=105,slow=7.4,SNR=132						
ASAR				LR	LR	18 37 15.0	
	comp=Z,555nm,18.2s,baz=180,slow=35						
	comp=Z,18nm,0.8s						
MANU	**Manus Island**	**43.46**	**304**	P	**P**	**18 20 06.7**	**-1.0**
DRV	**Dumont d'Urvil**	**43.84**	**203**	P	**P**	**18 20 10.5**	**+0.4**
DRV				PcP	**PcP**	**18 21 56.1**	**-0.1**
WR8	**Warramunga Arr**	**43.98**	**273**		**P**	**18 20 11.5**	**-0.4**
WR8				IAmb	IAmb	18 20 13.9	
	comp=Z,43nm,0.9s						
WRAB	**Tennant Creek**	**44.12**	**272**	P	**P**	**18 20 12.7**	**-0.3**
WRAB				IAmb	IAmb	18 20 15.0	
	comp=Z,42nm,0.9s						
WRAB	**Tennant Creek**	**44.12**	**272**	*d i*P	**P**	**18 20 13.1**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,47nm,0.9s						
WRA	**Warramunga Arr**	**44.13**	**272**		**P**	**18 20 12.6**	**-0.5**
WRA				PcP	**PcP**	**18 21 57.8**	**-0.3**
WRA	**Warramunga Arr**	**44.13**	**272**	P	**P**	**18 20 12.8**	**-0.3**
	comp=Z,43nm,0.9s,baz=113,slow=7.7,SNR=128						
WRA				LR	LR	18 37 28.2	
	comp=Z,362nm,18.5s,baz=55,slow=35						
	comp=Z,43nm,0.9s						
WB0	**Warramunga Arr**	**44.15**	**273**		**P**	**18 20 12.9**	**-0.4**
WB0				IAmb	IAmb	18 20 15.2	
	comp=Z,54nm,0.9s						
FORT	**Forrest**	**45.98**	**255**		**P**	**18 20 26.6**	**-1.1**
FORT				PcP	**PcP**	**18 22 02.9**	**-1.3**
FORT	**Forrest**	**45.98**	**255**	P	**P**	**18 20 27.0**	**-0.6**
SBA	**Scott Base**	**47.71**	**184**		**P**	**18 20 44.2**	**+3.7**
SBA				IAmb	IAmb	18 20 46.2	
	comp=Z,27nm,1.1s						
SBA				PcP	**PcP**	**18 22 11.6**	**+2.1**
SBA	**Scott Base**	**47.71**	**184**	P	**P**	**18 20 44.7**	**+4.2**
SBA				pmax	pmax		
	comp=Z,27nm,1.1s						
SBA	**Scott Base**	**47.71**	**184**	P	**P**	**18 20 44.9**	**+4.4**
SBA				PcP	**PcP**	**18 22 11.3**	**+1.8**
VNDA	**Vanda**	**47.77**	**186**		**P**	**18 20 44.4**	**+3.4**
VNDA	**Vanda**	**47.77**	**186**	P	**P**	**18 20 43.1**	**+2.2**
	comp=Z,3.5nm,0.8s,baz=9.3,slow=7.8,SNR=12						
VNDA				PcP	**PcP**	**18 22 11.3**	**+1.6**
	comp=Z,2.2nm,0.8s,baz=10.0,slow=5.0,SNR=3.7						
	comp=Z,3.5nm,0.8s						
VNDA	**Vanda**	**47.77**	**186**	P	**P**	**18 20 44.1**	**+3.1**
VNDA				PcP	**PcP**	**18 22 10.9**	**+1.2**
MTN	**Manton Dam**	**50.05**	**279**		**P**	**18 20 58.7**	**-0.6**
MTN				IAmb	IAmb	18 21 00.8	
	comp=Z,13nm,0.8s						
KNRA	**Kununurra**	**50.75**	**275**		**P**	**18 21 04.5**	**-0.1**
KNRA				IAmb	IAmb	18 21 06.1	
	comp=Z,18nm,0.9s						
KNRA	**Kununurra**	**50.75**	**275**	P	**P**	**18 21 04.7**	**+0.1**
	comp=Z,24nm,1.2s						
KMBL	**Kambalda**	**50.94**	**253**	P	**P**	**18 21 04.7**	**-1.2**
FITZ	**Fitzroy Crossi**	**52.38**	**270**	P	**P**	**18 21 16.4**	**-0.3**
FITZ	**Fitzroy Crossi**	**52.38**	**270**	LR	LR	18 42 19.1	
	comp=Z,500nm,18.2s,baz=161,slow=35						
CCD	**Concordia, Ant**	**52.64**	**196**	P	**P**	**18 21 19.4**	**+1.0**
FAKI	**Fak Fak**	**54.47**	**290**	P	**P**	**18 21 28.8**	**-3.4**
CASY	**Casey**	**54.86**	**208**		**P**	**18 21 33.6**	**-0.6**
CASY	**Casey**	**54.86**	**208**	P	**P**	**18 21 34.2**	**0.0**
MBWA	**Marble Bar**	**56.21**	**264**	P	**P**	**18 21 42.2**	**-2.4**
MORW	**Morawa**	**56.45**	**254**	P	**P**	**18 21 44.8**	**-1.6**
MORW				IAmb	IAmb	18 21 46.0	
	comp=Z,30nm,1.2s						
BATI	**Baumata**	**57.71**	**278**	LR	LR	18 46 41.6	
	comp=Z,549nm,18.2s,baz=150,slow=36						
QSPA	**South Pole Qui**	**59.38**	**180**		**P**	**18 22 08.6**	**+2.1**
QSPA	**South Pole Qui**	**59.38**	**180**	P	**P**	**18 22 08.7**	**+2.3**
	comp=Z,20nm,0.8s,baz=37,slow=2.0,SNR=107						
	comp=Z,20nm,0.8s						
QSPA	**South Pole Qui**	**59.38**	**180**	P	**P**	**18 22 09.1**	**+2.7**
QSPA				PcP	**PcP**	**18 22 55.6**	**+1.5**
PCI	**Palu**	**65.81**	**284**	P	**P**	**18 22 51.1**	**+1.1**
	comp=Z,30nm,1.1s						
JAGI	**Jajag, Banyuwa**	**66.72**	**274**	P	**P**	**18 22 54.2**	**-1.6**
JAGI				IAmb	IAmb	18 22 55.8	
	comp=Z,22nm,0.8s						
SMAI	**San Martin Ant**	**69.11**	**158**	P	**P**	**18 23 10.9**	**+0.9**
PCJI	**Pacitan**	**69.41**	**273**	P	**P**	**18 23 13.6**	**+0.9**
BELA	**Belgrano 2**	**69.45**	**172**		**P**	**18 23 12.6**	**+0.6**
BELA				IAmb	IAmb	18 23 14.2	
	comp=Z,17nm,0.9s						
PMSA	**Palmer Station**	**71.95**	**156**	LR	LR	18 49 40.9	
	comp=Z,382nm,18.6s,baz=43,slow=31						
MAW	**Mawson**	**72.00**	**201**	P	**P**	**18 23 28.4**	**+0.8**
	comp=Z,11nm,0.9s,baz=112,slow=6.9,SNR=16						
MAW				LR	LR	18 52 56.8	
	comp=Z,542nm,19.6s,baz=335,slow=34						
	comp=Z,11nm,0.9s						
KKM	**Kota Kinabalu**	**72.68**	**288**	P	**P**	**18 23 30.4**	**-2.2**
LEM	**Lembang**	**73.15**	**272**	LR	LR	18 56 56.2	
	comp=Z,391nm,18.0s,baz=336,slow=37						
ESPZ	**Base Esperanza**	**75.26**	**156**	P	**P**	**18 23 48.0**	**+1.2**
ESPZ				IAmb	IAmb	18 24 05.6	
	comp=Z,38nm,0.9s						
SYO	**Syowa Base**	**76.80**	**193**	⇑*i*P	**P**	**18 23 56.1**	**+0.6**
SYO	**Syowa Base**	**76.80**	**193**	⇑*i*pP	pP	18 24 08.1	+7.6
MDSI	**Maura Dua**	**77.27**	**272**	P	**P**	**18 23 57.2**	**-1.9**
	comp=Z,51nm,1.0s						
TROLL	**Troll, Antarti**	**77.54**	**180**	⇑P	**P**	**18 24 01.1**	**+1.2**
	comp=Z,2μm,0.8s						
SNAA	**Sanae**	**77.82**	**178**	⇑P	**P**	**18 24 02.4**	**+1.0**
	comp=Z,258nm,0.9s						
SNAA	**Sanae**	**77.82**	**178**		**P**	**18 24 01.7**	**+0.4**
SNAA				IAmb	IAmb	18 24 09.6	
	comp=Z,31nm,1.2s						
SNAA	**Sanae**	**77.82**	**178**	P	**P**	**18 24 01.9**	**+0.6**
	comp=Z,9.6nm,0.8s,baz=200,slow=5.4,SNR=32						
	comp=Z,9.6nm,0.8s						
SNAA	**Sanae**	**77.82**	**178**	*i* P	**P**	**18 24 01.7**	**+0.4**
SNAA				pmax	pmax		
	comp=Z,17nm,1.0s						
VNA3	**Neumayer Olymp**	**77.97**	**176**	⇑P	**P**	**18 24 03.0**	**+0.9**
	comp=Z,39nm,0.7s						
JGF	**Kuroka**	**78.21**	**324**		**P**	**18 24 02.5**	**-1.3**
VNA2	**Neumayer--Watz**	**78.41**	**177**	⇑P	**P**	**18 24 05.7**	**+1.2**
	comp=Z,27nm,0.7s,baz=164,slow=5.2						
MJA0	**Matsu Arr-Jizo**	**78.51**	**325**	*e*P	**P**	**18 24 05.1**	**-0.3**
MJA0				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MJAR	**Matsushiro Arr**	**78.52**	**325**	P	**P**	**18 24 04.5**	**-1.0**
	comp=Z,4.6nm,0.9s,baz=168,slow=5.3,SNR=10.0						
	comp=Z,4.6nm,0.9s						
MAJO	**Matsushiro**	**78.53**	**325**	*c i*P	**P**	**18 24 06.6**	**+1.1**
MAJO				pmax	pmax		
	comp=Z,12nm,1.3s						
MJB9	**Matsu-Tunnel**	**78.53**	**325**	P	**P**	**18 24 05.2**	**-0.3**
VNA1	**Neumayer--Stat**	**78.64**	**177**	⇑P	**P**	**18 24 07.0**	**+1.3**
	comp=Z,28nm,0.8s						
TPUB	**Ta-pu**	**79.68**	**305**		**P**	**18 24 10.1**	**-2.1**
TPUB				IAmb	IAmb	18 24 11.4	
	comp=Z,21nm,0.9s						
SSLB	**Suanglung**	**79.77**	**305**	P	**P**	**18 24 10.4**	**-2.2**
JNU	**Nakatsue**	**79.82**	**318**	P	**P**	**18 24 10.9**	**-1.8**
LL02	**Futaleuf**	**80.11**	**135**		**P**	**18 24 15.2**	**+0.9**
H03S2	**Juan Fernandez**	**80.27**	**123**	T	T	19 53 18.9	
	baz=238,slow=74,SNR=68						
H03S1	**Juan Fernandez**	**80.28**	**124**	T	T	19 53 21.2	
	baz=238,slow=74,SNR=65						
H03S3	**Juan Fernandez**	**80.28**	**123**	T	T	19 53 20.7	
	baz=238,slow=74,SNR=82						
H03N3	**Juan Fernandez**	**80.46**	**123**	T	T	19 53 35.6	
	baz=242,slow=72,SNR=58						
H03N2	**Juan Fernandez**	**80.46**	**123**	T	T	19 53 37.9	
	baz=242,slow=72,SNR=46						
H03N1	**Juan Fernandez**	**80.48**	**123**	T	T	19 53 36.4	
	baz=242,slow=72,SNR=74						
JTM	**Tenmabayashi**	**80.62**	**330**	P	**P**	**18 24 16.6**	**-0.2**
JTM				IAmb	IAmb	18 27 10.8	
	comp=Z,32nm,1.1s						
KIWB	**Kanaga Island**	**82.23**	**1**	P	**P**	**18 24 24.4**	**-0.6**
ADK	**Adak**	**82.27**	**1**		**P**	**18 24 24.5**	**-0.7**
ADK	**Adak**	**82.27**	**1**	P	**P**	**18 24 24.5**	**-0.7**
ADK				pmax	pmax		
	comp=Z,50nm,1.0s						
PLCA	**Paso Flores**	**82.27**	**133**		**P**	**18 24 26.8**	**+0.9**
PLCA				IAmb	IAmb	18 24 46.8	
	comp=Z,19nm,1.1s						
PLCA	**Paso Flores**	**82.27**	**133**	P	**P**	**18 24 26.6**	**+0.7**
	comp=Z,12nm,1.1s,baz=224,slow=6.1,SNR=10						
	comp=Z,12nm,1.1s						
DLV	**Lat**	**82.28**	**289**	P	**P**	**18 24 25.5**	**-0.9**
DLV				IAmb	IAmb	18 24 27.0	
	comp=Z,19nm,0.9s						
EFI	**East Falkland**	**82.50**	**147**	P	**P**	**18 24 27.9**	**+1.1**
EFI	**East Falkland**	**82.50**	**147**	P	**P**	**18 24 27.9**	**+1.1**
EFI				pmax	pmax		
	comp=Z,129nm,1.7s						

ATKA	Atka Island	82.65	2	P	P	18 24 26.8	-0.3
ASAJ	Asahikawa	82.74	333	P	P	18 24 27.6	-0.3
	comp=Z,6.5nm,1.0s,baz=265,slow=14,SNR=6.6						
ASAJ				LR	LR	18 54 43.4	
	comp=Z,358nm,19.4s,baz=350,slow=31						
	comp=Z,6.5nm,1.0s						
NIKH	Nikolski High	83.73	6	P	P	18 24 33.0	+0.2
BI02	San Fabin de	84.07	129	P	P	18 24 36.0	+0.7
BI02				IAmb	IAmb	18 24 38.3	
	comp=Z,11nm,0.8s						
KSRS	Korea Array	84.61	320	P	P	18 24 37.5	-0.2
	comp=Z,1.9nm,0.8s,baz=136,slow=5.2,SNR=7.5						
	comp=Z,1.9nm,0.8s						
KSRS	Korea Array	84.61	320	eP	P	18 24 37.9	+0.3
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KSAR	Wonju Array Be	84.62	320	P	P	18 24 37.2	-0.5
KSAR	Wonju Array Be	84.62	320	P	P	18 24 37.2	-0.5
YSS	Yuzhno-Sakhali	85.05	334	eP	P	18 24 40.4	+0.8
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BO02	Sierra Bellavi	85.45	128	IAmb	IAmb	18 24 44.7	
	comp=Z,19nm,0.8s						
BCW	Bitter Crk WRg	85.47	45	IAmb	IAmb	18 24 45.8	
	comp=Z,24nm,1.0s						
BO01	Tunca	85.47	127	IAmb	IAmb	18 24 45.7	
	comp=Z,16nm,1.3s						
PSI	Prapat	85.49	276	LR	LR	19 06 20.4	
	comp=Z,264nm,18.6s,baz=9.0,slow=38						
ELS	Elsinore Mount	85.83	47	IAmb	IAmb	18 24 47.2	
	comp=Z,10.0nm,0.9s						
GSI	Gunungsitoli	85.88	274		P	18 24 44.0	-0.6
GSI	Gunungsitoli	85.88	274	P	P	18 24 44.6	0.0
MT09	Talagante	85.88	127	IAmb	IAmb	18 24 47.0	
	comp=Z,29nm,1.1s						
YUH	Yuha Desert	86.13	48	IAmb	IAmb	18 25 05.0	
	comp=Z,11nm,1.1s						
LMEL	Las Melosas	86.38	127	IAmb	IAmb	18 24 52.9	
	comp=Z,19nm,1.1s						
PFO	Pinyon Flats O	86.42	47	iP	P	18 24 48.9	+2.0
PFO				pmax	pmax		
	comp=Z,18nm,1.2s						
PEL	Peldehue	86.45	127		P	18 24 48.9	+1.6
PEL	Peldehue	86.45	127	P	P	18 24 48.9	+1.6
PEL				pmax	pmax		
	comp=Z,27nm,0.9s						
NJ2	Nanjing	86.47	311	eP	P	18 24 50.1	+3.1
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ISA	Isabella, Lake	86.52	45	IAmb	IAmb	18 24 50.6	
	comp=Z,20nm,1.1s						
MT08	Bocatoma Ro	86.74	127	IAmb	IAmb	18 24 52.5	
	comp=Z,12nm,1.0s						
GSC	Goldstone, Bar	87.30	46	IAmb	IAmb	18 25 10.7	
	comp=Z,18nm,1.1s						
USA0B	Ussuriysk Arra	87.45	327	eP	P	18 24 51.2	-0.3
USRK	Ussuriysk Ar.	87.45	327		P	18 24 51.0	-0.5
USRK	Ussuriysk Ar.	87.45	327	P	P	18 24 51.8	+0.3
	comp=Z,3.8nm,0.8s,baz=113,slow=4.9,SNR=7.8						
	comp=Z,3.8nm,0.8s						
113A	Mohawk Valley,	87.61	49	IAmb	IAmb	18 24 56.1	
	comp=Z,30nm,1.7s						
QSM	Queen of Sheba	87.70	45	IAmb	IAmb	18 25 12.3	
	comp=Z,14nm,1.2s						
CO03	El Pedregal	87.75	125	IAmb	IAmb	18 24 56.2	
	comp=Z,16nm,0.9s						
DSP	Deep Springs	87.96	44	IAmb	IAmb	18 24 57.3	
	comp=Z,23nm,1.8s						
GWY	Greenwater Val	87.96	45	IAmb	IAmb	18 25 13.6	
	comp=Z,9.7nm,1.0s						
GRAC	Grapevine Rang	88.07	44	IAmb	IAmb	18 24 58.1	
	comp=Z,36nm,1.5s						
PNTR	Pine Nut	88.17	42	IAmb	IAmb	18 25 14.4	
	comp=Z,13nm,0.8s						
LHV	Little Huntoon	88.23	43	IAmb	IAmb	18 25 14.9	
	comp=Z,12nm,0.9s						
GMN	Gold Mountain	88.34	44	IAmb	IAmb	18 24 59.1	
	comp=Z,30nm,1.9s						
NVAR	Mina Array Bea	88.47	43	P	P	18 24 57.8	+0.9
NVAR	Mina Array Bea	88.47	43	P	P	18 24 58.0	+1.1
	comp=Z,5.3nm,0.8s,baz=222,slow=8.4,SNR=29						
	comp=Z,5.3nm,0.8s						
NV11	Mina Array Sit	88.56	43	IAmb	IAmb	18 25 16.2	
	comp=Z,10.0nm,1.1s						
V12A	Nelson	88.79	47	IAmb	IAmb	18 25 18.1	
	comp=Z,11nm,1.2s						
MDJ	Mudanjiang	88.91	326	P	P	18 25 02.1	+3.7
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
W13A	Hualapai Mount	89.00	48	IAmb	IAmb	18 25 19.3	
	comp=Z,15nm,1.1s						
SHPR	Sheep Range	89.10	46		P	18 25 00.0	+0.2
TUC	Tucson	89.30	51		P	18 25 03.0	+2.3
TUC				IAmb	IAmb	18 25 04.8	
	comp=Z,16nm,1.1s						
TUC	Tucson	89.30	51	P	P	18 25 03.0	+2.3
TUC				pmax	pmax		
	comp=Z,16nm,1.1s						
PRN	Pahroc Range	89.74	45	IAmb	IAmb	18 25 06.4	
	comp=Z,17nm,1.3s						
319A	Douglas	89.76	53	IAmb	IAmb	18 25 06.7	
	comp=Z,11nm,0.9s						
J05D	Fort Rock, OR	90.15	38	IAmb	IAmb	18 25 23.6	
	comp=Z,13nm,1.1s						
X16A	Lo Mia Camp, P	90.15	49	IAmb	IAmb	18 25 08.6	
	comp=Z,15nm,0.9s						
TIA	Tai'an	90.21	313	P	P	18 25 05.3	+0.5
TIA				pmax	pmax		
	comp=Z,19nm,1.1s						
CN2	Changchun	90.42	323	eP	P	18 25 05.3	-0.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GRNR	Gornyy	90.59	333	eP	P	18 25 07.1	+1.0
H04A	Detroit Lake	90.63	36	IAmb	IAmb	18 25 25.2	
	comp=Z,13nm,0.9s						
PINE	Pine Mountain	90.65	37	IAmb	IAmb	18 25 26.2	
	comp=Z,16nm,1.0s						
BNX	BinXian	90.79	325	⇓P	P	18 25 06.8	-0.4
BNX				pmax	pmax		
	comp=Z,9.0nm,0.9s						
U15A	North Rim	90.84	47	IAmb	IAmb	18 25 28.0	
	comp=Z,12nm,0.9s						
WUAZ	Wupatki	90.87	48	IAmb	IAmb	18 25 27.9	
	comp=Z,18nm,1.1s						
KNB	Kanab	90.87	47	IAmb	IAmb	18 25 27.9	
	comp=Z,13nm,1.1s						
WVOR	Wild Horse Val	90.96	40	IAmb	IAmb	18 25 11.0	
	comp=Z,16nm,1.4s						
WVOR	Wild Horse Val	90.96	40	P	P	18 25 10.3	+2.0
WVOR				pmax	pmax		
	comp=Z,7.0nm,1.5s						
X18A	Snowflake	91.20	50	IAmb	IAmb	18 25 13.2	
	comp=Z,6.7nm,0.8s						
KLR	Kul'dur	91.33	330	P	P	18 25 09.5	-0.1
	comp=Z,4.2nm,0.7s,baz=160,slow=5.5,SNR=12						
	comp=Z,4.2nm,0.7s						
KLR	Kul'dur	91.33	330	iP	P	18 25 09.7	+0.1
KLR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
I07A	Izee	91.61	38		P	18 25 12.2	+1.0
I07A				IAmb	IAmb	18 25 30.2	
	comp=Z,8.3nm,0.9s						
J08A	Circle Bar Ran	91.67	39	IAmb	IAmb	18 25 30.4	
	comp=Z,8.3nm,0.9s						
G06A	Carlson Farm,	91.81	37	IAmb	IAmb	18 25 14.6	
	comp=Z,11nm,1.0s						
MVU	Marysvale	92.17	46	IAmb	IAmb	18 25 35.2	
	comp=Z,7.1nm,1.2s						
VHRN	Van Horn	92.42	55	IAmb	IAmb	18 25 18.0	
	comp=Z,14nm,1.9s						
HNS	HongShan	92.47	313	⇑P	P	18 25 15.4	+0.2
HNS				pmax	pmax		
	comp=Z,8.0nm,1.2s						
TXAR	Lajitas Array	92.55	57		P	18 25 16.4	+0.4
TXAR	Lajitas Array	92.55	57	P	P	18 25 17.6	+1.6
	comp=Z,1.4nm,0.9s,baz=212,slow=6.8,SNR=12						
	comp=Z,1.4nm,0.9s						
CNPM	China Poot	92.61	13		P	18 25 15.1	-0.3
G08A	Pilot Rock	92.71	37	IAmb	IAmb	18 25 35.7	
	comp=Z,8.2nm,0.9s						
MFID	Camas Ranch	93.16	40	IAmb	IAmb	18 25 37.2	
	comp=Z,7.6nm,0.9s						
TMUT	Trail Mountain	93.28	46	IAmb	IAmb	18 25 38.7	
	comp=Z,13nm,1.5s						
CMAR	Chiang Mai Arr	93.53	289	P	P	18 25 20.8	+0.2
	comp=Z,0.9nm,0.9s,baz=111,slow=6.0,SNR=3.4						
	comp=Z,0.9nm,0.9s						
ANMO	Albuquerque	93.77	51	⇑iP	P	18 25 22.4	+0.9
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
HEH	HeiHe	94.00	328	eP	P	18 25 21.3	-0.6
PLID	Pearl Lake	94.15	39		P	18 25 22.4	-0.6
L18K	Granite Mounta	94.20	10	IAmb	IAmb	18 26 47.1	
	comp=Z,45nm,1.4s						
XAN	Xi'an	94.33	307	P	P	18 25 14.8	-9.1
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
XAN				LR	LR		
	comp=N,400nm,19.1s						
XAN				LR	LR		
	comp=E,400nm,17.9s						
XAN				LR	LR		
	comp=Z,310nm,17.5s						
L19K	White Mountain	94.45	11	IAmb	IAmb	18 26 46.6	
	comp=Z,25nm,1.1s						
PZH	PanZhiHua	95.47	297	P	P	18 25 31.8	+2.3
PZH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,4.5s						
PDAR	Pinedale Array	96.36	44	P	P	18 25 33.9	+0.7
	comp=Z,0.5nm,0.6s,baz=197,slow=4.5,SNR=4.4						
PDAR				PKKPbc	PKKPbc	18 42 18.8	-0.8
	comp=Z,0.8nm,0.8s,baz=42,slow=3.2,SNR=5.5						
	comp=Z,0.5nm,0.6s						
J20K	Nowinta River	96.44	10	IAmb	IAmb	18 26 50.8	
	comp=Z,19nm,0.8s						
HHC	Hu-ho-hao-te	96.48	314	eP	P	18 25 36.3	+2.6
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,100nm,5.3s						
ZEA	Zeya	96.54	331	⇑eP	P	18 25 33.5	0.0
BTO	Baotou	97.30	313	eP	Pdif	18 25 42.1	+4.6
BTO				pP	pwP	18 25 47.1	+0.6
BTO				sP	sP	18 25 49.3	+5.0
WRH	Wood River Hil	97.75	13	IAmb	IAmb	18 27 30.4	
	comp=Z,50nm,1.1s						
ILAR	Eielson Array	98.24	13	P	P	18 25 40.9	0.0
	comp=Z,1.0nm,0.9s,baz=215,slow=6.3,SNR=7.6						
	comp=Z,1.0nm,0.9s						
J26L	Joseph Creek	98.68	14	IAmb	IAmb	18 25 45.1	
	comp=Z,5.1nm,0.9s						
YAK	Yakutsk	101.56	338	eP	Pdif	18 25 58.1	+2.4
YAK				pmax	pmax		
	comp=Z,4.0nm,0.4s						
YKA	Yellowknife Ar	105.73	26	PKKPbc	PKKPbc	18 41 51.7	-0.8
	comp=Z,0.4nm,0.5s,baz=34,slow=3.5,SNR=6.0						
WMQ	Urumqi	113.44	308	ePKP	PKiKP	18 30 44.0	+1.8
WMQ	Urumqi	113.44	308	ePKP	PKiKP	18 30 39.0	-3.2
WMQ				sPKP		18 30 59.1	
BOSA	Boshof	116.96	203	PKP	PKiKP	18 30 50.0	+0.3
	comp=Z,1.2nm,0.6s,baz=226,slow=3.4,SNR=4.7						
ZALV	Zalesovo Beam	118.29	318	PKP	PKPdf	18 30 49.7	-1.4
	comp=Z,1.9nm,0.8s,baz=132,slow=2.2,SNR=5.5						
KSH	Kashi	120.42	300	PKP	PKiKP	18 30 59.5	+3.6
SKOMA	Sekoma	121.19	203	iP	PKiKP	18 30 58.6	+0.6
KURK	Kurchatov	121.29	314	PKIKP	PKPdf	18 30 55.9	-1.0
KURBB	Kurchatov Arra	121.33	314	PKP	PKPdf	18 30 55.9	-1.1
	comp=Z,7.0nm,0.8s,baz=99,slow=1.6,SNR=20						
KURBB				PKKPbc	PKKPbc	18 40 59.3	+0.4
	comp=Z,0.2nm,0.6s,baz=281,slow=4.1,SNR=4.4						
LPHEP	Lephephe	121.55	206		PKiKP	18 30 59.4	+0.7
AAK	Ala-Archa	122.31	304		PKPdf	18 30 59.0	-0.4
AAK	Ala-Archa	122.31	304	PKIKP	PKPdf	18 30 59.0	-0.4
LKGWB	Lokgwabe	122.44	201		PKPdf	18 30 59.4	-0.9
BROLN	Tlhalogang	123.02	208	iP	PKiKP	18 31 02.0	+0.3
KGCAE	Kacgae	123.31	202		PKPdf	18 31 02.0	+0.1
KOOLE	Kule	123.81	200	iP	PKiKP	18 31 03.9	+0.7
KBL	Kabul	124.37	293	PKIKP	PKPdf	18 31 03.7	0.0
GRTLG	Ghanzi	125.02	202	iP	PKiKP	18 31 06.3	+0.7
KK31	Karatay Array	125.27	303		PKPdf	18 31 03.5	-1.4
KK31	Karatay Array	125.27	303	PKIKP	PKPdf	18 31 03.5	-1.4
KKAR	Karatay Array	125.27	303		PKPdf	18 31 03.5	-1.4
KKAR	Karatay Array	125.27	303	PKIKP	PKPdf	18 31 03.5	-1.4
BATG	Bathurst New B	126.25	52		PKPdf	18 31 06.3	-0.3
SCHQ	Schefferville	126.47	42	PKP	PKPdf	18 31 06.2	-0.6
	comp=Z,4.4nm,0.9s,baz=113,slow=3.2,SNR=5.2						
BVAR	Borovoye Array	126.65	316	PKP	PKPdf	18 31 06.9	-0.3
	comp=Z,6.7nm,0.9s,baz=144,slow=2.7,SNR=6.1						
BRVK	Borovoye	126.72	316		PKPpre	18 30 54.6	
BRVK	Borovoye	126.72	316	PKHKP	PKPpre	18 30 54.6	
LMN	Caledonia Moun	126.90	53		PKPdf	18 31 07.3	-0.6
LSZ	Lusaka	127.79	213	PKIKP	PKPdf	18 31 11.1	+0.4
TSUM	Tsumeb	128.15	199		PKPdf	18 31 11.4	+0.1
SPITS	Spitsbergen Ar	132.03	356	PKP	PKPdf	18 31 17.1	+0.3
	comp=Z,8.3nm,0.8s,baz=105,slow=15,SNR=4.8						
SPB2	Spitsbergen Ar	132.04	356		PKPdf	18 31 16.7	-0.1
ARTI	Arti	133.46	320	iPKIKP	PKPdf	18 31 20.3	+0.3
ARTI						18 33 47.2	
ARTI				SS	SS	18 51 29.0	-3.4
NRS	Narsarsuaq	136.64	31		PKPdf	18 31 24.5	-1.2
NRS	Narsarsuaq	136.64	31	PKIKP	PKPdf	18 31 24.5	-1.2
ARCES	ARCESS Array B	138.92	348	PKhKP	PKPpre	18 31 22.1	
	comp=Z,3.7nm,0.8s,baz=27,slow=3.0,SNR=6.5						
BELG	Belogornoye	140.44	317	iPKIKP	PKPdf	18 31 32.2	-0.8
MSF	Maaselka	141.13	343	PKIKP	PKPdf	18 31 32.2	-1.7
AKT	Akhty	141.94	299	ePKIKP	PKPdf	18 31 36.9	+0.7
FAUS	Fauske	142.47	352	eP	PKPdf	18 31 35.5	-0.6
VAGH	Vaagaholmen	143.34	353	eP	PKPbc	18 31 35.4	+0.5
GNI	Garni	144.24	297	iPKIKP	PKPbc	18 31 39.5	+0.8
GNI				pmax	pmax		
	comp=Z,19nm,1.1s						
VRH	Novokhopyorsk	144.30	316	ePKIKP	PKPab	18 31 37.6	-0.3
VRH				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MOS	Moscow	144.62	325	iPKIKP	PKPab	18 31 37.8	-1.1
PUL	Pulkovo	145.30	335	iPKIKP	PKPbc	18 31 41.1	0.0
PUL				pmax	pmax		
	comp=Z,57nm,0.8s						
KBZ	Khabaz	145.31	304	PKPbc	PKPbc	18 31 40.9	-0.8
	comp=Z,12nm,0.8s,baz=99,slow=2.2,SNR=9.7						
KBZ	Khabaz	145.31	304	ePKIKP	PKPbc	18 31 41.4	-0.3
KBZ				pmax	pmax		
	comp=Z,12nm,0.8s						
LPSR	Galich'ya Gora	145.38	320	ePKP2	PKPbc	18 31 39.8	-1.8
LPSR				pmax	pmax		
	comp=Z,30nm,0.8s						
KIV	Kislovodsk	145.43	304	ePKIKP	PKPbc	18 31 41.6	-0.6
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
OBN	Obninsk	145.45	325		PKPdf	18 31 40.8	-0.9
OBN	Obninsk	145.45	325	d iPKIKP	PKiKP	18 31 44.5	-1.2
OBN				pmax	pmax		
	comp=Z,22nm,0.6s						
OBN				MLR	MLR		
	comp=Z,169nm,17.0s						
FIA1	FINESS Array S	145.46	340		PKPdf	18 31 40.1	-1.5
FINES	FINESS Array B	145.46	340		PKPdf	18 31 40.0	-1.6
FINES	FINESS Array B	145.46	340	PKPbc	PKPdf	18 31 40.7	-0.8
	comp=Z,45nm,0.6s,baz=61,slow=3.4,SNR=214						
KARS	Kars	145.49	298		PKPdf	18 31 41.0	-1.5
KARS	Kars	145.49	298	PKP2	PKPdf	18 31 41.0	-1.5
GEVA	Gevas	145.57	294		PKPdf	18 31 41.0	-1.8
VORR	Voronezh	145.59	318	ePKIKP	PKPdf	18 31 41.7	-0.4
VORR				pmax	pmax		
	comp=Z,73nm,0.7s						
NSS	Namsos	145.61	352	eP	PKPdf	18 31 41.5	-0.2
VSR	Storozhevoye	145.79	318	ePKHKP	PKPpre	18 31 39.4	
VSR				pmax	pmax		
	comp=Z,40nm,0.9s						
VORD	Divnogorie	145.81	317	ePKIKP	PKPdf	18 31 40.5	-2.0
VORD				pmax	pmax		
	comp=Z,30nm,0.9s						
ERBR	Yeremizino-Bor	146.64	308	iPKP2	PKPbc	18 31 45.2	-0.5
ERBR				pmax	pmax		
	comp=Z,53nm,0.9s						
LABN	Labinsk	146.70	306	iPKIKP	PKPdf	18 31 44.3	+0.1
LABN				pmax	pmax		
	comp=Z,16nm,0.5s						
DOMB	Dombas	148.34	354	eP	PKPbc	18 31 49.7	-0.2
AKN	Aaknes	148.38	356	eP	PKPbc	18 31 50.3	+0.3
ANN	Anapa	148.95	307	iPKP2	PKPbc	18 31 50.8	-1.1
ANN				pmax	pmax		
	comp=Z,34nm,0.9s						
FOO	Floro	149.06	357	eP	PKPbc	18 31 51.8	+0.2
NB2	NORSAR Subarra	149.08	351	PKP	PKPbc	18 31 51.2	-0.6
	comp=Z,31nm,0.9s,baz=12,slow=2.6						
NB2	NORSAR Subarra	149.08	351	PKP	PKPbc	18 31 51.2	-0.6
	baz=12,slow=2.6						
NOA	NORSAR Array B	149.08	351	PKPbc	PKPbc	18 31 51.3	-0.6
	comp=Z,21nm,0.9s,baz=15,slow=4.2,SNR=44						
NC602	NORSAR Array S	149.33	351	eP	PKPbc	18 31 52.0	-0.4
HFS	Hagfors	149.57	348	PKPbc	PKPbc	18 31 52.1	-0.9
	comp=Z,20nm,0.8s,baz=90,slow=0.4,SNR=34						
SUE	Sulen	149.62	357	eP	PKPbc	18 31 53.5	+0.4
SKAR	Skarslia	149.76	354	eP	PKPbc	18 31 54.0	+0.5
MNK	Minsk	149.88	330	iPKiKP	PKPbc	18 31 54.0	+0.1
	comp=E,5.0nm,0.7s						
MNK				iPKiKP	PKPbc	18 31 54.0	+0.1
	comp=Z,42nm,1.0s,baz=49						
MNK				iPP	PP	18 35 26.4	-1.5
MNK				iPPP	PPP	18 38 48.2	
MNK				iSKS	SKSdf	18 38 56.1	+0.3
MNK				iSS	SS	18 54 49.9	+7.2
MNK				iSSS	SSS	19 00 21.6	
MNK				iLR	LR	19 42 43.7	
MNK	Minsk	149.88	330	iPKP2	PKPbc	18 31 54.0	+0.1
MNK				i		18 35 26.3	
MNK				iPPP	PPP	18 38 48.2	
MNK				i		18 38 56.1	
MNK				iSSS	SSS	19 00 21.5	
MNK				pmax	pmax		
	comp=E,5.0nm,0.7s						
MNK				pmax	pmax		
	comp=Z,42nm,1.0s						
MNK				pmax	pmax		
	comp=N,16nm,1.1s						
NACGM	Naroch	150.08	331	ePKiKP	PKPbc	18 31 54.9	+0.5
ASK	Askoy	150.17	357	eP	PKPbc	18 31 54.5	+0.1
OSL	Oslo	150.21	351	eP	PKPbc	18 31 54.5	-0.1
KONO	Kongsberg	150.63	352	eP	PKPbc	18 31 55.7	+0.1
ODD1	Odda	150.65	355	eP	PKiKP	18 31 56.4	0.0
STRU	Stroemstad	151.02	350	eP	PKPbc	18 31 56.1	-0.4
BLS5	Blasjo	151.15	355	eP	PKiKP	18 31 57.3	-0.1
SIM	Simferopol'	151.17	309	iPKIKP	PKPbc	18 31 56.6	-0.7
SIM				e		18 32 03.9	
SIM				pmax	pmax		
	comp=Z,35nm,0.4s						
SIM				pmax	pmax		
	comp=Z,42nm,0.5s						
KMY	Karmoy	151.44	357	eP	PKiKP	18 31 57.9	0.0
AKASG	Malin Array Be	151.57	322		PKPdf	18 31 49.6	-2.3
AKASG				PKPbc	pPKPdf	18 31 57.1	0.0
AKASG	Malin Array Be	151.57	322	PKPbc	PKPbc	18 31 57.4	-0.7
	comp=Z,20nm,0.8s,baz=51,slow=2.5,SNR=13						
AKASG	Malin Array Be	151.57	322	ePKIKP	PKPdf	18 31 54.9	+3.1
AKASG				pmax	pmax		
	comp=Z,20nm,0.8s						
AKBB	Malin Array Si	151.57	322		PKPbc	18 31 55.3	-2.8
AKBB	Malin Array Si	151.57	322	PKIKP	PKPbc	18 31 55.3	-2.8
MMAI	Mount Meron Ar	151.62	283	PKPbc	PKPbc	18 31 59.2	+0.3
	comp=Z,23nm,0.7s,baz=78,slow=4.5,SNR=18						
BORU	Boraas	152.09	348	eP	PKPbc	18 31 58.2	-0.8
HOMB	Homborsund	152.11	353	eP	PKiKP	18 31 59.5	+0.1
HOMB	Homborsund	152.11	353	eP	PKiKP	18 31 59.4	+0.1
SNART	Snartemo	152.17	354	eP	PKPbc	18 31 59.5	+0.3
SNART	Snartemo	152.17	354	eP	PKPbc	18 31 59.4	+0.2
SUW	Suwalki	152.18	333	ePKP	PKPbc	18 31 58.6	-0.7
ONAU	Onsala	152.47	348	eP	PKPbc	18 31 59.6	-0.3
BLEU	Blekinge	152.66	343	eP	PKPbc	18 31 59.1	-1.3
FABU	Falkenberg	152.70	347	eP	PKPbc	18 32 00.2	-0.1
BRTR	Keskin Array B	152.77	298		PKPbc	18 31 59.1	-2.2
BRTR	Keskin Array B	152.77	298	PKP	PKPdf	18 31 53.8	-0.4
	comp=Z,0.5nm,0.9s,baz=159,slow=11,SNR=3.6						
BRTR				PKPbc	sPKPdf	18 32 00.3	-0.9
	comp=Z,7.3nm,0.9s,baz=142,slow=2.8,SNR=22						
BRTR	Keskin Array B	152.77	298	PKIKP	PKPbc	18 31 59.1	-2.2
DEL	Delary	152.96	345	eP	PKPbc	18 32 01.1	+0.1
BJUU	Bjuv	153.50	346	eP	PKPbc	18 32 02.1	-0.1
GKP	Gorka Klasztor	154.90	338	ePKP	PKPbc	18 32 04.9	-0.4
EKA	Eskdalemuir Ar	155.13	7	PKPab	PKPab	18 32 21.2	-0.3
	comp=Z,6.7nm,0.8s,baz=339,slow=3.0,SNR=12						
DBIC	Dimbokro	155.21	164	PKP	PKPdf	18 31 58.4	+0.1
	comp=Z,4.7nm,0.8s,baz=296,slow=1.6,SNR=3.7						
DBIC				PKPab	PKPab	18 32 23.9	+1.1
	comp=Z,8.6nm,0.8s,baz=242,slow=4.7,SNR=5.9						
KOLS	Kolonicke sedl	156.20	326	ePKP	PKPab	18 32 13.5	-13
KOLS				e		18 32 26.7	
STHS	Stebnicka Huta	156.36	328	ePKP	PKPdf	18 32 12.0	+13
STHS				e		18 32 26.9	
NIE	Niedzica	156.78	329	ePKP	PKPdf	18 31 56.7	-2.6
NIE	Niedzica	156.78	329	PKIKP	PKPdf	18 31 56.9	-2.4
KSP	Ksiaz	157.26	336	ePKP	PKPdf	18 31 59.0	-0.8
LANS	Liptovska Anna	157.35	329	ePKP	PKPab	18 32 35.3	+4.0
RETH	Rethem/Aller,	157.36	348	ePKPab	PKPab	18 32 30.9	-0.2
	baz=24,slow=4.4						
FLTG	Flechtingen	157.38	345	ePKPab	PKPab	18 32 30.3	-0.9
	baz=24,slow=4.4						
NRDL	Niedersach Rie	157.46	347	ePKPab	PKPab	18 32 31.0	-0.5
	baz=24,slow=4.4						
MORC	Moravsky Berou	157.67	333	ePKP	PKPab	18 32 34.0	+1.3
CLL	Collm	157.88	341	⇓ePKIKP	PKPdf	18 32 00.0	-0.5
CLL				i		18 32 32.8	
CLL				pmax	pmax		
	comp=Z,11nm,1.8s						
CLL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CLL	Collm	157.88	341	ePKPdf	PKPdf	18 32 00.0	-0.5
	comp=Z,11nm,1.8s						
CLL				ex	x	18 32 11.0	
CLL				⇓iPKPab	PKPab	18 32 32.8	-0.7
	comp=Z,9.0nm,0.9s						
CLL				ix	x	18 32 36.6	
	comp=Z,10.0nm,0.7s						
BRG	Berggiesshubel	158.00	340	⇓ePKPf		18 32 00.4	
BRG				Amp		18 32 01.5	
	comp=Z,4.4nm,1.2s						
BRG				PKPab	PKPab	18 32 33.6	-0.4
BRG				Amp		18 32 37.9	
	comp=Z,6.1nm,0.8s						
IBBN	Ibbenburen	158.03	351	ePKPab	PKPab	18 32 33.7	-0.3
	baz=24,slow=4.4						
VYHS	Vyhne	158.12	329	ePKP2	PKPab	18 32 34.6	0.0
VYHS	Vyhne	158.12	329	ePKP	PKPab	18 32 34.6	0.0
NEUB	Neuenburg	158.29	343	ePKPab	PKPab	18 32 34.9	-0.3
	baz=24,slow=4.4						
VRAC	Vranov	158.42	333	ePKP	PKPab	18 32 35.4	-0.5
KRUC	Moravsky	158.69	333	ePKP	PKPab	18 32 36.0	-1.1
MOX	Moxa	158.85	343	ePKPab	PKPab	18 32 36.6	-1.1
	baz=24,slow=4.4						
KASTN	Kahler Asten	159.00	349	ePKPab	PKPab	18 32 36.7	-1.7
	baz=24,slow=4.4						
ROTZ	Rotzenmuhle	159.49	341	ePKPab	PKPab	18 32 40.2	-0.3
	baz=24,slow=4.4						
CONA	Conrad Observa	159.82	332	iPKP	PKPdf	18 32 02.5	-0.6
	comp=Z,0.8nm,0.6s						
CONA				iPKP	PKPab	18 32 42.3	+0.2
	comp=Z,3.5nm,0.8s						
RONA	Rosalia, Austr	159.82	331	iPKP	PKPdf	18 32 02.8	-0.3
	comp=Z,3.4nm,1.2s						
RONA				iPKP	PKPab	18 32 41.9	-0.2
	comp=Z,4.8nm,1.0s						
GRF	Grafenberg Arr	159.83	342	ePKPab	PKPab	18 32 42.0	0.0
	baz=24,slow=4.4						
GERES	GERESS Array B	159.85	337	PKP	PKPdf	18 32 02.2	-0.9
	comp=Z,0.5nm,0.6s,baz=46,slow=7.6,SNR=5.9						
GERES				PKPab	PKPab	18 32 40.7	-1.5
	comp=Z,1.2nm,0.6s,baz=29,slow=3.0,SNR=5.8						
GERES	GERESS Array B	159.85	337	ePKIKP	PKPdf	18 32 05.5	+2.4
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WET	Wettzell	159.85	339	ePKPab	PKPab	18 32 41.7	-0.4
	baz=24,slow=4.4						
TNS	Taunus Mts	159.94	348	ePKPab	PKPab	18 32 42.1	-0.4
	baz=24,slow=4.4						
BGES	Gesves	160.23	354	dPKP	PKPab	18 32 43.1	-0.6
BMRD	Maredsous	160.34	355	dPKPdf	PKPdf	18 32 04.0	+0.5
BMRD				dPKP	PKPab	18 32 43.7	-0.4
ARSA	Arzberg	160.50	332	iPKP	PKPdf	18 32 04.3	+0.5
	comp=Z,2.3nm,0.8s						
DOU	Dourbes	160.56	355	dPKPdf	PKPdf	18 32 03.8	+0.1
DOU				dPKP	PKPab	18 32 44.2	-0.9
WLF	Walferdange	160.83	352	dPKPdf	PKPdf	18 32 04.5	+0.5
WLF				dPKP	PKPab	18 32 45.6	-0.7
BIOA	Bad Ischl, Aus	160.86	335	ePKP	PKPdf	18 32 04.4	+0.2
	comp=Z,1.0nm,0.4s						
BIOA				iPKP	PKPab	18 32 46.9	+0.3
	comp=Z,1.2nm,0.4s						
RJOB	Jochberg	161.11	337	ePKPab	PKPab	18 32 47.7	0.0
	baz=24,slow=4.4						
SOKA	Soboth	161.16	331	iPKP	PKPdf	18 32 04.2	-0.4
	comp=Z,2.4nm,1.0s						
SOKA				iPKP	PKPab	18 32 47.5	-0.5
	comp=Z,2.6nm,0.9s						

LESA	**Schwarzleotal**	**161.42**	**337**	*i* PKP	**PKPdf**	**18 32 05.1**	**+0.3**
	comp=Z,7.2nm,1.2s						
LESA				*e*PKP	**PKPab**	**18 32 48.8**	**-0.3**
	comp=Z,2.6nm,0.8s						
OBKA	**Obir**	**161.49**	**332**	*e*PKP	**PKPdf**	**18 32 04.6**	**-0.3**
	comp=Z,1.4nm,0.9s						
OBKA				*i* PKP	**PKPab**	**18 32 50.0**	**+0.6**
	comp=Z,1.1nm,0.6s						
MYKA	**Terra Mystica**	**161.75**	**334**	*e*PKP	**PKPdf**	**18 32 04.8**	**-0.4**
	comp=Z,1.6nm,0.5s						
MYKA				*i* PKP	**PKPab**	**18 32 51.4**	**+0.8**
	comp=Z,1.4nm,0.5s						
BFO	**Black Forest**	**161.78**	**346**	*e*PKPab	**PKPab**	**18 32 49.4**	**-1.1**
	baz=24,slow=4.4						
WATA	**Walderalm**	**161.86**	**339**	*i* PKP	**PKPdf**	**18 32 05.8**	**+0.4**
	comp=Z,3.0nm,0.5s						
WATA				*i* PKP	**PKPab**	**18 32 52.3**	**+1.2**
	comp=Z,4.3nm,0.9s						
WTTA	**Wattenberg**	**161.90**	**339**	*i* PKP	**PKPdf**	**18 32 04.5**	**-1.0**
	comp=Z,1.6nm,0.5s						
WTTA				*i* PKP	**PKPab**	**18 32 50.9**	**-0.5**
	comp=Z,7.5nm,1.2s						
RETA	**Reutte**	**161.97**	**341**	*i* PKP	**PKPab**	**18 32 51.0**	**-0.4**
	comp=Z,8.0nm,1.1s						
MOTA	**Moosalm**	**162.00**	**340**	*i* PKP	**PKPdf**	**18 32 05.3**	**-0.2**
	comp=Z,0.9nm,0.5s						
MOTA				*i* PKP	**PKPab**	**18 32 51.7**	**0.0**
	comp=Z,8.8nm,1.1s						
ABTA	**Abfaltersbach**	**162.06**	**336**	*i* PKP	**PKPdf**	**18 32 04.6**	**-0.9**
	comp=Z,6.1nm,1.4s						
ABTA				*i* PKP	**PKPab**	**18 32 50.6**	**-1.3**
	comp=Z,4.0nm,0.8s						
SQTA	**Sankt Quirin**	**162.07**	**339**	*e*PKP	**PKPdf**	**18 32 04.0**	**-1.6**
	comp=Z,1.5nm,0.6s						
SQTA				*i* PKP	**PKPab**	**18 32 51.6**	**-0.4**
	comp=Z,2.6nm,0.7s						
DAVA	**Damuels**	**162.39**	**342**	*i* PKP	**PKPdf**	**18 32 05.4**	**-0.5**
	comp=Z,3.6nm,0.9s						
DAVA				*i* PKP	**PKPab**	**18 32 53.1**	**-0.3**
	comp=Z,5.5nm,0.8s						
FETA	**Feichten**	**162.40**	**340**	*i* PKP	**PKPdf**	**18 32 05.7**	**-0.3**
	comp=Z,5.7nm,1.0s						
FETA				*i* PKP	**PKPab**	**18 32 53.5**	**0.0**
	comp=Z,5.1nm,0.9s						
TORD	**Torodi Ar. Bea**	**162.50**	**179**		**PKPdf**	**18 32 05.1**	**-1.7**
TORD					**PKPab**	**18 32 52.5**	**-1.9**
TORD	**Torodi Ar. Bea**	**162.50**	**179**	PKP	**PKPdf**	**18 32 06.8**	**+0.1**
	comp=Z,55nm,0.3s,baz=221,slow=1.2,SNR=2.0						
TORD				PKPab	**PKPab**	**18 32 55.1**	**+0.7**
	comp=Z,71nm,0.4s,baz=116,slow=3.4,SNR=1.4						
ESDC	**Sonseca Array**	**169.83**	**27**	PKP	**PKPdf**	**18 32 12.6**	**+0.6**
	comp=Z,4.0nm,1.2s,baz=328,slow=2.0,SNR=13						
ESDC				PKPab	**PKPab**	**18 33 25.9**	**-0.4**
	comp=Z,1.6nm,0.9s,baz=318,slow=4.1,SNR=6.2						

IDC 18 18:17:22.5±2.0**, 30°.96S×177°.53W, h0**^{km}**, mb3.9**/3**,**
mbtmp3.9/4**, Error ellipse: s-maj=48.1km s-min=38.0km**
az=73.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.51**	**210**	Pn	Pn	18 19 25.8	-1.2
	9.1nm,0.9s,baz=287,slow=17						
URZ				Sn	Sn	18 21 01.2	-2.6
ASAR	**Alice Springs**	**43.48**	**267**	P	P	18 25 27.7	-0.1
	0.9nm,0.6s,baz=103,slow=7.4,SNR=7.2						
	0.9nm,0.6s						
WRA	**Warramunga Arr**	**44.52**	**272**	P	P	18 25 36.2	+0.1
	1.2nm,0.6s,baz=113,slow=7.6,SNR=5.2						
	1.2nm,0.6s						
QSPA	**South Pole Qui**	**59.15**	**180**	P	P	18 27 25.1	+0.2
	2.0nm,1.1s,baz=135,slow=2.9,SNR=2.7						
	2.0nm,1.1s						
FINES	**FINESS Array B**	**145.81**	**340**	PKPbc	PKPdf	18 37 01.8	-0.5
	0.8nm,0.3s,baz=62,slow=3.5,SNR=9.4						

IDC ***18*** *18:21:50.7±0.5, 55°.22N×164°.83E, h0*^{km}*, mb4.2/26,*
mbtmp4.3/31, ML4.6/5, MS4.1/7, Error ellipse:
s-maj=15.1km s-min=10.4km az=168.0

NEIC ***18*** *18:21:51.2±2.3, 55°.03N±0°.07×164°.91E±0°.08, h10*^{km}*±1*^{km}*,*
mb4.7/264, Error ellipse: s-maj=12.8km s-min=7.0km
az=157.0

KRSC ***18*** *18:21:52.7±1.5, 55°.05N×164°.75E, h48*^{km}*±23*^{km}*, Mc5.1,*
Ml5.5, Felt [III-IV] at Nikolskoe; [III] at HMS cape Afrika.

MOS ***18*** *18:21:54.4±0.8, 55°.09N×164°.87E, h47*^{km}*, mb4.8/24, Error*
ellipse: s-maj=5.4km s-min=5.0km az=72.6

ISC 18 18:21:55.2±0.4**, 55°.05N**±0°.04×**164°.90E**±0°.03**, h40**^{km}±4^{km}**,**
n622, σ**1§11**/554**, mb4.6**/166**, MS4.4**/4**, 12C-1D,**
Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.64**	**75**	PN	**Pn**	**18 22 07.2**	**-0.5**
BKI				S	**Sn**	**18 22 16.5**	**-0.1**
BKI	**Bering**	**0.64**	**75**	*e*P	**Pn**	**18 22 07.2**	**-0.5**
BKI				*e*S	**Sn**	**18 22 16.5**	**-0.1**
KBTR	**Krutoberegovo**	**1.66**	**315**	PN	**Pn**	**18 22 19.0**	**-2.7**
KBTR	**Krutoberegovo**	**1.66**	**315**	*e*P	**Pn**	**18 22 19.1**	**-2.7**
KBG	**Krutoberegovo**	**1.74**	**315**	PN	**Pn**	**18 22 20.4**	**-2.4**
KBG				S	**Sn**	**18 22 39.4**	**-4.3**
KBG	**Krutoberegovo**	**1.74**	**315**	*e*P	**Pn**	**18 22 20.4**	**-2.4**
KBG				*e*S	**Sn**	**18 22 39.5**	**-4.3**
MKZ	**Mys Kozlova**	**1.90**	**256**	PN	**Pn**	**18 22 24.7**	**-0.3**
MKZ				S	**Sn**	**18 22 45.7**	**-2.0**
MKZ	**Mys Kozlova**	**1.90**	**256**	*e*P	**Pn**	**18 22 24.7**	**-0.3**
MKZ				*e*S	**Sn**	**18 22 45.7**	**-2.0**
SMKR	**Semkarok**	**2.48**	**310**	PN	**Pn**	**18 22 32.2**	**-0.8**
SMKR				S	**Sn**	**18 23 00.9**	**-1.1**
SMKR	**Semkarok**	**2.48**	**310**	*e*P	**Pn**	**18 22 32.3**	**-0.8**
SMKR				*e*S	**Sn**	**18 23 01.0**	**-1.1**
ZLN	**Zelenaya**	**2.52**	**294**	PN	**Pn**	**18 22 34.2**	**+0.5**
ZLN	**Zelenaya**	**2.52**	**294**	*e*P	**Pn**	**18 22 34.2**	**+0.5**
BZGR	**Bezymyannyi-Gr**	**2.56**	**292**	PN	**Pn**	**18 22 34.3**	**+0.1**
BZGR				S	**Sn**	**18 23 04.2**	**+0.2**
BZGR	**Bezymyannyi-Gr**	**2.56**	**292**	*e*P	**Pn**	**18 22 34.3**	**+0.1**
BZGR				*e*S	**Sn**	**18 23 04.3**	**+0.2**
BDR	**Baidarnaya**	**2.58**	**308**	PN	**Pn**	**18 22 34.9**	**+0.4**
BDR	**Baidarnaya**	**2.58**	**308**	*e*P	**Pn**	**18 22 34.9**	**+0.4**
CIRR	**Tsirk**	**2.59**	**296**	PN	**Pn**	**18 22 34.7**	**0.0**
CIRR	**Tsirk**	**2.59**	**296**	*e*P	**Pn**	**18 22 34.7**	**0.0**
TUMD	**Tumrok D**	**2.59**	**275**	PN	**Pn**	**18 22 34.5**	**0.0**
TUMD	**Tumrok D**	**2.59**	**275**	*e*P	**Pn**	**18 22 34.6**	**0.0**
LGNR	**Loginova**	**2.61**	**295**	PN	**Pn**	**18 22 35.4**	**+0.3**
LGNR	**Loginova**	**2.61**	**295**	*e*P	**Pn**	**18 22 35.4**	**+0.3**
SRKR	**Sorokina**	**2.65**	**309**	PN	**Pn**	**18 22 35.5**	**+0.1**
SRKR	**Sorokina**	**2.65**	**309**	*e*P	**Pn**	**18 22 35.6**	**+0.1**
BZMR	**Bezymyannaya**	**2.66**	**291**	PN	**Pn**	**18 22 36.0**	**+0.3**
BZMR	**Bezymyannaya**	**2.66**	**291**	*e*P	**Pn**	**18 22 36.1**	**+0.3**
BZWR	**Bezymyannyi-We**	**2.67**	**292**	PN	**Pn**	**18 22 36.2**	**+0.4**
BZWR	**Bezymyannyi-We**	**2.67**	**292**	*e*P	**Pn**	**18 22 36.2**	**+0.4**
KLY	**Klyuchi**	**2.72**	**300**	PN	**Pn**	**18 22 34.4**	**-1.9**
KLY	**Klyuchi**	**2.72**	**300**	*e*P	**Pn**	**18 22 34.5**	**-1.9**
KRSR	**Krestovskiy**	**2.73**	**297**	PN	**Pn**	**18 22 35.8**	**-0.7**
KRSR				S	**Sn**	**18 23 05.9**	**-2.3**
KRSR	**Krestovskiy**	**2.73**	**297**	*e*P	**Pn**	**18 22 35.8**	**-0.7**
KRSR				*e*S	**Sn**	**18 23 05.9**	**-2.3**
KIRR	**Kirishev**	**2.75**	**291**	PN	**Pn**	**18 22 37.1**	**+0.3**
KIRR	**Kirishev**	**2.75**	**291**	*e*P	**Pn**	**18 22 37.1**	**+0.3**
KMNR	**Kamenistaya**	**2.75**	**287**	PN	**Pn**	**18 22 37.5**	**+0.6**
KMNR	**Kamenistaya**	**2.75**	**287**	*e*P	**Pn**	**18 22 37.5**	**+0.6**
KPT	**Kopyto**	**2.82**	**291**	PN	**Pn**	**18 22 38.3**	**+0.6**
KPT	**Kopyto**	**2.82**	**291**	*e*P	**Pn**	**18 22 38.4**	**+0.6**
KOZ	**Kozyrevsk**	**3.03**	**292**	PN	**Pn**	**18 22 41.5**	**+0.9**
KOZ				S	**Sn**	**18 23 18.4**	**+2.8**
KOZ	**Kozyrevsk**	**3.03**	**292**	*e*P	**Pn**	**18 22 41.6**	**+0.9**
KOZ				*e*S	**Sn**	**18 23 18.4**	**+2.8**
SRDR	**Sredinnyy**	**3.20**	**296**	PN	**Pn**	**18 22 43.3**	**+0.3**
SRDR	**Sredinnyy**	**3.20**	**296**	*e*P	**Pn**	**18 22 43.3**	**+0.3**
KII	**Karymskiy**	**3.33**	**255**	PN	**Pn**	**18 22 45.6**	**+0.8**
KII	**Karymskiy**	**3.33**	**255**	*e*P	**Pn**	**18 22 45.7**	**+0.8**
SPN	**Mys Shipunski**	**3.47**	**238**	PN	**Pn**	**18 22 46.5**	**-0.1**
SPN	**Mys Shipunski**	**3.47**	**238**	*e*P	**Pn**	**18 22 46.6**	**-0.1**
SPN				*e*S	**Sn**	**18 23 23.0**	**-3.5**
ESO	**Esso**	**3.64**	**287**	PN	**Pn**	**18 22 49.2**	**+0.3**
ESO	**Esso**	**3.64**	**287**	*e*P	**Pn**	**18 22 49.2**	**+0.3**
NLC	**Nalytchevo**	**3.77**	**242**	PN	**Pn**	**18 22 50.8**	**+0.1**
NLC				S	**Sn**	**18 23 32.3**	**-1.5**
NLC	**Nalytchevo**	**3.77**	**242**	*e*P	**Pn**	**18 22 50.9**	**+0.1**
NLC				*e*S	**Sn**	**18 23 32.3**	**-1.5**
SMAR	**Somma**	**4.01**	**246**	PN	**Pn**	**18 22 55.0**	**+0.8**
SMAR				S	**Sn**	**18 23 39.0**	**-0.9**
SMAR	**Somma**	**4.01**	**246**	*e*P	**Pn**	**18 22 55.0**	**+0.8**
SMAR				*e*S	**Sn**	**18 23 39.1**	**-0.9**
KRER	**Koryakskii**	**4.01**	**247**	PN	**Pn**	**18 22 55.9**	**+1.6**
KRER				S	**Sn**	**18 23 39.0**	**-1.1**
KRER	**Koryakskii**	**4.01**	**247**	*e*P	**Pn**	**18 22 55.9**	**+1.6**
KRER				*e*S	**Sn**	**18 23 39.0**	**-1.1**
UGLR	**Uglovaya**	**4.02**	**245**	PN	**Pn**	**18 22 55.2**	**+1.0**
UGLR				S	**Sn**	**18 23 39.4**	**-0.7**
UGLR	**Uglovaya**	**4.02**	**245**	*e*P	**Pn**	**18 22 55.3**	**+1.0**
UGLR				*e*S	**Sn**	**18 23 39.4**	**-0.7**
AVH	**Avacha**	**4.04**	**246**	PN	**Pn**	**18 22 55.9**	**+1.4**
AVH				S	**Sn**	**18 23 40.6**	**+0.1**
AVH	**Avacha**	**4.04**	**246**	*e*P	**Pn**	**18 22 55.9**	**+1.4**
AVH				*e*S	**Sn**	**18 23 40.6**	**+0.1**
KRX	**Arik**	**4.04**	**248**	PN	**Pn**	**18 22 55.8**	**+1.2**
KRX	**Arik**	**4.04**	**248**	*e*P	**Pn**	**18 22 55.8**	**+1.2**
KOK	**Koryaka**	**4.08**	**247**	PN	**Pn**	**18 22 56.2**	**+1.1**
KOK	**Koryaka**	**4.08**	**247**	*e*P	**Pn**	**18 22 56.2**	**+1.1**
KOK				*e*S	**Sn**	**18 23 40.0**	**-1.5**
DALK	**Dalny**	**4.15**	**243**	PN	**Pn**	**18 22 56.4**	**+0.5**
DALK	**Dalny**	**4.15**	**243**	*e*P	**Pn**	**18 22 56.4**	**+0.5**
DALK				*e*S	**Sn**	**18 23 41.1**	**-2.0**
PET	**Petropavlovsk**	**4.20**	**244**		**Pn**	**18 22 56.6**	**-0.1**
PET				Sn	**Sn**	**18 23 39.5**	**-5.0**
PET	**Petropavlovsk**	**4.20**	**244**	*e*PN	**Pn**	**18 22 57.5**	**+0.8**
PET				pmax	pmax		
	comp=Z,214nm,0.5s						
PET				MLR	MLR		
	comp=Z,900nm,13.0s						
PET				MLR	MLR		
	comp=Z,800nm,13.0s						
INSR	**Institute**	**4.21**	**244**	PN	**Pn**	**18 22 57.6**	**+0.9**
INSR	**Institute**	**4.21**	**244**	*e*P	**Pn**	**18 22 57.6**	**+0.9**
INSR				*e*S	**Sn**	**18 23 43.5**	**-1.1**
KRMR	**Karymshinskiy**	**4.58**	**244**	PN	**Pn**	**18 23 03.2**	**+1.4**
KRMR	**Karymshinskiy**	**4.58**	**244**	*e*P	**Pn**	**18 23 03.2**	**+1.4**
KRMR				*e*S	**Sn**	**18 23 53.0**	**-0.6**
RUS	**Russkaya**	**4.61**	**238**	PN	**Pn**	**18 23 02.8**	**+0.6**
RUS	**Russkaya**	**4.61**	**238**	*e*P	**Pn**	**18 23 02.9**	**+0.6**
RUS				*e*S	**Sn**	**18 23 51.9**	**-2.5**
PEA0B	**Petropavlovsk-**	**4.66**	**248**		**Pn**	**18 23 04.3**	**+1.3**
PEA0B	**Petropavlovsk-**	**4.66**	**248**	*ce*PN	**Pn**	**18 23 04.9**	**+1.9**
PETK	**Petropavlovsk-**	**4.66**	**248**		**Pn**	**18 23 03.4**	**+0.3**
PETK				Sn	**Sn**	**18 23 55.2**	**-0.6**
PETK	**Petropavlovsk-**	**4.66**	**248**	Pn	**Pn**	**18 23 03.4**	**+0.3**
	comp=Z,47nm,0.3s,baz=68,slow=17,SNR=626						
PETK				Sn	**Sn**	**18 23 56.0**	**+0.1**
	comp=Z,48nm,0.3s,baz=304,slow=11,SNR=12						
PETK				LR	LR	18 24 35.5	
	comp=Z,752nm,20.8s,baz=64,slow=35						
	comp=Z,52nm,0.3s						
MTVR	**Mutnovka**	**4.74**	**240**	PN	**Pn**	**18 23 05.2**	**+1.0**
MTVR	**Mutnovka**	**4.74**	**240**	*e*P	**Pn**	**18 23 05.3**	**+1.0**
MTVR				*e*S	**Sn**	**18 23 55.7**	**-2.2**
GRL	**Gorelyy**	**4.75**	**241**	PN	**Pn**	**18 23 06.0**	**+1.6**
GRL	**Gorelyy**	**4.75**	**241**	*e*P	**Pn**	**18 23 06.0**	**+1.6**
GRL				*e*S	**Sn**	**18 23 58.1**	**-0.2**
ASAK	**Asacha**	**4.94**	**240**	PN	**Pn**	**18 23 08.6**	**+1.7**
ASAK	**Asacha**	**4.94**	**240**	*e*P	**Pn**	**18 23 08.7**	**+1.7**
ASAK				*e*S	**Sn**	**18 24 01.4**	**-1.4**
APC	**Apacha**	**5.04**	**248**	PN	**Pn**	**18 23 10.0**	**+1.9**
APC				S	**Sn**	**18 24 05.6**	**+0.6**
APC	**Apacha**	**5.04**	**248**	*e*P	**Pn**	**18 23 10.0**	**+1.9**
APC				*e*S	**Sn**	**18 24 05.6**	**+0.6**
SHEM	**Shemya Is, Ala**	**5.91**	**109**	Pn	**Pn**	**18 23 21.6**	**+1.4**
	comp=Z,42nm,0.3s,baz=331,slow=4.2,SNR=17						
SHEM				Sn	**Sn**	**18 24 24.6**	**-1.9**
	comp=Z,22nm,0.3s,baz=268,slow=18,SNR=3.6						
SHEM				LR	LR	18 25 17.5	
	comp=Z,771nm,20.0s,baz=288,slow=34						
	comp=Z,108nm,0.2s						
SKR	**Severo-Kuril’s**	**6.88**	**234**	*e*PN	**Pn**	**18 23 34.0**	**+0.6**
SKR				pmax	pmax		
	comp=Z,182nm,0.6s						
SKR				pmax	pmax		
	comp=Z,700nm,4.5s						
SKR				MLR	MLR		
	comp=Z,1μm,14.0s						
SKR	**Severo-Kuril’s**	**6.88**	**234**	*e*P	**Pn**	**18 23 33.9**	**+0.6**
KMSK	**Kamenskaya**	**7.48**	**5**	PN	**Pn**	**18 23 42.0**	**+0.5**
KMSK	**Kamenskaya**	**7.48**	**5**	*e*P	**Pn**	**18 23 42.0**	**+0.5**
MA2	**Magadan**	**8.89**	**306**	Pn	**Pn**	**18 24 01.1**	**+0.2**
MA2	**Magadan**	**8.89**	**306**	Pn	**Pn**	**18 24 00.0**	**-0.9**
	comp=Z,0.5nm,0.3s,baz=110,slow=9.1,SNR=4.4						
MA2				LR	LR	18 27 41.1	
	comp=Z,989nm,18.1s,baz=318,slow=40						
	comp=Z,14nm,0.8s						
MA2	**Magadan**	**8.89**	**306**	*i* PN	**Pn**	**18 23 59.3**	**-1.6**
AMKA	**Amchitka**	**9.39**	**107**		**Pn**	**18 24 09.0**	**+1.3**
SEY	**Seymchan**	**10.19**	**326**	Pn	**Pn**	**18 24 19.1**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=226,slow=22,SNR=3.8						
SEY	**Seymchan**	**10.19**	**326**	*i* PN	**Pn**	**18 24 18.6**	**-0.1**
GSTR	**Great Sitkin T**	**11.69**	**97**		**Pn**	**18 24 40.2**	**+0.9**
ATKA	**Atka Island**	**12.72**	**94**		**Pn**	**18 24 54.2**	**+0.9**
BILL	**Bilibino**	**13.06**	**2**		**Pn**	**18 24 59.8**	**+2.0**
BILL	**Bilibino**	**13.06**	**2**	*ce*PN	**Pn**	**18 25 00.2**	**+2.4**
BILL				pmax	pmax		
	comp=Z,19nm,1.0s						
SPIA	**Saint Paul Isl**	**14.00**	**71**	P	**Pn**	**18 25 12.4**	**+1.6**
	baz=272						
P08K	**Saint George I**	**14.42**	**73**		**Pn**	**18 25 18.6**	**+2.2**
P08K	**Saint George I**	**14.42**	**73**	P	**Pn**	**18 25 17.7**	**+1.4**
	baz=275						
GAMB	**Gambell**	**14.69**	**44**	P	**Pn**	**18 25 20.7**	**+0.8**
	baz=245						
NIKH	**Nikolski High**	**15.54**	**87**		**Pn**	**18 25 29.0**	**-2.2**
NIKH	**Nikolski High**	**15.54**	**87**	P	**Pn**	**18 25 32.6**	**+1.4**
	baz=288						
YSS	**Yuzhno-Sakhali**	**16.07**	**249**	P	**Pn**	**18 25 36.8**	**-1.2**
YSS	**Yuzhno-Sakhali**	**16.07**	**249**	*e*P	**P**	**18 25 41.6**	**+0.7**
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
SHO	**Shikotan**	**16.16**	**234**	*e*P	**Pn**	**18 25 35.4**	**-3.8**
SHO				pmax	pmax		
	comp=Z,22nm,0.7s						
SHO				pmax	pmax		
	comp=N,5.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,13nm,0.6s						
M11K	**Mekoryuk**	**16.25**	**59**	P	**Pn**	**18 25 41.2**	**+1.0**
	baz=264						
UNV	**Unalaska Valle**	**16.63**	**82**	P	**P**	**18 25 46.7**	**-0.3**
	baz=286						
LVA	**Lava Point**	**16.81**	**81**	P	**P**	**18 25 48.3**	**-0.8**
TNA	**Tin City**	**16.93**	**41**	P	**P**	**18 25 50.4**	**+0.1**
	baz=245						
AKUT	**Akutan**	**16.97**	**81**	P	**P**	**18 25 50.3**	**-0.5**
K13K	**Kusilvak Mount**	**17.21**	**54**	P	**P**	**18 25 53.5**	**0.0**
	baz=260						
F14K	**Arctic Creek**	**17.50**	**42**	P	**P**	**18 25 56.7**	**+0.1**
	baz=247						
ANM	**Nome**	**17.55**	**45**	P	**P**	**18 25 57.3**	**+0.1**
	baz=251						
GRNR	**Gornyy**	**17.64**	**268**	⇓*i*P	**P**	**18 25 58.5**	**+0.2**
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
M13K	**Dall Lake**	**17.66**	**59**	P	**P**	**18 25 59.0**	**+0.6**
	baz=267						
J14K	**Nanvaranak Lak**	**17.87**	**52**	P	**P**	**18 26 01.9**	**+1.3**
J14K	**Nanvaranak Lak**	**17.87**	**52**	P	**P**	**18 26 01.9**	**+1.3**
	baz=259						
JKA	**Kamikawa-asahi**	**18.04**	**242**		**Pn**	**18 26 02.6**	**-0.1**
ASAJ	**Asahikawa**	**18.05**	**242**	P	**P**	**18 26 02.9**	**+0.2**
	comp=Z,2.1nm,0.3s,baz=62,slow=7.9,SNR=12						
	comp=Z,14nm,0.5s						
ASAJ	**Asahikawa**	**18.05**	**242**	P	**Pn**	**18 26 02.6**	**-0.1**
ASAJ				pmax	pmax		
	comp=Z,28nm,0.9s						
L14K	**Kuka Creek**	**18.07**	**56**		**P**	**18 26 04.5**	**+1.6**
L14K	**Kuka Creek**	**18.07**	**56**	P	**P**	**18 26 04.3**	**+1.4**
	baz=264						
FALS	**False Pass**	**18.12**	**78**	P	**P**	**18 26 04.4**	**+0.9**
	baz=284						
G15K	**Niukluk**	**18.23**	**44**	P	**Pn**	**18 26 05.3**	**+0.5**
	baz=252						
F15K	**North Star Dit**	**18.24**	**42**	P	**Pn**	**18 26 04.9**	**0.0**
	baz=249						
M14K	**Bethel**	**18.37**	**58**		**Pn**	**18 26 07.3**	**+0.8**
M14K	**Bethel**	**18.37**	**58**	P	**Pn**	**18 26 07.3**	**+0.8**
	baz=267						
N14K	**Kuskokwak Cree**	**18.48**	**61**	P	**Pn**	**18 26 08.9**	**+1.1**
	baz=270						
L15K	**Ungalak Mounta**	**18.67**	**56**	P	**Pn**	**18 26 10.8**	**+0.6**
	baz=265						
S12K	**Black Hills**	**18.69**	**74**	P	**Pn**	**18 26 10.6**	**+0.1**
	baz=282						
O14K	**Tigyukauivet M**	**18.70**	**63**	P	**Pn**	**18 26 10.8**	**+0.4**
	baz=272						
K15K	**Wolf Creek Mou**	**18.72**	**54**		**Pn**	**18 26 10.8**	**0.0**
K15K	**Wolf Creek Mou**	**18.72**	**54**	P	**Pn**	**18 26 11.2**	**+0.5**
	baz=263						
M15K	**Kasigluk River**	**18.99**	**59**	P	**Pn**	**18 26 14.4**	**+0.4**
	baz=268						
C16K	**Lisburne Hills**	**19.09**	**34**	P	**P**	**18 26 13.4**	**-0.6**
C16K	**Lisburne Hills**	**19.09**	**34**	P	**Pn**	**18 26 15.7**	**+0.6**
	baz=241						
N15K	**Kwethluk River**	**19.28**	**60**		**Pn**	**18 26 17.4**	**-0.1**
N15K				IAmb	IAmb	18 26 19.3	
	comp=Z,46nm,1.0s						
N15K	**Kwethluk River**	**19.28**	**60**	P	**Pn**	**18 26 17.8**	**+0.4**
	baz=270,SNR=7.7						
J16K	**Anvik River**	**19.29**	**51**	P	**Pn**	**18 26 17.8**	**+0.2**
	baz=261						
ERM	**Erimo**	**19.32**	**237**	P	**P**	**18 26 15.2**	**-1.5**
ERM	**Erimo**	**19.32**	**237**	*i* P	**P**	**18 26 15.9**	**-0.8**
O15K	**Ungalikthiuk R**	**19.44**	**63**		**P**	**18 26 16.4**	**-1.5**
O15K				IAmb	IAmb	18 26 20.3	
	comp=Z,38nm,1.1s						
O15K	**Ungalikthiuk R**	**19.44**	**63**	P	**Pn**	**18 26 19.1**	**-0.4**
	baz=273,SNR=5.8						
YAK	**Yakutsk**	**19.46**	**305**		**P**	**18 26 15.5**	**-2.6**
YAK	**Yakutsk**	**19.46**	**305**	P	**P**	**18 26 16.8**	**-1.3**
	comp=Z,3.2nm,0.3s,baz=98,slow=4.6,SNR=22						
	comp=Z,44nm,0.8s						
YAK	**Yakutsk**	**19.46**	**305**	*e*P	**P**	**18 26 17.6**	**-0.5**
YAK				*e*S	**Sn**	**18 29 57.0**	**+0.3**
YAK				pmax	pmax		
	comp=Z,67nm,1.0s						
YAK				pmax	pmax		
	comp=N,12nm,1.2s						
YAK				pmax	pmax		
	comp=E,27nm,1.3s						
YAK				smax	smax		
	comp=N,93nm,3.5s						
YAK				smax	smax		
	comp=E,92nm,3.0s						
YAK				MLR	MLR		
	comp=Z,839nm,22.0s						
YAK				MLR	MLR		
	comp=N,1μm,19.0s						
YAK				MLR	MLR		
	comp=E,720nm,23.0s						
D17K	**Noatak River**	**19.59**	**37**	P	**Pn**	**18 26 21.2**	**+0.2**
	baz=246						
L16K	**Owhat River**	**19.63**	**56**		**Pn**	**18 26 21.7**	**+0.1**
L16K				IAmb	IAmb	18 26 32.6	
	comp=Z,24nm,0.7s						
L16K	**Owhat River**	**19.63**	**56**	P	**Pn**	**18 26 21.7**	**+0.1**
	baz=266						
SDPT	**Sand Point**	**19.65**	**75**	P	**P**	**18 26 19.6**	**-0.6**
SDPT	**Sand Point**	**19.65**	**75**	P	**Pn**	**18 26 21.9**	**0.0**
	baz=284						
G17K	**Kiwalik Mounta**	**19.75**	**44**	P	**Pn**	**18 26 22.3**	**-0.6**
	baz=255						
E17K	**Hotham Inlet**	**19.80**	**39**	P	**Pn**	**18 26 23.1**	**-0.4**
	baz=249						
RDOG	**Red Dog Mine**	**19.80**	**36**	P	**Pn**	**18 26 23.3**	**-0.3**
	baz=245						
M16K	**Timber Creek**	**19.85**	**58**		**P**	**18 26 23.2**	**+0.9**
M16K				IAmb	IAmb	18 26 25.1	
	comp=Z,41nm,0.9s						
M16K	**Timber Creek**	**19.85**	**58**	P	**Pn**	**18 26 23.9**	**-0.3**
	baz=269,SNR=9.2						
C17K	**DeLong Mountai**	**19.89**	**35**	P	**Pn**	**18 26 24.1**	**-0.6**
	baz=244						
H17K	**Granite Mounta**	**19.91**	**46**	P	**Pn**	**18 26 24.5**	**-0.4**
	baz=257						
N16K	**Nishlik Lake**	**19.94**	**59**	P	**Pn**	**18 26 24.6**	**-0.7**
	baz=271,SNR=5.5						
S14K	**Fog Glacier**	**19.95**	**72**	P	**Pn**	**18 26 25.0**	**-0.6**
	baz=282						
J17K	**VABM Dome**	**19.98**	**51**	P	**Pn**	**18 26 25.3**	**-0.4**
	baz=262,SNR=7.5						
L17K	**Donlin**	**20.21**	**55**	P	Pn	18 26 27.5	-1.0
	baz=266,SNR=11						
K17K	**Iditarod**	**20.26**	**53**	IAmb	IAmb	18 26 29.4	
	comp=Z,41nm,0.9s						
K17K	**Iditarod**	**20.26**	**53**	P	**P**	**18 26 27.7**	**+0.9**
	baz=265						
CHNA	**Chernabura Isl**	**20.27**	**76**	P	**P**	**18 26 27.1**	**+0.1**
	baz=286						
CNBA	**Chernabura Isl**	**20.27**	**76**		**P**	**18 26 25.9**	**-1.1**
CNBA				IAmb	IAmb	18 26 32.3	
	comp=Z,36nm,1.0s						
O16K	**Kokwok River B**	**20.30**	**62**	P	**P**	**18 26 27.1**	**-0.3**
	baz=274						
E18K	**Tukpahlearik C**	**20.36**	**39**	P	**P**	**18 26 28.4**	**+0.5**
	baz=250						
F18K	**Selawik**	**20.45**	**42**	P	Pn	18 26 30.4	-0.8
	baz=253						
M17K	**Holitna River**	**20.59**	**57**	IAmb	IAmb	18 26 36.3	
	comp=Z,44nm,0.8s						
M17K	**Holitna River**	**20.59**	**57**	P	Pn	18 26 31.8	-1.1
	baz=269,SNR=13						
H18K	**Honhosa River**	**20.60**	**46**	P	**P**	**18 26 31.5**	**+1.0**
	baz=258						
TEY	**Ternei**	**20.61**	**253**	*e*P	**P**	**18 26 31.2**	**+0.4**
C18K	**Utukok River**	**20.62**	**35**	IAmb	IAmb	18 26 44.2	
	comp=Z,37nm,1.4s						
C18K	**Utukok River**	**20.62**	**35**	P	Pn	18 26 32.2	-1.1
	baz=246						
G18K	**Tagagawik**	**20.65**	**44**	P	**P**	**18 26 31.8**	**+0.8**
	baz=256						
N17K	**Nushagak Hills**	**20.72**	**59**	P	**P**	**18 26 32.6**	**+0.8**
	baz=272						
B18K	**Kokolik River**	**20.74**	**33**	P	**P**	**18 26 32.9**	**+1.0**
	baz=243						
O17K	**Koliganek Bris**	**20.80**	**61**	P	**P**	**18 26 33.6**	**+0.9**
	baz=274,SNR=5.7						
L18K	**Granite Mounta**	**20.97**	**54**	P	**P**	**18 26 35.7**	**+1.1**
	baz=268,SNR=9.4						
KLR	**Kul'dur**	**21.02**	**268**	P	**P**	**18 26 35.4**	**+0.1**
	comp=Z,8.3nm,1.0s,baz=62,slow=11,SNR=8.5						
	comp=Z,8.3nm,1.0s						
KLR	**Kul'dur**	**21.02**	**268**	*ce*P	**P**	**18 26 36.3**	**+1.1**
KLR				pmax	pmax		
	comp=Z,26nm,1.7s						
J18K	**Innoko River**	**21.05**	**51**	IAmb	IAmb	18 26 50.5	
	comp=Z,40nm,0.9s						
J18K	**Innoko River**	**21.05**	**51**	P	**P**	**18 26 36.2**	**+0.9**
	baz=264,SNR=17						
Q16K	**King Salmon**	**21.12**	**64**	P	**P**	**18 26 37.2**	**+1.1**
	baz=277						
GCSA	**Galena City Sc**	**21.14**	**47**	P	**P**	**18 26 37.0**	**+0.6**
	baz=261						
P17K	**Kvichak River**	**21.18**	**63**	P	**P**	**18 26 37.1**	**+0.4**
	baz=276,SNR=6.8						
JTM	**Tenmabayashi**	**21.27**	**238**	P	**P**	**18 26 37.4**	**-0.4**
G19K	**Purcell Mounta**	**21.33**	**44**	P	**P**	**18 26 39.6**	**+1.3**
	baz=257						
C19K	**Lookout Ridge**	**21.34**	**35**	IAmb	IAmb	18 26 55.0	
	comp=Z,24nm,0.8s						
C19K	**Lookout Ridge**	**21.34**	**35**	P	**P**	**18 26 39.0**	**+0.5**
	baz=247						
A19K	**Wainwright**	**21.35**	**32**	P	**P**	**18 26 39.6**	**+1.1**
	baz=242						
N18K	**Kilae Creek**	**21.35**	**59**	IAmb	IAmb	18 26 43.0	
	comp=Z,23nm,0.9s						
N18K	**Kilae Creek**	**21.35**	**59**	P	**P**	**18 26 38.7**	**+0.1**
	baz=272,SNR=9.9						
M18K	**Stony River**	**21.37**	**56**	P	**P**	**18 26 39.4**	**+0.7**
	baz=270,SNR=5.9						
H19K	**Roundabout Mou**	**21.46**	**45**	P	**P**	**18 26 40.6**	**+0.9**
	baz=260						
Q17K	**Contact Creek**	**21.58**	**65**	P	**P**	**18 26 41.5**	**+0.3**
	baz=279,SNR=5.2						
J19K	**Poorman**	**21.59**	**50**	P	**P**	**18 26 41.9**	**+0.8**
	baz=264,SNR=9.6						
E19K	**Redstone River**	**21.61**	**40**	P	**P**	**18 26 42.8**	**+1.4**
	baz=254						
D19K	**Kuna River**	**21.61**	**37**	P	**P**	**18 26 42.3**	**+0.9**
	baz=250						
O18K	**Koktuh Hills**	**21.74**	**61**		**P**	**18 26 43.1**	**+0.3**
O18K				IAmb	IAmb	18 26 44.7	
	comp=Z,29nm,1.1s						
O18K	**Koktuh Hills**	**21.74**	**61**	P	**P**	**18 26 43.1**	**+0.3**
	baz=275						
P18K	**Big Mountain,**	**21.78**	**62**	P	**P**	**18 26 43.9**	**+0.7**
	baz=276						
ZEA	**Zeya**	**21.79**	**282**	*e*P	**P**	**18 26 42.7**	**-0.7**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						

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L19K  White Mountain    21.83  55     P      P      18 26 44.6 +0.9
      baz=270,SNR=9.3
Q18K  Katmai Hardscr    21.98  64     P      P      18 26 45.2 -0.3
      baz=278
N19K  Bonanza Creek     22.04  58     P      P      18 26 46.3 +0.2
      baz=273,SNR=6.9
M19K  Big River Lodg    22.05  55     P      P      18 26 46.1 +0.1
M19K  Big River Lodg    22.05  55     P      P      18 26 46.5 +0.4
      baz=271
F20K  Avaraart Lake     22.07  41     P      P      18 26 47.1 +0.9
      baz=257
H20K  Anotleneega Mo    22.10  46     P      P      18 26 46.9 +0.3
      baz=261,SNR=6.4
O19K  Port Alsworth     22.16  60     P      P      18 26 47.9 +0.7
      baz=275
I20K  Naaghedeneel      22.17  48     IAmb   IAmb   18 27 04.6
      comp=Z,34nm,1.1s
I20K  Naaghedeneel      22.17  48     P      P      18 26 47.8 +0.5
      baz=263
CHIR  Chirikof Islan    22.21  72     P      P      18 26 47.6 -0.2
      baz=285
D20K  Etivluk River     22.21  37     P      P      18 26 48.1 +0.3
      baz=252
E20K  Nigu River        22.22  38     P      P      18 26 48.5 +0.6
      baz=253
K20K  Telida            22.23  51     P      P      18 26 47.9 -0.1
      baz=267,SNR=11
J20K  Nowinta River     22.25  49     P      P      18 26 48.5 +0.3
      baz=265,SNR=19
L20K  Farewell, AK      22.29  54     P      P      18 26 48.9 +0.2
      baz=270
B20K  Meade River       22.48  34     IAmb   IAmb   18 27 24.5
      comp=Z,20nm,0.9s
B20K  Meade River       22.48  34     P      P      18 26 51.1 +0.5
      baz=248
TIXI  Tiksi             22.62 331            P      18 26 51.6 -0.5
TIXI                                  IAmb   IAmb   18 27 00.8
      comp=Z,28nm,1.2s
TIXI  Tiksi             22.62 331     P      P      18 26 51.2 -0.8
      comp=Z,2.4nm,0.5s,baz=119,slow=11,SNR=12
      comp=Z,2.4nm,0.5s
TIXI  Tiksi             22.62 331 ceP      P      18 26 53.2 +1.1
TIXI                                  pmax   pmax
      comp=Z,4.0nm,0.7s
IMAR  Indian Mountai    22.63  45     P      P      18 26 52.2 -0.1
M20K  Styx River        22.64  55     P      P      18 26 52.5  0.0
      baz=272
Q19K  Cape Douglas,     22.64  63     IAmb   IAmb   18 26 54.8
      comp=Z,37nm,1.0s
Q19K  Cape Douglas,     22.64  63     P      P      18 26 51.9 -0.6
      baz=278
P19K  Oil Pt            22.76  61     P      P      18 26 53.7  0.0
      baz=277
ILSW  Iliamna Southw    22.77  60     IAmb   IAmb   18 26 56.7
      comp=Z,30nm,1.2s
SII   Sitkinak Islan    22.81  69     P      P      18 26 53.4 -0.8
      baz=284
G21K  Allakaket         22.82  43     IAmb   IAmb   18 27 06.3
      comp=Z,20nm,1.1s
G21K  Allakaket         22.82  43     P      P      18 26 55.0 +0.8
      baz=260
F21K  Alatna River      22.96  42     IAmb   IAmb   18 27 23.4
      comp=Z,30nm,1.4s
F21K  Alatna River      22.96  42     P      P      18 26 55.9 +0.2
      baz=259
H21K  Melozitna Rive    22.97  46     IAmb   IAmb   18 27 07.7
      comp=Z,28nm,1.1s
H21K  Melozitna Rive    22.97  46     P      P      18 26 56.0 +0.1
      baz=263,SNR=9.5
C21K  Knifeblade Rid    22.98  36     P      P      18 26 56.0 +0.1
      baz=253
O20K  Slope Mountain    23.02  60     P      P      18 26 55.7 -0.7
      baz=276
CHUM  Lake Minchumin    23.03  50     P      P      18 26 56.2 -0.3
      baz=268
HEH   HeiHe             23.05 274  eP      P      18 26 55.4 -1.3
HEH                                   pmax   pmax
      comp=Z,12nm,0.9s
E21K  Killik River      23.06  38     P      P      18 26 56.7  0.0
      baz=255
PPLA  Purkeypile        23.07  53     IAmb   IAmb   18 27 10.1
      comp=Z,34nm,1.2s
PPLA  Purkeypile        23.07  53     P      P      18 26 56.3 -0.7
      baz=270,SNR=5.4
N20K  Mount Spurr       23.12  57     P      P      18 26 57.3 -0.2
      baz=274
SPCR  Spurr Chakacha    23.12  57     P      P      18 26 57.5 +0.1
      baz=274
CAST  Castle Rocks      23.12  51     IAmb   IAmb   18 26 60.0
      comp=Z,15nm,0.8s
CAST  Castle Rocks      23.12  51     P      P      18 26 57.2 -0.2
      baz=269,SNR=14
OHAK  Old Harbor        23.14  67     IAmb   IAmb   18 26 58.4
      comp=Z,38nm,1.4s
OHAK  Old Harbor        23.14  67     P      P      18 26 56.8 -0.7
      baz=283
A21K  Barrow            23.17  31     P      P      18 26 58.0 +0.3
      baz=246
B21K  Ikpikpuk River    23.18  35     IAmb   IAmb   18 27 09.7
      comp=Z,31nm,1.0s
B21K  Ikpikpuk River    23.18  35     P      P      18 26 57.2 -0.6
      baz=252
SPU   Mount Spurr       23.20  57     IAmb   IAmb   18 27 01.2
      comp=Z,20nm,1.1s
Q20K  Shuyak Island     23.34  64     P      P      18 26 58.9 -0.6
      baz=280,SNR=7.4
KDAK  Kodiak Island     23.39  66     P      P      18 26 59.3 -0.8
KDAK                                  IAmb   IAmb   18 27 02.3
      comp=Z,16nm,0.9s
KDAK  Kodiak Island     23.39  66     P      P      18 26 59.3 -0.8
KDAK                                  pmax   pmax
      comp=Z,17nm,0.9s
KDAK  Kodiak Island     23.39  66     P      P      18 26 59.0 -1.1
      baz=282
SKT   Skwentna          23.40  55     IAmb   IAmb   18 27 02.1
      comp=Z,25nm,1.0s
SKT   Skwentna          23.40  55     P      P      18 26 59.9 -0.2
      baz=273,SNR=12
A22K  Sinclair Lake     23.54  32     P      P      18 27 01.4 +0.2
      baz=248
H22K  Ishtalitna Cre    23.59  45     P      P      18 27 02.0 +0.1
      baz=264
BPAW  Bear Paw Mtn.     23.63  50     IAmb   IAmb   18 27 03.9
      comp=Z,42nm,1.5s
BPAW  Bear Paw Mtn.     23.63  50     P      P      18 27 02.3  0.0
      baz=268,SNR=14
D22K  Ayikyak River     23.63  38     IAmb   IAmb   18 27 28.5
      comp=Z,26nm,1.2s
D22K  Ayikyak River     23.63  38     P      P      18 27 02.4 +0.1
      baz=256
KTH   Kantishna Hill    23.65  51     IAmb   IAmb   18 27 14.7
      comp=Z,31nm,1.2s
G22K  Bettles           23.67  43     P      P      18 27 02.6  0.0
      baz=262
USRK  Ussuriysk Ar.     23.70 256     P      P      18 27 02.6 -0.5
      comp=Z,2.4nm,0.9s,baz=56,slow=11,SNR=2.8
      comp=Z,2.4nm,0.9s
E22K  Anaktuvuk Pass    23.77  40     IAmb   IAmb   18 27 19.6
      comp=Z,18nm,0.8s
E22K  Anaktuvuk Pass    23.77  40     P      P      18 27 03.4 -0.2
      baz=258
MLY   Manley            23.78  47     IAmb   IAmb   18 27 14.8
      comp=Z,18nm,1.2s
MLY   Manley            23.78  47     P      P      18 27 03.4 -0.4
      baz=267,SNR=13
CNPM  China Poot        23.78  61     IAmb   IAmb   18 27 06.0
      comp=Z,30nm,1.0s
B22K  Teshekpuk Lake    23.79  34     IAmb   IAmb   18 27 19.8
      comp=Z,30nm,1.0s
B22K  Teshekpuk Lake    23.79  34     P      P      18 27 03.6 -0.1
      baz=252
SUA   Susitna One       23.80  56     P      P      18 27 04.5 +0.5
      baz=275,SNR=7.3
TRF   Thorofare Moun    23.93  51     P      P      18 27 05.0 -0.3
      baz=271,SNR=39
CUT   Chulitna          23.97  54     P      P      18 27 05.4 -0.1
      baz=273
BRSE  Bradley Lake S    24.00  61     P      P      18 27 04.9 -0.9
      baz=279
COLD  Coldfoot          24.22  42     P      P      18 27 08.5 +0.8
      baz=262
G23K  Bananza Creek     24.22  43     P      P      18 27 08.3 +0.5
      baz=264
RC01  Rabbit Creek A    24.32  57     P      P      18 27 08.6 -0.1
      baz=276
H23K  Yukon River       24.33  46     IAmb   IAmb   18 27 21.0
      comp=Z,31nm,1.2s
H23K  Yukon River       24.33  46     P      P      18 27 09.4 +0.6
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      baz=266,SNR=18
D23K  Nanushuk River    24.35  38     IAmb   IAmb   18 27 49.1
      comp=Z,27nm,1.4s
D23K  Nanushuk River    24.35  38     P      P      18 27 09.5 +0.6
      baz=258
I23K  Minto, Yukon-K    24.37  47     P      P      18 27 09.4 +0.4
      baz=268,SNR=19
O22K  Cooper Landing    24.40  59     P      P      18 27 09.3 -0.1
      baz=278
NEA2  Nenana            24.47  49     IAmb   IAmb   18 27 11.8
      comp=Z,19nm,0.8s
NEA2  Nenana            24.47  49     P      P      18 27 10.0  0.0
      baz=269,SNR=15
MCK   McKinley          24.53  51     IAmb   IAmb   18 27 23.3
      comp=Z,24nm,1.0s
MCK   McKinley          24.53  51     P      P      18 27 10.8 +0.2
      baz=271,SNR=8.0
PMR   Palmer            24.56  56     P      P      18 27 10.8 -0.1
      baz=276
E23K  Chandalar         24.57  40            P      18 27 10.2 -0.8
E23K  Chandalar         24.57  40     P      P      18 27 10.8 -0.2
      baz=261,SNR=9.8
C23K  Itkillik River    24.57  36     IAmb   IAmb   18 27 23.5
      comp=Z,24nm,1.2s
C23K  Itkillik River    24.57  36     P      P      18 27 10.5 -0.4
      baz=256
SEW   Seward            24.59  59     IAmb   IAmb   18 27 11.1
      comp=Z,21nm,1.0s
SEW   Seward            24.59  59     P      P      18 27 10.4 -0.7
      baz=279,SNR=5.2
TOLK  Toolik Lake Re    24.68  39            P      18 27 11.0 -1.0
TOLK                                  IAmb   IAmb   18 27 23.6
      comp=Z,21nm,0.8s
TOLK  Toolik Lake Re    24.68  39     P      P      18 27 12.0 +0.1
      baz=260,SNR=6.0
WAT1  Susitna Watana    24.74  53     P      P      18 27 12.2 -0.3
      baz=274
MDJ   Mudanjiang        24.79 260     P      P      18 27 12.6 -0.5
MDJ                                   pmax   pmax
      comp=Z,10.0nm,0.9s
KNK   Knik Glacier      24.90  56     P      P      18 27 13.3 -0.7
      baz=277,SNR=6.5
SML   Sawmill           24.92  55     P      P      18 27 14.0 -0.2
      baz=276,SNR=14
E24K  Your Creek        24.99  40     IAmb   IAmb   18 27 27.5
      comp=Z,22nm,0.9s
E24K  Your Creek        24.99  40     P      P      18 27 15.6 +0.8
      baz=262,SNR=13
COLA  College           25.00  48  i P      P      18 27 14.0 -0.8
COLA                                  pmax   pmax
      comp=Z,16nm,1.0s
H24K  Noodor Dome       25.02  46     IAmb   IAmb   18 27 33.8
      comp=Z,24nm,1.4s
H24K  Noodor Dome       25.02  46     P      P      18 27 15.2 +0.1
      baz=268
PWL   Port Wells        25.03  57     P      P      18 27 14.7 -0.4
      baz=278,SNR=14
D24K  Happy Valley      25.04  38     P      P      18 27 15.9 +0.8
      baz=260,SNR=6.2
WAT6  Susitna Watana    25.13  53     P      P      18 27 16.6 +0.4
      baz=275,SNR=7.8
F24K  Squaw Lake        25.14  42     P      P      18 27 16.7 +0.5
      baz=264
POKR  Poker Plat Res    25.18  47     P      P      18 27 16.3 -0.1
      baz=270
C24K  Franklin Bluff    25.20  36     P      P      18 27 16.2 -0.3
      baz=258
M23K  Glacier View      25.21  55     P      P      18 27 16.8  0.0
      baz=276,SNR=9.3
G24K  Hadweenzic Riv    25.23  44     IAmb   IAmb   18 27 28.5
      comp=Z,18nm,0.9s
G24K  Hadweenzic Riv    25.23  44     P      P      18 27 17.0 +0.1
      baz=266,SNR=7.0
DHY   Denali Highway    25.26  52     IAmb   IAmb   18 27 18.6
      comp=Z,17nm,1.0s
DHY   Denali Highway    25.26  52     P      P      18 27 16.8 -0.6
      baz=274,SNR=16
BNX   BinXian           25.37 264  ⇑P      P      18 27 18.8 +0.4
BNX                                   pmax   pmax
      comp=Z,11nm,1.0s
SCM   Sheep Creek Mo    25.39  55     P      P      18 27 18.2 -0.3
      baz=277,SNR=20
HDA   Harding Lake      25.39  49     P      P      18 27 17.0 -1.4
HDA                                   IAmb   IAmb   18 27 39.1
      comp=Z,14nm,1.0s
HDA   Harding Lake      25.39  49     P      P      18 27 18.3 -0.1
      baz=271,SNR=7.4
ILAR  Eielson Array     25.41  48            P      18 27 17.8 -0.8
ILAR  Eielson Array     25.41  48     P      P      18 27 18.3 -0.3
      comp=Z,12nm,1.0s,baz=259,slow=8.5,SNR=58
      comp=Z,12nm,1.0s
P23K  Montague Islan    25.62  59     P      P      18 27 19.9 -0.6
      baz=280
GLI   Glacier Island    25.63  57     P      P      18 27 20.1 -0.5
      baz=279,SNR=7.1
G25K  Bearman Lake      25.78  44     P      P      18 27 21.6 -0.2
      baz=267
H25L  Birch Creek       25.87  45     P      P      18 27 23.0 +0.3
      baz=269
M24K  Tolsona, Glenn    25.90  54     P      P      18 27 23.0 -0.1
      baz=277
K24K  Donnelly Dome     25.93  50     IAmb   IAmb   18 27 50.7
      comp=Z,16nm,0.9s
K24K  Donnelly Dome     25.93  50     P      P      18 27 22.8 -0.6
      baz=274
D25K  Kavik River       25.93  38     P      P      18 27 22.4 -0.9
D25K                                  IAmb   IAmb   18 27 44.5
      comp=Z,11nm,0.8s
D25K  Kavik River       25.93  38     P      P      18 27 23.0 -0.3
      baz=262,SNR=6.1
FID   Port Fidalgo      25.95  57     IAmb   IAmb   18 27 26.8
      comp=Z,11nm,0.7s
PRP   Porcupine Dome    25.98  46     IAmb   IAmb   18 27 40.3
      comp=Z,20nm,1.0s
PRP   Porcupine Dome    25.98  46     P      P      18 27 23.3 -0.6
      baz=270,SNR=21
MAJO  Matsushiro        25.99 236            P      18 27 23.9 -0.2
MAJO  Matsushiro        25.99 236  i P      P      18 27 24.9 +0.9
MAJO                                  pmax   pmax
      comp=Z,23nm,0.9s
MJAR  Matsushiro Arr    25.99 236     P      P      18 27 26.4 +2.4
      comp=Z,13nm,0.8s,baz=26,slow=8.4,SNR=21
      comp=Z,13nm,0.8s
F25K  Christian Rive    26.01  42     P      P      18 27 23.3 -0.7
      baz=266
J25K  Salcha River,     26.07  48     P      P      18 27 23.7 -0.9
      baz=272
E25K  Arctic Village    26.08  40     IAmb   IAmb   18 27 42.7
      comp=Z,23nm,1.3s
E25K  Arctic Village    26.08  40     P      P      18 27 24.4 -0.3
      baz=265
KLU   Klutina           26.10  56     IAmb   IAmb   18 27 30.3
      comp=Z,13nm,0.8s
KLU   Klutina           26.10  56     P      P      18 27 24.6 -0.3
      baz=278,SNR=10
PAX   Paxson            26.14  52     P      P      18 27 24.4 -0.9
      baz=276,SNR=6.6
Q23K  Middleton Isla    26.25  60     P      P      18 27 25.4 -0.8
      baz=282
EYAK  Cordova Ski Ar    26.33  58     P      P      18 27 26.7 -0.2
EYAK                                  IAmb   IAmb   18 27 45.1
      comp=Z,15nm,0.8s
EYAK  Cordova Ski Ar    26.33  58     P      P      18 27 27.2 +0.3
      baz=280
HARP  HAARP             26.34  53     P      P      18 27 26.6 -0.4
      baz=277
RIDG  Independent Ri    26.35  50     IAmb   IAmb   18 27 41.5
      comp=Z,14nm,0.9s
RIDG  Independent Ri    26.35  50     P      P      18 27 26.4 -0.7
      baz=275,SNR=5.6
BMAR  Burnt Mountain    26.41  42            P      18 27 27.4 -0.2
C26K  Camden Bay        26.52  36     P      P      18 27 28.7 +0.2
      baz=262
F26K  Sheenjek River    26.59  41     P      P      18 27 28.9 -0.3
      baz=267
G26K  Porcupine Rive    26.70  43     P      P      18 27 30.3 +0.1
      baz=269
SCRK  Sand Creek        26.71  50     IAmb   IAmb   18 27 45.8
      comp=Z,14nm,1.0s
SCRK  Sand Creek        26.71  50     P      P      18 27 29.8 -0.6
      baz=275,SNR=15
N25K  Chitina, Valde    26.71  55     IAmb   IAmb   18 27 31.6
      comp=Z,10.0nm,0.8s
N25K  Chitina, Valde    26.71  55     P      P      18 27 29.9 -0.5
      baz=279,SNR=7.5
BMRM  Bremner River     26.81  57     IAmb   IAmb   18 27 48.0
      comp=Z,19nm,1.0s
BMRM  Bremner River     26.81  57     P      P      18 27 30.9 -0.5
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      baz=280,SNR=7.4
J26L  Joseph Creek      26.85  49     P      P      18 27 32.0 +0.3
      baz=274
RAGM  Ragged Mountai    26.89  58     IAmb   IAmb   18 27 49.1
      comp=Z,22nm,1.0s
C27K  Jago River        26.90  37     IAmb   IAmb   18 27 48.4
      comp=Z,19nm,0.9s
C27K  Jago River        26.90  37     P      P      18 27 31.9 -0.1
      baz=264
MENT  Mentasta          26.93  52     IAmb   IAmb   18 27 52.1
      comp=Z,11nm,0.9s
I26K  Coal Creek Min    26.98  47     P      P      18 27 32.9 +0.2
      baz=273
L26K  Log Cabin Wild    27.09  52     P      P      18 27 34.3 +0.5
      baz=277
KAIM  Kayak Island      27.11  59     P      P      18 27 34.6 +0.7
      baz=282
GLB   Gilahina Butte    27.11  55     IAmb   IAmb   18 27 56.3
      comp=Z,17nm,1.2s
JGF   Kuroka            27.15 236            P      18 27 33.8 -0.8
JGF                                   IAmb   IAmb   18 27 56.5
      comp=Z,10nm,0.8s
M26K  Nabesna, AK       27.34  53     P      P      18 27 36.8 +0.8
      baz=279,SNR=5.1
MCARA McCarthy VSAT     27.49  55     P      P      18 27 37.8 +0.4
      baz=281
G27K  Doyon Strip       27.54  43     P      P      18 27 39.0 +1.2
      baz=271
K27K  Chicken           27.54  50     P      P      18 27 37.9 +0.2
      baz=276
E27K  Coleen River      27.57  40     P      P      18 27 38.9 +0.9
      baz=269
CRQE  Cirque            27.58  57     P      P      18 27 38.5 +0.3
      baz=282,SNR=7.8
I27K  Kandik River      27.61  46     P      P      18 27 38.5 +0.1
      baz=274
H27K  Steamboat Moun    27.61  45     P      P      18 27 39.4 +1.0
      baz=273,SNR=5.8
L27K  Beaver Creek,     27.77  52     P      P      18 27 40.7 +0.8
      baz=278,SNR=26
BCAR  Beaver Creek A    27.79  52            P      18 27 40.3 +0.2
D27M  Malcolm River     27.84  38     P      P      18 27 40.3 -0.2
D27M                                  IAmb   IAmb   18 27 56.5
      comp=Z,12nm,0.8s
D27M  Malcolm River     27.84  38     P      P      18 27 40.8 +0.4
      baz=267
M27K  Edge Creek, AK    27.86  53     IAmb   IAmb   18 27 57.7
      comp=Z,16nm,1.0s
M27K  Edge Creek, AK    27.86  53     P      P      18 27 41.4 +0.7
      baz=280,SNR=13
F28M  Old Crow          28.22  42     IAmb   IAmb   18 28 02.7
      comp=Z,14nm,1.4s
F28M  Old Crow          28.22  42     P      P      18 27 44.0 +0.2
      baz=271
GRNC  Granite Creek     28.23  56     IAmb   IAmb   18 28 00.2
      comp=Z,21nm,1.2s
MESA  MESA              28.26  58     P      P      18 27 44.7 +0.2
      baz=284
YAH   Yahtse            28.31  57     IAmb   IAmb   18 28 01.9
      comp=Z,15nm,1.0s
BVCY  Beaver Creek      28.32  53     P      P      18 27 45.4 +0.6
      baz=280,SNR=6.7
I28M  Miner Creek       28.32  46     P      P      18 27 45.0 +0.2
      baz=275,SNR=5.6
E28M  Babbage River     28.34  40            P      18 27 45.1 +0.3
E28M  Babbage River     28.34  40     P      P      18 27 45.6 +0.8
      baz=270
CTG   Chitna Glacier    28.38  56     P      P      18 27 46.0 +0.6
      baz=283
CTGM  Chitina Glacie    28.38  56     IAmb   IAmb   18 28 03.5
      comp=Z,22nm,1.5s
YUK3  Moose Creek       28.62  54     P      P      18 27 47.4 -0.3
      baz=282,SNR=6.3
DAWY  Dawson            28.71  49     P      P      18 27 48.7 +0.5
      baz=278
H29M  Whitestone        28.89  45            P      18 27 49.5 -0.2
H29M  Whitestone        28.89  45     P      P      18 27 49.6 -0.2
      baz=275
E29M  Blow River        28.94  40            P      18 27 50.4 +0.2
E29M  Blow River        28.94  40     P      P      18 27 50.3 +0.1
      baz=272
O28M  Mount Upton       28.97  56     IAmb   IAmb   18 27 52.3
      comp=Z,11nm,0.9s
O28M  Mount Upton       28.97  56     P      P      18 27 50.9 +0.1
      baz=284,SNR=6.6
G29M  Pine Creek        28.97  43     IAmb   IAmb   18 28 30.1
      comp=Z,9.6nm,0.9s
G29M  Pine Creek        28.97  43     P      P      18 27 50.7 +0.2
      baz=274
I29M  Ogilvie Camp,     29.00  46     P      P      18 27 50.6 -0.2
      baz=277
YUK8  Steele Glacier    29.05  55     P      P      18 27 51.0 -0.5
      baz=283
PINM  Pinnacle          29.10  57     P      P      18 27 51.3 -0.5
      baz=285
M29M  Somme Creek       29.41  52     IAmb   IAmb   18 27 56.3
      comp=Z,7.0nm,0.8s
M29M  Somme Creek       29.41  52     P      P      18 27 55.3 +0.9
      baz=282,SNR=12
L29M  L29M              29.43  51     IAmb   IAmb   18 27 56.6
      comp=Z,16nm,0.8s
L29M  L29M              29.43  51     P      P      18 27 55.2 +0.6
      baz=281,SNR=19
EPYK  Eagle Plains      29.54  44     IAmb   IAmb   18 28 13.8
      comp=Z,15nm,1.1s
EPYK  Eagle Plains      29.54  44     P      P      18 27 55.8 +0.2
      baz=276
K29M  Barlow Dome       29.56  49     P      P      18 27 55.3 -0.5
      baz=280
YUK4  Talbot Arm        29.56  55     P      P      18 27 55.8 -0.2
      baz=284
PNL   Peninsula         29.63  58     P      P      18 27 56.7 +0.3
      baz=286
G30M  tAoh Zraii Nji    29.67  43            P      18 27 56.5 -0.2
G30M  tAoh Zraii Nji    29.67  43     P      P      18 27 56.7  0.0
      baz=276
YUK6  Outpost Mounta    29.79  55     P      P      18 27 58.4 +0.3
      baz=285
I30M  Mount Dempster    29.83  46     P      P      18 27 58.4 +0.2
      baz=279,SNR=6.0
O29M  Mount Kennedy     29.86  57     P      P      18 27 58.3 -0.2
      baz=286
J30M  Hart River        29.95  48     P      P      18 27 59.5 +0.2
      baz=280
HYT   Haines Junctio    30.23  55     IAmb   IAmb   18 28 03.7
      comp=Z,10nm,0.9s
HYT   Haines Junctio    30.23  55     P      P      18 28 01.9 +0.1
      baz=285,SNR=7.3
N30M  Aishikik Lake     30.26  54     P      P      18 28 02.1 +0.1
      baz=285
G31M  Satah River       30.44  43     P      P      18 28 03.1 -0.3
      baz=278
P29M  Windy Craggy      30.45  58     P      P      18 28 03.8 +0.2
      baz=287
KS19  Wonju Array Si    30.56 250     P      P      18 28 05.3 +0.5
KSRS  Korea Array       30.56 250     P      P      18 28 07.3 +2.6
      comp=Z,6.9nm,0.9s,baz=40,slow=8.9,SNR=23
      comp=Z,6.9nm,0.9s
INK   Inuvik            30.57  40     P      P      18 28 04.2 -0.3
      baz=276
H31M  Peel River        30.57  45     P      P      18 28 04.4 -0.3
      baz=279
F31M  Tsiigehtchic      30.58  42     P      P      18 28 04.6  0.0
      baz=277
KSAR  Wonju Array Be    30.59 250            P      18 28 05.1 +0.1
KSAR  Wonju Array Be    30.59 250     P      P      18 28 05.1 +0.1
P30M  Million Dollar    30.68  56     P      P      18 28 06.0 +0.2
      baz=287
O30N  Mendenhall        30.91  55     P      P      18 28 07.8  0.0
      baz=286
PLBC  Pleasant Camp     31.17  58     P      P      18 28 09.7 -0.3
      baz=288
M31M  Drury Creek, Y    31.31  52     IAmb   IAmb   18 28 13.4
      comp=Z,8.9nm,0.8s
M31M  Drury Creek, Y    31.31  52     P      P      18 28 11.7 +0.5
      baz=285,SNR=14
WHY   Whitehorse        31.51  55     IAmb   IAmb   18 28 15.5
      comp=Z,13nm,0.9s
WHY   Whitehorse        31.51  55     P      P      18 28 13.7 +0.6
      baz=287
FARO  Faro, Yukon       31.77  52     P      P      18 28 15.8 +0.5
      baz=286
N32M  Quiet Lake        32.21  53     P      P      18 28 19.7 +0.6
      baz=288
JNU   Nakatsue          32.32 241     LR     LR     18 43 08.8
      comp=Z,854nm,19.8s,baz=328,slow=40
P32M  Atlin             32.41  56     P      P      18 28 21.2 +0.4
      baz=290
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R32K	Eaglecrest	32.47	59	P	P	18 28 21.4	+0.1
	baz=291						
SIT	Sitka	32.52	61	P	P	18 28 21.3	-0.5
	baz=292						
MMPY	Sheldon Lake,	32.60	50	P	P	18 28 22.6	+0.1
	baz=287,SNR=7.7						
P33M	Teslin, Yukon	32.63	55	IAmb	IAmb	18 28 25.2	
	comp=Z,9.5nm,1.3s						
P33M	Teslin, Yukon	32.63	55	P	P	18 28 23.6	+0.8
	baz=289						
S32K	Killisnoo	32.74	60	P	P	18 28 23.6	0.0
	baz=292						
Q32M	Nakina River	33.32	57	P	P	18 28 28.9	-0.1
	baz=291						
R33M	Jennings River	33.79	56	P	P	18 28 33.1	+0.1
	baz=292,SNR=5.4						
C36M	Paulatuk	33.80	37	P	P	18 28 32.5	-0.3
	baz=282						
S34M	Telegraph Cree	34.27	58	P	P	18 28 36.2	-0.8
	baz=294						
WRAK	Wrangell Islan	34.28	61	P	P	18 28 36.7	-0.4
	baz=295						
TGTN	Hyland Airport	34.28	51	P	P	18 28 37.7	+0.5
	baz=290						
WTLY	Watson Lake, Y	34.55	54	IAmb	IAmb	18 28 41.6	
	comp=Z,10nm,1.0s						
WTLY	Watson Lake, Y	34.55	54	P	P	18 28 39.8	+0.4
	baz=292						
T35M	Bob Quinn	35.09	60	IAmb	IAmb	18 28 48.0	
	comp=Z,17nm,1.1s						
T35M	Bob Quinn	35.09	60	P	P	18 28 44.7	+0.5
	baz=295						
V35K	Ketchikan	35.12	63	P	P	18 28 44.7	+0.4
	baz=297						
H11N2	WAKE ISLAND Hy	35.29	177	T	T	19 06 40.7	
	baz=359,slow=76,SNR=169						
H11N3	WAKE ISLAND Hy	35.30	177	T	T	19 06 42.7	
	baz=359,slow=76,SNR=370						
H11N1	WAKE ISLAND Hy	35.30	177	T	T	19 06 42.0	
	baz=359,slow=76,SNR=397						
ULN	Ulaanbaatar	35.82	283		P	18 28 50.5	-0.2
ULN				IAmb	IAmb	18 28 53.6	
	comp=Z,12nm,1.3s						
ULN	Ulaanbaatar	35.82	283	ceP	P	18 28 52.3	+1.6
ULN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SONM	Songino Array	36.21	283		P	18 28 53.5	-0.5
SONM	Songino Array	36.21	283	P	P	18 28 54.9	+0.9
	comp=Z,5.5nm,0.7s,baz=60,slow=8.4,SNR=36						
	comp=Z,5.5nm,0.7s						
SONM	Songino Array	36.21	283	P	P	18 28 53.5	-0.5
SONM				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BEAVL	Fort Liard	36.24	53	P	P	18 28 54.7	+0.8
	baz=294						
H11S1	WAKE ISLAND Hy	36.50	177	T	T	19 08 16.8	
	baz=359,slow=76,SNR=26						
H11S3	WAKE ISLAND Hy	36.51	177	T	T	19 08 20.4	
	baz=359,slow=76,SNR=8.6						
H11S2	WAKE ISLAND Hy	36.52	177	T	T	19 08 14.3	
	baz=359,slow=76,SNR=17						
TOAD	Toad River Com	36.72	55	P	P	18 28 59.2	+1.2
	baz=296						
MOY	Mondy	37.11	292	eP	P	18 29 02.1	+0.5
MOY				pmax	pmax		
	comp=Z,11nm,1.5s						
HHC	Hu-ho-hao-te	37.48	270	eP	P	18 29 04.4	-0.5
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,420nm,5.1s						
BTO	Baotou	38.53	271	eP	P	18 29 14.3	+0.6
BTO				pP	pwP	18 29 29.3	-0.4
BTO				sP	sP	18 29 36.6	+9.2
BTO				PP	PnPn	18 30 47.0	+2.7
BTO				pmax	pmax		
	comp=Z,16nm,0.8s						
BTO				pmax	pmax		
	comp=Z,780nm,9.8s						
NJ2	Nanjing	39.55	254	eP	P	18 29 21.3	-0.8
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
YKA	Yellowknife Ar	39.79	46	P	P	18 29 23.9	+0.2
	comp=Z,1.0nm,0.7s,baz=306,slow=9.5,SNR=5.0						
	comp=Z,1.0nm,0.7s						
YKA	Yellowknife Ar	39.79	46	P	P	18 29 24.0	+0.2
RES	Resolute Bay	40.42	24	P	P	18 29 30.6	+1.8
RES	Resolute Bay	40.42	24	P	P	18 29 30.7	+1.8
RES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
LYN	LuoYang	41.30	262	P	P	18 29 38.9	+2.3
LYN				pmax	pmax		
	comp=Z,31nm,0.9s						
ZALV	Zalesovo Beam	44.09	303	P	P	18 29 58.2	-0.8
	comp=Z,0.4nm,0.4s,baz=53,slow=5.6,SNR=4.0						
	comp=Z,0.4nm,0.4s						
LZH	Lanzhou	45.16	271	eP	P	18 30 10.1	+2.2
LZH				pP	sP	18 30 20.8	-0.9
LZH				sP	pwP	18 30 27.0	+2.9
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
B08A	Colville Reser	45.27	65	IAmb	IAmb	18 30 10.4	
	comp=Z,9.1nm,0.9s						
SPITS	Spitsbergen Ar	45.65	351	P	P	18 30 10.3	-0.8
	comp=Z,2.7nm,0.7s,baz=38,slow=7.3,SNR=2.0						
	comp=Z,2.7nm,0.7s						
BLKN	Baker Lake	45.86	37		P	18 30 12.4	-0.4
BLKN				IAmb	IAmb	18 30 21.1	
	comp=Z,6.0nm,0.8s						
ENH	Enshi	46.15	261	P	P	18 30 15.8	+0.1
PINE	Pine Mountain	47.33	71	IAmb	IAmb	18 30 27.5	
	comp=Z,7.9nm,1.0s						
DAG	Danmarks Havn	48.43	1	iP	P	18 30 32.0	-0.8
BMO	Blue Mountains	48.59	68	IAmb	IAmb	18 30 36.4	
	comp=Z,4.6nm,0.8s						
KURK	Kurchatov	49.08	303		P	18 30 37.1	-1.0
KURK	Kurchatov	49.08	303	ceP	P	18 30 38.1	0.0
KURK				pmax	pmax		
	comp=Z,46nm,1.3s						
PLID	Pearl Lake	49.13	67		P	18 30 38.7	-0.1
PLID				IAmb	IAmb	18 30 40.6	
	comp=Z,4.8nm,0.8s						
KURBB	Kurchatov Arra	49.18	303	P	P	18 30 38.6	-0.2
	comp=Z,18nm,0.9s,baz=55,slow=7.8,SNR=102						
	comp=Z,18nm,0.9s						
MKAR	Makanchi Array	49.83	297		P	18 30 42.5	-1.4
MKAR	Makanchi Array	49.83	297	P	P	18 30 43.4	-0.5
	comp=Z,3.8nm,0.7s,baz=60,slow=7.8,SNR=36						
	comp=Z,3.8nm,0.7s						
MK31	Makanchi Array	49.83	297	cePKIKP	PKPdf	18 30 43.6	-7.2
MKAR	Makanchi Array	49.83	297	PKIKP	PKPdf	18 30 43.4	-7.4
MAKZ	Makanchi	49.98	297		P	18 30 43.1	-1.9
MAKZ				IAmb	IAmb	18 30 45.6	
	comp=Z,11nm,1.1s						
MAKZ	Makanchi	49.98	297	PKIKP	PKPdf	18 30 43.1	-8.1
MAKZ	Makanchi	49.98	297	pmax	pmax		
	comp=Z,11nm,1.1s						
PNTR	Pine Nut	51.27	75		P	18 30 55.4	+0.3
BVAR	Borovoye Array	51.36	310	P	P	18 30 55.5	+0.1
	comp=Z,12nm,0.9s,baz=46,slow=7.0,SNR=40						
	comp=Z,12nm,0.9s						
BRVK	Borovoye	51.39	310	ceP	P	18 30 55.9	+0.4
BRVK				pmax	pmax		
	comp=Z,29nm,1.7s						
SUMG	Summit	51.64	9		P	18 30 57.0	-0.6
SUMG				IAmb	IAmb	18 31 21.7	
	comp=Z,6.3nm,0.9s						
SUMG	Summit	51.64	9	P	P	18 30 57.0	-0.6
SUMG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WAKR	Walker	51.77	75	P	P	18 30 59.5	+0.7
WAKR				IAmb	IAmb	18 31 01.5	
	comp=Z,8.1nm,0.9s						
ARCES	ARCESS Array B	52.28	343	P	P	18 31 01.4	-0.5
	comp=Z,2.1nm,0.8s,baz=340,slow=11,SNR=3.7						
	comp=Z,2.1nm,0.8s						
YNE	Yellowstone No	52.31	63	IAmb	IAmb	18 31 20.8	
	comp=Z,7.0nm,0.9s						
YMP	Mirror Lake Pl	52.42	64	IAmb	IAmb	18 31 06.0	
	comp=Z,7.0nm,0.9s						
NVAR	Mina Array Bea	52.45	75	P	P	18 31 04.5	+0.6
NVAR	Mina Array Bea	52.45	75	P	P	18 31 05.5	+1.6
	comp=Z,4.6nm,0.7s,baz=295,slow=7.8,SNR=24						
	comp=Z,4.6nm,0.7s						
LHV	Little Huntoon	52.47	75	IAmb	IAmb	18 31 07.0	
	comp=Z,7.8nm,1.1s						
RLMT	Red Lodge	52.62	63	IAmb	IAmb	18 31 07.3	
	comp=Z,11nm,0.8s						
SVE	Sverdlovsk	52.76	318	eP	P	18 31 06.4	+0.8
DSP	Deep Springs	53.39	75	IAmb	IAmb	18 31 13.8	
	comp=Z,7.3nm,1.1s						
PZH	PanZhiHua	53.43	265	P	P	18 31 11.8	+0.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.8s						
GMN	Gold Mountain	53.83	75	P	P	18 31 15.9	+1.8
GMN				IAmb	IAmb	18 31 16.9	
	comp=Z,6.1nm,0.8s						
GMN				PcP	PcP	18 32 16.5	-2.9
HWUT	Hardware Ranch	53.87	67	IAmb	IAmb	18 31 16.7	
	comp=Z,5.1nm,0.9s						
ARTI	Arti	53.94	319	c iP	P	18 31 15.4	+1.1
ARTI						18 33 15.5	
ARTI				S	S	18 38 50.5	+3.9
ARTI				SS	SS	18 42 30.4	+3.1
ARTI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
PD31	Pinedale Array	54.11	65	IAmb	IAmb	18 31 18.1	
	comp=Z,6.0nm,0.9s						
PDAR	Pinedale Array	54.11	65	P	P	18 31 15.5	-0.6
PDAR	Pinedale Array	54.11	65	P	P	18 31 17.1	+1.0
	comp=Z,4.1nm,0.8s,baz=336,slow=3.3,SNR=24						
	comp=Z,4.1nm,0.8s						
PSUT	Pine Spring	54.83	71	IAmb	IAmb	18 31 23.8	
	comp=Z,8.6nm,1.1s						
QSM	Queen of Sheba	55.01	76	IAmb	IAmb	18 31 24.5	
	comp=Z,5.8nm,0.9s						
ULM	Lac du Bonnet	55.40	50	P	P	18 31 25.8	+0.8
	comp=Z,5.0nm,1.2s,baz=340,slow=7.4,SNR=3.3						
	comp=Z,5.0nm,1.2s						
KIRV	Kirov	55.46	325	ceP	P	18 31 26.3	+1.0
RSSD	Black Hills	55.97	60		P	18 31 29.9	+0.5
RSSD				IAmb	IAmb	18 31 47.1	
	comp=Z,10nm,1.2s						
RSSD	Black Hills	55.97	60	P	P	18 31 29.9	+0.5
RSSD				pmax	pmax		
	comp=Z,10.0nm,1.2s						
P18A	Preston Nutter	55.99	68	IAmb	IAmb	18 31 49.2	
	comp=Z,11nm,1.3s						
Q16A	Castle Valley	56.00	69	IAmb	IAmb	18 31 32.4	
	comp=Z,7.8nm,0.8s						
SLVN	Son La	56.22	259		P	18 31 30.8	-0.5
LCMT	Little Creek M	56.26	72	IAmb	IAmb	18 31 34.4	
	comp=Z,7.1nm,1.0s						
V12A	Nelson	56.31	75	IAmb	IAmb	18 31 34.7	
	comp=Z,9.7nm,1.2s						
KLMR	Klimovskoe	56.64	331	eP	P	18 31 31.8	-1.8
KLMR				pmax	pmax		
	comp=Z,18nm,1.5s						
AAK	Ala-Archa	56.71	298	P	P	18 31 34.5	-0.1
AAK				IAmb	IAmb	18 31 43.6	
	comp=Z,8.0nm,0.9s						
AAK	Ala-Archa	56.71	298	ceP	P	18 31 35.0	+0.3
AAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
LSA	Lhasa	57.10	276	P	P	18 31 38.5	+0.6
LSA	Lhasa	57.10	276	P	P	18 31 38.5	+0.6
LSA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PV22	Blue Mesa, Par	57.56	68	P	P	18 31 41.0	+0.2
PV22				IAmb	IAmb	18 31 59.3	
	comp=Z,6.2nm,0.9s						
PV04	Paradox Valley	57.60	68	IAmb	IAmb	18 32 03.7	
	comp=Z,9.7nm,0.9s						
PV16	Nyswonger Mesa	57.66	68	IAmb	IAmb	18 32 02.1	
	comp=Z,6.8nm,0.9s						
PV17	East Wray Mesa	57.66	68	IAmb	IAmb	18 32 03.6	
	comp=Z,9.1nm,1.0s						
PV11	David Mesa, Pa	57.69	68	IAmb	IAmb	18 32 08.8	
	comp=Z,11nm,1.0s						
PV05	Paradox Valley	57.73	69	P	P	18 31 42.4	+0.4
PV05				IAmb	IAmb	18 31 44.4	
	comp=Z,9.3nm,0.8s						
PV13	Radium Mtn., P	57.82	68	IAmb	IAmb	18 31 45.0	
	comp=Z,8.3nm,0.9s						
ISCO	Idaho Springs	58.31	65	IAmb	IAmb	18 32 04.6	
	comp=Z,7.7nm,1.1s						
ISCO	Idaho Springs	58.31	65	P	P	18 31 48.1	+2.0
ISCO				pmax	pmax		
	comp=Z,6.0nm,1.5s						
AB31	Akbulak array	58.64	312	IAmb	IAmb	18 32 07.2	
	comp=Z,6.1nm,0.8s						
ABKAR	Akbulak array	58.64	312		P	18 31 47.8	-0.1
ABKAR	Akbulak array	58.64	312	IAmb	IAmb	18 32 07.2	
	comp=Z,6.1nm,0.8s						
CHTO	Chiang Mai	61.04	261	P	P	18 32 08.9	+4.1
CHTO				pmax	pmax		
	comp=Z,10.0nm,1.3s						
CMAR	Chiang Mai Arr	61.32	261		P	18 32 06.9	+0.2
CMAR	Chiang Mai Arr	61.32	261	P	P	18 32 08.8	+2.2
	comp=Z,2.0nm,0.9s,baz=22,slow=7.2,SNR=8.8						
CMAR				LR	LR	18 59 29.2	
	comp=Z,102nm,18.4s,baz=75,slow=37						
	comp=Z,2.0nm,0.9s						
CMAR	Chiang Mai Arr	61.32	261	P	P	18 32 06.9	+0.2
GAR	Garm	61.53	298		P	18 32 08.2	+0.2
DZET	Dzherino	62.43	299	P	P	18 32 17.3	+3.2
DZET				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SIMJ	Simiganj	62.45	299		P	18 32 13.2	-1.0
NIL	Nilore	64.07	292		P	18 32 24.1	-0.8
NIL	Nilore	64.07	292	P	P	18 32 24.1	-0.8
NIL				pmax	pmax		
	comp=Z,15nm,0.8s						
MNTX	Cornudas Mount	64.53	71	IAmb	IAmb	18 32 30.4	
	comp=Z,7.1nm,1.1s						
VHRN	Van Horn	65.45	71	IAmb	IAmb	18 32 36.3	
	comp=Z,4.5nm,0.9s						
WMOK	Wichita Mounta	65.69	64	P	P	18 32 35.3	-0.1
WMOK				IAmb	IAmb	18 32 36.9	
	comp=Z,5.9nm,0.8s						
WMOK	Wichita Mounta	65.69	64	P	P	18 32 35.3	-0.1
WMOK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TX31	Lajitas Ar. Si	67.29	71	IAmb	IAmb	18 32 47.9	
	comp=Z,6.5nm,0.9s						
TXAR	Lajitas Array	67.29	71		P	18 32 46.2	+0.5
TXAR	Lajitas Array	67.29	71	P	P	18 32 47.0	+1.2
	comp=Z,4.8nm,0.8s,baz=296,slow=4.3,SNR=41						
TXAR				LR	LR	18 59 46.8	
	comp=Z,158nm,18.2s,baz=347,slow=34						
	comp=Z,4.8nm,0.8s						
TXAR	Lajitas Array	67.29	71	P	P	18 32 47.0	+1.2
SAND	Sanderson	67.64	70	IAmb	IAmb	18 32 49.8	
	comp=Z,7.2nm,1.4s						
AKASG	Malin Array Be	68.33	331	P	P	18 32 52.0	+0.2
	comp=Z,0.3nm,0.4s,baz=28,slow=5.9,SNR=0.9						
	comp=Z,0.3nm,0.4s						
AKASG	Malin Array Be	68.33	331	P	P	18 32 52.0	+0.2
MIAR	Mount Ida	68.49	60	P	P	18 32 52.9	-0.2
MIAR				IAmb	IAmb	18 33 10.4	
	comp=Z,6.9nm,1.0s						
MIAR	Mount Ida	68.49	60	P	P	18 32 52.9	-0.2
MIAR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
DRIO	Del Rio	68.87	69	IAmb	IAmb	18 32 56.8	
	comp=Z,4.9nm,0.8s						
O52A	Adamsville	69.48	49		PcP	18 33 14.2	-8.0
EKA	Eskdalemuir Ar	69.55	353	P	P	18 32 59.6	+0.3
	comp=Z,0.1nm,0.3s,baz=357,slow=5.7,SNR=0.9						
	comp=Z,0.1nm,0.3s						
L56A	Greenwood	69.59	45		PcP	18 33 14.9	-7.8
KBZ	Khabaz	69.99	319	P	P	18 33 04.5	+2.3
	comp=Z,1.1nm,0.5s,baz=12,slow=9.3,SNR=1.2						
	comp=Z,1.1nm,0.5s						
AKT	Akhty	69.99	315	eP	P	18 33 02.2	-0.3
AKT				e*PP	sP	18 33 17.2	+0.6
AKT				e		18 33 24.5	
AKT				pmax	pmax		
	comp=Z,12nm,1.2s						
U49A	Red Boiling Sp	70.67	54		PcP	18 33 20.6	-6.7
PLAL	Pickwick Lake	70.83	56	P	P	18 33 07.1	-0.4
CLL	Collm	71.46	342	eP	P	18 33 10.0	-1.1
CLL				e*PP	pwP	18 33 27.0	-1.1
CLL	Collm	71.46	342	eP	P	18 33 10.0	-1.1
CLL				ex	x	18 33 20.0	
CLL				ex	x	18 33 27.0	
FPAL	Fort Paine	72.36	55	IAmb	IAmb	18 33 29.3	
	comp=Z,8.1nm,1.0s						
GERES	GERESS Array B	73.69	341	P	P	18 33 25.0	+0.5
	comp=Z,0.2nm,0.5s,baz=22,slow=3.8,SNR=4.1						
	comp=Z,0.2nm,0.5s						
GERES	GERESS Array B	73.69	341	P	P	18 33 25.0	+0.5
CONA	Conrad Observa	74.14	339	epP	pP	18 33 35.5	-1.7
	comp=Z,2.2nm,1.0s						
RONA	Rosalia, Austr	74.27	339	i pP	pP	18 33 37.5	-0.4
	comp=Z,2.4nm,1.1s						
ARSA	Arzberg	74.86	339	i PcP	PcP	18 33 41.4	-3.7
	comp=Z,2.7nm,0.8s						
LESA	Schwarzleotal	75.25	341	ePcP	PcP	18 33 45.2	-1.6
	comp=Z,3.3nm,1.0s						
SOKA	Soboth	75.50	339	ePcP	PcP	18 33 46.3	-1.6
	comp=Z,2.7nm,1.0s						
WATA	Walderalm	75.54	342	i PcP	PcP	18 33 45.6	-2.6
	comp=Z,2.2nm,0.5s						
WTTA	Wattenberg	75.60	342	i PcP	PcP	18 33 46.1	-2.4
	comp=Z,6.3nm,1.1s						
MOTA	Moosalm	75.62	342	ePcP	PcP	18 33 45.2	-3.3
	comp=Z,2.7nm,0.7s						
SQTA	Sankt Quirin	75.72	342	ePcP	PcP	18 33 45.4	-3.5
	comp=Z,2.7nm,0.5s						
OBKA	Obir	75.76	339	i PcP	PcP	18 33 46.4	-2.7
	comp=Z,4.7nm,0.8s						
ABTA	Abfaltersbach	75.93	341	epP	pP	18 33 45.6	-2.1
	comp=Z,1.3nm,0.6s						
FETA	Feichten	76.00	342	epP	pP	18 33 45.6	-2.5
	comp=Z,2.1nm,0.8s						
WRAB	Tennant Creek	79.10	209	P	P	18 33 54.4	-0.8
WRAB	Tennant Creek	79.10	209	P	P	18 33 54.4	-0.8
WRAB				pmax	pmax		
	comp=Z,12nm,0.9s						
WRA	Warramunga Arr	79.11	209		P	18 33 53.5	-1.8
WRA	Warramunga Arr	79.11	209	P	P	18 33 56.3	+1.0
	comp=Z,4.8nm,0.8s,baz=24,slow=6.0,SNR=18						
	comp=Z,4.8nm,0.8s						
AS31	Alice Springs	82.77	208		P	18 34 13.6	-1.2
ASAR	Alice Springs	82.77	208		P	18 34 14.9	+0.2
ASAR	Alice Springs	82.77	208	P	P	18 34 16.2	+1.5
	comp=Z,4.7nm,0.8s,baz=15,slow=5.9,SNR=60						
	comp=Z,4.7nm,0.8s						
ASAR	Alice Springs	82.77	208	P	P	18 34 15.0	+0.2
ESDC	Sonseca Array	85.17	351	P	P	18 34 27.4	+0.3
	comp=Z,0.7nm,0.9s,baz=3.4,slow=5.5,SNR=5.0						
	comp=Z,0.7nm,0.9s						
STKA	Stephens Creek	88.86	200	LR	LR	19 11 48.0	
	comp=Z,299nm,19.5s,baz=291,slow=34						

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*NEIC **18** 18:24:43.5±1.9, 56°.3S±0°.2×27°.2W±0°.2, h111^{km}±11^{km}, mb4.3/8, Error ellipse: s-maj=25.6km s-min=10.6km az=216.0*

*IDC **18** 18:24:45.4±8.4, 56°.26S×27°.24W, h123^{km}±75^{km}, mb3.8/4, mbtmp4.1/5, MS4.1/1, Error ellipse: s-maj=42.1km s-min=24.2km az=67.0*

ISC 18 18:24:42.6±0.8**, 56°.3S**±0°.1×**27°.3W**±0°.1**, h100^{km}, n29, σ0^{s}.75**/24**, mb4.2**/6**, 5D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	5.60	287	Pn	Pn	18 26 05.2	+1.9
HOPE				Sn	Sn	18 27 04.6	-1.6
VNA1	Neumayer--Stat	16.64	158	⇓P	Pn	18 28 29.4	+0.1
	comp=Z,3.0nm,0.7s						
VNA3	Neumayer Olymp	16.83	160	⇓P	Pn	18 28 31.4	-0.3
	comp=Z,3.3nm,0.5s						
VNA2	Neumayer--Watz	17.03	158	⇓P	P	18 28 34.6	+0.3
	comp=Z,3.5nm,0.6s,baz=312,slow=12						
SNAA	Sanae	18.59	156	⇓P	P	18 28 51.4	-0.1
	comp=Z,132nm,0.5s						
SNAA	Sanae	18.59	156	P	P	18 28 50.8	-0.7
SNAA				IAmb	IAmb	18 28 52.7	
	comp=Z,5.5nm,0.6s						
SNAA	Sanae	18.59	156	P	P	18 28 51.9	+0.4
	comp=Z,5.4nm,0.6s,baz=298,slow=11,SNR=42						
PMSA	Palmer Station	19.71	229	LR	LR	18 35 54.3	
	comp=Z,489nm,18.3s,baz=26,slow=34						
TROLL	Troll, Antarti	20.10	153	⇓P	P	18 29 08.1	+0.1
	comp=Z,353nm,0.5s						
BELA	Belgrano 2	21.87	184	P	P	18 29 25.9	-0.8
BELA				IAmb	IAmb	18 29 28.6	
	comp=Z,10nm,0.5s						
QSPA	South Pole Qui	34.00	180	P	P	18 31 16.8	+0.4
QSPA				IAmb	IAmb	18 31 17.6	
	comp=Z,2.3nm,0.7s						
QSPA	South Pole Qui	34.00	180	P	P	18 31 17.0	+0.6
	comp=Z,1.7nm,0.5s,baz=162,slow=0.6,SNR=24						
	comp=Z,1.7nm,0.5s						
CO06	Fray Jorge	40.07	291	P	P	18 32 06.9	-1.0
GO02	Mina Guanaco	43.52	298	P	P	18 32 35.7	-0.7
VNDA	Vanda	46.37	183	P	P	18 32 58.4	+0.5
	comp=Z,0.8nm,0.5s,baz=183,slow=5.1,SNR=6.3						
	comp=Z,0.8nm,0.5s						
H10S2	ASCENSION HYDR	48.21	17	T	T	19 24 35.9	
	baz=28,slow=74,SNR=6.4						
H10S3	ASCENSION HYDR	48.22	17	T	T	19 24 33.6	
	baz=192,slow=74,SNR=7.4						
PB16	IPOC Station P	49.29	303	P	P	18 33 22.3	+0.5
PB16				IAmb	IAmb	18 33 51.8	
	comp=Z,5.5nm,1.1s						
H10N1	ASCENSION HYDR	49.33	17	T	T	19 26 01.2	
	baz=192,slow=76,SNR=4.5						
H10N3	ASCENSION HYDR	49.33	17	T	T	19 25 57.2	
	baz=192,slow=76,SNR=7.8						
H10N2	ASCENSION HYDR	49.35	17	T	T	19 25 58.8	
	baz=192,slow=76,SNR=12						
LPAZ	La Paz	50.43	305	P	P	18 33 30.9	+0.4
LPAZ				IAmb	IAmb	18 33 57.3	
	comp=Z,5.1nm,1.5s						
LPAZ	La Paz	50.43	305	P	P	18 33 31.1	+0.6
	comp=Z,1.6nm,0.6s,baz=214,slow=7.9,SNR=6.3						
	comp=Z,1.6nm,0.6s						
TORD	Torodi Ar. Bea	73.27	30	P	P	18 36 02.6	-0.1
TORD	Torodi Ar. Bea	73.27	30	P	P	18 36 03.3	+0.5
	comp=Z,52nm,0.3s,baz=198,slow=7.2,SNR=1.6						
ASAR	Alice Springs	98.82	163	P	P	18 38 10.9	-0.2
	comp=Z,0.4nm,0.7s,baz=187,slow=3.8,SNR=2.3						
	comp=Z,0.4nm,0.7s						
FINES	FINESS Array B	124.59	28	PKP	PKPdf	18 43 28.1	-0.5
	comp=Z,1.7nm,0.8s,baz=0.0,slow=0.3,SNR=5.6						
ILAR	Eielson Array	150.19	311	PKPbc	PKPbc	18 44 19.8	-0.4
	comp=Z,0.7nm,0.8s,baz=121,slow=0.5,SNR=6.3						
SONM	Songino Array	150.81	87	PKPbc	PKPbc	18 44 21.8	-0.5
	comp=Z,0.3nm,0.4s,baz=242,slow=3.1,SNR=3.1						

IDC 18 18:27:45.5±2.2**, 31°.02S**×**178°.10W, h0^{km}, mb3.8**/3**, mbtmp3.8**/3**, Error ellipse: s-maj=61.1km s-min=36.0km az=43.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	8.23	207	Pn	Pn	18 29 41.1	-5.0
URZ				Sn	Sn	18 31 13.2	-6.6
	1.7nm,0.3s,baz=240,slow=18,SNR=12						
ASAR	Alice Springs	42.99	268	P	P	18 35 46.6	-0.3
	0.4nm,0.4s,baz=107,slow=7.3,SNR=14						
	0.4nm,0.4s						
WRA	Warramunga Arr	44.04	273	P	P	18 35 55.3	0.0
	1.1nm,0.4s,baz=112,slow=8.0,SNR=16						
	1.1nm,0.4s						
QSPA	South Pole Qui	59.09	180	P	P	18 37 47.2	-0.3
	0.7nm,0.8s,baz=322,slow=1.9,SNR=6.9						
	0.7nm,0.8s						
FINES	FINESS Array B	145.69	340	PKPbc	PKPdf	18 47 25.0	-0.2
	0.8nm,0.6s,baz=64,slow=4.4,SNR=4.7						

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*IDC **18** 18:29:43.9±0.6, 13°.76N×120°.87E, h188^{km}±4^{km}, mb3.4/10, mbtmp3.9/10, MS4.0/2, Error ellipse: s-maj=35.8km s-min=11.6km az=60.0*

ISC 18 18:29:44.6±0.8**, 13°.8N**±0°.2×**120°.9E**±0°.3**, h200^{km}, n13, σ1^{s}.35**/12**, mb3.6**/10**, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	Tagaytay City	0.26	1	P	Pn	18 30 08.4	-2.7
	803nm,0.3s,baz=237,slow=1.5,SNR=32						
TGY				S	Sn	18 30 30.9	-1.0
	943nm,0.4s,baz=287,slow=6.9,SNR=6.2						
CMAR	Chiang Mai Arr	21.61	285	P	P	18 34 19.1	0.0
	1.8nm,0.8s,baz=89,slow=8.6,SNR=8.2						
	1.8nm,0.8s						
GUMO	Guam	23.25	88	LR	LR	18 43 32.8	
	comp=Z,250nm,20.5s,baz=60,slow=36						
SONM	Songino Array	35.99	343	P	P	18 36 27.4	+0.9
	0.9nm,0.6s,baz=169,slow=9.7,SNR=6.2						
	0.9nm,0.6s						
WRA	Warramunga Arr	36.07	158	P	P	18 36 26.7	-0.6
	0.8nm,0.4s,baz=337,slow=9.5,SNR=7.7						

	0.8nm,0.4s						
ASAR	Alice Springs	39.38	161	P	P	18 36 55.2	+0.3
	1.6nm,0.4s,baz=335,slow=7.1,SNR=46						
	1.6nm,0.4s						
MKAR	Makanchi Array	46.06	323	P	P	18 37 49.4	+1.0
	0.7nm,0.5s,baz=128,slow=9.4,SNR=7.9						
	0.7nm,0.5s						
ZALV	Zalesovo Beam	49.04	333	P	P	18 38 11.5	+0.3
	1.2nm,0.4s,baz=122,slow=6.7,SNR=6.6						
	1.2nm,0.4s						
KURBB	Kurchatov Arra	50.20	326	P	P	18 38 21.3	+1.3
	0.6nm,0.5s,baz=137,slow=2.7,SNR=11						
	0.6nm,0.5s						
MA2	Magadan	50.70	19	LR	LR	19 01 16.7	
	comp=Z,186nm,19.3s,baz=18,slow=37						
BVAR	Borovoye Array	55.79	326	P	P	18 39 01.4	+0.6
	0.4nm,0.4s,baz=120,slow=8.8,SNR=4.1						
	0.4nm,0.4s						
DZM	Mont Dzumac	57.14	128	P	P	18 39 12.6	+1.7
	1.6nm,0.6s,baz=205,slow=16,SNR=2.0						
	1.6nm,0.6s						
SPITS	Spitsbergen Ar	79.50	348	P	P	18 41 27.9	-0.7
	3.5nm,0.8s,baz=93,slow=8.7,SNR=2.5						
	3.5nm,0.8s						

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*NOU **18** 18:32:34.0, 39°.80S×174°.72E, h127^{km}, MLv4.0/18, North Island, New Zealand*

*WEL **18** 18:32:35.3±1.1, 40°S±7°×17°5E±°, h121^{km}±9^{km}, M3.9/19, ML4.2/12, MLv3.9/19, Error ellipse: s-maj=9.2km s-min=7.1km az=171.8, confirmed*

ISC 18 18:32:32.3±1.4**, 39°.81S**±0°.04×**174°.68E**±0°.04**, h149**^{km}±8^{km}**, n168, σ1^{s}.28**/176**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WAZ	Wanganui	0.24	77	P	Pn	18 32 53.7	+1.1
WAZ				S	Sn	18 33 06.8	-1.1
LREZ	Lake Rotokare	0.41	328	P	Pn	18 32 54.0	+0.9
LREZ				S	Sn	18 33 08.7	-0.2
PREZ	Palmer Road	0.62	319	P	Pn	18 32 55.1	+0.9
PREZ				S	Sn	18 33 10.5	-0.4
OHWZ	Ohakea	0.63	129	P	Pn	18 32 55.7	+1.5
VRZ	Vera Road	0.69	5	P	Pn	18 32 55.5	+0.9
NEZ	North Egmont	0.70	320	P	Pn	18 32 55.7	+0.9
NEZ				S	Sn	18 33 10.9	-1.0
DREZ	Durham Road	0.72	329	P	Pn	18 32 55.8	+0.9
DREZ				S	Sn	18 33 11.0	-1.0
KHEZ	Kahui Hut	0.73	315	P	Pn	18 32 55.9	+0.9
KHEZ	Kahui Hut	0.73	315	P	Pn	18 32 55.9	+0.9
KHEZ				S	Sn	18 33 11.3	-1.0
PKVZ	Pokaka	0.73	45	P	Pn	18 32 55.8	+0.8
PKVZ				S	Sn	18 33 10.3	-1.9
NMEZ	Namu Road	0.74	302	P	Pn	18 32 55.9	+1.0
MTVZ	Mangateitei	0.74	55	P	Pn	18 32 55.9	+0.8
MTVZ				S	Sn	18 33 10.5	-1.9
PKE	Pukeiti	0.82	319	P	Pn	18 32 56.3	+0.8
PKE				S	Sn	18 33 12.0	-1.3
NBEZ	Newall Road No	0.83	310	P	Pn	18 32 56.7	+1.1
TRVZ	Turoa	0.84	53	P	Pn	18 32 56.8	+0.8
WNVZ	Wahianoa	0.86	56	P	Pn	18 32 56.9	+0.8
MAVZ	Matarangi	0.87	52	P	Pn	18 32 57.0	+0.7
FWVZ	Far West T-bar	0.87	51	P	Pn	18 32 57.0	+0.8
WHVZ	Whangaehu Hut	0.88	53	P	Pn	18 32 57.0	+0.8
COVZ	Chateau Observ	0.90	48	P	Pn	18 32 57.1	+0.8
COVZ				S	Sn	18 33 12.6	-1.9
MOVZ	Moawhango	0.92	64	P	Pn	18 32 57.0	+0.6
TUVZ	Tukino	0.93	55	P	Pn	18 32 57.5	+1.0
TWVZ	Taurewa	0.94	39	P	Pn	18 32 57.3	+0.7
NGZ	Ngauruhoe	0.95	49	P	Pn	18 32 57.6	+0.9
SNVZ	South Ngauruho	0.97	50	P	Pn	18 32 58.0	+1.0
WTVZ	West Tongariro	0.99	46	P	Pn	18 32 57.9	+0.9
NNVZ	North Ngauruho	0.99	47	P	Pn	18 32 58.0	+0.9
OTVZ	Oturere	1.00	50	P	Pn	18 32 58.3	+1.1
TSZ	Takapari Road	1.01	105	P	Pn	18 32 58.2	+1.1
POWZ	Post Office Ro	1.02	125	P	Pn	18 32 58.4	+1.3
KRVZ	Karewarewa	1.03	46	P	Pn	18 32 58.3	+0.9
ETVZ	East Tongariro	1.04	50	P	Pn	18 32 58.7	+1.2
NTVZ	North Tongarir	1.05	48	P	Pn	18 32 58.6	+1.0
TMVZ	Te Maari	1.05	49	P	Pn	18 32 58.8	+1.2
KIW	Kapiti Island	1.06	171	P	Pn	18 32 58.7	+1.2
OGWZ	Otaki Gorge	1.07	160	P	Pn	18 32 59.0	+1.4
MRZ	Mangatainoka R	1.09	141	P	Pn	18 32 59.0	+1.2
KATZ	Kakaramea	1.15	44	P	Pn	18 32 59.5	+1.1
DUWZ	D'Urville Isla	1.15	210	P	Pn	18 32 59.4	+1.1
PNHZ	Pukenui	1.17	96	P	Pn	18 32 59.7	+1.2
RITZ	Rihia Road	1.23	48	P	Pn	18 33 00.5	+1.4
PRWZ	Pori Road	1.24	127	P	Pn	18 33 00.8	+1.7
DVHZ	Dannevirke	1.24	114	P	Pn	18 33 00.4	+1.2
HOWZ	Holdsworth Sta	1.26	150	P	Pn	18 33 00.6	+1.3
RATZ	Rangitukua	1.27	42	P	Pn	18 33 00.7	+1.2
HIZ	Hauiti	1.30	6	P	Pn	18 33 00.8	+1.0
HIZ	Hauiti	1.30	6	S	Sn	18 33 20.3	-0.4
HIZ	Hauiti	1.30	6	P	Pn	18 33 00.8	+1.0
KRHZ	Kereru	1.31	83	P	Pn	18 33 01.0	+1.1
CAW	Cannon Point	1.33	167	P	Pn	18 33 01.5	+1.5
TIWZ	Tintock	1.33	137	P	Pn	18 33 01.5	+1.4
WATZ	Wairara	1.37	37	P	Pn	18 33 02.0	+1.5
WPHZ	Waipukurau	1.38	101	P	Pn	18 33 01.9	+1.4
KWHZ	Kaweka Forest	1.40	75	P	Pn	18 33 02.3	+1.5
HATZ	Hinemaiaia	1.43	50	P	Pn	18 33 01.9	+0.8
TCW	Tory Channel	1.43	192	P	Pn	18 33 02.6	+1.5
WEL	Wellington	1.48	177	P	Pn	18 33 02.8	+1.4
BFZ	Birch Farm	1.48	127	P	Pn	18 33 02.9	+1.3
BFZ	Birch Farm	1.48	127	S	Sn	18 33 22.4	-1.6
BFZ	Birch Farm	1.48	127	P	Pn	18 33 02.9	+1.3
MTW	Mount Morrison	1.48	155	P	Pn	18 33 02.9	+1.3
SNZO	South Karori	1.50	179	P	Pn	18 33 02.8	+1.1
SNZO	South Karori	1.50	179	S	Sn	18 33 24.1	-0.2
WHTZ	Whakaora	1.51	41	P	Pn	18 33 03.7	+1.7
ANWZ	Angora Road	1.52	116	P	Pn	18 33 03.7	+1.8
BKZ	Black Stump Fm	1.54	66	P	Pn	18 33 03.2	+1.0
BKZ	Black Stump Fm	1.54	66	S	Sn	18 33 23.9	-1.3
BKZ	Black Stump Fm	1.54	66	P	Pn	18 33 03.3	+1.0
PRHZ	Porangahau	1.57	108	P	Pn	18 33 04.1	+1.6
KUTZ	Kaahu Road	1.59	34	P	Pn	18 33 04.5	+1.7
TMWZ	Te Maipa	1.59	145	P	Pn	18 33 04.2	+1.5
MCHZ	McNeill Hill	1.60	77	P	Pn	18 33 04.7	+1.9
BHW	Baring Head	1.60	175	P	Pn	18 33 04.1	+1.3
TLZ	Tolley Road	1.62	25	P	Pn	18 33 04.4	+1.2
MRHZ	Matea Rd	1.66	55	P	Pn	18 33 04.3	+0.7
MSWZ	Moikau Station	1.66	165	P	Pn	18 33 04.9	+1.4
PAWZ	Paruwai Farm	1.67	160	P	Pn	18 33 05.0	+1.3
KAHZ	Kahuranaki	1.69	90	P	Pn	18 33 05.5	+1.6
PXZ	Pawanui	1.69	98	P	Pn	18 33 05.2	+1.4
TUWZ	Tuamarina	1.71	199	P	Pn	18 33 05.6	+1.6
NNZ	Nelson	1.72	215	P	Pn	18 33 05.5	+1.3
WPRZ	Whakapapatarin	1.73	42	P	Pn	18 33 05.6	+1.3
TRWZ	Traveller	1.76	155	P	Pn	18 33 06.0	+1.3
NMHZ	Naumai	1.79	67	P	Pn	18 33 07.0	+1.9
ALRZ	Allen Road	1.79	47	P	Pn	18 33 06.1	+1.1
TKNZ	Takaka Hill	1.79	226	P	Pn	18 33 06.1	+1.1
PLWZ	Palliser	1.81	166	P	Pn	18 33 06.4	+1.2
GRRZ	Galatos Road	1.83	38	P	Pn	18 33 07.2	+1.7
CKHZ	Cape Kidnapper	1.85	86	P	Pn	18 33 07.5	+1.9
PRRZ	Plateau Road	1.87	46	P	Pn	18 33 06.9	+1.1
ARHZ	Aropaoanui	1.87	74	P	Pn	18 33 07.5	+1.7
HRRZ	Handcock Road	1.89	42	P	Pn	18 33 07.6	+1.5
HSRZ	Hossack Road	1.93	40	P	Pn	18 33 08.1	+1.6
MTHZ	Maungataniwha	1.93	61	P	Pn	18 33 07.6	+1.0
QRZ	Quartz Range	1.93	238	P	Pn	18 33 07.3	+0.8
QRZ	Quartz Range	1.93	238	P	Sn	18 33 31.9	-1.0
QRZ	Quartz Range	1.93	238	P	Pn	18 33 07.4	+0.9
CMWZ	Cape Campbell	1.97	190	P	Pn	18 33 09.1	+2.1
BSWZ	Blackbirch Sta	2.00	198	P	Pn	18 33 08.9	+1.6
UTU	Utuhina	2.01	36	P	Pn	18 33 09.4	+1.9
HLRZ	Highlands Stat	2.03	40	P	Pn	18 33 09.7	+1.9
RRRZ	Republican Roa	2.05	45	P	Pn	18 33 09.2	+1.3
RAHZ	Arahi	2.07	65	P	Pn	18 33 09.6	+1.5
NGRZ	Ngongotaha	2.07	35	P	Pn	18 33 10.2	+1.9
MUGZ	Murupara	2.10	51	P	Pn	18 33 09.3	+0.7
WHHZ	Waihua	2.11	71	P	Pn	18 33 10.2	+1.6
TARZ	Mount Tarawera	2.12	43	P	Pn	18 33 10.5	+1.6
RTZ	Ruatahuna	2.15	57	P	Pn	18 33 10.0	+0.8
OMRZ	Omania	2.15	38	P	Pn	18 33 10.8	+1.6
MRNZ	Matariki Terra	2.16	222	P	Pn	18 33 10.6	+1.4
TOZ	Tahuroa Road	2.17	17	P	Pn	18 33 10.5	+1.1
KMRZ	Kaimai	2.19	27	P	Pn	18 33 11.6	+1.8
SNGZ	Shannon Statio	2.30	64	P	Pn	18 33 12.3	+1.3
THZ	Tophouse	2.37	214	P	Pn	18 33 13.0	+1.2
MARZ	Manawahe	2.40	41	P	Pn	18 33 13.6	+1.5
TGRZ	Tauranga	2.42	31	P	Pn	18 33 14.5	+2.1
URZ	Urewera	2.44	51	P	Pn	18 33 13.2	+0.5
URZ	Urewera	2.44	51	P	Sn	18 33 41.9	-1.8
URZ	Urewera	2.44	51	P	Pn	18 33 13.2	+0.5
KNZ	Kokohu	2.45	72	P	Pn	18 33 13.7	+1.0
RAGZ	Rawiri	2.50	59	P	Pn	18 33 14.5	+1.1
MHGZ	Mahia Peninsul	2.58	76	P	Pn	18 33 15.7	+1.4
RIGZ	Rimuhau	2.63	66	P	Pn	18 33 16.1	+1.1
PRGZ	Paritu Road	2.63	71	P	Pn	18 33 16.2	+1.2
MWZ	Matawai	2.66	57	P	Pn	18 33 16.0	+0.6
MKAZ	Moumakai	2.73	8	P	Pn	18 33 17.7	+1.5
AWAZ	Awhitu Peninsu	2.74	359	P	Pn	18 33 18.8	+2.4
KHZ	Kahutara	2.74	198	P	Pn	18 33 17.8	+1.5
KHZ	Kahutara	2.74	198	P	Pn	18 33 18.0	+1.7
MYRZ	Mayor Island	2.81	26	P	Pn	18 33 19.7	+2.5
TKGZ	Te Karaka	2.82	62	P	Pn	18 33 18.4	+1.1
ETAZ	East Tamaki Re	2.86	4	P	Pn	18 33 23.6	+5.8
WTAZ	Waiatarua	2.87	358	P	Pn	18 33 23.8	+5.7
DSZ	Denniston Nort	2.92	228	P	Pn	18 33 19.7	+1.1
RUGZ	Raukumara Rang	2.98	53	P	Pn	18 33 19.6	+0.2
WIAZ	Waiheke Island	3.03	7	P	Pn	18 33 22.1	+2.0
MBAZ	Motutapu North	3.04	3	P	Pn	18 33 24.5	+4.4
TWGZ	Tauwhareparae	3.04	59	P	Pn	18 33 21.4	+1.1
HAZ	Te Kaha	3.17	51	P	Pn	18 33 21.8	0.0
PUZ	Puketiti	3.28	59	P	Pn	18 33 23.8	+0.5
GVZ	Greta Valley S	3.39	201	P	Pn	18 33 25.6	+1.1
LTZ	Lake Taylor	3.48	211	P	Pn	18 33 26.5	+0.7
WMGZ	Waiomatatini S	3.53	57	P	Pn	18 33 26.3	-0.1
MXZ	Matakaoa Point	3.62	53	P	Pn	18 33 28.5	+1.0
MXZ	Matakaoa Point	3.62	53	S	Sn	18 34 09.7	-0.6
MXZ	Matakaoa Point	3.62	53	P	Pn	18 33 28.5	+1.0
AMCZ	Amberley	3.69	204	P	Pn	18 33 29.2	+0.7
INZ	Inchbonnie	3.80	219	P	Pn	18 33 30.7	+0.9
OXZ	Oxford	4.03	209	P	Pn	18 33 32.7	-0.2
OKCZ	Okains Bay	4.09	197	P	Pn	18 33 34.2	+0.5
MQZ	McQueen's Vall	4.18	201	P	Pn	18 33 34.5	-0.3
AKCZ	Akaroa Harbour	4.27	197	P	Pn	18 33 36.6	+0.6
RACZ	Rakaia	4.35	205	P	Pn	18 33 36.8	-0.2
MHCZ	Mount Hutt	4.39	211	P	Pn	18 33 37.9	+0.3
WVZ	Waitaha Valley	4.41	221	P	Pn	18 33 38.4	+0.6
WACZ	Wakanui South	4.64	206	P	Pn	18 33 40.9	+0.1
RPZ	Rata Peaks	4.75	214	P	Pn	18 33 42.9	+0.6
RPZ	Rata Peaks	4.75	214	P	Pn	18 33 43.0	+0.7
GCSZ	Gaunt Creek Bo	4.79	222	P	Pn	18 33 43.2	+0.4
ARCZ	Arundel	4.89	211	P	Pn	18 33 44.6	+0.4
FOZ	Fox Glacier	5.21	223	P	Pn	18 33 48.1	-0.2
TMZ	Timaru	5.33	210	P	Pn	18 33 50.0	+0.1
LBZ	Lake Benmore	5.67	215	P	Pn	18 33 54.9	+0.4
ODZ	Otahua Downs	6.02	208	P	Pn	18 33 59.8	+0.7
MSZ	Milford Sound	6.98	224	P	Pn	18 34 11.3	-0.7
TUZ	Tuapeka	7.17	209	P	Pn	18 34 15.5	+1.0
CTZ	Chatham Island	7.59	124	P	Pn	18 34 22.4	+2.3
WHZ	Wether Hill Ro	7.83	217	P	Pn	18 34 23.2	-0.2

IDC 18 18:43:32.4±2.3**, 30°.35S**×**177°.53W, h0**^{km}**, mb3.5**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=64.2km s-min=41.5km az=39.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.52	267	P	P	18 51 38.0	0.0
	0.3nm,0.6s,baz=112,slow=8.3,SNR=10						
	0.3nm,0.6s						
WRA	Warramunga Arr	44.50	272	P	P	18 51 45.7	-0.2
	0.7nm,0.4s,baz=112,slow=8.0,SNR=14						
	0.7nm,0.4s						
QSPA	South Pole Qui	59.76	180	P	P	18 53 38.7	-0.3
	0.3nm,0.8s,baz=163,slow=0.1,SNR=0.8						
	0.3nm,0.8s						
FINES	FINESS Array B	145.24	340	PKPbc	PKPbc	19 03 10.4	-0.6
	1.2nm,0.8s,baz=44,slow=2.3,SNR=3.4						

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*IDC **18** 19:00:03.0±1.4, 30°.83S×177°.52W, h0^{km}, mb3.7/5, mbtmp3.8/6, Error ellipse: s-maj=37.2km s-min=29.4km az=53.0*

*NEIC **18** 19:00:04.7±1.1, 30°.95S±0°.03×177°.6W±0°.2, h10^{km}±2^{km}, mb4.2/7, Error ellipse: s-maj=33.2km s-min=4.2km az=95.0*

ISC 18 19:00:08.6±0.9**, 30°.99S**±0°.08×**177°.8W**±0°.2**, h35**^{km}**, n19, σ1^{s}.31**/21**, mb3.9**/9**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.74	356	Pn	Pn	19 00 33.9	-2.4
MXZ	Matakaoa Point	7.31	205	Pn	Pn	19 01 50.8	-2.1
URZ	Urewera	8.38	209	Pn	Pn	19 02 08.2	+0.6
	11nm,1.2s,baz=94,slow=15						
URZ				Sn	Sn	19 03 38.7	-2.3
	1.3nm,0.3s,baz=100,slow=22,SNR=6.6						
RPZ	Rata Peaks	15.48	212	Pn	Pn	19 03 42.6	-1.6
	0.3nm,0.3s,baz=53,slow=18,SNR=1.4						
STKA	Stephens Creek	34.54	258	P	P	19 06 55.8	+1.9
	0.6nm,0.4s,baz=114,slow=20,SNR=1.7						
	0.6nm,0.4s						
AS31	Alice Springs	43.28	267	P	P	19 08 07.0	-0.1
ASAR	Alice Springs	43.28	267	P	P	19 08 06.8	-0.3
ASAR	Alice Springs	43.28	267	P	P	19 08 08.4	+1.3
	0.4nm,0.4s,baz=106,slow=7.5,SNR=18						
ASAR				PcP	PcP	19 09 55.9	+0.1
	0.6nm,0.9s,baz=107,slow=3.4,SNR=4.9						
	0.4nm,0.4s						
WR8	Warramunga Arr	44.18	273	P	P	19 08 14.3	0.0
WR8				IAmb	IAmb	19 08 37.0	
	comp=Z,3.9nm,0.9s						
WRA	Warramunga Arr	44.32	273	P	P	19 08 16.5	+1.0
	comp=Z,0.9nm,0.4s,baz=112,slow=8.0,SNR=22						
	comp=Z,0.9nm,0.4s						
WB0	Warramunga Arr	44.34	273	P	P	19 08 16.7	+1.0
WB0				IAmb	IAmb	19 08 59.9	
	comp=Z,8.9nm,1.2s						
SBA	Scott Base	47.46	184	P	P	19 08 39.2	-0.2
SBA				IAmb	IAmb	19 08 43.9	
	comp=Z,0.7nm,0.9s						
VNDA	Vanda	47.53	186	P	P	19 08 40.6	+0.6
FITZ	Fitzroy Crossi	52.56	270	P	P	19 09 19.0	+0.1
FITZ				IAmb	IAmb	19 09 33.4	
	comp=Z,2.1nm,1.4s						
QSPA	South Pole Qui	59.12	180	P	P	19 10 06.0	+0.6
QSPA				IAmb	IAmb	19 10 20.7	
	comp=Z,6.6nm,1.4s						
QSPA	South Pole Qui	59.12	180	P	P	19 10 06.1	+0.7
	comp=Z,1.2nm,0.9s,baz=47,slow=1.2,SNR=7.0						
	comp=Z,1.2nm,0.9s						
SNAA	Sanae	77.56	178	P	P	19 12 01.6	+1.0
	comp=Z,0.3nm,0.8s,baz=214,slow=3.6,SNR=2.4						
	comp=Z,0.3nm,0.8s						
FINES	FINESS Array B	145.77	340	PKPbc	PKPab	19 19 42.5	-1.1
	comp=Z,0.8nm,0.4s,baz=50,slow=4.1,SNR=14						
AKASG	Malin Array Be	151.89	322	PKPbc	PKiKP	19 19 59.0	-0.8
	comp=Z,0.2nm,0.3s,baz=61,slow=1.9,SNR=1.5						

IDC 18 19:02:43.0±1.6**, 28°.34N**×**105°.01E, h0**^{km}**, mb3.5**/4**, mbtmp3.5**/5**, ML3.3**/1**, MS3.9**/2**, Error ellipse: s-maj=38.9km s-min=26.8km az=64.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	19.49	3	P	Pn	19 07 13.7	+0.8
	0.1nm,0.3s,baz=188,slow=7.1,SNR=1.5						
SONM				LR	LR	19 14 39.5	
	comp=Z,166nm,18.1s,baz=18,slow=37						
	0.4nm,0.7s						
KSRS	Korea Array	21.24	59	P	P	19 07 30.4	-0.3
	0.9nm,0.6s,baz=237,slow=11,SNR=4.8						
	0.9nm,0.6s						
MKAR	Makanchi Array	25.61	322	P	P	19 08 13.5	-0.5
	0.6nm,0.6s,baz=127,slow=11,SNR=6.1						
	0.6nm,0.6s						
USRK	Ussuriysk Ar.	26.74	46	P	P	19 08 23.2	-1.0
	1.2nm,0.7s,baz=239,slow=8.2,SNR=3.1						
	1.2nm,0.7s						
WRA	Warramunga Arr	55.75	146	P	P	19 12 21.9	+0.2
	0.4nm,0.7s,baz=336,slow=7.6,SNR=9.1						
	0.4nm,0.7s						
KDAK	Kodiak Island	72.70	33	LR	LR	19 47 02.5	
	comp=Z,170nm,19.4s,baz=72,slow=37						

IDC 18 19:04:45.9±3.3**, 31°.08S**×**178°.47W, h0**^{km}**, mb3.6**/2**, mbtmp3.7**/3**, ML3.0**/1**, MS4.3**/1**, Error ellipse: s-maj=73.3km s-min=48.7km az=112.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.03	206	Pn	Pn	19 06 43.5	-0.2
	0.2nm,0.3s,baz=111,slow=6.3,SNR=3.6						
URZ				Sn	Sn	19 08 11.6	-3.7
	baz=67,slow=13						
	7.0nm,1.0s						
ASAR	Alice Springs	42.68	268	P	P	19 12 44.5	-0.1
	0.4nm,0.4s,baz=111,slow=8.6,SNR=13						
	0.4nm,0.4s						
WRA	Warramunga Arr	43.73	273	P	P	19 12 53.0	-0.2
	0.3nm,0.3s,baz=111,slow=8.0,SNR=5.8						
	0.3nm,0.3s						
JAY	Jayapura	47.86	298	LR	LR	19 33 07.1	
	comp=Z,279nm,18.4s,baz=11,slow=36						
FINES	FINESS Array B	145.65	339	PKPbc	PKPdf	19 24 24.9	-0.5
	1.0nm,0.9s,baz=32,slow=7.5,SNR=3.4						

MEX 18 19:16:21.8±0.9**, 16°.41N**×**98°.14W, h15**^{km}±8^{km}**, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.03	139	*e*P	Pg	19 16 22.9	-1.6
PNIG				*e*S	Sg	19 16 25.5	-0.9
YOIG	Yosondua	0.72	52	*e*P	Pg	19 16 33.6	-2.4
TXIG	Tlaxiaco	0.91	23	*e*P	Pb	19 16 37.6	-1.9
TXIG				*e*S	Sb	19 16 47.1	-4.5
MGIG	Malinaltepec	0.94	330	*e*P	Pb	19 16 37.6	-2.4
CRIG	Cruz Grande	1.00	289	*e*P	Pb	19 16 37.9	-3.0
CRIG				*e*S	Sb	19 16 49.1	-4.7
PEIG	Puerto Escondi	1.04	113	*e*P	Pb	19 16 36.3	-5.2
PEIG				*e*S	Sb	19 16 49.0	-6.1
TLIG	Tlapa	1.22	341	*e*P	Pn	19 16 42.2	-2.2
TLIG				*e*S	Sb	19 16 58.9	-1.2
HLIG	Huajuapan de L	1.45	13	*e*P	Pn	19 16 46.4	-1.2
HLIG				*e*S	Sb	19 17 07.0	0.0
FTIG	Fresnillo de T	1.49	0	*e*P	Pn	19 16 47.4	-0.8
FTIG				*e*S	Sn	19 17 07.4	+0.1
VHO	Vista Hermosa	1.50	64	*e*P	Pn	19 16 41.4	-7.0
VHO				*e*S	Sn	19 17 00.0	-7.8
DAIG	Los Arroyos	1.57	293	*e*P	Pn	19 16 44.8	-4.3
DAIG				*e*S	Sn	19 17 05.7	-3.4
TOIG	Toxpalan	1.97	31	*e*P	Pn	19 16 54.0	-0.7
TOIG				*e*S	Sb	19 17 21.7	-0.1

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*IDC **18** 19:25:28.3±1.0, 28°.36N×104°.81E, h0^{km}, mb3.8/7, mbtmp3.8/8, ML3.5/1, Error ellipse: s-maj=32.1km s-min=18.6km az=60.0*

ISC 18 19:25:31.2±1.2**, 28°.4N**±0°.2×**104°.9E**±0°.2**, h19**^{km}**, n8, σ0^{s}.51**/8**, mb3.9**/7**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	19.42	3	P	Pn	19 29 57.1	-0.6
	0.1nm,0.3s,baz=179,slow=11,SNR=4.1						
	0.5nm,0.6s						
KSRS	Korea Array	21.31	59	P	P	19 30 16.9	0.0
	2.1nm,0.9s,baz=244,slow=10,SNR=9.8						
	2.1nm,0.9s						
MKAR	Makanchi Array	25.46	322	P	P	19 30 58.5	+0.5
	0.7nm,0.6s,baz=114,slow=11,SNR=6.2						
	0.7nm,0.6s						
USRK	Ussuriysk Ar.	26.78	47	P	P	19 31 10.7	+0.7
	2.4nm,0.8s,baz=250,slow=4.3,SNR=4.8						
	2.4nm,0.8s						
KURBB	Kurchatov Arra	29.79	325	P	P	19 31 36.7	0.0
	1.0nm,0.2s,baz=140,slow=7.3,SNR=1.6						
	1.0nm,0.2s						
BVAR	Borovoye Array	35.32	324	P	P	19 32 25.0	-0.1
	0.2nm,0.4s,baz=106,slow=11,SNR=1.8						
	0.2nm,0.4s						
WRA	Warramunga Arr	55.89	146	P	P	19 35 07.6	-0.3
	3.2nm,1.2s,baz=337,slow=8.2,SNR=12						
	3.2nm,1.2s						
ASAR	Alice Springs	58.87	149	P	P	19 35 29.0	+0.1
	0.6nm,0.7s,baz=336,slow=7.2,SNR=12						
	0.6nm,0.7s						

ROM 18 19:28:53.3±0.1**, 38°.489N**±0°.004×**16°.146E**±0°.005**, h10**^{km}**, ML2.3**/32**, 3C, Error ellipse: s-maj=0.5km s-min=0.1km az=317.0, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAC	Placanica	0.23	100	⇑P	Pg	19 28 58.9	+0.8
PLAC				S	Sg	19 29 03.0	+1.7
PLAC				AML	AML		
	comp=E,1048µm,1.6s						
PLAC				AML	AML		
	comp=N,2050µm,0.2s						
PLAC				AML	AML		
	comp=N,1160µm,1.6s						
PLAC				AML	AML		
	comp=N,2045µm,0.2s						
PLAC				AML	AML		
	comp=E,2205µm,0.2s						
PLAC				AML	AML		
	comp=N,1160µm,0.4s						
PLAC				AML	AML		
	comp=E,1048µm,0.4s						
PLAC				AML	AML		
	comp=N,1113µm,0.2s						
PLAC				AML	AML		
	comp=E,965µm,0.2s						
PLAC				AML	AML		
	comp=E,2205µm,0.2s						
PLAC				AML	AML		
	comp=N,2048µm,0.2s						
JOPP	Joppolo	0.24	300	⇑P	Pg	19 28 58.9	+0.7
JOPP				S	Sg	19 29 02.9	+1.5
JOPP				AML	AML		
	comp=N,1242µm,0.4s						
JOPP				AML	AML		
	comp=E,1044µm,1.0s						
JOPP				AML	AML		
	comp=N,1004µm,0.2s						
JOPP				AML	AML		
	comp=E,1015µm,0.2s						
CEL	Celeste	0.30	221	P	Pg	19 29 00.0	+0.6
CEL				S	Sb	19 29 05.1	-0.8
CEL				AML	AML		
	comp=N,465µm,0.2s						
CEL				AML	AML		
	comp=E,804µm,0.4s						
CEL				AML	AML		
	comp=E,786µm,0.4s						
CEL				AML	AML		
	comp=N,448µm,0.2s						
CEL				AML	AML		
	comp=E,804µm,0.4s						
CEL				AML	AML		
	comp=N,465µm,0.2s						
CEL				AML	AML		
	comp=E,786µm,0.4s						
CEL				AML	AML		
	comp=N,449µm,0.2s						
GRI	Girifalco	0.40	33	P	Pg	19 29 01.2	+0.1
GRI				S	Sg	19 29 07.4	+1.0
GRI				AML	AML		
	comp=N,748µm,0.2s						
GRI				AML	AML		
	comp=E,750µm,0.6s						
GRI				AML	AML		
	comp=N,748µm,0.2s						
GRI				AML	AML		
	comp=E,588µm,0.3s						
GMB	Gambarie	0.41	218	AML	AML		
	comp=E,1850µm,0.2s						
GMB				AML	AML		
	comp=N,1880µm,1.0s						
SICLA	Scilla	0.41	236	P	Pg	19 29 01.9	+0.6
SICLA				S	Sb	19 29 08.7	-0.3
SOI	Samo	0.42	190	⇑P	Pg	19 29 01.9	+0.4
SOI				S	Sb	19 29 08.3	-1.0
SOI				AML	AML		
	comp=E,319µm,0.4s						
SOI				AML	AML		
	comp=N,196µm,0.7s						
SOI				AML	AML		
	comp=E,319µm,1.6s						
SOI				AML	AML		
	comp=E,319µm,0.4s						

SOI				AML	AML		
	comp=N,193μm,0.5s						
MSRU	**Castanea**	**0.55**	**246**	P	Pg	19 29 04.3	+0.4
MSRU				AML	AML		
	comp=N,258μm,0.6s						
MSRU				AML	AML		
	comp=N,258μm,1.4s						
MSRU				AML	AML		
	comp=E,444μm,0.5s						
MSRU				AML	AML		
	comp=N,247μm,0.3s						
MSRU				AML	AML		
	comp=E,443μm,0.5s						
MTTG	**Motta San Giov**	**0.60**	**216**	P	Pb	19 29 05.6	-0.4
MTTG				AML	AML		
	comp=N,190μm,0.4s						
MTTG				AML	AML		
	comp=E,138μm,0.5s						
MTTG				AML	AML		
	comp=N,190μm,0.4s						
MPNC	**Port Mandanici**	**0.71**	**241**	P	Pb	19 29 07.6	-0.2
MPNC				AML	AML		
	comp=E,244μm,1.4s						
MPNC				AML	AML		
	comp=E,244μm,0.6s						
MPNC				AML	AML		
	comp=N,260μm,0.8s						
MPNC				AML	AML		
	comp=E,239μm,0.3s						
MPNC				AML	AML		
	comp=N,207μm,0.4s						
CAR1	**CAROLEI**	**0.77**	**4**	P	Pg	19 29 08.1	0.0
CAR1				AML	AML		
	comp=E,476μm,0.4s						
CAR1				AML	AML		
	comp=N,355μm,0.3s						
CAR1				AML	AML		
	comp=E,476μm,1.6s						
CAR1				AML	AML		
	comp=N,339μm,0.3s						
CAR1				AML	AML		
	comp=N,355μm,0.3s						
CAR1				AML	AML		
	comp=E,383μm,0.3s						
IST3	**Stromboli F**	**0.78**	**294**	P	Pg	19 29 08.2	-0.2
IST3				AML	AML		
	comp=E,584μm,0.2s						
IST3				AML	AML		
	comp=N,478μm,0.2s						
IST3				AML	AML		
	comp=E,584μm,0.2s						
SPS2	**Spezzano della**	**0.82**	**10**	P	Pg	19 29 09.3	+0.2
SPS2				S	Sb	19 29 21.0	+0.2
SPS2				AML	AML		
	comp=E,60μm,1.6s						
SPS2				AML	AML		
	comp=N,70μm,0.4s						
SPS2				AML	AML		
	comp=E,60μm,0.4s						
SPS2				AML	AML		
	comp=E,59μm,0.3s						
SPS2				AML	AML		
	comp=N,70μm,0.4s						
TIP	**Timpagrande**	**0.84**	**35**	P	Pg	19 29 08.8	-0.7
TIP				AML	AML		
	comp=N,43μm,0.5s						
TIP				AML	AML		
	comp=E,43μm,0.5s						
VPL	**Vulcano Piano**	**0.92**	**264**	P	Pg	19 29 10.2	-0.7
CELI	**Celico**	**0.96**	**17**	P	Pg	19 29 11.5	-0.2
CELI				S	Sb	19 29 24.9	0.0
CELI				AML	AML		
	comp=N,228μm,1.5s						
CELI				AML	AML		
	comp=N,228μm,0.5s						
CELI				AML	AML		
	comp=E,116μm,0.6s						
CELI				AML	AML		
	comp=N,220μm,0.3s						
CELI				AML	AML		
	comp=E,107μm,0.4s						
CET2	**Cetraro**	**1.05**	**352**	P	Pg	19 29 12.9	-0.6
CET2				AML	AML		
	comp=N,246μm,0.7s						
CET2				AML	AML		
	comp=E,147μm,0.7s						
MUCR	**Ucria**	**1.10**	**246**	P	Pg	19 29 13.3	-1.1
TDS	**Terranova Siba**	**1.18**	**7**	P	Pb	19 29 14.9	-0.9
TDS				AML	AML		
	comp=E,20μm,0.8s						
TDS				AML	AML		
	comp=N,25μm,0.8s						
TDS				AML	AML		
	comp=N,25μm,1.2s						
TDS				AML	AML		
	comp=E,20μm,1.2s						
SALB	**San Lorenzo Be**	**1.40**	**6**	P	Pn	19 29 18.5	-0.5
HLNI	**Lentini**	**1.52**	**222**	P	Pn	19 29 20.6	0.0

ROM 18 19:29:48.1±0.1**, 38°.490N**±0°.004×**16°.148E**±0°.006**, h10**^{km}**, ML2.0**/25**, 1C, Error ellipse: s-maj=0.5km s-min=0.1km az=326.0, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAC	**Placanica**	**0.23**	**100**	⇑P	Pg	19 29 53.6	+0.8
PLAC				S	Sg	19 29 57.6	+1.6
PLAC				AML	AML		
	comp=N,1088μm,0.3s						
PLAC				AML	AML		
	comp=E,672μm,0.5s						
PLAC				AML	AML		
	comp=E,1130μm,0.3s						
PLAC				AML	AML		
	comp=N,716μm,0.5s						
PLAC				AML	AML		
	comp=E,939μm,0.6s						
PLAC				AML	AML		
	comp=N,602μm,0.2s						
PLAC				AML	AML		
	comp=N,863μm,0.2s						
PLAC				AML	AML		
	comp=E,939μm,1.4s						
PLAC				AML	AML		
	comp=E,528μm,0.2s						
PLAC				AML	AML		
	comp=N,1087μm,0.3s						
PLAC				AML	AML		
	comp=N,716μm,0.5s						
PLAC				AML	AML		
	comp=E,672μm,0.5s						
PLAC				AML	AML		
	comp=E,1129μm,0.3s						
JOPP	**Joppolo**	**0.24**	**300**	P	Pg	19 29 53.6	+0.6
JOPP				S	Sg	19 29 57.7	+1.4
JOPP				AML	AML		
	comp=N,840μm,0.5s						
JOPP				AML	AML		
	comp=E,984μm,0.2s						
JOPP				AML	AML		
	comp=N,621μm,0.4s						
JOPP				AML	AML		
	comp=E,545μm,0.2s						
JOPP				AML	AML		
	comp=N,621μm,1.6s						
JOPP				AML	AML		
	comp=E,936μm,0.2s						
JOPP				AML	AML		
	comp=N,811μm,0.2s						
CEL	**Celeste**	**0.30**	**221**	P	Pg	19 29 54.7	+0.5
CEL				S	Sb	19 29 59.9	-0.9
CEL				AML	AML		
	comp=E,953μm,0.4s						
CEL				AML	AML		
	comp=E,962μm,0.4s						
CEL				AML	AML		
	comp=N,490μm,0.5s						
CEL				AML	AML		
	comp=N,512μm,0.5s						
CEL				AML	AML		
	comp=E,454μm,0.4s						
CEL				AML	AML		
	comp=N,294μm,0.2s						
CEL				AML	AML		
	comp=E,275μm,0.2s						
CEL				AML	AML		
	comp=E,275μm,1.8s						
CEL				AML	AML		
	comp=E,454μm,1.6s						
CEL				AML	AML		
	comp=N,283μm,0.2s						
CEL				AML	AML		
	comp=E,755μm,0.3s						
CEL				AML	AML		
	comp=E,769μm,0.3s						
CEL				AML	AML		
	comp=N,488μm,0.2s						
CEL				AML	AML		
	comp=N,484μm,0.2s						
GRI	**Girifalco**	**0.39**	**33**	P	Pg	19 29 55.9	0.0
GRI				S	Sg	19 30 02.0	+0.9
GRI				AML	AML		
	comp=E,476μm,0.5s						
GRI				AML	AML		
	comp=N,424μm,0.3s						
GRI				AML	AML		
	comp=N,244μm,0.2s						
GRI				AML	AML		
	comp=E,241μm,0.3s						
GRI				AML	AML		
	comp=E,445μm,0.3s						
GRI				AML	AML		
	comp=N,425μm,0.3s						
GMB	**Gambarie**	**0.41**	**218**	P	Pg	19 29 56.4	+0.2
GMB				AML	AML		
	comp=E,1700μm,0.5s						
GMB				AML	AML		
	comp=N,3020μm,0.2s						
GMB				AML	AML		
	comp=N,3021μm,0.2s						
GMB				AML	AML		
	comp=E,1660μm,0.2s						
SICLA	**Scilla**	**0.41**	**236**	P	Pg	19 29 56.6	+0.4
SICLA				S	Sb	19 30 03.2	-0.6
SOI	**Samo**	**0.42**	**190**	P	Pg	19 29 56.8	+0.4
SOI				AML	AML		
	comp=E,390μm,0.4s						
SOI				AML	AML		
	comp=N,246μm,0.2s						
SOI				AML	AML		
	comp=N,246μm,0.2s						
SOI				AML	AML		
	comp=N,246μm,0.2s						
SOI				AML	AML		
	comp=E,390μm,0.4s						
MSRU	**Castanea**	**0.55**	**246**	P	Pg	19 29 59.3	+0.5
MSRU				AML	AML		
	comp=E,612μm,0.3s						
MSRU				AML	AML		
	comp=N,282μm,0.2s						
MSRU				AML	AML		
	comp=N,281μm,0.2s						
MSRU				AML	AML		
	comp=E,612μm,0.3s						
MTTG	**Motta San Giov**	**0.60**	**216**	P	Pg	19 30 00.2	+0.4
MTTG				AML	AML		
	comp=E,198μm,0.4s						
MTTG				AML	AML		
	comp=N,174μm,0.4s						
MTTG				AML	AML		
	comp=N,174μm,0.4s						
MTTG				AML	AML		
	comp=E,198μm,0.4s						
CAR1	**CAROLEI**	**0.76**	**4**	P	Pg	19 30 02.8	0.0
CAR1				S	Sg	19 30 13.2	+0.3
CAR1				AML	AML		
	comp=E,380μm,0.4s						
CAR1				AML	AML		
	comp=N,266μm,0.4s						
CAR1				AML	AML		
	comp=N,117μm,1.1s						
CAR1				AML	AML		
	comp=N,57μm,0.4s						
CAR1				AML	AML		
	comp=E,95μm,0.1s						
CAR1				AML	AML		
	comp=E,87μm,0.2s						
CAR1				AML	AML		
	comp=E,312μm,0.5s						
CAR1				AML	AML		
	comp=N,328μm,0.5s						
CAR1				AML	AML		
	comp=E,380μm,0.4s						
CAR1				AML	AML		
	comp=N,267μm,0.4s						
SPS2	**Spezzano della**	**0.82**	**10**	P	Pg	19 30 04.1	+0.2
SPS2				AML	AML		
	comp=E,50μm,0.3s						
SPS2				AML	AML		
	comp=N,60μm,0.4s						
SPS2				AML	AML		
	comp=N,60μm,0.4s						
SPS2				AML	AML		
	comp=E,50μm,0.3s						
TIP	**Timpagrande**	**0.84**	**35**	P	Pg	19 30 04.4	+0.1
CELI	**Celico**	**0.95**	**17**	P	Pg	19 30 06.4	-0.1
CELI				AML	AML		
	comp=E,79μm,0.5s						
CELI				AML	AML		
	comp=N,148μm,0.3s						
CELI				AML	AML		
	comp=N,148μm,0.3s						
CET2	**Cetraro**	**1.05**	**352**	P	Pg	19 30 08.1	-0.2
CET2				AML	AML		
	comp=E,130μm,0.6s						
CET2				AML	AML		
	comp=N,176μm,1.1s						
MUCR	**Ucria**	**1.10**	**246**	P	Pg	19 30 09.0	-0.2
CUC	**Castrocucco**	**1.52**	**350**	P	Pb	19 30 16.5	0.0

NEIC ***18*** *19:40:56.2±1.0, 18°.68N±0°.04×67°.52W±0°.02, h28^{km}±10^{km}, ML3.7/30, Md3.5/14(RSPR), Error ellipse: s-maj=5.6km s-min=2.5km az=204.0*

SDD ***18*** *19:40:57.1±1.5, 18°.70N×67°.49W, h28^{km}±22^{km}, MD3.6, ML3.4, MW3.7*

OSPL ***18*** *19:40:57.4±0.8, 18°.72N×67°.45W, h8^{km}±4^{km}, ML3.5*

RSPR ***18*** *19:40:57.3, 18°.67N×67°.59W, h18^{km}±2^{km}, MD3.5/14*

ISC 18 19:40:53.9±1.7**, 18°.76N**±0°.05×**67°.49W**±0°.03**, h7**^{km}±13^{km}**, n73,** σ**0^{s}.58**/86**, 14C-9D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.38**	**178**		**Pb**	**19 41 03.7**	**+0.8**
IDE					**Sb**	**19 41 08.4**	**-0.4**
IDE	**Isla Desecheo**	**0.38**	**178**	⇑*e*P	**Pb**	**19 41 03.7**	**+0.8**
IDE	**Isla Desecheo**	**0.38**	**178**	*e*S	**Sb**	**19 41 08.4**	**-0.4**
AGPR	**Aguadilla, PR**	**0.47**	**129**		**Pb**	**19 41 05.5**	**+1.1**
AGPR					**Sb**	**19 41 11.8**	**+0.4**
AGPR	**Aguadilla, PR**	**0.47**	**129**	⇑*e*P	**Pb**	**19 41 05.5**	**+1.1**
AGPR	**Aguadilla, PR**	**0.47**	**129**	*e*S	**Sb**	**19 41 11.8**	**+0.4**
AGPR	**Aguadilla, PR**	**0.47**	**129**	*e*Pg	**Pb**	**19 41 05.5**	**+1.1**
AGPR				⇑*e*Sg	**Sb**	**19 41 11.9**	**+0.4**
AGPR				IAML		19 41 12.0	
	comp=E,7μm,0.3s						
AGPR				IAML		19 41 12.8	
	comp=N,7μm,0.5s						
AGPR	**Aguadilla, PR**	**0.47**	**129**	*i* P	**Pb**	**19 41 05.3**	**+0.9**
AGPR				*e*S	**Sb**	**19 41 10.0**	**-1.4**
AGPR				IAML		19 41 17.4	
	comp=Z,2μm,0.2s						
PRSN	**Puerto Rico Se**	**0.64**	**149**		**Pb**	**19 41 08.1**	**+0.8**
PRSN					**Sb**	**19 41 15.9**	**-0.5**
PRSN	**Puerto Rico Se**	**0.64**	**149**	IAML		19 41 17.7	
	comp=N,11μm,0.2s						
PRSN				IAML		19 41 21.7	
	comp=E,7μm,0.3s						
PRSN	**Puerto Rico Se**	**0.64**	**149**	⇓*e*P	**Pb**	**19 41 08.1**	**+0.8**
PRSN	**Puerto Rico Se**	**0.64**	**149**	*e*S	**Sb**	**19 41 15.9**	**-0.5**
LSP	**Las Mesas**	**0.70**	**147**		**Pb**	**19 41 09.2**	**+0.8**
LSP					**Sb**	**19 41 18.4**	**+0.2**
LSP	**Las Mesas**	**0.70**	**147**	⇓*e*P	**Pb**	**19 41 09.2**	**+0.8**
LSP	**Las Mesas**	**0.70**	**147**	*e*S	**Sb**	**19 41 18.4**	**+0.2**
AOPR	**Arecibo Observ**	**0.81**	**121**		**Pb**	**19 41 11.0**	**+0.6**
AOPR					**Sb**	**19 41 21.4**	**-0.1**
AOPR	**Arecibo Observ**	**0.81**	**121**	⇑*e*P	**Pb**	**19 41 11.0**	**+0.6**
AOPR	**Arecibo Observ**	**0.81**	**121**	*e*S	**Sb**	**19 41 21.4**	**-0.1**
AOPR	**Arecibo Observ**	**0.81**	**121**	⇑*e*Pg	**Pb**	**19 41 10.9**	**+0.6**
AOPR				*e*Sg	**Sb**	**19 41 21.4**	**-0.1**
AOPR				IAML		19 41 21.8	
	comp=N,3μm,0.2s						
AOPR				IAML		19 41 27.5	
	comp=E,5μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.83**	**154**		**Pb**	**19 41 11.2**	**+0.4**
CRPR					**Sb**	**19 41 21.9**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.83**	**154**	⇓*e*P	**Pb**	**19 41 11.2**	**+0.4**
CRPR	**Cabo Rojo, PR**	**0.83**	**154**	*e*Pg	**Pb**	**19 41 11.1**	**+0.4**
CRPR				IAML		19 41 29.9	
	comp=N,899nm,0.6s						
CRPR				IAML		19 41 30.1	
	comp=E,805nm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.83**	**154**	*i* P	**Pb**	**19 41 11.1**	**+0.4**
CRPR				*e*S	**Sb**	**19 41 21.9**	**-0.2**
CRPR				IAML		19 41 22.4	
	comp=Z,2μm,0.2s						
PCDR	**Punta Cana, DR**	**0.88**	**254**	⇑*e*Pg	**Pb**	**19 41 12.4**	**+0.9**
PCDR				IAML		19 41 25.1	
	comp=N,786nm,0.5s						
PCDR				IAML		19 41 25.1	
	comp=N,884nm,0.6s						
PCDR				IAML		19 41 36.9	
	comp=E,955nm,0.5s						
UUPR	**Utuado, UPR, P**	**0.89**	**125**		**Pb**	**19 41 12.2**	**+0.5**
UUPR					**Sb**	**19 41 23.4**	**-0.3**
UUPR	**Utuado, UPR, P**	**0.89**	**125**	⇑*e*P	**Pb**	**19 41 12.2**	**+0.5**
UUPR	**Utuado, UPR, P**	**0.89**	**125**	*e*S	**Sb**	**19 41 23.4**	**-0.3**
MLPR	**Magueyes Islan**	**0.90**	**152**	⇑*e*P	**Pb**	**19 41 11.7**	**0.0**
MLPR	**Magueyes Islan**	**0.90**	**152**	*e*S	**Sg**	**19 41 22.7**	**0.0**
MLPR	**Magueyes Islan**	**0.90**	**152**	IAML		19 41 28.3	
	comp=N,296nm,0.1s						
MLPR				IAML		19 41 32.0	
	comp=E,366nm,0.2s						
EMPR	**Esperanza - Ma**	**0.95**	**107**		**Pn**	**19 41 13.7**	**0.0**
EMPR					**Sn**	**19 41 27.7**	**+0.2**
EMPR	**Esperanza - Ma**	**0.95**	**107**	IAML		19 41 30.5	
	comp=N,2μm,0.3s						
EMPR				IAML		19 41 33.8	
	comp=E,3μm,0.5s						
EMPR	**Esperanza - Ma**	**0.95**	**107**	⇓*e*P	**Pn**	**19 41 13.7**	**0.0**
EMPR	**Esperanza - Ma**	**0.95**	**107**	*e*S	**Sn**	**19 41 27.7**	**+0.2**
GBPR	**Guanica, Bosqu**	**0.98**	**143**		**Pb**	**19 41 13.4**	**+0.3**
GBPR	**Guanica, Bosqu**	**0.98**	**143**	⇑*e*P	**Pb**	**19 41 13.4**	**+0.3**
GBPR				*e*S	**Sb**	**19 41 25.8**	**-0.3**
CELP	**Cerrillos**	**1.10**	**128**		**Pb**	**19 41 15.4**	**+0.1**
CELP					**Sb**	**19 41 29.9**	**0.0**
CELP	**Cerrillos**	**1.10**	**128**	IAML		19 41 30.3	
	comp=E,982nm,0.5s						
CELP				IAML		19 41 35.6	
	comp=N,1μm,0.3s						
CELP	**Cerrillos**	**1.10**	**128**	⇑*e*P	**Pb**	**19 41 15.4**	**+0.1**
CELP	**Cerrillos**	**1.10**	**128**	*e*S	**Sb**	**19 41 29.9**	**0.0**
CELP	**Cerrillos**	**1.10**	**128**	⇑*e*Pg	**Pb**	**19 41 15.4**	**+0.1**
CELP				IAML		19 41 35.5	
	comp=N,1μm,0.2s						
CELP				IAML		19 41 36.8	
	comp=E,905nm,0.3s						
OBIP	**Obispado Ponce**	**1.10**	**130**		**Pb**	**19 41 15.4**	**+0.2**
OBIP					**Sg**	**19 41 29.3**	**-0.2**
OBIP	**Obispado Ponce**	**1.10**	**130**	⇑*e*P	**Pb**	**19 41 15.4**	**+0.2**
OBIP	**Obispado Ponce**	**1.10**	**130**	*e*S	**Sg**	**19 41 29.3**	**-0.2**
ECPR	**Experimental S**	**1.16**	**112**	⇑*e*P	**Pn**	**19 41 16.7**	**+0.2**
ECPR	**Experimental S**	**1.16**	**112**	*e*S	**Sn**	**19 41 31.9**	**-0.6**
GCPR	**Guaynabo City**	**1.41**	**108**		**Pb**	**19 41 20.6**	**+0.1**
GCPR					**Sg**	**19 41 38.9**	**-0.3**
GCPR	**Guaynabo City**	**1.41**	**108**	⇓*e*P	**Pb**	**19 41 20.6**	**+0.1**
GCPR	**Guaynabo City**	**1.41**	**108**	*e*S	**Sg**	**19 41 38.9**	**-0.3**
SJG	**San Juan**	**1.43**	**117**		**Pb**	**19 41 20.8**	**-0.1**
SJG	**San Juan**	**1.43**	**117**	IAML		19 41 39.9	
	comp=E,1μm,0.4s						
SJG				IAML		19 41 40.9	
	comp=E,2μm,0.2s						
SJG	**San Juan**	**1.43**	**117**	⇓*e*P	**Pb**	**19 41 20.8**	**-0.1**
SJG	**San Juan**	**1.43**	**117**	*e*S	**Sn**	**19 41 39.1**	**-0.1**
SJG	**San Juan**	**1.43**	**117**	*i* P	**Pb**	**19 41 20.7**	**-0.1**
SJG				*e*S	**Sb**	**19 41 38.6**	**-0.6**
SJG				IAML		19 41 40.4	
	comp=Z,1μm,0.2s						
MIDR	**Miches**	**1.49**	**279**	*e*Pg	**Pn**	**19 41 22.2**	**+1.2**
MIDR				IAML		19 41 45.7	
	comp=E,168nm,0.4s						
MIDR				IAML		19 41 46.0	
	comp=N,332nm,0.3s						
MIDR				IAML		19 41 46.1	
	comp=N,332nm,0.3s						
IGPR	**InterUniversit**	**1.54**	**121**		**Pb**	**19 41 22.4**	**-0.2**
IGPR					**Sn**	**19 41 41.7**	**-0.2**
IGPR	**InterUniversit**	**1.54**	**121**	⇓*e*P	**Pb**	**19 41 22.4**	**-0.2**
IGPR	**InterUniversit**	**1.54**	**121**	*e*S	**Sn**	**19 41 41.7**	**-0.2**
PDPR	**Patillas Dam,**	**1.58**	**118**		**Pn**	**19 41 22.3**	**+0.1**
PDPR				IAML		19 41 44.4	
	comp=E,708nm,0.2s						
PDPR				IAML		19 41 45.9	
	comp=N,748nm,0.1s						
PDPR	**Patillas Dam,**	**1.58**	**118**	⇓*e*P	**Pb**	**19 41 23.1**	**-0.3**
PDPR	**Patillas Dam,**	**1.58**	**118**	*e*S	**Sb**	**19 41 43.0**	**-0.6**
HUMP	**Col San Antoni**	**1.68**	**111**		**Pn**	**19 41 24.1**	**+0.5**
HUMP					**Sb**	**19 41 46.2**	**-0.2**
HUMP	**Col San Antoni**	**1.68**	**111**	IAML		19 41 49.1	
	comp=E,688nm,0.2s						
HUMP				IAML		19 41 58.0	
	comp=N,521nm,0.2s						
HUMP	**Col San Antoni**	**1.68**	**111**	⇓*e*P	**Pn**	**19 41 24.1**	**+0.5**
HUMP	**Col San Antoni**	**1.68**	**111**	*e*S	**Sb**	**19 41 46.2**	**-0.2**
SMDR	**Samana, DR**	**1.69**	**288**	⇑*e*P	**Pb**	**19 41 26.5**	**+1.3**
DR12	**Loma Pena Alta**	**1.79**	**271**		**Pn**	**19 41 25.1**	**-0.2**
HATOM	**Hato Mayor del**	**1.79**	**271**	*e*Pg	**Pn**	**19 41 25.4**	**+0.1**
HATOM				IAML		19 41 53.3	
	comp=N,195nm,0.8s						
HATOM				IAML		19 42 02.8	
	comp=E,210nm,0.6s						
DR08	**Loma La Naviza**	**2.40**	**275**	*e*Pg	**Pb**	**19 41 37.4**	**-0.1**
DR08				IAML		19 42 18.5	
	comp=N,3μm,0.2s						
BANI	**BANI**	**2.74**	**263**		**Pn**	**19 41 36.9**	**-1.5**
ABDR	**Alto Bandera**	**2.97**	**271**	*e*Pg	**Pb**	**19 41 46.2**	**-1.1**
ABDR				IAML		19 42 40.0	
	comp=E,203nm,0.8s						
ABDR				IAML		19 42 40.6	
	comp=N,122nm,0.6s						
SC01	**Santiago de lo**	**3.13**	**283**		**Pn**	**19 41 43.3**	**-0.4**
SC01				IAML		19 42 48.7	
	comp=N,271nm,0.5s						
SC01				IAML		19 42 49.6	
	comp=E,260nm,0.6s						
SDDR	**Presa de Saban**	**3.60**	**274**		**Pn**	**19 41 51.6**	**+1.5**
SDDR				IAML		19 42 57.4	
	comp=E,99nm,0.8s						

TEH ***18*** *20:14:24.2, 30°.29N×51°.71E, h5^{km}*

IDC ***18*** *20:14:25.0±0.7, 30°.24N×51°.58E, h0^{km}, mb3.9/22, mbtmp3.9/27, ML3.6/5, MS3.4/20, Error ellipse: s-maj=15.9km s-min=14.0km az=26.0*

THR ***18*** *20:14:25.7±0.0, 30°.17N×51°.52E, h10^{km}±745^{km}, ML4.2*

NEIC ***18*** *20:14:26.5±2.6, 30°.17N±0°.08×51°.63E±0°.08, h10^{km}±1^{km}, mb4.2/26, Error ellipse: s-maj=15.5km s-min=10.2km az=213.0*

OMAN ***18*** *20:14:29.5±0.1, 30°.19N×51°.83E, h26^{km}±1^{km}, mb3.8/28, ms3.0/3, Error ellipse: s-maj=1.8km s-min=0.7km az=3.0*

DSN ***18*** *20:14:30.4±1.2, 29°.86N×51°.66E, h10^{km}, ML4.1/11, Error ellipse: s-maj=16.2km s-min=6.4km az=12.0*

ISC 18 20:14:26.8±0.4**, 30°.24N**±0°.03×**51°.69E**±0°.03**, h15**^{km}**, n207,** σ**1^{s}.71**/226**, mb4.0**/48**, MS3.3**/17**, 10C-1D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAZ2	**Kazeron-Fars-I**	**0.62**	**182**	Pg	**Pb**	**20 14 38.7**	**-0.7**
KLNJ	**Kolanjah**	**0.77**	**354**	Pg	**Pg**	**20 14 39.0**	**-2.9**
SHI	**Shiraz**	**0.93**	**129**	Pg	**Pb**	**20 14 43.4**	**-1.3**
ABEH	**Behbahan**	**1.29**	**287**	Pg	**Pg**	**20 14 51.6**	**-0.1**
IRAM	**Ramesheh**	**1.68**	**21**	Pg	**Pn**	**20 14 55.8**	**-0.1**
IBRJ	**Brojen**	**1.71**	**348**	Pg	**Pn**	**20 14 56.4**	**+0.1**
DSBU	**Dashti - Bushe**	**1.91**	**191**	Pn	**Pg**	**20 15 01.5**	**-1.8**
ZNGN	**Zangian**	**2.00**	**339**	Pn	**Pn**	**20 15 02.1**	**+1.6**
QIR1	**Qir**	**2.12**	**146**	Pn	**Pb**	**20 15 03.8**	**-1.1**
JHBN	**Jahan bin**	**2.17**	**337**	Pn	**Pn**	**20 15 03.8**	**+1.1**
JHRM	**Jahrom**	**2.39**	**136**	Pn	**Pn**	**20 15 06.9**	**+1.4**
IPIR	**Pirpir**	**2.53**	**345**	Pn	**Pn**	**20 15 09.1**	**+1.4**
IZEF	**Zefreh**	**2.71**	**12**	Pn	**Pn**	**20 15 11.5**	**+1.4**
AHWZ	**Ahwaz**	**2.84**	**293**	Pn	**Pn**	**20 15 12.9**	**+1.4**
IKLH	**Kolahrood**	**3.07**	**358**	Pn	**Pn**	**20 15 16.4**	**+1.3**
GTMR	**Gotvand**	**3.13**	**316**	*e*PnA		20 15 15.9	

GTMR				IAML		20 16 33.2	
	comp=Z,1.2nm,1.0s						
YZKH	Yazd	3.28	48	ePnA		20 15 21.7	
YZKH				IAML		20 16 20.1	
	comp=Z,0.2nm,1.0s						
LAR1	LAR	3.48	137	Pn	Pn	20 15 22.2	+1.7
QAMS	Qamsar	3.50	356	Pn	Pn	20 15 22.7	+1.8
KBD	Kabd	3.63	254	P	Pn	20 15 25.4	+2.9
KBD				S	Sb	20 16 09.3	-5.2
KRSH	Karshahi	3.74	6	Pn	Pn	20 15 25.4	+1.3
KHMZ	Khomeyn	3.79	338	ePn	Pn	20 15 26.5	+1.7
KHMZ				IAML		20 16 50.7	
	comp=Z,0.4nm,1.0s						
ISFB	Sefidab	4.13	6	Pn	Pn	20 15 30.4	+1.0
KHGB	Koh Gabri	4.14	87	Pn	Pn	20 15 31.0	+1.3
GHVR	GHOM	4.24	356	ePn	Pn	20 15 34.9	+3.9
GHVR				IAML		20 16 41.0	
	comp=Z,0.8nm,1.0s						
ZRDN	Zarand Kerman	4.24	79	Pn	Pn	20 15 33.1	+1.9
SAKB	Bahrain	4.36	194	P	Pn	20 15 35.7	+3.2
SAKB				S	Sn	20 16 26.3	+3.1
KRBR	Kerman	4.40	92	Pn	Pn	20 15 35.0	+1.6
SHMA	Al-Shehemyia	4.41	188	P	Pn	20 15 36.4	+3.2
	SNR=21						
SHMA				S	Sn	20 16 27.5	+3.2
	SNR=9.7						
ASAO	Ashtian	4.52	342	ePn	Pn	20 15 37.1	+2.1
ASAO				IAML		20 17 04.9	
	comp=Z,0.5nm,1.0s						
IQOM	Qom	4.62	354	Pn	Pn	20 15 37.3	+0.9
IKFM	Kafar-mosalman	4.63	316	Pn	Pn	20 15 37.4	+1.3
IVRN	Varamin	4.75	0	Pn	Pn	20 15 39.4	+1.5
HSAM	Samen	4.75	327	Pn	Pn	20 15 39.8	+1.7
KRM1	Kerman Provinc	4.83	85	Pn	Pn	20 15 41.1	+1.8
BNDS	Bandar-Abbas	4.84	125	Pn	Pn	20 15 40.3	+1.0
HAGD	Aghdareh	5.05	335	Pn	Pn	20 15 43.4	+1.1
CHMN	Cheshme madani	5.09	93	Pn	Pn	20 15 43.5	+0.6
TPRV	Parvadeh(Tabas	5.09	56	Pn	Pn	20 15 44.3	+1.7
ILAS	Lasjerd	5.24	11	Pn	Pn	20 15 45.9	+1.0
IDMV	Damavand	5.33	3	Pn	Pn	20 15 46.9	+0.7
DAMV	Damavand	5.38	2	ePn	Pn	20 15 48.8	+2.0
DAMV				IAML		20 16 57.2	
	comp=Z,0.0nm,1.0s						
IFIR	Firoozkooh	5.46	9	Pn	Pn	20 15 48.7	+0.8
TRNA	Turayna	5.50	185	P	Pn	20 15 51.0	+2.8
	SNR=32						
SMRA	Abu-Samra	5.52	188	P	Pn	20 15 51.1	+2.6
SMRA				S	Sn	20 16 54.7	+2.9
TNSJ	Nastanj	5.59	47	Pn	Pn	20 15 50.8	+1.3
SHME	Shamm	5.73	136	P	Pn	20 15 52.9	+1.5
SHME	Shamm	5.73	136	P	Pn	20 15 51.4	0.0
TABS	Tabas	5.73	52	ePnA		20 15 56.1	
TABS				IAML		20 17 55.2	
	comp=Z,210nm,1.0s						
KHNJ	Kahnooj	5.74	112	Pn	Pn	20 15 52.7	+1.2
SNQR	Sonqor, Kerman	5.74	324	Pn	Pn	20 15 53.3	+1.6
HGHA	Hamedan- Ghaye	5.75	336	Pn	Pn	20 15 52.9	+1.1
ILBA	Ilam Banvizeh	5.75	307	Pn	Pn	20 15 52.4	+0.7
ILBA	Ilam Banvizeh	5.75	307	ePn	Pn	20 15 52.6	+0.9
ILBA				IAML		20 17 49.5	
	comp=Z,0.1nm,1.0s						
UMQ	Umm Al-Quwin	5.87	142	P	Pn	20 15 55.4	+2.2
IGHG	Ghaleghazi	5.95	315	Pn	Pn	20 15 56.5	+1.9
KBAM	BAM	5.99	99	Pn	Pn	20 15 56.2	+1.3
SNGE	Sanandaj	6.07	324	ePn	Pn	20 15 57.6	+1.4
SNGE				IAML		20 17 51.3	
	comp=Z,0.1nm,1.0s						
SLWR	Sila	6.14	180	P	Pn	20 15 59.4	+2.3
SLWR				S	Sn	20 17 10.1	+3.1
MZPU	Pul - Mazandar	6.19	359	Pn	Pn	20 15 59.7	+1.9
MASF	Masafi	6.26	140	P	Pn	20 15 59.9	+1.3
	SNR=7.7						
MASF				S	Sn	20 17 10.1	+0.1
MSFE	Esma-Masafi	6.27	140	i P	Pn	20 15 59.2	+0.4
	SNR=12						
KLST	Kelardasht - M	6.29	355	Pn	Pn	20 16 01.2	+1.9
NAZ	Nazwa, Dubai	6.31	145	P	Pn	20 16 00.5	+1.2
	SNR=6.4						
NAZ				S	Sn	20 17 11.4	+0.3
NAZ	Nazwa, Dubai	6.31	145	i P	Pn	20 16 00.7	+1.4
	SNR=6.6						
GHWR	Ruwais	6.34	170	P	Pn	20 16 01.3	+1.6
GHWR				S	Sn	20 17 11.3	-0.5
AJN	Ajban	6.37	152	P	Pn	20 16 02.2	+2.1
AJN				S	Sn	20 17 13.4	+0.9
	SNR=7.2						
MDH	Madha	6.39	139	P	Pn	20 16 01.2	+0.8
	SNR=11						
MDH				S	Sn	20 17 12.9	-0.3
MDH	Madha	6.39	139	i P	Pn	20 16 00.6	+0.1
	SNR=12						
ASUD	Al Ashush, Dub	6.46	149	P	Pn	20 16 03.0	+1.7
	SNR=9.5						
ASUD				S	Sn	20 17 16.0	+1.2
ASUD	Al Ashush, Dub	6.46	149	i P	Pn	20 16 02.6	+1.2
	SNR=9.4						
FAQ	Al Faqa, Dubai	6.48	147	P	Pn	20 16 03.9	+2.3
FAQ				S	Sn	20 17 14.6	-0.7
FAQ	Al Faqa, Dubai	6.48	147	P	Pn	20 16 02.4	+0.8
BSRN	Basiran	6.61	73	ePn	Pn	20 16 06.4	+2.9
BSRN				IAML		20 18 09.6	
	comp=Z,43nm,1.0s						
UOSS	Minazif	6.62	142		Pn	20 16 03.9	+0.3
UOSS	Minazif	6.62	142	P	Pn	20 16 04.1	+0.5
UOSS				S	Sn	20 17 16.9	-1.9
UOSS	Minazif	6.62	142	i P	Pn	20 16 03.6	-0.1
	SNR=5.7						
IKOO	Kooshah	6.63	69	Pn	Pn	20 16 05.6	+1.6
HATD	Hatta, Dubai	6.68	143	P	Pn	20 16 07.0	+2.5
	SNR=11						
HATD				S	Sn	20 17 19.4	-1.0
HATD	Hatta, Dubai	6.68	143	i P	Pn	20 16 05.3	+0.9
	SNR=11						
MZWR	Madinat Zayed	6.74	163	P	Pn	20 16 07.0	+1.7
ASHO	Ashiyiah	6.76	144	P	Pn	20 16 06.1	+0.5
	SNR=22						
ASHO				S	Sn	20 17 20.7	-1.6
	SNR=9.4						
ASHO	Ashiyiah	6.76	144	i P	Pn	20 16 06.0	+0.5
	SNR=22						
ASHO				S	Sn	20 17 20.6	-1.6
ALNE	Al Ain	7.14	149	P	Pn	20 16 12.4	+1.7
MZR	Muzera	7.38	167	P	Pn	20 16 15.4	+1.3
	SNR=11						
MZR				S	Sn	20 17 36.9	-0.7
MZR	Muzera	7.38	167	i P	Pn	20 16 14.9	+0.9
	SNR=11						
SOHO	SOHO	7.45	143	P	Pn	20 16 15.3	+0.3
SOHO				S	Sn	20 17 37.5	-1.8
SOHO	SOHO	7.45	143	i P	Pn	20 16 15.1	0.0
	SNR=15						
ZHSF	Zahedan	7.91	92	ePn	Pn	20 16 25.9	+4.4
SRSL	SARDASHT	7.93	320	ePn	Pn	20 16 22.9	+1.2
SRSL				IAML		20 18 01.4	
	comp=Z,63nm,1.0s						
UMZA	Um Al Zommool	8.11	157	P	Pn	20 16 24.4	+0.3
UMZA				S	Sn	20 17 53.0	-2.5
ARQ	Araqi	8.12	147	P	Pn	20 16 24.5	+0.3
	SNR=35						
ARQ				S	Sn	20 17 53.8	-2.0
HOQ	Hoqain	8.31	142	P	Pn	20 16 27.6	+0.7
	SNR=7.7						
HOQ				S	Sn	20 17 58.8	-1.7
	SNR=5.2						
RAYN	Ar Rayn	8.67	221		Pn	20 16 31.8	0.0
RAYN	Ar Rayn	8.67	221	P	Pn	20 16 32.2	+0.4
RAYN				S	Sn	20 18 09.1	-0.2
RAYN	Ar Rayn	8.67	221	P	Pn	20 16 31.5	-0.3
BIDO	Bidbid	8.82	138	P	Pn	20 16 33.5	-0.2
BIDO				S	Sn	20 18 08.6	-4.3
BSY	Bisya	8.95	145	P	Pn	20 16 35.8	+0.2
SMDO	Samad	9.14	140	P	Pn	20 16 38.1	-0.1
	SNR=6.8						
SMDO				P	Pn	20 16 38.1	-0.1
	SNR=6.8						
SMDO				S	Sn	20 18 18.5	-2.4
	SNR=6.5						
SMDO				S	Sn	20 18 18.5	-2.4
	SNR=6.5						
WSAR	Wadi Sarin	9.33	137	Pn	Pn	20 16 40.5	-0.3
	baz=320,slow=24,SNR=20						
WSAR				Sn	Sn	20 18 21.1	-4.5
	baz=225,slow=24,SNR=7.2						
WSAR	Wadi Sarin	9.33	137	P	Pn	20 16 41.0	+0.2
	SNR=5.3						
WSAR				S	Sn	20 18 21.3	-4.3
NGCH	Negor - Chabah	9.67	118	P	Pn	20 16 45.6	+0.1
NGCH				S	Sn	20 18 30.6	-3.3
JMDO	Jabal Madar	9.72	142	P	Pn	20 16 45.3	-0.8
WBK	Wadi Bani Khal	10.01	138	P	Pn	20 16 49.4	-0.7
WBK				P	Pn	20 16 49.4	-0.7
JLN	Jalan Bani Buh	10.62	137	P	Pn	20 16 57.2	-1.3
GEVA	Gevas	10.76	321		Pn	20 17 00.3	-0.1
MHTO	MHTO	10.81	147	P	Pn	20 17 00.4	-0.7
GNI	Garni	11.40	332	Lg	Lg	20 20 32.8	
	comp=Z,0.3nm,0.3s,baz=185,slow=15,SNR=3.1						
GNI				LR	LR	20 21 18.9	
	comp=Z,68nm,18.7s,baz=146,slow=36						
MARD	Mardin	11.49	311	Pn	Pn	20 17 08.8	-1.6
DOK	Doka	11.78	169	P	Pn	20 17 13.3	-1.1
WHFO	Wadi Hawf	12.41	171	P	Pn	20 17 22.0	-1.0
	SNR=20						
ASF	Jabal al Asfar	12.81	282	Pn	Pn	20 17 26.8	-1.6
	comp=Z,1.0nm,0.3s,baz=116,slow=5.1,SNR=6.6						
ASF				Sn	Sn	20 19 46.8	-4.0
	comp=Z,0.3nm,0.3s,baz=142,slow=21,SNR=1.8						
ASF				Lg	Lg	20 21 18.2	
	comp=Z,0.3nm,0.3s,baz=150,slow=17,SNR=1.8						
ASF				LR	LR	20 23 42.8	
	comp=Z,202nm,18.2s,baz=128,slow=44						
	comp=Z,2.2nm,0.3s						
DMTO	DMTO	12.81	166	P	Pn	20 17 26.9	-1.6
RBK	Rabkut	12.88	169	P	Pn	20 17 28.4	-1.1
ABTO	Aybut	12.91	173	P	Pn	20 17 28.2	-1.7
MMAI	Mount Meron Ar	14.15	285	Pn	Pn	20 17 46.6	-0.1
	comp=Z,0.5nm,0.3s,baz=104,slow=17,SNR=1.9						
MMAI				Sn	Sn	20 20 19.3	-4.2
	comp=Z,0.3nm,0.3s,baz=73,slow=30,SNR=2.0						
MMAI				Lg	Lg	20 21 57.4	
	baz=106,slow=41						
MMAI				LR	LR	20 24 26.5	
	comp=Z,100nm,20.7s,baz=100,slow=43						
	comp=Z,0.6nm,0.4s						
EIL	Elat	14.52	272	Pn	Pn	20 17 53.3	+1.5
	comp=Z,0.3nm,0.3s,baz=57,slow=14,SNR=3.8						
EIL				Sn	Sn	20 20 30.2	-2.3
	comp=Z,0.1nm,0.3s,baz=42,slow=8.0,SNR=3.8						
EIL				Lg	Lg	20 22 05.7	
	baz=112,slow=16,SNR=1.8						
KBZ	Khabaz	15.17	335	Pn	Pn	20 18 01.7	+1.2
	comp=Z,0.2nm,0.3s,baz=105,slow=7.0,SNR=4.3						
KBZ				LR	LR	20 24 24.8	
	comp=Z,179nm,19.6s,baz=148,slow=40						
	comp=Z,0.7nm,0.4s						
KVAR	Kislovodsk Arr	15.44	335	Pn	P	20 18 07.9	-0.7
	baz=56,slow=21						
	comp=Z,4.0nm,0.8s						
KIV	Kislovodsk	15.45	335		Pn	20 18 05.3	+1.1
CSS	Mathiatis	16.17	292	Pn	Pn	20 18 12.3	-1.2
CSS				IAmb	IAmb	20 18 16.1	
	comp=Z,42nm,1.4s						
BR131	Keskin Array S	17.53	308		Pn	20 18 29.7	-1.1
BRTR	Keskin Array B	17.53	308		Pn	20 18 28.9	-1.9
BRTR	Keskin Array B	17.53	308	P	Pn	20 18 31.0	+0.2
	comp=Z,0.1nm,0.3s,baz=127,slow=12,SNR=9.5						
BRTR				LR	LR	20 25 29.1	
	comp=Z,99nm,19.2s,baz=120,slow=38						
	comp=Z,1.6nm,0.8s						
GAR	Garm	17.63	55		Pn	20 18 32.8	+0.9
ANTO	Ankara	18.18	307		Pn	20 18 38.4	-0.3
ANTO				IAmb	IAmb	20 18 53.1	
	comp=Z,20nm,1.4s						
KKAR	Karatay Array	19.77	44	P	P	20 18 56.9	+0.6
BORA	Eskisehir	19.83	305	P	P	20 18 55.8	-1.2
BORA				IAmb	IAmb	20 19 10.4	
	comp=Z,11nm,1.3s						
AB31	Akbulak array	20.00	16		Pn	20 19 00.4	-0.1
ABKAR	Akbulak array	20.00	16		P	20 18 59.5	+0.8
ATD	Arta Tunnel	20.35	206	LR	LR	20 27 47.1	
	comp=Z,6.9nm,18.1s,baz=32,slow=40						
AKTO	Aktyubinsk	20.73	11	P	Pn	20 19 08.6	-0.4
	comp=Z,1.6nm,0.7s,baz=187,slow=8.7,SNR=6.0						
	comp=Z,1.6nm,0.7s						
MANT	Manisa	20.75	300	P	P	20 19 07.6	+0.4
KSH	Kashi	21.92	58	P	P	20 19 17.3	-2.4
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KSH				LR	LR		
	comp=N,130nm,11.7s						
KSH				LR	LR		
	comp=E,110nm,8.9s						
KSH				LR	LR		
	comp=Z,100nm,13.7s						
AAK	Ala-Archa	22.05	50	P	P	20 19 25.3	+4.2
	comp=Z,0.8nm,0.3s,baz=228,slow=14,SNR=3.7						
AAK				LR	LR	20 29 19.2	
	comp=Z,98nm,18.4s,baz=256,slow=40						
BELG	Belogornoye	22.34	353	P	P	20 19 24.9	+1.0
	comp=Z,11nm,0.7s,baz=206,slow=2.8,SNR=4.2						
	comp=Z,11nm,0.7s						
JURR	Jurilovca	23.09	315	⇑P	P	20 19 32.0	+0.2
TIRR	Tirgusor	23.21	314	P	P	20 19 34.4	+1.3
TIRR				IAmb	IAmb	20 20 05.2	
	comp=Z,14nm,1.4s						
ALN	Alexandroupoli	23.33	304	P	P	20 19 34.6	+0.2
ALN				IAmb	IAmb	20 19 35.8	
	comp=Z,8.1nm,0.9s						
RDO	Rodhopi	23.78	304		P	20 19 38.4	-0.3
RDO				IAmb	IAmb	20 19 45.6	
	comp=Z,7.7nm,0.9s						
VRI	Vrincioaia	24.95	316	⇓P	P	20 19 53.8	+4.3
PLOR	Plostina	24.99	316	⇑P	P	20 19 52.3	+2.4
MLR	Muntele Rosu	25.25	314		P	20 19 54.8	+2.5
MLR	Muntele Rosu	25.25	314	LR	LR	20 30 25.1	
	comp=Z,86nm,19.6s,baz=114,slow=38						
MLR	Muntele Rosu	25.25	314	⇑P	P	20 19 56.2	+3.8
TESR	Tescani	25.33	317	⇑P	P	20 19 53.9	+1.0
ONER	Baraj Valea Uz	25.39	316	⇑P	P	20 19 55.1	+1.6
TURR	Turia	25.48	315	⇑P	P	20 19 56.8	+2.5
OZUR		25.63	315	⇑P	P	20 19 57.0	+1.2
ITM	Ithomi	25.64	294		P	20 19 56.2	+0.3
VOIR		25.78	313	⇑P	P	20 19 59.0	+1.8
AKASG	Malin Array Be	26.46	327	P	P	20 20 03.5	+0.5
	comp=Z,0.6nm,0.4s,baz=133,slow=8.9,SNR=8.8						
AKASG				LR	LR	20 32 29.3	
	comp=Z,81nm,20.3s,baz=112,slow=41						
	comp=Z,0.6nm,0.4s						
AKBB	Malin Array Si	26.46	327	P	P	20 20 01.9	-1.2
AKBB				IAmb	IAmb	20 20 23.9	
	comp=Z,7.4nm,1.1s						
KIEV	Kiev	26.46	327	P	P	20 20 01.7	-1.4
KIEV				IAmb	IAmb	20 20 23.9	
	comp=Z,6.7nm,1.1s						
BRVK	Borovoye	26.55	26	P	P	20 20 04.8	+0.9
BVAR	Borovoye Array	26.56	26	P	P	20 20 05.6	+1.6
	comp=Z,0.9nm,0.6s,baz=216,slow=7.0,SNR=11						
	comp=Z,0.9nm,0.6s						
ARTI	Arti	26.56	8	P	P	20 20 05.8	+1.9
ARTI				IAmb	IAmb	20 20 18.2	
	comp=Z,4.0nm,0.8s						
ARTI	Arti	26.56	8	P	P	20 20 06.0	+2.0
	comp=Z,1.5nm,0.8s,baz=245,slow=23,SNR=2.7						
	comp=Z,1.5nm,0.8s						
LOT	Lotru	26.60	313	⇑P	P	20 20 05.2	+0.7
BURAR	Bucovina Array	26.73	318	P	P	20 20 04.2	-1.5
BURAR	Bucovina Array	26.73	318	⇑P	P	20 20 05.3	-0.4
BUR08	Bucovina Ar. S	26.76	318		P	20 20 05.3	-0.7
BUR08				IAmb	IAmb	20 20 18.4	
	comp=Z,3.3nm,0.9s						
KIRV	Kirov	28.39	357	LR	LR	20 35 03.4	
	comp=Z,78nm,19.4s,baz=177,slow=44						
KURBB	Kurchatov Arra	28.59	37	P	P	20 20 23.2	+1.1
	comp=Z,0.7nm,0.9s,baz=236,slow=9.2,SNR=4.2						
KURBB				LR	LR	20 33 14.7	
	comp=Z,80nm,20.5s,baz=186,slow=39						
	comp=Z,0.7nm,0.9s						
KURK	Kurchatov	28.69	37	P	P	20 20 24.1	+1.1
KURK				IAmb	IAmb	20 20 29.9	
	comp=Z,2.2nm,0.9s						
MKAR	Makanchi Array	28.86	46	P	P	20 20 25.2	+0.6
	comp=Z,0.6nm,0.9s,baz=240,slow=7.6,SNR=4.1						
MKAR				LR	LR	20 33 39.3	
	comp=Z,113nm,19.8s,baz=222,slow=40						
	comp=Z,0.6nm,0.9s						
RONA	Rosalia, Austr	32.22	313	i pP	P	20 20 55.5	+1.1
	comp=Z,1.5nm,0.6s						
ARSA	Arzberg	32.56	312	eP	P	20 20 54.4	-3.0
	comp=Z,2.2nm,1.0s						
CONA	Conrad Observa	32.57	313	epP	P	20 20 58.7	+1.2
	comp=Z,1.1nm,0.7s						
VRAC	Vranov	32.62	316	LR	LR	20 36 42.9	
	comp=Z,36nm,18.2s,baz=90,slow=41						
SOKA	Soboth	32.71	310	epP	P	20 20 57.8	-0.9
	comp=Z,1.4nm,1.2s						
OBKA	Obir	32.98	310	eP	P	20 20 59.7	-1.4
	comp=Z,0.7nm,0.6s						
PRED	Cave del Predi	33.62	310	P	P	20 21 07.4	+0.8
PRED				IAmb	IAmb	20 21 22.1	
	comp=Z,3.0nm,1.1s						
ZAA0	Zalesovo Array	33.64	36	P	P	20 21 08.5	+1.9
ZAA0				IAmb	IAmb	20 21 17.1	
	comp=Z,2.1nm,0.7s						
ZALV	Zalesovo Beam	33.64	36	P	P	20 21 06.4	-0.3
ZALV	Zalesovo Beam	33.64	36	P	P	20 21 08.5	+1.9
	comp=Z,1.1nm,0.5s,baz=260,slow=8.3,SNR=6.4						
ZALV				LR	LR	20 36 43.2	
	comp=Z,48nm,18.4s,baz=80,slow=40						
	comp=Z,1.1nm,0.5s						
MURB	Monte Urbino	33.66	304	P	P	20 21 08.1	+1.0
BIOA	Bad Ischl, Aus	33.92	312	i pP	P	20 21 11.6	+2.4
	comp=Z,1.5nm,0.7s						
GERES	GERESS Array B	34.23	314	P	P	20 21 11.1	-0.9
	comp=Z,0.6nm,0.6s,baz=88,slow=11,SNR=5.0						
	comp=Z,0.6nm,0.6s						
ABTA	Abfaltersbach	34.40	310	epP	P	20 21 13.8	+0.4
	comp=Z,1.1nm,0.8s						
LESA	Schwarzleotal	34.47	311	eP	P	20 21 12.8	-1.2
	comp=Z,1.1nm,0.5s						
WTTA	Wattenberg	35.11	310	i pP	P	20 21 20.9	+1.2
	comp=Z,2.9nm,1.1s						
WATA	Walderalm	35.17	310	i pP	P	20 21 21.4	+1.3
	comp=Z,2.8nm,1.0s						
SQTA	Sankt Quirin	35.38	310	i pP	P	20 21 22.0	0.0
	comp=Z,4.8nm,0.6s						
FINES	FINESS Array B	35.47	339	P	P	20 21 21.6	-0.7
	comp=Z,1.5nm,0.7s,baz=139,slow=8.6,SNR=8.2						
FINES				LR	LR	20 38 15.8	
	comp=Z,58nm,19.6s,baz=100,slow=40						
	comp=Z,1.5nm,0.7s						
MOTA	Moosalm	35.48	310	epP	P	20 21 22.7	-0.2
	comp=Z,1.2nm,0.5s						
FETA	Feichten	35.65	310	eP	P	20 21 22.1	-2.2
	comp=Z,1.4nm,0.8s						
RETA	Reutte	35.74	310	eP	P	20 21 20.4	-4.6
	comp=Z,0.6nm,0.4s						
DAVA	Damuels	36.27	310	i pP	P	20 21 28.6	-1.0
	comp=Z,4.5nm,1.0s						
BRDH	Bariadhala	36.41	92	LR	LR	20 40 40.8	
	comp=Z,81nm,19.3s,baz=313,slow=43						
HFS	Hagfors	39.18	331	P	P	20 21 52.8	-1.1
	comp=Z,0.9nm,0.4s,baz=122,slow=7.2,SNR=6.9						
HFS				LR	LR	20 39 15.9	
	comp=Z,103nm,21.4s,baz=118,slow=38						
	comp=Z,0.9nm,0.4s						
GTA	Gaotai	40.15	63	eP	P	20 22 03.9	+1.5
GTA				pP	pP	20 22 08.6	+0.9
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
NOA	NORSAR Array B	40.70	331	P	P	20 22 05.6	-0.9
	comp=Z,0.3nm,0.6s,baz=125,slow=9.8,SNR=2.0						
NOA				LR	LR	20 41 37.9	
	comp=Z,32nm,18.9s,baz=135,slow=40						
	comp=Z,0.3nm,0.6s						
ARCES	ARCESS Array B	42.08	347	P	P	20 22 16.6	-1.2
	comp=Z,1.2nm,0.8s,baz=124,slow=6.6,SNR=7.4						
	comp=Z,1.2nm,0.8s						
CMAR	Chiang Mai Arr	44.34	94	P	P	20 22 36.9	+0.3
	comp=Z,1.7nm,0.3s,baz=211,slow=11,SNR=4.1						
CMAR				LR	LR	20 44 13.1	
	comp=Z,36nm,20.4s,baz=155,slow=40						
	comp=Z,1.7nm,0.3s						
EKA	Eskdalemuir Ar	45.90	319	P	P	20 22 48.6	0.0
	comp=Z,1.0nm,0.7s,baz=112,slow=7.9,SNR=7.3						
	comp=Z,1.0nm,0.7s						
ESDC	Sonseca Array	45.93	298	P	P	20 22 49.2	+0.1
	comp=Z,0.8nm,0.8s,baz=78,slow=7.6,SNR=5.0						
	comp=Z,0.8nm,0.8s						
TORD	Torodi Ar. Bea	49.06	261	P	P	20 23 13.9	+0.2
	comp=Z,60nm,0.4s,baz=55,slow=7.6,SNR=1.4						
SPITS	Spitsbergen Ar	50.51	351	P	P	20 23 24.5	+0.6
	comp=Z,2.3nm,0.6s,baz=124,slow=10,SNR=5.3						
	comp=Z,2.3nm,0.6s						
LSZ	Lusaka	50.60	210	LR	LR	20 46 19.9	
	comp=Z,144nm,18.6s,baz=115,slow=38						
BORG	Borgarnes	55.87	330	LR	LR	20 48 28.6	
	comp=Z,68nm,21.3s,baz=284,slow=37						
DBIC	Dimbokro	57.88	258	P	P	20 24 19.2	+0.8
	comp=Z,3.1nm,0.8s,baz=41,slow=5.1,SNR=3.5						
	comp=Z,3.1nm,0.8s						
KSRS	Korea Array	62.14	61	P	P	20 24 48.6	+1.2
	comp=Z,0.9nm,0.6s,baz=285,slow=6.2,SNR=4.2						
	comp=Z,0.9nm,0.6s						
BOSA	Boshof	63.73	206	P	P	20 24 58.6	+0.6
	comp=Z,1.9nm,0.8s,baz=18,slow=4.6,SNR=3.7						
	comp=Z,1.9nm,0.8s						
WRA	Warramunga Arr	93.77	111	P	P	20 27 45.6	+2.1
	comp=Z,0.4nm,0.9s,baz=306,slow=4.8,SNR=1.9						
	comp=Z,0.4nm,0.9s						
ASAR	Alice Springs	95.31	114	P	P	20 27 49.9	-0.7
	comp=Z,0.4nm,0.9s,baz=302,slow=5.3,SNR=4.2						
	comp=Z,0.4nm,0.9s						
QSPA	South Pole Qui	120.07	180	PKP	PKiKP	20 33 17.8	+1.6
	comp=Z,0.8nm,0.7s,baz=230,slow=11,SNR=1.5						

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*IDC **18** 20:16:50.5±0.9, 64°.14S×175°.82E, h0^{km}, mb4.0/7, mbtmp4.0/8, ML3.6/1, MS3.7/3, Error ellipse: s-maj=39.9km s-min=19.0km az=65.0*

ISC 18 20:16:51.8±0.8**, 64°.2S**±0°.1×**175°.6E**±0°.2**, h10**^{km}**, n27, σ0ˢ.78**/18**, mb4.1**/10**, 5C, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	Vanda	14.08	192	Pn	Pn	20 20 10.6	-0.4
	0.2nm,0.3s,baz=32,slow=14,SNR=16						
VNDA				LR	LR	20 24 16.2	
	comp=Z,184nm,18.3s,baz=8.5,slow=32						
	2.5nm,0.7s						
QSPA	South Pole Qui	25.93	180	P	P	20 22 24.3	+0.4
	4.9nm,0.9s,baz=17,slow=2.8,SNR=9.9						
QSPA				LR	LR	20 31 12.0	
	comp=Z,171nm,18.1s,baz=20,slow=33						
	4.9nm,0.9s						
DZM	Mont Dzumac	42.51	347	P	P	20 24 46.5	-0.6
	5.3nm,1.0s,baz=101,slow=16,SNR=3.2						
	5.3nm,1.0s						
TROLL	Troll, Antarti	44.01	183	⇑P	P	20 24 58.5	-0.3
	comp=Z,125nm,0.8s						
SNAA	Sanae	44.43	181	⇑P	P	20 25 02.3	+0.1
	comp=Z,13nm,0.5s						
SNAA	Sanae	44.43	181	P	P	20 25 01.4	-0.7
	comp=Z,1.1nm,0.9s,baz=157,slow=14,SNR=5.1						
SNAA				LR	LR	20 42 31.0	
	comp=Z,98nm,18.8s,baz=90,slow=35						
	comp=Z,1.1nm,0.9s						
VNA3	Neumayer Olymp	44.82	178	⇑P	P	20 25 05.0	-0.1
	comp=Z,1.6nm,0.9s						
VNA2	Neumayer--Watz	45.17	179	⇑P	P	20 25 07.6	-0.3
	comp=Z,1.5nm,0.7s,baz=191,slow=6.6						
VNA1	Neumayer--Stat	45.44	178	⇑P	P	20 25 09.9	-0.1
	comp=Z,4.7nm,0.8s						
H01W1	Cape Leeuwin H	46.83	278	T	T	21 15 48.8	
	baz=148,slow=76,SNR=34						
H01W2	Cape Leeuwin H	46.83	278	T	T	21 15 49.1	
	baz=148,slow=76,SNR=29						
H01W3	Cape Leeuwin H	46.84	278	T	T	21 15 50.0	
	baz=148,slow=76,SNR=26						
ASAR	Alice Springs	48.78	306	P	P	20 25 37.8	+1.0
	comp=Z,1.7nm,1.0s,baz=153,slow=6.6,SNR=12						
	comp=Z,1.7nm,1.0s						
WRA	Warramunga Arr	52.06	308	P	P	20 26 02.6	+1.0
	comp=Z,1.5nm,0.7s,baz=158,slow=6.7,SNR=11						
	comp=Z,1.5nm,0.7s						
H03S2	Juan Fernandez	66.38	119	T	T	21 40 33.4	
	baz=207,slow=74						
H03S1	Juan Fernandez	66.38	119	T	T	21 40 36.2	
	baz=207,slow=74						
H03S3	Juan Fernandez	66.39	119	T	T	21 40 36.0	
	baz=207						
CPUP	Villa Florida	80.83	134	P	P	20 29 06.1	+0.6
	comp=Z,0.6nm,0.7s,baz=118,slow=6.7,SNR=4.1						
	comp=Z,0.6nm,0.7s						
LPAZ	La Paz	86.32	120	P	P	20 29 35.4	+0.8
	comp=Z,1.3nm,0.7s,baz=254,slow=3.0,SNR=5.2						
	comp=Z,1.3nm,0.7s						
H08S2	Diego Garcia H	88.83	255	T	T	22 08 29.1	
	baz=153,slow=76,SNR=17						
H08S1	Diego Carcia H	88.83	255	T	T	22 08 41.1	
	baz=153,slow=76,SNR=12						

H08S3	Diego Garcia H	88.85	255	T	T	22 08 30.7	
	baz=153,slow=76,SNR=41						
ILAR	Eielson Array	131.54	20	PKP	PKPdf	20 36 00.9	-1.9
	comp=Z,0.9nm,1.0s,baz=238,slow=3.1,SNR=5.7						
KURBB	Kurchatov Arra	136.65	293	PKP	PKPdf	20 36 13.0	+0.2
	comp=Z,0.1nm,0.3s,baz=178,slow=4.4,SNR=2.8						
ZALV	Zalesovo Beam	136.76	300	PKP	PKPdf	20 36 12.1	-0.8
	comp=Z,0.4nm,0.4s,baz=132,slow=8.0,SNR=2.3						
KBZ	Khabaz	146.56	255	PKPbc	PKPab	20 36 33.0	-0.3
	comp=Z,2.6nm,0.9s,baz=94,slow=4.3,SNR=4.7						
BRTR	Keskin Array B	146.96	241	PKPbc	PKPbc	20 36 33.8	+0.1
	comp=Z,2.4nm,0.9s,baz=160,slow=3.9,SNR=9.1						

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*IDC **18** 20:21:07.8±0.8, 30°.92S×177°.61W, h0^{km}, mb4.1/6, mbtmp4.1/6, MS5.3/1, Error ellipse: s-maj=28.1km s-min=27.4km az=21.0*

*NEIC **18** 20:21:11.5±1.4, 30°.98S±0°.08×177°.6W±0°.2, h22^{km}±7^{km}, mb4.6/18, Error ellipse: s-maj=29.4km s-min=10.6km az=81.0*

ISC 18 20:21:11.4±0.7**, 31°.18S**±0°.05×**177°.7W**±0°.1**, h27^{km}, n69, σ1^{s}.79**/85**, mb4.3**/15**, 3C-1D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.92	354	P	Pn	20 21 39.9	-2.5
GLKZ				S	Sn	20 22 04.1	-1.5
RAO	Raoul Island	1.93	354		Pn	20 21 40.3	-2.2
RAO				Sn	Sn	20 22 01.5	-4.4
RIZ	Raoul Island	1.94	354	P	Pn	20 21 40.6	-2.1
RIZ				S	Sn	20 22 04.2	-2.0
MXZ	Matakaoa Point	7.17	206	Pn	Pn	20 22 53.1	-1.4
MXZ	Matakaoa Point	7.17	206	P	Pn	20 22 52.1	-2.3
MXZ				S	Sn	20 24 13.2	-1.8
WMGZ	Waiomatatini S	7.36	205	P	Pn	20 22 55.6	-1.5
WMGZ				S	Sn	20 24 18.5	-1.1
PKGZ	Pakihiroa	7.52	206	P	Pn	20 22 57.7	-1.6
PKGZ				S	Sn	20 24 22.1	-1.7
HAZ	Te Kaha	7.54	208	P	Pn	20 23 00.8	+1.2
HAZ				S	Sn	20 24 25.3	+1.1
PUZ	Puketiti	7.64	205	P	Pn	20 22 59.3	-1.6
PUZ				S	Sn	20 24 26.3	-0.3
RUGZ	Raukumara Rang	7.77	208	P	Pn	20 23 01.9	-0.9
RUGZ				S	Sn	20 24 30.3	+0.4
TWGZ	Tauwhareparae	7.83	206	P	Pn	20 22 59.2	-4.4
TWGZ				S	Sn	20 24 30.9	-0.5
CNGZ	Carnagh Statio	8.02	204	P	Pn	20 23 03.8	-2.4
CNGZ				S	Sn	20 24 35.5	-0.5
TKGZ	Te Karaka	8.11	206	S	Sn	20 24 36.8	-1.4
URZ	Urewera	8.25	210	Pn	Pn	20 23 09.3	0.0
	1.2nm,0.3s,baz=346,slow=4.1,SNR=6.5						
URZ				Sn	Sn	20 24 40.2	-1.5
	4.7nm,0.3s,baz=294,slow=19,SNR=11						
URZ	Urewera	8.25	210	P	Pn	20 23 08.4	-0.9
URZ				S	Sn	20 24 40.1	-1.5
OUZ	Omahuta	8.33	239	P	Pn	20 23 18.5	+8.1
RIGZ	Rimuhau	8.38	205	P	Pn	20 23 10.0	-1.1
RIGZ				S	Sn	20 24 43.4	-1.5
PRGZ	Paritu Road	8.53	204	S	Sn	20 24 46.6	-1.9
MUGZ	Murupara	8.58	210	P	Pn	20 23 13.5	-0.3
MUGZ				S	Sn	20 24 46.3	-3.4
SNGZ	Shannon Statio	8.60	207	P	Pn	20 23 14.6	+0.4
SNGZ				S	Sn	20 24 49.3	-1.1
MHGZ	Mahia Peninsul	8.73	203	S	Sn	20 24 50.9	-2.4
BKZ	Black Stump Fm	9.27	209	P	Pn	20 23 22.4	-1.0
BKZ				S	Sn	20 25 04.0	-2.9
OTVZ	Oturere	9.64	212	P	Pn	20 23 28.1	-0.3
OTVZ				S	Sn	20 25 13.2	-2.7
NGZ	Ngauruhoe	9.68	213	S	Sn	20 25 14.5	-2.4
PXZ	Pawanui	9.88	205	S	Sn	20 25 16.4	-5.0
THZ	Tophouse	12.98	213	Pn	Pn	20 24 13.6	-0.4
RPZ	Rata Peaks	15.35	212	Pn	Pn	20 24 42.3	-3.9
	1.2nm,0.3s,baz=91,slow=14,SNR=1.9						
RPZ				Sn	Sn	20 27 21.7	-14
	1.1nm,0.3s,baz=10,slow=19,SNR=1.7						
PINNC	Pines Island,	15.75	299	P	P	20 24 56.0	+0.8
PINNC				IAmb	IAmb	20 25 14.2	
	comp=Z,50nm,1.4s						
DZM	Mont Dzumac	16.82	299	P	P	20 25 08.4	+1.3
DZM	Mont Dzumac	16.82	299	Pn	P	20 25 09.3	+2.2
	comp=Z,0.1nm,0.3s,baz=94,slow=14,SNR=3.8						
ARMA	Armidale	26.32	264	P	P	20 26 47.0	+1.8
ARMA				IAmb	IAmb	20 26 54.4	
	comp=Z,27nm,1.4s						
EIDS	Eidsvold	28.04	274	P	P	20 27 00.6	+0.1
TOO	Toolangi	30.90	248	P	P	20 27 26.6	+0.7
TOO				IAmb	IAmb	20 28 08.2	
	comp=Z,11nm,1.4s						
CTAO	Charters Tower	34.19	280	P	P	20 27 55.5	+0.8
CTAO				IAmb	IAmb	20 27 58.1	
	comp=Z,9.2nm,0.9s						
STKA	Stephens Creek	34.56	258	P	P	20 27 59.1	+1.2
STKA	Stephens Creek	34.56	258	P	P	20 27 59.7	+1.8
	comp=Z,1.3nm,0.5s,baz=100,slow=11,SNR=3.9						
	comp=Z,1.3nm,0.5s						
BBOO	Buckleboo	39.01	255	P	P	20 28 36.8	+1.1
BBOO				IAmb	IAmb	20 28 37.8	
	comp=Z,21nm,1.2s						
PMG	Port Moresby	39.18	296	LR	LR	20 42 44.8	
	comp=Z,3μm,18.4s,baz=129,slow=33						
AS31	Alice Springs	43.33	268	P	P	20 29 11.5	+0.1
ASAR	Alice Springs	43.33	268	P	P	20 29 11.6	+0.2
ASAR	Alice Springs	43.33	268	P	P	20 29 12.5	+1.1
	comp=Z,2.1nm,0.6s,baz=105,slow=7.7,SNR=20						
	comp=Z,2.1nm,0.6s						
WR8	Warramunga Arr	44.25	273	P	P	20 29 19.5	+0.7
WR8				IAmb	IAmb	20 29 22.1	
	comp=Z,4.8nm,0.9s						
WB2	Warramunga Arr	44.38	273	P	P	20 29 19.9	+0.1
WRA	Warramunga Arr	44.39	273	P	P	20 29 20.9	+1.0
	comp=Z,2.1nm,0.4s,baz=111,slow=8.0,SNR=36						
	comp=Z,2.1nm,0.4s						
VNDA	Vanda	47.35	186	P	P	20 29 38.6	-3.9
	comp=Z,2.6nm,0.9s,baz=64,slow=3.3,SNR=8.8						
MTN	Manton Dam	50.36	279	P	P	20 30 06.7	+0.2
KNRA	Kununurra	51.02	275	P	P	20 30 11.5	+0.1
FITZ	Fitzroy Crossi	52.62	270	P	P	20 30 23.8	+0.5
CASY	Casey	54.57	208	P	P	20 30 37.3	+0.4
PSA00	Pilbara Seismi	56.13	264	P	P	20 30 49.7	+0.8
PSA00				IAmb	IAmb	20 31 16.9	
	comp=Z,7.9nm,1.4s						
QSPA	South Pole Qui	58.93	180	P	P	20 31 10.6	+2.5
QSPA	South Pole Qui	58.93	180	P	P	20 31 10.8	+2.7
	comp=Z,3.3nm,0.7s,baz=359,slow=0.9,SNR=25						
	comp=Z,3.3nm,0.7s						
TROLL	Troll, Antarti	77.09	180	⇓P	P	20 33 03.5	+1.5
	comp=Z,48nm,0.7s						
SNAA	Sanae	77.37	178	⇑P	P	20 33 05.9	+2.4
	comp=Z,9.0nm,0.4s						
SNAA	Sanae	77.37	178	P	P	20 33 05.0	+1.5
SNAA				IAmb	IAmb	20 33 18.1	
	comp=Z,11nm,1.5s						
SNAA	Sanae	77.37	178	P	P	20 33 05.3	+1.8
	comp=Z,0.5nm,0.4s,baz=204,slow=14,SNR=6.7						
	comp=Z,0.5nm,0.4s						
VNA3	Neumayer Olymp	77.51	176	⇑P	P	20 33 05.3	+1.1
	comp=Z,1.7nm,0.6s						
VNA2	Neumayer--Watz	77.95	177	⇑P	P	20 33 08.1	+1.5
	comp=Z,2.0nm,0.6s,baz=173,slow=4.1						
NVAR	Mina Array Bea	88.64	43	P	P	20 34 03.0	+0.7
	comp=Z,0.3nm,0.6s,baz=257,slow=4.5,SNR=2.5						
	comp=Z,0.3nm,0.6s						
MKAR	Makanchi Array	118.47	310	PKP	PKPdf	20 39 55.5	-0.8
	comp=Z,0.3nm,0.7s,baz=141,slow=7.1,SNR=2.4						
KURBB	Kurchatov Arra	121.81	313	PKP	PKiKP	20 40 03.1	+0.4
	comp=Z,0.3nm,0.3s,baz=94,slow=1.9,SNR=1.1						
BVAR	Borovoye Array	127.14	315	PKP	PKiKP	20 40 13.0	-0.3
	comp=Z,0.5nm,0.6s,baz=116,slow=6.6,SNR=2.9						
FINES	FINESS Array B	145.97	340	PKPbc	PKPbc	20 40 47.5	-0.3
	comp=Z,2.9nm,0.6s,baz=61,slow=3.6,SNR=19						
NB2	NORSAR Subarra	149.56	351	PKP	PKiKP	20 41 00.3	+1.6
	comp=Z,0.4nm,0.7s,baz=17,slow=2.6						
NOA	NORSAR Array B	149.56	351	PKPbc	PKPbc	20 40 57.0	-0.7
	comp=Z,0.1nm,0.4s,baz=7.8,slow=2.9,SNR=1.6						
HFS	Hagfors	150.06	349	PKPbc	PKPbc	20 40 58.3	-0.5
	comp=Z,0.6nm,0.5s,baz=38,slow=7.3,SNR=3.5						
MMAI	Mount Meron Ar	151.96	283	PKPbc	PKiKP	20 41 05.5	+0.9
	comp=Z,0.6nm,0.4s,baz=78,slow=5.4,SNR=4.2						
AKASG	Malin Array Be	152.07	322	PKPbc	PKiKP	20 41 04.0	-0.2
	comp=Z,0.3nm,0.3s,baz=45,slow=3.5,SNR=1.4						
BRTR	Keskin Array B	153.19	297	PKPbc	PKiKP	20 41 07.8	+0.7
	comp=Z,0.3nm,0.5s,baz=108,slow=9.3,SNR=2.2						

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*IDC **18** 20:25:42.0±1.1, 30°.56S×177°.39W, h0^{km}, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=34.6km s-min=32.8km az=31.0*

*NEIC **18** 20:25:45.2±1.2, 30°.64S±0°.08×177°.4W±0°.2, h17^{km}±6^{km}, mb4.4/8, Error ellipse: s-maj=19.7km s-min=11.0km az=92.0*

ISC 18 20:25:46.3±0.9**, 30°.66S**±0°.07×**177°.5W**±0°.2**, h33^{km}, n24, σ1^{s}.15**/25**, mb4.2**/9**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.46	344		Pn	20 26 10.2	-0.1
RAO				Sn	Sb	20 26 29.2	-1.8
URZ	Urewera	8.81	209	Pn	Pn	20 27 46.3	-5.0
	baz=53,slow=5.1						
URZ				Sn	Sn	20 29 23.8	-5.6
	1.5nm,0.3s,baz=22,slow=21,SNR=6.3						
RTZ	Ruatahuna	9.17	208	Pn	Pn	20 27 54.2	-2.1
STKA	Stephens Creek	34.88	257	P	P	20 32 35.3	+0.6
STKA	Stephens Creek	34.88	257	P	P	20 32 35.2	+0.6
	1.5nm,0.6s,baz=112,slow=13,SNR=3.2						
	1.5nm,0.6s						
BBOO	Buckleboo	39.35	254	P	P	20 33 13.9	+1.2
ASAR	Alice Springs	43.56	267	P	P	20 33 48.8	+1.4
ASAR	Alice Springs	43.56	267	P	P	20 33 49.0	+1.6
	0.5nm,0.6s,baz=107,slow=7.4,SNR=7.1						
	0.5nm,0.6s						
WRA	Warramunga Arr	44.58	272	P	P	20 33 55.7	+0.2
WRA	Warramunga Arr	44.58	272	P	P	20 33 56.4	+0.9
	1.1nm,0.5s,baz=111,slow=8.0,SNR=12						
	1.1nm,0.5s						
WB0	Warramunga Arr	44.60	272	P	P	20 33 56.5	+0.8
WB0				IAmb	IAmb	20 34 07.9	
	comp=Z,3.3nm,0.8s						
VNDA	Vanda	47.89	186	P	P	20 34 18.2	-2.5
	comp=Z,3.7nm,1.1s,baz=76,slow=8.1,SNR=7.2						
QSPA	South Pole Qui	59.45	180	P	P	20 35 46.5	+0.8
QSPA				IAmb	IAmb	20 35 59.0	
	comp=Z,6.7nm,1.4s						
QSPA	South Pole Qui	59.45	180	P	P	20 35 47.1	+1.4
	comp=Z,0.8nm,0.8s,baz=86,slow=0.6,SNR=1.7						
	comp=Z,0.8nm,0.8s						
SNAA	Sanae	77.89	178	P	P	20 37 40.5	+0.2
SNAA				IAmb	IAmb	20 37 42.1	
	comp=Z,1.6nm,1.1s						
SNAA	Sanae	77.89	178	P	P	20 37 41.9	+1.5
	comp=Z,0.7nm,0.9s,baz=186,slow=18,SNR=1.6						
	comp=Z,0.7nm,0.9s						
MAJO	Matsushiro	78.72	325	P	P	20 37 45.4	+0.1
MAJO				IAmb	IAmb	20 37 47.4	
	comp=Z,3.1nm,0.7s						
MJB9	Matsu-Tunnel	78.73	325	P	P	20 37 46.4	+1.0
MJB9				IAmb	IAmb	20 37 48.4	
	comp=Z,3.1nm,0.7s						
FIA1	FINESS Array S	145.54	340	PKPdf	PKPdf	20 45 20.3	0.0
FINES	FINESS Array B	145.55	340	PKPdf	PKPdf	20 45 20.3	0.0
FINES	FINESS Array B	145.55	340	PKPbc	PKPab	20 45 21.3	+0.5
	comp=Z,1.2nm,0.4s,baz=49,slow=3.7,SNR=16						
NOA	NORSAR Array B	149.07	352	PKPbc	PKiKP	20 45 31.5	-0.2
	comp=Z,0.2nm,0.7s,baz=48,slow=4.8,SNR=0.9						
HFS	Hagfors	149.59	349	PKPbc	PKPbc	20 45 32.1	+0.4
	comp=Z,0.6nm,0.6s,baz=72,slow=1.8,SNR=2.0						
AKASG	Malin Array Be	151.79	323	PKPbc	PKPbc	20 45 36.6	-0.5
	comp=Z,0.2nm,0.2s,baz=113,slow=0.4,SNR=1.6						
AKASG				PKPab	PKPab	20 45 45.6	-0.6
	comp=Z,0.3nm,0.4s,baz=52,slow=2.7,SNR=5.7						

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*IDC **18** 20:27:38.9±0.4, 22°.37S×169°.79E, h0^{km}, mb4.7/19, mbtmp4.7/21, ML4.3/2, MS4.8/30, Error ellipse: s-maj=16.9km s-min=13.8km az=83.0*

*NEIC **18** 20:27:40.4±1.7, 22°.32S±0°.08×169°.77E±0°.04, h10^{km}±1^{km}, mb5.4/274, Ms_20 5.1/521, Mww5.4/34, Error ellipse: s-maj=14.8km s-min=2.7km az=160.0*

*MOS **18** 20:27:40.1±1.3, 22°.33S×169°.68E, h14^{km}, mb5.5/29, MS4.9/23, Error ellipse: s-maj=8.6km s-min=8.1km az=107.5*

*BGR **18** 20:27:42.1, 22°.84S×170°.63E, h33^{km}, Ms5.1*

*NEIC **18** 20:27:42, 22°.23S×169°.64E, h16^{km}, Moment Tensor Solution. Duration: 2^{s}.7 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.12; M$_{\theta\theta}$0.68; M$_{\phi\phi}$0.44; M$_{r\theta}$-0.96; M$_{\theta\phi}$-0.47; M$_{\phi r}$1.18; Fault plane solution: M$_{0}$1.86000×10^{17} NP1: φ$_{s}$300.09000°, δ18.42000°, λ-107.26000°. NP2: φ$_{s}$138.22000°, δ72.44000°, λ-84.36000°. Principal axes: T 1.8050, Plg27.0000°, Azm224.0000°; N 0.1089, Plg5.0000°, Azm317.0000°; P -1.9139, Plg62.0000°, Azm57.0000°;*

*NEIC **18** 20:27:42, 22°.33S×169°.64E, h16^{km}*

*NOU **18** 20:27:46.5, 22°.13S×169°.56E, h35^{km}, mb5.3/85, Southeast of Loyalty Islands*

*GCMT **18** 20:27:46.4±0.1, 22°.33S±0°.01×169°.71E±0°.01, h18^{km}, MW5.4/146, Moment Tensor Solution. s126,c231; s146,c276; Duration: 1^{s}.2 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-1.41±.02; M$_{\theta\theta}$0.77±.01; M$_{\phi\phi}$0.63±.01; M$_{r\theta}$-0.48±.03; M$_{\theta\phi}$-0.80±.01; M$_{\phi r}$0.50±.04; Best double couple: M$_{0}$1.61800×10^{17} NP1:φ$_{s}$311.00000°, δ32.00000°, λ-93.00000°. NP2:φ$_{s}$134.00000°, δ58.00000°, λ-88.00000°. Principal axes: T 1.6680, Plg13.0000°, Azm223.0000°; N -0.0990, Plg2.0000°, Azm313.0000°; P -1.5680, Plg77.0000°, Azm50.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 20:27:42.1±0.4**, 22°.39S**±0°.04×**169°.90E**±0°.04**, h22^{km}**±3^{km}**, h22^{km}:pP-P, n1152, σ1^{s}.58**/890**, mb5.4**/192**, MS5.1**/325**, 25C-37D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.96	297	P	Pn	20 28 12.0	-2.0
PINNC	Pines Island,	2.28	264		Pn	20 28 16.1	-2.3
PINNC	Pines Island,	2.28	264	P	Pn	20 28 16.6	-1.8
YATNC	Mamie plateau,	2.81	276	P	Pn	20 28 23.3	-2.4
OUENC	Ouen Island, N	2.83	269	P	Pn	20 28 24.3	-1.7
INH	Isangel	2.89	348	P	Pn	20 28 25.8	-1.0
ONTNC	Ouen Toro	3.19	271		Pn	20 28 27.8	-3.2
ONTNC	Ouen Toro	3.19	271	P	Pn	20 28 28.2	-2.7
DZM	Mont Dzumac	3.22	275		Pn	20 28 28.8	-2.6
DZM	Mont Dzumac	3.22	275	*e*Pn	Pn	20 28 29.7	-1.7
	2μm,1.3s						
DZM	Mont Dzumac	3.22	275	Pn	Pn	20 28 29.9	-1.5
	119nm,0.3s,baz=120,slow=20,SNR=1664						
DZM				Sn	Sn	20 29 05.2	-3.9
	163nm,0.3s,baz=136,slow=23,SNR=9.2						
	248nm,0.3s						
DZM	Mont Dzumac	3.22	275	P	Pn	20 28 29.9	-1.5
DVP	Devils Point	4.91	341	P	Pn	20 28 52.6	-2.0
VLAKA	Lakatoro	6.68	339	P	Pn	20 29 16.7	-2.2
NFK	Norfolk Island	6.86	195	P	Pn	20 29 21.3	0.0
	comp=Z,245nm,0.6s						
SANVU	Saraoutou	7.36	339		Pn	20 29 25.0	-3.4
SANVU	Saraoutou	7.36	339	P	Pn	20 29 25.4	-2.9
MSVF	Nonsavu	8.95	60		Pn	20 29 50.5	+0.2
MSVF	Nonsavu	8.95	60	Pn	Pn	20 29 55.4	+5.1
	comp=Z,0.8nm,0.3s,baz=215,slow=12,SNR=14						
MSVF				LR	LR	20 32 33.6	
	comp=Z,9μm,19.6s,baz=185,slow=33						
MSVF	Nonsavu	8.95	60	P	Pn	20 29 55.8	+5.6
MSVF	Nonsavu	8.95	60	*i* P	Pn	20 29 54.2	+4.0
DGTI	Dogotuki	11.09	59	P	Pn	20 30 25.5	+6.1
TAVE	Taveuni	11.15	61	P	Pn	20 30 27.3	+7.0
OUZ	Omahuta	13.18	167	P	Pn	20 30 51.4	+3.4
WCZ	Waipu Caves	14.04	165	P	Pn	20 31 02.3	+2.6
KUZ	Kuaotunu	15.17	162	P	P	20 31 22.4	+2.5
MKAZ	Moumakai	15.35	164	P	P	20 31 24.1	+2.2
TOZ	Tahuroa Road	16.03	164		P	20 31 29.0	-0.5
TOZ	Tahuroa Road	16.03	164	P	P	20 31 33.0	+3.5
HNR	Honiara	16.04	322	P	Pn	20 31 24.7	-1.7
HNR				IAmb	IAmb	20 31 30.8	
	comp=Z,404nm,1.6s						
HNR	Honiara	16.04	322		Pn	20 31 24.6	-1.7
HNR				IAmb	IAmb	20 31 30.8	
	comp=Z,442nm,1.6s						
HNR	Honiara	16.04	322	P	Pn	20 31 25.2	-1.2
HNR	Honiara	16.04	322	P	Pn	20 31 24.7	-1.7
HNR				pmax	pmax		
	comp=Z,404nm,1.6s						
ALEG	Aligegeo Malai	16.19	325	P	Pn	20 31 27.4	-0.9
SAVO	Savo Central	16.34	322	P	Pn	20 31 29.2	-1.1
HIZ	Hauiti	16.62	166	P	P	20 31 36.0	0.0
HIZ	Hauiti	16.62	166	P	P	20 31 39.0	+3.0
HAZ	Te Kaha	16.75	158	P	P	20 31 43.6	+6.1
TATA	Tatamba Isabel	16.97	324	P	P	20 31 39.5	-0.6
URZ	Urewera	16.99	160	P	P	20 31 40.4	+0.3
	comp=Z,0.3nm,0.3s,baz=344,slow=7.4,SNR=9.4						
URZ				LR	LR	20 37 01.8	
	comp=Z,4μm,18.3s,baz=65,slow=33						
	comp=Z,67nm,1.2s						
MWZ	Matawai	17.19	159	P	P	20 31 47.3	+5.0
RTZ	Ruatahuna	17.27	161		P	20 31 43.9	+0.6
EIDS	Eidsvold	17.46	257		Pn	20 31 42.4	-2.0
EIDS	Eidsvold	17.46	257	P	P	20 31 45.7	+0.2
	comp=Z,0.0nmcomp=Z,72nm,1.9s						
EIDS	Eidsvold	17.46	257	P	P	20 31 45.0	-0.4
BKZ	Black Stump Fm	17.64	163		P	20 31 48.9	+1.5
BKZ	Black Stump Fm	17.64	163	P	P	20 31 54.8	+7.4
BKZ	Black Stump Fm	17.64	163	P	P	20 31 51.9	+4.5
ARMA	Armidale	18.20	240		Pn	20 31 53.0	-0.5
ARMA	Armidale	18.20	240	P	P	20 31 55.4	+1.7
ARMA	Armidale	18.20	240	P	P	20 31 55.9	+2.3
TSZ	Takapari Road	18.35	165	P	Pn	20 31 59.5	+4.3
QRZ	Quartz Range	18.51	174	P	Pn	20 32 05.1	+8.0
PXZ	Pawanui	18.55	163	P	Pn	20 32 03.9	+6.3
TKNZ	Takaka Hill	18.77	173	P	Pn	20 32 01.1	+0.9
MRZ	Mangatainoka R	18.84	167		Pn	20 32 01.9	+0.8
MRZ				IAmb	IAmb	20 32 09.6	
	comp=Z,483nm,1.8s						
MRZ	Mangatainoka R	18.84	167	P	Pn	20 32 03.1	+2.0
NNZ	Nelson	19.00	172	P	P	20 32 02.0	-0.2
NNZ				IAmb	IAmb	20 32 09.4	
	comp=Z,463nm,1.8s						
BFZ	Birch Farm	19.01	165	P	P	20 32 02.4	+0.1
BFZ	Birch Farm	19.01	165	P	Pn	20 32 05.6	+2.4
MRNZ	Matariki Terra	19.10	173	P	Pn	20 32 06.0	+1.7
TCW	Tory Channel	19.12	170	P	P	20 32 01.6	-2.0
TUWZ	Tuamarina	19.29	171	P	Pn	20 32 08.5	+2.0
AFI	Afiamalu	19.33	67		Pn	20 32 07.8	+0.5
AFI	Afiamalu	19.33	67	P	Pn	20 32 13.6	+6.3
AFI	Afiamalu	19.33	67	P	Pn	20 32 07.8	+0.5
AFI				pmax	pmax		
	comp=Z,164nm,1.1s						
BHW	Baring Head	19.42	169		Pn	20 32 07.9	-0.2
BHW				IAmb	IAmb	20 32 12.7	
	comp=Z,355nm,1.5s						
THZ	Tophouse	19.48	173		Pn	20 32 11.2	+2.3
THZ				IAmb	IAmb	20 32 13.7	
	comp=Z,302nm,1.5s						
THZ	Tophouse	19.48	173	P	Pn	20 32 11.8	+2.9
RIV	Riverview	20.04	231	P	Pn	20 32 17.0	+1.5
RIV	Riverview	20.04	231	P	Pn	20 32 17.2	+1.7
RIV	Riverview	20.04	231	P	Pn	20 32 17.8	+2.3
RIV				pmax	pmax		
	comp=Z,206nm,1.1s						
KHZ	Kahutara	20.20	172		P	20 32 15.3	0.0
KHZ				IAmb	IAmb	20 32 31.3	
	comp=Z,272nm,1.2s						
KHZ	Kahutara	20.20	172	P	Pn	20 32 20.6	+3.3
KHZ	Kahutara	20.20	172	P	Pn	20 32 20.7	+3.4
SYDH	Sydney Hard Ro	20.31	232	P	Pn	20 32 20.2	+1.5
LTZ	Lake Taylor	20.43	175		P	20 32 18.9	+1.0
LTZ	Lake Taylor	20.43	175	P	Pn	20 32 23.2	+3.2
FOZ	Fox Glacier	21.08	180		P	20 32 24.4	-0.4
FOZ				IAmb	IAmb	20 32 39.3	
	comp=Z,193nm,1.0s						
FOZ	Fox Glacier	21.08	180	P	P	20 32 33.3	+8.5
RPZ	Rata Peaks	21.29	178		P	20 32 27.6	+0.5
RPZ	Rata Peaks	21.29	178	P	P	20 32 29.1	+2.0
	comp=Z,18nm,1.0s,baz=7.9,slow=6.9,SNR=5.5						
RPZ				LR	LR	20 40 01.8	
	comp=Z,4μm,18.5s,baz=351,slow=35						
	comp=Z,18nm,1.0s						
RPZ	Rata Peaks	21.29	178	P	P	20 32 37.9	+11
MQZ	McQueen's Vall	21.38	175	P	P	20 32 28.7	+0.7
JCZ	Jackson Bay	21.64	182	P	P	20 32 34.8	+3.8
JCZ	Jackson Bay	21.64	182	P	P	20 32 38.3	+7.3
LBZ	Lake Benmore	21.94	179	P	P	20 32 33.9	-0.2
LBZ	Lake Benmore	21.94	179	P	P	20 32 39.1	+5.0
TMZ	Timaru	21.95	178	P	P	20 32 40.6	+6.3
CNB	Canberra Magne	22.07	230	P	P	20 32 38.2	+2.6
CNB	Canberra Magne	22.07	230	P	P	20 32 38.3	+2.7
CTAO	Charters Tower	22.15	272		P	20 32 32.7	-3.9
CTAO	Charters Tower	22.15	272	P	P	20 32 37.3	+0.7
CTAO	Charters Tower	22.15	272	P	P	20 32 32.7	-3.9
CTAO				pmax	pmax		
	comp=Z,36nm,1.0s						
CTAO				MLR	MLR		
	comp=Z,4μm,18.0s						
YNG	Young	22.28	233	P	P	20 32 40.5	+2.5
CAN	Canberra	22.33	230		P	20 32 36.7	-1.7
CAN				IAmb	IAmb	20 32 43.6	
	comp=Z,273nm,1.8s						
CAN	Canberra	22.33	230	P	P	20 32 39.9	+1.5
CAN	Canberra	22.33	230	P	P	20 32 40.7	+2.3
CAN	Canberra	22.33	230	P	P	20 32 36.7	-1.7
CAN				pmax	pmax		
	comp=Z,273nm,1.8s						
CAN				MLR	MLR		
	comp=Z,3μm,19.0s						
ODZ	Otahua Downs	22.60	179	P	P	20 32 43.2	+2.0
DCZ	Deep Cove	23.12	185	P	P	20 32 46.3	-0.3
DCZ				IAmb	IAmb	20 33 06.6	
	comp=Z,180nm,1.4s						
CMSA	Cobar Meteorol	23.38	242	P	P	20 32 50.6	+1.2
	comp=Z,82nm,1.7s						
CMSA	Cobar Meteorol	23.38	242	P	P	20 32 50.3	+1.0
WHZ	Wether Hill Ro	23.50	183		P	20 32 50.7	+0.4
WHZ				IAmb	IAmb	20 33 06.2	
	comp=Z,201nm,1.6s						
QLP	Quilpie	23.71	255	P	P	20 32 53.2	+0.6
	comp=Z,0.0nmcomp=Z,312nm,1.9s						
QLP	Quilpie	23.71	255	P	P	20 32 53.7	+1.1
SYZ	Scrubby Hill	24.10	181	P	P	20 32 59.9	+3.9
SYZ	Scrubby Hill	24.10	181	P	P	20 33 03.2	+7.3
MTSU	Mount Surprise	24.36	275	P	P	20 32 58.9	+0.2
	comp=Z,46nm,1.5s						
MTSU	Mount Surprise	24.36	275	P	P	20 32 59.3	+0.6
APZ	The Paps	24.43	183	P	P	20 33 05.6	+6.4
TOO	Toolangi	25.89	229	P	P	20 33 12.2	-0.3
TOO	Toolangi	25.89	229	P	P	20 33 13.8	+1.3
	comp=Z,21nm,1.9s						
TOO	Toolangi	25.89	229	P	P	20 33 12.2	-0.3
TOO				pmax	pmax		
	comp=Z,77nm,1.9s						
COEN	Coen	26.70	284		P	20 33 19.4	-0.6
COEN	Coen	26.70	284	P	P	20 33 20.7	+0.7
	comp=Z,64nm,1.0s						
COEN	Coen	26.70	284	P	P	20 33 20.7	+0.7
STKA	Stephens Creek	26.84	243		P	20 33 19.6	-1.5
STKA	Stephens Creek	26.84	243	P	P	20 33 20.0	-1.0
	comp=Z,200nm,1.3s						
STKA	Stephens Creek	26.84	243	P	P	20 33 21.2	+0.1
	comp=Z,4.0nm,0.7s,baz=90,slow=12,SNR=5.6						
STKA				LR	LR	20 43 43.4	
	comp=Z,3μm,18.2s,baz=74,slow=36						
	comp=Z,4.0nm,0.7s						
STKA	Stephens Creek	26.84	243	P	P	20 33 22.7	+1.6
STKA	Stephens Creek	26.84	243	*i* P	P	20 33 20.4	-0.7
RAR	Rarotonga	28.16	93	P	P	20 33 35.5	+2.4
	comp=Z,8.4nm,0.4s,baz=0.0,slow=11,SNR=1.7						
RAR				LR	LR	20 44 32.5	
	comp=Z,1μm,18.0s,baz=262,slow=36						
	comp=Z,8.4nm,0.4s						
ARPS	Mount Arapiles	28.17	233	P	P	20 33 35.3	+2.3
QIS	Mount Isa	28.23	268	P	P	20 33 34.0	+0.4
	comp=Z,15nm,1.8s						
QIS	Mount Isa	28.23	268	P	P	20 33 34.2	+0.5
HTT	Hallett	29.39	241	P	P	20 33 44.1	+0.1
	comp=Z,11nm,0.7s						
HTT	Hallett	29.39	241	P	P	20 33 45.8	+1.8
WHYH	Whyalla	30.41	243	P	P	20 33 54.6	+1.8
BBOO	Buckleboo	31.61	243	P	P	20 34 02.7	-0.8
BBOO	Buckleboo	31.61	243	P	P	20 34 05.4	+1.9
WR8	Warramunga Arr	33.05	268		P	20 34 13.6	-2.6
AS01	Alice Springs	33.05	261	P	P	20 34 16.2	-0.1
AS31	Alice Springs	33.10	261		P	20 34 14.0	-2.7
AS31	Alice Springs	33.10	261	P	P	20 34 16.1	-0.6
	comp=Z,11nm,0.8s						
AS12	Alice Springs	33.10	261	P	P	20 34 16.4	-0.3
	comp=Z,36nm,0.9s						
ASAR	Alice Springs	33.10	261		P	20 34 14.5	-2.2
ASAR	Alice Springs	33.10	261	P	P	20 34 15.9	-0.8
	comp=Z,7.1nm,0.8s,baz=87,slow=9.1,SNR=28						
ASAR				PcP	PcP	20 36 59.1	-0.8
	comp=Z,1.3nm,0.6s,baz=92,slow=4.1,SNR=1.6						
ASAR				PKiKP	PKiKP	20 44 24.8	-1.3

	comp=Z,0.2nm,0.6s,baz=85,slow=1.0,SNR=4.2						
ASAR				P3KPbc		21 05 32.1	
	comp=Z,0.4nm,0.6s,baz=276,slow=4.6,SNR=6.7						
	comp=Z,7.1nm,0.8s						
WB2	**Warramunga Arr**	**33.19**	**268**	P	**P**	**20 34 16.4**	**-1.1**
WRAB	**Tennant Creek**	**33.20**	**268**	P	**P**	**20 34 15.5**	**-2.0**
WRAB				IAmb	IAmb	20 34 31.7	
	comp=Z,50nm,1.4s						
WRAB	**Tennant Creek**	**33.20**	**268**	*i* P	**P**	**20 34 15.5**	**-2.0**
WRAB				pmax	pmax		
	comp=Z,20nm,1.5s						
WRA	**Warramunga Arr**	**33.20**	**267**		**P**	**20 34 16.0**	**-1.6**
WRA	**Warramunga Arr**	**33.20**	**267**	P	**P**	**20 34 16.0**	**-1.6**
	comp=Z,5.7nm,0.7s,baz=98,slow=8.0,SNR=27						
WRA				PcP	**PcP**	**20 36 59.6**	**-0.6**
	comp=Z,1.1nm,0.7s,baz=92,slow=5.3,SNR=1.1						
	comp=Z,5.7nm,0.7s						
TBI	**Tubuai**	**37.37**	**100**	*e*P	**P**	**20 34 54.3**	**+0.9**
	comp=Z,820nm,24.8s						
TBI				*e*S	**S**	**20 40 40.8**	**+0.3**
	comp=Z,1µm,24.2s						
TBI				*e*LQ	LQ	20 43 23.5	
	comp=Z,8µm,42.2s						
TBI				*e*LR	LR	20 44 53.2	
	comp=Z,3µm,23.0s						
TBI				*e*LR	LR	20 45 00.3	
	comp=Z,2µm,28.8s						
MTN	**Manton Dam**	**38.05**	**278**	P	**P**	**20 34 57.6**	**-1.6**
MTN				IAmb	IAmb	20 34 59.6	
	comp=Z,35nm,0.7s						
MTN	**Manton Dam**	**38.05**	**278**	P	**P**	**20 34 58.4**	**-0.8**
FORT	**Forrest**	**38.16**	**248**	IAmb	IAmb	20 35 23.4	
	comp=Z,51nm,0.9s						
FORT	**Forrest**	**38.16**	**248**	P	**P**	**20 34 60.0**	**0.0**
	comp=Z,69nm,0.9s						
FORT	**Forrest**	**38.16**	**248**	P	**P**	**20 35 00.7**	**+0.7**
PPT2	**Papeete2**	**38.30**	**90**	*e*P	**P**	**20 34 58.6**	**-2.8**
	comp=Z,139nm,23.2s						
PPT2				*e*S	**S**	**20 40 50.4**	**-4.4**
	comp=Z,468nm,25.8s						
PPT2				*e*LQ	LQ	20 43 43.8	
	comp=Z,3µm,29.0s						
PPT2				*e*LR	LR	20 45 24.3	
	comp=Z,376nm,21.8s						
PPT2				*e*LR	LR	20 45 31.0	
	comp=Z,318nm,26.0s						
PPT	**Papeete**	**38.31**	**90**	LR	LR	20 49 59.6	
	comp=Z,1µm,18.0s,baz=255,slow=35						
XMAS	**Kiritimati**	**40.07**	**57**	IAMs_20	IAMs_20	20 50 32.7	
	comp=Z,4µm,18.0s						
WAKE	**Wake Island**	**41.54**	**355**	IAMs_20	IAMs_20	20 50 44.1	
	comp=Z,2µm,19.0s						
KMBL	**Kambalda**	**43.47**	**248**	P	**P**	**20 35 45.1**	**+1.3**
NLAI	**Namlea**	**45.63**	**288**	P	**P**	**20 36 02.5**	**+1.2**
	comp=Z,1µmcomp=Z,63nm,1.1s						
PSA00	**Pilbara Seismi**	**46.24**	**261**	P	**P**	**20 36 04.6**	**-1.4**
PSA00	**Pilbara Seismi**	**46.24**	**261**	P	**P**	**20 36 05.2**	**-0.9**
PSA00				IAmb	IAmb	20 36 21.9	
	comp=Z,35nm,0.8s						
PSA00	**Pilbara Seismi**	**46.24**	**261**	P	**P**	**20 36 05.7**	**-0.4**
MBWA	**Marble Bar**	**46.43**	**262**	P	**P**	**20 36 06.4**	**-1.1**
MBWA				IAMs_20	IAMs_20	20 54 54.6	
	comp=Z,2µm,19.0s						
MBWA	**Marble Bar**	**46.43**	**262**	P	**P**	**20 36 07.3**	**-0.2**
MEEK	**Meekatharra**	**46.60**	**254**	P	**P**	**20 36 10.3**	**+1.4**
KLBR	**Kellerberrin**	**46.99**	**247**	P	**P**	**20 36 10.8**	**-1.0**
NWAO	**Narrogin (SRO)**	**47.39**	**245**	P	**P**	**20 36 14.3**	**-0.6**
NWAO	**Narrogin (SRO)**	**47.39**	**245**	IAMs_20	IAMs_20	20 56 10.4	
	comp=Z,3µm,20.0s						
NWAO	**Narrogin (SRO)**	**47.39**	**245**	LR	LR	20 56 21.1	
	comp=Z,3µm,18.7s,baz=86,slow=36						
NWAO	**Narrogin (SRO)**	**47.39**	**245**	P	**P**	**20 36 14.8**	**-0.1**
NWAO	**Narrogin (SRO)**	**47.39**	**245**	P	**P**	**20 36 14.3**	**-0.6**
NWAO				pmax	pmax		
	comp=Z,52nm,0.8s						
NWAO				MLR	MLR		
	comp=Z,3µm,20.0s						
BLDU	**Ballidu**	**47.93**	**248**	P	**P**	**20 36 20.6**	**+1.5**
MUN	**Mundaring**	**48.29**	**247**	P	**P**	**20 36 23.3**	**+1.4**
TAOE	**Nuku Hiva Isla**	**49.73**	**83**	*e*P	**P**	**20 36 30.6**	**-2.6**
	comp=Z,130nm,22.6s						
TAOE				*e*S	**S**	**20 43 40.4**	**-1.1**
	comp=Z,576nm,25.7s						
TAOE				*e*LQ	LQ	20 48 31.0	
	comp=Z,7µm,32.8s						
TAOE				*e*LR	LR	20 50 43.8	
	comp=Z,712nm,22.6s						
KAPI	**Kappang**	**51.41**	**282**	P	**P**	**20 36 45.3**	**-0.5**
KAPI	**Kappang**	**51.41**	**282**	P	**P**	**20 36 46.3**	**+0.5**
KAPI	**Kappang**	**51.41**	**282**	P	**P**	**20 36 45.3**	**-0.5**
KAPI				pmax	pmax		
	comp=Z,212nm,1.9s						
TOLI2	**Tolitoli**	**53.25**	**289**	P	**P**	**20 36 58.5**	**-0.9**
TOLI2				IAmb	IAmb	20 37 00.5	
	comp=Z,29nm,0.7s						
TOLI2	**Tolitoli**	**53.25**	**289**	P	**P**	**20 36 58.7**	**-0.7**
JAGI	**Jajag, Banyuwa**	**55.20**	**275**	P	**P**	**20 37 11.6**	**-2.1**
JAGI	**Jajag, Banyuwa**	**55.20**	**275**	P	**P**	**20 37 13.2**	**-0.5**
VNDA	**Vanda**	**55.32**	**182**	P	**P**	**20 37 13.1**	**-0.5**
VNDA	**Vanda**	**55.32**	**182**	P	**P**	**20 37 13.8**	**+0.2**
	comp=Z,2.2nm,1.0s,baz=356,slow=11,SNR=4.9						
VNDA				LR	LR	20 58 38.1	
	comp=Z,700nm,18.2s,baz=18,slow=34						
	comp=Z,2.2nm,1.0s						
SBA	**Scott Base**	**55.53**	**181**	P	**P**	**20 37 15.9**	**+0.7**
SBA	**Scott Base**	**55.53**	**181**	P	**P**	**20 37 15.9**	**+0.7**
SBA				pmax	pmax		
	comp=Z,123nm,1.6s						
SBA				MLR	MLR		
	comp=Z,1µm,19.0s						
CASY	**Casey**	**57.51**	**204**	IAMs_20	IAMs_20	20 57 58.4	
	comp=Z,1µm,18.0s						
KSM	**Kuching**	**62.70**	**284**	P	**P**	**20 38 04.7**	**-1.1**
KSM				IAmb	IAmb	20 38 07.0	
	comp=Z,21nm,0.8s						
KSM	**Kuching**	**62.70**	**284**	P	**P**	**20 38 05.8**	**0.0**
JGF	**Kuroka**	**65.40**	**331**	P	**P**	**20 38 22.7**	**-0.4**
JMN	**Monobe**	**65.51**	**327**	P	**P**	**20 38 23.1**	**-0.7**
JMN				IAmb	IAmb	20 39 06.9	
	comp=Z,44nm,1.3s						
JMN	**Monobe**	**65.51**	**327**	P	**P**	**20 38 24.3**	**+0.4**
MJAR	**Matsushiro Arr**	**65.81**	**332**	P	**P**	**20 38 24.9**	**-0.8**
	comp=Z,9.1nm,0.8s,baz=163,slow=6.3,SNR=24						
	comp=Z,9.1nm,0.8s						
MAJO	**Matsushiro**	**65.82**	**332**	P	**P**	**20 38 24.7**	**-1.1**
MAJO	**Matsushiro**	**65.82**	**332**	P	**P**	**20 38 25.2**	**-0.5**
MAJO	**Matsushiro**	**65.82**	**332**	*i* P	**P**	**20 38 24.8**	**-0.9**
MAJO				pmax	pmax		
	comp=Z,57nm,2.4s						
MJB9	**Matsu-Tunnel**	**65.82**	**332**	IAmb	IAmb	20 38 44.3	
	comp=Z,23nm,1.1s						
MDSI	**Maura Dua**	**65.87**	**275**	P	**P**	**20 38 25.8**	**-0.8**
	comp=Z,26nm,1.7s						
NACB	**Ninganchiao**	**65.92**	**312**	P	**P**	**20 38 25.5**	**-1.1**
NACB	**Ninganchiao**	**65.92**	**312**	P	**P**	**20 38 27.3**	**+0.7**
PMBI	**Palembang**	**65.92**	**277**	IAMs_20	IAMs_20	21 05 35.0	
	comp=Z,843nm,20.0s						
TPUB	**Ta-pu**	**66.03**	**310**	P	**P**	**20 38 26.1**	**-1.3**
TPUB				IAmb	IAmb	20 38 44.2	
	comp=Z,39nm,1.0s						
TPUB	**Ta-pu**	**66.03**	**310**	P	**P**	**20 38 26.5**	**-0.9**
SSLB	**Suanglung**	**66.11**	**311**	P	**P**	**20 38 26.5**	**-1.4**
SSLB				IAmb	IAmb	20 38 43.7	
	comp=Z,23nm,0.7s						
SSLB				IAMs_20	IAMs_20	21 06 09.9	
	comp=Z,815nm,19.0s						
SSLB	**Suanglung**	**66.11**	**311**	P	**P**	**20 38 27.4**	**-0.5**
YHNB	**Yeheng**	**66.39**	**312**	P	**P**	**20 38 30.1**	**+0.3**
JNU	**Nakatsue**	**66.58**	**325**	IAmb	IAmb	20 38 53.5	
	comp=Z,20nm,0.9s						
JNU	**Nakatsue**	**66.58**	**325**	P	**P**	**20 38 31.1**	**+0.3**
JSD	**Sado**	**67.06**	**333**	P	**P**	**20 38 33.9**	**+0.3**
QSPA	**South Pole Qui**	**67.68**	**180**	P	**P**	**20 38 37.6**	**+0.1**
QSPA	**South Pole Qui**	**67.68**	**180**	IAMs_20	IAMs_20	21 04 51.2	
	comp=Z,840nm,18.0s						
QSPA	**South Pole Qui**	**67.68**	**180**	P	**P**	**20 38 37.7**	**+0.2**
	comp=Z,18nm,0.9s,baz=12,slow=1.3,SNR=67						
QSPA				LR	LR	21 05 22.2	
	comp=Z,697nm,18.7s,baz=25,slow=33						
	comp=Z,18nm,0.9s						
JTM	**Tenmabayashi**	**68.33**	**337**	P	**P**	**20 38 41.0**	**-0.6**
QZH	**Quanzhou**	**68.51**	**310**	P	**P**	**20 38 43.6**	**+0.6**
QZH				S	**S**	**20 47 47.1**	**+3.0**
QZH				pmax	pmax		
	comp=Z,550nm,7.3s						
QZH				LR	LR		
	comp=Z,320nm,17.2s						
QZH				LR	LR		
	comp=Z,340nm,18.6s						
QZH				LR	LR		
	comp=Z,500nm,18.2s						
BKNI	**Bangkinang**	**70.63**	**279**	IAMs_20	IAMs_20	21 08 53.8	
	comp=Z,958nm,22.0s						
TJN	**Taejon**	**70.93**	**325**	P	**P**	**20 38 58.8**	**+1.1**
KSRS	**Korea Array**	**71.45**	**326**	P	**P**	**20 39 01.4**	**+0.6**
	comp=Z,7.1nm,0.9s,baz=140,slow=6.1,SNR=21						
	comp=Z,7.1nm,0.9s						
KSAR	**Wonju Array Be**	**71.46**	**326**	P	**P**	**20 39 00.2**	**-0.7**
KSAR	**Wonju Array Be**	**71.46**	**326**	P	**P**	**20 39 00.2**	**-0.7**
QIZ	**Qiongzhong**	**71.68**	**300**	P	**P**	**20 39 03.3**	**+0.6**
QIZ				PcP	**PcP**	**20 39 24.5**	**+2.8**
QIZ				S	**S**	**20 48 26.9**	**+5.3**
QIZ				pmax	pmax		
	comp=Z,360nm,7.1s						
QIZ				LR	LR		
	comp=Z,190nm,16.5s						
QIZ				LR	LR		
	comp=Z,220nm,14.4s						
NJ2	**Nanjing**	**72.90**	**316**	*e*P	**P**	**20 39 09.5**	**-0.1**
NJ2				S	**S**	**20 48 37.3**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,14nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,190nm,5.9s						
NJ2				LR	LR		
	comp=Z,220nm,16.6s						
NJ2				LR	LR		
	comp=Z,330nm,16.6s						
NJ2				LR	LR		
	comp=Z,400nm,16.6s						
KULM	**Kulim**	**73.03**	**283**	IAMs_20	IAMs_20	21 10 35.4	
	comp=Z,794nm,21.0s						
YSS	**Yuzhno-Sakhali**	**73.25**	**341**	P	**P**	**20 39 11.9**	**+0.6**
YSS				IAMs_20	IAMs_20	21 05 43.1	
	comp=Z,706nm,20.0s						
YSS	**Yuzhno-Sakhali**	**73.25**	**341**	P	**P**	**20 39 13.2**	**+1.9**
YSS	**Yuzhno-Sakhali**	**73.25**	**341**	*e*P	**P**	**20 39 12.8**	**+1.5**
YSS				*e*S	**S**	**20 48 35.2**	**-3.1**
YSS				*e*SS	**SS**	**20 53 22.5**	**+1.6**
YSS				pmax	pmax		
	comp=Z,40nm,0.9s						
YSS				MLR	MLR		
	comp=Z,400nm,15.0s						
UBPT	**Khong Chiam**	**73.36**	**295**	P	**P**	**20 39 13.6**	**+0.9**
RPSI	**Rantau Prapat**	**73.52**	**280**	P	**P**	**20 39 12.7**	**-1.0**
RPSI				IAmb	IAmb	20 39 28.3	
	comp=Z,35nm,1.3s						
RPSI				IAMs_20	IAMs_20	21 12 31.3	
	comp=Z,670nm,19.0s						
PSI	**Prapat**	**73.56**	**280**	P	**P**	**20 39 13.4**	**-0.8**
PSI	**Prapat**	**73.56**	**280**	P	**P**	**20 39 12.7**	**-1.5**
PSI				pmax	pmax		
	comp=Z,35nm,1.3s						
PSI				MLR	MLR		
	comp=Z,700nm,19.0s						
MSHR	**Mys Shultsa**	**73.87**	**331**	*i* P	**P**	**20 39 15.5**	**+0.4**
VLA	**Vladivostok**	**73.98**	**332**	*i* P	**P**	**20 39 13.6**	**-2.2**
GSI	**Gunungsitoli**	**74.19**	**278**	P	**P**	**20 39 16.8**	**-0.9**
GSI				IAmb	IAmb	20 39 33.5	
	comp=Z,76nm,1.2s						
GSI	**Gunungsitoli**	**74.19**	**278**	P	**P**	**20 39 18.1**	**+0.4**
CNSH	**ChangSha**	**74.49**	**310**	P	**P**	**20 39 19.4**	**+0.3**
CNSH				S	**S**	**20 48 54.8**	**+1.7**
CNSH				pmax	pmax		
	comp=Z,330nm,6.8s						
CNSH				LR	LR		
	comp=Z,250nm,19.1s						
CNSH				LR	LR		
	comp=Z,270nm,20.9s						
CNSH				LR	LR		
	comp=Z,310nm,20.3s						
USA0B	**Ussuriysk Arra**	**74.81**	**333**	*i* P	**P**	**20 39 20.2**	**-0.4**
USRK	**Ussuriysk Ar.**	**74.81**	**333**	P	**P**	**20 39 20.5**	**-0.1**
USRK	**Ussuriysk Ar.**	**74.81**	**333**	P	**P**	**20 39 21.1**	**+0.5**
	comp=Z,8.9nm,0.8s,baz=126,slow=5.0,SNR=17						
USRK				LR	LR	21 09 40.8	
	comp=Z,279nm,20.3s,baz=135,slow=34						
	comp=Z,8.9nm,0.8s						
ADK	**Adak**	**74.89**	**9**	P	**P**	**20 39 19.9**	**-0.9**
ADK				IAmb	IAmb	20 39 21.2	
	comp=Z,36nm,0.8s						
ADK	**Adak**	**74.89**	**9**	P	**P**	**20 39 20.0**	**-0.9**
ADK	**Adak**	**74.89**	**9**	P	**P**	**20 39 19.9**	**-0.9**
ADK				pmax	pmax		
	comp=Z,36nm,0.8s						
ADK				MLR	MLR		
	comp=Z,400nm,20.0s						
ATKA	**Atka Island**	**75.57**	**10**	P	**P**	**20 39 24.4**	**-0.3**
PET	**Petropavlovsk**	**75.73**	**353**	*e*P	**P**	**20 39 23.9**	**-1.7**
PET				*e*S	**S**	**20 49 03.4**	**-2.5**
PET				pmax	pmax		
	comp=Z,600nm,8.8s						
PET				pmax	pmax		
	comp=Z,300nm,7.7s						
PET				MLR	MLR		
	comp=Z,500nm,15.0s						
MAW	**Mawson**	**75.76**	**202**	P	**P**	**20 39 26.4**	**+0.6**
	comp=Z,4.3nm,0.8s,baz=145,slow=7.2,SNR=4.2						
	comp=Z,4.3nm,0.8s						
DL2	**Dalian**	**75.89**	**323**	P	**P**	**20 39 28.3**	**+1.4**
DL2				pP	**pwP**	**20 39 40.3**	**+0.8**
DL2				S	**S**	**20 49 10.9**	**+2.6**
DL2				pmax	pmax		
	comp=Z,37nm,1.9s						
DL2				pmax	pmax		
	comp=Z,710nm,6.5s						
DL2				LR	LR		
	comp=Z,300nm,16.1s						
DL2				LR	LR		
	comp=Z,250nm,18.0s						
DL2				LR	LR		
	comp=Z,540nm,17.1s						
PEA0B	**Petropavlovsk-**	**75.92**	**352**	*ce*P	**P**	**20 39 28.7**	**+1.9**
PETK	**Petropavlovsk-**	**75.92**	**352**	P	**P**	**20 39 26.6**	**-0.2**
PETK	**Petropavlovsk-**	**75.92**	**352**	P	**P**	**20 39 27.5**	**+0.7**
	comp=Z,25nm,0.9s,baz=133,slow=5.5,SNR=15						
	comp=Z,25nm,0.9s						
MDJ	**Mudanjiang**	**76.18**	**332**	P	**P**	**20 39 29.0**	**+0.6**
MDJ				S	**S**	**20 49 17.1**	**+5.9**
MDJ				sS	sS	20 49 20.6	+0.5
MDJ				pmax	pmax		
	comp=Z,14nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,560nm,5.9s						
MDJ				LR	LR		
	comp=Z,330nm,21.1s						
MDJ				LR	LR		
	comp=Z,270nm,20.9s						
MDJ				LR	LR		
	comp=Z,560nm,20.3s						
TIA	**Tai'an**	**76.70**	**319**	P	**P**	**20 39 31.5**	**-0.1**
TIA				S	**S**	**20 49 15.6**	**-1.8**
TIA				pmax	pmax		
	comp=Z,34nm,1.5s						
TIA				pmax	pmax		
	comp=Z,540nm,6.7s						
TIA				LR	LR		
	comp=Z,330nm,16.4s						
TIA				LR	LR		
	comp=Z,340nm,23.9s						
TIA				LR	LR		
	comp=Z,490nm,19.3s						
TYV	**Tymovskoe**	**76.79**	**343**	*e*P	**P**	**20 39 33.1**	**+1.4**
TYV				*e*S	**S**	**20 49 18.9**	**+1.2**
TYV				pmax	pmax		
	comp=Z,16nm,1.2s						
TYV				pmax	pmax		
	comp=Z,200nm,2.2s						
TYV				smax	smax		
	comp=N,300nm,2.2s						
TYV				smax	smax		
	comp=E,200nm,2.2s						
NIKH	**Nikolski High**	**77.29**	**13**	P	**P**	**20 39 34.1**	**-0.4**
NIKH	**Nikolski High**	**77.29**	**13**	P	**P**	**20 39 32.9**	**-1.6**
	baz=200						
CN2	**Changchun**	**77.46**	**329**	*e*P	**P**	**20 39 35.8**	**+0.1**
CN2				*e*S	**S**	**20 49 23.0**	**-2.2**
CN2				pmax	pmax		
	comp=E,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=E,300nm,3.0s						
CN2				LR	LR		
	comp=E,300nm,16.0s						
CN2				LR	LR		
	comp=E,300nm,16.0s						
CN2				LR	LR		
	comp=E,400nm,18.1s						
SLVN	**Son La**	**77.64**	**299**	P	**P**	**20 39 36.5**	**-0.7**
SLVN	**Son La**	**77.64**	**299**	P	**P**	**20 39 38.4**	**+1.1**
BNX	**BinXian**	**78.02**	**331**	⇑P	**P**	**20 39 38.3**	**-0.5**
BNX				sP	**pwP**	**20 39 52.8**	**+1.5**
BNX				S	**S**	**20 49 35.3**	**+4.1**
BNX				sS	**sS**	**20 49 42.1**	**+1.9**
BNX				pmax	pmax		
	comp=E,18nm,0.9s						
BNX				pmax	pmax		
	comp=E,320nm,5.3s						
BNX				LR	LR		
	comp=E,280nm,18.2s						
BNX				LR	LR		
	comp=E,250nm,20.8s						
BNX				LR	LR		
	comp=E,370nm,20.7s						
GYA	**Guiyang**	**78.12**	**305**	P	**P**	**20 39 41.0**	**+1.1**
GYA				pmax	pmax		
	comp=E,18nm,1.3s						
ENH	**Enshi**	**78.15**	**310**	P	**P**	**20 39 39.9**	**0.0**
GRNR	**Gornyy**	**78.60**	**339**	⇓*i*P	**P**	**20 39 42.8**	**+0.9**
GRNR				pmax	pmax		
	comp=Z,20nm,0.7s						
UNV	**Unalaska Valle**	**78.61**	**14**	P	**P**	**20 39 40.1**	**-1.7**
	baz=202						
LYN	**LuoYang**	**78.61**	**315**	P	**P**	**20 39 43.4**	**+1.1**
LYN				sP	pwP	20 39 55.8	+0.7
LYN				PP	**PP**	**20 42 44.9**	**+4.3**
LYN				S	**S**	**20 49 35.8**	**-2.3**
LYN				pmax	pmax		
	comp=Z,42nm,1.4s						
LYN				pmax	pmax		
	comp=Z,680nm,5.5s						
LYN				LR	LR		
	comp=Z,360nm,15.5s						
LYN				LR	LR		
	comp=Z,250nm,17.9s						
LYN				LR	LR		
	comp=Z,660nm,18.5s						
HNS	**HongShan**	**78.95**	**318**	⇓P	**P**	**20 39 44.6**	**+0.5**
HNS				S	**S**	**20 49 46.9**	**+5.4**
HNS				pmax	pmax		
	comp=Z,27nm,1.9s						
HNS				pmax	pmax		
	comp=Z,540nm,7.7s						
HNS				LR	LR		
	comp=Z,270nm,16.2s						
HNS				LR	LR		
	comp=Z,410nm,16.8s						
HNS				LR	LR		
	comp=Z,450nm,16.6s						
KLR	**Kul'dur**	**78.98**	**336**	*ce*P	**P**	**20 39 44.9**	**+0.9**
KLR				pmax	pmax		
	comp=Z,65nm,2.5s						
BJT	**Baijiatuau**	**79.75**	**321**	P	**P**	**20 39 49.5**	**+1.1**
BJI	**Beijing**	**79.76**	**321**	P	**P**	**20 39 48.6**	**+0.2**
BJI				S	**S**	**20 49 55.5**	**+5.5**
BJI				pmax	pmax		
	comp=Z,9.0nm,2.3s						
BJI				pmax	pmax		
	comp=Z,230nm,6.8s						
BJI				LR	LR		
	comp=Z,110nm,15.7s						
BJI				LR	LR		
	comp=Z,130nm,15.8s						
BJI				LR	LR		
	comp=Z,160nm,14.9s						
FALS	**False Pass**	**80.26**	**15**	P	**P**	**20 39 49.9**	**-0.8**
	baz=205						
CMAR	**Chiang Mai Arr**	**80.36**	**294**	P	**P**	**20 39 51.1**	**-1.1**
CMAR	**Chiang Mai Arr**	**80.36**	**294**	P	**P**	**20 39 53.5**	**+1.4**
	comp=Z,4.1nm,0.6s,baz=133,slow=4.3,SNR=26						
	comp=Z,4.1nm,0.6s						
KMI	**Kunming**	**80.46**	**302**	⇓P	**P**	**20 39 54.1**	**+1.2**
KMI				PcP	**pwP**	**20 40 05.6**	**-0.2**
KMI				S	**S**	**20 50 03.3**	**+4.8**
KMI				pmax	pmax		
	comp=Z,36nm,1.6s						
KMI				pmax	pmax		
	comp=Z,340nm,6.6s						
KMI				LR	LR		
	comp=Z,150nm,13.5s						
KMI				LR	LR		
	comp=Z,220nm,16.1s						
CHTO	**Chiang Mai**	**80.52**	**295**	P	**P**	**20 39 52.4**	**-0.6**
CHTO				IAmb	IAmb	20 40 08.4	
	comp=Z,50nm,1.4s						
CHTO	**Chiang Mai**	**80.52**	**295**	P	**P**	**20 39 54.7**	**+1.6**
CHTO	**Chiang Mai**	**80.52**	**295**	P	**P**	**20 39 52.4**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,50nm,1.4s						
TIY	**Taiyuan**	**80.56**	**317**	*e*P	**P**	**20 39 54.0**	**+1.1**
TIY				PP	**PP**	**20 43 03.1**	**+6.2**
TIY				S	**S**	**20 50 01.0**	**+2.3**
TIY				SKS	**SKSac**	**20 50 08.6**	**-1.4**
TIY				SS	**SS**	**20 55 14.5**	**+2.5**
TIY				pmax	pmax		
	comp=Z,370nm,5.3s						
TIY				LR	LR		
	comp=Z,140nm,18.6s						
TIY				LR	LR		
	comp=Z,200nm,15.1s						
TIY				LR	LR		
	comp=Z,260nm,22.0s						
P08K	**Saint George I**	**80.58**	**11**	P	**P**	**20 39 51.4**	**-1.0**
	baz=199						
SMAI	**San Martin Ant**	**80.66**	**161**	IAmb	IAmb	20 40 06.8	
	comp=Z,49nm,0.9s						
XAN	**Xi'an**	**80.69**	**313**	⇓P	**P**	**20 39 54.0**	**+0.3**
XAN				pP	pwP	20 40 06.5	0.0
XAN				S	**S**	**20 50 00.4**	**+0.2**
XAN				pmax	pmax		
	comp=Z,55nm,1.4s						
XAN				pmax	pmax		
	comp=Z,750nm,6.7s						
XAN				LR	LR		
	comp=Z,220nm,14.9s						
XAN				LR	LR		
	comp=Z,300nm,16.7s						
XAN				LR	LR		
	comp=Z,600nm,19.9s						
SPIA	**Saint Paul Isl**	**81.00**	**11**	P	**P**	**20 39 53.3**	**-1.3**
	baz=199						
CNBA	**Chernabura Isl**	**81.22**	**17**	IAMs_20	IAMs_20	21 18 16.1	
	comp=Z,970nm,18.0s						
CHNA	**Chernabura Isl**	**81.23**	**17**	P	**P**	**20 39 55.0**	**-1.0**
	baz=208						
S12K	**Black Hills**	**81.36**	**16**	P	**P**	**20 39 55.3**	**-1.4**
	baz=206						
SDPT	**Sand Point**	**81.45**	**17**	P	**P**	**20 39 56.0**	**-1.1**
	baz=208						
HEH	**HeiHe**	**81.51**	**334**	*e*P	**P**	**20 39 57.3**	**-0.2**
HEH				pP	**pP**	**20 40 02.3**	**-0.6**
HEH				S	**SKSac**	**20 50 16.5**	**+0.9**
HEH				pmax	pmax		
	comp=Z,11nm,1.4s						
HEH				pmax	pmax		
	comp=Z,510nm,7.2s						
HEH				LR	LR		
	comp=Z,290nm,15.9s						
HEH				LR	LR		
	comp=Z,240nm,14.3s						
HEH				LR	LR		
	comp=Z,450nm,14.7s						
PZH	**PanZhiHua**	**81.92**	**303**	P	**P**	**20 40 02.6**	**+2.1**
SYO	**Syowa Base**	**82.09**	**196**	⇓*e*P	**P**	**20 40 00.0**	**-0.5**
XLT	**XiLinHaoTe**	**82.34**	**324**	*e*P	**P**	**20 40 02.8**	**+0.6**
XLT				pP	pwP	20 40 13.0	-1.9
XLT				sP	sP	20 40 16.8	+7.7
XLT				S	**S**	**20 50 16.0**	**-1.0**
XLT				sS	ScS	20 50 29.8	-2.8
XLT				SS	**SS**	**20 55 37.5**	**-0.9**
XLT				pmax	pmax		
	comp=Z,13nm,0.8s						
XLT				pmax	pmax		
	comp=Z,340nm,7.2s						
XLT				LR	LR		
	comp=Z,19nm,17.4s						
XLT				LR	LR		
	comp=Z,180nm,16.2s						
XLT				LR	LR		

	comp=Z,300nm,18.3s						
S14K	**Fog Glacier**	**82.53**	**17**	P	**P**	**20 40 02.0**	**-0.9**
	baz=208						
HHC	**Hu-ho-hao-te**	**83.00**	**319**	*e*P	**P**	**20 40 07.4**	**+1.6**
HHC				sP	sP	20 40 15.1	+2.5
HHC				S	**S**	**20 50 24.4**	**+0.5**
HHC				sS	sS	20 50 33.6	+0.9
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC				pmax	pmax		
	comp=Z,380nm,4.6s						
HHC				LR	LR		
	comp=Z,230nm,15.3s						
HHC				LR	LR		
	comp=Z,240nm,17.6s						
HHC				LR	LR		
	comp=Z,350nm,16.0s						
CHIR	**Chirikof Islan**	**83.23**	**19**	P	**P**	**20 40 06.1**	**-0.3**
	baz=212						
PMSA	**Palmer Station**	**83.75**	**160**	LR	LR	21 15 09.3	
	comp=Z,335nm,18.3s,baz=216,slow=34						
TNCH	**TengChong**	**83.76**	**300**	P	**P**	**20 40 10.9**	**+0.8**
TNCH				S	**S**	**20 50 32.3**	**-0.1**
TNCH				pmax	pmax		
	comp=Z,24nm,2.0s						
TNCH				pmax	pmax		
	comp=Z,350nm,7.2s						
TNCH				LR	LR		
	comp=Z,200nm,18.4s						
TNCH				LR	LR		
	comp=Z,300nm,16.0s						
TNCH				LR	LR		
	comp=Z,370nm,17.3s						
BTO	**Baotou**	**83.80**	**319**	*e*P	**P**	**20 40 12.0**	**+2.1**
BTO				pP	**pwP**	**20 40 22.6**	**0.0**
BTO				PP	**PP**	**20 43 27.9**	**+4.4**
BTO				S	**S**	**20 50 36.8**	**+4.9**
BTO				SS	**SS**	**20 56 04.8**	**+4.7**
BTO				pmax	pmax		
	comp=Z,35nm,2.3s						
BTO				pmax	pmax		
	comp=Z,940nm,7.6s						
BTO				LR	LR		
	comp=Z,650nm,15.3s						
BTO				LR	LR		
	comp=Z,460nm,16.5s						
BTO				LR	LR		
	comp=Z,570nm,17.3s						
ZEA	**Zeya**	**84.28**	**336**	*e*P	**P**	**20 40 12.5**	**+0.7**
ZEA				pmax	pmax		
	comp=N,10.0nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.5s						
SII	**Sitkinak Islan**	**84.29**	**19**	IAMs_20	IAMs_20	21 21 50.9	
	comp=Z,1µm,18.0s						
SII	**Sitkinak Islan**	**84.29**	**19**	P	**P**	**20 40 12.4**	**+0.5**
SII	**Sitkinak Islan**	**84.29**	**19**	P	**P**	**20 40 10.8**	**-1.1**
	baz=213						
O14K	**Tigyukauivet M**	**84.75**	**14**	P	**P**	**20 40 13.3**	**-0.7**
	baz=207						
M11K	**Mekoryuk**	**84.75**	**12**	P	**P**	**20 40 12.7**	**-1.3**
	baz=202						
O15K	**Ungalikthiuk R**	**85.02**	**15**	P	**P**	**20 40 14.6**	**-0.9**
	baz=208						
R18K	**Karluk**	**85.05**	**18**	P	**P**	**20 40 14.8**	**-0.8**
	baz=213						
OHAK	**Old Harbor**	**85.11**	**19**	IAmb	IAmb	20 40 17.3	
	comp=Z,34nm,1.0s						
OHAK	**Old Harbor**	**85.11**	**19**	P	**P**	**20 40 15.7**	**-0.3**
OHAK	**Old Harbor**	**85.11**	**19**	P	**P**	**20 40 15.6**	**-0.3**
	baz=214,SNR=8.8						
Q17K	**Contact Creek**	**85.24**	**17**	P	**P**	**20 40 15.7**	**-1.0**
	baz=212,SNR=12						
N14K	**Kuskokwak Cree**	**85.25**	**14**	P	**P**	**20 40 16.5**	**0.0**
	baz=206						
LZH	**Lanzhou**	**85.29**	**312**	*e*P	**P**	**20 40 18.8**	**+1.2**
LZH				sP	sP	20 40 25.0	-0.4
LZH				S	**S**	**20 50 48.9**	**+1.7**
LZH				sS	ScS	20 50 58.9	+1.6
LZH				pmax	pmax		
	comp=Z,48nm,1.2s						
LZH				pmax	pmax		
	comp=Z,470nm,4.8s						
LZH				LR	LR		
	comp=Z,220nm,16.5s						
LZH				LR	LR		
	comp=Z,260nm,16.5s						
LZH				LR	LR		
	comp=Z,310nm,15.8s						
M13K	**Dall Lake**	**85.34**	**13**	P	**P**	**20 40 17.6**	**+0.6**
	baz=205						
P16K	**Nushagak River**	**85.34**	**16**	IAMs_20	IAMs_20	21 19 43.6	
	comp=Z,657nm,18.0s						
P16K	**Nushagak River**	**85.34**	**16**	P	**P**	**20 40 16.8**	**-0.3**
	baz=210						
ACHA	**Angle Creek He**	**85.35**	**18**	IAmb	IAmb	20 40 19.3	
	comp=Z,17nm,0.9s						
TROLL	**Troll, Antarti**	**85.45**	**184**	⇓P	**P**	**20 40 17.5**	**-0.4**
	comp=Z,1µm,0.6s						
TROLL				⇓pP	**pwP**	**20 40 29.4**	**-0.4**
	comp=Z,2µm,0.8s						
KDAK	**Kodiak Island**	**85.79**	**19**	P	**P**	**20 40 19.3**	**0.0**
KDAK				IAmb	IAmb	20 40 20.6	
	comp=Z,31nm,1.1s						
KDAK	**Kodiak Island**	**85.79**	**19**	LR	LR	21 17 04.9	
	comp=Z,655nm,18.1s,baz=206,slow=35						
KDAK	**Kodiak Island**	**85.79**	**19**	*i* P	**P**	**20 40 18.6**	**-0.7**
KDAK				pmax	pmax		
	comp=Z,48nm,1.2s						
KDAK	**Kodiak Island**	**85.79**	**19**	P	**P**	**20 40 18.5**	**-0.9**
	baz=214						
O16K	**Kokwok River B**	**85.81**	**16**	IAmb	IAmb	20 40 19.5	
	comp=Z,73nm,1.8s						
O16K	**Kokwok River B**	**85.81**	**16**	P	**P**	**20 40 17.6**	**-1.8**
	baz=210						
Q18K	**Katmai Hardscr**	**85.81**	**18**	P	**P**	**20 40 18.7**	**-0.8**
	baz=212,SNR=9.1						
NVL	**N'lazarevskaya**	**85.82**	**187**	*e*P	P	20 40 29.5	+10
NVL				pmax	pmax		
	comp=Z,13nm,1.1s						
N15K	**Kwethluk River**	**85.83**	**15**	P	**P**	**20 40 19.8**	**+0.2**
	baz=208,SNR=14						
P17K	**Kvichak River**	**85.89**	**17**	P	**P**	**20 40 18.6**	**-1.2**
	baz=211						
M14K	**Bethel**	**85.94**	**13**	IAmb	IAmb	20 40 21.6	
	comp=Z,37nm,0.8s						
M14K	**Bethel**	**85.94**	**13**	P	**P**	**20 40 19.9**	**0.0**
	baz=206,SNR=6.0						
SNAA	**Sanae**	**86.05**	**182**	⇓P	**P**	**20 40 20.2**	**-0.6**
	comp=Z,234nm,0.6s						
SNAA				⇓pP	**pwP**	**20 40 32.2**	**-0.5**
	comp=Z,467nm,0.8s						
SNAA	**Sanae**	**86.05**	**182**	P	**P**	**20 40 19.6**	**-1.2**
SNAA				IAMs_20	IAMs_20	21 15 43.5	
	comp=Z,803nm,19.0s						
SNAA	**Sanae**	**86.05**	**182**	P	**P**	**20 40 20.2**	**-0.6**
	comp=Z,23nm,1.1s,baz=198,slow=6.2,SNR=61						
SNAA				LR	LR	21 16 03.8	
	comp=Z,598nm,19.9s,baz=148,slow=34						
	comp=Z,23nm,1.1s						
SNAA	**Sanae**	**86.05**	**182**	*ce*P	**P**	**20 40 20.3**	**-0.5**
SNAA				pmax	pmax		
	comp=Z,25nm,1.0s						
SEY	**Seymchan**	**86.16**	**352**	*ce*P	**P**	**20 40 21.2**	**+0.2**
SEY				pmax	pmax		
	comp=Z,69nm,1.7s						
M15K	**Kasigluk River**	**86.17**	**14**	P	**P**	**20 40 20.9**	**-0.3**
	baz=207,SNR=8.0						
O17K	**Koliganek Bris**	**86.22**	**16**	P	**P**	**20 40 20.4**	**-1.0**
	baz=210						
L14K	**Kuka Creek**	**86.32**	**13**	P	**P**	**20 40 21.9**	**+0.1**
	baz=205,SNR=5.7						
P18K	**Big Mountain,**	**86.38**	**17**	P	**P**	**20 40 21.0**	**-1.3**
	baz=212						
N16K	**Nishlik Lake**	**86.42**	**15**	P	**P**	**20 40 22.7**	**+0.3**
	baz=209,SNR=12						
Q19K	**Cape Douglas,**	**86.43**	**18**	IAMs_20	IAMs_20	21 23 43.6	
	comp=Z,1µm,18.0s						
Q19K	**Cape Douglas,**	**86.43**	**18**	P	**P**	**20 40 21.4**	**-1.2**
	baz=214						
K13K	**Kusilvak Mount**	**86.47**	**12**	P	**P**	**20 40 22.6**	**0.0**
K13K				IAmb	IAmb	20 40 24.5	
	comp=Z,60nm,1.6s						
K13K				IAMs_20	IAMs_20	21 18 00.1	
	comp=Z,559nm,19.0s						
K13K	**Kusilvak Mount**	**86.47**	**12**	P	**P**	**20 40 22.5**	**-0.1**
	baz=204						
Q20K	**Shuyak Island**	**86.53**	**19**	P	**P**	**20 40 22.5**	**-0.4**
	baz=215						
SYI	**Shuyak Island**	**86.53**	**19**	IAmb	IAmb	20 40 38.2	
	comp=Z,18nm,0.9s						
VNA3	**Neumayer Olymp**	**86.62**	**180**	⇓P	**P**	**20 40 22.9**	**-0.6**
	comp=Z,45nm,0.7s						
VNA3				⇓pP	**pwP**	**20 40 34.8**	**-0.6**
	comp=Z,68nm,0.7s						
O18K	**Koktuh Hills**	**86.78**	**17**	P	**P**	**20 40 22.8**	**-1.4**
	baz=212						
N17K	**Nushagak Hills**	**86.85**	**16**	IAmb	IAmb	20 40 27.1	
	comp=Z,22nm,1.1s						
N17K				IAMs_20	IAMs_20	21 20 50.4	
	comp=Z,550nm,18.0s						
N17K	**Nushagak Hills**	**86.85**	**16**	P	**P**	**20 40 23.9**	**-0.6**
	baz=210						
M16K	**Timber Creek**	**86.85**	**15**	P	**P**	**20 40 24.5**	**0.0**
	baz=209						
L15K	**Ungalak Mounta**	**86.87**	**13**	P	**P**	**20 40 24.0**	**-0.6**
	baz=206						
VNA2	**Neumayer--Watz**	**86.92**	**181**	⇓P	**P**	**20 40 24.5**	**-0.4**
	comp=Z,40nm,0.6s,baz=176,slow=5.3						
VNA2				⇓pP	**pwP**	**20 40 36.6**	**-0.3**
	comp=Z,60nm,0.7s,baz=158,slow=6.7						
ESPZ	**Base Esperanza**	**86.93**	**161**	P	**P**	**20 40 24.4**	**-0.7**
GAMB	**Gambell**	**87.09**	**8**	P	**P**	**20 40 25.5**	**0.0**
	baz=197						
P19K	**Oil Pt**	**87.15**	**18**	IAMs_20	IAMs_20	21 23 50.6	
	comp=Z,1µm,18.0s						
P19K	**Oil Pt**	**87.15**	**18**	P	**P**	**20 40 24.6**	**-1.4**
	baz=214						
MCCM	**Marconi Confer**	**87.16**	**47**	IAMs_20	IAMs_20	21 21 12.5	
	comp=Z,809nm,18.0s						
VNA1	**Neumayer--Stat**	**87.20**	**181**	⇓P	**P**	**20 40 26.1**	**-0.2**
	comp=Z,14nm,0.6s						
VNA1				⇓pP	**pwP**	**20 40 38.0**	**-0.2**
	comp=Z,45nm,0.9s						
N18K	**Kilae Creek**	**87.31**	**16**	IAMs_20	IAMs_20	21 15 02.6	
	comp=Z,540nm,20.0s						
N18K	**Kilae Creek**	**87.31**	**16**	P	**P**	**20 40 25.3**	**-1.4**
	baz=212						
O19K	**Port Alsworth**	**87.31**	**17**	P	**P**	**20 40 25.0**	**-1.7**
	baz=213						
L16K	**Owhat River**	**87.34**	**14**	P	**P**	**20 40 26.6**	**-0.3**
	baz=208						
K15K	**Wolf Creek Mou**	**87.42**	**13**	IAmb	IAmb	20 40 42.3	
	comp=Z,44nm,1.2s						
K15K	**Wolf Creek Mou**	**87.42**	**13**	P	**P**	**20 40 26.9**	**-0.3**
	baz=206,SNR=5.5						
J14K	**Nanvaranak Lak**	**87.43**	**12**	P	**P**	**20 40 27.3**	**+0.1**
	baz=205						
ILSW	**Iliamna Southw**	**87.45**	**18**	IAmb	IAmb	20 40 28.9	
	comp=Z,15nm,0.7s						
M17K	**Holitna River**	**87.54**	**15**	IAMs_20	IAMs_20	21 21 50.7	
	comp=Z,536nm,18.0s						
M17K	**Holitna River**	**87.54**	**15**	P	**P**	**20 40 27.9**	**+0.1**
	baz=210						
HOM	**Homer**	**87.61**	**18**	IAMs_20	IAMs_20	21 20 11.8	
	comp=Z,735nm,18.0s						
CNPM	**China Poot**	**87.63**	**19**	IAMs_20	IAMs_20	21 21 54.2	
	comp=Z,724nm,18.0s						
O20K	**Slope Mountain**	**87.68**	**18**	P	**P**	**20 40 28.0**	**-0.6**
	baz=214						
N19K	**Bonanza Creek**	**87.79**	**17**	P	**P**	**20 40 27.1**	**-2.0**
	baz=213						
BRLK	**Bradley Lake**	**87.92**	**19**	IAMs_20	IAMs_20	21 19 14.7	
	comp=Z,649nm,19.0s						
BRSE	**Bradley Lake S**	**87.95**	**19**	P	**P**	**20 40 28.4**	**-1.5**
	baz=216						
L17K	**Donlin**	**87.98**	**14**	P	**P**	**20 40 29.5**	**-0.4**
	baz=209						
M18K	**Stony River**	**88.02**	**16**	P	**P**	**20 40 29.4**	**-0.7**
	baz=212						
O02D	**Mt. Diablo Mer**	**88.28**	**45**	IAmb	IAmb	20 40 35.6	
	comp=Z,45nm,1.3s						
O02D				IAMs_20	IAMs_20	21 14 33.9	
	comp=Z,986nm,19.0s						
BRDH	**Bariadhala**	**88.35**	**295**	LR	LR	21 22 32.7	
	comp=Z,169nm,19.8s,baz=147,slow=37						
USHA	**Ushuaia**	**88.41**	**150**	LR	LR	21 14 16.3	
	comp=Z,218nm,18.4s,baz=219,slow=32						
L18K	**Granite Mounta**	**88.43**	**15**	IAmb	IAmb	20 40 35.8	
	comp=Z,36nm,1.6s						
L18K				IAMs_20	IAMs_20	21 22 20.2	
	comp=Z,561nm,18.0s						
L18K	**Granite Mounta**	**88.43**	**15**	P	**P**	**20 40 30.9**	**-1.1**
	baz=211						
PASC	**Pasadena Art C**	**88.49**	**52**	IAMs_20	IAMs_20	21 15 17.1	
	comp=Z,1µm,18.0s						
K17K	**Iditarod**	**88.49**	**14**	P	**P**	**20 40 32.0**	**-0.3**
	baz=209						
J16K	**Anvik River**	**88.50**	**13**	IAmb	IAmb	20 40 38.2	
	comp=Z,25nm,1.5s						
J16K	**Anvik River**	**88.50**	**13**	P	**P**	**20 40 32.4**	**0.0**
	baz=207						
SEW	**Seward**	**88.63**	**19**	IAMs_20	IAMs_20	21 19 33.7	
	comp=Z,501nm,19.0s						
SEW	**Seward**	**88.63**	**19**	P	**P**	**20 40 33.4**	**+0.4**
	baz=217						
SLKM	**Skilak Lake**	**88.72**	**19**	IAMs_20	IAMs_20	21 20 20.3	
	comp=Z,517nm,19.0s						
M19K	**Big River Lodg**	**88.73**	**16**	IAmb	IAmb	20 40 49.8	
	comp=Z,28nm,1.8s						
ANM	**Nome**	**88.77**	**10**	P	**P**	**20 40 33.7**	**+0.1**
	baz=203						
CMB	**Columbia Colle**	**88.80**	**48**	IAMs_20	IAMs_20	21 20 00.0	
	comp=Z,954nm,18.0s						
L19K	**White Mountain**	**88.85**	**16**	P	**P**	**20 40 33.2**	**-0.9**
L19K	**White Mountain**	**88.85**	**16**	P	**P**	**20 40 33.9**	**-0.1**
	baz=212						
O22K	**Cooper Landing**	**88.85**	**19**	IAMs_20	IAMs_20	21 23 23.5	
	comp=Z,552nm,18.0s						
O22K	**Cooper Landing**	**88.85**	**19**	P	**P**	**20 40 33.1**	**-1.0**
	baz=217						
CIT	**Chita**	**88.90**	**329**	*e*P	P	20 40 44.2	+10
CIT				*e*		20 40 54.4	
CIT				*e*		20 45 57.6	
CIT				pmax	pmax		
	comp=Z,75nm,2.7s						
J17K	**VABM Dome**	**88.92**	**13**	P	**P**	**20 40 33.9**	**-0.4**
	baz=209						
ISA	**Isabella, Lake**	**88.99**	**51**	P	**P**	**20 40 35.7**	**+0.3**
ISA				IAmb	IAmb	20 40 38.5	
	comp=Z,43nm,1.5s						
ISA	**Isabella, Lake**	**88.99**	**51**	P	**P**	**20 40 35.7**	**+0.3**
ISA				pmax	pmax		
	comp=Z,43nm,1.5s						
I17K	**Unalakleet**	**89.02**	**13**	P	**P**	**20 40 34.1**	**-0.6**
	baz=207						
M20K	**Styx River**	**89.04**	**17**	IAMs_20	IAMs_20	21 23 49.4	
	comp=Z,470nm,18.0s						
Q23K	**Middleton Isla**	**89.07**	**21**	P	**P**	**20 40 35.0**	**-0.1**
	baz=220						
YBH	**Yreka Blue Hor**	**89.13**	**44**	LR	LR	21 15 48.3	
	comp=Z,30nm,18.3s,baz=270,slow=32						
ESJX	**Sierra Juarez**	**89.14**	**55**	IAmb	IAmb	20 40 38.9	
	comp=Z,32nm,1.8s						
P23K	**Montague Islan**	**89.18**	**20**	P	**P**	**20 40 35.4**	**-0.2**
	baz=219						
FIS	**Fire Island**	**89.24**	**18**	IAMs_20	IAMs_20	21 21 41.8	
	comp=Z,1µm,18.0s						
TNA	**Tin City**	**89.31**	**9**	P	**P**	**20 40 35.6**	**-0.4**
	baz=201						
RC01	**Rabbit Creek A**	**89.33**	**18**	P	**P**	**20 40 35.4**	**-0.9**
	baz=217						
L20K	**Farewell, AK**	**89.35**	**16**	P	**P**	**20 40 35.6**	**-0.8**
	baz=213						
SUA	**Susitna One**	**89.35**	**18**	IAMs_20	IAMs_20	21 20 19.6	
	comp=Z,623nm,18.0s						
YUH	**Yuha Desert**	**89.45**	**54**	IAmb	IAmb	20 40 40.7	
	comp=Z,39nm,1.7s						
HATC	**Hat Creek Radi**	**89.47**	**45**	IAMs_20	IAMs_20	21 15 33.6	
	comp=Z,686nm,19.0s						
PFO	**Pinyon Flats O**	**89.50**	**53**	LR	LR	21 13 22.1	
	comp=Z,442nm,19.2s,baz=244,slow=31						
J18K	**Innoko River**	**89.50**	**14**	P	**P**	**20 40 36.3**	**-0.8**
	baz=211						
SKT	**Skwentna**	**89.55**	**17**	IAMs_20	IAMs_20	21 23 01.0	
	comp=Z,627nm,18.0s						
SKT	**Skwentna**	**89.55**	**17**	P	**P**	**20 40 36.7**	**-0.7**
	baz=215						
PWL	**Port Wells**	**89.57**	**19**	P	**P**	**20 40 36.0**	**-1.5**
	baz=218						
L04D	**Klamath Falls**	**89.64**	**43**	IAmb	IAmb	20 40 40.2	
	comp=Z,19nm,1.0s						
WAKR	**Walker**	**89.68**	**48**	IAmb	IAmb	20 40 54.1	
	comp=Z,37nm,1.4s						
GTA	**Gaotai**	**89.73**	**313**	P	**P**	**20 40 39.5**	**+0.6**
GTA				sP	pwP	20 40 52.8	+1.0
GTA				PP	**PP**	**20 44 11.5**	**0.0**
GTA				SKS	**SKSac**	**20 51 08.3**	**-0.1**
GTA				S	**S**	**20 51 31.5**	**+1.9**
GTA				sS	sS	20 51 40.3	+2.0
GTA				SS	**SS**	**20 57 31.1**	**+4.0**
GTA				pmax	pmax		
	comp=Z,11nm,1.5s						
GTA				pmax	pmax		
	comp=Z,280nm,8.0s						
GTA				LR	LR		
	comp=Z,190nm,16.4s						
GTA				LR	LR		
	comp=Z,280nm,17.1s						
GTA				LR	LR		
	comp=Z,300nm,18.5s						
ULN	**Ulaanbaatar**	**89.75**	**323**	P	**P**	**20 40 38.5**	**-0.3**
ULN	**Ulaanbaatar**	**89.75**	**323**	*ce*P	**P**	**20 40 39.5**	**+0.7**
ULN				pmax	pmax		
	comp=Z,42nm,2.0s						
M22K	**Willow**	**89.76**	**18**	IAMs_20	IAMs_20	21 22 53.5	
	comp=Z,861nm,18.0s						
M22K	**Willow**	**89.76**	**18**	P	**P**	**20 40 36.5**	**-1.8**
	baz=217						
PNTR	**Pine Nut**	**89.85**	**47**	IAmb	IAmb	20 40 42.5	
	comp=Z,27nm,1.4s						
PMR	**Palmer**	**89.91**	**18**	P	**P**	**20 40 37.3**	**-1.6**
	baz=217						
F15K	**North Star Dit**	**89.95**	**10**	P	**P**	**20 40 38.4**	**-0.7**
	baz=204						
GLI	**Glacier Island**	**89.96**	**19**	IAMs_20	IAMs_20	21 22 45.0	
	comp=Z,501nm,19.0s						
GLI	**Glacier Island**	**89.96**	**19**	P	**P**	**20 40 36.9**	**-2.4**
	baz=219						
KNK	**Knik Glacier**	**89.97**	**19**	P	**P**	**20 40 37.4**	**-2.0**
	baz=218						
GSC	**Goldstone, Bar**	**90.02**	**52**	IAmb	IAmb	20 40 42.3	
	comp=Z,38nm,1.7s						
K20K	**Telida**	**90.04**	**15**	IAmb	IAmb	20 40 44.4	
	comp=Z,33nm,1.8s						
K20K	**Telida**	**90.04**	**15**	P	**P**	**20 40 37.7**	**-1.9**
	baz=213						
YAK	**Yakutsk**	**90.05**	**342**	IAMs_20	IAMs_20	21 22 47.3	
	comp=Z,805nm,19.0s						
YAK	**Yakutsk**	**90.05**	**342**	LR	LR	21 21 25.3	
	comp=Z,602nm,18.2s,baz=137,slow=36						
YAK	**Yakutsk**	**90.05**	**342**	*e*P	**P**	**20 40 38.4**	**-1.2**
YAK				e*PP	**pP**	**20 40 45.5**	**+0.5**
YAK				*e*		20 44 08.9	
YAK				*e*PPP	PPP	20 46 08.7	
YAK				*e*S	**SKSac**	**20 51 08.6**	**-0.2**
YAK				*e*SS	**SS**	**20 57 29.7**	**-0.8**
YAK				*e*SSS	SSS	21 01 05.2	
YAK				pmax	pmax		
	comp=Z,20nm,1.1s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.5s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,258nm,5.2s						
YAK				pmax	pmax		
	comp=N,236nm,5.4s						
YAK				pmax	pmax		
	comp=E,117nm,4.6s						
YAK				smax	smax		
	comp=N,148nm,4.1s						
YAK				smax	smax		
	comp=E,87nm,4.0s						
YAK				MLR	MLR		
	comp=Z,891nm,23.0s						
YAK				MLR	MLR		
	comp=N,480nm,21.0s						
YAK				MLR	MLR		
	comp=E,234nm,21.0s						
FID	**Port Fidalgo**	**90.05**	**20**	IAMs_20	IAMs_20	21 19 13.0	
	comp=Z,512nm,18.0s						
G16K	**Koyuk River**	**90.06**	**11**	P	**P**	**20 40 39.0**	**-0.6**
	baz=206						
KAIM	**Kayak Island**	**90.09**	**21**	P	**P**	**20 40 38.2**	**-1.7**
	baz=222						
SONM	**Songino Array**	**90.10**	**323**	P	**P**	**20 40 39.9**	**-0.5**
SONM	**Songino Array**	**90.10**	**323**	P	**P**	**20 40 40.4**	**0.0**
	comp=Z,4.1nm,0.9s,baz=140,slow=2.7,SNR=28						
SONM				LR	LR	21 22 46.8	
	comp=Z,303nm,18.4s,baz=123,slow=37						
	comp=Z,4.1nm,0.9s						
H17K	**Granite Mounta**	**90.11**	**12**	IAMs_20	IAMs_20	21 19 37.4	
	comp=Z,540nm,20.0s						
H17K	**Granite Mounta**	**90.11**	**12**	P	**P**	**20 40 39.3**	**-0.6**
	baz=208						
GHO	**Glory Hole Cre**	**90.12**	**18**	IAMs_20	IAMs_20	21 17 41.0	
	comp=Z,521nm,20.0s						
EYAK	**Cordova Ski Ar**	**90.13**	**20**	IAMs_20	IAMs_20	21 20 39.5	
	comp=Z,478nm,18.0s						
EYAK	**Cordova Ski Ar**	**90.13**	**20**	P	**P**	**20 40 38.1**	**-1.9**
	baz=220						
PPLA	**Purkeypile**	**90.13**	**16**	IAMs_20	IAMs_20	21 25 36.2	
	comp=Z,525nm,18.0s						
PPLA	**Purkeypile**	**90.13**	**16**	P	**P**	**20 40 37.6**	**-2.6**
	baz=215						
DSP	**Deep Springs**	**90.15**	**49**	P	**P**	**20 40 40.8**	**+0.1**
LHV	**Little Huntoon**	**90.20**	**48**	P	**P**	**20 40 40.3**	**-0.6**
BILL	**Bilibino**	**90.20**	**359**	P	**P**	**20 40 39.4**	**-0.9**
BILL	**Bilibino**	**90.20**	**359**	*ce*P	**P**	**20 40 39.7**	**-0.5**
BILL				pmax	pmax		
	comp=Z,82nm,1.6s						
J19K	**Poorman**	**90.21**	**14**	P	**P**	**20 40 39.5**	**-0.8**
	baz=212						
LPIG	**La Paz**	**90.23**	**64**	LR	LR	21 14 48.7	
	comp=Z,939nm,18.0s,baz=236,slow=31						
CUT	**Chulitna**	**90.24**	**17**	IAMs_20	IAMs_20	21 19 12.3	
	comp=Z,509nm,18.0s						
CUT	**Chulitna**	**90.24**	**17**	P	**P**	**20 40 38.7**	**-1.8**
	baz=216						
COR	**Corvallis**	**90.25**	**41**	IAMs_20	IAMs_20	21 18 32.8	
	comp=Z,702nm,19.0s						
QSM	**Queen of Sheba**	**90.28**	**51**	IAmb	IAmb	20 40 43.1	
	comp=Z,31nm,1.7s						
PAHR	**Pah Rah Range**	**90.30**	**47**	IAmb	IAmb	20 40 42.4	
	comp=Z,28nm,1.5s						
SML	**Sawmill**	**90.32**	**18**	IAMs_20	IAMs_20	21 23 06.3	
	comp=Z,492nm,18.0s						
SML	**Sawmill**	**90.32**	**18**	P	**P**	**20 40 39.2**	**-1.8**
	baz=218						
RAGM	**Ragged Mountai**	**90.35**	**21**	IAmb	IAmb	20 40 41.7	
	comp=Z,24nm,1.1s						
RAGM				IAMs_20	IAMs_20	21 19 30.4	
	comp=Z,695nm,18.0s						
I04A	**Tendick Farm,**	**90.39**	**42**	IAmb	IAmb	20 40 56.3	
	comp=Z,68nm,1.9s						
SUCK	**Suckling Hills**	**90.42**	**21**	IAMs_20	IAMs_20	21 21 14.1	
	comp=Z,1µm,18.0s						
NVAR	**Mina Array Bea**	**90.42**	**48**	P	**P**	**20 40 41.6**	**-0.6**
NVAR	**Mina Array Bea**	**90.42**	**48**	P	**P**	**20 40 42.4**	**+0.1**
	comp=Z,3.2nm,0.8s,baz=226,slow=8.3,SNR=18						
NVAR				LR	LR	21 16 38.9	
	comp=Z,444nm,18.1s,baz=236,slow=32						
	comp=Z,3.2nm,0.8s						
HMT	**Hamilton**	**90.45**	**21**	IAMs_20	IAMs_20	21 19 35.0	
	comp=Z,649nm,18.0s						
G17K	**Kiwalik Mounta**	**90.47**	**12**	P	**P**	**20 40 41.5**	**0.0**
	baz=207						
M23K	**Glacier View**	**90.48**	**19**	P	**P**	**20 40 40.9**	**-0.8**
	baz=219						
NV11	**Mina Array Sit**	**90.53**	**48**	IAmb	IAmb	20 40 44.5	
	comp=Z,52nm,1.9s						
GCSA	**Galena City Sc**	**90.57**	**14**	P	**P**	**20 40 41.5**	**-0.5**
	baz=211						
CAST	**Castle Rocks**	**90.59**	**16**	IAMs_20	IAMs_20	21 24 25.3	
	comp=Z,458nm,18.0s						
CAST	**Castle Rocks**	**90.59**	**16**	P	**P**	**20 40 40.0**	**-2.2**
	baz=215						
H18K	**Honhosa River**	**90.61**	**13**	P	**P**	**20 40 41.2**	**-1.1**
	baz=209						
BGLC	**Bering Glacier**	**90.62**	**21**	P	**P**	**20 40 41.8**	**-0.5**
	baz=222						
SCM	**Sheep Creek Mo**	**90.63**	**19**	P	**P**	**20 40 41.5**	**-1.0**
	baz=219						
BERG	**Berg Lake**	**90.68**	**21**	IAmb	IAmb	20 40 43.3	
	comp=Z,29nm,0.8s						
BERG				IAMs_20	IAMs_20	21 24 38.1	
	comp=Z,774nm,18.0s						
J20K	**Nowinta River**	**90.71**	**15**	IAmb	IAmb	20 40 42.5	
	comp=Z,31nm,1.9s						
J20K				IAMs_20	IAMs_20	21 23 56.4	
	comp=Z,603nm,19.0s						

J20K	**Nowinta River** baz=213	**90.71**	**15**	P	**P**	**20 40 41.6**	**-1.0**
KLU	**Klutina** baz=220	**90.80**	**20**	P	**P**	**20 40 42.1**	**-1.1**
BMRM	**Bremner River** baz=221	**90.81**	**20**	P	**P**	**20 40 42.3**	**-1.0**
CHUM	**Lake Minchumin** baz=215	**90.91**	**16**	P	**P**	**20 40 42.3**	**-1.4**
KTH	**Kantishna Hill** comp=Z,920nm,18.0s	**91.00**	**16**	IAMs_20	IAMs_20	21 24 01.2	
WAX	**Waxell Ridge** comp=Z,632nm,18.0s	**91.00**	**21**	IAMs_20	IAMs_20	21 20 58.7	
WAT1	**Susitna Watana** baz=218	**91.06**	**18**	P	**P**	**20 40 43.0**	**-1.4**
TRF	**Thorofare Moun** comp=Z,618nm,18.0s	**91.08**	**17**	IAMs_20	IAMs_20	21 25 53.4	
TRF	**Thorofare Moun** baz=216	**91.08**	**17**	P	**P**	**20 40 42.7**	**-1.9**
WAT6	**Susitna Watana** baz=219	**91.10**	**18**	P	**P**	**20 40 43.5**	**-1.3**
MESA	**MESA** comp=Z,824nm,18.0s	**91.11**	**22**	IAMs_20	IAMs_20	21 19 04.7	
MESA	**MESA** baz=224	**91.11**	**22**	P	**P**	**20 40 44.1**	**-0.8**
CRQM	**Cirque** comp=Z,28nm,1.2s	**91.14**	**21**	IAmb	IAmb	20 40 57.5	
CRQM	comp=Z,630nm,18.0s			IAMs_20	IAMs_20	21 26 37.5	
CRQE	**Cirque** baz=223	**91.15**	**21**	P	**P**	**20 40 43.8**	**-1.2**
I20K	**Naaghedeneel** comp=Z,49nm,1.6s	**91.16**	**14**	IAmb	IAmb	20 40 50.2	
I20K	comp=Z,564nm,18.0s			IAMs_20	IAMs_20	21 24 48.1	
I20K	**Naaghedeneel** baz=213	**91.16**	**14**	P	**P**	**20 40 44.6**	**-0.1**
TPNV	**Topopah Spring**	**91.17**	**50**	P	**P**	**20 40 45.1**	**-0.6**
TPNV	comp=Z,958nm,18.0s			IAMs_20	IAMs_20	21 17 44.1	
TPNV	**Topopah Spring**	**91.17**	**50**	P	**P**	**20 40 45.1**	**-0.6**
TPNV	comp=Z,80nm,2.0s			pmax	pmax		
TPNV	comp=Z,1µm,18.0s			MLR	MLR		
M24K	**Tolsona, Glenn** baz=220	**91.19**	**19**	P	**P**	**20 40 44.4**	**-0.7**
F17K	**Baldwin Pennin** baz=207	**91.20**	**11**	P	**P**	**20 40 44.9**	**0.0**
G18K	**Tagagawik**	**91.21**	**12**	P	**P**	**20 40 43.6**	**-1.3**
G18K	comp=Z,49nm,1.7s			IAmb	IAmb	20 40 46.0	
G18K	**Tagagawik** baz=209,SNR=5.2	**91.21**	**12**	P	**P**	**20 40 44.4**	**-0.6**
TGL	**Tana Glacier** comp=Z,510nm,18.0s	**91.24**	**21**	IAMs_20	IAMs_20	21 26 19.9	
ISLE	**Juniper Island** comp=Z,572nm,18.0s	**91.29**	**21**	IAMs_20	IAMs_20	21 21 52.3	
N25K	**Chitina, Valde** baz=221	**91.30**	**20**	P	**P**	**20 40 44.8**	**-0.8**
YAH	**Yahtse** comp=Z,795nm,18.0s	**91.32**	**22**	IAMs_20	IAMs_20	21 27 09.0	
I05D	**Terrebonne, OR** comp=Z,20nm,1.2s	**91.33**	**42**	IAmb	IAmb	20 40 48.0	
H19K	**Roundabout Mou** baz=211,SNR=7.2	**91.34**	**13**	P	**P**	**20 40 45.3**	**-0.3**
CRAG	**Craig** baz=231	**91.38**	**29**	P	**P**	**20 40 45.6**	**-0.3**
NLWA	**Neilton Lookou** comp=Z,488nm,20.0s	**91.40**	**38**	IAMs_20	IAMs_20	21 17 57.0	
BPAW	**Bear Paw Mtn.** comp=Z,680nm,18.0s	**91.43**	**16**	IAMs_20	IAMs_20	21 24 59.5	
BPAW	**Bear Paw Mtn.** baz=216	**91.43**	**16**	P	**P**	**20 40 46.2**	**+0.2**
RND	**Reindeer** comp=Z,30nm,1.4s	**91.44**	**17**	IAmb	IAmb	20 40 47.0	
RND	comp=Z,876nm,18.0s			IAMs_20	IAMs_20	21 22 56.7	
SIT	**Sitka** baz=229	**91.47**	**27**	P	**P**	**20 40 46.5**	**+0.2**
TABL	**Table Mountain** comp=Z,744nm,18.0s	**91.58**	**22**	IAMs_20	IAMs_20	21 19 20.1	
GRNC	**Granite Creek** comp=Z,16nm,0.8s	**91.58**	**22**	IAmb	IAmb	20 40 47.6	
GRNC	comp=Z,478nm,18.0s			IAMs_20	IAMs_20	21 20 49.0	
DHY	**Denali Highway** baz=219	**91.59**	**18**	P	**P**	**20 40 45.7**	**-1.3**
MCARA	**McCarthy VSAT**	**91.64**	**21**	P	**P**	**20 40 45.5**	**-1.6**
MCARA	comp=Z,21nm,1.0s			IAmb	IAmb	20 41 00.6	
MCARA	comp=Z,480nm,18.0s			IAMs_20	IAMs_20	21 21 06.4	
MCARA	**McCarthy VSAT** baz=223	**91.64**	**21**	P	**P**	**20 40 46.1**	**-0.9**
F18K	**Selawik** baz=208	**91.64**	**12**	P	**P**	**20 40 46.2**	**-0.7**
PCA	**Pinnacle** comp=Z,17nm,0.7s	**91.65**	**23**	IAmb	IAmb	20 40 47.6	
PCA	comp=Z,844nm,18.0s			IAMs_20	IAMs_20	21 19 28.9	
PINM	**Pinnacle** baz=225	**91.65**	**23**	P	**P**	**20 40 46.2**	**-1.0**
H20K	**Anotleneega Mo** baz=212,SNR=5.9	**91.65**	**14**	P	**P**	**20 40 46.9**	**-0.1**
PNL	**Peninsula** baz=226	**91.66**	**23**	P	**P**	**20 40 46.4**	**-0.8**
MCK	**McKinley** comp=Z,803nm,18.0s	**91.67**	**17**	IAMs_20	IAMs_20	21 23 24.0	
MCK	**McKinley** baz=218	**91.67**	**17**	P	**P**	**20 40 45.2**	**-2.0**
E17K	**Hotham Inlet** baz=206,SNR=5.8	**91.68**	**11**	P	**P**	**20 40 47.0**	**-0.1**
S31K	**Pelican** comp=Z,650nm,18.0s	**91.69**	**26**	IAMs_20	IAMs_20	21 19 42.4	
S31K	**Pelican** baz=228	**91.69**	**26**	P	**P**	**20 40 46.8**	**-0.6**
GOMU	**GeErMu**	**91.72**	**309**	P	**P**	**20 40 49.0**	**+0.5**
GOMU				pP	pP	20 40 52.1	-1.7
GOMU				sP	sP	20 40 56.4	+0.1
GOMU	comp=Z,5.0nm,0.8s			pmax	pmax		
GOMU	comp=Z,210nm,15.4s			LR	LR		
GOMU	comp=Z,230nm,15.4s			LR	LR		
GOMU	comp=Z,300nm,15.0s			LR	LR		
HARP	**HAARP** baz=221	**91.72**	**19**	P	**P**	**20 40 45.8**	**-1.7**
G19K	**Purcell Mounta** comp=Z,51nm,1.6s	**91.74**	**13**	IAmb	IAmb	20 41 00.9	
G19K	comp=Z,508nm,19.0s			IAMs_20	IAMs_20	21 20 20.5	
G19K	**Purcell Mounta** baz=210,SNR=9.7	**91.74**	**13**	P	**P**	**20 40 47.0**	**-0.5**
SHPR	**Sheep Range** comp=Z,26nm,1.9s	**91.75**	**51**	IAmb	IAmb	20 40 50.6	
BBB	**Bella Bella** comp=Z,529nm,18.1s,baz=220,slow=33	**91.77**	**33**	LR	LR	21 17 45.9	
BCPM	**Bancas Point** comp=Z,838nm,18.0s	**91.77**	**23**	IAMs_20	IAMs_20	21 21 10.1	
U33K	**Whale Pass** baz=231	**91.79**	**28**	P	**P**	**20 40 47.0**	**-0.8**
BARN	**Barnard Glacie** comp=Z,437nm,18.0s	**91.85**	**21**	IAMs_20	IAMs_20	21 21 35.1	
CTG	**Chitna Glacier** baz=224,SNR=11	**91.89**	**22**	P	**P**	**20 40 47.4**	**-1.0**
CTGM	**Chitina Glacie** comp=Z,22nm,0.8s	**91.89**	**22**	IAmb	IAmb	20 40 49.1	
CTGM	comp=Z,495nm,18.0s			IAMs_20	IAMs_20	21 21 10.2	
LOGN	**Logan Glacier** comp=Z,639nm,18.0s	**91.91**	**22**	IAMs_20	IAMs_20	21 26 51.6	
V35K	**Ketchikan** baz=232	**91.97**	**29**	P	**P**	**20 40 48.4**	**-0.2**
PALK	**Pallekele** comp=Z,371nm,18.8s,baz=117,slow=38	**91.99**	**277**	LR	LR	21 25 09.8	
D17K	**Noatak River** baz=205,SNR=6.2	**92.03**	**10**	P	**P**	**20 40 48.9**	**+0.2**
S32K	**Killisnoo** baz=230	**92.04**	**26**	P	**P**	**20 40 48.1**	**-0.9**
PAX	**Paxson** baz=221	**92.06**	**19**	P	**P**	**20 40 47.5**	**-1.6**
W13A	**Hualapai Mount**	**92.06**	**53**	P	**P**	**20 40 49.7**	**-0.2**
GNW	**Green Mountain**	**92.10**	**39**	P	**P**	**20 40 48.8**	**-0.7**
WVOR	**Wild Horse Val** comp=Z,673nm,20.0s	**92.11**	**45**	IAMs_20	IAMs_20	21 17 28.4	
WVOR	**Wild Horse Val**	**92.11**	**45**	P	**P**	**20 40 50.1**	**+0.2**
O28M	**Mount Upton** comp=Z,17nm,0.7s	**92.15**	**22**	IAmb	IAmb	20 40 50.4	
O28M	comp=Z,671nm,18.0s			IAMs_20	IAMs_20	21 20 15.1	
O28M	**Mount Upton** baz=225,SNR=18	**92.15**	**22**	P	**P**	**20 40 48.4**	**-1.5**
E18K	**Tukpahlearik C** baz=207,SNR=5.3	**92.20**	**11**	P	**P**	**20 40 49.4**	**-0.1**
F19K	**Shaleruckik Mo** baz=210	**92.20**	**12**	P	**P**	**20 40 48.7**	**-0.8**
C16K	**Lisburne Hills** baz=203	**92.21**	**9**	P	**P**	**20 40 49.1**	**-0.4**
Y14A	**Wickenburg**	**92.22**	**54**	P	**P**	**20 40 49.9**	**-0.6**
PRN	**Pahroc Range** comp=Z,21nm,1.4s	**92.23**	**50**	IAmb	IAmb	20 40 53.8	
P29M	**Windy Craggy** comp=Z,15nm,0.8s	**92.24**	**24**	IAmb	IAmb	20 40 50.9	
P29M	comp=Z,717nm,19.0s			IAMs_20	IAMs_20	21 17 47.6	
P29M	**Windy Craggy** baz=227,SNR=7.4	**92.24**	**24**	P	**P**	**20 40 49.8**	**-0.1**
MLY	**Manley** comp=Z,446nm,18.0s	**92.25**	**16**	IAMs_20	IAMs_20	21 27 49.1	
MLY	**Manley** baz=216	**92.25**	**16**	P	**P**	**20 40 48.5**	**-1.4**
H21K	**Melozitna Rive** comp=Z,32nm,1.8s	**92.27**	**15**	IAmb	IAmb	20 40 52.3	
H21K	comp=Z,506nm,19.0s			IAMs_20	IAMs_20	21 18 59.5	
H21K	**Melozitna Rive** baz=214,SNR=7.8	**92.27**	**15**	P	**P**	**20 40 49.4**	**-0.5**
T33K	**Petersburg** baz=231	**92.31**	**28**	P	**P**	**20 40 48.7**	**-1.5**
WRAK	**Wrangell Islan** baz=232	**92.32**	**28**	P	**P**	**20 40 49.7**	**-0.6**
IMAR	**Indian Mountai**	**92.32**	**14**	P	**P**	**20 40 49.0**	**-1.1**
NEA2	**Nenana** comp=Z,31nm,1.7s	**92.32**	**16**	IAmb	IAmb	20 40 50.7	
NEA2	**Nenana** baz=218,SNR=5.5	**92.32**	**16**	P	**P**	**20 40 48.3**	**-1.8**
I07A	**Izee** comp=Z,27nm,1.7s	**92.35**	**43**	IAmb	IAmb	20 40 51.8	
RDOG	**Red Dog Mine** baz=205	**92.38**	**10**	P	**P**	**20 40 49.8**	**-0.6**
O29M	**Mount Kennedy** comp=Z,896nm,18.0s	**92.39**	**23**	IAMs_20	IAMs_20	21 20 27.6	
O29M	**Mount Kennedy** baz=227	**92.39**	**23**	P	**P**	**20 40 49.3**	**-1.5**
M26K	**Nabesna, AK** comp=Z,25nm,1.4s	**92.40**	**20**	IAmb	IAmb	20 41 03.3	
M26K	**Nabesna, AK** baz=223,SNR=5.6	**92.40**	**20**	P	**P**	**20 40 49.8**	**-0.8**
WRH	**Wood River Hil** comp=Z,777nm,18.0s	**92.49**	**17**	IAMs_20	IAMs_20	21 24 16.5	
MENT	**Mentasta** comp=Z,16nm,1.2s	**92.57**	**19**	IAmb	IAmb	20 41 04.1	
MENT	**Mentasta**	**92.57**	**19**	P	**P**	**20 40 50.7**	**-0.7**
R32K	**Eaglecrest** comp=Z,617nm,19.0s	**92.59**	**26**	IAMs_20	IAMs_20	21 16 50.1	
R32K	**Eaglecrest** baz=230	**92.59**	**26**	P	**P**	**20 40 51.5**	**-0.1**
K24K	**Donnelly Dome** comp=Z,438nm,18.0s	**92.61**	**18**	IAMs_20	IAMs_20	21 26 41.9	
K24K	**Donnelly Dome** baz=220	**92.61**	**18**	P	**P**	**20 40 50.4**	**-1.1**
PLBC	**Pleasant Camp** baz=228,SNR=5.2	**92.64**	**24**	P	**P**	**20 40 50.8**	**-0.9**
BESE	**Bessie Mountai** comp=Z,517nm,19.0s	**92.65**	**26**	IAMs_20	IAMs_20	21 20 18.7	
YUK8	**Steele Glacier** baz=226,SNR=11	**92.66**	**22**	P	**P**	**20 40 51.9**	**-0.3**
I23K	**Minto, Yukon-K** comp=Z,26nm,1.6s	**92.69**	**16**	IAmb	IAmb	20 40 52.7	
I23K	comp=Z,842nm,18.0s			IAMs_20	IAMs_20	21 26 03.9	
I23K	**Minto, Yukon-K** baz=217	**92.69**	**16**	P	**P**	**20 40 50.4**	**-1.4**
CCB	**Clear Creek Bu** comp=Z,758nm,18.0s	**92.70**	**17**	IAMs_20	IAMs_20	21 24 04.2	
M27K	**Edge Creek, AK** comp=Z,32nm,1.3s	**92.72**	**20**	IAmb	IAmb	20 40 53.0	
M27K	comp=Z,512nm,18.0s			IAMs_20	IAMs_20	21 26 41.0	
M27K	**Edge Creek, AK** baz=224,SNR=14	**92.72**	**20**	P	**P**	**20 40 51.2**	**-1.1**
C17K	**DeLong Mountai** baz=205	**92.72**	**10**	P	**P**	**20 40 51.5**	**-0.5**
L26K	**Log Cabin Wild** comp=Z,8.5nm,0.7s	**92.75**	**19**	IAmb	IAmb	20 40 52.7	
L26K	comp=Z,571nm,18.0s			IAMs_20	IAMs_20	21 24 11.7	
L26K	**Log Cabin Wild** baz=222,SNR=5.3	**92.75**	**19**	P	**P**	**20 40 51.1**	**-1.1**
HDA	**Harding Lake** comp=Z,703nm,18.0s	**92.75**	**17**	IAMs_20	IAMs_20	21 25 12.5	
HDA	**Harding Lake** baz=219,SNR=12	**92.75**	**17**	P	**P**	**20 40 50.7**	**-1.4**
YUK3	**Moose Creek** baz=225,SNR=23	**92.77**	**21**	P	**P**	**20 40 51.4**	**-1.2**
H22K	**Ishtalitna Cre** baz=216,SNR=12	**92.80**	**15**	P	**P**	**20 40 51.5**	**-0.8**
F20K	**Avaraart Lake** comp=Z,28nm,1.4s	**92.80**	**13**	IAmb	IAmb	20 40 53.7	
F20K	**Avaraart Lake** baz=212,SNR=15	**92.80**	**13**	P	**P**	**20 40 52.1**	**-0.2**
G21K	**Allakaket** comp=Z,35nm,1.4s	**92.82**	**14**	IAmb	IAmb	20 40 53.5	
G21K	**Allakaket** baz=214,SNR=13	**92.82**	**14**	P	**P**	**20 40 51.7**	**-0.7**
RIDG	**Independent Ri** comp=Z,28nm,1.3s	**92.83**	**18**	IAmb	IAmb	20 40 52.9	
RIDG	comp=Z,552nm,18.0s			IAMs_20	IAMs_20	21 24 13.8	
RIDG	**Independent Ri** baz=221,SNR=6.0	**92.83**	**18**	P	**P**	**20 40 51.3**	**-1.3**
E19K	**Redstone River** comp=Z,21nm,0.9s	**92.85**	**12**	IAmb	IAmb	20 40 55.8	
E19K	**Redstone River** baz=210,SNR=27	**92.85**	**12**	P	**P**	**20 40 52.4**	**-0.2**
COLA	**College** comp=Z,635nm,18.0s	**92.87**	**17**	IAMs_20	IAMs_20	21 25 20.5	
COLA	**College**	**92.87**	**17**	P	**P**	**20 40 54.9**	**+2.3**
COLA	**College**	**92.87**	**17**	*i* P	**P**	**20 40 50.5**	**-2.1**
COLA	comp=Z,37nm,1.5s			pmax	pmax		
COLA	**College** baz=219	**92.87**	**17**	P	**P**	**20 40 51.0**	**-1.6**
YUK6	**Outpost Mounta** baz=227,SNR=5.7	**92.91**	**23**	P	**P**	**20 40 52.0**	**-1.3**
DOT	**Dot Lake** comp=Z,12nm,1.0s	**93.00**	**19**	IAmb	IAmb	20 40 53.6	
DOT	comp=Z,446nm,18.0s			IAMs_20	IAMs_20	21 28 03.1	
SKAG	**Skagway** baz=229	**93.04**	**25**	P	**P**	**20 40 52.9**	**-0.6**
U35K	**Hyder** baz=234	**93.04**	**29**	P	**P**	**20 40 52.8**	**-0.8**
IL31	comp=Z,34nm,1.5s	**93.05**	**17**	IAmb	IAmb	20 40 53.2	
ILAR	**Eielson Array**	**93.05**	**17**	P	**P**	**20 40 51.6**	**-1.9**
ILAR	**Eielson Array** comp=Z,2.4nm,0.6s,baz=194,slow=14,SNR=5.1	**93.05**	**17**	P	**P**	**20 40 52.1**	**-1.4**
ILAR	comp=Z,0.3nm,0.7s,baz=28,slow=4.0,SNR=4.4			PKKPbc	PKKPbc	20 58 13.8	+8.2
ILAR	comp=Z,639nm,18.0s,baz=246,slow=35 comp=Z,2.4nm,0.6s			LR	LR	21 22 03.5	
YUK4	**Talbot Arm** baz=227,SNR=9.5	**93.09**	**22**	P	**P**	**20 40 53.4**	**-0.6**
BVCY	**Beaver Creek** baz=225,SNR=7.7	**93.09**	**21**	P	**P**	**20 40 52.8**	**-1.1**
HYT	**Haines Junctio** comp=Z,18nm,1.4s	**93.14**	**23**	IAmb	IAmb	20 40 54.9	
HYT	**Haines Junctio** baz=228,SNR=5.6	**93.14**	**23**	P	**P**	**20 40 53.3**	**-0.9**
POKR	**Poker Plat Res** comp=Z,642nm,18.0s	**93.17**	**17**	IAMs_20	IAMs_20	21 28 10.6	
POKR	**Poker Plat Res** baz=219	**93.17**	**17**	P	**P**	**20 40 52.3**	**-1.8**
H23K	**Yukon River** comp=Z,40nm,1.9s	**93.19**	**16**	IAmb	IAmb	20 40 55.6	
H23K	comp=Z,678nm,18.0s			IAMs_20	IAMs_20	21 25 41.9	
H23K	**Yukon River** baz=217	**93.19**	**16**	P	**P**	**20 40 52.5**	**-1.7**
C18K	**Utukok River**	**93.19**	**10**	P	**P**	**20 40 53.8**	**-0.5**
C18K	**Utukok River** baz=207,SNR=7.0	**93.19**	**10**	P	**P**	**20 40 53.7**	**-0.5**
ZAK	**Zakamensk**	**93.20**	**324**	*e*P	**P**	**20 40 53.5**	**-1.2**
ZAK	comp=Z,12nm,2.1s			pmax	pmax		
L27K	**Beaver Creek,** comp=Z,23nm,1.6s	**93.25**	**20**	IAmb	IAmb	20 40 55.0	
L27K	**Beaver Creek,** baz=224,SNR=9.0	**93.25**	**20**	P	**P**	**20 40 53.3**	**-1.3**
BCAR	**Beaver Creek A**	**93.26**	**20**	P	**P**	**20 40 53.1**	**-1.5**
SCRK	**Sand Creek** baz=222,SNR=14	**93.26**	**19**	P	**P**	**20 40 53.1**	**-1.6**
G08A	**Pilot Rock** comp=Z,43nm,1.9s	**93.28**	**42**	IAmb	IAmb	20 40 56.6	
J25K	**Salcha River,** baz=221,SNR=10.0	**93.34**	**18**	P	**P**	**20 40 53.7**	**-1.3**
F21K	**Alatna River** comp=Z,16nm,1.1s	**93.42**	**13**	IAmb	IAmb	20 40 56.1	
F21K	comp=Z,531nm,19.0s			IAMs_20	IAMs_20	21 21 22.9	
F21K	**Alatna River** baz=214,SNR=15	**93.42**	**13**	P	**P**	**20 40 54.8**	**-0.4**
HAWA	**Hanford** comp=Z,18nm,1.4s	**93.46**	**41**	IAmb	IAmb	20 40 58.4	
HAWA	comp=Z,806nm,18.0s			IAMs_20	IAMs_20	21 22 01.6	
T35M	**Bob Quinn** baz=233	**93.58**	**28**	P	**P**	**20 40 55.8**	**-0.4**
D19K	**Kuna River** comp=Z,21nm,1.0s	**93.59**	**11**	IAmb	IAmb	20 40 57.3	
D19K	**Kuna River** baz=210	**93.59**	**11**	P	**P**	**20 40 55.2**	**-0.7**
ELK	**Elko** comp=Z,856nm,18.0s	**93.59**	**47**	IAMs_20	IAMs_20	21 21 30.8	
ELK	**Elko** comp=Z,433nm,18.6s,baz=250,slow=32	**93.59**	**47**	LR	LR	21 17 33.1	
ELK	**Elko**	**93.59**	**47**	P	**P**	**20 40 56.5**	**-0.4**
X16A	**Lo Mia Camp, P** comp=Z,20nm,1.6s	**93.59**	**54**	IAmb	IAmb	20 40 59.3	
G22K	**Bettles** baz=215	**93.61**	**14**	P	**P**	**20 40 55.3**	**-0.8**
H24K	**Noodor Dome** baz=219	**93.62**	**16**	P	**P**	**20 40 55.6**	**-0.6**
O30N	**Mendenhall** comp=Z,25nm,1.6s	**93.62**	**23**	IAmb	IAmb	20 40 57.0	
O30N	comp=Z,679nm,19.0s			IAMs_20	IAMs_20	21 19 28.0	
O30N	**Mendenhall** baz=229	**93.62**	**23**	P	**P**	**20 40 55.6**	**-0.7**
KNB	**Kanab** comp=Z,33nm,1.6s	**93.67**	**51**	IAmb	IAmb	20 40 59.5	
N30M	**Aishikik Lake** comp=Z,691nm,18.0s	**93.72**	**23**	IAMs_20	IAMs_20	21 24 31.6	
N30M	**Aishikik Lake** baz=228	**93.72**	**23**	P	**P**	**20 40 55.8**	**-1.0**
B18K	**Kokolik River** baz=206	**93.74**	**10**	P	**P**	**20 40 56.7**	**+0.1**
E20K	**Nigu River** baz=211,SNR=40	**93.75**	**12**	P	**P**	**20 40 56.3**	**-0.4**
P32M	**Atlin** comp=Z,666nm,19.0s	**93.75**	**25**	IAMs_20	IAMs_20	21 21 22.8	
P32M	**Atlin** baz=231	**93.75**	**25**	P	**P**	**20 40 56.4**	**-0.5**
S34M	**Telegraph Cree** comp=Z,527nm,19.0s	**93.76**	**27**	IAMs_20	IAMs_20	21 21 14.3	
S34M	**Telegraph Cree** baz=233	**93.76**	**27**	P	**P**	**20 40 56.7**	**-0.2**
J26L	**Joseph Creek** comp=Z,46nm,1.6s	**93.78**	**18**	IAmb	IAmb	20 40 58.0	
J26L	comp=Z,517nm,18.0s			IAMs_20	IAMs_20	21 25 10.8	
J26L	**Joseph Creek** baz=222,SNR=15	**93.78**	**18**	P	**P**	**20 40 56.6**	**-0.4**
G23K	**Bananza Creek** baz=217,SNR=5.3	**93.78**	**15**	P	**P**	**20 40 56.5**	**-0.5**
U15A	**North Rim** comp=Z,23nm,1.5s	**93.80**	**52**	IAmb	IAmb	20 41 00.3	
C19K	**Lookout Ridge** baz=208,SNR=8.2	**93.87**	**11**	P	**P**	**20 40 57.3**	**0.0**
K27K	**Chicken** baz=224	**93.87**	**19**	P	**P**	**20 40 56.8**	**-0.5**
M29M	**Somme Creek** baz=227,SNR=9.8	**93.91**	**21**	P	**P**	**20 40 56.5**	**-1.2**
H03S2	**Juan Fernandez** baz=243,slow=75,SNR=13	**93.92**	**129**	T	T	22 26 06.9	
H03S1	**Juan Fernandez** baz=243,slow=75,SNR=12	**93.93**	**129**	T	T	22 26 08.0	
Q32M	**Nakina River** comp=Z,550nm,20.0s	**93.94**	**26**	IAMs_20	IAMs_20	21 18 10.7	
Q32M	**Nakina River** baz=232	**93.94**	**26**	P	**P**	**20 40 57.7**	**-0.3**
H03S3	**Juan Fernandez** baz=243,slow=75,SNR=11	**93.94**	**129**	T	T	22 26 06.8	
F22K	**John River** baz=215	**93.94**	**14**	P	**P**	**20 40 57.0**	**-0.6**
PRP	**Porcupine Dome** comp=Z,738nm,18.0s	**93.99**	**17**	IAMs_20	IAMs_20	21 24 34.3	
PRP	**Porcupine Dome** baz=221	**93.99**	**17**	P	**P**	**20 40 56.4**	**-1.7**
WHY	**Whitehorse** comp=Z,42nm,1.5s	**93.99**	**24**	IAmb	IAmb	20 40 58.8	
WHY	**Whitehorse** baz=230	**93.99**	**24**	P	**P**	**20 40 57.1**	**-1.1**
D20K	**Etivluk River** comp=Z,29nm,0.9s	**94.06**	**12**	IAmb	IAmb	20 40 59.6	
D20K	**Etivluk River** baz=211	**94.06**	**12**	P	**P**	**20 40 57.7**	**-0.4**
WUAZ	**Wupatki** comp=Z,738nm,18.0s	**94.10**	**53**	IAMs_20	IAMs_20	21 19 51.9	
BMO	**Blue Mountains** comp=Z,751nm,18.0s	**94.10**	**43**	IAMs_20	IAMs_20	21 19 52.9	
COLD	**Coldfoot** comp=Z,492nm,18.0s	**94.16**	**14**	IAMs_20	IAMs_20	21 26 46.5	
COLD	**Coldfoot** baz=217,SNR=5.6	**94.16**	**14**	P	**P**	**20 40 58.7**	**+0.1**
N31M	**Braeburn, Yuko** comp=Z,33nm,1.6s	**94.20**	**23**	IAmb	IAmb	20 40 59.7	
N31M	comp=Z,735nm,18.0s			IAMs_20	IAMs_20	21 22 29.5	
N31M	**Braeburn, Yuko** baz=229	**94.20**	**23**	P	**P**	**20 40 58.8**	**-0.2**
E21K	**Killik River** comp=Z,17nm,0.9s	**94.34**	**13**	IAmb	IAmb	20 41 00.6	
E21K	**Killik River** baz=213,SNR=10	**94.34**	**13**	P	**P**	**20 40 58.5**	**-0.9**
G24K	**Hadweenzic Riv** comp=Z,32nm,1.6s	**94.39**	**16**	IAmb	IAmb	20 41 00.1	
G24K	comp=Z,429nm,18.0s			IAMs_20	IAMs_20	21 24 02.9	
G24K	**Hadweenzic Riv** baz=219,SNR=7.0	**94.39**	**16**	P	**P**	**20 40 58.7**	**-1.0**
L29M	**L29M** comp=Z,15nm,0.9s	**94.48**	**21**	IAmb	IAmb	20 41 01.1	
L29M	comp=Z,435nm,18.0s			IAMs_20	IAMs_20	21 22 10.6	
L29M	**L29M** baz=227,SNR=14	**94.48**	**21**	P	**P**	**20 40 59.5**	**-0.7**
H25L	**Birch Creek** baz=220	**94.48**	**16**	P	**P**	**20 41 00.6**	**+0.6**
I26K	**Coal Creek Min** comp=Z,26nm,1.1s	**94.49**	**18**	IAmb	IAmb	20 41 00.9	
I26K	comp=Z,534nm,18.0s			IAMs_20	IAMs_20	21 28 48.6	
I26K	**Coal Creek Min** baz=223,SNR=23	**94.49**	**18**	P	**P**	**20 40 59.5**	**-0.6**
P33M	**Teslin, Yukon** comp=Z,727nm,19.0s	**94.50**	**25**	IAMs_20	IAMs_20	21 22 40.4	
P33M	**Teslin, Yukon** baz=231	**94.50**	**25**	P	**P**	**20 40 59.9**	**-0.5**
E22K	**Anaktuvuk Pass** comp=Z,600nm,19.0s	**94.53**	**13**	IAMs_20	IAMs_20	21 21 42.4	
E22K	**Anaktuvuk Pass** baz=215,SNR=18	**94.53**	**13**	P	**P**	**20 41 00.1**	**-0.3**
A19K	**Wainwright** baz=207	**94.61**	**10**	P	**P**	**20 41 00.1**	**-0.5**
DAWY	**Dawson** baz=226,SNR=8.1	**94.73**	**20**	P	**P**	**20 41 00.1**	**-1.2**
R33M	**Jennings River** comp=Z,34nm,1.8s	**94.73**	**26**	IAmb	IAmb	20 41 03.1	
R33M	comp=Z,620nm,18.0s			IAMs_20	IAMs_20	21 18 56.8	
R33M	**Jennings River** baz=233	**94.73**	**26**	P	**P**	**20 41 00.9**	**-0.7**
C21K	**Knifeblade Rid** baz=213,SNR=25	**94.78**	**12**	P	**P**	**20 40 60.0**	**-1.4**
G25K	**Bearman Lake** baz=220	**94.79**	**16**	P	**P**	**20 41 00.4**	**-1.0**
FYU	**Fort Yukon** comp=Z,663nm,18.0s	**94.87**	**16**	IAMs_20	IAMs_20	21 27 57.4	
F24K	**Squaw Lake**	**94.94**	**15**	IAmb	IAmb	20 41 03.6	

	comp=Z,12nm,1.0s						
F24K				IAMs_20	IAMs_20	21 26 38.1	
	comp=Z,773nm,18.0s						
F24K	**Squaw Lake**	**94.94**	**15**	P	**P**	**20 41 01.9**	**-0.3**
	baz=219,SNR=15						
E23K	**Chandalar**	**94.96**	**14**	IAmb	IAmb	20 41 03.6	
	comp=Z,17nm,1.1s						
E23K				IAMs_20	IAMs_20	21 23 35.7	
	comp=Z,480nm,19.0s						
E23K	**Chandalar**	**94.96**	**14**	P	**P**	**20 41 02.1**	**-0.2**
	baz=217,SNR=13						
D22K	**Ayikyak River**	**94.97**	**13**	IAmb	IAmb	20 41 04.0	
	comp=Z,21nm,0.9s						
D22K				IAMs_20	IAMs_20	21 23 01.8	
	comp=Z,571nm,19.0s						
D22K	**Ayikyak River**	**94.97**	**13**	P	**P**	**20 41 02.2**	**-0.1**
	baz=214,SNR=19						
N32M	**Quiet Lake**	**94.98**	**24**	IAMs_20	IAMs_20	21 19 51.3	
	comp=Z,936nm,19.0s						
PLID	**Pearl Lake**	**95.03**	**43**	IAMs_20	IAMs_20	21 19 29.5	
	comp=Z,689nm,19.0s						
B20K	**Meade River**	**95.08**	**11**	IAmb	IAmb	20 41 04.2	
	comp=Z,11nm,0.8s						
B20K				IAMs_20	IAMs_20	21 20 39.6	
	comp=Z,525nm,20.0s						
B20K	**Meade River**	**95.08**	**11**	P	**P**	**20 41 02.5**	**-0.2**
	baz=210,SNR=11						
I27K	**Kandik River**	**95.15**	**18**	P	**P**	**20 41 02.3**	**-0.9**
	baz=224,SNR=10						
M31M	**Drury Creek, Y**	**95.17**	**23**	IAmb	IAmb	20 41 04.4	
	comp=Z,22nm,1.9s						
M31M				IAMs_20	IAMs_20	21 26 27.1	
	comp=Z,762nm,18.0s						
K29M	**Barlow Dome**	**95.18**	**21**	IAmb	IAmb	20 41 05.2	
	comp=Z,39nm,1.8s						
K29M				IAMs_20	IAMs_20	21 23 54.1	
	comp=Z,481nm,18.0s						
K29M	**Barlow Dome**	**95.18**	**21**	P	**P**	**20 41 02.8**	**-0.7**
	baz=228,SNR=12						
B21K	**Ikpikpuk River**	**95.21**	**12**	P	**P**	**20 41 03.3**	**0.0**
B21K				IAmb	IAmb	20 41 05.0	
	comp=Z,17nm,0.9s						
B21K				IAMs_20	IAMs_20	21 24 05.1	
	comp=Z,474nm,19.0s						
B21K	**Ikpikpuk River**	**95.21**	**12**	P	**P**	**20 41 03.3**	**0.0**
	baz=213,SNR=11						
E24K	**Your Creek**	**95.23**	**15**	IAmb	IAmb	20 41 05.8	
	comp=Z,17nm,1.4s						
E24K				IAMs_20	IAMs_20	21 20 52.9	
	comp=Z,474nm,20.0s						
E24K	**Your Creek**	**95.23**	**15**	P	**P**	**20 41 03.1**	**-0.5**
	baz=218						
J29N	**Klondike Camp**	**95.37**	**20**	IAMs_20	IAMs_20	21 29 13.1	
	comp=Z,586nm,18.0s						
TOLK	**Toolik Lake Re**	**95.44**	**14**	IAmb	IAmb	20 41 06.8	
	comp=Z,32nm,1.4s						
TOLK				IAMs_20	IAMs_20	21 24 39.2	
	comp=Z,614nm,19.0s						
TOLK	**Toolik Lake Re**	**95.44**	**14**	P	**P**	**20 41 04.3**	**-0.2**
	baz=217,SNR=8.8						
D23K	**Nanushuk River**	**95.46**	**13**	P	**P**	**20 41 04.3**	**-0.2**
D23K				IAmb	IAmb	20 41 06.3	
	comp=Z,22nm,1.1s						
D23K				IAMs_20	IAMs_20	21 22 21.7	
	comp=Z,896nm,19.0s						
D23K	**Nanushuk River**	**95.46**	**13**	P	**P**	**20 41 04.8**	**+0.3**
	baz=216,SNR=16						
I28M	**Miner Creek**	**95.53**	**19**	P	**P**	**20 41 03.6**	**-1.4**
	baz=226,SNR=13						
G26K	**Porcupine Rive**	**95.53**	**17**	IAmb	IAmb	20 41 06.1	
	comp=Z,18nm,0.9s						
G26K				IAMs_20	IAMs_20	21 27 09.1	
	comp=Z,714nm,18.0s						
G26K	**Porcupine Rive**	**95.53**	**17**	P	**P**	**20 41 04.7**	**-0.1**
	baz=222,SNR=9.2						
F25K	**Christian Rive**	**95.54**	**16**	P	**P**	**20 41 04.5**	**-0.4**
	baz=221,SNR=11						
MAYO	**Mayo, Yukon**	**95.56**	**21**	P	**P**	**20 41 04.8**	**-0.3**
	baz=229						
FARO	**Faro, Yukon**	**95.57**	**23**	P	**P**	**20 41 04.5**	**-0.7**
	baz=231						
H27K	**Steamboat Moun**	**95.63**	**18**	IAmb	IAmb	20 41 06.4	
	comp=Z,24nm,1.4s						
H27K				IAMs_20	IAMs_20	21 25 54.6	
	comp=Z,444nm,18.0s						
H27K	**Steamboat Moun**	**95.63**	**18**	P	**P**	**20 41 04.8**	**-0.6**
	baz=224,SNR=11						
BMAR	**Burnt Mountain**	**95.69**	**16**	P	**P**	**20 41 05.2**	**-0.5**
NEW	**Newport**	**95.78**	**40**	IAMs_20	IAMs_20	21 23 34.1	
	comp=Z,474nm,18.0s						
NEW	**Newport**	**95.78**	**40**	LR	LR	21 19 39.6	
	comp=Z,386nm,18.2s,baz=266,slow=33						
E25K	**Arctic Village**	**95.96**	**15**	IAmb	IAmb	20 41 08.1	
	comp=Z,15nm,1.3s						
E25K	**Arctic Village**	**95.96**	**15**	P	**P**	**20 41 06.4**	**-0.4**
	baz=221,SNR=8.6						
I29M	**Ogilvie Camp,**	**95.97**	**19**	IAmb	IAmb	20 41 07.2	
	comp=Z,32nm,1.4s						
F26K	**Sheenjek River**	**96.00**	**16**	IAmb	IAmb	20 41 07.6	
	comp=Z,24nm,1.8s						
F26K				IAMs_20	IAMs_20	21 29 27.2	
	comp=Z,458nm,18.0s						
F26K	**Sheenjek River**	**96.00**	**16**	P	**P**	**20 41 06.8**	**-0.2**
	baz=222,SNR=9.0						
G27K	**Doyon Strip**	**96.01**	**17**	IAMs_20	IAMs_20	21 27 32.7	
	comp=Z,432nm,18.0s						
G27K	**Doyon Strip**	**96.01**	**17**	P	**P**	**20 41 06.3**	**-0.8**
	baz=224						
D24K	**Happy Valley**	**96.01**	**14**	IAmb	IAmb	20 41 09.6	
	comp=Z,10nm,1.1s						
D24K				IAMs_20	IAMs_20	21 22 00.4	
	comp=Z,441nm,19.0s						
D24K	**Happy Valley**	**96.01**	**14**	P	**P**	**20 41 06.7**	**-0.3**
	baz=218						
B22K	**Teshekpuk Lake**	**96.04**	**12**	P	**P**	**20 41 06.6**	**-0.5**
B22K	**Teshekpuk Lake**	**96.04**	**12**	P	**P**	**20 41 06.7**	**-0.4**
	baz=214,SNR=7.8						
WTLY	**Watson Lake, Y**	**96.04**	**26**	P	**P**	**20 41 06.7**	**-0.7**
	baz=235						
J30M	**Hart River**	**96.06**	**20**	IAMs_20	IAMs_20	21 29 45.3	
	comp=Z,552nm,18.0s						
J30M	**Hart River**	**96.06**	**20**	P	**P**	**20 41 06.7**	**-0.8**
	baz=229						
C23K	**Itkillik River**	**96.18**	**13**	IAMs_20	IAMs_20	21 27 36.7	
	comp=Z,621nm,19.0s						
C23K	**Itkillik River**	**96.18**	**13**	P	**P**	**20 41 07.7**	**-0.1**
	baz=216,SNR=14						
A21K	**Barrow**	**96.31**	**10**	P	**P**	**20 41 07.5**	**-0.8**
	baz=211						
A22K	**Sinclair Lake**	**96.31**	**11**	P	**P**	**20 41 08.3**	**0.0**
	baz=212,SNR=7.1						
I30M	**Mount Dempster**	**96.47**	**20**	P	**P**	**20 41 08.3**	**-1.1**
	baz=229,SNR=8.3						
C24K	**Franklin Bluff**	**96.48**	**13**	IAMs_20	IAMs_20	21 22 54.9	
	comp=Z,631nm,19.0s						
C24K	**Franklin Bluff**	**96.48**	**13**	P	**P**	**20 41 09.3**	**+0.2**
	baz=218,SNR=11						
H29M	**Whitestone**	**96.53**	**19**	IAmb	IAmb	20 41 10.0	
	comp=Z,22nm,1.4s						
H29M				IAMs_20	IAMs_20	21 22 10.7	
	comp=Z,487nm,20.0s						
H29M	**Whitestone**	**96.53**	**19**	P	**P**	**20 41 08.7**	**-0.7**
	baz=227,SNR=6.6						
MMPY	**Sheldon Lake,**	**96.57**	**23**	P	**P**	**20 41 08.7**	**-1.1**
MMPY				IAmb	IAmb	20 41 58.1	
	comp=Z,19nm,2.0s						
MMPY	**Sheldon Lake,**	**96.57**	**23**	P	**P**	**20 41 09.2**	**-0.5**
	baz=233						
D25K	**Kavik River**	**96.69**	**14**	IAmb	IAmb	20 41 23.0	
	comp=Z,19nm,1.5s						
D25K				IAMs_20	IAMs_20	21 27 59.4	
	comp=Z,611nm,18.0s						
D25K	**Kavik River**	**96.69**	**14**	P	**P**	**20 41 09.0**	**-1.1**
	baz=220,SNR=5.5						
LIRD	**Liard River Hi**	**96.78**	**28**	P	**P**	**20 41 11.1**	**+0.4**
	baz=237						
TOAD	**Toad River Com**	**96.85**	**28**	P	**P**	**20 41 10.4**	**-0.6**
	baz=238						
Y22D	**IRIS PASSCAL I**	**96.89**	**56**	P	**P**	**20 41 11.6**	**-0.5**
	baz=248						
MVCO	**Mesa Verde**	**96.90**	**53**	IAMs_20	IAMs_20	21 21 50.0	
	comp=Z,1μm,18.0s						
E27K	**Coleen River**	**97.02**	**16**	IAMs_20	IAMs_20	21 29 05.2	
	comp=Z,489nm,18.0s						
E27K	**Coleen River**	**97.02**	**16**	P	**P**	**20 41 11.3**	**-0.4**
	baz=224,SNR=11						
F28M	**Old Crow**	**97.07**	**17**	IAmb	IAmb	20 41 12.7	
	comp=Z,19nm,1.6s						
F28M				IAMs_20	IAMs_20	21 26 22.7	
	comp=Z,525nm,19.0s						
F28M	**Old Crow**	**97.07**	**17**	P	**P**	**20 41 11.4**	**-0.5**
	baz=226						
MSO	**Missoula**	**97.09**	**42**	IAMs_20	IAMs_20	21 24 01.8	
	comp=Z,911nm,18.0s						
G29M	**Pine Creek**	**97.11**	**18**	IAMs_20	IAMs_20	21 23 06.8	
	comp=Z,491nm,19.0s						
G29M	**Pine Creek**	**97.11**	**18**	P	**P**	**20 41 11.1**	**-1.0**
	baz=228,SNR=8.7						
EPYK	**Eagle Plains**	**97.13**	**19**	P	**P**	**20 41 11.1**	**-1.1**
	baz=229,SNR=8.6						
DLMT	**Dillon**	**97.32**	**44**	IAMs_20	IAMs_20	21 21 24.2	
	comp=Z,733nm,19.0s						
C26K	**Camden Bay**	**97.48**	**14**	P	**P**	**20 41 13.5**	**-0.1**
	baz=222,SNR=9.4						
H31M	**Peel River**	**97.50**	**20**	IAMs_20	IAMs_20	21 30 30.3	
	comp=Z,516nm,18.0s						
H31M	**Peel River**	**97.50**	**20**	P	**P**	**20 41 13.4**	**-0.4**
	baz=231						
C27K	**Jago River**	**97.54**	**15**	IAmb	IAmb	20 41 15.3	
	comp=Z,21nm,1.4s						
C27K	**Jago River**	**97.54**	**15**	P	**P**	**20 41 13.7**	**-0.3**
	baz=223,SNR=9.1						
ANMO	**Albuquerque**	**97.58**	**55**	IAMs_20	IAMs_20	21 21 45.1	
	comp=Z,920nm,18.0s						
ANMO	**Albuquerque**	**97.58**	**55**	IAMs_20	IAMs_20	21 21 45.1	
	comp=Z,929nm,18.0s						
ANMO	**Albuquerque**	**97.58**	**55**	IAMs_20	IAMs_20	21 21 45.1	
	comp=Z,931nm,18.0s						
ANMO	**Albuquerque**	**97.58**	**55**	LR	LR	21 19 54.0	
	comp=Z,595nm,18.3s,baz=338,slow=32						
BEAVL	**Fort Liard**	**97.63**	**27**	P	Pdif	20 41 15.2	+0.5
	baz=238						
TPAW	**Teton Pass**	**97.64**	**46**	IAMs_20	IAMs_20	21 24 54.8	
	comp=Z,659nm,18.0s						
FXWY	**Fox Creek**	**97.65**	**46**	IAMs_20	IAMs_20	21 25 12.1	
	comp=Z,572nm,18.0s						
G30M	**tAoh Zraii Nji**	**97.68**	**19**	IAMs_20	IAMs_20	21 32 42.1	
	comp=Z,436nm,18.0s						
G30M	**tAoh Zraii Nji**	**97.68**	**19**	P	**P**	**20 41 13.3**	**-1.4**
	baz=229,SNR=15						
TXAR	**Lajitas Array**	**97.72**	**62**	P	Pdif	20 41 18.1	+2.2
	comp=Z,0.1nm,0.4s,baz=300,slow=2.7,SNR=3.5						
TXAR				LR	LR	21 19 18.4	
	comp=Z,838nm,18.1s,baz=231,slow=32						
	comp=Z,0.1nm,0.4s						
SNOW	**Snow King Moun**	**97.76**	**46**	IAMs_20	IAMs_20	21 24 24.0	
	comp=Z,544nm,18.0s						
E28M	**Babbage River**	**97.85**	**17**	IAMs_20	IAMs_20	21 28 31.4	
	comp=Z,493nm,18.0s						
E28M	**Babbage River**	**97.85**	**17**	P	**P**	**20 41 14.7**	**-0.7**
	baz=226,SNR=14						
LOHW	**Long Hollow**	**97.92**	**46**	IAMs_20	IAMs_20	21 25 11.3	
	comp=Z,610nm,18.0s						
D27M	**Malcolm River**	**97.93**	**16**	IAMs_20	IAMs_20	21 27 22.4	
	comp=Z,486nm,18.0s						
D27M	**Malcolm River**	**97.93**	**16**	P	Pdif	20 41 15.9	0.0
	baz=225						
TIXI	**Tiksi**	**97.94**	**348**	LR	LR	21 20 28.1	
	comp=Z,225nm,21.9s,baz=138,slow=32						
TIXI	**Tiksi**	**97.94**	**348**	*i* P	Pdif	20 41 18.4	+2.7
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.5s						
KOTAN	**Kotaneelee Air**	**98.04**	**28**	P	**P**	**20 41 16.1**	**-0.3**
	baz=239						
E29M	**Blow River**	**98.15**	**17**	IAmb	IAmb	20 41 17.1	
	comp=Z,13nm,1.4s						
E29M				IAMs_20	IAMs_20	21 29 16.2	
	comp=Z,424nm,18.0s						
E29M	**Blow River**	**98.15**	**17**	P	**P**	**20 41 15.7**	**-1.0**
	baz=228						
F30M	**Barrier River**	**98.22**	**18**	IAmb	IAmb	20 41 29.8	
	comp=Z,14nm,1.1s						
F30M				IAMs_20	IAMs_20	21 21 08.3	
	comp=Z,448nm,19.0s						
F30M	**Barrier River**	**98.22**	**18**	Pdiff	**P**	**20 41 16.4**	**-0.7**
	baz=230						
G31M	**Satah River**	**98.23**	**19**	IAmb	IAmb	20 41 18.6	
	comp=Z,17nm,1.1s						
G31M				IAMs_20	IAMs_20	21 31 09.6	
	comp=Z,427nm,18.0s						
G31M	**Satah River**	**98.23**	**19**	Pdiff	**P**	**20 41 15.8**	**-1.3**
	baz=231						
PDAR	**Pinedale Array**	**98.30**	**47**	P	Pdif	20 41 19.2	+0.9
	comp=Z,0.2nm,0.5s,baz=231,slow=7.6,SNR=2.9						
PDAR				PP	**PP**	**20 45 12.5**	**-6.1**
	comp=Z,0.1nm,0.4s,baz=235,slow=5.2,SNR=4.1						
PDAR				LR	LR	21 23 43.1	
	comp=Z,116nm,18.1s,baz=254,slow=34						
	comp=Z,0.2nm,0.5s						
F31M	**Tsiigehtchic**	**98.72**	**19**	Pdiff	**P**	**20 41 18.4**	**-0.8**
	baz=231						
SDCO	**Great Sand Dun**	**99.31**	**53**	IAMs_20	IAMs_20	21 24 37.9	
	comp=Z,747nm,18.0s						
INK	**Inuvik**	**99.33**	**18**	IAmb	IAmb	20 41 22.1	
	comp=Z,27nm,1.6s						
INK	**Inuvik**	**99.33**	**18**	LR	LR	21 21 20.2	
	comp=Z,351nm,20.9s,baz=226,slow=32						
INK	**Inuvik**	**99.33**	**18**	Pdiff	**Pdif**	**20 41 20.9**	**-1.0**
	baz=232						
WMQ	**Urumqi**	**99.81**	**313**	*e*P	**Pdif**	**20 41 27.3**	**+2.5**
WMQ				LR	LR		
	comp=Z,210nm,12.9s						
WMQ				LR	LR		
	comp=Z,260nm,16.5s						
WMQ				LR	LR		
	comp=Z,200nm,20.1s						
ISCO	**Idaho Springs**	**99.96**	**51**	IAMs_20	IAMs_20	21 22 49.8	
	comp=Z,501nm,18.0s						
EGMT	**Eagleton**	**100.17**	**42**	IAMs_20	IAMs_20	21 26 06.3	
	comp=Z,558nm,18.0s						
K22A	**Casper**	**100.33**	**48**	IAMs_20	IAMs_20	21 24 06.2	
	comp=Z,844nm,18.0s						
AMTX	**Amarillo**	**101.23**	**57**	IAMs_20	IAMs_20	21 24 08.9	
	comp=Z,813nm,18.0s						
KSCO	**Kaye Shedlock'**	**101.87**	**53**	IAMs_20	IAMs_20	21 20 32.5	
	comp=Z,466nm,20.0s						
LAO	**LASA Array**	**101.93**	**44**	IAMs_20	IAMs_20	21 22 49.3	
	comp=Z,740nm,19.0s						
RSSD	**Black Hills**	**102.53**	**47**	IAMs_20	IAMs_20	21 26 47.5	
	comp=Z,798nm,18.0s						
C36M	**Paulatuk**	**102.75**	**19**	Pdiff	**Pdif**	**20 41 36.5**	**-0.6**
	baz=240						
OGNE	**Ogallala**	**102.92**	**51**	IAMs_20	IAMs_20	21 31 33.2	
	comp=Z,419nm,18.0s						
A36M	**Sachs Harbour**	**103.75**	**17**	Pdiff	**Pdif**	**20 41 40.1**	**-1.4**
	baz=240						
MKAR	**Makanchi Array**	**104.40**	**315**	Pdiff	**Pdif**	**20 41 46.5**	**+1.4**
	comp=Z,0.9nm,0.9s,baz=97,slow=6.2,SNR=4.8						
MKAR				PKiKP	**PKiKP**	**20 46 01.1**	**-0.3**
	comp=Z,1.7nm,1.0s,baz=141,slow=1.3,SNR=5.1						
MKAR				PKKPbc	**PKKPbc**	**20 57 31.2**	**-1.6**
	comp=Z,0.3nm,0.4s,baz=273,slow=3.3,SNR=7.0						
ZALV	**Zalesovo Beam**	**104.98**	**322**	Pdiff	**Pdif**	**20 41 48.2**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=85,slow=3.0,SNR=1.5						
E28A	**Huff**	**105.52**	**46**	IAMs_20	IAMs_20	21 30 08.4	
	comp=Z,394nm,18.0s						
BGNE	**Belgrade**	**105.86**	**51**	IAMs_20	IAMs_20	21 30 22.0	
	comp=Z,708nm,18.0s						
SUSD	**Miller**	**106.11**	**48**	IAMs_20	IAMs_20	21 30 17.3	
	comp=Z,619nm,18.0s						
KSU1	**Kansas State U**	**106.37**	**54**	IAMs_20	IAMs_20	21 27 49.7	
	comp=Z,832nm,18.0s						
MDND	**Maddock**	**106.58**	**45**	IAMs_20	IAMs_20	21 28 00.2	
	comp=Z,839nm,18.0s						
441A	**DeRidder**	**106.77**	**63**	IAMs_20	IAMs_20	21 27 03.4	
	comp=Z,927nm,19.0s						
L34A	**Svendsen Farm,**	**107.29**	**51**	IAMs_20	IAMs_20	21 28 27.7	
	comp=Z,866nm,19.0s						
N35A	**Tabor**	**107.54**	**52**	IAMs_20	IAMs_20	21 30 11.6	
	comp=Z,617nm,18.0s						
ECSD	**EROS Data Cent**	**107.56**	**49**	IAMs_20	IAMs_20	21 27 45.8	
	comp=Z,878nm,19.0s						
KURBB	**Kurchatov Arra**	**107.82**	**318**	PKiKP	**PKiKP**	**20 46 06.8**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=115,slow=1.9,SNR=8.0						
BOAB	**BOACO BROADBAN**	**107.85**	**84**	IAMs_20	IAMs_20	21 40 04.2	
	comp=Z,799nm,18.0s						
F33A	**5 Mile Ranch,**	**108.29**	**47**	IAMs_20	IAMs_20	21 33 47.8	
	comp=Z,569nm,18.0s						
143A	**Socs Landing,**	**108.76**	**62**	IAMs_20	IAMs_20	21 27 45.0	
	comp=Z,855nm,18.0s						
N38A	**Joes South For**	**109.30**	**53**	IAMs_20	IAMs_20	21 28 04.2	
	comp=Z,796nm,18.0s						
VBMS	**Vicksburg**	**109.36**	**62**	IAMs_20	IAMs_20	21 27 03.9	
	comp=Z,637nm,19.0s						
R40A	**Maddies Statio**	**109.45**	**56**	IAMs_20	IAMs_20	21 32 48.5	
	comp=Z,687nm,18.0s						
SCIA	**State Center**	**109.56**	**52**	IAMs_20	IAMs_20	21 26 39.1	
	comp=Z,557nm,20.0s						
P40A	**Paris**	**109.90**	**55**	IAMs_20	IAMs_20	21 29 06.3	
	comp=Z,826nm,18.0s						
346A	**Big Creek Wild**	**110.02**	**63**	IAMs_20	IAMs_20	21 31 16.5	
	comp=Z,454nm,18.0s						
SPMN	**Marine on St.**	**110.55**	**48**	IAMs_20	IAMs_20	21 28 51.8	
	comp=Z,709nm,19.0s						
N41A	**Harden Midland**	**111.05**	**54**	IAMs_20	IAMs_20	21 31 19.5	
	comp=Z,796nm,18.0s						
Z47A	**Carrollton**	**111.60**	**62**	IAMs_20	IAMs_20	21 31 06.2	
	comp=Z,686nm,18.0s						
E38A	**The Farm, Brul**	**111.67**	**47**	IAMs_20	IAMs_20	21 29 57.1	
	comp=Z,475nm,18.0s						
P43A	**Skaggs, Pawnee**	**111.83**	**55**	IAMs_20	IAMs_20	21 30 06.4	
	comp=Z,638nm,19.0s						
I40A	**Norwalk**	**111.83**	**50**	IAMs_20	IAMs_20	21 27 21.9	
	comp=Z,632nm,20.0s						
JFWS	**Jewell Farm**	**111.92**	**51**	IAMs_20	IAMs_20	21 31 19.3	
	comp=Z,598nm,19.0s						
T45A	**Paducah**	**111.97**	**58**	IAMs_20	IAMs_20	21 31 47.5	
	comp=Z,374nm,18.0s						
BRAL	**Brewton**	**111.98**	**64**	IAMs_20	IAMs_20	21 35 20.3	
	comp=Z,492nm,18.0s						
250A	**Grady**	**112.81**	**64**	IAMs_20	IAMs_20	21 30 48.3	
	comp=Z,455nm,19.0s						
T47A	**Sharon Grove**	**113.18**	**58**	IAMs_20	IAMs_20	21 31 35.4	
	comp=Z,603nm,18.0s						
BVAR	**Borovoye Array**	**113.22**	**320**	PKiKP	**PKiKP**	**20 46 16.7**	**-1.0**
	comp=Z,0.9nm,0.7s,baz=75,slow=1.6,SNR=6.2						
COWI	**Conover**	**113.24**	**48**	IAMs_20	IAMs_20	21 35 49.7	
	comp=Z,508nm,18.0s						
HQIL	**Hanson Quary C**	**113.47**	**53**	IAMs_20	IAMs_20	21 30 39.6	
	comp=Z,610nm,19.0s						
P46A	**Rosedale**	**113.58**	**55**	IAMs_20	IAMs_20	21 32 20.8	
	comp=Z,500nm,18.0s						
SFIN	**Lafayette**	**113.80**	**54**	IAMs_20	IAMs_20	21 35 42.4	
	comp=Z,578nm,18.0s						
H43A	**Windswept, Lux**	**113.95**	**50**	IAMs_20	IAMs_20	21 29 04.9	
	comp=Z,616nm,20.0s						
553A	**Crawfordville**	**113.95**	**66**	IAMs_20	IAMs_20	21 32 20.7	
	comp=Z,459nm,18.0s						
U49A	**Red Boiling Sp**	**114.13**	**59**	IAMs_20	IAMs_20	21 31 02.8	
	comp=Z,759nm,18.0s						
L46A	**Eue Claire**	**114.66**	**53**	IAMs_20	IAMs_20	21 30 42.9	
	comp=Z,670nm,19.0s						
N47A	**Urbana**	**114.93**	**54**	IAMs_20	IAMs_20	21 35 10.4	
	comp=Z,431nm,18.0s						
T50A	**Nancy**	**114.97**	**58**	IAMs_20	IAMs_20	21 32 04.8	
	comp=Z,702nm,18.0s						
I45A	**Fountain**	**114.98**	**51**	IAMs_20	IAMs_20	21 35 19.3	
	comp=Z,692nm,18.0s						
O48B	**Farmland**	**115.25**	**55**	IAMs_20	IAMs_20	21 32 27.7	
	comp=Z,449nm,18.0s						
656A	**Willston**	**115.38**	**67**	IAMs_20	IAMs_20	21 33 42.7	
	comp=Z,402nm,19.0s						
R50A	**Paris**	**115.58**	**57**	IAMs_20	IAMs_20	21 33 57.8	
	comp=Z,482nm,19.0s						
S51A	**Beattyville**	**116.05**	**58**	IAMs_20	IAMs_20	21 32 39.3	
	comp=Z,578nm,18.0s						
GLMI	**Grayling**	**116.23**	**50**	IAMs_20	IAMs_20	21 29 55.1	
	comp=Z,687nm,19.0s						
E46A	**Sault Ste Mari**	**116.60**	**48**	IAMs_20	IAMs_20	21 30 51.7	
	comp=Z,573nm,20.0s						
AAM	**Ann Arbor**	**116.64**	**53**	IAMs_20	IAMs_20	21 31 43.4	
	comp=Z,709nm,19.0s						
Q52A	**Bidwell**	**117.27**	**57**	IAMs_20	IAMs_20	21 33 48.6	
	comp=Z,762nm,18.0s						
N51A	**Ashland**	**117.43**	**54**	IAMs_20	IAMs_20	21 35 28.6	
	comp=Z,341nm,19.0s						
NHSC	**New Hope**	**118.07**	**63**	IAMs_20	IAMs_20	21 31 56.7	
	comp=Z,529nm,19.0s						
BOSA	**Boshof**	**118.89**	**216**	PKP	**PKPdf**	**20 46 29.6**	**0.0**
	comp=Z,1.7nm,1.0s,baz=97,slow=1.9,SNR=5.7						
ERPA	**Erie**	**119.33**	**53**	IAMs_20	IAMs_20	21 36 03.7	
	comp=Z,499nm,18.0s						
ABKAR	**Akbulak array**	**119.54**	**315**		**PKPdf**	**20 46 29.4**	**-0.5**
Q56A	**Snyder Ridge,**	**119.66**	**57**	IAMs_20	IAMs_20	21 36 49.9	
	comp=Z,621nm,18.0s						
Y60A	**Bolivia**	**119.83**	**63**	IAMs_20	IAMs_20	21 34 57.1	
	comp=Z,641nm,18.0s						
ARTI	**Arti**	**120.23**	**323**	*i* PKIKP	**PKPdf**	**20 46 30.7**	**-0.4**
ARTI						20 47 58.2	
ARTI						20 53 42.5	
ARTI				SP	SP	20 57 40.0	-3.8
ARTI				SS	**SS**	**21 04 20.3**	**-3.0**
M57A	**Sunshine Farm,**	**121.42**	**54**	IAMs_20	IAMs_20	21 35 50.0	
	comp=Z,660nm,18.0s						
K57A	**Scipio Center**	**121.93**	**53**	IAMs_20	IAMs_20	21 36 13.5	
	comp=Z,702nm,19.0s						
SPITS	**Spitsbergen Ar**	**122.78**	**354**	PKP	**PKPdf**	**20 46 34.9**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=66,slow=6.5,SNR=5.1						
P61A	**Hammonton**	**123.11**	**56**	IAMs_20	IAMs_20	21 36 20.1	
	comp=Z,595nm,19.0s						
KIRV	**Kirov**	**124.65**	**327**	*i* PKIKP	**PKiKP**	**20 46 40.1**	**+0.4**
KOOLE	**Kule**	**126.10**	**215**		**PKPdf**	**20 46 43.1**	**-0.6**
M65A	**Busby, Falmout**	**126.29**	**54**	IAMs_20	IAMs_20	21 38 21.0	
	comp=Z,574nm,19.0s						
M65A	**Busby, Falmout**	**126.29**	**54**	Pdiff	**PKPdf**	**20 46 41.3**	**-1.8**
	baz=271						
KIBK	**Kibwezi**	**126.99**	**249**	IAMs_20	IAMs_20	21 38 36.0	
	comp=Z,594nm,19.0s						
BDFB	**Brasilia**	**127.01**	**132**	PKP	**PKPdf**	**20 46 44.4**	**-1.1**
	comp=Z,1.0nm,0.4s,baz=194,slow=4.2,SNR=3.0						
BELG	**Belogornoye**	**127.02**	**320**	*i* PKIKP	**PKPdf**	**20 46 43.5**	**-0.7**
SCHQ	**Schefferville**	**127.06**	**37**	PKP	**PKiKP**	**20 46 45.0**	**+0.3**
	comp=Z,2.1nm,0.6s,baz=4.5,slow=4.0,SNR=3.8						
D62A	**Allapoint, All**	**127.07**	**47**	IAMs_20	IAMs_20	21 45 46.6	
	comp=Z,638nm,18.0s						
PKME	**Peaks-Kenny Pk**	**127.08**	**49**		**PKiKP**	**20 46 45.4**	**+0.4**
ILULI	**Ilulissat**	**127.09**	**17**	IAMs_20	IAMs_20	21 42 47.1	
	comp=Z,384nm,19.0s						
APA	**Apatity**	**127.40**	**341**	⇓*i*PKIKP	**PKPdf**	**20 46 42.7**	**-1.8**
APA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
LKRN	**Lenkeran, Azer**	**127.60**	**302**	PKIKP	**PKiKP**	**20 46 46.1**	**-0.2**
ARCES	**ARCESS Array B**	**128.26**	**345**	PKP	**PKPdf**	**20 46 45.7**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=66,slow=1.3,SNR=13						
KMBO	**Kilima Mbogo**	**128.28**	**250**	IAMs_20	IAMs_20	21 40 10.4	
	comp=Z,547nm,19.0s						
AKT	**Akhty**	**128.33**	**306**	*i* PKIKP	**PKPdf**	**20 46 46.2**	**-1.0**
AKT				*e*		20 53 56.8	
AKT				pmax	pmax		
	comp=Z,13nm,1.1s						
QNGWA	**Qangwa**	**128.33**	**219**		**PKPdf**	**20 46 47.9**	**-0.1**
ATD	**Arta Tunnel**	**128.44**	**267**	IAMs_20	IAMs_20	21 40 42.1	
	comp=Z,386nm,20.0s						
KLMR	**Klimovskoe**	**128.59**	**332**	*e*PKIKP	**PKPdf**	**20 46 44.5**	**-2.4**
KLMR				pmax	pmax		
	comp=Z,14nm,1.5s						
SFJD	**Kangerlussuaq**	**128.67**	**19**	IAMs_20	IAMs_20	21 42 51.9	
	comp=Z,606nm,18.0s						
SEKA	**Sheki**	**128.74**	**306**	PKIKP	**PKiKP**	**20 46 48.6**	**0.0**
MNGR	**Mingechevir, A**	**128.85**	**305**	PKIKP	**PKiKP**	**20 46 48.9**	**+0.2**
GANJ	**Ganja**	**129.44**	**305**	PKIKP	**PKiKP**	**20 46 50.1**	**+0.1**
NAX	**Nakhchivan**	**130.15**	**303**	PKIKP	**PKPdf**	**20 46 51.0**	**+0.3**
GNI	**Garni**	**130.67**	**304**	*i* PKIKP	**PKPdf**	**20 46 51.5**	**-0.3**
GOF	**Gofitskoye**	**131.35**	**311**	*ce*PKIKP	**PKiKP**	**20 46 53.3**	**-0.3**
FURI	**Furi**	**131.36**	**262**	IAMs_20	IAMs_20	21 42 12.4	
	comp=Z,432nm,20.0s						
SCO	**Scoresbysund**	**131.39**	**5**	IAMs_20	IAMs_20	21 47 23.4	
	comp=Z,276nm,19.0s						
ILAM	**Ilet Lapin Mar**	**131.47**	**90**	IAMs_20	IAMs_20	21 40 37.1	
	comp=Z,678nm,21.0s						
KBZ	**Khabaz**	**131.66**	**309**	PKP	**PKiKP**	**20 46 54.4**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=46,slow=9.2,SNR=4.1						
KIV	**Kislovodsk**	**131.77**	**310**	*i* PKIKP	**PKPdf**	**20 46 52.9**	**-0.8**
KIV				*e*		20 49 11.3	
KIV				*e*SS	SS	21 06 47.1	-1.7
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LODK	**Lodwar**	**132.10**	**254**	IAMs_20	IAMs_20	21 38 26.9	
	comp=Z,412nm,22.0s						
OBN	**Obninsk**	**132.44**	**326**	⇓*e*PKIKP	**PKPdf**	**20 46 53.7**	**-0.7**
OBN						20 46 58.0	
OBN						20 47 00.0	
OBN				PPS	PPS	21 01 16.0	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.5s						
OBN				pmax	pmax		
	comp=Z,50nm,2.4s						
GBN	**Guysborough**	**132.49**	**48**		**PKPdf**	**20 46 54.1**	**-0.7**
IVI	**Ivigtut**	**133.17**	**24**	IAMs_20	IAMs_20	21 45 49.5	
	comp=Z,495nm,19.0s						
FINES	**FINESS Array B**	**133.72**	**337**	PKhKP	PKPpre	20 46 44.8	
	comp=Z,0.9nm,0.7s,baz=40,slow=2.4,SNR=0.7						
FINES				PKP	**PKPdf**	**20 46 57.1**	**+0.5**

	comp=Z,2.3nm,0.9s,baz=19,slow=2.4,SNR=5.0						
NRS	Narsarsuaq	134.22	23	IAMs_20	IAMs_20	21 45 50.1	
	comp=Z,481nm,19.0s						
MNK	Minsk	137.15	328	i PKP	PKPdf	20 47 00.6	-2.7
	comp=E,8.0nm,0.8s						
MNK				i PKP	PKPdf	20 47 00.6	-2.7
	comp=N,8.0nm,0.7s						
MNK				i PKP	PKPdf	20 47 00.6	-2.7
	comp=Z,5.0nm,0.6s,baz=57						
MNK				i PP	PP	20 49 46.1	-1.4
MNK				i PPP	PPP	20 52 45.5	
MNK				i SKS	SKSdf	20 54 05.9	-6.7
MNK				i SKKS	SKKSdf	21 03 47.1	-4.8
MNK				i SS	SS	21 07 54.9	+2.9
MNK				i SSS	SSS	21 12 45.8	
MNK				i LRM	MLR	21 46 46.0	
	comp=N,152nm,19.1s						
MNK				i LRM	MLR	21 47 00.5	
	comp=Z,323nm,21.6s						
MNK				i LRM	MLR	21 47 06.3	
	comp=E,174nm,18.9s						
MNK	Minsk	137.15	328	i PKIKP	PKPdf	20 47 00.5	-2.7
MNK				i		20 49 46.0	
MNK				i PPP	PPP	20 52 45.4	
MNK				i		20 54 05.9	
MNK				i SS	SS	21 07 54.9	+2.9
MNK				pmax	pmax		
	comp=N,8.0nm,0.7s						
MNK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MNK				pmax	pmax		
	comp=E,8.0nm,0.8s						
MNK				MLR	MLR		
	comp=N,152nm,19.0s						
MNK				MLR	MLR		
	comp=Z,323nm,22.0s						
MNK				MLR	MLR		
	comp=E,174nm,19.0s						
AKASG	Malin Array Be	138.38	323	PKP	PKPdf	20 47 05.5	-0.2
	comp=E,0.2nm,0.3s,baz=46,slow=1.0,SNR=10.0						
KIEV	Kiev	138.39	323	IAMs_20	IAMs_20	21 58 31.6	
	comp=Z,250nm,20.0s						
GHAJ	Ghor Haditha	138.54	292	IAMs_20	IAMs_20	21 49 44.5	
	comp=Z,345nm,20.0s						
MMAI	Mount Meron Ar	138.62	295	PKP	PKPdf	20 47 06.7	-0.1
	comp=Z,0.4nm,0.3s,baz=56,slow=8.9,SNR=2.4						
NOA	NORSAR Array B	138.63	344	PKP	PKPdf	20 47 05.9	0.0
	comp=Z,0.3nm,0.6s,baz=38,slow=2.2,SNR=2.1						
HFS	Hagfors	138.74	342	PKhKP	PKPpre	20 46 56.6	
	comp=Z,1.2nm,0.6s,baz=81,slow=9.2,SNR=2.6						
BRTR	Keskin Array B	139.18	305		PKPdf	20 47 05.0	-2.6
BRTR	Keskin Array B	139.18	305	PKhKP	PKPpre	20 46 58.6	
	comp=Z,0.3nm,0.6s,baz=106,slow=3.1,SNR=1.7						
BRTR				PKP	PKiKP	20 47 08.8	-1.1
	comp=Z,0.9nm,0.6s,baz=157,slow=3.8,SNR=6.1						
ANTO	Ankara	139.79	306		PKPdf	20 47 07.2	-1.5
ANTO	Ankara	139.79	306	PKIKP	PKPdf	20 47 07.2	-1.5
ANTO				MLR	MLR		
	comp=Z,200nm,21.0s						
CSS	Mathiatis	140.18	298	IAMs_20	IAMs_20	22 03 18.4	
	comp=Z,257nm,18.0s						
SHEL	Horse Pasture	141.65	187	i PKIKP	PKPdf	20 47 11.7	-1.0
BUR08	Bucovina Ar. S	142.16	320		PKPdf	20 47 09.4	-3.4
BURAR	Bucovina Array	142.17	320		PKPdf	20 47 09.6	-3.2
KWP	Kalwaria Pacla	142.52	325	ePKP	PKPdf	20 47 12.8	-0.4
MLR	Muntele Rosu	142.71	317		PKPpre	20 47 06.1	
MLR				IAMs_20	IAMs_20	21 59 59.6	
	comp=Z,260nm,19.0s						
MLR	Muntele Rosu	142.71	317	PKP	PKPdf	20 47 11.2	-2.6
	comp=Z,1.3nm,0.5s,baz=28,slow=8.0,SNR=4.9						
KOLS	Kolonicke sedl	143.15	324	ePKIKP	PKPdf	20 47 12.8	-1.5
KOLS	Kolonicke sedl	143.15	324	ePKP	PKPdf	20 47 12.8	-1.5
RGN	Rugen	143.38	337	IAMs_20	IAMs_20	21 59 46.0	
	comp=Z,350nm,19.0s						
OJC	Ojcow	143.67	327	ePKP	PKPdf	20 47 15.7	+0.5
TNR	Turnu Rosu	143.68	318	⇓P	PKPdf	20 47 15.1	-0.3
TNR	Turnu Rosu	143.68	318	⇓PKIKP	PKPdf	20 47 15.1	-0.3
HUMR	Humele	143.75	316	⇓P	PKPbc	20 47 13.5	+0.4
NIE	Niedzica	143.91	326	ePKP	PKPdf	20 47 16.2	+0.5
LOT	Lotru	144.09	318	⇑P	PKPbc	20 47 14.8	+0.5
CAVK	Edirne/Enez-Ca	144.43	309	⇓P	PKPbc	20 47 15.4	+0.1
ALN	Alexandroupoli	144.44	310		PKPab	20 47 14.5	-0.6
ALN	Alexandroupoli	144.44	310	PKIKP	PKPab	20 47 14.5	-0.6
LANS	Liptovska Anna	144.51	326	ePKIKP	PKPdf	20 47 17.6	+0.8
LANS	Liptovska Anna	144.51	326	ePKP	PKPdf	20 47 17.5	+0.8
LANS				e		20 47 31.5	
EZN	Ezine	144.60	308	⇑P	PKPbc	20 47 16.3	+0.4
EZN	Ezine	144.60	308	⇑PKIKP	PKPbc	20 47 16.3	+0.5
KDZ	Kurdzhali	144.68	311	eP	PKPbc	20 47 16.2	+0.1
RDO	Rodhopi	144.72	310		PKPab	20 47 15.3	-0.8
GZR	Gura Zlata	144.73	319	⇑P	PKPdf	20 47 16.9	-0.4
GZR	Gura Zlata	144.73	319	⇑PKIKP	PKPdf	20 47 16.9	-0.4
OKC	Ostrava-Krasne	144.74	328	AMS	AMS	21 49 20.0	
	comp=Z,300nm,24.3s						
RUE	Ruedersdorf	144.81	335	ePKPbc	PKPbc	20 47 16.0	-0.1
	baz=37,slow=2.9						
STEB	Steborice	144.86	328	ePKP	PKPbc	20 47 16.5	+0.1
PLD	Plovdiv	144.89	312	eP	PKPbc	20 47 16.7	0.0
BSEG	Bad Segeberg	144.91	339	ePKPbc	PKPab	20 47 16.3	-0.1
	baz=37,slow=2.9						
KSP	Ksiaz	144.94	331	ePKP	PKPbc	20 47 16.9	+0.3
SURR	Surduc	144.94	319	⇑P	PKPdf	20 47 17.3	-0.2
PSZ	Piszkesteto	145.03	324		PKPbc	20 47 16.0	-1.1
PSZ				IAMs_20	IAMs_20	22 00 44.4	
	comp=Z,221nm,19.0s						
PSZ	Piszkesteto	145.03	324	⇑P	PKPdf	20 47 17.7	0.0
PSZ	Piszkesteto	145.03	324	⇑PKIKP	PKPdf	20 47 17.7	0.0
MPEP	Malo Peshtene	145.06	315	eP	PKPdf	20 47 18.0	+0.2
RZN	Rozhen	145.07	312	eP	PKPbc	20 47 17.5	-0.1
KARP	Karpathos	145.07	300		PKPbc	20 47 15.4	-2.2
MORC	Moravsky Berou	145.07	328	ePKP	PKPab	20 47 17.2	0.0
MORC	Moravsky Berou	145.07	328	⇑P	PKPdf	20 47 17.7	0.0
PGB	Panagyurishte	145.13	313	eP	PKPdf	20 47 17.9	-0.1
OSTC	Ostas	145.17	330	ePKP	PKPdf	20 47 17.8	0.0
OSTC				AMS	AMS	21 51 40.0	
	comp=Z,300nm,20.8s						
OSTC	Ostas	145.17	330	ePKIKP	PKPdf	20 47 17.8	0.0
OSTC				MLR	MLR		
	comp=Z,300nm,20.8s						
HERR	Herculane	145.20	318	⇑P	PKPdf	20 47 18.3	+0.3
CHVC	Chvalec	145.22	330	ePKP	PKPdf	20 47 17.8	-0.1
CHVC				AMS	AMS	21 48 30.0	
	comp=Z,300nm,22.7s						
CHVC	Chvalec	145.22	330	ePKIKP	PKPdf	20 47 17.8	-0.1
CHVC				MLR	MLR		
	comp=Z,300nm,22.7s						
KRLC	Kraliky	145.24	329	ePKP	PKPab	20 47 17.7	-0.1
KRLC	Kraliky	145.24	329	ePKIKP	PKPab	20 47 17.7	-0.1
VYHS	Vyhne	145.24	326	ePKIKP	PKPdf	20 47 18.4	+0.4
VYHS	Vyhne	145.24	326	ePKP	PKPdf	20 47 18.4	+0.4
VYHS				e		20 47 31.7	
DPC	Dobruska-Polom	145.26	330	ePKP	PKPab	20 47 17.8	-0.1
DPC				AMS	AMS	21 53 10.0	
	comp=Z,200nm,19.8s						
DPC	Dobruska-Polom	145.26	330	ePKIKP	PKPab	20 47 17.8	-0.1
DPC				MLR	MLR		
	comp=Z,200nm,19.8s						
UPC	Upice	145.30	330	ePKP	PKPdf	20 47 18.3	+0.3
UPC				ex	x	20 47 32.4	
UPC				AMS	AMS	21 53 20.0	
	comp=Z,300nm,21.3s						
UPC	Upice	145.30	330	ePKIKP	PKPdf	20 47 18.3	+0.3
UPC				MLR	MLR		
	comp=Z,300nm,21.3s						
BZS	Buzias	145.32	320	⇑P	PKPdf	20 47 18.7	+0.5
BZS	Buzias	145.32	320	⇑PKIKP	PKPdf	20 47 18.7	+0.5
GORT1	Trebel	145.34	337	ePKPbc	PKPdf	20 47 18.0	+0.1
	baz=37,slow=2.9						
HLG	Helgoland	145.47	341	ePKPbc	PKPdf	20 47 18.1	-0.1
	baz=37,slow=2.9						
JAVC	Velka Javorina	145.61	327	ePKP	PKPab	20 47 20.0	+0.8
PLNA	Plana	145.65	314	eP	PKPab	20 47 20.1	+0.5
MDVR	Moldovita	145.69	318	⇑P	PKPbc	20 47 19.4	+0.1
VTS	Vitosha	145.72	314	eP	PKPab	20 47 20.1	+0.2
MMB	Musomishta	145.81	312	eP	PKPbc	20 47 19.8	0.0
VRAC	Vranov	145.85	328	PKPbc	PKPab	20 47 19.7	-0.3
	comp=Z,7.4nm,0.7s,baz=41,slow=3.6,SNR=29						
VRAC	Vranov	145.85	328	ePKP	PKPdf	20 47 19.2	+0.2
VRAC	Vranov	145.85	328	⇑P	PKPab	20 47 20.5	+0.5
FLTG	Flechtingen	145.90	337	ePKPbc	PKPbc	20 47 19.3	-0.3
	baz=37,slow=2.9						
PVCC	Panska Ves	145.93	332	ex	x	20 47 29.8	
PVCC				AMS	AMS	21 56 30.0	
	comp=Z,300nm,17.0s						
SRO	Srobarova	145.94	325	ePKP2	PKPab	20 47 21.0	+0.7
SRO	Srobarova	145.94	325	e	PKiKP	20 47 34.1	+11
SRO	Srobarova	145.94	325	ePKP	PKPab	20 47 21.0	+0.7
BRG	Berggiesshubel	145.95	333	ePKPbc	PKPbc	20 47 19.8	0.0
	baz=37,slow=2.9						
BRG	Berggiesshubel	145.95	333	⇓iPKP	PKPbc	20 47 19.8	0.0
BRG				Amp		20 47 21.0	
	comp=Z,31nm,0.9s						
CLL	Collm	146.01	334	IAMs_20	IAMs_20	21 55 19.8	
	comp=Z,294nm,20.0s						
CLL	Collm	146.01	334	⇓iPKP2	PKPbc	20 47 19.7	-0.3
CLL				pmax	pmax		
	comp=Z,140nm,2.0s						
CLL				MLR	MLR		
	comp=Z,300nm,19.7s						
CLL	Collm	146.01	334	ePKPbc	PKPbc	20 47 19.9	-0.1
	baz=37,slow=2.9						
CLL	Collm	146.01	334	⇓iPKPbc	PKPbc	20 47 19.7	-0.3
	comp=Z,140nm,2.0s						
CLL				i PKiKP	pPKPdf	20 47 24.4	-0.2
CLL				i pPKPdf	sPKPdf	20 47 26.4	-0.1
CLL				i x	x	20 47 32.4	
	comp=Z,45nm,1.0s						
CLL				ePP	PP	20 50 41.0	-0.3
CLL				AMS	AMS	21 55 00.0	
	comp=Z,300nm,19.7s						
KRUC	Moravsky	146.11	328	ePKP	PKPdf	20 47 19.4	0.0
KKB	Krupnik	146.12	313	eP	PKPbc	20 47 20.9	+0.3
MODS	Modra-Piesok	146.12	327	ePKP2	PKPbc	20 47 20.4	-0.1
MODS	Modra-Piesok	146.12	327	ePKP	PKPbc	20 47 20.4	-0.1
MODS				e		20 47 33.9	
NRDL	Niedersach Rie	146.18	338	ePKPbc	PKPbc	20 47 20.6	+0.2
	baz=37,slow=2.9						
RETH	Rethem/Aller,	146.23	339	ePKPbc	PKPbc	20 47 20.7	+0.2
	baz=37,slow=2.9						
BOVS	Bovan	146.25	316	⇑P	PKPbc	20 47 20.9	0.0
ASSE	Asse, Remlinge	146.27	337	ePKPbc	PKPab	20 47 21.0	-0.4
	baz=37,slow=2.9						
GOPC	GO Pecny, Ondr	146.27	331	ePKP	PKPab	20 47 21.2	-0.4
GOPC				AMS	AMS	21 54 40.0	
	comp=Z,200nm,22.4s						
GOPC	GO Pecny, Ondr	146.27	331	ePKP2	PKPab	20 47 21.2	-0.4
GOPC				MLR	MLR		
	comp=Z,200nm,22.4s						
PEHC	Pehcevo	146.30	313	i P	PKiKP	20 47 24.2	-0.2
PRA	Prague	146.32	331	AMS	AMS	21 56 50.0	
	comp=Z,400nm,19.5s						
PRU	Pruhonice	146.33	331	ePKP	PKPbc	20 47 21.0	0.0
PRU				AMS	AMS	21 56 50.0	
	comp=Z,300nm,19.5s						
PRU	Pruhonice	146.33	331	ePKP2	PKPbc	20 47 21.0	0.0
PRU				MLR	MLR		
	comp=Z,300nm,19.5s						
TREC	Trest	146.38	329	ePKP	PKPbc	20 47 21.5	+0.3
TREC	Trest	146.38	329	ePKP2	PKPbc	20 47 21.5	+0.3
NEUB	Neuenburg	146.58	335	ePKPbc	PKPbc	20 47 21.5	-0.2
	baz=37,slow=2.9						
FRGS	Fruska Gora	146.64	320	eP	PKPbc	20 47 21.9	-0.2
EKA	Eskdalemuir Ar	146.70	353	PKPbc	PKPbc	20 47 21.2	-0.6
	comp=Z,6.1nm,0.5s,baz=7.6,slow=2.4,SNR=58						
ESK	Eskdalemuir	146.72	353		PKPdf	20 47 20.8	+0.6
ESK	Eskdalemuir	146.72	353	PKP2	PKPdf	20 47 20.8	+0.6
MORH	Mrgy, Hungar	146.72	323	⇓P	PKPbc	20 47 22.6	+0.4
ZVC	Zvikov	146.88	331	ePKP	PKPbc	20 47 23.1	+0.5
ZVC				AMS	AMS	21 57 30.0	
	comp=Z,300nm,18.8s						
TANN	Tannenbergstha	146.92	333	ePKPbc	PKPbc	20 47 23.0	+0.3
	baz=37,slow=2.9						
IDI	Anoyia	146.94	301	PKPbc	PKPbc	20 47 23.4	+0.1
	comp=Z,8.5nm,0.6s,baz=171,slow=8.9,SNR=20						
GTTG	Gottingen	147.00	337	ePKPbc	PKPbc	20 47 23.1	+0.2
	baz=37,slow=2.9						
NKC	Novy Kostel	147.06	333	ePKP	PKPbc	20 47 23.6	+0.5
NKC	Novy Kostel	147.06	333	ePKP2	PKPbc	20 47 23.6	+0.5
RONA	Rosalia, Austr	147.06	326	ePKP	PKPdf	20 47 21.0	-0.2
	comp=Z,17nm,0.5s,SNR=20						
MOX	Moxa	147.09	334	ePKPdf	PKPdf	20 47 21.6	+0.6
	baz=39,slow=1.4						
MOX				ePKPbc	PKPbc	20 47 23.0	-0.1
	baz=37,slow=2.9						
MOX				eL	L	22 02 17.5	
	comp=Z,289nm,18.1s						
IBBN	Ibbenburen	147.12	340	ePKPbc	PKPbc	20 47 23.1	-0.1
	baz=37,slow=2.9						
CONA	Conrad Observa	147.13	327	i PKP	PKPdf	20 47 21.5	+0.2
	comp=Z,20nm,1.3s,SNR=11						
TEKS	Tekeris	147.14	319	eP	PKPbc	20 47 23.0	-0.5
SKO	Skopje	147.20	314	i P	PKPbc	20 47 24.2	+0.5
CKRC	Cesky Krumlov	147.27	330	ePKP	PKPbc	20 47 24.2	+0.4
CKRC				ex	x	20 47 33.1	
CKRC				AMS	AMS	21 50 50.0	
	comp=Z,300nm,21.1s						
CKRC	Cesky Krumlov	147.27	330	ePKP2	PKPbc	20 47 24.2	+0.4
CKRC				MLR	MLR		
	comp=Z,300nm,21.1s						
KHC	Kasperske Hory	147.38	331	ePKP	PKPbc	20 47 24.5	+0.4
KHC				ex	x	20 47 38.0	
KHC				AMS	AMS	21 57 40.0	
	comp=Z,400nm,18.0s						
KHC	Kasperske Hory	147.38	331	ePKP2	PKPbc	20 47 24.5	+0.4
KHC				MLR	MLR		
	comp=Z,400nm,18.0s						
MANZ	Manzenberg	147.39	333	ePKPdf	PKPdf	20 47 22.0	+0.4
	baz=39,slow=1.4						
MANZ				ePKPbc	PKPbc	20 47 24.6	+0.5
	baz=37,slow=2.9						
ROTZ	Rotzenmuhle	147.51	333	ePKPdf	PKPdf	20 47 22.2	+0.4
	baz=39,slow=1.4						
ROTZ				ePKPbc	PKPbc	20 47 24.6	+0.2
	baz=37,slow=2.9						
GEC2	GERESS Array S	147.53	330	ePKPdf	PKPdf	20 47 22.4	+0.4
	baz=39,slow=1.4						
GEC2				ePKPbc	PKPbc	20 47 24.5	-0.1
	baz=37,slow=2.9						
GERES	GERESS Array B	147.53	330	PKPbc	PKPbc	20 47 24.7	+0.1
	comp=Z,12nm,0.5s,baz=30,slow=2.7,SNR=117						
SJES	Sjenica	147.53	317	eP	PKPbc	20 47 25.1	+0.3
UBBA	Unterbreizbach	147.58	336	ePKPdf	PKPdf	20 47 22.4	+0.7
	baz=39,slow=1.4						
UBBA				ePKPbc	PKPbc	20 47 24.3	-0.1
	baz=37,slow=2.9						
BBLS	Lazi&#263i	147.58	318	eP	PKPbc	20 47 24.7	-0.1
WET	Wettzell	147.69	331	ePKPdf	PKPdf	20 47 22.6	+0.5
	baz=39,slow=1.4						
WET				ePKPbc	PKPbc	20 47 25.5	+0.6
	baz=37,slow=2.9						
RUDO	Rudo	147.73	318	eP	PKPbc	20 47 24.6	-0.6
HAPS	Han Pijesak,Bl	147.74	319	eP	PKPbc	20 47 24.7	-0.6
ARSA	Arzberg	147.75	326	i PKP	PKPdf	20 47 23.1	+0.8
	comp=Z,9.9nm,1.1s,SNR=9.1						
KASTN	Kahler Asten	147.83	338	ePKPdf	PKPdf	20 47 22.8	+0.5
	baz=39,slow=1.4						
KASTN				ePKPbc	PKPbc	20 47 25.5	+0.2
	baz=37,slow=2.9						
MOA	Molln	147.97	328	i PKP	PKPbc	20 47 25.7	0.0
	comp=Z,14nm,1.3s						
GRA1	Grafenberg Arr	147.99	334	IAMs_20	IAMs_20	22 03 03.0	
	comp=Z,287nm,19.0s						
GRF	Grafenberg Arr	147.99	334	ePKPdf	PKPdf	20 47 22.9	+0.3
	baz=39,slow=1.4						
GRF				ePKPbc	PKPbc	20 47 25.5	-0.2
	baz=37,slow=2.9						
GRF				eL	L	22 03 04.8	
	comp=Z,270nm,18.5s						
GRFO	Grafenberg	147.99	334		PKPdf	20 47 22.3	-0.3
GRFO				IAMs_20	IAMs_20	22 03 04.0	
	comp=Z,290nm,19.0s						
GRFO	Grafenberg	147.99	334	PKIKP	PKPdf	20 47 22.3	-0.3
GRFO				MLR	MLR		
	comp=Z,300nm,19.0s						
OHR	Ohrid	148.01	313	i P	PKPbc	20 47 26.4	+0.3
BUG	Bochum--Univer	148.02	339	ePKPbc	PKPbc	20 47 25.7	0.0
	baz=37,slow=2.9						
SOKA	Soboth	148.38	326	ePKP	PKPdf	20 47 23.0	-0.4
	comp=Z,4.4nm,1.3s,SNR=19						
BIOA	Bad Ischl, Aus	148.39	329	i PKP	PKPdf	20 47 23.4	+0.1
	comp=Z,9.1nm,1.2s						
BLY	Banja Luka	148.41	321	eP	PKPbc	20 47 27.1	+0.2
A051A	Mrakovica	148.41	322	eP	PKPbc	20 47 26.9	-0.1
TIR	Tirane	148.53	314	IAMs_20	IAMs_20	22 08 18.0	
	comp=Z,268nm,20.0s						
GCIS	Gornji Cirnik	148.60	324	ePKPbc	PKPbc	20 47 27.6	+0.2
GCIS	Gornji Cirnik	148.60	324	ePKPdf	PKPdf	20 47 23.3	-0.4
BRY	Bratogost	148.62	317	eP	PKPbc	20 47 27.5	-0.2
TNS	Taunus Mts	148.64	337	ePKPbc	PKPbc	20 47 27.8	+0.4
	baz=37,slow=2.9						
CRES	Cresnjevec Ost	148.71	324	eP	PKPbc	20 47 27.4	-0.3
OBKA	Obir	148.74	326	eP	PKPbc	20 47 26.4	-1.4
OBKA	Obir	148.74	326	i pPKP	PKPbc	20 47 27.3	-0.5
	comp=Z,10nm,1.5s,SNR=7.4						
RJOB	Jochberg	148.75	330	ePKPbc	PKPbc	20 47 27.3	-0.4
	baz=37,slow=2.9						
TREB	Trebinje	148.84	317	eP	PKPbc	20 47 27.3	-0.8
HCY	Herceg Novi	148.89	317	eP	PKPdf	20 47 26.1	+1.8
A050A	Klekovaca	148.94	322	eP	PKPbc	20 47 27.0	-1.4
BOJS	Bojanci	149.03	324	eP	PKPdf	20 47 24.6	+0.2
BOJS	Bojanci	149.03	324	i PKPbc	PKPbc	20 47 28.8	+0.3
BOJS	Bojanci	149.03	324	ePKPdf	PKPdf	20 47 24.2	-0.2
LESA	Schwarzleotal	149.03	329	ePKP	PKPdf	20 47 24.4	0.0
	comp=Z,7.5nm,0.6s,SNR=21						
LJU	Ljubljana	149.06	326	i PKPdf	PKPdf	20 47 24.2	-0.2
LJU				i PKPbc	PKPbc	20 47 28.5	0.0
BEBN	Eben Emael	149.08	340	dPKP	PKPbc	20 47 27.9	-0.5
BTNL	Ternell	149.12	340	dPKPdf	PKPdf	20 47 22.9	-1.5
MYKA	Terra Mystica	149.12	327	i pPKP	PKPbc	20 47 28.2	-0.6
	comp=Z,9.2nm,0.8s,SNR=5.5						
FUR	Furstenfeldbru	149.13	332	ePKPbc	PKPbc	20 47 28.9	+0.2
	baz=37,slow=2.9						
MEM	Membach	149.14	340	dPKP	PKPbc	20 47 28.1	-0.4
STON	Ston	149.16	318	eP	PKPbc	20 47 27.5	-1.3
BSTI	Sart Tilman	149.30	340	dPKPdf	PKPdf	20 47 25.4	+0.7
BSTI				dPKiKP	PKiKP	20 47 29.7	-0.4
CEY	Cerknica	149.32	325	eP	PKPbc	20 47 28.5	-0.7
UCC	Uccle	149.48	342	dPKiKP	PKPbc	20 47 28.9	-0.4
BCLA	Clavier	149.53	340	dPKP	PKPbc	20 47 29.1	-0.5
STU	Stuttgart	149.53	334	ePKPbc	PKPbc	20 47 30.0	+0.4
	baz=37,slow=2.9						
ABTA	Abfaltersbach	149.60	329	i PKP	PKPdf	20 47 25.3	-0.1
	comp=Z,4.5nm,0.5s,SNR=9.0						
WATA	Walderalm	149.61	330	i PKP	PKPdf	20 47 25.7	+0.2
	comp=Z,10nm,0.6s,SNR=7.1						
BGES	Gesves	149.63	341	dPKP	PKPbc	20 47 28.1	-1.6
BGES				dPKiKP	pPKPdf	20 47 29.9	-0.7
WTTA	Wattenberg	149.64	330	i PKP	PKPdf	20 47 26.0	+0.5
	comp=Z,55nm,1.5s,SNR=18						
SKDS	Skadanscina	149.66	325	eP	PKPbc	20 47 28.1	-2.0
BMRD	Maredsous	149.80	341	dPKP	PKPbc	20 47 29.2	-1.0
MOTA	Moosalm	149.82	331	i PKP	PKPdf	20 47 26.3	+0.5
	comp=Z,7.7nm,0.6s,SNR=8.6						
SQTA	Sankt Quirin	149.87	330	i pPKP	PKPbc	20 47 30.4	-0.2
	comp=Z,8.6nm,0.6s,SNR=10.0						
RETA	Reutte	149.87	331	i PKP	PKPdf	20 47 26.4	+0.7
	comp=Z,7.3nm,1.0s						
WLF	Walferdange	149.91	339	IAMs_20	IAMs_20	22 05 50.6	
	comp=Z,341nm,19.0s						
WLF	Walferdange	149.91	339	dPKP	PKPbc	20 47 30.8	+0.3
WLF	Walferdange	149.91	339	ePKPbc	PKiKP	20 47 31.3	-0.1
	baz=37,slow=2.9						
UBR	Ueberruh	150.01	332	ePKPbc	PKPbc	20 47 30.7	-0.3
	baz=37,slow=2.9						
DOU	Dourbes	150.03	341	dPKP	PKPbc	20 47 30.3	-0.5
BFO	Black Forest	150.23	335		PKPdf	20 47 24.7	-1.6
BFO	Black Forest	150.23	335	PKIKP	PKPdf	20 47 24.7	-1.6
BFO	Black Forest	150.23	335	ePKPbc	PKPbc	20 47 31.5	+0.1
	baz=37,slow=2.9						
FETA	Feichten	150.23	331	i PKP	PKPdf	20 47 27.9	+1.4
	comp=Z,5.9nm,0.7s,SNR=7.5						
DAVA	Damuels	150.41	332	ePKP	PKPdf	20 47 27.5	+0.7
	comp=Z,29nm,1.5s,SNR=6.5						
FUORN	Ofenpass-Fuorn	150.74	331	IAMs_20	IAMs_20	22 01 20.1	
	comp=Z,277nm,19.0s						
ECH	Echery	150.77	336	IAMs_20	IAMs_20	22 05 49.6	
	comp=Z,278nm,19.0s						
DAVOX	Davos/Dischmat	150.80	331	PKPbc	PKPbc	20 47 33.0	0.0
	comp=Z,12nm,0.6s,baz=126,slow=1.6,SNR=24						
DAVOX	Davos/Dischmat	150.80	331	PKIKP	PKPbc	20 47 33.0	0.0
MATE	Matera	150.96	315	⇑P	PKiKP	20 47 33.6	-0.3
SGRT	San Giovanni R	150.99	318		PKPbc	20 47 32.8	-0.7
TUE	Stuetta	151.27	331		PKPdf	20 47 26.7	-1.4
TUE				IAMs_20	IAMs_20	21 58 36.9	
	comp=Z,312nm,20.0s						
ACER	Acerenza	151.38	316		PKPbc	20 47 32.8	-1.6
TIP	Timpagrande	151.65	312	⇑P	PKiKP	20 47 35.7	+0.3
NRCA	Norcia	151.91	322		PKPdf	20 47 26.6	-2.5
NRCA				PKPbc	PKPbc	20 47 35.1	-0.5
SENIN	Lac Senin/Sane	152.23	334	IAMs_20	IAMs_20	22 00 10.2	
	comp=Z,263nm,20.0s						
CLF	Chambon-Foret	152.57	342	IAMs_20	IAMs_20	22 07 30.0	
	comp=Z,346nm,18.0s						
BNI	Bardonecchia	153.54	333	IAMs_20	IAMs_20	22 06 54.0	
	comp=Z,403nm,19.0s						
VAE	Valguarnera	154.08	311	PKP	PKPdf	20 47 31.8	-0.6
	comp=Z,2.4nm,0.5s,baz=23,slow=7.7,SNR=1.8						
VAE				PKPab	PKPab	20 47 53.4	-0.6
	comp=Z,4.2nm,0.5s,baz=132,slow=16,SNR=2.7						
VSL	Villasalto	156.21	320	IAMs_20	IAMs_20	22 11 26.7	
	comp=Z,327nm,19.0s						
CEST	Esterri de Car	157.73	337	PKPdf	PKPdf	20 47 34.7	-2.5
CEST					PKPab	20 48 08.4	-1.1
KEST	Kesra	158.47	312	PKPab	PKPab	20 48 11.7	-1.3
	comp=Z,2.7nm,0.8s,baz=50,slow=7.9,SNR=4.1						
MAHO	Mahon	158.70	328	IAMs_20	IAMs_20	22 15 52.9	
	comp=Z,314nm,18.0s						
PGAV	Gavieira, Arco	160.42	356	ePKPdf	PKPdf	20 47 44.8	+4.5
PGAV				eLR	LR	21 58 53.9	
PGAV				i AMs_20		22 15 18.1	
	comp=Z,352nm,18.0s						
POLO	Lamas de Olo	160.97	355	ePKPdf	PKPdf	20 47 45.8	+4.8
POLO				ePKPab	PKPab	20 48 24.1	+0.6
PVRL	Vila Real	161.06	354	ePKPab	PKPab	20 48 24.0	+0.1
MVO	Moncorvo	161.10	353	ePKPdf	PKPdf	20 47 45.6	+4.5
MVO				eLR	LR	21 57 37.9	
MVO				i AMs_20		22 07 55.0	
	comp=Z,312nm,18.0s						
PVIS	Viseu	161.64	355	ePKPdf	PKPdf	20 47 46.1	+4.5
PVIS				ePKPab	PKPab	20 48 26.9	+0.5
MTE	Manteigas	161.92	354	ePKPdf	PKPdf	20 47 46.9	+5.0
MTE				ePKPab	PKPab	20 48 27.4	-0.2
MTE				eLR	LR	21 57 54.4	
MTE				i AMs_20		22 13 03.6	
	comp=Z,349nm,20.0s						
ESDC	Sonseca Array	162.00	345	PKPab	PKPab	20 48 27.2	-0.8
	comp=Z,1.1nm,1.0s,baz=16,slow=3.3,SNR=6.3						
COI	Coimbra	162.18	356	ePKPdf	PKPdf	20 47 45.0	+3.0
PCAS	Casmilo, Conde	162.34	356	ePKPdf	PKPdf	20 47 46.4	+4.2
PCAS				ePKPab	PKPab	20 48 29.7	+0.2
PCBR	Castelo Branco	162.46	353	ePKPab	PKPab	20 48 28.9	-1.1
PSARD	Sardoal	162.77	355	ePKPdf	PKPdf	20 47 45.0	+2.3
PSARD				ePKPab	PKPab	20 48 31.5	+0.2
PMRV	Marv??o	162.86	353	ePKPdf	PKPdf	20 47 46.1	+3.3
PMRV				ePKPab	PKPab	20 48 32.2	+0.4
PMRV				eLR	LR	21 56 43.2	
PMRV				i AMs_20		22 10 25.5	
	comp=Z,370nm,16.0s						
PSBE	So Bento	162.90	357	ePKPdf	PKPdf	20 47 46.1	+3.2
PMTG	Montargil	163.30	355	ePKPdf	PKPdf	20 47 46.4	+3.2
PESTR	Estremoz	163.44	353	ePKPdf	PKPdf	20 47 48.5	+5.1
PESTR				ePKPab	PKPab	20 48 35.3	+1.0
DBIC	Dimbokro	163.57	199	PKPab	PKPab	20 48 35.6	+0.2
	comp=Z,5.0nm,0.5s,baz=198,slow=4.4,SNR=6.2						
EVO	Evora	163.81	354	ePKPdf	PKPdf	20 47 45.5	+1.8
EVO				ePKPab	PKPab	20 48 36.8	+0.9
PBEJ	Beja	164.30	353	ePKPab	PKPab	20 48 39.2	+1.1
MESJ	Messejana	164.52	354	ePKPdf	PKPdf	20 47 48.5	+4.1
PCVE	Castro Verde	164.71	354	ePKPdf	PKPdf	20 47 48.2	+3.7
PTEO	Sao Teotonio	164.85	356	ePKPdf	PKPdf	20 47 48.2	+3.5
PVAQ	Vaqueiros	164.90	353	ePKPdf	PKPdf	20 47 49.4	+4.7
PVAQ				ePKPab	PKPab	20 48 41.6	+0.9
PVAQ				eLR	LR	21 57 56.5	
PVAQ				i AMs_20		22 06 08.9	
	comp=Z,497nm,18.0s						
PBDV	Barranco-do-Ve	165.08	353	ePKPdf	PKPdf	20 47 51.4	+6.5
MORF	Marmelete	165.09	356	ePKPdf	PKPdf	20 47 47.6	+2.6
PFVI	Vila Bisbo	165.27	356	ePKPdf	PKPdf	20 47 49.6	+4.6
TORD	Torodi Ar. Bea	165.49	233	PKPab	PKPab	20 48 43.2	-0.8
	comp=Z,67nm,0.4s,baz=77,slow=4.1,SNR=1.8						
PMOZ	Porto Moniz, M	167.86	30	ePKPdf	PKPdf	20 47 54.2	+6.9
PMOZ				eLR	LR	21 57 50.5	
PMOZ				i AMs_20		22 03 11.4	
	comp=Z,210nm,18.0s						

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*IDC **18** 20:39:13.1±0.9, 28.°48N×105.°19E, h0^{km}, mb3.6/9, mbtmp3.6/11, ML3.4/1, MS3.8/3, Error ellipse: s-maj=25.7km s-min=17.7km az=64.0*

ISC 18 20:39:16.1±0.8, **28.°49N**±0.°08×**105.°01E**±0.°10, **h19^{km}, n15, σ1.s95**/15, **mb3.5**/9, **MS3.5**/3, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC

XAN	**Xi'an**	**6.46**	**30**	Pn	Pn	20 40 53.8	+3.5
XAN				Pg	**Pg**	**20 41 16.9**	**-2.9**
XAN				Sn	**Sn**	**20 42 06.8**	**+3.3**
XAN				Sg	**Sg**	**20 42 45.4**	**+1.9**
XAN				smax	smax		
	comp=N,170nm,1.1s						
XAN				smax	smax		
	comp=E,160nm,1.0s						
WHN	**Wuhan**	**8.39**	**74**	P	Pn	20 41 19.8	+3.1
WHN				S	**Sn**	**20 42 54.0**	**+3.1**
CMAR	**Chiang Mai Arr**	**11.43**	**210**	Pn	**Pn**	**20 41 60.0**	**+1.5**
	comp=E,2.1nm,0.9s,baz=22,slow=11,SNR=7.7						
SONM	**Songino Array**	**19.34**	**3**	P	**Pn**	**20 43 41.3**	**-0.2**
	comp=E,0.1nm,0.3s,baz=161,slow=5.2,SNR=3.5						
	comp=E,0.9nm,0.6s						
KSRS	**Korea Array**	**21.16**	**59**	P	**P**	**20 43 59.9**	**-0.2**
	comp=E,1.4nm,0.7s,baz=250,slow=9.5,SNR=7.2						
	comp=E,1.4nm,0.7s						
MKAR	**Makanchi Array**	**25.49**	**322**	P	**P**	**20 44 44.5**	**+1.4**
	comp=E,0.9nm,0.8s,baz=121,slow=10,SNR=7.3						
	comp=E,0.9nm,0.8s						
USRK	**Ussuriysk Ar.**	**26.63**	**47**	P	**P**	**20 44 51.9**	**-1.5**
	comp=E,1.5nm,0.7s,baz=236,slow=10.0,SNR=3.4						
USRK				LR	LR	20 55 32.2	
	comp=E,94nm,18.2s,baz=6.3,slow=37						
	comp=E,1.5nm,0.7s						
ZALV	**Zalesovo Beam**	**29.41**	**335**	P	**P**	**20 45 18.6**	**+0.5**
	comp=E,0.4nm,0.3s,baz=165,slow=11,SNR=1.9						
	comp=E,0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**29.81**	**325**	P	**P**	**20 45 22.5**	**+0.8**
	comp=E,0.4nm,0.7s,baz=135,slow=8.8,SNR=4.6						
	comp=E,0.4nm,0.7s						
KVAR	**Kislovodsk Arr**	**51.42**	**305**	LR	LR	21 13 37.7	
	comp=E,55nm,21.2s,baz=298,slow=40						
WRA	**Warramunga Arr**	**55.88**	**146**	P	**P**	**20 48 51.6**	**-1.1**
	comp=E,1.3nm,0.7s,baz=337,slow=8.2,SNR=15						
	comp=E,1.3nm,0.7s						
BRTR	**Keskin Array B**	**58.74**	**301**	P	**P**	**20 49 13.7**	**+0.7**
	comp=E,0.3nm,0.7s,baz=96,slow=3.7,SNR=1.7						
	comp=E,0.3nm,0.7s						
ASAR	**Alice Springs**	**58.86**	**149**	P	**P**	**20 49 13.2**	**-0.6**
	comp=E,0.6nm,0.7s,baz=328,slow=6.8,SNR=7.4						
	comp=E,0.6nm,0.7s						
ILAR	**Eielson Array**	**71.85**	**25**	P	**P**	**20 50 35.3**	**-2.0**
	comp=E,0.2nm,0.6s,baz=301,slow=6.4,SNR=2.0						
	comp=E,0.2nm,0.6s						
FRB	**Frobisher Bay**	**87.93**	**357**	LR	LR	21 35 43.8	
	comp=E,145nm,18.8s,baz=284,slow=39						

IDC ***18*** *20:44:33.7±1.3, 43°.17S×83°.21W, h0^{km}, mb4.0/6, mbtmp3.9/8, ML3.4/2, MS4.2/11, Error ellipse: s-maj=33.9km s-min=27.0km az=123.0*

NEIC ***18*** *20:44:41.3±2.2, 42°.47S±0°.09×82°.5W±0°.2, h10^{km}±2^{km}, mb4.8/8, Error ellipse: s-maj=25.2km s-min=12.3km az=249.0*

ISC 18 20:44:38.6±1.4, 42°.6S±0°.1×82°.9W±0°.2, h10^{km}, n45, σ1^{s}40/29, mb4.2/10, MS4.3/9, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COYC	**Coyhaique**	**8.32**	**114**		**Pn**	**20 46 39.7**	**+0.5**
AY03	**Cochrane**	**8.64**	**126**		**Pn**	**20 46 43.3**	**-0.4**
H03S1	**Juan Fernandez**	**9.30**	**21**	T	T	20 57 04.8	
	baz=197,slow=73,SNR=1716						
H03S2	**Juan Fernandez**	**9.30**	**21**	T	T	20 57 06.8	
	baz=197,slow=73,SNR=1354						
H03S3	**Juan Fernandez**	**9.32**	**21**	T	T	20 57 08.7	
	baz=197,slow=73,SNR=907						
PLCA	**Paso Flores**	**9.42**	**83**	Pn	**Pn**	**20 46 57.0**	**+2.5**
	0.1nm,0.3s,baz=257,slow=16,SNR=3.0						
PLCA				LR	LR	20 50 02.6	
	comp=Z,276nm,18.6s,baz=241,slow=34						
	5.2nm,1.2s						
VA04	**Juan Fernndez**	**9.51**	**21**		**Pn**	**20 46 54.9**	**-0.7**
H03N3	**Juan Fernandez**	**9.67**	**20**	Pn	**Pn**	**20 46 58.4**	**+0.9**
	baz=175,slow=26						
H03N3				T	T	20 57 33.4	
	baz=191,slow=74,SNR=112						
H03N2	**Juan Fernandez**	**9.68**	**20**	Pn	**Pn**	**20 46 57.7**	**+0.1**
	baz=175,slow=26						
H03N2				T	T	20 57 41.0	
	baz=191,slow=74,SNR=201						
H03N1	**Juan Fernandez**	**9.68**	**20**	Pn	**Pn**	**20 46 57.2**	**-0.6**
	baz=175,slow=26						
H03N1				T	T	20 57 33.3	
	baz=191,slow=74,SNR=138						
BO01	**Tunca**	**12.36**	**52**	Pn	**Pn**	**20 47 32.4**	**-2.1**
MT01	**Popeta**	**12.64**	**50**	Pn	**Pn**	**20 47 37.1**	**-1.3**
MT09	**Talagante**	**12.85**	**51**		**Pn**	**20 47 40.4**	**-1.0**
MT02	**Curacav**	**13.15**	**49**	Pn	**Pn**	**20 47 43.2**	**-2.2**
LMEL	**Las Melosas**	**13.26**	**53**		Pn	20 47 44.3	-2.7
MT08	**Bocatoma Ro**	**13.65**	**52**		**Pn**	**20 47 50.1**	**-2.3**
VA03	**San Esteban**	**13.85**	**49**	Pn	**Pn**	**20 47 53.0**	**-2.1**
CO02	**Combarbal**	**14.82**	**44**	P	**Pn**	**20 48 07.4**	**-0.9**
USHA	**Ushuaia**	**15.46**	**147**	LR	LR	20 53 03.6	
	comp=Z,303nm,18.2s,baz=134,slow=34						
CO05	**La Serena**	**15.76**	**40**	P	**Pn**	**20 48 18.1**	**-2.4**
CFA	**Coronel Fontan**	**16.02**	**51**	Pn	**P**	**20 48 28.9**	**+1.4**
	0.2nm,0.3s,baz=235,slow=12,SNR=5.8						
	1.0nm,0.5s						
TRQA	**Tornquist**	**16.57**	**81**		**Pn**	**20 48 31.0**	**0.0**
PB09	**IPOC Station P**	**23.70**	**33**	P	**P**	**20 49 52.3**	**+1.5**
PB09				IAmb	IAmb	20 50 08.6	
	comp=Z,43nm,1.4s						
PB01	**IPOC Station P**	**24.28**	**32**	P	**P**	**20 49 56.0**	**-0.1**
PB01				IAmb	IAmb	20 50 00.0	
	comp=Z,25nm,1.0s						
PB11	**IPOC Station P**	**25.38**	**30**	P	**P**	**20 50 05.3**	**-0.9**
CPUP	**Villa Florida**	**26.46**	**60**	P	**P**	**20 50 16.0**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=222,slow=3.7,SNR=3.5						
	comp=Z,0.8nm,0.7s						
LPAZ	**La Paz**	**29.13**	**30**	P	**P**	**20 50 42.6**	**+2.2**
	comp=Z,2.0nm,0.8s,baz=181,slow=7.3,SNR=7.2						
LPAZ				LR	LR	20 59 13.3	
	comp=Z,99nm,21.2s,baz=168,slow=30						
	comp=Z,2.0nm,0.8s						
SIV	**San Ignacio**	**32.46**	**42**	P	**P**	**20 51 10.1**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=220,slow=8.9,SNR=8.0						
	comp=Z,0.8nm,0.3s						
PTLB	**Pontes e Lacer**	**33.89**	**44**	P	**P**	**20 51 22.3**	**+0.7**
VILB	**Vilhena**	**35.49**	**40**	P	**P**	**20 51 34.6**	**-0.9**
VILB				IAmb	IAmb	20 51 42.2	
	comp=Z,10.0nm,0.8s						
BDFB	**Brasilia**	**40.16**	**59**	P	**P**	**20 52 15.6**	**+0.4**
	comp=Z,3.0nm,0.5s,baz=159,slow=6.6,SNR=4.4						
BDFB				LR	LR	21 09 30.6	
	comp=Z,231nm,18.4s,baz=232,slow=37						
	comp=Z,3.0nm,0.5s						
SNAA	**Sanae**	**47.13**	**155**	P	P	20 53 03.7	-6.8
	comp=Z,1.7nm,1.1s,baz=237,slow=6.0,SNR=5.2						
	comp=Z,1.7nm,1.1s						
ROSC	**El Rosal**	**47.87**	**12**	LR	LR	21 12 04.9	
	comp=Z,210nm,18.2s,baz=243,slow=34						
RUSC	**La Rusia**	**49.10**	**13**	P	**P**	**20 53 27.4**	**+0.6**
RUSC				IAmb	IAmb	20 53 49.8	
	comp=Z,17nm,1.4s						
VNDA	**Vanda**	**53.84**	**194**	LR	LR	21 12 33.2	
	comp=Z,163nm,19.0s,baz=79,slow=32						
URZ	**Urewera**	**71.63**	**235**	LR	LR	21 19 03.8	
	comp=Z,155nm,19.3s,baz=317,slow=29						
TXAR	**Lajitas Array**	**74.11**	**341**	P	**P**	**20 56 14.3**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=147,slow=5.8,SNR=3.8						
	comp=Z,0.5nm,0.8s						
TKL	**Tuckaleechee C**	**77.91**	**359**	LR	LR	21 26 56.3	
	comp=Z,309nm,21.5s,baz=240,slow=32						
BOSA	**Boshof**	**83.14**	**123**	LR	LR	21 28 32.1	
	comp=Z,365nm,20.5s,baz=148,slow=32						
LBTB	**Lobatse**	**85.91**	**120**	LR	LR	21 32 41.5	
	comp=Z,310nm,18.4s,baz=131,slow=34						
LSZ	**Lusaka**	**94.56**	**115**	LR	LR	21 34 06.0	
	comp=Z,439nm,21.1s,baz=136,slow=31						
H11S2	**WAKE ISLAND Hy**	**117.19**	**271**	T	T	23 10 58.9	
	baz=129,slow=74,SNR=14						
H11S1	**WAKE ISLAND Hy**	**117.21**	**271**	T	T	23 10 55.1	
	baz=129,slow=74,SNR=12						
H11S3	**WAKE ISLAND Hy**	**117.21**	**271**	T	T	23 10 52.3	
	baz=129,slow=74,SNR=14						
MJAR	**Matsushiro Arr**	**147.99**	**273**	PKPbc	**PKPdf**	**21 04 20.0**	**-0.9**
	comp=Z,1.3nm,0.7s,baz=143,slow=1.5,SNR=4.1						

ATH ***18*** *20:45:28.3, 40°.43N×20°.96E, h7^{km}±1^{km}, ML1.3/4, Manual Solution by M.Charalampakis First location: 2019/06/18 20:46:45, This location: 2019/06/19 02:41:00 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*

TIR 18 20:45:26.7, 40°.58N×20°.91E, h1^{km}±1^{km}, Ml1.9/2, 3C-1D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBN	**Korca**	**0.10**	**297**	⇑*i*Pg	Pg	20 45 28.3	-0.4
KBN				Sg	Sg	20 45 30.0	0.0
KBN				AML	AML	20 45 31.1	
	2.7nm,0.2s						
NEST	**Nestorio**	**0.19**	**147**	⇑*i*Pg	Pg	20 45 30.6	+0.2
NEST				Sg	Sg	20 45 34.3	+1.4
NEST				AML	AML	20 45 35.0	
	0.8nm,0.1s						
NEST	**Nestorio**	**0.19**	**147**	P	Pg	20 45 30.6	+0.2
NEST				S	Sg	20 45 32.0	-0.9
PENT	**Pentalofos**	**0.42**	**155**	P	Pg	20 45 33.9	-0.8
KZN	**Kozani**	**0.71**	**112**	P	Pg	20 45 40.8	+0.5
KPRO	**Kipourio**	**0.71**	**151**	P	Pg	20 45 39.4	-0.9
IGT	**Igoumenitsa**	**1.13**	**203**	⇑*e*Pn	Pb	20 45 49.2	+0.2
IGT				Sn	Sn	20 46 06.6	+0.8
TETR	**Tetrakomo, Epi**	**1.26**	**167**	P	Pg	20 45 49.7	-1.1
TYRN	**Tyrnavos**	**1.33**	**130**	P	Pg	20 45 51.2	-1.0
PUK	**Puka**	**1.65**	**333**	⇓*e*Pn	Pg	20 45 59.1	+0.7
PUK				Sn	Sg	20 46 22.8	+3.0

IDC ***18*** *20:56:14.8±1.5, 28°.88N×129°.86E, h0^{km}, mb3.7/6, mbtmp3.6/8, ML2.8/2, Error ellipse: s-maj=43.8km s-min=25.9km az=71.0*

JMA ***18*** *20:56:18.7±0.2, 29°.3N±0°.6×130°.6E±0°.8, h21^{km}, MV3.6/26, NEAR AMAMI-OSHIMA ISLAND*

ISC 18 20:56:18.3±1.4, 29°.26N±0°.04×130°.67E±0°.06, h32^{km}±11^{km}, n29, σ1^{s}25/31, mb3.8/6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**0.90**	**310**	P	**Pb**	**20 56 33.9**	**-1.6**
JNN				S	**Sn**	**20 56 45.8**	**-0.9**
JNN	**Nakanoshima**	**0.90**	**310**	A	A	20 56 33.9	
	comp=N,12nm,1.3s,comp=E,12nm,1.5s						
JYAK	**Yakushimahirau**	**0.98**	**352**	P	**Pb**	**20 56 36.0**	**-0.9**
JYAK				*e*S	**Sn**	**20 56 49.7**	**+0.9**
JZK	**Kikaishima**	**1.12**	**213**	*e*P	**Pb**	**20 56 39.6**	**+0.4**
JMTN	**Minamitane**	**1.15**	**10**	*e*P	**Pn**	**20 56 38.9**	**+0.7**
JMTN				*e*S	**Sn**	**20 56 54.5**	**+1.6**
JAM	**Amami Oshima**	**1.26**	**228**	*e*P	**Pn**	**20 56 40.9**	**+1.2**
JAM				*e*S	**Sb**	**20 56 58.0**	**+0.6**
JKC	**Kuchinoerabu**	**1.27**	**341**	P	**Pn**	**20 56 40.2**	**+0.4**
JTAJ	**Takarajima**	**1.29**	**266**	P	**Pn**	**20 56 40.7**	**+0.6**
JTAJ				*e*S	**Sn**	**20 56 58.1**	**+1.9**
JTN	**Tanegashima 3**	**1.42**	**11**	P	**Pn**	**20 56 42.7**	**+0.9**
JAMN	**Amaminishikomi**	**1.66**	**233**	P	**Pn**	**20 56 46.7**	**+1.5**
JTSR	**Tashiro 2**	**1.91**	**6**	*e*P	**Pn**	**20 56 50.0**	**+1.3**
JTSR				*e*S	**Sn**	**20 57 12.7**	**+1.0**
JTK	**Tokunoshima**	**2.11**	**226**	*e*P	**Pn**	**20 56 53.4**	**+2.0**
JYRO	**Yoronjima**	**2.97**	**222**	*e*P	**Pn**	**20 57 04.4**	**+1.3**
JOW	**Kunigami**	**3.21**	**222**	*e*P	**Pn**	**20 57 07.3**	**+0.8**
JKDJ	**Kitadaitoujima**	**3.34**	**170**	P	**Pn**	**20 57 09.4**	**+1.0**
JMZ	**Minamidaito 2**	**3.46**	**172**	*e*P	**Pn**	**20 57 11.1**	**+1.1**
JMZ				*e*S	**Sn**	**20 57 49.0**	**-0.8**
JNTH	**Nagotoyohara**	**3.60**	**221**	*e*P	**Pn**	**20 57 12.7**	**+0.9**
JKE	**Kume jima 2**	**4.51**	**231**	P	**Pn**	**20 57 25.0**	**+0.6**
KSRS	**Korea Array**	**8.49**	**345**	Pn	**Pn**	**20 58 21.9**	**+3.0**
	comp=E,0.1nm,0.3s,baz=164,slow=14,SNR=2.0						
	comp=E,0.5nm,0.5s						
MJAR	**Matsushiro Arr**	**9.63**	**39**	Pn	Pn	20 58 46.6	+12
	comp=E,0.1nm,0.3s,baz=238,slow=13,SNR=4.7						
	comp=E,0.7nm,0.4s						
SONM	**Songino Array**	**26.36**	**321**	P	**P**	**21 01 50.8**	**-0.8**
	comp=E,0.4nm,0.5s,baz=133,slow=8.7,SNR=3.8						
	comp=E,0.4nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**34.19**	**98**	T	T	21 39 42.7	
	baz=296						
H11N1	**WAKE ISLAND Hy**	**34.19**	**98**	T	T	21 39 47.9	
	baz=296						
H11N3	**WAKE ISLAND Hy**	**34.20**	**98**	T	T	21 39 44.3	
	baz=296						
MKAR	**Makanchi Array**	**41.23**	**309**	P	**P**	**21 03 59.7**	**-0.5**
	comp=E,0.3nm,0.4s,baz=89,slow=10,SNR=11						
	comp=E,0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**44.24**	**314**	P	**P**	**21 04 24.1**	**-0.3**
	comp=E,0.7nm,0.4s,baz=97,slow=9.2,SNR=16						
	comp=E,0.7nm,0.4s						
WRA	**Warramunga Arr**	**49.04**	**175**	P	**P**	**21 05 01.2**	**-1.2**
	comp=E,0.7nm,0.8s,baz=348,slow=7.8,SNR=4.5						
	comp=E,0.7nm,0.8s						
BVAR	**Borovoye Array**	**49.52**	**316**	P	**P**	**21 05 05.7**	**0.0**
	comp=E,1.0nm,0.5s,baz=95,slow=11,SNR=4.0						
	comp=E,1.0nm,0.5s						
FINES	**FINESS Array B**	**71.30**	**331**	P	**P**	**21 07 34.0**	**-0.3**
	comp=E,0.9nm,0.8s,baz=55,slow=7.2,SNR=4.7						
	comp=E,0.9nm,0.8s						

NEIC ***18*** *20:56:27.6±2.5, 36°.433N±0°.007×121°.03W±0°.02, h10^{km}±2^{km}, Error ellipse: s-maj=3.2km s-min=2.6km az=288.0*

NCEDC 18 20:56:28.0±2.3, 36°.44N±0°.02×121°.02W±0°.02, h9^{km}±6^{km}, Mwr3.3/5, ML3.0/68(NEIC), Error ellipse: s-maj=2.9km s-min=2.3km az=49.0, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LRV	**Little Rabbit**	**0.01**	**190**		Pg	20 56 29.7	-0.1
BPIM	**Pinnacles**	**0.13**	**293**		Pg	20 56 31.0	-0.1
BBGB	**Big Mountain B**	**0.14**	**352**		Pg	20 56 32.1	+0.8
BBGB	**Big Mountain B**	**0.14**	**352**	IAML		20 56 35.6	
	comp=E,8μm,0.5s						
BBGB				IAML		20 56 35.8	
	comp=N,9μm,0.5s						
BABI	**Panoche/Babies**	**0.15**	**59**		Pg	20 56 32.1	+0.7
BABI					Sg	20 56 35.2	+1.4
LRC	**Lone Oak Road**	**0.19**	**187**		Pg	20 56 32.0	0.0
BSGM	**Shirttail Gulc**	**0.19**	**263**		Pg	20 56 31.9	-0.2
BEMM	**Emmet**	**0.23**	**344**		Pg	20 56 33.6	+0.8
PMPB	**Monarch Peak**	**0.28**	**142**		Pg	20 56 34.1	+0.4
BMSM	**Mercy Hot Spri**	**0.28**	**39**		Pb	20 56 35.0	-0.4
BJOM	**Mount Johnson**	**0.31**	**308**		Pg	20 56 33.8	-0.3
BJOM					Sg	20 56 38.1	-0.2
BJCM	**Johnson Can.**	**0.32**	**290**		Pg	20 56 34.2	-0.2
BSMM	**Soledad Missio**	**0.34**	**261**		Pg	20 56 34.7	-0.1
SCZ	**Santa Cruz**	**0.35**	**297**		Pg	20 56 34.7	-0.3
SCZ	**Santa Cruz**	**0.35**	**297**	IAML		20 56 40.0	
	comp=N,682nm,0.7s						
SCZ				IAML		20 56 42.4	
	comp=E,497nm,0.4s						
PCCM	**Crazy Canyon**	**0.37**	**199**		Pg	20 56 35.5	+0.2
PSAM	**San Ardo**	**0.42**	**166**		Pg	20 56 36.3	0.0
HULI	**Fort Hunter Li**	**0.45**	**203**		Pg	20 56 36.9	0.0
HULI	**Fort Hunter Li**	**0.45**	**203**	IAML		20 56 45.6	
	comp=N,1μm,0.8s						
HULI				IAML		20 56 47.0	
	comp=E,2μm,0.8s						
BSRM	**Salinas Radio**	**0.47**	**299**		Pg	20 56 36.9	-0.3
SAO	**San Andreas Ge**	**0.48**	**313**	Pg	Pg	20 56 37.0	-0.3
FRP	**Fremont Peak**	**0.49**	**310**		Pg	20 56 37.3	-0.4
PSMM	**Smith Mountain**	**0.50**	**137**		Pg	20 56 38.2	+0.4
BAPM	**Anderson Peak**	**0.57**	**243**		Pg	20 56 39.1	-0.1
BPRM	**Ponciano Ridge**	**0.58**	**267**		Pg	20 56 39.1	-0.2
PAPM	**Alder Peak**	**0.59**	**208**		Pg	20 56 39.6	0.0
PACP	**Pacheco Peak**	**0.61**	**339**		Pb	20 56 40.5	-0.4
PKD	**Bear Valley Ra**	**0.62**	**142**		Pg	20 56 39.9	-0.2
HFEM	**San Felipe**	**0.63**	**330**		Pg	20 56 40.7	+0.5
HTUM	**Tustin Road**	**0.64**	**308**		Pg	20 56 39.9	-0.5
BPOM	**Post Ranch**	**0.64**	**251**		Pg	20 56 40.2	-0.3
PVCM	**Vineyard Canyo**	**0.65**	**143**		Pg	20 56 40.4	-0.1
PSTM	**Stockdale Moun**	**0.65**	**141**		Pg	20 56 40.4	-0.3
HPCM	**Pacheco Lake**	**0.66**	**341**		Pb	20 56 41.2	-0.4
PPO	**Portuguese Can**	**0.66**	**150**		Pg	20 56 40.9	+0.2
SLD	**San Luis Dam**	**0.66**	**345**		Pg	20 56 41.2	+0.4
PANM	**San Antonio Re**	**0.66**	**172**		Pg	20 56 40.8	0.0
HERM	**Elkhorn Road**	**0.67**	**303**		Pg	20 56 40.8	-0.1
HCBM	**Chamberlain**	**0.72**	**314**		Pg	20 56 42.0	+0.1
WSRE	**Westside REC,**	**0.73**	**98**		Pb	20 56 43.4	+0.5
GHS	**Gilroy Hot Spr**	**0.74**	**332**		Pg	20 56 42.7	+0.3
PWKM	**Work Ranch**	**0.74**	**147**		Pg	20 56 42.5	+0.1
HMOM	**Monterey**	**0.74**	**283**		Pg	20 56 42.1	-0.3
PHFM	**Heflinger Ranc**	**0.74**	**138**		Pg	20 56 42.4	0.0
CTM	**Castle Mountai**	**0.75**	**132**		Pb	20 56 43.5	+0.2
PHCM	**Hearst Castle**	**0.76**	**188**		Pg	20 56 42.9	+0.2
HLPM	**Lions Peak**	**0.78**	**321**		Pg	20 56 43.1	+0.1
RAMR	**Ramage Ranch**	**0.81**	**172**		Pg	20 56 43.4	-0.2
JELB	**Ellicott, Sant**	**0.82**	**307**		Pg	20 56 43.8	0.0
LCUV	**Le Cuvier**	**0.82**	**164**		Pg	20 56 43.4	-0.4
PKLM	**Kerr Lake**	**0.86**	**140**		Pg	20 56 44.4	-0.2
CADM	**Anderson Res.**	**0.88**	**326**		Pg	20 56 45.1	+0.2
TCHL	**Shandon**	**0.90**	**146**		Pg	20 56 45.2	-0.1
TCAS	**Cass Winery, P**	**0.91**	**156**		Pg	20 56 45.3	-0.2
PMRM	**Maxey Ranch**	**0.91**	**136**		Pg	20 56 45.6	+0.1
JLAB	**Laurel Hill**	**0.92**	**321**		Pg	20 56 45.7	-0.1
PCBM	**Cambria**	**0.92**	**182**		Pg	20 56 45.4	-0.3
PAGB	**Antelope Grade**	**0.94**	**139**		Pg	20 56 45.8	-0.3
THIS	**South End of C**	**0.96**	**138**		Pg	20 56 46.4	-0.1
TRAM	**Private Proper**	**0.97**	**141**		Pg	20 56 46.5	-0.2
CCOB	**Coe Ranch Numb**	**0.97**	**327**		Pb	20 56 47.1	0.0
ARN	**Arnold Ranch**	**1.00**	**336**		Pg	20 56 47.0	-0.3
MHC	**Mount Hamilton**	**1.03**	**331**		Pg	20 56 47.7	-0.3
LEGD	**La Grand CA**	**1.04**	**42**		Pg	20 56 47.4	-0.6
TSCN	**Private Proper**	**1.04**	**149**		Pg	20 56 47.6	-0.5
MYLM	**Yosemite Lake**	**1.06**	**27**		Pg	20 56 47.5	-0.8
PTAM	**Tassajara Cree**	**1.07**	**166**		Pg	20 56 47.7	-1.0
JJOM	**Saint Joseph’s**	**1.09**	**315**		Pg	20 56 47.7	-1.3
MTOS	**Mt Oso, Westle**	**1.09**	**347**		Pg	20 56 49.0	-0.1
MTOS	**Mt Oso, Westle**	**1.09**	**347**	IAML		20 57 08.6	
	comp=N,252nm,0.7s						
MHDM	**Hidden Dam**	**1.13**	**53**		Pb	20 56 48.6	-1.0
EFD	**Emergency Oper**	**1.14**	**168**		Pb	20 56 48.8	-1.1
TRAY	**Twisselman Ran**	**1.14**	**141**		Pb	20 56 49.5	-0.5
PBPM	**Bitterwater Pu**	**1.15**	**138**		Pb	20 56 49.5	-0.5
LSDC	**Los Osos Digit**	**1.15**	**173**		Pb	20 56 49.0	-1.0
CMLM	**Mount Lewis**	**1.16**	**334**		Pb	20 56 49.5	-0.7
CALM	**Calaveras Res.**	**1.19**	**328**		Pb	20 56 50.0	-0.8
DPD	**Davis Peak**	**1.22**	**171**		Pb	20 56 49.8	-1.5
DCD	**Diablo Creek**	**1.23**	**173**		Pn	20 56 49.7	-1.7
JSJM	**St Joseph**	**1.24**	**316**		Pn	20 56 50.5	-1.1
JBMM	**Black Mountain**	**1.27**	**314**		Pn	20 56 50.5	-1.4
JPSM		**1.31**	**306**		Pn	20 56 51.4	-1.1
JFP	**Foothills Park**	**1.32**	**315**		Pn	20 56 51.3	-1.3
VOG	**Valley Oaks Go**	**1.32**	**95**		Pn	20 56 51.4	-1.2
JSFB	**Stanford Teles**	**1.34**	**316**		Pn	20 56 51.8	-1.1
JRSC	**Jasper Ridge**	**1.38**	**315**		Pn	20 56 52.0	-1.3
BGH	**Bear Gulch**	**1.39**	**311**		Pn	20 56 52.5	-1.1
SMMC	**Simmler**	**1.39**	**143**		Pn	20 56 52.8	-0.9
BUCR	**Buckhorn Ranch**	**1.41**	**29**		Pn	20 56 53.5	-0.5
BUCR	**Buckhorn Ranch**	**1.41**	**29**	IAML		20 57 13.9	
	comp=N,129nm,0.7s						
BUCR				IAML		20 57 17.4	
	comp=E,134nm,0.8s						
MMIM	**Miami Mountain**	**1.41**	**46**		Pn	20 56 53.7	-0.3
JCHM	**Cahill Ridge**	**1.53**	**315**		Pn	20 56 54.4	-1.2
CRGC	**Crocker Grade**	**1.59**	**138**		Pn	20 56 55.9	-0.5
SAC	**San Andreas**	**1.60**	**316**		Pn	20 56 56.0	-0.5
BGC	**Bolinger Road**	**1.61**	**329**		Pn	20 56 56.5	-0.2
CMB	**Columbia Colle**	**1.67**	**17**	Pn	Pn	20 56 56.9	-0.6
VES	**Vestal, Richgr**	**1.67**	**110**		Pn	20 56 55.5	-2.0
BKS	**Berkeley--Byer**	**1.73**	**326**		Pn	20 56 57.6	-0.8
PKM	**Mcpherson Peak**	**1.83**	**147**		Pn	20 56 58.9	-0.9
SPG2	**Springville 2**	**1.83**	**97**		Pn	20 56 59.1	-0.6
FIGC	**Figueroa Mtn.**	**1.90**	**154**		Pn	20 56 59.9	-0.8
GATR	**Gnd/Air Tx Cnt**	**1.93**	**167**		Pn	20 57 00.0	-1.0
MRDM	**Red Cones**	**1.95**	**53**		Pb	20 57 02.9	-0.9
MDPB	**Devils Postpil**	**1.95**	**52**		Pn	20 57 02.6	+1.0
MDPB	**Devils Postpil**	**1.95**	**52**	IAML		20 57 30.8	
	comp=N,181nm,0.7s						
MDPB				IAML		20 57 35.7	
	comp=E,161nm,1.0s						
MMPM	**Mammoth Pass**	**1.97**	**53**		Pn	20 57 03.0	+1.1
MINS	**Minaret Summit**	**1.98**	**52**		Pn	20 57 03.1	+1.1
BCW	**Bitter Crk WRg**	**1.98**	**138**		Pn	20 57 02.3	+0.4
BCW	**Bitter Crk WRg**	**1.98**	**138**	Pn	Pn	20 57 01.7	-0.1
BCW				IAML		20 57 43.8	
	comp=N,143nm,0.5s						
BCW				IAML		20 57 44.9	
	comp=E,159nm,0.9s						
WELL	**Weller Preserv**	**2.01**	**7**		Pn	20 57 03.0	+0.8
MDYM	**Dry Creek**	**2.01**	**52**		Pb	20 57 04.2	-0.7
NJQ	**Nojoqui County**	**2.02**	**160**		Pn	20 57 01.4	-0.8
MDCM	**Deadman Creek**	**2.02**	**51**		Pn	20 57 03.5	+0.9
MLCM	**Laurel Creek C**	**2.05**	**54**		Pb	20 57 04.6	-1.0
MCBM	**Casa Benchmark**	**2.08**	**54**		Pb	20 57 05.5	-0.5
MCSM	**Casa Diablo Ho**	**2.08**	**54**		Pb	20 57 05.4	-0.7
WASM	**Alta Sierra Ca**	**2.11**	**109**		Pn	20 57 03.8	+0.1
MDRNC	**Doe Ridge**	**2.12**	**55**		Pb	20 57 05.8	-0.9
MTUM	**Tungsten Hills**	**2.17**	**64**		Pn	20 57 05.3	+0.8
ISA	**Isabella, Lake**	**2.20**	**110**		Pn	20 57 05.1	+0.3
ISA	**Isabella, Lake**	**2.20**	**110**	Pn	Pn	20 57 04.6	-0.2
ISA				IAML		20 57 36.0	
	comp=E,80nm,0.5s						
ISA				IAML		20 57 43.6	
	comp=N,85nm,0.8s						
BHPR	**Bishop**	**2.20**	**66**		Pn	20 57 06.0	+1.0
TEJ	**El Tejon**	**2.24**	**122**		Pn	20 57 04.2	-1.2
MCCM	**Marconi Confer**	**2.26**	**319**	Pn	Pn	20 57 04.9	-0.6
MCCM				IAML		20 58 01.9	
	comp=E,92nm,1.8s						
MCCM				IAML		20 58 17.6	
	comp=N,78nm,1.9s						
BENR	**Benton**	**2.33**	**56**		Pb	20 57 08.9	-1.5
WAKR	**Walker**	**2.41**	**31**		Pn	20 57 09.3	+1.4
WAKR				IAML		20 57 46.9	
	comp=N,85nm,1.1s						
BSM	**San Miguel Isl**	**2.46**	**167**		Pn	20 57 06.4	-1.9
AFDM	**Forest Hills D**	**2.51**	**1**		Pn	20 57 08.8	-0.2
WNMM	**Nine Mile Cany**	**2.59**	**102**		Pn	20 57 11.4	+1.4
CGO	**Cerro Gordo**	**2.59**	**87**		Pn	20 57 12.2	+1.8
DSP	**Deep Springs**	**2.61**	**68**		Pn	20 57 10.4	+0.1
DSP				IAML		20 57 58.8	
	comp=E,46nm,0.8s						
DSP				IAML		20 57 59.7	
	comp=N,37nm,0.9s						
LHV	**Little Huntoon**	**2.70**	**47**		Pn	20 57 11.5	-0.1
LHV				IAML		20 57 57.8	
	comp=E,90nm,0.7s						
LHV				IAML		20 57 57.8	
	comp=N,83nm,0.7s						
CCAC	**Calif City Air**	**2.75**	**117**		Pn	20 57 12.2	-0.3
CCAC				IAML		20 57 58.6	
	comp=E,82nm,1.2s						
PNTR	**Pine Nut**	**2.87**	**23**		Pn	20 57 14.3	+0.1
NVAR	**Mina Array Bea**	**2.93**	**47**		Pn	20 57 15.1	+0.1
RYN	**Ryan**	**2.95**	**41**		Pb	20 57 20.4	-0.5
RYN				IAML		20 58 00.4	
	comp=E,52nm,0.4s						
RYN				IAML		20 58 04.2	
	comp=N,37nm,0.6s						
MPK	**Martis Peak**	**2.96**	**15**		Pn	20 57 13.7	-1.7
GRAC	**Grapevine Rang**	**2.98**	**78**		Pn	20 57 14.8	-0.8
GRAC				IAML		20 58 07.9	
	comp=N,58nm,0.8s						
GRAC				IAML		20 58 21.8	
	comp=E,67nm,0.8s						
NV11	**Mina Array Sit**	**3.02**	**48**		Pb	20 57 22.5	+0.3
GMN	**Gold Mountain**	**3.13**	**73**		Pn	20 57 16.9	-0.9
GMN				IAML		20 58 08.5	
	comp=E,25nm,0.5s						
GMN				IAML		20 58 10.1	
	comp=N,35nm,0.6s						
MZP	**Montezuma Peak**	**3.17**	**65**		Pn	20 57 16.6	-1.6
QSM	**Queen of Sheba**	**3.39**	**97**		Pn	20 57 20.8	-0.3
QSM				IAML		20 58 22.2	
	comp=E,18nm,0.9s						
QSM				IAML		20 58 25.7	
	comp=N,21nm,1.0s						
TPH	**Tonopah**	**3.44**	**60**		Pn	20 57 20.9	-1.1
PAHR	**Pah Rah Range**	**3.51**	**21**		Pb	20 57 31.1	+0.7
PAHR				IAML		20 58 26.9	
	comp=E,22nm,1.3s						
GWY	**Greenwater Val**	**3.52**	**93**		Pn	20 57 22.2	-0.8
GWY				IAML		20 58 34.7	
	comp=E,27nm,0.9s						
GSC	**Goldstone, Bar**	**3.60**	**107**	Pn	Pn	20 57 21.4	-2.7
GSC				IAML		20 58 32.4	
	comp=N,24nm,0.9s						
GSC				IAML		20 58 33.9	
	comp=E,29nm,0.7s						
TPNV	**Topopah Spring**	**3.86**	**81**	Pn	Pn	20 57 27.8	0.0
TPNV				IAML		20 58 36.2	
	comp=E,17nm,0.8s						
TPNV				IAML		20 58 43.1	
	comp=E,19nm,1.8s						
R11B	**Troy Canyon, C**	**4.72**	**65**		Pn	20 57 40.6	+1.0
SPR3	**Spring Creek 3**	**5.88**	**62**		Pn	20 57 55.0	-0.6

*SJA **18** 21:01:30.5±0.6, 21°.46S×68°.67W, h139^{km}±4^{km}, ML3.5, MW3.5*

*GUC **18** 21:01:32.0±0.7, 21°.47S×68°.60W, h132^{km}±4^{km}, ML3.6*

ISC 18 21:01:31.1±1.7**, 21°.46S**±0°.03×**68°.7W**±0°.1**, h139**^{km}±11^{km}**, n26, σ0^{s}.39**/45**, 5C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.64**	**238**	⇑eP	**Pn**	**21 01 52.4**	**+0.2**
PB09				eS	**Sn**	**21 02 08.1**	**-0.2**
PB09				IAML		21 02 10.7	
	comp=E,908nm,0.3s						
PB09	**IPOC Station P**	**0.64**	**238**	i P	**Pn**	**21 01 52.2**	**0.0**
PB09				i S	**Sn**	**21 02 07.8**	**-0.4**
PB09				IAML		21 02 09.4	
	comp=Z,541nm,0.3s						
PB01	**IPOC Station P**	**0.87**	**298**	⇑eP	**Pn**	**21 01 53.8**	**0.0**
PB01				eS	**Sn**	**21 02 10.9**	**-0.2**
PB01				IAML		21 02 12.2	
	comp=N,3µm,0.3s						
PB01	**IPOC Station P**	**0.87**	**298**	i P	**Pn**	**21 01 53.6**	**-0.2**
PB01				i S	**Sn**	**21 02 11.1**	**-0.1**
PB01				IAML		21 02 12.1	
	comp=Z,703nm,0.2s						
PB03	**IPOC Station P**	**1.17**	**240**	⇑eP	**Pn**	**21 01 56.9**	**+0.3**
PB03				eS	**Sn**	**21 02 16.1**	**+0.1**
PB03				IAML		21 02 17.0	
	comp=E,533nm,0.1s						
PB03	**IPOC Station P**	**1.17**	**240**	i P	**Pn**	**21 01 56.9**	**+0.3**
PB03				i S	**Sn**	**21 02 16.1**	**+0.1**
PB03				IAML		21 02 17.1	
	comp=Z,452nm,0.1s						
PB08	**IPOC Station P**	**1.39**	**341**	⇓iP	**Pn**	**21 01 59.3**	**+0.2**
PB08				eS	**Sn**	**21 02 20.6**	**+0.1**
PB08				IAML		21 02 22.5	
	comp=N,510nm,0.3s						
PB08	**IPOC Station P**	**1.39**	**341**	i P	**Pn**	**21 01 59.2**	**+0.2**
PB08				i S	**Sn**	**21 02 20.5**	**+0.1**
PB08				IAML		21 02 22.3	
	comp=Z,312nm,0.5s						
PB06	**IPOC Station P**	**1.50**	**214**	⇑eP	**Pn**	**21 02 00.0**	**+0.1**
PB06				eS	**Sn**	**21 02 22.3**	**+0.2**
PB06				IAML		21 02 23.0	
	comp=E,903nm,0.2s						
PB06	**IPOC Station P**	**1.50**	**214**	i P	**Pn**	**21 02 00.1**	**+0.1**
PB06				i S	**Sn**	**21 02 22.7**	**+0.6**
PB06				IAML		21 02 26.2	
	comp=Z,323nm,0.2s						
AF01	**San Pedro de A**	**1.55**	**163**	IAML		21 02 44.9	
	comp=Z,219nm,1.4s						
HMBC	**Humberstone**	**1.64**	**316**	eP	**Pn**	**21 02 01.5**	**-0.1**
HMBC				eS	**Sn**	**21 02 24.8**	**-0.1**
HMBC				IAML		21 02 27.0	
	comp=E,1µm,0.4s						
HMBC	**Humberstone**	**1.64**	**316**	i P	**Pn**	**21 02 01.5**	**-0.1**
HMBC				i S	**Sn**	**21 02 24.7**	**-0.2**
HMBC				IAML		21 02 26.2	
	comp=Z,1µm,0.4s						
TA01	**Diego Aracena**	**1.68**	**302**	⇑eP	**Pn**	**21 02 01.9**	**+0.1**
TA01				eS	**Sn**	**21 02 25.3**	**+0.1**
TA01				IAML		21 02 27.2	
	comp=E,1µm,0.3s						
TA01	**Diego Aracena**	**1.68**	**302**	i P	**Pn**	**21 02 02.0**	**+0.3**
TA01				i S	**Sn**	**21 02 25.4**	**+0.2**
TA01				IAML		21 02 26.6	
	comp=Z,359nm,0.5s						
TA02	**Huaiquique**	**1.81**	**310**	eP	**Pn**	**21 02 03.3**	**-0.1**
TA02				eS	**Sn**	**21 02 27.7**	**-0.4**
TA02				IAML		21 02 31.5	
	comp=E,933nm,0.1s						
TA02	**Huaiquique**	**1.81**	**310**	IAML		21 02 30.0	
	comp=Z,491nm,0.1s						
GO01	**Chusmiza**	**1.85**	**344**	eP	**Pn**	**21 02 04.2**	**-0.2**
GO01				eS	**Sn**	**21 02 30.0**	**+0.2**
GO01				IAML		21 02 33.8	
	comp=N,1µm,0.1s						
GO01	**Chusmiza**	**1.85**	**344**	i P	**Pn**	**21 02 04.4**	**0.0**
GO01				i S	**Sn**	**21 02 29.6**	**-0.2**
GO01				IAML		21 02 32.2	
	comp=Z,207nm,0.5s						
PB11	**IPOC Station P**	**1.93**	**331**	eP	**Pn**	**21 02 04.7**	**-0.2**
PB11				eS	**Sn**	**21 02 30.8**	**0.0**
PB11				IAML		21 02 33.1	
	comp=E,891nm,0.3s						
PB05	**IPOC Station P**	**1.99**	**226**	eP	**Pn**	**21 02 05.8**	**+0.2**
PB05				eS	**Sn**	**21 02 31.6**	**-0.4**
PB05				IAML		21 02 36.3	
	comp=E,123nm,0.3s						
PB05	**IPOC Station P**	**1.99**	**226**	i P	**Pn**	**21 02 05.7**	**+0.2**
PB05				i S	**Sn**	**21 02 31.4**	**-0.6**
PB05				IAML		21 02 36.0	
	comp=Z,99nm,0.5s						
PB10	**IPOC Station P**	**2.69**	**220**	eP	**Pn**	**21 02 14.3**	**+0.2**
PB10				IAML		21 02 50.1	
	comp=E,64nm,0.3s						
PB14	**IPOC Station P**	**3.54**	**207**	i P	**Pn**	**21 02 25.4**	**+0.2**
PB14				i S	**Sn**	**21 03 06.8**	**-0.4**
PB14				IAML		21 03 07.7	
	comp=Z,76nm,0.3s						
GO02	**Mina Guanaco**	**3.78**	**193**	IAML		21 03 16.5	
	comp=Z,58nm,0.3s						
AC02	**Maricunga**	**5.37**	**184**	i P	**Pn**	**21 02 50.7**	**+1.0**
AC02				i S	**Sn**	**21 03 49.2**	**-1.7**
AC02				IAML		21 04 25.0	
	comp=Z,14nm,0.6s						

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*NEIC **18** 21:26:24.4±1.2, 4°.78S±0°.09×152°.87E±0°.10, h64^{km}±8^{km}, mb4.6/25, Error ellipse: s-maj=16.4km s-min=10.8km az=50.0*

*IDC **18** 21:26:24.3±4.5, 4°.82S×152°.91E, h68^{km}±41^{km}, mb3.9/10, mbtmp4.2/11, ML2.5/1, Error ellipse: s-maj=24.5km s-min=22.2km az=74.0*

ISC 18 21:26:21.8±0.7**, 4°.79S**±0°.07×**152°.95E**±0°.09**, h43**^{km}**, n46, σ1^{s}.14**/45**, mb4.6**/21**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**0.98**	**307**		**Pn**	**21 26 41.1**	**+1.9**
RABL				Sn	**Sn**	**21 26 54.1**	**+2.1**
MANU	**Manus Island**	**6.21**	**296**		**Pn**	**21 27 51.0**	**+0.1**
PMG	**Port Moresby**	**7.35**	**231**		**Pn**	**21 28 08.8**	**+2.1**
PMG	**Port Moresby**	**7.35**	**231**	P	**Pn**	**21 28 09.8**	**+3.1**
	4.4nm,0.3s,baz=47,slow=18,SNR=6.5						
PMG				S	**Sn**	**21 29 28.2**	**-0.6**
	52nm,0.4s,baz=116,slow=12,SNR=9.3						
	9.5nm,0.3s						
FAKI	**Fak Fak**	**20.74**	**274**	P	**P**	**21 30 58.4**	**-0.6**
FAKI				IAmb	IAmb	21 31 02.2	
	comp=Z,57nm,1.3s						
DZM	**Mont Dzumac**	**21.59**	**144**	P	**P**	**21 31 10.5**	**+2.3**
DZM				IAmb	IAmb	21 31 34.9	
	comp=Z,24nm,1.5s						
DZM	**Mont Dzumac**	**21.59**	**144**	P	**P**	**21 31 09.9**	**+1.8**
	comp=Z,5.2nm,0.6s,baz=327,slow=17,SNR=9.7						
	comp=Z,5.2nm,0.6s						
PINNC	**Pines Island,**	**22.59**	**143**	P	**P**	**21 31 20.5**	**+1.7**
PINNC				IAmb	IAmb	21 31 37.9	
	comp=Z,38nm,1.4s						
MTN	**Manton Dam**	**22.98**	**248**	P	**P**	**21 31 21.9**	**-1.0**
MTN				IAmb	IAmb	21 31 26.1	
	comp=Z,39nm,1.2s						
WB0	**Warramunga Arr**	**23.42**	**229**	P	**P**	**21 31 26.5**	**-0.8**
WB0				IAmb	IAmb	21 31 28.8	
	comp=Z,17nm,0.7s						
WRA	**Warramunga Arr**	**23.56**	**229**	P	**P**	**21 31 27.2**	**-1.4**
WRA	**Warramunga Arr**	**23.56**	**229**	P	**P**	**21 31 28.0**	**-0.6**
	comp=Z,15nm,0.4s,baz=53,slow=9.8,SNR=145						
	comp=Z,15nm,0.4s						
KNRA	**Kununurra**	**26.11**	**244**		**P**	**21 31 50.9**	**-1.0**
KNRA				IAmb	IAmb	21 31 56.1	
	comp=Z,31nm,1.1s						
AS31	**Alice Springs**	**26.26**	**223**		**P**	**21 31 52.9**	**-0.3**
ASAR	**Alice Springs**	**26.26**	**223**	P	**P**	**21 31 52.4**	**-0.9**
ASAR	**Alice Springs**	**26.26**	**223**	P	**P**	**21 31 53.0**	**-0.2**
	comp=Z,1.8nm,0.5s,baz=55,slow=9.1,SNR=38						
	comp=Z,1.8nm,0.5s						
H11N1	**WAKE ISLAND Hy**	**27.95**	**29**	T	T	22 01 13.0	
	baz=220						
H11N3	**WAKE ISLAND Hy**	**27.96**	**29**	T	T	22 01 18.1	
	baz=220,slow=74						
H11N2	**WAKE ISLAND Hy**	**27.96**	**29**	T	T	22 01 18.5	
	baz=220,slow=74						
STKA	**Stephens Creek**	**28.98**	**200**	P	**P**	**21 32 17.2**	**-0.2**
	comp=Z,2.0nm,1.0s,baz=24,slow=10.0,SNR=2.9						
	comp=Z,2.0nm,1.0s						
FITZ	**Fitzroy Crossi**	**29.79**	**241**	P	**P**	**21 32 23.9**	**-0.9**
MBWA	**Marble Bar**	**36.10**	**240**	P	**P**	**21 33 18.9**	**-0.9**
PSA00	**Pilbara Seismi**	**36.16**	**239**	P	**P**	**21 33 18.9**	**-1.4**
GIRL	**Giralia**	**41.40**	**241**	P	**P**	**21 34 03.8**	**-0.5**
MORW	**Morawa**	**42.47**	**231**	P	**P**	**21 34 11.6**	**-1.3**
MORW				IAmb	IAmb	21 34 38.0	
	comp=Z,23nm,1.4s						
PETK	**Petropavlovsk-**	**57.82**	**3**	P	**P**	**21 36 09.2**	**+0.4**
	comp=Z,4.9nm,0.9s,baz=184,slow=6.8,SNR=2.8						
	comp=Z,4.9nm,0.9s						
CMAR	**Chiang Mai Arr**	**58.01**	**295**	P	**P**	**21 36 11.6**	**+0.9**
	comp=Z,2.1nm,0.7s,baz=117,slow=5.6,SNR=15						
	comp=Z,2.1nm,0.7s						
VNDA	**Vanda**	**72.83**	**178**	P	**P**	**21 37 44.6**	**-1.0**
VNDA				IAmb	IAmb	21 37 45.2	
	comp=Z,3.7nm,0.6s						
K15K	**Wolf Creek Mou**	**75.34**	**20**	P	**P**	**21 38 00.9**	**+0.5**
K15K				IAmb	IAmb	21 38 21.9	
	comp=Z,12nm,1.4s						
OHAK	**Old Harbor**	**75.47**	**27**	P	**P**	**21 38 01.3**	**+0.1**
J16K	**Anvik River**	**76.33**	**20**	P	**P**	**21 38 05.9**	**-0.1**
J16K				IAmb	IAmb	21 38 17.1	
	comp=Z,7.1nm,1.2s						
P19K	**Oil Pt**	**76.86**	**25**	P	**P**	**21 38 08.8**	**-0.3**
SUA	**Susitna One**	**78.89**	**24**	P	**P**	**21 38 19.8**	**-0.7**
J20K	**Nowinta River**	**79.12**	**21**	P	**P**	**21 38 22.0**	**+0.5**
CAST	**Castle Rocks**	**79.44**	**22**	P	**P**	**21 38 22.7**	**-0.7**
SML	**Sawmill**	**80.05**	**24**	P	**P**	**21 38 27.0**	**+0.2**
SML				IAmb	IAmb	21 38 27.5	
	comp=Z,4.7nm,0.6s						
IMAR	**Indian Mountai**	**80.32**	**19**	P	**P**	**21 38 28.1**	**0.0**
MKAR	**Makanchi Array**	**80.42**	**319**	P	**P**	**21 38 29.2**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=98,slow=7.1,SNR=5.8						
	comp=Z,0.3nm,0.5s						
MLY	**Manley**	**80.82**	**21**	P	**P**	**21 38 30.7**	**-0.1**
MLY				IAmb	IAmb	21 38 31.4	
	comp=Z,3.5nm,0.5s						
ILAR	**Eielson Array**	**82.09**	**22**	P	**P**	**21 38 36.0**	**-1.4**
	comp=Z,1.1nm,0.7s,baz=241,slow=5.9,SNR=14						
	comp=Z,1.1nm,0.7s						
J25K	**Salcha River,**	**82.59**	**22**	P	**P**	**21 38 39.7**	**-0.5**
J25K				IAmb	IAmb	21 38 40.5	
	comp=Z,3.5nm,0.6s						
BCAR	**Beaver Creek A**	**83.34**	**25**	P	**P**	**21 38 44.1**	**0.0**
BMAR	**Burnt Mountain**	**84.19**	**20**	P	**P**	**21 38 48.9**	**+0.6**
QSPA	**South Pole Qui**	**85.17**	**180**	P	**P**	**21 38 53.2**	**-0.2**
	comp=Z,1.4nm,1.1s,baz=144,slow=7.3,SNR=2.2						
	comp=Z,1.4nm,1.1s						
BVAR	**Borovoye Array**	**89.32**	**323**	P	**P**	**21 39 12.7**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=95,slow=5.2,SNR=6.8						
	comp=Z,0.6nm,0.5s						
EKA	**Eskdalemuir Ar**	**126.06**	**343**	PKP	**PKPdf**	**21 45 18.1**	**-1.2**
	comp=Z,0.4nm,0.5s,baz=35,slow=3.0,SNR=3.9						

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*SDD **18** 21:33:00.1±2.6, 19°.61N×69°.96W, h19^{km}±10^{km}, MD3.4, ML3.7, MW3.7*

*OSPL **18** 21:33:02.1±3.9, 19°.54N×70°.03W, h0^{km}±16^{km}, ML3.3*

ISC 18 21:32:58.2±0.9**, 19°.65N**±0°.03×**69°.92W**±0°.03**, h25**^{km}±6^{km}**, n35, σ1^{s}.55**/60**, 21C-7D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CADR	**Cabrera**	**0.02**	**317**	⇑ePg	**Pb**	**21 33 02.5**	**+0.1**
CADR				⇓eSg	**Sb**	**21 33 05.8**	**+0.4**
CADR				IAML		21 33 06.1	
	comp=N,16µm,0.3s						
LONA1	**Toro Cenizo, N**	**0.27**	**168**	i P	**Pb**	**21 33 04.8**	**-0.1**
LONA1				eS	**Sb**	**21 33 08.7**	**-0.7**
LONA1				IAML		21 33 09.5	
	comp=Z,3µm,0.1s						
NADR	**Nagua**	**0.30**	**168**	⇓ePg	**Pb**	**21 33 05.1**	**-0.2**
NADR				⇑eSg	**Sb**	**21 33 10.0**	**0.0**
NADR				IAML		21 33 13.7	
	comp=N,10µm,0.3s						
SODR	**Sosua Marina B**	**0.62**	**280**	⇑ePg	**Pn**	**21 33 11.6**	**+0.1**
SODR				IAML		21 33 32.3	
	comp=N,3µm,0.5s						
DR08	**Loma La Naviza**	**0.69**	**188**	⇑ePg	**Pb**	**21 33 10.9**	**-0.8**
DR08				⇑eSg	**Sb**	**21 33 21.0**	**+0.2**
DR08				IAML		21 33 21.3	
	comp=N,64µm,0.1s						
SMDR	**Samana, DR**	**0.78**	**117**	⇓ePg	**Pn**	**21 33 14.4**	**+0.8**
SMDR				IAML		21 33 31.7	
	comp=N,959nm,0.5s						
SC01	**Santiago de lo**	**0.79**	**254**	⇑ePg	**Pn**	**21 33 13.5**	**-0.3**
SC01				IAML		21 33 33.6	
	comp=N,4µm,0.4s						
SC01	**Santiago de lo**	**0.79**	**254**	i P	**Pn**	**21 33 13.7**	**-0.1**
SC01				eS	**Sn**	**21 33 23.8**	**-1.0**
SC01				IAML		21 33 33.9	
	comp=Z,2µm,0.8s						
HATOM	**Hato Mayor del**	**1.00**	**149**	⇑ePg	**Pb**	**21 33 16.7**	**-0.2**
HATOM				⇑eSg	**Sn**	**21 33 31.2**	**+1.2**
HATOM				IAML		21 33 31.4	
	comp=N,1µm,0.4s						
LUDR	**Luperon**	**1.00**	**284**	⇓ePg	**Pn**	**21 33 17.5**	**+0.9**
LUDR				⇓eSg	**Sn**	**21 33 32.9**	**+2.9**
LUDR				IAML		21 33 36.5	
	comp=N,5µm,0.3s						
MIDR	**Miches**	**1.06**	**129**	⇓ePg	**Pb**	**21 33 18.8**	**+1.0**
MIDR				⇑eSg	**Sn**	**21 33 34.2**	**+2.9**
MIDR				IAML		21 33 35.5	
	comp=N,672nm,0.1s						
ABDR	**Alto Bandera**	**1.07**	**219**	⇑ePg	**Pb**	**21 33 16.6**	**-1.6**
ABDR				⇑eSg	**Sn**	**21 33 31.3**	**-0.8**
ABDR				IAML		21 33 36.4	
	comp=N,2µm,0.2s						
SDD	**Santo Domingo**	**1.19**	**180**	⇑ePg	**Pn**	**21 33 18.9**	**-0.3**
SDD				⇑eSg	**Sn**	**21 33 35.2**	**+0.7**
SDD				IAML		21 33 35.9	
	comp=N,225nm,0.2s						
SDD	**Santo Domingo**	**1.19**	**180**	i P	**Pb**	**21 33 19.9**	**-0.2**
SDD				eS	**Sn**	**21 33 35.1**	**+0.5**
LOSC1	**San Cristbal**	**1.25**	**188**	i P	Pb	21 33 35.1	+14
LOSC1				eS	Sn	21 33 50.8	+15
BANI	**BANI**	**1.32**	**198**	⇑ePg	**Pb**	**21 33 21.4**	**-0.9**
BANI				IAML		21 33 40.5	
	comp=N,4µm,0.2s						
SDDR	**Presa de Saban**	**1.45**	**243**	eP	**Pb**	**21 33 23.4**	**-1.2**
SDDR				eS	**Sn**	**21 33 39.9**	**-1.3**
SDDR				IAML		21 33 45.1	
	comp=N,467nm,0.5s						
SDDR				IAML		21 33 47.3	
	comp=N,379nm,0.3s						
SDDR	**Presa de Saban**	**1.45**	**243**	⇑ePg	**Pb**	**21 33 23.8**	**-0.8**
SDDR				⇑eSg	**Sb**	**21 33 43.1**	**+0.4**
SDDR				IAML		21 33 43.3	
	comp=N,399nm,0.8s						
SDDR	**Presa de Saban**	**1.45**	**243**	i P	**Pb**	**21 33 23.8**	**-0.8**
SDDR				eS	**Sb**	**21 33 42.5**	**-0.2**
SDDR				IAML		21 33 47.1	
	comp=Z,320nm,0.6s						
REDR	**Restauracion**	**1.47**	**251**	⇑ePg	**Pb**	**21 33 28.1**	**+3.2**
REDR				⇑eSg	**Sb**	**21 33 49.8**	**+6.7**
REDR				IAML		21 33 52.5	
	comp=N,1µm,0.2s						
MCDR	**Montecristi**	**1.65**	**279**	⇑ePg	**Pb**	**21 33 27.5**	**-0.5**
MCDR				IAML		21 34 04.9	
	comp=N,458nm,0.3s						
LODA1	**ITESIL, Dajabo**	**1.68**	**267**	⇓eSg	**Sb**	**21 33 50.3**	**+1.0**
LODA1				IAML		21 33 53.3	
	comp=N,3µm,4.3s						
LODA1	**ITESIL, Dajabo**	**1.68**	**267**	i P	**Pb**	**21 33 29.1**	**+0.5**
LODA1				IAML		21 33 49.8	
	comp=Z,932nm,1.2s						
LODA1				eS	**Sb**	**21 33 50.2**	**+1.0**
LODU1	**El Espartillar**	**1.95**	**229**	i P	**Pb**	**21 33 33.1**	**-0.1**
PODR	**Polo**	**1.96**	**221**	⇑ePg	**Pb**	**21 33 32.8**	**-0.5**
PODR				⇑eSg	**Sb**	**21 33 58.9**	**+1.5**
PODR				IAML		21 34 08.2	
	comp=N,405nm,1.1s						
PODR	**Polo**	**1.96**	**221**	i P	**Pb**	**21 33 32.9**	**-0.5**
PODR				eS	**Sb**	**21 33 59.9**	**+2.5**
GRTK	**Grand Turk**	**2.17**	**329**	eP	**Pb**	**21 33 36.0**	**-0.8**
GRTK				eS	**Sb**	**21 34 04.4**	**+1.0**
GRTK				IAML		21 34 07.6	
	comp=N,280nm,0.2s						
GRTK				IAML		21 34 08.0	
	comp=N,263nm,0.4s						
LOBH	**Bahia de las A**	**2.41**	**223**	i P	**Pb**	**21 33 40.4**	**-0.5**
CRPR	**Cabo Rojo, PR**	**3.13**	**121**	i P	**Pb**	**21 33 51.7**	**-1.4**
CRPR				eS	**Sb**	**21 34 28.8**	**-2.0**
CRPR				IAML		21 34 46.4	
	comp=Z,153nm,1.1s						
MASC	**Masc**	**4.09**	**278**	eP	**Pn**	**21 33 58.5**	**-0.7**
MASC				eS	**Sn**	**21 34 45.3**	**-0.8**
MASC				IAML		21 34 53.3	
	comp=N,11nm,0.3s						
MASC				IAML		21 34 53.6	
	comp=E,15nm,0.6s						
QMBU	**Quimbuelo**	**4.63**	**278**	eP	**Pn**	**21 34 05.9**	**-0.8**
QMBU				eS	**Sn**	**21 34 57.2**	**-2.5**
QMBU				IAML		21 35 16.3	
	comp=E,41nm,1.1s						
QMBU				IAML		21 35 20.1	
	comp=N,41nm,0.4s						
NMDO	**Nuevo Mundo**	**4.84**	**282**	eP	**Pn**	**21 34 06.8**	**-2.7**
NMDO				eS	**Sn**	**21 35 01.9**	**-2.8**
NMDO				IAML		21 35 03.9	
	comp=E,7.8nm,0.3s						
NMDO				IAML		21 35 05.4	
	comp=N,9.7nm,0.2s						
GTBY	**Guantanamo Bay**	**4.89**	**274**	eP	**Pn**	**21 34 10.2**	**0.0**
GTBY				eS	**Sn**	**21 35 04.3**	**-1.8**
GTBY				IAML		21 35 10.3	
	comp=N,24nm,0.0s						
GTBY				IAML		21 35 24.2	
	comp=N,54nm,3.4s						
RCC	**Rio Carpintero**	**5.45**	**275**	eP	**Pn**	**21 34 17.5**	**-0.3**
RCC				eS	**Sn**	**21 35 19.6**	**-0.1**
RCC				IAML		21 35 26.1	
	comp=E,9.6nm,1.4s						
RCC				IAML		21 35 29.5	
	comp=N,15nm,1.4s						
YAR	**Yar**	**6.09**	**278**	eP	**Pn**	**21 34 27.6**	**+0.9**
YAR				eS	**Sn**	**21 35 35.2**	**-0.5**

IDC 18 21:48:06.2±1.7**, 30°.02S**×**178°.09W, h0**^{km}**, mb4.0**/3**, mbtmp4.0**/3**, Error ellipse: s-maj=51.5km s-min=36.5km az=36.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.05**	**267**	P	P	21 56 07.6	-0.4
	1.0nm,0.7s,baz=111,slow=7.4,SNR=8.7						
	1.0nm,0.7s						
WRA	**Warramunga Arr**	**44.01**	**272**	P	P	21 56 15.9	+0.2
	1.7nm,0.6s,baz=112,slow=7.8,SNR=23						
	1.7nm,0.6s						
QSPA	**South Pole Qui**	**60.08**	**180**	P	P	21 58 15.0	0.0
	1.4nm,0.6s,baz=18,slow=0.3,SNR=6.8						
	1.4nm,0.6s						
FINES	**FINESS Array B**	**144.77**	**340**	PKP	PKPbc	22 07 43.3	0.0
	1.5nm,0.6s,baz=26,slow=3.4,SNR=10						
HFS	**Hagfors**	**148.86**	**349**	PKPbc	PKPbc	22 07 54.7	-0.5
	0.8nm,0.7s,baz=35,slow=5.3,SNR=4.1						

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*IDC **18** 21:53:58.4±1.0, 13°.83N×56°.60E, h0^{km}, mb3.7/17, mbtmp3.7/17, ML1.4/1, MS3.4/9, Error ellipse: s-maj=26.5km s-min=18.3km az=30.0*

ISC 18 21:54:01.7±1.0**, 13°.9N**±0°.2×**56°.6E**±0°.1**, h20**^{km}**, n28, σ0^{s}.53**/20**, mb3.8**/17**, MS3.5**/9**, Socotra region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**9.50**	**11**	Pn	**Pn**	**21 56 16.7**	**-0.8**
	baz=27,slow=24,SNR=2.3						
PALK	**Pallekele**	**24.57**	**103**	LR	LR	22 07 11.3	
	comp=Z,47nm,19.7s,baz=20,slow=32						
KBZ	**Khabaz**	**31.98**	**341**	LR	LR	22 16 42.2	
	comp=Z,98nm,18.6s,baz=176,slow=43						
AAK	**Ala-Archa**	**32.55**	**25**	LR	LR	22 13 58.8	
	comp=Z,59nm,19.4s,baz=241,slow=37						
BRTR	**Keskin Array B**	**32.71**	**326**	P	**P**	**22 00 33.5**	**+0.3**
	0.2nm,0.7s,baz=126,slow=6.3,SNR=4.4						
	0.2nm,0.7s						
OPO	**Ambohidratompo**	**33.56**	**196**	LR	LR	22 10 56.7	
	comp=Z,127nm,18.2s,baz=174,slow=30						
AKTO	**Aktyubinsk**	**36.47**	**2**	P	**P**	**22 01 06.9**	**+1.6**
	1.4nm,0.8s,baz=188,slow=7.9,SNR=4.9						
AKTO				LR	LR	22 16 04.1	
	comp=Z,80nm,18.7s,baz=292,slow=36						
	1.4nm,0.8s						
MKAR	**Makanchi Array**	**39.23**	**28**	P	**P**	**22 01 28.5**	**-0.3**
	0.4nm,0.8s,baz=213,slow=8.7,SNR=2.5						
MKAR				LR	LR	22 18 40.9	
	comp=Z,61nm,18.3s,baz=131,slow=38						
	0.4nm,0.8s						
KURBB	**Kurchatov Arra**	**40.74**	**21**	P	**P**	**22 01 40.8**	**-0.4**
	0.2nm,0.3s,baz=219,slow=7.9,SNR=4.1						
	0.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**40.85**	**78**	P	**P**	**22 01 42.6**	**+0.1**
	0.3nm,0.3s,baz=268,slow=8.3,SNR=1.6						
CMAR				LR	LR	22 18 48.0	
	comp=Z,10nm,19.6s,baz=265,slow=36						
	0.3nm,0.3s						
AKASG	**Malin Array Be**	**42.91**	**335**	P	**P**	**22 01 58.7**	**-0.2**
	0.8nm,0.6s,baz=147,slow=7.6,SNR=6.0						
	0.8nm,0.6s						
OBN	**Obninsk**	**44.00**	**344**	LR	LR	22 23 23.9	
	comp=Z,131nm,19.1s,baz=176,slow=40						
ZALV	**Zalesovo Beam**	**45.72**	**23**	P	**P**	**22 02 21.5**	**+0.2**
	0.5nm,0.3s,baz=210,slow=8.6,SNR=3.6						
ZALV				LR	LR	22 22 15.5	
	comp=Z,52nm,20.9s,baz=142,slow=37						
	0.5nm,0.3s						
GERES	**GERESS Array B**	**49.54**	**324**	P	**P**	**22 02 51.1**	**-0.1**
	0.3nm,0.7s,baz=128,slow=8.3,SNR=2.4						
	0.3nm,0.7s						
FINES	**FINESS Array B**	**52.33**	**342**	P	**P**	**22 03 12.2**	**+0.3**
	3.0nm,0.7s,baz=132,slow=8.9,SNR=11						
	3.0nm,0.7s						
SONM	**Songino Array**	**53.23**	**40**	P	**P**	**22 03 19.2**	**+0.2**
	0.2nm,0.3s,baz=242,slow=9.3,SNR=1.7						
	0.2nm,0.3s						
TORD	**Torodi Ar. Bea**	**53.29**	**276**	P	**P**	**22 03 19.5**	**-0.3**
	26nm,0.3s,baz=74,slow=5.5,SNR=0.9						
HFS	**Hagfors**	**55.77**	**336**	P	**P**	**22 03 36.7**	**-0.4**
	1.9nm,0.9s,baz=128,slow=7.9,SNR=2.0						
	1.9nm,0.9s						
NOA	**NORSAR Array B**	**57.30**	**336**	P	**P**	**22 03 47.4**	**-0.6**
	1.0nm,1.0s,baz=125,slow=7.2,SNR=2.7						
	1.0nm,1.0s						
ESDC	**Sonseca Array**	**58.67**	**308**	P	**P**	**22 03 58.3**	**+0.3**
	1.5nm,0.7s,baz=80,slow=5.9,SNR=15						
	1.5nm,0.7s						
ARCES	**ARCESS Array B**	**58.95**	**348**	P	**P**	**22 03 59.0**	**-0.4**
	1.7nm,0.9s,baz=149,slow=5.7,SNR=6.3						
	1.7nm,0.9s						
EKA	**Eskdalemuir Ar**	**61.63**	**326**	P	**P**	**22 04 17.7**	**-0.3**
	0.5nm,0.6s,baz=106,slow=6.2,SNR=4.1						
	0.5nm,0.6s						
H01W3	**Cape Leeuwin H**	**72.97**	**133**	T	T	23 25 02.9	
	baz=302,slow=76,SNR=33						
H01W2	**Cape Leeuwin H**	**72.98**	**134**	T	T	23 25 03.4	
	baz=302,slow=76,SNR=29						
H01W1	**Cape Leeuwin H**	**72.99**	**133**	T	T	23 25 04.2	
	baz=302,slow=76,SNR=26						
WRA	**Warramunga Arr**	**83.50**	**112**	P	**P**	**22 06 28.6**	**-0.2**
	1.4nm,0.8s,baz=299,slow=4.1,SNR=7.1						
	1.4nm,0.8s						
ASAR	**Alice Springs**	**84.23**	**116**	P	**P**	**22 06 32.2**	**-0.2**
	1.1nm,0.7s,baz=282,slow=4.6,SNR=10.0						
	1.1nm,0.7s						
PDAR	**Pinedale Array**	**122.21**	**348**	PKP	**PKiKP**	**22 12 56.4**	**+0.3**
	0.4nm,0.6s,baz=301,slow=3.4,SNR=2.1						

HEL 18 22:08:30.1±0.2**, 67°.86N**×**34°.07E, h0**^{km}**, ML1.4, Explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVZ	**Lovozero**	**0.22**	**80**	PG	Pg	22 08 34.0	-0.4
LVZ				SG	Sg	22 08 37.5	+0.3
VRF	**Varrio**	**1.70**	**268**	PN	Pn	22 09 00.9	0.0
	baz=80						
VRF				MSG		22 09 20.9	
	comp=Z,1.4nm,0.2s						
VRF				SN	Sn	22 09 22.5	-0.8
RAJF	**Raja-Jooseppi**	**2.24**	**289**	PG	Pb	22 09 10.2	-1.1
RAJF				SG	Sb	22 09 39.0	-0.6
OLKF	**Oulanka, Finla**	**2.39**	**232**	PN	Pn	22 09 10.1	-0.4
OLKF				MSG		22 09 40.8	
	comp=Z,0.7nm,0.2s						
OLKF				SB	Sn	22 09 41.3	+0.9
KU6	**Riekki**	**2.47**	**224**	PN	Pn	22 09 11.6	0.0

KU6				MSG		22 09 42.9	
	comp=Z,5.7nm,0.2s						
KTK1	**Kautokeino**	**4.16**	**291**	PG	Pb	22 09 44.5	+0.4
KTK1				SG	Sg	22 10 39.5	-4.2

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*KRNET **18** 22:13:04.6±0.1, 40°.30N×77°.53E, h19^{km}, mb3.1*
*SOME **18** 22:13:06.5, 40°.30N×77°.55E, h10^{km}*
*NNC **18** 22:13:09.1±0.7, 40°.40N×77°.59E, h0^{km}, mb3.5, mpv3.4, Error ellipse: s-maj=5.2km s-min=4.5km az=148.0*
ISC 18 22:13:00.4±2.2, **40°.13N**±0°.09×**77°.61E**±0°.05, **h10**^{km}, **n41**, σ**1^{s}39**/61, **10C-24D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.61**	**5**	⇓*i*P	**Pg**	**22 13 32.0**	**+0.8**
TARG				⇓*i*S	**Sg**	**22 13 51.5**	**-0.6**
NRN	**Naryn**	**1.79**	**317**	⇓*i*P	**Pg**	**22 13 35.3**	**+0.7**
NRN				⇓*i*S	**Sg**	**22 13 57.7**	**-0.1**
KDJ	**Kajisay**	**2.03**	**351**	⇓*i*P	**Pb**	**22 13 38.9**	**+1.5**
KDJ				⇓*i*S	**Sg**	**22 14 03.8**	**-1.7**
ULHL	**Ulahol**	**2.35**	**335**	⇓*i*P	**Pb**	**22 13 44.3**	**+1.3**
ULHL				⇓*i*S	**Sb**	**22 14 12.9**	**+0.7**
PRZ	**Przheval'sk**	**2.43**	**14**	⇓*i*P	**Pb**	**22 13 45.4**	**+1.1**
PRZ				⇓*i*S	**Sb**	**22 14 16.0**	**+1.7**
BOOM	**Boomskoye usch**	**2.67**	**333**	⇓*i*P	**Pb**	**22 13 48.7**	**+0.3**
BOOM				⇓*i*S	**Sb**	**22 14 20.7**	**-0.7**
SALK	**Salom-Alik**	**2.98**	**286**	⇓*e*P	**Pb**	**22 13 53.5**	**-0.2**
SALK				⇓*e*S	**Sb**	**22 14 29.8**	**-0.4**
SATY	**Saty**	**2.99**	**11**	Pg	**Pg**	**22 13 59.1**	**+1.4**
SATY				Lg	Lg	22 14 37.3	
	28nm,0.3s						
ARLS	**Aral**	**3.03**	**306**	⇑*e*P	**Pb**	**22 13 53.8**	**-0.7**
ARLS				⇑*e*S	**Sb**	**22 14 29.1**	**-2.5**
MDOK	**Medeo**	**3.06**	**352**	⇑Pn	**Pb**	**22 13 55.5**	**+0.5**
	10nm,0.7s						
MDOK				Pg	**Pg**	**22 13 59.5**	**+0.5**
	6.0nm,0.2s						
MDOK				Lg	Lg	22 14 37.7	
	37nm,0.6s						
MDOK				⇑Lg	Lg	22 14 38.4	
	36nm,0.6s						
AAA	**Alma-Ata**	**3.12**	**351**	Pg	**Pg**	**22 14 01.7**	**+1.5**
	15nm,0.1s						
AAA				Lg	Lg	22 14 41.6	
	63nm,0.4s						
AAA	**Alma-Ata**	**3.12**	**351**	*e*P	**Pg**	**22 14 01.7**	**+1.5**
	15nm,0.1s						
AAA				*e*S	**Sg**	**22 14 41.6**	**+1.0**
	63nm,0.4s						
KNDC	**Almaty**	**3.12**	**351**	⇑Pn	**Pb**	**22 13 56.3**	**+0.3**
	11nm,0.3s						
KNDC				⇑Lg	Lg	22 14 40.2	
	55nm,0.6s						
KOTS	**Kotyrbulak**	**3.13**	**353**	*e*P	**Pg**	**22 14 01.4**	**+1.1**
	8.0nm,0.2s						
KOTS				*e*S	**Sg**	**22 14 40.8**	**0.0**
	50nm,0.5s						
MTBS	**Maitube**	**3.13**	**344**	Pg	**Pg**	**22 14 00.9**	**+0.6**
	4.1nm,0.1s						
MTBS				Lg	Lg	22 14 40.6	
	16nm,0.3s						
MTBS	**Maitube**	**3.13**	**344**	*e*P	**Pg**	**22 14 00.9**	**+0.6**
	4.1nm,0.1s						
MTBS				*e*S	**Sg**	**22 14 40.6**	**-0.2**
	16nm,0.3s						
KST	**Kastek**	**3.16**	**338**	Pg	**Pg**	**22 14 02.0**	**+1.0**
	2.4nm,0.4s						
KST				Lg	Lg	22 14 42.3	
	28nm,0.3s						
KST	**Kastek**	**3.16**	**338**	*e*P	**Pg**	**22 14 02.0**	**+1.0**
	2.4nm,0.4s						
KST				*e*S	**Sg**	**22 14 42.3**	**+0.3**
	28nm,0.3s						
TKM2	**Tokmak 2**	**3.17**	**332**	⇑Pn	**Pb**	**22 13 57.4**	**+0.4**
	4.5nm,0.6s						
TKM2				⇓Lg	Lg	22 14 42.6	
	17nm,0.6s						
TKM2	**Tokmak 2**	**3.17**	**332**	⇓*i*P	**Pb**	**22 13 55.6**	**-1.3**
TKM2				⇓*i*S	**Sb**	**22 14 32.8**	**-3.0**
UZB	**Uzynbulak**	**3.20**	**19**	Pg	**Pg**	**22 14 01.8**	**+0.1**
	4.4nm,0.2s						
UZB				Lg	Lg	22 14 41.8	
	9.5nm,0.5s						
KURS	**Kuram**	**3.38**	**7**	Pg	**Pg**	**22 14 06.1**	**+0.9**
	3.8nm,0.6s						
KURS				Lg	Lg	22 14 49.2	
	9.7nm,0.9s						
AAK	**Ala-Archa**	**3.43**	**318**	⇓Pn	**Pb**	**22 14 02.0**	**+0.7**
	1.6nm,0.8s						
AAK				⇓Lg	Lg	22 14 51.7	
	3.6nm,0.6s						
PDGK	**Podgornoye**	**3.50**	**23**	⇑Pn	**Pb**	**22 14 01.0**	**-1.4**
	4.5nm,0.5s						
PDGK				⇓Lg	Lg	22 14 51.5	
	20nm,0.7s						
AML	**Almayashu**	**3.57**	**305**	⇓*i*P	**Pb**	**22 14 01.9**	**-1.9**
AML				⇓*i*S	**Sn**	**22 14 43.4**	**+4.8**
CHMS	**Chumysh**	**3.58**	**324**	⇑Pn	**Pb**	**22 14 02.8**	**-1.0**
	2.4nm,0.6s						
CHMS				⇓Lg	Lg	22 14 53.5	
	12nm,0.5s						
KTBS	**Karatobe**	**3.65**	**349**	Pg	**Pg**	**22 14 10.3**	**+0.1**
	3.6nm,0.5s						
KTBS				Lg	Lg	22 14 56.6	
	26nm,0.3s						
KRBS	**Karabastau**	**3.85**	**339**	Pg	**Pg**	**22 14 14.0**	**-0.1**
	3.8nm,0.4s						
KRBS				Lg	Lg	22 15 02.7	
	14nm,0.6s						
KUU	**Kurty**	**3.88**	**346**	Pg	**Pg**	**22 14 13.3**	**-1.3**
	3.0nm,0.1s						
KUU				Lg	Lg	22 15 01.5	
	18nm,0.3s						
KUU	**Kurty**	**3.88**	**346**	*e*P	**Pg**	**22 14 13.3**	**-1.3**
	3.0nm,0.1s						
KUU				*e*S	**Sg**	**22 15 01.5**	**-3.5**
	18nm,0.3s						
BLB	**Baldybastay**	**4.02**	**9**	Pg	**Pg**	**22 14 17.4**	**0.0**
	6.0nm,0.2s						
BLB				Lg	Lg	22 15 08.5	
	20nm,0.5s						
ARXS	**Arharly**	**4.09**	**2**	Pg	**Pg**	**22 14 18.1**	**-0.5**
	4.2nm,0.4s						
ARXS				Lg	Lg	22 15 09.8	
	20nm,0.5s						
MRKS	**Merke**	**4.21**	**310**	Pg	**Pg**	**22 14 20.5**	**-0.4**
	0.7nm,0.1s						
MRKS				Lg	Lg	22 15 14.3	
	5.4nm,0.4s						
MRKS	**Merke**	**4.21**	**310**	*e*P	**Pg**	**22 14 20.5**	**-0.4**
	0.7nm,0.1s						
MRKS				*e*S	**Sg**	**22 15 14.3**	**-1.0**
	5.4nm,0.4s						
DJR	**Jarkent**	**4.50**	**20**	Pg	**Pg**	**22 14 26.1**	**-0.6**
	0.5nm,0.1s						
DJR				Lg	Lg	22 15 23.5	
	5.7nm,0.4s						
DJR	**Jarkent**	**4.50**	**20**	*e*P	**Pg**	**22 14 26.1**	**-0.6**
	0.5nm,0.1s						
DJR				*e*S	**Sg**	**22 15 23.5**	**-1.4**
	5.7nm,0.4s						
TDK	**Taldyqorghan**	**4.91**	**7**	Pg	**Pg**	**22 14 32.8**	**-1.5**
	14nm,0.4s						
TDK				Lg	Lg	22 15 35.0	
	22nm,0.4s						
TDK	**Taldyqorghan**	**4.91**	**7**	*e*P	**Pg**	**22 14 32.8**	**-1.5**
	14nm,0.4s						
TDK				*e*S	**Sg**	**22 15 35.0**	**-2.9**
	22nm,0.4s						
BTLS	**Baital**	**5.57**	**333**	Pg	**Pg**	**22 14 46.2**	**-0.8**
	0.8nm,0.3s						
BTLS				Lg	Lg	22 15 57.7	
	3.9nm,0.3s						
BTLS	**Baital**	**5.57**	**333**	*e*P	**Pg**	**22 14 46.2**	**-0.8**
	0.8nm,0.3s						
BTLS				*e*S	**Sg**	**22 15 57.7**	**-1.4**
	3.9nm,0.3s						
KK31	**Karatay Array**	**6.09**	**302**	⇓Pg	**Pg**	**22 14 58.2**	**+1.2**
	0.8nm,0.6s,baz=132,slow=16,SNR=6.8						
KK31				⇑Lg	Lg	22 16 16.7	
	0.6nm,0.5s,baz=119,slow=25,SNR=4.0						

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*SJA **18** 22:29:47.0±0.7, 22°.88S×66°.61W, h226^{km}±5^{km}, ML3.7, MW3.7*
*GUC **18** 22:29:48.5±0.5, 22°.83S×66°.93W, h256^{km}±9^{km}, ML4.3*
ISC 18 22:29:46.5±2.1, **22°.85S**±0°.05×**66°.66W**±0°.06, **h232**^{km}±17^{km}, **n33**, σ**1^{s}49**/58, **10C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YJA	**Yavi**	**1.25**	**58**	*e*P	**Pn**	**22 30 22.7**	**+0.8**
YJA				*e*S	**S**	**22 30 48.3**	**-1.1**
SALTA		**1.40**	**168**	*e*P	**Pn**	**22 30 23.0**	**+0.1**
SLA	**San Lorenzo**	**2.14**	**151**	*e*P	**Pn**	**22 30 29.1**	**0.0**
PB09	**IPOC Station P**	**2.61**	**293**	⇑*e*P	**Pn**	**22 30 35.8**	**+1.8**
PB09				*e*S	**S**	**22 31 11.1**	**0.0**
PB09	**IPOC Station P**	**2.61**	**293**	*e*P	**Pn**	**22 30 35.7**	**+1.8**
PB09				IAML		22 31 14.9	
	comp=Z,45nm,0.2s						
PB06	**IPOC Station P**	**2.69**	**273**	*e*P	**Pn**	**22 30 35.9**	**+1.2**
PB06				*e*S	**S**	**22 31 12.0**	**-0.5**
PB06				IAML		22 31 14.8	
	comp=N,663nm,0.1s						
PB06	**IPOC Station P**	**2.69**	**273**	*e*P	**Pn**	**22 30 36.0**	**+1.2**
PB06				*e*S	**S**	**22 31 11.7**	**-0.8**
PB06				IAML		22 31 15.1	
	comp=Z,213nm,0.1s						
PB03	**IPOC Station P**	**2.97**	**285**	⇑*e*P	**Pn**	**22 30 38.9**	**+1.1**
PB03				*e*S	**S**	**22 31 15.9**	**-2.1**
PB03				IAML		22 31 19.7	
	comp=E,197nm,0.1s						
PB03	**IPOC Station P**	**2.97**	**285**	*e*P	**Pn**	**22 30 38.9**	**+1.1**
PB03				*e*S	**S**	**22 31 17.6**	**-0.4**
PB03				IAML		22 31 20.8	
	comp=Z,237nm,0.2s						
PB01	**IPOC Station P**	**3.18**	**304**	⇑*i*P	**Pn**	**22 30 41.2**	**+1.1**
PB01	**IPOC Station P**	**3.18**	**304**	*e*P	**Pn**	**22 30 41.2**	**+1.1**
PB01				IAML		22 31 25.8	
	comp=Z,119nm,0.2s						
PB05	**IPOC Station P**	**3.27**	**269**	⇑*i*P	**Pn**	**22 30 42.2**	**+1.1**
PB05				*i* S	**S**	**22 31 22.2**	**-1.8**
PB05	**IPOC Station P**	**3.27**	**269**	*e*P	**Pn**	**22 30 42.2**	**+1.1**
PB05				*e*S	**S**	**22 31 23.2**	**-0.8**
PB05				IAML		22 31 29.5	
	comp=Z,78nm,0.3s						
FSA	**Cafayete**	**3.30**	**169**	*e*P	**Pn**	**22 30 42.8**	**+1.3**
GO02	**Mina Guanaco**	**3.53**	**229**	⇑*i*P	**Pn**	**22 30 45.7**	**+1.4**
GO02				*i* S	**S**	**22 31 29.5**	**-0.3**
GO02	**Mina Guanaco**	**3.53**	**229**	*e*P	**Pn**	**22 30 45.2**	**+0.9**
PB08	**IPOC Station P**	**3.56**	**319**	⇑*i*P	**Pn**	**22 30 46.8**	**+2.0**
PB08				*i* S	**S**	**22 31 31.1**	**+0.5**
PB08	**IPOC Station P**	**3.56**	**319**	*e*P	**Pn**	**22 30 46.8**	**+2.0**
PB08				*e*S	**S**	**22 31 32.0**	**+1.4**
PB08				IAML		22 31 35.9	
	comp=Z,61nm,0.1s						
PB10	**IPOC Station P**	**3.64**	**259**	⇑*i*P	**Pn**	**22 30 46.5**	**+1.2**
PB10				*e*S	**S**	**22 31 30.4**	**-1.3**
PB10	**IPOC Station P**	**3.64**	**259**	*e*P	**Pn**	**22 30 46.6**	**+1.3**
PB10				*e*S	**S**	**22 31 30.8**	**-0.8**
PB10				IAML		22 31 31.7	
	comp=Z,64nm,0.3s						
PATCX	**Punta Patache**	**3.82**	**301**	*e*P	**Pn**	**22 30 48.1**	**+0.6**
PATCX				*e*S	**S**	**22 31 33.4**	**-2.3**
PATCX	**Punta Patache**	**3.82**	**301**	*e*P	**Pn**	**22 30 48.3**	**+0.7**
PATCX				*e*S	**S**	**22 31 35.2**	**-0.5**
PATCX				IAML		22 31 38.4	
	comp=Z,80nm,0.3s						
PB14	**IPOC Station P**	**3.86**	**242**	*e*P	**Pn**	**22 30 49.3**	**+1.1**
PB14				*e*S	**S**	**22 31 35.5**	**-1.3**
PB14				IAML		22 31 39.3	
	comp=Z,164nm,0.2s						
HMBC	**Humberstone**	**3.95**	**310**	*e*P	**Pn**	**22 30 49.3**	**+0.2**
HMBC				*e*S	**S**	**22 31 35.9**	**-2.5**
HMBC	**Humberstone**	**3.95**	**310**	*e*P	**Pn**	**22 30 49.3**	**+0.2**
HMBC				*e*S	**S**	**22 31 37.0**	**-1.5**
HMBC				IAML		22 31 42.1	
	comp=Z,143nm,0.3s						
GO01	**Chusmiza**	**3.95**	**323**	⇑*e*P	**Pn**	**22 30 50.9**	**+1.4**
GO01	**Chusmiza**	**3.95**	**323**	*e*P	**Pn**	**22 30 51.1**	**+1.6**
GO01				*e*S	**S**	**22 31 42.4**	**+3.2**
TA01	**Diego Aracena**	**3.99**	**304**	⇑*e*P	**Pn**	**22 30 49.5**	**+0.1**
TA01				*e*S	**S**	**22 31 36.2**	**-2.8**
TA01	**Diego Aracena**	**3.99**	**304**	*e*P	**Pn**	**22 30 49.7**	**+0.2**
TA01				*e*S	**S**	**22 31 38.6**	**-0.5**
TA01				IAML		22 31 40.0	
	comp=Z,77nm,0.2s						
TA02	**Huaiquique**	**4.13**	**308**	*e*P	**Pn**	**22 30 51.3**	**+0.2**
TA02				*e*S	**S**	**22 31 39.1**	**-3.0**
PB11	**IPOC Station P**	**4.16**	**317**	⇑*i*P	**Pn**	**22 30 51.9**	**+0.2**
PB11				*i* S	**S**	**22 31 40.9**	**-2.1**
PB11	**IPOC Station P**	**4.16**	**317**	*e*P	**Pn**	**22 30 52.1**	**+0.4**
PB11				*e*S	**S**	**22 31 41.9**	**-1.2**
PB11				IAML		22 31 44.5	
	comp=Z,160nm,0.1s						
PB16	**IPOC Station P**	**5.23**	**329**	*e*P	**Pn**	**22 31 06.6**	**+1.4**
PB16				*e*S	**S**	**22 32 03.9**	**-3.7**
PB16				IAML		22 32 13.1	
	comp=Z,33nm,0.4s						

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*IDC **18** 22:30:53.0±1.3, 64°.49N×17°.61W, h0^{km}, mb3.2/4, mbtmp3.3/5, ML3.9/1, MS3.2/1, Error ellipse: s-maj=42.6km s-min=17.8km az=18.0*
ISC 18 22:30:54.1±0.9, **64°.6N**±0°.1×**17°.54W**±0°.07, **h9**^{km}, **n8**, σ**1^{s}75**/8, **mb3.5**/4, **Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**1.64**	**277**	Pn	**Pn**	**22 31 21.2**	**-1.7**
	18nm,0.3s,baz=99,slow=8.8,SNR=49						
BORG				Sn	**Sg**	**22 31 46.8**	**+0.3**
	2.8nm,0.3s,baz=22,slow=23,SNR=7.0						
SCO	**Scoresbysund**	**6.14**	**346**	*i* P	**Pn**	**22 32 23.0**	**-1.8**
SCO				*e*S		22 32 30.6	
EKA	**Eskdalemuir Ar**	**11.72**	**136**	Pn	**Pn**	**22 33 40.8**	**-0.5**
	baz=328,slow=13 0.7nm,0.4s						
FINES	**FINESS Array B**	**19.73**	**79**	LR	LR	22 41 54.5	
	comp=Z,59nm,18.7s,baz=278,slow=33						
GERES	**GERESS Array B**	**22.94**	**118**	P	**P**	**22 35 59.1**	**+0.8**
	0.1nm,0.4s,baz=326,slow=9.4,SNR=4.8 0.1nm,0.4s						
ILAR	**Eielson Array**	**45.73**	**332**	P	**P**	**22 39 17.7**	**+2.7**
	0.3nm,0.9s,baz=43,slow=9.1,SNR=4.6 0.3nm,0.9s						
KURBB	**Kurchatov Arra**	**48.20**	**58**	P	**P**	**22 39 33.6**	**-0.7**
	0.6nm,0.9s,baz=320,slow=8.3,SNR=4.4 0.6nm,0.9s						
PDAR	**Pinedale Array**	**53.19**	**293**	P	**P**	**22 40 12.5**	**+0.1**
	0.6nm,0.8s,baz=25,slow=8.5,SNR=4.2 0.6nm,0.8s						

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*SDD **18** 22:34:38.0±1.7, 19°.31N×67°.73W, h8^{km}±148^{km}, MD3.5, ML2.7, MW2.8*
*RSPR **18** 22:34:40.6, 19°.43N×67°.70W, h58^{km}±10^{km}, MD2.8/16*
*NEIC **18** 22:34:42.3±2.4, 19°.15N±0°.07×67°.77W±0°.05, h35^{km}±2^{km}, ML2.7/28, Md2.8/16(RSPR), Error ellipse: s-maj=12.4km s-min=5.9km az=211.0*
ISC 18 22:34:36.5±1.4, **19°.33N**±0°.06×**67°.69W**±0°.03, **h10**^{km}±10^{km}, **n57**, σ**0^{s}86**/77, **23C-11D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.96**	**168**		**Pg**	**22 34 54.7**	**-0.4**
IDE					**Sg**	**22 35 06.8**	**-0.8**
AGPR	**Aguadilla, PR**	**1.02**	**147**		**Pn**	**22 34 56.6**	**-0.4**
AGPR					**Sg**	**22 35 09.5**	**+0.1**
AGPR				IAML		22 35 13.3	
	comp=E,234nm,0.5s						
AGPR				IAML		22 35 13.7	
	comp=N,260nm,0.3s						
AGPR	**Aguadilla, PR**	**1.02**	**147**	⇓*e*P	**Pn**	**22 34 57.2**	**+0.3**
AGPR	**Aguadilla, PR**	**1.02**	**147**	*e*S	**Sn**	**22 35 10.8**	**-0.5**
AGPR	**Aguadilla, PR**	**1.02**	**147**	⇑*e*Pg	**Pn**	**22 34 56.6**	**-0.4**
AGPR				⇑*e*Sg	**Sg**	**22 35 09.2**	**-0.3**
AGPR				IAML		22 35 13.6	
	comp=N,254nm,0.3s						
PCDR	**Punta Cana, DR**	**1.04**	**219**	⇑*e*Sg	**Sg**	**22 35 08.7**	**-1.5**
PCDR				IAML		22 35 15.6	
	comp=N,174nm,1.0s						
PRSN	**Puerto Rico Se**	**1.22**	**155**		**Pn**	**22 34 58.9**	**-0.8**
LSP	**Las Mesas**	**1.28**	**153**		**Pg**	**22 35 02.5**	**+1.3**
LSP					**Sg**	**22 35 19.8**	**+1.8**
LSP	**Las Mesas**	**1.28**	**153**	⇓*e*P	**Pg**	**22 35 02.5**	**+1.3**
LSP	**Las Mesas**	**1.28**	**153**	*e*S	**Sg**	**22 35 19.8**	**+1.8**
AOPR	**Arecibo Observ**	**1.32**	**138**		**Pg**	**22 35 02.0**	**0.0**
AOPR					**Sg**	**22 35 19.9**	**+0.7**
AOPR				IAML		22 35 30.5	
	comp=N,142nm,0.2s						
AOPR	**Arecibo Observ**	**1.32**	**138**	⇑*e*P	**Pg**	**22 35 02.5**	**+0.5**
AOPR	**Arecibo Observ**	**1.32**	**138**	*e*S	**Sg**	**22 35 20.7**	**+1.6**
AOPR	**Arecibo Observ**	**1.32**	**138**	⇑*e*Pg	**Pg**	**22 35 01.7**	**-0.3**
AOPR				⇑*e*Sg	**Sg**	**22 35 20.0**	**+0.9**
AOPR				IAML		22 35 30.4	
	comp=N,138nm,0.2s						
MIDR	**Miches**	**1.33**	**255**	⇑*e*Pg	**Pg**	**22 35 02.0**	**-0.1**
MIDR				⇑*e*Sg	**Sg**	**22 35 19.4**	**0.0**
MIDR				IAML		22 35 20.3	
	comp=N,54nm,0.2s						
EMPR	**Esperanza - Ma**	**1.39**	**127**		**Pg**	**22 35 04.1**	**+0.9**
EMPR					**Sg**	**22 35 22.7**	**+1.4**
EMPR				IAML		22 35 26.3	
	comp=N,143nm,1.3s						
EMPR				IAML		22 35 30.5	
	comp=E,184nm,0.9s						
EMPR	**Esperanza - Ma**	**1.39**	**127**	⇓*e*P	**Pg**	**22 35 04.6**	**+1.4**
EMPR	**Esperanza - Ma**	**1.39**	**127**	*e*S	**Sg**	**22 35 21.7**	**+0.4**
SMDR	**Samana, DR**	**1.41**	**269**	⇓*e*P	**Pb**	**22 35 02.6**	**-0.5**
SMDR	**Samana, DR**	**1.41**	**269**	*e*S	**Sg**	**22 35 20.8**	**-1.2**
SMDR	**Samana, DR**	**1.41**	**269**	⇑*e*Pg	**Pb**	**22 35 02.2**	**-0.8**
SMDR				⇑*e*Sg	**Sg**	**22 35 22.0**	**-0.1**
SMDR				IAML		22 35 28.5	
	comp=N,67nm,0.7s						
UUPR	**Utuado, UPR, P**	**1.41**	**139**		**Pg**	**22 35 04.3**	**+0.6**
UUPR					**Sg**	**22 35 21.9**	**-0.2**
UUPR	**Utuado, UPR, P**	**1.41**	**139**	⇓*e*P	**Pg**	**22 35 05.0**	**+1.3**
UUPR	**Utuado, UPR, P**	**1.41**	**139**	*e*S	**Sg**	**22 35 23.2**	**+1.2**
CRPR	**Cabo Rojo, PR**	**1.43**	**157**		**Pg**	**22 35 03.9**	**-0.1**
CRPR					**Sg**	**22 35 22.3**	**-0.3**
CRPR				IAML		22 35 29.5	
	comp=E,79nm,1.7s						
CRPR	**Cabo Rojo, PR**	**1.43**	**157**	⇑*e*P	**Pg**	**22 35 04.5**	**+0.5**
CRPR	**Cabo Rojo, PR**	**1.43**	**157**	*e*S	**Sg**	**22 35 23.3**	**+0.8**
CRPR	**Cabo Rojo, PR**	**1.43**	**157**	⇑*e*Pg	**Pg**	**22 35 04.1**	**+0.1**
CRPR				⇑*e*Sg	**Sg**	**22 35 23.9**	**+1.3**
CRPR				IAML		22 35 27.2	
	comp=N,67nm,0.6s						
MLPR	**Magueyes Islan**	**1.49**	**156**	⇑*e*P	**Pg**	**22 35 05.3**	**+0.2**
MLPR	**Magueyes Islan**	**1.49**	**156**	*e*S	**Sg**	**22 35 24.7**	**+0.3**
MLPR	**Magueyes Islan**	**1.49**	**156**	⇑*e*Pg	**Pb**	**22 35 04.5**	**+0.2**
MLPR				⇑*e*Sg	**Sg**	**22 35 24.3**	**-0.1**
MLPR				IAML		22 35 27.4	
	comp=N,33nm,0.2s						
GBPR	**Guanica, Bosqu**	**1.55**	**150**		**Pg**	**22 35 06.5**	**+0.2**
GBPR	**Guanica, Bosqu**	**1.55**	**150**	⇓*e*P	**Pg**	**22 35 06.5**	**+0.2**
ECPR	**Experimental S**	**1.61**	**128**	⇓*e*P	**Pb**	**22 35 06.5**	**0.0**
ECPR	**Experimental S**	**1.61**	**128**	*e*S	**Sg**	**22 35 27.8**	**-0.6**
CELP	**Cerrillos**	**1.64**	**140**		**Pg**	**22 35 07.4**	**-0.5**
CELP					**Sb**	**22 35 28.1**	**+0.5**
CELP				IAML		22 35 34.1	
	comp=N,72nm,0.3s						
CELP	**Cerrillos**	**1.64**	**140**	⇓*e*P	**Pg**	**22 35 07.6**	**-0.3**
CELP	**Cerrillos**	**1.64**	**140**	*e*S	**Sg**	**22 35 29.2**	**+0.1**
CELP	**Cerrillos**	**1.64**	**140**	⇑*e*Pg	**Pg**	**22 35 07.5**	**-0.5**
CELP				⇑*e*Sg	**Sg**	**22 35 29.1**	**-0.1**
CELP				IAML		22 35 34.1	
	comp=N,75nm,0.2s						
OBIP	**Obispado Ponce**	**1.64**	**141**		**Pb**	**22 35 07.0**	**+0.1**
OBIP					**Sb**	**22 35 27.5**	**-0.3**
OBIP				IAML		22 35 32.7	
	comp=E,56nm,0.4s						
OBIP				IAML		22 35 33.0	
	comp=N,63nm,0.5s						
OBIP	**Obispado Ponce**	**1.64**	**141**	⇑*e*P	**Pg**	**22 35 07.4**	**-0.7**
OBIP	**Obispado Ponce**	**1.64**	**141**	*e*S	**Sg**	**22 35 29.2**	**-0.3**
DR12	**Loma Pena Alta**	**1.69**	**252**	Pn	**Pb**	**22 35 07.1**	**-0.6**
HATOM	**Hato Mayor del**	**1.69**	**252**	⇑*e*Pg	**Pb**	**22 35 07.1**	**-0.6**
HATOM				⇑*e*Sg	**Sb**	**22 35 28.9**	**-0.2**
HATOM				IAML		22 35 30.2	
	comp=N,43nm,0.6s						
GCPR	**Guaynabo City**	**1.83**	**123**	Pn	**Pg**	**22 35 10.7**	**-1.0**
SJG	**San Juan**	**1.90**	**129**	Pn	**Pb**	**22 35 11.2**	**-0.2**
SJG				IAML		22 35 41.6	
	comp=N,44nm,0.4s						
SJG				IAML		22 35 41.6	
	comp=N,48nm,0.2s						
IGPR	**InterUniversit**	**2.03**	**132**		**Pb**	**22 35 11.9**	**-1.6**
IGPR					**Sn**	**22 35 36.8**	**+0.6**
IGPR				IAML		22 35 40.5	
	comp=N,61nm,0.2s						
IGPR				IAML		22 35 46.0	
	comp=E,77nm,0.2s						
IGPR	**InterUniversit**	**2.03**	**132**	⇓*e*P	**Pg**	**22 35 14.7**	**-0.7**
IGPR	**InterUniversit**	**2.03**	**132**	*e*S	**Sb**	**22 35 37.6**	**-1.2**
PDPR	**Patillas Dam,**	**2.05**	**129**	Pn	**Pb**	**22 35 12.8**	**-1.2**
PDPR	**Patillas Dam,**	**2.05**	**129**	⇓*e*P	**Pb**	**22 35 13.1**	**-0.8**
PDPR	**Patillas Dam,**	**2.05**	**129**	*e*S	**Sn**	**22 35 37.8**	**+1.0**
HUMP	**Col San Antoni**	**2.11**	**124**		**Pb**	**22 35 14.1**	**-0.8**
HUMP					**Sb**	**22 35 39.7**	**-1.5**
HUMP				IAML		22 35 49.6	
	comp=E,37nm,0.2s						
HUMP	**Col San Antoni**	**2.11**	**124**	⇓*e*P	**Pb**	**22 35 14.5**	**-0.4**
HUMP	**Col San Antoni**	**2.11**	**124**	*e*S	**Sb**	**22 35 40.0**	**-1.2**
DR08	**Loma La Naviza**	**2.23**	**261**	⇑*e*Pg	**Pb**	**22 35 16.8**	**-0.3**
DR08				⇑*e*Sg	**Sb**	**22 35 45.7**	**+0.9**
DR08				IAML		22 35 51.4	
	comp=N,937nm,0.2s						
SDDR	**Presa de Saban**	**3.42**	**265**	Pn	**Pn**	**22 35 32.4**	**+2.4**

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*GEN **18** 22:50:49.6, 44°.31N×7°.47E, h7^{km}, Ml1.6*
*ROM **18** 22:50:49.4±0.1, 44°.293N±0°.008×7°.46E±0°.01, h10^{km}, ML1.8/17, Error ellipse: s-maj=1.0km s-min=0.6km az=223.0*
*LDG **18** 22:50:50.3±0.1, 44°.31N×7°.48E, h5^{km}, Md2.6/1, Ml2.3/22, Error ellipse: s-maj=1.6km s-min=1.4km az=53.0*
STR 18 22:50:50.0±0.2, **44°N**±1°×°±°, **h3**^{km}, **MLv1.9**/14, **3C, Error ellipse: s-maj=0.0km s-min=0.0km az=31.2, preliminary, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENR	**Entracque**	**0.10**	**200**	Pg	Pg	22 50 52.1	+0.1
ENR	**Entracque**	**0.10**	**200**	Sg	Sg	22 50 53.4	+0.1
ENR	**Entracque**	**0.10**	**200**	P	Pg	22 50 52.1	+0.1
ENR				S	Sg	22 50 53.5	+0.2
ENR	**Entracque**	**0.10**	**200**	P	Pg	22 50 52.1	+0.1
ENR				S	Sg	22 50 53.4	+0.1
ENR				AML	AML		
	comp=N,8820μm,0.1s						
ENR				AML	AML		
	comp=E,20500μm,0.1s						
ENR				AML	AML		
	comp=N,8821μm,0.1s						
ENR				AML	AML		
	comp=E,20464μm,0.1s						
STV	**Sant Anna di V**	**0.12**	**234**	Pg	Pg	22 50 52.6	+0.1
STV	**Sant Anna di V**	**0.12**	**234**	Sg	Sg	22 50 54.2	0.0
STV	**Sant Anna di V**	**0.12**	**234**	P	Pg	22 50 52.6	+0.1
STV				S	Sg	22 50 54.2	0.0
STV	**Sant Anna di V**	**0.12**	**234**	P	Pg	22 50 52.6	+0.1
STV				S	Sg	22 50 54.2	0.0
PIAF	**les Granges de**	**0.23**	**152**	Pg	Pg	22 50 54.4	0.0
PIAF				Sg	Sg	22 50 57.6	+0.1
GBOS	**Grotte di Boss**	**0.28**	**106**	Sg	Sg	22 50 59.2	+0.1
GBOS	**Grotte di Boss**	**0.28**	**106**	Pg	Pg	22 50 55.5	+0.1
GBOS	**Grotte di Boss**	**0.28**	**106**	P	Pg	22 50 55.5	+0.1
GBOS				S	Sg	22 50 59.2	+0.2
GBOS	**Grotte di Boss**	**0.28**	**106**	P	Pg	22 50 55.5	+0.1
GBOS				AML	AML		
	comp=N,288μm,0.2s						
GBOS				AML	AML		
	comp=E,276μm,0.2s						
GBOS				AML	AML		
	comp=N,288μm,0.2s						
GBOS				AML	AML		
	comp=E,276μm,0.2s						
GBOS				AML	AML		
	comp=N,288μm,0.2s						
SPIF	**crte de Spivo**	**0.31**	**212**	Pg	Pg	22 50 56.1	0.0
SPIF				Sg	Sg	22 51 00.1	0.0
ISO	**Isola**	**0.33**	**246**	Pg	Pg	22 50 56.4	0.0
ISO				Sg	Sg	22 51 00.5	-0.2
ISO	**Isola**	**0.33**	**246**	P	Pg	22 50 56.9	+0.6
ISO				S	Sg	22 51 01.1	+0.4
SAOF	**Saorge**	**0.34**	**169**	Pg	Pg	22 50 56.5	0.0
SAOF				Sg	Sg	22 51 01.1	+0.2
SAOF	**Saorge**	**0.34**	**169**	P	Pg	22 50 57.0	+0.5

SAOF				S	Sg	22 51 01.5	+0.6
SAOF	**Saorge**	**0.34**	**169**	⇑P	Pg	22 50 56.5	-0.1
SAOF				S	Sg	22 51 00.9	0.0
SAOF				AML	AML		
	comp=E,110µm,0.2s						
SAOF				AML	AML		
	comp=N,88µm,0.9s						
SAOF				AML	AML		
	comp=N,88µm,0.9s						
TURF	**col de Turini**	**0.35**	**189**	Pg	Pg	22 50 56.8	0.0
TURF				Sg	Sg	22 51 01.5	+0.2
TURF	**col de Turini**	**0.35**	**189**	P	Pg	22 50 57.3	+0.5
TURF				S	Sg	22 51 01.6	+0.3
RORO	**Rocca Rossa**	**0.48**	**115**	Pg	Pg	22 50 59.2	0.0
RORO	**Rocca Rossa**	**0.48**	**115**	Sg	Sg	22 51 05.7	+0.3
RORO	**Rocca Rossa**	**0.48**	**115**	P	Pg	22 50 59.0	-0.1
RORO				S	Sg	22 51 05.6	+0.2
RORO	**Rocca Rossa**	**0.48**	**115**	P	Pg	22 50 59.1	0.0
RORO				S	Sg	22 51 06.2	+0.8
RORO				AML	AML		
	comp=N,266µm,0.2s						
RORO				AML	AML		
	comp=E,212µm,0.7s						
RORO				AML	AML		
	comp=E,163µm,0.2s						
RORO				AML	AML		
	comp=N,265µm,0.2s						
MVIF	**Mont Vial**	**0.48**	**208**	Pg	Pg	22 50 59.3	+0.1
MVIF				Sg	Sg	22 51 05.8	+0.3
ESCA	**l'Escarene**	**0.49**	**188**	Pg	Pg	22 50 59.4	0.0
ESCA				Sg	Sg	22 51 06.0	+0.2
ESCA	**l'Escarene**	**0.49**	**188**	P	Pg	22 50 59.9	+0.5
ESCA				S	Sg	22 51 06.6	+0.8
SURF	**Saint Ours**	**0.50**	**289**	Pg	Pg	22 50 59.6	0.0
SURF				Sg	Sg	22 51 06.7	+0.7
SURF	**Saint Ours**	**0.50**	**289**	P	Pg	22 50 59.5	0.0
SURF				S	Sg	22 51 06.7	+0.7
IMI	**Imperia**	**0.51**	**143**	P	Pg	22 50 59.7	-0.1
IMI				S	Sg	22 51 06.5	+0.1
IMI	**Imperia**	**0.51**	**143**	P	Pg	22 50 59.7	-0.1
IMI				S	Sg	22 51 06.7	+0.3
IMI				AML	AML		
	comp=N,158µm,0.1s						
IMI				AML	AML		
	comp=E,90µm,0.7s						
IMI				AML	AML		
	comp=N,158µm,0.1s						
JAUF	**Jausiers**	**0.53**	**282**	Pg	Pg	22 51 00.1	0.0
JAUF				Sg	Sg	22 51 07.2	+0.2
ENAUX	**Enaux**	**0.54**	**247**	Pg	Pg	22 51 00.4	+0.1
ENAUX				Sg	Sg	22 51 07.6	+0.2
BURY	**Giardini Botan**	**0.54**	**173**	Sg	Sg	22 51 07.7	+0.3
BURY	**Giardini Botan**	**0.54**	**173**	Pg	Pg	22 51 00.3	0.0
BURY	**Giardini Botan**	**0.54**	**173**	P	Pg	22 51 00.3	-0.1
BURY				S	Sg	22 51 07.4	+0.1
BURY	**Giardini Botan**	**0.54**	**173**	P	Pg	22 51 00.4	0.0
BHB	**Bricherasio**	**0.54**	**344**	Pg	Pg	22 51 00.0	-0.4
BHB	**Bricherasio**	**0.54**	**344**	Sg	Sg	22 51 07.2	-0.3
BHB	**Bricherasio**	**0.54**	**344**	P	Pg	22 50 60.0	-0.5
BHB				S	Sg	22 51 07.1	-0.4
BHB	**Bricherasio**	**0.54**	**344**	P	Pg	22 51 00.0	-0.5
BHB				AML	AML		
	comp=E,122µm,0.6s						
BHB				AML	AML		
	comp=N,101µm,0.5s						
BHB				AML	AML		
	comp=E,122µm,1.4s						
BHB				AML	AML		
	comp=E,105µm,0.2s						
BHB				AML	AML		
	comp=N,99µm,0.1s						
CANO	**Canova, Maglio**	**0.56**	**101**	Pg	Pg	22 51 00.8	-0.1
CANO	**Canova, Maglio**	**0.56**	**101**	Sg	Sg	22 51 08.1	-0.1
CANO	**Canova, Maglio**	**0.56**	**101**	P	Pg	22 51 00.8	-0.1
CANO				S	Sg	22 51 07.8	-0.3
CANO	**Canova, Maglio**	**0.56**	**101**	⇑P	Pg	22 51 00.8	-0.1
CANO				S	Sg	22 51 08.1	0.0
CANO				AML	AML		
	comp=N,175µm,0.3s						
CANO				AML	AML		
	comp=E,164µm,0.4s						
CANO				AML	AML		
	comp=E,139µm,0.1s						
CANO				AML	AML		
	comp=N,171µm,0.2s						
MON	**Monaco**	**0.59**	**183**	Pg	Pg	22 51 01.5	+0.2
MON				Sg	Sg	22 51 09.6	+0.6
MON	**Monaco**	**0.59**	**183**	P	Pg	22 51 02.0	+0.7
MON				S	Sg	22 51 09.4	+0.5
QLNO	**Quiliano**	**0.63**	**89**	P	Pg	22 51 02.1	-0.1
QLNO				S	Sg	22 51 10.3	0.0
QLNO	**Quiliano**	**0.63**	**89**	⇑P	Pg	22 51 02.1	0.0
QLNO				S	Sg	22 51 10.5	+0.2
QLNO				AML	AML		
	comp=N,69µm,0.2s						
QLNO				AML	AML		
	comp=E,69µm,1.4s						
QLNO				AML	AML		
	comp=E,69µm,0.6s						
QLNO				AML	AML		
	comp=E,60µm,0.2s						
QLNO				AML	AML		
	comp=N,69µm,0.2s						
MBDF	**Montbardon**	**0.64**	**310**	*e*Pg	Pg	22 51 02.3	-0.1
MBDF				*e*Sg	Sg	22 51 10.5	-0.3
	comp=N,38nm,0.3s						
CREF	**Crivoux**	**0.65**	**291**	Pg	Pg	22 51 02.2	-0.3
CREF				Sg	Sg	22 51 11.2	+0.4
CALF	**Calern**	**0.69**	**215**	Pg	Pg	22 51 03.6	+0.3
SALSA	**La sagne**	**0.71**	**232**	Pg	Pg	22 51 03.9	+0.2
SALSA				Sg	Sg	22 51 13.6	+0.7
RRL	**Rocca Remolon**	**0.77**	**321**	Pg	Pg	22 51 04.2	-0.7
RRL	**Rocca Remolon**	**0.77**	**321**	Sg	Sg	22 51 15.1	+0.2
RRL	**Rocca Remolon**	**0.77**	**321**	P	Pg	22 51 04.3	-0.5
RRL				S	Sg	22 51 14.8	-0.1
RRL	**Rocca Remolon**	**0.77**	**321**	P	Pg	22 51 04.4	-0.5
RRL				S	Sg	22 51 14.9	0.0
RRL				AML	AML		
	comp=E,33µm,0.8s						
RRL				AML	AML		
	comp=N,48µm,0.4s						
PCP	**Piancastagn**	**0.80**	**74**	Pg	Pg	22 51 05.2	-0.2
PCP	**Piancastagn**	**0.80**	**74**	Sg	Sg	22 51 16.4	+0.6
PCP	**Piancastagn**	**0.80**	**74**	P	Pg	22 51 05.2	-0.3
PCP				S	Sg	22 51 15.9	+0.1
PCP	**Piancastagn**	**0.80**	**74**	P	Pg	22 51 06.0	+0.5
PCP				AML	AML		
	comp=E,38µm,1.3s						
PCP				AML	AML		
	comp=N,44µm,0.1s						
PCP				AML	AML		
	comp=E,31µm,0.3s						
EILF	**Villa Eilenroc**	**0.81**	**198**	Pg	Pg	22 51 05.4	-0.1
EILF				Sg	Sg	22 51 16.5	+0.6
MONC	**Moncucco Torin**	**0.82**	**23**	AML	AML		
	comp=E,105µm,1.3s						
MONC				AML	AML		
	comp=N,100µm,0.5s						
ROTM	**Rocchetta Tana**	**0.83**	**50**	Sg	Sg	22 51 17.1	+0.6
ROTM	**Rocchetta Tana**	**0.83**	**50**	Pg	Pg	22 51 05.9	0.0
ROTM	**Rocchetta Tana**	**0.83**	**50**	P	Pb	22 51 07.1	+0.1
ROTM				S	Sb	22 51 19.1	+0.5
OGDI	**Digne**	**0.86**	**256**	Pg	Pb	22 51 08.1	+0.4
OGDI				Sg	Sb	22 51 20.2	+0.5
BNI	**Bardonecchia**	**0.92**	**323**	P	Pg	22 51 07.2	-0.5
TRIGF	**Trigance**	**0.95**	**234**	Pg	Pg	22 51 07.7	-0.6
TRIGF				Sg	Sb	22 51 21.5	-0.8
OGMO	**Fort Saint-Gob**	**1.05**	**328**	Pg	Pg	22 51 09.9	-0.2
OGMO				Sg	Sg	22 51 24.2	+0.4
RNCA	**Ronca, Sant'Ol**	**1.07**	**81**	Pg	Pg	22 51 10.6	0.0
RNCA	**Ronca, Sant'Ol**	**1.07**	**81**	Sg	Sb	22 51 25.3	-0.4
BLAF	**les Blancs**	**1.09**	**251**	Pg	Pb	22 51 11.5	-0.1
BLAF				Sg	Sb	22 51 25.7	-0.4
LMR	**La Mourre**	**1.20**	**215**	*e*Pg	Pg	22 51 12.5	-0.6
LMR				*e*Sg	Sg	22 51 27.9	-0.8
	comp=N,45nm,0.3s						
MLYF	**Mely**	**1.27**	**255**	Pg	Pg	22 51 14.3	-0.1
MLYF				Sg	Sb	22 51 31.6	+0.2
ORIF	**Oris-en-Rattie**	**1.28**	**298**	*e*Pg	Pg	22 51 13.8	-0.8
ORIF				*e*Sg	Sg	22 51 30.0	-1.2
	comp=N,15nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.28**	**298**	Pg	Pg	22 51 14.0	-0.6
ORIF	**Oris-en-Rattie**	**1.28**	**298**	P	Pg	22 51 14.0	-0.6
ORIF				S	Sg	22 51 30.3	-0.9
FLAF	**Flassans-sur-l**	**1.28**	**224**	Pg	Pg	22 51 14.1	-0.5
FLAF	**Flassans-sur-l**	**1.28**	**224**	Sg	Sg	22 51 30.7	-0.5
LPG	**La Plagne**	**1.28**	**337**	*e*Pg	Pg	22 51 13.2	-1.5
LPG				*e*Sg	Sg	22 51 29.0	-2.3
	comp=N,6.7nm,0.4s						
LPL	**La Plagne**	**1.31**	**337**	*e*Pg	Pg	22 51 13.7	-1.4
LPL				*e*Sg	Sg	22 51 31.3	-0.7
	comp=N,3.7nm,0.2s						
GORR	**Gorreto**	**1.34**	**77**	Pg	Pn	22 51 15.6	0.0
GORR	**Gorreto**	**1.34**	**77**	Sg	Sn	22 51 33.8	-0.2
BSTF	**la Bastide-des**	**1.38**	**252**	Pn	Pg	22 51 16.5	-0.1
BSTF				Sn	Sn	22 51 36.0	+0.9
SMRF	**Simiane la Rot**	**1.41**	**257**	*e*Pg	Pn	22 51 16.2	-0.4
SMRF				*e*Sg	Sn	22 51 35.5	-0.1
	comp=N,14nm,0.3s						
ARTF	**Artigues**	**1.41**	**239**	Pn	Pn	22 51 16.2	-0.4
ARTF				Sn	Sn	22 51 35.5	-0.2
RUSF	**Rustrel**	**1.48**	**256**	Pn	Pn	22 51 17.3	-0.2
RUSF				Sn	Sb	22 51 37.2	-0.1
RSL	**Roselend**	**1.49**	**337**	Pn	Pn	22 51 17.8	-0.1
LEPF	**PUYLOUBIER**	**1.50**	**239**	Pn	Pn	22 51 17.3	-0.6
LEPF				Sn	Sb	22 51 38.2	+0.1
GRN	**Grenoble**	**1.54**	**308**	Pn	Pb	22 51 19.0	-0.2
GRN				Sn	Sg	22 51 39.3	0.0
VIVF	**Saint-Julien-l**	**2.07**	**286**	*e*P	Pn	22 51 25.3	-0.4
VIVF	**Saint-Julien-l**	**2.07**	**286**	*e*Pg	Pb	22 51 28.3	+0.1
VIVF				*e*Sn	Sn	22 51 49.7	-2.3
	comp=N,2.3nm,0.3s						
VIVF				*e*Sg	Sb	22 51 55.1	+0.8
PGF	**Pioggiola**	**2.09**	**147**	*e*Pn	Pn	22 51 23.6	-2.5
PGF				*e*Sn	Sn	22 51 48.3	-4.4
	comp=N,1.8nm,0.2s						
CABF	**La Chapelle**	**2.49**	**338**	*e*P	Pn	22 51 32.8	+1.3
CABF	**La Chapelle**	**2.49**	**338**	*e*Pg	Pb	22 51 36.1	+0.7
LASF	**Ste Croix**	**2.61**	**266**	*e*Pn	Pn	22 51 31.7	-1.4
LASF				*e*Sn	Sn	22 52 02.5	-2.8
	comp=N,0.7nm,0.2s						
SMF	**Signal de Mont**	**3.45**	**314**	*e*Pn	Pn	22 51 43.7	-1.0
SMF	**Signal de Mont**	**3.45**	**314**	*e*Pg	Pg	22 51 54.3	-1.9
SMF				*e*Sn	Sn	22 52 22.2	-3.9
	comp=N,0.8nm,0.2s						
SMF				*e*Sg	Sg	22 52 38.0	-2.9
	comp=N,0.9nm,0.2s						
HINF	**Hinteralfeld**	**3.52**	**353**	*e*Pn	Pn	22 51 45.1	-0.6
HINF				*e*Sn	Sn	22 52 24.7	-3.2
	comp=N,0.7nm,0.3s						
HAU	**Haudompre**	**3.77**	**348**	*e*Pn	Pn	22 51 47.5	-1.6
HAU				*e*Sn	Sn	22 52 30.4	-3.5
	comp=N,0.8nm,0.2s						
AVF	**Avril sur Loir**	**3.80**	**312**	*e*P	Pn	22 51 50.1	+0.6
AVF				*e*Sn	Sn	22 52 31.6	-3.1
AVF				*e*Sg	Sg	22 52 50.1	-2.0
	comp=N,0.4nm,0.3s						
LOR	**Lormes**	**3.88**	**321**	*e*Pn	Pn	22 51 49.6	-1.0
LOR				*e*Sn	Sn	22 52 32.6	-4.1
	comp=N,0.6nm,0.2s						
SSF	**Saint Saulge**	**3.90**	**316**	*e*Sn	Sn	22 52 33.7	-3.5
	comp=N,0.5nm,0.2s						
CAF	**Calviac**	**3.91**	**281**	*e*P	Pn	22 51 51.7	+0.8
MTLF	**Montolieu**	**3.92**	**257**	*e*Pn	Pn	22 51 50.5	-0.6
BGF	**Bois d'Agland**	**3.95**	**306**	*e*P	Pn	22 51 51.7	+0.2
BGF				*e*Sn	Sn	22 52 34.3	-4.0
	comp=N,4.3nm,0.4s						
BGF				*e*Sg	Sg	22 52 54.1	-2.7
	comp=N,0.5nm,0.2s						
TCF	**Toulx Ste Croi**	**4.20**	**300**	*e*P	Pn	22 51 55.5	+0.5

MOS ***18*** *23:00:56.7±0.8, 36°.71N×71°.35E, h191^{km}, mb4.3/19, Error ellipse: s-maj=6.7km s-min=4.0km az=87.4*

NEIC ***18*** *23:00:57.7±1.6, 36°.71N±0°.06×71°.28E±0°.09, h186^{km}±6^{km}, mb4.2/59, Error ellipse: s-maj=10.3km s-min=9.0km az=113.0*

IDC ***18*** *23:00:58.5±2.5, 36°.69N×71°.36E, h194^{km}±24^{km}, mb3.6/18, mbtmp4.2/22, Error ellipse: s-maj=19.7km s-min=13.4km az=151.0*

NNC ***18*** *23:01:02.9±1.5, 37°.21N×71°.26E, h206^{km}±18^{km}, mb3.6, mpv4.6, Error ellipse: s-maj=14.2km s-min=9.5km az=15.0*

ISC 18 23:00:57.6±0.3**, 36°.66N**±0°.04×**71°.40E**±0°.04**, h200**^{km}**, n270,** σ1^{s}**70**/278**, mb4.0**/70**, 10C-9D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GAR	**Garm**	**2.49**	**340**	Pn	**Pn**	**23 01 39.9**	**-1.6**
SIMJ	**Simiganj**	**2.76**	**317**	Pn	**Pn**	**23 01 42.3**	**-2.2**
DRK	**Karamyk**	**2.83**	**6**	Pn	**Pn**	**23 01 45.1**	**-0.5**
DRK	**Karamyk**	**2.83**	**6**	PN	**Pn**	**23 01 45.1**	**-0.5**
KBL	**Kabul**	**2.86**	**223**	Pn	**Pn**	**23 01 44.8**	**-1.0**
KBL	**Kabul**	**2.86**	**223**	P	**Pn**	**23 01 45.2**	**-0.6**
KBL				S	**Sn**	**23 02 20.5**	**-2.8**
KBL	**Kabul**	**2.86**	**223**	PN	**Pn**	**23 01 45.0**	**-0.8**
DZET	**Dzherino**	**2.96**	**317**	PN	**Pn**	**23 01 44.8**	**-2.0**
NIL	**Nilore**	**3.36**	**153**	Pn	**Pn**	**23 01 52.8**	**+1.2**
NIL	**Nilore**	**3.36**	**153**	P	**Pn**	**23 01 52.9**	**+1.3**
NIL	**Nilore**	**3.36**	**153**	PN	**Pn**	**23 01 52.8**	**+1.2**
BTK	**Batken**	**3.43**	**352**	Pn	**Pn**	**23 01 51.9**	**-0.5**
BTK	**Batken**	**3.43**	**352**	PN	**Pn**	**23 01 51.9**	**-0.5**
OHH	**Osh**	**4.01**	**15**	PN	**Pn**	**23 01 58.8**	**-0.7**
KSH	**Kashi**	**4.60**	**50**	Pn	Pn	23 02 02.6	-4.4
KSH				Sn	Sn	23 02 50.9	-11
KSH				smax	smax		
	comp=N,720nm,0.7s						
KSH				smax	smax		
	comp=E,490nm,0.8s						
ARSB	**Arslanbob**	**4.82**	**14**	Pn	**Pn**	**23 02 08.5**	**-1.3**
ARSB	**Arslanbob**	**4.82**	**14**	PN	**Pn**	**23 02 08.5**	**-1.3**
TRKS	**Terek-Say**	**4.87**	**358**	PN	**Pn**	**23 02 08.6**	**-1.8**
ALCI	**Alchi Leh**	**5.31**	**116**	*e*P	Pn	23 02 09.2	-7.2
ALCI				*e*S	**Sn**	**23 03 12.2**	**-6.2**
ARLS	**Aral**	**5.67**	**23**	PN	**Pn**	**23 02 19.6**	**-1.0**
AML	**Almayashu**	**5.75**	**17**	P	**Pn**	**23 02 21.2**	**-0.7**
	SNR=202						
NRN	**Naryn**	**5.96**	**35**	Pn	**Pn**	**23 02 22.8**	**-1.8**
NRN	**Naryn**	**5.96**	**35**	PN	**Pn**	**23 02 22.8**	**-1.8**
DHRM	**DHARAMSHALA**	**5.97**	**136**	*e*P	Pn	23 02 17.2	-7.6
DHRM				*e*S	**Sn**	**23 03 27.6**	**-6.1**
DHRM				IAML		23 03 39.1	
	comp=E,2µm,0.4s						
DHRM				IAML		23 03 40.2	
	comp=N,2µm,0.5s						
UCH	**Uchtor**	**6.06**	**22**	P	**Pn**	**23 02 25.7**	**-0.3**
	SNR=15						
EKS2	**Erkin-Say**	**6.27**	**16**	P	**Pn**	**23 02 27.8**	**-0.6**
	SNR=33						
AAK	**Ala-Archa**	**6.43**	**21**	P	**Pn**	**23 02 30.2**	**-0.3**
	SNR=43						
AAK	**Ala-Archa**	**6.43**	**21**	Pn	**Pn**	**23 02 29.8**	**-0.7**
AAK	**Ala-Archa**	**6.43**	**21**	P	**Pn**	**23 02 30.4**	**0.0**
	comp=N,22nm,0.3s,baz=204,slow=8.3,SNR=113						
AAK				S	Sn	23 03 32.4	-12
	comp=N,35nm,0.6s,baz=218,slow=12,SNR=9.2						
AAK	**Ala-Archa**	**6.43**	**21**	P	**Pn**	**23 02 30.6**	**+0.2**
AAK				S	**Sn**	**23 03 41.6**	**-2.5**
AAK	**Ala-Archa**	**6.43**	**21**	⇓P	**Pn**	**23 02 29.9**	**-0.6**
	comp=N,9.3nm,0.7s						
AAK				⇓S	**Sn**	**23 03 40.1**	**-4.0**
	comp=N,56nm,0.6s						
AAK	**Ala-Archa**	**6.43**	**21**	*ce*PN	**Pn**	**23 02 30.2**	**-0.3**
AAK				pmax	pmax		
	comp=Z,27nm,0.6s						
KK31	**Karatay Array**	**6.47**	**354**	Pn	**Pn**	**23 02 29.5**	**-1.4**
KK31	**Karatay Array**	**6.47**	**354**	⇓P	**Pn**	**23 02 29.6**	**-1.4**
	comp=Z,62nm,0.3s,baz=179,slow=14,SNR=738						
KK31				S	**Sn**	**23 03 37.8**	**-7.2**
	comp=Z,84nm,0.4s,baz=170,slow=16,SNR=22						
KK31	**Karatay Array**	**6.47**	**354**	PN	**Pn**	**23 02 29.5**	**-1.4**
KKAR	**Karatay Array**	**6.47**	**354**	Pn	**Pn**	**23 02 29.5**	**-1.4**
KKAR	**Karatay Array**	**6.47**	**354**	Pn	**Pn**	**23 02 29.4**	**-1.4**
KKAR	**Karatay Array**	**6.47**	**354**	PN	**Pn**	**23 02 29.5**	**-1.4**
KBK	**Karagaybulak**	**6.58**	**23**	P	**Pn**	**23 02 32.3**	**-0.2**
	SNR=41						
FRU1	**Bishkek**	**6.63**	**21**	Pn	**Pn**	**23 02 32.9**	**-0.1**
FRU1	**Bishkek**	**6.63**	**21**	PN	**Pn**	**23 02 32.9**	**-0.1**
BOOM	**Boomskoye usch**	**6.80**	**30**	Pn	**Pn**	**23 02 34.4**	**-0.9**
BOOM	**Boomskoye usch**	**6.80**	**30**	PN	**Pn**	**23 02 34.4**	**-0.9**
CHMS	**Chumysh**	**6.84**	**21**	P	**Pn**	**23 02 35.2**	**-0.4**
	SNR=18						
CHMS	**Chumysh**	**6.84**	**21**	⇓P	**Pn**	**23 02 34.8**	**-0.8**
	comp=Z,21nm,0.4s						
CHMS				⇓S	**Sn**	**23 03 48.3**	**-5.2**
	comp=Z,73nm,0.7s						
CHMS	**Chumysh**	**6.84**	**21**	PN	**Pn**	**23 02 34.8**	**-0.8**
USP	**Ospenovka**	**7.02**	**19**	P	**Pn**	**23 02 37.0**	**-0.9**
	SNR=29						
TKM2	**Tokmak 2**	**7.04**	**26**	P	**Pn**	**23 02 38.0**	**-0.4**
	SNR=94						
TKM2	**Tokmak 2**	**7.04**	**26**	⇓P	**Pn**	**23 02 38.2**	**-0.3**
	comp=Z,54nm,0.6s						
TKM2				⇑S	**Sn**	**23 03 54.2**	**-4.3**
	comp=Z,69nm,0.8s						
TKM2	**Tokmak 2**	**7.04**	**26**	PN	**Pn**	**23 02 38.1**	**-0.3**
KDJ	**Kajisay**	**7.06**	**38**	Pn	**Pn**	**23 02 38.3**	**-0.4**
KDJ	**Kajisay**	**7.06**	**38**	PN	**Pn**	**23 02 38.3**	**-0.4**
TARG	**Taragay, Kyrgy**	**7.09**	**43**		**Pn**	**23 02 38.5**	**-0.9**
TARG	**Taragay, Kyrgy**	**7.09**	**43**	PN	**Pn**	**23 02 38.5**	**-0.9**
MDOK	**Medeo**	**7.81**	**32**	⇑P	**Pn**	**23 02 48.6**	**+0.2**
	comp=Z,8.4nm,0.5s						
MDOK	**Medeo**	**7.81**	**32**	PN	**Pn**	**23 02 48.6**	**+0.2**
KNDC	**Almaty**	**7.82**	**31**	⇓P	**Pn**	**23 02 48.6**	**+0.2**
	comp=Z,43nm,0.7s						
KNDC	**Almaty**	**7.82**	**31**	PN	**Pn**	**23 02 48.6**	**+0.2**
PRZ	**Przheval'sk**	**7.94**	**41**	Pn	**Pn**	**23 02 50.0**	**-0.1**
PRZ	**Przheval'sk**	**7.94**	**41**	PN	**Pn**	**23 02 50.0**	**-0.1**
NDI	**New Delhi**	**9.34**	**147**	*e*P	Pn	23 03 01.3	-6.9
NDI				*e*S	**Sn**	**23 04 47.2**	**-5.7**
NDI				IAML		23 04 49.0	
	comp=E,36nm,0.6s						
NDI				IAML		23 04 53.8	
	comp=N,41nm,0.6s						
NPLP	**NPLP New Delhi**	**9.36**	**147**	*e*P	Pn	23 03 02.0	-6.5
NPLP				*e*S	**Sn**	**23 04 47.5**	**-5.8**
NPLP				IAML		23 04 50.7	
	comp=N,79nm,0.1s						
NPLP				IAML		23 04 53.5	
	comp=E,64nm,0.2s						
SONA	**Sohna**	**9.66**	**149**	*e*P	Pn	23 03 04.8	-7.5
SONA				*e*S	**Sn**	**23 04 54.9**	**-5.6**
SONA				IAML		23 04 57.2	
	comp=E,109nm,0.5s						
SONA				IAML		23 04 59.5	
	comp=N,40nm,0.8s						
OTUK	**Ortayu**	**11.60**	**3**	⇑P	**Pn**	**23 03 34.9**	**-2.4**
	comp=N,7.5nm,0.8s						
OTUK	**Ortayu**	**11.60**	**3**	P	**Pn**	**23 03 34.8**	**-2.4**
MAKZ	**Makanchi**	**12.84**	**35**	Pn	**Pn**	**23 03 52.2**	**-0.7**
MAKZ	**Makanchi**	**12.84**	**35**	P	**Pn**	**23 03 52.2**	**-0.7**
MK31	**Makanchi Array**	**12.97**	**35**	⇓P	**Pn**	**23 03 55.2**	**+0.6**
	comp=N,6.5nm,0.8s,baz=203,slow=24,SNR=36						
MK31	**Makanchi Array**	**12.97**	**35**	*ce*P	**Pn**	**23 03 56.0**	**+1.4**
MKAR	**Makanchi Array**	**12.97**	**35**	Pn	**Pn**	**23 03 54.9**	**+0.3**
MKAR	**Makanchi Array**	**12.97**	**35**	P	**Pn**	**23 03 55.2**	**+0.6**
	comp=N,2.8nm,0.6s,baz=220,slow=12,SNR=16						
MKAR	**Makanchi Array**	**12.97**	**35**	P	**Pn**	**23 03 54.9**	**+0.3**
WMQ	**Urumqi**	**14.34**	**55**	*e*P	**Pn**	**23 04 12.8**	**+1.1**
WMQ				pmax	pmax		
	comp=Z,21nm,0.7s						
BHPL	**Bhopal**	**14.35**	**157**	*e*P	Pn	23 04 04.9	-7.0
BHPL				*e*S	**S**	**23 06 50.0**	**-1.6**
KURBB	**Kurchatov Arra**	**14.87**	**18**	P	**Pn**	**23 04 16.2**	**-1.8**
	comp=Z,4.5nm,0.8s,baz=202,slow=12,SNR=21						
KURBB				S	**S**	**23 07 00.7**	**-2.3**
	comp=Z,0.3nm,0.6s,baz=201,slow=24,SNR=1.7						
KURBB	**Kurchatov Arra**	**14.87**	**18**	⇑P	**Pn**	**23 04 15.5**	**-2.5**
	comp=Z,5.0nm,0.6s						
KURBB	**Kurchatov Arra**	**14.87**	**18**	P	**Pn**	**23 04 15.5**	**-2.5**
KURK	**Kurchatov**	**14.98**	**18**	Pn	**Pn**	**23 04 17.6**	**-1.8**
KURK	**Kurchatov**	**14.98**	**18**	P	**Pn**	**23 04 18.0**	**-1.3**
KURK	**Kurchatov**	**14.98**	**18**	*ce*P	**Pn**	**23 04 18.7**	**-0.6**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
AB31	**Akbulak array**	**15.11**	**330**	Pn	**Pn**	**23 04 18.0**	**-2.9**
AB31	**Akbulak array**	**15.11**	**330**	P	**Pn**	**23 04 18.8**	**-2.1**
	comp=Z,15nm,0.5s,baz=143,slow=12,SNR=319						
ABKAR	**Akbulak array**	**15.11**	**330**	Pn	**Pn**	**23 04 18.1**	**-2.8**
ABKAR	**Akbulak array**	**15.11**	**330**	Pn	**Pn**	**23 04 18.0**	**-2.9**
ABKAR				IAmb	IAmb	23 04 22.8	
	comp=Z,36nm,0.8s						
EVN	**Everest**	**15.64**	**119**	P	**P**	**23 04 28.1**	**-0.2**
BVA0	**Borovoye Array**	**16.38**	**358**	P	**Pn**	**23 04 35.9**	**-0.4**
	comp=Z,10nm,0.6s,baz=160,slow=14,SNR=91						
BVA0	**Borovoye Array**	**16.38**	**358**	P	**Pn**	**23 04 35.9**	**-0.4**
BVAR	**Borovoye Array**	**16.38**	**358**	P	**Pn**	**23 04 35.5**	**-0.7**
	comp=Z,16nm,0.6s,baz=166,slow=10,SNR=98						
BVAR				S	**S**	**23 07 33.2**	**-3.5**
	comp=Z,2.8nm,0.5s,baz=170,slow=18,SNR=4.3						
BRVK	**Borovoye**	**16.42**	**358**	P	**P**	**23 04 34.8**	**-1.0**
BRVK	**Borovoye**	**16.42**	**358**	P	**Pn**	**23 04 36.3**	**-0.4**
BRVK	**Borovoye**	**16.42**	**358**	*ce*P	**Pn**	**23 04 36.3**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,25nm,1.0s						
SHME	**Shamm**	**16.76**	**235**	P	**P**	**23 04 38.9**	**-1.0**
AKTO	**Aktyubinsk**	**16.81**	**329**	P	**Pn**	**23 04 41.1**	**-0.3**
	comp=Z,58nm,0.5s,baz=139,slow=7.4,SNR=102						
AKTO				S	**S**	**23 07 42.4**	**-2.9**
	comp=Z,13nm,0.8s,baz=210,slow=12,SNR=6.9						
AKTO	**Aktyubinsk**	**16.81**	**329**	⇓P	**Pn**	**23 04 40.5**	**-0.8**
	comp=Z,21nm,0.5s						
MDH	**Madha**	**17.18**	**233**	P	**P**	**23 04 44.0**	**-0.4**
MASF	**Masafi**	**17.22**	**233**	P	**Pn**	**23 04 46.1**	**-0.4**
WSAR	**Wadi Sarin**	**17.33**	**223**	P	**Pn**	**23 04 47.8**	**0.0**
	baz=71,slow=24,SNR=7.9						
WSAR	**Wadi Sarin**	**17.33**	**223**	P	**Pn**	**23 04 48.5**	**+0.6**
UOSS	**Minazif**	**17.49**	**232**	P	**P**	**23 04 45.0**	**-2.9**
UOSS				IAmb	IAmb	23 04 54.2	
	comp=Z,7.3nm,0.7s						
UOSS	**Minazif**	**17.49**	**232**	P	**P**	**23 04 47.6**	**-0.3**
HATD	**Hatta, Dubai**	**17.62**	**232**	P	**Pn**	**23 04 51.3**	**+0.2**
ASHO	**Ashiyiah**	**17.77**	**232**	P	**Pn**	**23 04 52.0**	**-0.9**
	SNR=8.6						
SMDO	**Samad**	**17.80**	**224**	P	**Pn**	**23 04 53.4**	**0.0**
LSA	**Lhasa**	**17.91**	**107**	P	**P**	**23 04 55.3**	**+2.3**
LSA				IAmb	IAmb	23 05 00.4	
	comp=Z,13nm,0.9s						
LSA	**Lhasa**	**17.91**	**107**	P	**P**	**23 04 55.3**	**+2.3**
LSA				pmax	pmax		
	comp=Z,13nm,0.9s						
LKRN	**Lenkeran, Azer**	**18.02**	**283**	P	**Pn**	**23 04 55.0**	**-0.7**
ASUD	**Al Ashush, Dub**	**18.27**	**233**	P	**P**	**23 04 56.8**	**+0.4**
ALNE	**Al Ain**	**18.41**	**231**	P	**Pn**	**23 04 59.0**	**-1.5**
ARQ	**Araqi**	**18.47**	**228**	P	**Pn**	**23 05 00.2**	**-1.0**
	SNR=9.5						
BSY	**Bisya**	**18.53**	**225**	P	**Pn**	**23 05 00.5**	**-1.4**
AKT	**Akhty**	**18.98**	**292**	*e*P	**Pn**	**23 05 04.4**	**-2.7**
AKT				pmax	pmax		
	comp=Z,8.0nm,0.5s						
SEKA	**Sheki**	**19.35**	**291**	P	**Pn**	**23 05 09.3**	**-2.2**
MNGR	**Mingechevir, A**	**19.40**	**290**	P	**Pn**	**23 05 10.2**	**-1.7**
MHTO	**MHTO**	**19.52**	**221**	P	**P**	**23 05 11.4**	**+1.5**
ZAA0	**Zalesovo Array**	**19.64**	**24**	P	**P**	**23 05 10.7**	**-0.1**
ZAA0				IAmb	IAmb	23 05 16.6	
	comp=Z,12nm,0.9s						
ZALV	**Zalesovo Beam**	**19.64**	**24**	P	**P**	**23 05 11.0**	**+0.2**
ZALV	**Zalesovo Beam**	**19.64**	**24**	P	**P**	**23 05 11.8**	**+1.0**
	comp=Z,6.7nm,0.3s,baz=212,slow=10,SNR=26						
GANJ	**Ganja**	**19.97**	**289**	P	**Pn**	**23 05 16.2**	**-2.7**
GHWR	**Ruwais**	**20.35**	**237**	P	**P**	**23 05 16.8**	**-2.0**
SHMA	**Al-Shehemyia**	**20.48**	**244**	P	**P**	**23 05 19.1**	**-1.0**
	SNR=8.9						
NAX	**Nakhchivan**	**20.57**	**285**	P	**P**	**23 05 22.2**	**+1.1**
MZR	**Muzera**	**20.61**	**234**	P	**P**	**23 05 20.7**	**-0.9**
SAKB	**Bahrain**	**20.72**	**245**	P	**P**	**23 05 21.6**	**-1.1**
TRNA	**Turayna**	**20.99**	**241**	P	**P**	**23 05 23.8**	**-1.7**
SLWR	**Sila**	**21.09**	**239**	P	**P**	**23 05 26.2**	**-0.3**
GNI	**Garni**	**21.15**	**288**	P	**P**	**23 05 28.7**	**+1.5**
	comp=Z,3.7nm,0.5s,baz=213,slow=6.0,SNR=3.3						
	comp=Z,3.7nm,0.5s						
GNI	**Garni**	**21.15**	**288**	*i* P	**P**	**23 05 28.5**	**+1.2**
GNI				pmax	pmax		
	comp=Z,13nm,1.3s						
SMRA	**Abu-Samra**	**21.26**	**242**	P	**P**	**23 05 26.8**	**-1.5**
SVE	**Sverdlovsk**	**21.43**	**344**	*e*P	**P**	**23 05 30.5**	**+0.7**
SVE				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ARTI	**Arti**	**21.60**	**340**	P	**P**	**23 05 31.3**	**-0.3**
ARTI	**Arti**	**21.60**	**340**	P	**P**	**23 05 32.2**	**+0.6**
	comp=Z,4.7nm,0.5s,baz=151,slow=8.9,SNR=12						
	comp=Z,4.7nm,0.5s						
ARTI	**Arti**	**21.60**	**340**	P	**P**	**23 05 31.3**	**-0.3**
ARTI				pmax	pmax		
	comp=Z,11nm,0.6s						
KBZ	**Khabaz**	**22.82**	**297**	P	**P**	**23 05 44.3**	**+1.2**
	comp=Z,2.0nm,0.6s,baz=155,slow=8.3,SNR=4.8						
	comp=Z,2.0nm,0.6s						
KBZ	**Khabaz**	**22.82**	**297**	*i* P	**P**	**23 05 42.4**	**-0.7**
KBZ				pmax	pmax		

	comp=Z,7.0nm,1.5s						
BELG	**Belogornoye**	**22.97**	**321**	P	**P**	**23 05 45.6**	**+1.3**
	comp=Z,15nm,0.7s,baz=189,slow=1.2,SNR=14						
	comp=Z,15nm,0.7s						
BELG	**Belogornoye**	**22.97**	**321**	i P	**P**	**23 05 44.3**	**-0.1**
BELG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KIV	**Kislovodsk**	**23.00**	**297**	eP	**P**	**23 05 44.0**	**-0.9**
KIV				e*PP	**pP**	**23 06 18.6**	**-2.6**
KIV				e*SP	PP	23 06 42.3	+0.7
KIV				eS	**S**	**23 09 38.9**	**-1.3**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
DOK	**Doka**	**23.54**	**225**	P	**P**	**23 05 50.6**	**+0.8**
DMTO	**DMTO**	**23.81**	**222**	P	**P**	**23 05 53.8**	**+1.4**
WHFO	**Wadi Hawf**	**24.30**	**224**	P	**P**	**23 05 57.2**	**+0.4**
	SNR=19						
ABTO	**Aybut**	**25.02**	**225**	P	**P**	**23 06 03.5**	**+0.1**
RAYN	**Ar Rayn**	**25.86**	**247**	P	**P**	**23 06 10.6**	**-0.3**
RAYN	**Ar Rayn**	**25.86**	**247**	P	**P**	**23 06 11.6**	**+0.7**
RAYN	**Ar Rayn**	**25.86**	**247**	P	**P**	**23 06 10.6**	**-0.3**
RAYN				pmax	pmax		
	comp=Z,8.0nm,0.4s						
KIRV	**Kirov**	**26.24**	**334**	i P	**P**	**23 06 14.8**	**+1.0**
PZH	**PanZhiHua**	**27.66**	**103**	P	**P**	**23 06 30.4**	**+3.4**
PZH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,4.3s						
SONM	**Songino Array**	**27.98**	**55**	P	**P**	**23 06 32.1**	**+2.4**
	comp=Z,0.3nm,0.4s,baz=259,slow=9.0,SNR=2.3						
	comp=Z,0.3nm,0.4s						
BR131	**Keskin Array S**	**29.70**	**288**	P	**P**	**23 06 46.6**	**+1.6**
BR131				IAmb	IAmb	23 06 48.1	
	comp=Z,3.2nm,0.7s						
BR131	**Keskin Array S**	**29.70**	**288**	P	**P**	**23 06 46.6**	**+1.6**
BR131				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BRTR	**Keskin Array B**	**29.70**	**288**	P	**P**	**23 06 46.4**	**+1.4**
	comp=Z,1.9nm,0.6s,baz=100,slow=9.2,SNR=16						
	comp=Z,1.9nm,0.6s						
BRTR	**Keskin Array B**	**29.70**	**288**	ceP	**P**	**23 06 47.0**	**+2.0**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
HHC	**Hu-ho-hao-te**	**31.41**	**70**	eP	**P**	**23 07 02.6**	**+2.7**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,44nm,4.2s						
ELL	**Elmali**	**33.08**	**283**	P	**P**	**23 07 15.8**	**+1.2**
ELL	**Elmali**	**33.08**	**283**	P	**P**	**23 07 15.8**	**+1.2**
ELL				pmax	pmax		
	comp=Z,17nm,0.4s						
AKASG	**Malin Array Be**	**33.10**	**309**	P	**P**	**23 07 14.7**	**+0.3**
AKASG	**Malin Array Be**	**33.10**	**309**	P	**P**	**23 07 15.3**	**+0.9**
	comp=Z,1.3nm,0.5s,baz=82,slow=7.0,SNR=14						
	comp=Z,1.3nm,0.5s						
AKASG	**Malin Array Be**	**33.10**	**309**⇑	eP	**P**	**23 07 15.3**	**+0.9**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKBB	**Malin Array Si**	**33.10**	**309**	IAmb	IAmb	23 07 18.1	
	comp=Z,3.8nm,0.6s						
KIEV	**Kiev**	**33.11**	**309**	P	**P**	**23 07 14.6**	**+0.1**
KIEV				IAmb	IAmb	23 07 15.9	
	comp=Z,3.8nm,0.5s						
KIEV	**Kiev**	**33.11**	**309**	P	**P**	**23 07 14.6**	**+0.1**
KIEV				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AKAS	**Kas**	**33.44**	**282**	P	**P**	**23 07 17.9**	**+0.3**
XLT	**XiLinHaoTe**	**34.50**	**64**	eP	**P**	**23 07 26.3**	**-0.4**
XLT				pP	pP	23 08 04.1	-5.2
XLT				sP	sP	23 08 25.4	-7.4
XLT				PP	**PP**	**23 08 46.4**	**-2.7**
XLT				pmax	pmax		
	comp=Z,5.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,64nm,4.5s						
MLR	**Muntele Rosu**	**34.99**	**299**	P	**P**	**23 07 34.0**	**+3.1**
MLR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
IDI	**Anoyia**	**37.38**	**282**	P	**P**	**23 07 51.0**	**-0.2**
IDI				IAmb	IAmb	23 07 53.1	
	comp=Z,7.2nm,1.1s						
KOLS	**Kolonicke sedl**	**37.45**	**305**	eP	**P**	**23 07 54.0**	**+2.5**
KOLS	**Kolonicke sedl**	**37.45**	**305**	eP	**P**	**23 07 54.0**	**+2.5**
FIA1	**FINESS Array S**	**37.53**	**326**	P	**P**	**23 07 53.0**	**+1.0**
FINES	**FINESS Array B**	**37.53**	**326**	P	**P**	**23 07 53.1**	**+1.0**
FINES	**FINESS Array B**	**37.53**	**326**	P	**P**	**23 07 53.3**	**+1.3**
	comp=Z,1.5nm,0.3s,baz=122,slow=9.4,SNR=38						
	comp=Z,1.5nm,0.3s						
NIE	**Niedzica**	**38.75**	**306**	P	**P**	**23 08 04.0**	**+1.6**
NIE				pmax	pmax		
	comp=Z,3.0nm,1.0s						
VYHS	**Vyhne**	**39.74**	**304**	eP	**P**	**23 08 12.9**	**+2.4**
VYHS	**Vyhne**	**39.74**	**304**	eP	**P**	**23 08 12.9**	**+2.4**
MORC	**Moravsky Berou**	**40.53**	**306**	P	**P**	**23 08 19.2**	**+2.2**
MORC	**Moravsky Berou**	**40.53**	**306**	P	**P**	**23 08 19.3**	**+2.2**
MORC				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARCES	**ARCESS Array B**	**41.12**	**337**	P	**P**	**23 08 22.8**	**+1.2**
ARCES	**ARCESS Array B**	**41.12**	**337**	P	**P**	**23 08 23.2**	**+1.6**
	comp=Z,1.2nm,0.5s,baz=111,slow=8.8,SNR=30						
	comp=Z,1.2nm,0.5s						
ARCES	**ARCESS Array B**	**41.12**	**337**	P	**P**	**23 08 22.8**	**+1.2**
RONA	**Rosalia, Austr**	**41.49**	**303**	eP	**P**	**23 08 26.7**	**+1.7**
CONA	**Conrad Observa**	**41.76**	**304**	i P	**P**	**23 08 28.5**	**+1.3**
	comp=Z,1.8nm,0.6s						
SOKA	**Soboth**	**42.46**	**302**	i P	**P**	**23 08 34.4**	**+1.6**
	comp=Z,2.5nm,0.5s						
TIP	**Timpagrande**	**42.63**	**291**	P	**P**	**23 08 35.2**	**+0.9**
BRG	**Berggiesshubel**	**42.78**	**308**	P	**P**	**23 08 37.1**	**+1.9**
BRG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BRG	**Berggiesshubel**	**42.78**	**308**	eP	**P**	**23 08 36.8**	**+1.6**
	comp=Z,2.6nm,0.7s,baz=83,slow=8.2						
BRG	**Berggiesshubel**	**42.78**	**308**	eP	**P**	**23 08 36.9**	**+1.6**
BRG				Amp		23 08 38.6	
	comp=Z,2.6nm,0.7s						
SGRT	**San Giovanni R**	**42.79**	**295**	P	**P**	**23 08 36.1**	**+0.6**
RUE	**Ruedersdorf**	**42.80**	**311**	eP	**P**	**23 08 37.0**	**+1.7**
	baz=83,slow=8.2						
MOA	**Molln**	**42.84**	**304**	i P	**P**	**23 08 36.6**	**+0.8**
	comp=Z,2.1nm,1.0s						
GEC2	**GERESS Array S**	**43.10**	**305**	eP	**P**	**23 08 36.5**	**-1.4**
	comp=Z,1.2nm,0.9s,baz=83,slow=8.2						
GERES	**GERESS Array B**	**43.10**	**305**	P	**P**	**23 08 39.4**	**+1.4**
	comp=Z,0.3nm,0.4s,baz=64,slow=7.6,SNR=4.7						
	comp=Z,0.3nm,0.4s						
HFS	**Hagfors**	**43.14**	**322**	P	**P**	**23 08 39.0**	**+1.0**
	comp=Z,5.4nm,0.5s,baz=98,slow=8.3,SNR=60						
	comp=Z,5.4nm,0.5s						
HFS	**Hagfors**	**43.14**	**322**	P	**P**	**23 08 39.0**	**+1.0**
SABO	**M.te Sabotino**	**43.54**	**301**	P	**P**	**23 08 42.4**	**+0.9**
SABO				IAmb	IAmb	23 08 43.7	
	comp=Z,4.8nm,1.0s						
SCHF	**Schoenfels**	**43.77**	**308**	eP	**P**	**23 08 46.5**	**+3.3**
	comp=Z,2.4nm,0.8s,baz=83,slow=8.2						
LESA	**Schwarzleotal**	**43.96**	**303**	i P	**P**	**23 08 46.0**	**+1.2**
	comp=Z,2.4nm,0.5s						
NC602	**NORSAR Array S**	**44.27**	**322**	P	**P**	**23 08 47.3**	**+0.4**
NC602				IAmb	IAmb	23 09 06.7	
	comp=Z,11nm,1.4s						
NORES	**NORESS Array B**	**44.27**	**322**	P	**P**	**23 08 47.4**	**+0.5**
WIMM	**Wimmelburg**	**44.27**	**309**	eP	**P**	**23 08 48.6**	**+1.6**
	comp=Z,3.9nm,0.7s,baz=83,slow=8.2						
MOX	**Moxa**	**44.27**	**308**	eP	**P**	**23 08 49.2**	**+2.0**
	comp=Z,1.3nm,0.8s,baz=83,slow=8.2						
HWTS	**Hohenwarte Tal**	**44.37**	**308**	eP	**P**	**23 08 49.6**	**+1.6**
	comp=Z,1.9nm,0.7s,baz=83,slow=8.2						
FLTG	**Flechtingen**	**44.37**	**310**	eP	**P**	**23 08 48.6**	**+0.8**
	comp=Z,5.0nm,0.7s,baz=83,slow=8.2						
NC303	**NORSAR Array S**	**44.39**	**323**	IAmb	IAmb	23 08 50.2	
	comp=Z,7.5nm,1.0s						
NB2	**NORSAR Subarra**	**44.45**	**323**	P	**P**	**23 08 49.0**	**+0.6**
	comp=Z,2.7nm,0.6s,baz=95,slow=7.9						
NB2	**NORSAR Subarra**	**44.45**	**323**	P	**P**	**23 08 46.4**	**-2.0**
NOA	**NORSAR Array B**	**44.45**	**323**	P	**P**	**23 08 49.1**	**+0.7**
	comp=Z,1.6nm,0.4s,baz=96,slow=7.7,SNR=23						
	comp=Z,1.6nm,0.4s						
NC204	**NORSAR Array S**	**44.69**	**323**	IAmb	IAmb	23 08 56.0	
	comp=Z,10nm,1.3s						
CTI	**Castel Tesino**	**44.87**	**301**	P	**P**	**23 08 52.9**	**+0.8**
CTI				IAmb	IAmb	23 08 53.6	
	comp=Z,2.8nm,0.6s						
CTI	**Castel Tesino**	**44.87**	**301**	P	**P**	**23 08 52.9**	**+0.8**
CTI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MOTA	**Moosalm**	**45.03**	**303**	i P	**P**	**23 08 53.6**	**+0.3**
	comp=Z,3.2nm,0.7s						
KONO	**Kongsberg**	**45.17**	**321**	P	**P**	**23 08 54.1**	**+0.1**
KONO				IAmb	IAmb	23 09 00.1	
	comp=Z,16nm,1.4s						
KONO	**Kongsberg**	**45.17**	**321**	P	**P**	**23 08 54.1**	**+0.1**
KONO				pmax	pmax		
	comp=Z,16nm,1.4s						
RETA	**Reutte**	**45.23**	**304**	eP	**P**	**23 08 54.6**	**-0.3**
	comp=Z,1.1nm,0.4s						
UBBA	**Unterbreizbach**	**45.27**	**308**	eP	**P**	**23 08 56.6**	**+1.7**
	comp=Z,1.9nm,0.7s,baz=83,slow=8.2						
FETA	**Feichten**	**45.33**	**303**	eP	**P**	**23 08 54.7**	**-1.1**
	comp=Z,4.1nm,1.2s						
TIXI	**Tiksi**	**45.51**	**22**	P	**P**	**23 08 57.5**	**+1.0**
	comp=Z,2.7nm,0.3s,baz=325,slow=4.0,SNR=9.9						
	comp=Z,2.7nm,0.3s						
FUORN	**Ofenpass-Fuorn**	**45.72**	**303**	P	**P**	**23 08 59.2**	**+0.3**
DAVA	**Damuels**	**45.86**	**303**	i P	**P**	**23 09 00.6**	**+0.8**
	comp=Z,5.7nm,0.5s						
MSSA	**Maissana**	**46.70**	**300**	P	**P**	**23 09 06.4**	**+0.1**
MSSA				IAmb	IAmb	23 09 15.1	
	comp=Z,7.0nm,1.1s						
SPITS	**Spitsbergen Ar**	**47.41**	**347**	P	**P**	**23 09 13.4**	**+2.1**
	comp=Z,1.7nm,0.7s,baz=118,slow=7.7,SNR=5.8						
	comp=Z,1.7nm,0.7s						
SENIN	**Lac Senin/Sane**	**47.77**	**303**	P	**P**	**23 09 15.4**	**+0.6**
KMBO	**Kilima Mbogo**	**49.18**	**228**	P	**P**	**23 09 27.4**	**+1.6**
KMBO	**Kilima Mbogo**	**49.18**	**228**	P	**P**	**23 09 27.8**	**+2.0**
KMBO	**Kilima Mbogo**	**49.18**	**228**	P	**P**	**23 09 27.5**	**+1.6**
KEST	**Kesra**	**49.29**	**289**	P	**P**	**23 09 27.7**	**+1.4**
KIBK	**Kibwezi**	**49.68**	**226**	P	**P**	**23 09 31.6**	**+2.1**
EKA	**Eskdalemuir Ar**	**52.40**	**316**	P	**P**	**23 09 49.6**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=91,slow=7.0,SNR=7.0						
	comp=Z,0.4nm,0.4s						
MBAR	**Mbarara**	**52.86**	**235**	P	**P**	**23 09 53.9**	**+0.7**
CEST	**Esterri de Car**	**52.95**	**300**	P	**P**	**23 09 54.2**	**+0.7**
CEST				IAmb	IAmb	23 10 12.1	
	comp=Z,6.8nm,1.1s						
ESDC	**Sonseca Array**	**57.67**	**298**	P	**P**	**23 10 28.1**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=55,slow=7.8,SNR=16						
	comp=Z,1.1nm,0.6s						
LSZ	**Lusaka**	**65.80**	**226**	P	**P**	**23 11 22.2**	**+0.6**
LSZ				IAmb	IAmb	23 11 22.7	
	comp=Z,3.6nm,0.7s						
LSZ	**Lusaka**	**65.80**	**226**	P	**P**	**23 11 22.5**	**+0.9**
LSZ	**Lusaka**	**65.80**	**226**	P	**P**	**23 11 22.2**	**+0.6**
LSZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**66.05**	**269**	P	**P**	**23 11 21.4**	**-1.7**
TORD				IAmb	IAmb	23 11 22.6	
	comp=Z,3.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**66.05**	**269**	P	**P**	**23 11 22.0**	**-1.2**
	comp=Z,73nm,0.3s,baz=47,slow=5.9,SNR=2.2						
C19K	**Lookout Ridge**	**68.08**	**17**	P	**P**	**23 11 37.2**	**+1.9**
C19K				IAmb	IAmb	23 11 56.7	
	comp=Z,5.9nm,1.2s						
RES	**Resolute Bay**	**68.56**	**356**	P	**P**	**23 11 39.8**	**+1.8**
RES	**Resolute Bay**	**68.56**	**356**	P	**P**	**23 11 39.8**	**+1.8**
D19K	**Kuna River**	**68.90**	**17**	P	**P**	**23 11 41.7**	**+1.5**
D19K				IAmb	IAmb	23 11 48.9	
	comp=Z,6.6nm,1.4s						
E18K	**Tukpahlearik C**	**69.07**	**19**	P	**P**	**23 11 42.3**	**+1.0**
E18K				IAmb	IAmb	23 11 48.3	
	comp=Z,4.4nm,1.2s						
C23K	**Itkillik River**	**69.49**	**14**	P	**P**	**23 11 45.0**	**+1.2**
C23K				IAmb	IAmb	23 11 55.3	
	comp=Z,7.5nm,1.4s						
TOLK	**Toolik Lake Re**	**70.69**	**15**	P	**P**	**23 11 52.7**	**+1.5**
IVI	**Ivigtut**	**70.85**	**334**	P	**P**	**23 11 52.2**	**+0.1**
C27K	**Jago River**	**70.95**	**12**	P	**P**	**23 11 54.7**	**+2.0**
C27K				IAmb	IAmb	23 12 10.7	
	comp=Z,4.2nm,1.4s						
F21K	**Alatna River**	**70.99**	**17**	P	**P**	**23 11 54.1**	**+1.1**
MREMI	**Moremi**	**72.05**	**222**	P	**P**	**23 12 00.5**	**+0.5**
MREMI				IAmb	IAmb	23 12 03.1	
	comp=Z,6.7nm,1.1s						
J16K	**Anvik River**	**72.15**	**22**	P	**P**	**23 12 01.9**	**+1.9**
J16K				IAmb	IAmb	23 12 12.6	
	comp=Z,8.4nm,1.3s						
BMAR	**Burnt Mountain**	**72.71**	**14**	P	**P**	**23 12 04.8**	**+1.5**
J19K	**Poorman**	**73.03**	**20**	P	**P**	**23 12 07.1**	**+2.0**
J20K	**Nowinta River**	**73.28**	**19**	P	**P**	**23 12 08.6**	**+2.0**
J20K				IAmb	IAmb	23 12 28.9	
	comp=Z,3.7nm,1.3s						
C36M	**Paulatuk**	**73.69**	**6**	P	**P**	**23 12 09.7**	**+0.9**
L18K	**Granite Mounta**	**74.13**	**21**	P	**P**	**23 12 13.2**	**+1.7**
CAST	**Castle Rocks**	**74.43**	**19**	P	**P**	**23 12 14.6**	**+1.3**
CAST				IAmb	IAmb	23 12 34.3	
	comp=Z,3.7nm,1.3s						
PPLA	**Purkeypile**	**74.83**	**19**	P	**P**	**23 12 16.1**	**+0.3**
G31M	**Satah River**	**74.89**	**10**	P	**P**	**23 12 17.2**	**+1.3**
G31M				IAmb	IAmb	23 12 28.4	
	comp=Z,8.4nm,1.4s						
H29M	**Whitestone**	**74.91**	**12**	P	**P**	**23 12 17.5**	**+1.5**
H29M				IAmb	IAmb	23 12 36.2	
	comp=Z,4.0nm,1.3s						
LBTB	**Lobatse**	**75.01**	**222**	P	**P**	**23 12 18.2**	**+1.0**
LBTB				IAmb	IAmb	23 12 18.7	
	comp=Z,3.2nm,0.7s						
LBTB	**Lobatse**	**75.01**	**222**	P	**P**	**23 12 18.2**	**+1.0**
LBTB				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DBIC	**Dimbokro**	**75.03**	**267**	P	**P**	**23 12 16.4**	**-1.1**
	comp=Z,2.3nm,0.5s,baz=62,slow=5.8,SNR=5.1						
I28M	**Miner Creek**	**75.34**	**13**	P	**P**	**23 12 19.6**	**+1.1**
RIDG	**Independent Ri**	**75.88**	**16**	P	**P**	**23 12 22.0**	**+0.4**
RIDG				IAmb	IAmb	23 12 50.9	
	comp=Z,3.1nm,1.2s						
LKGWB	**Lokgwabe**	**76.76**	**226**	P	**P**	**23 12 25.6**	**-1.6**
BCAR	**Beaver Creek A**	**77.13**	**15**	P	**P**	**23 12 30.2**	**+1.6**
BOSA	**Boshof**	**78.08**	**220**	P	**P**	**23 12 34.5**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=40,slow=9.5,SNR=3.6						
	comp=Z,1.7nm,0.8s						
YKA	**Yellowknife Ar**	**81.07**	**3**	P	**P**	**23 12 51.4**	**+1.5**
	comp=Z,1.2nm,0.7s,baz=355,slow=4.9,SNR=7.2						
	comp=Z,1.2nm,0.7s						
Q32M	**Nakina River**	**82.72**	**12**	P	**P**	**23 13 00.4**	**+1.5**
Q32M				IAmb	IAmb	23 13 10.6	
	comp=Z,9.9nm,1.4s						
AC02	**Maricunga**	**145.25**	**275**		**PKPab**	**23 20 13.2**	**+0.5**
CO01	**Juntas del Tor**	**147.30**	**270**		**PKPbc**	**23 20 17.1**	**-0.8**
GO04	**Tololo Observa**	**147.94**	**270**	PKPbc	**PKPbc**	**23 20 19.7**	**+0.1**
CO02	**Combarbal**	**148.47**	**269**	PKPbc	**PKPbc**	**23 20 21.2**	**+0.4**
BO02	**Sierra Bellavi**	**149.37**	**262**	PKPbc	**PKiKP**	**23 20 23.3**	**-0.5**
LR05	**Currie**	**151.25**	**252**	PKPbc	**PKPbc**	**23 20 26.9**	**-0.1**

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*IDC **18** 23:04:31.4±0.5, 30°.90S×177°.64W, h0^{km}, mb4.5/14, mbtmp4.5/14, MS4.4/5, Error ellipse: s-maj=22.7km s-min=17.7km az=92.0*

*NEIC **18** 23:04:34.8±1.7, 30°.93S±0°.07×177°.7W±0°.2, h18^{km}±3^{km}, mb5.0/37, Error ellipse: s-maj=19.7km s-min=9.7km az=96.0*

*MOS **18** 23:04:34.4±0.8, 31°.00S×177°.76W, h25^{km}, mb5.2/15, Error ellipse: s-maj=16.0km s-min=10.2km az=105.9*

*BJI **18** 23:04:35.2, 30°.33S×176°.82W, h32^{km}, mB5.4/9, mb5.0/17, Ms5.1/2*

*GCMT **18** 23:04:37.8±0.3, 30°.98S±0°.03×177°.31W±0°.02, h20^{km}, MW5.0/75, Moment Tensor Solution. s52,c68; s75,c101; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.22±.17; M$_{\theta\theta}$-0.23±.12; M$_{\phi\phi}$-2.99±.11; M$_{r\theta}$0.25±.27; M$_{\theta\phi}$-0.60±.09; M$_{\phi r}$2.16±.20; Best double couple: M$_0$3.84200×10^{16} NP1:φ$_s$194.00000°,δ28.00000°,λ95.00000°. NP2: φ$_s$9.00000°,δ62.00000°,λ87.00000°. Principal axes: T 3.8980, Plg73.0000°, Azm273.0000°; N -0.1110, Plg2.0000°, Azm10.0000°; P -3.7850, Plg17.0000°, Azm101.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 23:04:35.8±0.3**, 31°.15S**±0°.04×**177°.74W**±0°.07**, h27**km**, n291, σ2ˢ06**/296**, mb4.9**/50**, MS4.5**/6**, 10C-21D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.89**	**355**	P	**Pn**	**23 05 02.7**	**-3.7**
GLKZ				S	**Sn**	**23 05 26.0**	**-3.3**
RAO	**Raoul Island**	**1.90**	**355**		**Pn**	**23 05 03.1**	**-3.4**
RAO	**Raoul Island**	**1.90**	**355**	P	**Pn**	**23 05 03.1**	**-3.4**
RIZ	**Raoul Island**	**1.91**	**355**	P	**Pn**	**23 05 02.9**	**-3.7**
RIZ				S	**Sn**	**23 05 26.5**	**-3.3**
MXZ	**Matakaoa Point**	**7.18**	**206**	P	**Pn**	**23 06 15.4**	**-3.6**
MXZ				S	**Sn**	**23 07 37.3**	**-2.3**
WMGZ	**Waiomatatini S**	**7.37**	**204**	P	**Pn**	**23 06 18.4**	**-3.2**
WMGZ				S	**Sn**	**23 07 42.4**	**-1.8**
PKGZ	**Pakihiroa**	**7.53**	**206**	P	**Pn**	**23 06 20.6**	**-3.3**
PKGZ				S	**Sn**	**23 07 45.9**	**-2.4**
PUZ	**Puketiti**	**7.65**	**204**	P	**Pn**	**23 06 21.5**	**-3.9**
PUZ				S	**Sn**	**23 07 48.8**	**-2.4**
RUGZ	**Raukumara Rang**	**7.77**	**208**	P	**Pn**	**23 06 24.9**	**-2.4**
RUGZ				S	**Sn**	**23 07 54.1**	**-0.4**
TWGZ	**Tauwhareparae**	**7.84**	**206**	P	**Pn**	**23 06 26.1**	**-2.0**
TWGZ				S	**Sn**	**23 07 55.0**	**-1.0**
CNGZ	**Carnagh Statio**	**8.04**	**203**	P	**Pn**	**23 06 28.1**	**-2.6**
CNGZ				S	**Sn**	**23 08 00.5**	**-0.1**
TKGZ	**Te Karaka**	**8.12**	**205**	P	**Pn**	**23 06 27.9**	**-4.0**
TKGZ				S	**Sn**	**23 08 00.6**	**-2.2**
MWZ	**Matawai**	**8.15**	**207**	P	**Pn**	**23 06 29.0**	**-3.4**
MWZ				S	**Sn**	**23 08 01.7**	**-1.9**
URZ	**Urewera**	**8.26**	**209**	Pn	**Pn**	**23 06 31.8**	**-2.0**
	1.8nm,0.3s,baz=348,slow=5.1,SNR=8.9						
URZ				Sn	**Sn**	**23 08 01.4**	**-4.8**
	5.3nm,0.3s,baz=134,slow=5.9,SNR=3.4						
URZ	**Urewera**	**8.26**	**209**	P	**Pn**	**23 06 31.7**	**-2.0**
URZ				S	**Sn**	**23 08 02.5**	**-3.7**
OUZ	**Omahuta**	**8.32**	**239**	P	Pn	23 06 41.4	+6.8
RAGZ	**Rawiri**	**8.34**	**207**	P	**Pn**	**23 06 31.9**	**-3.0**
RAGZ				S	**Sn**	**23 08 04.7**	**-3.5**
RIGZ	**Rimuhau**	**8.39**	**205**	P	**Pn**	**23 06 31.4**	**-4.2**
RIGZ				S	**Sn**	**23 08 06.6**	**-2.8**
PRGZ	**Paritu Road**	**8.54**	**204**	P	Pn	23 06 32.4	-5.3
PRGZ				S	**Sn**	**23 08 09.2**	**-4.0**
MUGZ	**Murupara**	**8.59**	**210**	S	**Sn**	**23 08 10.4**	**-3.8**
RTZ	**Ruatahuna**	**8.61**	**209**	Pn	**Pn**	**23 06 41.4**	**+2.7**
SNGZ	**Shannon Statio**	**8.61**	**207**	P	**Pn**	**23 06 36.4**	**-2.3**
SNGZ				S	**Sn**	**23 08 11.4**	**-3.5**
MTHZ	**Maungataniwha**	**8.87**	**209**	P	**Pn**	**23 06 40.5**	**-1.8**
NMHZ	**Naumai**	**9.10**	**208**	P	**Pn**	**23 06 43.1**	**-2.2**
BKZ	**Black Stump Fm**	**9.28**	**209**	P	**Pn**	**23 06 44.1**	**-3.8**
OTVZ	**Oturere**	**9.64**	**212**	P	**Pn**	**23 06 51.0**	**-1.9**
SNVZ	**South Ngauruho**	**9.67**	**212**	P	**Pn**	**23 06 52.4**	**-0.9**
KAHZ	**Kahuranaki**	**9.67**	**205**	P	Pn	23 06 47.9	-5.3
NFK	**Norfolk Island**	**12.58**	**276**	P	**P**	**23 07 42.8**	**-1.5**
	comp=Z,154nm,1.9s						
CTZ	**Chatham Island**	**12.59**	**176**	P	**Pn**	**23 07 29.5**	**-3.5**
GVZ	**Greta Valley S**	**13.89**	**209**	Pn	**Pn**	**23 07 50.4**	**-0.5**
MSVF	**Nonsavu**	**13.90**	**343**	Pn	**Pn**	**23 07 51.5**	**+0.4**
MSVF	**Nonsavu**	**13.90**	**343**	LR	LR	23 12 24.3	
	comp=Z,2μm,18.5s,baz=177,slow=35						
MSVF	**Nonsavu**	**13.90**	**343**	P	**Pn**	**23 07 51.5**	**+0.4**
LTZ	**Lake Taylor**	**14.07**	**212**	Pn	**Pn**	**23 07 51.5**	**-1.9**
OXZ	**Oxford**	**14.61**	**211**	Pn	**Pn**	**23 07 58.5**	**-2.2**
RPZ	**Rata Peaks**	**15.36**	**212**	Pn	**Pn**	**23 08 06.5**	**-4.1**
	comp=Z,1.1nm,0.3s,baz=65,slow=6.7,SNR=5.8						
RPZ				Sn	Sn	23 10 47.8	-12
	comp=Z,1.5nm,0.3s,baz=325,slow=14,SNR=7.8						
PINNC	**Pines Island,**	**15.71**	**299**	P	**P**	**23 08 18.6**	**-0.4**
ONTNC	**Ouen Toro**	**16.63**	**298**		**P**	**23 08 28.6**	**-0.7**
DZM	**Mont Dzumac**	**16.77**	**299**	P	**P**	**23 08 32.3**	**+1.3**
DZM				IAmb	IAmb	23 08 36.9	
	comp=Z,249nm,1.5s						
DZM	**Mont Dzumac**	**16.77**	**299**	ePn	**P**	**23 08 32.7**	**+1.7**
	comp=Z,330nm,1.4s						
DZM				eLR	LR	23 12 24.5	
	comp=Z,3μm,22.9s						
DZM	**Mont Dzumac**	**16.77**	**299**	Pn	**P**	**23 08 32.7**	**+1.7**
	comp=Z,0.5nm,0.3s,baz=120,slow=13,SNR=28						
MLZ	**Mavora Lakes**	**17.98**	**214**	P	**Pn**	**23 08 43.5**	**-0.3**
RAR	**Rarotonga**	**18.90**	**63**	LR	LR	23 16 42.1	
	comp=Z,432nm,18.2s,baz=250,slow=39						
TBI	**Tubuai**	**26.26**	**80**	eS	**S**	**23 14 35.3**	**-4.5**
	comp=Z,3μm,25.0s						
TBI				eLR	LR	23 16 35.1	
	comp=Z,4μm,26.2s						
TBI				eLR	LR	23 16 38.1	
	comp=Z,883nm,23.8s						
ARMA	**Armidale**	**26.29**	**264**	P	**P**	**23 10 10.7**	**+1.5**
ARMA				IAmb	IAmb	23 10 38.7	
	comp=Z,20nm,0.9s						
ARMA	**Armidale**	**26.29**	**264**	P	**P**	**23 10 11.5**	**+2.2**
	comp=Z,27nm,1.1s						
EIDS	**Eidsvold**	**28.00**	**274**	P	**P**	**23 10 25.0**	**+0.4**
EIDS				IAmb	IAmb	23 10 27.2	
	comp=Z,17nm,0.8s						
EIDS	**Eidsvold**	**28.00**	**274**	P	**P**	**23 10 24.5**	**-0.1**
	comp=Z,22nm,1.0s						
PPT2	**Papeete2**	**28.89**	**69**	eP	**P**	**23 10 31.9**	**-0.7**
	comp=Z,103nm,27.8s						
PPT2				eS	**S**	**23 15 23.0**	**+1.5**
	comp=Z,117nm,24.0s						
PPT2				eLR	LR	23 17 46.7	
	comp=Z,510nm,27.0s						
PPT2				eLR	LR	23 17 59.1	
	comp=Z,681nm,25.0s						
PPT	**Papeete**	**28.90**	**69**	LR	LR	23 21 30.0	
	comp=Z,449nm,18.1s,baz=241,slow=36						
CMSA	**Cobar Meteorol**	**31.14**	**260**	P	**P**	**23 10 53.6**	**+1.3**
	comp=Z,33nm,0.9s						
QLP	**Quilpie**	**33.50**	**268**	P	**P**	**23 11 14.5**	**+1.4**
	comp=Z,91nm,1.3s						
ARPS	**Mount Arapiles**	**33.81**	**249**	P	**P**	**23 11 16.4**	**+0.7**
	comp=Z,23nm,1.0s						
CTAO	**Charters Tower**	**34.15**	**280**	P	**P**	**23 11 19.9**	**+1.1**
CTAO	**Charters Tower**	**34.15**	**280**	P	**P**	**23 11 19.9**	**+1.1**
CTAO				pmax	pmax		
	comp=Z,80nm,1.1s						
STKA	**Stephens Creek**	**34.53**	**258**	P	**P**	**23 11 23.1**	**+1.1**
STKA	**Stephens Creek**	**34.53**	**258**	P	**P**	**23 11 23.1**	**+1.1**
	comp=Z,173nm,1.0s						
STKA	**Stephens Creek**	**34.53**	**258**	P	**P**	**23 11 23.4**	**+1.5**
	comp=Z,15nm,0.8s,baz=87,slow=10.0,SNR=22						
STKA				LR	LR	23 24 41.6	
	comp=Z,999nm,18.3s,baz=84,slow=35						
	comp=Z,15nm,0.8s						
HTT	**Hallett**	**36.51**	**255**	P	**P**	**23 11 39.8**	**+0.7**
	comp=Z,12nm,2.4s						
BBOO	**Buckleboo**	**38.99**	**255**	P	**P**	**23 11 59.8**	**-0.1**
BBOO				IAmb	IAmb	23 12 01.2	
	comp=Z,33nm,0.9s						
PMG	**Port Moresby**	**39.13**	**296**	LR	LR	23 26 00.3	
	comp=Z,458nm,19.8s,baz=146,slow=33						
COEN	**Coen**	**39.70**	**287**	P	**P**	**23 12 05.9**	**-0.1**
COEN				IAmb	IAmb	23 12 20.9	
	comp=Z,25nm,0.9s						
TAOE	**Nuku Hiva Isla**	**41.40**	**66**	eLR	LR	23 23 44.1	
	comp=Z,380nm,26.4s						
AS31	**Alice Springs**	**43.30**	**268**	P	**P**	**23 12 35.6**	**0.0**
AS31	**Alice Springs**	**43.30**	**268**	P	**P**	**23 12 35.5**	**0.0**
	comp=Z,8.6nm,0.7s						
AS12	**Alice Springs**	**43.30**	**268**	P	**P**	**23 12 35.8**	**+0.3**
	comp=Z,35nm,1.0s						
ASAR	**Alice Springs**	**43.30**	**268**	P	**P**	**23 12 35.8**	**+0.3**
ASAR	**Alice Springs**	**43.30**	**268**	P	**P**	**23 12 36.0**	**+0.5**
	comp=Z,12nm,0.8s,baz=112,slow=8.0,SNR=65						
ASAR				ScP	**ScP**	**23 18 16.9**	**+3.2**
	comp=Z,4.5nm,0.9s,baz=112,slow=4.3,SNR=15						
	comp=Z,12nm,0.8s						
WR8	**Warramunga Arr**	**44.21**	**273**	P	**P**	**23 12 42.8**	**-0.1**
WR8				IAmb	IAmb	23 12 56.6	
	comp=Z,31nm,0.9s						
WB2	**Warramunga Arr**	**44.34**	**273**	P	**P**	**23 12 43.0**	**-0.9**
WRAB	**Tennant Creek**	**44.35**	**273**	P	**P**	**23 12 42.8**	**-1.2**
WRAB				IAmb	IAmb	23 12 57.6	
	comp=Z,35nm,0.9s						
WRAB	**Tennant Creek**	**44.35**	**273**	P	**P**	**23 12 42.8**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,35nm,0.9s						
WRA	**Warramunga Arr**	**44.35**	**273**	P	**P**	**23 12 43.5**	**-0.5**
WRA	**Warramunga Arr**	**44.35**	**273**	P	**P**	**23 12 44.3**	**+0.3**
	comp=Z,16nm,0.7s,baz=113,slow=7.7,SNR=95						
WRA				ScP	**ScP**	**23 18 20.0**	**+2.0**
	comp=Z,5.8nm,1.1s,baz=113,slow=4.1,SNR=7.9						
	comp=Z,16nm,0.7s						
WB0	**Warramunga Arr**	**44.38**	**273**	P	**P**	**23 12 43.9**	**-0.3**
FORT	**Forrest**	**46.08**	**256**	P	**P**	**23 12 56.8**	**-0.7**
FORT	**Forrest**	**46.08**	**256**	P	**P**	**23 12 54.7**	**-2.8**
SBA	**Scott Base**	**47.30**	**184**	P	**P**	**23 13 09.0**	**+2.5**
SBA				IAmb	IAmb	23 13 23.4	
	comp=Z,11nm,0.8s						
SBA	**Scott Base**	**47.30**	**184**	P	**P**	**23 13 09.0**	**+2.5**
SBA				pmax	pmax		
	comp=Z,11nm,0.9s						
VNDA	**Vanda**	**47.37**	**186**	P	**P**	**23 13 09.7**	**+2.7**
VNDA	**Vanda**	**47.37**	**186**	P	**P**	**23 13 08.9**	**+1.9**
	comp=Z,1.0nm,0.7s,baz=21,slow=5.9,SNR=6.3						

	comp=Z,1.0nm,0.7s						
KNRA	Kununurra	50.99	275	P	P	23 13 35.8	+0.3
KNRA				IAmb	IAmb	23 13 48.3	
	comp=Z,28nm,1.2s						
FITZ	Fitzroy Crossi	52.59	270	P	P	23 13 46.1	-1.3
CASY	Casey	54.58	208	P	P	23 14 02.2	+0.9
MBWA	Marble Bar	56.37	264	P	P	23 14 14.6	-0.3
MBWA				IAmb	IAmb	23 14 26.1	
	comp=Z,37nm,1.6s						
QSPA	South Pole Qui	58.96	180	P	P	23 14 34.2	+1.5
QSPA	South Pole Qui	58.96	180	P	P	23 14 34.1	+1.5
	comp=Z,5.2nm,0.7s,baz=67,slow=1.6,SNR=32						
	comp=Z,5.2nm,0.7s						
BELA	Belgrano 2	69.01	172	P	P	23 15 38.9	+0.5
BELA				IAmb	IAmb	23 16 01.9	
	comp=Z,7.9nm,0.8s						
PMSA	Palmer Station	71.49	156	P	P	23 15 54.4	+0.8
MAW	Mawson	71.68	201	P	P	23 15 55.5	+0.8
	comp=Z,10nm,1.2s,baz=125,slow=9.1,SNR=5.5						
	comp=Z,10nm,1.2s						
SYO	Syowa Base	76.43	193	⇓*e*P	P	23 16 22.6	+0.1
SYO	Syowa Base	76.43	193	⇓*e*pP	pP	23 16 29.0	-0.5
TROLL	Troll, Antarti	77.12	180	⇓P	P	23 16 26.6	+0.1
	comp=Z,193nm,0.8s						
SNAA	Sanae	77.40	178	⇓P	P	23 16 28.9	+0.9
	comp=Z,40nm,0.9s						
SNAA	Sanae	77.40	178	P	P	23 16 28.7	+0.7
SNAA				IAmb	IAmb	23 16 41.7	
	comp=Z,17nm,1.1s						
SNAA	Sanae	77.40	178	P	P	23 16 29.5	+1.5
	comp=Z,1.4nm,0.7s,baz=171,slow=4.3,SNR=4.5						
	comp=Z,1.4nm,0.7s						
VNA3	Neumayer Olymp	77.54	176	⇓P	P	23 16 29.8	+1.1
	comp=Z,5.3nm,0.7s						
VNA2	Neumayer--Watz	77.98	177	⇓P	P	23 16 32.0	+0.8
	comp=Z,5.4nm,0.7s,baz=186,slow=4.5						
VNA1	Neumayer--Stat	78.20	176	⇓P	P	23 16 33.2	+0.9
	comp=Z,6.0nm,0.9s						
MJAR	Matsushiro Arr	78.99	325	P	P	23 16 35.3	-1.8
	comp=Z,3.4nm,0.9s,baz=158,slow=6.1,SNR=8.0						
	comp=Z,3.4nm,0.9s						
MAJO	Matsushiro	78.99	325	*i* P	P	23 16 38.1	+1.0
MAJO				pmax	pmax		
	comp=Z,10.0nm,1.1s						
H03S2	Juan Fernandez	79.86	123	T	T	00 44 45.6	
	baz=243,slow=74,SNR=6.4						
H03S1	Juan Fernandez	79.87	123	T	T	00 44 44.6	
	baz=243,slow=74,SNR=7.1						
H03S3	Juan Fernandez	79.88	123	T	T	00 44 44.6	
	baz=243,slow=74,SNR=7.2						
H03N3	Juan Fernandez	80.06	123	T	T	00 44 54.8	
	baz=239,slow=74,SNR=5.6						
H03N2	Juan Fernandez	80.06	123	T	T	00 44 52.4	
	baz=239,SNR=3.6						
H03N1	Juan Fernandez	80.07	123	T	T	00 44 53.6	
	baz=239,slow=74,SNR=6.5						
JTM	Tenmabayashi	81.09	330	P	P	23 16 47.4	-0.9
ADK	Adak	82.69	1	P	P	23 16 55.6	-0.8
ADK				IAmb	IAmb	23 17 17.5	
	comp=Z,15nm,0.8s						
ADK	Adak	82.69	1	P	P	23 16 55.6	-0.8
ADK				pmax	pmax		
	comp=Z,15nm,0.9s						
KSRS	Korea Array	85.07	320	P	P	23 17 08.8	-0.1
	comp=Z,1.9nm,0.7s,baz=129,slow=5.1,SNR=7.2						
	comp=Z,1.9nm,0.7s						
KSAR	Wonju Array Be	85.08	320	P	P	23 17 07.5	-1.6
KSAR	Wonju Array Be	85.08	320	P	P	23 17 07.5	-1.6
YSS	Yuzhno-Sakhali	85.52	334	*e*P	P	23 17 11.1	+0.1
YSS				*e*S	S	23 27 37.4	-3.2
YSS				pmax	pmax		
	comp=Z,30nm,1.1s						
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
YSS				MLR	MLR		
	comp=N,400nm,15.0s						
GSI	Gunungsitoli	86.12	274	P	P	23 17 13.4	-1.4
PETK	Petropavlovsk-	86.60	345	P	P	23 17 15.8	-0.4
	comp=N,5.5nm,0.9s,baz=165,slow=5.6,SNR=3.6						
	comp=N,5.5nm,0.9s						
NJ2	Nanjing	86.90	310	*e*P	P	23 17 19.1	+0.9
NJ2				pmax	pmax		
	comp=N,5.0nm,0.6s						
GSC	Goldstone, Bar	87.45	46	P	P	23 17 20.2	-0.7
GSC				IAmb	IAmb	23 17 35.7	
	comp=Z,13nm,1.5s						
GSC	Goldstone, Bar	87.45	46	P	P	23 17 20.2	-0.7
GSC				pmax	pmax		
	comp=Z,13nm,1.5s						
USA0B	Ussuriysk Arra	87.91	326	P	P	23 17 21.2	-1.5
USA0B				IAmb	IAmb	23 17 23.6	
	comp=Z,8.9nm,0.9s						
USA0B	Ussuriysk Arra	87.91	326	*i* P	P	23 17 22.3	-0.4
USRK	Ussuriysk Ar.	87.91	326	P	P	23 17 20.9	-1.9
USRK	Ussuriysk Ar.	87.91	326	P	P	23 17 22.0	-0.7
	comp=Z,4.9nm,0.8s,baz=108,slow=3.6,SNR=9.8						
	comp=Z,4.9nm,0.8s						
NVAR	Mina Array Bea	88.64	43	P	P	23 17 25.3	-1.4
NVAR	Mina Array Bea	88.64	43	P	P	23 17 26.4	-0.2
	comp=Z,1.5nm,0.8s,baz=223,slow=7.5,SNR=8.1						
	comp=Z,1.5nm,0.8s						
TPNV	Topopah Spring	88.87	45	P	P	23 17 26.8	-0.9
TPNV	Topopah Spring	88.87	45	P	P	23 17 26.8	-0.9
TPNV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
W13A	Hualapai Mount	89.13	47	P	P	23 17 28.5	-0.5
W13A				IAmb	IAmb	23 17 43.9	
	comp=Z,23nm,2.0s						
MDJ	Mudanjiang	89.37	325	P	P	23 17 30.0	+0.4
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.4s						
PRN	Pahroc Range	89.89	45	IAmb	IAmb	23 17 47.6	
	comp=Z,10nm,1.5s						
TIA	Tai'an	90.65	313	P	P	23 17 35.8	0.0
TIA				pmax	pmax		
	comp=Z,13nm,1.1s						
CN2	Changchun	90.88	323	*e*P	P	23 17 35.9	-0.8
CN2				*e*S	S	23 28 31.8	+0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,200nm,11.0s						
CN2				LR	LR		
	comp=Z,300nm,11.0s						
U15A	North Rim	90.98	47	P	P	23 17 37.1	-0.6
U15A				IAmb	IAmb	23 17 58.4	
	comp=Z,5.0nm,1.1s						
BNX	BinXian	91.25	325	⇓P	P	23 17 37.3	-1.1
BNX				pmax	pmax		
	comp=Z,13nm,1.1s						
KLR	Kul'dur	91.80	330	*ce*P	P	23 17 40.9	+0.1
KLR				pmax	pmax		
	comp=Z,9.0nm,1.7s						
TXAR	Lajitas Array	92.61	57	P	P	23 17 45.6	+0.4
	comp=Z,0.2nm,0.6s,baz=261,slow=3.2,SNR=2.6						
	comp=Z,0.2nm,0.6s						
CMAR	Chiang Mai Arr	93.86	289	P	P	23 17 51.7	+0.6
	comp=Z,0.7nm,0.5s,baz=122,slow=5.0,SNR=2.2						
	comp=Z,0.7nm,0.5s						
PZH	PanZhiHua	95.85	297	P	P	23 18 01.6	+1.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,110nm,4.7s						
HHC	Hu-ho-hao-te	96.92	314	*e*P	P	23 18 06.4	+1.7
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,52nm,4.4s						
WMQ	Urumqi	113.87	308	*e*PKP	PKiKP	23 23 14.8	+2.8
MKAR	Makanchi Array	118.43	310		PKPdf	23 23 18.6	-2.0
MKAR	Makanchi Array	118.43	310	PKP	PKPdf	23 23 19.6	-1.0
	comp=Z,0.5nm,0.6s,baz=114,slow=2.8,SNR=5.0						
ZALV	Zalesovo Beam	118.74	318	PKP	PKPdf	23 23 20.0	-0.9
	comp=Z,0.4nm,0.4s,baz=124,slow=3.1,SNR=2.1						
ZALV	Zalesovo Beam	118.74	318	PKIKP	PKPdf	23 23 20.0	-0.9
KSH	Kashi	120.81	300	PKP	PKiKP	23 23 30.1	+4.4
KSH				sPKP		23 23 38.3	
NRN	Naryn	121.33	302	PKPdf	PKPdf	23 23 25.7	-1.0
NRN	Naryn	121.33	302	PKIKP	PKPdf	23 23 25.7	-1.0
BOOM	Boomskoye usch	121.64	304	PKPdf	PKPdf	23 23 26.0	-1.2
BOOM	Boomskoye usch	121.64	304	PKIKP	PKPdf	23 23 26.0	-1.2
KURK	Kurchatov	121.73	313	PKPdf	PKiKP	23 23 27.9	+1.0
KURK	Kurchatov	121.73	313	*i* PKIKP	PKPdf	23 23 24.7	-2.1
KURBB	Kurchatov Arra	121.77	313	PKP	PKPdf	23 23 25.4	-1.4
	comp=Z,1.2nm,0.7s,baz=115,slow=1.8,SNR=12						
AAK	Ala-Archa	122.72	303	*i* PKIKP	PKPdf	23 23 28.1	-1.1
KBL	Kabul	124.72	293	PKPdf	PKPdf	23 23 32.0	-1.3
KBL	Kabul	124.72	293	PKIKP	PKPdf	23 23 32.0	-1.3
KKAR	Karatay Array	125.67	303	PKPdf	PKPdf	23 23 32.8	-1.9
KKAR	Karatay Array	125.67	303	PKIKP	PKPdf	23 23 32.8	-1.9
BVAR	Borovoye Array	127.10	315	PKP	PKPdf	23 23 36.6	-0.4
	comp=Z,0.9nm,0.4s,baz=98,slow=3.0,SNR=11						
BRVK	Borovoye	127.17	315	PKPdf	PKPdf	23 23 35.2	-1.9
BRVK	Borovoye	127.17	315	*ce*PKIKP	PKPdf	23 23 36.8	-0.3
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
ARTI	Arti	133.92	320	*i* PKIKP	PKiKP	23 23 55.9	+4.8
ARTI						23 26 24.2	
ARCES	ARCESS Array B	139.37	348	PKhKP	PKPpre	23 23 51.4	
	comp=Z,2.1nm,0.8s,baz=11,slow=1.2,SNR=4.7						
ARCES				PKP	PKPdf	23 23 59.7	+0.1
	comp=Z,1.2nm,0.6s,baz=30,slow=1.6,SNR=4.5						
KLMR	Klimovskoe	141.53	332	*e*PKIKP	PKPdf	23 24 02.5	-1.2
KLMR				*e*		23 24 13.1	
KLMR				pmax	pmax		
	comp=Z,13nm,1.4s						
AKT	Akhty	142.32	299	*e*PKIKP	PKPdf	23 24 04.3	-1.6
AKT				pmax	pmax		
	comp=Z,13nm,1.0s						
GNI	Garni	144.61	297	PKPdf	PKPab	23 24 08.0	-0.7
GNI	Garni	144.61	297	*ce*PKIKP	PKPdf	23 24 09.4	-0.6
GNI				pmax	pmax		
	comp=Z,24nm,1.7s						
VRH	Novokhopyorsk	144.74	316	*e*PKIKP	PKPab	23 24 07.9	-0.6
VRH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MOS	Moscow	145.08	325	*i* PKIKP	PKPbc	23 24 07.6	-2.0
MOS				pmax	pmax		
	comp=Z,52nm,0.8s						
GOF	Gofitskoye	145.41	305	*ce*PKIKP	PKPbc	23 24 10.3	-0.7
KBZ	Khabaz	145.71	303	PKPbc	PKPbc	23 24 11.8	-0.2
	comp=Z,8.8nm,0.9s,baz=121,slow=1.6,SNR=14						
LPSR	Galich'ya Gora	145.83	320	*e*PKIKP	PKPdf	23 24 10.3	-1.2
LPSR				pmax	pmax		
	comp=Z,100nm,0.7s						
KIV	Kislovodsk	145.83	303	PKPdf	PKPdf	23 24 11.2	-0.7
KIV	Kislovodsk	145.83	303	*i* PKP2	PKPdf	23 24 11.2	-0.7
KIV				pmax	pmax		
	comp=Z,17nm,1.1s						
SHA1	Shidzhatmaz	145.88	303	*i* PKP2	PKPdf	23 24 11.7	-0.5
OBN	Obninsk	145.92	325	PKPdf	PKPdf	23 24 10.4	-1.1
OBN	Obninsk	145.92	325	⇓P	PKPdf	23 24 11.6	0.0
OBN	Obninsk	145.92	325	*c i*PKP2	PKPdf	23 24 11.0	-0.5
OBN						23 31 13.0	
OBN				pmax	pmax		
	comp=Z,80nm,0.8s						
OBN				pmax	pmax		
	comp=Z,114nm,1.8s						
OBN				MLR	MLR		
	comp=Z,69nm,17.0s						
FINES	FINESS Array B	145.93	340	PKPdf	PKPdf	23 24 10.3	-1.1
FINES	FINESS Array B	145.93	340	PKPbc	PKPdf	23 24 10.8	-0.6
	comp=Z,14nm,0.7s,baz=54,slow=2.7,SNR=37						
FINES	FINESS Array B	145.93	340	PKIKP	PKPdf	23 24 10.3	-1.1
VORR	Voronezh	146.04	318	*e*PKIKP	PKPdf	23 24 09.7	-2.2
VORR				pmax	pmax		
	comp=Z,80nm,0.6s						
VSR	Storozhevoye	146.24	317	*e*PKIKP	PKPdf	23 24 09.7	-2.5
VSR				pmax	pmax		
	comp=Z,70nm,0.8s						
VORD	Divnogorie	146.26	317	*e*PKIKP	PKPdf	23 24 10.6	-1.6
VORD				pmax	pmax		
	comp=Z,50nm,0.8s						
ERBR	Yeremizino-Bor	147.06	307	*i* PKHKP	PKPpre	23 24 05.1	
ERBR				pmax	pmax		
	comp=Z,55nm,0.7s						
LABN	Labinsk	147.11	305	*i* PKP2	PKiKP	23 24 24.7	+6.2
LABN				pmax	pmax		
	comp=Z,32nm,1.1s						
SOC	Sochi	148.02	303	*e*PKIKP	PKPdf	23 24 16.2	+0.7
SOC				*e*		23 27 56.3	
SOC				*e*SS	SS	23 46 50.7	-0.8
SOC				*e*SSS	SSS	23 52 28.2	
SOC				pmax	pmax		
	comp=Z,25nm,0.9s						
ANN	Anapa	149.37	306	*i* PKP2	PKPbc	23 24 21.3	-0.7
ANN				pmax	pmax		
	comp=Z,38nm,0.9s						
NB2	NORSAR Subarra	149.53	351	PKP	PKPbc	23 24 20.5	-1.5
	comp=Z,1.2nm,0.7s,baz=16,slow=2.6						
NOA	NORSAR Array B	149.53	351	PKPbc	PKPbc	23 24 20.4	-1.5
	comp=Z,3.3nm,0.9s,baz=13,slow=4.2,SNR=11						
HFS	Hagfors	150.03	349	PKPbc	PKPbc	23 24 21.5	-1.6
	comp=Z,4.0nm,0.7s,baz=27,slow=2.5,SNR=10						
MNK	Minsk	150.35	329	*i* PKiKP	PKiKP	23 24 26.5	+1.7
	comp=E,13nm,0.8s						
MNK				*i* PKiKP	PKiKP	23 24 26.5	+1.7
	comp=N,11nm,0.9s						
MNK				*i* PKiKP	PKiKP	23 24 26.5	+1.7
	comp=Z,19nm,0.8s,baz=48						
MNK				*i* PP	PP	23 28 02.4	+2.7
MNK				*i* PPP	PPP	23 31 25.6	
MNK				*i* SKS	SKSdf	23 31 27.5	+3.0
MNK				*i* SS	SS	23 47 25.2	+9.1
MNK				*i* SSS	SSS	23 53 44.1	
MNK				*i* LR	LR	00 35 45.4	
MNK	Minsk	150.35	329	*i* PKIKP	PKiKP	23 24 26.5	+1.7
MNK				*i*		23 28 02.3	
MNK				*i* PPP	PPP	23 31 25.6	
MNK				*i*		23 31 27.5	
MNK				pmax	pmax		
	comp=N,11nm,0.9s						
MNK				pmax	pmax		
	comp=Z,19nm,0.8s						
MNK				pmax	pmax		
	comp=E,13nm,0.8s						
NACGM	Naroch	150.54	331	LQ	LQ	00 24 17.2	
PABE	Paberze	151.22	334		PKPbc	23 24 24.9	-1.2
STRU	Stroemstad	151.47	350	*e*P	PKPbc	23 24 25.6	-0.9
SIM	Simferopol'	151.59	308	*i* PKIKP	PKPbc	23 24 26.9	-0.4
SIM				*e*		23 24 37.6	
SIM				pmax	pmax		
	comp=Z,17nm,0.8s						
SIM				pmax	pmax		
	comp=Z,67nm,1.0s						
MMAI	Mount Meron Ar	151.92	283	PKPbc	PKiKP	23 24 29.1	+0.1
	comp=Z,6.8nm,0.6s,baz=77,slow=3.6,SNR=15						
AKASG	Malin Array Be	152.03	322	PKPbc	PKPbc	23 24 26.3	-1.8
AKASG	Malin Array Be	152.03	322	PKPbc	PKPbc	23 24 26.8	-1.3
	comp=Z,4.8nm,0.6s,baz=47,slow=2.3,SNR=19						
AKASG	Malin Array Be	152.03	322	PKIKP	PKPbc	23 24 26.3	-1.8
KIEV	Kiev	152.04	322	PKPbc	PKPbc	23 24 26.5	-1.6
KIEV	Kiev	152.04	322	PKIKP	PKPbc	23 24 26.5	-1.6
AK22	Malin Array Si	152.08	322	PKP	PKPbc	23 24 26.9	-1.3
AK05	Malin Array Si	152.09	322	PKP	PKPbc	23 24 26.9	-1.3
BORU	Boraas	152.55	348	*e*P	PKPbc	23 24 26.6	-2.4
HOMB	Homborsund	152.55	353	*i* P	PKiKP	23 24 30.0	+0.8
SNART	Snartemo	152.61	354	*e*	PKPbc	23 24 26.8	-2.4
SUW	Suwalki	152.65	333	*e*PKP	PKPbc	23 24 28.6	-0.8
MI28	Mi28,Pidlybu	152.71	324	PKP	PKPbc	23 24 28.0	-1.6
KIRS	Kirsehir-Merke	153.02	296	⇓P	PKPbc	23 24 28.1	-2.7
BRTR	Keskin Array B	153.15	297	PKPbc	PKPbc	23 24 28.8	-2.4
BRTR	Keskin Array B	153.15	297	PKPbc	PKPbc	23 24 30.1	-1.1
	comp=Z,5.4nm,1.0s,baz=90,slow=2.4,SNR=20						
BRTR	Keskin Array B	153.15	297	PKIKP	PKPbc	23 24 28.8	-2.4
LUBAR	Lubar, Ukraine	153.25	322	PKP	PKPbc	23 24 30.3	-0.6
RNPP9	Sopachiv	153.28	326	PKP	PKPbc	23 24 30.1	-0.8
DEL	Delary	153.42	346	*i* P	PKPbc	23 24 29.0	-2.0
PURM	Purcari	153.75	314	⇑P	PKiKP	23 24 32.0	-0.1
ANTO	Ankara	153.77	298	PKPbc	PKPbc	23 24 31.4	-1.0
ANTO	Ankara	153.77	298	⇑P	PKPbc	23 24 30.0	-2.5
ANTO	Ankara	153.77	298	PKIKP	PKPbc	23 24 31.4	-1.0
SORM	Soroca	153.90	318	⇓P	PKPbc	23 24 31.5	-0.8
MILM	Milestii Mici	154.22	315	⇑P	PKPab	23 24 42.5	-4.5
GKP	Gorka Klasztor	155.37	338	*e*PKP	PKPab	23 24 46.3	-5.3
TPGR	Topolog	155.39	311	⇓P	PKPab	23 24 43.8	-8.3
CFR	Carcaliu	155.44	312	⇓P	PKPdf	23 24 34.0	+7.5
EKA	Eskdalemuir Ar	155.53	7	PKPab	PKPab	23 24 50.4	-1.8
	comp=Z,0.5nm,0.6s,baz=2.7,slow=3.6,SNR=3.4						
TIRR	Tirgusor	155.56	310	⇓P	PKPab	23 24 50.9	-1.8
TESR	Tescani	155.72	316	⇑P	PKPab	23 24 51.6	-1.8
BURAR	Bucovina Array	155.95	320	⇓P	PKPab	23 24 44.2	-10
VRI	Vrincioaia	156.00	315	⇓P	PKPab	23 24 47.7	-6.9
TURR	Turia	156.33	316	⇑P	PKPab	23 24 49.6	-6.5
OZUR		156.45	316	⇓P	PKPab	23 24 52.6	-4.0
KOLS	Kolonicke sedl	156.67	325	*e*PKIKP	PKPdf	23 24 32.0	+3.9
KOLS	Kolonicke sedl	156.67	325	*e*PKP	PKPdf	23 24 32.0	+3.9
KOLS				*e*		23 24 56.2	
STHS	Stebnicka Huta	156.82	327	*e*PKP2	PKPab	23 24 57.2	-0.9
STHS	Stebnicka Huta	156.82	327	*e*PKP	PKPab	23 24 57.2	-0.9
NIE	Niedzica	157.25	328	*e*PKP	PKPab	23 24 50.5	-9.5
KSP	Ksiaz	157.73	336	*e*PKP	PKPab	23 24 51.1	-11
DRGR		157.81	321	⇓P	PKPab	23 25 01.8	-0.8
LANS	Liptovska Anna	157.82	329	*e*PKP2	PKPab	23 25 02.7	+0.3
LANS	Liptovska Anna	157.82	329	*e*PKP	PKPab	23 25 02.7	+0.3
CHVC	Chvalec	158.03	336	*e*PKPAB	PKPab	23 25 02.6	-0.6
CHVC	Chvalec	158.03	336	*e*PKP2	PKPab	23 25 02.6	-0.6
DPC	Dobruska-Polom	158.13	335	*e*PKPAB	PKPab	23 25 03.3	-0.4
DPC	Dobruska-Polom	158.13	335	*e*PKP2	PKPab	23 25 03.3	-0.4
MORC	Moravsky Berou	158.14	333	*e*PKP	PKPab	23 25 02.4	-1.4
MORC				*e*		23 25 14.8	
KRLC	Kraliky	158.19	334	*e*PKPAB	PKPab	23 25 02.7	-1.3
KRLC	Kraliky	158.19	334	*e*PKP2	PKPab	23 25 02.7	-1.3
BRG	Berggiesshubel	158.47	340	*e*PKPab	PKPab	23 25 03.8	-1.2
	baz=23,slow=4.2						
BRG	Berggiesshubel	158.47	340	*e*PKP	PKPab	23 25 04.2	-0.8
BRG				Amp		23 25 08.2	
	comp=Z,3.3nm,0.8s						
VYHS	Vyhne	158.59	329	*e*PKP2	PKPab	23 25 05.3	-0.4
VYHS	Vyhne	158.59	329	*e*PKP	PKPab	23 25 05.3	-0.4
SURR	Surduc	158.76	319	⇓P	PKPab	23 25 05.8	-0.7
JAVC	Velka Javorina	158.81	331	*e*PKP	PKPab	23 25 04.6	-2.1
VRAC	Vranov	158.89	333	*e*PKP	PKPab	23 25 05.8	-1.1
VRAC				*e*		23 25 18.5	
KRUC	Moravsky	159.16	333	*e*PKP	PKPab	23 25 06.2	-1.9
TANN	Tannenbergstha	159.30	341	*e*PKPab	PKPab	23 25 08.1	-0.7
	baz=23,slow=4.2						
MODS	Modra-Piesok	159.35	331	*e*PKP2	PKPab	23 25 08.3	-0.7
MODS	Modra-Piesok	159.35	331	*e*PKP	PKPab	23 25 08.3	-0.7
MDVR	Moldovita	159.57	317	⇓P	PKPab	23 25 08.3	-1.8
ZVC	Zvikov	159.64	337	*e*PKPAB	PKPab	23 25 10.0	-0.2
ZVC				*e*x	x	23 25 20.3	
ROTZ	Rotzenmuhle	159.96	341	*e*PKPab	PKPab	23 25 11.1	-0.4
	baz=23,slow=4.2						
KHC	Kasperske Hory	160.11	338	*e*PKPAB	PKPab	23 25 11.4	-0.9
KHC				*e*x	x	23 25 22.0	
KHC	Kasperske Hory	160.11	338	*e*PKP2	PKPab	23 25 11.4	-0.9
CKRC	Cesky Krumlov	160.13	336	*e*PKPAB	PKPab	23 25 11.5	-0.9
CKRC	Cesky Krumlov	160.13	336	*e*PKP2	PKPab	23 25 11.5	-0.9
CONA	Conrad Observa	160.29	332	*e*PKP	PKPab	23 25 12.5	-0.7
	comp=Z,3.8nm,0.9s						
RONA	Rosalia, Austr	160.29	331	*e*PKP	PKPab	23 25 12.3	-0.8
	comp=Z,5.8nm,0.9s						
GRF	Grafenberg Arr	160.29	343	*e*PKPab	PKPab	23 25 11.7	-1.3
	baz=23,slow=4.2						
GERES	GERESS Array B	160.32	337	PKPab	PKPab	23 25 12.1	-1.2
	comp=Z,1.6nm,0.9s,baz=37,slow=6.2,SNR=6.8						
WET	Wettzell	160.32	339	*e*PKPab	PKPab	23 25 12.4	-0.7
	baz=23,slow=4.2						
BMRD	Maredsous	160.78	355	*d*PKP	PKPab	23 25 14.0	-1.0
ARSA	Arzberg	160.97	331	*e*PKP	PKPab	23 25 15.3	-0.8
	comp=Z,2.1nm,1.0s						
MOA	Molln	160.97	335	*i* PKP	PKPab	23 25 15.5	-0.5
	comp=Z,2.8nm,1.0s						
WLF	Walferdange	161.28	352	*e*PKPab	PKPab	23 25 11.8	-5.4
	baz=23,slow=4.2						
BIOA	Bad Ischl, Aus	161.33	335	*i* PKP	PKPab	23 25 17.3	-0.3
	comp=Z,6.6nm,1.2s						
RJOB	Jochberg	161.58	337	*e*PKPab	PKPab	23 25 18.0	-0.8
	baz=23,slow=4.2						
SOKA	Soboth	161.63	331	*e*PKP	PKPab	23 25 17.9	-1.2
	comp=Z,1.9nm,0.8s						
LESA	Schwarzleotal	161.89	337	*e*PKP	PKPab	23 25 19.8	-0.4
	comp=Z,5.2nm,1.1s						
OBKA	Obir	161.96	332	*e*PKP	PKPab	23 25 19.2	-1.3
	comp=Z,3.9nm,1.3s						
TORD	Torodi Ar. Bea	162.07	178	PKPab	PKPab	23 25 22.6	+1.0
	comp=Z,36nm,0.3s,baz=180,slow=3.2,SNR=1.3						
WATA	Walderalm	162.33	339	*i* PKP	PKPab	23 25 21.7	-0.4
	comp=Z,7.0nm,1.6s						
WTTA	Wattenberg	162.37	339	*e*PKP	PKPab	23 25 21.3	-1.1
	comp=Z,5.8nm,1.1s						
RETA	Reutte	162.43	341	*e*PKP	PKPab	23 25 21.4	-1.2
	comp=Z,3.7nm,0.8s						
MOTA	Moosalm	162.46	340	*e*PKP	PKPab	23 25 21.8	-1.0
	comp=Z,12nm,1.1s						
ABTA	Abfaltersbach	162.53	336	*e*PKP	PKPab	23 25 21.3	-1.7
	comp=Z,6.0nm,1.0s						
SQTA	Sankt Quirin	162.54	339	*e*PKP	PKPab	23 25 22.6	-0.5
	comp=Z,6.4nm,0.9s						
DAVA	Damuels	162.86	342	*e*PKP	PKPab	23 25 23.8	-0.7
	comp=Z,15nm,1.5s						
FETA	Feichten	162.86	340	*e*PKP	PKPab	23 25 23.8	-0.7
	comp=Z,4.8nm,1.0s						
TUE	Stuetta	163.75	342		PKPab	23 25 27.6	-0.9

IDC 18 23:17:08.7±3.1**, 29°.52S**×**177°.83W, h0**^{km}**, mb3.6**/3**, mbtmp3.6**/3**, Error ellipse: s-maj=89.8km s-min=43.2km az=37.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.31	266	P	P	23 25 12.2	-0.3
	0.2nm,0.4s,baz=112,slow=7.5,SNR=4.3						
	0.2nm,0.4s						
WRA	Warramunga Arr	44.22	271	P	P	23 25 19.9	0.0
	0.6nm,0.5s,baz=112,slow=8.1,SNR=5.7						
	0.6nm,0.5s						
QSPA	South Pole Qui	60.59	180	P	P	23 27 21.2	+0.2
	0.6nm,0.6s,baz=235,slow=2.9,SNR=1.9						
	0.6nm,0.6s						
FINES	FINESS Array B	144.37	340	PKP	PKPbc	23 36 45.0	+0.5
	0.8nm,0.4s,baz=51,slow=1.7,SNR=18						

IDC ***18*** *23:24:17.7±0.4, 31°.31S×177°.50W, h0^{km}, mb4.8/21, mbtmp4.8/21, MS4.8/20, Error ellipse: s-maj=17.9km s-min=15.0km az=83.0*

NEIC ***18*** *23:24:20.3±2.3, 31°.37S±0°.09×177°.6W±0°.1, h14^{km}±2^{km}, mb5.2/136, Mww5.2/27, Error ellipse: s-maj=16.7km s-min=12.2km az=66.0*

MOS ***18*** *23:24:20.3±1.2, 31°.37S×177°.69W, h22^{km}, mb5.4/20, MS4.9/8, Error ellipse: s-maj=13.5km s-min=9.3km az=110.5*

BJI ***18*** *23:24:20.8, 30°.84S×176°.93W, h28^{km}, mB5.7/16, mb5.3/24, Ms5.0/22, Ms7 4.7/24*

NEIC ***18*** *23:24:23.4, 31°.42S×176°.80W, h18^{km}, Moment Tensor Solution. Duration: 2^{s}3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$5.30; M$_{\theta\theta}$0.88; M$_{\phi\phi}$-6.19; M$_{r\theta}$0.35; M$_{\theta\phi}$-1.74; M$_{\phi r}$4.80; Fault plane solution: M$_{0}$7.73000×10^{16} NP1: ϕ_s201.93000°, δ26.18000°, λ103.94000°. NP2: ϕ_s6.47000°, δ64.65000°, λ83.24000°. Principal axes: T 7.0556, Plg70.0000°, Azm263.0000°; N 1.2100, Plg6.0000°, Azm9.0000°; P -8.2656, Plg19.0000°, Azm102.0000°;*

NEIC ***18*** *23:24:23.4, 31°.42S×177°.62W, h18^{km}*

GCMT ***18*** *23:24:23.3±0.2, 31°.31S±0°.01×177°.19W±0°.01, h13^{km}, MW5.2/114, Moment Tensor Solution. s85,c132; s114,c187; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$4.63±.15; M$_{\theta\theta}$0.60±.12; M$_{\phi\phi}$-5.23±.12; M$_{r\theta}$0.14±.30; M$_{\theta\phi}$-2.28±.09; M$_{\phi r}$4.74±.37; Best double couple: M$_{0}$7.16900×10^{16} NP1: ϕ_s216.00000°, δ27.00000°, λ118.00000°. NP2: ϕ_s6.00000°, δ67.00000°, λ77.00000°. Principal axes: T 6.6310, Plg66.0000°, Azm252.0000°; N 1.0740, Plg12.0000°, Azm11.0000°; P -7.7070, Plg20.0000°, Azm106.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 23:24:21.2±0.3**, 31°.47S**±0°.04×**177°.50W**±0°.05**, h26**^{km}**, n483, **σ**1^{s}57**/447**, mb5.2**/113**, MS4.9**/41**, 42C-29D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.23	350	P	Pn	23 24 53.5	-3.0
GLKZ				S	Sb	23 25 22.6	-5.4
RAO	Raoul Island	2.24	351	Pn	Pn	23 24 53.9	-2.7
RAO	Raoul Island	2.24	351	P	Pn	23 24 53.9	-2.7
RIZ	Raoul Island	2.25	350	P	Pn	23 24 54.5	-2.2
MXZ	Matakaoa Point	6.99	209	Pn	Pn	23 25 59.6	-2.3
MXZ	Matakaoa Point	6.99	209	P	Pn	23 25 58.8	-3.2
MXZ				S	Sn	23 27 18.8	-1.8
WMGZ	Waiomatatini S	7.17	207	P	Pn	23 26 01.8	-2.6
WMGZ				S	Sn	23 27 23.8	-1.2
PKGZ	Pakihiroa	7.35	208	P	Pn	23 26 03.5	-3.3
PKGZ				S	Sn	23 27 27.8	-1.6

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HAZ   Te Kaha            7.38 211   P      Pn     23 26 04.9 -2.3
HAZ                                 S      Sn     23 27 31.0 +0.9
PUZ   Puketiti           7.45 207   P      Pn     23 26 03.5 -4.8
PUZ                                 S      Sn     23 27 30.5 -1.5
WIZ   White Island       7.46 215   S      Sn     23 27 30.0 -2.2
GRZ   Great Barrier      7.55 229   P      Pn     23 26 10.8 +1.2
RUGZ  Raukumara Rang     7.60 210   P      Pn     23 26 06.8 -3.6
RUGZ                                S      Sn     23 27 35.3 -0.4
TWGZ  Tauwhareparae      7.65 208   P      Pn     23 26 07.1 -4.0
KUZ   Kuaotunu           7.70 225   P      Pn     23 26 07.4 -4.2
CNGZ  Carnagh Statio     7.83 206   P      Pn     23 26 09.5 -4.0
CNGZ                                S      Sn     23 27 38.3 -3.0
TKGZ  Te Karaka          7.93 207   S      Sn     23 27 39.2 -4.5
MWZ   Matawai            7.97 209   P      Pn     23 26 11.4 -4.0
MWZ                                 S      Sn     23 27 41.7 -3.1
URZ   Urewera            8.09 212   Pn     Pn     23 26 14.4 -2.7
      1.8nm,0.3s,baz=91,slow=3.0,SNR=13
URZ                                 Sn     Sn     23 27 41.1 -6.6
      11nm,0.3s,baz=254,slow=22,SNR=12
URZ   Urewera            8.09 212   P      Pn     23 26 13.8 -3.3
URZ                                 S      Sn     23 27 43.6 -4.1
WCZ   Waipu Caves        8.13 235   P      Pn     23 26 20.5 +3.0
RAGZ  Rawiri             8.16 209   P      Pn     23 26 15.2 -2.8
RAGZ                                S      Sn     23 27 44.8 -4.5
RIGZ  Rimuhau            8.20 207   S      Sn     23 27 48.9 -1.4
OUZ   Omahuta            8.34 241   P      Pn     23 26 21.2 +0.8
PRGZ  Paritu Road        8.34 206   S      Sn     23 27 52.0 -1.8
MUGZ  Murupara           8.42 212   S      Sn     23 27 51.7 -4.1
SNGZ  Shannon Statio     8.43 209   P      Pn     23 26 18.4 -3.3
SNGZ                                S      Sn     23 27 53.3 -2.7
MTHZ  Maungataniwha      8.70 211   P      Pn     23 26 21.2 -4.2
MTHZ                                S      Sn     23 27 58.6 -4.0
NGZ   Ngauruhoe          9.53 214   P      Pn     23 26 33.8 -3.2
NGZ                                 S      Sn     23 28 22.0 -1.2
CTZ   Chatham Island    12.27 177   Pn     Pn     23 27 09.8 -4.3
CTZ   Chatham Island    12.27 177   P      Pn     23 27 09.9 -4.2
THZ   Tophouse          12.83 214   Pn     Pn     23 27 18.7 -3.3
KHZ   Kahutara          13.06 211   Pn     Pn     23 27 21.4 -3.6
MSVF  Nonsavu           14.26 343          Pn     23 27 40.4 -1.2
MSVF  Nonsavu           14.26 343   LR     LR     23 32 32.4
      comp=Z,4µm,18.6s,baz=171,slow=35
MSVF  Nonsavu           14.26 343   P      Pn     23 27 40.4 -1.2
RPZ   Rata Peaks        15.20 213   Pn     Pn     23 27 50.5 -3.7
      1.7nm,0.3s,baz=325,slow=2.6,SNR=7.3
RPZ                                 Sn     Sn     23 30 25.4  -16
      1.5nm,0.3s,baz=300,slow=20,SNR=7.8
PINNC Pines Island,     16.04 300   P      P      23 28 06.5 -1.8
ODZ   Otahua Downs      16.42 211   Pn     Pn     23 28 06.2 -3.6
ONTNC Ouen Toro         16.96 299          P      23 28 17.8 -0.7
DZM   Mont Dzumac       17.11 299          P      23 28 20.1 -0.1
DZM   Mont Dzumac       17.11 299  ePn     P      23 28 20.6 +0.4
      282nm,1.4s
DZM                                eLR     LR     23 32 16.6
      6µm,25.1s
DZM   Mont Dzumac       17.11 299   P      P      23 28 21.9 +1.6
      85nm,1.1s,baz=114,slow=13,SNR=18
DZM                                 LR     LR     23 34 01.3
      comp=Z,5µm,18.1s,baz=167,slow=34
MLZ   Mavora Lakes      17.84 215   Pn     Pn     23 28 23.8 -3.8
WHZ   Wether Hill Ro    18.30 214   P      P      23 28 28.9 -4.3
DCZ   Deep Cove         18.39 216   P      P      23 28 32.7 -1.3
RAR   Rarotonga         18.86  61   P      Pn     23 28 42.1 +1.9
      33nm,0.8s,baz=209,slow=6.5,SNR=5.6
RAR                                 LR     LR     23 35 16.2
      comp=Z,2µm,19.4s,baz=238,slow=35
TBI   Tubuai            26.12  79  eP      P      23 29 54.9 +1.7
      515nm,23.0s
TBI                                eS      S      23 34 22.1 -1.1
      8µm,25.2s
TBI                                eLR     LR     23 36 17.0
      6µm,22.5s
TBI                                eLR     LR     23 36 20.3
      2µm,29.2s
ARMA  Armidale          26.46 264   P      P      23 29 59.3 +2.9
      comp=Z,39nm,1.3s
MGCD  Mangrove Creek    26.53 258   P      P      23 30 00.4 +3.5
MILA  Mila              28.03 249   P      P      23 30 10.9 +0.6
      comp=Z,26nm,0.9s
EIDS  Eidsvold          28.23 274   P      P      23 30 12.7 +0.5
EIDS                                IAmb   IAmb   23 30 14.5
      comp=Z,31nm,0.9s
EIDS  Eidsvold          28.23 274   P      P      23 30 13.5 +1.3
      comp=Z,35nm,1.0s
YNG   Young             28.70 255   P      P      23 30 17.4 +1.1
      comp=Z,33nm,1.1s
PPT2  Papeete2          28.82  68  eS      S      23 35 04.5 -1.5
      comp=Z,2µm,25.2s
PPT2                               eLR     LR     23 37 19.2
      comp=Z,1µm,21.0s
PPT2                               eLR     LR     23 37 40.7
      comp=Z,2µm,21.0s
PPT   Papeete           28.83  68   LR     LR     23 40 13.2
      comp=Z,2µm,18.6s,baz=228,slow=33
TOO   Toolangi          30.95 248   P      P      23 30 37.1 +0.9
TOO   Toolangi          30.95 248   P      P      23 30 37.7 +1.4
      comp=Z,12nm,1.2s
TOO   Toolangi          30.95 248   P      P      23 30 37.1 +0.9
TOO                                 pmax   pmax
      comp=Z,10.0nm,1.0s
CMSA  Cobar Meteorol    31.29 260   P      P      23 30 40.7 +1.5
      comp=Z,63nm,1.0s
ARPS  Mount Arapiles    33.89 250   P      P      23 31 02.5 +0.5
      comp=Z,74nm,1.0s
CTAO  Charters Tower    34.40 280   P      P      23 31 07.3 +0.8
CTAO  Charters Tower    34.40 280   P      P      23 31 07.3 +0.8
CTAO                                pmax   pmax
      comp=Z,55nm,1.0s
STKA  Stephens Creek    34.67 258   P      P      23 31 09.2 +0.4
STKA  Stephens Creek    34.67 258   P      P      23 31 09.4 +0.7
      comp=Z,211nm,1.3s
STKA  Stephens Creek    34.67 258   P      P      23 31 09.5 +0.7
      comp=Z,28nm,0.9s,baz=102,slow=9.8,SNR=41
STKA                                LR     LR     23 45 03.6
      comp=Z,1µm,18.4s,baz=94,slow=36
      comp=Z,28nm,0.9s
STKA  Stephens Creek    34.67 258 i P      P      23 31 08.0 -0.7
HTT   Hallett           36.63 255   P      P      23 31 26.4 +0.8
      comp=Z,11nm,1.2s
BBOO  Buckleboo         39.10 255   P      P      23 31 46.0 -0.4
BBOO                                IAmb   IAmb   23 31 47.0
      comp=Z,37nm,0.8s
COEN  Coen              39.98 287   P      P      23 31 54.8 +0.9
TAOE  Nuku Hiva Isla    41.35  65  eS      S      23 38 10.7 -7.9
      comp=Z,330nm,24.9s
TAOE                               eLR     LR     23 43 12.5
      comp=Z,901nm,21.1s
AS12  Alice Springs     43.49 268   P      P      23 32 22.0 -0.6
      comp=Z,31nm,0.8s
AS31  Alice Springs     43.49 268   P      P      23 32 22.6  0.0
AS31  Alice Springs     43.49 268   P      P      23 32 22.4 -0.2
      comp=Z,11nm,1.1s
ASAR  Alice Springs     43.49 268   P      P      23 32 22.4 -0.3
      comp=Z,28nm,0.9s,baz=110,slow=7.7,SNR=126
ASAR                                PcP    PcP    23 34 11.6 +1.1
      comp=Z,5.4nm,0.8s,baz=116,slow=4.0,SNR=4.2
ASAR                                ScP    ScP    23 38 03.8 +3.6
      comp=Z,4.1nm,0.9s,baz=119,slow=4.3,SNR=10
ASAR                                LR     LR     23 51 00.9
      comp=Z,1µm,18.3s,baz=113,slow=37
      comp=Z,28nm,0.9s
WR8   Warramunga Arr    44.43 273   P      P      23 32 29.4 -0.8
WR8                                 IAmb   IAmb   23 32 31.5
      comp=Z,51nm,0.9s
WB2   Warramunga Arr    44.56 273   P      P      23 32 31.2  0.0
WRAB  Tennant Creek     44.57 273   P      P      23 32 30.9 -0.4
WRAB  Tennant Creek     44.57 273 i P      P      23 32 29.5 -1.8
WRAB                                pmax   pmax
      comp=Z,73nm,1.1s
WRA   Warramunga Arr    44.58 273   P      P      23 32 30.1 -1.3
WRA   Warramunga Arr    44.58 273   P      P      23 32 31.0 -0.3
      comp=Z,50nm,0.9s,baz=113,slow=7.6,SNR=112
WRA                                 PcP    PcP    23 34 14.4 +0.2
      comp=Z,1.5nm,0.9s,baz=110,slow=3.4,SNR=2.5
WRA                                 ScP    ScP    23 38 08.7 +4.0
      comp=Z,4.9nm,1.1s,baz=114,slow=3.9,SNR=7.7
WRA                                 LR     LR     23 51 14.6
      comp=Z,3µm,18.2s,baz=124,slow=36
      comp=Z,50nm,0.9s
WRA   Warramunga Arr    44.58 273   P      P      23 32 30.1 -1.3
WRA                                 pmax   pmax
      comp=Z,4.0nm,1.0s
WB0   Warramunga Arr    44.60 273   P      P      23 32 30.2 -1.4
FORT  Forrest           46.20 256   P      P      23 32 42.4 -1.7
FORT  Forrest           46.20 256   P      P      23 32 43.2 -0.9
      comp=Z,92nm,1.0s
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SBA   Scott Base        47.01 185   P      P      23 32 51.2 +1.5
SBA                                 IAmb   IAmb   23 33 14.4
      comp=Z,29nm,1.1s
SBA   Scott Base        47.01 185   P      P      23 32 51.2 +1.5
SBA                                 pmax   pmax
      comp=Z,29nm,1.2s
VNDA  Vanda             47.08 186   P      P      23 32 52.0 +1.7
VNDA  Vanda             47.08 186   P      P      23 32 53.0 +2.7
      comp=Z,2.3nm,0.9s,baz=3.2,slow=7.4,SNR=6.9
VNDA                                LR     LR     23 49 07.7
      comp=Z,700nm,20.6s,baz=15,slow=32
      comp=Z,2.3nm,0.9s
VNDA  Vanda             47.08 186   P      P      23 32 52.0 +1.7
VNDA                                pmax   pmax
      comp=Z,18nm,1.6s
JAY   Jayapura          48.77 298   LR     LR     23 51 30.8
      comp=Z,481nm,21.3s,baz=212,slow=34
KNRA  Kununurra         51.22 275   P      P      23 33 21.1 -1.8
KNRA                                IAmb   IAmb   23 33 26.3
      comp=Z,23nm,0.8s
FITZ  Fitzroy Crossi    52.79 270   P      P      23 33 33.3 -1.2
CASY  Casey             54.40 208   P      P      23 33 45.6  0.0
CASY                                IAmb   IAmb   23 33 48.4
      comp=Z,27nm,0.9s
NWAO  Narrogin (SRO)    54.43 250   LR     LR     23 55 10.4
      comp=Z,444nm,20.0s,baz=88,slow=34
PSA00 Pilbara Seismi    56.27 264   P      P      23 33 57.0 -2.8
MBWA  Marble Bar        56.54 264   P      P      23 33 59.9 -1.8
MBWA                                IAmb   IAmb   23 34 01.0
      comp=Z,24nm,1.0s
GUMO  Guam              57.54 315   LR     LR     23 56 31.1
      comp=Z,386nm,20.1s,baz=114,slow=34
BATI  Baumata           58.22 278   LR     LR     00 00 15.5
      comp=Z,2µm,18.0s,baz=134,slow=37
QSPA  South Pole Qui    58.64 180   P      P      23 34 17.1 +1.1
QSPA  South Pole Qui    58.64 180   P      P      23 34 18.3 +2.3
      comp=Z,42nm,1.0s,baz=31,slow=2.5,SNR=41
QSPA                                LR     LR     23 56 54.0
      comp=Z,524nm,19.6s,baz=42,slow=33
      comp=Z,42nm,1.0s
WSI   Waingapu          61.34 276   P      P      23 34 44.0 +8.9
KAPI  Kappang           64.22 280   LR     LR     00 03 12.9
      comp=Z,527nm,18.4s,baz=118,slow=36
TOLI2 Tolitoli          66.75 287   P      P      23 35 09.1 -1.6
MPSI  Mapaga            67.04 285   P      P      23 35 13.1 +0.7
      comp=Z,10nm,0.9s
GMJI  Gumukmas          67.88 274   P      P      23 35 18.1 +0.3
      comp=Z,60nm,1.3s
SMAI  San Martin Ant    68.28 158   P      P      23 35 19.9 +0.5
SMAI                                IAmb   IAmb   23 35 21.6
      comp=Z,30nm,1.1s
BELA  Belgrano 2        68.67 172   P      P      23 35 21.8  0.0
BELA                                IAmb   IAmb   23 35 23.0
      comp=Z,17nm,1.1s
PCJI  Pacitan           69.85 273   P      P      23 35 30.7 +0.6
PMSA  Palmer Station    71.12 155   LR     LR     00 03 26.2
      comp=Z,694nm,18.5s,baz=244,slow=33
MAW   Mawson            71.46 201   P      P      23 35 41.0 +2.0
      comp=Z,16nm,1.1s,baz=117,slow=7.5,SNR=16
MAW                                 LR     LR     00 07 33.8
      comp=Z,1µm,18.6s,baz=115,slow=36
      comp=Z,16nm,1.1s
MAW   Mawson            71.46 201   P      P      23 35 41.0 +2.0
LEM   Lembang           73.58 272   LR     LR     00 09 59.3
      comp=Z,635nm,18.0s,baz=168,slow=37
TGY   Tagaytay City     74.40 298   LR     LR     00 10 15.9
      comp=Z,133nm,18.1s,baz=224,slow=37
ESPZ  Base Esperanza    74.42 156   P      P      23 35 56.9 +0.3
SYO   Syowa Base        76.17 193⇑eP     P      23 36 07.4 +0.8
AY03  Cochrane          76.67 137   IAmb   IAmb   23 36 12.6
      comp=Z,28nm,1.2s
TROLL Troll, Antarti    76.81 180 ⇓P      P      23 36 11.3 +0.9
      comp=Z,880nm,0.9s
SNAA  Sanae             77.08 178 ⇓P      P      23 36 11.9 +0.1
      comp=Z,438nm,1.1s
SNAA  Sanae             77.08 178   P      P      23 36 11.7 -0.1
SNAA                                IAmb   IAmb   23 36 15.6
      comp=Z,42nm,1.2s
SNAA  Sanae             77.08 178   P      P      23 36 12.6 +0.8
      comp=Z,24nm,1.1s,baz=197,slow=5.4,SNR=24
SNAA                                LR     LR     00 07 25.2
      comp=Z,477nm,20.0s,baz=207,slow=34
      comp=Z,24nm,1.1s
SNAA  Sanae             77.08 178ceP      P      23 36 11.5 -0.3
SNAA                                pmax   pmax
      comp=Z,32nm,1.0s
VNA3  Neumayer Olymp    77.21 176 ⇓P      P      23 36 12.6 +0.1
      comp=Z,37nm,0.8s
VNA2  Neumayer--Watz    77.65 177 ⇓P      P      23 36 15.4 +0.5
      comp=Z,25nm,0.8s,baz=180,slow=5.2
COYC  Coyhaique         77.87 136   P      P      23 36 18.3 +1.7
COYC                                IAmb   IAmb   23 36 18.8
      comp=Z,32nm,1.2s
VNA1  Neumayer--Stat    77.88 176 ⇓P      P      23 36 16.8 +0.6
      comp=Z,48nm,1.1s
LL02  Futaleuf          79.30 134   IAmb   IAmb   23 36 26.7
      comp=Z,29nm,1.2s
MJAR  Matsushiro Arr    79.36 325   P      P      23 36 23.9 -0.8
      comp=Z,6.8nm,1.1s,baz=160,slow=5.2,SNR=9.3
      comp=Z,6.8nm,1.1s
MAJO  Matsushiro        79.36 325   P      P      23 36 23.8 -1.0
MAJO  Matsushiro        79.36 325 i P      P      23 36 22.5 -2.2
MAJO                                pmax   pmax
      comp=Z,9.0nm,0.9s
H03S2 Juan Fernandez    79.52 123   T      T      01 04 01.8
      baz=238,slow=74,SNR=4.5
H03S1 Juan Fernandez    79.53 123   T      T      01 03 54.6
      baz=238,slow=74,SNR=4.7
H03S3 Juan Fernandez    79.54 123   T      T      01 03 55.5
      baz=238,slow=74,SNR=5.6
H03N3 Juan Fernandez    79.72 123   T      T      01 04 08.8
      baz=242
H03N2 Juan Fernandez    79.72 123   T      T      01 04 17.3
      baz=242
H03N1 Juan Fernandez    79.73 123   T      T      01 04 11.3
      baz=242
JNU   Nakatsue          80.64 318   P      P      23 36 30.9 -0.8
JNU   Nakatsue          80.64 318   P      P      23 36 30.4 -1.3
      comp=Z,9.8nm,1.0s,baz=170,slow=7.5,SNR=3.6
      comp=Z,9.8nm,1.0s
PLCA  Paso Flores       81.47 133   P      P      23 36 36.7 +0.3
PLCA                                IAmb   IAmb   23 36 38.6
      comp=Z,18nm,1.1s
PLCA  Paso Flores       81.47 133   P      P      23 36 37.2 +0.9
      comp=Z,12nm,1.1s,baz=254,slow=5.4,SNR=9.3
      comp=Z,12nm,1.1s
PLCA  Paso Flores       81.47 133   P      P      23 36 36.7 +0.3
PLCA                                pmax   pmax
      comp=Z,18nm,1.1s
JTM   Tenmabayashi      81.47 329   P      P      23 36 35.1 -0.8
JTM                                 IAmb   IAmb   23 36 37.2
      comp=Z,38nm,1.1s
QZH   Quanzhou          82.92 305  eP      P      23 36 49.9 +6.0
QZH                                 S      S      23 47 00.3 -0.9
QZH                                 LR     LR
      comp=Z,340nm,20.6s
QZH                                 LR     LR
      comp=Z,320nm,17.2s
BI02  San Fabin de      83.29 129   IAmb   IAmb   23 37 06.2
      comp=Z,30nm,1.5s
JKA   Kamikawa-asahi    83.58 332   P      P      23 36 47.8 +0.9
ASAJ  Asahikawa         83.58 332   P      P      23 36 47.9 +1.0
      comp=Z,17nm,1.0s,baz=241,slow=6.3,SNR=6.7
      comp=Z,17nm,1.0s
ASAJ  Asahikawa         83.58 332   P      P      23 36 47.8 +0.9
ASAJ                                pmax   pmax
      comp=Z,48nm,1.2s
BO01  Tunca             84.70 127   IAmb   IAmb   23 37 03.0
      comp=Z,26nm,1.4s
MT01  Popeta            84.88 127   P      P      23 36 53.8 -0.2
SKR   Severo-Kuril's    85.06 344  eP      P      23 36 38.4  -16
SKR                                 pmax   pmax
      comp=Z,400nm,4.2s
KSRS  Korea Array       85.44 319   P      P      23 36 57.0 +0.7
      comp=Z,4.2nm,1.0s,baz=146,slow=5.5,SNR=9.2
      comp=Z,4.2nm,1.0s
KSAR  Wonju Array Be    85.45 319   P      P      23 36 55.7 -0.8
KSAR  Wonju Array Be    85.45 319   P      P      23 36 55.7 -0.8
LMEL  Las Melosas       85.61 127   IAmb   IAmb   23 37 03.0
      comp=Z,30nm,1.3s
PEL   Peldehue          85.68 126   P      P      23 36 57.5 -0.6
PEL   Peldehue          85.68 126   P      P      23 36 57.5 -0.6
PEL                                 pmax   pmax
      comp=Z,42nm,1.1s
QIZ   Qiongzhong        85.84 295   P      P      23 36 59.0 +0.2
QIZ                                 S      S      23 47 30.9 +0.2
QIZ                                 SS     SS     23 53 09.9 +1.3
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QIZ                                 LR     LR
      comp=Z,280nm,19.2s
QIZ                                 LR     LR
      comp=Z,250nm,21.6s
ESJX  Sierra Juarez     85.88  48   IAmb   IAmb   23 37 09.6
      comp=Z,28nm,1.7s
YSS   Yuzhno-Sakhali    85.89 334⇑eP     P      23 36 59.4 +1.0
YSS                                eS      SKSac  23 47 25.8 +3.7
YSS                                 pmax   pmax
      comp=Z,30nm,1.1s
RPSI  Rantau Prapat     85.92 276   P      P      23 36 58.1 -1.3
RPSI                                IAmb   IAmb   23 36 59.1
      comp=Z,19nm,1.3s
MT08  Bocatoma Ro       85.97 127   IAmb   IAmb   23 37 02.7
      comp=Z,14nm,1.1s
PSI   Prapat            85.97 276   LR     LR     00 17 35.7
      comp=Z,658nm,19.6s,baz=110,slow=37
PSI   Prapat            85.97 276   P      P      23 36 58.1 -1.7
PSI                                 pmax   pmax
      comp=Z,19nm,1.3s
ELS   Elsinore Mount    86.04  46   P      P      23 36 59.9 +0.2
ELS                                 IAmb   IAmb   23 37 05.6
      comp=Z,47nm,1.9s
YUH   Yuha Desert       86.32  48   IAmb   IAmb   23 37 10.3
      comp=Z,39nm,2.0s
GSI   Gunungsitoli      86.34 274   P      P      23 37 01.3 -0.2
PFO   Pinyon Flats O    86.61  47   P      P      23 37 03.3 +0.8
PFO                                 IAmb   IAmb   23 37 12.8
      comp=Z,30nm,1.8s
PFO   Pinyon Flats O    86.61  47   P      P      23 37 03.3 +0.8
PFO                                 pmax   pmax
      comp=Z,30nm,1.8s
PET   Petropavlovsk     86.67 346  eP      P      23 37 00.5 -1.6
PET                                eS      S      23 47 39.4 +2.2
PET                                 pmax   pmax
      comp=Z,200nm,4.1s
PET                                 MLR    MLR
      comp=Z,400nm,15.0s
PET                                 MLR    MLR
      comp=Z,600nm,14.0s
PET   Petropavlovsk     86.67 346   P      P      23 37 01.9 -0.2
      comp=Z,34nm,1.6s
ISA   Isabella, Lake    86.76  44   P      P      23 37 03.9 +0.8
ISA                                 IAmb   IAmb   23 37 06.1
      comp=Z,17nm,1.1s
ISA   Isabella, Lake    86.76  44   P      P      23 37 03.9 +0.8
ISA                                 pmax   pmax
      comp=Z,17nm,1.1s
PETK  Petropavlovsk-    86.95 345   P      P      23 37 04.1 +0.6
      comp=Z,6.8nm,0.9s,baz=142,slow=7.5,SNR=4.9
      comp=Z,6.8nm,0.9s
NJ2   Nanjing           87.26 310  eP      P      23 37 07.3 +1.8
NJ2                                 pmax   pmax
      comp=Z,11nm,0.5s
CMB   Columbia Colle    87.27  42   IAmb   IAmb   23 37 15.4
      comp=Z,15nm,1.1s
MSHR  Mys Shultsa       87.48 325ceP      P      23 37 07.3 +1.0
MSHR                                pmax   pmax
      comp=Z,36nm,1.7s
GSC   Goldstone, Bar    87.52  46   IAmb   IAmb   23 37 25.3
      comp=Z,32nm,1.6s
AFDM  Forest Hills D    87.58  41   P      P      23 37 07.4 +0.5
AFDM                                IAmb   IAmb   23 37 16.6
      comp=Z,24nm,1.4s
ORV   Oroville          87.71  40   IAmb   IAmb   23 37 24.5
      comp=Z,22nm,1.6s
113A  Mohawk Valley,    87.78  49   IAmb   IAmb   23 37 25.8
      comp=Z,20nm,1.6s
QSM   Queen of Sheba    87.92  45   IAmb   IAmb   23 37 26.8
      comp=Z,17nm,1.3s
ZON   Zonda             87.99 126   IAmb   IAmb   23 37 13.0
      comp=Z,20nm,1.4s
GWY   Greenwater Val    88.19  45   IAmb   IAmb   23 37 35.9
      comp=Z,28nm,1.6s
DSP   Deep Springs      88.21  43   IAmb   IAmb   23 37 26.7
      comp=Z,19nm,1.5s
USA0B Ussuriysk Arra    88.29 326   P      P      23 37 10.4 +0.3
USA0B                               IAmb   IAmb   23 37 12.0
      comp=Z,14nm,0.9s
USA0B Ussuriysk Arra    88.29 326 i P      P      23 37 09.0 -1.1
USRK  Ussuriysk Ar.     88.29 326          P      23 37 10.1  0.0
USRK  Ussuriysk Ar.     88.29 326   P      P      23 37 11.1 +1.0
      comp=Z,6.9nm,0.8s,baz=141,slow=2.8,SNR=17
      comp=Z,6.9nm,0.8s
USRK  Ussuriysk Ar.     88.29 326   P      P      23 37 10.1  0.0
PNTR  Pine Nut          88.44  41   IAmb   IAmb   23 37 13.8
      comp=Z,15nm,1.0s
LHV   Little Huntoon    88.50  42   IAmb   IAmb   23 37 18.3
      comp=Z,30nm,1.4s
BEKR  Beckworth         88.56  40   IAmb   IAmb   23 37 14.0
      comp=Z,39nm,2.0s
GMN   Gold Mountain     88.58  44   IAmb   IAmb   23 37 22.0
      comp=Z,28nm,1.7s
NVAR  Mina Array Bea    88.73  42   P      P      23 37 12.3 -0.4
NVAR  Mina Array Bea    88.73  42   P      P      23 37 13.8 +1.1
      comp=Z,4.8nm,0.9s,baz=219,slow=7.6,SNR=20
      comp=Z,4.8nm,0.9s
NV11  Mina Array Sit    88.82  43   IAmb   IAmb   23 37 23.0
      comp=Z,26nm,1.6s
TPNV  Topopah Spring    88.95  45   IAmb   IAmb   23 37 24.2
      comp=Z,21nm,1.3s
PAHR  Pah Rah Range     88.99  41   IAmb   IAmb   23 37 27.9
      comp=Z,14nm,1.3s
V12A  Nelson            89.00  46   IAmb   IAmb   23 37 29.6
      comp=Z,12nm,1.2s
Y14A  Wickenburg        89.01  49   IAmb   IAmb   23 37 24.4
      comp=Z,22nm,1.4s
W13A  Hualapai Mount    89.20  47   IAmb   IAmb   23 37 18.1
      comp=Z,10nm,1.0s
TYV   Tymovskoe         89.20 336  eP      P      23 37 15.9 +1.7
TYV                                 pmax   pmax
      comp=Z,27nm,0.8s
TYV                                 pmax   pmax
      comp=Z,200nm,2.0s
TUC   Tucson            89.44  51   P      P      23 37 17.1 +1.1
TUC                                 IAmb   IAmb   23 37 26.8
      comp=Z,28nm,1.6s
TUC   Tucson            89.44  51   P      P      23 37 17.1 +1.1
TUC                                 pmax   pmax
      comp=Z,28nm,1.7s
MDJ   Mudanjiang        89.75 325   P      P      23 37 16.0 -1.0
MDJ                                 pmax   pmax
      comp=Z,19nm,1.3s
MDJ                                 pmax   pmax
      comp=Z,250nm,4.7s
MDJ                                 LR     LR
      comp=Z,170nm,13.1s
MDJ                                 LR     LR
      comp=Z,250nm,18.1s
MDJ                                 LR     LR
      comp=Z,450nm,19.0s
I04A  Tendick Farm,     90.24  36   P      P      23 37 19.2 -0.2
I04A                                IAmb   IAmb   23 37 21.5
      comp=Z,38nm,1.6s
LCMT  Little Creek M    90.82  46   P      P      23 37 23.8 +1.5
TIA   Tai'an            91.01 313   P      P      23 37 24.0 +0.9
TIA                                 SKS    SKSac  23 47 55.6 +2.3
TIA                                 pmax   pmax
      comp=Z,23nm,1.0s
TIA                                 LR     LR
      comp=Z,200nm,16.8s
TIA                                 LR     LR
      comp=Z,160nm,18.5s
TIA                                 LR     LR
      comp=Z,360nm,21.8s
U15A  North Rim         91.04  47   IAmb   IAmb   23 37 28.8
      comp=Z,10nm,1.0s
WUAZ  Wupatki           91.05  48   IAmb   IAmb   23 37 42.1
      comp=Z,25nm,1.4s
CN2   Changchun         91.25 323  eP      P      23 37 24.3 +0.3
CN2                                eS      S      23 48 19.0 -1.8
CN2                                 pmax   pmax
      comp=Z,20nm,1.1s
CN2                                 pmax   pmax
      comp=Z,200nm,4.0s
CN2                                 LR     LR
      comp=Z,700nm,20.0s
CN2                                 LR     LR
      comp=Z,500nm,20.0s
CN2                                 LR     LR
      comp=Z,200nm,16.0s
WVOR  Wild Horse Val    91.27  39   IAmb   IAmb   23 39 29.9
      comp=Z,7.3nm,0.7s
X18A  Snowflake         91.36  50   IAmb   IAmb   23 37 43.6
      comp=Z,13nm,1.3s
GRNR  Gornyy            91.43 333  eP      P      23 37 26.2 +1.5
BNX   BinXian           91.63 325 ⇓P      P      23 37 25.6 -0.1
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BNX				pmax	pmax		
	comp=Z,20nm,1.0s						
I07A	Izee	91.94	38	IAmb	IAmb	23 37 29.8	
	comp=Z,8.7nm,1.1s						
J08A	Circle Bar Ran	91.98	39	IAmb	IAmb	23 37 29.9	
	comp=Z,14nm,1.2s						
ELK	Elko	92.04	42	IAmb	IAmb	23 37 37.7	
	comp=Z,18nm,1.9s						
G06A	Carlson Farm,	92.15	36	P	P	23 37 28.8	+0.5
KLR	Kul'dur	92.17	329	P	P	23 37 29.3	+1.2
	comp=Z,7.3nm,0.9s,baz=178,slow=2.9,SNR=14						
	comp=Z,7.3nm,0.9s						
KLR	Kul'dur	92.17	329	ceP	P	23 37 29.5	+1.4
KLR				pmax	pmax		
	comp=Z,12nm,1.0s						
VHRN	Van Horn	92.50	55	IAmb	IAmb	23 37 53.6	
	comp=Z,17nm,1.9s						
TX31	Lajitas Ar. Si	92.60	57	IAmb	IAmb	23 37 39.9	
	comp=Z,14nm,1.6s						
TXAR	Lajitas Array	92.60	57	P	P	23 37 30.7	-0.1
TXAR	Lajitas Array	92.60	57	P	P	23 37 30.5	-0.3
	comp=Z,3.3nm,1.1s,baz=224,slow=4.9,SNR=11						
	comp=Z,3.3nm,1.1s						
NNA	Nana	92.72	106	ceP	P	23 37 34.3	+2.6
NNA				pmax	pmax		
	comp=Z,70nm,1.7s						
LYN	LuoYang	93.01	309	eP	P	23 37 33.3	+0.9
LYN				pmax	pmax		
	comp=Z,17nm,0.7s						
L14K	Kuka Creek	93.26	7	IAmb	IAmb	23 37 35.8	
	comp=Z,21nm,1.4s						
HNS	HongShan	93.27	312	⇓P	P	23 37 34.6	+1.1
HNS				SKS	SKSac	23 48 06.8	+0.9
HNS				S	ScS	23 48 43.9	+3.1
HNS				pmax	pmax		
	comp=Z,12nm,1.3s						
HNS				LR	LR		
	comp=Z,190nm,19.8s						
HNS				LR	LR		
	comp=Z,170nm,19.2s						
HNS				LR	LR		
	comp=Z,260nm,23.7s						
ANMO	Albuquerque	93.91	51	P	P	23 37 37.1	+0.3
ANMO	Albuquerque	93.91	51	P	P	23 37 37.1	+0.3
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.2s						
CMAR	Chiang Mai Arr	94.16	289	P	P	23 37 37.9	-0.2
	comp=Z,0.8nm,0.5s,baz=149,slow=4.7,SNR=4.4						
CMAR				PP	PP	23 41 24.3	-0.8
	comp=Z,0.6nm,0.3s,baz=122,slow=9.4,SNR=4.7						
	comp=Z,0.8nm,0.5s						
PV12	Saucer Basin,	94.39	47	IAmb	IAmb	23 37 43.0	
	comp=Z,13nm,1.3s						
PLID	Pearl Lake	94.46	39	P	P	23 37 39.1	-0.1
PLID				IAmb	IAmb	23 37 41.0	
	comp=Z,8.0nm,1.1s						
PB16	IPOC Station P	95.06	115	P	P	23 37 43.2	+0.2
PB16				IAmb	IAmb	23 38 02.9	
	comp=Z,21nm,1.4s						
XAN	Xi'an	95.10	307	P	P	23 37 42.3	+0.2
XAN				SKS	SKSac	23 48 16.3	+0.2
XAN				S	ScS	23 48 57.3	+0.9
XAN				pmax	pmax		
	comp=Z,150nm,5.0s						
XAN				LR	LR		
	comp=Z,220nm,20.1s						
XAN				LR	LR		
	comp=Z,280nm,21.6s						
XAN				LR	LR		
	comp=Z,420nm,18.9s						
GLI	Glacier Island	95.31	14	P	P	23 37 42.7	+0.4
GLI				IAmb	IAmb	23 37 44.0	
	comp=Z,7.6nm,1.0s						
PZH	PanZhiHua	96.18	297	P	P	23 37 48.6	+1.3
PZH				pmax	pmax		
	comp=Z,9.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.2s						
PDAR	Pinedale Array	96.61	43	P	P	23 37 49.5	+0.5
	comp=Z,0.8nm,0.9s,baz=197,slow=4.6,SNR=5.7						
	comp=Z,0.8nm,0.9s						
HHC	Hu-ho-hao-te	97.28	314	eP	Pdif	23 37 54.8	+2.8
HHC				SKS	SKSac	23 48 28.9	+1.5
HHC				S	ScS	23 49 14.8	+0.4
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,53nm,4.9s						
HHC				LR	LR		
	comp=Z,120nm,13.8s						
HHC				LR	LR		
	comp=Z,99nm,14.4s						
LPAZ	La Paz	97.32	114	P	Pdif	23 37 55.1	+1.7
LPAZ				IAmb	IAmb	23 37 58.9	
	comp=Z,13nm,1.6s						
LPAZ	La Paz	97.32	114	P	Pdif	23 37 54.5	+1.1
	comp=Z,1.2nm,0.7s,baz=354,slow=6.4,SNR=4.4						
	comp=Z,1.2nm,0.7s						
PAX	Paxson	97.53	14	IAmb	IAmb	23 37 55.5	
	comp=Z,15nm,1.9s						
BTO	Baotou	98.10	313	eP	Pdif	23 37 57.9	+2.3
BTO				pP	pP	23 38 02.8	+0.7
BTO				sP	sP	23 38 05.0	+0.5
BTO				SKS	SKSac	23 48 34.8	+3.2
BTO				S	ScS	23 49 21.3	+0.1
BTO				sS	pS	23 49 30.3	+0.6
BTO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BTO				pmax	pmax		
	comp=Z,210nm,5.8s						
BTO				LR	LR		
	comp=Z,350nm,21.0s						
BTO				LR	LR		
	comp=Z,400nm,20.4s						
BTO				LR	LR		
	comp=Z,640nm,22.7s						
ILAR	Eielson Array	98.87	13	P	Pdif	23 37 58.1	-0.2
	comp=Z,0.4nm,0.7s,baz=216,slow=5.5,SNR=4.8						
	comp=Z,0.4nm,0.7s						
J26L	Joseph Creek	99.29	14	P	Pdif	23 38 00.7	+0.4
LZH	Lanzhou	99.70	306	eP	Pdif	23 38 06.3	+3.3
LZH				pP	pwP	23 38 17.5	+0.2
LZH				SKS	SKSac	23 48 42.3	+2.3
LZH				S	S	23 49 40.8	+5.8
LZH				SS	SS	23 56 32.0	+4.6
LZH				pmax	pmax		
	comp=Z,99nm,4.5s						
LZH				LR	LR		
	comp=Z,180nm,16.1s						
LZH				LR	LR		
	comp=Z,190nm,16.5s						
LZH				LR	LR		
	comp=Z,180nm,16.5s						
WMQ	Urumqi	114.22	308	PKP	PKiKP	23 43 00.8	+2.6
WMQ				AMB	AMB		
	comp=Z,140nm,4.7s						
WMQ				LR	LR		
	comp=Z,170nm,20.1s						
ZSN	Zaisan	117.30	311	ePKIKP	PKiKP	23 43 04.6	+0.6
ZSN	Zaisan	117.30	311	ePKP	PKiKP	23 43 04.6	+0.6
RES	Resolute Bay	118.14	17	PKPdf	PKPdf	23 43 03.9	-0.8
RES	Resolute Bay	118.14	17	PKIKP	PKPdf	23 43 03.9	-0.8
MK31	Makanchi Array	118.79	310	c iPKIKP	PKPdf	23 43 06.9	0.0
MKAR	Makanchi Array	118.79	310	PKPdf	PKPdf	23 43 06.0	-0.9
MKAR	Makanchi Array	118.79	310	PKP	PKPdf	23 43 06.2	-0.7
	comp=Z,1.2nm,0.9s,baz=101,slow=2.5,SNR=6.5						
MKAR	Makanchi Array	118.79	310	PKIKP	PKPdf	23 43 06.0	-0.9
ZALV	Zalesovo Beam	119.11	318	PKP	PKiKP	23 43 08.2	+1.0
	comp=Z,0.7nm,0.7s,baz=114,slow=3.6,SNR=2.1						
UZB	Uzynbulak	119.98	305	ePKIKP	PKiKP	23 43 09.7	+0.1
UZB	Uzynbulak	119.98	305	ePKP	PKiKP	23 43 09.7	+0.1
KPKS	Kokpek	120.31	305	ePKIKP	PKiKP	23 43 10.3	+0.2
KPKS	Kokpek	120.31	305	ePKP	PKiKP	23 43 10.3	+0.2
SATY	Saty	120.39	304	ePKIKP	PKiKP	23 43 10.4	+0.1
SATY	Saty	120.39	304	ePKP	PKiKP	23 43 10.5	+0.1
MDOK	Medeo	121.38	304	ePKIKP	PKiKP	23 43 12.4	+0.1
MDOK	Medeo	121.38	304	ePKP	PKiKP	23 43 12.4	+0.1
AAA	Alma-Ata	121.48	304	ePKIKP	PKiKP	23 43 12.5	+0.1
AAA	Alma-Ata	121.48	304	ePKP	PKiKP	23 43 12.6	+0.1
KURK	Kurchatov	122.09	313	PKPdf	PKPdf	23 43 12.4	-0.6
KURK	Kurchatov	122.09	313	cePKIKP	PKiKP	23 43 13.2	0.0
KURK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
KURBB	Kurchatov Arra	122.13	313	PKP	PKPdf	23 43 12.8	-0.3
	comp=Z,2.8nm,0.8s,baz=104,slow=2.0,SNR=16						
AAK	Ala-Archa	123.06	303	PKPdf	PKPdf	23 43 15.5	+0.1
AAK	Ala-Archa	123.06	303	cePKIKP	PKiKP	23 43 16.2	+0.6
AAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SGDS	Sogindy	123.16	304	ePKP	PKiKP	23 43 15.7	+0.1
KOOLE	Kule	123.25	200	PKPdf	PKPdf	23 43 16.9	+0.4
KBL	Kabul	125.03	292	PKPdf	PKPdf	23 43 18.1	-1.4
KBL	Kabul	125.03	292	PKIKP	PKPdf	23 43 18.1	-1.4
DZA	Taraz	125.39	303	ePKIKP	PKiKP	23 43 20.0	0.0
DZA	Taraz	125.39	303	ePKP	PKiKP	23 43 20.0	0.0
BRZS	Berezniki	125.72	312	ePKIKP	PKiKP	23 43 20.6	+0.2
BRZS	Berezniki	125.72	312	ePKP	PKiKP	23 43 20.7	+0.2
KKAR	Karatay Array	126.02	303	PKPdf	PKPdf	23 43 20.3	-0.6
KKAR	Karatay Array	126.02	303	PKIKP	PKPdf	23 43 20.3	-0.6
SIMJ	Simiganj	126.15	297	PKPdf	PKPdf	23 43 20.8	-0.6
IUG	Iuzhnay	126.17	302	ePKIKP	PKPdf	23 43 21.4	+0.1
IUG	Iuzhnay	126.17	302	ePKP	PKPdf	23 43 21.5	+0.1
BRLS	Borolday	126.49	303	ePKIKP	PKiKP	23 43 22.2	0.0
BRLS				e		23 45 16.2	
BRLS	Borolday	126.49	303	ePKP	PKiKP	23 43 22.3	0.0
BRLS				ePP	PP	23 45 16.2	-2.1
SCHQ	Schefferville	126.74	42	PKP	PKPdf	23 43 20.6	-1.2
	comp=Z,5.5nm,1.1s,baz=282,slow=3.9,SNR=5.9						
BVAR	Borovoye Array	127.47	315	PKP	PKPdf	23 43 23.4	+0.1
	comp=Z,3.8nm,0.9s,baz=93,slow=3.0,SNR=21						
BRVK	Borovoye	127.53	315	PKPdf	PKPdf	23 43 22.7	-0.7
BRVK	Borovoye	127.53	315	cePKIKP	PKiKP	23 43 24.0	+0.1
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
ARTI	Arti	134.29	320	PKPdf	PKPdf	23 43 36.2	+0.1
ARTI	Arti	134.29	320	i PKIKP	PKiKP	23 43 36.9	-0.6
ARTI						23 46 05.6	
ARTI				SS	SS	00 03 50.5	-5.9
KIRV	Kirov	138.44	325	cePKIKP	PKiKP	23 43 47.2	+1.4
ARCES	ARCESS Array B	139.72	348	PKhKP	PKPpre	23 43 40.9	
	comp=Z,0.9nm,0.6s,baz=83,slow=4.0,SNR=5.5						
KLMR	Klimovskoe	141.90	331	ePKHKP	PKPpre	23 43 36.3	
KLMR				pmax	pmax		
	comp=Z,13nm,1.4s						
KLMR				MLR	MLR		
	comp=Z,319nm,19.0s						
GNI	Garni	144.94	296	PKPdf	PKPab	23 43 54.4	-1.0
GNI	Garni	144.94	296	i PKIKP	PKPab	23 43 55.4	-0.1
VRH	Novokhopyorsk	145.11	316	ePKHKP	PKPpre	23 43 52.7	
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MOS	Moscow	145.46	325	i PKP2	PKPbc	23 43 54.4	-1.9
MOS				pmax	pmax		
	comp=Z,300nm,1.4s						
MOS				pmax	pmax		
	comp=Z,192nm,1.1s						
GOF	Gofitskoye	145.76	305	cePKIKP	PKPab	23 43 57.9	-0.2
KBZ	Khabaz	146.06	303	PKPbc	PKPab	23 43 59.4	+0.2
	comp=Z,20nm,1.1s,baz=86,slow=3.3,SNR=25						
KBZ	Khabaz	146.06	303	cePKP2	PKPab	23 43 59.3	+0.1
PUL	Pulkovo	146.15	335	cePKP2	PKPab	23 43 59.8	+0.8
PUL				pmax	pmax		
	comp=Z,113nm,0.4s						
KIV	Kislovodsk	146.18	303	PKPdf	PKPbc	23 43 58.7	-0.4
KIV	Kislovodsk	146.18	303	⇑P	PKPab	23 44 00.2	+0.4
KIV	Kislovodsk	146.18	303	i PKP2	PKPbc	23 43 59.2	+0.1
KIV				pmax	pmax		
	comp=Z,24nm,1.1s						
LPSR	Galich'ya Gora	146.20	319	ePKIKP	PKPdf	23 43 56.5	-1.2
LPSR				pmax	pmax		
	comp=Z,110nm,1.0s						
OBN	Obninsk	146.29	325	PKPdf	PKPbc	23 43 58.5	-0.5
OBN	Obninsk	146.29	325	⇑P	PKPab	23 43 59.9	+0.2
OBN	Obninsk	146.29	325	c iPKP2	PKPbc	23 43 58.3	-0.6
OBN				e		23 47 21.5	
OBN				eSS	SS	00 06 09.0	-7.5
OBN				pmax	pmax		
	comp=Z,202nm,1.3s						
OBN				pmax	pmax		
	comp=Z,103nm,1.7s						
FINES	FINESS Array B	146.29	340	PKPdf	PKPdf	23 43 57.8	+0.2
FINES	FINESS Array B	146.29	340	PKPbc	PKPbc	23 43 58.5	-0.3
	comp=Z,12nm,0.6s,baz=48,slow=3.0,SNR=55						
FINES	FINESS Array B	146.29	340	PKP2	PKPdf	23 43 57.8	+0.2
VORR	Voronezh	146.41	318	ePKIKP	PKPdf	23 43 57.5	-0.6
VORR				pmax	pmax		
	comp=Z,130nm,1.0s						
VSR	Storozhevoye	146.61	317	ePKIKP	PKPdf	23 43 57.8	-0.6
VSR				pmax	pmax		
	comp=Z,80nm,1.0s						
VORD	Divnogorie	146.63	316	ePKIKP	PKPdf	23 43 57.8	-0.7
VORD				pmax	pmax		
	comp=Z,70nm,1.0s						
ERBR	Yeremizino-Bor	147.41	307	i PKP2	PKPbc	23 44 03.2	+0.7
ERBR				pmax	pmax		
	comp=Z,96nm,1.1s						
LABN	Labinsk	147.46	305	i PKP2	PKPbc	23 44 02.9	+0.2
LABN				pmax	pmax		
	comp=Z,30nm,1.1s						
NC303	NORSAR Array S	149.67	352		PKPbc	23 44 07.6	-0.2
ANN	Anapa	149.72	306	i PKP2	PKPbc	23 44 08.5	+0.1
ANN				pmax	pmax		
	comp=Z,76nm,1.1s						
NB2	NORSAR Subarra	149.87	352	PKP	PKPbc	23 44 08.0	-0.4
	comp=Z,167nm,3.3s,baz=8.7,slow=2.6						
NB2	NORSAR Subarra	149.87	352	PKP	PKPbc	23 44 08.0	-0.4
	baz=8.7,slow=2.6						
NOA	NORSAR Array B	149.87	352	PKPbc	PKPbc	23 44 08.5	+0.1
	comp=Z,7.0nm,1.0s,baz=14,slow=4.2,SNR=13						
HFS	Hagfors	150.37	349	PKPbc	PKPbc	23 44 09.3	-0.3
	comp=Z,8.6nm,0.9s,baz=45,slow=2.4,SNR=15						
MNK	Minsk	150.72	329	i PKiKP	PKiKP	23 44 11.2	0.0
	comp=E,10.0nm,0.9s						
MNK				i PKiKP	PKiKP	23 44 11.2	0.0
	comp=N,10.0nm,0.8s						
MNK				i PKiKP	PKiKP	23 44 11.2	0.0
	comp=Z,38nm,1.0s,baz=49						
MNK				i PP	PP	23 47 46.3	-1.0
MNK				i PPP	PPP	23 51 08.7	
MNK				i SKS	SKSdf	23 51 10.5	-0.3
MNK				i SS	SS	00 06 56.1	-10
MNK				i SSS	SSS	00 12 49.2	
MNK	Minsk	150.72	329	i PKIKP	PKiKP	23 44 11.2	0.0
MNK				i		23 47 46.3	
MNK				i PPP	PPP	23 51 08.7	
MNK				i		23 51 10.4	
MNK				i SSS	SSS	00 12 49.2	
MNK				pmax	pmax		
	comp=Z,38nm,1.0s						
MNK				pmax	pmax		
	comp=E,10.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,10.0nm,0.8s						
NACGM	Naroch	150.92	331	ePKiKP	PKiKP	23 44 12.1	+0.6
PABE	Paberze	151.60	334	PKPbc	PKPbc	23 44 12.3	-0.2
STRU	Stroemstad	151.81	350	eP	PKiKP	23 44 13.4	+0.2
SIM	Simferopol'	151.94	308	i PKIKP	PKPbc	23 44 11.5	-2.2
SIM				e		23 44 23.8	
SIM				pmax	pmax		
	comp=Z,26nm,1.1s						
SIM				pmax	pmax		
	comp=Z,23nm,0.4s						
MMAI	Mount Meron Ar	152.19	282	PKPbc	PKPbc	23 44 14.9	+0.2
	comp=Z,18nm,0.9s,baz=84,slow=4.4,SNR=21						
AKASG	Malin Array Be	152.41	322	PKPbc	PKPbc	23 44 14.4	-0.2
	comp=Z,8.0nm,0.9s,baz=47,slow=2.4,SNR=23						
AKBB	Malin Array Si	152.41	322	PKPbc	PKPbc	23 44 14.6	+0.1
AKBB	Malin Array Si	152.41	322	PKIKP	PKPbc	23 44 14.6	+0.1
KIEV	Kiev	152.42	322	PKPbc	PKPbc	23 44 14.0	-0.5
KIEV	Kiev	152.42	322	⇓P	PKiKP	23 44 14.8	0.0
KIEV	Kiev	152.42	322	⇓PKIKP	PKiKP	23 44 14.8	0.0
BORU	Boraas	152.90	348	eP	PKPbc	23 44 15.0	-0.4
SUW	Suwalki	153.02	333	ePKP	PKiKP	23 44 16.3	+0.3
KIRS	Kirsehir-Merke	153.34	295	⇑P	PKiKP	23 44 18.1	+0.9
BR131	Keskin Array S	153.47	297	PKPbc	PKPbc	23 44 17.3	-0.2
BRTR	Keskin Array B	153.47	297	PKPbc	PKPbc	23 44 17.6	+0.1
BRTR	Keskin Array B	153.47	297	PKPbc	PKiKP	23 44 17.7	+0.1
	comp=Z,5.0nm,1.0s,baz=90,slow=2.3,SNR=17						
BLEU	Blekinge	153.48	343	eP	PKPbc	23 44 15.3	-1.4
DEL	Delary	153.77	346	e	PKiKP	23 44 20.4	+3.0
ANTO	Ankara	154.10	297	PKPdf	PKPdf	23 44 08.3	-2.3
ANTO	Ankara	154.10	297	PKIKP	PKPdf	23 44 08.3	-2.3
TLCR		155.36	311	⇓P	PKPab	23 44 38.6	+1.1
TLCR		155.36	311	⇓PKP2	PKPab	23 44 38.6	+1.1
TPGR	Topolog	155.75	311	⇑P	PKPab	23 44 40.0	+0.7
CFR	Carcaliu	155.80	312	⇑P	PKPab	23 44 39.4	+0.1
CFR	Carcaliu	155.80	312	⇑PKP2	PKPab	23 44 39.4	+0.1
EKA	Eskdalemuir Ar	155.81	8	PKPab	PKPab	23 44 37.6	-1.4
	comp=Z,2.9nm,0.9s,baz=325,slow=4.2,SNR=5.9						
TIRR	Tirgusor	155.92	310	⇓P	PKPab	23 44 40.5	+0.6
TIRR	Tirgusor	155.92	310	⇓PKP2	PKPab	23 44 40.5	+0.6
TESR	Tescani	156.09	316	⇑P	PKPab	23 44 40.8	+0.2
TLBR	Topalu	156.12	310	⇓P	PKPab	23 44 42.1	+1.4
HARR	Harsova	156.14	311	⇓P	PKPab	23 44 41.3	+0.5
HARR	Harsova	156.14	311	⇓PKP2	PKPab	23 44 41.3	+0.5
BURAR	Bucovina Array	156.32	319		PKPab	23 44 41.5	-0.2
BURAR	Bucovina Array	156.32	319	⇑P	PKPab	23 44 41.5	-0.2
BURAR	Bucovina Array	156.32	319	⇑PKP2	PKPab	23 44 41.5	-0.2
KWP	Kalwaria Pacla	156.36	326	ePKP	PKPab	23 44 41.6	0.0
VRI	Vrincioaia	156.36	314	⇑P	PKPab	23 44 37.2	-4.6
VRI	Vrincioaia	156.36	314	⇑PKP2	PKPab	23 44 37.2	-4.6
PLOR	Plostina	156.42	314	⇑P	PKPab	23 44 42.8	+0.7
PLOR	Plostina	156.42	314	⇑PKP2	PKPab	23 44 42.8	+0.7
TURR	Turia	156.70	315	⇑P	PKPab	23 44 43.8	+0.6
BSEG	Bad Segeberg	156.85	348	ePKPab	PKPab	23 44 42.6	-0.9
	baz=22,slow=4.6						
BSEG				epPKPab	sPKPab	23 44 55.2	+2.8
	baz=22,slow=4.5						
BOSR	Bodos	156.90	316	⇑P	PKPab	23 44 45.4	+1.2
MLR	Muntele Rosu	157.03	314	⇑P	PKPab	23 44 45.4	+0.6
MLR	Muntele Rosu	157.03	314	⇑PKP2	PKPab	23 44 45.4	+0.6
KOLS	Kolonicke sedl	157.04	325	ePKP2	PKPab	23 44 45.0	+0.4
KOLS	Kolonicke sedl	157.04	325	ePKP	PKPab	23 44 45.0	+0.4
PRD	Provadia	157.10	308	eP	PKPab	23 44 45.5	+0.5
ARCR	ARCALIA	157.11	319	⇓P	PKPab	23 44 46.0	+1.1
DOPR	Dopca	157.12	316	⇓P	PKPab	23 44 46.2	+1.1
STHS	Stebnicka Huta	157.20	327	ePKP	PKPdf	23 44 22.2	+7.8
STHS				e		23 44 45.3	
BMR	Baia Mare	157.23	321	⇓P	PKPab	23 44 46.5	+1.1
OJC	Ojcow	157.25	330	ePKP	PKPab	23 44 45.3	-0.1
INCR	INCERC-Sediu C	157.39	312	⇓P	PKPab	23 44 51.4	+5.2
VOIR		157.60	315	⇓P	PKPab	23 44 47.2	0.0
VOIR		157.60	315	⇓PKP2	PKPab	23 44 47.2	0.0
NIE	Niedzica	157.63	328	ePKP	PKPab	23 44 48.1	+0.9
ARR	Arges	157.88	315	⇓P	PKPab	23 44 49.6	+1.1
HUMR	Humele	158.09	313	⇑P	PKPab	23 44 48.9	-0.4
KSP	Ksiaz	158.10	336	ePKP	PKPab	23 44 49.0	0.0
RETH	Rethem/Aller,	158.17	349	ePKPab	PKPab	23 44 49.1	-0.1
	baz=22,slow=4.6						
RETH				epPKPab	sPKPab	23 45 01.1	+3.0
	baz=22,slow=4.5						
DRGR		158.19	320	⇑P	PKPab	23 44 49.9	+0.2
LANS	Liptovska Anna	158.19	329	ePKP2	PKPab	23 44 50.4	+0.8
LANS	Liptovska Anna	158.19	329	ePKP	PKPab	23 44 50.4	+0.8
FLTG	Flechtingen	158.19	345	ePKPab	PKPab	23 44 48.6	-0.8
	baz=22,slow=4.6						
OKC	Ostrava-Krasne	158.23	332	AMS	AMS	01 03 20.0	
	comp=Z,200nm,18.9s						
LOT	Lotru	158.36	316	⇑P	PKPab	23 44 49.9	-0.6
OSTC	Ostas	158.37	336	AMS	AMS	01 12 50.0	
	comp=Z,200nm,17.6s						
CHVC	Chvalec	158.40	336	ePKPAB	PKPab	23 44 51.1	+0.7
CHVC				AMS	AMS	01 02 40.0	
	comp=Z,200nm,16.7s						
CHVC	Chvalec	158.40	336	ePKP2	PKPab	23 44 51.1	+0.7
CHVC				MLR	MLR		
	comp=Z,200nm,16.7s						
UPC	Upice	158.48	336	ePKPAB	PKPab	23 44 51.3	+0.6
UPC				AMS	AMS	01 02 40.0	
	comp=Z,300nm,21.5s						
UPC	Upice	158.48	336	ePKP2	PKPab	23 44 51.3	+0.6
UPC				MLR	MLR		
	comp=Z,300nm,21.5s						
ASSE	Asse, Remlinge	158.50	346	ePKPab	PKPab	23 44 50.3	-0.3
	baz=22,slow=4.6						
ASSE				epPKPab	sPKPab	23 45 03.3	+3.8
	baz=22,slow=4.5						
DPC	Dobruska-Polom	158.50	335	ePKPAB	PKPab	23 44 51.6	+0.7
DPC				AMS	AMS	01 13 00.0	
	comp=Z,200nm,18.1s						
DPC	Dobruska-Polom	158.50	335	ePKP2	PKPab	23 44 51.6	+0.7
DPC				MLR	MLR		
	comp=Z,200nm,18.1s						
MORC	Moravsky Berou	158.51	333	ePKP	PKPab	23 44 49.7	-1.2
MORC				e		23 45 00.8	
KRLC	Kraliky	158.56	334	ePKPAB	PKPab	23 44 51.6	+0.5
KRLC				AMS	AMS	00 55 10.0	
	comp=Z,200nm,18.2s						
KRLC	Kraliky	158.56	334	ePKP2	PKPab	23 44 51.6	+0.5
KRLC				MLR	MLR		
	comp=Z,200nm,18.2s						
VLAD	Vladila	158.71	312	⇓P	PKPab	23 44 52.8	+0.8
CLL	Collm	158.71	342	⇓ePKIKP	PKPdf	23 44 18.0	+1.9
CLL				i		23 44 51.6	
CLL				pmax	pmax		
	comp=Z,19nm,1.5s						
CLL	Collm	158.71	342	ePKPab	PKPab	23 44 51.0	-0.6
	baz=22,slow=4.6						
CLL				epPKPab	sPKPab	23 45 03.9	+3.4
	baz=22,slow=4.5						
CLL	Collm	158.71	342	ePKPdf	PKPdf	23 44 18.0	+1.9
CLL				⇓iPKPab	PKPab	23 44 51.6	0.0
	comp=Z,19nm,1.5s						
CLL				i x	x	23 45 03.5	
CLL				AMS	AMS	01 10 00.0	
	comp=Z,300nm,18.9s						
IBBN	Ibbenburen	158.82	351	ePKPab	PKPab	23 44 52.2	+0.1
	baz=22,slow=4.6						
BRG	Berggiesshubel	158.84	340	ePKPab	PKPab	23 44 52.0	-0.2
	baz=22,slow=4.6						
BRG	Berggiesshubel	158.84	340	ePKP	PKPab	23 44 52.3	+0.1
BRG				Amp		23 44 53.7	
	comp=Z,6.5nm,1.0s						
PSZ	Piszkesteto	158.89	326	PKPab	PKPab	23 44 52.0	-0.7
PSZ	Piszkesteto	158.89	326	⇑P	PKPab	23 44 52.1	-0.6
PSZ	Piszkesteto	158.89	326	PKP2	PKPab	23 44 52.0	-0.7
VYHS	Vyhne	158.96	329	ePKP2	PKPab	23 44 53.5	+0.6
VYHS	Vyhne	158.96	329	ePKP	PKPab	23 44 53.5	+0.6
NEUB	Neuenburg	159.12	343	ePKPab	PKPab	23 44 53.7	+0.3
	baz=22,slow=4.6						
NEUB				epPKPab	sPKPab	23 45 05.6	+3.3
	baz=22,slow=4.5						
SURR	Surduc	159.14	319	⇑P	PKPab	23 44 54.1	+0.4
JAVC	Velka Javorina	159.19	331	ePKP	PKPab	23 44 54.8	+0.9
VRAC	Vranov	159.26	333	ePKP	PKPab	23 44 54.7	+0.6
VRAC				e		23 45 05.5	
VRAC	Vranov	159.26	333	⇑P	PKPab	23 44 52.1	-2.0
VRAC	Vranov	159.26	333	⇑PKP2	PKPab	23 44 52.1	-2.0
GOPC	GO Pecny, Ondr	159.40	337	AMS	AMS	01 06 30.0	
	comp=Z,300nm,17.2s						
PRU	Pruhonice	159.42	337	AMS	AMS	01 04 20.0	
	comp=Z,200nm,18.2s						
MPEP	Malo Peshtene	159.44	311	eP	PKPab	23 44 55.9	+0.7
HERR	Herculane	159.47	316	⇓P	PKPab	23 44 54.8	-0.4
BZS	Buzias	159.50	319	⇑P	PKPab	23 44 55.2	-0.2
BZS	Buzias	159.50	319	⇑PKP2	PKPab	23 44 55.2	-0.2
KRUC	Moravsky	159.53	333	ePKP	PKPab	23 44 55.5	+0.2
TANN	Tannenbergstha	159.67	341	ePKPab	PKPab	23 44 55.8	-0.1
	baz=22,slow=4.6						
TANN				epPKPab	sPKPab	23 45 08.0	+3.2
	baz=22,slow=4.5						
MOX	Moxa	159.68	343	ePKPab	PKPab	23 44 55.3	-0.6
	baz=22,slow=4.6						
MOX				epPKPab	sPKPab	23 45 07.7	+3.0
	baz=22,slow=4.5						
TREC	Trest	159.68	335	AMS	AMS	01 04 10.0	
	comp=Z,300nm,19.0s						
SRO	Srobarova	159.70	328	ePKP2	PKPab	23 44 56.6	+0.5
SRO	Srobarova	159.70	328	ePKP	PKPab	23 44 56.6	+0.5
MODS	Modra-Piesok	159.73	331	ePKP2	PKPab	23 44 56.6	+0.3
MODS	Modra-Piesok	159.73	331	ePKP	PKPab	23 44 56.5	+0.3
KASTN	Kahler Asten	159.80	349	epPKPab	pPKPab	23 45 09.3	+6.3
	baz=22,slow=4.5						
NKC	Novy Kostel	159.84	341	AMS	AMS	01 08 10.0	
	comp=Z,400nm,16.0s						
UBBA	Unterbreizbach	159.88	346	ePKPab	PKPab	23 44 56.1	-0.5
	baz=22,slow=4.6						
MDVR	Moldovita	159.94	317	⇓P	PKPab	23 44 57.4	0.0
ZVC	Zvikov	160.01	337	ePKPAB	PKPab	23 44 58.1	+0.7
ZVC				AMS	AMS	01 05 20.0	
	comp=Z,300nm,20.3s						
VTS	Vitosha	160.11	310	eP	PKPab	23 44 58.9	+0.6
MANZ	Manzenberg	160.15	342	ePKPab	PKPab	23 44 58.6	+0.6
	baz=22,slow=4.6						
MANZ				epPKPab	sPKPab	23 45 09.7	+2.9
	baz=22,slow=4.5						
ROTZ	Rotzenmuhle	160.32	341	ePKPab	PKPab	23 44 58.8	+0.1
	baz=22,slow=4.6						
TRAN	Tran	160.39	311	eP	PKPab	23 45 00.1	+0.7
KHC	Kasperske Hory	160.48	338	ePKPAB	PKPab	23 44 59.9	+0.4
KHC				ex	x	23 45 14.9	
KHC				AMS	AMS	01 04 50.0	
	comp=Z,300nm,19.8s						

KHC	**Kasperske Hory**	**160.48**	**338**	*e*PKP2	**PKPab**	**23 44 59.9**	**+0.4**
KHC				MLR	MLR		
	comp=Z,300nm,19.8s						
CKRC	**Cesky Krumlov**	**160.50**	**336**	*e*PKPAB	**PKPab**	**23 44 59.9**	**+0.3**
CKRC				AMS	AMS	01 03 00.0	
	comp=Z,300nm,20.6s						
CKRC	**Cesky Krumlov**	**160.50**	**336**	*e*PKP2	**PKPab**	**23 44 59.9**	**+0.3**
CKRC				MLR	MLR		
	comp=Z,300nm,20.6s						
BOVS	**Bovan**	**160.58**	**314**	⇑P	**PKPab**	**23 44 56.0**	**-4.1**
GRF	**Grafenberg Arr**	**160.65**	**343**	*e*PKPab	**PKPab**	**23 45 00.2**	**0.0**
	baz=22,slow=4.6						
CONA	**Conrad Observa**	**160.66**	**332**	*e*PKP	**PKPab**	**23 45 00.9**	**+0.5**
	comp=Z,11nm,1.2s,SNR=6.7						
RONA	**Rosalia, Austr**	**160.66**	**331**	*e*PKP	**PKPab**	**23 45 00.8**	**+0.4**
	comp=Z,13nm,1.1s,SNR=8.0						
GEC2	**GERESS Array S**	**160.69**	**337**	*e*PKPab	**PKPab**	**23 45 00.2**	**-0.3**
	baz=22,slow=4.6						
GERES	**GERESS Array B**	**160.69**	**337**	PKPab	**PKPab**	**23 45 00.0**	**-0.4**
	comp=Z,2.2nm,0.9s,baz=22,slow=4.3,SNR=15						
WET	**Wettzell**	**160.69**	**339**	*e*PKPab	**PKPab**	**23 44 59.9**	**-0.4**
	baz=22,slow=4.6						
MORH	**Mrgy, Hungar**	**160.69**	**324**	⇓P	**PKPab**	**23 44 59.2**	**-1.2**
TNS	**Taunus Mts**	**160.75**	**348**	*e*pPKPab	pPKPab	23 45 12.6	+5.5
	baz=22,slow=4.5						
MOA	**Molln**	**161.34**	**335**	*i* PKP	**PKPab**	**23 45 03.6**	**+0.4**
	comp=Z,8.9nm,1.3s						
ARSA	**Arzberg**	**161.34**	**331**	*i* PKP	**PKPab**	**23 45 03.6**	**+0.3**
	comp=Z,6.1nm,1.4s						
BIOA	**Bad Ischl, Aus**	**161.70**	**335**	*i* PKP	**PKPab**	**23 45 05.2**	**+0.3**
	comp=Z,13nm,1.1s,SNR=7.4						
TORD	**Torodi Ar. Bea**	**161.75**	**177**		**PKPdf**	**23 44 19.8**	**-0.8**
TORD					**PKPab**	**23 45 05.6**	**-0.1**
TORD	**Torodi Ar. Bea**	**161.75**	**177**	PKP	**PKPdf**	**23 44 20.0**	**-0.6**
	comp=Z,72nm,0.3s,baz=166,slow=2.3,SNR=1.8						
TORD				PKPab	**PKPab**	**23 45 06.0**	**+0.3**
	comp=Z,58nm,0.3s,baz=182,slow=3.5,SNR=1.6						
RJOB	**Jochberg**	**161.95**	**337**	*e*PKPab	**PKPab**	**23 45 06.1**	**+0.2**
	baz=22,slow=4.6						
SOKA	**Soboth**	**162.00**	**331**	*i* PKP	**PKPab**	**23 45 06.1**	**-0.2**
	comp=Z,9.1nm,1.2s,SNR=5.7						
FUR	**Furstenfeldbru**	**162.03**	**341**	*e*PKPab	**PKPab**	**23 45 06.9**	**+0.6**
	baz=22,slow=4.6						
LESA	**Schwarzleotal**	**162.26**	**337**	*i* PKP	**PKPab**	**23 45 07.7**	**+0.3**
	comp=Z,12nm,1.5s,SNR=5.5						
OBKA	**Obir**	**162.33**	**332**	*i* PKP	**PKPab**	**23 45 07.5**	**-0.3**
	comp=Z,3.3nm,1.2s						
BFO	**Black Forest**	**162.59**	**347**	*e*PKPab	**PKPab**	**23 45 08.9**	**+0.2**
	baz=22,slow=4.6						
MYKA	**Terra Mystica**	**162.59**	**334**	*e*PKP	**PKPab**	**23 45 08.5**	**-0.4**
	comp=Z,9.1nm,1.4s						
WATA	**Walderalm**	**162.69**	**339**	*i* PKP	**PKPab**	**23 45 09.6**	**+0.3**
	comp=Z,10nm,1.3s,SNR=5.7						
WTTA	**Wattenberg**	**162.74**	**339**	*e*PKP	**PKPab**	**23 45 08.9**	**-0.7**
	comp=Z,17nm,1.3s						
RETA	**Reutte**	**162.80**	**341**	*e*PKP	**PKPab**	**23 45 09.7**	**0.0**
	comp=Z,14nm,1.3s,SNR=5.4						
MOTA	**Moosalm**	**162.83**	**340**	*i* PKP	**PKPab**	**23 45 10.4**	**+0.4**
	comp=Z,15nm,1.1s,SNR=6.5						
ABTA	**Abfaltersbach**	**162.90**	**336**	*i* PKP	**PKPab**	**23 45 09.8**	**-0.4**
	comp=Z,8.7nm,1.1s,SNR=5.1						
SQTA	**Sankt Quirin**	**162.91**	**339**	*i* PKP	**PKPab**	**23 45 10.5**	**+0.3**
	comp=Z,0.3nm,0.3s,SNR=5.1						
DAVA	**Damuels**	**163.22**	**342**	*i* PKP	**PKPab**	**23 45 11.9**	**+0.2**
	comp=Z,11nm,1.9s						
FETA	**Feichten**	**163.23**	**340**	*e*PKP	**PKPab**	**23 45 12.3**	**+0.6**
	comp=Z,12nm,1.5s						
INTR	**Introdacqua**	**166.08**	**322**	PKPab	**PKPab**	**23 45 24.5**	**+0.2**
CEL	**Celeste**	**167.09**	**305**	PKPab	**PKPab**	**23 45 27.9**	**-1.1**
ESDC	**Sonseca Array**	**170.27**	**31**	PKP	**PKPdf**	**23 44 27.1**	**+0.3**
	comp=Z,1.4nm,1.2s,baz=329,slow=1.5,SNR=5.2						
ESDC				PKPab	**PKPab**	**23 45 42.3**	**-0.6**
	comp=Z,0.9nm,0.9s,baz=308,slow=4.0,SNR=4.3						

NNC 18 23:24:41.9±2.0**, 37°.77N×71°.85E, h0^{km}, mb3.8, mpv3.4, 4C, Error ellipse: s-maj=16.8km s-min=15.0km az=42.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**4.58**	**17**	P	Pn	23 25 53.6	+0.7
	SNR=23						
EKS2	**Erkin-Say**	**5.11**	**16**	P	Pn	23 26 00.4	+0.6
	SNR=11						
AAK	**Ala-Archa**	**5.27**	**22**	P	Pn	23 26 02.8	+0.7
	SNR=7.0						
AAK	**Ala-Archa**	**5.27**	**22**	⇑P	Pn	23 26 02.1	0.0
	1.2nm,0.6s						
AAK				⇑S	Sn	23 27 04.8	+1.2
	1.4nm,0.6s						
KK31	**Karatay Array**	**5.43**	**350**	⇑P	Pn	23 26 04.5	+0.4
	2.6nm,0.3s,baz=174,slow=13,SNR=29						
KK31				S	Sn	23 27 08.3	+1.0
	2.7nm,0.2s,baz=172,slow=23,SNR=21						
CHMS	**Chumysh**	**5.67**	**22**	P	Pn	23 26 07.5	0.0
	SNR=5.5						
CHMS	**Chumysh**	**5.67**	**22**	⇑P	Pn	23 26 07.0	-0.5
	3.1nm,0.5s						
USP	**Ospenovka**	**5.85**	**19**	P	Pn	23 26 09.4	-0.5
	SNR=7.0						

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*IDC **18** 23:37:11.4±0.6, 31°.33S×177°.62W, h0^{km}, mb4.6/8, mbtmp4.5/10, ML5.2/1, MS4.1/4, Error ellipse: s-maj=24.4km s-min=21.4km az=95.0*

*NEIC **18** 23:37:14.2±1.9, 31°.3S±0°.1×177°.6W±0°.2, h10^{km}±1^{km}, mb4.9/19, Error ellipse: s-maj=23.0km s-min=16.6km az=71.0*

ISC 18 23:37:17.4±0.5**, 31°.45S**±0°.05×**177°.89W**±0°.10**, h35^{km}, n115, σ1^{s}.86**/118**, mb4.8**/19**, 3C-3D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**2.18**	**359**	P	**Pn**	**23 37 47.3**	**-3.9**
RAO	**Raoul Island**	**2.19**	**359**		**Pn**	**23 37 47.5**	**-3.7**
RIZ	**Raoul Island**	**2.20**	**359**	P	**Pn**	**23 37 48.0**	**-3.4**
MXZ	**Matakaoa Point**	**6.86**	**206**	Pn	**Pn**	**23 38 55.6**	**+0.2**
MXZ	**Matakaoa Point**	**6.86**	**206**	P	**Pn**	**23 38 55.0**	**-0.4**
MXZ				S	**Sn**	**23 40 14.4**	**+2.2**
PUZ	**Puketiti**	**7.33**	**205**	P	**Pn**	**23 39 01.0**	**-0.9**
PUZ				S	**Sn**	**23 40 24.4**	**+0.5**
MWZ	**Matawai**	**7.83**	**207**	P	**Pn**	**23 39 06.8**	**-2.0**
MWZ				S	**Sn**	**23 40 37.5**	**+1.3**
URZ	**Urewera**	**7.94**	**210**	Pn	**Pn**	**23 39 05.9**	**-4.3**
	1.1nm,0.3s,baz=328,slow=5.7,SNR=8.5						
URZ				Sn	**Sn**	**23 40 35.5**	**-3.3**
	6.2nm,0.3s,baz=272,slow=17,SNR=8.4						
URZ	**Urewera**	**7.94**	**210**	P	**Pn**	**23 39 06.1**	**-4.2**
TSZ	**Takapari Road**	**9.94**	**208**	P	**Pn**	**23 39 37.7**	**0.0**
PRWZ	**Pori Road**	**10.36**	**207**	P	Pn	23 39 49.5	+6.2
PRWZ				S	**Sn**	**23 41 33.8**	**-4.3**
TIWZ	**Tintock**	**10.58**	**207**	P	**Pn**	**23 39 43.6**	**-2.9**
TIWZ				S	**Sn**	**23 41 39.9**	**-3.8**
MRZ	**Mangatainoka R**	**10.60**	**208**	P	Pn	23 39 41.3	-5.4
MRZ				S	**Sn**	**23 41 37.8**	**-6.3**
OGWZ	**Otaki Gorge**	**10.90**	**209**	P	**Pn**	**23 39 52.4**	**+1.6**
OGWZ				S	**Sn**	**23 41 45.9**	**-5.6**
KIW	**Kapiti Island**	**11.04**	**210**	P	**Pn**	**23 39 56.4**	**+3.6**
KIW				S	**Sn**	**23 41 48.8**	**-6.3**
QRZ	**Quartz Range**	**12.14**	**217**	P	**Pn**	**23 40 08.2**	**+0.4**
CTZ	**Chatham Island**	**12.31**	**176**	Pn	**Pn**	**23 40 08.6**	**-1.4**
THZ	**Tophouse**	**12.67**	**213**	P	**Pn**	**23 40 15.1**	**+0.1**
KHZ	**Kahutara**	**12.91**	**210**	P	**Pn**	**23 40 16.6**	**-1.6**
LTZ	**Lake Taylor**	**13.76**	**212**	Pn	**Pn**	**23 40 28.1**	**-1.8**
MSVF	**Nonsavu**	**14.14**	**344**	Pn	**Pn**	**23 40 33.6**	**-1.7**
	0.4nm,0.3s,baz=148,slow=13,SNR=4.4						
	11nm,0.9s						
OXZ	**Oxford**	**14.29**	**211**	P	**P**	**23 40 44.2**	**+0.4**
RPZ	**Rata Peaks**	**15.04**	**212**	Pn	**Pn**	**23 40 44.7**	**-2.6**
	1.1nm,0.3s,baz=44,slow=2.1,SNR=5.6						
RPZ				Sn	Sn	23 43 18.2	-14
	0.6nm,0.3s,baz=224,slow=23,SNR=2.1						
DZM	**Mont Dzumac**	**16.81**	**300**	Pn	**Pn**	**23 41 10.3**	**+0.1**
	12nm,1.2s,baz=105,slow=14,SNR=10						
DZM				LR	LR	23 46 39.4	
	comp=Z,2µm,18.4s,baz=172,slow=34						
RAR	**Rarotonga**	**19.14**	**62**	LR	LR	23 48 00.0	
	comp=Z,201nm,19.6s,baz=251,slow=34						
EIDS	**Eidsvold**	**27.90**	**275**	P	**P**	**23 43 06.3**	**+2.1**
PPT	**Papeete**	**29.13**	**68**	LR	LR	23 51 02.1	
	comp=Z,177nm,21.9s,baz=222,slow=29						
CTAO	**Charters Tower**	**34.08**	**281**	P	**P**	**23 44 00.4**	**+1.7**
CTAO				IAmb	IAmb	23 44 01.9	
	comp=Z,21nm,0.8s						
STKA	**Stephens Creek**	**34.35**	**258**	P	**P**	**23 44 03.6**	**+2.7**
STKA				IAmb	IAmb	23 44 17.4	
	comp=Z,30nm,0.7s						
STKA	**Stephens Creek**	**34.35**	**258**	P	**P**	**23 44 02.0**	**+1.1**
	comp=Z,4.1nm,0.7s,baz=101,slow=11,SNR=9.6						
STKA				LR	LR	23 56 31.7	
	comp=Z,530nm,18.3s,baz=74,slow=34						
	comp=Z,4.1nm,0.7s						
BBOO	**Buckleboo**	**38.79**	**255**	P	**P**	**23 44 38.9**	**+0.2**
BBOO				IAmb	IAmb	23 46 08.6	
	comp=Z,87nm,1.9s						
COEN	**Coen**	**39.66**	**287**	P	**P**	**23 44 47.2**	**+1.0**
COEN				IAmb	IAmb	23 45 05.0	
	comp=Z,72nm,1.7s						
AS31	**Alice Springs**	**43.16**	**268**	P	**P**	**23 45 15.9**	**+1.0**
ASAR	**Alice Springs**	**43.16**	**268**	P	**P**	**23 45 15.8**	**+0.9**
ASAR	**Alice Springs**	**43.16**	**268**	P	**P**	**23 45 15.9**	**+1.1**
	comp=Z,12nm,0.8s,baz=108,slow=7.6,SNR=61						
ASAR				PcP	**PcP**	**23 47 04.1**	**0.0**
	comp=Z,1.3nm,0.9s,baz=105,slow=3.9,SNR=1.7						
ASAR				ScP	**ScP**	**23 50 56.8**	**+4.1**
	comp=Z,1.4nm,0.9s,baz=123,slow=4.1,SNR=7.5						
	comp=Z,12nm,0.8s						
WR8	**Warramunga Arr**	**44.10**	**273**	P	**P**	**23 45 23.3**	**+0.8**
WR8				IAmb	IAmb	23 45 24.6	
	comp=Z,16nm,0.8s						
WRA	**Warramunga Arr**	**44.24**	**273**	P	**P**	**23 45 24.6**	**+1.0**
	comp=Z,17nm,0.8s,baz=114,slow=7.7,SNR=40						
WRA				ScP	**ScP**	**23 51 00.1**	**+3.0**
	comp=Z,0.8nm,1.0s,baz=112,slow=3.8,SNR=4.5						
	comp=Z,17nm,0.8s						
WB0	**Warramunga Arr**	**44.27**	**273**	P	**P**	**23 45 24.7**	**+0.9**
WB0				IAmb	IAmb	23 45 25.9	
	comp=Z,23nm,0.9s						
MTN	**Manton Dam**	**50.25**	**280**	P	**P**	**23 46 11.0**	**+0.6**
FITZ	**Fitzroy Crossi**	**52.46**	**271**	P	**P**	**23 46 27.5**	**+0.6**
CASY	**Casey**	**54.26**	**208**	P	**P**	**23 46 40.4**	**+0.9**
QSPA	**South Pole Qui**	**58.66**	**180**	P	**P**	**23 47 13.5**	**+2.5**
QSPA	**South Pole Qui**	**58.66**	**180**	P	**P**	**23 47 11.7**	**+0.7**
	comp=Z,5.2nm,1.0s,baz=25,slow=2.1,SNR=6.9						
	comp=Z,5.2nm,1.0s						
BELA	**Belgrano 2**	**68.73**	**172**	P	**P**	**23 48 17.6**	**+0.6**
BELA				IAmb	IAmb	23 48 30.3	
	comp=Z,5.0nm,0.8s						
MAW	**Mawson**	**71.36**	**201**	P	**P**	**23 48 34.4**	**+1.1**
	comp=Z,4.1nm,0.9s,baz=119,slow=2.3,SNR=6.2						
	comp=Z,4.1nm,0.9s						
SYO	**Syowa Base**	**76.12**	**193**	⇓*e*P	**P**	**23 49 02.5**	**+1.4**
TROLL	**Troll, Antarti**	**76.83**	**180**	⇑P	P	23 48 53.4	-12
	comp=Z,64nm,0.5s						
SNAA	**Sanae**	**77.11**	**178**	⇑P	**P**	**23 49 06.0**	**-0.7**
	comp=Z,67nm,0.8s						
SNAA	**Sanae**	**77.11**	**178**	P	**P**	**23 49 05.1**	**-1.7**
SNAA				IAmb	IAmb	23 49 47.6	
	comp=Z,16nm,1.5s						
SNAA	**Sanae**	**77.11**	**178**	P	**P**	**23 49 06.1**	**-0.7**
	comp=Z,2.9nm,0.8s,baz=198,slow=18,SNR=6.8						
	comp=Z,2.9nm,0.8s						
VNA3	**Neumayer Olymp**	**77.25**	**176**	⇓P	**P**	**23 49 08.0**	**+0.5**
	comp=Z,5.6nm,0.8s						
VNA2	**Neumayer--Watz**	**77.69**	**177**	⇑P	**P**	**23 49 11.8**	**+1.9**
	comp=Z,4.2nm,0.7s,baz=172,slow=4.0						
H03S2	**Juan Fernandez**	**79.81**	**123**	T	T	01 17 00.1	
	baz=238,slow=74,SNR=4.3						
H03S1	**Juan Fernandez**	**79.82**	**123**	T	T	01 17 00.6	
	baz=238,slow=74,SNR=4.2						
H03S3	**Juan Fernandez**	**79.82**	**123**	T	T	01 16 59.4	
	baz=238,slow=74,SNR=4.8						
PETK	**Petropavlovsk-**	**86.85**	**346**	P	**P**	**23 49 57.5**	**-0.3**
	comp=Z,4.2nm,0.7s,baz=113,slow=9.3,SNR=4.6						
	comp=Z,4.2nm,0.7s						
GSC	**Goldstone, Bar**	**87.74**	**46**		**P**	**23 50 01.7**	**-1.0**
NVAR	**Mina Array Bea**	**88.94**	**43**	P	**P**	**23 50 07.0**	**-1.5**
NVAR	**Mina Array Bea**	**88.94**	**43**	P	**P**	**23 50 07.4**	**-1.0**
	comp=Z,1.6nm,0.9s,baz=222,slow=4.4,SNR=7.2						
	comp=Z,1.6nm,0.9s						
PRN	**Pahroc Range**	**90.19**	**45**	P	**P**	**23 50 14.3**	**+0.1**
PRN				IAmb	IAmb	23 50 16.8	
	comp=Z,8.3nm,1.3s						
X16A	**Lo Mia Camp, P**	**90.56**	**49**	P	**P**	**23 50 15.1**	**-1.0**
X16A				IAmb	IAmb	23 50 18.0	
	comp=Z,4.7nm,1.2s						
U15A	**North Rim**	**91.27**	**47**	P	**P**	**23 50 18.9**	**-0.6**
U15A				IAmb	IAmb	23 50 33.5	
	comp=Z,4.6nm,1.1s						
MESA	**MESA**	**95.96**	**17**	P	**P**	**23 50 41.9**	**+1.5**
MKAR	**Makanchi Array**	**118.52**	**310**	PKPdf	**PKPdf**	**23 55 59.7**	**-1.4**
MKAR	**Makanchi Array**	**118.52**	**310**	PKP	**PKPdf**	**23 56 00.2**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=104,slow=1.6,SNR=4.8						
KURK	**Kurchatov**	**121.84**	**313**	PKPdf	**PKPdf**	**23 56 06.2**	**-1.1**
KURBB	**Kurchatov Arra**	**121.88**	**313**	PKP	**PKPdf**	**23 56 06.4**	**-1.0**
	comp=Z,1.4nm,0.7s,baz=115,slow=2.1,SNR=13						
KKAR	**Karatay Array**	**125.73**	**303**	PKPdf	**PKPdf**	**23 56 14.8**	**-0.3**
BVAR	**Borovoye Array**	**127.22**	**315**	PKP	**PKPdf**	**23 56 17.4**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=86,slow=1.3,SNR=8.9						
ARTI	**Arti**	**134.06**	**320**	PKP	**PKPdf**	**23 56 30.8**	**+0.4**
	comp=Z,0.8nm,0.4s,baz=162,slow=3.5,SNR=4.0						
AKTO	**Aktyubinsk**	**134.88**	**312**	PKP	**PKPdf**	**23 56 32.1**	**0.0**
	comp=Z,0.8nm,0.6s,baz=87,slow=6.2,SNR=3.6						
ARCES	**ARCESS Array B**	**139.63**	**348**	PKhKP	PKPpre	23 56 33.9	
	comp=Z,1.3nm,0.9s,baz=28,slow=2.9,SNR=1.8						
KBZ	**Khabaz**	**145.77**	**303**	PKPbc	**PKPbc**	**23 56 52.5**	**0.0**
	comp=Z,6.0nm,1.1s,baz=148,slow=22,SNR=6.1						
GEVA	**Gevas**	**145.93**	**293**	PKPdf	**PKPab**	**23 56 53.8**	**-0.2**
OBN	**Obninsk**	**146.08**	**324**	PKPdf	**PKPbc**	**23 56 52.8**	**-0.3**
FIA1	**FINESS Array S**	**146.16**	**339**	PKPdf	**PKPdf**	**23 56 51.8**	**-0.3**
FINES	**FINESS Array B**	**146.16**	**339**	PKPdf	**PKPdf**	**23 56 51.9**	**-0.2**
FINES	**FINESS Array B**	**146.16**	**339**	PKPbc	**PKPdf**	**23 56 52.4**	**+0.3**
	comp=Z,24nm,0.9s,baz=64,slow=4.4,SNR=49						
GURO	**Guroymak-BITLI**	**146.74**	**293**	PKPbc	**PKPab**	**23 56 56.5**	**-0.6**
MARD	**Mardin**	**147.72**	**291**	PKPbc	**PKPbc**	**23 56 58.2**	**-0.3**
NC303	**NORSAR Array S**	**149.60**	**351**	PKPbc	**PKPbc**	**23 57 01.1**	**-1.3**
NB2	**NORSAR Subarra**	**149.80**	**351**	PKP	**PKPbc**	**23 57 02.0**	**-1.0**
	comp=Z,1.1nm,0.7s,baz=13,slow=2.6						
NOA	**NORSAR Array B**	**149.80**	**351**	PKPbc	**PKPbc**	**23 57 01.9**	**-1.1**
	comp=Z,2.3nm,0.9s,baz=16,slow=4.3,SNR=6.9						
NC602	**NORSAR Array S**	**150.05**	**351**	PKPbc	**PKPbc**	**23 57 03.2**	**-0.3**
HFS	**Hagfors**	**150.29**	**348**	PKPbc	**PKPbc**	**23 57 03.0**	**-1.1**
	comp=Z,3.7nm,0.8s,baz=23,slow=2.2,SNR=6.5						
PABE	**Paberze**	**151.44**	**334**	PKPbc	**PKPbc**	**23 57 05.5**	**-1.4**
MMAI	**Mount Meron Ar**	**151.86**	**282**	PKPbc	**PKiKP**	**23 57 09.9**	**+0.8**
	comp=Z,7.4nm,0.8s,baz=104,slow=2.3,SNR=9.5						
AKASG	**Malin Array Be**	**152.19**	**322**	PKPbc	**PKPbc**	**23 57 08.3**	**-0.5**
	comp=Z,2.8nm,0.7s,baz=49,slow=2.1,SNR=16						
BRTR	**Keskin Array B**	**153.17**	**297**	PKPbc	**PKPbc**	**23 57 10.8**	**-0.8**
BRTR	**Keskin Array B**	**153.17**	**297**	PKPbc	**PKPbc**	**23 57 11.3**	**-0.3**
	comp=Z,2.1nm,1.0s,baz=96,slow=2.9,SNR=11						
BURAR	**Bucovina Array**	**156.09**	**319**	PKPdf	**PKPdf**	**23 57 09.3**	**+1.4**
STHS	**Stebnicka Huta**	**157.00**	**327**	*e*PKP	**PKPab**	**23 57 37.1**	**-2.1**
MORC	**Moravsky Berou**	**158.34**	**332**	*e*P	**PKPab**	**23 57 44.2**	**-0.8**
CLL	**Collm**	**158.59**	**341**	⇓*i*PKPab	**PKPab**	**23 57 44.8**	**-1.1**
	comp=Z,8.0nm,1.3s						
BRG	**Berggiesshubel**	**158.70**	**339**	*e*P	**PKPab**	**23 57 45.7**	**-0.8**
BRG				Amp		23 57 47.1	
	comp=Z,3.4nm,1.0s						
VYHS	**Vyhne**	**158.77**	**328**	*e*PKP	**PKPab**	**23 57 46.0**	**-0.9**
JAVC	**Velka Javorina**	**159.01**	**330**	*e*P	**PKPab**	**23 57 47.3**	**-0.6**
VRAC	**Vranov**	**159.09**	**333**	*e*P	**PKPab**	**23 57 47.1**	**-1.1**
KRUC	**Moravsky**	**159.37**	**333**	*e*P	**PKPab**	**23 57 48.2**	**-1.2**
RONA	**Rosalia, Austr**	**160.49**	**330**	*e*PKP	**PKPab**	**23 57 54.2**	**-0.1**
CONA	**Conrad Observa**	**160.49**	**331**	*e*PKP	**PKPab**	**23 57 54.5**	**+0.1**
	comp=Z,2.2nm,1.0s						
GERES	**GERESS Array B**	**160.54**	**337**	PKPab	**PKPab**	**23 57 52.4**	**-2.2**
	comp=Z,0.7nm,0.8s,baz=62,slow=2.3,SNR=6.7						
MOA	**Molln**	**161.18**	**334**	*e*PKP	**PKPab**	**23 57 57.1**	**-0.3**
	comp=Z,2.6nm,1.0s						
BIOA	**Bad Ischl, Aus**	**161.54**	**335**	*e*PKP	**PKPab**	**23 57 59.1**	**+0.2**
SOKA	**Soboth**	**161.82**	**330**	*e*PKP	**PKPab**	**23 57 59.7**	**-0.6**
	comp=Z,0.6nm,0.8s						
LESA	**Schwarzleotal**	**162.11**	**336**	*e*PKP	**PKPab**	**23 58 01.8**	**+0.3**
	comp=Z,4.6nm,1.2s						
MYKA	**Terra Mystica**	**162.43**	**333**	*i* PKP	**PKPab**	**23 58 01.8**	**-1.2**
	comp=Z,0.1nm,0.2s						
WATA	**Walderalm**	**162.55**	**338**	*i* PKP	**PKPab**	**23 58 03.6**	**+0.1**
	comp=Z,4.1nm,1.0s						
WTTA	**Wattenberg**	**162.60**	**338**	*e*PKP	**PKPab**	**23 58 03.3**	**-0.5**
RETA	**Reutte**	**162.67**	**340**	*e*PKP	**PKPab**	**23 58 03.5**	**-0.4**
MOTA	**Moosalm**	**162.69**	**339**	*i* PKP	**PKPab**	**23 58 03.8**	**-0.3**
	comp=Z,8.0nm,1.1s						
ABTA	**Abfaltersbach**	**162.75**	**335**	*e*PKP	**PKPab**	**23 58 03.0**	**-1.3**
	comp=Z,3.0nm,0.9s						
SQTA	**Sankt Quirin**	**162.77**	**339**	*i* PKP	**PKPab**	**23 58 04.0**	**-0.4**
	comp=Z,2.5nm,0.5s						
FETA	**Feichten**	**163.10**	**339**	*e*PKP	**PKPab**	**23 58 05.9**	**-0.1**
	comp=Z,3.1nm,1.0s						
DAVA	**Damuels**	**163.10**	**342**	*e*PKP	**PKPab**	**23 58 05.2**	**-0.7**

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*IDC **18** 23:36:31.6±2.8, 30°.07S×178°.00W, h0^{km}, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=79.3km s-min=36.7km az=39.0*

ISC 18 23:37:18.0±1.6**, 31°.3S**±0°.1×**179°.0W**±0°.2**, h400^{km}, n11, σ2^{s}.30**/12**, mb3.4**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HAZ	**Te Kaha**	**7.02**	**201**	P	**Pn**	**23 38 59.7**	**-2.0**
HAZ				S	**S**	**23 40 24.2**	**-2.3**
POWZ	**Post Office Ro**	**10.06**	**204**	S	**S**	**23 41 32.0**	**+1.9**
BFZ	**Birch Farm**	**10.17**	**201**	S	**S**	**23 41 33.7**	**+1.5**
HOWZ	**Holdsworth Sta**	**10.60**	**203**	S	**S**	**23 41 42.6**	**+1.6**
TMWZ	**Te Maipa**	**10.67**	**201**	S	**S**	**23 41 43.5**	**+1.0**
PAWZ	**Paruwai Farm**	**11.07**	**202**	S	**S**	**23 41 53.1**	**+2.6**
CTZ	**Chatham Island**	**12.60**	**172**	P	**P**	**23 40 01.6**	**-2.6**
ASAR	**Alice Springs**	**42.23**	**268**	P	**P**	**23 44 33.5**	**-0.7**
	1.0nm,0.6s,baz=107,slow=7.6,SNR=9.1						
	1.0nm,0.6s						
WRA	**Warramunga Arr**	**43.29**	**274**	P	**P**	**23 44 42.0**	**-0.6**
	0.9nm,0.5s,baz=112,slow=7.9,SNR=9.9						
	0.9nm,0.5s						
QSPA	**South Pole Qui**	**58.86**	**180**	P	**P**	**23 46 40.0**	**+3.8**
	1.3nm,0.7s,baz=274,slow=2.0,SNR=7.3						
	1.3nm,0.7s						
FINES	**FINESS Array B**	**145.64**	**339**	PKP	**PKPdf**	**23 56 09.1**	**+0.4**
	1.8nm,0.9s,baz=56,slow=1.9,SNR=8.6						

DJA 18 23:44:11.4±0.4**, 7°S**±3°×**10°5E**±°**, h10^{km}, M4.3**/13**, mb4.4**/2**, MLv4.2**/13**, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CGJI	**Cibinong**	**0.44**	**69**	P	Pg	23 44 20.0	0.0
SBJI	**Serang**	**1.06**	**53**	P	Pg	23 44 30.5	-1.4
SBJI				S	Sb	23 44 46.1	+0.2
SKJI	**Sukabumi**	**1.29**	**101**	P	Pn	23 44 33.6	-1.9
SKJI				S	Sn	23 44 52.8	0.0
BLSI	**Bandar Lampung**	**1.39**	**359**	P	Pn	23 44 36.2	-0.7
BLSI				S	Sn	23 44 54.3	-1.1
TNG	**Tangerang**	**1.48**	**66**	P	Pb	23 44 38.3	-0.8
TNG				P	Pn	23 44 38.0	-0.1
TNG				S	Sg	23 44 58.9	-0.2
CNJI	**Cibinong**	**1.91**	**106**	P	Pn	23 44 42.3	-1.8
LWLI	**Liwa**	**2.12**	**325**	P	Pn	23 44 47.2	+0.1
LEM	**Lembang**	**2.32**	**92**	P	Pn	23 44 51.0	+1.1
MDSI	**Maura Dua**	**2.52**	**334**	P	Pn	23 44 52.6	+0.2
MNAI	**Manna**	**3.33**	**316**	P	Pn	23 45 04.4	+0.8
TPI	**Tanjungpandan**	**4.64**	**31**	P	Pn	23 45 21.1	-0.5
UGM	**Wanagama**	**5.32**	**103**	P	Pn	23 45 31.0	0.0
	71nm,1.6s						
PCJI	**Pacitan**	**6.02**	**104**	P	Pn	23 45 40.9	+0.4

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*IDC **18** 23:59:03.4±0.4, 30°.93S×177°.78W, h0^{km}, mb4.5/17, mbtmp4.5/17, MS4.8/48, Error ellipse: s-maj=18.8km s-min=15.8km az=87.0*

*BJI **18** 23:59:06.5, 30°.56S×177°.23W, h30^{km}, mB5.6/11, mb5.1/21, Ms5.1/13, Ms7 4.8/13*

*NEIC **18** 23:59:06.8±1.9, 30°.99S±0°.08×177°.6W±0°.1, h19^{km}±1^{km}, mb5.2/79, Mww5.3/24, Error ellipse: s-maj=14.2km s-min=11.7km az=104.0*

*NEIC **18** 23:59:08.3, 30°.99S×177°.67W, h24^{km}*

*MOS **18** 23:59:08.3±1.0, 30°.92S×177°.83W, h38^{km}, mb5.4/25, MS5.1/10, Error ellipse: s-maj=13.1km s-min=8.9km az=106.2*

*NEIC **18** 23:59:08.3, 31°.09S×177°.20W, h24^{km}, Moment Tensor Solution. Duration: 2^{s}.4 Moment tensor: Scale 10^{17}Nm; M_{rr}0.92; $M_{\theta\theta}$0.15; $M_{\phi\phi}$-1.08; $M_{r\theta}$0.08; $M_{\theta\phi}$-0.28; $M_{\phi r}$0.52; Fault plane solution: $M_0$1.17000×10^{17} NP1: ϕ_s194.81000°, δ31.59000°, λ93.90000°. NP2: ϕ_s10.23000°, δ58.49000°, λ87.60000°. Principal axes: T 1.0507, Plg76.0000°, Azm273.0000°; N 0.2106, Plg2.0000°, Azm11.0000°; P -1.2613, Plg13.0000°, Azm102.0000°;*

*GCMT **18** 23:59:10.8±0.1, 31°.00S±0°.01×177°.32W±0°.01, h19^{km}, MW5.3/135, Moment Tensor Solution. s106,c174; s135,c234; Duration: 1^{s}.1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.91±.02; $M_{\theta\theta}$0.06±.01; $M_{\phi\phi}$-0.97±.01; $M_{r\theta}$0.13±.03; $M_{\theta\phi}$-0.25±.01; $M_{\phi r}$0.85±.04; Best double couple: $M_0$1.30000×10^{17} NP1: ϕ_s196.00000°, δ24.00000°, λ96.00000°. NP2: ϕ_s10.00000°, δ66.00000°, λ87.00000°. Principal axes: T 1.2450, Plg69.0000°, Azm274.0000°; N 0.1110, Plg2.0000°, Azm11.0000°; P -1.3550, Plg21.0000°, Azm102.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 23:59:07.4±0.6**, 31°.13S**±0°.04×**177°.68W**±0°.05**, h28^{km}**±3^{km}**, h28^{km}:pP-P, n501, σ1^{s}.58**/458**, mb5.1**/99**, MS5.0**/68**, 23C-33D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**1.87**	**354**	P	**Pn**	**23 59 35.0**	**-2.5**
GLKZ				S	**Sn**	**23 59 58.6**	**-1.7**
RAO	**Raoul Island**	**1.88**	**354**		**Pn**	**23 59 35.1**	**-2.6**
RAO	**Raoul Island**	**1.88**	**354**	P	**Pn**	**23 59 35.1**	**-2.6**
RIZ	**Raoul Island**	**1.89**	**353**	P	**Pn**	**23 59 35.4**	**-2.4**
MXZ	**Matakaoa Point**	**7.23**	**206**	P	**Pn**	**00 00 47.4**	**-3.8**
MXZ				S	**Sn**	**00 02 12.0**	**-0.2**
WMGZ	**Waiomatatini S**	**7.41**	**205**	P	**Pn**	**00 00 50.8**	**-2.9**
WMGZ				S	**Sn**	**00 02 15.3**	**-1.5**
PKGZ	**Pakihiroa**	**7.58**	**206**	P	**Pn**	**00 00 53.0**	**-3.0**
PKGZ				S	**Sn**	**00 02 20.5**	**-0.4**
HAZ	**Te Kaha**	**7.60**	**208**	P	**Pn**	**00 00 53.4**	**-2.9**
HAZ				S	**Sn**	**00 02 21.5**	**+0.1**
PUZ	**Puketiti**	**7.69**	**205**	P	Pn	00 00 53.3	-4.3
PUZ				S	**Sn**	**00 02 20.8**	**-3.0**
RUGZ	**Raukumara Rang**	**7.82**	**208**	P	**Pn**	**00 00 55.8**	**-3.6**
RUGZ				S	**Sn**	**00 02 26.4**	**-0.7**
TWGZ	**Tauwhareparae**	**7.89**	**206**	P	**Pn**	**00 00 57.7**	**-2.5**
TWGZ				S	**Sn**	**00 02 27.1**	**-1.5**
CNGZ	**Carnagh Statio**	**8.08**	**204**	P	Pn	00 00 58.5	-4.4
CNGZ				S	**Sn**	**00 02 33.0**	**-0.3**
TKGZ	**Te Karaka**	**8.17**	**206**	P	**Pn**	**00 01 02.7**	**-1.3**
TKGZ				S	**Sn**	**00 02 33.6**	**-1.8**
MWZ	**Matawai**	**8.20**	**207**	P	**Pn**	**00 01 01.0**	**-3.6**
MWZ				S	**Sn**	**00 02 34.2**	**-2.0**
WCZ	**Waipu Caves**	**8.21**	**232**	P	**Pn**	**00 01 08.6**	**+4.0**
URZ	**Urewera**	**8.31**	**210**	Pn	**Pn**	**00 01 02.6**	**-3.4**
	4.6nm,0.3s,baz=153,slow=5.1,SNR=22						
URZ				Sn	**Sn**	**00 02 31.6**	**-7.2**
	9.7nm,0.3s,baz=155,slow=8.5,SNR=3.9						
URZ	**Urewera**	**8.31**	**210**	P	**Pn**	**00 01 02.5**	**-3.4**
URZ				S	**Sn**	**00 02 35.3**	**-3.6**
OUZ	**Omahuta**	**8.37**	**239**	P	Pn	00 01 13.4	+6.5
RAGZ	**Rawiri**	**8.38**	**207**	P	Pn	00 01 01.3	-5.8
RAGZ				S	**Sn**	**00 02 37.9**	**-3.0**
MKAZ	**Moumakai**	**8.41**	**223**	P	**Pn**	**00 01 09.5**	**+2.1**
RIGZ	**Rimuhau**	**8.44**	**205**	P	**Pn**	**00 01 03.6**	**-4.1**
RIGZ				S	**Sn**	**00 02 39.1**	**-3.0**
PRGZ	**Paritu Road**	**8.59**	**204**	S	**Sn**	**00 02 42.5**	**-3.2**
MUGZ	**Murupara**	**8.63**	**210**	S	**Sn**	**00 02 44.8**	**-2.1**
SNGZ	**Shannon Statio**	**8.66**	**207**	P	**Pn**	**00 01 09.1**	**-1.8**
SNGZ				S	**Sn**	**00 02 43.2**	**-4.3**
TOZ	**Tahuroa Road**	**8.66**	**219**	Pn	**Pn**	**00 01 11.1**	**+0.2**
KNZ	**Kokohu**	**8.75**	**205**	P	**Pn**	**00 01 07.8**	**-4.2**
KNZ				S	**Sn**	**00 02 46.2**	**-3.5**
MHGZ	**Mahia Peninsul**	**8.78**	**203**	S	**Sn**	**00 02 43.6**	**-7.0**
BKZ	**Black Stump Fm**	**9.33**	**209**	P	**Pn**	**00 01 16.7**	**-3.3**
NGZ	**Ngauruhoe**	**9.73**	**213**	P	**Pn**	**00 01 26.3**	**+0.7**
MRZ	**Mangatainoka R**	**10.97**	**208**	Pn	Pn	00 01 37.9	-4.5
CTZ	**Chatham Island**	**12.61**	**176**	P	**Pn**	**00 02 01.6**	**-3.3**
CTZ				S	Sn	00 04 10.8	-14
NFK	**Norfolk Island**	**12.63**	**276**	P	P	00 02 11.4	-4.9
	comp=Z,205nm,2.2s						
MSVF	**Nonsavu**	**13.89**	**343**	Pn	**Pn**	**00 02 21.4**	**-1.1**
MSVF	**Nonsavu**	**13.89**	**343**	LR	LR	00 06 56.5	
	comp=Z,6µm,18.5s,baz=173,slow=35						
MSVF	**Nonsavu**	**13.89**	**343**	*i* P	**Pn**	**00 02 21.7**	**-0.8**
RPZ	**Rata Peaks**	**15.41**	**212**	Pn	**Pn**	**00 02 36.8**	**-6.0**
	comp=Z,1.5nm,0.3s,baz=92,slow=0.4,SNR=12						
RPZ				Sn	Sn	00 05 15.9	-17
	comp=Z,2.7nm,0.3s,baz=7.7,slow=15,SNR=7.2						
PINNC	**Pines Island,**	**15.74**	**299**	P	**P**	**00 02 50.2**	**-0.6**

PINNC				IAmb	IAmb	00 02 55.0	
	comp=Z,596nm,2.0s						
ODZ	**Otahua Downs**	**16.63**	**210**	P	**Pn**	**00 02 55.0**	**-3.5**
ONTNC	**Ouen Toro**	**16.66**	**298**	P	**P**	**00 03 02.3**	**+1.1**
DZM	**Mont Dzumac**	**16.81**	**299**	P	**P**	**00 03 04.3**	**+1.4**
DZM	**Mont Dzumac**	**16.81**	**299**	*e*Pn	**P**	**00 03 02.9**	**+0.1**
	comp=Z,408nm,1.3s						
DZM				*e*LR	LR	00 06 51.5	
	comp=Z,10µm,23.0s						
DZM	**Mont Dzumac**	**16.81**	**299**	Pn	**P**	**00 03 03.8**	**+0.9**
	comp=Z,1.2nm,0.3s,baz=121,slow=13,SNR=27						
DZM				LR	LR	00 08 30.8	
	comp=Z,11µm,18.4s,baz=137,slow=34						
WKZ	**Wanaka**	**17.20**	**214**	P	**Pn**	**00 03 01.2**	**-4.4**
RAR	**Rarotonga**	**18.84**	**63**	P	**Pn**	**00 03 28.9**	**+3.1**
	comp=Z,16nm,0.6s,baz=235,slow=7.3,SNR=4.9						
RAR				S	Sn	00 06 35.0	-21
	comp=Z,12nm,0.4s,baz=82,slow=20,SNR=3.0						
RAR				LR	LR	00 11 33.9	
	comp=Z,1µm,18.1s,baz=246,slow=40						
LHI	**Lord Howe Isla**	**19.87**	**263**	Pn	**Pn**	**00 03 40.1**	**+2.0**
LHI				IAmb	IAmb	00 03 42.1	
	comp=Z,126nm,0.8s						
LHI	**Lord Howe Isla**	**19.87**	**263**	P	**Pn**	**00 03 40.2**	**+2.0**
	comp=Z,162nm,0.9s						
TBI	**Tubuai**	**26.21**	**80**	*e*P	**P**	**00 04 39.7**	**-0.2**
	comp=Z,871nm,27.5s						
TBI				*e*S	**S**	**00 09 10.3**	**-0.1**
	comp=Z,10µm,26.0s						
TBI				*e*LR	LR	00 11 05.5	
	comp=Z,3µm,28.8s						
TBI				*e*LR	LR	00 11 09.1	
	comp=Z,14µm,26.5s						
ARMA	**Armidale**	**26.34**	**264**	P	**P**	**00 04 43.2**	**+2.0**
ARMA	**Armidale**	**26.34**	**264**	P	**P**	**00 04 43.6**	**+2.4**
	comp=Z,37nm,1.4s						
CNB	**Canberra Magne**	**27.81**	**252**	P	**P**	**00 04 56.5**	**+2.1**
	comp=Z,41nm,2.6s						
EIDS	**Eidsvold**	**28.05**	**274**	P	**P**	**00 04 57.1**	**+0.6**
EIDS				IAmb	IAmb	00 05 13.5	
	comp=Z,46nm,1.2s						
EIDS	**Eidsvold**	**28.05**	**274**	P	**P**	**00 04 57.8**	**+1.3**
	comp=Z,27nm,1.4s						
CAN	**Canberra**	**28.11**	**252**	P	**P**	**00 04 59.8**	**+2.8**
	comp=Z,25nm,1.6s						
YNG	**Young**	**28.64**	**255**	P	**P**	**00 05 04.1**	**+2.4**
	comp=Z,29nm,2.6s						
PPT2	**Papeete2**	**28.83**	**69**	*e*P	**P**	**00 05 04.3**	**+0.7**
	comp=Z,169nm,24.2s						
PPT2				*e*S	**S**	**00 09 52.2**	**+0.2**
	comp=Z,2µm,24.2s						
PPT2				*e*LR	LR	00 12 18.5	
	comp=Z,2µm,25.0s						
PPT2				*e*LR	LR	00 12 20.2	
	comp=Z,2µm,26.8s						
PPT	**Papeete**	**28.84**	**69**	LR	LR	00 16 12.8	
	comp=Z,1µm,18.1s,baz=237,slow=36						
TOO	**Toolangi**	**30.94**	**248**	P	**P**	**00 05 23.0**	**+1.0**
TOO	**Toolangi**	**30.94**	**248**	P	**P**	**00 05 23.2**	**+1.2**
	comp=Z,13nm,1.3s						
TOO	**Toolangi**	**30.94**	**248**	P	**P**	**00 05 23.0**	**+1.0**
TOO				pmax	pmax		
	comp=Z,25nm,1.5s						
CMSA	**Cobar Meteorol**	**31.20**	**260**	P	**P**	**00 05 26.2**	**+1.9**
	comp=Z,52nm,1.6s						
QLP	**Quilpie**	**33.55**	**268**	P	**P**	**00 05 46.4**	**+1.4**
	comp=Z,144nm,0.6s						
ARPS	**Mount Arapiles**	**33.87**	**249**	P	**P**	**00 05 49.0**	**+1.4**
	comp=Z,35nm,0.8s						
CTAO	**Charters Tower**	**34.19**	**280**	P	**P**	**00 05 52.1**	**+1.5**
CTAO	**Charters Tower**	**34.19**	**280**	P	**P**	**00 05 52.1**	**+1.5**
CTAO				pmax	pmax		
	comp=Z,202nm,1.6s						
STKA	**Stephens Creek**	**34.59**	**258**	P	**P**	**00 05 55.5**	**+1.5**
STKA	**Stephens Creek**	**34.59**	**258**	P	**P**	**00 05 55.7**	**+1.7**
	comp=Z,279nm,1.2s						
STKA	**Stephens Creek**	**34.59**	**258**	P	**P**	**00 05 54.9**	**+0.9**
	comp=Z,16nm,0.5s,baz=100,slow=12,SNR=44						
STKA				LR	LR	00 19 14.2	
	comp=Z,2µm,18.5s,baz=89,slow=35						
	comp=Z,16nm,0.5s						
STKA	**Stephens Creek**	**34.59**	**258**	*i* P	**P**	**00 05 55.0**	**+1.0**
HTT	**Hallett**	**36.57**	**255**	P	**P**	**00 06 10.8**	**-0.2**
	comp=Z,13nm,1.1s						
MTSU	**Mount Surprise**	**36.71**	**282**	P	**P**	**00 06 13.3**	**+1.0**
	comp=Z,33nm,0.7s						
BBOO	**Buckleboo**	**39.04**	**255**	P	**P**	**00 06 31.5**	**-0.3**
BBOO				IAmb	IAmb	00 06 44.9	
	comp=Z,37nm,0.8s						
BBOO	**Buckleboo**	**39.04**	**255**	P	**P**	**00 06 31.9**	**0.0**
	comp=Z,56nm,0.9s						
PMG	**Port Moresby**	**39.17**	**296**	LR	LR	00 20 32.5	
	comp=Z,1µm,19.2s,baz=130,slow=33						
QIS	**Mount Isa**	**39.65**	**275**	P	**P**	**00 06 37.7**	**+0.7**
	comp=Z,28nm,1.1s						
COEN	**Coen**	**39.74**	**287**	P	**P**	**00 06 37.7**	**-0.1**
COEN				IAmb	IAmb	00 06 46.0	
	comp=Z,37nm,1.1s						
COEN	**Coen**	**39.74**	**287**	P	**P**	**00 06 39.1**	**+1.3**
	comp=Z,37nm,1.1s						
TAOE	**Nuku Hiva Isla**	**41.35**	**66**	*e*S	**S**	**00 13 02.6**	**-1.7**
	comp=Z,467nm,25.1s						
TAOE				*e*LR	LR	00 18 05.3	
	comp=Z,1µm,25.5s						
AS17	**Alice Springs**	**43.27**	**268**	P	**P**	**00 07 07.3**	**+0.5**
	comp=Z,58nm,0.8s						
AS12	**Alice Springs**	**43.35**	**268**	P	**P**	**00 07 08.1**	**+0.7**
	comp=Z,48nm,0.8s						
AS31	**Alice Springs**	**43.35**	**268**	P	**P**	**00 07 07.1**	**-0.3**
AS31	**Alice Springs**	**43.35**	**268**	P	**P**	**00 07 07.8**	**+0.4**
	comp=Z,14nm,1.2s						
ASAR	**Alice Springs**	**43.35**	**268**	P	**P**	**00 07 07.4**	**0.0**
ASAR	**Alice Springs**	**43.35**	**268**	P	**P**	**00 07 07.2**	**-0.2**
	comp=Z,15nm,0.5s,baz=105,slow=7.2,SNR=157						
ASAR				ScP	**ScP**	**00 12 47.3**	**+2.0**
	comp=Z,3.4nm,0.8s,baz=120,slow=3.9,SNR=8.6						
	comp=Z,15nm,0.5s						
ASAR	**Alice Springs**	**43.35**	**268**	P	**P**	**00 07 07.4**	**0.0**
WR8	**Warramunga Arr**	**44.26**	**273**	P	**P**	**00 07 14.7**	**0.0**
WR8				IAmb	IAmb	00 07 21.8	
	comp=Z,49nm,0.9s						
WR7	**Warramunga Arr**	**44.28**	**273**	P	**P**	**00 07 15.3**	**+0.4**
WRAB	**Tennant Creek**	**44.40**	**273**	P	**P**	**00 07 15.9**	**0.0**
WRAB				IAmb	IAmb	00 07 22.8	
	comp=Z,50nm,0.8s						
WRAB	**Tennant Creek**	**44.40**	**273**	*i* P	**P**	**00 07 15.3**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,34nm,0.6s						
WRA	**Warramunga Arr**	**44.40**	**273**		**P**	**00 07 15.0**	**-0.9**
WRA	**Warramunga Arr**	**44.40**	**273**	P	**P**	**00 07 15.3**	**-0.6**
	comp=Z,49nm,0.6s,baz=112,slow=7.8,SNR=370						
WRA				PcP	**PcP**	**00 08 59.2**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=117,slow=2.9,SNR=1.7						
WRA				ScP	**ScP**	**00 12 51.5**	**+1.9**
	comp=Z,6.8nm,1.1s,baz=113,slow=4.1,SNR=6.2						
WRA				LR	LR	00 25 22.4	
	comp=Z,3µm,18.0s,baz=138,slow=36						
WB0	**Warramunga Arr**	**44.43**	**273**	P	**P**	**00 07 16.5**	**+0.4**
FORT	**Forrest**	**46.13**	**256**	P	**P**	**00 07 28.6**	**-0.9**
FORT	**Forrest**	**46.13**	**256**	P	**P**	**00 07 28.8**	**-0.7**
	comp=Z,99nm,0.6s						
SBA	**Scott Base**	**47.34**	**184**	P	**P**	**00 07 41.1**	**+2.9**
SBA				IAmb	IAmb	00 07 58.8	
	comp=Z,31nm,1.2s						
SBA	**Scott Base**	**47.34**	**184**	P	**P**	**00 07 41.1**	**+2.9**
SBA				pmax	pmax		
	comp=Z,31nm,1.3s						
VNDA	**Vanda**	**47.40**	**186**	P	**P**	**00 07 40.8**	**+2.1**
VNDA	**Vanda**	**47.40**	**186**	P	**P**	**00 07 41.2**	**+2.4**
	comp=Z,1.7nm,0.7s,baz=9.2,slow=6.8,SNR=9.2						
VNDA				LR	LR	00 24 03.2	
	comp=Z,739nm,20.9s,baz=23,slow=32						
	comp=Z,1.7nm,0.7s						
VNDA	**Vanda**	**47.40**	**186**	P	**P**	**00 07 40.8**	**+2.1**
VNDA				pmax	pmax		
	comp=Z,22nm,1.8s						
WRKA	**Warakurna**	**47.66**	**263**	P	**P**	**00 07 41.0**	**-0.6**
	comp=Z,25nm,0.7s						
JAY	**Jayapura**	**48.48**	**298**	LR	LR	00 28 03.1	
	comp=Z,537nm,18.8s,baz=196,slow=36						
KDU	**Kakadu**	**49.32**	**280**	P	**P**	**00 07 53.8**	**-0.5**
	comp=Z,35nm,1.3s						
MTN	**Manton Dam**	**50.37**	**279**	P	**P**	**00 08 01.7**	**-0.6**
MTN				IAmb	IAmb	00 09 46.4	
	comp=Z,40nm,1.1s						
MTN	**Manton Dam**	**50.37**	**279**	P	**P**	**00 08 01.9**	**-0.4**
	comp=Z,22nm,0.7s						
KNRA	**Kununurra**	**51.04**	**275**	P	**P**	**00 08 07.4**	**+0.1**
KNRA				IAmb	IAmb	00 08 20.6	
	comp=Z,100nm,1.8s						
KNRA	**Kununurra**	**51.04**	**275**	P	**P**	**00 08 07.1**	**-0.2**
	comp=Z,28nm,2.0s						
KMBL	**Kambalda**	**51.07**	**253**	P	**P**	**00 08 06.5**	**-1.0**
	comp=Z,24nm,1.8s						
KLBR	**Kellerberrin**	**54.38**	**251**	P	**P**	**00 08 30.9**	**-1.0**
	comp=Z,30nm,1.0s						
NWAO	**Narrogin (SRO)**	**54.40**	**250**	LR	LR	00 28 10.3	
	comp=Z,844nm,21.9s,baz=83,slow=32						
CASY	**Casey**	**54.63**	**208**	P	**P**	**00 08 34.0**	**+0.8**
MEEK	**Meekatharra**	**55.29**	**257**	P	**P**	**00 08 37.6**	**-1.1**
	comp=Z,17nm,1.3s						
KIP	**Kipapa**	**55.55**	**22**	*i* P	**P**	**00 08 39.5**	**-0.8**
KIP				pmax	pmax		
	comp=Z,75nm,1.1s						
PSAC2	**Pilbara Seismi**	**56.11**	**264**	P	**P**	**00 08 43.5**	**-1.1**
	comp=Z,8.1nm,0.6s						
PSA00	**Pilbara Seismi**	**56.16**	**264**	P	**P**	**00 08 43.9**	**-1.0**
MBWA	**Marble Bar**	**56.42**	**264**	P	**P**	**00 08 45.6**	**-1.1**
MBWA				IAmb	IAmb	00 10 06.6	
	comp=Z,68nm,1.9s						
MBWA	**Marble Bar**	**56.42**	**264**	P	**P**	**00 08 45.9**	**-0.9**
	comp=Z,16nm,1.5s						
MORW	**Morawa**	**56.59**	**254**	P	**P**	**00 08 47.3**	**-0.5**
MORW				IAmb	IAmb	00 09 37.1	
	comp=Z,44nm,1.6s						
MORW	**Morawa**	**56.59**	**254**	P	**P**	**00 08 47.0**	**-0.9**
GUMO	**Guam**	**57.19**	**315**	LR	LR	00 31 25.9	
	comp=Z,690nm,19.3s,baz=120,slow=34						
BATI	**Baumata**	**58.02**	**278**	LR	LR	00 34 49.2	
	comp=Z,4µm,18.1s,baz=130,slow=37						
QSPA	**South Pole Qui**	**58.98**	**180**	P	**P**	**00 09 05.7**	**+1.5**
QSPA	**South Pole Qui**	**58.98**	**180**	P	**P**	**00 09 06.2**	**+2.0**
	comp=Z,6.8nm,0.7s,baz=28,slow=1.1,SNR=46						
QSPA				LR	LR	00 32 20.7	
	comp=Z,1µm,19.0s,baz=39,slow=34						
	comp=Z,6.8nm,0.7s						
GIRL	**Giralia**	**60.49**	**260**	P	**P**	**00 09 15.5**	**+0.4**
GIRL	**Giralia**	**60.49**	**260**	P	**P**	**00 09 14.5**	**-0.6**
	comp=Z,120nm,1.6s						
KAPI	**Kappang**	**64.01**	**280**	LR	LR	00 36 59.2	
	comp=Z,620nm,20.3s,baz=114,slow=36						
DAV	**Davao City (W)**	**66.18**	**295**	LR	LR	00 38 29.9	
	comp=Z,243nm,19.6s,baz=158,slow=36						
JAGI	**Jajag, Banyuwa**	**67.00**	**274**	P	**P**	**00 09 57.5**	**-0.6**
SMAI	**San Martin Ant**	**68.65**	**158**	P	**P**	**00 10 08.6**	**+1.0**
BELA	**Belgrano 2**	**69.03**	**172**	P	**P**	**00 10 09.8**	**-0.1**
BELA				IAmb	IAmb	00 10 35.2	
	comp=Z,9.7nm,0.7s						
PMSA	**Palmer Station**	**71.49**	**156**	LR	LR	00 37 57.5	
	comp=Z,672nm,18.1s,baz=240,slow=32						
MAW	**Mawson**	**71.73**	**201**	P	**P**	**00 10 26.9**	**+0.4**
MAW	**Mawson**	**71.73**	**201**	P	**P**	**00 10 27.7**	**+1.2**
	comp=Z,6.1nm,0.7s,baz=122,slow=7.4,SNR=15						
MAW				LR	LR	00 41 29.6	
	comp=Z,898nm,19.1s,baz=118,slow=35						
	comp=Z,6.1nm,0.7s						
LEM	**Lembang**	**73.42**	**272**	LR	LR	00 44 25.9	
	comp=Z,872nm,18.2s,baz=146,slow=37						
TGY	**Tagaytay City**	**74.10**	**298**	LR	LR	00 40 20.4	
	comp=Z,209nm,22.0s,baz=30,slow=34						
ESPZ	**Base Esperanza**	**74.79**	**156**	P	**P**	**00 10 45.8**	**+1.1**
ESPZ				IAmb	IAmb	00 11 12.0	
	comp=Z,32nm,1.1s						
USHA	**Ushuaia**	**75.17**	**146**	LR	LR	00 35 45.4	
	comp=Z,380nm,20.3s,baz=226,slow=29						
SYO	**Syowa Base**	**76.47**	**193**	⇓*e*P	**P**	**00 10 55.5**	**+1.4**
SYO	**Syowa Base**	**76.47**	**193**	⇓*e*sP	sP	00 11 04.2	+0.2
TROLL	**Troll, Antarti**	**77.15**	**180**	⇓P	**P**	**00 10 58.4**	**+0.3**
	comp=Z,158nm,0.6s						
JOW	**Kunigami**	**77.35**	**312**	LR	LR	00 41 31.2	
	comp=Z,504nm,21.2s,baz=131,slow=33						
SNAA	**Sanae**	**77.42**	**178**	⇓P	**P**	**00 11 00.0**	**+0.4**
	comp=Z,33nm,0.5s						
SNAA	**Sanae**	**77.42**	**178**	P	**P**	**00 10 59.5**	**-0.1**
SNAA				IAmb	IAmb	00 11 15.9	
	comp=Z,30nm,1.1s						
SNAA	**Sanae**	**77.42**	**178**	P	**P**	**00 11 00.4**	**+0.8**
	comp=Z,1.2nm,0.5s,baz=216,slow=11,SNR=9.0						
SNAA				LR	LR	00 42 44.5	
	comp=Z,367nm,20.1s,baz=208,slow=34						
	comp=Z,1.2nm,0.5s						
SNAA	**Sanae**	**77.42**	**178**	*ce*P	**P**	**00 10 59.4**	**-0.2**
SNAA				pmax	pmax		
	comp=Z,25nm,1.3s						
VNA3	**Neumayer Olymp**	**77.56**	**176**	⇑P	**P**	**00 11 00.2**	**-0.1**
	comp=Z,14nm,0.6s						
VNA2	**Neumayer--Watz**	**78.00**	**177**	⇓P	**P**	**00 11 03.2**	**+0.4**
	comp=Z,9.9nm,0.6s,baz=168,slow=5.0						
NVL	**N'lazarevskaya**	**78.17**	**183**	*e*P	P	00 10 55.3	-8.3
NVL				pmax	pmax		
	comp=Z,13nm,1.0s						
COYC	**Coyhaique**	**78.22**	**136**	P	**P**	**00 11 05.9**	**+1.5**
COYC				IAmb	IAmb	00 11 19.4	
	comp=Z,59nm,1.5s						
VNA1	**Neumayer--Stat**	**78.23**	**176**	⇓P	**P**	**00 11 04.8**	**+0.9**
	comp=Z,6.0nm,0.6s						
JGF	**Kuroka**	**78.68**	**324**	P	**P**	**00 11 06.1**	**-0.8**
JGF				IAmb	IAmb	00 11 19.6	
	comp=Z,22nm,1.4s						
MJAR	**Matsushiro Arr**	**78.99**	**325**	P	**P**	**00 11 07.2**	**-1.4**
	comp=Z,5.2nm,1.1s,baz=167,slow=5.5,SNR=8.3						
MJAR				LR	LR	00 40 55.8	
	comp=Z,247nm,21.8s,baz=132,slow=32						
	comp=Z,5.2nm,1.1s						
MAJO	**Matsushiro**	**79.00**	**325**	*i* P	**P**	**00 11 07.0**	**-1.6**
MAJO				pmax	pmax		
	comp=Z,15nm,1.7s						
LL02	**Futaleuf**	**79.65**	**134**	P	**P**	**00 11 13.5**	**+1.2**
LL02				IAmb	IAmb	00 11 20.1	
	comp=Z,30nm,1.3s						
JNU	**Nakatsue**	**80.28**	**318**	LR	LR	00 45 03.8	
	comp=Z,158nm,18.3s,baz=135,slow=34						
JTM	**Tenmabayashi**	**81.09**	**330**	P	**P**	**00 11 19.8**	**0.0**
ERM	**Erimo**	**81.23**	**332**	*i* P	**P**	**00 11 21.5**	**+1.0**
ERM				pmax	pmax		
	comp=Z,46nm,1.5s						
PLCA	**Paso Flores**	**81.81**	**133**	P	**P**	**00 11 25.5**	**+1.4**
PLCA				IAmb	IAmb	00 11 32.1	
	comp=Z,27nm,1.4s						
PLCA	**Paso Flores**	**81.81**	**133**	P	**P**	**00 11 25.4**	**+1.4**
	comp=Z,7.1nm,1.2s,baz=259,slow=6.3,SNR=4.6						
PLCA				LR	LR	00 39 35.4	
	comp=Z,543nm,20.7s,baz=234,slow=30						
	comp=Z,7.1nm,1.2s						
KIWB	**Kanaga Island**	**82.62**	**0**	P	**P**	**00 11 27.6**	**0.0**
ADK	**Adak**	**82.66**	**1**	P	**P**	**00 11 26.8**	**-0.9**
ADK	**Adak**	**82.66**	**1**	P	**P**	**00 11 26.8**	**-0.9**
ADK				pmax	pmax		
	comp=Z,64nm,1.2s						
ASAJ	**Asahikawa**	**83.21**	**332**	LR	LR	00 46 14.8	
	comp=Z,618nm,18.9s,baz=162,slow=34						
BI02	**San Fabin de**	**83.62**	**129**	P	**P**	**00 11 33.4**	**-0.2**
SHEM	**Shemya Is, Ala**	**83.81**	**355**	LR	LR	00 43 40.7	
	comp=Z,849nm,20.0s,baz=137,slow=32						
NIKH	**Nikolski High**	**84.10**	**5**	P	**P**	**00 11 34.2**	**-0.9**
LPIG	**La Paz**	**84.69**	**58**	LR	LR	00 44 01.4	
	comp=Z,1µm,18.0s,baz=216,slow=32						
BO02	**Sierra Bellavi**	**85.01**	**128**	P	**P**	**00 11 40.5**	**-0.1**
BO02				IAmb	IAmb	00 11 47.9	
	comp=Z,27nm,1.1s						
KSRS	**Korea Array**	**85.08**	**320**	P	**P**	**00 11 40.1**	**-0.4**
	comp=Z,1.5nm,0.6s,baz=140,slow=4.9,SNR=7.7						
	comp=Z,1.5nm,0.6s						
KSAR	**Wonju Array Be**	**85.09**	**319**	P	**P**	**00 11 40.0**	**-0.6**
KSAR	**Wonju Array Be**	**85.09**	**319**	P	**P**	**00 11 40.0**	**-0.6**
YSS	**Yuzhno-Sakhali**	**85.52**	**334**	*e*P	**P**	**00 11 40.0**	**-2.4**
YSS				*e**PP	**pP**	**00 11 50.3**	**+0.3**
YSS				*e*S	**SKSac**	**00 22 06.3**	**+0.9**
YSS				pmax	pmax		
	comp=Z,30nm,1.4s						
YSS				MLR	MLR		
	comp=Z,600nm,13.0s						
YSS				MLR	MLR		
	comp=N,400nm,14.0s						
QIZ	**Qiongzhong**	**85.55**	**295**	P	**P**	**00 11 44.3**	**+1.0**
QIZ				S	**S**	**00 22 16.3**	**+2.8**
QIZ				LR	LR		
	comp=N,250nm,19.2s						
QIZ				LR	LR		
	comp=N,260nm,17.9s						
RPSI	**Rantau Prapat**	**85.73**	**276**	P	**P**	**00 11 42.9**	**-1.4**
RPSI				IAmb	IAmb	00 11 57.5	
	comp=Z,20nm,1.2s						
PSI	**Prapat**	**85.78**	**276**	LR	LR	00 50 45.4	
	comp=Z,830nm,20.4s,baz=116,slow=36						
PSI	**Prapat**	**85.78**	**276**	P	**P**	**00 11 42.9**	**-1.9**
PSI				pmax	pmax		
	comp=Z,20nm,1.2s						
PEL	**Peldehue**	**86.01**	**126**	P	**P**	**00 11 46.7**	**+1.1**
PEL				pmax	pmax		
	comp=Z,23nm,1.4s						
GSI	**Gunungsitoli**	**86.17**	**274**	P	**P**	**00 11 47.5**	**+1.0**
TEY	**Ternei**	**86.46**	**329**	*e*P	P	00 11 38.0	-9.1
PFO	**Pinyon Flats O**	**86.50**	**47**	LR	LR	00 45 22.9	
	comp=Z,818nm,18.4s,baz=238,slow=32						
PEA0B	**Petropavlovsk-**	**86.58**	**345**	*ce*P	**P**	**00 11 46.9**	**-0.7**
PETK	**Petropavlovsk-**	**86.58**	**345**	P	**P**	**00 11 47.7**	**+0.1**
PETK	**Petropavlovsk-**	**86.58**	**345**	P	**P**	**00 11 48.1**	**+0.5**
	comp=Z,5.7nm,0.7s,baz=111,slow=8.1,SNR=4.7						
PETK				LR	LR	00 44 04.5	
	comp=Z,351nm,21.3s,baz=155,slow=31						
	comp=Z,5.7nm,0.7s						
NJ2	**Nanjing**	**86.92**	**310**	*e*P	**P**	**00 11 52.3**	**+2.5**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MSHR	**Mys Shultsa**	**87.11**	**325**	*ce*P	**P**	**00 11 51.8**	**+1.4**
MSHR				pmax	pmax		
	comp=Z,27nm,1.3s						
CMB	**Columbia Colle**	**87.12**	**42**	P	**P**	**00 11 51.2**	**+0.6**
CMB	**Columbia Colle**	**87.12**	**42**	P	**P**	**00 11 51.2**	**+0.6**
CMB				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GSC	**Goldstone, Bar**	**87.39**	**46**	P	**P**	**00 11 51.9**	**-0.2**
GSC				IAmb	IAmb	00 12 22.7	
	comp=Z,20nm,1.4s						
GSC	**Goldstone, Bar**	**87.39**	**46**	P	**P**	**00 11 51.9**	**-0.2**
GSC				pmax	pmax		
	comp=Z,20nm,1.5s						
QSM	**Queen of Sheba**	**87.79**	**45**	P	**P**	**00 11 54.3**	**+0.4**
QSM				IAmb	IAmb	00 12 17.4	
	comp=Z,9.5nm,1.0s						
USA0B	**Ussuriysk Arra**	**87.92**	**326**	*i* P	**P**	**00 11 52.6**	**-1.6**
USRK	**Ussuriysk Ar.**	**87.92**	**326**	P	**P**	**00 11 53.5**	**-0.8**
USRK	**Ussuriysk Ar.**	**87.92**	**326**	P	**P**	**00 11 54.2**	**-0.1**
	comp=Z,4.1nm,0.8s,baz=125,slow=3.0,SNR=14						
USRK				LR	LR	00 45 14.5	
	comp=Z,226nm,21.4s,baz=148,slow=32						
	comp=Z,4.1nm,0.8s						
WAKR	**Walker**	**87.98**	**42**	IAmb	IAmb	00 12 03.0	
	comp=Z,37nm,1.7s						
GWY	**Greenwater Val**	**88.06**	**45**	P	**P**	**00 11 55.5**	**+0.2**
GWY				IAmb	IAmb	00 12 03.2	
	comp=Z,14nm,1.3s						
DSP	**Deep Springs**	**88.07**	**43**	P	**P**	**00 11 55.8**	**+0.7**
DSP				IAmb	IAmb	00 12 18.1	
	comp=Z,18nm,1.6s						
YBH	**Yreka Blue Hor**	**88.43**	**38**	LR	LR	00 43 54.6	
	comp=Z,38nm,21.1s,baz=246,slow=30						
NVAR	**Mina Array Bea**	**88.58**	**43**	P	**P**	**00 11 57.4**	**-0.5**
NVAR	**Mina Array Bea**	**88.58**	**43**	P	**P**	**00 11 58.4**	**+0.5**
	comp=Z,1.3nm,0.7s,baz=215,slow=5.4,SNR=6.9						
NVAR				LR	LR	00 47 53.2	
	comp=Z,1µm,18.0s,baz=218,slow=33						
	comp=Z,1.3nm,0.7s						
RYN	**Ryan**	**88.59**	**42**	P	**P**	**00 11 58.2**	**+0.3**
RYN				IAmb	IAmb	00 12 06.5	
	comp=Z,23nm,1.9s						
TPNV	**Topopah Spring**	**88.82**	**45**	IAmb	IAmb	00 12 07.2	
	comp=Z,14nm,1.4s						
V12A	**Nelson**	**88.88**	**46**	IAmb	IAmb	00 12 07.7	
	comp=Z,15nm,1.6s						
Y14A	**Wickenburg**	**88.91**	**49**	IAmb	IAmb	00 12 25.7	
	comp=Z,8.8nm,1.0s						
TUC	**Tucson**	**89.35**	**51**	P	**P**	**00 12 01.9**	**+0.5**
TUC				IAmb	IAmb	00 12 25.1	
	comp=Z,22nm,1.6s						
TUC	**Tucson**	**89.35**	**51**	P	**P**	**00 12 01.9**	**+0.5**
TUC				pmax	pmax		
	comp=Z,22nm,1.6s						
MDJ	**Mudanjiang**	**89.38**	**325**	P	**P**	**00 12 02.3**	**+1.2**
MDJ				pmax	pmax		
	comp=Z,13nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,250nm,11.2s						
PRN	**Pahroc Range**	**89.84**	**45**	IAmb	IAmb	00 12 27.2	
	comp=Z,26nm,1.6s						
TIA	**Tai'an**	**90.67**	**313**	P	**P**	**00 12 08.1**	**+0.7**
TIA				pmax	pmax		
	comp=Z,19nm,1.4s						
TIA				LR	LR		
	comp=Z,250nm,20.1s						
TIA				LR	LR		
	comp=Z,180nm,25.0s						
TIA				LR	LR		
	comp=Z,370nm,24.0s						
CN2	**Changchun**	**90.89**	**323**	*e*P	**P**	**00 12 07.8**	**-0.4**
CN2				pP	sP	00 12 18.4	+0.1
CN2				SKS	**SKSac**	**00 22 35.6**	**-2.3**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,70nm,4.0s						
CN2				LR	LR		
	comp=Z,800nm,22.0s						
CN2				LR	LR		
	comp=Z,800nm,22.0s						
CN2				LR	LR		
	comp=Z,300nm,17.0s						
U15A	**North Rim**	**90.92**	**47**	IAmb	IAmb	00 12 32.4	
	comp=Z,45nm,1.9s						
WUAZ	**Wupatki**	**90.94**	**48**	P	**P**	**00 12 08.9**	**+0.1**
WUAZ				IAmb	IAmb	00 12 33.4	
	comp=Z,11nm,1.1s						
KNB	**Kanab**	**90.96**	**46**	IAmb	IAmb	00 12 21.2	
	comp=Z,12nm,1.1s						
KDAK	**Kodiak Island**	**91.05**	**13**	LR	LR	00 46 43.8	
	comp=Z,226nm,21.2s,baz=206,slow=32						
GRNR	**Gornyy**	**91.06**	**333**	⇑*i*P	**P**	**00 12 09.7**	**+0.9**
GRNR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WVOR	**Wild Horse Val**	**91.10**	**39**	P	**P**	**00 12 10.5**	**+1.1**
WVOR				pmax	pmax		
	comp=Z,3.0nm,1.7s						
BNX	**BinXian**	**91.26**	**325**	⇑P	**P**	**00 12 09.0**	**-0.9**
BNX				pmax	pmax		
	comp=Z,16nm,1.3s						
KLR	**Kul'dur**	**91.80**	**330**	LR	LR	00 49 58.5	
	comp=Z,325nm,20.1s,baz=172,slow=33						
KLR	**Kul'dur**	**91.80**	**330**	*ce*P	**P**	**00 12 12.4**	**+0.1**
KLR				pmax	pmax		
	comp=Z,18nm,1.6s						
ELK	**Elko**	**91.89**	**42**	LR	LR	00 50 06.3	
	comp=Z,1µm,18.0s,baz=230,slow=33						
TXAR	**Lajitas Array**	**92.55**	**57**	P	**P**	**00 12 17.1**	**+0.7**
	comp=Z,0.7nm,1.0s,baz=236,slow=4.3,SNR=6.0						
TXAR				LR	LR	00 48 58.0	
	comp=Z,526nm,18.1s,baz=232,slow=32						
	comp=Z,0.7nm,1.0s						
LYN	**LuoYang**	**92.67**	**309**	*e*P	**P**	**00 12 17.8**	**+1.1**
LYN				pmax	pmax		
	comp=Z,15nm,1.0s						
G08A	**Pilot Rock**	**92.87**	**37**	IAmb	IAmb	00 12 39.9	
	comp=Z,13nm,1.4s						
HNS	**HongShan**	**92.92**	**312**	⇓P	**P**	**00 12 16.0**	**-1.8**
HNS				SKS	**SKSac**	**00 22 52.5**	**+2.9**
HNS				S	**S**	**00 23 15.3**	**-6.4**
HNS				pmax	pmax		
	comp=Z,8.0nm,1.8s						
HNS				LR	LR		
	comp=Z,260nm,22.7s						
HNS				LR	LR		
	comp=Z,200nm,22.4s						
HNS				LR	LR		
	comp=Z,380nm,22.2s						
NNA	**Nana**	**92.96**	**106**	LR	LR	00 44 29.0	
	comp=Z,427nm,21.9s,baz=233,slow=29						
BBB	**Bella Bella**	**93.61**	**28**	LR	LR	00 49 49.8	
	comp=Z,336nm,18.8s,baz=198,slow=33						
ANMO	**Albuquerque**	**93.82**	**51**	LR	LR	00 50 50.3	
	comp=Z,1µm,18.0s,baz=325,slow=33						
CMAR	**Chiang Mai Arr**	**93.90**	**289**	P	**P**	**00 12 22.1**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=113,slow=5.5,SNR=1.5						
	comp=Z,0.7nm,0.3s						
MA2	**Magadan**	**94.06**	**345**	LR	LR	00 50 18.4	
	comp=Z,573nm,20.9s,baz=152,slow=33						
PV17	**East Wray Mesa**	**94.15**	**47**	IAmb	IAmb	00 12 46.0	
	comp=Z,4.6nm,0.6s						
ATAH	**Atahualpa**	**94.23**	**101**	LR	LR	00 45 02.7	
	comp=Z,190nm,20.4s,baz=237,slow=29						
HEH	**HeiHe**	**94.47**	**328**	*e*P	**P**	**00 12 24.5**	**-0.1**

HEH				LR	LR		
	comp=Z,510nm,19.2s						
HEH				LR	LR		
	comp=Z,130nm,17.7s						
HEH				LR	LR		
	comp=Z,560nm,19.4s						
XAN	Xi'an	94.77	307	P	P	00 12 26.6	+0.1
XAN				pmax	pmax		
	comp=Z,6.0nm,1.5s						
XAN				LR	LR		
	comp=Z,210nm,19.1s						
XAN				LR	LR		
	comp=Z,290nm,17.9s						
XAN				LR	LR		
	comp=Z,420nm,19.4s						
NEW	Newport	95.80	36	LR	LR	00 48 41.8	
	comp=Z,802nm,20.2s,baz=212,slow=31						
PZH	PanZhiHua	95.88	297	P	P	00 12 33.6	+1.8
PZH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.8s						
PDAR	Pinedale Array	96.47	43	P	P	00 12 35.4	+1.2
	comp=Z,0.2nm,0.5s,baz=211,slow=5.2,SNR=2.3						
PDAR				LR	LR	00 52 56.4	
	comp=Z,572nm,18.1s,baz=228,slow=34						
	comp=Z,0.2nm,0.5s						
SEY	Seymchan	96.75	347	LR	LR	00 53 05.1	
	comp=Z,451nm,19.9s,baz=133,slow=34						
SEY	Seymchan	96.75	347	ceP	P	00 12 33.9	-0.7
SEY				pmax	pmax		
	comp=Z,12nm,1.5s						
HHC	Hu-ho-hao-te	96.94	314	eP	P	00 12 37.3	+1.1
HHC				pmax	pmax		
	comp=Z,11nm,0.5s						
HHC				pmax	pmax		
	comp=Z,120nm,5.3s						
HHC				LR	LR		
	comp=Z,130nm,16.8s						
HHC				LR	LR		
	comp=Z,150nm,17.6s						
JTS	Las Juntas de	97.55	83	LR	LR	00 47 14.7	
	comp=Z,273nm,20.9s,baz=232,slow=30						
LPAZ	La Paz	97.60	114	P	Pdif	00 12 42.4	+1.8
	comp=Z,0.5nm,0.6s,baz=310,slow=5.0,SNR=1.6						
LPAZ				LR	LR	00 50 02.0	
	comp=Z,143nm,18.6s,baz=222,slow=31						
	comp=Z,0.5nm,0.6s						
BTO	Baotou	97.76	313	eP	Pdif	00 12 40.6	+0.6
BTO				pP	pP	00 12 45.4	-2.2
BTO				pmax	pmax		
	comp=Z,400nm,7.8s						
BTO				LR	LR		
	comp=Z,580nm,20.4s						
BTO				LR	LR		
	comp=Z,500nm,21.9s						
BTO				LR	LR		
	comp=Z,910nm,18.9s						
ILAR	Eielson Array	98.57	13	P	P	00 12 41.1	-1.7
	comp=Z,0.3nm,0.7s,baz=205,slow=6.6,SNR=2.3						
	comp=Z,0.3nm,0.7s						
CPUP	Villa Florida	99.32	128	LR	LR	00 53 41.5	
	comp=Z,125nm,18.0s,baz=96,slow=33						
WMQ	Urumqi	113.89	308	ePKP	PKiKP	00 17 44.1	+0.6
WMQ				LR	LR		
	comp=Z,170nm,17.3s						
BOSA	Boshof	116.70	203	PKP	PKiKP	00 17 50.5	+0.9
	comp=Z,1.4nm,0.6s,baz=151,slow=4.8,SNR=5.1						
ZSN	Zaisan	116.95	311	ePKIKP	PKPdf	00 17 48.7	-0.5
ZSN	Zaisan	116.95	311	ePKP	PKPdf	00 17 48.7	-0.5
MK31	Makanchi Array	118.45	310	c iPKIKP	PKiKP	00 17 52.6	+0.5
MKAR	Makanchi Array	118.45	310		PKPdf	00 17 50.9	-1.2
MKAR	Makanchi Array	118.45	310	PKP	PKPdf	00 17 51.1	-1.0
	comp=Z,1.5nm,0.7s,baz=113,slow=2.2,SNR=9.5						
MAKZ	Makanchi	118.66	310	PKPdf	PKPdf	00 17 51.2	-1.3
MAKZ	Makanchi	118.66	310	PKIKP	PKPdf	00 17 51.2	-1.3
ZALV	Zalesovo Beam	118.76	318	PKPdf	PKPdf	00 17 52.1	-0.4
ZALV	Zalesovo Beam	118.76	318	PKP	PKPdf	00 17 52.0	-0.4
	comp=Z,0.8nm,0.4s,baz=104,slow=3.5,SNR=4.3						
ZALV	Zalesovo Beam	118.76	318	PKIKP	PKPdf	00 17 52.0	-0.4
UZB	Uzynbulak	119.66	305	ePKIKP	PKPdf	00 17 54.1	-0.6
UZB	Uzynbulak	119.66	305	ePKP	PKPdf	00 17 54.1	-0.6
KPKS	Kokpek	119.99	305	ePKIKP	PKPdf	00 17 54.7	-0.6
KPKS	Kokpek	119.99	305	ePKP	PKPdf	00 17 54.7	-0.6
SATY	Saty	120.07	305	ePKIKP	PKPdf	00 17 54.8	-0.6
SATY	Saty	120.07	305	ePKP	PKPdf	00 17 54.9	-0.6
TARG	Taragay, Kyrgy	120.13	303	PKIKP	PKiKP	00 17 56.4	+0.3
KSH	Kashi	120.84	300	PKP	PKiKP	00 17 57.9	+0.7
KSH				sPKP		00 18 10.4	
MDOK	Medeo	121.06	305	ePKIKP	PKPdf	00 17 56.7	-0.7
MDOK	Medeo	121.06	305	ePKP	PKPdf	00 17 56.7	-0.7
NRN	Naryn	121.35	302		PKPdf	00 17 57.3	-1.0
NRN	Naryn	121.35	302	PKIKP	PKPdf	00 17 57.3	-1.0
BOOM	Boomskoye usch	121.67	304	PKIKP	PKPdf	00 17 58.8	+0.2
KURK	Kurchatov	121.75	313	PKPdf	PKPdf	00 17 57.1	-1.1
KURK	Kurchatov	121.75	313	i PKIKP	PKPdf	00 17 58.3	+0.1
KURBB	Kurchatov Arra	121.79	313	PKP	PKPdf	00 17 57.4	-1.0
	comp=Z,2.4nm,0.6s,baz=112,slow=1.9,SNR=16						
ARLS	Aral	122.68	302	PKIKP	PKPdf	00 18 00.8	+0.2
FRU1	Bishkek	122.69	304	PKPdf	PKPdf	00 18 00.4	-0.1
FRU1	Bishkek	122.69	304	PKIKP	PKPdf	00 18 00.4	-0.1
AAK	Ala-Archa	122.74	303	PKPdf	PKPdf	00 17 59.3	-1.4
AAK	Ala-Archa	122.74	303	cePKIKP	PKiKP	00 18 01.5	+0.6
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SGDS	Sogindy	122.84	304	ePKP	PKPdf	00 18 00.2	-0.5
KOOLE	Kule	123.52	200	PKPdf	PKPdf	00 18 01.9	-1.0
BTLS	Baital	123.60	306	ePKIKP	PKPdf	00 18 01.5	-0.5
BTLS	Baital	123.60	306	ePKP	PKPdf	00 18 01.5	-0.5
KBL	Kabul	124.76	293	PKPdf	PKPdf	00 18 04.8	0.0
KBL	Kabul	124.76	293	PKIKP	PKPdf	00 18 04.9	0.0
BTK	Batken	124.82	300	PKIKP	PKPdf	00 18 05.0	+0.4
TRKS	Terek-Say	124.92	301	PKIKP	PKPdf	00 18 04.8	-0.1
DZA	Taraz	125.07	303	ePKIKP	PKPdf	00 18 04.2	-0.7
DZA	Taraz	125.07	303	ePKP	PKPdf	00 18 04.3	-0.7
BRZS	Berezniki	125.38	312	ePKIKP	PKPdf	00 18 05.0	-0.3
BRZS	Berezniki	125.38	312	ePKP	PKPdf	00 18 05.0	-0.3
KKAR	Karatay Array	125.70	303	PKPdf	PKPdf	00 18 05.5	-0.7
KKAR	Karatay Array	125.70	303	PKIKP	PKPdf	00 18 05.5	-0.7
SIMJ	Simiganj	125.85	297	PKPdf	PKPdf	00 18 06.1	-0.6
IUG	Iuzhnay	125.86	302	ePKIKP	PKPdf	00 18 05.8	-0.8
IUG	Iuzhnay	125.86	302	ePKP	PKPdf	00 18 05.9	-0.8
DZET	Dzherino	126.03	298	PKIKP	PKiKP	00 18 07.9	+0.4
BRLS	Borolday	126.17	303	ePKIKP	PKPdf	00 18 06.6	-0.5
BRLS	Borolday	126.17	303	ePKP	PKPdf	00 18 06.6	-0.5
SCHQ	Schefferville	126.59	42	PKP	PKiKP	00 18 09.0	+1.1
	comp=Z,2.1nm,0.8s,baz=120,slow=1.4,SNR=3.8						
BVAR	Borovoye Array	127.12	315	PKP	PKPdf	00 18 08.4	-0.1
	comp=Z,3.4nm,0.6s,baz=111,slow=1.9,SNR=19						
BRVK	Borovoye	127.18	315	PKPdf	PKPdf	00 18 07.9	-0.7
BRVK	Borovoye	127.18	315	i PKIKP	PKPdf	00 18 07.4	-1.2
LSZ	Lusaka	127.59	212	PKIKP	PKiKP	00 18 13.7	+2.4
SPITS	Spitsbergen Ar	132.44	356	PKP	PKiKP	00 18 18.9	-0.2
	comp=Z,1.2nm,0.6s,baz=90,slow=2.5,SNR=5.7						
SVE	Sverdlovsk	132.63	321	ePKIKP	PKiKP	00 18 27.7	+7.7
ABKAR	Akbulak array	133.59	310	PKPdf	PKPdf	00 18 21.0	+0.1
ARTI	Arti	133.93	320	PKPdf	PKPdf	00 18 21.7	+0.4
ARTI	Arti	133.93	320	i PKIKP	PKiKP	00 18 22.4	-0.2
ARTI						00 20 50.5	
KIRV	Kirov	138.07	325	i PKIKP	PKiKP	00 18 30.6	-0.3
ARCES	ARCESS Array B	139.36	348	PKhKP	PKPpre	00 18 23.0	
	comp=Z,0.9nm,0.5s,baz=50,slow=2.8,SNR=12						
ARCES				PKP	PKPdf	00 18 31.7	+0.6
	comp=Z,2.5nm,0.7s,baz=52,slow=2.3,SNR=8.0						
KLMR	Klimovskoe	141.53	332	ePKIKP	PKPdf	00 18 33.0	-2.1
KLMR				e		00 18 44.0	
KLMR				pmax	pmax		
	comp=Z,15nm,1.6s						
MSF	Maaselka	141.58	343	PKIKP	PKiKP	00 18 37.7	-0.2
AKT	Akhty	142.35	299	ePKIKP	PKPdf	00 18 36.4	-1.0
AKT				e		00 21 43.5	
AKT				pmax	pmax		
	comp=Z,14nm,1.0s						
GNI	Garni	144.65	297	PKPdf	PKPab	00 18 40.5	+0.2
GNI	Garni	144.65	297	i PKIKP	PKPab	00 18 39.9	-0.4
VRH	Novokhopyorsk	144.76	316	ePKIKP	PKPab	00 18 39.9	-0.1
VRH				pmax	pmax		
	comp=Z,28nm,0.6s						
MOS	Moscow	145.09	325	i PKIKP	PKPbc	00 18 40.0	-1.1
MOS				pmax	pmax		
	comp=Z,63nm,0.6s						
MOS				pmax	pmax		
	comp=Z,100nm,0.6s						
GOF	Gofitskoye	145.44	305	cePKIKP	PKPdf	00 18 42.5	0.0
KBZ	Khabaz	145.74	303	PKPbc	PKPdf	00 18 43.3	+0.2
	comp=Z,14nm,1.1s,baz=98,slow=0.7,SNR=19						
KBZ	Khabaz	145.74	303	i PKIKP	PKPdf	00 18 43.0	-0.1
LPSR	Galich'ya Gora	145.84	320	ePKIKP	PKPdf	00 18 41.9	-1.0
LPSR				pmax	pmax		
	comp=Z,40nm,0.9s						
KIV	Kislovodsk	145.86	304	PKPdf	PKPdf	00 18 42.8	-0.7
KIV	Kislovodsk	145.86	304	⇓P	PKPbc	00 18 44.2	+0.1
KIV	Kislovodsk	145.86	304	i PKIKP	PKPdf	00 18 42.0	-1.4
KIV				pmax	pmax		
	comp=Z,19nm,1.0s						
SHA1	Shidzhatmaz	145.91	303	i PKP2	PKPab	00 18 45.0	+0.1
FINES	FINESS Array B	145.92	340	PKPdf	PKPdf	00 18 42.0	-0.8
FINES	FINESS Array B	145.92	340	PKPbc	PKPdf	00 18 42.8	-0.1
	comp=Z,16nm,0.6s,baz=58,slow=3.6,SNR=134						
FINES	FINESS Array B	145.92	340	PKIKP	PKPdf	00 18 42.0	-0.8
OBN	Obninsk	145.92	325	PKPdf	PKPdf	00 18 43.0	+0.1
OBN	Obninsk	145.92	325	⇑P	PKPbc	00 18 43.7	0.0
OBN	Obninsk	145.92	325	c iPKP2	PKPdf	00 18 43.4	+0.4
OBN				pmax	pmax		
	comp=Z,419nm,1.8s						
NSS	Namsos	146.03	353	ePKPdf	PKPdf	00 18 42.9	0.0
VORR	Voronezh	146.06	318	ePKP2	PKPdf	00 18 43.9	+0.6
VORR				pmax	pmax		
	comp=Z,170nm,0.6s						
VSR	Storozhevoye	146.26	317	ePKIKP	PKPdf	00 18 42.2	-1.5
VSR				pmax	pmax		
	comp=Z,40nm,1.0s						
VORD	Divnogorie	146.28	317	ePKIKP	PKPdf	00 18 42.2	-1.5
VORD				pmax	pmax		
	comp=Z,30nm,1.0s						
KOPT	Kop Dagi	147.91	297		PKiKP	00 18 51.7	-0.5
VSU	Vasula	148.00	336	PKP2	PKPbc	00 18 48.4	-1.1
DOMB	Dombas	148.76	354	ePKPbc	PKPbc	00 18 51.7	+0.2
AKN	Aaknes	148.79	356	ePKPbc	PKPbc	00 18 51.6	+0.1
ANN	Anapa	149.39	306	i PKP2	PKPbc	00 18 53.0	-0.5
ANN				pmax	pmax		
	comp=Z,98nm,1.4s						
NB2	NORSAR Subarra	149.51	351	PKP	PKPbc	00 18 52.4	-1.0
	comp=Z,16nm,1.1s,baz=24,slow=2.7						
NB2	NORSAR Subarra	149.51	351	PKPab	PKPbc	00 18 52.4	-1.0
	baz=24,slow=2.7						
NOA	NORSAR Array B	149.51	351	PKPbc	PKPbc	00 18 52.8	-0.6
	comp=Z,2.8nm,0.6s,baz=14,slow=4.1,SNR=22						
NC602	NORSAR Array S	149.76	351	ePKPbc	PKPbc	00 18 53.1	-0.8
HFS	Hagfors	150.01	349	PKPbc	PKPbc	00 18 53.4	-1.2
	comp=Z,5.3nm,0.6s,baz=27,slow=2.5,SNR=31						
SKAR	Skarslia	150.18	354	ePKPbc	PKPbc	00 18 55.1	+0.1
MNK	Minsk	150.35	329	i PKIKP	PKPbc	00 18 55.7	+0.2
MNK				i		00 22 31.0	
MNK				i PPP	PPP	00 25 53.3	
MNK				i		00 25 57.1	
MNK				i SSS	SSS	00 47 34.0	
MNK				pmax	pmax		
	comp=E,5.0nm,0.7s						
MNK				pmax	pmax		
	comp=Z,17nm,0.9s						
MNK				pmax	pmax		
	comp=N,6.0nm,0.8s						
GAZ	Gaziantep	150.61	291	PKPbc	PKPbc	00 18 56.5	-0.4
KONO	Kongsberg	151.06	352	PKPbc	PKPbc	00 18 55.9	-1.2
KONO	Kongsberg	151.06	352	PKIKP	PKPbc	00 18 55.9	-1.2
KONO	Kongsberg	151.06	352	ePKPbc	PKPbc	00 18 56.9	-0.2
MMAI	Mount Meron Ar	151.96	283	PKPbc	PKiKP	00 19 01.0	+0.5
	comp=N,5.8nm,0.4s,baz=108,slow=2.7,SNR=28						
AKASG	Malin Array Be	152.04	322	PKPbc	PKPbc	00 18 58.7	-0.9
AKASG	Malin Array Be	152.04	322	PKPbc	PKPbc	00 18 59.0	-0.6
	comp=N,6.8nm,0.6s,baz=49,slow=2.3,SNR=30						
AKASG	Malin Array Be	152.04	322	PKIKP	PKPbc	00 18 58.7	-0.9
KIEV	Kiev	152.06	322	PKPbc	PKPbc	00 18 57.9	-1.7
KIEV	Kiev	152.06	322	⇑P	PKiKP	00 19 00.0	+0.1
KIEV	Kiev	152.06	322	PKIKP	PKPbc	00 18 57.9	-1.7
HOMB	Homborsund	152.53	353	ePKPbc	PKPbc	00 19 00.6	+0.2
HOMB	Homborsund	152.53	353	i P	PKPbc	00 19 00.3	-0.1
BORU	Boraas	152.53	348	i P	PKPbc	00 18 59.8	-0.6
SNART	Snartemo	152.59	354	ePKPbc	PKPbc	00 19 00.7	+0.2
SNART	Snartemo	152.59	354	i P	PKPbc	00 19 00.1	-0.5
SUW	Suwalki	152.65	333	ePKP	PKiKP	00 19 01.7	+0.7
ILGA	Ilgaz	152.89	300	PKPbc	PKPbc	00 19 01.5	-0.6
ONAU	Onsala	152.91	349	i P	PKPbc	00 19 00.6	-0.7
KIRS	Kirsehir-Merke	153.05	296	⇑P	PKPbc	00 19 02.6	+0.3
BLEU	Blekinge	153.11	343	i P	PKPbc	00 19 00.9	-0.8
FABU	Falkenberg	153.14	347	i P	PKPbc	00 19 01.1	-0.7
BRTR	Keskin Array B	153.18	297	PKPbc	PKPbc	00 19 01.7	-1.0
BRTR	Keskin Array B	153.18	297	PKPbc	PKPbc	00 19 02.2	-0.5
	comp=N,2.1nm,0.5s,baz=84,slow=2.6,SNR=18						
BRTR	Keskin Array B	153.18	297	PKIKP	PKPbc	00 19 01.7	-1.0
OVD	Ostervraa, Den	153.25	350	i P	PKPbc	00 19 01.7	-0.3
DEL	Delary	153.40	346	i P	PKPbc	00 19 02.2	-0.2
PURM	Purcari	153.77	314	⇓P	PKiKP	00 19 06.8	+3.2
ANTO	Ankara	153.80	298	PKPbc	PKPbc	00 19 03.1	-0.9
ANTO	Ankara	153.80	298	⇑P	PKPbc	00 19 03.9	-0.1
ANTO	Ankara	153.80	298	PKIKP	PKPbc	00 19 03.1	-0.9
SORM	Soroca	153.91	318	⇑P	PKiKP	00 19 04.5	+0.7
MILM	Milestii Mici	154.24	315	⇓P	PKiKP	00 19 09.3	+4.7
DBIC	Dimbokro	154.76	163	PKPbc	PKiKP	00 19 07.2	+0.5
	comp=N,4.6nm,0.6s,baz=183,slow=4.3,SNR=7.5						
MDUB	Mudurnu	154.88	300	PKPbc	PKPbc	00 19 04.9	-1.4
SSRD	Sdr. Stenderup	155.11	350	i P	PKPdf	00 19 05.2	+7.9
GKP	Gorka Klasztor	155.37	338	ePKP	PKPab	00 19 17.8	-5.3
TPGR	Topolog	155.41	311	⇑P	PKPdf	00 19 08.5	+10
CFR	Carcaliu	155.46	312	⇑P	PKPdf	00 19 08.4	+10
EKA	Eskdalemuir Ar	155.49	8	PKPab	PKPab	00 19 22.6	-0.9
	comp=N,0.8nm,0.5s,baz=357,slow=2.4,SNR=5.3						
TESR	Tescani	155.74	316	⇓P	PKPdf	00 19 10.7	+12
BURAR	Bucovina Array	155.96	320	⇓P	PKPdf	00 19 09.4	+11
ONER	Baraj Valea Uz	155.98	316	⇑P	PKPdf	00 19 07.3	+8.5
KWP	Kalwaria Pacla	155.99	326	ePKP	PKPab	00 19 25.2	-0.7
VRI	Vrincioaia	156.01	315	⇑P	PKPdf	00 19 10.6	+12
PLOR	Plostina	156.07	315	⇓P	PKPab	00 19 18.7	-7.7
TURR	Turia	156.35	316	⇓P	PKPdf	00 19 13.4	+14
BSEG	Bad Segeberg	156.49	348	ePKPab	PKPab	00 19 27.0	-0.8
	baz=19,slow=4.4						
BOSR	Bodos	156.55	316	⇑P	PKPab	00 19 22.5	-6.0
KOLS	Kolonicke sedl	156.67	325	ePKP	PKPdf	00 18 54.4	-5.2
MLR	Muntele Rosu	156.68	315	⇓P	PKPdf	00 19 10.2	+10
DOPR	Dopca	156.77	316	⇓P	PKPab	00 19 16.1	-13
STHS	Stebnicka Huta	156.83	327	ePKP	PKPdf	00 18 54.6	-5.2
OJC	Ojcow	156.88	331	ePKP	PKPdf	00 19 10.0	+10
NIE	Niedzica	157.26	329	ePKP	PKPdf	00 19 10.9	+11
NIE	Niedzica	157.26	329	PKIKP	PKPdf	00 19 01.2	+0.9
KSP	Ksiaz	157.73	336	ePKP	PKPab	00 19 33.2	-0.1
RETH	Rethem/Aller,	157.80	349	ePKPab	PKPab	00 19 32.9	-0.6
	baz=19,slow=4.4						
LANS	Liptovska Anna	157.82	329	ePKP2	PKPab	00 19 34.4	+0.5
LANS	Liptovska Anna	157.82	329	ePKP	PKPdf	00 18 58.0	-3.1
DRGR		157.83	321	⇓P	PKPab	00 19 22.9	-11
FLTG	Flechtingen	157.83	345	ePKPab	PKPab	00 19 33.0	-0.6
	baz=19,slow=4.4						
KECS	Kecovo	157.84	327	ePKP	PKPdf	00 18 58.4	-2.6
OKC	Ostrava-Krasne	157.85	332	AMS	AMS	01 24 20.0	
	comp=N,300nm,17.9s						
NRDL	Niedersach Rie	157.90	347	ePKPab	PKPab	00 19 32.7	-1.2
	baz=19,slow=4.4						
OSTC	Ostas	158.00	336	ePKPAB	PKPab	00 19 35.4	+0.9
OSTC				AMS	AMS	01 28 20.0	
	comp=N,400nm,21.2s						
OSTC	Ostas	158.00	336	ePKP2	PKPab	00 19 35.4	+0.9
OSTC				MLR	MLR		
	comp=Z,400nm,21.2s						
LOT	Lotru	158.00	317	⇑P	PKPab	00 19 20.6	-14
CHVC	Chvalec	158.03	336	ePKPAB	PKPab	00 19 34.5	-0.2
CHVC				AMS	AMS	01 28 10.0	
	comp=Z,400nm,20.0s						
CHVC	Chvalec	158.03	336	ePKP2	PKPab	00 19 34.5	-0.2
CHVC				MLR	MLR		
	comp=Z,400nm,20.0s						
UPC	Upice	158.11	336	ePKPAB	PKPab	00 19 35.2	+0.2
UPC				AMS	AMS	01 28 10.0	
	comp=Z,400nm,20.7s						
UPC	Upice	158.11	336	ePKP2	PKPab	00 19 35.2	+0.2
UPC				MLR	MLR		
	comp=Z,400nm,20.7s						
DPC	Dobruska-Polom	158.13	335	ePKPAB	PKPab	00 19 35.2	+0.1
DPC				AMS	AMS	01 29 20.0	
	comp=Z,400nm,20.5s						
DPC	Dobruska-Polom	158.13	335	ePKP2	PKPab	00 19 35.2	+0.1
DPC				MLR	MLR		
	comp=Z,400nm,20.5s						
BORR	Bors	158.13	322	⇓P	PKPdf	00 19 15.1	+14
ASSE	Asse, Remlinge	158.13	346	ePKPab	PKPab	00 19 34.4	-0.5
	baz=19,slow=4.4						
MORC	Moravsky Berou	158.14	333	ePKP	PKPab	00 19 35.1	-0.1
MORC	Moravsky Berou	158.14	333	⇓P	PKPdf	00 19 10.3	+8.9
KRLC	Kraliky	158.19	334	ePKPAB	PKPab	00 19 33.6	-1.8
KRLC				AMS	AMS	01 29 20.0	
	comp=Z,300nm,16.8s						
KRLC	Kraliky	158.19	334	ePKP2	PKPab	00 19 33.6	-1.8
KRLC				MLR	MLR		
	comp=Z,300nm,16.8s						
CLL	Collm	158.34	342	ePKPab	PKPab	00 19 35.3	-0.6
	baz=19,slow=4.4						
BRG	Berggiesshubel	158.46	340	ePKPab	PKPab	00 19 35.4	-1.0
	baz=19,slow=4.4						
BRG	Berggiesshubel	158.46	340	P	PKPab	00 19 46.5	+10
BRG				Amp		00 19 50.6	
	comp=Z,10nm,1.0s						
BRG				PP	PP	00 23 16.3	0.0
BRG				Amp		00 23 20.8	
	comp=Z,1.3nm,0.9s						
BRG	Berggiesshubel	158.46	340	⇓ePKPf		00 19 06.8	
BRG	Berggiesshubel	158.46	340	Amp		00 19 10.3	
	comp=Z,1.7nm,0.9s						
BRG	Berggiesshubel	158.46	340	PKPab	PKPab	00 19 36.1	-0.3
BRG	Berggiesshubel	158.46	340	Amp		00 19 37.8	
	comp=Z,4.0nm,0.9s						
IBBN	Ibbenburen	158.46	351	ePKPab	PKPab	00 19 36.2	-0.1
	baz=19,slow=4.4						
PSZ	Piszkesteto	158.52	326		PKPab	00 19 35.9	-1.1
PSZ	Piszkesteto	158.52	326	PKP2	PKPab	00 19 35.9	-1.1
PVCC	Panska Ves	158.57	338	ePKPAB	PKPab	00 19 36.7	-0.3
PVCC	Panska Ves	158.57	338	ePKP2	PKPab	00 19 36.7	-0.3
VYHS	Vyhne	158.59	329	ePKP2	PKPab	00 19 36.9	-0.3
VYHS	Vyhne	158.59	329	ePKP	PKPdf	00 18 59.7	-2.3
RICC	Richard	158.70	339	ePKPAB	PKPab	00 19 37.2	-0.3
SURR	Surduc	158.78	319	⇓P	PKPab	00 19 38.0	0.0
JAVC	Velka Javorina	158.81	331	ePKP	PKPab	00 19 37.3	-0.9
GTTG	Gottingen	158.83	347	ePKPab	PKPab	00 19 37.5	-0.5
	baz=19,slow=4.4						
VRAC	Vranov	158.88	333	ePKP	PKPab	00 19 37.8	-0.6
PRA	Prague	159.01	338	AMS	AMS	01 40 10.0	
	comp=Z,200nm,20.6s						
GOPC	GO Pecny, Ondr	159.03	337	ePKPAB	PKPab	00 19 37.1	-1.9
GOPC				AMS	AMS	01 42 00.0	
	comp=Z,400nm,19.7s						
GOPC	GO Pecny, Ondr	159.03	337	ePKP2	PKPab	00 19 37.1	-1.9
GOPC				MLR	MLR		
	comp=Z,400nm,19.7s						
PRU	Pruhonice	159.05	338	ePKPAB	PKPab	00 19 38.8	-0.2
PRU				AMS	AMS	01 41 50.0	
	comp=Z,300nm,19.6s						
PRU	Pruhonice	159.05	338	ePKP2	PKPab	00 19 38.8	-0.2
PRU				MLR	MLR		
	comp=Z,300nm,19.6s						
HERR	Herculane	159.12	317	⇓P	PKPab	00 19 30.0	-10
KRUC	Moravsky	159.16	333	ePKP	PKPab	00 19 39.0	-0.6
TANN	Tannenbergstha	159.29	341	ePKPab	PKPab	00 19 39.6	-0.6
	baz=19,slow=4.4						
MOX	Moxa	159.31	343	ePKPab	PKPab	00 19 39.5	-0.7
	baz=19,slow=4.4						
TREC	Trest	159.31	335	AMS	AMS	01 35 30.0	
	comp=Z,400nm,19.5s						
SRO	Srobarova	159.33	328	ePKP	PKPdf	00 19 04.0	+1.2
MODS	Modra-Piesok	159.35	331	ePKP	PKPdf	00 19 01.0	-1.9
KASTN	Kahler Asten	159.44	349	ePKPab	PKPab	00 19 40.4	-0.3
	baz=19,slow=4.4						
NKC	Novy Kostel	159.46	341	ePKPAB	PKPab	00 19 41.7	+0.8
NKC				AMS	AMS	01 43 50.0	
	comp=Z,300nm,19.4s						
NKC	Novy Kostel	159.46	341	ePKP2	PKPab	00 19 41.7	+0.8
NKC				e		00 44 25.2	
NKC				MLR	MLR		
	comp=Z,300nm,19.4s						
NKC				MLR	MLR		
	comp=Z,14µm,19.8s						
UBBA	Unterbreizbach	159.51	346	ePKPab	PKPab	00 19 40.0	-0.9
	baz=19,slow=4.4						
MDVR	Moldovita	159.58	317	⇓P	PKPab	00 19 40.8	-0.9
ZVC	Zvikov	159.63	337	ePKPAB	PKPab	00 19 39.6	-2.0
ZVC				AMS	AMS	01 42 00.0	
	comp=Z,300nm,17.6s						
MANZ	Manzenberg	159.78	341	ePKPab	PKPab	00 19 41.9	-0.4
	baz=19,slow=4.4						
ROTZ	Rotzenmuhle	159.95	341	ePKPab	PKPab	00 19 42.9	-0.1
	baz=19,slow=4.4						
KHC	Kasperske Hory	160.10	338	ePKPAB	PKPab	00 19 44.2	+0.5
KHC				AMS	AMS	01 37 10.0	
	comp=Z,300nm,15.8s						
KHC	Kasperske Hory	160.10	338	ePKP2	PKPab	00 19 44.2	+0.5
KHC				MLR	MLR		
	comp=Z,300nm,15.8s						
CKRC	Cesky Krumlov	160.13	336	ePKPAB	PKPab	00 19 44.1	+0.3
CKRC				AMS	AMS	01 39 10.0	
	comp=Z,300nm,17.9s						
CKRC	Cesky Krumlov	160.13	336	ePKP2	PKPab	00 19 44.1	+0.3
CKRC				MLR	MLR		
	comp=Z,300nm,17.9s						
GRF	Grafenberg Arr	160.28	343	ePKPab	PKPab	00 19 44.8	+0.3
	baz=19,slow=4.4						
CONA	Conrad Observa	160.29	332	i PKP	PKPab	00 19 44.9	+0.2
	comp=Z,19nm,1.8s,SNR=6.0						
UCC	Uccle	160.29	356	dpPKP	PKPab	00 19 53.9	+10
RONA	Rosalia, Austr	160.29	331	i PKP	PKPab	00 19 44.8	+0.2
	comp=Z,13nm,1.4s						
GEC2	GERESS Array S	160.31	337	ePKPab	PKPab	00 19 44.6	-0.1
	baz=19,slow=4.4						
GERES	GERESS Array B	160.31	337	PKPab	PKPab	00 19 43.8	-0.9
GERES	GERESS Array B	160.31	337	PKPab	PKPab	00 19 44.1	-0.7
	comp=Z,1.1nm,0.6s,baz=27,slow=3.8,SNR=4.1						
GERES	GERESS Array B	160.31	337	PKP2	PKPab	00 19 43.8	-0.9
WET	Wettzell	160.31	339	ePKPab	PKPab	00 19 43.7	-1.0
	baz=19,slow=4.4						
BTNL	Ternell	160.35	353	dPKP	PKPab	00 19 44.8	+0.1
BTNL				dpPKP	sPKPab	00 19 53.4	-1.4
TNS	Taunus Mts	160.38	348	ePKPab	PKPab	00 19 43.5	-1.4
	baz=19,slow=4.4						
BCLA	Clavier	160.60	354	dPKPdf	PKPdf	00 19 06.2	+2.0
BCLA				dpPKPdf	sPKPdf	00 19 17.2	+2.7
BCLA				dPKP	PKPab	00 19 45.6	-0.1
BGES	Gesves	160.65	355	dPKP	PKPab	00 19 45.4	-0.5
BGES				dpPKP	sPKPab	00 19 55.3	-0.8
MOA	Molln	160.96	335	i PKP	PKPab	00 19 47.7	+0.2
	comp=Z,8.0nm,1.4s,SNR=5.5						
ARSA	Arzberg	160.97	332	ePKP	PKPab	00 19 48.6	+1.1
	comp=Z,9.2nm,1.4s						
WLF	Walferdange	161.26	352	dPKP	PKPab	00 19 48.2	-0.4
WLF				dpPKP	sPKPab	00 19 58.1	-0.7
WLF	Walferdange	161.26	352	ePKPab	PKPab	00 19 47.3	-1.3
	baz=19,slow=4.4						
BIOA	Bad Ischl, Aus	161.32	336	i PKP	PKPab	00 19 49.6	+0.6
	comp=Z,14nm,1.3s,SNR=8.0						
SOKA	Soboth	161.63	331	ePKP	PKPab	00 19 50.0	-0.5
	comp=Z,7.9nm,1.7s						
FUR	Furstenfeldbru	161.66	341	ePKPab	PKPab	00 19 50.6	+0.1
	baz=19,slow=4.4						
LESA	Schwarzleotal	161.89	337	i PKP	PKPab	00 19 51.7	+0.1
	comp=Z,13nm,1.4s,SNR=6.2						
OBKA	Obir	161.96	332	i PKP	PKPab	00 19 50.9	-1.1
	comp=Z,2.7nm,1.0s						
TORD	Torodi Ar. Bea	162.10	178	PKP	PKPdf	00 19 07.1	+0.2
	comp=Z,65nm,0.3s,baz=153,slow=1.3,SNR=1.8						
TORD				PKPab	PKPab	00 19 53.7	+0.6
	comp=Z,54nm,0.3s,baz=177,slow=4.3,SNR=1.5						
MYKA	Terra Mystica	162.22	334	i PKP	PKPab	00 19 52.3	-0.8
	comp=Z,3.9nm,0.6s						
BFO	Black Forest	162.22	347	ePKPab	PKPab	00 19 52.0	-0.9
	baz=19,slow=4.4						
WATA	Walderalm	162.32	339	i PKP	PKPab	00 19 53.6	0.0
	comp=Z,13nm,1.4s,SNR=5.5						
WTTA	Wattenberg	162.37	339	i PKP	PKPab	00 19 53.8	0.0
	comp=Z,6.8nm,0.9s						
PRED	Cave del Predi	162.40	334	PKPab	PKPab	00 19 52.5	-1.4
RETA	Reutte	162.42	341	i PKP	PKPab	00 19 53.7	-0.2
	comp=Z,6.9nm,1.0s,SNR=5.8						
MOTA	Moosalm	162.45	340	ePKP	PKPab	00 19 54.2	0.0
	comp=Z,17nm,1.4s,SNR=7.2						
ABTA	Abfaltersbach	162.53	336	i PKP	PKPab	00 19 53.8	-0.7
	comp=Z,14nm,1.6s						
SQTA	Sankt Quirin	162.53	339	i PKP	PKPab	00 19 54.4	-0.1
	comp=Z,6.6nm,0.8s						
DAVA	Damuels	162.85	342	i PKP	PKPab	00 19 53.4	-2.5
	comp=Z,3.9nm,0.9s						
FETA	Feichten	162.86	340	i PKP	PKPab	00 19 56.4	+0.5
	comp=Z,7.5nm,1.1s						
ESDC	Sonseca Array	170.05	29	PKP	PKPdf	00 19 13.0	+0.5
	comp=Z,0.6nm,1.0s,baz=309,slow=0.8,SNR=2.6						
ESDC				PKPab	PKPab	00 20 27.6	-0.2
	comp=Z,0.5nm,0.7s,baz=327,slow=4.2,SNR=1.7						

IDC 19 00:08:51.6±2.2, 30°.45S×178°.02W, h0^{km}, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=63.8km s-min=43.7km az=43.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.09	267	P	P	00 16 53.7	0.0
	0.3nm,0.5s,baz=103,slow=7.6,SNR=2.3						
	0.3nm,0.5s						
WRA	Warramunga Arr	44.09	272	P	P	00 17 01.5	-0.2
	0.4nm,0.4s,baz=112,slow=8.2,SNR=5.0						
	0.4nm,0.4s						
QSPA	South Pole Qui	59.66	180	P	P	00 18 57.4	0.0
	0.7nm,0.8s,baz=313,slow=7.7,SNR=1.3						
	0.7nm,0.8s						
FINES	FINESS Array B	145.19	340	PKPbc	PKPbc	00 28 29.1	-0.9
	1.2nm,0.8s,baz=46,slow=6.0,SNR=5.3						

IDC 19 00:21:19.3±2.0, 30°.26S×177°.87W, h0^{km}, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=57.3km s-min=38.1km az=42.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.23	267	P	P	00 29 22.2	-0.3
	0.7nm,0.6s,baz=109,slow=8.5,SNR=7.5						
	0.7nm,0.6s						
WRA	Warramunga Arr	44.20	272	P	P	00 29 30.4	0.0
	1.0nm,0.4s,baz=114,slow=8.1,SNR=12						
	1.0nm,0.4s						
QSPA	South Pole Qui	59.85	180	P	P	00 31 26.5	0.0
	1.0nm,0.7s,baz=56,slow=1.3,SNR=5.6						
	1.0nm,0.7s						
FINES	FINESS Array B	145.05	340	PKPbc	PKPbc	00 40 56.4	-0.9
	0.9nm,0.4s,baz=57,slow=5.1,SNR=10						

IDC 19 00:22:40.5±0.9, 30°.91S×177°.69W, h0^{km}, mb4.2/4, mbtmp4.2/5, ML3.6/1, MS3.8/2, Error ellipse: s-maj=35.0km s-min=28.7km az=137.0

NEIC 19 00:22:43.7±1.1, 30°.9S±0°.1×177°.8W±0°.1, h10^{km}±1^{km}, mb4.7/11, Error ellipse: s-maj=21.6km s-min=16.0km az=44.0

ISC 19 00:22:47.2±0.8, 31°.12S±0°.08×177°.9W±0°.1, h46^{km}, n42, σ1^{s}53/42, mb4.5/9, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.86	359	Pn	Pn	00 23 12.7	-3.9
MXZ	Matakaoa Point	7.16	205	Pn	Pn	00 24 23.4	-5.8
URZ	Urewera	8.23	209	Pn	Pn	00 24 43.2	-0.6
	0.7nm,0.3s,baz=35,slow=2.4,SNR=1.4						
URZ				Sn	Sn	00 26 11.8	-3.6
	2.2nm,0.3s,baz=338,slow=5.5,SNR=6.7						
	5.1nm,0.5s						
RTZ	Ruatahuna	8.58	208	Pn	Pn	00 24 44.8	-4.0
THZ	Tophouse	12.94	212	Pn	Pn	00 25 46.5	-1.9
MSVF	Nonsavu	13.83	344	LR	LR	00 29 55.8	
	comp=Z,184nm,18.2s,baz=145,slow=32						
LTZ	Lake Taylor	14.04	211	Pn	Pn	00 26 01.1	-2.3
FOZ	Fox Glacier	15.76	215	Pn	Pn	00 26 26.1	+0.2
FOZ				IAmb	IAmb	00 26 28.8	
	comp=Z,54nm,1.5s						
ODZ	Otahua Downs	16.55	210	Pn	P	00 26 38.0	+0.1
DZM	Mont Dzumac	16.64	299	Pn	P	00 26 41.8	+2.6
	comp=Z,0.1nm,0.3s,baz=79,slow=16,SNR=5.0						
DZM				LR	LR	00 31 46.2	
	comp=Z,650nm,18.1s,baz=192,slow=33						
CTAO	Charters Tower	34.01	280	P	P	00 29 27.3	+0.5
STKA	Stephens Creek	34.42	258	P	P	00 29 31.9	+1.7
STKA	Stephens Creek	34.42	258	P	P	00 29 32.3	+2.1
	comp=Z,1.0nm,0.4s,baz=91,slow=10.0,SNR=3.7						
	comp=Z,1.0nm,0.4s						
BBOO	Buckleboo	38.87	255	P	P	00 30 08.6	+0.4
BBOO				IAmb	IAmb	00 30 24.2	
	comp=Z,29nm,1.3s						
ASAR	Alice Springs	43.17	268	P	P	00 30 44.6	+1.0
ASAR	Alice Springs	43.17	268	P	P	00 30 44.5	+0.8
	comp=Z,3.4nm,0.8s,baz=108,slow=7.7,SNR=18						
ASAR				PcP	PcP	00 32 32.5	-0.1
	comp=Z,1.0nm,0.9s,baz=97,slow=4.1,SNR=2.9						
	comp=Z,3.4nm,0.8s						
WR8	Warramunga Arr	44.08	273	P	P	00 30 51.6	+0.6
WR8				IAmb	IAmb	00 30 57.8	
	comp=Z,10nm,1.0s						
WRAB	Tennant Creek	44.22	273	P	P	00 30 51.8	-0.2
WRAB				IAmb	IAmb	00 30 59.7	
	comp=Z,19nm,0.8s						
WRA	Warramunga Arr	44.22	273	P	P	00 30 52.4	+0.3
WRA	Warramunga Arr	44.22	273	P	P	00 30 52.6	+0.5
	comp=Z,2.6nm,0.5s,baz=113,slow=7.6,SNR=18						
	comp=Z,2.6nm,0.5s						
WB0	Warramunga Arr	44.25	273	P	P	00 30 52.5	+0.1
WB0				IAmb	IAmb	00 30 59.5	
	comp=Z,11nm,0.9s						
QSPA	South Pole Qui	58.99	180	P	P	00 32 43.6	+1.6
QSPA				IAmb	IAmb	00 32 54.0	
	comp=Z,8.8nm,0.8s						
QSPA	South Pole Qui	58.99	180	P	P	00 32 43.7	+1.8
	comp=Z,2.8nm,0.9s,baz=24,slow=2.2,SNR=5.1						
	comp=Z,2.8nm,0.9s						
SNAA	Sanae	77.44	178	P	P	00 34 40.2	+3.0
SNAA				IAmb	IAmb	00 34 52.7	
	comp=Z,4.5nm,1.2s						
MKAR	Makanchi Array	118.31	310	PKP	PKPdf	00 41 28.0	-1.2
	comp=Z,0.2nm,0.6s,baz=113,slow=3.3,SNR=1.5						
KURBB	Kurchatov Arra	121.65	313	PKP	PKPdf	00 41 34.1	-1.3
	comp=Z,0.4nm,0.6s,baz=123,slow=2.0,SNR=5.3						
KKAR	Karatay Array	125.55	303	PKPdf	PKiKP	00 41 43.8	+0.2
BVAR	Borovoye Array	126.98	315	PKP	PKPdf	00 41 45.7	+0.1
	comp=Z,0.6nm,0.7s,baz=71,slow=6.2,SNR=3.6						
KBZ	Khabaz	145.59	303	PKPbc	PKPab	00 42 21.3	+0.6
	comp=Z,1.6nm,0.9s,baz=135,slow=1.4,SNR=3.6						
FIA1	FINESS Array S	145.85	340	PKPdf	PKPdf	00 42 20.0	0.0
FINES	FINESS Array B	145.85	340	PKPdf	PKPdf	00 42 19.8	-0.2
FINES	FINESS Array B	145.85	340	PKPbc	PKPdf	00 42 20.4	+0.4
	comp=Z,2.9nm,0.6s,baz=39,slow=3.9,SNR=11						
NB2	NORSAR Subarra	149.47	351	PKP	PKPbc	00 42 29.9	-0.7
	comp=Z,3.5nm,1.2s,baz=26,slow=2.7						
NOA	NORSAR Array B	149.47	351	PKPbc	PKPbc	00 42 30.2	-0.5
	comp=Z,0.7nm,0.6s,baz=15,slow=2.5,SNR=3.4						
HFS	Hagfors	149.97	348	PKPbc	PKPbc	00 42 30.7	-1.0
	comp=Z,1.5nm,0.7s,baz=319,slow=4.3,SNR=3.9						
MMAI	Mount Meron Ar	151.79	283	PKPbc	PKiKP	00 42 38.0	+0.6
	comp=Z,2.3nm,0.6s,baz=92,slow=4.3,SNR=5.9						
AKASG	Malin Array Be	151.93	322	PKPbc	PKPbc	00 42 36.9	+0.3
AKASG	Malin Array Be	151.93	322	PKPbc	PKiKP	00 42 37.0	0.0
	comp=Z,0.5nm,0.4s,baz=52,slow=2.7,SNR=7.1						
AKBB	Malin Array Si	151.93	322	PKPbc	PKPbc	00 42 36.7	0.0
KIEV	Kiev	151.94	322	PKPbc	PKPbc	00 42 36.6	-0.1
BRTR	Keskin Array B	153.02	297	PKPab	PKPab	00 42 50.6	-0.6
BRTR	Keskin Array B	153.02	297	PKPbc	PKiKP	00 42 40.0	+0.1
	comp=Z,0.7nm,0.8s,baz=112,slow=5.8,SNR=4.7						

IDC 19 00:25:16.4±1.1, 31°.58S×177°.26W, h0^{km}, mb4.1/2, mbtmp4.2/4, ML3.4/1, Error ellipse: s-maj=40.2km s-min=29.4km az=140.0

ISC 19 00:25:19.8±1.0, 31°.4S±0°.1×177°.6W±0°.2, h10^{km}, n17, σ1^{s}69/19, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	8.12	211	Pn	Pn	00 27 17.0	-0.7
	17nm,0.8s,baz=133,slow=22,SNR=1.2						
URZ				Sn	Sn	00 28 50.4	+0.8
	3.9nm,0.3s,baz=325,slow=22,SNR=8.2						
DZM	Mont Dzumac	17.04	299	P	Pn	00 29 20.2	+1.9
	0.1nm,0.3s,baz=168,slow=14,SNR=3.9						
	4.6nm,0.9s						
ASAR	Alice Springs	43.45	268	P	P	00 33 23.1	-0.1
	0.8nm,0.4s,baz=106,slow=7.5,SNR=5.8						
ASAR				PcP	PcP	00 35 10.4	-1.1
	0.2nm,0.4s,baz=106,slow=4.1,SNR=1.7						
ASAR				ScP	ScP	00 39 04.5	+1.4
	1.2nm,0.9s,baz=132,slow=5.1,SNR=5.1						
	0.8nm,0.4s						
WRA	Warramunga Arr	44.53	273	P	P	00 33 30.8	-1.1
	1.9nm,0.4s,baz=112,slow=7.9,SNR=16						
	1.9nm,0.4s						
H03S2	Juan Fernandez	79.59	123	T	T	02 04 40.8	
	baz=243,slow=74,SNR=7.1						
H03S1	Juan Fernandez	79.60	123	T	T	02 04 41.9	
	baz=243,slow=74,SNR=6.6						
H03S3	Juan Fernandez	79.61	123	T	T	02 04 43.0	
	baz=243,slow=74,SNR=6.6						
KURBB	Kurchatov Arra	122.06	313	PKP	PKPdf	00 44 13.3	-0.9
	0.2nm,0.4s,baz=113,slow=1.5,SNR=2.3						
BVAR	Borovoye Array	127.39	315	PKP	PKPdf	00 44 24.0	-0.4
	0.2nm,0.3s,baz=79,slow=3.1,SNR=2.1						
ARCES	ARCESS Array B	139.66	348	PKP	PKPdf	00 44 45.4	-1.5
	0.8nm,0.8s,baz=44,slow=2.1,SNR=3.8						
FINES	FINESS Array B	146.22	340	PKPbc	PKPdf	00 44 58.1	-0.6
	2.7nm,0.6s,baz=43,slow=4.5,SNR=12						
HFS	Hagfors	150.31	349	PKPbc	PKPdf	00 45 08.6	+3.2
	1.5nm,0.9s,baz=48,slow=2.1,SNR=4.5						
EIL	Elat	152.00	275	PKPbc	PKPbc	00 45 14.9	-0.6
	1.1nm,0.6s,baz=135,slow=1.4,SNR=1.7						
MMAI	Mount Meron Ar	152.13	282	PKPbc	PKPbc	00 45 14.3	-1.5
	1.3nm,0.5s,baz=69,slow=7.9,SNR=4.7						
AKASG	Malin Array Be	152.33	322	PKPbc	PKPbc	00 45 14.8	-0.8
	1.2nm,0.7s,baz=50,slow=2.8,SNR=4.3						
AKASG				PKPab	PKPab	00 45 25.6	0.0
	2.6nm,0.7s,baz=50,slow=2.4,SNR=9.3						
BRTR	Keskin Array B	153.41	297	PKPbc	PKPbc	00 45 17.0	-1.6
	0.3nm,0.6s,baz=102,slow=4.7,SNR=2.0						
BRTR				PKPab	PKPab	00 45 29.9	-0.9
	0.8nm,0.5s,baz=123,slow=3.1,SNR=4.8						
DBIC	Dimbokro	154.46	163	PKPbc	PKPdf	00 45 17.1	+4.1
	3.4nm,0.8s,baz=189,slow=6.3,SNR=1.9						

NEIC 19 00:30:53.4±1.7, 10°.14S±0°.09×151°.5E±0°.1, h10^{km}±1^{km}, mb4.3/8, Error ellipse: s-maj=23.4km s-min=10.4km az=57.0

IDC 19 00:30:53.0±1.1, 10°.09S×151°.35E, h0^{km}, mb3.7/7, mbtmp3.8/9, ML3.0/2, Error ellipse: s-maj=31.4km s-min=21.8km az=115.0

ISC 19 00:30:56.7±0.7, 10°.24S±0°.10×151°.46E±0°.09, h35^{km}, n24, σ1^{s}46/25, mb3.9/9, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.32	281		Pn	00 31 58.1	-1.8
PMG	Port Moresby	4.32	281	Pn	Pn	00 31 58.4	-1.5
	7.9nm,0.3s,baz=67,slow=6.7,SNR=8.7						
PMG				Sn	Sn	00 32 49.6	+0.5
	5.2nm,0.3s,baz=114,slow=18,SNR=1.6						
	22nm,0.4s						
COEN	Coen	8.90	245	Pn	Pn	00 33 02.8	-0.2
EIDS	Eidsvold	15.05	181	P	P	00 34 32.3	+0.5
WR8	Warramunga Arr	18.99	237	P	P	00 35 16.2	+0.8
WB0	Warramunga Arr	18.99	238	P	P	00 35 16.8	+1.3
WB0				IAmb	IAmb	00 35 53.5	
	comp=Z,8.2nm,1.1s						
WRA	Warramunga Arr	19.12	238	P	P	00 35 18.0	+1.1
	comp=Z,0.2nm,0.3s,baz=62,slow=11,SNR=8.3						
	comp=Z,2.5nm,0.6s						
MTN	Manton Dam	20.08	261	P	P	00 35 27.7	+0.4
MTN				IAmb	IAmb	00 35 30.8	
	comp=Z,16nm,0.8s						
ASAR	Alice Springs	21.42	229	P	P	00 35 43.0	+1.2
	comp=Z,1.7nm,1.0s,baz=61,slow=9.8,SNR=8.6						
	comp=Z,1.7nm,1.0s						
KNRA	Kununurra	22.76	254	P	P	00 35 56.2	0.0
KNRA				IAmb	IAmb	00 36 11.5	
	comp=Z,11nm,0.9s						
STKA	Stephens Creek	23.39	202	P	P	00 36 03.7	+1.3
STKA	Stephens Creek	23.39	202	P	P	00 36 04.4	+2.1
	comp=Z,1.2nm,0.7s,baz=13,slow=9.0,SNR=3.3						
	comp=Z,1.2nm,0.7s						
BSWZ	Blackbirch Sta	37.03	152	P	P	00 38 02.9	-0.3
NWAO	Narrogin (SRO)	38.74	229	P	P	00 38 17.1	-0.7
MJAR	Matsushiro Arr	48.18	346	P	P	00 39 33.8	+0.1
	comp=Z,1.5nm,0.7s,baz=170,slow=8.7,SNR=2.4						
	comp=Z,1.5nm,0.7s						
KSRS	Korea Array	52.33	336	P	P	00 40 05.2	+0.2
	comp=Z,1.0nm,0.6s,baz=157,slow=7.7,SNR=2.7						
	comp=Z,1.0nm,0.6s						
SBA	Scott Base	68.05	177	P	P	00 41 49.2	-3.0
SBA				IAmb	IAmb	00 41 52.4	
	comp=Z,2.4nm,1.0s						
SONM	Songino Array	70.25	330	P	P	00 42 08.5	+2.0
	comp=Z,1.4nm,1.0s,baz=169,slow=2.9,SNR=4.9						
	comp=Z,1.4nm,1.0s						
MKAR	Makanchi Array	83.56	320	P	P	00 43 21.1	-0.2
	comp=Z,0.4nm,0.8s,baz=113,slow=3.3,SNR=2.2						
	comp=Z,0.4nm,0.8s						
ILAR	Eielson Array	87.67	22	P	P	00 43 41.9	+0.6
	comp=Z,0.4nm,0.7s,baz=235,slow=4.3,SNR=4.5						
	comp=Z,0.4nm,0.7s						
FINES	FINESS Array B	115.39	334	PKP	PKPdf	00 49 36.7	+2.3
	comp=Z,1.9nm,0.9s,baz=52,slow=5.4,SNR=4.0						
BDFB	Brasilia	147.85	143	PKPbc	PKPab	00 50 42.3	+0.7
	comp=Z,2.2nm,0.6s,baz=255,slow=2.9,SNR=3.2						
TORD	Torodi Ar. Bea	150.26	279	PKPdf	PKPdf	00 50 37.0	-3.0
TORD	Torodi Ar. Bea	150.26	279	PKPbc	PKPbc	00 50 44.4	-0.8
	comp=Z,49nm,0.3s,baz=150,slow=0.9,SNR=1.4						

RSNC 19 00:31:51.2±0.5, 9°N±4°×7°1W±°, h10^{km}±8^{km}, M2.3, mb4.2, ML2.3, MLv3.1

FUNV 19 00:31:53.6, 8°.84N×70°.95W, h2^{km}, MW3.0

ISC 19 00:31:51.5±1.5, 8°.95N±0°.04×70°.96W±0°.03, h4^{km}±12^{km}, n16, σ1^{s}29/31, 1C, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SDV	Santo Domingo	0.33	101	P	Pb	00 31 59.2	-0.8
SDV				S	Sb	00 32 04.3	-1.4
SOCV	Socops	0.67	171	⇑*i*P	Pg	00 32 04.3	0.0
SOCV				*e*S	Sg	00 32 12.8	-0.3
CAPV	Capacho	1.72	231	*e*P	Pn	00 32 22.8	+0.4
CAPV				*e*S	Sn	00 32 45.9	+0.9
TEPV	Terepaima	2.01	60	*e*P	Pb	00 32 29.3	+0.6
TEPV				*e*S	Sg	00 32 55.2	-1.0
PAMC	Pamplona, Colo	2.35	227	P	Pb	00 32 35.4	+0.6
PAMC				S	Sb	00 33 05.2	+0.8
OCAC	Ocana	2.44	253	P	Pn	00 32 32.2	-0.1
OCAC				S	Sn	00 33 04.5	+1.8
TAMC	Tame, Arauca	2.63	198	P	Pb	00 32 40.3	+1.0
TAMC				S	Sb	00 33 11.4	-0.6
CRJC	Cerrejon, Guaj	2.80	318	P	Pn	00 32 36.0	-1.2
CRJC				S	Sn	00 33 09.1	-2.4
BAUV	El Baul	2.88	90	*e*P	Pn	00 32 39.3	+1.1
BAUV				*e*S	Sn	00 33 13.4	0.0
URIC	Uribia, Colomb	2.92	340	P	Pn	00 32 40.5	+1.8
BENV	Beln	3.46	73	*e*P	Pn	00 32 47.8	+1.5
BENV				*e*S	Sn	00 33 28.1	+0.3
RUSC	La Rusia	3.70	215	P	Pn	00 32 50.4	+0.5
RUSC				S	Sn	00 33 33.6	-0.6
TACV	Tcata	4.05	73	*e*P	Pn	00 32 56.4	+2.0
TACV				*e*S	Sn	00 33 41.0	-1.3
PTBC	PUERTO BERRIO,	4.21	236	P	Pn	00 32 55.7	-0.9
PTBC				S	Sn	00 33 43.1	-3.2
SJCC	San Jacinto, C	4.27	283	P	Pn	00 32 57.5	+0.1
SJCC				S	Sn	00 33 49.4	+1.6
PTGC	Puerto Gaitan,	4.86	194	P	Pn	00 33 05.6	+0.1
PTGC				S	Sn	00 34 01.6	-0.7

IDC 19 00:32:34.6±1.3, 30°.60S×177°.37W, h0^{km}, mb3.9/4, mbtmp4.0/6, ML3.8/2, MS3.6/1, Error ellipse: s-maj=37.6km s-min=30.6km az=123.0

NEIC 19 00:32:44.3±1.5, 30°.5S±0°.1×177°.7W±0°.1, h50^{km}±8^{km}, mb4.5/10, Error ellipse: s-maj=18.9km s-min=14.4km az=218.0

ISC 19 00:32:41.0±0.8, 30°.59S±0°.08×177°.7W±0°.2, h33^{km}, n35, σ1^{s}41/31, mb4.3/9, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.35	350	Pn	Pb	00 33 05.4	-0.5
MXZ	Matakaoa Point	7.71	205	Pn	Pn	00 34 29.2	-1.9
URZ	Urewera	8.78	208	Pn	Pn	00 34 44.3	-1.3
	0.9nm,0.3s,baz=164,slow=16,SNR=2.4						
URZ				Sn	Sn	00 36 14.4	-9.0
	3.4nm,0.3s,baz=272,slow=18,SNR=6.0						
	3.6nm,0.3s						
RTZ	Ruatahuna	9.14	207	Pn	Pn	00 34 48.0	-2.6
BKZ	Black Stump Fm	9.81	208	Pn	Pn	00 34 56.6	-3.2
RPZ	Rata Peaks	15.87	211	Pn	Pn	00 36 21.3	-0.6
RPZ	Rata Peaks	15.87	211	Pn	Pn	00 36 19.2	-2.6
	0.4nm,0.3s,baz=41,slow=9.3,SNR=1.7						
	4.0nm,0.7s						
DZM	Mont Dzumac	16.57	297	LR	LR	00 40 53.2	
	comp=Z,206nm,18.3s,baz=34,slow=30						
LBZ	Lake Benmore	16.78	212	Pn	P	00 36 35.4	0.0
CTAO	Charters Tower	34.12	279	P	P	00 39 24.2	+1.2
CTAO				IAmb	IAmb	00 39 45.4	
	comp=Z,12nm,1.2s						
STKA	Stephens Creek	34.72	257	P	P	00 39 28.7	+0.6
STKA	Stephens Creek	34.72	257	P	P	00 39 29.1	+1.1
	comp=Z,1.5nm,0.5s,baz=87,slow=12,SNR=5.5						
	comp=Z,1.5nm,0.5s						
BBOO	Buckleboo	39.20	254	P	P	00 40 07.3	+1.1
ASAR	Alice Springs	43.39	267	P	P	00 40 41.8	+1.1
ASAR	Alice Springs	43.39	267	P	P	00 40 40.8	+0.1
	comp=Z,0.9nm,0.7s,baz=105,slow=7.6,SNR=8.9						
	comp=Z,0.9nm,0.7s						
WR8	Warramunga Arr	44.25	272	P	P	00 40 48.1	+0.4
WR8				IAmb	IAmb	00 41 14.7	
	comp=Z,15nm,1.4s						
WRA	Warramunga Arr	44.40	272	P	P	00 40 48.8	0.0
WRA	Warramunga Arr	44.40	272	P	P	00 40 48.8	0.0
	comp=Z,1.2nm,0.6s,baz=111,slow=8.0,SNR=12						
	comp=Z,1.2nm,0.6s						
WB0	Warramunga Arr	44.42	272	P	P	00 40 48.8	-0.1
WB0				IAmb	IAmb	00 40 59.1	
	comp=Z,17nm,1.5s						
SBA	Scott Base	47.87	184	P	P	00 41 17.7	+2.4
SBA				IAmb	IAmb	00 41 18.2	
	comp=Z,4.7nm,1.3s						
QSPA	South Pole Qui	59.52	180	P	P	00 42 42.8	+1.9
QSPA				IAmb	IAmb	00 43 11.4	
	comp=Z,3.3nm,0.9s						
QSPA	South Pole Qui	59.52	180	P	P	00 42 39.7	-1.2
	comp=Z,1.0nm,0.9s,baz=273,slow=5.7,SNR=2.4						
	comp=Z,1.0nm,0.9s						
SNAA	Sanae	77.96	178	P	P	00 44 36.4	+0.9
SNAA				IAmb	IAmb	00 44 51.3	
	comp=Z,3.6nm,1.1s						
H03S2	Juan Fernandez	80.11	123	T	T	02 13 26.3	
	baz=239						
H03S1	Juan Fernandez	80.13	123	T	T	02 13 51.3	
	baz=239,slow=74						
H03S3	Juan Fernandez	80.13	123	T	T	02 14 02.0	
	baz=239,slow=74						
MK31	Makanchi Array	118.12	310	PKPdf	PKiKP	00 51 23.9	-0.5
MKAR	Makanchi Array	118.12	310	PKPdf	PKPdf	00 51 22.7	-1.7
FIA1	FINESS Array S	145.42	340		PKPab	00 52 14.8	-0.2
FINES	FINESS Array B	145.43	340		PKPab	00 52 14.5	-0.6
FINES	FINESS Array B	145.43	340	PKPbc	PKPab	00 52 14.8	-0.3
	comp=Z,1.7nm,0.3s,baz=50,slow=4.2,SNR=23						
NB2	NORSAR Subarra	148.98	352	PKP	PKiKP	00 52 25.8	-0.5
	comp=Z,1.3nm,1.2s,baz=17,slow=2.6						
NOA	NORSAR Array B	148.98	352	PKPbc	PKPdf	00 52 21.3	+0.4
	comp=Z,0.5nm,0.7s,baz=16,slow=2.6,SNR=3.8						
AKASG	Malin Array Be	151.63	323	PKPbc	PKPbc	00 52 29.5	-2.1
	comp=Z,0.2nm,0.3s,baz=50,slow=3.4,SNR=1.6						
MMAI	Mount Meron Ar	151.86	284	PKPbc	PKiKP	00 52 33.4	+0.3
	comp=Z,1.6nm,0.6s,baz=156,slow=4.6,SNR=2.5						

ISK 19 00:45:30.6, 39°.58N×38°.60E, h5^{km}, ML4.3/23

IDC 19 00:45:30.6±0.6, 39°.55N×38°.61E, h0^{km}, mb3.9/16, mbtmp3.9/24, ML3.8/8, MS3.6/3, Error ellipse: s-maj=12.9km s-min=8.1km az=170.0

AFAD 19 00:45:30.8, 39°.54N×38°.64E, h10^{km}, MW4.1

CFUSG 19 00:45:31.0, 38°.67N×38°.10E, h33^{km}, mb3.2/4, Eastern Turkey Magtype MSH 3.3 from 2 stations

MOS 19 00:45:32.4±1.3, 39°.79N×38°.62E, h14^{km}, mb4.3/19, Error ellipse: s-maj=5.2km s-min=3.9km az=102.5

NEIC 19 00:45:34.3±1.9, 39°.62N±0°.06×38°.59E±0°.05, h17^{km}±5^{km}, mb4.2/50, Error ellipse: s-maj=9.5km s-min=5.3km az=161.0

ISC 19 00:45:31.8±0.8, 39°.58N±0°.02×38°.62E±0°.02, h6^{km}±5^{km}, n307, σ1^{s}48/340, mb4.2/54, 14C-13D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILIC	ilic-Erzincan	0.14	198	Pg	Pg	00 45 34.2	-0.5
ILIC				Sg	Sg	00 45 36.4	-0.2
ARPR	Arapgir-MALATY	0.54	205	Pg	Pg	00 45 41.4	-0.8
ARPR				Sg	Sg	00 45 49.3	+0.1
EZC	Erzincan	0.59	73	P	Pb	00 45 46.3	+1.6
SUSE	Susehri	0.70	333	P	Pg	00 45 45.3	-0.1
SUSE				S	Sb	00 45 55.9	-0.8
CUZAR	Zara_SIVAS	0.72	295	P	Pg	00 45 45.5	-0.3
CUZAR				S	Sb	00 45 57.3	0.0
KELT	Kelkit	0.75	41	P	Pg	00 45 45.6	-0.7
KELT				S	Sg	00 45 54.7	-1.3
ALUC	Giresun/Alucra	0.77	8	P	Pg	00 45 46.7	0.0
ALUC				S	Sg	00 45 57.5	+0.9
EUZM	Uzumlu	0.84	81	P	Pg	00 45 46.6	-1.4
EUZM				S	Sg	00 45 59.0	+0.1
ERZN	Erzincan	0.85	89	Pg	Pg	00 45 46.2	-2.0
TNCL	Tunceli-Merkez	0.85	123	P	Pg	00 45 46.5	-1.7
TNCL				S	Sg	00 45 57.6	-1.7
HEKM	Malatya_Hekimh	0.87	216	P	Pg	00 45 48.0	-0.6
HEKM				S	Sg	00 45 59.3	-0.6
ELZG	Elazig	1.12	165	P	Pg	00 45 51.8	-1.5
ELZG				S	Sg	00 46 06.8	-1.0
SCER	sogukcermik	1.19	284	P	Pg	00 45 53.5	-1.1
SCER				S	Sb	00 46 10.6	+0.1
MAYA	Malatya/Merkez	1.26	187	P	Pn	00 45 54.0	-2.2
MAYA				S	Sb	00 46 10.6	-2.1
KOVA	Elazig, Kovanc	1.27	133	P	Pn	00 45 53.8	-2.5
RSDY	Resadiye-TOKAT	1.28	310	Pn	Pn	00 45 55.2	-1.2
RSDY				Sn	Sg	00 46 13.6	+0.4
SVSK	Karacayir	1.30	285	Pn	Pn	00 45 55.8	-0.7
ESPY	Espiye-Giresun	1.33	3	Pn	Pn	00 45 56.1	-1.0
ESPY				Sn	Sn	00 46 15.6	+0.4
DARE	Darende-Malaty	1.34	222	Pn	Pn	00 45 56.1	-1.2
DARE				Sn	Sb	00 46 15.4	+0.4
CUGUR	Gurin_SVAS	1.35	231	P	Pn	00 45 57.0	-0.4
CUGUR				S	Sb	00 46 14.8	-0.5
CUGUR				*i* IAML		00 46 18.0	
	comp=N,8μm,0.3s						
CUGUR				*i* IAML		00 46 21.0	
	comp=E,8μm,0.6s						
BAYB	BAYBURT	1.43	61	P	Pn	00 45 57.6	-1.0
BAYB				S	Sb	00 46 16.1	-1.4
BAYB				*i* IAML		00 46 21.0	
	comp=N,2μm,0.9s						
BAYB				*i* IAML		00 46 26.0	
	comp=E,2μm,0.6s						
CUAYA	Sivas-Altinyay	1.49	258	P	Pn	00 45 58.6	-0.7
CUAYA				S	Sb	00 46 19.9	+0.7
CUAYA				*i* IAML		00 46 24.0	
	comp=N,2μm,0.3s						
CUAYA				*i* IAML		00 46 26.0	
	comp=E,3μm,0.4s						
YEDI	Yedisu-Bingol	1.49	95	Pn	Pn	00 45 58.3	-1.1
YEDI				Sn	Sn	00 46 19.7	+0.4
KOPT	Kop Dagi	1.51	73		Pn	00 45 58.9	-0.8
KOPT	Kop Dagi	1.51	73	P	Pn	00 45 59.4	-0.3
KOPT				S	Sg	00 46 21.0	+0.6
KOPT				*i* IAML		00 46 25.0	
	comp=E,4μm,0.9s						
KOPT				*i* IAML		00 46 26.0	
	comp=N,3μm,1.0s						
ORDU	Ordu-Boztepe	1.52	338	P	Pn	00 45 59.6	0.0
ORDU				S	Sg	00 46 21.1	+0.3
ORDU				*i* IAML		00 46 28.0	
	comp=N,2μm,0.5s						
BINT	Bingol	1.61	115	P	Pn	00 46 01.4	+0.4
BINT				S	Sg	00 46 25.4	+1.7
MACK	Trabzon	1.62	32	P	Pn	00 46 01.2	+0.2
MACK				S	Sb	00 46 23.2	+0.3
MACK				*i* IAML		00 46 30.0	
	comp=E,6μm,0.4s						
MACK				*i* IAML		00 46 30.0	
	comp=N,5μm,0.3s						
KTUT	Trabzon	1.65	32	Pn	Pn	00 46 00.7	-0.7
KTUT				Sn	Sb	00 46 23.6	-0.2
NARI	Adyaman-Kaht	1.70	176	P	Pn	00 46 03.2	+1.1
NARI				S	Sb	00 46 25.9	+0.7
NARI				*i* IAML		00 46 31.0	
	comp=E,1μm,0.7s						
BNGB	Bingl	1.70	110	Pn	Pn	00 46 01.4	-0.8
BNGB				Sn	Sn	00 46 24.9	+0.5
TOKT	Tokat	1.76	295	Pn	Pn	00 46 02.8	-0.1
AZEY	Adyaman-Merk	1.79	189	P	Pn	00 46 03.6	+0.2
AZEY				S	Sn	00 46 26.6	+0.1
ERBA	Erbaa	1.80	308	P	Pn	00 46 03.7	+0.1
ERBA				S	Sb	00 46 28.1	-0.1
TOKA	Tokat	1.81	295	Pn	Pn	00 46 03.7	+0.1
TOKA	Tokat	1.81	295	P	Pn	00 46 04.3	+0.8
TOKA				S	Sg	00 46 32.3	+2.5
ECAT	Cat-ERZURUM	1.82	88	P	Pn	00 46 04.0	+0.1

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ECAT                               S     Sb     00 46 29.9 +1.1
EMRE  Erzurum,Aziziy    1.87  75   P     Pn     00 46 05.9 +1.3
KARO  Karliova-Bingo    1.90  97   Pn    Pn     00 46 05.1 +0.1
IZDR  Rize              1.91  50   P     Pn     00 46 05.7 +0.6
IZDR                               S     Sn     00 46 30.1 +0.7
KRIK  Erzurum-spir      1.93  66   P     Pn     00 46 06.8 +1.4
KRIK                               S     Sg     00 46 34.2 +0.5
AKCA  Adyaman/G¶l       1.93 203   P     Pn     00 46 06.2 +0.9
ETEKE Tekederesi - E    1.95  83   P     Pn     00 46 06.9 +1.1
HANM  anlurfa/Hi        2.01 174   P     Pn     00 46 07.2 +0.9
HANM                               S     Sb     00 46 34.2 +0.1
DIYA  Diyarbakir        2.03 144   P     Pb     00 46 09.0 -0.1
EDAM  Erzurum-Paland    2.06  80   Pn    Pn     00 46 07.5 +0.2
ATAB  Bozova            2.12 187   P     Pn     00 46 10.1 +2.2
ERZM  Erzurum           2.14  80   P     Pn     00 46 10.2 +1.9
ERZM                               S     Sg     00 46 40.8 +0.2
CHOM  Cayeli-Rize       2.23  47   Pn    Pn     00 46 09.8 +0.5
HACI  Hacifakili, Ak    2.24 274   P     Pn     00 46 10.1 +0.6
VRTB  Varto-Mus         2.24 100   Pn    Pn     00 46 09.7 +0.1
VRTB  Varto-Mus         2.24 100   P     Pb     00 46 12.3 -0.4
BNN   Bunyan            2.28 252   Pn    Pn     00 46 09.9 -0.2
BNN   Bunyan            2.28 252   Pn    Pn     00 46 10.2 +0.1
GZT   Gaziantep         2.37 201   P     Pn     00 46 11.4 -0.1
MUSM  Mu-Merkez         2.40 110   P     Pn     00 46 14.3 +2.4
GUNE  Kayseri           2.42 255   P     Pn     00 46 13.5 +1.3
KAHM  Kahramanmaras,    2.43 212   P     Pn     00 46 11.9 -0.3
SVAN  Silvan-Diyarba    2.47 125   Pn    Pn     00 46 13.2 +0.6
SVAN  Silvan-Diyarba    2.47 125   P     Pn     00 46 13.3 +0.6
SVAN                               S     Sb     00 46 47.6 +0.3
KVT   Kavak             2.47 308   Pn    Pn     00 46 12.8 +0.1
KVT   Kavak             2.47 308   P     Pn     00 46 13.5 +0.8
KMRS  Kahramanmaras     2.48 214   Pn    Pn     00 46 12.6 -0.2
YARM  Yarimca-Ladik(    2.52 303   Pn    Pn     00 46 13.5  0.0
YOZ   Yozgat            2.55 272   Pn    Pn     00 46 13.9  0.0
GAZ   Gaziantep         2.65 205   Pn    Pn     00 46 15.5 +0.3
GAZ   Gaziantep         2.65 205   Pn    Pn     00 46 14.5 -0.7
MARD  Mardin            2.83 143   Pn    Pn     00 46 17.2 -0.5
GURO  Guroymak-BITLI    2.85 110   Pn    Pn     00 46 18.4 +0.4
KOZK  Kozakli-Nevseh    2.93 264   Pn    Pn     00 46 19.6 +0.5
KOZT  Kozan             3.04 227   Pn    Pn     00 46 19.9 -0.5
CORM  Corum             3.13 282   Pn    Pn     00 46 21.9 +0.1
KARS  Kars              3.57  72   Pn    Pn     00 46 29.8 +1.8
KARS  Kars              3.57  72   P     Pn     00 46 29.8 +1.8
KIRS  Kirsehir-Merke    3.67 264 ⇓P     Pn     00 46 30.2 +0.9
GEVA  Gevas             3.68 109   Pn    Pn     00 46 31.9 +2.4
BR131 Keskin Array S    3.85 274   Pn    Pn     00 46 31.6 -0.2
BR131 Keskin Array S    3.85 274 i P     Pn     00 46 32.2 +0.5
BRTR  Keskin Array B    3.85 274   Pn    Pn     00 46 31.8 +0.1
BRTR  Keskin Array B    3.85 274   Pn    Pn     00 46 32.2 +0.5
      17nm,0.3s,baz=108,slow=15,SNR=436
BRTR                               Lg    Lg     00 47 33.6
      7.9nm,0.3s,baz=103,slow=25,SNR=6.1
      58nm,0.4s
BRTR  Keskin Array B    3.85 274 i P     Pn     00 46 32.2 +0.5
BRTR                               pmax  pmax
      comp=Z,75nm,0.6s
VSLR  Vesyoloye         4.02  15 i P     Pn     00 46 33.8 -0.1
ILGA  Ilgaz             4.03 293   Pn    Pn     00 46 34.7 +0.4
SOC   Sochi             4.08  11 eP     Pn     00 46 32.5 -2.3
SOC                              e              00 47 20.6
SOC                                pmax  pmax
      comp=Z,54nm,0.5s
SOC                                MLR   MLR
      comp=Z,174nm,12.0s
BZK   Bozkurt           4.24 306   Pn    Pn     00 46 36.3 -0.6
ANTO  Ankara            4.50 275   Pn    Pn     00 46 41.4 +0.7
ANTO  Ankara            4.50 275 ⇑P     Pn     00 46 41.7 +1.0
ANTO  Ankara            4.50 275   P     Pn     00 46 41.4 +0.7
GNI   Garni             4.74  81   Pn    Pn     00 46 45.8 +1.7
GNI   Garni             4.74  81   Pn    Pn     00 46 46.2 +2.2
      comp=Z,0.2nm,0.3s,baz=204,slow=23,SNR=1.2
GNI                                Lg    Lg     00 48 05.3
      baz=165,slow=20
GNI                                LR    LR     00 48 26.4
      comp=Z,125nm,19.7s,baz=146,slow=37
GNI   Garni             4.74  81   P     Pn     00 46 45.8 +1.7
CIDE  Kastamonu/Cide    4.88 300 ⇑P     Pn     00 46 46.5 +0.6
SHA1  Shidzhatmaz       5.13  35 eP     Pn     00 46 49.7 +0.2
KBZ   Khabaz            5.24  36   Pn    Pn     00 46 51.6 +1.0
      comp=Z,1.6nm,0.3s,baz=226,slow=15,SNR=15
      comp=Z,7.4nm,0.6s
KBZ   Khabaz            5.24  36ceP     Pn     00 46 51.2 +0.6
ANN   Anapa             5.29 351 eP     Pn     00 46 49.3 -2.1
ANN                              eS     Sn     00 47 50.8 -1.8
ANN                                pmax  pmax
      comp=Z,18nm,0.9s
LABN  Labinsk           5.29  16 eP     Pn     00 46 51.0 -0.4
LABN                             eS     Sn     00 47 54.6 +1.9
LABN                               pmax  pmax
      comp=Z,25nm,0.6s
KIV   Kislovodsk        5.32  33   Pn    Pn     00 46 53.2 +1.3
KIV   Kislovodsk        5.32  33 eP     Pn     00 46 52.4 +0.5
KIV                                pmax  pmax
      comp=Z,21nm,1.0s
NAX   Nakhchivan        5.34  92   P     Pn     00 46 56.6 +4.4
BEIL  Beino             5.39 202 eP     Pn     00 46 53.5 +0.5
NCK   Nalchik           5.40  42 eP     Pn     00 46 52.9 -0.1
HWQ   Hawqa             5.71 203 eP     Pn     00 46 58.9 +1.6
MDUB  Mudurnu           5.77 281   Pn    Pn     00 46 58.9 +0.8
YAL   Yalta             5.92 327 eP     Pn     00 47 02.7 +2.6
SUDU  Sudak             5.95 334 eP     Pn     00 47 06.6 +6.2
SUDU  Sudak             5.95 334 eP     Pn     00 47 06.6 +6.2
SUDU                               Pm           00 47 11.0
      comp=Z,10.0nm,0.4s
SUDU                             eS     Sb     00 48 18.6 -8.7
SUDU                               Sm           00 48 19.0
      comp=N,21nm,0.4s
SUDU                               Sm           00 48 19.0
      comp=E,2.0nm,0.3s
ZAHL  Zahle             6.12 202 eP     Pn     00 47 05.5 +2.6
BHL   Bhannes           6.15 204 eP     Pn     00 47 05.8 +2.5
SEV   Sevastopol'       6.18 325 eP     Pn     00 47 08.6 +5.0
SEV   Sevastopol'       6.18 325 eP     Pn     00 47 08.6 +5.0
SEV                                Pm           00 47 08.9
      comp=Z,3.0nm,0.3s
CSS   Mathiatis         6.25 224   Pn    Pn     00 47 06.1 +1.5
ERBR  Yeremizino-Bor    6.28  12 eP     Pn     00 47 04.4 -0.6
ERBR                             eS     Sn     00 48 18.5 +1.4
ERBR                               pmax  pmax
      comp=Z,31nm,0.7s
BORA  Eskisehir         6.30 275   Pn    Pn     00 47 05.7 +0.2
SIM   Simferopol'       6.32 330 eP     Pn     00 47 13.9 +8.4
SIM                                pmax  pmax
      comp=Z,8.0nm,0.8s
DQRL  Deir Qamar        6.36 204 eP     Pn     00 47 09.7 +3.5
GOF   Gofitskoye        6.38  29ceP     Pn     00 47 09.0 +2.7
RCY   Rachaya           6.47 201 eP     Pn     00 47 11.0 +3.2
SHBL  Chebaa            6.64 201 eP     Pn     00 47 12.8 +2.7
DNZ2  Donuzlav2         7.03 327 eP     Pn     00 47 17.7 +2.4
DNZ2                               Pm           00 47 22.9
      comp=Z,13nm,0.5s
DNZ2                             eS     Sn     00 48 41.1 +5.6
DNZ2                               Sm           00 48 46.8
      comp=N,16nm,0.6s
DNZ2                               Sm           00 48 46.8
      comp=E,5.0nm,0.7s
MMAI  Mount Meron Ar    7.05 203   Pn    Pn     00 47 16.8 +1.1
      comp=E,2.8nm,0.3s,baz=47,slow=15,SNR=11
      comp=E,0.6nm,0.3s
TARU  Tarkhankut        7.33 324 eP     Pn     00 47 20.4 +1.0
TARU                               Pm           00 47 27.9
      comp=Z,1.0nm,0.6s
ELL   Elmali            7.42 250   Pn    Pn     00 47 27.2 +6.4
ELL   Elmali            7.42 250   P     Pn     00 47 27.2 +6.3
MAK   Makhachkala       7.49  60 eP     Pn     00 47 18.0 -3.6
MAK                              eS     Sn     00 48 42.7 -4.2
MAK                                pmax  pmax
      comp=Z,38nm,0.5s
MAK                                MLR   MLR
      comp=Z,199nm,14.0s
ASF   Jabal al Asfar    7.53 191   Pn    Pn     00 47 21.6 -0.6
      comp=Z,0.5nm,0.3s,baz=68,slow=10,SNR=4.9
ASF                                Lg    Lg     00 49 28.7
      comp=Z,0.5nm,0.3s,baz=46,slow=13,SNR=3.7
      comp=Z,4.2nm,0.8s
TIRR  Tirgusor          9.02 306   Pn    Pn     00 47 40.8 -1.8
TIRR  Tirgusor          9.02 306   P     Pn     00 47 40.8 -1.8
TLCR                    9.16 311 ⇓P     Pn     00 47 43.9 -0.7
TPGR  Topolog           9.22 308 ⇓P     Pn     00 47 44.4 -0.9
CFR   Carcaliu          9.56 309 ⇓P     Pn     00 47 48.6 -1.3
CFR   Carcaliu          9.56 309   P     Pn     00 47 48.6 -1.3
ALN   Alexandroupoli    9.71 282   Pn    Pn     00 47 53.1 +1.1
ALN   Alexandroupoli    9.71 282   P     Pn     00 47 53.1 +1.1
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RDO   Rodhopi          10.11 283   Pn    Pn     00 47 57.9 +0.4
EIL   Elat             10.34 198   Pn    Pn     00 48 00.4 -0.3
      comp=Z,0.1nm,0.3s,baz=159,slow=16,SNR=1.3
EIL                                Lg    Lg     00 50 57.7
      comp=Z,0.2nm,0.3s,baz=76,slow=11,SNR=2.1
      comp=Z,0.6nm,0.4s
BISRR Bisoca           10.61 308 ⇑P     Pn     00 48 03.0 -1.5
VRI   Vrincioaia       10.76 310 ⇓P     Pn     00 48 06.9 +0.4
VRI   Vrincioaia       10.76 310   P     Pn     00 48 06.9 +0.4
MLR   Muntele Rosu     11.06 306   Pn    Pn     00 48 11.6 +1.0
MLR   Muntele Rosu     11.06 306   Pn    Pn     00 48 12.0 +1.5
      comp=Z,0.3nm,0.3s,baz=22,slow=14,SNR=7.3
      comp=Z,1.0nm,0.6s
MLR   Muntele Rosu     11.06 306 ⇓P     Pn     00 48 10.8 +0.2
TESR  Tescani          11.16 312 ⇑P     Pn     00 48 11.3 -0.5
ONER  Baraj Valea Uz   11.21 311 ⇑P     Pn     00 48 12.7 +0.1
SORM  Soroca           11.31 322 ⇓P     Pn     00 48 13.5 -0.3
SORM  Soroca           11.31 322   P     Pn     00 48 13.5 -0.3
VORD  Divnogorie       11.39   2 eP     Pn     00 48 12.4 -2.6
VORD                               pmax  pmax
      comp=Z,5.0nm,0.8s
DOPR  Dopca            11.62 308 ⇓P     Pn     00 48 17.7 -0.6
VSR   Storozhevoye     11.64   2 eP     Pn     00 48 17.3 -1.1
VSR                              eS     Sn     00 50 25.0 -3.7
VSR                                pmax  pmax
      comp=Z,5.0nm,0.8s
VSR                                smax  smax
      comp=E,60nm,0.9s
VRH   Novokhopyorsk    11.82  10 eP     Pn     00 48 18.3 -2.6
VRH                                pmax  pmax
      comp=Z,8.0nm,1.0s
BURAR Bucovina Array   12.59 314 ⇓P     Pn     00 48 30.6 -1.0
BURAR Bucovina Array   12.59 314   P     Pn     00 48 30.5 -1.0
BUR08 Bucovina Ar. S   12.62 314   Pn    Pn     00 48 29.9 -2.0
AKASG Malin Array Be   12.93 332   Pn    Pn     00 48 36.0 -0.1
      comp=Z,1.1nm,0.3s,baz=140,slow=14,SNR=8.8
      comp=Z,0.5nm,0.4s
AKASG Malin Array Be   12.93 332 i P     Pn     00 48 37.0 +0.9
AKASG                              pmax  pmax
      comp=Z,1.0nm,0.4s
AKBB  Malin Array Si   12.93 332   Pn    Pn     00 48 34.9 -1.2
AKBB  Malin Array Si   12.93 332 eP     Pn     00 48 35.4 -0.7
KIEV  Kiev             12.93 332 ⇓P     Pn     00 48 35.7 -0.4
KIEV  Kiev             12.93 332   P     Pn     00 48 37.7 +1.6
KIEV                               pmax  pmax
      comp=Z,8.0nm,0.9s
LPSR  Galich'ya Gora   13.02   1 eP     Pn     00 48 29.7 -7.6
LPSR                               pmax  pmax
      comp=Z,7.0nm,0.8s
BELG  Belogornoye      14.24  23 eP     Pn     00 48 53.4 -0.5
KOLS  Kolonicke sedl   14.96 314 eP     P      00 49 07.4 -2.0
KOLS  Kolonicke sedl   14.96 314 eP     P      00 49 07.4 -2.0
KWP   Kalwaria Pacla   15.12 317   P     P      00 49 10.7 -0.5
KWP                                pmax  pmax
      comp=Z,17nm,0.9s
OBN   Obninsk          15.60 356 eP     Pn     00 49 11.8 -0.3
OBN                                pmax  pmax
      comp=Z,7.0nm,0.6s
STHS  Stebnicka Huta   15.79 314 eP     P      00 49 18.9 +0.2
STHS  Stebnicka Huta   15.79 314 eP     P      00 49 18.9 +0.2
MORH  Mrgy, Hungar     16.05 301 ⇑P     Pn     00 49 17.8 -0.2
MOS   Moscow           16.18 358 eP     Pn     00 49 16.7 -2.9
MOS                              e              00 52 20.0
MNK   Minsk            16.59 338 i P     Pn     00 49 21.9 -3.0
      comp=E,5.0nm,0.8s
MNK                              i P     Pn     00 49 21.9 -3.0
      comp=N,8.0nm,1.0s
MNK                              i P     Pn     00 49 21.9 -3.0
      comp=Z,5.0nm,0.8s,baz=149
MNK                              i PP    pP     00 49 30.6 +1.1
MNK                              i PPP   PPP    00 49 38.8
MNK                              i S     Sn     00 52 26.1 -3.2
MNK                              i SS    S      00 52 40.6 -0.5
MNK                              i SSS   SSS    00 52 53.3
MNK                              i LQ    LQ     00 54 25.5
MNK                              i LR    LR     00 55 30.0
MNK                              i LRM   MLR    00 55 57.8
      comp=E,116nm,18.9s
MNK                              i LRM   MLR    00 56 03.5
      comp=N,50nm,16.1s
MNK                              i LRM   MLR    00 56 37.8
      comp=Z,115nm,18.5s
MNK   Minsk            16.59 338 i P     Pn     00 49 21.9 -3.0
MNK                              i S     Sn     00 52 26.1 -3.2
MNK                                pmax  pmax
      comp=Z,5.0nm,0.8s
MNK                                pmax  pmax
      comp=N,8.0nm,1.0s
MNK                                pmax  pmax
      comp=E,5.0nm,0.8s
MNK                                MLR   MLR
      comp=E,116nm,19.0s
MNK                                MLR   MLR
      comp=N,50nm,16.0s
MNK                                MLR   MLR
      comp=Z,115nm,18.0s
VYHS  Vyhne            16.75 309 eP     P      00 49 30.2 +0.9
VYHS  Vyhne            16.75 309 eP     P      00 49 30.2 +0.9
TIP   Timpagrande      16.91 276         Pn     00 49 30.1 +1.0
OJC   Ojcow            17.01 315   P     P      00 49 33.7 +1.6
OJC                                pmax  pmax
      comp=Z,8.0nm,1.6s
RAYN  Ar Rayn          17.04 158         P      00 49 33.7 +1.0
RAYN  Ar Rayn          17.04 158   P     P      00 49 33.7 +1.0
RAYN                               pmax  pmax
      comp=Z,3.0nm,0.9s
NACGM Naroch           17.27 336 eP     Pn     00 49 31.0 -2.4
      comp=Z,4.0nm,0.7s,baz=147
AKTO  Aktyubinsk       17.43  45   P     Pn     00 49 34.6 -0.9
      comp=Z,0.3nm,0.3s,baz=240,slow=10,SNR=13
      comp=Z,6.4nm,0.7s
CEL   Celeste          17.73 273   Pn    Pn     00 49 38.1 -1.3
SUW   Suwalki          17.83 329   Pn    Pn     00 49 39.0 -1.4
SUW   Suwalki          17.83 329   P     Pn     00 49 39.0 -1.4
AB31  Akbulak array    17.99  50   Pn    Pn     00 49 41.8 -0.6
ABKAR Akbulak array    17.99  50   Pn    Pn     00 49 41.0 -1.4
RONA  Rosalia, Austr   18.04 304 ePn    P      00 49 44.2 +0.6
      comp=Z,3.3nm,1.0s
MORC  Moravsky Berou   18.07 311         P      00 49 44.6 +0.7
MORC  Moravsky Berou   18.07 311 eP     P      00 49 44.7 +0.8
MORC  Moravsky Berou   18.07 311   P     P      00 49 44.6 +0.7
MORC                               pmax  pmax
      comp=Z,6.0nm,1.5s
CONA  Conrad Observa   18.39 304 i P     P      00 49 52.8 +5.3
      comp=Z,4.9nm,1.2s
KRUC  Moravsky         18.45 308 eP     P      00 49 47.8 -0.3
SOKA  Soboth           18.58 300 i P     Pn     00 49 56.2 +6.5
      comp=Z,2.3nm,1.2s
PABE  Paberze          18.69 333   P     P      00 49 49.0 -1.6
PABE                               IAmb  IAmb   00 49 59.2
      comp=Z,9.3nm,0.9s
OBKA  Obir             18.86 299 epP    pP     00 49 60.0 +5.2
      comp=Z,3.0nm,1.3s
CAMP  Campotosto       19.22 287   P     P      00 49 56.9 +0.2
AQU   L'Aquila         19.23 286   P     Pn     00 49 58.2 +0.6
AQU                                pmax  pmax
      comp=Z,18nm,1.0s
KSP   Ksiaz            19.26 313   P     Pn     00 49 57.8 -0.1
KSP                                pmax  pmax
      comp=Z,5.0nm,0.8s
MOA   Molln            19.39 303 i P     Pn     00 50 02.3 +2.8
      comp=Z,2.2nm,0.9s
BIOA  Bad Ischl, Aus   19.75 302 i P     Pn     00 50 04.9 +1.0
      comp=Z,1.5nm,0.4s
CESX  Cesi             19.83 287   P     P      00 50 03.8 +0.5
MURB  Monte Urbino     19.88 289   P     P      00 50 04.6 +0.7
MURB                               IAmb  IAmb   00 50 19.2
      comp=Z,9.1nm,1.0s
GEC2  GERESS Array S   20.04 306   P     Pn     00 50 06.9 -0.5
GEC2  GERESS Array S   20.04 306   P     Pn     00 50 08.5 +1.1
GEC2                               pmax  pmax
      comp=Z,3.0nm,1.6s
GERES GERESS Array B   20.04 306   P     P      00 50 06.6 +1.0
      comp=Z,0.8nm,0.6s,baz=108,slow=8.8,SNR=8.8
      comp=Z,0.8nm,0.6s
KHC   Kasperske Hory   20.21 306⇑iP     P      00 50 08.2 +0.8
KHC                                pmax  pmax
      comp=Z,2.0nm,0.6s
KIRV  Kirov            20.24  16⇑iP     P      00 50 07.3 -0.2
ABTA  Abfaltersbach    20.29 299 i pP    pP     00 50 13.6 +3.3
      comp=Z,3.7nm,1.0s
LESA  Schwarzleotal    20.32 301 eP     Pn     00 50 11.6 +1.0
      comp=Z,1.2nm,0.6s
VSU   Vasula           20.38 342⇑iP     P      00 50 09.5 +0.4
VSU                                pmax  pmax
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      comp=Z,6.0nm,0.9s
BRG   Berggiesshubel   20.62 311 eP     Pn     00 50 13.8 -0.3
BRG                                Amp          00 50 15.7
      comp=Z,2.6nm,0.9s
TEOL  Teolo            20.65 295   P     P      00 50 12.4 +0.3
TEOL                               IAmb  IAmb   00 50 17.2
      comp=Z,18nm,1.0s
WET   Wettzell         20.65 306   P     P      00 50 12.9 +0.7
WET                                pmax  pmax
      comp=Z,3.0nm,1.3s
CTI   Castel Tesino    20.76 297   P     P      00 50 14.4 +1.0
CTI   Castel Tesino    20.76 297   P     P      00 50 14.4 +1.0
CTI                                pmax  pmax
      comp=Z,4.0nm,0.7s
UOSS  Minazif          20.78 129   P     P      00 50 13.6  0.0
OSSC  Osservatorio P   20.82 290   P     P      00 50 14.5 +0.4
OSSC                               IAmb  IAmb   00 50 22.4
      comp=Z,9.9nm,0.9s
WTTA  Wattenberg       20.98 300 i P     P      00 50 17.4 +1.6
      comp=Z,3.0nm,0.8s
WATA  Walderalm        21.03 300 i P     P      00 50 18.9 +2.5
      comp=Z,10nm,1.1s
SQTA  Sankt Quirin     21.25 300 i Pn    P      00 50 19.1 +0.3
      comp=Z,6.0nm,1.0s
ARTI  Arti             21.26  31   P     P      00 50 16.9 -1.7
ARTI  Arti             21.26  31   P     P      00 50 18.5 -0.1
      comp=Z,12nm,0.6s,baz=223,slow=7.0,SNR=20
      comp=Z,12nm,0.6s
ARTI  Arti             21.26  31c iP     P      00 50 17.8 -0.8
ARTI                                            00 50 36.7
ARTI                               S     S      00 54 17.4 +2.3
ARTI                               SS    SnSn   00 54 40.7 +3.7
ARTI                               pmax  pmax
      comp=Z,16nm,0.7s
KLMR  Klimovskoe       21.30   1 eP     P      00 50 16.3 -2.7
KLMR                               pmax  pmax
      comp=Z,18nm,1.6s
CLL   Collm            21.34 312   P     P      00 50 19.9 +0.3
CLL                                IAmb  IAmb   00 50 27.9
      comp=Z,10nm,1.2s
CLL   Collm            21.34 312 eP     P      00 50 20.0 +0.5
CLL                              i              00 50 23.1
CLL                                pmax  pmax
      comp=Z,4.0nm,1.2s
CLL   Collm            21.34 312 eP     P      00 50 20.0 +0.5
      comp=Z,4.0nm,1.2s
CLL                              i x     x      00 50 23.1
      comp=Z,9.0nm,1.4s
CLL                              i x     x      00 50 26.9
      comp=Z,11nm,1.2s
CLL                              i x     x      00 50 36.7
CLL                              i PPP   PPP    00 50 46.8
MOTA  Moosalm          21.35 300 i Pn    P      00 50 20.7 +0.9
      comp=Z,4.2nm,0.9s
FETA  Feichten         21.54 299 i pP    pP     00 50 24.7 +0.8
      comp=Z,3.5nm,0.7s
RETA  Reutte           21.60 301 i P     P      00 50 23.9 +1.5
      comp=Z,2.5nm,0.8s
FUORN Ofenpass-Fuorn   21.79 298   P     P      00 50 25.6 +0.9
GRA1  Grafenberg Arr   21.85 307   P     P      00 50 25.7 +0.7
GRF   Grafenberg Arr   21.85 307   P     P      00 50 25.7 +0.7
GRF                                pmax  pmax
      comp=Z,17nm,0.8s
GRF   Grafenberg Arr   21.85 307 eP     P      00 50 27.1 +2.1
      comp=Z,16nm,0.8s,baz=107,slow=9.5
GRFO  Grafenberg       21.85 307   P     P      00 50 26.5 +1.5
GRFO  Grafenberg       21.85 307   P     P      00 50 26.5 +1.5
GRFO                               pmax  pmax
      comp=Z,15nm,0.8s
DAVA  Damuels          22.16 300 epP    pP     00 50 30.1 -0.4
      comp=Z,2.6nm,0.6s
TUE   Stuetta          22.40 297   P     P      00 50 33.3 +2.2
FINES FINESS Array B   23.21 345   P     P      00 50 39.5 +0.3
      comp=Z,2.3nm,0.9s,baz=136,slow=7.7,SNR=3.9
      comp=Z,2.3nm,0.9s
KEST  Kesra            23.45 270   P     P      00 50 41.3 -0.7
      comp=Z,3.2nm,0.9s,baz=46,slow=10.0,SNR=4.4
      comp=Z,3.2nm,0.9s
SIMJ  Simiganj         23.54  82   P     P      00 50 44.0 +1.0
SIMJ                               IAmb  IAmb   00 50 49.4
      comp=Z,6.2nm,1.1s
SENIN Lac Senin/Sane   23.79 297   P     P      00 50 44.5 -1.0
SENIN                              IAmb  IAmb   00 50 48.6
      comp=Z,6.7nm,0.9s
KK31  Karatay Array    24.12  71   P     P      00 50 47.6 -0.8
KK31                               IAmb  IAmb   00 50 53.4
      comp=Z,4.8nm,0.8s
KK31  Karatay Array    24.12  71   P     P      00 50 47.6 -0.8
KK31                               pmax  pmax
      comp=Z,5.0nm,0.9s
KKAR  Karatay Array    24.12  71   P     P      00 50 47.3 -1.1
KKAR  Karatay Array    24.12  71   P     P      00 50 48.5 +0.1
KKAR                               IAmb  IAmb   00 50 53.4
      comp=Z,5.0nm,0.8s
KKAR  Karatay Array    24.12  71   P     P      00 50 47.3 -1.1
KKAR                                            00 50 48.5
KKAR                               pmax  pmax
      comp=Z,5.0nm,0.9s
ECH   Echery           24.12 301   P     P      00 50 48.2 -0.2
ECH                                IAmb  IAmb   00 50 52.3
      comp=Z,4.4nm,1.0s
ECH   Echery           24.12 301   P     P      00 50 48.2 -0.2
ECH                                pmax  pmax
      comp=Z,4.0nm,1.0s
GAR   Garm             24.48  81   P     P      00 50 52.6 +0.8
GAR                                IAmb  IAmb   00 50 57.7
      comp=Z,11nm,1.0s
KBL   Kabul            24.73  92   P     P      00 50 55.2 +1.0
KBL                                IAmb  IAmb   00 51 02.9
      comp=Z,8.8nm,1.1s
KBL   Kabul            24.73  92   P     P      00 50 55.2 +1.0
KBL                                pmax  pmax
      comp=Z,9.0nm,1.2s
WLF   Walferdange      25.03 304   P     P      00 50 57.0 +0.4
WLF                                IAmb  IAmb   00 50 59.6
      comp=Z,6.9nm,0.9s
WLF   Walferdange      25.03 304   P     P      00 50 57.0 +0.4
WLF                                pmax  pmax
      comp=Z,7.0nm,0.9s
MEM   Membach          25.32 307 dP     P      00 51 01.6 +2.4
      comp=Z,6.5nm,1.0s
BRVK  Borovoye         25.44  48   P     P      00 50 59.8 -0.5
BRVK                               IAmb  IAmb   00 51 06.2
      comp=Z,3.4nm,0.8s
BRVK  Borovoye         25.44  48d iP     P      00 50 59.4 -0.8
BRVK                               pmax  pmax
      comp=Z,2.0nm,0.6s
BVAR  Borovoye Array   25.49  48   P     P      00 51 01.4 +0.7
      comp=Z,2.6nm,0.8s,baz=248,slow=6.2,SNR=17
      comp=Z,2.6nm,0.8s
HFS   Hagfors          25.82 331   P     P      00 51 04.7 +1.1
      comp=Z,2.4nm,0.7s,baz=148,slow=14,SNR=6.5
      comp=Z,2.4nm,0.7s
ARSB  Arslanbob        26.11  75   P     P      00 51 07.8 +1.2
ARSB  Arslanbob        26.11  75   P     P      00 51 07.8 +1.2
ARSB                               pmax  pmax
      comp=Z,26nm,1.5s
AAK   Ala-Archa        27.07  72   P     P      00 51 16.7 +1.4
AAK                                IAmb  IAmb   00 51 21.1
      comp=Z,6.8nm,1.4s
AAK   Ala-Archa        27.07  72⇑iP     P      00 51 16.7 +1.4
AAK                                pmax  pmax
      comp=Z,2.0nm,1.0s
NRN   Naryn            28.34  74   P     P      00 51 27.6 +0.7
NRN                                IAmb  IAmb   00 51 32.8
      comp=Z,3.9nm,1.0s
NRN   Naryn            28.34  74   P     P      00 51 27.6 +0.7
NRN                                pmax  pmax
      comp=Z,4.0nm,1.0s
KSH   Kashi            28.67  78   P     P      00 51 29.1 -0.5
KSH                                pmax  pmax
      comp=Z,2.0nm,0.7s
KURBB Kurchatov Arra   29.91  55   P     P      00 51 40.5 +0.2
      comp=Z,4.1nm,1.0s,baz=274,slow=9.2,SNR=28
KURBB                              LR    LR     01 06 59.0
      comp=Z,110nm,20.4s,baz=125,slow=43
      comp=Z,4.1nm,1.0s
KURK  Kurchatov        29.97  55   P     P      00 51 41.0 +0.1
KURK                               IAmb  IAmb   00 51 42.8
      comp=Z,4.6nm,0.9s
KURK  Kurchatov        29.97  55d iP     P      00 51 41.2 +0.3
KURK                               pmax  pmax
      comp=Z,5.0nm,0.9s
EKA   Eskdalemuir Ar   31.78 314   P     P      00 51 55.5 -1.1
      comp=Z,0.7nm,0.8s,baz=110,slow=9.0,SNR=3.9
      comp=Z,0.7nm,0.8s
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MKAR	**Makanchi Array**	**32.31**	**63**	P	**P**	**00 52 01.9**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=269,slow=8.6,SNR=6.8						
	comp=Z,0.4nm,0.5s						
ESDC	**Sonseca Array**	**32.57**	**284**	P	**P**	**00 52 02.9**	**-1.1**
	comp=Z,2.0nm,1.1s,baz=68,slow=8.6,SNR=8.0						
	comp=Z,2.0nm,1.1s						
ZAA0	**Zalesovo Array**	**34.10**	**50**	P	**P**	**00 52 16.5**	**-0.5**
ZAA0				IAmb	IAmb	00 52 17.5	
	comp=Z,2.7nm,0.8s						
ZALV	**Zalesovo Beam**	**34.10**	**50**	P	**P**	**00 52 16.6**	**-0.4**
ZALV	**Zalesovo Beam**	**34.10**	**50**	P	**P**	**00 52 16.2**	**-0.8**
	comp=Z,2.4nm,0.7s,baz=270,slow=5.9,SNR=8.2						
	comp=Z,2.4nm,0.7s						
ZALV	**Zalesovo Beam**	**34.10**	**50**	P	**P**	**00 52 16.6**	**-0.4**
WMQ	**Urumqi**	**36.45**	**67**	*e*P	**P**	**00 52 40.4**	**+2.9**
SONM	**Songino Array**	**48.25**	**57**	P	**P**	**00 54 14.7**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=275,slow=8.6,SNR=3.0						
	comp=Z,0.5nm,0.7s						
ULN	**Ulaanbaatar**	**48.66**	**57**	⇑*i*P	**P**	**00 54 17.1**	**+0.3**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
DBIC	**Dimbokro**	**50.93**	**242**	LR	LR	01 17 31.0	
	comp=Z,249nm,18.7s,baz=207,slow=38						
PZH	**PanZhiHua**	**53.50**	**84**	P	**P**	**00 54 55.6**	**+2.2**
HHC	**Hu-ho-hao-te**	**54.16**	**63**	*e*P	**P**	**00 54 59.8**	**+1.8**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**55.74**	**94**	P	**P**	**00 55 08.8**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=303,slow=6.3,SNR=2.1						
	comp=Z,1.0nm,0.4s						
KLR	**Kul'dur**	**63.15**	**47**	*e*P	**P**	**00 56 00.3**	**-0.1**
KLR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SEY	**Seymchan**	**65.05**	**28**	*e*P	**P**	**00 56 13.8**	**+1.2**
SEY				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SCHQ	**Schefferville**	**66.52**	**323**	P	**P**	**00 56 21.8**	**-0.5**
	comp=Z,1.4nm,0.6s,baz=59,slow=13,SNR=3.7						
	comp=Z,1.4nm,0.6s						
KSRS	**Korea Array**	**66.93**	**60**	P	**P**	**00 56 24.2**	**-0.9**
	comp=Z,1.0nm,0.5s,baz=301,slow=8.2,SNR=6.2						
	comp=Z,1.0nm,0.5s						
BLKN	**Baker Lake**	**70.45**	**341**	P	**P**	**00 56 46.9**	**+0.3**
BLKN				IAmb	IAmb	00 56 47.2	
	comp=Z,2.3nm,0.7s						
C27K	**Jago River**	**71.09**	**1**	P	**P**	**00 56 50.4**	**-0.1**
E29M	**Blow River**	**72.32**	**359**	P	**P**	**00 56 58.6**	**+0.8**
E18K	**Tukpahlearik C**	**72.32**	**8**	P	**P**	**00 56 58.2**	**+0.3**
E27K	**Coleen River**	**72.55**	**0**	P	**P**	**00 57 00.1**	**+0.8**
E27K				IAmb	IAmb	00 57 00.9	
	comp=Z,1.5nm,0.8s						
BMAR	**Burnt Mountain**	**73.29**	**1**	P	**P**	**00 57 04.0**	**+0.3**
G31M	**Satah River**	**73.68**	**357**	P	**P**	**00 57 05.6**	**-0.3**
G31M				IAmb	IAmb	00 57 38.2	
	comp=Z,5.1nm,1.2s						
G27K	**Doyon Strip**	**73.94**	**0**	P	**P**	**00 57 08.1**	**+0.5**
G27K				IAmb	IAmb	00 57 09.6	
	comp=Z,2.6nm,0.9s						
IMAR	**Indian Mountai**	**74.33**	**5**	P	**P**	**00 57 09.6**	**-0.2**
H23K	**Yukon River**	**74.73**	**3**	P	**P**	**00 57 13.3**	**+1.1**
H23K				IAmb	IAmb	00 57 14.2	
	comp=Z,3.8nm,1.1s						
I30M	**Mount Dempster**	**75.46**	**358**	P	**P**	**00 57 16.2**	**-0.3**
YKA	**Yellowknife Ar**	**76.01**	**348**	P	**P**	**00 57 19.7**	**+0.2**
	comp=Z,1.3nm,0.8s,baz=23,slow=6.0,SNR=5.3						
	comp=Z,1.3nm,0.8s						
J20K	**Nowinta River**	**76.09**	**6**	P	**P**	**00 57 20.6**	**+0.7**
J30M	**Hart River**	**76.11**	**358**	P	**P**	**00 57 20.4**	**+0.3**
J30M				IAmb	IAmb	00 57 21.2	
	comp=Z,2.2nm,0.7s						
K29M	**Barlow Dome**	**76.87**	**358**	P	**P**	**00 57 25.6**	**+1.1**
K29M				IAmb	IAmb	00 57 29.9	
	comp=Z,5.7nm,1.5s						
CAST	**Castle Rocks**	**76.99**	**5**	P	**P**	**00 57 25.1**	**+0.1**
CAST				IAmb	IAmb	00 57 26.0	
	comp=Z,3.7nm,0.9s						
BCAR	**Beaver Creek A**	**77.70**	**0**	P	**P**	**00 57 28.9**	**-0.2**
M29M	**Somme Creek**	**78.29**	**359**	P	**P**	**00 57 32.5**	**0.0**
SCM	**Sheep Creek Mo**	**78.82**	**3**	P	**P**	**00 57 35.9**	**+0.6**
SCM	**Sheep Creek Mo**	**78.82**	**3**	P	**P**	**00 57 35.9**	**+0.6**
SCM				pmax	pmax		
	comp=Z,6.0nm,0.8s						
QSPA	**South Pole Qui**	**129.41**	**180**	PKPdf	**PKPdf**	**01 04 38.8**	**-1.5**
QSPA	**South Pole Qui**	**129.41**	**180**	PKP	**PKPdf**	**01 04 38.7**	**-1.6**
	comp=Z,1.1nm,1.1s,baz=173,slow=1.8,SNR=1.8						

WEL 19 00:48:58.6±1.1**, 42°S**±5°×**17°3E**±°**, h76**^{km}±8^{km}**, M3.2**/25**, ML3.3**/6**, MLv3.2**/25**, Error ellipse: s-maj=7.6km s-min=6.1km az=33.8, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATW	**Matariki Wadsw**	**0.12**	**316**	P	Pn	00 49 11.0	+1.4
MATW				S	Sn	00 49 19.9	+2.2
MRNZ	**Matariki Terra**	**0.12**	**340**	P	Pn	00 49 11.0	+1.4
MRNZ				S	Sn	00 49 20.1	+2.3
THZ	**Tophouse**	**0.26**	**165**	P	Pn	00 49 11.3	+1.0
THZ				S	Sn	00 49 21.1	+2.3
MOTS	**Motueka DOC wo**	**0.42**	**21**	P	Pn	00 49 12.7	+1.5
TKNZ	**Takaka Hill**	**0.49**	**13**	P	Pn	00 49 13.0	+1.1
TKNZ				S	Sn	00 49 23.8	+2.1
NNZ	**Nelson**	**0.52**	**55**	P	Pn	00 49 13.0	+0.9
NNZ				S	Sn	00 49 24.3	+2.2
KASC	**Karamea School**	**0.59**	**297**	P	Pn	00 49 14.2	+1.5
KASC				S	Sn	00 49 25.7	+2.5
QRZ	**Quartz Range**	**0.72**	**343**	P	Pn	00 49 15.3	+1.2
QRZ				S	Sn	00 49 27.4	+1.7
DSZ	**Denniston Nort**	**0.79**	**253**	P	Pn	00 49 15.7	+0.7
DSZ				S	Sn	00 49 28.0	+0.9
BSWZ	**Blackbirch Sta**	**0.82**	**104**	P	Pn	00 49 15.9	+0.7
BSWZ				S	Sn	00 49 30.0	+2.4
TUWZ	**Tuamarina**	**0.85**	**85**	P	Pn	00 49 16.6	+1.0
TUWZ				S	Sn	00 49 29.8	+1.5
KHZ	**Kahutara**	**1.05**	**149**	P	Pn	00 49 18.1	+0.1
CMWZ	**Cape Campbell**	**1.07**	**103**	P	Pn	00 49 20.6	+2.3
DUWZ	**D’Urville Isla**	**1.10**	**50**	P	Pn	00 49 19.5	+0.9
TCW	**Tory Channel**	**1.14**	**75**	P	Pn	00 49 19.5	+0.4
LTZ	**Lake Taylor**	**1.33**	**198**	P	Pn	00 49 21.7	+0.1
GVZ	**Greta Valley S**	**1.46**	**174**	P	Pn	00 49 22.9	-0.3
WEL	**Wellington**	**1.49**	**82**	P	Pn	00 49 22.9	-0.6
BHW	**Baring Head**	**1.55**	**87**	P	Pn	00 49 23.1	-1.2
INZ	**Inchbonnie**	**1.58**	**220**	P	Pn	00 49 25.6	+0.8
AMCZ	**Amberley**	**1.67**	**184**	P	Pn	00 49 25.3	-0.6
KIW	**Kapiti Island**	**1.71**	**68**	P	Pn	00 49 26.1	-0.4
MSWZ	**Moikau Station**	**1.83**	**88**	P	Pn	00 49 26.4	-1.8
PLWZ	**Palliser**	**1.83**	**93**	P	Pn	00 49 26.4	-1.7
OXZ	**Oxford**	**1.90**	**197**	P	Pn	00 49 27.9	-1.1
OGWZ	**Otaki Gorge**	**1.91**	**69**	P	Pn	00 49 28.2	-1.0
PAWZ	**Paruwai Farm**	**1.97**	**87**	P	Pn	00 49 27.9	-2.1
MTW	**Mount Morrison**	**2.06**	**81**	P	Pn	00 49 29.0	-2.0
HOWZ	**Holdsworth Sta**	**2.13**	**74**	P	Pn	00 49 30.3	-1.8
WVZ	**Waitaha Valley**	**2.19**	**224**	P	Pn	00 49 32.9	0.0
MQZ	**McQueen’s Vall**	**2.19**	**183**	P	Pn	00 49 30.9	-2.0
OKCZ	**Okains Bay**	**2.21**	**175**	P	Pn	00 49 32.0	-1.2
MHCZ	**Mount Hutt**	**2.22**	**204**	P	Pn	00 49 32.0	-1.3
NMEZ	**Namu Road**	**2.25**	**21**	P	Pn	00 49 35.1	+1.4
MRZ	**Mangatainoka R**	**2.26**	**69**	P	Pn	00 49 32.0	-1.8
RACZ	**Rakaia**	**2.27**	**192**	P	Pn	00 49 32.3	-1.6
AKCZ	**Akaroa Harbour**	**2.36**	**178**	P	Pn	00 49 34.1	-1.1
NBEZ	**Newall Road No**	**2.38**	**20**	P	Pn	00 49 36.9	+1.4
KHEZ	**Kahui Hut**	**2.40**	**23**	P	Pn	00 49 37.0	+1.2
PREZ	**Palmer Road**	**2.40**	**26**	P	Pn	00 49 37.0	+1.2
TIWZ	**Tintock**	**2.43**	**73**	P	Pn	00 49 34.0	-2.2
PKE	**Pukeiti**	**2.48**	**22**	P	Pn	00 49 38.3	+1.4
WACZ	**Wakanui South**	**2.53**	**196**	P	Pn	00 49 35.9	-1.5
DREZ	**Durham Road**	**2.55**	**25**	P	Pn	00 49 38.8	+1.0
GCSZ	**Gaunt Creek Bo**	**2.58**	**225**	P	Pn	00 49 38.2	+0.1

WEL 19 00:49:22.3±1.2**, 40°S**±4°×**17°6E**±°**, h42**^{km}±9^{km}**, M1.8**/10**, ML1.9**/7**, MLv1.8**/10**, Error ellipse: s-maj=5.7km s-min=4.9km az=122.0, confirmed, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVHZ	**Dannevirke**	**0.11**	**201**	P	Pn	00 49 30.8	+1.4
DVHZ				S	Sn	00 49 36.6	+2.4
WPHZ	**Waipukurau**	**0.22**	**52**	P	Pn	00 49 31.7	+1.6
WPHZ				S	Sn	00 49 38.5	+3.1
TSZ	**Takapari Road**	**0.24**	**305**	P	Pn	00 49 31.8	+1.5
TSZ				S	Sn	00 49 38.3	+2.5
PNHZ	**Pukenui**	**0.28**	**357**	P	Pn	00 49 32.2	+1.5
PNHZ				S	Sn	00 49 39.2	+2.7
WDPS	**Woodville Poli**	**0.30**	**242**	P	Pn	00 49 32.3	+1.5
WDPS				S	Sn	00 49 39.7	+3.0
ANWZ	**Angora Road**	**0.33**	**143**	P	Pn	00 49 32.5	+1.4
ANWZ				S	Sn	00 49 40.1	+2.9
PRHZ	**Porangahau**	**0.33**	**102**	P	Pn	00 49 32.4	+1.3
PRHZ				S	Sn	00 49 39.9	+2.6
POWZ	**Post Office Ro**	**0.39**	**240**	P	Pn	00 49 33.2	+1.4
POWZ	**Post Office Ro**	**0.39**	**240**	P	Pn	00 49 33.2	+1.4
PRWZ	**Pori Road**	**0.40**	**208**	P	Pn	00 49 33.4	+1.4
PRWZ				S	Sn	00 49 41.1	+2.3
KRHZ	**Kereru**	**0.57**	**12**	P	Pn	00 49 35.1	+1.0
KAHZ	**Kahuranaki**	**0.65**	**52**	P	Pn	00 49 36.3	+1.1
KWHZ	**Kaweka Forest**	**0.79**	**12**	P	Pn	00 49 38.1	+1.0
MCHZ	**McNeill Hill**	**0.84**	**26**	P	Pn	00 49 38.8	+1.1
MOVZ	**Moawhango**	**0.87**	**336**	P	Pn	00 49 39.6	+1.4
WNVZ	**Wahianoa**	**0.99**	**331**	P	Pn	00 49 41.8	+1.8
BKZ	**Black Stump Fm**	**1.05**	**12**	P	Pn	00 49 41.3	+0.6
FWVZ	**Far West T-bar**	**1.07**	**331**	P	Pn	00 49 40.7	-0.4
SNVZ	**South Ngauruho**	**1.10**	**336**	P	Pn	00 49 43.2	+1.7
OTVZ	**Oturere**	**1.12**	**337**	P	Pn	00 49 43.1	+1.4
ETVZ	**East Tongariro**	**1.13**	**340**	P	Pn	00 49 43.5	+1.7
NNVZ	**North Ngauruho**	**1.16**	**336**	P	Pn	00 49 43.9	+1.7
NTVZ	**North Tongarir**	**1.18**	**339**	P	Pn	00 49 44.0	+1.6

*IDC **19** 00:52:04.0±1.8, 30°.95S×177°.76W, h0^{km}, mb4.0/3, mbtmp3.9/4, ML3.4/1, MS3.8/2, Error ellipse: s-maj=44.0km s-min=37.7km az=69.0*

*NEIC **19** 00:52:05.7±2.5, 31°.0S±0°.1×177°.52W±0°.07, h10^{km}±2^{km}, mb4.5/7, Error ellipse: s-maj=19.5km s-min=10.1km az=1.0*

ISC 19 00:52:08.2±1.2**, 31°.17S**±0°.10×**177°.7W**±0°.2**, h27**^{km}**, n20,** σ**1**^{s}**85**/19**, mb4.4**/7**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.92**	**355**	Pn	**Pn**	**00 52 36.2**	**-2.8**
URZ	**Urewera**	**8.25**	**210**	Pn	**Pn**	**00 54 07.4**	**+1.4**
	0.5nm,0.3s,baz=346,slow=23,SNR=1.7						
URZ				Sn	**Sn**	**00 55 33.7**	**-4.5**
	1.5nm,0.3s,baz=301,slow=22,SNR=8.0						
	3.3nm,0.6s						
RTZ	**Ruatahuna**	**8.60**	**209**	Pn	**Pn**	**00 54 08.6**	**-2.4**
BKZ	**Black Stump Fm**	**9.27**	**209**	Pn	**Pn**	**00 54 19.7**	**-0.4**
THZ	**Tophouse**	**12.97**	**213**	Pn	**Pn**	**00 55 11.2**	**+0.5**
BBOO	**Buckleboo**	**38.98**	**255**	P	**P**	**00 59 35.5**	**+3.3**
PMG	**Port Moresby**	**39.14**	**296**	LR	LR	01 14 41.4	
	comp=Z,125nm,18.2s,baz=326,slow=35						
COEN	**Coen**	**39.70**	**287**	P	**P**	**00 59 39.4**	**+1.0**
COEN				IAmb	IAmb	00 59 48.4	
	comp=Z,27nm,1.5s						
ASAR	**Alice Springs**	**43.30**	**268**	P	**P**	**01 00 07.5**	**-0.4**
	comp=Z,1.9nm,0.8s,baz=105,slow=7.9,SNR=16						
	comp=Z,1.9nm,0.8s						
WR8	**Warramunga Arr**	**44.22**	**273**	P	**P**	**01 00 14.9**	**-0.3**
WR8				IAmb	IAmb	01 00 49.9	
	comp=Z,7.8nm,1.2s						
WB2	**Warramunga Arr**	**44.35**	**273**	P	**P**	**01 00 15.7**	**-0.6**
WB2				IAmb	IAmb	01 00 34.3	
	comp=Z,10nm,1.3s						
WRA	**Warramunga Arr**	**44.36**	**273**	P	**P**	**01 00 17.0**	**+0.6**
WRA	**Warramunga Arr**	**44.36**	**273**	P	**P**	**01 00 16.2**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=112,slow=7.8,SNR=9.9						
	comp=Z,1.3nm,0.5s						
WB0	**Warramunga Arr**	**44.38**	**273**	P	**P**	**01 00 17.2**	**+0.6**
WB0				IAmb	IAmb	01 00 30.0	
	comp=Z,7.2nm,1.1s						
QSPA	**South Pole Qui**	**58.94**	**180**	P	**P**	**01 02 06.3**	**+1.4**
QSPA				IAmb	IAmb	01 02 15.2	
	comp=Z,2.8nm,0.9s						
QSPA	**South Pole Qui**	**58.94**	**180**	P	**P**	**01 02 06.3**	**+1.4**
	comp=Z,1.2nm,1.0s,baz=63,slow=2.3,SNR=2.7						
	comp=Z,1.2nm,1.0s						
LPAZ	**La Paz**	**97.62**	**114**	LR	LR	01 39 23.9	
	comp=Z,37nm,21.5s,baz=55,slow=29						
KURBB	**Kurchatov Arra**	**121.78**	**313**	PKP	**PKPdf**	**01 10 58.3**	**-0.9**
	comp=Z,0.2nm,0.6s,baz=106,slow=3.5,SNR=2.7						
FINES	**FINESS Array B**	**145.94**	**340**	PKPdf	**PKPdf**	**01 11 44.0**	**+0.2**
FINES	**FINESS Array B**	**145.94**	**340**	PKPbc	**PKPdf**	**01 11 44.0**	**+0.2**
	comp=Z,2.6nm,0.9s,baz=64,slow=4.4,SNR=5.8						

IDC 19 00:56:36.1±2.3**, 30°.89S**×**177°.74W, h0**^{km}**, mb3.7**/3**, mbtmp3.7**/3**, Error ellipse: s-maj=65.4km s-min=42.1km az=40.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**8.49**	**209**	Sn	Sn	01 00 01.3	-15
	1.9nm,0.3s,baz=312,slow=23,SNR=8.0						
ASAR	**Alice Springs**	**43.30**	**267**	P	P	01 04 39.9	-0.1
	0.5nm,0.6s,baz=104,slow=7.4,SNR=8.3						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**44.34**	**273**	P	P	01 04 48.1	-0.2
	0.5nm,0.5s,baz=114,slow=7.7,SNR=6.6						
	0.5nm,0.5s						
QSPA	**South Pole Qui**	**59.22**	**180**	P	P	01 06 38.9	-0.1
	1.6nm,1.2s,baz=333,slow=2.3,SNR=1.6						
	1.6nm,1.2s						
FINES	**FINESS Array B**	**145.68**	**340**	PKPbc	PKPdf	01 16 15.3	-0.5
	1.0nm,0.8s,baz=64,slow=3.2,SNR=3.5						

*IDC **19** 01:05:54.2±0.7, 31°.11S×177°.50W, h0^{km}, mb4.2/7, mbtmp4.2/9, ML3.7/2, MS3.9/7, Error ellipse: s-maj=26.0km s-min=24.8km az=124.0*

*NEIC **19** 01:05:57.2±2.2, 31°.0S±0°.1×177°.7W±0°.2, h10^{km}±1^{km}, mb4.7/11, Error ellipse: s-maj=31.5km s-min=17.8km az=82.0*

ISC 19 01:05:56.2±0.6**, 31°.20S**±0°.05×**177°.7W**±0°.1**, h10**^{km}**, n92,** σ**1**^{s}**91**/83**, mb4.4**/14**, MS3.9**/5**, 3C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**1.94**	**355**	P	**Pn**	**01 06 27.3**	**-1.9**
GLKZ				S	**Sn**	**01 06 50.9**	**-2.8**
RAO	**Raoul Island**	**1.95**	**355**	Pn	**Pn**	**01 06 27.5**	**-1.9**
RIZ	**Raoul Island**	**1.96**	**355**	P	**Pn**	**01 06 28.0**	**-1.5**
MXZ	**Matakaoa Point**	**7.14**	**206**	Pn	Pn	01 07 37.9	-2.8
MXZ	**Matakaoa Point**	**7.14**	**206**	P	Pn	01 07 38.4	-2.3
MXZ				S	**Sn**	**01 08 59.6**	**-2.3**
WMGZ	**Waiomatatini S**	**7.33**	**205**	P	Pn	01 07 40.4	-2.9
WMGZ				S	**Sn**	**01 09 05.8**	**-0.7**
HAZ	**Te Kaha**	**7.52**	**208**	P	**Pn**	**01 07 45.0**	**-0.8**
HAZ				S	**Sn**	**01 09 10.8**	**-0.4**
RUGZ	**Raukumara Rang**	**7.74**	**208**	P	Pn	01 07 47.0	-2.0
RUGZ				S	**Sn**	**01 09 14.6**	**-2.2**
TWGZ	**Tauwhareparae**	**7.80**	**206**	S	**Sn**	**01 09 16.3**	**-2.1**
CNGZ	**Carnagh Statio**	**8.00**	**204**	P	Pn	01 07 48.0	-4.5
CNGZ				S	**Sn**	**01 09 21.7**	**-1.3**
TKGZ	**Te Karaka**	**8.09**	**206**	P	Pn	01 07 51.0	-2.6
TKGZ				S	**Sn**	**01 09 21.8**	**-3.4**
MWZ	**Matawai**	**8.12**	**208**	P	Pn	01 07 51.5	-2.7
MWZ				S	**Sn**	**01 09 23.4**	**-2.6**
WCZ	**Waipu Caves**	**8.13**	**232**	P	Pn	01 08 01.4	+7.1
URZ	**Urewera**	**8.22**	**210**	Pn	Pn	01 07 52.9	-2.7
	2.1nm,0.3s,baz=38,slow=6.6,SNR=9.5						
URZ				Sn	**Sn**	**01 09 25.1**	**-3.4**
	5.7nm,0.3s,baz=157,slow=20,SNR=9.6						
URZ	**Urewera**	**8.22**	**210**	P	**Pn**	**01 07 54.8**	**-0.8**
URZ				S	**Sn**	**01 09 25.2**	**-3.4**
OUZ	**Omahuta**	**8.31**	**239**	P	Pn	01 08 03.7	+7.0
RIGZ	**Rimuhau**	**8.35**	**205**	S	**Sn**	**01 09 29.0**	**-2.7**
PRGZ	**Paritu Road**	**8.50**	**204**	S	**Sn**	**01 09 31.6**	**-3.8**
MUGZ	**Murupara**	**8.55**	**210**	S	**Sn**	**01 09 32.3**	**-4.3**
SNGZ	**Shannon Statio**	**8.58**	**207**	P	Pn	01 07 56.6	-3.9
SNGZ				S	**Sn**	**01 09 33.8**	**-3.5**
RTZ	**Ruatahuna**	**8.58**	**209**	Pn	**Pn**	**01 07 59.3**	**-1.2**
RTZ	**Ruatahuna**	**8.58**	**209**	P	**Pn**	**01 08 00.2**	**-0.3**
RTZ				S	**Sn**	**01 09 34.8**	**-2.6**
MHGZ	**Mahia Peninsul**	**8.70**	**203**	P	Pn	01 07 57.5	-4.6
MHGZ				S	**Sn**	**01 09 37.2**	**-3.0**
NMHZ	**Naumai**	**9.06**	**208**	P	Pn	01 08 03.4	-3.7
NMHZ				S	**Sn**	**01 09 46.6**	**-2.6**
KAHZ	**Kahuranaki**	**9.63**	**206**	P	Pn	01 08 10.2	-4.7
KAHZ				S	Sn	01 09 58.9	-4.4
NGZ	**Ngauruhoe**	**9.65**	**213**	S	**Sn**	**01 10 00.2**	**-3.6**
KRHZ	**Kereru**	**9.70**	**208**	S	Sn	01 09 58.6	-6.3
PXZ	**Pawanui**	**9.85**	**205**	S	Sn	01 10 01.9	-6.6
PNHZ	**Pukenui**	**10.00**	**208**	P	**Pn**	**01 08 19.0**	**-1.0**
PNHZ				S	Sn	01 10 04.3	-7.9
ANWZ	**Angora Road**	**10.37**	**205**	S	Sn	01 10 11.8	-9.3
BFZ	**Birch Farm**	**10.64**	**206**	P	Pn	01 08 23.4	-5.3
BFZ				S	Sn	01 10 19.8	-8.2
MRZ	**Mangatainoka R**	**10.88**	**208**	P	Pn	01 08 28.5	-3.5
MRZ				S	Sn	01 10 24.3	-10
CTZ	**Chatham Island**	**12.54**	**176**	P	Pn	01 08 50.3	-4.3
CTZ				S	Sn	01 11 01.6	-13
MSVF	**Nonsavu**	**13.95**	**343**	LR	LR	01 13 48.8	
	comp=Z,278nm,18.6s,baz=203,slow=34						
RPZ	**Rata Peaks**	**15.32**	**212**	Pn	**Pn**	**01 09 32.1**	**-0.5**
	0.9nm,0.3s,baz=41,slow=3.8,SNR=3.9						
	5.0nm,0.7s						
DZM	**Mont Dzumac**	**16.81**	**299**	Pn	**P**	**01 09 59.8**	**+5.7**
DZM	**Mont Dzumac**	**16.81**	**299**	Pn	**P**	**01 09 54.7**	**+0.6**
	0.1nm,0.3s,baz=85,slow=19,SNR=6.0						
DZM				LR	LR	01 15 31.5	
	comp=Z,541nm,18.2s,baz=180,slow=34						
	4.0nm,1.0s						
EIDS	**Eidsvold**	**28.03**	**274**	P	**P**	**01 11 47.8**	**+0.2**
EIDS				IAmb	IAmb	01 12 01.8	
	comp=Z,8.0nm,1.1s						
CTAO	**Charters Tower**	**34.17**	**280**	P	**P**	**01 12 42.7**	**+0.8**
CTAO				IAmb	IAmb	01 12 51.8	
	comp=Z,9.8nm,0.6s						
STKA	**Stephens Creek**	**34.54**	**258**	P	**P**	**01 12 46.5**	**+1.6**
STKA	**Stephens Creek**	**34.54**	**258**	P	**P**	**01 12 46.6**	**+1.7**
	comp=Z,2.5nm,0.5s,baz=124,slow=10,SNR=6.3						
STKA				LR	LR	01 26 04.8	
	comp=Z,207nm,18.1s,baz=59,slow=35						
	comp=Z,2.5nm,0.5s						
BBOO	**Buckleboo**	**38.99**	**255**	P	**P**	**01 13 22.3**	**-0.6**
BBOO				IAmb	IAmb	01 13 27.9	
	comp=Z,40nm,1.4s						
PMG	**Port Moresby**	**39.17**	**296**	LR	LR	01 26 20.2	
	comp=Z,102nm,21.4s,baz=160,slow=31						
ASAR	**Alice Springs**	**43.31**	**268**	P	**P**	**01 13 58.9**	**+0.3**
ASAR	**Alice Springs**	**43.31**	**268**	P	**P**	**01 13 59.2**	**+0.7**
	comp=Z,3.5nm,0.6s,baz=109,slow=7.8,SNR=22						
ASAR				PcP	**PcP**	**01 15 49.0**	**+1.5**
	comp=Z,0.5nm,0.7s,baz=91,slow=3.4,SNR=1.6						
ASAR				ScP	**ScP**	**01 19 39.5**	**+0.7**
	comp=Z,1.6nm,0.9s,baz=107,slow=5.1,SNR=8.0						
	comp=Z,3.5nm,0.6s						
WR8	**Warramunga Arr**	**44.23**	**273**	P	**P**	**01 14 05.8**	**-0.2**
WR8				IAmb	IAmb	01 14 22.2	
	comp=Z,7.6nm,0.8s						
WRA	**Warramunga Arr**	**44.38**	**273**	P	**P**	**01 14 06.0**	**-1.1**
WRA	**Warramunga Arr**	**44.38**	**273**	P	**P**	**01 14 07.5**	**+0.4**
	comp=Z,2.6nm,0.3s,baz=111,slow=8.0,SNR=45						
WRA				LR	LR	01 32 21.7	
	comp=Z,162nm,18.2s,baz=350,slow=36						
	comp=Z,2.6nm,0.3s						
WB0	**Warramunga Arr**	**44.40**	**273**	P	**P**	**01 14 06.4**	**-0.9**
WB0				IAmb	IAmb	01 14 23.9	
	comp=Z,12nm,0.9s						
CASY	**Casey**	**54.55**	**208**	P	**P**	**01 15 24.5**	**+0.4**
QSPA	**South Pole Qui**	**58.91**	**180**	P	**P**	**01 15 56.9**	**+1.6**
QSPA				IAmb	IAmb	01 16 20.7	
	comp=Z,11nm,0.9s						
QSPA	**South Pole Qui**	**58.91**	**180**	P	**P**	**01 15 56.2**	**+1.0**
	comp=Z,2.2nm,1.0s,baz=356,slow=1.2,SNR=6.9						
	comp=Z,2.2nm,1.0s						
KAPI	**Kappang**	**63.99**	**280**	LR	LR	01 43 48.6	
	comp=Z,70nm,18.4s,baz=98,slow=35						
MAW	**Mawson**	**71.64**	**201**	P	**P**	**01 17 17.9**	**+0.3**
	comp=Z,1.8nm,0.8s,baz=146,slow=3.6,SNR=1.7						
	comp=Z,1.8nm,0.8s						
TROLL	**Troll, Antarti**	**77.07**	**180**	⇑P	**P**	**01 17 50.0**	**+0.6**
	comp=Z,64nm,0.9s						
SNAA	**Sanae**	**77.35**	**178**	P	**P**	**01 17 51.8**	**+1.0**
SNAA				IAmb	IAmb	01 18 13.0	
	comp=Z,4.1nm,0.8s						
SNAA	**Sanae**	**77.35**	**178**	P	**P**	**01 17 50.8**	**0.0**
	comp=Z,1.2nm,0.9s,baz=183,slow=12,SNR=2.1						
	comp=Z,1.2nm,0.9s						
VNA3	**Neumayer Olymp**	**77.49**	**176**	⇑P	**P**	**01 17 51.5**	**-0.1**
	comp=Z,2.0nm,0.6s						
VNA2	**Neumayer--Watz**	**77.93**	**177**	⇑P	**P**	**01 17 54.0**	**0.0**
	comp=Z,1.4nm,0.7s,baz=192,slow=5.9						
PFO	**Pinyon Flats O**	**86.57**	**47**	LR	LR	01 57 07.7	
	comp=Z,52nm,18.1s,baz=55,slow=36						
NVAR	**Mina Array Bea**	**88.66**	**43**	P	**P**	**01 18 49.0**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=240,slow=4.2,SNR=2.6						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**118.47**	**310**	PKP	**PKPdf**	**01 24 42.5**	**-1.3**
	comp=Z,0.6nm,0.9s,baz=214,slow=1.0,SNR=4.9						
KURBB	**Kurchatov Arra**	**121.81**	**313**	PKP	**PKPdf**	**01 24 49.4**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=104,slow=1.8,SNR=12						
KKAR	**Karatay Array**	**125.72**	**303**	PKPdf	**PKPdf**	**01 24 58.8**	**+0.8**
BVAR	**Borovoye Array**	**127.15**	**315**	PKP	**PKPdf**	**01 24 59.4**	**-0.9**
	comp=Z,1.7nm,0.8s,baz=101,slow=4.6,SNR=8.4						
ARCES	**ARCESS Array B**	**139.42**	**348**	PKhKP	PKPpre	01 25 15.4	
	comp=Z,0.7nm,0.7s,baz=19,slow=1.9,SNR=3.8						
KBZ	**Khabaz**	**145.76**	**303**	PKPbc	**PKPdf**	**01 25 35.4**	**+0.6**
	comp=Z,1.3nm,0.4s,baz=70,slow=5.7,SNR=3.4						
FIA1	**FINESS Array S**	**145.98**	**340**	PKPdf	**PKPdf**	**01 25 34.4**	**-0.3**
FINES	**FINESS Array B**	**145.98**	**340**	PKPdf	**PKPdf**	**01 25 34.4**	**-0.3**
FINES	**FINESS Array B**	**145.98**	**340**	PKPbc	**PKPdf**	**01 25 34.2**	**-0.4**
	comp=Z,11nm,0.8s,baz=48,slow=3.6,SNR=28						
GURO	**Guroymak-BITLI**	**146.78**	**294**		**PKPbc**	**01 25 38.8**	**+0.1**
NC303	**NORSAR Array S**	**149.38**	**351**	PKPbc	**PKPbc**	**01 25 43.8**	**-1.0**
NB2	**NORSAR Subarra**	**149.58**	**351**	PKP	**PKPbc**	**01 25 45.1**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**149.58**	**351**	PKPbc	**PKPbc**	**01 25 44.7**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=16,slow=2.5,SNR=3.5						
HFS	**Hagfors**	**150.08**	**349**	PKPbc	**PKPdf**	**01 25 44.6**	**+3.1**
	comp=Z,0.7nm,0.5s,baz=335,slow=6.4,SNR=5.9						
NACGM	**Naroch**	**150.60**	**331**	*e*PKP	**PKPdf**	**01 25 43.8**	**+1.4**
	comp=Z,6.0nm,0.9s,baz=46						
PABE	**Paberze**	**151.28**	**334**	PKPbc	**PKPbc**	**01 25 48.2**	**-1.2**
MMAI	**Mount Meron Ar**	**151.95**	**283**	PKPbc	**PKPbc**	**01 25 52.5**	**+0.7**
	comp=Z,1.2nm,0.4s,baz=93,slow=6.1,SNR=6.6						
AKASG	**Malin Array Be**	**152.08**	**322**	PKPbc	**PKPbc**	**01 25 50.6**	**-0.8**
AKASG	**Malin Array Be**	**152.08**	**322**	PKPbc	**PKPbc**	**01 25 51.1**	**-0.3**
	comp=Z,3.4nm,0.7s,baz=52,slow=2.7,SNR=12						
AKBB	**Malin Array Si**	**152.08**	**322**	PKPbc	**PKPbc**	**01 25 51.1**	**-0.3**
KIEV	**Kiev**	**152.09**	**322**	PKPbc	**PKPbc**	**01 25 50.7**	**-0.7**
BRTR	**Keskin Array B**	**153.19**	**297**	PKPbc	**PKPbc**	**01 25 52.4**	**-2.1**
BRTR	**Keskin Array B**	**153.19**	**297**	PKPbc	**PKPbc**	**01 25 54.1**	**-0.4**
	comp=Z,1.9nm,1.1s,baz=174,slow=1.4,SNR=4.3						
CLL	**Collm**	**158.40**	**342**	*e*PKPab	**PKPab**	**01 26 29.0**	**+1.1**
CONA	**Conrad Observa**	**160.34**	**332**	*e*PKP	**PKPab**	**01 26 39.9**	**+3.3**
	comp=Z,2.7nm,1.2s						
RONA	**Rosalia, Austr**	**160.34**	**331**	*i* PKP	**PKPab**	**01 26 34.7**	**-1.9**
	comp=Z,0.8nm,0.8s						
MOA	**Molln**	**161.02**	**335**	*e*PKP	**PKPab**	**01 26 42.5**	**+3.1**
	comp=Z,2.2nm,1.3s						
SOKA	**Soboth**	**161.68**	**331**	*e*PKP	**PKPab**	**01 26 45.4**	**+2.9**
	comp=Z,1.6nm,1.1s						
MOTA	**Moosalm**	**162.51**	**340**	*e*PKP	**PKPab**	**01 26 48.1**	**+2.0**
	comp=Z,3.3nm,0.9s						
DAVA	**Damuels**	**162.91**	**342**	*e*PKP	**PKPab**	**01 26 51.0**	**+3.2**
	comp=Z,4.0nm,1.0s						
FETA	**Feichten**	**162.92**	**340**	*e*PKP	**PKPab**	**01 26 47.3**	**-0.6**
	comp=Z,1.1nm,0.6s						

IDC 19 01:11:22.2±2.1**, 30°.46S**×**177°.93W, h0**^{km}**, mb3.8**/3**, mbtmp3.8**/3**, Error ellipse: s-maj=60.8km s-min=38.5km az=45.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**8.79**	**206**	Sn	Sn	01 14 51.9	-18
	0.6nm,0.3s,baz=160,slow=14,SNR=1.7						
ASAR	**Alice Springs**	**43.17**	**267**	P	P	01 19 24.8	-0.2
	0.4nm,0.5s,baz=103,slow=7.5,SNR=2.0						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**44.16**	**272**	P	P	01 19 32.9	-0.1
	0.9nm,0.4s,baz=112,slow=7.9,SNR=12						
	0.9nm,0.4s						
QSPA	**South Pole Qui**	**59.65**	**180**	P	P	01 21 27.9	-0.2
	1.6nm,1.1s,baz=331,slow=1.5,SNR=5.8						
	1.6nm,1.1s						
FINES	**FINESS Array B**	**145.22**	**340**	PKPbc	PKPbc	01 31 00.1	-0.7
	0.5nm,0.5s,baz=64,slow=3.2,SNR=6.0						

IDC 19 01:13:51.4±3.1**, 31°.36S**×**177°.47W, h0**^{km}**, mb3.7**/2**, mbtmp3.8**/3**, Error ellipse: s-maj=76.9km s-min=37.3km az=116.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**8.20**	**211**	Pn	Pn	01 15 51.5	-0.1
	6.6nm,0.9s,baz=339,slow=10,SNR=1.8						
URZ				Sn	Sn	01 17 23.8	-1.2

	0.8nm,0.3s,baz=107,slow=23,SNR=2.4						
ASAR	**Alice Springs**	**43.52**	**268**	P	P	01 21 57.6	+0.7
	0.4nm,0.3s,baz=109,slow=6.7,SNR=4.1						
	0.4nm,0.3s						
WRA	**Warramunga Arr**	**44.59**	**273**	P	P	01 22 05.1	-0.5
	0.4nm,0.4s,baz=112,slow=7.9,SNR=5.5						
	0.4nm,0.4s						
FINES	**FINESS Array B**	**146.20**	**340**	PKPbc	PKPdf	01 33 31.9	0.0
	1.5nm,0.9s,baz=25,slow=3.7,SNR=6.1						

IDC 19 01:18:17.4±3.1**,31°.42S**×**177°.56W,h0^{km},mb3.7**/2**,mbtmp3.8**/3**,ML3.1**/1**,Error ellipse: s-maj=74.9km s-min=37.0km az=117.0,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**8.11**	**211**	Pn	Pn	01 20 16.0	-0.4
	0.2nm,0.3s,baz=248,slow=8.5,SNR=2.3						
URZ				Sn	Sn	01 21 49.2	+0.4
	1.0nm,0.3s,baz=211,slow=23,SNR=6.5						
	8.7nm,1.0s						
ASAR	**Alice Springs**	**43.44**	**268**	P	P	01 26 22.4	0.0
	0.3nm,0.3s,baz=109,slow=6.6,SNR=4.6						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**44.52**	**273**	P	P	01 26 30.9	-0.1
	0.6nm,0.4s,baz=112,slow=7.9,SNR=7.1						
	0.6nm,0.4s						
QSPA	**South Pole Qui**	**58.70**	**180**	P	P	01 28 21.2	+4.6
	1.0nm,1.0s,baz=298,slow=21,SNR=0.8						
H03S2	**Juan Fernandez**	**79.59**	**123**	T	T	02 57 30.5	
	baz=243,slow=74,SNR=18						
H03S1	**Juan Fernandez**	**79.60**	**123**	T	T	02 57 30.5	
	baz=243,slow=74,SNR=17						
H03S3	**Juan Fernandez**	**79.61**	**123**	T	T	02 57 29.6	
	baz=243,slow=74,SNR=19						
H03N3	**Juan Fernandez**	**79.79**	**123**	T	T	02 57 38.6	
	baz=248,slow=73,SNR=9.6						
H03N2	**Juan Fernandez**	**79.79**	**123**	T	T	02 57 39.1	
	baz=248,slow=73,SNR=9.0						
H03N1	**Juan Fernandez**	**79.81**	**123**	T	T	02 57 40.3	
	baz=248,slow=73,SNR=11						
FINES	**FINESS Array B**	**146.23**	**340**	PKPbc	PKPdf	01 37 58.2	+0.2
	0.8nm,0.6s,baz=48,slow=2.8,SNR=7.3						

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*NEIC **19** 01:22:03.3±0.6, 19°.23N±0°.03×155°.480W±0°.008, h38^{km}±4^{km}, Error ellipse: s-maj=3.7km s-min=0.9km az=186.0*

HVO 19 01:22:04.4±0.7**,19°.20N**±0°.03×**155°.46W**±0°.02**,h37^{km}**±3^{km}**,ML2.7**/3**,ML2.1**/27(NEIC)**,Error ellipse: s-maj=4.0km s-min=2.9km az=179.0,Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HTC	**Hot Caves**	**0.07**	**57**		Pn	01 22 10.2	-0.4
HPO	**Honuapo**	**0.14**	**219**	Pn	Pn	01 22 10.5	-5.5
HPO					Sn	01 22 15.1	-12
KHU	**Kahuku**	**0.15**	**288**	Pn	Pn	01 22 10.5	-5.2
KHU				Sn	Sn	01 22 14.7	-12
KHU				IAML		01 22 20.3	
	comp=N,161nm,3.6s						
AIN	**Ainahou**	**0.17**	**1**	Pn	Pn	01 22 10.6	-4.3
AIN				Sn	Sn	01 22 15.0	-10
AIN				IAML		01 22 17.0	
	comp=N,178nm,3.9s						
HLP	**Hilina Pali**	**0.17**	**56**	Pn	Pn	01 22 10.6	-4.1
SDHHI	**Sand Hill**	**0.25**	**40**		Pn	01 22 11.1	-2.0
SDHHI					Sn	01 22 16.1	-4.9
WRMHI	**West Rim**	**0.26**	**36**		Pn	01 22 11.1	-1.8
WRMHI					Sn	01 22 16.4	-4.2
RIM	**Rim**	**0.26**	**42**		Pn	01 22 11.2	-1.7
RIM					Sn	01 22 16.4	-4.1
KKO	**Keanakako'i**	**0.27**	**43**		Pn	01 22 11.3	-1.6
KKO					Sn	01 22 16.2	-4.2
UWE	**Uwekahuna**	**0.27**	**36**	Pn	Pn	01 22 11.1	-1.8
UWE				Sn	Sn	01 22 16.5	-3.9
OBL	**Observatory Le**	**0.27**	**38**		Pn	01 22 11.2	-1.6
OBL					Sn	01 22 16.4	-4.0
UWB	**Uwekahuna Bluf**	**0.28**	**38**		Pn	01 22 11.2	-1.6
BYL	**Byron's Ledge**	**0.28**	**42**	Pn	Pn	01 22 11.0	-1.8
PUH	**Pauahi**	**0.29**	**53**	Pn	Pn	01 22 11.1	-1.7
PUH				Sn	Sn	01 22 16.1	-4.0
PUH				IAML		01 22 21.3	
	comp=N,205nm,2.8s						
SBLHI	**Steaming Bluff**	**0.29**	**39**		Pn	01 22 11.3	-1.5
SBLHI					Sn	01 22 16.4	-3.7
HATHI	**Halema‘uma‘u T**	**0.29**	**40**	Pn	Pn	01 22 11.5	-1.3
HATHI				Sn	Sn	01 22 16.6	-3.5
HATHI				IAML		01 22 18.7	
	comp=N,161nm,1.7s						
HATHI				IAML		01 22 25.4	
	comp=E,129nm,2.2s						
MLH	**Mauna Loa**	**0.30**	**14**	Pn	Pn	01 22 11.5	-1.4
MLH				IAML		01 22 17.0	
	comp=N,123nm,3.1s						
MLH				Sn	Sn	01 22 17.1	-3.2
MWH	**Mokuaweoweo**	**0.31**	**336**	Pn	Pn	01 22 11.7	-1.7
MWH				Sn	Sn	01 22 16.8	-4.0
MWH				IAML		01 22 18.3	
	comp=N,193nm,2.1s						
RSD	**Rainshed**	**0.31**	**33**	Pn	Pn	01 22 11.2	-1.7
KNHH	**Kane Nui o Ham**	**0.33**	**57**	Pn	Pn	01 22 11.6	-1.3
STCH	**Steam Cracks**	**0.37**	**60**	Pn	Pn	01 22 11.9	-1.3
STCH				Sn	Sn	01 22 17.9	-2.1
STCH				IAML		01 22 22.2	
	comp=N,118nm,2.1s						
ALEP	**Alea Permanent**	**0.38**	**333**		Pn	01 22 12.3	-1.3
ALEP					Sn	01 22 17.9	-2.8
NPOC	**North of Pu‘u**	**0.38**	**60**		Pn	01 22 12.4	-0.9
NPOC					Sn	01 22 18.3	-1.9
JCUZ	**Jacuzzi**	**0.39**	**61**		Pn	01 22 12.5	-0.8
JCUZ					Sn	01 22 18.6	-1.6
HMH	**Humu‘ula Sheep**	**0.40**	**357**	Pn	Pn	01 22 12.8	-1.0
HMH				IAML		01 22 17.6	
	comp=E,132nm,4.2s						
HMH				Sn	Sn	01 22 19.5	-1.4
HMH				IAML		01 22 19.6	
	comp=N,91nm,2.9s						
JOKA	**Jonika Flow**	**0.49**	**62**	Pn	Pn	01 22 13.3	-1.6
JOKA				Sn	Sn	01 22 20.1	-2.2
JOKA				IAML		01 22 30.5	
	comp=E,138nm,2.3s						

IDC 19 01:34:03.5±1.6**,30°.82S**×**177°.53W,h0^{km},mb3.7**/3**,mbtmp3.7**/3**,Error ellipse: s-maj=48.3km s-min=42.0km az=31.0,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**8.64**	**209**	Sn	Sn	01 37 37.3	-10
	0.6nm,0.3s,baz=326,slow=17,SNR=2.0						
ASAR	**Alice Springs**	**43.49**	**267**	P	P	01 42 08.4	-0.5
	0.3nm,0.3s,baz=108,slow=7.7,SNR=4.8						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**44.52**	**272**	P	P	01 42 17.2	+0.1
	0.6nm,0.4s,baz=112,slow=7.7,SNR=9.4						
	0.6nm,0.4s						
QSPA	**South Pole Qui**	**59.29**	**180**	P	P	01 44 06.7	-0.1
	1.2nm,1.0s,baz=0.0,slow=1.0,SNR=2.1						
	1.2nm,1.0s						
FINES	**FINESS Array B**	**145.68**	**340**	PKPbc	PKPdf	01 53 43.1	-0.1
	0.6nm,0.4s,baz=50,slow=4.3,SNR=9.9						
HFS	**Hagfors**	**149.73**	**349**	PKPbc	PKPbc	01 53 53.6	-1.0
	0.4nm,0.4s,baz=97,slow=3.3,SNR=1.6						

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*SDD **19** 01:34:59.3±2.1, 18°.68N×70°.35W, h105^{km}±13^{km}, MD3.2, ML2.5, MW2.9*

*OSPL **19** 01:34:59.2±1.0, 18°.80N×70°.38W, h118^{km}±13^{km}, ML2.0*

ISC 19 01:35:01.2±2.1**,18°.74N**±0°.09×**70°.29W**±0°.04**,h82^{km}**±15^{km}**,n12,**σ**1^{s}85**/20**,14C,Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABDR	**Alto Bandera**	**0.33**	**283**	⇑*e*Pg	**Pn**	**01 35 12.6**	**-1.8**
ABDR				⇑*e*Sg	**Sn**	**01 35 25.5**	**+1.4**
ABDR				IAML		01 35 26.5	
	comp=N,110nm,0.5s						
DR08	**Loma La Naviza**	**0.34**	**49**	⇑*e*Sg	**Sn**	**01 35 24.5**	**+0.9**
DR08				IAML		01 35 26.7	
	comp=N,3μm,0.1s						
BANI	**BANI**	**0.35**	**191**	*e*Pg	**Pn**	**01 35 14.4**	**+0.2**
BANI				IAML		01 35 29.3	
	comp=N,129nm,2.1s						
NADR	**Nagua**	**0.74**	**34**	⇑*e*Pg	**Pn**	**01 35 16.5**	**-1.0**
NADR				⇑*e*Sg	**Sn**	**01 35 30.6**	**+1.1**
NADR				IAML		01 35 32.6	
	comp=N,274nm,0.3s						
SC01	**Santiago de lo**	**0.80**	**329**	*i* P	**Pn**	**01 35 17.3**	**-0.9**
SC01				*e*S	**Sn**	**01 35 31.0**	**+0.3**
SC01				IAML		01 35 39.2	
	comp=Z,47nm,3.1s						
HATOM	**Hato Mayor del**	**0.86**	**87**	⇑*e*Pg	**Pn**	**01 35 18.3**	**-0.5**
HATOM				⇑*e*Sg	**Sn**	**01 35 32.2**	**+0.2**
HATOM				IAML		01 35 35.3	
	comp=N,43nm,0.2s						
SDDR	**Presa de Saban**	**0.97**	**285**	⇑*e*Pg	**Pn**	**01 35 18.2**	**-2.0**
SDDR				⇑*e*Sg	**Sn**	**01 35 33.0**	**-1.4**
SDDR				IAML		01 35 39.7	
	comp=N,31nm,0.5s						
SDDR	**Presa de Saban**	**0.97**	**285**	*i* P	**Pn**	**01 35 18.6**	**-1.6**
SDDR				*e*S	**Sn**	**01 35 33.2**	**-1.2**
SDDR				IAML		01 35 37.1	
	comp=Z,15nm,0.6s						
REDR	**Restauracion**	**1.13**	**292**	⇑*e*Pg	**Pn**	**01 35 22.9**	**+1.0**
REDR				⇑*e*Sg	**Sn**	**01 35 43.2**	**+5.7**
REDR				IAML		01 35 43.6	
	comp=N,24nm,0.1s						
SMDR	**Samana, DR**	**1.18**	**62**	⇑*e*Sg	**Sn**	**01 35 38.7**	**+0.1**
SMDR				IAML		01 35 44.2	
	comp=N,51nm,1.1s						
LODU1	**El Espartillar**	**1.19**	**251**	*i* P	**Pn**	**01 35 21.9**	**-0.8**
MIDR	**Miches**	**1.20**	**78**	⇑*e*Pg	**Pn**	**01 35 22.5**	**-0.3**
MIDR				⇑*e*Sg	**Sn**	**01 35 39.8**	**+0.7**
MIDR				IAML		01 36 07.1	
	comp=N,18nm,1.3s						

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*NEIC **19** 01:58:28.2±1.4, 18°.7N±0°.1×145°.3E±0°.3, h199^{km}±6^{km}, mb4.2/43, Error ellipse: s-maj=42.6km s-min=8.7km az=108.0*

*IDC **19** 01:58:33.6±15.0, 18°.69N×145°.50E, h261^{km}±151^{km}, mb3.3/11, mbtmp4.0/11, MS3.2/1, Error ellipse: s-maj=28.3km s-min=22.6km az=57.0*

ISC 19 01:58:32.3±0.7**,18°.6N**±0°.1×**145°.4E**±0°.2**,h250^{km},n62,**σ**0^{s}93**/61**,mb4.1**/34**,Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTN	**Manton Dam**	**34.27**	**205**	P	**P**	**02 04 54.5**	**-0.6**
KNRA	**Kununurra**	**37.80**	**207**	P	**P**	**02 05 24.5**	**-0.4**
WB0	**Warramunga Arr**	**39.63**	**196**	P	**P**	**02 05 40.7**	**+0.6**
WB0				IAmb	IAmb	02 05 41.7	
	comp=Z,10nm,1.1s						
WR8	**Warramunga Arr**	**39.78**	**196**	P	**P**	**02 05 41.8**	**+0.5**
WR8				IAmb	IAmb	02 06 21.4	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**39.81**	**196**	P	**P**	**02 05 41.8**	**+0.2**
WRA	**Warramunga Arr**	**39.81**	**196**	P	**P**	**02 05 42.5**	**+0.9**
	comp=Z,3.6nm,0.7s,baz=14,slow=8.5,SNR=27						
	comp=Z,3.6nm,0.7s						
MA2	**Magadan**	**41.11**	**4**	LR	LR	02 22 33.9	
	comp=Z,29nm,19.6s,baz=252,slow=35						
FITZ	**Fitzroy Crossi**	**41.32**	**209**	P	**P**	**02 05 54.9**	**+1.0**
ASAR	**Alice Springs**	**43.48**	**195**	P	**P**	**02 06 12.8**	**+1.6**
ASAR	**Alice Springs**	**43.48**	**195**	P	**P**	**02 06 12.2**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=21,slow=8.0,SNR=7.5						
	comp=Z,0.6nm,0.6s						
ATKA	**Atka Island**	**46.02**	**34**	P	**P**	**02 06 31.2**	**+0.4**
UNV	**Unalaska Valle**	**50.89**	**35**	P	**P**	**02 07 07.7**	**-0.2**
LVA	**Lava Point**	**51.28**	**34**	P	**P**	**02 07 11.5**	**+0.7**
O15K	**Ungalikthiuk R**	**56.39**	**30**	P	**P**	**02 07 48.2**	**+0.6**
N15K	**Kwethluk River**	**56.64**	**29**	P	**P**	**02 07 49.9**	**+0.6**
J16K	**Anvik River**	**57.67**	**26**	P	**P**	**02 07 57.8**	**+1.3**
MKAR	**Makanchi Array**	**58.34**	**314**	P	**P**	**02 08 02.5**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=99,slow=5.1,SNR=2.8						
	comp=Z,0.3nm,0.5s						
N18K	**Kilae Creek**	**58.77**	**29**	P	**P**	**02 08 05.6**	**+1.5**
N18K				IAmb	IAmb	02 08 31.1	
	comp=Z,7.8nm,1.2s						
H18K	**Honhosa River**	**59.33**	**24**	P	**P**	**02 08 08.6**	**+0.7**
H18K				IAmb	IAmb	02 08 44.0	
	comp=Z,7.7nm,1.4s						
C18K	**Utukok River**	**59.86**	**20**	P	**P**	**02 08 11.3**	**-0.2**
C18K				IAmb	IAmb	02 08 20.9	
	comp=Z,9.1nm,1.5s						
C19K	**Lookout Ridge**	**60.59**	**20**	P	**P**	**02 08 17.7**	**+1.3**
C19K				IAmb	IAmb	02 08 18.1	
	comp=Z,3.5nm,0.7s						
D19K	**Kuna River**	**60.80**	**21**	P	**P**	**02 08 17.4**	**-0.4**
D19K				IAmb	IAmb	02 08 50.0	
	comp=Z,6.6nm,1.5s						
KURBB	**Kurchatov Arra**	**61.21**	**318**	P	**P**	**02 08 19.9**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=99,slow=6.2,SNR=4.8						
	comp=Z,0.4nm,0.3s						
D20K	**Etivluk River**	**61.40**	**21**	P	**P**	**02 08 22.7**	**+0.9**
D20K				IAmb	IAmb	02 08 23.5	
	comp=Z,4.6nm,0.9s						
B20K	**Meade River**	**61.76**	**19**	P	**P**	**02 08 25.6**	**+1.6**
MLY	**Manley**	**62.33**	**25**	P	**P**	**02 08 28.6**	**+0.6**
MLY				IAmb	IAmb	02 08 29.6	
	comp=Z,2.2nm,0.7s						
D22K	**Ayikyak River**	**62.79**	**21**	P	**P**	**02 08 32.2**	**+1.3**
D22K				IAmb	IAmb	02 08 33.1	
	comp=Z,3.8nm,0.7s						
I23K	**Minto, Yukon-K**	**62.92**	**26**	P	**P**	**02 08 32.4**	**+0.6**
I23K				IAmb	IAmb	02 08 33.7	
	comp=Z,2.4nm,0.7s						
WRH	**Wood River Hil**	**63.29**	**26**	P	**P**	**02 08 33.9**	**-0.3**
D23K	**Nanushuk River**	**63.50**	**21**	P	**P**	**02 08 36.4**	**+0.7**
D23K				IAmb	IAmb	02 09 11.8	
	comp=Z,5.0nm,1.4s						
E23K	**Chandalar**	**63.61**	**22**	P	**P**	**02 08 37.5**	**+1.1**
E23K				IAmb	IAmb	02 08 40.7	
	comp=Z,4.4nm,1.2s						
H24K	**Noodor Dome**	**63.69**	**25**	P	**P**	**02 08 37.3**	**+0.4**
ILAR	**Eielson Array**	**63.86**	**26**	P	**P**	**02 08 37.1**	**-0.9**
	comp=Z,1.2nm,0.7s,baz=262,slow=4.9,SNR=18						
	comp=Z,1.2nm,0.7s						
J25K	**Salcha River,**	**64.47**	**27**	P	**P**	**02 08 41.1**	**-0.9**
F25K	**Christian Rive**	**64.95**	**23**	P	**P**	**02 08 46.4**	**+1.3**
F25K				IAmb	IAmb	02 09 18.5	
	comp=Z,4.4nm,1.4s						
L27K	**Beaver Creek,**	**65.78**	**28**	P	**P**	**02 08 50.8**	**+0.3**
BCAR	**Beaver Creek A**	**65.80**	**28**	P	**P**	**02 08 50.8**	**+0.2**
C27K	**Jago River**	**66.06**	**21**	P	**P**	**02 08 52.6**	**+0.5**
BVAR	**Borovoye Array**	**66.38**	**320**	P	**P**	**02 08 55.4**	**+1.0**
	comp=Z,1.2nm,0.5s,baz=99,slow=8.3,SNR=9.7						
	comp=Z,1.2nm,0.5s						
F28M	**Old Crow**	**67.14**	**24**	P	**P**	**02 08 59.5**	**+0.5**
L29M	**L29M**	**67.46**	**29**	P	**P**	**02 09 02.4**	**+1.4**
L29M				IAmb	IAmb	02 09 03.4	
	comp=Z,3.5nm,0.8s						
N30M	**Aishikik Lake**	**67.88**	**30**	P	**P**	**02 09 04.5**	**+0.8**
G31M	**Satah River**	**69.26**	**25**	P	**P**	**02 09 12.2**	**+0.2**
G31M				IAmb	IAmb	02 09 13.0	
	comp=Z,3.5nm,0.7s						
C36M	**Paulatuk**	**72.94**	**22**	P	**P**	**02 09 34.0**	**0.0**
YKA	**Yellowknife Ar**	**78.21**	**28**	P	**P**	**02 10 02.4**	**-1.5**
	comp=Z,0.7nm,0.6s,baz=294,slow=5.5,SNR=3.8						
	comp=Z,0.7nm,0.6s						
B08A	**Colville Reser**	**79.73**	**42**	P	**P**	**02 10 13.3**	**+0.7**
B08A				IAmb	IAmb	02 10 14.1	
	comp=Z,2.9nm,0.8s						
PINE	**Pine Mountain**	**79.93**	**47**	P	**P**	**02 10 15.5**	**+1.5**
PINE				IAmb	IAmb	02 10 16.6	
	comp=Z,5.4nm,0.9s						
BEKR	**Beckworth**	**81.46**	**51**	P	**P**	**02 10 23.2**	**+1.1**
BEKR				IAmb	IAmb	02 10 23.6	
	comp=Z,3.7nm,0.8s						
PNTR	**Pine Nut**	**82.25**	**51**	P	**P**	**02 10 26.1**	**-0.1**
PNTR				IAmb	IAmb	02 10 28.2	
	comp=Z,5.1nm,0.8s						
ARCES	**ARCESS Array B**	**82.51**	**342**	P	**P**	**02 10 26.5**	**-0.2**
	comp=Z,1.3nm,1.0s,baz=59,slow=5.4,SNR=4.1						
	comp=Z,1.3nm,1.0s						
NVAR	**Mina Array Bea**	**83.42**	**52**	P	**P**	**02 10 33.0**	**+0.8**
NVAR	**Mina Array Bea**	**83.42**	**52**	P	**P**	**02 10 33.2**	**+1.0**
	comp=Z,3.1nm,0.7s,baz=265,slow=6.1,SNR=25						
	comp=Z,3.1nm,0.7s						
GMN	**Gold Mountain**	**84.56**	**53**	P	**P**	**02 10 39.0**	**+1.0**
GMN				IAmb	IAmb	02 10 39.6	
	comp=Z,2.1nm,0.6s						
LRM	**Limekiln Ridge**	**85.00**	**43**	P	**P**	**02 10 40.5**	**+0.4**
TPNV	**Topopah Spring**	**85.44**	**53**	P	**P**	**02 10 43.3**	**+0.9**
TPNV				IAmb	IAmb	02 10 43.9	
	comp=Z,2.7nm,0.7s						
FINES	**FINESS Array B**	**86.86**	**335**	P	**P**	**02 10 47.1**	**-1.4**
	comp=Z,0.3nm,0.4s,baz=68,slow=5.9,SNR=8.0						
	comp=Z,0.3nm,0.4s						
PDAR	**Pinedale Array**	**88.09**	**45**	P	**P**	**02 10 54.1**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=277,slow=5.1,SNR=2.0						
	comp=Z,0.3nm,0.5s						
U15A	**North Rim**	**88.60**	**52**	P	**P**	**02 10 59.1**	**+1.4**
PV03	**Paradox Valley**	**90.41**	**49**	P	**P**	**02 11 06.0**	**0.0**
PV03				IAmb	IAmb	02 11 07.3	
	comp=Z,2.2nm,1.0s						
BO02	**Sierra Bellavi**	**144.10**	**124**	PKPdf	**PKPdf**	**02 17 37.9**	**-0.7**
CO02	**Combarbal**	**144.83**	**118**		**PKPdf**	**02 17 39.0**	**-1.1**
PB11	**IPOC Station P**	**146.89**	**98**	PKPbc	**PKPab**	**02 17 46.7**	**-1.5**

SJA 19 01:58:59.2±0.5**,27°.48S**×**64°.23W,h19^{km}**±3^{km}**,ML4.0,MW3.9,Santiago del Estero Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUSE	**Guasayan**	**0.68**	**233**	*e*P	Pg	01 59 12.7	0.0
AHML	**Horco Molle**	**1.21**	**305**	*e*P	Pg	01 59 27.6	+5.1
AHML				*e*S	Sg	01 59 41.4	+3.0
CYA	**Choya**	**1.69**	**235**	*e*P	Pb	01 59 29.6	-0.1
CYA				*e*S	Sn	01 59 44.5	-4.4
CYA				IAML		01 59 46.5	
	comp=Z,2μm,0.3s						
FSA	**Cafayete**	**2.08**	**311**	*e*P	Pg	01 59 40.8	+1.7
FSA				*e*S	Sg	02 00 06.2	0.0
SLA	**San Lorenzo**	**2.98**	**337**	*e*P	Pg	01 59 56.9	+0.6
SLA				*e*S	Sg	02 00 45.3	+10
SLA				IAML		02 00 53.5	
	comp=Z,198nm,0.4s						
ACLC	**CERRO LA CRUZ**	**3.08**	**230**	*e*P	Pn	01 59 49.5	+2.4
ACLC				*e*S	Sb	02 00 28.7	-2.2
VCA	**Vinchina**	**3.73**	**249**	*e*P	Pn	01 59 59.7	+3.7
VCA				*e*S	Sn	02 00 38.2	-1.2
VCA				IAML		02 00 55.3	
	comp=Z,229nm,0.4s						
ACHE	**Chepes**	**4.24**	**210**	*e*P	Pn	02 00 06.9	+3.9
ACHE				*e*S	Sn	02 00 53.4	+1.4
AVFE	**Valle Fertil**	**4.25**	**221**	*e*P	Pn	02 00 05.7	+2.7
AVFE				*e*S	Sn	02 00 49.1	-3.0
AVFE				IAML		02 01 10.8	
	comp=Z,102nm,0.5s						
AGUA	**GUANDACOL**	**4.25**	**241**	*e*P	Pn	02 00 06.5	+3.4
AGUA				*e*S	Sn	02 00 50.3	-1.9
AGUA				IAML		02 01 03.3	
	comp=Z,150nm,0.4s						
ACDV	**Cuesta del Vie**	**5.06**	**237**	*i* P	Pn	02 00 17.9	+3.7
ACDV				*e*S	Sb	02 01 28.4	+0.6
ACDV				IAML		02 01 40.4	
	comp=Z,50nm,0.5s						
MRA	**San Martin**	**5.09**	**194**	*e*P	Pn	02 00 19.2	+4.6
MRA				*e*S	Sn	02 01 13.9	+1.0
MRA				IAML		02 01 39.4	
	comp=Z,186nm,0.4s						
ACCO	**Cerro Coronel**	**5.25**	**233**	*e*P	Pn	02 00 20.0	+3.1
ACCO				*e*S	Sn	02 01 14.7	-2.4
AROD	**Rodeo**	**5.32**	**239**	*e*P	Pn	02 00 22.2	+4.2
AROD				*e*S	Sn	02 01 23.6	+4.6
CFA	**Coronel Fontan**	**5.39**	**219**	*e*P	Pn	02 00 22.1	+3.4
CFA				*e*Pg	Pg	02 00 37.9	-4.6
CFA				*e*S	Sn	02 01 20.6	+0.3
CFA				*e*Sg	Sb	02 01 41.2	+3.9
ACAN	**Cantantal**	**5.42**	**208**	*e*P	Pn	02 00 23.6	+4.5
ACAN				*e*S	Sn	02 01 19.9	-1.3
ACAN				IAML		02 01 58.2	
	comp=Z,259nm,0.6s						

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*NEIC **19** 02:31:46.7±1.7, 15°.30N±0°.08×94°.72W±0°.04, h35^{km}±2^{km}, mb4.0/24, Md4.3/98(MEX), Error ellipse: s-maj=13.2km s-min=5.7km az=185.0*

*GCG **19** 02:31:46.0±2.1, 15°.32N×94°.73W, h35^{km}±999^{km}, MD4.6, ML4.0*

*MEX **19** 02:31:47.5±0.9, 15°.35N×94°.66W, h17^{km}±11^{km}, MD4.3*

*CATAC **19** 02:31:47.5±1.9, 16°N±11°×9°5W±°, h28^{km}±18^{km}, M4.5/7, mb4.7/4, mB5.8/3, MLv4.4/7, Mw(mB)5.4/3, Error ellipse: s-maj=25.0km s-min=6.2km az=12.6, confirmed*

ISC 19 02:31:46.9±0.9**,15°.33N**±0°.05×**94°.68W**±0°.03**,h40^{km},n126,**σ**3^{s}02**/184**,Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**1.44**	**288**		**Pn**	**02 32 10.0**	**-0.5**
HUIG					**Sn**	**02 32 26.2**	**-2.1**
HUIG	**Huatulco**	**1.44**	**288**	*e*P	**Pn**	**02 32 10.0**	**-0.5**
HUIG				*e*S	**Sn**	**02 32 26.2**	**-2.1**
HUIG	**Huatulco**	**1.44**	**288**	*i* P	**Pn**	**02 32 10.0**	**-0.5**
HUIG				*i* S	**Sn**	**02 32 26.3**	**-2.0**
HUIG				IAML		02 32 28.0	
	comp=E,486nm,0.1s						
PCIG		**1.46**	**75**		**Pn**	**02 32 09.2**	**-1.5**
PCIG					**Sn**	**02 32 25.6**	**-3.0**
PCIG		**1.46**	**75**	*e*P	**Pn**	**02 32 09.2**	**-1.5**
PCIG				*e*S	**Sn**	**02 32 25.6**	**-3.0**
PANG	**Puerto Angel**	**1.76**	**281**		**Pn**	**02 32 13.8**	**-1.1**
PANG					**Sn**	**02 32 33.0**	**-3.0**
PANG	**Puerto Angel**	**1.76**	**281**	*e*P	**Pn**	**02 32 13.8**	**-1.1**
PANG				*e*S	**Sn**	**02 32 33.0**	**-3.0**
TGIG		**2.08**	**46**		**Pn**	**02 32 18.2**	**-1.1**
TGIG					**Sn**	**02 32 42.8**	**-1.2**
TGIG		**2.08**	**46**	*e*P	**Pn**	**02 32 18.2**	**-1.1**
TGIG				*e*S	**Sn**	**02 32 42.8**	**-1.2**
TGIG		**2.08**	**46**	*i* P	**Pn**	**02 32 19.4**	**0.0**
TGIG				*i* S	**Sn**	**02 32 44.5**	**+0.5**
TGIG				IAML		02 32 46.4	
	comp=E,2μm,0.5s						
TGBT	**Tuxtla Gutierr**	**2.10**	**47**		**Pn**	**02 32 16.5**	**-3.0**
TGBT					**Sn**	**02 32 42.7**	**-1.8**
TGBT	**Tuxtla Gutierr**	**2.10**	**47**	*e*P	**Pn**	**02 32 16.5**	**-3.0**
TGBT				*e*S	**Sn**	**02 32 42.7**	**-1.8**
THIG		**2.37**	**100**		**Pn**	**02 32 23.4**	**+0.1**
THIG					**Sn**	**02 32 49.4**	**-1.8**
THIG		**2.37**	**100**	*e*P	**Pn**	**02 32 23.4**	**+0.1**
THIG				*e*S	**Sn**	**02 32 49.4**	**-1.8**
THIG		**2.37**	**100**	*i* P	**Pn**	**02 32 23.3**	**0.0**
THIG				*i* S	**Sn**	**02 32 50.8**	**-0.3**
THIG				IAML		02 32 51.2	
	comp=N,509nm,0.8s						
PATR	**El Naranjo**	**2.37**	**95**	*e*P	**Pn**	**02 32 22.6**	**-0.9**
PATR				*e*S	**Sn**	**02 32 49.0**	**-2.5**
PAVE	**Pavencul**	**2.42**	**93**	*e*P	**Pn**	**02 32 23.8**	**-0.4**
PAVE				*e*S	**Sn**	**02 32 51.5**	**-1.1**
PEIG	**Puerto Escondi**	**2.47**	**286**		**Pn**	**02 32 24.4**	**-0.2**
PEIG					**Sn**	**02 32 50.3**	**-3.3**
PEIG	**Puerto Escondi**	**2.47**	**286**	*e*P	**Pn**	**02 32 24.4**	**-0.2**
PEIG				*e*S	**Sn**	**02 32 50.3**	**-3.3**
OXLC	**Oaxaca**	**2.60**	**312**	*e*P	**Pn**	**02 32 26.8**	**+0.2**
OXLC				*e*S	**Sn**	**02 32 55.4**	**-1.6**
OXBJ	**Oaxaca**	**2.62**	**312**		**Pn**	**02 32 27.4**	**+0.6**
OXBJ					**Sn**	**02 32 54.1**	**-3.4**
OXBJ	**Oaxaca**	**2.62**	**312**	*e*P	**Pn**	**02 32 27.4**	**+0.6**
OXBJ				*e*S	**Sn**	**02 32 54.1**	**-3.4**
CCIG	**Comitan**	**2.62**	**69**	Pn	**Pn**	**02 32 27.3**	**+0.4**
CCIG	**Comitan**	**2.62**	**69**	*e*P	**Pn**	**02 32 27.8**	**+0.9**
CCIG				*e*S	**Sn**	**02 32 57.0**	**-0.6**
CCIG	**Comitan**	**2.62**	**69**	*i* P	**Pn**	**02 32 28.3**	**+1.4**
CCIG				*i* S	**Sn**	**02 33 00.6**	**+2.9**
CCIG				IAML		02 33 06.0	
	comp=N,502nm,0.5s						
CCIG	**Comitan**	**2.62**	**69**	P	**Pn**	**02 32 28.2**	**+1.3**
CCIG	**Comitan**	**2.62**	**69**	S	**Sn**	**02 32 59.9**	**+2.2**
OXIG	**Oaxaca**	**2.62**	**312**		**Pn**	**02 32 28.3**	**+1.3**
OXIG					**Sn**	**02 32 56.3**	**-1.5**
VHO	**Vista Hermosa**	**2.62**	**312**	*e*P	**Pn**	**02 32 28.3**	**+1.3**
VHO				*e*S	**Sn**	**02 32 56.3**	**-1.4**
TUIG	**Tuzandepetl**	**2.70**	**5**	*e*P	**Pn**	**02 32 26.5**	**-1.3**
TUIG				*e*S	**Sn**	**02 32 53.0**	**-6.3**
RTAL	**Retalhuleu**	**3.00**	**105**	Pn	**Pn**	**02 32 32.7**	**+0.9**
RTAL	**Retalhuleu**	**3.00**	**105**	*e*P	Pn	02 32 22.6	-9.3
RTAL				*e*S	**Sn**	**02 32 59.0**	**-7.5**
HUEH	**Huehuetenango**	**3.07**	**90**	Pn	**Pn**	**02 32 34.5**	**+1.4**
HUEH	**Huehuetenango**	**3.07**	**90**	*e*P	**Pn**	**02 32 34.3**	**+1.3**
HUEH				*e*S	**Sn**	**02 33 09.4**	**+0.8**
HUEH	**Huehuetenango**	**3.07**	**90**	*i* P	**Pn**	**02 32 34.8**	**+1.8**
HUEH				*i* S	**Sn**	**02 33 15.6**	**+6.9**
HUEH				IAML		02 33 24.0	
	comp=N,2μm,0.9s						
HUEH	**Huehuetenango**	**3.07**	**90**	P	**Pn**	**02 32 35.3**	**+2.3**
HUEH	**Huehuetenango**	**3.07**	**90**	S	**Sn**	**02 33 12.7**	**+4.0**

STG8	El Palmar, Qui	3.34	105	i P	Pn	02 32 32.7	-4.0
STG8				IAML		02 33 14.5	
	comp=E,307nm,0.3s						
STG0	El Palmar, Qui	3.35	105	i P	Pn	02 32 32.8	-4.1
STG0				IAML		02 33 13.2	
	comp=E,495nm,0.2s						
PNIG	Pinotepa	3.48	288		Pn	02 32 38.9	+0.3
PNIG					Sn	02 33 14.3	-4.3
PNIG	Pinotepa	3.48	288	eP	Pn	02 32 38.9	+0.3
PNIG				eS	Sn	02 33 14.3	-4.3
TXIG	Tlaxiaco	3.53	303		Pn	02 32 41.0	+1.6
TXIG					Sn	02 33 15.3	-4.8
TXIG	Tlaxiaco	3.53	303	eP	Pn	02 32 41.0	+1.6
TXIG				eS	Sn	02 33 15.3	-4.8
HLIG	Huajuapan de L	3.89	310		Pn	02 32 46.2	+1.9
HLIG					Sn	02 33 26.3	-2.7
HLIG	Huajuapan de L	3.89	310	eP	Pn	02 32 46.2	+1.9
HLIG				eS	Sn	02 33 26.3	-2.7
TPIG	Tehuac#an	4.00	321		Pn	02 32 45.9	0.0
TPIG					Sn	02 33 31.4	-0.3
TPIG	Tehuac#an	4.00	321	eP	Pn	02 32 45.9	0.0
TPIG				eS	Sn	02 33 31.4	-0.3
FTIG	Fresnillo de T	4.19	308		Pn	02 32 50.5	+2.1
FTIG					Sn	02 33 34.0	-2.1
FTIG	Fresnillo de T	4.19	308	eP	Pn	02 32 50.5	+2.1
FTIG				eS	Sn	02 33 34.0	-2.1
MGIG	Malinaltepec	4.24	297		Pn	02 32 51.2	+2.0
MGIG					Sn	02 33 32.7	-4.9
MGIG	Malinaltepec	4.24	297	eP	Pn	02 32 51.2	+2.0
MGIG				eS	Sn	02 33 32.7	-4.9
TLIG	Tlapa	4.34	301	Pn	Pn	02 32 52.6	+2.1
TLIG	Tlapa	4.34	301	eP	Pn	02 32 52.6	+2.1
TLIG				eS	Sn	02 33 36.7	-3.2
TLIG	Tlapa	4.34	301	P	Pn	02 32 52.3	+1.8
JAUV	Jalcomulco	4.50	334	eP	Pn	02 32 49.8	-2.8
JAUV				eS	Sn	02 33 36.3	-7.4
CRIG	Cruz Grande	4.50	289		Pn	02 32 53.6	+1.0
CRIG					Sn	02 33 38.5	-5.2
CRIG	Cruz Grande	4.50	289	eP	Pn	02 32 53.6	+1.0
CRIG				eS	Sn	02 33 38.5	-5.2
FAME	Alcaldia de Sa	4.75	108	P	Pn	02 32 57.9	+1.8
PETF	Flores	4.89	71	Pn	Pn	02 32 57.6	-0.2
PETF	Flores	4.89	71	eP	Pn	02 32 57.7	-0.2
PETF				eS	Sn	02 33 49.8	-3.5
NUBE	Las Nubes	4.95	106	P	Pn	02 32 59.9	+1.0
DAIG	Los Arroyos	5.06	290		Pn	02 33 01.3	+1.0
DAIG					Sn	02 33 49.9	-7.7
DAIG	Los Arroyos	5.06	290	eP	Pn	02 33 01.3	+1.0
DAIG				eS	Sn	02 33 49.9	-7.7
PBCV	Popocatepetl	5.19	315	eP	Pn	02 33 04.2	+1.8
PBCV				eS	Sn	02 33 55.8	-5.4
ESQI	Esquipulas	5.22	98	Pn	Pn	02 33 03.6	+1.1
MTO3	Montecristo	5.23	100	Pn	Pn	02 33 03.5	+0.8
MTO3	Montecristo	5.23	100	P	Pn	02 33 03.6	+0.8
PBXN	Popocatepetl	5.28	314	eP	Pn	02 33 07.4	+3.8
PBXN				eS	Sn	02 33 56.7	-6.7
PBPN	Popocatepetl	5.28	315	eP	Pn	02 33 07.9	+4.2
PBPN				eP		02 33 08.8	
PBPN				eS	Sn	02 34 00.5	-3.1
PBPN				eS		02 34 00.9	
PPM	Popocatepetl	5.29	315	eP	Pn	02 33 06.5	+2.6
PPM				eS	Sn	02 33 57.8	-6.2
PPIG	Popocatepetl	5.29	315		Pn	02 33 06.5	+2.6
PPIG					Sn	02 33 57.8	-6.2
MEIG	Mezcala	5.39	299		Pn	02 33 07.8	+2.9
MEIG					Sn	02 34 02.1	-3.7
MEIG	Mezcala	5.39	299	eP	Pn	02 33 07.8	+2.9
MEIG				eS	Sn	02 34 02.1	-3.7
YAIG	Yautepec	5.47	311		Pn	02 33 08.9	+2.9
YAIG					Sn	02 34 04.1	-3.8
YAIG	Yautepec	5.47	311	eP	Pn	02 33 08.9	+2.9
YAIG				eS	Sn	02 34 04.1	-3.8
PLIG	Platanillo	5.53	304		Pn	02 33 09.5	+2.7
PLIG					Sn	02 34 01.9	-7.3
PLIG	Platanillo	5.53	304	eP	Pn	02 33 09.5	+2.7
PLIG				eS	Sn	02 34 01.9	-7.3
CXUV	Coxquihui	5.56	331	eP	Pn	02 33 06.0	-1.1
CXUV				eS	Sn	02 34 02.3	-7.4
UDBS	Universidad Do	5.59	106	P	Pn	02 33 27.0	+19
CAIG	El Cayaco	5.63	288		Pn	02 33 09.3	+1.2
CAIG					Sn	02 34 04.6	-7.0
CAIG	El Cayaco	5.63	288	eP	Pn	02 33 09.3	+1.2
CAIG				eS	Sn	02 34 04.6	-7.0
AOVM	Tlapan	5.92	312		Pn	02 33 15.8	+3.4
AOVM					Sn	02 34 12.6	-6.6
AOVM	Tlapan	5.92	312	eP	Pn	02 33 15.8	+3.4
AOVM				eS	Sn	02 34 12.6	-6.6
SCLA	Alcaldia de Sa	5.99	105	P	Pn	02 33 20.2	+7.1
ARIG	Puente Sto Nin	6.17	299		Pn	02 33 18.4	+2.9
ARIG					Sn	02 34 22.1	-2.8
ARIG	Puente Sto Nin	6.17	299	eP	Pn	02 33 18.4	+2.9
ARIG				eS	Sn	02 34 22.1	-2.8
RANC	El Ranchito	6.47	106	P	Pn	02 33 44.6	+25
RANC	El Ranchito	6.47	106	S	Sn	02 34 13.7	-19
ZIIG	Zihuatanejo	6.89	290		Pn	02 33 27.6	+2.2
ZIIG	Zihuatanejo	6.89	290	eP	Pn	02 33 27.6	+2.2
TGUH	Tegucigalpa,Un	7.28	99	Pn	Pn	02 33 31.3	+0.5
MYIG	Merida	7.31	39	eP	Pn	02 33 26.6	-4.5
MYIG				eS	Sn	02 34 45.1	-7.7
MOIG	Morelia	7.57	306	Pn	Pn	02 33 37.7	+2.8
TEIG	Tepich	7.80	50	Pn	Pn	02 33 34.9	-3.0
MGAN	Managua	8.78	110	P	Pn	02 33 59.3	+7.9
MNGA	Volcan de Coli	9.47	297	eP	Pn	02 34 05.6	+4.5
MNGA				eS	Sn	02 35 46.5	+0.1
INCO	Volcan de Coli	9.48	297	eP	Pn	02 34 06.5	+5.2
INCO				eS	Sn	02 35 51.2	+4.3
SOMAC	Volcano de Col	9.51	297	eP	Pn	02 34 06.0	+4.4
SOMAC				eS	Sn	02 35 51.6	+4.2
CEGR	Campo Tres	9.65	296	eP	Pn	02 34 07.9	+4.5
CEGR				eS	Sn	02 35 47.4	-3.2
CIHU	Emiliano Zapat	10.37	294	eP	Pn	02 34 16.3	+3.2
ZAIG	Zacatecas	10.50	316	Pn	Pn	02 34 15.9	+0.8
833A	Chaparral WMA,	13.65	342	Pn	Pn	02 34 57.8	-0.2
HNDO	Hondo	14.75	344	Pn	Pn	02 35 12.1	-0.8
435B	Jarrell	15.61	351	Pn	Pn	02 35 24.0	-0.1
435B				IAmb	IAmb	02 35 28.8	
	comp=Z,14nm,0.9s						
JCT	Junction City	15.79	344	Pn	Pn	02 35 26.6	+0.1
TXAR	Lajitas Array	16.22	331	Pn	Pn	02 35 31.9	0.0
BRDY	Brady	16.37	347	P	Pn	02 35 35.5	+1.8
OZNA	Ozona	16.61	340		Pn	02 35 37.6	+0.8
OZNA				IAmb	IAmb	02 35 46.3	
	comp=Z,13nm,1.1s						
WHTX	Lake Whitney,	16.78	352	Pn	Pn	02 35 37.8	-1.1
WHTX				IAmb	IAmb	02 35 53.2	
	comp=Z,15nm,1.0s						
ALPN	Alpine	17.09	333		Pn	02 35 43.2	+0.3
FW13	Cleburne	17.13	352		Pn	02 35 44.0	+0.7
FW13				IAmb	IAmb	02 35 49.3	
	comp=Z,8.3nm,0.8s						
FW14	Alvarado	17.15	353	Pn	Pn	02 35 43.2	-0.3
FW07	Weatherford	17.52	351		P	02 35 50.2	+1.2
SGCY	Sterling City	17.53	342		Pn	02 35 48.6	+0.3
SGCY				IAmb	IAmb	02 35 49.6	
	comp=Z,14nm,1.1s						
MNHN	Monahans	17.57	337		Pn	02 35 49.6	+0.8
MNHN				IAmb	IAmb	02 35 55.5	
	comp=Z,12nm,1.1s						
PLPT	Palo Pinto	17.72	350		Pn	02 35 50.1	-0.5
PLPT				IAmb	IAmb	02 36 04.6	
	comp=Z,8.4nm,0.9s						
ABTX	Abilene, Hawle	17.80	346		Pn	02 35 51.8	+0.2
ABTX				IAmb	IAmb	02 35 57.2	
	comp=Z,12nm,1.1s						
FW03	Perrin-Whitt E	17.90	351		Pn	02 35 51.8	-1.0
FW03				IAmb	IAmb	02 35 56.5	
	comp=Z,10nm,0.6s						
APMT	Aspermont	18.58	346		P	02 36 00.5	-0.2
APMT				IAmb	IAmb	02 36 02.7	
	comp=Z,8.8nm,0.9s						
POST	Post	18.71	342		P	02 36 01.9	-0.2
HTMS	Hat Mesa	18.91	336	P	P	02 36 04.8	+0.5
SMWD	Samnorwood	20.32	347	P	P	02 36 20.4	+0.8
AMTX	Amarillo	20.46	343	P	Pn	02 36 23.4	-0.2
BNM	Barren Site	21.62	332	P	P	02 36 33.5	-0.3
LENM	Lemitar	21.79	332	P	P	02 36 35.9	+0.3
RTBA	Rita Blanca	22.22	343	P	P	02 36 40.2	+0.1
RTBA				IAmb	IAmb	02 36 42.7	
	comp=Z,7.0nm,0.9s						

NIED ***19*** *02:35:48.7, 31.°20N×131.°54E, h28km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.72; $M_{\theta\theta}$-0.61; $M_{\phi\phi}$-1.11; $M_{r\theta}$1.32; $M_{\theta\phi}$0.16; $M_{\phi r}$2.23; Fault plane solution: $M_0$2.91000×10^{15} NP1: ϕ_s179.00000°, δ15.00000°, λ64.00000°. NP2: ϕ_s26.00000°, δ76.00000°, λ97.00000°.*

JMA ***19*** *02:35:48.7±0.1, 31.°2N±0.°3×131.°5E±0.°5, h28km, MD4.1/40, MV4.1/40, SE OFF OSUMI PEN*

JMA Felt II J1 at SE OFF OSUMI PEN .

IDC ***19*** *02:35:51.9±2.5, 31.°24N×131.°34E, h67km±19km, mb3.6/16, mbtmp3.9/21, MS3.7/29, Error ellipse: s-maj=26.7km s-min=17.2km az=60.0*

MOS ***19*** *02:35:53.1±1.1, 31.°66N×131.°28E, h69km, mb4.6/15, Error ellipse: s-maj=10.4km s-min=6.4km az=100.3*

NEIC ***19*** *02:35:58.4±1.2, 31.°9N±0.°1×131.°07E±0.°08, h82km±7km, mb4.3/23, Error ellipse: s-maj=16.5km s-min=9.9km az=172.0*

ISC 19 02:35:50.1±0.8**, 31.°26N**±0.°03×**131.°33E**±0.°05**, h40**km±6km**, n140,** σ1.°46/110**, mb4.3**/37**, MS3.8**/28**, 10C-12D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNAR	Kushima--Naru	0.27	350	⇓P	Pn	02 35 57.2	-0.8
JNAR				⇓S	Sn	02 36 03.8	+0.1
JNAR	Kushima--Naru	0.27	350	A	A	02 35 57.2	
	comp=N,47nm,0.4s,comp=E,61nm,0.5s						
JTSR	Tashiro 2	0.36	255	⇓P	Pn	02 35 59.2	+0.2
JTSR				⇓S	Sn	02 36 07.3	+2.0
JTSR	Tashiro 2	0.36	255	A	A	02 35 59.2	
	comp=N,37nm,0.5s,comp=E,18nm,0.5s						
JNKG	Nichinankitago	0.40	6	⇓P	Pn	02 35 58.7	-0.9
JNKG				⇓S	Sn	02 36 05.8	-0.4
JNKG	Nichinankitago	0.40	6	A	A	02 35 58.7	
	comp=N,46nm,0.6s,comp=E,37nm,1.3s						
JTZ	Takazaki	0.67	342	⇓iP	Pn	02 36 03.7	+0.5
JTZ				⇓eS	Sn	02 36 15.2	+2.7
JTZ	Takazaki	0.67	342	A	A	02 36 03.7	
	comp=N,11nm,0.6s,comp=E,26nm,1.9s						
JTN	Tanegashima 3	0.67	206	i P	Pn	02 36 03.2	0.0
JTN				S	Sn	02 36 14.6	+2.0
JTN	Tanegashima 3	0.67	206	A	A	02 36 03.2	
	comp=N,8.0nm,1.0s,comp=E,8.0nm,1.0s						
JSU	Suzuyama	0.79	288	i P	Pn	02 36 06.2	+1.5
JSU				eS	Sn	02 36 19.5	+4.2
JSU	Suzuyama	0.79	288	A	A	02 36 06.2	
	comp=N,9.0nm,1.4s,comp=E,14nm,1.0s						
JMTN	Minamitane	0.94	203	i P	Pn	02 36 06.6	-0.1
JMTN				S	Sn	02 36 19.9	+0.9
JTSN	Tsuno	0.99	9	i P	Pn	02 36 06.9	-0.7
JTSN	Tsuno	0.99	9	A	A	02 36 06.9	
	comp=N,5.0nm,1.8s,comp=E,6.0nm,1.6s						
JZO	Okuchi	1.07	325	i P	Pn	02 36 10.1	+1.4
JHHC	Hyugahichiya	1.21	13	A	A	02 36 10.4	
	comp=N,6.0nm,0.8s,comp=E,6.0nm,0.6s						
JYAK	Yakushimahirau	1.24	215	eP	Pn	02 36 11.4	+0.5
JYAK				S	Sn	02 36 28.8	+2.4
JKC	Kuchinoerabu	1.26	231	P	Pn	02 36 12.0	+0.9
JKC	Kuchinoerabu	1.26	231	A	A	02 36 12.0	
	comp=N,4.0nm,2.2s,comp=E,3.0nm,2.3s						
JIU3	Izumi3	1.36	341	A	A	02 36 14.1	
	comp=N,4.0nm,5.6s,comp=E,5.0nm,1.0s						
JKIT	Kitakata	1.36	4	A	A	02 36 13.3	
	comp=N,8.0nm,0.5s,comp=E,11nm,0.5s						
JHD	Hondo	1.57	320	A	A	02 36 17.9	
	comp=N,4.0nm,1.5s,comp=E,7.0nm,2.3s						
JUS	Usuki	1.84	11	A	A	02 36 19.8	
	comp=N,4.0nm,1.8s,comp=E,5.0nm,1.3s						
JNU	Nakatsue	1.90	349	Pn	Pn	02 36 21.2	+1.2
JNU	Nakatsue	1.90	349	P	Pn	02 36 20.9	+1.0
	comp=E,178nm,0.4s,baz=195,slow=8.0,SNR=57						
JNU				S	Sn	02 36 46.1	+3.5
	comp=E,211nm,0.4s,baz=308,slow=18,SNR=5.7						
JNU				LR	LR	02 37 21.7	
	comp=E,881nm,19.1s,baz=216,slow=47						
JMN	Monobe	3.27	41	Pn	Pn	02 36 42.6	+3.7
TJN	Taejon	6.08	328	Pn	Pn	02 37 18.7	+1.4
TJN	Taejon	6.08	328	P	Pn	02 37 18.7	+1.4
INU	Inuyama	6.27	48	Pn	Pn	02 37 24.4	+4.4
JGF	Kuroka	6.64	48	Pn	Pn	02 37 30.6	+5.4
KSRS	Korea Array	6.79	336	P	Pn	02 37 29.4	+2.3
	comp=E,1.8nm,0.6s,baz=160,slow=13,SNR=9.9						
KSAR	Wonju Array Be	6.79	336	Pn	Pn	02 37 24.8	-2.3
KSAR	Wonju Array Be	6.79	336	P	Pn	02 37 24.8	-2.3
MAJO	Matsushiro	7.77	45	eP	Pn	02 37 41.2	+0.5
MJAR	Matsushiro Arr	7.78	46	P	Pn	02 37 43.2	+2.5
	comp=E,0.8nm,0.5s,baz=236,slow=13,SNR=6.2						
MSHR	Mys Shultsa	11.30	359	⇑eP	Pn	02 38 26.3	-2.6
USRK	Ussuriysk Ar.	12.93	2	Pn	Pn	02 38 45.3	-5.9
USRK	Ussuriysk Ar.	12.93	2	P	Pn	02 38 54.5	+3.4
	comp=E,0.7nm,0.7s,baz=205,slow=16,SNR=7.7						
USRK				LR	LR	02 43 45.5	
	comp=E,169nm,18.9s,baz=193,slow=37						
ERM	Erimo	14.32	38	eP	Pn	02 39 08.5	-1.5
BNX	BinXian	14.78	349	⇓P	P	02 39 20.8	-0.7
BNX				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ASAJ	Asahikawa	15.61	32	P	Pn	02 39 27.9	+0.9
	comp=Z,1.3nm,0.3s,baz=65,slow=17,SNR=1.1						
ASAJ				LR	LR	02 45 23.2	
	comp=Z,121nm,18.8s,baz=78,slow=37						
ASAJ	Asahikawa	15.61	32	P	Pn	02 39 28.0	+0.9
YUK	Yuzh-Kuril'sk	17.14	38	eP	Pn	02 39 46.2	-0.3
KLR	Kul'dur	17.95	1	P	Pn	02 39 56.4	-0.1
	comp=Z,1.9nm,0.6s,baz=188,slow=9.3,SNR=6.6						
KLR				LR	LR	02 46 21.2	
	comp=Z,116nm,21.0s,baz=178,slow=35						
KLR	Kul'dur	17.95	1	⇓iP	Pn	02 39 54.8	-1.7
KLR				pmax	pmax		
	comp=Z,10.0nm,1.6s						
YSS	Yuzhno-Sakhali	17.98	26	⇑iP	Pn	02 39 57.3	+0.6
HHC	Hu-ho-hao-te	18.59	306	eP	P	02 40 03.6	-0.3
HHC				S	Sn	02 43 19.8	-12
HHC				pmax	pmax		
	comp=Z,14nm,0.6s						
HHC				pmax	pmax		
	comp=Z,82nm,7.6s						
HHC				LR	LR		
	comp=N,250nm,13.5s						
HHC				LR	LR		
	comp=E,260nm,13.4s						
HHC				LR	LR		
	comp=Z,470nm,15.4s						
ENH	Enshi	18.80	273	P	Pn	02 40 08.3	+1.4
ENH				IAmb	IAmb	02 40 09.8	
	comp=Z,24nm,0.8s						
HEH	HeiHe	19.20	352	eP	P	02 40 10.8	+0.5
ZEA	Zeya	22.66	354	eP	P	02 40 52.3	+4.7
ZEA				e		02 45 44.1	
ULN	Ulaanbaatar	24.85	319	P	P	02 41 08.3	-0.5
ULN				IAmb	IAmb	02 41 10.6	
	comp=Z,13nm,0.8s						
ULN	Ulaanbaatar	24.85	319	c iP	P	02 41 07.4	-1.4
ULN				pmax	pmax		
	comp=Z,16nm,0.9s						
SONM	Songino Array	25.20	318	P	P	02 41 11.6	-0.4
SONM	Songino Array	25.20	318	P	P	02 41 11.8	-0.3
	comp=Z,4.7nm,0.8s,baz=137,slow=9.7,SNR=26						
SONM				LR	LR	02 52 36.0	
	comp=Z,295nm,18.2s,baz=96,slow=40						
	comp=Z,4.7nm,0.8s						
PETK	Petropavlovsk-	29.01	34	LR	LR	02 54 22.8	
	comp=Z,62nm,18.6s,baz=146,slow=38						
YAK	Yakutsk	30.80	358	LR	LR	02 54 12.4	
	comp=Z,73nm,19.6s,baz=183,slow=36						
MA2	Magadan	31.19	19	LR	LR	02 55 45.5	
	comp=Z,67nm,18.1s,baz=360,slow=38						
CMAR	Chiang Mai Arr	31.90	254	LR	LR	02 56 40.4	
	comp=Z,72nm,18.3s,baz=70,slow=39						
H11N2	WAKE ISLAND Hy	33.96	101	T	T	03 18 23.0	
	baz=297,slow=75,SNR=30						
H11N1	WAKE ISLAND Hy	33.96	101	T	T	03 18 23.0	
	baz=297,slow=75,SNR=22						
H11N3	WAKE ISLAND Hy	33.97	101	T	T	03 18 24.0	
	baz=297,slow=75,SNR=22						
H11S3	WAKE ISLAND Hy	34.35	103	T	T	03 19 15.0	
	baz=303,slow=74						
H11S1	WAKE ISLAND Hy	34.36	103	T	T	03 19 36.4	
	baz=303,slow=74						
H11S2	WAKE ISLAND Hy	34.37	103	T	T	03 19 21.4	
	baz=303						
SEY	Seymchan	34.43	17	eP	P	02 42 30.7	-2.7
SEY				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BRDH	Bariadhala	36.23	266	LR	LR	03 00 52.9	
	comp=Z,105nm,18.6s,baz=122,slow=41						
WMQ	Urumqi	36.40	303	eP	P	02 42 52.4	+1.8
WMQ				pmax	pmax		
	comp=Z,23nm,0.7s						
WMQ				LR	LR		
	comp=Z,120nm,22.3s						
ZALV	Zalesovo Beam	40.10	318	P	P	02 43 20.4	-1.2
ZALV	Zalesovo Beam	40.10	318	LR	LR	03 01 28.6	
	comp=Z,141nm,19.1s,baz=107,slow=38						
ZALV	Zalesovo Beam	40.10	318	P	P	02 43 20.4	-1.2
MK31	Makanchi Array	40.45	307	eP	P	02 43 24.0	-0.6
MKAR	Makanchi Array	40.45	307	P	P	02 43 24.3	-0.4
	comp=Z,0.2nm,0.4s,baz=98,slow=7.9,SNR=5.5						
MKAR				LR	LR	03 01 56.6	
	comp=Z,129nm,18.6s,baz=93,slow=39						
	comp=Z,0.2nm,0.4s						
TIXI	Tiksi	40.47	359	LR	LR	03 01 02.1	
	comp=Z,67nm,18.8s,baz=190,slow=37						
BILL	Bilibino	42.05	19	⇓iP	P	02 43 38.4	+1.0
BILL				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KURK	Kurchatov	43.24	312	P	P	02 43 46.6	-0.7
KURK				IAmb	IAmb	02 43 47.5	
	comp=Z,5.0nm,0.8s						
KURK	Kurchatov	43.24	312	d iP	P	02 43 46.9	-0.4
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KURBB	Kurchatov Arra	43.29	312	P	P	02 43 46.8	-0.9
	comp=Z,2.9nm,0.7s,baz=97,slow=8.9,SNR=23						
	comp=Z,2.9nm,0.7s						
AAK	Ala-Archa	46.03	301	LR	LR	03 06 21.1	
	comp=Z,123nm,18.4s,baz=74,slow=40						
AAK	Ala-Archa	46.03	301	i P	P	02 44 09.8	-0.1
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BVAR	Borovoye Array	48.49	315	P	P	02 44 28.1	-0.5
	comp=Z,4.1nm,0.4s,baz=92,slow=9.4,SNR=26						
BVAR				LR	LR	03 06 43.0	
	comp=Z,140nm,18.5s,baz=96,slow=38						
	comp=Z,4.1nm,0.4s						
BRVK	Borovoye	48.55	315	P	P	02 44 28.0	-1.2
BRVK	Borovoye	48.55	315	c iP	P	02 44 28.7	-0.4
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KK31	Karatay Array	48.90	302	P	P	02 44 32.2	+0.2
KK31	Karatay Array	48.90	302	P	P	02 44 32.2	+0.2
KK31				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KKAR	Karatay Array	48.90	302	P	P	02 44 32.0	0.0
KKAR	Karatay Array	48.90	302	P	P	02 44 32.0	0.0
WRA	Warramunga Arr	50.99	176	P	P	02 44 45.5	-2.5
	comp=Z,0.1nm,0.4s,baz=355,slow=7.7,SNR=3.1						
	comp=Z,0.1nm,0.4s						
FALS	False Pass	51.06	42	P	P	02 44 50.0	+1.9
D19K	Kuna River	54.19	25	P	P	02 45 11.6	+0.4
D19K				IAmb	IAmb	02 45 26.0	
	comp=Z,7.6nm,1.2s						
ASAR	Alice Springs	54.67	177	P	P	02 45 15.2	0.0
	comp=Z,0.2nm,0.3s,baz=0.9,slow=7.8,SNR=1.8						
	comp=Z,0.2nm,0.3s						
D20K	Etivluk River	54.76	25	P	P	02 45 16.3	+1.0
D20K				IAmb	IAmb	02 45 30.7	
	comp=Z,5.3nm,1.3s						
ABKAR	Akbulak array	55.30	311	P	P	02 45 18.4	-1.0
ARTI	Arti	55.33	320	P	P	02 45 18.5	-1.1
ARTI	Arti	55.33	320	LR	LR	03 11 32.5	
	comp=Z,91nm,20.4s,baz=83,slow=39						
ARTI	Arti	55.33	320	c iP	P	02 45 18.4	-1.1
ARTI						02 46 17.9	
ARTI						02 47 18.1	
ARTI				S	S	02 53 01.2	+0.6
ARTI				SS	SS	02 56 42.0	-3.0
ARTI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
AKTO	Aktyubinsk	56.34	313	LR	LR	03 11 30.2	
	comp=Z,150nm,18.2s,baz=28,slow=38						
CAST	Castle Rocks	56.60	32	P	P	02 45 29.7	+1.2
MLY	Manley	57.08	30	P	P	02 45 32.6	+0.7
E23K	Chandalar	57.34	26	P	P	02 45 34.7	+0.9
E23K				IAmb	IAmb	02 45 51.4	
	comp=Z,5.2nm,1.3s						
E24K	Your Creek	57.77	26	P	P	02 45 38.0	+1.2
E24K				IAmb	IAmb	02 45 49.4	
	comp=Z,3.9nm,1.4s						
F24K	Squaw Lake	58.03	27	P	P	02 45 39.2	+0.6
F24K				IAmb	IAmb	02 45 52.5	
	comp=Z,2.3nm,1.1s						
ILAR	Eielson Array	58.74	30	P	P	02 45 42.8	-0.7
	comp=Z,0.2nm,0.6s,baz=280,slow=7.3,SNR=4.9						
	comp=Z,0.2nm,0.6s						
F25K	Christian Rive	58.88	26	P	P	02 45 45.8	+1.3
F25K				IAmb	IAmb	02 46 24.2	
	comp=Z,2.7nm,1.3s						
BMAR	Burnt Mountain	59.31	27	P	P	02 45 48.3	+0.8
F26K	Sheenjek River	59.44	26	P	P	02 45 49.5	+1.2
F26K				IAmb	IAmb	02 45 50.4	
	comp=Z,1.5nm,0.8s						
KIRV	Kirov	59.80	323	⇑iP	P	02 45 50.5	-0.4
BELG	Belogornoye	62.25	317	LR	LR	03 15 46.0	
	comp=Z,93nm,18.8s,baz=74,slow=38						
I30M	Mount Dempster	63.01	28	P	P	02 46 12.9	+0.2
I30M				IAmb	IAmb	02 46 30.1	
	comp=Z,2.9nm,1.0s						
INK	Inuvik	63.20	25	LR	LR	03 15 27.4	
	comp=Z,36nm,18.3s,baz=242,slow=38						
ARCES	ARCESS Array B	66.34	338	LR	LR	03 20 44.8	
	comp=Z,80nm,18.3s,baz=78,slow=41						
OBN	Obninsk	67.55	322	eP	P	02 46 41.5	-0.5
OBN				e		02 47 03.1	
OBN				pmax	pmax		
	comp=Z,6.0nm,2.0s						
KBZ	Khabaz	68.12	309	P	P	02 46 44.6	-1.2
	comp=Z,3.0nm,0.7s,baz=63,slow=0.8,SNR=7.5						
KBZ				LR	LR	03 21 32.4	
	comp=Z,51nm,18.5s,baz=110,slow=40						
	comp=Z,3.0nm,0.7s						
KBZ	Khabaz	68.12	309	⇑iP	P	02 46 46.7	+0.9
KBZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV	Kislovodsk	68.17	309	eP	P	02 46 46.9	+0.6
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,32nm,17.0s						
GNI	Garni	68.24	305	LR	LR	03 20 11.3	
	comp=Z,38nm,18.8s,baz=71,slow=39						
FIA1	FINESS Array S	69.84	330	P	P	02 46 55.1	-1.1
FINES	FINESS Array B	69.84	330	P	P	02 46 54.8	-1.4
	comp=Z,1.5nm,0.6s,baz=57,slow=5.1,SNR=7.6						
FINES				LR	LR	03 21 14.0	
	comp=Z,82nm,18.2s,baz=62,slow=39						
	comp=Z,1.5nm,0.6s						
FINES	FINESS Array B	69.84	330	ceP	P	02 46 55.2	-1.0
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	Malin Array Be	73.48	320	P	P	02 47 17.3	-1.0
	comp=Z,0.3nm,0.3s,baz=55,slow=6.6,SNR=6.0						
AKASG				LR	LR	03 22 35.4	
	comp=Z,49nm,19.7s,baz=57,slow=38						
	comp=Z,0.3nm,0.3s						
AKASG	Malin Array Be	73.48	320	ceP	P	02 47 17.6	-0.7
RAYN	Ar Rayn	74.80	288		P	02 47 27.1	+0.5
RAYN				IAmb	IAmb	02 47 27.9	
	comp=Z,2.7nm,0.8s						
RAYN	Ar Rayn	74.80	288	P	P	02 47 27.1	+0.5
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HFS	Hagfors	75.62	333	P	P	02 47 28.8	-1.7
	comp=Z,0.5nm,0.4s,baz=54,slow=7.5,SNR=6.1						
HFS				LR	LR	03 25 20.2	
	comp=Z,49nm,19.0s,baz=42,slow=39						
	comp=Z,0.5nm,0.4s						
NB2	NORSAR Subarra	76.00	334	P	P	02 47 31.6	-1.1
	comp=Z,2.9nm,1.0s,baz=52,slow=5.9						
NOA	NORSAR Array B	76.00	334	P	P	02 47 31.8	-1.0
	comp=Z,1.1nm,0.8s,baz=48,slow=5.6,SNR=6.9						
NOA				LR	LR	03 24 13.8	
	comp=Z,34nm,19.3s,baz=40,slow=38						
	comp=Z,1.1nm,0.8s						
BR131	Keskin Array S	76.09	308	P	P	02 47 33.5	-0.3
BR131				IAmb	IAmb	02 47 35.2	
	comp=Z,3.0nm,0.8s						
BR131	Keskin Array S	76.09	308	P	P	02 47 33.5	-0.3
BR131				pmax	pmax		
	comp=Z,3.0nm,0.9s						

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRTR	Keskin Array B	76.09	308	P	P	02 47 33.7	-0.2
BRTR	Keskin Array B	76.09	308	P	P	02 47 33.5	-0.3
	comp=Z,2.2nm,0.8s,baz=102,slow=5.4,SNR=15						
	comp=Z,2.2nm,0.8s						
BRTR	Keskin Array B	76.09	308	*ce*P	P	02 47 34.0	+0.2
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BURAR	Bucovina Array	77.32	318	P	P	02 47 40.3	-0.3
BURAR	Bucovina Array	77.32	318	P	P	02 47 40.3	-0.3
BURAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MLR	Muntele Rosu	78.04	316	LR	LR	03 25 34.4	
	comp=Z,98nm,18.5s,baz=74,slow=38						
MMAI	Mount Meron Ar	78.12	301	P	P	02 47 44.5	-0.8
	comp=Z,0.4nm,0.3s,baz=90,slow=5.8,SNR=1.9						
	comp=Z,0.4nm,0.3s						
VRAC	Vranov	81.03	323	LR	LR	03 28 08.6	
	comp=Z,38nm,19.2s,baz=45,slow=39						
GERES	GERESS Array B	82.80	324	P	P	02 48 09.5	-0.6
	comp=Z,0.3nm,0.7s,baz=327,slow=1.6,SNR=2.8						
	comp=Z,0.3nm,0.7s						
EKA	Eskdalemuir Ar	85.36	336	P	P	02 48 20.8	-2.1
	comp=Z,1.9nm,1.0s,baz=51,slow=4.8,SNR=3.5						
	comp=Z,1.9nm,1.0s						
DAVOX	Davos/Dischmat	86.10	324	LR	LR	03 30 59.1	
	comp=Z,45nm,20.1s,baz=74,slow=38						
VAE	Valguarnera	89.74	315	LR	LR	03 34 23.2	
	comp=Z,48nm,19.4s,baz=118,slow=39						

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*IDC **19** 02:45:19.0±0.9, 2°.59S×141°.35E, h0^{km}, mb3.8/6, mbtmp3.8/7, ML4.1/1, MS3.9/1, Error ellipse: s-maj=23.0km s-min=17.3km az=12.0*

*DJA **19** 02:45:30.6±2.4, 2°S±10°×14°1E±1°9, h10^{km}, M3.9/5, mb4.5/1, MLv3.6/5*

ISC 19 02:45:20.4±1.1**, 2°.5S**±0°.1×**141°.47E**±0°.08**, h10^{km}, n20,** σ**1^{s}23**/16**, mb3.7**/6**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	0.77	268	Pn	Pg	02 45 35.1	-0.1
	152nm,0.3s,baz=128,slow=5.4,SNR=474						
JAY				Sn	Sb	02 45 47.4	+1.0
	166nm,0.3s,baz=140,slow=12,SNR=8.8						
JAY	Jayapura	0.77	268	P	Pg	02 45 35.4	+0.2
GENI	Genyem	1.30	266	P	Pb	02 45 43.3	-1.8
SMPI	Sarmi	2.80	280	P	Pn	02 46 05.4	0.0
WAMI	Wamena	3.08	243	P	Pn	02 46 11.7	+2.5
BAKI	Biak	5.51	283	P	Pn	02 46 42.7	0.0
FAKI	Fak Fak	9.22	267	P	Pn	02 47 34.4	+0.8
WRA	Warramunga Arr	18.69	201	P	P	02 49 37.3	-1.8
	0.6nm,0.3s,baz=21,slow=12,SNR=16						
	1.6nm,0.4s						
ASAR	Alice Springs	22.29	199	P	P	02 50 16.8	-1.4
	1.2nm,0.6s,baz=31,slow=10,SNR=11						
	1.2nm,0.6s						
H11S3	WAKE ISLAND Hy	32.42	49	T	T	03 25 59.6	
	baz=232,slow=75,SNR=88						
H11S2	WAKE ISLAND Hy	32.43	49	T	T	03 25 56.9	
	baz=232,slow=75,SNR=57						
H11S1	WAKE ISLAND Hy	32.44	49	T	T	03 26 01.4	
	baz=232,slow=75,SNR=60						
NWAO	Narrogin (SRO)	37.86	214	LR	LR	03 10 14.6	
	comp=Z,170nm,20.1s,baz=321,slow=40						
MKAR	Makanchi Array	71.32	321	P	P	02 56 41.3	+0.8
	0.2nm,0.3s,baz=95,slow=8.3,SNR=6.9						
	0.2nm,0.3s						
KURBB	Kurchatov Arra	75.15	324	P	P	02 57 02.8	-0.2
	0.3nm,0.5s,baz=113,slow=4.7,SNR=3.1						
	0.3nm,0.5s						
BVAR	Borovoye Array	80.72	325	P	P	02 57 34.8	+0.9
	1.7nm,0.5s,baz=113,slow=6.8,SNR=9.2						
	1.7nm,0.5s						
ILAR	Eielson Array	84.50	24	P	P	02 57 52.8	-0.6
	0.3nm,0.6s,baz=274,slow=3.6,SNR=4.5						
	0.3nm,0.6s						
QSPA	South Pole Qui	87.45	180	P	P	02 58 07.2	-0.9
	0.7nm,0.7s,baz=307,slow=6.4,SNR=4.1						
	0.7nm,0.7s						
LPAZ	La Paz	145.31	124	PKPbc	PKPbc	03 05 00.4	+0.2
	0.7nm,0.8s,baz=195,slow=1.6,SNR=4.8						
DBIC	Dimbokro	146.19	278	PKPbc	PKPdf	03 05 02.3	+1.1
	3.1nm,0.6s,baz=60,slow=4.8,SNR=5.1						

IDC 19 02:55:29.2±2.1**, 31°.03S**×**177°.74W, h0^{km}, mb3.7**/3**, mbtmp3.7**/4**, ML3.0**/1**, MS3.2**/1**, Error ellipse: s-maj=50.3km s-min=38.5km az=67.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	8.37	209	Pn	Pn	02 57 30.8	-0.9
	0.2nm,0.3s,baz=100,slow=6.5,SNR=1.8						
URZ				Sn	Sn	02 59 02.5	-4.5
	0.8nm,0.3s,baz=70,slow=15,SNR=3.6						
URZ				LR	LR	03 01 08.3	
	comp=Z,156nm,18.2s,baz=268,slow=40						
	4.3nm,0.8s						
ASAR	Alice Springs	43.30	267	P	P	03 03 32.4	-0.7
	0.4nm,0.5s,baz=108,slow=7.8,SNR=5.4						
	0.4nm,0.5s						
WRA	Warramunga Arr	44.34	273	P	P	03 03 42.1	+0.7
	0.6nm,0.4s,baz=113,slow=7.9,SNR=6.4						
	0.6nm,0.4s						
QSPA	South Pole Qui	59.09	180	P	P	03 05 31.4	+0.2
	0.9nm,0.9s,baz=205,slow=2.7,SNR=3.1						
	0.9nm,0.9s						
FINES	FINESS Array B	145.81	340	PKPbc	PKPdf	03 15 08.4	-0.7
	1.0nm,0.6s,baz=49,slow=4.2,SNR=5.7						

DJA 19 03:09:27.5±0.6**, 10°S**±5°×**11°1E**±°**, h10^{km}, M3.9**/9**, mB6.2**/1**, mb4.3**/2**, MLv3.7**/9**, Mw(mB)5.9**/1**, MwMwp6.3**/1**, Mwp6.3**/1**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCJI	Pacitan	1.93	1	P	Pn	03 10 00.3	-0.1
PCJI				S	Sn	03 10 24.6	-0.2
UGM	Wanagama	2.30	344	P	Pn	03 10 05.0	-0.5
WOJI	Wonogiri, Jawa	2.30	354	P	Pn	03 10 05.4	-0.1
WOJI				S	Sb	03 10 35.9	-1.7
GMJI	Gumukmas	2.93	51	P	Pn	03 10 14.0	-0.1
JAGI	Jajag, Banyuwa	3.40	61	P	Pn	03 10 20.8	+0.2
TWSI	Taliwang, Sumb	5.82	77	P	Pn	03 10 54.1	+0.1
	0.1nm18nm,0.7s						
CGJI	Cibinong	6.44	303	P	Pn	03 11 02.2	-0.2
PLAI	Plampang	6.67	79	P	Pn	03 11 05.6	0.0

IDC 19 03:12:47.8±3.2**, 31°.35S**×**177°.07W, h0^{km}, mb3.6**/2**, mbtmp3.6**/3**, ML2.9**/1**, Error ellipse: s-maj=78.4km s-min=37.7km az=118.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	8.38	213	Pn	Pn	03 14 50.4	-0.2
	0.1nm,0.3s,baz=27,slow=14,SNR=1.7						
URZ				Sn	Sn	03 16 26.6	+0.6
	0.9nm,0.3s,baz=12,slow=23,SNR=6.3						
	1.8nm,0.4s						
ASAR	Alice Springs	43.86	268	P	P	03 20 56.2	+0.1
	0.2nm,0.3s,baz=104,slow=7.7,SNR=5.8						
	0.2nm,0.3s						
WRA	Warramunga Arr	44.93	273	P	P	03 21 04.5	-0.2
	0.4nm,0.4s,baz=111,slow=8.0,SNR=7.0						
	0.4nm,0.4s						
FINES	FINESS Array B	146.31	340	PKPbc	PKPdf	03 32 28.9	+0.3
	0.6nm,0.5s,baz=48,slow=2.8,SNR=5.5						

IDC 19 03:25:25.8±2.9**, 31°.01S**×**177°.63W, h0^{km}, mb3.5**/2**, mbtmp3.5**/3**, ML3.1**/1**, Error ellipse: s-maj=72.0km s-min=36.3km az=116.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	8.43	209	Pn	Pn	03 27 28.4	-0.7
	0.2nm,0.3s,baz=2.5,slow=19,SNR=1.4						
URZ				Sn	Sn	03 29 04.5	-0.5
	0.3nm,0.3s,baz=251,slow=23,SNR=1.2						
	2.6nm,0.7s						
ASAR	Alice Springs	43.40	267	P	P	03 33 31.3	+1.0
	0.2nm,0.3s,baz=107,slow=7.2,SNR=4.3						
	0.2nm,0.3s						
WRA	Warramunga Arr	44.44	273	P	P	03 33 38.1	-0.7
	0.3nm,0.3s,baz=111,slow=8.0,SNR=7.5						
	0.3nm,0.3s						
FINES	FINESS Array B	145.82	340	PKPbc	PKPdf	03 45 05.2	-0.4
	0.7nm,0.3s,baz=39,slow=4.5,SNR=14						

IDC 19 03:30:46.5±3.2**, 31°.43S**×**177°.48W, h0^{km}, mb3.5**/2**, mbtmp3.6**/3**, ML2.9**/1**, Error ellipse: s-maj=77.2km s-min=37.4km az=116.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	8.13	212	Pn	Pn	03 32 45.1	-0.7
	0.1nm,0.3s,baz=108,slow=12,SNR=1.8						
URZ				Sn	Sn	03 34 17.9	-0.5
	0.8nm,0.3s,baz=315,slow=19,SNR=6.2						
	3.7nm,0.8s						
ASAR	Alice Springs	43.51	268	P	P	03 38 52.5	+0.6
	0.2nm,0.3s,baz=108,slow=7.3,SNR=1.6						
	0.2nm,0.3s						
WRA	Warramunga Arr	44.59	273	P	P	03 39 00.4	-0.2
	0.3nm,0.3s,baz=111,slow=8.0,SNR=7.5						
	0.3nm,0.3s						
FINES	FINESS Array B	146.27	340	PKPbc	PKPdf	03 50 27.2	+0.1
	1.4nm,0.9s,baz=45,slow=3.0,SNR=5.6						

WEL 19 03:45:12.2±0.6**, 33°S**±4°×**17°9W**±°**, h33^{km}, M4.3**/13**, mB4.8**/6**, ML4.7**/18**, MLv4.4**/13**, Mw(mB)4.0**/6**, Error ellipse: s-maj=12.1km s-min=3.7km az=110.2, confirmed, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.62	14	P	Pn	03 46 05.6	-0.4
GLKZ				S	Sn	03 46 44.0	-3.6
MXZ	Matakaoa Point	5.28	205	P	Pn	03 46 30.0	+1.3
WMGZ	Waiomatatini S	5.47	203	P	Pn	03 46 32.3	+0.9
WMGZ				S	Sn	03 47 37.0	+3.8
PKGZ	Pakihiroa	5.63	205	P	Pn	03 46 37.1	+3.5
PKGZ				S	Sn	03 47 39.4	+2.3
HAZ	Te Kaha	5.64	208	P	Pn	03 46 34.0	+0.2
HAZ				S	Sn	03 47 41.2	+3.7
PUZ	Puketiti	5.75	203	P	Pn	03 46 37.8	+2.5
PUZ				S	Sn	03 47 42.0	+1.9
RUGZ	Raukumara Rang	5.87	208	P	Pn	03 46 36.6	-0.3
RUGZ				S	Sn	03 47 46.3	+3.2
TWGZ	Tauwhareparae	5.94	205	P	Pn	03 46 38.4	+0.5
TWGZ				S	Sn	03 47 47.1	+2.2
CNGZ	Carnagh Statio	6.14	202	P	Pn	03 46 39.9	-0.8
CNGZ				S	Sn	03 47 49.7	-0.1
TKGZ	Te Karaka	6.22	204	P	Pn	03 46 41.9	+0.2
TKGZ				S	Sn	03 47 53.1	+1.4
MWZ	Matawai	6.25	207	P	Pn	03 46 45.0	+2.9
MWZ				S	Sn	03 47 53.7	+1.4
URZ	Urewera	6.35	210	P	Pn	03 46 43.2	-0.2
URZ				S	Sn	03 47 55.5	+0.7
WCZ	Waipu Caves	6.41	239	P	Pn	03 46 47.2	+3.0
RAGZ	Rawiri	6.43	207	P	Pn	03 46 47.4	+2.8
RAGZ				S	Sn	03 47 58.3	+1.4
RIGZ	Rimuhau	6.49	204	P	Pn	03 46 47.1	+1.6
RIGZ				S	Sn	03 47 59.3	+0.9
PRGZ	Paritu Road	6.65	202	S	Sn	03 48 01.8	-0.4
OUZ	Omahuta	6.69	247	P	Pn	03 46 49.6	+1.5
OUZ				S	Sn	03 48 05.2	+2.0
SNGZ	Shannon Statio	6.71	206	P	Pn	03 46 50.3	+1.8
SNGZ				S	Sn	03 48 04.0	+0.2
MHGZ	Mahia Peninsul	6.85	201	P	Pn	03 46 49.3	-1.1
MTHZ	Maungataniwha	6.96	209	P	Pn	03 46 53.6	+1.7
MTHZ				S	Sn	03 48 10.9	+0.9
NMHZ	Naumai	7.19	208	P	Pn	03 46 56.2	+1.1
NMHZ				S	Sn	03 48 15.3	-0.3
ARHZ	Aropaoanui	7.26	206	P	Pn	03 46 55.4	-0.5
BKZ	Black Stump Fm	7.37	209	P	Pn	03 46 55.6	-2.0
BKZ				S	Sn	03 48 19.5	-0.6
NTVZ	North Tongarir	7.67	213	P	Pn	03 47 02.8	+1.0
ETVZ	East Tongariro	7.69	213	P	Pn	03 47 02.6	+0.6
OTVZ	Oturere	7.73	213	P	Pn	03 47 03.2	+0.6
SNVZ	South Ngauruho	7.76	213	P	Pn	03 47 03.6	+0.6
KAHZ	Kahuranaki	7.77	205	P	Pn	03 47 02.6	-0.4
KAHZ				S	Sn	03 48 28.9	-1.0
KRHZ	Kereru	7.83	208	P	Pn	03 47 02.6	-1.2
KRHZ				S	Sn	03 48 28.1	-3.2
PNHZ	Pukenui	8.13	208	P	Pn	03 47 05.9	-2.0
PNHZ				S	Sn	03 48 34.9	-3.8
PRHZ	Porangahau	8.28	204	P	Pn	03 47 08.3	-1.6
TIWZ	Tintock	8.99	206	P	Pn	03 47 17.0	-2.8
MRZ	Mangatainoka R	9.01	208	P	Pn	03 47 17.2	-2.8
MRZ				S	Sn	03 48 53.5	-6.9
OGWZ	Otaki Gorge	9.31	209	P	Pn	03 47 21.3	-2.8
OGWZ				S	Sn	03 49 00.0	-7.6

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*ATH **19** 04:03:56.1, 40°.03N×21°.43E, h16^{km}±3^{km}, ML2.5/12, Manual Solution by A.Plessa First location: 2019/06/19 04:04:47, This location: 2019/06/19 05:10:30 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

*THE **19** 04:03:57.2, 40°.1N±0°.9×2°1E±°, h0^{km}±3^{km}, M2.4/9, MLh2.4/9*

ISC 19 04:03:57.2±0.8**, 40°.03N**±0°.02×**21°.42E**±0°.03**, h12^{km}**±6^{km}**, n27,** σ**1^{s}41**/35**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KPRO	Kipourio	0.09	211	P	Pg	04 04 00.1	+0.1
KPRO				S	Sg	04 04 02.7	+0.7
KPRO	Kipourio	0.09	211	P	Pg	04 04 00.1	+0.1
KPRO				S	Sg	04 04 02.1	+0.1
PENT	Pentalofos	0.27	308	P	Pg	04 04 02.4	-0.5
PENT				S	Sg	04 04 06.2	-0.6
PENT	Pentalofos	0.27	308	P	Pg	04 04 02.4	-0.5
PENT				S	Sg	04 04 06.2	-0.6
MSVA	Metsovo	0.32	216	P	Pg	04 04 04.2	+0.6
MSVA				S	Sg	04 04 07.8	-0.1
KZN	Kozani	0.39	44	P	Pg	04 04 04.2	-0.7
KZN	Kozani	0.39	44	P	Pg	04 04 04.2	-0.7
KZN				S	Sb	04 04 10.0	-1.9
NEST	Nestorio	0.48	324	P	Pg	04 04 05.6	-1.1
NEST	Nestorio	0.48	324	P	Pg	04 04 05.5	-1.1
JAN	Janina	0.57	230	S	Sb	04 04 17.8	+0.5
JAN	Janina	0.57	230	P	Pg	04 04 07.8	-0.6
THL	Klokotos Trika	0.65	135	S	Sb	04 04 20.7	+1.3
THL	Klokotos Trika	0.65	135	P	Pg	04 04 08.7	-1.1
TETR	Tetrakomo, Epi	0.69	189	P	Pg	04 04 10.0	-0.6
TYRN	Tyrnavos	0.70	117	P	Pg	04 04 09.9	-0.8
TYRN	Tyrnavos	0.70	117	P	Pg	04 04 09.8	-1.0
IGT	Igoumenitsa	0.97	240	P	Pg	04 04 14.7	-1.3
MAKR	Makrakomi, Fth	1.15	151	P	Pb	04 04 16.9	-2.1
OHR	Ohrid	1.18	337	*i* Pn	Pn	04 04 19.2	-0.4
OHR				*i* Sn	Sn	04 04 38.4	+2.8
AGG	Agios Georgios	1.23	145	P	Pn	04 04 19.6	-0.5
TSLK	Tsoukalades, L	1.34	207	P	Pn	04 04 21.5	-0.2
LKD2	Lefkada island	1.37	206	P	Pn	04 04 21.9	-0.2
EVGI	Lefkada island	1.52	203	P	Pb	04 04 25.2	-0.1
VAY	Valandovo	1.56	34	*i* Pn	Pg	04 04 26.2	-1.0
VAY				*i* Sn	Sg	04 04 52.9	+5.5
EFP	Efpalio	1.64	167	P	Pb	04 04 27.4	0.0
SERG	Sergoula	1.69	163	P	Pb	04 04 28.0	-0.1
PAIG	Paliouri	1.74	93	P	Pn	04 04 26.5	-0.6

IDC 19 04:15:54.0±2.0**, 6°.74S**×**128°.82E, h0^{km}, mb3.8**/1**, mbtmp3.7**/3**, ML3.9**/2**, Error ellipse: s-maj=114.9km s-min=31.2km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.18	158	Pn	Pn	04 19 15.3	-0.9
	0.6nm,0.3s,baz=337,slow=13,SNR=12						
WRA				Sn	Sn	04 21 43.5	-11
	0.4nm,0.3s,baz=340,slow=21,SNR=5.2						
	0.6nm,0.3s						
ASAR	Alice Springs	17.52	164	P	Pn	04 20 00.6	+0.6
	0.4nm,0.3s,baz=340,slow=12,SNR=11						
ASAR				S	Sn	04 23 10.2	-5.7
	0.2nm,0.4s,baz=347,slow=24,SNR=1.7						
	0.6nm,0.3s						
MKAR	Makanchi Array	67.37	327	P	P	04 26 51.2	0.0
	0.5nm,0.4s,baz=119,slow=7.4,SNR=6.6						
	0.5nm,0.4s						

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*IDC **19** 04:29:20.3±2.9, 33°.96S×178°.58W, h0^{km}, mb4.1/2, mbtmp4.1/3, ML4.1/1, MS3.4/3, Error ellipse: s-maj=70.3km s-min=35.3km az=123.0*

*WEL **19** 04:29:25.0±0.6, 34°S±10°×17°9W±2°3, h33^{km}, M4.1/14, mB4.7/7, ML4.5/14, MLv4.3/14, Mw(mB)3.9/7, Error ellipse: s-maj=32.9km s-min=3.8km az=113.1, confirmed*

ISC 19 04:29:24.3±1.4**, 33°.7S**±0°.1×**179°.0W**±0°.3**, h35^{km}, n35,** σ**1^{s}52**/54**, MS3.5**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	4.45	209	P	Pn	04 30 29.4	+0.2
MXZ				S	Sn	04 31 20.5	+0.8
GLKZ	Green Lake	4.51	12	P	Pn	04 30 29.2	-0.9
GLKZ				S	Sn	04 31 22.6	+1.2
WMGZ	Waiomatatini S	4.63	207	P	Pn	04 30 31.6	-0.1
WMGZ				S	Sn	04 31 26.2	+2.1
PKGZ	Pakihiroa	4.80	209	P	Pn	04 30 35.4	+1.4
PKGZ				S	Sn	04 31 29.6	+1.2
HAZ	Te Kaha	4.83	212	P	Pn	04 30 35.6	+1.1
HAZ				S	Sn	04 31 32.2	+3.1
PUZ	Puketiti	4.91	206	P	Pn	04 30 36.9	+1.4
PUZ				S	Sn	04 31 30.8	-0.3
RUGZ	Raukumara Rang	5.05	212	P	Pn	04 30 37.7	+0.1
RUGZ				S	Sn	04 31 36.7	+1.9
TWGZ	Tauwhareparae	5.10	208	P	Pn	04 30 40.0	+1.7
TWGZ				S	Sn	04 31 36.0	0.0
TKGZ	Te Karaka	5.38	208	P	Pn	04 30 42.4	+0.4
TKGZ				S	Sn	04 31 41.7	-1.1
MWZ	Matawai	5.42	210	P	Pn	04 30 43.4	+0.8
MWZ				S	Sn	04 31 45.9	+2.0
URZ	Urewera	5.55	214	Pn	Pn	04 30 44.9	+0.6
	6.2nm,0.3s,baz=34,slow=2.6,SNR=26						
URZ				Sn	Sn	04 31 47.2	+0.4
	8.1nm,0.3s,baz=18,slow=6.4,SNR=10						
	13nm,0.3s						
URZ	Urewera	5.55	214	P	Pn	04 30 44.9	+0.6
URZ				S	Sn	04 31 46.0	-0.8
RAGZ	Rawiri	5.61	210	P	Pn	04 30 45.5	+0.3
RAGZ				S	Sn	04 31 48.3	-0.1
RIGZ	Rimuhau	5.65	207	P	Pn	04 30 45.7	0.0
RIGZ				S	Sn	04 31 49.2	-0.2
PRGZ	Paritu Road	5.80	205	S	Sn	04 31 52.7	-0.3
SNGZ	Shannon Statio	5.88	209	P	Pn	04 30 49.9	+0.9
SNGZ				S	Sn	04 31 55.6	+0.5
MUGZ	Murupara	5.88	215	S	Sn	04 31 54.9	-0.2
RAHZ	Arahi	6.10	210	P	Pn	04 30 52.5	+0.6
RAHZ				S	Sn	04 32 01.5	+1.0
MTHZ	Maungataniwha	6.15	212	P	Pn	04 30 54.4	+1.7
MTHZ				S	Sn	04 32 01.6	-0.2
NMHZ	Naumai	6.37	211	P	Pn	04 30 54.5	-1.2
NMHZ				S	Sn	04 32 08.3	+1.1
KWHZ	Kaweka Forest	6.81	212	P	Pn	04 31 03.1	+1.4
KWHZ				S	Sn	04 32 16.0	-2.0
TMVZ	Te Maari	6.90	217	S	Sn	04 32 19.0	-1.3
NTVZ	North Tongarir	6.90	217	P	Pn	04 31 04.2	+1.1
NTVZ				S	Sn	04 32 20.0	-0.3
ETVZ	East Tongariro	6.91	217	S	Sn	04 32 19.6	-1.0
OTVZ	Oturere	6.96	217	P	Pn	04 31 04.8	+1.0
OTVZ				S	Sn	04 32 19.4	-2.3
NGZ	Ngauruhoe	7.00	217	S	Sn	04 32 22.8	0.0
WNVZ	Wahianoa	7.11	216	P	Pn	04 31 06.8	+0.8
WNVZ				S	Sn	04 32 25.0	-0.7
PNHZ	Pukenui	7.31	211	P	Pn	04 31 08.2	-0.4
PNHZ				S	Sn	04 32 27.2	-3.0
MRZ	Mangatainoka R	8.19	210	P	Pn	04 31 20.2	-0.4
MRZ				S	Sn	04 32 45.2	-6.7
STKA	Stephens Creek	33.06	262	LR	LR	04 48 45.1	
	comp=Z,78nm,18.1s,baz=21,slow=35						
ASAR	Alice Springs	42.22	271	P	P	04 37 17.9	+3.8
	1.5nm,0.6s,baz=114,slow=7.4,SNR=23						
	1.5nm,0.6s						
WRA	Warramunga Arr	43.51	276	P	P	04 37 28.4	+3.8
	1.6nm,0.5s,baz=118,slow=7.3,SNR=25						
	1.6nm,0.5s						
ASAJ	Asahikawa	84.99	333	LR	LR	05 12 08.1	
	comp=Z,23nm,20.6s,baz=149,slow=30						
PETK	Petropavlovsk-	88.80	346	LR	LR	05 17 49.3	
	comp=Z,12nm,20.1s,baz=14,slow=33						
FINES	FINESS Array B	147.91	337	PKPbc	PKiKP	04 49 06.9	+0.2
	1.0nm,0.7s,baz=52,slow=2.3,SNR=9.7						

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*KRNET **19** 04:50:33.9±0.1, 42°.11N×77°.76E, h21^{km}, mb3.1*

*SOME **19** 04:50:34.9, 42°.15N×77°.73E, h10^{km}*

*NNC **19** 04:50:35.3±0.7, 42°.22N×77°.76E, h0^{km}, mb3.2, mpv3.5, Error ellipse: s-maj=5.3km s-min=2.6km az=179.0*

ISC 19 04:50:34.1±1.1**, 42°.12N**±0°.03×**77°.75E**±0°.02**, h4^{km}**±10^{km}**, n50,** σ**0^{s}94**/90**, 27C-18D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	Taragay, Kyrgy	0.40	174	⇑*i*P	Pg	04 50 41.8	0.0
TARG				⇑*i*S	Sg	04 50 47.3	+0.3
KDJ	Kajisay	0.42	271	⇓*i*P	Pg	04 50 42.4	+0.1
KDJ				⇓*i*S	Sg	04 50 48.5	+0.6
PRZ	Przheval'sk	0.60	53	⇑*i*P	Pg	04 50 45.8	+0.1
PRZ				⇑*i*S	Sg	04 50 54.2	+0.7
SATY	Saty	1.05	27	P	Pg	04 50 54.6	+0.2
	23nm,0.1s						
SATY				S	Sg	04 51 07.7	-0.3
	363nm,0.1s						
ULHL	Ulahol	1.13	277	⇑*i*P	Pg	04 50 54.9	-0.8
ULHL				⇑*i*S	Sg	04 51 10.2	-0.2
MDOK	Medeo	1.16	334	⇑P	Pg	04 50 56.0	-0.4
	5.3nm,0.2s						
MDOK				Pg	Pb	04 50 56.7	-0.2
	27nm,0.2s						
MDOK				⇑S	Sg	04 51 10.8	-0.6
	52nm,0.8s						
MDOK				Lg	Lg	04 51 11.4	
	41nm,0.3s						
KOTS	Kotyrbulak	1.21	337	P	Pg	04 50 57.3	0.0
	34nm,0.1s						
KOTS				S	Sg	04 51 12.9	0.0
	142nm,0.2s						
KOTS	Kotyrbulak	1.21	337	*e*P	Pg	04 50 57.2	0.0
	34nm,0.1s						
KOTS				*e*S	Sg	04 51 12.1	-0.8
	142nm,0.2s						
AAA	Alma-Ata	1.25	331	P	Pg	04 50 58.6	+0.6
	68nm,0.1s						
AAA				S	Sg	04 51 15.1	+0.8
	135nm,0.1s						
AAA	Alma-Ata	1.25	331	*e*P	Pg	04 50 58.2	+0.1
	68nm,0.1s						
AAA				*e*S	Sg	04 51 13.8	-0.4
	135nm,0.1s						
UZB	Uzynbulak	1.39	42	P	Pn	04 51 00.5	+0.1
	9.2nm,0.1s						
UZB				S	Sb	04 51 17.9	-1.0
	126nm,0.2s						
UZB	Uzynbulak	1.39	42	*e*P	Pn	04 50 59.9	-0.5
UZB				*e*S	Sb	04 51 16.9	-2.1
BOOM	Boomskoye usch	1.39	286	⇑*i*P	Pn	04 50 59.5	-1.0
BOOM				⇑*i*S	Sb	04 51 18.3	-0.7
MTBS	Maitube	1.40	316	P	Pb	04 51 01.3	+0.4
	13nm,0.1s						
MTBS				S	Sb	04 51 18.6	-0.7
	49nm,0.1s						
MTBS	Maitube	1.40	316	*e*P	Pb	04 51 01.3	+0.4
	13nm,0.1s						
MTBS				*e*S	Sb	04 51 18.6	-0.7
	49nm,0.1s						
NRN	Naryn	1.48	243	⇓*i*P	Pn	04 51 01.4	-0.5
NRN				⇓*i*S	Sn	04 51 21.2	-0.6
KST	Kastek	1.61	305	P	Pb	04 51 04.6	+0.1
	4.1nm,0.2s						
KST				S	Sn	04 51 25.4	+0.6
	60nm,0.3s						
KST	Kastek	1.61	305	*e*P	Pb	04 51 04.6	+0.1
	4.1nm,0.2s						
KST				*e*S	Sn	04 51 25.4	+0.6
	60nm,0.3s						
PDGK	Podgornoye	1.76	46	⇑Pn	Pn	04 51 06.0	+0.5
	5.3nm,0.3s						
PDGK				⇑Sn	Sb	04 51 28.9	-0.7
	70nm,0.5s						
KTBS	Karatobe	1.77	334	P	Pb	04 51 07.0	-0.2
	22nm,0.2s						
KTBS				S	Sn	04 51 29.1	+0.4
	130nm,0.2s						
TKM2	Tokmak 2	1.78	297	⇑Pn	Pn	04 51 06.7	+0.8

	4.8nm,0.3s						
TKM2				⇑Sn	Sb	04 51 30.6	+0.4
	48nm,0.4s						
TKM2	Tokmak 2	1.78	297	⇑iP	Pn	04 51 06.3	+0.4
TKM2				⇑iS	Sn	04 51 29.7	+0.6
JNKS	Jany-Kuch	1.90	237	⇑iP	Pn	04 51 07.8	+0.2
JNKS				⇑iS	Sn	04 51 32.4	+0.3
BLB	Baldybastay	2.04	15	Pg	Pb	04 51 12.0	+0.1
	92nm,0.3s						
BLB				Lg	Lg	04 51 38.4	
	285nm,0.4s						
KUU	Kurty	2.05	330	P	Pn	04 51 09.5	+0.1
	3.9nm,0.2s						
KUU				S	Sn	04 51 33.5	-2.0
	42nm,0.3s						
KUU	Kurty	2.05	330	eP	Pn	04 51 09.7	+0.2
	3.3nm,0.1s						
KUU				eS	Sn	04 51 33.6	-2.0
	69nm,0.4s						
ARXS	Arharly	2.09	2	Pg	Pb	04 51 13.1	+0.4
	16nm,0.2s						
ARXS				Lg	Lg	04 51 39.9	
	149nm,0.2s						
KBK	Karagaybulak	2.14	285	⇓eP	Pn	04 51 11.0	+0.1
KBK				⇓iS	Sn	04 51 38.5	+0.5
KRBS	Karabastau	2.19	317	Pg	Pb	04 51 15.2	+0.9
	6.5nm,0.2s						
KRBS				Lg	Lg	04 51 42.7	
	60nm,0.2s						
KTMS	Ketmen	2.33	54	Pg	Pb	04 51 16.7	-0.1
	3.8nm,0.2s						
KTMS				Lg	Lg	04 51 45.7	
	32nm,0.1s						
KTMS	Ketmen	2.33	54	eP	Pb	04 51 16.7	-0.1
	3.8nm,0.2s						
KTMS				eS	Sb	04 51 45.8	-0.2
	32nm,0.1s						
CHMS	Chumysh	2.38	293	⇑iP	Pn	04 51 14.3	+0.3
CHMS				⇑iS	Sn	04 51 43.7	0.0
UCH	Uchtor	2.41	274	⇑iP	Pn	04 51 15.0	+0.2
UCH				⇑iS	Sn	04 51 45.0	+0.1
AAK	Ala-Archa	2.47	283	⇓iP	Pn	04 51 15.7	+0.4
AAK				⇓iS	Sn	04 51 45.9	-0.1
KNOS	Konyrlen	2.47	25	Pg	Pb	04 51 18.8	-0.4
	6.8nm,0.3s						
KNOS				Lg	Lg	04 51 49.5	
	35nm,0.3s						
ARLS	Aral	2.57	265	⇓eP	Pn	04 51 16.9	+0.2
ARLS				⇓iS	Sn	04 51 48.3	-0.2
USP	Ospenovka	2.66	297	⇓iP	Pn	04 51 18.1	+0.3
USP				⇓iS	Sn	04 51 50.6	+0.1
DJR	Jarkent	2.67	33	Pg	Pb	04 51 21.8	-0.6
	3.3nm,0.1s						
DJR				Lg	Lg	04 51 54.7	
	124nm,0.4s						
DJR	Jarkent	2.67	33	eP	Pb	04 51 22.9	+0.4
	4.5nm,0.2s						
DJR				eS	Sb	04 51 56.2	+0.6
	124nm,0.4s						
EKS2	Erkin-Say	2.99	282	⇓eP	Pn	04 51 22.9	+0.4
EKS2				⇓eS	Sn	04 51 58.6	-0.3
AML	Almayashu	3.02	272	⇓iP	Pn	04 51 23.3	+0.2
AML				⇓iS	Sn	04 51 59.6	-0.3
SALK	Salom-Alik	3.20	249	⇑iP	Pn	04 51 25.8	+0.4
SALK				⇑iS	Sn	04 52 03.4	-0.7
KAPS	Kapalarasan	3.37	20	Pg	Pb	04 51 34.9	+0.5
	2.3nm,0.1s						
KAPS				Lg	Lg	04 52 17.2	
	70nm,0.2s						
MRKS	Merke	3.41	282	Pg	Pb	04 51 36.5	+1.4
	4.4nm,0.5s						
MRKS				Lg	Lg	04 52 19.7	
	16nm,0.5s						
MRKS	Merke	3.41	282	eP	Pb	04 51 37.7	+2.6
	2.4nm,0.3s						
MRKS				eS	Sg	04 52 21.5	-2.0
	18nm,0.2s						
MNAS	Manas	3.91	277	⇓iP	Pn	04 51 35.7	+0.6
MNAS				⇓iS	Sn	04 52 20.6	-0.9
BTLS	Baital	3.97	319	Pg	Pb	04 51 46.2	+1.6
	1.4nm,0.2s						
BTLS				Lg	Lg	04 52 36.5	
	1.5nm,0.4s						
BTLS	Baital	3.97	319	eP	Pb	04 51 46.2	+1.6
	1.4nm,0.2s						
BTLS				eS	Sb	04 52 36.5	+3.5
	1.5nm,0.4s						
KK31	Karatay Array	5.43	283	⇑Pg	Pg	04 52 14.7	-3.4
	0.5nm,0.3s						
KK31				Lg	Lg	04 53 22.8	
	1.5nm,0.4s,baz=99,slow=29,SNR=6.8						
MK31	Makanchi Array	5.69	33	⇑Pn	Pn	04 52 01.6	+2.2
	0.1nm,0.2s,baz=209,slow=15,SNR=7.3						
MK31				⇑Lg	Lg	04 53 29.4	
	2.8nm,0.7s,baz=215,slow=29,SNR=4.6						

IDC 19 04:51:48.5±3.4**, 31°.29S**×**177°.46W, h0**^{km}**, mb3.7**/2**,**
mbtmp3.7/3**, ML3.1**/1**, Error ellipse: s-maj=76.2km**
s-min=38.2km az=114.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	8.26	211	Pn	Pn	04 53 49.6	0.0
	0.2nm,0.3s,baz=172,slow=17,SNR=1.7						
URZ				Sn	Sn	04 55 23.5	-0.1
	1.5nm,0.3s,baz=150,slow=20,SNR=6.8						
	5.3nm,0.9s						
ASAR	Alice Springs	43.53	268	P	P	04 59 54.6	+0.4
	0.5nm,0.5s,baz=104,slow=7.4,SNR=9.2						
	0.5nm,0.5s						
WRA	Warramunga Arr	44.60	273	P	P	05 00 02.2	-0.5
	0.5nm,0.3s,baz=111,slow=8.1,SNR=14						
	0.5nm,0.3s						
FINES	FINESS Array B	146.14	340	PKPbc	PKPdf	05 11 29.0	+0.1
	2.2nm,1.0s,baz=47,slow=3.0,SNR=3.7						

IDC ***19*** *04:55:17.6±0.8, 62°.45N×150°.63W, h0^{km}, mb3.8/18, mbtmp3.8/19, ML3.0/2, MS3.0/12, Error ellipse: s-maj=23.1km s-min=13.5km az=37.0*

AEIC ***19*** *04:55:20.8±1.4, 62°.25N±0°.01×150°.50W±0°.04, h18^{km}±4^{km}, ML3.8, ML4.0/264(NEIC), Mwr3.8/138(NEIC), Error ellipse: s-maj=3.0km s-min=1.7km az=96.0*

NEIC ***19*** *04:55:21.0±1.3, 62°.23N±0°.02×150°.51W±0°.04, h19^{km}±4^{km}, Error ellipse: s-maj=3.2km s-min=2.8km az=134.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}6.69; $M_{\theta\theta}$-2.08; $M_{\phi\phi}$-4.61; $M_{r\theta}$0.46; $M_{\theta\phi}$-2.33; $M_{\phi r}$0.12; Fault plane solution: $M_0$6.39000×10^{14} NP1:ϕ_s33.33000°, δ46.60000°, λ93.56000°. NP2:ϕ_s208.15000°, δ43.52000°, λ86.24000°. Principal axes: T 6.7129, Plg87.0000°, Azm0.0000°; N -0.7100, Plg3.0000°, Azm211.0000°; P -6.0029, Plg2.0000°, Azm121.0000°;*

NEIC ***19*** *04:55:20.4, 62°.25N×150°.49W, h14^{km}*

ISC 19 04:55:20.3±0.9**, 62°.25N**±0°.02×**150°.55W**±0°.03**, h19**^{km}±3^{km}**,**
n323, σ1^{s}**08**/313**, mb4.0**/18**, MS3.1**/8**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUT	Chulitna	0.21	39		Pg	04 55 25.9	+0.5
CUT					Sg	04 55 30.1	+1.2
CUT	Chulitna	0.21	39	IAML		04 55 30.3	
	comp=E,65μm,0.5s						
CUT				IAML		04 55 30.3	
	comp=N,62μm,0.5s						
SKT	Skwentna	0.53	240		Pg	04 55 30.4	-0.6
SKT				IAML		04 55 38.9	
	comp=N,9μm,0.3s						
SKT				IAML		04 55 39.0	
	comp=E,8μm,0.3s						
SKT	Skwentna	0.53	240		Sg	04 55 37.9	-0.3
M22K	Willow	0.54	158		Pg	04 55 30.6	-0.4
M22K	Willow	0.54	158		Sg	04 55 38.4	+0.2
SUA	Susitna One	0.79	187		Sb	04 55 46.5	+0.7
SUA	Susitna One	0.79	187	Pg	Pb	04 55 35.0	-0.5
SUA				IAML		04 55 47.4	
	comp=E,4μm,0.6s						
SUA				IAML		04 55 48.0	
	comp=N,6μm,0.5s						
GHO	Glory Hole Cre	0.90	121		Sb	04 55 49.4	+0.4
GHO	Glory Hole Cre	0.90	121	Pg	Pb	04 55 36.3	-1.0
GHO				IAML		04 55 50.7	
	comp=N,4μm,0.7s						
GHO				IAML		04 55 51.3	
	comp=E,5μm,0.7s						
PMR	Palmer	0.94	134		Pb	04 55 37.2	-0.7
PMR				IAML		04 55 50.7	
	comp=E,6μm,0.4s						
PMR	Palmer	0.94	134		Sb	04 55 50.1	+0.2
PMR	Palmer	0.94	134	P	Pb	04 55 37.3	-0.6
PMR	Palmer	0.94	134	S	Sb	04 55 50.4	+0.4
STLK	Strandline Lak	0.97	220		Pb	04 55 38.1	-0.4
STLK					Sb	04 55 50.8	0.0
STLK	Strandline Lak	0.97	220	IAML		04 55 51.6	
	comp=E,4μm,0.2s						
STLK				IAML		04 55 53.4	
	comp=N,3μm,0.3s						
WAT7	Susitna Watana	0.98	52		Pb	04 55 38.3	-0.5
WAT7					Sb	04 55 51.4	0.0
PPLA	Purkeypile	1.00	311		Pb	04 55 39.8	+0.6
WAT1	Susitna Watana	1.10	57		Pb	04 55 40.4	-0.3
WAT1					Sb	04 55 54.9	+0.3
FIS	Fire Island	1.12	172		Pn	04 55 41.4	+0.5
SML	Sawmill	1.14	112		Pn	04 55 40.6	-0.6
SML					Sb	04 55 55.4	-0.3
SML				IAML		04 55 56.9	
	comp=N,5μm,1.0s						
SML				IAML		04 55 57.0	
	comp=E,5μm,0.9s						
TRF	Thorofare Moun	1.22	6		Pn	04 55 42.8	+0.4
TRF				IAML		04 56 00.3	
	comp=E,3μm,1.0s						
TRF				IAML		04 56 02.2	
	comp=N,3μm,0.7s						
RC01	Rabbit Creek A	1.22	161		Pn	04 55 41.5	-0.9
RC01				IAML		04 55 58.8	
	comp=E,4μm,0.4s						
RC01				IAML		04 56 04.2	
	comp=N,4μm,0.4s						
RC01	Rabbit Creek A	1.22	161		Sb	04 55 57.8	-0.4
SPCP	Crater Peak Br	1.25	218		Pn	04 55 42.9	0.0
M20K	Styx River	1.27	254		Pn	04 55 43.9	+0.8
SPCN	Chakachatna No	1.29	218		Pn	04 55 43.9	+0.6
KNK	Knik Glacier	1.30	129		Pn	04 55 43.1	-0.4
KNK				IAML		04 56 01.7	
	comp=E,3μm,0.6s						
SPCR	Spurr Chakacha	1.31	218		Pn	04 55 44.0	+0.3
SPCR	Spurr Chakacha	1.31	218		Pn	04 55 44.0	+0.3
SPCR					Sn	04 56 01.0	+0.3
SPBG	Spurr Blockage	1.31	222		Pn	04 55 44.0	+0.3
KTH	Kantishna Hill	1.32	353		Pn	04 55 44.6	+0.8
KTH				IAML		04 56 03.1	
	comp=E,2μm,1.3s						
KTH	Kantishna Hill	1.32	353		Sb	04 56 02.0	+0.9
WAT6	Susitna Watana	1.35	74		Pn	04 55 43.5	-0.8
CKL	Chakachamna La	1.35	220		Pn	04 55 44.6	+0.3
SPWE	Spurr West	1.36	225		Pn	04 55 44.9	+0.5
CAST	Castle Rocks	1.37	330	Pn	Pn	04 55 45.2	+0.8
CAST				IAML		04 56 03.9	
	comp=E,3μm,0.8s						
CAST				IAML		04 56 03.9	
	comp=N,2μm,0.7s						
RND	Reindeer	1.40	33		Pn	04 55 44.9	0.0
RND				IAML		04 56 04.8	
	comp=N,2μm,0.6s						
M23K	Glacier View	1.41	108		Pn	04 55 44.5	-0.4
CAPN	Captain Cook N	1.51	191		Pn	04 55 47.5	+1.2
L20K	Farewell, AK	1.57	280		Pn	04 55 48.5	+1.3
SCM	Sheep Creek Mo	1.57	104		Pn	04 55 47.2	-0.1
MCK	McKinley	1.66	26		Pn	04 55 48.9	+0.4
DHY	Denali Highway	1.69	59		Pn	04 55 49.3	+0.5
PWL	Port Wells	1.75	142		Pn	04 55 50.9	+1.2
PWL	Port Wells	1.75	142	IAML		04 56 18.9	
	comp=N,2μm,0.7s						
PWL				IAML		04 56 20.6	
	comp=E,2μm,0.7s						
SLKM	Skilak Lake	1.75	175		Pn	04 55 49.9	+0.3
SLKM	Skilak Lake	1.75	175	IAML		04 56 14.8	
	comp=N,2μm,0.3s						
SLKM				IAML		04 56 21.4	
	comp=E,2μm,0.4s						
O22K	Cooper Landing	1.81	167		Pn	04 55 51.5	+1.0
M19K	Big River Lodg	1.84	261		Pn	04 55 51.2	+0.3
BPAW	Bear Paw Mtn.	1.87	354		Pn	04 55 51.6	+0.3
RDT	Redoubt	1.90	209		Pn	04 55 53.0	+1.3
DFR	Drift River	1.95	213		Pn	04 55 53.7	+1.2
K20K	Telida	1.96	306		Pn	04 55 54.2	+1.6
K20K	Telida	1.96	306	IAML		04 56 24.1	
	comp=E,881nm,0.5s						
K20K				IAML		04 56 26.1	
	comp=N,884nm,0.7s						
RDJH	Redoubt Jeurge	1.98	214		Pn	04 55 54.4	+1.4
BWN	Browne	2.00	14		Pn	04 55 53.3	+0.4
BWN				IAML		04 56 30.4	
	comp=N,1μm,1.0s						
BWN				IAML		04 56 36.5	
	comp=E,1μm,0.9s						
L19K	White Mountain	2.02	270		Pn	04 55 54.2	+0.8
L19K	White Mountain	2.02	270	IAML		04 56 29.9	
	comp=E,966nm,0.5s						
L19K				IAML		04 56 32.5	
	comp=N,1μm,0.6s						
NCT	North Crescent	2.04	215		Pn	04 55 55.2	+1.4
M24K	Tolsona, Glenn	2.06	92		Pn	04 55 54.3	+0.4
RDWB	Redoubt West	2.08	213		Pn	04 55 54.9	+0.6
RDSO	Redoubt South	2.09	211		Pn	04 55 56.0	+1.6
RED	Redoubt Volcan	2.12	211		Pn	04 55 55.8	+0.9
RED	Redoubt Volcan	2.12	211	IAML		04 56 33.3	
	comp=E,818nm,1.0s						
GLI	Glacier Island	2.15	128		Pn	04 55 55.9	+0.8
SEW	Seward	2.21	166		Pn	04 55 57.4	+1.4
KLU	Klutina	2.32	107		Pn	04 55 58.1	+0.6
KLU				IAML		04 56 39.8	
	comp=E,945nm,0.8s						
N19K	Bonanza Creek	2.37	234		Pn	04 55 58.8	+0.6
N19K				IAML		04 56 44.6	
	comp=E,650nm,0.7s						
O20K	Slope Mountain	2.39	206		Pn	04 56 00.3	+1.8
NEA2	Nenana	2.45	15		Pn	04 55 59.2	0.0
PAX	Paxson	2.46	71		Pn	04 56 00.1	+0.6
FID	Port Fidalgo	2.46	126		Pn	04 55 59.7	+0.3
FID				IAML		04 56 35.3	
	comp=N,1μm,0.6s						
FID				IAML		04 56 44.5	
	comp=E,1μm,0.8s						
WRH	Wood River Hil	2.49	25		Pn	04 56 00.1	+0.3
BRLK	Bradley Lake	2.50	184		Pn	04 56 01.0	+1.1
BRLK				IAML		04 56 45.9	
	comp=E,655nm,0.8s						
BRSE	Bradley Lake S	2.52	182		Pn	04 56 01.5	+1.4
HARP	HAARP	2.52	84		Pn	04 56 02.6	+2.4
J20K	Nowinta River	2.53	322		Pn	04 56 01.1	+0.8
J20K				IAML		04 56 41.4	
	comp=N,986nm,0.6s						
J20K				IAML		04 56 43.0	
	comp=E,1μm,0.7s						
DIV	Divide	2.54	114		Pn	04 56 00.7	+0.2
DIV				IAML		04 56 35.8	
	comp=E,998nm,0.4s						
ILSW	Iliamna Southw	2.60	210		Pn	04 56 03.0	+1.6
ILS	Iliamna Low So	2.60	209		Pn	04 56 03.3	+1.9
M18K	Stony River	2.61	255		Pn	04 56 01.9	+0.5
HOM	Homer	2.65	192		Pn	04 56 04.2	+2.3
K24K	Donnelly Dome	2.68	52		Pn	04 56 02.6	+0.2
HIN	Hinchinbrook I	2.69	132		Pn	04 56 03.8	+1.2
CCB	Clear Creek Bu	2.71	26		Pn	04 56 02.8	+0.1
HDA	Harding Lake	2.71	35		Pn	04 56 03.0	+0.2
HDA				IAML		04 56 54.9	
	comp=N,554nm,0.6s						
P23K	Montague Islan	2.72	145		Pn	04 56 03.4	+0.4
P23K				IAML		04 56 47.9	
	comp=E,719nm,0.8s						
P23K				IAML		04 56 54.0	
	comp=N,626nm,0.7s						
CNPM	China Poot	2.75	187		Pn	04 56 04.8	+1.4
CNPM	China Poot	2.75	187	IAML		04 56 54.1	
	comp=E,575nm,0.6s						
CNPM				IAML		04 56 56.1	
	comp=N,543nm,0.5s						
O19K	Port Alsworth	2.75	223		Pn	04 56 03.9	+0.6
MLY	Manley	2.80	358		Pn	04 56 04.8	+0.7
EYAK	Cordova Ski Ar	2.87	124		Pn	04 56 06.3	+1.4
EYAK	Cordova Ski Ar	2.87	124	IAML		04 56 48.2	
	comp=N,556nm,0.7s						
EYAK	Cordova Ski Ar	2.87	124	P	Pn	04 56 06.9	+1.9
L18K	Granite Mounta	2.87	272		Pn	04 56 05.5	+0.5
L18K				IAML		04 56 55.1	
	comp=E,537nm,1.2s						
L18K				IAML		04 56 58.2	
	comp=N,604nm,1.0s						
N25K	Chitina, Valde	2.89	100		Pn	04 56 06.0	+0.7
N25K	Chitina, Valde	2.89	100	IAML		04 56 54.2	
	comp=N,444nm,0.7s						
N25K				IAML		04 56 55.0	
	comp=E,414nm,0.9s						
J19K	Poorman	2.90	310		Pn	04 56 06.2	+0.8
J19K				IAML		04 56 55.6	
	comp=N,628nm,0.7s						
J19K				IAML		04 56 56.8	
	comp=E,776nm,0.9s						
COLA	College	2.90	23		Pn	04 56 05.6	+0.2
COLA				IAML		04 57 06.8	
	comp=E,865nm,0.5s						
COLA				IAML		04 57 07.8	
	comp=E,750nm,0.6s						
COLA	College	2.90	23	P	Pn	04 56 05.6	+0.2
P19K	Oil Pt	2.91	208		Pn	04 56 07.5	+1.8
P19K	Oil Pt	2.91	208	IAML		04 57 08.1	
	comp=N,779nm,0.8s						
WACK	Wrangell Chich	2.94	92		Pn	04 56 07.6	+1.4
I23K	Minto, Yukon-K	2.96	10		Pn	04 56 06.7	+0.4
RIDG	Independent Ri	3.00	58		Pn	04 56 07.8	+0.9
RIDG				IAML		04 57 05.6	
	comp=E,709nm,0.8s						
N18K	Kilae Creek	3.01	241		Pn	04 56 07.5	+0.6
N18K				IAML		04 56 59.8	
	comp=N,554nm,0.8s						
N18K				IAML		04 57 01.9	
	comp=E,366nm,0.7s						
IL31		3.02	31		Pn	04 56 06.8	-0.2
ILAR	Eielson Array	3.02	31		Pn	04 56 07.4	+0.3
ILAR	Eielson Array	3.02	31	Pn	Pn	04 56 07.2	+0.1
	comp=E,5.2nm,0.3s,baz=221,slow=13,SNR=162						
ILAR				Sn	Sn	04 56 40.5	-2.2
	comp=E,11nm,0.3s,baz=26,slow=37,SNR=2.2						
J18K	Innoko River	3.08	296		Pn	04 56 08.6	+0.7
J18K				IAML		04 57 03.0	
	comp=N,327nm,0.6s						
J18K				IAML		04 57 03.8	
	comp=E,320nm,0.9s						
I20K	Naaghedeneel	3.11	327		Pn	04 56 08.9	+0.7
BMRM	Bremner River	3.12	112		Pn	04 56 09.2	+0.7
BMRM				IAML		04 56 58.0	
	comp=N,511nm,0.9s						
BMRM				IAML		04 57 06.2	
	comp=E,405nm,0.7s						
AU22	Augustine Moun	3.20	207		Pn	04 56 11.1	+1.7
POKR	Poker Plat Res	3.20	24		Pn	04 56 09.7	+0.2
MENT	Mentasta	3.23	75		Pn	04 56 10.5	+0.4
DOT	Dot Lake	3.28	62		Pn	04 56 11.8	+1.1
DOT				IAML		04 57 09.7	
	comp=N,361nm,1.0s						
DOT				IAML		04 57 10.5	
	comp=E,475nm,0.9s						
GLB	Gilahina Butte	3.29	101		Pn	04 56 12.5	+1.6
GLB				IAML		04 57 05.0	
	comp=N,501nm,0.5s						
O18K	Koktuh Hills	3.30	225		Pn	04 56 11.6	+0.7
J25K	Salcha River,	3.33	42		Pn	04 56 11.1	-0.3
M17K	Holitna River	3.38	259		Pn	04 56 12.4	+0.4
RAGM	Ragged Mountai	3.39	121		Pn	04 56 12.8	+0.6
L26K	Log Cabin Wild	3.42	74		Pn	04 56 13.4	+0.9
L26K				IAML		04 57 15.9	
	comp=N,376nm,0.8s						
L26K				IAML		04 57 28.0	
	comp=E,404nm,0.5s						
SCRK	Sand Creek	3.45	57		Pn	04 56 13.7	+0.6
Q23K	Middleton Isla	3.49	142	Pn	Pn	04 56 14.5	+1.0
Q23K				IAML		04 57 20.2	
	comp=N,314nm,0.7s						
Q23K				IAML		04 57 33.1	
	comp=E,263nm,1.3s						
VRDI	Verde Repeater	3.53	104		Pn	04 56 14.8	+0.6
VRDI				IAML		04 57 17.1	
	comp=N,313nm,1.0s						
M26K	Nabesna, AK	3.53	84		Pn	04 56 15.9	+1.8
M26K				IAML		04 57 16.3	
	comp=E,235nm,0.6s						
M26K				IAML		04 57 21.9	
	comp=N,340nm,0.9s						
H21K	Melozitna Rive	3.57	345		Pn	04 56 15.1	+0.5
H21K				IAML		04 57 11.0	
	comp=E,479nm,0.8s						
H21K				IAML		04 57 13.0	
	comp=N,251nm,0.6s						
HMT	Hamilton	3.59	119		Pn	04 56 16.2	+1.3
H23K	Yukon River	3.62	7		Pn	04 56 15.8	+0.4
K17K	Iditarod	3.63	281		Pn	04 56 16.1	+0.7
K17K				IAML		04 57 17.1	
	comp=E,295nm,1.3s						
K17K				IAML		04 57 18.2	
	comp=N,362nm,1.1s						
N17K	Nushagak Hills	3.63	245		Pn	04 56 15.9	+0.5
N17K				IAML		04 57 15.9	
	comp=E,383nm,0.6s						
L17K	Donlin	3.63	272		Pn	04 56 15.9	+0.4
Q19K	Cape Douglas,	3.66	206		Pn	04 56 18.0	+2.1
P18K	Big Mountain,	3.67	221		Pn	04 56 16.6	+0.6
MCARA	McCarthy VSAT	3.67	100		Pn	04 56 16.4	+0.4
H22K	Ishtalitna Cre	3.68	355		Pn	04 56 16.9	+0.8
SYI	Shuyak Island	3.76	195		Pn	04 56 18.6	+1.4
SYI				IAML		04 57 26.4	
	comp=E,180nm,1.0s						
KAIM	Kayak Island	3.78	125	Pn	Pn	04 56 18.1	+0.7
KAIM				IAML		04 57 26.3	
	comp=E,236nm,0.9s						
KAIM				IAML		04 57 26.7	
	comp=N,226nm,0.8s						
H20K	Anotleneega Mo	3.78	331		Pn	04 56 17.6	+0.1
BERG	Berg Lake	3.79	116		Pn	04 56 19.4	+1.8
H24K	Noodor Dome	3.79	17		Pn	04 56 17.5	-0.2
CRQM	Cirque	3.85	110		Pn	04 56 19.1	+0.5
J26L	Joseph Creek	3.87	51		Pn	04 56 19.3	+0.4
J26L				IAML		04 57 24.9	
	comp=N,181nm,0.8s						
J26L				IAML		04 57 25.4	
	comp=E,185nm,0.8s						
SUCK	Suckling Hills	3.94	121		Pn	04 56 20.2	+0.5
SUCK				IAML		04 57 33.0	
	comp=N,374nm,0.7s						
SUCK				IAML		04 57 36.6	
	comp=E,184nm,0.8s						
KHIT	Khitrov Hills	3.95	114		Pn	04 56 20.9	+0.9
PRP	Porcupine Dome	3.96	32		Pn	04 56 20.6	+0.4
PRP				IAML		04 57 36.4	
	comp=E,169nm,0.8s						
TGL	Tana Glacier	3.99	109		Pn	04 56 20.3	-0.2
PTPK	Patty Peak	3.99	102		Pn	04 56 22.6	+2.0
IMAR	Indian Mountai	4.01	341		Pn	04 56 21.4	+0.8
GRIN	Grindle Hills	4.01	116		Pn	04 56 22.6	+1.9
O17K	Koliganek Bris	4.04	235		Pn	04 56 21.6	+0.5
M27K	Edge Creek, AK	4.05	85		Pn	04 56 21.6	+0.3
M27K				IAML		04 57 35.2	
	comp=N,242nm,1.1s						
M27K				IAML		04 57 44.2	
	comp=E,156nm,0.9s						
J17K	VABM Dome	4.08	290		Pn	04 56 21.8	+0.2
J17K				IAML		04 57 35.9	
	comp=E,200nm,0.8s						
J17K				IAML		04 57 39.5	
	comp=N,200nm,0.8s						
L27K	Beaver Creek,	4.11	75		Pn	04 56 22.8	+0.8
WAX	Waxell Ridge	4.12	113		Pn	04 56 21.8	-0.4
BCAR	Beaver Creek A	4.13	75		Pn	04 56 22.8	+0.5
KIAG	Kiagna River	4.13	105		Pn	04 56 23.8	+1.3
M16K	Timber Creek	4.20	257		Pn	04 56 23.7	+0.5
M16K				IAML		04 57 39.3	
	comp=N,284nm,0.8s						
M16K				IAML		04 57 42.9	
	comp=E,201nm,0.6s						
H19K	Roundabout Mou	4.20	324		Pn	04 56 23.9	+0.7
H19K				IAML		04 57 33.8	
	comp=E,300nm,1.4s						
H19K				IAML		04 57 38.8	
	comp=N,290nm,1.5s						
P17K	Kvichak River	4.21	226		Pn	04 56 25.1	+1.8
KAHC	Katmai Hardscr	4.23	213		Pn	04 56 25.7	+1.9
K27K	Chicken	4.24	61		Pn	04 56 24.4	+0.6
K27K				IAML		04 57 36.1	
	comp=N,152nm,1.0s						
K27K				IAML		04 57 41.0	
	comp=E,146nm,0.9s						
L16K	Owhat River	4.25	267		Pn	04 56 24.4	+0.5

L16K				IAML		04 57 40.2	
	comp=N,204nm,0.7s						
L16K				IAML		04 57 47.0	
	comp=E,166nm,1.6s						
KAHG	Katmai Hook Gl	4.25	210		Pn	04 56 25.4	+1.3
ISLE	Juniper Island	4.28	109		Pn	04 56 25.3	+0.8
ISLE	Juniper Island	4.28	109	IAML		04 57 30.2	
	comp=E,273nm,0.6s						
BARK	Barkley Ridge	4.30	112		Pn	04 56 26.4	+1.7
N16K	Nishlik Lake	4.34	249		Pn	04 56 25.8	+0.6
BARN	Barnard Glacie	4.40	102		Pn	04 56 26.6	+0.4
BARN				IAML		04 57 36.5	
	comp=N,214nm,0.8s						
BARN				IAML		04 57 37.5	
	comp=E,175nm,1.0s						
BAGL	Bagley Icefiel	4.43	110		Pn	04 56 27.3	+0.9
G21K	Allakaket	4.47	345		Pn	04 56 27.8	+0.8
G21K				IAML		04 57 41.9	
	comp=E,192nm,0.9s						
G21K				IAML		04 57 50.5	
	comp=N,152nm,0.8s						
GRNC	Granite Creek	4.48	106		Pn	04 56 28.5	+1.2
GRNC				IAML		04 57 44.0	
	comp=N,220nm,0.9s						
GRNC				IAML		04 57 44.4	
	comp=E,114nm,0.8s						
G23K	Bananza Creek	4.49	3		Pn	04 56 27.6	+0.3
I26K	Coal Creek Min	4.49	44		Pn	04 56 27.2	-0.1
I26K	Coal Creek Min	4.49	44	IAML		04 57 44.1	
	comp=E,215nm,0.8s						
I26K				IAML		04 57 47.4	
	comp=N,249nm,0.8s						
H18K	Honhosa River	4.54	313		Pn	04 56 28.7	+0.8
H18K				IAML		04 57 54.2	
	comp=E,119nm,0.8s						
H18K				IAML		04 57 55.0	
	comp=N,116nm,0.7s						
O16K	Kokwok River B	4.54	237		Pn	04 56 28.2	+0.3
O16K				IAML		04 57 47.9	
	comp=E,149nm,0.5s						
O16K				IAML		04 57 54.6	
	comp=N,121nm,0.6s						
CTGM	Chitina Glacie	4.58	102		Pn	04 56 29.6	+0.9
CTGM				IAML		04 57 49.0	
	comp=N,136nm,1.3s						
KDAK	Kodiak Island	4.59	194		Pn	04 56 29.2	+0.6
KDAK				IAML		04 57 46.4	
	comp=N,110nm,0.8s						
KDAK				IAML		04 57 51.9	
	comp=N,98nm,0.9s						
KDAK	Kodiak Island	4.59	194	Pn	Pn	04 56 31.8	+3.2
	comp=N,1.3nm,0.3s,baz=5.6,slow=7.1,SNR=30						
KDAK				Sn	Sn	04 57 23.9	+2.5
	comp=N,7.3nm,0.3s,baz=140,slow=12,SNR=3.9						
KDAK				LR	LR	04 58 33.7	
	comp=N,231nm,18.2s,baz=16,slow=41						
YUK2	White River	4.60	91		Pn	04 56 31.3	+2.5
MESA	MESA	4.65	113		Pn	04 56 31.2	+1.6
YAH	Yahtse	4.65	110		Pn	04 56 29.3	-0.3
YAH				IAML		04 57 45.3	
	comp=E,200nm,1.0s						
G24K	Hadweenzic Riv	4.67	15		Pn	04 56 30.0	+0.3
ACHA	Angle Creek He	4.70	213		Pn	04 56 30.6	+0.4
J16K	Anvik River	4.74	287		Pn	04 56 31.0	+0.4
J16K				IAML		04 58 00.1	
	comp=N,117nm,0.7s						
YUK3	Moose Creek	4.78	91		Pn	04 56 34.0	+2.6
LOGN	Logan Glacier	4.79	103		Pn	04 56 31.7	+0.3
LOGN				IAML		04 57 50.8	
	comp=N,175nm,0.9s						
CNTC	Contact Creek	4.80	216		Pn	04 56 33.2	+1.7
G19K	Purcell Mounta	4.84	327		Pn	04 56 32.7	+0.6
G19K				IAML		04 57 59.7	
	comp=E,85nm,0.6s						
RKAV	Rock Avalanche	4.85	110		Pn	04 56 33.5	+1.1
TABL	Table Mountain	4.88	108		Pn	04 56 33.9	+1.2
TABL	Table Mountain	4.88	108	IAML		04 57 56.5	
	comp=E,132nm,0.8s						
TABL				IAML		04 57 58.0	
	comp=N,156nm,0.9s						
I17K	Unalakleet	4.90	294		Pn	04 56 33.5	+0.7
I17K				IAML		04 58 01.5	
	comp=N,88nm,1.8s						
FYU	Fort Yukon	4.91	26		Pn	04 56 33.4	+0.4
FYU				IAML		04 58 07.9	
	comp=N,106nm,1.3s						
FYU				IAML		04 58 11.4	
	comp=E,137nm,1.1s						
G25K	Bearman Lake	4.93	21		Pn	04 56 33.8	+0.6
H17K	Granite Mounta	4.98	307		Pn	04 56 34.6	+0.7
H17K				IAML		04 58 08.6	
	comp=N,78nm,0.9s						
H17K				IAML		04 58 13.6	
	comp=E,91nm,0.9s						
COLD	Coldfoot	5.00	2		Pn	04 56 35.0	+0.7
N15K	Kwethluk River	5.06	250		Pn	04 56 36.1	+0.9
G18K	Tagagawik	5.10	319		Pn	04 56 36.0	+0.3
K15K	Wolf Creek Mou	5.13	275		Pn	04 56 36.6	+0.6
K15K				IAML		04 58 03.9	
	comp=N,77nm,1.5s						
F21K	Alatna River	5.15	347		Pn	04 56 37.1	+0.8
F21K				IAML		04 57 38.3	
	comp=N,97nm,0.5s						
F21K				IAML		04 58 06.1	
	comp=E,89nm,1.1s						
O28M	Mount Upton	5.18	102		Pn	04 56 36.9	0.0
O28M				IAML		04 58 00.6	
	comp=E,75nm,1.5s						
O28M				IAML		04 58 02.6	
	comp=N,103nm,1.1s						
I27K	Kandik River	5.18	46		Pn	04 56 37.6	+0.8
L15K	Ungalak Mounta	5.19	269		Pn	04 56 37.6	+0.8
OHAK	Old Harbor	5.23	197		Pn	04 56 37.5	+0.1
OHAK	Old Harbor	5.23	197	P	Pn	04 56 39.4	+2.1
F20K	Avaraart Lake	5.31	338		Pn	04 56 40.0	+1.5
F20K				IAML		04 58 11.8	
	comp=E,89nm,1.2s						
F20K				IAML		04 58 18.4	
	comp=N,85nm,1.1s						
DAWY	Dawson	5.38	65		Pn	04 56 40.1	+0.7
DAWY				IAML		04 58 18.2	
	comp=N,106nm,1.2s						
DAWY				IAML		04 58 21.9	
	comp=E,113nm,0.9s						
F24K	Squaw Lake	5.41	11		Pn	04 56 40.3	+0.3
PCA	Pinnacle	5.43	109		Pn	04 56 41.8	+1.6
O15K	Ungalikthiuk R	5.50	240	Pn	Pn	04 56 41.8	+0.8
G17K	Kiwalik Mounta	5.53	311		Pn	04 56 42.8	+1.3
G26K	Porcupine Rive	5.54	29		Pn	04 56 42.1	+0.4
F19K	Shaleruckik Mo	5.56	329		Pn	04 56 42.9	+1.1
H27K	Steamboat Moun	5.61	41		Pn	04 56 43.0	+0.4
M29M	Somme Creek	5.63	83		Pn	04 56 43.6	+0.6
M14K	Bethel	5.67	260	Pn	Pn	04 56 44.4	+1.0
I28M	Miner Creek	5.69	51		Pn	04 56 43.7	0.0
F25K	Christian Rive	5.76	19		Pn	04 56 45.0	+0.3
BCPM	Bancas Point	5.77	109		Pn	04 56 45.3	+0.4
L29M	L29M	5.79	76		Pn	04 56 46.2	+1.2
BMAR	Burnt Mountain	5.79	23		Pn	04 56 46.0	+0.8
L14K	Kuka Creek	5.83	266		Pn	04 56 46.6	+1.0
E23K	Chandalar	5.85	3		Pn	04 56 46.9	+0.9
F18K	Selawik	5.88	322		Pn	04 56 48.1	+1.8
N14K	Kuskokwak Cree	5.88	252	Pn	Pn	04 56 46.8	+0.5
E24K	Your Creek	5.92	8		Pn	04 56 47.0	+0.1
E22K	Anaktuvuk Pass	5.94	355		Pn	04 56 47.7	+0.6
E19K	Redstone River	5.95	334		Pn	04 56 48.6	+1.2
G27K	Doyon Strip	5.97	36		Pn	04 56 47.1	-0.4
SII	Sitkinak Islan	6.00	200	Pn	Pn	04 56 50.3	+2.3
SII	Sitkinak Islan	6.00	200	P	Pn	04 56 51.3	+3.3
PNL	Peninsula	6.01	110		Pn	04 56 49.8	+1.6
PNL	Peninsula	6.01	110	P	Pn	04 56 50.5	+2.3
J14K	Nanvaranak Lak	6.05	281	Pn	Pn	04 56 49.3	+0.8
O14K	Tigyukauivet M	6.05	245	Pn	Pn	04 56 50.3	+1.7
O29M	Mount Kennedy	6.09	103		Pn	04 56 50.9	+1.5
G16K	Koyuk River	6.10	306		Pn	04 56 50.4	+1.0
F26K	Sheenjek River	6.11	24		Pn	04 56 49.8	+0.3
K29M	Barlow Dome	6.14	69		Pn	04 56 51.1	+1.1
YUK5	Granite Creek	6.14	95		Pn	04 56 51.1	+1.0
I29M	Ogilvie Camp,	6.25	55		Pn	04 56 51.3	-0.2
E25K	Arctic Village	6.26	17		Pn	04 56 52.4	+0.9
F17K	Baldwin Pennin	6.27	317		Pn	04 56 53.3	+1.8
E21K	Killik River	6.38	349		Pn	04 56 54.7	+1.5
HYT	Haines Junctio	6.40	97		Pn	04 56 54.8	+1.2
N30M	Aishikik Lake	6.42	91		Pn	04 56 54.0	+0.2
TOLK	Toolik Lake Re	6.43	3		Pn	04 56 55.0	+1.1
E20K	Nigu River	6.48	341		Pn	04 56 56.5	+1.9
K13K	Kusilvak Mount	6.63	274	Pn	Pn	04 56 57.6	+1.0
H29M	Whitestone	6.63	48		Pn	04 56 56.6	-0.1
D22K	Ayikyak River	6.72	353	Pn	Pn	04 56 59.6	+1.8
E18K	Tukpahlearik C	6.73	325		Pn	04 56 58.9	+1.0
D23K	Nanushuk River	6.75	360		Pn	04 56 57.9	-0.3
P29M	Windy Craggy	6.77	107		Pn	04 57 00.7	+2.2
J30M	Hart River	6.79	64		Pn	04 57 01.0	+2.0
E17K	Hotham Inlet	6.85	320		Pn	04 57 01.1	+1.6
P30M	Million Dollar	6.91	102		Pn	04 57 02.1	+1.7
CHIR	Chirikof Islan	6.95	204	Pn	Pn	04 57 02.4	+1.4
CHIR	Chirikof Islan	6.95	204	P	Pn	04 57 03.4	+2.4
I30M	Mount Dempster	6.96	58		Pn	04 57 01.1	-0.1
D20K	Etivluk River	6.96	341		Pn	04 57 02.0	+0.9
D19K	Kuna River	7.02	337		Pn	04 57 02.7	+0.7
N31M	Braeburn, Yuko	7.03	90		Pn	04 57 02.1	0.0
F28M	Old Crow	7.03	35		Pn	04 57 02.1	-0.1
E27K	Coleen River	7.04	28		Pn	04 57 02.5	+0.2
ANM	Nome	7.05	296	Pn	Pn	04 57 03.8	+1.5
O30N	Mendenhall	7.07	96		Pn	04 57 03.0	+0.3
F15K	North Star Dit	7.10	305		Pn	04 57 04.6	+1.6
G29M	Pine Creek	7.13	44		Pn	04 57 03.8	+0.3
C21K	Knifeblade Rid	7.16	348		Pn	04 57 05.5	+1.7
EPYK	Eagle Plains	7.29	49		Pn	04 57 05.1	-0.6
D25K	Kavik River	7.31	12		Pn	04 57 07.5	+1.6
C24K	Franklin Bluff	7.54	5		Pn	04 57 09.8	+0.7
B21K	Ikpikpuk River	7.59	349		Pn	04 57 10.3	+0.6
C23K	Itkillik River	7.62	360		Pn	04 57 11.1	+1.0
WHY	Whitehorse	7.67	95		Pn	04 57 11.3	+0.3
G30M	tAoh Zraii Nji	7.76	46		Pn	04 57 11.5	-0.7
E28M	Babbage River	7.85	31		Pn	04 57 13.0	-0.3
C27K	Jago River	7.91	18		Pn	04 57 16.0	+1.9
D27M	Malcolm River	8.05	25		Pn	04 57 16.5	+0.5
E29M	Blow River	8.11	35		Pn	04 57 17.3	+0.5
B22K	Teshekpuk Lake	8.21	353		Pn	04 57 18.4	+0.2
G31M	Satah River	8.41	49		Pn	04 57 20.0	-1.0
P33M	Teslin, Yukon	8.79	96		Pn	04 57 25.9	-0.4
SIT	Sitka	9.29	117	P	Pn	04 57 34.1	+1.1
INK	Inuvik	9.34	42		Pn	04 57 34.5	+0.8
INK	Inuvik	9.34	42	Pn	Pn	04 57 33.8	+0.1
	comp=E,0.2nm,0.3s,baz=236,slow=14,SNR=4.3						
INK				Sn	Sn	04 59 21.1	+3.0
	baz=258,slow=28						
INK				LR	LR	05 01 55.5	
	comp=E,44nm,18.2s,baz=248,slow=43						
	comp=E,2.0nm,0.6s						
Q32M	Nakina River	9.56	102		Pn	04 57 37.9	+0.9
R33M	Jennings River	9.97	98		Pn	04 57 41.3	-1.2
S34M	Telegraph Cree	10.61	105		Pn	04 57 51.4	+0.3
DLBC	Dease Lake	10.84	101	Pn	Pn	04 57 56.1	+1.7
	baz=253,slow=5.2,SNR=4.4						
DLBC				Sn	Sn	05 00 04.9	+10
	baz=125,slow=19						
DLBC				Lg	Lg	05 01 10.6	
	baz=21,slow=26						
DLBC				LR	LR	05 02 20.9	
	comp=E,13nm,20.3s,baz=224,slow=39						
BBB	Bella Bella	15.69	120	Pn	Pn	04 59 00.3	+0.3
	comp=E,0.3nm,0.3s,baz=350,slow=13,SNR=1.3						
YKA	Yellowknife Ar	16.54	73	Pn	P	04 59 14.4	+1.0
	comp=E,0.1nm,0.3s,baz=322,slow=16,SNR=3.6						
YKA				LR	LR	05 05 43.5	
	comp=E,48nm,19.7s,baz=298,slow=38						
NEW	Newport	23.29	111	LR	LR	05 10 18.8	
	comp=E,66nm,20.4s,baz=322,slow=38						
PDAR	Pinedale Array	30.90	110	P	P	05 01 37.6	+1.9
	comp=E,0.2nm,0.4s,baz=289,slow=4.5,SNR=3.7						
	comp=E,0.2nm,0.4s						
NVAR	Mina Array Bea	30.91	125	P	P	05 01 37.2	+1.5
	comp=E,0.6nm,0.7s,baz=310,slow=8.9,SNR=4.6						
	comp=E,0.6nm,0.7s						
FRB	Frobisher Bay	34.87	50	LR	LR	05 15 43.4	
	comp=E,20nm,20.5s,baz=58,slow=35						
YAK	Yakutsk	35.07	306	LR	LR	05 17 19.3	
	comp=E,25nm,19.1s,baz=186,slow=38						
SPITS	Spitsbergen Ar	39.59	4	P	P	05 02 48.1	-1.6
	comp=E,1.6nm,0.5s,baz=12,slow=4.4,SNR=7.3						
	comp=E,1.6nm,0.5s						
TXAR	Lajitas Array	44.76	115	P	P	05 03 34.0	+1.6
	comp=E,0.3nm,0.7s,baz=320,slow=6.8,SNR=5.7						
TXAR				PcP	PcP	05 05 14.8	+0.4
	comp=E,0.2nm,0.5s,baz=76,slow=2.7,SNR=3.8						
	comp=E,0.3nm,0.7s						
BORG	Borgarnes	47.84	27	LR	LR	05 26 48.0	
	comp=E,12nm,18.5s,baz=10,slow=40						
TKL	Tuckaleechee C	48.46	91	LR	LR	05 25 22.6	
	comp=E,38nm,19.2s,baz=3.5,slow=37						
ARCES	ARCESS Array B	48.47	2	P	P	05 03 59.2	-1.7
	comp=E,1.4nm,0.8s,baz=10,slow=7.4,SNR=5.6						
ARCES				PcP	PcP	05 05 25.4	-1.3
	comp=E,3.0nm,1.1s,baz=330,slow=3.1,SNR=4.3						
	comp=E,1.4nm,0.8s						
KSRS	Korea Array	53.84	283	P	P	05 04 42.6	+1.0
	comp=E,0.8nm,0.6s,baz=38,slow=8.4,SNR=4.1						
	comp=E,0.8nm,0.6s						
SONM	Songino Array	54.43	306	P	P	05 04 46.4	+0.5
	comp=E,1.0nm,0.7s,baz=37,slow=7.6,SNR=4.9						
	comp=E,1.0nm,0.7s						
NOA	NORSAR Array B	56.25	11	P	P	05 04 57.6	-1.1
	comp=E,0.3nm,0.8s,baz=153,slow=7.5,SNR=2.0						
	comp=E,0.3nm,0.8s						
ZALV	Zalesovo Beam	56.26	324	P	P	05 04 57.8	-1.1
	comp=E,1.6nm,0.4s,baz=22,slow=8.2,SNR=7.4						
	comp=E,1.6nm,0.4s						
FINES	FINESS Array B	56.60	2	P	P	05 04 58.9	-2.3
	comp=E,1.2nm,0.9s,baz=189,slow=35,SNR=1.6						
	comp=E,1.2nm,0.9s						
HFS	Hagfors	57.35	9	P	P	05 05 04.7	-1.8
	comp=E,0.5nm,0.4s,baz=28,slow=3.5,SNR=6.1						
	comp=E,0.5nm,0.4s						
ARTI	Arti	59.57	342	LR	LR	05 33 41.2	
	comp=E,12nm,18.4s,baz=336,slow=39						
EKA	Eskdalemuir Ar	60.01	21	P	P	05 05 24.5	-0.5
	comp=E,1.0nm,0.6s,baz=333,slow=5.2,SNR=7.8						
	comp=E,1.0nm,0.6s						
BVAR	Borovoye Array	60.62	333	P	P	05 05 28.1	-1.1
	comp=E,2.2nm,0.8s,baz=39,slow=7.6,SNR=7.7						
	comp=E,2.2nm,0.8s						
KURBB	Kurchatov Arra	60.93	327	P	P	05 05 30.4	-1.0
	comp=E,0.6nm,0.5s,baz=24,slow=6.6,SNR=8.1						
	comp=E,0.6nm,0.5s						
MKAR	Makanchi Array	63.40	322	P	P	05 05 46.7	-1.4
	comp=E,0.5nm,0.3s,baz=43,slow=8.0,SNR=9.6						
MKAR				LR	LR	05 33 32.9	
	comp=E,16nm,21.4s,baz=8.5,slow=36						
	comp=E,0.5nm,0.3s						
AKASG	Malin Array Be	67.40	0	P	P	05 06 12.5	-1.3
	comp=E,1.0nm,0.4s,baz=2.0,slow=6.1,SNR=8.7						
	comp=E,1.0nm,0.4s						
ESDC	Sonseca Array	74.91	26	P	P	05 06 60.0	+0.4
	comp=E,1.7nm,0.9s,baz=339,slow=5.9,SNR=11						
	comp=E,1.7nm,0.9s						
BRTR	Keskin Array B	78.32	357	P	P	05 07 17.4	-1.6
	comp=E,0.5nm,0.7s,baz=354,slow=6.6,SNR=3.9						
	comp=E,0.5nm,0.7s						
CMAR	Chiang Mai Arr	82.97	296	LR	LR	05 45 15.0	
	comp=E,22nm,19.8s,baz=190,slow=36						
BOSA	Boshof	146.25	7	PKPbc	PKPdf	05 14 58.9	+0.9
	comp=E,1.5nm,0.8s,baz=342,slow=4.8,SNR=6.5						
QSPA	South Pole Qui	152.06	180	PKPbc	PKPbc	05 15 12.0	-0.5
	comp=E,1.5nm,0.6s,baz=32,slow=0.4,SNR=14						

IDC 19 05:05:03.0±8.6,**6°.09S**×**128°.77E,h437**^{km}±109^{km}**,mb3.0**/1,
mbtmp3.7/4**,Error ellipse: s-maj=71.1km s-min=60.6km az=77.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.32	194	P	P	05 07 44.4	-1.2
	2.2nm,0.4s,baz=13,slow=9.7,SNR=10						
FITZ				S	S	05 09 56.9	-2.8
	2.4nm,0.7s,baz=339,slow=8.6,SNR=2.3						
WRA	Warramunga Arr	14.80	159	P	P	05 08 11.3	-1.0
	0.2nm,0.3s,baz=340,slow=11,SNR=8.1						
WRA				S	S	05 10 47.2	-1.6
	1.0nm,0.8s,baz=340,slow=22,SNR=4.9						
ASAR	Alice Springs	18.16	165	P	P	05 08 49.2	+1.2
	1.6nm,0.5s,baz=343,slow=9.5,SNR=17						
ILAR	Eielson Array	93.05	25	P	P	05 17 27.8	-0.5
	0.2nm,0.6s,baz=248,slow=6.1,SNR=2.5						
	0.2nm,0.6s						

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*ATH **19** 05:06:46.7,40°.51N×20°.79E,h13^{km}±1^{km},ML2.1/5, Manual Solution by K.Orfanogiannaki First location: 2019/06/19 05:08:01, This location: 2019/06/19 07:10:52 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*TIR **19** 05:06:47.3,40°.41N×20°.79E,h0^{km}±1^{km},Ml2.6/3*

ISC 19 05:06:47.8±1.1**,40°.40N**±0°.05×**20°.78E**±0°.05**,h7**^{km}±13^{km},
n11,σ1^s.**00**/21**,4C-1D,Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEST	Nestorio	0.20	86	⇑*i*Pg	Pg	05 06 51.9	0.0
NEST				Sg	Sg	05 06 55.5	+0.8
NEST				AML	AML	05 06 57.9	
	3.0nm,0.3s						
NEST	Nestorio	0.20	86	P	Pg	05 06 51.7	-0.2
NEST				S	Sg	05 06 55.2	+0.5
KBN	Korca	0.22	1	⇓*i*Pg	Pg	05 06 50.8	-1.4
KBN				AML	AML	05 06 53.9	
	7.4nm,0.6s						
KBN				Sg	Sg	05 06 54.0	-1.3
PENT	Pentalofos	0.34	127	P	Pg	05 06 54.8	+0.3
PENT				S	Sb	05 07 00.8	-1.1
KPRO	Kipourio	0.63	135	P	Pg	05 06 59.8	-0.1
KPRO				S	Sb	05 07 10.4	+0.3
KZN	Kozani	0.76	97	P	Pg	05 07 02.0	-0.4
KZN				S	Sg	05 07 12.3	+0.1
SRN	Sarande	0.80	229	⇑*i*Pn	Pb	05 07 04.4	+0.5
SRN				Sn	Sn	05 07 17.0	-0.4
IGT	Igoumenitsa	0.94	202	⇑*e*Pn	Pb	05 07 06.5	+0.2
IGT				Sn	Sn	05 07 21.0	+0.1
IGT	Igoumenitsa	0.94	202	P	Pb	05 07 06.7	+0.4
IGT				S	Sn	05 07 20.3	-0.6
TYRN	Tyrnavos	1.31	121	P	Pg	05 07 11.4	-1.4
PUK	Puka	1.77	338	⇑*e*Pn	Pb	05 07 21.6	+1.0
PUK				Sn	Sg	05 07 47.3	+2.6
PUK				AML	AML	05 07 48.6	
	0.2nm,0.8s						

IDC 19 05:11:35.0±6.8**,31°.29S**×**177°.44W,h0**^{km}**,mb3.5**/2,
mbtmp3.5/2**,Error ellipse: s-maj=293.9km s-min=59.9km az=156.0,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.55	268	P	P	05 19 41.1	+0.3
	0.2nm,0.4s,baz=112,slow=7.2,SNR=4.9						
	0.2nm,0.4s						
WRA	Warramunga Arr	44.62	273	P	P	05 19 48.8	-0.6
	0.7nm,0.8s,baz=114,slow=7.9,SNR=2.7						
	0.7nm,0.8s						
FINES	FINESS Array B	146.14	340	PKPbc	PKPdf	05 31 15.5	+0.1
	0.7nm,0.5s,baz=59,slow=4.9,SNR=6.0						

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*CATAC **19** 05:11:35.9±0.2,12°N±2°×8°8W±°,h1^{km},M3.6/41, MLv3.6/41,Error ellipse: s-maj=4.1km s-min=2.1km az=20.4,confirmed*

*GCG **19** 05:11:43.7±2.7,11°.94N×87°.79W,h61^{km}±265^{km},MD4.5, ML3.9*

*SNET **19** 05:11:43.8±0.8,12°.04N×87°.90W,h16^{km}±6^{km},ML3.2*

ISC 19 05:11:37.2±2.0**,11°.64N**±0°.05×**87°.78W**±0°.03**,h19**^{km}±5^{km},
n90,σ1^s.**44**/102**,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALEN	Leon	1.21	47	P	Pb	05 11 59.5	+0.1
ALEN	Leon	1.21	47	S	Sb	05 12 14.4	-0.3
CRIN	San Cristobal	1.27	34	P	Pb	05 12 00.9	+0.2
CRIN	San Cristobal	1.27	34	S	Sg	05 12 17.8	-0.7
COPN	Copaltepe	1.28	65	P	Pb	05 12 00.6	-0.1
PKGN	Cerro Pekin	1.29	37	P	Pb	05 12 00.8	-0.1
TEL3	Telica 3	1.30	45	P	Pn	05 12 00.8	+0.4
QUEN	Al S del Volca	1.31	44	P	Pb	05 12 01.2	-0.1
QUEN				S	Sn	05 12 16.0	-1.7
TELN	Telica	1.33	44	P	Pn	05 11 57.7	-3.2
HERN	Volcan Telica	1.34	44	P	Pn	05 12 01.0	0.0
HERN	Volcan Telica	1.34	44	S	Sg	05 12 20.1	-0.5
BC86	Nagarote	1.34	62	P	Pn	05 12 01.2	+0.2
CNGA	Al SSO del Vol	1.35	51	P	Pn	05 12 01.4	+0.2
CNGN	Cerro Negro	1.36	51	P	Pn	05 12 01.5	+0.3
POTN	Potosi Cosigui	1.38	11	P	Pn	05 12 02.0	+0.5
POTN				S	Sb	05 12 20.1	+0.4
POLN	Al Sur del Vol	1.38	43	P	Pn	05 12 00.7	-0.8
POLN				S	Sb	05 12 20.0	+0.3
ILCN	San Idelfonso	1.41	48	P	Pn	05 12 01.9	+0.1
ILCN				S	Sb	05 12 20.6	+0.1
MOMN	Momotombo	1.43	58	P	Pn	05 12 02.4	+0.2
MOMN				S	Sb	05 12 21.4	+0.1
SAPS	Ciudad Sandino	1.45	68	P	Pn	05 12 03.0	+0.6
CRUN	El Crucero	1.49	77	P	Pn	05 12 02.5	-0.5
MOM2	El Cardon	1.49	58	P	Pn	05 12 03.0	-0.1
APQ3	Volcan Apoyequ	1.52	65	P	Pn	05 12 04.0	+0.6
APQ2	Apoyeque	1.53	69	P	Pn	05 12 02.9	-0.6
UNAN	Cigeo UNAN	1.55	72	P	Pn	05 12 04.3	+0.5
TISN	Laguna Tiscapa	1.56	71	P	Pn	05 12 03.6	-0.3
MGAN	Managua	1.58	71	P	Pn	05 12 04.2	0.0
SABN	Sabanita	1.61	79	P	Pn	05 12 04.8	0.0
MAS3	Al N del Volca	1.62	76	P	Pn	05 12 04.2	-0.6
MAS3				S	Sn	05 12 24.6	-0.5
CNCH	Conchagua	1.63	358	*e*P	Pn	05 12 05.8	+0.8
CNCH				*e*S	Sn	05 12 23.0	-2.6
CNCH	Conchagua	1.63	358	P	Pn	05 12 05.8	+0.8
WILN	Americas 2	1.64	71	P	Pn	05 12 05.2	+0.2
WILN				S	Sn	05 12 25.5	-0.2
NANN	Nandasmo	1.65	79	P	Pn	05 12 06.2	+1.0
NANN	Nandasmo	1.65	79	S	Sn	05 12 25.2	-0.8
LCND	La Caada	1.66	356	*e*P	Pn	05 12 05.6	+0.2
LCND				IAML		05 12 35.6	
	comp=Z,299nm,0.5s						
LCND	La Caada	1.66	356	P	Pn	05 12 06.2	+0.8
NADN	Granada	1.71	86	P	Pn	05 12 06.3	+0.2
NADN				S	Sn	05 12 26.7	-0.8
ALJI	Alcalda de J	1.85	335	*e*P	Pn	05 12 09.0	+1.1
ALJI	Alcalda de J	1.85	335	P	Pb	05 12 09.4	-1.0
ALJI	Alcalda de J	1.85	335	S	Sn	05 12 30.6	-0.2
BLLM	Bellamira	1.85	346	*e*P	Pn	05 12 09.0	+1.0
RANC	El Ranchito	1.85	344	P	Pn	05 12 01.2	-6.9
RANC	El Ranchito	1.85	344	S	Sn	05 12 24.4	-6.7
PACA	Pacayal	1.89	344	*e*P	Pn	05 12 09.6	+0.9
PACA				*e*S	Sn	05 12 30.2	-2.0
PACA	Pacayal	1.89	344	P	Pb	05 12 10.4	-0.9
PACA	Pacayal	1.89	344	S	Sb	05 12 34.2	-0.4
LIMN	Finca el Limon	1.98	44	P	Pn	05 12 10.5	+0.7
JAPN	Al SSO del Vol	2.06	93	P	Pn	05 12 10.9	0.0
PQSS	Presa 15 de Se	2.12	339	*e*P	Pn	05 12 12.9	+1.3
PQSS	Presa 15 de Se	2.12	339	P	Pn	05 12 13.3	+1.7
TECO	Alcaldia de Te	2.12	333	P	Pn	05 12 13.6	+1.8
UESV	Universidad de	2.21	334	P	Pn	05 12 14.2	+1.1
UESV	Universidad de	2.21	334	S	Sn	05 12 39.8	-0.1
BOAB	BOACO BROADBAN	2.22	69	P	Pn	05 12 12.7	-0.3
MATN	Matagalpa	2.22	55	P	Pn	05 12 12.5	-0.6
SCLA	Alcaldia de Sa	2.25	336	*e*P	Pn	05 12 14.5	+1.0
SCLA	Alcaldia de Sa	2.25	336	P	Pn	05 12 15.5	+2.0
SCLA	Alcaldia de Sa	2.25	336	S	Sn	05 12 41.7	+0.9
CARN	Rivas	2.26	101	P	Pn	05 12 13.7	+0.1
CARN				S	Sn	05 12 40.6	-0.3
LFRS	El Faro	2.33	328	*e*P	Pn	05 12 16.7	+2.0
PAVA	Las Pavas	2.35	331	*e*P	Pn	05 12 16.3	+1.4
PAVA	Las Pavas	2.35	331	P	Pn	05 12 17.1	+2.1
PAVA	Las Pavas	2.35	331	S	Sn	05 12 44.8	+1.4
LALI	Alcalda de L	2.38	321	P	Pb	05 12 17.8	-1.6
LOMA	Loma Larga	2.41	326	*e*P	Pn	05 12 17.1	+1.2
LOMA	Loma Larga	2.41	326	P	Pn	05 12 17.0	+1.2
LOMA	Loma Larga	2.41	326	S	Sn	05 12 45.8	+0.8
TGUH	Tegucigalpa,Un	2.45	12	P	Pn	05 12 17.8	+1.4
RCVN	Varillal2	2.48	39	P	Pn	05 12 17.8	+1.1
RCVN	Varillal2	2.48	39	S	Sn	05 12 49.2	+2.7
RCPN	Sur Rio San Ju	2.49	41	P	Pn	05 12 17.0	+0.1
PMON	Piamonte	2.55	324	*e*P	Pn	05 12 19.0	+1.3
PMON	Piamonte	2.55	324	P	Pn	05 12 19.4	+1.8
ACON	Acoyapa	2.57	82	P	Pn	05 12 18.1	+0.3
JAYA	Jayaque - finc	2.58	321	*e*P	Pn	05 12 19.2	+1.0
JAYA				*e*S	Sn	05 12 47.1	-2.1
JAYA				IAML		05 12 52.0	
	comp=Z,228nm,0.1s						
JAYA	Jayaque - finc	2.58	321	*i* P	Pn	05 12 19.3	+1.1
JAYA				*i* S	Sn	05 12 48.4	-0.7
JAYA	Jayaque - finc	2.58	321	P	Pn	05 12 19.1	+0.9
INDI	Punta indio, G	2.85	128	P	Pn	05 12 22.1	+0.5
UNIC	Universidad Ca	2.90	324	P	Pn	05 12 24.4	+2.0

NUBE	Las Nubes	2.98	319	eP	Pn	05 12 24.9	+1.3
NUBE	Las Nubes	2.98	319	iP	Pn	05 12 25.2	+1.6
NUBE				iS	Sn	05 12 58.6	-0.3
NUBE	Las Nubes	2.98	319	P	Pn	05 12 24.9	+1.3
SLOZ	Alcaldia de Sa	3.07	321	P	Pn	05 12 27.8	+2.9
SLOZ	Alcaldia de Sa	3.07	321	S	Sn	05 13 03.8	+2.6
MTO3	Montecristo	3.15	331	eP	Pn	05 12 28.3	+2.3
MTO3	Montecristo	3.15	331	iP	Pn	05 12 27.8	+1.8
MTO3	Montecristo	3.15	331	P	Pn	05 12 28.3	+2.3
ESQI	Esquipulas	3.28	333	P	Pn	05 12 29.5	+1.8
SIUN	Universidad Ur	3.59	55	P	Pb	05 12 40.6	+0.5
STG0	El Palmar, Qui	4.44	309	iP	Pb	05 12 51.6	-3.2
STG0				iS	Sb	05 13 43.7	-4.4
STG0				IAML		05 13 46.7	
	comp=E,113nm,0.2s						
STG8	El Palmar, Qui	4.46	309	iP	Pb	05 12 52.0	-3.2
STG8				IAML		05 13 52.8	
	comp=E,95nm,0.2s						

*SJA **19** 05:17:04.1±0.8, 21°.42S×70°.61W, h40^{km}±999^{km}, ML3.6, MW3.7*
*GUC **19** 05:17:06.7±0.9, 21°.41S×70°.53W, h50^{km}±7^{km}, ML3.7*
ISC 19 05:17:04.6±1.5, 21°.42S±0°.02×70°.63W±0°.06, h25^{km}±14^{km}, n25, σ0^{s}63/48, 3C-6D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TA01	Diego Aracena	0.95	26	⇓iP	Pb	05 17 22.4	0.0
TA01				iS	Sb	05 17 34.1	-0.3
TA01				IAML		05 17 35.1	
	comp=N,2µm,0.2s						
TA01	Diego Aracena	0.95	26	iP	Pb	05 17 22.3	0.0
TA01				iS	Sb	05 17 35.2	+0.8
TA01				IAML		05 17 35.4	
	comp=Z,538nm,0.6s						
PB03	IPOC Station P	1.02	128	⇓iP	Pb	05 17 24.0	+0.2
PB03				iS	Sb	05 17 36.9	0.0
PB03				IAML		05 17 38.1	
	comp=N,3µm,0.5s						
PB03	IPOC Station P	1.02	128	iP	Pb	05 17 23.9	+0.2
PB03				iS	Sb	05 17 37.1	+0.2
PB03				IAML		05 17 37.4	
	comp=Z,3µm,0.4s						
PB01	IPOC Station P	1.13	71	⇓iP	Pn	05 17 25.1	+0.2
PB01				iS	Sb	05 17 38.3	-1.4
PB01				IAML		05 17 39.2	
	comp=E,7µm,0.2s						
PB01	IPOC Station P	1.13	71	iP	Pn	05 17 25.1	+0.2
PB01				iS	Sb	05 17 39.2	-0.6
PB01				IAML		05 17 39.2	
	comp=Z,4µm,0.2s						
TA02	Huaiquique	1.23	22	eP	Pn	05 17 26.5	+0.3
TA02				iS	Sn	05 17 41.8	-0.3
TA02				IAML		05 17 43.2	
	comp=N,4µm,0.1s						
TA02	Huaiquique	1.23	22	iP	Pn	05 17 26.0	-0.3
TA02				iS	Sn	05 17 41.9	-0.2
TA02				IAML		05 17 44.2	
	comp=Z,1µm,0.1s						
PB09	IPOC Station P	1.34	106	⇓iP	Pn	05 17 29.0	+1.1
PB09				iS	Sn	05 17 45.0	0.0
PB09				IAML		05 17 46.5	
	comp=N,5µm,0.4s						
PB09	IPOC Station P	1.34	106	iP	Pn	05 17 27.3	-0.7
PB09				iS	Sn	05 17 44.9	-0.2
PB09				IAML		05 17 46.3	
	comp=Z,5µm,0.6s						
PB05	IPOC Station P	1.48	165	⇓iP	Pn	05 17 30.0	+0.3
PB05				eS	Sn	05 17 46.9	-1.5
PB05				IAML		05 17 50.6	
	comp=E,994nm,0.4s						
PB05	IPOC Station P	1.48	165	iP	Pn	05 17 29.8	0.0
PB05				IAML		05 17 53.7	
	comp=Z,491nm,0.6s						
PB06	IPOC Station P	1.61	143	⇓iP	Pn	05 17 31.7	+0.1
PB06				iS	Sn	05 17 51.4	-0.3
PB06				IAML		05 17 53.1	
	comp=N,864nm,0.3s						
PB06	IPOC Station P	1.61	143	iP	Pn	05 17 31.8	+0.1
PB06				iS	Sn	05 17 52.0	+0.3
PB06				IAML		05 17 54.9	
	comp=Z,549nm,0.5s						
PB08	IPOC Station P	1.88	48	⇑iP	Pn	05 17 36.1	+0.6
PB08				iS	Sn	05 17 58.1	-0.4
PB08				IAML		05 18 00.2	
	comp=N,2µm,0.2s						
PB08	IPOC Station P	1.88	48	iP	Pn	05 17 36.0	+0.6
PB08				iS	Sn	05 17 59.4	+0.9
PB08				IAML		05 17 59.9	
	comp=Z,773nm,0.3s						
PB11	IPOC Station P	1.89	29	⇑iP	Pn	05 17 35.4	0.0
PB11				iS	Sn	05 17 57.2	-1.2
PB11				IAML		05 17 59.6	
	comp=E,1µm,0.3s						
PB11	IPOC Station P	1.89	29	iP	Pn	05 17 35.4	0.0
PB11				iS	Sn	05 17 58.7	+0.2
PB11				IAML		05 17 59.2	
	comp=Z,638nm,0.3s						
PB10	IPOC Station P	2.08	178	eP	Pn	05 17 38.0	0.0
PB10	IPOC Station P	2.08	178	iP	Pn	05 17 37.9	0.0
PB10				iS	Sn	05 18 03.6	+0.4
PB10				IAML		05 18 05.8	
	comp=Z,172nm,0.4s						
GO01	Chusmiza	2.20	38	eP	Pn	05 17 40.5	+0.5
GO01				eS	Sn	05 18 06.2	-0.5
GO01				IAML		05 18 09.6	
	comp=N,2µm,0.1s						
GO01	Chusmiza	2.20	38	iP	Pn	05 17 40.4	+0.5
GO01				iS	Sn	05 18 07.5	+0.8
GO01				IAML		05 18 07.7	
	comp=Z,486nm,0.3s						
PB14	IPOC Station P	3.20	176	iP	Pn	05 17 53.0	-0.5
PB14				IAML		05 18 32.1	
	comp=Z,85nm,0.2s						
PB14				iS	Sn	05 18 32.2	+1.1
PB16	IPOC Station P	3.25	19	⇑iP	Pn	05 17 55.1	+0.6
PB16				iS	Sn	05 18 31.0	-1.6
PB16				IAML		05 18 31.8	
	comp=N,89nm,0.3s						
PB16	IPOC Station P	3.25	19	iP	Pn	05 17 55.0	+0.5
PB16				iS	Sn	05 18 33.2	+0.6
PB16				IAML		05 18 34.6	
	comp=Z,64nm,0.5s						

IDC 19 05:27:24.5±7.5, 30°.22S×177°.87W, h0^{km}, mb3.6/2, mbtmp3.6/2, Error ellipse: s-maj=307.1km s-min=60.9km az=155.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.23	267	P	P	05 35 28.0	+0.2
	0.3nm,0.5s,baz=104,slow=6.8,SNR=4.0						
	0.3nm,0.5s						
WRA	Warramunga Arr	44.21	272	P	P	05 35 35.1	-0.5
	0.4nm,0.3s,baz=111,slow=8.1,SNR=14						
	0.4nm,0.3s						
FINES	FINESS Array B	145.01	340	PKPbc	PKPbc	05 47 01.6	-0.7
	1.2nm,0.7s,baz=42,slow=2.3,SNR=4.1						

*NNC **19** 05:28:58.0±4.1, 53°.45N×87°.87E, h0^{km}, mb3.0, mpv2.7, Error ellipse: s-maj=32.6km s-min=14.9km az=64.0, Suspected Mining explosion.*
ASRS 19 05:28:53.0±1.1, 53°.60N×87°.97E, h0^{km}, M2.9, 3C-8D, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	Zalesovo Array	1.90	282	⇓P	Pg	05 29 30.7	+1.2
	1.0nm,0.6s						
ZAA0				⇓S	Sg	05 29 57.0	+2.9
	4.9nm,0.7s						
KURK	Kurchatov	6.44	247	⇑Pn	Pn	05 30 30.1	+1.1
	0.3nm,0.5s						
KURK				⇓Sn	Sn	05 31 45.6	+2.5
	1.2nm,0.7s						
KURK				⇓Lg	Lg	05 32 19.4	
	1.7nm,0.7s						
MK31	Makanchi Array	7.72	210	⇓Pn	Pn	05 30 50.7	+4.0
	0.4nm,0.5s,baz=32,slow=13,SNR=5.0						
MK31				⇑Sn	Sn	05 32 16.3	+1.4
	0.5nm,0.5s,baz=37,slow=26						
MK31				⇓Lg	Lg	05 33 00.3	
	2.1nm,0.7s,baz=28,slow=32,SNR=3.8						
MAKZ	Makanchi	7.81	212	⇑Pn	Pn	05 30 55.1	+7.3
	0.4nm,0.4s						
MAKZ				⇓Sn	Sn	05 32 18.8	+1.9
	0.3nm,0.4s						
MAKZ				⇓Lg	Lg	05 33 00.8	
	3.0nm,0.9s						

ASRS 19 05:29:47.0±0.8, 55°.08N×88°.95E, h0^{km}, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

*IDC **19** 05:31:30.9±5.1, 12°.82S×166°.92E, h222^{km}±48^{km}, mb3.4/7, mbtmp3.9/8, MS3.6/1, Error ellipse: s-maj=33.7km s-min=23.1km az=159.0*
*NOU **19** 05:31:30.7, 13°.05S×165°.75E, h9^{km}, MLv4.5/7, Vanuatu Islands*
ISC 19 05:31:28.7±0.8, 12°.74S±0°.08×166°.9E±0°.2, h200^{km}, n17, σ1^{s}75/16, mb3.7/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUES	Luesalemba Tem	2.28	335	P	Pn	05 32 10.3	+0.1
SANVU	Saraoutou	2.71	174	P	Pn	05 32 15.0	+0.1
SANVU	Saraoutou	2.71	174	S	Sn	05 32 49.6	-1.6
VLAKA	Lakatoro	3.38	171	P	Pn	05 32 23.5	+0.6
HNR	Honiara	7.58	295	P	Pn	05 33 09.3	-7.2
DZM	Mont Dzumac	9.29	183	P	Pn	05 33 40.0	+1.2
	1.8nm,0.3s,baz=299,slow=13						
DZM				S	Sn	05 35 19.5	-3.4
	1.2nm,0.5s,baz=98,slow=21,SNR=1.3						
DZM	Mont Dzumac	9.29	183	P	Pn	05 33 40.9	+2.1
OUENC	Ouen Island, N	9.62	180	P	Pn	05 33 47.1	+4.0
URZ	Urewera	26.99	162	LR	LR	05 45 43.2	
	comp=Z,125nm,18.1s,baz=298,slow=32						
STKA	Stephens Creek	30.05	227	P	P	05 37 20.2	+1.0
	1.5nm,0.4s,baz=27,slow=9.7,SNR=4.4						
	1.5nm,0.4s						
WRA	Warramunga Arr	32.01	253	P	P	05 37 36.3	-0.3
	0.9nm,0.5s,baz=86,slow=9.0,SNR=9.9						
	0.9nm,0.5s						
ASAR	Alice Springs	33.09	246	P	P	05 37 45.8	-0.2
	1.7nm,0.7s,baz=72,slow=9.6,SNR=18						
	1.7nm,0.7s						
VNDA	Vanda	64.83	181	P	P	05 41 44.8	-0.9
	1.0nm,0.9s,baz=344,slow=9.4,SNR=4.9						
	1.0nm,0.9s						
ILAR	Eielson Array	84.76	18	P	P	05 43 39.9	-0.1
	1.5nm,0.7s,baz=230,slow=5.2,SNR=23						
	1.5nm,0.7s						
NVAR	Mina Array Bea	86.25	49	P	P	05 43 48.0	-0.3
	0.2nm,0.6s,baz=256,slow=5.3,SNR=2.3						
	0.2nm,0.6s						
MKAR	Makanchi Array	95.52	317	P	P	05 44 32.0	+1.0
	0.2nm,0.6s,baz=108,slow=4.7,SNR=2.9						
	0.2nm,0.6s						
ARCES	ARCESS Array B	118.25	346	PKP	PKPdf	05 49 51.2	-0.3
	0.4nm,0.5s,baz=59,slow=0.7,SNR=7.7						

*NEIC **19** 05:47:21.8±0.7, 31°.639N±0°.006×104°.58W±0°.01, h5^{km}±1^{km}, mb_Lg3.0/126, ML3.0/5, ML3.2/60, Error ellipse: s-maj=2.8km s-min=1.9km az=39.0*
*TXNET **19** 05:47:21.4, 31°.7N±0°.9×10°5W±°, h6^{km}±2^{km}, ML3.3/17, Error ellipse: s-maj=1.7km s-min=1.3km az=57.8, final*
*NEIC **19** 05:47:21.4±0.7, 31°.65N±0°.01×104°.58W±0°.01, h6^{km}±2^{km}, Error ellipse: s-maj=1.9km s-min=1.8km az=156.0*
ISC 19 05:47:21.6±1.1, 31°.62N±0°.02×104°.56W±0°.02, h2^{km}±10^{km}, n125, σ1^{s}16/138, 2C, Western Texas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TPB09	Culberson Coun	0.27	56	P	Pg	05 47 27.4	+0.6
TPB09				S	Sg	05 47 31.1	+0.7
TPB11	China Draw	0.55	55	P	Pg	05 47 32.4	+0.2
TPB11				S	Sg	05 47 39.9	+0.5
GDL2	Guadalupe Moun	0.60	16		Pg	05 47 33.3	+0.1
GDL2	Guadalupe Moun	0.60	16	P	Pg	05 47 33.3	+0.1
PECS	Pecos	0.65	113		Pg	05 47 34.7	+0.7
PECS				Sg	Sg	05 47 43.6	+1.1
PECS	Pecos	0.65	113	P	Pg	05 47 34.7	+0.7
PECS				S	Sg	05 47 43.7	+1.2
PECS	Pecos	0.65	113	P	Pg	05 47 34.8	+0.7
TPB12	Southwest of T	0.66	128	⇑P	Pg	05 47 35.0	+0.7
TPB12				S	Sg	05 47 44.1	+1.2
MNTX	Cornudas Mount	0.70	276		Pg	05 47 35.2	+0.1
MNTX				Sg	Sg	05 47 44.3	+0.1
MNTX	Cornudas Mount	0.70	276	P	Pg	05 47 35.2	+0.1
MNTX				S	Sg	05 47 44.6	+0.4
MNTX	Cornudas Mount	0.70	276	P	Pg	05 47 35.2	+0.1
TPB07	Mentone	0.77	93	P	Pb	05 47 37.4	-0.4
TPB07				S	Sb	05 47 48.4	-0.2
TPB10	Southeast of T	0.77	116	P	Pg	05 47 37.2	+0.7
TPB10				S	Sb	05 47 47.8	-0.9
CLNB	Carlsbad	0.86	42		Pg	05 47 38.4	+0.1
CLNB	Carlsbad	0.86	42	P	Pg	05 47 38.2	0.0
CLNB				S	Sg	05 47 50.2	+0.7
CLNB	Carlsbad	0.86	42	P	Pg	05 47 38.1	-0.2
VHRN	Van Horn	0.91	203		Pg	05 47 39.3	+0.3
VHRN				Sg	Sg	05 47 51.8	+1.0
VHRN				IAML		05 47 52.8	
	635nm,0.4s						
VHRN	Van Horn	0.91	203	⇑P	Pg	05 47 39.3	+0.3
VHRN				S	Sg	05 47 51.9	+1.0
VHRN	Van Horn	0.91	203	P	Pg	05 47 39.4	+0.3
PCOS	Crockett Middl	0.93	103		Pb	05 47 40.3	-0.1
PCOS	Crockett Middl	0.93	103	P	Pb	05 47 40.3	-0.1
PCOS				S	Sb	05 47 52.8	-0.4
PCOS	Crockett Middl	0.93	103	P	Pb	05 47 40.7	+0.3
PCOS				S	Sb	05 47 52.8	-0.4
CBET	Carlsbad E Tow	0.93	31		Pg	05 47 39.4	-0.1
CBET	Carlsbad E Tow	0.93	31	P	Pg	05 47 39.4	-0.1
TPB01	Permian Basin	0.95	135	P	Pg	05 47 40.0	+0.1
TPB01				S	Sg	05 47 53.2	+0.9
TPB01	Permian Basin	0.95	135	P	Pg	05 47 40.0	+0.1
TPB01				S	Sg	05 47 53.2	+0.9
CLN7	Carlsbad 7	1.02	39		Pg	05 47 40.9	-0.3
CLN7	Carlsbad 7	1.02	39	P	Pg	05 47 41.0	-0.1
TPB03	Saragosa	1.05	121	P	Pg	05 47 42.3	+0.5
TPB03				S	Sb	05 47 56.5	-0.2
TPB03	Saragosa	1.05	121	P	Pg	05 47 42.3	+0.5
TPB03				S	Sb	05 47 56.5	-0.2
TPB06	Permian Basin	1.15	88	P	Pb	05 47 44.1	-0.2
TPB06				S	Sn	05 47 59.8	-1.3
TPB06	Permian Basin	1.15	88	P	Pb	05 47 43.9	-0.4
HTMS	Hat Mesa	1.16	43		Pb	05 47 43.7	-0.8
HTMS	Hat Mesa	1.16	43	P	Pb	05 47 43.7	-0.8
HTMS				S	Sb	05 47 59.1	-0.8
TPB04	Verhalen	1.19	111	P	Pb	05 47 44.6	-0.4
TPB04				S	Sg	05 48 00.8	+0.9
TPB16	Coyonosa	1.23	114	P	Pn	05 47 45.3	-0.5
TPB16				S	Sn	05 48 02.2	-0.8
NM01	Eunice	1.23	53	P	Pn	05 47 45.0	-0.9
NM01				S	Sb	05 48 01.4	-0.6
TPB05	Hovey Rd	1.27	123	P	Pn	05 47 45.9	-0.5
TPB05				S	Sn	05 48 03.4	-0.8
TPB19	West of Imperi	1.29	104	P	Pb	05 47 46.6	-0.1
ALPN	Alpine	1.48	147		Pn	05 47 48.8	-0.5
ALPN					Sb	05 48 08.7	-0.5
ALPN	Alpine	1.48	147	P	Pn	05 47 48.8	-0.5
ALPN				S	Sb	05 48 08.6	-0.5
ALPN	Alpine	1.48	147	P	Pn	05 47 49.0	-0.4
CPRX	Cap Rock	1.52	23		Pn	05 47 49.8	-0.2
CPRX	Cap Rock	1.52	23	P	Pn	05 47 49.8	-0.2
MNHN	Monahans	1.57	100		Pb	05 47 50.9	-0.5
MNHN					Sg	05 48 12.1	+0.1
MNHN	Monahans	1.57	100	P	Pb	05 47 50.8	-0.5
MNHN	Monahans	1.57	100	P	Pb	05 47 51.2	-0.1
TPB08	Permian Basin	1.59	117	P	Pb	05 47 52.2	+0.3
TPB08				S	Sg	05 48 14.3	+1.4
EPT	El Paso	1.66	276		Pb	05 47 52.2	-0.8
EPT				IAML		05 48 17.0	
	comp=E,285nm,0.6s						
EPT				IAML		05 48 17.9	
	comp=N,224nm,0.2s						
EPT	El Paso	1.66	276	P	Pn	05 47 52.1	+0.2
EPT	El Paso	1.66	276	S	Sg	05 48 15.6	+0.5
ODSA	Odessa	1.79	73		Pb	05 47 54.7	-0.5
ODSA	Odessa	1.79	73	P	Pb	05 47 54.6	-0.5
ODSA				S	Sb	05 48 17.7	-0.2
ODSA	Odessa	1.79	73	P	Pb	05 47 54.8	-0.3
TMB04	Seminole	2.02	60	P	Pb	05 47 58.2	-1.0
TMB04				S	Sg	05 48 25.9	-0.8
TMB01	Midkiff	2.12	88	P	Pb	05 47 59.6	-1.1
TMB01				S	Sb	05 48 27.7	+0.2
TMB02	Rankin	2.20	100	P	Pb	05 48 00.7	-1.5
TMB02				S	Sb	05 48 30.9	+1.0
TMB06	Greenwood	2.38	81	P	Pb	05 48 03.7	-1.6
TMB06				S	Sb	05 48 34.4	-0.7
TMB06				Sg	Sg	05 48 36.7	-1.5
TX31	Lajitas Ar. Si	2.41	161		Pn	05 48 03.3	+1.2
TX31	Lajitas Ar. Si	2.41	161	S	Sg	05 48 38.4	-0.7
TX31	Lajitas Ar. Si	2.41	161	P	Pb	05 48 03.7	-2.0
TX31				Pg	Pg	05 48 05.9	-1.9
TXAR	Lajitas Array	2.41	161		Pn	05 48 03.3	+1.1
TMB05	Klondike	2.50	66	P	Pb	05 48 05.3	-2.1
TMB05				S	Sb	05 48 39.7	+1.1
SAND	Sanderson	2.68	128		Pb	05 48 07.9	-2.4
SAND	Sanderson	2.68	128	P	Pb	05 48 08.0	-2.3
SAND				Pg	Pg	05 48 09.6	-3.4
SAND				S	Sb	05 48 45.4	+1.8
SAND	Sanderson	2.68	128	P	Pb	05 48 08.0	-2.3
MSTX	Muleshoe	2.78	32		Pn	05 48 08.7	+1.3
MSTX	Muleshoe	2.78	32	P	Pn	05 48 09.3	+1.9
MSTX				Pg	Pb	05 48 11.0	-1.1
MSTX				S	Sb	05 48 43.6	-3.2
MSTX				Sg	Sg	05 48 48.1	-3.0
MSTX	Muleshoe	2.78	32	P	Pn	05 48 09.0	+1.7
SGCY	Sterling City	2.94	83		Pn	05 48 10.8	+1.3
SGCY					Sn	05 48 46.9	+1.6
SGCY				IAmb_Lg		05 48 58.7	
	comp=Z,63nm,0.9s						
SGCY	Sterling City	2.94	83	P	Pn	05 48 10.7	+1.2
SGCY				S	Sn	05 48 46.9	+1.6
SGCY	Sterling City	2.94	83	P	Pn	05 48 10.7	+1.2
CRNM	Carthage	2.96	322		Pn	05 48 11.5	+1.8
POST	Post	2.96	60		Pn	05 48 11.7	+1.9
POST				IAmb_Lg		05 49 01.5	
	comp=Z,52nm,0.9s						
POST	Post	2.96	60	P	Pn	05 48 11.7	+1.9
POST				S	Sb	05 48 52.3	+0.3
POST	Post	2.96	60	P	Pn	05 48 11.6	+1.8
POST				S	Sb	05 48 51.2	-0.7
OZNA	Ozona	3.02	102		Pn	05 48 11.7	+1.2
OZNA				Sg	Sb	05 48 56.1	+2.5
OZNA				IAmb_Lg		05 49 03.5	
	comp=Z,56nm,0.9s						
OZNA	Ozona	3.02	102	P	Pn	05 48 11.6	+1.0
OZNA				Sg	Sb	05 48 56.1	+2.5
OZNA	Ozona	3.02	102	P	Pn	05 48 12.2	+1.7
BNM	Barren Site	3.06	326		Pn	05 48 13.2	+2.0
Y22A	Socorro	3.07	319		Pn	05 48 12.6	+1.3
Y22A	Socorro	3.07	319	P	Pn	05 48 12.6	+1.3
Y22D	IRIS PASSCAL I	3.15	322		Pb	05 48 18.9	+0.5
Y22D	IRIS PASSCAL I	3.15	322	P	Pb	05 48 18.9	+0.5
Y22D	IRIS PASSCAL I	3.15	322	S	Sg	05 49 01.3	-1.5
SN08	Arah	3.19	68	S	Sb	05 49 00.2	+1.8
SN03	Snyder 3	3.33	66	S	Sb	05 49 03.6	+1.1
SN05	Snyder 5	3.36	67	IAmb_Lg		05 49 17.3	
	comp=Z,42nm,0.8s						
SN07	Snyder 07	3.44	64	IAmb_Lg		05 49 18.8	
	comp=Z,33nm,0.8s						
ANMO	Albuquerque	3.67	335	IAmb_Lg		05 49 17.3	
	comp=Z,36nm,1.0s						
ANMO	Albuquerque	3.67	335	IAmb_Lg		05 49 16.0	
	comp=Z,31nm,0.7s						
ANMO	Albuquerque	3.67	335	IAML		05 49 15.9	
	comp=Z,29nm,0.6s						
ANMO				IAML		05 49 18.0	
	comp=Z,31nm,0.4s						
ANMO				IAmb_Lg		05 49 21.6	
	comp=Z,38nm,1.0s						
ANMO	Albuquerque	3.67	335	IAML		05 49 18.2	
	comp=Z,43nm,0.4s						
ANMO				IAML		05 49 19.4	
	comp=Z,31nm,0.3s						
ANMO				IAmb_Lg		05 49 21.6	
	comp=Z,42nm,1.0s						
ANMO	Albuquerque	3.67	335	IAML		05 49 18.3	
	comp=Z,58nm,0.5s						
ANMO				IAmb_Lg		05 49 21.6	
	comp=Z,48nm,1.1s						
ANMO				IAML		05 49 23.0	
	comp=Z,42nm,0.9s						
DKNS	Dickens	3.69	55	IAmb_Lg		05 49 23.8	
	comp=Z,46nm,0.8s						
DKNS	Dickens	3.69	55	P	Pn	05 48 21.8	+2.1
DRIO	Del Rio	4.05	122	IAmb_Lg		05 49 35.2	
	comp=Z,41nm,0.9s						
AMTX	Amarillo	4.05	36		Pn	05 48 25.6	+0.9
APMT	Aspermont	4.12	65		Pn	05 48 26.5	+0.9
APMT				IAmb_Lg		05 49 40.7	
	comp=Z,44nm,0.8s						
ABTX	Abilene, Hawle	4.29	75		Pn	05 48 29.6	+1.7
RTBA	Rita Blanca	5.04	17	IAmb_Lg		05 50 14.6	
	comp=Z,22nm,0.8s						
TUC	Tucson	5.33	279	IAmb_Lg		05 50 19.6	
	comp=Z,6.3nm,0.8s						
X18A	Snowflake	5.37	304	IAML		05 50 15.9	
	comp=N,15nm,0.5s						
X18A				IAML		05 50 25.8	
	comp=E,10nm,0.9s						
T25A	Trinidad	5.50	1	IAmb_Lg		05 50 18.2	
	comp=Z,35nm,1.0s						
833A	Chaparral WMA,	5.56	125	IAmb_Lg		05 50 31.8	
	comp=Z,17nm,0.9s						
FW03	Perrin-Whitt E	5.68	74	IAmb_Lg		05 50 33.5	
	comp=Z,22nm,0.8s						
WMOK	Wichita Mounta	5.76	56	IAmb_Lg		05 50 32.9	
	comp=Z,23nm,0.8s						
FW07	Weatherford	5.85	78	IAmb_Lg		05 50 39.2	
	comp=Z,29nm,1.1s						
FW06	Azle	6.08	75	IAmb_Lg		05 50 47.1	
	comp=Z,15nm,0.7s						
ELIS	Ellis County	6.16	43	IAmb_Lg		05 50 48.8	
	comp=Z,25nm,0.7s						
FW14	Alvarado	6.31	81	IAmb_Lg		05 50 50.4	
	comp=Z,16nm,0.7s						
X34A	Smith Ranch, M	6.38	60	IAmb_Lg		05 50 51.8	
	comp=Z,19nm,0.8s						
Z35A	Perchaven, San	6.41	73	IAmb_Lg		05 51 03.3	
	comp=Z,25nm,1.0s						
735A	Kenedy	6.46	114	IAmb_Lg		05 50 59.4	
	comp=Z,16nm,0.8s						
OK029	Liberty Lake	7.24	53	IAmb_Lg		05 51 29.8	
	comp=Z,16nm,0.9s						
TREL	Terrell	7.27	79	IAmb_Lg		05 51 19.1	
	comp=Z,19nm,0.8s						
KSCO	Kaye Shedlock’	7.54	12	IAmb_Lg		05 51 39.3	
	comp=Z,18nm,0.8s						
KAN08	Anthony NE Sta	7.80	42	IAmb_Lg		05 51 33.2	
	comp=Z,16nm,0.9s						
KAN01	Argonia South	7.88	44	IAmb_Lg		05 51 41.7	
	comp=Z,21nm,1.2s						
KAN09	Caldwell North	7.95	44	IAmb_Lg		05 51 53.7	
	comp=Z,20nm,0.9s						
Z38A	Mt. Pleasant	8.26	76	IAmb_Lg		05 52 05.6	
	comp=Z,20nm,0.9s						
R32A	Long Quarter,	8.31	34	IAmb_Lg		05 51 57.4	
	comp=Z,18nm,0.9s						
TUL3	Leonard	8.46	57	IAmb_Lg		05 51 52.3	
	comp=Z,14nm,1.0s						
T35A	Sooner Cattle	8.50	49	IAmb_Lg		05 51 58.4	
	comp=Z,9.5nm,0.8s						
OGNE	Ogallala	9.52	12	IAmb_Lg		05 52 30.0	
	comp=Z,13nm,0.9s						

*IDC **19** 05:55:38.2±0.7, 31°.75S×177°.61W, h0^{km}, mb4.3/7, mbtmp4.2/7, Error ellipse: s-maj=27.6km s-min=25.9km az=156.0*
*NEIC **19** 05:55:42.3±1.2, 31°.2S±0°.1×177°.8W±0°.3, h10^{km}±2^{km}, mb4.6/7, Error ellipse: s-maj=36.5km s-min=19.7km az=85.0*
ISC 19 05:55:39.6±0.6, 31°.68S±0°.06×177°.8W±0°.1, h10^{km}, n55, σ1^{s}90/75, mb4.6/15, 5D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	2.41	357	P	Pn	05 56 18.0	-1.0
GLKZ				S	Sn	05 56 45.0	-3.6

RAO	Raoul Island	2.42	357	Pn	Pn	05 56 15.8	-3.5
RIZ	Raoul Island	2.43	357	P	Pn	05 56 17.9	-1.5
RIZ				S	Sn	05 56 47.8	-1.3
HAZ	Te Kaha	7.08	210	P	Pn	05 57 20.2	-3.1
HAZ				S	Sn	05 58 46.6	+2.8
PUZ	Puketiti	7.16	206	P	Pn	05 57 21.2	-3.2
PUZ				S	Sn	05 58 43.7	-2.2
RUGZ	Raukumara Rang	7.30	210	P	Pn	05 57 24.4	-2.0
RUGZ				S	Sn	05 58 49.2	-0.2
TWGZ	Tauwhareparae	7.36	207	P	Pn	05 57 24.4	-2.8
TWGZ				S	Sn	05 58 50.7	0.0
TKGZ	Te Karaka	7.64	207	P	Pn	05 57 28.0	-2.9
TKGZ				S	Sn	05 58 56.8	-0.7
MWZ	Matawai	7.68	209	P	Pn	05 57 29.2	-2.3
MWZ				S	Sn	05 58 58.8	+0.3
URZ	Urewera	7.79	211	Pn	Pn	05 57 29.9	-3.1
	1.6nm,0.3s,baz=32,slow=9.5,SNR=11						
URZ				Sn	Sn	05 58 58.3	-2.9
	3.9nm,0.3s,baz=76,slow=22,SNR=10						
URZ	Urewera	7.79	211	P	Pn	05 57 29.3	-3.7
URZ				S	Sn	05 58 59.4	-1.8
RAGZ	Rawiri	7.86	209	P	Pn	05 57 31.9	-2.2
RAGZ				P	Sn	05 59 03.9	+0.8
RIGZ	Rimuhau	7.91	206	P	Pn	05 57 32.3	-2.3
RIGZ				S	Sn	05 59 03.6	-0.5
OUZ	Omahuta	8.03	242	P	Pn	05 57 43.5	+7.2
PRGZ	Paritu Road	8.05	205	S	Sn	05 59 06.8	-0.9
SNGZ	Shannon Statio	8.13	208	P	Pn	05 57 37.5	-0.3
SNGZ				S	Sn	05 59 09.7	-0.1
MHGZ	Mahia Peninsul	8.25	204	P	Pn	05 57 36.9	-2.4
MHGZ				S	Sn	05 59 10.8	-1.7
RAHZ	Arahi	8.35	209	P	Pn	05 57 40.1	-0.7
RAHZ				S	Sn	05 59 14.8	-0.4
MTHZ	Maungataniwha	8.40	210	P	Pn	05 57 38.7	-2.8
MTHZ				S	Sn	05 59 16.8	+0.4
WHHZ	Waihua	8.43	208	S	Sn	05 59 16.6	-0.4
NMHZ	Naumai	8.62	209	P	Pn	05 57 43.5	-1.0
NMHZ				S	Sn	05 59 21.3	-0.5
BKZ	Black Stump Fm	8.81	210	P	Pn	05 57 44.4	-2.7
BKZ				S	Sn	05 59 25.1	-1.3
MCHZ	McNeill Hill	8.96	209	S	Sn	05 59 28.9	-1.1
KWHZ	Kaweka Forest	9.06	210	P	Pn	05 57 49.9	-0.6
KWHZ				S	Sn	05 59 31.1	-1.5
KAHZ	Kahuranaki	9.19	207	P	Pn	05 57 46.3	-6.0
KAHZ				S	Sn	05 59 32.9	-2.8
PNHZ	Pukenui	9.56	209	P	Pn	05 57 52.7	-4.6
PNHZ				S	Sn	05 59 40.4	-4.5
DVHZ	Dannevirke	9.90	208	P	Pn	05 57 58.7	-3.2
RPZ	Rata Peaks	14.90	213	Sn	Sn	06 01 44.7	-11
	0.6nm,0.3s,baz=98,slow=20,SNR=2.2						
BBOO	Buckleboo	38.82	256	P	P	06 03 07.8	+3.0
BBOO				IAmb	IAmb	06 03 49.5	
	comp=Z,25nm,1.4s						
AS31	Alice Springs	43.25	268	P	P	06 03 42.6	+1.2
AS31				IAmb	IAmb	06 03 46.8	
	comp=Z,0.9nm,0.7s						
ASAR	Alice Springs	43.25	268	P	P	06 03 43.8	+2.4
ASAR	Alice Springs	43.25	268	P	P	06 03 42.2	+0.9
	comp=Z,1.3nm,0.6s,baz=105,slow=7.6,SNR=16						
ASAR				PcP	PcP	06 05 32.5	+1.9
	comp=Z,0.4nm,0.5s,baz=105,slow=3.6,SNR=1.9						
	comp=Z,1.3nm,0.6s						
WR8	Warramunga Arr	44.21	273	P	P	06 03 50.4	+1.3
WR8				IAmb	IAmb	06 04 21.7	
	comp=Z,19nm,1.5s						
WB2	Warramunga Arr	44.34	273	P	P	06 03 51.7	+1.5
WB2				IAmb	IAmb	06 04 22.2	
	comp=Z,17nm,1.4s						
WRA	Warramunga Arr	44.35	273	P	P	06 03 52.5	+2.2
WRA	Warramunga Arr	44.35	273	P	P	06 03 51.7	+1.4
	comp=Z,2.4nm,0.7s,baz=111,slow=8.1,SNR=11						
	comp=Z,2.4nm,0.7s						
WB0	Warramunga Arr	44.38	274	P	P	06 03 51.5	+1.0
WB0				IAmb	IAmb	06 03 57.4	
	comp=Z,13nm,1.2s						
QSPA	South Pole Qui	58.44	180	P	P	06 05 37.8	+2.4
QSPA	South Pole Qui	58.44	180	P	P	06 05 35.8	+0.5
	comp=Z,6.3nm,1.0s,baz=31,slow=3.8,SNR=9.2						
	comp=Z,6.3nm,1.0s						
TROLL	Troll, Antarti	76.60	180	⇓P	P	06 07 30.5	+0.4
	comp=Z,168nm,0.7s						
SNAA	Sanae	76.88	178	⇓P	P	06 07 31.6	+0.1
	comp=Z,44nm,0.7s						
SNAA	Sanae	76.88	178	P	P	06 07 30.4	-1.1
	comp=Z,6.3nm,1.2s,baz=188,slow=8.3,SNR=8.7						
	comp=Z,6.3nm,1.2s						
VNA3	Neumayer Olymp	77.02	176	⇓P	P	06 07 31.9	-0.4
	comp=Z,6.5nm,0.6s						
VNA2	Neumayer--Watz	77.46	177	⇓P	P	06 07 35.0	+0.3
	comp=Z,6.9nm,0.8s,baz=180,slow=5.4						
VNA1	Neumayer--Stat	77.69	176	⇓P	P	06 07 36.8	+0.8
	comp=Z,6.1nm,0.8s						
NVAR	Mina Array Bea	89.05	43	P	P	06 08 35.6	+0.6
	comp=Z,2.2nm,1.1s,baz=240,slow=4.2,SNR=6.9						
	comp=Z,2.2nm,1.1s						
TXAR	Lajitas Array	92.92	57	P	P	06 08 52.7	-0.4
	comp=Z,1.0nm,1.1s,baz=252,slow=4.5,SNR=5.4						
	comp=Z,1.0nm,1.1s						
PDAR	Pinedale Array	96.92	44	P	P	06 09 11.0	-0.3
	comp=Z,0.1nm,0.3s,baz=268,slow=7.7,SNR=1.9						
	comp=Z,0.1nm,0.3s						
KURBB	Kurchatov Arra	122.10	313	PKP	PKiKP	06 14 34.5	+0.4
	comp=Z,0.4nm,0.6s,baz=95,slow=2.2,SNR=4.1						
KBZ	Khabaz	145.97	302	PKPbc	PKPab	06 15 20.0	+0.2
	comp=Z,3.8nm,0.9s,baz=356,slow=2.2,SNR=6.1						
FINES	FINESS Array B	146.41	339	PKPbc	PKPdf	06 15 19.4	+0.6
	comp=Z,2.6nm,0.5s,baz=68,slow=3.9,SNR=22						
HFS	Hagfors	150.53	348	PKP	PKPdf	06 15 27.1	+1.6
	comp=Z,1.7nm,0.9s,baz=312,slow=5.4,SNR=3.6						
MMAI	Mount Meron Ar	152.00	282	PKPbc	PKPbc	06 15 35.7	+0.4
	comp=Z,1.4nm,0.4s,baz=94,slow=5.8,SNR=2.2						
AKASG	Malin Array Be	152.42	321	PKPbc	PKPbc	06 15 34.1	-1.4
	comp=Z,0.2nm,0.3s,baz=50,slow=2.0,SNR=5.4						
AKASG				PKPab	PKPab	06 15 45.9	+0.1
	comp=Z,0.2nm,0.3s,baz=50,slow=4.5,SNR=4.6						
BRTR	Keskin Array B	153.36	296	PKP	PKPdf	06 15 31.2	+0.5
	comp=Z,0.5nm,0.5s,baz=14,slow=8.0,SNR=2.4						
BRTR				PKPbc	pPKPbc	06 15 39.8	-0.1
	comp=Z,0.5nm,0.6s,baz=158,slow=5.9,SNR=3.6						

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*IDC **19** 05:56:00.7±2.4, 10.°16S×161.°36E, h101^{km}±18^{km}, mb3.5/6, mbtmp4.0/7, Error ellipse: s-maj=28.5km s-min=20.5km az=80.0*

*NEIC **19** 05:56:00.5±1.7, 10.°20S±0.°10×161.°33E±0.°09, h88^{km}±7^{km}, mb4.3/14, Error ellipse: s-maj=14.9km s-min=11.1km az=212.0*

*NOU **19** 05:56:01.0, 10.°27S×161.°41E, h44^{km}, MLv4.9/16, Solomon Islands*

ISC 19 05:55:59.9±0.6, **10.°28S**±0.°06×**161.°46E**±0.°06, **h100**^{km}**, n47,** σ**1.^{s}91**/43, **mb4.0**/12, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HURO	Huro Makira	0.48	113	P	Pn	05 56 12.9	-2.7
HURO	Huro Makira	0.48	113	S	Sn	05 56 23.5	-3.8
ALEG	Aligegeo Malai	1.69	334	P	Pn	05 56 27.7	-0.9
ALEG	Aligegeo Malai	1.69	334	S	Sn	05 56 48.8	-1.6
HNR	Honiara	1.71	299	Sn	Sn	05 56 47.4	-3.4
HNR	Honiara	1.71	299	P	Pn	05 56 27.1	-1.7
	383nm,0.3s,baz=151,slow=3.8,SNR=15						
HNR				S	Sn	05 56 48.7	-2.1
	766nm,0.3s,baz=174,slow=19,SNR=8.1						
HNR	Honiara	1.71	299	P	Pn	05 56 28.2	-0.6
HNR	Honiara	1.71	299	S	Sn	05 56 49.8	-1.0
NGOA	Tingoa Renbel	1.86	227	P	Pn	05 56 29.1	-1.7
NGOA	Tingoa Renbel	1.86	227	S	Sn	05 56 51.7	-2.6
SAVO	Savo Central	1.97	305	P	Pn	05 56 30.7	-1.5
TATA	Tatamba Isabel	2.49	319	P	Pn	05 56 37.6	-1.3
LUES	Luesalemba Tem	4.40	95	P	Pn	05 57 03.7	-0.9
SANVU	Saraoutou	7.60	133	Pn	Pn	05 57 49.4	+1.3
SANVU	Saraoutou	7.60	133	P	Pn	05 57 50.4	+2.3
DVP	Devils Point	9.87	139	P	Pn	05 58 20.7	+1.8
DZM	Mont Dzumac	12.66	158	P	Pn	05 58 59.4	+2.8
	5.4nm,0.3s,baz=330,slow=20,SNR=70						
DZM				S	Sn	06 01 12.5	-3.4
	3.7nm,0.3s,baz=319,slow=20,SNR=5.8						
DZM	Mont Dzumac	12.66	158	P	P	05 59 00.4	-3.5
ONTNC	Ouen Toro	12.88	159	Pn	Pn	05 59 01.8	+2.4
OUENC	Ouen Island, N	13.13	158	P	P	05 59 06.8	-2.1
PINNC	Pines Island,	13.54	156	Pn	Pn	05 59 08.8	+0.9
CTAO	Charters Tower	17.60	235	P	Pn	05 59 59.1	+0.1
EIDS	Eidsvold	17.95	212		Pn	06 00 04.5	+1.4
COEN	Coen	18.24	257		P	06 00 04.8	-0.8
COEN				IAmb	IAmb	06 00 11.5	
	comp=Z,11nm,1.0s						
WR8	Warramunga Arr	27.70	247	P	P	06 01 38.7	-0.4
WR8				IAmb	IAmb	06 02 03.6	
	comp=Z,7.3nm,1.0s						
WB0	Warramunga Arr	27.75	247	P	P	06 01 39.4	0.0
WB0				IAmb	IAmb	06 02 17.8	
	comp=Z,17nm,1.5s						
WRA	Warramunga Arr	27.84	247	P	P	06 01 40.2	-0.1
WRA	Warramunga Arr	27.84	247	P	P	06 01 40.9	+0.6
	comp=Z,1.5nm,0.8s,baz=75,slow=9.4,SNR=8.4						
	comp=Z,1.5nm,0.8s						
H11S2	WAKE ISLAND Hy	29.05	10	T	T	06 30 47.9	
	baz=194,slow=76,SNR=37						
H11S3	WAKE ISLAND Hy	29.05	10	T	T	06 30 47.8	
	baz=194,slow=76,SNR=28						
H11S1	WAKE ISLAND Hy	29.07	10	T	T	06 30 50.6	
	baz=194,slow=76,SNR=31						
ASAR	Alice Springs	29.45	240	P	P	06 01 54.6	+0.1
	comp=Z,0.3nm,0.5s,baz=64,slow=9.8,SNR=4.5						
	comp=Z,0.3nm,0.5s						
H11N1	WAKE ISLAND Hy	30.28	10	T	T	06 32 19.5	
	baz=193,slow=76,SNR=22						
H11N3	WAKE ISLAND Hy	30.29	10	T	T	06 32 20.1	
	baz=193,slow=76,SNR=19						
H11N2	WAKE ISLAND Hy	30.30	10	T	T	06 32 21.3	
	baz=193,slow=76,SNR=29						
BBOO	Buckleboo	32.40	222	P	P	06 02 21.1	+0.8
FITZ	Fitzroy Crossi	35.53	253	P	P	06 02 47.0	-0.6
FITZ				IAmb	IAmb	06 03 17.2	
	comp=Z,2.8nm,1.2s						
UGM	Wanagama	50.31	268	P	P	06 04 46.5	-0.5
KLR	Kul'dur	64.76	339	P	P	06 06 26.6	-1.1
	comp=Z,0.6nm,0.5s,baz=144,slow=8.7,SNR=1.9						
	comp=Z,0.6nm,0.5s						
CASY	Casey	65.60	200	P	P	06 06 36.7	+3.8
SONM	Songino Array	75.60	325	P	P	06 07 34.5	+0.4
	comp=Z,0.8nm,0.5s,baz=131,slow=6.1,SNR=4.2						
	comp=Z,0.8nm,0.5s						
KDAK	Kodiak Island	77.48	23	P	P	06 07 45.5	+1.3
KDAK				IAmb	IAmb	06 07 55.1	
	comp=Z,11nm,1.3s						
J17K	VABM Dome	79.41	17	P	P	06 07 56.2	+1.5
J17K				IAmb	IAmb	06 08 22.5	
	comp=Z,5.2nm,1.2s						
QSPA	South Pole Qui	79.72	180	P	P	06 07 58.0	+1.3
QSPA				IAmb	IAmb	06 08 00.5	
	comp=Z,3.3nm,1.1s						
QSPA	South Pole Qui	79.72	180	P	P	06 07 57.9	+1.3
	comp=Z,1.4nm,0.8s,baz=90,slow=1.0,SNR=1.8						
	comp=Z,1.4nm,0.8s						
M19K	Big River Lodg	79.74	20	P	P	06 07 58.9	+2.3
M19K				IAmb	IAmb	06 08 23.2	
	comp=Z,8.8nm,1.2s						
ILAR	Eielson Array	84.18	20	P	P	06 08 20.3	+0.6
	comp=Z,0.2nm,0.4s,baz=245,slow=5.0,SNR=11						
	comp=Z,0.2nm,0.4s						

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*IDC **19** 06:01:34.1±1.0, 31.°80S×177.°72W, h0^{km}, mb4.3/6, mbtmp4.2/8, ML3.5/2, Error ellipse: s-maj=29.1km s-min=23.4km az=72.0*

ISC 19 06:01:34.9±0.9, **31.°72S**±0.°07×**177.°8W**±0.°2, **h10**^{km}**, n49,** σ**2.^{s}92**/63, **mb4.3**/6, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.45	358	P	Pn	06 02 12.2	-2.8
GLKZ				S	Sn	06 02 41.0	-3.9
RIZ	Raoul Island	2.47	358	P	Pn	06 02 11.7	-3.5
RIZ				S	Sn	06 02 41.7	-3.7
MXZ	Matakaoa Point	6.63	208	P	Pn	06 03 09.4	-3.0
MXZ				S	Sn	06 04 27.6	-0.5
WMGZ	Waiomatatini S	6.82	206	P	Pn	06 03 13.8	-1.1
WMGZ				S	Sn	06 04 35.1	+2.5
PKGZ	Pakihiroa	6.99	208	P	Pn	06 03 15.7	-1.5
PKGZ				S	Sn	06 04 37.6	+0.8
HAZ	Te Kaha	7.01	210	P	Pn	06 03 16.9	-0.7
HAZ				S	Sn	06 04 41.6	+4.3
PUZ	Puketiti	7.10	206	P	Pn	06 03 16.8	-2.0
PUZ				S	Sn	06 04 39.9	+0.3
RUGZ	Raukumara Rang	7.23	209	S	Sn	06 04 45.5	+2.5
TWGZ	Tauwhareparae	7.29	207	P	Pn	06 03 20.4	-1.1
TWGZ				S	Sn	06 04 45.9	+1.5
CNGZ	Carnagh Statio	7.48	205	P	Pn	06 03 22.1	-1.9
TKGZ	Te Karaka	7.57	207	S	Sn	06 04 51.7	+0.5
MWZ	Matawai	7.61	209	P	Pn	06 03 24.7	-1.2
MWZ				S	Sn	06 04 53.5	+1.3
URZ	Urewera	7.72	211	Pn	Pn	06 03 25.8	-1.5
	1.0nm,0.3s,baz=324,slow=22,SNR=1.5						
URZ				Sn	Sn	06 04 54.4	-0.6
	5.4nm,0.3s,baz=24,slow=20,SNR=19						
	2.9nm,0.3s						
URZ	Urewera	7.72	211	P	Pn	06 03 26.4	-1.0
URZ				S	Sn	06 04 54.3	-0.6
RAGZ	Rawiri	7.79	209	S	Sn	06 04 57.5	+0.8
RIGZ	Rimuhau	7.84	206	S	Sn	06 04 58.8	+1.0
PRGZ	Paritu Road	7.99	205	S	Sn	06 04 58.5	-3.0
SNGZ	Shannon Statio	8.07	208	P	Pn	06 03 30.6	-1.6
SNGZ				S	Sn	06 05 04.9	+1.4
RAHZ	Arahi	8.29	209	P	Pn	06 03 31.1	-4.0
RAHZ				S	Sn	06 05 09.3	+0.6
MTHZ	Maungataniwha	8.33	210	P	Pn	06 03 37.3	+1.5
NMHZ	Naumai	8.55	209	P	Pn	06 03 37.5	-1.3
MCHZ	McNeill Hill	8.89	208	P	Pn	06 03 42.3	-1.1
KAHZ	Kahuranaki	9.12	207	P	Pn	06 03 41.7	-5.0
PNHZ	Pukenui	9.49	209	P	Pn	06 03 48.4	-3.3
PRHZ	Porangahau	9.63	206	P	Pn	06 03 49.4	-4.0
DVHZ	Dannevirke	9.84	208	P	Pn	06 03 53.1	-3.2
DVHZ				S	Sn	06 05 42.4	-4.4
ANWZ	Angora Road	9.85	206	S	Sn	06 05 42.7	-4.5
POWZ	Post Office Ro	10.07	209	P	Pn	06 03 57.6	-2.0
POWZ				S	Sn	06 05 49.2	-3.5
PRWZ	Pori Road	10.13	208	S	Sn	06 05 49.8	-4.2
BFZ	Birch Farm	10.13	206	P	Pn	06 03 56.2	-4.2
BFZ				S	Sn	06 05 48.9	-5.2
TIWZ	Tintock	10.35	207	P	Pn	06 04 00.4	-3.1
TIWZ				S	Sn	06 05 54.4	-5.1
MRZ	Mangatainoka R	10.38	209	P	Pn	06 04 01.1	-2.6
MRZ				S	Sn	06 05 55.2	-5.0
HOWZ	Holdsworth Sta	10.60	208	S	Sn	06 05 58.6	-7.1
OGWZ	Otaki Gorge	10.68	210	P	Pn	06 04 05.9	-2.0
OGWZ				S	Sn	06 06 00.8	-6.7
KIW	Kapiti Island	10.83	211	P	Pn	06 04 08.0	-2.0
KIW				S	Sn	06 06 05.3	-5.9
MTW	Mount Morrison	10.83	208	S	Sn	06 06 05.0	-6.2
RPZ	Rata Peaks	14.83	213	Pn	Pn	06 05 00.3	-4.4
	1.3nm,0.3s,baz=7.1,slow=3.1,SNR=5.6						
RPZ				Sn	Sn	06 07 37.2	-12
	1.5nm,0.3s,baz=312,slow=6.6,SNR=5.5						
DZM	Mont Dzumac	16.98	301	P	P	06 05 36.2	+1.6
	0.1nm,0.3s,baz=154,slow=14,SNR=4.0						
	2.5nm,0.9s						
STKA	Stephens Creek	34.33	259	P	P	06 08 24.3	+2.5
	1.4nm,0.4s,baz=111,slow=15,SNR=3.6						
	1.4nm,0.4s						
ASAR	Alice Springs	43.19	268	P	P	06 09 37.9	+1.7
	1.9nm,0.6s,baz=103,slow=7.3,SNR=13						
	1.9nm,0.6s						
WRA	Warramunga Arr	44.30	273	P	P	06 09 46.1	+1.0
	1.9nm,0.4s,baz=112,slow=8.0,SNR=36						
	1.9nm,0.4s						
QSPA	South Pole Qui	58.39	180	P	P	06 11 31.5	+1.2
	2.7nm,0.9s,baz=39,slow=0.6,SNR=12						
	2.7nm,0.9s						
SNAA	Sanae	76.83	178	P	P	06 13 26.7	+0.2
	2.9nm,1.1s,baz=204,slow=9.7,SNR=12						
	2.9nm,1.1s						
KLR	Kul'dur	92.24	330	P	P	06 14 45.4	+0.8
	0.6nm,0.4s,baz=228,slow=12,SNR=2.4						
	0.6nm,0.4s						
FINES	FINESS Array B	146.43	339	PKPbc	PKPdf	06 21 14.8	+0.8
	3.7nm,0.5s,baz=61,slow=3.3,SNR=20						
HFS	Hagfors	150.56	348	PKPbc	PKPbc	06 21 26.7	+0.4
	0.4nm,0.5s,baz=72,slow=4.7,SNR=2.9						
MMAI	Mount Meron Ar	151.95	282	PKPbc	PKPbc	06 21 32.2	+1.8
	1.5nm,0.3s,baz=83,slow=7.6,SNR=4.3						
AKASG	Malin Array Be	152.42	321	PKPbc	PKPbc	06 21 31.8	+1.0
	0.3nm,0.3s,baz=48,slow=3.4,SNR=1.4						
BRTR	Keskin Array B	153.32	296	PKPbc	PKiKP	06 21 35.8	+2.3
	0.4nm,0.4s,baz=154,slow=4.9,SNR=2.3						

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*NOU **19** 06:03:40.8, 21.°75S×173.°62W, h5^{km}, mb5.2/48, Tonga Islands*

*MOS **19** 06:03:41.8±1.4, 21.°40S×174.°14W, h10^{km}, mb5.2/22, Error ellipse: s-maj=12.3km s-min=10.8km az=67.6*

*NEIC **19** 06:03:42.7±2.2, 21.°47S±0.°08×173.°68W±0.°06, h10^{km}±1^{km}, mb5.1/143, Error ellipse: s-maj=15.0km s-min=6.0km az=207.0*

*BJI **19** 06:03:43.1, 21.°07S×173.°76W, h12^{km}, mB5.4/13, mb5.2/30, Ms4.9/7, Ms7 4.6/7*

*GCMT **19** 06:03:46.7±0.3, 21.°40S±0.°03×173.°70W±0.°02, h23^{km}, MW4.9/90, Moment Tensor Solution. s34,c35; s90,c117; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.93±.16; M$_{\theta\theta}$-0.69±.10; M$_{\phi\phi}$-2.24±.10; M$_{r\theta}$-0.10±.17; M$_{\theta\phi}$-0.85±.06; M$_{\phi r}$0.81±.13; Best double couple: M$_0$2.88500×10^{16} NP1:ϕ_s210.00000°, δ38.00000°, λ101.00000°. NP2: ϕ_s16.00000°, δ53.00000°, λ81.00000°. Principal axes: T 3.0680, Plg80.0000°, Azm249.0000°; N -0.3630, Plg7.0000°, Azm22.0000°; P -2.7020, Plg7.0000°, Azm113.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **19** 06:03:47.3, 22.°00S×174.°59W, h33^{km}*

*IDC **19** 06:03:52.1±3.0, 21.°37S×174.°40W, h69^{km}±26^{km}, mb4.3/16, mbtmp4.7/18, MS4.1/12, Error ellipse: s-maj=16.8km s-min=12.4km az=134.0*

ISC 19 06:03:42.5±0.3, **21.°47S**±0.°06×**173.°70W**±0.°05, **h10**^{km}**, n608,** σ**1.^{s}90**/549, **mb5.1**/127, **MS4.1**/16, **20C-6D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.27	57		Pn	06 04 46.4	-1.1
NIUE	Niue	4.27	57	P	Pn	06 04 46.4	-1.1
NIUE				S	Sn	06 05 31.7	-5.7
NIUE	Niue	4.27	57	P	Pn	06 04 46.6	-1.0
LKBA	Tubou, Lakemba	5.79	303	P	Pn	06 05 10.9	+2.5
TAVE	Taveuni	7.54	308	P	Pn	06 05 34.8	+2.3
AFI	Afiamalu	7.74	14		Pn	06 05 34.2	-1.1
AFI	Afiamalu	7.74	14	P	Pn	06 05 37.0	+1.7
AFI	Afiamalu	7.74	14	P	Pn	06 05 35.1	-0.2
AFI				pmax	pmax		
	comp=Z,109nm,0.6s						
DGTI	Dogotuki	8.06	309	P	Pn	06 05 41.4	+1.7
MSVF	Nonsavu	8.62	294		Pn	06 05 49.0	+1.7
MSVF	Nonsavu	8.62	294	LR	LR	06 08 40.5	
	comp=Z,2μm,18.6s,baz=71,slow=36						
MSVF	Nonsavu	8.62	294	P	Pn	06 05 49.9	+2.6
MSVF	Nonsavu	8.62	294	P	Pn	06 05 49.1	+1.7
RAR	Rarotonga	12.98	91		Pn	06 06 46.2	-0.9
RAR	Rarotonga	12.98	91	P	Pn	06 06 46.0	-1.1
	comp=Z,68nm,0.4s,baz=247,slow=7.0,SNR=28						
RAR				S	Sn	06 09 00.5	-11
	comp=Z,18nm,0.4s,baz=116,slow=23,SNR=1.5						
RAR	Rarotonga	12.98	91	P	Pn	06 06 45.5	-1.6
RAR	Rarotonga	12.98	91	P	Pn	06 06 46.5	-0.6
RAR				pmax	pmax		
	comp=Z,92nm,0.5s						
DVP	Devils Point	17.46	279	P	P	06 07 47.9	+0.4
PINNC	Pines Island,	17.51	263	P	Pn	06 07 47.8	+0.9
PINNC	Pines Island,	17.51	263	P	Pn	06 07 47.5	+0.6
OUENC	Ouen Island, N	18.07	263	P	Pn	06 07 54.3	+0.5
DZM	Mont Dzumac	18.45	264		P	06 07 57.5	-1.0
DZM	Mont Dzumac	18.45	264	*e*P	P	06 07 56.5	-2.0
	comp=Z,72nm,0.8s						
DZM				*e*LR	LR	06 12 03.7	
	comp=Z,386nm,21.1s						
DZM	Mont Dzumac	18.45	264	P	P	06 07 56.4	-2.0
	comp=Z,36nm,0.8s,baz=80,slow=17,SNR=28						
DZM	Mont Dzumac	18.45	264	P	P	06 07 58.0	-0.5
URZ	Urewera	18.51	203	P	Pn	06 08 00.9	+1.8
	comp=Z,7.6nm,0.4s,baz=109,slow=7.1,SNR=4.2						
URZ				S	Sn	06 11 09.9	-16
	comp=Z,5.2nm,0.8s,baz=54,slow=20,SNR=1.8						
VLAKA	Lakatoro	18.64	283	P	P	06 08 00.6	+0.1
SANVU	Saraoutou	19.07	285	P	Pn	06 08 06.6	+0.6
BKZ	Black Stump Fm	19.54	203	P	P	06 08 11.0	+0.7
TBI	Tubuai	22.49	99	*e*P	P	06 08 36.8	-5.4
	comp=Z,514nm,23.8s						
TBI				*e*S	S	06 12 45.2	-3.9
	comp=Z,2μm,27.5s						
TBI				*e*LR	LR	06 13 48.3	
	comp=Z,739nm,28.2s						
TBI				*e*LR	LR	06 13 50.1	
	comp=Z,2μm,21.5s						
PPT2	Papeete2	23.06	85	*e*LR	LR	06 14 13.0	
	comp=Z,396nm,21.2s						
PPT2				*e*LR	LR	06 14 18.2	
	comp=Z,439nm,20.5s						
PPT	Papeete	23.06	85	LR	LR	06 16 32.7	
	comp=Z,670nm,18.8s,baz=226,slow=32						
DSZ	Denniston Nort	23.62	208	P	P	06 08 55.0	+1.3
DSZ				IAmb	IAmb	06 08 59.5	
	comp=Z,64nm,1.2s						
LTZ	Lake Taylor	24.28	206	P	P	06 08 59.4	-0.5
INZ	Inchbonnie	24.57	207		P	06 09 02.7	+0.1
INZ				IAmb	IAmb	06 09 20.0	
	comp=Z,49nm,1.0s						
RPZ	Rata Peaks	25.55	206	P	P	06 09 11.1	-0.3
	comp=Z,8.2nm,0.8s,baz=356,slow=4.1,SNR=4.8						
RPZ				LR	LR	06 19 41.4	
	comp=Z,565nm,18.4s,baz=23,slow=37						
	comp=Z,8.2nm,0.8s						
FOZ	Fox Glacier	25.93	208		P	06 09 17.8	+3.0
HNR	Honiara	28.02	291	LR	LR	06 20 05.8	
	comp=Z,238nm,18.4s,baz=159,slow=36						
SAVO	Savo Central	28.27	292	P	P	06 09 37.0	+0.8
TATA	Tatamba Isabel	28.65	293	P	P	06 09 39.4	-0.2
ARMA	Armidale	32.32	247	P	P	06 10 10.4	-1.7
ARMA				IAmb	IAmb	06 10 11.8	
	comp=Z,19nm,0.9s						
ARMA	Armidale	32.32	247	P	P	06 10 09.4	-2.6
	comp=Z,25nm,0.9s						
ARMA	Armidale	32.32	247	P	P	06 10 11.2	-0.8
TAOE	Nuku Hiva Isla	34.64	74	*e*S	S	06 15 50.9	-11
	comp=Z,133nm,22.4s						
TAOE				*e*LR	LR	06 19 35.5	
	comp=Z,296nm,20.8s						
CTAO	Charters Tower	37.40	265	P	P	06 10 53.0	-2.9
CTAO				IAmb	IAmb	06 10 57.5	
	comp=Z,65nm,2.0s						
CTAO	Charters Tower	37.40	265	P	P	06 10 53.3	-2.6
CTAO	Charters Tower	37.40	265	P	P	06 10 53.0	-2.9
CTAO				pmax	pmax		
	comp=Z,65nm,2.0s						
CMSA	Cobar Meteorol	37.51	246	P	P	06 10 53.7	-3.0
	comp=Z,29nm,1.0s						
CMSA	Cobar Meteorol	37.51	246	P	P	06 10 54.4	-2.3
QLP	Quilpie	38.63	254	P	P	06 11 05.1	-1.1
TAU	Tasmania Unive	38.84	227	P	P	06 11 07.2	-0.6
TAU	Tasmania Unive	38.84	227	P	P	06 11 07.2	-0.6
TAU				pmax	pmax		
	comp=Z,96nm,1.4s						
PMG	Port Moresby	39.47	282		P	06 11 10.4	-2.9
PMG	Port Moresby	39.47	282	LR	LR	06 25 14.8	
	comp=Z,229nm,18.1s,baz=168,slow=33						
PMG	Port Moresby	39.47	282	P	P	06 11 11.0	-2.3
PMG	Port Moresby	39.47	282	P	P	06 11 11.2	-2.1
PMG	Port Moresby	39.47	282	*ce*P	P	06 11 10.5	-2.9
PMG				pmax	pmax		
	comp=Z,23nm,0.8s						
MTSU	Mount Surprise	39.55	267	P	P	06 11 10.8	-3.2
	comp=Z,6.4nm,0.7s						
STKA	Stephens Creek	41.02	246		P	06 11 23.8	-2.2
STKA	Stephens Creek	41.02	246	P	P	06 11 23.4	-2.7
	comp=Z,85nm,1.0s						
STKA	Stephens Creek	41.02	246	P	P	06 11 23.6	-2.5
	comp=Z,13nm,0.8s,baz=90,slow=9.9,SNR=19						
STKA				LR	LR	06 27 14.2	
	comp=Z,222nm,20.3s,baz=55,slow=35						
	comp=Z,13nm,0.8s						
STKA	Stephens Creek	41.02	246	P	P	06 11 24.0	-2.0
COEN	Coen	41.65	273	P	P	06 11 28.7	-2.6
HTT	Hallett	43.36	244	P	P	06 11 42.0	-3.2
	comp=Z,9.6nm,1.1s						
HTT	Hallett	43.36	244	P	P	06 11 42.6	-2.6
BBOO	Buckleboo	45.74	245	P	P	06 12 01.6	-2.5
JAY	Jayapura	48.16	287	P	P	06 12 21.0	-2.3
	comp=Z,34nm,0.8s,baz=107,slow=1.6,SNR=9.7						
	comp=Z,34nm,0.8s						
JAY	Jayapura	48.16	287	P	P	06 12 18.5	-4.8
	comp=Z,536nmcomp=Z,42nm,0.8s						
AS01	Alice Springs	48.17	257	P	P	06 12 20.8	-2.5

AS31	**Alice Springs**	**48.21**	**257**	P	**P**	**06 12 20.5**	**-3.2**
	comp=Z,8.2nm,0.9s						
ASAR	**Alice Springs**	**48.21**	**257**	P	**P**	**06 12 21.0**	**-2.7**
ASAR	**Alice Springs**	**48.21**	**257**	P	**P**	**06 12 20.5**	**-3.1**
	comp=Z,24nm,0.9s,baz=91,slow=8.2,SNR=81						
ASAR				PcP	**PcP**	**06 13 51.9**	**+1.0**
	comp=Z,2.1nm,0.8s,baz=98,slow=3.3,SNR=1.4						
ASAR				S	S	06 19 12.2	-11
	comp=Z,2.9nm,1.1s,baz=94,slow=16,SNR=12						
ASAR				LR	LR	06 31 50.5	
	comp=Z,188nm,18.3s,baz=92,slow=35						
	comp=Z,24nm,0.9s						
ASAR	**Alice Springs**	**48.21**	**257**	P	**P**	**06 12 21.0**	**-2.7**
WR8	**Warramunga Arr**	**48.29**	**262**	IAmb	IAmb	06 12 22.0	
	comp=Z,16nm,1.1s						
WB0	**Warramunga Arr**	**48.43**	**262**	IAmb	IAmb	06 12 27.2	
	comp=Z,18nm,0.7s						
WRAB	**Tennant Creek**	**48.43**	**262**	P	**P**	**06 12 22.1**	**-3.3**
WRAB				IAmb	IAmb	06 12 23.0	
	comp=Z,28nm,1.0s						
WRAB	**Tennant Creek**	**48.43**	**262**	P	**P**	**06 12 22.1**	**-3.3**
WRAB				pmax	pmax		
	comp=Z,28nm,1.0s						
WRA	**Warramunga Arr**	**48.44**	**262**	P	**P**	**06 12 21.4**	**-4.1**
WRA	**Warramunga Arr**	**48.44**	**262**	P	**P**	**06 12 21.8**	**-3.6**
	comp=Z,19nm,0.9s,baz=98,slow=7.6,SNR=39						
WRA				PcP	**PcP**	**06 13 51.2**	**-0.6**
	comp=Z,2.9nm,0.9s,baz=95,slow=3.4,SNR=2.1						
	comp=Z,19nm,0.9s						
WRA	**Warramunga Arr**	**48.44**	**262**	P	**P**	**06 12 21.4**	**-4.1**
WRA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
FORT	**Forrest**	**52.61**	**247**	P	**P**	**06 12 56.0**	**-0.8**
WRKA	**Warakurna**	**53.07**	**254**	P	**P**	**06 12 57.2**	**-3.1**
	comp=Z,13nm,0.8s						
GUMO	**Guam**	**53.55**	**307**	LR	LR	06 35 09.2	
	comp=Z,60nm,18.1s,baz=127,slow=35						
FITZ	**Fitzroy Crossi**	**56.87**	**262**	P	**P**	**06 13 26.3**	**-1.6**
SBA	**Scott Base**	**57.21**	**185**		**P**	**06 13 30.4**	**+1.1**
SBA				IAmb	IAmb	06 13 47.4	
	comp=Z,17nm,1.1s						
SBA	**Scott Base**	**57.21**	**185**	P	**P**	**06 13 30.4**	**+1.1**
SBA				pmax	pmax		
	comp=Z,17nm,1.1s						
VNDA	**Vanda**	**57.34**	**186**	P	**P**	**06 13 32.5**	**+2.3**
VNDA	**Vanda**	**57.34**	**186**	P	**P**	**06 13 34.1**	**+3.8**
	comp=Z,3.8nm,1.0s,baz=2.3,slow=6.2,SNR=14						
VNDA				LR	LR	06 33 45.6	
	comp=Z,92nm,20.6s,baz=15,slow=31						
	comp=Z,3.8nm,1.0s						
VNDA	**Vanda**	**57.34**	**186**	P	**P**	**06 13 32.6**	**+2.3**
VNDA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SWI	**Sorong**	**57.37**	**283**	P	**P**	**06 13 28.5**	**-3.0**
SWI	**Sorong**	**57.37**	**283**	P	**P**	**06 13 29.0**	**-2.5**
SWI				pmax	pmax		
	comp=Z,72nm,1.0s						
KLBR	**Kellerberrin**	**61.28**	**245**	P	**P**	**06 13 55.5**	**-2.8**
	comp=Z,35nm,0.8s						
KLBR	**Kellerberrin**	**61.28**	**245**	P	**P**	**06 13 57.3**	**-1.0**
PSA00	**Pilbara Seismi**	**61.35**	**256**	P	**P**	**06 13 56.4**	**-2.6**
	comp=Z,21nm,1.0s						
PSA00	**Pilbara Seismi**	**61.35**	**256**	P	**P**	**06 13 57.4**	**-1.5**
NWAO	**Narrogin (SRO)**	**61.52**	**243**	LR	LR	06 39 51.3	
	comp=Z,261nm,18.5s,baz=45,slow=35						
MBWA	**Marble Bar**	**61.55**	**257**	P	**P**	**06 13 58.2**	**-2.1**
MBWA				IAmb	IAmb	06 13 58.6	
	comp=Z,13nm,0.8s						
MBWA	**Marble Bar**	**61.55**	**257**	P	**P**	**06 13 57.7**	**-2.6**
	comp=Z,18nm,1.0s						
MBWA	**Marble Bar**	**61.55**	**257**	P	**P**	**06 13 58.7**	**-1.6**
MORW	**Morawa**	**63.17**	**247**	P	**P**	**06 14 09.9**	**-1.1**
MORW	**Morawa**	**63.17**	**247**	P	**P**	**06 14 08.7**	**-2.3**
	comp=Z,19nm,0.8s						
MORW	**Morawa**	**63.17**	**247**	P	**P**	**06 14 11.1**	**+0.1**
EDFI	**Ende, Flores**	**63.27**	**271**	P	**P**	**06 14 08.6**	**-3.4**
	comp=Z,18nm,0.8s						
CASY	**Casey**	**64.82**	**206**	P	**P**	**06 14 22.3**	**+1.1**
CASY				IAmb	IAmb	06 14 36.3	
	comp=Z,14nm,1.0s						
TOLI2	**Tolitoli**	**67.73**	**281**	IAmb	IAmb	06 14 39.6	
	comp=Z,14nm,1.1s						
TOLI2	**Tolitoli**	**67.73**	**281**	P	**P**	**06 14 40.7**	**0.0**
QSPA	**South Pole Qui**	**68.61**	**180**	P	**P**	**06 14 48.9**	**+3.3**
	comp=Z,9.8nm,1.0s,baz=34,slow=3.5,SNR=14						
QSPA				LR	LR	06 40 39.1	
	comp=Z,174nm,20.5s,baz=44,slow=32						
	comp=Z,9.8nm,1.0s						
JHJ2	**Mitsune**	**70.09**	**320**	P	**P**	**06 14 54.3**	**-0.7**
MYLDM	**Lahad Datu**	**71.46**	**283**	P	**P**	**06 15 05.5**	**+1.7**
KIWB	**Kanaga Island**	**73.07**	**358**		**P**	**06 15 12.6**	**+0.1**
JGF	**Kuroka**	**73.28**	**320**	IAmb	IAmb	06 15 14.8	
	comp=Z,27nm,1.4s						
JGF	**Kuroka**	**73.28**	**320**	P	**P**	**06 15 14.6**	**+0.4**
INU	**Inuyama**	**73.31**	**320**	P	**P**	**06 15 14.9**	**+0.6**
MJAR	**Matsushiro Arr**	**73.42**	**321**	P	**P**	**06 15 14.3**	**-0.6**
	comp=Z,15nm,1.0s,baz=157,slow=6.1,SNR=21						
MJAR				LR	LR	06 44 49.4	
	comp=Z,52nm,18.7s,baz=122,slow=34						
	comp=Z,15nm,1.0s						
MAJO	**Matsushiro**	**73.42**	**321**		**P**	**06 15 13.8**	**-1.2**
MAJO				IAmb	IAmb	06 15 15.7	
	comp=Z,24nm,1.1s						
MAJO	**Matsushiro**	**73.42**	**321**	P	**P**	**06 15 15.1**	**+0.1**
MAJO	**Matsushiro**	**73.42**	**321**	P	**P**	**06 15 13.8**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,24nm,1.1s						
MJB9	**Matsu-Tunnel**	**73.42**	**321**	IAmb	IAmb	06 15 16.7	
	comp=Z,22nm,1.1s						
JMN	**Monobe**	**74.20**	**317**		**P**	**06 15 20.0**	**+0.3**
JMN	**Monobe**	**74.20**	**317**	P	**P**	**06 15 19.9**	**+0.3**
JSD	**Sado**	**74.42**	**322**	P	**P**	**06 15 21.3**	**+0.5**
JNU	**Nakatsue**	**75.77**	**315**	IAmb	IAmb	06 15 29.4	
	comp=Z,25nm,1.0s						
JNU	**Nakatsue**	**75.77**	**315**	P	**P**	**06 15 29.4**	**+0.7**
KSM	**Kuching**	**77.52**	**277**	IAmb	IAmb	06 15 40.1	
	comp=Z,23nm,0.9s						
PETK	**Petropavlovsk-**	**78.30**	**343**	P	**P**	**06 15 43.1**	**+0.7**
	comp=Z,9.6nm,0.8s,baz=120,slow=8.8,SNR=7.0						
	comp=Z,9.6nm,0.8s						
YSS	**Yuzhno-Sakhali**	**78.61**	**331**	*e*P	**P**	**06 15 45.3**	**+1.0**
YSS				*e**SP	**PcP**	**06 15 50.4**	**-2.8**
YSS				*e*		06 15 55.5	
YSS				*e*S	**S**	**06 25 39.7**	**-1.4**
YSS				pmax	pmax		
	comp=Z,30nm,1.1s						
YSS				MLR	MLR		
	comp=Z,200nm,12.0s						
RYN	**Ryan**	**79.03**	**41**	P	**P**	**06 15 46.5**	**-0.6**
NVAR	**Mina Array Bea**	**79.04**	**41**	P	**P**	**06 15 51.3**	**+4.2**
	comp=Z,2.3nm,0.6s,baz=226,slow=7.6,SNR=23						
	comp=Z,2.3nm,0.6s						
NV11	**Mina Array Sit**	**79.13**	**41**	P	**P**	**06 15 47.4**	**-0.2**
TPH	**Tonopah**	**79.49**	**42**	P	**P**	**06 15 49.0**	**-0.6**
TPH	**Tonopah**	**79.49**	**42**	P	**P**	**06 15 49.0**	**-0.6**
TPH				pmax	pmax		
	comp=Z,117nm,1.8s						
SHPR	**Sheep Range**	**79.86**	**44**		**P**	**06 15 50.5**	**-1.1**
OHAK	**Old Harbor**	**80.24**	**11**	P	**P**	**06 15 54.0**	**+1.1**
	baz=199						
KSRS	**Korea Array**	**80.31**	**317**	P	**P**	**06 15 54.8**	**+1.1**
	comp=Z,8.1nm,1.0s,baz=139,slow=6.0,SNR=27						
	comp=Z,8.1nm,1.0s						
KSAR	**Wonju Array Be**	**80.33**	**317**	P	**P**	**06 15 54.3**	**+0.4**
KSAR	**Wonju Array Be**	**80.33**	**317**	P	**P**	**06 15 54.3**	**+0.4**
R18K	**Karluk**	**80.36**	**10**	P	**P**	**06 15 55.1**	**+1.6**
	baz=198						
Q17K	**Contact Creek**	**80.80**	**9**	P	**P**	**06 15 57.4**	**+1.3**
	baz=197						
KDAK	**Kodiak Island**	**80.90**	**11**	P	**P**	**06 15 58.2**	**+1.8**
	baz=200						
MDSI	**Maura Dua**	**81.05**	**269**	P	**P**	**06 15 56.1**	**-2.2**
O15K	**Ungalikthiuk R**	**81.16**	**7**	P	**P**	**06 15 59.2**	**+1.4**
	baz=193						
P16K	**Nushagak River**	**81.24**	**8**	P	**P**	**06 15 59.6**	**+1.4**
	baz=195						
Q18K	**Katmai Hardscr**	**81.31**	**10**	P	**P**	**06 16 00.0**	**+1.3**
	baz=198						
WVOR	**Wild Horse Val**	**81.36**	**38**	P	**P**	**06 16 03.1**	**+3.6**
WVOR				pmax	pmax		
	comp=Z,6.0nm,2.2s						
MSHR	**Mys Shultsa**	**81.49**	**322**	*ce*P	**P**	**06 15 59.6**	**-0.4**
MSHR				pmax	pmax		
	comp=Z,14nm,0.8s						
P17K	**Kvichak River**	**81.62**	**9**	P	**P**	**06 16 01.9**	**+1.7**
	baz=196						
N14K	**Kuskokwak Cree**	**81.69**	**6**	P	**P**	**06 16 02.7**	**+2.2**
	baz=191						
Q20K	**Shuyak Island**	**81.71**	**11**	P	**P**	**06 16 02.7**	**+2.0**
	baz=200						
O16K	**Kokwok River B**	**81.78**	**8**	P	**P**	**06 16 02.1**	**+1.0**
	baz=195						
Q19K	**Cape Douglas,**	**81.80**	**10**	P	**P**	**06 16 02.6**	**+1.3**
	baz=199						
MAW	**Mawson**	**81.98**	**199**	P	**P**	**06 16 04.8**	**+2.6**
	comp=Z,2.5nm,0.7s,baz=141,slow=7.2,SNR=4.2						
	comp=Z,2.5nm,0.7s						
MAW	**Mawson**	**81.98**	**199**	P	**P**	**06 16 04.0**	**+1.7**
P18K	**Big Mountain,**	**81.98**	**9**	P	**P**	**06 16 03.7**	**+1.5**
	baz=197						
M13K	**Dall Lake**	**82.02**	**5**	P	**P**	**06 16 04.7**	**+2.4**
	baz=190						
USA0B	**Ussuriysk Arra**	**82.06**	**324**	*i* P	**P**	**06 16 04.1**	**+1.1**
USRK	**Ussuriysk Ar.**	**82.06**	**324**		**P**	**06 16 03.0**	**+0.1**
USRK	**Ussuriysk Ar.**	**82.06**	**324**	P	**P**	**06 16 05.2**	**+2.3**
	comp=Z,3.5nm,0.9s,baz=104,slow=3.9,SNR=6.1						
USRK	**Ussuriysk Ar.**	**82.06**	**324**	P	**P**	**06 16 03.0**	**+0.1**
O17K	**Koliganek Bris**	**82.08**	**8**	P	**P**	**06 16 04.2**	**+1.5**
	baz=196						
N15K	**Kwethluk River**	**82.10**	**7**	P	**P**	**06 16 04.4**	**+1.6**
	baz=193						
O18K	**Koktuh Hills**	**82.43**	**9**	P	**P**	**06 16 06.2**	**+1.7**
	baz=197						
M14K	**Bethel**	**82.48**	**6**	P	**P**	**06 16 07.0**	**+2.3**
	baz=191						
N16K	**Nishlik Lake**	**82.55**	**7**	P	**P**	**06 16 07.0**	**+1.8**
	baz=194						
M15K	**Kasigluk River**	**82.55**	**6**	P	**P**	**06 16 07.2**	**+2.2**
	baz=192,SNR=7.2						
P19K	**Oil Pt**	**82.55**	**10**	P	**P**	**06 16 06.8**	**+1.6**
	baz=199						
N17K	**Nushagak Hills**	**82.80**	**8**	P	**P**	**06 16 08.0**	**+1.6**
	baz=196						
O19K	**Port Alsworth**	**82.89**	**10**	P	**P**	**06 16 08.4**	**+1.6**
	baz=198						
L14K	**Kuka Creek**	**83.00**	**5**	IAmb	IAmb	06 16 10.5	
	comp=Z,20nm,1.1s						
L14K	**Kuka Creek**	**83.00**	**5**	P	**P**	**06 16 09.7**	**+2.3**
	baz=190						
M16K	**Timber Creek**	**83.06**	**7**	P	**P**	**06 16 10.4**	**+2.6**
	baz=194,SNR=7.1						
O20K	**Slope Mountain**	**83.06**	**10**	P	**P**	**06 16 09.2**	**+1.4**
	baz=200						
BRSE	**Bradley Lake S**	**83.08**	**11**	P	**P**	**06 16 09.8**	**+1.9**
	baz=202						
N18K	**Kilae Creek**	**83.12**	**9**	P	**P**	**06 16 09.8**	**+1.7**
	baz=197						
K13K	**Kusilvak Mount**	**83.43**	**4**	P	**P**	**06 16 11.7**	**+2.1**
	baz=188						
L15K	**Ungalak Mounta**	**83.44**	**6**	P	**P**	**06 16 11.9**	**+2.2**
	baz=191						
N19K	**Bonanza Creek**	**83.46**	**9**	P	**P**	**06 16 11.3**	**+1.4**
	baz=198						
M17K	**Holitna River**	**83.61**	**8**	P	**P**	**06 16 12.5**	**+1.9**
	baz=195						
NJ2	**Nanjing**	**83.61**	**308**	*e*P	**P**	**06 16 12.0**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
SEW	**Seward**	**83.66**	**12**	P	**P**	**06 16 12.8**	**+2.0**
	baz=203						
MDJ	**Mudanjiang**	**83.66**	**323**	P	**P**	**06 16 12.1**	**+0.9**
MDJ				S	**SKSac**	**06 26 36.5**	**+2.5**
MDJ				pmax	pmax		
	comp=Z,32nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,190nm,4.1s						
MDJ				LR	LR		
	comp=Z,190nm,17.9s						
MDJ				LR	LR		
	comp=Z,200nm,17.2s						
MDJ				LR	LR		
	comp=Z,330nm,19.2s						
L16K	**Owhat River**	**83.67**	**7**	P	**P**	**06 16 13.3**	**+2.4**
	baz=193						
Q23K	**Middleton Isla**	**83.68**	**14**	P	**P**	**06 16 12.8**	**+1.8**
	baz=206						
M18K	**Stony River**	**83.91**	**9**	P	**P**	**06 16 13.8**	**+1.7**
	baz=197						
P23K	**Montague Islan**	**83.97**	**13**	P	**P**	**06 16 14.3**	**+1.8**
	baz=204						
K15K	**Wolf Creek Mou**	**84.04**	**6**	P	**P**	**06 16 15.3**	**+2.5**
	baz=191,SNR=19						
CRAG	**Craig**	**84.05**	**22**	P	**P**	**06 16 14.9**	**+2.0**
	baz=218						
N20K	**Mount Spurr**	**84.19**	**10**	P	**P**	**06 16 14.9**	**+1.3**
	baz=200						
SPCR	**Spurr Chakacha**	**84.19**	**10**	P	**P**	**06 16 14.7**	**+1.1**
	baz=200						
L17K	**Donlin**	**84.22**	**7**	P	**P**	**06 16 15.3**	**+1.7**
	baz=194,SNR=8.7						
TXAR	**Lajitas Array**	**84.24**	**56**		**P**	**06 16 13.9**	**-0.8**
TXAR	**Lajitas Array**	**84.24**	**56**	P	**P**	**06 16 18.0**	**+3.3**
	comp=Z,0.8nm,1.0s,baz=208,slow=7.8,SNR=6.9						
	comp=Z,0.8nm,1.0s						
TXAR	**Lajitas Array**	**84.24**	**56**	P	**P**	**06 16 13.9**	**-0.8**
J14K	**Nanvaranak Lak**	**84.32**	**5**	P	**P**	**06 16 16.1**	**+2.0**
	baz=190						
V35K	**Ketchikan**	**84.47**	**23**	P	**P**	**06 16 16.4**	**+1.4**
	baz=219						
L18K	**Granite Mounta**	**84.50**	**8**	P	**P**	**06 16 16.5**	**+1.4**
	baz=196						
M19K	**Big River Lodg**	**84.51**	**9**	P	**P**	**06 16 16.4**	**+1.2**
	baz=198						
RC01	**Rabbit Creek A**	**84.52**	**11**	P	**P**	**06 16 17.0**	**+1.8**
	baz=202						
KAIM	**Kayak Island**	**84.56**	**14**	P	**P**	**06 16 17.0**	**+1.5**
	baz=207						
U33K	**Whale Pass**	**84.56**	**21**	P	**P**	**06 16 17.1**	**+1.6**
	baz=218						
PWL	**Port Wells**	**84.57**	**12**	IAmb	IAmb	06 16 19.4	
	comp=Z,13nm,1.0s						
PWL	**Port Wells**	**84.57**	**12**	P	**P**	**06 16 17.2**	**+1.7**
	baz=204						
SIT	**Sitka**	**84.59**	**20**	P	**P**	**06 16 17.3**	**+1.7**
	baz=216						
M20K	**Styx River**	**84.68**	**10**	P	**P**	**06 16 17.6**	**+1.4**
	baz=199						
SUA	**Susitna One**	**84.68**	**11**		**P**	**06 16 16.4**	**+0.2**
SUA				IAmb	IAmb	06 16 22.9	
	comp=Z,16nm,1.0s						
SUA	**Susitna One**	**84.68**	**11**	P	**P**	**06 16 17.5**	**+1.3**
	baz=201						
L19K	**White Mountain**	**84.71**	**9**	P	**P**	**06 16 18.1**	**+1.9**
	baz=198						
K17K	**Iditarod**	**84.78**	**7**	P	**P**	**06 16 18.6**	**+2.0**
	baz=194						
EYAK	**Cordova Ski Ar**	**84.82**	**13**	P	**P**	**06 16 18.5**	**+1.8**
	baz=206						
GLI	**Glacier Island**	**84.84**	**13**	IAmb	IAmb	06 16 27.9	
	comp=Z,14nm,1.0s						
GLI	**Glacier Island**	**84.84**	**13**	P	**P**	**06 16 18.4**	**+1.5**
	baz=205						
ANMO	**Albuquerque**	**84.92**	**50**	*ce*P	**P**	**06 16 19.9**	**+1.7**
ANMO				pmax	pmax		
	comp=Z,13nm,2.5s						
GAMB	**Gambell**	**84.97**	**1**	P	**P**	**06 16 18.9**	**+1.5**
	baz=182						
SKT	**Skwentna**	**85.03**	**10**	IAmb	IAmb	06 16 19.7	
	comp=Z,18nm,1.6s						
SKT	**Skwentna**	**85.03**	**10**	P	**P**	**06 16 19.4**	**+1.6**
	baz=201						
KNK	**Knik Glacier**	**85.06**	**12**	IAmb	IAmb	06 16 25.2	
	comp=Z,9.8nm,0.9s						
KNK	**Knik Glacier**	**85.06**	**12**	P	**P**	**06 16 19.7**	**+1.7**
	baz=204						
S31K	**Pelican**	**85.06**	**19**	P	**P**	**06 16 19.7**	**+1.8**
	baz=215						
M22K	**Willow**	**85.06**	**11**	P	**P**	**06 16 19.9**	**+2.0**
	baz=202						
WRAK	**Wrangell Islan**	**85.07**	**22**	P	**P**	**06 16 19.9**	**+1.9**
	baz=218						
PMR	**Palmer**	**85.09**	**12**		**P**	**06 16 17.2**	**-0.9**
PMR	**Palmer**	**85.09**	**12**	P	**P**	**06 16 19.9**	**+1.8**
PMR	**Palmer**	**85.09**	**12**	P	**P**	**06 16 17.2**	**-0.9**
PMR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
PMR	**Palmer**	**85.09**	**12**	P	**P**	**06 16 20.1**	**+2.0**
	baz=203						
J16K	**Anvik River**	**85.10**	**6**		**P**	**06 16 18.5**	**+0.4**
J16K	**Anvik River**	**85.10**	**6**	P	**P**	**06 16 20.5**	**+2.4**
	baz=192						
COCO	**West Island**	**85.13**	**259**	P	**P**	**06 16 19.2**	**-0.2**
L20K	**Farewell, AK**	**85.14**	**9**	P	**P**	**06 16 19.9**	**+1.5**
	baz=198						
S32K	**Killisnoo**	**85.17**	**20**	P	**P**	**06 16 19.2**	**+0.7**
	baz=216						
GHO	**Glory Hole Cre**	**85.30**	**12**	IAmb	IAmb	06 16 25.6	
	comp=Z,9.7nm,0.8s						
J17K	**VABM Dome**	**85.36**	**7**	IAmb	IAmb	06 16 23.2	
	comp=Z,14nm,1.3s						
J17K	**VABM Dome**	**85.36**	**7**	P	**P**	**06 16 21.8**	**+2.3**
	baz=194						
MESA	**MESA**	**85.37**	**15**	P	**P**	**06 16 21.6**	**+1.8**
	baz=209						
SML	**Sawmill**	**85.44**	**12**	P	**P**	**06 16 21.9**	**+1.9**
	baz=204						
KLR	**Kul'dur**	**85.45**	**328**	*ce*P	**P**	**06 16 21.6**	**+1.4**
KLR				pmax	pmax		
	comp=Z,18nm,2.5s						
BMRM	**Bremner River**	**85.45**	**14**	IAmb	IAmb	06 16 39.6	
	comp=Z,20nm,1.3s						
BMRM	**Bremner River**	**85.45**	**14**	P	**P**	**06 16 21.8**	**+1.9**
	baz=207						
CN2	**Changchun**	**85.55**	**321**	P	**P**	**06 16 21.9**	**+1.1**
CN2				sP	pwP	06 16 28.8	-4.1
CN2				SKS	**SKSac**	**06 26 43.4**	**-2.8**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				LR	LR		
	comp=Z,990nm,21.0s						
CN2				LR	LR		
	comp=Z,880nm,21.0s						
CN2				LR	LR		
	comp=Z,380nm,22.0s						
BNX	**BinXian**	**85.57**	**323**	⇑P	**P**	**06 16 21.3**	**+0.4**
BNX				pmax	pmax		
	comp=Z,20nm,0.9s						
PNL	**Peninsula**	**85.58**	**17**	P	**P**	**06 16 22.5**	**+1.9**
	baz=212						
CRQE	**Cirque**	**85.60**	**15**	P	**P**	**06 16 23.0**	**+2.2**
	baz=208						
KLU	**Klutina**	**85.64**	**13**	P	**P**	**06 16 22.8**	**+1.9**
	baz=206						
CUT	**Chulitna**	**85.64**	**11**	P	**P**	**06 16 22.8**	**+2.0**
	baz=202						
SCM	**Sheep Creek Mo**	**85.66**	**12**	IAmb	IAmb	06 16 27.6	
	comp=Z,12nm,0.8s						
SCM	**Sheep Creek Mo**	**85.66**	**12**	P	**P**	**06 16 23.1**	**+2.1**
	baz=204,SNR=7.5						
I17K	**Unalakleet**	**85.68**	**6**	P	**P**	**06 16 23.2**	**+2.3**
	baz=192						
J18K	**Innoko River**	**85.70**	**8**	P	**P**	**06 16 21.1**	**0.0**
J18K	**Innoko River**	**85.70**	**8**	P	**P**	**06 16 23.4**	**+2.2**
	baz=196,SNR=8.1						
PINM	**Pinnacle**	**85.73**	**16**	P	**P**	**06 16 23.8**	**+2.4**
	baz=211						
PPLA	**Purkeypile**	**85.79**	**10**	P	**P**	**06 16 24.1**	**+2.4**
	baz=200						
MA2	**Magadan**	**85.84**	**343**	P	**P**	**06 16 21.9**	**0.0**
	comp=Z,25nm,2.4s						
R32K	**Eaglecrest**	**85.84**	**20**	P	**P**	**06 16 24.5**	**+2.6**
	baz=216						
GRNC	**Granite Creek**	**85.90**	**15**	IAmb	IAmb	06 16 34.4	
	comp=Z,22nm,1.3s						
K20K	**Telida**	**85.94**	**9**	IAmb	IAmb	06 16 25.5	
	comp=Z,31nm,1.6s						
K20K	**Telida**	**85.94**	**9**	P	**P**	**06 16 24.2**	**+1.9**
	baz=198,SNR=7.3						
P29M	**Windy Craggy**	**86.01**	**17**	P	**P**	**06 16 25.1**	**+2.4**
	baz=213						
N25K	**Chitina, Valde**	**86.02**	**13**	P	**P**	**06 16 24.8**	**+2.0**
	baz=207						
M24K	**Tolsona, Glenn**	**86.14**	**13**	P	**P**	**06 16 25.8**	**+2.4**
	baz=206						
LOGN	**Logan Glacier**	**86.17**	**15**	IAmb	IAmb	06 16 53.5	
	comp=Z,13nm,1.2s						
MCARA	**McCarthy VSAT**	**86.17**	**14**	P	**P**	**06 16 25.7**	**+2.2**
	baz=208						
CTG	**Chitna Glacier**	**86.20**	**15**	P	**P**	**06 16 25.8**	**+2.0**
	baz=210						
T35M	**Bob Quinn**	**86.23**	**22**	P	**P**	**06 16 26.1**	**+2.2**
	baz=220						
PLBC	**Pleasant Camp**	**86.25**	**18**	P	**P**	**06 16 26.1**	**+2.2**
	baz=214						
WAT6	**Susitna Watana**	**86.26**	**12**	P	**P**	**06 16 26.1**	**+2.0**
	baz=204,SNR=6.2						
CAST	**Castle Rocks**	**86.30**	**10**	IAmb	IAmb	06 16 25.9	
	comp=Z,36nm,1.8s						
CAST	**Castle Rocks**	**86.30**	**10**	P	**P**	**06 16 24.9**	**+0.8**
	baz=200,SNR=6.2						
O28M	**Mount Upton**	**86.32**	**16**	IAmb	IAmb	06 17 59.5	
	comp=Z,10.0nm,0.7s						
O28M	**Mount Upton**	**86.32**	**16**	P	**P**	**06 16 26.5**	**+1.8**
	baz=211						
WAT1	**Susitna Watana**	**86.34**	**11**	P	**P**	**06 16 26.6**	**+2.2**
	baz=203						
O29M	**Mount Kennedy**	**86.34**	**17**	P	**P**	**06 16 26.3**	**+1.8**
	baz=212						
J19K	**Poorman**	**86.34**	**8**	P	**P**	**06 16 26.4**	**+2.1**
	baz=197,SNR=7.3						
G15K	**Niukluk**	**86.51**	**4**	P	**P**	**06 16 27.4**	**+2.4**
	baz=189						
SKAG	**Skagway**	**86.56**	**19**	P	**P**	**06 16 27.5**	**+2.1**
	baz=215						
HARP	**HAARP**	**86.61**	**13**	P	**P**	**06 16 27.8**	**+2.1**
	baz=206						
TRF	**Thorofare Moun**	**86.61**	**10**	IAmb	IAmb	06 16 28.7	
	comp=Z,12nm,0.8s						
TRF	**Thorofare Moun**	**86.61**	**10**	P	**P**	**06 16 27.1**	**+1.2**
	baz=202,SNR=14						
SYO	**Syowa Base**	**86.62**	**191**	⇓*e*PcP	**P**	**06 16 27.0**	**+1.2**
SYO	**Syowa Base**	**86.62**	**191**	⇓*e*pP	pP	06 16 29.4	+3.2
P30M	**Million Dollar**	**86.63**	**17**	P	**P**	**06 16 28.4**	**+2.5**
	baz=214						
S34M	**Telegraph Cree**	**86.65**	**21**	P	**P**	**06 16 27.7**	**+1.8**
	baz=219						
CHUM	**Lake Minchumin**	**86.70**	**9**	P	**P**	**06 16 27.8**	**+1.8**
	baz=200						
J20K	**Nowinta River**	**86.72**	**8**	IAmb	IAmb	06 16 30.3	
	comp=Z,29nm,1.4s						
J20K	**Nowinta River**	**86.72**	**8**	P	**P**	**06 16 28.0**	**+1.9**
	baz=198,SNR=11						
TROLL	**Troll, Antarti**	**86.73**	**179**	⇑P	**P**	**06 16 29.4**	**+2.9**
	comp=Z,181nm,0.8s						
H17K	**Granite Mounta**	**86.78**	**6**	IAmb	IAmb	06 16 33.0	
	comp=Z,18nm,1.4s						
H17K	**Granite Mounta**	**86.78**	**6**	P	**P**	**06 16 28.2**	**+1.8**
	baz=193						
DHY	**Denali Highway**	**86.79**	**12**	P	**P**	**06 16 28.3**	**+1.6**
	baz=204						
F14K	**Arctic Creek**	**86.85**	**3**	P	**P**	**06 16 28.7**	**+2.0**
	baz=187						
VNA3	**Neumayer Olymp**	**86.87**	**175**	⇑P	**P**	**06 16 28.6**	**+1.5**
	comp=Z,6.2nm,0.8s						
SNAA	**Sanae**	**86.89**	**177**	⇑P	**P**	**06 16 28.2**	**+1.0**
	comp=Z,68nm,1.0s						
SNAA	**Sanae**	**86.89**	**177**		**P**	**06 16 27.9**	**+0.7**
SNAA	**Sanae**	**86.89**	**177**	P	**P**	**06 16 28.3**	**+1.1**
	comp=Z,2.7nm,1.0s,baz=143,slow=5.2,SNR=5.1						
	comp=Z,2.7nm,1.0s						
SNAA	**Sanae**	**86.89**	**177**	*ce*P	**P**	**06 16 27.1**	**-0.1**
SNAA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GCSA	**Galena City Sc**	**86.92**	**7**	P	**P**	**06 16 29.3**	**+2.3**
	baz=196						
YUK6	**Outpost Mounta**	**86.94**	**16**	P	**P**	**06 16 29.5**	**+1.9**
	baz=213						
PDAR	**Pinedale Array**	**86.97**	**42**	P	**P**	**06 16 30.4**	**+2.2**
	comp=Z,0.7nm,0.7s,baz=196,slow=2.8,SNR=5.7						
	comp=Z,0.7nm,0.7s						
G16K	**Koyuk River**	**87.02**	**5**	P	**P**	**06 16 29.8**	**+2.2**
	baz=191						
PAX	**Paxson**	**87.06**	**12**	IAmb	IAmb	06 16 33.3	
	comp=Z,25nm,2.0s						
PAX	**Paxson**	**87.06**	**12**	P	**P**	**06 16 29.8**	**+1.9**
	baz=206						
HYT	**Haines Junctio**	**87.07**	**17**	IAmb	IAmb	06 16 48.6	
	comp=Z,19nm,1.7s						
HYT	**Haines Junctio**	**87.07**	**17**	P	**P**	**06 16 30.1**	**+2.0**
	baz=213						
M26K	**Nabesna, AK**	**87.08**	**14**	P	**P**	**06 16 30.1**	**+2.2**
	baz=208						
Q32M	**Nakina River**	**87.10**	**20**	P	**P**	**06 16 29.9**	**+1.5**
	baz=218						
MCK	**McKinley**	**87.11**	**11**	P	**P**	**06 16 28.7**	**+0.7**
MCK				IAmb	IAmb	06 17 04.4	
	comp=Z,15nm,1.0s						
MCK	**McKinley**	**87.11**	**11**	P	**P**	**06 16 28.7**	**+0.7**
MCK				pmax	pmax		
	comp=Z,15nm,1.0s						
MCK	**McKinley**	**87.11**	**11**	P	**P**	**06 16 29.7**	**+1.6**
	baz=203						

BPAW	**Bear Paw Mtn.**	**87.11**	**10**	P	**P**	**06 16 29.8**	**+1.8**
	baz=201						
YUK3	**Moose Creek**	**87.12**	**15**	P	**P**	**06 16 30.3**	**+1.9**
	baz=211						
P32M	**Atlin**	**87.15**	**19**	P	**P**	**06 16 30.4**	**+2.0**
	baz=217						
H18K	**Honhosa River**	**87.15**	**6**	IAmb	IAmb	06 16 31.3	
	comp=Z,25nm,1.6s						
H18K	**Honhosa River**	**87.15**	**6**	P	**P**	**06 16 29.9**	**+1.7**
	baz=194						
F15K	**North Star Dit**	**87.18**	**4**	P	**P**	**06 16 30.4**	**+2.1**
	baz=188						
YUK4	**Talbot Arm**	**87.21**	**16**	P	**P**	**06 16 31.3**	**+2.4**
	baz=212						
UBPT	**Khong Chiam**	**87.25**	**287**	P	**P**	**06 16 30.5**	**+0.7**
I20K	**Naaghedeneel**	**87.26**	**8**	P	**P**	**06 16 31.0**	**+2.3**
	baz=198						
G17K	**Kiwalik Mounta**	**87.27**	**5**	P	**P**	**06 16 30.7**	**+1.9**
	baz=192						
M27K	**Edge Creek, AK**	**87.29**	**14**	IAmb	IAmb	06 16 41.5	
	comp=Z,15nm,1.1s						
M27K	**Edge Creek, AK**	**87.29**	**14**	P	**P**	**06 16 31.6**	**+2.5**
	baz=209,SNR=10						
VNA2	**Neumayer--Watz**	**87.36**	**176**	⇑P	**P**	**06 16 32.2**	**+2.8**
	comp=Z,2.9nm,0.8s,baz=206,slow=5.1						
MENT	**Mentasta**	**87.40**	**13**	P	**P**	**06 16 31.1**	**+1.6**
O30N	**Mendenhall**	**87.41**	**17**	P	**P**	**06 16 31.9**	**+2.3**
	baz=215						
L26K	**Log Cabin Wild**	**87.55**	**13**	IAmb	IAmb	06 16 34.1	
	comp=Z,15nm,1.6s						
L26K	**Log Cabin Wild**	**87.55**	**13**	P	**P**	**06 16 32.4**	**+2.2**
	baz=208						
BVCY	**Beaver Creek**	**87.58**	**15**	P	**P**	**06 16 32.8**	**+2.4**
	baz=210,SNR=6.1						
WHY	**Whitehorse**	**87.67**	**18**	P	**P**	**06 16 33.0**	**+2.1**
	baz=216						
N30M	**Aishikik Lake**	**87.71**	**17**	P	**P**	**06 16 33.3**	**+2.2**
	baz=214						
H19K	**Roundabout Mou**	**87.72**	**7**	P	**P**	**06 16 33.1**	**+2.2**
	baz=196						
K24K	**Donnelly Dome**	**87.75**	**12**	IAmb	IAmb	06 16 42.9	
	comp=Z,16nm,1.1s						
K24K	**Donnelly Dome**	**87.75**	**12**	P	**P**	**06 16 33.5**	**+2.3**
	baz=206						
G18K	**Tagagawik**	**87.84**	**6**	IAmb	IAmb	06 16 34.6	
	comp=Z,19nm,1.6s						
G18K	**Tagagawik**	**87.84**	**6**	P	**P**	**06 16 33.4**	**+1.9**
	baz=194						
R33M	**Jennings River**	**87.86**	**20**	P	**P**	**06 16 33.5**	**+1.6**
	baz=219						
KULM	**Kulim**	**87.88**	**276**	P	**P**	**06 16 33.3**	**+0.4**
H20K	**Anotleneega Mo**	**87.88**	**8**	P	**P**	**06 16 33.9**	**+2.2**
	baz=198,SNR=6.2						
RIDG	**Independent Ri**	**87.88**	**12**	IAmb	IAmb	06 16 38.4	
	comp=Z,12nm,1.3s						
RIDG	**Independent Ri**	**87.88**	**12**	P	**P**	**06 16 33.8**	**+2.0**
	baz=207						
NEA2	**Nenana**	**87.88**	**10**	IAmb	IAmb	06 16 35.7	
	comp=Z,20nm,1.6s						
NEA2	**Nenana**	**87.88**	**10**	P	**P**	**06 16 33.5**	**+1.8**
	baz=203						
P33M	**Teslin, Yukon**	**87.92**	**19**	P	**P**	**06 16 34.5**	**+2.3**
	baz=218						
L27K	**Beaver Creek,**	**87.92**	**14**	IAmb	IAmb	06 16 38.5	
	comp=Z,20nm,1.9s						
L27K	**Beaver Creek,**	**87.92**	**14**	P	**P**	**06 16 34.4**	**+2.4**
	baz=210						
BCAR	**Beaver Creek A**	**87.93**	**14**	P	**P**	**06 16 31.9**	**-0.2**
DOT	**Dot Lake**	**87.96**	**13**	IAmb	IAmb	06 16 35.7	
	comp=Z,28nm,1.8s						
MLY	**Manley**	**88.02**	**10**	IAmb	IAmb	06 16 37.5	
	comp=Z,24nm,2.0s						
MLY	**Manley**	**88.02**	**10**	P	**P**	**06 16 33.9**	**+1.5**
	baz=201						
HDA	**Harding Lake**	**88.08**	**11**	IAmb	IAmb	06 16 37.2	
	comp=Z,11nm,1.3s						
HDA	**Harding Lake**	**88.08**	**11**	P	**P**	**06 16 34.4**	**+1.7**
	baz=205						
N31M	**Braeburn, Yuko**	**88.09**	**17**	P	**P**	**06 16 34.8**	**+1.9**
	baz=215						
F17K	**Baldwin Pennin**	**88.14**	**5**	P	**P**	**06 16 35.0**	**+2.1**
	baz=192						
M29M	**Somme Creek**	**88.19**	**16**	P	**P**	**06 16 35.5**	**+2.1**
	baz=212						
G19K	**Purcell Mounta**	**88.25**	**7**	IAmb	IAmb	06 16 36.9	
	comp=Z,21nm,1.4s						
G19K	**Purcell Mounta**	**88.25**	**7**	P	**P**	**06 16 35.4**	**+2.0**
	baz=196						
SCRK	**Sand Creek**	**88.27**	**13**	P	**P**	**06 16 35.7**	**+2.0**
	baz=208,SNR=5.6						
SEY	**Seymchan**	**88.28**	**345**	*ce*P	**P**	**06 16 34.9**	**+1.3**
SEY				pmax	pmax		
	comp=Z,15nm,0.8s						
HEH	**HeiHe**	**88.28**	**327**	*e*P	**P**	**06 16 34.9**	**+1.0**
HEH				pmax	pmax		
	comp=Z,12nm,1.1s						
H21K	**Melozitna Rive**	**88.31**	**9**	IAmb	IAmb	06 16 38.3	
	comp=Z,14nm,1.4s						
H21K	**Melozitna Rive**	**88.31**	**9**	P	**P**	**06 16 36.0**	**+2.2**
	baz=199,SNR=6.2						
I23K	**Minto, Yukon-K**	**88.35**	**10**	IAmb	IAmb	06 16 37.7	
	comp=Z,23nm,1.7s						
I23K	**Minto, Yukon-K**	**88.35**	**10**	P	**P**	**06 16 35.5**	**+1.7**
	baz=203						
COLA	**College**	**88.35**	**11**	P	**P**	**06 16 34.4**	**+0.5**
COLA	**College**	**88.35**	**11**	*i* P	**P**	**06 16 33.7**	**-0.2**
COLA				pmax	pmax		
	comp=Z,31nm,1.8s						
COLA	**College**	**88.35**	**11**	P	**P**	**06 16 35.8**	**+1.9**
	baz=204						
ILAR	**Eielson Array**	**88.42**	**11**	P	**P**	**06 16 35.4**	**+1.1**
ILAR	**Eielson Array**	**88.42**	**11**	P	**P**	**06 16 36.0**	**+1.7**
	comp=Z,1.5nm,0.6s,baz=227,slow=6.1,SNR=20						
	comp=Z,1.5nm,0.6s						
ILAR	**Eielson Array**	**88.42**	**11**	P	**P**	**06 16 35.4**	**+1.1**
F18K	**Selawik**	**88.44**	**6**	P	**P**	**06 16 35.9**	**+1.7**
	baz=193						
IMAR	**Indian Mountai**	**88.49**	**8**	P	**P**	**06 16 35.4**	**+0.8**
J25K	**Salcha River,**	**88.56**	**12**	P	**P**	**06 16 36.8**	**+1.8**
	baz=206,SNR=7.6						
PSI	**Prapat**	**88.57**	**274**	P	**P**	**06 16 35.8**	**-0.6**
PSI	**Prapat**	**88.57**	**274**	P	**P**	**06 16 35.2**	**-1.2**
PSI				pmax	pmax		
	comp=Z,24nm,1.2s						
POKR	**Poker Plat Res**	**88.64**	**11**	P	**P**	**06 16 37.0**	**+1.7**
	baz=204						
K27K	**Chicken**	**88.71**	**13**	P	**P**	**06 16 38.0**	**+2.3**
	baz=209						
E17K	**Hotham Inlet**	**88.73**	**5**	P	**P**	**06 16 37.4**	**+1.7**
	baz=191						
H22K	**Ishtalitna Cre**	**88.73**	**9**	P	**P**	**06 16 37.6**	**+1.9**
	baz=201						
J26L	**Joseph Creek**	**88.82**	**13**	IAmb	IAmb	06 16 48.5	
	comp=Z,12nm,1.0s						
J26L	**Joseph Creek**	**88.82**	**13**	P	**P**	**06 16 38.8**	**+2.5**
	baz=208,SNR=14						
L29M	**L29M**	**88.83**	**15**	P	**P**	**06 16 38.9**	**+2.6**
	baz=213,SNR=8.3						
F19K	**Shaleruckik Mo**	**88.84**	**6**	P	**P**	**06 16 38.1**	**+1.9**
	baz=195						
H23K	**Yukon River**	**88.94**	**10**	P	**P**	**06 16 38.3**	**+1.5**
	baz=202						
G21K	**Allakaket**	**89.03**	**8**	IAmb	IAmb	06 16 40.7	
	comp=Z,16nm,1.7s						
G21K	**Allakaket**	**89.03**	**8**	P	**P**	**06 16 39.4**	**+2.2**
	baz=199						
M31M	**Drury Creek, Y**	**89.06**	**17**	P	**P**	**06 16 39.7**	**+2.3**
	baz=216						
E18K	**Tukpahlearik C**	**89.16**	**5**	IAmb	IAmb	06 16 44.4	
	comp=Z,9.4nm,1.0s						
E18K	**Tukpahlearik C**	**89.16**	**5**	P	**P**	**06 16 39.7**	**+2.0**
	baz=192						
HNS	**HongShan**	**89.19**	**311**	⇑P	**P**	**06 16 40.3**	**+1.8**
HNS				S	**S**	**06 27 27.3**	**-0.5**
HNS				pmax	pmax		
	comp=Z,11nm,1.1s						
H24K	**Noodor Dome**	**89.23**	**10**	P	**P**	**06 16 39.8**	**+1.7**
	baz=204						
D17K	**Noatak River**	**89.25**	**4**	P	**P**	**06 16 40.2**	**+2.1**
	baz=190						
F20K	**Avaraart Lake**	**89.27**	**7**	P	**P**	**06 16 40.4**	**+2.2**
	baz=197						
GSI	**Gunungsitoli**	**89.28**	**272**		**P**	**06 16 39.3**	**-0.3**
GSI	**Gunungsitoli**	**89.28**	**272**	P	**P**	**06 16 40.0**	**+0.4**
DAWY	**Dawson**	**89.34**	**14**	P	**P**	**06 16 40.8**	**+2.1**
	baz=212,SNR=5.8						
PRP	**Porcupine Dome**	**89.35**	**11**	IAmb	IAmb	06 16 42.1	
	comp=Z,31nm,2.0s						
PRP	**Porcupine Dome**	**89.35**	**11**	P	**P**	**06 16 40.8**	**+2.0**
	baz=206,SNR=6.1						
FARO	**Faro, Yukon**	**89.37**	**18**	P	**P**	**06 16 40.8**	**+1.9**
	baz=217						
TOAD	**Toad River Com**	**89.42**	**23**	P	**P**	**06 16 41.3**	**+2.2**
	baz=224						
LYN	**LuoYang**	**89.50**	**308**	⇓P	**P**	**06 16 41.9**	**+1.8**
LYN				pP	PcP	06 16 45.8	+4.3
LYN				sP	pwP	06 16 51.1	-1.1
LYN				S	**S**	**06 27 24.8**	**-6.1**
LYN				sS	ScS	06 27 38.5	+3.0
LYN				pmax	pmax		
	comp=Z,34nm,1.2s						
E19K	**Redstone River**	**89.50**	**6**	P	**P**	**06 16 41.1**	**+1.8**
	baz=195						
K29M	**Barlow Dome**	**89.60**	**15**	IAmb	IAmb	06 16 45.2	
	comp=Z,34nm,1.9s						
K29M	**Barlow Dome**	**89.60**	**15**	P	**P**	**06 16 42.4**	**+2.4**
	baz=213,SNR=6.3						
I26K	**Coal Creek Min**	**89.61**	**12**	IAmb	IAmb	06 16 43.8	
	comp=Z,22nm,1.8s						
I26K	**Coal Creek Min**	**89.61**	**12**	P	**P**	**06 16 42.1**	**+2.2**
	baz=208,SNR=5.3						
G22K	**Bettles**	**89.68**	**9**	P	**P**	**06 16 42.1**	**+2.0**
	baz=201						
C16K	**Lisburne Hills**	**89.69**	**3**	P	**P**	**06 16 42.1**	**+2.0**
	baz=188						
G23K	**Bananza Creek**	**89.70**	**9**	P	**P**	**06 16 42.4**	**+2.1**
	baz=202						
F21K	**Alatna River**	**89.70**	**8**	P	**P**	**06 16 42.2**	**+1.9**
	baz=199						
H25L	**Birch Creek**	**89.97**	**11**	P	**P**	**06 16 43.6**	**+2.1**
	baz=206						
C17K	**DeLong Mountai**	**90.01**	**4**	P	**P**	**06 16 43.7**	**+2.0**
	baz=190						
SRIT	**Nakonsritamara**	**90.05**	**279**	P	**P**	**06 16 43.3**	**+0.2**
COLD	**Coldfoot**	**90.15**	**9**	P	**P**	**06 16 44.8**	**+2.4**
	baz=202						
I27K	**Kandik River**	**90.18**	**13**	P	**P**	**06 16 44.7**	**+2.1**
	baz=210						
MMPY	**Sheldon Lake,**	**90.28**	**18**	P	**P**	**06 16 45.1**	**+2.0**
	baz=219						
C18K	**Utukok River**	**90.32**	**5**	P	**P**	**06 16 45.4**	**+2.2**
	baz=192						
G25K	**Bearman Lake**	**90.37**	**11**	P	**P**	**06 16 45.7**	**+2.3**
	baz=206						
E20K	**Nigu River**	**90.39**	**6**	P	**P**	**06 16 45.8**	**+2.3**
	baz=196						
I28M	**Miner Creek**	**90.40**	**13**	IAmb	IAmb	06 16 49.9	
	comp=Z,24nm,2.0s						
I28M	**Miner Creek**	**90.40**	**13**	P	**P**	**06 16 45.7**	**+2.0**
	baz=211						
D19K	**Kuna River**	**90.42**	**6**	IAmb	IAmb	06 16 46.1	
	comp=Z,12nm,1.3s						
D19K	**Kuna River**	**90.42**	**6**	P	**P**	**06 16 45.9**	**+2.2**
	baz=194						
BEAVL	**Fort Liard**	**90.43**	**22**	P	**P**	**06 16 45.8**	**+2.0**
	baz=224						
BILL	**Bilibino**	**90.46**	**353**	P	**P**	**06 16 43.8**	**+0.1**
BILL	**Bilibino**	**90.46**	**353**	*ce*P	**P**	**06 16 45.7**	**+1.9**
BILL				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ZEA	**Zeya**	**90.46**	**329**	*e*P	**P**	**06 16 45.7**	**+1.6**
ZEA				*e*		06 28 47.4	
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
J30M	**Hart River**	**90.50**	**15**	P	**P**	**06 16 46.5**	**+2.3**
	baz=214						
I29M	**Ogilvie Camp,**	**90.69**	**14**	IAmb	IAmb	06 16 49.4	
	comp=Z,17nm,1.8s						
I29M	**Ogilvie Camp,**	**90.69**	**14**	P	**P**	**06 16 47.1**	**+2.1**
	baz=213						
H27K	**Steamboat Moun**	**90.75**	**12**	IAmb	IAmb	06 16 50.1	
	comp=Z,13nm,1.5s						
H27K	**Steamboat Moun**	**90.75**	**12**	P	**P**	**06 16 47.7**	**+2.4**
	baz=210						
F24K	**Squaw Lake**	**90.77**	**10**	P	**P**	**06 16 47.8**	**+2.5**
	baz=204						
E22K	**Anaktuvuk Pass**	**90.78**	**8**	P	**P**	**06 16 47.3**	**+1.9**
	baz=200						
D20K	**Etivluk River**	**90.78**	**6**	P	**P**	**06 16 47.1**	**+1.8**
	baz=196						
E21K	**Killik River**	**90.81**	**7**	P	**P**	**06 16 47.4**	**+1.9**
	baz=198						
C19K	**Lookout Ridge**	**90.89**	**5**	IAmb	IAmb	06 16 52.6	
	comp=Z,7.4nm,0.9s						
C19K	**Lookout Ridge**	**90.89**	**5**	P	**P**	**06 16 47.9**	**+2.1**
	baz=193						
G26K	**Porcupine Rive**	**90.95**	**11**	IAmb	IAmb	06 16 51.0	
	comp=Z,14nm,1.3s						
G26K	**Porcupine Rive**	**90.95**	**11**	P	**P**	**06 16 48.2**	**+2.1**
	baz=208						
SLVN	**Son La**	**90.95**	**292**	IAmb	IAmb	06 16 50.0	
	comp=Z,15nm,1.4s						
B18K	**Kokolik River**	**90.98**	**4**	P	**P**	**06 16 48.4**	**+2.2**
	baz=191						
E23K	**Chandalar**	**91.01**	**9**	P	**P**	**06 16 48.4**	**+2.0**
	baz=202						
I30M	**Mount Dempster**	**91.02**	**15**	P	**P**	**06 16 46.6**	**0.0**
I30M				IAmb	IAmb	06 17 15.3	
	comp=Z,12nm,1.4s						
I30M	**Mount Dempster**	**91.02**	**15**	P	**P**	**06 16 48.8**	**+2.2**
	baz=214						
E24K	**Your Creek**	**91.19**	**9**	P	**P**	**06 16 49.6**	**+2.3**
	baz=203						
F25K	**Christian Rive**	**91.20**	**10**	IAmb	IAmb	06 16 51.6	
	comp=Z,23nm,1.9s						
F25K	**Christian Rive**	**91.20**	**10**	P	**P**	**06 16 49.5**	**+2.2**
	baz=206						
G27K	**Doyon Strip**	**91.23**	**12**	IAmb	IAmb	06 16 51.5	
	comp=Z,18nm,1.9s						
G27K	**Doyon Strip**	**91.23**	**12**	P	**P**	**06 16 49.7**	**+2.2**
	baz=210						
BMAR	**Burnt Mountain**	**91.23**	**11**	P	**P**	**06 16 48.9**	**+1.5**
D22K	**Ayikyak River**	**91.38**	**7**	IAmb	IAmb	06 16 51.6	
	comp=Z,12nm,1.5s						
D22K	**Ayikyak River**	**91.38**	**7**	P	**P**	**06 16 50.3**	**+2.3**
	baz=200						
C21K	**Knifeblade Rid**	**91.40**	**7**	P	**P**	**06 16 50.4**	**+2.3**
	baz=198						
H29M	**Whitestone**	**91.40**	**14**	P	**P**	**06 16 50.4**	**+2.2**
	baz=213						
F26K	**Sheenjek River**	**91.55**	**11**	P	**P**	**06 16 50.9**	**+2.0**
	baz=207						
TOLK	**Toolik Lake Re**	**91.56**	**9**	P	**P**	**06 16 50.7**	**+1.8**
	baz=202						
E25K	**Arctic Village**	**91.69**	**10**	P	**P**	**06 16 51.4**	**+1.9**
	baz=206						
D23K	**Nanushuk River**	**91.71**	**8**	P	**P**	**06 16 51.6**	**+2.0**
	baz=201						
A19K	**Wainwright**	**91.86**	**4**	P	**P**	**06 16 52.2**	**+2.0**
	baz=192						
EPYK	**Eagle Plains**	**91.90**	**14**	P	**P**	**06 16 52.5**	**+1.9**
	baz=214						
XAN	**Xi'an**	**91.93**	**306**	P	**P**	**06 16 52.3**	**+0.8**
XAN				S	**S**	**06 27 53.8**	**+0.4**
XAN				pmax	pmax		
	comp=Z,25nm,1.1s						
XAN				pmax	pmax		
	comp=Z,180nm,3.6s						
XAN				LR	LR		
	comp=Z,160nm,14.1s						
XAN				LR	LR		
	comp=Z,210nm,14.4s						
XAN				LR	LR		
	comp=Z,190nm,16.5s						
B20K	**Meade River**	**91.98**	**6**	P	**P**	**06 16 52.8**	**+2.0**
	baz=195						
H31M	**Peel River**	**91.99**	**15**	P	**P**	**06 16 53.0**	**+2.0**
	baz=216						
G29M	**Pine Creek**	**92.06**	**13**	P	**P**	**06 16 53.4**	**+2.1**
	baz=213						
F28M	**Old Crow**	**92.28**	**12**	P	**P**	**06 16 54.4**	**+2.1**
	baz=211						
E27K	**Coleen River**	**92.44**	**11**	IAmb	IAmb	06 17 29.8	
	comp=Z,11nm,1.5s						
E27K	**Coleen River**	**92.44**	**11**	P	**P**	**06 16 55.3**	**+2.3**
	baz=210						
G30M	**tAoh Zraii Nji**	**92.51**	**14**	P	**P**	**06 16 55.4**	**+2.0**
	baz=215						
C23K	**Itkillik River**	**92.53**	**8**	IAmb	IAmb	06 16 57.2	
	comp=Z,21nm,1.7s						
C23K	**Itkillik River**	**92.53**	**8**	P	**P**	**06 16 55.5**	**+2.2**
	baz=201						
D25K	**Kavik River**	**92.65**	**9**	P	**P**	**06 16 56.1**	**+2.1**
	baz=205						
B22K	**Teshekpuk Lake**	**92.68**	**7**	IAmb	IAmb	06 16 57.4	
	comp=Z,17nm,1.4s						
B22K	**Teshekpuk Lake**	**92.68**	**7**	P	**P**	**06 16 56.0**	**+2.0**
	baz=199						
C24K	**Franklin Bluff**	**92.68**	**8**	P	**P**	**06 16 56.2**	**+2.2**
	baz=203						
G31M	**Satah River**	**92.91**	**15**	P	**P**	**06 16 57.2**	**+2.0**
	baz=216						
HHC	**Hu-ho-hao-te**	**92.92**	**313**	*e*P	**P**	**06 16 56.1**	**+0.1**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
F30M	**Barrier River**	**93.13**	**14**	P	**P**	**06 16 58.1**	**+1.9**
	baz=215						
A22K	**Sinclair Lake**	**93.15**	**6**	P	**P**	**06 16 58.2**	**+2.1**
	baz=197						
E28M	**Babbage River**	**93.19**	**12**	IAmb	IAmb	06 17 00.1	
	comp=Z,12nm,1.6s						
E28M	**Babbage River**	**93.19**	**12**	P	**P**	**06 16 58.5**	**+2.1**
	baz=212						
A21K	**Barrow**	**93.30**	**5**	P	**P**	**06 16 58.8**	**+1.9**
	baz=196						
E29M	**Blow River**	**93.33**	**13**	P	**P**	**06 16 59.0**	**+1.9**
	baz=213						
C27K	**Jago River**	**93.34**	**10**	P	**P**	**06 16 59.1**	**+2.0**
	baz=208						
KMI	**Kunming**	**93.38**	**296**	P	**P**	**06 17 00.1**	**+1.5**
KMI				pmax	pmax		
	comp=Z,19nm,1.1s						
C26K	**Camden Bay**	**93.41**	**10**	P	**P**	**06 16 59.6**	**+2.2**
	baz=207						
F31M	**Tsiigehtchic**	**93.45**	**14**	P	**P**	**06 16 59.6**	**+2.0**
	baz=217						
D27M	**Malcolm River**	**93.48**	**11**	P	**P**	**06 16 59.7**	**+1.9**
	baz=210						
INK	**Inuvik**	**94.20**	**14**	P	**P**	**06 17 02.7**	**+1.6**
	baz=217						
CMAR	**Chiang Mai Arr**	**94.23**	**288**	P	**P**	**06 17 03.4**	**+1.0**
	comp=Z,2.8nm,0.3s,baz=115,slow=3.7,SNR=1.9						
CHTO	**Chiang Mai**	**94.35**	**288**	P	**P**	**06 17 02.1**	**-0.8**
CHTO				IAmb	IAmb	06 17 05.1	
	comp=Z,11nm,0.9s						
CHTO	**Chiang Mai**	**94.35**	**288**	P	**P**	**06 17 03.8**	**+0.9**
CHTO	**Chiang Mai**	**94.35**	**288**	P	**P**	**06 17 02.1**	**-0.8**
CHTO				pmax	pmax		
	comp=Z,11nm,1.0s						
PZH	**PanZhiHua**	**94.72**	**296**	P	**P**	**06 17 05.3**	**+0.7**
PZH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,100nm,4.7s						
C36M	**Paulatuk**	**97.25**	**16**	P	Pdif	06 17 16.5	+1.5
	baz=226						
A36M	**Sachs Harbour**	**98.84**	**14**	P	Pdif	06 17 23.6	+1.6
	baz=225						
WMQ	**Urumqi**	**110.60**	**310**	*e*PKP	**PKiKP**	**06 22 15.6**	**+0.1**
ZALV	**Zalesovo Beam**	**113.77**	**321**	PKiKP	**PKiKP**	**06 22 21.9**	**+0.8**
	comp=Z,1.1nm,0.3s,baz=129,slow=3.9,SNR=2.0						
MK31	**Makanchi Array**	**114.79**	**313**	*i* PKIKP	PKPdf	06 22 21.6	-1.7
MKAR	**Makanchi Array**	**114.79**	**313**	PKP	PKPdf	06 22 23.0	-0.3
	comp=Z,1.0nm,0.8s,baz=75,slow=1.9,SNR=6.5						
KURK	**Kurchatov**	**117.43**	**317**	*i* PKIKP	**PKPdf**	**06 22 25.7**	**-2.5**
KURBB	**Kurchatov Arra**	**117.49**	**317**	PKP	**PKPdf**	**06 22 27.6**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=102,slow=2.2,SNR=5.1						
BVAR	**Borovoye Array**	**122.40**	**320**	PKP	**PKPdf**	**06 22 37.5**	**-0.2**
	comp=Z,4.7nm,0.9s,baz=103,slow=2.0,SNR=11						
BRVK	**Borovoye**	**122.46**	**320**	*i* PKIKP	**PKiKP**	**06 22 38.5**	**+0.5**
ARTI	**Arti**	**128.37**	**326**	*i* PKIKP	**PKiKP**	**06 22 50.1**	**+0.4**
ARTI						06 24 53.8	
ARTI						06 30 01.0	
ARTI				SS	SS	06 42 08.7	-0.4
ARCES	**ARCESS Array B**	**130.54**	**351**	PKP	**PKiKP**	**06 22 54.5**	**+0.8**
	comp=Z,1.2nm,0.6s,baz=342,slow=0.4,SNR=5.6						
BELG	**Belogornoye**	**135.74**	**325**	*i* PKIKP	**PKPdf**	**06 23 03.1**	**+0.1**
FINES	**FINESS Array B**	**137.75**	**346**	PKP	**PKPdf**	**06 23 07.2**	**+0.7**
	comp=Z,1.7nm,0.9s,baz=90,slow=2.8,SNR=2.3						
OBN	**Obninsk**	**139.46**	**334**	*e*PKIKP	**PKPdf**	**06 23 09.9**	**+0.1**
OBN				*e*		06 26 05.3	
OBN				*e*PPP	PPP	06 29 08.6	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NOA	**NORSAR Array B**	**140.31**	**356**	PKP	**PKPdf**	**06 23 11.5**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=6.9,slow=6.3,SNR=2.0						
KIV	**Kislovodsk**	**142.49**	**315**	*e*PKIKP	**PKiKP**	**06 23 18.2**	**-0.7**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MNK	**Minsk**	**143.20**	**339**	*i* PKP	PKPbc	06 23 14.4	+0.9
	comp=E,7.0nm,0.7s						
MNK				*i* PKP	PKPbc	06 23 14.4	+0.9
	comp=N,3.0nm,0.4s						
MNK				*i* PKP	PKPbc	06 23 14.4	+0.9
	comp=Z,8.0nm,0.7s,baz=36						
MNK				*i* PP	**PP**	**06 26 25.4**	**-1.2**
MNK				*i* PPP	PPP	06 29 34.6	
MNK				*i* SKS	**SKSdf**	**06 30 24.1**	**-2.2**
MNK				*i* SS	**SS**	**06 45 06.7**	**+0.9**
MNK				*i* SSS	SSS	06 50 28.1	
MNK				*i* LQ	LQ	07 20 10.3	
MNK				*i* LRM	MLR	07 25 26.1	
	comp=E,495nm,18.4s						
MNK				*i* LRM	MLR	07 25 34.9	
	comp=Z,2µm,21.2s						
MNK				*i* LRM	MLR	07 25 36.8	
	comp=N,345nm,20.5s						
MNK	**Minsk**	**143.20**	**339**	*i* PKIKP	PKPbc	06 23 14.3	+0.8
MNK				*i*		06 26 25.4	
MNK				*i* PPP	PPP	06 29 34.6	
MNK				*i*		06 30 24.0	
MNK				*i* SS	SS	06 45 06.7	+0.9
MNK				*i* SSS	SSS	06 50 28.0	
MNK				pmax	pmax		
	comp=N,3.0nm,0.4s						
MNK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MNK				pmax	pmax		
	comp=E,7.0nm,0.7s						
MNK				MLR	MLR		
	comp=E,495nm,18.0s						
MNK				MLR	MLR		
	comp=Z,2µm,21.0s						
MNK				MLR	MLR		
	comp=N,345nm,21.0s						
NACGM	**Naroch**	**143.22**	**340**	*e*PKiKP	**PKiKP**	**06 23 19.4**	**-0.4**
	comp=Z,8.0nm,0.8s,baz=34						
SUW	**Suwalki**	**145.06**	**343**	*e*PKP	**PKPab**	**06 23 19.5**	**+0.3**
EKA	**Eskdalemuir Ar**	**145.45**	**10**	PKPbc	**PKPab**	**06 23 21.7**	**+1.0**
	comp=Z,2.1nm,0.8s,baz=329,slow=3.1,SNR=5.7						
AK03	**Malin Array Si**	**145.71**	**334**	PKP	**PKPdf**	**06 23 21.2**	**+0.1**
AKASG	**Malin Array Be**	**145.72**	**334**	PKPdf	**PKPbc**	**06 23 21.7**	**+0.2**
AKASG	**Malin Array Be**	**145.72**	**334**	PKPbc	**PKPdf**	**06 23 20.7**	**-0.4**
	comp=Z,4.6nm,0.6s,baz=39,slow=4.0,SNR=30						
AKASG	**Malin Array Be**	**145.72**	**334**	PKIKP	**PKPbc**	**06 23 21.7**	**+0.2**
AKBB	**Malin Array Si**	**145.72**	**334**	PKP	**PKPdf**	**06 23 21.2**	**+0.1**
AK04	**Malin Array Si**	**145.73**	**334**	PKP	**PKPdf**	**06 23 21.1**	**0.0**
KIEV	**Kiev**	**145.74**	**334**	PKPdf	**PKPbc**	**06 23 21.7**	**+0.2**
KIEV	**Kiev**	**145.74**	**334**	PKIKP	**PKPbc**	**06 23 21.7**	**+0.2**
KIEV	**Kiev**	**145.74**	**334**	PKP	**PKPdf**	**06 23 21.2**	**+0.1**
AK08	**Malin Array Si**	**145.76**	**334**	PKP	**PKPdf**	**06 23 21.5**	**+0.4**
MI28	**Mi28,Pidlybu**	**146.16**	**336**	PKP	**PKPbc**	**06 23 22.7**	**-0.1**
LODK	**Lodwar**	**146.54**	**242**	PKPdf	**PKPdf**	**06 23 21.3**	**-2.4**
LUBAR	**Lubar, Ukraine**	**146.93**	**334**	PKP	**PKPbc**	**06 23 25.4**	**+0.3**
SIM	**Simferopol'**	**147.26**	**322**	*e*PKP2	**PKiKP**	**06 23 32.5**	**+4.0**
SIM				pmax	pmax		
	comp=Z,20nm,0.8s						
BSEG	**Bad Segeberg**	**147.44**	**356**	*e*PKPbc	**PKiKP**	**06 23 29.4**	**+0.9**
	baz=12,slow=2.4						
GORT1	**Trebel**	**148.30**	**354**	*e*PKPbc	**PKiKP**	**06 23 30.9**	**+0.7**
	baz=12,slow=2.4						
RETH	**Rethem/Aller,**	**148.70**	**356**	*e*PKPbc	**PKPbc**	**06 23 30.5**	**+0.8**
	baz=12,slow=2.4						
NRDL	**Niedersach Rie**	**148.89**	**355**	*e*PKPbc	**PKiKP**	**06 23 31.9**	**+0.4**
	baz=12,slow=2.4						
FLTG	**Flechtingen**	**148.96**	**354**	*e*PKPbc	**PKiKP**	**06 23 31.4**	**-0.3**
	baz=12,slow=2.4						
KWP	**Kalwaria Pacla**	**149.03**	**339**	*e*PKP	**PKiKP**	**06 23 31.7**	**-0.4**
IBBN	**Ibbenburen**	**149.20**	**358**	*e*PKPbc	**PKiKP**	**06 23 32.6**	**+0.4**
	baz=12,slow=2.4						
ASSE	**Asse, Remlinge**	**149.21**	**355**	*e*PKPbc	**PKiKP**	**06 23 32.3**	**+0.1**
	baz=12,slow=2.4						
BNN	**Bunyan**	**149.32**	**311**		**PKPdf**	**06 23 25.3**	**-2.4**
OJC	**Ojcow**	**149.39**	**343**	*e*PKP	**PKPdf**	**06 23 29.0**	**+1.8**
KSP	**Ksiaz**	**149.65**	**347**	*e*PKP	**PKPdf**	**06 23 29.3**	**+1.7**
STHS	**Stebnicka Huta**	**149.69**	**341**	*e*PKP2	**PKPab**	**06 23 39.7**	**+2.2**
STHS	**Stebnicka Huta**	**149.69**	**341**	*e*PKP	**PKPab**	**06 23 39.7**	**+2.2**
CLL	**Collm**	**149.76**	**352**	*i* PKP2	**PKiKP**	**06 23 34.0**	**+0.5**
CLL				pmax	pmax		
	comp=Z,56nm,2.1s						
CLL	**Collm**	**149.76**	**352**	*e*PKPbc	**PKiKP**	**06 23 34.2**	**+0.8**

	baz=12,slow=2.4						
CLL	Collm	149.76	352	i PKPbc	PKiKP	06 23 34.0	+0.5
	comp=Z,56nm,2.1s						
CLL				i PKPab	PKPab	06 23 38.0	+0.3
	comp=Z,21nm,1.3s						
CLL				ePKPlp		06 23 58.0	
CLL				i x	x	06 26 59.2	
CLL				ePP	PP	06 27 09.0	+3.9
KOLS	Kolonicke sedl	149.78	339	ePKP2	PKPab	06 23 40.7	+2.8
KOLS	Kolonicke sedl	149.78	339	ePKP	PKPab	06 23 40.7	+2.8
BURAR	Bucovina Array	149.78	334	PKPbc	PKiKP	06 23 34.1	+0.3
GTTG	Gottingen	149.84	355	ePKPbc	PKiKP	06 23 34.2	+0.6
	baz=12,slow=2.4						
NIE	Niedzica	149.97	342	ePKP	PKiKP	06 23 35.6	+1.6
NEUB	Neuenburg	150.01	353	ePKPbc	PKiKP	06 23 34.2	+0.2
	baz=12,slow=2.4						
BRG	Berggiesshubel	150.05	350	ePKPbc	PKiKP	06 23 34.7	+0.6
	baz=12,slow=2.4						
BRG	Berggiesshubel	150.05	350	ePKP	PKPbc	06 23 33.4	+0.3
BRG				Amp		06 23 37.0	
	comp=Z,6.0nm,0.9s						
BRG	Berggiesshubel	150.05	350	P	PKPab	06 23 45.9	+7.0
BRG				Amp		06 23 49.1	
	comp=Z,9.7nm,1.0s						
BUG	Bochum--Univer	150.07	359	ePKPbc	PKiKP	06 23 34.4	+0.4
	baz=12,slow=2.4						
DPC	Dobruska-Polom	150.11	347⇑	ePKP	PKiKP	06 23 35.6	+1.3
DPC	Dobruska-Polom	150.11	347	ePKP2	PKiKP	06 23 35.6	+1.3
KRLC	Kraliky	150.27	346⇑	ePKP	PKiKP	06 23 35.8	+1.2
KRLC	Kraliky	150.27	346	ePKIKP	PKiKP	06 23 35.8	+1.2
PVCC	Panska Ves	150.28	349⇑	ePKP	PKiKP	06 23 36.4	+1.8
PVCC	Panska Ves	150.28	349	ePKIKP	PKiKP	06 23 36.4	+1.8
KASTN	Kahler Asten	150.28	357	ePKPbc	PKiKP	06 23 35.5	+1.0
	baz=12,slow=2.4						
MORC	Moravsky Berou	150.38	345		PKPbc	06 23 33.5	-0.6
MORC	Moravsky Berou	150.38	345	ePKP	PKiKP	06 23 35.3	+0.4
MORC	Moravsky Berou	150.38	345	PKIKP	PKPbc	06 23 33.5	-0.6
BR131	Keskin Array S	150.43	314		PKPbc	06 23 33.9	-0.8
BR131	Keskin Array S	150.43	314	PKIKP	PKPbc	06 23 33.9	-0.8
BRTR	Keskin Array B	150.43	314		PKPbc	06 23 34.4	-0.3
BRTR	Keskin Array B	150.43	314	PKPbc	PKiKP	06 23 35.3	-0.1
	comp=Z,4.4nm,0.7s,baz=132,slow=1.8,SNR=17						
BRTR	Keskin Array B	150.43	314	PKIKP	PKPbc	06 23 34.4	-0.3
UBBA	Unterbreizbach	150.56	355	ePKPbc	PKiKP	06 23 35.8	+0.8
	baz=12,slow=2.4						
MOX	Moxa	150.58	353	ePKPbc	PKPbc	06 23 34.9	+0.4
	baz=12,slow=2.4						
TANN	Tannenbergstha	150.71	352	ePKPbc	PKPbc	06 23 34.7	-0.2
	baz=12,slow=2.4						
PRU	Pruhonice	150.80	349⇑	ePKP	PKPbc	06 23 34.8	-0.2
PRU	Pruhonice	150.80	349	ePKIKP	PKPbc	06 23 34.8	-0.2
VRAC	Vranov	151.04	346	ePKP	PKiKP	06 23 37.2	+1.0
MANZ	Manzenberg	151.17	352	ePKPbc	PKiKP	06 23 37.7	+1.2
	baz=12,slow=2.4						
JAVC	Velka Javorina	151.20	344	ePKP	PKiKP	06 23 38.3	+1.7
BMRD	Maredsous	151.20	2	dPKP	PKPbc	06 23 34.5	-1.4
BMRD				dPKiKP	pPKPbc	06 23 36.1	-0.2
TNS	Taunus Mts	151.25	357	ePKPbc	PKiKP	06 23 37.7	+1.0
	baz=12,slow=2.4						
KRUC	Moravsky	151.31	346	ePKP	PKiKP	06 23 37.5	+0.7
ROTZ	Rotzenmuhle	151.38	352	ePKPbc	PKiKP	06 23 38.2	+1.3
	baz=12,slow=2.4						
ZVC	Zvikov	151.39	349⇑	ePKP	PKiKP	06 23 40.6	+3.7
DOU	Dourbes	151.40	2	dPKP	PKiKP	06 23 38.4	+1.6
MODS	Modra-Piesok	151.75	344	ePKIKP	PKiKP	06 23 38.1	+0.4
MODS	Modra-Piesok	151.75	344	ePKP	PKiKP	06 23 38.1	+0.4
MMAI	Mount Meron Ar	151.77	300	PKPbc	PKPbc	06 23 36.1	-1.8
	comp=Z,1.0nm,0.3s,baz=353,slow=2.6,SNR=5.9						
MMAI				PKKPbc		06 30 27.1	
	comp=Z,1.4nm,0.2s,baz=135,slow=8.3,SNR=4.3						
KHC	Kasperske Hory	151.79	350⇑	ePKP	PKiKP	06 23 39.6	+1.8
KHC	Kasperske Hory	151.79	350	ePKIKP	PKiKP	06 23 39.6	+1.8
WLF	Walferdange	151.86	0	ePKPbc	PKiKP	06 23 39.8	+1.9
	baz=12,slow=2.4						
WET	Wettzell	151.89	351	ePKPbc	PKiKP	06 23 38.8	+0.8
	baz=12,slow=2.4						
CKRC	Cesky Krumlov	151.97	349⇑	ePKP	PKiKP	06 23 39.3	+1.2
CKRC	Cesky Krumlov	151.97	349	ePKIKP	PKiKP	06 23 39.3	+1.2
GEC2	GERESS Array S	152.05	350	ePKPbc	PKiKP	06 23 38.9	+0.4
	baz=12,slow=2.4						
GERES	GERESS Array B	152.05	350	PKPbc	PKPbc	06 23 37.3	-0.8
	comp=Z,2.0nm,0.9s,baz=29,slow=3.0,SNR=12						
CONA	Conrad Observa	152.50	346	epPKP	PKiKP	06 23 40.8	+1.5
	comp=Z,7.2nm,1.6s						
RONA	Rosalia, Austr	152.61	345	ePKiKP	PKiKP	06 23 40.4	+0.9
	comp=Z,5.6nm,0.9s						
MOA	Molln	152.91	348	epPKP	PKPab	06 23 52.7	+1.7
	comp=Z,3.9nm,0.8s						
BFO	Black Forest	153.15	357		PKPab	06 23 53.6	+1.7
BFO	Black Forest	153.15	357	PKP2	PKPab	06 23 53.6	+1.7
BFO	Black Forest	153.15	357	ePKPbc	PKiKP	06 23 42.1	+1.5
	baz=12,slow=2.4						
BIOA	Bad Ischl, Aus	153.18	349	epPKP	PKPab	06 23 54.2	+2.1
	comp=Z,11nm,0.8s						
LESA	Schwarzleotal	153.60	350	epPKP	PKPab	06 23 55.6	+1.6
	comp=Z,0.1nm,0.2s						
UBR	Ueberruh	153.67	354	ePKPbc	PKiKP	06 23 43.4	+1.7
	baz=12,slow=2.4						
RETA	Reutte	153.79	353	epPKP	PKPab	06 23 55.9	+1.1
	comp=Z,9.2nm,1.1s						
SOKA	Soboth	153.87	346	epPKP	PKPab	06 24 00.5	+5.4
	comp=Z,10nm,1.0s						
MOTA	Moosalm	153.89	353	epPKiKP	PKiKP	06 23 46.3	+3.9
	comp=Z,3.4nm,0.8s						
SQTA	Sankt Quirin	154.00	352	ePKP	PKPab	06 23 51.7	-4.0
OBKA	Obir	154.13	347	i PKP	PKPab	06 23 57.0	+0.7
	comp=Z,3.7nm,0.6s						
MYKA	Terra Mystica	154.20	348	epPKP	PKPab	06 23 57.5	+1.0
	comp=Z,3.7nm,0.9s						
FETA	Feichten	154.26	353	i PKP	PKPab	06 23 55.9	-1.0
	comp=Z,4.3nm,0.8s						
ABTA	Abfaltersbach	154.28	350	epPKiKP	PKiKP	06 23 48.5	+5.5
	comp=Z,7.3nm,1.0s						
ESDC	Sonseca Array	159.84	24	PKP	PKPdf	06 23 44.6	+2.5
	comp=Z,0.3nm,0.4s,baz=39,slow=2.9,SNR=1.3						

WEL 19 06:14:30.8±2.0**, 47°S**±10°×**16°6E**±°**, h5^{km}**±8^{km}**, M3.6**/8**, ML3.8**/8**, MLv3.6**/8**, Error ellipse: s-maj=13.5km s-min=10.8km az=34.0, confirmed, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYZ	Puysegur Point	1.02	42	P	Pg	06 14 49.7	-0.6
PYZ				S	Sb	06 15 04.6	+0.1
RRKS	Rarakau	1.45	58	P	Pn	06 14 57.2	-0.5
RRKS				S	Sg	06 15 17.6	+0.3
ORPS	Orepuki	1.56	66	P	Pn	06 14 58.5	-0.6
ORPS				S	Sn	06 15 19.4	-0.3
APZ	The Paps	1.57	87	P	Pn	06 14 58.8	-0.5
APZ				S	Sn	06 15 19.5	-0.6
DCZ	Deep Cove	1.78	35	P	Pn	06 15 00.3	-1.9
WHZ	Wether Hill Ro	1.86	57	P	Pn	06 15 02.5	-0.9
WHZ				S	Sn	06 15 27.4	0.0
MLZ	Mavora Lakes	2.29	48	P	Pn	06 15 09.3	0.0
MLZ				S	Sb	06 15 40.6	-0.7
SYZ	Scrubby Hill	2.39	82	P	Pn	06 15 11.3	+0.7
SYZ				S	Sn	06 15 40.8	+0.6
MSZ	Milford Sound	2.74	35	P	Pn	06 15 16.2	+0.8
TUZ	Tuapeka	2.88	72	P	Pn	06 15 17.5	+0.1
TUZ				S	Sn	06 15 52.3	-0.1
EAZ	Earnscleugh	3.03	57	P	Pn	06 15 19.4	0.0
EAZ				S	Sn	06 15 56.1	+0.1
WKZ	Wanaka	3.13	49	P	Pn	06 15 21.7	+1.0
WKZ				S	Sn	06 15 59.6	+1.2
HHSZ	Highcliff Hill	3.54	75	P	Pn	06 15 24.0	-2.4
JCZ	Jackson Bay	3.58	38	P	Pn	06 15 28.0	+0.8
ODZ	Otahua Downs	3.92	63	P	Pn	06 15 29.7	-2.0
LBZ	Lake Benmore	4.04	53	P	Pn	06 15 31.5	-1.8
FOZ	Fox Glacier	4.47	42	P	Pn	06 15 39.1	0.0
TMZ	Timaru	4.50	57	P	Pn	06 15 38.4	-1.3
WVZ	Waitaha Valley	5.25	45	P	Pn	06 15 49.4	-0.6
INZ	Inchbonnie	5.86	46	P	Pn	06 15 56.1	-2.2
LTZ	Lake Taylor	6.24	51	P	Pn	06 16 02.5	-1.0
DSZ	Denniston Nort	6.78	42	P	Pn	06 16 10.2	-0.7
THZ	Tophouse	7.30	48	P	Pn	06 16 19.0	+0.9
QRZ	Quartz Range	7.84	41	P	Pn	06 16 24.3	-1.2

GCG 19 06:26:28.3±0.3**, 13°.03N**×**89°.54W, h55^{km}**±8^{km}**, MD3.5, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	0.62	8	i P	Pn	06 26 41.1	-0.4
JAYA				i S	Sn	06 26 51.3	+0.2
NUBE	Las Nubes	0.90	345	i P	Pn	06 26 45.3	+0.3
NUBE				i S	Sn	06 26 58.5	+1.3
MTO3	Montecristo	1.37	7	i P	Pn	06 26 51.9	+0.5

IDC 19 06:29:02.0±2.2**, 7°.51S**×**155°.27E, h0^{km}, mb3.4**/5**, mbtmp3.4**/5**, Error ellipse: s-maj=77.2km s-min=26.8km az=125.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.75	237	P	P	06 34 16.1	-0.3
	0.7nm,0.6s,baz=61,slow=9.7,SNR=9.4						
	0.7nm,0.6s						
ASAR	Alice Springs	26.04	230	P	P	06 34 37.2	-0.1
	0.4nm,0.6s,baz=62,slow=9.5,SNR=5.8						
	0.4nm,0.6s						
SONM	Songino Array	69.92	327	P	P	06 40 16.0	+0.8
	0.2nm,0.3s,baz=130,slow=6.3,SNR=1.5						
	0.2nm,0.3s						
ILAR	Eielson Array	83.75	21	P	P	06 41 32.5	-0.2
	0.3nm,0.8s,baz=241,slow=5.7,SNR=4.8						
	0.3nm,0.8s						
MKAR	Makanchi Array	83.97	319	P	P	06 41 34.1	-0.2
	0.2nm,0.4s,baz=108,slow=4.7,SNR=2.9						
	0.2nm,0.4s						

IDC 19 06:29:07.5±317.0**, 23°.05N**×**159°.36W, h0^{km}, Error ellipse: s-maj=141.1km s-min=96.2km az=151.0, Hawaiian Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I59US	HAWAII INFRASO	4.72	136	I	I	06 59 30.0	
	baz=319,slow=321,SNR=9.3						
I58US	Midway Islands	17.04	291	I	I	08 21 10.0	
	baz=104,slow=316,SNR=3.0						
I60US	Wake Island	31.91	270	I	I	09 39 00.0	
	baz=77,slow=312,SNR=0.9						

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*ASRS **19** 06:29:43.0±1.1, 54°.12N×86°.46E, h0^{km}, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 19 06:29:46.9±2.6**, 54°.15N**×**86°.43E, h0^{km}, mbtmp3.1**/2**, ML2.9**/2**, Error ellipse: s-maj=21.6km s-min=12.9km az=55.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.97	259	I	I	06 36 30.0	
	baz=78,slow=320,SNR=2.1						
ZALV	Zalesovo Beam	0.97	259	Pg	Pg	06 30 04.0	-1.4
	1.4nm,0.3s,baz=77,slow=17,SNR=12						
ZALV				Lg	Lg	06 30 19.4	
	2.1nm,0.3s,baz=75,slow=28,SNR=9.4						
KURBB	Kurchatov Arra	5.99	237	Pn	Pn	06 31 18.0	+1.4
	0.1nm,0.3s,baz=55,slow=14,SNR=5.6						
	0.6nm,0.3s						
MKAR	Makanchi Array	7.82	201	Pn	Pn	06 31 42.8	+0.9
	0.3nm,0.3s,baz=26,slow=14,SNR=12						
MKAR				Lg	Lg	06 33 53.1	
	0.1nm,0.3s,baz=20,slow=31,SNR=1.8						
	0.4nm,0.3s						

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*PMR **19** 07:01:40.0, 30°.80S×177°.40W, h10^{km}*

*IDC **19** 07:01:41.3±2.1, 30°.62S×178°.05W, h12^{km}±12^{km}, mb5.4/28, mbtmp5.4/31, ML5.7/2, MS6.1/53, Error ellipse: s-maj=12.5km s-min=11.8km az=169.0*

*NEIC **19** 07:01:42.6, 30°.53S×177°.79W, h40^{km}, Moment Tensor Solution. Duration: 8^s.0 Moment tensor: Scale 10^{18}Nm; M_{rr}4.31; $M_{\theta\theta}$-0.19; $M_{\phi\phi}$-4.11; $M_{r\theta}$1.23; $M_{\theta\phi}$-0.92; $M_{\phi r}$2.87; Fault plane solution: $M_0$5.32000×10^{18} NP1: ϕ_s186.51000°, δ27.54000°, λ79.17000°. NP2: ϕ_s18.69000°, δ62.99000°, λ95.60000°. Principal axes: T 5.3422, Plg71.0000°, Azm301.0000°; N -0.0388, Plg5.0000°, Azm196.0000°; P -5.3033, Plg18.0000°, Azm105.0000°;*

*IPGP **19** 07:01:42.0, 30°.60S×177°.79W, h50^{km}, Mw6.5, Fault plane solution: NP1: ϕ_s197.00000°, δ34.00000°, λ96.00000°. NP2: ϕ_s9.00000°, δ56.00000°, λ86.00000°.*

*NEIC **19** 07:01:42.6, 30°.53S×177°.79W, h10^{km}*

*NEIC **19** 07:01:42.6, 30°.53S×177°.79W, h40^{km}*

*BJI **19** 07:01:43.1, 30°.40S×177°.94W, h20^{km}, mB6.6/66, mb5.9/72, Ms6.4/95, Ms7 6.2/92*

*BGR **19** 07:01:44.3, 30°.21S×178°.59W, h33^{km}, Ms6.4*

*ISC-PP **19** 07:01:45, 30°.52S×177°.85W, h17^{km}±10^{km}, Mwppsm6.8, Moment Tensor Solution. s24 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.03±.16; $M_{\theta\theta}$0.17±.26; $M_{\phi\phi}$0.29±.41; $M_{r\theta}$-0.21±.14; $M_{\theta\phi}$0.30±.22; $M_{\phi r}$0.56±.15; Fault plane solution: $M_0$2.26000×10^{19} NP1: ϕ_s81.60000°, δ61.70000°, λ339.60000°. NP2: ϕ_s181.60000°, δ72.10000°, λ-150.10000°.*

*NEIC **19** 07:01:45.4±2.7, 30°.52S±0°.06×177°.85W±0°.09, h30^{km}±1^{km}, mb6.1/533, Ms_20 6.2/633, Mwb6.3/109, Mww6.4/32 Error ellipse: s-maj=13.7km s-min=9.9km az=105.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}3.50; $M_{\theta\theta}$-1.08; $M_{\phi\phi}$-2.42; $M_{r\theta}$0.57; $M_{\theta\phi}$-1.63; $M_{\phi r}$1.53; Fault plane solution: $M_0$3.87000×10^{18} NP1: ϕ_s28.29000°, δ57.47000°, λ83.98000°. NP2: ϕ_s219.39000°, δ33.02000°, λ99.34000°. Principal axes: T 3.8768, Plg77.0000°, Azm280.0000°; N -0.0166, Plg5.0000°, Azm32.0000°; P -3.8602, Plg12.0000°, Azm123.0000°;*

*MOS **19** 07:01:46.8±1.2, 30°.46S×178°.04W, h52^{km}, mb6.4/36, MS6.2/35 Error ellipse: s-maj=8.8km s-min=7.0km az=113.3*

*NOU **19** 07:01:46.7, 30°.93S×177°.65W, h47^{km}, ML6.4/191, Kermadec Islands, New Zealand*

*GCMT **19** 07:01:53.4±0.0, 30°.68S×177°.81W, h49^{km}, MW6.5/174, Moment Tensor Solution. s172,c450; s174,c742; Duration: 4^s.2 Moment tensor: Scale 10^{18}Nm; M_{rr}5.84±.03; $M_{\theta\theta}$-0.28±.02; $M_{\phi\phi}$-5.56±.02; $M_{r\theta}$0.14±.02; $M_{\theta\phi}$-1.41±.01; $M_{\phi r}$2.74±.02; Best double couple: $M_0$6.48500×10^{18} NP1: ϕ_s199.00000°, δ33.00000°, λ98.00000°. NP2: ϕ_s9.00000°, δ57.00000°, λ85.00000°. Principal axes: T 6.4690, Plg77.0000°, Azm263.0000°; N 0.0350, Plg4.0000°, Azm12.0000°; P -6.5020, Plg12.0000°, Azm103.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 19 07:01:44.0±0.3**, 30°.70S**±0°.03×**177°.85W**±0°.03**, h23^{km}**±1^{km}**, h23^{km}:pP-P, n2179, σ2^s.33**/2243**, mb6.1**/381**, MS6.2**/468**, 161C-72D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.43	357	P	Pn	07 02 06.6	-1.9
GLKZ				S	Sb	07 02 30.5	+2.8
RAO	Raoul Island	1.44	358		Pn	07 02 07.4	-1.2
RAO	Raoul Island	1.44	358	P	Pb	07 02 11.2	+1.1
RAO	Raoul Island	1.44	358	P	Pn	07 02 07.4	-1.2
RAO	Raoul Island	1.44	358	⇑P	Pn	07 02 07.0	-1.7
RIZ	Raoul Island	1.45	357	P	Pn	07 02 07.0	-1.8
MXZ	Matakaoa Point	7.55	204		Pn	07 03 33.5	+0.9
MXZ	Matakaoa Point	7.55	204	P	Pn	07 03 33.7	+1.1
MXZ	Matakaoa Point	7.55	204	P	Pn	07 03 31.0	-1.6
MXZ				S	Sn	07 04 58.9	+1.4
WMGZ	Waiomatatini S	7.75	203	P	Pn	07 03 34.3	-1.0
WMGZ				S	Sn	07 05 06.4	+4.1
GRZ	Great Barrier	7.87	223	P	Pn	07 03 43.3	+6.4
PKGZ	Pakihiroa	7.91	204	P	Pn	07 03 36.2	-1.2
PKGZ				S	Sn	07 05 08.5	+2.3
HAZ	Te Kaha	7.92	206	P	Pn	07 03 36.6	-1.0
HAZ				S	Sn	07 05 10.3	+3.9
WSRZ	White Island S	7.96	210	P	Pn	07 03 40.9	+2.7
WSRZ				S	Sn	07 05 12.4	+4.9
WIZ	White Island	7.96	210	P	Pn	07 03 38.8	+0.7
WIZ				S	Sn	07 05 11.0	+3.5
PUZ	Puketiti	8.03	203	P	Pn	07 03 38.0	-1.2
PUZ				S	Sn	07 05 09.7	+0.4
KUZ	Kuaotunu	8.07	220	P	Pn	07 03 43.0	+3.3
KUZ				S	Sn	07 05 16.5	+6.4
RUGZ	Raukumara Rang	8.14	206	P	Pn	07 03 40.5	-0.3
RUGZ				S	Sn	07 05 15.2	+3.1
TWGZ	Tauwhareparae	8.22	204	P	Pn	07 03 40.2	-1.6
TWGZ				S	Sn	07 05 14.6	+0.7
WHRZ	Whale Island	8.33	210	P	Pn	07 03 45.1	+1.8
WHRZ				S	Sn	07 05 21.7	+5.1
WCZ	Waipu Caves	8.37	229	P	Pn	07 03 46.7	+2.9
CNGZ	Carnagh Statio	8.42	202	P	Pn	07 03 42.6	-2.0
CNGZ				S	Sn	07 05 20.3	+1.4
WIAZ	Waiheke Island	8.43	222	P	Pn	07 03 50.0	+5.3
ABAZ	Army Bay	8.48	224	P	Pn	07 03 52.9	+7.6
OUZ	Omahuta	8.49	236	P	Pn	07 03 47.0	+1.6
OUZ	Omahuta	8.49	236	⇓P	Pn	07 03 52.0	+6.6
TKGZ	Te Karaka	8.50	204	P	Pn	07 03 43.8	-1.8
MWZ	Matawai	8.52	205	P	Pn	07 03 43.5	-2.4
MWZ				S	Sn	07 05 21.9	+0.5
TGRZ	Tauranga	8.54	213	P	Pn	07 03 48.7	+2.5
MBAZ	Motutapu North	8.55	223	P	Pn	07 03 53.3	+7.0
MARZ	Manawahe	8.56	210	P	Pn	07 03 48.0	+1.5
MARZ				S	Sn	07 05 26.2	+3.8
URZ	Urewera	8.62	208	Pn	Pn	07 03 44.9	-2.2
	9.6nm,0.3s,baz=258,slow=0.9,SNR=64						
URZ				Sn	Sn	07 05 23.1	-0.5
	198nm,0.3s,baz=356,slow=11,SNR=4.1						
	82nm,0.4s						
URZ	Urewera	8.62	208	P	Pn	07 03 46.3	-0.9
URZ	Urewera	8.62	208	S	Sn	07 05 24.5	+0.9
URZ	Urewera	8.62	208	P	Pn	07 03 45.4	-1.8
URZ				S	Sn	07 05 22.4	-1.1
MKAZ	Moumakai	8.64	220	P	Pn	07 03 50.6	+3.1
EDRZ	Edgecumbe	8.64	210	P	Pn	07 03 49.2	+1.6
EDRZ				S	Sn	07 05 29.0	+4.7
ETAZ	East Tamaki Re	8.66	222	P	Pn	07 03 50.9	+3.0
RAGZ	Rawiri	8.70	205	P	Pn	07 03 46.0	-2.5
RAGZ				S	Sn	07 05 26.5	+0.5
RIGZ	Rimuhau	8.77	203	P	Pn	07 03 49.3	0.0
RIGZ				S	Sn	07 05 27.7	+0.2
MKRZ	Makatiti	8.78	211	P	Pn	07 03 54.6	+5.0
KARZ	Kaharoa	8.79	212	P	Pn	07 03 49.2	-0.4
KMRZ	Kaimai	8.79	214	P	Pn	07 03 50.4	+0.8
OMRZ	Omania	8.80	211	P	Pn	07 03 49.5	-0.3
TARZ	Mount Tarawera	8.85	210	P	Pn	07 03 53.3	+2.9
WTAZ	Waiatarua	8.86	223	P	Pn	07 03 57.4	+6.9
NGRZ	Ngongotaha	8.88	212	P	Pn	07 03 55.0	+4.2
TOZ	Tahuroa Road	8.92	216		Pn	07 03 54.8	+3.5
TOZ	Tahuroa Road	8.92	216	P	Pn	07 03 54.8	+3.5
PRGZ	Paritu Road	8.93	202	P	Pn	07 03 49.2	-2.2
HLRZ	Highlands Stat	8.93	211	P	Pn	07 03 53.6	+2.0
RRRZ	Republican Roa	8.93	210	P	Pn	07 03 53.2	+1.7
UTU	Utuhina	8.94	212	P	Pn	07 03 52.8	+1.2
MUGZ	Murupara	8.94	208	P	Pn	07 03 49.1	-2.5
RTZ	Ruatahuna	8.97	207		Pn	07 03 51.0	-1.2
RTZ	Ruatahuna	8.97	207	P	Pn	07 03 49.8	-2.4
SNGZ	Shannon Statio	8.98	205	P	Pn	07 03 50.3	-2.0
HSRZ	Hossack Road	9.02	211	P	Pn	07 03 54.5	+1.7
HRRZ	Handcock Road	9.07	211	P	Pn	07 03 56.7	+3.2
KNZ	Kokohu	9.08	203	P	Pn	07 03 51.3	-2.3
PRRZ	Plateau Road	9.12	210	P	Pn	07 03 55.0	+0.9
GRRZ	Galatos Road	9.12	211	P	Pn	07 03 54.5	+0.4
MHGZ	Mahia Peninsul	9.13	201	P	Pn	07 03 51.5	-2.7
ALRZ	Allen Road	9.19	210	P	Pn	07 03 55.3	+0.3
RAHZ	Arahi	9.20	206	P	Pn	07 03 53.6	-1.6
WPRZ	Whakapapatarin	9.23	211	P	Pn	07 03 57.0	+1.3
MTHZ	Maungataniwha	9.23	207	P	Pn	07 03 53.7	-2.0
WHHZ	Waihua	9.28	204	P	Pn	07 03 56.1	-0.3
KUTZ	Kaahu Road	9.36	212	P	Pn	07 03 58.4	+0.9
TLZ	Tolley Road	9.37	214	P	Pn	07 03 57.7	+0.2
MRHZ	Matea Rd	9.39	209	P	Pn	07 03 55.9	-2.0
WHTZ	Whakaora	9.44	211	P	Pn	07 03 59.7	+1.1
NMHZ	Naumai	9.46	206	P	Pn	07 03 56.7	-2.1
ARHZ	Aropaoanui	9.53	205	P	Pn	07 03 57.9	-1.9
WATZ	Wairara	9.58	212	P	Pn	07 04 00.9	+0.5
BKZ	Black Stump Fm	9.64	207		Pn	07 03 59.8	-1.5
BKZ	Black Stump Fm	9.64	207	P	Pn	07 04 00.0	-1.3
BKZ	Black Stump Fm	9.64	207	S	Sn	07 05 48.7	-0.2
BKZ	Black Stump Fm	9.64	207	P	Pn	07 03 58.1	-3.2
RATZ	Rangitukua	9.69	211	P	Pn	07 04 03.0	+1.0
RITZ	Rihia Road	9.74	210	P	Pn	07 04 03.8	+1.1
MCHZ	McNeill Hill	9.80	206	P	Pn	07 04 01.3	-2.2
KATZ	Kakaramea	9.81	211	P	Pn	07 04 05.9	+2.1
HIZ	Hauiti	9.84	216		Pn	07 04 06.2	+2.1
HIZ	Hauiti	9.84	216	P	Pn	07 04 07.0	+3.0
HIZ	Hauiti	9.84	216	P	Pn	07 04 04.9	+0.8
CKHZ	Cape Kidnapper	9.86	204	P	Pn	07 04 01.4	-2.8
KWHZ	Kaweka Forest	9.89	207	P	Pn	07 04 03.4	-1.4
NTVZ	North Tongarir	9.92	211	P	Pn	07 04 03.6	-1.6
TMVZ	Te Maari	9.93	210	P	Pn	07 04 03.9	-1.4
KRVZ	Karewarewa	9.94	211	P	Pn	07 04 05.5	0.0
ETVZ	East Tongariro	9.94	210	P	Pn	07 04 04.2	-1.2
WTVZ	West Tongariro	9.98	211	P	Pn	07 04 05.1	-0.9
NNVZ	North Ngauruho	9.98	211	P	Pn	07 04 05.4	-0.7
OTVZ	Oturere	9.98	210	P	Pn	07 04 04.0	-2.1
SNVZ	South Ngauruho	10.01	210	P	Pn	07 04 05.5	-1.0
NGZ	Ngauruhoe	10.02	211	P	Pn	07 04 06.4	-0.2
KAHZ	Kahuranaki	10.05	204	P	Pn	07 04 03.2	-3.7
TUVZ	Tukino	10.07	210	P	Pn	07 04 07.0	-0.3
KRHZ	Kereru	10.10	206	P	Pn	07 04 03.5	-4.0
FWVZ	Far West T-bar	10.11	211	P	Pn	07 04 06.8	-1.1
MAVZ	Matarangi	10.11	210	P	Pn	07 04 07.2	-0.8
WHVZ	Whangaehu Hut	10.11	210	P	Pn	07 04 06.6	-1.4
TRVZ	Turoa	10.14	210	P	Pn	07 04 06.8	-1.6
MOVZ	Moawhango	10.15	209	P	Pn	07 04 06.7	-1.6
WNVZ	Wahianoa	10.15	210	P	Pn	07 04 05.8	-2.5
MTVZ	Mangateitei	10.25	210	P	Pn	07 04 09.1	-0.6
PWZ	Pawanui	10.26	203	P	Pn	07 04 08.3	-1.5
PXZ	Pawanui	10.26	203	P	Pn	07 04 05.4	-4.3
VRZ	Vera Road	10.37	214	P	Pn	07 04 12.5	+1.3
WPHZ	Waipukurau	10.44	205	P	Pn	07 04 09.2	-3.1
WAZ	Wanganui	10.77	211	P	Pn	07 04 16.4	-0.3
KHEZ	Kahui Hut	10.86	216	P	Pn	07 04 19.7	+1.6
BFZ	Birch Farm	11.06	204	P	Pn	07 04 17.3	-3.3
BFZ	Birch Farm	11.06	204	S	Sn	07 06 21.3	-2.2
MRZ	Mangatainoka R	11.28	206	P	Pn	07 04 19.5	-4.3
SNZO	South Karori	12.18	208	P	Pn	07 04 32.7	-3.3
LKBA	Tubou, Lakemba	12.44	356	P	Pn	07 04 44.2	+4.6
NFK	Norfolk Island	12.45	274	⇓P	Pn	07 04 45.1	+5.4
NNZ	Nelson	12.67	212		Pn	07 04 39.8	-2.9
CMWZ	Cape Campbell	12.75	208		Pn	07 04 42.1	-1.7
QRZ	Quartz Range	12.77	215		Pn	07 04 43.9	-0.1
QRZ	Quartz Range	12.77	215	P	Pn	07 04 44.6	+0.6
QRZ	Quartz Range	12.77	215	S	Sn	07 07 02.2	-3.2
QRZ	Quartz Range	12.77	215	P	Pn	07 04 43.4	-0.7
BSWZ	Blackbirch Sta	12.86	209		Pn	07 04 45.2	0.0
CTZ	Chatham Island	13.05	176		Pn	07 04 48.7	+0.8
CTZ	Chatham Island	13.05	176	P	Pn	07 04 48.5	+0.6
CTZ	Chatham Island	13.05	176	S	Sn	07 07 05.5	-6.8
CTZ	Chatham Island	13.05	176	P	Pn	07 04 42.2	-5.6
MRNZ	Matariki Terra	13.10	213		Pn	07 04 46.6	-1.9
THZ	Tophouse	13.32	211		Pn	07 04 49.0	-2.7
MSVF	Nonsavu	13.43	343		Pn	07 04 54.4	+1.1
MSVF	Nonsavu	13.43	343	Pn	Pn	07 04 50.9	-2.4
	4.4nm,0.3s,baz=154,slow=15,SNR=22						
MSVF				LR	LR	07 09 21.7	
	comp=Z,182μm,19.9s,baz=181,slow=35						
MSVF				ScP	ScP	07 13 52.9	+0.2
	28nm,0.9s,baz=152,slow=5.3,SNR=5.8						
	25nm,0.9s						
MSVF	Nonsavu	13.43	343	P	P	07 04 58.3	-4.2
MSVF	Nonsavu	13.43	343c	iP	Pn	07 04 54.4	+1.1
MSVF	Nonsavu	13.43	343	⇑P	Pn	07 04 54.2	+0.9
KHZ	Kahutara	13.58	208	P	Pn	07 04 53.8	-1.3
NIUE	Niue	13.61	34		Pn	07 04 51.0	-4.7
NIUE	Niue	13.61	34	P	Pn	07 04 58.6	+2.9
NIUE	Niue	13.61	34	⇑P	Pn	07 04 49.8	-5.8
DSZ	Denniston Nort	13.82	214		Pn	07 04 57.0	-1.4
TAVE	Taveuni	14.05	352	P	P	07 05 06.8	-2.5
GVZ	Greta Valley S	14.25	208		Pn	07 05 01.7	-2.5
LTZ	Lake Taylor	14.42	210		Pn	07 05 04.4	-2.2
DGTI	Dogotuki	14.50	351	P	P	07 05 12.5	-1.8
PINNC	Pines Island,	15.40	298	P	P	07 05 24.9	+0.6
PINNC	Pines Island,	15.40	298	P	P	07 05 24.5	+0.2
MARNC	Mare, Loyalty	15.64	303	P	P	07 05 28.1	+1.1
RPZ	Rata Peaks	15.70	211	Pn	Pn	07 05 18.2	-5.3
	14nm,0.3s,baz=58,slow=3.5,SNR=37						
RPZ				Sn	Sn	07 08 03.7	-13
	71nm,0.3s,baz=52,slow=8.8,SNR=13						
RPZ	Rata Peaks	15.70	211	P	Pn	07 05 21.5	-2.1
OUENC	Ouen Island, N	15.98	297	P	P	07 05 32.4	+1.7
INH	Isangel	16.09	311	P	P	07 05 33.4	+1.5
FOZ	Fox Glacier	16.13	214	Pn	Pn	07 05 28.8	-0.3

ONTNC	Ouen Toro	16.34	297	P	P	07 05 34.6	0.0
ONTNC	Ouen Toro	16.34	297	P	P	07 05 35.6	+1.0
ONTNC	Ouen Toro	16.34	297	⇑P	P	07 05 34.4	-0.2
DZM	Mont Dzumac	16.48	298		P	07 05 37.2	+0.9
DZM	Mont Dzumac	16.48	298	ePn	P	07 05 36.9	+0.6
	6µm,1.6s						
DZM				eLR	LR	07 09 20.3	
	578µm,25.6s						
DZM	Mont Dzumac	16.48	298	Pn	Pn	07 05 32.4	-1.4
	0.7nm,0.3s,baz=126,slow=12,SNR=36						
DZM				LR	LR	07 10 44.8	
	comp=Z,266µm,19.1s,baz=129,slow=33						
DZM				ScP	ScP	07 13 58.0	-0.2
	14nm,0.6s,baz=96,slow=8.7,SNR=6.7						
DZM	Mont Dzumac	16.48	298	P	P	07 05 38.0	+1.7
DZM	Mont Dzumac	16.48	298	⇑P	P	07 05 37.6	+1.3
LBZ	Lake Benmore	16.61	211		Pn	07 05 33.8	-1.5
ODZ	Otahua Downs	16.93	209		Pn	07 05 39.6	+0.3
JCZ	Jackson Bay	17.03	215	P	Pn	07 05 40.3	-0.3
AFI	Afiamalu	17.62	20	Pn	Pn	07 05 42.6	-5.5
AFI	Afiamalu	17.62	20	P	P	07 05 50.5	+1.6
AFI	Afiamalu	17.62	20	P	Pn	07 05 42.6	-5.5
AFI				pmax	pmax		
	comp=Z,324nm,0.9s						
AFI	Afiamalu	17.62	20	⇑P	Pn	07 05 42.5	-5.5
DVP	Devils Point	18.11	312	P	P	07 05 58.6	+4.3
SYZ	Scrubby Hill	18.76	209	P	Pn	07 06 01.8	0.0
RAR	Rarotonga	18.78	64		P	07 06 01.3	-0.3
RAR	Rarotonga	18.78	64	P	P	07 06 00.9	-0.7
	comp=Z,176nm,0.9s,baz=233,slow=7.6,SNR=22						
RAR				S	Sn	07 09 14.4	-17
	comp=Z,108nm,0.5s,baz=17,slow=20,SNR=3.1						
RAR				LR	LR	07 13 10.7	
	comp=Z,21µm,18.7s,baz=239,slow=36						
RAR	Rarotonga	18.78	64	P	P	07 06 01.3	-0.3
RAR	Rarotonga	18.78	64	P	P	07 06 01.3	-0.3
RAR				pmax	pmax		
	comp=Z,255nm,1.0s						
RAR	Rarotonga	18.78	64	⇓sP	P	07 06 01.4	-0.3
KOUNC	Koumac, New Ca	18.99	298	P	Pn	07 06 08.4	+3.6
PYZ	Puysegur Point	19.58	214	P	Pn	07 06 11.2	-0.4
PYZ	Puysegur Point	19.58	214	P	Pn	07 06 12.7	+1.1
LHI	Lord Howe Isla	19.79	262		Pn	07 06 16.4	+2.2
LHI				IAmb	IAmb	07 06 25.0	
	comp=Z,646nm,0.8s						
LHI	Lord Howe Isla	19.79	262	⇑P	Pn	07 06 16.6	+2.4
VLAKA	Lakatoro	19.81	314	P	Pn	07 06 16.1	+1.5
SANVU	Saraoutou	20.45	315	P	P	07 06 19.3	-0.5
SANVU				IAMs_20	IAMs_20	07 13 42.7	
	comp=Z,99µm,19.0s						
SANVU	Saraoutou	20.45	315	P	Pn	07 06 24.1	+2.0
SANVU	Saraoutou	20.45	315	⇑P	P	07 06 18.1	-1.8
FUNA	Funafuti	22.23	352	P	P	07 06 43.5	+4.4
LUES	Luesalemba Tem	25.00	319	P	P	07 07 09.7	+3.5
GC1S	Gold Coast 1 S	25.05	269	P	P	07 07 09.7	+3.2
NTLH	Newcastle Hard	25.93	257	P	P	07 07 18.0	+3.5
ARMA	Armidale	26.25	263	IAmb	IAmb	07 07 26.8	
	comp=Z,598nm,0.8s						
ARMA	Armidale	26.25	263	P	P	07 07 21.1	+3.5
ARMA	Armidale	26.25	263	⇑P	P	07 07 20.2	+2.7
TBI	Tubuai	26.28	81	eP	P	07 07 24.9	+7.2
	comp=Z,842nm,1.3s						
TBI				eS	S	07 11 47.9	-1.2
	comp=Z,231µm,31.5s						
TBI				eLQ	LQ	07 12 37.6	
	comp=Z,231µm,24.5s						
TBI				eLR	LR	07 13 50.3	
	comp=Z,179µm,29.5s						
TBI				eLR	LR	07 13 54.4	
	comp=Z,781µm,27.8s						
RIV	Riverview	26.35	255	P	P	07 07 20.4	+2.2
RIV	Riverview	26.35	255	P	P	07 07 21.2	+3.0
RIV				pmax	pmax		
	comp=Z,2µm,1.3s						
RIV	Riverview	26.35	255	⇓P	P	07 07 21.3	+3.1
MGCD	Mangrove Creek	26.41	256	P	P	07 07 21.9	+3.0
WOLH	Wollongong Har	26.57	254	P	P	07 07 22.3	+2.1
SYDH	Sydney Hard Ro	26.69	255	P	P	07 07 23.6	+2.2
HURO	Huro Makira	27.56	313	P	P	07 07 32.5	+3.2
CNB	Canberra Magne	27.81	252	P	P	07 07 33.3	+1.8
EIDS	Eidsvold	27.88	273	IAmb	IAmb	07 07 41.8	
	comp=Z,541nm,0.9s						
EIDS	Eidsvold	27.88	273	P	P	07 07 32.8	+0.7
EIDS	Eidsvold	27.88	273	⇑P	P	07 07 32.9	+0.7
NGOA	Tingoa Renbel	27.96	308	P	P	07 07 33.5	+0.6
MILA	Mila	28.03	248	⇑P	P	07 07 38.0	+4.6
CAN	Canberra	28.10	252	IAMs_20	IAMs_20	07 16 22.1	
	comp=Z,85µm,22.0s						
CAN	Canberra	28.10	252	P	P	07 07 36.0	+1.9
CAN	Canberra	28.10	252	P	P	07 07 36.4	+2.3
CAN				pmax	pmax		
	comp=Z,1µm,1.0s						
CAN	Canberra	28.10	252	⇑P	P	07 07 36.0	+1.9
GD1S	Gladstone Soft	28.31	276	P	P	07 07 40.3	+4.3
PAE	Paea	28.77	70	eP	P	07 07 40.3	+0.2
	comp=Z,182nm,1.3s						
PAE				eS	S	07 12 26.3	-2.2
	comp=Z,4µm,25.5s						
PAE				eLR	LR	07 14 57.9	
	comp=Z,22µm,25.2s						
PPT2	Papeete2	28.82	70	eP	P	07 07 42.3	+1.7
	comp=Z,362nm,1.3s						
PPT2				eS	S	07 12 29.6	+0.3
	comp=Z,35µm,28.8s						
PPT2				eLQ	LQ	07 13 47.5	
	comp=Z,61µm,25.0s						
PPT2				eLR	LR	07 14 53.9	
	comp=Z,121µm,28.8s						
PPT2				eLR	LR	07 15 00.4	
	comp=Z,161µm,26.8s						
PPTF	Pamatai, Papee	28.82	70	P	P	07 07 40.1	-0.6
PPT	Papeete	28.83	70	P	P	07 07 41.5	+0.9
	comp=Z,33nm,0.9s,baz=176,slow=6.4,SNR=5.4						
PPT				LR	LR	07 19 00.8	
	comp=Z,16µm,18.4s,baz=239,slow=36						
	comp=Z,33nm,0.9s						
TVO	Taravao	28.98	70	eP	P	07 07 46.5	+4.5
	comp=Z,89nm,1.1s						
TVO				eS	S	07 12 29.6	-2.2
	comp=Z,5µm,26.0s						
TVO				eLR	LR	07 15 03.1	
	comp=Z,21µm,25.1s						
GLAD	Gladstone	29.36	240	P	P	07 07 46.5	+1.4
RMQ	Roma	29.56	270	P	P	07 07 49.8	+2.7
HNR	Honiara	29.59	311		P	07 07 47.3	-0.1
HNR				IAmb	IAmb	07 07 52.9	
	comp=Z,429nm,0.9s						
HNR	Honiara	29.59	311	LR	LR	07 17 44.9	
	comp=Z,49µm,21.9s,baz=150,slow=33						
HNR	Honiara	29.59	311	P	P	07 07 50.4	+3.0
HNR	Honiara	29.59	311	P	P	07 07 47.3	-0.1
HNR				pmax	pmax		
	comp=Z,429nm,0.9s						
ALEG	Aligegeo Malai	29.63	313	P	P	07 07 47.1	-0.6
SAVO	Savo Central	29.89	311	P	P	07 07 53.8	+3.7
MOO	Moorlands	30.22	237	P	P	07 07 54.5	+1.7
TAU	Tasmania Unive	30.23	236		P	07 07 52.8	+0.1
TAU				IAmb	IAmb	07 07 58.9	
	comp=Z,456nm,0.8s						
TAU	Tasmania Unive	30.23	236	P	P	07 07 54.4	+1.6
TAU	Tasmania Unive	30.23	236	P	P	07 07 52.8	+0.1
TAU				pmax	pmax		
	comp=Z,456nm,0.9s						
TAU	Tasmania Unive	30.23	236	⇓P	P	07 07 53.9	+1.1
TATA	Tatamba Isabel	30.47	312	P	P	07 07 56.1	+0.9
TOO	Toolangi	30.97	247	IAmb	IAmb	07 08 06.5	
	comp=Z,257nm,0.9s						
TOO	Toolangi	30.97	247	⇑P	P	07 08 00.3	+0.9
TOO	Toolangi	30.97	247	⇑P	P	07 08 00.3	+0.9
CMSA	Cobar Meteorol	31.14	259	P	P	07 08 02.1	+1.1
MLBS	Spotswood, Mel	31.45	247	P	P	07 08 07.6	+4.0
PMOR	Pomariorio Ree	31.58	67	eP	P	07 08 09.9	+4.9
	comp=Z,520nm,1.3s						
PMOR				eS	S	07 13 11.3	-1.3
	comp=Z,25µm,25.4s						
PMOR				eLR	LR	07 16 15.4	
	comp=Z,125µm,25.6s						
GEXS	Deakin Univers	31.94	246	P	P	07 08 09.8	+1.9
QLP	Quilpie	33.43	267	P	P	07 08 21.5	+0.4
QLP	Quilpie	33.43	267	⇑P	P	07 08 21.6	+0.4
ARPS	Mount Arapiles	33.89	249	P	P	07 08 26.0	+1.0
CTAO	Charters Tower	33.98	280		P	07 08 27.4	+1.5
CTAO	Charters Tower	33.98	280	P	P	07 08 26.5	+0.6
CTAO	Charters Tower	33.98	280	P	P	07 08 27.4	+1.5
CTAO				pmax	pmax		
	comp=Z,3µm,0.9s						
CTAO	Charters Tower	33.98	280	⇑P	P	07 08 26.8	+0.9
CTAO	Charters Tower	33.98	280	P	P	07 08 27.0	+1.0
STKA	Stephens Creek	34.54	257		P	07 08 32.2	+1.5
STKA	Stephens Creek	34.54	257	P	P	07 08 29.2	-1.5
	comp=Z,189nm,0.6s,baz=100,slow=10,SNR=325						
STKA				PKiKP	PKiKP	07 18 29.9	+1.6
	comp=Z,6.6nm,0.7s,baz=60,slow=4.2,SNR=3.0						
STKA				LR	LR	07 21 25.9	
	comp=Z,79µm,19.2s,baz=94,slow=34						
	comp=Z,189nm,0.6s						
STKA	Stephens Creek	34.54	257	P	P	07 08 32.0	+1.3
STKA	Stephens Creek	34.54	257	c iP	P	07 08 32.2	+1.5
MGBR	Mount Gambier	34.87	247		P	07 08 34.9	+1.4
MTSU	Mount Surprise	36.48	281	P	P	07 08 48.4	+0.9
HTT	Hallett	36.55	254	P	P	07 08 48.4	+0.4
HTT	Hallett	36.55	254	P	P	07 08 48.9	+0.9
HTT	Hallett	36.55	254	⇑P	P	07 08 48.6	+0.6
GHSS	Government Hou	36.63	252	P	P	07 08 49.4	+0.8
PTPS	Port Pirie	37.35	254	P	P	07 08 56.5	+1.7
WHYH	Whyalla	37.72	255	P	P	07 08 58.7	+0.8
RABL	Rabaul	38.65	307	IAMs_20	IAMs_20	07 22 58.1	
	comp=Z,37µm,22.0s						
PMG	Port Moresby	38.85	296		P	07 09 08.1	+0.5
PMG				IAmb	IAmb	07 09 15.7	
	comp=Z,220nm,0.8s						
PMG	Port Moresby	38.85	296	LR	LR	07 22 55.6	
	comp=Z,46µm,20.3s,baz=128,slow=33						
PMG	Port Moresby	38.85	296	P	P	07 09 11.8	+4.2
PMG	Port Moresby	38.85	296	P	P	07 09 08.1	+0.5
PMG				pmax	pmax		
	comp=Z,220nm,0.8s						
PMG	Port Moresby	38.85	296	⇑P	P	07 09 06.7	-0.9
BBOO	Buckleboo	39.02	255	P	P	07 09 08.7	-0.1
QIS	Mount Isa	39.47	275	P	P	07 09 12.7	0.0
COEN	Coen	39.48	286	P	P	07 09 13.8	+1.0
COEN	Coen	39.48	286	⇑P	P	07 09 13.3	+0.5
TAOE	Nuku Hiva Isla	41.30	66	eP	P	07 09 27.6	-0.5
	comp=Z,453nm,1.3s						
TAOE	Nuku Hiva Isla	41.30	66	ePP	PP	07 11 04.4	+0.8
	comp=Z,2µm,23.9s						
TAOE				eS	S	07 15 39.2	-2.1
	comp=Z,25µm,28.5s						
TAOE				eSS	SS	07 18 44.1	-1.2
	comp=Z,36µm,29.8s						
TAOE				eLR	LR	07 20 45.2	
	comp=Z,96µm,27.3s						
PTCN	Pitcairn Islan	42.33	95	IAMs_20	IAMs_20	07 22 15.7	
	comp=Z,40µm,22.0s						
AS01	Alice Springs	43.19	267	P	P	07 09 42.8	-0.5
ASAR	Alice Springs	43.23	267	P	P	07 09 43.5	-0.1
ASAR	Alice Springs	43.23	267	P	P	07 09 42.0	-1.6
	comp=Z,52nm,0.4s,baz=105,slow=7.5,SNR=637						
ASAR				PcP	PcP	07 11 34.1	+1.4
	comp=Z,49nm,0.8s,baz=102,slow=4.1,SNR=2.0						
ASAR				ScP	ScP	07 15 22.8	+0.2
	comp=Z,47nm,0.8s,baz=114,slow=4.4,SNR=8.1						
ASAR				S	S	07 16 09.7	+0.2
	comp=Z,2.9nm,0.7s,baz=110,slow=16,SNR=1.4						
ASAR				PKiKP	PKiKP	07 18 35.7	-0.2
	comp=Z,1.6nm,0.4s,baz=95,slow=1.5,SNR=4.6						
ASAR				LR	LR	07 27 38.1	
	comp=Z,95µm,18.1s,baz=120,slow=36						
ASAR				P3KP		07 40 19.4	
	comp=Z,1.0nm,0.8s,baz=318,slow=1.3,SNR=4.9						
ASAR				P4KPbc		07 47 39.5	
	comp=Z,0.4nm,0.5s,baz=108,slow=4.2,SNR=5.3						
	comp=Z,52nm,0.4s						
ASAR	Alice Springs	43.23	267	P	P	07 09 43.5	-0.1
MANU	Manus Island	43.53	304	IAmb	IAmb	07 09 51.8	
	comp=Z,219nm,0.9s						
MANU	Manus Island	43.53	304	⇑P	P	07 09 44.7	-1.3
DRV	Dumont d'Urvil	43.92	203	P	P	07 09 49.1	+0.6
DRV				PcP	PcP	07 11 36.6	+2.5
DRV				ScP	ScP	07 15 24.7	+0.2
WRAB	Tennant Creek	44.23	272	P	P	07 09 51.3	-0.4
WRAB	Tennant Creek	44.23	272	c iP	P	07 09 51.2	-0.5
WRA	Warramunga Arr	44.24	272	P	P	07 09 51.1	-0.7
WRA	Warramunga Arr	44.24	272	P	P	07 09 49.4	-2.3
	comp=Z,105nm,0.4s,baz=111,slow=8.0,SNR=848						
WRA				PcP	PcP	07 11 37.2	+1.0
	comp=Z,95nm,0.9s,baz=116,slow=7.5,SNR=3.2						
WRA				ScP	ScP	07 15 25.3	-1.4
	comp=Z,10nm,0.8s,baz=149,slow=6.0,SNR=4.0						
WRA				S	S	07 16 11.6	-13
	comp=Z,6.8nm,0.9s,baz=112,slow=4.0,SNR=2.0						
WRA				PKiKP	PKiKP	07 18 36.0	-0.9
	comp=Z,6.8nm,0.8s,baz=116,slow=0.4,SNR=5.8						
WRA				LR	LR	07 27 49.0	
	comp=Z,68µm,18.1s,baz=106,slow=36						
WRA				P3KP		07 40 19.7	
	comp=Z,1.1nm,0.8s,baz=282,slow=1.4,SNR=7.1						
WRA				P4KPbc		07 47 45.9	
	comp=Z,1.4nm,0.6s,baz=104,slow=4.2,SNR=16						
	comp=Z,105nm,0.4s						
WRA	Warramunga Arr	44.24	272	P	P	07 09 51.1	-0.7
WRA				pmax	pmax		
	comp=Z,98nm,0.8s						
FORT	Forrest	46.10	255	P	P	07 10 05.4	-1.0
SBA	Scott Base	47.75	184	P	P	07 10 23.0	+4.3
SBA	Scott Base	47.75	184	P	P	07 10 23.0	+4.3
SBA				pmax	pmax		
	comp=Z,463nm,1.0s						
SBA	Scott Base	47.75	184	P	P	07 10 23.1	+4.5
SBA				PcP	PcP	07 11 52.2	+4.8
VNDA	Vanda	47.81	186	P	P	07 10 22.6	+3.4
VNDA				IAmb	IAmb	07 10 31.1	
	comp=Z,117nm,0.8s						
VNDA	Vanda	47.81	186	P	P	07 10 17.3	-1.9
	comp=Z,1.0nm,0.7s,baz=316,slow=4.0,SNR=5.5						
VNDA				S	S	07 17 14.5	+0.3
	comp=Z,6.8nm,0.9s,baz=292,slow=20,SNR=0.9						
VNDA				LR	LR	07 27 06.2	
	comp=Z,13µm,21.7s,baz=28,slow=32						
VNDA	Vanda	47.81	186	P	P	07 10 22.6	+3.4
VNDA				pmax	pmax		
	comp=Z,117nm,0.8s						
VNDA	Vanda	47.81	186	P	P	07 10 22.3	+3.2
JOHN	Johnston Islan	47.83	11	P	P	07 10 20.7	+0.8
JAY	Jayapura	48.15	297	ScP	ScP	07 15 44.9	+1.8
	comp=Z,46nm,0.9s,baz=85,slow=9.2,SNR=4.9						
JAY	Jayapura	48.15	297	P	P	07 10 19.2	-3.4
	comp=Z,31µmcomp=Z,8µmcomp=Z,649nm,0.9s						
GENI	Genyem	48.51	297	P	P	07 10 25.1	-0.3
GENI	Genyem	48.51	297	P	P	07 10 25.0	-0.3
	comp=Z,35µmcomp=Z,15µmcomp=Z,1µm,1.0s						
GENI	Genyem	48.51	297	⇑P	P	07 10 23.4	-1.9
KDU	Kakadu	49.10	280	P	P	07 10 28.9	-0.9
KDU	Kakadu	49.10	280	⇑P	P	07 10 28.7	-1.1
SMPI	Sarmi	50.02	296	P	P	07 10 35.8	-1.0
	comp=Z,34µmcomp=Z,6µmcomp=Z,301nm,1.0s						
MTN	Manton Dam	50.16	279	P	P	07 10 38.1	+0.2
MTN	Manton Dam	50.16	279	⇑P	P	07 10 36.4	-1.6
WAKE	Wake Island	51.88	341	P	P	07 10 49.8	-0.8
WAKE				IAmb	IAmb	07 11 02.7	
	comp=Z,321nm,1.1s						
WAKE	Wake Island	51.88	341	P	P	07 10 52.8	+2.1
WAKE	Wake Island	51.88	341	⇑P	P	07 10 52.8	+2.1
WAKE	Wake Island	51.88	341	P	P	07 10 52.7	+2.1
SRPI	Serui, Papua	52.01	294	P	P	07 10 51.1	-0.8
	comp=Z,561nm,0.9s						
H11N3	WAKE ISLAND Hy	52.22	342	P	P	07 10 56.9	+4.0
	baz=198,slow=8.7,SNR=12						
H11N1	WAKE ISLAND Hy	52.22	342	P	P	07 10 56.9	+3.9
	baz=198,slow=8.7,SNR=7.9						
H11N2	WAKE ISLAND Hy	52.24	342	P	P	07 10 57.2	+4.1
	baz=198,slow=8.7,SNR=7.6						
FITZ	Fitzroy Crossi	52.49	270	IAmb	IAmb	07 11 01.0	
	comp=Z,189nm,0.9s						
FITZ	Fitzroy Crossi	52.49	270	P	P	07 10 52.0	-3.4
	comp=Z,184nm,1.1s,baz=137,slow=5.5,SNR=59						
FITZ				LR	LR	07 32 03.0	
	comp=Z,71µm,20.6s,baz=104,slow=35						
	comp=Z,184nm,1.1s						
FITZ	Fitzroy Crossi	52.49	270	P	P	07 10 54.0	-1.4
FITZ	Fitzroy Crossi	52.49	270	⇑P	P	07 10 54.1	-1.3
BAKI	Biak	52.54	295	P	P	07 10 58.9	+3.1
CCD	Concordia, Ant	52.70	196	P	P	07 10 57.9	+1.3
CCD				ScP	ScP	07 16 04.4	+2.3
KMPI	Kaimana, Papua	52.96	291	P	P	07 10 57.8	-1.1
	comp=Z,35µmcomp=Z,11µmcomp=Z,730nm,1.0s						
RKPI	Ransiki, Papua	53.86	293	P	P	07 11 08.6	+3.1
KLBR	Kellerberrin	54.38	251	P	P	07 11 07.2	-1.9
NWAO	Narrogin (SRO)	54.42	249	P	P	07 11 07.8	-1.6
NWAO				IAmb	IAmb	07 11 11.9	
	comp=Z,616nm,1.6s						
NWAO	Narrogin (SRO)	54.42	249	P	P	07 11 06.8	-2.6
	comp=Z,170nm,1.1s,baz=107,slow=6.0,SNR=27						
NWAO				LR	LR	07 30 55.8	
	comp=Z,27µm,21.4s,baz=102,slow=32						
	comp=Z,170nm,1.1s						
NWAO	Narrogin (SRO)	54.42	249	P	P	07 11 09.3	-0.1
NWAO				P	P	07 11 09.3	-0.1
NWAO	Narrogin (SRO)	54.42	249	P	P	07 11 08.4	-1.0
NWAO	Narrogin (SRO)	54.42	249	P	P	07 11 07.8	-1.6
NWAO				pmax	pmax		
	comp=Z,616nm,1.6s						
HMH	Humu'ula Sheep	54.44	26	P	P	07 11 10.6	+0.7
POHA	Pohakuloa	54.56	26	P	P	07 11 10.3	-0.4
POHA	Pohakuloa	54.56	26	P	P	07 11 12.2	+1.5
POHA	Pohakuloa	54.56	26	⇑P	P	07 11 15.0	+4.3
FAKI	Fak Fak	54.56	290	P	P	07 11 09.0	-1.7
FAKI				IAMs_20	IAMs_20	07 33 40.2	
	comp=Z,19µm,22.0s						
FAKI	Fak Fak	54.56	290	P	P	07 11 10.7	0.0
FAKI	Fak Fak	54.56	290	P	P	07 11 07.5	-3.2
	comp=Z,34µmcomp=Z,7µmcomp=Z,440nm,0.9s						
FAKI	Fak Fak	54.56	290	⇑P	P	07 11 08.4	-2.2
CASY	Casey	54.94	208	P	P	07 11 12.8	+0.2
CASY	Casey	54.94	208	IAMs_20	IAMs_20	07 33 37.3	
	comp=Z,17µm,18.0s						
CASY	Casey	54.94	208	⇑P	P	07 11 12.3	-0.3
CASY	Casey	54.94	208	P	P	07 11 12.7	0.0
CASY				ScP	ScP	07 16 12.2	+0.7
KIP	Kipapa	55.21	23	P	P	07 11 15.2	+0.1
KIP	Kipapa	55.21	23	P	P	07 11 16.1	+1.0
KIP	Kipapa	55.21	23	c iP	P	07 11 14.9	-0.2
KIP				pmax	pmax		
	comp=Z,927nm,1.2s						
KIP				MLR	MLR		
	comp=Z,4µm,19.0s						
KIP	Kipapa	55.21	23	P	P	07 11 13.6	-1.5
MEEK	Meekatharra	55.24	257	P	P	07 11 13.6	-1.9
KHLH	Kahului Airpor	55.27	25	P	P	07 11 14.6	-0.9
MUN	Mundaring	55.52	250	P	P	07 11 15.8	-1.6
MUN	Mundaring	55.52	250	P	P	07 11 15.5	-1.9
BLDU	Ballidu	55.53	252	P	P	07 11 15.3	-2.2
BNDI	Bandanaira	55.56	287	P	P	07 11 20.2	+2.4
BNDI	Bandanaira	55.56	287	P	P	07 11 18.0	+0.2
	comp=Z,34µmcomp=Z,1µm,0.9s						
BNDI	Bandanaira	55.56	287	⇑P	P	07 11 18.9	+1.1
MTKN	Mount Kenneth	55.89	250	P	P	07 11 21.9	+1.9
PSA00	Pilbara Seismi	56.06	263	P	P	07 11 18.9	-2.5
PSA00	Pilbara Seismi	56.06	263	IAmb	IAmb	07 12 25.3	
	comp=Z,99nm,0.8s						
PSA00	Pilbara Seismi	56.06	263	P	P	07 11 21.1	-0.3
H01W1	Cape Leeuwin H	56.32	246	P	P	07 11 26.4	+3.6
	baz=115,slow=8.3,SNR=8.7						
MBWA	Marble Bar	56.32	264	P	P	07 11 21.7	-1.6
MBWA				IAmb	IAmb	07 11 26.1	
	comp=Z,126nm,0.8s						
MBWA	Marble Bar	56.32	264	P	P	07 11 23.1	-0.1
MBWA				P	P	07 11 23.1	-0.1
MBWA	Marble Bar	56.32	264	P	P	07 11 21.9	-1.4
MBWA	Marble Bar	56.32	264	⇑P	P	07 11 20.8	-2.5
MBWA	Marble Bar	56.32	264	P	P	07 11 20.7	-2.5
MBWA				PcP	PcP	07 12 17.9	-2.5
H01W2	Cape Leeuwin H	56.34	246	P	P	07 11 26.5	+3.6
	baz=115,slow=8.3,SNR=6.1						
H01W3	Cape Leeuwin H	56.34	246	P	P	07 11 26.8	+3.9
	baz=115,slow=8.3,SNR=6.1						
MORW	Morawa	56.57	254	P	P	07 11 23.0	-2.0
MORW	Morawa	56.57	254	⇑P	P	07 11 22.8	-2.2
SWI	Sorong	56.57	292	P	P	07 11 24.2	-0.9
	comp=Z,28µmcomp=Z,10µmcomp=Z,585nm,0.9s						
GUMO	Guam	56.78	315	P	P	07 11 25.0	-1.4
GUMO	Guam	56.78	315	IAMs_20	IAMs_20	07 32 03.2	
	comp=Z,20µm,22.0s						
GUMO	Guam	56.78	315	LR	LR	07 33 48.2	
	comp=Z,14µm,19.2s,baz=136,slow=34						
GUMO	Guam	56.78	315	P	P	07 11 28.3	+1.9
GUMO	Guam	56.78	315	P	P	07 11 25.0	-1.4
GUMO				pmax	pmax		
	comp=Z,1µm,1.0s						
GUMO	Guam	56.78	315	⇑P	P	07 11 27.3	+0.8
MSAI	Masohi	57.02	288	P	P	07 11 32.5	+4.2
AAI	Ambon	57.44	287	P	P	07 11 29.6	-1.6
	comp=Z,7µmcomp=Z,194nm,0.9s						
SOEI	Soe	57.53	278	P	P	07 11 31.4	-0.6
SOEI	Soe	57.53	278	P	P	07 11 34.1	+2.1
SOEI	Soe	57.53	278	P	P	07 11 30.7	-1.3
	comp=Z,13µmcomp=Z,676nm,0.9s						
SOEI	Soe	57.53	278	⇑P	P	07 11 31.8	-0.2
BATI	Baumata	57.82	277	P	P	07 11 32.2	-1.7
	comp=Z,46nm,0.7s,baz=111,slow=17,SNR=19						
BATI				LR	LR	07 36 37.4	
	comp=Z,110µm,19.4s,baz=136,slow=36						
	comp=Z,46nm,0.7s						
BATI	Baumata	57.82	277	P	P	07 11 31.6	-2.4
	comp=Z,33µmcomp=Z,8µmcomp=Z,520nm,0.8s						
MIDW	Midway	58.59	0	IAMs_20	IAMs_20	07 31 42.1	
	comp=Z,24µm,22.0s						
MIDW	Midway	58.59	0	P	P	07 11 40.0	+1.2
NLAI	Namlea	58.59	286	P	P	07 11 37.7	-1.6
	comp=Z,37µmcomp=Z,7µmcomp=Z,343nm,0.8s						
QSPA	South Pole Qui	59.41	180	IAMs_20	IAMs_20	07 35 21.5	
	comp=Z,18µm,19.0s						
QSPA	South Pole Qui	59.41	180	P	P	07 11 45.2	+0.8
	comp=Z,54nm,0.8s,baz=39,slow=2.2,SNR=97						
QSPA				S	S	07 19 51.8	-0.2
	comp=Z,22nm,1.0s,baz=359,slow=23,SNR=13						
QSPA				LR	LR	07 35 13.8	
	comp=Z,16µm,19.0s,baz=38,slow=34						
	comp=Z,54nm,0.8s						
QSPA	South Pole Qui	59.41	180	P	P	07 11 47.2	+2.7
MMRI	Maumere	59.82	278	P	P	07 11 48.4	+0.5
MMRI	Maumere	59.82	278	P	P	07 11 49.4	+1.6
MMRI	Maumere	59.82	278	P	P	07 11 45.2	-2.6
	comp=Z,34µmcomp=Z,10µmcomp=Z,480nm,1.0s						
MMRI	Maumere	59.82	278	⇑P	P	07 11 45.8	-2.0
SANI	Sanana	60.17	287	P	P	07 11 47.3	-3.0
SANI	Sanana	60.17	287	P	P	07 11 51.8	+1.5
SANI	Sanana	60.17	287	P	P	07 11 48.8	-1.5
	comp=Z,27µmcomp=Z,7µmcomp=Z,388nm,1.4s						
SANI	Sanana	60.17	287	⇑P	P	07 11 47.7	-2.6
EDFI	Ende, Flores	60.23	278	P	P	07 11 49.0	-1.8
	comp=Z,33µmcomp=Z,5µmcomp=Z,231nm,0.8s						
GIRL	Giralia	60.42	260	P	P	07 11 52.4	+0.5
GIRL	Giralia	60.42	260	P	P	07 11 54.0	+2.1
GIRL	Giralia	60.42	260	⇓P	P	07 11 52.1	+0.2
BASI	Baing, Sumba	60.45	276	P	P	07 11 52.4	+0.2
	comp=Z,2µm,1.4s						
TNTI	Ternate	60.67	290	P	P	07 11 52.1	-1.5
TNTI				IAmb	IAmb	07 11 58.7	
	comp=Z,251nm,1.1s						
TNTI	Ternate	60.67	290	P	P	07 11 54.4	+0.8
TNTI	Ternate	60.67	290	P	P	07 11 52.1	-1.5
WSI	Waingapu	60.96	276	P	P	07 11 54.0	-1.6
WBSI	Waikabubak, Su	61.75	276	P	P	07 11 58.5	-2.6
	comp=Z,29µmcomp=Z,7µmcomp=Z,534nm,0.9s						
KMSI	Cibinong	63.31	288	P	P	07 12 11.7	+0.3
	comp=Z,32µmcomp=Z,10µmcomp=Z,537nm,0.8s						
LUWI	Luwuk	63.40	286	P	P	07 12 09.5	-2.4
LUWI	Luwuk	63.40	286	P	P	07 12 14.0	+2.0
LUWI	Luwuk	63.40	286	P	P	07 12 13.4	+1.4
	comp=Z,32µmcomp=Z,6µmcomp=Z,475nm,1.1s						
PLAI	Plampang	63.54	275	P	P	07 12 12.0	-0.9
PLAI	Plampang	63.54	275	P	P	07 12 10.1	-2.8
	comp=Z,32µmcomp=Z,11µmcomp=Z,1µm,0.8s						
KAPI	Kappang	63.79	280	P	P	07 12 13.6	-1.0
KAPI				IAmb	IAmb	07 12 18.3	
	comp=Z,534nm,1.9s						
KAPI	Kappang	63.79	280	P	P	07 12 13.8	-0.8
	comp=Z,36nm,0.6s,baz=118,slow=2.8,SNR=16						
KAPI				LR	LR	07 40 53.8	
	comp=Z,23µm,18.1s,baz=123,slow=37						
	comp=Z,36nm,0.6s						
KAPI	Kappang	63.79	280	P	P	07 12 14.3	-0.3
KAPI				P	P	07 12 14.3	-0.3
KAPI				S	S	07 20 44.6	-3.9
KAPI				S	S	07 20 44.6	-3.9
KAPI	Kappang	63.79	280	P	P	07 12 16.7	+2.1
KAPI	Kappang	63.79	280	c iP	P	07 12 12.9	-1.7
KAPI	Kappang	63.79	280	⇑P	P	07 12 12.8	-1.8
BNSI	Bone	63.81	281	P	P	07 12 13.0	-1.7
SGSI	Sangihe	63.87	292	P	P	07 12 14.1	-1.0
	comp=Z,30µmcomp=Z,9µmcomp=Z,693nm,0.8s						
SPSI	Sidrap Palu	64.33	281	P	P	07 12 16.9	-1.2

APSI	**Ampana**	**64.40**	**285**	P	**P**	**07 12 19.3**	**+0.7**
	comp=Z,19µmcomp=Z,248nm,1.3s						
TTSI	**Tana Toraja**	**64.77**	**282**	P	**P**	**07 12 19.9**	**-1.1**
MRSI	**Marisa**	**64.93**	**287**	P	**P**	**07 12 21.1**	**-0.9**
	comp=Z,29µmcomp=Z,161nm,0.7s						
DNP	**Denpasar**	**65.81**	**274**	P	**P**	**07 12 26.9**	**-0.9**
	comp=Z,34µmcomp=Z,1µm,1.4s						
DAV	**Davao City (W)**	**65.87**	**295**	LR	LR	07 41 43.7	
	comp=Z,5µm,19.3s,baz=137,slow=37						
DAV	**Davao City (W)**	**65.87**	**295**	P	**P**	**07 12 27.4**	**-0.7**
DAV	**Davao City (W)**	**65.87**	**295**	P	**P**	**07 12 24.0**	**-4.1**
PCI	**Palu**	**65.91**	**284**	P	**P**	**07 12 28.7**	**+0.3**
	comp=Z,32µmcomp=Z,10µmcomp=Z,716nm,1.4s						
SRBI	**Singaraja**	**66.11**	**275**	P	**P**	**07 12 31.1**	**+1.5**
	comp=Z,28µmcomp=Z,9µmcomp=Z,776nm,1.0s						
TOLI2	**Tolitoli**	**66.24**	**286**	P	**P**	**07 12 27.9**	**-2.6**
TOLI2				IAmb	IAmb	07 12 34.2	
	comp=Z,121nm,1.0s						
TOLI2	**Tolitoli**	**66.24**	**286**	P	**P**	**07 12 28.7**	**-1.8**
MPSI	**Mapaga**	**66.54**	**285**	P	**P**	**07 12 30.4**	**-2.0**
	comp=Z,31µmcomp=Z,259nm,0.8s						
JAGI	**Jajag, Banyuwa**	**66.83**	**274**	P	**P**	**07 12 32.8**	**-1.4**
JAGI	**Jajag, Banyuwa**	**66.83**	**274**	P	**P**	**07 12 32.7**	**-1.6**
JAGI	**Jajag, Banyuwa**	**66.83**	**274**	P	**P**	**07 12 32.3**	**-2.0**
	comp=Z,28µmcomp=Z,9µmcomp=Z,899nm,1.0s						
JAGI	**Jajag, Banyuwa**	**66.83**	**274**	⇑P	**P**	**07 12 31.5**	**-2.8**
GMJI	**Gumukmas**	**67.53**	**274**	P	**P**	**07 12 37.5**	**-1.2**
	comp=Z,10µmcomp=Z,981nm,1.0s						
KMMI	**Kalianget**	**67.69**	**275**	P	**P**	**07 12 41.4**	**+1.7**
	comp=Z,30µmcomp=Z,10µmcomp=Z,969nm,1.0s						
JCJ	**Chichijima**	**69.00**	**322**	IAmb	IAmb	07 12 56.8	
	comp=Z,166nm,0.9s						
JCJ	**Chichijima**	**69.00**	**322**	P	**P**	**07 12 49.9**	**+2.3**
GRJI	**Gresik**	**69.03**	**274**	P	**P**	**07 12 47.5**	**-0.7**
SMAI	**San Martin Ant**	**69.11**	**158**	IAmb	IAmb	07 13 15.5	
	comp=Z,273nm,1.3s						
BELA	**Belgrano 2**	**69.47**	**172**	P	**P**	**07 12 51.0**	**+1.1**
PCJI	**Pacitan**	**69.52**	**273**	P	**P**	**07 12 50.3**	**-0.9**
TBJI	**Tambak Boyo**	**69.62**	**274**	P	**P**	**07 12 51.7**	**-0.1**
	comp=Z,29µmcomp=Z,11µmcomp=Z,765nm,0.9s						
NGJI	**Ngawi**	**69.68**	**273**	P	**P**	**07 12 52.1**	**-0.1**
	comp=Z,9µmcomp=Z,801nm,0.9s						
WOJI	**Wonogiri, Jawa**	**69.91**	**273**	P	**P**	**07 12 52.7**	**-0.9**
UGM	**Wanagama**	**70.22**	**272**	P	**P**	**07 12 55.0**	**-0.6**
UGM	**Wanagama**	**70.22**	**272**	P	**P**	**07 12 57.0**	**+1.5**
UGM	**Wanagama**	**70.22**	**272**	P	**P**	**07 12 55.8**	**+0.3**
	comp=Z,30µmcomp=Z,6µmcomp=Z,717nm,1.0s						
MYLDM	**Lahad Datu**	**70.42**	**289**	P	**P**	**07 12 56.7**	**+0.1**
YOGI	**Yogyakarta**	**70.47**	**272**	P	**P**	**07 12 56.6**	**-0.4**
	comp=Z,8µmcomp=Z,731nm,0.9s						
SMRI	**Semarang**	**70.72**	**273**	P	**P**	**07 12 58.1**	**-0.5**
	comp=Z,7µmcomp=Z,456nm,0.8s						
SMRI	**Semarang**	**70.72**	**273**	⇑P	**P**	**07 13 00.2**	**+1.6**
PMSA	**Palmer Station**	**71.94**	**156**	IAMs_20	IAMs_20	07 37 55.3	
	comp=Z,11µm,21.0s						
PMSA	**Palmer Station**	**71.94**	**156**	⇓P	P	07 13 10.4	+5.4
PMSA	**Palmer Station**	**71.94**	**156**	*e*P	**P**	**07 13 09.7**	**+4.6**
MAW	**Mawson**	**72.08**	**201**	P	**P**	**07 13 03.9**	**-2.0**
	comp=Z,15nm,0.6s,baz=134,slow=8.4,SNR=55						
MAW				S	**S**	**07 22 22.1**	**-3.9**
	comp=Z,3.1nm,1.1s,baz=162,slow=19,SNR=1.2						
MAW				LR	LR	07 43 26.3	
	comp=Z,34µm,20.6s,baz=116,slow=35						
	comp=Z,15nm,0.6s						
MAW	**Mawson**	**72.08**	**201**	⇑P	**P**	**07 13 06.5**	**+0.7**
KKM	**Kota Kinabalu**	**72.77**	**288**	P	**P**	**07 13 09.1**	**-1.9**
JCJI	**Jatiwangi**	**72.86**	**273**	P	**P**	**07 13 10.2**	**-1.2**
BBJI	**Bungbulang**	**72.92**	**271**	P	**P**	**07 13 11.6**	**-0.2**
XMI	**Christmas Isla**	**73.15**	**268**	P	**P**	**07 13 14.4**	**+1.2**
XMIS	**Christmas Isla**	**73.17**	**268**	P	**P**	**07 13 12.4**	**-0.9**
LEM	**Lembang**	**73.26**	**272**	P	**P**	**07 13 11.3**	**-2.7**
	comp=Z,195nm,1.0s,baz=74,slow=6.9,SNR=20						
LEM				PP	**PP**	**07 15 57.9**	**+0.6**
	comp=Z,285nm,0.9s,baz=99,slow=5.9,SNR=7.1						
LEM				LR	LR	07 47 04.4	
	comp=Z,24µm,19.1s,baz=111,slow=37						
	comp=Z,195nm,1.0s						
CNJI	**Cibinong**	**73.44**	**271**	P	**P**	**07 13 15.6**	**+0.8**
	comp=Z,5µmcomp=Z,590nm,1.1s						
STKI	**Sintang**	**73.47**	**280**	P	**P**	**07 13 15.2**	**+0.2**
	comp=Z,27µmcomp=Z,795nm,0.9s						
TGY	**Tagaytay City**	**73.77**	**298**	P	**P**	**07 13 14.4**	**-2.3**
	comp=Z,202nm,0.2s,baz=207,slow=14,SNR=17						
TGY				LR	LR	07 42 43.6	
	comp=Z,6µm,22.0s,baz=134,slow=34						
SKJI	**Sukabumi**	**74.08**	**271**	P	**P**	**07 13 19.5**	**+0.9**
	comp=Z,24µmcomp=Z,12µmcomp=Z,1µm,1.1s						
SBJI	**Serang**	**74.89**	**272**	P	**P**	**07 13 25.0**	**+1.7**
	comp=Z,26µmcomp=Z,836nm,1.3s						
CGJI	**Cibinong**	**75.02**	**271**	P	**P**	**07 13 23.0**	**-1.1**
	comp=Z,12µmcomp=Z,1µm,1.1s						
JHJ2	**Mitsune**	**75.03**	**324**	P	**P**	**07 13 24.0**	**+0.4**
JHJ2	**Mitsune**	**75.03**	**324**	P	**P**	**07 13 25.3**	**+1.7**
MG03	**Isla Dawson**	**75.13**	**144**	IAmb	IAmb	07 13 49.9	
	comp=Z,634nm,1.8s						
MG05	**Puerto Natales**	**75.19**	**142**	P	**P**	**07 13 25.2**	**+0.8**
MG05				IAmb	IAmb	07 13 38.1	
	comp=Z,191nm,1.0s						
KSM	**Kuching**	**75.21**	**281**	P	**P**	**07 13 23.9**	**-1.2**
ESPZ	**Base Esperanza**	**75.24**	**156**	IAmb	IAmb	07 13 46.6	
	comp=Z,314nm,1.0s						
TPI	**Tanjungpandan**	**75.27**	**276**	P	**P**	**07 13 24.4**	**-1.1**
	comp=Z,28µmcomp=Z,6µmcomp=Z,424nm,1.1s						
USHA	**Ushuaia**	**75.60**	**146**	LR	LR	07 40 17.5	
	comp=Z,3µm,21.9s,baz=235,slow=31						
MG01	**Puerto William**	**75.94**	**146**	IAmb	IAmb	07 13 56.4	
	comp=Z,356nm,1.2s						
BLSI	**Bandar Lampung**	**76.03**	**272**	P	**P**	**07 13 29.2**	**-0.7**
	comp=Z,11µmcomp=Z,887nm,0.9s						
SYO	**Syowa Base**	**76.86**	**193**	⇑*i*P	**P**	**07 13 34.2**	**+0.6**
JOW	**Kunigami**	**76.96**	**312**	IAmb	IAmb	07 13 39.4	
	comp=Z,169nm,0.9s						
JOW	**Kunigami**	**76.96**	**312**	P	**P**	**07 13 34.0**	**-0.8**
	comp=Z,21nm,0.4s,baz=116,slow=2.0,SNR=10						
JOW				LR	LR	07 43 12.0	
	comp=Z,17µm,21.4s,baz=134,slow=32						
	comp=Z,21nm,0.4s						
JOW	**Kunigami**	**76.96**	**312**	P	**P**	**07 13 38.2**	**+3.4**
JSG	**Sagara**	**77.10**	**324**	P	**P**	**07 13 37.9**	**+2.6**
LWLI	**Liwa**	**77.22**	**272**	P	**P**	**07 13 36.5**	**-0.3**
AY03	**Cochrane**	**77.44**	**138**	IAmb	IAmb	07 14 04.2	
	comp=Z,319nm,1.2s						
TROLL	**Troll, Antarti**	**77.58**	**180**	⇑P	**P**	**07 13 39.1**	**+1.3**
	comp=Z,19µm,0.9s						
TROLL				⇑S	**S**	**07 23 27.6**	**0.0**
SNAA	**Sanae**	**77.86**	**178**	⇑P	**P**	**07 13 40.2**	**+0.9**
	comp=Z,2µm,1.0s						
SNAA				⇑S	**S**	**07 23 29.3**	**-1.2**
SNAA	**Sanae**	**77.86**	**178**	P	**P**	**07 13 40.5**	**+1.2**
SNAA				IAMs_20	IAMs_20	07 44 23.6	
	comp=Z,11µm,21.0s						
SNAA	**Sanae**	**77.86**	**178**	P	**P**	**07 13 39.2**	**-0.1**
	comp=Z,84nm,0.8s,baz=210,slow=7.5,SNR=47						
SNAA				S	**S**	**07 23 28.9**	**-1.6**
	comp=Z,4.7nm,1.2s,baz=204,slow=15,SNR=1.6						
SNAA				PKKPbc	**PKKPbc**	**07 32 39.7**	**-1.7**
	comp=Z,2.3nm,0.8s,baz=25,slow=1.7,SNR=8.1						
SNAA				LR	LR	07 47 57.6	
	comp=Z,8µm,18.5s,baz=194,slow=36						
	comp=Z,84nm,0.8s						
SNAA	**Sanae**	**77.86**	**178**	*c* *i*P	**P**	**07 13 40.0**	**+0.7**
SNAA				pmax	pmax		
	comp=Z,1µm,1.1s						
SNAA				MLR	MLR		
	comp=Z,5µm,19.0s						
VNA3	**Neumayer Olymp**	**78.00**	**176**	⇑P	**P**	**07 13 40.9**	**+0.9**
	comp=Z,270nm,0.6s						
VNA3				⇑S	**S**	**07 23 30.9**	**-1.1**
INU	**Inuyama**	**78.22**	**324**	P	**P**	**07 13 40.0**	**-1.6**
INU				IAmb	IAmb	07 13 47.5	
	comp=Z,141nm,0.8s						
INU	**Inuyama**	**78.22**	**324**	P	**P**	**07 13 40.7**	**-0.9**
JGF	**Kuroka**	**78.24**	**324**	IAmb	IAmb	07 13 45.3	
	comp=Z,110nm,0.8s						
JGF	**Kuroka**	**78.24**	**324**	P	**P**	**07 13 40.2**	**-1.6**
JMM	**Marumori**	**78.39**	**328**	P	**P**	**07 13 44.5**	**+2.0**
VNA2	**Neumayer--Watz**	**78.44**	**177**	⇑P	**P**	**07 13 43.5**	**+1.1**
	comp=Z,174nm,0.6s,baz=171,slow=5.1						
VNA2				⇓S	**S**	**07 23 35.7**	**-0.9**
	baz=119,slow=34						
MJAR	**Matsushiro Arr**	**78.56**	**325**	P	**P**	**07 13 40.6**	**-2.8**
	comp=Z,19nm,0.8s,baz=156,slow=5.1,SNR=28						
MJAR				PKPPKP	**P'P'df**	**07 40 43.6**	**+5.4**
	comp=Z,1.8nm,0.9s,baz=336,slow=2.3,SNR=4.1						
MJAR				LR	LR	07 43 08.6	
	comp=Z,6µm,21.8s,baz=145,slow=32						
	comp=Z,19nm,0.8s						
MAJO	**Matsushiro**	**78.56**	**325**	P	**P**	**07 13 41.6**	**-1.9**
MAJO	**Matsushiro**	**78.56**	**325**	P	**P**	**07 13 41.5**	**-1.9**
MAJO	**Matsushiro**	**78.56**	**325**	*c* *i*P	**P**	**07 13 41.0**	**-2.5**
MAJO				pmax	pmax		
	comp=Z,104nm,0.9s						
MAJO				MLR	MLR		
	comp=Z,3µm,19.0s						
NVL	**N'lazarevskaya**	**78.59**	**183**	*e*P	P	07 13 49.5	+6.3
NVL				*e*		07 14 01.7	
NVL				*e*		07 16 47.8	
NVL				*e*PPP	PPP	07 18 31.6	
NVL				*e*S	**S**	**07 23 45.5**	**+7.3**
NVL				*i* SSS	SSS	07 31 58.9	
NVL				pmax	pmax		
	comp=Z,132nm,0.9s						
NVL				smax	smax		
	comp=E,3µm,11.4s						
COYC	**Coyhaique**	**78.63**	**136**	IAMs_20	IAMs_20	07 40 27.1	
	comp=Z,13µm,22.0s						
COYC	**Coyhaique**	**78.63**	**136**	IAmb	IAmb	07 14 03.8	
	comp=Z,370nm,1.1s						
JMN	**Monobe**	**78.63**	**321**	P	**P**	**07 13 44.9**	**+0.9**
VNA1	**Neumayer--Stat**	**78.67**	**176**	⇑P	**P**	**07 13 45.0**	**+1.4**
	comp=Z,287nm,0.9s						
YOJ	**Yonaguni jima**	**78.84**	**307**	IAMs_20	IAMs_20	07 47 25.2	
	comp=Z,9µm,21.0s						
YOJ	**Yonaguni jima**	**78.84**	**307**	P	**P**	**07 13 46.8**	**+1.5**
JWT	**Wachi**	**79.00**	**323**	P	**P**	**07 13 48.7**	**+2.8**
TWGBT	**Beinan**	**79.13**	**305**	P	**P**	**07 13 47.9**	**+1.0**
TWG	**Pinlang**	**79.14**	**305**	IAmb	IAmb	07 13 56.9	
	comp=Z,341nm,1.2s						
KSI	**Kapahiang**	**79.17**	**272**	P	**P**	**07 13 47.9**	**+0.4**
	comp=Z,15µmcomp=Z,1µm,0.8s						
YULB	**Yu-li**	**79.34**	**305**	P	**P**	**07 13 48.2**	**+0.1**
NACB	**Ninganchiao**	**79.64**	**306**	IAmb	IAmb	07 13 54.2	
	comp=Z,307nm,1.2s						
NACB	**Ninganchiao**	**79.64**	**306**	P	**P**	**07 13 51.1**	**+1.5**
JSD	**Sado**	**79.72**	**326**	P	**P**	**07 13 50.5**	**+0.8**
TPUB	**Ta-pu**	**79.76**	**305**	IAMs_20	IAMs_20	07 45 33.6	
	comp=Z,10µm,20.0s						
TPUB	**Ta-pu**	**79.76**	**305**	P	**P**	**07 13 50.2**	**-0.1**
SSLB	**Suanglung**	**79.84**	**305**	IAmb	IAmb	07 13 54.7	
	comp=Z,281nm,0.9s						
SSLB	**Suanglung**	**79.84**	**305**	P	**P**	**07 13 51.2**	**+0.4**
JNU	**Nakatsue**	**79.86**	**318**	IAmb	IAmb	07 14 00.1	
	comp=Z,157nm,0.9s						
JNU	**Nakatsue**	**79.86**	**318**	P	**P**	**07 13 48.4**	**-2.4**
	comp=Z,20nm,0.9s,baz=120,slow=5.6,SNR=20						
JNU				LR	LR	07 47 37.1	
	comp=Z,3µm,18.8s,baz=139,slow=35						
	comp=Z,20nm,0.9s						
JNU	**Nakatsue**	**79.86**	**318**	P	**P**	**07 13 51.0**	**+0.3**
COCO	**West Island**	**79.90**	**262**	P	**P**	**07 13 52.7**	**+1.3**
COCO				P	**P**	**07 13 52.7**	**+1.3**
COCO	**West Island**	**79.90**	**262**	P	**P**	**07 13 53.2**	**+1.8**
COCO	**West Island**	**79.90**	**262**	P	**P**	**07 13 53.9**	**+2.5**
LL02	**Futaleuf**	**80.05**	**134**	IAmb	IAmb	07 14 18.4	
	comp=Z,278nm,1.1s						
YHNB	**Yeheng**	**80.11**	**306**	P	**P**	**07 13 54.4**	**+2.1**
LL01	**San Ignacio de**	**80.14**	**134**	IAmb	IAmb	07 14 10.8	
	comp=Z,195nm,1.4s						
H03S2	**Juan Fernandez**	**80.19**	**123**	T	T	08 43 07.2	
	baz=238,slow=75,SNR=646						
H03S1	**Juan Fernandez**	**80.20**	**123**	T	T	08 43 08.4	
	baz=238,slow=75,SNR=394						
H03S3	**Juan Fernandez**	**80.21**	**123**	T	T	08 43 07.0	
	baz=238,slow=75,SNR=414						
TATO	**Taipei**	**80.23**	**307**	P	**P**	**07 13 51.3**	**-1.5**
TATO	**Taipei**	**80.23**	**307**	IAMs_20	IAMs_20	07 45 40.6	
	comp=Z,10µm,20.0s						
TATO	**Taipei**	**80.23**	**307**	P	**P**	**07 13 51.9**	**-0.9**
TATO				P	**P**	**07 13 51.9**	**-0.9**
TATO	**Taipei**	**80.23**	**307**	P	**P**	**07 13 54.9**	**+2.1**
H03N3	**Juan Fernandez**	**80.39**	**123**	T	T	08 43 20.9	
	baz=242,slow=73,SNR=234						
H03N2	**Juan Fernandez**	**80.39**	**123**	T	T	08 43 11.9	
	baz=242,slow=73,SNR=247						
H03N1	**Juan Fernandez**	**80.40**	**123**	T	T	08 43 26.4	
	baz=242,slow=73,SNR=497						
JTM	**Tenmabayashi**	**80.65**	**330**	IAmb	IAmb	07 14 03.7	
	comp=Z,234nm,0.8s						
JTM	**Tenmabayashi**	**80.65**	**330**	P	**P**	**07 13 56.0**	**+1.3**
ERM	**Erimo**	**80.78**	**332**	P	**P**	**07 13 56.0**	**+0.6**
ERM	**Erimo**	**80.78**	**332**	P	**P**	**07 13 56.3**	**+0.9**
ERM	**Erimo**	**80.78**	**332**	*c* *i*P	**P**	**07 13 55.0**	**-0.4**
ERM				pmax	pmax		
	comp=Z,96nm,0.9s						
JEM	**Erimo**	**80.78**	**332**	P	**P**	**07 13 57.3**	**+1.9**
H06S1	**SOCORRO T**	**80.90**	**62**	T	T	08 43 34.7	
	SNR=28						
YUK	**Yuzh-Kuril'sk**	**81.44**	**334**	*d* *i*P	**P**	**07 13 57.2**	**-1.6**
YUK				*i*		07 17 03.0	
YUK				*i* PPP	PPP	07 18 53.0	
YUK				*i* S	**S**	**07 24 07.5**	**-1.0**
YUK				pmax	pmax		
	comp=Z,214nm,1.0s						
YUK				pmax	pmax		
	comp=Z,387nm,4.9s						
LR05	**Currie**	**81.56**	**132**	IAmb	IAmb	07 14 18.8	
	comp=Z,255nm,1.1s						
LR03	**Panguipulli**	**81.67**	**131**	IAmb	IAmb	07 14 27.3	
	comp=Z,430nm,1.4s						
JTU	**Tsushima**	**81.73**	**318**	P	**P**	**07 14 02.8**	**+2.2**
KUR	**Kuril'sk**	**81.75**	**336**	P	**P**	**07 14 01.9**	**+1.5**
KUR				S	**SKSac**	**07 24 14.2**	**-4.4**
KUR				pmax	pmax		
	comp=Z,5µm,16.0s						
KUR				MLR	MLR		
	comp=N,9µm,18.0s						
KUR				MLR	MLR		
	comp=Z,15µm,18.0s						
PLCA	**Paso Flores**	**82.21**	**133**	P	**P**	**07 14 05.0**	**+1.6**
PLCA				IAmb	IAmb	07 14 30.1	
	comp=Z,261nm,1.2s						
PLCA	**Paso Flores**	**82.21**	**133**	P	**P**	**07 14 02.4**	**-1.0**
	comp=Z,17nm,1.0s,baz=229,slow=5.9,SNR=24						
PLCA				S	**S**	**07 24 17.1**	**-0.3**
	comp=Z,2.4nm,1.1s,baz=193,slow=6.3,SNR=1.4						
PLCA				PKKPbc	**PKKPbc**	**07 32 32.4**	**+1.4**
	comp=Z,7.0nm,0.9s,baz=103,slow=1.1,SNR=9.5						
PLCA				PKPPKP	P'P'df	07 40 28.4	-12
	comp=Z,4.0nm,0.9s,baz=253,slow=1.3,SNR=5.2						
PLCA				LR	LR	07 42 08.0	
	comp=Z,20µm,21.4s,baz=256,slow=30						
	comp=Z,17nm,1.0s						
PLCA	**Paso Flores**	**82.21**	**133**	P	**P**	**07 14 05.0**	**+1.6**
PLCA				pmax	pmax		
	comp=Z,261nm,1.3s						
PLCA	**Paso Flores**	**82.21**	**133**	*e*P	**P**	**07 14 05.3**	**+2.0**
ADK	**Adak**	**82.23**	**1**	P	**P**	**07 14 01.7**	**-1.1**
ADK	**Adak**	**82.23**	**1**	P	**P**	**07 14 01.8**	**-1.0**
ADK	**Adak**	**82.23**	**1**	P	**P**	**07 14 01.7**	**-1.1**
ADK				pmax	pmax		
	comp=Z,567nm,1.0s						
QZH	**Quanzhou**	**82.23**	**305**	⇑*i*P	**P**	**07 14 02.0**	**-1.5**
QZH				PP	**PP**	**07 17 09.0**	**-3.4**
QZH				S	**S**	**07 24 14.0**	**-3.6**
QZH				pmax	pmax		
	comp=Z,340nm,2.1s						
QZH				LR	LR		
	comp=Z,5µm,20.3s						
QZH				LR	LR		
	comp=Z,7µm,19.9s						
QZH				LR	LR		
	comp=Z,10µm,20.6s						
DLV	**Lat**	**82.38**	**289**	P	**P**	**07 14 04.5**	**-0.2**
EFI	**East Falkland**	**82.47**	**147**	P	**P**	**07 14 05.7**	**+1.3**
EFI				IAmb	IAmb	07 14 31.6	
	comp=Z,271nm,1.1s						
EFI	**East Falkland**	**82.47**	**147**	*d* *e*P	**P**	**07 14 04.7**	**+0.3**
EFI				pmax	pmax		
	comp=Z,296nm,1.1s						
EFI				MLR	MLR		
	comp=Z,4µm,16.0s						
BKNI	**Bangkinang**	**82.52**	**275**	P	**P**	**07 14 04.0**	**-1.3**
BKNI	**Bangkinang**	**82.52**	**275**	P	**P**	**07 14 06.0**	**+0.7**
BKNI	**Bangkinang**	**82.52**	**275**	P	**P**	**07 14 04.9**	**-0.4**
	comp=Z,26µmcomp=Z,8µmcomp=Z,1µm,1.1s						
ATKA	**Atka Island**	**82.61**	**2**	IAMs_20	IAMs_20	07 45 31.8	
	comp=Z,13µm,21.0s						
ATKA	**Atka Island**	**82.61**	**2**	P	**P**	**07 14 04.0**	**-0.7**
PPI	**Padang Panjang**	**82.67**	**274**	P	**P**	**07 14 04.0**	**-2.1**
BI05	**Punta Hualpn**	**82.67**	**128**	IAmb	IAmb	07 14 32.1	
	comp=Z,426nm,1.5s						
JKA	**Kamikawa-asahi**	**82.76**	**332**	IAmb	IAmb	07 14 15.6	
	comp=Z,162nm,0.9s						
ASAJ	**Asahikawa**	**82.76**	**332**	P	**P**	**07 14 04.4**	**-1.4**
	comp=Z,24nm,0.8s,baz=224,slow=12,SNR=12						
ASAJ				LR	LR	07 45 55.3	
	comp=Z,12µm,21.6s,baz=173,slow=32						
	comp=Z,24nm,0.8s						
SISI	**Saibi**	**83.36**	**272**	P	**P**	**07 14 09.4**	**-0.2**
	comp=Z,27µmcomp=Z,8µmcomp=Z,350nm,1.2s						
SHEM	**Shemya Is, Ala**	**83.37**	**355**	LR	LR	07 46 57.1	
	comp=Z,19µm,19.7s,baz=179,slow=33						
SMY	**Shemya**	**83.37**	**355**	P	**P**	**07 14 10.1**	**+1.4**
NIKH	**Nikolski High**	**83.68**	**5**	P	**P**	**07 14 09.7**	**-0.6**
NIKH	**Nikolski High**	**83.68**	**5**	P	**P**	**07 14 10.0**	**-0.3**
NIKH	**Nikolski High**	**83.68**	**5**	P	**P**	**07 14 09.7**	**-0.6**
	baz=187						
NIKH				S	**SKSac**	**07 24 31.5**	**+0.4**
	baz=187						
HKC	**Hong Kong Obse**	**83.83**	**300**	⇑P	**P**	**07 14 15.0**	**+3.2**
BI02	**San Fabin de**	**84.01**	**129**	IAmb	IAmb	07 14 41.5	
	comp=Z,118nm,0.8s						
MNSI	**Mandailing Nat**	**84.01**	**274**	P	**P**	**07 14 11.9**	**-1.1**
	comp=Z,24µmcomp=Z,6µmcomp=Z,413nm,0.9s						
TJN	**Taejon**	**84.21**	**318**	P	**P**	**07 14 14.6**	**+1.2**
TJN	**Taejon**	**84.21**	**318**	*c* *i*P	**P**	**07 14 12.0**	**-1.4**
SKR	**Severo-Kuril’s**	**84.23**	**344**	*e*P	**P**	**07 14 08.9**	**-4.2**
SKR				*e*S	**SKSac**	**07 24 29.4**	**-5.4**
SKR				pmax	pmax		
	comp=Z,263nm,0.8s						
SKR				pmax	pmax		
	comp=Z,2µm,13.2s						
SKR				smax	smax		
	comp=N,4µm,16.0s						
SSE	**Sheshan**	**84.40**	**311**	P	**P**	**07 14 16.0**	**+1.5**
SSE				S	**S**	**07 24 44.0**	**+4.7**
SSE				pmax	pmax		
	comp=N,38nm,0.8s						
SSE				pmax	pmax		
	comp=N,1µm,6.7s						
SSE				LR	LR		
	comp=N,3µm,25.4s						
SSE				LR	LR		
	comp=N,3µm,25.8s						
LPIG	**La Paz**	**84.58**	**58**	LR	LR	07 47 26.2	
	comp=N,8µm,18.1s,baz=242,slow=32						
SLBS	**Sierra La Lagu**	**84.60**	**59**	P	**P**	**07 14 16.7**	**+0.9**
SLBS				IAmb	IAmb	07 14 24.8	
	comp=Z,448nm,1.8s						
SLBS	**Sierra La Lagu**	**84.60**	**59**	IAMs_20	IAMs_20	07 42 11.4	
	comp=Z,11µm,22.0s						
KSRS	**Korea Array**	**84.66**	**320**	P	**P**	**07 14 14.3**	**-1.3**
	comp=Z,20nm,0.7s,baz=140,slow=4.8,SNR=30						
KSRS				PKiKP	**PKiKP**	**07 19 29.9**	**+1.1**
	comp=Z,2.1nm,0.7s,baz=200,slow=1.3,SNR=4.6						
KSRS				S	**SKSac**	**07 24 38.5**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=81,slow=10,SNR=1.4						
KSRS				LR	LR	07 48 07.4	
	comp=Z,3395µm,21.2s,baz=125,slow=33						
	comp=Z,20nm,0.7s						
KSAR	**Wonju Array Be**	**84.67**	**320**	P	**P**	**07 14 14.9**	**-0.8**
KSAR	**Wonju Array Be**	**84.67**	**320**	P	**P**	**07 14 14.9**	**-0.8**
KS19	**Wonju Array Si**	**84.72**	**320**	IAmb	IAmb	07 14 22.3	
	comp=Z,78nm,1.0s						
UNV	**Unalaska Valle**	**84.76**	**7**	IAmb	IAmb	07 14 24.1	
	comp=Z,162nm,0.9s						
UNV	**Unalaska Valle**	**84.76**	**7**	P	**P**	**07 14 14.6**	**-1.1**
	baz=189						
UNV				S	**S**	**07 24 39.7**	**-2.2**
	baz=189						
GZH	**Guangzhou**	**84.91**	**300**	P	**P**	**07 14 16.8**	**-0.5**
GZH				PP	**PP**	**07 17 33.4**	**-0.9**
GZH				S	**SKSac**	**07 24 41.3**	**+0.8**
GZH				pmax	pmax		
	comp=Z,570nm,1.0s						
GZH				LR	LR		
	comp=Z,2µm,21.4s						
GZH				LR	LR		
	comp=Z,5µm,19.2s						
GZH				LR	LR		
	comp=Z,8µm,21.4s						
CCX	**Cicese**	**85.04**	**48**	IAmb	IAmb	07 14 45.9	
	comp=Z,184nm,1.2s						
YSS	**Yuzhno-Sakhali**	**85.07**	**334**	P	**P**	**07 14 17.5**	**0.0**
YSS	**Yuzhno-Sakhali**	**85.07**	**334**	P	**P**	**07 14 19.5**	**+2.0**
YSS	**Yuzhno-Sakhali**	**85.07**	**334**	*e*P	**P**	**07 14 16.9**	**-0.6**
YSS				*e*		07 17 40.2	
YSS				*e*S	**S**	**07 24 43.2**	**-2.1**
YSS				*e*PS	**PnS**	**07 25 32.4**	**-10**
YSS				*e*PPS	PPS	07 25 55.7	
YSS				*e*SS	**SS**	**07 30 13.4**	**-6.4**
YSS				pmax	pmax		
	comp=Z,4µm,6.1s						
YSS				pmax	pmax		
	comp=Z,280nm,0.9s						
YSS				smax	smax		
	comp=E,2µm,9.1s						
AKUT	**Akutan**	**85.12**	**7**	P	**P**	**07 14 20.2**	**+2.7**
SRIG	**Santa Rosalia**	**85.15**	**54**	IAmb	IAmb	07 14 25.3	
	comp=Z,213nm,1.3s						
QIZ	**Qiongzhong**	**85.24**	**295**	IAmb	IAmb	07 14 24.7	
	comp=Z,117nm,0.9s						
QIZ	**Qiongzhong**	**85.24**	**295**	P	**P**	**07 14 16.8**	**-2.2**
QIZ				PP	**PP**	**07 17 36.1**	**-1.0**
QIZ				S	**S**	**07 24 44.8**	**-3.4**
QIZ				sS	**sS**	**07 25 04.8**	**+5.7**
QIZ				SS	**SS**	**07 30 26.8**	**+3.6**
QIZ				pmax	pmax		
	comp=Z,130nm,0.8s						
QIZ				pmax	pmax		
	comp=Z,4µm,11.8s						
QIZ				LR	LR		
	comp=Z,5µm,20.6s						
QIZ				LR	LR		
	comp=Z,16µm,33.0s						
QIZ	**Qiongzhong**	**85.24**	**295**	P	**P**	**07 14 20.9**	**+1.9**
VTX	**Valle De La Tr**	**85.31**	**49**	IAmb	IAmb	07 14 26.4	
	comp=Z,140nm,1.2s						
CBX	**Cerro Bola**	**85.33**	**48**	IAmb	IAmb	07 14 47.5	
	comp=Z,155nm,1.2s						
BO02	**Sierra Bellavi**	**85.38**	**128**	IAmb	IAmb	07 14 45.9	
	comp=Z,238nm,1.1s						
KULM	**Kulim**	**85.40**	**279**	P	**P**	**07 14 18.2**	**-1.8**
BO01	**Tunca**	**85.40**	**127**	IAmb	IAmb	07 14 46.5	
	comp=Z,149nm,1.3s						
INCN	**Inchon**	**85.40**	**319**	P	**P**	**07 14 19.3**	**-0.2**
INCN				S	**SKSac**	**07 24 43.2**	**+0.2**
INCN	**Inchon**	**85.40**	**319**	P	**P**	**07 14 21.8**	**+2.4**
INCN	**Inchon**	**85.40**	**319**	P	**P**	**07 14 23.8**	**+4.4**
SAO	**San Andreas Ge**	**85.41**	**42**	IAmb	IAmb	07 14 26.5	
	comp=Z,121nm,1.1s						
VA05	**Santo Domingo**	**85.45**	**127**	IAmb	IAmb	07 14 38.4	
	comp=Z,146nm,0.9s						
MCCM	**Marconi Confer**	**85.56**	**40**	IAMs_20	IAMs_20	07 52 48.4	
	comp=Z,10µm,18.0s						
ESJX	**Sierra Juarez**	**85.59**	**49**	IAmb	IAmb	07 14 28.3	
	comp=Z,144nm,1.2s						
PSI	**Prapat**	**85.60**	**276**	LR	LR	07 53 09.4	
	comp=Z,33µm,21.1s,baz=136,slow=36						
PSI	**Prapat**	**85.60**	**276**	P	**P**	**07 14 18.1**	**-3.0**
PASC	**Pasadena Art C**	**85.60**	**46**	IAmb	IAmb	07 14 48.3	
	comp=Z,156nm,1.2s						
ELS	**Elsinore Mount**	**85.72**	**47**	IAmb	IAmb	07 14 49.4	
	comp=Z,141nm,1.1s						
MT09	**Talagante**	**85.81**	**127**	IAmb	IAmb	07 14 40.5	
	comp=Z,265nm,1.1s						
PET	**Petropavlovsk**	**85.85**	**346**	P	**P**	**07 14 22.4**	**+1.2**
PET				IAmb	IAmb	07 14 26.2	
	comp=Z,106nm,0.7s						
PET				IAMs_20	IAMs_20	07 47 48.0	
	comp=Z,11µm,21.0s						
PET	**Petropavlovsk**	**85.85**	**346**	P	**P**	**07 14 22.0**	**+0.8**
PET	**Petropavlovsk**	**85.85**	**346**	*e*P	**P**	**07 14 25.4**	**+4.2**
PET				*e*PPP	PPP	07 17 42.3	
PET				*e*PS	**PnS**	**07 26 06.6**	**+15**
PET				pmax	pmax		
	comp=Z,176nm,0.8s						
PET				pmax	pmax		
	comp=Z,3µm,15.3s						
PET				pmax	pmax		
	comp=Z,3µm,13.2s						
PET				MLR	MLR		
	comp=Z,7µm,19.0s						
PET	**Petropavlovsk**	**85.85**	**346**	P	**P**	**07 14 21.2**	**0.0**
	comp=Z,4µmcomp=Z,177nm,0.8s						
BO04	**La Punta**	**85.95**	**127**	IAmb	IAmb	07 14 57.1	
	comp=Z,177nm,1.2s						

GSI	**Gunungsitoli**	**85.99**	**274**	P	**P**	**07 14 22.1**	**-0.9**
GSI	**Gunungsitoli**	**85.99**	**274**	P	**P**	**07 14 21.9**	**-1.1**
MT02	**Curacav**	**86.00**	**126**	IAmb	IAmb	07 14 50.9	
	comp=Z,244nm,1.1s						
TEY	**Ternei**	**86.01**	**330**	⇓*e*P	**P**	**07 14 24.2**	**+2.0**
TEY				*e*		07 24 42.2	
TEY				pmax	pmax		
	comp=E,10.0nm,1.5s						
TEY				pmax	pmax		
	comp=N,10.0nm,1.2s						
TEY				pmax	pmax		
	comp=Z,10.0nm,1.2s						
YUH	**Yuha Desert**	**86.03**	**48**	IAmb	IAmb	07 14 29.9	
	comp=Z,113nm,1.1s						
HOPS	**Hopland Field**	**86.05**	**40**	IAMs_20	IAMs_20	07 49 19.5	
	comp=Z,10µm,19.0s						
GDXM	**Geysers**	**86.07**	**40**	IAmb	IAmb	07 14 30.1	
	comp=Z,98nm,1.1s						
FALS	**False Pass**	**86.11**	**8**	P	**P**	**07 14 23.4**	**+1.0**
FALS	**False Pass**	**86.11**	**8**	P	**P**	**07 14 21.5**	**-0.9**
	baz=192						
PEA0B	**Petropavlovsk-**	**86.13**	**346**	*c* *i*P	**P**	**07 14 21.0**	**-1.6**
PETK	**Petropavlovsk-**	**86.13**	**346**	P	**P**	**07 14 21.8**	**-0.8**
PETK	**Petropavlovsk-**	**86.13**	**346**	P	**P**	**07 14 20.2**	**-2.5**
	comp=Z,35nm,0.9s,baz=121,slow=6.7,SNR=13						
PETK				PKiKP	**PKiKP**	**07 19 29.6**	**-1.1**
	comp=Z,7.8nm,1.0s,baz=81,slow=4.7,SNR=2.6						
PETK				LR	LR	07 45 24.5	
	comp=Z,7µm,21.5s,baz=164,slow=30						
	comp=Z,35nm,0.9s						
PETK	**Petropavlovsk-**	**86.13**	**346**	P	**P**	**07 14 21.8**	**-0.8**
TSI	**Tuntungan**	**86.26**	**276**	P	**P**	**07 14 23.5**	**-0.8**
	comp=Z,21µmcomp=Z,575nm,1.4s						
KCPM	**Cahto Peak**	**86.27**	**39**	IAmb	IAmb	07 14 30.9	
	comp=Z,279nm,1.4s						
PFO	**Pinyon Flats O**	**86.31**	**47**	P	**P**	**07 14 24.9**	**+0.7**
PFO				IAmb	IAmb	07 14 31.4	
	comp=Z,155nm,1.2s						
PFO	**Pinyon Flats O**	**86.31**	**47**	LR	LR	07 44 27.7	
	comp=Z,6µm,21.9s,baz=242,slow=30						
PFO	**Pinyon Flats O**	**86.31**	**47**	P	**P**	**07 14 24.9**	**+0.7**
PFO				pmax	pmax		
	comp=Z,155nm,1.3s						
CCAC	**Calif City Air**	**86.35**	**45**	IAmb	IAmb	07 14 31.5	
	comp=Z,186nm,1.4s						
PEL	**Peldehue**	**86.38**	**127**	IAMs_20	IAMs_20	07 44 19.5	
	comp=Z,12µm,21.0s						
PEL	**Peldehue**	**86.38**	**127**	P	**P**	**07 14 26.3**	**+1.6**
ISA	**Isabella, Lake**	**86.42**	**45**	P	**P**	**07 14 25.6**	**+1.0**
ISA				IAmb	IAmb	07 14 31.8	
	comp=Z,205nm,1.1s						
ISA	**Isabella, Lake**	**86.42**	**45**	P	**P**	**07 14 25.6**	**+1.0**
ISA				pmax	pmax		
	comp=Z,205nm,1.1s						
NJ2	**Nanjing**	**86.54**	**311**	⇑P	**P**	**07 14 24.1**	**-1.0**
NJ2				PP	**PP**	**07 17 47.0**	**-0.4**
NJ2				sS	**sS**	**07 25 14.3**	**+3.0**
NJ2				pmax	pmax		
	comp=Z,160nm,1.6s						
NJ2				pmax	pmax		
	comp=Z,4µm,5.3s						
NJ2				LR	LR		
	comp=Z,8µm,23.8s						
NJ2				LR	LR		
	comp=Z,5µm,23.8s						
NJ2				LR	LR		
	comp=Z,13µm,24.5s						
CNBA	**Chernabura Isl**	**86.61**	**10**	IAMs_20	IAMs_20	07 48 07.0	
	comp=Z,10µm,22.0s						
CHNA	**Chernabura Isl**	**86.62**	**10**	P	**P**	**07 14 25.4**	**+0.5**
CHNA	**Chernabura Isl**	**86.62**	**10**	P	**P**	**07 14 24.7**	**-0.2**
	baz=195						
CHNA				S	**S**	**07 25 01.1**	**+1.1**
	baz=195						
UBPT	**Khong Chiam**	**86.65**	**290**	P	**P**	**07 14 26.0**	**0.0**
MT08	**Bocatoma Ro**	**86.67**	**127**	IAmb	IAmb	07 14 45.8	
	comp=Z,149nm,1.1s						
MSHR	**Mys Shultsa**	**86.68**	**325**	*c* *i*P	**P**	**07 14 23.5**	**-2.0**
MSHR				pmax	pmax		
	comp=Z,134nm,0.9s						
VA03	**San Esteban**	**86.69**	**126**	IAmb	IAmb	07 14 53.3	
	comp=Z,92nm,0.9s						
VLA	**Vladivostok**	**86.72**	**326**	*c* *e*P	**P**	**07 14 26.5**	**+0.8**
VLA				pmax	pmax		
	comp=Z,62nm,0.9s						
VLA				MLR	MLR		
	comp=Z,5µm,19.0s						
CMB	**Columbia Colle**	**86.89**	**42**	P	**P**	**07 14 26.9**	**+0.1**
CMB				IAmb	IAmb	07 14 33.3	
	comp=Z,100nm,1.1s						
CMB				IAMs_20	IAMs_20	07 44 44.9	
	comp=Z,11µm,22.0s						
CMB	**Columbia Colle**	**86.89**	**42**	P	**P**	**07 14 26.9**	**+0.1**
CMB				pmax	pmax		
	comp=Z,99nm,1.1s						
PSTR	**Posyet**	**86.90**	**325**	*d* *i*P	**P**	**07 14 26.0**	**-0.6**
SDPT	**Sand Point**	**86.98**	**10**	P	**P**	**07 14 26.5**	**-0.2**
SDPT	**Sand Point**	**86.98**	**10**	P	**P**	**07 14 26.8**	**+0.1**
SDPT	**Sand Point**	**86.98**	**10**	P	**P**	**07 14 26.5**	**-0.2**
	baz=194						
SDPT				S	**S**	**07 25 02.6**	**-1.0**
	baz=194						
GLA	**Glamis**	**86.99**	**49**	IAmb	IAmb	07 14 56.2	
	comp=Z,214nm,1.2s						
O02D	**Mt. Diablo Mer**	**87.04**	**39**	IAMs_20	IAMs_20	07 44 16.7	
	comp=Z,11µm,21.0s						
HSIG		**87.08**	**54**	IAmb	IAmb	07 14 34.8	
	comp=Z,110nm,1.2s						
UGL	**Uglegorsk**	**87.10**	**335**	*e*P	**P**	**07 14 23.6**	**-3.8**
UGL				*e*S	**SKSac**	**07 24 55.1**	**+2.2**
UGL				*e*SS	**SS**	**07 30 40.0**	**-9.5**
UGL				pmax	pmax		
	comp=Z,4µm,6.2s						
UGL				pmax	pmax		
	comp=Z,200nm,1.2s						
UGL				smax	smax		
	comp=E,2µm,11.0s						
UGL				smax	smax		
	comp=N,4µm,15.0s						
UGL				MLR	MLR		
	comp=E,3µm,15.0s						
S12K	**Black Hills**	**87.11**	**9**	IAMs_20	IAMs_20	07 53 42.9	
	comp=Z,7µm,20.0s						
S12K	**Black Hills**	**87.11**	**9**	P	**P**	**07 14 27.0**	**-0.3**
	baz=193						
S12K				S	**S**	**07 25 05.3**	**+0.4**
	baz=193						
AFDM	**Forest Hills D**	**87.19**	**41**	P	**P**	**07 14 28.5**	**+0.3**
AFDM				IAmb	IAmb	07 14 36.2	
	comp=Z,329nm,1.8s						
GSC	**Goldstone, Bar**	**87.20**	**46**	IAmb	IAmb	07 14 35.5	
	comp=Z,224nm,1.2s						
P08K	**Saint George I**	**87.24**	**5**	P	**P**	**07 14 27.8**	**-0.1**
	baz=187						
ORV	**Oroville**	**87.31**	**40**	IAmb	IAmb	07 14 36.9	
	comp=Z,315nm,1.8s						
ORV				IAMs_20	IAMs_20	07 49 40.9	
	comp=Z,7µm,19.0s						
USA0B	**Ussuriysk Arra**	**87.48**	**326**	IAmb	IAmb	07 14 35.5	
	comp=Z,110nm,0.9s						
USA0B	**Ussuriysk Arra**	**87.48**	**326**	*c* *i*P	**P**	**07 14 28.3**	**-1.1**
USRK	**Ussuriysk Ar.**	**87.48**	**326**	P	**P**	**07 14 26.0**	**-3.4**
	comp=Z,20nm,0.9s,baz=134,slow=3.5,SNR=37						
USRK				PKPPKP	**P'P'df**	**07 40 27.4**	**+5.4**
	comp=Z,1.5nm,0.8s,baz=29,slow=4.4,SNR=5.0						
USRK				LR	LR	07 47 48.9	
	comp=Z,8µm,21.9s,baz=140,slow=32						
	comp=Z,20nm,0.9s						
113A	**Mohawk Valley,**	**87.50**	**49**	IAmb	IAmb	07 14 39.0	
	comp=Z,306nm,1.6s						
QSM	**Queen of Sheba**	**87.59**	**45**	IAmb	IAmb	07 14 37.1	
	comp=Z,171nm,1.2s						
214A	**Organ Pipe Nat**	**87.62**	**50**	IAmb	IAmb	07 14 39.8	
	comp=Z,200nm,1.2s						
SPIA	**Saint Paul Isl**	**87.77**	**4**	IAMs_20	IAMs_20	07 49 00.3	
	comp=Z,11µm,20.0s						
SPIA	**Saint Paul Isl**	**87.77**	**4**	P	**P**	**07 14 30.7**	**+0.3**
	baz=186,SNR=6.7						
SPIA				S	**S**	**07 25 15.5**	**+4.5**
	baz=186						
DSP	**Deep Springs**	**87.86**	**44**	IAmb	IAmb	07 14 40.1	
	comp=Z,375nm,1.9s						
GWY	**Greenwater Val**	**87.86**	**45**	IAmb	IAmb	07 14 38.4	
	comp=Z,136nm,1.2s						
GO04	**Tololo Observa**	**87.98**	**124**	IAmb	IAmb	07 14 58.1	
	comp=Z,230nm,1.3s						
SRIT	**Nakonsritamara**	**87.99**	**281**	P	**P**	**07 14 35.2**	**+2.6**
S14K	**Fog Glacier**	**88.03**	**10**	P	**P**	**07 14 32.0**	**+0.1**
	baz=195,SNR=9.5						
S14K				S	**S**	**07 25 15.5**	**+1.7**
	baz=195						
PNTR	**Pine Nut**	**88.06**	**41**	IAmb	IAmb	07 14 39.2	
	comp=Z,136nm,0.9s						
LHV	**Little Huntoon**	**88.13**	**43**	IAmb	IAmb	07 14 39.7	
	comp=Z,114nm,1.0s						
BEKR	**Beckworth**	**88.17**	**40**	IAmb	IAmb	07 14 41.1	
	comp=Z,221nm,1.8s						
YBH	**Yreka Blue Hor**	**88.18**	**38**	LR	LR	07 45 35.6	
	comp=Z,526nm,21.8s,baz=249,slow=30						
HATC	**Hat Creek Radi**	**88.21**	**39**	IAmb	IAmb	07 14 39.8	
	comp=Z,179nm,1.1s						
HATC				IAMs_20	IAMs_20	07 44 41.6	
	comp=Z,9µm,22.0s						
CNSH	**ChangSha**	**88.22**	**304**	P	**P**	**07 14 31.9**	**-1.4**
CNSH				PP	**PP**	**07 18 00.0**	**-1.0**
CNSH				SKS	**SKSac**	**07 25 02.3**	**+1.6**
CNSH				S	**S**	**07 25 18.0**	**+1.3**
CNSH				pmax	pmax		
	comp=Z,54nm,1.7s						
CNSH				LR	LR		
	comp=Z,3µm,22.0s						
CNSH				LR	LR		
	comp=Z,4µm,25.1s						
CNSH				LR	LR		
	comp=Z,7µm,26.1s						
CHGN	**Chignik**	**88.22**	**11**	S	**S**	**07 25 17.4**	**+2.0**
	baz=196						
GMN	**Gold Mountain**	**88.23**	**44**	IAmb	IAmb	07 14 41.9	
	comp=Z,307nm,1.8s						
CHIR	**Chirikof Islan**	**88.24**	**12**	IAMs_20	IAMs_20	07 49 24.0	
	comp=Z,12µm,22.0s						
CHIR	**Chirikof Islan**	**88.24**	**12**	P	**P**	**07 14 34.1**	**+1.4**
CHIR	**Chirikof Islan**	**88.24**	**12**	P	**P**	**07 14 32.6**	**-0.2**
	baz=199						
CHIR				S	**S**	**07 25 19.5**	**+3.9**
	baz=199						
NVAR	**Mina Array Bea**	**88.37**	**43**	P	**P**	**07 14 34.5**	**+0.4**
NVAR	**Mina Array Bea**	**88.37**	**43**	P	**P**	**07 14 34.3**	**+0.1**
	comp=Z,21nm,1.0s,baz=221,slow=7.8,SNR=64						
NVAR				PKiKP	**PKiKP**	**07 19 38.6**	**+3.3**
	comp=Z,1.2nm,0.8s,baz=210,slow=6.8,SNR=1.9						
NVAR				PKKPbc	**PKKPbc**	**07 32 17.9**	**0.0**
	comp=Z,6.8nm,0.7s,baz=56,slow=5.0,SNR=11						
NVAR				PKPPKP	**P'P'df**	**07 40 24.9**	**+3.3**
	comp=Z,12nm,1.1s,baz=92,slow=3.3,SNR=14						
NVAR				LR	LR	07 46 09.4	
	comp=Z,9µm,21.8s,baz=228,slow=30						
	comp=Z,21nm,1.0s						
RYN	**Ryan**	**88.37**	**42**	IAmb	IAmb	07 14 42.4	
	comp=Z,337nm,2.0s						
TYV	**Tymovskoe**	**88.38**	**336**	*e*P	**P**	**07 14 33.0**	**-0.5**
TYV				*e*S	**S**	**07 25 17.4**	**+0.2**
TYV				pmax	pmax		
	comp=Z,148nm,1.1s						
TYV				pmax	pmax		
	comp=Z,1µm,3.0s						
TYV				smax	smax		
	comp=N,2µm,7.4s						
TYV				smax	smax		
	comp=E,2µm,7.4s						
GULI	**GuiLin**	**88.40**	**301**	P	**P**	**07 14 33.6**	**-0.7**
GULI				PP	**PP**	**07 18 07.9**	**+5.3**
GULI				S	**SKSac**	**07 25 05.9**	**+3.9**
GULI				pmax	pmax		
	comp=E,90nm,1.5s						
GULI				pmax	pmax		
	comp=E,4µm,14.3s						
GULI				LR	LR		
	comp=E,5µm,22.4s						
GULI				LR	LR		
	comp=E,2µm,21.4s						
GULI				LR	LR		
	comp=E,8µm,21.4s						
NV11	**Mina Array Sit**	**88.45**	**43**	IAmb	IAmb	07 14 41.0	
	comp=Z,82nm,1.1s						
MLSI	**Meulaboh, Aceh**	**88.50**	**276**	P	**P**	**07 14 34.6**	**-0.5**
	comp=Z,6µmcomp=Z,922nm,1.1s						
LHMI	**Lhok Sumawe**	**88.53**	**277**	P	**P**	**07 14 36.2**	**+1.0**
LHMI	**Lhok Sumawe**	**88.53**	**277**	P	**P**	**07 14 36.8**	**+1.6**
	comp=Z,22µmcomp=Z,6µmcomp=Z,596nm,1.1s						
CO01	**Juntas del Tor**	**88.59**	**124**	IAmb	IAmb	07 15 02.3	
	comp=Z,384nm,1.9s						
PAHR	**Pah Rah Range**	**88.61**	**41**	IAmb	IAmb	07 14 41.5	
	comp=Z,76nm,1.1s						
WHN	**Wuhan**	**88.63**	**307**	⇑P	**P**	**07 14 34.3**	**-0.9**
WHN				PP	**PP**	**07 18 08.0**	**+3.7**
WHN				SKS	**SKSac**	**07 25 01.3**	**-1.8**
WHN				S	**S**	**07 25 18.6**	**-1.9**
WHN				SS	**SS**	**07 31 12.6**	**+0.1**
WHN				pmax	pmax		
	comp=Z,440nm,1.2s						
WHN				pmax	pmax		
	comp=Z,6µm,5.4s						
WHN				LR	LR		
	comp=Z,17µm,21.7s						
WHN				LR	LR		
	comp=Z,16µm,23.4s						
WHN				LR	LR		
	comp=Z,21µm,21.9s						
V12A	**Nelson**	**88.69**	**46**	IAmb	IAmb	07 14 42.9	
	comp=Z,120nm,1.2s						
Y14A	**Wickenburg**	**88.73**	**49**	IAmb	IAmb	07 14 43.1	
	comp=Z,140nm,1.0s						
W13A	**Hualapai Mount**	**88.89**	**47**	IAmb	IAmb	07 14 44.1	
	comp=Z,137nm,1.1s						
MDJ	**Mudanjiang**	**88.94**	**325**	P	**P**	**07 14 35.5**	**-0.9**
MDJ				PP	**PP**	**07 18 04.8**	**-1.7**
MDJ				SKS	**SKSac**	**07 25 04.4**	**+0.1**
MDJ				S	**ScS**	**07 25 27.8**	**-0.2**
MDJ				pmax	pmax		
	comp=Z,130nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,4µm,8.9s						
MDJ				LR	LR		
	comp=Z,7µm,24.5s						
MDJ				LR	LR		
	comp=Z,8µm,23.2s						
MDJ				LR	LR		
	comp=Z,22µm,23.2s						
CFA	**Coronel Fontan**	**88.96**	**126**	LR	LR	07 46 13.9	
	comp=Z,6µm,21.3s,baz=246,slow=30						
SHPR	**Sheep Range**	**88.99**	**46**	IAmb	IAmb	07 14 45.3	
	comp=Z,165nm,1.7s						
TRQA	**Tornquist**	**89.13**	**135**	IAMs_20	IAMs_20	07 46 15.1	
	comp=Z,12µm,22.0s						
TUC	**Tucson**	**89.19**	**51**	P	**P**	**07 14 39.4**	**+1.4**
TUC	**Tucson**	**89.19**	**51**	P	**P**	**07 14 39.4**	**+1.4**
TUC				pmax	pmax		
	comp=Z,617nm,1.8s						
SII	**Sitkinak Islan**	**89.21**	**13**	IAMs_20	IAMs_20	07 49 51.6	
	comp=Z,12µm,22.0s						
SII	**Sitkinak Islan**	**89.21**	**13**	P	**P**	**07 14 38.0**	**+0.7**
SII	**Sitkinak Islan**	**89.21**	**13**	P	**P**	**07 14 37.3**	**0.0**
	baz=200,SNR=22						
SII				S	**S**	**07 25 27.1**	**+2.3**
	baz=200						
DL2	**Dalian**	**89.26**	**317**	P	**P**	**07 14 35.3**	**-2.7**
DL2				PP	**PP**	**07 18 05.6**	**-3.5**
DL2				SKS	**SKSac**	**07 24 59.3**	**-7.1**
DL2				S	**SKKSac**	**07 25 20.0**	**+1.5**
DL2				pmax	pmax		
	comp=Z,29nm,1.2s						
DL2				pmax	pmax		
	comp=Z,4µm,7.0s						
DL2				LR	LR		
	comp=Z,7µm,23.9s						
DL2				LR	LR		
	comp=Z,11µm,23.3s						
DL2				LR	LR		
	comp=Z,21µm,27.1s						
S11A	**Rachel**	**89.37**	**45**	IAmb	IAmb	07 15 22.9	
	comp=Z,136nm,1.2s						
R16K	**Pilot Point**	**89.57**	**11**	P	**P**	**07 14 38.8**	**-0.1**
	baz=197						
R16K				S	**S**	**07 25 31.0**	**+3.0**
	baz=197						
ZAIG	**Zacatecas**	**89.62**	**63**	IAmb	IAmb	07 15 04.0	
	comp=Z,192nm,2.0s						
HPIG		**89.63**	**58**	IAmb	IAmb	07 14 48.6	
	comp=Z,178nm,1.7s						
PRN	**Pahroc Range**	**89.64**	**45**	IAmb	IAmb	07 14 48.3	
	comp=Z,320nm,1.5s						
319A	**Douglas**	**89.65**	**53**	IAmb	IAmb	07 14 47.8	
	comp=Z,151nm,1.1s						
COR	**Corvallis**	**89.90**	**36**	IAMs_20	IAMs_20	07 46 05.1	
	comp=Z,12µm,22.0s						
COR	**Corvallis**	**89.90**	**36**	P	**P**	**07 14 42.5**	**+1.7**
TLIG	**Tlapa**	**89.97**	**70**	IAmb	IAmb	07 14 50.9	
	comp=Z,174nm,1.4s						
OHAK	**Old Harbor**	**90.00**	**13**	P	**P**	**07 14 41.0**	**0.0**
OHAK	**Old Harbor**	**90.00**	**13**	P	**P**	**07 14 41.0**	**0.0**
	baz=200,SNR=38						
OHAK				S	**S**	**07 25 35.7**	**+3.6**
	baz=200						
X16A	**Lo Mia Camp, P**	**90.04**	**49**	IAmb	IAmb	07 14 49.8	
	comp=Z,171nm,1.0s						
J05D	**Fort Rock, OR**	**90.05**	**38**	IAmb	IAmb	07 14 49.3	
	comp=Z,330nm,1.6s						
BSI	**Banda Aceh**	**90.08**	**276**	P	**P**	**07 14 43.1**	**+0.6**
	comp=Z,18µmcomp=Z,5µmcomp=Z,298nm,1.1s						
SNY	**Shenyang**	**90.10**	**320**	⇓P	**P**	**07 14 41.0**	**-0.8**
SNY				S	**S**	**07 25 32.6**	**-1.1**
SNY				pmax	pmax		
	comp=Z,14nm,1.0s						
SNY				pmax	pmax		
	comp=Z,3µm,11.7s						
SNY				LR	LR		
	comp=Z,6µm,24.1s						
SNY				LR	LR		
	comp=Z,4µm,22.2s						
SNY				LR	LR		
	comp=Z,12µm,23.7s						
R18K	**Karluk**	**90.11**	**12**	P	**P**	**07 14 41.3**	**-0.2**
	baz=200						
R18K				S	**S**	**07 25 35.8**	**+2.9**
	baz=200						
TIA	**Tai'an**	**90.27**	**313**	P	**P**	**07 14 42.1**	**-0.7**
TIA				PP	**PP**	**07 18 17.0**	**-0.3**
TIA				SKS	**SKSac**	**07 25 12.0**	**-0.5**
TIA				S	**S**	**07 25 35.3**	**-0.3**
TIA				SS	**SS**	**07 31 35.1**	**-1.1**
TIA				pmax	pmax		
	comp=Z,100nm,0.9s						
TIA				pmax	pmax		
	comp=Z,4µm,7.4s						
TIA				LR	LR		
	comp=Z,8µm,22.1s						
TIA				LR	LR		
	comp=Z,8µm,23.0s						
TIA				LR	LR		
	comp=Z,18µm,24.0s						
CN2	**Changchun**	**90.46**	**323**	⇑P	**P**	**07 14 42.1**	**-1.4**
CN2				SKS	**SKSac**	**07 25 11.3**	**-1.9**
CN2				pmax	pmax		
	comp=Z,80nm,1.0s						
CN2				pmax	pmax		
	comp=Z,860nm,3.0s						
CN2				LR	LR		
	comp=Z,5µm,24.0s						
CN2				LR	LR		
	comp=Z,7µm,24.0s						
CN2				LR	LR		
	comp=Z,11µm,26.0s						
LCMT	**Little Creek M**	**90.50**	**46**	IAmb	IAmb	07 14 51.3	
	comp=Z,88nm,1.1s						
Q17K	**Contact Creek**	**90.51**	**11**	P	**P**	**07 14 42.8**	**-0.7**
	baz=198						
Q17K				S	**S**	**07 25 39.5**	**+2.5**
	baz=198						
ACHA	**Angle Creek He**	**90.56**	**12**	IAmb	IAmb	07 14 50.8	
	comp=Z,131nm,1.5s						
GRNR	**Gornyy**	**90.61**	**333**	⇑*i*P	**P**	**07 14 43.6**	**-0.4**
GRNR				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KDAK	**Kodiak Island**	**90.67**	**13**	P	**P**	**07 14 43.8**	**-0.3**
KDAK				IAmb	IAmb	07 14 52.2	
	comp=Z,227nm,1.3s						
KDAK	**Kodiak Island**	**90.67**	**13**	LR	LR	07 48 58.4	
	comp=Z,5µm,21.0s,baz=203,slow=31						
KDAK	**Kodiak Island**	**90.67**	**13**	*c* *i*P	**P**	**07 14 43.6**	**-0.5**
KDAK				pmax	pmax		
	comp=Z,337nm,1.5s						
KDAK				MLR	MLR		
	comp=Z,6µm,18.0s						
KDAK	**Kodiak Island**	**90.67**	**13**	P	**P**	**07 14 43.9**	**-0.1**
	baz=201						
KDAK				S	**S**	**07 25 41.9**	**+3.7**
	baz=201						
O14K	**Tigyukauivet M**	**90.67**	**8**	IAmb	IAmb	07 14 51.3	
	comp=Z,182nm,1.1s						
O14K				IAMs_20	IAMs_20	07 57 23.0	
	comp=Z,8µm,21.0s						
O14K	**Tigyukauivet M**	**90.67**	**8**	P	**P**	**07 14 43.3**	**-0.7**
	baz=194,SNR=8.1						
O14K				S	**S**	**07 25 40.3**	**+2.2**
	baz=194						
U15A	**North Rim**	**90.74**	**47**	IAmb	IAmb	07 14 52.8	
	comp=Z,120nm,1.0s						
WUAZ	**Wupatki**	**90.76**	**48**	IAmb	IAmb	07 14 52.7	
	comp=Z,143nm,1.1s						
KNB	**Kanab**	**90.77**	**47**	IAmb	IAmb	07 14 52.7	
	comp=Z,142nm,1.2s						
Q16K	**King Salmon**	**90.78**	**11**	P	**P**	**07 14 43.7**	**-0.8**
	baz=198						
O15K	**Ungalikthiuk R**	**90.78**	**9**	IAMs_20	IAMs_20	07 51 01.1	
	comp=Z,8µm,21.0s						
O15K	**Ungalikthiuk R**	**90.78**	**9**	P	**P**	**07 14 43.7**	**-0.9**
	baz=195,SNR=6.5						
O15K				S	**S**	**07 25 41.2**	**+2.0**
	baz=195						
BNX	**BinXian**	**90.83**	**325**	⇑P	**P**	**07 14 43.0**	**-2.1**
BNX				PP	**PP**	**07 18 19.8**	**-1.7**
BNX				S	**S**	**07 25 39.0**	**-1.2**
BNX				pmax	pmax		
	comp=Z,250nm,0.9s						
BNX				pmax	pmax		
	comp=Z,1µm,6.0s						
BNX				LR	LR		
	comp=Z,4µm,23.3s						
BNX				LR	LR		
	comp=Z,5µm,30.9s						
BNX				LR	LR		
	comp=Z,12µm,27.1s						
WVOR	**Wild Horse Val**	**90.86**	**39**	IAmb	IAmb	07 14 54.7	
	comp=Z,138nm,1.4s						
WVOR				IAMs_20	IAMs_20	07 46 17.8	
	comp=Z,10µm,22.0s						
WVOR	**Wild Horse Val**	**90.86**	**39**	P	**P**	**07 14 46.0**	**+0.4**
P16K	**Nushagak River**	**90.91**	**10**	P	**P**	**07 14 44.1**	**-1.0**
	baz=197						
P16K				S	**S**	**07 25 42.4**	**+2.1**
	baz=197						
NKL	**Nikolayevsk**	**90.96**	**336**	*e*P	**P**	**07 14 44.6**	**-0.9**
NKL				*e*S	**SKSac**	**07 25 15.5**	**-0.1**
NKL				pmax	pmax		
	comp=N,98nm,1.0s						
NKL				pmax	pmax		
	comp=E,117nm,1.3s						
NKL				pmax	pmax		
	comp=Z,567nm,1.3s						
NKL				smax	smax		
	comp=E,1µm,8.2s						
NKL				smax	smax		
	comp=N,288nm,2.1s						
NKL				MLR	MLR		
	comp=E,34µm,18.0s						
NKL				MLR	MLR		
	comp=N,13µm,16.0s						
NKL				MLR	MLR		
	comp=Z,53µm,19.0s						
Q18K	**Katmai Hardscr**	**91.03**	**12**	P	**P**	**07 14 45.2**	**-0.7**
	baz=199,SNR=47						
Q18K				S	**S**	**07 25 43.9**	**+2.2**
	baz=199						
AC02	**Maricunga**	**91.08**	**122**	IAmb	IAmb	07 15 14.3	
	comp=Z,117nm,1.4s						
PSUT	**Pine Spring**	**91.08**	**45**	IAmb	IAmb	07 14 55.2	
	comp=Z,112nm,1.4s						
X18A	**Snowflake**	**91.09**	**50**	IAmb	IAmb	07 14 54.4	
	comp=Z,116nm,1.1s						
SPR3	**Spring Creek 3**	**91.09**	**44**	IAmb	IAmb	07 14 54.7	
	comp=Z,151nm,1.6s						
SLVN	**Son La**	**91.15**	**294**	IAmb	IAmb	07 15 14.3	
	comp=Z,150nm,1.5s						
SLVN				IAMs_20	IAMs_20	08 03 18.3	
	comp=Z,11µm,20.0s						
SLVN	**Son La**	**91.15**	**294**	P	**P**	**07 14 49.6**	**+2.3**
M11K	**Mekoryuk**	**91.25**	**6**	P	**P**	**07 14 47.8**	**+1.1**
	baz=190,SNR=5.9						
M11K				S	**S**	**07 25 49.0**	**+5.7**
	baz=190						

HOOD	**Mount Hood Mea**	**91.25**	**36**	IAmb	IAmb	07 14 53.6	
	comp=Z,114nm,1.0s						
N14K	**Kuskokwak Cree**	**91.27**	**8**	P	**P**	**07 14 47.0**	**+0.2**
	baz=194,SNR=26						
N14K				S	**S**	**07 25 47.6**	**+4.1**
	baz=194						
P17K	**Kvichak River**	**91.31**	**11**	P	**P**	**07 14 46.2**	**-0.8**
	baz=198,SNR=10						
P17K				S	**S**	**07 25 46.7**	**+2.7**
	baz=198						
KLR	**Kul'dur**	**91.36**	**330**	P	**P**	**07 14 46.1**	**-1.5**
	comp=Z,11nm,0.8s,baz=117,slow=3.8,SNR=13						
KLR				PKiKP	**PKiKP**	**07 19 39.9**	**+0.3**
	comp=Z,6.3nm,0.8s,baz=117,slow=4.8,SNR=4.6						
KLR				LR	LR	07 49 49.7	
	comp=Z,9µm,21.9s,baz=153,slow=32						
	comp=Z,11nm,0.8s						
KLR	**Kul'dur**	**91.36**	**330**	*c* *i*P	**P**	**07 14 46.0**	**-1.5**
KLR				pmax	pmax		
	comp=Z,110nm,0.9s						
KLR				MLR	MLR		
	comp=Z,6µm,18.0s						
O16K	**Kokwok River B**	**91.43**	**10**	IAmb	IAmb	07 14 57.2	
	comp=Z,76nm,1.1s						
O16K	**Kokwok River B**	**91.43**	**10**	P	**P**	**07 14 46.2**	**-1.4**
	baz=196						
O16K				S	**S**	**07 25 46.9**	**+1.8**
	baz=196						
Q20K	**Shuyak Island**	**91.47**	**13**	P	**P**	**07 14 47.5**	**-0.2**
	baz=201,SNR=8.4						
Q20K				S	**S**	**07 25 49.1**	**+3.6**
	baz=201						
SYI	**Shuyak Island**	**91.47**	**13**	IAMs_20	IAMs_20	07 51 16.5	
	comp=Z,9µm,22.0s						
I07A	**Izee**	**91.51**	**38**	IAmb	IAmb	07 14 55.1	
	comp=Z,99nm,1.1s						
Q19K	**Cape Douglas,**	**91.54**	**12**	IAMs_20	IAMs_20	07 51 31.1	
	comp=Z,10µm,22.0s						
Q19K	**Cape Douglas,**	**91.54**	**12**	P	**P**	**07 14 47.5**	**-0.6**
	baz=200						
Q19K				S	**S**	**07 25 49.0**	**+2.9**
	baz=200						
M13K	**Dall Lake**	**91.56**	**7**	IAMs_20	IAMs_20	07 50 53.5	
	comp=Z,8µm,21.0s						
M13K	**Dall Lake**	**91.56**	**7**	P	**P**	**07 14 48.1**	**0.0**
	baz=192,SNR=11						
M13K				S	**S**	**07 25 53.8**	**+7.7**
	baz=192						
NLWA	**Neilton Lookou**	**91.63**	**33**	IAmb	IAmb	07 14 57.6	
	comp=Z,76nm,1.0s						
NLWA				IAMs_20	IAMs_20	07 47 24.7	
	comp=Z,10µm,21.0s						
ELK	**Elko**	**91.67**	**42**	PKKPbc	PKKPbc	07 32 07.8	-1.9
	comp=Z,5.1nm,0.6s,baz=52,slow=4.4,SNR=3.8						
ELK				LR	LR	07 48 23.0	
	comp=Z,10µm,21.8s,baz=243,slow=30						
ELK	**Elko**	**91.67**	**42**	P	**P**	**07 14 50.0**	**+0.5**
P18K	**Big Mountain,**	**91.69**	**11**	IAmb	IAmb	07 14 55.3	
	comp=Z,193nm,1.2s						
P18K	**Big Mountain,**	**91.69**	**11**	P	**P**	**07 14 47.5**	**-1.4**
	baz=199,SNR=34						
P18K				S	**S**	**07 25 49.1**	**+1.5**
	baz=199						
N15K	**Kwethluk River**	**91.70**	**9**	IAMs_20	IAMs_20	07 51 39.5	
	comp=Z,9µm,20.0s						
N15K	**Kwethluk River**	**91.70**	**9**	P	**P**	**07 14 48.9**	**0.0**
	baz=195,SNR=45						
N15K				S	**S**	**07 25 52.0**	**+4.4**
	baz=195						
G06A	**Carlson Farm,**	**91.71**	**36**	IAmb	IAmb	07 14 55.7	
	comp=Z,137nm,1.1s						
O17K	**Koliganek Bris**	**91.75**	**10**	P	**P**	**07 14 48.3**	**-0.8**
	baz=197,SNR=9.3						
O17K				S	**S**	**07 25 49.4**	**+1.4**
	baz=197						
EPT	**El Paso**	**91.80**	**54**	IAmb	IAmb	07 14 57.0	
	comp=Z,61nm,1.1s						
GYA	**Guiyang**	**91.81**	**300**	⇑P	**P**	**07 14 52.5**	**+2.1**
GYA				sP	pP	07 14 57.8	+1.0
GYA				SKS	**SKSac**	**07 25 20.3**	**-1.8**
GYA				S	**S**	**07 25 46.1**	**-4.2**
GYA				pmax	pmax		
	comp=Z,130nm,1.5s						
GYA				LR	LR		
	comp=Z,3µm,20.7s						
GYA				LR	LR		
	comp=Z,3µm,29.1s						
GYA				LR	LR		
	comp=Z,9µm,30.1s						
ENH	**Enshi**	**91.88**	**304**	P	**P**	**07 14 51.8**	**+1.3**
CMBY	**CAMPBELL BAY**	**92.01**	**277**	*e*P	**P**	**07 14 47.6**	**-3.9**
M14K	**Bethel**	**92.04**	**8**	IAmb	IAmb	07 14 57.7	
	comp=Z,158nm,1.1s						
M14K	**Bethel**	**92.04**	**8**	P	**P**	**07 14 50.5**	**+0.1**
	baz=193,SNR=21						
M14K				S	**S**	**07 25 55.7**	**+5.2**
	baz=193						
MVU	**Marysvale**	**92.07**	**46**	IAmb	IAmb	07 15 00.3	
	comp=Z,160nm,1.7s						
O18K	**Koktuh Hills**	**92.13**	**11**	P	**P**	**07 14 50.2**	**-0.7**
	baz=199,SNR=69						
O18K				S	**S**	**07 25 53.9**	**+2.4**
	baz=199						
M15K	**Kasigluk River**	**92.14**	**8**	P	**P**	**07 14 50.8**	**0.0**
	baz=194,SNR=41						
M15K				S	**S**	**07 25 55.4**	**+4.0**
	baz=194						
N16K	**Nishlik Lake**	**92.18**	**9**	P	**P**	**07 14 51.2**	**+0.1**
	baz=196,SNR=29						
N16K				S	**S**	**07 25 56.6**	**+4.7**
	baz=196						
GNW	**Green Mountain**	**92.25**	**34**	IAmb	IAmb	07 14 58.2	
	comp=Z,56nm,1.1s						
LYN	**LuoYang**	**92.29**	**309**	P	**P**	**07 14 53.9**	**+1.7**
LYN				PP	**PP**	**07 18 32.9**	**-0.4**
LYN				SKS	**SKSac**	**07 25 25.1**	**+1.0**
LYN				S	**ScS**	**07 25 58.4**	**+2.2**
LYN				pmax	pmax		
	comp=Z,240nm,0.9s						
LYN				pmax	pmax		
	comp=Z,4µm,5.8s						
LYN				LR	LR		
	comp=Z,11µm,22.7s						
LYN				LR	LR		
	comp=Z,6µm,21.6s						
LYN				LR	LR		
	comp=Z,17µm,22.0s						
P19K	**Oil Pt**	**92.29**	**12**	IAmb	IAmb	07 14 58.4	
	comp=Z,190nm,1.2s						
P19K	**Oil Pt**	**92.29**	**12**	P	**P**	**07 14 51.0**	**-0.6**
	baz=201,SNR=23						
P19K				S	**S**	**07 25 56.0**	**+3.0**
	baz=201						
VHRN	**Van Horn**	**92.31**	**55**	IAmb	IAmb	07 15 25.0	
	comp=Z,119nm,1.8s						
TX31	**Lajitas Ar. Si**	**92.44**	**57**	IAmb	IAmb	07 15 19.4	
	comp=Z,65nm,1.2s						
TXAR	**Lajitas Array**	**92.44**	**57**	P	**P**	**07 14 53.5**	**+0.3**
	comp=Z,6.5nm,1.0s,baz=212,slow=4.4,SNR=36						
TXAR				S	**SKSac**	**07 25 22.7**	**-2.7**
	comp=Z,0.2nm,0.9s,baz=319,slow=6.8,SNR=1.8						
TXAR				PKKPbc	**PKKPdf**	**07 32 02.7**	**-2.7**
	comp=Z,1.6nm,0.7s,baz=112,slow=4.6,SNR=5.7						
TXAR				PKP2bc		07 39 21.9	
	comp=Z,0.3nm,0.8s,baz=50,slow=4.7,SNR=3.5						
TXAR				PKPPKP	**P'P'df**	**07 40 14.8**	**-0.8**
	comp=Z,1.6nm,0.9s,baz=132,slow=1.9,SNR=5.2						
TXAR				LR	LR	07 52 39.8	
	comp=Z,3µm,18.0s,baz=218,slow=33						
	comp=Z,6.5nm,1.0s						
TXAR	**Lajitas Array**	**92.44**	**57**	P	**P**	**07 14 53.6**	**+0.4**
N17K	**Nushagak Hills**	**92.46**	**10**	P	**P**	**07 14 52.0**	**-0.4**
	baz=197						
N17K				S	**S**	**07 25 57.2**	**+2.8**
	baz=197						
F07A	**Phinny Hill Vi**	**92.53**	**36**	IAmb	IAmb	07 15 00.2	
	comp=Z,82nm,1.2s						
HNS	**HongShan**	**92.53**	**313**	⇑P	**P**	**07 14 52.5**	**-0.7**
HNS				PP	**PP**	**07 18 39.1**	**+4.0**
HNS				SKS	**SKSac**	**07 25 26.6**	**+1.4**
HNS				S	**ScS**	**07 25 57.0**	**-1.0**
HNS				pmax	pmax		
	comp=Z,130nm,1.3s						
HNS				pmax	pmax		
	comp=Z,3µm,11.8s						
HNS				LR	LR		
	comp=Z,7µm,23.0s						
HNS				LR	LR		
	comp=Z,8µm,23.7s						
HNS				LR	LR		
	comp=Z,15µm,24.9s						
L14K	**Kuka Creek**	**92.54**	**7**	IAmb	IAmb	07 14 59.9	
	comp=Z,148nm,1.1s						
L14K	**Kuka Creek**	**92.54**	**7**	P	**P**	**07 14 52.4**	**-0.2**
	baz=193,SNR=34						
L14K				S	**S**	**07 25 59.4**	**+4.5**
	baz=193						
CNPM	**China Poot**	**92.55**	**13**	IAMs_20	IAMs_20	07 51 47.9	
	comp=Z,11µm,21.0s						
HOM	**Homer**	**92.59**	**13**	P	**P**	**07 14 52.1**	**-0.8**
	baz=202						
HOM				S	**S**	**07 25 59.1**	**+3.5**
	baz=202						
O19K	**Port Alsworth**	**92.61**	**12**	IAMs_20	IAMs_20	07 52 27.4	
	comp=Z,9µm,22.0s						
O19K	**Port Alsworth**	**92.61**	**12**	P	**P**	**07 14 52.2**	**-0.7**
	baz=200,SNR=32						
O19K				S	**S**	**07 25 56.4**	**+0.8**
	baz=200						
G08A	**Pilot Rock**	**92.61**	**37**	IAmb	IAmb	07 15 00.0	
	comp=Z,120nm,1.1s						
HMU	**Henry Mountain**	**92.64**	**47**	IAmb	IAmb	07 15 01.3	
	comp=Z,109nm,1.5s						
M16K	**Timber Creek**	**92.68**	**9**	IAmb	IAmb	07 14 59.5	
	comp=Z,135nm,1.1s						
M16K				IAMs_20	IAMs_20	07 52 21.3	
	comp=Z,9µm,21.0s						
M16K	**Timber Creek**	**92.68**	**9**	P	**P**	**07 14 53.4**	**0.0**
	baz=196,SNR=29						
M16K				S	**S**	**07 26 02.0**	**+5.7**
	baz=196						
O20K	**Slope Mountain**	**92.80**	**12**	P	**P**	**07 14 52.9**	**-1.2**
	baz=201						
O20K				S	**S**	**07 26 00.1**	**+2.5**
	baz=201						
N18K	**Kilae Creek**	**92.81**	**11**	IAmb	IAmb	07 15 01.3	
	comp=Z,142nm,1.6s						
N18K	**Kilae Creek**	**92.81**	**11**	P	**P**	**07 14 53.2**	**-0.8**
	baz=198,SNR=9.0						
N18K				S	**S**	**07 25 59.4**	**+2.0**
	baz=198						
MXC	**Moxie City**	**92.81**	**36**	IAmb	IAmb	07 15 02.5	
	comp=Z,230nm,1.9s						
BRLK	**Bradley Lake**	**92.84**	**13**	IAMs_20	IAMs_20	07 51 57.2	
	comp=Z,10µm,21.0s						
BRSE	**Bradley Lake S**	**92.85**	**13**	P	**P**	**07 14 53.5**	**-0.7**
	baz=203,SNR=26						
BRSE				S	**S**	**07 26 02.0**	**+4.1**
	baz=203						
CBB	**Campbell River**	**92.86**	**31**	IAmb	IAmb	07 15 02.0	
	comp=Z,294nm,1.9s						
K13K	**Kusilvak Mount**	**92.92**	**6**	IAmb	IAmb	07 15 01.8	
	comp=Z,157nm,1.1s						
K13K	**Kusilvak Mount**	**92.92**	**6**	P	**P**	**07 14 53.6**	**-0.8**
	baz=191,SNR=31						
K13K				S	**S**	**07 26 02.2**	**+3.9**
	baz=191						
Q16A	**Castle Valley**	**92.97**	**46**	IAmb	IAmb	07 15 22.4	
	comp=Z,124nm,1.6s						
L15K	**Ungalak Mounta**	**93.00**	**8**	P	**P**	**07 14 53.7**	**-1.1**
	baz=194						
L15K				S	**S**	**07 26 01.8**	**+2.8**
	baz=194						
E07A	**Sunnyside**	**93.02**	**36**	IAmb	IAmb	07 15 03.5	
	comp=Z,174nm,1.5s						
ALPN	**Alpine**	**93.04**	**56**	IAmb	IAmb	07 15 23.5	
	comp=Z,54nm,1.1s						
MFID	**Camas Ranch**	**93.06**	**40**	IAmb	IAmb	07 15 02.0	
	comp=Z,58nm,0.9s						
HAWA	**Hanford**	**93.06**	**36**	IAmb	IAmb	07 15 04.4	
	comp=Z,60nm,0.9s						
HAWA				IAMs_20	IAMs_20	07 48 07.8	
	comp=Z,8µm,22.0s						
RED	**Redoubt Volcan**	**93.09**	**12**	IAmb	IAmb	07 15 00.6	
	comp=Z,208nm,1.5s						
N19K	**Bonanza Creek**	**93.16**	**11**	IAmb	IAmb	07 15 01.8	
	comp=Z,76nm,1.1s						
N19K				IAMs_20	IAMs_20	07 55 10.1	
	comp=Z,8µm,20.0s						
N19K	**Bonanza Creek**	**93.16**	**11**	P	**P**	**07 14 54.1**	**-1.6**
	baz=200,SNR=15						
N19K				S	**S**	**07 26 01.7**	**+1.0**
	baz=200						
TMUT	**Trail Mountain**	**93.17**	**46**	IAmb	IAmb	07 15 27.0	
	comp=Z,54nm,0.9s						
BMO	**Blue Mountains**	**93.19**	**38**	IAmb	IAmb	07 15 04.0	
	comp=Z,205nm,2.0s						
BMO				IAMs_20	IAMs_20	07 49 55.4	
	comp=Z,7µm,21.0s						
NNA	**Nana**	**93.22**	**106**	LR	LR	07 47 43.8	
	comp=Z,14µm,21.9s,baz=242,slow=30						
BJT	**Baijiatuau**	**93.22**	**315**	IAMs_20	IAMs_20	07 52 24.9	
	comp=Z,11µm,22.0s						
BJT	**Baijiatuau**	**93.22**	**315**	IAmb	IAmb	07 15 02.4	
	comp=Z,58nm,0.9s						
BJT	**Baijiatuau**	**93.22**	**315**	P	**P**	**07 14 57.9**	**+1.5**
BJI	**Beijing**	**93.23**	**315**	P	**P**	**07 14 55.3**	**-1.1**
BJI				SKS	**SKSac**	**07 25 28.5**	**-0.5**
BJI				S	**SKKSac**	**07 25 50.0**	**+2.0**
BJI				pmax	pmax		
	comp=Z,32nm,0.9s						
BJI				pmax	pmax		
	comp=Z,1µm,14.0s						
BJI				LR	LR		
	comp=Z,2µm,22.5s						
BJI				LR	LR		
	comp=Z,3µm,21.7s						
BJI				LR	LR		
	comp=Z,9µm,28.2s						
M17K	**Holitna River**	**93.26**	**10**	IAmb	IAmb	07 15 02.2	
	comp=Z,119nm,1.1s						
M17K				IAMs_20	IAMs_20	07 52 26.6	
	comp=Z,8µm,22.0s						
M17K	**Holitna River**	**93.26**	**10**	P	**P**	**07 14 55.6**	**-0.4**
	baz=197,SNR=26						
M17K				S	**S**	**07 26 05.4**	**+4.0**
	baz=197						
L16K	**Owhat River**	**93.28**	**9**	P	**P**	**07 14 55.9**	**-0.2**
	baz=195,SNR=43						
L16K				S	**S**	**07 26 04.4**	**+2.9**
	baz=195						
WAH2	**Wahluke Slope**	**93.29**	**36**	IAmb	IAmb	07 15 04.6	
	comp=Z,274nm,1.9s						
BBB	**Bella Bella**	**93.30**	**28**	LR	LR	07 53 56.0	
	comp=Z,4µm,18.1s,baz=238,slow=34						
MPU	**Maple Canyon**	**93.35**	**45**	IAmb	IAmb	07 15 05.7	
	comp=Z,92nm,1.7s						
LNOR	**Lincton Mounta**	**93.36**	**37**	IAmb	IAmb	07 15 03.0	
	comp=Z,127nm,2.0s						
SEW	**Seward**	**93.44**	**14**	IAmb	IAmb	07 15 13.2	
	comp=Z,113nm,1.2s						
SEW				IAMs_20	IAMs_20	07 52 40.5	
	comp=Z,7µm,20.0s						
SEW	**Seward**	**93.44**	**14**	P	**P**	**07 14 56.2**	**-0.6**
	baz=204						
SEW				S	**S**	**07 26 05.3**	**+2.4**
	baz=204						
SRU	**San Rafael Swe**	**93.48**	**46**	IAmb	IAmb	07 15 05.8	
	comp=Z,281nm,1.9s						
Q23K	**Middleton Isla**	**93.51**	**16**	IAMs_20	IAMs_20	07 52 00.4	
	comp=Z,7µm,20.0s						
Q23K	**Middleton Isla**	**93.51**	**16**	P	**P**	**07 14 57.0**	**-0.1**
	baz=206						
Q23K				S	**S**	**07 26 07.0**	**+3.4**
	baz=206						
M18K	**Stony River**	**93.59**	**10**	P	**P**	**07 14 57.2**	**-0.3**
	baz=198,SNR=38						
M18K				S	**S**	**07 26 07.5**	**+3.3**
	baz=198						
K15K	**Wolf Creek Mou**	**93.59**	**8**	P	**P**	**07 14 57.8**	**+0.2**
	baz=194,SNR=56						
K15K				S	**S**	**07 26 08.0**	**+3.7**
	baz=194						
MA2	**Magadan**	**93.61**	**345**	P	**P**	**07 14 57.6**	**-0.1**
MA2				IAmb	IAmb	07 15 03.0	
	comp=Z,46nm,0.9s						
MA2	**Magadan**	**93.61**	**345**	LR	LR	07 52 53.3	
	comp=Z,12µm,21.1s,baz=162,slow=33						
MA2	**Magadan**	**93.61**	**345**	P	**P**	**07 14 59.1**	**+1.4**
MA2	**Magadan**	**93.61**	**345**	*ce*P	**P**	**07 14 58.3**	**+0.6**
MA2				pmax	pmax		
	comp=Z,53nm,0.9s						
MA2				MLR	MLR		
	comp=Z,3µm,19.0s						
MA2	**Magadan**	**93.61**	**345**	P	**P**	**07 14 56.6**	**-1.1**
	comp=Z,2µmcomp=Z,69nm,1.1s						
CM31	**Chiang Mai Arr**	**93.62**	**289**	P	**P**	**07 14 59.1**	**+0.3**
	SNR=14						
CM31				P	**P**	**07 14 59.1**	**+0.3**
	SNR=14						
CMAR	**Chiang Mai Arr**	**93.62**	**289**	P	**P**	**07 14 59.0**	**+0.2**
CMAR	**Chiang Mai Arr**	**93.62**	**289**	P	**P**	**07 14 58.4**	**-0.4**
	comp=Z,4.1nm,0.7s,baz=154,slow=3.4,SNR=7.1						
CMAR				PP	**PP**	**07 18 43.3**	**-0.7**
	comp=Z,7.3nm,0.4s,baz=100,slow=32,SNR=7.5						
CMAR				PKKPbc	**PKKPbc**	**07 32 03.0**	**-0.3**
	comp=Z,2.9nm,0.3s,baz=285,slow=4.8,SNR=6.0						
CMAR				LR	LR	07 59 57.5	
	comp=Z,4µm,19.6s,baz=125,slow=37						
	comp=Z,4.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**93.62**	**289**	P	**P**	**07 14 59.0**	**+0.2**
SLKM	**Skilak Lake**	**93.66**	**13**	IAMs_20	IAMs_20	07 52 23.3	
	comp=Z,8µm,22.0s						
ANMO	**Albuquerque**	**93.66**	**51**	P	**P**	**07 14 59.4**	**+0.6**
ANMO	**Albuquerque**	**93.66**	**51**	IAmb	IAmb	07 15 26.5	
	comp=Z,51nm,1.2s						
ANMO	**Albuquerque**	**93.66**	**51**	PKKPbc	PKKPbc	07 32 04.3	+0.2
	comp=Z,3.7nm,0.9s,baz=151,slow=3.7,SNR=7.1						
ANMO				LR	LR	07 50 10.3	
	comp=Z,4µm,21.8s,baz=342,slow=31						
ANMO	**Albuquerque**	**93.66**	**51**	*d* *i*P	**P**	**07 14 58.3**	**-0.5**
ANMO				pmax	pmax		
	comp=Z,40nm,1.1s						
CAPN	**Captain Cook N**	**93.72**	**13**	IAMs_20	IAMs_20	07 52 38.8	
	comp=Z,11µm,21.0s						
O22K	**Cooper Landing**	**93.73**	**14**	IAMs_20	IAMs_20	07 58 09.2	
	comp=Z,7µm,20.0s						
O22K	**Cooper Landing**	**93.73**	**14**	P	**P**	**07 14 57.8**	**-0.4**
	baz=204						
O22K				S	**S**	**07 26 07.7**	**+2.2**
	baz=204						
PV05	**Paradox Valley**	**93.76**	**47**	IAmb	IAmb	07 15 06.0	
	comp=Z,58nm,1.1s						
HVU	**Hansel Valley**	**93.76**	**43**	IAmb	IAmb	07 15 07.0	
	comp=Z,251nm,1.7s						
P23K	**Montague Islan**	**93.78**	**15**	IAmb	IAmb	07 15 03.7	
	comp=Z,80nm,1.0s						
P23K				IAMs_20	IAMs_20	07 52 34.5	
	comp=Z,9µm,20.0s						
P23K	**Montague Islan**	**93.78**	**15**	P	**P**	**07 14 57.8**	**-0.6**
	baz=206						
P23K				S	**S**	**07 26 09.3**	**+3.3**
	baz=206						
CHTO	**Chiang Mai**	**93.80**	**289**	P	**P**	**07 14 58.8**	**-0.8**
CHTO				IAmb	IAmb	07 15 08.0	
	comp=Z,69nm,1.1s						
CHTO				IAMs_20	IAMs_20	08 00 02.0	
	comp=Z,7µm,20.0s						
CHTO	**Chiang Mai**	**93.80**	**289**	P	**P**	**07 14 59.4**	**-0.2**
CHTO	**Chiang Mai**	**93.80**	**289**	P	**P**	**07 15 01.3**	**+1.7**
CHTO	**Chiang Mai**	**93.80**	**289**	P	**P**	**07 14 58.8**	**-0.8**
CHTO				pmax	pmax		
	comp=Z,69nm,1.1s						
CHTO				MLR	MLR		
	comp=Z,7µm,20.0s						
D08A	**Wollman Farm,**	**93.82**	**36**	IAmb	IAmb	07 15 06.2	
	comp=Z,40nm,0.8s						
J14K	**Nanvaranak Lak**	**93.82**	**7**	P	**P**	**07 14 58.1**	**-0.4**
	baz=192						
J14K				S	**S**	**07 26 08.7**	**+2.5**
	baz=192						
JLU	**Jordanelle**	**93.82**	**44**	IAmb	IAmb	07 15 06.8	
	comp=Z,98nm,1.6s						
L17K	**Donlin**	**93.84**	**9**	P	**P**	**07 14 59.5**	**+0.8**
	baz=196,SNR=34						
L17K				S	**S**	**07 26 08.4**	**+1.9**
	baz=196						
E09A	**Wood Farm, Sta**	**93.86**	**37**	IAmb	IAmb	07 15 06.5	
	comp=Z,259nm,1.9s						
N20K	**Mount Spurr**	**93.92**	**12**	P	**P**	**07 14 57.5**	**-1.6**
	baz=202						
N20K				S	**S**	**07 26 07.6**	**+0.2**
	baz=202						
SPCR	**Spurr Chakacha**	**93.92**	**12**	P	**P**	**07 14 57.8**	**-1.4**
	baz=202						
SPCR				S	**S**	**07 26 08.6**	**+1.2**
	baz=202						
HLID	**Hailey**	**93.94**	**41**	IAmb	IAmb	07 15 06.4	
	comp=Z,49nm,1.1s						
HLID				IAMs_20	IAMs_20	07 58 05.4	
	comp=Z,7µm,18.0s						
CRAG	**Craig**	**93.96**	**24**	P	**P**	**07 15 01.7**	**+2.4**
CRAG	**Craig**	**93.96**	**24**	P	**P**	**07 14 57.0**	**-2.3**
	baz=217						
CRAG				S	S	07 26 17.0	+9.3
	baz=217						
PV19	**Morning Glory**	**93.97**	**47**	IAmb	IAmb	07 15 25.9	
	comp=Z,134nm,1.4s						
PV10	**Paradox Valley**	**93.97**	**47**	IAmb	IAmb	07 15 07.8	
	comp=Z,204nm,1.8s						
PV18	**Skein Mesa, Pa**	**93.98**	**47**	IAmb	IAmb	07 15 06.4	
	comp=Z,66nm,1.1s						
PV20	**West Nyswonger**	**94.00**	**47**	IAmb	IAmb	07 15 40.6	
	comp=Z,83nm,1.2s						
HEH	**HeiHe**	**94.03**	**328**	*e*P	**P**	**07 14 58.5**	**-1.3**
HEH				pP	**pP**	**07 15 04.3**	**-2.0**
HEH				PP	**PP**	**07 18 51.0**	**+4.4**
HEH				SKS	**SKSac**	**07 25 30.1**	**-2.8**
HEH				S	**ScS**	**07 26 12.3**	**+2.3**
HEH				pmax	pmax		
	comp=Z,20nm,1.7s						
HEH				pmax	pmax		
	comp=Z,2µm,6.7s						
HEH				LR	LR		
	comp=Z,8µm,19.4s						
HEH				LR	LR		
	comp=Z,6µm,21.4s						
HEH				LR	LR		
	comp=Z,15µm,20.8s						
AF01	**San Pedro de A**	**94.03**	**120**	P	**P**	**07 14 58.8**	**-2.2**
AF01				IAmb	IAmb	07 15 21.1	
	comp=Z,179nm,1.1s						
PV11	**David Mesa, Pa**	**94.03**	**47**	IAmb	IAmb	07 15 07.5	
	comp=Z,76nm,1.5s						
PV23	**Carpenter Ridg**	**94.04**	**47**	IAmb	IAmb	07 15 06.9	
	comp=Z,55nm,1.1s						
PLID	**Pearl Lake**	**94.05**	**39**	IAmb	IAmb	07 15 07.9	
	comp=Z,84nm,1.1s						
PLID				IAMs_20	IAMs_20	07 49 39.0	
	comp=Z,9µm,22.0s						
PV02	**Paradox Valley**	**94.07**	**48**	IAmb	IAmb	07 15 06.8	
	comp=Z,61nm,1.1s						
PV04	**Paradox Valley**	**94.07**	**47**	IAmb	IAmb	07 15 07.0	
	comp=Z,126nm,1.9s						
KMI	**Kunming**	**94.07**	**297**	P	**P**	**07 15 00.9**	**-0.1**
KMI				pP	pP	07 15 04.8	-2.6
KMI				PP	**PP**	**07 18 52.9**	**+5.2**
KMI				pmax	pmax		
	comp=Z,56nm,1.6s						
KMI				pmax	pmax		
	comp=Z,2µm,14.8s						
KMI				LR	LR		
	comp=Z,4µm,21.8s						
KMI				LR	LR		
	comp=Z,3µm,27.8s						
KMI				LR	LR		
	comp=Z,7µm,22.5s						
PV12	**Saucer Basin,**	**94.09**	**47**	IAmb	IAmb	07 15 24.5	
	comp=Z,96nm,1.3s						
PV21	**Cone Mtn., Par**	**94.12**	**47**	IAmb	IAmb	07 15 07.2	
	comp=Z,152nm,1.9s						
L18K	**Granite Mounta**	**94.15**	**10**	IAmb	IAmb	07 15 08.0	
	comp=Z,76nm,1.1s						
L18K	**Granite Mounta**	**94.15**	**10**	P	**P**	**07 14 59.8**	**-0.3**
	baz=198						
L18K				S	**S**	**07 26 10.5**	**+1.3**
	baz=198						
TIY	**Taiyuan**	**94.16**	**312**	*e*P	**P**	**07 15 02.3**	**+1.4**
TIY				PP	**PP**	**07 18 47.0**	**-1.1**
TIY				SKS	**SKSac**	**07 25 33.0**	**-1.5**
TIY				SS	**SS**	**07 32 33.4**	**+1.1**
TIY				pmax	pmax		
	comp=Z,130nm,1.0s						
TIY				pmax	pmax		
	comp=Z,1µm,6.0s						
TIY				LR	LR		
	comp=Z,5µm,24.3s						
TIY				LR	LR		
	comp=Z,8µm,24.3s						
TIY				LR	LR		
	comp=Z,12µm,24.9s						
BSUT	**Blindstream Ca**	**94.20**	**45**	IAmb	IAmb	07 15 07.9	
	comp=Z,54nm,1.2s						

M19K	Big River Lodg	94.20	11	P	P	07 14 59.2	-1.2
	baz=200						
M19K				S	S	07 26 11.4	+1.6
	baz=200						
PV22	Blue Mesa, Par	94.23	47	IAmb	IAmb	07 15 09.4	
	comp=Z,100nm,1.8s						
FIS	Fire Island	94.24	13	IAMs_20	IAMs_20	07 52 53.7	
	comp=Z,8µm,22.0s						
GAMB	Gambell	94.28	3	IAmb	IAmb	07 15 06.3	
	comp=Z,101nm,1.0s						
GAMB				IAMs_20	IAMs_20	07 51 07.4	
	comp=Z,11µm,21.0s						
GAMB	Gambell	94.28	3	P	P	07 15 00.9	+0.3
	baz=185						
GAMB				S	S	07 26 14.1	+3.9
	baz=185						
RC01	Rabbit Creek A	94.29	13	IAmb	IAmb	07 15 07.5	
	comp=Z,192nm,1.4s						
RC01				IAMs_20	IAMs_20	07 52 41.8	
	comp=Z,7µm,22.0s						
RC01	Rabbit Creek A	94.29	13	P	P	07 15 00.1	-0.7
	baz=204,SNR=7.9						
RC01				S	S	07 26 13.4	+2.9
	baz=204						
HIN	Hinchinbrook I	94.34	15	IAmb	IAmb	07 15 11.3	
	comp=Z,55nm,1.0s						
HIN				IAMs_20	IAMs_20	07 53 01.3	
	comp=Z,9µm,20.0s						
PWL	Port Wells	94.36	14	IAmb	IAmb	07 15 07.9	
	comp=Z,180nm,1.3s						
PWL				IAMs_20	IAMs_20	07 52 55.8	
	comp=Z,7µm,20.0s						
PWL	Port Wells	94.36	14	P	P	07 15 00.4	-0.8
	baz=205,SNR=13						
PWL				S	S	07 26 15.4	+4.3
	baz=205						
HWUT	Hardware Ranch	94.37	44	IAMs_20	IAMs_20	07 49 05.9	
	comp=Z,10µm,22.0s						
V35K	Ketchikan	94.38	24	IAMs_20	IAMs_20	07 49 43.8	
	comp=Z,9µm,22.0s						
V35K	Ketchikan	94.38	24	P	P	07 14 59.3	-1.9
	baz=218						
V35K				S	S	07 26 17.5	+6.1
	baz=218						
L19K	White Mountain	94.39	11	P	P	07 15 00.8	-0.5
	baz=199,SNR=44						
L19K				S	S	07 26 13.3	+1.9
	baz=199						
M20K	Styx River	94.39	11	IAMs_20	IAMs_20	07 55 48.7	
	comp=Z,9µm,20.0s						
M20K	Styx River	94.39	11	P	P	07 14 59.8	-1.5
	baz=201						
M20K				S	S	07 26 12.9	+1.3
	baz=201						
XAN	Xi'an	94.40	307	P	P	07 15 00.6	-1.4
XAN				PP	PP	07 18 52.1	+2.2
XAN				SKS	SKSac	07 25 34.3	-1.5
XAN				S	S	07 26 12.0	-0.8
XAN				SS	SS	07 32 36.6	+0.9
XAN				pmax	pmax		
	comp=Z,90nm,0.8s						
XAN				pmax	pmax		
	comp=Z,3µm,5.7s						
XAN				LR	LR		
	comp=Z,6µm,19.6s						
XAN				LR	LR		
	comp=Z,5µm,19.1s						
XAN				LR	LR		
	comp=Z,12µm,19.6s						
K17K	Iditarod	94.40	9	IAmb	IAmb	07 15 08.3	
	comp=Z,158nm,1.4s						
K17K				IAMs_20	IAMs_20	08 01 28.8	
	comp=Z,7µm,20.0s						
K17K	Iditarod	94.40	9	P	P	07 15 00.6	-0.6
	baz=196,SNR=30						
K17K				S	S	07 26 13.7	+2.4
	baz=196						
KAIM	Kayak Island	94.40	16	IAMs_20	IAMs_20	07 52 27.0	
	comp=Z,9µm,20.0s						
KAIM	Kayak Island	94.40	16	P	P	07 14 58.7	-2.6
	baz=208						
KAIM				S	S	07 26 16.9	+5.4
	baz=208						
SUA	Susitna One	94.44	13	IAmb	IAmb	07 15 11.3	
	comp=Z,86nm,0.8s						
SUA	Susitna One	94.44	13	P	P	07 15 00.4	-1.2
	baz=203,SNR=14						
SUA				S	S	07 26 15.1	+3.1
	baz=203						
ATAH	Atahualpa	94.46	101	LR	LR	07 47 31.2	
	comp=Z,8µm,21.6s,baz=239,slow=29						
U33K	Whale Pass	94.47	23	IAMs_20	IAMs_20	07 49 26.2	
	comp=Z,8µm,21.0s						
U33K	Whale Pass	94.47	23	P	P	07 14 59.7	-2.0
	baz=217						
U33K				S	S	07 26 17.6	+5.5
	baz=217						
SIT	Sitka	94.51	22	P	P	07 14 59.9	-1.9
	baz=215						
SIT				S	S	07 26 20.6	+8.2
	baz=215						
GLI	Glacier Island	94.64	15	IAmb	IAmb	07 15 07.4	
	comp=Z,92nm,0.9s						
GLI				IAMs_20	IAMs_20	07 52 43.3	
	comp=Z,8µm,20.0s						
GLI	Glacier Island	94.64	15	P	P	07 15 01.2	-1.2
	baz=206,SNR=13						
GLI				S	S	07 26 17.4	+3.8
	baz=206						
EYAK	Cordova Ski Ar	94.64	15	IAmb	IAmb	07 15 07.7	
	comp=Z,57nm,0.9s						
EYAK	Cordova Ski Ar	94.64	15	P	P	07 15 02.6	+0.2
EYAK	Cordova Ski Ar	94.64	15	P	P	07 15 01.4	-1.0
	baz=207,SNR=14						
EYAK				S	S	07 26 17.3	+3.8
	baz=207						
FID	Port Fidalgo	94.66	15	IAmb	IAmb	07 15 07.5	
	comp=Z,54nm,1.0s						
FID				IAMs_20	IAMs_20	07 52 20.6	
	comp=Z,9µm,20.0s						
J16K	Anvik River	94.66	8	IAmb	IAmb	07 15 10.2	
	comp=Z,138nm,1.1s						
J16K				IAMs_20	IAMs_20	08 01 31.7	
	comp=Z,7µm,20.0s						
J16K	Anvik River	94.66	8	P	P	07 15 02.1	-0.3
	baz=194,SNR=46						
J16K				S	S	07 26 18.8	+5.1
	baz=194						
SUCK	Suckling Hills	94.69	16	IAMs_20	IAMs_20	07 52 47.5	
	comp=Z,10µm,20.0s						
SKT	Skwentna	94.77	12	IAMs_20	IAMs_20	07 53 56.6	
	comp=Z,11µm,21.0s						
SKT	Skwentna	94.77	12	P	P	07 15 02.2	-0.8
	baz=202,SNR=10.0						
SKT				S	S	07 26 16.3	+1.6
	baz=202						
M22K	Willow	94.82	13	IAmb	IAmb	07 15 22.3	
	comp=Z,116nm,1.0s						
M22K				IAMs_20	IAMs_20	07 53 14.0	
	comp=Z,11µm,21.0s						
M22K	Willow	94.82	13	P	P	07 15 01.6	-1.5
	baz=203						
M22K				S	S	07 26 17.5	+2.6
	baz=203						
L20K	Farewell, AK	94.83	11	P	P	07 15 02.3	-1.0
	baz=200,SNR=18						
L20K				S	S	07 26 17.3	+2.1
	baz=200						
KNK	Knik Glacier	94.84	14	IAmb	IAmb	07 15 08.6	
	comp=Z,57nm,1.1s						
KNK	Knik Glacier	94.84	14	P	P	07 15 02.9	-0.4
	baz=205,SNR=9.2						
KNK				S	S	07 26 19.0	+3.7
	baz=205						
PMR	Palmer	94.87	13	IAmb	IAmb	07 15 10.1	
	comp=Z,74nm,1.2s						
PMR	Palmer	94.87	13	P	P	07 15 02.6	-0.8
PMR	Palmer	94.87	13	P	P	07 15 02.5	-0.9
	baz=204,SNR=24						
PMR				S	S	07 26 18.1	+2.7
	baz=204						
HBVL	Hebbronville	94.91	62	IAmb	IAmb	07 15 12.7	
	comp=Z,180nm,1.7s						
J17K	VABM Dome	94.95	8	IAmb	IAmb	07 15 11.0	
	comp=Z,105nm,1.2s						
J17K				IAMs_20	IAMs_20	07 54 29.4	
	comp=Z,7µm,21.0s						
J17K	VABM Dome	94.95	8	P	P	07 15 03.7	0.0
	baz=196,SNR=30						
J17K				S	S	07 26 19.7	+3.6
	baz=196						
S31K	Pelican	94.96	21	IAMs_20	IAMs_20	07 51 47.0	
	comp=Z,10µm,20.0s						
S31K	Pelican	94.96	21	P	P	07 15 02.7	-1.2
	baz=215						
S31K				S	S	07 26 25.8	+9.5
	baz=215						
WRAK	Wrangell Islan	94.98	23	IAMs_20	IAMs_20	07 49 41.6	
	comp=Z,8µm,22.0s						
WRAK	Wrangell Islan	94.98	23	P	P	07 15 02.7	-1.3
	baz=218						
WRAK				S	S	07 26 25.1	+8.5
	baz=218						
BERG	Berg Lake	94.98	16	IAmb	IAmb	07 15 11.5	
	comp=Z,91nm,1.2s						
GHO	Glory Hole Cre	95.07	13	IAmb	IAmb	07 15 11.8	
	comp=Z,76nm,0.9s						
S32K	Killisnoo	95.08	22	IAMs_20	IAMs_20	07 50 14.2	
	comp=Z,9µm,20.0s						
S32K	Killisnoo	95.08	22	P	P	07 15 04.2	-0.2
	baz=216						
S32K				S	S	07 26 26.0	+8.6
	baz=216						
T33K	Petersburg	95.09	23	P	P	07 15 03.3	-1.2
	baz=217						
T33K				S	S	07 26 26.3	+8.8
	baz=217						
DIV	Divide	95.16	15	IAMs_20	IAMs_20	07 53 26.9	
	comp=Z,8µm,20.0s						
SML	Sawmill	95.22	14	P	P	07 15 04.3	-0.8
	baz=205						
SML				S	S	07 26 21.8	+3.1
	baz=205						
MESA	MESA	95.23	17	IAmb	IAmb	07 15 16.5	
	comp=Z,73nm,0.8s						
MESA				IAMs_20	IAMs_20	07 58 36.0	
	comp=Z,9µm,20.0s						
MESA	MESA	95.23	17	P	P	07 15 05.4	+0.1
	baz=210,SNR=12						
MESA				S	S	07 26 25.1	+6.0
	baz=210						
I17K	Unalakleet	95.24	8	IAmb	IAmb	07 15 12.3	
	comp=Z,75nm,1.1s						
I17K	Unalakleet	95.24	8	P	P	07 15 04.6	-0.4
	baz=194,SNR=8.1						
I17K				S	S	07 26 23.1	+4.6
	baz=194						
WAX	Waxell Ridge	95.24	17	IAmb	IAmb	07 15 12.8	
	comp=Z,110nm,1.2s						
WAX				IAMs_20	IAMs_20	07 53 35.2	
	comp=Z,10µm,20.0s						
BMRM	Bremner River	95.28	16	IAmb	IAmb	07 15 10.7	
	comp=Z,61nm,0.9s						
BMRM				IAMs_20	IAMs_20	07 53 08.2	
	comp=Z,10µm,20.0s						
BMRM	Bremner River	95.28	16	P	P	07 15 04.8	-0.6
	baz=208,SNR=12						
BMRM				S	S	07 26 24.4	+5.2
	baz=208						
M23K	Glacier View	95.33	14	P	P	07 15 05.0	-0.6
	baz=205,SNR=7.8						
M23K				S	S	07 26 23.6	+4.1
	baz=205						
J18K	Innoko River	95.33	9	IAmb	IAmb	07 15 12.4	
	comp=Z,102nm,1.1s						
J18K				IAMs_20	IAMs_20	07 53 41.5	
	comp=Z,9µm,22.0s						
J18K	Innoko River	95.33	9	P	P	07 15 04.8	-0.7
	baz=198,SNR=42						
J18K				S	S	07 26 23.5	+4.0
	baz=198						
AHID	Auburn Hatcher	95.35	43	IAmb	IAmb	07 15 12.7	
	comp=Z,71nm,1.1s						
AHID				IAMs_20	IAMs_20	07 49 56.8	
	comp=Z,9µm,22.0s						
CUT	Chulitna	95.39	13	P	P	07 15 05.3	-0.4
	baz=203						
CUT				S	S	07 26 22.6	+2.6
	baz=203						
YAH	Yahtse	95.44	17	IAmb	IAmb	07 15 13.9	
	comp=Z,67nm,1.0s						
ANM	Nome	95.45	5	IAMs_20	IAMs_20	07 54 21.4	
	comp=Z,10µm,22.0s						
ANM	Nome	95.45	5	P	P	07 15 06.2	+0.2
	baz=190						
ANM				S	S	07 26 24.5	+4.1
	baz=190						
CRQE	Cirque	95.45	16	P	P	07 15 05.9	-0.4
	baz=209						
CRQE				S	S	07 26 26.5	+5.7
	baz=209						
KLU	Klutina	95.45	15	IAMs_20	IAMs_20	07 52 57.6	
	comp=Z,8µm,20.0s						
KLU	Klutina	95.45	15	P	P	07 15 05.6	-0.6
	baz=207,SNR=8.8						
KLU				S	S	07 26 25.2	+4.5
	baz=207						
SCM	Sheep Creek Mo	95.45	14	IAmb	IAmb	07 15 11.5	
	comp=Z,67nm,0.9s						
SCM	Sheep Creek Mo	95.45	14	P	P	07 15 05.4	-0.8
	baz=206,SNR=12						
SCM				S	S	07 26 24.2	+3.4
	baz=206						
PNL	Peninsula	95.47	18	P	P	07 15 08.9	+2.7
PNL	Peninsula	95.47	18	P	P	07 15 05.7	-0.6
	baz=212,SNR=12						
PNL				S	S	07 26 28.2	+7.4
	baz=212						
R31K	City Hall, Gus	95.48	21	P	P	07 15 05.9	-0.4
	baz=215						
R31K				S	S	07 26 29.2	+8.4
	baz=215						
ISLE	Juniper Island	95.50	17	IAMs_20	IAMs_20	07 49 54.1	
	comp=Z,11µm,22.0s						
PPLA	Purkeypile	95.50	11	IAMs_20	IAMs_20	07 56 43.0	
	comp=Z,8µm,20.0s						
PPLA	Purkeypile	95.50	11	P	P	07 15 04.2	-2.3
	baz=202						
PPLA				S	S	07 26 23.5	+2.2
	baz=202						
NEW	Newport	95.53	36	PKKPbc	PKKPbc	07 31 58.2	-1.3
	comp=Z,3.9nm,0.6s,baz=102,slow=3.9,SNR=8.1						
NEW				LR	LR	07 50 49.0	
	comp=Z,7µm,21.7s,baz=220,slow=31						
PZH	PanZhiHua	95.56	297	P	P	07 15 09.0	+1.4
PZH				sP	sP	07 15 15.9	-0.5
PZH				PP	PP	07 19 03.3	+4.1
PZH				SKS	SKSac	07 25 37.6	-5.0
PZH				S	S	07 26 19.8	-3.6
PZH				SS	SS	07 32 45.8	-6.8
PZH				pmax	pmax		
	comp=Z,30nm,1.1s						
PZH				pmax	pmax		
	comp=Z,1µm,9.3s						
PZH				LR	LR		
	comp=Z,3µm,21.1s						
PZH				LR	LR		
	comp=Z,3µm,24.0s						
PZH				LR	LR		
	comp=Z,4µm,25.0s						
PCA	Pinnacle	95.60	18	IAMs_20	IAMs_20	07 54 06.8	
	comp=Z,7µm,20.0s						
PINM	Pinnacle	95.60	18	P	P	07 15 06.3	-0.6
	baz=211,SNR=5.7						
PINM				S	S	07 26 28.5	+6.4
	baz=211						
K20K	Telida	95.62	11	IAmb	IAmb	07 15 14.2	
	comp=Z,125nm,1.4s						
K20K	Telida	95.62	11	P	P	07 15 05.9	-1.0
	baz=200,SNR=32						
K20K				S	S	07 26 24.7	+2.7
	baz=200						
MSTX	Muleshoe	95.63	54	IAmb	IAmb	07 15 13.6	
	comp=Z,44nm,1.0s						
BCPM	Bancas Point	95.64	18	IAMs_20	IAMs_20	07 54 07.9	
	comp=Z,10µm,20.0s						
XLT	XiLinHaoTe	95.65	318	*e*P	P	07 15 09.6	+2.1
XLT				sP	sP	07 15 16.8	+0.5
XLT				PP	PP	07 19 05.1	+5.6
XLT				SKS	SKSac	07 25 45.1	+3.0
XLT				pmax	pmax		
	comp=Z,23nm,1.0s						
XLT				pmax	pmax		
	comp=Z,1µm,6.7s						
XLT				LR	LR		
	comp=Z,9µm,23.0s						
XLT				LR	LR		
	comp=Z,12µm,22.8s						
PB16	IPOC Station P	95.66	115	P	P	07 15 09.7	+0.7
PB16				IAmb	IAmb	07 15 28.4	
	comp=Z,54nm,1.2s						
TABL	Table Mountain	95.66	17	IAMs_20	IAMs_20	07 50 10.4	
	comp=Z,9µm,21.0s						
R32K	Eaglecrest	95.75	21	IAMs_20	IAMs_20	07 52 11.8	
	comp=Z,9µm,20.0s						
R32K	Eaglecrest	95.75	21	P	P	07 15 06.8	-0.7
	baz=216						
R32K				S	S	07 26 32.5	+9.2
	baz=216						
KVTX	Kingsville	95.75	61	IAMs_20	IAMs_20	07 57 06.1	
	comp=Z,8µm,18.0s						
GRNC	Granite Creek	95.76	17	IAmb	IAmb	07 15 15.1	
	comp=Z,64nm,1.2s						
GRNC				IAMs_20	IAMs_20	07 50 01.9	
	comp=Z,11µm,22.0s						
VRDI	Verde Repeater	95.78	16	IAmb	IAmb	07 15 18.4	
	comp=Z,58nm,1.2s						
VRDI				IAMs_20	IAMs_20	07 53 33.3	
	comp=Z,9µm,20.0s						
JIS	Juneau Island	95.79	21	P	P	07 15 08.8	+1.2
N25K	Chitina, Valde	95.84	15	IAMs_20	IAMs_20	07 53 38.1	
	comp=Z,8µm,20.0s						
N25K	Chitina, Valde	95.84	15	P	P	07 15 07.7	-0.3
	baz=208,SNR=29						
N25K				S	S	07 26 25.9	+1.7
	baz=208						
JCT	Junction City	95.87	58	IAMs_20	IAMs_20	07 49 20.0	
	comp=Z,8µm,21.0s						
TPAW	Teton Pass	95.88	42	IAMs_20	IAMs_20	07 50 13.5	
	comp=Z,10µm,22.0s						
GLB	Gilahina Butte	95.88	16	IAMs_20	IAMs_20	07 53 37.1	
	comp=Z,7µm,21.0s						
BESE	Bessie Mountai	95.89	21	IAMs_20	IAMs_20	07 52 44.5	
	comp=Z,9µm,20.0s						
P29M	Windy Craggy	95.90	19	IAmb	IAmb	07 15 17.4	
	comp=Z,149nm,1.9s						
P29M				IAMs_20	IAMs_20	07 53 57.7	
	comp=Z,9µm,20.0s						
P29M	Windy Craggy	95.90	19	P	P	07 15 08.3	0.0
	baz=214,SNR=11						
P29M				S	S	07 26 33.3	+8.7
	baz=214						
FXWY	Fox Creek	95.92	42	IAMs_20	IAMs_20	07 50 14.8	
	comp=Z,9µm,22.0s						
M24K	Tolsona, Glenn	95.94	14	IAmb	IAmb	07 15 34.9	
	comp=Z,56nm,0.9s						
M24K	Tolsona, Glenn	95.94	14	P	P	07 15 08.1	-0.3
	baz=207,SNR=6.5						
M24K				S	S	07 26 30.5	+5.6
	baz=207						
DGPR	DIGLIPUR	95.95	282	*e*P	P	07 15 05.6	-3.8
SNOW	Snow King Moun	95.97	42	IAmb	IAmb	07 15 15.6	
	comp=Z,55nm,1.1s						
SNOW				IAMs_20	IAMs_20	07 50 16.2	
	comp=Z,9µm,22.0s						
G15K	Niukluk	95.98	6	P	P	07 15 07.7	-0.8
	baz=192						
G15K				S	S	07 26 30.0	+5.0
	baz=192						
J19K	Poorman	95.99	10	IAmb	IAmb	07 15 15.7	
	comp=Z,86nm,1.5s						
J19K				IAMs_20	IAMs_20	07 54 23.9	
	comp=Z,9µm,21.0s						
J19K	Poorman	95.99	10	P	P	07 15 07.9	-0.6
	baz=199,SNR=36						
J19K				S	S	07 26 28.1	+3.0
	baz=199						
CAST	Castle Rocks	96.01	11	IAmb	IAmb	07 15 13.8	
	comp=Z,162nm,1.7s						
CAST				IAMs_20	IAMs_20	08 03 39.3	
	comp=Z,6µm,20.0s						
CAST	Castle Rocks	96.01	11	P	P	07 15 06.4	-2.2
	baz=202,SNR=33						
CAST				S	S	07 26 23.6	-1.7
	baz=202						
MCARA	McCarthy VSAT	96.02	16	IAmb	IAmb	07 15 19.5	
	comp=Z,56nm,1.2s						
MCARA				IAMs_20	IAMs_20	07 53 29.6	
	comp=Z,9µm,21.0s						
MCARA	McCarthy VSAT	96.02	16	P	P	07 15 08.1	-0.6
	baz=209,SNR=9.4						
MCARA				S	S	07 26 27.0	+1.5
	baz=209						
LOGN	Logan Glacier	96.03	17	IAMs_20	IAMs_20	07 50 10.0	
	comp=Z,11µm,22.0s						
POST	Post	96.03	55	IAmb	IAmb	07 15 16.6	
	comp=Z,131nm,1.9s						
WAT6	Susitna Watana	96.04	14	P	P	07 15 08.0	-1.0
	baz=205,SNR=32						
WAT6				S	S	07 26 28.2	+2.2
	baz=205						
CTG	Chitna Glacier	96.06	17	P	P	07 15 08.2	-0.9
	baz=211,SNR=7.7						
CTG				S	S	07 26 30.6	+4.4
	baz=211						
BARN	Barnard Glacie	96.07	17	IAMs_20	IAMs_20	07 50 00.0	
	comp=Z,10µm,22.0s						
CTGM	Chitina Glacie	96.07	17	IAMs_20	IAMs_20	07 49 60.0	
	comp=Z,11µm,22.0s						
DLMT	Dillon	96.08	40	IAmb	IAmb	07 15 16.7	
	comp=Z,116nm,1.6s						
DLMT				IAMs_20	IAMs_20	07 50 09.0	
	comp=Z,9µm,22.0s						
WAT1	Susitna Watana	96.11	13	P	P	07 15 08.1	-1.0
	baz=205						
WAT1				S	S	07 26 28.2	+1.9
	baz=205						
T35M	Bob Quinn	96.14	24	IAMs_20	IAMs_20	07 51 31.5	
	comp=Z,8µm,20.0s						
T35M	Bob Quinn	96.14	24	P	P	07 15 08.4	-1.0
	baz=219						
T35M				S	S	07 26 35.2	+8.4
	baz=219						
LOHW	Long Hollow	96.15	42	IAMs_20	IAMs_20	07 50 32.9	
	comp=Z,8µm,22.0s						
PLBC	Pleasant Camp	96.15	20	P	P	07 15 08.9	-0.4
	baz=215,SNR=9.1						
PLBC				S	S	07 26 35.0	+8.4
	baz=215						
O28M	Mount Upton	96.19	18	IAMs_20	IAMs_20	07 49 53.4	
	comp=Z,11µm,22.0s						
O28M	Mount Upton	96.19	18	P	P	07 15 08.4	-1.5
	baz=212,SNR=7.7						
O28M				S	S	07 26 29.8	+2.2
	baz=212						
O29M	Mount Kennedy	96.23	18	IAmb	IAmb	07 15 17.9	
	comp=Z,93nm,1.9s						
O29M				IAMs_20	IAMs_20	07 50 48.3	
	comp=Z,9µm,21.0s						
O29M	Mount Kennedy	96.23	18	P	P	07 15 09.1	-0.7
	baz=213,SNR=5.9						
O29M				S	S	07 26 34.8	+7.2
	baz=213						
TNA	Tin City	96.25	4	IAmb	IAmb	07 15 17.0	
	comp=Z,132nm,1.1s						
TNA				IAMs_20	IAMs_20	07 54 03.6	
	comp=Z,9µm,20.0s						
TNA	Tin City	96.25	4	P	P	07 15 09.0	-0.6
	baz=188,SNR=9.9						
TNA				S	S	07 26 28.5	+1.2
	baz=188						
BW06	Boulder Array	96.26	43	IAMs_20	IAMs_20	07 50 28.9	
	comp=Z,10µm,22.0s						
PDAR	Pinedale Array	96.26	43	P	P	07 15 10.2	-0.3
PDAR	Pinedale Array	96.26	43	P	P	07 15 09.6	-1.0
	comp=Z,4.1nm,1.0s,baz=200,slow=3.0,SNR=27						
PDAR				PP	PP	07 19 05.2	+0.7
	comp=Z,0.9nm,0.8s,baz=215,slow=4.9,SNR=3.9						
PDAR				S	SKSac	07 25 45.9	+0.1
	comp=Z,0.1nm,0.5s,baz=239,slow=0.6,SNR=1.3						
PDAR				PKKPbc	PKKPbc	07 31 56.1	-1.4
	comp=Z,17nm,0.7s,baz=78,slow=3.5,SNR=24						
PDAR				PKPPKP	P'P'df	07 40 03.0	-4.1
	comp=Z,0.8nm,0.8s,baz=134,slow=4.3,SNR=4.9						
PDAR				LR	LR	07 51 13.4	
	comp=Z,5µm,21.8s,baz=223,slow=31						
	comp=Z,4.1nm,1.0s						
MSO	Missoula	96.27	38	IAMs_20	IAMs_20	07 49 52.7	
	comp=Z,9µm,22.0s						
F14K	Arctic Creek	96.27	5	P	P	07 15 09.2	-0.5
	baz=190						
F14K				S	S	07 26 31.1	+3.6
	baz=190						
SEY	Seymchan	96.29	347	LR	LR	07 53 35.5	

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          comp=Z,11µm,21.9s,baz=168,slow=32
SEY   Seymchan         96.29 347⇓iP       P         07 15 08.6  -1.3
SEY                              pmax     pmax
          comp=Z,135nm,1.9s
SEY                              MLR      MLR
          comp=Z,4µm,18.0s
KTH   Kantishna Hill   96.33  12 IAmb     IAmb      07 15 16.4
          comp=Z,60nm,1.3s
KTH                              IAMs_20  IAMs_20   07 54 25.9
          comp=Z,10µm,21.0s
H17K  Granite Mounta   96.34   8 IAmb     IAmb      07 15 16.7
          comp=Z,83nm,1.4s
H17K  Granite Mounta   96.34   8 P        P         07 15 08.9  -1.2
          baz=195,SNR=13
H17K                             S        S         07 26 29.8  +1.7
          baz=195
TRF   Thorofare Moun   96.35  12 P        P         07 15 08.8  -1.5
          baz=203,SNR=40
TRF                              S        S         07 26 28.6   0.0
          baz=203
CD2   Chengdu          96.36 302 P        P         07 15 11.4  +0.4
CD2                              PP       PP        07 19 05.3  +0.1
CD2                              SKS      SKSac     07 25 47.8  +1.4
CD2                              S        ScS       07 26 31.8  +1.3
CD2                              sS       pS        07 26 38.3  -0.1
CD2                              pmax     pmax
          comp=Z,50nm,1.8s
CD2                              pmax     pmax
          comp=Z,1µm,12.0s
CD2                              LR       LR
          comp=Z,8µm,20.2s
CD2                              LR       LR
          comp=Z,7µm,20.5s
J20K  Nowinta River    96.38  10 IAmb     IAmb      07 15 16.9
          comp=Z,96nm,1.4s
J20K                             IAMs_20  IAMs_20   07 54 49.2
          comp=Z,9µm,21.0s
J20K  Nowinta River    96.38  10 P        P         07 15 08.8  -1.4
          baz=200,SNR=37
J20K                             S        S         07 26 29.9  +1.4
          baz=200
CHUM  Lake Minchumin   96.40  11 P        P         07 15 08.5  -1.8
          baz=202,SNR=10
CHUM                             S        S         07 26 30.6  +2.0
          baz=202
HARP  HAARP            96.42  15 P        P         07 15 09.5  -1.0
          baz=208
HARP                             S        S         07 26 34.4  +5.4
          baz=208
SKAG  Skagway          96.46  20 P        P         07 15 08.1  -2.6
          baz=215
SKAG                             S        S         07 26 38.9  +10
          baz=215
735A  Kenedy           96.50  60 IAMs_20  IAMs_20   07 49 51.7
          comp=Z,7µm,22.0s
YFT   Old Faithful     96.52  42 IAmb     IAmb      07 15 20.9
          comp=Z,74nm,1.6s
P30M  Million Dollar   96.53  19 P        P         07 15 10.1  -1.0
          baz=214
P30M                             S        S         07 26 37.5  +7.4
          baz=214
G16K  Koyuk River      96.53   6 IAmb     IAmb      07 15 17.8
          comp=Z,65nm,1.3s
G16K                             IAMs_20  IAMs_20   07 54 50.0
          comp=Z,7µm,20.0s
G16K  Koyuk River      96.53   6 P        P         07 15 09.6  -1.3
          baz=193
G16K                             S        S         07 26 34.1  +4.4
          baz=193
HHC   Hu-ho-hao-te     96.53 314⇑iP       P         07 15 14.3  +2.6
HHC                              pP       pP        07 15 17.8  -0.4
HHC                              SKS      SKSac     07 25 48.0  +1.0
HHC                              LR       LR
          comp=Z,4µm,20.2s
HHC                              LR       LR
          comp=Z,3µm,19.3s
HHC                              LR       LR
          comp=Z,7µm,22.0s
GCSA  Galena City Sc   96.53   9 P        P         07 15 10.1  -0.8
          baz=198,SNR=10
GCSA                             S        S         07 26 33.0  +3.3
          baz=198
DHY   Denali Highway   96.56  13 IAmb     IAmb      07 15 18.7
          comp=Z,62nm,1.2s
DHY   Denali Highway   96.56  13 P        P         07 15 10.2  -1.1
          baz=206,SNR=15
DHY                              S        S         07 26 34.0  +3.6
          baz=206
S34M  Telegraph Cree   96.56  23 IAMs_20  IAMs_20   07 51 03.5
          comp=Z,10µm,21.0s
S34M  Telegraph Cree   96.56  23 P        P         07 15 09.2  -2.1
          baz=219,SNR=8.3
S34M                             S        S         07 26 38.2  +7.9
          baz=219
YHL   Hebgen Lake      96.56  41 IAmb     IAmb      07 15 19.7
          comp=Z,68nm,1.3s
ZEA   Zeya             96.57 331 eP       P         07 15 11.7  +0.4
ZEA                              e                  07 19 06.1
ZEA                              e                  07 25 46.2
ZEA                              e                  07 28 01.0
ZEA                              pmax     pmax
          comp=Z,700nm,9.7s
ZEA                              pmax     pmax
          comp=N,30nm,0.9s
ZEA                              pmax     pmax
          comp=Z,40nm,1.1s
RND   Reindeer         96.58  13 IAMs_20  IAMs_20   07 54 18.3
          comp=Z,10µm,21.0s
F15K  North Star Dit   96.63   5 IAmb     IAmb      07 15 18.0
          comp=Z,54nm,1.1s
F15K                             IAMs_20  IAMs_20   07 56 31.7
          comp=Z,7µm,20.0s
F15K  North Star Dit   96.63   5 P        P         07 15 10.5  -0.9
          baz=191
H17A  Grant Village    96.64  42 IAmb     IAmb      07 15 21.4
          comp=Z,96nm,1.9s
H18K  Honhosa River    96.73   8 IAmb     IAmb      07 15 18.3
          comp=Z,65nm,1.4s
H18K                             IAMs_20  IAMs_20   08 03 05.4
          comp=Z,6µm,20.0s
H18K  Honhosa River    96.73   8 P        P         07 15 10.1  -1.7
          baz=196,SNR=7.4
H18K                             S        S         07 26 35.3  +3.8
          baz=196
YUK8  Steele Glacier   96.74  17 P        P         07 15 11.9  -0.4
          baz=212
G17K  Kiwalik Mounta   96.81   7 P        P         07 15 11.6  -0.5
          baz=194,SNR=25
G17K                             S        S         07 26 34.3  +2.2
          baz=194
YUK6  Outpost Mounta   96.82  18 P        P         07 15 10.5  -2.1
          baz=213
YUK6                             S        S         07 26 38.8  +5.9
          baz=213
BPAW  Bear Paw Mtn.    96.83  12 IAmb     IAmb      07 15 18.8
          comp=Z,87nm,1.7s
BPAW                             IAMs_20  IAMs_20   07 57 24.9
          comp=Z,6µm,20.0s
BPAW  Bear Paw Mtn.    96.83  12 P        P         07 15 10.3  -2.0
          baz=203,SNR=9.8
BPAW                             S        S         07 26 32.9  +0.5
          baz=203
MCK   McKinley         96.86  13 IAmb     IAmb      07 15 19.7
          comp=Z,78nm,1.2s
MCK   McKinley         96.86  13 P        P         07 15 11.4  -1.0
          baz=204,SNR=10
MCK                              S        S         07 26 34.3  +1.7
          baz=204
PAX   Paxson           96.86  14 IAmb     IAmb      07 15 19.8
          comp=Z,77nm,1.7s
PAX                              IAMs_20  IAMs_20   07 54 25.0
          comp=Z,8µm,21.0s
PAX   Paxson           96.86  14 P        P         07 15 11.3  -1.3
          baz=207,SNR=9.3
PAX                              S        S         07 26 32.6  -0.3
          baz=207
M26K  Nabesna, AK      96.91  16 IAMs_20  IAMs_20   07 54 33.3
          comp=Z,8µm,21.0s
M26K  Nabesna, AK      96.91  16 P        P         07 15 12.2  -0.5
          baz=209,SNR=9.8
M26K                             S        S         07 26 38.6  +5.4
          baz=209
I20K  Naaghedeneel     96.92  10 IAmb     IAmb      07 15 24.1
          comp=Z,53nm,0.9s
I20K                             IAMs_20  IAMs_20   07 55 03.3
          comp=Z,9µm,21.0s
I20K  Naaghedeneel     96.92  10 P        P         07 15 12.2  -0.5
          baz=200,SNR=6.3
HYT   Haines Junctio   96.96  19 P        P         07 15 12.1  -1.0
          baz=214
HYT                              S        S         07 26 40.8  +6.9
          baz=214
YUK3  Moose Creek      96.98  17 P        P         07 15 12.8  -0.5
          baz=211
YUK3                             S        S         07 26 39.9  +5.7
          baz=211
RTBA  Rita Blanca      97.00  52 IAmb     IAmb      07 15 21.2
          comp=Z,93nm,1.8s
Q32M  Nakina River     97.01  22 IAMs_20  IAMs_20   07 53 23.2
          comp=Z,10µm,20.0s
Q32M  Nakina River     97.01  22 P        P         07 15 13.4   0.0
          baz=218,SNR=8.4
Q32M                             S        S         07 26 42.6  +8.1
          baz=218
HIA   Hailar           97.03 324 IAMs_20  IAMs_20   07 57 44.3
          comp=Z,10µm,22.0s
HIA   Hailar           97.03 324 P        Pdif      07 15 16.5  +2.8
P32M  Atlin            97.05  21 IAMs_20  IAMs_20   07 52 03.3
          comp=Z,8µm,20.0s
P32M  Atlin            97.05  21 P        P         07 15 12.2  -1.3
          baz=217
P32M                             S        S         07 26 43.9  +9.3
          baz=217
YUK4  Talbot Arm       97.08  18 P        P         07 15 13.6  -0.2
          baz=213
ABTX  Abilene, Hawle   97.12  56 IAMs_20  IAMs_20   07 58 20.8
          comp=Z,8µm,18.0s
M27K  Edge Creek, AK   97.13  16 IAmb     IAmb      07 15 24.0
          comp=Z,51nm,1.1s
M27K                             IAMs_20  IAMs_20   07 54 18.2
          comp=Z,9µm,21.0s
M27K  Edge Creek, AK   97.13  16 P        P         07 15 13.4  -0.5
          baz=210,SNR=37
M27K                             S        S         07 26 40.6  +5.3
          baz=210
APMT  Aspermont        97.15  56 IAmb     IAmb      07 15 37.2
          comp=Z,70nm,1.7s
MENT  Mentasta         97.21  15 P        P         07 15 13.9  -0.2
TNCH  TengChong        97.30 295 P        P         07 15 15.1  -0.5
TNCH                             PP       PP        07 19 14.3  +1.6
TNCH                             SKS      SKSac     07 25 54.1  +2.3
TNCH                             S        S         07 26 30.8  -7.8
TNCH                             SS       SS        07 33 11.8  -5.6
TNCH                             pmax     pmax
          comp=Z,1µm,6.7s
TNCH                             LR       LR
          comp=Z,3µm,19.3s
TNCH                             LR       LR
          comp=Z,3µm,22.4s
TNCH                             LR       LR
          comp=Z,10µm,21.0s
O30N  Mendenhall       97.31  19 IAMs_20  IAMs_20   07 51 20.9
          comp=Z,10µm,21.0s
O30N  Mendenhall       97.31  19 P        P         07 15 14.1  -0.5
          baz=215
O30N                             S        S         07 26 43.4  +6.7
          baz=215
YNE   Yellowstone No   97.33  41 IAmb     IAmb      07 15 51.8
          comp=Z,41nm,1.1s
H19K  Roundabout Mou   97.34   9 IAmb     IAmb      07 15 21.6
          comp=Z,64nm,1.2s
H19K                             IAMs_20  IAMs_20   08 01 39.4
          comp=Z,7µm,20.0s
H19K  Roundabout Mou   97.34   9 P        P         07 15 13.5  -1.0
          baz=198,SNR=26
H19K                             S        S         07 26 42.2  +5.6
          baz=198
DLBC  Dease Lake       97.34  23 PKKPbc   PKKPbc    07 31 51.6  -3.3
          comp=Z,0.4nm,0.7s,baz=280,slow=18,SNR=6.1
DLBC                             LR       LR        07 51 27.9
          comp=Z,895nm,21.8s,baz=214,slow=31
BTO   Baotou           97.36 313 eP       Pdif      07 15 20.0  +4.5
BTO                              pP       sP        07 15 24.9  +0.7
BTO                              sP       pwP       07 15 27.3  +0.9
BTO                              SKS      SKSac     07 25 52.9  +1.6
BTO                              sS       sS        07 26 50.5  +1.5
BTO                              pmax     pmax
          comp=Z,19nm,1.0s
BTO                              pmax     pmax
          comp=Z,4µm,12.9s
BTO                              LR       LR
          comp=Z,11µm,21.1s
BTO                              LR       LR
          comp=Z,16µm,21.7s
BTO                              LR       LR
          comp=Z,29µm,24.9s
L26K  Log Cabin Wild   97.37  15 IAMs_20  IAMs_20   07 54 29.5
          comp=Z,10µm,20.0s
L26K  Log Cabin Wild   97.37  15 P        P         07 15 14.2  -0.6
          baz=209,SNR=10
L26K                             S        S         07 26 42.1  +5.0
          baz=209
G18K  Tagagawik        97.41   8 IAmb     IAmb      07 15 20.6
          comp=Z,107nm,2.0s
G18K                             IAMs_20  IAMs_20   08 01 26.4
          comp=Z,6µm,20.0s
G18K  Tagagawik        97.41   8 P        P         07 15 13.9  -1.1
          baz=196
G18K                             S        S         07 26 42.5  +5.2
          baz=196
BVCY  Beaver Creek     97.43  16 P        P         07 15 15.0  -0.1
          baz=211,SNR=11
BVCY                             S        S         07 26 43.7  +6.0
          baz=211
H20K  Anotleneega Mo   97.52   9 P        P         07 15 14.7  -0.7
          baz=199,SNR=29
H20K                             S        S         07 26 42.6  +4.4
          baz=199
TGUH  Tegucigalpa,Un   97.53  78 IAMs_20  IAMs_20   07 48 55.4
          comp=Z,11µm,22.0s
K24K  Donnelly Dome    97.54  14 IAmb     IAmb      07 15 25.9
          comp=Z,56nm,0.9s
K24K                             IAMs_20  IAMs_20   07 54 07.9
          comp=Z,8µm,21.0s
K24K  Donnelly Dome    97.54  14 P        P         07 15 14.5  -1.0
          baz=207,SNR=13
K24K                             S        S         07 26 41.8  +3.3
          baz=207
WHY   Whitehorse       97.56  20 IAmb     IAmb      07 15 26.6
          comp=Z,64nm,1.6s
WHY   Whitehorse       97.56  20 P        P         07 15 14.0  -1.9
          baz=216
WHY                              S        S         07 26 48.0  +8.9
          baz=216
N30M  Aishikik Lake    97.59  18 IAMs_20  IAMs_20   07 55 21.5
          comp=Z,8µm,19.0s
N30M  Aishikik Lake    97.59  18 P        P         07 15 14.0  -1.9
          baz=214
N30M                             S        S         07 26 44.7  +5.5
          baz=214
NEA2  Nenana           97.62  12 P        P         07 15 14.0  -1.8
          baz=204,SNR=13
NEA2                             S        S         07 26 39.8  +0.7
          baz=204
JTS   Las Juntas de    97.64  83 LR       LR        07 49 31.1
          comp=Z,5µm,21.1s,baz=233,slow=29
F17K  Baldwin Pennin   97.66   7 IAmb     IAmb      07 15 25.7
          comp=Z,34nm,0.8s
F17K  Baldwin Pennin   97.66   7 P        P         07 15 15.6  -0.4
          baz=194
F17K                             S        S         07 26 45.4  +6.1
          baz=194
RIDG  Independent Ri   97.68  14 IAmb     IAmb      07 15 21.4
          comp=Z,45nm,1.2s
RIDG                             IAMs_20  IAMs_20   07 55 01.5
          comp=Z,9µm,21.0s
RIDG  Independent Ri   97.68  14 P        P         07 15 15.1  -1.1
          baz=208,SNR=12
RIDG                             S        S         07 26 43.1  +3.4
          baz=208
WRH   Wood River Hil   97.69  13 IAmb     IAmb      07 15 22.5
          comp=Z,120nm,1.1s
WRH                              IAMs_20  IAMs_20   07 54 43.7
          comp=Z,8µm,20.0s
MLY   Manley           97.73  11 IAMs_20  IAMs_20   07 58 20.7
          comp=Z,7µm,20.0s
MLY   Manley           97.73  11 P        P         07 15 14.7  -1.7
          baz=203,SNR=8.1
MLY                              S        S         07 26 40.7  +0.6
          baz=203
L27K  Beaver Creek,    97.75  16 P        P         07 15 15.8  -0.8
          baz=210,SNR=7.9
L27K                             S        S         07 26 46.5  +6.1
          baz=210
DOT   Dot Lake         97.76  15 IAMs_20  IAMs_20   07 55 02.7
          comp=Z,8µm,21.0s
BCAR  Beaver Creek A   97.77  16 P        P         07 15 15.8  -0.8
R33M  Jennings River   97.77  22 IAMs_20  IAMs_20   07 53 38.3
          comp=Z,9µm,20.0s
R33M  Jennings River   97.77  22 P        P         07 15 16.0  -0.8
          baz=219
R33M                             S        S         07 26 47.7  +6.8
          baz=219
RLMT  Red Lodge        97.82  42 IAMs_20  IAMs_20   07 51 28.0
          comp=Z,8µm,22.0s
P33M  Teslin, Yukon    97.82  21 IAMs_20  IAMs_20   07 55 37.7
          comp=Z,8µm,20.0s
P33M  Teslin, Yukon    97.82  21 P        P         07 15 14.7  -2.3
          baz=218
P33M                             S        S         07 26 49.1  +7.9
          baz=218
G19K  Purcell Mounta   97.84   8 IAMs_20  IAMs_20   07 54 28.7
          comp=Z,7µm,22.0s
G19K  Purcell Mounta   97.84   8 P        P         07 15 15.7  -1.1
          baz=198,SNR=21
G19K                             S        S         07 26 44.4  +3.5
          baz=198
HDA   Harding Lake     97.85  13 IAmb     IAmb      07 15 24.5
          comp=Z,48nm,1.2s
HDA   Harding Lake     97.85  13 P        P         07 15 15.9  -1.0
          baz=206,SNR=30
HDA                              S        S         07 26 43.2  +2.2
          baz=206
CCB   Clear Creek Bu   97.90  13 IAmb     IAmb      07 15 23.2
          comp=Z,61nm,1.2s
CCB                              IAMs_20  IAMs_20   07 55 11.3
          comp=Z,7µm,20.0s
LPAZ  La Paz           97.90 114 P        Pdif      07 15 19.8  +0.6
          comp=Z,3.2nm,0.8s,baz=277,slow=0.6,SNR=15
LPAZ                             S        SKSac     07 25 54.4  -2.1
          comp=Z,1.1nm,0.7s,baz=196,slow=7.4,SNR=1.6
LPAZ                             PKKPbc   PKKPbc    07 31 51.9  -0.2
          comp=Z,3.0nm,0.8s,baz=359,slow=4.5,SNR=6.2
LPAZ                             LR       LR        07 51 19.1
          comp=Z,5µm,21.6s,baz=208,slow=30
          comp=Z,3.2nm,0.8s
LPAZ  La Paz           97.90 114 eP       Pdif      07 15 20.0  +0.8
ITQB  Itaqui           97.96 131 eP       Pdif      07 15 22.2  +3.8
H21K  Melozitna Rive   97.98  10 IAmb     IAmb      07 15 25.1
          comp=Z,58nm,1.4s
H21K                             IAMs_20  IAMs_20   07 55 57.3
          comp=Z,9µm,21.0s
H21K  Melozitna Rive   97.98  10 P        P         07 15 16.3  -1.2
          baz=201,SNR=30
H21K                             S        S         07 26 46.0  +3.8
          baz=201
N31M  Braeburn, Yuko   97.98  19 IAMs_20  IAMs_20   07 55 23.7
          comp=Z,9µm,20.0s
N31M  Braeburn, Yuko   97.98  19 P        P         07 15 17.1  -0.5
          baz=215
N31M                             S        S         07 26 48.4  +6.0
          baz=215
F18K  Selawik          97.98   7 P        P         07 15 16.4  -1.0
          baz=195,SNR=9.2
F18K                             S        S         07 26 45.1  +3.1
          baz=195
K22A  Casper           98.01  45 IAMs_20  IAMs_20   07 53 56.4
          comp=Z,8µm,20.0s
M29M  Somme Creek      98.05  17 IAMs_20  IAMs_20   07 51 26.5
          comp=Z,10µm,22.0s
M29M  Somme Creek      98.05  17 P        P         07 15 17.5  -0.5
          baz=213,SNR=15
M29M                             S        S         07 26 50.6  +7.4
          baz=213
SCRK  Sand Creek       98.07  14 IAMs_20  IAMs_20   07 55 11.8
          comp=Z,8µm,21.0s
SCRK  Sand Creek       98.07  14 Pdiff    P         07 15 16.9  -1.2
          baz=209
SCRK                             S        S         07 26 48.0  +4.7
          baz=209
I23K  Minto, Yukon-K   98.07  12 Pdiff    P         07 15 16.7  -1.1
          baz=204
I23K                             S        S         07 26 43.2  +0.4
          baz=204
COLA  College          98.09  12 IAMs_20  IAMs_20   07 55 07.5
          comp=Z,9µm,20.0s
COLA  College          98.09  12 P        Pdif      07 15 19.1  +1.1
COLA  College          98.09  12c iP      P         07 15 16.6  -1.3
COLA                             pmax     pmax
          comp=Z,91nm,1.3s
COLA                             MLR      MLR
          comp=Z,6µm,19.0s
COLA  College          98.09  12 Pdiff    P         07 15 16.8  -1.1
          baz=205
COLA                             S        S         07 26 44.3  +1.3
          baz=205
IL31                   98.19  13 IAmb     IAmb      07 15 24.7
          comp=Z,77nm,1.6s
ILAR  Eielson Array    98.19  13 P        P         07 15 17.1  -1.3
ILAR  Eielson Array    98.19  13 P        P         07 15 17.3  -1.1
          comp=Z,6.5nm,0.8s,baz=220,slow=5.1,SNR=47
ILAR                             PP       PP        07 19 17.1  -1.4
          comp=Z,4.6nm,0.8s,baz=215,slow=7.3,SNR=4.1
ILAR                             PKiKP    PKiKP     07 19 52.0  +1.0
          comp=Z,3.5nm,0.7s,baz=294,slow=2.8,SNR=12
ILAR                             S        SKSac     07 25 51.7  -2.4
          comp=Z,0.8nm,0.9s,baz=242,slow=3.5,SNR=1.7
ILAR                             PKKPbc   PKKPbc    07 31 49.5  -3.2
          comp=Z,2.9nm,0.7s,baz=334,slow=3.8,SNR=5.4
ILAR                             PKPPKP   P'P'df    07 39 58.9  -1.9
          comp=Z,1.2nm,1.1s,baz=42,slow=0.8,SNR=4.0
ILAR                             LR       LR        07 53 48.1
          comp=Z,3µm,21.2s,baz=207,slow=32
          comp=Z,6.5nm,0.8s
OTAV  Otavalo          98.21  95 IAMs_20  IAMs_20   07 49 19.3
          comp=Z,10µm,22.0s
OTAV  Otavalo          98.21  95 eP       Pdif      07 15 23.4  +3.1
HDC   Heredia          98.22  83 IAMs_20  IAMs_20   07 49 40.0
          comp=Z,8µm,22.0s
E17K  Hotham Inlet     98.23   6 Pdiff    P         07 15 18.2  -0.3
          baz=194
E17K                             S        S         07 26 48.6  +4.5
          baz=194
J25K  Salcha River,    98.34  14 Pdiff    P         07 15 18.4  -0.8
          baz=207
J25K                             S        S         07 26 48.2  +2.8
          baz=207
WHTX  Lake Whitney,    98.37  58 IAMs_20  IAMs_20   07 56 16.2
          comp=Z,8µm,19.0s
POKR  Poker Plat Res   98.39  13 IAMs_20  IAMs_20   07 55 06.4
          comp=Z,9µm,20.0s
POKR  Poker Plat Res   98.39  13 Pdiff    P         07 15 18.1  -1.2
          baz=206
POKR                             S        S         07 26 46.0  +0.3
          baz=206
F19K  Shaleruckik Mo   98.42   8 IAMs_20  IAMs_20   07 54 59.0
          comp=Z,7µm,22.0s
F19K  Shaleruckik Mo   98.42   8 Pdiff    P         07 15 18.5  -0.8
          baz=197
F19K                             S        S         07 26 48.7  +3.0
          baz=197
H22K  Ishtalitna Cre   98.42  11 Pdiff    P         07 15 18.7  -0.8
          baz=202
H22K                             S        S         07 26 49.0  +3.1
          baz=202
N32M  Quiet Lake       98.49  20 Pdiff    P         07 15 19.4  -0.5
          baz=217
N32M                             S        S         07 26 53.8  +7.0
          baz=217
K27K  Chicken          98.53  15 IAMs_20  IAMs_20   07 54 55.1
          comp=Z,8µm,20.0s
K27K  Chicken          98.53  15 Pdiff    P         07 15 19.6  -0.4
          baz=210
K27K                             S        S         07 26 53.1  +6.2
          baz=210
J26L  Joseph Creek     98.62  14 IAmb     IAmb      07 15 26.3
          comp=Z,50nm,1.0s
J26L                             IAMs_20  IAMs_20   07 55 40.4
          comp=Z,8µm,21.0s
J26L  Joseph Creek     98.62  14 Pdiff    P         07 15 20.2  -0.3
          baz=209
J26L                             S        S         07 26 53.5  +5.7
          baz=209
H23K  Yukon River      98.66  11 IAMs_20  IAMs_20   08 01 57.4
          comp=Z,7µm,19.0s
H23K  Yukon River      98.66  11 Pdiff    P         07 15 19.6  -1.0
          baz=204
H23K                             S        S         07 26 50.0  +2.1
          baz=204
E18K  Tukpahlearik C   98.68   7 IAMs_20  IAMs_20   07 56 55.8
          comp=Z,6µm,20.0s
E18K  Tukpahlearik C   98.68   7 Pdiff    P         07 15 20.2  -0.4
          baz=195
E18K                             S        S         07 26 50.2  +2.3
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	baz=195						
G21K	Allakaket	98.68	10	IAmb	IAmb	07 15 28.2	
	comp=Z,53nm,1.2s						
G21K	Allakaket	98.68	10	Pdiff	P	07 15 19.9	-0.6
	baz=201						
G21K				S	S	07 26 51.9	+3.9
	baz=201						
L29M	L29M	98.69	17	IAMs_20	IAMs_20	07 51 46.5	
	comp=Z,10μm,22.0s						
L29M	L29M	98.69	17	Pdiff	P	07 15 19.9	-0.9
	baz=213						
L29M				S	S	07 26 56.5	+8.1
	baz=213						
D17K	Noatak River	98.72	6	Pdiff	P	07 15 20.5	-0.2
	baz=192						
D17K				S	S	07 26 51.5	+3.2
	baz=192						
F20K	Avaraart Lake	98.88	9	IAMs_20	IAMs_20	08 00 59.1	
	comp=Z,6μm,19.0s						
F20K	Avaraart Lake	98.88	9	Pdiff	P	07 15 20.6	-0.8
	baz=199						
M31M	Drury Creek, Y	98.95	19	Pdiff	P	07 15 20.9	-1.0
	baz=216						
H24K	Noodor Dome	98.96	12	Pdiff	P	07 15 20.2	-1.7
	baz=205						
LZH	Lanzhou	99.00	307	*e*P	Pdif	07 15 26.1	+3.1
LZH				pP	sP	07 15 30.8	-1.0
LZH				SKS	SKSac	07 26 00.9	+0.9
LZH				S	ScS	07 26 56.3	+3.7
LZH				pmax	pmax		
	comp=Z,26nm,1.2s						
LZH				pmax	pmax		
	comp=Z,1μm,4.1s						
LZH				LR	LR		
	comp=Z,4μm,18.2s						
LZH				LR	LR		
	comp=Z,7μm,19.2s						
LZH				LR	LR		
	comp=Z,8μm,18.6s						
WTLY	Watson Lake, Y	99.03	23	Pdiff	Pdif	07 15 20.7	-1.7
	baz=221						
E19K	Redstone River	99.08	8	IAmb	IAmb	07 15 29.9	
	comp=Z,52nm,1.1s						
E19K				IAMs_20	IAMs_20	08 02 36.4	
	comp=Z,6μm,20.0s						
E19K	Redstone River	99.08	8	Pdiff	Pdif	07 15 21.8	-0.6
	baz=198						
RDOG	Red Dog Mine	99.08	6	Pdiff	Pdif	07 15 21.4	-0.9
	baz=193						
C16K	Lisburne Hills	99.11	5	IAmb	IAmb	07 15 29.2	
	comp=Z,69nm,1.2s						
C16K				IAMs_20	IAMs_20	07 56 15.2	
	comp=Z,8μm,20.0s						
C16K	Lisburne Hills	99.11	5	Pdiff	Pdif	07 15 21.8	-0.6
	baz=190						
PRP	Porcupine Dome	99.11	13	Pdiff	Pdif	07 15 21.6	-1.1
	baz=207						
BILL	Bilibino	99.15	354	P	Pdif	07 15 21.8	-0.9
BILL				IAmb	IAmb	07 15 28.3	
	comp=Z,133nm,2.0s						
BILL				IAMs_20	IAMs_20	07 58 49.6	
	comp=Z,8μm,21.0s						
BILL	Bilibino	99.15	354*c*	*i*P	Pdif	07 15 20.8	-1.8
BILL				pmax	pmax		
	comp=Z,56nm,1.9s						
BILL				MLR	MLR		
	comp=Z,4μm,20.0s						
DAWY	Dawson	99.18	16	Pdiff	Pdif	07 15 22.3	-0.7
	baz=212						
EGMT	Eagleton	99.25	39	IAMs_20	IAMs_20	07 57 25.7	
	comp=Z,8μm,19.0s						
FARO	Faro, Yukon	99.27	19	Pdiff	Pdif	07 15 22.3	-1.0
	baz=217						
TOAD	Toad River Com	99.33	25	Pdiff	Pdif	07 15 21.9	-1.8
	baz=224						
F21K	Alatna River	99.34	9	IAMs_20	IAMs_20	08 02 43.4	
	comp=Z,7μm,20.0s						
F21K	Alatna River	99.34	9	Pdiff	Pdif	07 15 22.3	-1.2
	baz=201						
G22K	Bettles	99.35	10	Pdiff	Pdif	07 15 22.8	-0.7
	baz=202						
G23K	Bananza Creek	99.39	11	Pdiff	Pdif	07 15 22.8	-1.0
	baz=204						
I26K	Coal Creek Min	99.41	14	IAmb	IAmb	07 15 30.3	
	comp=Z,65nm,1.6s						
I26K				IAMs_20	IAMs_20	07 55 16.2	
	comp=Z,7μm,21.0s						
I26K	Coal Creek Min	99.41	14	Pdiff	Pdif	07 15 22.9	-0.9
	baz=209						
LIRD	Liard River Hi	99.42	24	Pdiff	Pdif	07 15 21.9	-2.2
	baz=223						
K29M	Barlow Dome	99.45	17	IAMs_20	IAMs_20	07 55 29.6	
	comp=Z,8μm,20.0s						
K29M	Barlow Dome	99.45	17	Pdiff	Pdif	07 15 23.2	-1.0
	baz=214						
C17K	DeLong Mountai	99.47	5	Pdiff	Pdif	07 15 23.7	-0.4
	baz=192						
MAYO	Mayo, Yukon	99.67	18	Pdiff	Pdif	07 15 24.4	-0.7
	baz=215						
CPUP	Villa Florida	99.70	128	P	Pdif	07 15 25.7	-0.5
	comp=Z,0.9nm,1.0s,baz=176,slow=2.5,SNR=10						
CPUP				PKKPbc	PKKPbc	07 31 45.8	-0.8
	comp=Z,3.0nm,0.8s,baz=268,slow=3.6,SNR=12						
CPUP				PKPPKP	P'P'df	07 40 01.8	-5.8
	comp=Z,2.0nm,1.0s,baz=325,slow=1.5,SNR=6.9						
CPUP				LR	LR	07 52 40.7	
	comp=Z,3μm,21.6s,baz=100,slow=31						
	comp=Z,0.9nm,1.0s						
CPUP	Villa Florida	99.70	128	*e*P	Pdif	07 15 29.1	+2.8
H25L	Birch Creek	99.72	13	Pdiff	Pdif	07 15 24.0	-1.2
	baz=207						
J29N	Klondike Camp	99.79	16	IAMs_20	IAMs_20	07 55 51.5	
	comp=Z,7μm,20.0s						
J29N	Klondike Camp	99.79	16	Pdiff	Pdif	07 15 23.6	-2.1
	baz=213						
F22K	John River	99.80	10	Pdiff	Pdif	07 15 24.3	-1.3
	baz=202						
G24K	Hadweenzic Riv	99.81	12	IAMs_20	IAMs_20	07 56 31.9	
	comp=Z,9μm,20.0s						
G24K	Hadweenzic Riv	99.81	12	Pdiff	Pdif	07 15 25.0	-0.6
	baz=206						
C18K	Utukok River	99.81	6	Pdiff	Pdif	07 15 25.3	-0.4
	baz=194						
COLD	Coldfoot	99.84	11	IAMs_20	IAMs_20	08 01 29.5	
	comp=Z,6μm,20.0s						
COLD	Coldfoot	99.84	11	Pdiff	Pdif	07 15 25.5	-0.2
	baz=204						
E20K	Nigu River	99.97	8	Pdiff	Pdif	07 15 25.6	-0.8
	baz=198						
D19K	Kuna River	99.97	7	IAMs_20	IAMs_20	07 56 13.1	
	comp=Z,7μm,21.0s						
D19K	Kuna River	99.97	7	Pdiff	Pdif	07 15 25.9	-0.5
	baz=197						
I27K	Kandik River	99.99	14	Pdiff	Pdif	07 15 25.7	-0.8
	baz=211						
FYU	Fort Yukon	100.10	13	IAMs_20	IAMs_20	07 55 47.5	
	comp=Z,7μm,21.0s						
G25K	Bearman Lake	100.12	12	Pdiff	Pdif	07 15 26.3	-0.6
	baz=207						
MMPY	Sheldon Lake,	100.18	20	Pdiff	Pdif	07 15 27.0	-0.4
	baz=219						
I28M	Miner Creek	100.23	15	IAMs_20	IAMs_20	07 56 18.9	
	comp=Z,9μm,21.0s						
I28M	Miner Creek	100.23	15	Pdiff	Pdif	07 15 26.7	-0.9
	baz=212						
TGTN	Hyland Airport	100.26	22	Pdiff	Pdif	07 15 26.8	-1.0
	baz=221						
NATX	Nacogdoches	100.31	59	IAMs_20	IAMs_20	07 54 50.6	
	comp=Z,6μm,20.0s						
RSSD	Black Hills	100.34	45	IAMs_20	IAMs_20	07 53 03.9	
	comp=Z,9μm,22.0s						
BEAVL	Fort Liard	100.34	24	Pdiff	Pdif	07 15 27.8	-0.3
	baz=224						
D20K	Etivluk River	100.35	8	IAMs_20	IAMs_20	08 05 13.0	
	comp=Z,6μm,20.0s						
D20K	Etivluk River	100.35	8	Pdiff	Pdif	07 15 27.0	-1.1
	baz=198						
J30M	Hart River	100.36	17	IAMs_20	IAMs_20	07 53 01.4	
	comp=Z,10μm,22.0s						
J30M	Hart River	100.36	17	Pdiff	Pdif	07 15 27.2	-1.0
	baz=215						
C19K	Lookout Ridge	100.41	7	IAMs_20	IAMs_20	07 57 44.5	
	comp=Z,8μm,21.0s						
C19K	Lookout Ridge	100.41	7	Pdiff	Pdif	07 15 27.7	-0.6
	baz=196						
E21K	Killik River	100.42	9	IAMs_20	IAMs_20	07 56 11.9	
	comp=Z,7μm,22.0s						
E21K	Killik River	100.42	9	Pdiff	Pdif	07 15 27.3	-1.0
	baz=200						
E22K	Anaktuvuk Pass	100.43	10	IAMs_20	IAMs_20	08 03 27.2	
	comp=Z,7μm,20.0s						
E22K	Anaktuvuk Pass	100.43	10	Pdiff	Pdif	07 15 28.3	-0.2
	baz=202						
B18K	Kokolik River	100.46	6	Pdiff	Pdif	07 15 28.2	-0.2
	baz=194						
F24K	Squaw Lake	100.48	11	Pdiff	Pdif	07 15 28.0	-0.7
	baz=206						
I29M	Ogilvie Camp,	100.53	16	IAMs_20	IAMs_20	07 56 26.9	
	comp=Z,8μm,21.0s						
I29M	Ogilvie Camp,	100.53	16	Pdiff	Pdif	07 15 28.6	-0.3
	baz=214						
H27K	Steamboat Moun	100.55	14	IAMs_20	IAMs_20	07 55 52.4	
	comp=Z,8μm,21.0s						
H27K	Steamboat Moun	100.55	14	Pdiff	Pdif	07 15 29.0	0.0
	baz=211						
KOTAN	Kotaneelee Air	100.66	24	Pdiff	Pdif	07 15 29.4	-0.1
	baz=225						
E23K	Chandalar	100.69	10	IAMs_20	IAMs_20	08 00 54.0	
	comp=Z,8μm,20.0s						
E23K	Chandalar	100.69	10	Pdiff	Pdif	07 15 29.3	-0.4
	baz=204						
G26K	Porcupine Rive	100.72	13	Pdiff	Pdif	07 15 29.7	+0.1
	baz=209						
IMP	Imphal	100.81	292	*e*P	Pdif	07 15 26.4	-4.8
OK052	Battle Ridge R	100.86	55	IAMs_20	IAMs_20	07 52 28.8	
	comp=Z,7μm,22.0s						
I30M	Mount Dempster	100.87	17	IAMs_20	IAMs_20	07 53 17.1	
	comp=Z,9μm,22.0s						
I30M	Mount Dempster	100.87	17	Pdiff	Pdif	07 15 30.1	-0.5
	baz=215						
E24K	Your Creek	100.88	11	Pdiff	Pdif	07 15 30.6	+0.1
	baz=205						
POPC	Popayan, Colom	100.90	94	P	PP	07 19 44.2	+3.9
F25K	Christian Rive	100.94	12	Pdiff	Pdif	07 15 30.9	+0.2
	baz=207						
C21K	Knifeblade Rid	100.99	8	Pdiff	Pdif	07 15 31.0	+0.2
	baz=200						
D22K	Ayikyak River	101.00	9	Pdiff	Pdif	07 15 31.0	+0.1
	baz=202						
G27K	Doyon Strip	101.02	14	IAMs_20	IAMs_20	07 57 27.8	
	comp=Z,7μm,21.0s						
G27K	Doyon Strip	101.02	14	Pdiff	Pdif	07 15 30.7	-0.3
	baz=211						
KOHI	KOHIMA	101.11	293	*e*P	Pdif	07 15 28.5	-4.1
H29M	Whitestone	101.23	15	IAMs_20	IAMs_20	07 56 59.4	
	comp=Z,7μm,21.0s						
H29M	Whitestone	101.23	15	Pdiff	Pdif	07 15 31.7	-0.3
	baz=214						
TOLK	Toolik Lake Re	101.23	10	IAMs_20	IAMs_20	08 03 59.3	
	comp=Z,6μm,20.0s						
TOLK	Toolik Lake Re	101.23	10	Pdiff	Pdif	07 15 31.7	-0.3
	baz=204						
JAMC	Jamundi, Valle	101.24	93	P	PP	07 19 49.5	+6.7
FLOC	Florencia	101.29	95	P	PP	07 19 45.3	+2.3
AZL	Aizawl	101.30	291	*e*P	Pdif	07 15 28.8	-4.6
F26K	Sheenjek River	101.30	12	IAMs_20	IAMs_20	08 00 26.2	
	comp=Z,8μm,20.0s						
F26K	Sheenjek River	101.30	12	Pdiff	Pdif	07 15 32.6	+0.3
	baz=209						
A19K	Wainwright	101.34	6	Pdiff	Pdif	07 15 32.3	0.0
	baz=194						
D23K	Nanushuk River	101.36	10	Pdiff	Pdif	07 15 32.4	-0.1
	baz=203						
E25K	Arctic Village	101.42	12	IAMs_20	IAMs_20	07 57 12.3	
	comp=Z,10μm,22.0s						
E25K	Arctic Village	101.42	12	Pdiff	Pdif	07 15 32.7	-0.1
	baz=208						
B21K	Ikpikpuk River	101.45	8	IAMs_20	IAMs_20	08 03 46.1	
	comp=Z,7μm,19.0s						
B21K	Ikpikpuk River	101.45	8	Pdiff	Pdif	07 15 32.9	+0.1
	baz=200						
B20K	Meade River	101.53	7	IAMs_20	IAMs_20	08 04 22.1	
	comp=Z,6μm,19.0s						
B20K	Meade River	101.53	7	Pdiff	Pdif	07 15 33.4	+0.3
	baz=198						
TUL3	Leonard	101.53	55	IAMs_20	IAMs_20	07 52 24.6	
	comp=Z,7μm,22.0s						
YAK	Yakutsk	101.57	338	Pdiff	Pdif	07 15 34.7	+1.2
	comp=Z,15nm,0.3s,baz=155,slow=4.8,SNR=6.5						
YAK	Yakutsk	101.57	338	*e*P	Pdif	07 15 33.3	-0.2
YAK				*e*		07 19 40.4	
YAK				*e*S	SKSac	07 26 12.2	+1.4
YAK				*e*SS	SS	07 34 28.6	+13
YAK				*e*SSS	SSS	07 37 59.5	
YAK				pmax	pmax		
	comp=Z,17nm,1.6s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.9s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,525nm,4.7s						
YAK				pmax	pmax		
	comp=N,522nm,8.6s						
YAK				pmax	pmax		
	comp=E,445nm,8.6s						
YAK				smax	smax		
	comp=E,77nm,2.3s						
YAK				smax	smax		
	comp=N,199nm,5.0s						
EPYK	Eagle Plains	101.73	16	IAMs_20	IAMs_20	07 57 03.7	
	comp=Z,6μm,20.0s						
EPYK	Eagle Plains	101.73	16	Pdiff	Pdif	07 15 34.2	0.0
	baz=215						
D24K	Happy Valley	101.81	10	IAMs_20	IAMs_20	08 01 49.6	
	comp=Z,7μm,19.0s						
D24K	Happy Valley	101.81	10	Pdiff	Pdif	07 15 34.8	+0.3
	baz=205						
H31M	Peel River	101.85	17	IAMs_20	IAMs_20	07 53 56.9	
	comp=Z,8μm,22.0s						
H31M	Peel River	101.85	17	Pdiff	Pdif	07 15 34.5	-0.3
	baz=217						
G29M	Pine Creek	101.88	15	IAMs_20	IAMs_20	07 57 29.7	
	comp=Z,9μm,21.0s						
G29M	Pine Creek	101.88	15	Pdiff	Pdif	07 15 34.0	-0.8
	baz=214						
YOTC	Yotoco, Valle	101.91	92	P	PKiKP	07 19 57.7	-1.7
F28M	Old Crow	102.07	14	IAMs_20	IAMs_20	07 57 19.6	
	comp=Z,9μm,20.0s						
F28M	Old Crow	102.07	14	Pdiff	Pdif	07 15 35.1	-0.6
	baz=212						
ZIRO	ZIRO	102.17	295	*e*P	Pdif	07 15 33.3	-4.0
C23K	Itkillik River	102.17	9	IAMs_20	IAMs_20	07 58 55.2	
	comp=Z,7μm,22.0s						
C23K	Itkillik River	102.17	9	Pdiff	Pdif	07 15 36.1	0.0
	baz=203						
E27K	Coleen River	102.21	13	Pdiff	Pdif	07 15 36.6	+0.3
	baz=211						
B22K	Teshekpuk Lake	102.27	8	IAMs_20	IAMs_20	08 01 04.8	
	comp=Z,7μm,21.0s						
B22K	Teshekpuk Lake	102.27	8	Pdiff	Pdif	07 15 36.7	+0.2
	baz=201						
C24K	Franklin Bluff	102.34	10	IAMs_20	IAMs_20	08 02 43.7	
	comp=Z,8μm,19.0s						
C24K	Franklin Bluff	102.34	10	Pdiff	Pdif	07 15 36.8	0.0
	baz=205						
G30M	tAoh Zraii Nji	102.34	16	IAMs_20	IAMs_20	07 57 33.0	
	comp=Z,8μm,22.0s						
G30M	tAoh Zraii Nji	102.34	16	Pdiff	Pdif	07 15 36.5	-0.4
	baz=215						
D25K	Kavik River	102.35	11	Pdiff	Pdif	07 15 36.2	-0.7
	baz=207						
AGT	Agartala	102.53	290	*e*P	Pdif	07 15 35.4	-3.3
TEZP	TEZPUR	102.57	293	*e*P	Pdif	07 15 34.2	-4.7
DGMT	Dagmar	102.58	41	IAMs_20	IAMs_20	07 54 28.9	
	comp=Z,8μm,22.0s						
A22K	Sinclair Lake	102.71	7	Pdiff	Pdif	07 15 38.4	0.0
	baz=200						
G31M	Satah River	102.76	16	IAMs_20	IAMs_20	07 54 14.9	
	comp=Z,9μm,22.0s						
G31M	Satah River	102.76	16	Pdiff	Pdif	07 15 38.5	-0.1
	baz=217						
U38A	Gravette	102.79	55	IAMs_20	IAMs_20	08 01 16.7	
	comp=Z,6μm,18.0s						
A21K	Barrow	102.84	7	Pdiff	Pdif	07 15 39.0	0.0
	baz=198						
F30M	Barrier River	102.96	15	IAMs_20	IAMs_20	07 58 04.1	
	comp=Z,8μm,22.0s						
F30M	Barrier River	102.96	15	Pdiff	Pdif	07 15 39.4	-0.2
	baz=216						
E28M	Babbage River	102.97	14	IAMs_20	IAMs_20	07 58 56.5	
	comp=Z,6μm,20.0s						
E28M	Babbage River	102.97	14	Pdiff	Pdif	07 15 39.7	0.0
	baz=213						
WRGLY	Wrigley	103.05	22	Pdiff	Pdif	07 15 39.6	-0.4
	baz=226						
C27K	Jago River	103.07	12	IAMs_20	IAMs_20	07 58 16.9	
	comp=Z,9μm,22.0s						
C27K	Jago River	103.07	12	Pdiff	Pdif	07 15 40.0	-0.1
	baz=209						
ULN	Ulaanbaatar	103.08	318	IAMs_20	IAMs_20	08 02 01.9	
	comp=Z,7μm,20.0s						
ULN	Ulaanbaatar	103.08	318	P	Pdif	07 15 40.7	-0.2
C26K	Camden Bay	103.12	11	Pdiff	Pdif	07 15 40.3	+0.1
	baz=208						
E29M	Blow River	103.13	14	Pdiff	Pdif	07 15 40.0	-0.3
	baz=214						
CBOC	Ciudad Bolivar	103.14	91	P	PP	07 19 55.1	-2.0
D27M	Malcolm River	103.24	13	Pdiff	Pdif	07 15 41.0	+0.1
	baz=212						
F31M	Tsiigehtchic	103.30	16	IAMs_20	IAMs_20	07 57 41.1	
	comp=Z,6μm,20.0s						
F31M	Tsiigehtchic	103.30	16	Pdiff	Pdif	07 15 41.1	+0.1
	baz=218						
GUY2C	Guyana, Caldas	103.38	92	P	PKiKP	07 20 01.9	-0.6
SONM	Songino Array	103.45	318	Pdiff	Pdif	07 15 40.6	-1.8
	comp=Z,2.4nm,0.7s,baz=158,slow=4.7,SNR=13						
SONM				PP	PP	07 19 55.2	-3.7
	comp=Z,6.9nm,1.1s,baz=144,slow=3.0,SNR=3.2						
SONM				PKKPbc	PKKPbc	07 31 36.2	-0.8
	comp=Z,9.6nm,1.2s,baz=257,slow=2.7,SNR=10.0						
SONM				PKPPKP	P'P'df	07 39 54.9	+1.5
	comp=Z,0.9nm,0.7s,baz=242,slow=3.2,SNR=4.5						
D28M	Stokes Point	103.74	13	Pdiff	Pdif	07 15 43.0	0.0
	baz=214						
TAWA	Tawang	103.76	294	*e*P	Pdif	07 15 40.5	-4.1
INK	Inuvik	104.03	16	Pdiff	Pdif	07 15 43.8	-0.5
	baz=218						
ROSC	El Rosal	104.08	93	PKKPbc	PKKPbc	07 31 29.0	-5.2
	comp=Z,5.6nm,0.4s,baz=43,slow=22,SNR=1.8						
ROSC				PKKP	PKKPdf	07 31 41.2	-2.2
	comp=Z,16nm,0.7s,baz=93,slow=11,SNR=7.3						
S39A	Bolivar	104.13	55	IAMs_20	IAMs_20	08 02 51.5	
	comp=Z,5μm,18.0s						
MALK	Mahakanadarawa	104.19	271	P	Pdif	07 15 45.2	-1.2
SPBC	San Pablo de B	104.70	92	P	PP	07 20 08.2	-0.4
MDND	Maddock	104.91	43	IAMs_20	IAMs_20	08 02 32.6	
	comp=Z,5μm,19.0s						
Y45A	Yeager Farm, C	105.10	59	IAMs_20	IAMs_20	07 58 32.5	
	comp=Z,6μm,21.0s						
R40A	Maddies Statio	105.14	54	IAMs_20	IAMs_20	08 03 24.0	
	comp=Z,7μm,18.0s						
LSA	Lhasa	105.28	296	IAMs_20	IAMs_20	08 10 22.9	
	comp=Z,7μm,22.0s						
T42A	Van Buren	105.40	56	IAMs_20	IAMs_20	07 55 10.0	
	comp=Z,9μm,22.0s						
GOMU	GeErMu	105.44	303	Pdif	Pdif	07 15 53.3	+1.4
GOMU				PP	PP	07 20 11.8	-2.5
GOMU				SS	SS	07 35 11.9	+1.3
GOMU				AMB	AMB		
	comp=Z,2μm,10.5s						
GOMU				LR	LR		
	comp=Z,3μm,19.8s						
GOMU				LR	LR		
	comp=Z,7μm,18.9s						
GOMU				LR	LR		
	comp=Z,12μm,18.9s						
OXF	Oxford	105.49	59	IAMs_20	IAMs_20	07 58 13.7	
	comp=Z,7μm,21.0s						
N38A	Joes South For	105.61	52	IAMs_20	IAMs_20	07 55 45.3	
	comp=Z,6μm,22.0s						
YKA	Yellowknife Ar	105.65	26	Pdiff	Pdif	07 15 53.7	+2.0
	comp=Z,1.9nm,0.9s,baz=249,slow=4.3,SNR=4.5						
YKA				PKiKP	PKiKP	07 20 04.2	-0.4
	comp=Z,4.2nm,0.7s,baz=276,slow=2.1,SNR=13						
YKA				PKKPbc	PKKPbc	07 31 28.1	-2.4
	comp=Z,31nm,0.9s,baz=39,slow=3.3,SNR=17						
RUSC	La Rusia	105.67	92	P	PKiKP	07 20 08.2	+1.4
CCM	Cathedral Cave	105.75	55	IAMs_20	IAMs_20	08 03 43.3	
	comp=Z,6μm,18.0s						
F33A	5 Mile Ranch,	105.95	46	IAMs_20	IAMs_20	07 59 06.5	
	comp=Z,6μm,20.0s						
GTK	Tadong	106.22	292	*e*P	Pdif	07 15 55.7	+0.5
ZAK	Zakamensk	106.48	319	*e*P	Pdif	07 15 56.6	+0.8
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
MDRS	Chennai	106.70	275	*e*P	Pdif	07 15 53.5	-4.0
BOK	Bokaro	106.85	288	*e*P	Pdif	07 15 53.7	-4.3
C36M	Paulatuk	107.12	17	IAMs_20	IAMs_20	08 00 57.1	
	comp=Z,7μm,20.0s						
C36M	Paulatuk	107.12	17	PKiKP	PKiKP	07 20 06.8	-0.3
	baz=226						
T45A	Paducah	107.15	57	IAMs_20	IAMs_20	07 56 12.5	
	comp=Z,8μm,22.0s						
TRD	Trivandrum	107.33	270	*e*P	Pdif	07 15 56.5	-3.9
Q44A	Meyer Farm, Va	107.70	55	IAMs_20	IAMs_20	08 04 35.7	
	comp=Z,8μm,18.0s						
SPMN	Marine on St.	107.86	48	IAMs_20	IAMs_20	08 04 25.4	
	comp=Z,6μm,19.0s						
V48A	Smith Brothers	107.93	59	IAMs_20	IAMs_20	07 59 56.4	
	comp=Z,7μm,21.0s						
ULM	Lac du Bonnet	108.19	42	Pdiff	Pdif	07 16 04.4	+1.1
	comp=Z,0.6nm,0.4s,baz=240,slow=4.5,SNR=3.2						
ULM				PKiKP	PKiKP	07 20 10.4	+0.7
	comp=Z,3.6nm,0.8s,baz=241,slow=3.1,SNR=4.9						
ULM				PKKPbc	PKKPbc	07 31 19.7	-2.5
	comp=Z,8.4nm,0.8s,baz=113,slow=5.4,SNR=8.6						
ULM				PKKP	PKKPdf	07 31 35.8	-1.2
	comp=Z,27nm,0.9s,baz=65,slow=4.2,SNR=13						
T47A	Sharon Grove	108.25	57	IAMs_20	IAMs_20	08 02 52.7	
	comp=Z,6μm,19.0s						
061Z	Ochoppi	108.31	70	IAMs_20	IAMs_20	07 56 16.5	
	comp=Z,6μm,22.0s						
A36M	Sachs Harbour	108.66	15	PKiKP	PKiKP	07 20 09.4	-0.5
	baz=226						
W50A	Signal Mountai	108.83	60	IAMs_20	IAMs_20	08 00 38.1	
	comp=Z,6μm,20.0s						
U49A	Red Boiling Sp	109.02	58	IAMs_20	IAMs_20	08 00 29.2	
	comp=Z,6μm,22.0s						
Y52A	Lilburn	109.21	62	IAMs_20	IAMs_20	07 58 36.5	
	comp=Z,6μm,22.0s						
E38A	The Farm, Brul	109.24	47	IAMs_20	IAMs_20	08 00 58.7	
	comp=Z,7μm,22.0s						
GOGA	Godfrey	109.48	62	IAMs_20	IAMs_20	07 58 48.6	
	comp=Z,6μm,22.0s						
SFIN	Lafayette	109.66	54	IAMs_20	IAMs_20	08 08 24.6	
	comp=Z,6μm,18.0s						
EYMN	Ely	109.83	45	IAMs_20	IAMs_20	07 58 46.1	
	comp=Z,7μm,22.0s						
HYB	Hyderabad	110.15	279	*e*Pdif	Pdif	07 16 12.3	-0.5
HYB				*e*PKiKP	PKiKP	07 20 14.1	-0.3
HYB				*e*pPKiKP	pPKiKP	07 20 23.9	+2.8
HYB				*e*SKSac	SKSac	07 26 49.5	-1.8
HYB				IVMs_BB	IVMs_BB	08 08 18.6	
	comp=Z,3μm,18.6s						
R49A	Shelbyville	110.19	57	IAMs_20	IAMs_20	08 04 12.9	
	comp=Z,8μm,19.0s						
P48A	Milroy	110.47	56	IAMs_20	IAMs_20	07 58 51.2	
	comp=Z,8μm,22.0s						
COWI	Conover	110.57	48	IAMs_20	IAMs_20	07 59 37.0	
	comp=Z,6μm,21.0s						
TZTN	Tazewell	110.68	59	IAMs_20	IAMs_20	08 01 12.1	
	comp=Z,6μm,20.0s						
R50A	Paris	110.79	57	IAMs_20	IAMs_20	08 04 31.9	
	comp=Z,7μm,18.0s						
N47A	Urbana	110.84	54	IAMs_20	IAMs_20	08 08 44.7	
	comp=Z,5μm,18.0s						
L46A	Eue Claire	110.86	53	IAMs_20	IAMs_20	08 03 42.2	
	comp=Z,5μm,20.0s						
V53A	Saluda	110.88	60	IAMs_20	IAMs_20	08 05 13.6	
	comp=Z,5μm,19.0s						
S51A	Beattyville	111.08	58	IAMs_20	IAMs_20	08 02 15.5	
	comp=Z,5μm,20.0s						
F42A	Maple Grove Fa	111.08	49	IAMs_20	IAMs_20	08 05 58.6	
	comp=Z,7μm,19.0s						
V55A	Taylorsville	112.15	61	IAMs_20	IAMs_20	08 05 56.2	
	comp=Z,7μm,19.0s						
VOI	Vohitsoka	112.38	225	P	PKiKP	07 20 21.0	+2.3
Q52A	Bidwell	112.55	57	IAMs_20	IAMs_20	08 02 33.3	
	comp=Z,7μm,22.0s						
M50A	Fremont	112.89	54	IAMs_20	IAMs_20	08 08 20.1	
	comp=Z,7μm,18.0s						
U56A	King	112.96	60	IAMs_20	IAMs_20	08 06 10.6	
	comp=Z,7μm,19.0s						
GLMI	Grayling	113.04	51	IAMs_20	IAMs_20	08 01 32.7	
	comp=Z,5μm,22.0s						
N51A	Ashland	113.18	55	IAMs_20	IAMs_20	08 00 13.0	
	comp=Z,8μm,22.0s						
BLA	Blacksburg	113.25	60	IAMs_20	IAMs_20	08 08 28.2	
	comp=Z,5μm,18.0s						
O52A	Adamsville	113.28	56	IAMs_20	IAMs_20	08 06 15.9	
	comp=Z,7μm,19.0s						
BDFB	Brasilia	113.30	126	PKiKP	PKiKP	07 20 20.9	+0.3

	comp=Z,4.3nm,0.9s,baz=248,slow=4.2,SNR=7.0						
BDFB				PKKPbc	**PKKPbc**	**07 31 02.4**	**-2.4**
	comp=Z,5.1nm,0.7s,baz=141,slow=6.6,SNR=7.8						
P53A	**Whipple**	**113.37**	**57**	IAMs_20	IAMs_20	08 05 54.1	
	comp=Z,7µm,19.0s						
WMQ	**Urumqi**	**113.51**	**308**	PKP	**PKiKP**	**07 20 23.4**	**+3.3**
WMQ				PP	**PP**	**07 21 14.0**	**+1.7**
WMQ				AMB	AMB		
	comp=Z,950nm,5.1s						
WMQ				LR	LR		
	comp=Z,3µm,23.9s						
WMQ				LR	LR		
	comp=Z,4µm,24.1s						
WMQ				LR	LR		
	comp=Z,6µm,23.8s						
Q54A	**Coxs Mills**	**113.59**	**58**	IAMs_20	IAMs_20	08 06 19.0	
	comp=Z,7µm,18.0s						
K50A	**Casco**	**113.67**	**53**	IAMs_20	IAMs_20	08 00 43.6	
	comp=Z,6µm,22.0s						
V58A	**Windy Hill, Pi**	**113.71**	**61**	IAMs_20	IAMs_20	08 01 04.5	
	comp=Z,6µm,22.0s						
E46A	**Sault Ste Mari**	**113.78**	**49**	IAMs_20	IAMs_20	08 05 21.2	
	comp=Z,6µm,20.0s						
T57A	**Hurt**	**114.04**	**60**	IAMs_20	IAMs_20	08 12 20.2	
	comp=Z,5µm,18.0s						
N53A	**Lisbon**	**114.23**	**56**	IAMs_20	IAMs_20	08 06 37.8	
	comp=Z,7µm,18.0s						
O54A	**Avella**	**114.35**	**56**	IAMs_20	IAMs_20	08 08 15.9	
	comp=Z,6µm,18.0s						
KRAR	**Krasnoyarsk**	**114.47**	**322**	⇑*i*PKIKP	**PKiKP**	**07 20 22.2**	**+0.8**
S57A	**Dark Hollow, R**	**114.54**	**59**	IAMs_20	IAMs_20	08 09 25.3	
	comp=Z,5µm,18.0s						
Q56A	**Snyder Ridge,**	**114.81**	**58**	IAMs_20	IAMs_20	08 06 58.4	
	comp=Z,4µm,18.0s						
SUR	**Sutherland**	**114.82**	**197**	P	PKPdf	07 20 26.0	+2.7
BRAK	**Brakfontein**	**114.82**	**199**	*e*P	PKPdf	07 20 27.7	+4.6
FRAZ	**Fraserburg**	**115.09**	**198**	*e*P	**PKiKP**	**07 20 23.4**	**-0.3**
T59A	**Double "B" Far**	**115.31**	**61**	IAMs_20	IAMs_20	08 07 22.7	
	comp=Z,6µm,19.0s						
R58B	**Mineral**	**115.41**	**60**	IAMs_20	IAMs_20	08 09 52.3	
	comp=Z,6µm,18.0s						
V61A	**Roper**	**115.63**	**62**	IAMs_20	IAMs_20	08 07 16.6	
	comp=Z,5µm,19.0s						
P57A	**Homestead Farm**	**115.82**	**58**	IAMs_20	IAMs_20	08 07 31.1	
	comp=Z,5µm,19.0s						
CBN	**Corbin Frederi**	**115.86**	**59**	IAMs_20	IAMs_20	08 10 23.3	
	comp=Z,6µm,18.0s						
CVNA	**Calvinia**	**115.94**	**197**	*e*P	**PKiKP**	**07 20 23.6**	**-1.7**
SSPA	**Standing Stone**	**116.29**	**57**	IAMs_20	IAMs_20	08 08 02.3	
	comp=Z,6µm,19.0s						
ZSN	**Zaisan**	**116.56**	**311**	*e*PKIKP	**PKPdf**	**07 20 24.4**	**-1.3**
ZSN	**Zaisan**	**116.56**	**311**	*e*PKP	**PKPdf**	**07 20 24.4**	**-1.3**
ALKP	**Alkanpan, Nort**	**116.74**	**200**	*e*P	**PKiKP**	**07 20 27.4**	**+0.5**
S61A	**Accomac**	**116.96**	**60**	IAMs_20	IAMs_20	08 11 20.4	
	comp=Z,5µm,18.0s						
BOSA	**Boshof**	**117.04**	**203**		**PKiKP**	**07 20 27.7**	**+0.1**
BOSA	**Boshof**	**117.04**	**203**	Pdiff	**Pdif**	**07 16 46.1**	**+2.5**
	comp=Z,3.5nm,0.9s,baz=199,slow=2.1,SNR=4.6						
BOSA				PKP	**PKPdf**	**07 20 27.1**	**-0.5**
	comp=Z,86nm,1.2s,baz=155,slow=1.9,SNR=23						
BOSA				PP	**PP**	**07 21 36.7**	**+0.8**
	comp=Z,16nm,0.9s,baz=166,slow=9.1,SNR=4.3						
BOSA				PKKPbc	**PKKPbc**	**07 30 51.0**	**-1.3**
	comp=Z,8.5nm,0.9s,baz=9.0,slow=3.8,SNR=5.1						
BOSA	**Boshof**	**117.04**	**203**	PKIKP	**PKiKP**	**07 20 27.7**	**+0.1**
BOSA	**Boshof**	**117.04**	**203**	*e*P	**PKiKP**	**07 20 28.8**	**+1.3**
BOSA	**Boshof**	**117.04**	**203**	*i* P	**PKiKP**	**07 20 29.0**	**+1.5**
J55A	**Hilton**	**117.16**	**54**	IAMs_20	IAMs_20	08 07 57.1	
	comp=Z,7µm,21.0s						
SJG	**San Juan**	**117.38**	**84**	IAMs_20	IAMs_20	08 00 01.7	
	comp=Z,6µm,22.0s						
R61A	**Willards**	**117.42**	**60**	IAMs_20	IAMs_20	08 11 12.5	
	comp=Z,5µm,18.0s						
MK31	**Makanchi Array**	**118.06**	**310**	*c i*PKIKP	**PKPdf**	**07 20 26.4**	**-2.3**
MKAR	**Makanchi Array**	**118.06**	**310**		**PKPdf**	**07 20 27.0**	**-1.7**
MKAR	**Makanchi Array**	**118.06**	**310**	Pdiff	**Pdif**	**07 16 49.0**	**+1.6**
	comp=Z,1.8nm,0.6s,baz=99,slow=7.5,SNR=3.9						
MKAR				PKP	**PKPdf**	**07 20 27.1**	**-1.5**
	comp=Z,16nm,0.7s,baz=104,slow=1.5,SNR=24						
MKAR				PKKPbc	**PKKPbc**	**07 30 48.8**	**+0.1**
	comp=Z,2.5nm,0.6s,baz=263,slow=3.3,SNR=6.8						
MAKZ	**Makanchi**	**118.27**	**310**		**PKPdf**	**07 20 27.0**	**-2.1**
MAKZ				IAMs_20	IAMs_20	08 17 27.8	
	comp=Z,8µm,22.0s						
MAKZ	**Makanchi**	**118.27**	**310**	PKIKP	**PKPdf**	**07 20 27.0**	**-2.1**
ZALV	**Zalesovo Beam**	**118.34**	**318**	PKP	**PKPdf**	**07 20 26.0**	**-2.9**
	comp=Z,36nm,0.8s,baz=133,slow=0.8,SNR=28						
PDGK	**Podgornoye**	**119.02**	**305**	PKIKP	**PKPdf**	**07 20 28.1**	**-2.7**
MOPA	**Mopani**	**119.23**	**211**	*i* P	**PKiKP**	**07 20 34.3**	**+2.5**
UZB	**Uzynbulak**	**119.30**	**305**	*e*PKIKP	**PKPdf**	**07 20 29.6**	**-1.7**
UZB				*e*		07 21 50.2	
UZB	**Uzynbulak**	**119.30**	**305**	*e*PKP	**PKPdf**	**07 20 29.6**	**-1.7**
UZB				*e*PP	**PP**	**07 21 50.2**	**-2.7**
J59A	**Piesco**	**119.53**	**55**	IAMs_20	IAMs_20	08 09 08.9	
	comp=Z,5µm,18.0s						
N62A	**Caumsett State**	**119.58**	**58**	IAMs_20	IAMs_20	08 09 46.4	
	comp=Z,6µm,18.0s						
KPKS	**Kokpek**	**119.62**	**305**	*e*PKIKP	**PKPdf**	**07 20 30.3**	**-1.6**
KPKS				*e*		07 21 52.3	
KPKS	**Kokpek**	**119.62**	**305**	*e*PKP	**PKPdf**	**07 20 30.3**	**-1.6**
KPKS				*e*PP	**PP**	**07 21 52.3**	**-2.7**
SATY	**Saty**	**119.71**	**305**	*e*PKIKP	**PKPdf**	**07 20 30.4**	**-1.7**
SATY	**Saty**	**119.71**	**305**	*e*PKP	**PKPdf**	**07 20 30.4**	**-1.7**
MAKGR	**Makgori**	**119.78**	**204**	*i* P	**PKiKP**	**07 20 34.9**	**+1.9**
TARG	**Taragay, Kyrgy**	**119.78**	**303**	IAMs_20	IAMs_20	08 17 52.4	
	comp=Z,6µm,22.0s						
BIM	**Bigot**	**120.16**	**90**	IAMs_20	IAMs_20	08 02 17.0	
	comp=Z,6µm,22.0s						
TDK	**Taldyqorghan**	**120.21**	**307**	*e*PKIKP	**PKPdf**	**07 20 31.3**	**-1.5**
TDK				MLR	MLR		
	comp=Z,4µm,23.0s						
TDK	**Taldyqorghan**	**120.21**	**307**	*e*PKP	**PKPdf**	**07 20 31.4**	**-1.5**
TDK				LR	LR	08 12 18.0	
	comp=Z,4µm,22.5s						
LBTB	**Lobatse**	**120.22**	**205**		**PKPdf**	**07 20 32.9**	**-0.8**
LBTB	**Lobatse**	**120.22**	**205**	PKKPbc	PKKPbc	07 30 38.9	-1.9
	comp=Z,14nm,1.0s,baz=330,slow=4.1,SNR=7.8						
LBTB	**Lobatse**	**120.22**	**205**	PKIKP	**PKPdf**	**07 20 32.9**	**-0.8**
LBTB	**Lobatse**	**120.22**	**205**	*i* P	**PKiKP**	**07 20 35.4**	**+1.5**
MPOM	**Morne Pois Mar**	**120.31**	**91**	IAMs_20	IAMs_20	08 02 20.8	
	comp=Z,5µm,22.0s						
ARXS	**Arharly**	**120.41**	**306**	*i* PKIKP	**PKPdf**	**07 20 31.4**	**-1.9**
KSH	**Kashi**	**120.50**	**300**	PKP	**PKPdf**	**07 20 33.1**	**-0.6**
KSH				PP	**PP**	**07 22 03.5**	**+2.2**
KSH				SKKS		07 28 58.1	
KSH				LR	LR		
	comp=Z,6µm,22.0s						
KSH				LR	LR		
	comp=Z,3µm,24.7s						
KSH				LR	LR		
	comp=Z,7µm,22.7s						
MAGL	**Barre de l'ile**	**120.62**	**89**	IAMs_20	IAMs_20	08 10 44.0	
	comp=Z,5µm,20.0s						
ABD	**La Joyeuse, An**	**120.67**	**88**	IAMs_20	IAMs_20	08 10 46.3	
	comp=Z,5µm,20.0s						
MDOK	**Medeo**	**120.69**	**305**	*e*PKIKP	**PKPdf**	**07 20 32.3**	**-1.7**
MDOK				*e*		07 21 59.7	
MDOK				MLR	MLR		
	comp=Z,2µm,23.0s						
MDOK	**Medeo**	**120.69**	**305**	*e*PKP	**PKPdf**	**07 20 32.3**	**-1.7**
MDOK				*e*PP	**PP**	**07 21 59.8**	**-2.7**
MDOK				LR	LR	08 12 24.1	
	comp=Z,2µm,23.4s						
M63A	**Gales Ferry**	**120.74**	**57**	IAMs_20	IAMs_20	08 10 21.2	
	comp=Z,7µm,19.0s						
AAA	**Alma-Ata**	**120.80**	**305**	*e*PKIKP	**PKPdf**	**07 20 32.5**	**-1.6**
AAA	**Alma-Ata**	**120.80**	**305**	*e*PKP	**PKPdf**	**07 20 32.5**	**-1.6**
NIL	**Nilore**	**120.86**	**293**		**PKPdf**	**07 20 32.6**	**-1.9**
NIL	**Nilore**	**120.86**	**293**	P	**PKPdf**	**07 20 34.2**	**-0.3**
NIL	**Nilore**	**120.86**	**293**	PKIKP	**PKPdf**	**07 20 32.6**	**-1.9**
ANWB	**Willy Bob**	**120.93**	**87**	IAMs_20	IAMs_20	08 02 44.2	
	comp=Z,6µm,22.0s						
VT1	**Waterbury**	**120.98**	**54**	IAMs_20	IAMs_20	08 10 47.1	
	comp=Z,5µm,18.0s						
MUSN	**Musina, Limpop**	**120.98**	**210**	*i* P	**PKiKP**	**07 20 36.3**	**+1.0**
ULHL	**Ulahol**	**121.04**	**304**	P	**PKPdf**	**07 20 34.2**	**-0.6**
	SNR=20						
HNH	**Hanover**	**121.15**	**55**	IAMs_20	IAMs_20	08 12 57.8	
	comp=Z,6µm,18.0s						
SKOMA	**Sekoma**	**121.27**	**203**	*i* P	**PKiKP**	**07 20 36.2**	**+0.3**
KURK	**Kurchatov**	**121.35**	**314**		**PKPdf**	**07 20 33.0**	**-1.7**
KURK	**Kurchatov**	**121.35**	**314**	IAMs_20	IAMs_20	08 21 08.6	
	comp=Z,6µm,22.0s						
KURK	**Kurchatov**	**121.35**	**314**	P	**PKiKP**	**07 20 34.9**	**0.0**
KURK	**Kurchatov**	**121.35**	**314**	*c i*PKIKP	**PKPdf**	**07 20 31.6**	**-3.2**
KURK				MLR	MLR		
	comp=Z,4µm,22.0s						
HRV	**Adam Dziewonsk**	**121.37**	**56**		**PKPdf**	**07 20 32.7**	**-2.4**
HRV	**Adam Dziewonsk**	**121.37**	**56**	⇑PKIKP	**PKiKP**	**07 20 37.5**	**+2.3**
AUSN	**Aus**	**121.38**	**195**	*e*P	**PKPdf**	**07 20 33.0**	**-3.0**
KURBB	**Kurchatov Arra**	**121.39**	**314**	Pdiff	**Pdif**	**07 17 05.8**	**+3.9**
	comp=Z,0.3nm,0.3s,baz=107,slow=3.5,SNR=5.1						
KURBB				PKP	**PKPdf**	**07 20 32.9**	**-2.0**
	comp=Z,63nm,0.8s,baz=107,slow=1.8,SNR=38						
KURBB				SKP		07 24 08.7	
	comp=Z,8.1nm,0.8s,baz=112,slow=1.8,SNR=4.6						
KURBB				PKKPbc	**PKKPab**	**07 30 35.5**	**+0.7**
	comp=Z,3.1nm,0.9s,baz=289,slow=5.1,SNR=7.0						
KURBB	**Kurchatov Arra**	**121.39**	**314**	PKIKP	**PKPdf**	**07 20 32.2**	**-2.7**
LBNH	**Lisbon**	**121.53**	**54**	IAMs_20	IAMs_20	08 11 20.8	
	comp=Z,5µm,19.0s						
LPHEP	**Lephephe**	**121.64**	**206**	*i* P	**PKiKP**	**07 20 37.3**	**+0.7**
TKM2	**Tokmak 2**	**121.67**	**304**	P	**PKPdf**	**07 20 34.2**	**-1.7**
	SNR=30						
TKM2	**Tokmak 2**	**121.67**	**304**	PKIKP	**PKPdf**	**07 20 34.0**	**-2.0**
MREMI	**Moremi**	**121.74**	**208**	*i* P	**PKiKP**	**07 20 37.0**	**+0.1**
I62A	**Tamworth**	**121.86**	**55**	IAMs_20	IAMs_20	08 13 19.6	
	comp=Z,5µm,18.0s						
TMAB	**Tom-Au,PA,Br**	**121.97**	**115**	*e*P	**PKiKP**	**07 20 39.3**	**+1.9**
KBK	**Karagaybulak**	**122.06**	**304**	P	**PKPdf**	**07 20 35.0**	**-1.7**
	SNR=19						
H62A	**Milan**	**122.15**	**54**	IAMs_20	IAMs_20	08 13 21.0	
	comp=Z,5µm,18.0s						
UCH	**Uchtor**	**122.28**	**303**	P	**PKiKP**	**07 20 43.0**	**+5.3**
	SNR=8.9						
CHMS	**Chumysh**	**122.29**	**304**	P	**PKiKP**	**07 20 37.3**	**+0.2**
	SNR=12						
AAK	**Ala-Archa**	**122.39**	**304**	P	**PKPdf**	**07 20 36.0**	**-1.3**
	SNR=17						
AAK	**Ala-Archa**	**122.39**	**304**		**PKPdf**	**07 20 35.8**	**-1.5**
AAK	**Ala-Archa**	**122.39**	**304**	IAMs_20	IAMs_20	08 20 40.4	
	comp=Z,7µm,20.0s						
AAK	**Ala-Archa**	**122.39**	**304**	P	**PKiKP**	**07 20 37.5**	**0.0**
AAK	**Ala-Archa**	**122.39**	**304**	*c i*PKIKP	**PKPdf**	**07 20 35.9**	**-1.4**
AAK	**Ala-Archa**	**122.39**	**304**	*i* PKPdf	**PKPdf**	**07 20 35.5**	**-1.8**
	SNR=12						
I63A	**Otisfield**	**122.43**	**55**	IAMs_20	IAMs_20	08 11 04.7	
	comp=Z,7µm,20.0s						
SGDS	**Sogindy**	**122.48**	**305**	*e*PKP	**PKPdf**	**07 20 35.7**	**-1.6**
USP	**Ospenovka**	**122.53**	**304**	P	**PKPdf**	**07 20 35.5**	**-1.9**
	SNR=26						
AML	**Almayashu**	**122.84**	**303**	P	**PKPdf**	**07 20 37.4**	**-1.1**
	SNR=26						
EKS2	**Erkin-Say**	**122.91**	**304**	P	**PKPdf**	**07 20 37.2**	**-1.0**
	SNR=26						
BROLN	**Tlhalogang**	**123.10**	**208**	*i* P	**PKiKP**	**07 20 39.8**	**+0.2**
WVL	**Waterville**	**123.19**	**54**	IAMs_20	IAMs_20	08 14 10.6	
	comp=Z,6µm,18.0s						
BTLS	**Baital**	**123.23**	**306**	*e*PKIKP	**PKPdf**	**07 20 37.1**	**-1.5**
BTLS				*e*		07 22 17.0	
BTLS	**Baital**	**123.23**	**306**	*e*PKP	**PKPdf**	**07 20 37.2**	**-1.5**
BTLS				*e*PP	**PP**	**07 22 17.1**	**-2.4**
KGCAE	**Kacgae**	**123.38**	**202**	*i* P	**PKiKP**	**07 20 40.7**	**+0.6**
BLWY	**Bulawayo**	**123.42**	**210**	*i* P	**PKiKP**	**07 20 40.6**	**+0.3**
PKME	**Peaks-Kenny Pk**	**123.59**	**53**	IAMs_20	IAMs_20	08 21 43.1	
	comp=Z,5µm,18.0s						
E62A	**Clayton Lake**	**123.69**	**52**	IAMs_20	IAMs_20	08 09 43.6	
	comp=Z,7µm,22.0s						
KOOLE	**Kule**	**123.88**	**200**	*i* P	**PKiKP**	**07 20 43.9**	**+2.7**
SOOWA	**Sowa**	**124.03**	**207**	*i* P	**PKiKP**	**07 20 41.9**	**+0.5**
D62A	**Allapoint, All**	**124.09**	**51**	IAMs_20	IAMs_20	08 11 28.1	
	comp=Z,4µm,19.0s						
F64A	**Sherman**	**124.35**	**53**	IAMs_20	IAMs_20	08 17 08.2	
	comp=Z,6µm,18.0s						
KBU	**Kabul Universi**	**124.38**	**293**	PKP	**PKPdf**	**07 20 40.3**	**-1.2**
KBL	**Kabul**	**124.46**	**293**		**PKPdf**	**07 20 40.2**	**-1.3**
KBL	**Kabul**	**124.46**	**293**	P	**PKiKP**	**07 20 41.9**	**0.0**
	SNR=66						
KBL	**Kabul**	**124.46**	**293**	PKIKP	**PKPdf**	**07 20 40.3**	**-1.3**
DZA	**Taraz**	**124.72**	**303**	*e*PKIKP	**PKPdf**	**07 20 39.9**	**-1.6**
DZA	**Taraz**	**124.72**	**303**	*e*PKP	**PKPdf**	**07 20 40.0**	**-1.6**
G65A	**Princeton**	**124.78**	**54**	IAMs_20	IAMs_20	08 22 20.5	
	comp=Z,5µm,18.0s						
OTUK	**Ortayu**	**124.96**	**310**	PKIKP	**PKPdf**	**07 20 38.7**	**-3.2**
PHDHD	**Phuduhudu**	**125.02**	**206**	*i* P	**PKiKP**	**07 20 43.5**	**+0.2**
GRTLG	**Ghanzi**	**125.09**	**202**	*i* P	**PKiKP**	**07 20 44.0**	**+0.5**
WIN	**Windhoek**	**125.13**	**197**		**PKPdf**	**07 20 41.6**	**-1.8**
WIN	**Windhoek**	**125.13**	**197**	PKIKP	**PKPdf**	**07 20 41.6**	**-1.8**
GGN	**Saint George**	**125.26**	**54**		**PKPdf**	**07 20 41.4**	**-1.1**
KK31	**Karatay Array**	**125.35**	**303**	*i* PKIKP	**PKPdf**	**07 20 41.1**	**-1.7**
NBAN	**Anadia - AL**	**125.49**	**131**	*e*P	**PKiKP**	**07 20 44.9**	**+0.5**
IUG	**Iuzhnay**	**125.51**	**302**	*e*PKIKP	**PKPdf**	**07 20 41.4**	**-1.8**
IUG	**Iuzhnay**	**125.51**	**302**	*e*PKP	**PKPdf**	**07 20 41.5**	**-1.8**
SIMJ	**Simiganj**	**125.53**	**298**		**PKPdf**	**07 20 41.5**	**-1.9**
BRLS	**Borolday**	**125.82**	**303**	*e*PKIKP	**PKPdf**	**07 20 42.2**	**-1.5**
BRLS				*e*		07 22 34.9	
BRLS	**Borolday**	**125.82**	**303**	*e*PKP	**PKPdf**	**07 20 42.2**	**-1.5**
BRLS				*e*PP	**PP**	**07 22 35.0**	**-2.0**
CHM	**Chimkent**	**125.85**	**302**	*e*PKIKP	**PKPdf**	**07 20 42.1**	**-1.6**
CHM	**Chimkent**	**125.85**	**302**	*e*PKP	**PKPdf**	**07 20 42.2**	**-1.6**
CHM				LR	LR	08 16 57.8	
	comp=Z,3µm,20.7s						
KRI	**Karoi**	**125.86**	**213**	*i* P	**PKiKP**	**07 20 45.9**	**+0.7**
NBPB	**Pedra_Branca-C**	**126.23**	**125**	*e*P	**PKiKP**	**07 20 46.5**	**+0.6**
SCHQ	**Schefferville**	**126.37**	**42**	PKP	**PKPdf**	**07 20 42.0**	**-2.3**
	comp=Z,16nm,0.8s,baz=3.0,slow=1.3,SNR=14						
BVA0	**Borovoye Array**	**126.71**	**316**	*i* PKIKP	**PKPdf**	**07 20 40.5**	**-4.5**
BVAR	**Borovoye Array**	**126.71**	**316**	PKP	**PKPdf**	**07 20 41.9**	**-3.1**
	comp=Z,52nm,0.7s,baz=90,slow=3.0,SNR=29						
BRVK	**Borovoye**	**126.77**	**316**	IAMs_20	IAMs_20	08 24 05.7	
	comp=Z,5µm,22.0s						
BRVK	**Borovoye**	**126.77**	**316**	P	**PKPdf**	**07 20 43.0**	**-2.1**
BRVK	**Borovoye**	**126.77**	**316**	*c i*PKIKP	**PKPdf**	**07 20 43.5**	**-1.6**
LMN	**Caledonia Moun**	**126.79**	**53**		**PKPdf**	**07 20 44.5**	**-0.9**
QNGWA	**Qangwa**	**126.82**	**203**	*i* P	**PKiKP**	**07 20 47.7**	**+0.7**
KULLO	**Kullorsuaq**	**127.36**	**17**	*i* P	**PKiKP**	**07 20 46.1**	**-0.1**
NEEM	**North Greenlan**	**127.48**	**13**	*i* P	**PKPdf**	**07 20 45.0**	**-1.2**
LSZ	**Lusaka**	**127.88**	**212**		**PKiKP**	**07 20 49.1**	**-0.1**
LSZ	**Lusaka**	**127.88**	**212**	PP	**PP**	**07 22 53.6**	**+4.0**
	comp=Z,19nm,0.9s,baz=165,slow=7.0,SNR=3.1						
LSZ				SKPbc	SKPbc	07 24 04.6	
	comp=Z,22nm,0.7s,baz=93,slow=1.5,SNR=5.9						
LSZ	**Lusaka**	**127.88**	**212**	P	**PKiKP**	**07 20 50.7**	**+1.5**
LSZ	**Lusaka**	**127.88**	**212**	PKIKP	**PKiKP**	**07 20 49.1**	**-0.1**
NBCL	**Cascavel-CE**	**128.07**	**125**	*e*P	**PKiKP**	**07 20 51.1**	**+1.6**
NGCH	**Negor - Chabah**	**128.16**	**280**	P	**PKiKP**	**07 20 49.7**	**+0.5**
TSUM	**Tsumeb**	**128.22**	**199**	PP	**PP**	**07 22 54.9**	**+3.4**
	comp=Z,86nm,1.1s,baz=150,slow=7.0,SNR=7.5						
TSUM	**Tsumeb**	**128.22**	**199**	*i* P	**PKiKP**	**07 20 51.2**	**+1.4**
UPNV	**Upernavik**	**128.30**	**19**	*i* P	**PKPdf**	**07 20 45.3**	**-2.2**
NOR	**Nord**	**128.49**	**3**	*i* P	**PKPdf**	**07 20 45.8**	**-1.8**
JLN	**Jalan Bani Buh**	**128.49**	**275**	P	**PKPdf**	**07 20 48.5**	**-0.9**
	SNR=11						
RCBR	**Riachuelo**	**128.58**	**128**	*e*P	**PKiKP**	**07 20 51.9**	**+1.3**
GBN	**Guysborough**	**129.03**	**54**		**PKPdf**	**07 20 48.9**	**-0.8**
WBK	**Wadi Bani Khal**	**129.04**	**275**	P	**PKiKP**	**07 20 51.6**	**+0.5**
DQM	**DQM**	**129.23**	**272**	P	**PKiKP**	**07 20 51.2**	**-0.4**
MHTO	**MHTO**	**129.28**	**273**	P	**PKPdf**	**07 20 50.5**	**-0.4**
	SNR=14						
WSAR	**Wadi Sarin**	**129.56**	**276**	PKP	**PKPdf**	**07 20 49.0**	**-2.4**
	comp=Z,0.1nm,0.7s,baz=123,slow=6.9,SNR=11						
WSAR	**Wadi Sarin**	**129.56**	**276**	P	**PKiKP**	**07 20 52.5**	**+0.3**
	SNR=8.1						
NUUG	**Nuugaatsiaq**	**129.60**	**20**	*i* P	**PKiKP**	**07 20 50.9**	**+0.1**
JMDO	**Jabal Madar**	**129.69**	**275**	P	**PKiKP**	**07 20 53.1**	**+0.7**
	SNR=12						
SMDO	**Samad**	**129.99**	**275**	P	**PKiKP**	**07 20 53.3**	**+0.2**
	SNR=18						
BIDO	**Bidbid**	**130.09**	**276**	P	**PKiKP**	**07 20 52.8**	**-0.4**
	SNR=12						
UMMG	**Uummannaq**	**130.27**	**21**	*i* P	**PKPdf**	**07 20 48.9**	**-2.3**
DMTO	**DMTO**	**130.55**	**268**	P	**PKiKP**	**07 20 54.5**	**+0.2**
BSY	**Bisya**	**130.60**	**275**	P	**PKiKP**	**07 20 53.9**	**-0.4**
	SNR=11						
HOQ	**Hoqain**	**130.81**	**276**	P	**PKPdf**	**07 20 53.2**	**-0.5**
	SNR=14						
RBK	**Rabkut**	**131.10**	**267**	P	**PKPdf**	**07 20 54.8**	**+0.3**
	SNR=6.1						
ILULI	**Ilulissat**	**131.18**	**22**	*i* P	**PKPdf**	**07 20 50.9**	**-2.2**
ARQ	**Araqi**	**131.40**	**275**	P	**PKPdf**	**07 20 54.7**	**-0.2**
	SNR=14						
KBS	**Kingsbay**	**131.49**	**357**	IAMs_20	IAMs_20	08 10 06.9	
	comp=Z,6µm,22.0s						
KBS	**Kingsbay**	**131.49**	**357**	*e*PKPdf	**PKiKP**	**07 20 53.9**	**-0.5**
KBS				*e*PP	**PP**	**07 23 14.1**	**+1.3**
KBS				*e*		07 24 23.7	
KBS				*e*SP	SP	07 33 22.7	+0.1
KBS				*e*		07 40 60.0	
KBS	**Kingsbay**	**131.49**	**357**	*i* P	**PKPdf**	**07 20 52.3**	**-1.2**
DOK	**Doka**	**131.63**	**268**	P	**PKiKP**	**07 20 56.0**	**-0.4**
WHFO	**Wadi Hawf**	**131.65**	**267**	P	**PKPdf**	**07 20 54.8**	**-0.7**
SOHO	**SOHO**	**131.67**	**276**	P	**PKPdf**	**07 20 54.5**	**-0.8**
SOHO	**SOHO**	**131.67**	**276**	*i* PKPdf	**PKPdf**	**07 20 53.0**	**-2.3**
	SNR=18						
ABTO	**Aybut**	**131.81**	**266**	P	**PKiKP**	**07 20 57.6**	**+0.7**
SPA0	**Spitsbergen Ar**	**132.01**	**356**	*e*PKPdf	**PKPdf**	**07 20 53.2**	**-1.3**
SPA0				*e*PP	**PP**	**07 23 19.9**	**+3.8**
SPA0				*e*SKPdf	**SKPdf**	**07 24 28.1**	**-0.1**
SPA0				*e*SS	**SS**	**07 40 52.3**	**+1.5**
SPITS	**Spitsbergen Ar**	**132.01**	**356**	PKhKP	PKPpre	07 20 40.6	
	comp=Z,6.4nm,0.8s,baz=101,slow=2.6,SNR=6.2						
SPITS				PKP	**PKPdf**	**07 20 53.3**	**-1.1**
	comp=Z,144nm,0.8s,baz=114,slow=8.3,SNR=56						
SVE	**Sverdlovsk**	**132.21**	**321**	*d i*PKIKP	**PKPdf**	**07 20 54.3**	**-1.0**
SVE				pmax	pmax		
	comp=Z,175nm,1.6s						
SVE				MLR	MLR		
	comp=E,7µm,23.0s						
SVE				MLR	MLR		
	comp=Z,9µm,23.0s						
SFJD	**Kangerlussuaq**	**132.21**	**25**		**PKPdf**	**07 20 54.6**	**-0.4**
SFJD	**Kangerlussuaq**	**132.21**	**25**	PKIKP	**PKPdf**	**07 20 54.6**	**-0.4**
SFJD				MLR	MLR		
	comp=Z,7µm,22.0s						
SFJD	**Kangerlussuaq**	**132.21**	**25**	*i* P	**PKPdf**	**07 20 51.4**	**-3.6**
UOSS	**Minazif**	**132.23**	**277**	IAMs_20	IAMs_20	08 17 01.8	
	comp=Z,6µm,22.0s						
UOSS	**Minazif**	**132.23**	**277**	P	**PKiKP**	**07 20 58.0**	**+0.5**
UOSS	**Minazif**	**132.23**	**277**	*i* PKPdf	**PKPdf**	**07 20 53.9**	**-2.5**
	SNR=8.8						
HATD	**Hatta, Dubai**	**132.25**	**277**	P	**PKiKP**	**07 20 58.2**	**+0.7**
	SNR=15						
HATD	**Hatta, Dubai**	**132.25**	**277**	*i* PKPdf	PKPpre	07 20 52.8	
	SNR=8.8						
ASHO	**Ashiyiah**	**132.27**	**277**	P	**PKiKP**	**07 20 58.1**	**+0.5**
	SNR=14						
ASHO	**Ashiyiah**	**132.27**	**277**	*i* PKPdf	PKPpre	07 20 48.0	
	SNR=16						
MDH	**Madha**	**132.27**	**278**	P	**PKiKP**	**07 20 57.2**	**-0.3**
	SNR=7.0						
MDH	**Madha**	**132.27**	**278**	*i* PKPdf	PKPpre	07 20 49.4	
	SNR=6.5						
ALNE	**Al Ain**	**132.31**	**276**	P	**PKiKP**	**07 20 57.5**	**-0.2**
	SNR=6.1						
ALNE	**Al Ain**	**132.31**	**276**	*i* PKPdf	PKPpre	07 20 51.5	
	SNR=9.9						
MSFE	**Esma-Masafi**	**132.41**	**278**	*i* PKPdf	**PKPdf**	**07 20 54.4**	**-2.4**
	SNR=11						
MASF	**Masafi**	**132.41**	**278**	P	**PKiKP**	**07 20 58.1**	**+0.2**
	SNR=10						
BANOM	**Banah**	**132.47**	**278**	P	**PKiKP**	**07 20 57.9**	**-0.1**
KIBK	**Kibwezi**	**132.58**	**233**	PKP	**PKPdf**	**07 20 57.1**	**-0.5**
KIBK	**Kibwezi**	**132.58**	**233**	P	**PKiKP**	**07 20 58.7**	**+0.1**
	SNR=12						
SHME	**Shamm**	**132.64**	**278**	P	**PKiKP**	**07 20 57.9**	**-0.4**
FAQ	**Al Faqa, Dubai**	**132.69**	**277**	P	**PKiKP**	**07 20 58.1**	**-0.3**
NAZ	**Nazwa, Dubai**	**132.71**	**277**	P	**PKiKP**	**07 20 58.9**	**+0.5**
	SNR=6.3						
NAZ	**Nazwa, Dubai**	**132.71**	**277**	*i* PKPdf	**PKPdf**	**07 20 55.8**	**-1.5**
	SNR=7.6						
NUUK	**Nuuk**	**132.77**	**29**	*i* P	**PKPdf**	**07 20 54.8**	**-1.4**
DAG	**Danmarks Havn**	**132.82**	**6**	PKP	**PKPdf**	**07 20 53.3**	**-2.6**
DAG	**Danmarks Havn**	**132.82**	**6**	*i* P	**PKPdf**	**07 20 53.4**	**-2.6**
HOPEN	**Hopen**	**132.85**	**353**	*e*PKPdf	**PKPdf**	**07 20 56.0**	**0.0**
HOPEN				IVmB_BB		07 21 00.5	
	comp=Z,537nm,5.3s						
HOPEN				*e*PP	**PP**	**07 23 23.5**	**+2.0**
HOPEN				*e*SP	SP	07 33 38.4	+4.1
HOPEN				IVMs_BB	IVMs_BB	08 05 41.1	
	comp=Z,2µm,33.3s						
ASUD	**Al Ashush, Dub**	**132.87**	**276**	P	**PKiKP**	**07 20 58.3**	**-0.4**
ASUD	**Al Ashush, Dub**	**132.87**	**276**	PKPdf	**PKPdf**	**07 20 55.8**	**-1.8**
UMQ	**Umm Al-Quwin**	**132.88**	**278**	P	**PKiKP**	**07 20 58.7**	**-0.1**
SUMG	**Summit**	**132.95**	**16**	PKP	**PKPdf**	**07 20 52.1**	**-4.7**
SUMG	**Summit**	**132.95**	**16**	IAMs_20	IAMs_20	08 26 19.6	
	comp=Z,4µm,19.0s						
SUMG	**Summit**	**132.95**	**16**	*i* P	**PKPdf**	**07 20 54.8**	**-2.1**
AJN	**Ajban**	**133.14**	**276**	P	**PKiKP**	**07 20 59.6**	**+0.3**
AB31	**Akbulak array**	**133.20**	**310**	*i* PKIKP	**PKPdf**	**07 20 55.4**	**-2.0**
ARTI	**Arti**	**133.50**	**320**	*i* PKIKP	**PKPdf**	**07 20 55.9**	**-1.9**
ARTI						07 23 21.5	
ARTI				MLR	MLR		
	comp=Z,15µm,23.0s						
MZR	**Muzera**	**133.89**	**273**	P	**PKiKP**	**07 21 01.0**	**+0.1**
AKTO	**Aktyubinsk**	**134.40**	**312**	PKHKP	PKPpre	07 20 47.7	
GHWR	**Ruwais**	**134.75**	**274**	P	**PKiKP**	**07 21 03.5**	**+1.0**
ICESG	**Greenland Ices**	**134.80**	**20**	*i* P	**PKPdf**	**07 20 57.0**	**-3.3**
DBG	**Daneborg**	**134.88**	**8**	*i* P	**PKPdf**	**07 20 58.1**	**-1.8**
JRN	**Qarnain Island**	**135.10**	**276**	P	**PKPdf**	**07 21 02.4**	**+0.7**
IVI	**Ivigtut**	**135.29**	**32**	IAMs_20	IAMs_20	08 16 38.0	
	comp=Z,5µm,22.0s						
IVI	**Ivigtut**	**135.29**	**32**	*i* P	**PKPdf**	**07 20 55.9**	**-5.1**
BJO1	**Bjornoya**	**135.31**	**354**	*i*		07 22 29.3	
BJO1				*i*		07 23 23.4	
SLWR	**Sila**	**135.80**	**274**	P	**PKiKP**	**07 21 04.7**	**0.0**
TRNA	**Turayna**	**136.44**	**275**	P	**PKiKP**	**07 21 05.6**	**-0.3**
NRS	**Narsarsuaq**	**136.55**	**31**	IAMs_20	IAMs_20	08 14 32.3	
	comp=Z,5µm,21.0s						
NRS	**Narsarsuaq**	**136.55**	**31**	*i* P	PKPpre	07 20 56.5	
SMRA	**Abu-Samra**	**136.77**	**274**	P	**PKiKP**	**07 21 06.6**	**-0.1**
	SNR=6.3						
SHMA	**Al-Shehemyia**	**137.01**	**276**	P	**PKiKP**	**07 21 06.8**	**-0.3**
ISOG	**Isortoq, Green**	**137.05**	**24**	*i* P	PKPpre	07 20 57.6	
SAKB	**Bahrain**	**137.41**	**276**	P	**PKiKP**	**07 21 09.1**	**+1.2**
KIRV	**Kirov**	**137.64**	**325**	*ce*PKIKP	**PKPdf**	**07 21 04.2**	**-1.2**
VADS	**Vadso**	**137.68**	**347**	*e*PKPdf	PKPpre	07 20 57.3	
VADS				*e*PP	**PP**	**07 23 50.0**	**-2.0**
ATD	**Arta Tunnel**	**137.81**	**252**	PKP	**PKPdf**	**07 21 04.5**	**-2.6**
	comp=Z,1.9nm,0.8s,baz=287,slow=4.0,SNR=8.1						
ATD	**Arta Tunnel**	**137.81**	**252**	P	**PKiKP**	**07 21 08.3**	**-0.9**
	SNR=5.3						
SCO	**Scoresbysund**	**137.96**	**12**	IAMs_20	IAMs_20	08 20 03.8	
	comp=Z,5µm,21.0s						
LVZ	**Lovozero**	**138.17**	**342**		**PKPdf**	**07 21 04.1**	**-2.1**
LVZ	**Lovozero**	**138.17**	**342**	*c i*PKIKP	**PKPdf**	**07 21 03.8**	**-2.4**
HAMF	**Hammerfest**	**138.25**	**349**	*i*	PKPpre	07 21 01.0	
HAMF				*e*SS	SS	07 42 10.4	+4.7
LODK	**Lodwar**	**138.55**	**236**	P	**PKPdf**	**07 21 09.5**	**+0.9**
	SNR=9.2						
MBAR	**Mbarara**	**138.68**	**226**		**PKPdf**	**07 21 05.7**	**-3.3**
MBAR	**Mbarara**	**138.68**	**226**	P	**PKiKP**	**07 21 10.6**	**-0.6**
MBAR	**Mbarara**	**138.68**	**226**	PKIKP	**PKPdf**	**07 21 05.7**	**-3.3**
APA	**Apatity**	**138.73**	**342**	⇓*i*PKIKP	**PKPdf**	**07 21 06.7**	**-0.5**
APA				pmax	pmax		
	comp=Z,63nm,0.8s						
ARA0	**ARCESS Array S**	**138.91**	**348**	*e*P	PKPpre	07 20 59.2	
ARA0				*e*PP	**PP**	**07 23 59.9**	**+0.2**
ARA0				*e*SS	SS	07 42 13.5	-0.1
ARCES	**ARCESS Array B**	**138.91**	**348**	PKhKP	PKPpre	07 20 58.1	
	comp=Z,30nm,0.8s,baz=71,slow=2.8,SNR=44						
ARCES				SKPbc	**SKPbc**	**07 24 40.0**	**-1.0**
	comp=Z,51nm,0.9s,baz=42,slow=2.0,SNR=7.6						
ARCES				PKKP	**PKKPdf**	**07 30 41.2**	**+3.1**
	comp=Z,1.3nm,0.6s,baz=203,slow=0.9,SNR=4.3						
JMIC	**Jan Mayen**	**139.23**	**5**	*e*	**PKPdf**	**07 21 03.5**	**-4.6**
JMIC				*e*PP	**PP**	**07 24 03.6**	**+2.0**
JMIC				*e*PP	**PP**	**07 24 04.4**	**+2.8**
JNE	**Jan Mayen East**	**139.24**	**5**	*e*PKPdf	**PKPdf**	**07 21 03.8**	**-4.2**
JNE				*e*PP	**PP**	**07 24 04.3**	**+2.7**
JMI	**Jan Mayen**	**139.27**	**5**	*i*	**PKiKP**	**07 21 10.1**	**-0.3**
JETT	**Jettan, Norway**	**139.73**	**350**	*e*PKPdf	**PKPdf**	**07 21 03.3**	**-5.7**
JETT				*e*PP	**PP**	**07 24 06.5**	**+1.8**
TRO	**Tromso**	**139.87**	**351**	*e*PKPdf	**PKPdf**	**07 21 05.5**	**-3.7**
TRO				IVmB_BB		07 21 13.5	
	comp=Z,1µm,1.4s						
TRO				*e*PP	**PP**	**07 24 07.4**	**+1.9**
TRO				*e*SS	SS	07 42 28.3	+3.6
TRO				IVMs_BB	IVMs_BB	08 10 43.6	
	comp=Z,2µm,23.2s						
BELG	**Belogornoye**	**140.50**	**317**	*d i*PKIKP	**PKPdf**	**07 21 10.3**	**-0.5**
BELG				MLR	MLR		
	comp=Z,1µm,21.0s						
KBD	**Kabd**	**140.71**	**280**	P	**PKPdf**	**07 21 11.9**	**0.0**
RAYN	**Ar Rayn**	**140.94**	**270**	P	**PKPdf**	**07 21 12.1**	**-0.5**
RAYN	**Ar Rayn**	**140.94**	**270**	⇓PKIKP	**PKPdf**	**07 21 09.9**	**-2.7**
RAYN	**Ar Rayn**	**140.94**	**270**	*i* PKPdf	**PKPdf**	**07 21 07.7**	**-5.0**
	SNR=23						
KLMR	**Klimovskoe**	**141.08**	**332**	*e*PKIKP	**PKPdf**	**07 21 10.4**	**-1.2**
KLMR				*e*		07 24 08.1	
KLMR				SS	SS	07 42 37.3	-2.3
KLMR				pmax	pmax		
	comp=Z,271nm,1.1s						
KLMR				MLR	MLR		

Code	Name	Dist	Azi	Phase	ISC phase	Time	Res
	comp=Z,13µm,22.0s						
LOF	Lofoten	141.94	353	ePKPdf	PKPdf	07 21 12.7	-0.2
LOF				ePP	PP	07 24 19.8	+1.7
STEI	Steigen	141.94	352	ePKPdf	PKPdf	07 21 13.6	+0.6
STEI				ePP	PP	07 24 19.5	+1.3
STEI				e		07 43 01.8	
AKT	Akhty	142.02	299	ePKIKP	PKPdf	07 21 09.7	-4.4
AKT				e		07 24 14.7	
AKT				ePPP	PPP	07 27 30.6	
AKT				pmax	pmax		
	comp=Z,70nm,0.7s						
AKT				MLR	MLR		
	comp=Z,9µm,26.0s						
MAK	Makhachkala	142.12	302	d iPKIKP	PKPdf	07 21 10.5	-3.6
MAK				e		07 24 18.4	
MAK				ePPP	PPP	07 27 27.4	
MAK				e		07 28 16.7	
MAK				eSS	SS	07 42 54.6	+1.3
MAK				eSSS	SSS	07 48 10.9	
MAK				pmax	pmax		
	comp=Z,481nm,1.6s						
FAUS	Fauske	142.46	352	ePKPdf	PKPdf	07 21 13.0	-0.9
FAUS				IVmB_BB		07 21 18.7	
	comp=Z,1µm,1.6s						
FAUS				ePP	PP	07 24 23.6	+2.3
FAUS				eSS	SS	07 42 59.2	+4.4
VAGH	Vaagaholmen	143.32	353	ePKPdf	PKPdf	07 21 15.9	+0.4
VAGH				ePP	PP	07 24 28.3	+1.8
VAGH				eSS	SS	07 43 03.4	-1.4
KONS	Konsvik	143.56	353	e	PKPbc	07 21 12.8	-0.5
MOR8	Moi Rana	143.72	352	ePKPdf	PKPbc	07 21 14.7	+0.9
MOR8				ePP	PP	07 24 30.4	+1.5
MOR8				e		07 43 00.7	
STOK	Stokkvaagen	143.73	353	ePKPdf	PKPdf	07 21 15.1	-1.1
STOK				eSS	SS	07 43 14.3	+4.8
LEIR	Leirfjorden	143.93	352	ePKPdf	PKPbc	07 21 14.8	+0.5
LEIR				ePP	PP	07 24 32.3	+2.1
LEIR				eSS	SS	07 43 16.7	+4.8
GNI	Garni	144.32	297		PKPab	07 21 16.1	-0.2
GNI	Garni	144.32	297	IAMs_20	IAMs_20	08 30 53.7	
	comp=Z,5µm,22.0s						
GNI	Garni	144.32	297	P	PKPbc	07 21 17.5	+0.8
GNI	Garni	144.32	297	c iPKIKP	PKPab	07 21 15.0	-1.3
GNI	Garni	144.32	297	PKPdf	PKPab	07 21 15.6	-0.7
VRH	Novokhopyorsk	144.35	317	ePKIKP	PKPbc	07 21 16.2	+0.1
VRH				pmax	pmax		
	comp=Z,150nm,0.9s						
MOS	Moscow	144.65	325	i PKIKP	PKPab	07 21 14.3	-2.5
MOS				e		07 24 29.9	
MOS				pmax	pmax		
	comp=Z,800nm,1.1s						
MOS				pmax	pmax		
	comp=Z,574nm,1.0s						
NCK	Nalchik	144.91	303	⇓iPKIKP	PKPab	07 21 17.4	-0.8
NCK				MLR	MLR		
	comp=Z,4µm,21.0s						
GOF	Gofitskoye	145.07	306	c iPKIKP	PKPbc	07 21 16.5	-2.2
PUL	Pulkovo	145.32	335	⇓ePKIKP	PKPbc	07 21 17.7	-1.3
PUL				MLR	MLR		
	comp=Z,9µm,21.0s						
KBZ	Khabaz	145.38	304	PKPbc	PKPbc	07 21 18.2	-1.5
	comp=Z,42nm,0.7s,baz=89,slow=2.7,SNR=34						
KBZ	Khabaz	145.38	304	c iPKP2	PKPbc	07 21 17.4	-2.3
LPSR	Galich'ya Gora	145.42	320	ePKP2	PKPbc	07 21 17.8	-1.7
LPSR				pmax	pmax		
	comp=Z,870nm,0.8s						
LPSR				MLR	MLR		
	comp=Z,7µm,22.0s						
FINES	FINESS Array B	145.47	340		PKPdf	07 21 18.1	-1.2
FINES	FINESS Array B	145.47	340	PKPbc	PKPdf	07 21 17.6	-1.7
	comp=Z,540nm,0.7s,baz=62,slow=4.5,SNR=367						
FINES	FINESS Array B	145.47	340	PKIKP	PKPdf	07 21 18.1	-1.2
OBN	Obninsk	145.49	325		PKPdf	07 21 18.1	-1.4
OBN	Obninsk	145.49	325	⇑P	PKPdf	07 21 19.0	-0.5
OBN	Obninsk	145.49	325	c iPKP2	PKPdf	07 21 17.7	-1.8
OBN				ePPP	PPP	07 27 51.3	
OBN				pmax	pmax		
	comp=Z,1µm,0.9s						
OBN				MLR	MLR		
	comp=Z,8µm,21.0s						
KIV	Kislovodsk	145.50	304		PKPdf	07 21 18.8	-1.3
KIV	Kislovodsk	145.50	304	P	PKPdf	07 21 19.9	-0.3
KIV	Kislovodsk	145.50	304	⇑P	PKPdf	07 21 18.6	-1.5
KIV	Kislovodsk	145.50	304	i PKP2	PKPdf	07 21 18.0	-2.1
KIV				e		07 24 34.5	
KIV				eSS	SS	07 43 24.2	-8.2
KIV				eSSS	SSS	07 48 54.6	
KIV				pmax	pmax		
	comp=Z,286nm,1.0s						
KIV	Kislovodsk	145.50	304	i PKPdf	PKPdf	07 21 18.1	-2.1
	SNR=70						
SHA1	Shidzhatmaz	145.56	304	c iPKP2	PKPdf	07 21 18.3	-2.1
NSS	Namsos	145.59	353	ePKPbc	PKPdf	07 21 18.2	-1.2
VORR	Voronezh	145.64	318	ePKIKP	PKPdf	07 21 18.9	-1.0
VORR				pmax	pmax		
	comp=Z,817nm,0.7s						
VSR	Storozhevoye	145.84	318	ePKIKP	PKPdf	07 21 18.5	-1.8
VSR				pmax	pmax		
	comp=Z,800nm,0.8s						
VSR				MLR	MLR		
	comp=Z,10µm,23.0s						
VORD	Divnogorie	145.86	317	ePKIKP	PKPdf	07 21 18.2	-2.1
VORD				pmax	pmax		
	comp=Z,610nm,0.9s						
VORD				MLR	MLR		
	comp=Z,970nm,12.0s						
ERBR	Yeremizino-Bor	146.71	308	i PKP2	PKPbc	07 21 23.1	-0.6
ERBR				pmax	pmax		
	comp=Z,719nm,0.9s						
LABN	Labinsk	146.77	306	i PKP2	PKPab	07 21 25.6	+0.4
LABN				pmax	pmax		
	comp=Z,117nm,0.8s						
VSLR	Vesyoloye	147.48	304	c iPKP2	PKPdf	07 21 24.3	+0.9
VSU	Vasula	147.55	336	c iPKIKP	PKPdf	07 21 23.2	+0.3
VSU				MLR	MLR		
	comp=Z,8µm,22.0s						
SOC	Sochi	147.69	304	ePKHKP	PKPpre	07 21 21.1	
SOC				i		07 21 26.5	
SOC				e		07 24 50.8	
SOC				eSS	SS	07 43 52.3	-4.6
SOC				eSSS	SSS	07 49 22.8	
SOC				pmax	pmax		
	comp=Z,14nm,0.5s						
SOC				pmax	pmax		
	comp=Z,315nm,1.0s						
SOC				MLR	MLR		
	comp=Z,7µm,22.0s						
DOMB	Dombas	148.32	354	ePKPdf	PKPdf	07 21 25.3	+1.1
DOMB				eSKPdf	SKPdf	07 24 58.4	+1.8
DOMB				i		07 35 07.8	
DOMB				eSS	SS	07 44 01.3	-0.5
DOMB				IVMs_BB	IVMs_BB	08 17 50.8	
	comp=Z,3µm,23.8s						
AKN	Aaknes	148.35	356	eP	PKPbc	07 21 26.8	-0.9
AKN				IVmB_BB		07 21 37.3	
	comp=Z,8µm,0.9s						
ANN	Anapa	149.02	307	i PKP2	PKPbc	07 21 28.7	-1.2
ANN				e		07 24 58.2	
ANN				pmax	pmax		
	comp=Z,199nm,0.8s						
FOO	Floro	149.03	357	ePKPdf	PKPdf	07 21 26.2	+0.9
FOO				eSKPdf	SKPdf	07 24 59.8	+2.3
FOO				IVMs_BB	IVMs_BB	08 15 21.5	
	comp=Z,2µm,30.2s						
NB2	NORSAR Subarra	149.06	351	PKP	PKPbc	07 21 27.7	-1.9
	comp=Z,956nm,1.7s,baz=17,slow=2.6						
NB2	NORSAR Subarra	149.06	351	PKP	PKPbc	07 21 27.7	-1.9
	baz=17,slow=2.6						
NOA	NORSAR Array B	149.06	351	PKP	PKPdf	07 21 24.4	-1.1
	comp=Z,49nm,0.8s,baz=122,slow=3.8,SNR=75						
NC602	NORSAR Array S	149.31	351	ePKPdf	PKPdf	07 21 26.9	+1.1
NC602				IVmB_BB		07 21 33.4	
	comp=Z,3µm,1.0s						
NC602				eSKPdf	SKPdf	07 25 00.8	+2.8
NC602				eSS	SS	07 44 16.5	+3.6
NC602				IVMs_BB	IVMs_BB	08 15 57.0	
	comp=Z,3µm,32.7s						
HYA	Hoyanger	149.41	356	ePKPdf	PKPdf	07 21 27.0	+1.1
HYA				IVmB_BB		07 21 33.9	
	comp=Z,5µm,2.0s						
HYA				eSS	SS	07 44 18.3	+4.5
HYA				IVMs_BB	IVMs_BB	08 17 56.4	
	comp=Z,2µm,23.6s						
HFS	Hagfors	149.56	349	PKP	PKPdf	07 21 24.1	-2.0
	comp=Z,37nm,0.9s,baz=286,slow=5.0,SNR=46						
HFS				PKPbc	PKPbc	07 21 29.4	-1.4
	comp=Z,324nm,0.7s,baz=98,slow=3.3,SNR=68						
SUE	Sulen	149.58	357	ePKPdf	PKPbc	07 21 28.5	-2.2
SUE				IVmB_BB		07 21 36.0	
	comp=Z,8µm,1.5s						
SUE				eSKPdf	SKPdf	07 24 55.5	-2.9
SUE				eSS	SS	07 44 23.7	+7.9
SUE				IVMs_BB	IVMs_BB	08 15 35.6	
	comp=Z,2µm,33.0s						
SKAR	Skarslia	149.73	354	ePKPdf	PKPdf	07 21 27.4	+0.9
SKAR				e		07 35 20.6	
SKAR				eSS	SS	07 44 21.5	+3.8
SKAR				IVMs_BB	IVMs_BB	08 18 56.5	
	comp=Z,2µm,24.9s						
MNK	Minsk	149.91	330	i PKiKP	PKPbc	07 21 31.0	-0.8
	comp=E,68nm,0.9s						
MNK				i PKiKP	PKPbc	07 21 31.0	-0.8
	comp=N,96nm,1.1s						
MNK				i PKiKP	PKPbc	07 21 31.0	-0.8
	comp=Z,312nm,1.2s,baz=48						
MNK				i PP	PP	07 25 04.0	-1.8
MNK				i PPP	PPP	07 28 25.0	
MNK				i SKS	SKSdf	07 28 32.6	-0.6
MNK				i SS	SS	07 44 21.6	+1.4
MNK				i SSS	SSS	07 50 01.3	
MNK				i LQ	LQ	08 21 02.4	
MNK				i LRM	MLR	08 27 53.8	
	comp=N,4µm,20.7s						
MNK				i LRM	MLR	08 28 13.1	
	comp=E,7µm,22.2s						
MNK				i LRM	MLR	08 28 33.8	
	comp=Z,11µm,22.7s						
MNK	Minsk	149.91	330	i PKP2	PKPbc	07 21 30.9	-0.8
MNK				i		07 25 03.9	
MNK				i PPP	PPP	07 28 25.0	
MNK				i		07 28 32.5	
MNK				i SS	SS	07 44 21.6	+1.3
MNK				i SSS	SSS	07 50 01.2	
MNK				pmax	pmax		
	comp=E,68nm,0.9s						
MNK				pmax	pmax		
	comp=Z,312nm,1.2s						
MNK				pmax	pmax		
	comp=N,96nm,1.1s						
MNK				MLR	MLR		
	comp=N,4µm,21.0s						
MNK				MLR	MLR		
	comp=E,7µm,22.0s						
MNK				MLR	MLR		
	comp=Z,11µm,23.0s						
NACGM	Naroch	150.10	331	ePKiKP	PKPdf	07 21 29.3	+2.1
ASK	Askoy	150.14	357	ePKPdf	PKPdf	07 21 28.3	+1.2
ASK				IVmB_BB		07 21 37.6	
	comp=Z,6µm,1.4s						
OSL	Oslo	150.19	351	ePKPdf	PKPdf	07 21 29.5	+2.4
OSL				eSS	SS	07 44 28.1	+5.5
OSL				IVMs_BB	IVMs_BB	08 16 05.4	
	comp=Z,3µm,25.9s						
BER	Bergen	150.23	357	ePKPdf	PKPdf	07 21 28.1	+0.9
BER				IVmB_BB		07 21 38.0	
	comp=Z,5µm,1.3s						
LRW	Lerwick	150.47	3	eP	PKPdf	07 21 27.8	+0.2
LRW				IAMs_20	IAMs_20	08 21 50.4	
	comp=Z,7µm,24.5s						
KONO	Kongsberg	150.61	352		PKPdf	07 21 27.6	-0.2
KONO	Kongsberg	150.61	352	IAMs_20	IAMs_20	08 28 49.2	
	comp=Z,5µm,22.0s						
KONO	Kongsberg	150.61	352	PKIKP	PKPdf	07 21 27.6	-0.2
KONO	Kongsberg	150.61	352	ePKPdf	PKPdf	07 21 28.9	+1.1
KONO				IVmB_BB		07 21 38.3	
	comp=Z,4µm,1.2s						
KONO				ePP	PP	07 25 10.9	+1.5
KONO				eSS	SS	07 44 32.5	+5.1
KONO				IVMs_BB	IVMs_BB	08 17 36.6	
	comp=Z,2µm,26.2s						
ODD1	Odda	150.63	355	ePKPdf	PKPdf	07 21 28.3	+0.3
BLS5	Blasjo	151.12	355	ePKPdf	PKPdf	07 21 29.7	+1.0
BLS5				IVmB_BB		07 21 38.9	
	comp=Z,5µm,1.7s						
BLS5				eSS	SS	07 44 37.3	+4.3
BLS5				IVMs_BB	IVMs_BB	08 17 04.6	
	comp=Z,2µm,23.3s						
SIM	Simferopol'	151.23	309	ePKIKP	PKPdf	07 21 32.2	+2.9
SIM				pmax	pmax		
	comp=Z,128nm,1.1s						
DIKM	Dikmen	151.29	302	⇑P	PKPdf	07 21 28.8	-0.7
HWQ	Hawqa	151.35	286	eP	PKPdf	07 21 29.9	0.0
KMY	Karmoy	151.41	357	ePKPdf	PKPdf	07 21 30.1	+1.1
KMY				eSKPdf	SKPdf	07 25 01.9	+0.8
KMY				i		07 35 19.6	
KMY				eSS	SS	07 44 42.8	+6.8
GHAJ	Ghor Haditha	151.41	280		PKPbc	07 21 34.0	-2.1
BHL	Bhannes	151.57	285	eP	PKPdf	07 21 29.9	-0.4
AKASG	Malin Array Be	151.61	322	PKP	PKPdf	07 21 27.2	-2.4
	comp=Z,4.4nm,0.4s,baz=32,slow=1.0,SNR=117						
AKASG				PKPbc	PKPbc	07 21 32.1	-3.8
	comp=Z,112nm,1.0s,baz=50,slow=3.3,SNR=44						
KIEV	Kiev	151.63	323		PKPdf	07 21 28.1	-1.5
KIEV	Kiev	151.63	323	⇓P	PKPdf	07 21 29.6	0.0
KIEV	Kiev	151.63	323	⇓PKIKP	PKPdf	07 21 29.6	0.0
KIEV	Kiev	151.63	323	i PKPdf	PKPdf	07 21 28.0	-1.6
	SNR=77						
SACV	Santiago Islan	151.66	118		PKPbc	07 21 35.7	-1.4
MMAI	Mount Meron Ar	151.73	283	PKP	PKPdf	07 21 27.1	-3.5
	comp=Z,1.7nm,0.3s,baz=182,slow=5.8,SNR=4.4						
MMAI				PKPbc	PKPbc	07 21 34.6	-2.3
	comp=Z,82nm,0.6s,baz=82,slow=6.8,SNR=23						
MMAI				PKPab	pPKPbc	07 21 42.2	-1.3
	comp=Z,117nm,0.4s,baz=82,slow=6.1,SNR=32						
LEWI	Lewis, Hebride	151.86	10	eP	PKPdf	07 21 29.3	-0.5
LEWI				IAMs_20	IAMs_20	08 25 13.9	
	comp=Z,8µm,21.2s						
BIGH	Upper Bighouse	151.90	7	eP	PKPdf	07 21 28.5	-1.3
HOMB	Homborsund	152.09	353	ePKPdf	PKPdf	07 21 31.5	+1.4
HOMB				ePP	PP	07 25 18.0	+0.2
HOMB				IVMs_BB	IVMs_BB	08 20 59.0	
	comp=Z,2µm,20.0s						
BZK	Bozkurt	152.14	303	⇓P	PKPdf	07 21 31.0	+0.2
SNART	Snartemo	152.14	354	epPKPdf	PKPdf	07 21 33.0	+2.8
SUW	Suwalki	152.20	333	ePKP	PKPdf	07 21 32.8	+2.4
SUW				eL	L	08 18 29.2	
	comp=Z,12µm,31.5s						
KIRS	Kirsehir-Merke	152.73	297	⇑P	PKPdf	07 21 30.3	-1.6
OVD	Ostervraa, Den	152.80	350	i P	PKPdf	07 21 32.5	+1.3
KPL	Plockton	152.81	9	eP	PKPdf	07 21 30.8	-0.4
KPL				IAMs_20	IAMs_20	08 26 12.8	
	comp=Z,7µm,21.3s						
BR131	Keskin Array S	152.85	298	P	PKPdf	07 21 33.3	+1.2
	SNR=86						
BRTR	Keskin Array B	152.85	298	PKP	PKPdf	07 21 29.9	-2.2
	comp=Z,12nm,0.9s,baz=180,slow=1.4,SNR=16						
BRTR				PKPbc	pPKPdf	07 21 37.3	-1.5
	comp=Z,92nm,0.8s,baz=132,slow=3.6,SNR=42						
MCD	Coleburn Disti	152.86	6	eP	PKPdf	07 21 30.4	-0.9
MCD				IAMs_20	IAMs_20	08 34 40.1	
	comp=Z,7µm,22.6s						
CIDE	Kastamonu/Cide	152.92	303	⇓P	PKPdf	07 21 32.1	+0.2
ANTO	Ankara	153.47	299	P	PKPdf	07 21 33.3	+0.4
ANTO	Ankara	153.47	299	⇑P	PKPdf	07 21 31.8	-1.1
ANTO	Ankara	153.47	299	⇑PKIKP	PKPdf	07 21 31.8	-1.1
SORM	Soroca	153.49	318	⇑P	PKPdf	07 21 33.4	+0.9
SORM	Soroca	153.49	318	⇑PKIKP	PKPdf	07 21 33.4	+0.9
PCED	Cedros	153.51	64	ePKP	PKPbc	07 21 38.7	-1.9
PCED	Cedros	153.51	64	ePKP	PKPbc	07 21 38.7	-1.9
CALA	Caldeira	153.51	64	ePKP	PKPdf	07 21 33.6	+0.6
CALA	Caldeira	153.51	64	ePKP	PKPdf	07 21 33.6	+0.6
HOR	Horta	153.58	64	ePKP	PKPbc	07 21 38.3	-2.4
HOR	Horta	153.58	64	ePKP	PKPbc	07 21 38.3	-2.4
DRUM	Mains of Drumt	153.59	6	eP	PKPdf	07 21 31.6	-0.8
DRUM				IAMs_20	IAMs_20	08 40 21.6	
	comp=Z,7µm,23.1s						
PCAN	Candelaria	153.70	65	ePKP	PKPdf	07 21 31.7	-1.5
PCAN	Candelaria	153.70	65	ePKP	PKPdf	07 21 31.7	-1.5
PICO	Pico	153.74	64	ePKP	PKPbc	07 21 37.3	-3.9
PICO	Pico	153.74	64	ePKP	PKPbc	07 21 37.3	-3.9
KIS	Kishinev	153.79	316	ePKP	PKPdf	07 21 30.0	-3.0
	comp=Z,720nm,7.6s						
KIS	Kishinev	153.79	316	ePP	PP	07 25 25.0	-3.4
KIS				eL	L	08 18 42.0	
KIS				LRM	MLR	08 33 41.0	
	comp=Z,2µm,20.5s						
KIS	Kishinev	153.79	316	ePKIKP	PKPdf	07 21 30.0	-3.0
KIS				i		07 21 44.0	
KIS				e		07 25 25.0	
KIS				pmax	pmax		
	comp=Z,720nm,7.6s						
MILM	Milestii Mici	153.83	316	ePKP	PKPdf	07 21 30.0	-3.0
	comp=Z,1µm,5.6s						
MILM				XM		07 21 45.0	
	comp=Z,660nm,1.3s						
MILM	Milestii Mici	153.83	316	ePP	PP	07 25 25.0	-3.6
MILM				eL	L	08 18 42.0	
MILM				LRM	MLR	08 33 56.0	
	comp=Z,7µm,21.0s						
MILM	Milestii Mici	153.83	316	⇓P	PKPdf	07 21 33.9	+0.9
MILM	Milestii Mici	153.83	316	⇓PKIKP	PKPdf	07 21 33.9	+0.9
ROSA	Rosais	153.85	64	ePKP	PKPdf	07 21 32.0	-1.3
ROSA	Rosais	153.85	64	ePKP	PKPdf	07 21 32.0	-1.3
PPNO	Prainha do Nor	153.87	64	ePKP	PKPdf	07 21 31.7	-1.8
PPNO	Prainha do Nor	153.87	64	ePKP	PKPdf	07 21 31.7	-1.8
LAWE	Loch Awe, Argy	153.90	10	eP	PKPdf	07 21 32.3	-0.5
LAWE				IAMs_20	IAMs_20	08 25 00.9	
	comp=Z,9µm,24.9s						
COP	Copenhagen	153.98	347	i P	PKPdf	07 21 33.3	+0.4
PMAN	Manadas	153.98	64	ePKP	PKPbc	07 21 38.3	-3.3
PMAN	Manadas	153.98	64	ePKP	PKPbc	07 21 38.3	-3.3
PID	Ribeirinha	153.99	64	ePKP	PKPab	07 21 48.8	-6.3
PID	Ribeirinha	153.99	64	ePKP	PKPab	07 21 48.8	-6.3
R9F13	Warsaw-Wawer	154.36	332	ePKP	PKPdf	07 21 36.1	+2.5
R9F13				e		07 29 38.9	
PGBU	Glenifferbraes	154.46	9	eP	PKPdf	07 21 33.4	-0.2
PGBU				IAMs_20	IAMs_20	08 24 03.9	
	comp=Z,12µm,24.8s						
EDI	Edinburgh	154.50	7	eP	PKPdf	07 21 32.7	-1.0
EDI				IAMs_20	IAMs_20	08 39 52.6	
	comp=Z,9µm,22.1s						
PSBA	Serra de Santa	154.55	64	ePKP	PKPbc	07 21 40.4	-2.4
PSBA	Serra de Santa	154.55	64	ePKP	PKPbc	07 21 40.4	-2.4
ESY	Stoneypath	154.56	6	eP	PKPdf	07 21 32.3	-1.5
TLCR		154.62	312	⇑P	PKPdf	07 21 34.1	-0.1
TLCR		154.62	312	⇑PKIKP	PKPdf	07 21 34.1	-0.1
PAGU	Agualva, Azore	154.66	63	ePKP	PKPbc	07 21 40.1	-3.0
PAGU	Agualva, Azore	154.66	63	ePKP	PKPbc	07 21 40.1	-3.0
SSRD	Sdr. Stenderup	154.66	350	i P	PKPdf	07 21 33.3	-0.6
IDGL	Inch Island, C	154.68	13	eP	PKPdf	07 21 33.8	-0.1
IDGL	Inch Island, C	154.68	13	PKPdf	PKPdf	07 21 36.6	+2.7
PSCM	Serra do Cume	154.72	64	ePKP	PKPbc	07 21 39.4	-3.8
PSCM	Serra do Cume	154.72	64	ePKP	PKPbc	07 21 39.4	-3.8
VLDR	Vladesti	154.79	314	⇓P	PKPdf	07 21 35.2	+0.7
BEL	Belsk	154.80	332	ePKP	PKPdf	07 21 37.0	+2.8
BEL				ePP	PP	07 25 32.8	-0.7
BEL				eL	L	08 25 09.8	
	comp=Z,3µm,26.4s						
RGN	Rugen	154.85	345	ePKPdf	PKPdf	07 21 34.0	-0.2
	baz=24,slow=1.0						
RGN				ePP	PP	07 25 30.3	-3.2
	baz=21,slow=5.4						
GKP	Gorka Klasztor	154.91	338	ePKP	PKPdf	07 21 33.4	-1.0
GKP				ePP	PP	07 25 33.0	-1.0
GKP				eL	L	08 25 42.9	
	comp=Z,12µm,26.2s						
CLGH	Cloghs, Cushen	154.92	11	eP	PKPdf	07 21 33.5	-0.8
ACRG	Accra	154.98	174		PKPdf	07 21 39.7	+4.0
TPGR	Topolog	155.02	312	⇓P	PKPdf	07 21 34.6	-0.2
CFR	Carcaliu	155.06	313	⇑P	PKPdf	07 21 36.2	+1.4
CFR	Carcaliu	155.06	313	⇑PKIKP	PKPdf	07 21 36.2	+1.4
EKA	Eskdalemuir Ar	155.09	7	PKP	PKPdf	07 21 32.9	-1.7
	comp=Z,9.3nm,0.8s,baz=349,slow=1.6,SNR=24						
ESK	Eskdalemuir	155.10	7	eP	PKPdf	07 21 34.6	0.0
ESK				IAMs_20	IAMs_20	08 27 38.1	
	comp=Z,7µm,22.1s						
NEWG	New Galloway	155.17	9	eP	PKPdf	07 21 34.6	-0.1
NEWG				IAMs_20	IAMs_20	08 25 16.5	
	comp=Z,7µm,23.0s						
TIRR	Tirgusor	155.19	311	⇑P	PKPdf	07 21 35.5	+0.5
TIRR	Tirgusor	155.19	311	⇑PKIKP	PKPdf	07 21 35.5	+0.5
DBIC	Dimbokro	155.21	163	PKP	PKPdf	07 21 34.0	-1.9
	comp=Z,82nm,1.0s,baz=174,slow=2.2,SNR=29						
MFTR	Murfatlar	155.30	310	⇑P	PKPdf	07 21 34.7	-0.5
TESR	Tescani	155.33	317	⇑P	PKPdf	07 21 35.4	+0.3
MANR	Mangalia	155.34	309	⇑P	PKPdf	07 21 35.2	0.0
GAL1	Galloway	155.35	10	eP	PKPdf	07 21 34.6	-0.3
GAL1				IAMs_20	IAMs_20	08 27 46.5	
	comp=Z,6µm,23.4s						
PANC	Panciu	155.35	315	⇓P	PKPdf	07 21 34.3	-0.8
HARR	Harsova	155.41	312	⇓P	PKPdf	07 21 35.5	+0.2
HARR	Harsova	155.41	312	⇓PKIKP	PKPdf	07 21 35.5	+0.2
SILT	Sile	155.51	303	⇑P	PKPdf	07 21 35.4	-0.1
BURAR	Bucovina Array	155.54	320	⇓P	PKPdf	07 21 35.0	-0.6
BURAR	Bucovina Array	155.54	320	⇓PKIKP	PKPdf	07 21 35.0	-0.6
KWP	Kalwaria Pacla	155.55	327	ePKP	PKPdf	07 21 34.0	-1.4
KWP				ePP	PP	07 25 36.0	-1.9
KWP				eSS	SS	07 45 22.5	0.0
KWP				eL	L	08 30 20.3	
	comp=Z,12µm,24.9s						
ONER	Baraj Valea Uz	155.57	317	⇑P	PKPdf	07 21 35.6	+0.1
VRI	Vrincioaia	155.61	315	⇑P	PKPdf	07 21 34.6	-1.0
VRI	Vrincioaia	155.61	315	⇑PKIKP	PKPdf	07 21 34.6	-1.0
PLOR	Plostina	155.66	315	⇑P	PKPdf	07 21 36.3	+0.6
PLOR	Plostina	155.66	315	⇑PKIKP	PKPdf	07 21 36.3	+0.6
EDMD	Edmundbyers	155.70	6	eP	PKPdf	07 21 35.7	+0.3
EDMD				IAMs_20	IAMs_20	08 38 28.6	
	comp=Z,6µm,22.6s						
IGLA	Glengowla, Co	155.79	17	eP	PKPdf	07 21 35.3	-0.2
IGLA	Glengowla, Co	155.79	17	PKPdf	PKPdf	07 21 38.5	+3.0
KESW	Keswick, Cumbr	155.82	7	eP	PKPdf	07 21 35.7	+0.2
KESW				IAMs_20	IAMs_20	08 26 46.5	
	comp=Z,7µm,21.7s						
ILTH	Belurgan, Co L	155.89	12	eP	PKPdf	07 21 35.0	-0.7
ILTH	Belurgan, Co L	155.89	12	PKPdf	PKPdf	07 21 36.7	+1.1
PSET	Sete Cidades	155.95	65	ePKP	PKPdf	07 21 39.7	+3.4
PSET	Sete Cidades	155.95	65	ePKP	PKPdf	07 21 39.7	+3.4
IOMK	Kirk Michael	155.96	10	eP	PKPdf	07 21 35.0	-0.8
BSEG	Bad Segeberg	156.04	348	ePKPdf	PKPdf	07 21 35.0	-0.8
	baz=24,slow=1.0						
BSEG				ePKPab	PKPab	07 22 04.8	+1.6
	baz=10,slow=4.1						
BSEG				ePP	PP	07 25 37.5	-2.6
	baz=21,slow=5.4						
NEHR	Nehoiu	156.09	315	⇑P	PKPdf	07 21 36.9	+0.6
CMLA	Cha da Macela	156.11	65	ePKP	PKPdf	07 21 39.7	+3.2
CMLA	Cha da Macela	156.11	65	ePKP	PKPdf	07 21 39.7	+3.2
BOSR	Bodos	156.14	317	⇑P	PKPdf	07 21 36.2	-0.1
HLG	Helgoland	156.16	352	ePP	PP	07 25 37.9	-2.8
	baz=21,slow=5.4						
GDLE	Glaisdale, N Y	156.19	4	eP	PKPdf	07 21 36.5	+0.4
GDLE				IAMs_20	IAMs_20	08 26 12.6	
	comp=Z,7µm,23.4s						
PGRON	Lagoa das Cont	156.23	65	ePKP	PKPdf	07 21 40.4	+3.7
PGRON	Lagoa das Cont	156.23	65	ePKP	PKPdf	07 21 40.4	+3.7
KOLS	Kolonicke sedl	156.24	326	ePKIKP	PKPdf	07 21 39.8	+3.5
KOLS				e		07 21 51.9	
KOLS	Kolonicke sedl	156.24	326	ePKP	PKPdf	07 21 39.8	+3.5
KOLS				e		07 21 51.9	
MLR	Muntele Rosu	156.27	315	⇓P	PKPdf	07 21 36.0	-0.6
MLR	Muntele Rosu	156.27	315	⇓PKIKP	PKPdf	07 21 36.0	-0.6
ARCR	ARCALIA	156.32	320	⇑P	PKPdf	07 21 37.4	+0.9
DOPR	Dopca	156.36	317	⇓P	PKPdf	07 21 37.2	+0.6
CTYL	Yalikoy Yolu	156.38	304	⇑P	PKPdf	07 21 36.7	0.0
BART	Pico Bartolome	156.39	65	ePKP	PKPdf	07 21 42.2	+5.2
BART	Pico Bartolome	156.39	65	ePKP	PKPdf	07 21 42.2	+5.2
STHS	Stebnicka Huta	156.39	328	ePKIKP	PKPdf	07 21 40.1	+3.6
STHS	Stebnicka Huta	156.39	328	ePKP	PKPdf	07 21 40.1	+3.6
STHS				e		07 22 08.3	
OJC	Ojcow	156.43	331	ePKP	PKPdf	07 21 35.0	-1.6
OJC				ePP	PP	07 25 41.8	-0.9
OJC				ePPP	PPP	07 29 16.2	
OJC				eSS	SS	07 45 49.9	+18
OJC				eL	L	08 32 47.6	
	comp=Z,12µm,23.3s						
BMR	Baia Mare	156.44	322	⇑P	PKPdf	07 21 37.2	+0.6
BMR	Baia Mare	156.44	322	⇑PKIKP	PKPdf	07 21 37.2	+0.6
SULR		156.48	313	⇑P	PKPdf	07 21 37.2	+0.5
PSMN	Pico do Norte,	156.58	67	ePKP	PKPdf	07 21 41.1	+4.0
PSMN	Pico do Norte,	156.58	67	ePKP	PKPdf	07 21 41.1	+4.0
HPK	Haverah Park	156.59	6	eP	PKPdf	07 21 36.8	+0.3
HPK				IAMs_20	IAMs_20	08 26 55.5	
	comp=Z,8µm,23.5s						
RUE	Ruedersdorf	156.62	342	ePKPdf	PKPdf	07 21 36.1	-0.5
	baz=24,slow=1.0						
RUE				ePKPab	pPKPab	07 22 09.0	-3.2
	baz=10,slow=4.1						
RUE				ePP	PP	07 25 39.7	-3.6
	baz=21,slow=5.4						
DSB	Dublin	156.63	13	IAMs_20	IAMs_20	08 27 03.3	

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             comp=Z,4µm,21.0s
DSB    Dublin            156.63  13   PKPdf    PKPdf    07 21 39.5 +2.9
GORT1  Trebel            156.74 346 ePKPdf     PKPdf    07 21 35.6 -1.1
             baz=24,slow=1.0
GORT1                               ePKPab     PKPab    07 22 07.1 +0.9
             baz=10,slow=4.1
GORT1                               ePP        PP       07 25 40.7 -3.2
             baz=21,slow=5.4
WPS    Cemaes, Angles    156.80  10 eP         PKPdf    07 21 36.8  0.0
WPS                                   IAMs_20  IAMs_20  08 41 28.6
             comp=Z,7µm,24.3s
NIE    Niedzica          156.81 329 ePKP       PKPdf    07 21 36.2 -0.9
NIE                                 ePP        PP       07 25 43.3 -1.6
NIE                                 eL         L        08 33 02.8
             comp=Z,8µm,22.6s
VOIR                     156.84 316 ⇓P         PKPdf    07 21 36.8 -0.5
VOIR                     156.84 316 ⇓PKIKP     PKPdf    07 21 36.8 -0.5
BAND   Balkesir-Ban      156.86 302 ⇑P         PKPdf    07 21 36.5 -0.9
PHSR   Pinarhisar        156.87 305 ⇑P         PKPdf    07 21 35.9 -1.5
VAL    Valentia          156.89  20   PKPdf    PKPdf    07 21 37.3 +0.3
WLF1   Llynfaes          156.92  10 eP         PKPdf    07 21 36.5 -0.5
WLF1                                  IAMs_20  IAMs_20  08 39 40.2
             comp=Z,15µm,22.5s
ARR    Arges             157.12 316 ⇓P         PKPdf    07 21 37.0 -0.6
LBWR   Ladybower, Pea    157.13   6 eP         PKPdf    07 21 37.6 +0.3
LMK    Market Rasen      157.18   4 eP         PKPdf    07 21 36.1 -1.2
KSP    Ksiaz             157.28 336 ePKP       PKPdf    07 21 35.8 -1.7
KSP                                 ePP        PP       07 25 45.5 -1.7
KSP                                 eSS        SS       07 45 54.3 +14
KSP                                 eL         L        08 22 04.8
             comp=Z,8µm,29.9s
RETH   Rethem/Aller,     157.35 349 ePKPdf     PKPdf    07 21 36.1 -1.4
             baz=24,slow=1.0
RETH                                ePKPab     PKPab    07 22 09.5 +0.7
             baz=10,slow=4.1
RETH                                ePP        PP       07 25 43.9 -3.3
             baz=21,slow=5.4
IWEX   Carrickbyrne,     157.37  14 eP         PKPdf    07 21 38.7 +1.1
IWEX   Carrickbyrne,     157.37  14   PKPdf    PKPdf    07 21 40.2 +2.6
FLTG   Flechtingen       157.37 345 ePKPdf     PKPdf    07 21 36.0 -1.6
             baz=24,slow=1.0
FLTG                                ePKPab     pPKPab   07 22 12.4 -3.1
             baz=10,slow=4.1
FLTG                                ePP        PP       07 25 43.7 -3.8
             baz=21,slow=5.4
LANS   Liptovska Anna    157.38 329 ePKIKP     PKPdf    07 21 42.1 +4.3
LANS   Liptovska Anna    157.38 329 ePKP       PKPdf    07 21 42.1 +4.3
STNC   Stoke             157.40   7 eP         PKPdf    07 21 38.4 +0.7
STNC                                  IAMs_20  IAMs_20  08 22 26.8
             comp=Z,7µm,28.2s
DRGR                     157.40 321 ⇓P         PKPdf    07 21 38.7 +0.7
DRGR                     157.40 321 ⇓PKIKP     PKPdf    07 21 38.7 +0.7
KECS   Kecovo            157.40 327 ePKP       PKPab    07 22 12.1 +2.8
OKC    Ostrava-Krasne    157.40 332 ePKPDF     PKPdf    07 21 37.0 -0.7
OKC                                 ePKPAB     pPKPab   07 22 14.3 -1.5
OKC                                 ePP        PP       07 25 49.0 +1.0
OKC                                   AMS      AMS      08 27 00.0
             comp=Z,8µm,24.6s
OKC    Ostrava-Krasne    157.40 332 ePKIKP     PKPdf    07 21 37.0 -0.7
OKC                                 e                   07 25 49.0
OKC                                   MLR      MLR
             comp=Z,8µm,24.6s
NRDL   Niedersach Rie    157.45 347 ePKPdf     PKPdf    07 21 36.1 -1.5
             baz=24,slow=1.0
NRDL                                ePP        PP       07 25 44.8 -3.0
             baz=21,slow=5.4
FOEL   Foel Wylfa        157.48   8 eP         PKPdf    07 21 38.0 +0.2
OSTC   Ostas             157.54 336 ePKPDF     PKPdf    07 21 37.3 -0.6
OSTC                                ePKPAB     pPKPab   07 22 15.1 -1.3
OSTC                                ePP        PP       07 25 49.6 +0.9
OSTC                                  AMS      AMS      08 31 40.0
             comp=Z,9µm,23.5s
OSTC   Ostas             157.54 336 ePKIKP     PKPdf    07 21 37.3 -0.6
OSTC                                e                   07 25 49.6
OSTC                                  MLR      MLR
             comp=Z,9µm,23.5s
CHVC   Chvalec           157.57 336 ePKPDF     PKPdf    07 21 37.7 -0.3
CHVC                                ePKPAB     pPKPab   07 22 13.5 -3.0
CHVC                                ePP        PP       07 25 50.0 +1.1
CHVC                                  AMS      AMS      08 35 20.0
             comp=Z,7µm,21.2s
CHVC   Chvalec           157.57 336 ePKIKP     PKPdf    07 21 37.7 -0.3
CHVC                                e                   07 25 50.0
CHVC                                  MLR      MLR
             comp=Z,7µm,21.2s
UPC    Upice             157.66 336 ePKPDF     PKPdf    07 21 36.2 -1.9
UPC                                 ePKPAB     PKPab    07 22 13.4 +3.1
UPC                                 ePP        PP       07 25 49.4 +0.1
UPC                                   AMS      AMS      08 35 50.0
             comp=Z,8µm,21.4s
UPC    Upice             157.66 336 ePKIKP     PKPdf    07 21 36.2 -1.9
UPC                                 e                   07 25 49.4
UPC                                   MLR      MLR
             comp=Z,8µm,21.4s
DPC    Dobruska-Polom    157.68 336 ePKPDF     PKPdf    07 21 36.2 -2.0
DPC                                 ePKPAB     pPKPab   07 22 13.8 -3.2
DPC                                 ePP        PP       07 25 50.1 +0.6
DPC                                   AMS      AMS      08 31 50.0
             comp=Z,12µm,23.3s
DPC    Dobruska-Polom    157.68 336 ePKIKP     PKPdf    07 21 36.2 -2.0
DPC                                 e                   07 25 50.1
DPC                                   MLR      MLR
             comp=Z,12µm,23.3s
ASSE   Asse, Remlinge    157.68 346 ePKPdf     PKPdf    07 21 36.2 -1.8
             baz=24,slow=1.0
ASSE                                ePKPab     PKPab    07 22 12.8 +2.6
             baz=10,slow=4.1
ASSE                                ePP        PP       07 25 45.9 -3.2
             baz=21,slow=5.4
MORC   Moravsky Berou    157.69 333 ePKP       PKPdf    07 21 36.7 -1.5
MORC                                ePP        PP       07 25 48.3 -1.3
MORC   Moravsky Berou    157.69 333 ⇑P         PKPdf    07 21 38.2  0.0
MORC   Moravsky Berou    157.69 333 ⇑PKIKP     PKPdf    07 21 38.2  0.0
BORR   Bors              157.70 323 ⇑P         PKPdf    07 21 38.4 +0.2
KRLC   Kraliky           157.74 335 ePKPDF     PKPdf    07 21 37.5 -0.7
KRLC                                ePKPAB     pPKPab   07 22 14.1 -3.2
KRLC                                ePP        PP       07 25 50.7 +0.9
KRLC                                  AMS      AMS      08 32 20.0
             comp=Z,11µm,23.7s
KRLC   Kraliky           157.74 335 ePKIKP     PKPdf    07 21 37.5 -0.7
KRLC                                e                   07 25 50.7
KRLC                                  MLR      MLR
             comp=Z,11µm,23.7s
CWF    Charnwood Fore    157.83   6 eP         PKPdf    07 21 37.2 -1.0
HLM1   Long Mynd         157.88   8 eP         PKPdf    07 21 38.7 +0.4
HLM1                                  IAMs_20  IAMs_20  08 37 46.6
             comp=Z,8µm,24.2s
CLL    Collm             157.89 342 ePKIKP     PKPdf    07 21 36.0 -2.3
CLL                                 e                   07 21 53.0
CLL                                   pmax     pmax
             comp=Z,31nm,1.6s
CLL                                   pmax     pmax
             comp=Z,236nm,1.0s
CLL                                   MLR      MLR
             comp=Z,6µm,20.3s
CLL    Collm             157.89 342 ePKPdf     PKPdf    07 21 36.6 -1.7
             baz=24,slow=1.0
CLL                                 ePKPab     PKPab    07 22 13.9 +2.7
             baz=10,slow=4.1
CLL                                 ePP        PP       07 25 46.7 -3.7
             baz=21,slow=5.4
CLL    Collm             157.89 342 ePKPdf     PKPdf    07 21 36.0 -2.3
             comp=Z,31nm,1.6s
CLL                                 i x        x        07 21 41.2
             comp=Z,112nm,1.5s
CLL                                 ePKPdif    sPKPdf   07 21 53.0 +5.8
CLL                                 ePKPab     PKPab    07 22 13.0 +1.8
             comp=Z,236nm,1.0s
CLL                                 ePP        PP       07 25 51.0 +0.6
CLL                                 i x        x        07 26 11.7
CLL                                 ex         x        07 27 59.0
CLL                                 ePPP       PPP      07 29 31.0
CLL                                 ePPPP               07 32 00.0
CLL                                 ex         x        07 34 30.0
CLL                                 ePSKS               07 36 20.0
CLL                                 ePPS       PPS      07 39 15.0
CLL                                 ex         x        07 40 55.0
CLL                                 ex         x        07 42 06.0
CLL                                 ex         x        07 43 41.0
CLL                                 eSS        SS       07 45 42.0 -4.7
CLL                                 e(PSPS)             07 47 33.0
CLL                                 eSSS       SSS      07 51 42.0
CLL                                 eSSSS               07 56 06.0
CLL                                   AMS      AMS      08 33 00.0
CLL                                   AMS      AMS      08 47 00.0
             comp=Z,6µm,20.3s
WACR   West Acre         157.96   2 eP         PKPdf    07 21 38.0 -0.3
BRG    Berggiesshubel    158.01 340 ePKPdf     PKPdf    07 21 36.8 -1.6
             baz=24,slow=1.0
BRG                                 ePKPab     PKPab    07 22 14.3 +2.5
             baz=10,slow=4.1
BRG                                 ePP        PP       07 25 47.3 -3.8
             baz=21,slow=5.4
BRG    Berggiesshubel    158.01 340 ePKP       PKPdf    07 21 37.6 -0.9
BRG                                   Amp               07 21 38.8
             comp=Z,29nm,1.4s
BRG    Berggiesshubel    158.01 340   P        PKPdf    07 21 41.9 +3.5
BRG                                   Amp               07 21 44.2
             comp=Z,116nm,1.4s
IBBN   Ibbenburen        158.02 351 ePKPdf     PKPdf    07 21 37.3 -1.1
             baz=24,slow=1.0
IBBN                                ePKPab     PKPab    07 22 12.0 +0.2
             baz=10,slow=4.1
IBBN                                ePP        PP       07 25 47.5 -3.5
             baz=21,slow=5.4
PSZ    Piszkesteto       158.08 327 ⇑P         PKPdf    07 21 36.8 -2.0
PSZ    Piszkesteto       158.08 327 ⇑PKIKP     PKPdf    07 21 36.8 -2.0
PVCC   Panska Ves        158.12 338 ePKPDF     PKPdf    07 21 37.7 -0.9
PVCC                                ePKPAB     pPKPab   07 22 17.2 -1.6
PVCC                                ePP        PP       07 25 52.1 +0.3
PVCC                                  AMS      AMS      08 27 20.0
             comp=Z,11µm,26.2s
PVCC   Panska Ves        158.12 338 ePKIKP     PKPdf    07 21 37.7 -0.9
PVCC                                e                   07 25 52.1
PVCC                                  MLR      MLR
             comp=Z,11µm,26.2s
VYHS   Vyhne             158.15 329 ePKIKP     PKPdf    07 21 41.0 +2.3
VYHS   Vyhne             158.15 329 ePKP       PKPdf    07 21 41.0 +2.3
VYHS                                e                   07 22 17.7
CAVK   Edirne/Enez-Ca    158.15 304 ⇑P         PKPdf    07 21 38.9  0.0
RSBS   Rosebush, Pemb    158.16  12 eP         PKPdf    07 21 38.7 +0.1
GZR    Gura Zlata        158.20 318 ⇑P         PKPdf    07 21 38.1 -0.9
GZR    Gura Zlata        158.20 318 ⇑PKIKP     PKPdf    07 21 38.1 -0.9
RICC   Richard           158.25 339 ePKPDF     PKPdf    07 21 37.7 -1.1
RICC                                ePP        PP       07 25 54.2 +1.7
RICC                                  AMS      AMS      08 29 30.0
             comp=Z,7µm,23.2s
NEUB   Neuenburg         158.29 343 ePKPdf     PKPdf    07 21 37.5 -1.3
             baz=24,slow=1.0
NEUB                                ePKPab     pPKPab   07 22 16.2 -3.3
             baz=10,slow=4.1
NEUB                                ePP        PP       07 25 48.8 -3.8
             baz=21,slow=5.4
EZN    Ezine             158.31 301 ⇓P         PKPdf    07 21 37.0 -2.2
EZN    Ezine             158.31 301 ⇓PKIKP     PKPdf    07 21 37.0 -2.2
SURR   Surduc            158.36 320 ⇑P         PKPdf    07 21 38.3 -0.8
SRE    Strehaia          158.36 316 ⇑P         PKPdf    07 21 38.6 -0.5
SRE    Strehaia          158.36 316 ⇑PKIKP     PKPdf    07 21 38.6 -0.5
JAVC   Velka Javorina    158.37 331 ePKP       PKPdf    07 21 38.6 -0.5
JAVC                                ePP        PP       07 25 54.2 +0.8
GTTG   Gottingen         158.38 347 ePKPdf     PKPdf    07 21 37.3 -1.6
             baz=24,slow=1.0
GTTG                                ePKPab     PKPab    07 22 15.2 +1.8
             baz=10,slow=4.1
GTTG                                ePP        PP       07 25 49.8 -3.2
             baz=21,slow=5.4
MCH1   Michaelchurch     158.38   9 eP         PKPdf    07 21 39.9 +1.0
MCH1                                  IAMs_20  IAMs_20  08 26 30.7
             comp=Z,8µm,23.8s
VRAC   Vranov            158.44 334 ePKP       PKPdf    07 21 37.4 -1.7
VRAC                                ePP        PP       07 25 53.6  0.0
VRAC   Vranov            158.44 334 ⇓P         PKPdf    07 21 40.3 +1.2
VRAC   Vranov            158.44 334 ⇓PKIKP     PKPdf    07 21 40.3 +1.2
PRA    Prague            158.56 338 ePKPDF     PKPdf    07 21 38.4 -0.7
PRA                                 ePP        PP       07 25 53.0 -1.2
PRA                                   AMS      AMS      08 27 50.0
             comp=Z,10µm,25.6s
PRA    Prague            158.56 338 ePKIKP     PKPdf    07 21 38.4 -0.7
PRA                                 e                   07 25 53.0
PRA                                   MLR      MLR
             comp=Z,10µm,25.6s
MONM   Monmouth          158.56   8 eP         PKPdf    07 21 38.4 -0.7
MONM                                  IAMs_20  IAMs_20  08 26 35.0
             comp=Z,9µm,23.8s
GOPC   GO Pecny, Ondr    158.58 337 ePKPDF     PKPdf    07 21 38.5 -0.7
GOPC                                ePKPAB     PKPab    07 22 17.2 +2.9
GOPC                                ePP        PP       07 25 55.7 +1.4
GOPC                                  AMS      AMS      08 29 00.0
             comp=Z,10µm,26.0s
GOPC   GO Pecny, Ondr    158.58 337 ePKIKP     PKPdf    07 21 38.5 -0.7
GOPC                                e                   07 25 55.7
GOPC                                  MLR      MLR
             comp=Z,10µm,26.0s
PRU    Pruhonice         158.59 338 ePKPDF     PKPdf    07 21 38.3 -0.9
PRU                                 ePKPAB     pPKPab   07 22 17.6 -3.3
PRU                                 ePP        PP       07 25 56.4 +2.0
PRU                                   AMS      AMS      08 27 40.0
             comp=Z,10µm,26.4s
PRU    Pruhonice         158.59 338 ePKIKP     PKPdf    07 21 38.3 -0.9
PRU                                 e                   07 25 56.4
PRU                                   MLR      MLR
             comp=Z,10µm,26.4s
ELMS   Elmsett, Ipswi    158.60   2 eP         PKPdf    07 21 39.1  0.0
STRD   Stroud            158.70   7 eP         PKPdf    07 21 38.7 -0.5
STRD                                  IAMs_20  IAMs_20  08 23 03.7
             comp=Z,10µm,28.0s
HERR   Herculane         158.70 317 ⇑P         PKPdf    07 21 40.3 +0.8
KRUC   Moravsky          158.71 334 ePKP       PKPdf    07 21 37.7 -1.7
KRUC                                ePP        PP       07 25 54.8 -0.3
BZS    Buzias            158.72 320 ⇑P         PKPdf    07 21 38.7 -0.8
BZS    Buzias            158.72 320 ⇑PKIKP     PKPdf    07 21 38.7 -0.8
OLDB   Oldbury-Upon-S    158.77   8 eP         PKPdf    07 21 39.1 -0.2
OLDB                                  IAMs_20  IAMs_20  08 23 04.2
             comp=Z,10µm,27.6s
TANN   Tannenbergstha    158.84 342 ePKPdf     PKPdf    07 21 38.1 -1.5
             baz=24,slow=1.0
TANN                                ePKPab     PKPab    07 22 18.4 +2.9
             baz=10,slow=4.1
TANN                                ePP        PP       07 25 52.1 -3.6
             baz=21,slow=5.4
MOX    Moxa              158.85 343 ePKPdf     PKPdf    07 21 37.7 -1.8
             baz=24,slow=1.0
MOX                                 ePKPab     PKPab    07 22 18.2 +2.7
             baz=10,slow=4.1
MOX                                 ePP        PP       07 25 52.2 -3.5
             baz=21,slow=5.4
MOX                                 eL         L        08 41 52.9
             comp=Z,5µm,21.4s
TREC   Trest             158.86 335 ePKPDF     PKPdf    07 21 38.8 -0.8
TREC                                ePP        PP       07 25 56.7 +0.8
TREC                                  AMS      AMS      08 33 00.0
             comp=Z,12µm,23.5s
TREC   Trest             158.86 335 ePKIKP     PKPdf    07 21 38.8 -0.8
TREC                                e                   07 25 56.7
TREC                                  MLR      MLR
             comp=Z,12µm,23.5s
SRO    Srobarova         158.89 329 ePKP2      PKPab    07 22 19.5 +3.8
SRO    Srobarova         158.89 329 ePKP       PKPab    07 22 19.5 +3.8
MODS   Modra-Piesok      158.91 331 ePKIKP     PKPdf    07 21 38.8 -0.9
MODS   Modra-Piesok      158.91 331 ePKP       PKPdf    07 21 38.8 -0.9
MODS                                e                   07 22 18.5
BUG    Bochum--Univer    158.93 351 ePKPdf     PKPdf    07 21 38.5 -1.0
             baz=24,slow=1.0
BUG                                 ePP        PP       07 25 52.6 -3.3
             baz=21,slow=5.4
KASTN  Kahler Asten      158.99 349 ePKPdf     PKPdf    07 21 37.9 -1.8
             baz=24,slow=1.0
KASTN                               ePP        PP       07 25 53.2 -3.2
             baz=21,slow=5.4
SWN1   Swindon           159.00   7 eP         PKPdf    07 21 37.6 -2.0
UBBA   Unterbreizbach    159.06 346 ePKPdf     PKPdf    07 21 37.7 -1.9
             baz=24,slow=1.0
UBBA                                ePKPab     PKPab    07 22 18.5 +2.3
             baz=10,slow=4.1
UBBA                                ePP        PP       07 25 53.3 -3.3
             baz=21,slow=5.4
HTL    Hartland          159.13  12 eP         PKPdf    07 21 40.6 +0.8
MDVR   Moldovita         159.17 318 ⇑P         PKPdf    07 21 39.2 -1.0
ZVC    Zvikov            159.18 337 ePKPDF     PKPdf    07 21 38.9 -1.0
ZVC                                 ePKPAB     PKPab    07 22 19.3 +2.4
ZVC                                 ePP        PP       07 25 58.0 +0.4
ZVC                                   AMS      AMS      08 29 10.0
             comp=Z,10µm,25.5s
WOL    Wolverton         159.25   6 eP         PKPdf    07 21 38.7 -1.2
MANZ   Manzenberg        159.33 342 ePKPdf     PKPdf    07 21 38.2 -2.0
             baz=24,slow=1.0
MANZ                                ePKPab     PKPab    07 22 20.1 +2.5
             baz=10,slow=4.1
MANZ                                ePP        PP       07 25 55.1 -3.2
             baz=21,slow=5.4
ROTZ   Rotzenmuhle       159.50 341 ePKPdf     PKPdf    07 21 38.4 -1.9
             baz=24,slow=1.0
ROTZ                                ePKPab     PKPab    07 22 20.8 +2.5
             baz=10,slow=4.1
ROTZ                                ePP        PP       07 25 56.2 -3.0
             baz=21,slow=5.4
SBD    Saint Breward     159.50  13 eP         PKPdf    07 21 41.0 +0.8
APE    Apeiranthos       159.60 294 ⇑P         PKPdf    07 21 40.3 -0.6
APE    Apeiranthos       159.60 294 ⇑PKIKP     PKPdf    07 21 40.3 -0.6
KHC    Kasperske Hory    159.65 338 ePKPDF     PKPdf    07 21 38.2 -2.3
KHC                                 ePKPAB     PKPab    07 22 21.9 +2.9
KHC                                 ePP        PP       07 26 02.1 +1.9
KHC                                   AMS      AMS      08 29 30.0
             comp=Z,11µm,24.6s
KHC    Kasperske Hory    159.65 338 ePKIKP     PKPdf    07 21 38.2 -2.3
KHC                                 e                   07 26 02.1
KHC                                   MLR      MLR
             comp=Z,11µm,24.6s
CKRC   Cesky Krumlov     159.68 336 ePKPDF     PKPdf    07 21 39.6 -1.0
CKRC                                ePKPAB     pPKPab   07 22 22.4 -3.3
CKRC                                ePP        PP       07 26 01.3 +1.0
CKRC                                  AMS      AMS      08 30 10.0
             comp=Z,10µm,25.6s
CKRC   Cesky Krumlov     159.68 336 ePKIKP     PKPdf    07 21 39.6 -1.0
CKRC                                e                   07 26 01.3
CKRC                                  MLR      MLR
             comp=Z,10µm,25.0s
BEBN   Eben Emael        159.75 354 dPKPdf     PKPdf    07 21 39.3 -1.2
BEBN                                dPKP       PKPab    07 22 18.2 -1.0
DYA    Yadsworthy        159.76  11 eP         PKPdf    07 21 40.6 +0.1
DYA                                   IAMs_20  IAMs_20  08 26 07.0
             comp=Z,7µm,23.3s
HMNX   Herstmonceux      159.80   3 eP         PKPdf    07 21 41.0 +0.5
HMNX                                  IAMs_20  IAMs_20  08 32 28.9
             comp=Z,9µm,23.1s
BOVS   Bovan             159.82 315 ⇑P         PKPdf    07 21 39.7 -1.2
GRF    Grafenberg Arr    159.83 343 ePKPdf     PKPdf    07 21 40.1 -0.6
             baz=24,slow=1.0
GRF                                 ePKPab     PKPab    07 22 21.7 +2.0
             baz=10,slow=4.1
GRF                                 ePP        PP       07 25 57.6 -3.4
             baz=21,slow=5.4
GRF                                 eL         L        08 35 57.2
             comp=Z,6µm,22.0s
CONA   Conrad Observa    159.84 332 ePKP       PKPdf    07 21 39.6 -1.2
             comp=Z,77nm,1.6s,SNR=37
CONA                                epPKP      PKPab    07 22 22.6 +2.6
             comp=Z,88nm,1.0s
CONA                                i PP       PP       07 26 01.6 +0.2
             comp=Z,15nm,1.0s
RONA   Rosalia, Austr    159.84 331 ePKP       PKPdf    07 21 39.7 -1.1
             comp=Z,78nm,1.6s,SNR=13
RONA                                i pPKP     pPKPab   07 22 23.4 -3.1
             comp=Z,84nm,0.9s
RONA                                i PP       PP       07 26 02.3 +0.9
             comp=Z,9.5nm,1.2s
UCC    Uccle             159.85 356 dPKPdf     PKPdf    07 21 39.9 -0.7
UCC                                 dPKP       PKPab    07 22 19.0 -0.7
GEC2   GERESS Array S    159.86 337 ePKPdf     PKPdf    07 21 38.4 -2.5
             baz=24,slow=1.0
GEC2                                ePKPab     pPKPab   07 22 23.4 -3.2
             baz=10,slow=4.1
GEC2                                ePP        PP       07 25 58.2 -3.2
             baz=21,slow=5.4
GERES  GERESS Array B    159.86 337   PKP      PKPdf    07 21 39.1 -1.7
             comp=Z,8.0nm,0.8s,baz=117,slow=2.7,SNR=33
GERES                                 PKPab    PKPab    07 22 19.1 -0.9
             comp=Z,10nm,0.7s,baz=101,slow=1.4,SNR=6.0
WET    Wettzell          159.86 339 ePKPdf     PKPdf    07 21 39.0 -1.8
             baz=24,slow=1.0
WET                                 ePKPab     PKPab    07 22 22.6 +2.7
             baz=10,slow=4.1
WET                                 ePP        PP       07 25 58.2 -3.1
             baz=21,slow=5.4
MORH   Mrgy, Hungar      159.89 325 ⇑P         PKPdf    07 21 40.1 -0.7
MEM    Membach           159.90 353 dPKPdf     PKPdf    07 21 40.0 -0.7
MEM                                 dPKP       PKPab    07 22 19.2 -0.8
BTNL   Ternell           159.91 353 dPKPdf     PKPdf    07 21 39.5 -1.3
BTNL                                dPKP       PKPab    07 22 19.2 -0.8
TNS    Taunus Mts        159.93 348 ePKPdf     PKPdf    07 21 39.2 -1.6
             baz=24,slow=1.0
TNS                                 ePKPab     PKPab    07 22 21.7 +1.5
             baz=10,slow=4.1
TNS                                 ePP        PP       07 25 58.2 -3.3
             baz=21,slow=5.4
BSTI   Sart Tilman       159.97 354 dPKPdf     PKPdf    07 21 39.9 -0.9
BSTI                                dPKP       PKPab    07 22 18.4 -1.8
FRGS   Fruska Gora       160.00 321⇑iP         PKPdf    07 21 38.9 -2.1
BCLA   Clavier           160.16 354 dPKPdf     PKPdf    07 21 39.7 -1.3
BCLA                                dpPKPdf    pPKPdf   07 21 44.6 -3.1
BCLA                                dPKP       PKPab    07 22 19.7 -1.4
BCLA                                dpPKP      pPKPab   07 22 23.0 -4.7
BGES   Gesves            160.21 354 dPKPdf     PKPdf    07 21 40.3 -0.8
BGES                                dPKP       PKPab    07 22 19.9 -1.5
BMRD   Maredsous         160.32 355 dPKPdf     PKPdf    07 21 38.9 -2.2
BMRD                                dPKP       PKPab    07 22 19.7 -2.1
IDI    Anoyia            160.40 290   PKP      PKPdf    07 21 40.4 -1.5
VAY    Valandovo         160.42 308 i Pn       PKPdf    07 21 43.6 +2.0
MOA    Molln             160.51 335 ePKP       PKPdf    07 21 40.1 -1.4
             comp=Z,44nm,1.1s,SNR=14
MOA                                 epPKP      pPKPab   07 22 26.3 -3.1
             comp=Z,103nm,1.7s
ARSA   Arzberg           160.52 332 ePKP       PKPdf    07 21 40.2 -1.3
             comp=Z,50nm,1.4s,SNR=12
ARSA                                ePKP       PKPab    07 22 21.6 -1.3
             comp=Z,57nm,1.5s
DOU    Dourbes           160.53 355 dPKPdf     PKPdf    07 21 40.6 -0.8
DOU                                 dPKP       PKPab    07 22 21.0 -1.7
TEKS   Tekeris           160.54 320⇑iP         PKPdf    07 21 39.5 -2.2
WLF    Walferdange       160.81 352   PKP      PKPdf    07 21 41.1 -0.7
WLF    Walferdange       160.81 352 dPKPdf     PKPdf    07 21 41.1 -0.7
WLF                                 dPKP       PKPab    07 22 22.8 -1.2
WLF    Walferdange       160.81 352 ePKPdf     PKPdf    07 21 40.8 -0.9
             baz=24,slow=1.0
WLF                                 ePKPab     PKPab    07 22 23.0 -0.9
             baz=10,slow=4.1
WLF                                 ePP        PP       07 26 03.1 -3.1
             baz=21,slow=5.4
SKO    Skopje            160.86 311 i Pn       PKPdf    07 21 44.6 +2.6
BIOA   Bad Ischl, Aus    160.87 336 i PKP      PKPdf    07 21 40.3 -1.6
             comp=Z,65nm,1.4s,SNR=12
BIOA                                i pPKP     PKPab    07 22 27.5 +3.1
             comp=Z,125nm,1.1s
BIOA                                ePP        PP       07 26 00.6 -6.3
             comp=Z,6.7nm,0.7s
BBLS   Lazi&#263i        161.04 319⇑iP         PKPdf    07 21 40.6 -1.7
SJES   Sjenica           161.07 316⇑iP         PKPdf    07 21 40.9 -1.5
HAPS   Han Pijesak,Bl    161.16 320⇑iP         PKPdf    07 21 41.0 -1.5
STU    Stuttgart         161.17 345 ePKPdf     PKPdf    07 21 40.5 -1.6
             baz=24,slow=1.0
STU                                 ePKPab     PKPab    07 22 25.0 -0.6
             baz=10,slow=4.1
STU                                 ePP        PP       07 26 04.3 -3.8
             baz=21,slow=5.4
SOKA   Soboth            161.18 332 ePKP       PKPdf    07 21 40.3 -2.1
             comp=Z,105nm,1.3s,SNR=58
SOKA                                epPKP      PKPab    07 22 27.1 +1.3
             comp=Z,79nm,1.1s
SOKA                                i PP       PP       07 26 06.0 -2.7
             comp=Z,6.5nm,1.0s
FUR    Furstenfeldbru    161.21 341 ePKPab     PKPab    07 22 28.0 +2.2
             baz=10,slow=4.1
FUR                                 ePP        PP       07 26 05.0 -3.5
             baz=21,slow=5.4
RUDO   Rudo              161.22 318 eP         PKPdf    07 21 41.6 -0.8
JSA    Saint Aubin       161.24   9 eP         PKPdf    07 21 41.8 -0.4
IVA    Berane            161.35 316⇓iPKP       PKPdf    07 21 40.5 -2.2
PLE    Pljevlja          161.38 317⇑iPKP       PKPdf    07 21 40.6 -2.1
LESA   Schwarzleotal     161.43 337 ePKP       PKPdf    07 21 40.6 -2.0
             comp=Z,194nm,1.9s,SNR=47
LESA                                ePKP       PKPab    07 22 25.5 -1.4
             comp=Z,54nm,1.1s
LESA                                i PP       PP       07 26 09.6 -0.2
             comp=Z,7.8nm,0.7s
OBKA   Obir              161.51 332⇑iP         PKPdf    07 21 40.1 -2.6
OBKA   Obir              161.51 332 ePKP       PKPdf    07 21 40.6 -2.1
             comp=Z,62nm,1.9s,SNR=12
OBKA                                epPKP      PKPab    07 22 30.2 +2.9
             comp=Z,24nm,0.9s
OBKA                                i PP       PP       07 26 09.2 -1.2
             comp=Z,20nm,1.4s
KOME   Kolasin           161.59 316 ePKP       PKPdf    07 21 40.9 -2.0
A051A  Mrakovica         161.60 325⇑iP         PKPdf    07 21 40.8 -2.0
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LEGS	Legarje	161.64	330	ePKPdf	PKPdf	07 21 41.1	-1.6
BLY	Banja Luka	161.65	324	⇑iP	PKPdf	07 21 41.2	-1.6
OHR	Ohrid	161.70	310	i Pn	PKPdf	07 21 42.2	-0.9
UPM	Unac-Piva	161.74	318	⇑iPKP	PKPdf	07 21 40.3	-2.9
BFO	Black Forest	161.77	347	ePKPdf	PKPdf	07 21 40.2	-2.6
	baz=24,slow=1.0						
BFO				ePKPab	PKPab	07 22 28.0	-0.2
	baz=10,slow=4.1						
BFO				ePP	PP	07 26 07.6	-3.7
	baz=21,slow=5.4						
MYKA	Terra Mystica	161.77	334	ePKP	PKPdf	07 21 40.5	-2.5
	comp=Z,72nm,1.7s,SNR=33						
MYKA				epPKP	PKPab	07 22 31.6	+3.2
	comp=Z,56nm,1.0s,SNR=5.3						
MYKA	Terra Mystica	161.77	334	P	PKPab	07 22 31.6	+3.2
	comp=Z,56nm,1.0s,SNR=5.3						
WATA	Walderalm	161.87	339	i PKP	PKPdf	07 21 41.1	-2.1
	comp=Z,88nm,1.5s,SNR=13						
WATA				i pPKP	pPKPab	07 22 32.2	-3.2
	comp=Z,125nm,1.1s						
WATA				ePP	PP	07 26 10.1	-2.1
	comp=Z,46nm,1.5s						
GORS	Gorjuse	161.89	333	ePKPdf	PKPdf	07 21 40.9	-2.3
LJU	Ljubljana	161.90	331	ePKPdf	PKPdf	07 21 41.4	-1.6
LJU				epPKPdf	pPKPdf	07 21 44.8	-4.9
LJU				epPKPab	pPKPab	07 22 32.6	-2.8
LJU				ePP	PP	07 26 14.5	+2.1
LJU				e		07 29 08.2	
LJU				e		07 30 16.5	
WTTA	Wattenberg	161.91	339	ePKP	PKPdf	07 21 41.9	-1.3
	comp=Z,149nm,1.4s,SNR=38						
WTTA				i pPKP	PKPab	07 22 32.1	+3.0
	comp=Z,133nm,1.0s						
WTTA				i PP	PP	07 26 13.1	+0.6
	comp=Z,60nm,1.6s						
RETA	Reutte	161.97	341	ePKP	PKPdf	07 21 42.0	-1.1
	comp=Z,33nm,1.4s						
RETA				i pPKP	pPKPab	07 22 32.6	-3.2
	comp=Z,179nm,1.0s						
RETA				i PP	PP	07 26 12.5	-0.1
	comp=Z,17nm,1.1s						
UBR	Ueberruh	161.97	342	ePKPdf	PKPdf	07 21 41.0	-2.2
	baz=24,slow=1.0						
UBR				ePP	PP	07 26 09.1	-3.5
	baz=21,slow=5.4						
MOTA	Moosalm	162.00	340	i PKP	PKPdf	07 21 41.4	-1.9
	comp=Z,80nm,1.1s,SNR=28						
MOTA				i pPKP	PKPab	07 22 32.9	+3.4
	comp=Z,266nm,1.1s,SNR=5.9						
MOTA				ePP	PP	07 26 13.3	+0.4
	comp=Z,24nm,1.3s						
MOTA	Moosalm	162.00	340	eP	PKPab	07 22 32.9	+3.4
	comp=Z,266nm,1.1s,SNR=5.9						
BOJS	Bojanci	162.01	329	⇑iP	PKPdf	07 21 41.5	-1.6
BOJS	Bojanci	162.01	329	i PKPdf	PKPdf	07 21 41.6	-1.5
BOJS				i pPKPdf	pPKPdf	07 21 45.2	-4.6
ABTA	Abfaltersbach	162.08	336	i PKP	PKPdf	07 21 41.6	-1.7
	comp=Z,118nm,1.5s,SNR=58						
ABTA				i pPKP	PKPab	07 22 32.3	+2.6
	comp=Z,31nm,0.7s						
ABTA				ePP	PP	07 26 09.0	-4.3
	comp=Z,11nm,1.0s						
SQTA	Sankt Quirin	162.08	340	i PKP	PKPdf	07 21 41.8	-1.5
	comp=Z,65nm,1.2s,SNR=13						
SQTA				i pPKP	pPKPab	07 22 33.1	-3.2
	comp=Z,172nm,1.3s						
SQTA				i PP	PP	07 26 10.6	-2.7
	comp=Z,24nm,1.3s						
CEME	Cevo	162.12	316	ePKP	PKPdf	07 21 41.2	-2.2
BRY	Bratogost	162.13	317	eP	PKPdf	07 21 41.9	-1.6
BRY	Bratogost	162.13	317	⇑iPKP	PKPdf	07 21 41.1	-2.5
DRME	Dracevica, Mon	162.17	315	ePKP	PKPdf	07 21 41.5	-1.9
VOJS	Vojsko	162.17	332	ePKPdf	PKPdf	07 21 41.5	-1.9
VOJS				ePP	PP	07 26 15.9	+2.0
A050A	Klekovaca	162.17	325	⇑iP	PKPdf	07 21 41.3	-2.2
ULC	Ulcinj	162.26	314	⇑iPKP	PKPdf	07 21 41.6	-2.0
BUM	Brajici-Budva	162.28	315	⇓iPKP	PKPdf	07 21 41.0	-2.6
TREB	Trebinje	162.36	317	eP	PKPdf	07 21 45.7	+2.1
DAVA	Damuels	162.39	342	ePKP	PKPdf	07 21 42.2	-1.5
	comp=Z,56nm,1.6s,SNR=11						
DAVA				epPKP	PKPab	07 22 33.7	+2.5
	comp=Z,174nm,1.0s						
DAVA				ePP	PP	07 26 12.2	-2.7
	comp=Z,4.0nm,0.6s						
FETA	Feichten	162.40	340	i PKP	PKPdf	07 21 42.3	-1.4
	comp=Z,93nm,1.4s,SNR=44						
FETA				i pPKP	pPKPab	07 22 34.7	-3.1
	comp=Z,110nm,1.1s						
FETA				ePP	PP	07 26 16.6	+1.5
	comp=Z,37nm,1.5s						
HCY	Herceg Novi	162.43	316	⇓iPKP	PKPdf	07 21 41.0	-2.7
SKDS	Skadanscina	162.51	331	⇑iP	PKPdf	07 21 41.5	-2.2
TOA0	Torodi Ar. Sit	162.53	179	P	PKPdf	07 21 46.2	+1.6
	SNR=21						
TORD	Torodi Ar. Bea	162.53	179	PKP	PKPdf	07 21 42.8	-1.8
	comp=Z,65nm,0.3s,baz=180,slow=1.4,SNR=4.1						
TORD				PKPab	PKPab	07 22 33.5	+1.3
	comp=Z,115nm,0.5s,baz=202,slow=1.6,SNR=4.8						
STON	Ston	162.63	319	⇑iP	PKPdf	07 21 41.1	-2.7
PMOZ	Porto Moniz, M	163.41	78	PKP	PKPdf	07 21 43.7	-1.4
PMOZ	Porto Moniz, M	163.41	78	ePKPdf	PKPdf	07 21 48.9	+3.8
PMOZ				ePKPab	PKPab	07 22 36.5	+0.3
PMOZ				ePP	PP	07 26 38.1	+16
PMOZ				eSS	SS	07 46 44.9	-3.0
PMOZ				eLR	LR	08 18 03.9	
PMOZ				i AMs_20		08 45 34.9	
	comp=Z,4μm,22.0s						
PMAR	Madeira	163.65	78	ePKPdf	PKPdf	07 21 49.2	+3.8
PMAR				ePP	PP	07 26 28.8	+5.5
FUL	Funchal	163.67	78	ePKPdf	PKPdf	07 21 51.8	+6.6
PMPST	Porto Santo, M	164.12	77	ePKPdf	PKPdf	07 21 49.5	+4.0
PMPST				ePKPab	PKPab	07 22 42.2	+3.0
PMPST				ePP	PP	07 26 31.3	+5.8
MATE	Matera	164.58	314	⇑P	PKPdf	07 21 45.5	-0.2
VLC	Villacollemand	165.07	336	PKP	PKPdf	07 21 43.3	-2.8
AQU	L'Aquila	165.28	325	PKP	PKPdf	07 21 44.7	-1.7
TIP	Timpagrande	165.35	309	⇑P	PKPdf	07 21 45.3	-1.2
PGAV	Gavieira, Arco	165.98	34	ePKPdf	PKPdf	07 21 46.6	-0.4
PGAV				ePKPab	pPKPab	07 22 52.3	-1.2
PGAV				ePP	PP	07 26 36.7	+2.6
PGAV				eSS	SS	07 47 19.7	+7.7
PGAV				eLR	LR	08 19 23.9	
PGAV				i AMs_20		08 46 24.3	
	comp=Z,5μm,22.0s						
PCAB	Cabril	166.29	34	ePKPdf	PKPdf	07 21 46.8	-0.4
PCAB				ePKPab	PKPab	07 22 47.9	-0.5
PCAB				ePP	PP	07 26 43.4	+7.8
POLO	Lamas de Olo	166.66	34	ePKPdf	PKPdf	07 21 51.0	+3.4
POLO				ePKPab	pPKPab	07 22 54.2	-2.3
POLO				ePP	PP	07 26 41.4	+3.8
ECAL	Calabor	166.69	30	PKP	PKPdf	07 21 46.7	-0.9
PVRL	Vila Real	166.77	34	ePKPdf	PKPdf	07 21 50.1	+2.5
PVRL				ePP	PP	07 26 44.3	+6.2
PBRG	Braganca	166.80	30	ePKPdf	PKPdf	07 21 50.5	+2.9
PBRG				ePKPab	pPKPab	07 22 55.5	-1.6
PBRG				ePP	PP	07 26 42.7	+4.5
PVIS	Viseu	167.10	36	ePKPdf	PKPdf	07 21 51.5	+3.6
PVIS				ePKPab	pPKPab	07 22 57.6	-0.9
PVIS				ePP	PP	07 26 43.0	+3.1
MVO	Moncorvo	167.19	33	ePKPdf	PKPdf	07 21 48.1	+0.2
MVO				ePKPab	pPKPab	07 22 58.0	-0.8
MVO				ePP	PP	07 26 43.8	+3.5
MVO				eSS	SS	07 47 29.6	+5.5
MVO				eLR	LR	08 20 36.6	
MVO				i AMs_20		08 36 54.9	
	comp=Z,7μm,22.0s						
COI	Coimbra	167.19	39	ePKPdf	PKPdf	07 21 50.4	+2.5
COI				ePP	PP	07 26 43.8	+3.4
PCAS	Casmilo, Conde	167.25	40	ePKPdf	PKPdf	07 21 50.6	+2.7
PCAS				ePKPab	pPKPab	07 22 57.5	-1.6
PCAS				ePP	PP	07 26 45.1	+4.3
PSBE	So Bento	167.45	43	ePKPdf	PKPdf	07 21 51.9	+3.8
PSBE				ePKPab	pPKPab	07 22 58.9	-1.2
PSBE				ePP	PP	07 26 45.6	+3.8
MTE	Manteigas	167.52	37	ePKPdf	PKPdf	07 21 48.0	-0.2
MTE				ePKPab	pPKPab	07 22 57.1	-3.2
MTE				ePP	PP	07 26 46.0	+3.9
MTE				eSS	SS	07 47 38.9	+11
MTE				eLR	LR	08 21 01.2	
MTE				i AMs_20		08 36 17.5	
	comp=Z,8μm,22.0s						
LIS	Lisbon	167.74	46	ePKPdf	PKPdf	07 21 48.8	+0.5
LIS				ePP	PP	07 26 43.7	+0.3
LIS				eSS	SS	07 47 32.8	+2.5
LIS				IAMs_20	IAMs_20	08 44 45.7	
	comp=Z,10μm,18.6s						
LIS	Lisbon	167.74	46	ePKPdf	PKPdf	07 21 52.0	+3.7
LIS				ePP	PP	07 26 49.9	+6.5
PSARD	Sardoal	167.75	41	ePKPdf	PKPdf	07 21 48.2	-0.1
PSARD				ePKPab	PKPab	07 22 57.9	+2.9
PSARD				ePP	PP	07 26 46.7	+3.3
PCBR	Castelo Branco	167.96	38	ePKPdf	PKPdf	07 21 49.0	+0.6
PCBR				ePP	PP	07 26 47.9	+3.6
PMTG	Montargil	168.08	43	ePKPdf	PKPdf	07 21 48.1	-0.4
PMTG				ePKPab	pPKPab	07 23 00.2	-2.6
PMTG				ePP	PP	07 26 48.0	+2.9
EJON	La Jonquera	168.25	357	PKP	PKPdf	07 21 47.5	-1.1
PMRV	Marv??o	168.30	39	ePKPdf	PKPdf	07 21 48.3	-0.4
PMRV				ePKPab	pPKPab	07 23 00.8	-3.0
PMRV				ePP	PP	07 26 49.4	+3.2
PMRV				eSS	SS	07 47 36.6	+1.0
PMRV				eLR	LR	08 19 52.4	
PMRV				i AMs_20		08 36 44.1	
	comp=Z,9μm,22.0s						
EVO	Evora	168.55	44	PKP	PKPdf	07 21 49.3	+0.4
EVO	Evora	168.55	44	ePKPdf	PKPdf	07 21 49.2	+0.3
EVO				ePP	PP	07 26 52.7	+5.2
PESTR	Estremoz	168.58	42	PKP	PKPdf	07 21 48.8	-0.1
PESTR	Estremoz	168.58	42		PKPdf	07 21 48.4	-0.5
PESTR	Estremoz	168.58	42	ePKPdf	PKPdf	07 21 48.8	-0.1
PESTR				ePKPab	pPKPab	07 23 03.3	-1.8
PESTR				ePP	PP	07 26 50.5	+2.9
PTEO	Sao Teotonio	168.69	50	ePKPdf	PKPdf	07 21 50.7	+1.7
PTEO				ePP	PP	07 26 55.2	+6.8
PFVI	Vila Bisbo	168.85	52	PKP	PKPdf	07 21 49.2	+0.1
PFVI	Vila Bisbo	168.85	52	ePKPdf	PKPdf	07 21 50.2	+1.1
PFVI				ePKPab	pPKPab	07 23 05.1	-1.2
PFVI				ePP	PP	07 26 55.8	+6.5
MESJ	Messejana	168.85	47	ePKPdf	PKPdf	07 21 49.6	+0.5
MESJ				ePP	PP	07 26 49.5	+0.4
MESJ				eSS	SS	07 47 43.6	+2.1
MESJ				IAMs_20	IAMs_20	08 35 40.4	
	comp=Z,10μm,25.8s						
MESJ	Messejana	168.85	47	ePKPdf	PKPdf	07 21 52.7	+3.6
MESJ				ePKPab	pPKPab	07 23 03.7	-2.6
MESJ				ePP	PP	07 26 54.8	+5.6
MORF	Marmelete	168.88	51	ePKPdf	PKPdf	07 21 49.5	+0.3
MORF				ePP	PP	07 26 49.5	+0.1
MORF				eSS	SS	07 47 44.3	+2.2
MORF				IAMs_20	IAMs_20	08 28 08.7	
	comp=E,11μm,34.6s						
MORF	Marmelete	168.88	51	ePKPdf	PKPdf	07 21 52.7	+3.6
MORF				ePP	PP	07 26 55.3	+5.9
PBEJ	Beja	168.96	46	ePKPdf	PKPdf	07 21 51.8	+2.6
PBEJ				ePP	PP	07 26 57.8	+8.2
EBAD	Badajoz	168.98	41	PKP	PKPdf	07 21 49.3	+0.2
PCVE	Castro Verde	169.09	48	ePKPdf	PKPdf	07 21 53.4	+4.1
PCVE				ePKPab	pPKPab	07 23 06.4	-1.0
PCVE				ePP	PP	07 26 55.7	+5.4
PBDV	Barranco-do-Ve	169.39	49	ePKPdf	PKPdf	07 21 49.6	+0.2
PBDV				ePKPab	pPKPab	07 23 07.4	-1.3
PBDV				ePP	PP	07 26 58.6	+6.6
PVAQ	Vaqueiros	169.43	48	ePKPdf	PKPdf	07 21 53.4	+3.9
PVAQ				ePKPab	pPKPab	07 23 07.2	-1.6
PVAQ				ePP	PP	07 26 58.0	+5.9
PVAQ				eLR	LR	08 21 06.4	
PVAQ				i AMs_20		08 46 07.6	
	comp=E,8μm,20.0s						
UCM	Universidad Co	169.45	23	PKP	PKPdf	07 21 49.5	+0.1
PAB	San Pablo	169.69	29	⇑PKIKP	PKPdf	07 21 49.4	-0.3
ESBB	Sonseca Array	169.74	27		PKPdf	07 21 49.5	-0.1
ESDC	Sonseca Array	169.74	28		PKPdf	07 21 49.5	-0.1
ESDC	Sonseca Array	169.74	28	PKP	PKPdf	07 21 47.3	-2.4
	comp=E,12nm,1.0s,baz=343,slow=2.4,SNR=34						
ESDC				PKPab	PKPab	07 23 03.2	-0.5
	comp=E,17nm,0.9s,baz=330,slow=3.0,SNR=8.6						
ESDC				PP	PP	07 26 51.6	-1.5
	comp=E,9.7nm,1.1s,baz=349,slow=4.9,SNR=6.6						
EMIN	Mina Concepcio	169.85	44	PKP	PKPdf	07 21 50.2	+0.5
MAHO	Mahon	170.66	350	PKP	PKPdf	07 21 48.8	-1.2
EADA	Adamuz	170.71	35	PKP	PKPdf	07 21 49.9	-0.3
ECHE	Chera	170.77	15	PKP	PKPdf	07 21 50.4	+0.2
ESPR	Espera	170.93	45	PKP	PKPdf	07 21 51.2	+0.9
ETOS	Mallorca	170.93	357	PKP	PKPdf	07 21 49.9	-0.4
AVE	Averroes	171.47	70	PKP	PKPdf	07 21 50.9	+0.2
EIBI	Ibiza	171.66	4	PKP	PKPdf	07 21 50.7	+0.1
EGOR	Sierra Gorda,	171.75	37	PKP	PKPdf	07 21 49.9	-1.0
EMIJ	Mijas	171.78	43	PKP	PKPdf	07 21 49.9	-0.8
EMAL	Malaga-Limoner	171.84	40	PKP	PKPdf	07 21 49.7	-1.1
CEU	Ceuta	171.84	49	PKP	PKPdf	07 21 50.6	-0.2
TIO	Tiouine	171.90	86	PKP	PKPdf	07 21 51.5	+0.3
EQTA	Presa de Quent	172.01	34	PKP	PKPdf	07 21 50.2	-0.7
KEST	Kesra	172.16	312	PKP	PKPdf	07 21 49.3	-1.8
	comp=E,32nm,0.9s,baz=101,slow=5.2,SNR=29						
KEST				PKPab	PKPab	07 23 13.2	-1.4
	comp=E,44nm,0.8s,baz=116,slow=1.8,SNR=7.6						
KEST	Kesra	172.16	312	P	PKPdf	07 21 54.9	+3.8
	SNR=30						
ELGU	Los Guajares,	172.19	36	PKP	PKPdf	07 21 50.9	-0.1
TLOR	Lorca, Murcia	172.36	24	PKP	PKPdf	07 21 50.6	-0.4
CMAH	Djebel Manchou	172.64	325	P	PKPdf	07 21 50.6	-0.6
CART	Cartagena	172.65	20	PKP	PKPdf	07 21 50.4	-0.7
ENIJ	Nijar	172.77	29	PKP	PKPdf	07 21 50.9	-0.3
CAEH	'Ain El Ouahch	172.78	328	P	PKPdf	07 21 52.6	+1.4
CKFL	Kef-Lekhel	173.15	327	P	PKPdf	07 21 51.9	+0.4
IFR	Ifrane	173.21	64	PKP	PKPdf	07 21 52.3	+0.6
CASM	Ain Smara	173.37	328	P	PKPdf	07 21 55.0	+3.5
DFRA	Djebel Bou Aff	173.39	333	P	PKPdf	07 21 52.3	+0.7

IDC 19 07:19:21.9±7.8, 30°.27S×178°.02W, h0^{km}, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=327.4km s-min=60.5km az=156.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.10	267	P	P	07 27 23.9	-0.2
	0.4nm,0.8s,baz=94,slow=7.1,SNR=1.4						
	0.4nm,0.8s						
WRA	Warramunga Arr	44.07	272	P	P	07 27 32.0	+0.1
	0.4nm,0.3s,baz=111,slow=8.1,SNR=8.2						
	0.4nm,0.3s						
FINES	FINESS Array B	145.01	340	PKPbc	PKPbc	07 38 59.2	-0.6
	1.1nm,0.8s,baz=64,slow=4.4,SNR=5.1						

IDC 19 07:24:49.9±3.2, 31°.20S×177°.35W, h0^{km}, mb3.6/2, mbtmp3.7/3, ML3.3/1, Error ellipse: s-maj=75.4km s-min=37.4km az=116.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.39	211	Pn	Pn	07 26 52.4	-0.3
	0.3nm,0.3s,baz=50,slow=7.9,SNR=1.9						
URZ				Sn	Sn	07 28 29.2	+1.1
	1.6nm,0.3s,baz=97,slow=21,SNR=10						
	7.8nm,1.0s						
ASAR	Alice Springs	43.63	267	P	P	07 32 56.5	+0.2
	0.3nm,0.6s,baz=106,slow=7.7,SNR=6.7						
	0.3nm,0.6s						
WRA	Warramunga Arr	44.69	273	P	P	07 33 04.5	-0.4
	0.7nm,0.5s,baz=111,slow=8.0,SNR=8.4						
	0.7nm,0.5s						
FINES	FINESS Array B	146.08	340	PKPbc	PKPdf	07 44 30.3	0.0
	0.7nm,0.5s,baz=65,slow=4.7,SNR=5.9						

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*IDC **19** 07:52:21.5±5.5, 30°.33N×141°.91E, h0^{km}, mb3.5/5, mbtmp3.5/6, ML2.6/1, Error ellipse: s-maj=208.2km s-min=29.9km az=73.0*

ISC 19 07:52:24.2±4.8, 30°.4N±0°.4×14°2E±°, h23^{km}, n6, σ1^{s}59/6, mb3.5/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	6.89	333	Pn	Pn	07 54 02.8	-1.0
	0.1nm,0.3s,baz=146,slow=11,SNR=5.8						
	2.3nm,0.9s						
SONM	Songino Array	32.31	313	P	P	07 58 51.0	-0.6
	0.3nm,0.4s,baz=98,slow=7.4,SNR=1.7						
	0.3nm,0.4s						
MKAR	Makanchi Array	48.33	307	P	P	08 01 04.2	+0.4
	0.3nm,0.6s,baz=95,slow=7.2,SNR=1.9						
	0.3nm,0.6s						
WRA	Warramunga Arr	50.65	189	P	P	08 01 21.1	-0.6
	0.4nm,1.0s,baz=7.8,slow=7.8,SNR=1.5						
	0.4nm,1.0s						
KURBB	Kurchatov Arra	50.68	313	P	P	08 01 22.0	+0.3
	0.6nm,0.6s,baz=90,slow=8.3,SNR=1.8						
	0.6nm,0.6s						
BVAR	Borovoye Array	55.55	316	P	P	08 01 59.9	+2.4
	0.7nm,0.5s,baz=88,slow=10,SNR=2.9						
	0.7nm,0.5s						

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*IDC **19** 08:00:14.5±3.4, 53°.63N×87°.85E, h0^{km}, mbtmp2.8/2, ML2.2/2, Error ellipse: s-maj=29.5km s-min=17.8km az=54.0*

ASRS 19 08:00:12.0±1.4, 53°.60N×87°.90E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.86	282	I	I	08 11 55.0	
	0.1nm,1.1s,baz=98,slow=322,SNR=11						
ZALV	Zalesovo Beam	1.86	282	Pg	Pg	08 00 47.6	-0.1
	0.8nm,0.3s,baz=99,slow=14,SNR=8.6						
ZALV				Lg	Lg	08 01 12.1	
	1.8nm,0.3s,baz=102,slow=21,SNR=8.7						
KURBB	Kurchatov Arra	6.50	246	Pn	Pn	08 01 51.5	+2.8
	baz=63,slow=14,SNR=1.6						
KURBB				Lg	Lg	08 03 40.7	
	0.1nm,0.3s,baz=63,slow=32,SNR=5.9						
	0.4nm,0.3s						
MKAR	Makanchi Array	7.70	210	Pn	Pn	08 02 09.4	+4.0
	0.1nm,0.3s,baz=30,slow=14,SNR=2.3						
MKAR				Lg	Lg	08 04 20.0	
	baz=29,slow=29,SNR=4.3						
	0.2nm,0.4s						

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*ASRS **19** 08:05:14.0±1.0, 54°.40N×86°.82E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 19 08:05:15.0±3.4, 54°.53N×86°.96E, h0^{km}, mbtmp3.1/2, ML2.4/2, Error ellipse: s-maj=29.8km s-min=20.9km az=52.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.39	246	I	I	08 13 40.0	
	baz=68,slow=318,SNR=4.2						
ZALV	Zalesovo Beam	1.39	246	Pg	Pg	08 05 39.5	-2.0
	0.8nm,0.3s,baz=62,slow=16,SNR=11						
ZALV				Lg	Lg	08 05 59.2	
	1.4nm,0.3s,baz=64,slow=26,SNR=7.4						
KURBB	Kurchatov Arra	6.46	236	Pn	Pn	08 06 51.7	+0.5
	0.1nm,0.3s,baz=53,slow=14,SNR=6.6						
	1.5nm,0.2s						
MKAR	Makanchi Array	8.30	203	Pn	Pn	08 07 18.0	+1.6
	0.1nm,0.3s,baz=21,slow=8.5,SNR=3.1						
MKAR				Lg	Lg	08 09 40.9	
	baz=20,slow=30,SNR=3.4						
	0.2nm,0.5s						

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*IDC **19** 08:07:48.8±1.8, 34°.40N×43°.32E, h0^{km}, mb3.8/4, mbtmp3.6/10, ML3.6/6, Error ellipse: s-maj=39.2km s-min=15.2km az=148.0*

*AFAD **19** 08:07:56.9, 35°.72N×42°.88E, h8^{km}±2^{km}, MW4.1*

ISC 19 08:07:57.3±2.3, 35°.74N±0°.09×42°.92E±0°.05, h6^{km}±14^{km}, n30, σ2^{s}13/32, mb3.7/4, Iraq

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUKT	Cukurca	1.60	20	P	Pg	08 08 27.8	-0.3
CUKT	Cukurca	1.60	20	P	Pg	08 08 27.8	-0.3
CUKT				S	Sg	08 08 53.4	+4.6
CUKT				i IAML		08 09 10.0	
	comp=N,2μm,0.8s						
SIRN	Sırnak	1.80	347	P	Pb	08 08 29.7	-1.1
SIRN				S	Sg	08 08 56.5	+1.4
SIRN				i IAML		08 09 11.0	
	comp=E,3μm,0.6s						
HAKT	HAKKARI	1.92	19	P	Pb	08 08 33.3	+0.3
HAKT				S	Sg	08 08 59.7	+0.6
HAKT				i IAML		08 09 18.0	
	comp=N,737nm,0.6s						
MIDY	Mardin/Midyat-	2.06	324	P	Pn	08 08 30.4	-2.3
MIDY				S	Sg	08 09 02.8	-0.8
MARD	Mardin	2.33	313	P	Pn	08 08 37.0	+0.6
MARD				S	Sb	08 09 09.5	+0.6
BTMN	Batman	2.52	329	P	Pg	08 08 45.8	+0.2
BTMN				S	Sg	08 09 22.4	+4.1
AKDM	Akdamar-Van	2.58	1	eP	Pb	08 08 42.6	-1.6
SVAN	Silvan-Diyarba	2.77	331	eP	Pg	08 08 48.5	-1.9
SVAN	Silvan-Diyarba	2.77	331	P	Pg	08 08 49.6	-0.8
SVAN				S	Sg	08 09 26.1	-0.3
VANB	Van	2.87	7	i P	Pb	08 08 46.2	-2.9
GURO	Guroymak-BITLI	2.89	346	eP	Pb	08 08 47.9	-1.5
DIYA	Diyarbakir	3.13	315	P	Pb	08 08 51.9	-1.5
DIYA				S	Sb	08 09 31.7	-0.1
DIYA				i IAML		08 09 49.0	
	comp=E,2μm,0.8s						
GNI	Garni	4.63	18	Pn	Pb	08 09 17.8	-1.3
	1.3nm,0.3s,baz=180,slow=19,SNR=5.4						
	9.3nm,0.5s						
GAZ	Gaziantep	4.81	289	eP	Pg	08 09 26.5	-3.1
KMRS	Kahramanmaras	5.15	292	P	Pb	08 09 30.1	+2.3
DARE	Darende-Malaty	5.18	305	P	Pb	08 09 27.6	-0.8
TAHT	Tahtakopru-Hat	5.49	279	P	Pb	08 09 34.8	+1.2
ASF	Jabal al Asfar	6.14	236	Pn	Pn	08 09 15.9	-13
	1.7nm,0.3s,baz=89,slow=8.6,SNR=6.1						
ASF				Pg	Pb	08 09 35.3	-9.5
	3.0nm,0.3s,baz=88,slow=15,SNR=8.0						
ASF				Lg	Lg	08 10 43.0	
	7.0nm,0.3s,baz=93,slow=22,SNR=9.8						
	3.4nm,0.3s						
MMAI	Mount Meron Ar	6.78	249	Pn	Pn	08 09 27.8	-10
	6.3nm,0.3s,baz=78,slow=15,SNR=6.6						
MMAI				Lg	Lg	08 11 05.4	
	16nm,0.3s,baz=115,slow=30,SNR=6.6						
	1.1nm,0.2s						
BRTR	Keskin Array B	8.36	301	Pn	Pn	08 10 09.3	+10
	0.1nm,0.3s,baz=139,slow=11,SNR=2.9						
BRTR				Pg	Pb	08 10 27.5	+5.0
	0.1nm,0.3s,baz=125,slow=14,SNR=2.6						
	0.6nm,0.8s						
EIL	Elat	9.04	230	Pn	Pn	08 09 54.9	-13
	0.9nm,0.3s,baz=13,slow=18,SNR=4.1						
EIL				Lg	Lg	08 12 15.6	
	2.4nm,0.3s,baz=76,slow=17,SNR=6.1						
	1.3nm,0.4s						
IDI	Anoyia	14.69	273	Pn	P	08 11 32.0	-0.1
	0.6nm,0.3s,baz=67,slow=12,SNR=7.2						
MLR	Muntele Rosu	16.12	312	Pn	P	08 11 58.9	+11
	1.0nm,0.3s,baz=133,slow=12,SNR=4.7						
AKTO	Aktyubinsk	18.31	32	P	P	08 12 13.5	+1.4
	0.3nm,0.3s,baz=219,slow=6.8,SNR=6.1						
	0.6nm,0.4s						
WSAR	Wadi Sarin	18.47	128	P	P	08 11 59.6	-14
	0.1nm,0.7s,baz=303,slow=23,SNR=7.4						
ARTI	Arti	23.17	22	P	P	08 13 08.9	+4.4
	3.1nm,0.6s,baz=222,slow=3.4,SNR=3.4						
	3.1nm,0.6s						
GERES	GERESS Array B	25.09	311	P	P	08 13 26.2	+3.4
	1.0nm,0.6s,baz=106,slow=9.8,SNR=10						
	1.0nm,0.6s						
BVAR	Borovoye Array	25.91	40	P	P	08 13 28.5	-1.6
	0.2nm,0.3s,baz=233,slow=8.6,SNR=2.4						
	0.2nm,0.3s						
MKAR	Makanchi Array	31.28	57	P	P	08 14 15.7	-2.4
	0.6nm,0.5s,baz=260,slow=8.5,SNR=6.8						
	0.6nm,0.5s						

IDC 19 08:13:30.1±2.2, 5°.05S×134°.03E, h0^{km}, mb3.8/2, mbtmp3.5/5, ML3.3/3, MS4.5/3, Error ellipse: s-maj=93.7km s-min=27.6km az=77.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	14.70	325	LR	LR	08 23 29.1	
	comp=Z,2μm,18.5s,baz=282,slow=41						
WRA	Warramunga Arr	14.81	179	Pn	Pn	08 17 01.9	+0.9
	0.1nm,0.3s,baz=354,slow=13,SNR=1.5						
WRA				Sn	Sn	08 19 41.3	-4.7
	0.1nm,0.3s,baz=360,slow=23,SNR=1.7						
	0.1nm,0.4s						
FITZ	Fitzroy Crossi	15.35	212	Pn	Pn	08 17 08.1	-0.1
	0.3nm,0.3s,baz=34,slow=12,SNR=13						
FITZ				Sn	Sn	08 19 51.5	-7.5

	0.2nm,0.3s,baz=57,slow=3.1,SNR=1.8						
FITZ				LR	LR	08 23 03.8	
	comp=Z,1µm,20.7s,baz=227,slow=37						
	1.0nm,0.4s						
ASAR	**Alice Springs**	**18.51**	**180**	P	Pn	08 17 48.5	+0.3
	0.1nm,0.3s,baz=1.4,slow=12,SNR=7.5						
ASAR				LR	LR	08 24 32.0	
	comp=Z,2µm,18.9s,baz=352,slow=36						
	0.2nm,0.5s						
STKA	**Stephens Creek**	**27.62**	**166**	P	P	08 19 18.8	-0.6
	0.8nm,0.5s,baz=343,slow=11,SNR=1.7						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**68.88**	**325**	P	P	08 24 36.9	+0.1
	0.3nm,0.4s,baz=120,slow=7.2,SNR=4.6						
	0.3nm,0.4s						

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*SDD **19** 08:18:50.1±2.8, 17.°92N×65.°69W, h25^{km}±66^{km}, MD3.2, ML2.4, MW2.9*

*RSPR **19** 08:18:50.7, 17.°83N×65.°76W, h12^{km}, MD2.5/15*

NEIC 19 08:18:50.4±0.7**, 17.°88N**±0.°06×**65.°81W**±0.°08**, h30^{km}**±5^{km}**, ML2.5**/24**, Md2.5**/15(RSPR)**, 13C, Error ellipse: s-maj=11.5km s-min=6.8km az=58.0, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDPR	**Patillas Dam,**	**0.24**	**303**	Pg	Pb	08 18 56.9	-0.2
PDPR				IAML		08 19 02.1	
	comp=N,488nm,0.1s						
PDPR	**Patillas Dam,**	**0.24**	**303**	⇑eP	Pb	08 18 56.9	-0.2
PDPR	**Patillas Dam,**	**0.24**	**303**	eS	Sb	08 19 02.0	+0.3
HUMP	**Col San Antoni**	**0.26**	**351**		Pb	08 18 57.4	+0.1
HUMP					Sb	08 19 02.6	+0.6
HUMP	**Col San Antoni**	**0.26**	**351**	IAML		08 19 03.2	
	comp=E,506nm,0.2s						
HUMP				IAML		08 19 03.4	
	comp=N,342nm,0.2s						
HUMP	**Col San Antoni**	**0.26**	**351**	⇑eP	Pb	08 18 57.4	+0.1
HUMP	**Col San Antoni**	**0.26**	**351**	eS	Sb	08 19 02.6	+0.6
IGPR	**InterUniversit**	**0.30**	**286**		Pb	08 18 57.7	-0.1
IGPR					Sb	08 19 03.4	+0.6
IGPR	**InterUniversit**	**0.30**	**286**	IAML		08 19 03.8	
	comp=N,562nm,0.2s						
IGPR				IAML		08 19 04.5	
	comp=E,460nm,0.2s						
IGPR	**InterUniversit**	**0.30**	**286**	⇑iP	Pb	08 18 57.7	-0.1
IGPR	**InterUniversit**	**0.30**	**286**	eS	Sb	08 19 03.4	+0.6
SJG	**San Juan**	**0.40**	**305**		Pb	08 18 59.0	-0.2
SJG	**San Juan**	**0.40**	**305**	IAML		08 19 06.2	
	comp=E,521nm,0.2s						
SJG				IAML		08 19 06.4	
	comp=E,270nm,0.2s						
SJG	**San Juan**	**0.40**	**305**	⇑eP	Pb	08 18 59.0	-0.2
SJG	**San Juan**	**0.40**	**305**	eS	Sb	08 19 05.7	+0.5
SJG	**San Juan**	**0.40**	**305**	ePg	Pn	08 19 01.8	+1.6
SJG				eSg	Sn	08 19 06.3	-0.3
GCPR	**Guaynabo City**	**0.50**	**328**		Pb	08 19 00.9	+0.1
GCPR					Sb	08 19 07.8	-0.1
GCPR	**Guaynabo City**	**0.50**	**328**	IAML		08 19 08.6	
	comp=E,230nm,0.2s						
GCPR				IAML		08 19 09.2	
	comp=N,221nm,0.4s						
GCPR	**Guaynabo City**	**0.50**	**328**	⇑eP	Pb	08 19 00.9	+0.1
GCPR	**Guaynabo City**	**0.50**	**328**	eS	Sb	08 19 07.8	-0.1
ECPR	**Experimental S**	**0.68**	**309**	⇑eP	Pb	08 19 03.1	-0.8
ECPR	**Experimental S**	**0.68**	**309**	eS	Sn	08 19 13.9	+0.2
CELP	**Cerrillos**	**0.76**	**285**		Pb	08 19 04.4	-0.8
CELP					Sn	08 19 15.5	-0.1
CELP	**Cerrillos**	**0.76**	**285**	IAML		08 19 16.5	
	comp=N,146nm,0.3s						
CELP	**Cerrillos**	**0.76**	**285**	⇑eP	Pb	08 19 04.4	-0.8
CELP	**Cerrillos**	**0.76**	**285**	eS	Sn	08 19 15.5	-0.1
CELP	**Cerrillos**	**0.76**	**285**	ePg	Pb	08 19 04.6	-0.5
CELP				eSg	Sn	08 19 15.5	-0.1
CELP				IAML		08 19 16.4	
	comp=N,146nm,0.2s						
OBIP	**Obispado Ponce**	**0.78**	**282**		Pn	08 19 04.9	-0.5
OBIP					Sn	08 19 16.1	+0.1
OBIP	**Obispado Ponce**	**0.78**	**282**	IAML		08 19 17.0	
	comp=N,123nm,0.3s						
OBIP	**Obispado Ponce**	**0.78**	**282**	⇑iP	Pn	08 19 04.9	-0.5
OBIP	**Obispado Ponce**	**0.78**	**282**	eS	Sn	08 19 16.1	+0.1
EMPR	**Esperanza - Ma**	**0.91**	**311**		Pn	08 19 07.2	0.0
EMPR					Sb	08 19 20.1	+0.8
EMPR	**Esperanza - Ma**	**0.91**	**311**	⇑eP	Pn	08 19 07.2	0.0
EMPR	**Esperanza - Ma**	**0.91**	**311**	eS	Sb	08 19 20.1	+0.8
UUPR	**Utuado, UPR, P**	**0.94**	**293**		Pn	08 19 07.3	-0.3
UUPR					Sn	08 19 19.7	-0.5
UUPR	**Utuado, UPR, P**	**0.94**	**293**	⇑eP	Pn	08 19 07.3	-0.3
UUPR	**Utuado, UPR, P**	**0.94**	**293**	eS	Sn	08 19 19.7	-0.5
AOPR	**Arecibo Observ**	**1.01**	**297**		Pn	08 19 08.4	-0.2
AOPR					Sb	08 19 22.4	0.0
AOPR	**Arecibo Observ**	**1.01**	**297**	⇑eP	Pn	08 19 08.4	-0.2
AOPR	**Arecibo Observ**	**1.01**	**297**	eS	Sb	08 19 22.4	0.0
AOPR	**Arecibo Observ**	**1.01**	**297**	ePg	Pn	08 19 08.8	+0.2
AOPR				eSg	Sb	08 19 22.2	-0.2
AOPR				IAML		08 19 24.7	
	comp=N,364nm,0.2s						
MLPR	**Magueyes Islan**	**1.18**	**274**	ePg	Pn	08 19 10.2	-0.7
MLPR				eSg	Sb	08 19 28.5	+1.4
MLPR				IAML		08 19 29.7	
	comp=N,9.1nm,0.3s						
CRPR	**Cabo Rojo, PR**	**1.25**	**276**		Pn	08 19 12.5	+0.7
CRPR					Sn	08 19 27.4	-0.2
CRPR	**Cabo Rojo, PR**	**1.25**	**276**	⇑eP	Pn	08 19 12.5	+0.7
CRPR	**Cabo Rojo, PR**	**1.25**	**276**	eS	Sn	08 19 27.4	-0.2
CRPR	**Cabo Rojo, PR**	**1.25**	**276**	ePg	Pb	08 19 13.0	-0.3
CRPR				eSg	Sb	08 19 30.6	+1.6
CRPR				IAML		08 19 35.9	
	comp=N,39nm,1.6s						
LSP	**Las Mesas**	**1.25**	**284**		Pn	08 19 12.7	+0.7
LSP					Sb	08 19 29.5	+0.3
LSP	**Las Mesas**	**1.25**	**284**	⇑eP	Pn	08 19 12.7	+0.7
LSP	**Las Mesas**	**1.25**	**284**	eS	Sb	08 19 29.5	+0.3
AGPR	**Aguadilla, PR**	**1.37**	**295**		Pn	08 19 14.3	+0.7
AGPR					Sb	08 19 32.1	-0.4
AGPR	**Aguadilla, PR**	**1.37**	**295**	IAML		08 19 34.1	
	comp=N,156nm,0.4s						
AGPR				IAML		08 19 37.9	
	comp=E,120nm,0.4s						
AGPR	**Aguadilla, PR**	**1.37**	**295**	⇑eP	Pn	08 19 14.3	+0.7
AGPR	**Aguadilla, PR**	**1.37**	**295**	eS	Sb	08 19 32.1	-0.4
AGPR	**Aguadilla, PR**	**1.37**	**295**	ePg	Pn	08 19 14.1	+0.6
AGPR				eSg	Sb	08 19 32.4	-0.1
AGPR				IAML		08 19 33.9	
	comp=N,147nm,0.5s						
IDE	**Isla Desecheo**	**1.66**	**288**		Pn	08 19 18.6	+1.0
IDE					Sb	08 19 40.0	-1.0
IDE	**Isla Desecheo**	**1.66**	**288**	⇑eP	Pn	08 19 18.6	+1.0
IDE	**Isla Desecheo**	**1.66**	**288**	eS	Sb	08 19 40.0	-1.0

IDC 19 08:20:44.2±3.4**, 30.°60S**×**178.°49W, h0^{km}, mb3.5**/2**, mbtmp3.6**/3**, ML3.4**/1**, Error ellipse: s-maj=74.0km s-min=38.2km az=104.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.46**	**204**	Pn	Pn	08 22 48.9	+0.9
	0.4nm,0.3s,baz=45,slow=20,SNR=1.3						
URZ				Sn	Sn	08 24 22.8	-1.2
	0.3nm,0.3s,baz=339,slow=16,SNR=1.9						
	5.7nm,0.9s						
ASAR	**Alice Springs**	**42.67**	**267**	P	P	08 28 42.9	-0.1
	0.2nm,0.4s,baz=106,slow=7.1,SNR=4.7						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**43.68**	**273**	P	P	08 28 51.0	-0.1
	0.3nm,0.4s,baz=110,slow=8.2,SNR=7.0						
	0.3nm,0.4s						
FINES	**FINESS Array B**	**145.19**	**340**	PKPbc	PKPbc	08 40 21.6	-1.0
	2.0nm,0.9s,baz=28,slow=4.3,SNR=1.9						

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*IDC **19** 08:24:13.6±2.4, 31.°31S×177.°37W, h0^{km}, mb3.9/3, mbtmp3.8/4, ML3.0/1, Error ellipse: s-maj=63.1km s-min=33.7km az=125.0*

ISC 19 08:24:14.7±2.2**, 31.°4S**±0.°2×**177.°2W**±0.°4**, h10^{km}, n6,** σ**1.^{s}01**/8**, mb3.9**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.26**	**213**	Pn	**Pn**	**08 26 14.1**	**-0.5**
	0.2nm,0.3s,baz=30,slow=17,SNR=1.2						
URZ				Sn	**Sn**	**08 27 48.3**	**+0.3**
	2.5nm,0.3s,baz=90,slow=20,SNR=14						
	1.0nm,0.3s						
STKA	**Stephens Creek**	**34.90**	**258**	P	**P**	**08 31 07.4**	**+0.9**
	0.8nm,0.4s,baz=103,slow=14,SNR=3.1						
	0.8nm,0.4s						
ASAR	**Alice Springs**	**43.71**	**268**	P	**P**	**08 32 20.1**	**-0.1**
	0.7nm,0.7s,baz=107,slow=7.6,SNR=7.7						
	0.7nm,0.7s						
WRA	**Warramunga Arr**	**44.79**	**273**	P	**P**	**08 32 27.8**	**-1.1**
	1.1nm,0.4s,baz=111,slow=8.0,SNR=24						
	1.1nm,0.4s						
FINES	**FINESS Array B**	**146.31**	**340**	PKPbc	**PKPdf**	**08 43 54.9**	**+1.2**
	0.6nm,0.5s,baz=36,slow=3.1,SNR=5.4						
BRTR	**Keskin Array B**	**153.64**	**297**	PKPbc	**PKPbc**	**08 44 12.8**	**-1.2**
	0.3nm,0.6s,baz=97,slow=2.3,SNR=1.3						
BRTR				PKPab	**PKPab**	**08 44 26.9**	**+0.3**
	0.7nm,1.0s,baz=67,slow=4.3,SNR=4.0						

IDC 19 08:25:47.0±1.9**, 54.°70N**×**83.°74E, h0^{km}, mbtmp2.9**/2**, ML2.5**/2**, Error ellipse: s-maj=17.1km s-min=11.6km az=13.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.98**	**140**	I	I	08 31 50.0	
	baz=320,slow=315,SNR=0.9						
ZALV	**Zalesovo Beam**	**0.98**	**140**	Pg	Pg	08 26 04.6	-1.2
	2.2nm,0.3s,baz=323,slow=15,SNR=18						
ZALV				Lg	Lg	08 26 21.4	
	5.3nm,0.3s,baz=322,slow=29,SNR=16						
MKAR	**Makanchi Array**	**7.97**	**187**	Pn	Pn	08 27 43.6	-0.4
	0.1nm,0.3s,baz=12,slow=7.4,SNR=2.4						
MKAR				Lg	Lg	08 29 56.3	
	baz=11,slow=24,SNR=2.1						
	0.1nm,0.4s						
BVAR	**Borovoye Array**	**8.07**	**263**	Pn	Pn	08 27 45.3	-0.1
	baz=75,slow=14,SNR=3.0						
	0.6nm,0.3s						

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*RSNC **19** 08:27:55.0±0.3, 10°N±2°×7°0W±°, h0^{km}, M3.6, mB4.8, mb4.3, ML3.3, Mw(mB)4.1*

*FUNV **19** 08:27:57.0, 9.°70N×69.°89W, h5^{km}, MW3.7*

ISC 19 08:27:55.1±0.8**, 9.°77N**±0.°04×**69.°90W**±0.°03**, h10^{km}, n41,** σ**2.^{s}45**/65**, 1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEPV	**Terepaima**	**0.72**	**74**	⇓iP	**Pb**	**08 28 09.7**	**-0.1**
TEPV				eS	**Sb**	**08 28 19.5**	**-0.3**
SDV	**Santo Domingo**	**1.14**	**220**	P	**Pg**	**08 28 15.7**	**-1.3**
SDV				S	**Sg**	**08 28 29.8**	**-2.1**
SOCV	**Socops**	**1.75**	**213**	eP	**Pb**	**08 28 27.0**	**-0.4**
SOCV				eS	**Sg**	**08 28 50.0**	**-1.5**
BAUV	**El Baul**	**2.01**	**114**	eP	**Pb**	**08 28 30.3**	**-1.4**
BAUV				eS	**Sb**	**08 28 55.8**	**-0.9**
BENV	**Beln**	**2.27**	**85**	eP	**Pb**	**08 28 35.2**	**-1.1**
BENV				eS	**Sb**	**08 29 03.7**	**-0.8**
MCQV	**Machiques**	**2.61**	**276**	eP	**Pb**	**08 28 39.8**	**-2.2**
URIC	**Uribia, Colomb**	**2.82**	**313**	P	**Pn**	**08 28 42.2**	**+2.0**
URIC				S	**Sn**	**08 29 16.2**	**+1.9**
TACV	**Tcata**	**2.85**	**82**	eP	**Pn**	**08 28 42.7**	**+2.0**
CAPV	**Capacho**	**3.05**	**232**	eP	**Pn**	**08 28 45.4**	**+1.9**
FUNV	**FUNVISIS**	**3.12**	**77**	eP	**Pn**	**08 28 46.8**	**+2.3**
CRJC	**Cerrejon, Guaj**	**3.19**	**293**	P	**Pn**	**08 28 47.7**	**+2.3**
CRJC				S	**Sn**	**08 29 25.9**	**+2.3**
PAMC	**Pamplona, Colo**	**3.67**	**229**	P	**Pn**	**08 28 55.0**	**+2.5**
PAMC				S	**Sn**	**08 29 39.8**	**+3.7**
OCAC	**Ocana**	**3.71**	**246**	P	**Pn**	**08 28 55.0**	**+2.4**
OCAC				S	**Sg**	**08 29 49.8**	**-4.5**
TAMC	**Tame, Arauca**	**3.81**	**210**	P	**Pn**	**08 28 54.7**	**+0.8**
TAMC				S	**Sn**	**08 29 41.1**	**+2.4**
CACV	**CAICARA DEL OR**	**3.98**	**123**	eP	**Pb**	**08 29 03.8**	**-1.5**
ARGC	**Ariguani, Magd**	**4.29**	**272**	P	**Pn**	**08 29 02.4**	**+1.9**
ARGC				S	**Sn**	**08 29 52.3**	**+1.7**
SMRC	**Santa Marta, M**	**4.48**	**288**	P	**Pn**	**08 29 04.1**	**+1.0**
BARC	**Barichara**	**4.53**	**226**	P	**Pn**	**08 29 06.7**	**+2.7**
BARC				S	**Sn**	**08 30 02.1**	**+5.2**
BRJC	**Barrancabermej**	**4.71**	**234**	P	**Pn**	**08 29 07.7**	**+1.4**
BRJC				S	**Sn**	**08 30 07.3**	**+6.2**
RUSC	**La Rusia**	**4.98**	**220**	P	**Pn**	**08 29 12.2**	**+1.8**
RUSC				S	**Sn**	**08 30 11.4**	**+3.1**
PCRV	**Puerto La Cruz**	**5.20**	**85**	eP	**Pn**	**08 29 14.6**	**+1.6**
SJCC	**San Jacinto, C**	**5.21**	**272**	P	**Pn**	**08 29 15.3**	**+2.1**
SJCC				S	**Sn**	**08 30 15.2**	**+1.8**
ZARC	**Zaragoza, Cauc**	**5.40**	**246**	P	**Pn**	**08 29 17.4**	**+1.6**
ZARC				S	**Sn**	**08 30 17.8**	**-0.3**
PTBC	**PUERTO BERRIO,**	**5.54**	**235**	P	**Pn**	**08 29 18.6**	**+0.9**
PTBC				S	**Sn**	**08 30 18.4**	**-3.1**
SPBC	**San Pablo de B**	**5.82**	**226**	P	**Pn**	**08 29 24.3**	**+2.7**
SPBC				S	**Sn**	**08 30 32.5**	**+4.0**
UREC	**San Jos de Ur**	**5.92**	**251**	P	**Pn**	**08 29 26.3**	**+3.4**
	388nm17nm,0.7s						
UREC				S	**Sn**	**08 30 33.9**	**+3.0**
	388nm17nm,0.7s						
CHIC	**Chingaza**	**6.37**	**217**	P	**Pn**	**08 29 31.1**	**+1.7**
NORC	**Norcasia**	**6.46**	**230**	P	**Pn**	**08 29 31.7**	**+1.3**
	11nm,0.5s						
NORC				S	**Sn**	**08 30 48.6**	**+4.3**
	11nm,0.5s						
ROSC	**El Rosal**	**6.57**	**222**	P	**Pn**	**08 29 36.0**	**+3.8**
	30nm,0.7s						
ROSC				S	**Sn**	**08 30 50.6**	**+3.1**
	30nm,0.7s						
VILC	**Villavicencio,**	**6.76**	**214**	P	**Pn**	**08 29 36.4**	**+1.7**
	403nm34nm,0.6s						
VILC				S	**Sn**	**08 30 52.2**	**+0.3**
	403nm34nm,0.6s						
APAC	**Apartado, Choc**	**6.86**	**255**	P	**Pn**	**08 29 38.8**	**+3.0**
	17nm,1.3s						
APAC				S	**Sn**	**08 30 56.2**	**+2.1**
	17nm,1.3s						
GUY2C	**Guyana, Caldas**	**7.05**	**231**	P	**Pn**	**08 29 41.6**	**+2.7**
	34nm,0.6s						
GUY2C				S	**Sn**	**08 31 01.2**	**+1.7**
	34nm,0.6s						
CBOC	**Ciudad Bolivar**	**7.19**	**238**	P	**Pn**	**08 29 43.5**	**+2.9**
	11nm,1.1s						
ANIL	**Santa Ana**	**7.57**	**227**	P	**Pn**	**08 29 48.3**	**+2.4**
PRAC	**Prado**	**7.79**	**220**	P	**Pn**	**08 29 49.6**	**+0.9**
	15nm,0.4s						
ORTC	**Ortega, Tolima**	**7.88**	**223**	P	**Pn**	**08 29 51.6**	**+1.7**
	23nm,0.8s						
PLMC	**San Jos del P**	**7.96**	**233**	P	**Pn**	**08 29 53.4**	**+2.3**
	17nm,0.5s						
BCIP	**Isla Barro Col**	**9.82**	**267**	P	**Pn**	**08 30 16.5**	**0.0**
	47nm,1.6s						
FLOC	**Florencia**	**9.94**	**215**	P	**Pn**	**08 30 17.0**	**-1.2**
	6.7nm,1.1s						
SGC2	**Sao Gabriel da**	**10.27**	**163**	P	**Pn**	**08 30 20.0**	**-2.7**
	7.5nm,0.8s						
BOAV	**Boa Vista**	**11.85**	**128**	P	**Pn**	**08 30 43.9**	**-0.4**

IDC 19 08:32:27.3±3.0**, 30.°81S**×**177.°74W, h0^{km}, mb3.8**/3**, mbtmp3.9**/4**, ML2.8**/1**, MS4.3**/1**, Error ellipse: s-maj=69.6km s-min=36.4km az=115.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.56**	**208**	Pn	Pn	08 34 32.3	-0.2
	0.1nm,0.3s,baz=68,slow=5.4,SNR=2.8						
URZ				Sn	Sn	08 36 09.0	-0.7
	1.0nm,0.3s,baz=14,slow=14,SNR=7.4						
	12nm,1.1s						
STKA	**Stephens Creek**	**34.61**	**257**	P	P	08 39 19.8	+1.6
	3.0nm,0.9s,baz=101,slow=11,SNR=4.7						
	3.0nm,0.9s						
ASAR	**Alice Springs**	**43.32**	**267**	P	P	08 40 30.6	-0.7
	0.3nm,0.4s,baz=113,slow=8.1,SNR=4.1						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**44.34**	**272**	P	P	08 40 38.7	-0.8
	0.6nm,0.3s,baz=110,slow=8.0,SNR=15						
	0.6nm,0.3s						
VNDA	**Vanda**	**47.71**	**186**	LR	LR	08 57 41.7	
	comp=Z,342nm,21.7s,baz=267,slow=32						
FINES	**FINESS Array B**	**145.61**	**340**	PKPbc	PKPdf	08 52 06.3	-0.6
	0.9nm,0.5s,baz=40,slow=4.6,SNR=6.9						

STR 19 08:44:14.2±0.4**, 46°N**±3°×°±°**, h0^{km}, MLv1.9**/7**, Error ellipse: s-maj=0.0km s-min=0.0km az=11.2, preliminary, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLDF	**La Plantade**	**0.66**	**266**	Pg	Pg	08 44 25.9	-0.9
COLF	**Collangettes**	**0.79**	**231**	Pg	Pg	08 44 29.3	-0.1
COLF				Sg	Sg	08 44 40.8	+1.1
OGMY	**Moye**	**0.93**	**98**	Pg	Pg	08 44 32.5	+0.4
OGMY				Sg	Sg	08 44 44.2	0.0
PLYF	**Puligny Montra**	**0.94**	**7**	Pg	Pg	08 44 32.0	-0.3
PLYF				Sn	Sb	08 44 47.2	+0.7
AGO	**Saint Agoulin**	**1.00**	**272**	Pg	Pg	08 44 33.2	-0.1
AGO				Sg	Sg	08 44 46.4	+0.1
GRN	**Grenoble**	**1.14**	**133**	Pn	Pb	08 44 36.5	-0.3
LBL	**Lubilhac**	**1.22**	**230**	Pg	Pg	08 44 37.2	-0.4
LBL				Sg	Sg	08 44 53.3	0.0
LOR	**Lormes**	**1.34**	**339**	Pg	Pg	08 44 39.4	-0.4
LOR				Sg	Sg	08 44 57.2	+0.1
VERF	**Verneugheol**	**1.48**	**260**	Pn	Pn	08 44 42.0	-0.1
VERF				Sg	Sg	08 45 01.8	+0.1

IDC 19 08:50:10.8±3.8**, 54.°25N**×**87.°39E, h0^{km}, mbtmp2.5**/2**, ML2.3**/2**, Error ellipse: s-maj=33.3km s-min=20.5km az=50.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.54**	**260**	I	I	08 59 30.2	
	baz=79,slow=325,SNR=6.9						
ZALV	**Zalesovo Beam**	**1.54**	**260**	Pg	Pn	08 50 37.9	-1.7
	1.3nm,0.3s,baz=78,slow=15,SNR=6.6						
ZALV				Lg	Lg	08 51 00.1	
	0.8nm,0.3s,baz=76,slow=26,SNR=2.4						
KURBB	**Kurchatov Arra**	**6.52**	**240**	Pn	Pn	08 51 48.6	+0.7
	baz=59,slow=44,SNR=2.5						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**8.14**	**206**	Pn	Pn	08 52 11.5	+1.3
	baz=25,slow=14,SNR=1.6						
	0.1nm,0.3s						

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*FUNV **19** 08:55:25.7, 9.°73N×69.°90W, h5^{km}, MW3.4*

*RSNC **19** 08:55:27.7±0.7, 10°N±3°×7°0W±°, h0^{km}, M3.3, mB4.1, ML3.0, Mw(mB)3.2*

ISC 19 08:55:24.1±0.8**, 9.°73N**±0.°05×**69.°90W**±0.°03**, h10^{km}, n22,** σ**2.^{s}02**/32**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEPV	**Terepaima**	**0.74**	**72**	eP	**Pb**	**08 55 38.7**	**-0.3**
TEPV				eS	**Sb**	**08 55 48.3**	**-0.9**
SDV	**Santo Domingo**	**1.11**	**221**	P	**Pg**	**08 55 44.9**	**-0.5**
SDV				S	**Sg**	**08 55 58.7**	**-1.1**
SOCV	**Socops**	**1.72**	**213**	eP	**Pb**	**08 55 55.8**	**0.0**
SOCV				eS	**Sg**	**08 56 19.3**	**-0.1**
BAUV	**El Baul**	**2.00**	**113**	eP	**Pb**	**08 55 59.4**	**-1.1**
BAUV				eS	**Sb**	**08 56 25.6**	**+0.2**
BENV	**Beln**	**2.28**	**84**	eP	**Pb**	**08 56 04.2**	**-1.2**
BENV				eS	**Sb**	**08 56 31.3**	**-2.5**
MCQV	**Machiques**	**2.61**	**277**	eP	**Pn**	**08 56 07.9**	**+1.5**
URIC	**Uribia, Colomb**	**2.84**	**314**	P	**Pn**	**08 56 10.9**	**+1.4**
URIC				S	**Sn**	**08 56 44.1**	**+0.3**
TACV	**Tcata**	**2.86**	**82**	eP	**Pn**	**08 56 11.6**	**+1.8**
CAPV	**Capacho**	**3.02**	**232**	eP	**Pn**	**08 56 14.0**	**+1.8**
FUNV	**FUNVISIS**	**3.13**	**76**	eP	**Pn**	**08 56 15.1**	**+1.4**
CRJC	**Cerrejon, Guaj**	**3.20**	**294**	P	**Pn**	**08 56 16.6**	**+2.0**
CRJC				S	**Sn**	**08 56 54.7**	**+1.9**
PAMC	**Pamplona, Colo**	**3.65**	**230**	P	**Pb**	**08 56 25.2**	**-3.7**
OCAC	**Ocana**	**3.69**	**247**	P	**Pn**	**08 56 24.1**	**+2.8**
OCAC				S	**Sg**	**08 57 19.0**	**-3.6**
TAMC	**Tame, Arauca**	**3.77**	**210**	P	**Pn**	**08 56 24.1**	**+1.7**
CACV	**CAICARA DEL OR**	**3.96**	**123**	eP	**Pb**	**08 56 32.7**	**-1.3**
ARGC	**Ariguani, Magd**	**4.28**	**272**	P	**Pn**	**08 56 31.5**	**+2.1**
ARGC				S	**Sn**	**08 57 20.1**	**+0.6**
SMRC	**Santa Marta, M**	**4.49**	**289**	P	**Pn**	**08 56 31.9**	**-0.2**
BARC	**Barichara**	**4.50**	**226**	P	**Pn**	**08 56 36.1**	**+3.5**
SJCC	**San Jacinto, C**	**5.20**	**272**	P	**Pn**	**08 56 44.8**	**+2.7**
SJCC				S	**Sn**	**08 57 46.2**	**+3.9**
PCRV	**Puerto La Cruz**	**5.21**	**85**	eP	**Pn**	**08 56 43.7**	**+1.6**
ZARC	**Zaragoza, Cauc**	**5.38**	**246**	P	**Pn**	**08 56 46.4**	**+1.9**
PTBC	**PUERTO BERRIO,**	**5.51**	**235**	P	**Pn**	**08 56 47.5**	**+1.2**

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*IDC **19** 08:59:30.2±1.8, 67.°42N×22.°95E, h0^{km}, mbtmp2.5/2, ML1.9/2, Error ellipse: s-maj=36.9km s-min=10.5km az=94.0*

*HEL **19** 08:59:30.9±0.1, 67.°44N×23.°35E, h0^{km}, ML1.7, Explosion*

*UPP **19** 08:59:30.9±0.3, 67.°42N×23.°31E, h0^{km}, ML1.8, Unknown*

*BER **19** 08:59:35.4±2.5, 67.°56N×23.°17E, h0^{km}, ML1.4, Suspected explosion*

ISC 19 08:59:29.0±0.7**, 67.°47N**±0.°02×**23.°55E**±0.°02**, h0^{km}, n40,** σ**1.^{s}03**/71**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLF	**Kolari**	**0.28**	**145**	PG	**Pb**	**08 59 36.7**	**-0.3**
	baz=313						
KLF				SG	**Sb**	**08 59 41.4**	**-0.8**
PAJU	**Pajala**	**0.48**	**201**	P	**Pg**	**08 59 38.7**	**+0.6**
PAJU				S	**Sg**	**08 59 44.4**	**+0.2**
PAJU	**Pajala**	**0.48**	**201**	PG	**Pg**	**08 59 38.6**	**+0.6**
PAJU				SG	**Sg**	**08 59 43.9**	**-0.3**
MASU	**Masugnsbyn**	**0.60**	**270**	P	**Pg**	**08 59 40.6**	**+0.1**
MASU				S	**Sg**	**08 59 47.7**	**-0.4**
LANU	**Lannavaara**	**0.83**	**315**	PG	**Pb**	**08 59 46.6**	**+0.3**
LANU				SB	**Sn**	**08 59 59.7**	**-1.3**
HEF	**Hetta**	**0.95**	**2**	eP	**Pn**	**08 59 49.0**	**-0.6**
HEF				eS	**Sn**	**09 00 03.5**	**-0.2**
HEF	**Hetta**	**0.95**	**2**	PB	**Pn**	**08 59 49.3**	**-0.3**
	baz=184						
HEF				SG	**Sg**	**08 59 58.2**	**-1.1**
HEF				MSG		09 00 01.0	
	comp=Z,7.9nm,0.2s						
ERTU	**Ertsjaerv**	**1.06**	**211**	P	**Pg**	**08 59 48.8**	**-0.4**
ERTU				S	**Sg**	**09 00 02.2**	**-0.8**
ERTU	**Ertsjaerv**	**1.06**	**211**	PG	**Pg**	**08 59 48.8**	**-0.4**
ERTU				SB	**Sg**	**09 00 02.6**	**-0.4**
DUNU	**Dundret**	**1.21**	**255**	P	**Pg**	**08 59 51.7**	**-0.4**
RNF	**Rovaniemi**	**1.29**	**131**	PG	**Pn**	**08 59 55.2**	**+0.9**
RNF				SB	**Sn**	**09 00 13.4**	**+1.1**
KUA	**Kurravaara**	**1.32**	**293**	P	**Pg**	**08 59 54.2**	**0.0**
TOF	**Tornio**	**1.43**	**167**	PG	**Pb**	**08 59 56.7**	**+0.3**
TOF				MSG		09 00 13.7	
	comp=Z,3.8nm,0.2s						
TOF				SG	**Sg**	**09 00 13.7**	**-1.0**
KOVU	**Salmi**	**1.49**	**302**	P	**Pb**	**08 59 57.7**	**+0.1**
RATU	**Laukkuluspa**	**1.56**	**285**	P	**Pn**	**08 59 58.1**	**+0.2**
KALU	**Kalix**	**1.62**	**183**	P	**Pb**	**08 59 59.6**	**-0.1**
KALU	**Kalix**	**1.62**	**183**	PG	**Pb**	**08 59 59.7**	**+0.1**
KALU				SN	**Sg**	**09 00 21.5**	**+0.7**
HARU	**Harads**	**1.66**	**219**	P	**Pn**	**08 59 59.3**	**+0.1**
KIF	**Kilpisjarvi**	**1.85**	**328**	eP	**Pg**	**09 00 04.9**	**+0.4**
KIF				eSg	**Sg**	**09 00 29.1**	**+0.6**
KIF	**Kilpisjarvi**	**1.85**	**328**	PG	**Pg**	**09 00 04.6**	**+0.1**
KIF				MSG		09 00 26.6	
	comp=Z,5.9nm,0.2s						
KIF				SN	**Sg**	**09 00 29.8**	**+1.3**
RANF	**Ranua**	**1.94**	**137**	PG	**Pg**	**09 00 06.2**	**0.0**
RANF				SG	**Sg**	**09 00 32.0**	**+0.6**
SALU	**Saltoluokta**	**1.95**	**270**	eP	**Pb**	**09 00 04.9**	**-0.4**
SALU				eS	**Sb**	**09 00 29.6**	**-0.6**
RAJF	**Raja-Jooseppi**	**2.06**	**58**	PG	**Pg**	**09 00 09.0**	**+0.5**
RAJF				SG	**Sg**	**09 00 38.4**	**+3.2**
ARA0	**ARCESS Array S**	**2.20**	**18**	eP	**Pb**	**09 00 09.9**	**+0.3**
ARA0				eSg	**Sg**	**09 00 39.1**	**-0.5**
ARA0				IAML		09 00 43.4	
	comp=Z,2.7nm,0.2s						
ARA0	**ARCESS Array S**	**2.20**	**18**	PG	**Pb**	**09 00 10.1**	**+0.4**
ARA0				SG	**Sg**	**09 00 39.5**	**-0.1**
ARCES	**ARCESS Array B**	**2.20**	**18**	Pn	**Pb**	**09 00 09.8**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=202,slow=15,SNR=22						
ARCES				Sn	**Sg**	**09 00 39.7**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=210,slow=27,SNR=18						
	comp=Z,0.6nm,0.3s						
VRF	**Varrio**	**2.34**	**80**	PG	**Pg**	**09 00 13.3**	**-0.5**
VRF				MSG		09 00 42.4	
	comp=Z,3.0nm,0.2s						
VRF				SG	**Sg**	**09 00 44.8**	**+0.8**
JETT	**Jettan, Norway**	**2.40**	**333**	eP	**Pb**	**09 00 12.8**	**-0.2**
JETT				eSg	**Sg**	**09 00 44.5**	**-1.4**
JETT				IAML		09 00 47.0	

	comp=Z,6.9nm,0.2s						
I37NO	I37NO	2.45	314	I	I	09 14 24.2	
	baz=132,slow=327						
KU2	Taivalkoski	2.57	131	PG	Pg	09 00 17.0	-1.2
KU2				SG	Sg	09 00 49.9	-1.5
OUL	Oulu	2.57	157	PB	Pb	09 00 15.4	-0.6
OUL				SG	Sg	09 00 49.8	-1.8
OLKF	Oulanka, Finla	2.58	114	PB	Pb	09 00 16.3	+0.2
OLKF				MSG		09 00 48.6	
	comp=Z,2.1nm,0.2s						
OLKF				SG	Sg	09 00 52.6	+0.9
KEV	Kevo	2.63	27	*e*P	Pb	09 00 16.4	-0.5
KEV				*e*S	Sb	09 00 49.3	-0.3
KEV	Kevo	2.63	27	PB	Pb	09 00 16.6	-0.2
KEV				MSG		09 00 49.9	
	comp=Z,2.7nm,0.2s						
KEV				SG	Sg	09 00 52.3	-0.9
MSF	Maaselka	2.69	123	PB	Pb	09 00 17.0	-0.9
MSF				SG	Sg	09 00 54.4	-0.7
KU6	Riekki	2.90	117	PG	Pb	09 00 22.6	+1.0
KU6				MSG		09 00 58.0	
	comp=Z,1.6nm,0.2s						
KU6				SG	Sg	09 01 01.5	-0.6
KU1	Kurvinen	3.07	126	PN	Pb	09 00 21.9	-2.5
KU1				SN	Sb	09 01 00.1	-2.3
OUF	Merijarvi	3.15	171	PB	Pb	09 00 24.6	-1.2
OUF				MSG		09 01 03.1	
	comp=Z,1.2nm,0.2s						
UMAU	Umeaa	3.79	200	PN	Pn	09 00 31.4	+2.8
	baz=16						
UMAU				SN	Sn	09 01 15.9	+2.2
FINES	FINESS Array B	6.14	169	Pn	Pn	09 01 03.5	+2.6
	comp=Z,0.1nm,0.3s,baz=352,slow=12,SNR=2.0						
FINES				Sn	Sn	09 02 11.3	-0.5
	comp=Z,0.1nm,0.3s,baz=348,slow=23,SNR=1.5						
FINES				Lg	Lg	09 02 37.5	
	baz=355,slow=31						
	comp=Z,0.8nm,0.7s						

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*IDC **19** 09:00:21.7±2.7, 54°.34N×86°.88E, h0^{km}, mbtmp3.2/3, ML2.8/3, Error ellipse: s-maj=23.5km s-min=15.0km az=62.0*

*ASRS **19** 09:00:24.0±1.8, 54°.35N×86°.77E, h0^{km}, M2.8, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

ISC 19 09:00:23.6±3.7**, 54°.3N**±0°.2×**86°.6E**±0°.2**, h0^{km}, n5, σ1^{s}.20**/6**, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.13	252	I	I	09 08 26.8	
	baz=69,slow=322,SNR=3.8						
ZALV	Zalesovo Beam	1.13	252	Pg	Pg	09 00 44.5	-0.7
	3.8nm,0.3s,baz=75,slow=18,SNR=17						
ZALV				Lg	Lg	09 01 02.7	
	3.7nm,0.3s,baz=73,slow=16,SNR=8.5						
KURBB	Kurchatov Arra	6.18	237	Pn	Pn	09 01 55.9	-0.1
	0.2nm,0.3s,baz=53,slow=14,SNR=5.9						
KURBB				Sn	Sn	09 03 08.8	+1.5
	baz=57,slow=31,SNR=1.6						
KURBB				Lg	Lg	09 03 46.6	
	0.1nm,0.3s,baz=50,slow=32,SNR=4.7						
	0.9nm,0.3s						
MKAR	Makanchi Array	8.02	202	Pn	Pn	09 02 22.0	+0.7
	0.3nm,0.3s,baz=20,slow=12,SNR=11						
MKAR				Sn	Sn	09 03 51.7	-1.0
	0.2nm,0.3s,baz=22,slow=26,SNR=4.8						
MKAR				Lg	Lg	09 04 37.8	
	0.1nm,0.3s,baz=26,slow=30,SNR=1.6						
	0.3nm,0.3s						
BVAR	Borovoye Array	9.73	269	Pn	Pn	09 02 44.5	-0.2
	0.1nm,0.3s,baz=70,slow=15,SNR=2.8						
	0.5nm,0.3s						

IDC 19 09:25:59.3±3.1**, 53°.73N**×**87°.21E, h0^{km}, mbtmp2.6**/2**, ML2.5**/2**, Error ellipse: s-maj=30.7km s-min=17.9km az=62.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.43	280	I	I	09 34 00.0	
	baz=99,slow=324,SNR=1.9						
ZALV	Zalesovo Beam	1.43	280	Pg	Pn	09 26 25.1	-1.3
	1.0nm,0.3s,baz=94,slow=16,SNR=9.0						
ZALV				Lg	Lg	09 26 45.5	
	0.8nm,0.3s,baz=100,slow=30,SNR=4.5						
KURBB	Kurchatov Arra	6.18	243	Pn	Pn	09 27 31.8	+0.1
	baz=59,slow=13,SNR=2.0						
	0.2nm,0.3s						
MKAR	Makanchi Array	7.63	206	Pn	Pn	09 27 53.2	+1.6
	0.1nm,0.3s,baz=24,slow=13,SNR=4.6						
	0.2nm,0.3s						

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*IDC **19** 09:30:17.5±2.9, 54°.32N×87°.36E, h0^{km}, mbtmp3.3/2, ML2.6/2, Error ellipse: s-maj=23.4km s-min=17.1km az=53.0*

*ASRS **19** 09:30:18.0±1.0, 54°.27N×87°.10E, h0^{km}, M3.1, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*NNC **19** 09:30:21.7±2.3, 54°.14N×86°.89E, h0^{km}, mb3.0, mpv2.8, Error ellipse: s-maj=19.8km s-min=12.4km az=14.0, Suspected Mining explosion.*

ISC 19 09:30:17.3±4.0**, 54°.4N**±0°.2×**87°.2E**±0°.2**, h0^{km}, n9, σ2^{s}.52**/14**, 7C-4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.43	255	I	I	09 39 15.2	
	0.4nm,0.8s,baz=76,slow=329,SNR=34						
ZAA0	Zalesovo Array	1.43	255	⇓P	Pg	09 30 44.5	-0.3
	0.1nm,0.2s						
ZAA0				⇑S	Sb	09 31 02.1	-1.6
	1.4nm,0.8s						
ZALV	Zalesovo Beam	1.43	255	Pg	Pg	09 30 45.0	+0.2
	1.8nm,0.3s,baz=72,slow=15,SNR=31						
ZALV				Lg	Lg	09 31 03.5	
	2.1nm,0.3s,baz=71,slow=28,SNR=6.3						
KURK	Kurchatov	6.35	239	⇓Pn	Pn	09 31 54.7	+2.6
	2.6nm,0.9s						
KURK				⇑Sn	Sn	09 33 05.3	0.0
	0.9nm,0.7s						
KURK				⇑Lg	Lg	09 33 38.4	
	12nm,1.2s						
KURBB	Kurchatov Arra	6.46	238	Pn	Pn	09 31 56.7	+3.2
	0.1nm,0.3s,baz=54,slow=13,SNR=28						
KURBB				Sn	Sn	09 33 11.6	+3.8
	baz=57,slow=28,SNR=3.1						
KURBB				Lg	Lg	09 33 42.5	
	baz=59,slow=33,SNR=4.1						
	4.4nm,0.7s						
KURBB	Kurchatov Arra	6.46	238	⇑Pn	Pn	09 31 56.0	+2.5
	7.1nm,0.8s						
KURBB				⇑Sn	Sn	09 33 07.0	-0.8
	4.6nm,0.8s						
KURBB				⇓Lg	Lg	09 33 38.4	
	18nm,1.1s						
MK31	Makanchi Array	8.17	204	⇓Pn	Pn	09 32 16.3	-0.8
	0.1nm,0.2s,baz=93,slow=13,SNR=6.5						
MK31				⇑Sn	Sn	09 33 48.3	-1.9
	0.6nm,0.6s,baz=32,slow=26,SNR=4.3						
MK31				⇑Lg	Lg	09 34 33.1	
	9.0nm,1.1s,baz=27,slow=29,SNR=3.7						
MKAR	Makanchi Array	8.17	204	Pn	Pn	09 32 16.8	-0.3
	0.1nm,0.3s,baz=26,slow=14,SNR=6.7						
MKAR				Sn	Sn	09 33 52.4	+2.3
	0.2nm,0.3s,baz=27,slow=23,SNR=6.9						
MKAR				Lg	Lg	09 34 34.7	
	baz=26,slow=28,SNR=3.9						
	0.8nm,0.8s						
BVAR	Borovoye Array	10.04	269	Sn	Sn	09 34 31.4	-4.4
	baz=67,slow=20,SNR=4.9						

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*CATAC **19** 09:37:46.4±0.8, 13°N±4°×8°9W±°, h27^{km}±6^{km}, M2.6/12, MLv2.6/12, Error ellipse: s-maj=9.3km s-min=5.9km az=25.9, confirmed*

*GCG **19** 09:37:47.8±0.3, 12°.92N×89°.03W, h66^{km}±8^{km}, MD3.6*

*SNET **19** 09:37:47.4±0.9, 12°.92N×88°.91W, h32^{km}±6^{km}, ML2.7*

ISC 19 09:37:46.3±2.4**, 12°.8N**±0°.1×**88°.96W**±0°.05**, h55^{km}, n31, σ0^{s}.46**/36**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TECO	Alcaldia de Te	0.74	13	P	Pn	09 38 00.3	-0.6
TECO	Alcaldia de Te	0.74	13	S	Sn	09 38 10.9	-0.6
UESV	Universidad de	0.84	11	P	Pn	09 38 02.0	-0.1
UESV	Universidad de	0.84	11	S	Sn	09 38 13.3	-0.4
LOMA	Loma Larga	0.86	346	P	Pn	09 38 02.5	+0.1
LOMA	Loma Larga	0.86	346	S	Sn	09 38 13.7	-0.6
PQSS	Presa 15 de Se	0.90	25	P	Pn	09 38 03.3	+0.5
PQSS	Presa 15 de Se	0.90	25	S	Sn	09 38 15.5	+0.5
PAVA	Las Pavas	0.90	1	P	Pn	09 38 02.9	0.0
PAVA	Las Pavas	0.90	1	S	Sn	09 38 15.3	+0.1
PACA	Pacayal	0.90	43	*e*P	Pn	09 38 02.6	-0.4
PACA	Pacayal	0.90	43	P	Pn	09 38 03.2	+0.2
PACA	Pacayal	0.90	43	S	Sn	09 38 15.1	-0.1
SCLA	Alcaldia de Sa	0.92	14	P	Pn	09 38 03.3	+0.2
SCLA	Alcaldia de Sa	0.92	14	S	Sn	09 38 15.8	+0.3
PMON	Piamonte	0.96	339	P	Pn	09 38 03.6	-0.2
PMON	Piamonte	0.96	339	S	Sn	09 38 16.6	-0.1
JAYA	Jayaque - finc	0.97	330	*e*P	Pn	09 38 03.8	0.0
JAYA				*e*S	Sn	09 38 16.4	-0.4
JAYA				*e*S	Sn	09 38 16.4	-0.4
JAYA				IAML		09 38 17.7	
	comp=Z,563nm,0.1s						
JAYA	Jayaque - finc	0.97	330	*i* P	Pn	09 38 03.9	0.0
JAYA				*i* S	Sn	09 38 16.6	-0.2
JAYA	Jayaque - finc	0.97	330	P	Pn	09 38 04.1	+0.2
LCND	La Caada	1.15	64	*e*P	Pn	09 38 06.2	0.0
LCND				*e*P		09 38 06.6	
LCND				IAML		09 38 23.2	
	comp=Z,63nm,0.3s						
LCND	La Caada	1.15	64	P	Pn	09 38 06.2	0.0
CNCH	Conchagua	1.19	67	*e*P	Pn	09 38 06.2	-0.6
CNCH				*e*S	Sn	09 38 22.4	+0.3
CNCH	Conchagua	1.19	67	P	Pn	09 38 07.0	+0.2
UNIC	Universidad Ca	1.30	334	P	Pn	09 38 06.7	-1.5
NUBE	Las Nubes	1.35	324	*i* P	Pn	09 38 09.5	+0.5
NUBE				*i* S	Sn	09 38 26.3	+0.4
NUBE	Las Nubes	1.35	324	P	Pn	09 38 09.6	+0.5
NUBE	Las Nubes	1.35	324	S	Sn	09 38 25.9	0.0
MTO3	Montecristo	1.63	346	*i* P	Pn	09 38 13.5	+0.7
MTO3	Montecristo	1.63	346	P	Pn	09 38 13.5	+0.7
MTO3	Montecristo	1.63	346	S	Sn	09 38 33.1	+0.3

STR 19 09:39:21.0±0.4**, 45°N**±2°×°±°**, h5^{km}, MLv1.6**/10**, Error ellipse: s-maj=0.0km s-min=0.0km az=63.8, preliminary, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRN	Grenoble	0.06	155	Pg	Pg	09 39 22.8	+0.3
GRN				Sg	Sg	09 39 23.7	+0.2
ORIF	Oris-en-Rattie	0.39	162	Pg	Pg	09 39 28.1	-0.6
ORIF				Sg	Sg	09 39 34.0	+0.2
RSL	Roselend	0.75	58	Pg	Pg	09 39 35.0	-0.5
OG35	Corcelles	0.76	353	Pg	Pg	09 39 35.2	-0.4
OG35				Sg	Sg	09 39 45.7	+0.2
RRL	Rocca Remolon	0.85	116	Pg	Pg	09 39 37.4	0.0
SURF	Saint Ours	1.13	136	Pg	Pg	09 39 42.8	+0.2
COLF	Collangettes	1.44	280	Pn	Pn	09 39 48.0	+0.2
COLF				Sn	Sb	09 40 06.7	-0.3

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*SJA **19** 09:45:07.5±0.6, 21°.50S×68°.29W, h129^{km}±6^{km}, ML4.2, MW4.0*

*VAO **19** 09:45:08.7±0.8, 21°.46S×68°.58W, h143^{km}, mb4.2*

*NEIC **19** 09:45:09.5±1.5, 21°.45S±0°.05×68°.51W±0°.06, h147^{km}±6^{km}, mb4.4/11, ML4.4(GUC), Error ellipse: s-maj=7.8km s-min=7.4km az=65.0*

*GUC **19** 09:45:10.9±0.7, 21°.46S×68°.46W, h135^{km}±5^{km}, ML4.4*

*IDC **19** 09:45:10.1±2.2, 21°.39S×68°.17W, h126^{km}±19^{km}, mb3.7/9, mbtmp3.9/13, MS3.1/1, Error ellipse: s-maj=22.1km s-min=13.5km az=78.0*

ISC 19 09:45:08.9±0.6**, 21°.49S**±0°.03×**68°.34W**±0°.04**, h129^{km}**±6^{km}**, n121, σ1^{s}.46**/151**, mb4.2**/12**, 6C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	0.90	250		Pn	09 45 32.5	+1.5
PB09				Sn	Sn	09 45 48.9	+1.3
PB09	IPOC Station P	0.90	250	⇑*i*P	Pn	09 45 32.5	+1.5
PB09				*i* S	Sn	09 45 49.0	+1.3
PB09				IAML		09 45 50.5	
	comp=N,7µm,0.3s						
PB09	IPOC Station P	0.90	250	*e*P	Pn	09 45 26.7	-4.2
PB09				*e*S	Sn	09 45 49.6	+1.9
PB09				IAML		09 45 50.2	
	comp=Z,3µm,0.7s						
PB01	IPOC Station P	1.16	292		Pn	09 45 34.0	+0.6
PB01				Sn	Sn	09 45 52.3	+0.2
PB01	IPOC Station P	1.16	292	⇑*i*P	Pn	09 45 34.0	+0.6
PB01				*i* S	Sn	09 45 52.2	+0.2
PB01				IAML		09 45 54.1	
	comp=N,14µm,0.3s						
PB01	IPOC Station P	1.16	292	*e*P	Pn	09 45 33.3	-0.1
PB01				*e*S	Sn	09 45 53.2	+1.2
PB01				IAML		09 45 53.8	
	comp=Z,6µm,0.2s						
PB03	IPOC Station P	1.43	247		Pn	09 45 37.2	+0.9
PB03				Sn	Sn	09 45 57.1	0.0
PB03	IPOC Station P	1.43	247	⇑*i*P	Pn	09 45 37.2	+0.9
PB03				*i* S	Sn	09 45 57.1	0.0
PB03				IAML		09 45 58.6	
	comp=E,7µm,0.2s						
PB03	IPOC Station P	1.43	247	*e*P	Pn	09 45 37.1	+0.9
PB03				*e*S	Sn	09 45 57.5	+0.4
PB03				IAML		09 45 58.5	
	comp=Z,6µm,0.2s						
AF01	San Pedro de A	1.46	174		Pn	09 45 39.7	+2.9
AF01	San Pedro de A	1.46	174	*e*P	Pn	09 45 39.7	+2.9
AF01	San Pedro de A	1.46	174	*e*P	Pn	09 45 36.2	-0.6
AF01				*e*S	Sn	09 45 57.1	-1.0
AF01				IAML		09 46 17.9	
	comp=Z,981nm,1.3s						
PB08	IPOC Station P	1.54	330		Pn	09 45 39.2	+1.4
PB06	IPOC Station P	1.67	223		Pn	09 45 40.2	+1.3
PB06	IPOC Station P	1.67	223	⇑*i*P	Pn	09 45 40.3	+1.3
PB06				*i* S	Sn	09 46 02.9	+1.0
PB06				IAML		09 46 04.5	
	comp=E,8µm,0.1s						
PB06	IPOC Station P	1.67	223	*e*P	Pn	09 45 35.0	-4.0
PB06				*e*S	Sn	09 46 03.5	+1.5
PB06				IAML		09 46 04.1	
	comp=Z,3µm,0.4s						
PATCX	Punta Patache	1.82	291		Pn	09 45 41.2	+0.5
TA01	Diego Aracena	1.95	298		Pn	09 45 42.2	0.0
TA01	Diego Aracena	1.95	298	*e*P	Pn	09 45 42.1	0.0
TA01				*i* S	Sn	09 46 06.8	-0.9
TA01				IAML		09 46 08.1	
	comp=E,5µm,0.3s						
TA01	Diego Aracena	1.95	298	*e*P	Pn	09 45 42.4	+0.1
TA01				*e*S	Sn	09 46 07.8	0.0
TA01				IAML		09 46 08.6	
	comp=Z,2µm,0.3s						
GO01	Chusmiza	1.98	336		Pn	09 45 43.9	+0.7
GO01	Chusmiza	1.98	336	⇑*i*P	Pn	09 45 44.0	+0.8
GO01				*i* S	Sn	09 46 09.3	+0.1
GO01	Chusmiza	1.98	336	*e*P	Pn	09 45 43.5	+0.4
GO01				*e*S	Sn	09 46 11.6	+2.4
TA02	Huaiquique	2.07	306		Pn	09 45 43.3	-0.4
TA02	Huaiquique	2.07	306	*e*P	Pn	09 45 43.4	-0.3
TA02				*i* S	Sn	09 46 09.0	-1.4
TA02	Huaiquique	2.07	306	*e*P	Pn	09 45 43.6	0.0
TA02				*e*S	Sn	09 46 10.4	+0.1
TA02				IAML		09 46 13.1	
	comp=Z,930nm,0.3s						
PB11	IPOC Station P	2.12	324		Pn	09 45 44.5	0.0
PB11	IPOC Station P	2.12	324	⇑*i*P	Pn	09 45 44.4	-0.1
PB11				*i* S	Sn	09 46 10.8	-0.9
PB11				IAML		09 46 13.2	
	comp=N,2µm,0.6s						
PB11	IPOC Station P	2.12	324	*e*P	Pn	09 45 44.4	0.0
PB11				*e*S	Sn	09 46 11.8	+0.2
PB11				IAML		09 46 12.6	
	comp=Z,767nm,0.4s						
PB05	IPOC Station P	2.20	232		Pn	09 45 46.2	+0.8
PB05	IPOC Station P	2.20	232	⇓*e*P	Pn	09 45 45.9	+0.6
PB05				*i* S	Sn	09 46 12.8	-0.5
PB05				IAML		09 46 14.8	
	comp=N,2µm,0.2s						
PB05	IPOC Station P	2.20	232	*e*P	Pn	09 45 46.0	+0.7
PB05				*e*S	Sn	09 46 12.9	-0.4
PB05				IAML		09 46 14.0	
	comp=Z,1µm,0.3s						
YJA	Yavi	2.71	105	*e*P	Pn	09 45 50.5	-1.7
YJA				*e*S	Sn	09 46 24.5	-0.9
PB10	IPOC Station P	2.87	225		Pn	09 45 54.2	+0.3
PB10	IPOC Station P	2.87	225	*e*P	Pn	09 45 53.9	0.0
PB10				*i* S	Sn	09 46 25.5	-3.0
PB10				IAML		09 46 29.2	
	comp=E,828nm,0.5s						
PB10	IPOC Station P	2.87	225	*e*P	Pn	09 45 53.6	-0.3
PB10				*e*S	Sn	09 46 25.8	-2.7
PB10				IAML		09 46 30.0	
	comp=Z,516nm,0.4s						
PB16	IPOC Station P	3.33	340		Pn	09 46 01.2	+0.9
PB16	IPOC Station P	3.33	340	*e*P	Pn	09 46 01.0	+0.7
PB16				*i* S	Sn	09 46 37.5	-2.4
PB16				IAML		09 46 43.7	
	comp=E,201nm,0.4s						
PB16	IPOC Station P	3.33	340	*e*P	Pn	09 45 58.9	-1.4
PB16				*e*S	Sn	09 46 40.8	+0.9
AP01	Chacalluta	3.63	328	Pn	Pn	09 46 04.0	+0.3
AP01	Chacalluta	3.63	328	*e*P	Pn	09 46 05.6	+1.8
AP01				IAML		09 46 55.9	
	comp=Z,296nm,0.6s						
PB14	IPOC Station P	3.66	211		Pn	09 46 04.8	+0.4
PB14	IPOC Station P	3.66	211	*e*P	Pn	09 46 04.5	+0.2
PB14				*e*S	Sn	09 46 33.2	-14
PB14				IAML		09 46 48.1	
	comp=Z,366nm,0.2s						
GO02	Mina Guanaco	3.83	197		Pn	09 46 07.7	+1.0
GO02	Mina Guanaco	3.83	197	*e*P	Pn	09 46 07.3	+0.6
GO02				*i* S	Sn	09 46 51.1	-0.4
GO02	Mina Guanaco	3.83	197	*e*P	Pn	09 46 07.5	+0.9
GO02				*e*S	Sn	09 46 52.0	+0.6
SLA	San Lorenzo	4.14	141	*e*P	Pn	09 46 08.8	-1.8
AC01	Pan de Azucar	5.08	204		Pn	09 46 22.2	-0.8
AC01	Pan de Azucar	5.08	204	*e*P	Pn	09 46 22.0	-1.0
AC01				*e*S	Sn	09 47 17.9	-2.9
AC01				IAML		09 47 19.6	
	comp=Z,138nm,0.4s						
FSA	Cafayete	5.08	155	*e*P	Pn	09 46 20.4	-2.9
FSA				*e*S	Sn	09 47 03.1	-18
LPAZ	La Paz	5.18	2		Pn	09 46 27.1	+2.2
LPAZ	La Paz	5.18	2	P	Pn	09 46 25.5	+0.5
	comp=Z,4.6nm,0.3s,baz=179,slow=4.4,SNR=16						
LPAZ				S	Sn	09 47 23.8	-0.3
	comp=Z,8.7nm,0.6s,baz=146,slow=3.6,SNR=4.5						
LPAZ	La Paz	5.18	2	*e*P	Pn	09 46 25.0	0.0
AC02	Maricunga	5.37	188		Pn	09 46 28.1	+0.7
AC02	Maricunga	5.37	188	*e*P	Pn	09 46 27.9	+0.6
AC02				*e*S	Sn	09 47 15.0	-13
AC06	Mina Casimiro	6.12	197		Pn	09 46 35.4	-1.7
GO03	Copiapo	6.32	195		Pn	09 46 38.3	-1.4
AC04	Llanos de Chal	7.13	200		Pn	09 46 47.5	-3.1
CO01	Juntas del Tor	8.60	190	Pn	Pn	09 47 10.0	-0.6
CO05	La Serena	8.79	197		Pn	09 47 09.4	-3.5
GO04	Tololo Observa	8.93	194	Pn	Pn	09 47 12.4	-2.6
PTLB	Pontes e Lacer	10.60	57		Pn	09 47 36.0	-1.2
CPUP	Villa Florida	11.16	118	P	Pn	09 47 43.8	-0.9
	comp=Z,0.5nm,0.9s,baz=258,slow=17,SNR=3.1						
VILB	Vilhena	11.51	44		Pn	09 47 48.8	-0.7
SJPY	San Joaquin	11.78	110	*e*P	Pn	09 47 54.3	+1.4
AQDB	Aquidauana	11.85	87	*e*P	P	09 47 57.0	-4.5
MT02	Curacav	11.98	191	Pn	Pn	09 47 55.7	+0.2
BO01	Tunca	13.08	190	Pn	Pn	09 48 09.9	+0.1
SALV	Santo Antonio	13.20	67	*e*P	P	09 48 14.0	-2.7
BO02	Sierra Bellavi	13.43	189	Pn	Pn	09 48 14.1	-0.2
RPRD	Ribas do Rio P	13.71	88	*e*P	P	09 48 20.7	-1.6
TRCB	Terra Rica	14.61	98	Pn	P	09 48 30.5	-1.8
TRCB	Terra Rica	14.61	98	*e*P	P	09 48 32.0	-0.3
PDRB	Porto dos Gac	14.83	50	*e*P	P	09 48 34.7	-0.1
PTGB	Pitanga	15.31	105	*e*P	P	09 48 38.8	-1.4
ITAB	Concordia	15.83	114	P	P	09 48 46.0	+0.3
ITAB				IAmb	IAmb	09 48 47.8	
	comp=Z,18nm,0.7s						
ITAB	Concordia	15.83	114	*e*P	P	09 48 46.9	+1.1
PCMB	Pacaembu	15.89	94	*e*P	P	09 48 47.2	+0.7
CLDB	Colider	16.00	51	*e*P	P	09 48 48.1	+0.3
LDASE	Londrina, Braz	16.03	100	*e*P	P	09 48 49.7	+1.7
CPSB	Cacapava Do Su	16.06	127	*e*P	P	09 48 48.5	+0.2
PLTB	Pedras Altas	16.66	131	P	P	09 48 54.0	-1.0
PLTB				IAmb	IAmb	09 48 54.5	
	comp=Z,26nm,1.4s						
PLTB	Pedras Altas	16.66	131	*e*P	P	09 48 55.9	+1.0
ARAG	Araguaiana, MT	16.68	73	*e*P	P	09 48 56.2	+1.0
FRTB	Fartura	17.46	100	*e*P	Pn	09 49 05.0	+0.5
CNLB	Canela	17.60	120	*e*P	Pn	09 49 07.7	+1.6
BB19B	Bebedouro	18.47	92	*e*P	Pn	09 49 16.2	-0.4
SNDB	Serra Nova Dou	18.85	63	*e*P	P	09 49 19.0	0.0
NPGB	Novo Progresso	19.07	43	*e*P	P	09 49 20.6	-0.9
IPMB	Ipameri, GO	19.26	83	*e*P	Pn	09 49 26.1	+0.2
PLCA	Paso Flores	19.27	185	P	Pn	09 49 25.9	+0.1
	comp=Z,0.8nm,0.5s,baz=8.3,slow=15,SNR=4.3						
MACA	Manacapuru-AM	19.68	23	P	P	09 49 26.8	-1.2
VAO	Valinhos	19.84	98	P	P	09 49 29.5	-0.3
VAO				IAmb	IAmb	09 49 30.9	
	comp=Z,16nm,0.8s						
VAO	Valinhos	19.84	98	*e*P	P	09 49 29.7	-0.1
BDFB	Brasilia	20.12	77	P	P	09 49 33.0	+0.1
BDFB	Brasilia	20.12	77	P	P	09 49 32.4	-0.5
	comp=Z,1.5nm,0.3s,baz=202,slow=7.0,SNR=3.9						
ITTB	Itaituba	20.96	37	*e*P	P	09 49 40.8	-1.0
BSCB	Bom Sucesso	21.97	93	*e*P	P	09 49 51.9	-0.7
DIAM	Diamantina, MG	23.40	87	*e*P	P	09 50 06.2	-0.4
SMTB	Santa Maria do	23.60	61	*e*P	P	09 50 08.7	+0.6
JANB	Januaria	23.68	78	*e*P	P	09 50 09.7	+0.7
OTAV	Otavalo	23.75	334	P	P	09 50 07.0	-2.9
SDBA	SAO DESIDERIO	24.14	72	*e*P	P	09 50 14.3	+1.1
RUSC	La Rusia	27.61	350	P	P	09 50 41.5	-3.4
BAUV	El Baul	30.25	1	P	P	09 51 04.8	-2.9
BAUV				IAmb	IAmb	09 51 07.9	
	comp=Z,8.1nm,0.9s						
TEIG	Tepich	45.81	333	LR	LR	10 14 40.0	
	comp=Z,21nm,20.7s,baz=124,slow=39						
SWET	Sewanee	58.82	343	P	P	09 54 51.4	-2.3
SWET				IAmb	IAmb	09 55 00.3	
	comp=Z,6.6nm,1.2s						
WVT	Waverly	60.20	342	P	P	09 55 01.5	-1.7
WVT				IAmb	IAmb	09 55 03.7	
	comp=Z,2.6nm,0.7s						
TXAR	Lajitas Array	60.93	325	P	P	09 55 09.4	+1.0
	comp=Z,0.2nm,0.6s,baz=145,slow=6.1,SNR=2.7						
	comp=Z,0.2nm,0.6s						
SNAA	Sanae	62.11	161	P	P	09 55 17.3	+1.5
SNAA				IAmb	IAmb	09 55 18.0	
	comp=Z,2.3nm,0.8s						
SNAA	Sanae	62.11	161	P	P	09 55 17.5	+1.8
	comp=Z,1.2nm,0.6s,baz=280,slow=11,SNR=16						
	comp=Z,1.2nm,0.6s						
DBIC	Dimbokro	68.22	73	P	P	09 55 56.4	+0.4
	comp=Z,5.3nm,0.7s,baz=254,slow=7.4,SNR=6.5						
	comp=Z,5.3nm,0.7s						
QSPA	South Pole Qui	68.70	180	P	P	09 56 00.9	+2.6
	comp=Z,3.7nm,1.2s,baz=208,slow=1.3,SNR=13						
	comp=Z,3.7nm,1.2s						
ULM	Lac du Bonnet	75.47	342	P	P	09 56 38.6	+0.1
	comp=Z,1.0nm,0.5s,baz=149,slow=4.4,SNR=3.4						
	comp=Z,1.0nm,0.5s						
NVAR	Mina Array Bea	75.81	322	P	P	09 56 43.0	+2.0
	comp=Z,0.3nm,0.6s,baz=163,slow=3.8,SNR=2.7						
	comp=Z,0.3nm,0.6s						
TORD	Torodi Ar. Bea	76.85	70	P	P	09 56 47.2	+0.1
	comp=Z,5.7nm,0.6s,baz=251,slow=5.3,SNR=24						
BOSA	Boshof	82.98	118	P	P	09 57 21.6	+1.4
	comp=Z,3.6nm,0.9s,baz=248,slow=9.6,SNR=3.7						
	comp=Z,3.6nm,0.9s						
ESDC	Sonseca Array	85.45	44	P	P	09 57 34.0	+1.8
	comp=Z,0.8nm,0.9s,baz=246,slow=4.8,SNR=4.6						
	comp=Z,0.8nm,0.9s						
YKA	Yellowknife Ar	91.36	340	P	P	09 58 00.6	+1.0
	comp=Z,1.4nm,0.8s,baz=134,slow=4.9,SNR=3.7						
	comp=Z,1.4nm,0.8s						
MKAR	Makanchi Array	145.31	36	PKPbc	PKPab	10 04 32.7	+1.0
	comp=Z,3.6nm,0.9s,baz=304,slow=2.8,SNR=8.1						
PZH	PanZhiHua	169.65	59	PKP	PKPdf	10 04 58.6	-3.1

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*KRNET **19** 09:47:42.4±0.1, 41°.80N×79°.22E, h14^{km}, mb2.7*

*SOME **19** 09:47:42.8, 41°.87N×79°.20E, h5^{km}*

*NNC **19** 09:47:44.4±1.7, 41°.96N×79°.29E, h0^{km}, mb3.3, mpv3.2,* *Error ellipse: s-maj=11.5km s-min=7.0km az=153.0*

ISC 19 09:47:41.3±1.8, 41°.83N±0°.06×79°.20E±0°.04, h2^{km}±11^{km}, n28, σ0ˢ.94/49, 11C-8D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	0.89	318	⇑iP	Pn	09 48 00.3	-0.6
PRZ				⇑iS	Sn	09 48 13.2	-1.2
TARG	Taragay, Kyrgy	1.05	265	⇑iP	Pn	09 48 02.7	-0.6
TARG				⇑iS	Sn	09 48 17.8	-0.9
UZB	Uzynbulak	1.32	354	P	Pg	09 48 07.2	+0.6
	3.8nm,0.2s						
UZB				S	Sg	09 48 24.6	+0.7
	8.8nm,0.1s						
UZB	Uzynbulak	1.32	354	eP	Pg	09 48 07.2	+0.6
UZB				eS	Sg	09 48 24.6	+0.7
SATY	Saty	1.36	335	P	Pg	09 48 08.3	+0.8
	8.9nm,0.2s						
SATY				S	Sg	09 48 26.2	+1.1
	53nm,0.2s						
PDGK	Podgornoye	1.52	8	⇓P	Pg	09 48 10.1	-0.2
	2.2nm,0.2s						
PDGK				⇓S	Sb	09 48 29.1	-0.8
	35nm,0.6s						
KDJ	Kajisay	1.54	282	⇓iP	Pg	09 48 11.6	+0.9
KDJ				⇓iS	Sg	09 48 32.7	+2.1
KPKS	Kokpek	1.68	347	P	Pg	09 48 13.7	+0.2
	3.5nm,0.1s						
KPKS				S	Sg	09 48 35.7	+0.4
	16nm,0.3s						
KTMS	Ketmen	1.83	27	P	Pb	09 48 15.0	-0.5
	4.5nm,0.2s						
KTMS				S	Sb	09 48 38.8	0.0
	15nm,0.3s						
KTMS	Ketmen	1.83	27	eP	Pg	09 48 15.8	-0.4
	3.1nm,0.2s						
KTMS				eS	Sg	09 48 39.2	-0.7
	14nm,0.2s						
MDOK	Medeo	2.08	311	Pn	Pb	09 48 20.0	+0.2
	8.7nm,0.4s						
MDOK				Pg	Pg	09 48 20.6	-0.4
	14nm,0.4s						
MDOK				Lg	Lg	09 48 47.3	
	12nm,0.4s						
MDOK				⇑Sn	Sg	09 48 48.9	+0.9
	8.9nm,0.4s						
ULHL	Ulahol	2.24	282	⇑iP	Pb	09 48 23.4	+0.8
ULHL				⇑iS	Sg	09 48 53.1	-0.2
BLB	Baldybastay	2.33	347	Pg	Pb	09 48 23.9	-0.1
	62nm,0.4s						
BLB				Lg	Lg	09 48 53.5	
	55nm,0.4s						
MTBS	Maitube	2.43	303	Pg	Pg	09 48 27.4	-0.4
	7.3nm,0.3s						
MTBS				Lg	Lg	09 48 59.5	
	19nm,0.4s						
MTBS	Maitube	2.43	303	eP	Pg	09 48 27.4	-0.4
	7.3nm,0.3s						
MTBS				eS	Sg	09 48 59.5	+0.2
	19nm,0.4s						
NRN	Naryn	2.43	262	⇑eP	Pb	09 48 26.4	+0.5
NRN				⇑eS	Sg	09 48 58.0	-1.4
BOOM	Boomskoye usch	2.51	286	⇓iP	Pb	09 48 26.9	-0.3
BOOM				⇓iS	Sb	09 48 59.5	+0.9
DJR	Jarkent	2.54	10	Pg	Pb	09 48 27.0	-0.6
	1.1nm,0.1s						
DJR				Lg	Lg	09 48 58.4	
	25nm,0.4s						
DJR	Jarkent	2.54	10	eP	Pg	09 48 28.7	-1.3
	1.8nm,0.1s						
DJR				eS	Sg	09 49 01.3	-1.6
	25nm,0.4s						
ARXS	Arharly	2.59	338	Pg	Pg	09 48 29.9	-1.0
	2.8nm,0.2s						
ARXS				Lg	Lg	09 49 03.5	
	18nm,0.4s						
KTBS	Karatobe	2.64	316	Pg	Pg	09 48 31.1	-0.8
	6.2nm,0.3s						
KTBS				Lg	Lg	09 49 05.2	
	43nm,0.5s						
KST	Kastek	2.69	298	Pg	Pb	09 48 30.7	+0.6
	5.7nm,0.3s						
KST				Lg	Lg	09 49 06.3	
	36nm,0.7s						
KST	Kastek	2.69	298	eP	Pg	09 48 32.5	-0.3
	3.5nm,0.2s						
KST				eS	Sg	09 49 07.7	+0.1
	36nm,0.7s						
TKM2	Tokmak 2	2.89	293	⇓Pn	Pb	09 48 33.2	-0.3
	1.7nm,0.5s						
TKM2				⇑Sn	Sg	09 49 13.8	-0.2
	8.2nm,0.4s						
KUU	Kurty	2.95	315	Pg	Pg	09 48 36.9	-0.9
	3.7nm,0.1s						
KUU				Lg	Lg	09 49 15.1	
	19nm,0.3s						
KUU	Kurty	2.95	315	eP	Pg	09 48 36.9	-0.9
	3.7nm,0.1s						
KUU				eS	Sg	09 49 15.1	-0.8
	19nm,0.3s						
KRBS	Karabastau	3.20	307	Pg	Pg	09 48 40.8	-1.7
	1.5nm,0.3s						
KRBS				Lg	Lg	09 49 22.1	
	8.0nm,0.4s						
MK31	Makanchi Array	5.44	23	Pn	Pn	09 49 06.2	+2.9
	0.1nm,0.2s,baz=204,slow=14,SNR=8.1						
MK31				⇓Sn	Sn	09 50 07.2	+0.8
	0.2nm,0.3s,baz=181,slow=20,SNR=3.8						
MK31				⇑Lg	Lg	09 50 27.0	
	0.8nm,0.6s						

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*NEIC **19** 09:54:32.9±1.2, 17°.5S±0°.1×175°.0W±0°.1, h247^{km}±6^{km}, mb4.1/21, Error ellipse: s-maj=18.7km s-min=15.2km az=116.0*

*IDC **19** 09:54:42.0±7.1, 17°.25S×175°.64W, h314^{km}±45^{km}, mb3.7/4, mbtmp4.3/6, Error ellipse: s-maj=125.9km s-min=27.9km az=134.0*

ISC 19 09:54:32.7±0.6, 17°.47S±0°.09×174°.98W±0°.09, h250^{km}, n50, σ1ˢ.11/52, mb4.0/13, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.70	41	Pn	Pn	09 55 45.6	+0.7
AFI				Sn	S	09 56 40.2	-2.2
NIUE	Niue	5.06	109	Pn	Pn	09 55 49.8	+0.6
MSVF	Nonsavu	6.66	267	P	Pn	09 56 11.7	+2.5
	6.1nm,0.8s,baz=80,slow=6.1,SNR=2.7						
DZM	Mont Dzumac	18.07	252	P	P	09 58 24.9	-1.4
DZM				IAmb	IAmb	09 58 43.5	
	comp=Z,19nm,1.4s						
DZM	Mont Dzumac	18.07	252	P	P	09 58 27.4	+1.1
	comp=Z,5.6nm,0.8s,baz=69,slow=18,SNR=4.7						
ONTNC	Ouen Toro	18.11	252	P	P	09 58 25.4	-1.1
MXZ	Matakaoa Point	20.87	195	P	P	09 58 55.5	-0.3
WMGZ	Waiomatatini S	21.08	195	P	P	09 58 58.4	+0.5
HAZ	Te Kaha	21.18	196	P	P	09 58 57.9	-1.1
PKGZ	Pakihiroa	21.21	195	P	P	09 59 00.0	+0.8
PUZ	Puketiti	21.36	195	P	P	09 58 59.3	-1.4
RUGZ	Raukumara Rang	21.41	196	P	P	09 59 00.6	-0.7
TWGZ	Tauwhareparae	21.53	195	P	P	09 59 01.2	-1.1
MWZ	Matawai	21.79	196	P	P	09 59 04.6	-0.2
TKGZ	Te Karaka	21.81	195	P	P	09 59 05.6	+0.8
URZ	Urewera	21.84	197	P	P	09 59 03.0	-2.0
RAGZ	Rawiri	21.98	196	P	P	09 59 05.4	-1.0
RIGZ	Rimuhau	22.09	195	P	P	09 59 08.0	+0.6
RAHZ	Arahi	22.46	196	P	P	09 59 10.0	-0.8
MTHZ	Maungataniwha	22.47	197	P	P	09 59 10.5	-0.4
MRHZ	Matea Rd	22.57	198	P	P	09 59 10.3	-1.5
NMHZ	Naumai	22.70	197	P	P	09 59 14.0	+0.9
BKZ	Black Stump Fm	22.86	197	P	P	09 59 13.3	-1.2
MCHZ	McNeill Hill	23.06	197	P	P	09 59 17.1	+0.8
KWHZ	Kaweka Forest	23.12	197	P	P	09 59 16.1	-0.8
EIDS	Eidsvold	32.49	250	P	P	10 00 38.5	-1.7
EIDS				IAmb	IAmb	10 00 55.7	
	comp=Z,5.6nm,1.2s						
ARMA	Armidale	33.00	241	P	P	10 00 44.3	-0.4
CTAO	Charters Tower	36.74	260	P	P	10 01 15.8	-0.8
CTAO				IAmb	IAmb	10 01 43.9	
	comp=Z,8.0nm,1.2s						
TOO	Toolangi	39.99	232	P	P	10 01 43.1	-0.4
COEN	Coen	40.38	269	P	P	10 01 47.1	+0.3
COEN				IAmb	IAmb	10 01 53.5	
	comp=Z,22nm,1.4s						
STKA	Stephens Creek	41.71	242	P	P	10 01 57.2	-0.2
STKA				IAmb	IAmb	10 02 22.8	
	comp=Z,14nm,1.4s						
STKA	Stephens Creek	41.71	242	P	P	10 01 57.1	-0.3
	comp=Z,2.9nm,0.5s,baz=80,slow=11,SNR=11						
	comp=Z,2.9nm,0.5s						
BBOO	Buckleboo	46.48	241	P	P	10 02 34.2	-1.0
WR8	Warramunga Arr	47.77	259	P	P	10 02 44.3	-1.1
WR8				IAmb	IAmb	10 02 54.8	
	comp=Z,12nm,1.4s						
WB0	Warramunga Arr	47.89	259	P	P	10 02 45.9	-0.4
WB0				IAmb	IAmb	10 02 52.4	
	comp=Z,8.8nm,1.2s						
WRAB	Tennant Creek	47.92	259	P	P	10 02 45.6	-0.9
WRA	Warramunga Arr	47.92	259	P	P	10 02 45.3	-1.2
WRA	Warramunga Arr	47.92	259	P	P	10 02 45.2	-1.2
	comp=Z,2.6nm,0.6s,baz=95,slow=7.8,SNR=96						
WRA				PcP	PcP	10 04 10.5	-0.3
	comp=Z,0.4nm,0.8s,baz=101,slow=1.9,SNR=2.1						
	comp=Z,2.6nm,0.6s						
AS31	Alice Springs	48.05	254	P	P	10 02 46.8	-0.6
AS31				IAmb	IAmb	10 02 47.6	
	comp=Z,4.6nm,0.7s						
ASAR	Alice Springs	48.05	254	P	P	10 02 47.0	-0.4
ASAR	Alice Springs	48.05	254	P	P	10 02 46.6	-0.9
	comp=Z,18nm,0.6s,baz=93,slow=7.7,SNR=335						
	comp=Z,18nm,0.6s						
MTN	Manton Dam	52.08	267	P	P	10 03 15.8	-1.8
KNRA	Kununurra	53.79	263	P	P	10 03 28.9	-1.2
KNRA				IAmb	IAmb	10 03 30.8	
	comp=Z,16nm,1.2s						
FITZ	Fitzroy Crossi	56.32	260	P	P	10 03 46.9	-1.3
SBA	Scott Base	61.08	184	P	P	10 04 19.4	-0.4
MBWA	Marble Bar	61.35	255	P	P	10 04 21.9	-0.7
MBWA				IAmb	IAmb	10 04 26.2	
	comp=Z,5.1nm,1.1s						
CASY	Casey	67.90	205	P	P	10 05 05.1	+1.1
QSPA	South Pole Qui	72.58	180	P	P	10 05 33.5	+1.0
QSPA				IAmb	IAmb	10 05 51.9	
	comp=Z,3.6nm,1.2s						
ILAR	Eielson Array	84.77	12	P	P	10 06 40.5	+2.1
	comp=Z,0.2nm,0.5s,baz=206,slow=5.1,SNR=7.0						
	comp=Z,0.2nm,0.5s						
BRTR	Keskin Array B	146.74	318	PKPbc	PKPbc	10 13 45.0	-0.6
	comp=Z,0.3nm,0.5s,baz=46,slow=4.6,SNR=3.8						

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*HEL **19** 09:59:50.1±0.3, 64°.70N×30°.95E, h0^{km}, ML1.9, Explosion*

*KOLA **19** 09:59:50.8, 64°.63N×30°.74E, h0^{km}, ML2.2, Error ellipse: s-maj=20.4km s-min=13.3km az=170.0, Kostomuksha, Karelia*

*MOS **19** 09:59:51.0±0.7, 64°.7N±0°.4×30°.6E±0°.4, h0^{km}, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*IDC **19** 09:59:51.4±2.7, 64°.68N×31°.08E, h0^{km}, mbtmp2.9/4, ML2.2/4, Error ellipse: s-maj=39.5km s-min=9.5km az=100.0*

ISC 19 09:59:50.7±1.0, 64°.73N±0°.03×30°.46E±0°.05, h0^{km}, n20, σ1ˢ.11/33, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KU1	Kurvinen	0.92	336	eP	Pg	10 00 08.4	+0.2
KU1				eS	Sb	10 00 22.4	+0.2
KU6	Riekki	1.32	350	eP	Pg	10 00 15.3	-0.7
KU6				eS	Sn	10 00 35.6	+1.0
MSF	Maaselka	1.33	334	eP	Pg	10 00 15.7	-0.3
MSF				eS	Sn	10 00 35.6	+0.8
KU2	Taivalkoski	1.36	317	eP	Pg	10 00 16.5	-0.2
KU2				eS	Sn	10 00 37.2	+1.6
KU2				MSG		10 00 38.8	
	comp=Z,8.4nm,0.1s						
OLKF	Oulanka, Finla	1.66	345	eP	Pn	10 00 21.5	+0.5
OLKF				MSG		10 00 49.2	
	comp=Z,9.8nm,0.1s						
NIF	Nilsia	1.78	222	eP	Pn	10 00 22.8	+0.1
NIF				eS	Sg	10 00 46.6	-1.2
NIF				MSG		10 00 50.3	
	comp=Z,4.7nm,0.1s						
JOF	Joensuu	1.86	168	eP	Pn	10 00 22.2	-1.5
JOF				eS	Sn	10 00 47.1	-0.7
JOF				MSG		10 00 50.3	
	comp=Z,8.3nm,0.1s						
OUL	Oulu	1.98	282	eP	Pg	10 00 27.9	-0.6
OUL				eS	Sg	10 00 54.7	+0.6
OUL				MSG		10 00 58.5	
	comp=Z,7.6nm,0.1s						
KVDA	Kovda	2.21	26	P	Pn	10 00 28.8	+0.3
KVDA				S	Sn	10 00 56.6	+0.3
OBF4	Vikkela, Lumij	2.30	274	eP	Pb	10 00 32.5	-0.4
OBF4				eS	Sg	10 01 03.8	-0.6
OUF	Merijarvi	2.50	264	eP	Pb	10 00 35.0	-1.4
OUF				eS	Sb	10 01 08.5	+0.8
APA0	Apatity Array	3.06	18	S	Sn	10 01 19.0	+1.5
FINES	FINESS Array B	3.85	213	Pn	Pn	10 00 53.5	+2.4
	comp=Z,0.2nm,0.3s,baz=33,slow=13,SNR=7.1						
FINES				Pg	Pb	10 01 00.3	+0.8
	comp=Z,0.5nm,0.3s,baz=31,slow=15,SNR=9.0						
FINES				Sn	Sn	10 01 39.2	+2.1
	comp=Z,0.4nm,0.3s,baz=37,slow=21,SNR=5.0						
FINES				Lg	Lg	10 01 51.1	
	comp=Z,0.7nm,0.3s,baz=38,slow=28,SNR=7.8						
	comp=Z,0.4nm,0.2s						
ARCES	ARCESS Array B	5.20	340	Pn	Pn	10 01 09.7	+0.1
	comp=Z,0.1nm,0.3s,baz=153,slow=14,SNR=14						
ARCES				Sn	Sn	10 02 10.4	+0.3
	comp=Z,0.1nm,0.3s,baz=149,slow=20,SNR=5.1						
ARCES				Lg	Lg	10 02 29.9	
	comp=Z,0.2nm,0.3s,baz=153,slow=24,SNR=3.2						
	comp=Z,0.5nm,0.2s						
ARCES	ARCESS Array B	5.20	340	P	Pn	10 01 10.0	+0.4
ARCES				S	Sn	10 02 10.4	+0.3
VADS	Vadso	5.43	356	S	Sn	10 02 12.8	-3.0
I37NO	I37NO	6.38	318	I	I	10 38 35.0	
	baz=128,slow=318,SNR=1.9						
FAUS	Fauske	6.72	300	S	Sn	10 02 46.8	-0.7
HFS	Hagfors	9.02	247	Pn	Pn	10 02 01.8	-0.3
	comp=Z,0.2nm,0.3s,baz=54,slow=14,SNR=5.2						
HFS				Lg	Lg	10 04 32.8	
	comp=Z,0.2nm,0.3s,baz=60,slow=29,SNR=3.4						
	comp=Z,0.5nm,0.3s						
NOA	NORSAR Array B	9.52	256	Pn	Pn	10 02 07.9	-1.0
	baz=55,slow=19,SNR=5.1						
	comp=Z,0.1nm,0.4s						

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*ASRS **19** 10:00:49.0±1.6, 53°.71N×91°.08E, h0^{km}, M3.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*IDC **19** 10:00:55.1±3.1, 53°.68N×90°.85E, h0^{km}, mbtmp3.3/3, ML2.9/3, Error ellipse: s-maj=26.3km s-min=22.6km az=53.0*

*NNC **19** 10:00:58.5±2.6, 53°.57N×90°.46E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=20.2km s-min=16.0km az=40.0, Suspected Mining explosion.*

ISC 19 10:00:55.0±4.2, 53°.9N±0°.1×90°.5E±0°.2, h0^{km}, n10, σ1ˢ.49/13, 6C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	3.36	273	I	I	10 22 40.0	
	0.3nm,1.0s,baz=91,slow=320,SNR=18						
ZAA0	Zalesovo Array	3.36	273	⇓Pg	Pg	10 01 59.7	+0.3
	2.4nm,0.8s						
ZAA0				⇓Lg	Lg	10 02 47.5	
	26nm,1.0s						
ZALV	Zalesovo Beam	3.36	273	Pn	Pb	10 01 53.8	-1.6
	1.7nm,0.3s,baz=93,slow=15,SNR=15						
ZALV				Lg	Lg	10 02 48.1	
	1.2nm,0.3s,baz=87,slow=28,SNR=5.5						
	1.7nm,0.4s						
KURK	Kurchatov	7.94	251	⇑Pn	Pn	10 02 53.6	+2.0
	1.7nm,0.9s						
KURK				⇑Sn	Sn	10 04 22.3	+0.3
	6.5nm,0.8s						
KURK				⇑Lg	Lg	10 05 09.9	
	21nm,0.9s						
KURBB	Kurchatov Arra	8.04	251	Pn	Pn	10 02 54.9	+2.0
	0.2nm,0.3s,baz=64,slow=14,SNR=22						
KURBB				Sn	Sn	10 04 25.6	+1.2
	0.1nm,0.3s,baz=67,slow=24,SNR=11						
KURBB				Lg	Lg	10 05 14.0	
	baz=64,slow=33,SNR=5.3						
	3.1nm,0.6s						
KURBB	Kurchatov Arra	8.04	251	⇓Pn	Pn	10 02 54.4	+1.5
	4.7nm,0.6s						
KURBB				⇓Sn	Sn	10 04 25.3	+0.9
	75nm,0.8s						
KURBB				⇑Lg	Lg	10 05 12.0	
	46nm,0.9s						
MK31	Makanchi Array	8.82	220	Pn	Pn	10 03 04.8	+1.1
	0.7nm,0.7s,baz=39,slow=13,SNR=11						
MK31				⇑Sn	Sn	10 04 42.8	-0.9
	3.6nm,0.8s,baz=101,slow=19,SNR=3.3						
MK31				⇑Lg	Lg	10 05 32.5	
	13nm,0.8s,baz=28,slow=32,SNR=4.1						
MKAR	Makanchi Array	8.82	220	Pn	Pn	10 03 03.6	-0.1
	0.3nm,0.3s,baz=31,slow=13,SNR=13						
MKAR				Sn	Sn	10 04 43.7	0.0
	0.1nm,0.3s,baz=38,slow=28,SNR=5.1						
MKAR				Lg	Lg	10 05 33.4	
	0.1nm,0.3s,baz=38,slow=26,SNR=6.2						
	0.8nm,0.6s						
SONM	Songino Array	11.71	115	Lg	Lg	10 06 50.0	
	0.2nm,0.3s,baz=306,slow=28,SNR=9.2						
BVAR	Borovoye Array	12.02	274	Sn	Sn	10 05 60.0	-2.1
	baz=73,slow=24,SNR=2.0						
BVAR				Lg	Lg	10 07 29.4	
	baz=81,slow=30,SNR=1.3						

IDC 19 10:27:31.9±1.7, 7°.88S×129°.87E, h0^{km}, mb3.5/2, mbtmp3.3/4, ML3.0/2, MS3.6/2, Error ellipse: s-maj=103.9km s-min=26.6km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	12.74	161	Pn	Pn	10 30 35.1	+0.5
	0.1nm,0.3s,baz=340,slow=12,SNR=9.9						
WRA				Sn	Sn	10 33 00.3	+3.0
	0.1nm,0.3s,baz=338,slow=24,SNR=2.0						
	0.3nm,0.8s						
ASAR	Alice Springs	16.16	167	Pn	Pn	10 31 19.1	-1.5
	0.1nm,0.3s,baz=340,slow=9.6,SNR=7.1						
	0.2nm,0.5s						
TGY	Tagaytay City	23.57	338	LR	LR	10 42 37.0	
	comp=Z,118nm,19.6s,baz=1.5,slow=38						
JNU	Nakatsue	40.79	1	LR	LR	10 48 57.2	
	comp=Z,83nm,21.1s,baz=83,slow=32						
SONM	Songino Array	59.24	342	P	P	10 37 34.1	-1.1
	0.3nm,0.5s,baz=151,slow=3.3,SNR=2.0						
	0.3nm,0.5s						
MKAR	Makanchi Array	68.89	327	P	P	10 38 39.7	+1.0
	0.3nm,0.6s,baz=139,slow=6.8,SNR=3.7						
	0.3nm,0.6s						

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*IDC **19** 10:32:01.2±1.8, 31°.77S×177°.22W, h0^{km}, mb4.1/4, mbtmp4.0/5, ML3.4/1, Error ellipse: s-maj=42.7km s-min=38.0km az=55.0*

*NEIC **19** 10:32:02.2±1.9, 31°.7S±0°.1×177°.1W±0°.2, h10^{km}±1^{km}, mb4.2/17, Error ellipse: s-maj=27.1km s-min=16.9km az=69.0*

ISC 19 10:32:05.4±0.8, 31°.75S±0°.08×177°.3W±0°.1, h35^{km}, n26, σ1ˢ.30/28, mb4.2/12, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.56	347	Pn	Pn	10 32 43.9	-0.4
URZ	Urewera	7.97	214	Pn	Pn	10 33 56.7	-2.0
	0.5nm,0.3s,baz=40,slow=16,SNR=2.7						
URZ				Sn	Sn	10 35 25.0	-2.7
	2.6nm,0.3s,baz=120,slow=20,SNR=7.3						
	3.5nm,0.6s						
NIUE	Niue	14.24	29	Pn	Pn	10 35 22.6	-2.0
ARMA	Armidale	26.65	265	P	P	10 37 39.6	-1.4
ARMA				IAmb	IAmb	10 38 04.1	
	comp=Z,7.1nm,1.1s						
CAN	Canberra	28.28	254	P	P	10 37 55.8	+0.3
CAN				IAmb	IAmb	10 38 17.7	
	comp=Z,7.4nm,1.0s						
TOO	Toolangi	31.05	249	P	P	10 38 19.7	-0.4
TOO				IAmb	IAmb	10 38 44.1	
	comp=Z,2.0nm,1.1s						
CTAO	Charters Tower	34.67	281	P	P	10 38 52.1	+0.3
CTAO				IAmb	IAmb	10 39 16.5	
	comp=Z,4.2nm,0.9s						
STKA	Stephens Creek	34.83	259	P	P	10 38 55.8	+2.8
	comp=Z,0.9nm,0.4s,baz=103,slow=14,SNR=3.4						
	comp=Z,0.9nm,0.4s						
BBOO	Buckleboo	39.24	256	P	P	10 39 30.9	+0.3
BBOO				IAmb	IAmb	10 39 47.4	
	comp=Z,1.6nm,0.8s						
PMG	Port Moresby	39.77	296	P	P	10 39 34.4	-0.7
AS31	Alice Springs	43.69	268	P	P	10 40 08.6	+1.4
ASAR	Alice Springs	43.70	268	P	P	10 40 08.1	+0.9
ASAR	Alice Springs	43.70	268	P	P	10 40 07.9	+0.7
	comp=Z,1.4nm,0.6s,baz=111,slow=8.1,SNR=17						
ASAR				PcP	PcP	10 41 55.8	+1.9
	comp=Z,0.2nm,0.5s,baz=112,slow=3.4,SNR=1.7						
	comp=Z,1.4nm,0.6s						
WR8	Warramunga Arr	44.66	273	P	P	10 40 15.9	+1.0
WR8				IAmb	IAmb	10 40 38.7	
	comp=Z,8.1nm,1.1s						
WRA	Warramunga Arr	44.80	273	P	P	10 40 16.6	+0.5
WRA	Warramunga Arr	44.80	273	P	P	10 40 16.8	+0.6
	comp=Z,2.1nm,0.4s,baz=114,slow=8.3,SNR=53						
	comp=Z,2.1nm,0.4s						
WB0	Warramunga Arr	44.83	273	P	P	10 40 17.4	+1.1
SBA	Scott Base	46.75	185	P	P	10 40 30.4	-0.2
SBA				IAmb	IAmb	10 40 43.9	
	comp=Z,2.3nm,1.1s						
VNDA	Vanda	46.82	186	P	P	10 40 32.5	+1.3
KNRA	Kununurra	51.46	275	P	P	10 41 08.8	+1.3
FITZ	Fitzroy Crossi	53.01	271	P	P	10 41 19.8	+0.8
QSPA	South Pole Qui	58.37	180	P	P	10 41 57.9	+0.9
QSPA				IAmb	IAmb	10 42 26.7	
	comp=Z,2.1nm,0.7s						
QSPA	South Pole Qui	58.37	180	P	P	10 41 57.8	+0.8
	comp=Z,1.8nm,1.1s,baz=66,slow=5.1,SNR=2.0						
	comp=Z,1.8nm,1.1s						
KKM	Kota Kinabalu	73.59	288	P	P	10 43 34.8	-0.7
SNAA	Sanae	76.79	178	P	P	10 43 53.6	+0.6
SNAA				IAmb	IAmb	10 44 12.2	
	comp=Z,3.4nm,1.1s						
FINES	FINESS Array B	146.63	340	PKPbc	PKPbc	10 51 43.0	+0.5
	comp=Z,1.9nm,0.7s,baz=51,slow=4.4,SNR=8.3						

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*NEIC **19** 11:16:40.5±1.3, 31°.66S±0°.08×177°.4W±0°.2, h10^{km}±2^{km}, mb4.3/9, Error ellipse: s-maj=25.3km s-min=13.6km az=99.0*

*IDC **19** 11:16:40.4±1.4, 31°.85S×177°.54W, h0^{km}, mb4.0/5, mbtmp4.0/6, ML3.2/1, MS3.0/1, Error ellipse: s-maj=35.0km s-min=26.9km az=52.0*

ISC 19 11:16:41.1±1.1, 31°.71S±0°.10×177°.7W±0°.2, h10^{km}, n20, σ1ˢ.26/21, mb4.2/10, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.46	354	Pn	Pn	11 17 19.8	-1.4
URZ	Urewera	7.82	212	Pn	Pn	11 18 32.6	-2.3
	0.4nm,0.3s,baz=72,slow=19,SNR=8.5						
URZ				Sn	Sn	11 20 02.5	-1.0
	1.9nm,0.3s,baz=75,slow=20,SNR=12						
	1.9nm,0.4s						
RTZ	Ruatahuna	8.17	211	Pn	Pn	11 18 40.6	+0.8
ARMA	Armidale	26.31	265	P	P	11 22 17.0	-0.2
ARMA				IAmb	IAmb	11 22 26.7	
	comp=Z,9.2nm,1.1s						
STKA	Stephens Creek	34.50	259	P	P	11 23 30.0	+0.6
STKA	Stephens Creek	34.50	259	P	P	11 23 32.6	+3.1
	comp=Z,2.0nm,0.7s,baz=94,slow=19,SNR=6.1						
	comp=Z,2.0nm,0.7s						
BBOO	Buckleboo	38.92	256	P	P	11 24 07.2	+0.1
BBOO				IAmb	IAmb	11 24 18.7	
	comp=Z,7.6nm,1.1s						
AS31	Alice Springs	43.36	268	P	P	11 24 44.7	+0.9
ASAR	Alice Springs	43.36	268	P	P	11 24 43.4	-0.4
ASAR	Alice Springs	43.36	268	P	P	11 24 44.7	+0.9
	comp=Z,0.5nm,0.4s,baz=110,slow=8.4,SNR=16						
ASAR				PcP	PcP	11 26 34.6	+2.2
	comp=Z,0.2nm,0.4s,baz=106,slow=3.8,SNR=1.2						
	comp=Z,0.5nm,0.4s						
WR8	Warramunga Arr	44.32	273	P	P	11 24 51.4	-0.1
WR8				IAmb	IAmb	11 24 55.4	
	comp=Z,4.2nm,1.1s						
WRA	Warramunga Arr	44.46	273	P	P	11 24 53.7	+1.0
	comp=Z,1.2nm,0.4s,baz=115,slow=8.1,SNR=28						
	comp=Z,1.2nm,0.4s						

WB0	Warramunga Arr	44.49	274	P	P	11 24 53.8	+0.8
WB0				IAmb	IAmb	11 25 10.2	
	comp=Z,5.8nm,1.1s						
KNRA	Kununurra	51.12	275	P	P	11 25 44.6	+0.3
KNRA				IAmb	IAmb	11 25 51.2	
	comp=Z,4.6nm,0.9s						
FITZ	Fitzroy Crossi	52.67	271	P	P	11 25 55.0	-0.9
GUMO	Guam	57.62	316	LR	LR	11 50 38.6	
	comp=Z,13nm,19.2s,baz=152,slow=35						
QSPA	South Pole Qui	58.41	180	P	P	11 26 36.5	-0.2
QSPA	South Pole Qui	58.41	180	P	P	11 26 36.5	-0.2
	comp=Z,3.3nm,1.1s,baz=34,slow=3.6,SNR=9.0						
	comp=Z,3.3nm,1.1s						
SNAA	Sanae	76.84	178	P	P	11 28 33.2	+0.4
	comp=Z,1.9nm,1.0s,baz=187,slow=16,SNR=8.6						
	comp=Z,1.9nm,1.0s						
FINES	FINESS Array B	146.47	340	PKPbc	PKPbc	11 36 21.6	-0.1
	comp=Z,1.2nm,0.5s,baz=29,slow=3.2,SNR=10						

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*IDC **19** 11:18:43.5±0.6, 30°.52S×177°.84W, h0^{km}, mb4.5/6, mbtmp4.5/6, MS3.6/9, Error ellipse: s-maj=25.6km s-min=24.4km az=147.0*

*NEIC **19** 11:18:49.5±1.4, 30°.65S±0°.09×177°.8W±0°.2, h35^{km}±1^{km}, mb4.9/25, Error ellipse: s-maj=26.6km s-min=15.8km az=82.0*

ISC 19 11:18:49.3±0.5, **30°.82S**±0°.05×**177°.9W**±0°.1, **h35**^{km}, **n100**, σ**2^{s}18**/99, **mb4.8**/22, **MS3.7**/4, **1C-5D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.55	359	P	Pn	11 19 12.2	-2.3
GLKZ				S	Sn	11 19 27.8	-5.6
RAO	Raoul Island	1.56	359		Pn	11 19 12.2	-2.4
RIZ	Raoul Island	1.57	359	P	Pn	11 19 12.4	-2.4
MXZ	Matakaoa Point	7.42	204	P	Pn	11 20 32.9	-2.3
MXZ				S	Sn	11 21 57.0	-1.2
PKGZ	Pakihiroa	7.78	204	P	Pn	11 20 35.7	-4.3
PKGZ				S	Sn	11 22 05.7	-1.1
HAZ	Te Kaha	7.79	206	P	Pn	11 20 39.2	-0.9
HAZ				S	Sn	11 22 07.0	-0.1
PUZ	Puketiti	7.90	203	P	Pn	11 20 40.4	-1.4
PUZ				S	Sn	11 22 04.8	-5.1
RUGZ	Raukumara Rang	8.01	206	P	Pn	11 20 42.3	-1.0
RUGZ				S	Sn	11 22 11.0	-1.7
WCZ	Waipu Caves	8.26	230	P	Pn	11 20 53.1	+6.5
CNGZ	Carnagh Statio	8.29	202	P	Pn	11 20 44.2	-2.8
CNGZ				S	Sn	11 22 19.2	-0.2
OUZ	Omahuta	8.38	236	P	Pn	11 20 54.9	+6.6
MWZ	Matawai	8.39	205	P	Pn	11 20 45.9	-2.5
MWZ				S	Sn	11 22 17.3	-4.7
URZ	Urewera	8.49	208	Pn	Pn	11 20 46.7	-3.0
	0.3nm,0.3s,baz=27,slow=2.3,SNR=1.1						
URZ				Sn	Sn	11 22 20.2	-4.0
	11nm,0.3s,baz=66,slow=20,SNR=12						
URZ				LR	LR	11 24 05.8	
	comp=Z,250nm,20.8s,baz=41,slow=37						
URZ	Urewera	8.49	208	P	Pn	11 20 49.6	-0.1
URZ				S	Sn	11 22 21.6	-2.6
TOZ	Tahuroa Road	8.79	217	Pn	Pn	11 20 58.1	+4.2
RTZ	Ruatahuna	8.85	207	Pn	Pn	11 20 56.3	+1.5
RAHZ	Arahi	9.07	206	P	Pn	11 20 55.6	-2.1
RAHZ				S	Sn	11 22 36.8	-1.8
MTHZ	Maungataniwha	9.11	207	P	Pn	11 20 57.7	-0.6
MTHZ				S	Sn	11 22 37.0	-2.5
BKZ	Black Stump Fm	9.51	207	Pn	Pn	11 21 05.5	+1.7
MCHZ	McNeill Hill	9.68	206	S	Sn	11 22 50.3	-3.2
KWHZ	Kaweka Forest	9.76	207	S	Sn	11 22 52.3	-3.3
KRHZ	Kereru	9.97	206	S	Sn	11 22 55.1	-5.6
PWZ	Pawanui	10.13	204	P	Pn	11 21 07.1	-5.2
PWZ				S	Sn	11 22 59.0	-5.6
PNHZ	Pukenui	10.27	206	S	Sn	11 23 03.6	-4.5
MSVF	Nonsavu	13.54	343	LR	LR	11 26 00.8	
	comp=Z,309nm,21.7s,baz=206,slow=33						
RPZ	Rata Peaks	15.57	211	Pn	Pn	11 22 22.2	-3.9
	1.3nm,0.3s,baz=51,slow=13,SNR=8.6						
RPZ				Sn	Sn	11 25 01.9	-16
	1.0nm,0.3s,baz=19,slow=18,SNR=1.9						
RPZ				LR	LR	11 27 32.7	
	comp=Z,146nm,21.6s,baz=38,slow=33						
DZM	Mont Dzumac	16.50	298		Pn	11 22 40.5	+2.3
DZM	Mont Dzumac	16.50	298	LR	LR	11 27 55.8	
	comp=Z,237nm,18.4s,baz=144,slow=34						
RAR	Rarotonga	18.87	64	LR	LR	11 29 52.5	
	comp=Z,44nm,19.4s,baz=236,slow=36						
ARMA	Armidale	26.20	263	P	P	11 24 23.9	+2.9
ARMA				IAmb	IAmb	11 24 41.0	
	comp=Z,44nm,1.5s						
CAN	Canberra	28.03	252	P	P	11 24 39.1	+1.8
CAN				IAmb	IAmb	11 24 59.9	
	comp=Z,36nm,1.4s						
TAU	Tasmania Unive	30.12	237	P	P	11 24 56.7	+1.0
TOO	Toolangi	30.88	247	P	P	11 25 03.4	+0.9
CTAO	Charters Tower	33.96	280	P	P	11 25 31.1	+1.5
CTAO	Charters Tower	33.96	280	P	P	11 25 30.8	+1.2
STKA	Stephens Creek	34.48	258		P	11 25 35.9	+1.9
STKA	Stephens Creek	34.48	258	P	P	11 25 35.8	+1.8
	comp=Z,41nm,0.7s,baz=102,slow=13,SNR=92						
	comp=Z,41nm,0.7s						
BBOO	Buckleboo	38.94	255	P	P	11 26 12.1	+0.1
COEN	Coen	39.48	286	P	P	11 26 16.2	-0.4
COEN				IAmb	IAmb	11 26 17.7	
	comp=Z,29nm,1.4s						
AS31	Alice Springs	43.18	267		P	11 26 47.2	+0.2
ASAR	Alice Springs	43.18	267	P	P	11 26 46.5	-0.5
ASAR	Alice Springs	43.18	267	P	P	11 26 46.4	-0.7
	comp=Z,3.8nm,0.5s,baz=112,slow=8.0,SNR=52						
ASAR				PcP	PcP	11 28 35.7	-0.4
	comp=Z,0.3nm,0.5s,baz=107,slow=4.2,SNR=1.5						
ASAR				LR	LR	11 43 31.0	
	comp=Z,103nm,18.2s,baz=97,slow=34						
	comp=Z,3.8nm,0.5s						
DRV	Dumont d'Urvil	43.79	203	P	P	11 26 51.6	+0.4
WR8	Warramunga Arr	44.06	273		P	11 26 53.8	-0.4
WR8				IAmb	IAmb	11 26 55.4	
	comp=Z,8.9nm,0.8s						
WRAB	Tennant Creek	44.20	273	P	P	11 26 55.0	-0.3
WRAB				IAmb	IAmb	11 26 56.0	
	comp=Z,9.7nm,0.7s						
WRA	Warramunga Arr	44.21	273	P	P	11 26 54.5	-0.7
	comp=Z,12nm,0.5s,baz=114,slow=6.8,SNR=70						
	comp=Z,12nm,0.5s						
WB0	Warramunga Arr	44.23	273		P	11 26 55.0	-0.5
WB0				IAmb	IAmb	11 26 56.3	
	comp=Z,15nm,0.6s						
FORT	Forrest	46.03	255	P	P	11 27 09.0	-0.6
FORT				IAmb	IAmb	11 27 10.4	
	comp=Z,14nm,0.6s						
SBA	Scott Base	47.63	184	P	P	11 27 22.9	+1.5
JAY	Jayapura	48.17	298	LR	LR	11 44 57.8	
	comp=Z,63nm,20.7s,baz=66,slow=33						
MTN	Manton Dam	50.14	279	P	P	11 27 41.7	+0.1
KNRA	Kununurra	50.83	275	P	P	11 27 46.2	-0.6
KNRA				IAmb	IAmb	11 28 00.9	
	comp=Z,23nm,1.4s						
FITZ	Fitzroy Crossi	52.45	270	P	P	11 27 58.5	-0.4
CCD	Concordia, Ant	52.58	196	P	P	11 28 00.8	+1.3
CASY	Casey	54.81	208	P	P	11 28 15.6	+0.2
CASY				IAmb	IAmb	11 28 16.1	
	comp=Z,10nm,0.7s						
CASY	Casey	54.81	208	P	P	11 28 15.4	-0.1
MBWA	Marble Bar	56.27	264	P	P	11 28 26.1	-0.5
MBWA				IAmb	IAmb	11 28 50.5	
	comp=Z,10nm,1.4s						
MORW	Morawa	56.50	254	P	P	11 28 27.1	-1.1
MORW				IAmb	IAmb	11 28 35.6	
	comp=Z,22nm,1.5s						
BATI	Baumata	57.80	278	LR	LR	11 53 29.8	
	comp=Z,213nm,18.0s,baz=162,slow=36						
QSPA	South Pole Qui	59.29	180	P	P	11 28 50.1	+2.8
QSPA	South Pole Qui	59.29	180	P	P	11 28 49.7	+2.3
	comp=Z,1.9nm,0.7s,baz=47,slow=1.0,SNR=8.9						
	comp=Z,1.9nm,0.7s						
QSPA	South Pole Qui	59.29	180	P	P	11 28 49.7	+2.3
BELA	Belgrano 2	69.36	172	P	P	11 29 53.7	+0.8
BELA				IAmb	IAmb	11 30 02.5	
	comp=Z,4.9nm,0.7s						
SYO	Syowa Base	76.73	193	⇑eP	P	11 30 36.2	-0.3
TROLL	Troll, Antarti	77.45	180	⇓P	P	11 30 41.9	+1.2
	comp=Z,192nm,1.1s						
SNAA	Sanae	77.73	178	⇓P	P	11 30 43.1	+0.8
	comp=Z,21nm,0.8s						
SNAA	Sanae	77.73	178	P	P	11 30 42.9	+0.7
SNAA	Sanae	77.73	178	P	P	11 30 42.9	+0.7
	comp=Z,1.1nm,0.9s,baz=190,slow=5.6,SNR=9.5						
	comp=Z,1.1nm,0.9s						
VNA3	Neumayer Olymp	77.88	176	⇓P	P	11 30 43.7	+0.6
	comp=Z,3.5nm,0.7s						
VNA2	Neumayer--Watz	78.32	177	⇓P	P	11 30 46.5	+1.1
	comp=Z,2.3nm,0.8s,baz=162,slow=6.0						
VNA1	Neumayer--Stat	78.55	176	⇓P	P	11 30 48.6	+1.9
	comp=Z,2.8nm,0.9s						
H03S2	Juan Fernandez	80.16	123	T	T	13 00 08.7	
	baz=238,slow=74,SNR=13						
H03S1	Juan Fernandez	80.17	123	T	T	13 00 06.1	
	baz=238,slow=74,SNR=11						
H03S3	Juan Fernandez	80.17	123	T	T	13 00 05.0	
	baz=238,slow=74,SNR=8.2						
H03N3	Juan Fernandez	80.35	123	T	T	13 00 19.5	
	baz=242,slow=72,SNR=8.0						
H03N2	Juan Fernandez	80.35	123	T	T	13 00 17.0	
	baz=242,slow=72,SNR=9.1						
H03N1	Juan Fernandez	80.37	123	T	T	13 00 21.5	
	baz=242,slow=72,SNR=13						
ADK	Adak	82.35	1	P	P	11 31 05.9	-1.2
ADK				IAmb	IAmb	11 31 33.7	
	comp=Z,17nm,1.1s						
SHEM	Shemya Is, Ala	83.49	355	LR	LR	12 04 44.3	
	comp=Z,29nm,19.2s,baz=164,slow=33						
NVAR	Mina Array Bea	88.48	43	P	P	11 31 38.4	+0.1
	comp=Z,0.7nm,0.6s,baz=253,slow=4.7,SNR=8.5						
	comp=Z,0.7nm,0.6s						
MKAR	Makanchi Array	118.11	310	PKP	PKPdf	11 37 30.9	-1.4
	comp=Z,0.6nm,0.6s,baz=94,slow=1.3,SNR=5.0						
KURBB	Kurchatov Arra	121.44	313	PKP	PKPdf	11 37 37.0	-1.5
	comp=Z,1.3nm,0.5s,baz=110,slow=1.7,SNR=15						
KKAR	Karatay Array	125.38	303		PKPdf	11 37 45.7	-0.7
BVAR	Borovoye Array	126.77	316	PKP	PKPdf	11 37 47.7	-1.0
	comp=Z,2.1nm,0.6s,baz=94,slow=3.5,SNR=9.9						
SPITS	Spitsbergen Ar	132.13	356	PKP	PKPdf	11 37 58.6	+0.4
	comp=Z,4.3nm,1.0s,baz=8.5,slow=2.9,SNR=4.4						
ARCES	ARCESS Array B	139.02	348	PKhKP	PKPpre	11 38 02.5	
	comp=Z,0.7nm,0.6s,baz=28,slow=2.9,SNR=8.4						
KBZ	Khabaz	145.42	303	PKPbc	PKPdf	11 38 22.9	-0.5
	comp=Z,1.2nm,0.5s,baz=108,slow=3.2,SNR=3.7						
FIA1	FINESS Array S	145.57	340		PKPdf	11 38 22.2	-0.9
FINES	FINESS Array B	145.57	340		PKPdf	11 38 22.1	-1.0
FINES	FINESS Array B	145.57	340	PKPbc	PKPdf	11 38 21.8	-1.3
	comp=Z,18nm,0.5s,baz=43,slow=3.9,SNR=90						
NC303	NORSAR Array S	148.98	351		PKPdf	11 38 32.2	+3.4
NC303				PKPab	PKiKP	11 38 36.3	+2.1
NB2	NORSAR Subarra	149.18	351	PKP	PKPdf	11 38 32.4	+3.2
	comp=Z,2.2nm,0.8s,baz=9.3,slow=2.5						
NOA	NORSAR Array B	149.18	351	PKPbc	PKPdf	11 38 31.6	+2.4
	comp=Z,2.5nm,0.7s,baz=14,slow=2.5,SNR=10						
HFS	Hagfors	149.67	349	PKPbc	PKPdf	11 38 33.1	+3.2
	comp=Z,5.2nm,0.7s,baz=56,slow=2.6,SNR=16						
AKASG	Malin Array Be	151.69	322		PKPbc	11 38 38.9	-0.7
AKASG	Malin Array Be	151.69	322	PKPbc	PKPbc	11 38 38.4	-1.3
	comp=Z,4.2nm,0.6s,baz=50,slow=2.5,SNR=15						
KIEV	Kiev	151.70	322		PKPbc	11 38 38.8	-0.9
MMAI	Mount Meron Ar	151.72	283	PKPbc	PKPbc	11 38 40.0	-0.4
	comp=Z,2.6nm,0.5s,baz=84,slow=5.9,SNR=3.5						
BRTR	Keskin Array B	152.88	298	PKPbc	PKPbc	11 38 41.8	-1.1
	comp=Z,0.6nm,0.5s,baz=116,slow=3.4,SNR=3.5						
TORD	Torodi Ar. Bea	162.41	179	PKPab	PKPab	11 39 35.9	+0.5
	comp=Z,9.9nm,0.3s,baz=182,slow=2.6,SNR=8.8						

IDC 19 11:25:54.3±2.9, **31°.88S**×**177°.76W**, **h0**^{km}, **mb3.9**/3, **mbtmp3.9**/4, **ML3.2**/1, **Error ellipse: s-maj=67.5km s-min=37.4km az=118.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.63	212	Pn	Pn	11 27 45.9	-0.8
	0.4nm,0.3s,baz=38,slow=15,SNR=2.2						
URZ				Sn	Sn	11 29 15.2	+1.3
	1.1nm,0.3s,baz=12,slow=20,SNR=6.8						
	4.8nm,0.8s						
STKA	Stephens Creek	34.37	259	P	P	11 32 41.5	-1.6
	1.7nm,1.0s,baz=96,slow=9.2,SNR=2.3						
	1.7nm,1.0s						
ASAR	Alice Springs	43.25	268	P	P	11 33 58.3	+0.6
	0.7nm,0.6s,baz=111,slow=8.0,SNR=13						
ASAR				PcP	PcP	11 35 48.3	+1.3
	0.1nm,0.4s,baz=124,slow=3.8,SNR=0.9						
	0.7nm,0.6s						
WRA	Warramunga Arr	44.38	274	P	P	11 34 06.7	0.0
	1.4nm,0.5s,baz=114,slow=8.0,SNR=12						
	1.4nm,0.5s						
FINES	FINESS Array B	146.60	339	PKPbc	PKPdf	11 45 35.0	-0.5
	0.7nm,0.7s,baz=39,slow=5.3,SNR=1.5						

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*SJA **19** 11:37:20.5±0.5, 21°.45S×66°.68W, h271^{km}±6^{km}, ML3.6, MW3.5*

*SCB **19** 11:37:22.4±1.4, 21°.34S×66°.59W, h230^{km}±11^{km}, ML3.9/3, MW3.1, Error ellipse: s-maj=8.7km s-min=5.9km az=0.0*

ISC 19 11:37:19.7±2.0, **21°.44S**±0°.05×**66°.59W**±0°.06, **h254**^{km}±14^{km}, **n38**, σ**1^{s}79**/59, **Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCB	Mochara	0.91	78	Pg	Pn	11 37 55.4	+0.1
MOCB				Sg	S	11 38 20.3	-2.9
MOCB				IAML		11 38 23.7	
	228nm,0.4s						
YJA	Yavi	1.24	126	Pg	Pn	11 37 57.9	+0.8
YJA	Yavi	1.24	126	i P	Pn	11 38 00.6	+3.5
YJA				IAML		11 38 31.8	
	comp=Z,8.9nm,0.7s						
PB09	IPOC Station P	2.49	261	eP	Pn	11 38 09.6	+2.2
PB09				i S	S	11 38 46.0	+1.0
PB09				IAML		11 38 50.3	
	comp=N,95nm,0.2s						
PB09	IPOC Station P	2.49	261	Pg	Pn	11 38 09.4	+2.1
PB09	IPOC Station P	2.49	261	i P	Pn	11 38 11.3	+4.0
PB09				IAML		11 38 51.7	
	comp=Z,80nm,0.4s						
PB01	IPOC Station P	2.73	278	eP	Pn	11 38 11.2	+1.6
PB01				i S	S	11 38 48.3	-1.0
PB01				IAML		11 38 50.8	
	comp=E,534nm,0.3s						
PB01	IPOC Station P	2.73	278	Pg	Pn	11 38 11.5	+1.8
PB01				Sg	S	11 38 48.2	-1.0
PB01				IAML		11 38 51.0	
	comp=E,460nm,0.2s						
PB03	IPOC Station P	3.00	258	eP	Pn	11 38 14.3	+1.7
PB03				i S	S	11 38 53.3	-1.2
PB03				IAML		11 38 54.6	
	comp=E,250nm,0.2s						
PB03	IPOC Station P	3.00	258	i P	Pn	11 38 13.9	+1.4
PB03				i S	S	11 38 53.7	-0.8
PB03				IAML		11 38 54.3	
	comp=Z,250nm,0.3s						
GO01	Chusmiza	3.01	305	eP	Pn	11 38 14.1	+1.0
GO01	Chusmiza	3.01	305	Pg	Pn	11 38 14.1	+1.0
GO01	Chusmiza	3.01	305	i P	Pn	11 38 14.3	+1.2
GO01				i S	S	11 38 54.8	-0.5
GO01				IAML		11 39 03.0	
	comp=Z,58nm,0.2s						
PB06	IPOC Station P	3.04	245	eP	Pn	11 38 15.8	+2.8
PB06				i S	S	11 38 55.2	0.0
SOEO	Opoqueri	3.11	337	Pg	Pn	11 38 15.9	+1.7
PB11	IPOC Station P	3.32	300	eP	Pn	11 38 16.5	+0.4
PB11				i S	S	11 38 58.4	-2.4
PB11	IPOC Station P	3.32	300	Pg	Pn	11 38 17.0	+0.9
PB11				Sg	S	11 38 58.5	-2.4
PB11				IAML		11 39 01.8	
	comp=Z,330nm,0.2s						
PB11	IPOC Station P	3.32	300	i P	Pn	11 38 16.5	+0.4
PB11				IAML		11 39 00.8	
	comp=Z,166nm,0.1s						
PATCX	Punta Patache	3.38	280	eP	Pn	11 38 17.6	+1.0
PATCX				i S	S	11 38 60.0	-1.9
PATCX	Punta Patache	3.38	280	i P	Pn	11 38 17.9	+1.2
PATCX				i S	S	11 39 00.6	-1.3
PATCX				IAML		11 39 02.4	
	comp=Z,185nm,0.2s						
TA01	Diego Aracena	3.46	284	i P	Pn	11 38 17.9	+0.4
TA01				IAML		11 39 02.6	
	comp=Z,84nm,0.2s						
TA02	Huaiquique	3.51	289	i P	Pn	11 38 19.2	+1.1
TA02				i S	S	11 39 03.0	-1.3
TA02				IAML		11 39 04.6	
	comp=Z,228nm,0.1s						
PB05	IPOC Station P	3.63	247	eP	Pn	11 38 21.2	+1.7
PB05				i S	S	11 39 05.3	-1.8
PB05	IPOC Station P	3.63	247	i P	Pn	11 38 20.8	+1.3
PB05				i S	S	11 39 05.2	-1.8
PB05				IAML		11 39 08.4	
	comp=Z,66nm,0.3s						
PB16	IPOC Station P	4.13	318	eP	Pn	11 38 27.3	+1.4
PB16				i S	S	11 39 17.5	-0.9
PB16	IPOC Station P	4.13	318	Pg	Pn	11 38 27.2	+1.4
PB16	IPOC Station P	4.13	318	i P	Pn	11 38 27.3	+1.4
PB16				i S	S	11 39 16.8	-1.5
PB16				IAML		11 39 20.2	
	comp=Z,21nm,0.4s						
PB10	IPOC Station P	4.21	240	eP	Pn	11 38 27.7	+1.6
PB10				i S	S	11 39 16.0	-2.9
PB10	IPOC Station P	4.21	240	i P	Pn	11 38 27.4	+1.3
PB10				i S	S	11 39 16.3	-2.6
PB10				IAML		11 39 19.2	
	comp=Z,39nm,0.2s						
GO02	Mina Guanaco	4.62	216	i P	Pn	11 38 33.0	+1.8
GO02				i S	S	11 39 25.7	-2.6
GO02				IAML		11 39 30.8	
	comp=Z,111nm,0.5s						
BBOJ	La Paz, Jacaqu	4.69	341	Pg	Pn	11 38 34.5	+2.0
SOEJ	Jacaque	4.69	341	Pg	Pn	11 38 34.6	+2.1
PB14	IPOC Station P	4.73	227	i P	Pn	11 38 34.0	+1.4
PB14				i S	S	11 39 27.7	-3.1
PB14				IAML		11 39 36.3	
	comp=Z,31nm,0.6s						
BBOE	La Paz, Chanca	4.79	344	Pg	Pn	11 38 35.4	+1.8
BBOD	La Paz, Gloria	5.14	338	Pg	Pn	11 38 39.3	+1.4
LPAZ	La Paz	5.33	344	Pg	Pn	11 38 41.0	+0.7
LPAZ	La Paz	5.33	344	i P	Pn	11 38 41.5	+1.2
LPAZ				IAML		11 39 44.8	
	comp=Z,7.4nm,1.2s						
BBOB	La Paz, Bander	5.47	344	Pg	Pn	11 38 42.5	+0.6

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*IDC **19** 11:46:01.6±1.2, 35°.51N×69°.95E, h0^{km}, mb3.8/6, mbtmp3.9/11, ML3.7/5, Error ellipse: s-maj=27.7km s-min=21.0km az=76.0*

*NNC **19** 11:46:20.4±3.3, 36°.43N×70°.00E, h121^{km}±45^{km}, mb3.4, mpv4.0, Error ellipse: s-maj=26.3km s-min=23.0km az=168.0*

ISC 19 11:46:18.6±1.9, **36°.4N**±0°.1×**70°.0E**±0°.1, **h100**^{km}, **n23**, σ**1^{s}71**/28, **mb3.8**/5, **3C-6D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.43	26	P	Pn	11 47 52.1	+1.1
	SNR=25						
KK31	Karatay Array	6.72	4	⇓P	Pn	11 47 56.3	+1.6
	10nm,0.3s						
KK31				⇑S	Sn	11 49 11.4	+1.8
	30nm,0.5s						
AAK	Ala-Archa	7.16	28	P	Pn	11 48 02.2	+1.5
	SNR=5.8						
AAK	Ala-Archa	7.16	28	Pn	Pn	11 48 02.1	+1.4
	2.0nm,0.3s,baz=193,slow=11,SNR=15						
AAK				Sn	Sn	11 49 20.8	+0.3
	2.4nm,0.3s,baz=180,slow=20,SNR=11						
	6.5nm,0.5s						
AAK	Ala-Archa	7.16	28	⇓P	Pn	11 48 01.9	+1.2
	1.6nm,0.6s						
AAK				⇑S	Sn	11 49 22.4	+1.8
	6.1nm,0.6s						
CHMS	Chumysh	7.57	28	P	Pn	11 48 07.5	+1.3
	SNR=6.1						
USP	Ospenovka	7.71	26	P	Pn	11 48 10.0	+1.9
	SNR=7.1						
TKM2	Tokmak 2	7.84	32	P	Pn	11 48 10.7	+0.7
	SNR=14						
TKM2	Tokmak 2	7.84	32	⇓P	Pn	11 48 10.2	+0.2
	5.6nm,0.5s						
TKM2				⇓S	Sn	11 49 36.9	-0.3
	7.2nm,0.8s						
MK31	Makanchi Array	13.89	38	⇓P	P	11 49 33.3	-2.6
	4.6nm,0.8s,baz=214,slow=8.6,SNR=24						
MKAR	Makanchi Array	13.89	38	Pn	Pn	11 49 29.0	-1.9
	0.2nm,0.3s,baz=224,slow=15,SNR=5.8						
MKAR				Sn	Sn	11 52 06.6	+2.9
	baz=216,slow=27						
	0.7nm,0.6s						
AB31	Akbulak array	14.79	334	P	Pn	11 49 42.9	+0.5
	0.7nm,0.3s,baz=149,slow=12,SNR=52						
KURBB	Kurchatov Arra	15.52	21	Pn	Pn	11 49 50.8	-0.7
	0.2nm,0.3s,baz=209,slow=11,SNR=9.8						
	1.2nm,0.3s						
AKTO	Aktyubinsk	16.47	332	P	Pn	11 50 04.0	+0.5
	0.7nm,0.3s,baz=138,slow=12,SNR=4.5						
AKTO				S	Sn	11 53 02.3	-3.6
	1.0nm,0.3s,baz=214,slow=3.3,SNR=1.9						
	2.2nm,0.4s						
AKTO	Aktyubinsk	16.47	332	⇑P	Pn	11 50 03.2	-0.3
	1.0nm,0.5s						
BVA0	Borovoye Array	16.64	1	⇓P	Pn	11 50 05.1	-0.4
	1.7nm,0.5s,baz=187,slow=10,SNR=10						
BVAR	Borovoye Array	16.64	1	P	Pn	11 50 06.3	+0.8
	0.1nm,0.3s,baz=173,slow=10,SNR=14						
BVAR				S	Sn	11 53 06.0	-4.0
	0.5nm,0.5s,baz=193,slow=25,SNR=1.7						
	2.5nm,0.5s						
ZALV	Zalesovo Beam	20.38	26	P	P	11 50 46.5	-0.5
	6.6nm,0.3s,baz=210,slow=9.8,SNR=22						
	6.6nm,0.3s						
FINES	FINESS Array B	37.11	326	P	P	11 53 19.8	+0.8
	0.7nm,0.5s,baz=100,slow=7.2,SNR=6.4						
	0.7nm,0.5s						
ARCES	ARCESS Array B	40.93	338	P	P	11 53 50.8	+0.1
	1.4nm,0.9s,baz=106,slow=6.9,SNR=2.7						
	1.4nm,0.9s						
HFS	Hagfors	42.63	322	P	P	11 54 05.6	+0.9
	0.7nm,0.5s,baz=98,slow=10,SNR=4.0						
	0.7nm,0.5s						
WRA	Warramunga Arr	82.66	121	P	P	11 58 24.7	-6.4
	0.3nm,0.6s,baz=314,slow=5.5,SNR=6.2						
	0.3nm,0.6s						
ASAR	Alice Springs	84.89	124	P	P	11 58 36.3	-6.2
	0.4nm,0.6s,baz=315,slow=5.2,SNR=7.0						
	0.4nm,0.6s						

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*SJA **19** 11:59:05.4±0.6, 23°.55S×66°.79W, h219^{km}±4^{km}, ML3.5, MW3.5*

*IDC **19** 11:59:09.9±2.3, 23°.28S×66°.58W, h226^{km}±24^{km}, mb2.9/2, mbtmp3.7/6, Error ellipse: s-maj=23.1km s-min=18.9km az=112.0*

ISC 19 11:59:06.9±0.8, **23°.55S**±0°.05×**66°.87W**±0°.05, **h200**^{km}, **n23**, σ**1^{s}44**/35, **Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALTA		0.83	145	eP	Pn	11 59 36.9	+0.6
SALTA				eS	Sn	11 59 59.9	+0.9
AF01	San Pedro de A	1.34	296	eP	Pn	11 59 42.0	+2.3
AF01				IAML		12 00 28.6	
	comp=Z,130nm,0.7s						
SLA	San Lorenzo	1.71	133	eP	Pn	11 59 36.0	-6.8
YJA	Yavi	1.85	43	eP	Pn	11 59 45.0	+0.6
YJA				eS	Sn	12 00 14.5	+1.0
PB06	IPOC Station P	2.63	288	eP	Pn	11 59 53.6	+1.2
PB06				eS	Sn	12 00 28.6	+0.7
PB06				IAML		12 00 32.2	
	comp=Z,188nm,0.1s						
FSA	Cafayete	2.68	163	eP	Pn	11 59 53.2	+0.2
PB09	IPOC Station P	2.80	308	eP	Pn	11 59 55.8	+1.3
PB09				eS	Sn	12 00 32.5	+0.9
PB09				IAML		12 00 35.2	
	comp=Z,69nm,0.1s						
GO02	Mina Guanaco	2.96	237	eS	Sn	12 00 35.9	+0.8
PB03	IPOC Station P	3.05	299	eP	Pn	11 59 58.0	+0.6
PB03				eS	Sn	12 00 36.2	-0.5
PB03				IAML		12 00 40.8	
	comp=Z,232nm,0.1s						
PB05	IPOC Station P	3.15	282	eP	Pn	11 59 59.0	+0.5
PB05				eS	Sn	12 00 38.6	0.0
PB05				IAML		12 00 41.8	
	comp=Z,79nm,0.9s						
PB10	IPOC Station P	3.38	270	eP	Pn	12 00 01.8	+0.7
PB10				eS	Sn	12 00 43.8	+0.1
PB10				IAML		12 00 46.6	
	comp=Z,45nm,0.3s						
PB14	IPOC Station P	3.41	251	eP	Pn	12 00 01.8	+0.1
PB14				eS	Sn	12 00 43.6	-1.0
PB14				IAML		12 00 44.6	
	comp=Z,40nm,0.8s						
PB01	IPOC Station P	3.48	315	eP	Pn	12 00 02.9	+0.5
PB01				eS	Sn	12 00 45.6	-0.3

PB01				IAML		12 00 46.1	
	comp=Z,105nm,0.2s						
PATCX	Punta Patache	4.08	311	eP	Pn	12 00 10.0	+0.2
PATCX				eS	Sn	12 00 58.6	-0.6
AC01	Pan de Azucar	4.27	232	eP	Pn	12 00 11.0	-1.0
AC01				eS	Sn	12 01 01.0	-2.3
AC01				IAML		12 01 06.4	
	comp=Z,30nm,1.9s						
GO03	Copiapo	5.05	216	eP	Pn	12 00 20.6	-1.3
GO03				eS	Sn	12 01 18.1	-3.1
LPAZ	La Paz	7.32	350	P	Pn	12 00 51.5	-0.5
	comp=Z,1.0nm,0.3s,baz=166,slow=8.3,SNR=4.2						
LPAZ				S	Sn	12 02 14.9	-0.4
	comp=Z,0.7nm,0.6s,baz=130,slow=3.2,SNR=2.0						
SIV	San Ignacio	9.29	37	P	Pn	12 01 14.8	-2.2
	comp=Z,4.0nm,0.5s,baz=224,slow=12,SNR=22						
PLCA	Paso Flores	17.41	189	P	Pn	12 03 02.3	+4.2
	comp=Z,0.7nm,0.4s,baz=5.2,slow=11,SNR=3.2						
BDFB	Brasilia	19.41	70	P	P	12 03 16.1	-2.2
	comp=Z,3.1nm,0.4s,baz=242,slow=12,SNR=6.7						
TXAR	Lajitas Array	63.38	324	P	P	12 09 15.8	+0.5
	comp=Z,0.1nm,0.5s,baz=140,slow=5.0,SNR=1.8 comp=Z,0.1nm,0.5s						
QSPA	South Pole Qui	66.65	180	P	P	12 09 37.1	+1.2
	comp=Z,0.4nm,0.5s,baz=236,slow=3.6,SNR=6.3 comp=Z,0.4nm,0.5s						
TORD	Torodi Ar. Bea	76.29	69	P	P	12 10 32.5	-1.7
	comp=Z,51nm,0.3s,baz=248,slow=7.1,SNR=17						

IDC 19 11:59:11.7±3.4, 19°.95S×178°.05W, h555^{km}±31^{km}, mb3.0/4, mbtmp3.9/5, Error ellipse: s-maj=91.4km s-min=28.6km az=38.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.30	300	P	P	12 00 36.2	-0.1
	2.2nm,0.4s,baz=119,slow=19,SNR=2.5						
ASAR	Alice Springs	44.60	256	P	P	12 06 35.1	-0.2
	1.1nm,0.5s,baz=95,slow=7.7,SNR=26						
ASAR				PcP	PcP	12 08 05.6	-0.5
	0.2nm,0.6s,baz=94,slow=3.0,SNR=1.2 1.1nm,0.5s						
WRA	Warramunga Arr	44.63	262	P	P	12 06 35.5	-0.1
	0.9nm,0.5s,baz=98,slow=8.0,SNR=27 0.9nm,0.5s						
FITZ	Fitzroy Crossi	53.05	262	P	P	12 07 37.8	0.0
	0.5nm,0.3s,baz=108,slow=20,SNR=0.9 0.5nm,0.3s						
VNDA	Vanda	58.45	185	P	P	12 08 14.1	-0.1
	1.7nm,0.6s,baz=35,slow=3.1,SNR=8.9 1.7nm,0.6s						

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*JMA **19** 12:03:16.1±0.1, 23°.3N±0°.9×12°1E±°, h41^{km}±1^{km}, MV3.9/11, TAIWAN REGION*

*ASIES **19** 12:03:17.1, 23°.31N×121°.38E, h40^{km}, ML4.2, Mw3.6, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}0.47; $M_{\theta\theta}$2.95; $M_{\phi\phi}$-3.41; $M_{r\theta}$0.59; $M_{\theta\phi}$-1.12; $M_{\phi r}$0.12; Fault plane solution: $M_0$3.44979×10^{21} NP1: ϕ_s145.22000°, δ79.67000°, λ5.94000°. NP2: ϕ_s54.15000°, δ84.16000°, λ169.62000°. Principal axes: T Plg11.4660°, Azm9.3610°; N Plg78.1000°, Azm205.0960°; P Plg3.1420°, Azm99.9990°;*

*TAP **19** 12:03:17.1, 23°.31N×121°.38E, h40^{km}, ML4.2, B*

ISC 19 12:03:17.3±0.9, 23°.29N±0°.01×121°.44E±0°.02, h34^{km}±1^{km}, n171, σ0^{s}.94/297, 48C-17D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ECBN	Changbin	0.03	14	eP	Pb	12 03 24.1	+1.2
ECBN				eS	Sb	12 03 29.0	+2.2
CHKH	Chenggong	0.11	205	⇑iP	Pb	12 03 23.9	+0.7
CHKH				eS	Sb	12 03 28.7	+1.5
EYUL	Yuli	0.13	297	eP	Pb	12 03 23.8	+0.4
EYUL				S	Sb	12 03 28.5	+0.9
TWF1	Yuli	0.15	295	⇑iP	Pb	12 03 23.6	0.0
TWF1				S	Sb	12 03 27.8	0.0
FULB	Fuli	0.16	237	⇑iP	Pb	12 03 24.3	+0.6
FULB				S	Sb	12 03 29.8	+1.7
YULB	Yu-li	0.17	308	P	Pn	12 03 23.3	+1.4
YULB	Yu-li	0.17	308	⇓iP	Pb	12 03 23.6	-0.1
YULB				eS	Sb	12 03 28.0	-0.1
CHKT	Chengkung	0.20	201	⇑iP	Pb	12 03 24.5	+0.5
CHKT				S	Sb	12 03 30.1	+1.5
HGSD	Ruisui	0.20	355	P	Pb	12 03 24.6	+0.6
HGSD				S	Sb	12 03 30.1	+1.4
EHYH	Wanrong	0.22	336	⇑iP	Pn	12 03 24.2	+0.7
EHYH				eS	Sb	12 03 28.9	-0.1
EHY	Hungye	0.24	333	⇑iP	Pn	12 03 24.2	+0.2
EHY				S	Sb	12 03 28.9	-0.4
EHD	Haiduan	0.26	238	⇑iP	Pn	12 03 24.2	-0.2
EHD				S	Sn	12 03 29.1	+1.0
ECS	Chishang	0.28	227	⇑iP	Pn	12 03 25.1	+0.2
ECS				S	Sb	12 03 30.9	+0.9
EDH	Donghe	0.34	202	⇑iP	Pb	12 03 25.7	+0.1
EDH				iS	Sb	12 03 32.1	+0.8
EGFH	Guangfu	0.38	358	iP	Pb	12 03 25.6	-0.6
EGFH				S	Sb	12 03 31.7	-0.6
ELDTW	Lidau	0.41	256	⇑iP	Pb	12 03 26.0	-0.6
ELDTW				eS	Sb	12 03 32.0	-1.1
TEGC	Jichi Village	0.43	12	⇑iP	Pb	12 03 27.2	+0.4
TEGC				eS	Sn	12 03 35.0	+1.2
WARBT	Fenglin Townsh	0.43	353	⇑iP	Pb	12 03 26.0	-0.9
WARBT				eS	Sb	12 03 31.9	-1.7
LONT	Longtian	0.48	217	⇑iP	Pb	12 03 26.8	-0.8
LONT				eS	Sb	12 03 34.3	-0.4
SHUL	Shoufeng	0.51	12	⇑iP	Pb	12 03 28.1	0.0
SHUL				eS	Sn	12 03 36.2	+0.5
ESL	Shilin	0.52	359	⇑iP	Pb	12 03 27.2	-1.1
ESL				eS	Sb	12 03 33.9	-2.1
VWDT	VWDT	0.54	329	⇑iP	Pb	12 03 28.5	-0.1
VWDT				S	Sb	12 03 35.5	-0.8
TWGBT	Beinan	0.58	216	P	Pn	12 03 27.7	-1.3
TWGBT	Beinan	0.58	216	⇑iP	Pn	12 03 27.8	-1.3
TWGBT				S	Sb	12 03 35.5	-1.8
TWG	Pinlang	0.58	216	⇑iP	Pn	12 03 27.8	-1.3
TWG				iS	Sb	12 03 35.6	-1.8
TEYL	Yanliau Villag	0.59	14	⇑iP	Pn	12 03 29.6	+0.3
TEYL				S	Sn	12 03 38.8	+0.9
TTN	Taitung	0.60	207	⇑iP	Pn	12 03 29.1	-0.2
TTN				S	Sb	12 03 37.8	0.0
STYH	Taoyuan	0.62	259	⇓P	Pn	12 03 29.5	-0.2
STYH				S	Sn	12 03 38.7	+0.1
ALS	Alishan	0.63	291	⇓iP	Pn	12 03 29.9	-0.1
ALS				S	Sb	12 03 38.7	-0.3
SSLB	Suanglung	0.67	318	P	Pn	12 03 30.0	-0.4
SSLB	Suanglung	0.67	318	S	Sn	12 03 39.3	-0.5
SSLB	Suanglung	0.67	318	P	Pn	12 03 30.1	-0.3
SSLB				S	Sn	12 03 38.3	-1.5
ETM	Tongmen	0.68	4	⇑iP	Pn	12 03 29.3	-1.2
ETM				eS	Sn	12 03 37.5	-2.4
WHYT	Xinyi Township	0.68	307	⇓P	Pn	12 03 30.6	+0.1
WHYT				eS	Sn	12 03 39.9	-0.1
HWA	Hwalien	0.70	12	⇑iP	Pn	12 03 30.5	-0.3
OWD	Renai	0.71	340	⇑iP	Pn	12 03 30.4	-0.6
OWD				S	Sn	12 03 39.1	-1.8
TPUB	Ta-pu	0.75	271	P	Pn	12 03 31.9	+0.4
TPUB	Ta-pu	0.75	271	⇓iP	Pn	12 03 31.6	+0.1
TPUB				S	Sn	12 03 42.0	+0.3
WUSB	Renai	0.76	337	⇑iP	Pn	12 03 31.6	-0.2
WUSB				eS	Sn	12 03 39.7	-2.5
WTP	Ta-pu	0.76	267	⇓iP	Pn	12 03 31.8	0.0
WTP				S	Sn	12 03 42.9	+0.7
CHN5	Tsauling	0.77	294	⇓iP	Pn	12 03 32.2	+0.3
CHN5				S	Sn	12 03 42.4	+0.1
SMLT	Sun Moon Lake	0.77	320	⇑iP	Pn	12 03 32.1	+0.1
SMLT				iS	Sn	12 03 42.5	0.0
WCKO	Fanlu	0.79	281	⇓iP	Pn	12 03 32.4	+0.4
WCKO				S	Sn	12 03 43.3	+0.7
TWD	Chiawan	0.80	10	⇑iP	Pn	12 03 31.2	-1.0
TWD				eS	Sn	12 03 41.3	-1.7
TYC	Yuchr	0.82	319	⇑iP	Pn	12 03 32.8	+0.4
TYC				iS	Sn	12 03 42.9	-0.4
ECL	Taimali	0.82	213	⇑iP	Pn	12 03 30.8	-1.7
ECL				eS	Sn	12 03 40.9	-2.6
WJS	Zhushan	0.84	309	⇓iP	Pn	12 03 33.3	+0.5
WJS				S	Sn	12 03 45.0	+0.9
CHN1	Nanshi	0.85	263	⇓iP	Pn	12 03 33.3	+0.4
CHN1				S	Sb	12 03 45.2	+0.4
WHF	Hehuan Shan	0.87	349	⇑iP	Pn	12 03 32.8	-0.8
WHF				iS	Sn	12 03 43.4	-1.9
SNST	Tainan City	0.87	266	⇓P	Pn	12 03 33.5	+0.3
SNST				S	Sb	12 03 46.0	+0.5
TWK	Hsinying	0.88	269	⇓P	Pn	12 03 33.5	+0.2
TWK				S	Sn	12 03 45.6	+0.7
ETL	Fush Village	0.88	11	eP	Pn	12 03 32.2	-1.2
NACB	Ninganchiao	0.89	9	P	Pn	12 03 32.2	-1.3
NACB	Ninganchiao	0.89	9	⇑iP	Pn	12 03 32.1	-1.3
NACB				S	Sn	12 03 43.1	-2.1
WGK	Gukeng	0.90	296	eP	Pn	12 03 34.1	+0.5
WGK				eS	Sn	12 03 46.0	+0.6
WCS	Beigang Elemen	0.91	328	⇑P	Pn	12 03 34.0	+0.4
WCS				iS	Sn	12 03 45.6	0.0
WNT	Mingjian	0.91	310	eP	Pn	12 03 34.3	+0.5
WNT				iS	Sn	12 03 46.4	+0.7
ETLH	Xiulin Townshi	0.92	2	⇑iP	Pn	12 03 32.7	-1.2
CHN2	Minshiung	0.92	285	eP	Pn	12 03 34.9	+1.0
CHN2				eS	Sb	12 03 47.8	+1.0
SSD	Sandimen	0.92	234	⇑iP	Pn	12 03 33.5	-0.3
WDLH	Douliu	0.92	296	eP	Pn	12 03 34.8	+0.9
WDLH				iS	Sb	12 03 47.2	+0.3
WDL	Douliou City	0.93	297	eP	Pb	12 03 35.2	+0.1
TSMG	Majia	0.94	232	eP	Pn	12 03 33.9	-0.2
TSMG				eS	Sb	12 03 47.7	+0.4
CHY	Chiayi	0.96	283	⇓P	Pn	12 03 34.8	+0.4
CHY				eS	Sn	12 03 47.8	+1.0
SCST	Cishan	0.96	246	eP	Pb	12 03 35.6	+0.1
SCST				eS	Sb	12 03 49.6	+1.6
FUSS	Fushou	0.97	349	⇑iP	Pn	12 03 34.8	-0.1
FUSS				iS	Sn	12 03 46.7	-0.9
TWT	Tachien	0.99	346	P	Pn	12 03 35.1	+0.1
TWT				S	Sn	12 03 46.9	-1.0
TDCB	Techi	1.00	345	⇑iP	Pn	12 03 35.1	+0.1
TDCB				S	Sn	12 03 46.6	-1.4
MASBT	Mashibuluo	1.01	228	⇑eP	Pn	12 03 34.8	-0.3
MASBT				eS	Sb	12 03 49.5	+0.3
CHN3	Shinhua	1.01	258	eP	Pb	12 03 36.6	+0.2
CHN3				iS	Sb	12 03 52.0	+2.5
SGLT	Jiouru	1.04	238	eP	Pb	12 03 37.5	+0.7
SGLT				eS	Sb	12 03 51.3	+1.0
WTK	Tuku	1.05	293	eP	Pn	12 03 35.7	+0.1
WTK				eS	Sn	12 03 50.2	+1.2
EHP	Heping Village	1.05	15	eP	Pn	12 03 34.7	-1.0
EAST	Anshuo	1.05	211	⇑iP	Pn	12 03 34.5	-1.3
TAW	Tawu	1.05	209	eP	Pn	12 03 34.3	-1.4
TAW				iS	Sn	12 03 47.6	-1.6
EAHA	Aohua	1.07	15	eP	Pn	12 03 35.6	-0.4
ICHU	Yijhu	1.07	274	eP	Pn	12 03 35.7	-0.2
ICHU				iS	Sn	12 03 50.7	+1.1
SSHA	Shanhua	1.07	262	eP	Pn	12 03 36.9	+0.9
SSHA				iS	Sb	12 03 52.7	+1.6
TAWH	Dawu Township	1.07	209	eP	Pn	12 03 34.8	-1.1
WHP	Taichung City	1.09	335	eP	Pn	12 03 37.4	+1.2
WHP				eS	Sn	12 03 51.3	+1.1
TCU	Taichung	1.11	321	eP	Pb	12 03 37.9	-0.1
TCU				eS	Sn	12 03 51.8	+1.2
WCHH	Zhanghua	1.13	314	P	Pn	12 03 37.7	+1.0
WCHH				eS	Sb	12 03 53.2	+0.4
WCH1	Changhua City	1.13	314	eP	Pn	12 03 37.9	+1.1
WCH1				eS	Sn	12 03 52.2	+1.0
CHN8	Yiju	1.13	273	eP	Pn	12 03 37.2	+0.4
CHN8				S	Sb	12 03 52.9	0.0
NNSB	Datong	1.14	357	⇑iP	Pn	12 03 36.5	-0.5
NNSB				eS	Sn	12 03 50.2	-1.3
WSL	Shuilin Townsh	1.14	282	eP	Pn	12 03 36.9	0.0
WSL				eS	Sn	12 03 52.0	+0.6
NNS	Nan Shan	1.15	357	⇑iP	Pn	12 03 36.8	-0.4
SNJT	Kaohsiung City	1.15	243	eP	Pb	12 03 39.4	+0.6
SNJT				eS	Sb	12 03 54.0	+0.7
EOS4	EOS4	1.15	44	eP	Pn	12 03 37.0	+0.3
EOS4				eS	Sn	12 03 51.2	+0.1
SCLT	Jiali	1.16	265	eP	Pn	12 03 37.6	+0.5
SCLT				eS	Sn	12 03 53.0	+1.3
ENA	Nanau	1.17	13	⇑iP	Pn	12 03 36.4	-0.9
WSF	Szhu	1.18	287	eP	Pn	12 03 37.5	+0.2
WSF				eS	Sn	12 03 52.5	+0.3
SCZT	Fangliau	1.19	220	iP	Pn	12 03 37.6	+0.1
SCZT				eS	Sn	12 03 53.8	+1.3
EWUT	Wuta	1.19	15	eP	Pn	12 03 37.0	-0.7
EWUT				eS	Sn	12 03 50.8	-1.8
WTCT	Ta-ch'eng	1.21	298	eP	Pn	12 03 38.1	+0.2
WTCT				iS	Sn	12 03 53.8	+0.8
TWQ1	Liyutan	1.22	330	⇑iP	Pn	12 03 39.3	+1.3
TWQ1				eS	Sb	12 03 55.6	+0.2
SLIU	Shizi	1.22	209	eP	Pn	12 03 36.8	-1.2
SLIU				eS	Sn	12 03 54.9	+1.5
LATG	Datong	1.24	3	⇑iP	Pn	12 03 37.6	-0.8
LAY	Lan-yu	1.25	175	iP	Pn	12 03 37.6	-0.8
LAY				iS	Sn	12 03 53.2	-0.8
TSCK	Chigu Township	1.26	264	eP	Pn	12 03 38.8	+0.4
TSCK				eS	Sn	12 03 54.5	+0.3
WSSB	Gushan	1.27	240	eP	Pb	12 03 40.4	-0.2
WSSB				eS	Sn	12 03 54.8	+0.3
EOS3	EOS3	1.28	39	eP	Pn	12 03 39.2	+0.6
NSY	Sanyi	1.28	331	⇑iP	Pn	12 03 40.5	+1.6
NSY				eS	Sb	12 03 57.7	+0.5
WDJ	Dajia District	1.29	325	P	Pn	12 03 40.4	+1.5
WDJ				eS	Sb	12 03 58.2	+1.0
LYUB	Lan-yu	1.29	174	P	Pn	12 03 37.3	-1.6
LYUB				eS	Sn	12 03 53.7	-1.3
ESAO	Su ao	1.33	16	eP	Pn	12 03 39.6	0.0
ESAO				eS	Sn	12 03 56.9	+0.8
EOS2	EOS2	1.34	33	eP	Pn	12 03 40.6	+1.2
ENTT	Nioudou	1.35	5	⇑iP	Pn	12 03 39.3	-0.5
NDS	Dongshan	1.36	10	eP	Pn	12 03 38.4	-1.6
NDS				eS	Sn	12 03 57.4	+0.6
TWC	Suao	1.37	16	eP	Pn	12 03 39.6	-0.4
TWC				eS	Sn	12 03 56.7	-0.2
TWP	Hsiaoliuchiu	1.37	227	eP	Pb	12 03 42.7	+0.3
NFF	Wufeng Townshi	1.37	348	eP	Pn	12 03 41.4	+1.3
NFF				eS	Sn	12 03 58.4	+1.2
YHNB	Yeheng	1.38	357	⇑iP	Pn	12 03 40.5	+0.3
YHNB				eS	Sn	12 03 57.1	-0.2
NMLH	Miaoli	1.38	334	iP	Pn	12 03 41.4	+1.2
NMLH				eS	Sn	12 03 59.0	+1.7
SMST	Manzhou Townsh	1.38	204	eP	Pn	12 03 39.9	-0.3
SMST				eS	Sn	12 03 57.8	+0.5
NSK	Sanguang	1.38	357	⇑iP	Pn	12 03 40.6	+0.3
NSK				eS	Sn	12 03 56.6	-0.9
NSTT	Nanjuang	1.40	343	eP	Pn	12 03 41.5	+1.1
NSTT				S	Sn	12 03 58.6	+0.9
LIOB	Emei	1.41	344	⇑iP	Pn	12 03 41.7	+1.1
LIOB				eS	Sn	12 03 58.7	+0.7
HEN	Hengchun	1.43	207	eP	Pn	12 03 41.9	+1.0
TWE	Neicheng	1.44	8	⇑iP	Pn	12 03 40.5	-0.5
TWKBT	Hengchun	1.46	204	eP	Pn	12 03 40.8	-0.5
TWK1	Hengchun	1.46	204	eP	Pn	12 03 40.9	-0.4
TWK1				eS	Sn	12 03 59.4	+0.1
TSEB	Hengchuen, Pin	1.47	200	eP	Pn	12 03 41.7	+0.3
TSEB				iS	Sn	12 04 00.0	+0.5
FUSB	Fushanzhiwuyua	1.47	5	iP	Pn	12 03 41.1	-0.4
NWLT	Wulai	1.48	2	eP	Pn	12 03 41.9	+0.2
NWLT				eS	Sn	12 03 59.1	-0.7
ILA	Ilan	1.50	11	eP	Pn	12 03 42.3	+0.5
ILA				eS	Sn	12 04 00.3	+0.1
KSHI	Guanxi Townshi	1.50	351	eP	Pn	12 03 43.6	+1.7
KSHI				S	Sb	12 04 02.5	-0.8
SBCB	Hsinchu	1.56	344	eP	Pn	12 03 43.7	+1.1
SBCB				eS	Sb	12 04 04.0	-0.9
HSN	Hsinchu	1.57	344	eP	Pn	12 03 43.7	+0.9
HSN				iS	Sn	12 04 04.2	+2.2
EGS		1.61	16	eP	Pn	12 03 44.0	+0.6
EGS				eS	Sn	12 04 04.0	+1.0
WDGT	Dungji	1.64	269	⇓iP	Pn	12 03 43.4	-0.4
WDGT				iS	Sn	12 04 02.4	-1.3
NHDH	Xindian Distri	1.67	3	eP	Pn	12 03 44.7	+0.5
NHDH				eS	Sn	12 04 04.7	+0.3
TATO	Taipei	1.68	1	P	Pn	12 03 44.9	+0.6
TATO	Taipei	1.68	1	S	Sn	12 04 05.7	+1.0
NCUH	Zhongli	1.69	352	eP	Pn	12 03 45.7	+1.3
TWA	Mucha	1.69	4	eP	Pn	12 03 44.9	+0.4
TWA				eS	Sn	12 04 05.2	+0.2
NCU	National Centr	1.69	352	eP	Pn	12 03 43.3	-1.2
TIPB	Shuangxi	1.71	12	eP	Pn	12 03 44.9	+0.1
TIPB				eS	Sn	12 04 05.9	+0.4
PHUB	P'eng-hu	1.73	278	⇓P	Pn	12 03 44.6	-0.4
PNG	Penghu	1.76	279	⇓iP	Pn	12 03 45.0	-0.3
PNG				eS	Sn	12 04 05.5	-1.0
TWB1	Santiao Chiao	1.78	16	eP	Pn	12 03 46.5	+0.7
TWB1				eS	Sn	12 04 07.6	+0.4
JYNG	Yonagunijimaku	1.80	50	P	Pn	12 03 47.1	+1.2
JYNG				S	Sn	12 04 08.9	+1.3
NWF	Wu-fen Shan	1.80	10	iP	Pn	12 03 46.5	+0.4
NWF				S	Sn	12 04 07.8	0.0
WFSB	Wu-fen Shan	1.80	10	eP	Pn	12 03 46.7	+0.7
WFSB				eS	Sn	12 04 06.8	-0.9
TWS1	Kuangyinshan	1.81	359	eP	Pn	12 03 46.6	+0.5
TWS1				S	Sn	12 04 09.6	+1.8
SXI1	Grass Mountain	1.84	12	eP	Pn	12 03 46.7	+0.1
SXI1				eS	Sn	12 04 10.3	+1.5
YOJ	Yonaguni jima	1.85	51	P	Pn	12 03 48.0	+1.3
YOJ	Yonaguni jima	1.85	51	P	Pn	12 03 48.0	+1.3
YOJ				eS	Sn	12 04 10.2	+1.4
YOJ	Yonaguni jima	1.85	51	eP	Pn	12 03 47.8	+1.2
YOJ				eS	Sn	12 04 10.0	+1.1
VCHM	Qimei	1.85	268	⇓iP	Pn	12 03 46.3	-0.4
VCHM				eS	Sn	12 04 07.4	-1.6
YM01	YM01	1.85	4	P	Pn	12 03 46.5	-0.2
YM01				eS	Sn	12 04 08.3	-0.8
NTST	Danshui	1.87	0	eP	Pn	12 03 47.3	+0.4
NTST				S	Sn	12 04 11.5	+2.2
ZUZH	Zhuzihu	1.87	3	iP	Pn	12 03 47.0	0.0
ZUZH				S	Sn	12 04 08.4	-1.0
TNOU	National Taiwa	1.88	9	eP	Pn	12 03 47.0	0.0
ANP	Anpu	1.89	2	eP	Pn	12 03 47.3	0.0
ANP				eS	Sn	12 04 09.6	-0.4
YM08	YM08	1.90	4	eP	Pn	12 03 47.0	-0.3
YM08				eS	Sn	12 04 09.3	-0.7
TWY	Chenhua	1.98	4	eP	Pn	12 03 48.5	0.0
HATJ	Hateruma jima	2.30	70	P	Pn	12 03 53.6	+0.8
HATJ				S	Sn	12 04 20.6	+0.7
IRIF	Iriomote-Funau	2.34	63	eP	Pn	12 03 54.6	+1.2
IRIF				eS	Sn	12 04 22.2	+1.3
VWUC	VWUC	2.49	313	eP	Pn	12 03 54.9	-0.5
JKRS	Kuro-shima	2.53	68	iP	Pn	12 03 57.4	+1.4
JKRS				S	Sn	12 04 26.9	+1.2
PTMZ	Houxiangcun	2.75	310	eP	Pn	12 03 58.5	-0.5
KNM	Kinmen	2.98	293	eP	Pn	12 04 02.5	+0.4
KNMB	Chin-men Tao	3.03	293	eP	Pn	12 04 01.9	-1.0
MATB	Ma-tsu	3.16	335	eP	Pn	12 04 03.7	-1.0
ZPLA	Ao Xicun	3.45	281	eP	Pn	12 04 07.9	-0.7
AXDP	Jialang	3.56	298	eP	Pn	12 04 09.4	-0.7
MHZQ	Yeshan	3.56	322	eP	Pn	12 04 09.7	-0.4
DSXP	Dongshan	3.71	277	eP	Pn	12 04 11.6	-0.7
XPSS	Dashiqiu	3.80	343	eP	Pn	12 04 12.5	-1.0
SXFK	Yanhouchang	4.64	313	eP	Pn	12 04 24.2	-0.8

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*NEIC **19** 12:05:02.2±1.7, 6°.73N±0°.04×93°.51E±0°.08, h35^{km}±1^{km}, mb4.7/57, Error ellipse: s-maj=14.2km s-min=7.8km az=264.0*

*IDC **19** 12:05:04.6±2.7, 6°.83N×93°.59E, h56^{km}±23^{km}, mb3.9/21, mbtmp4.1/24, ML3.9/3, MS3.1/5, Error ellipse: s-maj=23.3km s-min=11.4km az=53.0*

*DJA **19** 12:05:04.7±1.3, 7°N±5°×9°4E±°, h29^{km}±15^{km}, M4.5/9, mb4.5/8, mB5.8/2, MLv4.6/9, Mw(mB)5.3/2*

*BKK **19** 12:05:13.5±1.3, 7°N±10°×9°4E±°, h10^{km}, M4.2/7, mB4.4/2, mb4.3/4, Mjma3.8/7, ML4.3/2, MLv4.4/4, Mw(mB)3.5/2*

ISC 19 12:05:01.5±0.4, 6°.69N±0°.04×93°.44E±0°.05, h35^{km}, n123, σ1^{s}.22/128, mb4.6/48, MS3.1/3, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMBY	CAMPBELL BAY	0.58	56	eP	Pn	12 05 16.3	+3.0
CMBY				IAML		12 05 25.7	
	comp=E,40µm,0.2s						
BSI	Banda Aceh	2.19	123	P	Pn	12 05 39.0	+3.5
BSI				S	Sn	12 06 04.1	+2.7
LHMI	Lhok Sumawe	3.78	112	Pn	Pn	12 05 58.7	+1.5
LHMI	Lhok Sumawe	3.78	112	P	Pn	12 06 00.2	+3.0
LHMI				S	Sn	12 06 41.7	+1.2
MLSI	Meulaboh, Aceh	3.81	129	P	Pn	12 06 01.1	+3.4
MLSI				S	Sn	12 06 42.0	+0.8
RNTT	Ranong	5.66	61	P	Pn	12 06 23.9	+0.7
RNTT				S	Sn	12 07 18.9	-8.2
SRIT	Nakonsritamara	6.39	72		Pn	12 06 33.4	+0.1
DGPR	DIGLIPUR	6.47	356	eP	Pn	12 06 35.2	+0.9
DGPR				IAML		12 07 46.9	
	comp=E,489nm,0.2s						
DGPR				eS	Sn	12 07 47.0	+0.1
PSI	Prapat	6.69	125	P	Pn	12 06 40.9	+3.4
	comp=E,1.8nm,0.3s,baz=316,slow=12,SNR=5.6						
PSI				S	Sn	12 07 51.5	-1.0
	comp=E,9.8nm,0.5s,baz=284,slow=15,SNR=4.6						
PSI				LR	LR	12 09 23.9	
	comp=E,152nm,18.7s,baz=286,slow=39 comp=E,6.2nm,0.5s						
RPSI	Rantau Prapat	6.75	126	Pn	Pn	12 06 38.9	+0.8
RPSI				Sn	Sn	12 07 54.3	+0.4
GSI	Gunungsitoli	6.75	142		Pn	12 06 37.6	-0.6
GSI	Gunungsitoli	6.75	142	P	Pn	12 06 39.8	+1.6
	comp=E,0.2nmcomp=E,3µmcomp=E,29nm,0.5s						
KULM	Kulim	7.30	101	Pn	Pn	12 06 45.2	-0.5
PALK	Pallekele	12.66	273	P	P	12 08 04.9	-5.2
	comp=E,0.3nm,0.3s,baz=90,slow=12,SNR=1.7						
PALK				S	Sn	12 10 16.0	-3.1
	comp=E,5.3nm,0.4s,baz=340,slow=18,SNR=7.3 comp=E,7.0nm,0.9s						
CM05	Chiang Mai Arr	12.82	24	P	Pn	12 08 04.5	+3.1
	comp=E,0.0nmcomp=E,134nmcomp=E,18nm,0.9s						
CM02	Chiang Mai Arr	12.85	24	P	Pn	12 08 05.2	+3.4
CM31	Chiang Mai Arr	12.87	24		Pn	12 08 00.7	-1.4
CMAR	Chiang Mai Arr	12.87	24	P	Pn	12 08 03.2	+1.1
	comp=E,0.6nm,0.3s,baz=203,slow=14,SNR=16 comp=E,5.6nm,0.8s						
CHTO	Chiang Mai	13.19	23		Pn	12 08 04.4	-2.0
DLV	Lat	15.73	70	Pn	Pn	12 08 38.5	-2.3
BRDH	Bariadhala	15.99	354	LR	LR	12 15 01.2	
	comp=E,62nm,20.9s,baz=190,slow=38						
TRD	Trivandrum	16.44	277	eP	P	12 08 51.3	-0.7
TRD				IAmb	IAmb	12 08 56.0	
	comp=Z,36nm,1.1s						
TRD				eS	Sn	12 11 52.9	+1.8
AZL	Aizawl	16.97	358	eP	Pn	12 08 57.2	+0.8
AZL				IAmb	IAmb	12 09 14.5	
	comp=Z,21nm,1.3s						
AZL				eS	Sn	12 12 05.4	+1.3
KOHI	KOHIMA	18.94	2	eP	P	12 09 20.7	+0.9
KOHI				IAmb	IAmb	12 09 22.8	
	comp=Z,37nm,1.4s						
KOHI				eS	Sn	12 12 53.0	+1.3
HMDM	Hanimaadhoo	20.12	271	P	P	12 09 32.6	0.0
QIZ	Qiongzhong	20.13	51	P	P	12 09 31.0	-1.7
ZIRO	ZIRO	20.73	1	eP	P	12 09 39.7	+0.4
ZIRO				IAmb	IAmb	12 09 49.9	
	comp=Z,16nm,0.4s						
ZIRO				eS	S	12 13 30.2	+1.1
GTK	Tadong	21.03	348	eP	P	12 09 43.8	+1.3
GTK				IAML		12 09 46.1	
	comp=Z,36nm,1.2s						
GTK				eS	S	12 13 35.8	+0.9
EVN	Everest	22.07	344	P	P	12 09 53.1	-1.1
LSA	Lhasa	22.99	355	P	P	12 10 03.1	-0.7
H08S3	Diego Garcia H	25.28	236	T	T	12 36 59.0	
	baz=55,slow=76						
H08S2	Diego Garcia H	25.28	236	T	T	12 36 59.9	
	baz=55,slow=76						
H08S1	Diego Carcia H	25.30	236	T	T	12 37 02.2	
	baz=55,slow=76						
TGY	Tagaytay City	28.01	73	LR	LR	12 21 24.2	
	comp=Z,45nm,18.3s,baz=236,slow=35						
KSH	Kashi	36.27	337	P	P	12 12 00.8	-0.9
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SIMJ	Simiganj	38.74	329	P	P	12 12 20.6	-2.0
BOOM	Boomskoye usch	38.87	339	P	P	12 12 24.2	+0.5
BTK	Batken	38.94	332	P	P	12 12 23.7	-0.5
BTK				IAmb	IAmb	12 12 47.7	
	comp=Z,4.9nm,0.6s						
ARSB	Arslanbob	39.01	335	P	P	12 12 24.8	-0.1
ARSB				IAmb	IAmb	12 12 31.5	
	comp=Z,5.2nm,0.7s						
AAK	Ala-Archa	39.53	338	P	P	12 12 29.1	0.0
FITZ	Fitzroy Crossi	40.20	128	P	P	12 12 35.1	+0.2
FITZ	Fitzroy Crossi	40.20	128	P	P	12 12 35.4	+0.5
	comp=Z,6.5nm,0.8s,baz=328,slow=6.9,SNR=17						
FITZ				PcP	PcP	12 14 39.4	+0.7
	comp=Z,4.8nm,1.0s,baz=337,slow=7.7,SNR=2.8 comp=Z,6.5nm,0.8s						
MKAR	Makanchi Array	41.09	348	P	P	12 12 42.4	+0.5
MKAR	Makanchi Array	41.09	348	P	P	12 12 42.0	0.0

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              comp=Z,1.3nm,0.5s,baz=173,slow=8.0,SNR=7.3
MKAR                                    PcP     PcP     12 14 41.6 +0.5
              comp=Z,0.2nm,0.5s,baz=170,slow=4.0,SNR=2.1
              comp=Z,1.3nm,0.5s
KNRA  Kununurra          41.44 123      P       P       12 12 45.1  -0.1
KNRA                                    IAmb    IAmb    12 13 12.5
              comp=Z,19nm,1.4s
KK31  Karatay Array      41.52 335      P       P       12 12 44.8  -0.6
KKAR  Karatay Array      41.52 335      P       P       12 12 47.0 +1.6
KKAR  Karatay Array      41.52 335      P       P       12 12 44.7  -0.8
KKAR                                    IAmb    IAmb    12 13 05.6
              comp=Z,2.2nm,0.7s
MTN   Manton Dam         42.18 117      P       P       12 12 50.1  -1.2
MTN                                     IAmb    IAmb    12 12 54.8
              comp=Z,26nm,1.3s
SONM  Songino Array      42.47  13      P       P       12 12 52.9  -0.4
SONM  Songino Array      42.47  13      P       P       12 12 51.9  -1.4
              comp=Z,1.0nm,0.7s,baz=194,slow=9.2,SNR=4.7
SONM                                    PcP     PcP     12 14 45.8   0.0
              comp=Z,0.2nm,0.4s,baz=183,slow=2.6,SNR=4.0
              comp=Z,1.0nm,0.7s
ULN   Ulaanbaatar        42.64  14      P       P       12 12 54.2  -0.6
JNU   Nakatsue           43.55  48      P       P       12 13 01.5  -0.7
JNU                                     IAmb    IAmb    12 13 02.7
              comp=Z,15nm,1.0s
JNU   Nakatsue           43.55  48      P       P       12 13 01.2  -1.0
              comp=Z,11nm,0.9s,baz=23,slow=0.4,SNR=6.3
              comp=Z,11nm,0.9s
KSRS  Korea Array        43.81  41      P       P       12 13 03.1  -1.0
              comp=Z,0.8nm,0.8s,baz=221,slow=9.9,SNR=4.2
              comp=Z,0.8nm,0.8s
NWAO  Narrogin (SRO)     45.43 152      P       P       12 13 15.8  -1.3
KURBB Kurchatov Arra     45.53 347      P       P       12 13 18.3 +0.7
              comp=Z,2.3nm,0.6s,baz=166,slow=6.8,SNR=25
KURBB                                   PcP     PcP     12 14 56.6 +0.7
              comp=Z,0.8nm,0.8s,baz=162,slow=2.9,SNR=7.0
              comp=Z,2.3nm,0.6s
KURK  Kurchatov          45.59 347              P       12 13 18.9 +0.8
KURK                                    IAmb    IAmb    12 13 19.7
              comp=Z,11nm,1.4s
ZALV  Zalesovo Beam      47.64 353      P       P       12 13 34.7 +0.6
ZALV  Zalesovo Beam      47.64 353      P       P       12 13 34.0   0.0
              comp=Z,1.1nm,0.3s,baz=168,slow=9.1,SNR=5.2
              comp=Z,1.1nm,0.3s
HIA   Hailar             47.88  23      P       P       12 13 34.5  -1.6
HIA                                     IAmb    IAmb    12 13 36.1
              comp=Z,6.4nm,0.8s
WB0   Warramunga Arr     48.12 124              P       12 13 38.5 +0.1
WRA   Warramunga Arr     48.16 124      P       P       12 13 39.0 +0.3
              comp=Z,5.0nm,0.7s,baz=305,slow=8.5,SNR=100
WRA                                     PcP     PcP     12 15 06.2 +0.4
              comp=Z,0.6nm,0.6s,baz=300,slow=3.7,SNR=2.2
WRA                                     LR      LR      12 35 46.0
              comp=Z,42nm,18.6s,baz=345,slow=38
              comp=Z,5.0nm,0.7s
WR8   Warramunga Arr     48.29 124      P       P       12 13 39.7   0.0
WR8                                     IAmb    IAmb    12 13 40.8
              comp=Z,14nm,1.2s
RAYN  Ar Rayn            48.95 295      P       P       12 13 46.1 +1.2
JGF   Kuroka             49.45  48      P       P       12 13 47.0  -1.4
JGF                                     IAmb    IAmb    12 13 48.2
              comp=Z,9.2nm,0.9s
AS31  Alice Springs      49.70 129              P       12 13 51.3 +0.7
AS31                                    IAmb    IAmb    12 13 51.6
              comp=Z,2.7nm,0.4s
ASAR  Alice Springs      49.70 129      P       P       12 13 51.0 +0.5
              comp=Z,4.7nm,0.5s,baz=301,slow=7.5,SNR=146
ASAR                                    PcP     PcP     12 15 11.8 +0.4
              comp=Z,1.5nm,0.7s,baz=300,slow=3.8,SNR=8.3
              comp=Z,4.7nm,0.5s
BVAR  Borovoye Array     49.89 342      P       P       12 13 51.4  -0.1
              comp=Z,0.7nm,0.4s,baz=138,slow=9.8,SNR=4.5
BVAR                                    PcP     PcP     12 15 11.6 +0.1
              comp=Z,1.3nm,0.6s,baz=159,slow=4.3,SNR=4.1
              comp=Z,0.7nm,0.4s
MJAR  Matsushiro Arr     50.47  47      P       P       12 13 55.8  -0.4
              comp=Z,2.2nm,0.7s,baz=223,slow=5.7,SNR=5.4
              comp=Z,2.2nm,0.7s
AB31  Akbulak array      50.94 332              P       12 14 00.6 +1.1
ABKAR Akbulak array      50.94 332      P       P       12 14 00.6 +1.1
BBOO  Buckleboo          56.41 137      P       P       12 14 39.6  -0.2
BBOO                                    IAmb    IAmb    12 15 08.0
              comp=Z,12nm,1.3s
ARTI  Arti               56.75 338      P       P       12 14 42.2 +0.5
ARTI  Arti               56.75 338      P       P       12 14 41.7   0.0
              comp=Z,2.1nm,0.4s,baz=135,slow=7.1,SNR=2.4
              comp=Z,2.1nm,0.4s
KRVT  Keravat (AS076     59.49  99      LR      LR      12 41 01.7
              comp=Z,6.6nm,21.9s,baz=185,slow=36
STKA  Stephens Creek     59.80 133      P       P       12 15 03.9 +0.4
              comp=Z,0.6nm,0.3s,baz=315,slow=10.0,SNR=3.8
              comp=Z,0.6nm,0.3s
BRTR  Keskin Array B     62.68 311      P       P       12 15 22.8  -0.4
              comp=Z,0.9nm,0.8s,baz=120,slow=7.3,SNR=4.5
              comp=Z,0.9nm,0.8s
H04N2 CROZET ISLANDS     64.36 211      T       T       13 26 00.4
              baz=47,slow=74
H04N1 CROZET ISLANDS     64.37 211      T       T       13 26 01.0
              baz=47,slow=74
H04N3 CROZET ISLANDS     64.38 211      T       T       13 25 58.8
              baz=47,slow=74
EIDS  Eidsvold           64.43 122      P       P       12 15 33.6  -1.1
EIDS                                    IAmb    IAmb    12 15 55.5
              comp=Z,4.9nm,1.1s
H04S1 CROZET ISLANDS     64.76 210      T       T       13 26 31.8
              baz=45
H04S3 CROZET ISLANDS     64.77 210      T       T       13 26 31.0
              baz=45,slow=74
H04S2 CROZET ISLANDS     64.78 210      T       T       13 26 34.6
              baz=45,slow=74
TOO   Toolangi           65.47 136      P       P       12 15 40.8  -0.5
TOO                                     IAmb    IAmb    12 15 46.3
              comp=Z,5.0nm,1.1s
ARMA  Armidale           66.80 127      P       P       12 15 49.9  -0.1
CAN   Canberra           66.87 133      P       P       12 15 48.6  -1.8
TIXI  Tiksi              68.53  11      P       P       12 15 59.1  -0.9
LBTB  Lobatse            73.07 241      P       P       12 16 30.1 +1.5
LBTB                                    IAmb    IAmb    12 16 48.2
              comp=Z,18nm,1.4s
FIA1  FINESS Array S     73.43 332      P       P       12 16 30.2 +0.2
FINES FINESS Array B     73.43 332      P       P       12 16 30.4 +0.5
FINES FINESS Array B     73.43 332      P       P       12 16 30.0   0.0
              comp=Z,1.4nm,0.7s,baz=145,slow=8.2,SNR=2.7
              comp=Z,1.4nm,0.7s
CASY  Casey              73.84 173      P       P       12 16 29.8  -2.4
CASY                                    IAmb    IAmb    12 16 31.0
              comp=Z,5.7nm,0.8s
ARCES ARCESS Array B     76.14 340      P       P       12 16 46.4 +0.8
ARCES ARCESS Array B     76.14 340      P       P       12 16 45.9 +0.3
              comp=Z,1.0nm,0.8s,baz=97,slow=5.0,SNR=5.2
              comp=Z,1.0nm,0.8s
GERES GERESS Array B     78.25 318      P       P       12 16 58.8 +0.9
              comp=Z,0.7nm,0.6s,baz=86,slow=5.8,SNR=5.1
              comp=Z,0.7nm,0.6s
CLL   Collm              78.84 321    i Px      Px      12 17 04.8
HFS   Hagfors            79.13 330      P       P       12 17 02.4 +0.1
              comp=Z,0.5nm,0.4s,baz=70,slow=9.3,SNR=4.9
              comp=Z,0.5nm,0.4s
SPITS Spitsbergen Ar     80.85 348      P       P       12 17 11.4   0.0
              comp=Z,3.2nm,0.7s,baz=116,slow=11,SNR=5.3
              comp=Z,3.2nm,0.7s
C16K  Lisburne Hills     87.97  21      P       P       12 17 47.2  -0.4
C16K                                    IAmb    IAmb    12 17 47.6
              comp=Z,7.0nm,1.3s
EKA   Eskdalemuir Ar     88.30 325      P       P       12 17 50.2 +0.8
              comp=Z,0.4nm,0.5s,baz=74,slow=6.4,SNR=3.4
              comp=Z,0.4nm,0.5s
F15K  North Star Dit     88.83  24      P       P       12 17 51.7   0.0
F15K                                    IAmb    IAmb    12 18 08.2
              comp=Z,6.0nm,1.4s
C18K  Utukok River       89.36  21      P       P       12 17 54.2   0.0
C18K                                    IAmb    IAmb    12 17 55.1
              comp=Z,4.5nm,0.8s
C19K  Lookout Ridge      89.77  20      P       P       12 17 56.7 +0.6
C19K                                    IAmb    IAmb    12 17 57.1
              comp=Z,2.4nm,0.6s
G16K  Koyuk River        89.83  24      P       P       12 17 57.0 +0.6
G16K                                    IAmb    IAmb    12 17 57.6
              comp=Z,4.8nm,0.9s
E18K  Tukpahlearik C     89.93  22              P       12 17 57.2 +0.4
E18K                                    IAmb    IAmb    12 17 58.0
              comp=Z,5.2nm,0.9s
F17K  Baldwin Pennin     89.97  23      P       P       12 17 57.5 +0.5
D20K  Etivluk River      90.92  20      P       P       12 18 01.9 +0.5
D20K                                    IAmb    IAmb    12 18 02.1
              comp=Z,3.6nm,0.9s
E19K  Redstone River     91.15  21              P       12 18 02.7 +0.2
F19K  Shaleruckik Mo     91.16  22      P       P       12 18 02.4  -0.2
F19K                                    IAmb    IAmb    12 18 03.2
              comp=Z,4.1nm,1.0s
G19K  Purcell Mounta     91.66  23              P       12 18 05.3 +0.4
F20K  Avaraart Lake      91.84  22      P       P       12 18 05.9 +0.3
E21K  Killik River       91.92  20      P       P       12 18 05.9  -0.2
E21K                                    IAmb    IAmb    12 18 06.8
              comp=Z,4.1nm,0.8s
H19K  Roundabout Mou     92.13  23              P       12 18 07.6 +0.6
G21K  Allakaket          92.86  22      P       P       12 18 10.6 +0.2
G21K                                    IAmb    IAmb    12 18 11.1
              comp=Z,4.2nm,0.9s
K20K  Telida             93.90  25              P       12 18 16.5 +1.2
D25K  Kavik River        93.97  18      P       P       12 18 15.8 +0.2
D25K                                    IAmb    IAmb    12 18 16.4
              comp=Z,3.8nm,0.9s
CAST  Castle Rocks       94.69  24      P       P       12 18 19.7 +0.7
CAST                                    IAmb    IAmb    12 18 19.9
              comp=Z,4.1nm,1.0s
ILAR  Eielson Array      96.10  22      P       P       12 18 24.6  -0.7
              comp=Z,0.2nm,0.7s,baz=299,slow=3.9,SNR=3.2
              comp=Z,0.2nm,0.7s
NVAR  Mina Array Bea    126.29  31      PKP     PKiKP   12 24 01.8 +0.1
              comp=Z,0.4nm,0.5s,baz=290,slow=1.7,SNR=4.4
PDAR  Pinedale Array    126.52  21      PKP     PKPdf   12 24 01.6   0.0
              comp=Z,0.3nm,0.6s,baz=26,slow=3.8,SNR=4.0
TXAR  Lajitas Array     140.58  24      PKP     PKPdf   12 24 29.6 +1.4
              comp=Z,0.3nm,0.5s,baz=349,slow=1.9,SNR=4.1
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*IDC **19** 12:11:44.9±0.6, 44°.33N×142°.37E, h221km±3km, mb2.8/4, mbtmp3.5/7, Error ellipse: s-maj=24.9km s-min=14.3km az=107.0*

*JMA **19** 12:11:45.3±0.2, 44°.3N±0°.8×14°3E±°, h226km±1km, MV3.1/34, KAMIKAWA-SORACHI REGION*

*SKHL **19** 12:11:49.1±0.5, 44°.50N×143°.20E, h158km±3km, mb4.0/3, msha4.4/3*

ISC 19 12:11:44.7±0.8**, 44°.27N**±0°.06×**142°.79E**±0°.06**, h230**km±6km**, n29, σ1s.51**/44**, mb3.0**/4**, Hokkaido region**

```
Code  Station Name        Δ°   AZ°      Phase ID          Time     Res
                                        Op      ISC     h  m  s    ISC
ASAJ  Asahikawa           0.20 222      P       Pn      12 12 15.0 +0.4
              14nm,0.3s,baz=326,slow=3.6,SNR=96
ASAJ                                    S       S       12 12 37.2  -0.8
              32nm,0.7s,baz=11,slow=9.9,SNR=42
ASAJ  Asahikawa           0.20 222      P       Pn      12 12 15.0 +0.4
ASAJ                                   eS       S       12 12 37.5  -0.5
JKK2  Kamakawa 2          0.40 184      P       Pn      12 12 15.6 +0.5
JKK2                                    S       S       12 12 38.7  -0.1
JMP   Maruseppu           0.49 122      P       Pn      12 12 16.1 +0.8
JMP                                    eS       S       12 12 39.4 +0.2
JSS   Shosan              0.68 281      P       Pn      12 12 15.8  -0.1
JSS                                     S       S       12 12 39.7  -0.6
JSE   Soyaes              0.70 348    i P       Pn      12 12 16.2 +0.3
JSE                                    eS       S       12 12 39.6  -1.0
JTKR  Abashiri--Toko      0.86 110      P       Pn      12 12 18.1 +1.3
JTKR                                    S       S       12 12 42.9 +1.1
JAB   Ashibetsu           0.87 208      P       Pn      12 12 17.0 +0.1
JAB                                     S       S       12 12 41.6  -0.3
JHR   Hokuryu             0.93 236      P       Pn      12 12 17.1  -0.1
JHR                                    eS       S       12 12 42.0  -0.5
JAR   Ashorobuto          1.21 143    i P       Pn      12 12 20.0 +1.0
JAR                                     S       S       12 12 46.9 +1.3
JWK2  Keihoku             1.22 329      P       Pn      12 12 19.0 +0.1
JRBN  Rebuntou            1.68 314      P       Pn      12 12 21.3  -1.2
JCH   Churui              1.71 166    i P       Pn      12 12 22.2  -0.7
JCH                                    eS       S       12 12 50.7  -2.0
JEW   Eniwo               1.73 215    i P       Pn      12 12 23.1   0.0
JAK   Akkeshi             1.88 132     eP       Pn      12 12 24.4   0.0
JAK                                     S       S       12 12 55.2  -0.1
AKK   Akkeshi             1.95 129     eP       Pn      12 12 25.0   0.0
AKK                                    eS       S       12 12 55.5  -1.0
JNBK  Urakawa-nobuka      1.99 181    i P       Pn      12 12 25.2  -0.3
YUK   Yuzh-Kuril'sk       2.23  95     eP       Pn      12 12 23.7  -4.0
YUK                                     AMB     AMB     12 12 33.2
              60nm,0.4s
YUK                                    eS       S       12 12 52.0  -9.2
YUK                                     A       A       12 12 56.0
              100nm,0.5s
YUK                                     A       A       12 12 56.0
              70nm,0.5s
NMR   Nemuro--Hokkai      2.31 112     eP       Pn      12 12 27.3  -1.3
NMR                                    eS       S       12 12 57.5  -5.3
NEM2  Nemuro 2            2.32 112      S       S       12 13 02.4  -0.6
YSS   Yuzhno-Sakhali      2.68 360     eP       Pn      12 12 32.5 +0.1
YSS                                     AMB     AMB     12 12 33.1
              30nm,0.5s
YSS                                    eS       S       12 13 07.9  -2.0
YSS                                     A       A       12 13 09.6
              20nm,0.8s
YSS                                     A       A       12 13 09.6
              30nm,0.8s
SHO   Shikotan            2.94  96     eP       Pn      12 12 34.6  -0.7
SHO                                     AMB     AMB     12 12 40.0
              20nm,0.6s
SHO                                    eS       S       12 13 10.7  -4.2
SHO                                     A       A       12 13 18.1
              20nm,0.3s
SHO                                     A       A       12 13 18.1
              40nm,0.3s
USRK  Ussuriysk Ar.       7.75 273      P       Pn      12 13 31.2  -3.6
              3.8nm,0.7s,baz=81,slow=14,SNR=5.0
MJAR  Matsushiro Arr      8.47 206      P       Pn      12 13 42.8  -1.2
              0.9nm,0.5s,baz=12,slow=14,SNR=4.6
SEY   Seymchan           19.50  13      P       P       12 15 54.9 +0.5
              1.3nm,0.3s,baz=198,slow=11,SNR=8.2
KURBB Kurchatov Arra     42.69 302      P       P       12 19 17.3  -1.5
              0.1nm,0.3s,baz=71,slow=9.3,SNR=3.4
              0.1nm,0.3s
ILAR  Eielson Array      42.93  36      P       P       12 19 22.6 +2.0
              0.4nm,0.6s,baz=279,slow=7.4,SNR=6.9
              0.4nm,0.6s
WRA   Warramunga Arr     64.36 189      P       P       12 21 56.7 +0.6
              0.4nm,0.5s,baz=7.2,slow=6.8,SNR=8.6
              0.4nm,0.5s
ASAR  Alice Springs      68.09 189      P       P       12 22 21.2 +1.5
              0.2nm,0.8s,baz=3.4,slow=6.4,SNR=6.4
              0.2nm,0.8s
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*IDC **19** 12:17:28.9±1.6, 21°.38N×84°.22E, h0km, mb3.8/5, mbtmp3.8/6, ML4.2/1, Error ellipse: s-maj=57.9km s-min=22.6km az=61.0*

*NDI **19** 12:17:54.3±0.9, 25°.31N×85°.11E, h39km±999km, ML3.7, MW3.6*

ISC 19 12:17:33.4±1.0**, 21°.6N**±0°.1×**84°.71E**±0°.07**, h10**km**, n8, σ2s.60**/9**, mb4.0**/5**, Southern India**

```
Code  Station Name        Δ°   AZ°      Phase ID          Time     Res
                                        Op      ISC     h  m  s    ISC
BOK   Bokaro              2.43  26     eP       Pg      12 18 21.3 +1.3
BOK                                    eS       Sn      12 18 40.5  -2.5
BOK                                     IAML            12 18 54.2
              comp=E,1μm,0.4s
BHPL  Bhopal              6.93 285     eP       Pb      12 19 37.3 +3.3
BHPL                                    IAML            12 20 28.8
              comp=N,40nm,0.1s
BHPL                                   eS       Sb      12 20 53.0  -3.9
CMAR  Chiang Mai Arr     13.74 101      Pn      Pn      12 20 48.8 +0.3
              comp=N,0.4nm,0.3s,baz=279,slow=12,SNR=6.0
              comp=N,1.1nm,0.7s
MKAR  Makanchi Array     25.20 356      P       P       12 22 58.0  -1.2
              comp=N,0.9nm,0.7s,baz=178,slow=9.5,SNR=4.5
              comp=N,0.9nm,0.7s
SONM  Songino Array      31.44  29      P       P       12 23 56.2 +1.1
              comp=N,0.4nm,0.4s,baz=232,slow=7.1,SNR=2.0
              comp=N,0.4nm,0.4s
HFS   Hagfors            62.06 328      P       P       12 27 50.3  -3.7
              comp=N,0.5nm,0.4s,baz=71,slow=9.6,SNR=1.9
              comp=N,0.5nm,0.4s
WRA   Warramunga Arr     63.71 127      P       P       12 28 04.2  -1.3
              comp=N,1.3nm,0.7s,baz=317,slow=6.6,SNR=23
              comp=N,1.3nm,0.7s
ASAR  Alice Springs      65.71 130      P       P       12 28 17.1  -1.5
              comp=N,1.6nm,0.7s,baz=310,slow=6.4,SNR=37
              comp=N,1.6nm,0.7s
```

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*IDC **19** 12:25:19.7±1.1, 11°.87N×58°.26E, h0km, mb4.0/11, mbtmp4.0/11, ML1.9/1, MS3.4/8, Error ellipse: s-maj=28.2km s-min=20.9km az=88.0*

ISC 19 12:25:21.3±1.0**, 11°.9N**±0°.1×**58°.3E**±0°.2**, h10**km**, n20, σ0s.76**/12**, mb4.0**/11**, MS3.4**/8**, Owen Fracture Zone region**

```
Code  Station Name        Δ°   AZ°      Phase ID          Time     Res
                                        Op      ISC     h  m  s    ISC
WSAR  Wadi Sarin         11.28   2      Pn      Pn      12 28 02.1  -0.6
              baz=214,slow=24,SNR=4.9
PALK  Pallekele          22.60 100      LR      LR      12 37 21.7
              comp=Z,87nm,21.8s,baz=266,slow=32
EIL   Elat               27.96 313      LR      LR      12 41 45.0
              comp=Z,85nm,21.3s,baz=74,slow=35
BRDH  Bariadhala         33.55  67      LR      LR      12 45 23.5
              comp=Z,101nm,19.6s,baz=291,slow=36
BRTR  Keskin Array B     35.24 326      P       P       12 32 17.2 +1.0
              0.6nm,0.7s,baz=145,slow=5.3,SNR=4.5
BRTR                                    LR      LR      12 46 43.5
              comp=Z,58nm,21.8s,baz=136,slow=36
              0.6nm,0.7s
CMAR  Chiang Mai Arr     39.74  75      P       P       12 32 55.8 +1.3
              3.9nm,0.9s,baz=267,slow=7.5,SNR=13
CMAR                                    LR      LR      12 49 03.8
              comp=Z,21nm,19.8s,baz=265,slow=36
              3.9nm,0.9s
MKAR  Makanchi Array     40.26  26      P       P       12 32 59.0 +0.5
              1.9nm,0.6s,baz=214,slow=9.2,SNR=15
              1.9nm,0.6s
KURBB Kurchatov Arra     42.03  19      P       P       12 33 13.1 +0.2
              3.9nm,0.9s,baz=216,slow=8.2,SNR=27
              3.9nm,0.9s
BVAR  Borovoye Array     42.16  11      P       P       12 33 13.6  -0.3
              0.4nm,0.4s,baz=216,slow=7.1,SNR=2.2
              0.4nm,0.4s
ZALV  Zalesovo Beam      46.94  21      P       P       12 33 51.7  -0.4
              7.7nm,0.7s,baz=232,slow=7.3,SNR=28
              7.7nm,0.7s
LBTB  Lobatse            48.59 221      LR      LR      12 53 31.4
              comp=Z,49nm,18.6s,baz=48,slow=35
BOSA  Boshof             51.38 218      P       P       12 34 26.4  -0.3
              1.2nm,0.6s,baz=51,slow=5.0,SNR=3.7
BOSA                                    LR      LR      12 54 02.9
              comp=Z,61nm,20.4s,baz=32,slow=34
              1.2nm,0.6s
SONM  Songino Array      53.74  38      P       P       12 34 44.0 +0.1
              1.9nm,0.9s,baz=240,slow=8.1,SNR=9.3
              1.9nm,0.9s
KAPI  Kappang            63.41 102      LR      LR      13 02 11.1
              comp=Z,47nm,18.8s,baz=308,slow=35
KSRS  Korea Array        66.75  54      P       P       12 36 11.9  -1.2
              1.5nm,0.7s,baz=269,slow=6.7,SNR=8.4
              1.5nm,0.7s
H01W3 Cape Leeuwin H     70.45 134      T       T       13 53 45.5
              baz=300,slow=76,SNR=15
H01W2 Cape Leeuwin H     70.45 134      T       T       13 53 46.4
              baz=300,slow=76,SNR=12
H01W1 Cape Leeuwin H     70.47 134      T       T       13 53 46.1
              baz=300,slow=76,SNR=14
WRA   Warramunga Arr     81.26 112      P       P       12 37 37.9  -0.4
              0.6nm,0.9s,baz=297,slow=4.3,SNR=7.2
              0.6nm,0.9s
ASAR  Alice Springs      81.92 116      P       P       12 37 41.7   0.0
              0.4nm,0.6s,baz=288,slow=5.1,SNR=8.8
              0.4nm,0.6s
```

IDC 19 12:26:51.4±2.1**, 12°.98N**×**57°.94E, h0**km**, mb3.8**/6**, mbtmp3.8**/6**, MS3.5**/1**, Error ellipse: s-maj=45.2km s-min=43.2km az=35.0, Owen Fracture Zone region**

```
Code  Station Name        Δ°   AZ°      Phase ID          Time     Res
                                        Op      ISC     h  m  s    ISC
WSAR  Wadi Sarin         10.22   4      Pn      Pn      12 29 25.4 +5.9
              baz=39,slow=24,SNR=8.5
ASF   Jabal al Asfar     27.15 318      LR      LR      12 43 08.0
              comp=Z,91nm,18.4s,baz=119,slow=36
MKAR  Makanchi Array     39.44  26      P       P       12 34 23.9 +0.6
              0.8nm,0.6s,baz=206,slow=7.9,SNR=5.8
              0.8nm,0.6s
KURBB Kurchatov Arra     41.12  20      P       P       12 34 37.9 +0.7
              1.3nm,0.8s,baz=221,slow=7.8,SNR=6.6
              1.3nm,0.8s
ZALV  Zalesovo Beam      46.05  22      P       P       12 35 16.2  -0.6
              3.8nm,0.6s,baz=217,slow=7.1,SNR=7.4
              3.8nm,0.6s
SONM  Songino Array      53.10  39      P       P       12 36 09.2  -1.7
              0.6nm,0.7s,baz=257,slow=5.8,SNR=2.7
              0.6nm,0.7s
ESDC  Sonseca Array      60.25 308      P       P       12 37 01.6  -0.2
              0.3nm,0.4s,baz=97,slow=6.2,SNR=1.8
              0.3nm,0.4s
H01W3 Cape Leeuwin H     71.41 134      T       T       13 55 29.5
              baz=301,slow=75
H01W2 Cape Leeuwin H     71.42 134      T       T       13 55 28.8
              baz=301,slow=75
H01W1 Cape Leeuwin H     71.43 134      T       T       13 55 29.7
              baz=301,slow=75
WRA   Warramunga Arr     81.96 113      P       P       12 39 14.2 +0.5
              0.4nm,0.9s,baz=287,slow=5.3,SNR=1.8
              0.4nm,0.9s
```

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*ATH **19** 12:31:16.5, 40°.65N×21°.44E, h19km±9km, ML1.6/5, Manual Solution by I.Dede First location: 2019/06/19 12:32:33, This location: 2019/06/19 13:27:08 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 10 km*

TIR 19 12:31:18.0, 40°.09N×**20°.91E, h7**km±12km**, Ml2.0**/2**, 2C, Greece-Albania border region**

```
Code  Station Name        Δ°   AZ°      Phase ID          Time     Res
                                        Op      ISC     h  m  s    ISC
NEST  Nestorio            0.34  18    ⇑Pg       Pg      12 31 25.1 +0.4
NEST                                    Sg      Sg      12 31 30.5 +1.2
NEST                                    AML     AML     12 31 32.4
              0.3nm,0.2s
NEST  Nestorio            0.34  18    ⇑Pg       Pg      12 31 25.1 +0.4
NEST                                    Sg      Sg      12 31 30.0 +0.7
NEST                                    AML     AML     12 31 32.4
              0.3nm,0.2s
NEST  Nestorio            0.34  18      P       Pg      12 31 24.7  -0.1
NEST                                    S       Sg      12 31 30.4 +1.1
KPRO  Kipourio            0.37 111      P       Pn      12 31 29.8   0.0
KPRO                                    S       Sb      12 31 39.5 +6.5
KBN   Korca               0.54 350      Pg      Pg      12 31 28.6 +0.1
KBN                                     Sg      Sg      12 31 36.4 +0.8
KBN                                     AML     AML     12 31 37.6
              1.1nm,0.5s
KBN   Korca               0.54 350      Pg      Pg      12 31 28.6 +0.1
KBN                                     Sg      Sg      12 31 34.3  -1.4
KBN                                     AML     AML     12 31 37.6
              1.1nm,0.5s
KZN   Kozani              0.69  71      P       Pg      12 31 25.7  -5.7
KZN                                     S       Sg      12 31 31.6  -8.8
IGT   Igoumenitsa         0.71 219      P       Pb      12 31 32.2  -0.5
IGT   Igoumenitsa         0.71 219      P       Pn      12 31 37.4 +2.9
THL   Klokotos Trika      1.00 121      P       Pb      12 31 37.7 +0.1
THL                                     S       Sn      12 31 53.0 +0.3
TYRN  Tyrnavos            1.08 110      P       Pg      12 31 37.8  -0.9
TYRN                                    S       Sg      12 31 51.7  -1.1
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*WEL **19** 12:41:05.4±0.7, 33°S±7°×17°9E±1°6, h33km, mB4.7/8, ML4.5/15, MLv4.4/12, Mw(mB)3.9/8, Error ellipse: s-maj=22.0km s-min=3.9km az=110.6, confirmed*

*NOU **19** 12:41:45.7, 36°.59S×178°.50E, h242km, MLv3.8/8, Off E. Coast of N. Island, N.Z.*

ISC 19 12:41:02.0±1.3**, 32°.83S**±0°.08×**179°.6E**±0°.1**, h250**km**, n29, σ2s.24**/46**, South of Kermadec Islands**

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Code  Station Name        Δ°   AZ°      Phase ID          Time     Res
                                        Op      ISC     h  m  s    ISC
GLKZ  Green Lake          4.13  31      P       Pn      12 42 06.6  -0.9
GLKZ                                    S       S       12 42 57.8  -1.6
MXZ   Matakaoa Point      4.84 193      P       Pn      12 42 19.7 +3.9
MXZ   Matakaoa Point      4.84 193      P       Pn      12 42 19.4 +3.6
MXZ                                     S       S       12 43 15.7 +1.0
WMGZ  Waiomatatini S      5.07 191      P       Pn      12 42 20.6 +2.0
WMGZ                                    S       S       12 43 20.0 +0.3
HAZ   Te Kaha             5.14 197      P       Pn      12 42 21.0 +1.6
HAZ                                     S       S       12 43 22.5 +1.3
PKGZ  Pakihiroa           5.18 194      P       Pn      12 42 23.4 +3.4
PKGZ                                    S       S       12 43 23.0 +0.8
PUZ   Puketiti            5.34 192      P       Pn      12 42 24.7 +2.7
PUZ                                     S       S       12 43 26.1 +0.3
WCZ   Waipu Caves         5.36 233      P       Pn      12 42 23.6 +1.5
RUGZ  Raukumara Rang      5.36 197      P       Pn      12 42 22.8 +0.4
RUGZ                                    S       S       12 43 22.7  -3.8
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TWGZ	Tauwhareparae	5.50	194	P	Pn	12 42 27.1	+3.2
TWGZ				S	S	12 43 31.1	+1.8
OUZ	Omahuta	5.55	243	P	Pn	12 42 26.5	+2.0
MARZ	Manawahe	5.68	204	P	Pn	12 42 29.4	+3.2
MWZ	Matawai	5.75	197	P	Pn	12 42 29.4	+2.4
MWZ				S	S	12 43 34.4	-0.6
TKGZ	Te Karaka	5.78	194	P	Pn	12 42 29.4	+2.1
TKGZ				S	S	12 43 35.0	-0.5
URZ	Urewera	5.79	200	P	Pn	12 42 27.4	-0.1
URZ	Urewera	5.79	200	P	Pn	12 42 26.9	-0.6
URZ				S	S	12 43 34.3	-1.5
RAGZ	Rawiri	5.93	197	P	Pn	12 42 30.8	+1.5
RAGZ				S	S	12 43 38.8	-0.3
TOZ	Tahuroa Road	5.94	214	P	Pn	12 42 31.1	+1.7
RIGZ	Rimuhau	6.05	194	P	Pn	12 42 30.4	-0.4
RIGZ				S	S	12 43 43.1	+1.3
MUGZ	Murupara	6.09	202	P	Pn	12 42 32.5	+1.2
MUGZ				S	S	12 43 43.1	+0.4
SNGZ	Shannon Statio	6.22	197	P	Pn	12 42 34.3	+1.5
SNGZ				S	S	12 43 44.1	-1.5
PRGZ	Paritu Road	6.24	193	P	Pn	12 42 35.3	+2.2
PRGZ				S	S	12 43 48.1	+2.1
MHGZ	Mahia Peninsul	6.46	192	P	Pn	12 42 39.3	+3.5
MHGZ				S	S	12 43 48.8	-2.2
BKZ	Black Stump Fm	6.81	201	P	Pn	12 42 37.7	-2.6
HIZ	Hauiti	6.87	213	P	Pn	12 42 43.1	+2.1
BFZ	Birch Farm	8.29	198	P	Pn	12 42 54.5	-4.4
SNZO	South Karori	9.33	204	P	Pn	12 43 08.6	-3.4
QRZ	Quartz Range	9.80	213	P	Pn	12 43 17.2	-0.7
KHZ	Kahutara	10.71	205	P	Pn	12 43 25.4	-4.0

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*SKHL **19** 12:45:00.9±0.3, 47°.10N×142°.30E, h14km±1km, mb4.0/5*
*JMA **19** 12:45:00.5±0.4, 47°N±2°×14°2E±°, h12km, MV2.6/9, SOUTH SAKHALIN*
ISC 19 12:45:02.3±2.8, 47°.1N±0°.2×142°.23E±0°.08, h12km, n5, σ0s.74/8, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YSS	Yuzhno-Sakhali	0.37	104	*e*Pg	Pg	12 45 09.4	-0.3
YSS				AMB	AMB	12 45 09.6	
	130nm,0.3s						
YSS				*e*Sg	Sg	12 45 15.6	+0.9
YSS				A	A	12 45 16.0	
	800nm,0.2s						
YSS				A	A	12 45 16.0	
	510nm,0.2s						
NEVR	Nevel`sk	0.45	215	*e*Pg	Pg	12 45 11.4	+0.2
NEVR				AMB	AMB	12 45 11.9	
	110nm,0.3s						
NEVR				*e*Sg	Sb	12 45 18.7	-0.1
NEVR				A	A	12 45 19.6	
	890nm,0.4s						
NEVR				A	A	12 45 19.6	
	780nm,0.4s						
JWK2	Keihoku	1.75	188	*e*P	Pn	12 45 32.9	+0.5
JRBN	Rebuntou	1.81	207	P	Pn	12 45 32.6	-0.7
JRBN				*e*S	Sn	12 45 56.5	+0.3
JSE	Soyaes	2.10	173	*e*S	Sb	12 46 05.4	-0.9

IDC 19 12:47:27.9±3.2, 31°.24S×176°.97W, h0km, mb3.9/2, mbtmp3.9/3, ML3.8/1, Error ellipse: s-maj=76.5km s-min=45.6km az=123.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.53	213	Pn	Pn	12 49 31.1	-1.6
	1.3nm,0.3s,baz=279,slow=4.3,SNR=10						
URZ				Sn	Sn	12 51 03.2	-6.5
	1.1nm,0.3s,baz=122,slow=18,SNR=4.4						
	1.7nm,0.3s						
ASAR	Alice Springs	43.96	267	P	P	12 55 37.1	+0.1
	0.6nm,0.4s,baz=104,slow=7.4,SNR=16						
	0.6nm,0.4s						
WRA	Warramunga Arr	45.02	272	P	P	12 55 45.5	0.0
	0.9nm,0.4s,baz=112,slow=7.9,SNR=25						
	0.9nm,0.4s						
FINES	FINESS Array B	146.23	340	PKPbc	PKPdf	13 07 08.7	+0.1
	1.1nm,0.5s,baz=58,slow=5.2,SNR=5.4						

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*IDC **19** 12:47:46.8±1.0, 8°.21N×141°.46E, h0km, mb3.8/9, mbtmp3.9/11, ML4.3/2, MS3.2/13, Error ellipse: s-maj=40.0km s-min=16.5km az=92.0*
ISC 19 12:47:51.5±0.8, 8°.21N±0°.09×141°.7E±0°.2, h35km, n28, σ0s.97/12, mb3.9/9, MS3.2/10, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	6.18	30	Pn	Pn	12 49 21.3	+0.9
	7.1nm,0.3s,baz=191,slow=16,SNR=5.3						
GUMO				Sn	Sn	12 50 28.0	-1.9
	11nm,0.3s,baz=24,slow=22,SNR=9.8						
GUMO				LR	LR	12 52 48.2	
	comp=Z,72nm,18.4s,baz=212,slow=48						
	24nm,0.7s						
JAY	Jayapura	10.70	185	Pn	Pn	12 50 22.3	-0.2
	2.4nm,0.3s,baz=13,slow=19,SNR=13						
JAY				LR	LR	12 53 41.7	
	comp=Z,180nm,20.6s,baz=357,slow=33						
	4.8nm,0.4s						
DAV	Davao City (W)	16.02	267	LR	LR	12 56 35.0	
	comp=Z,54nm,20.5s,baz=118,slow=34						
H11S3	WAKE ISLAND Hy	26.33	65	T	T	13 21 20.5	
	baz=250,slow=75,SNR=96						
H11S2	WAKE ISLAND Hy	26.35	65	T	T	13 21 20.1	
	baz=250,slow=75,SNR=111						
H11S1	WAKE ISLAND Hy	26.35	65	T	T	13 21 20.2	
	baz=250,slow=75,SNR=81						
JNU	Nakatsue	26.74	339	LR	LR	13 02 14.1	
	comp=Z,63nm,21.5s,baz=145,slow=32						
H11N1	WAKE ISLAND Hy	26.94	62	T	T	13 22 02.2	
	baz=248,slow=75,SNR=236						
H11N2	WAKE ISLAND Hy	26.95	62	T	T	13 22 03.2	
	baz=248,slow=75,SNR=203						
H11N3	WAKE ISLAND Hy	26.96	62	T	T	13 22 03.3	
	baz=248,slow=75,SNR=561						
MJAR	Matsushiro Arr	28.38	354	LR	LR	13 03 10.8	
	comp=Z,14nm,18.4s,baz=194,slow=33						
WRA	Warramunga Arr	28.90	194	P	P	12 53 46.7	-0.7
	0.5nm,0.7s,baz=14,slow=9.8,SNR=7.4						
	0.5nm,0.7s						
KSRS	Korea Array	31.68	339	P	P	12 54 11.3	-0.4
	0.5nm,0.7s,baz=164,slow=10.0,SNR=4.4						
	0.5nm,0.7s						
ASAR	Alice Springs	32.58	193	P	P	12 54 19.6	-0.3
	0.4nm,0.6s,baz=17,slow=13,SNR=14						
	0.4nm,0.6s						
ASAJ	Asahikawa	35.78	1	LR	LR	13 08 30.2	
	comp=Z,20nm,21.9s,baz=152,slow=35						
USRK	Ussuriysk Ar.	36.84	348	P	P	12 54 56.1	-0.3
	2.7nm,0.7s,baz=188,slow=8.7,SNR=7.1						
	2.7nm,0.7s						
KLR	Kul'dur	41.73	350	LR	LR	13 09 45.3	
	comp=Z,44nm,20.6s,baz=220,slow=32						
PETK	Petropavlovsk-	46.62	13	LR	LR	13 13 43.3	
	comp=Z,25nm,21.1s,baz=212,slow=33						
SONM	Songino Array	49.53	329	P	P	12 56 39.2	+0.1
	0.4nm,0.3s,baz=134,slow=6.2,SNR=2.2						
	0.4nm,0.3s						
SEY	Seymchan	55.17	6	LR	LR	13 19 04.6	
	comp=Z,26nm,21.3s,baz=328,slow=34						
URZ	Urewera	56.79	147	LR	LR	13 20 38.2	
	comp=Z,88nm,18.5s,baz=271,slow=35						
MKAR	Makanchi Array	63.31	319	P	P	12 58 17.0	-0.1
	0.9nm,0.7s,baz=97,slow=8.4,SNR=9.7						
	0.9nm,0.7s						
KURBB	Kurchatov Arra	66.81	322	P	P	12 58 38.5	-1.1
	0.4nm,0.3s,baz=113,slow=6.0,SNR=6.3						
	0.4nm,0.3s						
BVAR	Borovoye Array	72.27	323	P	P	12 59 13.4	0.0
	0.9nm,0.6s,baz=116,slow=6.6,SNR=5.2						
	0.9nm,0.6s						
ILAR	Eielson Array	74.73	25	P	P	12 59 28.9	+1.4
	0.8nm,0.6s,baz=252,slow=5.8,SNR=12						
	0.8nm,0.6s						
SPITS	Spitsbergen Ar	88.81	350	LR	LR	13 40 07.9	
	comp=Z,7.8nm,20.7s,baz=35,slow=35						
ARCES	ARCESS Array B	91.20	342	LR	LR	13 43 51.6	
	comp=Z,12nm,21.9s,baz=66,slow=37						
FINES	FINESS Array B	94.67	334	LR	LR	13 46 17.8	
	comp=Z,21nm,19.5s,baz=67,slow=37						

IDC 19 12:48:49.9±9.5, 32°.09S×179°.89W, h246km±93km, mb3.3/2, mbtmp3.9/3, Error ellipse: s-maj=94.6km s-min=41.2km az=11.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.63	201	P	Pn	12 50 27.0	+1.3
	6.9nm,0.6s,baz=120,slow=21,SNR=2.0						
URZ				S	S	12 51 41.3	-1.1
	8.7nm,0.5s,baz=161,slow=11,SNR=1.9						
ASAR	Alice Springs	41.45	270	P	P	12 56 13.4	+0.5
	0.6nm,0.4s,baz=105,slow=7.4,SNR=5.5						
	0.6nm,0.4s						
WRA	Warramunga Arr	42.59	275	P	P	12 56 21.6	-0.5
	1.0nm,0.3s,baz=111,slow=8.0,SNR=7.9						
	1.0nm,0.3s						
KURBB	Kurchatov Arra	121.07	313	PKP	PKPdf	13 07 12.7	0.0
	0.3nm,0.7s,baz=91,slow=1.7,SNR=5.4						
FINES	FINESS Array B	146.13	338	PKPbc	PKPdf	13 07 59.2	+0.3
	2.4nm,0.6s,baz=50,slow=2.4,SNR=5.8						

IDC 19 12:51:11.8±2.8, 33°.92S×178°.47W, h0km, mb3.6/2, mbtmp3.8/3, ML4.2/1, Error ellipse: s-maj=77.4km s-min=46.1km az=129.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	5.62	218	Pn	Pn	12 52 36.7	+0.1
	7.2nm,0.3s,baz=218,slow=1.8,SNR=16						
URZ				Sn	Sn	12 53 35.9	-6.0
	2.9nm,0.3s,baz=122,slow=16,SNR=3.8						
	14nm,0.3s						
ASAR	Alice Springs	42.64	271	P	P	12 59 10.0	-0.3
	0.6nm,0.7s,baz=110,slow=6.8,SNR=4.7						
ASAR				PcP	PcP	13 01 02.1	-0.3
	0.1nm,0.5s,baz=125,slow=3.6,SNR=1.0						
	0.6nm,0.7s						
WRA	Warramunga Arr	43.95	276	P	P	12 59 20.8	0.0
	0.8nm,0.6s,baz=120,slow=7.8,SNR=3.6						
	0.8nm,0.6s						
FINES	FINESS Array B	148.27	338	PKPbc	PKPbc	13 10 58.5	-0.6
	1.9nm,0.8s,baz=46,slow=4.0,SNR=4.6						

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*PRE **19** 12:59:07.4±0.8, 26°.03S×29°.21E, h0km, ML2.7, Suspected explosion*
*BUL **19** 12:59:13.6±2.0, 26°.22S×29°.57E, h21km±22km, MD3.2*
ISC 19 12:59:08.0±0.8, 26°.01S±0°.04×29°.23E±0°.03, h0km, n21, σ1s.59/40, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRLN	Carolina, Mapu	0.72	89	*e*P	Pg	12 59 22.1	+0.3
CRLN				*e*S	Sg	12 59 31.7	+0.7
CRLN				IAML		12 59 40.0	
	comp=Z,198nm,0.7s						
HRAO	HartRAO	1.39	275	*e*P	Pg	12 59 34.5	-0.2
HRAO				*e*S	Sb	12 59 52.6	-0.7
HRAO				IAML		12 59 57.5	
	comp=Z,69nm,0.6s						
WDLM	Western Deep L	1.67	255	*e*P	Pn	12 59 38.1	-0.6
WDLM				*e*S	Sg	13 00 01.3	-0.4
WDLM				IAML		13 00 03.3	
	comp=Z,115nm,0.6s						
PILG	Pilgrimsrest,	1.72	52	*e*P	Pn	12 59 40.1	+0.8
PILG				*e*S	Sb	13 00 03.4	+0.6
PILG				IAML		13 00 06.4	
	comp=Z,132nm,0.5s						
NWCL	Newcastle	1.82	161	*e*P	Pn	12 59 41.1	+0.5
NWCL				*e*S	Sn	13 00 04.7	+0.2
NWCL				IAML		13 00 05.8	
	comp=Z,231nm,0.4s						
PRYS	Parys	1.90	241	*e*P	Pn	12 59 41.9	+0.1
PRYS				*e*S	Sn	13 00 06.6	-0.1
PRYS				IAML		13 00 11.0	
	comp=Z,83nm,0.6s						
POGA	Pongola	2.59	121	*e*P	Pn	12 59 50.6	-0.5
POGA				*e*S	Sn	13 00 23.5	+0.2
POGA				IAML		13 00 34.4	
	comp=Z,62nm,0.4s						
SNKL	Senekal, Frees	2.60	210	*e*P	Pn	12 59 51.2	-0.3
SNKL				*e*S	Sn	13 00 23.6	-0.3
SNKL				IAML		13 00 37.2	
	comp=Z,36nm,0.4s						
MOPA	Mopani	3.17	39	*e*P	Pn	12 59 59.5	+0.3
MOPA				*e*S	Sn	13 00 38.2	+0.4
MOPA				IAML		13 00 49.3	
	comp=Z,52nm,0.5s						
MOPA	Mopani	3.17	39	*i* P	Pn	13 00 01.9	+2.7
MOPA				*i* S	Sn	13 00 37.6	-0.2
LBTB	Lobatse	3.42	286	*e*P	Pn	13 00 03.1	+0.4
LBTB				*e*S	Sn	13 00 43.6	-0.6
LBTB				IAML		13 01 03.1	
	comp=Z,24nm,0.5s						
LBTB	Lobatse	3.42	286	*i* P	Pb	13 00 10.9	+1.3
LBTB				*i* S	Sb	13 00 53.2	+1.3
PMBG	Pietermaritzbu	3.67	162	*e*P	Pn	13 00 06.4	+0.3
PMBG				*e*S	Sn	13 00 48.8	-1.2
PMBG				IAML		13 01 04.1	
	comp=Z,34nm,0.4s						
MUSN	Musina, Limpop	3.75	9	*e*P	Pn	13 00 07.0	-0.1
MUSN				*e*S	Sn	13 00 51.3	-0.8
MUSN				IAML		13 01 15.4	
	comp=Z,21nm,0.5s						
MUSN	Musina, Limpop	3.75	9	*i* P	Pb	13 00 12.4	-2.8
MUSN				*i* S	Sn	13 00 56.3	+4.2
BOSA	Boshof	4.38	233	*e*P	Pn	13 00 16.0	+0.1
BOSA				*e*S	Sn	13 01 05.8	-2.0
BOSA				IAML		13 01 25.2	
	comp=Z,24nm,0.4s						
BOSA	Boshof	4.38	233	*i* P	Pn	13 00 20.2	+4.3
BOSA				*i* S	Sn	13 01 09.1	+1.4
KSTD	Kokstad	4.59	179	*e*P	Pn	13 00 19.0	+0.2
KSTD				*e*S	Sn	13 01 10.9	-2.0
KSTD				IAML		13 01 32.5	
	comp=Z,11nm,0.4s						
BLWY	Bulawayo	5.87	354	*i* P	Pn	13 00 43.2	+6.7
BLWY				*i* S	Sn	13 01 44.6	+0.1
CHIPN	CHIPINGE	6.56	29	*i* P	Pn	13 00 49.0	+3.2
CHIPN				*i* S	Sn	13 01 59.5	-1.9
KRI	Karoi	9.14	2	*i* P	Pn	13 01 18.3	-3.1
KRI				*i* S	Sn	13 02 49.7	-15

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*IDC **19** 13:30:59.1±7.4, 13°.07S×166°.92E, h215km±74km, mb3.5/5, mbtmp3.9/6, Error ellipse: s-maj=61.2km s-min=27.1km az=158.0*
*NEIC **19** 13:30:59.7±2.1, 13°.2S±0°.1×167°.0E±0°.2, h215km±8km, mb4.4/19, Error ellipse: s-maj=23.0km s-min=17.1km az=85.0*
ISC 19 13:30:57.5±0.8, 13°.06S±0°.09×166°.9E±0°.1, h200km, n30, σ1s.10/30, mb4.3/13, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	2.39	173		Pn	13 31 41.5	+1.2
DZM	Mont Dzumac	8.98	183	Pn	Pn	13 33 05.3	+1.7
DZM	Mont Dzumac	8.98	183	P	Pn	13 33 06.6	+3.0
	1.8nm,0.4s,baz=343,slow=17,SNR=1.7						
DZM				S	Sn	13 34 43.9	-0.4
	3.1nm,0.8s,baz=354,slow=18,SNR=2.1						
EIDS	Eidsvold	19.30	228	P	Pn	13 35 08.9	-2.1
EIDS				IAmb	IAmb	13 35 25.9	
	comp=Z,6.6nm,1.1s						
LHI	Lord Howe Isla	19.75	200	P	P	13 35 11.3	-0.9
CTAO	Charters Tower	20.99	248	P	P	13 35 27.1	+1.4
CTAO				IAmb	IAmb	13 35 42.0	
	comp=Z,15nm,1.5s						
RAO	Raoul Island	21.40	141	P	P	13 35 30.2	+0.5
ARMA	Armidale	22.32	217	P	P	13 35 39.1	+0.2
ARMA				IAmb	IAmb	13 35 56.1	
	comp=Z,9.6nm,1.1s						
BKZ	Black Stump Fm	27.35	164	P	P	13 36 23.1	-1.0
BKZ				IAmb	IAmb	13 37 00.7	
	comp=Z,18nm,1.3s						
STKA	Stephens Creek	29.85	227	P	P	13 36 44.6	-1.6
STKA				IAmb	IAmb	13 36 44.9	
	comp=Z,18nm,1.2s						
STKA	Stephens Creek	29.85	227	P	P	13 36 46.7	+0.5
	comp=Z,1.7nm,0.4s,baz=38,slow=9.2,SNR=6.9						
	comp=Z,1.7nm,0.4s						
WR8	Warramunga Arr	31.79	253	P	P	13 37 03.7	+0.2
WR8				IAmb	IAmb	13 37 23.2	
	comp=Z,7.8nm,1.2s						
WRA	Warramunga Arr	31.94	253	P	P	13 37 04.4	-0.4
	comp=Z,1.1nm,0.9s,baz=85,slow=9.0,SNR=5.6						
	comp=Z,1.1nm,0.9s						
AS31	Alice Springs	32.98	247	P	P	13 37 13.8	-0.1
ASAR	Alice Springs	32.99	247	P	P	13 37 13.8	-0.1
	comp=Z,1.6nm,0.7s,baz=75,slow=9.1,SNR=31						
	comp=Z,1.6nm,0.7s						
BBOO	Buckleboo	34.36	230	P	P	13 37 25.7	+0.1
BBOO				IAmb	IAmb	13 37 59.0	
	comp=Z,19nm,1.2s						
KNRA	Kununurra	37.02	261	P	P	13 37 49.6	+1.2
KNRA				IAmb	IAmb	13 37 53.7	
	comp=Z,29nm,1.5s						
FITZ	Fitzroy Crossi	40.02	257	P	P	13 38 14.5	+1.2
MBWA	Marble Bar	45.68	253	P	P	13 38 58.4	-0.4
VNDA	Vanda	64.52	181	P	P	13 41 12.4	-0.1
CASY	Casey	64.94	202	P	P	13 41 14.5	-0.9
QSPA	South Pole Qui	76.96	180	P	P	13 42 27.1	-0.8
QSPA				IAmb	IAmb	13 42 28.2	
	comp=Z,5.0nm,1.1s						
P16K	Nushagak River	77.28	18	P	P	13 42 32.3	+2.9
M16K	Timber Creek	78.65	16	P	P	13 42 37.9	+1.0
M16K				IAmb	IAmb	13 42 57.0	
	comp=Z,11nm,1.3s						
K15K	Wolf Creek Mou	79.06	14	P	P	13 42 39.3	+0.1
K15K				IAmb	IAmb	13 43 23.2	
	comp=Z,15nm,1.4s						
ILAR	Eielson Array	85.05	18	P	P	13 43 09.3	-1.0
	comp=Z,0.5nm,0.7s,baz=234,slow=5.6,SNR=7.4						
	comp=Z,0.5nm,0.7s						
MKAR	Makanchi Array	95.76	317	P	P	13 44 01.1	+0.2
MKAR	Makanchi Array	95.76	317	P	P	13 44 01.7	+0.8
	comp=Z,0.4nm,0.6s,baz=102,slow=3.4,SNR=4.7						
	comp=Z,0.4nm,0.6s						
ARCES	ARCESS Array B	118.56	346	PKP	PKiKP	13 49 20.5	-0.5
	comp=Z,0.5nm,0.3s,baz=52,slow=2.0,SNR=14						
FINES	FINESS Array B	124.05	339	PKP	PKiKP	13 49 31.8	-0.2
	comp=Z,0.6nm,0.6s,baz=64,slow=4.8,SNR=3.7						

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*IDC **19** 13:49:36.8±0.8, 30°.90S×177°.83W, h0km, mb4.3/7, mbtmp4.3/7, MS3.4/4, Error ellipse: s-maj=31.8km s-min=25.1km az=148.0*
*NEIC **19** 13:49:42.9±2.3, 31°.02S±0°.10×177°.9W±0°.2, h35km±2km, mb4.6/21, Error ellipse: s-maj=26.6km s-min=16.0km az=81.0*
ISC 19 13:49:38.1±0.5, 31°.15S±0°.05×177°.84W±0°.09, h10km, n75, σ1s.84/76, mb4.6/21, 5C, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.89	358	P	Pn	13 50 09.0	-1.4
GLKZ				S	Sn	13 50 32.8	-1.4
RAO	Raoul Island	1.90	358		Pn	13 50 11.3	+0.8
RIZ	Raoul Island	1.90	358	P	Pn	13 50 10.7	+0.1
RIZ				S	Sn	13 50 32.3	-2.4
TKGZ	Te Karaka	8.09	205	P	Pn	13 51 32.8	-2.8
TKGZ				S	Sn	13 53 05.6	-1.5
MWZ	Matawai	8.12	207	P	Pn	13 51 32.7	-3.3
MWZ				S	Sn	13 53 07.0	-0.8
MARZ	Manawahe	8.18	212	P	Pn	13 51 39.8	+2.9
URZ	Urewera	8.22	209	Pn	Pn	13 51 34.5	-2.8
	1.4nm,0.3s,baz=256,slow=3.5,SNR=19						
URZ				Sn	Sn	13 53 07.4	-2.9
	8.2nm,0.3s,baz=244,slow=6.2,SNR=16						
URZ	Urewera	8.22	209	P	Pn	13 51 34.5	-2.8
URZ				S	Sn	13 53 09.0	-1.2
RAGZ	Rawiri	8.30	207	P	Pn	13 51 35.4	-3.1
RAGZ				S	Sn	13 53 10.2	-2.2
RIGZ	Rimuhau	8.36	204	P	Pn	13 51 37.1	-2.2
RIGZ				S	Sn	13 53 12.4	-1.3
PRGZ	Paritu Road	8.51	203	P	Pn	13 51 37.4	-4.0
PRGZ				S	Sn	13 53 13.4	-4.1
TOZ	Tahuroa Road	8.56	218	Pn	Pn	13 51 43.2	+1.2
SNGZ	Shannon Statio	8.58	206	P	Pn	13 51 40.7	-1.7
SNGZ				S	Sn	13 53 15.4	-3.7
RAHZ	Arahi	8.79	207	P	Pn	13 51 43.1	-2.1
RAHZ				S	Sn	13 53 23.1	-1.3
NMHZ	Naumai	9.06	207	P	Pn	13 51 46.4	-2.6
BKZ	Black Stump Fm	9.24	209	P	Pn	13 51 48.0	-3.5
MSVF	Nonsavu	13.87	343	LR	LR	13 57 25.3	
	comp=Z,190nm,19.2s,baz=205,slow=34						
RPZ	Rata Peaks	15.31	212	Pn	Pn	13 53 09.9	-4.4
	0.5nm,0.3s,baz=42,slow=14,SNR=0.9						
RPZ				Sn	Sn	13 55 48.3	-16
	1.0nm,0.3s,baz=33,slow=19,SNR=2.0						
DZM	Mont Dzumac	16.70	299	Pn	Pn	13 53 29.1	-3.3
DZM	Mont Dzumac	16.70	299	*e*Pn	P	13 53 36.6	+1.9
	27nm,1.1s						
DZM				*e*LR	LR	13 57 29.7	
	295nm,23.6s						
DZM	Mont Dzumac	16.70	299	Pn	P	13 53 37.5	+2.8
	0.4nm,0.3s,baz=120,slow=20,SNR=4.5						
RAR	Rarotonga	18.97	63	LR	LR	14 01 05.7	
	comp=Z,75nm,18.2s,baz=242,slow=36						
TBI	Tubuai	26.34	80	*e*LR	LR	14 01 51.4	
	621nm,25.8s						
EIDS	Eidsvold	27.92	274		P	13 55 28.1	-0.5
EIDS				IAmb	IAmb	13 55 32.3	
	comp=Z,10nm,1.1s						
CAN	Canberra	27.97	252	P	P	13 55 30.5	+1.5
CAN				IAmb	IAmb	13 56 14.7	
	comp=Z,11nm,1.0s						
PPT2	Papeete2	28.97	69	*e*S	S	14 00 25.6	-3.4
	comp=Z,147nm,27.0s						
PPT2				*e*LR	LR	14 02 56.0	
	comp=Z,138nm,27.8s						
PPT2				*e*LR	LR	14 03 00.4	
	comp=Z,158nm,26.2s						
PPT	Papeete	28.98	69	LR	LR	14 06 38.3	
	comp=Z,29nm,18.7s,baz=199,slow=35						
CTAO	Charters Tower	34.06	280		P	13 56 24.3	+1.5
CTAO				IAmb	IAmb	13 56 25.8	
	comp=Z,10nm,0.8s						
STKA	Stephens Creek	34.45	258	P	P	13 56 27.4	+1.3
STKA	Stephens Creek	34.45	258	P	P	13 56 27.5	+1.5
	comp=Z,3.0nm,0.4s,baz=99,slow=8.8,SNR=10						
STKA				LR	LR	14 09 03.1	
	comp=Z,158nm,18.6s,baz=44,slow=34						
	comp=Z,3.0nm,0.4s						
BBOO	Buckleboo	38.91	255	P	P	13 57 03.7	-0.3
BBOO				IAmb	IAmb	13 57 04.5	
	comp=Z,15nm,1.1s						
COEN	Coen	39.62	287	P	P	13 57 09.6	-0.5
COEN				IAmb	IAmb	13 57 16.1	
	comp=Z,11nm,0.8s						
AS31	Alice Springs	43.21	268		P	13 57 40.4	+0.8
ASAR	Alice Springs	43.21	268		P	13 57 39.7	0.0
ASAR	Alice Springs	43.21	268	P	P	13 57 39.8	+0.2
	comp=Z,5.0nm,0.6s,baz=105,slow=7.2,SNR=54						
	comp=Z,5.0nm,0.6s						
WR8	Warramunga Arr	44.13	273		P	13 57 47.4	+0.4
WR8				IAmb	IAmb	13 57 52.0	
	comp=Z,8.8nm,0.8s						
WRA	Warramunga Arr	44.27	273		P	13 57 48.0	-0.1
WRA	Warramunga Arr	44.27	273	P	P	13 57 48.0	-0.1
	comp=Z,7.6nm,0.6s,baz=112,slow=8.0,SNR=47						
	comp=Z,7.6nm,0.6s						
FORT	Forrest	45.99	256	P	P	13 58 00.6	-1.1
FORT				IAmb	IAmb	13 58 01.0	
	comp=Z,12nm,0.9s						
VNDA	Vanda	47.36	186	P	P	13 58 15.7	+4.0
MTN	Manton Dam	50.24	279	P	P	13 58 34.6	-0.1
KNRA	Kununurra	50.91	275	P	P	13 58 38.9	-0.9
KNRA				IAmb	IAmb	13 58 44.6	
	comp=Z,7.1nm,0.9s						
FITZ	Fitzroy Crossi	52.50	270	P	P	13 58 50.6	-1.0
CASY	Casey	54.54	208		P	13 59 05.7	-0.2
QSPA	South Pole Qui	58.96	180	P	P	13 59 39.5	+2.0
QSPA	South Pole Qui	58.96	180	P	P	13 59 39.7	+2.2
	comp=Z,2.3nm,0.8s,baz=65,slow=3.4,SNR=11						
	comp=Z,2.3nm,0.8s						
TROLL	Troll, Antarti	77.12	180	⇑P	P	14 01 32.4	+0.9
	comp=Z,163nm,0.7s						
SNAA	Sanae	77.40	178	⇑P	P	14 01 33.4	+0.4
	comp=Z,40nm,0.7s						
SNAA	Sanae	77.40	178		P	14 01 33.0	+0.1
SNAA				IAmb	IAmb	14 01 54.2	
	comp=Z,8.0nm,1.0s						
VNA3	Neumayer Olymp	77.55	176	⇑P	P	14 01 33.7	0.0
	comp=Z,7.1nm,0.8s						
VNA2	Neumayer--Watz	77.98	177	⇑P	P	14 01 36.5	+0.4
	comp=Z,4.1nm,0.8s,baz=172,slow=5.1						
VNA1	Neumayer--Stat	78.21	176	⇑P	P	14 01 38.0	+0.7
	comp=Z,5.6nm,1.0s						

JSD	Sado	80.10	326	P	P	14 01 49.5	+1.4
JSD				IAmb	IAmb	14 02 01.4	
	comp=Z,2.6nm,0.5s						
KIWB	Kanaga Island	82.65	0	P	P	14 02 01.7	+0.4
ADK	Adak	82.69	1	P	P	14 02 00.8	-0.6
ADK				IAmb	IAmb	14 02 10.9	
	comp=Z,9.2nm,0.9s						
KSRS	Korea Array	85.01	320	P	P	14 02 12.9	-0.7
	comp=Z,0.7nm,0.8s,baz=145,slow=6.6,SNR=4.1						
	comp=Z,0.7nm,0.8s						
PEA0B	Petropavlovsk-	86.58	346	P	P	14 02 20.7	-0.3
PETK	Petropavlovsk-	86.58	346	P	P	14 02 21.0	-0.1
	comp=Z,4.3nm,0.8s,baz=116,slow=8.0,SNR=8.1						
	comp=Z,4.3nm,0.8s						
NVAR	Mina Array Bea	88.69	43	P	P	14 02 32.1	+0.2
	comp=Z,0.6nm,0.7s,baz=241,slow=4.1,SNR=3.7						
	comp=Z,0.6nm,0.7s						
MKAR	Makanchi Array	118.36	310	PKP	PKPdf	14 08 24.5	-1.0
	comp=Z,0.8nm,0.5s,baz=139,slow=0.7,SNR=6.9						
KURBB	Kurchatov Arra	121.71	313	PKP	PKPdf	14 08 30.8	-1.0
	comp=Z,2.4nm,0.6s,baz=116,slow=2.0,SNR=27						
BVAR	Borovoye Array	127.04	315	PKP	PKPdf	14 08 41.5	-0.5
	comp=Z,2.4nm,0.5s,baz=117,slow=1.7,SNR=14						
ARTI	Arti	133.86	320	PKP	PKPdf	14 08 54.5	-0.2
	comp=Z,2.7nm,0.5s,baz=162,slow=2.7,SNR=2.2						
AKTO	Aktyubinsk	134.71	312	PKP	PKPdf	14 08 55.9	-0.7
	comp=Z,2.2nm,0.7s,baz=31,slow=2.5,SNR=3.9						
ARCES	ARCESS Array B	139.35	348	PKhKP	PKPpre	14 08 54.0	
	comp=Z,0.5nm,0.5s,baz=28,slow=3.6,SNR=7.9						
ARCES				PKP	PKPdf	14 09 03.8	-0.8
	comp=Z,1.7nm,0.9s,baz=108,slow=2.1,SNR=3.8						
KBZ	Khabaz	145.64	303	PKPbc	PKPdf	14 09 16.5	0.0
	comp=Z,1.5nm,0.6s,baz=45,slow=1.4,SNR=4.3						
FINES	FINESS Array B	145.90	340	PKPbc	PKPdf	14 09 16.5	+0.1
	comp=Z,11nm,0.8s,baz=48,slow=4.1,SNR=12						
NB2	NORSAR Subarra	149.51	351	PKP	PKPdf	14 09 26.3	+3.8
	comp=Z,0.8nm,0.5s,baz=15,slow=4.3						
NOA	NORSAR Array B	149.51	351	PKPbc	PKPdf	14 09 26.5	+4.0
	comp=Z,2.0nm,0.7s,baz=16,slow=4.2,SNR=9.7						
HFS	Hagfors	150.01	348	PKPbc	PKPdf	14 09 27.0	+3.8
	comp=Z,1.9nm,0.7s,baz=347,slow=4.4,SNR=7.0						
MMAI	Mount Meron Ar	151.84	283	PKPbc	PKPbc	14 09 34.5	+1.1
	comp=Z,5.7nm,0.4s,baz=86,slow=5.4,SNR=18						
AKASG	Malin Array Be	151.98	322	PKPbc	PKPbc	14 09 32.6	-0.4
	comp=Z,12nm,0.9s,baz=51,slow=2.5,SNR=34						
AKBB	Malin Array Si	151.98	322	PKP	PKPbc	14 09 31.8	-1.2
BRTR	Keskin Array B	153.07	297	PKPbc	PKPbc	14 09 35.0	-1.0
	comp=Z,1.6nm,0.6s,baz=152,slow=4.9,SNR=8.8						
CLL	Collm	158.32	341	*i* PKPab	PKPab	14 10 09.0	-0.4

IDC 19 14:03:46.3±3.2**, 31.°23S**×**177.°76W, h0^{km}, mb3.4**/2**, mbtmp3.5**/3**, ML3.0**/1**, Error ellipse: s-maj=73.7km s-min=37.3km az=113.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.19	210	Pn	Pn	14 05 47.0	+0.6
	0.2nm,0.3s,baz=12,slow=17,SNR=1.1						
URZ				Sn	Sn	14 07 18.1	-1.5
	0.6nm,0.3s,baz=32,slow=15,SNR=5.6						
	4.2nm,0.9s						
ASAR	Alice Springs	43.28	268	P	P	14 11 51.0	+1.0
	0.5nm,0.8s,baz=104,slow=7.6,SNR=4.6						
	0.5nm,0.8s						
WRA	Warramunga Arr	44.34	273	P	P	14 11 57.7	-0.9
	0.3nm,0.5s,baz=113,slow=7.6,SNR=10						
	0.3nm,0.5s						
FINES	FINESS Array B	145.99	340	PKPbc	PKPdf	14 23 26.3	-0.2
	1.1nm,0.8s,baz=30,slow=3.4,SNR=5.3						

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*KRNET **19** 14:04:11.6±0.1, 41.°42N×76.°52E, h14^{km}, mb3.1*
*NNC **19** 14:04:13.5±1.6, 41.°43N×76.°63E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=10.6km s-min=6.5km az=174.0*
*SOME **19** 14:04:14.1, 41.°50N×76.°65E, h10^{km}*
*KNET **19** 14:04:14.1±0.7, 41.°49N×76.°43E, h11^{km}±5^{km}, ml2.6, Error ellipse: s-maj=8.8km s-min=3.8km az=86.0*
ISC 19 14:04:11.5±1.1**, 41.°39N**±0.°04×**76.°50E**±0.°02**, h13^{km}**±10^{km}**, n52, σ1^{s}34**/86**, 32C-31D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn	0.38	277	⇑*i*P	Pg	14 04 19.6	+0.4
NRN				⇑*i*S	Sg	14 04 25.2	+0.8
ULHL	Ulahol	0.88	347	⇓P	Pn	14 04 28.9	-0.8
	15nm,0.1s,SNR=6.7						
ULHL				⇑S	Sb	14 04 40.5	0.0
	100nm,0.2s						
ULHL	Ulahol	0.88	347	⇑*i*P	Pg	14 04 27.8	-0.7
ULHL				⇑*i*S	Sg	14 04 39.5	-0.6
KDJ	Kajisay	0.90	34	⇑*i*P	Pg	14 04 28.2	-0.7
KDJ				⇑*i*S	Sb	14 04 40.3	-0.7
TARG	Taragay, Kyrgy	1.04	70	⇓*i*P	Pb	14 04 30.7	-0.8
TARG				⇓*i*S	Sg	14 04 44.8	-0.4
BOOM	Boomskoye usch	1.18	339	⇑*i*P	Pb	14 04 33.4	-0.4
BOOM				⇑*i*S	Sn	14 04 49.3	-0.5
TKM2	Tokmak 2	1.67	337	⇓P	Pg	14 04 43.5	-0.1
	12nm,0.2s,SNR=7.4						
TKM2				⇓S	Sg	14 05 05.9	+0.6
	20nm,0.1s						
TKM2	Tokmak 2	1.67	337	⇓Pg	Pg	14 04 46.1	+2.5
	6.8nm,0.4s						
TKM2				⇑Lg	Lg	14 05 10.3	
	18nm,0.4s						
ARLS	Aral	1.70	287	⇑*e*P	Pb	14 04 43.1	+0.5
ARLS				⇑*e*S	Sg	14 05 06.0	-0.1
KST	Kastek	1.70	347	P	Pg	14 04 44.5	+0.4
	6.3nm,0.3s						
KST				S	Sg	14 05 06.4	+0.2
	30nm,0.4s						
KST	Kastek	1.70	347	*e*P	Pg	14 04 44.5	+0.4
	6.3nm,0.3s						
KST				*e*S	Sg	14 05 06.4	+0.2
	30nm,0.4s						
UCH	Uchtor	1.70	300	⇓*i*P	Pb	14 04 43.1	+0.2
UCH				⇓*i*S	Sg	14 05 06.3	-0.1
KBK	Karagaybulak	1.71	318	⇓P	Pg	14 04 44.1	-0.3
	22nm,0.2s,SNR=15						
KBK				⇑S	Sg	14 05 07.0	+0.3
	120nm,0.4s						
KBK	Karagaybulak	1.71	318	⇑*i*P	Pb	14 04 43.0	+0.1
KBK				⇑*i*S	Sg	14 05 06.0	-0.7
MTBS	Maitube	1.74	358	P	Pg	14 04 44.7	-0.2
	12nm,0.1s						
MTBS				S	Sg	14 05 06.7	-0.9
	32nm,0.2s						
MTBS	Maitube	1.74	358	*e*P	Pg	14 04 44.7	-0.2
	12nm,0.1s						
MTBS				*e*S	Sg	14 05 06.7	-0.9
	32nm,0.2s						
PRZ	Przheval'sk	1.79	52	⇓*i*P	Pb	14 04 44.5	+0.2
PRZ				⇓*i*S	Sg	14 05 08.4	-0.8
MDOK	Medeo	1.82	13	⇑Pg	Pg	14 04 45.7	-0.8
	23nm,0.3s						
MDOK				Pg	Pb	14 04 46.0	+1.2
	76nm,0.2s						
MDOK				Lg	Lg	14 05 09.4	
	66nm,0.4s						
MDOK				Lg	Lg	14 05 09.7	
	107nm,0.6s						
KNDC	Almaty	1.86	11	⇑Pg	Pg	14 04 49.7	+2.5
	21nm,0.4s						
KNDC				⇑Lg	Lg	14 05 12.2	
	66nm,0.4s						
AAK	Ala-Archa	1.95	311	⇓P	Pg	14 04 48.9	+0.1
	14nm,0.3s,SNR=17						
AAK				⇓S	Sg	14 05 14.8	+0.7
	37nm,0.4s						
AAK	Ala-Archa	1.95	311	⇑Pg	Pg	14 04 49.9	+1.0
	1.6nm,0.5s						
AAK				⇓Lg	Lg	14 05 16.7	
	2.7nm,0.4s						
AAK	Ala-Archa	1.95	311	⇓*i*P	Pb	14 04 47.2	+0.3
AAK				⇓*i*S	Sg	14 05 13.1	-1.0
FRU1	Bishkek	1.99	316	⇑*i*P	Pb	14 04 48.0	+0.5
FRU1				⇑*i*S	Sg	14 05 14.7	-0.7
CHMS	Chumysh	2.07	322	⇑P	Pg	14 04 49.8	-1.3
	11nm,0.3s,SNR=7.6						
CHMS				⇓S	Sg	14 05 17.5	-0.4
CHMS	Chumysh	2.07	322	⇑Pg	Pg	14 04 51.5	+0.3
	11nm,0.5s						
CHMS				⇓Lg	Lg	14 05 18.2	
	16nm,0.5s						
CHMS	Chumysh	2.07	322	⇓*i*P	Pb	14 04 48.5	-0.4
CHMS				⇓*i*S	Sb	14 05 15.8	+1.3
SALK	Salom-Alik	2.08	257	⇓*i*P	Pb	14 04 49.5	+0.3
SALK				⇓*i*S	Sb	14 05 17.0	+2.0
SATY	Saty	2.19	40	Pg	Pg	14 04 52.2	-1.3
	36nm,0.3s						
SATY				Lg	Lg	14 05 19.4	
	127nm,0.2s						
AML	Almayashu	2.23	290	⇑P	Pb	14 04 52.1	+0.4
	14nm,0.2s,SNR=16						
AML				⇑S	Sg	14 05 22.8	-0.3
	66nm,0.3s						
AML	Almayashu	2.23	290	⇑*i*P	Pb	14 04 51.5	-0.2
AML				⇑*i*S	Sb	14 05 20.5	+1.2
KTBS	Karatobe	2.33	3	Pg	Pb	14 04 54.0	+0.7
	20nm,0.2s						
KTBS				Lg	Lg	14 05 24.4	
	237nm,0.3s						
KRBS	Karabastau	2.39	346	Pg	Pg	14 04 56.5	-0.7
	18nm,0.4s						
KRBS				Lg	Lg	14 05 26.9	
	54nm,0.5s						
USP	Ospenovka	2.39	322	⇑P	Pb	14 04 54.9	+0.5
	8.7nm,0.2s,SNR=10						
USP	Ospenovka	2.39	322	⇑*i*P	Pb	14 04 53.2	-1.2
USP				⇑*i*S	Sb	14 05 23.6	-0.2
EKS2	Erkin-Say	2.39	303	⇓*i*P	Pb	14 04 53.4	-1.1
EKS2				⇓*i*S	Sb	14 05 24.0	+0.1
KUU	Kurty	2.51	357	Pg	Pg	14 04 58.3	-1.2
	8.1nm,0.2s						
KUU				Lg	Lg	14 05 30.9	
	79nm,0.3s						
KUU	Kurty	2.51	357	*e*P	Pg	14 04 58.3	-1.2
	8.1nm,0.2s						
KUU				*e*S	Sg	14 05 30.9	-1.2
	79nm,0.3s						
UZB	Uzynbulak	2.57	46	Pg	Pb	14 04 58.3	+0.8
	47nm,0.3s						
UZB				Lg	Lg	14 05 29.9	
	41nm,0.4s						
KPKS	Kokpek	2.63	37	Pg	Pg	14 04 59.9	-2.0
	4.2nm,0.2s						
KPKS				Lg	Lg	14 05 32.8	
	117nm,0.6s						
ARSB	Arslanbob	2.65	270	⇓*e*P	Pb	14 04 57.5	-1.3
ARSB				⇓*e*S	Sb	14 05 30.4	-0.8
MRKS	Merke	2.79	300	Pg	Pg	14 05 04.3	-0.6
	6.3nm,0.3s						
MRKS				Lg	Lg	14 05 40.3	
	18nm,0.2s						
MRKS	Merke	2.79	300	*e*P	Pg	14 05 06.8	+1.9
	6.9nm,0.3s						
MRKS				*e*S	Sg	14 05 44.4	+3.3
	15nm,0.3s						
OHH	Osh	2.94	254	⇓*i*P	Pb	14 05 01.2	-2.6
OHH				⇓*i*S	Sb	14 05 37.6	-2.0
ARXS	Arharly	2.99	19	Pg	Pg	14 05 07.1	-1.6
	12nm,0.4s						
ARXS				Lg	Lg	14 05 45.4	
	61nm,0.5s						
BLB	Baldybastay	3.08	28	Pg	Pb	14 05 07.6	+1.5
	25nm,0.3s						
BLB				Lg	Lg	14 05 46.1	
	31nm,0.3s						
MNAS	Manas	3.17	292	⇓*i*P	Pn	14 05 04.3	+3.1
MNAS				⇓*i*S	Sb	14 05 42.8	-3.6
KTMS	Ketmen	3.52	53	Pg	Pb	14 05 15.4	+1.8
	3.8nm,0.5s						
KTMS				Lg	Lg	14 05 59.3	
	8.1nm,0.2s						
KTMS	Ketmen	3.52	53	*e*P	Pb	14 05 15.4	+1.8
	3.8nm,0.5s						
KTMS				*e*S	Sb	14 05 59.3	+3.1
	8.1nm,0.2s						
BTLS	Baital	4.07	335	Pg	Pg	14 05 26.9	-2.5
	2.3nm,0.4s						
BTLS				Lg	Lg	14 06 19.2	
	3.7nm,0.5s						
BTLS	Baital	4.07	335	*e*P	Pg	14 05 26.9	-2.5
	2.3nm,0.4s						
BTLS				*e*S	Sg	14 06 19.2	-2.8
	3.7nm,0.5s						
KK31	Karatay Array	4.76	293	⇑Pg	Pg	14 05 40.9	-1.8
	0.8nm,0.3s						
KK31				⇑Lg	Lg	14 06 41.4	
	2.2nm,0.5s						
MK31	Makanchi Array	6.83	36	Pn	Pn	14 05 52.2	+1.0
	0.4nm,0.6s,baz=211,slow=14,SNR=6.5						
MK31				⇓Lg	Lg	14 07 43.6	
	0.7nm,0.5s,baz=214,slow=28						

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*IDC **19** 14:05:39.3±1.5, 31.°29S×177.°62W, h0^{km}, mb4.2/4, mbtmp4.2/4, Error ellipse: s-maj=44.8km s-min=36.7km az=17.0*
*NEIC **19** 14:05:40.2±1.3, 31.°36S±0.°05×177.°4W±0.°2, h10^{km}±1^{km}, mb4.4/13, Error ellipse: s-maj=27.9km s-min=5.2km az=77.0*
ISC 19 14:05:42.2±0.8**, 31.°37S**±0.°10×**177.°4W**±0.°1**, h26^{km}, n26, σ1^{s}34**/27**, mb4.2**/11**, 3C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.16	347	Pn	Pn	14 06 16.2	-0.4
URZ	Urewera	8.23	212	Sn	Sn	14 09 03.4	-8.6
	2.4nm,0.3s,baz=180,slow=19,SNR=7.2						
DZM	Mont Dzumac	17.15	299	Pn	P	14 09 46.0	+4.3
	0.1nm,0.3s,baz=138,slow=18,SNR=3.3						
AFI	Afiamalu	18.12	18	P	Pn	14 09 51.4	-0.9
AFI				IAmb	IAmb	14 10 22.9	
	comp=Z,42nm,1.1s						
TAU	Tasmania Unive	30.20	238	P	P	14 11 50.0	-0.4
CTAO	Charters Tower	34.49	280	P	P	14 12 28.7	+0.4
CTAO				IAmb	IAmb	14 12 30.6	
	comp=Z,6.8nm,0.9s						
STKA	Stephens Creek	34.80	258	P	P	14 12 30.2	-0.5
	comp=Z,0.9nm,0.3s,baz=117,slow=8.0,SNR=4.5						
	comp=Z,0.9nm,0.3s						
BBOO	Buckleboo	39.23	255	P	P	14 13 06.5	-2.0
BBOO				IAmb	IAmb	14 13 20.2	
	comp=Z,4.0nm,0.8s						
AS31	Alice Springs	43.60	268	P	P	14 13 43.9	-0.6
ASAR	Alice Springs	43.60	268	P	P	14 13 42.2	-2.3
ASAR	Alice Springs	43.60	268	P	P	14 13 43.8	-0.7
	comp=Z,2.8nm,0.7s,baz=105,slow=7.3,SNR=25						
ASAR				PcP	PcP	14 15 31.7	-0.1
	comp=Z,0.2nm,0.5s,baz=121,slow=4.1,SNR=1.4						
	comp=Z,2.8nm,0.7s						
WR8	Warramunga Arr	44.53	273	P	P	14 13 51.1	-0.8
WR8				IAmb	IAmb	14 13 52.4	
	comp=Z,6.8nm,0.8s						
WRA	Warramunga Arr	44.68	273	P	P	14 13 52.2	-0.9
WRA	Warramunga Arr	44.68	273	P	P	14 13 52.2	-0.9
	comp=Z,6.9nm,0.7s,baz=114,slow=7.5,SNR=30						
WRA				PcP	PcP	14 15 35.4	-0.1
	comp=Z,0.5nm,0.8s,baz=126,slow=3.1,SNR=1.8						
	comp=Z,6.9nm,0.7s						
SBA	Scott Base	47.11	185	P	P	14 14 11.7	+0.1
SBA				IAmb	IAmb	14 14 37.5	
	comp=Z,1.7nm,0.9s						
KNRA	Kununurra	51.32	275	P	P	14 14 44.1	-0.3
FITZ	Fitzroy Crossi	52.90	270	P	P	14 14 54.4	-1.8
CASY	Casey	54.54	208	P	P	14 15 07.1	-0.4
QSPA	South Pole Qui	58.74	180	P	P	14 15 38.9	+1.2
QSPA	South Pole Qui	58.74	180	P	P	14 15 39.4	+1.8
	comp=Z,1.7nm,0.8s,baz=48,slow=3.9,SNR=4.1						
	comp=Z,1.7nm,0.8s						
SNAA	Sanae	77.17	178	⇑P	P	14 17 32.3	-1.0
	comp=Z,24nm,1.0s						
SNAA	Sanae	77.17	178	P	P	14 17 34.0	+0.7
SNAA				IAmb	IAmb	14 18 00.0	
	comp=Z,2.7nm,1.1s						
VNA3	Neumayer Olymp	77.30	176	⇑P	P	14 17 34.2	+0.2
	comp=Z,4.5nm,0.8s						
VNA2	Neumayer--Watz	77.74	177	⇑P	P	14 17 36.2	-0.2
	comp=Z,2.9nm,0.8s,baz=172,slow=5.8						
FINES	FINESS Array B	146.24	340	PKPbc	PKPab	14 25 19.8	-0.5
	comp=Z,1.6nm,0.5s,baz=41,slow=4.9,SNR=9.3						
AKASG	Malin Array Be	152.40	322	PKPbc	PKiKP	14 25 36.6	+0.9
	comp=Z,0.5nm,0.5s,baz=46,slow=4.5,SNR=5.4						

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*IDC **19** 14:12:54.3±5.3, 15.°72S×173.°26W, h133^{km}±45^{km}, mb3.3/7, mbtmp3.8/8, MS3.3/4, Error ellipse: s-maj=43.1km s-min=24.9km az=144.0*
ISC 19 14:12:55.8±1.0**, 15.°6S**±0.°3×**173.°4W**±0.°2**, h150^{km}, n15, σ0^{s}89**/9**, mb3.5**/6**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.51	254	P	Pn	14 14 55.8	-0.3
	8.0nm,0.9s,baz=91,slow=12,SNR=4.2						
MSVF				LR	LR	14 17 46.0	
	comp=Z,220nm,19.6s,baz=147,slow=34						
RAR	Rarotonga	14.03	115	LR	LR	14 19 39.3	
	comp=Z,100nm,21.0s,baz=286,slow=29						
DZM	Mont Dzumac	20.16	248	*e*LR	LR	14 22 14.3	
	137nm,22.8s						
DZM	Mont Dzumac	20.16	248	P	P	14 17 19.1	+0.4
	2.4nm,0.8s,baz=79,slow=14,SNR=3.6						
	2.4nm,0.8s						
PPT	Papeete	22.86	98	LR	LR	14 23 42.0	
	comp=Z,49nm,20.5s,baz=265,slow=28						
PPT2	Papeete2	22.86	98	*e*LR	LR	14 22 32.2	
	155nm,29.5s						
PPT2				*e*LR	LR	14 22 32.7	
	150nm,27.2s						
TBI	Tubuai	23.78	113	*e*LR	LR	14 22 52.2	
	986nm,24.2s						
TBI				*e*LR	LR	14 23 04.9	
	567nm,27.0s						
URZ	Urewera	24.07	199	LR	LR	14 26 24.5	
	comp=Z,110nm,19.6s,baz=176,slow=34						
STKA	Stephens Creek	43.97	240	P	P	14 20 48.2	-0.1
	3.5nm,0.9s,baz=77,slow=14,SNR=5.6						
	3.5nm,0.9s						
WRA	Warramunga Arr	49.84	257	P	P	14 21 34.8	+0.7
	1.3nm,0.9s,baz=92,slow=8.2,SNR=15						
	1.3nm,0.9s						
ASAR	Alice Springs	50.09	252	P	P	14 21 36.2	+0.3
	2.9nm,0.8s,baz=87,slow=8.1,SNR=29						
	2.9nm,0.8s						
QSPA	South Pole Qui	74.43	180	P	P	14 24 17.3	0.0
	0.4nm,0.9s,baz=318,slow=4.6,SNR=3.9						
	0.4nm,0.9s						
TXAR	Lajitas Array	80.69	56	P	P	14 24 53.0	+0.3
	0.1nm,0.4s,baz=244,slow=3.3,SNR=4.4						
	0.1nm,0.4s						
ILAR	Eielson Array	82.65	11	P	P	14 25 02.3	+0.3
	0.4nm,0.7s,baz=214,slow=6.2,SNR=3.3						
	0.4nm,0.7s						
BRTR	Keskin Array B	146.35	321	PKPbc	PKiKP	14 32 20.5	-1.9
	0.7nm,0.7s,baz=64,slow=3.4,SNR=3.6						

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*ISN **19** 14:14:18.6±0.7, 34.°74N×45.°82E, h12^{km}±43^{km}, ML3.1*
*TEH **19** 14:14:18.7, 34.°73N×45.°82E, h15^{km}±81^{km}*
ISC 19 14:14:19.1±0.9**, 34.°76N**±0.°03×**45.°82E**±0.°03**, h10^{km}, n19, σ1^{s}05**/23**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KGS1	Ghasr-e-Shirin	0.32	217	Pg	Pb	14 14 25.7	-1.2
IDHR	Dehrash	0.47	97	Pg	Pb	14 14 28.9	-0.7
GLG1	Gilan-e-Gharb	0.65	173	Pg	Pb	14 14 32.1	-0.5
IGHG	Ghaleghazi	0.75	125	Pg	Pb	14 14 33.4	-1.0
ILIN	Lien	0.95	80	Pg	Pn	14 14 39.0	+0.2
KCHF	Cheshme Sefid,	1.12	115	Pg	Pn	14 14 41.4	+0.4
ILBA	Ilam Banvizeh	1.18	164	Pg	Pn	14 14 41.9	+0.1
IKRK	Kirkuk	1.37	298	*e*Pg	Pb	14 14 45.0	+0.2
IKRK				*e*Sg	Sg	14 15 04.5	+1.3
IKRK				AML	AML	14 15 06.6	
	comp=N,403nm,0.5s						
IKRK				AML	AML	14 15 07.5	
	comp=E,211nm,0.8s						
SNQR	Sonqor, Kerman	1.49	86	Pg	Pg	14 14 48.2	+0.4
IBDR	Badra	1.65	177	*e*Pn	Pb	14 14 49.0	-0.6
IBDR				*e*Sn	Sg	14 15 11.0	-1.1
IBDR				AML	AML	14 15 18.4	
	comp=E,343nm,0.7s						
IBDR				AML	AML	14 15 19.3	
	comp=N,203nm,0.7s						
IBZA	Bozab	1.71	99	Pg	Pg	14 14 51.4	-0.5
BHD	Baghdad	1.91	219	*e*Pn	Pn	14 14 52.0	+0.3
BHD				*e*Sn	Sb	14 15 17.4	-0.5
MAHB	Mahabad	2.00	357	Pn	Pb	14 14 55.0	-0.8
IKFM	Kafar-mosalman	2.08	126	Pn	Pb	14 14 56.9	-0.1
IDOB	Doab	2.18	116	Pn	Pb	14 14 58.7	-0.1
HSAM	Samen	2.36	103	Pn	Pb	14 15 01.2	-0.7
IAZR	Azarshahr	2.91	3	Pn	Pb	14 15 08.7	-2.6
RAFI	Al-Rafai	3.04	175	*e*Pn	Pn	14 15 08.5	+1.3
RAFI				*e*Sn	Sn	14 15 44.0	+0.3
ISFB	Sefidab	5.31	93	Pn	Pn	14 15 40.8	+2.2

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*IDC **19** 14:19:02.4±0.4, 4.°53S×143.°51E, h85^{km}±3^{km}, mb4.3/18, mbtmp4.8/22, MS3.6/33, Error ellipse: s-maj=10.4km s-min=7.9km az=66.0*
*NEIC **19** 14:19:03.7±1.4, 4.°52S±0.°07×143.°42E±0.°07, h94^{km}±6^{km}, mb4.9/68, Error ellipse: s-maj=10.5km s-min=9.5km az=209.0*
*GCMT **19** 14:19:04.7±0.2, 4.°45S±0.°02×143.°43E±0.°02, h109^{km}±3^{km}, MW5.0/83, Moment Tensor Solution. s26,c27; s83,c116; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.18±.17; $M_{\theta\theta}$-3.72±.13; $M_{\phi\phi}$4.90±.17; $M_{r\theta}$1.35±.09; $M_{\theta\phi}$-0.35±.13; $M_{\phi r}$0.57±.16; Best double couple: $M_0$4.64800×10^{16} NP1:ϕ_s315.00000°,δ70.00000°,λ-166.00000°. NP2: ϕ_s220.00000°,δ77.00000°,λ-21.00000°. Principal axes: T 4.9600, Plg5.0000°, Azm268.0000°; N -0.6230, Plg66.0000°, Azm10.0000°; P -4.3370, Plg24.0000°, Azm176.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **19** 14:19:04.8±0.5, 5°S±3°×14°3E±°, h97^{km}±3^{km}, M5.1/66, mb5.3/66, mB5.5/38, MLv6.0/6, Mw(mB)4.9/38, MwMwp4.8/3, Mwp5.1/3*
ISC 19 14:19:02.8±0.3**, 4.°52S**±0.°04×**143.°47E**±0.°04**, h85^{km}**±2^{km}**, h86^{km}:pP-P, n366, σ1^{s}31**/376**, mb5.0**/101**, 1C-2D, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	3.40	306	P	Pn	14 19 53.9	+0.1
	342nm,0.4s,baz=156,slow=9.3,SNR=315						
JAY				S	Sn	14 20 34.3	+1.1
	1µm,0.8s,baz=43,slow=4.3,SNR=4.8						
JAY				LR	LR	14 20 54.7	
	comp=Z,2µm,18.5s,baz=130,slow=33						
JAY	Jayapura	3.40	306	P	Pn	14 19 53.9	+0.1
JAY				S	Sn	14 20 35.6	+2.4
GENI	Genyem	3.81	300	P	Pn	14 19 55.7	-3.6
GENI	Genyem	3.81	300	P	Pn	14 19 59.4	+0.1
GENI				S	Sn	14 20 43.1	+0.1
MANU	Manus Island	4.60	58		Pn	14 20 11.5	+1.5
SMPI	Sarmi	5.38	298	P	Pn	14 20 21.2	+0.6
PMG	Port Moresby	6.08	143		Pn	14 20 30.0	-0.2
PMG	Port Moresby	6.08	143	P	Pn	14 20 30.4	+0.3
	231nm,0.5s,baz=321,slow=10,SNR=68						
PMG				S	Sn	14 21 36.6	-1.8
	314nm,0.6s,baz=330,slow=20,SNR=1.8						
PMG	Port Moresby	6.08	143	P	Pn	14 20 29.5	-0.7
PMG	Port Moresby	6.08	143	P	Pn	14 20 29.4	-0.7
SRPI	Serui, Papua	7.68	290	P	Pn	14 20 52.2	+0.1
	2.7nm1µm5µm442nm,0.6s						
SRPI				S	Sn	14 22 17.3	-0.3
	2.7nm1µm5µm442nm,0.6s						
BAKI	Biak	8.06	294	P	Pn	14 20 57.1	-0.2
	1.5nm4µm344nm,0.6s						
RABL	Rabaul	8.67	88		Pn	14 21 06.2	+0.5
COEN	Coen	9.38	182		Pn	14 21 15.9	+0.7
COEN	Coen	9.38	182	P	Pn	14 21 16.6	+1.3
	comp=Z,760nm,1.2s						
COEN	Coen	9.38	182	S	Sn	14 22 58.5	-0.6
COEN	Coen	9.38	182	P	Pn	14 21 16.9	+1.6
RKPI	Ransiki, Papua	9.75	288	P	Pn	14 21 20.2	-0.1
	comp=Z,296nm,0.6s						
KMPI	Kaimana, Papua	9.78	275	P	Pn	14 21 22.7	+2.0
FAKI	Fak Fak	11.31	278		Pn	14 21 40.0	-1.6
FAKI	Fak Fak	11.31	278	P	Pn	14 21 39.9	-1.6
FAKI	Fak Fak	11.31	278	P	Pn	14 21 41.3	-0.3
	comp=Z,1µmcomp=Z,162nm,0.7s						
SAUI	Saumlaki	12.58	254	P	Pn	14 21 59.3	+0.6
SWI	Sorong	12.72	286	P	Pn	14 21 59.2	-1.4
BNDI	Bandanaira	13.53	269	P	Pn	14 22 10.2	-1.0
BNDI	Bandanaira	13.53	269	S	Sn	14 24 42.7	+2.7
BNDI	Bandanaira	13.53	269	P	Pn	14 22 11.4	+0.2
MTSU	Mount Surprise	13.56	177	P	Pn	14 22 13.8	+2.1
	comp=Z,60nm,0.9s						
MTSU	Mount Surprise	13.56	177	P	Pn	14 22 14.2	+2.5

KDU	Kakadu	13.56	233	P	Pn	14 22 10.1	-1.6
	comp=Z,230nm,1.1s						
KDU	Kakadu	13.56	233	P	Pn	14 22 10.1	-1.6
KDU	Kakadu	13.56	233	S	Sn	14 24 43.9	+3.0
MSAI	Masohi	14.55	274	P	Pn	14 22 24.1	-0.5
	comp=Z,2µmcomp=Z,154nm,0.6s						
MTN	Manton Dam	14.73	235		Pn	14 22 25.7	-1.1
MTN	Manton Dam	14.73	235	P	Pn	14 22 25.4	-1.4
	comp=Z,172nm,0.8s						
MTN	Manton Dam	14.73	235	P	Pn	14 22 25.3	-1.6
AAI	Ambon	15.26	273	P	Pn	14 22 31.6	-2.1
	comp=Z,2µmcomp=Z,227nm,1.1s						
CTAO	Charters Tower	15.71	170	Pn	Pn	14 22 39.2	-0.1
CTAO	Charters Tower	15.71	170	P	P	14 22 40.8	-0.8
QIS	Mount Isa	16.38	193	P	Pn	14 22 47.6	-0.1
	comp=Z,65nm,1.7s						
QIS	Mount Isa	16.38	193	P	Pn	14 22 48.3	+0.6
NLAI	Namlea	16.38	274	P	P	14 22 49.2	+0.1
	comp=Z,2µmcomp=Z,136nm,0.6s						
TATA	Tatamba Isabel	16.68	104	P	Pn	14 22 51.2	-0.2
SAVO	Savo Central	16.86	107	P	P	14 22 55.5	+1.1
TNTI	Ternate	16.93	288		Pn	14 22 53.4	-1.0
TNTI	Ternate	16.93	288	P	P	14 22 55.2	+0.1
	comp=Z,2µmcomp=Z,211nm,1.0s						
HNR	Honiara	17.06	108		Pn	14 22 55.1	-1.1
HNR	Honiara	17.06	108	P	Pn	14 22 54.3	-1.8
	comp=Z,162nm,0.7s,baz=208,slow=1.9,SNR=12						
HNR	Honiara	17.06	108	P	P	14 22 57.1	+0.5
ALEG	Aligegeo Malai	17.61	105	P	P	14 23 02.6	-0.1
SANI	Sanana	17.62	277	P	Pn	14 23 03.6	+0.6
SANI	Sanana	17.62	277	P	Pn	14 23 03.9	+0.9
	comp=Z,1µmcomp=Z,88nm,0.8s						
WRAB	Tennant Creek	17.71	209	P	P	14 23 02.5	-1.2
WRA	Warramunga Arr	17.73	209	P	P	14 23 02.4	-1.5
	comp=Z,36nm,0.6s,baz=33,slow=12,SNR=22						
WRA				S	Sn	14 26 06.8	-15
	comp=Z,30nm,0.9s,baz=24,slow=24,SNR=6.7						
NGOA	Tingoa Renbel	17.84	114	P	Pn	14 23 05.9	+0.2
GUMO	Guam	18.04	4	LR	LR	14 28 59.6	
	comp=Z,89nm,21.2s,baz=194,slow=33						
KNRA	Kununurra	18.22	231		P	14 23 08.6	-0.7
KNRA	Kununurra	18.22	231	P	P	14 23 08.6	-0.7
	comp=Z,169nm,0.8s						
SGSI	Sangihe	19.69	294	P	Pn	14 23 26.9	-0.8
	comp=Z,3µmcomp=Z,344nm,0.8s						
SOEI	Soe	19.75	254		P	14 23 26.5	+0.3
SOEI	Soe	19.75	254	P	P	14 23 26.3	+0.1
SOEI	Soe	19.75	254	P	Pn	14 23 27.4	-1.0
KMSI	Cibinong	20.12	284	P	Pn	14 23 31.7	-1.0
BATI	Baumata	20.43	253	P	P	14 23 34.6	+1.1
	comp=Z,112nm,0.6s,baz=120,slow=4.7,SNR=18						
BATI				S	S	14 27 17.9	+0.1
	comp=Z,77nm,0.9s,baz=77,slow=14,SNR=3.7						
	comp=Z,112nm,0.6s						
BATI	Baumata	20.43	253	P	Pn	14 23 36.0	-0.4
	comp=Z,3µmcomp=Z,339nm,0.8s						
BBSI	Bau Bau	20.84	266	P	P	14 23 36.0	-1.9
	comp=Z,2µmcomp=Z,191nm,1.1s						
LUWI	Luwuk	20.96	279		P	14 23 39.7	+0.5
LUWI	Luwuk	20.96	279	P	P	14 23 39.3	+0.2
	comp=Z,3µmcomp=Z,262nm,0.9s						
AS06	Alice Springs	21.11	205	P	P	14 23 39.9	-0.9
	comp=Z,95nm,0.9s						
AS01	Alice Springs	21.14	205	P	P	14 23 40.2	-0.8
AS31	Alice Springs	21.15	205		P	14 23 39.5	-1.7
AS31	Alice Springs	21.15	205	P	P	14 23 40.5	-0.6
	comp=Z,36nm,0.6s						
ASAR	Alice Springs	21.16	205	P	P	14 23 40.0	-1.2
ASAR	Alice Springs	21.16	205	P	P	14 23 40.2	-1.0
	comp=Z,8.6nm,0.7s,baz=31,slow=10,SNR=58						
ASAR				S	S	14 27 31.5	-0.4
	comp=Z,22nm,0.9s,baz=18,slow=27,SNR=5.4						
ASAR				LR	LR	14 33 16.4	
	comp=Z,261nm,18.6s,baz=30,slow=40						
	comp=Z,8.6nm,0.7s						
MMRI	Maumere	21.48	258	P	P	14 23 42.8	-2.0
MMRI	Maumere	21.48	258	P	P	14 23 43.9	-0.8
MMRI	Maumere	21.48	258	P	P	14 23 44.4	-0.3
	comp=Z,116nm,1.1s						
QLP	Quilpie	21.95	178	P	P	14 23 48.8	-0.8
	comp=Z,65nm,0.8s						
QLP	Quilpie	21.95	178	P	P	14 23 49.0	-0.6
EIDS	Eidsvold	21.98	161	P	P	14 23 48.6	-1.3
EIDS	Eidsvold	21.98	161	P	P	14 23 49.9	-0.1
	comp=Z,105nm,0.8s						
EIDS	Eidsvold	21.98	161	P	P	14 23 50.0	+0.1
EDFI	Ende, Flores	22.04	258	P	P	14 23 48.8	-1.9
	comp=Z,45nm,0.6s						
FITZ	Fitzroy Crossi	22.05	231	P	P	14 23 49.1	-1.6
FITZ	Fitzroy Crossi	22.05	231	P	P	14 23 50.6	-0.2
	comp=Z,14nm,0.9s						
FITZ	Fitzroy Crossi	22.05	231	LR	LR	14 33 08.5	
	comp=Z,241nm,20.2s,baz=50,slow=38						
FITZ	Fitzroy Crossi	22.05	231	P	P	14 23 50.6	-0.2
MRSI	Marisa	22.07	282	P	P	14 23 51.9	+0.8
	comp=Z,1µmcomp=Z,171nm,0.9s						
APSI	Ampana	22.09	279	P	P	14 23 52.6	+1.4
	comp=Z,2µmcomp=Z,200nm,0.9s						
BSSI	Bau Bau, Buton	22.94	265	P	P	14 24 02.1	+2.0
	comp=Z,2µmcomp=Z,180nm,0.8s						
BNSI	Bone	23.29	269	P	P	14 24 04.1	+0.6
	comp=Z,1µmcomp=Z,122nm,0.8s						
TOLI2	Tolitoli	23.35	283	P	P	14 24 02.5	-1.5
TOLI2	Tolitoli	23.35	283	P	P	14 24 03.4	-0.6
BASI	Baing, Sumba	23.39	255	P	P	14 24 06.1	+1.7
	comp=Z,4µmcomp=Z,369nm,1.2s						
WSI	Waingapu	23.55	256	P	P	14 24 05.3	-0.5
KAPI	Kappang	23.64	268	P	P	14 24 06.1	-0.6
KAPI	Kappang	23.64	268	LR	LR	14 35 39.9	
	comp=Z,63nm,18.2s,baz=98,slow=42						
SPSI	Sidrap Palu	23.64	270	P	P	14 24 06.9	+0.2
	comp=Z,82nm,0.9s						
TTSI	Tana Toraja	23.64	273	P	P	14 24 08.0	+1.3
	comp=Z,1µmcomp=Z,104nm,0.8s						
PCI	Palu	23.88	278	P	P	14 24 10.4	+1.6
MPSI	Mapaga	24.04	281	P	P	14 24 10.1	-0.1
	comp=Z,47nm,1.1s						
WBSI	Waikabubak, Su	24.42	257	P	P	14 24 12.9	-0.8
	comp=Z,1µmcomp=Z,149nm,0.8s						
WRKA	Warakurna	25.08	214	P	P	14 24 18.7	-0.8
	comp=Z,21nm,0.9s						
SANVU	Saraoutou	25.74	117	P	P	14 24 24.1	-1.5
PLAI	Plampang	25.87	259	P	P	14 24 25.3	-1.5
PLAI	Plampang	25.87	259	P	P	14 24 24.7	-2.1
	comp=Z,56nm,1.0s						
ARMA	Armidale	26.89	164	P	P	14 24 35.8	-0.2
	comp=Z,23nm,1.3s						
CMSA	Cobar Meteorol	26.96	176	P	P	14 24 35.8	-0.6
	comp=Z,18nm,1.5s						
CMSA	Cobar Meteorol	26.96	176	P	P	14 24 36.7	+0.3
STKA	Stephens Creek	27.27	183	P	P	14 24 38.5	-0.7
STKA	Stephens Creek	27.27	183	P	P	14 24 38.6	-0.7
	comp=Z,77nm,1.0s						
STKA	Stephens Creek	27.27	183	P	P	14 24 38.5	-0.7
	comp=Z,12nm,0.8s,baz=343,slow=9.8,SNR=7.8						
STKA				LR	LR	14 36 49.9	
	comp=Z,558nm,18.2s,baz=2.7,slow=39						
	comp=Z,12nm,0.8s						
STKA	Stephens Creek	27.27	183	P	P	14 24 38.9	-0.3
DZM	Mont Dzumac	28.28	130	P	P	14 24 47.6	-0.8
DZM	Mont Dzumac	28.28	130	*e*P	P	14 24 44.9	-3.6
	comp=Z,46nm,1.2s						
DZM				*e*LR	LR	14 32 10.0	
	comp=Z,527nm,31.8s						
DZM	Mont Dzumac	28.28	130	P	P	14 24 48.1	-0.4
	comp=Z,12nm,0.8s,baz=267,slow=9.5,SNR=20						
DZM				LR	LR	14 35 06.8	
	comp=Z,255nm,21.7s,baz=316,slow=34						
	comp=Z,12nm,0.8s						
DZM	Mont Dzumac	28.28	130	P	P	14 24 48.1	-0.4
SRBI	Singaraja	28.30	261	P	P	14 24 47.6	-1.1
	comp=Z,30nm,0.9s						
MBWA	Marble Bar	28.37	232	P	P	14 24 48.1	-1.1
MBWA				IAmb	IAmb	14 25 48.9	
	comp=Z,18nm,0.8s						
MBWA	Marble Bar	28.37	232	P	P	14 24 49.3	+0.1
	comp=Z,20nm,0.7s						
MBWA	Marble Bar	28.37	232	P	P	14 24 48.9	-0.3
PSAD1	Pilbara Seismi	28.45	232	P	P	14 24 49.2	-0.7
	comp=Z,25nm,1.3s						
PSA00	Pilbara Seismi	28.50	231	P	P	14 24 50.4	+0.1
PSA00	Pilbara Seismi	28.50	231		P	14 24 48.6	-1.8
PSA00				IAmb	IAmb	14 25 51.3	
	comp=Z,23nm,0.9s						
PSA00	Pilbara Seismi	28.50	231	P	P	14 24 50.5	+0.1
	comp=Z,19nm,0.8s						
PSA00	Pilbara Seismi	28.50	231	P	P	14 24 50.5	+0.1
PSAD3	Pilbara Seismi	28.59	231	P	P	14 24 50.3	-0.9
	comp=Z,21nm,0.7s						
OUENC	Ouen Island, N	28.78	130	P	P	14 24 54.7	+1.9
BBOO	Buckleboo	28.99	193	P	P	14 24 54.0	-0.5
BBOO	Buckleboo	28.99	193	P	P	14 24 53.7	-0.8
	comp=Z,33nm,0.6s						
BBOO	Buckleboo	28.99	193	P	P	14 24 55.3	+0.8
TGY	Tagaytay City	29.02	310	LR	LR	14 35 43.6	
	comp=Z,75nm,20.6s,baz=116,slow=34						
HTT	Hallett	29.08	188	P	P	14 24 54.8	-0.5
	comp=Z,4.0nm,1.9s						
HTT	Hallett	29.08	188	P	P	14 24 56.3	+1.0
FORT	Forrest	29.89	207		P	14 25 01.5	-1.0
FORT	Forrest	29.89	207	P	P	14 25 01.8	-0.7
	comp=Z,53nm,0.9s						
FORT	Forrest	29.89	207	P	P	14 25 02.0	-0.5
YNG	Young	29.98	172	P	P	14 25 02.9	-0.4
	comp=Z,16nm,1.2s						
CAN	Canberra	31.07	171	P	P	14 25 12.4	-0.6
	comp=Z,25nm,1.2s						
CAN	Canberra	31.07	171	P	P	14 25 14.0	+1.0
CAN	Canberra	31.07	171	P	P	14 25 13.2	+0.3
CAN				pP	pP	14 25 33.9	+0.9
CAN				sP	sP	14 25 44.6	+1.5
ARPS	Mount Arapiles	32.13	182	P	P	14 25 22.6	+0.5
	comp=Z,24nm,0.9s						
ARPS	Mount Arapiles	32.13	182	P	P	14 25 23.8	+1.6
MEEK	Meekatharra	32.38	225	P	P	14 25 23.9	-0.6
	comp=Z,21nm,0.6s						
MEEK	Meekatharra	32.38	225	P	P	14 25 24.7	+0.2
TOO	Toolangi	32.95	177	P	P	14 25 29.2	-0.2
GIRL	Giralia	33.53	235	P	P	14 25 33.5	-1.0
	comp=Z,73nm,1.4s						
GIRL	Giralia	33.53	235	P	P	14 25 35.1	+0.6
KSM	Kuching	33.67	279	P	P	14 25 35.3	-0.6
KSM				IAmb	IAmb	14 26 05.3	
	comp=Z,35nm,1.2s						
MORW	Morawa	35.66	224	P	P	14 25 52.7	-0.2
	comp=Z,40nm,0.8s						
MORW	Morawa	35.66	224	P	P	14 25 53.5	+0.6
KLBR	Kellerberrin	36.17	219	P	P	14 25 56.3	-0.9
	comp=Z,58nm,0.8s						
KLBR	Kellerberrin	36.17	219	P	P	14 25 57.1	-0.1
BLDU	Ballidu	36.19	221	P	P	14 25 56.9	-0.5
	comp=Z,73nm,0.7s						
BLDU	Ballidu	36.19	221	P	P	14 25 57.7	+0.3
MSVF	Nonsavu	36.29	114	P	P	14 26 02.0	+3.5
NWAO	Narrogin (SRO)	37.40	218	P	P	14 26 06.9	-0.7
NWAO	Narrogin (SRO)	37.40	218	P	P	14 26 07.0	-0.7
NWAO	Narrogin (SRO)	37.40	218	LR	LR	14 42 36.3	
	comp=Z,177nm,21.6s,baz=52,slow=38						
NWAO	Narrogin (SRO)	37.40	218	P	P	14 26 08.6	+1.0
NWAO	Narrogin (SRO)	37.40	218	P	P	14 26 07.5	-0.1
MUN	Mundaring	37.40	220	P	P	14 26 07.2	-0.4
	comp=Z,33nm,0.7s						
MUN	Mundaring	37.40	220	P	P	14 26 08.2	+0.5
MOO	Moorlands	37.91	176	P	P	14 26 12.7	+0.9
TAU	Tasmania Unive	38.38	175	P	P	14 26 16.9	+1.2
	comp=Z,36nm,1.9s						
RKGY	Rocky Gully	38.72	216	P	P	14 26 17.8	-1.0
	comp=Z,22nm,0.9s						
JMN	Monobe	39.11	347	P	P	14 26 21.8	-0.1
JMN				IAmb	IAmb	14 26 43.9	
	comp=Z,18nm,0.8s						
MDSI	Maura Dua	39.17	268	P	P	14 26 21.7	-1.0
	comp=Z,76nm,1.0s						
LWLI	Liwa	39.27	268	P	P	14 26 23.9	+0.1
JNU	Nakatsue	39.29	343	P	P	14 26 22.7	-0.9
JNU	Nakatsue	39.29	343	LR	LR	14 40 42.0	
	comp=Z,54nm,18.3s,baz=159,slow=33						
MJAR	Matsushiro Arr	41.14	354	P	P	14 26 38.4	-0.3
	comp=Z,1.7nm,0.7s,baz=169,slow=6.1,SNR=4.8						
MJAR				LR	LR	14 42 57.1	
	comp=Z,64nm,21.1s,baz=168,slow=35						
	comp=Z,1.7nm,0.7s						
OUZ	Omahuta	41.33	142	P	P	14 26 42.7	+2.4
OUZ	Omahuta	41.33	142	P	P	14 26 42.9	+2.6
WCZ	Waipu Caves	42.26	142	P	P	14 26 49.9	+2.1
GRZ	Great Barrier	43.15	141	P	P	14 26 57.0	+2.0
PPI	Padang Panjang	43.21	274	P	P	14 26 55.0	-0.9
	comp=Z,68nm,0.9s						
NJ2	Nanjing	43.26	329	*e*P	P	14 26 56.5	+0.6
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
KUZ	Kuaotunu	43.63	142	P	P	14 27 01.0	+2.1
KUZ	Kuaotunu	43.63	142	P	P	14 27 00.7	+1.8
TOZ	Tahuroa Road	44.13	143	P	P	14 27 05.3	+2.4
KSRS	Korea Array	44.20	342	P	P	14 27 03.6	+0.3
	comp=Z,2.4nm,0.6s,baz=163,slow=9.0,SNR=20						
KSRS				pP	pP	14 27 24.5	+0.6
	comp=Z,8.1nm,0.7s,baz=163,slow=8.9,SNR=12						
KSRS				sP	sP	14 27 34.0	+0.4
	comp=Z,28nm,1.2s,baz=161,slow=9.1,SNR=5.3						
	comp=Z,2.4nm,0.6s						
KSAR	Wonju Array Be	44.20	342	P	P	14 27 03.5	+0.1
HIZ	Hauiti	44.26	144	P	P	14 27 06.1	+2.2
HIZ	Hauiti	44.26	144	P	P	14 27 05.8	+1.8
KS19	Wonju Array Si	44.26	342	P	P	14 27 02.7	-1.2
KS19				IAmb	IAmb	14 27 39.9	
	comp=Z,14nm,1.0s						
QRZ	Quartz Range	44.58	148	P	P	14 27 08.3	+1.8
QRZ	Quartz Range	44.58	148	P	P	14 27 08.2	+1.7
VRZ	Vera Road	44.61	145	P	P	14 27 09.8	+3.1
WHN	Wuhan	44.62	323	P	P	14 27 09.8	+2.9
WHN				pP	pP	14 27 29.6	+2.1
WHN				pmax	pmax		
	comp=Z,68nm,0.9s						
DSZ	Denniston Nort	44.88	150	P	P	14 27 11.2	+2.3
OMRZ	Omania	44.89	143	P	P	14 27 11.3	+2.3
KATZ	Kakaramea	45.05	144	P	P	14 27 13.2	+2.8
RPSI	Rantau Prapat	45.09	278	P	P	14 27 09.6	-1.3
RPSI	Rantau Prapat	45.09	278	P	P	14 27 09.9	-1.0
WTVZ	West Tongariro	45.09	144	P	P	14 27 13.3	+2.6
PSI	Prapat	45.10	278	P	P	14 27 09.9	-1.3
	comp=Z,21nm,0.7s,baz=130,slow=4.5,SNR=11						
	comp=Z,21nm,0.7s						
KRVZ	Karewarewa	45.10	144	P	P	14 27 13.3	+2.5
MRNZ	Matariki Terra	45.11	149		P	14 27 10.6	-0.1
COVZ	Chateau Observ	45.12	144	P	P	14 27 13.4	+2.5
NGZ	Ngauruhoe	45.13	144	P	P	14 27 13.7	+2.6
FWVZ	Far West T-bar	45.16	144	P	P	14 27 13.4	+2.0
OTVZ	Oturere	45.16	144	P	P	14 27 13.3	+2.0
SNVZ	South Ngauruho	45.16	144	P	P	14 27 14.0	+2.6
ETVZ	East Tongariro	45.17	144	P	P	14 27 14.6	+3.2
WNVZ	Wahianoa	45.23	144	P	P	14 27 15.1	+3.2
JCZ	Jackson Bay	45.27	154	P	P	14 27 14.1	+2.1
JCZ	Jackson Bay	45.27	154	P	P	14 27 13.3	+1.3
NNZ	Nelson	45.31	148	P	P	14 27 12.9	+0.7
MSZ	Milford Sound	45.39	155	P	P	14 27 14.5	+1.7
INZ	Inchbonnie	45.44	151	P	P	14 27 13.1	-0.1
URZ	Urewera	45.44	142	LR	LR	14 47 22.5	
	comp=Z,203nm,18.8s,baz=313,slow=37						
URZ	Urewera	45.44	142	P	P	14 27 14.6	+1.3
URZ	Urewera	45.44	142	P	P	14 27 14.7	+1.4
THZ	Tophouse	45.45	149	P	P	14 27 14.2	+0.7
HAZ	Te Kaha	45.54	141	P	P	14 27 15.3	+1.2
RTZ	Ruatahuna	45.59	143	P	P	14 27 15.4	+0.9
RUGZ	Raukumara Rang	45.60	142	P	P	14 27 16.0	+1.2
BKZ	Black Stump Fm	45.65	144	P	P	14 27 15.9	+0.9
DCZ	Deep Cove	45.73	157		P	14 27 15.7	+0.3
DCZ	Deep Cove	45.73	157	P	P	14 27 16.4	+1.0
MWZ	Matawai	45.74	142	P	P	14 27 17.7	+1.9
MXZ	Matakaoa Point	45.75	141	P	P	14 27 17.2	+1.4
MXZ	Matakaoa Point	45.75	141	P	P	14 27 17.1	+1.4
LTZ	Lake Taylor	45.88	150	P	P	14 27 16.7	0.0
TSZ	Takapari Road	45.93	145	P	P	14 27 17.6	+0.4
PNHZ	Pukenui	45.97	145	P	P	14 27 18.0	+0.5
RPZ	Rata Peaks	46.00	152	P	P	14 27 18.6	+0.9
RPZ	Rata Peaks	46.00	152	P	P	14 27 18.1	+0.4
MLZ	Mavora Lakes	46.03	156	P	P	14 27 18.7	+0.8
PUZ	Puketiti	46.03	141	P	P	14 27 18.9	+0.8
SNZO	South Karori	46.08	147	P	P	14 27 18.6	+0.3
MRZ	Mangatainoka R	46.12	146	P	P	14 27 19.0	+0.4
LBZ	Lake Benmore	46.13	153	P	P	14 27 19.0	+0.3
OXZ	Oxford	46.17	151	P	P	14 27 19.7	+0.7
GSI	Gunungsitoli	46.22	276	P	P	14 27 17.3	-2.6
	comp=Z,24nm,0.8s						
KHZ	Kahutara	46.25	149	P	P	14 27 20.0	+0.4
KHZ	Kahutara	46.25	149	P	P	14 27 19.5	-0.1
KAHZ	Kahuranaki	46.28	144	P	P	14 27 20.9	+0.9
WHZ	Wether Hill Ro	46.39	156	P	P	14 27 21.2	+0.5
WHZ	Wether Hill Ro	46.39	156	P	P	14 27 20.5	-0.2
GVZ	Greta Valley S	46.40	150	P	P	14 27 21.2	+0.4
PXZ	Pawanui	46.43	144	P	P	14 27 22.1	+1.1
TMZ	Timaru	46.49	153	P	P	14 27 21.6	0.0
BFZ	Birch Farm	46.51	145	P	P	14 27 23.1	+1.4
BFZ	Birch Farm	46.51	145	P	P	14 27 21.7	+0.1
SLVN	Son La	46.51	305		P	14 27 20.1	-2.0
MQZ	McQueen’s Vall	46.76	151	P	P	14 27 23.4	-0.1
ODZ	Otahua Downs	46.85	154	P	P	14 27 24.1	-0.1
TUZ	Tuapeka	47.13	155	P	P	14 27 27.1	+0.7
APZ	The Paps	47.18	157	P	P	14 27 27.5	+0.6
SYZ	Scrubby Hill	47.40	156	P	P	14 27 28.8	+0.3
ENH	Enshi	47.48	319	P	P	14 27 28.5	-0.9
ENH				IAmb	IAmb	14 27 51.4	
	comp=Z,26nm,0.9s						
MLSI	Meulaboh, Aceh	47.82	280	P	P	14 27 30.5	-1.8
	comp=Z,99nm,1.5s						
JKA	Kamikawa-asahi	48.42	359	P	P	14 27 36.5	+0.1
JKA				IAmb	IAmb	14 28 15.8	
	comp=Z,13nm,1.0s						
CMAR	Chiang Mai Arr	49.46	299	P	P	14 27 43.9	-0.9
CMAR	Chiang Mai Arr	49.46	299	P	P	14 27 45.0	+0.2
	comp=Z,7.5nm,0.7s,baz=118,slow=6.1,SNR=44						
CMAR				pP	pP	14 28 06.5	+0.7
	comp=Z,7.5nm,0.8s,baz=123,slow=6.2,SNR=5.4						
CMAR				LR	LR	14 49 20.8	
	comp=Z,22nm,19.1s,baz=165,slow=37						
	comp=Z,7.5nm,0.7s						
HNS	HongShan	49.56	330	⇓P	P	14 27 45.4	+0.2
HNS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
USRK	Ussuriysk Ar.	49.59	349	P	P	14 27 45.0	-0.3
USRK	Ussuriysk Ar.	49.59	349	P	P	14 27 44.8	-0.5
	comp=Z,2.0nm,0.6s,baz=174,slow=11,SNR=5.3						
USRK				pP	pP	14 28 05.5	-0.8
	comp=Z,11nm,0.8s,baz=165,slow=8.6,SNR=9.0						
USRK				LR	LR	14 47 11.5	
	comp=Z,18nm,18.7s,baz=185,slow=34						
	comp=Z,2.0nm,0.6s						
USA0B	Ussuriysk Arra	49.59	349	P	P	14 27 44.5	-0.8
USA0B				IAmb	IAmb	14 28 09.3	
	comp=Z,15nm,1.0s						
CHTO	Chiang Mai	49.60	299	P	P	14 27 44.6	-1.2
CHTO	Chiang Mai	49.60	299	P	P	14 27 45.4	-0.4
CHTO				pP	pP	14 28 07.7	+0.9
MDJ	Mudanjiang	50.48	347	P	P	14 27 52.1	+0.1
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.3s						
CN2	Changchun	50.77	343	*e*P	P	14 27 56.0	+1.8
CN2				sP	sP	14 28 30.8	+5.9
CN2				*e*S	S	14 35 04.3	+0.8
PZH	PanZhiHua	50.80	310	P	P	14 27 56.3	+1.3
PZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PZH				pmax	pmax		
	comp=Z,100nm,4.7s						
BJT	Baijiatuau	50.94	333	P	P	14 27 55.2	-0.3
BJT				IAmb	IAmb	14 28 19.0	
	comp=Z,14nm,0.8s						
BJT	Baijiatuau	50.94	333	P	P	14 27 55.3	-0.3
BJT				pP	pP	14 28 16.8	+0.2
BJI	Beijing	50.95	333	P	P	14 27 55.8	+0.1
BJI				pP	pP	14 28 16.8	+0.1
BJI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BJI				LR	LR		
	comp=N,59nm,18.7s						
BJI				LR	LR		
	comp=E,95nm,18.3s						
BNX	BinXian	52.05	346	⇓P	P	14 28 03.6	-0.1
BNX				pmax	pmax		
	comp=Z,9.0nm,1.5s						
CTZ	Chatham Island	52.54	144	P	P	14 28 09.0	+1.5
HHC	Hu-ho-hao-te	53.77	330	*e*P	P	14 28 19.3	+2.6
HHC				pmax	pmax		
	comp=Z,20nm,0.6s						
HHC				pmax	pmax		
	comp=Z,34nm,5.9s						
BTO	Baotou	54.37	329	*e*P	P	14 28 25.3	+4.3
BTO				pP	sP	14 28 49.1	-2.7
BTO				sP	pP	14 28 59.8	+18
BTO				pmax	pmax		
	comp=Z,12nm,0.9s						
BTO				pmax	pmax		
	comp=Z,160nm,6.9s						
KLR	Kul'dur	54.49	351	LR	LR	14 50 14.3	
	comp=Z,25nm,21.4s,baz=160,slow=34						
HEH	HeiHe	56.29	348	*e*P	P	14 28 36.9	+2.4
RAR	Rarotonga	57.45	112	LR	LR	14 52 01.5	
	comp=Z,27nm,19.5s,baz=272,slow=34						
PETK	Petropavlovsk-	58.66	10	P	P	14 28 50.5	-0.6
	comp=Z,2.6nm,0.6s,baz=153,slow=6.4,SNR=9.5						
PETK				pP	pP	14 29 11.9	-0.6
	comp=Z,15nm,0.9s,baz=162,slow=6.8,SNR=6.7						
PETK				sP	sP	14 29 21.4	-0.7
	comp=Z,16nm,1.0s,baz=168,slow=7.1,SNR=4.4						
	comp=Z,2.6nm,0.6s						
GTA	Gaotai	59.38	322	P	P	14 28 57.6	+1.0
GTA				pP	pP	14 29 19.5	+1.4
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ULN	Ulaanbaatar	61.16	333	P	P	14 29 08.5	-0.1
SONM	Songino Array	61.44	332	P	P	14 29 10.4	0.0
SONM				IAmb	IAmb	14 29 34.9	
	comp=Z,13nm,1.1s						
SONM	Songino Array	61.44	332	P	P	14 29 10.7	+0.3
	comp=Z,1.2nm,0.6s,baz=151,slow=7.7,SNR=7.6						
SONM				pP	pP	14 29 32.0	-0.1
	comp=Z,6.0nm,0.9s,baz=149,slow=8.9,SNR=10						
SONM				LR	LR	14 56 21.3	
	comp=Z,65nm,19.7s,baz=130,slow=36						
	comp=Z,1.2nm,0.6s						
DRV	Dumont d’Urvil	62.08	182	P	P	14 29 14.3	+0.1
SHEM	Shemya Is, Ala	62.64	20	LR	LR	14 50 30.5	
	comp=Z,61nm,21.5s,baz=187,slow=30						
PALK	Pallekele	63.72	280	LR	LR	15 03 32.7	
	comp=Z,32nm,19.2s,baz=112,slow=42						
KIWB	Kanaga Island	65.38	26	P	P	14 29 36.2	+0.1
CASY	Casey	65.79	194	P	P	14 29 38.1	-0.5
CASY				IAmb	IAmb	14 29 39.3	
	comp=Z,15nm,0.8s						
PPT	Papeete	66.69	107	LR	LR	14 55 01.4	
	comp=Z,38nm,21.4s,baz=291,slow=32						
PPT2	Papeete2	66.69	107	*e*P	P	14 29 39.8	-5.5
	comp=Z,80nm,34.0s						
PPT2	Papeete2	66.69	107	*e*LR	LR	14 49 48.7	
	comp=Z,109nm,25.8s						
TBI	Tubuai	67.18	113	*e*LR	LR	14 50 05.8	
	comp=Z,905nm,30.0s						
TBI				*e*LR	LR	14 50 09.4	
	comp=Z,747nm,33.8s						
YAK	Yakutsk	67.20	353	P	P	14 29 46.7	-0.9
YAK	Yakutsk	67.20	353	LR	LR	14 57 10.4	
	comp=Z,31nm,21.8s,baz=172,slow=34						
WMQ	Urumqi	69.40	320	*e*P	P	14 30 03.8	+2.0
CCD	Concordia, Ant	71.48	185	P	P	14 30 14.4	+0.1
CCD				PcP	PcP	14 30 31.7	-1.6
CCD				pP	pP	14 30 37.4	+0.7
CCD				sP	sP	14 30 46.6	+0.5
VNDA	Vanda	73.61	176	P	P	14 30 26.0	-0.4
VNDA	Vanda	73.61	176	P	P	14 30 26.9	+0.5
	comp=Z,21nm,0.7s,baz=326,slow=6.5,SNR=86						
VNDA				LR	LR	14 59 54.9	
	comp=Z,77nm,21.8s,baz=336,slow=33						
	comp=Z,21nm,0.7s						
MKAR	Makanchi Array	74.14	321	P	P	14 30 29.6	-0.5
MKAR	Makanchi Array	74.14	321	P	P	14 30 30.2	+0.1
	comp=Z,8.3nm,0.9s,baz=99,slow=7.6,SNR=36						
MKAR				pP	pP	14 30 52.3	-0.1
	comp=Z,11nm,0.9s,baz=100,slow=6.7,SNR=7.4						
	comp=Z,8.3nm,0.9s						
SBA	Scott Base	74.31	175	P	P	14 30 31.7	+1.2
SBA				IAmb	IAmb	14 30 33.1	
	comp=Z,20nm,0.9s						
MAKZ	Makanchi	74.34	321	P	P	14 30 30.6	-0.7
MAKZ				IAmb	IAmb	14 30 55.3	
	comp=Z,20nm,1.0s						
TARG	Taragay, Kyrgy	75.19	315	P	P	14 30 35.9	-0.9
KDJ	Kajisay	75.77	315		P	14 30 36.9	-2.8
KDJ				IAmb	IAmb	14 31 04.4	
	comp=Z,13nm,1.0s						
KSH	Kashi	75.79	313	P	P	14 30 41.6	+1.7
KSH				sP	sP	14 31 17.3	+5.7
KSH				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ZAA0	Zalesovo Array	75.91	329		P	14 30 38.4	-1.6

ZALV	Zalesovo Beam	75.91	329	P	P	14 30 38.0	-2.0
ZALV	Zalesovo Beam	75.91	329	P	P	14 30 39.2	-0.9
	comp=Z,3.2nm,0.6s,baz=112,slow=5.7,SNR=10						
ZALV				pP	pP	14 31 01.6	-0.9
	comp=Z,9.8nm,0.9s,baz=108,slow=4.8,SNR=5.2						
ZALV				LR	LR	15 03 47.4	
	comp=Z,30nm,20.0s,baz=102,slow=35						
	comp=Z,3.2nm,0.6s						
NIL	Nilore	76.22	306	P	P	14 30 40.6	-1.7
TIXI	Tiksi	76.62	355	LR	LR	15 04 08.7	
	comp=Z,18nm,20.5s,baz=188,slow=35						
AAK	Ala-Archa	77.81	315	P	P	14 30 49.6	-1.7
AAK	Ala-Archa	77.81	315	LR	LR	15 08 30.8	
	comp=Z,21nm,18.6s,baz=133,slow=38						
KURK	Kurchatov	77.94	324	P	P	14 30 50.8	-0.8
KURBB	Kurchatov Arra	77.96	324	P	P	14 30 51.0	-0.7
	comp=Z,2.4nm,0.8s,baz=116,slow=4.6,SNR=17						
KURBB				pP	pP	14 31 13.4	-0.7
	comp=Z,17nm,1.3s,baz=116,slow=4.8,SNR=7.0						
	comp=Z,2.4nm,0.8s						
ACHA	Angle Creek He	79.17	28	P	P	14 30 57.3	-1.0
ACHA				IAmb	IAmb	14 31 25.2	
	comp=Z,12nm,0.9s						
OHAK	Old Harbor	79.72	30	P	P	14 31 00.9	-0.2
OHAK				IAmb	IAmb	14 31 26.3	
	comp=Z,35nm,1.4s						
K17K	Iditarod	80.07	23	P	P	14 31 02.5	-0.4
K17K				IAmb	IAmb	14 31 33.5	
	comp=Z,18nm,1.0s						
H17K	Granite Mounta	80.63	21		P	14 31 05.2	-0.7
H17K				IAmb	IAmb	14 31 45.6	
	comp=Z,11nm,0.9s						
KKAR	Karatay Array	80.75	315	P	P	14 31 05.7	-1.4
L19K	White Mountain	81.21	25	P	P	14 31 09.0	-0.1
G18K	Tagagawik	81.58	21	P	P	14 31 10.3	-0.7
G18K				IAmb	IAmb	14 31 34.9	
	comp=Z,28nm,1.4s						
E18K	Tukpahlearik C	81.75	19	P	P	14 31 11.7	-0.1
E18K				IAmb	IAmb	14 31 35.6	
	comp=Z,11nm,0.8s						
K20K	Telida	82.07	24	P	P	14 31 12.2	-1.4
H19K	Roundabout Mou	82.18	21		P	14 31 13.2	-0.9
H19K				IAmb	IAmb	14 31 38.5	
	comp=Z,23nm,1.3s						
MAW	Mawson	82.26	202	P	P	14 31 14.9	+0.5
	comp=Z,19nm,0.7s,baz=94,slow=7.0,SNR=31						
MAW				LR	LR	15 03 50.6	
	comp=Z,70nm,19.4s,baz=54,slow=33						
	comp=Z,19nm,0.7s						
J20K	Nowinta River	82.41	23		P	14 31 14.4	-0.9
J20K				IAmb	IAmb	14 31 55.0	
	comp=Z,10nm,0.8s						
D19K	Kuna River	83.12	18	P	P	14 31 19.0	0.0
D19K				IAmb	IAmb	14 32 01.5	
	comp=Z,16nm,1.3s						
F20K	Avaraart Lake	83.18	20	P	P	14 31 19.4	+0.2
BVAR	Borovoye Array	83.52	324	P	P	14 31 21.3	0.0
	comp=Z,3.8nm,0.5s,baz=116,slow=5.4,SNR=12						
BVAR				pP	pP	14 31 43.5	-0.5
	comp=Z,22nm,0.7s,baz=104,slow=6.3,SNR=15						
	comp=Z,3.8nm,0.5s						
BRVK	Borovoye	83.59	324	P	P	14 31 20.9	-0.7
D20K	Etivluk River	83.71	19	P	P	14 31 21.8	-0.1
SML	Sawmill	83.86	26	P	P	14 31 22.1	-0.8
E21K	Killik River	84.43	19	P	P	14 31 25.8	+0.2
E21K				IAmb	IAmb	14 31 56.0	
	comp=Z,9.0nm,0.9s						
DHY	Denali Highway	84.73	25	P	P	14 31 27.1	-0.4
DHY				IAmb	IAmb	14 31 56.4	
	comp=Z,13nm,0.8s						
G23K	Bananza Creek	85.05	21		P	14 31 29.1	+0.3
CCB	Clear Creek Bu	85.12	24	P	P	14 31 27.1	-2.0
CCB				IAmb	IAmb	14 31 57.2	
	comp=Z,11nm,0.9s						
QSPA	South Pole Qui	85.44	180	P	P	14 31 30.7	-0.2
	comp=Z,62nm,0.8s,baz=330,slow=1.0,SNR=417						
QSPA				LR	LR	15 09 41.4	
	comp=Z,199nm,20.2s,baz=16,slow=36						
H24K	Noodor Dome	85.52	23		P	14 31 31.0	-0.2
ILAR	Eielson Array	85.53	24	P	P	14 31 29.2	-2.0
ILAR	Eielson Array	85.53	24	P	P	14 31 29.1	-2.1
	comp=Z,1.7nm,0.7s,baz=258,slow=4.7,SNR=28						
ILAR				pP	pP	14 31 51.2	-2.8
	comp=Z,6.9nm,0.8s,baz=252,slow=5.1,SNR=14						
ILAR				LR	LR	15 05 51.8	
	comp=Z,17nm,19.8s,baz=234,slow=33						
	comp=Z,1.7nm,0.7s						
D23K	Nanushuk River	85.74	19		P	14 31 31.4	-0.8
D23K				IAmb	IAmb	14 31 58.5	
	comp=Z,11nm,0.9s						
G24K	Hadweenzic Riv	85.99	22	P	P	14 31 32.5	-0.9
G24K				IAmb	IAmb	14 32 03.7	
	comp=Z,7.8nm,1.0s						
C23K	Itkillik River	86.12	18		P	14 31 34.2	+0.2
BARN	Barnard Glacie	86.66	28	P	P	14 31 37.1	+0.1
BARN				IAmb	IAmb	14 31 50.4	
	comp=Z,8.0nm,0.6s						
M27K	Edge Creek, AK	86.91	27	P	P	14 31 37.8	-0.4
M27K				IAmb	IAmb	14 32 08.0	
	comp=Z,12nm,1.0s						
BCAR	Beaver Creek A	87.15	26	P	P	14 31 38.9	-0.3
F26K	Sheenjek River	87.55	21	P	P	14 31 40.6	-0.4
F26K				IAmb	IAmb	14 32 11.6	
	comp=Z,7.4nm,1.0s						
G27K	Doyon Strip	88.22	22	P	P	14 31 44.3	+0.1
M29M	Somme Creek	88.48	27	P	P	14 31 45.6	-0.1
M29M				IAmb	IAmb	14 32 23.4	
	comp=Z,7.6nm,1.0s						
I28M	Miner Creek	88.54	24		P	14 31 46.2	+0.4
AB31	Akbulak array	89.17	319	P	P	14 31 47.0	-2.0
ABKAR	Akbulak array	89.17	319	P	P	14 31 47.4	-1.6
SYO	Syowa Base	90.75	200	⇑*e*P	P	14 31 56.6	+0.6
INK	Inuvik	91.58	22	LR	LR	15 08 31.7	
	comp=Z,38nm,20.2s,baz=250,slow=32						
BBB	Bella Bella	92.56	38	LR	LR	15 07 52.8	
	comp=Z,31nm,19.3s,baz=213,slow=32						
KIRV	Kirov	95.95	328	LR	LR	15 18 39.6	
	comp=Z,26nm,19.0s,baz=79,slow=37						
BELG	Belogornoye	97.13	322	LR	LR	15 17 44.3	
	comp=Z,18nm,20.4s,baz=307,slow=36						
BELA	Belgrano 2	97.71	180		P	14 32 27.1	-0.7
YKA	Yellowknife Ar	99.50	27	LR	LR	15 24 44.5	
	comp=Z,7.3nm,18.4s,baz=288,slow=40						
MNK	Minsk	108.34	326	*i* P	Pdif	14 33 18.3	+2.8
	comp=E,6.0nm,0.5s						
MNK				*i* P	Pdif	14 33 18.3	+2.8
	comp=N,7.0nm,0.5s						
MNK				*i* P	Pdif	14 33 18.3	+2.8
	comp=Z,4.0nm,0.4s,baz=71						
MNK				*i* pP	pPdif	14 33 40.0	+1.5
MNK				*i* PP	PP	14 37 49.6	+3.3
MNK				*i* PPP	PPP	14 40 07.0	
MNK				*i* SKS	SKSdf	14 44 28.6	+3.1
MNK				*i* PS	PS	14 47 16.2	+3.9
MNK				*i* SS	SS	14 52 40.5	-14
MNK				*i* SSS	SSS	14 56 58.3	
MNK				*i* LQ	LQ	15 15 17.0	
MNK				*i* LRM	MLR	15 23 02.6	
	comp=E,99nm,19.7s						
MNK				*i* LRM	MLR	15 23 51.0	
	comp=N,86nm,22.3s						
TXAR	Lajitas Array	112.11	60	PKiKP	PKiKP	14 37 28.7	-0.5
	comp=N,0.5nm,0.7s,baz=330,slow=2.7,SNR=7.2						
GERES	GERESS Array B	118.69	325	PKP	PKPdf	14 37 39.8	-1.5
	comp=N,0.5nm,0.5s,baz=282,slow=1.2,SNR=4.9						
EKA	Eskdalemuir Ar	122.68	338	PKP	PKPdf	14 37 48.2	-0.4
	comp=N,0.9nm,0.5s,baz=40,slow=2.8,SNR=8.4						
SCHQ	Schefferville	124.18	21	PKP	PKPdf	14 37 51.2	-0.4
	comp=N,2.3nm,0.6s,baz=252,slow=2.9,SNR=7.1						
PLCA	Paso Flores	125.24	149	PKP	PKiKP	14 37 54.2	-0.3
	comp=N,1.7nm,0.6s,baz=215,slow=2.3,SNR=7.9						
LPAZ	La Paz	142.53	124	PKP	PKPdf	14 38 24.2	-3.5
	comp=N,3.2nm,0.6s,baz=176,slow=0.9,SNR=9.6						
CPUP	Villa Florida	143.31	148	PKP	PKPbc	14 38 25.0	-0.3
	comp=N,0.7nm,0.4s,baz=102,slow=1.7,SNR=6.9						
DBIC	Dimbokro	148.41	275	PKPbc	PKPbc	14 38 40.3	-0.4
	comp=N,17nm,0.8s,baz=125,slow=2.9,SNR=17						

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*NEIC **19** 14:36:16.5±2.7, 39°.022N±0°.007×123°.068W±0°.009, h5^{km}±1^{km}, Error ellipse: s-maj=1.9km s-min=1.3km az=207.0*

*NEIC **19** 14:36:17.1, 39°.03N×123°.06W, h3^{km}*

*NEIC **19** 14:36:17.1, 39°.03N×123°.06W, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M_{rr}1.04; $M_{\theta\theta}$-6.39; $M_{\phi\phi}$5.34; $M_{r\theta}$3.03; $M_{\theta\phi}$1.44; $M_{\phi r}$1.34; Fault plane solution: $M_0$6.95000×10^{13} NP1:ϕ_s53.34000°, δ88.75000°, λ28.52000°. NP2:ϕ_s322.66000°, δ61.49000°, λ178.57000°. Principal axes: T 6.1588, Plg21.0000°, Azm282.0000°; N 1.3705, Plg61.0000°, Azm56.0000°; P -7.5293, Plg19.0000°, Azm184.0000°;*

NCEDC 19 14:36:17.0±2.7**, 39°.034N**±0°.008×**123°.065W**±0°.009**, h4**^{km}±1^{km}**, Mwr3.2**/5**, ML2.8**/86(NEIC) **Error ellipse: s-maj=1.2km s-min=1.1km az=186.0, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPS	Hopland Field	0.04	188	Pg	Pg	14 36 18.2	+0.1
HOPS	Hopland Field	0.04	188		Sg	14 36 19.4	+0.5
GSNM	Snow Mountain	0.14	227		Pg	14 36 20.1	+0.3
GSNM					Sg	14 36 22.9	+1.3
GHGM	Hogback Ridge	0.21	63		Pg	14 36 21.5	+0.4
GHGM					Sg	14 36 25.3	+1.4
GALB	Galbreath Wild	0.23	221		Pg	14 36 21.9	+0.4
GALB					Sg	14 36 25.7	+1.3
GWRM	Wonder Ranch	0.25	314		Pg	14 36 22.4	+0.5
GWRM					Sg	14 36 26.9	+1.6
GDXM	Geysers	0.31	137		Pg	14 36 23.3	+0.3
GDXM	Geysers	0.31	137		Sg	14 36 26.9	-0.2
GDXM				IAML		14 36 29.3	
	comp=E,4µm,0.2s						
GDXM				IAML		14 36 30.5	
	comp=N,5µm,0.8s						
GGPM	Geyser Peak	0.32	147		Pg	14 36 23.7	+0.5
GRTM	Round Top Moun	0.32	107		Pg	14 36 23.6	+0.4
GSGM	Seigler Mounta	0.32	121		Pg	14 36 23.5	+0.2
GBGM	Boggs Mountain	0.37	126		Pg	14 36 24.8	+0.6
GGUM	Gualala	0.38	242		Pg	14 36 25.1	+0.8
GHCM	House Creek	0.44	194		Pg	14 36 26.2	+0.7
DCMP	DeCamp, Califo	0.48	334		Pg	14 36 26.6	+0.3
DCMP	DeCamp, Califo	0.48	334	IAML		14 36 34.6	
	comp=E,126nm,0.7s						
DCMP				IAML		14 36 41.8	
	comp=N,501nm,0.6s						
MNRC	McLaughlin Min	0.51	107		Pg	14 36 27.5	+0.7
MNRC	McLaughlin Min	0.51	107	IAML		14 36 42.3	
	comp=N,552nm,1.1s						
MNRC				IAML		14 36 42.3	
	comp=E,542nm,0.9s						
GTC	Three Chop Rid	0.53	314		Pg	14 36 27.7	+0.6
NMTM	Middletown	0.53	115		Pg	14 36 28.0	+0.7
MNDO	Woodland Fire	0.60	298		Pg	14 36 28.8	+0.3
KFPM	Farley Peak	0.67	335		Pb	14 36 30.6	-0.6
GCK	Clark Valley	0.70	44		Pb	14 36 32.5	+0.6
KCPM	Cahto Peak	0.77	329		Pb	14 36 32.6	-0.4
OAKV	Oakville Exper	0.79	139		Pg	14 36 32.4	+0.2
GVV	Valley View	0.80	22		Pb	14 36 33.4	-0.2
CVS	Carmenet Viney	0.84	145		Pg	14 36 32.6	-0.4
CVS	Carmenet Viney	0.84	145	IAML		14 36 37.5	
	comp=N,214nm,0.5s						
CVS				IAML		14 36 52.0	
	comp=E,200nm,0.7s						
KIPM	Iron Peak	0.84	338		Pb	14 36 33.7	-0.5
KBNM	Bluenose Ridge	0.86	353		Pb	14 36 34.9	+0.2
MCCM	Marconi Confer	0.90	171		Pg	14 36 33.7	-0.6
MCCM	Marconi Confer	0.90	171		Pg	14 36 33.8	-0.4
MCCM				IAML		14 36 58.0	
	comp=E,534nm,0.9s						
MCCM				IAML		14 36 58.9	
	comp=N,375nm,1.0s						
QRDG	Quail Ridge Na	0.91	127		Pg	14 36 34.3	-0.1
GROM	Round Mountain	0.93	19		Pb	14 36 35.9	0.0
OSUM	Sutter Buttes	0.97	76		Pg	14 36 35.4	-0.3
NOLM	Olema	1.01	168		Pg	14 36 35.5	-1.0
NOLM					Pb	14 36 37.5	+0.3
NADM	Allendale	1.03	123		Pb	14 36 37.1	-0.3
RUSS	Russell Ranch	1.06	117		Pg	14 36 37.2	0.0
RUSS				IAML		14 37 06.5	
	comp=N,294nm,1.1s						
RUSS				IAML		14 37 14.6	
	comp=E,220nm,1.2s						
O02D	Mt. Diablo Mer	1.16	11		Pg	14 36 39.4	+0.1
O02D	Mt. Diablo Mer	1.16	11	Pn	Pb	14 36 39.9	+0.2
O02D				IAML		14 36 43.4	
	comp=N,158nm,0.4s						
O02D				IAML		14 36 58.4	
	comp=E,189nm,1.2s						
NLHM	Lake Herman	1.16	141		Pn	14 36 39.9	-0.1
CPMM	Point Molate	1.20	154		Pg	14 36 38.2	-1.8
CPIM	Pinole Ridge	1.24	147		Pg	14 36 39.7	-1.1
BRIC	Briceland Vine	1.25	329		Pg	14 36 39.6	-1.4
BRIC					Pb	14 36 39.7	-1.5
KMRM	Mail Ridge	1.29	337		Pg	14 36 40.4	-1.3
OGOM	Van Goodin Ran	1.29	61		Pg	14 36 39.5	-2.2
OGOM					Pn	14 36 39.6	-2.1
JPRM	Presidio of Sa	1.32	159		Pn	14 36 40.9	-1.3
ORV	Oroville	1.32	66		Pn	14 36 41.2	-1.1
BKS	Berkeley--Byer	1.33	150		Pn	14 36 40.3	-2.1
BKS					Pg	14 36 40.4	-2.1
FARB	Farallon Islan	1.33	178		Pn	14 36 40.1	-2.3
FARB	Farallon Islan	1.33	178	IAML		14 36 48.4	
	comp=N,114nm,1.1s						
FARB				IAML		14 37 09.7	
	comp=E,146nm,0.8s						
SFRE	Sierra Foothil	1.37	80		Pn	14 36 41.0	-1.9
LTCM	Tuscan Springs	1.38	31		Pn	14 36 42.7	-0.3
BGC	Bolinger Road	1.45	147		Pn	14 36 43.4	-0.6
JSBM	San Bruno Moun	1.45	159		Pn	14 36 42.1	-1.9
JMGM	Milagra Ridge	1.47	161		Pn	14 36 42.0	-2.3
SAC	San Andreas	1.54	160		Pn	14 36 43.0	-2.2
PETL	Petrolia	1.59	322		Pn	14 36 45.8	-0.2
KMPM	Mount Pierce	1.60	330		Pn	14 36 45.1	-1.1
KMPM				IAML		14 37 25.8	
	comp=N,173nm,0.8s						
JCHM	Cahill Ridge	1.61	160		Pn	14 36 43.8	-2.5
KHBM	Hayfork Bally	1.63	356		Pn	14 36 45.8	-0.9
KHBM	Hayfork Bally	1.63	356	IAML		14 37 17.5	
	comp=E,73nm,0.7s						
KHBM				IAML		14 37 19.8	
	comp=N,94nm,0.8s						
AFDM	Forest Hills D	1.63	92		Pn	14 36 44.8	-1.8
LDBM	Digger Butte	1.71	35		Pn	14 36 46.1	-1.6
WEAV	Weaverville	1.71	2		Pn	14 36 47.6	-0.1
JRSC	Jasper Ridge	1.75	158		Pn	14 36 46.1	-2.1
JFP	Foothills Park	1.81	157		Pn	14 36 46.6	-2.4
CSTL	Corral Hollow	1.86	138		Pn	14 36 49.2	-0.5
LRDM	Redding Peak	1.89	40		Pn	14 36 50.9	+0.8
KHMM	Horse Mountain	1.91	345	Pn	Pn	14 36 48.9	-1.6
KHMM				IAML		14 37 28.9	
	comp=N,86nm,1.2s						
KHMM				IAML		14 37 38.8	
	comp=E,82nm,1.7s						
JPSM		1.92	163		Pn	14 36 48.3	-2.1
LSHM	Sage Hen Hill	1.93	24		Pn	14 36 49.4	-1.2
JCC	Jacoby Creek,	1.93	338		Pn	14 36 49.1	-1.4
JCC	Jacoby Creek,	1.93	338	IAML		14 37 37.5	
	comp=E,87nm,1.8s						
JCC				IAML		14 37 40.0	
	comp=N,81nm,1.4s						
N02D	Trinity Center	1.96	8		Pn	14 36 50.2	-0.9
N02D				IAML		14 37 36.7	
	comp=E,73nm,0.7s						
N02D				IAML		14 37 37.3	
	comp=N,72nm,1.4s						
MHC	Mount Hamilton	2.03	146		Pn	14 36 50.4	-1.7
ARN	Arnold Ranch	2.07	144		Pn	14 36 51.0	-1.6
LBKM	Bonanza King	2.07	8		Pn	14 36 53.2	+0.5
CCOB	Coe Ranch Numb	2.08	148		Pn	14 36 51.4	-1.4
HATC	Hat Creek Radi	2.17	34	Pn	Pn	14 36 54.1	+0.1
HATC				IAML		14 37 52.1	
	comp=N,88nm,2.0s						
HATC				IAML		14 38 02.6	
	comp=E,79nm,3.4s						
LBCM	Butte Creek Ri	2.23	36		Pn	14 36 55.6	+0.7
LBCM					Pb	14 36 55.8	-2.3
KRPM	Rodgers	2.25	341	Pn	Pn	14 36 54.9	-0.1
BEKR	Beckworth	2.25	67		Pn	14 36 55.1	-0.2
BEKR				IAML		14 37 29.0	
	comp=E,49nm,0.7s						
BEKR				IAML		14 37 42.5	
	comp=N,45nm,0.9s						
GHS	Gilroy Hot Spr	2.32	146		Pn	14 36 54.1	-1.9
CMB	Columbia Colle	2.33	115		Pn	14 36 55.1	-1.0
M02C	Callahan	2.36	4		Pn	14 36 56.1	-0.6
MPK	Martis Peak	2.37	83		Pn	14 36 56.1	-0.9
MPK				IAML		14 37 35.8	
	comp=N,90nm,0.7s						
HPCM	Pacheco Lake	2.42	144		Pn	14 36 55.0	-2.4
OCR	O’Connell Ranc	2.44	149		Pn	14 36 55.8	-1.9
KRMB	Red Mountain	2.57	346		Pn	14 36 58.6	-0.9
KRMB				IAML		14 37 57.9	
	comp=E,42nm,3.9s						
KRMB				IAML		14 38 15.9	
	comp=N,39nm,3.3s						
FRP	Fremont Peak	2.59	151		Pn	14 36 57.7	-2.1
SAO	San Andreas Ge	2.60	150		Pn	14 36 58.2	-1.6
BUCR	Buckhorn Ranch	2.66	120		Pn	14 37 01.4	+0.6
YBH	Yreka Blue Hor	2.71	6		Pn	14 37 00.3	-1.1
KSXB	Camp Six Broad	2.86	348	Pn	Pn	14 37 02.7	-0.9
KSXB				IAML		14 38 22.7	
	comp=N,25nm,3.5s						
KSXB				IAML		14 38 29.3	
	comp=E,32nm,3.2s						
WAKR	Walker	2.88	99		Pn	14 37 03.9	-0.1
PAHR	Pah Rah Range	2.93	76		Pn	14 37 03.3	-1.2
L02F	Cave Junction	3.11	353	Pn	Pn	14 37 06.6	-0.2
L02F				IAML		14 37 37.6	
	comp=N,19nm,2.8s						
L02F				IAML		14 38 11.9	
	comp=E,25nm,3.2s						
L04D	Klamath Falls	3.23	10	Pn	Pn	14 37 08.9	+0.2
L04D				IAML		14 38 09.4	
	comp=N,24nm,3.8s						
KBO	Bosley Butte	3.30	345	Pn	Pn	14 37 08.1	-1.4
RYN	Ryan	3.57	95	Pn	Pn	14 37 12.2	-1.1
LHV	Little Huntoon	3.66	101	Pn	Pn	14 37 13.5	-0.9
LHV				IAML		14 38 17.4	
	comp=N,22nm,1.5s						
LHV				IAML		14 38 40.6	
	comp=E,17nm,1.0s						
K02D	Willamette Mer	3.69	353	Pn	Pn	14 37 15.2	+0.4
K02D				IAML		14 38 18.9	
	comp=E,23nm,3.7s						
K02D				IAML		14 38 20.3	
	comp=N,21nm,2.5s						
BBOR	Butler Butte	3.86	4		Pn	14 37 17.8	+0.4
BBOR				IAML		14 38 21.4	
	comp=E,14nm,3.7s						
BBOR				IAML		14 39 25.9	
	comp=N,15nm,3.2s						
NV11	Mina Array Sit	3.89	97		Pn	14 37 16.2	-1.5
NV11				IAML		14 38 48.5	
	comp=N,8.7nm,2.4s						
J01E	Myrtle Point	4.17	351	Pn	Pn	14 37 20.7	-0.7
J04A	Umpqua Nationa	4.26	9	Pn	Pn	14 37 23.2	+0.3
J05D	Fort Rock, OR	4.47	17	Pn	Pn	14 37 24.7	-0.9
J05D				IAML		14 38 22.4	
	comp=N,16nm,3.6s						
J05D				IAML		14 39 42.9	
	comp=E,15nm,4.4s						

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*IDC **19** 14:40:39.6±0.8, 31°.12S×177°.82W, h0^{km}, mb4.1/7, mbtmp4.1/7, MS3.4/4, Error ellipse: s-maj=38.0km s-min=24.8km az=157.0*

*NEIC **19** 14:40:43.0±1.4, 31°.14S±0°.04×177°.7W±0°.2, h17^{km}±5^{km}, mb4.6/14, Error ellipse: s-maj=25.8km s-min=6.1km az=91.0*

ISC 19 14:40:41.3±0.6**, 31°.19S**±0°.10×**177°.8W**±0°.1**, h10**^{km}**, n45, σ1§36**/40**, mb4.4**/15**, MS3.2**/3**, 3C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.93	356		Pn	14 41 14.4	+0.1
URZ	Urewera	8.22	209	Pn	Pn	14 42 36.0	-4.6
	0.8nm,0.3s,baz=270,slow=6.0,SNR=9.2						
URZ				Sn	Sn	14 44 06.3	-7.2
	2.9nm,0.3s,baz=95,slow=16,SNR=7.5						
RPZ	Rata Peaks	15.32	212	Pn	Pn	14 44 10.0	-7.6
	0.3nm,0.3s,baz=42,slow=14,SNR=2.5						
RPZ				Sn	Sn	14 46 57.1	-10
	0.6nm,0.3s,baz=83,slow=16,SNR=1.7						
DZM	Mont Dzumac	16.77	299	Pn	P	14 44 39.4	+0.7
	0.1nm,0.3s,baz=130,slow=19,SNR=2.1						
DZM				LR	LR	14 49 58.5	
	comp=Z,154nm,18.9s,baz=179,slow=34						
FUTU	Fugatoga	16.80	359	Pn	Pn	14 44 36.2	-0.6
FUTU				IAmb	IAmb	14 44 38.0	
	comp=Z,83nm,1.2s						
AFI	Afiamalu	18.05	19		Pn	14 44 50.9	-1.6
AFI				IAmb	IAmb	14 44 56.8	
	comp=Z,69nm,1.4s						
EIDS	Eidsvold	27.99	274	P	P	14 46 33.4	+1.0
HNR	Honiara	29.97	311	LR	LR	14 57 37.9	
	comp=Z,49nm,18.2s,baz=148,slow=34						
CTAO	Charters Tower	34.13	280	P	P	14 47 27.0	+0.4
CTAO				IAmb	IAmb	14 47 41.3	
	comp=Z,9.7nm,1.0s						
STKA	Stephens Creek	34.51	258	P	P	14 47 28.2	-1.6
	comp=Z,1.4nm,0.8s,baz=91,slow=8.8,SNR=2.9						
	comp=Z,1.4nm,0.8s						
BBOO	Buckleboo	38.96	255	P	P	14 48 06.8	-0.9
BBOO				IAmb	IAmb	14 48 20.1	
	comp=Z,6.9nm,0.8s						
COEN	Coen	39.69	287	P	P	14 48 14.7	+0.8
COEN				IAmb	IAmb	14 48 17.6	
	comp=Z,18nm,1.3s						
AS31	Alice Springs	43.27	268		P	14 48 43.0	-0.4
AS31				IAmb	IAmb	14 48 56.5	
	comp=Z,5.0nm,0.7s						
ASAR	Alice Springs	43.27	268	P	P	14 48 42.5	-0.8
ASAR	Alice Springs	43.27	268	P	P	14 48 43.5	+0.2
	comp=Z,3.2nm,0.8s,baz=103,slow=7.4,SNR=26						
	comp=Z,3.2nm,0.8s						
WR8	Warramunga Arr	44.19	273	P	P	14 48 50.9	+0.2
WRA	Warramunga Arr	44.34	273		P	14 48 50.0	-1.9
WRA	Warramunga Arr	44.34	273	P	P	14 48 51.6	-0.2
	comp=Z,3.2nm,0.8s,baz=112,slow=7.9,SNR=24						
	comp=Z,3.2nm,0.8s						
FITZ	Fitzroy Crossi	52.56	270	P	P	14 49 55.2	-0.1
NWAO	Narrogin (SRO)	54.31	250	LR	LR	15 10 50.2	
	comp=Z,75nm,18.3s,baz=334,slow=33						
CASY	Casey	54.54	208	P	P	14 50 09.9	+0.8
CASY				IAmb	IAmb	14 50 24.4	
	comp=Z,11nm,1.2s						
GUMO	Guam	57.18	315	LR	LR	15 12 52.6	
	comp=Z,13nm,19.3s,baz=110,slow=34						
QSPA	South Pole Qui	58.93	180	P	P	14 50 41.4	+0.9
QSPA	South Pole Qui	58.93	180	P	P	14 50 41.4	+0.9
	comp=Z,1.4nm,0.9s,baz=45,slow=4.6,SNR=4.3						
	comp=Z,1.4nm,0.9s						
LUWI	Luwuk	63.60	286	P	P	14 51 12.7	0.0
SNAA	Sanae	77.37	178	⇑P	P	14 52 33.7	-2.3
	comp=Z,10nm,0.7s						
SNAA	Sanae	77.37	178	P	P	14 52 35.2	-0.8
SNAA				IAmb	IAmb	14 52 57.3	
	comp=Z,9.2nm,1.2s						
VNA3	Neumayer Olymp	77.51	176	⇑P	P	14 52 35.7	-1.0
	comp=Z,3.3nm,0.8s						
VNA2	Neumayer--Watz	77.95	177	⇑P	P	14 52 38.2	-1.0
	comp=Z,1.2nm,0.7s,baz=193,slow=6.8						
PETK	Petropavlovsk-	86.62	345	P	P	14 53 24.9	+0.3
	comp=Z,3.0nm,0.7s,baz=141,slow=5.0,SNR=3.5						
	comp=Z,3.0nm,0.7s						
NVAR	Mina Array Bea	88.68	43	P	P	14 53 35.8	+0.7
	comp=Z,0.9nm,0.7s,baz=215,slow=4.9,SNR=4.6						
	comp=Z,0.9nm,0.7s						
TXAR	Lajitas Array	92.64	57	P	P	14 53 53.8	+0.2
	comp=Z,0.2nm,0.4s,baz=220,slow=1.4,SNR=2.7						
	comp=Z,0.2nm,0.4s						
KURBB	Kurchatov Arra	121.77	313	PKP	PKPdf	14 59 33.5	-1.6
	comp=Z,0.7nm,0.7s,baz=115,slow=1.6,SNR=9.3						
BVAR	Borovoye Array	127.11	315	PKP	PKPdf	14 59 44.8	-0.6
	comp=Z,0.6nm,0.4s,baz=87,slow=7.4,SNR=4.0						
ARCES	ARCESS Array B	139.40	348	PKhKP	PKPpre	15 00 01.9	
	comp=Z,0.8nm,0.7s,baz=358,slow=2.7,SNR=4.7						
FIA1	FINESS Array S	145.95	340		PKPdf	15 00 19.6	-0.1
FINES	FINESS Array B	145.95	340		PKPdf	15 00 19.5	-0.2
FINES	FINESS Array B	145.95	340	PKPbc	PKPdf	15 00 19.8	+0.1
	comp=Z,11nm,0.7s,baz=52,slow=4.4,SNR=46						
NB2	NORSAR Subarra	149.56	351	PKP	PKPdf	15 00 29.3	+3.5
	comp=Z,0.8nm,0.8s,baz=16,slow=2.7						
NOA	NORSAR Array B	149.56	351	PKPbc	PKPdf	15 00 29.1	+3.4
	comp=Z,0.5nm,0.6s,baz=16,slow=2.6,SNR=4.8						
HFS	Hagfors	150.05	349	PKPbc	PKPdf	15 00 30.4	+3.9
	comp=Z,1.1nm,0.6s,baz=48,slow=2.1,SNR=6.4						
MMAI	Mount Meron Ar	151.91	283	PKPbc	PKPbc	15 00 36.1	-0.7
	comp=Z,3.5nm,0.6s,baz=78,slow=5.4,SNR=6.5						
AKASG	Malin Array Be	152.04	322	PKPdf	PKPdf	15 00 29.0	-0.9
AKASG				PKPbc	PKPbc	15 00 36.1	-0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKASG	Malin Array Be	152.04	322	PKPbc	PKPbc	15 00 35.8	-0.6
	comp=Z,2.3nm,0.6s,baz=51,slow=2.6,SNR=12						
BRTR	Keskin Array B	153.15	297	PKPbc	PKPbc	15 00 38.6	-0.8
	comp=Z,0.6nm,0.6s,baz=151,slow=2.8,SNR=5.0						

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*BUL **19** 14:46:13.6±1.3, 25°.00S×28°.53E, h10km, MD3.3*
*PRE **19** 14:46:14.4±1.1, 25°.65S×28°.77E, h0km, ML2.5, Suspected explosion*
*BGSI **19** 14:46:24.7±1.7, 24°.99S×28°.65E, h0km±41km, ML2.7*
ISC 19 14:46:14.9±0.8, **25°.68S**±0°.04×**28°.75E**±0°.03, **h0km, n29, σ1s.28**/45, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HRAO	HartRAO	0.98	257	eP	Pg	14 46 34.3	+0.6
HRAO				eS	Sb	14 46 48.2	-0.2
HRAO				IAML		14 46 55.7	
	comp=Z,115nm,0.3s						
CRLN	Carolina, Mapu	1.19	106	eP	Pg	14 46 37.3	-0.4
CRLN				eS	Sg	14 46 53.6	+0.4
CRLN				IAML		14 47 01.4	
	comp=Z,68nm,0.2s						
WDLM	Western Deep L	1.40	238	eP	Pg	14 46 41.5	-0.2
WDLM				eS	Sn	14 47 02.2	+1.0
WDLM				IAML		14 47 05.5	
	comp=Z,189nm,0.3s						
PRYS	Parys	1.76	225	eP	Pb	14 46 48.0	-0.1
PRYS				eS	Sb	14 47 11.3	+0.5
PRYS				IAML		14 47 17.1	
	comp=Z,56nm,0.3s						
PILG	Pilgrimsrest,	1.93	68	eP	Pn	14 46 49.5	+0.4
PILG				eS	Sn	14 47 13.3	-0.8
PILG				IAML		14 47 15.9	
	comp=Z,99nm,0.5s						
NWCL	Newcastle	2.29	154	eP	Pn	14 46 54.8	+0.7
NWCL				eS	Sn	14 47 23.2	+0.2
NWCL				IAML		14 47 37.1	
	comp=Z,53nm,0.4s						
HOED	Hoedspruit, Li	2.35	58	eP	Pn	14 46 55.3	+0.5
HOED				eS	Sn	14 47 24.2	-0.2
HOED				IAML		14 47 28.0	
	comp=Z,60nm,0.5s						
SNKL	Senekal, Frees	2.73	198	eP	Pn	14 47 00.9	+0.8
SNKL				eS	Sn	14 47 34.4	+0.5
SNKL				IAML		14 47 50.2	
	comp=Z,34nm,0.5s						
LBTB	Lobatse	2.93	282	eP	Pn	14 47 03.5	+0.7
LBTB				eS	Sn	14 47 38.9	+0.1
LBTB				IAML		14 47 51.9	
	comp=Z,18nm,0.2s						
LBTB	Lobatse	2.93	282	i P	Pn	14 46 55.3	-7.5
LBTB				i S	Sn	14 47 28.1	-11
POGA	Pongola	3.13	123	eP	Pn	14 47 05.2	-0.3
POGA				eS	Sn	14 47 43.1	-0.4
POGA				IAML		14 48 00.1	
	comp=Z,34nm,0.5s						
MOPA	Mopani	3.23	49	eP	Pn	14 47 06.2	-0.7
MOPA				eS	Sn	14 47 44.7	-1.5
MOPA				IAML		14 48 01.3	
	comp=Z,64nm,0.4s						
MREMI	Moremi	3.32	339	i P	Pn	14 47 07.6	-0.6
MREMI				i S	Sn	14 47 38.1	-10
MREMI				IAML		14 47 56.0	
	comp=E,162nm,0.3s						
SWZ	Schweizer	3.41	243	eP	Pn	14 47 10.4	+1.0
SWZ				eS	Sn	14 47 50.3	-0.4
SWZ				IAML		14 48 08.3	
	comp=Z,22nm,0.3s						
LPHEP	Lephephe	3.50	311	i P	Pn	14 47 10.5	-0.2
LPHEP				IAML		14 48 05.9	
	comp=N,23nm,0.5s						
MUSN	Musina, Limpop	3.53	17	eP	Pn	14 47 09.9	-1.1
MUSN				eS	Sn	14 47 52.5	-1.0
MUSN				IAML		14 48 04.9	
	comp=Z,23nm,0.7s						
MUSN	Musina, Limpop	3.53	17	i P	Pn	14 47 00.1	-11
MUSN				i S	Sn	14 47 34.9	-19
MAKGR	Makgori	3.56	267	i P	Pb	14 47 19.9	+1.0
MAKGR				i S	Sb	14 48 00.9	-1.8
MAKGR				IAML		14 48 11.3	
	comp=N,133nm,0.2s						
PMBG	Pietermaritzbu	4.12	158	eP	Pn	14 47 20.2	+1.0
PMBG				eS	Sn	14 48 07.5	-0.7
PMBG				IAML		14 48 29.9	
	comp=Z,19nm,0.5s						
BOSA	Boshof	4.27	226	eP	Pn	14 47 21.2	0.0
BOSA				eS	Sn	14 48 11.7	-0.1
BOSA				IAML		14 48 42.1	
	comp=Z,13nm,0.3s						
BOSA	Boshof	4.27	226	i P	Pn	14 47 22.2	+1.0
BOSA				i S	Sn	14 48 15.5	+3.7
BROLN	Tlhalogang	4.74	344	i P	Pn	14 47 26.3	-1.4
BROLN				i S	Sn	14 48 12.2	-11
BROLN				IAML		14 48 20.2	
	comp=N,9.6nm,0.6s						
KSTD	Kokstad	4.94	174	eP	Pn	14 47 31.8	+1.2
KSTD				eS	Sn	14 48 28.3	-0.2
KSTD				IAML		14 49 01.4	
	comp=Z,6.1nm,0.4s						
BLWY	Bulawayo	5.52	359	i P	Pn	14 47 25.8	-13
BLWY				i S	Sn	14 48 19.1	-24
CHIPN	CHIPINGE	6.50	34	i P	Pn	14 47 44.7	-7.3
CHIPN				i S	Sn	14 48 52.0	-15
ALKP	Alkanpan, Nort	7.15	232	eP	Pn	14 48 01.6	+0.7
ALKP				eS	Sn	14 49 19.7	-3.2
ALKP				IAML		14 50 05.8	
	comp=Z,10nm,0.3s						
BRAK	Brakfontein	7.96	219	eP	Pn	14 48 12.3	+0.4
BRAK				eS	Sn	14 49 39.4	-3.3
BRAK				IAML		14 50 29.0	
	comp=Z,3.7nm,0.5s						
KRI	Karoi	8.84	5	i P	Pn	14 48 04.4	-20
KRI				i S	Sn	14 49 25.8	-39
FRAZ	Fraserburg	8.95	224	eP	Pn	14 48 26.4	+0.8
FRAZ				eS	Sn	14 50 03.9	-3.4
FRAZ				IAML		14 50 05.7	
	comp=Z,1.4nm,0.4s						

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*NNC **19** 14:48:55.8±0.5, 42°.89N×72°.43E, h0km, mb3.2, mpv3.0, Error ellipse: s-maj=6.7km s-min=2.8km az=176.0*
*KRNET **19** 14:48:55.1±0.1, 42°.81N×72°.41E, h26km, mb2.8*
*SOME **19** 14:48:56.2, 42°.88N×72°.43E, h15km*
ISC 19 14:48:54.5±1.0, **42°.91N**±0°.03×**72°.48E**±0°.02, **h17km**±8km, **n46, σ0s.96**/75, **23C-15D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAS	Manas	0.42	177	⇑iP	Pg	14 49 02.6	-0.5
MNAS				⇑iS	Sg	14 49 07.5	-1.4
MRKS	Merke	0.57	106	P	Pn	14 49 07.7	-0.3
	7.7nm,0.1s						
MRKS				S	Sn	14 49 16.1	-1.0
	83nm,0.2s						
MRKS	Merke	0.57	106	eP	Pn	14 49 08.7	+0.7
	11nm,0.1s						
MRKS				eS	Sn	14 49 17.3	+0.1
	50nm,0.1s						
EKS2	Erkin-Say	0.99	104	P	Pg	14 49 15.2	+1.6
	SNR=9.2						
EKS2	Erkin-Say	0.99	104	⇓iP	Pg	14 49 14.3	+0.7
EKS2				⇓iS	Sn	14 49 28.1	+0.7
ARK	Arkit	1.17	199	⇓eP	Pn	14 49 15.2	-1.0
ARK				⇓eS	Sb	14 49 29.5	-1.8
AML	Almayashu	1.19	130	P	Pg	14 49 18.9	+1.5
	SNR=18						
AML	Almayashu	1.19	130	⇑iP	Pb	14 49 17.0	+0.2
AML				⇑iS	Sn	14 49 32.4	-0.3
KK31	Karatay Array	1.46	278	⇓P	Pg	14 49 22.4	-0.1
	1.7nm,0.2s,baz=99,slow=15						
KK31				⇓S	Sb	14 49 39.7	+0.3
	8.6nm,0.2s,baz=101,slow=27						
KKAR	Karatay Array	1.46	278	⇑iP	Pb	14 49 21.1	-0.1
KKAR				⇑iS	Sb	14 49 39.6	+0.2
AAK	Ala-Archa	1.51	100	P	Pg	14 49 24.9	+1.4
	SNR=25						
AAK	Ala-Archa	1.51	100	⇑Pn	Pg	14 49 24.7	+1.2
	0.3nm,0.2s						
AAK				⇓Sn	Sg	14 49 45.2	+2.0
	1.0nm,0.2s						
AAK	Ala-Archa	1.51	100	⇓iP	Pg	14 49 23.3	-0.2
AAK				⇓iS	Sg	14 49 43.6	+0.4
USP	Ospenovka	1.52	76	P	Pg	14 49 24.5	+0.7
	SNR=20						
USP	Ospenovka	1.52	76	⇑iP	Pg	14 49 24.0	+0.2
USP				⇑iS	Sg	14 49 44.9	+1.2
FRU1	Bishkek	1.58	93	⇑iP	Pg	14 49 24.4	-0.6
FRU1				⇑iS	Sg	14 49 45.5	-0.1
UCH	Uchtor	1.65	114	⇑iP	Pb	14 49 25.3	+0.6
UCH				⇑iS	Sg	14 49 46.9	-0.8
SGDS	Sogindy	1.67	70	P	Pg	14 49 27.3	+0.8
	12nm,0.2s						
SGDS				S	Sg	14 49 49.8	+1.7
	31nm,0.1s						
CHMS	Chumysh	1.67	86	P	Pg	14 49 27.1	+0.5
	SNR=33						
CHMS	Chumysh	1.67	86	⇓iP	Pg	14 49 25.8	-0.8
CHMS				⇓iS	Sg	14 49 48.2	-0.1
TRKS	Terek-Say	1.70	216	⇑eP	Pn	14 49 24.3	+0.8
TRKS				⇑eS	Sn	14 49 45.7	+0.8
ARLS	Aral	1.72	127	⇑eP	Pb	14 49 25.6	-0.1
ARLS				⇑eS	Sb	14 49 48.0	+0.9
KBK	Karagaybulak	1.83	97	P	Pg	14 49 30.2	+0.4
	SNR=17						
KBK	Karagaybulak	1.83	97	⇑iP	Pb	14 49 28.2	+0.5
KBK				⇑iS	Sg	14 49 52.0	-1.6
BRLS	Borolday	1.94	275	Pg	Pg	14 49 32.4	+0.6
	2.4nm,0.4s						
BRLS				Lg	Lg	14 49 58.7	
	15nm,0.5s						
BRLS	Borolday	1.94	275	eP	Pg	14 49 32.4	+0.6
	2.4nm,0.4s						
BRLS				eS	Sg	14 49 58.7	+1.7
	15nm,0.5s						
IUG	Iuzhnay	1.96	248	P	Pg	14 49 31.8	-0.3
	53nm,0.3s						
IUG				S	Sg	14 49 56.7	-0.9
	33nm,0.4s						
SALK	Salom-Alik	2.25	153	⇑iP	Pn	14 49 32.5	+1.3
SALK				⇑iS	Sn	14 49 59.5	+0.8
TKM2	Tokmak 2	2.29	89	P	Pb	14 49 36.4	+0.9
	SNR=9.4						
TKM2	Tokmak 2	2.29	89	⇑Pn	Pb	14 49 36.4	+0.9
	3.3nm,0.3s						
TKM2				⇑Sn	Sg	14 50 08.1	-0.1
	12nm,0.4s						
TKM2	Tokmak 2	2.29	89	⇓iP	Pb	14 49 34.6	-0.9
TKM2				⇓iS	Sb	14 50 03.3	-0.3
BTLS	Baital	2.42	27	Pg	Pg	14 49 41.0	+0.2
	0.5nm,0.2s						
BTLS				Lg	Lg	14 50 13.0	
	7.0nm,0.2s						
BTLS	Baital	2.42	27	eP	Pg	14 49 40.2	-0.6
	0.6nm,0.1s						
BTLS				eS	Sg	14 50 11.4	-0.7
	7.0nm,0.1s						
KRBS	Karabastau	2.46	70	Pg	Pg	14 49 41.4	-0.3
	1.5nm,0.2s						
KRBS				Lg	Lg	14 50 13.6	
	7.5nm,0.4s						
KST	Kastek	2.56	86	Pg	Pg	14 49 43.4	-0.2
	3.8nm,0.3s						
KST				Lg	Lg	14 50 17.1	
	13nm,0.4s						
KST	Kastek	2.56	86	eP	Pg	14 49 43.4	-0.2
	3.8nm,0.3s						
KST				eS	Sg	14 50 17.1	+0.3
	13nm,0.4s						
BOOM	Boomskoye usch	2.58	98	⇓iP	Pb	14 49 38.3	-2.2
BOOM				⇓iS	Sb	14 50 09.7	-2.4
MTBS	Maitube	2.91	84	Pg	Pg	14 49 49.5	-0.7
	1.6nm,0.2s						
MTBS				Lg	Lg	14 50 27.4	
	4.0nm,0.3s						
MTBS	Maitube	2.91	84	eP	Pg	14 49 50.4	+0.3
	0.9nm,0.1s						
MTBS				eS	Sg	14 50 28.8	+1.0
	6.7nm,0.3s						
KUU	Kurty	2.98	69	Pg	Pg	14 49 50.9	-0.7
	3.1nm,0.2s						
KUU				Lg	Lg	14 50 29.8	
	12nm,0.5s						
KUU	Kurty	2.98	69	eP	Pg	14 49 50.9	-0.7
	3.1nm,0.2s						
KUU				eS	Sg	14 50 29.9	-0.4
	12nm,0.5s						
KTBS	Karatobe	3.17	74	Pg	Pg	14 49 54.4	-0.8
	1.1nm,0.3s						
KTBS				Lg	Lg	14 50 36.0	
	16nm,0.3s						
MDOK	Medeo	3.36	84	Pg	Pg	14 49 57.9	-1.0
	0.8nm,0.2s						
MDOK				Lg	Lg	14 50 41.8	
	4.6nm,0.8s						
KOTS	Kotyrbulak	3.41	83	Pg	Pg	14 49 59.7	-0.1
	2.3nm,0.3s						
KOTS				Lg	Lg	14 50 45.1	
	7.9nm,0.4s						
KOTS	Kotyrbulak	3.41	83	eP	Pg	14 49 59.7	-0.1
	2.3nm,0.3s						
KOTS				eS	Sg	14 50 45.1	+1.0
	7.9nm,0.4s						
ARXS	Arharly	4.10	70	Pg	Pg	14 50 10.7	-2.4
	0.8nm,0.4s						
ARXS				Lg	Lg	14 51 04.0	
	4.9nm,0.5s						

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*IDC **19** 14:55:07.5±2.7, 15°.32S×177°.79W, h434km±30km, mb3.0/4, mbtmp3.8/5, Error ellipse: s-maj=107.2km s-min=24.7km az=151.0*
ISC 19 14:55:08.3±1.7, **15°.5S**±0°.6×**177°.8W**±0°.4, **h450km, n6, σ0s.75**/6, **mb3.2**/4, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.55	241	P	P	14 56 27.9	-0.6
	7.8nm,0.5s,baz=76,slow=12,SNR=7.1						
WRA	Warramunga Arr	45.70	257	P	P	15 02 48.1	+0.3
	0.5nm,0.8s,baz=91,slow=6.2,SNR=7.1						
	0.5nm,0.8s						
ASAR	Alice Springs	46.05	252	P	P	15 02 51.5	+1.0
	3.0nm,0.5s,baz=84,slow=7.5,SNR=74						
	3.0nm,0.5s						
ILAR	Eielson Array	83.46	13	P	P	15 06 46.9	-0.2
	0.5nm,0.7s,baz=225,slow=6.7,SNR=9.4						
	0.5nm,0.7s						
TXAR	Lajitas Array	84.22	58	P	P	15 06 52.0	+0.2
	0.3nm,0.7s,baz=217,slow=5.8,SNR=3.9						
	0.3nm,0.7s						
BRTR	Keskin Array B	143.50	317	PKP	PKPdf	15 13 50.9	-0.4
	1.2nm,0.8s,baz=54,slow=2.5,SNR=6.1						

IDC 19 15:01:56.1±2.1, **31°.94S**×**177°.28W, h0km, mb4.0**/3, **mbtmp4.0**/3, **Error ellipse: s-maj=61.8km s-min=33.9km az=45.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.80	215	Sn	Sn	15 05 21.9	+2.0
	0.6nm,0.3s,baz=300,slow=14,SNR=1.5						
ASAR	Alice Springs	43.66	268	P	P	15 10 03.2	+0.4
	0.5nm,0.4s,baz=105,slow=7.4,SNR=10						
	0.5nm,0.4s						
WRA	Warramunga Arr	44.78	273	P	P	15 10 11.2	-0.7
	1.1nm,0.5s,baz=111,slow=8.0,SNR=16						
	1.1nm,0.5s						
QSPA	South Pole Qui	58.18	180	P	P	15 11 51.2	-0.5
	1.1nm,0.5s,baz=243,slow=23,SNR=14						
	1.1nm,0.5s						
FINES	FINESS Array B	146.79	340	PKPbc	PKPbc	15 21 39.4	0.0
	1.9nm,0.9s,baz=64,slow=4.4,SNR=4.6						

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*PRE **19** 15:06:21.2±0.9, 26°.02S×29°.28E, h0km, ML2.7, Suspected explosion*
*BUL **19** 15:06:28.2±0.9, 26°.16S×30°.32E, h10km, MD3.6*
*BGSI **19** 15:06:37.5±1.9, 25°.15S×28°.65E, h0km±34km, ML2.8*
ISC 19 15:06:21.1±0.8, **25°.97S**±0°.03×**29°.30E**±0°.03, **h0km, n23, σ1s.64**/40, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRLN	Carolina, Mapu	0.66	93	eP	Pg	15 06 33.8	+0.1
CRLN				eS	Sg	15 06 43.1	+0.9
CRLN				IAML		15 06 51.9	
	comp=Z,94nm,0.9s						
PILG	Pilgrimsrest,	1.64	51	eP	Pg	15 06 53.5	+0.9
PILG				eS	Sg	15 07 16.0	+2.1
PILG				IAML		15 07 18.1	
	comp=Z,200nm,0.7s						
WDLM	Western Deep L	1.74	254	eP	Pn	15 06 53.0	+0.1
WDLM				eS	Sn	15 07 15.7	-0.2
WDLM				IAML		15 07 17.8	
	comp=Z,160nm,0.3s						
NWCL	Newcastle	1.84	163	eP	Pn	15 06 53.9	-0.2
NWCL				eS	Sb	15 07 18.5	-1.0
NWCL				IAML		15 07 27.1	
	comp=Z,54nm,0.8s						
PRYS	Parys	1.98	241	eP	Pn	15 06 56.5	+0.5
PRYS				eS	Sn	15 07 21.9	+0.2
PRYS				IAML		15 07 23.5	
	comp=Z,113nm,0.9s						
POGA	Pongola	2.56	123	eP	Pn	15 07 04.0	+0.1
POGA				eS	Sn	15 07 36.1	+0.3
POGA				IAML		15 07 50.1	
	comp=Z,32nm,0.7s						
SNKL	Senekal, Frees	2.67	210	eP	Pn	15 07 05.7	+0.1
SNKL				eS	Sn	15 07 38.9	+0.1
SNKL				IAML		15 07 50.4	
	comp=Z,74nm,0.6s						
MOPA	Mopani	3.10	39	eP	Pn	15 07 13.1	+1.7
MOPA				eS	Sn	15 07 49.5	+0.4
MOPA				IAML		15 08 00.7	
	comp=Z,73nm,0.7s						
MOPA	Mopani	3.10	39	i P	Pn	15 07 13.8	+2.5
MOPA				i S	Sn	15 07 45.4	-3.6
LBTB	Lobatse	3.47	285	eP	Pn	15 07 18.0	+1.5
LBTB				eS	Sn	15 07 58.6	+0.1
LBTB				IAML		15 08 22.1	
	comp=Z,41nm,0.4s						
PMBG	Pietermaritzbu	3.69	163	eP	Pn	15 07 19.8	+0.2
PMBG				eS	Sn	15 08 02.2	-1.6
PMBG				IAML		15 08 19.2	
	comp=Z,20nm,0.6s						
MUSN	Musina, Limpop	3.70	8	eP	Pn	15 07 20.9	+1.3
MUSN				eS	Sn	15 08 05.3	+1.3
MUSN				IAML		15 08 20.1	
	comp=Z,37nm,0.8s						
MUSN	Musina, Limpop	3.70	8	i P	Pb	15 07 27.2	-0.2
MUSN				i S	Sb	15 08 11.1	-1.8
SWZ	Schweizer	3.75	250	eP	Pn	15 07 21.0	+0.6
SWZ				eS	Sn	15 08 04.4	-1.0
SWZ				IAML		15 08 18.9	
	comp=Z,37nm,0.4s						
MAKGR	Makgori	4.05	271	i P	Pb	15 07 32.9	-0.6
MAKGR				i S	Sn	15 08 11.6	-1.1
MAKGR				IAML		15 08 32.9	
	comp=N,238nm,0.5s						
LPHEP	Lephephe	4.06	309	i P	Pn	15 07 24.9	+0.3
LPHEP				i S	Sn	15 08 01.2	-12
LPHEP				IAML		15 08 31.5	
	comp=N,28nm,0.3s						
BOSA	Boshof	4.46	233	eP	Pn	15 07 31.1	+1.0
BOSA				eS	Sn	15 08 21.4	-1.4
BOSA				IAML		15 08 39.7	
	comp=Z,32nm,0.5s						
KSTD	Kokstad	4.63	180	eP	Pn	15 07 32.5	-0.1
KSTD				eS	Sn	15 08 25.5	-1.7
KSTD				IAML		15 08 58.3	
	comp=Z,8.8nm,0.6s						
KDWAN	Kaudwane	4.94	300	i P	Pn	15 07 38.7	+2.0
KDWAN				i S	Sn	15 08 25.5	-9.2
KDWAN				IAML		15 09 02.2	
	comp=E,71nm,0.8s						
BROLN	Tlhalogang	5.17	339	i P	Pn	15 07 41.3	+1.4
BROLN				i S	Sn	15 08 28.0	-12
BROLN				IAML		15 09 15.2	
	comp=E,23nm,1.0s						
BLWY	Bulawayo	5.83	354	i P	Pb	15 07 59.3	-4.5
CHIPN	CHIPINGE	6.49	29	i P	Pn	15 07 59.8	+1.8
CHIPN				i S	Sn	15 09 06.7	-6.1
KRI	Karoi	9.10	2	i P	Pn	15 08 32.5	-1.3
KRI				i S	Sn	15 10 04.0	-13

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*IDC **19** 15:07:43.5±1.1, 30°.56S×178°.36W, h0km, mb4.0/4, mbtmp4.0/4, MS3.1/3, Error ellipse: s-maj=35.9km s-min=32.2km az=20.0*
*NEIC **19** 15:07:47.5±2.2, 30°.68S±0°.10×178°.2W±0°.2, h35km±2km, mb4.5/8, Error ellipse: s-maj=29.7km s-min=16.6km az=84.0*
ISC 19 15:07:48.2±1.0, **30°.6S**±0°.1×**178°.5W**±0°.2, **h35km, n28, σ1s.43**/23, **mb4.4**/7, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.46	19	Pn	Pn	15 08 11.4	-0.7
MXZ	Matakaoa Point	7.41	200	Pn	Pn	15 09 32.8	-1.1
URZ	Urewera	8.44	205	Pn	Pn	15 09 36.9	-11
	0.3nm,0.3s,baz=324,slow=8.7,SNR=2.4						
URZ				Sn	Sn	15 11 10.7	-11
	2.2nm,0.3s,baz=235,slow=17,SNR=7.0						
RTZ	Ruatahuna	8.80	204	Pn	Pn	15 09 47.0	-6.1
MRZ	Mangatainoka R	11.11	204	Pn	Pn	15 10 16.2	-8.4
MSVF	Nonsavu	13.24	345	LR	LR	15 14 39.6	
	comp=Z,70nm,18.1s,baz=182,slow=32						
RAR	Rarotonga	19.22	65	LR	LR	15 17 10.8	
	comp=Z,27nm,21.9s,baz=218,slow=30						
CTAO	Charters Tower	33.45	280	P	P	15 14 23.8	-0.3
CTAO				IAmb	IAmb	15 14 49.6	
	comp=Z,8.9nm,1.1s						
STKA	Stephens Creek	34.05	257	P	P	15 14 28.7	-0.4
STKA	Stephens Creek	34.05	257	P	P	15 14 28.8	-0.4
	comp=Z,0.8nm,0.6s,baz=72,slow=9.7,SNR=3.2						
	comp=Z,0.8nm,0.6s						
BBOO	Buckleboo	38.53	255	P	P	15 15 07.4	-0.1
AS31	Alice Springs	42.71	267	P	P	15 15 43.3	+1.2
ASAR	Alice Springs	42.71	267	P	P	15 15 41.5	-0.7
ASAR	Alice Springs	42.71	267	P	P	15 15 43.5	+1.4
	comp=Z,1.0nm,0.5s,baz=107,slow=7.3,SNR=27						
ASAR				LR	LR	15 32 01.5	
	comp=Z,48nm,18.4s,baz=123,slow=34						
	comp=Z,1.0nm,0.5s						
WR8	Warramunga Arr	43.58	273	P	P	15 15 50.4	+1.3
WR8				IAmb	IAmb	15 16 25.6	
	comp=Z,8.2nm,1.2s						
WRA	Warramunga Arr	43.72	273	P	P	15 15 49.4	-0.9
WRA	Warramunga Arr	43.72	273	P	P	15 15 51.4	+1.1
	comp=Z,1.3nm,0.3s,baz=111,slow=8.0,SNR=30						
	comp=Z,1.3nm,0.3s						
WB0	Warramunga Arr	43.74	273	P	P	15 15 51.3	+0.8
WB0				IAmb	IAmb	15 16 19.4	
	comp=Z,8.0nm,1.1s						
QSPA	South Pole Qui	59.47	180	P	P	15 17 47.6	+0.1
QSPA				IAmb	IAmb	15 18 20.6	
	comp=Z,3.1nm,0.9s						
QSPA	South Pole Qui	59.47	180	P	P	15 17 48.6	+1.1
	comp=Z,1.1nm,0.4s,baz=213,slow=1.0,SNR=19						
	comp=Z,1.1nm,0.4s						
KURBB	Kurchatov Arra	120.97	314	PKP	PKiKP	15 26 37.4	+0.7
	comp=Z,1.1nm,1.0s,baz=109,slow=2.7,SNR=6.0						
BVAR	Borovoye Array	126.30	316	PKP	PKiKP	15 26 49.0	+1.8
	comp=Z,0.7nm,0.7s,baz=46,slow=6.4,SNR=4.3						
FIA1	FINESS Array S	145.23	340		PKPbc	15 27 17.8	-3.3
FINES	FINESS Array B	145.23	340	PKPbc	PKPbc	15 27 18.8	-2.4
FINES	FINESS Array B	145.23	340	PKPbc	PKPbc	15 27 19.4	-1.7
	comp=Z,1.7nm,0.6s,baz=40,slow=2.4,SNR=3.9						
HFS	Hagfors	149.40	348	PKPbc	PKPbc	15 27 31.1	-1.7
	comp=Z,0.4nm,0.4s,baz=224,slow=42,SNR=1.7						
AKASG	Malin Array Be	151.25	322	PKPbc	PKiKP	15 27 39.3	+1.2
	comp=Z,0.8nm,0.5s,baz=52,slow=2.5,SNR=7.6						
BRTR	Keskin Array B	152.37	298	PKPbc	PKiKP	15 27 42.4	+1.4
	comp=Z,0.5nm,0.6s,baz=76,slow=3.5,SNR=3.7						

IDC 19 15:10:26.2±1.9, **30°.66S**×**177°.97W, h0km, mb3.8**/4, **mbtmp3.8**/4, **Error ellipse: s-maj=57.6km s-min=29.5km az=44.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.60	207	Pn	Pn	15 12 22.5	-9.4
	baz=257,slow=12						
URZ				Sn	Sn	15 13 55.0	-15
	2.0nm,0.3s,baz=250,slow=23,SNR=6.2						
ASAR	Alice Springs	43.12	267	P	P	15 18 28.6	0.0
	0.7nm,0.5s,baz=110,slow=7.9,SNR=8.9						
	0.7nm,0.5s						
WRA	Warramunga Arr	44.13	272	P	P	15 18 36.5	-0.2
	1.0nm,0.4s,baz=114,slow=8.0,SNR=12						
	1.0nm,0.4s						
QSPA	South Pole Qui	59.45	180	P	P	15 20 30.0	-0.6

	0.7nm,1.0s,baz=90,slow=1.0,SNR=11						
	0.7nm,1.0s						
SNAA	**Sanae**	**77.89**	**178**	P	P	15 22 26.2	+0.8
	0.7nm,1.1s,baz=0.2,slow=19,SNR=8.6						
	0.7nm,1.1s						
FINES	**FINESS Array B**	**145.40**	**340**	PKPbc	PKPbc	15 30 04.1	-1.2
	1.5nm,0.5s,baz=48,slow=2.1,SNR=7.5						

IDC 19 15:18:28.9±3.5**, 31°.28S**×**177°.76W, h0^{km}, mb3.4**/2**, mbtmp3.5**/3**, ML2.8**/1**, Error ellipse: s-maj=78.0km s-min=49.3km az=117.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.14**	**210**	Pn	Pn	15 20 27.1	-1.3
	0.1nm,0.3s,baz=167,slow=18,SNR=0.9						
URZ				Sn	Sn	15 21 57.9	-3.3
	0.5nm,0.3s,baz=235,slow=23,SNR=5.6						
	3.8nm,0.8s						
ASAR	**Alice Springs**	**43.28**	**268**	P	P	15 26 32.9	+0.3
	0.2nm,0.5s,baz=112,slow=8.0,SNR=8.6						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**44.34**	**273**	P	P	15 26 40.8	-0.3
	0.3nm,0.4s,baz=112,slow=7.9,SNR=8.3						
	0.3nm,0.4s						
FINES	**FINESS Array B**	**146.04**	**340**	PKPbc	PKPdf	15 38 09.1	0.0
	1.5nm,1.0s,baz=40,slow=5.3,SNR=2.6						

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*IDC **19** 15:28:49.8±0.9, 33°.66S×179°.06W, h0^{km}, mb4.0/4, mbtmp4.1/5, ML4.6/1, MS3.1/5, Error ellipse: s-maj=32.7km s-min=25.4km az=74.0*

*WEL **19** 15:28:58.6±0.8, 34°S±7°×17°9W±°, h149^{km}±34^{km}, M4.2/22, mB4.8/15, ML4.8/16, MLv4.7/22, Mw(mB)4.0/15, Error ellipse: s-maj=10.6km s-min=8.3km az=106.2, confirmed*

ISC 19 15:28:56.5±0.8**, 33°.97S**±0°.07×**178°.82W**±0°.10**, h50^{km}, n64, σ2^{s}07**/97**, mb3.8**/4**, MS2.8**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.28**	**212**	P	**Pn**	**15 30 00.1**	**+1.1**
MXZ				S	**Sn**	**15 30 51.2**	**+3.6**
CNGZ	**Carnagh Statio**	**5.10**	**207**	P	**Pn**	**15 30 12.1**	**+1.8**
URZ	**Urewera**	**5.40**	**216**	Pn	**Pn**	**15 30 15.1**	**+0.7**
	20nm,0.3s,baz=240,slow=2.9,SNR=6.8						
URZ				Sn	**Sn**	**15 31 16.0**	**+0.8**
	11nm,0.3s,baz=247,slow=18,SNR=5.4						
	42nm,0.3s						
URZ	**Urewera**	**5.40**	**216**	P	**Pn**	**15 30 16.5**	**+2.1**
URZ				S	**Sn**	**15 31 16.9**	**+1.7**
PRGZ	**Paritu Road**	**5.61**	**207**	P	**Pn**	**15 30 18.3**	**+1.0**
PRGZ				S	**Sn**	**15 31 20.3**	**-0.2**
SNGZ	**Shannon Statio**	**5.71**	**212**	P	**Pn**	**15 30 21.8**	**+3.1**
SNGZ				S	**Sn**	**15 31 25.8**	**+2.8**
MUGZ	**Murupara**	**5.74**	**217**	P	**Pn**	**15 30 21.7**	**+2.7**
MUGZ				S	**Sn**	**15 31 24.6**	**+1.0**
RTZ	**Ruatahuna**	**5.74**	**215**	P	**Pn**	**15 30 18.4**	**-0.8**
RTZ				S	**Sn**	**15 31 25.2**	**+1.4**
MHGZ	**Mahia Peninsul**	**5.80**	**206**	P	**Pn**	**15 30 20.6**	**+0.7**
MHGZ				S	**Sn**	**15 31 24.7**	**-0.4**
RAHZ	**Arahi**	**5.94**	**213**	P	**Pn**	**15 30 25.0**	**+3.2**
RAHZ				S	**Sn**	**15 31 29.4**	**+1.0**
WCZ	**Waipu Caves**	**5.95**	**249**	P	**Pn**	**15 30 23.5**	**+1.5**
MTHZ	**Maungataniwha**	**6.00**	**214**	P	**Pn**	**15 30 25.2**	**+2.6**
MTHZ				S	**Sn**	**15 31 32.5**	**+2.5**
MRHZ	**Matea Rd**	**6.19**	**217**	P	**Pn**	**15 30 26.0**	**+0.8**
MRHZ				S	**Sn**	**15 31 36.8**	**+2.1**
NMHZ	**Naumai**	**6.21**	**213**	P	**Pn**	**15 30 28.1**	**+2.5**
NMHZ				S	**Sn**	**15 31 36.8**	**+1.6**
ARHZ	**Aropaoanui**	**6.26**	**211**	P	**Pn**	**15 30 24.6**	**-1.6**
ARHZ				S	**Sn**	**15 31 38.7**	**+2.3**
OUZ	**Omahuta**	**6.38**	**257**	P	**Pn**	**15 30 28.1**	**+0.2**
OUZ				S	**Sn**	**15 31 37.7**	**-1.7**
BKZ	**Black Stump Fm**	**6.41**	**215**	P	**Pn**	**15 30 27.1**	**-1.2**
BKZ				S	**Sn**	**15 31 39.7**	**-0.5**
CKHZ	**Cape Kidnapper**	**6.56**	**209**	P	**Pn**	**15 30 29.8**	**-0.5**
CKHZ				S	**Sn**	**15 31 44.8**	**+1.1**
TMVZ	**Te Maari**	**6.76**	**219**	P	**Pn**	**15 30 35.2**	**+1.9**
TMVZ				S	**Sn**	**15 31 49.3**	**+0.3**
NTVZ	**North Tongarir**	**6.77**	**219**	P	**Pn**	**15 30 34.1**	**+0.8**
NTVZ				S	**Sn**	**15 31 51.6**	**+2.5**
OTVZ	**Oturere**	**6.82**	**219**	P	**Pn**	**15 30 35.4**	**+1.3**
OTVZ				S	**Sn**	**15 31 49.5**	**-1.0**
NNVZ	**North Ngauruho**	**6.82**	**219**	P	**Pn**	**15 30 36.1**	**+2.0**
NNVZ				S	**Sn**	**15 31 52.6**	**+2.1**
HIZ	**Hauiti**	**6.83**	**227**	P	**Pn**	**15 30 36.7**	**+2.7**
SNVZ	**South Ngauruho**	**6.85**	**219**	P	**Pn**	**15 30 32.9**	**-1.5**
SNVZ				S	**Sn**	**15 31 52.2**	**+1.0**
NGZ	**Ngauruhoe**	**6.86**	**219**	S	**Sn**	**15 31 54.0**	**+2.6**
TUVZ	**Tukino**	**6.90**	**218**	P	**Pn**	**15 30 38.8**	**+3.6**
TUVZ				S	**Sn**	**15 31 52.6**	**+0.1**
FWVZ	**Far West T-bar**	**6.95**	**219**	P	**Pn**	**15 30 37.5**	**+1.7**
FWVZ				S	**Sn**	**15 31 53.4**	**-0.2**
WHVZ	**Whangaehu Hut**	**6.95**	**219**	P	**Pn**	**15 30 38.8**	**+3.0**
WHVZ				S	**Sn**	**15 31 54.4**	**+0.8**
MAVZ	**Matarangi**	**6.95**	**219**	P	**Pn**	**15 30 37.4**	**+1.4**
MOVZ	**Moawhango**	**6.96**	**217**	P	**Pn**	**15 30 34.9**	**-1.0**
MOVZ				S	**Sn**	**15 31 52.0**	**-1.7**
PXZ	**Pawanui**	**6.96**	**209**	P	**Pn**	**15 30 35.9**	**0.0**
PXZ				S	**Sn**	**15 31 51.8**	**-1.9**
WNVZ	**Wahianoa**	**6.98**	**218**	P	**Pn**	**15 30 38.5**	**+2.2**
PNHZ	**Pukenui**	**7.14**	**213**	P	**Pn**	**15 30 37.4**	**-1.0**
PNHZ				S	**Sn**	**15 31 58.5**	**+0.3**
WPHZ	**Waipukurau**	**7.17**	**211**	P	**Pn**	**15 30 39.3**	**+0.7**
WPHZ				S	**Sn**	**15 31 59.4**	**+0.8**
PRHZ	**Porangahau**	**7.25**	**209**	P	**Pn**	**15 30 39.8**	**-0.1**
PRHZ				S	**Sn**	**15 32 00.5**	**-0.3**
TSZ	**Takapari Road**	**7.37**	**213**	S	**Sn**	**15 32 02.4**	**-1.3**
DVHZ	**Dannevirke**	**7.48**	**211**	P	**Pn**	**15 30 39.5**	**-3.4**
DVHZ				S	**Sn**	**15 32 02.7**	**-3.6**
BFZ	**Birch Farm**	**7.76**	**209**	P	**Pn**	**15 30 45.8**	**-1.0**
BFZ				S	**Sn**	**15 32 11.4**	**-1.9**
PRWZ	**Pori Road**	**7.77**	**211**	P	**Pn**	**15 30 47.6**	**+0.7**
PRWZ				S	**Sn**	**15 32 10.1**	**-3.4**
TIWZ	**Tintock**	**7.99**	**210**	P	**Pn**	**15 30 50.0**	**0.0**
TIWZ				S	**Sn**	**15 32 15.6**	**-3.4**
MRZ	**Mangatainoka R**	**8.03**	**212**	P	**Pn**	**15 30 48.6**	**-1.9**
MRZ				S	**Sn**	**15 32 15.4**	**-4.5**
HOWZ	**Holdsworth Sta**	**8.25**	**211**	P	**Pn**	**15 30 51.8**	**-1.6**
HOWZ				S	**Sn**	**15 32 21.4**	**-3.9**
OGWZ	**Otaki Gorge**	**8.34**	**213**	P	**Pn**	**15 30 52.3**	**-2.4**
OGWZ				S	**Sn**	**15 32 23.6**	**-3.8**
MTW	**Mount Morrison**	**8.47**	**211**	P	**Pn**	**15 30 53.9**	**-2.6**
MTW				S	**Sn**	**15 32 27.0**	**-3.6**
KIW	**Kapiti Island**	**8.49**	**214**	P	**Pn**	**15 30 55.1**	**-1.7**
KIW				S	**Sn**	**15 32 25.8**	**-5.4**
RPZ	**Rata Peaks**	**12.52**	**216**	Pn	**Pn**	**15 31 48.0**	**-3.8**
	0.8nm,0.3s,baz=41,slow=21,SNR=1.4						
MSVF	**Nonsavu**	**16.42**	**349**	LR	LR	15 37 44.8	
	comp=Z,67nm,19.0s,baz=160,slow=33						
DZM	**Mont Dzumac**	**17.58**	**309**	LR	LR	15 38 45.8	
	comp=Z,134nm,18.3s,baz=80,slow=35						
RAR	**Rarotonga**	**21.08**	**58**	LR	LR	15 39 51.8	
	comp=Z,30nm,20.4s,baz=252,slow=31						
PPT	**Papeete**	**30.84**	**65**	LR	LR	15 43 28.7	
	comp=Z,25nm,21.9s,baz=268,slow=28						
HNR	**Honiara**	**31.26**	**316**	LR	LR	15 45 36.5	
	comp=Z,52nm,18.3s,baz=32,slow=33						
ASAR	**Alice Springs**	**42.36**	**271**	P	**P**	**15 36 44.6**	**-1.4**
	1.1nm,0.6s,baz=111,slow=7.8,SNR=30						
	1.1nm,0.6s						
WRA	**Warramunga Arr**	**43.67**	**276**	P	**P**	**15 36 53.5**	**-3.0**
	1.2nm,0.5s,baz=117,slow=7.9,SNR=23						
	1.2nm,0.5s						
QSPA	**South Pole Qui**	**56.15**	**180**	P	**P**	**15 38 32.5**	**+1.7**
	1.7nm,0.7s,baz=6.4,slow=0.4,SNR=18						
	1.7nm,0.7s						
SNAA	**Sanae**	**74.61**	**179**	P	**P**	**15 40 33.2**	**+3.3**
	0.6nm,0.7s,baz=217,slow=20,SNR=1.5						
	0.6nm,0.7s						
KURBB	**Kurchatov Arra**	**123.01**	**312**	PKP	**PKPdf**	**15 47 45.9**	**-0.8**
	0.9nm,0.9s,baz=117,slow=1.7,SNR=5.6						
BVAR	**Borovoye Array**	**128.43**	**314**	PKP	**PKiKP**	**15 47 57.5**	**-0.2**
	0.7nm,0.6s,baz=96,slow=5.8,SNR=3.4						
ARCES	**ARCESS Array B**	**141.91**	**346**	PKhKP	PKPpre	15 48 15.6	
	0.7nm,0.6s,baz=34,slow=2.2,SNR=4.8						
ARCES				PKP	**PKPdf**	**15 48 21.9**	**+0.2**
	0.6nm,0.6s,baz=43,slow=1.6,SNR=2.3						
FINES	**FINESS Array B**	**148.22**	**337**	PKPbc	**PKPbc**	**15 48 35.6**	**-0.4**
	1.2nm,0.4s,baz=34,slow=4.7,SNR=12						
NB2	**NORSAR Subarra**	**152.15**	**350**	PKP	**PKiKP**	**15 48 45.9**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=15,slow=2.5						
NOA	**NORSAR Array B**	**152.15**	**350**	PKPbc	**PKiKP**	**15 48 46.0**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=15,slow=4.5,SNR=7.0						
HFS	**Hagfors**	**152.57**	**346**	PKPbc	**PKPbc**	**15 48 46.4**	**-0.2**
	comp=Z,2.2nm,0.7s,baz=333,slow=1.7,SNR=6.0						
AKASG	**Malin Array Be**	**153.60**	**318**	PKPab	**PKPab**	**15 49 00.7**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=62,slow=2.2,SNR=4.2						
TORD	**Torodi Ar. Bea**	**159.26**	**181**	PKPab	**PKPab**	**15 49 27.5**	**+0.6**
	comp=Z,146nm,0.5s,baz=172,slow=3.3,SNR=1.6						

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*IDC **19** 15:29:14.3±1.6, 19°.57N×109°.03W, h0^{km}, mb3.8/7, mbtmp3.8/10, ML3.5/3, MS3.1/13, Error ellipse: s-maj=61.2km s-min=19.1km az=64.0*

*MEX **19** 15:29:20.8±0.4, 19°.24N×108°.58W, h15^{km}±999^{km}, MD4.2*

ISC 19 15:29:16.3±1.2**, 19°.6N**±0°.1×**108°.67W**±0°.09**, h10^{km}, n28, σ1^{s}85**/24**, mb4.0**/6**, MS3.2**/11**, Revilla Gigedo Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CJM	**Chamela**	**3.42**	**91**	*i* P	**Pn**	**15 30 09.9**	**+0.1**
CJM				*e*S	**Sn**	**15 30 48.5**	**-2.0**
CIHU	**Emiliano Zapat**	**3.73**	**94**	*e*P	**Pn**	**15 30 13.7**	**-0.3**
CIHU				*e*S	**Sn**	**15 30 55.6**	**-2.5**
CDAR	**Ciudad de Arme**	**4.45**	**98**	*e*P	**Pn**	**15 30 23.7**	**-0.2**
CDAR				*e*S	**Sn**	**15 31 13.3**	**-2.6**
CEGR	**Campo Tres**	**4.55**	**92**	*e*P	**Pn**	**15 30 26.3**	**+0.8**
CEGR				*e*S	**Sn**	**15 31 16.2**	**-2.3**
SOMAC	**Volcano de Col**	**4.76**	**90**	*e*P	**Pn**	**15 30 30.7**	**+2.2**
SOMAC				*e*S	**Sn**	**15 31 21.5**	**-2.4**
MNGA	**Volcan de Coli**	**4.77**	**91**	*e*P	**Pn**	**15 30 29.1**	**+0.6**
MNGA				*i* S	**Sn**	**15 31 22.2**	**-1.8**
INCO	**Volcan de Coli**	**4.78**	**90**	*e*P	**Pn**	**15 30 31.4**	**+2.5**
INCO				*e*S	**Sn**	**15 31 26.8**	**+2.2**
TXAR	**Lajitas Array**	**10.72**	**24**	Pn	**Pn**	**15 31 52.8**	**+2.7**
	baz=198,slow=16,SNR=7.5						
TXAR				LR	LR	15 35 37.8	
	comp=Z,54nm,21.7s,baz=224,slow=35						
	0.6nm,0.7s						
ANMO	**Albuquerque**	**15.43**	**7**	Pn	**Pn**	**15 32 56.3**	**+2.1**
	0.1nm,0.3s,baz=221,slow=9.3,SNR=3.0						
	1.1nm,0.6s						
PFO	**Pinyon Flats O**	**15.60**	**335**	Pn	**Pn**	**15 32 55.8**	**-0.7**
	0.2nm,0.3s,baz=161,slow=7.8,SNR=6.5						
PFO				LR	LR	15 37 57.3	
	comp=Z,261nm,21.1s,baz=158,slow=34						
	1.2nm,0.4s						
NVAR	**Mina Array Bea**	**20.55**	**338**	P	**P**	**15 33 54.9**	**-0.4**
	1.9nm,0.7s,baz=168,slow=12,SNR=14						
NVAR				LR	LR	15 41 16.0	
	comp=Z,88nm,18.2s,baz=179,slow=35						
	1.9nm,0.7s						
ELK	**Elko**	**21.82**	**346**	LR	LR	15 42 30.5	
	comp=Z,81nm,18.0s,baz=175,slow=37						
PDAR	**Pinedale Array**	**23.12**	**358**	P	**P**	**15 34 23.1**	**+0.3**
	1.1nm,0.7s,baz=163,slow=9.7,SNR=8.5						
PDAR				LR	LR	15 42 09.7	
	comp=Z,28nm,19.3s,baz=188,slow=34						
	1.1nm,0.7s						
YBH	**Yreka Blue Hor**	**25.09**	**335**	LR	LR	15 44 19.7	
	comp=Z,4.7nm,18.5s,baz=144,slow=36						
NEW	**Newport**	**29.41**	**348**	LR	LR	15 47 05.3	
	comp=Z,34nm,21.3s,baz=352,slow=36						
SADO	**Sadowa**	**35.09**	**38**	LR	LR	15 49 16.0	
	comp=Z,51nm,21.6s,baz=196,slow=34						
BBB	**Bella Bella**	**35.90**	**340**	LR	LR	15 50 30.3	
	comp=Z,76nm,19.4s,baz=196,slow=36						
SJG	**San Juan**	**40.20**	**85**	LR	LR	15 55 11.5	
	comp=Z,19nm,18.6s,baz=178,slow=38						
DLBC	**Dease Lake**	**41.81**	**343**	LR	LR	15 53 19.8	
	comp=Z,9.1nm,18.1s,baz=178,slow=35						
YKA	**Yellowknife Ar**	**43.07**	**356**	P	**P**	**15 37 13.7**	**-2.5**
	0.9nm,0.8s,baz=172,slow=7.1,SNR=4.5						
YKA				LR	LR	15 56 18.2	
	comp=Z,48nm,19.9s,baz=118,slow=38						
	0.9nm,0.8s						
SCHQ	**Schefferville**	**47.30**	**32**	LR	LR	15 55 55.6	
	comp=Z,35nm,18.8s,baz=312,slow=34						
ILAR	**Eielson Array**	**51.79**	**340**	P	**P**	**15 38 22.9**	**-1.1**
	1.2nm,0.8s,baz=146,slow=6.6,SNR=15						
	1.2nm,0.8s						
LPAZ	**La Paz**	**53.47**	**129**	P	**P**	**15 38 39.4**	**+1.5**
	1.9nm,0.7s,baz=323,slow=5.7,SNR=6.6						
	1.9nm,0.7s						
H03N2	**Juan Fernandez**	**59.88**	**151**	T	T	16 44 26.7	
	baz=329,slow=78,SNR=38						
H03N1	**Juan Fernandez**	**59.90**	**151**	T	T	16 44 28.0	
	baz=329,slow=78,SNR=61						
H03N3	**Juan Fernandez**	**59.90**	**151**	T	T	16 44 26.0	
	baz=329,slow=78,SNR=47						
CPUP	**Villa Florida**	**67.57**	**131**	P	**P**	**15 40 14.7**	**+1.3**
	0.9nm,0.8s,baz=295,slow=7.2,SNR=4.2						
	0.9nm,0.8s						
ARCES	**ARCESS Array B**	**85.36**	**15**	P	**P**	**15 41 53.0**	**-0.5**
	1.5nm,0.8s,baz=322,slow=3.7,SNR=7.4						
	1.5nm,0.8s						

DJA 19 15:37:08.3±0.3**, 0°S**±2°×**12°3E**±°**, h85^{km}**±6^{km}**, M3.8**/14**, mb4.4**/1**, MLv3.5**/14**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.75**	**187**	P	Pn	15 37 25.8	+0.9
LUWI				S	Sn	15 37 38.6	+1.3
MRSI	**Marisa**	**1.19**	**310**	P	Pn	15 37 30.6	+0.6
MRSI				S	Sn	15 37 46.9	+0.6
APSI	**Ampana**	**1.36**	**243**	P	Pn	15 37 33.6	+1.6
KMSI	**Cibinong**	**1.41**	**53**	P	Pn	15 37 33.2	+0.5
KMSI				S	Sn	15 37 52.2	+1.1
MPSI	**Mapaga**	**3.03**	**282**	P	Pn	15 37 54.6	+0.5
PCI	**Palu**	**3.08**	**259**	P	Pn	15 37 55.0	+0.1
SANI	**Sanana**	**3.58**	**119**	P	Pn	15 38 01.9	+0.3
KDI	**Kendari**	**3.65**	**184**	P	Pn	15 38 03.4	+0.8
TTSI	**Tana Toraja**	**4.09**	**228**	P	Pn	15 38 09.1	+0.6
TNTI	**Ternate**	**4.63**	**77**	P	Pn	15 38 14.8	-1.1
SGSI	**Sangihe**	**4.77**	**34**	P	Pn	15 38 17.2	-0.5
SPSI	**Sidrap Palu**	**4.78**	**220**	P	Pn	15 38 18.6	+0.7
BNSI	**Bone**	**4.92**	**214**	P	Pn	15 38 19.5	-0.4

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*IDC **19** 15:39:44.9±2.0, 31°.06S×177°.42W, h0^{km}, mb4.0/4, mbtmp4.0/4, MS3.4/2, Error ellipse: s-maj=53.6km s-min=36.4km az=36.0*

*NEIC **19** 15:39:47.3±1.2, 31°.26S±0°.06×177°.5W±0°.3, h12^{km}±7^{km}, mb4.4/11, Error ellipse: s-maj=35.1km s-min=8.6km az=88.0*

ISC 19 15:39:46.9±1.0**, 31°.34S**±0°.06×**177°.8W**±0°.2**, h10^{km}, n42, σ1^{s}85**/33**, mb4.3**/9**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.07**	**357**	P	**Pb**	**15 40 23.3**	**-1.3**
GLKZ				S	**Sg**	**15 40 51.6**	**-1.9**
RAO	**Raoul Island**	**2.08**	**357**	Pn	**Pn**	**15 40 21.0**	**-0.9**
RIZ	**Raoul Island**	**2.09**	**357**	P	**Pb**	**15 40 24.6**	**-0.3**
WMGZ	**Waiomatatini S**	**7.18**	**205**	P	Pn	15 41 28.9	-3.0
WMGZ				S	**Sn**	**15 42 51.2**	**-2.3**
HAZ	**Te Kaha**	**7.37**	**208**	P	Pn	15 41 32.5	-2.0
HAZ				S	**Sn**	**15 42 56.6**	**-1.5**
PUZ	**Puketiti**	**7.46**	**205**	P	Pn	15 41 31.8	-4.0
PUZ				S	**Sn**	**15 42 57.1**	**-3.4**
RUGZ	**Raukumara Rang**	**7.59**	**208**	P	Pn	15 41 34.6	-3.0
RUGZ				S	**Sn**	**15 43 00.6**	**-3.2**
TWGZ	**Tauwhareparae**	**7.65**	**206**	P	Pn	15 41 35.4	-3.1
TWGZ				S	**Sn**	**15 43 02.2**	**-3.1**
MWZ	**Matawai**	**7.96**	**208**	P	Pn	15 41 39.0	-3.7
MWZ				S	Sn	15 43 08.7	-4.2
URZ	**Urewera**	**8.07**	**210**	Pn	Pn	15 41 41.9	-2.3
	0.5nm,0.3s,baz=328,slow=14,SNR=1.4						
URZ				Sn	Sn	15 43 09.7	-5.8
	3.0nm,0.3s,baz=347,slow=20,SNR=8.4						
OUZ	**Omahuta**	**8.18**	**239**	P	Pn	15 41 52.8	+7.2
MUGZ	**Murupara**	**8.40**	**211**	S	Sn	15 43 18.9	-4.7
SNGZ	**Shannon Statio**	**8.43**	**207**	P	Pn	15 41 46.0	-3.1
SNGZ				S	Sn	15 43 18.4	-5.8
RTZ	**Ruatahuna**	**8.43**	**209**	Pn	**Pn**	**15 41 47.6**	**-1.5**
RAHZ	**Arahi**	**8.64**	**208**	S	**Sn**	**15 43 26.6**	**-2.9**
MTHZ	**Maungataniwha**	**8.69**	**209**	P	**Pn**	**15 41 53.2**	**+0.5**
MTHZ				S	**Sn**	**15 43 28.5**	**-2.1**
NMHZ	**Naumai**	**8.91**	**208**	S	Sn	15 43 31.8	-4.4
BKZ	**Black Stump Fm**	**9.10**	**209**	P	**Pn**	**15 41 56.7**	**-1.6**
BKZ				S	Sn	15 43 33.3	-7.4
KAHZ	**Kahuranaki**	**9.48**	**206**	S	Sn	15 43 43.3	-6.9
WPHZ	**Waipukurau**	**9.88**	**207**	S	Sn	15 43 53.3	-6.7
TSZ	**Takapari Road**	**10.07**	**209**	S	Sn	15 43 56.7	-7.9
TUWZ	**Tuamarina**	**12.06**	**211**	Pn	**Pn**	**15 42 39.7**	**+0.9**
RAR	**Rarotonga**	**19.03**	**62**	LR	LR	15 51 01.2	
	comp=Z,61nm,18.4s,baz=306,slow=36						
STKA	**Stephens Creek**	**34.45**	**258**		**P**	**15 46 37.3**	**+2.5**
STKA				IAmb	IAmb	15 46 53.6	
	comp=Z,15nm,1.1s						
STKA	**Stephens Creek**	**34.45**	**258**	P	**P**	**15 46 38.2**	**+3.4**
	comp=Z,1.4nm,0.8s,baz=100,slow=12,SNR=3.2						
	comp=Z,1.4nm,0.8s						
BBOO	**Buckleboo**	**38.89**	**255**	P	**P**	**15 47 13.1**	**+0.4**
AS31	**Alice Springs**	**43.24**	**268**	P	**P**	**15 47 50.3**	**+1.7**
ASAR	**Alice Springs**	**43.24**	**268**	P	**P**	**15 47 48.4**	**-0.2**
ASAR	**Alice Springs**	**43.24**	**268**	P	**P**	**15 47 50.4**	**+1.8**
	comp=Z,1.3nm,0.7s,baz=106,slow=7.3,SNR=19						
	comp=Z,1.3nm,0.7s						
WR0	**Warramunga Arr**	**44.13**	**273**	P	**P**	**15 47 57.2**	**+1.4**
WR0				IAmb	IAmb	15 47 59.9	
	comp=Z,4.3nm,0.9s						
WR8	**Warramunga Arr**	**44.17**	**273**	P	**P**	**15 47 57.3**	**+1.1**
WR8				IAmb	IAmb	15 48 12.8	
	comp=Z,5.1nm,0.9s						
WRA	**Warramunga Arr**	**44.31**	**273**	P	**P**	**15 47 59.0**	**+1.7**
WRA	**Warramunga Arr**	**44.31**	**273**	P	**P**	**15 47 59.1**	**+1.8**
	comp=Z,2.7nm,0.5s,baz=112,slow=8.0,SNR=25						
	comp=Z,2.7nm,0.5s						
WB0	**Warramunga Arr**	**44.34**	**273**	P	**P**	**15 47 58.7**	**+1.2**
WB0				IAmb	IAmb	15 48 00.8	
	comp=Z,4.5nm,0.7s						
SBA	**Scott Base**	**47.12**	**184**	P	**P**	**15 48 19.7**	**+1.1**
SBA				IAmb	IAmb	15 48 49.9	
	comp=Z,4.3nm,1.4s						
FITZ	**Fitzroy Crossi**	**52.54**	**271**	P	**P**	**15 49 01.0**	**+0.3**
FITZ				IAmb	IAmb	15 49 11.3	
	comp=Z,3.2nm,1.4s						
CASY	**Casey**	**54.40**	**208**	P	**P**	**15 49 14.2**	**+0.6**
QSPA	**South Pole Qui**	**58.77**	**180**	P	**P**	**15 49 45.2**	**+0.2**
QSPA				IAmb	IAmb	15 50 09.9	
	comp=Z,3.1nm,0.7s						
QSPA	**South Pole Qui**	**58.77**	**180**	P	**P**	**15 49 46.2**	**+1.2**
	comp=Z,0.9nm,0.7s,baz=263,slow=1.0,SNR=5.6						
	comp=Z,0.9nm,0.7s						
TGY	**Tagaytay City**	**74.11**	**298**	LR	LR	16 18 20.1	
	comp=Z,45nm,21.8s,baz=12,slow=31						
FINES	**FINESS Array B**	**146.09**	**340**	PKPdf	**PKPdf**	**15 59 24.6**	**-0.9**
FINES	**FINESS Array B**	**146.09**	**340**	PKPbc	**PKPdf**	**15 59 25.2**	**-0.3**
	comp=Z,1.9nm,0.9s,baz=53,slow=4.2,SNR=7.6						

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*NOU **19** 15:46:25.8, 37°.50S×177°.14E, h4^{km}, MLv4.2/15, Off E. Coast of N. Island, N.Z.*

*IDC **19** 15:46:25.0±1.1, 37°.52S×177°.38E, h0^{km}, mb4.3/6, mbtmp4.2/7, ML3.2/1, MS3.7/10, Error ellipse: s-maj=28.0km s-min=10.8km az=94.0*

*WEL **19** 15:46:27.2, 37°.54S×177°.12E, h8^{km}, ML4.2, Mw4.3, Moment Tensor Solution. s16 Moment tensor: Scale 10^{15}Nm; M_{rr}-2.48; $M_{\theta\theta}$-0.90; $M_{\phi\phi}$3.38; $M_{r\theta}$0.48; $M_{\theta\phi}$2.44; $M_{\phi r}$-0.28; Fault plane solution: $M_0$3.66000×10^{15} NP1: ϕ_s356.00000°, δ54.00000°, λ-132.00000°. NP2: ϕ_s233.00000°, δ53.00000°, λ-47.00000°. Principal axes: T 4.4850, Plg1.0000°, Azm114.0000°; N -1.6423, Plg33.0000°, Azm23.0000°; P -2.8427, Plg57.0000°, Azm206.0000°; Stations used: OPRZ HAZ URZ MWZ PUZ RTZ TOZ KUZ TLZ MKAZ BKZ RATZ HIZ WHVZ VRZ WCZ OBLIQUE-NORMAL FAULTING*

*WEL **19** 15:46:27.2±0.5, 38°S±3°×17°7E±°, h5^{km}, M4.4/26, ML4.7/26, MLv4.4/26 Error ellipse: s-maj=4.1km s-min=2.3km az=175.8, confirmed*

*NEIC **19** 15:46:27.5±0.9, 37°.6S±0°.1×177°.28E±0°.07, h10^{km}±1^{km}, mb4.4/9, Error ellipse: s-maj=24.0km s-min=9.5km az=356.0*

ISC 19 15:46:27.2±0.9**, 37°.55S**±0°.03×**177°.14E**±0°.02**, h13^{km}**±5^{km}**, n130, σ1^{s}20**/137**, mb4.3**/12**, MS3.6**/9**, 4D, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSRZ	**White Island S**	**0.05**	**47**	P	**Pg**	**15 46 29.1**	**-0.7**
WIZ	**White Island**	**0.05**	**61**	P	**Pg**	**15 46 29.0**	**-0.8**
WHRZ	**Whale Island**	**0.33**	**203**	P	**Pb**	**15 46 34.6**	**-0.3**
HAZ	**Te Kaha**	**0.55**	**112**	P	**Pg**	**15 46 37.9**	**-0.2**
HAZ				S	**Sb**	**15 46 46.4**	**-0.1**
MARZ	**Manawahe**	**0.57**	**220**	P	**Pg**	**15 46 38.3**	**0.0**
RUGZ	**Raukumara Rang**	**0.60**	**134**	P	**Pg**	**15 46 38.4**	**-0.6**
RUGZ				S	**Sb**	**15 46 47.4**	**-0.5**
EDRZ	**Edgecumbe**	**0.64**	**209**	P	**Pb**	**15 46 40.2**	**0.0**
URZ	**Urewera**	**0.71**	**182**	Pg	**Pg**	**15 46 40.4**	**-0.6**
	512nm,0.3s,baz=306,slow=5.0,SNR=1270						
URZ				LR	LR	15 46 41.2	
	comp=Z,86nm,20.5s,baz=162,slow=21						
URZ				Lg	Lg	15 46 50.4	
	714nm,0.3s,baz=257,slow=23,SNR=12						
URZ	**Urewera**	**0.71**	**182**	P	**Pg**	**15 46 40.3**	**-0.6**
URZ	**Urewera**	**0.71**	**182**	S	**Sn**	**15 46 51.3**	**-2.3**
URZ	**Urewera**	**0.71**	**182**	P	**Pg**	**15 46 40.4**	**-0.6**
URZ				S	**Sb**	**15 46 50.9**	**-0.1**
TGRZ	**Tauranga**	**0.72**	**255**	P	**Pg**	**15 46 41.5**	**+0.3**
LIRZ	**Lichensteins R**	**0.75**	**233**	P	**Pg**	**15 46 42.3**	**+0.5**
LIRZ				S	**Sg**	**15 46 52.3**	**+0.7**
MYRZ	**Mayor Island**	**0.76**	**290**	P	**Pb**	**15 46 42.1**	**-0.2**
MKRZ	**Makatiti**	**0.79**	**222**	P	**Pn**	**15 46 43.3**	**-0.8**
PKGZ	**Pakihiroa**	**0.81**	**113**	P	**Pg**	**15 46 42.9**	**-0.1**
PKGZ				S	**Sn**	**15 46 55.2**	**-1.1**
OMRZ	**Omania**	**0.82**	**227**	P	**Pg**	**15 46 43.3**	**+0.2**
MWZ	**Matawai**	**0.84**	**158**	P	**Pb**	**15 46 43.0**	**-0.7**
MWZ				S	**Sn**	**15 46 56.6**	**-0.4**
TARZ	**Mount Tarawera**	**0.85**	**216**	P	**Pn**	**15 46 44.0**	**-0.9**
KARZ	**Kaharoa**	**0.85**	**236**	P	**Pb**	**15 46 43.5**	**-0.2**
KARZ				S	**Sg**	**15 46 55.4**	**+0.6**
TWGZ	**Tauwhareparae**	**0.92**	**133**	P	**Pn**	**15 46 45.0**	**-0.8**
TWGZ				S	**Sn**	**15 46 59.7**	**+0.9**
RRRZ	**Republican Roa**	**0.93**	**212**	P	**Pb**	**15 46 44.8**	**-0.4**
MXZ	**Matakaoa Point**	**0.93**	**91**		**Pb**	**15 46 43.3**	**-1.8**
MXZ	**Matakaoa Point**	**0.93**	**91**	P	**Pb**	**15 46 44.1**	**-1.1**
MXZ	**Matakaoa Point**	**0.93**	**91**	P	**Pb**	**15 46 44.0**	**-1.1**
MXZ				S	**Sn**	**15 47 00.5**	**+1.4**
NGRZ	**Ngongotaha**	**0.93**	**233**	P	**Pg**	**15 46 45.1**	**-0.2**
HLRZ	**Highlands Stat**	**0.94**	**221**	P	**Pn**	**15 46 45.4**	**-0.6**
MUGZ	**Murupara**	**0.97**	**197**	P	**Pb**	**15 46 45.1**	**-0.7**
RAGZ	**Rawiri**	**0.97**	**167**	P	**Pg**	**15 46 45.5**	**-0.5**
RAGZ				S	**Sn**	**15 46 59.5**	**-0.7**
UTU	**Utuhina**	**0.97**	**230**	P	**Pn**	**15 46 46.7**	**+0.1**
KMRZ	**Kaimai**	**0.99**	**252**	P	**Pb**	**15 46 45.5**	**-0.7**
PUZ	**Puketiti**	**1.03**	**121**	P	**Pg**	**15 46 47.2**	**+0.1**
HSRZ	**Hossack Road**	**1.04**	**223**	P	**Pg**	**15 46 47.5**	**+0.3**
WMGZ	**Waiomatatini S**	**1.05**	**105**	P	**Pg**	**15 46 47.9**	**+0.5**
TKGZ	**Te Karaka**	**1.05**	**148**	P	**Pg**	**15 46 47.5**	**0.0**
TKGZ				S	**Sn**	**15 47 03.4**	**+1.3**
RTZ	**Ruatahuna**	**1.07**	**186**	Pn	**Pb**	**15 46 46.2**	**-1.4**
RTZ	**Ruatahuna**	**1.07**	**186**	P	**Pb**	**15 46 47.0**	**-0.6**
RTZ				S	**Sn**	**15 47 02.5**	**-0.2**
HRRZ	**Handcock Road**	**1.07**	**218**	P	**Pn**	**15 46 47.3**	**-0.7**
PRRZ	**Plateau Road**	**1.11**	**212**	P	**Pb**	**15 46 47.4**	**-0.9**
GRRZ	**Galatos Road**	**1.14**	**225**	P	**Pn**	**15 46 48.3**	**-0.5**
ALRZ	**Allen Road**	**1.19**	**212**	P	**Pn**	**15 46 48.7**	**-0.9**
SNGZ	**Shannon Statio**	**1.24**	**173**	P	**Pb**	**15 46 50.0**	**-0.5**
RIGZ	**Rimuhau**	**1.25**	**157**	P	**Pg**	**15 46 51.3**	**-0.1**
RIGZ				S	**Sg**	**15 47 11.7**	**+4.0**
CNGZ	**Carnagh Statio**	**1.26**	**138**	P	**Pg**	**15 46 51.9**	**+0.5**
TOZ	**Tahuroa Road**	**1.31**	**262**	Pn	**Pn**	**15 46 49.1**	**-2.0**
TOZ	**Tahuroa Road**	**1.31**	**262**	P	**Pn**	**15 46 49.7**	**-1.4**
MTHZ	**Maungataniwha**	**1.32**	**190**	P	**Pn**	**15 46 50.6**	**-0.7**
RAHZ	**Arahi**	**1.36**	**182**	P	**Pn**	**15 46 51.5**	**-0.5**
KUZ	**Kuaotunu**	**1.39**	**305**	P	**Pn**	**15 46 50.2**	**-2.0**
KUZ	**Kuaotunu**	**1.39**	**305**	S	**Sn**	**15 47 08.7**	**-1.6**
KUZ	**Kuaotunu**	**1.39**	**305**	P	**Pn**	**15 46 50.1**	**-2.0**
KUTZ	**Kaahu Road**	**1.40**	**227**	P	**Pn**	**15 46 51.8**	**-0.6**
MRHZ	**Matea Rd**	**1.40**	**204**	P	**Pn**	**15 46 51.5**	**-1.0**
WHTZ	**Whakaora**	**1.45**	**219**	P	**Pb**	**15 46 53.4**	**-0.7**
TLZ	**Tolley Road**	**1.48**	**238**	P	**Pn**	**15 46 52.5**	**-1.0**
PRGZ	**Paritu Road**	**1.49**	**157**	P	**Pg**	**15 46 55.0**	**-0.8**
WHHZ	**Waihua**	**1.53**	**177**	P	**Pg**	**15 46 55.5**	**-1.1**
KNZ	**Kokohu**	**1.53**	**164**	P	**Pg**	**15 46 55.4**	**-1.2**
NMHZ	**Naumai**	**1.57**	**189**	P	**Pb**	**15 46 54.7**	**-1.3**
WATZ	**Wairara**	**1.60**	**223**	P	**Pg**	**15 46 57.0**	**-0.9**
MKAZ	**Moumakai**	**1.64**	**285**	P	**Pn**	**15 46 54.2**	**-1.4**
BKZ	**Black Stump Fm**	**1.69**	**197**	Pn	**Pn**	**15 46 54.8**	**-1.7**
BKZ	**Black Stump Fm**	**1.69**	**197**	P	**Pn**	**15 46 55.4**	**-1.0**

BKZ	Black Stump Fm	1.69	197	P	Pn	15 46 55.5	-1.0
RATZ	Rangitukua	1.70	219	P	Pg	15 46 59.2	-0.6
MHGZ	Mahia Peninsul	1.71	159	P	Pb	15 46 57.9	-0.6
ARHZ	Aropaoanui	1.71	184	P	Pb	15 46 57.7	-0.9
WIAZ	Waiheke Island	1.77	295	P	Pn	15 46 56.3	-1.1
ETAZ	East Tamaki Re	1.86	288	P	Pn	15 46 57.9	-0.8
GRZ	Great Barrier	1.87	313	P	Pn	15 46 57.4	-1.4
MCHZ	McNeill Hill	1.92	190	P	Pb	15 47 00.8	-1.3
NTVZ	North Tongarir	1.93	216	P	Pb	15 47 02.1	-0.1
ETVZ	East Tongariro	1.94	215	P	Pn	15 46 59.9	-0.1
MBAZ	Motutapu North	1.95	293	P	Pn	15 46 59.2	-0.7
KWHZ	Kaweka Forest	1.95	196	P	Pn	15 46 59.9	-0.2
NNVZ	North Ngauruho	1.98	217	P	Pg	15 47 04.0	-1.2
EPAZ	Eden Park BICE	2.02	289	P	Pn	15 47 00.7	-0.2
HIZ	Hauiti	2.04	241	P	Pn	15 47 00.7	-0.5
HIZ	Hauiti	2.04	241	P	Pn	15 47 00.8	-0.5
HBAZ	Herne Bay Bore	2.04	289	P	Pn	15 47 01.0	-0.2
AWAZ	Awhitu Peninsu	2.05	283	P	Pn	15 47 00.7	-0.5
COVZ	Chateau Observ	2.07	217	P	Pb	15 47 05.0	+0.3
FWVZ	Far West T-bar	2.11	216	P	Pn	15 47 02.5	+0.1
WTAZ	Waiatarua	2.13	286	P	Pn	15 47 02.3	-0.3
KHEZ	Kahui Hut	3.01	234	P	Pn	15 47 16.8	+2.2
BFZ	Birch Farm	3.20	192	P	Pn	15 47 15.9	-1.3
OUZ	Omahuta	3.68	308	P	Pn	15 47 23.4	-0.4
MSWZ	Moikau Station	4.13	200	Pn	Pn	15 47 28.2	-1.7
SNZO	South Karori	4.20	206	P	Pn	15 47 30.8	-0.1
PLWZ	Palliser	4.27	199	Pn	Pn	15 47 28.9	-3.0
TUWZ	Tuamarina	4.59	212	Pn	Pn	15 47 35.3	-0.9
QRZ	Quartz Range	4.85	226	Pn	Pn	15 47 40.5	+0.8
QRZ	Quartz Range	4.85	226	P	Pn	15 47 40.6	+0.8
KHZ	Kahutara	5.59	208	P	Pn	15 47 48.7	-1.2
INZ	Inchbonnie	6.76	218	Pn	Pn	15 48 07.1	+1.1
RPZ	Rata Peaks	7.70	215	Pn	Pn	15 48 19.7	+0.7
	0.3nm,0.3s,baz=211,slow=22,SNR=1.9						
RPZ				Sn	Sn	15 49 40.1	-5.9
	0.5nm,0.3s,baz=300,slow=23,SNR=1.2						
	7.7nm,0.8s						
CTZ	Chatham Island	7.79	144	P	Pn	15 48 20.4	+0.2
ODZ	Otahua Downs	8.94	211	P	Pn	15 48 37.6	+1.7
DZM	Mont Dzumac	17.98	326	LR	LR	15 56 15.9	
	comp=Z,353nm,19.2s,baz=150,slow=33						
STKA	Stephens Creek	29.64	270	P	P	15 52 34.1	+1.8
	5.0nm,0.9s,baz=103,slow=9.9,SNR=8.0						
STKA				LR	LR	16 03 09.2	
	comp=Z,137nm,19.5s,baz=69,slow=34						
	5.0nm,0.9s						
HNR	Honiara	32.01	327	LR	LR	16 03 41.4	
	comp=Z,83nm,18.4s,baz=198,slow=32						
AS31	Alice Springs	39.36	278	P	P	15 53 57.8	+1.3
ASAR	Alice Springs	39.36	278	P	P	15 53 57.9	+1.5
ASAR	Alice Springs	39.36	278	P	P	15 53 58.1	+1.7
	4.5nm,0.9s,baz=123,slow=8.2,SNR=36						
ASAR				PcP	PcP	15 56 05.0	+0.2
	0.2nm,0.8s,baz=104,slow=4.0,SNR=1.3						
ASAR				LR	LR	16 09 31.9	
	comp=Z,85nm,19.6s,baz=111,slow=35						
	4.5nm,0.9s						
VNDA	Vanda	40.61	185	LR	LR	16 09 37.9	
	comp=Z,40nm,18.8s,baz=308,slow=34						
FORT	Forrest	40.79	265	P	P	15 54 09.9	+1.8
WR8	Warramunga Arr	40.89	283	P	P	15 54 10.1	+0.9
WR8				IAmb	IAmb	15 54 11.7	
	comp=Z,12nm,1.1s						
WRAB	Tennant Creek	41.02	283	P	P	15 54 10.8	+0.6
WRAB				IAmb	IAmb	15 54 13.1	
	comp=Z,16nm,1.2s						
WRA	Warramunga Arr	41.02	283	P	P	15 54 11.5	+1.3
WRA	Warramunga Arr	41.02	283	P	P	15 54 11.4	+1.1
	comp=Z,6.4nm,0.9s,baz=125,slow=7.5,SNR=22						
WRA				LR	LR	16 11 12.9	
	comp=Z,101nm,18.0s,baz=34,slow=36						
	comp=Z,6.4nm,0.9s						
WB0	Warramunga Arr	41.08	283	P	P	15 54 11.5	+0.8
WB0				IAmb	IAmb	15 54 13.2	
	comp=Z,8.5nm,0.9s						
CASY	Casey	46.94	211	P	P	15 54 57.9	+0.8
NWAO	Narrogin (SRO)	48.43	257	LR	LR	16 14 51.8	
	comp=Z,48nm,18.8s,baz=202,slow=35						
QSPA	South Pole Qui	52.57	180	P	P	15 55 41.7	+1.5
QSPA				IAmb	IAmb	15 55 57.1	
	comp=Z,5.8nm,1.3s						
QSPA	South Pole Qui	52.57	180	P	P	15 55 41.3	+1.1
	comp=Z,1.9nm,1.0s,baz=192,slow=1.8,SNR=8.0						
QSPA				LR	LR	16 15 43.2	
	comp=Z,54nm,18.8s,baz=42,slow=33						
	comp=Z,1.9nm,1.0s						
BATI	Baumata	55.07	285	LR	LR	16 21 02.9	
	comp=Z,263nm,18.2s,baz=162,slow=38						
KAPI	Kappang	61.35	287	LR	LR	16 24 01.5	
	comp=Z,84nm,18.7s,baz=92,slow=37						
MAW	Mawson	64.19	203	P	P	15 57 00.7	-0.4
	comp=Z,4.0nm,0.9s,baz=95,slow=9.3,SNR=4.3						
	comp=Z,4.0nm,0.9s						
SNAA	Sanae	71.08	180	⇓P	P	15 57 44.5	-0.1
	comp=Z,24nm,0.8s						
SNAA	Sanae	71.08	180	P	P	15 57 43.5	-1.1
SNAA				IAmb	IAmb	15 57 56.0	
	comp=Z,2.4nm,1.1s						
SNAA	Sanae	71.08	180	P	P	15 57 44.3	-0.3
	comp=Z,1.6nm,1.0s,baz=171,slow=8.8,SNR=3.9						
	comp=Z,1.6nm,1.0s						
VNA3	Neumayer Olymp	71.40	178	⇓P	P	15 57 45.7	-0.8
	comp=Z,1.0nm,0.8s						
VNA2	Neumayer--Watz	71.78	178	⇓P	P	15 57 48.9	+0.1
	comp=Z,1.6nm,0.7s,baz=178,slow=4.6						
VNA1	Neumayer--Stat	72.03	178	⇓P	P	15 57 47.1	-3.2
	comp=Z,3.4nm,0.8s						
HHC	Hu-ho-hao-te	98.40	316	*e*P	Pdif	16 00 07.4	+2.6
ARCES	ARCESS Array B	144.50	343	PKPdf	PKPbc	16 06 00.3	-0.5
ARCES	ARCESS Array B	144.50	343	PKP	PKPdf	16 06 01.4	-0.7
	comp=Z,1.5nm,0.7s,baz=39,slow=3.5,SNR=6.2						
DBIC	Dimbokro	149.21	176	PKPbc	PKiKP	16 06 16.6	-0.5
	comp=Z,4.2nm,1.0s,baz=242,slow=2.9,SNR=4.3						
FINES	FINESS Array B	150.05	332	PKPbc	PKiKP	16 06 16.5	-0.9
TORD	Torodi Ar. Bea	155.36	191	PKPab	PKPab	16 06 44.5	-1.5
	comp=Z,114nm,0.3s,baz=187,slow=3.3,SNR=1.6						

IDC 19 15:52:46.3±7.4**, 30°.56S**×**177°.63W, h0^{km}, mb3.4**/2**,**
mbtmp3.4/2**, Error ellipse: s-maj=305.2km**
s-min=62.6km az=155.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.42	267	P	P	16 00 51.0	-0.1
	0.2nm,0.5s,baz=105,slow=7.2,SNR=10						
	0.2nm,0.5s						
WRA	Warramunga Arr	44.42	272	P	P	16 00 59.0	-0.2
	0.3nm,0.4s,baz=114,slow=8.2,SNR=8.2						
	0.3nm,0.4s						
FINES	FINESS Array B	145.40	340	PKPbc	PKPbc	16 12 24.5	-0.9
	1.1nm,0.8s,baz=57,slow=5.1,SNR=1.4						

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*IDC **19** 15:53:42.3±0.5, 54°.98N×164°.62E, h0^{km}, mb4.3/31,*
mbtmp4.3/37, ML4.5/5, MS3.9/50, Error ellipse:
s-maj=13.9km s-min=9.7km az=171.0

*KRSC **19** 15:53:43.6±1.5, 54°.80N×164°.59E, h51^{km}±29^{km}, Mc4.7,*
Ml5.2, Felt [IV] at kordon Aerodrom; [III] at Nikolskoe.

*NEIC **19** 15:53:43.4±1.8, 54°.90N±0°.09×164°.7E±0°.1, h10^{km}±1^{km},*
mb4.8/332, Error ellipse: s-maj=14.5km s-min=10.8km
az=178.0

*MOS **19** 15:53:45.3±0.9, 54°.82N×164°.68E, h39^{km}, mb4.9/45,*
MS4.1/9, Error ellipse: s-maj=4.8km s-min=3.8km az=96.6

*GCMT **19** 15:53:49.4±0.4, 54°.81N±0°.02×164°.63E±0°.03, h32^{km}±1^{km},*
MW4.8/72, Moment Tensor Solution. s15,c18; s72,c100;
Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.80±.16;
M$_{\theta\theta}$-0.85±.10; M$_{\phi\phi}$1.66±.10; M$_{r\theta}$-1.02±.14; M$_{\theta\phi}$0.87±.07;
M$_{\phi r}$0.00±.10; Best double couple: M$_0$1.96600×10^{16}
NP1:φ$_s$160.00000°, δ57.00000°, λ-153.00000°. NP2:
φ$_s$55.00000°, δ68.00000°, λ-36.00000°. Principal axes: T
1.9700, Plg7.0000°, Azm110.0000°; N -0.0050,
Plg49.0000°, Azm208.0000°; P -1.9630, Plg41.0000°,
Azm14.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s. Triangular
moment-rate function

*BGR **19** 15:53:53.6, 56°.10N×164°.40E, h33^{km}, mb4.7*

ISC 19 15:53:46.0±0.5**, 54°.81N**±0°.04×**164°.68E**±0°.03**, h31**^{km}±3^{km}**,**
h31^{km}:pP-P, n871, σ1^{s}.06/764**, mb4.8**/261**, MS4.0**/70**,**
11C-17D, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	0.84	61	PN	Pn	15 54 01.1	-0.5
BKI				S	Sn	15 54 12.0	-0.9
BKI	Bering	0.84	61	*e*P	Pn	15 54 01.2	-0.5
BKI				*e*S	Sn	15 54 12.0	-0.9
MKZ	Mys Kozlova	1.73	263	PN	Pn	15 54 13.0	-0.9
MKZ	Mys Kozlova	1.73	263	*e*P	Pn	15 54 13.1	-0.9
KBTR	Krutoberegovo	1.76	324	PN	Pn	15 54 12.1	-2.2
KBTR	Krutoberegovo	1.76	324	*e*P	Pn	15 54 12.1	-2.2
KBG	Krutoberegovo	1.83	323	PN	Pn	15 54 13.9	-1.4
KBG				S	Sn	15 54 34.4	-3.0
KBG	Krutoberegovo	1.83	323	*e*P	Pn	15 54 13.9	-1.4
KBG				*e*S	Sn	15 54 34.4	-3.0
TUMD	Tumrok D	2.50	281	PN	Pn	15 54 24.1	-0.4
TUMD				S	Sn	15 54 53.8	-0.1
TUMD	Tumrok D	2.50	281	*e*P	Pn	15 54 24.2	-0.4
TUMD				*e*S	Sn	15 54 53.8	-0.1
ZLN	Zelenaya	2.52	300	PN	Pn	15 54 24.9	+0.1
ZLN	Zelenaya	2.52	300	*e*P	Pn	15 54 25.0	+0.1
BZGR	Bezymyannyi-Gr	2.54	298	PN	Pn	15 54 25.3	+0.2
BZGR	Bezymyannyi-Gr	2.54	298	*e*P	Pn	15 54 25.4	+0.2
SMKR	Semkarok	2.54	316	PN	Pn	15 54 24.4	-0.7
SMKR				S	Sn	15 54 55.6	+0.6
SMKR	Semkarok	2.54	316	*e*P	Pn	15 54 24.5	-0.7
SMKR				*e*S	Sn	15 54 55.6	+0.6
CIRR	Tsirk	2.59	302	PN	Pn	15 54 26.4	+0.5
CIRR	Tsirk	2.59	302	*e*P	Pn	15 54 26.5	+0.5
LGNR	Loginova	2.61	301	PN	Pn	15 54 26.9	+0.7
LGNR	Loginova	2.61	301	*e*P	Pn	15 54 26.9	+0.7
BDR	Baidarnaya	2.64	313	PN	Pn	15 54 27.3	+0.8
BDR	Baidarnaya	2.64	313	*e*P	Pn	15 54 27.3	+0.8
BZMR	Bezymyannaya	2.65	297	PN	Pn	15 54 26.5	-0.1
BZMR	Bezymyannaya	2.65	297	*e*P	Pn	15 54 26.5	-0.1
BZWR	Bezymyannyi-We	2.65	298	PN	Pn	15 54 26.9	+0.2
BZWR	Bezymyannyi-We	2.65	298	*e*P	Pn	15 54 26.9	+0.2
KMNR	Kamenistaya	2.71	292	PN	Pn	15 54 27.8	+0.3
KMNR	Kamenistaya	2.71	292	*e*P	Pn	15 54 27.9	+0.3
SRKR	Sorokina	2.71	314	PN	Pn	15 54 29.0	+1.5
SRKR	Sorokina	2.71	314	*e*P	Pn	15 54 29.1	+1.5
KIRR	Kirishev	2.73	297	PN	Pn	15 54 28.0	+0.3
KIRR				S	Sn	15 55 00.3	+0.6
KIRR	Kirishev	2.73	297	*e*P	Pn	15 54 28.1	+0.3
KIRR				*e*S	Sn	15 55 00.4	+0.6
KRSR	Krestovskiy	2.73	303	PN	Pn	15 54 27.8	0.0
KRSR	Krestovskiy	2.73	303	*e*P	Pn	15 54 27.9	0.0
KLY	Klyuchi	2.74	305	PN	Pn	15 54 26.0	-1.7
KLY				S	Sn	15 54 57.3	-2.4
KLY	Klyuchi	2.74	305	*e*P	Pn	15 54 26.0	-1.7
KLY				*e*S	Sn	15 54 57.4	-2.4
KPT	Kopyto	2.80	296	PN	Pn	15 54 29.2	+0.6
KPT	Kopyto	2.80	296	*e*P	Pn	15 54 29.3	+0.6
KOZ	Kozyrevsk	3.01	296	PN	Pn	15 54 32.4	+0.9
KOZ				S	Sn	15 55 07.8	+1.3
KOZ	Kozyrevsk	3.01	296	*e*P	Pn	15 54 32.4	+0.9
KOZ				*e*S	Sn	15 55 07.9	+1.3
KII	Karymskiy	3.15	258	PN	Pn	15 54 33.8	+0.3
KII				S	Sn	15 55 09.5	-0.6
KII	Karymskiy	3.15	258	*e*P	Pn	15 54 33.8	+0.3
KII				*e*S	Sn	15 55 09.6	-0.6
SRDR	Sredinnyy	3.20	300	PN	Pn	15 54 35.3	+1.2
SRDR	Sredinnyy	3.20	300	*e*P	Pn	15 54 35.4	+1.2
SPN	Mys Shipunski	3.24	240	PN	Pn	15 54 34.2	-0.5
SPN	Mys Shipunski	3.24	240	*e*P	Pn	15 54 34.3	-0.5
SPN				*e*S	Sn	15 55 08.3	-3.9
ESO	Esso	3.59	291	PN	Pn	15 54 39.1	-0.4
ESO	Esso	3.59	291	*e*P	Pn	15 54 39.2	-0.4
SDLR	Sedlovina	3.75	248	PN	Pn	15 54 42.0	+0.3
SDLR	Sedlovina	3.75	248	*e*P	Pn	15 54 42.0	+0.3
SDLR				*e*S	Sn	15 55 23.3	-1.5
SMAR	Somma	3.80	248	PN	Pn	15 54 43.2	+0.7
SMAR				S	Sn	15 55 24.9	-1.3
SMAR	Somma	3.80	248	*e*P	Pn	15 54 43.3	+0.7
SMAR				*e*S	Sn	15 55 24.9	-1.3
KRER	Koryakskii	3.81	249	PN	Pn	15 54 43.8	+1.2
KRER				S	Sn	15 55 25.6	-0.8
KRER	Koryakskii	3.81	249	*e*P	Pn	15 54 43.8	+1.2
KRER				*e*S	Sn	15 55 25.6	-0.8
UGLR	Uglovaya	3.81	247	PN	Pn	15 54 43.0	+0.4
UGLR	Uglovaya	3.81	247	*e*P	Pn	15 54 43.1	+0.4
UGLR				*e*S	Sn	15 55 24.7	-1.7
AVH	Avacha	3.83	249	PN	Pn	15 54 43.6	+0.7
AVH	Avacha	3.83	249	*e*P	Pn	15 54 43.6	+0.7
AVH				*e*S	Sn	15 55 25.4	-1.4
KRX	Arik	3.84	250	PN	Pn	15 54 43.6	+0.6
KRX				S	Sn	15 55 26.4	-0.7
KRX	Arik	3.84	250	*e*P	Pn	15 54 43.7	+0.6
KRX				*e*S	Sn	15 55 26.4	-0.7
KOK	Koryaka	3.88	249	PN	Pn	15 54 44.2	+0.8
KOK	Koryaka	3.88	249	*e*P	Pn	15 54 44.3	+0.8
KOK				*e*S	Sn	15 55 26.2	-1.7
DALK	Dalny	3.93	245	PN	Pn	15 54 44.2	+0.1
DALK	Dalny	3.93	245	*e*P	Pn	15 54 44.3	+0.1
DALK				*e*S	Sn	15 55 26.5	-2.7
PET	Petropavlovsk	3.99	246		Pn	15 54 45.5	+0.6
PET	Petropavlovsk	3.99	246	*e*PN	Pn	15 54 45.1	+0.2
PET				MLR	MLR		
	comp=Z,500nm,11.0s						
PET				MLR	MLR		
	comp=Z,800nm,15.0s						
PET	Petropavlovsk	3.99	246	*e*P	Pn	15 54 45.7	+0.8
PET				*e*S	Sn	15 55 28.5	-2.1
PET	Petropavlovsk	3.99	246	Pn	Pn	15 54 45.5	+0.6
INSR	Institute	3.99	247	PN	Pn	15 54 45.9	+0.9
INSR	Institute	3.99	247	*e*P	Pn	15 54 45.9	+0.9
INSR				*e*S	Sn	15 55 28.7	-2.0
KRMR	Karymshinskiy	4.36	246	PN	Pn	15 54 51.0	+1.0
KRMR	Karymshinskiy	4.36	246	*e*P	Pn	15 54 51.1	+1.0
KRMR				*e*S	Sn	15 55 38.5	-1.2
RUS	Russkaya	4.38	240	PN	Pn	15 54 50.7	+0.5
RUS	Russkaya	4.38	240	*e*P	Pn	15 54 50.8	+0.5
RUS				*e*S	Sn	15 55 36.9	-3.2
PEA0B	Petropavlovsk-	4.46	250	Pn	Pn	15 54 52.0	+0.5
PEA0B	Petropavlovsk-	4.46	250	*c i*PN	Pn	15 54 52.4	+0.9
PETK	Petropavlovsk-	4.46	250	Pn	Pn	15 54 50.7	-0.8
PETK	Petropavlovsk-	4.46	250	Pn	Pn	15 54 51.4	0.0
	comp=Z,58nm,0.3s,baz=69,slow=17,SNR=701						
PETK				Sn	Sn	15 55 42.4	+0.1
	comp=Z,64nm,0.3s,baz=89,slow=4.3,SNR=4.4						
	comp=Z,103nm,0.5s						
MTVR	Mutnovka	4.52	242	PN	Pn	15 54 52.7	+0.4
MTVR	Mutnovka	4.52	242	*e*P	Pn	15 54 52.8	+0.4
GRL	Gorelyy	4.53	243	PN	Pn	15 54 53.6	+1.1
GRL	Gorelyy	4.53	243	*e*P	Pn	15 54 53.7	+1.1
OSSR	Ossora	4.54	349	PN	Pn	15 54 52.1	-0.3
OSSR	Ossora	4.54	349	*e*P	Pn	15 54 52.2	-0.3
ASAK	Asacha	4.71	242	PN	Pn	15 54 56.3	+1.4
ASAK	Asacha	4.71	242	*e*P	Pn	15 54 56.4	+1.4
ASAK				*e*S	Sn	15 55 47.6	-1.0
APC	Apacha	4.84	250	PN	Pn	15 54 58.2	+1.6
APC	Apacha	4.84	250	*e*P	Pn	15 54 58.2	+1.6
PALN	Palana	5.01	331	PN	Pn	15 54 59.0	+0.2
PALN	Palana	5.01	331	*e*P	Pn	15 54 59.0	+0.2
MIPR	Malaya Ipel'ka	5.36	245	PN	Pn	15 55 05.9	+2.1
MIPR	Malaya Ipel'ka	5.36	245	*e*P	Pn	15 55 05.9	+2.1
TILK	Tilichiki	5.71	7	PN	Pn	15 55 10.0	+1.5
TILK	Tilichiki	5.71	7	*e*P	Pn	15 55 10.0	+1.5
PAU	Pauzhetka	5.80	238	PN	Pn	15 55 11.0	+1.2
PAU	Pauzhetka	5.80	238	*e*P	Pn	15 55 11.0	+1.2
SHEM	Shemya Is, Ala	5.96	107	Pn	Pn	15 55 12.1	+0.2
SHEM	Shemya Is, Ala	5.96	107	Pn	Pn	15 55 12.7	+0.7
	comp=Z,20nm,0.3s,baz=256,slow=3.2,SNR=20						
SHEM				Sn	Sn	15 56 16.7	-2.4
	comp=Z,3.9nm,0.3s,baz=292,slow=20,SNR=1.8						
	comp=Z,38nm,0.3s						
SMY	Shemya	5.96	107	Pn	Pn	15 55 12.2	+0.2
SMY	Shemya	5.96	107	PN	Pn	15 55 12.2	+0.2
SKR	Severo-Kuril's	6.64	235	*e*PN	Pn	15 55 22.6	+1.3
SKR				pmax	pmax		
	comp=Z,127nm,0.6s						
SKR				MLR	MLR		
	comp=Z,1µm,13.0s						
SKR	Severo-Kuril's	6.64	235	*e*P	Pn	15 55 21.9	+0.6
KMSK	Kamenskaya	7.72	5	PN	Pn	15 55 36.8	+0.7
KMSK	Kamenskaya	7.72	5	*e*P	Pn	15 55 36.8	+0.7
MA2	Magadan	8.93	308	Pn	Pn	15 55 54.0	+1.3
MA2	Magadan	8.93	308	Pn	Pn	15 55 52.7	0.0
	comp=Z,0.8nm,0.3s,baz=108,slow=11,SNR=8.6						
MA2				LR	LR	15 59 45.5	
	comp=Z,802nm,18.2s,baz=117,slow=41						
	comp=Z,7.5nm,0.7s						
MA2	Magadan	8.93	308	*ce*PN	Pn	15 55 54.8	+2.1
MA2				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MA2	Magadan	8.93	308	Pn	Pn	15 55 53.4	+0.7
	comp=Z,13nm,0.7s						
AMKA	Amchitka	9.44	105	Pn	Pn	15 56 00.1	+0.3
SEY	Seymchan	10.32	327	Pn	Pn	15 56 10.7	-0.9
	comp=Z,2.0nm,0.9s,baz=150,slow=12,SNR=7.4						
SEY				LR	LR	16 00 30.1	
	comp=Z,552nm,20.4s,baz=127,slow=40						
SEY	Seymchan	10.32	327	⇓*e*PN	Pn	15 56 14.4	+2.7
SEY				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KIWB	Kanaga Island	11.26	98	Pn	Pn	15 56 25.4	+0.9
ADK	Adak	11.51	97	Pn	Pn	15 56 26.5	-1.5
ADK	Adak	11.51	97	PN	Pn	15 56 26.5	-1.5
ATKA	Atka Island	12.83	93	Pn	Pn	15 56 46.6	+0.6
BILL	Bilibino	13.30	3	*d i*PN	Pn	15 56 54.6	+2.3
BILL				pmax	pmax		
	comp=Z,19nm,1.3s						
TYV	Tymovskoe	13.87	263	*e*P	Pn	15 57 02.2	+2.0
TYV				*e*S	Sn	15 59 36.0	+3.0
TYV				pmax	pmax		
	comp=Z,10.0nm,1.4s						
TYV				pmax	pmax		
	comp=Z,100nm,3.1s						
TYV				smax	smax		
	comp=N,100nm,2.6s						
TYV				smax	smax		
	comp=E,200nm,2.6s						
TYV				smax	smax		
	comp=N,9.0nm,1.7s						
TYV				smax	smax		
	comp=E,11nm,1.7s						
SPIA	Saint Paul Isl	14.20	70	P	Pn	15 57 03.0	-1.7
	baz=271						
P08K	Saint George I	14.61	72	P	Pn	15 57 09.3	-0.9
	baz=274						
GAMB	Gambell	14.95	44	P	Pn	15 57 13.4	-1.3
	baz=244						
NIKH	Nikolski High	15.68	86	Pn	Pn	15 57 25.7	+1.3
NIKH				IAmb	IAmb	15 57 26.7	
	comp=Z,38nm,1.0s						
NIKH	Nikolski High	15.68	86	P	Pn	15 57 24.5	+0.1
	baz=288						
YSS	Yuzhno-Sakhali	15.87	249	P	P	15 57 29.6	-0.7
YSS	Yuzhno-Sakhali	15.87	249	⇓*e*P	Pn	15 57 25.3	-1.5
SHO	Shikotan	15.92	234	*e*P	Pn	15 57 23.4	-4.2
SHO				pmax	pmax		
	comp=Z,14nm,0.6s						
SHO				pmax	pmax		
	comp=N,4.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,5.0nm,0.2s						
YUK	Yuzh-Kuril'sk	16.26	236	*e*P	Pn	15 57 30.7	-1.2
YUK				pmax	pmax		
	comp=Z,85nm,0.3s						
YUK				pmax	pmax		
	comp=N,13nm,0.2s						
YUK				pmax	pmax		
	comp=E,24nm,0.4s						
M11K	Mekoryuk	16.48	58	P	Pn	15 57 33.2	-1.3
	baz=263						
RUSJ	Misakicho	16.50	238	*e*P	Pn	15 57 34.3	-0.7
UNV	Unalaska Valle	16.79	81	P	P	15 57 41.6	+1.3
UNV	Unalaska Valle	16.79	81	P	Pn	15 57 38.2	-0.2
	baz=285						
NMR	Nemuro--Hokkai	16.82	235	*e*P	Pn	15 57 33.2	-5.8
TNA	Tin City	17.19	40	P	P	15 57 45.3	+0.5
TNA	Tin City	17.19	40	P	Pn	15 57 42.6	-0.8
	baz=244						
K13K	Kusilvak Mount	17.45	54	P	P	15 57 48.6	+0.8
K13K	Kusilvak Mount	17.45	54	P	Pn	15 57 46.6	-0.1
	baz=260,SNR=7.4						
GRNR	Gornyy	17.50	268	⇓*i*P	Pn	15 57 48.3	+0.8
GRNR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GRNR				MLR	MLR		
	comp=N,360nm,15.0s						
GRNR				MLR	MLR		
	comp=Z,150nm,13.0s						
F14K	Arctic Creek	17.76	42	P	Pn	15 57 50.6	+0.1
	baz=247						
ANM	Nome	17.81	45	P	P	15 57 52.7	+1.0
ANM	Nome	17.81	45	P	P	15 57 52.7	+1.0
ANM				pmax	pmax		
	comp=Z,41nm,1.6s						
ANM	Nome	17.81	45	P	Pn	15 57 50.9	-0.2
	baz=251						
JKA	Kamikawa-asahi	17.82	242		Pn	15 57 52.0	+0.6
ASAJ	Asahikawa	17.82	242	P	Pn	15 57 52.3	+0.8
	comp=Z,1.0nm,0.3s,baz=70,slow=11,SNR=23						
ASAJ				LR	LR	16 04 18.3	
	comp=Z,296nm,19.5s,baz=47,slow=36						
	comp=Z,8.8nm,0.6s						
ASAJ	Asahikawa	17.82	242	P	Pn	15 57 52.0	+0.6
ASAJ				pmax	pmax		
	comp=Z,18nm,0.7s						
M13K	Dall Lake	17.89	59	P	Pn	15 57 52.7	+0.5
	baz=266						
J14K	Nanvaranak Lak	18.11	51		P	15 57 55.7	+0.7
J14K	Nanvaranak Lak	18.11	51	P	P	15 57 55.7	+0.7
	baz=259,SNR=6.2						
L14K	Kuka Creek	18.30	56	P	Pn	15 57 57.6	+0.5
L14K	Kuka Creek	18.30	56	P	Pn	15 57 58.2	+1.1
	baz=264						
G15K	Niukluk	18.49	44	P	Pn	15 58 00.0	+0.6
	baz=252,SNR=7.3						
F15K	North Star Dit	18.50	42	P	Pn	15 57 59.5	0.0
F15K	North Star Dit	18.50	42	P	Pn	15 58 00.4	+0.9
	baz=249,SNR=13						
M14K	Bethel	18.60	58	P	Pn	15 58 01.1	+0.4
M14K	Bethel	18.60	58	P	Pn	15 58 01.3	+0.5
	baz=266						
N14K	Kuskokwak Cree	18.70	60	P	Pn	15 58 02.5	+0.5
	baz=269						
L15K	Ungalak Mounta	18.91	55	P	Pn	15 58 04.9	+0.4
	baz=264						
O14K	Tigyukauivet M	18.92	63	P	P	15 58 04.5	+0.7
	baz=272						
K15K	Wolf Creek Mou	18.96	53	P	Pn	15 58 05.8	+0.6
K15K	Wolf Creek Mou	18.96	53	P	Pn	15 58 05.7	+0.6
	baz=262,SNR=11						
ERM	Erimo	19.08	237	P	P	15 58 06.5	+0.7
ERM				IAmb	IAmb	15 58 17.1	
	comp=Z,19nm,0.5s						
ERM	Erimo	19.08	237	*ce*P	P	15 58 04.8	-1.0
H16K	Elim	19.12	46	P	P	15 58 06.4	+0.4
	baz=255,SNR=10						
M15K	Kasigluk River	19.22	58	P	P	15 58 07.8	+0.6
	baz=268						
G16K	Koyuk River	19.29	44	P	P	15 58 08.1	+0.3
G16K	Koyuk River	19.29	44	P	Pn	15 58 08.6	-0.5
	baz=253						
C16K	Lisburne Hills	19.35	34		P	15 58 08.7	+0.2
C16K				IAmb	IAmb	15 58 10.2	
	comp=Z,38nm,0.9s						
C16K	Lisburne Hills	19.35	34	P	P	15 58 08.7	+0.2
	baz=241,SNR=20						
YAK	Yakutsk	19.50	306	P	P	15 58 08.9	-1.3
YAK				IAmb	IAmb	15 58 24.8	
	comp=Z,22nm,0.6s						
YAK	Yakutsk	19.50	306	P	P	15 58 07.9	-2.2
	comp=Z,2.1nm,0.3s,baz=121,slow=1.9,SNR=7.9						
YAK				LR	LR	16 06 15.2	
	comp=Z,463nm,18.1s,baz=98,slow=39						
	comp=Z,17nm,0.6s						
YAK	Yakutsk	19.50	306	*e*P	P	15 58 09.1	-1.0
YAK				*e*S	S	16 01 47.5	-0.9
YAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.0s						
YAK				smax	smax		
	comp=N,8.0nm,1.5s						
YAK				smax	smax		
	comp=E,9.0nm,1.0s						
N15K	Kwethluk River	19.50	60	P	Pn	15 58 11.7	0.0
	baz=270,SNR=12						
J16K	Anvik River	19.53	50	P	Pn	15 58 11.9	-0.1
	baz=260,SNR=6.6						
I17K	Unalakleet	19.60	49	P	P	15 58 11.7	+0.4
I17K				IAmb	IAmb	15 58 14.3	
	comp=Z,67nm,1.1s						

I17K	Unalakleet	19.60	49	P	Pn	15 58 12.7	-0.1
	baz=259,SNR=5.6						
O15K	Ungalikthiuk R	19.66	63	P	P	15 58 12.6	+0.6
	baz=273						
SDPT	Sand Point	19.83	74	P	Pn	15 58 16.1	+0.6
	baz=283						
D17K	Noatak River	19.85	37	P	P	15 58 14.3	+0.3
	baz=246,SNR=23						
L16K	Owhat River	19.87	55	P	P	15 58 14.9	+0.7
	baz=266						
G17K	Kiwalik Mounta	20.00	44	P	P	15 58 16.6	+1.0
	baz=254,SNR=18						
F17K	Baldwin Pennin	20.05	41	P	Pn	15 58 17.2	-0.9
	baz=251						
E17K	Hotham Inlet	20.06	39	P	Pn	15 58 17.4	-0.7
	baz=249,SNR=28						
RDOG	Red Dog Mine	20.06	36	P	P	15 58 16.5	+0.2
RDOG	Red Dog Mine	20.06	36	P	P	15 58 16.8	+0.5
	baz=245						
M16K	Timber Creek	20.08	57	P	Pn	15 58 18.1	-0.4
	baz=268,SNR=13						
S14K	Fog Glacier	20.15	71	P	P	15 58 18.3	+0.8
	baz=281						
C17K	DeLong Mountai	20.16	35	P	P	15 58 18.1	+0.7
	baz=243,SNR=14						
H17K	Granite Mounta	20.16	46	P	P	15 58 17.4	0.0
H17K				IAmb	IAmb	15 58 20.0	
	comp=Z,56nm,0.9s						
H17K	Granite Mounta	20.16	46	P	Pn	15 58 18.7	-0.7
	baz=257,SNR=45						
N16K	Nishlik Lake	20.16	59	P	P	15 58 18.5	+1.0
	baz=270						
J17K	VABM Dome	20.23	50	P	P	15 58 19.1	+0.9
J17K				IAmb	IAmb	15 58 24.9	
	comp=Z,71nm,1.1s						
J17K	VABM Dome	20.23	50	P	P	15 58 19.3	+1.2
	baz=262,SNR=39						
TEY	Ternei	20.42	253⇑	*e*P	Pn	15 58 22.9	+0.3
TEY				*e*		16 02 52.6	
TEY				pmax	pmax		
	comp=N,10.0nm,0.7s						
TEY				pmax	pmax		
	comp=E,20nm,0.7s						
TEY				pmax	pmax		
	comp=Z,30nm,0.7s						
CHNA	Chernabura Isl	20.45	75	P	P	15 58 20.8	+0.2
	baz=285						
L17K	Donlin	20.45	54	P	P	15 58 20.7	+0.2
	baz=266,SNR=5.9						
K17K	Iditarod	20.50	52	P	P	15 58 22.4	+1.3
	baz=264						
O16K	Kokwok River B	20.53	61	P	P	15 58 22.0	+0.6
	baz=273						
P16K	Nushagak River	20.61	63	P	P	15 58 23.3	+1.0
	baz=275						
E18K	Tukpahlearik C	20.62	39	P	P	15 58 23.5	+1.1
	baz=250						
F18K	Selawik	20.71	41	P	P	15 58 23.8	+0.6
	baz=253,SNR=18						
M17K	Holitna River	20.82	56	IAmb	IAmb	15 58 30.3	
	comp=Z,57nm,0.9s						
M17K	Holitna River	20.82	56	P	P	15 58 25.4	+0.7
	baz=269,SNR=15						
H18K	Honhosa River	20.85	46	P	P	15 58 25.8	+0.9
	baz=258						
C18K	Utukok River	20.89	35	IAmb	IAmb	15 58 30.0	
	comp=Z,37nm,0.9s						
C18K	Utukok River	20.89	35	P	P	15 58 25.8	+0.4
	baz=246,SNR=28						
KLR	Kul'dur	20.89	268	P	P	15 58 25.1	-0.3
	comp=Z,1.4nm,0.5s,baz=51,slow=11,SNR=7.8						
KLR				LR	LR	16 05 51.4	
	comp=Z,136nm,21.9s,baz=67,slow=35						
	comp=Z,1.4nm,0.5s						
KLR	Kul'dur	20.89	268⇑	*e*P	P	15 58 25.4	0.0
KLR				pmax	pmax		
	comp=Z,10.0nm,1.9s						
G18K	Tagagawik	20.90	43	IAmb	IAmb	15 58 27.7	
	comp=Z,33nm,1.1s						
G18K	Tagagawik	20.90	43	P	P	15 58 26.0	+0.5
	baz=256,SNR=24						
N17K	Nushagak Hills	20.95	59	P	P	15 58 26.7	+0.7
	baz=271,SNR=6.4						
B18K	Kokolik River	21.00	33	P	P	15 58 26.9	+0.4
	baz=243						
O17K	Koliganek Bris	21.02	61	P	P	15 58 27.5	+0.8
	baz=273						
JTM	Tenmabayashi	21.04	238	P	P	15 58 26.7	-0.3
L18K	Granite Mounta	21.21	54	IAmb	IAmb	15 58 31.3	
	comp=Z,35nm,1.2s						
L18K	Granite Mounta	21.21	54	P	P	15 58 29.6	+0.9
	baz=267,SNR=14						
J18K	Innoko River	21.29	51	IAmb	IAmb	15 58 32.0	
	comp=Z,59nm,1.0s						
J18K	Innoko River	21.29	51	P	P	15 58 30.1	+0.5
	baz=264,SNR=51						
GCSA	Galena City Sc	21.39	47	P	P	15 58 31.0	+0.3
	baz=261,SNR=12						
P17K	Kvichak River	21.40	62	P	P	15 58 30.6	-0.2
	baz=275,SNR=6.7						
F19K	Shaleruckik Mo	21.49	41	P	P	15 58 31.9	+0.2
	baz=254						
N18K	Kilae Creek	21.58	58	P	P	15 58 33.4	+0.6
	baz=272,SNR=11						
G19K	Purcell Mounta	21.59	43	P	P	15 58 32.8	+0.1
	baz=257,SNR=27						
M18K	Stony River	21.60	56	P	P	15 58 33.7	+0.8
	baz=270,SNR=7.9						
C19K	Lookout Ridge	21.61	35	IAmb	IAmb	15 58 34.5	
	comp=Z,58nm,1.1s						
C19K	Lookout Ridge	21.61	35	P	P	15 58 33.4	+0.4
	baz=247						
A19K	Wainwright	21.62	31	P	P	15 58 32.6	-0.4
	baz=242						
H19K	Roundabout Mou	21.71	45	IAmb	IAmb	15 58 37.6	
	comp=Z,44nm,1.1s						
H19K	Roundabout Mou	21.71	45	P	P	15 58 34.2	+0.1
	baz=259,SNR=26						
ZEA	Zeya	21.72	283	*e*P	P	15 58 37.1	+2.8
ZEA				MLR	MLR		
	comp=E,100nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,100nm,15.0s						
Q17K	Contact Creek	21.79	65	P	P	15 58 34.8	-0.3
	baz=278						
J19K	Poorman	21.83	49	IAmb	IAmb	15 58 38.8	
	comp=Z,32nm,0.9s						
J19K	Poorman	21.83	49	P	P	15 58 35.2	-0.2
	baz=264,SNR=41						
E19K	Redstone River	21.87	40	P	P	15 58 36.2	+0.4
E19K				IAmb	IAmb	15 58 39.2	
	comp=Z,59nm,1.1s						
E19K	Redstone River	21.87	40	P	P	15 58 36.2	+0.4
	baz=254						
D19K	Kuna River	21.88	37	P	P	15 58 35.7	-0.2
	baz=250						
O18K	Koktuh Hills	21.97	60	P	P	15 58 36.4	-0.5
	baz=275,SNR=7.4						
P18K	Big Mountain,	22.00	62	P	P	15 58 37.5	+0.2
	baz=276,SNR=6.1						
L19K	White Mountain	22.07	54	P	P	15 58 38.5	+0.6
	baz=269,SNR=12						
Q18K	Katmai Hardscr	22.20	64	P	P	15 58 39.2	-0.3
	baz=278,SNR=7.6						
N19K	Bonanza Creek	22.27	58	P	P	15 58 39.4	-0.8
	baz=273,SNR=5.5						
M19K	Big River Lodg	22.28	55	P	P	15 58 40.2	-0.1
	baz=270						
F20K	Avaraart Lake	22.33	41	IAmb	IAmb	15 58 43.0	
	comp=Z,32nm,1.1s						
F20K	Avaraart Lake	22.33	41	P	P	15 58 40.5	-0.2
	baz=256,SNR=53						
H20K	Anotleneega Mo	22.35	45	P	P	15 58 41.3	+0.3
	baz=261,SNR=40						
CHIR	Chirikof Islan	22.40	71	P	P	15 58 41.1	-0.5
	baz=284						
I20K	Naaghedeneel	22.42	47	P	P	15 58 41.3	-0.4
	baz=263						
D20K	Etivluk River	22.47	37	P	P	15 58 41.8	-0.4
D20K				IAmb	IAmb	15 58 44.2	
	comp=Z,47nm,1.1s						
D20K	Etivluk River	22.47	37	P	P	15 58 41.9	-0.4
	baz=251						
K20K	Telida	22.47	51	IAmb	IAmb	15 58 44.9	
	comp=Z,25nm,1.0s						
K20K	Telida	22.47	51	P	P	15 58 42.4	+0.2
	baz=267						
E20K	Nigu River	22.48	38	P	P	15 58 42.2	-0.2
	baz=253						
J20K	Nowinta River	22.50	49	IAmb	IAmb	15 58 45.5	
	comp=Z,39nm,0.9s						
J20K	Nowinta River	22.50	49	P	P	15 58 42.5	0.0
	baz=265,SNR=56						
L20K	Farewell, AK	22.53	53	P	P	15 58 42.8	-0.1
	baz=269						
R18K	Karluk	22.66	66	P	P	15 58 43.1	-1.2
	baz=281						
B20K	Meade River	22.75	33	P	P	15 58 44.5	-0.5
	baz=248,SNR=44						
TIXI	Tiksi	22.76	331	P	P	15 58 44.5	-0.8
TIXI	Tiksi	22.76	331	LR	LR	16 07 51.1	
	comp=Z,251nm,20.4s,baz=158,slow=38						
TIXI	Tiksi	22.76	331⇓	*i*P	P	15 58 46.6	+1.4
TIXI				pmax	pmax		
	comp=Z,22nm,1.0s						
Q19K	Cape Douglas,	22.86	63	P	P	15 58 46.1	-0.4
	baz=278						
M20K	Styx River	22.88	55	P	P	15 58 46.4	-0.3
	baz=271,SNR=8.8						
IMAR	Indian Mountai	22.89	44	P	P	15 58 46.3	-0.4
HEH	HeiHe	22.94	274	*e*P	P	15 58 44.0	-3.2
HEH				pP	pP	15 58 48.0	-6.2
HEH				S	S	16 02 50.5	-4.5
HEH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HEH				LR	LR		
	comp=N,390nm,14.5s						
HEH				LR	LR		
	comp=E,280nm,16.7s						
HEH				LR	LR		
	comp=Z,410nm,14.7s						
P19K	Oil Pt	22.98	61	P	P	15 58 47.1	-0.6
	baz=277						
G21K	Allakaket	23.08	43	P	P	15 58 48.9	+0.4
G21K	Allakaket	23.08	43	P	P	15 58 48.2	-0.4
	baz=260						
RED	Redoubt Volcan	23.14	59	IAmb	IAmb	15 58 50.8	
	comp=Z,22nm,0.9s						
F21K	Alatna River	23.22	41	P	P	15 58 49.9	-0.1
	baz=258,SNR=51						
H21K	Melozitna Rive	23.23	45	P	P	15 58 49.5	-0.6
	baz=263,SNR=75						
C21K	Knifeblade Rid	23.24	36	P	P	15 58 49.9	-0.3
	baz=253,SNR=67						
O20K	Slope Mountain	23.24	59	P	P	15 58 49.8	-0.5
	baz=276						
CHUM	Lake Minchumin	23.28	50	P	P	15 58 50.7	+0.1
	baz=267,SNR=23						
PPLA	Purkeypile	23.31	52	P	P	15 58 51.6	+0.5
	baz=270,SNR=12						
E21K	Killik River	23.32	38	IAmb	IAmb	15 58 51.8	
	comp=Z,36nm,1.1s						
E21K	Killik River	23.32	38	P	P	15 58 50.2	-0.9
	baz=255						
OHAK	Old Harbor	23.35	67	P	P	15 58 52.1	+0.8
	baz=282						
N20K	Mount Spurr	23.35	57	P	P	15 58 51.5	0.0
	baz=274						
SPCR	Spurr Chakacha	23.35	57	P	P	15 58 52.0	+0.5
	baz=274						
CAST	Castle Rocks	23.37	51	P	P	15 58 51.7	+0.2
CAST	Castle Rocks	23.37	51	P	P	15 58 51.8	+0.2
	baz=269,SNR=28						
A21K	Barrow	23.44	30	P	P	15 58 51.0	-1.1
	baz=246						
B21K	Ikpikpuk River	23.44	35	P	P	15 58 51.9	-0.2
	baz=252,SNR=78						
JMM	Marumori	23.46	234	P	P	15 58 54.9	+2.3
JMM				IAmb	IAmb	15 59 10.2	
	comp=Z,25nm,0.7s						
USRK	Ussuriysk Ar.	23.52	257	P	P	15 58 54.7	+1.6
	comp=Z,1.0nm,0.6s,baz=58,slow=9.8,SNR=1.9						
USRK				LR	LR	16 07 47.3	
	comp=Z,230nm,21.4s,baz=64,slow=36						
	comp=Z,1.0nm,0.6s						
Q20K	Shuyak Island	23.56	63	P	P	15 58 52.3	-1.0
	baz=280						
KDAK	Kodiak Island	23.61	65	P	P	15 58 53.0	-0.9
KDAK				IAmb	IAmb	15 59 14.1	
	comp=Z,35nm,1.6s						
KDAK	Kodiak Island	23.61	65⇑	*e*P	P	15 58 52.9	-0.9
KDAK				pmax	pmax		
	comp=Z,21nm,1.4s						
KDAK	Kodiak Island	23.61	65	P	P	15 58 52.4	-1.4
	baz=281						
SKT	Skwentna	23.63	55	IAmb	IAmb	15 58 56.2	
	comp=Z,41nm,1.2s						
SKT	Skwentna	23.63	55	P	P	15 58 54.7	+0.6
	baz=273,SNR=26						
F22K	John River	23.77	41	P	P	15 58 55.4	+0.1
	baz=259,SNR=43						
HOM	Homer	23.78	60	P	P	15 58 56.9	+1.5
	baz=278						
A22K	Sinclair Lake	23.80	32	P	P	15 58 55.1	-0.4
	baz=248,SNR=38						
H22K	Ishtalitna Cre	23.84	45	P	P	15 58 56.4	+0.3
	baz=264,SNR=40						
BPAW	Bear Paw Mtn.	23.88	49	P	P	15 58 56.5	+0.1
	baz=268,SNR=45						
D22K	Ayikyak River	23.89	37	P	P	15 58 56.0	-0.5
D22K				IAmb	IAmb	15 58 57.7	
	comp=Z,49nm,1.2s						
D22K	Ayikyak River	23.89	37	P	P	15 58 56.4	-0.1
	baz=256,SNR=30						
G22K	Bettles	23.93	42	P	P	15 58 56.1	-0.7
	baz=261						
CNPM	China Poot	24.01	61	P	P	15 58 56.8	-0.8
CNPM				IAmb	IAmb	15 59 00.8	
	comp=Z,50nm,1.1s						
MLY	Manley	24.03	47	IAmb	IAmb	15 58 59.6	
	comp=Z,37nm,0.9s						
MLY	Manley	24.03	47	P	P	15 58 58.1	+0.3
	baz=266,SNR=48						
E22K	Anaktuvuk Pass	24.03	39	P	P	15 58 57.8	0.0
	baz=258,SNR=80						
SUA	Susitna One	24.04	56	IAmb	IAmb	15 59 00.1	
	comp=Z,26nm,0.9s						
SUA	Susitna One	24.04	56	P	P	15 58 58.0	0.0
	baz=274						
B22K	Teshekpuk Lake	24.06	34	P	P	15 58 57.0	-0.9
B22K	Teshekpuk Lake	24.06	34	P	P	15 58 57.5	-0.5
	baz=252,SNR=86						
TRF	Thorofare Moun	24.18	51	P	P	15 58 59.5	+0.2
	baz=270,SNR=80						
CUT	Chulitna	24.21	53	P	P	15 58 59.1	-0.3
	baz=273						
BRSE	Bradley Lake S	24.22	60	P	P	15 59 00.0	+0.4
	baz=278						
COLD	Coldfoot	24.48	42	P	P	15 59 01.4	-0.5
	baz=262,SNR=59						
G23K	Bananza Creek	24.48	43	P	P	15 59 01.4	-0.5
G23K				IAmb	IAmb	15 59 03.5	
	comp=Z,25nm,0.9s						
G23K	Bananza Creek	24.48	43	P	P	15 59 01.6	-0.4
	baz=263,SNR=40						
RC01	Rabbit Creek A	24.56	57	P	P	15 59 01.7	-0.9
	baz=276						
H23K	Yukon River	24.59	45	P	P	15 59 02.9	0.0
	baz=266,SNR=124						
D23K	Nanushuk River	24.61	38	IAmb	IAmb	15 59 06.7	
	comp=Z,17nm,1.0s						
D23K	Nanushuk River	24.61	38	P	P	15 59 02.5	-0.5
	baz=258,SNR=16						
I23K	Minto, Yukon-K	24.62	47	P	P	15 59 03.4	+0.3
	baz=267,SNR=90						
NEA2	Nenana	24.72	48	P	P	15 59 03.5	-0.6
NEA2	Nenana	24.72	48	P	P	15 59 03.9	-0.2
	baz=269,SNR=62						
MCK	McKinley	24.78	50	IAmb	IAmb	15 59 07.3	
	comp=Z,40nm,1.0s						
MCK	McKinley	24.78	50	P	P	15 59 04.1	-0.5
	baz=271,SNR=18						
SEW	Seward	24.82	59	IAmb	IAmb	15 59 05.9	
	comp=Z,35nm,1.3s						
SEW	Seward	24.82	59	P	P	15 59 04.8	-0.1
	baz=278						
E23K	Chandalar	24.83	40	P	P	15 59 04.8	-0.3
	baz=261,SNR=79						
C23K	Itkillik River	24.84	35	P	P	15 59 04.6	-0.5
	baz=256,SNR=40						
TOLK	Toolik Lake Re	24.94	38	P	P	15 59 05.9	-0.2
	baz=260,SNR=60						
WAT1	Susitna Watana	24.98	52	P	P	15 59 05.2	-1.3
	baz=273						
KNK	Knik Glacier	25.14	56	IAmb	IAmb	15 59 08.5	
	comp=Z,21nm,0.9s						
KNK	Knik Glacier	25.14	56	P	P	15 59 06.9	-1.0
	baz=276,SNR=6.7						
SML	Sawmill	25.16	55	P	P	15 59 07.3	-0.8
	baz=276,SNR=6.7						
E24K	Your Creek	25.25	40	P	P	15 59 08.6	-0.3
E24K	Your Creek	25.25	40	P	P	15 59 09.1	+0.2
	baz=262,SNR=140						
COLA	College	25.25	48	*d i*P	P	15 59 09.1	+0.3
COLA				pmax	pmax		
	comp=Z,44nm,1.0s						
COLA	College	25.25	48	P	P	15 59 08.8	-0.1
	baz=269						
PWL	Port Wells	25.26	57	P	P	15 59 08.1	-0.9
PWL	Port Wells	25.26	57	P	P	15 59 07.9	-1.1
	baz=278,SNR=13						
H24K	Noodor Dome	25.27	45	IAmb	IAmb	15 59 12.0	
	comp=Z,22nm,1.0s						
H24K	Noodor Dome	25.27	45	P	P	15 59 09.1	0.0
	baz=267,SNR=23						
D24K	Happy Valley	25.31	37	IAmb	IAmb	15 59 11.3	
	comp=Z,30nm,0.8s						
D24K	Happy Valley	25.31	37	P	P	15 59 08.8	-0.6
	baz=259,SNR=21						
WAT6	Susitna Watana	25.37	53	P	P	15 59 09.3	-0.9
	baz=274,SNR=10						
F24K	Squaw Lake	25.40	41	IAmb	IAmb	15 59 14.1	
	comp=Z,15nm,1.1s						
F24K	Squaw Lake	25.40	41	P	P	15 59 10.2	-0.1
	baz=264,SNR=23						
POKR	Poker Plat Res	25.43	47	IAmb	IAmb	15 59 13.4	
	comp=Z,40nm,1.2s						
POKR	Poker Plat Res	25.43	47	P	P	15 59 10.5	0.0
	baz=269,SNR=9.6						
M23K	Glacier View	25.45	55	P	P	15 59 10.7	0.0
	baz=276,SNR=7.8						
C24K	Franklin Bluff	25.46	36	P	P	15 59 10.0	-0.7
	baz=258						
G24K	Hadweenzic Riv	25.49	43	P	P	15 59 11.2	+0.2
	baz=266,SNR=69						
DHY	Denali Highway	25.50	52	IAmb	IAmb	15 59 12.7	
	comp=Z,35nm,1.2s						
DHY	Denali Highway	25.50	52	P	P	15 59 10.7	-0.7
	baz=274,SNR=22						
SCM	Sheep Creek Mo	25.63	55	P	P	15 59 12.5	+0.1
	baz=276,SNR=10						
HDA	Harding Lake	25.64	49	IAmb	IAmb	15 59 15.6	
	comp=Z,21nm,1.0s						
HDA	Harding Lake	25.64	49	P	P	15 59 11.4	-1.0
	baz=271,SNR=24						
IL31		25.66	48	IAmb	IAmb	15 59 15.3	
	comp=Z,36nm,1.1s						
ILAR	Eielson Array	25.66	48	P	P	15 59 11.8	-0.7
ILAR	Eielson Array	25.66	48	P	P	15 59 12.4	-0.2
	comp=Z,26nm,1.0s,baz=261,slow=8.5,SNR=178						
ILAR				LR	LR	16 10 31.7	
	comp=Z,212nm,18.3s,baz=264,slow=40						
	comp=Z,26nm,1.0s						
ILAR	Eielson Array	25.66	48	*e*P	P	15 59 11.9	-0.7
ILAR				pmax	pmax		
	comp=Z,19nm,0.9s						
MAJO	Matsushiro	25.75	236	P	P	15 59 17.9	+4.3
MAJO				pmax	pmax		
	comp=Z,27nm,0.7s						
MJAR	Matsushiro Arr	25.75	236	P	P	15 59 15.9	+2.2
	comp=Z,2.3nm,0.6s,baz=16,slow=10,SNR=10.0						
MJAR				LR	LR	16 10 15.6	
	comp=Z,163nm,20.0s,baz=30,slow=38						
	comp=Z,2.3nm,0.6s						
P23K	Montague Islan	25.85	59	P	P	15 59 14.0	-0.3
	baz=280						
GLI	Glacier Island	25.86	57	P	P	15 59 13.8	-0.6
GLI				IAmb	IAmb	15 59 16.8	
	comp=Z,20nm,0.9s						
GLI	Glacier Island	25.86	57	P	P	15 59 14.5	0.0
	baz=278						
G25K	Bearman Lake	26.04	43	P	P	15 59 15.8	-0.2
	baz=267,SNR=8.7						
H25L	Birch Creek	26.13	44	P	P	15 59 16.7	0.0
	baz=268,SNR=10.0						
M24K	Tolsona, Glenn	26.14	54	P	P	15 59 17.3	+0.3
	baz=277,SNR=11						
K24K	Donnelly Dome	26.18	50	IAmb	IAmb	15 59 19.4	
	comp=Z,26nm,1.1s						
K24K	Donnelly Dome	26.18	50	P	P	15 59 16.8	-0.5
	baz=273,SNR=7.4						
D25K	Kavik River	26.20	37	P	P	15 59 16.8	-0.6
	baz=262,SNR=13						
PRP	Porcupine Dome	26.24	46	P	P	15 59 18.0	+0.1
	baz=270,SNR=64						
F25K	Christian Rive	26.27	41	IAmb	IAmb	15 59 22.8	
	comp=Z,15nm,0.9s						
F25K	Christian Rive	26.27	41	P	P	15 59 18.0	-0.2
	baz=266,SNR=32						
J25K	Salcha River,	26.32	48	IAmb	IAmb	15 59 18.2	
	comp=Z,29nm,1.6s						
J25K	Salcha River,	26.32	48	P	P	15 59 17.0	-1.6
	baz=272,SNR=14						
KLU	Klutina	26.34	55	IAmb	IAmb	15 59 57.4	
	comp=Z,16nm,1.1s						
KLU	Klutina	26.34	55	P	P	15 59 18.5	-0.3
	baz=278						
E25K	Arctic Village	26.34	40	IAmb	IAmb	15 59 22.8	
	comp=Z,25nm,1.1s						
E25K	Arctic Village	26.34	40	P	P	15 59 19.1	+0.3
	baz=265						
PAX	Paxson	26.38	52	IAmb	IAmb	15 59 25.0	
	comp=Z,13nm,0.9s						
PAX	Paxson	26.38	52	P	P	15 59 18.0	-1.2
	baz=275,SNR=11						
Q23K	Middleton Isla	26.48	60	P	P	15 59 20.4	+0.5
	baz=282						
EYAK	Cordova Ski Ar	26.57	57	P	P	15 59 20.5	-0.2
	baz=280						
HARP	HAARP	26.58	53	P	P	15 59 20.9	-0.1
	baz=277						
RIDG	Independent Ri	26.59	50	IAmb	IAmb	15 59 21.1	
	comp=Z,26nm,1.1s						
RIDG	Independent Ri	26.59	50	P	P	15 59 20.1	-1.0
	baz=274,SNR=14						
BMAR	Burnt Mountain	26.67	42	P	P	15 59 22.1	+0.4
C26K	Camden Bay	26.79	36	P	P	15 59 22.4	-0.3
	baz=262						
F26K	Sheenjek River	26.85	41	P	P	15 59 23.6	+0.3
	baz=267,SNR=16						
N25K	Chitina, Valde	26.95	55	P	P	15 59 24.4	0.0
	baz=279,SNR=6.8						
DOT	Dot Lake	26.95	50	IAmb	IAmb	15 59 27.4	
	comp=Z,16nm,1.2s						
SCRK	Sand Creek	26.96	49	IAmb	IAmb	15 59 24.5	
	comp=Z,22nm,1.0s						
SCRK	Sand Creek	26.96	49	P	P	15 59 23.3	-1.2
	baz=275,SNR=34						
G26K	Porcupine Rive	26.96	43	IAmb	IAmb	15 59 25.9	
	comp=Z,27nm,1.1s						
G26K	Porcupine Rive	26.96	43	P	P	15 59 24.8	+0.5
	baz=269,SNR=34						
BMRM	Bremner River	27.05	56	IAmb	IAmb	15 59 26.3	
	comp=Z,15nm,0.9s						
BMRM	Bremner River	27.05	56	P	P	15 59 25.2	0.0
	baz=280,SNR=8.5						
J26L	Joseph Creek	27.10	48	P	P	15 59 26.5	+0.8
	baz=274						
C27K	Jago River	27.17	37	P	P	15 59 25.8	-0.3
	baz=264,SNR=14						
KAIM	Kayak Island	27.34	58	P	P	15 59 28.1	+0.3
	baz=282						
CN2	Changchun	27.49	263	*e*P	P	15 59 28.6	-0.7
CN2				LR	LR		
	comp=N,340nm,18.0s						
CN2				LR	LR		
	comp=E,220nm,18.0s						
CN2				LR	LR		
	comp=Z,300nm,13.0s						
M26K	Nabesna, AK	27.58	53	P	P	15 59 30.1	+0.2
M26K				IAmb	IAmb	15 59 32.0	
	comp=Z,18nm,1.3s						
M26K	Nabesna, AK	27.58	53	P	P	15 59 30.5	+0.5
	baz=278,SNR=6.2						
MCARA	McCarthy VSAT	27.73	55	P	P	15 59 31.7	+0.5
	baz=280						
K27K	Chicken	27.79	49	P	P	15 59 31.6	-0.2
	baz=276						
CRQM	Cirque	27.79	56	IAmb	IAmb	15 59 33.6	
	comp=Z,19nm,0.9s						
G27K	Doyon Strip	27.80	43	P	P	15 59 32.4	+0.6
	baz=271,SNR=15						
CRQE	Cirque	27.82	56	P	P	15 59 32.4	+0.3
	baz=282,SNR=7.2						

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E27K  Coleen River       27.83  40  P      P      15 59 32.3 +0.2
      baz=268,SNR=8.7
I27K  Kandik River       27.86  46  P      P      15 59 31.1 -1.3
      baz=273
H27K  Steamboat Moun     27.87  44  IAmb   IAmb   15 59 34.2
      comp=Z,36nm,1.3s
H27K  Steamboat Moun     27.87  44  P      P      15 59 33.1 +0.7
      baz=272,SNR=22
L27K  Beaver Creek,      28.02  51  IAmb   IAmb   15 59 35.6
      comp=Z,26nm,0.9s
L27K  Beaver Creek,      28.02  51  P      P      15 59 34.6 +0.8
      baz=278,SNR=44
BCAR  Beaver Creek A     28.04  51  P      P      15 59 34.2 +0.2
M27K  Edge Creek, AK     28.10  53  IAmb   IAmb   15 59 36.8
      comp=Z,13nm,1.0s
M27K  Edge Creek, AK     28.10  53  P      P      15 59 35.3 +0.6
      baz=279,SNR=13
D27M  Malcolm River      28.10  38  P      P      15 59 33.9 -0.6
D27M                                IAmb   IAmb   15 59 35.6
      comp=Z,19nm,1.0s
D27M  Malcolm River      28.10  38  P      P      15 59 34.7 +0.2
      baz=267,SNR=13
GRNC  Granite Creek      28.46  56  IAmb   IAmb   15 59 39.6
      comp=Z,16nm,1.1s
F28M  Old Crow           28.48  41  IAmb   IAmb   15 59 39.5
      comp=Z,26nm,1.2s
F28M  Old Crow           28.48  41  P      P      15 59 38.1 +0.3
      baz=271,SNR=21
MESA  MESA               28.49  57  P      P      15 59 38.5 +0.3
      baz=283
YAH   Yahtse             28.55  57  IAmb   IAmb   15 59 40.6
      comp=Z,14nm,0.8s
BVCY  Beaver Creek       28.56  52  P      P      15 59 39.3 +0.6
      baz=280
I28M  Miner Creek        28.57  46  IAmb   IAmb   15 59 39.9
      comp=Z,14nm,1.1s
I28M  Miner Creek        28.57  46  P      P      15 59 38.6 -0.2
      baz=275,SNR=14
E28M  Babbage River      28.60  39  IAmb   IAmb   15 59 40.3
      comp=Z,28nm,1.6s
E28M  Babbage River      28.60  39  P      P      15 59 38.9 -0.1
      baz=270,SNR=13
CTG   Chitna Glacier     28.61  55  P      P      15 59 39.6 +0.3
      baz=282
LOGN  Logan Glacier      28.80  56  IAmb   IAmb   15 59 43.1
      comp=Z,9.7nm,0.8s
TABL  Table Mountain     28.82  57  IAmb   IAmb   15 59 43.8
      comp=Z,16nm,1.0s
YUK3  Moose Creek        28.86  54  P      P      15 59 41.6 +0.1
      baz=281,SNR=5.8
D28M  Stokes Point       28.90  38  P      P      15 59 41.6 +0.1
      baz=269
DAWY  Dawson             28.96  49  IAmb   IAmb   15 59 49.1
      comp=Z,9.8nm,0.9s
DAWY  Dawson             28.96  49  P      P      15 59 42.2  0.0
      baz=278,SNR=8.7
H29M  Whitestone         29.14  44  P      P      15 59 44.0 +0.2
      baz=275,SNR=14
O28M  Mount Upton        29.20  56  IAmb   IAmb   15 59 46.1
      comp=Z,12nm,0.9s
O28M  Mount Upton        29.20  56  P      P      15 59 44.7  0.0
      baz=283,SNR=6.7
E29M  Blow River         29.20  40  IAmb   IAmb   15 59 45.9
      comp=Z,35nm,1.6s
E29M  Blow River         29.20  40  P      P      15 59 44.6 +0.3
      baz=272,SNR=17
G29M  Pine Creek         29.23  43  P      P      15 59 45.3 +0.8
      baz=274,SNR=25
I29M  Ogilvie Camp,      29.26  46  P      P      15 59 43.5 -1.3
I29M                                IAmb   IAmb   15 59 45.7
      comp=Z,12nm,1.1s
I29M  Ogilvie Camp,      29.26  46  P      P      15 59 44.4 -0.4
      baz=277,SNR=13
YUK8  Steele Glacier     29.29  54  P      P      15 59 45.5 +0.1
      baz=283
PCA   Pinnacle           29.33  57  IAmb   IAmb   16 00 39.5
      comp=Z,16nm,0.7s
PINM  Pinnacle           29.34  57  P      P      15 59 45.9 +0.3
      baz=284
M29M  Somme Creek        29.65  52  IAmb   IAmb   15 59 50.3
      comp=Z,8.5nm,0.7s
M29M  Somme Creek        29.65  52  P      P      15 59 49.2 +0.8
      baz=282,SNR=15
BCPM  Bancas Point       29.67  57  IAmb   IAmb   15 59 49.8
      comp=Z,20nm,0.8s
L29M  L29M               29.67  51  P      P      15 59 49.5 +0.9
      baz=281,SNR=33
EPYK  Eagle Plains       29.79  44  P      P      15 59 49.5 -0.1
      baz=276,SNR=9.8
YUK4  Talbot Arm         29.80  54  P      P      15 59 50.3 +0.4
      baz=283
K29M  Barlow Dome        29.81  49  P      P      15 59 49.9 +0.1
      baz=280,SNR=7.0
PNL   Peninsula          29.86  58  P      P      15 59 50.6 +0.3
      baz=286
G30M  tAoh Zraii Nji     29.93  43  IAmb   IAmb   15 59 51.8
      comp=Z,40nm,1.8s
G30M  tAoh Zraii Nji     29.93  43  P      P      15 59 50.9 +0.2
      baz=276,SNR=8.7
YUK6  Outpost Mounta     30.03  55  P      P      15 59 50.8 -1.2
      baz=284
F30M  Barrier River      30.04  41  IAmb   IAmb   15 59 53.6
      comp=Z,20nm,1.1s
F30M  Barrier River      30.04  41  P      P      15 59 52.4 +0.7
      baz=275,SNR=8.1
I30M  Mount Dempster     30.08  46  IAmb   IAmb   15 59 53.0
      comp=Z,11nm,0.8s
I30M  Mount Dempster     30.08  46  P      P      15 59 52.0 -0.2
      baz=278,SNR=20
O29M  Mount Kennedy      30.09  56  P      P      15 59 52.7 +0.3
      baz=285
J30M  Hart River         30.20  47  P      P      15 59 53.0 -0.2
      baz=280
KSRS  Korea Array        30.36 250  P      P      15 59 56.8 +2.0
      comp=Z,1.0nm,0.5s,baz=40,slow=9.5,SNR=9.2
      comp=Z,1.0nm,0.5s
HYT   Haines Junctio     30.47  55  P      P      15 59 56.4 +0.7
HYT                                 IAmb   IAmb   15 59 57.5
      comp=Z,9.8nm,0.9s
HYT   Haines Junctio     30.47  55  P      P      15 59 56.2 +0.5
      baz=285,SNR=6.8
N30M  Aishikik Lake      30.50  54  P      P      15 59 55.6 -0.3
      baz=284
P29M  Windy Craggy       30.68  57  P      P      15 59 57.5 +0.1
      baz=287
G31M  Satah River        30.70  43  IAmb   IAmb   15 59 58.5
      comp=Z,14nm,1.1s
G31M  Satah River        30.70  43  P      P      15 59 57.1 -0.4
      baz=277
H31M  Peel River         30.83  45  P      P      15 59 58.6 -0.1
      baz=279,SNR=6.2
INK   Inuvik             30.83  40  P      P      15 59 57.5 -1.1
INK                                 IAmb   IAmb   15 59 59.9
      comp=Z,37nm,1.6s
INK   Inuvik             30.83  40  LR     LR     16 14 23.2
      comp=Z,56nm,19.3s,baz=273,slow=40
INK   Inuvik             30.83  40  P      P      15 59 57.5 -1.1
INK                                 pmax   pmax
      comp=Z,37nm,1.6s
INK   Inuvik             30.83  40  P      P      15 59 58.8 +0.2
      baz=276,SNR=5.4
F31M  Tsiigehtchic       30.84  41  P      P      15 59 58.3 -0.4
      baz=277
N31M  Braeburn, Yuko     31.10  53  P      P      16 00 01.9 +0.7
      baz=285
O30N  Mendenhall         31.15  55  P      P      16 00 02.0 +0.4
      baz=286
PLBC  Pleasant Camp      31.40  57  P      P      16 00 04.4 +0.6
      baz=288
M31M  Drury Creek, Y     31.55  52  IAmb   IAmb   16 00 07.4
      comp=Z,13nm,0.8s
M31M  Drury Creek, Y     31.55  52  P      P      16 00 06.0 +0.9
      baz=285,SNR=13
WHY   Whitehorse         31.75  54  IAmb   IAmb   16 00 10.4
      comp=Z,14nm,0.9s
WHY   Whitehorse         31.75  54  P      P      16 00 07.4 +0.5
      baz=287,SNR=5.4
SKAG  Skagway            31.90  57  P      P      16 00 09.7 +1.5
      baz=289
S31K  Pelican            31.96  60  P      P      16 00 10.1 +1.5
      baz=290
FARO  Faro, Yukon        32.02  51  P      P      16 00 10.2 +1.0
      baz=286
P32M  Atlin              32.64  56  P      P      16 00 15.9 +1.2
      baz=289
R32K  Eaglecrest         32.70  59  IAmb   IAmb   16 00 17.6
      comp=Z,11nm,0.8s
R32K  Eaglecrest         32.70  59  P      P      16 00 16.1 +1.0
      baz=291,SNR=7.2
SIT   Sitka              32.74  61  P      P      16 00 16.6 +1.1
      baz=292
MMPY  Sheldon Lake,      32.85  50  IAmb   IAmb   16 00 18.9
      comp=Z,12nm,0.9s
MMPY  Sheldon Lake,      32.85  50  P      P      16 00 16.9 +0.5
      baz=286,SNR=13
P33M  Teslin, Yukon      32.86  55  IAmb   IAmb   16 00 19.0
      comp=Z,24nm,1.8s
P33M  Teslin, Yukon      32.86  55  P      P      16 00 17.5 +0.8
      baz=289
S32K  Killisnoo          32.96  60  P      P      16 00 18.4 +1.0
      baz=292
A36M  Sachs Harbour      33.24  32  P      P      16 00 19.6 -0.1
      baz=277
Q32M  Nakina River       33.55  57  IAmb   IAmb   16 00 26.0
      comp=Z,9.1nm,1.1s
Q32M  Nakina River       33.55  57  P      P      16 00 24.1 +1.3
      baz=291
R33M  Jennings River     34.02  56  IAmb   IAmb   16 00 29.8
      comp=Z,9.5nm,1.0s
R33M  Jennings River     34.02  56  P      P      16 00 27.5 +0.7
      baz=291,SNR=7.7
C36M  Paulatuk           34.06  37  P      P      16 00 26.2 -0.7
C36M  Paulatuk           34.06  37  P      P      16 00 27.0 +0.1
      baz=282,SNR=5.5
U33K  Whale Pass         34.23  62  P      P      16 00 30.1 +1.7
      baz=295
WRAK  Wrangell Islan     34.50  61  P      P      16 00 32.6 +1.8
      baz=295
S34M  Telegraph Cree     34.50  58  P      P      16 00 32.3 +1.5
      baz=293
TGTN  Hyland Airport     34.52  51  P      P      16 00 31.0 -0.1
      baz=290
DLBC  Dease Lake         34.84  57  LR     LR     16 16 52.6
      comp=Z,12nm,18.3s,baz=299,slow=40
H11N2 WAKE ISLAND Hy     35.06 176  T      T      16 38 35.5
      baz=359,slow=76,SNR=96
H11N3 WAKE ISLAND Hy     35.07 176  T      T      16 38 37.1
      baz=359,slow=76,SNR=45
H11N1 WAKE ISLAND Hy     35.08 176  T      T      16 38 38.6
      baz=359,slow=76,SNR=226
T35M  Bob Quinn          35.32  59  P      P      16 00 39.5 +1.6
      baz=295
SONM  Songino Array      36.14 284  P      P      16 00 45.0 -0.2
      comp=Z,0.9nm,0.4s,baz=52,slow=8.6,SNR=6.3
SONM                                LR     LR     16 16 39.1
      comp=Z,81nm,18.9s,baz=58,slow=38
      comp=Z,0.9nm,0.4s
H11S1 WAKE ISLAND Hy     36.27 177  T      T      16 39 53.9
      baz=359
H11S3 WAKE ISLAND Hy     36.28 177  T      T      16 39 54.5
      baz=359,slow=74
H11S2 WAKE ISLAND Hy     36.29 177  T      T      16 39 55.1
      baz=359,slow=74
LIRD  Liard River Hi     36.32  54  P      P      16 00 47.6 +1.2
      baz=294
BEAVL Fort Liard         36.48  52  P      P      16 00 48.8 +1.0
      baz=294
TOAD  Toad River Com     36.96  54  P      P      16 00 53.3 +1.4
      baz=295,SNR=11
HHC   Hu-ho-hao-te       37.36 271  eP     P      16 00 55.5 -0.1
HHC                                 S      S      16 06 42.8 +1.4
HHC                                 pmax   pmax
      comp=Z,14nm,0.6s
HHC                                 pmax   pmax
      comp=Z,12nm,0.6s
HHC                                 pmax   pmax
      comp=Z,35nm,6.7s
HHC                                 LR     LR
      comp=N,230nm,16.8s
HHC                                 LR     LR
      comp=E,120nm,13.5s
HHC                                 LR     LR
      comp=Z,150nm,15.4s
BBB   Bella Bella        38.68  65  LR     LR     16 16 23.5
      comp=Z,83nm,18.4s,baz=316,slow=35
NJ2   Nanjing            39.36 254  eP     P      16 01 12.4  0.0
NJ2                                 pmax   pmax
      comp=Z,6.0nm,0.5s
EUNU  Eureka             39.61  15  IAmb   IAmb   16 01 15.4
      comp=Z,31nm,1.1s
YKA   Yellowknife Ar     40.04  45  P      P      16 01 17.9 +0.3
      comp=Z,2.7nm,0.8s,baz=304,slow=8.7,SNR=8.1
YKA                                 LR     LR     16 19 49.0
      comp=Z,98nm,18.1s,baz=296,slow=39
      comp=Z,2.7nm,0.8s
RES   Resolute Bay       40.69  24  P      P      16 01 22.2 -0.7
RES   Resolute Bay       40.69  24  LR     LR     16 19 59.6
      comp=Z,34nm,19.0s,baz=179,slow=39
RES   Resolute Bay       40.69  24  P      P      16 01 22.2 -0.7
RES                                 pmax   pmax
      comp=Z,10.0nm,1.0s
ZALV  Zalesovo Beam      44.12 303  P      P      16 01 50.5 -0.5
      comp=Z,0.4nm,0.4s,baz=15,slow=6.3,SNR=2.0
ZALV                                LR     LR     16 21 11.8
      comp=Z,121nm,19.4s,baz=42,slow=38
      comp=Z,0.4nm,0.4s
GTA   Gaotai             45.08 278  P      P      16 02 00.3 +1.2
GTA                                 pmax   pmax
      comp=Z,5.0nm,1.0s
GTA                                 LR     LR
      comp=N,310nm,18.7s
GTA                                 LR     LR
      comp=E,290nm,20.3s
GTA                                 LR     LR
      comp=Z,290nm,17.1s
B08A  Colville Reser     45.49  65  IAmb   IAmb   16 02 04.0
      comp=Z,9.6nm,1.1s
SPITS Spitsbergen Ar     45.87 351  P      P      16 02 04.2 -0.5
      comp=Z,26nm,1.0s,baz=67,slow=8.4,SNR=12
      comp=Z,26nm,1.0s
SPB2  Spitsbergen Ar     45.87 351  P      P      16 02 03.9 -0.8
BLKN  Baker Lake         46.12  37  P      P      16 02 06.4 -0.3
J05D  Fort Rock, OR      47.70  72  P      P      16 02 21.4 +1.8
J05D                                IAmb   IAmb   16 02 22.8
      comp=Z,9.4nm,1.0s
ZSN   Zaisan             48.06 296  eP     P      16 02 21.8 -0.4
ZSN                                 pmax   pmax
      comp=Z,6.0nm,0.8s
ZSN   Zaisan             48.06 296  eP     P      16 02 21.9 -0.4
      comp=Z,6.3nm,0.8s
WMQ   Urumqi             48.93 291  eP     P      16 02 31.0 +2.0
WMQ                                 LR     LR
      comp=N,270nm,19.3s
WMQ                                 LR     LR
      comp=Z,120nm,18.3s
KURK  Kurchatov          49.10 303  P      P      16 02 29.9 -0.2
KURK                                IAmb   IAmb   16 02 31.4
      comp=Z,9.5nm,0.8s
KURK  Kurchatov          49.10 303d iP     P      16 02 29.4 -0.7
KURK                                pmax   pmax
      comp=Z,15nm,1.0s
KURBB Kurchatov Arra     49.21 303  P      P      16 02 30.9  0.0
      comp=Z,7.1nm,0.8s,baz=56,slow=7.8,SNR=51
      comp=Z,7.1nm,0.8s
PLID  Pearl Lake         49.34  67  P      P      16 02 32.9 +0.6
MK31  Makanchi Array     49.82 297deP      P      16 02 35.8 +0.1
MKAR  Makanchi Array     49.83 297  P      P      16 02 34.8 -0.9
MKAR  Makanchi Array     49.83 297  P      P      16 02 35.5 -0.2
      comp=Z,1.7nm,0.8s,baz=56,slow=6.6,SNR=20
MKAR                                LR     LR     16 24 55.6
      comp=Z,152nm,18.8s,baz=28,slow=38
      comp=Z,1.7nm,0.8s
FFC   Flin Flon          49.86  49  P      P      16 02 35.9 +0.1
FFC   Flin Flon          49.86  49  P      P      16 02 35.9 +0.1
FFC                                 pmax   pmax
      comp=Z,6.0nm,1.1s
MAKZ  Makanchi           49.98 297  P      P      16 02 36.2 -0.7
MAKZ  Makanchi           49.98 297  P      P      16 02 36.2 -0.7
MAKZ                                pmax   pmax
      comp=Z,6.0nm,1.1s
FCC   Fort Churchill     50.42  42  IAmb   IAmb   16 02 41.2
      comp=Z,16nm,1.1s
DLMT  Dillon             50.95  64  P      P      16 02 44.4  0.0
DLMT                                IAmb   IAmb   16 03 43.0
      comp=Z,7.4nm,0.4s
HLID  Hailey             51.21  67  P      P      16 02 46.4  0.0
BVAR  Borovoye Array     51.42 310  P      P      16 02 48.0 +0.4
      comp=Z,6.7nm,0.9s,baz=54,slow=7.5,SNR=27
BVAR                                PcP    PcP    16 04 01.7  0.0
      comp=Z,2.0nm,0.8s,baz=38,slow=5.4,SNR=1.6
BVAR                                LR     LR     16 27 08.8
      comp=Z,214nm,18.1s,baz=44,slow=39
      comp=Z,6.7nm,0.9s
BRVK  Borovoye           51.44 310  P      P      16 02 47.8 +0.1
BRVK                                IAmb   IAmb   16 02 49.0
      comp=Z,7.8nm,0.9s
BRVK  Borovoye           51.44 310d iP     P      16 02 47.7  0.0
BRVK                                pmax   pmax
      comp=Z,11nm,1.0s
SUMG  Summit             51.89   9  P      P      16 02 50.8 -0.5
SUMG                                IAmb   IAmb   16 02 52.6
      comp=Z,18nm,1.3s
SUMG  Summit             51.89   9  P      P      16 02 50.8 -0.5
SUMG                                pmax   pmax
      comp=Z,17nm,1.3s
BRZS  Berezniki          52.43 306  eP     P      16 02 55.1 -0.1
BRZS  Berezniki          52.43 306  eP     P      16 02 55.1 -0.1
ARCES ARCESS Array B     52.46 343  P      P      16 02 54.0 -1.1
ARCES                               IAmb   IAmb   16 02 55.6
      comp=Z,14nm,1.1s
ARCES ARCESS Array B     52.46 343  P      P      16 02 54.6 -0.5
      comp=Z,7.7nm,0.9s,baz=12,slow=7.6,SNR=15
ARCES                               LR     LR     16 28 50.2
      comp=Z,81nm,18.6s,baz=33,slow=40
      comp=Z,7.7nm,0.9s
YNE   Yellowstone No     52.53  63  P      P      16 02 55.8 -0.5
NVAR  Mina Array Bea     52.63  74  P      P      16 02 59.1 +2.0
      comp=Z,2.3nm,0.8s,baz=298,slow=7.5,SNR=13
      comp=Z,2.3nm,0.8s
RLMT  Red Lodge          52.84  62  IAmb   IAmb   16 03 00.9
      comp=Z,10.0nm,0.9s
TDK   Taldyqorghan       53.03 298  eP     P      16 02 59.4 -0.3
TDK   Taldyqorghan       53.03 298  eP     P      16 02 59.5 -0.3
PZH   PanZhiHua          53.28 265  P      P      16 03 12.8 +11
LAO   LASA Array         53.29  59  IAmb   IAmb   16 03 04.0
      comp=Z,16nm,1.2s
KPKS  Kokpek             53.96 296  eP     P      16 03 06.6  0.0
KPKS  Kokpek             53.96 296  eP     P      16 03 06.7  0.0
UZB   Uzynbulak          54.01 296  eP     P      16 03 06.7 -0.3
UZB   Uzynbulak          54.01 296  eP     P      16 03 06.7 -0.3
ARTI  Arti               54.03 319  P      P      16 03 06.1 -0.7
ARTI                                IAmb   IAmb   16 03 24.7
      comp=Z,8.2nm,0.7s
ARTI  Arti               54.03 319  LR     LR     16 28 24.3
      comp=Z,184nm,21.3s,baz=42,slow=39
ARTI  Arti               54.03 319d iP     P      16 03 06.6 -0.2
ARTI                                *PP    pwP    16 03 22.3 +1.4
ARTI                                              16 04 10.7
ARTI                                              16 05 04.1
ARTI                                S      S      16 10 40.9 +0.4
ARTI                                SS     SS     16 14 23.8 +2.5
ARTI                                pmax   pmax
      comp=Z,10.0nm,1.1s
PDAR  Pinedale Array     54.32  65  P      P      16 03 10.2 +0.7
PDAR  Pinedale Array     54.32  65  P      P      16 03 10.1 +0.6
      comp=Z,2.2nm,0.8s,baz=323,slow=3.7,SNR=16
      comp=Z,2.2nm,0.8s
SATY  Saty               54.39 296  eP     P      16 03 09.3 -0.5
SATY  Saty               54.39 296  eP     P      16 03 09.4 -0.5
FRB   Frobisher Bay      54.81  26  LR     LR     16 28 50.8
      comp=Z,68nm,21.2s,baz=288,slow=39
FRB   Frobisher Bay      54.81  26  P      P      16 03 11.4 -1.0
FRB                                 pmax   pmax
      comp=Z,14nm,1.0s
TPNV  Topopah Spring     54.83  74  IAmb   IAmb   16 03 15.9
      comp=Z,8.1nm,1.1s
SCO   Scoresbysund       54.92   3  IAmb   IAmb   16 03 14.1
      comp=Z,18nm,1.7s
SCO   Scoresbysund       54.92   3  P      P      16 03 13.1 +0.1
MSF   Maaselka           54.99 339  P      P      16 03 11.5 -2.2
MSF                                 pmax   pmax
      comp=Z,19nm,1.9s
MDOK  Medeo              55.02 297  eP     P      16 03 13.9 -0.5
MDOK  Medeo              55.02 297  eP     P      16 03 14.0 -0.5
GWY   Greenwater Val     55.15  75  IAmb   IAmb   16 03 18.0
      comp=Z,7.8nm,1.0s
PRN   Pahroc Range       55.17  73  P      P      16 03 16.0 +0.5
PRN                                 IAmb   IAmb   16 03 18.4
      comp=Z,7.1nm,0.9s
BTLS  Baital             55.22 300  eP     P      16 03 15.4 -0.2
BTLS  Baital             55.22 300  eP     P      16 03 15.4 -0.2
KIRV  Kirov              55.58 325  LR     LR     16 28 58.0
      comp=Z,122nm,21.4s,baz=35,slow=38
KIRV  Kirov              55.58 325⇑eP      P      16 03 18.6 +0.6
ULM   Lac du Bonnet      55.65  50  IAmb   IAmb   16 03 20.2
      comp=Z,10nm,1.1s
ULM   Lac du Bonnet      55.65  50  P      P      16 03 18.5 -0.1
      comp=Z,4.3nm,0.9s,baz=328,slow=6.1,SNR=7.6
ULM                                 LR     LR     16 27 02.1
      comp=Z,121nm,20.2s,baz=331,slow=36
      comp=Z,4.3nm,0.9s
SFJD  Kangerlussuaq      55.66  16  LR     LR     16 29 29.5
      comp=Z,44nm,18.3s,baz=332,slow=39
TMUT  Trail Mountain     55.91  69  P      P      16 03 22.1 +1.1
TMUT                                IAmb   IAmb   16 03 23.7
      comp=Z,6.6nm,0.9s
SLVN  Son La             56.05 259  P      P      16 03 23.2 +1.2
RSSD  Black Hills        56.19  60  P      P      16 03 23.8 +0.9
RSSD                                pmax   pmax
      comp=Z,7.0nm,0.8s
OUL   Oulu               56.34 340  P      P      16 03 22.6 -0.7
OUL                                 pmax   pmax
      comp=Z,10.0nm,1.1s
SRU   San Rafael Swe     56.41  68  IAmb   IAmb   16 03 27.2
      comp=Z,10nm,1.0s
AAK   Ala-Archa          56.71 298  LR     LR     16 29 04.2
      comp=Z,104nm,18.9s,baz=48,slow=38
AAK   Ala-Archa          56.71 298⇓eP      P      16 03 26.8 +0.3
AAK                                 pmax   pmax
      comp=Z,6.0nm,1.3s
KLMR  Klimovskoe         56.78 331  eP     P      16 03 24.1 -2.4
KLMR                                e*PP   sP     16 03 38.7 +1.0
KLMR                                pmax   pmax
      comp=Z,21nm,1.1s
O20A  White River Ci     56.89  66  IAmb   IAmb   16 03 30.2
      comp=Z,14nm,1.2s
EPLO  Experimental L     57.02  49  P      P      16 03 28.0 -0.4
EPLO                                IAmb   IAmb   16 03 29.8
      comp=Z,13nm,1.3s
AGMN  Agassiz Nation     57.08  52  IAmb   IAmb   16 03 30.3
      comp=Z,12nm,1.2s
JOF   Joensuu            57.11 337  eP     P      16 03 29.1 +0.3
HMU   Henry Mountain     57.15  70  IAmb   IAmb   16 03 53.5
      comp=Z,11nm,0.8s
PV10  Paradox Valley     57.75  68  IAmb   IAmb   16 03 36.8
      comp=Z,12nm,1.1s
PV20  West Nyswonger     57.81  68  P      P      16 03 35.2 +0.9
PV20                                IAmb   IAmb   16 03 56.3
      comp=Z,6.9nm,0.6s
PV19  Morning Glory      57.82  68  IAmb   IAmb   16 03 37.5
      comp=Z,11nm,1.1s
PV17  East Wray Mesa     57.86  68  IAmb   IAmb   16 03 37.1
      comp=Z,8.2nm,1.1s
PV11  David Mesa, Pa     57.89  68  IAmb   IAmb   16 04 07.2
      comp=Z,17nm,1.4s
PV18  Skein Mesa, Pa     57.91  68  IAmb   IAmb   16 03 37.5
      comp=Z,16nm,1.1s
PV05  Paradox Valley     57.93  68  IAmb   IAmb   16 03 37.8
      comp=Z,7.2nm,1.0s
PV13  Radium Mtn., P     58.02  68  IAmb   IAmb   16 03 38.3
      comp=Z,8.9nm,1.0s
PV02  Paradox Valley     58.03  68  IAmb   IAmb   16 03 38.5
      comp=Z,21nm,1.5s
DZA   Taraz              58.12 300  eP     P      16 03 36.1 -0.2
DZA   Taraz              58.12 300  eP     P      16 03 36.2 -0.1
KSH   Kashi              58.21 295  P      P      16 03 40.8 +3.7
KSH                                 pmax   pmax
      comp=Z,3.0nm,1.1s
KK31  Karatay Array      58.38 301  P      P      16 03 37.7 -0.4
KK31  Karatay Array      58.38 301  P      P      16 03 37.7 -0.4
KK31                                pmax   pmax
      comp=Z,5.0nm,0.9s
KKAR  Karatay Array      58.38 301  P      P      16 03 37.4 -0.7
KKAR  Karatay Array      58.38 301  P      P      16 03 37.4 -0.7
ARSB  Arslanbob          58.44 298  P      P      16 03 39.9 +1.2
ARSB  Arslanbob          58.44 298  P      P      16 03 39.9 +1.2
ISCO  Idaho Springs      58.52  65  IAmb   IAmb   16 04 03.5
      comp=Z,12nm,1.4s
ISCO  Idaho Springs      58.52  65  P      P      16 03 41.9 +2.4
ISCO                                pmax   pmax
      comp=Z,6.0nm,1.2s
AKTO  Aktyubinsk         58.62 314  LR     LR     16 31 44.9
      comp=Z,258nm,18.5s,baz=74,slow=39
AB31  Akbulak array      58.70 312  P      P      16 03 39.7 -0.5
AB31                                IAmb   IAmb   16 03 41.4
      comp=Z,6.3nm,1.1s
ABKAR Akbulak array      58.70 312  P      P      16 03 39.9 -0.3
ABKAR                               IAmb   IAmb   16 03 41.4
      comp=Z,6.4nm,1.1s
BRLS  Borolday           58.76 301  eP     P      16 03 42.3 +1.5
BRLS  Borolday           58.76 301  eP     P      16 03 42.3 +1.5
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EYMN  Ely               59.29  49    IAmb   IAmb   16 03 45.6
      comp=Z,10nm,0.9s
IUG   Iuzhnay           59.32 300   eP      P      16 03 44.4  -0.3
IUG                                  pmax   pmax
      comp=Z,14nm,1.3s
IUG   Iuzhnay           59.32 300   eP      P      16 03 44.4  -0.3
      comp=Z,14nm,1.3s
CHM   Chimkent          59.41 301   eP      P      16 03 45.0  -0.2
CHM   Chimkent          59.41 301   eP      P      16 03 45.1  -0.2
FINES FINESS Array B    59.57 338    P      P      16 03 45.5  -0.5
FINES FINESS Array B    59.57 338    P      P      16 03 45.8  -0.2
      comp=Z,7.0nm,0.8s,baz=38,slow=9.6,SNR=21
FINES                                LR     LR     16 33 21.7
      comp=Z,104nm,18.1s,baz=29,slow=40
      comp=Z,7.0nm,0.8s
TBO   Thunder Bay       59.66  48    IAmb   IAmb   16 03 47.8
      comp=Z,7.5nm,1.0s
SDCO  Great Sand Dun    60.10  66    P      P      16 03 51.1  +0.7
E38A  The Farm, Brul    60.28  50    IAmb   IAmb   16 03 52.1
      comp=Z,12nm,0.9s
BORG  Borgarnes         60.68   3    LR     LR     16 28 54.1
      comp=Z,30nm,21.6s,baz=325,slow=35
RAF   Rauma             60.84 340   eP      P      16 03 54.6   0.0
MEF   Metsahovi         61.04 339   eP      P      16 03 55.7  -0.3
BELG  Belogornoye       61.12 321    LR     LR     16 33 54.1
      comp=Z,175nm,18.0s,baz=19,slow=40
CMAR  Chiang Mai Arr    61.16 261    P      P      16 03 59.1  +1.7
      comp=Z,1.2nm,0.7s,baz=26,slow=7.3,SNR=8.3
CMAR                                 LR     LR     16 33 29.6
      comp=Z,54nm,18.3s,baz=90,slow=39
      comp=Z,1.2nm,0.7s
GAR   Garm              61.53 298    P      P      16 03 59.5  -0.4
ANMO  Albuquerque       61.68  69    P      P      16 04 02.7  +1.6
ANMO  Albuquerque       61.68  69    P      P      16 04 02.5  +1.4
      comp=Z,3.5nm,0.9s,baz=55,slow=6.2,SNR=4.4
      comp=Z,3.5nm,0.9s
ANMO  Albuquerque       61.68  69⇓eP      P      16 04 02.4  +1.4
ANMO                                 pmax   pmax
      comp=Z,3.0nm,0.9s
COWI  Conover           61.74  49    IAmb   IAmb   16 04 02.0
      comp=Z,10.0nm,1.0s
BRDH  Bariadhala        62.06 270    LR     LR     16 35 17.4
      comp=Z,116nm,18.4s,baz=144,slow=40
VSU   Vasula            62.11 337⇑eP      P      16 04 01.7  -1.6
VSU                                  pmax   pmax
      comp=Z,12nm,0.9s
VSU   Vasula            62.11 337   eP      P      16 04 02.8  -0.5
BNM   Barren Site       62.18  70    P      P      16 04 05.8  +1.2
DZET  Dzherino          62.43 299    P      P      16 04 06.2  +0.2
DZET                                 pmax   pmax
      comp=Z,4.0nm,0.4s
SIMJ  Simiganj          62.45 299    P      P      16 04 04.8  -1.4
SIMJ                                 IAmb   IAmb   16 04 23.6
      comp=Z,6.1nm,0.9s
OBN   Obninsk           62.48 329    LR     LR     16 35 07.6
      comp=Z,98nm,18.4s,baz=38,slow=40
OBN   Obninsk           62.48 329⇑eP      P      16 04 05.8   0.0
OBN                                 e              16 04 45.0
OBN                                 e              16 06 23.5
OBN                                  pmax   pmax
      comp=Z,10.0nm,0.7s
MTSE  Matsula           62.53 338   eP      P      16 04 06.1   0.0
NB2   NORSAR Subarra    62.60 346    P      P      16 04 05.8  -0.8
      comp=Z,17nm,1.1s,baz=17,slow=6.9
NB2   NORSAR Subarra    62.60 346    P      P      16 04 05.7  -0.8
NB2                                  pmax   pmax
      comp=Z,9.0nm,1.3s
NOA   NORSAR Array B    62.60 346    P      P      16 04 06.1  -0.5
      comp=Z,6.5nm,0.9s,baz=17,slow=6.8,SNR=14
NOA                                  LR     LR     16 33 33.0
      comp=Z,38nm,20.4s,baz=20,slow=38
      comp=Z,6.5nm,0.9s
NOA   NORSAR Array B    62.60 346   eP      P      16 04 06.1  -0.5
NOA                                  pmax   pmax
      comp=Z,6.0nm,0.9s
SCHQ  Schefferville     62.83  31    P      P      16 04 07.5  -0.7
      comp=Z,5.2nm,0.9s,baz=347,slow=8.4,SNR=7.8
      comp=Z,5.2nm,0.9s
HFS   Hagfors           63.09 344    P      P      16 04 08.9  -1.0
      comp=Z,4.6nm,0.6s,baz=35,slow=5.4,SNR=22
HFS                                  LR     LR     16 32 44.5
      comp=Z,70nm,20.8s,baz=15,slow=37
      comp=Z,4.6nm,0.6s
NIL   Nilore            64.04 292    P      P      16 04 16.3  -0.3
NIL                                  IAmb   IAmb   16 04 34.8
      comp=Z,11nm,0.9s
NIL   Nilore            64.04 292    P      P      16 04 16.3  -0.3
NIL                                  pmax   pmax
      comp=Z,11nm,1.0s
HNR   Honiara           64.12 185    LR     LR     16 27 50.3
      comp=Z,208nm,21.3s,baz=4.5,slow=32
KONO  Kongsberg         64.16 346deP      P      16 04 16.8  -0.1
KONO                                 pmax   pmax
      comp=Z,11nm,1.0s
MSTX  Muleshoe          64.39  67    IAmb   IAmb   16 04 20.7
      comp=Z,8.1nm,0.9s
MNTX  Cornudas Mount    64.73  70    P      P      16 04 22.3  +1.3
MNTX                                 IAmb   IAmb   16 04 23.6
      comp=Z,5.9nm,0.9s
MNK   Minsk             65.40 334   i P     P      16 04 25.4  +0.4
      comp=E,11nm,0.7s
MNK                                 i P     P      16 04 25.4  +0.4
      comp=N,6.0nm,0.6s
MNK                                 i P     P      16 04 25.4  +0.4
      comp=Z,22nm,0.9s,baz=26
MNK                                 i pP    pwP    16 04 39.5  +0.3
MNK                                 i PP    PP     16 06 41.9  -6.6
MNK                                 i PPP   PPP    16 08 23.5
MNK                                 i S     S      16 13 07.2  +0.4
MNK                                 i sS    sS     16 13 31.4   +11
MNK                                 i SS    SS     16 17 22.7  +3.4
MNK                                 i SSS   SSS    16 20 29.6
MNK                                 i LQ    LQ     16 28 28.9
MNK                                 i LR    LR     16 35 06.2
MNK   Minsk             65.40 334   i P     P      16 04 25.4  +0.4
MNK                                 i *PP   pwP    16 04 39.4  +0.3
MNK                                 i PPP   PPP    16 08 23.5
MNK                                 i S     S      16 13 07.2  +0.4
MNK                                 i *SS   sS     16 13 31.4   +11
MNK                                 i SS    SS     16 17 22.6  +3.4
MNK                                  pmax   pmax
      comp=Z,22nm,0.9s
MNK                                  pmax   pmax
      comp=E,11nm,0.7s
MNK                                  pmax   pmax
      comp=N,6.0nm,0.6s
MNK                                  MLR    MLR
      comp=N,45nm,17.0s
MNK                                  MLR    MLR
      comp=E,49nm,16.0s
MNK                                  MLR    MLR
      comp=Z,68nm,16.0s
PABE  Paberze           65.44 337   eP      P      16 04 25.9  +0.6
DKNS  Dickens           65.61  66    P      P      16 04 25.9  -0.9
DKNS                                 IAmb   IAmb   16 05 32.5
      comp=Z,6.9nm,0.8s
WMOK  Wichita Mounta    65.90  64    IAmb   IAmb   16 04 30.2
      comp=Z,11nm,0.9s
HDIL  Hopedale          66.02  53    P      P      16 04 29.2   0.0
BUKO  Buck Lake         66.36  44    IAmb   IAmb   16 04 31.3
      comp=Z,11nm,1.1s
SADO  Sadowa            67.02  44    LR     LR     16 36 39.8
      comp=Z,80nm,18.9s,baz=281,slow=38
CCM   Cathedral Cave    67.08  56    P      P      16 04 36.1   0.0
HHAR  Hobbs             67.16  59    IAmb   IAmb   16 04 37.0
      comp=Z,12nm,1.1s
MGMO  Mountain Grove    67.30  58    IAmb   IAmb   16 04 37.7
      comp=Z,5.8nm,0.7s
TX31  Lajitas Ar. Si    67.49  71    IAmb   IAmb   16 04 41.0
      comp=Z,6.3nm,0.8s
TXAR  Lajitas Array     67.49  71    P      P      16 04 39.6  +0.7
TXAR  Lajitas Array     67.49  71    P      P      16 04 40.0  +1.1
      comp=Z,6.3nm,0.9s,baz=300,slow=4.5,SNR=59
TXAR                                 LR     LR     16 33 46.8
      comp=Z,43nm,19.5s,baz=348,slow=36
      comp=Z,6.3nm,0.9s
TXAR  Lajitas Array     67.49  71    P      P      16 04 39.6  +0.7
DELO  Deloro Mine       67.83  43    IAmb   IAmb   16 04 40.6
      comp=Z,11nm,1.1s
SAND  Sanderson         67.84  69    IAmb   IAmb   16 04 56.1
      comp=Z,8.4nm,1.0s
T42A  Van Buren         67.97  57    IAmb   IAmb   16 06 15.3
      comp=Z,4.4nm,1.0s
AK03  Malin Array Si    68.45 331    P      P      16 04 43.8  -0.7
AK21  Malin Array Si    68.46 331    P      P      16 04 44.1  -0.4
AK22  Malin Array Si    68.46 331    P      P      16 04 44.1  -0.5
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AKASG Malin Array Be    68.47 331    P      P      16 04 44.4  -0.2
      comp=Z,0.6nm,0.4s,baz=30,slow=6.0,SNR=20
AKASG                                LR     LR     16 38 25.5
      comp=Z,150nm,18.3s,baz=22,slow=39
      comp=Z,0.6nm,0.4s
AKBB  Malin Array Si    68.47 331    IAmb   IAmb   16 04 45.1
      comp=Z,10nm,1.2s
AKBB  Malin Array Si    68.47 331c iP      P      16 04 44.3  -0.3
AKBB                                 pmax   pmax
      comp=Z,11nm,1.4s
AKBB  Malin Array Si    68.47 331    P      P      16 04 44.1  -0.5
KIEV  Kiev              68.48 331           P      16 04 44.0  -0.7
KIEV                                 IAmb   IAmb   16 04 45.1
      comp=Z,10nm,1.3s
KIEV  Kiev              68.48 331    P      P      16 04 44.0  -0.7
KIEV                                 pmax   pmax
      comp=Z,10.0nm,1.3s
KIEV  Kiev              68.48 331    P      P      16 04 44.3  -0.4
      comp=Z,29nm,1.4s
AK01  Malin Array Si    68.48 331    P      P      16 04 44.2  -0.5
AK20  Malin Array Si    68.49 331    P      P      16 04 44.3  -0.5
MEDO  Medina            68.63  45    P      P      16 04 45.1  -0.6
JCT   Junction City     68.68  67    IAmb   IAmb   16 04 47.8
      comp=Z,7.8nm,0.8s
MIAR  Mount Ida         68.71  60    IAmb   IAmb   16 05 28.5
      comp=Z,12nm,1.1s
WHAR  Wooly Hollow      68.76  59    IAmb   IAmb   16 04 47.5
      comp=Z,10nm,1.0s
RNPP1 Kostyukhnivka     68.81 334    P      P      16 04 46.1  -0.6
D62A  Allapoint, All    68.82  36    P      P      16 04 46.5  -0.3
D62A                                 IAmb   IAmb   16 04 47.5
      comp=Z,9.7nm,0.9s
MAK   Makhachkala       68.92 316   eP      P      16 04 44.9  -2.7
MAK                                 e              16 07 16.3
MAK                                 ePPP    PPP    16 09 01.1
MAK                                 eS      S      16 13 45.9  -3.6
MAK                                  pmax   pmax
      comp=Z,128nm,1.3s
MAK                                  MLR    MLR
      comp=Z,120nm,18.0s
DRIO  Del Rio           69.07  69    IAmb   IAmb   16 04 50.0
      comp=Z,7.7nm,1.0s
BSEG  Bad Segeberg      69.57 344   eP      P      16 04 52.3  +0.9
      comp=Z,11nm,1.0s,baz=16,slow=6.0
LUBAR Lubar, Ukraine    69.58 332    P      P      16 04 50.8  -0.7
WLAR  White Oak Lake    69.63  60    P      P      16 04 52.3  +0.3
EKA   Eskdalemuir Ar    69.77 353    P      P      16 04 52.9  +0.3
      comp=Z,6.7nm,0.9s,baz=8.9,slow=5.9,SNR=12
      comp=Z,6.7nm,0.9s
G62A  West of Eustis    69.91  38    P      P      16 04 53.5  -0.1
KVAR  Kislovodsk Arr    69.97 319    LR     LR     16 39 16.9
      comp=Z,100nm,20.2s,baz=285,slow=39
KIV   Kislovodsk        69.97 319   eP      P      16 04 55.7  +1.5
KIV                                  pmax   pmax
      comp=Z,6.0nm,1.1s
KIV                                  MLR    MLR
      comp=Z,94nm,17.0s
KBZ   Khabaz            70.08 319    P      P      16 04 55.4  +0.7
      comp=Z,2.3nm,0.7s,baz=283,slow=4.8,SNR=6.6
KBZ                                  LR     LR     16 40 28.3
      comp=Z,133nm,19.2s,baz=28,slow=40
      comp=Z,2.3nm,0.7s
KBZ   Khabaz            70.08 319c iP      P      16 04 55.5  +0.8
KBZ                                  pmax   pmax
      comp=Z,6.0nm,1.0s
H62A  Milan             70.24  39    P      P      16 04 55.7   0.0
WVT   Waverly           70.25  55    P      P      16 04 56.0  +0.1
WVT   Waverly           70.25  55    P      P      16 04 56.0  +0.1
WVT                                  pmax   pmax
      comp=Z,52nm,0.9s
HORU  Horodok           70.59 332    P      P      16 04 57.9  +0.2
M57A  Sunshine Farm,    70.69  45    IAmb   IAmb   16 04 58.7
      comp=Z,13nm,1.0s
RETH  Rethem/Aller,     70.88 344   eP      P      16 04 59.9  +0.5
      comp=Z,6.3nm,1.1s,baz=16,slow=6.0
I63A  Otisfield         70.90  39    IAmb   IAmb   16 05 00.9
      comp=Z,9.4nm,0.9s
U49A  Red Boiling Sp    70.91  53    IAmb   IAmb   16 07 23.6
      comp=Z,11nm,0.9s
T50A  Nancy             70.93  52    IAmb   IAmb   16 05 01.0
      comp=Z,9.4nm,1.1s
CLTN  Cedars of Leba    70.99  54    IAmb   IAmb   16 07 02.1
      comp=Z,11nm,1.0s
NRDL  Niedersach Rie    71.00 344   eP      P      16 05 00.4  +0.3
      comp=Z,4.7nm,1.0s,baz=16,slow=6.0
SORM  Soroca            71.04 331    P      P      16 04 59.9  -0.5
      comp=Z,4.2nm,0.8s
ANN   Anapa             71.14 323   eP      P      16 04 59.2  -1.9
ANN                                 e*PP    sP     16 05 13.4  +0.9
ANN                                 e              16 07 37.3
ANN                                 eS      S      16 14 12.8  -2.7
ANN                                  pmax   pmax
      comp=Z,36nm,0.9s
KWP   Kalwaria Pacla    71.16 335    P      P      16 05 02.1  +0.9
      comp=Z,18nm,1.2s
KMPD  K-Podol'skiy      71.17 332    P      P      16 05 00.8  -0.4
ASSE  Asse, Remlinge    71.26 343   eP      P      16 05 02.1  +0.5
      comp=Z,8.5nm,1.0s,baz=16,slow=6.0
OJC   Ojcow             71.29 337    P      P      16 05 02.8  +0.8
      comp=Z,12nm,1.3s
KSP   Ksiaz             71.45 339    P      P      16 05 03.9  +0.9
      comp=Z,13nm,1.1s
IBBN  Ibbenburen        71.54 345   eP      P      16 05 04.1  +0.7
      comp=Z,15nm,1.1s,baz=16,slow=6.0
CLZ   Clausthal         71.59 344   eP      P      16 05 04.6  +0.9
      comp=Z,18nm,1.2s,baz=16,slow=6.0
CLL   Collm             71.64 342    IAmb   IAmb   16 05 05.7
      comp=Z,18nm,1.3s
CLL   Collm             71.64 342   i P     P      16 05 03.8  -0.3
CLL                                 e*PP    sP     16 05 16.0  +0.7
CLL                                  pmax   pmax
      comp=Z,15nm,1.2s
CLL   Collm             71.64 342    P      P      16 05 04.0  -0.1
      comp=Z,12nm,1.3s
CLL   Collm             71.64 342   eP      P      16 05 04.2  +0.1
      comp=Z,9.0nm,0.9s,baz=16,slow=6.0
CLL   Collm             71.64 342   i P     P      16 05 03.8  -0.3
      comp=Z,15nm,1.2s
CLL                                 ex      x      16 05 16.0
CLL                                 i x     x      16 05 21.0
OSTC  Ostas             71.74 339    AMS    AMS    16 37 40.0
      comp=Z,100nm,15.5s
CHVC  Chvalec           71.75 340   eP      P      16 05 06.0  +1.3
CHVC                                 AMS    AMS    16 37 20.0
      comp=Z,100nm,13.8s
CHVC  Chvalec           71.75 340   eP      P      16 05 06.0  +1.3
CHVC                                 MLR    MLR
      comp=Z,100nm,13.8s
UPC   Upice             71.83 340   eP      P      16 05 06.8  +1.6
UPC                                  AMS    AMS    16 37 50.0
      comp=Z,100nm,26.2s
UPC   Upice             71.83 340   eP      P      16 05 06.8  +1.6
UPC                                  MLR    MLR
      comp=Z,100nm,26.2s
BRG   Berggiesshubel    71.89 341   eP      P      16 05 05.4  -0.2
      comp=Z,13nm,1.3s,baz=16,slow=6.0
BRG   Berggiesshubel    71.89 341   eP      P      16 05 05.6  +0.1
BRG                                  Amp           16 05 07.4
      comp=Z,8.3nm,1.1s
DPC   Dobruska-Polom    71.92 339   eP      P      16 05 07.0  +1.2
DPC                                  AMS    AMS    16 42 50.0
      comp=Z,100nm,13.0s
DPC   Dobruska-Polom    71.92 339   eP      P      16 05 07.0  +1.2
DPC                                  MLR    MLR
      comp=Z,100nm,13.0s
DPC   Dobruska-Polom    71.92 339    P      P      16 05 06.5  +0.7
      comp=Z,14nm,1.1s
NIE   Niedzica          71.93 336    P      P      16 05 06.9  +1.0
      comp=Z,2.1nm,1.8s
OKC   Ostrava-Krasne    72.02 338    AMS    AMS    16 40 00.0
      comp=Z,100nm,13.9s
KRLC  Kraliky           72.08 339   eP      P      16 05 08.2  +1.4
KRLC                                 AMS    AMS    16 40 50.0
      comp=Z,100nm,13.3s
KRLC  Kraliky           72.08 339   eP      P      16 05 08.2  +1.4
KRLC                                 MLR    MLR
      comp=Z,100nm,13.3s
W50A  Signal Mountai    72.20  54    P      P      16 05 07.3  -0.4
W50A                                 IAmb   IAmb   16 05 08.6
      comp=Z,12nm,0.9s
MORC  Moravsky Berou    72.20 338    IAmb   IAmb   16 05 09.4
      comp=Z,12nm,1.2s
MORC  Moravsky Berou    72.20 338   eP      P      16 05 08.1  +0.6
HOLU  Holmets           72.26 335    P      P      16 05 08.5  +0.7
LANS  Liptovska Anna    72.37 337   eP      P      16 05 10.4  +1.9
LANS                                 pmax   pmax
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      comp=Z,6.0nm,1.2s
LANS  Liptovska Anna    72.37 337   eP      P      16 05 10.4  +1.9
BURAR Bucovina Array    72.38 333    P      P      16 05 08.2  -0.5
BURAR Bucovina Array    72.38 333    P      P      16 05 08.2  -0.5
BURAR                                pmax   pmax
      comp=Z,2.0nm,0.9s
GNI   Garni             72.41 316    LR     LR     16 43 25.6
      comp=Z,74nm,18.3s,baz=28,slow=41
BUG   Bochum--Univer    72.46 345   eP      P      16 05 09.2  +0.3
      comp=Z,8.3nm,0.9s,baz=16,slow=6.0
KASTN Kahler Asten      72.52 345   eP      P      16 05 09.6  +0.3
      comp=Z,6.1nm,1.0s,baz=16,slow=6.0
MOX   Moxa              72.53 342   eP      P      16 05 09.9  +0.5
      comp=Z,9.4nm,1.1s,baz=16,slow=6.0
PRA   Prague            72.56 340    AMS    AMS    16 41 00.0
      comp=Z,200nm,23.3s
FPAL  Fort Paine        72.60  55    IAmb   IAmb   16 05 11.0
      comp=Z,11nm,1.0s
TANN  Tannenbergstha    72.60 342   eP      P      16 05 10.5  +0.6
      comp=Z,5.7nm,1.1s,baz=16,slow=6.0
PRU   Pruhonice         72.62 340   eP      P      16 05 10.8  +0.9
PRU                                  AMS    AMS    16 40 30.0
      comp=Z,100nm,19.9s
PRU   Pruhonice         72.62 340   eP      P      16 05 10.8  +0.9
PRU                                  MLR    MLR
      comp=Z,100nm,19.9s
UBBA  Unterbreizbach    72.64 343   eP      P      16 05 10.6  +0.8
      comp=Z,1.4nm,0.6s,baz=16,slow=6.0
GOPC  GO Pecny, Ondr    72.64 340    AMS    AMS    16 40 40.0
      comp=Z,100nm,18.4s
NKC   Novy Kostel       72.78 342    AMS    AMS    16 41 10.0
      comp=Z,100nm,23.9s
VRAC  Vranov            72.85 339    LR     LR     16 41 53.2
      comp=Z,80nm,18.7s,baz=42,slow=40
VRAC  Vranov            72.85 339   eP      P      16 05 12.2  +0.9
JAVC  Velka Javorina    73.04 338   eP      P      16 05 14.5  +1.9
MANZ  Manzenberg        73.08 342   eP      P      16 05 13.3  +0.6
      comp=Z,1.5nm,1.0s,baz=16,slow=6.0
TREC  Trest             73.09 339    AMS    AMS    16 39 50.0
      comp=Z,100nm,23.6s
KRUC  Moravsky          73.12 339   eP      P      16 05 14.0  +1.1
VYHS  Vyhne             73.13 337   eP      P      16 05 14.0  +1.0
VYHS                                 pmax   pmax
      comp=Z,9.0nm,1.4s
VYHS  Vyhne             73.13 337   eP      P      16 05 14.0  +1.0
MSVF  Nonsavu           73.15 167    LR     LR     16 31 03.3
      comp=Z,67nm,21.5s,baz=149,slow=31
ZVC   Zvikov            73.21 340   eP      P      16 05 14.7  +1.2
ZVC                                  AMS    AMS    16 41 40.0
      comp=Z,100nm,13.1s
ROTZ  Rotzenmuhle       73.27 342   eP      P      16 05 14.7  +0.9
      comp=Z,2.5nm,1.1s,baz=16,slow=6.0
MEM   Membach           73.45 346   dP      P      16 05 14.7  -0.1
BTNL  Ternell           73.45 346   dP      P      16 05 15.2  +0.3
TNS   Taunus Mts        73.46 344   eP      P      16 05 15.6  +0.6
      comp=Z,5.9nm,1.1s,baz=16,slow=6.0
GRF   Grafenberg Arr    73.52 342   eP      P      16 05 16.2  +0.9
      comp=Z,18nm,1.1s,baz=16,slow=6.0
MODS  Modra-Piesok      73.59 338   eP      P      16 05 16.9  +1.2
MODS                                 pmax   pmax
      comp=Z,20nm,1.3s
MODS  Modra-Piesok      73.59 338   eP      P      16 05 16.8  +1.1
KHC   Kasperske Hory    73.62 341   eP      P      16 05 16.9  +1.0
KHC                                  AMS    AMS    16 41 20.0
      comp=Z,100nm,20.1s
KHC   Kasperske Hory    73.62 341d iP      P      16 05 16.6  +0.7
KHC                                  pmax   pmax
      comp=Z,13nm,1.2s
KHC   Kasperske Hory    73.62 341    P      P      16 05 16.8  +0.9
      comp=Z,9.2nm,1.2s
WET   Wettzell          73.74 341   eP      P      16 05 17.6  +1.0
      comp=Z,12nm,1.1s,baz=16,slow=6.0
CKRC  Cesky Krumlov     73.78 340   eP      P      16 05 17.8  +1.0
CKRC                                 AMS    AMS    16 41 50.0
      comp=Z,100nm,20.9s
CKRC  Cesky Krumlov     73.78 340   eP      P      16 05 17.8  +1.0
CKRC                                 MLR    MLR
      comp=Z,100nm,20.9s
GEC2  GERESS Array S    73.87 341   eP      P      16 05 18.0  +0.6
      comp=Z,6.3nm,1.0s,baz=16,slow=6.0
GERES GERESS Array B    73.87 341    P      P      16 05 17.2  -0.3
GERES GERESS Array B    73.87 341    P      P      16 05 18.1  +0.6
      comp=Z,2.6nm,0.9s,baz=46,slow=3.9,SNR=19
GERES                                LR     LR     16 42 23.9
      comp=Z,77nm,18.3s,baz=22,slow=40
      comp=Z,2.6nm,0.9s
MLR   Muntele Rosu      74.13 331    LR     LR     16 39 55.1
      comp=Z,88nm,21.5s,baz=29,slow=38
MLR   Muntele Rosu      74.13 331    P      P      16 05 20.4  +1.3
      comp=Z,5.3nm,0.8s
ISR   Istrita           74.30 331    P      P      16 05 20.7  +0.7
      comp=Z,12nm,1.2s
CONA  Conrad Observa    74.31 339   i pP    P      16 05 21.3  +1.2
      comp=Z,8.3nm,1.3s,SNR=8.9
WLF   Walferdange       74.35 346   eP      P      16 05 21.0  +0.9
      comp=Z,3.9nm,0.9s,baz=16,slow=6.0
VOIR                    74.42 332    P      P      16 05 21.7  +1.0
      comp=Z,4.2nm,1.5s
RONA  Rosalia, Austr    74.44 338   i pP    P      16 05 22.5  +1.7
      comp=Z,9.6nm,1.5s
MPLH  Magyarpolny       74.67 337    P      P      16 05 23.4  +1.4
      comp=Z,507nmcomp=Z,34nm,1.4s
MOA   Molln             74.71 340   i pP    P      16 05 22.9  +0.6
      comp=Z,8.0nm,1.6s
ARSA  Arzberg           75.03 339   i P     P      16 05 24.5  +0.4
      comp=Z,9.2nm,1.3s
RJOB  Jochberg          75.11 341   eP      P      16 05 25.7  +1.0
      comp=Z,7.8nm,0.9s,baz=16,slow=6.0
BFO   Black Forest      75.32 344    P      P      16 05 25.8   0.0
BFO                                  IAmb   IAmb   16 05 26.8
      comp=Z,6.6nm,0.9s
BFO   Black Forest      75.32 344    P      P      16 05 25.8   0.0
BFO                                  pmax   pmax
      comp=Z,7.0nm,0.9s
BFO   Black Forest      75.32 344   eP      P      16 05 25.7  -0.1
      comp=Z,9.0nm,1.1s,baz=16,slow=6.0
MORH  Mrgy, Hungar      75.32 336    P      P      16 05 26.1  +0.3
      comp=Z,3.1nm,1.2s
LESA  Schwarzleotal     75.43 341   i pP    P      16 05 27.7  +1.2
      comp=Z,5.7nm,1.0s
ECH   Echery            75.61 345    IAmb   IAmb   16 05 28.6
      comp=Z,8.2nm,1.3s
UBR   Ueberruh          75.65 343   eP      P      16 05 28.3  +0.5
      comp=Z,12nm,1.1s,baz=16,slow=6.0
SOKA  Soboth            75.68 339   i pP    P      16 05 29.5  +1.6
      comp=Z,10nm,1.5s,SNR=7.7
WATA  Walderalm         75.72 341   i pP    P      16 05 29.4  +1.1
      comp=Z,18nm,1.4s
RETA  Reutte            75.72 342   epP     P      16 05 28.8  +0.6
      comp=Z,0.6nm,0.3s
WTTA  Wattenberg        75.78 341   i pP    P      16 05 29.8  +1.2
      comp=Z,14nm,1.0s,SNR=6.6
MOTA  Moosalm           75.80 342   i pP    P      16 05 29.5  +0.8
      comp=Z,12nm,1.3s,SNR=5.2
SQTA  Sankt Quirin      75.90 342   i pP    P      16 05 30.0  +0.7
      comp=Z,15nm,1.0s,SNR=5.5
OBKA  Obir              75.94 339   i pP    P      16 05 30.3  +0.9
      comp=Z,18nm,1.1s,SNR=9.1
MYKA  Terra Mystica     76.00 340   i pP    P      16 05 31.2  +1.4
      comp=Z,8.8nm,1.4s
DAVA  Damuels           76.07 343   i pP    P      16 05 31.2  +0.9
      comp=Z,9.7nm,1.6s
ABTA  Abfaltersbach     76.11 341   i pP    P      16 05 31.4  +1.0
      comp=Z,14nm,1.2s,SNR=7.6
FETA  Feichten          76.18 342   i pP    P      16 05 32.0  +1.1
      comp=Z,12nm,1.1s,SNR=6.1
PRED  Cave del Predi    76.20 340    P      P      16 05 30.0  -0.9
PRED                                 IAmb   IAmb   16 05 32.2
      comp=Z,6.4nm,0.8s
DAVOX Davos/Dischmat    76.56 342    LR     LR     16 42 11.4
      comp=Z,63nm,19.9s,baz=78,slow=38
DZM   Mont Dzumac       76.58 178   eLR     LR     16 29 09.5
      comp=Z,132nm,28.1s
FUORN Ofenpass-Fuorn    76.65 342    IAmb   IAmb   16 05 35.7
      comp=Z,12nm,1.3s
BR106 Keskin Array S    76.94 323    P      P      16 05 36.2  +0.9
      comp=Z,1.4nm,0.8s
BR131 Keskin Array S    76.94 323⇓eP      P      16 05 34.8  -0.6
BRTR  Keskin Array B    76.94 323    P      P      16 05 34.7  -0.6
BRTR  Keskin Array B    76.94 323    P      P      16 05 35.4  +0.1
      comp=Z,0.8nm,0.8s,baz=64,slow=5.6,SNR=5.0
BRTR                                 LR     LR     16 45 37.7
      comp=Z,55nm,18.2s,baz=20,slow=41
      comp=Z,0.8nm,0.8s
BRTR  Keskin Array B    76.94 323   eP      P      16 05 36.3  +1.0
BRTR                                 pmax   pmax
      comp=Z,1.0nm,0.7s
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TUE	Stuetta	76.95	343	P	P	16 05 35.8	+0.4
TUE				IAmb	IAmb	16 05 37.2	
	comp=Z,7.5nm,1.1s						
TUE	Stuetta	76.95	343	P	P	16 05 36.1	+0.8
	comp=Z,30nm,1.4s						
TAOE	Nuku Hiva Isla	78.34	124	eLR	LR	16 30 09.9	
	comp=Z,150nm,26.9s						
WRA	Warramunga Arr	78.84	209	P	P	16 05 45.9	+0.2
	comp=Z,0.5nm,0.8s,baz=20,slow=5.7,SNR=5.8						
	comp=Z,0.5nm,0.8s						
FDMO	Fiordimonte	79.56	339	IAmb	IAmb	16 05 51.8	
	comp=Z,16nm,1.2s						
PPT2	Papeete2	81.93	136	eLR	LR	16 31 36.4	
	comp=Z,73nm,23.0s						
MMAI	Mount Meron Ar	82.28	319	LR	LR	16 48 23.3	
	comp=Z,61nm,18.9s,baz=36,slow=40						
TIP	Timpagrande	82.43	335	IAmb	IAmb	16 06 06.8	
	comp=Z,9.2nm,1.2s						
TIP	Timpagrande	82.43	335	P	P	16 06 06.0	+1.0
	comp=Z,5.8nm,1.2s						
ASF	Jabal al Asfar	82.45	317	LR	LR	16 48 34.3	
	comp=Z,109nm,18.8s,baz=140,slow=40						
ASAR	Alice Springs	82.50	208	P	P	16 06 05.6	+0.3
ASAR	Alice Springs	82.50	208	P	P	16 06 06.5	+1.2
	comp=Z,1.0nm,1.0s,baz=14,slow=5.8,SNR=7.7						
	comp=Z,1.0nm,1.0s						
ASAR	Alice Springs	82.50	208	P	P	16 06 05.6	+0.3
PVRL	Vila Real	84.06	354	eP	P	16 06 14.3	+1.0
PVRL				i Amb		16 06 15.5	
	comp=Z,27nm,1.3s						
MVO	Moncorvo	84.13	354	eP	P	16 06 14.7	+0.9
VAE	Valguarnera	84.60	337	LR	LR	16 46 33.5	
	comp=Z,68nm,21.4s,baz=335,slow=38						
PVIS	Viseu	84.63	354	eP	P	16 06 17.0	+0.8
MTE	Manteigas	84.93	354	eP	P	16 06 18.9	+1.2
MTE				i Amb		16 06 35.2	
	comp=Z,28nm,1.9s						
PCAS	Casmilo, Conde	85.33	355	eP	P	16 06 20.5	+0.8
ESBB	Sonseca Array	85.38	351	P	P	16 06 19.0	-1.1
ESDC	Sonseca Array	85.38	351	P	P	16 06 19.2	-0.8
ESDC	Sonseca Array	85.38	351	P	P	16 06 20.5	+0.5
	comp=Z,8.6nm,1.0s,baz=1.3,slow=5.0,SNR=46						
	comp=Z,8.6nm,1.0s						
EIL	Elat	85.44	318	LR	LR	16 50 39.4	
	comp=Z,105nm,18.5s,baz=63,slow=40						
PCBR	Castelo Branco	85.48	354	eP	P	16 06 21.0	+0.6
PCBR				i Amb		16 06 43.2	
	comp=Z,16nm,1.7s						
PAB	San Pablo	85.54	352	P	P	16 06 20.7	-0.2
PAB				IAmb	IAmb	16 06 22.5	
	comp=Z,7.9nm,1.1s						
PAB	San Pablo	85.54	352	P	P	16 06 20.7	-0.2
PAB				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PSARD	Sardoal	85.76	354	eP	P	16 06 22.8	+0.9
PSARD				i Amb		16 06 44.8	
	comp=Z,22nm,1.6s						
PESTR	Estremoz	86.46	354	eP	P	16 06 26.6	+1.3
TBI	Tubuai	87.18	139	eLR	LR	16 34 03.3	
	comp=Z,302nm,29.2s						
TBI				eLR	LR	16 34 14.1	
	comp=Z,928nm,24.8s						
MORF	Marmelete	88.07	355	eP	P	16 06 32.5	-0.7
MORF				i Amb		16 06 53.9	
	comp=Z,41nm,1.7s						
QSPA	South Pole Qui	144.56	180	PKPdf	PKPab	16 13 15.3	-1.0

WEL 19 15:59:38.8±1.6, **38°S**±15°×**17°7E**±°, **h5^{km}**, **M2.6**/7, **ML3.6**/6, **MLv2.6**/7, **Error ellipse: s-maj=20.3km s-min=5.7km az=10.2, confirmed, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WIZ	White Island	0.02	268	P	Pg	15 59 40.0	+0.2
HAZ	Te Kaha	0.51	117	P	Pg	15 59 48.9	+0.4
HAZ				S	Sb	15 59 56.6	-1.2
RUGZ	Raukumara Rang	0.57	140	P	Pg	15 59 49.5	-0.3
RAGZ	Rawiri	0.98	171	P	Pg	15 59 58.0	+0.3
GRRZ	Galatos Road	1.20	226	P	Pn	16 00 02.4	+0.1
ALRZ	Allen Road	1.24	213	P	Pg	16 00 00.7	-2.0
ALRZ				S	Sg	16 00 04.9	-14
WPRZ	Whakapapatarin	1.29	220	P	Pn	15 59 59.4	-4.2
MRHZ	Matea Rd	1.45	205	P	Pn	16 00 02.3	-3.4
MRHZ				S	Sb	16 00 07.1	-18
KUTZ	Kaahu Road	1.46	228	P	Pn	16 00 01.5	-4.4
WHTZ	Whakaora	1.51	221	P	Pn	15 59 58.3	-8.3
WATZ	Wairara	1.66	224	P	Pn	16 00 02.0	-6.7
RATZ	Rangitukua	1.76	220	P	Pn	16 00 01.8	-8.1

*NOU **19** 16:00:08.9, 37°.45S×177°.09E, h0^{km}, MLv3.4/5, Off E. Coast of N. Island, N.Z.*

*WEL **19** 16:00:10.7, 37°.53S×177°.12E, h5^{km}, ML3.4, Mw3.7, Moment Tensor Solution. s6 Moment tensor: Scale 10^{14} Nm; M$_{rr}$-2.25; M$_{\theta\theta}$-1.17; M$_{\phi\phi}$3.41; M$_{r\theta}$0.18; M$_{\theta\phi}$3.04; M$_{\phi r}$0.43; Fault plane solution: M$_0$3.82000×10^{14} NP1: φ$_s$162.00000°, δ89.00000°, λ-174.00000°. NP2: φ$_s$72.00000°, δ84.00000°, λ-1.00000°. Principal axes: T 4.9570, Plg4.0000°, Azm297.0000°; N -2.6830, Plg84.0000°, Azm171.0000°; P -2.2740, Plg5.0000°, Azm27.0000°; Stations used: OPRZ URZ MWZ RTZ TOZ HIZ STRIKE-SLIP FAULTING*

*WEL **19** 16:00:10.1±0.7, 38°S±4°×17°7E±°, h5^{km}±5^{km}, M3.4/50, ML4.0/19, MLv3.4/50 Error ellipse: s-maj=5.8km s-min=2.9km az=174.9, confirmed*

ISC 19 16:00:09.5±0.9, **37°.51S**±0°.04×**177°.12E**±0°.03, **h13^{km}**±6^{km}, **n78, σ0^{s}68**/86, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSRZ	White Island S	0.04	98	P	Pg	16 00 12.1	+0.2
WIZ	White Island	0.06	106	P	Pg	16 00 12.0	+0.1
WIZ				S	Sg	16 00 13.3	-0.4
HAZ	Te Kaha	0.58	115	P	Pg	16 00 21.0	+0.1
HAZ				S	Sg	16 00 29.1	+0.6
MARZ	Manawahe	0.59	217	P	Pb	16 00 21.5	-0.3
EDRZ	Edgecumbe	0.67	207	P	Pb	16 00 23.2	+0.1
TGRZ	Tauranga	0.72	252	P	Pb	16 00 24.4	+0.5
URZ	Urewera	0.75	181	P	Pg	16 00 23.7	-0.4
URZ	Urewera	0.75	181	P	Pg	16 00 23.6	-0.4
LIRZ	Lichensteins R	0.76	230	P	Pb	16 00 25.2	+0.4
LIRZ				S	Sb	16 00 35.3	+0.3
MKRZ	Makatiti	0.81	219	P	Pn	16 00 26.4	-0.5
OMRZ	Omania	0.84	225	P	Pb	16 00 26.3	+0.3
OMRZ				S	Sg	16 00 36.4	-0.4
KARZ	Kaharoa	0.86	234	P	Pb	16 00 26.5	+0.1
KARZ				S	Sb	16 00 38.1	+0.2
TARZ	Mount Tarawera	0.87	214	P	Pn	16 00 27.4	-0.3
MWZ	Matawai	0.88	159	P	Pg	16 00 26.1	-0.5
MWZ				S	Sn	16 00 39.5	-0.9
MXZ	Matakaoa Point	0.94	93	P	Pg	16 00 27.5	-0.2
MXZ	Matakaoa Point	0.94	93	P	Pg	16 00 27.3	-0.4
NGRZ	Ngongotaha	0.95	231	P	Pn	16 00 28.6	-0.1
RRRZ	Republican Roa	0.96	210	P	Pg	16 00 27.7	-0.3
HLRZ	Highlands Stat	0.96	219	P	Pn	16 00 28.8	0.0
UTU	Utuhina	0.99	228	P	Pn	16 00 30.0	+0.8
KMRZ	Kaimai	0.99	250	P	Pb	16 00 28.4	-0.3
MUGZ	Murupara	1.00	196	P	Pb	16 00 28.6	-0.2
RAGZ	Rawiri	1.01	167	P	Pb	16 00 28.6	-0.3
RAGZ				S	Sg	16 00 42.1	-0.1
PUZ	Puketiti	1.06	122	P	Pn	16 00 30.4	+0.3
PUZ				S	Sn	16 00 45.9	+1.1
TKGZ	Te Karaka	1.09	148	P	Pn	16 00 30.6	+0.1
RTZ	Ruatahuna	1.11	186	P	Pb	16 00 30.0	-0.7
SNGZ	Shannon Statio	1.28	172	P	Pn	16 00 33.0	-0.2
CNGZ	Carnagh Statio	1.29	139	P	Pg	16 00 34.9	+0.5
RIGZ	Rimuhau	1.29	157	P	Pg	16 00 34.4	-0.1
TOZ	Tahuroa Road	1.30	260	P	Pn	16 00 32.8	-0.7
KUZ	Kuaotunu	1.36	304	P	Pn	16 00 33.1	-1.1
MTHZ	Maungataniwha	1.36	189	P	Pn	16 00 34.4	+0.2
RAHZ	Arahi	1.40	181	P	Pb	16 00 35.9	+0.3
TLZ	Tolley Road	1.50	236	P	Pb	16 00 37.4	+0.1
PRGZ	Paritu Road	1.53	157	P	Pg	16 00 38.8	-0.2
WHHZ	Waihua	1.56	177	P	Pg	16 00 39.0	-0.6
KNZ	Kokohu	1.57	164	P	Pg	16 00 40.2	+0.5
NMHZ	Naumai	1.60	189	P	Pb	16 00 39.4	+0.4
MKAZ	Moumakai	1.62	284	P	Pn	16 00 37.3	-0.5
BKZ	Black Stump Fm	1.72	196	P	Pb	16 00 41.6	+0.5
BKZ	Black Stump Fm	1.72	196	P	Pn	16 00 39.6	+0.3
WIAZ	Waiheke Island	1.74	294	P	Pn	16 00 39.4	-0.1
MHGZ	Mahia Peninsul	1.75	160	P	Pb	16 00 40.7	-0.8
ARHZ	Aropaoanui	1.75	183	P	Pb	16 00 41.4	-0.2
GRZ	Great Barrier	1.83	313	P	Pn	16 00 40.4	-0.3
ETAZ	East Tamaki Re	1.84	287	P	Pn	16 00 41.0	+0.1
KATZ	Kakaramea	1.84	217	P	Pg	16 00 47.5	+2.6
MBAZ	Motutapu North	1.93	292	P	Pn	16 00 42.2	+0.2
NTVZ	North Tongarir	1.95	215	P	Pg	16 00 46.9	-0.1
TMVZ	Te Maari	1.95	214	P	Pg	16 00 46.7	-0.3
MCHZ	McNeill Hill	1.96	190	P	Pb	16 00 44.5	-0.6
ETVZ	East Tongariro	1.96	214	P	Pg	16 00 46.7	-0.6
KWHZ	Kaweka Forest	1.99	196	P	Pb	16 00 45.0	-0.7
EPAZ	Eden Park BICE	2.00	288	P	Pn	16 00 43.6	+0.6
NNVZ	North Ngauruho	2.00	216	P	Pg	16 00 47.4	-0.7
HBAZ	Herne Bay Bore	2.02	288	P	Pn	16 00 44.0	+0.7
AWAZ	Awhitu Peninsu	2.03	282	P	Pn	16 00 43.8	+0.4
SNVZ	South Ngauruho	2.04	214	P	Pg	16 00 48.1	-0.5
NGZ	Ngauruhoe	2.05	215	P	Pg	16 00 48.4	-0.4
HIZ	Hauiti	2.05	240	P	Pn	16 00 44.0	+0.2
HIZ	Hauiti	2.05	240	P	Pn	16 00 43.9	+0.1
COVZ	Chateau Observ	2.09	216	P	Pg	16 00 49.3	-0.4
TUVZ	Tukino	2.10	213	P	Pg	16 00 49.1	-0.7
WTAZ	Waiatarua	2.12	285	P	Pn	16 00 45.9	+1.3
FWVZ	Far West T-bar	2.13	215	P	Pg	16 00 49.9	-0.6
MAVZ	Matarangi	2.14	214	P	Pg	16 00 49.7	-0.9
WHVZ	Whangaehu Hut	2.14	214	P	Pg	16 00 49.5	-1.1
WNVZ	Wahianoa	2.17	213	P	Pb	16 00 49.3	+0.5
MOVZ	Moawhango	2.18	209	P	Pb	16 00 48.2	-0.7
KRHZ	Kereru	2.21	195	P	Pn	16 00 47.0	+1.0
KAHZ	Kahuranaki	2.29	185	P	Pn	16 00 47.9	+0.8
VRZ	Vera Road	2.46	228	P	Pn	16 00 50.1	+0.8
PNHZ	Pukenui	2.50	196	P	Pn	16 00 50.8	+0.7
PXZ	Pawanui	2.52	185	P	Pn	16 00 49.6	-0.6
TSZ	Takapari Road	2.70	199	P	Pn	16 00 53.6	+0.9
WCZ	Waipu Caves	2.73	304	P	Pn	16 00 53.2	+0.1
WAZ	Wanganui	2.80	216	P	Pb	16 00 57.4	-1.9
NEZ	North Egmont	2.96	233	P	Pn	16 00 58.5	+2.2

*GCG **19** 16:00:44.1±1.3, 13°.98N×93°.45W, h36^{km}±999^{km}, MD4.6, ML4.4*

*NEIC **19** 16:00:44.9±1.9, 14°.14N±0°.09×93°.34W±0°.05, h10^{km}±1^{km}, mb4.3/29, Md4.2/33(MEX), Error ellipse: s-maj=14.6km s-min=7.8km az=170.0*

*IDC **19** 16:00:45.1±3.2, 14°.80N×92°.70W, h0^{km}, mb3.8/8, mbtmp3.8/8, MS3.5/4, Error ellipse: s-maj=89.8km s-min=37.2km az=29.0*

*CATAC **19** 16:00:45.3±0.8, 14°N±4°×9°3W±°, h1^{km}, M4.3/10, MLv4.3/10, Error ellipse: s-maj=10.6km s-min=8.8km az=85.4, confirmed*

*MEX **19** 16:00:47.5±0.7, 14°.32N×93°.39W, h8^{km}±31^{km}, MD4.3*

ISC 19 16:00:48.2±0.9, **14°.28N**±0°.07×**93°.36W**±0°.03, **h36^{km}**±2^{km}, **n104, σ2^{s}34**/132, **mb4.1**/13, **MS3.4**/4, **1C, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMCA	Catarina	1.37	65	i P	Pn	16 01 09.5	-1.3
SMCA				i S	Sn	16 01 27.8	+0.2
SMCA				IAML		16 01 31.7	
	comp=N,2µm,0.6s						
PATR	El Naranjo	1.37	52	eP	Pn	16 01 09.2	-1.8
PATR				eS	Sn	16 01 25.9	-2.2
PCIG		1.42	5		Pn	16 01 09.6	-2.0
PCIG		1.42	5	i P	Pn	16 01 09.6	-2.0
PCIG				eS	Sn	16 01 21.9	-7.1
PAVE	Pavencul	1.46	51	eP	Pn	16 01 10.7	-1.5
PAVE				eS	Sn	16 01 30.8	+0.6
RTAL	Retalhuleu	1.63	81	Pn	Pn	16 01 12.8	-1.5
RTAL	Retalhuleu	1.63	81	eP	Pn	16 01 12.7	-1.6
RTAL				eS	Sn	16 01 33.7	-0.4
RTAL	Retalhuleu	1.63	81	P	Pn	16 01 13.3	-1.1
RTAL	Retalhuleu	1.63	81	S	Sn	16 01 34.6	+0.5
STG8	El Palmar, Qui	1.95	85	i P	Pn	16 01 15.3	-3.7
STG8				i S	Sn	16 01 38.4	-4.0
STG8				IAML		16 01 42.4	
	comp=N,3µm,0.5s						
STG0	El Palmar, Qui	1.96	85	i P	Pn	16 01 15.0	-4.1
STG0				i S	Sn	16 01 39.4	-3.1
STG0				IAML		16 01 44.4	
	comp=E,4µm,0.2s						
SOKI	Kika Raxquin	1.96	74	i P	Pn	16 01 18.9	-0.5
SOKI				i S	Sn	16 01 49.1	+6.1
SOKI				IAML		16 02 00.1	
	comp=N,3µm,1.0s						
HUEH	Huehuetenango	2.07	60	Pn	Pn	16 01 20.8	+0.1
HUEH	Huehuetenango	2.07	60	eP	Pn	16 01 19.9	-0.8
HUEH				i S	Sn	16 01 44.6	-0.7
HUEH	Huehuetenango	2.07	60	i P	Pn	16 01 21.2	+0.5
HUEH				i S	Sn	16 01 51.9	+6.6
HUEH				IAML		16 02 04.1	
	comp=E,4µm,0.8s						
HUEH	Huehuetenango	2.07	60	P	Pn	16 01 20.7	+0.1
HUEH	Huehuetenango	2.07	60	S	Sn	16 01 52.9	+7.6
CCIG	Comitan	2.31	30	Pn	Pn	16 01 24.5	+0.5
CCIG	Comitan	2.31	30	eP	Pn	16 01 24.9	+0.9
CCIG				eS	Sn	16 01 50.8	-0.5
CCIG	Comitan	2.31	30	⇑iP	Pn	16 01 25.0	+1.0
CCIG				i S	Sn	16 01 56.4	+5.1
CCIG				IAML		16 01 59.8	
	comp=E,1µm,0.6s						
CCIG	Comitan	2.31	30	P	Pn	16 01 24.6	+0.6
TGIG		2.50	5		Pn	16 01 26.9	+0.5
TGIG					Sn	16 01 54.9	-0.8
TGIG		2.50	5	eP	Pn	16 01 26.4	0.0
TGIG				eS	Sn	16 01 54.9	-0.8
TGIG		2.50	5	i P	Pn	16 01 26.7	+0.3
TGIG				i S	Sn	16 01 58.9	+3.2
TGIG				IAML		16 02 02.2	
	comp=E,803nm,1.2s						
TGBT	Tuxtla Gutierr	2.50	6		Pn	16 01 27.2	+0.8
TGBT					Sn	16 01 54.9	-0.7
TGBT	Tuxtla Gutierr	2.50	6	i P	Pn	16 01 27.2	+0.8
TGBT				i S	Sn	16 01 54.9	-0.7
HUIG	Huatulco	3.04	299		Pn	16 01 28.0	-5.9
HUIG	Huatulco	3.04	299	eP	Pn	16 01 28.0	-5.9
NUBE	Las Nubes	3.49	96	P	Pn	16 01 38.9	-1.2
NUBE	Las Nubes	3.49	96	S	Sn	16 02 19.3	-1.0
JAYA	Jayaque - finc	3.84	99	P	Pn	16 01 44.2	-0.8
MTO3	Montecristo	3.87	88	Pn	Pn	16 01 43.9	-1.5
MTO3	Montecristo	3.87	88	P	Pn	16 01 47.1	+1.6
ESQI	Esquipulas	3.90	85	Pn	Pn	16 01 42.2	-3.5
PMON	Piamonte	3.96	98	P	Pn	16 01 47.6	+1.0
PEIG	Puerto Escondi	4.04	296		Pn	16 01 44.6	-3.0
PEIG	Puerto Escondi	4.04	296	eP	Pn	16 01 44.6	-3.0
PETF	Flores	4.26	52	eP	Pn	16 01 42.6	-8.0
PETF				eS	Sn	16 02 38.3	-0.9
PETF	Flores	4.26	52	P	Pn	16 01 50.2	-0.5
VHO	Vista Hermosa	4.28	311	eP	Pn	16 01 51.7	+0.6
VHO				eS	Sn	16 02 40.6	+0.8
YOIG	Yosondua	4.78	303		Pn	16 01 57.7	-0.3
YOIG					Sn	16 02 49.9	-2.5
YOIG	Yosondua	4.78	303	eP	Pn	16 01 57.7	-0.3
YOIG				i S	Sn	16 02 49.9	-2.5
PNIG	Pinotepa	5.06	295		Pn	16 02 00.1	-1.5
PNIG					Sn	16 03 05.8	+6.9
PNIG	Pinotepa	5.06	295	eP	Pn	16 02 00.1	-1.5
PNIG				eS	Sn	16 03 05.8	+6.9
TXIG	Tlaxiaco	5.18	305		Pn	16 02 01.6	-1.8
TXIG					Sn	16 03 02.9	+0.8
TXIG	Tlaxiaco	5.18	305	eP	Pn	16 02 01.6	-1.8
TXIG				eS	Sn	16 03 02.9	+0.8
TOIG	Toxpalan	5.21	317		Pn	16 02 03.8	+0.1
TOIG					Sn	16 03 00.5	-2.1
TOIG	Toxpalan	5.21	317	eP	Pn	16 02 03.8	+0.1
TOIG				eS	Sn	16 03 00.5	-2.1
HLIG	Huajuapan de L	5.55	310		Pn	16 02 14.6	+6.2
HLIG	Huajuapan de L	5.55	310	eP	Pn	16 02 14.6	+6.2
HLIG				eS	Sn	16 03 16.9	+5.8
FTIG	Fresnillo de T	5.84	309	eP	Pn	16 02 12.2	-0.3
FTIG				eS	Sn	16 03 14.6	-3.6
TLIG	Tlapa	5.98	304	eP	Pn	16 02 15.0	+0.6
TLIG				eS	Sn	16 03 18.5	-3.3
JAUV	Jalcomulco	6.04	327	eP	Pn	16 02 14.2	-1.0
JAUV				i S	Sn	16 03 22.1	-0.9
CRIG	Cruz Grande	6.08	294	eP	Pn	16 02 16.5	+0.9
CRIG				eS	Sn	16 03 19.4	-4.6
DAIG	Los Arroyos	6.65	295	eP	Pn	16 02 22.6	-0.9
DAIG				eS	Sn	16 03 40.9	+2.8
CXUV	Coxquihui	7.12	326	eP	Pn	16 02 27.2	-2.8
CXUV				eS	Sn	16 03 43.9	-5.8
YAIG	Yautepec	7.12	311	eP	Pn	16 02 30.9	+0.7
YAIG				eS	Sn	16 03 50.8	+0.9
PLIG	Platanillo	7.18	306	eP	Pn	16 02 31.6	+0.8
PLIG				eS	Sn	16 03 51.3	+0.1
TEIG	Tepich	7.65	39	Pn	Pn	16 02 36.8	-0.4
ARIG	Puente Sto Nin	7.80	302	eP	Pn	16 02 40.9	+1.6
ARIG				eS	Sn	16 04 07.9	+1.4
ZIIG	Zihuatanejo	8.47	294	eP	Pn	16 02 47.2	-1.2
SOR	Soroa	12.96	48	Pn	Pn	16 03 47.7	-2.1
HNDO	Hondo	16.14	341	P	P	16 04 38.6	+3.3
HNDO				IAmb	IAmb	16 04 39.9	
	comp=Z,9.4nm,0.6s						
OZNA	Ozona	18.04	338	P	P	16 04 58.9	+2.5
ALPN	Alpine	18.61	331	P	Pn	16 05 04.0	+0.8
SGCY	Sterling City	18.94	339	P	Pn	16 05 08.1	+0.9
SGCY				IAmb	IAmb	16 05 12.7	
	comp=Z,12nm,0.8s						
VHRN	Van Horn	19.61	329	P	Pn	16 05 15.4	+0.2
VHRN				IAmb	IAmb	16 05 18.2	
	comp=Z,5.5nm,1.0s						
ODSA	Odessa	19.65	336	P	Pn	16 05 17.1	+1.5
ODSA				IAmb	IAmb	16 05 20.4	
	comp=Z,15nm,0.9s						
SN05	Snyder 5	19.75	341	P	Pn	16 05 17.3	+0.5
SN05				IAmb	IAmb	16 05 23.4	
	comp=Z,10nm,0.9s						
HTMS	Hat Mesa	20.40	334	P	P	16 05 23.1	+0.9
DKNS	Dickens	20.49	342	P	P	16 05 23.9	+0.7
MNTX	Cornudas Mount	20.54	330	P	Pn	16 05 26.3	+0.2
FNO	Franklin	21.20	351	P	P	16 05 31.4	+0.7
MSTX	Muleshoe	21.38	338	P	P	16 05 33.0	+0.2
MSTX				IAmb	IAmb	16 05 40.6	
	comp=Z,8.9nm,1.1s						
SMWD	Samnorwood	21.65	345	P	P	16 05 36.1	+0.5
AMTX	Amarillo	21.85	341	P	P	16 05 39.2	+1.4
AMTX				IAmb	IAmb	16 05 48.1	
	comp=Z,13nm,0.8s						
TKL	Tuckaleechee C	22.96	20	LR	LR	16 15 55.1	
	comp=Z,60nm,18.4s,baz=208,slow=41						
CRNM	Carthage	23.04	331	P	P	16 05 50.9	+0.3
BNM	Barren Site	23.15	331	P	P	16 05 53.7	+2.0
SBM	South Baldy	23.27	330	P	P	16 05 54.5	+1.4
LENM	Lemitar	23.32	330	P	P	16 05 54.6	+1.3
RTBA	Rita Blanca	23.61	341	P	P	16 05 55.6	-0.5
RTBA				IAmb	IAmb	16 06 04.3	
	comp=Z,11nm,1.0s						
ANMO	Albuquerque	23.73	332	P	P	16 05 56.9	-0.4
	comp=Z,1.5nm,0.7s,baz=145,slow=5.5,SNR=2.3						
	comp=Z,1.5nm,0.7s						
T25A	Trinidad	24.81	339	P	P	16 06 09.6	+2.4
T25A				IAmb	IAmb	16 06 16.5	
	comp=Z,11nm,1.1s						
SDCO	Great Sand Dun	25.75	337	P	P	16 06 16.3	+0.5
N38A	Joes South For	26.42	0	P	P	16 06 22.4	+0.9
PDAR	Pinedale Array	31.64	337	P	P	16 07 08.2	0.0
	comp=Z,0.2nm,0.5s,baz=166,slow=9.6,SNR=1.7						
	comp=Z,0.2nm,0.5s						
ELK	Elko	32.55	328	LR	LR	16 22 27.0	
	comp=Z,100nm,18.9s,baz=306,slow=40						
NVAR	Mina Array Bea	32.64	322	P	P	16 07 19.4	+2.4
NVAR	Mina Array Bea	32.64	322	P	P	16 07 19.2	+2.2
	comp=Z,0.8nm,0.6s,baz=144,slow=8.1,SNR=5.7						
NVAR				LR	LR	16 22 29.2	
	comp=Z,52nm,19.1s,baz=226,slow=40						
	comp=Z,0.8nm,0.6s						
MCMT	McKenzie Canyo	34.66	335	P	P	16 07 36.1	+1.6
ULM	Lac du Bonnet	35.93	357	P	P	16 07 42.3	-2.8
	comp=Z,1.2nm,0.5s,baz=183,slow=9.9,SNR=4.2						
	comp=Z,1.2nm,0.5s						
SCHQ	Schefferville	45.43	21	LR	LR	16 29 24.4	
	comp=Z,84nm,18.6s,baz=286,slow=38						
YKAW1	Yellowknife Wh	50.43	347	P	P	16 09 41.4	-0.5
YKAW1				IAmb	IAmb	16 09 43.2	
	comp=Z,8.5nm,0.8s						
YKA	Yellowknife Ar	50.46	347	P	P	16 09 42.4	+0.2
	comp=Z,2.4nm,0.7s,baz=150,slow=7.1,SNR=7.3						
	comp=Z,2.4nm,0.7s						
MCARA	McCarthy VSAT	58.88	335	P	P	16 10 41.7	-1.5
F28M	Old Crow	61.19	342	P	P	16 10 60.0	+1.0
F28M				IAmb	IAmb	16 11 01.0	
	comp=Z,2.6nm,0.8s						
ILAR	Eielson Array	62.07	337	P	P	16 11 05.6	+0.7
	comp=Z,0.5nm,0.7s,baz=123,slow=3.3,SNR=4.7						
	comp=Z,0.5nm,0.7s						
BMAR	Burnt Mountain	62.58	340	P	P	16 11 08.7	+0.2
F21K	Alatna River	65.56	338	P	P	16 11 28.3	+0.3
ESDC	Sonseca Array	80.57	51	P	P	16 12 55.2	-2.1
	comp=Z,0.4nm,0.6s,baz=292,slow=5.8,SNR=4.6						
	comp=Z,0.4nm,0.6s						
ARCES	ARCESS Array B	86.28	18	P	P	16 13 25.6	-0.4
	comp=Z,0.9nm,0.7s,baz=336,slow=2.7,SNR=4.9						
	comp=Z,0.9nm,0.7s						
CMAR	Chiang Mai Arr	145.29	339		PKPbc	16 20 22.3	-0.5
CMAR	Chiang Mai Arr	145.29	339	PKPbc	PKPdf	16 20 23.4	+0.2
	comp=Z,1.1nm,0.7s,baz=14,slow=1.5,SNR=7.4						

*IDC **19** 16:09:30.9±5.0, 6°.32N×82°.52W, h0^{km}, mb3.7/3, mbtmp4.0/5, ML3.6/2, MS3.4/15, Error ellipse: s-maj=152.6km s-min=28.5km az=33.0*

*NEIC **19** 16:09:31.5±1.7, 6°.17N±0°.04×82°.5W±0°.1, h10^{km}±1^{km}, mb4.1/1, Error ellipse: s-maj=19.8km s-min=5.0km az=254.0*

*CATAC **19** 16:09:31.2±0.4, 6°N±3°×8°3W±°, h10^{km}, M4.7/13, mb4.6/5, MLv4.7/13, Error ellipse: s-maj=10.7km s-min=4.7km az=60.2, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-2.22; M$_{\theta\theta}$-2.16; M$_{\phi\phi}$4.38; M$_{r\theta}$-0.18; M$_{\theta\phi}$-2.84; M$_{\phi r}$0.60; Fault plane solution: M$_0$4.78093×10^{15} NP1:φ$_s$294.38866°, δ84.91586°, λ178.48964°. NP2: φ$_s$24.52254°, δ88.49559°, λ5.08590°. Principal axes: T 5.4930, Plg4.6591°, Azm249.5589°; N -2.2699, Plg84.6968°, Azm40.9581°; P -3.2231, Plg2.5275°, Azm159.3528°; Moment Tensor Solution. Moment tensor: Scale 10^{15} Nm; M$_{rr}$-0.52; M$_{\theta\theta}$-1.53; M$_{\phi\phi}$2.06; M$_{r\theta}$-0.97; M$_{\theta\phi}$-2.92; M$_{\phi r}$0.11; Fault plane solution: M$_0$3.59508×10^{15} NP1:φ$_s$106.79288°, δ84.42622°, λ-163.29654°. NP2:φ$_s$15.12341°, δ73.37781°, λ-5.81768°. Principal axes: T 3.7680, Plg7.6774°, Azm239.9025°; N -0.3752, Plg72.4163°, Azm124.7282°; P -3.3927, Plg15.7210°, Azm332.0771°; confirmed*

*RSNC **19** 16:09:32.5±0.0, 6°N±3°×8°2W±°, h40^{km}±857^{km}, M3.7, mB5.1, mb5.2, ML3.3, Mw(mB)4.4*

*UPA **19** 16:09:32.9±1.2, 6°.17N×82°.39W, h20^{km}±10^{km}, MW4.5*

ISC 19 16:09:31.4±0.8, **6°.07N**±0°.04×**82°.46W**±0°.04, **h14^{km}, n101, σ2^{s}18**/112, **mb3.9**/4, **MS3.6**/10, **13C-4D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CACAO	El Cacao, Vera	2.03	51	P	Pn	16 10 03.4	-1.8
CACAO				S	Sn	16 10 26.3	-4.1
CACAO	El Cacao, Vera	2.03	51	eP	Pn	16 10 03.5	-1.8
CACAO				eS	Sn	16 10 26.4	-4.0
GMAL	Guarumal, Vera	2.08	36	P	Pn	16 10 04.3	-1.6
GMAL				S	Sn	16 10 28.1	-3.4
GMAL	Guarumal, Vera	2.08	36	⇓eP	Pn	16 10 04.3	-1.6
GMAL				eS	Sn	16 10 28.3	-3.3
MAPC	Malpelo	2.22	157	P	Pn	16 10 05.2	-2.7
MAPC				S	Sn	16 10 29.7	-5.5
RSUS3	Rio de Jesus,	2.30	34	eP	Pn	16 10 07.6	-1.3
RSUS3				eS	Sn	16 10 33.9	-3.1
PEDE3	Pedregal, Chir	2.30	1	eP	Pn	16 10 07.8	-1.1
LOCO3	Loma Colorada,	2.32	1	eP	Pn	16 10 08.3	-0.9
LOCO3				eS	Sn	16 10 36.2	-1.4
LOMA3	Las Lomas, Chi	2.35	2	eP	Pn	16 10 08.7	-0.8
LOMA3				eS	Sn	16 10 36.0	-2.2
DVD	David	2.35	0	eP	Pn	16 10 08.4	-1.2
DVD				eS	Sn	16 10 33.8	-4.4
TOSI3	Tonosi	2.41	56	eP	Pn	16 10 09.1	-1.3
TOSI3				eS	Sn	16 10 36.5	-3.2
MESA3	La Mesa, Verag	2.42	31	eP	Pn	16 10 09.3	-1.3
MESA3				eS	Sn	16 10 37.8	-2.2
PIRO	Carate, Puerto	2.48	340	Pn	Pn	16 10 09.0	-2.3
PIRO	Carate, Puerto	2.48	340	⇑P	Pn	16 10 09.0	-2.3
PIRO	Carate, Puerto	2.48	340	S	Sn	16 10 38.8	-2.6
CDITO	Canoas	2.52	351	⇑P	Pn	16 10 09.9	-2.0
CDITO	Canoas	2.52	351	S	Sn	16 10 38.5	-3.9
PSOM3	Paja de Sombre	2.60	3	eP	Pn	16 10 12.6	-0.5
PSOM3				eS	Sn	16 10 42.1	-2.4
PTAR3	Potrerillos Ar	2.60	359	⇑eP	Pn	16 10 13.0	-0.3

PTAR3				eS	Sn	16 10 42.2	-2.5
SFRA3	San Francisco,	2.62	34	eP	Pn	16 10 12.8	-0.6
SFRA3				eS	Sn	16 10 42.1	-2.9
ACHO3	Achotines, Los	2.64	59	⇓iP	Pn	16 10 12.3	-1.2
ACHO3				eS	Sn	16 10 42.8	-2.5
BQSF3	Alto Boquete,	2.65	1	eP	Pn	16 10 13.2	-0.7
BQSF3				eS	Sn	16 10 43.2	-2.7
BRU2	Volcan	2.71	355	Pn	Pn	16 10 13.2	-1.6
BRU2	Volcan	2.71	355	⇑P	Pn	16 10 14.4	-0.4
BRU2	Volcan	2.71	355	⇓iP	Pn	16 10 13.8	-0.9
BRU2				eS	Sn	16 10 45.8	-1.7
BC3P	Paso Ancho	2.73	357	⇑iP	Pn	16 10 15.1	+0.1
BC3P				eS	Sn	16 10 47.2	-0.8
CALO3	Calobre, Verag	2.75	36	eP	Pn	16 10 14.5	-0.7
AZU	Azuero	2.76	52	P	Pn	16 10 14.3	-1.0
AZU				S	Sn	16 10 44.5	-4.0
AZU	Azuero	2.76	52	eP	Pn	16 10 14.0	-1.3
AZU				eS	Sn	16 10 44.7	-3.8
PCRI3	Pocri, Los San	2.81	56	⇑eP	Pn	16 10 15.0	-1.0
PCRI3				eS	Sn	16 10 46.6	-3.1
OCHAL	Ojochal	3.23	339	S	Sn	16 10 56.7	-3.3
OCHAL	Ojochal	3.23	339	⇑P	Pn	16 10 20.1	-1.5
DRK0	Durika	3.27	346	S	Sn	16 10 59.6	-1.5
DRK0	Durika	3.27	346	⇑P	Pn	16 10 21.3	-1.1
DRK0	Durika	3.27	346	⇑iP	Pn	16 10 21.4	-0.9
DRK0				eS	Sn	16 10 58.8	-2.3
RGM0	Gandoca	3.50	358	Pn	Pn	16 10 25.4	-0.1
RGM0	Gandoca	3.50	358	S	Sb	16 11 10.1	-5.4
RGM0	Gandoca	3.50	358	P	Pn	16 10 26.9	+1.5
LCR2	La Lucha 2	3.95	337	Pn	Pn	16 10 30.8	-1.1
LCR2	La Lucha 2	3.95	337	⇑P	Pn	16 10 31.2	-0.7
ARRA3	Arraijan, Pana	4.00	44	eP	Pn	16 10 31.1	-1.3
ARRA3				eS	Sn	16 11 15.5	-3.6
BCIP	Isla Barro Col	4.03	40	Pn	Pn	16 10 32.1	-0.6
BCIP	Isla Barro Col	4.03	40	P	Pn	16 10 32.2	-0.5
BCIP				S	Sn	16 11 18.7	-1.0
BCIP	Isla Barro Col	4.03	40	eP	Pn	16 10 32.6	-0.1
BCIP				eS	Sn	16 11 15.3	-4.5
UPA	Univ. de Panam	4.10	45	eP	Pn	16 10 31.6	-2.0
UPA				eS	Sn	16 11 18.0	-3.4
HDC	Heredia	4.23	337	Pn	Pn	16 10 35.7	0.0
HDC	Heredia	4.23	337	⇑P	Pn	16 10 35.7	0.0
TRT2	Tortugero	4.63	344	S	Sn	16 11 34.5	-0.1
TRT2	Tortugero	4.63	344	⇑P	Pn	16 10 41.1	+0.1
PTAC	Punta Ardita,	4.75	77	P	Pn	16 10 43.5	+0.9
PTAC				S	Sn	16 11 32.3	-5.1
SOCE	Pocosol	4.79	334	Pn	Pn	16 10 41.5	-1.6
SOCE	Pocosol	4.79	334	S	Sn	16 11 39.2	+0.7
SOCE	Pocosol	4.79	334	⇓P	Pn	16 10 43.5	+0.3
INDI	Punta indio, G	4.83	322	S	Sn	16 11 35.5	-3.9
INDI	Punta indio, G	4.83	322	⇑P	Pn	16 10 42.5	-1.1
JTS	Las Juntas de	4.86	330	Pn	Pn	16 10 43.0	-1.3
JTS	Las Juntas de	4.86	330	Pn	Pn	16 10 43.5	-0.7
	20nm,0.3s,baz=165,slow=16,SNR=17						
JTS				LR	LR	16 11 25.8	
	comp=Z,142nm,22.0s,baz=181,slow=25						
	53nm,0.4s						
JTS	Las Juntas de	4.86	330	P	Pn	16 10 44.3	+0.1
JTS				S	Sn	16 11 38.7	-1.7
JTS	Las Juntas de	4.86	330	eP	Pn	16 10 43.7	-0.6
JTS				eS	Sn	16 11 38.2	-2.2
COVE	Coope Vega, Sa	5.00	338	S	Sn	16 11 44.7	+0.9
COVE	Coope Vega, Sa	5.00	338	P	Pn	16 10 47.2	+1.2
GR1C	Gorgona, Isla	5.26	125	P	Pn	16 10 50.3	+0.7
GR1C				S	Sn	16 11 49.2	-0.8
MALC	Bahia Malaga	5.50	112	P	Pn	16 10 54.9	+1.9
MALC				S	Sn	16 11 56.5	+0.4
CAP2	Capurgana	5.67	63	P	Pn	16 10 57.6	+2.3
ESPN	Las Esperanzas	6.35	344	Pn	Pn	16 11 03.4	-1.2
ESPN	Las Esperanzas	6.35	344	P	Pn	16 11 04.4	-0.2
ACON	Acoyapa	6.44	336	Pn	Pn	16 11 04.6	-1.3
ACON	Acoyapa	6.44	336	P	Pn	16 11 04.8	-1.1
BBAC	Balboa, Cauca	6.58	128	P	Pn	16 11 10.5	+2.6
	610nm33nm,0.5s						
POPC	Popayan, Colom	6.75	121	P	Pn	16 11 11.8	+1.4
	2µm165nm,0.6s						
OTAV	Otavalo	7.04	145	Pn	Pn	16 11 15.8	+1.3
BOAB	BOACO BROADBAN	7.08	334	Pn	Pn	16 11 13.3	-1.4
PRAC	Prado	7.90	107	P	Pn	16 11 29.1	+3.1
FLOC	Florencia	8.12	123	Pn	Pn	16 11 31.6	+2.5
ROSC	El Rosal	8.20	98	Pn	Pn	16 11 34.2	+3.8
	4.1nm,0.3s,baz=288,slow=20,SNR=4.1						
	11nm,0.4s						
COHC	Cochancay	9.06	159	Pn	Pn	16 11 43.1	+1.1
SDV	Santo Domingo	12.06	76	LR	LR	16 17 01.9	
	comp=Z,105nm,19.2s,baz=246,slow=37						
ATAH	Atahualpa	13.73	163	LR	LR	16 17 37.6	
	comp=Z,345nm,20.7s,baz=342,slow=35						
PCRV	Puerto La Cruz	18.11	76	LR	LR	16 21 44.4	
	comp=Z,114nm,20.8s,slow=40						
SJG	San Juan	19.92	52	LR	LR	16 21 16.0	
	comp=Z,70nm,20.5s,baz=234,slow=36						
BOAV	Boa Vista	22.18	99	P	P	16 14 28.8	+1.4
BOAV				IAmb	IAmb	16 14 37.9	
	comp=Z,7.6nm,0.9s						
TKL	Tuckaleechee C	29.47	358	LR	LR	16 27 17.9	
	comp=Z,66nm,19.4s,baz=179,slow=36						
MDP	Montagnes des	29.69	90	LR	LR	16 28 34.7	
	comp=Z,58nm,18.4s,baz=302,slow=38						
SIV	San Ignacio	30.48	136	LR	LR	16 28 05.1	
	comp=Z,147nm,18.1s,baz=298,slow=36						
LPIG	La Paz	32.20	307	LR	LR	16 26 13.6	
	comp=Z,45nm,20.6s,baz=224,slow=31						
ANMO	Albuquerque	36.27	326	LR	LR	16 32 07.1	
	comp=Z,113nm,19.9s,baz=296,slow=38						
H03N2	Juan Fernandez	39.44	175	T	T	16 58 56.8	
	baz=354,slow=76,SNR=5.3						
H03N1	Juan Fernandez	39.44	175	T	T	16 58 57.2	
	baz=354,slow=76,SNR=5.5						
H03N3	Juan Fernandez	39.45	175	T	T	16 58 56.0	
	baz=354,slow=76,SNR=6.5						
PFO	Pinyon Flats O	41.76	316	LR	LR	16 34 16.5	
	comp=Z,83nm,18.0s,baz=102,slow=36						
ELK	Elko	45.28	325	LR	LR	16 37 06.6	
	comp=Z,50nm,21.2s,baz=122,slow=37						
ULM	Lac du Bonnet	45.45	348	P	P	16 17 49.3	-0.5
	comp=Z,1.6nm,0.6s,baz=164,slow=9.7,SNR=4.2						
	comp=Z,1.6nm,0.6s						
NEW	Newport	51.34	331	LR	LR	16 42 07.9	
	comp=Z,70nm,18.2s,baz=140,slow=38						
YKA	Yellowknife Ar	61.05	344	LR	LR	16 49 40.2	
	comp=Z,33nm,18.3s,baz=235,slow=40						
ILAR	Eielson Array	73.80	336	P	P	16 21 05.4	+0.2
	comp=Z,0.8nm,1.1s,baz=98,slow=5.9,SNR=4.8						
ILAR				LR	LR	16 56 16.8	
	comp=Z,44nm,18.2s,baz=96,slow=38						
	comp=Z,0.8nm,1.1s						
ESDC	Sonseca Array	77.30	51	P	P	16 21 26.8	+1.0
	comp=Z,0.1nm,0.4s,baz=268,slow=5.1,SNR=4.3						
	comp=Z,0.1nm,0.4s						
TORD	Torodi Ar. Bea	82.97	78	P	P	16 21 58.6	+1.8
	comp=Z,100nm,0.3s,baz=274,slow=5.4,SNR=1.3						
H11S2	WAKE ISLAND Hy	107.61	291	T	T	18 24 14.9	
	baz=77,slow=75,SNR=8.2						
H11S1	WAKE ISLAND Hy	107.61	291	T	T	18 24 16.8	
	baz=77,slow=75,SNR=12						
H11S3	WAKE ISLAND Hy	107.62	291	T	T	18 24 16.4	
	baz=77,slow=75,SNR=12						
WRA	Warramunga Arr	141.70	245	PKhKP	PKPpre	16 28 59.2	
	comp=Z,0.2nm,0.7s,baz=111,slow=3.0,SNR=1.7						

IDC ***19*** *16:12:04.6±1.0, 33°.51S×178°.21W, h0^{km}, mb4.5/3,*
mbtmp4.5/6, ML4.2/3, MS3.7/3, Error ellipse: s-maj=42.9km
s-min=26.4km az=149.0
WEL ***19*** *16:12:07.4±1.4, 33°S±11°×17°8W±3°1, h33^{km}, M4.8/5,*
mB5.1/2, ML5.0/5, MLv4.8/5, Mw(mB)4.5/2, Error ellipse:
s-maj=42.6km s-min=4.2km az=109.1, confirmed
NEIC ***19*** *16:12:09.9±1.1, 33°.35S±0°.06×178°.4W±0°.2, h24^{km}±7^{km},*
mb4.7/18, Error ellipse: s-maj=26.6km s-min=2.1km
az=109.0

ISC 19 16:12:11.6±0.7**, 33°.43S**±0°.06×**178°.44W**±0°.10**, h41**^{km}**, n91,**
σ1^{s}77/104**, mb4.6**/15**, 5D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.18	6	P	Pn	16 13 04.4	-8.4
GLKZ				S	Sn	16 13 49.4	-11
RAO	Raoul Island	4.19	6		Pn	16 13 11.5	-1.4
MXZ	Matakaoa Point	4.91	212	P	Pn	16 13 24.1	+1.3
MXZ				S	Sn	16 14 20.3	+2.1
WMGZ	Waiomatatini S	5.08	209	P	Pn	16 13 25.9	+0.8
WMGZ				S	Sn	16 14 24.3	+1.9
PKGZ	Pakihiroa	5.26	212	S	Sn	16 14 29.6	+2.6
PUZ	Puketiti	5.36	209	S	Sn	16 14 31.4	+2.0
RUGZ	Raukumara Rang	5.52	214	S	Sn	16 14 37.4	+3.8
TWGZ	Tauwhareparae	5.56	211	S	Sn	16 14 38.3	+3.8
CNGZ	Carnagh Statio	5.73	207	P	Pn	16 13 33.9	-0.2
CNGZ				S	Sn	16 14 43.0	+4.5
KUZ	Kuaotunu	5.82	234	P	Pn	16 13 36.1	+0.8
TKGZ	Te Karaka	5.84	210	S	Sn	16 14 42.3	+1.1
URZ	Urewera	6.02	216	Pn	Pn	16 13 36.5	-1.6
	13nm,0.3s,baz=227,slow=9.0,SNR=4.5						
URZ				Sn	Sn	16 14 38.3	-7.4
	12nm,0.3s,baz=154,slow=19,SNR=6.8						
	78nm,0.5s						
RAGZ	Rawiri	6.07	212	S	Sn	16 14 48.1	+1.0
RIGZ	Rimuhau	6.10	209	S	Sn	16 14 49.7	+2.0
OUZ	Omahuta	6.83	253	P	Pn	16 13 52.5	+3.4
NMHZ	Naumai	6.84	213	P	Pn	16 13 49.3	0.0
NMHZ				S	Sn	16 15 07.3	+1.4
ARHZ	Aropaoanui	6.89	211	P	Pn	16 13 49.6	-0.4
ARHZ				S	Sn	16 15 08.7	+1.7
BKZ	Black Stump Fm	7.04	214	Pn	Pn	16 13 52.4	+0.4
BKZ	Black Stump Fm	7.04	214	P	Pn	16 13 52.2	+0.1
BKZ				S	Sn	16 15 10.3	-0.4
MCHZ	McNeill Hill	7.17	212	P	Pn	16 13 53.8	0.0
MCHZ				S	Sn	16 15 14.8	+0.8
KWHZ	Kaweka Forest	7.28	213	P	Pn	16 13 54.8	-0.6
KWHZ				S	Sn	16 15 17.3	+0.7
KAHZ	Kahuranaki	7.38	209	P	Pn	16 13 55.9	-0.9
KAHZ				S	Sn	16 15 19.7	+0.3
TMVZ	Te Maari	7.39	218	P	Pn	16 13 57.2	+0.3
TMVZ				S	Sn	16 15 19.9	+0.5
KRHZ	Kereru	7.48	212	P	Pn	16 13 57.3	-0.8
KRHZ				S	Sn	16 15 19.8	-1.8
NGZ	Ngauruhoe	7.48	218	S	Sn	16 15 22.6	+0.7
TUVZ	Tukino	7.53	218	S	Sn	16 15 23.6	+0.7
MOVZ	Moawhango	7.58	216	P	Pn	16 13 59.5	0.0
MOVZ				S	Sn	16 15 23.2	-1.1
PXZ	Pawanui	7.59	208	P	Pn	16 13 58.5	-1.1
PXZ				S	Sn	16 15 22.7	-1.6
PNHZ	Pukenui	7.77	212	P	Pn	16 14 00.1	-2.1
PNHZ				S	Sn	16 15 27.1	-1.7
WPHZ	Waipukurau	7.79	210	P	Pn	16 14 02.7	+0.3
WPHZ				S	Sn	16 15 27.8	-1.5
TSZ	Takapari Road	8.00	213	P	Pn	16 14 04.3	-0.9
TSZ				S	Sn	16 15 31.9	-2.4
BFZ	Birch Farm	8.39	209	Pn	Pn	16 14 07.2	-3.4
BFZ	Birch Farm	8.39	209	P	Pn	16 14 08.2	-2.4
BFZ				S	Sn	16 15 40.7	-3.3
PLWZ	Palliser	9.54	210	Pn	Pn	16 14 22.8	-3.6
LTZ	Lake Taylor	11.85	215	Pn	Pn	16 14 54.5	-3.5
RPZ	Rata Peaks	13.14	216	Pn	Pn	16 15 11.4	-4.1
RPZ	Rata Peaks	13.14	216	Pn	Pn	16 15 12.6	-3.0
	1.3nm,0.3s,baz=69,slow=2.3,SNR=7.3						
RPZ				Sn	Sn	16 17 29.2	-11
	1.2nm,0.3s,baz=207,slow=22,SNR=8.2						
	6.4nm,0.6s						
ODZ	Otahua Downs	14.34	213	Pn	Pn	16 15 27.9	-3.9
WHZ	Wether Hill Ro	16.24	216	Pn	Pn	16 15 54.5	-2.2
WHZ				IAmb	IAmb	16 16 32.1	
	comp=Z,50nm,1.4s						
DZM	Mont Dzumac	17.50	306		Pn	16 16 11.6	-1.0
DZM	Mont Dzumac	17.50	306	ePn	P	16 16 13.9	+0.5
	comp=Z,55nm,1.1s						
DZM				eLR	LR	16 20 15.2	
	comp=Z,306nm,25.6s						
DZM	Mont Dzumac	17.50	306	P	P	16 16 14.2	+0.8
	comp=Z,0.3nm,0.3s,baz=110,slow=16,SNR=12						
DZM				LR	LR	16 22 17.8	
	comp=Z,387nm,18.1s,baz=126,slow=35						
	comp=Z,17nm,0.9s						
RAR	Rarotonga	20.53	58	LR	LR	16 24 21.2	
	comp=Z,122nm,18.9s,baz=264,slow=36						
TBI	Tubuai	27.32	76	eLR	LR	16 24 32.3	
	comp=Z,361nm,24.5s						
EIDS	Eidsvold	27.67	279	P	P	16 17 56.3	+0.6
PPT2	Papeete2	30.32	66	eLR	LR	16 25 42.5	
	comp=Z,138nm,25.2s						
PPT2				eLR	LR	16 25 44.8	
	comp=Z,85nm,21.5s						
PPT	Papeete	30.33	66	LR	LR	16 29 58.1	
	comp=Z,93nm,18.2s,baz=256,slow=36						
STKA	Stephens Creek	33.54	261	P	P	16 18 47.1	-0.5
STKA	Stephens Creek	33.54	261	P	P	16 18 47.7	+0.2
	comp=Z,0.6nm,0.4s,baz=88,slow=9.3,SNR=4.3						
	comp=Z,0.6nm,0.4s						
CTAO	Charters Tower	34.04	284	P	P	16 18 52.4	+0.4
CTAO				IAmb	IAmb	16 18 55.5	
	comp=Z,6.8nm,0.8s						
BBOO	Buckleboo	37.88	258	P	P	16 19 24.3	-0.4
BBOO				IAmb	IAmb	16 19 25.3	
	comp=Z,18nm,1.2s						
COEN	Coen	39.84	290	P	P	16 19 42.1	+0.8
COEN				IAmb	IAmb	16 20 21.6	
	comp=Z,33nm,1.5s						
RABL	Rabaul	39.96	310	P	P	16 19 42.7	+0.4
AS31	Alice Springs	42.66	270	P	P	16 20 04.0	-0.5
AS31				IAmb	IAmb	16 20 05.5	
	comp=Z,4.6nm,0.6s						
ASAR	Alice Springs	42.66	270	P	P	16 20 04.1	-0.3
ASAR	Alice Springs	42.66	270	P	P	16 20 04.3	-0.1
	comp=Z,11nm,0.6s,baz=110,slow=7.9,SNR=196						
ASAR				PcP	PcP	16 21 55.2	-0.7
	comp=Z,2.2nm,1.0s,baz=107,slow=5.1,SNR=4.1						
ASAR				S	S	16 26 24.6	-0.4
	comp=Z,1.0nm,0.9s,baz=112,slow=16,SNR=6.2						
	comp=Z,11nm,0.6s						
TAOE	Nuku Hiva Isla	42.91	64	eLR	LR	16 31 22.0	
	comp=Z,150nm,26.9s						
WR8	Warramunga Arr	43.78	276	P	P	16 20 13.3	-0.2
WR8				IAmb	IAmb	16 20 15.2	
	comp=Z,9.4nm,0.8s						
WRA	Warramunga Arr	43.92	276	P	P	16 20 13.4	-1.2
WRA	Warramunga Arr	43.92	276	P	P	16 20 14.5	-0.1
	comp=Z,4.6nm,0.4s,baz=116,slow=7.7,SNR=100						
WRA				PcP	PcP	16 21 60.0	-0.2
	comp=Z,0.9nm,0.8s,baz=120,slow=3.1,SNR=2.4						
	comp=Z,4.6nm,0.4s						
WB0	Warramunga Arr	43.96	276	P	P	16 20 14.9	0.0
WB0				IAmb	IAmb	16 20 15.0	
	comp=Z,8.8nm,0.8s						
FORT	Forrest	44.98	258	P	P	16 20 22.5	-0.4
FORT				IAmb	IAmb	16 20 47.4	
	comp=Z,11nm,0.8s						
MTN	Manton Dam	50.15	282	P	P	16 21 02.5	-0.8
KNRA	Kununurra	50.63	277	P	P	16 21 06.3	-0.6
FITZ	Fitzroy Crossi	52.05	272	P	P	16 21 16.7	-0.7
CASY	Casey	52.30	209	P	P	16 21 19.3	+0.6
CASY				IAmb	IAmb	16 21 24.1	
	comp=Z,7.3nm,0.8s						
QSPA	South Pole Qui	56.69	180	P	P	16 21 52.7	+2.1
QSPA				IAmb	IAmb	16 21 55.8	
	comp=Z,9.7nm,1.1s						
QSPA	South Pole Qui	56.69	180	P	P	16 21 52.8	+2.1
	comp=Z,7.7nm,1.0s,baz=35,slow=3.9,SNR=11						
TROLL	Troll, Antarti	74.85	180	⇓P	P	16 23 48.9	+1.4
	comp=Z,160nm,0.8s						
SNAA	Sanae	75.15	179	⇓P	P	16 23 49.7	+0.6
	comp=Z,35nm,0.8s						
VNA3	Neumayer Olymp	75.32	176	⇓P	P	16 23 51.3	+1.3
	comp=Z,2.9nm,0.8s						
VNA2	Neumayer--Watz	75.75	177	⇓P	P	16 23 53.6	+1.2
	comp=Z,4.5nm,0.8s,baz=177,slow=4.7						
VNA1	Neumayer--Stat	75.98	177	⇓P	P	16 23 56.3	+2.6
	comp=Z,6.8nm,0.9s						
MKAR	Makanchi Array	119.40	309	PKPdf	PKPdf	16 30 55.4	-0.8
MKAR	Makanchi Array	119.40	309	PKP	PKPdf	16 30 55.3	-0.9
	comp=Z,0.3nm,0.5s,baz=225,slow=2.6,SNR=5.0						
MAKZ	Makanchi	119.61	309	PKPdf	PKPdf	16 30 56.0	-0.7
KURBB	Kurchatov Arra	122.87	312	PKP	PKPdf	16 31 02.0	-0.7
	comp=Z,0.7nm,0.4s,baz=114,slow=1.9,SNR=6.4						
BVAR	Borovoye Array	128.27	314	PKP	PKPdf	16 31 12.6	-0.4
	comp=Z,1.0nm,0.4s,baz=90,slow=1.0,SNR=7.8						
ARCES	ARCESS Array B	141.45	347	PKPpre	PKPpre	16 31 32.0	
ARCES	ARCESS Array B	141.45	347	PKhKP	PKPpre	16 31 32.3	
	comp=Z,1.1nm,0.9s,baz=16,slow=4.7,SNR=5.0						
KBZ	Khabaz	146.39	300	PKPbc	PKPdf	16 31 46.6	+0.2
	comp=Z,2.6nm,0.8s,baz=327,slow=3.6,SNR=5.1						
FIA1	FINESS Array S	147.83	338	PKPbc	PKPbc	16 31 50.9	-0.3
FINES	FINESS Array B	147.83	338	PKPbc	PKPbc	16 31 50.2	-1.0
FINES	FINESS Array B	147.83	338	PKPbc	PKPbc	16 31 50.8	-0.5
	comp=Z,5.0nm,0.7s,baz=31,slow=2.8,SNR=18						
NB2	NORSAR Subarra	151.67	350	PKP	PKPbc	16 32 00.8	0.0
	comp=Z,2.9nm,0.8s,baz=22,slow=3.3						
NOA	NORSAR Array B	151.67	350	PKPbc	PKPbc	16 31 59.8	-1.0
	comp=Z,0.9nm,0.6s,baz=16,slow=4.1,SNR=6.2						
MMAI	Mount Meron Ar	151.75	279	PKPbc	PKiKP	16 32 03.2	+0.9
	comp=Z,7.0nm,0.7s,baz=66,slow=4.9,SNR=9.0						
HFS	Hagfors	152.12	347	PKPbc	PKPbc	16 32 01.2	-0.5
	comp=Z,0.5nm,0.4s,baz=146,slow=0.5,SNR=8.0						
AKASG	Malin Array Be	153.40	319	PKPbc	PKiKP	16 32 04.9	-0.1
	comp=Z,1.0nm,0.6s,baz=64,slow=2.1,SNR=5.6						
BRTR	Keskin Array B	153.57	293	PKPbc	PKPbc	16 32 05.5	-0.4
BRTR	Keskin Array B	153.57	293	PKPbc	PKiKP	16 32 06.2	+0.2
	comp=Z,1.8nm,0.6s,baz=142,slow=3.9,SNR=12						

WEL 19 16:12:55.2±0.5**, 38°S**±3°×**17°7E**±°**, h5**^{km}**, M3.1**/13**,**
ML3.3/13**, MLv3.1**/13**, Error ellipse: s-maj=4.2km**
s-min=3.5km az=23.3, confirmed, Off east coast of
North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WIZ	White Island	0.06	38	P	Pg	16 12 56.9	+0.3
WSRZ	White Island S	0.06	26	P	Pg	16 12 56.9	+0.3
WHRZ	Whale Island	0.32	205	P	Pb	16 13 02.5	-0.9
HAZ	Te Kaha	0.54	110	P	Pg	16 13 05.6	+0.1
HAZ				S	Sg	16 13 13.2	+0.6
MARZ	Manawahe	0.56	222	P	Pg	16 13 06.5	+0.5
RUGZ	Raukumara Rang	0.58	133	P	Pg	16 13 06.4	+0.1
RUGZ				S	Sg	16 13 14.6	+0.8
EDRZ	Edgecumbe	0.62	211	P	Pb	16 13 08.0	-0.6
URZ	Urewera	0.69	182	P	Pg	16 13 08.6	+0.1
URZ				S	Sg	16 13 18.3	+0.9
MYRZ	Mayor Island	0.78	292	P	Pg	16 13 10.0	-0.1
MYRZ				S	Sg	16 13 21.0	+0.8
PKGZ	Pakihiroa	0.80	112	P	Pg	16 13 10.9	+0.3
MWZ	Matawai	0.82	159	P	Pg	16 13 10.9	-0.1
MWZ				S	Sg	16 13 22.3	+0.7
KARZ	Kaharoa	0.84	238	P	Pg	16 13 11.5	0.0
MXZ	Matakaoa Point	0.92	90	Pn	Pn	16 13 14.6	-0.2
MXZ	Matakaoa Point	0.92	90	P	Pn	16 13 14.3	-0.5
PUZ	Puketiti	1.01	120	P	Pb	16 13 15.3	0.0
RTZ	Ruatahuna	1.05	187	P	Pg	16 13 15.1	-0.3
TOZ	Tahuroa Road	1.31	263	P	Pn	16 13 17.4	-2.8
KUZ	Kuaotunu	1.41	305	P	Pn	16 13 18.2	-3.2
TLZ	Tolley Road	1.48	239	P	Pb	16 13 23.2	-0.1
BKZ	Black Stump Fm	1.67	198	P	Pn	16 13 24.3	-0.9
GRZ	Great Barrier	1.89	314	P	Pn	16 13 25.6	-2.5

ASRS ***19*** *16:13:55.3±0.7, 51°N±2°×8°4E±°, h10^{km}, MLh3.2/12, Error*
ellipse: s-maj=6.9km s-min=3.0km az=69.6, confirmed
NNC ***19*** *16:14:00.3±3.5, 50°.86N×83°.58E, h0^{km}, mb2.8, mpv2.5,*
Error ellipse: s-maj=36.1km s-min=17.7km az=43.0,
Suspected Mining explosion.

ISC 19 16:13:56.2±1.1**, 51°.03N**±0°.04×**84°.05E**±0°.05**, h0**^{km}**, n18,**
σ1^{s}10/30**, 5C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELDR	Elanda	1.30	81	Pg	Pg	16 14 20.8	-0.3
ELDR				Sg	Sb	16 14 37.5	-1.3
GALT	Gorno-Altaysk,	1.51	51	Pg	Pg	16 14 24.7	-0.4
GALT				Sg	Sn	16 14 44.6	-0.2
ARTR	Artybash	2.17	68	Pg	Pb	16 14 36.5	+0.2
ARTR				Sg	Sg	16 15 04.4	-1.4
CHBI	Chibit, Altay	2.31	107	Pg	Pn	16 14 37.0	+1.4
CHBI				Sg	Sb	16 15 07.8	-0.1
YALR	Yailyu, Altay	2.35	70	Pg	Pb	16 14 39.6	+0.1
YALR				Sg	Sg	16 15 10.3	-1.5
AKAR	Aktash	2.38	106	Pg	Pn	16 14 38.2	+1.6
AKAR				Sg	Sb	16 15 09.9	-0.1
ULGR	Ulagan, Altay	2.52	98	Pg	Pb	16 14 40.9	-1.4
ULGR				Sg	Sb	16 15 13.2	-0.6
DGZ	Jazzator, Alta	2.54	120	Pg	Pb	16 14 42.4	-0.4
DGZ				Sg	Sb	16 15 15.4	+0.8
ELT	Eltsovka	2.61	30	Sg	Sg	16 15 19.5	-0.6
CUR	Chagan-Uzun	2.90	107	Pn	Pn	16 14 45.8	+2.1
CUR				Pg	Pb	16 14 49.4	+0.6
CUR				Sg	Sg	16 15 27.5	-1.8
TASR	Tashtagol	2.94	52	Pg	Pb	16 14 50.7	+1.2
TASR				Sg	Sg	16 15 30.1	-0.6
MALIN	Malinovka, Kuz	3.11	38	Sg	Sg	16 15 35.7	-0.4
BJR1	Bachatsky 1, K	3.44	20	Sg	Sg	16 15 44.8	-1.7
KURK	Kurchatov	3.45	267	⇓Pn	Pn	16 14 51.0	-0.1
	0.1nm,0.2s						
KURK				⇑Lg	Lg	16 15 39.7	
	7.7nm,0.3s						
KURBB	Kurchatov Arra	3.52	266	⇓Pn	Pn	16 14 52.2	+0.1
	2.0nm,0.3s						
KURBB				⇑Lg	Lg	16 15 41.3	
	26nm,0.3s						
SALR	Pechorkino, Sa	3.54	16	Pg	Pg	16 15 05.1	+1.0
SALR				Sg	Sg	16 15 48.5	-1.4
MK31	Makanchi Array	4.39	196	⇑Pn	Pn	16 15 04.9	+0.8
	0.1nm,0.2s,baz=20,slow=13,SNR=47						
MK31				⇑Lg	Lg	16 16 12.4	
	5.2nm,0.4s,baz=30,slow=31,SNR=7.6						
MAKZ	Makanchi	4.44	199	⇓Pn	Pn	16 15 06.2	+1.4
	0.6nm,0.3s						
MAKZ				⇑Lg	Lg	16 16 12.8	
	7.7nm,0.6s						

JMA ***19*** *16:18:51.8±0.7, 46°N±3°×14°8E±°, h336^{km}, MV3.7/28,*
SOUTHERN SEA OF OKHOTSK
MOS ***19*** *16:18:52.3±1.1, 46°.69N×147°.22E, h301^{km}, mb4.2/13,*
Error ellipse: s-maj=10.3km s-min=5.9km az=90.0
SKHL ***19*** *16:18:53.9±0.6, 46°.50N×147°.10E, h313^{km}±7^{km}, mb5.4/5,*
msha5.7/3
IDC ***19*** *16:18:54.3±1.0, 46°.82N×147°.10E, h299^{km}±10^{km},*
mb3.5/26, mbtmp4.2/35, Error ellipse: s-maj=11.6km
s-min=8.2km az=138.0

ISC 19 16:18:53.0±0.5**, 46°.54N**±0°.04×**147°.31E**±0°.05**, h300**^{km}±4^{km}**,**
n127, σ1^{s}66/158**, mb3.8**/39**, 14C-9D, Northwest of Kuril**
Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.36	163c	iPN	Pn	16 19 35.9	+0.6
KUR				S	S	16 20 10.7	+1.6
KUR				pmax	pmax		
	comp=E,26nm,0.4s						
KUR				pmax	pmax		
	comp=Z,311nm,0.4s						
KUR				pmax	pmax		
	comp=N,75nm,0.3s						
KUR				smax	smax		
	comp=N,87nm,0.6s						
KUR				smax	smax		
	comp=E,54nm,0.6s						
KUR	Kuril'sk	1.36	163	eP	Pn	16 19 35.8	+0.5
KUR				AMB	AMB	16 19 36.0	
	comp=E,460nm,0.4s						
KUR				eS	S	16 20 08.2	-0.9
SHO	Shikotan	2.69	187c	iPN	Pn	16 19 45.6	-0.2
SHO				eS	S	16 20 25.8	-2.2
SHO				pmax	pmax		
	comp=N,258nm,0.1s						
SHO				pmax	pmax		
	comp=Z,713nm,0.1s						
SHO				pmax	pmax		
	comp=E,299nm,0.2s						
SHO				smax	smax		
	comp=N,406nm,0.2s						
SHO				smax	smax		
	comp=E,562nm,0.3s						
SHO	Shikotan	2.69	187	i P	Pn	16 19 45.6	-0.2
SHO				AMB	AMB	16 19 46.2	
	comp=E,420nm,0.2s						
SHO				eS	S	16 20 25.7	-2.2
SHO				A	A	16 20 30.1	
	comp=E,400nm,0.5s						
SHO				A	A	16 20 30.1	
	comp=E,600nm,0.5s						
YUK	Yuzh-Kuril'sk	2.70	203c	iPN	Pn	16 19 46.5	+0.6
YUK				eS	S	16 20 28.4	+0.2
YUK				pmax	pmax		
	comp=E,272nm,0.2s						
YUK				pmax	pmax		
	comp=Z,828nm,0.2s						
YUK				pmax	pmax		
	comp=N,193nm,0.1s						
YUK				smax	smax		
	comp=E,694nm,0.4s						
YUK				smax	smax		

	comp=N,256nm,0.2s						
YUK	Yuzh-Kuril'sk	2.70	203	*i* P	Pn	16 19 46.7	+0.8
YUK				AMB	AMB	16 19 47.5	
	comp=N,740nm,0.2s						
YUK				*e*S	S	16 20 28.4	+0.2
YUK				A	A	16 20 33.6	
	comp=N,490nm,0.6s						
YUK				A	A	16 20 33.6	
	comp=N,690nm,0.6s						
RUSJ	Misakicho	2.84	212	*e*PN	Pn	16 19 47.3	+0.1
JRA	Rausu	3.02	212	P	Pn	16 19 50.0	+1.0
GLVR	Golovnino	3.07	205	*e*PN	Pn	16 19 50.4	+0.9
GLVR				*e*S	S	16 20 35.7	+1.1
GLVR				pmax	pmax		
	comp=N,117nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,389nm,0.1s						
GLVR				smax	smax		
	comp=E,204nm,0.4s						
GLVR				smax	smax		
	comp=N,674nm,0.3s						
GLVR	Golovnino	3.07	205	*e*P	Pn	16 19 50.4	+0.9
GLVR				AMB	AMB	16 19 52.1	
	comp=N,390nm,0.2s						
GLVR				*e*S	S	16 20 35.7	+1.1
GLVR				A	A	16 20 40.8	
	comp=N,670nm,0.4s						
GLVR				A	A	16 20 40.8	
	comp=N,200nm,0.4s						
YSS	Yuzhno-Sakhali	3.16	279	*d i*PN	Pn	16 19 50.7	+0.5
YSS	Yuzhno-Sakhali	3.16	279	*e*P	Pn	16 19 49.8	-0.4
YSS				*e*S	S	16 20 36.5	+0.5
NEM2	Nemuro 2	3.36	200	P	Pn	16 19 51.2	-1.2
NEM2				*e*S	S	16 20 36.1	-3.8
NMR	Nemuro--Hokkai	3.36	200	⇑*i*PN	Pn	16 19 51.2	-1.2
NMR	Nemuro--Hokkai	3.36	200	*i* P	Pn	16 19 51.2	-1.2
NMR				*i* S	S	16 20 37.0	-3.0
JNK	Nakash	3.48	213	P	Pn	16 19 54.2	+0.6
JNK				*e*S	S	16 20 44.2	+2.0
JTKR	Abashiri--Toko	3.52	224	P	Pn	16 19 55.3	+1.3
JTKR				*e*S	S	16 20 45.2	+2.3
JSE	Soyaes	3.67	246	*e*P	Pn	16 19 57.1	+1.6
JMP	Maruseppu	3.77	229	P	Pn	16 19 58.0	+1.3
AKK	Akkeshi	3.94	207	*i* P	Pn	16 19 57.5	-1.0
JAK	Akkeshi	4.00	209	*i* P	Pn	16 19 58.5	-0.7
JAK				*e*S	S	16 20 48.9	-3.4
JAR	Ashorobuto	4.10	219	*i* P	Pn	16 20 01.5	+1.2
ASAJ	Asahikawa	4.11	236	P	Pn	16 20 02.6	+2.2
	comp=N,37nm,0.5s,baz=62,slow=7.4,SNR=67						
ASAJ				S	S	16 20 56.0	+1.5
	comp=N,4.8nm,0.4s,baz=115,slow=33,SNR=6.7						
JKK2	Kamakawa 2	4.18	232	P	Pn	16 20 03.0	+1.8
JKK2				*e*S	S	16 20 58.7	+2.8
JFR	Furan	4.76	227	P	Pn	16 20 09.4	+1.7
JCH	Churui	4.83	217	P	Pn	16 20 07.9	-0.7
JCH				*e*S	S	16 21 04.7	-4.6
JBT2	Biratori 2	5.16	225	P	Pn	16 20 13.0	+0.7
TYV	Tymovskoe	5.31	326	*e*PN	Pn	16 20 12.7	-1.2
TYV				*e*S	S	16 21 15.8	-3.3
TYV				pmax	pmax		
	comp=Z,18nm,0.7s						
TYV				pmax	pmax		
	comp=Z,100nm,3.2s						
TYV				smax	smax		
	comp=N,200nm,2.2s						
TYV				smax	smax		
	comp=E,100nm,2.2s						
TYV				smax	smax		
	comp=N,8.0nm,1.3s						
TYV				smax	smax		
	comp=E,21nm,1.3s						
TYV	Tymovskoe	5.31	326	*e*P	Pn	16 20 13.0	-0.9
TYV				*e*S	S	16 21 15.8	-3.3
JNBK	Urakawa-nobuka	5.36	219	P	Pn	16 20 13.5	-1.3
ERM	Erimo	5.42	215	*c i*PN	Pn	16 20 15.5	+0.1
JEW	Eniwo	5.58	231	P	Pn	16 20 19.1	+1.8
JOT	Ohata	6.85	223	*e*P	Pn	16 20 31.3	-1.2
SKR	Severo-Kuril's	7.16	51	*e*S	S	16 22 00.5	+1.0
JSI2	Shiura 2	7.41	225	P	Pn	16 20 38.4	-0.9
JSI2				*e*S	S	16 21 57.5	-7.9
JANG	Nango	7.46	216	*e*P	Pn	16 20 37.8	-2.2
TEY	Ternei	7.63	263	*e*PN	Pn	16 20 51.4	+9.4
JIW	Iwasaki	7.96	224	*e*P	Pn	16 20 45.1	-1.0
PETK	Petropavlovsk-	9.39	42	P	Pn	16 21 03.5	0.0
	comp=E,5.1nm,1.0s,baz=200,slow=6.8,SNR=5.4						
KLR	Kul'dur	10.79	290	*i* PN	Pn	16 21 18.1	-2.5
KLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KLR	Kul'dur	10.79	290	*e*P	P	16 21 23.4	+0.1
USRK	Ussuriysk Ar.	11.03	263	P	Pn	16 21 24.4	+0.8
	comp=Z,1.4nm,0.5s,baz=71,slow=12,SNR=6.2						
MAJO	Matsushiro	12.08	217	*de*PN	P	16 21 38.7	+0.9
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MJAR	Matsushiro Arr	12.08	217	P	P	16 21 38.6	+0.8
	comp=Z,6.6nm,0.6s,baz=20,slow=12,SNR=19						
MA2	Magadan	13.22	8	P	P	16 21 50.1	0.0
	comp=Z,9.8nm,0.8s,baz=186,slow=8.8,SNR=7.5						
MA2	Magadan	13.22	8	⇓*e*PN	P	16 21 51.0	+0.9
MA2	Magadan	13.22	8	*e*P	P	16 21 51.0	+0.9
KBG	Krutoberegovo	13.64	39	*e*P	Pn	16 21 55.5	+0.6
HEH	HeiHe	13.72	293	*e*P	Pn	16 21 56.6	+0.6
HEH				pmax	pmax		
	comp=Z,11nm,1.3s						
ZEA	Zeya	14.71	307	*e*P	Pn	16 22 08.2	+0.5
ZEA				pmax	pmax		
	comp=N,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SEY	Seymchan	16.68	8	P	P	16 22 28.6	+0.6
	comp=Z,2.2nm,0.3s,baz=183,slow=10,SNR=24						
SEY	Seymchan	16.68	8	⇓*i*P	P	16 22 28.8	+0.9
SEY				pmax	pmax		
	comp=Z,20nm,2.8s						
SEY	Seymchan	16.68	8	*e*P	P	16 22 28.8	+0.9
KSRS	Korea Array	17.00	245	P	Pn	16 22 34.8	+0.2
	comp=Z,0.4nm,0.3s,baz=57,slow=10,SNR=2.4						
JNU	Nakatsue	18.36	229	P	P	16 22 48.5	+2.1
	comp=Z,11nm,1.1s,baz=24,slow=4.2,SNR=6.4						
YAK	Yakutsk	18.52	333	P	P	16 22 46.4	-1.3
	comp=Z,16nm,0.4s,baz=329,slow=7.7,SNR=14						
YAK	Yakutsk	18.52	333	*e*P	P	16 22 45.7	-2.0
YAK				*e*S	S	16 25 59.9	-2.7
YAK				pmax	pmax		
	comp=Z,35nm,0.9s						
YAK				pmax	pmax		
	comp=N,13nm,1.2s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.0s						
YAK				smax	smax		
	comp=N,33nm,2.2s						
YAK				smax	smax		
	comp=E,20nm,2.3s						
YAK	Yakutsk	18.52	333	*e*P	P	16 22 47.0	-0.7
BILL	Bilibino	23.66	18	⇓*e*P	P	16 23 37.1	-0.4
BILL	Bilibino	23.66	18	*e*P	P	16 23 39.7	+2.2
TIK	Tiksi	26.65	347	*e*P	P	16 24 04.4	+0.2
TIXI	Tiksi	26.66	347	⇑*e*P	P	16 24 04.4	+0.1
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ULN	Ulaanbaatar	27.17	288	⇑*e*P	P	16 24 12.7	+3.3
ULN				pmax	pmax		
	comp=Z,3.0nm,1.4s						
SONM	Songino Array	27.61	288	P	P	16 24 12.0	-1.2
	comp=Z,0.3nm,0.4s,baz=86,slow=5.9,SNR=4.4						
SONM				PcP	PcP	16 27 21.8	-0.2
	comp=Z,0.3nm,0.4s,baz=46,slow=4.2,SNR=1.9						
SONM				ScP	ScP	16 30 34.6	+1.2
	comp=Z,1.4nm,0.8s,baz=81,slow=1.9,SNR=5.6						
	comp=Z,0.3nm,0.4s						
GTA	Gaotai	35.03	276	*e*P	P	16 25 19.4	+1.6
GTA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KDAK	Kodiak Island	37.32	50	P	P	16 25 37.0	+0.4
	comp=Z,1.3nm,0.3s,baz=286,slow=7.4,SNR=10						
	comp=Z,1.3nm,0.3s						
KDAK	Kodiak Island	37.32	50	P	P	16 25 37.0	+0.4
COLA	College	38.78	38	*ce*P	P	16 25 49.4	+0.8
COLA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ILAR	Eielson Array	39.20	38	P	P	16 25 52.6	+0.5
	comp=Z,1.5nm,0.5s,baz=258,slow=5.8,SNR=23						
	comp=Z,1.5nm,0.5s						
MK31	Makanchi Array	43.45	295	*d i*P	P	16 26 26.3	-0.4
MKAR	Makanchi Array	43.45	295	P	P	16 26 26.4	-0.3
	comp=Z,0.9nm,0.6s,baz=71,slow=6.7,SNR=13						
MKAR				PcP	PcP	16 28 09.2	+0.4
	comp=Z,0.2nm,0.5s,baz=64,slow=4.9,SNR=3.8						
	comp=Z,0.9nm,0.6s						
INK	Inuvik	43.95	32	P	P	16 26 31.4	+1.1
	comp=Z,6.8nm,0.4s,baz=299,slow=6.2,SNR=14						
	comp=Z,6.8nm,0.4s						
KURK	Kurchatov	44.11	302	*c i*P	P	16 26 30.8	-1.0
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KURK	Kurchatov	44.11	302	*e*P	P	16 26 30.8	-1.0
KURBB	Kurchatov Arra	44.20	302	P	P	16 26 31.9	-0.6
	comp=Z,1.6nm,0.4s,baz=70,slow=8.7,SNR=14						
KURBB				PcP	PcP	16 28 11.9	+0.6
	comp=Z,0.5nm,0.2s,baz=63,slow=3.7,SNR=5.1						
	comp=Z,1.6nm,0.4s						
BVAR	Borovoye Array	47.86	307	P	P	16 27 00.6	-0.3
	comp=Z,0.9nm,0.4s,baz=59,slow=8.8,SNR=7.4						
BVAR				PcP	PcP	16 28 24.8	+0.6
	comp=Z,0.3nm,0.3s,baz=57,slow=5.3,SNR=3.8						
	comp=Z,0.9nm,0.4s						
BRVK	Borovoye	47.90	308	⇑*i*P	P	16 27 01.1	-0.1
AAK	Ala-Archa	50.30	294	⇓*e*P	P	16 27 20.1	+0.5
AAK	Ala-Archa	50.30	294	*e*P	P	16 27 20.1	+0.5
RES	Resolute Bay	52.27	17	P	P	16 27 32.4	-1.0
	comp=Z,3.9nm,0.4s,baz=333,slow=4.7,SNR=24						
	comp=Z,3.9nm,0.4s						
ARTI	Arti	52.52	316	P	P	16 27 34.2	-1.3
	comp=Z,3.0nm,0.7s,baz=54,slow=5.2,SNR=4.4						
	comp=Z,3.0nm,0.7s						
ARTI	Arti	52.52	316	*c i*P	P	16 27 34.4	-1.1
ARTI				*PP	pP	16 28 39.5	+0.5
ARTI						16 29 34.1	
ARTI				SS	SKiKP	16 38 16.8	-5.4
ARTI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
YKA	Yellowknife Ar	53.44	35	P	P	16 27 42.5	+0.5
	comp=Z,1.8nm,0.6s,baz=268,slow=9.8,SNR=14						
	comp=Z,1.8nm,0.6s						
ARCES	ARCESS Array B	56.68	339	P	P	16 28 04.2	-0.8
	comp=Z,0.2nm,0.3s,baz=45,slow=7.3,SNR=11						
ARCES				PcP	PcP	16 28 57.0	-0.2
	comp=Z,0.8nm,0.7s,baz=38,slow=2.3,SNR=2.2						
	comp=Z,0.2nm,0.3s						
BELG	Belogornoye	59.96	316	*i* P	P	16 28 25.6	-2.1
BELG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FINES	FINESS Array B	62.45	332	P	P	16 28 42.9	-1.2
	comp=Z,7.8nm,0.5s,baz=39,slow=7.4,SNR=82						
	comp=Z,7.8nm,0.5s						
OBN	Obninsk	63.15	323	*e*P	P	16 28 47.4	-1.4
OBN				*e*		16 29 24.0	
OBN				*e**PP	pP	16 29 55.0	+0.7
OBN				*e*		16 31 12.5	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NVAR	Mina Array Bea	66.02	59	P	P	16 29 09.2	+1.3
	comp=Z,0.7nm,0.6s,baz=314,slow=6.4,SNR=4.2						
	comp=Z,0.7nm,0.6s						
NB2	NORSAR Subarra	67.05	338	P	P	16 29 12.5	-1.3
	comp=Z,2.8nm,0.6s,baz=32,slow=6.5						
NB2	NORSAR Subarra	67.05	338	P	P	16 29 12.3	-1.5
NOA	NORSAR Array B	67.05	338	P	P	16 29 12.7	-1.0
	comp=Z,1.9nm,0.5s,baz=30,slow=6.7,SNR=19						
	comp=Z,1.9nm,0.5s						
HFS	Hagfors	67.17	337	P	P	16 29 13.3	-1.2
	comp=Z,3.5nm,0.5s,baz=41,slow=4.9,SNR=23						
	comp=Z,3.5nm,0.5s						
WRA	Warramunga Arr	67.20	193	P	P	16 29 17.6	+2.4
	comp=Z,1.6nm,0.9s,baz=10,slow=6.5,SNR=9.1						
	comp=Z,1.6nm,0.9s						
NORES	NORESS Array B	67.22	338	P	P	16 29 13.8	-1.0
KIV	Kislovodsk	68.00	311	*e*P	P	16 29 21.2	+1.2
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KIV	Kislovodsk	68.00	311	*e*P	P	16 29 21.3	+1.2
KBZ	Khabaz	68.05	311	P	P	16 29 20.7	+0.5
	comp=Z,3.6nm,0.8s,baz=28,slow=8.2,SNR=7.3						
	comp=Z,3.6nm,0.8s						
KBZ	Khabaz	68.05	311	*de*P	P	16 29 21.3	+1.1
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KBZ	Khabaz	68.05	311	*e*P	P	16 29 21.3	+1.1
ULM	Lac du Bonnet	69.22	38	P	P	16 29 27.5	+0.2
	comp=Z,0.6nm,0.3s,baz=292,slow=5.4,SNR=3.2						
	comp=Z,0.6nm,0.3s						
AKASG	Malin Array Be	69.41	323	P	P	16 29 27.5	-0.9
	comp=Z,2.3nm,0.4s,baz=37,slow=6.4,SNR=17						
	comp=Z,2.3nm,0.4s						
AKASG	Malin Array Be	69.41	323	*ce*P	P	16 29 27.5	-0.9
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AKBB	Malin Array Si	69.41	323	⇓*i*P	P	16 29 26.3	-2.1
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ASAR	Alice Springs	70.92	193	P	P	16 29 41.2	+3.4
	comp=Z,1.0nm,0.5s,baz=7.3,slow=6.0,SNR=56						
	comp=Z,1.0nm,0.5s						
STHS	Stebnicka Huta	73.59	327	*e*P	P	16 29 52.7	-0.6
STHS				pmax	pmax		
	comp=Z,9.0nm,1.5s						
STHS	Stebnicka Huta	73.59	327	*e*P	P	16 29 52.7	-0.6
LANS	Liptovska Anna	74.47	327	*e*P	P	16 29 59.8	+1.4
LANS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LANS	Liptovska Anna	74.47	327	*e*P	P	16 29 59.8	+1.4
MORC	Moravsky Berou	74.66	329	*e*P	P	16 29 59.5	0.0
CLL	Collm	74.90	332	*i* P	P	16 30 00.1	-0.6
CLL				*i* *PP	pP	16 31 07.0	-1.6
CLL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CLL	Collm	74.90	332	*i* P	P	16 30 00.1	-0.6
	comp=Z,4.0nm,0.6s						
CLL	Collm	74.90	332	*i* PKPdf	pP	16 31 07.0	-1.6
CLL				*i* PKPab	PP	16 32 45.7	-6.4
	comp=Z,23nm,2.2s						
SCHQ	Schefferville	74.95	20	P	P	16 30 00.5	-0.5
	comp=Z,0.8nm,0.7s,baz=342,slow=3.2,SNR=1.7						
	comp=Z,0.8nm,0.7s						
VYHS	Vyhne	75.25	327	*e*P	P	16 30 03.2	+0.3
VYHS	Vyhne	75.25	327	*e*P	P	16 30 03.2	+0.3
JAVC	Velka Javorina	75.38	328	*e*P	P	16 30 04.7	+1.1
VRAC	Vranov	75.39	329	*e*P	P	16 30 03.9	+0.3
EKA	Eskdalemuir Ar	75.49	343	P	P	16 30 03.6	-0.4
	comp=Z,1.3nm,0.7s,baz=30,slow=5.6,SNR=4.2						
	comp=Z,1.3nm,0.7s						
KRUC	Moravsky	75.66	329	*e*P	P	16 30 05.2	+0.1
BR131	Keskin Array S	75.71	313	⇑*e*P	P	16 30 06.0	+0.2
BRTR	Keskin Array B	75.71	313	P	P	16 30 06.5	+0.7
	comp=Z,1.3nm,0.7s,baz=57,slow=5.3,SNR=7.4						
	comp=Z,1.3nm,0.7s						
MODS	Modra-Piesok	75.93	328	*e*P	P	16 30 07.2	+0.5
MODS	Modra-Piesok	75.93	328	*e*P	P	16 30 07.2	+0.5
KHC	Kasperske Hory	76.58	331	⇑*e*P	P	16 30 10.1	-0.2
KHC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GERES	GERESS Array B	76.78	331	P	P	16 30 11.3	-0.2
	comp=Z,1.0nm,0.6s,baz=28,slow=6.0,SNR=8.2						
	comp=Z,1.0nm,0.6s						
MMAI	Mount Meron Ar	79.86	308	P	P	16 30 30.3	+1.7
	comp=Z,0.7nm,0.4s,baz=34,slow=12,SNR=2.0						
	comp=Z,0.7nm,0.4s						
TXAR	Lajitas Array	81.02	57	P	P	16 30 36.9	+2.1
	comp=Z,0.9nm,0.8s,baz=287,slow=3.5,SNR=9.3						
	comp=Z,0.9nm,0.8s						

NOU 19 16:19:14.9, 15°.00S×167°.21E, h106^{km}, MLv4.3/12, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.45	181	P	Pn	16 19 31.9	+0.9
VLAKA	Lakatoro	1.12	170	P	Pn	16 19 37.4	+0.3
VLAKA	Lakatoro	1.12	170	S	Sn	16 19 54.9	+1.1
DVP	Devils Point	2.87	161	P	Pn	16 19 59.6	+0.6
DZM	Mont Dzumac	7.07	186	P	Pn	16 20 55.5	-0.4
ONTNC	Ouen Toro	7.30	186	P	Pn	16 20 58.5	-0.4
OUENC	Ouen Island, N	7.39	183	P	Pn	16 21 00.3	+0.2
PINNC	Pines Island,	7.58	178	P	Pn	16 21 03.0	+0.4

IDC 19 16:25:10.6±3.4, 21°.28S×176°.78W, h0^{km}, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=96.9km s-min=44.3km az=32.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	45.46	257	P	P	16 33 31.7	-0.1
	0.4nm,0.9s,baz=91,slow=7.5,SNR=2.7						
	0.4nm,0.9s						
WRA	Warramunga Arr	45.63	263	P	P	16 33 33.0	-0.2
	0.3nm,0.8s,baz=96,slow=8.0,SNR=5.6						
	0.3nm,0.8s						
QSPA	South Pole Qui	68.80	180	P	P	16 36 16.4	-0.1
	1.5nm,1.0s,baz=296,slow=2.1,SNR=6.0						
	1.5nm,1.0s						
AKASG	Malin Array Be	144.24	332	PKP	PKPdf	16 44 48.3	0.0
	0.5nm,0.5s,baz=44,slow=4.3,SNR=5.1						

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*AEIC **19** 16:34:59.6±0.6, 52°.67N±0°.10×163°.4W±0°.1, h4^{km}±10^{km}, Error ellipse: s-maj=14.3km s-min=11.9km az=165.0*

NEIC 19 16:34:58.2±0.7, 52°.85N±0°.02×163°.5W±0°.1, h10^{km}±2^{km}, ML2.9/18, ML2.9(AEIC), Error ellipse: s-maj=10.8km s-min=4.0km az=79.0, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WESE	West Dahl East	1.74	339		Pn	16 35 28.5	-0.1
AKUT	Akutan	1.86	315	Pn	Pn	16 35 29.7	-0.4
AKUT				IAML		16 35 54.9	
	comp=E,119nm,0.3s						
AHB	Akutan Harbor	1.86	314		Pn	16 35 30.3	+0.1
AHB					Sn	16 35 54.2	+0.5
ISLZ	Isanotski Laza	1.88	357		Pn	16 35 30.2	-0.3
ISLZ					Sn	16 35 54.1	-0.1
SSLS	Shishaldin Sou	1.89	352		Pn	16 35 30.6	0.0
SSLS					Sn	16 35 54.8	+0.4
WEBT	Westdahl Beart	1.89	338		Pn	16 35 30.0	-0.6
AKMO	Akutan Morgan	1.94	311		Pn	16 35 31.4	+0.2
AKMO					Sn	16 35 55.5	-0.1
SSBA	Shishaldin	1.96	350		Pn	16 35 31.3	-0.2
SSBA					Sb	16 35 58.0	-0.4
ISNN	Isanotski Nort	1.99	356		Pn	16 35 32.6	+0.7
LVA	Lava Point	1.99	312	Pn	Pn	16 35 31.9	0.0
LVA				IAML		16 36 00.9	
	comp=E,95nm,0.6s						
LVA				IAML		16 36 04.1	
	comp=N,149nm,0.6s						
AKGG	Akutan Green G	2.00	314		Pn	16 35 32.3	+0.2
FALS	False Pass	2.01	2	Pn	Pn	16 35 31.6	-0.6
FALS					Sn	16 35 57.2	-0.1
UNV	Unalaska Valle	2.04	300	Pn	Pn	16 35 31.9	-0.7
UNV				IAML		16 35 58.7	
	comp=E,74nm,0.3s						
MREP	Makushin Rep't	2.16	298		Pn	16 35 34.1	-0.2
MTBL	Makushin Table	2.19	302		Pn	16 35 34.5	-0.2
MGOD	Makushin Gods	2.22	297		Pn	16 35 34.8	-0.3
MAPS	Pakushin South	2.26	296		Pn	16 35 35.3	-0.4
OKRE	Okmok R'deer P	2.87	285		Pn	16 35 43.7	-0.3
S12K	Black Hills	2.98	16	Pn	Pn	16 35 45.8	+0.2
S12K				IAML		16 36 24.9	
	comp=E,73nm,1.1s						
S12K				IAML		16 36 28.0	
	comp=N,48nm,1.3s						
CNBA	Chernabura Isl	3.06	48	Pn	Pn	16 35 45.2	-1.3
SDPT	Sand Point	3.08	34	Pn	Pn	16 35 46.2	-0.7
SDPT				IAML		16 36 25.7	
	comp=N,32nm,1.3s						
SDPT				IAML		16 36 27.6	
	comp=E,33nm,1.3s						
NIKH	Nikolski High	3.23	274	Pn	Pn	16 35 48.1	-0.9
NIKH				IAML		16 36 28.0	
	comp=E,28nm,1.0s						
NIKH				IAML		16 36 32.9	
	comp=N,28nm,0.8s						
CHIR	Chirikof Islan	5.50	54	Pn	Pn	16 36 17.7	-2.4
ATKA	Atka Island	6.54	269	Pn	Pn	16 36 34.1	-0.3
ADK	Adak	8.11	268	Pn	Pn	16 36 55.6	-0.4

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*CNRM **19** 16:35:50.7, 35°.68N×5°.15W, h10^{km}, ML2.3*

*MDD **19** 16:35:53.1±0.6, 35°.87N×5°.15W, h1^{km}±3^{km}, mb_Lg2.3/16, Error ellipse: s-maj=3.7km s-min=2.5km az=166.0*

*INMG **19** 16:35:53.1±1.3, 35°.84N×5°.14W, h4^{km}±3^{km}, ML2.0, Error ellipse: s-maj=2.5km s-min=2.4km az=65.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE Ceuta*

*SFS **19** 16:35:54.1, 35°.85N×5°.15W, h11^{km}, ML2.5/13, ML2.3/17, MLv2.2/17*

ISC 19 16:35:50.8±0.9, 35°.72N±0°.02×5°.14W±0°.02, h12^{km}±7^{km}, n62, σ1^{s}.18/90, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMIR	Smir Dam	0.20	258	P	Pg	16 35 54.6	-0.7
SMIR	Smir Dam	0.20	258	S	Sg	16 35 57.9	-0.3
ECEU	Ceuta	0.26	312	Pg	Pg	16 35 57.2	+0.9
ECEU				Sg	Sg	16 35 59.8	-0.2
ECEU	Ceuta	0.26	312	Pg	Pg	16 35 57.1	+0.9
ECEU				Sg	Sg	16 35 59.9	-0.1
ECEU				*i* IVmb_Lg		16 36 04.0	
CPS	Cap Spartel	0.63	276	P	Pg	16 36 03.3	+0.2
CPS	Cap Spartel	0.63	276	S	Sb	16 36 12.5	0.0
CHEFC	Chefchaouen	0.64	195	P	Pg	16 36 02.1	-1.2
CHEFC	Chefchaouen	0.64	195	S	Sg	16 36 10.9	-0.8
EJIF	Jimena Fronter	0.77	340	Pg	Pb	16 36 06.2	0.0
EJIF				Sg	Sb	16 36 12.1	-4.6
EMIJ	Mijas	0.89	19	Pg	Pb	16 36 08.0	-0.2
EMIJ				Sg	Sb	16 36 17.6	-2.4
EMIJ				*i* IVmb_Lg		16 36 24.9	
RSA	Sarsar	1.01	214	P	Pb	16 36 10.4	+0.2
RSA	Sarsar	1.01	214	S	Sb	16 36 22.7	-0.7
PALE	Palemas	1.10	117	P	Pb	16 36 12.0	+0.1
PALE	Palemas	1.10	117	S	Sb	16 36 26.4	+0.2
EMAL	Malaga-Limoner	1.18	29	Sg	Sb	16 36 28.4	-0.1
EMAL				Pg	Pn	16 36 12.7	-0.5
ESPR	Espera	1.28	333	Pn	Pg	16 36 16.3	+0.9
ESPR				Sg	Sb	16 36 30.8	-0.4
ESPR	Espera	1.28	333	Pg	Pn	16 36 14.9	+0.3
ESPR				Sg	Sb	16 36 28.5	-2.8
ESPR				*i* IVmb_Lg		16 36 39.5	
AKLM	AKL	1.60	139	P	Pn	16 36 17.4	-1.6
EGOR	Sierra Gorda,	1.61	31	Pn	Pb	16 36 20.9	+0.3
EGOR	Sierra Gorda,	1.61	31	Pg	Pb	16 36 20.6	0.0
EGOR				Sg	Sb	16 36 40.6	-0.4
EGOR				*i* IVmb_Lg		16 37 02.0	
ELGU	Los Guajares,	1.67	47	Sn	Sn	16 36 41.8	+0.4
ELGU				Pn	Pn	16 36 19.9	-0.1
ELGU	Los Guajares,	1.67	47	Pn	Pn	16 36 20.5	+0.6
ELGU				Sn	Sn	16 36 41.7	+0.4
ELGU				*i* IVmb_Lg		16 36 48.0	
EALB	Alboran	1.72	82	Sn	Sn	16 36 43.4	+0.9
EALB	Alboran	1.72	82	Sn	Sb	16 36 44.2	+0.2
EALB				*i* IVmb_Lg		16 36 47.5	
GOG	Mont Gurugu	1.82	105	P	Pn	16 36 22.2	+0.2
GOG	Mont Gurugu	1.82	105	S	Sn	16 36 45.5	+0.5
IFR	Ifrane	2.20	180	Pn	Pb	16 36 31.2	+0.5
IFR				Sn	Sb	16 36 59.4	+1.4
ECAB	El Cabril	2.36	355	Pn	Pn	16 36 30.3	+0.9
ECAB				Sn	Sn	16 36 57.2	-1.0
ECAB	El Cabril	2.36	355	Pn	Pn	16 36 30.1	+0.7
ECAB				Sn	Sn	16 36 58.5	+0.2
ECAB				*i* IVmb_Lg		16 37 17.4	
EMIN	Mina Concepcio	2.38	329	Pn	Pn	16 36 29.7	0.0
EMIN	Mina Concepcio	2.38	329	Pn	Pn	16 36 29.4	-0.3
EMIN				Sn	Sn	16 36 57.8	-1.0
EMIN				*i* IVmb_Lg		16 37 07.8	
EADA	Adamuz	2.48	10	Pg	Pb	16 36 35.2	-0.1
EADA	Adamuz	2.48	10	Pn	Pn	16 36 31.3	+0.3
EADA				Sn	Sn	16 37 00.5	-0.7
EADA				*i* IVmb_Lg		16 37 18.5	
E0803	Jimena (Jaen)	2.50	32	Pn	Pn	16 36 32.1	+0.8
E0803				Sn	Sn	16 37 00.6	-1.1
ZHG	ZHG	2.59	209	P	Pn	16 36 33.6	+1.0
EGRO	El Granado	2.61	314	Pn	Pn	16 36 32.7	-0.1
EGRO				Sn	Sn	16 37 05.1	+0.6
EGRO	El Granado	2.61	314	Pn	Pn	16 36 33.4	+0.6
EGRO				Sn	Sn	16 37 03.7	-0.8
EGRO				*i* IVmb_Lg		16 37 12.8	
EQES	Quesada	2.66	38	Pn	Pn	16 36 35.6	+2.0
EQES				Sn	Sn	16 37 05.5	-0.3
EQES				*i* IVmb_Lg		16 37 19.8	
PVAQ	Vaqueiros	2.67	310	Pn	Pn	16 36 33.4	-0.2
PVAQ	Vaqueiros	2.67	310	*e*Pn	Pn	16 36 34.3	+0.7
PVAQ				*i* AML	AML	16 37 10.5	
PBDV	Barranco-do-Ve	2.71	305	*e*Pn	Pn	16 36 35.3	+1.1

PBDV				*e*Sn	Sn	16 37 07.0	0.0
PBDV				*i* AML	AML	16 37 08.9	
PBDV				*i* AML	AML	16 37 09.7	
PBDV				*i* AML	AML	16 37 16.7	
MD31	MD31	2.87	174	P	Pn	16 36 36.2	-0.2
PBAR	Barrancos	2.88	329	*e*Pn	Pn	16 36 38.7	+2.2
PBAR				*e*Sn	Sn	16 37 10.7	-0.4
PBAR				*i* AML	AML	16 37 15.3	
PBAR				*i* AML	AML	16 37 17.2	
PBAR				*i* AML	AML	16 37 17.4	
MDT	Midelt	2.94	171	P	Pn	16 36 37.1	-0.3
PCVE	Castro Verde	3.01	310	Sn	Sn	16 37 14.7	+0.4
PCVE				Pn	Pn	16 36 38.8	+0.5
PCVE	Castro Verde	3.01	310	*e*Pn	Pn	16 36 38.9	+0.6
PCVE				*i* AML	AML	16 37 18.9	
PCVE				*i* AML	AML	16 37 25.9	
PCVE				*i* AML	AML	16 37 29.3	
MORF	Marmelete	3.24	300	*e*Pn	Pn	16 36 43.3	+1.8
MORF				*e*Sn	Sn	16 37 19.6	-0.4
MORF				*i* AML	AML	16 37 22.3	
MORF				*i* AML	AML	16 37 25.6	
MORF				*i* AML	AML	16 37 26.0	
MESJ	Messejana	3.25	311	*e*Pn	Pn	16 36 42.3	+0.7
MESJ				*e*Sn	Sn	16 37 19.5	-0.7
MESJ				*i* AML	AML	16 37 25.1	
MESJ				*i* AML	AML	16 37 28.1	
MESJ				*i* AML	AML	16 37 28.8	
PSIM	Granatula de C	3.28	19	Pn	Pn	16 36 42.7	+0.6
PSIM				Sn	Sn	16 37 19.8	-1.2
PFVI	Vila Bisbo	3.29	296	*e*Pn	Pn	16 36 43.8	+1.7
EBAD	Badajoz	3.38	334	Pn	Pn	16 36 44.9	+1.6
EBAD	Badajoz	3.38	334	Pn	Pn	16 36 44.0	+0.7
EBAD				Sn	Sn	16 37 22.3	-0.9
EBAD				*i* IVmb_Lg		16 37 32.4	
TLOR	Lorca, Murcia	3.38	54	Sn	Sn	16 37 23.3	0.0
PTEO	Sao Teotonio	3.41	303	*e*Pn	Pn	16 36 44.5	+0.7
PTEO				*e*Sn	Sn	16 37 24.9	+0.8
EVO	Evora	3.62	322	Sn	Sn	16 37 27.5	-1.9
EVO				Pn	Pn	16 36 47.5	+0.7
PMRV	Marv??o	4.11	335	*e*Pn	Pn	16 36 56.2	+2.8
PMRV				*i* AML	AML	16 37 48.6	
PMTG	Montargil	4.14	325	*e*Pn	Pn	16 36 55.8	+1.9
PARRA	Arraiolos	4.38	316	*e*Pn	Pn	16 36 51.5	-5.7
PARRA				*e*Sn	Sn	16 37 34.8	-13
PARRA				*i* AML	AML	16 37 37.1	
PARRA				*i* AML	AML	16 37 41.1	
PARRA				*i* AML	AML	16 37 47.6	
PCBR	Castelo Branco	4.51	336	*e*Pn	Pn	16 37 01.5	+2.6
PCBR				*e*Sn	Sn	16 37 51.0	-0.2
PCBR				*i* AML	AML	16 37 54.6	
PCBR				*i* AML	AML	16 37 56.1	
PSARD	Sardoal	4.55	329	*e*Pn	Pn	16 37 01.4	+1.9
OUZM	OUZ	4.99	196	P	Pn	16 37 07.2	+1.5
MVO	Moncorvo	5.63	345	*e*Pn	Pn	16 37 17.5	+3.1

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*NOU **19** 16:42:16.2, 37°.50S×177°.12E, h0^{km}, MLv3.5/7, Off E. Coast of N. Island, N.Z.*

*WEL **19** 16:42:17.8, 37°.56S×177°.13E, h6^{km}, ML3.4, Mw3.7, Moment Tensor Solution. s5 Moment tensor: Scale 10^{14} Nm; M_{rr}-1.58; $M_{\theta\theta}$-1.38; $M_{\phi\phi}$2.96; $M_{r\theta}$-0.38; $M_{\theta\phi}$2.94; $M_{\phi r}$0.78; Fault plane solution: $M_0$3.83000×10^{14} NP1: ϕ_s165.00000°, δ77.00000°, λ-159.00000°. NP2: ϕ_s70.00000°, δ70.00000°, λ-14.00000°. Principal axes: T 4.4940, Plg5.0000°, Azm297.0000°; N -3.1720, Plg66.0000°, Azm195.0000°; P -1.3220, Plg24.0000°, Azm29.0000°; Stations used: URZ MWZ RTZ TOZ HIZ STRIKE-SLIP FAULTING*

*WEL **19** 16:42:17.8±0.4, 38°S±3°×17°7E±°, h5^{km}, M3.4/55, ML3.9/26, MLv3.4/55 Error ellipse: s-maj=4.2km s-min=2.3km az=174.1, confirmed*

ISC 19 16:42:17.1±0.9**, 37°.51S**±0°.03×**177°.12E**±0°.02**, h10^{km}**±6^{km}**, n81, σ0^{s}.90**/91**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSRZ	White Island S	0.05	103	P	Pg	16 42 19.4	+0.1
WIZ	White Island	0.06	109	P	Pg	16 42 19.3	0.0
WHRZ	Whale Island	0.37	198	P	Pb	16 42 24.7	-1.0
HAZ	Te Kaha	0.58	115	P	Pg	16 42 28.2	-0.3
HAZ				S	Sg	16 42 36.3	+0.1
MARZ	Manawahe	0.59	216	P	Pg	16 42 28.9	+0.2
RUGZ	Raukumara Rang	0.64	136	P	Pg	16 42 28.8	-0.8
EDRZ	Edgecumbe	0.67	206	P	Pb	16 42 30.5	-0.4
TGRZ	Tauranga	0.71	252	P	Pb	16 42 32.0	+0.3
MYRZ	Mayor Island	0.73	288	P	Pb	16 42 32.5	+0.6
URZ	Urewera	0.75	180	P	Pg	16 42 30.9	-0.8
URZ	Urewera	0.75	180	P	Pg	16 42 30.8	-0.8
URZ				S	Sg	16 42 40.5	-1.0
LIRZ	Lichensteins R	0.76	229	P	Pb	16 42 32.5	0.0
LIRZ				S	Sb	16 42 42.4	-0.5
MKRZ	Makatiti	0.81	219	P	Pb	16 42 33.6	+0.2
OMRZ	Omania	0.84	224	P	Pb	16 42 33.7	-0.1
PKGZ	Pakihiroa	0.84	115	P	Pg	16 42 33.3	-0.1
PKGZ				S	Sg	16 42 44.6	+0.1
KARZ	Kaharoa	0.86	233	P	Pg	16 42 33.9	+0.1
KARZ				S	Sg	16 42 44.9	0.0
TARZ	Mount Tarawera	0.87	213	P	Pb	16 42 34.2	-0.2
MWZ	Matawai	0.89	159	P	Pg	16 42 32.2	-2.1
MWZ				S	Sg	16 42 44.6	-1.2
NGRZ	Ngongotaha	0.95	231	P	Pb	16 42 36.1	+0.5
MXZ	Matakaoa Point	0.95	94	P	Pg	16 42 34.6	-0.8
MXZ	Matakaoa Point	0.95	94	P	Pg	16 42 34.5	-0.9
MXZ				S	Sn	16 42 50.2	+0.2
TWGZ	Tauwhareparae	0.96	135	P	Pg	16 42 35.4	-0.2
TWGZ				S	Sb	16 42 49.5	+1.0
RRRZ	Republican Roa	0.96	210	P	Pg	16 42 35.2	-0.3
HLRZ	Highlands Stat	0.96	219	P	Pb	16 42 35.9	+0.1
UTU	Utuhina	0.99	227	P	Pb	16 42 36.9	+0.6
KMRZ	Kaimai	0.99	250	P	Pg	16 42 35.8	-0.4
MUGZ	Murupara	1.01	196	P	Pg	16 42 35.5	-1.0
RAGZ	Rawiri	1.01	167	P	Pg	16 42 36.0	-0.7
HSRZ	Hossack Road	1.06	220	P	Pb	16 42 37.9	+0.3
PUZ	Puketiti	1.06	122	P	Pb	16 42 37.6	0.0
PUZ				S	Sb	16 42 52.9	+1.3
WMGZ	Waiomatatini S	1.08	107	P	Pn	16 42 38.6	+0.4
TKGZ	Te Karaka	1.10	148	P	Pb	16 42 37.9	-0.2
TKGZ				S	Sn	16 42 53.6	0.0
HRRZ	Handcock Road	1.10	216	P	Pg	16 42 37.7	-0.6
RTZ	Ruatahuna	1.11	186	P	Pg	16 42 37.2	-1.4
PRRZ	Plateau Road	1.14	210	P	Pg	16 42 37.7	-1.4
GRRZ	Galatos Road	1.16	223	P	Pn	16 42 39.8	+0.4
ALRZ	Allen Road	1.22	210	P	Pb	16 42 40.3	+0.1
SNGZ	Shannon Statio	1.28	172	P	Pg	16 42 40.4	-1.4
RIGZ	Rimuhau	1.30	157	P	Pb	16 42 41.7	0.0
CNGZ	Carnagh Statio	1.30	139	P	Pn	16 42 42.2	+0.9
TOZ	Tahuroa Road	1.30	260	P	Pg	16 42 40.1	-2.0
KUZ	Kuaotunu	1.35	304	P	Pn	16 42 40.4	-1.5
KUZ	Kuaotunu	1.35	304	P	Pn	16 42 40.7	-1.2
MTHZ	Maungataniwha	1.36	189	P	Pg	16 42 41.4	-1.8
RAHZ	Arahi	1.41	181	P	Pn	16 42 42.8	0.0
KUTZ	Kaahu Road	1.42	226	P	Pn	16 42 43.7	+0.8
MRHZ	Matea Rd	1.44	202	P	Pn	16 42 42.0	-1.2
WHTZ	Whakaora	1.48	218	P	Pg	16 42 46.8	+1.4
TLZ	Tolley Road	1.50	236	P	Pg	16 42 45.6	-0.2
PRGZ	Paritu Road	1.54	157	P	Pg	16 42 46.4	-0.2
WHHZ	Waihua	1.57	177	P	Pb	16 42 46.2	0.0
KNZ	Kokohu	1.57	164	P	Pg	16 42 48.1	+0.8
NMHZ	Naumai	1.61	189	P	Pg	16 42 47.9	-0.1
MKAZ	Moumakai	1.61	284	P	Pn	16 42 44.7	-0.8
RATZ	Rangitukua	1.72	218	P	Pg	16 42 51.9	+1.7
BKZ	Black Stump Fm	1.73	196	P	Pn	16 42 45.9	-1.4
BKZ	Black Stump Fm	1.73	196	P	Pn	16 42 45.9	-1.4
WIAZ	Waiheke Island	1.74	294	P	Pn	16 42 49.0	+1.7
ARHZ	Aropaoanui	1.76	183	P	Pn	16 42 48.5	+0.9
MHGZ	Mahia Peninsul	1.76	160	P	Pn	16 42 48.3	+0.7
RITZ	Rihia Road	1.77	214	P	Pg	16 42 53.8	+2.8
GRZ	Great Barrier	1.83	313	P	Pn	16 42 47.8	-0.8
ETAZ	East Tamaki Re	1.83	287	P	Pn	16 42 48.3	-0.3
MBAZ	Motutapu North	1.92	292	P	Pn	16 42 49.5	-0.3
NTVZ	North Tongarir	1.95	215	P	Pg	16 42 54.7	+0.1
TMVZ	Te Maari	1.95	214	P	Pb	16 42 53.3	+0.4
MCHZ	McNeill Hill	1.96	190	P	Pn	16 42 51.5	+1.1
ETVZ	East Tongariro	1.97	214	P	Pb	16 42 52.5	-0.6
KWHZ	Kaweka Forest	1.99	196	P	Pn	16 42 52.2	+1.4
WTVZ	West Tongariro	2.01	216	P	Pg	16 42 56.8	+1.2
OTVZ	Oturere	2.01	214	P	Pb	16 42 53.3	-0.6
AWAZ	Awhitu Peninsu	2.02	282	P	Pn	16 42 51.1	-0.1
SNVZ	South Ngauruho	2.04	214	P	Pb	16 42 54.9	+0.5
HIZ	Hauiti	2.05	240	P	Pn	16 42 52.2	+0.6
FWVZ	Far West T-bar	2.13	215	P	Pb	16 42 56.6	+0.6
MOVZ	Moawhango	2.18	209	P	Pb	16 42 55.7	-0.9
KRHZ	Kereru	2.21	195	P	Pn	16 42 54.4	+0.5
KAHZ	Kahuranaki	2.29	185	P	Pn	16 42 55.1	+0.1
PXZ	Pawanui	2.53	184	P	Pn	16 42 57.0	-1.2
KHEZ	Kahui Hut	3.02	233	P	Pn	16 43 06.3	+1.3
OUZ	Omahuta	3.64	308	P	Pn	16 43 13.8	+0.3

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*IDC **19** 16:43:01.5±1.0, 31°.06S×177°.74W, h0^{km}, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=39.6km s-min=33.3km az=39.0*

*NEIC **19** 16:43:04.0±2.6, 31°.0S±0°.1×177°.8W±0°.2, h10^{km}±1^{km}, mb4.5/13, Error ellipse: s-maj=32.2km s-min=18.4km az=84.0*

ISC 19 16:43:07.7±0.8**, 30°.97S**±0°.10×**177°.8W**±0°.2**, h46^{km}, n32, σ1^{s}.43**/32**, mb4.4**/8**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.72	356	Pn	Pn	16 43 33.2	-1.9
TOZ	Tahuroa Road	8.74	218	Pn	Pn	16 45 09.2	-2.2
BFZ	Birch Farm	10.83	205	Pn	Pn	16 45 32.0	-8.0
CMWZ	Cape Campbell	12.54	209	Pn	Pn	16 46 04.0	+0.7
THZ	Tophouse	13.12	212	Pn	Pn	16 46 05.9	-5.5
FOZ	Fox Glacier	15.94	215	Pn	Pn	16 46 48.3	-0.4
FOZ				IAmb	IAmb	16 46 58.1	
	comp=Z,63nm,1.4s						
ODZ	Otahua Downs	16.73	210	Pn	Pn	16 46 58.0	-0.6
ODZ				IAmb	IAmb	16 47 36.5	
	comp=Z,31nm,1.3s						
WKZ	Wanaka	17.29	213	P	Pn	16 47 02.4	-3.2
WKZ				IAmb	IAmb	16 47 31.8	
	comp=Z,75nm,1.5s						
CTAO	Charters Tower	34.09	280	P	P	16 49 49.0	+1.0
CTAO				IAmb	IAmb	16 50 04.3	
	comp=Z,6.9nm,0.8s						
STKA	Stephens Creek	34.54	258	P	P	16 49 53.4	+1.5
BBOO	Buckleboo	39.00	255	P	P	16 50 28.9	-0.9
BBOO				IAmb	IAmb	16 50 52.9	
	comp=Z,22nm,1.4s						
AS31	Alice Springs	43.27	267	P	P	16 51 04.2	-0.9
ASAR	Alice Springs	43.27	267	P	P	16 51 04.2	-0.9
ASAR	Alice Springs	43.27	267	P	P	16 51 05.3	+0.3
	comp=Z,1.1nm,0.5s,baz=106,slow=7.3,SNR=42						
ASAR				PcP	PcP	16 52 53.5	0.0
	comp=Z,0.2nm,0.5s,baz=100,slow=3.8,SNR=1.6						
ASAR				ScP	ScP	16 56 46.0	+4.9
	comp=Z,0.8nm,0.9s,baz=134,slow=4.7,SNR=5.2						
	comp=Z,1.1nm,0.5s						
WR8	Warramunga Arr	44.17	273	P	P	16 51 12.3	+0.1
WRA	Warramunga Arr	44.32	273	P	P	16 51 13.0	-0.4
WRA	Warramunga Arr	44.32	273	P	P	16 51 13.6	+0.2
	comp=Z,3.0nm,0.4s,baz=112,slow=7.9,SNR=43						
	comp=Z,3.0nm,0.4s						
WB0	Warramunga Arr	44.34	273	P	P	16 51 13.8	+0.2
WB0				IAmb	IAmb	16 51 35.4	
	comp=Z,6.1nm,0.9s						
FITZ	Fitzroy Crossi	52.55	270	P	P	16 52 17.2	+0.4
CASY	Casey	54.73	208	P	P	16 52 30.8	-1.2
CASY				IAmb	IAmb	16 52 44.4	
	comp=Z,5.9nm,1.1s						
QSPA	South Pole Qui	59.14	180	P	P	16 53 03.7	+0.2
QSPA	South Pole Qui	59.14	180	P	P	16 53 03.5	+0.1
	comp=Z,0.9nm,0.8s,baz=3.5,slow=7.4,SNR=2.2						
	comp=Z,0.9nm,0.8s						
SNAA	Sanae	77.58	178	P	P	16 54 58.2	-0.3
	comp=Z,0.4nm,0.8s,baz=214,slow=15,SNR=1.0						
	comp=Z,0.4nm,0.8s						
MKAR	Makanchi Array	118.29	310	PKP	PKiKP	17 01 51.1	+1.4
	comp=Z,0.3nm,0.7s,baz=82,slow=0.8,SNR=3.5						
KURBB	Kurchatov Arra	121.62	313	PKP	PKiKP	17 01 56.2	+0.2
	comp=Z,0.3nm,0.3s,baz=108,slow=2.9,SNR=4.0						
FIA1	FINESS Array S	145.75	340		PKPab	17 02 41.3	0.0
FINES	FINESS Array B	145.75	340	PKPdf	PKPbc	17 02 40.7	-0.1
FINES	FINESS Array B	145.75	340	PKPbc	PKPab	17 02 41.1	-0.2
	comp=Z,0.9nm,0.4s,baz=44,slow=3.8,SNR=12						
HFS	Hagfors	149.84	349	PKPbc	PKiKP	17 02 53.0	0.0
	comp=Z,0.5nm,0.5s,baz=46,slow=6.2,SNR=2.0						
MMAI	Mount Meron Ar	151.85	283	PKPbc	PKiKP	17 02 57.9	-0.2
	comp=Z,1.0nm,0.5s,baz=75,slow=6.1,SNR=1.7						
AKASG	Malin Array Be	151.87	322	PKPbc	PKPbc	17 02 57.0	-0.1
	comp=Z,0.2nm,0.3s,baz=42,slow=1.5,SNR=1.6						
BRTR	Keskin Array B	153.04	298	PKPbc	PKiKP	17 03 02.7	+2.3
	comp=Z,1.1nm,0.8s,baz=123,slow=4.6,SNR=5.3						

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*IDC **19** 16:45:36.4±2.4, 2°.55N×127°.51E, h0^{km}, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=199.5km s-min=23.7km az=67.0*

*DJA **19** 16:45:49.9±0.5, 2°N±3°×12°8E±°, h102^{km}±5^{km}, M3.9/9, MLv3.9/9*

ISC 19 16:45:49.4±1.5**, 2°.42N**±0°.08×**127°.6E**±0°.1**, h100^{km}, n7, σ1^{s}.23**/9**, mb3.2**/3**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.66	188	P	Pn	16 46 19.7	+2.0
TNTI				S	Sn	16 46 40.0	+0.9
SGSI	Sangihe	2.42	301	P	Pn	16 46 28.0	+0.6
SGSI				S	Sn	16 46 57.5	+0.9
KMSI	Cibinong	4.05	243	P	Pn	16 46 49.7	+0.3
KMSI				S	Sn	16 47 35.9	0.0
SANI	Sanana	4.73	200	P	Pn	16 46 57.2	-1.3
WRA	Warramunga Arr	23.19	164	P	P	16 50 44.7	-3.0
	0.6nm,0.5s,baz=340,slow=9.3,SNR=19						
	0.6nm,0.5s						
ASAR	Alice Springs	26.65	167	P	P	16 51 18.1	-1.0
	0.3nm,0.4s,baz=345,slow=11,SNR=3.0						
	0.3nm,0.4s						
MKAR	Makanchi Array	59.12	325	P	P	16 55 38.9	-0.6
	0.6nm,0.4s,baz=114,slow=8.3,SNR=12						
	0.6nm,0.4s						

IDC 19 16:50:15.7±2.9**, 30°.35S**×**178°.54W, h0^{km}, mb3.6**/3**, mbtmp3.6**/3**, Error ellipse: s-maj=81.6km s-min=36.6km az=39.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.64	267	P	P	16 58 13.8	-0.4
	0.2nm,0.4s,baz=104,slow=7.1,SNR=14						
	0.2nm,0.4s						
WRA	Warramunga Arr	43.62	272	P	P	16 58 22.4	+0.2
	0.4nm,0.4s,baz=112,slow=7.9,SNR=14						
	0.4nm,0.4s						
QSPA	South Pole Qui	59.76	180	P	P	17 00 22.2	-0.1
	0.7nm,0.6s,baz=46,slow=1.8,SNR=6.2						
	0.7nm,0.6s						
FINES	FINESS Array B	144.94	340	PKP	PKPbc	17 09 53.7	+0.4
	0.7nm,0.5s,baz=64,slow=3.2,SNR=4.0						

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*NOU **19** 16:52:36.4, 37°.54S×177°.11E, h7^{km}, MLv3.9/10, Off E. Coast of N. Island, N.Z.*

*WEL **19** 16:52:37.4, 37°.54S×177°.16E, h8^{km}, ML4.0, Mw4.0, Moment Tensor Solution. s7 Moment tensor: Scale 10^{15} Nm; M_{rr}-0.44; $M_{\theta\theta}$-0.54; $M_{\phi\phi}$0.98; $M_{r\theta}$-0.13; $M_{\theta\phi}$0.84; $M_{\phi r}$0.14; Fault plane solution: $M_0$1.16000×10^{15} NP1: ϕ_s161.00000°, δ79.00000°, λ-165.00000°. NP2: ϕ_s68.00000°, δ76.00000°, λ-11.00000°. Principal axes: T 1.3504, Plg2.0000°, Azm294.0000°; N -0.9676, Plg72.0000°, Azm197.0000°; P -0.3827, Plg18.0000°, Azm25.0000°; Stations used: HAZ URZ MWZ RTZ KUZ TLZ HIZ STRIKE-SLIP FAULTING*

*WEL **19** 16:52:37.6±0.5, 38°S±4°×17°7E±°, h5^{km}, M4.1/21, ML4.4/21, MLv4.1/21 Error ellipse: s-maj=4.8km s-min=2.9km az=178.8, confirmed*

ISC 19 16:52:36.9±1.0**, 37°.52S**±0°.04×**177°.12E**±0°.03**, h14^{km}**±7^{km}**, n50, σ0^{s}.63**/54**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSRZ	White Island S	0.04	86	P	Pg	16 52 39.4	-0.1
WIZ	White Island	0.05	96	P	Pg	16 52 39.4	-0.2
WHRZ	Whale Island	0.35	199	P	Pb	16 52 44.7	-0.3
HAZ	Te Kaha	0.57	114	P	Pb	16 52 48.3	-0.4
HAZ				S	Sg	16 52 56.5	+0.7
MARZ	Manawahe	0.58	217	P	Pg	16 52 48.7	+0.3
RUGZ	Raukumara Rang	0.62	135	P	Pb	16 52 48.8	-0.9
RUGZ				S	Sg	16 52 59.4	+1.9
EDRZ	Edgecumbe	0.66	207	P	Pg	16 52 50.3	+0.5
TGRZ	Tauranga	0.72	253	P	Pn	16 52 51.8	-0.8
TGRZ				S	Sn	16 53 03.1	-0.2
URZ	Urewera	0.74	181	P	Pb	16 52 50.8	-0.7
URZ	Urewera	0.74	181	S	Sb	16 53 00.7	-0.7
URZ	Urewera	0.74	181	P	Pb	16 52 50.9	-0.6
MYRZ	Mayor Island	0.74	289	P	Pn	16 52 52.5	-0.4
LIRZ	Lichensteins R	0.76	230	P	Pn	16 52 52.6	-0.6
MKRZ	Makatiti	0.81	220	P	Pn	16 52 53.5	-0.4
OMRZ	Omania	0.83	225	P	Pn	16 52 53.5	-0.7
PKGZ	Pakihiroa	0.83	115	P	Pg	16 52 53.3	+0.2
KARZ	Kaharoa	0.86	234	P	Pn	16 52 54.0	-0.5
TARZ	Mount Tarawera	0.86	214	P	Pn	16 52 54.1	-0.6
MWZ	Matawai	0.87	159	P	Pb	16 52 53.3	-0.5
MWZ				S	Sb	16 53 04.9	-0.5
MXZ	Matakaoa Point	0.94	93	P	Pb	16 52 54.6	-0.4
MXZ	Matakaoa Point	0.94	93	P	Pb	16 52 54.6	-0.4
NGRZ	Ngongotaha	0.94	232	P	Pg	16 52 56.1	+1.0
TWGZ	Tauwhareparae	0.94	134	P	Pn	16 52 55.4	-0.4
RRRZ	Republican Roa	0.95	210	P	Pn	16 52 55.1	-0.7
HLRZ	Highlands Stat	0.95	220	P	Pg	16 52 55.9	+0.6
UTU	Utuhina	0.98	228	P	Pg	16 52 57.1	+1.2
KMRZ	Kaimai	0.99	251	P	Pg	16 52 55.8	-0.3
MUGZ	Murupara	0.99	196	P	Pb	16 52 55.6	-0.3
RAGZ	Rawiri	1.00	167	P	Pb	16 52 55.9	-0.1
HSRZ	Hossack Road	1.05	221	P	Pg	16 52 58.1	+0.9
PUZ	Puketiti	1.05	122	P	Pg	16 52 57.7	+0.5
WMGZ	Waiomatatini S	1.07	107	P	Pg	16 52 58.5	+1.0
TKGZ	Te Karaka	1.08	148	P	Pg	16 52 57.9	+0.1
HRRZ	Handcock Road	1.09	217	P	Pg	16 52 57.9	-0.1
RTZ	Ruatahuna	1.10	186	P	Pn	16 52 57.3	-0.6
PRRZ	Plateau Road	1.13	210	P	Pn	16 52 57.7	-0.6
GRRZ	Galatos Road	1.15	224	P	Pg	16 52 59.2	+0.1
ALRZ	Allen Road	1.21	210	P	Pb	16 52 59.2	-0.3
SNGZ	Shannon Statio	1.27	172	P	Pb	16 53 00.3	-0.3
RIGZ	Rimuhau	1.28	157	P	Pg	16 53 01.6	-0.1
CNGZ	Carnagh Statio	1.29	139	P	Pg	16 53 02.3	+0.6
KUZ	Kuaotunu	1.36	304	P	Pn	16 53 00.7	-0.8
RAHZ	Arahi	1.39	181	P	Pb	16 53 02.9	+0.2
MRHZ	Matea Rd	1.42	203	P	Pn	16 53 01.9	-0.5
BKZ	Black Stump Fm	1.71	197	P	Pn	16 53 05.9	-0.5
HIZ	Hauiti	2.05	240	P	Pn	16 53 11.2	+0.3
KHEZ	Kahui Hut	3.02	233	P	Pn	16 53 23.8	-0.5
BFZ	Birch Farm	3.23	192	P	Pn	16 53 26.8	-0.3
OUZ	Omahuta	3.66	308	P	Pn	16 53 33.8	+0.8
QRZ	Quartz Range	4.86	226	P	Pn	16 53 49.9	+0.3

JMA 19 16:54:32.4±0.1**, 38°.6N**±0°.4×**139°.4E**±0°.3**, h12^{km}**±1^{km}**, MV0.6**/10**, OFF N NIIGATA PREF, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAW	Awa shima	0.16	227	P	Pg	16 54 36.2	0.0
JAW				*e*S	Sg	16 54 39.0	+0.2
JYA	Atsumi	0.25	84	P	Pg	16 54 37.7	+0.1
JYA				*e*S	Sg	16 54 41.5	+0.4
JYK	Kaneyama	0.83	65	*e*P	Pg	16 54 48.1	-0.4

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*BJI **19** 16:55:41.3, 34°.80N×140°.71E, h70^{km}, mB4.7/18, mb4.7/55*

*MOS **19** 16:55:45.1±1.2, 35°.01N×140°.52E, h69^{km}, mb4.9/52, Error ellipse: s-maj=7.6km s-min=4.1km az=112.2*

*JMA **19** 16:55:47.8±0.2, 35°.0N±0°.6×140°.2E±0°.7, h76^{km}±1^{km}, MD4.4/39, MW4.4/39, SE OFF BOSO PENINSULA*

JMA Felt II J1 at SE OFF BOSO PENINSULA .

*NIED **19** 16:55:47.8, 35°.01N×140°.20E, h76^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-2.26; $M_{\theta\theta}$3.37; $M_{\phi\phi}$-1.10; $M_{r\theta}$-1.32; $M_{\theta\phi}$-0.95; $M_{\phi r}$-3.23; Fault plane solution: $M_0$4.47000×10^{15} NP1: ϕ_s311.00000°, δ49.00000°, λ-33.00000°. NP2: ϕ_s65.00000°, δ66.00000°, λ-134.00000°.*

*NEIC **19** 16:55:48.2±1.9, 34°.99N±0°.05×140°.22E±0°.09, h71^{km}±2^{km}, mb4.7/81 Error ellipse: s-maj=10.5km s-min=7.7km az=94.0*

*IDC **19** 16:55:49.0±1.7, 34°.88N×140°.07E, h78^{km}±13^{km}, mb4.1/25, mbtmp4.4/27, MS3.1/12, Error ellipse: s-maj=16.8km s-min=11.0km az=73.0*

ISC 19 16:55:47.7±0.4**, 35°.00N**±0°.03×**140°.29E**±0°.04**, h70^{km}**±3^{km}**, h70^{km}:pP-P, n392, σ1^{s}.53**/389**, mb4.6**/139**, 7C-32D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO4	Boso 4	0.04	104	⇓*i*P	Pn	16 55 59.2	+1.5
BSO4				⇓X		16 56 07.4	
KTR	Katsuura	0.15	10	⇓*i*P	Pn	16 55 59.2	+1.0
KTR				⇓*e*S	Sn	16 56 07.4	+1.7
JKUC	kamogawauchiur	0.17	336	⇓*i*P	Pn	16 55 59.1	+0.8
JKUC				⇓S	Sn	16 56 07.4	+1.5
JKUC	kamogawauchiur	0.17	336	A	A	16 55 59.1	
	comp=N,238nm,0.9s,comp=E,322nm,0.5s						
BSO3	Boso 3	0.27	137	⇓*i*P	Pn	16 55 59.9	+1.5
TATJ	Tateyama 2	0.33	275	P	Pn	16 55 60.0	+0.9
TATJ				S	Sn	16 56 09.2	+1.9
TATJ	Tateyama 2	0.33	275	A	A	16 55 60.0	
	comp=N,59nm,0.5s,comp=E,93nm,2.0s						
JYO	Yokosk	0.56	294	A	A	16 56 01.2	
	comp=N,67nm,1.3s,comp=E,33nm,1.2s						
JSMT	Sammumatsuo	0.65	12	A	A	16 56 02.9	
	comp=N,72nm,1.0s,comp=E,32nm,1.0s						
BSO1	Boso 1	0.67	121	⇓*i*P	Pn	16 56 03.3	+1.7
JIM2	Oshima 3	0.76	248	P	Pn	16 56 02.7	-0.6
JIM2				*e*S	Sn	16 56 13.7	-1.1
JIM2	Oshima 3	0.76	248	A	A	16 56 02.7	
	comp=N,54nm,0.7s,comp=E,43nm,0.4s						
TOK	Tokyo	0.81	328	A	A	16 56 04.0	
	comp=N,55nm,1.0s,comp=E,74nm,1.1s						
JTHY	Toshimahigashi	0.95	240	A	A	16 56 05.5	
	comp=N,52nm,0.6s,comp=E,32nm,0.3s						
JIHU	Itakohorinouch	0.98	11	A	A	16 56 06.7	
	comp=N,35nm,1.7s,comp=E,43nm,1.3s						
JOD2	Odawara 2	1.01	285	⇓P	Pn	16 56 05.8	-0.6
JOD2				⇓*e*S	Sn	16 56 18.9	-1.5
JOD2	Odawara 2	1.01	285	A	A	16 56 05.8	
	comp=N,13nm,1.0s,comp=E,24nm,0.5s						
JHTM	Izuhatsuma	1.05	268	A	A	16 56 06.5	
	comp=N,33nm,1.0s,comp=E,39nm,0.2s						
JNIO	Niijimaoohara	1.05	233	A	A	16 56 06.8	
	comp=N,46nm,2.0s,comp=E,33nm,0.4s						
JSGW	Sagamiharawaka	1.06	305	A	A	16 56 06.8	
	comp=N,22nm,0.8s,comp=E,26nm,0.7s						
JSKK	Shikinejimakit	1.11	233	A	A	16 56 07.5	
	comp=N,22nm,0.4s,comp=E,28nm,1.9s						
JMYK	Miyake Tsubota	1.12	213	P	Pn	16 56 07.6	-0.1
JMYK	Miyake Tsubota	1.12	213	A	A	16 56 07.6	
	comp=N,26nm,0.3s,comp=E,25nm,0.4s						
JIZS	Izushimoda	1.19	257	P	Pn	16 56 08.2	-0.5
JIZS				*e*S	Sn	16 56 23.6	-0.7
JIZS	Izushimoda	1.19	257	A	A	16 56 08.2	
	comp=N,15nm,0.6s,comp=E,12nm,0.9s						
JYT	Yasato	1.23	357	A	A	16 56 09.6	
	comp=N,15nm,0.4s,comp=E,13nm,0.4s						
JMKN	Mikurajimanish	1.25	208	P	Pn	16 56 09.5	+0.1
JMKN				*e*S	Sn	16 56 25.3	-0.3
JMKN	Mikurajimanish	1.25	208	A	A	16 56 09.5	
	comp=N,20nm,1.1s,comp=E,24nm,1.1s						
JKO	Kozu shima	1.25	230	A	A	16 56 09.3	
	comp=N,27nm,4.1s,comp=E,29nm,1.6s						
JFNN	Fujinakano	1.33	279	A	A	16 56 10.0	
	comp=N,12nm,0.4s,comp=E,12nm,0.7s						
JYN	Shimob	1.51	290	⇓P	Pn	16 56 12.8	-0.1
JYN				⇓*e*S	Sn	16 56 31.3	-0.5
JYN	Shimob	1.51	290	A	A	16 56 12.8	
	comp=N,12nm,0.3s,comp=E,19nm,0.7s						
JRY	Ryogami san	1.52	312	*i* P	Pn	16 56 13.2	+0.2
JRY				*e*S	Sn	16 56 32.4	+0.5
JRY	Ryogami san	1.52	312	A	A	16 56 13.2	
	comp=N,5.0nm,0.6s,comp=E,11nm,1.1s						
JAG	Ashikaga	1.57	335	*i* P	Pn	16 56 13.9	+0.2
JAG				*e*S	Sn	16 56 33.5	+0.3
JAG	Ashikaga	1.57	335	A	A	16 56 13.9	
	comp=N,6.0nm,0.5s,comp=E,9.0nm,2.0s						
SHZ3	Shizuoka 3	1.70	273	P	Pn	16 56 15.6	+0.2
SHZ3	Shizuoka 3	1.70	273	A	A	16 56 15.6	
	comp=N,6.0nm,1.9s,comp=E,6.0nm,0.6s						
JSG	Sagara	1.76	260		Pn	16 56 16.4	+0.3
JSG	Sagara	1.76	260	P	Pn	16 56 17.3	+1.2

JSG	Sagara	1.76	260	S	Sn	16 56 40.0	+2.4
JSG	Sagara	1.76	260	A	A	16 56 15.9	
	comp=N,8.0nm,1.1s,comp=E,11nm,0.7s						
JHJ2	Mitsune	1.92	192	Pn	Pn	16 56 18.9	+0.5
JHJ2	Mitsune	1.92	192	P	Pn	16 56 19.0	+0.7
JHJ2	Mitsune	1.92	192	S	Sn	16 56 42.1	+0.5
JHJ2	Mitsune	1.92	192	A	A	16 56 19.0	
	comp=N,11nm,0.5s,comp=E,14nm,0.6s						
JKT	Katashina	1.95	335	A	A	16 56 19.0	
	comp=N,9.0nm,0.4s,comp=E,11nm,1.1s						
JSB	Shiboa	1.98	352	A	A	16 56 19.7	
	comp=N,10.0nm,1.8s,comp=E,9.0nm,1.1s						
JNY	Yasuok	2.02	281	A	A	16 56 19.4	
	comp=N,8.0nm,1.1s,comp=E,8.0nm,0.6s						
JGK	Kuni	2.05	320	A	A	16 56 20.2	
	comp=N,7.0nm,1.0s,comp=E,8.0nm,1.1s						
JNG	Nsakai	2.27	309	A	A	16 56 23.0	
	comp=N,7.0nm,1.5s,comp=E,13nm,1.0s						
MJAR	Matsushiro Arr	2.28	313	Pn	Pn	16 56 23.7	+0.5
MJAR	Matsushiro Arr	2.28	313	P	Pn	16 56 24.1	+0.9
	comp=E,169nm,0.4s,baz=199,slow=20,SNR=435						
MJAR				S	Sn	16 56 51.4	+1.1
	comp=E,592nm,0.5s,baz=97,slow=40,SNR=6.1						
MAJO	Matsushiro	2.29	313	Pn	Pn	16 56 23.7	+0.5
MAJO	Matsushiro	2.29	313	P	Pn	16 56 24.5	+1.3
MAJO	Matsushiro	2.29	313	P	Pn	16 56 23.7	+0.5
MJB9	Matsu-Tunnel	2.29	313	Pn	Pn	16 56 24.3	+1.0
JGF	Kuroka	2.47	285	Pn	Pn	16 56 26.5	+0.8
JGF	Kuroka	2.47	285	P	Pn	16 56 27.4	+1.7
JAOM	Aogashimamukai	2.57	190	A	A	16 56 28.0	
	comp=N,14nm,0.7s,comp=E,20nm,0.8s						
INU	Inuyama	2.70	278	Pn	Pn	16 56 28.7	-0.1
INU	Inuyama	2.70	278	P	Pn	16 56 29.9	+1.1
JMM	Marumori	2.89	8	Pn	Pn	16 56 31.5	+0.1
JMM	Marumori	2.89	8	P	Pn	16 56 32.1	+0.7
JMM	Marumori	2.89	8	S	Sn	16 57 05.3	+0.3
JSD	Sado	3.44	332	Pn	Pn	16 56 38.5	-0.3
JSD	Sado	3.44	332	P	Pn	16 56 39.5	+0.6
JMN	Monobe	5.45	258	Pn	Pn	16 57 07.7	+1.3
JMN	Monobe	5.45	258	P	Pn	16 57 07.5	+1.1
JTM	Tenmabayashi	5.81	6	Pn	Pn	16 57 10.6	-0.6
JTM	Tenmabayashi	5.81	6	P	Pn	16 57 11.5	+0.3
ERM	Erimo	7.36	17	Pn	Pn	16 57 30.8	-1.5
ERM	Erimo	7.36	17	P	Pn	16 57 30.5	-1.8
ERM	Erimo	7.36	17	*ce*P	Pn	16 57 30.7	-1.6
JEM	Erimo	7.36	17	P	Pn	16 57 32.3	-0.1
JNU	Nakatsue	8.03	259	Pn	Pn	16 57 43.1	+1.4
JNU	Nakatsue	8.03	259	P	Pn	16 57 43.8	+2.2
	comp=E,49nm,0.7s,baz=79,slow=5.5,SNR=48						
JNU				LR	LR	17 01 08.2	
	comp=E,127nm,18.7s,baz=92,slow=41						
JNU	Nakatsue	8.03	259	P	Pn	16 57 43.7	+2.1
JCJ	Chichijima	8.05	168	Pn	Pn	16 57 38.3	-3.6
JCJ	Chichijima	8.05	168	P	Pn	16 57 37.3	-4.6
JCJ				S	Sn	16 59 01.9	-10
JCJ	Chichijima	8.05	168	P	Pn	16 57 40.0	-1.9
JTU	Tsushima	8.97	270	P	Pn	16 57 56.3	+1.8
ASAJ	Asahikawa	9.28	10	P	Pn	16 57 56.3	-2.3
	comp=E,11nm,0.4s,baz=229,slow=9.7,SNR=59						
ASAJ				S	Sn	16 59 35.5	-5.8
	comp=E,11nm,0.6s,baz=61,slow=29,SNR=2.2						
ASAJ				LR	LR	17 02 36.0	
	comp=E,114nm,20.8s,baz=182,slow=43						
ASAJ	Asahikawa	9.28	10	P	Pn	16 57 55.5	-3.1
JKA	Kamikawa-asahi	9.28	10	Pn	Pn	16 57 55.5	-3.1
NMR	Nemuro--Hokkai	9.36	25	*e*P	Pn	16 57 56.4	-3.3
NMR				*e*S	Sn	16 59 32.7	-11
GLVR	Golovnino	9.62	23	*e*P	Pn	16 58 01.1	-2.1
GLVR				*e*S	Sn	16 59 41.5	-8.1
GLVR				pmax	pmax		
	comp=Z,36nm,0.2s						
RUSJ	Misakicho	9.86	21	*e*P	Pn	16 58 04.8	-1.8
RUSJ				*e*S	Sn	16 59 47.8	-7.8
YUK	Yuzh-Kuril'sk	9.99	24	*e*P	Pn	16 58 06.2	-2.2
YUK				*e*S	Sn	16 59 49.3	-9.5
YUK				pmax	pmax		
	comp=N,18nm,0.2s						
YUK				pmax	pmax		
	comp=Z,63nm,0.2s						
SHO	Shikotan	10.20	28	*e*P	Pn	16 58 09.0	-2.1
SHO				*e*S	Sn	16 59 54.0	-10
SHO				pmax	pmax		
	comp=Z,13nm,0.3s						
SHO				pmax	pmax		
	comp=N,5.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,2.0nm,0.1s						
KSRS	Korea Array	10.28	287	P	Pn	16 58 15.7	+3.4
	comp=E,8.7nm,0.8s,baz=104,slow=14,SNR=40						
KSRS	Korea Array	10.28	287	*e*P	Pn	16 58 16.1	+3.8
KSRS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KSAR	Wonju Array Be	10.31	287	Pn	Pn	16 58 14.5	+1.8
KSAR	Wonju Array Be	10.31	287	P	Pn	16 58 14.5	+1.8
KS19	Wonju Array Si	10.34	288	Pn	Pn	16 58 13.6	+0.5
MSHR	Mys Shultsa	10.39	319	⇓*e*P	Pn	16 58 17.4	+3.7
MSHR				pmax	pmax		
	comp=Z,13nm,0.8s						
TEY	Ternei	10.41	345	*e*P	Pn	16 58 15.6	+1.6
TJN	Taejon	10.60	281	Pn	Pn	16 58 19.2	+2.6
TJN	Taejon	10.60	281	*ce*P	Pn	16 58 19.6	+2.9
USA0B	Ussuriysk Arra	11.19	328	Pn	Pn	16 58 24.9	+0.3
USA0B	Ussuriysk Arra	11.19	328	⇓*e*P	Pn	16 58 27.9	+3.2
USRK	Ussuriysk Ar.	11.19	328	Pn	Pn	16 58 24.0	-0.6
USRK	Ussuriysk Ar.	11.19	328	P	Pn	16 58 25.9	+1.2
	comp=Z,4.1nm,0.7s,baz=141,slow=12,SNR=13						
USRK				LR	LR	17 02 27.3	
	comp=Z,106nm,21.0s,baz=131,slow=36						
KUR	Kuril'sk	11.74	27	P	Pn	16 58 30.9	-1.3
KUR				S	Sn	17 00 33.3	-8.2
KUR				smax	smax		
	comp=N,87nm,0.5s						
KUR				smax	smax		
	comp=E,64µm,0.5s						
YSS	Yuzhno-Sakhali	12.09	8	Pn	Pn	16 58 34.8	-2.1
YSS	Yuzhno-Sakhali	12.09	8	P	Pn	16 58 35.8	-1.1
YSS	Yuzhno-Sakhali	12.09	8	*d i*P	Pn	16 58 35.1	-1.8
YSS				pmax	pmax		
	comp=Z,19nm,1.0s						
MDJ	Mudanjiang	12.63	323	P	Pn	16 58 44.5	+0.2
MDJ				sP	P	16 59 04.3	+11
MDJ				S	Sn	17 01 06.1	+3.0
MDJ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BNX	BinXian	14.52	321	⇑P	Pn	16 59 09.3	-0.1
BNX				pmax	pmax		
	comp=Z,10.0nm,1.2s						
DL2	Dalian	15.41	290	P	Pn	16 59 21.4	+0.5
DL2				sP	sP	16 59 43.9	-3.3
DL2				*e*S	Sn	17 02 14.6	+3.9
DL2				pmax	pmax		
	comp=Z,34nm,0.6s						
DL2				pmax	pmax		
	comp=Z,260nm,3.8s						
KLR	Kul'dur	15.55	339	P	Pn	16 59 21.1	-1.5
	comp=Z,3.4nm,0.5s,baz=148,slow=14,SNR=13						
KLR				LR	LR	17 05 04.2	
	comp=Z,65nm,19.5s,baz=150,slow=36						
KLR	Kul'dur	15.55	339	*ce*P	P	16 59 24.8	-0.7
KLR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
TYV	Tymovskoe	15.95	5	*e*P	Pn	16 59 25.2	-2.4
TYV				*e*S	Sn	17 02 19.7	-3.8
TYV				pmax	pmax		
	comp=Z,100nm,2.2s						
TYV				pmax	pmax		
	comp=Z,21nm,1.2s						
TYV				smax	smax		
	comp=N,300nm,3.9s						
TYV				smax	smax		
	comp=E,200nm,3.9s						
TYV				smax	smax		
	comp=N,7.0nm,1.8s						
TYV				smax	smax		
	comp=E,9.0nm,1.8s						
HEH	HeiHe	17.90	332	*e*P	P	16 59 48.4	-3.1
HEH				pmax	pmax		
	comp=E,14nm,0.6s						
NJ2	Nanjing	18.11	267	*e*P	Pn	16 59 54.4	0.0
NJ2				pmax	pmax		
	comp=E,10.0nm,0.6s						
NACB	Ninganchiao	19.48	241	P	P	17 00 07.7	-1.3
XLT	XiLinHaoTe	20.64	303	*e*P	P	17 00 19.1	-2.4
XLT				pP	pP	17 00 34.8	-1.3
XLT				pmax	pmax		
	comp=E,8.0nm,0.9s						
XLT				pmax	pmax		
	comp=E,52nm,4.8s						
HNS	HongShan	20.76	284	⇓P	P	17 00 20.6	-2.2
HNS				pmax	pmax		
	comp=E,21nm,0.6s						
ZEA	Zeya	20.86	338	*e*P	P	17 00 24.1	+0.4
ZEA				*e*		17 00 42.2	
ZEA				*e*		17 04 01.2	
ZEA				pmax	pmax		
	comp=N,20nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.7s						
GUMO	Guam	21.72	168	P	P	17 00 31.9	-1.2
GUMO	Guam	21.72	168	P	P	17 00 31.2	-1.9
	comp=Z,36nm,0.8s,baz=163,slow=19,SNR=1.9						
GUMO				LR	LR	17 08 34.1	
	comp=Z,51nm,19.8s,baz=28,slow=35						
	comp=Z,36nm,0.8s						
GUMO	Guam	21.72	168	P	P	17 00 31.9	-1.2
GUMO				pmax	pmax		
	comp=Z,179nm,1.4s						
PETK	Petropavlovsk-	21.90	29	P	P	17 00 37.9	+3.0
	comp=Z,4.7nm,0.9s,baz=204,slow=9.6,SNR=2.8						
PETK				LR	LR	17 09 56.6	
	comp=Z,30nm,20.6s,baz=203,slow=38						
	comp=Z,4.7nm,0.9s						
WHN	Wuhan	22.23	266	P	P	17 00 37.9	-0.7
WHN				pmax	pmax		
	comp=Z,30nm,0.7s						
HHC	Hu-ho-hao-te	23.34	293	*e*P	P	17 00 48.8	-1.1
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						
BTO	Baotou	24.49	292	*e*P	P	17 01 02.1	+1.7
BTO				pP	pP	17 01 19.1	+2.2
BTO				sP	sP	17 01 29.0	+3.8
BTO				PP	PnPn	17 01 42.0	+7.2
BTO				pmax	pmax		
	comp=Z,35nm,0.8s						
BTO				pmax	pmax		
	comp=Z,70nm,6.2s						
MA2	Magadan	25.53	12	P	P	17 01 11.0	+1.5
MA2				IAmb	IAmb	17 01 16.0	
	comp=Z,12nm,0.8s						
MA2	Magadan	25.53	12	LR	LR	17 11 31.3	
	comp=Z,51nm,18.8s,baz=174,slow=37						
MA2	Magadan	25.53	12	⇓*e*P	P	17 01 06.7	-2.8
MA2				pmax	pmax		
	comp=Z,59nm,2.5s						
XAN	Xi'an	25.81	277	⇑P	P	17 01 10.8	-1.6
XAN				pmax	pmax		
	comp=Z,14nm,0.9s						
XAN				pmax	pmax		
	comp=Z,100nm,5.2s						
ENH	Enshi	26.30	268	P	P	17 01 14.2	-2.6
ENH				IAmb	IAmb	17 01 15.8	
	comp=Z,15nm,0.7s						
ULN	Ulaanbaatar	27.80	308	P	P	17 01 29.7	-0.6
ULN	Ulaanbaatar	27.80	308	*ce*P	P	17 01 29.9	-0.4
ULN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
YAK	Yakutsk	27.87	349	P	P	17 01 29.9	-0.5
YAK				IAmb	IAmb	17 01 31.6	
	comp=Z,14nm,0.7s						
YAK	Yakutsk	27.87	349	LR	LR	17 12 16.9	
	comp=Z,57nm,21.2s,baz=114,slow=35						
YAK	Yakutsk	27.87	349	*e*P	P	17 01 28.4	-2.1
YAK				*e**PP	pP	17 01 45.5	-1.6
YAK				*e*		17 02 15.0	
YAK				*e*		17 04 43.4	
YAK				*e*S	S	17 06 05.4	-3.2
YAK				*e**SS	sS	17 06 31.1	-6.0
YAK				*e*		17 12 09.6	
YAK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.6s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,34nm,2.3s						
YAK				pmax	pmax		
	comp=N,20nm,2.0s						
YAK				pmax	pmax		
	comp=E,50nm,4.4s						
YAK				smax	smax		
	comp=N,17nm,1.9s						
YAK				smax	smax		
	comp=E,43nm,2.3s						
H11N2	WAKE ISLAND Hy	27.99	116	T	T	17 30 48.5	
	baz=308,slow=75,SNR=240						
H11N1	WAKE ISLAND Hy	28.00	116	T	T	17 30 51.6	
	baz=308,slow=75,SNR=297						
H11N3	WAKE ISLAND Hy	28.01	116	T	T	17 30 51.4	
	baz=308,slow=75,SNR=275						
SONM	Songino Array	28.23	307	P	P	17 01 33.0	-1.0
SONM	Songino Array	28.23	307	P	P	17 01 34.0	0.0
	comp=E,5.0nm,0.7s,baz=109,slow=8.6,SNR=24						
SONM				LR	LR	17 13 42.1	
	comp=E,108nm,18.3s,baz=91,slow=38						
	comp=E,5.0nm,0.7s						
H11S3	WAKE ISLAND Hy	28.62	118	T	T	17 31 37.6	
	baz=310,slow=75,SNR=186						
H11S1	WAKE ISLAND Hy	28.62	118	T	T	17 31 35.3	
	baz=310,slow=75,SNR=131						
H11S2	WAKE ISLAND Hy	28.63	118	T	T	17 31 38.1	
	baz=310,slow=75,SNR=123						
SEY	Seymchan	28.96	11	LR	LR	17 13 40.6	
	comp=E,54nm,18.4s,baz=192,slow=37						
SEY	Seymchan	28.96	11	⇓*e*P	P	17 01 40.9	+0.8
SEY				pmax	pmax		
	comp=Z,11nm,1.8s						
SHEM	Shemya Is, Ala	29.76	43	LR	LR	17 13 45.0	
	comp=Z,30nm,18.0s,baz=192,slow=36						
ZAK	Zakamensk	30.87	311	*e*P	P	17 01 57.4	+0.1
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
DAV	Davao City (W)	30.92	209	LR	LR	17 13 28.0	
	comp=Z,20nm,21.5s,baz=65,slow=34						
GTA	Gaotai	32.34	290	P	P	17 02 10.5	+0.1
GTA				sP	sP	17 02 37.6	+2.2
GTA				PcP	PcP	17 04 58.0	+1.2
GTA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BILL	Bilibino	36.23	16	⇓*e*P	P	17 02 44.3	+0.8
BILL				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GOMU	GeErMu	36.73	285	P	P	17 02 47.3	-1.4
GOMU				pmax	pmax		
	comp=Z,15nm,1.1s						
UBPT	Khong Chiam	36.87	247	P	P	17 02 48.0	-1.5
TIXI	Tiksi	37.20	354	P	P	17 02 51.7	0.0
TIXI	Tiksi	37.20	354	⇓*e*P	P	17 02 52.0	+0.3
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.6s						
TNCH	TengChong	37.27	266	P	P	17 02 51.3	-1.8
TNCH				pmax	pmax		
	comp=Z,11nm,1.0s						
CMAR	Chiang Mai Arr	40.12	257	P	P	17 03 15.0	-1.8
	comp=Z,2.3nm,0.7s,baz=46,slow=7.6,SNR=21						
CMAR				PcP	PcP	17 05 20.2	0.0
	comp=Z,1.2nm,0.9s,baz=56,slow=1.3,SNR=5.3						
	comp=Z,2.3nm,0.7s						
CMAR	Chiang Mai Arr	40.12	257	*e*P	P	17 03 15.0	-1.8
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
WMQ	Urumqi	40.98	299	*e*P	P	17 03 25.5	+1.8
WMQ				pmax	pmax		
	comp=Z,27nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,77nm,3.7s						
ZAA0	Zalesovo Array	42.64	314	P	P	17 03 35.8	-1.2
ZALV	Zalesovo Beam	42.64	314	P	P	17 03 35.8	-1.2
ZALV	Zalesovo Beam	42.64	314	P	P	17 03 36.8	-0.1
	comp=Z,5.3nm,0.5s,baz=87,slow=6.4,SNR=23						
ZALV				PcP	PcP	17 05 27.9	+0.1
	comp=Z,4.0nm,0.6s,baz=126,slow=2.8,SNR=7.0						
	comp=Z,5.3nm,0.5s						
ZALV	Zalesovo Beam	42.64	314	*e*P	P	17 03 37.2	+0.2
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ZSN	Zaisan	42.64	304	*e*P	P	17 03 37.7	+0.6
ZSN				pmax	pmax		
	comp=Z,13nm,0.6s						
ZSN	Zaisan	42.64	304	*e*P	P	17 03 37.8	+0.6
	comp=Z,12nm,0.6s						
MK31	Makanchi Array	44.45	304	*d i*P	P	17 03 51.7	0.0
MKAR	Makanchi Array	44.45	304	P	P	17 03 51.2	-0.5
MKAR	Makanchi Array	44.45	304	P	P	17 03 51.8	0.0
	comp=Z,5.9nm,0.6s,baz=88,slow=9.2,SNR=64						
MKAR				PcP	PcP	17 05 33.5	-0.7
	comp=Z,1.8nm,0.7s,baz=67,slow=4.1,SNR=3.5						
MKAR				ScP	ScP	17 09 20.6	+0.5
	comp=Z,0.3nm,0.6s,baz=98,slow=2.9,SNR=2.9						
	comp=Z,5.9nm,0.6s						
C16K	Lisburne Hills	44.93	25	P	P	17 03 56.9	+1.8
C16K				IAmb	IAmb	17 04 18.5	
	comp=Z,8.7nm,1.1s						
E18K	Tukpahlearik C	46.41	27	P	P	17 04 09.0	+2.1
KURK	Kurchatov	46.49	310	P	P	17 04 07.5	-0.2
KURK	Kurchatov	46.49	310	*d i*P	P	17 04 07.1	-0.6
KURK				pmax	pmax		
	comp=Z,33nm,0.7s						
C18K	Utukok River	46.50	26	P	P	17 04 09.4	+1.8
C18K				IAmb	IAmb	17 04 32.3	
	comp=Z,5.8nm,0.8s						
KURBB	Kurchatov Arra	46.56	309	P	P	17 04 08.1	-0.2
	comp=Z,19nm,0.6s,baz=85,slow=7.4,SNR=194						
KURBB				PcP	PcP	17 05 41.0	-0.3
	comp=Z,1.5nm,0.7s,baz=84,slow=4.8,SNR=2.6						
	comp=Z,19nm,0.6s						
C19K	Lookout Ridge	47.18	25	P	P	17 04 15.6	+2.7
C19K				IAmb	IAmb	17 04 44.2	
	comp=Z,11nm,1.3s						
UZB	Uzynbulak	47.31	299	*e*P	P	17 04 14.4	0.0
UZB				pmax	pmax		
	comp=Z,7.0nm,0.6s						
UZB	Uzynbulak	47.31	299	*e*P	P	17 04 14.5	0.0
	comp=Z,6.7nm,0.6s						
KPKS	Kokpek	47.49	300	*e*P	P	17 04 15.9	+0.2
KPKS	Kokpek	47.49	300	*e*P	P	17 04 15.9	+0.2
SATY	Saty	47.77	299	*e*P	P	17 04 18.1	+0.1
SATY	Saty	47.77	299	*e*P	P	17 04 18.1	+0.1
PRZ	Przheval'sk	47.90	298	P	P	17 04 19.1	+0.1
PRZ	Przheval'sk	47.90	298	P	P	17 04 19.1	+0.1
PRZ				pmax	pmax		
	comp=Z,36nm,0.8s						
B20K	Meade River	48.22	24	IAmb	IAmb	17 04 51.5	
	comp=Z,5.8nm,0.8s						
MDOK	Medeo	48.72	300	*e*P	P	17 04 25.7	+0.4
MDOK	Medeo	48.72	300	*e*P	P	17 04 25.7	+0.4
AAA	Alma-Ata	48.81	300	*e*P	P	17 04 26.3	+0.5
AAA	Alma-Ata	48.81	300	*e*P	P	17 04 26.3	+0.5
KDJ	Kajisay	48.86	298	P	P	17 04 26.2	-0.2
KDJ				pmax	pmax		
	comp=Z,20nm,0.9s						
B21K	Ikpikpuk River	49.01	25	IAmb	IAmb	17 04 58.0	
	comp=Z,7.3nm,1.1s						
D22K	Ayikyak River	49.59	26	IAmb	IAmb	17 04 58.5	
	comp=Z,4.3nm,0.8s						
BOOM	Boomskoye usch	49.67	299	P	P	17 04 32.7	+0.1
BOOM				IAmb	IAmb	17 04 34.0	
	comp=Z,12nm,0.8s						
BOOM	Boomskoye usch	49.67	299	P	P	17 04 32.7	+0.1
BOOM				pmax	pmax		
	comp=Z,12nm,0.8s						
TKM2	Tokmak 2	49.81	300	P	P	17 04 34.2	+0.5
	SNR=32						
E22K	Anaktuvuk Pass	49.83	27	IAmb	IAmb	17 05 04.2	
	comp=Z,6.3nm,1.1s						
NRN	Naryn	49.89	298	IAmb	IAmb	17 04 35.7	
	comp=Z,8.1nm,0.8s						
KBK	Karagaybulak	50.34	299	P	P	17 04 38.4	+0.7
	SNR=26						
CHMS	Chumysh	50.40	300	P	P	17 04 37.7	-0.2
	SNR=5.7						
BTLS	Baital	50.42	303	*e*P	P	17 04 37.9	0.0
BTLS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BTLS	Baital	50.42	303	*e*P	P	17 04 38.0	0.0
	comp=Z,6.9nm,1.1s						
KSH	Kashi	50.42	295	P	P	17 04 42.3	+4.0
KSH				PcP	PcP	17 05 52.1	-3.6
KSH				pmax	pmax		
	comp=Z,11nm,0.8s						
USP	Ospenovka	50.51	300	P	P	17 04 39.2	+0.4
	SNR=12						
FRU1	Bishkek	50.53	300	P	P	17 04 38.8	-0.2
FRU1				pmax	pmax		
	comp=Z,16nm,0.4s						
E23K	Chandalar	50.64	27	P	P	17 04 41.2	+1.8
E23K				IAmb	IAmb	17 05 11.7	
	comp=Z,6.4nm,1.1s						
AAK	Ala-Archa	50.67	300	P	P	17 04 40.5	+0.4
	SNR=9.1						
AAK	Ala-Archa	50.67	300	P	P	17 04 39.7	-0.4
AAK				IAmb	IAmb	17 04 41.3	
	comp=Z,9.4nm,0.8s						
AAK	Ala-Archa	50.67	300	*d i*P	P	17 04 40.3	+0.2
AAK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NEA2	Nenana	50.76	32	P	P	17 04 42.9	+2.6
E24K	Your Creek	51.07	27	P	P	17 04 45.3	+2.7
C24K	Franklin Bluff	51.08	25	P	P	17 04 44.8	+2.3
C24K				IAmb	IAmb	17 05 13.3	
	comp=Z,6.0nm,0.8s						
EKS2	Erkin-Say	51.18	300	P	P	17 04 44.2	+0.4
	SNR=8.0						
BVAR	Borovoye Array	51.28	313	P	P	17 04 44.0	-0.3
	comp=Z,3.4nm,0.5s,baz=97,slow=6.0,SNR=20						
BVAR				PcP	PcP	17 05 58.1	-0.4
	comp=Z,4.4nm,0.7s,baz=76,slow=4.1,SNR=7.2						
	comp=Z,3.4nm,0.5s						
BRVK	Borovoye	51.34	313	P	P	17 04 43.2	-1.5
BRVK				IAmb	IAmb	17 04 50.4	
	comp=Z,4.7nm,0.8s						
BRVK	Borovoye	51.34	313	*d i*P	P	17 04 44.7	-0.1
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AML	Almayashu	51.37	299	P	P	17 04 46.7	+1.0
	SNR=53						
KNRA	Kununurra	51.57	194	P	P	17 04 46.1	-0.7
ILAR	Eielson Array	51.70	31	P	P	17 04 49.3	+2.0
	comp=Z,1.1nm,0.8s,baz=273,slow=6.5,SNR=11						
	comp=Z,1.1nm,0.8s						
GSI	Gunungsitoli	51.98	239	P	P	17 04 47.5	-2.4
GSI				IAmb	IAmb	17 05 04.7	
	comp=Z,10nm,0.8s						
F25K	Christian Rive	52.14	28	P	P	17 04 53.0	+2.4
BMAR	Burnt Mountain	52.55	28	P	P	17 04 57.0	+3.3
F26K	Sheenjek River	52.71	28	P	P	17 04 57.8	+3.0
F26K				IAmb	IAmb	17 05 27.4	
	comp=Z,6.1nm,1.1s						
DZA	Taraz	52.85	301	*e*P	P	17 04 56.4	+0.2
DZA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
DZA	Taraz	52.85	301	*e*P	P	17 04 56.4	+0.2
	comp=Z,6.1nm,0.7s						
SCRK	Sand Creek	53.01	32	P	P	17 04 58.8	+1.7
SCRK				IAmb	IAmb	17 05 21.7	
	comp=Z,6.3nm,1.3s						
KK31	Karatay Array	53.37	301	P	P	17 05 00.9	+0.9
KK31				IAmb	IAmb	17 05 01.2	
	comp=Z,15nm,0.9s						
KK31	Karatay Array	53.37	301	P	P	17 05 00.9	+0.9
KK31				pmax	pmax		
	comp=Z,15nm,1.0s						
KKAR	Karatay Array	53.37	301	P	P	17 05 00.0	0.0
KKAR	Karatay Array	53.37	301	P	P	17 05 00.0	0.0
DRK	Karamyk	53.52	296	P	P	17 05 01.4	0.0
DRK	Karamyk	53.52	296	P	P	17 05 01.5	0.0
DRK				pmax	pmax		
	comp=Z,15nm,0.7s						
BRLS	Borolday	53.87	301	*e*P	P	17 05 05.1	+1.5
BRLS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRLS	Borolday	53.87	301	*e*P	P	17 05 05.1	+1.5
	comp=Z,4.1nm,0.8s						
IUG	Iuzhnay	53.98	300	*e*P	P	17 05 04.8	+0.2
IUG				pmax	pmax		
	comp=Z,8.0nm,0.7s						
IUG	Iuzhnay	53.98	300	*e*P	P	17 05 04.8	+0.2
	comp=Z,7.7nm,0.7s						
BTK	Batken	54.05	297	P	P	17 05 04.0	-1.1
BTK	Batken	54.05	297	P	P	17 05 04.0	-1.1
BTK				pmax	pmax		
	comp=Z,7.0nm,0.4s						
CHM	Chimkent	54.24	300	*e*P	P	17 05 06.4	+0.1
CHM	Chimkent	54.24	300	*e*P	P	17 05 06.5	+0.1
NIL	Nilore	54.40	289	P	P	17 05 07.8	+0.1
NIL	Nilore	54.40	289	P	P	17 05 07.8	+0.1

NIL				pmax	pmax		
	comp=Z,40nm,0.8s						
WB0	Warramunga Arr	54.75	187	P	P	17 05 09.4	-0.7
GAR	Garm	54.76	296	P	P	17 05 09.8	-0.5
WR8	Warramunga Arr	54.93	187	P	P	17 05 10.8	-0.6
WR8				IAmb	IAmb	17 05 13.0	
	comp=Z,15nm,0.9s						
WRA	Warramunga Arr	54.93	187	P	P	17 05 10.1	-1.3
WRA	Warramunga Arr	54.93	187	P	P	17 05 11.2	-0.3
	comp=Z,9.9nm,0.9s,baz=3.2,slow=7.6,SNR=48						
	comp=Z,9.9nm,0.9s						
SIMJ	Simiganj	55.84	296	P	P	17 05 17.4	-0.7
DZET	Dzherino	55.92	297	P	P	17 05 18.7	+0.1
DZET				pmax	pmax		
	comp=Z,32nm,0.7s						
SVE	Sverdlovsk	56.08	319	eP	P	17 05 19.8	+0.5
SVE				pmax	pmax		
	comp=Z,8.0nm,1.4s						
KBL	Kabul	57.30	292	P	P	17 05 28.1	-0.5
KBL				IAmb	IAmb	17 05 29.0	
	comp=Z,12nm,1.1s						
KBL	Kabul	57.30	292	P	P	17 05 28.1	-0.5
KBL				pmax	pmax		
	comp=Z,12nm,1.1s						
ARTI	Arti	57.39	319		P	17 05 28.2	-0.4
ARTI	Arti	57.39	319	d iP	P	17 05 28.5	-0.1
ARTI				*PP	pP	17 05 46.1	-0.7
ARTI						17 06 19.8	
ARTI						17 07 35.3	
ARTI				S	S	17 13 22.8	+2.9
ARTI				SS	SS	17 17 09.3	-0.5
ARTI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AB31	Akbulak array	58.56	311	P	P	17 05 36.1	-0.8
AB31				IAmb	IAmb	17 05 37.8	
	comp=Z,10nm,0.8s						
ABKAR	Akbulak array	58.56	311	P	P	17 05 36.2	-0.7
AS31	Alice Springs	58.66	187	P	P	17 05 37.8	0.0
	comp=Z,1.5nm,0.5s						
ASAR	Alice Springs	58.66	187	P	P	17 05 37.8	0.0
	comp=Z,2.1nm,0.7s,baz=9.2,slow=7.5,SNR=33						
	comp=Z,2.1nm,0.7s						
MBWA	Marble Bar	59.16	202	P	P	17 05 39.9	-1.4
MBWA				IAmb	IAmb	17 05 43.3	
	comp=Z,4.1nm,0.8s						
WRKA	Warakurna	60.78	192	P	P	17 05 52.2	-0.2
	comp=Z,3.9nm,0.8s						
EIDS	Eidsvold	60.91	169	P	P	17 05 54.5	+1.3
EIDS				IAmb	IAmb	17 05 55.8	
	comp=Z,4.7nm,0.5s						
EIDS	Eidsvold	60.91	169	P	P	17 05 54.5	+1.3
	comp=Z,9.3nm,0.5s						
KIRV	Kirov	61.32	323	d iP	P	17 05 55.9	+0.3
SPB2	Spitsbergen Ar	62.34	349	P	P	17 06 03.7	+1.5
SPB2				IAmb	IAmb	17 06 06.2	
	comp=Z,12nm,0.9s						
SPITS	Spitsbergen Ar	62.34	349	P	P	17 06 03.1	+0.8
	comp=Z,5.8nm,0.8s,baz=91,slow=6.7,SNR=14						
	comp=Z,5.8nm,0.8s						
APA	Apatity	64.16	336	⇓iP	P	17 06 11.9	-2.5
APA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,200nm,11.0s						
BELG	Belogornoye	64.67	317	⇓eP	P	17 06 17.9	0.0
BELG				pmax	pmax		
	comp=Z,3.0nm,1.1s						
RES	Resolute Bay	64.79	14	P	P	17 06 19.1	+0.8
RES				IAmb	IAmb	17 06 31.0	
	comp=Z,6.4nm,1.2s						
RES	Resolute Bay	64.79	14	P	P	17 06 19.2	+0.8
RES				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KLMR	Klimovskoe	64.99	328	eP	P	17 06 18.5	-1.4
KLMR				e*PP	pP	17 06 37.4	-0.9
KLMR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ARCES	ARCESS Array B	65.57	339	P	P	17 06 24.0	+0.5
ARCES				IAmb	IAmb	17 07 00.4	
	comp=Z,9.4nm,1.4s						
ARCES	ARCESS Array B	65.57	339	P	P	17 06 24.1	+0.5
	comp=Z,3.3nm,0.7s,baz=59,slow=6.4,SNR=16						
	comp=Z,3.3nm,0.7s						
FORT	Forrest	66.44	191	P	P	17 06 29.4	-0.1
FORT	Forrest	66.44	191	P	P	17 06 29.8	+0.3
	comp=Z,20nm,0.6s						
STKA	Stephens Creek	66.54	179	P	P	17 06 29.5	-0.6
	comp=Z,1.9nm,0.7s,baz=330,slow=13,SNR=3.6						
	comp=Z,1.9nm,0.7s						
BBOO	Buckleboo	67.57	184	P	P	17 06 36.5	-0.1
BBOO				IAmb	IAmb	17 06 40.8	
	comp=Z,22nm,1.2s						
MORW	Morawa	67.71	203	P	P	17 06 37.0	-0.6
MORW				IAmb	IAmb	17 07 03.8	
	comp=Z,17nm,1.4s						
OBN	Obninsk	69.17	323	⇑eP	P	17 06 46.5	0.0
OBN				e*PP	pP	17 07 07.3	+2.2
OBN				e		17 07 11.7	
OBN				e		17 09 19.9	
OBN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KLBR	Kellerberrin	69.55	200	P	P	17 06 48.3	-0.6
	comp=Z,20nm,1.0s						
AKT	Akhty	69.56	307	eP	P	17 06 48.3	-1.0
AKT				e		17 07 08.7	
AKT				pmax	pmax		
	comp=Z,8.0nm,0.6s						
FIA1	FINESS Array S	70.18	332	P	P	17 06 52.4	-0.1
FINES	FINESS Array B	70.18	332	P	P	17 06 52.4	-0.1
FINES	FINESS Array B	70.18	332	P	P	17 06 52.9	+0.3
	comp=Z,6.5nm,0.7s,baz=72,slow=6.2,SNR=26						
	comp=Z,6.5nm,0.7s						
KBZ	Khabaz	71.53	311	P	P	17 07 02.1	+1.1
	comp=Z,10nm,0.8s,baz=70,slow=2.1,SNR=21						
	comp=Z,10nm,0.8s						
KBZ	Khabaz	71.53	311	d iP	P	17 07 01.7	+0.6
KBZ				pmax	pmax		
	comp=Z,13nm,0.9s						
KIV	Kislovodsk	71.55	311	eP	P	17 07 01.6	+0.3
KIV				pmax	pmax		
	comp=Z,26nm,1.1s						
KIV	Kislovodsk	71.55	311	P	P	17 07 02.7	+1.4
	comp=Z,24nm,1.2s						
VSU	Vasula	71.74	330	⇓eP	P	17 07 01.3	-0.7
VSU				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SUMG	Summit	72.71	360	P	P	17 07 09.8	+1.7
SUMG	Summit	72.71	360	P	P	17 07 09.8	+1.7
SUMG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MNK	Minsk	73.66	326	i P	P	17 07 12.2	-1.4
	comp=E,23nm,0.8s						
MNK				i P	P	17 07 12.2	-1.4
	comp=N,9.0nm,0.7s						
MNK				i P	P	17 07 12.2	-1.4
	comp=Z,18nm,0.8s,baz=52						
MNK				i pP	PcP	17 07 30.9	+1.9
MNK				i PP	PP	17 09 57.8	-0.2
MNK				i PPP	PPP	17 11 43.1	
MNK				i S	S	17 16 39.6	+1.2
MNK				i sS	sS	17 17 12.1	+1.8
MNK				i SS	SS	17 21 26.3	+4.4
MNK				i SSS	SSS	17 24 48.1	
MNK				i LQ	LQ	17 36 17.7	
MNK				i LR	LR	17 42 00.9	
MNK				i LRM	MLR	17 43 41.3	
	comp=E,111nm,16.9s						
MNK				i LRM	MLR	17 43 42.8	
	comp=Z,550nm,16.5s						
MNK				i LRM	MLR	17 43 45.2	
	comp=N,278nm,16.0s						
MNK	Minsk	73.66	326	i P	P	17 07 12.1	-1.4
MNK				i *PP	PcP	17 07 30.9	+1.9
MNK				i		17 09 57.8	
MNK				i PPP	PPP	17 11 43.0	
MNK				i S	S	17 16 39.5	+1.2
MNK				i *SS	sS	17 17 12.0	+1.8
MNK				i SS	SS	17 21 26.3	+4.4
MNK				pmax	pmax		
	comp=E,23nm,0.8s						
MNK				pmax	pmax		
	comp=N,9.0nm,0.7s						
MNK				pmax	pmax		
	comp=Z,18nm,0.8s						
MNK				MLR	MLR		
	comp=E,111nm,17.0s						
MNK				MLR	MLR		
	comp=Z,550nm,17.0s						
MNK				MLR	MLR		
	comp=N,278nm,16.0s						
NACGM	Naroch	73.91	327	eP	P	17 07 15.8	+0.8
	comp=Z,8.0nm,0.9s,baz=51						
SCO	Scoresbysund	74.03	354	P	P	17 07 17.3	+1.9
SCO	Scoresbysund	74.03	354	P	P	17 07 17.3	+1.9
SCO				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ANN	Anapa	74.28	314	eP	P	17 07 14.3	-3.0
ANN				e*PP	PcP	17 07 32.2	+0.4
ANN				e		17 10 03.5	
ANN				eS	S	17 16 43.9	-1.7
ANN				pmax	pmax		
	comp=Z,46nm,1.1s						
AK03	Malin Array Si	75.33	322	P	P	17 07 23.2	0.0
AKASG	Malin Array Be	75.34	322	P	P	17 07 22.8	-0.6
AKASG				IAmb	IAmb	17 07 24.4	
	comp=Z,7.9nm,1.4s						
AKASG	Malin Array Be	75.34	322	P	P	17 07 23.2	-0.1
	comp=Z,4.3nm,0.5s,baz=50,slow=6.0,SNR=42						
	comp=Z,4.3nm,0.5s						
AKASG	Malin Array Be	75.34	322	eP	P	17 07 23.2	-0.1
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.5s						
AKBB	Malin Array Si	75.34	322	P	P	17 07 22.8	-0.6
AKBB				IAmb	IAmb	17 07 24.1	
	comp=Z,9.2nm,0.7s						
AKBB	Malin Array Si	75.34	322	d iP	P	17 07 23.1	-0.2
AKBB				pmax	pmax		
	comp=Z,8.0nm,0.6s						
AKBB	Malin Array Si	75.34	322	P	P	17 07 23.2	-0.1
AK01	Malin Array Si	75.35	322	P	P	17 07 23.3	-0.1
KIEV	Kiev	75.35	322	P	P	17 07 22.6	-0.7
KIEV				IAmb	IAmb	17 07 24.1	
	comp=Z,8.2nm,0.7s						
KIEV	Kiev	75.35	322	P	P	17 07 22.7	-0.7
KIEV				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KIEV	Kiev	75.35	322	P	P	17 07 23.1	-0.3
	comp=Z,56nm,0.9s						
AK23	Malin Array Si	75.35	322	P	P	17 07 23.3	-0.1
NC405	NORSAR Array S	75.48	337	P	P	17 07 24.1	+0.1
NC405				IAmb	IAmb	17 07 25.0	
	comp=Z,4.8nm,0.7s						
HFS	Hagfors	75.56	335	P	P	17 07 24.7	+0.3
	comp=Z,2.4nm,0.6s,baz=95,slow=3.6,SNR=12						
	comp=Z,2.4nm,0.6s						
NB2	NORSAR Subarra	75.70	337	P	P	17 07 25.2	-0.1
	comp=Z,1.5nm,0.6s,baz=42,slow=5.9						
NB2	NORSAR Subarra	75.70	337	P	P	17 07 25.7	+0.4
NB2				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NOA	NORSAR Array B	75.70	337	P	P	17 07 25.5	+0.2
	comp=Z,3.8nm,0.8s,baz=40,slow=5.7,SNR=12						
	comp=Z,3.8nm,0.8s						
MI28	Mi28,Pidlybu	75.97	323	P	P	17 07 27.4	+0.5
MARD	Mardin	76.32	306	P	P	17 07 30.3	+0.9
MARD				IAmb	IAmb	17 07 31.1	
	comp=Z,12nm,0.6s						
RNPP9	Sopachiv	76.54	324	P	P	17 07 30.5	+0.4
LUBAR	Lubar, Ukraine	76.56	322	P	P	17 07 30.4	+0.1
RNPP5	Staryi Chortor	76.66	324	P	P	17 07 31.3	+0.5
SORM	Soroca	77.38	320	P	P	17 07 34.7	-0.2
	comp=Z,9.5nm,0.9s						
KMPD	K-Podol'skiy	78.08	322	P	P	17 07 39.0	+0.2
ILGA	Ilgaz	78.67	312	P	P	17 07 43.4	+0.9
BURAR	Bucovina Array	79.33	321	P	P	17 07 45.7	-0.1
BURAR	Bucovina Array	79.33	321	P	P	17 07 45.7	-0.1
BURAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BR131	Keskin Array S	79.51	311	IAmb	IAmb	17 07 50.9	
	comp=Z,7.1nm,0.8s						
BRTR	Keskin Array B	79.51	311	P	P	17 07 47.5	+0.4
	comp=Z,3.5nm,0.7s,baz=97,slow=4.3,SNR=17						
	comp=Z,3.5nm,0.7s						
BRTR	Keskin Array B	79.51	311	eP	P	17 07 47.9	+0.9
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BR106	Keskin Array S	79.52	311	P	P	17 07 47.8	+0.8
	comp=Z,36nmcomp=Z,3.4nm,0.8s						
BR104	Keskin Array S	79.52	311	P	P	17 07 47.8	+0.8
	comp=Z,59nmcomp=Z,7.7nm,0.9s						
BR105	Keskin Array S	79.53	311	P	P	17 07 47.9	+0.8
	comp=Z,45nmcomp=Z,5.4nm,0.9s						
PDAR	Pinedale Array	79.75	45	P	P	17 07 50.0	+1.7
	comp=Z,0.4nm,0.7s,baz=295,slow=4.4,SNR=2.8						
	comp=Z,0.4nm,0.7s						
KOLS	Kolonicke sedl	79.92	324	eP	P	17 07 49.9	+1.0
KOLS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KOLS	Kolonicke sedl	79.92	324	eP	P	17 07 49.9	+1.0
STHS	Stebnicka Huta	80.09	325	eP	P	17 07 50.4	+0.6
STHS	Stebnicka Huta	80.09	325	eP	P	17 07 50.4	+0.6
OJC	Ojcow	80.21	326	eP	P	17 07 51.0	+0.6
OJC	Ojcow	80.21	326	P	P	17 07 51.2	+0.8
OJC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
OJC	Ojcow	80.21	326	P	P	17 07 51.1	+0.6
	comp=Z,8.2nm,0.9s						
NIE	Niedzica	80.53	325	eP	P	17 07 53.3	+1.0
NIE	Niedzica	80.53	325	P	P	17 07 53.4	+1.2
NIE				pmax	pmax		
	comp=Z,3.0nm,1.1s						
NIE	Niedzica	80.53	325	P	P	17 07 53.2	+1.0
	comp=Z,2.7nm,1.1s						
RAYN	Ar Rayn	80.57	292	P	P	17 07 52.0	-0.9
RAYN				IAmb	IAmb	17 07 53.9	
	comp=Z,8.8nm,0.8s						
RAYN	Ar Rayn	80.57	292	P	P	17 07 52.0	-0.9
RAYN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LANS	Liptovska Anna	81.11	325	eP	P	17 07 56.8	+1.5
LANS				pmax	pmax		
	comp=Z,3.0nm,0.6s						
LANS	Liptovska Anna	81.11	325	eP	P	17 07 56.8	+1.5
KSP	Ksiaz	81.34	328	eP	P	17 07 57.2	+0.8
KSP	Ksiaz	81.34	328	P	P	17 07 57.3	+0.8
KSP				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KSP	Ksiaz	81.34	328	P	P	17 07 57.2	+0.8
	comp=Z,6.2nm,1.0s						
DPC	Dobruska-Polom	81.68	328	P	P	17 07 58.8	+0.5
DPC				pmax	pmax		
	comp=Z,4.0nm,1.4s						
DPC	Dobruska-Polom	81.68	328	P	P	17 07 59.3	+1.0
	comp=Z,4.5nm,1.4s						
VYHS	Vyhne	81.87	325	eP	P	17 08 00.5	+1.2
VYHS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
VYHS	Vyhne	81.87	325	eP	P	17 08 00.5	+1.2
VYHS				e		18 07 32.0	
BRG	Berggiesshubel	82.33	329	eP	P	17 08 02.1	+0.5
BRG				Amp		17 08 02.9	
	comp=Z,2.4nm,0.9s						
MMAI	Mount Meron Ar	82.39	305	P	P	17 08 03.0	+0.7
	comp=Z,1.6nm,0.5s,baz=9.5,slow=2.0,SNR=4.6						
	comp=Z,1.6nm,0.5s						
CLL	Collm	82.39	330	i P	P	17 08 02.2	+0.3
CLL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CLL	Collm	82.39	330	P	P	17 08 02.1	+0.2
	comp=Z,8.3nm,1.1s						
CLL	Collm	82.39	330	i P	P	17 08 02.2	+0.3
	comp=Z,6.0nm,0.9s						
CSS	Mathiatis	82.58	308	P	P	17 08 03.9	+0.6
CSS				IAmb	IAmb	17 08 09.9	
	comp=Z,10nm,0.9s						
PV13	Radium Mtn., P	83.08	48	P	P	17 08 07.5	+1.5
MPLH	Magyarpolny	83.43	325	P	P	17 08 08.1	+0.7
	comp=Z,11nm,1.0s						
MORH	Mrgy, Hungar	83.58	323	P	P	17 08 08.5	+0.4
	comp=Z,2.8nm,1.0s						
RONA	Rosalia, Austr	83.62	326	i PcP	P	17 08 09.5	+1.1
	comp=Z,3.9nm,0.7s						
CONA	Conrad Observa	83.66	326	i PcP	P	17 08 09.4	+0.7
	comp=Z,5.4nm,1.1s						
KHC	Kasperske Hory	83.79	328	d eP	P	17 08 09.8	+0.6
KHC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KHC	Kasperske Hory	83.79	328	P	P	17 08 10.0	+0.8
	comp=Z,5.5nm,1.0s						
GERES	GERESS Array B	83.95	328	P	P	17 08 10.6	+0.5
	comp=Z,2.3nm,0.8s,baz=44,slow=4.4,SNR=17						
	comp=Z,2.3nm,0.8s						
AKAS	Kas	84.17	311	P	P	17 08 11.3	-0.2
ARSA	Arzberg	84.31	326	i PcP	P	17 08 12.0	+0.1
	comp=Z,1.5nm,0.5s						
EKA	Eskdalemuir Ar	84.73	340	P	P	17 08 14.0	+0.2
	comp=Z,0.7nm,0.5s,baz=35,slow=4.8,SNR=6.1						
	comp=Z,0.7nm,0.5s						
BIOA	Bad Ischl, Aus	84.84	327	eP	P	17 08 14.1	-0.5
	comp=Z,2.4nm,0.4s						
SOKA	Soboth	84.96	326	i PcP	P	17 08 15.8	+0.6
	comp=Z,9.2nm,1.0s						
OBKA	Obir	85.31	326	ePcP	P	17 08 17.3	+0.3
	comp=Z,3.5nm,0.8s						
LESA	Schwarzleotal	85.47	327	i PcP	P	17 08 17.9	+0.1
	comp=Z,4.5nm,1.2s						
MYKA	Terra Mystica	85.64	326	ePcP	P	17 08 18.2	-0.5
	comp=Z,2.9nm,0.7s						
PRED	Cave del Predi	85.81	326	IAmb	IAmb	17 08 20.8	
	comp=Z,3.5nm,0.8s						
WTTA	Wattenberg	86.05	328	eP	P	17 08 19.9	-0.9
	comp=Z,2.9nm,0.8s						
ABTA	Abfaltersbach	86.06	327	i P	P	17 08 18.7	-2.0
	comp=Z,3.3nm,1.0s						
MOTA	Moosalm	86.22	328	i P	P	17 08 20.7	-1.0
	comp=Z,2.3nm,0.7s						
RETA	Reutte	86.26	328	ePcP	P	17 08 22.5	+0.8
	comp=Z,1.4nm,0.4s						
SQTA	Sankt Quirin	86.27	328	ePcP	P	17 08 22.1	+0.3
	comp=Z,1.4nm,0.5s						
FETA	Feichten	86.63	328	i PcP	P	17 08 24.0	+0.3
	comp=Z,3.7nm,1.0s						
DAVA	Damuels	86.79	329	i PcP	P	17 08 25.5	+1.1
	comp=Z,5.0nm,1.2s						
FUORN	Ofenpass-Fuorn	87.14	328	IAmb	IAmb	17 08 27.6	
	comp=Z,3.5nm,0.6s						
FDMO	Fiordimonte	88.60	324	P	P	17 08 32.6	-0.4
NRCA	Norcia	88.74	324	IAmb	IAmb	17 08 35.0	
	comp=Z,6.6nm,0.7s						
CEL	Celeste	90.74	319	P	P	17 08 42.9	-0.2
TXAR	Lajitas Array	92.09	52	P	P	17 08 51.6	+2.0
	comp=Z,0.3nm,0.5s,baz=243,slow=4.1,SNR=4.0						
	comp=Z,0.3nm,0.5s						
QSPA	South Pole Qui	124.75	180	PKP	PKPdf	17 14 38.1	-0.3
	comp=Z,0.9nm,0.6s,baz=217,slow=0.5,SNR=11						
SNAA	Sanae	138.54	197	PKPdf	PKPdf	17 15 04.4	+0.1
SNAA	Sanae	138.54	197	PKIKP	PKPdf	17 15 04.4	+0.1
LPAZ	La Paz	148.49	61	PKPbc	PKPbc	17 15 28.7	+1.0
LPAZ	La Paz	148.49	61	PKPbc	PKiKP	17 15 29.3	+0.1
	comp=Z,3.0nm,0.6s,baz=4.7,slow=3.0,SNR=12						
PB16	IPOC Station P	148.79	66	PKPbc	PKiKP	17 15 29.6	-0.1
PB11	IPOC Station P	149.53	68	PKPbc	PKiKP	17 15 30.9	+0.2
HMBC	Humberstone	149.65	69	PKPbc	PKiKP	17 15 31.3	+0.4

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*IDC **19** 16:55:51.8±1.3, 40°.38N×29°.30W, h0^{km}, mb3.5/5, mbtmp3.4/6, MS3.9/3, Error ellipse: s-maj=48.9km s-min=21.9km az=6.0*

*SVSA **19** 16:55:52.7±1.2, 40°.67N×29°.48W, h10^{km}, ML3.5(INMG), Error ellipse: s-maj=8.1km s-min=4.2km az=82.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Crista Mdia Atlntico N*

*INMG **19** 16:55:52.7±1.2, 40°.67N×29°.48W, h10^{km}, ML3.5, Error ellipse: s-maj=8.1km s-min=4.2km az=82.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Crista Mdia Atlntico N*

*GCMT **19** 16:55:57.0±0.3, 40°.84N±0°.05×29°.15W±0°.03, h15^{km}±1^{km}, MW4.7/78, Moment Tensor Solution. s11,c12; s78,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.37±.13; M$_{\theta\theta}$0.13±.08; M$_{\phi\phi}$1.24±.09; M$_{r\theta}$0.60±.24; M$_{\theta\phi}$0.15±.05; M$_{\phi r}$-0.70±.16; Best double couple: M$_0$1.58300×10^{16} NP1:φ$_s$203.00000°,δ35.00000°,λ-58.00000°. NP2: φ$_s$346.00000°,δ61.00000°,λ-110.00000°. Principal axes: T 1.4150, Plg14.0000°, Azm90.0000°; N 0.3350, Plg18.0000°, Azm356.0000°; P -1.7510, Plg67.0000°, Azm216.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 19 16:55:53.4±0.8**, 40°.37N**±0°.07×**29°.22W**±0°.07**, h10^{km}, n60, σ0^{s}.69**/100**, mb3.7**/5**, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRBC	Serra Branca	1.61	145	eP	Pn	16 56 19.6	-2.3
SRBC				eS	Sn	16 56 41.2	-1.5
SRBC				i IAML		16 56 44.9	
SRBC				i IAML		16 56 52.9	
SRBC				i IAML		16 56 56.7	
SRBC	Serra Branca	1.61	145	eP	Pn	16 56 19.6	-2.3
SRBC				eS	Sn	16 56 41.2	-1.5
SRBC				i IAML		16 56 44.9	
SRBC				i IAML		16 56 52.9	
SRBC				i IAML		16 56 56.7	
SRBC	Serra Branca	1.61	145	eP	Pn	16 56 19.6	-2.3
SRBC				eS	Sn	16 56 41.2	-1.5
SRBC				i AML	AML	16 56 44.9	
SRBC				i AML	AML	16 56 52.9	
SRBC				i AML	AML	16 56 56.7	
PCED	Cedros	1.78	167	eP	Pn	16 56 23.2	-1.0
PCED				eS	Sn	16 56 46.8	-0.2
PCED				i IAML		16 56 48.7	
PCED				i IAML		16 56 49.5	
PCED				i IAML		16 56 50.0	
PCED	Cedros	1.78	167	eP	Pn	16 56 23.2	-1.0
PCED				eS	Sn	16 56 46.8	-0.2
PCED				i IAML		16 56 48.7	
PCED				i IAML		16 56 49.5	
PCED				i IAML		16 56 50.0	
PCED	Cedros	1.78	167	eP	Pn	16 56 23.2	-1.0
PCED				eS	Sn	16 56 46.8	-0.2
PCED				i AML	AML	16 56 48.7	
PCED				i AML	AML	16 56 49.5	
PCED				i AML	AML	16 56 50.0	
ROSA	Rosais	1.81	155	eP	Pn	16 56 24.1	-0.5
ROSA				eS	Sn	16 56 48.0	+0.4
ROSA				i IAML		16 56 49.6	
ROSA				i IAML		16 56 51.1	
ROSA				i IAML		16 56 54.6	
ROSA	Rosais	1.81	155	eP	Pn	16 56 24.1	-0.5
ROSA				eS	Sn	16 56 48.0	+0.4
ROSA				i IAML		16 56 49.6	
ROSA				i IAML		16 56 51.1	
ROSA				i IAML		16 56 54.6	
ROSA	Rosais	1.81	155	eP	Pn	16 56 24.1	-0.5
ROSA				eS	Sn	16 56 48.0	+0.4
ROSA				i AML	AML	16 56 49.6	
ROSA				i AML	AML	16 56 51.1	
ROSA				i AML	AML	16 56 54.6	
CALA	Caldeira	1.83	167	eP	Pn	16 56 24.4	-0.5
CALA				eS	Sn	16 56 48.1	-0.1
CALA				i IAML		16 56 52.6	
CALA				i IAML		16 56 53.6	
CALA				i IAML		16 56 53.8	
CALA	Caldeira	1.83	167	eP	Pn	16 56 24.4	-0.5
CALA				eS	Sn	16 56 48.1	-0.1
CALA				i IAML		16 56 52.6	
CALA				i IAML		16 56 53.6	
CALA				i IAML		16 56 53.8	
CALA	Caldeira	1.83	167	eP	Pn	16 56 24.4	-0.5
CALA				eS	Sn	16 56 48.1	-0.1
CALA				i AML	AML	16 56 52.6	
CALA				i AML	AML	16 56 53.6	
CALA				i AML	AML	16 56 53.8	
PFCBR	Castelo Branco	1.89	168	eP	Pn	16 56 25.4	-0.2
PFCBR				eS	Sn	16 56 49.5	+0.1
PFCBR				i IAML		16 56 52.0	
PFCBR				i IAML		16 56 52.2	
PFCBR				i IAML		16 56 57.3	
PFCBR	Castelo Branco	1.89	168	eP	Pn	16 56 25.4	-0.2
PFCBR				eS	Sn	16 56 49.5	+0.1
PFCBR				i IAML		16 56 52.0	
PFCBR				i IAML		16 56 52.2	
PFCBR				i IAML		16 56 57.3	
PFCBR	Castelo Branco	1.89	168	eP	Pn	16 56 25.4	-0.2
PFCBR				eS	Sn	16 56 49.5	+0.1
PFCBR				i AML	AML	16 56 52.0	
PFCBR				i AML	AML	16 56 52.2	
PFCBR				i AML	AML	16 56 57.3	
HOR	Horta	1.90	166	eS	Sn	16 56 49.7	0.0
HOR				i IAML		16 56 51.7	
HOR				i IAML		16 56 52.0	

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HOR                                i IAML        16 56 54.8
HOR    Horta               1.90 166 eS     Sn     16 56 49.7  0.0
HOR                                i IAML        16 56 51.7
HOR                                i IAML        16 56 52.0
HOR                                i IAML        16 56 54.8
HOR    Horta               1.90 166 eS     Sn     16 56 49.7  0.0
HOR                                i AML  AML    16 56 51.7
HOR                                i AML  AML    16 56 52.0
HOR                                i AML  AML    16 56 54.8
PMAN   Manadas             1.94 153 eP     Pn     16 56 26.1 -0.2
PMAN                               eS     Sn     16 56 51.5 +0.7
PMAN                               i IAML        16 56 54.1
PMAN                               i IAML        16 56 54.1
PMAN                               i IAML        16 56 56.1
PMAN   Manadas             1.94 153 eP     Pn     16 56 26.1 -0.2
PMAN                               eS     Sn     16 56 51.5 +0.7
PMAN                               i IAML        16 56 54.1
PMAN                               i IAML        16 56 54.1
PMAN                               i IAML        16 56 56.1
PMAN   Manadas             1.94 153 eP     Pn     16 56 26.1 -0.2
PMAN                               eS     Sn     16 56 51.5 +0.7
PMAN                               i AML  AML    16 56 54.1
PMAN                               i AML  AML    16 56 54.1
PMAN                               i AML  AML    16 56 56.1
PICO   Pico                1.96 162 eP     Pn     16 56 26.8  0.0
PICO                               eS     Sn     16 56 51.9 +0.4
PICO                               i IAML        16 56 57.6
PICO                               i IAML        16 56 59.1
PICO                               i IAML        16 56 59.1
PICO   Pico                1.96 162 eP     Pn     16 56 26.8  0.0
PICO                               eS     Sn     16 56 51.9 +0.4
PICO                               i IAML        16 56 57.6
PICO                               i IAML        16 56 59.1
PICO                               i IAML        16 56 59.1
PICO   Pico                1.96 162 eP     Pn     16 56 26.8  0.0
PICO                               eS     Sn     16 56 51.9 +0.4
PICO                               i AML  AML    16 56 57.6
PICO                               i AML  AML    16 56 59.1
PICO                               i AML  AML    16 56 59.1
PCAN   Candelaria          1.98 163 eP     Pn     16 56 27.0  0.0
PCAN                               eS     Sn     16 56 52.0 +0.1
PCAN                               i IAML        16 56 57.8
PCAN                               i IAML        16 56 58.1
PCAN                               i IAML        16 56 59.8
PCAN   Candelaria          1.98 163 eP     Pn     16 56 27.0  0.0
PCAN                               eS     Sn     16 56 52.0 +0.1
PCAN                               i IAML        16 56 57.8
PCAN                               i IAML        16 56 58.1
PCAN                               i IAML        16 56 59.8
PCAN   Candelaria          1.98 163 eP     Pn     16 56 27.0  0.0
PCAN                               eS     Sn     16 56 52.0 +0.1
PCAN                               i AML  AML    16 56 57.8
PCAN                               i AML  AML    16 56 58.1
PCAN                               i AML  AML    16 56 59.8
PPNO   Prainha do Nor      2.03 158 eP     Pn     16 56 27.6 -0.1
PPNO                               eS     Sn     16 56 53.1 -0.1
PPNO                               i IAML        16 57 02.8
PPNO                               i IAML        16 57 08.3
PPNO   Prainha do Nor      2.03 158 eP     Pn     16 56 27.6 -0.1
PPNO                               eS     Sn     16 56 53.1 -0.1
PPNO                               i IAML        16 57 02.8
PPNO                               i IAML        16 57 08.3
PPNO   Prainha do Nor      2.03 158 eP     Pn     16 56 27.6 -0.1
PPNO                               eS     Sn     16 56 53.1 -0.1
PPNO                               i AML  AML    16 57 02.8
PPNO                               i AML  AML    16 57 08.3
PID    Ribeirinha          2.10 156 eP     Pn     16 56 28.8 +0.2
PID                                eS     Sn     16 56 55.5 +0.7
PID                                i IAML        16 56 58.6
PID                                i IAML        16 56 59.7
PID                                i IAML        16 57 14.0
PID    Ribeirinha          2.10 156 eP     Pn     16 56 28.8 +0.2
PID                                eS     Sn     16 56 55.5 +0.7
PID                                i IAML        16 56 58.6
PID                                i IAML        16 56 59.7
PID                                i IAML        16 57 14.0
PID    Ribeirinha          2.10 156 eP     Pn     16 56 28.8 +0.2
PID                                eS     Sn     16 56 55.5 +0.7
PID                                i AML  AML    16 56 58.6
PID                                i AML  AML    16 56 59.7
PID                                i AML  AML    16 57 14.0
PSBA   Serra de Santa      2.17 137 eP     Pn     16 56 28.6 -0.9
PSBA                               eS     Sn     16 56 57.5 +1.1
PSBA                               i IAML        16 56 57.6
PSBA                               i IAML        16 57 01.6
PSBA                               i IAML        16 57 03.6
PSBA   Serra de Santa      2.17 137 eP     Pn     16 56 28.6 -0.9
PSBA                               eS     Sn     16 56 57.5 +1.1
PSBA                               i IAML        16 56 57.6
PSBA                               i IAML        16 57 01.6
PSBA                               i IAML        16 57 03.6
PSBA   Serra de Santa      2.17 137 eP     Pn     16 56 28.6 -0.9
PSBA                               eS     Sn     16 56 57.5 +1.1
PSBA                               i AML  AML    16 56 57.6
PSBA                               i AML  AML    16 57 01.6
PSBA                               i AML  AML    16 57 03.6
PAGU   Agualva, Azore      2.24 135 eP     Pn     16 56 29.9 -0.6
PAGU                               eS     Sn     16 56 57.9 -0.4
PAGU                               i IAML        16 56 59.0
PAGU                               i IAML        16 56 59.9
PAGU                               i IAML        16 57 02.9
PAGU   Agualva, Azore      2.24 135 eP     Pn     16 56 29.9 -0.6
PAGU                               eS     Sn     16 56 57.9 -0.4
PAGU                               i IAML        16 56 59.0
PAGU                               i IAML        16 56 59.9
PAGU                               i IAML        16 57 02.9
PAGU   Agualva, Azore      2.24 135 eP     Pn     16 56 29.9 -0.6
PAGU                               eS     Sn     16 56 57.9 -0.4
PAGU                               i AML  AML    16 56 59.0
PAGU                               i AML  AML    16 56 59.9
PAGU                               i AML  AML    16 57 02.9
PSCM   Serra do Cume       2.33 135 eP     Pn     16 56 31.2 -0.5
PSCM                               eS     Sn     16 57 00.7 +0.3
PSCM                               i IAML        16 57 07.6
PSCM                               i IAML        16 57 12.2
PSCM                               i IAML        16 57 13.7
PSCM   Serra do Cume       2.33 135 eP     Pn     16 56 31.2 -0.5
PSCM                               eS     Sn     16 57 00.7 +0.3
PSCM                               i IAML        16 57 07.6
PSCM                               i IAML        16 57 12.2
PSCM                               i IAML        16 57 13.7
PSCM   Serra do Cume       2.33 135 eP     Pn     16 56 31.2 -0.5
PSCM                               eS     Sn     16 57 00.7 +0.3
PSCM                               i AML  AML    16 57 07.6
PSCM                               i AML  AML    16 57 12.2
PSCM                               i AML  AML    16 57 13.7
PSET   Sete Cidades        3.72 132 eP     Pn     16 56 50.9  0.0
PSET   Sete Cidades        3.72 132 eP     Pn     16 56 50.9  0.0
CMLA   Cha da Macela       3.88 131 eP     Pn     16 56 53.4 +0.4
CMLA                               eS     Sn     16 57 38.2 -0.3
CMLA                               i IAML        16 57 42.2
CMLA                               i IAML        16 57 44.8
CMLA                               i IAML        16 57 44.8
CMLA   Cha da Macela       3.88 131 eP     Pn     16 56 53.4 +0.4
CMLA                               eS     Sn     16 57 38.2 -0.3
CMLA                               i IAML        16 57 42.2
CMLA                               i IAML        16 57 44.8
CMLA                               i IAML        16 57 44.8
CMLA   Cha da Macela       3.88 131 eP     Pn     16 56 53.4 +0.4
CMLA                               eS     Sn     16 57 38.2 -0.3
CMLA                               i AML  AML    16 57 42.2
CMLA                               i AML  AML    16 57 44.8
CMLA                               i AML  AML    16 57 44.8
BART   Pico Bartolome      4.08 128 eP     Pn     16 56 55.6 -0.2
BART   Pico Bartolome      4.08 128 eP     Pn     16 56 55.6 -0.2
PSMN   Pico do Norte,      4.67 135 eP     Pn     16 57 03.9  0.0
PSMN   Pico do Norte,      4.67 135 eP     Pn     16 57 03.9  0.0
ESDC   Sonseca Array      19.34  84  P     P      17 00 19.3 +0.5
       0.6nm,0.8s,baz=287,slow=11,SNR=5.3
ESDC                                LR     LR     17 06 43.0
       comp=Z,455nm,18.5s,baz=279,slow=34
MDT    Midelt             21.11 103 LR     LR     17 07 08.6
       comp=Z,284nm,21.4s,baz=344,slow=32
BORG   Borgarnes          24.85   8 LR     LR     17 08 09.4
       comp=Z,204nm,20.6s,baz=184,slow=30
TORD   Torodi Ar. Bea     38.34 126  P     P      17 03 14.9 +0.4
       132nm,0.4s,baz=321,slow=9.2,SNR=1.4
AKASG  Malin Array Be     41.22  55  P     P      17 03 36.9 -1.2
       0.2nm,0.3s,baz=274,slow=9.0,SNR=4.4
       0.2nm,0.3s
BRTR   Keskin Array B     47.19  69  P     P      17 04 27.1 +0.7
       0.6nm,0.8s,baz=298,slow=6.4,SNR=3.8
       0.6nm,0.8s
PDAR   Pinedale Array     57.93 301  P     P      17 05 45.5 -0.4
       0.6nm,0.8s,baz=28,slow=6.8,SNR=4.6
       0.6nm,0.8s
TXAR   Lajitas Array      60.44 285  P     P      17 06 02.6 -0.8
       0.4nm,0.9s,baz=60,slow=7.5,SNR=6.1
       0.4nm,0.9s
KURBB  Kurchatov Arra     69.57  40  P     P      17 07 03.9 +1.6
       0.6nm,0.8s,baz=305,slow=7.0,SNR=2.7
       0.6nm,0.8s
```

IDC 19 16:56:20.7±2.1**,30°.90S**×**177°.26W,h0^{km},mb3.5**/3**, mbtmp3.5**/3**,Error ellipse: s-maj=60.4km s-min=42.3km az=40.0,Kermadec Islands**

```
Code   Station Name       Δ°   AZ°    Phase ID         Time      Res
                                    Op     ISC        h  m  s    ISC
ASAR   Alice Springs      43.72 267  P     P      17 04 27.9 -0.1
       0.3nm,0.6s,baz=109,slow=7.5,SNR=6.8
       0.3nm,0.6s
WRA    Warramunga Arr     44.75 272  P     P      17 04 36.0 -0.2
       0.3nm,0.4s,baz=111,slow=8.0,SNR=7.5
       0.3nm,0.4s
QSPA   South Pole Qui     59.21 180  P     P      17 06 23.5  0.0
       0.9nm,1.1s,baz=76,slow=4.2,SNR=1.2
       0.9nm,1.1s
FINES  FINESS Array B    145.84 340 PKPbc  PKPdf  17 16 00.4 -0.3
       0.4nm,0.4s,baz=64,slow=3.2,SNR=6.6
```

JMA 19 16:56:27.4±0.1**,38°.7N**±0°.3×**139°.4E**±0°.3**,h10^{km}**±1^{km}**, MV2.4**/19**,OFF N NIIGATA PREF,Near west coast of eastern Honshu**

```
Code   Station Name       Δ°   AZ°    Phase ID         Time      Res
                                    Op     ISC        h  m  s    ISC
JAW    Awa shima           0.23 214  P     Pg     16 56 32.2 +0.1
JAW                                  S     Sg     16 56 36.1 +0.8
JYA    Atsumi              0.24 103  P     Pg     16 56 32.5  0.0
JYA                                  S     Sg     16 56 36.4 +0.6
JTB    Tobi-shima          0.56  12  P     Pg     16 56 38.3 -0.1
JYK    Kaneyama            0.79  70  P     Pg     16 56 42.3 -0.3
```

---

*IDC **19** 17:09:25.9±0.6,40°.54N×29°.40W,h0^{km},mb3.9/22, mbtmp3.9/23,ML3.9/1,MS4.3/18,Error ellipse: s-maj=18.0km s-min=12.6km az=162.0*

*NEIC **19** 17:09:27.2±2.0,40°.51N±0°.09×29°.23W±0°.08,h10^{km}±1^{km}, mb4.6/117,Error ellipse: s-maj=16.1km s-min=9.3km az=164.0*

*BGR **19** 17:09:27.1,40°.54N×30°.45W,h33^{km},mb4.4,Ms4.3*

*IGIL **19** 17:09:27.8,40°.28N×29°.35W,h10^{km},Mb4.2*

*INMG **19** 17:09:28.4±1.4,40°.62N×29°.32W,h10^{km},ML4.4,Error ellipse: s-maj=7.4km s-min=4.5km az=80.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Crista Mdia Atlntico N*

*SVSA **19** 17:09:28.4±1.4,40°.62N×29°.32W,h10^{km},ML4.4(INMG), Error ellipse: s-maj=7.4km s-min=4.5km az=80.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Crista Mdia Atlntico N*

*GCMT **19** 17:09:30.2±0.2,40°.81N±0°.02×29°.21W±0°.02,h12^{km}, MW5.0/92,Moment Tensor Solution. s35,c45; s92,c148; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.82±.10; $M_{\theta\theta}$0.49±.11; $M_{\phi\phi}$3.34±.08; $M_{r\theta}$3.04±.41; $M_{\theta\phi}$0.74±.09; $M_{\phi r}$-0.52±.30; Best double couple: $M_0$4.49900×10^{16} NP1:ϕ_s350.00000°,δ49.00000°,λ-128.00000°. NP2: ϕ_s221.00000°,δ54.00000°,λ-55.00000°. Principal axes: T 3.5330, Plg3.0000°, Azm286.0000°; N 1.9410, Plg28.0000°, Azm18.0000°; P -5.4650, Plg62.0000°, Azm191.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 17:09:27.3±0.4**,40°.47N**±0°.04×**29°.25W**±0°.03**,h10^{km},n226,** σ**2^{s}.38**/246**,mb4.5**/79**,MS4.1**/17**,6D,Azores Islands region**

```
Code   Station Name       Δ°   AZ°    Phase ID         Time      Res
                                    Op     ISC        h  m  s    ISC
SRBC   Serra Branca        1.71 146 eP     Pn     17 09 53.0 -4.1
SRBC                               eS     Sn     17 10 14.1 -5.0
SRBC                               i IAML        17 10 17.3
SRBC                               i IAML        17 10 19.1
SRBC                               i IAML        17 10 21.9
SRBC   Serra Branca        1.71 146 eP     Pn     17 09 53.0 -4.1
SRBC                               eS     Sn     17 10 14.1 -5.0
SRBC                               i IAML        17 10 17.3
SRBC                               i IAML        17 10 19.1
SRBC                               i IAML        17 10 21.9
SRBC   Serra Branca        1.71 146 eP     Pn     17 09 53.0 -4.1
SRBC                               eS     Sn     17 10 14.1 -5.0
SRBC                               i AML  AML    17 10 17.3
SRBC                               i AML  AML    17 10 19.1
SRBC                               i AML  AML    17 10 21.9
PGRA   Graciosa            1.74 145 eP     Pg     17 10 08.0 +7.3
PGRA                               eS     Sg     17 10 28.5 +5.2
PGRA                               i IAML        17 10 32.5
PGRA                               i IAML        17 10 33.6
PGRA                               i IAML        17 10 34.0
PGRA   Graciosa            1.74 145 eP     Pg     17 10 08.0 +7.3
PGRA                               eS     Sg     17 10 28.5 +5.2
PGRA                               i IAML        17 10 32.5
PGRA                               i IAML        17 10 33.6
PGRA                               i IAML        17 10 34.0
PGRA   Graciosa            1.74 145 eP     Pg     17 10 08.0 +7.3
PGRA                               eS     Sg     17 10 28.5 +5.2
PGRA                               i AML  AML    17 10 32.5
PGRA                               i AML  AML    17 10 33.6
PGRA                               i AML  AML    17 10 34.0
H07S1  FLORES T-PHASE      1.85 235  Pn    Pn     17 09 58.8 -0.4
H07S1                               Sn    Sn     17 10 22.4 -0.4
H07S1                               T     T      17 11 44.8
PCED   Cedros              1.89 167 eP     Pn     17 09 58.5 -1.1
PCED                               eS     Sn     17 10 20.4 -3.0
PCED                               i IAML        17 10 21.1
PCED                               i IAML        17 10 21.5
PCED                               i IAML        17 10 21.8
PCED   Cedros              1.89 167 eP     Pn     17 09 58.5 -1.1
PCED                               eS     Sn     17 10 20.4 -3.0
PCED                               i IAML        17 10 21.1
PCED                               i IAML        17 10 21.5
PCED                               i IAML        17 10 21.8
PCED   Cedros              1.89 167 eP     Pn     17 09 58.5 -1.1
PCED                               eS     Sn     17 10 20.4 -3.0
PCED                               i AML  AML    17 10 21.1
PCED                               i AML  AML    17 10 21.5
PCED                               i AML  AML    17 10 21.8
ROSA   Rosais              1.91 156 eP     Pn     17 09 58.2 -1.8
ROSA                               eS     Sn     17 10 21.6 -2.6
ROSA                               i IAML        17 10 22.8
ROSA                               i IAML        17 10 27.0
ROSA                               i IAML        17 10 28.9
ROSA   Rosais              1.91 156 eP     Pn     17 09 58.2 -1.8
ROSA                               eS     Sn     17 10 21.6 -2.6
ROSA                               i IAML        17 10 22.8
ROSA                               i IAML        17 10 27.0
ROSA                               i IAML        17 10 28.9
ROSA   Rosais              1.91 156 eP     Pn     17 09 58.2 -1.8
ROSA                               eS     Sn     17 10 21.6 -2.6
ROSA                               i AML  AML    17 10 22.8
ROSA                               i AML  AML    17 10 27.0
ROSA                               i AML  AML    17 10 28.9
CALA   Caldeira            1.93 167 eP     Pn     17 09 59.3 -1.0
CALA                               eS     Sn     17 10 21.5 -3.2
CALA                               i IAML        17 10 24.5
CALA                               i IAML        17 10 24.9
CALA                               i IAML        17 10 26.0
CALA   Caldeira            1.93 167 eP     Pn     17 09 59.3 -1.0
CALA                               eS     Sn     17 10 21.5 -3.2
CALA                               i IAML        17 10 24.5
CALA                               i IAML        17 10 24.9
CALA                               i IAML        17 10 26.0
CALA   Caldeira            1.93 167 eP     Pn     17 09 59.3 -1.0
CALA                               eS     Sn     17 10 21.5 -3.2
CALA                               i AML  AML    17 10 24.5
CALA                               i AML  AML    17 10 24.9
CALA                               i AML  AML    17 10 26.0
PFCBR  Castelo Branco      1.99 168 eS     Sn     17 10 23.1 -2.9
PFCBR                              i IAML        17 10 24.1
PFCBR                              i IAML        17 10 24.2
PFCBR                              i IAML        17 10 25.3
PFCBR  Castelo Branco      1.99 168 eS     Sn     17 10 23.1 -2.9
PFCBR                              i IAML        17 10 24.1
PFCBR                              i IAML        17 10 24.2
PFCBR                              i IAML        17 10 25.3
PFCBR  Castelo Branco      1.99 168 eS     Sn     17 10 23.1 -2.9
PFCBR                              i AML  AML    17 10 24.1
PFCBR                              i AML  AML    17 10 24.2
PFCBR                              i AML  AML    17 10 25.3
HOR    Horta               2.00 166 eS     Sn     17 10 23.3 -2.9
HOR                                i IAML        17 10 24.8
HOR                                i IAML        17 10 25.0
HOR                                i IAML        17 10 27.8
HOR    Horta               2.00 166 eS     Sn     17 10 23.3 -2.9
HOR                                i IAML        17 10 24.8
HOR                                i IAML        17 10 25.0
HOR                                i IAML        17 10 27.8
HOR    Horta               2.00 166 eS     Sn     17 10 23.3 -2.9
HOR                                i AML  AML    17 10 24.8
HOR                                i AML  AML    17 10 25.0
HOR                                i AML  AML    17 10 27.8
PMAN   Manadas             2.04 153 eP     Pn     17 10 00.0 -1.7
PMAN                               eS     Sn     17 10 24.4 -2.9
PMAN                               i IAML        17 10 26.7
PMAN                               i IAML        17 10 27.6
PMAN                               i IAML        17 10 28.8
PMAN   Manadas             2.04 153 eP     Pn     17 10 00.0 -1.7
PMAN                               eS     Sn     17 10 24.4 -2.9
PMAN                               i IAML        17 10 26.7
PMAN                               i IAML        17 10 27.6
PMAN                               i IAML        17 10 28.8
PMAN   Manadas             2.04 153 eP     Pn     17 10 00.0 -1.7
PMAN                               eS     Sn     17 10 24.4 -2.9
PMAN                               i AML  AML    17 10 26.7
PMAN                               i AML  AML    17 10 27.6
PMAN                               i AML  AML    17 10 28.8
PICO   Pico                2.07 162 eP     Pn     17 10 01.1 -1.0
PICO                               eS     Sn     17 10 24.9 -3.1
PICO                               i IAML        17 10 30.5
PICO                               i IAML        17 10 32.3
PICO                               i IAML        17 10 33.4
PICO   Pico                2.07 162 eP     Pn     17 10 01.1 -1.0
PICO                               eS     Sn     17 10 24.9 -3.1
PICO                               i IAML        17 10 30.5
PICO                               i IAML        17 10 32.3
PICO                               i IAML        17 10 33.4
PICO   Pico                2.07 162 eP     Pn     17 10 01.1 -1.0
PICO                               eS     Sn     17 10 24.9 -3.1
PICO                               i AML  AML    17 10 30.5
PICO                               i AML  AML    17 10 32.3
PICO                               i AML  AML    17 10 33.4
PCAN   Candelaria          2.09 163 eP     Pn     17 10 01.6 -0.8
PCAN                               eS     Sn     17 10 25.9 -2.6
PCAN                               i IAML        17 10 27.5
PCAN                               i IAML        17 10 27.6
PCAN                               i IAML        17 10 29.6
PCAN   Candelaria          2.09 163 eP     Pn     17 10 01.6 -0.8
PCAN                               eS     Sn     17 10 25.9 -2.6
PCAN                               i IAML        17 10 27.5
PCAN                               i IAML        17 10 27.6
PCAN                               i IAML        17 10 29.6
PCAN   Candelaria          2.09 163 eP     Pn     17 10 01.6 -0.8
PCAN                               eS     Sn     17 10 25.9 -2.6
PCAN                               i AML  AML    17 10 27.5
PCAN                               i AML  AML    17 10 27.6
PCAN                               i AML  AML    17 10 29.6
PPNO   Prainha do Nor      2.14 159 eP     Pn     17 10 01.7 -1.4
PPNO                               eS     Sn     17 10 26.2 -3.5
PPNO                               i IAML        17 10 34.8
PPNO                               i IAML        17 10 49.8
PPNO   Prainha do Nor      2.14 159 eP     Pn     17 10 01.7 -1.4
PPNO                               eS     Sn     17 10 26.2 -3.5
PPNO                               i IAML        17 10 34.8
PPNO                               i IAML        17 10 49.8
PPNO   Prainha do Nor      2.14 159 eP     Pn     17 10 01.7 -1.4
PPNO                               eS     Sn     17 10 26.2 -3.5
PPNO                               i AML  AML    17 10 34.8
PPNO                               i AML  AML    17 10 49.8
PID    Ribeirinha          2.21 156 eP     Pn     17 10 02.9 -1.2
PID                                eS     Sn     17 10 29.0 -2.4
PID                                i IAML        17 10 33.0
PID                                i IAML        17 10 37.0
PID                                i IAML        17 10 42.4
PID    Ribeirinha          2.21 156 eP     Pn     17 10 02.9 -1.2
PID                                eS     Sn     17 10 29.0 -2.4
PID                                i IAML        17 10 33.0
PID                                i IAML        17 10 37.0
PID                                i IAML        17 10 42.4
PID    Ribeirinha          2.21 156 eP     Pn     17 10 02.9 -1.2
PID                                eS     Sn     17 10 29.0 -2.4
PID                                i AML  AML    17 10 33.0
PID                                i AML  AML    17 10 37.0
PID                                i AML  AML    17 10 42.4
PSBA   Serra de Santa      2.26 138 eP     Pn     17 10 02.6 -2.2
PSBA                               eS     Sn     17 10 29.1 -3.6
PSBA                               i IAML        17 10 33.2
PSBA                               i IAML        17 10 34.3
PSBA                               i IAML        17 10 35.2
PSBA   Serra de Santa      2.26 138 eP     Pn     17 10 02.6 -2.2
PSBA                               eS     Sn     17 10 29.1 -3.6
PSBA                               i IAML        17 10 33.2
PSBA                               i IAML        17 10 34.3
PSBA                               i IAML        17 10 35.2
PSBA   Serra de Santa      2.26 138 eP     Pn     17 10 02.6 -2.2
PSBA                               eS     Sn     17 10 29.1 -3.6
PSBA                               i AML  AML    17 10 33.2
PSBA                               i AML  AML    17 10 34.3
PSBA                               i AML  AML    17 10 35.2
PAGU   Agualva, Azore      2.33 136 eP     Pn     17 10 03.8 -2.0
PAGU                               eS     Sn     17 10 31.6 -2.8
PAGU                               i IAML        17 10 34.2
PAGU                               i IAML        17 10 36.6
PAGU                               i IAML        17 10 37.1
PAGU   Agualva, Azore      2.33 136 eP     Pn     17 10 03.8 -2.0
PAGU                               eS     Sn     17 10 31.6 -2.8
PAGU                               i IAML        17 10 34.2
PAGU                               i IAML        17 10 36.6
PAGU                               i IAML        17 10 37.1
PAGU   Agualva, Azore      2.33 136 eP     Pn     17 10 03.8 -2.0
PAGU                               eS     Sn     17 10 31.6 -2.8
PAGU                               i AML  AML    17 10 34.2
PAGU                               i AML  AML    17 10 36.6
PAGU                               i AML  AML    17 10 37.1
ADH    Angra Heroismo      2.39 139 eP     Pn     17 10 04.4 -2.1
ADH                                eS     Sn     17 10 31.2 -4.7
ADH                                i IAML        17 10 35.6
ADH                                i IAML        17 10 36.5
ADH                                i IAML        17 10 37.9
ADH    Angra Heroismo      2.39 139 eP     Pn     17 10 04.4 -2.1
ADH                                eS     Sn     17 10 31.2 -4.7
ADH                                i IAML        17 10 35.6
ADH                                i IAML        17 10 36.5
ADH                                i IAML        17 10 37.9
ADH    Angra Heroismo      2.39 139 eP     Pn     17 10 04.4 -2.1
ADH                                eS     Sn     17 10 31.2 -4.7
ADH                                i AML  AML    17 10 35.6
ADH                                i AML  AML    17 10 36.5
ADH                                i AML  AML    17 10 37.9
PSCM   Serra do Cume       2.42 136 eP     Pn     17 10 05.0 -1.9
PSCM                               eS     Sn     17 10 33.3 -3.3
PSCM                               i IAML        17 10 41.1
PSCM                               i IAML        17 10 41.1
PSCM                               i IAML        17 10 41.1
PSCM   Serra do Cume       2.42 136 eP     Pn     17 10 05.0 -1.9
PSCM                               eS     Sn     17 10 33.3 -3.3
PSCM                               i IAML        17 10 41.1
PSCM                               i IAML        17 10 41.1
PSCM                               i IAML        17 10 41.1
PSCM   Serra do Cume       2.42 136 eP     Pn     17 10 05.0 -1.9
PSCM                               eS     Sn     17 10 33.3 -3.3
PSCM                               i AML  AML    17 10 41.1
PSCM                               i AML  AML    17 10 41.1
PSCM                               i AML  AML    17 10 41.1
PSET   Sete Cidades        3.81 133 eP     Pn     17 10 24.6 -1.5
PSET                               eS     Sn     17 11 06.9 -4.0
PSET                               i IAML        17 11 16.1
```

PSET				*i* IAML		17 11 16.3	
PSET				*i* IAML		17 11 17.2	
PSET	**Sete Cidades**	**3.81**	**133**	*e*P	**Pn**	**17 10 24.6**	**-1.5**
PSET				*e*S	**Sn**	**17 11 06.9**	**-4.0**
PSET				*i* IAML		17 11 16.1	
PSET				*i* IAML		17 11 16.3	
PSET				*i* IAML		17 11 17.2	
PSET	**Sete Cidades**	**3.81**	**133**	*e*P	**Pn**	**17 10 24.6**	**-1.5**
PSET				*e*S	**Sn**	**17 11 06.9**	**-4.0**
PSET				*i* AML	AML	17 11 16.1	
PSET				*i* AML	AML	17 11 16.3	
PSET				*i* AML	AML	17 11 17.2	
CMLA	**Cha da Macela**	**3.96**	**132**	*e*P	**Pn**	**17 10 26.9**	**-1.3**
CMLA				*e*S	**Sn**	**17 11 10.8**	**-3.9**
CMLA				*i* IAML		17 11 15.2	
CMLA				*i* IAML		17 11 16.0	
CMLA				*i* IAML		17 11 18.4	
CMLA	**Cha da Macela**	**3.96**	**132**	Pn	**Pn**	**17 10 26.6**	**-1.6**
CMLA	**Cha da Macela**	**3.96**	**132**	*e*P	**Pn**	**17 10 26.9**	**-1.3**
CMLA				*e*S	**Sn**	**17 11 10.8**	**-3.9**
CMLA				*i* IAML		17 11 15.2	
CMLA				*i* IAML		17 11 16.0	
CMLA				*i* IAML		17 11 18.4	
CMLA	**Cha da Macela**	**3.96**	**132**	*e*P	**Pn**	**17 10 26.9**	**-1.3**
CMLA				*e*S	**Sn**	**17 11 10.8**	**-3.9**
CMLA				*i* AML	AML	17 11 15.2	
CMLA				*i* AML	AML	17 11 16.0	
CMLA				*i* AML	AML	17 11 18.4	
PGRON	**Lagoa das Cont**	**4.04**	**131**	*e*P	**Pn**	**17 10 28.0**	**-1.3**
PGRON	**Lagoa das Cont**	**4.04**	**131**	*e*P	**Pn**	**17 10 28.0**	**-1.3**
BART	**Pico Bartolome**	**4.16**	**129**	*e*P	**Pn**	**17 10 29.6**	**-1.4**
BART				*e*S	**Sn**	**17 11 15.6**	**-4.1**
BART				*i* IAML		17 11 17.7	
BART				*i* IAML		17 11 21.0	
BART				*i* IAML		17 11 21.2	
BART	**Pico Bartolome**	**4.16**	**129**	*e*P	**Pn**	**17 10 29.6**	**-1.4**
BART				*e*S	**Sn**	**17 11 15.6**	**-4.1**
BART				*i* IAML		17 11 17.7	
BART				*i* IAML		17 11 21.0	
BART				*i* IAML		17 11 21.2	
BART	**Pico Bartolome**	**4.16**	**129**	*e*P	**Pn**	**17 10 29.6**	**-1.4**
BART				*e*S	**Sn**	**17 11 15.6**	**-4.1**
BART				*i* AML	AML	17 11 17.7	
BART				*i* AML	AML	17 11 21.0	
BART				*i* AML	AML	17 11 21.2	
PSMN	**Pico do Norte,**	**4.76**	**135**	*e*P	**Pn**	**17 10 38.1**	**-1.1**
PSMN				*e*S	**Sn**	**17 11 30.6**	**-3.8**
PSMN				*i* IAML		17 11 32.1	
PSMN				*i* IAML		17 11 33.0	
PSMN				*i* IAML		17 11 34.5	
PSMN	**Pico do Norte,**	**4.76**	**135**	*e*P	**Pn**	**17 10 38.1**	**-1.1**
PSMN				*e*S	**Sn**	**17 11 30.6**	**-3.8**
PSMN				*i* IAML		17 11 32.1	
PSMN				*i* IAML		17 11 33.0	
PSMN				*i* IAML		17 11 34.5	
PSMN	**Pico do Norte,**	**4.76**	**135**	*e*P	**Pn**	**17 10 38.1**	**-1.1**
PSMN				*e*S	**Sn**	**17 11 30.6**	**-3.8**
PSMN				*i* AML	AML	17 11 32.1	
PSMN				*i* AML	AML	17 11 33.0	
PSMN				*i* AML	AML	17 11 34.5	
PCAS	**Casmilo, Conde**	**15.85**	**85**	*e*P	**P**	**17 13 15.4**	**+1.1**
PCAS				IAmb	IAmb	17 13 48.5	
	comp=Z,37nm,1.6s						
PGAV	**Gavieira, Arco**	**15.86**	**78**	*e*P	**Pn**	**17 13 11.7**	**+0.9**
PGAV				*e*S	**S**	**17 16 28.0**	**+6.9**
COI	**Coimbra**	**15.90**	**84**		**Pn**	**17 13 10.4**	**-0.7**
COI				IAmb	IAmb	17 13 19.8	
	comp=Z,52nm,1.2s						
COI	**Coimbra**	**15.90**	**84**	P	**P**	**17 13 16.3**	**+1.5**
PSARD	**Sardoal**	**16.18**	**86**	*e*P	**P**	**17 13 16.8**	**-1.1**
PSARD				IAmb	IAmb	17 13 32.3	
	comp=Z,46nm,1.7s						
PTEO	**Sao Teotonio**	**16.22**	**94**	*e*P	**Pn**	**17 13 16.3**	**+1.0**
PVIS	**Viseu**	**16.23**	**82**	*e*P	**P**	**17 13 20.3**	**+1.8**
PMTG	**Montargil**	**16.23**	**88**	*e*P	**Pn**	**17 13 16.4**	**+1.0**
PMTG				IAmb	IAmb	17 13 23.8	
	comp=Z,38nm,1.5s						
POLO	**Lamas de Olo**	**16.25**	**80**	*e*P	**P**	**17 13 20.1**	**+1.3**
POLO				IAmb	IAmb	17 13 43.1	
	comp=Z,16nm,1.5s						
PVRL	**Vila Real**	**16.31**	**80**	*e*P	**P**	**17 13 18.7**	**-0.7**
PVRL				IAmb	IAmb	17 13 33.8	
	comp=Z,32nm,1.4s						
MORF	**Marmelete**	**16.35**	**95**	*e*P	**P**	**17 13 18.2**	**-1.6**
MORF				IAmb	IAmb	17 13 19.8	
	comp=Z,30nm,1.1s						
MORF	**Marmelete**	**16.35**	**95**		**Pn**	**17 13 15.4**	**-1.5**
MORF	**Marmelete**	**16.35**	**95**	*e*P	**Pn**	**17 13 16.4**	**-0.5**
EVO	**Evora**	**16.51**	**90**	*e*P	**Pn**	**17 13 19.7**	**+0.7**
EVO				IAmb	IAmb	17 13 31.2	
	comp=Z,22nm,1.8s						
MESJ	**Messejana**	**16.52**	**92**	*e*P	**P**	**17 13 20.4**	**-1.3**
MESJ				IAmb	IAmb	17 13 24.4	
	comp=Z,21nm,1.2s						
MESJ	**Messejana**	**16.52**	**92**	P	**P**	**17 13 22.0**	**+0.3**
MESJ	**Messejana**	**16.52**	**92**	*e*P	**P**	**17 13 20.8**	**-1.0**
MESJ				IAmb	IAmb	17 13 31.0	
	comp=Z,38nm,1.2s						
MTE	**Manteigas**	**16.53**	**83**		**P**	**17 13 21.6**	**-0.3**
MTE				IAmb	IAmb	17 13 38.4	
	comp=Z,40nm,1.2s						
MTE	**Manteigas**	**16.53**	**83**	*e*P	**P**	**17 13 24.2**	**+2.3**
MTE				IAmb	IAmb	17 13 36.6	
	comp=Z,53nm,1.5s						
MTE				*e*S	**S**	**17 16 44.3**	**+10**
PCBR	**Castelo Branco**	**16.66**	**85**	*e*P	**P**	**17 13 23.3**	**0.0**
PCBR				IAmb	IAmb	17 13 28.8	
	comp=Z,38nm,1.4s						
PCVE	**Castro Verde**	**16.72**	**93**	*e*P	**Pn**	**17 13 22.4**	**+0.8**
PMRV	**Marv??o**	**16.80**	**86**	*e*P	**P**	**17 13 25.0**	**+0.3**
PMRV				IAmb	IAmb	17 13 38.1	
	comp=Z,36nm,1.8s						
PMRV				*e*S	S	17 16 59.5	+20
MVO	**Moncorvo**	**16.84**	**80**	*e*P	**P**	**17 13 27.1**	**+1.8**
MVO				IAmb	IAmb	17 13 31.0	
	comp=Z,37nm,1.3s						
MVO				*e*S	**S**	**17 16 46.0**	**+5.1**
PBDV	**Barranco-do-Ve**	**16.91**	**94**	*e*P	**P**	**17 13 26.5**	**+0.4**
PBDV				IAmb	IAmb	17 13 40.5	
	comp=Z,44nm,1.7s						
PBRG	**Braganca**	**17.01**	**78**	*e*P	**P**	**17 13 33.0**	**+5.9**
PVAQ	**Vaqueiros**	**17.03**	**93**		**P**	**17 13 26.7**	**-0.7**
PVAQ	**Vaqueiros**	**17.03**	**93**	*e*P	**P**	**17 13 29.1**	**+1.8**
PVAQ				IAmb	IAmb	17 13 41.6	
	comp=Z,32nm,1.6s						
PBAR	**Barrancos**	**17.34**	**90**	*e*P	**P**	**17 13 33.3**	**+2.5**
PBAR				IAmb	IAmb	17 14 02.5	
	comp=Z,22nm,1.8s						
PAB	**San Pablo**	**19.09**	**85**	P	**P**	**17 13 48.4**	**-1.8**
ESDC	**Sonseca Array**	**19.36**	**84**	P	**P**	**17 13 51.9**	**-1.2**
ESDC	**Sonseca Array**	**19.36**	**84**	P	**Pn**	**17 13 53.7**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=290,slow=10,SNR=12						
ESDC				LR	LR	17 20 26.3	
	comp=Z,1µm,18.1s,baz=266,slow=34						
	comp=Z,2.0nm,1.0s						
ESBB	**Sonseca Array**	**19.36**	**84**	P	**P**	**17 13 51.4**	**-1.7**
MDT	**Midelt**	**21.16**	**103**	LR	LR	17 20 42.4	
	comp=Z,892nm,21.0s,baz=304,slow=32						
DRLN	**Deer Lake**	**21.76**	**303**		**P**	**17 14 16.3**	**-2.7**
DRLN				IAmb	IAmb	17 14 20.5	
	comp=Z,42nm,1.4s						
EKA	**Eskdalemuir Ar**	**22.77**	**40**	P	**P**	**17 14 31.3**	**+1.6**
	comp=Z,4.0nm,1.0s,baz=242,slow=12,SNR=7.5						
	comp=Z,4.0nm,1.0s						
CEST	**Esterri de Car**	**22.88**	**75**		**P**	**17 14 30.1**	**-1.0**
CEST				IAmb	IAmb	17 14 41.2	
	comp=Z,17nm,1.1s						
CLF	**Chambon-Foret**	**23.68**	**61**	P	**P**	**17 14 36.5**	**-2.5**
CLF				IAmb	IAmb	17 14 50.5	
	comp=Z,33nm,1.4s						
GBN	**Guysborough**	**24.03**	**293**		**P**	**17 14 42.6**	**+0.3**
GBN				IAmb	IAmb	17 14 44.9	
	comp=Z,17nm,1.1s						
BORG	**Borgarnes**	**24.75**	**8**	LR	LR	17 21 45.1	
	comp=Z,644nm,20.2s,baz=183,slow=30						
BMRD	**Maredsous**	**25.64**	**56**	*d*P	**P**	**17 14 58.1**	**+1.2**
BGES	**Gesves**	**25.85**	**56**	*d*P	**P**	**17 15 02.7**	**+3.9**
BGES				*d*PP	**PnPn**	**17 15 33.4**	**-2.3**
BGES				*d*PcP	**PcP**	**17 18 27.6**	**-0.2**
BCLA	**Clavier**	**25.99**	**56**	*d*P	**P**	**17 15 02.1**	**+1.9**
	comp=Z,4.5nm,1.0s						
BCLA				*d*PcP	**PcP**	**17 18 24.4**	**-3.7**
ECH	**Echery**	**26.97**	**61**	P	**P**	**17 15 08.5**	**-0.5**
BATG	**Bathurst New B**	**27.20**	**297**		**P**	**17 15 11.2**	**+0.1**
BATG				IAmb	IAmb	17 15 21.5	
	comp=Z,17nm,1.4s						
BFO	**Black Forest**	**27.75**	**61**	P	**P**	**17 15 15.0**	**-1.0**
BBTS	**Babate**	**28.01**	**153**	LR	LR	17 24 36.5	
	comp=Z,311nm,19.1s,baz=220,slow=32						
SCHQ	**Schefferville**	**28.70**	**313**	P	**P**	**17 15 25.1**	**+0.6**
	comp=Z,2.2nm,0.9s,baz=108,slow=9.6						
SCHQ				LR	LR	17 24 52.4	
	comp=Z,597nm,20.1s,baz=116,slow=32						
	comp=Z,2.2nm,0.9s						
DAVOX	**Davos/Dischmat**	**28.80**	**64**	LR	LR	17 25 19.6	
	comp=Z,366nm,20.6s,baz=266,slow=33						
SFJD	**Kangerlussuaq**	**29.11**	**343**	LR	LR	17 24 21.8	
	comp=Z,352nm,19.5s,baz=152,slow=31						
GRF	**Grafenberg Arr**	**29.71**	**58**	*e*P	**P**	**17 15 36.3**	**+2.8**
	comp=Z,7.4nm,1.3s,baz=267,slow=9.1						
GRF				*e*L	L	17 25 37.5	
	comp=Z,669nm,19.9s						
MOX	**Moxa**	**30.02**	**56**	*e*L	L	17 25 39.3	
	comp=Z,633nm,21.8s						
KEST	**Kesra**	**30.57**	**86**	LR	LR	17 27 53.0	
	comp=Z,673nm,18.5s,baz=330,slow=36						
CLL	**Collm**	**30.94**	**55**	*e*Px	Px	17 15 47.0	
GERES	**GERESS Array B**	**31.33**	**60**	P	**P**	**17 15 49.3**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=243,slow=11,SNR=2.1						
GERES				LR	LR	17 27 12.2	
	comp=Z,301nm,19.0s,baz=248,slow=34						
	comp=Z,0.3nm,0.6s						
FDMO	**Fiordimonte**	**31.45**	**71**	P	**P**	**17 15 48.0**	**-0.9**
FDMO				IAmb	IAmb	17 15 55.6	
	comp=Z,5.6nm,0.8s						
NOA	**NORSAR Array B**	**32.09**	**36**	P	**P**	**17 15 54.5**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=163,slow=17,SNR=2.1						
NOA				LR	LR	17 27 06.9	
	comp=Z,187nm,20.4s,baz=250,slow=33						
	comp=Z,0.4nm,0.7s						
FRB	**Frobisher Bay**	**32.69**	**329**	LR	LR	17 25 45.7	
	comp=Z,187nm,20.5s,baz=122,slow=30						
HFS	**Hagfors**	**32.95**	**39**	LR	LR	17 28 13.7	
	comp=Z,323nm,19.1s,baz=251,slow=34						
VRAC	**Vranov**	**33.22**	**59**	LR	LR	17 28 39.9	
	comp=Z,246nm,18.3s,baz=263,slow=35						
VAE	**Valguarnera**	**33.82**	**81**	LR	LR	17 29 57.3	
	comp=Z,814nm,18.0s,baz=299,slow=36						
TAM	**Tamanrasset**	**34.18**	**110**	P	**P**	**17 16 11.7**	**-1.4**
J57A	**Williamstown**	**34.54**	**291**		**P**	**17 16 12.9**	**-2.9**
J57A				IAmb	IAmb	17 16 26.8	
	comp=Z,6.8nm,1.2s						
PECO	**Prince Edward**	**35.15**	**292**	P	**P**	**17 16 20.0**	**-1.0**
PECO				IAmb	IAmb	17 16 36.6	
	comp=Z,6.5nm,0.9s						
OJC	**Ojcow**	**35.25**	**57**	P	**P**	**17 16 21.0**	**-0.9**
PSZ	**Piszkesteto**	**35.51**	**61**	P	**P**	**17 16 24.0**	**-0.2**
SADO	**Sadowa**	**36.50**	**294**	LR	LR	17 30 23.0	
	comp=Z,1µm,20.1s,baz=118,slow=35						
ALLY	**Alegheny Colle**	**37.94**	**289**	P	**P**	**17 16 44.7**	**-0.2**
TORD	**Torodi Ar. Bea**	**38.42**	**126**		**P**	**17 16 49.8**	**+0.7**
TORD	**Torodi Ar. Bea**	**38.42**	**126**	P	**P**	**17 16 49.4**	**+0.2**
	comp=Z,113nm,0.3s,baz=317,slow=9.0,SNR=1.5						
BUR08	**Bucovina Ar. S**	**39.09**	**61**		**P**	**17 16 55.0**	**+0.3**
BURAR	**Bucovina Array**	**39.10**	**61**		**P**	**17 16 55.1**	**+0.4**
FINES	**FINESS Array B**	**39.15**	**39**	P	**P**	**17 16 55.1**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=259,slow=1.9,SNR=4.4						
	comp=Z,0.9nm,0.8s						
DBIC	**Dimbokro**	**40.12**	**140**	P	**P**	**17 17 04.0**	**+0.7**
	comp=Z,6.4nm,1.0s,baz=329,slow=12,SNR=3.6						
	comp=Z,6.4nm,1.0s						
ACSO	**Alum Creek Sta**	**40.41**	**288**	P	**P**	**17 17 05.0**	**-0.6**
ACSO				IAmb	IAmb	17 17 08.8	
	comp=Z,11nm,0.9s						
ARCES	**ARCESS Array B**	**40.53**	**26**	P	**P**	**17 17 06.7**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=266,slow=7.5,SNR=4.0						
	comp=Z,0.6nm,0.6s						
P51A	**Williamsport**	**40.70**	**287**	P	**P**	**17 17 07.3**	**-0.7**
P51A				IAmb	IAmb	17 17 11.1	
	comp=Z,13nm,1.0s						
Q51A	**Peebles**	**41.07**	**286**	P	**P**	**17 17 10.1**	**-0.9**
Q51A				IAmb	IAmb	17 17 14.9	
	comp=Z,10.0nm,1.0s						
KIEV	**Kiev**	**41.17**	**55**		**P**	**17 17 12.5**	**+0.8**
AKASG	**Malin Array Be**	**41.18**	**55**	P	**P**	**17 17 10.7**	**-1.1**
	comp=Z,1.8nm,0.7s,baz=275,slow=8.5,SNR=12						
AKASG				LR	LR	17 33 54.6	
	comp=Z,488nm,18.3s,baz=276,slow=36						
	comp=Z,1.8nm,0.7s						
AKBB	**Malin Array Si**	**41.18**	**55**		**P**	**17 17 12.5**	**+0.7**
O49A	**Covington**	**41.40**	**288**	P	**P**	**17 17 13.8**	**0.0**
O49A				IAmb	IAmb	17 17 19.2	
	comp=Z,20nm,1.5s						
TIRR	**Tirgusor**	**41.97**	**65**		**P**	**17 17 17.4**	**-0.9**
SPB2	**Spitsbergen Ar**	**42.04**	**13**	P	**P**	**17 17 19.8**	**+1.3**
SPB2				IAmb	IAmb	17 17 30.7	
	comp=Z,16nm,1.1s						
SPITS	**Spitsbergen Ar**	**42.04**	**13**	P	**P**	**17 17 17.3**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=279,slow=11,SNR=7.3						
	comp=Z,0.4nm,0.3s						
TKL	**Tuckaleechee C**	**42.62**	**282**	LR	LR	17 33 43.1	
	comp=Z,393nm,19.7s,baz=55,slow=34						
G40A	**Rib Lake**	**44.00**	**297**		**P**	**17 17 35.0**	**+0.3**
EYMN	**Ely**	**44.15**	**301**		**P**	**17 17 34.9**	**-1.2**
E38A	**The Farm, Brul**	**44.54**	**300**	IAmb	IAmb	17 17 42.4	
	comp=Z,6.9nm,0.9s						
I40A	**Norwalk**	**44.69**	**296**	P	**P**	**17 17 40.0**	**-0.3**
I40A				IAmb	IAmb	17 17 43.7	
	comp=Z,16nm,1.4s						
SPMN	**Marine on St.**	**45.77**	**298**	P	**P**	**17 17 47.2**	**-1.7**
SPMN				IAmb	IAmb	17 17 53.0	
	comp=Z,7.8nm,1.0s						
SIUC	**Southern Illin**	**45.84**	**287**	P	**P**	**17 17 48.2**	**-1.3**
S44A	**Carbondale**	**45.88**	**287**	P	**P**	**17 17 48.5**	**-1.3**
N41A	**Harden Midland**	**45.91**	**291**	P	**P**	**17 17 48.8**	**-1.2**
ULM	**Lac du Bonnet**	**46.37**	**305**	P	**P**	**17 17 50.8**	**-2.7**
	comp=Z,1.1nm,0.6s,baz=63,slow=9.0,SNR=3.1						
ULM				LR	LR	17 36 14.6	
	comp=Z,803nm,18.9s,baz=90,slow=35						
	comp=Z,1.1nm,0.6s						
I37A	**Lemond, Waseca**	**46.55**	**297**	P	**P**	**17 17 53.2**	**-1.9**
BAUV	**El Baul**	**46.58**	**238**		**P**	**17 17 57.0**	**+1.5**
FVM	**French Village**	**46.62**	**288**	P	**P**	**17 17 54.9**	**-0.7**
FVM				IAmb	IAmb	17 18 00.8	
	comp=Z,11nm,1.2s						
AGMN	**Agassiz Nation**	**46.88**	**303**	P	**P**	**17 17 55.3**	**-2.3**
AGMN				IAmb	IAmb	17 18 04.1	
	comp=Z,5.1nm,1.1s						
CCM	**Cathedral Cave**	**47.18**	**288**	P	**P**	**17 17 59.3**	**-0.7**
CCM				IAmb	IAmb	17 18 05.2	
	comp=Z,7.3nm,1.1s						
BRTR	**Keskin Array B**	**47.18**	**69**	P	**P**	**17 18 00.1**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=245,slow=2.3,SNR=4.1						
	comp=Z,0.5nm,0.7s						
P40A	**Paris**	**47.19**	**290**	IAmb	IAmb	17 18 00.6	
	comp=Z,6.6nm,0.9s						
T42A	**Van Buren**	**47.48**	**287**	IAmb	IAmb	17 18 05.5	
	comp=Z,9.3nm,1.2s						
ECSD	**EROS Data Cent**	**48.84**	**297**		**P**	**17 18 11.9**	**-0.9**
ECSD				IAmb	IAmb	17 18 16.2	
	comp=Z,8.3nm,1.0s						
KBZ	**Khabaz**	**52.06**	**61**	P	**P**	**17 18 39.3**	**+2.2**
	comp=Z,1.6nm,0.8s,baz=288,slow=7.9,SNR=2.3						
	comp=Z,1.6nm,0.8s						
BRDY	**Brady**	**55.93**	**284**	IAmb	IAmb	17 19 08.5	
	comp=Z,7.4nm,1.2s						
RTBA	**Rita Blanca**	**56.14**	**291**	IAmb	IAmb	17 19 10.9	
	comp=Z,8.1nm,1.1s						
ARTI	**Arti**	**56.30**	**42**		**P**	**17 19 08.0**	**0.0**
T25A	**Trinidad**	**56.99**	**293**	IAmb	IAmb	17 19 17.7	
	comp=Z,10nm,1.3s						
PDAR	**Pinedale Array**	**57.86**	**301**	P	**P**	**17 19 17.9**	**-1.6**
PDAR	**Pinedale Array**	**57.86**	**301**	P	**P**	**17 19 18.3**	**-1.1**
	comp=Z,1.4nm,0.8s,baz=66,slow=8.4,SNR=7.9						
	comp=Z,1.4nm,0.8s						
MTO3	**Montecristo**	**58.12**	**262**		**P**	**17 19 22.3**	**+0.8**
SAND	**Sanderson**	**58.92**	**284**	IAmb	IAmb	17 19 31.6	
	comp=Z,7.4nm,1.2s						
F30M	**Barrier River**	**59.07**	**335**		**P**	**17 19 25.9**	**-1.3**
E29M	**Blow River**	**59.33**	**336**		**P**	**17 19 28.0**	**-1.0**
E28M	**Babbage River**	**59.71**	**337**		**P**	**17 19 30.5**	**-1.1**
E28M				IAmb	IAmb	17 19 39.0	
	comp=Z,6.2nm,1.4s						
HWUT	**Hardware Ranch**	**59.72**	**301**	IAmb	IAmb	17 19 38.5	
	comp=Z,4.2nm,0.9s						
ABKAR	**Akbulak array**	**60.30**	**49**	P	**P**	**17 19 35.5**	**-0.5**
F28M	**Old Crow**	**60.38**	**336**	IAmb	IAmb	17 19 40.7	
	comp=Z,10nm,1.5s						
TXAR	**Lajitas Array**	**60.39**	**285**		**P**	**17 19 36.4**	**-0.6**
TXAR	**Lajitas Array**	**60.39**	**285**	P	**P**	**17 19 36.6**	**-0.4**
	comp=Z,1.4nm,0.7s,baz=64,slow=6.8,SNR=10						
	comp=Z,1.4nm,0.7s						
HVU	**Hansel Valley**	**60.43**	**301**	IAmb	IAmb	17 20 00.6	
	comp=Z,4.4nm,1.2s						
VHRN	**Van Horn**	**60.59**	**287**	IAmb	IAmb	17 19 42.2	
	comp=Z,4.1nm,1.1s						
PLID	**Pearl Lake**	**60.86**	**306**		**P**	**17 19 38.8**	**-1.3**
PLID				IAmb	IAmb	17 19 52.0	
	comp=Z,9.6nm,1.5s						
I29M	**Ogilvie Camp,**	**61.15**	**333**	IAmb	IAmb	17 19 53.5	
	comp=Z,5.3nm,1.2s						
DUG	**Dugway, Tooele**	**61.24**	**300**	IAmb	IAmb	17 19 44.9	
	comp=Z,3.6nm,0.9s						
MVU	**Marysvale**	**61.69**	**298**	IAmb	IAmb	17 19 49.6	
	comp=Z,3.8nm,1.2s						
G26K	**Porcupine Rive**	**61.99**	**336**	IAmb	IAmb	17 19 52.5	
	comp=Z,4.1nm,0.9s						
PTLB	**Pontes e Lacer**	**62.18**	**213**		**P**	**17 19 49.0**	**0.0**
L29M	**L29M**	**62.38**	**331**		**P**	**17 19 49.2**	**-0.7**
L29M				IAmb	IAmb	17 19 55.7	
	comp=Z,5.7nm,1.1s						
ELK	**Elko**	**62.55**	**301**		**P**	**17 19 51.0**	**-0.7**
ELK				IAmb	IAmb	17 20 04.2	
	comp=Z,5.5nm,1.4s						
E24K	**Your Creek**	**62.66**	**338**	IAmb	IAmb	17 20 02.3	
	comp=Z,3.7nm,1.1s						
I26K	**Coal Creek Min**	**62.82**	**334**		**P**	**17 19 51.6**	**-1.0**
I26K				IAmb	IAmb	17 20 01.8	
	comp=Z,4.4nm,1.2s						
B21K	**Ikpikpuk River**	**63.20**	**341**	IAmb	IAmb	17 19 57.1	
	comp=Z,3.5nm,1.1s						
PRP	**Porcupine Dome**	**63.45**	**335**		**P**	**17 19 56.9**	**-0.2**
PRP				IAmb	IAmb	17 20 35.0	
	comp=Z,7.1nm,1.4s						
COLD	**Coldfoot**	**63.72**	**338**	IAmb	IAmb	17 20 06.9	
	comp=Z,4.2nm,1.2s						
BRVK	**Borovoye**	**63.95**	**41**		**P**	**17 20 00.8**	**+0.5**
BRVK				IAmb	IAmb	17 20 02.7	
	comp=Z,8.5nm,1.4s						
BVAR	**Borovoye Array**	**64.02**	**41**	P	**P**	**17 20 01.3**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=314,slow=5.6,SNR=11						
	comp=Z,1.6nm,0.7s						
D20K	**Etivluk River**	**64.35**	**341**	IAmb	IAmb	17 20 05.7	
	comp=Z,4.5nm,1.1s						
ILAR	**Eielson Array**	**64.38**	**335**	P	**P**	**17 20 02.1**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=48,slow=6.1,SNR=7.7						
	comp=Z,0.7nm,0.8s						
F21K	**Alatna River**	**64.64**	**339**	IAmb	IAmb	17 20 08.9	
	comp=Z,4.5nm,1.3s						
HDA	**Harding Lake**	**64.64**	**335**	IAmb	IAmb	17 20 12.5	
	comp=Z,3.8nm,1.0s						
PAX	**Paxson**	**65.10**	**333**	IAmb	IAmb	17 20 47.7	
	comp=Z,4.3nm,1.1s						
NEA2	**Nenana**	**65.19**	**336**	IAmb	IAmb	17 20 09.5	
	comp=Z,4.4nm,0.9s						
E19K	**Redstone River**	**65.45**	**340**	IAmb	IAmb	17 20 12.9	
	comp=Z,2.9nm,0.9s						
NVAR	**Mina Array Bea**	**65.79**	**301**	P	**P**	**17 20 10.6**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=78,slow=7.4,SNR=1.2						
	comp=Z,0.1nm,0.3s						
LPAZ	**La Paz**	**67.03**	**221**	P	**P**	**17 20 22.1**	**+0.7**
LPAZ				IAmb	IAmb	17 20 37.5	
	comp=Z,5.7nm,1.2s						
LPAZ	**La Paz**	**67.03**	**221**	P	**P**	**17 20 21.7**	**+0.3**
	comp=Z,1.8nm,0.8s,baz=6.7,slow=7.3,SNR=3.9						
	comp=Z,1.8nm,0.8s						
TIXI	**Tiksi**	**67.11**	**7**	P	**P**	**17 20 21.3**	**+0.8**
TIXI				IAmb	IAmb	17 20 23.8	
	comp=Z,3.9nm,0.8s						
SKT	**Skwentna**	**67.82**	**334**	IAmb	IAmb	17 20 28.8	
	comp=Z,4.2nm,1.0s						
KURK	**Kurchatov**	**69.50**	**40**		**P**	**17 20 36.0**	**+0.1**
KURK				IAmb	IAmb	17 20 37.6	
	comp=Z,7.2nm,1.3s						
KURBB	**Kurchatov Arra**	**69.52**	**40**	P	**P**	**17 20 35.8**	**-0.1**
	comp=Z,2.3nm,0.8s,baz=311,slow=6.4,SNR=18						
	comp=Z,2.3nm,0.8s						
ZAA0	**Zalesovo Array**	**70.27**	**35**		**P**	**17 20 39.6**	**-0.9**
ZALV	**Zalesovo Beam**	**70.27**	**35**		**P**	**17 20 39.5**	**-1.0**
ZALV	**Zalesovo Beam**	**70.27**	**35**	P	**P**	**17 20 40.9**	**+0.4**
	comp=Z,2.7nm,0.9s,baz=324,slow=7.3,SNR=9.2						
	comp=Z,2.7nm,0.9s						
MKAR	**Makanchi Array**	**73.90**	**42**		**P**	**17 21 02.3**	**-0.1**
MKAR	**Makanchi Array**	**73.90**	**42**	P	**P**	**17 21 03.1**	**+0.6**
	comp=Z,1.5nm,0.9s,baz=322,slow=4.7,SNR=13						
	comp=Z,1.5nm,0.9s						
NRN	**Naryn**	**74.02**	**49**	P	**P**	**17 21 02.2**	**-1.4**
TARG	**Taragay, Kyrgy**	**74.86**	**48**	P	**P**	**17 21 08.1**	**-0.5**
KSH	**Kashi**	**75.24**	**51**	P	**P**	**17 21 13.4**	**+2.9**
KSH				PcP	**PcP**	**17 21 28.8**	**+4.9**
KSH				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NIL	**Nilore**	**77.36**	**57**	P	**P**	**17 21 20.1**	**-2.4**
NIL				IAmb	IAmb	17 21 32.8	
	comp=Z,5.7nm,1.1s						
SONM	**Songino Array**	**83.67**	**28**	P	**P**	**17 21 56.6**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=270,slow=3.0,SNR=3.9						
	comp=Z,0.6nm,0.6s						
QSPA	**South Pole Qui**	**130.35**	**180**	PKP	**PKiKP**	**17 28 38.8**	**+1.1**
	comp=Z,4.7nm,1.0s,baz=241,slow=2.6,SNR=7.4						

IDC ***19*** *17:22:26.7±1.3, 2°.12S×138°.56E, h0^{km}, mb3.4/4, mbtmp3.4/6, ML3.6/2, Error ellipse: s-maj=25.8km s-min=24.3km az=33.0*

DJA ***19*** *17:22:30.8±0.5, 2°S±4°×13°9E±°, h21^{km}±4^{km}, M4.5/7, mb4.4/1, MLv4.5/7*

ISC 19 17:22:30.5±0.8,**2°.2S**±0°.1×**138°.57E**±0°.05,**h22**^{km}±7^{km},**n13**, σ**0ˢ.92**/18,**mb3.5**/3,**Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.22**	**38**	P	**Pb**	**17 22 36.0**	**-0.3**
GENI	**Genyem**	**1.65**	**105**	P	**Pn**	**17 22 58.9**	**+0.7**
GENI				S	**Sb**	**17 23 20.8**	**+0.2**
JAY	**Jayapura**	**2.16**	**99**	Pn	**Pn**	**17 23 05.3**	**+0.2**
	8.8nm,0.3s,baz=215,slow=9.9,SNR=49						
JAY				Sn	**Sn**	**17 23 32.1**	**+0.8**
	15nm,0.3s,baz=336,slow=20,SNR=10.0						
	27nm,0.3s						
JAY	**Jayapura**	**2.16**	**99**	P	**Pn**	**17 23 05.4**	**+0.2**
JAY				S	**Sn**	**17 23 32.5**	**+1.2**
SRPI	**Serui, Papua**	**2.35**	**277**	P	**Pn**	**17 23 07.6**	**-0.2**
SRPI				S	**Sn**	**17 23 37.1**	**+1.0**
BAKI	**Biak**	**2.65**	**291**	P	**Pn**	**17 23 12.7**	**+0.8**
BAKI				S	**Sn**	**17 23 43.9**	**+0.5**
RKPI	**Ransiki, Papua**	**4.44**	**278**	P	**Pn**	**17 23 37.8**	**+1.2**
FAKI	**Fak Fak**	**6.36**	**263**	P	**Pn**	**17 24 03.5**	**+0.5**
WRA	**Warramunga Arr**	**18.14**	**193**	P	**P**	**17 26 41.4**	**-0.1**
	0.2nm,0.3s,baz=18,slow=12,SNR=8.6						
	0.4nm,0.5s						
FITZ	**Fitzroy Crossi**	**20.29**	**218**	P	**P**	**17 27 05.2**	**+0.2**
	0.9nm,0.6s,baz=52,slow=19,SNR=1.6						
	0.9nm,0.6s						
ASAR	**Alice Springs**	**21.85**	**192**	P	**P**	**17 27 20.3**	**-1.4**
	1.0nm,0.8s,baz=18,slow=11,SNR=11						
	1.0nm,0.8s						
MKAR	**Makanchi Array**	**69.28**	**322**	P	**P**	**17 33 36.8**	**+0.7**
	0.2nm,0.6s,baz=123,slow=5.3,SNR=2.2						
	0.2nm,0.6s						
BVAR	**Borovoye Array**	**78.79**	**325**	P	**P**	**17 34 29.8**	**-1.7**
	0.5nm,0.6s,baz=94,slow=4.5,SNR=1.8						
	0.5nm,0.6s						

ISC-PP ***19*** *17:24:48, 2°.27S×138°.46E, h17^{km}, Mwppsm6.5, Moment Tensor Solution. s45 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.24±.15; $M_{\theta\theta}$-0.01±.16; $M_{\phi\phi}$0.24±.18; $M_{r\theta}$-0.21±.10; $M_{\theta\phi}$-0.63±.10; $M_{\phi r}$-0.07±.11; Fault plane solution: $M_0$8.04000×10^{18} NP1:ϕ_s145.00000°,δ14.10000°, λ220.50000°. NP2:ϕ_s15.40000°,δ80.90000°,λ-79.20000°.*

IDC ***19*** *17:24:48.2±0.3, 2°.25S×138°.42E, h0^{km}, mb5.1/31, mbtmp5.2/37, ML5.0/4, MS6.1/51 Error ellipse: s-maj=14.3km s-min=8.9km az=81.0*

MOS ***19*** *17:24:48.3±1.5, 2°.17S×138°.35E, h10^{km}, mb6.0/51, MS6.1/38, Error ellipse: s-maj=7.5km s-min=4.4km az=107.8*

NEIC ***19*** *17:24:48.8±1.8, 2°.27S±0°.07×138°.46E±0°.05, h10^{km}±1^{km}, mb6.0/248, Ms_20 6.4/1018, Mwb6.2/60, Mww6.3/26, Error ellipse: s-maj=12.0km s-min=8.7km az=189.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.08; $M_{\theta\theta}$2.28; $M_{\phi\phi}$-2.20; $M_{r\theta}$-0.57; $M_{\theta\phi}$0.65; $M_{\phi r}$-0.69;*

Fault plane solution: $M_0$2.49000×10^{18} NP1: ϕ_s306.98000°,δ69.09000°,λ-0.17000°. NP2:ϕ_s37.04000°, δ89.84000°,λ-159.09000°. Principal axes: T 2.5378, Plg15.0000°, Azm170.0000°; N -0.0878, Plg69.0000°, Azm37.0000°; P -2.4500, Plg15.0000°, Azm264.0000°;

*NEIC **19** 17:24:49.3,2°.45S×138°.46E,h12^{km},Moment Tensor Solution. Duration: 7^s8 Moment tensor: Scale 10^{18}Nm; M_{rr}0.06; $M_{\theta\theta}$3.66; $M_{\phi\phi}$-3.71; $M_{r\theta}$0.25; $M_{\theta\phi}$0.81; $M_{\phi r}$-0.02;*
Fault plane solution: $M_0$3.78000×10^{18} NP1:ϕ_s38.71000°, δ86.82000°,λ177.76000°. NP2:ϕ_s128.83000°,δ87.76000°, λ3.18000°. Principal axes: T 3.7617, Plg4.0000°, Azm354.0000°; N 0.0403, Plg86.0000°, Azm164.0000°; P -3.8020, Plg1.0000°, Azm264.0000°;

*IPGP **19** 17:24:49.0,2°.25S×138°.40E,h13^{km},Mw6.3,Fault plane solution: NP1:ϕ_s40.00000°,δ89.00000°,λ-160.00000°. NP2:ϕ_s310.00000°,δ70.00000°,λ-1.00000°.*

*NEIC **19** 17:24:49.3,2°.35S×138°.36E,h12^{km}*

*NEIC **19** 17:24:49.2,2°.25S×138°.41E,h12^{km}*

*BJI **19** 17:24:50.2,2°.06S×138°.59E,h15^{km},mB6.3/88,mb5.7/67, Ms6.4/99,Ms7 6.3/99*

*DJA **19** 17:24:50.1±0.4,2°S±2°×13°9E±°,h10^{km}±3^{km},M6.2/126, mB6.5/120,mb6.0/126,MLv6.2/11,Mw6.3/154, Mw(mB)6.2/120,MwMwp6.0/111,Mwp6.1/111*

*GCMT **19** 17:24:55.8±0.0,2°.17S×138°.53E,h13^{km},MW6.3/172, Moment Tensor Solution. s169,c408; s172,c665; Duration: 3^s3 Moment tensor: Scale 10^{18}Nm; M_{rr}0.18±.01; $M_{\theta\theta}$3.00±.01; $M_{\phi\phi}$-3.18±.01; $M_{r\theta}$-0.06±.03; $M_{\theta\phi}$0.78±.01; $M_{\phi r}$-0.22±.03; Best double couple: $M_0$3.19400×10^{18} NP1:ϕ_s308.00000°,δ86.00000°, λ-1.00000°. NP2:ϕ_s38.00000°,δ89.00000°,λ-176.00000°.*
Principal axes: T 3.0980, Plg2.0000°, Azm173.0000°; N 0.1940, Plg86.0000°, Azm58.0000°; P -3.2890, Plg4.0000°, Azm263.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function

ISC 19 17:24:51.0±0.3,**2°.25S**±0°.02×**138°.45E**±0°.03,**h17**^{km}±1^{km}, **h17**^{km}**:pP-P,n1791,**σ**2^s22**/1741,**mb5.9**/275,**MS6.4**/613, **72C-42D,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.37	46	Pg	Pg	17 24 55.6	-3.0
SMPI				Sg	Sg	17 24 59.8	-4.0
GENI	Genyem	1.75	101	P	Pn	17 25 18.6	-2.0
GENI	Genyem	1.75	101	⇓P	Pn	17 25 18.9	-1.8
SRPI	Serui, Papua	2.24	280	P	Pn	17 25 26.2	-1.1
JAY	Jayapura	2.27	97	Pn	Pn	17 25 25.8	-2.0
	246nm,0.3s,baz=242,slow=10,SNR=127						
JAY				Sn	Sn	17 25 54.0	-1.4
	2µm,0.3s,baz=221,slow=19,SNR=14						
JAY				LR	LR	17 26 38.5	
	comp=Z,881µm,20.3s,baz=236,slow=48						
	1µm,0.3s						
JAY	Jayapura	2.27	97	P	Pn	17 25 24.7	-3.1
BAKI	Biak	2.56	294	P	Pn	17 25 31.6	-0.2
RKPI	Ransiki, Papua	4.33	280	P	Pn	17 25 55.7	-0.4
KMPI	Kaimana, Papua	4.94	253	P	Pn	17 26 06.0	+1.5
FAKI	Fak Fak	6.23	264		Pn	17 26 21.9	-0.3
FAKI	Fak Fak	6.23	264	P	Pn	17 26 23.8	+1.6
FAKI	Fak Fak	6.23	264	S	Sn	17 27 34.4	+1.3
FAKI	Fak Fak	6.23	264	P	Pn	17 26 22.3	+0.1
FAKI	Fak Fak	6.23	264	⇑P	Pn	17 26 22.6	+0.4
SWI	Sorong	7.31	281	P	Pn	17 26 38.3	+1.2
	4.9nm173µm18µm827nm,0.7s						
BNDI	Bandanaira	8.82	255	P	Pn	17 26 56.7	-1.1
BNDI	Bandanaira	8.82	255	P	Pn	17 26 59.0	+1.2
	36µm2µm,1.1s						
BNDI	Bandanaira	8.82	255	⇓P	Pn	17 26 59.8	+2.0
MANU	Manus Island	8.92	89		Pn	17 26 58.9	-0.3
MANU	Manus Island	8.92	89	⇓P	Pn	17 27 00.1	+1.0
SAUI	Saumlaki	9.12	231		Pn	17 26 58.9	-2.9
SAUI	Saumlaki	9.12	231	P	Pn	17 27 05.4	+3.5
MSAI	Masohi	9.57	263	P	Pn	17 27 09.3	+1.2
AAI	Ambon	10.34	262	P	Pn	17 27 19.1	+0.5
I39PW	PALAU INFRASON	10.47	338	Pn	Pn	17 27 22.2	+1.7
	baz=174,slow=19						
PMG	Port Moresby	11.21	130		Pn	17 27 30.1	-0.5
PMG	Port Moresby	11.21	130	Pn	Pn	17 27 31.7	+1.1
	216nm,0.9s,baz=318,slow=10,SNR=32						
PMG				Sn	Sn	17 29 35.0	-0.6
	baz=346,slow=19						
PMG				LR	LR	17 33 12.2	
	comp=Z,409µm,19.6s,baz=314,slow=45						
PMG	Port Moresby	11.21	130	P	Pn	17 27 32.7	+2.2
PMG	Port Moresby	11.21	130	P	Pn	17 27 33.1	+2.6
PMG	Port Moresby	11.21	130	⇑P	Pn	17 27 32.3	+1.7
NLAI	Namlea	11.38	265	P	Pn	17 27 33.6	+0.7
TNTI	Ternate	11.48	285		Pn	17 27 33.4	-0.8
TNTI	Ternate	11.48	285	P	Pn	17 27 34.5	+0.3
TNTI	Ternate	11.48	285	P	Pn	17 27 38.7	+4.5
	48µm22µm518nm,2.0s						
TNTI	Ternate	11.48	285	⇓P	Pn	17 27 38.1	+3.9
KDU	Kakadu	11.94	209	P	Pn	17 27 37.5	-3.1
KDU	Kakadu	11.94	209	P	Pn	17 27 40.8	+0.2
KDU	Kakadu	11.94	209	⇑P	Pn	17 27 38.0	-2.6
SANI	Sanana	12.45	271	P	Pn	17 27 47.1	-0.4
SANI				S	Sn	17 30 08.4	+2.3
SANI	Sanana	12.45	271	P	Pn	17 27 48.4	+0.8
SANI	Sanana	12.45	271	P	Pn	17 27 46.9	-0.7
	96µm12µm925nm,0.8s						
SANI	Sanana	12.45	271	⇓P	Pn	17 27 46.8	-0.7
COEN	Coen	12.54	158		Pn	17 27 46.9	-1.9
COEN	Coen	12.54	158	P	Pn	17 27 47.4	-1.4
	comp=Z,524nm,0.6s,comp=Z,0.0nm						
COEN	Coen	12.54	158	P	Pn	17 27 49.3	+0.5
COEN	Coen	12.54	158	⇑P	Pn	17 27 48.2	-0.6
MTN	Manton Dam	12.78	214		Pn	17 27 50.1	-1.9
MTN	Manton Dam	12.78	214	P	Pn	17 27 50.7	-1.3
	comp=Z,0.0nmcomp=Z,677nm,1.0s						
MTN	Manton Dam	12.78	214	P	Pn	17 27 51.5	-0.5
MTN	Manton Dam	12.78	214	S	Sn	17 30 14.2	+0.2
MTN	Manton Dam	12.78	214	⇑P	Pn	17 27 51.3	-0.7
RABL	Rabaul	13.83	98		Pn	17 28 05.8	-0.7
RABL	Rabaul	13.83	98	⇓P	Pn	17 28 05.5	-1.0
SGSI	Sangihe	14.19	295	P	Pn	17 28 11.5	+0.1
	comp=Z,58µmcomp=Z,27µmcomp=Z,730nm,1.3s						
KMSI	Cibinong	14.73	281	P	Pn	17 28 19.1	+0.3
LUWI	Luwuk	15.71	274	P	Pn	17 28 31.2	-0.5
LUWI	Luwuk	15.71	274		Pn	17 28 30.5	-1.3
LUWI				IAmb	IAmb	17 28 35.6	
	comp=Z,922nm,1.1s						
LUWI	Luwuk	15.71	274	P	Pn	17 28 32.3	+0.5
LUWI	Luwuk	15.71	274	P	Pn	17 28 31.9	+0.1
	comp=Z,77µmcomp=Z,21µmcomp=Z,1µm,1.0s						
LUWI	Luwuk	15.71	274	⇓P	Pn	17 28 30.8	-1.0
DAV	Davao City (W)	15.83	306	Pn	Pn	17 28 34.1	+0.8
	comp=Z,122nm,0.4s,baz=38,slow=18,SNR=6.2						
DAV	Davao City (W)	15.83	306	P	Pn	17 28 33.8	+0.5
DAV	Davao City (W)	15.83	306	P	Pn	17 28 32.2	-1.0
DAV	Davao City (W)	15.83	306	P	Pn	17 28 32.0	-1.3
SOEI	Soe	15.94	242	S	S	17 31 40.0	-5.4
SOEI				P	Pn	17 28 36.2	+1.3
SOEI	Soe	15.94	242		Pn	17 28 31.8	-3.1
SOEI	Soe	15.94	242	P	Pn	17 28 35.2	+0.3
SOEI	Soe	15.94	242	P	Pn	17 28 34.0	-0.9
	comp=Z,71µmcomp=Z,23µmcomp=Z,2µm,1.2s						
SOEI	Soe	15.94	242	⇓P	Pn	17 28 32.5	-2.4
BBSI	Bau Bau	16.16	258	P	P	17 28 39.3	-1.4
KNRA	Kununurra	16.41	215		Pn	17 28 38.3	-2.3
KNRA				IAmb	IAmb	17 28 47.2	
	comp=Z,1µm,1.6s						
KNRA	Kununurra	16.41	215	P	Pn	17 28 39.5	-1.1
	comp=Z,0.0nmcomp=Z,878nm,0.8s						
BATI	Baumata	16.68	241	Pn	Pn	17 28 42.6	-1.5
	comp=Z,6.3nm,0.3s,baz=125,slow=4.4,SNR=15						
BATI				Sn	Sn	17 31 50.5	+1.3
	comp=Z,2.9nm,0.3s,baz=104,slow=19,SNR=1.0						
	comp=Z,153nm,1.0s						
BATI	Baumata	16.68	241	P	Pn	17 28 41.9	-2.2
	comp=Z,46µmcomp=Z,25µmcomp=Z,1µm,0.9s						
MRSI	Marisa	16.72	279	P	Pn	17 28 44.1	-0.6
	comp=Z,62µmcomp=Z,12µmcomp=Z,535nm,1.2s						
MTSU	Mount Surprise	16.81	160	P	Pn	17 28 45.9	+0.2
	comp=Z,329nm,0.8s						
MTSU	Mount Surprise	16.81	160	P	P	17 28 48.0	+0.2
APSI	Ampana	16.84	274	P	P	17 28 47.5	-0.7
	comp=Z,43µmcomp=Z,31µmcomp=Z,2µm,1.5s						
GUMO	Guam	16.98	22	Pn	Pn	17 28 44.6	-3.2
GUMO	Guam	16.98	22	Pn	P	17 28 48.6	-1.0
	comp=Z,6.2nm,0.3s,baz=202,slow=12,SNR=8.3						
GUMO				Sn	Sn	17 31 59.1	+2.8
	comp=Z,3.3nm,0.3s,baz=161,slow=18,SNR=1.8						
GUMO				LR	LR	17 35 23.1	
	comp=Z,51µm,20.1s,baz=204,slow=37						
	comp=Z,105nm,0.8s						
GUMO	Guam	16.98	22	P	P	17 28 50.8	+1.1
GUMO	Guam	16.98	22	⇑P	Pn	17 28 46.5	-1.3
MMRI	Maumere	17.33	248		Pn	17 28 48.6	-3.7
MMRI	Maumere	17.33	248	P	P	17 28 54.0	+0.3
MMRI	Maumere	17.33	248	P	Pn	17 28 51.5	-0.8
MMRI	Maumere	17.33	248	⇓P	Pn	17 28 51.0	-1.3
WB0	Warramunga Arr	17.86	193	P	Pn	17 28 54.8	-4.1
EDFI	Ende, Flores	17.88	248	P	Pn	17 28 57.7	-1.5
WB9	Warramunga Arr	17.88	193	P	Pn	17 28 57.1	-2.0
TOLI2	Tolitoli	17.97	281	P	Pn	17 28 57.9	-2.4
TOLI2	Tolitoli	17.97	281	P	P	17 29 00.5	-0.3
WR8	Warramunga Arr	18.02	192	P	Pn	17 28 58.1	-2.7
WRAB	Tennant Creek	18.03	193	Pn	Pn	17 28 56.5	-4.4
WRAB	Tennant Creek	18.03	193	*c i*P	Pn	17 28 58.6	-2.3
WRAB				pmax	pmax		
	comp=Z,1µm,1.0s						
WRA	Warramunga Arr	18.04	193	Pn	Pn	17 28 55.3	-5.8
WRA	Warramunga Arr	18.04	193	P	Pn	17 28 58.5	-2.5
	comp=Z,5.0nm,0.3s,baz=17,slow=12,SNR=45						
WRA				S	Sn	17 32 12.3	-10
	comp=Z,362nm,1.0s,baz=8.3,slow=22,SNR=8.0						
WRA				LR	LR	17 36 28.8	
	comp=Z,255µm,18.0s,baz=12,slow=39						
	comp=Z,74nm,0.8s						
WRA	Warramunga Arr	18.04	193	*i* P	Pn	17 28 59.2	-1.9
WRA				pmax	pmax		
	comp=Z,55nm,0.6s						
QIS	Mount Isa	18.23	177	P	Pn	17 28 59.6	-3.9
BSSI	Bau Bau, Buton	18.32	257	P	P	17 29 06.0	+1.4
	comp=Z,72µmcomp=Z,32µmcomp=Z,878nm,1.0s						
BNSI	Bone	18.43	263	P	Pn	17 29 07.7	+1.8
	comp=Z,2µm,1.2s						
TTSI	Tana Toraja	18.62	267	P	Pn	17 29 10.8	+2.5
	comp=Z,33µmcomp=Z,1µm,1.8s						
PCI	Palu	18.65	274	P	Pn	17 29 11.2	+2.6
	comp=Z,39µmcomp=Z,1µm,1.1s						
MPSI	Mapaga	18.72	278	P	Pn	17 29 10.1	+0.7
SPSI	Sidrap Palu	18.73	264	P	Pn	17 29 10.6	+1.1
	comp=Z,752nm,0.8s						
KAPI	Kappang	18.86	261	P	P	17 29 10.6	+0.1
KAPI	Kappang	18.86	261	P	Pn	17 29 13.8	+2.7
	comp=Z,166nm,1.0s,baz=75,slow=12,SNR=17						
KAPI	Kappang	18.86	261	P	Pn	17 29 11.8	+0.7
KAPI	Kappang	18.86	261	*d i*P	Pn	17 29 11.7	+0.7
KAPI	Kappang	18.86	261	P	Pn	17 29 11.6	+0.6
KAPI	Kappang	18.86	261	⇓P	Pn	17 29 11.0	-0.1
CTAO	Charters Tower	19.30	157	P	P	17 29 13.0	-2.3
CTAO	Charters Tower	19.30	157	P	Pn	17 29 16.9	+0.5
CTAO	Charters Tower	19.30	157	P	P	17 29 13.0	-2.3
CTAO				pmax	pmax		
	comp=Z,257nm,1.0s						
CTAO	Charters Tower	19.30	157	⇑P	P	17 29 15.3	0.0
BASI	Baing, Sumba	19.44	245	P	Pn	17 29 17.3	-0.7
	comp=Z,35µmcomp=Z,16µmcomp=Z,730nm,0.9s						
WSI	Waingapu	19.49	247	P	P	17 29 15.6	-1.8
	comp=Z,38µmcomp=Z,14µmcomp=Z,1µm,1.0s						
FITZ	Fitzroy Crossi	20.15	218	P	P	17 29 21.4	-3.2
FITZ	Fitzroy Crossi	20.15	218	P	P	17 29 23.0	-1.6
	comp=Z,89nm,1.4s						
FITZ	Fitzroy Crossi	20.15	218	P	P	17 29 22.8	-1.7
	comp=Z,20nm,0.8s,baz=41,slow=13,SNR=17						
FITZ				S	S	17 33 00.7	-10
	comp=Z,466nm,0.8s,baz=81,slow=16,SNR=6.7						
	comp=Z,20nm,0.8s						
FITZ	Fitzroy Crossi	20.15	218	P	Pn	17 29 26.4	-0.1
WBSI	Waikabubak, Su	20.31	248	P	P	17 29 24.2	-2.3
	comp=Z,38µmcomp=Z,881nm,1.1s						
MYLDM	Lahad Datu	21.25	290	P	P	17 29 39.0	+2.5
SMKI	Samarinda	21.31	275	P	P	17 29 40.2	+3.0
	comp=Z,37µmcomp=Z,2µm,1.4s						
BKB	Balikpapan	21.56	272	P	P	17 29 36.6	-3.3
BKB	Balikpapan	21.56	272	P	P	17 29 41.3	+1.4
BKB	Balikpapan	21.56	272	P	P	17 29 42.4	+2.5
BKB	Balikpapan	21.56	272	⇓P	P	17 29 44.0	+4.1
PLAI	Plampang	21.58	252	P	P	17 29 40.1	0.0
PLAI	Plampang	21.58	252	P	P	17 29 38.0	-2.1
	comp=Z,30µmcomp=Z,526nm,1.0s						
AS01	Alice Springs	21.73	191	P	P	17 29 44.2	+2.5
AS31	Alice Springs	21.74	191	P	P	17 29 40.6	-1.1
	comp=Z,0.0nmcomp=Z,510nm,0.9s						
ASAR	Alice Springs	21.74	191	P	P	17 29 39.8	-2.0
ASAR	Alice Springs	21.74	191	P	P	17 29 40.7	-1.1
	comp=Z,82nm,0.7s,baz=23,slow=10,SNR=131						
ASAR				S	S	17 33 38.5	-3.4
	comp=Z,133nm,1.0s,baz=13,slow=23,SNR=5.5						
ASAR				LR	LR	17 38 35.9	
	comp=Z,123µm,19.8s,baz=16,slow=38						
	comp=Z,82nm,0.7s						
SAVO	Savo Central	22.33	109	P	P	17 29 50.2	+2.0
HNR	Honiara	22.54	109	P	P	17 29 46.9	-3.4
HNR	Honiara	22.54	109	P	P	17 29 48.9	-1.4
	comp=Z,141nm,0.6s,baz=248,slow=3.4,SNR=15						
HNR				S	S	17 33 57.9	+0.9
	comp=Z,102nm,1.1s,baz=334,slow=18,SNR=1.4						
HNR				LR	LR	17 39 04.3	
	comp=Z,58µm,21.8s,baz=282,slow=38						
	comp=Z,141nm,0.6s						
HNR	Honiara	22.54	109	P	P	17 29 52.8	+2.4
HNR	Honiara	22.54	109	⇓P	P	17 29 47.1	-3.3
ALEG	Aligegeo Malai	23.06	107	P	P	17 29 58.0	+2.1
NGOA	Tingoa Renbel	23.34	114	P	P	17 30 02.6	+3.9
KKM	Kota Kinabalu	23.68	290	P	P	17 30 00.1	-2.1
KKM				IAmb	IAmb	17 30 23.0	
	comp=Z,1µm,1.5s						
KKM	Kota Kinabalu	23.68	290	P	P	17 30 03.6	+1.4
KKM	Kota Kinabalu	23.68	290	⇑P	P	17 30 01.8	-0.4
TGY	Tagaytay City	23.77	314	LR	LR	17 40 32.8	
	comp=Z,32µm,19.6s,baz=130,slow=40						
SRBI	Singaraja	23.84	255	P	P	17 30 02.8	-0.8
	comp=Z,42µmcomp=Z,15µmcomp=Z,450nm,1.6s						
DNP	Denpasar	23.98	254	P	P	17 30 06.3	+1.3
	comp=Z,36µmcomp=Z,24µmcomp=Z,669nm,1.4s						
HURO	Huro Makira	24.68	110	P	P	17 30 12.8	+1.5
WRKA	Warakurna	24.68	203	P	P	17 30 09.7	-1.6
	comp=Z,0.0nmcomp=Z,315nm,1.0s						
GD1S	Gladstone Soft	24.75	151	P	P	17 30 14.8	+3.0
QLP	Quilpie	24.83	168	P	P	17 30 10.6	-1.9
QLP	Quilpie	24.83	168	P	P	17 30 16.0	+3.5
QLP	Quilpie	24.83	168	⇑P	P	17 30 12.5	0.0
KMMI	Kalianget	24.85	258	P	P	17 30 14.5	+1.6
	comp=Z,43µmcomp=Z,1µm,1.4s						
JAGI	Jajag, Banyuwa	24.95	255	P	P	17 30 10.4	-3.4
JAGI				IAmb	IAmb	17 30 26.4	
	comp=Z,247nm,0.9s						
JAGI	Jajag, Banyuwa	24.95	255	P	P	17 30 15.4	+1.6
JAGI	Jajag, Banyuwa	24.95	255	P	P	17 30 12.2	-1.6
	comp=Z,27µmcomp=Z,8µmcomp=Z,339nm,1.0s						
JAGI	Jajag, Banyuwa	24.95	255	⇑P	P	17 30 13.0	-0.9
GMJI	Gumukmas	25.59	256	P	P	17 30 19.9	+0.3
	comp=Z,23µmcomp=Z,8µmcomp=Z,150nm,0.9s						
BWJI	Bawean	25.97	261	P	P	17 30 23.9	+0.9
	comp=Z,38µmcomp=Z,12µmcomp=Z,516nm,0.9s						
EIDS	Eidsvold	26.01	153	P	P	17 30 24.6	+1.3
	comp=Z,0.0nmcomp=Z,1µm,1.8s						
EIDS	Eidsvold	26.01	153	P	P	17 30 24.6	+1.3
EIDS	Eidsvold	26.01	153	⇓P	P	17 30 24.2	+1.0
RMQ	Roma	26.05	159	P	P	17 30 27.1	+3.4
MBWA	Marble Bar	26.19	223	P	P	17 30 23.1	-1.9
MBWA				IAmb	IAmb	17 30 34.3	
	comp=Z,180nm,0.7s						
MBWA	Marble Bar	26.19	223	P	P	17 30 24.2	-0.8
	comp=Z,0.0nmcomp=Z,267nm,0.9s						
MBWA	Marble Bar	26.19	223	P	P	17 30 25.1	+0.2
MBWA	Marble Bar	26.19	223	P	P	17 30 27.7	+2.7
MBWA				S	S	17 34 59.2	+2.7
MBWA	Marble Bar	26.19	223	⇑P	P	17 30 24.6	-0.3
GRJI	Gresik	26.29	259	P	P	17 30 28.4	+2.5
PSA00	Pilbara Seismi	26.40	222	P	P	17 30 24.7	-2.1
PSA00	Pilbara Seismi	26.40	222	IAmb	IAmb	17 30 52.3	
	comp=Z,225nm,0.8s						
PSA00	Pilbara Seismi	26.40	222	P	P	17 30 25.4	-1.5
	comp=Z,290nm,0.8s						
PSA00	Pilbara Seismi	26.40	222	P	P	17 30 26.5	-0.3
TBJI	Tambak Boyo	26.89	259	P	P	17 30 33.0	+1.6
STKI	Sintang	27.06	275	P	P	17 30 34.8	+1.9
	comp=Z,23µmcomp=Z,314nm,1.3s						
NGJI	Ngawi	27.36	258	P	P	17 30 36.9	+1.3
	comp=Z,36µmcomp=Z,11µmcomp=Z,248nm,1.3s						
PCJI	Pacitan	27.78	257	P	P	17 30 39.9	+0.6
	comp=Z,19µmcomp=Z,4µmcomp=Z,173nm,1.5s						
WOJI	Wonogiri, Jawa	27.96	258	P	P	17 30 41.8	+0.8
	comp=Z,22µmcomp=Z,5µmcomp=Z,211nm,1.2s						
SMRI	Semarang	28.31	259	P	P	17 30 45.7	+1.6
SMRI	Semarang	28.31	259	P	P	17 30 45.5	+1.4
	comp=Z,350nm,1.1s						
UGM	Wanagama	28.36	258	P	P	17 30 45.4	+0.8
KSM	Kuching	28.37	277	P	P	17 30 43.6	-1.1
KSM	Kuching	28.37	277	P	P	17 30 46.5	+1.8
KSM	Kuching	28.37	277	⇑P	P	17 30 45.9	+1.2
LUES	Luesalemba Tem	28.52	108	P	P	17 30 50.3	+4.3
JCJ	Chichijima	29.39	7	LR	LR	17 40 53.4	
	comp=Z,20µm,19.6s,baz=135,slow=33						
STKA	Stephens Creek	29.62	175	P	P	17 30 55.7	+0.1
	comp=Z,0.0nmcomp=Z,708nm,1.5s						
STKA	Stephens Creek	29.62	175	P	P	17 30 55.0	-0.5
	comp=Z,37nm,0.7s,baz=344,slow=9.2,SNR=35						
STKA				S	S	17 35 51.5	+1.2
	comp=Z,8.1nm,0.7s,baz=355,slow=23,SNR=1.0						
STKA				LR	LR	17 44 57.9	
	comp=Z,103µm,18.3s,baz=343,slow=41						
	comp=Z,37nm,0.7s						
STKA	Stephens Creek	29.62	175	P	P	17 30 57.3	+1.8
STKA	Stephens Creek	29.62	175	*c i*P	P	17 30 56.4	+0.9
CMSA	Cobar Meteorol	29.93	168	P	P	17 30 58.6	+0.4
	comp=Z,0.0nmcomp=Z,540nm,1.3s						
CMSA	Cobar Meteorol	29.93	168	P	P	17 31 00.8	+2.6
FORT	Forrest	30.03	198	P	P	17 30 56.5	-2.6
FORT	Forrest	30.03	198	P	P	17 30 59.6	+0.4
	comp=Z,0.0nmcomp=Z,343nm,0.9s						
FORT	Forrest	30.03	198	P	P	17 31 02.0	+2.8
FORT	Forrest	30.03	198	⇓P	P	17 30 59.5	+0.4
JCJI	Jatiwangi	30.38	261	P	P	17 31 04.6	+2.2
	comp=Z,22µmcomp=Z,8µmcomp=Z,327nm,1.3s						
YULB	Yu-li	30.47	328	P	P	17 31 01.5	-1.6
YULB	Yu-li	30.47	328	P	P	17 31 05.2	+2.0
BBOO	Buckleboo	30.48	184	P	P	17 31 01.9	-1.3
BBOO				IAmb	IAmb	17 31 52.0	
	comp=Z,150nm,0.8s						
BBOO				IAMs_20	IAMs_20	17 43 37.2	
	comp=Z,69µm,18.0s						
BBOO	Buckleboo	30.48	184	P	P	17 31 02.4	-0.8
	comp=Z,0.0nmcomp=Z,166nm,1.6s						
BBOO	Buckleboo	30.48	184	P	P	17 31 04.7	+1.5
JOW	Kunigami	30.53	342	LR	LR	17 42 00.7	
	comp=Z,64µm,20.4s,baz=174,slow=34						
JOW	Kunigami	30.53	342	P	P	17 31 05.7	+2.1
WHYH	Whyalla	30.64	181	P	P	17 31 07.3	+2.8
ARMA	Armidale	30.68	157	P	P	17 31 04.6	-0.4
ARMA				IAMs_20	IAMs_20	17 43 27.8	
	comp=Z,87µm,18.0s						
ARMA	Armidale	30.68	157	P	P	17 31 04.9	-0.1
	comp=Z,0.0nmcomp=Z,603nm,2.1s						
ARMA	Armidale	30.68	157	P	P	17 31 07.1	+2.0
ARMA	Armidale	30.68	157	⇑P	P	17 31 07.0	+2.0
TPUB	Ta-pu	30.76	327	IAMs_20	IAMs_20	17 42 10.8	
	comp=Z,63µm,19.0s						
TPUB	Ta-pu	30.76	327	P	P	17 31 07.7	+2.0
TPI	Tanjungpandan	30.77	268	P	P	17 31 06.4	+0.5
	comp=Z,20µmcomp=Z,4µmcomp=Z,200nm,1.0s						
MEEK	Meekatharra	30.83	216	P	P	17 31 08.6	+2.3
MEEK	Meekatharra	30.83	216	P	P	17 31 08.6	+2.3
NACB	Ninganchiao	30.95	329	P	P	17 31 05.3	-2.0
NACB				IAmb	IAmb	17 31 14.6	
	comp=Z,185nm,1.1s						
NACB	Ninganchiao	30.95	329	P	P	17 31 09.1	+1.7
SSLB	Suanglung	30.98	328	P	P	17 31 03.6	-4.0
SSLB				IAMs_20	IAMs_20	17 42 14.5	
	comp=Z,72µm,20.0s						
SSLB	Suanglung	30.98	328	P	P	17 31 07.8	+0.2
HTT	Hallett	31.02	179	P	P	17 31 08.0	0.0
	comp=Z,29nm,0.7s						
HTT	Hallett	31.02	179	P	P	17 31 11.0	+3.0
HTT	Hallett	31.02	179	P	P	17 31 08.5	+0.5
HTT	Hallett	31.02	179	⇓P	P	17 31 08.2	+0.2
GIRL	Giralia	31.04	227	P	P	17 31 09.2	+1.1
	comp=Z,0.0nmcomp=Z,452nm,1.1s						
GIRL	Giralia	31.04	227	P	P	17 31 10.3	+2.1
GIRL	Giralia	31.04	227	⇓P	P	17 31 10.2	+2.1
LEM	Lembang	31.06	261	P	P	17 31 08.8	+0.1
BBJI	Bungbulang	31.11	259	P	P	17 31 08.0	-1.0
SANVU	Saraoutou	31.23	117	P	P	17 31 08.3	-1.6
SANVU				IAmb	IAmb	17 31 36.9	
	comp=Z,265nm,1.2s						
SANVU	Saraoutou	31.23	117	P	P	17 31 14.2	+4.2
YHNB	Yeheng	31.47	329	IAMs_20	IAMs_20	17 42 08.8	
	comp=Z,82µm,20.0s						
YHNB	Yeheng	31.47	329	P	P	17 31 13.8	+1.7
CNJI	Cibinong	31.60	260	P	P	17 31 13.9	+0.7
TATO	Taipei	31.67	330	P	P	17 31 15.8	+2.1
VLAKA	Lakatoro	31.68	118	P	P	17 31 17.8	+3.9
DBJI	Dramaga	31.88	261	P	P	17 31 16.6	+0.8
	comp=Z,18µmcomp=Z,152nm,1.4s						
SKJI	Sukabumi	32.12	260	P	P	17 31 18.1	+0.2
	comp=Z,15µmcomp=Z,5µmcomp=Z,276nm,1.0s						
PPBI	Pangkal Pinang	32.29	270	P	P	17 31 20.4	+1.1
GHSS	Government Hou	32.51	180	P	P	17 31 23.6	+2.7
NTLH	Newcastle Hard	32.93	159	P	P	17 31 27.8	+3.1
CGJI	Cibinong	32.93	261	P	P	17 31 23.6	-1.4
	comp=Z,23µmcomp=Z,3µmcomp=Z,214nm,0.9s						
DLV	Lat	32.94	296	IAmb	IAmb	17 32 03.4	
	comp=Z,188nm,1.5s						
DLV	Lat	32.94	296	P	P	17 31 26.5	+1.3
DLV	Lat	32.94	296	⇑P	P	17 31 24.4	-0.8
DVP	Devils Point	32.99	120	P	P	17 31 29.3	+3.9
MGCD	Mangrove Creek	33.01	160	P	P	17 31 26.0	+0.6
	comp=Z,266nm,1.4s						
MGCD	Mangrove Creek	33.01	160	P	P	17 31 29.0	+3.6
QZH	Quanzhou	33.19	326	P	P	17 31 25.1	-1.9
QZH				S	S	17 36 43.8	-2.4
QZH				pmax	pmax		
	comp=Z,130nm,1.0s						
QZH				pmax	pmax		
	comp=Z,5µm,10.0s						
QZH				LR	LR		
	comp=Z,21µm,18.9s						
QZH				LR	LR		
	comp=Z,28µm,18.9s						
QZH				LR	LR		
	comp=Z,52µm,19.2s						
YNG	Young	33.21	165	P	P	17 31 28.7	+1.5
	comp=Z,438nm,1.6s						
SYDH	Sydney Hard Ro	33.40	161	P	P	17 31 31.9	+3.2
RIV	Riverview	33.59	161	P	P	17 31 30.3	-0.1
	comp=Z,893nm,2.3s						
RIV	Riverview	33.59	161	P	P	17 31 34.3	+3.9
RIV	Riverview	33.59	161	⇓P	P	17 31 33.4	+3.0
RIV	Riverview	33.59	161	⇓P	P	17 31 33.4	+3.0
DZM	Mont Dzumac	33.59	128	P	P	17 31 27.8	-2.9
DZM	Mont Dzumac	33.59	128	*e*P	P	17 31 27.1	-3.6
	comp=Z,173nm,1.4s						
DZM	Mont Dzumac	33.59	128	*e*PP	PP	17 32 47.0	+0.1
	comp=Z,4µm,24.0s						
DZM				*e*S	S	17 36 51.4	-1.4
	comp=Z,22µm,26.8s						
DZM				*e*LR	LR	17 40 24.1	
	comp=Z,90µm,23.4s						
DZM	Mont Dzumac	33.59	128	P	P	17 31 34.3	+3.6
DZM	Mont Dzumac	33.59	128	⇑P	P	17 31 32.2	+1.5
PMBI	Palembang	33.65	268	P	P	17 31 33.3	+2.1
PMBI	Palembang	33.65	268	P	P	17 31 33.2	+2.1
	comp=Z,13µmcomp=Z,530nm,1.1s						
ONTNC	Ouen Toro	33.73	128	P	P	17 31 31.4	-0.4
ONTNC				IAMs_20	IAMs_20	17 45 38.9	
	comp=Z,63µm,21.0s						
ONTNC	Ouen Toro	33.73	128	P	P	17 31 35.3	+3.5
HKC	Hong Kong Obse	34.02	317	⇑P	P	17 31 37.0	+2.8
HKPS	Hong Kong Po S	34.02	317	P	P	17 31 32.3	-2.0
WOLH	Wollongong Har	34.03	161	P	P	17 31 37.5	+3.3
OUENC	Ouen Island, N	34.09	128	P	P	17 31 38.5	+3.6
MORW	Morawa	34.15	216	IAmb	IAmb	17 31 50.7	
	comp=Z,152nm,1.1s						
MORW	Morawa	34.15	216	P	P	17 31 35.5	+0.1
	comp=Z,0.0nmcomp=Z,152nm,1.1s						
MORW	Morawa	34.15	216	P	P	17 31 38.3	+2.9
MORW	Morawa	34.15	216	⇑P	P	17 31 36.9	+1.5
MDSI	Maura Dua	34.28	265	P	P	17 31 36.7	0.0
	comp=Z,13µmcomp=Z,6µmcomp=Z,336nm,1.6s						
CAN	Canberra	34.34	165	IAMs_20	IAMs_20	17 47 23.5	
	comp=Z,90µm,20.0s						
CAN	Canberra	34.34	165	P	P	17 31 38.8	+1.8
	comp=Z,0.0nmcomp=Z,437nm,2.0s						
CAN	Canberra	34.34	165	P	P	17 31 40.0	+3.0
CAN	Canberra	34.34	165	P	P	17 31 38.6	+1.6
CAN	Canberra	34.34	165	⇓P	P	17 31 38.5	+1.5

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LWLI  Liwa              34.42 264   P        P        17 31 38.6 +0.5
      comp=Z,17µmcomp=Z,6µmcomp=Z,289nm,0.8s
CNB   Canberra Magne    34.43 164   P        P        17 31 39.0 +1.2
      comp=Z,0.0nmcomp=Z,473nm,1.7s
CNB   Canberra Magne    34.43 164   P        P        17 31 40.4 +2.6
ARPS  Mount Arapiles    34.49 175   P        P        17 31 38.2  0.0
      comp=Z,385nm,0.8s
ARPS  Mount Arapiles    34.49 175   P        P        17 31 40.0 +1.8
H11S3 WAKE ISLAND Hy    34.60  52   T        T        18 07 31.9
      baz=236,slow=75,SNR=91
H11S2 WAKE ISLAND Hy    34.62  52   T        T        18 07 38.2
      baz=236,slow=75,SNR=114
H11S1 WAKE ISLAND Hy    34.62  52   T        T        18 07 38.7
      baz=236,slow=75,SNR=105
PINNC Pines Island,     34.67 128   P        P        17 31 44.0 +4.1
INH   Isangel           34.70 122   P        P        17 31 43.9 +3.7
BLDU  Ballidu           34.92 214   P        P        17 31 42.5 +0.4
      comp=Z,147nm,1.1s
BLDU  Ballidu           34.92 214   P        P        17 31 44.4 +2.4
LHI   Lord Howe Isla    35.02 148   P        P        17 31 45.4 +2.5
GZH   Guangzhou         35.11 317   P        P        17 31 44.8 +1.1
GZH                                 PP       PP       17 33 07.3 +3.8
GZH                                 S        S        17 37 17.9 +2.0
GZH                                 pmax     pmax
      comp=Z,4µm,8.7s
GZH                                 LR       LR
      comp=Z,25µm,22.3s
GZH                                 LR       LR
      comp=Z,19µm,18.1s
GZH                                 LR       LR
      comp=Z,31µm,17.7s
KLBR  Kellerberrin      35.11 212   P        P        17 31 41.6 -2.1
KLBR  Kellerberrin      35.11 212   P        P        17 31 44.7 +1.0
QIZ   Qiongzhong        35.18 308   IAmb     IAmb     17 32 01.9
      comp=Z,212nm,1.3s
QIZ   Qiongzhong        35.18 308   P        P        17 31 44.1 -0.3
QIZ                                 PP       PP       17 33 06.1 +1.7
QIZ                                 S        S        17 37 18.3 +1.1
QIZ                                 pmax     pmax
      comp=Z,94nm,1.4s
QIZ                                 LR       LR
      comp=Z,22µm,17.9s
QIZ                                 LR       LR
      comp=Z,39µm,17.9s
QIZ   Qiongzhong        35.18 308   P        P        17 31 44.3 -0.1
MNAI  Manna             35.49 266   P        P        17 31 49.8 +2.6
      comp=Z,12µmcomp=Z,358nm,1.2s
TOO   Toolangi          35.74 170   IAmb     IAmb     17 31 57.2
      comp=Z,261nm,1.4s
TOO                                 IAMs_20  IAMs_20  17 47 02.7
      comp=Z,56µm,22.0s
TOO   Toolangi          35.74 170 ⇑P        P        17 31 51.7 +2.6
TOO   Toolangi          35.74 170 ⇑P        P        17 31 51.7 +2.6
KSI   Kapahiang         35.83 267   P        P        17 31 49.7 -0.5
      comp=Z,13µmcomp=Z,7µmcomp=Z,305nm,1.0s
JNU   Nakatsue          35.90 349   IAmb     IAmb     17 31 57.7
      comp=Z,297nm,1.3s
JNU   Nakatsue          35.90 349   P        P        17 31 49.7 -0.7
      comp=Z,68nm,1.1s,baz=167,slow=6.4,SNR=21
JNU                                 LR       LR       17 46 20.3
      comp=Z,34µm,19.3s,baz=162,slow=36
      comp=Z,68nm,1.1s
JNU   Nakatsue          35.90 349   P        P        17 31 51.5 +1.1
JNU   Nakatsue          35.90 349 ⇓P        P        17 31 49.6 -0.7
MLBS  Spotswood, Mel    35.90 171   P        P        17 31 53.7 +3.4
MILA  Mila              36.02 165   P        P        17 31 53.3 +1.8
      comp=Z,108nm,1.5s
MILA  Mila              36.02 165 ⇓P        P        17 31 53.6 +2.2
JMN   Monobe            36.04 354   IAmb     IAmb     17 31 59.3
      comp=Z,191nm,1.1s
JMN                                 IAMs_20  IAMs_20  17 43 31.6
      comp=Z,77µm,22.0s
JMN   Monobe            36.04 354   P        P        17 31 52.5 +0.9
JMN   Monobe            36.04 354 ⇑P        P        17 31 51.0 -0.6
GEXS  Deakin Univers    36.18 172   P        P        17 31 56.3 +3.6
MUN   Mundaring         36.24 213   P        P        17 31 55.9 +2.6
MUN   Mundaring         36.24 213   P        P        17 31 55.8 +2.5
NWAO  Narrogin (SRO)    36.44 211   P        P        17 31 52.2 -2.7
NWAO  Narrogin (SRO)    36.44 211   IAMs_20  IAMs_20  17 46 24.3
      comp=Z,73µm,20.0s
NWAO  Narrogin (SRO)    36.44 211   LR       LR       17 47 53.5
      comp=Z,143µm,18.9s,baz=28,slow=38
NWAO  Narrogin (SRO)    36.44 211   P        P        17 31 57.2 +2.2
NWAO  Narrogin (SRO)    36.44 211   P        P        17 31 52.3 -2.7
NWAO                                pmax     pmax
      comp=Z,126nm,1.0s
NWAO                                MLR      MLR
      comp=Z,73µm,20.0s
MTKN  Mount Kenneth     36.44 213   P        P        17 31 57.7 +2.7
JSG   Sagara            36.73 360   P        P        17 31 59.7 +2.3
SSE   Sheshan           37.01 335   P        P        17 31 59.3 -0.5
SSE                                 PP       PnPn     17 33 25.6 +1.0
SSE                                 S        S        17 37 46.3 +1.5
SSE                                 pmax     pmax
      comp=Z,1µm,8.0s
SSE                                 LR       LR
      comp=Z,6µm,19.9s
INU   Inuyama           37.42 358   P        P        17 32 06.1 +2.8
INU   Inuyama           37.42 358 ⇑P        P        17 32 01.9 -1.4
BKNI  Bangkinang        37.49 273   P        P        17 32 04.1 -0.1
BKNI  Bangkinang        37.49 273   P        P        17 32 06.5 +2.3
BKNI  Bangkinang        37.49 273   P        P        17 32 04.5 +0.3
      comp=Z,14µmcomp=Z,10µmcomp=Z,712nm,1.6s
JTU   Tsushima          37.55 348   P        P        17 32 06.7 +2.3
JTU   Tsushima          37.55 348 ⇑P        P        17 32 03.5 -1.0
JGF   Kuroka            37.66 359   P        P        17 32 08.0 +2.6
JGF   Kuroka            37.66 359 ⇑P        P        17 32 03.4 -2.1
RKGY  Rocky Gully       37.91 209   P        P        17 32 08.9 +1.4
      comp=Z,78nm,1.2s
PPI   Padang Panjang    38.08 272   P        P        17 32 09.0 -0.2
      comp=Z,15µmcomp=Z,10µmcomp=Z,592nm,1.3s
KULM  Kulim             38.49 281   P        P        17 32 11.1 -1.6
KULM                                IAmb     IAmb     17 32 22.9
      comp=Z,242nm,1.0s
KULM  Kulim             38.49 281   P        P        17 32 13.6 +0.9
KULM  Kulim             38.49 281 ⇑P        P        17 32 12.5 -0.2
MJAR  Matsushiro Arr    38.59 360   P        P        17 32 11.6 -1.7
      comp=Z,9.0nm,0.6s,baz=178,slow=9.2,SNR=15
MJAR                                PcP      PcP      17 34 26.2 +0.6
      comp=Z,9.5nm,0.9s,baz=191,slow=3.8,SNR=4.0
MJAR                                S        S        17 38 12.4 +3.6
      comp=Z,0.8nm,0.5s,baz=199,slow=3.3,SNR=2.2
MJAR                                LR       LR       17 46 34.2
      comp=Z,23µm,20.5s,baz=152,slow=34
      comp=Z,9.0nm,0.6s
MAJO  Matsushiro        38.59 360   P        P        17 32 09.3 -3.9
MAJO  Matsushiro        38.59 360   P        P        17 32 14.5 +1.3
MAJO  Matsushiro        38.59 360c iP        P        17 32 10.2 -3.0
MAJO                                pmax     pmax
      comp=Z,133nm,1.8s
MAJO  Matsushiro        38.59 360   P        P        17 32 08.9 -4.4
MAJO                                S        S        17 38 06.5 -2.2
MAJO  Matsushiro        38.59 360 ⇑P        P        17 32 10.3 -3.0
GULI  GuiLin            38.60 317   P        P        17 32 13.6 +0.2
GULI                                PP       PnPn     17 33 50.8 +6.8
GULI                                S        S        17 38 14.3 +5.1
GULI                                pmax     pmax
      comp=Z,30nm,1.0s
GULI                                pmax     pmax
      comp=Z,4µm,8.8s
GULI                                LR       LR
      comp=Z,21µm,18.6s
GULI                                LR       LR
      comp=Z,16µm,19.4s
GULI                                LR       LR
      comp=Z,21µm,20.0s
NJ2   Nanjing           38.85 333 ⇑P        P        17 32 15.3 -0.1
NJ2                                 pP       pP       17 32 19.5 -1.2
NJ2                                 PP       PnPn     17 33 52.5 +5.6
NJ2                                 S        S        17 38 11.8 -0.9
NJ2                                 pmax     pmax
      comp=Z,27nm,0.7s
NJ2                                 pmax     pmax
      comp=Z,3µm,4.3s
NJ2                                 LR       LR
      comp=Z,35µm,21.3s
NJ2                                 LR       LR
      comp=Z,40µm,17.8s
NJ2                                 LR       LR
      comp=Z,68µm,19.8s
CNSH  ChangSha          38.94 323   P        P        17 32 16.4 +0.1
CNSH                                S        S        17 38 16.8 +2.5
CNSH                                pmax     pmax
      comp=Z,4µm,8.8s
CNSH                                LR       LR
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      comp=Z,11µm,20.2s
CNSH                                LR       LR
      comp=Z,24µm,18.2s
CNSH                                LR       LR
      comp=Z,27µm,21.0s
MNSI  Mandailing Nat    38.98 274   P        P        17 32 16.7 -0.1
      comp=Z,12µmcomp=Z,6µmcomp=Z,255nm,0.8s
SISI  Saibi             39.35 271   P        P        17 32 18.4 -1.5
GLAD  Gladstone         39.52 169   P        P        17 32 23.9 +3.0
H01W1 Cape Leeuwin H    39.57 212   P        P        17 32 26.1 +4.9
      baz=45,slow=9.7,SNR=4.4
H01W3 Cape Leeuwin H    39.57 212   P        P        17 32 26.1 +4.9
      baz=45,slow=9.7,SNR=4.4
H01W2 Cape Leeuwin H    39.59 212   P        P        17 32 26.2 +4.9
      baz=45,slow=9.7,SNR=3.3
TJN   Taejon            39.79 346   IAmb     IAmb     17 32 33.6
      comp=Z,632nm,1.2s
CORO  Coronation Par    39.81 170   P        P        17 32 26.5 +3.2
RPSI  Rantau Prapat     39.81 277   IAmb     IAmb     17 32 33.8
      comp=Z,416nm,1.0s
PSI   Prapat            39.83 277   LR       LR       17 52 13.2
      comp=Z,13µm,19.8s,baz=114,slow=41
PSI   Prapat            39.83 277   P        P        17 32 24.4 +0.4
WHN   Wuhan             39.89 327 ⇑P        P        17 32 24.6 +0.5
WHN                                 pP       pP       17 32 29.0 -0.4
WHN                                 S        S        17 38 33.4 +5.0
WHN                                 pmax     pmax
      comp=Z,1µm,1.7s
WHN                                 pmax     pmax
      comp=Z,14µm,9.4s
WHN                                 LR       LR
      comp=Z,29µm,15.1s
WHN                                 LR       LR
      comp=Z,53µm,16.8s
WHN                                 LR       LR
      comp=Z,56µm,17.5s
JMM   Marumori          39.97   3   P        P        17 32 22.6 -2.1
JMM   Marumori          39.97   3   P        P        17 32 25.3 +0.6
JMM   Marumori          39.97   3 ⇑P        P        17 32 23.8 -0.9
JSD   Sado              40.08 360   P        P        17 32 25.3 -0.3
JSD   Sado              40.08 360 ⇑P        P        17 32 23.6 -2.0
SRIT  Nakonsritamara    40.20 286   IAmb     IAmb     17 32 43.9
      comp=Z,502nm,1.3s
SRIT  Nakonsritamara    40.20 286   P        P        17 32 28.4 +1.5
TSI   Tuntungan         40.27 278   P        P        17 32 27.3 -0.3
      comp=Z,15µmcomp=Z,395nm,1.1s
KSAR  Wonju Array Be    40.69 347   P        P        17 32 28.6 -2.0
KSAR  Wonju Array Be    40.69 347   P        P        17 32 28.6 -2.0
KSRS  Korea Array       40.69 347   P        P        17 32 30.2 -0.4
      comp=Z,13nm,0.8s,baz=163,slow=8.7,SNR=34
KSRS                                PcP      PcP      17 34 32.7 +0.6
      comp=Z,13nm,1.0s,baz=229,slow=2.6,SNR=4.9
KSRS                                S        S        17 38 47.4 +7.2
      comp=Z,0.4nm,0.5s,baz=181,slow=6.0,SNR=0.7
KSRS                                LR       LR       17 46 58.4
      comp=Z,14511µm,21.3s,baz=170,slow=33
      comp=Z,13nm,0.8s
MOO   Moorlands         40.78 170   P        P        17 32 34.8 +3.5
MOO   Moorlands         40.78 170   P        P        17 32 35.3 +4.0
GSI   Gunungsitoli      41.02 275   P        P        17 32 31.7 -2.1
GSI   Gunungsitoli      41.02 275   P        P        17 32 33.8 +0.1
GSI   Gunungsitoli      41.02 275   P        P        17 32 31.9 -1.8
      comp=Z,12µmcomp=Z,7µmcomp=Z,379nm,2.0s
GSI   Gunungsitoli      41.02 275 ⇑P        P        17 32 31.5 -2.2
FUNA  Funafuti          41.02 100   IAMs_20  IAMs_20  17 47 16.6
      comp=Z,45µm,20.0s
FUNA  Funafuti          41.02 100   P        P        17 32 38.1 +4.3
INCN  Inchon            41.02 346   P        P        17 32 31.4 -2.0
INCN                                IAmb     IAmb     17 32 42.6
      comp=Z,307nm,1.5s
INCN  Inchon            41.02 346   IAMs_20  IAMs_20  17 49 14.2
      comp=Z,40µm,19.0s
INCN  Inchon            41.02 346   P        P        17 32 35.5 +2.1
INCN  Inchon            41.02 346   P        P        17 32 31.4 -2.0
INCN                                pmax     pmax
      comp=Z,307nm,1.5s
INCN                                MLR      MLR
      comp=Z,40µm,19.0s
SLVN  Son La            41.12 307   P        P        17 32 32.8 -1.8
SLVN  Son La            41.12 307   P        P        17 32 35.4 +0.8
TAU   Tasmania Unive    41.26 170   P        P        17 32 34.9 -0.3
TAU                                 IAmb     IAmb     17 32 49.1
      comp=Z,393nm,1.1s
TAU   Tasmania Unive    41.26 170   P        P        17 32 38.1 +2.9
TAU   Tasmania Unive    41.26 170   P        P        17 32 34.9 -0.3
TAU                                 pmax     pmax
      comp=Z,393nm,1.2s
TAU                                 MLR      MLR
      comp=Z,98µm,18.0s
TAU   Tasmania Unive    41.26 170 ⇑P        P        17 32 38.2 +3.0
HJU   Haeju             41.78 345   P        P        17 32 38.5 -1.1
HJU                                 S        S        17 38 55.8 -0.5
HJU                                 AmB
      comp=Z,1µm,2.0s
HJU                                 AMS      AMS
      comp=Z,34µm,17.1s
MSVF  Nonsavu           41.79 114   P        P        17 32 38.2 -2.0
MSVF                                IAmb     IAmb     17 32 47.3
      comp=Z,603nm,1.9s
MSVF  Nonsavu           41.79 114   LR       LR       17 50 17.4
      comp=Z,20µm,20.0s,baz=286,slow=37
MSVF  Nonsavu           41.79 114   P        P        17 32 44.2 +4.1
MSVF  Nonsavu           41.79 114   P        P        17 32 38.2 -2.0
MSVF                                pmax     pmax
      comp=Z,603nm,1.9s
MSVF  Nonsavu           41.79 114 ⇑P        P        17 32 43.5 +3.4
GYA   Guiyang           41.91 315 ⇑P        P        17 32 42.1 +1.1
GYA                                 pP       pP       17 32 45.3 -1.0
GYA                                 S        S        17 38 59.1 +0.2
GYA                                 pmax     pmax
      comp=Z,44nm,1.0s
GYA                                 pmax     pmax
      comp=Z,6µm,9.2s
GYA                                 LR       LR
      comp=Z,17µm,19.5s
GYA                                 LR       LR
      comp=Z,13µm,22.3s
GYA                                 LR       LR
      comp=Z,34µm,22.4s
LHMI  Lhok Sumawe       42.12 280   P        P        17 32 42.2 -0.5
LHMI  Lhok Sumawe       42.12 280   P        P        17 32 43.8 +1.0
LHMI  Lhok Sumawe       42.12 280   P        P        17 32 43.1 +0.4
LHMI  Lhok Sumawe       42.12 280 ⇑P        P        17 32 43.7 +1.0
COCO  West Island       42.38 254   P        P        17 32 47.6 +2.7
COCO  West Island       42.38 254   P        P        17 32 47.1 +2.2
MLSI  Meulaboh, Aceh    42.51 279   P        P        17 32 45.1 -0.9
ENH   Enshi             42.54 322   P        P        17 32 47.9 +1.9
PYAG  Pyongyang         42.73 345   P        P        17 32 46.5 -0.8
PYAG                                S        S        17 39 09.7 -0.5
PYAG                                AmB
      comp=Z,1µm,1.6s
PYAG                                AMS      AMS
      comp=Z,19µm,21.2s
JTM   Tenmabayashi      42.90   3   P        P        17 32 45.9 -2.7
JTM   Tenmabayashi      42.90   3   P        P        17 32 49.0 +0.4
JTM   Tenmabayashi      42.90   3 ⇑P        P        17 32 47.4 -1.3
DGTI  Dogotuki          42.96 112   P        P        17 32 53.3 +3.7
TIA   Tai'an            43.12 335   P        P        17 32 49.8 -0.8
TIA                                 PP       PP       17 34 32.8 +1.8
TIA                                 S        S        17 39 14.0 -2.3
TIA                                 SS       SS       17 42 20.3 -9.0
TIA                                 ScS      ScS      17 42 53.0 +2.3
TIA                                 pmax     pmax
      comp=Z,30nm,0.7s
TIA                                 pmax     pmax
      comp=Z,5µm,8.3s
TIA                                 LR       LR
      comp=Z,42µm,22.1s
TIA                                 LR       LR
      comp=Z,20µm,20.6s
TIA                                 LR       LR
      comp=Z,70µm,20.1s
HHU   Hamhung           43.15 348   P        P        17 32 49.5 -1.2
HHU                                 S        S        17 39 15.9 -0.6
HHU                                 AmB
      comp=Z,1µm,1.7s
HHU                                 AMS      AMS
      comp=Z,22µm,18.6s
TAVE  Taveuni           43.39 112   P        P        17 32 57.0 +3.9
BSI   Banda Aceh        43.78 280   P        P        17 32 54.9 -1.4
      comp=Z,10µmcomp=Z,4µmcomp=Z,170nm,1.2s
DL2   Dalian            43.79 341   P        P        17 32 54.8 -1.1
DL2                                 S        S        17 39 28.3 +2.5
DL2                                 pmax     pmax
      comp=Z,48nm,1.7s
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DL2                                 pmax     pmax
      comp=Z,4µm,9.4s
DL2                                 LR       LR
      comp=Z,29µm,17.7s
DL2                                 LR       LR
      comp=Z,18µm,18.8s
DL2                                 LR       LR
      comp=Z,30µm,19.4s
CM31  Chiang Mai Arr    43.98 300   IAmb     IAmb     17 33 11.5
      comp=Z,223nm,1.2s
CMAR  Chiang Mai Arr    43.98 300   P        P        17 32 56.8 -1.0
CMAR  Chiang Mai Arr    43.98 300   P        P        17 32 57.8 -0.1
      comp=Z,29nm,0.9s,baz=119,slow=5.9,SNR=68
CMAR                                ScP      ScP      17 38 37.0 +2.1
      comp=Z,1.4nm,1.0s,baz=110,slow=3.8,SNR=1.8
CMAR                                S        S        17 39 26.3 -3.1
      comp=Z,0.7nm,0.8s,baz=66,slow=6.7,SNR=1.3
CMAR                                LR       LR       17 53 02.8
      comp=Z,8µm,18.8s,baz=135,slow=38
      comp=Z,29nm,0.9s
CMAR  Chiang Mai Arr    43.98 300  i P        P        17 32 57.7 -0.1
CMAR                                pmax     pmax
      comp=Z,30nm,0.9s
LYN   LuoYang           43.99 329   P        P        17 32 57.8 +0.2
LYN                                 pP       pP       17 33 01.6 -1.4
LYN                                 S        S        17 39 30.0 +1.0
LYN                                 sS       sS       17 39 37.3 -0.5
LYN                                 pmax     pmax
      comp=Z,91nm,1.1s
LYN                                 pmax     pmax
      comp=Z,7µm,8.5s
LYN                                 LR       LR
      comp=Z,15µm,16.8s
LYN                                 LR       LR
      comp=Z,16µm,17.2s
LYN                                 LR       LR
      comp=Z,28µm,16.8s
KMI   Kunming           44.02 310   P        P        17 32 57.1 -1.2
KMI                                 PP       PcP      17 34 47.8 +4.0
KMI                                 pmax     pmax
      comp=Z,51nm,1.1s
KMI                                 LR       LR
      comp=Z,16µm,19.1s
KMI                                 LR       LR
      comp=Z,20µm,22.7s
KMI                                 LR       LR
      comp=Z,30µm,27.2s
SUJ   Sinuiju           44.04 345   P        P        17 32 57.1 -0.8
SUJ                                 S        S        17 39 29.0 -0.6
SUJ                                 AmB
      comp=Z,5µm,5.4s
SUJ                                 AMS      AMS
      comp=Z,20µm,19.9s
CHTO  Chiang Mai        44.12 300   P        P        17 32 57.6 -1.3
CHTO                                IAmb     IAmb     17 33 12.4
      comp=Z,354nm,1.7s
CHTO  Chiang Mai        44.12 300   P        P        17 33 00.4 +1.5
CHTO  Chiang Mai        44.12 300   P        P        17 32 57.7 -1.3
CHTO                                pmax     pmax
      comp=Z,354nm,1.7s
CHTO                                MLR      MLR
      comp=Z,13µm,18.0s
CHTO  Chiang Mai        44.12 300   P        P        17 32 58.3 -0.6
CHTO                                S        S        17 39 30.2 -1.3
CHTO  Chiang Mai        44.12 300 ⇑P        P        17 32 58.5 -0.4
ERM   Erimo             44.26   5   P        P        17 33 02.3 +2.7
ERM   Erimo             44.26   5   P        P        17 32 58.9 -0.8
ERM                                 S        S        17 39 31.9 -0.8
ERM   Erimo             44.26   5 ⇑P        P        17 32 59.0 -0.6
JEM   Erimo             44.26   5   P        P        17 33 02.4 +2.8
FUTU  Fugatoga          44.52 108   P        P        17 33 07.2 +5.0
LKBA  Tubou, Lakemba    44.80 114   P        P        17 33 08.2 +3.9
MSHR  Mys Shultsa       45.10 352c iP        P        17 33 05.0 -1.3
MSHR                                pmax     pmax
      comp=Z,109nm,1.3s
MSHR                                MLR      MLR
      comp=Z,25µm,17.0s
HNS   HongShan          45.18 333 ⇓P        P        17 33 06.5 -0.5
HNS                                 S        S        17 39 43.1 -3.0
HNS                                 SS       ScS      17 43 04.5 +0.9
HNS                                 pmax     pmax
      comp=Z,40nm,1.0s
HNS                                 pmax     pmax
      comp=Z,5µm,9.5s
HNS                                 LR       LR
      comp=Z,44µm,19.1s
HNS                                 LR       LR
      comp=Z,29µm,18.8s
HNS                                 LR       LR
      comp=Z,56µm,19.8s
PSTR  Posyet            45.22 352⇓eP        P        17 33 07.9 +0.6
PZH   PanZhiHua         45.52 311   P        P        17 33 08.9 -1.2
PZH                                 sP       sP       17 33 16.3 -1.3
PZH                                 PP       PP       17 34 58.3 +1.4
PZH                                 S        S        17 39 53.1 +1.3
PZH                                 SS       ScS      17 43 03.6 -3.0
PZH                                 pmax     pmax
      comp=Z,2µm,9.2s
PZH                                 LR       LR
      comp=Z,17µm,23.5s
PZH                                 LR       LR
      comp=Z,12µm,22.5s
PZH                                 LR       LR
      comp=Z,17µm,21.6s
VLA   Vladivostok       45.55 353d iP        P        17 33 09.9 +0.1
VLA                                 pmax     pmax
      comp=Z,316nm,1.7s
VLA                                 MLR      MLR
      comp=Z,17µm,17.0s
XAN   Xi'an             45.55 325   P        P        17 33 08.9 -1.2
XAN                                 PP       PP       17 34 54.4 -2.5
XAN                                 S        S        17 39 51.4 -0.3
XAN                                 SS       ScS      17 43 07.6 +1.3
XAN                                 pmax     pmax
      comp=Z,200nm,1.2s
XAN                                 pmax     pmax
      comp=Z,7µm,8.8s
XAN                                 LR       LR
      comp=Z,23µm,16.7s
XAN                                 LR       LR
      comp=Z,28µm,16.1s
XAN                                 LR       LR
      comp=Z,35µm,18.5s
SNY   Shenyang          45.90 345 ⇓P        P        17 33 12.5 -0.1
SNY                                 S        S        17 39 55.6 -0.8
SNY                                 pmax     pmax
      comp=Z,4µm,9.8s
SNY                                 LR       LR
      comp=Z,18µm,18.8s
SNY                                 LR       LR
      comp=Z,10µm,16.7s
SNY                                 LR       LR
      comp=Z,23µm,19.0s
OUZ   Omahuta           46.27 139   IAMs_20  IAMs_20  17 52 12.6
      comp=Z,56µm,20.0s
OUZ   Omahuta           46.27 139   P        P        17 33 19.9 +4.2
OUZ   Omahuta           46.27 139   P        P        17 33 19.4 +3.6
OUZ   Omahuta           46.27 139 ⇑P        P        17 33 19.3 +3.6
JKA   Kamikawa-asahi    46.31   4   P        P        17 33 14.1 -1.8
ASAJ  Asahikawa         46.31   4   P        P        17 33 15.3 -0.5
      comp=Z,21nm,0.7s,baz=217,slow=9.1,SNR=25
ASAJ                                S        S        17 40 01.2 -1.0
      comp=Z,1.8nm,0.9s,baz=221,slow=19,SNR=1.4
ASAJ                                LR       LR       17 51 59.4
      comp=Z,18µm,21.0s,baz=192,slow=35
      comp=Z,21nm,0.7s
TIY   Taiyuan           46.49 331  eP        P        17 33 17.3 -0.2
TIY                                 SS       SS       17 43 27.3 -4.2
TIY                                 pmax     pmax
      comp=Z,19nm,0.7s
TIY                                 pmax     pmax
      comp=Z,4µm,9.4s
TIY                                 LR       LR
      comp=Z,26µm,19.5s
TIY                                 LR       LR
      comp=Z,25µm,20.0s
TIY                                 LR       LR
      comp=Z,42µm,19.6s
YUK   Yuzh-Kuril'sk     46.55   7d iP        P        17 33 22.7 +5.0
YUK                                i                  17 35 03.7
YUK                                i PPP     PPP      17 35 46.4
YUK                                i S       S        17 40 02.5 -3.2
YUK                                i SS      ScS      17 43 18.4 +6.2
YUK                                i SSS     SSS      17 44 23.6
YUK                                 pmax     pmax
      comp=Z,184nm,1.7s
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YUK			pmax	pmax		
	comp=E,75nm,1.5s					
YUK			pmax	pmax		
	comp=N,171nm,1.2s					
YUK			pmax	pmax		
	comp=Z,446nm,3.6s					
USA0B	**Ussuriysk Arra**	**46.60 354**	IAmb	IAmb	17 33 35.0	
	comp=Z,312nm,1.7s					
USRK	**Ussuriysk Ar.**	**46.60 354**	P	**P**	**17 33 18.1**	**-0.1**
	comp=Z,24nm,0.9s,baz=171,slow=8.4,SNR=23					
USRK			S	**S**	**17 40 04.5**	**-1.9**
	comp=Z,0.4nm,0.3s,baz=139,slow=20,SNR=1.2					
USRK			LR	LR	17 49 41.6	
	comp=Z,37µm,21.2s,baz=174,slow=32					
	comp=Z,24nm,0.9s					
CD2	**Chengdu**	**46.66 318**	P	**P**	**17 33 19.3**	**+0.3**
CD2			PP	**PP**	**17 35 10.9**	**+2.0**
CD2			S	**S**	**17 40 08.8**	**+0.9**
CD2			ScS	**ScS**	**17 43 12.9**	**-0.8**
CD2			pmax	pmax		
	comp=Z,80nm,1.1s					
CD2			pmax	pmax		
	comp=Z,9µm,9.0s					
CD2			LR	LR		
	comp=Z,19µm,18.4s					
CD2			LR	LR		
	comp=Z,28µm,19.2s					
CD2			LR	LR		
	comp=Z,35µm,19.0s					
BJT	**Baijiatuau**	**46.75 336**	IAMs_20	IAMs_20	17 52 06.5	
	comp=Z,46µm,20.0s					
BJT	**Baijiatuau**	**46.75 336**	IAmb	IAmb	17 33 51.0	
	comp=Z,239nm,1.5s					
BJT	**Baijiatuau**	**46.75 336**	P	**P**	**17 33 21.5**	**+2.1**
BJI	**Beijing**	**46.77 336**	P	**P**	**17 33 18.3**	**-1.2**
BJI			pP	**pP**	**17 33 22.8**	**-2.1**
BJI			sP	**sP**	**17 33 27.1**	**+0.1**
BJI			S	**S**	**17 40 10.6**	**+1.7**
BJI			pmax	pmax		
	comp=Z,51nm,1.6s					
BJI			pmax	pmax		
	comp=Z,2µm,8.6s					
BJI			LR	LR		
	comp=Z,17µm,19.9s					
BJI			LR	LR		
	comp=Z,12µm,20.6s					
BJI			LR	LR		
	comp=Z,26µm,20.2s					
TEY	**Ternei**	**47.10 358**	⇓eP	**P**	**17 33 19.9**	**-2.1**
TEY			e		17 40 07.9	
TEY			pmax	pmax		
	comp=Z,100nm,9.7s					
WCZ	**Waipu Caves**	**47.19 140**	P	**P**	**17 33 24.5**	**+1.6**
TNCH	**TengChong**	**47.25 308**	⇑P	**P**	**17 33 23.3**	**-0.5**
TNCH			sP	sP	17 33 30.4	-0.9
TNCH			PP	**PP**	**17 35 13.9**	**-1.1**
TNCH			S	**S**	**17 40 15.6**	**-1.1**
TNCH			ScS	**ScS**	**17 43 15.0**	**-3.0**
TNCH			pmax	pmax		
	comp=Z,150nm,1.5s					
TNCH			pmax	pmax		
	comp=Z,5µm,8.2s					
TNCH			LR	LR		
	comp=Z,10µm,17.6s					
TNCH			LR	LR		
	comp=Z,8µm,17.8s					
TNCH			LR	LR		
	comp=Z,19µm,21.2s					
CN2	**Changchun**	**47.30 347**	P	**P**	**17 33 22.9**	**-0.8**
CN2			PP	**PP**	**17 35 13.1**	**-1.9**
CN2			S	**S**	**17 40 15.9**	**-0.6**
CN2			eSS	**SS**	**17 43 35.9**	**-8.4**
CN2			pmax	pmax		
	comp=Z,2µm,7.5s					
CN2			LR	LR		
	comp=Z,29µm,20.0s					
CN2			LR	LR		
	comp=Z,20µm,20.0s					
CN2			LR	LR		
	comp=Z,39µm,20.0s					
MDJ	**Mudanjiang**	**47.32 351**	P	**P**	**17 33 22.9**	**-0.9**
MDJ			PP	**PP**	**17 35 11.3**	**-3.8**
MDJ			S	**S**	**17 40 20.4**	**+3.7**
MDJ			pmax	pmax		
	comp=Z,4µm,8.9s					
MDJ			LR	LR		
	comp=Z,28µm,17.2s					
MDJ			LR	LR		
	comp=Z,10µm,19.2s					
MDJ			LR	LR		
	comp=Z,48µm,18.6s					
KUR	**Kuril'sk**	**48.01 9**	eP	**P**	**17 33 26.8**	**-2.3**
KUR			eS	**S**	**17 40 24.5**	**-1.9**
KUR			pmax	pmax		
	comp=Z,3µm,5.9s					
KUR			pmax	pmax		
	comp=Z,487nm,1.4s					
KUR			MLR	MLR		
	comp=E,10µm,18.0s					
KUR			MLR	MLR		
	comp=Z,9µm,18.0s					
GRZ	**Great Barrier**	**48.09 139**	P	**P**	**17 33 32.8**	**+2.9**
KUZ	**Kuaotunu**	**48.56 140**	P	**P**	**17 33 33.1**	**-0.4**
BNX	**BinXian**	**48.77 350**	⇓P	**P**	**17 33 34.6**	**-0.4**
BNX			pP	**pP**	**17 33 37.8**	**-2.6**
BNX			S	**S**	**17 40 40.0**	**+2.8**
BNX			sS	**sS**	**17 40 45.5**	**-0.6**
BNX			pmax	pmax		
	comp=Z,40nm,0.9s					
BNX			pmax	pmax		
	comp=Z,5µm,8.8s					
BNX			LR	LR		
	comp=Z,16µm,20.6s					
BNX			LR	LR		
	comp=Z,5µm,20.0s					
BNX			LR	LR		
	comp=Z,16µm,23.0s					
TOZ	**Tahuroa Road**	**49.00 141**	IAMs_20	IAMs_20	17 53 09.1	
	comp=Z,39µm,21.0s					
TOZ	**Tahuroa Road**	**49.00 141**	P	**P**	**17 33 37.5**	**+0.6**
KHEZ	**Kahui Hut**	**49.06 143**	P	**P**	**17 33 41.7**	**+4.3**
HIZ	**Hauiti**	**49.08 142**	IAMs_20	IAMs_20	17 53 24.0	
	comp=Z,43µm,20.0s					
HIZ	**Hauiti**	**49.08 142**	P	**P**	**17 33 41.0**	**+3.4**
YSS	**Yuzhno-Sakhali**	**49.14 4**	P	**P**	**17 33 35.7**	**-2.0**
YSS			IAmb	IAmb	17 34 00.5	
	comp=Z,114nm,0.9s					
YSS	**Yuzhno-Sakhali**	**49.14 4**	P	**P**	**17 33 38.3**	**+0.5**
YSS	**Yuzhno-Sakhali**	**49.14 4**c	iP	**P**	**17 33 36.4**	**-1.3**
YSS			pmax	pmax		
	comp=Z,129nm,0.9s					
YSS			MLR	MLR		
	comp=Z,9µm,16.0s					
YSS	**Yuzhno-Sakhali**	**49.14 4**	⇑P	**P**	**17 33 36.5**	**-1.3**
QRZ	**Quartz Range**	**49.20 146**	P	**P**	**17 33 39.1**	**+0.7**
QRZ	**Quartz Range**	**49.20 146**	P	**P**	**17 33 41.4**	**+3.0**
TLZ	**Tolley Road**	**49.39 141**	P	**P**	**17 33 40.0**	**+0.1**
VRZ	**Vera Road**	**49.40 143**	P	**P**	**17 33 41.6**	**+1.7**
HHC	**Hu-ho-hao-te**	**49.40 333**	⇑iP	**P**	**17 33 39.3**	**-0.8**
HHC			pP	pP	17 33 44.3	-1.2
HHC			sP	sP	17 33 47.0	-0.6
HHC			PP	**PP**	**17 35 32.8**	**-1.5**
HHC			S	**S**	**17 40 48.9**	**+2.4**
HHC			pmax	pmax		
	comp=Z,4µm,8.4s					
HHC			LR	LR		
	comp=Z,33µm,20.1s					
HHC			LR	LR		
	comp=Z,20µm,17.8s					
HHC			LR	LR		
	comp=Z,49µm,20.0s					
DSZ	**Denniston Nort**	**49.43 147**	P	**P**	**17 33 41.2**	**+1.0**
JCZ	**Jackson Bay**	**49.56 151**	P	**P**	**17 33 43.3**	**+2.1**
JCZ	**Jackson Bay**	**49.56 151**	P	**P**	**17 33 44.0**	**+2.7**
MSZ	**Milford Sound**	**49.61 153**	P	**P**	**17 33 44.0**	**+2.5**
FOZ	**Fox Glacier**	**49.66 150**	IAMs_20	IAMs_20	17 56 00.6	
	comp=Z,38µm,18.0s					
FOZ	**Fox Glacier**	**49.66 150**	P	**P**	**17 33 44.0**	**+2.1**
MRNZ	**Matariki Terra**	**49.71 146**	P	**P**	**17 33 45.3**	**+3.0**
WVZ	**Waitaha Valley**	**49.80 149**	P	**P**	**17 33 42.6**	**-0.3**
DCZ	**Deep Cove**	**49.88 154**	IAmb	IAmb	17 33 49.7	
	comp=Z,274nm,1.0s					
DCZ	**Deep Cove**	**49.88 154**	P	**P**	**17 33 47.0**	**+3.5**
INZ	**Inchbonnie**	**49.92 148**	IAMs_20	IAMs_20	17 54 09.3	
	comp=Z,51µm,20.0s					
INZ	**Inchbonnie**	**49.92 148**	P	**P**	**17 33 44.7**	**+0.8**
BTO	**Baotou**	**49.92 332**	eP	**P**	**17 33 45.8**	**+1.8**
BTO			pP	**sP**	**17 33 50.3**	**-1.2**
BTO			sP	**pP**	**17 33 52.8**	**+3.4**
BTO			PP	**PP**	**17 35 42.0**	**+2.9**
BTO			S	**S**	**17 40 56.6**	**+2.8**
BTO			sS	**sS**	**17 41 04.6**	**+1.9**
BTO			pmax	pmax		
	comp=Z,33nm,1.4s					
BTO			pmax	pmax		
	comp=Z,7µm,8.5s					
BTO			LR	LR		
	comp=Z,85µm,20.8s					
BTO			LR	LR		
	comp=Z,52µm,19.5s					
BTO			LR	LR		
	comp=Z,97µm,20.2s					
WAZ	**Wanganui**	**49.93 143**	P	**P**	**17 33 47.4**	**+3.4**
NNZ	**Nelson**	**49.94 146**	P	**P**	**17 33 45.4**	**+1.3**
NGZ	**Ngauruhoe**	**49.94 142**	P	**P**	**17 33 44.7**	**+0.4**
LZH	**Lanzhou**	**49.96 323**	eP	**P**	**17 33 45.0**	**+0.6**
LZH			pP	pP	17 33 49.3	-0.5
LZH			S	**S**	**17 40 51.5**	**-3.0**
LZH			SS	**SS**	**17 44 26.6**	**-1.1**
LZH			pmax	pmax		
	comp=Z,140nm,1.3s					
LZH			pmax	pmax		
	comp=Z,4µm,4.8s					
LZH			LR	LR		
	comp=Z,15µm,14.8s					
LZH			LR	LR		
	comp=Z,25µm,14.8s					
LZH			LR	LR		
	comp=Z,32µm,14.8s					
THZ	**Tophouse**	**50.04 146**	P	**P**	**17 33 45.4**	**+0.5**
THZ	**Tophouse**	**50.04 146**	P	**P**	**17 33 47.3**	**+2.4**
XLT	**XiLinHaoTe**	**50.13 339**	eP	**P**	**17 33 47.8**	**+2.3**
XLT			pP	sP	17 33 53.0	0.0
XLT			S	**S**	**17 40 59.5**	**+3.0**
XLT			SS	**SS**	**17 44 26.9**	**-3.2**
XLT			pmax	pmax		
	comp=Z,3µm,8.6s					
XLT			LR	LR		
	comp=Z,2µm,20.2s					
XLT			LR	LR		
	comp=Z,12µm,19.4s					
XLT			LR	LR		
	comp=Z,22µm,20.0s					
PYZ	**Puysegur Point**	**50.22 155**	IAMs_20	IAMs_20	17 56 59.1	
	comp=Z,31µm,18.0s					
PYZ	**Puysegur Point**	**50.22 155**	P	**P**	**17 33 49.5**	**+3.4**
PYZ	**Puysegur Point**	**50.22 155**	P	**P**	**17 33 49.8**	**+3.7**
MLZ	**Mavora Lakes**	**50.23 153**	IAMs_20	IAMs_20	17 55 20.5	
	comp=Z,37µm,20.0s					
MLZ	**Mavora Lakes**	**50.23 153**	P	**P**	**17 33 49.3**	**+3.1**
WKZ	**Wanaka**	**50.24 152**	IAMs_20	IAMs_20	17 57 51.7	
	comp=Z,41µm,18.0s					
WKZ	**Wanaka**	**50.24 152**	P	**P**	**17 33 45.6**	**-0.7**
URZ	**Urewera**	**50.34 140**	LR	LR	17 54 26.3	
	comp=Z,42µm,21.7s,baz=306,slow=35					
URZ	**Urewera**	**50.34 140**	P	**P**	**17 33 46.3**	**-0.8**
LTZ	**Lake Taylor**	**50.39 148**	P	**P**	**17 33 49.3**	**+1.8**
RPZ	**Rata Peaks**	**50.42 150**	P	**P**	**17 33 47.2**	**-0.5**
RPZ	**Rata Peaks**	**50.42 150**	P	**P**	**17 33 48.8**	**+1.2**
TCW	**Tory Channel**	**50.45 145**	P	**P**	**17 33 45.3**	**-2.6**
RTZ	**Ruatahuna**	**50.47 141**	P	**P**	**17 33 45.8**	**-2.4**
LBZ	**Lake Benmore**	**50.47 151**	P	**P**	**17 33 47.2**	**-0.8**
LBZ			IAMs_20	IAMs_20	17 53 49.9	
	comp=Z,34µm,21.0s					
LBZ	**Lake Benmore**	**50.47 151**	P	**P**	**17 33 50.2**	**+2.2**
HAZ	**Te Kaha**	**50.48 139**	P	**P**	**17 33 47.9**	**-0.3**
BKZ	**Black Stump Fm**	**50.49 142**	IAmb	IAmb	17 33 57.3	
	comp=Z,140nm,1.0s					
BKZ			IAMs_20	IAMs_20	17 54 21.3	
	comp=Z,38µm,20.0s					
AFI	**Afiamalu**	**50.51 106**	P	**P**	**17 33 52.2**	**+3.3**
AFI	**Afiamalu**	**50.51 106**	P	**P**	**17 33 52.1**	**+3.2**
WHZ	**Wether Hill Ro**	**50.56 154**	IAMs_20	IAMs_20	17 53 41.1	
	comp=Z,35µm,21.0s					
WHZ	**Wether Hill Ro**	**50.56 154**	P	**P**	**17 33 49.3**	**+0.6**
OXZ	**Oxford**	**50.65 149**	IAMs_20	IAMs_20	17 54 31.7	
	comp=Z,38µm,21.0s					
OXZ	**Oxford**	**50.65 149**	P	**P**	**17 33 48.4**	**-1.0**
EAZ	**Earnscleugh**	**50.68 152**	P	**P**	**17 33 50.0**	**+0.4**
TSZ	**Takapari Road**	**50.71 143**	P	**P**	**17 33 48.8**	**-1.1**
MXZ	**Matakaoa Point**	**50.72 139**	IAMs_20	IAMs_20	17 53 49.4	
	comp=Z,53µm,21.0s					
MXZ	**Matakaoa Point**	**50.72 139**	P	**P**	**17 33 53.9**	**+3.9**
MXZ	**Matakaoa Point**	**50.72 139**	P	**P**	**17 33 47.7**	**-2.3**
SNZO	**South Karori**	**50.76 145**	IAMs_20	IAMs_20	17 55 00.4	
	comp=Z,39µm,19.0s					
SNZO	**South Karori**	**50.76 145**	P	**P**	**17 33 54.0**	**+3.8**
SNZO	**South Karori**	**50.76 145**	P	**P**	**17 33 51.9**	**+1.7**
SNZO	**South Karori**	**50.76 145**	⇑P	**P**	**17 33 50.4**	**+0.2**
KHZ	**Kahutara**	**50.83 147**	IAmb	IAmb	17 33 55.9	
	comp=Z,128nm,0.9s					
KHZ	**Kahutara**	**50.83 147**	P	**P**	**17 33 54.0**	**+3.3**
KHZ	**Kahutara**	**50.83 147**	P	**P**	**17 33 50.7**	**0.0**
KHZ	**Kahutara**	**50.83 147**	P	**P**	**17 33 51.3**	**+0.6**
KHZ	**Kahutara**	**50.83 147**	⇑P	**P**	**17 33 51.3**	**+0.6**
MRZ	**Mangatainoka R**	**50.85 144**	IAmb	IAmb	17 34 04.7	
	comp=Z,272nm,0.9s					
MRZ			IAMs_20	IAMs_20	17 54 56.0	
	comp=Z,45µm,19.0s					
MRZ	**Mangatainoka R**	**50.85 144**	P	**P**	**17 33 50.4**	**-0.5**
IMP	**Imphal**	**50.85 305**	eP	**P**	**17 33 50.4**	**-0.9**
TMZ	**Timaru**	**50.87 150**	P	**P**	**17 33 52.3**	**+1.2**
GVZ	**Greta Valley S**	**50.93 148**	P	**P**	**17 33 50.7**	**-0.8**
GVZ	**Greta Valley S**	**50.93 148**	P	**P**	**17 33 53.4**	**+1.9**
PUZ	**Puketiti**	**50.97 139**	P	**P**	**17 33 53.9**	**+2.0**
KNZ	**Kokohu**	**51.14 141**	P	**P**	**17 33 56.2**	**+3.1**
ODZ	**Otahua Downs**	**51.18 151**	P	**P**	**17 33 54.6**	**+1.3**
ODZ	**Otahua Downs**	**51.18 151**	⇑P	**P**	**17 33 56.5**	**+3.2**
UGL	**Uglegorsk**	**51.22 3**	eP	**P**	**17 33 49.6**	**-3.9**
UGL			eS	**S**	**17 41 05.0**	**-6.2**
UGL			eSS	**ScS**	**17 43 43.0**	**-0.3**
UGL			pmax	pmax		
	comp=Z,100nm,1.2s					
UGL			pmax	pmax		
	comp=Z,2µm,3.9s					
UGL			smax	smax		
	comp=E,6µm,13.0s					
UGL			smax	smax		
	comp=N,9µm,16.0s					
UGL			MLR	MLR		
	comp=E,4µm,16.0s					
UGL			MLR	MLR		
	comp=Z,10µm,16.0s					
MQZ	**McQueen's Vall**	**51.24 148**	P	**P**	**17 33 54.6**	**+0.9**
PXZ	**Pawanui**	**51.24 142**	P	**P**	**17 33 53.2**	**-0.6**
BFZ	**Birch Farm**	**51.26 143**	P	**P**	**17 33 57.1**	**+3.1**
BFZ	**Birch Farm**	**51.26 143**	P	**P**	**17 33 52.8**	**-1.3**
APZ	**The Paps**	**51.30 154**	P	**P**	**17 33 57.2**	**+2.9**
TUZ	**Tuapeka**	**51.37 152**	P	**P**	**17 33 56.0**	**+1.3**
AZL	**Aizawl**	**51.44 303**	eP	**P**	**17 33 55.0**	**-0.8**
AZL			IAmb	IAmb	17 34 08.2	
	comp=Z,125nm,1.0s					
SYZ	**Scrubby Hill**	**51.59 153**	P	P	17 34 01.0	+4.7
SYZ	**Scrubby Hill**	**51.59 153**	P	**P**	**17 33 56.9**	**+0.6**
KLR	**Kul'dur**	**51.60 354**	P	**P**	**17 33 56.0**	**-0.4**
	comp=Z,17nm,0.7s,baz=174,slow=5.3,SNR=20					
KLR			S	**S**	**17 41 14.0**	**-2.5**
	comp=Z,0.6nm,0.4s,baz=239,slow=4.9,SNR=1.5					
KLR			LR	LR	17 52 36.6	
	comp=Z,28µm,21.2s,baz=177,slow=32					
	comp=Z,17nm,0.7s					
KLR	**Kul'dur**	**51.60 354**c	iP	**P**	**17 33 55.5**	**-0.9**
KLR			pmax	pmax		
	comp=Z,163nm,1.5s					
KLR			MLR	MLR		
	comp=Z,20µm,18.0s					
HHSZ	**Highcliff Hill**	**51.77 152**	P	**P**	**17 34 00.9**	**+3.1**
BRDH	**Bariadhala**	**51.92 301**	S	**S**	**17 41 16.4**	**-5.4**
	comp=Z,110nm,0.3s,baz=74,slow=20,SNR=1.9					
BRDH			LR	LR	17 56 32.3	
	comp=Z,11µm,21.3s,baz=132,slow=37					
MIDW	**Midway**	**52.12 51**	IAMs_20	IAMs_20	17 53 16.5	
	comp=Z,31µm,20.0s					
ZIRO	**ZIRO**	**52.12 308**	eP	**P**	**17 34 01.9**	**+0.9**
ZIRO			IAmb	IAmb	17 34 11.2	
	comp=Z,194nm,0.4s					
TEZP	**TEZPUR**	**52.56 306**	eP	**P**	**17 34 03.3**	**-0.6**
GRNR	**Gornyy**	**52.84 358**	⇑iP	**P**	**17 34 05.1**	**-0.5**
GRNR			pmax	pmax		
	comp=N,2.0nm,0.9s					
GRNR			pmax	pmax		
	comp=Z,2.0nm,1.0s					
TYV	**Tymovskoe**	**53.03 3**	eP	**P**	**17 34 08.1**	**+1.2**
TYV			eS	**S**	**17 41 36.7**	**+0.7**
TYV			pmax	pmax		
	comp=Z,900nm,2.1s					
TYV			pmax	pmax		
	comp=Z,59nm,1.3s					
TYV			smax	smax		
	comp=N,11nm,2.4s					
TYV			smax	smax		
	comp=E,10.0nm,2.4s					
TYV			smax	smax		
	comp=N,3µm,4.6s					
TYV			smax	smax		
	comp=E,2µm,4.6s					
HEH	**HeiHe**	**53.15 351**	eP	**P**	**17 34 06.6**	**-1.2**
HEH			S	**S**	**17 41 39.4**	**+1.7**
HEH			SS	**SS**	**17 45 16.8**	**-0.7**
HEH			pmax	pmax		
	comp=E,4µm,7.2s					
HEH			LR	LR		
	comp=E,14µm,18.2s					
HEH			LR	LR		
	comp=E,12µm,19.0s					
HEH			LR	LR		
	comp=E,26µm,19.4s					
TAWA	**Tawang**	**53.73 307**	eP	**P**	**17 34 11.9**	**-1.1**
TAWA			IAmb	IAmb	17 34 24.5	
	comp=Z,234nm,0.9s					
HIA	**Hailar**	**53.80 345**	P	**P**	**17 34 15.1**	**+2.4**
GTA	**Gaotai**	**54.54 324**	P	**P**	**17 34 18.8**	**+0.3**
GTA			S	**S**	**17 41 59.6**	**+2.3**
GTA			ScS	**ScS**	**17 44 09.5**	**+2.1**
GTA			pmax	pmax		
	comp=Z,37nm,1.3s					
GTA			pmax	pmax		
	comp=Z,5µm,9.6s					
GTA			LR	LR		
	comp=Z,14µm,19.1s					
GTA			LR	LR		
	comp=Z,16µm,18.7s					
GTA			LR	LR		
	comp=Z,20µm,19.9s					
JOHN	**Johnston Islan**	**54.69 68**	IAMs_20	IAMs_20	17 52 41.4	
	comp=Z,30µm,22.0s					
SKR	**Severo-Kuril's**	**54.86 14**	eP	P	17 34 25.8	+5.5
SKR			eS	**S**	**17 42 07.1**	**+6.4**
SKR			eSS	**ScS**	**17 44 10.9**	**+2.1**
SKR			pmax	pmax		
	comp=Z,2µm,4.3s					
SKR			smax	smax		
	comp=E,13µm,16.0s					
SKR			smax	smax		
	comp=N,7µm,14.7s					
LSA	**Lhasa**	**55.22 309**	P	**P**	**17 34 24.3**	**+0.4**
LSA			S	**S**	**17 42 02.9**	**-4.5**
LSA			pmax	pmax		
	comp=N,27nm,1.1s					
LSA			LR	LR		
	comp=N,8µm,20.6s					
LSA			LR	LR		
	comp=N,12µm,20.1s					
LSA	**Lhasa**	**55.22 309**	P	**P**	**17 34 24.3**	**+0.4**
NKL	**Nikolayevsk**	**55.23 2**	eP	**P**	**17 34 20.5**	**-2.4**
NKL			eS	**S**	**17 42 04.2**	**-1.4**
NKL			pmax	pmax		
	comp=E,141nm,1.4s					
NKL			pmax	pmax		
	comp=N,109nm,1.1s					
NKL			pmax	pmax		
	comp=Z,438nm,1.3s					
NKL			smax	smax		
	comp=E,1µm,14.0s					
NKL			smax	smax		
	comp=N,507nm,7.1s					
NKL			MLR	MLR		
	comp=N,14µm,19.0s					
NKL			MLR	MLR		
	comp=Z,27µm,18.0s					
GOMU	**GeErMu**	**55.80 318**	P	**P**	**17 34 27.8**	**-0.1**
GOMU			pP	pP	17 34 31.8	-1.5
GOMU			sP	sP	17 34 35.1	-0.3
GOMU			PP	**PP**	**17 36 33.6**	**+1.1**
GOMU			SS	**SS**	**17 45 58.0**	**-2.6**
GOMU			LR	LR		
	comp=Z,11µm,17.8s					
GOMU			LR	LR		
	comp=Z,12µm,18.2s					
GOMU			LR	LR		
	comp=Z,24µm,18.3s					
GTK	**Tadong**	**56.25 305**	eP	**P**	**17 34 30.2**	**-0.8**
ZEA	**Zeya**	**56.57 352**	eP	**P**	**17 34 31.4**	**-1.1**
ZEA			e		17 36 39.5	
ZEA			eS	**S**	**17 42 23.7**	**+0.2**
ZEA			e		17 44 25.6	
ZEA			pmax	pmax		
	comp=E,300nm,4.1s					
ZEA			pmax	pmax		
	comp=N,800nm,6.9s					
ZEA			pmax	pmax		
	comp=Z,2µm,9.8s					
ZEA			pmax	pmax		
	comp=E,300nm,5.0s					
ZEA			pmax	pmax		
	comp=N,700nm,8.8s					
ZEA			pmax	pmax		
	comp=Z,1µm,8.8s					
ZEA			smax	smax		
	comp=N,3µm,10.6s					
ZEA			smax	smax		
	comp=E,3µm,12.8s					
ULN	**Ulaanbaatar**	**56.94 335**	P	**P**	**17 34 34.6**	**-0.9**
ULN	**Ulaanbaatar**	**56.94 335**c	iP	**P**	**17 34 35.2**	**-0.3**
ULN			pmax	pmax		
	comp=Z,117nm,1.7s					
ULN			MLR	MLR		
	comp=Z,14µm,18.0s					
ULN	**Ulaanbaatar**	**56.94 335**	⇑P	**P**	**17 34 35.2**	**-0.3**
SONM	**Songino Array**	**57.19 335**	P	**P**	**17 34 35.4**	**-1.8**
SONM	**Songino Array**	**57.19 335**	P	**P**	**17 34 37.5**	**+0.2**
	comp=Z,5.4nm,0.6s,baz=157,slow=7.7,SNR=14					
SONM			S	**S**	**17 42 30.3**	**-2.0**
	comp=Z,0.5nm,0.5s,baz=172,slow=12,SNR=1.3					
SONM			LR	LR	17 59 19.5	
	comp=Z,58µm,20.1s,baz=140,slow=36					
SONM			PKPPKP	**P'P'df**	**18 04 29.1**	**+3.0**
	comp=Z,0.9nm,0.9s,baz=333,slow=0.7,SNR=5.6					
SONM			PKP2bc		18 04 40.9	
	comp=Z,5.6nm,1.2s,baz=282,slow=1.5,SNR=13					
	comp=Z,5.4nm,0.6s					
BOK	**Bokaro**	**57.26 300**	eP	**P**	**17 34 37.2**	**-0.9**
BOK			IAmb	IAmb	17 34 49.0	
	comp=Z,271nm,1.6s					
CTZ	**Chatham Island**	**57.35 143**	IAMs_20	IAMs_20	17 57 58.9	
	comp=Z,30µm,19.0s					
CTZ	**Chatham Island**	**57.35 143**	P	P	17 34 42.8	+4.5
PEA0B	**Petropavlovsk-**	**57.48 14**	⇓eP	**P**	**17 34 40.0**	**+1.0**
PETK	**Petropavlovsk-**	**57.48 14**	P	**P**	**17 34 40.4**	**+1.4**
	comp=Z,11nm,0.8s,baz=168,slow=4.7,SNR=8.0					
PETK			S	**S**	**17 42 33.2**	**-2.4**
	comp=Z,2.9nm,0.9s,baz=289,slow=4.5,SNR=1.4					
PETK			LR	LR	17 55 29.0	
	comp=Z,14µm,21.7s,baz=202,slow=32					
	comp=Z,11nm,0.8s					
PET	**Petropavlovsk**	**57.63 14**	eP	**P**	**17 34 39.9**	**-0.1**
PET			eS	**S**	**17 42 30.3**	**-7.2**
PET			pmax	pmax		
	comp=Z,2µm,11.1s					
PET			pmax	pmax		
	comp=Z,1µm,9.5s					
CIT	**Chita**	**58.03 342**	eP	**P**	**17 34 43.2**	**+0.2**
CIT			e		17 36 59.0	
CIT			eS	**S**	**17 42 41.0**	**-2.0**
CIT			pmax	pmax		
	comp=Z,620nm,2.4s					
RAGD	**RAYAGADA**	**58.07 294**	eP	**P**	**17 34 42.9**	**-1.0**
RAGD			IAmb	IAmb	17 35 01.1	
	comp=Z,225nm,1.5s					
PALK	**Pallekele**	**58.39 280**	LR	LR	18 02 10.3	
	comp=Z,7µm,21.2s,baz=106,slow=38					
PALK	**Pallekele**	**58.39 280**	i P	**P**	**17 34 45.3**	**-0.9**
PALK	**Pallekele**	**58.39 280**	P	**P**	**17 34 48.6**	**+2.4**
PALK			S	**S**	**17 42 42.3**	**-6.6**
JHSG	**JHARSUGUGA**	**58.48 297**	eP	**P**	**17 34 45.9**	**-0.8**

MALK	**Mahakanadarawa**	58.69	281	P	P	17 34 49.1	+0.8
MALK	**Mahakanadarawa**	58.69	281	⇑P	P	17 34 49.2	+0.9
MDRS	**Chennai**	59.71	286	*e*P	P	17 34 54.7	-0.6
ZAK	**Zakamensk**	60.46	335	*e*P	P	17 34 59.5	-0.4
ALBI	**Allahabad**	61.26	300	*e*P	P	17 35 05.2	-0.6
ALBI				IAmb	IAmb	17 35 14.6	
	comp=Z,130nm,1.0s						
IRK	**Irkutsk**	61.47	337	*e*P	P	17 35 05.7	-0.9
IRK				*e*S	S	17 43 54.4	+27
IRK				pmax	pmax		
	comp=Z,388nm,1.9s						
KOD	**Kodaikanal**	61.95	283	*e*P	P	17 35 10.5	-0.4
KOD				IAmb	IAmb	17 35 21.9	
	comp=Z,290nm,1.1s						
HYB	**Hyderabad**	62.16	291	*e*P	P	17 35 10.3	-1.7
HYB				*e*sP	pP	17 35 14.9	-2.6
HYB				IVmB_BB		17 35 20.5	
	comp=Z,2µm,6.7s						
HYB				*e*PcP	PcP	17 35 50.3	-1.8
HYB				*e*PP	PP	17 37 27.2	-1.8
HYB				*e*ScP	ScP	17 39 52.1	-1.5
HYB				*e*PcS	PcS	17 39 53.4	-2.2
HYB				*e*S	S	17 43 36.8	-0.4
HYB				IVMs_BB	IVMs_BB	17 58 51.4	
	comp=Z,3µm,40.9s						
TRD	**Trivandrum**	62.22	281	*e*P	P	17 35 11.3	-1.1
TRD				IAmb	IAmb	17 35 19.7	
	comp=Z,300nm,1.3s						
MOY	**Mondy**	62.38	335	*e*P	P	17 35 30.3	+17
MOY				*e*		17 44 01.0	
MOY				pmax	pmax		
	comp=Z,325nm,2.0s						
MA2	**Magadan**	62.40	7	P	P	17 35 10.9	-1.8
MA2				IAmb	IAmb	17 35 23.0	
	comp=Z,222nm,1.6s						
MA2	**Magadan**	62.40	7	P	P	17 35 12.5	-0.2
	comp=Z,14nm,0.9s,baz=178,slow=4.2,SNR=9.8						
MA2				S	S	17 43 36.7	-2.0
	comp=Z,1.8nm,0.7s,baz=189,slow=14,SNR=1.1						
MA2				LR	LR	18 00 45.8	
	comp=Z,5µm,20.3s,baz=192,slow=35						
	comp=Z,14nm,0.9s						
MA2	**Magadan**	62.40	7	P	P	17 35 15.8	+3.1
MA2	**Magadan**	62.40	7	⇑*e*P	P	17 35 11.6	-1.1
MA2				pmax	pmax		
	comp=Z,154nm,1.6s						
MA2	**Magadan**	62.40	7	P	P	17 35 14.4	+1.7
	comp=Z,3µmcomp=Z,56nm,2.1s						
MA2	**Magadan**	62.40	7	⇓P	P	17 35 13.7	+1.0
SHEM	**Shemya Is, Ala**	62.43	24	P	P	17 35 14.9	+1.9
	comp=Z,15nm,0.7s,baz=263,slow=15,SNR=4.0						
SHEM				S	S	17 43 37.1	-2.1
	comp=Z,7.6nm,0.2s,baz=277,slow=21,SNR=1.3						
SHEM				LR	LR	18 00 48.6	
	comp=Z,16µm,19.6s,baz=220,slow=35						
	comp=Z,15nm,0.7s						
SMY	**Shemya**	62.43	24	IAMs_20	IAMs_20	18 01 05.9	
	comp=Z,22µm,20.0s						
RAR	**Rarotonga**	62.94	113	LR	LR	18 01 16.4	
	comp=Z,10µm,20.8s,baz=276,slow=35						
BOD	**Bodaibo**	63.01	346	*e*P	P	17 35 18.2	+1.4
BOD				pmax	pmax		
	comp=Z,211nm,2.0s						
LGTI	**Lohaghat**	63.88	304	*e*P	P	17 35 23.3	+0.1
LGTI				IAmb	IAmb	17 35 51.0	
PTH	**Pithoragarh**	63.94	304	*e*P	P	17 35 22.9	-0.9
PTH				IAmb	IAmb	17 36 03.0	
	comp=Z,151nm,1.4s						
JHNI	**Jhansi**	64.14	300	*e*P	P	17 35 23.7	-1.2
XMAS	**Kiritimati**	64.23	87	IAMs_20	IAMs_20	17 59 16.1	
	comp=Z,25µm,20.0s						
AKL	**Akola**	64.30	294	*e*P	P	17 35 25.3	-0.8
AKL				IAmb	IAmb	17 35 34.4	
	comp=Z,112nm,1.1s						
YAK	**Yakutsk**	64.45	355	P	P	17 35 24.6	-1.7
YAK	**Yakutsk**	64.45	355	IAMs_20	IAMs_20	18 00 08.7	
	comp=Z,25µm,20.0s						
YAK	**Yakutsk**	64.45	355	P	P	17 35 25.7	-0.5
	comp=Z,59nm,0.7s,baz=158,slow=3.7,SNR=18						
YAK				S	S	17 44 03.2	-1.0
	comp=Z,6.3nm,0.5s,baz=112,slow=1.3,SNR=1.4						
YAK				LR	LR	18 00 06.2	
	comp=Z,26µm,21.8s,baz=166,slow=33						
	comp=Z,59nm,0.7s						
YAK	**Yakutsk**	64.45	355	*e*P	P	17 35 26.2	0.0
YAK				*e*		17 35 57.6	
YAK				*e*		17 37 47.4	
YAK				*e*PPP	PPP	17 39 18.6	
YAK				*e*S	S	17 44 06.2	+2.1
YAK				*e*		17 45 20.6	
YAK				*e*SS	SS	17 48 17.5	+2.9
YAK				pmax	pmax		
	comp=Z,49nm,1.0s						
YAK				pmax	pmax		
	comp=N,33nm,1.1s						
YAK				pmax	pmax		
	comp=E,7.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,286nm,3.0s						
YAK				pmax	pmax		
	comp=N,956nm,6.9s						
YAK				pmax	pmax		
	comp=E,245nm,4.4s						
YAK				smax	smax		
	comp=N,5µm,9.4s						
YAK				smax	smax		
	comp=E,7µm,10.0s						
YAK				MLR	MLR		
	comp=Z,8µm,13.0s						
YAK				MLR	MLR		
	comp=N,6µm,16.0s						
YAK				MLR	MLR		
	comp=E,5µm,16.0s						
YAK	**Yakutsk**	64.45	355	⇑P	P	17 35 24.4	-1.9
WMQ	**Urumqi**	64.49	322	P	P	17 35 27.4	+0.4
WMQ				ScP		17 40 08.0	
WMQ				S	S	17 44 08.9	+3.4
WMQ				pmax	pmax		
	comp=E,50nm,1.3s						
WMQ				pmax	pmax		
	comp=E,2µm,8.7s						
WMQ				LR	LR		
	comp=E,15µm,23.7s						
WMQ				LR	LR		
	comp=E,8µm,21.1s						
WMQ				LR	LR		
	comp=E,6µm,21.1s						
BHPL	**Bhopal**	64.53	297	*e*P	P	17 35 26.7	-0.9
BHPL				IAmb	IAmb	17 35 37.7	
	comp=Z,142nm,1.4s						
KEKH	**Kekaha**	64.97	65	IAMs_20	IAMs_20	17 57 07.6	
	comp=Z,32µm,22.0s						
SEY	**Seymchan**	65.86	7	P	P	17 35 35.2	-0.2
	comp=Z,7.5nm,0.8s,baz=175,slow=4.4,SNR=17						
SEY				S	S	17 44 17.9	-3.5
	comp=Z,1.6nm,0.9s,baz=232,slow=19,SNR=1.7						
SEY				LR	LR	18 03 05.5	
	comp=Z,8µm,20.3s,baz=188,slow=35						
	comp=Z,7.5nm,0.8s						
SEY	**Seymchan**	65.86	7	*d i*P	P	17 35 35.8	+0.5
SEY				pmax	pmax		
	comp=Z,87nm,1.5s						
ADK	**Adak**	65.90	29	P	P	17 35 39.9	+4.1
ADK	**Adak**	65.90	29	P	P	17 35 38.0	+2.2
ADK	**Adak**	65.90	29	⇓P	P	17 35 37.5	+1.7
DDI	**Dehra Dun**	65.96	305	*e*P	P	17 35 36.0	-0.8
DDI				IAmb	IAmb	17 35 47.1	
	comp=Z,198nm,0.8s						
NDI	**New Delhi**	66.17	303	*e*P	P	17 35 37.5	-0.6
KAD	**Karad**	66.23	290	*e*P	P	17 35 37.8	-1.0
KAD				IAmb	IAmb	17 35 44.4	
	comp=Z,211nm,1.6s						
KIP	**Kipapa**	66.38	66	P	P	17 35 44.8	+5.3
KIP	**Kipapa**	66.38	66	P	P	17 35 42.5	+3.0
KUDL	**Kundal**	66.64	302	*e*P	P	17 35 40.5	-0.6
POO	**Poona**	66.77	291	*e*P	P	17 35 41.4	-0.8
POO				IAmb	IAmb	17 35 52.9	
	comp=Z,135nm,1.1s						
CASY	**Casey**	66.87	192	P	P	17 35 41.0	-0.8
CASY	**Casey**	66.87	192	⇑P	P	17 35 41.8	0.0
SMLA	**Simla**	66.94	305	*e*P	P	17 35 42.3	-0.6
SMLA				IAmb	IAmb	17 36 11.2	
	comp=Z,194nm,1.1s						
ATKA	**Atka Island**	67.30	29	IAMs_20	IAMs_20	18 00 48.9	
	comp=Z,22µm,21.0s						

ATKA	**Atka Island**	67.30	29	P	P	17 35 48.3	+3.5
ATKA	**Atka Island**	67.30	29	⇓P	P	17 35 47.1	+2.4
BHK	**Bhakra**	67.64	305	*e*P	P	17 35 44.0	-3.4
BHK				IAML		17 35 54.1	
	comp=Z,116nm,1.0s						
KHLH	**Kahului Airpor**	67.72	66	IAMs_20	IAMs_20	17 59 49.6	
	comp=Z,20µm,21.0s						
HLK	**Haleakala**	67.85	67	IAMs_20	IAMs_20	18 00 04.2	
	comp=Z,23µm,22.0s						
DHRM	**DHARAMSHALA**	67.98	306	*e*P	P	17 35 48.9	-0.9
DHRM				IAmb	IAmb	17 36 03.8	
	comp=Z,216nm,1.1s						
ZSN	**Zaisan**	68.04	324	*e*P	P	17 35 49.0	-0.5
ZSN				*e*S	S	17 44 49.3	+1.0
ZSN				pmax	pmax		
	comp=Z,103nm,2.5s						
ZSN	**Zaisan**	68.04	324	*e*P	P	17 35 49.1	-0.5
	comp=Z,103nm,2.5s						
ZSN				*e*S	S	17 44 49.4	+1.0
KHU	**Kahuku**	68.15	68	IAMs_20	IAMs_20	18 01 35.1	
	comp=Z,22µm,20.0s						
MWH	**Mokuaweoweo**	68.21	68	IAMs_20	IAMs_20	18 01 36.7	
	comp=Z,21µm,21.0s						
AIN	**Ainahou**	68.32	68	IAMs_20	IAMs_20	18 00 13.6	
	comp=Z,22µm,20.0s						
POHA	**Pohakuloa**	68.32	68	IAMs_20	IAMs_20	18 00 53.6	
	comp=Z,17µm,20.0s						
POHA	**Pohakuloa**	68.32	68	P	P	17 35 55.8	+3.6
HMH	**Humu‘ula Sheep**	68.34	68	IAMs_20	IAMs_20	18 01 40.1	
	comp=Z,21µm,20.0s						
MLH	**Mauna Loa**	68.41	68	IAMs_20	IAMs_20	18 01 52.9	
	comp=Z,22µm,19.0s						
HLP	**Hilina Pali**	68.45	68	IAMs_20	IAMs_20	18 00 16.9	
	comp=Z,24µm,20.0s						
UWE	**Uwekahuna**	68.48	68	IAMs_20	IAMs_20	18 00 17.9	
	comp=Z,23µm,21.0s						
HATHI	**Halema‘uma‘u T**	68.51	68	IAMs_20	IAMs_20	18 00 18.6	
	comp=Z,23µm,20.0s						
PUH	**Pauahi**	68.55	68	IAMs_20	IAMs_20	18 00 19.5	
	comp=Z,23µm,20.0s						
STCH	**Steam Cracks**	68.63	68	IAMs_20	IAMs_20	18 01 57.8	
	comp=Z,25µm,20.0s						
JOKA	**Jonika Flow**	68.75	68	IAMs_20	IAMs_20	18 00 15.0	
	comp=Z,23µm,20.0s						
JMU	**Jammu**	69.25	306	*e*P	P	17 35 57.4	0.0
JMU				IAmb	IAmb	17 36 04.6	
	comp=Z,184nm,1.1s						
MK31	**Makanchi Array**	69.27	322	*c i*P	P	17 35 56.8	-0.5
MKAR	**Makanchi Array**	69.27	322	P	P	17 35 56.4	-0.9
MKAR	**Makanchi Array**	69.27	322	P	P	17 35 56.9	-0.4
	comp=Z,25nm,0.8s,baz=111,slow=6.6,SNR=98						
MKAR				S	S	17 44 59.6	-3.4
	comp=Z,0.2nm,0.6s,baz=128,slow=9.3,SNR=1.3						
MKAR				PKP2bc		18 04 06.4	
	comp=Z,0.7nm,1.0s,baz=270,slow=2.4,SNR=4.0						
	comp=Z,25nm,0.8s						
MKAR	**Makanchi Array**	69.27	322	*i* P	P	17 35 56.9	-0.4
MKAR				pmax	pmax		
	comp=Z,24nm,0.7s						
UZB	**Uzynbulak**	69.79	318	*e*P	P	17 35 59.9	-0.9
UZB				*e*S	S	17 45 10.1	+0.5
UZB				pmax	pmax		
	comp=Z,55nm,1.1s						
UZB	**Uzynbulak**	69.79	318	*e*P	P	17 35 59.9	-0.9
	comp=Z,55nm,1.1s						
UZB				*e*S	S	17 45 10.1	+0.5
TARG	**Taragay, Kyrgy**	70.07	316	IAmb	IAmb	17 36 19.3	
	comp=Z,100nm,1.0s						
KPKS	**Kokpek**	70.14	318	*e*P	P	17 36 02.1	-0.8
KPKS				*e*S	S	17 45 14.2	+0.6
KPKS	**Kokpek**	70.14	318	*e*P	P	17 36 02.1	-0.8
KPKS				*e*S	S	17 45 14.2	+0.6
SATY	**Saty**	70.17	318	*e*P	P	17 36 02.3	-0.7
SATY				*e*S	S	17 45 14.6	+0.6
SATY				pmax	pmax		
	comp=Z,43nm,0.9s						
SATY	**Saty**	70.17	318	*e*P	P	17 36 02.4	-0.7
	comp=Z,43nm,0.9s						
SATY				*e*S	S	17 45 14.7	+0.6
NIKH	**Nikolski High**	70.42	31	P	P	17 36 02.9	-1.2
	baz=238						
NIKH				S	S	17 45 14.5	-1.7
	baz=238						
KSH	**Kashi**	70.58	313	P	P	17 36 06.8	+1.2
KSH				S	S	17 45 20.9	+2.0
KSH				pmax	pmax		
	comp=Z,37nm,1.2s						
KSH				pmax	pmax		
	comp=Z,3µm,10.3s						
KSH				LR	LR		
	comp=Z,9µm,19.2s						
KSH				LR	LR		
	comp=Z,14µm,19.2s						
KSH				LR	LR		
	comp=Z,15µm,19.2s						
KDJ	**Kajisay**	70.65	316	IAmb	IAmb	17 36 32.5	
	comp=Z,147nm,1.3s						
NIL	**Nilore**	70.84	307	P	P	17 36 06.1	-1.1
NIL				IAmb	IAmb	17 36 17.3	
	comp=Z,193nm,1.1s						
NIL	**Nilore**	70.84	307	P	P	17 36 06.1	-1.1
NIL				pmax	pmax		
	comp=Z,193nm,1.1s						
TDK	**Taldyqorghan**	70.94	319	*e*P	P	17 36 07.0	-0.6
TDK				pmax	pmax		
	comp=Z,64nm,1.0s						
TDK				MLR	MLR		
	comp=Z,7µm,18.0s						
TDK	**Taldyqorghan**	70.94	319	*e*P	P	17 36 07.0	-0.6
	comp=Z,64nm,1.0s						
TDK				LR	LR	18 08 08.6	
	comp=Z,7µm,18.0s						
ARXS	**Arharly**	71.01	318	*e*P	P	17 36 07.9	-0.2
MDOK	**Medeo**	71.13	317	*e*P	P	17 36 08.1	-0.8
MDOK				*e*S	S	17 45 25.8	+0.6
MDOK				MLR	MLR		
	comp=Z,5µm,19.0s						
MDOK	**Medeo**	71.13	317	*e*P	P	17 36 08.1	-0.8
MDOK				*e*S	S	17 45 25.8	+0.6
MDOK				LR	LR	18 08 42.7	
	comp=Z,5µm,19.5s						
JASL	**Jaisalmer**	71.14	299	*e*P	P	17 36 08.4	-0.8
AAA	**Alma-Ata**	71.23	317	*e*P	P	17 36 08.8	-0.7
AAA				pmax	pmax		
	comp=Z,105nm,1.0s						
AAA	**Alma-Ata**	71.23	317	*e*P	P	17 36 08.8	-0.7
	comp=Z,105nm,1.0s						
ZAA0	**Zalesovo Array**	71.41	330	IAmb	IAmb	17 36 45.2	
	comp=Z,217nm,1.8s						
ZALV	**Zalesovo Beam**	71.41	330	P	P	17 36 07.7	-2.5
ZALV	**Zalesovo Beam**	71.41	330	P	P	17 36 09.1	-1.1
	comp=Z,13nm,0.6s,baz=107,slow=5.1,SNR=31						
ZALV				S	S	17 45 23.9	-3.8
	comp=Z,0.3nm,0.4s,baz=75,slow=17,SNR=1.3						
ZALV				PKPPKP	P'P'df	18 03 58.4	-4.6
	comp=Z,0.3nm,0.3s,baz=258,slow=7.4,SNR=4.2						
ZALV				LR	LR	18 08 03.2	
	comp=Z,14µm,20.5s,baz=122,slow=36						
	comp=Z,13nm,0.6s						
BOOM	**Boomskoye usch**	71.64	316	IAmb	IAmb	17 36 45.3	
	comp=Z,131nm,1.2s						
BOOM				IAMs_20	IAMs_20	18 09 52.2	
	comp=Z,16µm,20.0s						
KUU	**Kurty**	71.88	318	*e*P	P	17 36 12.6	-0.7
KUU				pmax	pmax		
	comp=Z,110nm,1.3s						
KUU				MLR	MLR		
	comp=Z,4µm,15.0s						
KUU	**Kurty**	71.88	318	*e*P	P	17 36 12.7	-0.7
	comp=Z,110nm,1.3s						
KUU				LR	LR	18 09 06.8	
	comp=Z,4µm,15.2s						
TKM2	**Tokmak 2**	72.03	317	P	P	17 36 14.2	-0.2
	SNR=34						
UNV	**Unalaska Valle**	72.07	31	IAMs_20	IAMs_20	18 03 16.2	
	comp=Z,16µm,20.0s						
UNV	**Unalaska Valle**	72.07	31	P	P	17 36 13.5	-0.7
	baz=239						
UNV				S	S	17 45 35.4	+0.1
	baz=239						
P08K	**Saint George I**	72.08	27	IAMs_20	IAMs_20	18 04 03.2	
	comp=Z,19µm,22.0s						
P08K	**Saint George I**	72.08	27	P	P	17 36 12.7	-1.4
	baz=236						
P08K				S	S	17 45 36.7	+1.4
	baz=236						

SPIA	**Saint Paul Isl**	72.09	27	IAMs_20	IAMs_20	18 03 20.4	
	comp=Z,17µm,21.0s						
SPIA	**Saint Paul Isl**	72.09	27	P	P	17 36 14.2	0.0
	baz=235						
SPIA				S	S	17 45 37.2	+1.8
	baz=235						
PPT	**Papeete**	72.14	108	P	P	17 36 15.7	+0.3
	comp=Z,18nm,0.3s,baz=281,slow=19,SNR=1.6						
PPT				LR	LR	18 07 52.3	
	comp=Z,5µm,18.0s,baz=270,slow=36						
	comp=Z,18nm,0.3s						
PPT2	**Papeete2**	72.15	108	*e*P	P	17 36 08.3	-7.2
	comp=Z,1µm,25.0s						
PPT2				*e*S	S	17 45 37.5	-0.2
	comp=Z,4µm,22.0s						
PPT2				*e*SS	SS	17 50 11.0	-4.4
	comp=Z,6µm,24.2s						
PPT2				*e*LQ	LQ	17 55 09.8	
	comp=Z,118µm,35.0s						
PPT2				*e*LR	LR	17 58 07.5	
	comp=Z,39µm,26.0s						
PPT2				*e*LR	LR	17 58 15.1	
	comp=Z,26µm,26.2s						
PAE	**Paea**	72.15	108	*e*PKIKP	P	17 35 52.7	-23
	comp=Z,207nm,22.3s						
PAE				*e*S	S	17 45 34.7	-2.8
	comp=Z,699nm,21.7s						
PAE	**Paea**	72.15	108	*e*LR	LR	17 58 16.2	
	comp=Z,6µm,25.3s						
KBK	**Karagaybulak**	72.39	316	P	P	17 36 17.3	+0.7
	SNR=21						
TVO	**Taravao**	72.47	108	*e*S	S	17 45 35.0	-6.3
	comp=Z,996nm,22.1s						
TVO	**Taravao**	72.47	108	*e*LR	LR	17 58 22.5	
	comp=Z,7µm,25.3s						
LVA	**Lava Point**	72.47	31	IAMs_20	IAMs_20	18 03 17.7	
	comp=Z,19µm,22.0s						
UCH	**Uchtor**	72.54	316	P	P	17 36 18.9	+1.1
	SNR=8.6						
CHMS	**Chumysh**	72.64	316	P	P	17 36 18.3	+0.4
	SNR=14						
TBI	**Tubuai**	72.68	114	*e*P	P	17 36 09.4	-9.0
	comp=Z,5µm,25.5s						
TBI				*e*S	S	17 45 41.5	-1.9
	comp=Z,20µm,29.2s						
TBI				*e*SS	SS	17 50 24.2	+1.0
	comp=Z,19µm,25.8s						
TBI				*e*LQ	LQ	17 55 18.0	
	comp=Z,332µm,38.0s						
TBI				*e*LR	LR	17 58 23.0	
	comp=Z,24µm,28.8s						
TBI				*e*LR	LR	17 58 25.2	
	comp=Z,107µm,29.0s						
AAK	**Ala-Archa**	72.69	316	P	P	17 36 19.1	+0.8
	SNR=16						
AAK	**Ala-Archa**	72.69	316	P	P	17 36 16.9	-1.5
AAK	**Ala-Archa**	72.69	316	P	P	17 36 18.7	+0.3
	comp=Z,17nm,0.9s,baz=172,slow=4.5,SNR=21						
AAK				S	S	17 45 40.2	-3.1
	comp=Z,0.6nm,0.3s,baz=174,slow=9.2,SNR=1.5						
AAK				LR	LR	18 10 39.8	
	comp=Z,12µm,19.8s,baz=118,slow=38						
	comp=Z,17nm,0.9s						
AAK	**Ala-Archa**	72.69	316	*c i*P	P	17 36 18.5	+0.1
AAK				pmax	pmax		
	comp=Z,98nm,1.2s						
AAK				MLR	MLR		
	comp=Z,11µm,19.0s						
AAK	**Ala-Archa**	72.69	316	P	P	17 36 18.2	-0.1
AAK	**Ala-Archa**	72.69	316	P	P	17 36 18.1	-0.3
AAK				S	S	17 45 43.4	+0.1
BILL	**Bilibino**	72.76	11	P	P	17 36 16.4	-1.6
BILL	**Bilibino**	72.76	11	*c i*P	P	17 36 16.6	-1.4
BILL				pmax	pmax		
	comp=Z,43nm,1.1s						
BILL				MLR	MLR		
	comp=Z,11µm,20.0s						
SGDS	**Sogindy**	72.88	317	*e*P	P	17 36 18.5	-0.8
USP	**Ospenovka**	72.90	317	P	P	17 36 19.8	+0.4
	SNR=64						
AML	**Almayashu**	73.08	315	P	P	17 36 21.4	+0.4
	SNR=66						
KURK	**Kurchatov**	73.19	325	P	P	17 36 19.1	-1.8
KURK				IAmb	IAmb	17 36 31.4	
	comp=Z,131nm,1.1s						
KURK	**Kurchatov**	73.19	325	*c i*P	P	17 36 20.0	-0.9
KURK				pmax	pmax		
	comp=Z,168nm,1.2s						
KURK				MLR	MLR		
	comp=Z,8µm,17.0s						
EKS2	**Erkin-Say**	73.20	316	P	P	17 36 22.4	+1.0
	SNR=38						
KURBB	**Kurchatov Arra**	73.20	325	P	P	17 36 20.1	-0.9
	comp=Z,24nm,0.9s,baz=114,slow=5.7,SNR=57						
KURBB				S	S	17 45 43.4	-5.0
	comp=Z,0.2nm,0.3s,baz=108,slow=3.7,SNR=0.8						
KURBB				PKPPKP	P'P'df	18 03 58.0	-2.2
	comp=Z,0.5nm,0.9s,baz=301,slow=2.7,SNR=4.4						
	comp=Z,24nm,0.9s						
DRK	**Karamyk**	73.63	312	IAmb	IAmb	17 36 56.0	
	comp=Z,257nm,1.4s						
PMOR	**Pomariorio Ree**	73.64	105	*e*P	P	17 36 25.1	+0.9
	comp=Z,287nm,1.2s						
PMOR				*e*S	SKiKP	17 45 49.3	-4.9
	comp=Z,4µm,22.7s						
PMOR	**Pomariorio Ree**	73.64	105	*e*LR	LR	17 58 51.4	
	comp=Z,31µm,24.4s						
BTLS	**Baital**	73.82	318	*e*P	P	17 36 24.0	-0.7
BTLS	**Baital**	73.82	318	*e*P	P	17 36 24.1	-0.7
TIXI	**Tiksi**	74.03	357	P	P	17 36 23.3	-2.1
TIXI				IAmb	IAmb	17 36 46.5	
	comp=Z,142nm,1.4s						
TIXI				IAMs_20	IAMs_20	18 06 42.8	
	comp=Z,18µm,20.0s						
TIXI	**Tiksi**	74.03	357	LR	LR	18 06 53.9	
	comp=Z,16µm,20.7s,baz=186,slow=34						
TIXI	**Tiksi**	74.03	357	⇓*e*P	P	17 36 27.4	+2.0
TIXI				pmax	pmax		
	comp=Z,113nm,1.5s						
TIXI				MLR	MLR		
	comp=Z,13µm,18.0s						
FALS	**False Pass**	74.14	31	P	P	17 36 29.8	+3.4
FALS	**False Pass**	74.14	31	P	P	17 36 25.6	-0.8
	baz=242						
FALS				S	S	17 45 58.9	+0.1
	baz=242						
KBU	**Kabul Universi**	74.36	307	P	P	17 36 27.1	-1.3
KBL	**Kabul**	74.44	307	P	P	17 36 26.9	-2.0
KBL	**Kabul**	74.44	307	P	P	17 36 26.9	-2.0
KBL				pmax	pmax		
	comp=Z,100nm,1.1s						
BTK	**Batken**	74.52	313	IAmb	IAmb	17 36 52.0	
	comp=Z,122nm,1.0s						
DZA	**Taraz**	74.98	315	*e*P	P	17 36 30.9	-0.7
DZA	**Taraz**	74.98	315	*e*P	P	17 36 31.0	-0.7
S12K	**Black Hills**	75.22	30	P	P	17 36 31.8	-0.9
	baz=243						
S12K				S	S	17 46 10.5	-0.4
	baz=243						
GAMB	**Gambell**	75.44	21	P	P	17 36 33.8	0.0
	baz=232						
GAMB				S	S	17 46 16.0	+3.1
	baz=232						
SIMJ	**Simiganj**	75.49	311	P	P	17 36 33.4	-1.4
SIMJ				IAmb	IAmb	17 36 47.0	
	comp=Z,160nm,0.9s						
KK31	**Karatay Array**	75.62	316	IAmb	IAmb	17 36 49.8	
	comp=Z,110nm,1.2s						
KKAR	**Karatay Array**	75.62	316	P	P	17 36 33.7	-1.6
KKAR	**Karatay Array**	75.62	316	IAmb	IAmb	17 36 49.8	
	comp=Z,115nm,1.2s						
KKAR	**Karatay Array**	75.62	316	P	P	17 36 33.7	-1.6
M11K	**Mekoryuk**	75.62	25	IAMs_20	IAMs_20	18 04 44.9	
	comp=Z,20µm,22.0s						
M11K	**Mekoryuk**	75.62	25	P	P	17 36 33.8	-1.0
	baz=238						
M11K				S	S	17 46 19.5	+4.5
	baz=238						
IUG	**Iuzhnay**	75.68	314	*e*P	P	17 36 34.9	-0.9
IUG				pmax	pmax		
	comp=Z,108nm,1.9s						
IUG	**Iuzhnay**	75.68	314	*e*P	P	17 36 34.9	-0.9
	comp=Z,108nm,1.9s						
SDPT	**Sand Point**	75.88	31	P	P	17 36 40.6	+4.2
SDPT	**Sand Point**	75.88	31	P	P	17 36 35.5	-0.9
	baz=244						
SDPT				S	S	17 46 20.1	+2.1

	baz=244						
CHM	**Chimkent**	76.03	315	*e*P	P	17 36 36.9	-0.8
CHM				pmax	pmax		
	comp=Z,174nm,1.2s						
CHM				MLR	MLR		
	comp=Z,3µm,17.0s						
CHM	**Chimkent**	76.03	315	*e*P	P	17 36 36.9	-0.8
	comp=Z,174nm,1.2s						
CHM				LR	LR	18 11 45.9	
	comp=Z,3µm,16.8s						
BRLS	**Borolday**	76.07	315	*e*P	P	17 36 37.3	-0.5
BRLS	**Borolday**	76.07	315	*e*P	P	17 36 37.4	-0.5
CHNA	**Chernabura Isl**	76.12	32	P	P	17 36 41.1	+3.3
CHNA	**Chernabura Isl**	76.12	32	P	P	17 36 37.3	-0.5
	baz=245						
CHNA				S	S	17 46 21.5	+0.7
	baz=245						
VNDA	**Vanda**	76.26	175	P	P	17 36 37.4	-0.8
VNDA	**Vanda**	76.26	175	P	P	17 36 38.2	0.0
	comp=Z,20nm,0.8s,baz=326,slow=7.0,SNR=25						
VNDA				S	S	17 46 19.8	-2.0
	comp=Z,0.7nm,0.8s,baz=282,slow=4.1,SNR=1.6						
VNDA				LR	LR	18 10 53.2	
	comp=Z,44µm,18.3s,baz=352,slow=36						
	comp=Z,20nm,0.8s						
BRZS	**Berezniki**	76.41	323	*e*P	P	17 36 38.9	-0.7
BRZS				*e*S	S	17 46 25.1	+0.8
BRZS	**Berezniki**	76.41	323	*e*P	P	17 36 38.9	-0.7
BRZS				*e*S	S	17 46 25.1	+0.8
S14K	**Fog Glacier**	76.75	30	P	P	17 36 41.1	-0.4
	baz=245						
S14K				S	S	17 46 29.2	+1.4
	baz=245						
M13K	**Dall Lake**	76.85	26	P	P	17 36 41.9	+0.1
	baz=241						
M13K				S	S	17 46 29.9	+1.3
	baz=241						
SBA	**Scott Base**	77.03	174	P	P	17 36 46.3	+3.7
K13K	**Kusilvak Mount**	77.07	24	P	P	17 36 42.5	-0.5
	baz=239,SNR=15						
K13K				S	S	17 46 33.6	+2.6
	baz=239						
O14K	**Tigyukauivet M**	77.23	27	IAMs_20	IAMs_20	18 07 01.6	
	comp=Z,15µm,21.0s						
O14K	**Tigyukauivet M**	77.23	27	P	P	17 36 43.1	-0.8
	baz=243						
O14K				S	S	17 46 33.2	+0.4
	baz=243						
CHGN	**Chignik**	77.33	31	S	S	17 46 33.8	-0.2
	baz=246						
N14K	**Kuskokwak Cree**	77.35	27	IAMs_20	IAMs_20	18 06 44.7	
	comp=Z,22µm,21.0s						
N14K	**Kuskokwak Cree**	77.35	27	P	P	17 36 44.2	-0.5
	baz=242						
N14K				S	S	17 46 35.6	+1.5
	baz=242						
L14K	**Kuka Creek**	77.59	25	IAmb	IAmb	17 37 06.4	
	comp=Z,215nm,1.1s						
L14K	**Kuka Creek**	77.59	25	P	P	17 36 46.0	0.0
	baz=241,SNR=16						
L14K				S	S	17 46 39.4	+2.8
	baz=241						
M14K	**Bethel**	77.62	26	IAmb	IAmb	17 37 06.5	
	comp=Z,138nm,0.9s						
M14K				IAMs_20	IAMs_20	18 09 46.7	
	comp=Z,14µm,20.0s						
M14K	**Bethel**	77.62	26	P	P	17 36 46.0	-0.1
	baz=242,SNR=15						
M14K				S	S	17 46 38.7	+1.8
	baz=242						
TNA	**Tin City**	77.81	20	P	P	17 36 47.3	+0.2
	baz=235,SNR=6.4						
TNA				S	S	17 46 42.3	+3.5
	baz=235						
O15K	**Ungalikthiuk R**	77.86	28	P	P	17 36 47.3	-0.2
	baz=244						
O15K				S	S	17 46 43.0	+3.3
	baz=244						
J14K	**Nanvaranak Lak**	77.93	24	IAMs_20	IAMs_20	18 07 10.8	
	comp=Z,16µm,21.0s						
J14K	**Nanvaranak Lak**	77.93	24	P	P	17 36 47.8	0.0
	baz=240,SNR=11						
J14K				S	S	17 46 43.4	+3.2
	baz=240						
M15K	**Kasigluk River**	78.15	26	P	P	17 36 49.2	+0.2
	baz=243,SNR=8.3						
M15K				S	S	17 46 44.2	+1.5
	baz=243						
ANM	**Nome**	78.17	22	P	P	17 36 48.8	-0.3
	baz=238						
ANM				S	S	17 46 44.7	+1.9
	baz=238						
N15K	**Kwethluk River**	78.17	27	IAMs_20	IAMs_20	18 07 19.5	
	comp=Z,25µm,21.0s						
N15K	**Kwethluk River**	78.17	27	P	P	17 36 48.6	-0.7
	baz=244,SNR=7.4						
N15K				S	S	17 46 46.0	+2.9
	baz=244						
L15K	**Ungalak Mounta**	78.26	25	P	P	17 36 48.7	-0.9
	baz=242,SNR=8.8						
L15K				S	S	17 46 45.2	+1.4
	baz=242						
R16K	**Pilot Point**	78.26	30	IAMs_20	IAMs_20	18 06 54.0	
	comp=Z,25µm,21.0s						
R16K	**Pilot Point**	78.26	30	P	P	17 36 48.9	-0.9
	baz=246						
R16K				S	S	17 46 44.8	+0.8
	baz=246						
F14K	**Arctic Creek**	78.32	20	P	P	17 36 49.9	-0.1
	baz=237						
F14K				S	S	17 46 48.0	+3.7
	baz=237						
K15K	**Wolf Creek Mou**	78.53	24	IAmb	IAmb	17 37 11.8	
	comp=Z,201nm,1.2s						
K15K				IAMs_20	IAMs_20	18 06 23.7	
	comp=Z,17µm,22.0s						
K15K	**Wolf Creek Mou**	78.53	24	P	P	17 36 49.7	-1.4
	baz=242,SNR=11						
K15K				S	S	17 46 50.0	+3.3
	baz=242						
CHIR	**Chirikof Islan**	78.59	32	P	P	17 36 50.3	-1.3
	baz=249						
CHIR				S	S	17 46 51.2	+3.6
	baz=249						
P16K	**Nushagak River**	78.66	28	P	P	17 36 50.4	-1.5
	baz=246						
P16K				S	S	17 46 49.5	+1.3
	baz=246						
BVAR	**Borovoye Array**	78.78	325	P	P	17 36 52.2	-0.6
	comp=Z,53nm,0.7s,baz=110,slow=8.1,SNR=117						
BVAR				S	S	17 46 46.0	-3.8
	comp=Z,0.2nm,0.4s,baz=139,slow=11,SNR=1.5						
BVAR				PKKPbc	PKKPbc	17 55 50.5	+1.0
	comp=Z,0.6nm,0.7s,baz=289,slow=4.4,SNR=3.3						
BVAR				PKPPKP	P'P'df	18 03 54.1	+3.8
	comp=Z,0.4nm,0.6s,baz=229,slow=1.3,SNR=1.9						
BVAR				LR	LR	18 13 59.5	
	comp=Z,7µm,19.4s,baz=103,slow=38						
	comp=Z,53nm,0.7s						
O16K	**Kokwok River B**	78.84	28	P	P	17 36 51.6	-1.4
	baz=246,SNR=18						
O16K				S	S	17 46 51.3	+1.2
	baz=246						
BRVK	**Borovoye**	78.86	325	P	P	17 36 51.2	-2.0
BRVK				IAmb	IAmb	17 37 01.3	
	comp=Z,111nm,0.8s						
BRVK	**Borovoye**	78.86	325*c*	*i*P	P	17 36 52.6	-0.6
BRVK				pmax	pmax		
	comp=Z,146nm,0.9s						
BRVK				MLR	MLR		
	comp=Z,11µm,19.0s						
G15K	**Niukluk**	78.88	21	P	P	17 36 52.5	-0.6
	baz=239,SNR=9.5						
G15K				S	S	17 46 51.5	+1.2
	baz=239						
N16K	**Nishlik Lake**	78.90	27	P	P	17 36 53.0	-0.3
	baz=245,SNR=12						
N16K				S	S	17 46 53.7	+2.9
	baz=245						
F15K	**North Star Dit**	79.03	21	P	P	17 36 53.3	-0.6
	baz=238,SNR=18						
F15K				S	S	17 46 55.3	+3.3
	baz=238						
M16K	**Timber Creek**	79.05	26	IAMs_20	IAMs_20	18 07 14.6	
	comp=Z,19µm,22.0s						
M16K	**Timber Creek**	79.05	26	P	P	17 36 53.4	-0.7
	baz=245,SNR=18						
M16K				S	S	17 46 54.6	+2.2
	baz=245						
L16K	**Owhat River**	79.13	25	IAMs_20	IAMs_20	18 07 06.6	
	comp=Z,20µm,22.0s						
L16K	**Owhat River**	79.13	25	P	P	17 36 53.7	-0.8
	baz=244,SNR=9.7						
L16K				S	S	17 46 55.4	+2.3
	baz=244						
Q16K	**King Salmon**	79.15	29	P	P	17 36 54.3	-0.3
	baz=247						
Q16K				S	S	17 46 53.0	-0.4
	baz=247						
Q17K	**Contact Creek**	79.36	29	P	P	17 36 56.1	+0.1
	baz=248,SNR=10						
Q17K				S	S	17 46 55.4	-0.6
	baz=248						
J16K	**Anvik River**	79.37	24	P	P	17 36 56.5	+0.7
	baz=243,SNR=9.8						
J16K				S	S	17 46 58.4	+2.7
	baz=243						
H16K	**Elim**	79.37	22	P	P	17 36 55.4	-0.4
	baz=241,SNR=11						
H16K				S	S	17 46 57.6	+2.0
	baz=241						
O17K	**Koliganek Bris**	79.38	28	P	P	17 36 55.8	0.0
	baz=246,SNR=27						
O17K				S	S	17 46 57.6	+1.8
	baz=246						
P17K	**Kvichak River**	79.45	28	P	P	17 36 56.3	0.0
	baz=247						
P17K				S	S	17 46 57.2	+0.5
	baz=247						
SII	**Sitkinak Islan**	79.61	31	P	P	17 37 01.1	+3.9
SII	**Sitkinak Islan**	79.61	31	P	P	17 36 57.2	0.0
	baz=250,SNR=11						
SII				S	S	17 47 00.9	+2.4
	baz=250						
I17K	**Unalakleet**	79.61	23	IAMs_20	IAMs_20	18 07 49.2	
	comp=Z,17µm,21.0s						
I17K	**Unalakleet**	79.61	23	P	P	17 36 57.2	+0.2
	baz=242						
I17K				S	S	17 47 01.8	+3.7
	baz=242						
ACHA	**Angle Creek He**	79.62	30	IAMs_20	IAMs_20	18 07 46.9	
	comp=Z,17µm,22.0s						
N17K	**Nushagak Hills**	79.64	27	IAmb	IAmb	17 37 13.5	
	comp=Z,127nm,1.2s						
N17K				IAMs_20	IAMs_20	18 08 17.2	
	comp=Z,20µm,21.0s						
N17K	**Nushagak Hills**	79.64	27	P	P	17 36 57.4	+0.1
	baz=246,SNR=15						
N17K				S	S	17 47 02.3	+3.7
	baz=246						
G16K	**Koyuk River**	79.70	21	IAmb	IAmb	17 37 17.9	
	comp=Z,138nm,1.2s						
G16K	**Koyuk River**	79.70	21	P	P	17 36 57.4	-0.1
	baz=241						
G16K				S	S	17 47 01.8	+2.8
	baz=241						
L17K	**Donlin**	79.81	25	P	P	17 36 58.0	-0.2
	baz=245,SNR=13						
L17K				S	S	17 47 04.1	+3.7
	baz=245						
R18K	**Karluk**	79.82	30	P	P	17 36 58.2	-0.1
	baz=249,SNR=10						
R18K				S	S	17 47 02.5	+1.9
	baz=249						
M17K	**Holitna River**	79.88	26	IAmb	IAmb	17 37 19.5	
	comp=Z,260nm,1.2s						
M17K				IAMs_20	IAMs_20	18 08 24.5	
	comp=Z,16µm,20.0s						
M17K	**Holitna River**	79.88	26	P	P	17 36 58.8	+0.2
	baz=246,SNR=19						
M17K				S	S	17 47 04.5	+3.3
	baz=246						
Q18K	**Katmai Hardscr**	79.94	29	P	P	17 36 59.4	+0.3
	baz=249,SNR=28						
Q18K				S	S	17 47 02.3	+0.2
	baz=249						
J17K	**VABM Dome**	80.03	24	IAmb	IAmb	17 37 20.3	
	comp=Z,219nm,1.1s						
J17K	**VABM Dome**	80.03	24	P	P	17 36 59.4	0.0
	baz=244,SNR=29						
J17K				S	S	17 47 06.1	+3.5
	baz=244						
K17K	**Iditarod**	80.06	25	IAmb	IAmb	17 37 15.8	
	comp=Z,231nm,1.1s						
K17K	**Iditarod**	80.06	25	P	P	17 36 59.5	0.0
	baz=245,SNR=24						
K17K				S	S	17 47 05.9	+2.9
	baz=245						
P18K	**Big Mountain,**	80.11	28	IAMs_20	IAMs_20	18 07 42.7	
	comp=Z,18µm,21.0s						
P18K	**Big Mountain,**	80.11	28	P	P	17 36 59.5	-0.4
	baz=248,SNR=6.3						
P18K				S	S	17 47 03.6	-0.1
	baz=248						
C16K	**Lisburne Hills**	80.17	18	P	P	17 36 59.7	-0.3
	baz=237,SNR=12						
C16K				S	S	17 47 05.6	+1.7
	baz=237						
N18K	**Kilae Creek**	80.28	27	IAMs_20	IAMs_20	18 08 37.3	
	comp=Z,20µm,21.0s						
N18K	**Kilae Creek**	80.28	27	P	P	17 37 01.0	+0.1
	baz=248,SNR=32						
N18K				S	S	17 47 08.7	+3.3
	baz=248						
O18K	**Koktuh Hills**	80.29	28	P	P	17 37 00.7	-0.1
	baz=248,SNR=11						
O18K				S	S	17 47 07.1	+1.5
	baz=248						
OHAK	**Old Harbor**	80.30	31	IAmb	IAmb	17 37 16.3	
	comp=Z,241nm,1.2s						
OHAK				IAMs_20	IAMs_20	18 08 24.8	
	comp=Z,15µm,21.0s						
OHAK	**Old Harbor**	80.30	31	P	P	17 37 04.5	+3.6
OHAK	**Old Harbor**	80.30	31	P	P	17 37 00.6	-0.3
	baz=250,SNR=17						
OHAK				S	S	17 47 08.0	+2.4
	baz=250						
G17K	**Kiwalik Mounta**	80.37	22	P	P	17 37 01.0	-0.2
	baz=242,SNR=17						
G17K				S	S	17 47 09.2	+3.0
	baz=242						
H17K	**Granite Mounta**	80.39	22	IAmb	IAmb	17 37 22.0	
	comp=Z,254nm,1.4s						
H17K	**Granite Mounta**	80.39	22	P	P	17 37 01.0	-0.3
	baz=243,SNR=14						
H17K				S	S	17 47 10.2	+3.8
	baz=243						
L18K	**Granite Mounta**	80.53	25	IAmb	IAmb	17 37 18.3	
	comp=Z,114nm,1.1s						
L18K				IAMs_20	IAMs_20	18 08 12.9	
	comp=Z,23µm,21.0s						
L18K	**Granite Mounta**	80.53	25	P	P	17 37 02.3	+0.2
	baz=246,SNR=18						
L18K				S	S	17 47 10.5	+2.5
	baz=246						
D17K	**Noatak River**	80.59	19	P	P	17 37 01.8	-0.5
	baz=240,SNR=28						
D17K				S	S	17 47 08.7	+0.3
	baz=240						
F17K	**Baldwin Pennin**	80.60	21	P	P	17 37 02.7	+0.3
	baz=242						
F17K				S	S	17 47 11.7	+3.2
	baz=242						
M18K	**Stony River**	80.63	26	P	P	17 37 02.3	-0.3
	baz=247,SNR=20						
M18K				S	S	17 47 11.8	+2.9
	baz=247						
Q19K	**Cape Douglas,**	80.70	29	IAMs_20	IAMs_20	18 08 31.4	
	comp=Z,20µm,21.0s						
Q19K	**Cape Douglas,**	80.70	29	P	P	17 37 02.0	-1.1
	baz=250						
Q19K				S	S	17 47 09.7	-0.2
	baz=250						
E17K	**Hotham Inlet**	80.71	20	P	P	17 37 02.7	-0.3
	baz=241,SNR=28						
E17K				S	S	17 47 12.3	+2.6
	baz=241						
O19K	**Port Alsworth**	80.83	28	IAMs_20	IAMs_20	18 09 02.7	
	comp=Z,14µm,21.0s						
O19K	**Port Alsworth**	80.83	28	P	P	17 37 03.5	-0.2
	baz=249						
O19K				S	S	17 47 10.4	-0.7
	baz=249						
RDOG	**Red Dog Mine**	80.83	19	P	P	17 37 03.3	-0.3
	baz=240						
RDOG				S	S	17 47 12.5	+1.6
	baz=240						
KDAK	**Kodiak Island**	80.84	30	P	P	17 37 02.6	-1.2
KDAK				IAmb	IAmb	17 37 19.1	
	comp=Z,273nm,1.1s						
KDAK	**Kodiak Island**	80.84	30	LR	LR	18 08 55.0	
	comp=Z,26µm,20.8s,baz=236,slow=33						
KDAK	**Kodiak Island**	80.84	30⇓	*e*P	P	17 37 04.3	+0.5
KDAK				pmax	pmax		
	comp=Z,361nm,1.1s						
KDAK	**Kodiak Island**	80.84	30	P	P	17 37 03.5	-0.3
	baz=251						
KDAK				S	S	17 47 13.4	+2.1
	baz=251						
C17K	**DeLong Mountai**	80.96	19	P	P	17 37 03.7	-0.6
	baz=240,SNR=17						
C17K				S	S	17 47 12.3	+0.1
	baz=240						
N19K	**Bonanza Creek**	80.97	27	IAMs_20	IAMs_20	18 08 57.6	
	comp=Z,19µm,20.0s						
N19K	**Bonanza Creek**	80.97	27	P	P	17 37 03.5	-1.1
	baz=249,SNR=22						
N19K				S	S	17 47 14.5	+1.6
	baz=249						
J18K	**Innoko River**	81.02	24	P	P	17 37 03.6	-1.2
	baz=246,SNR=17						
J18K				S	S	17 47 13.9	+0.8
	baz=246						
H18K	**Honhosa River**	81.08	22	P	P	17 37 03.9	-1.0
	baz=244						
H18K				S	S	17 47 14.6	+1.0
	baz=244						
P19K	**Oil Pt**	81.15	29	IAmb	IAmb	17 37 19.9	
	comp=Z,195nm,1.0s						
P19K				IAMs_20	IAMs_20	18 08 56.3	
	comp=Z,23µm,21.0s						
P19K	**Oil Pt**	81.15	29	P	P	17 37 04.0	-1.5
	baz=250						
P19K				S	S	17 47 12.5	-2.1
	baz=250						
TAOE	**Nuku Hiva Isla**	81.17	99	*e*PKIKP	P	17 37 03.9	-2.7
	comp=Z,1µm,30.1s						
TAOE	**Nuku Hiva Isla**	81.17	99	*e*S	S	17 47 11.0	-5.6
	comp=Z,2µm,27.8s						
TAOE				*e*SS	SS	17 52 33.3	+1.2
	comp=Z,6µm,28.8s						
TAOE				*e*LQ	LQ	17 58 52.1	
	comp=Z,20µm,24.9s						
TAOE				*e*LR	LR	18 02 14.8	
	comp=Z,34µm,26.4s						
Q20K	**Shuyak Island**	81.21	30	P	P	17 37 05.3	-0.5
	baz=251						
Q20K				S	S	17 47 14.5	-0.6
	baz=251						
SYI	**Shuyak Island**	81.21	30	IAMs_20	IAMs_20	18 09 28.9	
	comp=Z,16µm,20.0s						
F18K	**Selawik**	81.24	21	P	P	17 37 05.0	-0.7
	baz=243,SNR=5.9						
F18K				S	S	17 47 17.2	+2.0
	baz=243						
G18K	**Tagagawik**	81.29	22	P	P	17 37 05.7	-0.3
	baz=244,SNR=26						
G18K				S	S	17 47 17.0	+1.2
	baz=244						
E18K	**Tukpahlearik C**	81.29	20	IAmb	IAmb	17 37 27.1	
	comp=Z,122nm,1.1s						
E18K	**Tukpahlearik C**	81.29	20	P	P	17 37 05.5	-0.5
	baz=242						
E18K				S	S	17 47 17.9	+2.2
	baz=242						
ILSW	**Iliamna Southw**	81.31	28	IAMs_20	IAMs_20	18 08 52.4	
	comp=Z,19µm,22.0s						
L19K	**White Mountain**	81.31	26	IAmb	IAmb	17 37 22.2	
	comp=Z,160nm,1.1s						
L19K				IAMs_20	IAMs_20	18 08 47.5	
	comp=Z,22µm,21.0s						
L19K	**White Mountain**	81.31	26	P	P	17 37 06.4	+0.1
	baz=248,SNR=22						
L19K				S	S	17 47 18.8	+2.6
	baz=248						
M19K	**Big River Lodg**	81.41	26	IAmb	IAmb	17 37 22.8	
	comp=Z,140nm,1.2s						
M19K				IAMs_20	IAMs_20	18 08 51.2	
	comp=Z,19µm,22.0s						
M19K	**Big River Lodg**	81.41	26	P	P	17 37 06.6	-0.2
	baz=249						
M19K				S	S	17 47 19.3	+2.1
	baz=249						
GCSA	**Galena City Sc**	81.48	23	P	P	17 37 06.6	-0.4
	baz=246						
GCSA				S	S	17 47 19.3	+1.6
	baz=246						
WSAR	**Wadi Sarin**	81.53	294	LR	LR	18 18 12.9	
	comp=Z,7.6nm,19.4s,baz=119,slow=39						
O20K	**Slope Mountain**	81.58	28	P	P	17 37 07.3	-0.6
	baz=250						
C18K	**Utukok River**	81.68	19	P	P	17 37 07.9	-0.3
	baz=241,SNR=27						
C18K				S	S	17 47 20.3	+0.5
	baz=241						
J19K	**Poorman**	81.68	24	IAmb	IAmb	17 37 24.0	
	comp=Z,221nm,1.4s						
J19K	**Poorman**	81.68	24	P	P	17 37 07.5	-0.7
	baz=247,SNR=19						
J19K				S	S	17 47 21.6	+1.7
	baz=247						
B18K	**Kokolik River**	81.83	18	P	P	17 37 08.4	-0.5
	baz=241						
B18K				S	S	17 47 21.6	+0.3
	baz=241						
L20K	**Farewell, AK**	81.85	26	P	P	17 37 08.3	-0.8
	baz=249,SNR=21						
L20K				S	S	17 47 23.7	+2.0
	baz=249						
HOM	**Homer**	81.91	29	IAMs_20	IAMs_20	18 09 21.4	
	comp=Z,15µm,21.0s						
HOM	**Homer**	81.91	29	P	P	17 37 08.7	-0.7
	baz=251						
HOM				S	S	17 47 22.3	0.0
	baz=251						
H19K	**Roundabout Mou**	81.96	22	IAmb	IAmb	17 37 30.2	
	comp=Z,102nm,1.2s						
H19K				IAMs_20	IAMs_20	18 10 24.4	
	comp=Z,13µm,20.0s						
H19K	**Roundabout Mou**	81.96	22	P	P	17 37 09.8	+0.2
	baz=246,SNR=13						
H19K				S	S	17 47 25.6	+2.9
	baz=246						
M20K	**Styx River**	81.96	26	IAMs_20	IAMs_20	18 09 41.5	
	comp=Z,17µm,21.0s						
M20K	**Styx River**	81.96	26	P	P	17 37 09.5	-0.3
	baz=250						
M20K				S	S	17 47 26.0	+2.9
	baz=250						
G19K	**Purcell Mounta**	81.98	22	IAmb	IAmb	17 37 37.2	
	comp=Z,120nm,1.0s						
G19K	**Purcell Mounta**	81.98	22	P	P	17 37 09.0	-0.7
	baz=246,SNR=32						
G19K				S	SKSac	17 47 26.1	-3.0
	baz=246						
F19K	**Shaleruckik Mo**	82.02	21	P	P	17 37 09.4	-0.4
	baz=245						
F19K				S	SKSac	17 47 27.5	-1.8
	baz=245						
K20K	**Telida**	82.08	25	IAmb	IAmb	17 37 26.3	
	comp=Z,147nm,1.1s						
K20K				IAMs_20	IAMs_20	18 11 54.7	
	comp=Z,13µm,20.0s						
K20K	**Telida**	82.08	25	P	P	17 37 10.0	-0.3
	baz=249						
K20K				S	SKSac	17 47 27.9	-2.1
	baz=249						
N20K	**Mount Spurr**	82.15	27	P	P	17 37 10.2	-0.6
	baz=251						
N20K				S	S	17 47 24.9	-0.1
	baz=251						
SPCR	**Spurr Chakacha**	82.15	27	P	P	17 37 10.3	-0.5
	baz=251						
SPCR				S	S	17 47 22.4	-2.6
	baz=251						
BRLK	**Bradley Lake**	82.31	29	IAMs_20	IAMs_20	18 09 34.6	
	comp=Z,16µm,22.0s						
J20K	**Nowinta River**	82.35	24	IAmb	IAmb	17 37 27.6	
	comp=Z,140nm,1.2s						
J20K	**Nowinta River**	82.35	24	P	P	17 37 11.2	-0.5
	baz=249,SNR=32						
J20K				S	S	17 47 28.4	+1.7
	baz=249						
BRSE	**Bradley Lake S**	82.37	29	P	P	17 37 10.9	-1.0

								baz=252
BRSE				S	S	17 47 26.4	-0.8	baz=252
C19K	Lookout Ridge	82.41	19	IAmb	IAmb	17 37 37.2		comp=Z,168nm,1.1s
C19K	Lookout Ridge	82.41	19	P	P	17 37 11.7	-0.3	baz=243,SNR=19
C19K				S	S	17 47 27.1	-0.2	baz=243
I20K	Naaghedeneel	82.45	23	P	P	17 37 11.7	-0.5	baz=248
I20K				S	S	17 47 28.5	+0.9	baz=248
MAW	Mawson	82.45	202	P	P	17 37 12.4	+0.3	comp=Z,6.2nm,0.8s,baz=80,slow=5.9,SNR=32
MAW				S	S	17 47 26.7	-1.0	comp=Z,2.8nm,1.0s,baz=131,slow=4.0,SNR=1.9 comp=Z,6.2nm,0.8s
A19K	Wainwright	82.47	17	P	P	17 37 11.9	-0.2	baz=241
A19K				S	S	17 47 28.2	+0.5	baz=241
E19K	Redstone River	82.47	21	IAmb	IAmb	17 37 35.0		comp=Z,119nm,0.9s
E19K	Redstone River	82.47	21	P	P	17 37 11.6	-0.7	baz=245
E19K				S	S	17 47 28.6	+0.7	baz=245
CAPN	Captain Cook N	82.50	28	IAMs_20	IAMs_20	18 09 11.8		comp=Z,19µm,21.0s
CAPN	Captain Cook N	82.50	28	P	P	17 37 11.2	-1.3	baz=252
CAPN				S	S	17 47 28.3	+0.1	baz=252
H20K	Anotleneega Mo	82.55	23	P	P	17 37 12.7	-0.1	baz=248,SNR=16
H20K				S	S	17 47 30.7	+1.9	baz=248
D19K	Kuna River	82.61	19	IAmb	IAmb	17 37 38.4		comp=Z,124nm,1.0s
D19K	Kuna River	82.61	19	P	P	17 37 12.4	-0.6	baz=244
D19K				S	S	17 47 28.1	-1.3	baz=244
SKT	Skwentna	82.71	27	IAMs_20	IAMs_20	18 10 04.4		comp=Z,18µm,20.0s
SKT	Skwentna	82.71	27	P	P	17 37 11.7	-2.0	baz=251,SNR=13
SKT				S	S	17 47 28.2	-2.4	baz=251
PPLA	Purkeypile	82.72	26	IAMs_20	IAMs_20	18 09 30.7		comp=Z,19µm,21.0s
PPLA	Purkeypile	82.72	26	P	P	17 37 12.6	-1.2	baz=250,SNR=12
PPLA				S	S	17 47 32.4	+1.5	baz=250
F20K	Avaraart Lake	82.84	21	IAmb	IAmb	17 37 39.4		comp=Z,108nm,1.0s
F20K	Avaraart Lake	82.84	21	P	P	17 37 13.7	-0.5	baz=247,SNR=33
F20K				S	SKSac	17 47 33.9	-0.8	baz=247
SLKM	Skilak Lake	82.85	28	IAMs_20	IAMs_20	18 11 58.3		comp=Z,14µm,20.0s
SUA	Susitna One	82.90	27	IAmb	IAmb	17 37 35.6		comp=Z,107nm,1.0s
SUA				IAMs_20	IAMs_20	18 10 31.5		comp=Z,15µm,21.0s
SUA	Susitna One	82.90	27	P	P	17 37 12.3	-2.5	baz=252,SNR=10
SUA				S	S	17 47 32.5	-0.2	baz=252
CAST	Castle Rocks	82.94	25	IAmb	IAmb	17 37 29.8		comp=Z,88nm,1.2s
CAST				IAMs_20	IAMs_20	18 12 51.5		comp=Z,14µm,20.0s
CAST	Castle Rocks	82.94	25	P	P	17 37 13.0	-1.9	baz=251,SNR=14
CAST				S	S	17 47 31.9	-1.0	baz=251
CHUM	Lake Minchumin	83.00	25	P	P	17 37 13.4	-1.7	baz=250
CHUM				S	S	17 47 33.9	+0.5	baz=250
FIS	Fire Island	83.05	28	IAMs_20	IAMs_20	18 10 25.3		comp=Z,20µm,21.0s
O22K	Cooper Landing	83.08	28	P	P	17 37 14.5	-1.1	baz=253
O22K				S	S	17 47 33.0	-1.3	baz=253
SEW	Seward	83.10	29	IAMs_20	IAMs_20	18 10 11.9		comp=Z,23µm,21.0s
SEW	Seward	83.10	29	P	P	17 37 14.1	-1.5	baz=253
SEW				S	S	17 47 34.4	-0.1	baz=253
E20K	Nigu River	83.16	20	P	P	17 37 15.1	-0.8	baz=246
E20K				S	S	17 47 33.5	-1.6	baz=246
IMAR	Indian Mountai	83.17	22	P	P	17 37 14.3	-1.6	
D20K	Etivluk River	83.21	19	IAmb	IAmb	17 37 35.6		comp=Z,86nm,1.1s
D20K	Etivluk River	83.21	19	P	P	17 37 15.4	-0.7	baz=246
D20K				S	S	17 47 34.5	-0.9	baz=246
RC01	Rabbit Creek A	83.25	28	IAmb	IAmb	17 37 30.8		comp=Z,133nm,0.9s
RC01				IAMs_20	IAMs_20	18 10 30.8		comp=Z,22µm,21.0s
RC01	Rabbit Creek A	83.25	28	P	P	17 37 15.0	-1.4	baz=253,SNR=20
RC01				S	S	17 47 34.7	-1.3	baz=253
M22K	Willow	83.28	27	P	P	17 37 15.5	-1.0	baz=252
M22K				S	S	17 47 35.3	-0.9	baz=252
CUT	Chulitna	83.41	26	IAMs_20	IAMs_20	18 10 26.9		comp=Z,18µm,21.0s
CUT	Chulitna	83.41	26	P	P	17 37 16.3	-0.9	baz=252
CUT				S	S	17 47 36.4	-1.1	baz=252
H21K	Melozitna Rive	83.42	23	IAMs_20	IAMs_20	18 09 54.8		comp=Z,16µm,22.0s
H21K	Melozitna Rive	83.42	23	P	P	17 37 16.9	-0.3	baz=250,SNR=18
H21K				S	SKSac	17 47 38.9	+0.2	baz=250
G21K	Allakaket	83.45	22	P	P	17 37 16.2	-1.2	baz=249
G21K				S	SKSac	17 47 38.7	-0.2	baz=249
KTH	Kantishna Hill	83.48	25	IAmb	IAmb	17 37 32.1		comp=Z,142nm,1.2s
KTH				IAMs_20	IAMs_20	18 13 06.7		comp=Z,15µm,20.0s
SOHO	SOHO	83.53	294	P	P	17 37 18.0	-0.7	
B20K	Meade River	83.57	18	IAmb	IAmb	17 37 36.5		comp=Z,79nm,1.1s
B20K	Meade River	83.57	18	P	P	17 37 17.7	-0.2	baz=245,SNR=14
B20K				S	S	17 47 38.5	-0.4	baz=245
BPAW	Bear Paw Mtn.	83.63	25	P	P	17 37 17.9	-0.4	baz=252,SNR=8.9
BPAW				S	SKSac	17 47 40.4	+0.3	baz=252
PMR	Palmer	83.68	27	IAMs_20	IAMs_20	18 11 07.1		comp=Z,23µm,21.0s
PMR	Palmer	83.68	27	P	P	17 37 22.6	+4.0	
PMR	Palmer	83.68	27	P	P	17 37 20.8	+2.2	
PMR	Palmer	83.68	27	P	P	17 37 17.1	-1.5	baz=253,SNR=11
PMR				S	S	17 47 39.0	-1.3	baz=253
TRF	Thorofare Moun	83.72	25	IAMs_20	IAMs_20	18 09 60.0		comp=Z,14µm,22.0s
TRF	Thorofare Moun	83.72	25	P	P	17 37 17.7	-1.3	baz=252,SNR=13
TRF				S	S	17 47 39.2	-1.8	baz=252
F21K	Alatna River	83.72	21	IAMs_20	IAMs_20	18 14 10.8		comp=Z,13µm,21.0s
F21K	Alatna River	83.72	21	P	P	17 37 18.8	0.0	baz=249,SNR=24
F21K				S	SKSac	17 47 40.9	+0.3	baz=249
GHO	Glory Hole Cre	83.83	27	IAmb	IAmb	17 37 34.2		comp=Z,166nm,1.3s
GHO				IAMs_20	IAMs_20	18 10 40.9		comp=Z,21µm,21.0s
PWL	Port Wells	83.84	28	IAMs_20	IAMs_20	18 13 57.5		comp=Z,18µm,20.0s
PWL	Port Wells	83.84	28	P	P	17 37 18.5	-1.0	baz=254,SNR=18
PWL				S	S	17 47 42.0	-0.1	baz=254
UOSS	Minazif	83.91	295	P	P	17 37 19.1	-1.6	
UOSS	Minazif	83.91	295	P	P	17 37 20.6	0.0	
UOSS				S	SKSac	17 47 41.2	-2.3	
KNK	Knik Glacier	83.94	28	IAMs_20	IAMs_20	18 10 52.0		comp=Z,23µm,21.0s
KNK	Knik Glacier	83.94	28	P	P	17 37 19.4	-0.6	baz=254,SNR=24
KNK				S	S	17 47 43.3	+0.2	baz=254
HATD	Hatta, Dubai	83.96	295	P	P	17 37 20.2	-0.7	
MSFE	Esma-Masafi	83.99	296	P	P	17 37 20.4	-0.6	
C21K	Knifeblade Rid	83.99	19	P	P	17 37 19.9	-0.2	baz=247,SNR=34
C21K				S	S	17 47 42.7	-0.6	baz=247
E21K	Killik River	83.99	20	P	P	17 37 19.2	-0.9	baz=248,SNR=11
E21K				S	SKSac	17 47 42.7	+0.3	baz=248
ASHO	Ashiyiah	84.02	295	P	P	17 37 20.4	-0.8	
MLY	Manley	84.02	24	IAmb	IAmb	17 37 36.6		comp=Z,151nm,1.4s
MLY	Manley	84.02	24	P	P	17 37 20.1	-0.3	baz=252,SNR=17
MLY				S	S	17 47 44.1	+0.3	baz=252
H22K	Ishtalitna Cre	84.05	23	P	P	17 37 20.3	-0.1	baz=251,SNR=31
H22K				S	S	17 47 44.7	+0.7	baz=251
P23K	Montague Islan	84.06	29	IAMs_20	IAMs_20	18 11 39.3		comp=Z,16µm,20.0s
P23K	Montague Islan	84.06	29	P	P	17 37 19.8	-0.8	baz=255
P23K				S	S	17 47 44.7	+0.5	baz=255
SHME	Shamm	84.07	296	P	P	17 37 20.3	-1.1	
SML	Sawmill	84.11	27	P	P	17 37 19.7	-1.2	baz=254,SNR=20
SML				S	SKSac	17 47 43.7	+0.3	baz=254
AB31	Akbulak array	84.20	320	IAmb	IAmb	17 37 32.3		comp=Z,113nm,1.1s
ABKAR	Akbulak array	84.20	320	P	P	17 37 19.9	-1.6	
ABKAR	Akbulak array	84.20	320	IAmb	IAmb	17 37 32.3		comp=Z,114nm,1.1s
B21K	Ikpikpuk River	84.23	19	IAmb	IAmb	17 37 46.3		comp=Z,123nm,1.1s
B21K	Ikpikpuk River	84.23	19	P	P	17 37 20.4	-0.8	baz=248,SNR=46
B21K				S	S	17 47 46.8	+1.3	baz=248
ALNE	Al Ain	84.24	294	P	P	17 37 21.4	-1.0	
BWN	Browne	84.28	25	IAMs_20	IAMs_20	18 13 22.8		comp=Z,14µm,20.0s
A21K	Barrow	84.29	17	P	P	17 37 20.3	-1.2	baz=246
A21K				S	S	17 47 47.6	+1.5	baz=246
WAT1	Susitna Watana	84.29	26	P	P	17 37 21.2	-0.6	baz=254
WAT1				S	SKSac	17 47 44.6	+0.1	baz=254
F22K	John River	84.29	21	P	P	17 37 21.2	-0.5	baz=250,SNR=19
F22K				S	S	17 47 46.7	+0.4	baz=250
RND	Reindeer	84.32	26	IAMs_20	IAMs_20	18 10 18.9		comp=Z,17µm,22.0s
G22K	Bettles	84.34	22	P	P	17 37 21.8	-0.1	baz=251
G22K				S	S	17 47 47.0	+0.2	baz=251
M23K	Glacier View	84.38	27	P	P	17 37 21.1	-1.2	baz=255,SNR=11
M23K				S	S	17 47 46.7	-0.7	baz=255
MCK	McKinley	84.38	25	P	P	17 37 20.7	-1.5	baz=253,SNR=16
MCK				S	SKSac	17 47 45.9	+0.9	baz=253
NAZ	Nazwa, Dubai	84.40	295	P	P	17 37 21.8	-1.3	
GLI	Glacier Island	84.43	28	IAMs_20	IAMs_20	18 09 19.1		comp=Z,20µm,22.0s
GLI	Glacier Island	84.43	28	P	P	17 37 21.0	-1.5	baz=255,SNR=39
GLI				S	S	17 47 47.9	-0.1	baz=255
Q23K	Middleton Isla	84.44	30	IAMs_20	IAMs_20	18 11 14.4		comp=Z,12µm,20.0s
Q23K	Middleton Isla	84.44	30	P	P	17 37 22.0	-0.5	baz=256
Q23K				S	S	17 47 50.4	+2.5	baz=256
FAQ	Al Faqa, Dubai	84.44	295	P	P	17 37 22.2	-1.1	
SCM	Sheep Creek Mo	84.57	27	IAMs_20	IAMs_20	18 11 33.7		comp=Z,16µm,20.0s
SCM	Sheep Creek Mo	84.57	27	P	P	17 37 22.3	-1.0	baz=255,SNR=17
SCM				S	S	17 47 48.1	-1.3	baz=255
NEA2	Nenana	84.57	24	IAmb	IAmb	17 37 38.9		comp=Z,141nm,1.2s
NEA2	Nenana	84.57	24	P	P	17 37 22.0	-1.1	baz=253,SNR=18
NEA2				S	S	17 47 48.6	-0.7	baz=253
WAT6	Susitna Watana	84.58	27	P	P	17 37 22.1	-1.3	baz=255,SNR=22
WAT6				S	S	17 47 49.4	-0.3	baz=255
D22K	Ayikyak River	84.59	20	IAmb	IAmb	17 37 42.0		comp=Z,127nm,1.2s
D22K	Ayikyak River	84.59	20	P	P	17 37 22.7	-0.5	baz=249,SNR=16
D22K				S	S	17 47 50.8	+1.4	baz=249
HIN	Hinchinbrook I	84.60	29	IAMs_20	IAMs_20	18 12 26.4		comp=Z,18µm,20.0s
I23K	Minto, Yukon-K	84.62	24	P	P	17 37 22.6	-0.7	baz=253,SNR=22
I23K				S	S	17 47 50.5	+0.9	baz=253
E22K	Anaktuvuk Pass	84.64	21	IAmb	IAmb	17 37 44.8		comp=Z,70nm,0.9s
E22K	Anaktuvuk Pass	84.64	21	P	P	17 37 22.9	-0.5	baz=250,SNR=24
E22K				S	S	17 47 51.0	+1.1	baz=250
A22K	Sinclair Lake	84.65	18	P	P	17 37 23.2	-0.1	baz=247
A22K				S	S	17 47 51.5	+1.8	baz=247
ASUD	Al Ashush, Dub	84.67	295	P	P	17 37 23.0	-1.4	
H23K	Yukon River	84.75	23	IAmb	IAmb	17 37 38.9		comp=Z,83nm,1.2s
H23K	Yukon River	84.75	23	P	P	17 37 23.5	-0.5	baz=253,SNR=14
H23K				S	S	17 47 52.4	+1.4	baz=253
G23K	Bananza Creek	84.83	22	IAmb	IAmb	17 37 35.6		comp=Z,72nm,1.0s
G23K				IAMs_20	IAMs_20	18 12 52.2		comp=Z,14µm,21.0s
G23K	Bananza Creek	84.83	22	P	P	17 37 23.9	-0.5	baz=252,SNR=19
G23K				S	S	17 47 56.1	+4.3	baz=252
DHY	Denali Highway	84.87	26	IAMs_20	IAMs_20	18 11 31.6		comp=Z,21µm,20.0s
DHY	Denali Highway	84.87	26	P	P	17 37 23.8	-1.1	baz=255,SNR=77
DHY				S	S	17 47 52.2	-0.4	baz=255
B22K	Teshekpuk Lake	84.88	18	IAmb	IAmb	17 37 36.0		comp=Z,82nm,0.9s
B22K	Teshekpuk Lake	84.88	18	P	P	17 37 24.1	-0.4	baz=249,SNR=14
B22K				S	S	17 47 53.4	+1.5	baz=249
COLD	Coldfoot	84.92	22	IAmb	IAmb	17 37 37.4		comp=Z,59nm,0.9s
COLD	Coldfoot	84.92	22	P	P	17 37 24.6	-0.2	baz=252,SNR=16
COLD				S	S	17 47 55.3	+2.7	baz=252
EYAK	Cordova Ski Ar	85.00	29	IAMs_20	IAMs_20	18 12 40.0		comp=Z,21µm,20.0s
EYAK	Cordova Ski Ar	85.00	29	P	P	17 37 29.3	+4.0	
EYAK	Cordova Ski Ar	85.00	29	P	P	17 37 24.9	-0.3	baz=256
EYAK				S	S	17 47 55.7	+2.2	baz=256
CCB	Clear Creek Bu	85.11	25	IAmb	IAmb	17 37 46.6		comp=Z,177nm,1.1s
DIV	Divide	85.12	28	IAMs_20	IAMs_20	18 11 16.2		comp=Z,22µm,22.0s
KLU	Klutina	85.14	28	IAMs_20	IAMs_20	18 11 31.6		comp=Z,22µm,21.0s
KLU	Klutina	85.14	28	P	P	17 37 25.9	-0.2	baz=256,SNR=22
KLU				S	S	17 47 55.1	0.0	baz=256
COLA	College	85.15	24	P	P	17 37 29.7	+3.7	
COLA	College	85.15	24	*d i*P	P	17 37 25.5	-0.5	
COLA				pmax	pmax			comp=Z,100nm,1.2s
COLA	College	85.15	24	P	P	17 37 25.1	-0.8	baz=254
COLA				S	S	17 47 53.9	-0.9	baz=254
COLA	College	85.15	24	P	P	17 37 25.2	-0.8	
M24K	Tolsona, Glenn	85.17	27	IAMs_20	IAMs_20	18 11 31.4		comp=Z,16µm,21.0s
M24K	Tolsona, Glenn	85.17	27	P	P	17 37 25.8	-0.4	baz=256,SNR=22
M24K				S	S	17 47 55.7	+0.4	baz=256
SVE	Sverdlovsk	85.21	327	*e*P	P	17 37 27.3	+0.8	
SVE				*e*S	S	17 47 53.5	-2.3	
SVE				pmax	pmax			comp=Z,137nm,1.5s
SVE				MLR	MLR			comp=E,10µm,20.0s
SVE				MLR	MLR			comp=Z,11µm,20.0s
D23K	Nanushuk River	85.30	20	P	P	17 37 26.0	-0.7	baz=251,SNR=102
D23K				S	S	17 47 58.1	+1.7	baz=251
POKR	Poker Plat Res	85.39	24	P	P	17 37 25.5	-1.7	baz=255
POKR				S	S	17 47 56.0	-1.4	baz=255
E23K	Chandalar	85.39	21	P	P	17 37 27.0	-0.3	baz=252,SNR=34
E23K				S	S	17 47 58.1	+0.7	baz=252
H24K	Noodor Dome	85.41	23	IAmb	IAmb	17 37 51.6		comp=Z,252nm,1.8s
H24K	Noodor Dome	85.41	23	P	P	17 37 26.5	-0.8	baz=254,SNR=37
H24K				S	S	17 47 58.6	+1.0	baz=254
HDA	Harding Lake	85.41	25	IAmb	IAmb	17 37 49.3		comp=Z,65nm,1.0s
HDA				IAMs_20	IAMs_20	18 14 15.6		comp=Z,12µm,20.0s
HDA	Harding Lake	85.41	25	P	P	17 37 26.6	-0.7	baz=255,SNR=12
HDA				S	S	17 47 56.1	-1.4	baz=255
RAGM	Ragged Mountai	85.48	29	IAMs_20	IAMs_20	18 09 26.7		comp=Z,19µm,22.0s
KAIM	Kayak Island	85.50	30	IAMs_20	IAMs_20	18 18 16.5		comp=Z,14µm,19.0s
KAIM	Kayak Island	85.50	30	P	P	17 37 26.2	-1.6	baz=258
KAIM				S	S	17 48 00.7	+2.1	baz=258
IL31		85.52	24	IAmb	IAmb	17 37 48.1		comp=Z,83nm,1.1s
ILAR	Eielson Array	85.52	24	P	P	17 37 25.4	-2.5	
ILAR	Eielson Array	85.52	24	P	P	17 37 26.4	-1.5	comp=Z,4.5nm,0.7s,baz=260,slow=4.7,SNR=41
ILAR				S	SKSac	17 47 52.8	+0.5	comp=Z,0.1nm,0.5s,baz=286,slow=3.4,SNR=1.0
ILAR				PKKPbc	PKKPbc	17 55 32.3	-2.1	comp=Z,0.4nm,0.6s,baz=7.5,slow=1.8,SNR=4.6
ILAR				LR	LR	18 14 01.8		comp=Z,9µm,19.9s,baz=233,slow=34 comp=Z,4.5nm,0.7s
TOLK	Toolik Lake Re	85.58	20	IAmb	IAmb	17 37 46.8		comp=Z,158nm,1.2s
TOLK	Toolik Lake Re	85.58	20	P	P	17 37 27.9	-0.3	baz=252,SNR=19
TOLK				S	S	17 48 00.7	+1.5	baz=252
C23K	Itkillik River	85.61	19	IAmb	IAmb	17 37 39.9		comp=Z,111nm,0.9s
C23K	Itkillik River	85.61	19	P	P	17 37 27.8	-0.4	baz=251,SNR=62
C23K				S	S	17 47 60.0	+0.7	baz=251
AKTO	Aktyubinsk	85.62	321	LR	LR	18 18 38.9		comp=Z,8µm,18.7s,baz=106,slow=38
BMRM	Bremner River	85.64	28	IAMs_20	IAMs_20	18 13 00.9		comp=Z,18µm,20.0s
BMRM	Bremner River	85.64	28	P	P	17 37 27.6	-1.0	baz=258,SNR=17
BMRM				S	S	17 48 00.1	+0.1	baz=258
HMT	Hamilton	85.67	29	IAMs_20	IAMs_20	18 11 17.8		comp=Z,18µm,21.0s
PAX	Paxson	85.69	26	IAMs_20	IAMs_20	18 11 27.2		comp=Z,19µm,21.0s
PAX	Paxson	85.69	26	P	P	17 37 27.9	-0.9	baz=257,SNR=19
PAX				S	S	17 48 00.8	+0.3	baz=257
HARP	HAARP	85.70	27	P	P	17 37 28.7	-0.2	baz=257
HARP				S	S	17 48 00.9	+0.4	baz=257
K24K	Donnelly Dome	85.75	26	IAmb	IAmb	17 37 53.9		comp=Z,91nm,1.0s
K24K				IAMs_20	IAMs_20	18 11 04.8		comp=Z,19µm,21.0s
K24K	Donnelly Dome	85.75	26	P	P	17 37 27.9	-1.2	baz=256,SNR=12
K24K				S	S	17 48 00.7	-0.3	baz=256
N25K	Chitina, Valde	85.78	28	IAMs_20	IAMs_20	18 11 49.7		comp=Z,20µm,21.0s
N25K	Chitina, Valde	85.78	28	P	P	17 37 28.7	-0.6	baz=258,SNR=14
N25K				S	S	17 48 02.1	+0.6	baz=258
G24K	Hadweenzic Riv	85.80	23	IAmb	IAmb	17 37 47.8		comp=Z,130nm,1.4s
G24K	Hadweenzic Riv	85.80	23	P	P	17 37 29.3	0.0	baz=254,SNR=37
G24K				S	S	17 48 03.0	+1.7	baz=254
E24K	Your Creek	85.80	21	P	P	17 37 29.5	+0.2	baz=254,SNR=25
E24K				S	S	17 48 01.8	+0.4	baz=254
SUCK	Suckling Hills	85.85	29	IAMs_20	IAMs_20	18 19 04.6		comp=Z,13µm,19.0s
F24K	Squaw Lake	85.86	22	IAmb	IAmb	17 37 39.9		comp=Z,143nm,1.4s
F24K				IAMs_20	IAMs_20	18 13 36.5		comp=Z,12µm,21.0s
F24K	Squaw Lake	85.86	22	P	P	17 37 29.9	+0.3	baz=254,SNR=98
F24K				S	S	17 48 03.3	+1.4	baz=254
BERG	Berg Lake	85.95	29	IAMs_20	IAMs_20	18 19 19.3		comp=Z,15µm,18.0s
D24K	Happy Valley	86.00	20	P	P	17 37 30.4	+0.2	baz=253,SNR=52
D24K				S	S	17 48 03.2	0.0	baz=253

BGLC	Bering Glacier	86.10	29	P	P	17 37 30.6	-0.1
	baz=259						
BGLC				S	S	17 48 05.3	+1.0
	baz=259						
GLB	Gilahina Butte	86.11	28	IAmb	IAmb	17 37 46.0	
	comp=Z,127nm,1.1s						
GLB				IAMs_20	IAMs_20	18 12 09.5	
	comp=Z,15µm,22.0s						
J25K	Salcha River,	86.12	25	IAmb	IAmb	17 37 54.2	
	comp=Z,108nm,1.2s						
J25K	Salcha River,	86.12	25	P	P	17 37 30.0	-0.9
	baz=257,SNR=31						
J25K				S	S	17 48 03.3	-1.3
	baz=257						
RIDG	Independent Ri	86.14	26	IAmb	IAmb	17 37 47.2	
	comp=Z,87nm,0.9s						
RIDG				IAMs_20	IAMs_20	18 11 26.0	
	comp=Z,22µm,21.0s						
RIDG	Independent Ri	86.14	26	P	P	17 37 30.1	-0.9
	baz=257,SNR=38						
RIDG				S	S	17 48 04.7	-0.2
	baz=257						
C24K	Franklin Bluff	86.20	20	IAmb	IAmb	17 37 47.0	
	comp=Z,108nm,1.1s						
C24K	Franklin Bluff	86.20	20	P	P	17 37 30.3	-0.8
	baz=253						
C24K				S	S	17 48 04.2	-0.9
	baz=253						
MZR	Muzera	86.24	293	P	P	17 37 30.5	-1.9
PRP	Porcupine Dome	86.27	24	P	P	17 37 29.6	-2.1
	baz=256						
PRP				S	S	17 48 02.4	-3.8
	baz=256						
CRQM	Cirque	86.30	29	IAMs_20	IAMs_20	18 09 52.9	
	comp=Z,16µm,22.0s						
CRQE	Cirque	86.32	29	P	P	17 37 30.3	-1.7
	baz=259,SNR=14						
CRQE				S	S	17 48 07.7	+0.8
	baz=259						
H25L	Birch Creek	86.33	23	P	P	17 37 31.2	-0.6
	baz=256,SNR=14						
H25L				S	S	17 48 08.1	+1.7
	baz=256						
G25K	Bearman Lake	86.34	23	P	P	17 37 31.9	+0.1
	baz=256,SNR=16						
G25K				S	S	17 48 06.9	+0.4
	baz=256						
ARTI	Arti	86.36	327	P	P	17 37 30.0	-2.2
ARTI				IAmb	IAmb	17 37 41.5	
	comp=Z,70nm,1.0s						
ARTI				IAMs_20	IAMs_20	18 18 58.2	
	comp=Z,15µm,20.0s						
ARTI	Arti	86.36	327	LR	LR	18 18 60.0	
	comp=Z,9µm,19.6s,baz=91,slow=38						
ARTI	Arti	86.36	327	*c i*P	P	17 37 30.7	-1.5
ARTI						17 40 50.9	
ARTI				S	SKSac	17 47 56.2	-1.6
ARTI				SSS	SSS	17 57 13.3	
ARTI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ARTI				MLR	MLR		
	comp=Z,14µm,20.0s						
WAX	Waxell Ridge	86.38	29	IAMs_20	IAMs_20	18 19 33.5	
	comp=Z,13µm,19.0s						
DOT	Dot Lake	86.46	26	IAMs_20	IAMs_20	18 14 44.5	
	comp=Z,17µm,20.0s						
MENT	Mentasta	86.46	27	P	P	17 37 34.0	+1.4
MCARA	McCarthy VSAT	86.47	28	P	P	17 37 32.1	-0.5
	baz=259						
MCARA				S	S	17 48 09.3	+1.2
	baz=259						
SCRK	Sand Creek	86.56	26	IAmb	IAmb	17 37 45.8	
	comp=Z,142nm,1.9s						
SCRK				IAMs_20	IAMs_20	18 11 39.2	
	comp=Z,16µm,21.0s						
SCRK	Sand Creek	86.56	26	P	P	17 37 32.1	-1.1
	baz=258,SNR=22						
SCRK				S	S	17 48 08.0	-1.1
	baz=258						
FYU	Fort Yukon	86.63	23	IAMs_20	IAMs_20	18 13 46.8	
	comp=Z,13µm,20.0s						
L26K	Log Cabin Wild	86.65	27	P	P	17 37 33.3	-0.2
	baz=258						
L26K				S	S	17 48 10.5	+0.8
	baz=258						
ISLE	Juniper Island	86.65	29	IAMs_20	IAMs_20	18 16 20.8	
	comp=Z,12µm,20.0s						
M26K	Nabesna, AK	86.68	27	P	P	17 37 33.4	-0.4
	baz=259						
M26K				S	S	17 48 10.7	+0.5
	baz=259						
F25K	Christian Rive	86.72	22	IAmb	IAmb	17 37 57.0	
	comp=Z,92nm,1.2s						
F25K	Christian Rive	86.72	22	P	P	17 37 33.4	-0.4
	baz=256,SNR=20						
F25K				S	S	17 48 10.9	+0.5
	baz=256						
MESA	MESA	86.77	29	IAMs_20	IAMs_20	18 12 58.9	
	comp=Z,18µm,21.0s						
MESA	MESA	86.77	29	P	P	17 37 33.8	-0.6
	baz=260						
MESA				S	S	17 48 13.2	+1.8
	baz=260						
J26L	Joseph Creek	86.85	25	IAMs_20	IAMs_20	18 13 30.9	
	comp=Z,12µm,20.0s						
J26L	Joseph Creek	86.85	25	P	P	17 37 33.1	-1.5
	baz=258,SNR=15						
J26L				S	S	17 48 09.9	-2.0
	baz=258						
E25K	Arctic Village	86.87	21	IAmb	IAmb	17 37 44.8	
	comp=Z,186nm,1.4s						
E25K	Arctic Village	86.87	21	P	P	17 37 34.2	-0.4
	baz=256						
E25K				S	S	17 48 09.9	-1.8
	baz=256						
D25K	Kavik River	86.88	20	P	P	17 37 33.6	-0.9
	baz=255						
D25K				S	S	17 48 08.7	-3.1
	baz=255						
YAH	Yahtse	86.90	29	IAMs_20	IAMs_20	18 13 04.2	
	comp=Z,15µm,20.0s						
GRNC	Granite Creek	86.96	29	IAmb	IAmb	17 37 50.8	
	comp=Z,190nm,1.3s						
GRNC				IAMs_20	IAMs_20	18 16 30.9	
	comp=Z,12µm,20.0s						
BMAR	Burnt Mountain	87.08	22	P	P	17 37 34.6	-1.0
I26K	Coal Creek Min	87.19	24	IAmb	IAmb	17 38 05.8	
	comp=Z,84nm,1.4s						
I26K	Coal Creek Min	87.19	24	P	P	17 37 35.0	-1.0
	baz=259,SNR=14						
I26K				S	S	17 48 12.7	-2.1
	baz=259						
M27K	Edge Creek, AK	87.19	27	P	P	17 37 35.7	-0.6
	baz=260,SNR=24						
M27K				S	S	17 48 15.2	0.0
	baz=260						
CTG	Chitna Glacier	87.20	29	P	P	17 37 35.6	-0.8
	baz=260,SNR=14						
CTG				S	S	17 48 14.5	-1.0
	baz=260						
TABL	Table Mountain	87.21	29	IAMs_20	IAMs_20	18 13 13.5	
	comp=Z,16µm,21.0s						
G26K	Porcupine Rive	87.28	23	P	P	17 37 36.2	-0.2
	baz=258,SNR=27						
G26K				S	S	17 48 11.9	-3.7
	baz=258						
F26K	Sheenjek River	87.30	22	P	P	17 37 36.1	-0.5
	baz=258,SNR=133						
F26K				S	S	17 48 13.2	-2.7
	baz=258						
L27K	Beaver Creek,	87.33	27	IAmb	IAmb	17 37 52.5	
	comp=Z,197nm,1.6s						
L27K				IAMs_20	IAMs_20	18 12 59.7	
	comp=Z,16µm,20.0s						
L27K	Beaver Creek,	87.33	27	P	P	17 37 36.5	-0.4
	baz=260,SNR=45						
L27K				S	S	17 48 13.0	-3.4
	baz=260						
LOGN	Logan Glacier	87.34	29	IAmb	IAmb	17 37 52.5	
	comp=Z,172nm,1.2s						
LOGN				IAMs_20	IAMs_20	18 16 42.9	
	comp=Z,12µm,20.0s						
BCAR	Beaver Creek A	87.36	27	P	P	17 37 36.2	-0.8
K27K	Chicken	87.40	26	IAMs_20	IAMs_20	18 15 41.1	
	comp=Z,13µm,20.0s						
K27K	Chicken	87.40	26	P	P	17 37 36.7	-0.4
	baz=260						
K27K				S	S	17 48 15.2	-1.7
	baz=260						
C26K	Camden Bay	87.53	20	P	P	17 37 36.7	-0.8
	baz=257						
C26K				S	S	17 48 12.6	-5.2
	baz=257						
PCA	Pinnacle	87.59	30	IAMs_20	IAMs_20	18 12 51.7	
	comp=Z,14µm,20.0s						
PINM	Pinnacle	87.59	30	P	P	17 37 36.5	-1.7
	baz=261,SNR=6.6						
PINM				S	S	17 48 15.9	-3.2
	baz=261						
BVCY	Beaver Creek	87.66	27	P	P	17 37 38.6	+0.2
	baz=261,SNR=14						
BVCY				S	S	17 48 16.7	-2.9
	baz=261						
QSPA	South Pole Qui	87.69	180	P	P	17 37 36.9	-1.8
QSPA				IAmb	IAmb	17 37 59.1	
	comp=Z,119nm,0.9s						
QSPA	South Pole Qui	87.69	180	P	P	17 37 37.8	-0.8
	comp=Z,13nm,0.6s,baz=339,slow=1.3,SNR=60						
QSPA				PP	PP	17 41 03.2	-0.7
	comp=Z,20nm,1.0s,baz=354,slow=7.6,SNR=4.2						
QSPA				S	SKSac	17 48 07.3	+1.4
	comp=Z,1.2nm,1.0s,baz=267,slow=17,SNR=6.6						
QSPA				PKKP	PKKPdf	17 55 22.8	-0.6
	comp=Z,2.1nm,1.0s,baz=224,slow=2.0,SNR=3.6						
QSPA				LR	LR	18 17 08.2	
	comp=Z,32µm,19.5s,baz=9.5,slow=36						
	comp=Z,13nm,0.6s						
O28M	Mount Upton	87.72	29	P	P	17 37 39.0	-0.1
	baz=261,SNR=12						
O28M				S	S	17 48 21.6	+0.8
	baz=261						
YUK3	Moose Creek	87.75	28	P	P	17 37 38.7	-0.4
	baz=261,SNR=16						
YUK3				S	S	17 48 22.5	+1.7
	baz=261						
C27K	Jago River	87.87	20	IAmb	IAmb	17 38 27.4	
	comp=Z,161nm,1.9s						
C27K	Jago River	87.87	20	P	P	17 37 39.0	-0.2
	baz=258						
C27K				S	S	17 48 21.8	+0.6
	baz=258						
I27K	Kandik River	87.88	24	P	P	17 37 39.9	+0.4
	baz=260,SNR=36						
I27K				S	S	17 48 22.3	+0.7
	baz=260						
BCPM	Bancas Point	87.88	30	IAMs_20	IAMs_20	18 13 00.2	
	comp=Z,15µm,21.0s						
PNL	Peninsula	87.96	30	P	P	17 37 43.8	+3.9
PNL	Peninsula	87.96	30	P	P	17 37 38.8	-1.1
	baz=262						
PNL				S	S	17 48 23.9	+1.4
	baz=262						
YUK8	Steele Glacier	88.00	29	P	P	17 37 40.3	-0.2
	baz=262						
H27K	Steamboat Moun	88.02	24	P	P	17 37 40.9	+0.8
	baz=260,SNR=20						
H27K				S	S	17 48 26.3	+3.4
	baz=260						
G27K	Doyon Strip	88.07	23	IAmb	IAmb	17 38 13.7	
	comp=Z,116nm,1.4s						
G27K				IAMs_20	IAMs_20	18 14 30.9	
	comp=Z,13µm,21.0s						
G27K	Doyon Strip	88.07	23	P	P	17 37 40.5	+0.1
	baz=260,SNR=27						
G27K				S	S	17 48 26.5	+3.2
	baz=260						
E27K	Coleen River	88.34	22	P	P	17 37 41.5	-0.1
	baz=260,SNR=17						
E27K				S	S	17 48 28.6	+2.8
	baz=260						
O29M	Mount Kennedy	88.45	30	IAMs_20	IAMs_20	18 13 31.4	
	comp=Z,19µm,20.0s						
O29M	Mount Kennedy	88.45	30	P	P	17 37 42.3	0.0
	baz=263,SNR=7.0						
O29M				S	S	17 48 29.6	+2.2
	baz=263						
I28M	Miner Creek	88.54	24	IAMs_20	IAMs_20	18 14 13.4	
	comp=Z,19µm,20.0s						
I28M	Miner Creek	88.54	24	P	P	17 37 43.1	+0.5
	baz=262,SNR=21						
I28M				S	S	17 48 29.6	+1.6
	baz=262						
YUK4	Talbot Arm	88.55	29	P	P	17 37 42.7	-0.2
	baz=263,SNR=14						
DAWY	Dawson	88.57	26	IAMs_20	IAMs_20	18 12 53.3	
	comp=Z,15µm,21.0s						
DAWY	Dawson	88.57	26	P	P	17 37 43.1	+0.4
	baz=262,SNR=17						
DAWY				S	S	17 48 29.3	+1.1
	baz=262						
YUK6	Outpost Mounta	88.63	29	P	P	17 37 42.8	-0.6
	baz=263,SNR=13						
YUK6				S	S	17 48 31.3	+2.0
	baz=263						
D27M	Malcolm River	88.75	21	P	P	17 37 44.3	+0.7
	baz=260,SNR=5.8						
D27M				S	S	17 48 32.2	+2.5
	baz=260						
M29M	Somme Creek	88.77	28	IAmb	IAmb	17 37 59.6	
	comp=Z,124nm,1.1s						
M29M	Somme Creek	88.77	28	P	P	17 37 44.0	+0.1
	baz=263,SNR=32						
M29M				S	S	17 48 34.0	+3.7
	baz=263						
P29M	Windy Craggy	88.79	30	P	P	17 37 43.9	+0.1
	baz=264,SNR=12						
P29M				S	S	17 48 33.3	+2.9
	baz=264						
F28M	Old Crow	88.89	22	P	P	17 37 44.2	0.0
	baz=262,SNR=22						
F28M				S	S	17 48 32.9	+1.9
	baz=262						
L29M	L29M	89.01	27	IAMs_20	IAMs_20	18 13 32.9	
	comp=Z,20µm,21.0s						
L29M	L29M	89.01	27	P	P	17 37 44.9	+0.1
	baz=263,SNR=17						
L29M				S	S	17 48 34.7	+2.3
	baz=263						
HYT	Haines Junctio	89.04	29	IAMs_20	IAMs_20	18 13 42.8	
	comp=Z,20µm,21.0s						
HYT	Haines Junctio	89.04	29	P	P	17 37 44.6	-0.5
	baz=264,SNR=21						
HYT				S	S	17 48 33.2	+0.3
	baz=264						
J29N	Klondike Camp	89.13	26	IAMs_20	IAMs_20	18 16 44.1	
	comp=Z,16µm,20.0s						
J29N	Klondike Camp	89.13	26	P	P	17 37 45.3	-0.1
	baz=263						
J29N				S	S	17 48 33.2	-0.3
	baz=263						
E28M	Babbage River	89.16	21	P	P	17 37 45.3	-0.1
	baz=262,SNR=24						
E28M				S	S	17 48 33.3	-0.2
	baz=262						
I29M	Ogilvie Camp,	89.20	25	P	P	17 37 45.9	+0.2
	baz=263,SNR=23						
I29M				S	S	17 48 34.4	+0.3
	baz=263						
P30M	Million Dollar	89.23	30	P	P	17 37 45.8	-0.2
	baz=264						
P30M				S	S	17 48 35.7	+1.2
	baz=264						
H29M	Whitestone	89.28	24	IAmb	IAmb	17 38 16.6	
	comp=Z,85nm,1.2s						
H29M	Whitestone	89.28	24	P	P	17 37 45.1	-0.9
	baz=263,SNR=10						
H29M				S	S	17 48 35.6	+0.8
	baz=263						
N30M	Aishikik Lake	89.31	29	IAmb	IAmb	17 38 02.0	
	comp=Z,118nm,1.1s						
N30M	Aishikik Lake	89.31	29	P	P	17 37 46.0	-0.3
	baz=264,SNR=17						
N30M				S	S	17 48 35.7	+0.4
	baz=264						
K29M	Barlow Dome	89.36	26	P	P	17 37 45.8	-0.8
	baz=264,SNR=53						
K29M				S	S	17 48 35.5	-0.3
	baz=264						
S31K	Pelican	89.40	32	P	P	17 37 46.1	-0.6
	baz=265,SNR=5.1						
S31K				S	S	17 48 36.1	+0.1
	baz=265						
PLBC	Pleasant Camp	89.47	31	P	P	17 37 46.3	-0.7
	baz=265,SNR=8.4						
PLBC				S	S	17 48 35.6	-1.1
	baz=265						
G29M	Pine Creek	89.51	23	IAmb	IAmb	17 37 60.0	
	comp=Z,116nm,1.4s						
G29M	Pine Creek	89.51	23	P	P	17 37 46.0	-1.0
	baz=263,SNR=15						
G29M				S	S	17 48 37.0	+0.2
	baz=263						
D28M	Stokes Point	89.55	21	P	P	17 37 45.8	-1.3
	baz=262						
D28M				S	S	17 48 37.2	+0.2
	baz=262						
R31K	City Hall, Gus	89.70	32	P	P	17 37 47.8	-0.2
	baz=265						
R31K				S	S	17 48 38.8	0.0
	baz=265						
O30N	Mendenhall	89.72	29	IAmb	IAmb	17 38 03.8	
	comp=Z,125nm,1.2s						
O30N				IAMs_20	IAMs_20	18 14 13.0	
	comp=Z,17µm,20.0s						
O30N	Mendenhall	89.72	29	P	P	17 37 47.5	-0.8
	baz=265,SNR=17						
O30N				S	S	17 48 40.1	+1.0
	baz=265						
E29M	Blow River	89.73	22	P	P	17 37 46.9	-1.1
	baz=263						
E29M				S	S	17 48 39.7	+0.9
	baz=263						
SIT	Sitka	89.81	33	P	P	17 37 47.9	-0.7
	baz=266						
SIT				S	S	17 48 40.5	+0.7
	baz=266						
N31M	Braeburn, Yuko	89.93	29	IAmb	IAmb	17 38 04.9	
	comp=Z,180nm,1.2s						
N31M	Braeburn, Yuko	89.93	29	P	P	17 37 48.3	-0.8
	baz=265						
N31M				S	S	17 48 41.9	+0.9
	baz=265						
J30M	Hart River	89.95	25	IAmb	IAmb	17 38 05.2	
	comp=Z,130nm,1.2s						
J30M				IAMs_20	IAMs_20	18 17 08.9	
	comp=Z,16µm,20.0s						
J30M	Hart River	89.95	25	P	P	17 37 48.3	-1.0
	baz=265,SNR=15						
J30M				S	S	17 48 42.0	+0.7
	baz=265						
EPYK	Eagle Plains	89.97	24	P	P	17 37 48.3	-1.0
	baz=264						
EPYK				S	S	17 48 40.8	-0.3
	baz=264						
SKAG	Skagway	89.99	31	P	P	17 37 52.9	+3.5
SKAG	Skagway	89.99	31	P	P	17 37 48.9	-0.6
	baz=266						
SKAG				S	S	17 48 41.0	-0.5
	baz=266						
I30M	Mount Dempster	90.00	25	IAmb	IAmb	17 38 13.9	
	comp=Z,108nm,1.4s						
I30M	Mount Dempster	90.00	25	P	P	17 37 49.2	-0.3
	baz=265,SNR=14						
I30M				S	S	17 48 42.2	+0.6
	baz=265						
MAYO	Mayo, Yukon	90.06	26	IAMs_20	IAMs_20	18 13 51.7	
	comp=Z,13µm,21.0s						
MAYO	Mayo, Yukon	90.06	26	P	P	17 37 49.3	-0.4
	baz=265						
MAYO				S	S	17 48 43.4	+1.3
	baz=265						
G30M	tAoh Zraii Nji	90.22	23	IAMs_20	IAMs_20	18 13 43.7	
	comp=Z,12µm,22.0s						
G30M	tAoh Zraii Nji	90.22	23	P	P	17 37 49.6	-0.8
	baz=265,SNR=17						
G30M				S	S	17 48 42.0	-1.5
	baz=265						
S32K	Killisnoo	90.25	33	P	P	17 37 49.9	-0.7
	baz=266						
S32K				S	S	17 48 42.6	-1.3
	baz=266						
WHY	Whitehorse	90.31	29	P	P	17 37 50.2	-0.9
	baz=266,SNR=14						
WHY				S	S	17 48 43.7	-1.0
	baz=266						
R32K	Eaglecrest	90.33	32	P	P	17 37 50.6	-0.4
	baz=266						
R32K				S	S	17 48 43.8	-0.9
	baz=266						
JIS	Juneau Island	90.40	32	P	P	17 37 54.9	+3.6
F30M	Barrier River	90.44	22	P	P	17 37 50.8	-0.6
	baz=265,SNR=14						
F30M				S	S	17 48 43.9	-1.6
	baz=265						
M31M	Drury Creek, Y	90.64	28	IAMs_20	IAMs_20	18 15 07.2	
	comp=Z,18µm,22.0s						
M31M	Drury Creek, Y	90.64	28	P	P	17 37 51.9	-0.5
	baz=266,SNR=16						
M31M				S	S	17 48 44.4	-3.1
	baz=266						
P32M	Atlin	90.82	31	IAmb	IAmb	17 38 08.7	
	comp=Z,57nm,1.0s						
P32M	Atlin	90.82	31	P	P	17 37 52.8	-0.6
	baz=267						
P32M				S	S	17 48 49.0	-0.3
	baz=267						
H31M	Peel River	90.89	24	IAMs_20	IAMs_20	18 16 43.4	
	comp=Z,11µm,20.0s						
H31M	Peel River	90.89	24	P	P	17 37 52.6	-0.9
	baz=267,SNR=9.9						
H31M				S	S	17 48 49.3	-0.4
	baz=267						
CRAG	Craig	90.94	35	IAMs_20	IAMs_20	18 09 45.6	
	comp=Z,18µm,22.0s						
CRAG	Craig	90.94	35	P	P	17 37 57.6	+3.7
CRAG	Craig	90.94	35	P	P	17 37 52.7	-1.2
	baz=268						
CRAG				S	S	17 48 53.3	+2.9
	baz=268						
U33K	Whale Pass	90.97	34	IAMs_20	IAMs_20	18 17 27.4	
	comp=Z,12µm,19.0s						
U33K	Whale Pass	90.97	34	P	P	17 37 52.9	-1.1
	baz=268						
U33K				S	S	17 48 51.4	+0.8
	baz=268						
G31M	Satah River	90.98	23	P	P	17 37 52.5	-1.4
	baz=267						
G31M				S	S	17 48 50.5	+0.2
	baz=267						
SYO	Syowa Base	91.09	201	⇓*e*pP	P	17 37 56.6	+2.2
SYO	Syowa Base	91.09	201	⇓*i*sP	sP	17 37 59.4	-2.7
T33K	Petersburg	91.10	33	P	P	17 37 53.6	-1.0
	baz=268						
T33K				S	S	17 48 53.6	+1.9
	baz=268						
FARO	Faro, Yukon	91.13	28	IAMs_20	IAMs_20	18 15 22.2	
	comp=Z,18µm,22.0s						
FARO	Faro, Yukon	91.13	28	P	P	17 37 53.9	-0.9
	baz=267						
FARO				S	S	17 48 52.5	+0.5
	baz=267						
N32M	Quiet Lake	91.21	29	IAMs_20	IAMs_20	18 16 19.1	
	comp=Z,12µm,20.0s						
N32M	Quiet Lake	91.21	29	P	P	17 37 53.9	-1.3
	baz=268						
N32M				S	S	17 48 54.6	+1.7
	baz=268						
F31M	Tsiigehtchic	91.22	23	IAMs_20	IAMs_20	18 14 03.0	
	comp=Z,12µm,22.0s						
F31M	Tsiigehtchic	91.22	23	P	P	17 37 53.4	-1.6
	baz=267						
F31M				S	S	17 48 52.5	0.0
	baz=267						
H02S1	DAWSON INLET T	91.23	37	P	P	17 37 57.6	+2.3
	SNR=15						
P33M	Teslin, Yukon	91.30	30	IAMs_20	IAMs_20	18 22 32.8	
	comp=Z,11µm,19.0s						
P33M	Teslin, Yukon	91.30	30	P	P	17 37 53.6	-2.1
	baz=268						
P33M				S	S	17 48 54.6	+0.8
	baz=268						
INK	Inuvik	91.34	22	LR	LR	18 17 06.0	
	comp=Z,10µm,20.9s,baz=248,slow=34						
INK	Inuvik	91.34	22	P	P	17 37 58.0	+2.5
INK	Inuvik	91.34	22	P	P	17 37 53.8	-1.6
	baz=267						
INK				S	S	17 48 52.6	-0.9
	baz=267						
KIRV	Kirov	91.39	328	LR	LR	18 21 06.5	
	comp=Z,28µm,20.7s,baz=90,slow=37						
KIRV	Kirov	91.39	328	*de*P	P	17 37 55.4	-0.5
WRAK	Wrangell Islan	91.42	34	IAMs_20	IAMs_20	18 10 02.1	
	comp=Z,14µm,22.0s						
WRAK	Wrangell Islan	91.42	34	P	P	17 37 54.6	-1.5

	baz=268						
WRAK				S	**S**	**17 48 55.1**	**+0.4**
	baz=268						
MOBC	**Moresby Island**	**91.53**	**37**	IAMs_20	IAMs_20	18 13 30.5	
	comp=Z,14µm,20.0s						
Q32M	**Nakina River**	**91.54**	**31**	P	**P**	**17 37 54.7**	**-2.2**
	baz=268						
Q32M				S	**S**	**17 48 57.3**	**+1.1**
	baz=268						
V35K	**Ketchikan**	**91.80**	**35**	IAMs_20	IAMs_20	18 18 19.3	
	comp=Z,12µm,20.0s						
V35K	**Ketchikan**	**91.80**	**35**	P	**P**	**17 37 55.9**	**-2.0**
	baz=269						
V35K				S	**S**	**17 48 59.4**	**+1.2**
	baz=269						
AKT	**Akhty**	**92.01**	**311**	*e*P	**P**	**17 37 57.1**	**-2.3**
AKT				*e*		17 41 40.4	
AKT				*e*PPP	PPP	17 43 39.0	
AKT				*e*		17 48 30.6	
AKT				*e*SP	SP	17 50 09.7	-0.7
AKT				pmax	pmax		
	comp=Z,41nm,1.4s						
AKT				MLR	MLR		
	comp=Z,12µm,23.0s						
S34M	**Telegraph Cree**	**92.11**	**32**	P	**P**	**17 37 57.3**	**-2.0**
	baz=269						
S34M				S	**S**	**17 49 00.4**	**-0.6**
	baz=269						
MMPY	**Sheldon Lake,**	**92.11**	**28**	P	**P**	**17 37 57.7**	**-1.6**
	baz=269,SNR=13						
MMPY				S	**S**	**17 49 01.2**	**+0.3**
	baz=269						
MAK	**Makhachkala**	**92.21**	**313***c*	*i*P	P	17 37 53.3	-6.8
MAK				*e*		17 41 41.4	
MAK				*e*		17 48 23.6	
MAK				*e*SS	SS	17 55 11.0	-1.4
MAK				pmax	pmax		
	comp=Z,108nm,1.3s						
R33M	**Jennings River**	**92.22**	**31**	P	**P**	**17 37 58.0**	**-2.0**
	baz=269						
R33M				S	**S**	**17 49 01.7**	**-0.5**
	baz=269						
BELG	**Belogornoye**	**92.27**	**322**	LR	LR	18 22 10.0	
	comp=Z,6µm,21.4s,baz=92,slow=37						
BELG	**Belogornoye**	**92.27**	**322***c*	*i*P	**P**	**17 37 58.0**	**-2.1**
BELG				pmax	pmax		
	comp=Z,29nm,0.9s						
BELG				MLR	MLR		
	comp=Z,1µm,20.0s						
T35M	**Bob Quinn**	**92.58**	**33**	IAMs_20	IAMs_20	18 10 51.9	
	comp=Z,13µm,22.0s						
T35M	**Bob Quinn**	**92.58**	**33**	P	**P**	**17 38 00.4**	**-1.1**
	baz=270						
T35M				S	**S**	**17 49 05.9**	**+0.6**
	baz=270						
DLBC	**Dease Lake**	**92.70**	**32**	LR	LR	18 16 04.3	
	comp=Z,659nm,20.2s,baz=262,slow=33						
U35K	**Hyder**	**92.70**	**34**	IAMs_20	IAMs_20	18 10 51.2	
	comp=Z,19µm,22.0s						
U35K	**Hyder**	**92.70**	**34**	P	**P**	**17 38 00.5**	**-1.5**
	baz=270						
U35K				S	**S**	**17 49 12.0**	**+5.8**
	baz=270						
WTLY	**Watson Lake, Y**	**93.31**	**30**	P	**P**	**17 38 03.8**	**-1.1**
	baz=271						
WTLY				S	**S**	**17 49 13.0**	**+1.3**
	baz=271						
TGTN	**Hyland Airport**	**93.53**	**29**	P	**P**	**17 38 03.9**	**-2.0**
	baz=272						
TGTN				S	**S**	**17 49 14.0**	**+0.4**
	baz=272						
RAYN	**Ar Rayn**	**93.59**	**293**	P	**P**	**17 38 04.0**	**-3.0**
RAYN	**Ar Rayn**	**93.59**	**293**	P	**P**	**17 38 04.0**	**-3.0**
RAYN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BBB	**Bella Bella**	**93.88**	**38**	LR	LR	18 13 23.1	
	comp=Z,9µm,21.1s,baz=276,slow=31						
HOLB	**Holberg**	**93.90**	**40**	IAMs_20	IAMs_20	18 11 11.2	
	comp=Z,15µm,22.0s						
A36M	**Sachs Harbour**	**94.08**	**18**	P	**P**	**17 38 06.0**	**-2.0**
	baz=275						
A36M				S	**S**	**17 49 18.9**	**+1.1**
	baz=275						
GNI	**Garni**	**94.27**	**310**	LR	LR	18 24 41.7	
	comp=Z,4µm,20.3s,baz=94,slow=38						
LIRD	**Liard River Hi**	**94.71**	**31**	P	**P**	**17 38 08.5**	**-2.7**
	baz=274						
LIRD				S	**S**	**17 49 23.7**	**-0.1**
	baz=274						
C36M	**Paulatuk**	**94.74**	**21**	P	**P**	**17 38 09.4**	**-1.7**
	baz=276						
C36M				S	**S**	**17 49 23.2**	**-0.4**
	baz=276						
BEAVL	**Fort Liard**	**95.17**	**30**	P	**P**	**17 38 11.0**	**-2.3**
	baz=275						
BEAVL				S	**S**	**17 49 28.1**	**+0.3**
	baz=275						
TOAD	**Toad River Com**	**95.19**	**31**	P	**P**	**17 38 11.1**	**-2.5**
	baz=274						
TOAD				S	**S**	**17 49 28.4**	**+0.3**
	baz=274						
GOF	**Gofitskoye**	**95.40**	**315***c*	*e*P	**P**	**17 38 16.9**	**+2.1**
KBZ	**Khabaz**	**95.56**	**314**	P	**P**	**17 38 14.6**	**-0.8**
	comp=Z,1.8nm,0.9s,baz=75,slow=3.5,SNR=5.2						
KBZ				PP	**PP**	**17 42 06.9**	**+0.3**
	comp=Z,2.6nm,0.9s,baz=82,slow=7.1,SNR=4.2						
KBZ				S	**SKSac**	**17 48 49.8**	**-1.3**
	comp=Z,0.5nm,0.3s,baz=121,slow=5.9,SNR=1.3						
KBZ				LR	LR	18 24 39.9	
	comp=Z,3µm,21.2s,baz=78,slow=38						
	comp=Z,1.8nm,0.9s						
KBZ	**Khabaz**	**95.56**	**314***d*	*i*P	**P**	**17 38 16.4**	**+0.9**
KBZ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KBZ				MLR	MLR		
	comp=Z,5µm,21.0s						
WRGLY	**Wrigley**	**95.65**	**27**	IAMs_20	IAMs_20	18 21 15.5	
	comp=Z,11µm,20.0s						
WRGLY	**Wrigley**	**95.65**	**27**	P	**P**	**17 38 13.3**	**-2.1**
	baz=276						
WRGLY				S	**S**	**17 49 30.7**	**-1.1**
	baz=276						
OZB	**Mount Ozzard**	**95.67**	**41**	IAMs_20	IAMs_20	18 22 34.2	
	comp=Z,16µm,20.0s						
KOTAN	**Kotaneelee Air**	**95.68**	**30**	P	**P**	**17 38 13.5**	**-2.2**
	baz=275						
KOTAN				S	**S**	**17 49 33.2**	**+0.9**
	baz=275						
CBB	**Campbell River**	**95.69**	**40**	IAMs_20	IAMs_20	18 12 26.8	
	comp=Z,18µm,21.0s						
KIV	**Kislovodsk**	**95.70**	**314**	*e*P	**P**	**17 38 13.8**	**-2.5**
KIV				*e*		17 42 05.5	
KIV				*e*		17 48 49.6	
KIV				*e*SS	SS	17 56 02.2	-0.3
KIV				*e*SSS	SSS	17 59 41.6	
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV	**Kislovodsk**	**95.70**	**314**	P	**P**	**17 38 13.5**	**-2.8**
ATD	**Arta Tunnel**	**95.93**	**281**	LR	LR	18 20 55.9	
	comp=Z,56nm,21.1s,baz=86,slow=35						
VRH	**Novokhopyorsk**	**95.96**	**321**	*e*P	**P**	**17 38 15.2**	**-1.9**
VRH				pmax	pmax		
	comp=Z,77nm,0.9s						
KLMR	**Klimovskoe**	**96.31**	**331**	*e*P	**P**	**17 38 15.9**	**-2.6**
KLMR				S	**SKSac**	**17 48 52.4**	**-1.9**
KLMR				SS	**SS**	**17 56 13.8**	**+3.9**
KLMR				SSS	SSS	17 59 54.3	
KLMR				pmax	pmax		
	comp=Z,31nm,1.3s						
CLRS	**Cowichan Lake**	**96.58**	**41**	IAMs_20	IAMs_20	18 14 12.3	
	comp=Z,14µm,21.0s						
KEBM	**Edson Butte**	**96.82**	**47**	IAMs_20	IAMs_20	18 15 19.2	
	comp=Z,15µm,20.0s						
KBO	**Bosley Butte**	**96.94**	**48**	IAMs_20	IAMs_20	18 16 17.3	
	comp=Z,13µm,20.0s						
PGC	**Sidney**	**97.04**	**41**	IAMs_20	IAMs_20	18 13 13.5	
	comp=Z,13µm,22.0s						
LABN	**Labinsk**	**97.07**	**315**	*e*P	**P**	**17 38 19.2**	**-3.2**
LABN				e*PP	**PcP**	**17 38 20.5**	**-2.0**
LABN				*e*S	**SKSac**	**17 48 56.0**	**-3.0**
LABN				pmax	pmax		
	comp=Z,27nm,0.6s						
HEBO	**Mount Hebo**	**97.09**	**45**	IAMs_20	IAMs_20	18 14 25.1	
	comp=Z,12µm,22.0s						
J01E	**Myrtle Point**	**97.10**	**47**	IAMs_20	IAMs_20	18 15 07.5	
	comp=Z,13µm,20.0s						
I02E	**Swisshome, OR**	**97.10**	**46**	IAMs_20	IAMs_20	18 17 13.4	
	comp=Z,12µm,22.0s						
KMPM	**Mount Pierce**	**97.11**	**50**	IAMs_20	IAMs_20	18 15 51.2	
	comp=Z,14µm,21.0s						
E03A	**Lebam**	**97.13**	**44**	IAMs_20	IAMs_20	18 22 58.0	
	comp=Z,9µm,19.0s						
KRPM	**Rodgers**	**97.15**	**49**	IAMs_20	IAMs_20	18 13 15.0	
	comp=Z,18µm,22.0s						
JCC	**Jacoby Creek,**	**97.16**	**49**	IAMs_20	IAMs_20	18 15 45.4	
	comp=Z,13µm,20.0s						
ERBR	**Yeremizino-Bor**	**97.17**	**316**	*e*P	**P**	**17 38 21.4**	**-1.4**
ERBR				e*PP	Pdif	17 38 23.5	+0.6
ERBR				*e*S	**SKSac**	**17 48 58.5**	**-1.0**
ERBR				pmax	pmax		
	comp=Z,18nm,0.8s						
LVZ	**Lovozero**	**97.25**	**338**	⇑*e*P	Pdif	17 38 22.9	+0.1
LVZ				pmax	pmax		
	comp=Z,42nm,1.3s						
LVZ				MLR	MLR		
	comp=Z,9µm,20.0s						
KHMM	**Horse Mountain**	**97.38**	**49**	IAMs_20	IAMs_20	18 15 53.3	
	comp=Z,15µm,20.0s						
L02F	**Cave Junction**	**97.43**	**48**	IAMs_20	IAMs_20	18 16 43.3	
	comp=Z,15µm,20.0s						
G03D	**McMinnville, O**	**97.43**	**45**	IAMs_20	IAMs_20	18 14 35.2	
	comp=Z,12µm,21.0s						
KMRM	**Mail Ridge**	**97.44**	**50**	IAMs_20	IAMs_20	18 15 47.9	
	comp=Z,16µm,20.0s						
COR	**Corvallis**	**97.45**	**45**	IAMs_20	IAMs_20	18 21 26.8	
	comp=Z,11µm,19.0s						
I03D	**Drain, OR**	**97.48**	**46**	IAMs_20	IAMs_20	18 17 24.7	
	comp=Z,13µm,22.0s						
VORR	**Voronezh**	**97.49**	**322**	*e*P	Pdif	17 38 26.1	+2.0
VORR				pmax	pmax		
	comp=Z,44nm,0.4s						
VORD	**Divnogorie**	**97.51**	**321**	*e*P	**P**	**17 38 22.0**	**-2.2**
VORD				pmax	pmax		
	comp=Z,60nm,0.9s						
VORD				MLR	MLR		
	comp=Z,5µm,18.0s						
KOPT	**Kop Dagi**	**97.53**	**310**	IAmb	IAmb	17 38 43.0	
	comp=Z,56nm,1.1s						
F04D	**Rainier, OR**	**97.54**	**44**	IAMs_20	IAMs_20	18 13 49.1	
	comp=Z,11µm,22.0s						
VSR	**Storozhevoye**	**97.56**	**321**	*e*P	**P**	**17 38 23.1**	**-1.3**
VSR				pmax	pmax		
	comp=Z,40nm,0.9s						
VSR				MLR	MLR		
	comp=Z,11µm,20.0s						
LPSR	**Galich'ya Gora**	**97.56**	**323**	*e*P	**P**	**17 38 22.9**	**-1.5**
LPSR				pmax	pmax		
	comp=Z,50nm,0.4s						
LPSR				MLR	MLR		
	comp=Z,10µm,21.0s						
BUCK	**Buck Mountain**	**97.71**	**46**	IAMs_20	IAMs_20	18 17 32.6	
	comp=Z,11µm,21.0s						
APA	**Apatity**	**97.79**	**338**	⇓*i*P	Pdif	17 38 27.3	+2.2
APA				pmax	pmax		
	comp=Z,17nm,0.9s						
H04D	**Lebanon**	**97.86**	**46**	IAMs_20	IAMs_20	18 17 28.6	
	comp=Z,10µm,22.0s						
SOC	**Sochi**	**97.87**	**314**	*e*P	**P**	**17 38 25.6**	**-0.4**
SOC				*e*		17 42 25.6	
SOC				*e*PPP	PPP	17 44 28.1	
SOC				*e*S	**SKSac**	**17 49 03.4**	**+0.3**
SOC				*e*SS	**SS**	**17 56 30.6**	**-2.3**
SOC				*e*SSS	SSS	18 00 15.3	
LLLB	**Lillooet**	**97.87**	**39**	IAMs_20	IAMs_20	18 13 48.4	
	comp=Z,11µm,21.0s						
MOS	**Moscow**	**97.94**	**326**	*e*P	Pdif	17 38 27.5	+1.5
MOS				*e*		17 42 29.7	
MOS				*e*PPP	PPP	17 44 35.8	
MOS				*e*S	**SKSac**	**17 49 02.9**	**0.0**
MOS				*e*PS	**PS**	**17 51 19.1**	**+1.8**
MOS				*e*SSS	SSS	18 00 25.6	
MOS				pmax	pmax		
	comp=Z,37nm,0.9s						
MOS				pmax	pmax		
	comp=Z,200nm,2.2s						
MOS				smax	smax		
	comp=N,400nm,3.1s						
MOS				smax	smax		
	comp=E,900nm,3.7s						
MOS				MLR	MLR		
	comp=Z,16µm,20.0s						
HOPS	**Hopland Field**	**98.00**	**51**	IAMs_20	IAMs_20	18 27 13.9	
	comp=Z,10µm,18.0s						
YBH	**Yreka Blue Hor**	**98.09**	**48**	LR	LR	18 14 33.5	
	comp=Z,1µm,21.5s,baz=278,slow=30						
MCCM	**Marconi Confer**	**98.21**	**52**	IAMs_20	IAMs_20	18 17 02.4	
	comp=Z,10µm,21.0s						
H04A	**Detroit Lake**	**98.24**	**45**	IAMs_20	IAMs_20	18 22 01.6	
	comp=Z,11µm,19.0s						
J04A	**Umpqua Nationa**	**98.42**	**47**	IAMs_20	IAMs_20	18 16 00.4	
	comp=Z,15µm,21.0s						
SPITS	**Spitsbergen Ar**	**98.48**	**350**	P	**P**	**17 38 27.7**	**-0.3**
	comp=Z,4.2nm,1.0s,baz=48,slow=18,SNR=1.5						
SPITS				PP	**PP**	**17 42 30.6**	**+2.4**
	comp=Z,7.8nm,1.0s,baz=57,slow=5.5,SNR=2.4						
SPITS				LR	LR	18 22 35.4	
	comp=Z,11µm,21.1s,baz=24,slow=35						
	comp=Z,4.2nm,1.0s						
HOOD	**Mount Hood Mea**	**98.56**	**45**	IAMs_20	IAMs_20	18 18 30.9	
	comp=Z,10µm,20.0s						
OBN	**Obninsk**	**98.63**	**325**	LR	LR	18 25 28.4	
	comp=Z,15µm,20.8s,baz=26,slow=37						
OBN	**Obninsk**	**98.63**	**325**	*e*P	**P**	**17 38 27.9**	**-1.2**
OBN				*e*		17 42 29.5	
OBN				*e*PPP	PPP	17 44 35.0	
OBN				*e*S	**SKSac**	**17 49 06.8**	**+0.4**
OBN				*e*SS	**SS**	**17 56 39.2**	**-3.6**
OBN				*e*SSS	SSS	18 00 33.1	
OBN				pmax	pmax		
	comp=Z,41nm,1.1s						
OBN				MLR	MLR		
	comp=Z,17µm,21.0s						
K04D	**Chiloquin, OR**	**98.73**	**47**	IAMs_20	IAMs_20	18 16 29.7	
	comp=Z,13µm,20.0s						
KBS	**Kingsbay**	**98.81**	**351**	IAMs_20	IAMs_20	18 27 50.7	
	comp=Z,9µm,19.0s						
J05D	**Fort Rock, OR**	**99.05**	**47**	IAMs_20	IAMs_20	18 16 33.1	
	comp=Z,16µm,22.0s						
HATC	**Hat Creek Radi**	**99.11**	**49**	IAMs_20	IAMs_20	18 17 08.8	
	comp=Z,11µm,21.0s						
PINE	**Pine Mountain**	**99.22**	**46**	IAMs_20	IAMs_20	18 18 42.4	
	comp=Z,10µm,21.0s						
HSPB	**Hornsund (broa**	**99.26**	**349**	*e*Pdif	**Pdif**	**17 38 37.9**	**+6.5**
HSPB				*e*PP	**PP**	**17 42 34.0**	**0.0**
HSPB				*e*SKS	**SKSac**	**17 49 12.5**	**+3.7**
HSPB				*e*SS	SS	17 57 12.5	+22
HSPB				*e*L	L	18 21 10.0	
	comp=Z,11µm,24.1s						
G06A	**Carlson Farm,**	**99.28**	**45**	IAMs_20	IAMs_20	18 14 22.0	
	comp=Z,11µm,22.0s						
ANN	**Anapa**	**99.40**	**315**	*e*P	**Pdif**	**17 38 32.5**	**-0.3**
ANN				e*PP	**pP**	**17 38 37.6**	**-0.9**
ANN				*e*		17 42 41.9	
ANN				*e*S	**SKSac**	**17 49 11.3**	**+0.6**
ANN				*e*SS	**SS**	**17 57 01.2**	**+7.0**
ANN				pmax	pmax		
	comp=Z,44nm,1.4s						
KEV	**Kevo**	**99.42**	**341**	S	**S**	**17 49 57.5**	**-6.2**
SAO	**San Andreas Ge**	**99.44**	**53**	IAMs_20	IAMs_20	18 22 19.0	
	comp=Z,15µm,19.0s						
AFDM	**Forest Hills D**	**99.64**	**51**	IAMs_20	IAMs_20	18 29 44.2	
	comp=Z,9µm,18.0s						
F07A	**Phinny Hill Vi**	**99.70**	**44**	IAMs_20	IAMs_20	18 25 43.1	
	comp=Z,11µm,20.0s						
YKA	**Yellowknife Ar**	**99.77**	**27**	P	**Pdif**	**17 38 35.0**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=294,slow=5.2,SNR=11						
YKA				PP	**PP**	**17 42 39.7**	**+1.4**
	comp=Z,1.3nm,0.9s,baz=282,slow=8.7,SNR=2.6						
YKA				S	**SKSac**	**17 49 08.2**	**-3.6**
	comp=Z,0.3nm,0.6s,baz=307,slow=5.2,SNR=1.4						
YKA				LR	LR	18 20 43.1	
	comp=Z,12µm,21.7s,baz=284,slow=34						
	comp=Z,0.8nm,0.8s						
B08A	**Colville Reser**	**99.79**	**41**	IAMs_20	IAMs_20	18 16 14.3	
	comp=Z,11µm,21.0s						
HAWA	**Hanford**	**99.91**	**43**	IAMs_20	IAMs_20	18 22 13.6	
	comp=Z,9µm,20.0s						
ARCES	**ARCESS Array B**	**99.99**	**341**	P	**Pdif**	**17 38 35.5**	**+0.6**
	comp=Z,3.3nm,0.7s,baz=64,slow=5.5,SNR=10						
ARCES				PKiKP	**PKiKP**	**17 43 03.5**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=90,slow=1.2,SNR=3.6						
ARCES				S	**SKSac**	**17 49 12.3**	**-0.5**
	comp=Z,1.4nm,1.1s,baz=60,slow=5.3,SNR=1.5						
ARCES				LR	LR	18 27 59.5	
	comp=Z,7µm,22.0s,baz=68,slow=38						
	comp=Z,3.3nm,0.7s						
PMPB	**Monarch Peak**	**100.00**	**54**	IAMs_20	IAMs_20	18 19 58.9	
	comp=Z,15µm,20.0s						
CMB	**Columbia Colle**	**100.18**	**52**	IAMs_20	IAMs_20	18 18 02.4	
	comp=Z,9µm,20.0s						
I07A	**Izee**	**100.22**	**46**	IAMs_20	IAMs_20	18 19 04.8	
	comp=Z,13µm,21.0s						
D08A	**Wollman Farm,**	**100.24**	**43**	IAMs_20	IAMs_20	18 18 16.3	
	comp=Z,11µm,20.0s						
MPK	**Martis Peak**	**100.34**	**51**	IAMs_20	IAMs_20	18 18 39.4	
	comp=Z,11µm,21.0s						
SGF	**Sodankyl**	**100.36**	**339**	P	**Pdif**	**17 38 38.3**	**+1.7**
TROLL	**Troll, Antarti**	**100.72**	**193**	⇑P	**Pdif**	**17 38 38.4**	**0.0**
	comp=Z,116nm,0.9s						
PAHR	**Pah Rah Range**	**100.79**	**50**	IAMs_20	IAMs_20	18 18 59.5	
	comp=Z,11µm,21.0s						
E09A	**Wood Farm, Sta**	**100.85**	**43**	IAMs_20	IAMs_20	18 15 32.3	
	comp=Z,10µm,22.0s						
WAKR	**Walker**	**100.88**	**51**	IAMs_20	IAMs_20	18 18 27.9	
	comp=Z,13µm,21.0s						
WVOR	**Wild Horse Val**	**101.04**	**47**	IAMs_20	IAMs_20	18 15 26.9	
	comp=Z,14µm,22.0s						
J08A	**Circle Bar Ran**	**101.05**	**46**	IAMs_20	IAMs_20	18 17 35.9	
	comp=Z,13µm,21.0s						
NEW	**Newport**	**101.27**	**41**	IAMs_20	IAMs_20	18 23 41.2	
	comp=Z,12µm,21.0s						
RES	**Resolute Bay**	**101.31**	**13**	P	**Pdif**	**17 38 40.9**	**+0.3**
RYN	**Ryan**	**101.58**	**51**	IAMs_20	IAMs_20	18 19 01.4	
	comp=Z,10µm,21.0s						
LHV	**Little Huntoon**	**101.63**	**52**	IAMs_20	IAMs_20	18 18 50.9	
	comp=Z,11µm,20.0s						
SIM	**Simferopol'**	**101.72**	**315**	*e*P	**Pdif**	**17 38 50.6**	**+7.5**
SIM				*e*		17 49 22.0	
SIM				*e*S	**Sdif**	**17 50 19.0**	**-5.0**
NVAR	**Mina Array Bea**	**101.77**	**51**	P	**Pdif**	**17 38 44.5**	**+0.7**
	comp=Z,3.1nm,0.8s,baz=252,slow=6.1,SNR=13						
NVAR				PP	**PP**	**17 42 52.5**	**-2.1**
	comp=Z,0.3nm,0.5s,baz=275,slow=6.4,SNR=1.7						
NVAR				S	**SKSac**	**17 49 20.1**	**-3.1**
	comp=Z,0.3nm,0.7s,baz=315,slow=4.8,SNR=1.3						
SNAA	**Sanae**	**102.11**	**192**	⇑P	**Pdif**	**17 38 47.0**	**+2.6**
	comp=Z,31nm,0.8s						
SNAA	**Sanae**	**102.11**	**192**	P	**Pdif**	**17 38 45.4**	**+1.0**
	comp=Z,3.7nm,0.8s,baz=176,slow=2.9,SNR=15						
SNAA				PP	**PP**	**17 42 59.1**	**+3.5**
	comp=Z,9.9nm,1.1s,baz=131,slow=9.4,SNR=6.3						
SNAA				PKKPbc	**PKKPbc**	**17 54 49.2**	**-1.5**
	comp=Z,1.8nm,1.0s,baz=347,slow=5.0,SNR=3.8						
DSP	**Deep Springs**	**102.15**	**52**	IAMs_20	IAMs_20	18 15 22.7	
	comp=Z,16µm,22.0s						
MMAI	**Mount Meron Ar**	**102.16**	**303**	P	**Pdif**	**17 38 45.1**	**-0.4**
	comp=Z,5.5nm,0.8s,baz=94,slow=4.3,SNR=5.0						
MMAI				S	**SKSac**	**17 49 23.0**	**-1.9**
	comp=Z,0.8nm,0.5s,baz=137,slow=19,SNR=1.1						
FINES	**FINESS Array B**	**102.53**	**333**	P	**Pdif**	**17 38 46.8**	**+0.5**
	comp=Z,4.3nm,1.0s,baz=83,slow=6.0,SNR=7.4						
FINES				PP	**PP**	**17 42 59.7**	**+0.6**
	comp=Z,3.3nm,0.9s,baz=81,slow=12,SNR=2.8						
FINES				S	**SKSac**	**17 49 20.7**	**-4.5**
	comp=Z,0.4nm,0.6s,baz=138,slow=17,SNR=1.4						
PLID	**Pearl Lake**	**102.55**	**44**	IAMs_20	IAMs_20	18 20 24.5	
	comp=Z,11µm,21.0s						
Q09A	**Carvers**	**102.59**	**51**	IAMs_20	IAMs_20	18 22 20.3	
	comp=Z,10µm,20.0s						
GRAC	**Grapevine Rang**	**102.67**	**53**	IAMs_20	IAMs_20	18 15 37.6	
	comp=Z,14µm,22.0s						
BRTR	**Keskin Array B**	**102.81**	**310**	P	**Pdif**	**17 38 48.7**	**+0.4**
	comp=Z,4.1nm,0.9s,baz=153,slow=3.6,SNR=11						
BRTR				PP	**PKiKP**	**17 43 06.7**	**-2.2**
	comp=Z,1.7nm,0.9s,baz=93,slow=7.2,SNR=2.2						
BRTR				S	**SKSac**	**17 49 25.2**	**-2.6**
	comp=Z,0.3nm,0.5s,baz=122,slow=14,SNR=1.6						
BR104	**Keskin Array S**	**102.81**	**310**	P	**Pdif**	**17 38 49.6**	**+1.3**
	comp=Z,42nmcomp=Z,6.4nm,1.0s						
MFID	**Camas Ranch**	**102.95**	**46**	IAMs_20	IAMs_20	18 25 41.1	
	comp=Z,10µm,20.0s						
QSM	**Queen of Sheba**	**103.20**	**54**	IAMs_20	IAMs_20	18 23 04.5	
	comp=Z,12µm,19.0s						
GSC	**Goldstone, Bar**	**103.33**	**54**	IAMs_20	IAMs_20	18 22 04.0	
	comp=Z,14µm,20.0s						
GWY	**Greenwater Val**	**103.33**	**53**	IAMs_20	IAMs_20	18 18 14.0	
	comp=Z,11µm,22.0s						
TPNV	**Topopah Spring**	**103.57**	**53**	IAMs_20	IAMs_20	18 16 16.7	
	comp=Z,10µm,22.0s						
VNA2	**Neumayer--Watz**	**103.59**	**191**	⇑P	**Pdif**	**17 38 56.2**	**+5.3**
	comp=Z,0.8nm,0.6s,baz=131,slow=3.6						
MNK	**Minsk**	**103.67**	**326**	*i* P	**Pdif**	**17 38 48.0**	**-3.6**
	comp=E,7.0nm,0.6s						
MNK				*i* P	**Pdif**	**17 38 48.0**	**-3.6**
	comp=N,5.0nm,0.7s						
MNK				*i* P	**Pdif**	**17 38 48.0**	**-3.6**
	comp=Z,5.0nm,0.7s,baz=74						
MNK				*i* PP	**PP**	**17 43 04.8**	**-3.1**
MNK				*i* PPP	PPP	17 45 16.0	
MNK				*i* S	**SKSac**	**17 49 28.0**	**-2.9**
MNK				*i* PS	**PS**	**17 52 16.2**	**-2.3**
MNK				*i* SS	**SS**	**17 57 52.8**	**0.0**
MNK				*i* SSS	SSS	18 01 48.5	
MNK				*i* LR	LR	18 27 37.0	
MNK	**Minsk**	**103.67**	**326**	*i* P	**Pdif**	**17 38 48.0**	**-3.6**
MNK				*i*		17 43 04.7	
MNK				*i* PPP	PPP	17 45 16.0	
MNK				*i* S	**SKSac**	**17 49 27.9**	**-2.9**
MNK				*i* PS	**PS**	**17 52 16.2**	**-2.3**
MNK				*i* SS	**SS**	**17 57 52.8**	**0.0**
MNK				*i* SSS	SSS	18 01 48.4	
MNK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MNK				pmax	pmax		
	comp=N,5.0nm,0.7s						
MNK				pmax	pmax		
	comp=E,7.0nm,0.6s						
MNK				MLR	MLR		
	comp=E,5µm,19.0s						
MNK				MLR	MLR		
	comp=N,15µm,21.0s						
VNA3	**Neumayer Olymp**	**103.75**	**190**	⇑P	**Pdif**	**17 38 52.1**	**+0.5**
	comp=Z,1.4nm,0.7s						
ELK	**Elko**	**103.80**	**49**	IAMs_20	IAMs_20	18 23 08.1	
	comp=Z,10µm,20.0s						
AKASG	**Malin Array Be**	**103.84**	**322**	Pdiff	**Pdif**	**17 38 53.0**	**+0.6**
	comp=Z,11nm,1.0s,baz=64,slow=4.4,SNR=8.6						
AKASG				PP	**PP**	**17 43 07.4**	**-1.9**
	comp=Z,0.2nm,0.2s,baz=71,slow=8.4,SNR=4.3						
AKASG				PKKPbc	**PKKPbc**	**17 54 44.1**	**-0.8**
	comp=Z,1.5nm,0.6s,baz=276,slow=2.8,SNR=9.1						
KIEV	**Kiev**	**103.86**	**322**	P	**Pdif**	**17 38 55.3**	**+2.8**
S11A	**Rachel**	**103.87**	**52**	IAMs_20	IAMs_20	18 18 59.2	
	comp=Z,12µm,20.0s						
AK11	**Malin Array Si**	**103.88**	**322**	P	**Pdif**	**17 38 54.3**	**+1.7**
AK22	**Malin Array Si**	**103.92**	**322**	P	**Pdif**	**17 38 54.9**	**+2.1**
HLID	**Hailey**	**103.94**	**46**	IAMs_20	IAMs_20	18 24 31.3	
	comp=Z,10µm,20.0s						
VNA1	**Neumayer--Stat**	**103.99**	**191**	⇑P	**Pdif**	**17 38 58.6**	**+6.0**
	comp=Z,3.1nm,0.8s						
NACGM	**Naroch**	**104.17**	**326**	*e*Pdif	**Pdif**	**17 38 53.0**	**-0.8**
	comp=Z,10.0nm,0.9s,baz=73						
SPR3	**Spring Creek 3**	**104.77**	**50**	IAMs_20	IAMs_20	18 22 13.8	
	comp=Z,10µm,20.0s						
V12A	**Nelson**	**104.85**	**54**	IAMs_20	IAMs_20	18 25 19.3	
	comp=Z,14µm,19.0s						
DLMT	**Dillon**	**104.86**	**44**	IAMs_20	IAMs_20	18 22 00.6	
	comp=Z,11µm,20.0s						
LUBAR	**Lubar, Ukraine**	**104.95**	**321**	P	**Pdif**	**17 38 56.2**	**-1.2**
KIS	**Kishinev**	**104.96**	**318**	*e*PS	PS	17 52 31.0	-1.3
KIS				*e*L	L	18 24 00.0	
KIS				LQM		18 29 46.0	
	comp=Z,1µm,20.0s						
KIS				LRM	MLR	18 34 43.0	
	comp=Z,2µm,20.5s						
MILM	**Milestii Mici**	**104.98**	**318**	*e*P	**Pdif**	**17 39 01.0**	**+3.4**
MILM	**Milestii Mici**	**104.98**	**318**	*e*PP	**PP**	**17 43 24.0**	**+6.1**
MILM				*i* SKS	**SKSac**	**17 49 36.0**	**-1.1**
MILM				*e*SKKS	**SKKSac**	**17 50 21.0**	**-1.4**
MILM	**Milestii Mici**	**104.98**	**318**	*e*P	**Pdif**	**17 39 01.0**	**+3.4**
MILM				*e*		17 43 24.0	
MILM				*i*		17 49 36.0	
MILM				*e*		17 50 21.0	
MILM				*e*PS	**PS**	**17 52 27.0**	**-5.6**
MILM				*e*PPS	PPS	17 53 30.0	
PSUT	**Pine Spring**	**105.21**	**51**	IAMs_20	IAMs_20	18 27 12.6	
	comp=Z,9µm,20.0s						
BGU	**Big Grassy Mou**	**105.42**	**48**	IAMs_20	IAMs_20	18 22 10.0	
	comp=Z,13µm,20.0s						

SFX	San Felipe	105.46	59	IAMs_20	IAMs_20	18 18 55.7	
	comp=Z,15µm,21.0s						
W13A	Hualapai Mount	105.72	54	IAMs_20	IAMs_20	18 20 19.2	
	comp=Z,13µm,21.0s						
TIRR	Tirgusor	105.80	316	IAMs_20	IAMs_20	18 30 25.3	
	comp=Z,9µm,21.0s						
YHL	Hebgen Lake	105.95	44	IAMs_20	IAMs_20	18 22 46.4	
	comp=Z,13µm,21.0s						
EGMT	Eagleton	106.14	40	IAMs_20	IAMs_20	18 20 04.0	
	comp=Z,13µm,20.0s						
KNB	Kanab	106.27	52	IAMs_20	IAMs_20	18 26 55.8	
	comp=Z,8µm,19.0s						
YNM	Yellowstone No	106.31	44	IAMs_20	IAMs_20	18 22 58.9	
	comp=Z,12µm,21.0s						
FXWY	Fox Creek	106.33	45	IAMs_20	IAMs_20	18 19 29.6	
	comp=Z,13µm,22.0s						
YNR	Norris Junctio	106.33	44	IAMs_20	IAMs_20	18 22 59.5	
	comp=Z,12µm,21.0s						
TPAW	Teton Pass	106.42	45	IAMs_20	IAMs_20	18 19 31.8	
	comp=Z,13µm,22.0s						
CTU	Camp Tracy	106.42	48	IAMs_20	IAMs_20	18 22 40.3	
	comp=Z,9µm,21.0s						
SUW	Suwalki	106.45	326	ePdif	Pdif	17 39 09.8	+5.9
SUW				ePP	PP	17 43 39.7	+11
SUW				eSKS	SKSac	17 49 43.3	-0.1
SUW				eL	L	18 30 34.2	
	comp=Z,19µm,19.2s						
AHID	Auburn Hatcher	106.47	46	IAMs_20	IAMs_20	18 26 11.3	
	comp=Z,10µm,20.0s						
MVU	Marysvale	106.49	51	IAMs_20	IAMs_20	18 21 52.3	
	comp=Z,11µm,20.0s						
SNOW	Snow King Moun	106.56	45	IAMs_20	IAMs_20	18 19 47.8	
	comp=Z,13µm,22.0s						
LOHW	Long Hollow	106.64	45	IAMs_20	IAMs_20	18 20 01.7	
	comp=Z,13µm,21.0s						
JLU	Jordanelle	106.66	48	IAMs_20	IAMs_20	18 23 55.8	
	comp=Z,8µm,20.0s						
YMP	Mirror Lake Pl	106.69	44	IAMs_20	IAMs_20	18 23 00.9	
	comp=Z,12µm,20.0s						
YNE	Yellowstone No	106.72	44	IAMs_20	IAMs_20	18 27 28.9	
	comp=Z,9µm,21.0s						
U15A	North Rim	106.79	53	IAMs_20	IAMs_20	18 26 36.6	
	comp=Z,10µm,19.0s						
GRHM	Grahamstown, E	107.05	234	IAMs_20	IAMs_20	18 25 26.7	
	comp=Z,11µm,20.0s						
RLMT	Red Lodge	107.20	43	IAMs_20	IAMs_20	18 26 44.6	
	comp=Z,8µm,20.0s						
SMAI	San Martin Ant	107.56	170	IAMs_20	IAMs_20	18 34 27.5	
	comp=Z,14µm,20.0s						
PDAR	Pinedale Array	107.58	46	Pdiff	Pdif	17 39 12.8	+3.2
	comp=Z,0.6nm,0.7s,baz=278,slow=2.2,SNR=5.1						
PDAR				PKiKP	PKiKP	17 43 18.4	+0.7
	comp=Z,0.1nm,0.3s,baz=121,slow=0.4,SNR=2.3						
WUAZ	Wupatki	107.68	53	IAMs_20	IAMs_20	18 24 45.2	
	comp=Z,13µm,20.0s						
HMU	Henry Mountain	107.73	51	IAMs_20	IAMs_20	18 19 12.3	
	comp=Z,10µm,22.0s						
KWP	Kalwaria Pacla	108.17	322	ePdif	Pdif	17 39 12.6	+0.9
KWP				eSKS	SKSac	17 49 54.0	+2.8
KWP				eL	L	18 32 09.0	
	comp=Z,17µm,20.7s						
SRIG	Santa Rosalia	108.17	62	IAMs_20	IAMs_20	18 25 09.0	
	comp=Z,11µm,20.0s						
FFC	Flin Flon	108.53	32	IAMs_20	IAMs_20	18 20 37.5	
	comp=Z,13µm,22.0s						
BEL	Belsk	108.56	325	ePdif	Pdif	17 39 11.8	-1.6
BEL				eL	L	18 32 45.9	
	comp=Z,5µm,20.2s						
HFS	Hagfors	108.59	334	Pdiff	Pdif	17 39 16.5	+3.2
	comp=Z,4.0nm,0.9s,baz=132,slow=6.2,SNR=7.5						
HFS				PP	PP	17 43 42.0	-1.9
	comp=Z,5.8nm,1.0s,baz=80,slow=8.9,SNR=3.5						
HFS				PKKPab	PKKPab	17 54 41.2	-0.7
	comp=Z,6.9nm,1.2s,baz=12,slow=7.6,SNR=7.3						
LAO	LASA Array	108.82	41	IAMs_20	IAMs_20	18 21 49.0	
	comp=Z,10µm,20.0s						
HSIG		109.07	60	IAMs_20	IAMs_20	18 20 26.7	
	comp=Z,12µm,22.0s						
BOSA	Boshof	109.11	239	PKiKP	PKiKP	17 43 20.9	+0.1
	comp=Z,3.6nm,1.1s,baz=84,slow=2.7,SNR=1.9						
O20A	White River Ci	109.16	48	IAMs_20	IAMs_20	18 26 45.3	
	comp=Z,9µm,20.0s						
NB2	NORSAR Subarra	109.16	336	P	Pdif	17 39 18.0	+2.1
	comp=Z,4.2nm,0.8s,baz=61,slow=4.4						
NB2				PKKP	PKKPbc	17 54 27.4	-1.4
	comp=Z,4.6nm,1.2s,baz=234,slow=3.5						
NB2	NORSAR Subarra	109.16	336	P	Pdif	17 39 18.0	+2.1
	baz=61,slow=4.4						
NOA	NORSAR Array B	109.16	336	Pdiff	Pdif	17 39 16.2	+0.2
	comp=Z,2.8nm,0.9s,baz=60,slow=4.5,SNR=6.6						
NOA				PP	PP	17 43 48.0	0.0
	comp=Z,2.1nm,0.9s,baz=54,slow=7.2,SNR=4.4						
NOA				PKKPbc	PKKPbc	17 54 28.4	-0.4
	comp=Z,1.4nm,0.9s,baz=53,slow=3.1,SNR=4.0						
DGMT	Dagmar	109.55	39	IAMs_20	IAMs_20	18 34 05.2	
	comp=Z,10µm,19.0s						
NIE	Niedzica	109.72	322	ePdif	Pdif	17 39 26.0	+7.3
NIE				ePP	PP	17 44 00.7	+8.2
NIE				ePPP	PPP	17 46 11.3	
NIE				eSKS	SKSac	17 50 01.6	+3.8
NIE				eSS	SS	17 59 25.3	+10
NIE				eL	L	18 31 59.1	
	comp=Z,6µm,21.5s						
OJC	Ojcow	109.73	323	ePdif	Pdif	17 39 19.0	+0.4
OJC				ePP	PP	17 43 54.9	+2.4
OJC				ePPP	PPP	17 46 31.6	
OJC				eSKS	SKSac	17 49 59.3	+1.6
OJC				eSS	SS	17 59 36.4	+21
OJC				eL	L	18 32 08.1	
	comp=Z,11µm,21.5s						
GKP	Gorka Klasztor	110.01	327	ePdif	Pdif	17 39 18.7	-1.1
GKP				ePP	PP	17 43 52.7	-1.7
GKP				eL	L	18 33 41.9	
	comp=Z,25µm,20.1s						
LANS	Liptovska Anna	110.32	322	ePDIFF	Pdif	17 39 30.4	+9.1
FCC	Fort Churchill	110.49	26	IAMs_20	IAMs_20	18 26 31.7	
	comp=Z,11µm,22.0s						
PSZ	Piszkesteto	110.49	321	IAMs_20	IAMs_20	18 33 59.8	
	comp=Z,12µm,20.0s						
KDWAN	Kaudwane	110.79	244	i P	PKiKP	17 43 27.8	+3.6
OKC	Ostrava-Krasne	110.86	323	eP	Pdif	17 39 31.8	+8.1
OKC				ePP	PP	17 44 07.9	+7.2
OKC				eSP	SP	17 53 32.9	+3.8
OKC				eSS	SS	18 00 05.7	+35
OKC				AMS	AMS	18 35 20.0	
	comp=Z,8µm,18.3s						
VYHS	Vyhne	110.95	322	eP	Pdif	17 39 30.6	+6.5
VYHS				e		17 44 04.2	
VYHS	Vyhne	110.95	322	ePDIFF	Pdif	17 39 30.6	+6.5
VYHS	Vyhne	110.95	322	ePP	PP	17 44 04.2	+2.8
RSSD	Black Hills	111.07	43	IAMs_20	IAMs_20	18 25 17.8	
	comp=Z,11µm,21.0s						
PMSA	Palmer Station	111.13	170	IAMs_20	IAMs_20	18 33 16.9	
	comp=Z,11µm,18.0s						
ISCO	Idaho Springs	111.20	48	IAMs_20	IAMs_20	18 26 28.7	
	comp=Z,9µm,21.0s						
MORC	Moravsky Berou	111.25	323	IAMs_20	IAMs_20	18 34 50.5	
	comp=Z,11µm,21.0s						
MORC	Moravsky Berou	111.25	323	ePDIFF	Pdif	17 39 24.4	-1.1
MORC				ePP	PP	17 44 02.3	-1.2
MORC				ePS	PS	17 53 37.0	+1.5
RGN	Rugen	111.51	329	ePP	PP	17 44 04.0	-1.1
	baz=61,slow=7.2						
JAVC	Velka Javorina	111.53	322	ePDIFF	Pdif	17 39 25.5	-1.2
JAVC				ePP	PP	17 44 04.3	-1.3
JAVC				ePS	PS	17 53 37.2	-1.0
KSP	Ksiaz	111.55	325	ePdif	Pdif	17 39 31.9	+5.2
KSP				ePP	PP	17 44 05.0	-0.5
KSP				ePPP	PPP	17 46 28.6	
KSP				eSKS	SKSac	17 50 05.0	-0.2
KSP				eL	L	18 33 35.0	
	comp=Z,16µm,21.4s						
KRLC	Kraliky	111.58	324	eP	Pdif	17 39 38.1	+11
KRLC				ePP	PP	17 44 08.2	+2.3
KRLC				eSP	SP	17 53 39.6	+3.9
KRLC				eSS	SS	18 00 12.4	+32
KRLC				AMS	AMS	18 34 30.0	
	comp=Z,16µm,19.9s						
OSTC	Ostas	111.71	324	ePP	PP	17 44 09.4	+2.6
OSTC				ex	x	17 53 42.0	
OSTC				eSS	SS	18 00 17.0	+35
OSTC				AMS	AMS	18 33 30.0	
	comp=Z,16µm,21.6s						
DPC	Dobruska-Polom	111.73	324	eP	Pdif	17 39 38.0	+10
DPC				ePP	PP	17 44 09.0	+2.0
DPC				ex	x	17 53 41.9	
DPC				eSS	SS	18 00 15.7	+34
DPC				AMS	AMS	18 33 30.0	
	comp=Z,13µm,21.6s						
ANMO	Albuquerque	111.74	53	IAMs_20	IAMs_20	18 23 45.6	
	comp=Z,14µm,21.0s						
ANMO	Albuquerque	111.74	53	IAMs_20	IAMs_20	18 23 46.1	
	comp=Z,13µm,21.0s						
ANMO	Albuquerque	111.74	53	IAMs_20	IAMs_20	18 23 46.1	
	comp=Z,14µm,21.0s						
Q24A	Divide	111.77	49	IAMs_20	IAMs_20	18 29 52.4	
	comp=Z,8µm,21.0s						
CHVC	Chvalec	111.79	325	ePP	PP	17 44 09.8	+2.4
CHVC				ex	x	17 53 40.4	
CHVC				eSS	SS	18 00 15.3	+32
CHVC				AMS	AMS	18 33 40.0	
	comp=Z,16µm,20.9s						
SUR	Sutherland	111.80	234	IAMs_20	IAMs_20	18 34 17.5	
	comp=Z,7µm,18.0s						
SDCO	Great Sand Dun	111.82	50	IAMs_20	IAMs_20	18 24 08.3	
	comp=Z,11µm,21.0s						
UPC	Upice	111.85	325	eP	Pdif	17 39 39.4	+11
UPC				ePP	PP	17 44 10.5	+2.8
UPC				ex	x	17 53 41.7	
UPC				eSS	SS	18 00 15.3	+32
UPC				AMS	AMS	18 33 40.0	
	comp=Z,17µm,21.5s						
MODS	Modra-Piesok	111.95	322	ePP	PP	17 44 09.7	+1.1
VRAC	Vranov	112.00	323	ePDIFF	Pdif	17 39 28.8	0.0
VRAC				ePP	PP	17 44 08.1	-0.8
VRAC				ePS	PS	17 53 41.6	-0.8
KRUC	Moravsky	112.22	323	ePDIFF	Pdif	17 39 28.5	-1.2
KRUC				ePP	PP	17 44 08.3	-2.1
KRUC				ePS	PS	17 53 44.4	0.0
RUE	Ruedersdorf	112.24	327	ePP	PP	17 44 09.0	-1.4
	baz=61,slow=7.2						
E28A	Huff	112.44	40	IAMs_20	IAMs_20	18 22 45.8	
	comp=Z,10µm,22.0s						
MDND	Maddock	112.64	38	IAMs_20	IAMs_20	18 22 43.8	
	comp=Z,11µm,22.0s						
TREC	Trest	112.67	323	ePP	PP	17 44 15.9	+2.3
TREC				eSP	SP	17 53 51.5	+5.8
TREC				eSS	SS	18 00 08.2	+14
TREC				AMS	AMS	18 35 20.0	
	comp=Z,14µm,20.3s						
PVCC	Panska Ves	112.67	325	ePP	PP	17 44 15.3	+1.7
PVCC				eSP	SP	17 53 49.9	+4.3
PVCC				eSS	SS	18 00 07.8	+13
PVCC				AMS	AMS	18 35 10.0	
	comp=Z,19µm,20.5s						
TIR	Tirane	112.68	314	IAMs_20	IAMs_20	18 35 42.5	
	comp=Z,10µm,22.0s						
T25A	Trinidad	112.81	50	IAMs_20	IAMs_20	18 30 33.2	
	comp=Z,9µm,19.0s						
GOPC	GO Pecny, Ondr	112.81	324	eP	Pdif	17 39 37.6	+5.2
GOPC				ePP	PP	17 44 14.3	-0.4
GOPC				eSP	SP	17 53 52.3	+5.3
GOPC				eSS	SS	18 00 03.6	+7.2
GOPC				AMS	AMS	18 35 00.0	
	comp=Z,16µm,20.6s						
GOPC	GO Pecny, Ondr	112.81	324	eP	Pdif	17 39 37.6	+5.2
GOPC				e		17 44 14.3	
GOPC				eSS	SS	18 00 03.6	+7.2
GOPC				MLR	MLR		
	comp=Z,16µm,20.6s						
RONA	Rosalia, Austr	112.82	322	i PKiKP	PKiKP	17 43 25.5	-1.7
	comp=Z,6.4nm,1.3s						
BRG	Berggiesshubel	112.88	325	ePP	PP	17 44 13.6	-1.4
	baz=61,slow=7.2						
BRG	Berggiesshubel	112.88	325	SP	SP	17 53 52.0	+4.5
BRG				PKKP		17 54 22.1	
BRG				Amp		17 54 29.9	
	comp=Z,2.5nm,0.8s						
PRU	Pruhonice	112.93	324	eP	Pdif	17 39 42.6	+10
PRU				ePP	PP	17 44 16.9	+1.5
PRU				eSP	SP	17 53 51.0	+3.0
PRU				eSS	SS	18 00 04.1	+6.3
PRU				AMS	AMS	18 35 00.0	
	comp=Z,18µm,20.8s						
PRU	Pruhonice	112.93	324	eP	Pdif	17 39 42.6	+10
PRU				e		17 44 16.9	
PRU				e		17 53 51.0	
PRU				eSS	SS	18 00 04.1	+6.3
PRU				MLR	MLR		
	comp=Z,18µm,20.8s						
RICC	Richard	112.94	325	ePP	PP	17 44 17.2	+1.7
RICC				ex	x	17 53 52.2	
RICC				eSS	SS	18 00 00.7	+2.8
RICC				AMS	AMS	18 35 30.0	
	comp=Z,19µm,20.8s						
PRA	Prague	112.95	325	eP	Pdif	17 39 43.9	+11
PRA				ePP	PP	17 44 16.8	+1.2
PRA				eSP	SP	17 53 53.7	+5.5
PRA				eSS	SS	18 00 04.0	+5.8
PRA				AMS	AMS	18 35 00.0	
	comp=Z,18µm,20.8s						
CONA	Conrad Observa	113.00	322	i PKiKP	PKiKP	17 43 26.0	-1.6
	comp=Z,4.3nm,1.4s						
KGCAE	Kacgae	113.11	244	i P	PKiKP	17 43 30.5	+2.0
CLL	Collm	113.21	326	eP	Pdif	17 39 42.0	+7.9
CLL				e		17 44 19.0	
CLL				pmax	pmax		
	comp=Z,9.0nm,1.3s						
CLL				MLR	MLR		
	comp=Z,27µm,19.5s						
CLL	Collm	113.21	326	ePP	PP	17 44 16.0	-1.3
	baz=61,slow=7.2						
GORT1	Trebel	113.31	328	ePP	PP	17 44 16.8	-1.1
	baz=61,slow=7.2						
BSEG	Bad Segeberg	113.34	330	ePP	PP	17 44 17.3	-0.9
	baz=61,slow=7.2						
ZVC	Zvikov	113.37	324	eP	Pdif	17 39 39.2	+4.3
ZVC				ePP	PP	17 44 17.4	-1.2
ZVC				ex	x	17 53 57.1	
ZVC				eSS	SS	18 00 17.4	+14
ZVC				AMS	AMS	18 35 20.0	
	comp=Z,18µm,20.1s						
OGNE	Ogallala	113.48	46	IAMs_20	IAMs_20	18 23 44.8	
	comp=Z,9µm,21.0s						
ARSA	Arzberg	113.48	321	IAMs_20	IAMs_20	18 35 03.9	
	comp=Z,11µm,21.0s						
CKRC	Cesky Krumlov	113.57	323	eP	Pdif	17 39 47.0	+11
CKRC				ePP	PP	17 44 22.0	+1.9
CKRC				ex	x	17 53 59.6	
CKRC				eSS	SS	18 00 19.9	+13
CKRC				AMS	AMS	18 34 40.0	
	comp=Z,11µm,21.3s						
KSCO	Kaye Shedlock’	113.64	48	IAMs_20	IAMs_20	18 27 34.9	
	comp=Z,11µm,19.0s						
FLTG	Flechtingen	113.68	328	ePP	PP	17 44 19.4	-1.2
	baz=61,slow=7.2						
ULM	Lac du Bonnet	113.83	35	PKiKP	PKiKP	17 43 27.8	-1.2
	comp=Z,2.2nm,0.8s,baz=294,slow=2.9,SNR=4.1						
ULM				PP	PP	17 44 23.3	+1.5
	comp=Z,0.7nm,0.2s,baz=288,slow=9.5,SNR=3.1						
KHC	Kasperske Hory	113.87	324	eP	Pdif	17 39 39.9	+2.8
KHC				x	x	17 43 20.5	
KHC				x	x	17 43 32.5	
KHC				ePP	PP	17 44 23.3	+1.1
KHC				ex	x	17 54 02.1	
KHC				eSS	SS	18 00 24.1	+14
KHC				AMS	AMS	18 35 30.0	
	comp=Z,18µm,20.5s						
KHC	Kasperske Hory	113.87	324	eP	Pdif	17 39 39.9	+2.8
KHC				e		17 44 23.3	
KHC				e		17 54 02.1	
KHC				eSS	SS	18 00 24.1	+14
KHC				MLR	MLR		
	comp=Z,18µm,20.5s						
GEC2	GERESS Array S	113.92	324	ePP	PP	17 44 21.4	-1.2
	baz=61,slow=7.2						
GERES	GERESS Array B	113.92	324	Pdiff	Pdif	17 39 40.0	+2.5
	comp=Z,0.7nm,0.8s,baz=36,slow=2.5,SNR=5.9						
GERES				PKiKP	PKiKP	17 43 29.3	-0.1
	comp=Z,1.7nm,0.5s,baz=79,slow=1.9,SNR=8.6						
GERES				PP	PP	17 44 23.2	+0.5
	comp=Z,2.0nm,1.0s,baz=80,slow=6.7,SNR=4.4						
TANN	Tannenbergstha	113.93	326	ePP	PP	17 44 21.4	-1.1
	baz=61,slow=7.2						
NEUB	Neuenburg	113.93	326	ePP	PP	17 44 21.3	-1.1
	baz=61,slow=7.2						
HPIG		114.02	62	IAMs_20	IAMs_20	18 26 56.8	
	comp=Z,12µm,20.0s						
NKC	Novy Kostel	114.02	325	ePP	PP	17 44 25.2	+2.0
NKC				eSP	SP	17 54 02.7	+4.7
NKC				eSS	SS	18 00 27.0	+15
NKC				AMS	AMS	18 36 10.0	
	comp=Z,14µm,19.8s						
SOKA	Soboth	114.02	321	ePKP	PKPdf	17 43 27.8	-1.7
	comp=Z,7.1nm,1.3s						
ASSE	Asse, Remlinge	114.08	328	ePP	PP	17 44 22.4	-0.9
	baz=61,slow=7.2						
NRDL	Niedersach Rie	114.19	328	ePP	PP	17 44 23.2	-0.9
	baz=61,slow=7.2						
WET	Wettzell	114.27	324	ePP	PP	17 44 23.8	-1.2
	baz=61,slow=7.2						
MOX	Moxa	114.29	326	ePP	PP	17 44 24.1	-0.9
	baz=61,slow=7.2						
MOX				eL	L	18 35 37.3	
	comp=Z,23µm,20.7s						
MANZ	Manzenberg	114.33	325	ePP	PP	17 44 24.2	-1.1
	baz=61,slow=7.2						
GRTLG	Ghanzi	114.34	245	i P	PKPdf	17 43 30.3	-0.7
ROTZ	Rotzenmuhle	114.37	325	ePP	PP	17 44 24.6	-1.0
	baz=61,slow=7.2						
SUSD	Miller	114.38	41	IAMs_20	IAMs_20	18 24 34.2	
	comp=Z,10µm,21.0s						
CLZ	Clausthal	114.38	328	ePP	PP	17 44 25.1	-0.6
	baz=61,slow=7.2						
OBKA	Obir	114.40	321	ePKiKP	PKiKP	17 43 28.9	-1.4
	comp=Z,0.6nm,0.4s						
HLG	Helgoland	114.42	331	ePP	PP	17 44 24.5	-1.3
	baz=61,slow=7.2						
RETH	Rethem/Aller,	114.46	329	ePP	PP	17 44 24.8	-1.2
	baz=61,slow=7.2						
K30B	Basset	114.59	43	IAMs_20	IAMs_20	18 25 47.1	
	comp=Z,8µm,21.0s						
GTTG	Gottingen	114.75	327	ePP	PP	17 44 27.7	-0.6
	baz=61,slow=7.2						
QNGWA	Qangwa	114.77	247	i P	PKiKP	17 43 32.6	+0.8
KOOLE	Kule	114.88	243	i P	PKPdf	17 43 30.6	-1.4
RJOB	Jochberg	114.95	323	ePP	PP	17 44 28.8	-1.1
	baz=61,slow=7.2						
GRF	Grafenberg Arr	114.97	325	ePdiff	Pdif	17 39 41.9	-0.1
	baz=62,slow=4.2						
GRF				ePKiKP	PKPdf	17 43 34.8	+3.6
	baz=54,slow=0.8						
GRF				ePP	PP	17 44 28.9	-1.0
	baz=61,slow=7.2						
GRF				eL	L	18 37 01.2	
	comp=Z,15µm,20.5s						
PRED	Cave del Predi	115.04	321	IAMs_20	IAMs_20	18 37 30.2	
	comp=Z,13µm,21.0s						
UBBA	Unterbreizbach	115.10	327	ePP	PP	17 44 29.9	-0.7
	baz=61,slow=7.2						
LESA	Schwarzleotal	115.16	323	i PKiKP	PKiKP	17 43 30.3	-1.4
	comp=Z,3.0nm,1.0s						
SABO	M.te Sabotino	115.22	321	IAMs_20	IAMs_20	18 37 27.2	
	comp=Z,13µm,21.0s						
TXAR	Lajitas Array	115.28	59	PKP	PKPdf	17 43 33.1	+0.6
	comp=Z,1.0nm,0.7s,baz=268,slow=2.4,SNR=8.0						
TXAR				PP	PP	17 44 34.3	+1.1
	comp=Z,0.8nm,0.7s,baz=268,slow=7.5,SNR=1.3						
TXAR				PKKPbc	PKKPbc	17 54 07.8	+0.3
	comp=Z,0.3nm,0.7s,baz=102,slow=5.3,SNR=3.5						
IBBN	Ibbenburen	115.52	329	ePP	PP	17 44 32.3	-1.2
	baz=61,slow=7.2						
F33A	5 Mile Ranch,	115.54	39	IAMs_20	IAMs_20	18 30 28.6	
	comp=Z,10µm,20.0s						
ABTA	Abfaltersbach	115.56	322	ePKiKP	PKiKP	17 43 31.8	-0.8
	comp=Z,3.9nm,0.7s						
TIP	Timpagrande	115.63	313	IAMs_20	IAMs_20	18 38 36.6	
	comp=Z,9µm,22.0s						
STAL	STALIGIAL	115.66	321	IAMs_20	IAMs_20	18 39 33.4	
	comp=Z,9µm,21.0s						
FUR	Furstenfeldbru	115.67	324	ePP	PP	17 44 33.5	-1.4
	baz=61,slow=7.2						
KASTN	Kahler Asten	115.76	328	ePP	PP	17 44 35.0	-0.4
	baz=61,slow=7.2						
CBKS	Cedar Bluff	115.84	48	IAMs_20	IAMs_20	18 32 06.6	
	comp=Z,11µm,20.0s						
WTTA	Wattenberg	115.87	323	ePKP	PKiKP	17 43 31.0	-2.3
	comp=Z,5.6nm,0.8s						
WATA	Walderalm	115.87	323	i PKiKP	PKiKP	17 43 31.9	-1.2
	comp=Z,2.2nm,0.5s						
SQTA	Sankt Quirin	116.15	323	ePKiKP	PKiKP	17 43 32.9	-0.8
	comp=Z,1.1nm,0.4s						
MOTA	Moosalm	116.15	323	epPKP	PKPdf	17 43 34.3	+0.5
	comp=Z,3.8nm,0.6s						
BUG	Bochum--Univer	116.24	328	ePP	PP	17 44 37.7	-0.9
	baz=61,slow=7.2						
TNS	Taunus Mts	116.26	327	ePP	PP	17 44 38.5	-0.5
	baz=61,slow=7.2						
RETA	Reutte	116.29	323	epPKP	PKiKP	17 43 35.1	+1.2
	comp=Z,1.4nm,0.4s						
CTI	Castel Tesino	116.41	321	IAMs_20	IAMs_20	18 38 30.4	
	comp=Z,9µm,21.0s						
FETA	Feichten	116.53	323	i PKiKP	PKPdf	17 43 33.3	-1.2
	comp=Z,8.7nm,1.4s						
STU	Stuttgart	116.58	325	ePP	PP	17 44 40.1	-1.1
	baz=61,slow=7.2						
UBR	Ueberruh	116.59	324	ePP	PP	17 44 39.7	-1.6
	baz=61,slow=7.2						
R32A	Long Quarter,	116.73	48	IAMs_20	IAMs_20	18 34 51.6	
	comp=Z,9µm,19.0s						
DAVA	Damuels	116.91	323	i PKiKP	PKPdf	17 43 33.7	-1.5
	comp=Z,3.8nm,0.7s						
BFO	Black Forest	117.30	325	ePP	PP	17 44 45.1	-1.1
	baz=61,slow=7.2						
OK038	West end E0370	117.35	50	IAMs_20	IAMs_20	18 29 59.8	
	comp=Z,10µm,22.0s						
EYMN	Ely	117.46	35	IAMs_20	IAMs_20	18 25 57.1	
	comp=Z,13µm,22.0s						
WIN	Windhoek	117.75	243	IAMs_20	IAMs_20	18 36 35.0	
	comp=Z,11µm,19.0s						
WLF	Walferdange	117.81	327	IAMs_20	IAMs_20	18 37 21.9	
	comp=Z,12µm,21.0s						
WLF	Walferdange	117.81	327	ePP	PP	17 44 49.7	0.0
	baz=61,slow=7.2						
PRMA	PARMA	117.83	321	IAMs_20	IAMs_20	18 41 11.1	
	comp=Z,9µm,20.0s						
WMOK	Wichita Mounta	117.88	52	IAMs_20	IAMs_20	18 31 06.9	
	comp=Z,12µm,20.0s						
CROK	Carrier	117.92	49	IAMs_20	IAMs_20	18 36 27.9	
	comp=Z,8µm,19.0s						
SPMN	Marine on St.	118.01	39	IAMs_20	IAMs_20	18 31 27.8	
	comp=Z,11µm,20.0s						
KSU1	Kansas State U	118.02	46	IAMs_20	IAMs_20	18 33 37.1	
	comp=Z,11µm,20.0s						
TSUM	Tsumeb	118.14	247	IAMs_20	IAMs_20	18 36 39.5	
	comp=Z,8µm,19.0s						
I37A	Lemond, Waseca	118.19	40	IAMs_20	IAMs_20	18 29 58.8	
	comp=Z,11µm,21.0s						
JCT	Junction City	118.27	56	IAMs_20	IAMs_20	18 24 52.9	
	comp=Z,12µm,22.0s						
OK029	Liberty Lake	118.56	50	IAMs_20	IAMs_20	18 34 21.9	
	comp=Z,9µm,20.0s						
EKA	Eskdalemuir Ar	118.65	336	PKP	PKiKP	17 43 38.5	+0.4
	comp=Z,0.5nm,0.4s,baz=23,slow=3.0,SNR=5.4						
EKA				PP	PP	17 44 49.8	-5.4
	comp=Z,0.5nm,0.5s,baz=57,slow=9.1,SNR=3.9						
EKA				PKKPbc	PKKPbc	17 53 55.0	-1.3
	comp=Z,1.6nm,0.7s,baz=216,slow=5.2,SNR=5.3						
OK051	E0350 and S346	118.79	49	IAMs_20	IAMs_20	18 36 22.8	
	comp=Z,8µm,20.0s						
T35A	Sooner Cattle	118.89	49	IAMs_20	IAMs_20	18 31 07.9	
	comp=Z,12µm,20.0s						
OK052	Battle Ridge R	118.99	50	IAMs_20	IAMs_20	18 34 56.2	
	comp=Z,9µm,20.0s						
SCIA	State Center	119.25	42	IAMs_20	IAMs_20	18 28 26.1	
	comp=Z,9µm,22.0s						
DEOK	Depew	119.28	50	IAMs_20	IAMs_20	18 34 43.8	
	comp=Z,9µm,20.0s						
N38A	Joes South For	119.72	43	IAMs_20	IAMs_20	18 42 26.7	
	comp=Z,8µm,18.0s						
WHTX	Lake Whitney,	119.77	54	IAMs_20	IAMs_20	18 25 46.8	
	comp=Z,13µm,22.0s						
TUL3	Leonard	119.79	49	IAMs_20	IAMs_20	18 33 41.8	
	comp=Z,8µm,19.0s						
FW14	Alvarado	119.86	54	IAMs_20	IAMs_20	18 26 31.7	
	comp=Z,9µm,22.0s						
P38A	Dawn	120.01	45	IAMs_20	IAMs_20	18 31 36.1	
	comp=Z,11µm,20.0s						
I40A	Norwalk	120.02	39	IAMs_20	IAMs_20	18 35 00.1	
	comp=Z,12µm,20.0s						
RLO	Rose Lookout	120.28	49	IAMs_20	IAMs_20	18 43 38.1	
	comp=Z,12µm,22.0s						
KVTX	Kingsville	120.64	59	IAMs_20	IAMs_20	18 31 14.1	
	comp=Z,9µm,19.0s						
U38A	Gravette	120.65	48	IAMs_20	IAMs_20	18 34 18.6	
	comp=Z,11µm,19.0s						
JFWS	Jewell Farm	120.73	40	IAMs_20	IAMs_20	18 28 22.1	
	comp=Z,12µm,22.0s						

HHAR	Hobbs	121.05	48	IAMs_20	IAMs_20	18 32 22.5	
	comp=Z,11μm,21.0s						
I42A	Draeger Farm,	121.08	38	IAMs_20	IAMs_20	18 34 07.3	
	comp=Z,10μm,20.0s						
P40A	Paris	121.08	44	IAMs_20	IAMs_20	18 30 25.6	
	comp=Z,11μm,21.0s						
UNM	Universidad Na	121.20	69	IAMs_20	IAMs_20	18 26 03.2	
	comp=Z,11μm,21.0s						
N41A	Harden Midland	121.38	42	IAMs_20	IAMs_20	18 35 04.1	
	comp=Z,10μm,21.0s						
R40A	Maddies Statio	121.46	46	IAMs_20	IAMs_20	18 31 55.6	
	comp=Z,11μm,21.0s						
H43A	Windswept, Lux	121.48	37	IAMs_20	IAMs_20	18 29 21.7	
	comp=Z,13μm,22.0s						
K43A	Burlington	122.06	39	IAMs_20	IAMs_20	18 34 49.1	
	comp=Z,11μm,19.0s						
CCM	Cathedral Cave	122.29	45	IAMs_20	IAMs_20	18 32 32.1	
	comp=Z,12μm,22.0s						
KEST	Kesra	122.37	312	PKP	PKiKP	17 43 48.0	+1.9
	comp=Z,4.6nm,0.8s,baz=100,slow=6.1,SNR=3.6						
E46A	Sault Ste Mari	122.42	34	IAMs_20	IAMs_20	18 40 50.2	
	comp=Z,11μm,19.0s						
FCAR	Ozark Folk Cen	122.55	48	IAMs_20	IAMs_20	18 33 29.4	
	comp=Z,7μm,20.0s						
L44A	Lake County Fo	122.59	40	IAMs_20	IAMs_20	18 29 40.4	
	comp=Z,10μm,21.0s						
WLAR	White Oak Lake	122.65	51	IAMs_20	IAMs_20	18 27 55.3	
	comp=Z,10μm,21.0s						
WHAR	Wooly Hollow	122.67	49	IAMs_20	IAMs_20	18 44 44.5	
	comp=Z,10μm,18.0s						
P43A	Skaggs, Pawnee	122.78	43	IAMs_20	IAMs_20	18 34 44.2	
	comp=Z,8μm,20.0s						
HQIL	Hanson Quary C	122.82	40	IAMs_20	IAMs_20	18 28 05.5	
	comp=Z,9μm,22.0s						
T42A	Van Buren	122.84	46	IAMs_20	IAMs_20	18 29 55.7	
	comp=Z,12μm,21.0s						
FVM	French Village	122.90	45	IAMs_20	IAMs_20	18 32 50.3	
	comp=Z,11μm,21.0s						
Z41A	Richland Creek	123.05	51	IAMs_20	IAMs_20	18 33 31.8	
	comp=Z,11μm,20.0s						
LCAR	Lake Charles	123.20	48	IAMs_20	IAMs_20	18 36 07.4	
	comp=Z,8μm,20.0s						
Q44A	Meyer Farm, Va	123.47	44	IAMs_20	IAMs_20	18 34 54.6	
	comp=Z,10μm,19.0s						
441A	DeRidder	123.62	54	IAMs_20	IAMs_20	18 36 07.9	
	comp=Z,12μm,20.0s						
SCHQ	Schefferville	123.68	17	PKP	PKiKP	17 43 48.5	+0.5
	comp=Z,2.6nm,0.7s,baz=20,slow=6.1,SNR=4.5						
L46A	Eue Claire	123.70	39	IAMs_20	IAMs_20	18 36 05.7	
	comp=Z,11μm,19.0s						
CGM3	Cape Girardeau	123.75	46	IAMs_20	IAMs_20	18 29 30.8	
	comp=Z,12μm,22.0s						
HBAR	Harrisburg	123.78	48	IAMs_20	IAMs_20	18 39 34.8	
	comp=Z,9μm,21.0s						
S44A	Carbondale	123.86	45	IAMs_20	IAMs_20	18 33 32.1	
	comp=Z,8μm,21.0s						
SIUC	Southern Illin	123.88	45	IAMs_20	IAMs_20	18 33 32.1	
	comp=Z,9μm,21.0s						
GNAR	Gosnell	124.08	47	IAMs_20	IAMs_20	18 37 20.6	
	comp=Z,9μm,19.0s						
MAHO	Mahon	124.10	318	IAMs_20	IAMs_20	18 42 38.2	
	comp=Z,8μm,21.0s						
PVMO	Portageville	124.11	47	IAMs_20	IAMs_20	18 38 01.5	
	comp=Z,11μm,19.0s						
OLIL	Olney	124.18	43	IAMs_20	IAMs_20	18 35 35.8	
	comp=Z,10μm,19.0s						
P46A	Rosedale	124.35	42	IAMs_20	IAMs_20	18 34 45.7	
	comp=Z,11μm,20.0s						
HDBT	Hernando Brdge	124.39	48	IAMs_20	IAMs_20	18 45 21.0	
	comp=Z,8μm,20.0s						
EFI	East Falkland	124.48	168	IAMs_20	IAMs_20	18 38 45.0	
	comp=Z,8μm,19.0s						
MET	Memphis--Engin	124.50	48	IAMs_20	IAMs_20	18 45 42.8	
	comp=Z,8μm,19.0s						
HALT	Halls	124.60	47	IAMs_20	IAMs_20	18 38 13.3	
	comp=Z,10μm,20.0s						
I49A	Point Hope	124.71	35	IAMs_20	IAMs_20	18 30 41.0	
	comp=Z,10μm,21.0s						
UTMT	University of	124.75	46	IAMs_20	IAMs_20	18 37 53.2	
	comp=Z,10μm,20.0s						
BLO	Bloomington	125.03	42	IAMs_20	IAMs_20	18 33 18.3	
	comp=Z,11μm,20.0s						
COYC	Coyhaique	125.23	154	IAMs_20	IAMs_20	18 38 36.5	
	comp=Z,9μm,18.0s						
Y45A	Yeager Farm, C	125.31	49	IAMs_20	IAMs_20	18 30 50.1	
	comp=Z,8μm,22.0s						
O48B	Farmland	125.37	40	IAMs_20	IAMs_20	18 34 50.5	
	comp=Z,10μm,20.0s						
WVT	Waverly	125.59	46	PKIKP	PKiKP	17 43 52.2	-0.2
P48A	Milroy	125.61	41	IAMs_20	IAMs_20	18 38 57.1	
	comp=Z,11μm,20.0s						
N49A	Columbus Grove	125.63	39	IAMs_20	IAMs_20	18 38 01.7	
	comp=Z,11μm,20.0s						
WCI	Wyandotte Cave	125.66	43	PKIKP	PKiKP	17 43 53.9	+1.4
PLAL	Pickwick Lake	125.93	47	IAMs_20	IAMs_20	18 30 52.7	
	comp=Z,10μm,22.0s						
Z47A	Carrollton	126.71	49	IAMs_20	IAMs_20	18 33 36.1	
	comp=Z,11μm,22.0s						
U49A	Red Boiling Sp	126.87	45	IAMs_20	IAMs_20	18 32 10.6	
	comp=Z,10μm,21.0s						
X48A	Hartselle	126.93	47	IAMs_20	IAMs_20	18 34 19.6	
	comp=Z,8μm,20.0s						
Q51A	Peebles	127.21	41	IAMs_20	IAMs_20	18 32 50.5	
	comp=Z,9μm,22.0s						
T50A	Nancy	127.27	44	IAMs_20	IAMs_20	18 35 51.1	
	comp=Z,9μm,20.0s						
ERPA	Erie	127.47	36	IAMs_20	IAMs_20	18 33 08.0	
	comp=Z,9μm,22.0s						
TRQ	Mont Tremblant	127.58	28	IAMs_20	IAMs_20	18 37 05.1	
	comp=Z,10μm,21.0s						
Y49A	Blount Mountai	127.66	48	IAMs_20	IAMs_20	18 48 55.1	
	comp=Z,10μm,18.0s						
LDAQ	Lac Daran	127.75	25	IAMs_20	IAMs_20	18 32 23.2	
	comp=Z,9μm,22.0s						
FPAL	Fort Paine	127.94	47	IAMs_20	IAMs_20	18 40 24.7	
	comp=Z,6μm,19.0s						
WVNY	West Valley, N	128.09	35	IAMs_20	IAMs_20	18 32 03.1	
	comp=Z,12μm,22.0s						
WBO	Williamsburg	128.10	30	IAMs_20	IAMs_20	18 34 39.0	
	comp=Z,9μm,21.0s						
P53A	Whipple	128.20	39	IAMs_20	IAMs_20	18 34 24.8	
	comp=Z,9μm,22.0s						
BRAL	Brewton	128.35	51	IAMs_20	IAMs_20	18 35 22.2	
	comp=Z,9μm,21.0s						
TZTN	Tazewell	128.40	43	IAMs_20	IAMs_20	18 39 37.6	
	comp=Z,11μm,21.0s						
MNTQ	Montreal, Queb	128.55	29	IAMs_20	IAMs_20	18 37 22.7	
	comp=Z,8μm,20.0s						
LONY	Lake Ozonia	128.72	30	IAMs_20	IAMs_20	18 42 13.4	
	comp=Z,8μm,20.0s						
CART	Cartagena	128.81	318	IAMs_20	IAMs_20	18 48 17.9	
	comp=Z,7μm,20.0s						
GUD	Guadarrama	129.00	324	PKIKP	PKPdf	17 43 58.7	+0.1
FRNY	Flat Rock	129.06	29	IAMs_20	IAMs_20	18 35 41.1	
	comp=Z,11μm,22.0s						
S54A	Dingess, Beckl	129.22	41	IAMs_20	IAMs_20	18 44 15.5	
	comp=Z,10μm,20.0s						
D62A	Allapoint, All	129.36	24	IAMs_20	IAMs_20	18 35 58.6	
	comp=Z,9μm,21.0s						
ESDC	Sonseca Array	129.48	322	PKP	PKiKP	17 44 00.6	+0.4
	comp=Z,1.3nm,0.8s,baz=5.3,slow=2.2,SNR=6.0						
ESDC				PP	PP	17 46 09.0	+0.5
	comp=Z,2.4nm,1.1s,baz=35,slow=5.5,SNR=4.1						
J59A	Piesco	129.59	31	IAMs_20	IAMs_20	18 41 32.3	
	comp=Z,9μm,20.0s						
U54A	Nelsons Funny	129.59	43	IAMs_20	IAMs_20	18 36 07.5	
	comp=Z,11μm,22.0s						
451A	Vernon	129.60	51	IAMs_20	IAMs_20	18 32 50.7	
	comp=Z,11μm,22.0s						
PLCA	Paso Flores	129.71	151	PKP	PKiKP	17 44 00.1	-0.5
	comp=Z,11nm,1.0s,baz=192,slow=3.5,SNR=11						
PLCA	Paso Flores	129.71	151	*e*P	PKiKP	17 44 03.0	+2.4
PBRG	Braganca	129.74	326	*e*PKPdf	PKPdf	17 43 58.8	-1.0
PBRG				*e*PP	PP	17 46 13.4	+3.4
VT1	Waterbury	129.83	29	IAMs_20	IAMs_20	18 38 02.8	
	comp=Z,9μm,21.0s						
Q56A	Snyder Ridge,	129.84	38	IAMs_20	IAMs_20	18 38 48.1	
	comp=Z,11μm,21.0s						
ACCN	Adirondack Com	130.07	30	IAMs_20	IAMs_20	18 33 22.1	
	comp=Z,10μm,22.0s						
BLA	Blacksburg	130.13	41	IAMs_20	IAMs_20	18 40 12.2	
	comp=Z,11μm,21.0s						
G62A	West of Eustis	130.19	27	IAMs_20	IAMs_20	18 40 35.0	
	comp=Z,9μm,21.0s						
LBNH	Lisbon	130.29	28	IAMs_20	IAMs_20	18 38 14.8	
	comp=Z,11μm,21.0s						
MVO	Moncorvo	130.32	326	*e*PKPdf	PKPdf	17 44 00.1	-0.8
MVO				*e*PP	PP	17 46 17.5	+3.6
MVO				*e*SKP		17 47 26.6	
MVO				*e*SS	SS	18 03 49.4	+9.4
MVO				*e*LQ	LQ	18 23 05.5	
MVO				*e*LR	LR	18 33 35.3	
MVO				*i* AMs_20		18 44 23.1	
	comp=Z,8μm,22.0s						
V55A	Taylorsville	130.36	43	IAMs_20	IAMs_20	18 37 17.0	
	comp=Z,11μm,22.0s						
H62A	Milan	130.41	28	IAMs_20	IAMs_20	18 38 59.6	
	comp=Z,10μm,20.0s						
PGAV	Gavieira, Arco	130.46	327	*e*PKPdf	PKPdf	17 43 59.4	-1.9
PGAV				*e*PP	PP	17 46 20.2	+5.4
PGAV				*e*SKP		17 47 27.7	
PGAV				*e*SS	SS	18 03 54.7	+13
PGAV				*e*LQ	LQ	18 25 44.5	
PGAV				*e*LR	LR	18 38 41.3	
PGAV				*i* AMs_20		18 46 00.9	
	comp=Z,14μm,20.0s						
HODGE	Hodges	130.50	45	IAMs_20	IAMs_20	18 34 42.4	
	comp=Z,9μm,22.0s						
HNH	Hanover	130.52	29	IAMs_20	IAMs_20	18 36 34.9	
	comp=Z,11μm,22.0s						
POLO	Lamas de Olo	130.61	327	*e*PP	PP	17 46 21.3	+5.5
POLO				*e*SKP		17 47 28.4	
F64A	Sherman	130.63	25	IAMs_20	IAMs_20	18 36 32.2	
	comp=Z,9μm,22.0s						
J61A	Chester	130.65	30	IAMs_20	IAMs_20	18 36 38.5	
	comp=Z,9μm,21.0s						
KMSC	Kings Mountain	130.67	44	IAMs_20	IAMs_20	18 38 00.2	
	comp=Z,11μm,22.0s						
553A	Crawfordville	130.81	51	IAMs_20	IAMs_20	18 32 43.7	
	comp=Z,10μm,22.0s						
TIGA	Tifton	130.89	49	IAMs_20	IAMs_20	18 34 40.6	
	comp=Z,11μm,21.0s						
SDMD	Soldier’s Deli	131.03	36	IAMs_20	IAMs_20	18 33 55.4	
	comp=Z,8μm,22.0s						
TEIG	Tepich	131.05	65	IAMs_20	IAMs_20	18 37 46.3	
	comp=Z,8μm,20.0s						
I63A	Otisfield	131.07	28	IAMs_20	IAMs_20	18 48 34.3	
	comp=Z,8μm,19.0s						
WVL	Waterville	131.09	27	IAMs_20	IAMs_20	18 40 42.7	
	comp=Z,9μm,20.0s						
LUPA	Lehigh Univers	131.10	34	IAMs_20	IAMs_20	18 40 25.8	
	comp=Z,10μm,20.0s						
PVIS	Viseu	131.11	326	*e*PP	PP	17 46 23.9	+4.9
PVIS				*e*SKP		17 47 31.9	
MTE	Manteigas	131.13	325	IAMs_20	IAMs_20	18 44 38.4	
	comp=Z,10μm,21.0s						
MTE	Manteigas	131.13	325	*e*PKPdf	PKiKP	17 44 06.4	+2.9
MTE				*e*PP	PP	17 46 23.5	+4.4
MTE				*e*SKP		17 47 28.0	
MTE				*e*SS	SS	18 03 58.8	+8.9
MTE				*e*LQ	LQ	18 22 44.2	
MTE				*e*LR	LR	18 34 21.9	
MTE				*i* AMs_20		18 45 00.7	
	comp=Z,9μm,20.0s						
L61B	Northampton	131.25	31	IAMs_20	IAMs_20	18 41 08.2	
	comp=Z,7μm,20.0s						
K62A	Royalston	131.31	30	IAMs_20	IAMs_20	18 42 52.9	
	comp=Z,9μm,20.0s						
R58B	Mineral	131.31	39	IAMs_20	IAMs_20	18 47 18.1	
	comp=Z,10μm,19.0s						
WUPA	West Chester U	131.41	35	IAMs_20	IAMs_20	18 35 31.2	
	comp=Z,10μm,22.0s						
G65A	Princeton	131.49	24	IAMs_20	IAMs_20	18 39 50.0	
	comp=Z,7μm,20.0s						
PMRV	Marv??o	131.68	324	*e*PKPdf	PKPdf	17 44 02.9	-0.6
PMRV				*e*PP	PP	17 46 26.6	+4.0
PMRV				*e*SKP		17 47 31.8	
PMRV				*e*SS	SS	18 04 15.8	+19
PMRV				*e*LQ	LQ	18 28 53.9	
PMRV				*e*LR	LR	18 36 48.6	
PMRV				*i* AMs_20		18 48 59.4	
	comp=Z,8μm,20.0s						
HRV	Adam Dziewonsk	131.77	30	IAMs_20	IAMs_20	18 41 22.9	
	comp=Z,10μm,21.0s						
GGN	Saint George	131.85	24	IAMs_20	IAMs_20	18 43 28.5	
	comp=Z,8μm,20.0s						
PCAS	Casmilo, Conde	131.90	326	*e*PKPdf	PKiKP	17 44 05.7	+0.7
PCAS				*e*PP	PP	17 46 30.4	+6.4
PCAS				*e*SKP		17 47 30.8	
EMMW	East Machias	131.93	25	IAMs_20	IAMs_20	18 39 59.7	
	comp=Z,9μm,20.0s						
UCCT	U. Connecticut	131.95	31	IAMs_20	IAMs_20	18 43 24.0	
	comp=Z,10μm,21.0s						
WES	Weston	131.97	30	IAMs_20	IAMs_20	18 41 28.4	
	comp=Z,10μm,21.0s						
PSARD	Sardoal	132.01	325	*e*PP	PP	17 46 31.4	+6.7
PSARD				*e*SKP		17 47 32.2	
LMN	Caledonia Moun	132.03	22	IAMs_20	IAMs_20	18 40 17.0	
	comp=Z,10μm,22.0s						
BCX	Boston College	132.09	30	IAMs_20	IAMs_20	18 41 31.4	
	comp=Z,9μm,21.0s						
PESTR	Estremoz	132.17	324	IAMs_20	IAMs_20	18 50 52.2	
	comp=Z,9μm,18.0s						
PESTR	Estremoz	132.17	324	*e*PP	PP	17 46 29.7	+3.9
PESTR				*e*SKP		17 47 32.9	
PBAR	Barrancos	132.29	323	*e*PKPdf	PKPdf	17 44 03.5	-1.2
PBAR				*e*PP	PP	17 46 32.9	+6.3
PBAR				*e*SKP		17 47 33.2	
PMTG	Montargil	132.41	325	*e*PP	PP	17 46 31.1	+3.8
PMTG				*e*SKP		17 47 32.9	
456A	Hilliard	132.41	49	IAMs_20	IAMs_20	18 34 23.9	
	comp=Z,11μm,22.0s						
L64A	Middleborough	132.55	30	IAMs_20	IAMs_20	18 37 44.6	
	comp=Z,9μm,22.0s						
W59A	Clinton	132.62	42	IAMs_20	IAMs_20	18 33 38.6	
	comp=Z,10μm,22.0s						
EVO	Evora	132.64	324	*e*PKPdf	PKPdf	17 44 03.2	-2.1
EVO				*e*PP	PP	17 46 32.5	+3.7
EVO				*e*SKP		17 47 33.6	
656A	Willston	132.65	51	IAMs_20	IAMs_20	18 36 49.4	
	comp=Z,11μm,22.0s						
CSU	Charleston Sou	132.70	45	IAMs_20	IAMs_20	18 36 50.7	
	comp=Z,10μm,21.0s						
M65A	Busby, Falmout	132.92	30	IAMs_20	IAMs_20	18 40 09.5	
	comp=Z,9μm,22.0s						
LIS	Lisbon	133.18	325	*e*PP	PP	17 46 31.3	-0.8
LIS				IAMs_20	IAMs_20	18 45 38.6	
	comp=N,11μm,20.7s						
PVAQ	Vaqueiros	133.20	323	IAMs_20	IAMs_20	18 48 12.5	
	comp=Z,8μm,20.0s						
PVAQ	Vaqueiros	133.20	323	*e*PKPdf	PKPdf	17 44 03.1	-3.4
PVAQ				*e*PP	PP	17 46 33.9	+1.5
PVAQ				*e*SKP		17 47 36.3	
PVAQ				*e*LR	LR	18 35 41.2	
PVAQ				*i* AMs_20		18 48 45.6	
	comp=Z,10μm,20.0s						
MESJ	Messejana	133.22	323	*e*PP	PP	17 46 31.6	-1.0
MESJ				IAMs_20	IAMs_20	18 48 05.5	
	comp=Z,11μm,22.1s						
MESJ	Messejana	133.22	323	*e*PKPdf	PKiKP	17 44 08.1	+0.5
MESJ				*e*PP	PP	17 46 35.8	+3.2
MESJ				*e*SKP		17 47 36.7	
PCVE	Castro Verde	133.25	323	*e*PP	PP	17 46 36.8	+4.1
PCVE				*e*SKP		17 47 35.3	
TGUH	Tegucigalpa,Un	133.35	73	IAMs_20	IAMs_20	18 34 21.2	
	comp=Z,10μm,20.0s						
PBDV	Barranco-do-Ve	133.43	323	*e*PKPdf	PKiKP	17 44 07.7	-0.5
PBDV				*e*PP	PP	17 46 36.8	+2.8
PBDV				*e*SKP		17 47 35.6	
Y60A	Bolivia	133.44	43	IAMs_20	IAMs_20	18 40 29.4	
	comp=Z,10μm,22.0s						
HAL	Halifax	133.51	22	IAMs_20	IAMs_20	18 40 30.3	
	comp=Z,9μm,21.0s						
MORF	Marmelete	133.83	323	*e*PP	PP	17 46 35.5	-1.0
MORF				IAMs_20	IAMs_20	18 48 36.4	
	comp=Z,10μm,15.8s						
MORF	Marmelete	133.83	323	*e*PP	PP	17 46 39.8	+3.3
MORF				*e*SKP		17 47 38.8	
MDT	Midelt	133.91	315	PKP	PKPdf	17 44 07.7	-0.4
	comp=Z,1.5nm,0.4s,baz=326,slow=4.9,SNR=2.1						
PFVI	Vila Bisbo	134.04	323	*e*PP	PP	17 46 43.9	+6.1
PFVI				*e*SKP		17 47 38.0	
DWPF	Disney Wildern	134.08	52	IAMs_20	IAMs_20	18 38 17.7	
	comp=Z,6μm,22.0s						
SOR	Soroa	134.92	60	IAMs_20	IAMs_20	18 43 06.3	
	comp=Z,7μm,19.0s						
060A	Indiantown	135.41	53	IAMs_20	IAMs_20	18 47 30.8	
	comp=Z,7μm,19.0s						
061Z	Ochoppi	135.48	55	IAMs_20	IAMs_20	18 42 28.0	
	comp=Z,8μm,20.0s						
AVE	Averroes	135.56	318	IAMs_20	IAMs_20	18 51 45.5	
	comp=Z,7μm,20.0s						
TORD	Torodi Ar. Bea	135.87	287	PKP	PKPdf	17 44 12.1	0.0
	comp=Z,95nm,0.4s,baz=72,slow=2.9,SNR=1.2						
JTS	Las Juntas de	136.17	78	PKIKP	PKiKP	17 44 14.9	+0.6
CAMR	Camarioca	136.23	58	IAMs_20	IAMs_20	18 43 58.7	
	comp=Z,13μm,20.0s						
LCO	Las Campanas	138.21	140	IAMs_20	IAMs_20	18 36 13.8	
	comp=Z,6μm,21.0s						
SHEL	Horse Pasture	140.25	242	IAMs_20	IAMs_20	18 54 05.9	
	comp=Z,5μm,18.0s						
PMPST	Porto Santo, M	141.27	325	*e*PP	PP	17 47 25.3	+2.5
CHIV	Chivirico	141.67	60	IAMs_20	IAMs_20	18 48 57.1	
	comp=Z,6μm,22.0s						
PMAR	Madeira	141.87	325	*e*PP	PP	17 47 31.8	+5.2
PMOZ	Porto Moniz, M	141.95	326	*e*PP	PP	17 47 32.2	+5.2
PMOZ				*e*SS	SS	18 06 11.5	+12
PMOZ				*e*LQ	LQ	18 33 40.7	
PMOZ				*e*LR	LR	18 37 34.0	
PMOZ				*i* AMs_20		18 53 05.4	
	comp=Z,5μm,20.0s						
NMDO	Nuevo Mundo	142.66	58	IAMs_20	IAMs_20	18 44 48.2	
	comp=Z,9μm,20.0s						
GTBY	Guantanamo Bay	142.81	59	IAMs_20	IAMs_20	18 44 18.3	
	comp=Z,7μm,22.0s						
BBSR	BB Station	142.97	34	IAMs_20	IAMs_20	18 45 56.9	
	comp=Z,10μm,22.0s						
OTAV	Otavalo	143.06	93	IAMs_20	IAMs_20	18 36 53.2	
	comp=Z,7μm,22.0s						
OTAV	Otavalo	143.06	93	PKIKP	PKPdf	17 44 26.1	+0.3
DBIC	Dimbokro	143.16	278	PKP	PKPdf	17 44 24.2	-1.1
	comp=Z,4.8nm,0.5s,baz=124,slow=3.2,SNR=8.3						
DBIC	Dimbokro	143.16	278	PKP	PKPdf	17 44 24.9	-0.4
PLTB	Pedras Altas	144.29	162	PKP	PKiKP	17 44 29.7	-0.8
PLTB	Pedras Altas	144.29	162	*e*P	PKiKP	17 44 29.9	-0.6
MACI	Morro de la Ar	144.78	320	IAMs_20	IAMs_20	18 53 00.6	
	comp=Z,6μm,22.0s						
ITQB	Itaqui	145.14	157	PKP	PKiKP	17 44 33.2	+0.9
ITQB	Itaqui	145.14	157	*e*P	PKiKP	17 44 30.3	-1.9
CPSB	Cacapava Do Su	145.60	162	PKP	PKiKP	17 44 31.2	-2.0
CPSB	Cacapava Do Su	145.60	162	*e*P	PKiKP	17 44 31.9	-1.3
SDDR	Presa de Saban	146.48	58	IAMs_20	IAMs_20	18 46 37.3	
	comp=Z,9μm,21.0s						
ROSC	El Rosal	147.20	85	PKPbc	PKPbc	17 44 33.9	-1.2
	comp=Z,39nm,0.6s,baz=284,slow=4.5,SNR=8.3						
CZSB	Cruzeiro do Su	147.38	108	PKP	PKiKP	17 44 38.8	+1.5
CZSB	Cruzeiro do Su	147.38	108	*e*P	PKPbc	17 44 35.5	+0.5
CPUP	Villa Florida	147.76	153	PKPbc	PKPbc	17 44 35.4	-0.3
	comp=Z,22nm,0.9s,baz=180,slow=12,SNR=36						
CPUP	Villa Florida	147.76	153	PKP	PKiKP	17 44 37.0	-0.7
LPAZ	La Paz	147.93	126	PKPbc	PKPdf	17 44 34.8	+0.6
	comp=Z,20nm,0.8s,baz=300,slow=0.8,SNR=20						
LPAZ	La Paz	147.93	126	PKP	PKPbc	17 44 37.8	+0.6
LPAZ	La Paz	147.93	126	*e*P	PKPbc	17 44 36.0	-1.2
ITAB	Concordia	148.97	162	*e*P	PKPbc	17 44 37.5	-1.3
AGPR	Aguadilla, PR	150.21	56	IAMs_20	IAMs_20	18 50 33.9	
	comp=Z,5μm,20.0s						
PRSN	Puerto Rico Se	150.31	56	IAMs_20	IAMs_20	18 51 42.5	
	comp=Z,5μm,20.0s						
SDV	Santo Domingo	150.33	76	IAMs_20	IAMs_20	18 46 46.5	
	comp=Z,6μm,20.0s						
SDV	Santo Domingo	150.33	76	PKP	PKPbc	17 44 40.3	-2.5
SDV	Santo Domingo	150.33	76	*e*P	PKPdf	17 44 39.5	+1.9
OBIP	Obispado Ponce	150.84	56	IAMs_20	IAMs_20	18 46 30.5	
	comp=Z,5μm,22.0s						
ASCN	Ascension	151.05	249	IAMs_20	IAMs_20	18 59 12.8	
	comp=Z,7μm,19.0s						
SJG	San Juan	151.18	55	IAMs_20	IAMs_20	18 50 06.5	
	comp=Z,6μm,20.0s						
IGPR	InterUniversit	151.29	55	IAMs_20	IAMs_20	18 49 44.4	
	comp=Z,5μm,22.0s						
PTGB	Pitanga	151.32	160	PKP	PKPbc	17 44 43.7	-1.1
HUMP	Col San Antoni	151.41	55	IAMs_20	IAMs_20	18 49 14.6	
	comp=Z,6μm,21.0s						
PET01	Itanhaem-SP	153.04	168	PKP	PKPbc	17 44 46.7	-1.8
LABB	L¡brea	153.36	116	PKP	PKPdf	17 44 44.5	+2.6
FRTB	Fartura	153.39	163	PKP	PKPbc	17 44 45.8	-3.6
AQDB	Aquidauana	153.50	149	PKP	PKPbc	17 44 47.9	-1.7
SIV	San Ignacio	153.53	134	PKP	PKPdf	17 44 42.8	+0.6
	comp=Z,4.3nm,0.8s,baz=164,slow=1.4,SNR=13						
SIV				PKPbc	PKiKP	17 44 51.4	+1.5
	comp=Z,7.8nm,0.7s,baz=221,slow=2.2,SNR=15						
SPB	Sao Paulo	153.69	168	*e*P	PKPdf	17 44 44.8	+2.7
SMRT	St. Maarten	153.69	52	IAMs_20	IAMs_20	18 47 25.5	
	comp=Z,6μm,22.0s						
SABA	Saba	153.79	53	IAMs_20	IAMs_20	18 47 36.3	
	comp=Z,7μm,20.0s						
SEUS	St. Eustatius	154.07	53	IAMs_20	IAMs_20	18 48 32.7	
	comp=Z,8μm,21.0s						
SLP01	Ubatuba-SP	154.34	172	PKP	PKPdf	17 44 46.2	+3.0
VAO	Valinhos	154.35	168	IAMs_20	IAMs_20	18 52 31.8	
	comp=Z,9μm,22.0s						
SGC2	Sao Gabriel da	154.47	95	PKP	PKPdf	17 44 45.2	+1.7
PTLB	Pontes e Lacer	155.27	136	PKP	PKPdf	17 44 48.7	+4.2
VAS01	Vassouras-RJ	155.55	176	PKP	PKPdf	17 44 49.1	+4.3
PCRV	Puerto La Cruz	155.76	70	PKP	PKPdf	17 44 46.3	+1.0
	comp=Z,5.4nm,0.7s,baz=6.2,slow=5.3,SNR=1.7						
ABD	La Joyeuse, An	155.82	53	IAMs_20	IAMs_20	18 49 24.1	
	comp=Z,8μm,22.0s						
TDBA	Terre de Bas,	156.04	54	IAMs_20	IAMs_20	18 52 21.1	
	comp=Z,8μm,21.0s						
MAGL	Barre de l’ile	156.27	54	IAMs_20	IAMs_20	18 45 47.2	
	comp=Z,8μm,22.0s						
SVN	Savane Anatole	156.95	56	IAMs_20	IAMs_20	19 05 18.6	
	comp=Z,5μm,21.0s						
FDF	Fort de France	157.02	56	IAMs_20	IAMs_20	18 52 57.4	
	comp=Z,5μm,22.0s						
FDF	Fort de France	157.02	56	PKIKP	PKPdf	17 44 48.2	+1.3
BIM	Bigot	157.20	57	IAMs_20	IAMs_20	18 49 48.2	
	comp=Z,6μm,22.0s						
ILAM	Ilet Lapin Mar	157.23	56	IAMs_20	IAMs_20	18 53 09.8	
	comp=Z,5μm,21.0s						
MPOM	Morne Pois Mar	157.41	56	IAMs_20	IAMs_20	18 53 07.7	
	comp=Z,7μm,22.0s						
GRGR	Grenville	157.79	63	IAMs_20	IAMs_20	18 55 04.7	
	comp=Z,6μm,21.0s						
PMNB	Patos De Minas	158.79	167	PKP	PKPdf	17 44 53.5	+4.4
ARAG	Araguaiana, MT	159.48	151	PKP	PKPdf	17 44 54.3	+4.5
MACA	Manacapuru-AM	160.14	106	PKP	PKPdf	17 44 53.5	+2.8
CLDB	Colider	160.75	133	PKP	PKPdf	17 44 55.4	+4.1
BOAV	Boa Vista	161.05	89	PKP	PKPdf	17 44 54.1	+2.5
BDFB	Brasilia	161.11	160	PKP	PKPdf	17 44 52.3	+0.5
	comp=Z,10.0nm,0.9s,baz=180,slow=6.1,SNR=9.1						
BDFB				PKPab	PKPab	17 45 35.9	+1.3
	comp=Z,16nm,1.0s,baz=125,slow=1.8,SNR=4.0						
GUA01	Guaratinga, BA	161.21	185	PKP	PKPdf	17 44 55.8	+4.1
CMC01	Camacan, BA	162.39	186	PKP	PKPdf	17 44 57.0	+4.1
JANB	Januaria	162.59	171	PKP	PKPdf	17 44 56.3	+3.0
SNDB	Serra Nova Dou	162.87	146	PKP	PKPdf	17 44 57.2	+3.7
ITTB	Itaituba	164.38	115	PKP	PKPdf	17 44 58.3	+3.4
NBPA	Parau_RN	170.90	209	PKP	PKPdf	17 45 01.0	+1.5
NBCL	Cascavel-CE	172.79	207	PKP	PKPdf	17 45 04.1	+3.6
SBBR	Sobral	173.91	192	PKP	PKPdf	17 45 03.8	+2.9

WEL 19 17:26:25.3±3.0, 33˚S±13˚×17˚8W±5˚8, h33^{km}, M4.6/8, mB4.8/7, ML5.1/12, MLv5.1/8, Mw(mB)4.1/7, Error ellipse: s-maj=77.1km s-min=5.7km az=102.2, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.98	357	P	Pn	17 27 24.0	+0.1
GLKZ				S	Sn	17 28 10.2	+0.8
HAZ	Te Kaha	5.84	218	P	Pn	17 27 50.3	+0.8
PUZ	Puketiti	5.86	214	P	Pn	17 27 50.7	+0.9
RUGZ	Raukumara Rang	6.06	218	P	Pn	17 27 52.3	-0.3
TWGZ	Tauwhareparae	6.07	215	P	Pn	17 27 53.9	+1.1
CNGZ	Carnagh Statio	6.22	212	P	Pn	17 27 53.4	-1.3
TKGZ	Te Karaka	6.34	214	P	Pn	17 27 56.8	+0.3
MWZ	Matawai	6.42	216	P	Pn	17 27 56.7	-0.8
URZ	Urewera	6.57	219	P	Pn	17 27 58.7	-0.9
RAGZ	Rawiri	6.60	216	P	Pn	17 27 59.9	-0.1
RIGZ	Rimuhau	6.60	213	P	Pn	17 27 59.8	-0.2
MARZ	Manawahe	6.62	223	P	Pn	17 28 00.2	0.0
SNGZ	Shannon Statio	6.86	215	P	Pn	17 28 03.8	+0.3
RAHZ	Arahi	7.09	215	P	Pn	17 28 07.1	+0.4

WEL 19 17:31:35.0±0.7, 38˚S±4˚×17˚7E±˚, h5^{km}, M2.2/4, ML2.6/8, MLv2.2/4, Error ellipse: s-maj=5.6km s-min=4.4km az=167.3, confirmed, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WIZ	White Island	0.07	44	P	Pg	17 31 37.0	+0.4
WSRZ	White Island S	0.07	34	P	Pg	17 31 37.1	+0.6
OPRZ	Ohinepanea	0.53	239	P	Pg	17 31 45.5	+0.4

OPRZ				S	Sg	17 31 52.8	+0.8
HAZ	Te Kaha	0.55	109	P	Pg	17 31 45.7	+0.2
HAZ				S	Sg	17 31 53.5	+0.8
RUGZ	Raukumara Rang	0.58	132	P	Pg	17 31 46.2	0.0
RUGZ				S	Sg	17 31 54.6	+0.8
URZ	Urewera	0.68	181	P	Pg	17 31 48.3	+0.2
MWZ	Matawai	0.82	157	P	Pg	17 31 50.7	0.0
MWZ				S	Sb	17 32 02.3	-0.9
TWGZ	Tauwhareparae	0.90	132	P	Pb	17 31 53.2	+0.1
TWGZ				S	Sn	17 32 07.0	-0.8
TKGZ	Te Karaka	1.03	147	P	Pb	17 31 55.7	+0.3
RTZ	Ruatahuna	1.04	186	P	Pg	17 31 54.8	-0.2
RIGZ	Rimuhau	1.23	156	P	Pn	17 31 59.8	+0.8

WEL 19 17:32:22.8±0.6, 38°S±6°×17°7E±°, h5^{km}, M2.5/8, ML2.9/12, MLv2.5/8, Error ellipse: s-maj=7.2km s-min=4.8km az=177.9, confirmed, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WIZ	White Island	0.02	75	P	Pg	17 32 24.6	+0.8
WHRZ	Whale Island	0.36	205	P	Pb	17 32 30.7	-0.9
HAZ	Te Kaha	0.54	115	P	Pg	17 32 32.3	-0.9
RUGZ	Raukumara Rang	0.59	137	P	Pg	17 32 32.9	-1.3
MARZ	Manawahe	0.60	221	P	Pg	17 32 34.2	0.0
MYRZ	Mayor Island	0.78	289	P	Pg	17 32 37.9	+0.2
MKRZ	Makatiti	0.82	222	P	Pg	17 32 38.3	-0.3
TARZ	Mount Tarawera	0.88	216	P	Pb	17 32 40.2	-0.4
KARZ	Kaharoa	0.88	236	P	Pg	17 32 39.7	0.0
RAGZ	Rawiri	0.98	168	P	Pg	17 32 41.2	-0.4
MUGZ	Murupara	0.99	198	P	Pg	17 32 41.4	-0.5
PUZ	Puketiti	1.02	122	P	Pb	17 32 42.9	0.0
WMGZ	Waiomatatini S	1.03	107	P	Pn	17 32 43.8	-0.2
TKGZ	Te Karaka	1.05	149	P	Pg	17 32 42.6	-0.5
MTHZ	Maungataniwha	1.34	191	P	Pg	17 32 49.5	+0.9
KUZ	Kuaotunu	1.40	304	P	Pn	17 32 47.5	-1.4
HIZ	Hauiti	2.07	241	P	Pn	17 32 55.9	-2.3

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*WEL **19** 17:33:15.7±1.2, 38°S±9°×17°7E±°, h8^{km}±4^{km}, M3.2/9, ML3.5/9, MLv3.2/9, Error ellipse: s-maj=12.6km s-min=5.3km az=156.5, confirmed*

ISC 19 17:33:14.3±1.6, 37°.39S±0°.08×177°.14E±0°.07, h19^{km}±4^{km}, n14, σ1^{s}01/17, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSRZ	White Island S	0.13	167	P	Pg	17 33 17.9	-0.6
WIZ	White Island	0.14	164	P	Pg	17 33 17.7	-0.9
WHRZ	Whale Island	0.48	196	P	Pg	17 33 23.6	-0.5
MARZ	Manawahe	0.70	212	P	Pb	17 33 27.6	-0.3
MARZ				S	Sb	17 33 35.7	-1.4
MKRZ	Makatiti	0.92	215	P	Pb	17 33 32.4	+0.7
MKRZ				S	Sb	17 33 43.2	-0.3
PUZ	Puketiti	1.12	128	P	Pg	17 33 37.1	+1.1
RAGZ	Rawiri	1.12	169	P	Pb	17 33 35.3	+0.1
RAGZ				S	Sb	17 33 48.6	-0.9
KUZ	Kuaotunu	1.30	299	P	Pn	17 33 37.6	+0.1
SNGZ	Shannon Statio	1.40	174	P	Pg	17 33 40.9	-0.4
BKZ	Black Stump Fm	1.84	196	P	Pg	17 33 52.4	+2.6
BKZ	Black Stump Fm	1.84	196	P	Pb	17 33 47.4	0.0
KATZ	Kakaramea	1.95	215	P	Pn	17 33 46.9	+0.3
KRVZ	Karewarewa	2.07	214	P	Pn	17 33 48.5	+0.3
OTVZ	Oturere	2.12	213	P	Pn	17 33 48.8	-0.1

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*IDC **19** 17:36:54.9±0.6, 2°.24S×138°.50E, h0^{km}, mb4.1/15, mbtmp4.2/18, ML4.2/2, Error ellipse: s-maj=20.8km s-min=14.1km az=71.0*

*NEIC **19** 17:36:57.0±2.4, 2°.2S±0°.1×138°.50E±0°.06, h10^{km}±1^{km}, mb4.7/14, Error ellipse: s-maj=17.4km s-min=10.5km az=4.0*

*DJA **19** 17:36:57.9±0.4, 2°S±3°×13°9E±°, h18^{km}±4^{km}, M5.0/11, mb5.0/8, MLv5.0/11*

ISC 19 17:36:57.1±1.5, 2°.30S±0°.05×138°.49E±0°.04, h14^{km}±10^{km}, n51, σ1^{s}43/58, mb4.2/16, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.37	36	P	Pg	17 37 03.6	-1.1
GENI	Genyem	1.70	100	P	Pb	17 37 27.8	-0.4
GENI				S	Sb	17 37 50.4	+1.0
JAY	Jayapura	2.22	96	Pn	Pn	17 37 33.9	+0.3
	42nm,0.3s,baz=236,slow=11,SNR=44						
JAY				Sn	Sn	17 38 00.3	-0.5
	69nm,0.3s,baz=180,slow=20,SNR=16						
	97nm,0.3s						
JAY	Jayapura	2.22	96	P	Pn	17 37 33.8	+0.2
JAY				S	Sn	17 38 01.2	+0.3
SRPI	Serui, Papua	2.29	281	P	Pn	17 37 33.9	-0.6
SRPI				S	Sn	17 38 04.1	+1.6
BAKI	Biak	2.62	295	P	Pn	17 37 38.7	-0.4
BAKI				S	Sn	17 38 10.2	-0.5
RKPI	Ransiki, Papua	4.38	280	P	Pn	17 38 03.5	+0.2
KMPI	Kaimana, Papua	4.97	254	P	Pn	17 38 13.9	+2.6
FAKI	Fak Fak	6.27	264		Pn	17 38 29.3	+0.1
FAKI	Fak Fak	6.27	264	P	Pn	17 38 30.0	+0.8
	2.0nm131nm,0.8s						
SWI	Sorong	7.37	281	P	Pn	17 38 45.8	+1.5
MSAI	Masohi	9.61	264	P	Pn	17 39 16.7	+1.6
	94nm,0.7s						
PMG	Port Moresby	11.14	130	Pn	Pn	17 39 37.9	+1.8
	19nm,0.7s,baz=218,slow=11,SNR=2.0						
NLAI	Namlea	11.42	265	P	Pn	17 39 40.7	+0.8
	82nm,0.9s						
TNTI	Ternate	11.53	285	P	Pn	17 39 40.6	-0.9
COEN	Coen	12.48	158	Pn	Pn	17 39 55.4	+1.0
MTN	Manton Dam	12.76	214	Pn	Pn	17 39 58.5	+0.2
LUWI	Luwuk	15.76	274	Pn	Pn	17 40 37.1	-1.8
LUWI				IAmb	IAmb	17 41 04.0	
	comp=Z,63nm,1.1s						
SOEI	Soe	15.96	242	Pn	Pn	17 40 41.0	-0.5
SOEI				IAmb	IAmb	17 41 24.2	
	comp=Z,205nm,1.4s						
KNRA	Kununurra	16.39	215	Pn	Pn	17 40 46.8	-0.1
BATI	Baumata	16.69	241	Pn	P	17 40 54.3	+1.2
	comp=Z,17nm,0.3s,baz=92,slow=2.2,SNR=21						
WB0	Warramunga Arr	17.82	193	Pn	Pn	17 41 03.8	-1.1
WR8	Warramunga Arr	17.98	192		Pn	17 41 05.4	-1.4
WRAB	Tennant Creek	17.99	193	Pn	Pn	17 41 06.0	-0.9
WRA	Warramunga Arr	18.00	193	P	Pn	17 41 06.8	-0.3
	comp=Z,1.2nm,0.3s,baz=16,slow=13,SNR=12						
WRA				S	Sn	17 44 21.4	-6.5
	comp=Z,7.7nm,1.0s,baz=15,slow=23,SNR=5.8						
	comp=Z,6.2nm,0.6s						
TOLI2	Tolitoli	18.03	281	Pn	Pn	17 41 05.4	-2.0
CTAO	Charters Tower	19.24	157	P	Pn	17 41 23.3	+1.2
CTAO				IAmb	IAmb	17 42 08.7	
	comp=Z,126nm,1.5s						
FITZ	Fitzroy Crossi	20.14	218	P	P	17 41 31.7	+0.7
	comp=Z,33nm,0.9s,baz=42,slow=9.4,SNR=6.4						
FITZ				S	S	17 45 05.8	-11
	comp=Z,11nm,0.5s,baz=342,slow=19,SNR=13						
	comp=Z,33nm,0.9s						
AS31	Alice Springs	21.70	191	P	P	17 41 47.8	-0.1
AS31				IAmb	IAmb	17 42 18.2	
	comp=Z,23nm,1.2s						
ASAR	Alice Springs	21.70	191	P	P	17 41 47.5	-0.4
ASAR	Alice Springs	21.70	191	P	P	17 41 48.1	+0.2
	comp=Z,7.1nm,0.7s,baz=11,slow=12,SNR=14						
ASAR				S	S	17 45 45.9	-2.0
	comp=Z,9.0nm,0.8s,baz=12,slow=20,SNR=7.0						
	comp=Z,7.1nm,0.7s						
EIDS	Eidsvold	25.95	153	P	P	17 42 31.7	+2.4
MBWA	Marble Bar	26.18	223	P	P	17 42 30.6	-0.8
STKA	Stephens Creek	29.57	175	P	P	17 43 03.0	+1.3
STKA	Stephens Creek	29.57	175	P	P	17 43 03.2	+1.6
	comp=Z,6.3nm,0.6s,baz=324,slow=17,SNR=0.8						
	comp=Z,6.3nm,0.6s						
CAN	Canberra	34.28	165	P	P	17 43 44.2	+1.2
TOO	Toolangi	35.69	170	P	P	17 43 56.1	+0.9
TOO				IAmb	IAmb	17 44 36.5	
	comp=Z,3.7nm,1.0s						
KSRS	Korea Array	40.75	347	P	P	17 44 37.2	-0.5
	comp=Z,0.3nm,0.4s,baz=162,slow=8.4,SNR=1.5						
	comp=Z,0.3nm,0.4s						
CMAR	Chiang Mai Arr	44.04	300	P	P	17 45 05.9	+1.0
	comp=Z,0.9nm,0.8s,baz=116,slow=6.5,SNR=4.7						
	comp=Z,0.9nm,0.8s						
KLR	Kul'dur	51.65	354	P	P	17 46 04.8	+1.5
	comp=Z,0.5nm,0.3s,baz=155,slow=15,SNR=2.0						
	comp=Z,0.5nm,0.3s						
SONM	Songino Array	57.25	335	P	P	17 46 45.7	+1.4
	comp=Z,0.4nm,0.4s,baz=174,slow=4.1,SNR=1.9						
	comp=Z,0.4nm,0.4s						
YAK	Yakutsk	64.50	355	P	P	17 47 33.9	+0.8
	comp=Z,3.1nm,0.5s,baz=159,slow=14,SNR=4.1						
	comp=Z,3.1nm,0.5s						
SEY	Seymchan	65.90	7	P	P	17 47 41.1	-1.0
	comp=Z,1.3nm,0.8s,baz=128,slow=17,SNR=2.1						
	comp=Z,1.3nm,0.8s						
MKAR	Makanchi Array	69.33	322	P	P	17 48 03.9	-0.4
	comp=Z,1.5nm,0.7s,baz=99,slow=8.4,SNR=13						
	comp=Z,1.5nm,0.7s						
ZALV	Zalesovo Beam	71.47	330	P	P	17 48 16.0	-1.2
	comp=Z,1.0nm,0.6s,baz=104,slow=6.3,SNR=3.7						
	comp=Z,1.0nm,0.6s						
KURBB	Kurchatov Arra	73.27	325	P	P	17 48 26.4	-1.5
	comp=Z,1.0nm,0.9s,baz=116,slow=5.6,SNR=5.6						
	comp=Z,1.0nm,0.9s						
BVAR	Borovoye Array	78.85	325	P	P	17 48 59.4	-0.3
	comp=Z,1.9nm,0.4s,baz=121,slow=7.6,SNR=15						
	comp=Z,1.9nm,0.4s						
ILAR	Eielson Array	85.55	24	P	P	17 49 33.5	-1.1
	comp=Z,0.5nm,0.8s,baz=260,slow=5.5,SNR=4.4						
	comp=Z,0.5nm,0.8s						
QSPA	South Pole Qui	87.65	180	P	P	17 49 44.9	-0.2
	comp=Z,3.0nm,1.1s,baz=56,slow=3.6,SNR=8.8						
	comp=Z,3.0nm,1.1s						
CPUP	Villa Florida	147.69	153	PKPbc	PKPbc	17 56 41.6	-0.5
	comp=Z,0.3nm,0.3s,baz=270,slow=4.0,SNR=3.0						
LPAZ	La Paz	147.86	126	PKPbc	PKPbc	17 56 43.0	-0.6
	comp=Z,3.0nm,0.8s,baz=250,slow=5.9,SNR=3.6						

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*NEIC **19** 17:41:31.3±0.4, 36°.028N±0°.004×98°.10W±0°.01, h5^{km}±1^{km}, mb_Lg2.6/39, ML2.1/18, ML2.1/41, Error ellipse: s-maj=2.7km s-min=1.9km az=248.0*

NEIC 19 17:41:31.4±0.7, 36°.030N±0°.010×98°.094W±0°.004, h6^{km}±5^{km}, Error ellipse: s-maj=1.5km s-min=0.5km az=191.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.48	11		Pg	17 41 41.1	+0.4
CROK					Sg	17 41 48.2	+1.1
CROK				IAML		17 41 53.5	
	comp=N,110nm,0.2s						
BCOK	Bluff Creek, N	0.54	133		Pg	17 41 42.4	+0.5
BCOK					Sg	17 41 49.6	+0.7
OK029	Liberty Lake	0.57	114		Pg	17 41 42.4	0.0
OK029					Sg	17 41 50.5	+0.7
OK029				IAML		17 41 50.8	
	comp=N,92nm,0.3s						
OK038	West end E0370	0.69	311		Pg	17 41 44.6	-0.1
OK038					Sg	17 41 54.3	+0.6
GC02	Grant County #	0.84	13		Pg	17 41 47.5	-0.1
GC02					Sg	17 41 59.1	+0.5
KAN14	Manchester OK	0.93	6		Pg	17 41 49.0	-0.3
KAN14					Sb	17 42 02.1	-0.5
KAN14				IAML		17 42 06.7	
	comp=N,51nm,0.1s						
KAN14				IAML		17 42 08.6	
	comp=E,53nm,0.1s						
FNO	Franklin	0.96	144		Pg	17 41 49.6	-0.2
FNO					Sg	17 42 02.4	+0.2
FNO				IAML		17 42 05.1	
	comp=N,59nm,0.2s						
BLOK	Blackwell	1.02	44		Pg	17 41 50.8	-0.2
BLOK					Sg	17 42 04.5	+0.3
OK052	Battle Ridge R	1.05	92		Pg	17 41 51.1	-0.5
OK052					Sb	17 42 06.0	+0.1
OK052				IAML		17 42 09.3	
	comp=N,51nm,0.2s						
OK052				IAML		17 42 10.0	
	comp=N,49nm,0.2s						
KAN13	South Haven SW	1.10	27		Pg	17 41 52.2	-0.4
QUOK	Quay	1.13	82		Pg	17 41 52.6	-0.6
QUOK					Sg	17 42 08.0	+0.1
KAN01	Argonia South	1.15	13		Pg	17 41 53.1	-0.5
KAN01				IAML		17 42 09.7	
	comp=N,38nm,0.3s						
KAN01				IAML		17 42 11.0	
	comp=E,37nm,0.1s						
KAN09	Caldwell North	1.17	19		Pg	17 41 53.3	-0.6
KAN09					Sb	17 42 09.4	-0.1
DEOK	Depew	1.31	98		Pn	17 41 55.3	-1.0
DEOK					Sg	17 42 13.8	+0.3
DEOK				IAML		17 42 17.0	
	comp=N,30nm,0.3s						
DEOK				IAML		17 42 18.5	
	comp=E,28nm,0.1s						
WMOK	Wichita Mounta	1.41	204		Pn	17 41 56.9	-0.7
X34A	Smith Ranch, M	1.44	171		Pn	17 41 58.4	+0.2
X34A					Sg	17 42 18.5	+0.7
T35A	Sooner Cattle	1.55	55		Pb	17 42 00.2	-0.4
T35A					Sb	17 42 20.6	0.0
X40A	Basin Creek Fa	4.57	108	IAmb_Lg		17 44 05.7	
	comp=Z,8.9nm,1.3s						
WHAR	Wooly Hollow	4.78	97	IAmb_Lg		17 44 11.9	
	comp=Z,7.9nm,1.1s						
BRDY	Brady	4.79	189	IAmb_Lg		17 44 10.3	
	comp=Z,8.7nm,0.9s						
MGMO	Mountain Grove	4.82	75	IAmb_Lg		17 44 10.1	
	comp=Z,12nm,1.0s						
FCAR	Ozark Folk Cen	4.84	90	IAmb_Lg		17 44 14.9	
	comp=Z,8.2nm,1.0s						
UALR	University of	4.86	103	IAmb_Lg		17 44 12.1	
	comp=Z,14nm,0.8s						
P38A	Dawn	5.09	44	IAmb_Lg		17 44 08.8	
	comp=Z,14nm,0.7s						
R40A	Maddies Statio	5.17	62	IAmb_Lg		17 44 12.8	
	comp=Z,8.9nm,0.8s						
LCAR	Lake Charles	5.62	88	IAmb_Lg		17 44 26.9	
	comp=Z,7.1nm,1.1s						
JCT	Junction City	5.72	195	IAmb_Lg		17 44 28.5	
	comp=Z,11nm,0.8s						
CCM	Cathedral Cave	5.84	68	IAmb_Lg		17 44 33.7	
	comp=Z,12nm,1.2s						
P40A	Paris	5.93	52	IAmb_Lg		17 44 39.0	
	comp=Z,4.9nm,0.9s						
N38A	Joes South For	6.10	37	IAmb_Lg		17 44 48.1	
	comp=Z,9.4nm,0.8s						
FVM	French Village	6.44	70	IAmb_Lg		17 45 09.3	
	comp=Z,10nm,1.2s						
CGM3	Cape Girardeau	6.90	77	IAmb_Lg		17 45 10.5	
	comp=Z,6.6nm,1.1s						
Q44A	Meyer Farm, Va	7.77	66	IAmb_Lg		17 45 34.6	
	comp=Z,5.0nm,0.8s						
ECSD	EROS Data Cent	7.78	8	IAmb_Lg		17 45 33.8	
	comp=Z,3.0nm,0.9s						
L40A	Anamosa	8.05	39	IAmb_Lg		17 45 43.2	
	comp=Z,8.7nm,1.3s						

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*IDC **19** 17:44:29.7±0.7, 28°.43N×104°.77E, h0^{km}, mb3.7/13, mbtmp3.7/15, ML3.0/2, Error ellipse: s-maj=26.0km s-min=15.1km az=60.0*

ISC 19 17:44:32.7±0.7, 28°.50N±0°.08×104°.96E±0°.09, h19^{km}, n19, σ1^{s}37/25, mb3.8/13, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PZH	PanZhiHua	3.48	236	Pn	Pn	17 45 27.1	+1.1
PZH				Pg	Pb	17 45 34.3	+0.4
PZH				Sn	Sn	17 46 05.6	-1.2
PZH				Sg	Sb	17 46 17.3	+1.4
PZH				smax	smax		
	comp=N,90nm,0.9s						
PZH				smax	smax		
	comp=E,100nm,0.9s						
XAN	Xi'an	6.48	31	Pn	Pn	17 46 10.8	+3.7
XAN				Pg	Pg	17 46 34.0	-2.7
XAN				Sn	Sn	17 47 20.8	+0.3
XAN				Sg	Sg	17 47 59.8	-0.7
XAN				smax	smax		
	comp=N,260nm,1.2s						
XAN				smax	smax		
	comp=E,280nm,0.9s						
CMAR	Chiang Mai Arr	11.42	210	Pn	Pn	17 47 13.1	-1.8
	baz=20,slow=11,SNR=6.1						
	comp=E,0.3nm,0.4s						
SONM	Songino Array	19.33	3	P	Pn	17 48 58.5	+0.5
	baz=193,slow=12,SNR=4.6						
	comp=E,0.5nm,0.7s						
KSRS	Korea Array	21.19	59	P	P	17 49 18.2	+1.1
	comp=E,1.8nm,0.7s,baz=247,slow=11,SNR=4.6						
	comp=E,1.8nm,0.7s						
MKAR	Makanchi Array	25.45	322	P	P	17 49 59.3	-0.1
	comp=E,1.7nm,0.7s,baz=129,slow=11,SNR=10						
	comp=E,1.7nm,0.7s						
USRK	Ussuriysk Ar.	26.66	47	P	P	17 50 11.9	+1.7
	comp=E,2.1nm,0.6s,baz=237,slow=11,SNR=4.2						
	comp=E,2.1nm,0.6s						
ZALV	Zalesovo Beam	29.38	335	P	P	17 50 33.8	-0.7
	comp=E,0.7nm,0.5s,baz=134,slow=6.2,SNR=2.7						
	comp=E,0.7nm,0.5s						
KURBB	Kurchatov Arra	29.77	325	P	P	17 50 38.9	+0.9
	comp=E,1.1nm,0.6s,baz=131,slow=10,SNR=9.7						
	comp=E,1.1nm,0.6s						
BVAR	Borovoye Array	35.30	324	P	P	17 51 24.6	-1.8
	comp=E,0.3nm,0.5s,baz=134,slow=8.3,SNR=1.9						
	comp=E,0.3nm,0.5s						
WRA	Warramunga Arr	55.91	146	P	P	17 54 09.8	+0.2
	comp=E,0.9nm,0.7s,baz=316,slow=12,SNR=12						
	comp=E,0.9nm,0.7s						
ASAR	Alice Springs	58.89	149	P	P	17 54 31.1	+0.5
	comp=E,0.5nm,0.4s,baz=329,slow=7.0,SNR=13						
	comp=E,0.5nm,0.4s						
AKASG	Malin Array Be	59.72	314	P	P	17 54 35.6	-0.4
	comp=E,0.4nm,0.4s,baz=70,slow=6.8,SNR=3.0						
	comp=E,0.4nm,0.4s						
ARCES	ARCESS Array B	59.93	336	P	P	17 54 37.1	-0.1
	comp=E,1.0nm,0.8s,baz=74,slow=5.9,SNR=1.5						
	comp=E,1.0nm,0.8s						
FINES	FINESS Array B	60.14	327	P	P	17 54 38.4	-0.3
	comp=E,1.2nm,1.0s,baz=157,slow=7.4,SNR=3.7						
	comp=E,1.2nm,1.0s						
NOA	NORSAR Array B	67.25	328	P	P	17 55 25.3	-0.4
	comp=E,0.2nm,0.4s,baz=74,slow=4.6,SNR=1.7						
	comp=E,0.2nm,0.4s						
GERES	GERESS Array B	69.90	315	P	P	17 55 42.8	+0.2
	comp=E,0.4nm,0.6s,baz=78,slow=6.7,SNR=2.0						
	comp=E,0.4nm,0.6s						
QSPA	South Pole Qui	118.29	180	PKP	PKPdf	18 03 17.4	-0.6
	comp=E,1.2nm,1.0s,baz=251,slow=1.8,SNR=2.4						
SNAA	Sanae	122.38	201	PKP	PKPdf	18 03 24.5	-1.2
	comp=E,0.7nm,0.8s,baz=57,slow=4.5,SNR=3.0						

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*NEIC **19** 17:53:46.2±1.3, 19°.7S±0°.1×177°.5W±0°.2, h554^{km}±14^{km}, mb4.5/19, Error ellipse: s-maj=24.4km s-min=9.2km az=55.0*

*IDC **19** 17:53:48.1±1.3, 19°.76S×177°.76W, h580^{km}±12^{km}, mb3.3/9, mbtmp4.2/12, Error ellipse: s-maj=18.0km s-min=15.2km az=138.0*

*NOU **19** 17:53:49.2, 19°.14S×177°.38W, h568^{km}, mb4.0/4, Fiji Islands Region*

ISC 19 17:53:45.3±0.6, 19°.79S±0°.09×177°.52W±0°.08, h550^{km}, n47, σ1^{s}67/52, mb4.3/19, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	1.97	321	P	P	17 54 59.1	+4.2
DGTI	Dogotuki	4.34	323	P	P	17 55 12.0	+2.1
MSVF	Nonsavu	4.67	295	P	P	17 55 14.4	+1.9
MSVF	Nonsavu	4.67	295	P	P	17 55 16.3	+3.8
	21nm,0.4s,baz=144,slow=8.7,SNR=19						
MSVF				S	S	17 56 26.9	+3.3
	5.9nm,1.0s,baz=130,slow=22,SNR=0.6						
MSVF	Nonsavu	4.67	295	P	P	17 55 16.6	+4.1
FUTU	Fugatoga	5.48	354	P	P	17 55 19.2	-0.1
NIUE	Niue	7.20	86	P	P	17 55 36.1	+1.0
AFI	Afiamalu	8.02	44	P	P	17 55 41.0	-2.4
AFI	Afiamalu	8.02	44	P	P	17 55 42.5	-0.9
PINNC	Pines Island,	14.30	256	P	P	17 56 47.2	-0.4
DZM	Mont Dzumac	15.16	259	P	P	17 56 56.9	+0.4
DZM				IAmb	IAmb	17 57 15.3	
	comp=Z,9.2nm,1.0s						
DZM	Mont Dzumac	15.16	259	P	P	17 56 57.1	+0.6
	comp=Z,4.2nm,0.6s,baz=64,slow=7.8,SNR=9.5						
URZ	Urewera	18.99	193	P	P	17 57 31.5	-0.5
	comp=Z,5.5nm,0.5s,baz=0.0,slow=4.0,SNR=6.0						
URZ				S	S	18 00 32.9	-3.3
	comp=Z,8.0nm,0.8s,baz=19,slow=20,SNR=1.1						
WHZ	Wether Hill Ro	28.66	201	P	P	17 58 59.4	+1.4
ARMA	Armidale	29.79	243	P	P	17 59 08.4	+0.3
ARMA				IAmb	IAmb	17 59 10.8	
	comp=Z,18nm,1.2s						
CAN	Canberra	33.29	235	P	P	17 59 37.6	-0.1
CAN				IAmb	IAmb	18 00 00.9	
	comp=Z,29nm,1.3s						
CTAO	Charters Tower	34.02	263	P	P	17 59 43.6	-0.5
CTAO				IAmb	IAmb	17 59 46.7	
	comp=Z,14nm,0.8s						
PMG	Port Moresby	35.64	282	P	P	17 59 57.5	-0.1
PMG				IAmb	IAmb	17 59 59.7	
	comp=Z,19nm,0.8s						
TOO	Toolangi	36.69	233	P	P	18 00 06.3	+0.3
TOO				IAmb	IAmb	18 00 09.4	
	comp=Z,6.3nm,0.8s						
COEN	Coen	38.00	273	P	P	18 00 16.8	-0.2
COEN				IAmb	IAmb	18 00 19.6	
	comp=Z,18nm,1.0s						
STKA	Stephens Creek	38.51	243	P	P	18 00 21.1	+0.2
STKA	Stephens Creek	38.51	243	P	P	18 00 20.6	-0.3
	comp=Z,6.7nm,0.7s,baz=100,slow=11,SNR=13						
	comp=Z,6.7nm,0.7s						
BBOO	Buckleboo	43.27	243	P	P	18 00 58.2	-0.6
AS31	Alice Springs	45.13	256	P	P	18 01 12.5	-0.8
ASAR	Alice Springs	45.13	256	P	P	18 01 12.0	-1.2
ASAR	Alice Springs	45.13	256	P	P	18 01 12.4	-0.8
	comp=Z,12nm,0.8s,baz=93,slow=7.4,SNR=76						
ASAR				PcP	PcP	18 02 40.5	-1.6
	comp=Z,1.1nm,0.7s,baz=112,slow=3.8,SNR=5.9						
ASAR				S	S	18 07 08.8	-4.2
	comp=Z,1.3nm,0.8s,baz=93,slow=14,SNR=9.0						
	comp=Z,12nm,0.8s						
WRA	Warramunga Arr	45.15	261	P	P	18 01 12.0	-1.4
	comp=Z,3.7nm,0.5s,baz=97,slow=8.2,SNR=51						
WRA				PcP	PcP	18 02 42.6	+0.5
	comp=Z,0.3nm,0.5s,baz=99,slow=2.7,SNR=2.8						
	comp=Z,3.7nm,0.5s						
MTN	Manton Dam	49.62	270	P	P	18 01 46.4	-0.5
KNRA	Kununurra	51.16	266	P	P	18 01 57.5	-0.7
KNRA				IAmb	IAmb	18 02 22.2	
	comp=Z,23nm,1.2s						
FITZ	Fitzroy Crossi	53.58	262	P	P	18 02 15.0	-0.5
PSA00	Pilbara Seismi	58.27	256	P	P	18 02 48.5	+0.6
PSA00				IAmb	IAmb	18 02 49.8	
	comp=Z,15nm,0.7s						
MBWA	Marble Bar	58.46	257	P	P	18 02 47.7	-1.4
MBWA				IAmb	IAmb	18 02 51.1	
	comp=Z,8.8nm,0.7s						
SBA	Scott Base	58.61	184	P	P	18 02 50.9	+1.7
MORW	Morawa	60.52	247	P	P	18 03 02.0	-0.8
MORW				IAmb	IAmb	18 03 06.5	
	comp=Z,12nm,1.4s						
MJAR	Matsushiro Arr	69.91	323	P	P	18 03 59.9	-1.6
	comp=Z,0.9nm,0.5s,baz=142,slow=6.2,SNR=4.2						
	comp=Z,0.9nm,0.5s						
QSPA	South Pole Qui	70.28	180	P	P	18 04 04.5	+1.2
QSPA	South Pole Qui	70.28	180	P	P	18 04 04.3	+1.0
	comp=Z,2.1nm,0.7s,baz=355,slow=0.7,SNR=14						
	comp=Z,2.1nm,0.7s						
NVAR	Mina Array Bea	80.19	43	P	P	18 05 00.6	+1.5
	comp=Z,0.3nm,0.6s,baz=287,slow=4.4,SNR=1.6						
	comp=Z,0.3nm,0.6s						
ILAR	Eielson Array	87.52	13	P	P	18 05 32.7	-1.6
	comp=Z,0.3nm,0.6s,baz=205,slow=4.9,SNR=4.2						
	comp=Z,0.3nm,0.6s						
SNAA	Sanae	88.71	178	P	P	18 05 39.5	-0.5
	comp=Z,0.4nm,0.7s,baz=240,slow=8.1,SNR=1.1						
	comp=Z,0.4nm,0.7s						
CMAR	Chiang Mai Arr	90.31	289	P	P	18 05 48.7	+0.4
	comp=Z,0.5nm,0.3s,baz=98,slow=5.4,SNR=6.3						
	comp=Z,0.5nm,0.3s						
MKAR	Makanchi Array	111.04	314	PKiKP	PKiKP	18 11 16.4	0.0
	comp=Z,0.2nm,0.5s,baz=99,slow=1.2,SNR=2.6						
KURBB	Kurchatov Arra	113.83	317	PKiKP	PKiKP	18 11 21.6	+0.1
	comp=Z,0.3nm,0.6s,baz=78,slow=2.0,SNR=5.9						
BVAR	Borovoye Array	118.83	320	PKP	PKPdf	18 11 29.5	-1.6
	comp=Z,0.4nm,0.5s,baz=45,slow=2.4,SNR=2.5						
BRTR	Keskin Array B	146.69	313	PKPbc	PKPdf	18 12 25.0	+1.6
	comp=Z,0.9nm,0.6s,baz=143,slow=4.3,SNR=5.4						
MMAI	Mount Meron Ar	147.85	301	PKPbc	PKPbc	18 12 29.2	+0.1
	comp=Z,0.7nm,0.3s,baz=113,slow=9.6,SNR=3.2						
GERES	GERESS Array B	149.63	345	PKPbc	PKPbc	18 12 32.3	-0.8
	comp=Z,1.0nm,0.8s,baz=8.5,slow=2.7,SNR=8.1						

IDC 19 18:06:33.3±3.0, 31°.66S×177°.79W, h0^{km}, mb3.8/2, mbtmp3.8/3, ML3.1/1, Error ellipse: s-maj=70.5km s-min=36.7km az=117.0, Kermadec Islands region

```
Code  Station Name        Δ°    AZ°  Phase ID              Time      Res
                                     Op      ISC          h  m  s    ISC
URZ   Urewera             7.80 211   Pn      Pn           18 08 28.2 +0.1
      0.3nm,0.3s,baz=45,slow=17,SNR=1.9
URZ                                  Sn      Sn           18 09 56.8 -0.3
      0.3nm,0.3s,baz=319,slow=6.2,SNR=1.8
      6.0nm,0.8s
ASAR  Alice Springs      43.23 268   P       P            18 14 36.4 -0.2
      0.5nm,0.5s,baz=103,slow=7.3,SNR=6.8
      0.5nm,0.5s
WRA   Warramunga Arr     44.34 273   P       P            18 14 45.4  0.0
      0.8nm,0.3s,baz=111,slow=8.0,SNR=20
      0.8nm,0.3s
QSPA  South Pole Qui     58.46 180   P       P            18 16 40.2 +9.4
      2.8nm,1.0s,baz=26,slow=4.4,SNR=5.6
FINES FINESS Array B    146.38 339   PKPbc   PKPdf        18 26 14.5 +0.4
      0.8nm,0.5s,baz=53,slow=4.3,SNR=9.4
```

IDC 19 18:15:11.3±2.3**, 30°.27S**×**178°.08W, h0**km**, mb3.7**/3**, mbtmp3.7**/3**, Error ellipse: s-maj=64.5km s-min=42.5km az=40.0, Kermadec Islands**

```
Code  Station Name        Δ°    AZ°  Phase ID              Time      Res
                                     Op      ISC          h  m  s    ISC
ASAR  Alice Springs      43.05 267   P       P            18 23 12.2 -0.9
      0.3nm,0.6s,baz=106,slow=7.2,SNR=6.9
      0.3nm,0.6s
WRA   Warramunga Arr     44.02 272   P       P            18 23 20.7 -0.3
      0.2nm,0.4s,baz=111,slow=8.1,SNR=5.7
      0.2nm,0.4s
QSPA  South Pole Qui     59.84 180   P       P            18 25 19.6 +1.1
      5.6nm,1.4s,baz=157,slow=5.9,SNR=2.1
      5.6nm,1.4s
FINES FINESS Array B    145.00 340   PKPbc   PKPbc        18 34 48.1 -1.0
      1.7nm,1.1s,baz=57,slow=5.0,SNR=3.9
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*GCG **19** 18:15:49.6±1.1, 13°.97N×93°.25W, h35km±112km, MD4.4, ML3.9*

*MEX **19** 18:15:52.3±0.7, 14°.27N×93°.33W, h16km±398km, MD4.0*

ISC 19 18:15:47.3±2.6**, 14°.2N**±0°.1×**93°.29W**±0°.08**, h28**km±15km**, n13, σ1.s59**/24**, Near coast of Chiapas**

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Code  Station Name        Δ°    AZ°  Phase ID              Time      Res
                                     Op      ISC          h  m  s    ISC
THIG                      1.21  55   eP      Pb           18 16 10.9 +1.4
THIG                                 eS      Sb           18 16 22.6 -2.2
PATR  El Naranjo          1.36  49   eP      Pb           18 16 12.8 +0.6
PATR                                 eS      Sn           18 16 29.1 +1.2
PAVE  Pavencul            1.45  48   eP      Pb           18 16 14.5 +0.7
PAVE                                 eS      Sb           18 16 32.2 +0.2
PCIG                      1.48   3   eP      Pb           18 16 14.5 +0.3
PCIG                                 i S     Sb           18 16 30.9 -1.8
RTAL  Retalhuleu          1.58  79   eP      Pb           18 16 16.3 +0.5
RTAL                                 eS      Sn           18 16 31.7 -1.3
STG8  El Palmar, Qui      1.90  83   i P     Pn           18 16 18.6 +0.6
STG8                                 i S     Sb           18 16 43.5 -1.2
STG8                                  IAML                18 16 45.2
      comp=N,517nm,0.3s
STG0  El Palmar, Qui      1.90  83   i P     Pn           18 16 18.6 +0.5
STG0                                 i S     Sn           18 16 39.9 -1.3
STG0                                  IAML                18 16 45.5
      comp=E,989nm,0.3s
HUEH  Huehuetenango       2.05  57   i S     Sn           18 16 42.4 -2.4
CCIG  Comitan             2.34  28   eP      Pb           18 16 29.8 +0.9
CCIG                                 eS      Sb           18 16 58.5 +1.1
CCIG  Comitan             2.34  28   i P     Pb           18 16 29.9 +1.0
CCIG                                 i S     Sb           18 17 00.2 +2.8
CCIG                                  AMP                 18 17 05.2
      comp=N,4µm,0.4s
TGIG                      2.55   4   eP      Pb           18 16 32.1 -0.4
TGIG                                 i S     Sb           18 16 59.8 -3.7
TGIG                      2.55   4   i P     Pb           18 16 32.1 -0.4
TGIG                                 i S     Sb           18 17 03.2 -0.3
TGIG                                  IAML                18 17 06.5
      comp=E,185nm,0.6s
JAUV  Jalcomulco          6.13 327   eP      Pn           18 17 21.8 +5.7
JAUV                                 eS      Sn           18 18 26.6 +1.3
```

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*IDC **19** 18:40:44.4±0.8, 2°.20S×138°.50E, h0km, mb3.8/8, mbtmp3.8/10, ML3.9/2, MS4.4/1, Error ellipse: s-maj=23.4km s-min=18.5km az=74.0*

*DJA **19** 18:40:47.9±0.5, 2°S±4°×13°9E±°, h21km±4km, M4.3/8, mb4.5/1, MLv4.2/8*

ISC 19 18:40:46.9±1.6**, 2°.30S**±0°.08×**138°.49E**±0°.04**, h17**km±11km**, n20, σ1.s27**/25**, mb3.8**/7**, Irian Jaya**

```
Code  Station Name        Δ°    AZ°  Phase ID              Time      Res
                                     Op      ISC          h  m  s    ISC
SMPI  Sarmi               0.37  36   P       Pg           18 40 53.9 -0.7
GENI  Genyem              1.70 100   P       Pb           18 41 17.3 -0.4
GENI                                 S       Sb           18 41 40.3 +1.5
JAY   Jayapura            2.22  96   Pn      Pn           18 41 23.6 +0.6
      19nm,0.3s,baz=235,slow=10,SNR=96
JAY                                  Sn      Sn           18 41 50.0 -0.2
      18nm,0.3s,baz=183,slow=17,SNR=10
      34nm,0.3s
JAY   Jayapura            2.22  96   P       Pn           18 41 23.7 +0.7
JAY                                  S       Sn           18 41 50.5 +0.4
SRPI  Serui, Papua        2.29 281   P       Pn           18 41 23.9  0.0
SRPI                                 S       Sn           18 41 52.2 +0.4
BAKI  Biak                2.62 295   P       Pn           18 41 29.2 +0.7
BAKI                                 S       Sn           18 41 59.8 -0.2
RKPI  Ransiki, Papua      4.38 280   P       Pn           18 41 52.5 -0.2
FAKI  Fak Fak             6.27 264   P       Pn           18 42 20.2 +1.5
BATI  Baumata            16.70 241   Pn      P            18 44 45.3 +2.7
      3.5nm,0.3s,baz=14,slow=8.3,SNR=5.2
WRA   Warramunga Arr     18.00 193   P       Pn           18 44 56.2 -0.3
      0.6nm,0.3s,baz=15,slow=12,SNR=21
WRA                                  S       Sn           18 48 13.4 -3.7
      0.6nm,0.7s,baz=19,slow=24,SNR=1.5
      1.2nm,0.4s
FITZ  Fitzroy Crossi     20.14 218   P       Pn           18 45 22.1 -0.2
      2.7nm,0.9s,baz=68,slow=6.1,SNR=9.0
FITZ                                 S       S            18 48 58.5 -7.6
      4.9nm,0.9s,baz=123,slow=17,SNR=7.0
      2.7nm,0.9s
ASAR  Alice Springs      21.70 191   P       P            18 45 37.7 +0.4
      1.5nm,0.6s,baz=15,slow=11,SNR=32
ASAR                                 S       S            18 49 35.7 -1.4
      1.0nm,0.7s,baz=16,slow=24,SNR=4.8
      1.5nm,0.6s
STKA  Stephens Creek     29.57 175   P       P            18 46 52.0 +1.0
      1.3nm,0.6s,baz=360,slow=7.7,SNR=4.3
      1.3nm,0.6s
ASAJ  Asahikawa          46.35   4   LR      LR           19 09 26.5
      comp=Z,412nm,18.1s,baz=341,slow=37
MKAR  Makanchi Array     69.33 322   P       P            18 51 53.8 +0.2
      0.6nm,0.8s,baz=111,slow=6.6,SNR=6.6
      0.6nm,0.8s
KURBB Kurchatov Arra     73.27 325   P       P            18 52 16.6 -0.7
      0.5nm,0.8s,baz=114,slow=5.6,SNR=6.1
      0.5nm,0.8s
BVAR  Borovoye Array     78.85 325   P       P            18 52 49.1  0.0
      1.2nm,0.6s,baz=116,slow=6.9,SNR=6.9
      1.2nm,0.6s
ILAR  Eielson Array      85.55  24   P       P            18 53 22.8 -1.1
      0.3nm,0.7s,baz=269,slow=3.5,SNR=4.1
      0.3nm,0.7s
QSPA  South Pole Qui     87.65 180   P       P            18 53 34.7 +0.4
      0.7nm,0.7s,baz=19,slow=1.7,SNR=1.8
      0.7nm,0.7s
LPAZ  La Paz            147.86 126   PKPbc   PKiKP        19 00 34.1 -0.8
      1.0nm,0.7s,baz=211,slow=3.0,SNR=6.2
```

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*TEH **19** 18:42:35.6, 34°.38N×57°.17E, h9km±14km*

*IDC **19** 18:42:40.2±4.2, 34°.95N×57°.07E, h0km, mb3.2/4, mbtmp3.4/7, ML3.5/3, Error ellipse: s-maj=82.3km s-min=22.5km az=169.0*

ISC 19 18:42:36.6±0.7**, 34°.38N**±0°.03×**57°.21E**±0°.04**, h10**km**, n60, σ1.s63**/59**, mb3.0**/3**, Northern and central Iran**

```
Code  Station Name        Δ°    AZ°  Phase ID              Time      Res
                                     Op      ISC          h  m  s    ISC
TAPT  Tabas- Tapeh t      0.51 355   Pg      Pg           18 42 46.0 -0.5
TNSJ  Nastanj             0.65 230   Pg      Pg           18 42 47.8 -1.4
TPRV  Parvadeh(Tabas      1.42 198   Pg      Pg           18 43 02.3 -1.5
AFRZ  Afriz               1.78 122   Pg      Pb           18 43 09.0 -0.4
ITEG  Tejag               1.96 139   Pn      Pb           18 43 11.4 -1.1
TBHD  Torbat heydari      1.96  58   Pn      Pb           18 43 11.3 -1.2
SBZV  Sabzevar            2.03   9   Pn      Pb           18 43 12.3 -1.5
IMOG  Moghan              2.45  45   Pn      Pb           18 43 18.4 -2.6
IKOO  Kooshah             2.46 142   Pn      Pn           18 43 18.3 +1.2
IPAY  Payeh               2.53  35   Pn      Pn           18 43 19.3 +1.3
IAKL  Akhelmad            2.55  29   Pn      Pn           18 43 19.7 +1.3
SHRT  Shahrakht           2.66 105   Pn      Pn           18 43 21.1 +1.5
TBJM  Torbat-e-JAM        2.71  70   Pn      Pn           18 43 22.0 +1.5
ISFR  Sfrayin             2.74  13   Pn      Pn           18 43 22.5 +1.5
IDAH  Dahanechah          2.76 126   Pn      Pn           18 43 22.7 +1.6
BSRN  Basiran             2.90 146   Pn      Pn           18 43 24.0 +1.1
JRKH  Jarkhoshk           2.99  58   Pn      Pn           18 43 26.0 +1.8
IKRD  Kardeh              3.04  38   Pn      Pn           18 43 26.6 +1.6
IMYA  Miami               3.07  50   Pn      Pn           18 43 27.2 +1.8
ANAR  Anarak              3.13 249   Pn      Pn           18 43 26.3 +0.1
ICHK  Chekchek            3.17 229   Pn      Pn           18 43 27.5 +0.7
IMND  Minoodasht          3.22 333   Pn      Pn           18 43 28.5 +1.3
IEMG  Emamgholi           3.25  21   Pn      Pn           18 43 28.8 +0.9
MRVT  Maraveh tapeh       3.40 345   Pn      Pn           18 43 30.9 +1.1
ZRDN  Zarand Kerman       3.45 190   Pn      Pn           18 43 31.9 +1.2
ILAS  Lasjerd             3.63 287   Pn      Pn           18 43 34.3 +1.1
IMEH  Mehriz              3.70 217   Pn      Pn           18 43 35.2 +1.1
NHDN  Nehbandan           3.82 140   Pn      Pn           18 43 37.4 +1.8
ISAD  Sadrabad            3.85 231   Pn      Pn           18 43 36.7 +0.6
KRM1  Kerman Provinc      3.87 179   Pn      Pn           18 43 37.6 +1.3
IFIR  Firoozkooh          3.87 290   Pn      Pn           18 43 36.4  0.0
KHGB  Koh Gabri           4.04 189   Pn      Pn           18 43 40.2 +1.5
ISFB  Sefidab             4.11 271   Pn      Pn           18 43 40.4 +0.8
KRSH  Karshahi            4.23 266   Pn      Pn           18 43 42.0 +0.7
IZEF  Zefreh              4.33 251   Pn      Pn           18 43 43.0 +0.3
IPRN  Peran               4.40 296   Pn      Pn           18 43 44.4 +0.8
KRBR  Kerman              4.40 185   Pn      Pn           18 43 45.4 +1.6
IDMV  Damavand            4.42 287   Pn      Pn           18 43 45.0 +1.0
CHMN  Cheshme madani      4.51 176   Pn      Pn           18 43 46.9 +1.5
IVRN  Varamin             4.56 279   Pn      Pn           18 43 46.5 +0.7
IGAR  Gharneh             4.75 247   Pn      Pn           18 43 48.8 +0.3
IRAM  Ramesheh            4.79 239   Pn      Pn           18 43 50.0 +0.9
IKLH  Kolahrood           4.80 259   Pn      Pn           18 43 49.8 +0.5
QAMS  Qamsar              4.87 264   Pn      Pn           18 43 50.7 +0.5
MZPU  Pul - Mazandar      5.04 296   Pn      Pn           18 43 54.2 +1.7
IQOM  Qom                 5.08 277   Pn      Pn           18 43 53.5 +0.4
KBAM  BAM                 5.33 168   Pn      Pn           18 43 57.2 +0.8
KLST  Kelardasht - M      5.46 295   Pn      Pn           18 43 59.5 +1.2
IPIR  Pirpir              5.54 254   Pn      Pn           18 44 00.9 +1.5
ZNGN  Zangian             5.78 249   Pn      Pn           18 44 04.4 +1.6
KLNJ  Kolanjah            5.81 236   Pn      Pn           18 44 05.0 +1.8
JHBN  Jahan bin           5.88 250   Pn      Pn           18 44 05.2 +1.1
KBZ   Khabaz             14.50 314   Pn      Pn           18 46 03.7 +1.9
      0.2nm,0.3s,baz=45,slow=7.9,SNR=1.7
      0.5nm,0.4s
KSH   Kashi              15.85  66   P       Pn           18 46 13.6 -6.3
KSH                                  pmax    pmax
      comp=Z,2.0nm,0.7s
MMAI  Mount Meron Ar     18.20 272   P       P            18 46 54.0 +4.3
      comp=Z,0.4nm,0.3s,baz=114,slow=27,SNR=2.3
      comp=Z,1.9nm,0.8s
BRTR  Keskin Array B     19.53 293   P       Pn           18 47 06.8 +1.1
      comp=Z,0.1nm,0.3s,baz=85,slow=16,SNR=4.0
      comp=Z,0.6nm,0.9s
BVAR  Borovoye Array     20.87  23   P       Pn           18 47 19.6 -1.6
      comp=Z,2.3nm,0.6s,baz=206,slow=11,SNR=12
      comp=Z,2.3nm,0.6s
KURBB Kurchatov Arra     22.47  37   P       P            18 47 37.2 +1.4
      comp=Z,0.6nm,0.5s,baz=235,slow=11,SNR=13
      comp=Z,0.6nm,0.5s
MKAR  Makanchi Array     22.62  49   P       P            18 47 39.0 +1.5
      comp=Z,0.3nm,0.6s,baz=238,slow=9.3,SNR=4.8
      comp=Z,0.3nm,0.6s
AKASG Malin Array Be     26.07 317   P       P            18 48 09.0 -1.2
      comp=Z,0.1nm,0.3s,baz=128,slow=8.8,SNR=5.5
      comp=Z,0.1nm,0.3s
```

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*IDC **19** 18:43:42.5±1.0, 59°.67S×26°.69W, h0km, mb3.9/5, mbtmp4.0/6, ML4.4/1, Error ellipse: s-maj=36.5km s-min=22.4km az=61.0*

ISC 19 18:43:48.8±0.9**, 60°.0S**±0°.1×**26°.5W**±0°.2**, h50**km**, n23, σ3.s45**/18**, mb3.9**/5**, 2C-6D, South Sandwich Islands region**

```
Code  Station Name        Δ°    AZ°  Phase ID              Time      Res
                                     Op      ISC          h  m  s    ISC
VNA1  Neumayer--Stat     13.01 152  ⇓P       Pn           18 46 52.1 +1.6
      comp=Z,46nm,0.2s
VNA1                                ⇓S       Sn           18 49 10.9 -2.7
VNA3  Neumayer Olymp     13.15 156  ⇓P       Pn           18 46 53.3 +0.8
      comp=Z,13nm,0.2s
VNA3                                ⇑S       Sn           18 49 12.8 -4.1
VNA2  Neumayer--Watz     13.41 152  ⇓P       Pn           18 46 56.6 +0.5
      comp=Z,6.7nm,0.2s,baz=320,slow=15
SNAA  Sanae              15.00 151  ⇓P       Pn           18 47 18.4 +1.0
      comp=Z,24nm,0.2s
SNAA                                ⇑S       Sn           18 49 58.9 -3.2
SNAA  Sanae              15.00 151   Pn      Pn           18 47 18.9 +1.6
      comp=Z,1.4nm,0.3s,baz=37,slow=6.4,SNR=91
SNAA                                 Sn      Sn           18 49 52.5  -10
      comp=Z,0.4nm,0.3s,baz=14,slow=20,SNR=5.6
      comp=Z,5.6nm,0.6s
TROLL Troll, Antarti     16.57 148  ⇓P       P            18 47 40.5 +1.2
      comp=Z,86nm,0.2s
QSPA  South Pole Qui     30.22 180   P       P            18 49 57.8 +3.5
      comp=Z,1.7nm,0.8s,baz=236,slow=3.0,SNR=9.4
      comp=Z,1.7nm,0.8s
PLCA  Paso Flores        33.26 285   P       P            18 50 20.7 -0.4
      comp=Z,1.8nm,0.8s,baz=52,slow=8.8,SNR=4.1
      comp=Z,1.8nm,0.8s
CFA   Coronel Fontan     39.60 297   P       P            18 51 11.3 -3.8
      comp=Z,0.9nm,0.4s,baz=135,slow=11,SNR=2.1
      comp=Z,0.9nm,0.4s
VNDA  Vanda              42.61 183   P       P            18 51 43.2 +3.9
      comp=Z,0.9nm,0.8s,baz=176,slow=4.5,SNR=3.9
      comp=Z,0.9nm,0.8s
H04S2 CROZET ISLANDS     45.69 110   T       T            19 42 36.0
      baz=225,slow=75,SNR=12
H04S3 CROZET ISLANDS     45.70 110   T       T            19 42 35.2
      baz=225,slow=75,SNR=12
H04S1 CROZET ISLANDS     45.71 110   T       T            19 42 34.0
      baz=225,slow=75,SNR=17
H10S2 ASCENSION HYDR     51.73  15   T       T            19 48 47.8
      baz=188,slow=74,SNR=6.8
H10S3 ASCENSION HYDR     51.73  15   T       T            19 48 48.1
      baz=32,slow=74,SNR=3.2
H10N1 ASCENSION HYDR     52.84  15   T       T            19 49 47.3
      baz=194
H10N3 ASCENSION HYDR     52.85  15   T       T            19 49 52.7
      baz=194
H10N2 ASCENSION HYDR     52.86  15   T       T            19 49 58.8
      baz=194
LPAZ  La Paz             53.04 307   P       P            18 52 59.8 -1.5
      comp=Z,0.4nm,0.3s,baz=133,slow=7.6,SNR=1.6
      comp=Z,0.4nm,0.3s
TORD  Torodi Ar. Bea     76.36  28   P       P            18 55 33.4 +1.0
      comp=Z,85nm,0.3s,baz=192,slow=5.5,SNR=1.6
ZALV  Zalesovo Beam     143.63  68   PKhKP   PKPpre       19 03 14.0
      comp=Z,0.5nm,0.4s,baz=238,slow=5.2,SNR=2.7
SONM  Songino Array     150.36  93   PKPbc   PKPbc        19 03 33.4 -0.1
      comp=Z,1.0nm,0.9s,baz=222,slow=2.0,SNR=6.3
ILAR  Eielson Array     152.91 306   PKPbc   PKPbc        19 03 38.4 -0.3
      comp=Z,0.2nm,0.5s,baz=128,slow=1.5,SNR=2.6
```

IDC 19 18:45:17.1±8.2**, 32°.95S**×**176°.73W, h0**km**, mb3.3**/2**, mbtmp3.3**/2**, MS3.8**/1**, Error ellipse: s-maj=392.6km s-min=65.6km az=161.0, South of Kermadec Islands**

```
Code  Station Name        Δ°    AZ°  Phase ID              Time      Res
                                     Op      ISC          h  m  s    ISC
URZ   Urewera             7.29 222   LR      LR           18 49 41.4
      comp=Z,802nm,21.4s,baz=206,slow=36
ASAR  Alice Springs      44.10 269   P       P            18 53 26.6 -0.8
      0.4nm,1.0s,baz=113,slow=8.5,SNR=1.6
      0.4nm,1.0s
WRA   Warramunga Arr     45.31 274   P       P            18 53 37.6 +0.5
      0.2nm,0.5s,baz=117,slow=8.5,SNR=5.0
      0.2nm,0.5s
FINES FINESS Array B    147.90 339   PKPbc   PKPbc        19 05 02.6 -0.9
      0.6nm,0.7s,baz=50,slow=6.8,SNR=2.1
```

IDC 19 18:51:35.7±2.4**, 6°.53S**×**130°.53E, h0**km**, mb3.2**/1**, mbtmp3.5**/4**, ML3.6**/3**, MS3.8**/1**, Error ellipse: s-maj=88.6km s-min=30.4km az=78.0, Banda Sea**

```
Code  Station Name        Δ°    AZ°  Phase ID              Time      Res
                                     Op      ISC          h  m  s    ISC
FITZ  Fitzroy Crossi     12.45 202   Pn      Pn           18 54 34.4 +0.1
      0.2nm,0.3s,baz=21,slow=9.8,SNR=8.6
FITZ                                 Sn      Sn           18 56 39.0  -15
      0.6nm,0.3s,baz=83,slow=17,SNR=8.1
FITZ                                 LR      LR           19 00 09.7
      comp=Z,505nm,21.1s,baz=194,slow=41
      1.0nm,0.4s
WRA   Warramunga Arr     13.84 165   Pn      Pn           18 54 53.3 -0.1
      0.3nm,0.3s,baz=348,slow=14,SNR=16
WRA                                  Sn      Sn           18 57 17.5  -10
      0.3nm,0.3s,baz=331,slow=23,SNR=5.1
      0.8nm,0.5s
ASAR  Alice Springs      17.35 170   P       Pn           18 55 39.4  0.0
      0.2nm,0.3s,baz=346,slow=9.7,SNR=16
ASAR                                 S       Sn           18 58 41.9  -11
      0.2nm,0.7s,baz=76,slow=26,SNR=1.7
      0.3nm,0.4s
MKAR  Makanchi Array     68.12 326   P       P            19 02 37.6  0.0
      0.1nm,0.4s,baz=127,slow=7.1,SNR=2.1
      0.1nm,0.4s
```

DJA 19 18:52:07.7±1.0**, 4°S**±5°×**14°0E**±°**, h16**km±12km**, M4.1**/6**, mb4.5**/1**, MLv3.8**/6**, Irian Jaya**

```
Code  Station Name        Δ°    AZ°  Phase ID              Time      Res
                                     Op      ISC          h  m  s    ISC
GENI  Genyem              0.96 355   P       Pb           18 52 25.7 -0.4
GENI                                 S       Sn           18 52 40.0  0.0
JAY   Jayapura            1.13  24   P       Pn           18 52 28.3 -0.7
JAY                                  S       Sg           18 52 44.5  0.0
WAMI  Wamena              1.57 258   P       Pn           18 52 33.4 -1.5
WAMI                                 S       Sn           18 52 51.5 -3.4
SMPI  Sarmi               2.19 315   P       Pn           18 52 44.3 +0.8
SMPI                                 S       Sn           18 53 11.3 +1.0
SRPI  Serui, Papua        4.34 293   P       Pn           18 53 13.4 +0.3
BAKI  Biak                4.76 300   P       Pn           18 53 18.0 -0.9
BAKI                                 S       Sn           18 54 14.5 +0.7
RKPI  Ransiki, Papua      6.40 288   P       Pn           18 53 40.3 -1.1
```

DJA 19 19:06:10.6±0.9**, 2°S**±9°×**13°9E**±°**, h11**km±4km**, M3.8**/7**, mb4.3**/1**, MLv3.6**/7**, Near north coast of Irian Jaya**

```
Code  Station Name        Δ°    AZ°  Phase ID              Time      Res
                                     Op      ISC          h  m  s    ISC
SMPI  Sarmi               0.30 152   P       Pb           19 06 17.7 -0.4
GENI  Genyem              1.82 119   P       Pn           19 06 41.2 -0.6
GENI                                 S       Sb           19 07 05.8 -0.9
JAY   Jayapura            2.27 110   P       Pn           19 06 48.3 +0.1
JAY                                  S       Sn           19 07 17.2 +0.9
SRPI  Serui, Papua        2.33 266   P       Pn           19 06 49.0  0.0
SRPI                                 S       Sn           19 07 18.7 +1.0
BAKI  Biak                2.52 282   P       Pn           19 06 51.5  0.0
BAKI                                 S       Sn           19 07 23.1 +0.9
RKPI  Ransiki, Papua      4.40 273   P       Pn           19 07 17.6 +0.3
FAKI  Fak Fak             6.43 259   P       Pn           19 07 45.0 -0.3
```

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*IDC **19** 19:13:41.9±1.1, 30°.37S×177°.76W, h0km, mb4.3/4, mbtmp4.3/4, Error ellipse: s-maj=34.2km s-min=31.0km az=178.0*

ISC 19 19:13:45.0±1.3**, 30°.78S**±0°.07×**177°.6W**±0°.2**, h35**km**, n32, σ1.s30**/36**, mb4.3**/4**, Kermadec Islands**

```
Code  Station Name        Δ°    AZ°  Phase ID              Time      Res
                                     Op      ISC          h  m  s    ISC
GLKZ  Green Lake          1.54 349   P       Pn           19 14 10.2 +0.2
GLKZ                                 S       Sn           19 14 26.4 -2.4
RIZ   Raoul Island        1.56 349   P       Pn           19 14 10.0 -0.3
RIZ                                  S       Sn           19 14 28.0 -1.3
MXZ   Matakaoa Point      7.58 206   P       Pn           19 15 31.7 -1.2
MXZ                                  S       Sn           19 16 56.5 -1.0
WMGZ  Waiomatatini S      7.76 204   P       Pn           19 15 34.8 -0.7
WMGZ                                 S       Sn           19 17 03.5 +1.3
HAZ   Te Kaha             7.95 208   P       Pn           19 15 37.9 -0.1
PUZ   Puketiti            8.04 204   S       Sn           19 17 07.9 -1.3
RUGZ  Raukumara Rang      8.17 207   P       Pn           19 15 40.5 -0.6
RUGZ                                 S       Sn           19 17 14.0 +1.8
TWGZ  Tauwhareparae       8.24 205   P       Pn           19 15 41.3 -0.8
CNGZ  Carnagh Statio      8.43 203   P       Pn           19 15 44.0 -0.6
WCZ   Waipu Caves         8.49 231   P       Pn           19 15 52.7 +7.3
MWZ   Matawai             8.55 207   P       Pn           19 15 45.1 -1.2
MWZ                                  S       Sn           19 17 20.1 -1.4
OUZ   Omahuta             8.63 237   P       Pn           19 15 53.4 +6.0
URZ   Urewera             8.65 209   Pn      Pn           19 15 44.9 -2.7
      0.5nm,0.3s,baz=43,slow=20,SNR=1.5
URZ                                  Sn      Sn           19 17 22.2 -1.7
      3.1nm,0.3s,baz=42,slow=18,SNR=7.3
URZ   Urewera             8.65 209   P       Pn           19 15 46.5 -1.1
URZ                                  S       Sn           19 17 21.8 -2.1
RIGZ  Rimuhau             8.79 205   P       Pn           19 15 49.1 -0.5
RIGZ                                 S       Sn           19 17 26.3 -1.0
TOZ   Tahuroa Road        8.99 218   P       Pn           19 15 53.1 +0.8
SNGZ  Shannon Statio      9.01 206   P       Pn           19 15 51.8 -0.8
SNGZ                                 S       Sn           19 17 31.4 -1.4
MTHZ  Maungataniwha       9.27 208   P       Pn           19 15 57.6 +1.4
MTHZ                                 S       Sn           19 17 36.7 -2.4
MRZ   Mangatainoka R     11.31 208   P       Pn           19 16 18.6 -5.6
STKA  Stephens Creek     34.75 257   P       P            19 20 34.2 +2.2
      8.4nm,0.6s,baz=102,slow=11,SNR=20
      8.4nm,0.6s
ASAR  Alice Springs      43.45 267   P       P            19 21 45.5 +0.5
      0.8nm,0.3s,baz=105,slow=7.2,SNR=44
      0.8nm,0.3s
WRA   Warramunga Arr     44.48 272   P       P            19 21 53.1  0.0
      2.6nm,0.3s,baz=111,slow=8.1,SNR=70
      2.6nm,0.3s
QSPA  South Pole Qui     59.33 180   P       P            19 23 48.3 +5.0
      1.3nm,0.9s,baz=23,slow=0.9,SNR=28
      1.3nm,0.9s
H03S2 Juan Fernandez     79.95 123   T       T            20 55 00.7
      baz=238,slow=74,SNR=10
H03S1 Juan Fernandez     79.96 123   T       T            20 55 01.2
      baz=238,slow=74,SNR=10
H03S3 Juan Fernandez     79.97 123   T       T            20 55 07.3
      baz=238,slow=74,SNR=10
FINES FINESS Array B    145.63 340   PKPbc   PKPab        19 33 20.2 +0.7
      2.1nm,0.5s,baz=56,slow=4.0,SNR=25
NB2   NORSAR Subarra    149.18 352   PKP     PKiKP        19 33 30.8 +0.5
      comp=Z,0.5nm,0.7s,baz=19,slow=4.3
NOA   NORSAR Array B    149.18 352   PKPbc   PKiKP        19 33 30.6 +0.3
      comp=Z,0.2nm,0.5s,baz=7.1,slow=3.6,SNR=3.7
HFS   Hagfors           149.69 349   PKPbc   PKiKP        19 33 31.6 +0.3
      comp=Z,1.2nm,0.7s,baz=64,slow=3.4,SNR=5.1
AKASG Malin Array Be    151.82 323   PKPbc   PKiKP        19 33 35.9 -0.1
      comp=Z,0.4nm,0.5s,baz=52,slow=0.7,SNR=4.3
MMAI  Mount Meron Ar    151.97 283   PKPbc   PKiKP        19 33 37.4 +0.4
      comp=Z,1.2nm,0.6s,baz=90,slow=6.3,SNR=3.8
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*SJA **19** 19:31:20.4±0.6, 19°.26S×69°.46W, h109km±3km, ML3.5, MW3.5*

*GUC **19** 19:31:22.2±0.6, 19°.23S×69°.43W, h100km±2km, ML3.5*

ISC 19 19:31:21.5±1.5**, 19°.28S**±0°.03×**69°.47W**±0°.07**, h108**km±9km**, n30, σ1.s17**/50**, Northern Chile**

```
Code  Station Name        Δ°    AZ°  Phase ID              Time      Res
                                     Op      ISC          h  m  s    ISC
GO01  Chusmiza            0.46 146   eP      Pn           19 31 38.2 -0.3
GO01                                 eS      Sn           19 31 50.9 -0.4
GO01  Chusmiza            0.46 146   eP      Pn           19 31 38.2 -0.3
GO01                                 eS      Sn           19 31 51.5 +0.2
PB11  IPOC Station P      0.51 201   i P     Pn           19 31 38.4 -0.2
PB11                                 eS      Sn           19 31 51.0 -0.2
PB11                                  IAML                19 31 51.6
      comp=N,4µm,0.2s
PB11  IPOC Station P      0.51 201   eP      Pn           19 31 38.3 -0.2
PB11                                 eS      Sn           19 31 51.2  0.0
PB11                                  IAML                19 31 51.7
      comp=Z,3µm,0.1s
PB08  IPOC Station P      0.90 161   eP      Pn           19 31 42.4 +0.3
PB08                                 eS      Sn           19 31 58.0 +0.5
PB08                                  IAML                19 31 58.9
      comp=E,1µm,0.1s
PB08  IPOC Station P      0.90 161   eP      Pn           19 31 42.1  0.0
PB08                                 eS      Sn           19 31 58.2 +0.7
PB08                                  IAML                19 32 01.5
      comp=Z,676nm,0.3s
PB16  IPOC Station P      0.94 358   eP      Pn           19 31 42.1 -0.6
PB16                                 eS      Sn           19 31 57.9 -0.6
PB16                                  IAML                19 31 58.6
      comp=E,1µm,0.3s
PB16  IPOC Station P      0.94 358   eP      Pn           19 31 42.1 -0.6
PB16                                 eS      Sn           19 31 58.3 -0.2
PB16                                  IAML                19 31 59.2
      comp=Z,679nm,0.4s
HMBC  Humberstone         1.06 202   eP      Pn           19 31 43.6 +0.2
HMBC                                 eS      Sn           19 32 00.3 +0.3
```

HMBC				IAML		19 32 04.3	
	comp=E,1µm,0.3s						
HMBC	Humberstone	1.06	202	*e*P	Pn	19 31 43.4	-0.1
HMBC				*e*S	Sn	19 32 01.3	+1.3
HMBC				IAML		19 32 06.5	
	comp=Z,1µm,0.7s						
TA02	Huaiquique	1.16	212	*e*P	Pn	19 31 44.4	0.0
TA02	Huaiquique	1.16	212	*e*P	Pn	19 31 44.9	+0.5
TA02				*e*S	Sn	19 32 03.1	+1.4
TA02				IAML		19 32 07.6	
	comp=Z,2µm,0.1s						
AP01	Chacalluta	1.23	318	*e*P	Pn	19 31 44.6	-0.5
AP01				*e*S	Sn	19 32 02.0	-0.9
AP01				IAML		19 32 06.2	
	comp=N,2µm,0.2s						
AP01	Chacalluta	1.23	318	*e*P	Pn	19 31 45.0	-0.2
AP01				*e*S	Sn	19 32 04.2	+1.2
AP01				IAML		19 32 13.5	
	comp=Z,858nm,0.1s						
TA01	Diego Aracena	1.44	208	*e*P	Pn	19 31 47.6	+0.1
TA01				*e*S	Sn	19 32 07.3	0.0
TA01				IAML		19 32 09.3	
	comp=E,649nm,0.2s						
TA01	Diego Aracena	1.44	208	*e*P	Pn	19 31 46.9	-0.6
TA01				*e*S	Sn	19 32 07.9	+0.6
TA01				IAML		19 32 14.0	
	comp=Z,240nm,0.3s						
PATCX	Punta Patache	1.66	203	*e*P	Pn	19 31 50.9	+0.6
PATCX				IAML		19 32 13.8	
	comp=E,456nm,0.1s						
PATCX	Punta Patache	1.66	203	*e*P	Pn	19 31 50.3	0.0
PATCX				*e*S	Sn	19 32 12.8	+0.6
PATCX				IAML		19 32 17.2	
	comp=Z,338nm,0.3s						
PB18	Visviri	1.69	360	*e*P	Pn	19 31 51.8	+0.7
PB18				IAML		19 32 24.3	
	comp=E,178nm,0.5s						
PB01	IPOC Station P	1.75	181	*e*P	Pn	19 31 51.7	+0.3
PB01				*e*S	Sn	19 32 14.9	+0.7
PB01				IAML		19 32 16.2	
	comp=E,664nm,0.2s						
PB01	IPOC Station P	1.75	181	*e*P	Pn	19 31 51.9	+0.4
PB01				*e*S	Sn	19 32 15.7	+1.5
PB01				IAML		19 32 17.2	
	comp=Z,385nm,0.2s						
PB09	IPOC Station P	2.51	175	*e*P	Pn	19 32 02.2	+1.0
PB09	IPOC Station P	2.51	175	*e*P	Pn	19 32 01.6	+0.4
PB09				*e*S	Sn	19 32 28.7	-2.9
PB09				IAML		19 32 56.9	
	comp=Z,115nm,1.0s						
PB03	IPOC Station P	2.76	186	*e*P	Pn	19 32 05.7	+1.1
PB03				IAML		19 32 39.0	
	comp=E,123nm,0.2s						
PB03	IPOC Station P	2.76	186	*e*P	Pn	19 32 05.4	+0.8
PB03				*e*S	Sn	19 32 31.7	-5.9
PB03				IAML		19 32 34.2	
	comp=Z,138nm,0.2s						
LPAZ	La Paz	3.24	23	*e*P	Pn	19 32 12.3	+1.0
PB06	IPOC Station P	3.41	182	*e*P	Pn	19 32 13.9	+0.9
PB06				IAML		19 33 11.9	
	comp=E,79nm,0.5s						
PB06	IPOC Station P	3.41	182	*e*P	Pn	19 32 13.7	+0.7
PB06				*e*S	Sn	19 32 41.5	-11
PB06				IAML		19 33 17.3	
	comp=Z,56nm,0.2s						
PB05	IPOC Station P	3.62	191	*e*P	Pn	19 32 16.0	+0.2
PB05				*e*S	Sn	19 32 45.7	-12
PB05				IAML		19 33 17.3	
	comp=Z,49nm,0.4s						
PB10	IPOC Station P	4.33	193	*e*P	Pn	19 32 25.1	-0.2
PB10				IAML		19 33 40.5	
	comp=Z,32nm,1.5s						

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*DJA **19** 19:41:46.5±0.6, 8°S±5°×12°5E±°, h374^{km}±6^{km}, M3.8/13, mb3.9/6, MLv3.7/13*

*IDC **19** 19:41:46.6±3.2, 7°.40S×125°.48E, h374^{km}±35^{km}, mb2.6/1, mbtmp3.5/5, Error ellipse: s-maj=88.7km s-min=16.9km az=61.0*

ISC 19 19:41:46.8±1.1, **7°.50S**±0°.07×**125°.5E**±0°.1, **h350**^{km}, **n16**, σ**1**^{s}**55**/22, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	2.53	208	P	Pn	19 42 43.9	+1.6
BATI	Baumata	3.23	213	P	Pn	19 42 50.6	+2.4
	12nm,0.3s,baz=104,slow=8.3,SNR=16						
BATI				S	S	19 43 39.2	+1.5
	35nm,0.3s,baz=190,slow=4.4,SNR=14						
BATI	Baumata	3.23	213	P	Pn	19 42 50.2	+1.9
BATI				S	S	19 43 39.9	+2.2
MMRI	Maumere	3.39	250	P	Pn	19 42 51.2	+1.4
MMRI				S	S	19 43 41.9	+1.3
BBSI	Bau Bau	3.51	305	P	Pn	19 42 53.2	+2.2
EDFI	Ende, Flores	3.94	251	P	Pn	19 42 55.1	-0.3
KDI	Kendari	4.52	321	P	Pn	19 43 02.6	+1.3
NLAI	Namlea	4.54	21	P	Pn	19 43 03.4	+1.9
BASI	Baing, Sumba	5.54	240	P	Pn	19 43 12.6	+0.2
WSI	Waingapu	5.55	247	P	Pn	19 43 12.6	0.0
	42nm,0.8s						
WBSI	Waikabubak, Su	6.38	250	P	Pn	19 43 20.7	-1.3
	0.1nm25nm,1.0s						
PLAI	Plampang	7.73	260	P	Pn	19 43 37.2	-0.6
FITZ	Fitzroy Crossi	10.53	179	P	Pn	19 44 11.4	+0.2
	3.2nm,0.4s,baz=14,slow=10,SNR=23						
FITZ				S	S	19 46 09.4	-0.2
	2.4nm,0.9s,baz=280,slow=15,SNR=1.4						
WRA	Warramunga Arr	15.06	146	P	P	19 45 01.6	-0.6
	0.5nm,0.9s,baz=327,slow=12,SNR=11						
WRA				S	S	19 47 43.0	-1.2
	0.6nm,0.7s,baz=326,slow=20,SNR=4.8						
ASAR	Alice Springs	18.00	154	P	P	19 45 33.8	0.0
	0.2nm,0.3s,baz=330,slow=9.6,SNR=11						
ASAR				S	S	19 48 42.2	+0.2
	0.4nm,0.7s,baz=325,slow=19,SNR=4.2						
MKAR	Makanchi Array	66.26	329	P	P	19 51 55.3	-3.1
	0.2nm,0.6s,baz=129,slow=5.7,SNR=2.4 0.2nm,0.6s						

IDC 19 19:45:34.2±7.1, **30°.86S**×**178°.01W**, **h0**^{km}, **mb3.5**/2, **mbtmp3.5**/2, **Error ellipse: s-maj=292.2km s-min=59.5km az=156.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.08	267	P	P	19 53 36.0	-0.2
	0.3nm,0.7s,baz=114,slow=8.3,SNR=6.4 0.3nm,0.7s						
WRA	Warramunga Arr	44.11	273	P	P	19 53 44.5	0.0
	0.6nm,0.4s,baz=114,slow=8.1,SNR=13 0.6nm,0.4s						
FINES	FINESS Array B	145.57	340	PKPbc	PKPdf	20 05 13.0	-0.7
	0.8nm,0.9s,baz=59,slow=4.9,SNR=4.5						

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*JMA **19** 19:46:51.6±0.3, 35°N±2°×13°7E±°, h336^{km}±2^{km}, MV2.7/30, MIKAWA BAY REGION*

*IDC **19** 19:46:51.8±1.6, 34°.69N×137°.25E, h331^{km}±56^{km}, mb2.7/5, mbtmp3.3/6, Error ellipse: s-maj=144.4km s-min=17.7km az=62.0*

ISC 19 19:46:52.2±0.9, **34°.66N**±0°.10×**136°.94E**±0°.09, **h327**^{km}±7^{km}, **n20**, σ**0**^{s}**75**/23, **mb2.9**/5, **Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAA	Atsumi	0.17	99	P	Pn	19 47 34.2	+0.7
JAA				*e*S	S	19 48 06.8	+0.5
JIE	Ise	0.33	216	P	Pn	19 47 34.2	+0.4
JIE				S	S	19 48 06.3	-0.4
JYTA	Yamagatataniai	0.95	350	P	Pn	19 47 35.7	+0.4
JWY	Kouya	1.20	249	*i* P	Pn	19 47 36.9	+0.3
JTNC	Tanabenakahech	1.38	233	P	Pn	19 47 37.7	+0.2
JWT	Wachi	1.41	297	*i* P	Pn	19 47 37.7	+0.2
JKG	Kaga	1.69	343	*e*P	Pn	19 47 39.3	+0.1
JRY	Ryogami san	2.10	49	P	Pn	19 47 43.0	+0.8
MAT	Matsushiro	2.15	28	*e*P	Pn	19 47 43.2	+0.7
MJAR	Matsushiro Arr	2.15	28	P	Pn	19 47 43.2	+0.7
	3.4nm,0.6s,baz=201,slow=7.9,SNR=16						
MJAR				S	S	19 48 20.7	-2.1
	1.0nm,0.5s,baz=304,slow=12,SNR=4.2						
JAI	Aioi	2.24	248	P	Pn	19 47 43.1	-0.2
JMN	Monobe	2.70	251	*e*P	Pn	19 47 47.1	-0.2
JAG	Ashikaga	2.70	49	*e*P	Pn	19 47 46.5	-0.7
JHS	Saijyo	3.17	277	P	Pn	19 47 51.6	+0.1
JOI	OKI	3.43	299	P	Pn	19 47 53.7	-0.2
SONM	Songino Array	26.28	309	P	P	19 51 59.9	+1.2
	0.5nm,0.7s,baz=115,slow=8.4,SNR=2.8 0.5nm,0.7s						
MKAR	Makanchi Array	42.35	304	P	P	19 54 15.7	+0.6
	0.2nm,0.5s,baz=98,slow=9.4,SNR=4.2 0.2nm,0.5s						
BVAR	Borovoye Array	49.51	313	P	P	19 55 10.1	-0.2
	0.2nm,0.3s,baz=92,slow=8.0,SNR=2.4 0.2nm,0.3s						
WRA	Warramunga Arr	54.35	183	P	P	19 55 45.5	-0.6
	0.4nm,0.4s,baz=360,slow=7.6,SNR=9.1 0.4nm,0.4s						
ASAR	Alice Springs	58.08	183	P	P	19 56 11.4	-0.6
	0.1nm,0.3s,baz=358,slow=5.8,SNR=7.8 0.1nm,0.3s						

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*IDC **19** 19:55:30.3±1.0, 28°.34N×104°.86E, h0^{km}, mb3.5/6, mbtmp3.4/8, ML3.3/2, Error ellipse: s-maj=32.7km s-min=18.7km az=63.0*

ISC 19 19:55:33.1±1.0, **28°.4N**±0°.1×**104°.9E**±0°.2, **h19**^{km}, **n8**, σ**0**^{s}**47**/8, **mb3.5**/6, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.26	210	Pn	Pn	19 58 13.2	+0.1
	baz=23,slow=15,SNR=2.0 0.5nm,0.9s						
SONM	Songino Array	19.48	3	P	P	19 59 58.4	-0.5
	0.3nm,0.3s,baz=182,slow=10,SNR=5.6 0.4nm,0.5s						
KSRS	Korea Array	21.33	59	P	P	20 00 19.5	+0.5
	1.2nm,0.8s,baz=249,slow=11,SNR=7.2 1.2nm,0.8s						
MKAR	Makanchi Array	25.51	322	P	P	20 01 01.0	+0.6
	0.9nm,0.8s,baz=126,slow=10,SNR=8.2 0.9nm,0.8s						
KURBB	Kurchatov Arra	29.84	325	P	P	20 01 38.9	-0.2
	0.6nm,0.8s,baz=131,slow=10,SNR=4.8 0.6nm,0.8s						
BVAR	Borovoye Array	35.37	324	P	P	20 02 27.5	+0.1
	0.2nm,0.5s,baz=123,slow=10,SNR=1.8 0.2nm,0.5s						
WRA	Warramunga Arr	55.84	146	P	P	20 05 09.5	0.0
	0.6nm,0.7s,baz=335,slow=7.7,SNR=7.0 0.6nm,0.7s						
ASAR	Alice Springs	58.82	149	P	P	20 05 30.1	-0.4
	0.4nm,0.6s,baz=329,slow=7.1,SNR=6.2 0.4nm,0.6s						

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*IDC **19** 20:09:42.1±2.3, 34°.65N×141°.12E, h45^{km}±19^{km}, mb3.4/9, mbtmp3.7/14, ML3.4/4, Error ellipse: s-maj=38.5km s-min=13.4km az=70.0*

*JMA **19** 20:09:47.7±0.2, 34°.7N±0°.6×140°.2E±0°.6, h74^{km}±1^{km}, MV3.4/38, SE OFF BOSO PENINSULA*

JMA Felt I J1 at SE OFF BOSO PENINSULA .

ISC 19 20:09:47.7±0.8, **34°.60N**±0°.04×**140°.32E**±0°.05, **h74**^{km}±7^{km}, **n49**, σ**1**^{s}**48**/56, **mb3.7**/9, **5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO3	Boso 3	0.26	38	⇓*i*P	Pn	20 09 59.2	+0.5
BSO3				⇓X		20 10 07.5	
BSO4	Boso 4	0.39	2	*i* P	Pn	20 10 00.1	+0.2
BSO4				X		20 10 09.4	
BSO1	Boso 1	0.55	84	⇓*i*P	Pn	20 10 01.9	+1.2
KTR	Katsuura	0.55	360	*i* P	Pn	20 10 01.2	-0.2
KTR				S	Sn	20 10 10.8	-0.6
TATJ	Tateyama 2	0.56	321	*i* P	Pn	20 10 01.4	0.0
TATJ				S	Sn	20 10 11.0	-0.6
JKUC	kamogawauchiur	0.57	350	*i* P	Pn	20 10 01.1	-0.4
JKUC				S	Sn	20 10 11.2	-0.6
JIM2	Oshima 3	0.74	280	⇓*i*P	Pn	20 10 02.4	-1.0
JIM2				⇓S	Sn	20 10 12.7	-2.3
JMYK	Miyake Tsubota	0.83	230	P	Pn	20 10 04.6	+0.2
JMYK				S	Sn	20 10 16.6	-0.1
JTHY	Toshimahigashi	0.85	265	*i* P	Pn	20 10 04.2	-0.4
JTHY				S	Sn	20 10 16.1	-1.0
JMKN	Mikurajimanish	0.93	221	*i* P	Pn	20 10 05.6	+0.1
JMKN				S	Sn	20 10 18.3	-0.4
JKO	Kozu shima	1.06	248	P	Pn	20 10 07.4	+0.3
JKO				S	Sn	20 10 21.4	-0.2
JIZS	Izushimoda	1.19	276	P	Pn	20 10 08.0	-0.8
JIZS				S	Sn	20 10 22.8	-1.8
JOD2	Odawara 2	1.21	304	*i* P	Pn	20 10 08.0	-1.1
JOD2				S	Sn	20 10 22.5	-2.5
JHJ2	Mitsune	1.54	196	P	Pn	20 10 14.3	+1.0
JHJ2	Mitsune	1.54	196	P	Pn	20 10 14.4	+1.1
JHJ2				S	Sn	20 10 33.5	+0.9
JYN	Shimob	1.71	302	*i* P	Pn	20 10 15.4	-0.2
JYN				S	Sn	20 10 36.0	-0.8
SHZ3	Shizuoka 3	1.80	286	P	Pn	20 10 16.8	0.0
SHZ3				*e*S	Sn	20 10 39.4	+0.6
JRY	Ryogami san	1.83	321	*i* P	Pn	20 10 16.9	-0.3
MJAR	Matsushiro Arr	2.59	319	P	Pn	20 10 27.8	+0.3
	4.2nm,0.3s,baz=151,slow=12,SNR=215						
MJAR				S	Sn	20 10 58.5	+0.5
	56nm,0.6s,baz=122,slow=33,SNR=5.0 20nm,0.4s						
MAJO	Matsushiro	2.59	319	P	Pn	20 10 28.4	+0.9
JGF	Kuroka	2.63	293	P	Pn	20 10 29.2	+1.3
INU	Inuyama	2.81	286	P	Pn	20 10 32.6	+2.2
JMM	Marumori	3.29	7	P	Pn	20 10 36.9	+0.1
JSD	Sado	3.81	335	P	Pn	20 10 43.8	-0.2
JMN	Monobe	5.41	263	P	Pn	20 11 07.9	+2.1
JTM	Tenmabayashi	6.21	5	P	Pn	20 11 16.5	-0.2
JCJ	Chichijima	7.65	167	P	Pn	20 11 30.3	-6.2
	21nm,0.4s						
JCJ				S	Sn	20 12 55.7	-5.8
JCJ	Chichijima	7.65	167	P	Pn	20 11 36.7	+0.3
ERM	Erimo	7.74	16	P	Pn	20 11 37.5	0.0
JEM	Erimo	7.74	16	P	Pn	20 11 38.6	+1.1
JNU	Nakatsue	7.99	262	P	Pn	20 11 43.7	+2.6
	0.8nm,0.3s,baz=73,slow=5.0,SNR=8.9 8.0nm,0.7s						
JNU	Nakatsue	7.99	262	P	Pn	20 11 43.7	+2.6
ASAJ	Asahikawa	9.67	10	P	Pn	20 11 55.4	-8.5
	0.3nm,0.3s,baz=195,slow=19,SNR=5.6						
ASAJ				S	Sn	20 13 35.6	-15
	0.5nm,0.3s,baz=175,slow=28,SNR=1.8 1.6nm,0.8s						
KSRS	Korea Array	10.44	289	P	Pn	20 12 18.1	+3.7
	0.2nm,0.3s,baz=106,slow=14,SNR=5.8 1.6nm,0.9s						
H11N2	WAKE ISLAND Hy	27.79	115	T	T	20 45 18.8	
	baz=308,slow=75,SNR=51						
H11N1	WAKE ISLAND Hy	27.80	115	T	T	20 45 20.0	
	baz=308,slow=75,SNR=33						
H11N3	WAKE ISLAND Hy	27.81	115	T	T	20 45 19.9	
	baz=308,slow=75,SNR=45						
H11S3	WAKE ISLAND Hy	28.40	118	T	T	20 46 04.4	
	baz=310,slow=75,SNR=18						
H11S1	WAKE ISLAND Hy	28.40	118	T	T	20 46 07.0	
	baz=310,slow=75,SNR=15						
H11S2	WAKE ISLAND Hy	28.42	118	T	T	20 46 09.1	
	baz=310,slow=75,SNR=9.5						
SONM	Songino Array	28.49	308	P	P	20 15 37.1	+1.1
	0.4nm,0.6s,baz=120,slow=7.1,SNR=2.3 0.4nm,0.6s						
ZALV	Zalesovo Beam	42.94	314	P	P	20 17 40.2	+1.2
	0.5nm,0.4s,baz=91,slow=5.8,SNR=2.5 0.5nm,0.4s						
MKAR	Makanchi Array	44.70	304	P	P	20 17 54.1	+0.8
	1.0nm,0.5s,baz=84,slow=10.0,SNR=17 1.0nm,0.5s						
KURBB	Kurchatov Arra	46.83	310	P	P	20 18 11.0	+1.0
	0.5nm,0.4s,baz=85,slow=7.4,SNR=7.0 0.5nm,0.4s						
BVAR	Borovoye Array	51.58	314	P	P	20 18 46.5	+0.4
	0.2nm,0.3s,baz=94,slow=8.2,SNR=3.0 0.2nm,0.3s						
WRA	Warramunga Arr	54.53	187	P	P	20 19 06.5	-1.7
	0.3nm,0.4s,baz=5.9,slow=7.9,SNR=7.2 0.3nm,0.4s						
ASAR	Alice Springs	58.26	187	P	P	20 19 32.5	-2.1
	0.2nm,0.8s,baz=23,slow=10,SNR=5.8 0.2nm,0.8s						
FINES	FINESS Array B	70.55	332	P	P	20 20 53.6	-0.8
	0.7nm,0.8s,baz=68,slow=5.2,SNR=1.9 0.7nm,0.8s						
AKASG	Malin Array Be	75.68	322	P	P	20 21 25.3	+0.5
	0.4nm,0.4s,baz=52,slow=5.3,SNR=4.8 0.4nm,0.4s						

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*TXNET **19** 20:11:48.2, 29°N±1°×10°4W±°, h4^{km}±2^{km}, ML3.1/3, Error ellipse: s-maj=2.1km s-min=2.0km az=57.1, final*

*NEIC **19** 20:11:48.2±1.1, 29°.48N±0°.02×104°.05W±0°.03, h5^{km}±1^{km}, mb_Lg2.6/38, ML2.4/3, ML2.8/20, Error ellipse: s-maj=6.1km s-min=3.0km az=232.0*

*NEIC **19** 20:11:48.2±1.7, 29°.44N±0°.04×104°.11W±0°.04, h4^{km}±4^{km}, Error ellipse: s-maj=6.7km s-min=2.7km az=221.0*

ISC 19 20:11:48.1±1.2, **29°.49N**±0°.02×**104°.07W**±0°.03, **h2**^{km}±11^{km}, **n57**, σ**0**^{s}**95**/91, **2C, Texas-Mexico border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TX31	Lajitas Ar. Si	0.38	113		Pg	20 11 55.8	+0.4
TX31	Lajitas Ar. Si	0.38	113	⇑P	Pg	20 11 55.9	+0.5
TX31				S	Sg	20 12 01.5	+1.1
TXAR	Lajitas Array	0.38	113		Pg	20 11 55.9	+0.4
ALPN	Alpine	0.96	23		Pg	20 12 05.9	-0.7
ALPN				Sg	Sg	20 12 18.9	-0.2
ALPN	Alpine	0.96	23	⇑P	Pg	20 12 06.1	-0.5
ALPN				S	Sg	20 12 19.2	+0.1
TPB01	Permian Basin	1.48	10	P	Pn	20 12 15.6	-0.3
TPB01				Pg	Pg	20 12 16.6	+0.1
TPB01				S	Sg	20 12 37.2	+1.6
TPB01				Sg	Sb	20 12 38.2	+2.6
TPB01	Permian Basin	1.48	10	P	Pn	20 12 15.6	-0.3
TPB01				S	Pg	20 12 16.9	+0.5
VHRN	Van Horn	1.52	329		Pn	20 12 16.4	-0.2
VHRN					Sn	20 12 36.5	-0.5
VHRN				IAML		20 12 40.9	
	135nm,0.7s						
VHRN				IAML		20 12 42.4	
	95nm,0.9s						
VHRN	Van Horn	1.52	329	P	Pn	20 12 16.6	0.0
VHRN				S	Sg	20 12 37.5	+0.5
VHRN	Van Horn	1.52	329	P	Pn	20 12 16.6	0.0
TPB05	Hovey Rd	1.57	24	P	Pb	20 12 17.5	-0.5
TPB05				Pg	Pg	20 12 18.4	+0.1
TPB05				S	Sg	20 12 39.6	+1.0
TPB05				Sg	Sb	20 12 41.0	+2.7
TPB05	Hovey Rd	1.57	24	P	Pb	20 12 17.5	-0.5
TPB03	Saragosa	1.66	17	P	Pb	20 12 19.1	-0.5
TPB03				S	Sg	20 12 42.2	+0.6
TPB08	Permian Basin	1.73	35	P	Pg	20 12 20.8	-0.4
TPB08				S	Sg	20 12 43.9	+0.3
TPB12	Southwest of T	1.73	3	P	Pb	20 12 20.7	0.0
TPB12				Pg	Pg	20 12 21.3	+0.1
TPB12				S	Sg	20 12 43.2	-0.4
TPB12	Southwest of T	1.73	3	P	Pb	20 12 20.6	0.0
SAND	Sanderson	1.75	74	Pn	Pn	20 12 19.2	-0.5
SAND	Sanderson	1.75	74	P	Pb	20 12 20.0	-1.1
SAND				S	Sg	20 12 44.4	-0.2
TPB16	Coyonosa	1.78	23	P	Pb	20 12 21.3	-0.3
TPB16				S	Sg	20 12 45.5	+0.1
TPB16	Coyonosa	1.78	23	P	Pb	20 12 21.4	-0.2
TPB10	Southeast of T	1.81	9	P	Pb	20 12 22.2	0.0
TPB10				S	Sg	20 12 46.8	+0.4
TPB10				Sg	Sb	20 12 49.6	+4.3
TPB10	Southeast of T	1.81	9	P	Pb	20 12 22.4	+0.2
TPB04	Verhalen	1.83	22	P	Pb	20 12 22.1	-0.4
TPB04				Pg	Pg	20 12 22.6	-0.7
TPB04				S	Sg	20 12 47.3	+0.3
TPB04	Verhalen	1.83	22	P	Pb	20 12 22.1	-0.4
PECS	Pecos	1.89	5		Pn	20 12 20.9	-0.6
PECS	Pecos	1.89	5	P	Pb	20 12 22.4	-1.0
PECS				Pg	Pg	20 12 23.2	-1.2
PECS				S	Sg	20 12 48.8	0.0
PECS	Pecos	1.89	5	P	Pb	20 12 22.4	-1.0
PCOS	Crockett Middl	1.98	14	S	Sg	20 12 50.8	-0.9
TPB19	West of Imperi	2.00	25	Pg	Pb	20 12 24.5	-0.8
TPB19				Sg	Sg	20 12 51.7	-0.6
TPB13	Reeves - Culbe	2.07	5	Sg	Sg	20 12 55.9	+1.1
TPB07	Mentone	2.12	9	P	Pb	20 12 27.2	-0.1
TPB07				S	Sg	20 12 56.4	+0.2
TPB07	Mentone	2.12	9	P	Pb	20 12 27.7	+0.4
MNHN	Monahans	2.17	31		Pn	20 12 25.2	-0.2
MNHN	Monahans	2.17	31	P	Pn	20 12 26.2	+0.8
MNHN				S	Sb	20 12 54.4	-1.1
TPB06	Permian Basin	2.28	19	Sg	Sb	20 12 58.3	-0.4
TPB09	Culberson Coun	2.29	355	Sg	Sg	20 13 01.9	+0.1
TMB02	Rankin	2.45	45	Pg	Pb	20 12 32.8	-0.2
TMB02				Sg	Sg	20 13 05.9	-1.0
MNTX	Cornudas Mount	2.48	333		Pn	20 12 29.2	-0.4
MNTX				Pg	Pg	20 12 35.1	-0.6
MNTX	Cornudas Mount	2.48	333	P	Pn	20 12 29.5	-0.1
MNTX				Pg	Pg	20 12 35.1	-0.6
MNTX				S	Sn	20 13 01.8	+1.3
MNTX				Sg	Sg	20 13 07.2	-0.7
HPIG		2.91	209		Pn	20 12 34.2	-1.4
HPIG				Pg	Pb	20 12 41.0	+0.1
HPIG				IAML		20 13 27.6	
	comp=N,31nm,0.3s						
HPIG		2.91	209	P	Pn	20 12 34.2	-1.4
HPIG				Pg	Pb	20 12 41.0	+0.1
HPIG				S	Sn	20 13 10.5	-0.8
HPIG				Sg	Sb	20 13 17.4	+0.5
OZNA	Ozona	2.92	60		Pn	20 12 34.8	-0.9
OZNA				IAmb_Lg		20 13 24.9	
	comp=Z,20nm,0.8s						
CLN7	Carlsbad 7	2.93	4	Pn	Pn	20 12 34.8	-1.1
ODSA	Odessa	2.93	26	Pn	Pn	20 12 34.7	-1.2
ODSA				IAmb_Lg		20 13 22.7	
	comp=Z,16nm,0.8s						
DRIO	Del Rio	3.01	90		Pn	20 12 36.6	-0.3
DRIO				IAmb_Lg		20 13 27.9	
	comp=Z,21nm,1.0s						
SGCY	Sterling City	3.50	46		Pn	20 12 42.1	-1.6
JCT	Junction City	3.83	74		Pn	20 12 49.0	+0.8
JCT				IAmb_Lg		20 13 56.0	
	comp=Z,12nm,0.7s						
HNDO	Hondo	4.17	88		Pn	20 12 53.5	+0.6
HNDO				IAmb_Lg		20 14 05.2	
	comp=Z,10nm,0.9s						
833A	Chaparral WMA,	4.26	105		Pn	20 12 53.3	-0.8
SN07	Snyder 07	4.51	36		Pn	20 12 56.7	-0.8
SN07				IAmb_Lg		20 14 23.1	
	comp=Z,13nm,0.8s						
MSTX	Muleshoe	4.61	14	Pn	Pn	20 12 58.0	-1.0
MSTX				IAmb_Lg		20 14 26.9	
	comp=Z,16nm,1.3s						
BRDY	Brady	4.73	66		Pn	20 12 58.7	-1.9
BRDY				IAmb_Lg		20 14 22.6	
	comp=Z,9.0nm,0.8s						
DKNS	Dickens	4.96	32		Pn	20 13 01.9	-1.9
APMT	Aspermont	5.10	40		Pn	20 13 05.4	-0.2
APMT				IAmb_Lg		20 14 38.5	
	comp=Z,11nm,0.7s						
AMTX	Amarillo	5.75	20	IAmb_Lg		20 15 03.7	
	comp=Z,9.6nm,0.7s						
SMWD	Samnorwood	6.47	29	IAmb_Lg		20 15 29.3	
	comp=Z,9.6nm,1.0s						
WMOK	Wichita Mounta	6.89	39		Pn	20 13 30.3	0.0
WMOK				IAmb_Lg		20 15 30.7	
	comp=Z,5.1nm,0.7s						

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*IDC **19** 20:12:26.6±1.2, 33°.86S×178°.80W, h0^{km}, mb3.9/3, mbtmp4.1/4, ML4.6/1, Error ellipse: s-maj=38.1km s-min=33.3km az=130.0*

ISC 19 20:12:34.0±1.2, **34°.0S**±0°.2×**179°.0W**±0°.2, **h50**^{km}, **n11**, σ**0**^{s}**93**/12, **mb3.9**/3, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	5.24	215	Pn	Pn	20 13 48.5	-1.2
	17nm,0.3s,baz=267,slow=3.1,SNR=6.4						
URZ				Sn	Sn	20 14 49.0	+0.2
	baz=155,slow=22 56nm,0.3s						
ASAR	Alice Springs	42.18	271	P	P	20 20 22.8	+0.8
	1.2nm,0.8s,baz=111,slow=7.4,SNR=11 1.2nm,0.8s						
WRA	Warramunga Arr	43.50	277	P	P	20 20 33.2	+0.6
	1.8nm,0.7s,baz=118,slow=7.4,SNR=11 1.8nm,0.7s						
QSPA	South Pole Qui	56.08	180	P	P	20 22 09.0	+1.2
	2.2nm,1.1s,baz=333,slow=2.3,SNR=2.8 2.2nm,1.1s						
KURBB	Kurchatov Arra	122.92	312	PKP	PKPdf	20 31 23.8	-0.3
	0.3nm,0.5s,baz=107,slow=2.4,SNR=1.6						

ARCES	ARCESS Array B	141.93	346	PKP	PKPdf	20 31 58.3	-0.9
	0.6nm,0.9s,baz=66,slow=1.3,SNR=4.2						
FINES	FINESS Array B	148.20	337	PKPbc	PKPbc	20 32 13.4	-0.1
	2.1nm,0.6s,baz=108,slow=4.2,SNR=12						
NB2	NORSAR Subarra	152.18	349	PKP	PKPbc	20 32 23.2	0.0
	comp=Z,0.1nm,0.4s,baz=17,slow=2.6						
NOA	NORSAR Array B	152.18	349	PKPbc	PKPbc	20 32 21.5	-1.7
	comp=Z,0.4nm,0.7s,baz=14,slow=4.0,SNR=3.8						
HFS	Hagfors	152.59	346	PKPbc	PKPbc	20 32 24.1	0.0
	comp=Z,1.3nm,0.8s,baz=24,slow=2.4,SNR=2.1						
AKASG	Malin Array Be	153.52	318	PKPbc	PKiKP	20 32 26.8	+0.2
	comp=Z,0.2nm,0.3s,baz=78,slow=1.3,SNR=2.1						

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*IDC **19** 20:14:57.7±1.0, 33°.72S×178°.94W, h0km, mb3.9/4, mbtmp4.0/5, ML4.7/1, Error ellipse: s-maj=33.4km s-min=27.1km az=75.0*

*NEIC **19** 20:14:58.2±0.6, 34°.18S±0°.08×178°.7W±0°.2, h10km±2km, mb4.2/5, Error ellipse: s-maj=27.4km s-min=13.0km az=104.0*

*WEL **19** 20:14:59.1±0.8, 34°S±6°×17°9W±1°3, h33km, M4.5/12, mB5.1/7, ML4.7/16, MLv4.5/12, Mw(mB)4.4/7, Error ellipse: s-maj=18.3km s-min=4.5km az=111.0, confirmed*

ISC 19 20:15:01.1±0.9, **34°.10S**±0°.07×**178°.5W**±0°.1, **h37**km, **n44**, σ**1.s64**/60, **mb4.1**/7, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.30	216	Pn	Pn	20 16 02.9	-1.1
MXZ	Matakaoa Point	4.30	216	P	Pn	20 16 02.7	-1.3
MXZ				S	Sn	20 16 53.6	+0.8
WMGZ	Waiomatatini S	4.46	213	P	Pn	20 16 06.6	+0.5
WMGZ				S	Sn	20 16 58.3	+1.6
PKGZ	Pakihiroa	4.65	215	P	Pn	20 16 07.8	-1.0
PKGZ				S	Sn	20 17 01.8	+0.3
HAZ	Te Kaha	4.72	218	P	Pn	20 16 10.8	+1.2
HAZ				S	Sn	20 17 05.2	+2.2
PUZ	Puketiti	4.74	212	P	Pn	20 16 08.4	-1.5
PUZ				S	Sn	20 17 02.6	-1.0
GLKZ	Green Lake	4.86	6	S	Sn	20 17 01.3	-5.2
RAO	Raoul Island	4.87	6	Pn	Pn	20 16 12.6	+0.9
RUGZ	Raukumara Rang	4.93	217	P	Pn	20 16 12.7	+0.1
TWGZ	Tauwhareparae	4.95	214	P	Pn	20 16 13.0	+0.1
TWGZ				S	Sn	20 17 09.6	+0.8
CNGZ	Carnagh Statio	5.10	210	P	Pn	20 16 12.4	-2.6
CNGZ				S	Sn	20 17 13.9	+1.3
TKGZ	Te Karaka	5.22	213	P	Pn	20 16 16.2	-0.3
TKGZ				S	Sn	20 17 14.8	-0.7
MWZ	Matawai	5.29	216	P	Pn	20 16 16.6	-0.9
MWZ				S	Sn	20 17 16.4	-0.8
URZ	Urewera	5.44	219	Pn	Pn	20 16 19.4	-0.2
	22nm,0.3s,baz=250,slow=3.9,SNR=21						
URZ				Sn	Sn	20 17 19.3	-1.6
	9.5nm,0.3s,baz=33,slow=22,SNR=6.4 41nm,0.3s						
URZ	Urewera	5.44	219	P	Pn	20 16 19.4	-0.2
URZ				S	Sn	20 17 18.9	-2.1
RAGZ	Rawiri	5.47	216	P	Pn	20 16 19.8	-0.3
RAGZ				S	Sn	20 17 19.6	-2.2
RIGZ	Rimuhau	5.48	212	P	Pn	20 16 19.9	-0.2
RIGZ				S	Sn	20 17 22.1	+0.1
PRGZ	Paritu Road	5.61	210	P	Pn	20 16 21.7	-0.3
SNGZ	Shannon Statio	5.73	214	P	Pn	20 16 22.5	-1.2
SNGZ				S	Sn	20 17 28.1	0.0
RTZ	Ruatahuna	5.78	218	Pn	Pn	20 16 22.7	-1.6
RTZ				Sn	Sn	20 17 28.3	-1.0
MUGZ	Murupara	5.78	220	P	Pn	20 16 23.3	-0.9
MUGZ				S	Sn	20 17 26.6	-2.7
MKAZ	Moumakai	5.95	238	P	Pn	20 16 26.0	-0.5
WCZ	Waipu Caves	6.13	251	P	Pn	20 16 30.2	+1.2
BKZ	Black Stump Fm	6.45	217	Pn	Pn	20 16 31.1	-2.3
OUZ	Omahuta	6.58	258	P	Pn	20 16 36.1	+0.9
OTVZ	Oturere	6.88	221	P	Pn	20 16 37.8	-1.6
BFZ	Birch Farm	7.77	211	Pn	Pn	20 16 48.7	-2.9
BFZ				Sn	Sn	20 18 13.6	-4.6
MRZ	Mangatainoka R	8.05	214	Pn	Pn	20 16 52.7	-2.6
ASAR	Alice Springs	42.60	271	P	P	20 22 53.1	-0.7
	1.0nm,0.5s,baz=110,slow=7.5,SNR=11 1.0nm,0.5s						
WR8	Warramunga Arr	43.78	276	P	P	20 23 02.0	-1.3
WR8				IAmb	IAmb	20 23 35.7	
	comp=Z,5.0nm,1.1s						
WRA	Warramunga Arr	43.92	276	P	P	20 23 03.6	-0.8
	comp=Z,1.6nm,0.4s,baz=119,slow=7.1,SNR=31 comp=Z,1.6nm,0.4s						
WB0	Warramunga Arr	43.96	277	P	P	20 23 03.8	-0.9
KNRA	Kununurra	50.64	278	P	P	20 23 56.3	-0.5
CASY	Casey	51.68	209	P	P	20 24 03.8	-0.1
CASY				IAmb	IAmb	20 24 43.5	
	comp=Z,4.2nm,1.1s						
FITZ	Fitzroy Crossi	52.01	273	P	P	20 24 06.2	-0.8
FITZ				IAmb	IAmb	20 24 25.4	
	comp=Z,3.4nm,1.4s						
QSPA	South Pole Qui	56.02	180	P	P	20 24 40.0	+4.2
	comp=Z,0.8nm,0.8s,baz=54,slow=1.3,SNR=8.5 comp=Z,0.8nm,0.8s						
SNAA	Sanae	74.47	179	P	P	20 26 41.4	+6.3
	comp=Z,0.6nm,0.9s,baz=195,slow=12,SNR=5.7 comp=Z,0.6nm,0.9s						
KURBB	Kurchatov Arra	123.27	312	PKP	PKiKP	20 33 54.2	+0.6
	comp=Z,0.5nm,0.5s,baz=119,slow=2.2,SNR=6.7						
ARCES	ARCESS Array B	142.09	347	PKP	PKPdf	20 34 29.0	+0.8
	comp=Z,0.3nm,0.4s,baz=57,slow=2.2,SNR=5.4						
FINES	FINESS Array B	148.43	338	PKPbc	PKiKP	20 34 44.2	-0.1
	comp=Z,2.7nm,0.5s,baz=34,slow=3.3,SNR=21						
NB2	NORSAR Subarra	152.32	350	PKP	PKiKP	20 34 53.7	+1.2
	comp=Z,0.2nm,0.5s,baz=28,slow=2.7						
NOA	NORSAR Array B	152.32	350	PKPbc	PKiKP	20 34 53.6	+1.2
	comp=Z,0.4nm,0.5s,baz=13,slow=4.1,SNR=5.2						
HFS	Hagfors	152.75	347	PKPbc	PKiKP	20 34 53.1	-0.2
	comp=Z,0.9nm,0.7s,baz=41,slow=2.7,SNR=2.4						
AKASG	Malin Array Be	153.86	318	PKPbc	PKiKP	20 34 56.4	+0.5
	comp=Z,0.4nm,0.5s,baz=61,slow=1.3,SNR=1.8						

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*NOU **19** 20:31:58.7, 40°.30S×172°.83E, h316km, MLv3.5/8, Off W. Coast of S. Island, N.Z.*

*WEL **19** 20:32:21.7±0.7, 42°S±4°×17°3E±°, h60km±7km, M2.6/9, ML3.0/10, MLv2.6/9, Error ellipse: s-maj=6.9km s-min=5.6km az=70.0, confirmed*

ISC 19 20:32:21.7±1.5, **41°.76S**±0°.04×**172°.83E**±0°.04, **h73**km±10km, **n23**, σ**0.s59**/32, **South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THZ	Tophouse	0.06	94	P	Pn	20 32 32.1	-0.2
THZ				S	Sn	20 32 39.8	-0.2
MATW	Matariki Wadsw	0.34	344	P	Pn	20 32 33.8	+0.3
MATW				S	Sn	20 32 42.2	0.0
MRNZ	Matariki Terra	0.36	351	P	Pn	20 32 33.7	0.0
MRNZ				S	Sn	20 32 42.7	+0.3
MOLW	Molesworth Sta	0.46	136	P	Pn	20 32 34.5	0.0
MOLW				S	Sn	20 32 44.5	+0.6
NNZ	Nelson	0.68	37	P	Pn	20 32 36.4	-0.1
NNZ				S	Sn	20 32 47.6	0.0
TKNZ	Takaka Hill	0.73	8	P	Pn	20 32 37.2	0.0
TKNZ				S	Sn	20 32 48.9	+0.3
SJFS	Springs Juncti	0.75	220	P	Pn	20 32 37.5	0.0
DSZ	Denniston Nort	0.77	271	P	Pn	20 32 37.0	-0.6
DSZ				S	Sn	20 32 49.2	-0.2
BSWZ	Blackbirch Sta	0.78	87	P	Pn	20 32 38.1	+0.3
KHZ	Kahutara	0.84	142	P	Pn	20 32 38.2	-0.3
KHZ				S	Sn	20 32 50.6	-0.2
TUWZ	Tuamarina	0.90	69	P	Pn	20 32 39.6	+0.5
TUWZ				S	Sn	20 32 52.3	+0.4
QRZ	Quartz Range	0.96	346	P	Pn	20 32 39.8	-0.1
QRZ	Quartz Range	0.96	346	P	Pn	20 32 39.8	-0.1
QRZ				S	Sn	20 32 52.8	-0.5
LTZ	Lake Taylor	1.10	202	P	Pn	20 32 41.5	-0.2
TCW	Tory Channel	1.22	64	P	Pn	20 32 43.0	-0.1
TCW				S	Sn	20 32 59.4	+0.4
GVZ	Greta Valley S	1.22	173	P	Pn	20 32 42.7	-0.4
GVZ				S	Sn	20 32 58.0	-1.1
SNZO	South Karori	1.48	73	P	Pn	20 32 45.4	-1.0
RPZ	Rata Peaks	2.35	213	P	Pn	20 33 00.4	+2.2
KHEZ	Kahui Hut	2.62	21	P	Pn	20 32 42.3	-20
BFZ	Birch Farm	2.79	68	P	Pn	20 32 53.9	-10
ODZ	Otahua Downs	3.65	205	P	Pn	20 33 15.8	0.0
JCZ	Jackson Bay	3.77	231	P	Pn	20 33 17.2	-0.3
BKZ	Black Stump Fm	3.81	48	P	Pn	20 32 54.9	-23

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*SOME **19** 20:33:03.0, 39°.65N×72°.50E, h10km*

*KRNET **19** 20:33:04.8±0.1, 39°.11N×71°.62E, h14km, mb3.4*

*NNC **19** 20:33:06.4±5.9, 39°.01N×71°.49E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=58.6km s-min=29.4km az=169.0*

ISC 19 20:33:05.8±1.2, **39°.15N**±0°.06×**71°.62E**±0°.04, **h10**km, **n26**, σ**2.s53**/50, **24C-23D**, **Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	0.36	23	⇓iP	Pg	20 33 12.6	-0.4
DRK				⇓iS	Sg	20 33 18.4	+0.6
GAR	Garm	1.03	262	⇑iP	Pg	20 33 24.0	-1.6
GAR				⇑iS	Sb	20 33 37.9	-1.5
BTK	Batken	1.10	326	⇓eP	Pb	20 33 26.4	-0.5
BTK				⇓iS	Sb	20 33 41.8	+0.4
OHH	Osh	1.64	33	⇑iP	Pb	20 33 35.8	-0.3
OHH				⇑iS	Sg	20 33 58.5	0.0
SFK	Sufi-Kurgan	1.69	59	⇑iP	Pb	20 33 36.4	-0.7
SFK				⇑iS	Sg	20 33 59.6	-0.6
TRKS	Terek-Say	2.40	351	⇓eP	Pn	20 33 46.9	+1.5
TRKS				⇓eS	Sn	20 34 17.1	+2.1
ARSB	Arslanbob	2.41	25	⇑iP	Pb	20 33 47.4	-1.9
ARSB				⇑iS	Sb	20 34 18.6	-0.5
SALK	Salom-Alik	2.42	44	⇓iP	Pb	20 33 47.5	-2.0
SALK				⇓iS	Sb	20 34 18.8	-0.6
ARK	Arkit	2.66	6	⇓eP	Pb	20 33 51.3	-2.2
ARK				⇓eS	Sb	20 34 24.5	-1.7
AML	Almayashu	3.37	27	⇓iP	Pn	20 34 00.9	+2.1
AML				⇓iS	Sn	20 34 41.9	+2.8
MNAS	Manas	3.40	11	⇑iP	Pn	20 34 01.4	+2.4
MNAS				⇑iS	Sn	20 34 42.5	+3.0
ARLS	Aral	3.40	36	⇑eP	Pn	20 34 01.2	+2.1
ARLS				⇑eS	Sn	20 34 42.4	+2.9
UCH	Uchtor	3.78	35	⇓iP	Pn	20 34 06.5	+2.0
UCH				⇓iS	Sn	20 34 51.7	+2.4
MRKS	Merke	3.79	18	eP	Pn	20 34 01.2	-3.1
	0.9nm,0.1s						
MRKS				eS	Sn	20 34 43.1	-6.0
	5.8nm,0.4s						
EKS2	Erkin-Say	3.87	24	⇑iP	Pn	20 34 07.7	+2.2
EKS2				⇑iS	Sn	20 34 53.6	+2.6
KK31	Karatay Array	4.04	348	⇑Pn	Pn	20 34 11.9	+4.2
	3.0nm,0.3s,baz=152,slow=12,SNR=85						
KK31				⇓Sn	Sb	20 35 01.7	-4.1
	3.7nm,0.3s,baz=145,slow=26,SNR=6.3						
KKAR	Karatay Array	4.04	348	⇑iP	Pn	20 34 10.1	+2.4
KKAR				⇑iS	Sn	20 34 57.6	+2.6
NRN	Naryn	4.05	54	⇓eP	Pn	20 34 09.9	+1.8
NRN				⇓eS	Sn	20 34 57.3	+1.5
BRLS	Borolday	4.10	341	eP	Pn	20 34 11.4	+2.8
	7.1nm,0.2s						
BRLS				eS	Sn	20 35 00.4	+3.7
	9.5nm,0.4s						
AAK	Ala-Archa	4.11	31	⇓iP	Pn	20 34 10.9	+2.1
AAK				⇓iS	Sn	20 34 59.6	+2.7
FRU1	Bishkek	4.31	31	⇓iP	Pn	20 34 14.1	+2.7
FRU1				⇓iS	Sn	20 35 04.6	+2.9
KBK	Karagaybulak	4.31	35	⇓iP	Pn	20 34 14.0	+2.4
KBK				⇓iS	Sn	20 35 04.3	+2.2
CHMS	Chumysh	4.51	31	⇑iP	Pn	20 34 16.5	+2.3
CHMS				⇑iS	Sn	20 35 09.0	+2.2
USP	Ospenovka	4.65	27	⇑eP	Pn	20 34 18.3	+2.2
USP				⇑iS	Sn	20 35 12.4	+2.3
TKM2	Tokmak 2	4.82	37	⇑Pn	Pn	20 34 23.0	+4.4
	1.1nm,0.3s						
TKM2				⇑Sn	Sg	20 35 34.7	-5.8
	5.1nm,0.7s						
AB31	Akbulak array	13.11	324	⇑P	Pn	20 36 11.9	0.0
	0.4nm,0.5s,baz=136,slow=11,SNR=14						

NEIC 19 20:38:41.8±0.2, **37°.66N**±0°.01×**105°.48W**±0°.06, **h5**km±1km, **ML1.6**/14, **Error ellipse: s-maj=8.7km s-min=3.1km az=261.0**, **Colorado**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDCO	Great Sand Dun	0.08	350	Pg	Pg	20 38 44.1	+0.3
SDCO				IAML		20 38 44.3	
	340nm,0.1s						
SDCO				Sg	Sg	20 38 45.9	+0.6
SDCO				IAML		20 38 46.3	
	325nm,0.1s						
T25A	Trinidad	1.00	121	Pg	Pg	20 39 00.7	-0.3
T25A				Sg	Sg	20 39 13.7	-0.3
T25A				IAML		20 39 14.1	
	comp=N,13nm,0.2s						
Q24A	Divide	1.32	11		Pg	20 39 06.7	-0.6
Q24A				IAML		20 39 25.0	
	comp=E,13nm,0.3s						
ISCO	Idaho Springs	2.13	357	Pn	Pn	20 39 17.5	-0.9
MVCO	Mesa Verde	2.44	260	Pn	Pn	20 39 21.4	-1.2
PV01	Paradox Valley	2.49	282	Pn	Pn	20 39 21.7	-1.5
RTBA	Rita Blanca	2.52	118	Pn	Pn	20 39 22.7	-0.8

TRN 19 20:45:44.0, **18°.38N**×**61°.91W**, **h16**km, **MD4.0**, **Far North of Barbuda.**, **Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANWB	Willy Bob	0.71	171	eP	Pn	20 46 00.1	+0.7
ANWB				eS	Sn	20 46 12.5	+2.4
ANBD	Bethesda, Anti	1.33	174	eP	Pb	20 46 08.5	-0.1
ANBD				eS	Sg	20 46 27.4	+0.5
MBFL	Flemmings, Mon	1.65	190	eP	Pb	20 46 13.3	-0.7
MBFL				eS	Sg	20 46 36.7	-0.3
MAGL	Barre de l'ile	2.49	166	eP	Pb	20 46 26.7	-1.6
TBG	Guadaloupe-3	2.52	174	eP	Pn	20 46 26.6	+2.2
DWS	Wesley	2.85	168	eP	Pn	20 46 31.4	+2.5
DWS				eS	Sn	20 47 04.0	+1.1
DSLB	Salisbury	2.96	171	eP	Pn	20 46 32.5	+2.1
BIM	Bigot	3.92	168	eP	Pn	20 46 46.0	+2.4
SLBI	Saint Lucia, B	4.42	168	eP	Pn	20 46 53.2	+2.7
SLBI				eS	Sn	20 47 44.1	+2.5

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*IDC **19** 20:50:00.5±7.9, 7°.23S×129°.60E, h134km±76km, mb3.7/3, mbtmp4.3/7, Error ellipse: s-maj=85.3km s-min=20.2km az=53.0*

*NEIC **19** 20:50:01.6±1.7, 7°.18S±0°.08×129°.62E±0°.07, h142km±9km, mb4.1/11, Error ellipse: s-maj=13.0km s-min=8.4km az=206.0*

*DJA **19** 20:50:01.3±0.4, 7°S±3°×13°0E±°, h183km±7km, M4.5/15, mB5.0/6, mb4.4/11, MLv4.6/15, Mw(mB)4.3/6*

ISC 19 20:50:01.5±0.6, **7°.28S**±0°.04×**129°.51E**±0°.05, **h150**km, **n68**, σ**2.s74**/77, **mb3.8**/6, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.90	112		Pn	20 50 33.6	-1.9
SAUI				Sn	Sn	20 50 59.2	-2.5
SAUI	Saumlaki	1.90	112	P	Pn	20 50 35.4	-0.1
SAUI	Saumlaki	1.90	112	P	Pn	20 50 37.0	+1.5
SAUI				S	Sn	20 51 04.3	+2.6
BNDI	Bandanaira	2.77	8	P	Pn	20 50 46.1	+0.1
BNDI				S	Sn	20 51 21.5	+1.1
AAI	Ambon	3.81	340	P	Pn	20 51 00.2	+0.9
MSAI	Masohi	3.95	352	P	Pn	20 51 02.8	+1.6
FAKI	Fak Fak	5.12	32	Pn	Pn	20 51 14.7	-1.9
FAKI	Fak Fak	5.12	32	P	Pn	20 51 14.5	-2.1
FAKI	Fak Fak	5.12	32	S	Sn	20 52 09.4	-5.8
FAKI	Fak Fak	5.12	32	P	Pn	20 51 14.7	-1.9
KMPI	Kaimana, Papua	5.51	49	P	Pn	20 51 20.3	-1.4
SOEI	Soe	5.74	244	Pn	Pn	20 51 26.6	+1.7
SOEI				Sn	Sn	20 52 28.1	-1.9
SOEI	Soe	5.74	244	P	Pn	20 51 26.2	+1.3
SOEI	Soe	5.74	244	P	Pn	20 51 26.3	+1.3
	1.3nm2μm120nm,0.9s						
MTN	Manton Dam	5.75	164		Pn	20 51 26.2	+1.2
MTN				Sn	Sn	20 52 26.6	-3.6
MTN	Manton Dam	5.75	164	P	Pn	20 51 25.7	+0.7
KDU	Kakadu	6.11	152	P	Pn	20 51 30.2	+0.5
SANI	Sanana	6.27	326	P	Pn	20 51 32.9	+1.0
	0.2nm79nm,0.9s						
BATI	Baumata	6.47	243	P	Pn	20 51 36.5	+2.0
	58nm,0.4s,baz=102,slow=5.9,SNR=32						
BATI				S	Sn	20 52 44.0	-3.4
	165nm,0.6s,baz=233,slow=20,SNR=9.0						
BATI	Baumata	6.47	243	P	Pn	20 51 36.2	+1.6
	0.8nm1μm67nm,0.5s						
SWI	Sorong	6.61	15	P	Pn	20 51 33.9	-2.5
BBSI	Bau Bau	7.12	284	P	Pn	20 51 44.8	+1.5
	0.1nm31nm,1.0s						
MMRI	Maumere	7.33	259		Pn	20 51 47.5	+1.4
MMRI	Maumere	7.33	259	P	Pn	20 51 48.2	+2.2
	0.2nm19nm,0.7s						
RKPI	Ransiki, Papua	7.38	39	P	Pn	20 51 45.1	-1.7
	3μm59nm,0.6s						
EDFI	Ende, Flores	7.88	259	P	Pn	20 51 55.3	+1.8
TNTI	Ternate	8.28	345	Pn	Pn	20 51 53.0	-5.7
KNRA	Kununurra	8.37	185		Pn	20 51 60.0	0.0
KNRA				Sn	Sn	20 53 29.3	-3.8
WSI	Waingapu	9.42	255	P	Pn	20 52 15.0	+1.1
FITZ	Fitzroy Crossi	11.39	199		Pn	20 52 38.8	-1.2
FITZ					Sn	20 54 37.0	-8.9
FITZ	Fitzroy Crossi	11.39	199	P	Pn	20 52 38.6	-1.3
	4.2nm,0.3s,baz=26,slow=11,SNR=42						
FITZ				S	Sn	20 54 37.4	-8.5
	19nm,0.4s,baz=71,slow=16,SNR=9.9						
PLAI	Plampang	11.72	262	P	Pn	20 52 43.9	-0.4
WB0	Warramunga Arr	13.28	160		Pn	20 53 02.3	-2.2
WB0				Sn	Sn	20 55 22.2	-9.3
WRAB	Tennant Creek	13.42	160		Pn	20 53 03.9	-2.3
WRA	Warramunga Arr	13.43	160		Pn	20 53 04.0	-2.2
WRA	Warramunga Arr	13.43	160	P	Pn	20 53 05.2	-1.1
	5.7nm,0.3s,baz=336,slow=13,SNR=84						
WRA				S	Sn	20 55 24.9	-10
	9.7nm,0.6s,baz=330,slow=23,SNR=9.4						
WR8	Warramunga Arr	13.49	159		Pn	20 53 05.4	-1.7
WR8				Sn	Sn	20 55 25.7	-11
COEN	Coen	14.97	117	Pn	Pn	20 53 24.3	-1.5
COEN	Coen	14.97	117	P	P	20 53 27.5	-0.1
JAGI	Jajag, Banyuwa	15.26	265	Pn	Pn	20 53 24.6	-4.7
JAGI				IAmb	IAmb	20 53 32.4	
	comp=Z,20nm,0.9s						
JAGI	Jajag, Banyuwa	15.26	265	P	P	20 53 29.8	-1.0
QIS	Mount Isa	16.42	144	P	P	20 53 45.8	+2.2
MBWA	Marble Bar	16.73	213		Pn	20 53 49.5	+2.4
MBWA				IAmb	IAmb	20 53 50.7	
	comp=Z,5.1nm,0.8s						
AS31	Alice Springs	16.83	166		Pn	20 53 49.2	+0.8
AS31				IAmb	IAmb	20 53 57.2	
	comp=Z,4.1nm,0.5s						
ASAR	Alice Springs	16.83	166		Pn	20 53 50.7	+2.3
ASAR	Alice Springs	16.83	166	P	Pn	20 53 49.1	+0.7
	comp=Z,3.8nm,0.5s,baz=341,slow=9.7,SNR=60						
ASAR				S	S	20 56 49.0	-6.6
	comp=Z,2.0nm,0.6s,baz=346,slow=23,SNR=6.9						
AS01	Alice Springs	16.84	166	P	Pn	20 53 51.2	+2.7
PSA00	Pilbara Seismi	17.00	212		Pn	20 53 51.3	+0.8
PSA00				IAmb	IAmb	20 53 54.1	
	comp=Z,8.3nm,0.7s						
PSA00	Pilbara Seismi	17.00	212	P	Pn	20 53 52.9	+2.4
MTSU	Mount Surprise	18.01	128	P	Pn	20 54 05.2	+2.6
GIRL	Giralia	21.20	222	P	P	20 54 39.0	+3.5
FORT	Forrest	23.41	183	P	P	20 54 57.6	+0.5
FORT				IAmb	IAmb	20 55 15.1	
	comp=Z,17nm,1.0s						
FORT	Forrest	23.41	183	P	P	20 55 00.8	+3.7
BBOO	Buckleboo	26.12	167	P	P	20 55 26.8	+5.2
BBOO	Buckleboo	26.12	167	P	P	20 55 26.6	+5.0
STKA	Stephens Creek	26.94	157	P	P	20 55 30.3	+1.3
STKA	Stephens Creek	26.94	157	P	P	20 55 29.9	+0.9
	comp=Z,2.2nm,0.8s,baz=332,slow=12,SNR=9.5 comp=Z,2.2nm,0.8s						
STKA	Stephens Creek	26.94	157	P	P	20 55 32.5	+3.5
ARPS	Mount Arapiles	31.43	161	P	P	20 56 12.6	+4.0
CORO	Coronation Par	37.46	158	P	P	20 57 03.7	+3.3
MKAR	Makanchi Array	68.20	327	P	P	21 00 47.0	+1.2
MKAR	Makanchi Array	68.20	327	P	P	21 00 47.1	+1.3
	comp=Z,1.1nm,0.4s,baz=125,slow=7.9,SNR=31 comp=Z,1.1nm,0.4s						
MAKZ	Makanchi	68.38	327	P	P	21 00 47.7	+0.8
MAKZ				IAmb	IAmb	21 00 49.0	
	comp=Z,1.0nm,0.7s						
ZALV	Zalesovo Beam	71.62	334	P	P	21 01 05.8	-0.6
	comp=Z,0.4nm,0.4s,baz=141,slow=5.5,SNR=2.5 comp=Z,0.4nm,0.4s						
VNDA	Vanda	72.23	173	P	P	21 01 09.9	+0.1
KURK	Kurchatov	72.51	329	P	P	21 01 12.1	+0.3
KURK				IAmb	IAmb	21 01 13.6	
	comp=Z,1.6nm,0.9s						
AB31	Akbulak array	82.43	322	P	P	21 02 06.2	-0.8
ABKAR	Akbulak array	82.43	322	P	P	21 02 06.9	0.0

NOU 19 20:50:18.6, **15°.34S**×**166°.29E**, **h0**km, **MLv5.0**/18, **Vanuatu Islands**, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.89	97	P	Pb	20 50 37.0	+0.1
SANVU	Saraoutou	0.89	97	S	Sb	20 50 49.2	-0.1
VLAKA	Lakatoro	1.33	125	P	Pg	20 50 44.0	-0.1
VLAKA	Lakatoro	1.33	125	S	Sg	20 51 01.0	-0.4
DVP	Devils Point	2.99	143	P	Pn	20 51 07.1	-0.2
MARNC	Mare, Loyalty	6.33	165	P	Pn	20 51 53.3	+0.1
DZM	Mont Dzumac	6.70	179	P	Pn	20 51 58.3	-0.1
ONTNC	Ouen Toro	6.93	179	P	Pn	20 52 00.7	-0.8
OUENC	Ouen Island, N	7.06	176	P	Pn	20 52 03.8	+0.5
NGOA	Tingoa Renbel	7.13	301	P	Pn	20 52 04.4	+0.1
SAVO	Savo Central	8.83	313	P	Pn	20 52 26.9	-0.7
TATA	Tatamba Isabel	9.38	317	P	Pn	20 52 34.9	-0.3

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*LDG **19** 20:58:25.6±0.1, 44°.84N×7°.25E, h9km, Md2.7/2, Ml3.0/31, Error ellipse: s-maj=1.7km s-min=1.3km az=76.0*

*GEN **19** 20:58:25.5, 44°.84N×7°.21E, h13km, Ml2.6*

*ROM **19** 20:58:25.3±0.1, 44°.807N±0°.008×7°.20E±0°.01, h13km±1km, ML2.6/58, Error ellipse: s-maj=1.1km s-min=0.3km az=252.0*

*PRU **19** 20:58:26.1, 45°.39N×7°.11E, h0km*

*STR **19** 20:58:26.2±0.2, 45°N±1°×°±°, h3km, MLv2.9/13, Error ellipse: s-maj=0.0km s-min=0.0km az=80.3, preliminary*

ISC 19 20:58:25.5±0.7, **44°.82N**±0°.01×**7°.20E**±0°.01, **h16**km±4km, **n146**, σ**1.s59**/222, **7C**, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHB	Bricherasio	0.05	67	Pg	Pg	20 58 28.4	-0.1
BHB				Sg	Sg	20 58 29.0	-1.5
BHB	Bricherasio	0.05	67	P	Pg	20 58 28.4	-0.1
BHB				S	Sg	20 58 29.8	-0.6
BHB	Bricherasio	0.05	67	P	Pg	20 58 28.4	-0.1
BHB				S	Sg	20 58 29.9	-0.6
BHB				AML	AML		
	comp=E,43150μm,0.2s						
BHB				AML	AML		
	comp=N,27650μm,0.1s						
BHB				AML	AML		
	comp=N,27650μm,1.9s						
BHB				AML	AML		
	comp=E,43150μm,1.8s						
BHB				AML	AML		
	comp=N,27671μm,0.1s						
BHB				AML	AML		
	comp=E,43134μm,0.2s						
RRL	Rocca Remolon	0.31	288	Pg	Pb	20 58 32.6	-0.2
RRL				Sg	Sg	20 58 36.8	+0.1
RRL	Rocca Remolon	0.31	288	P	Pb	20 58 32.5	-0.2
RRL				S	Sg	20 58 36.9	+0.1
RRL	Rocca Remolon	0.31	288	⇑P	Pb	20 58 32.5	-0.2
RRL				S	Sg	20 58 36.8	+0.1
RRL				AML	AML		
	comp=N,1675μm,0.4s						
RRL				AML	AML		
	comp=E,2765μm,0.1s						
RRL				AML	AML		
	comp=N,1654μm,0.1s						
RRL				AML	AML		
	comp=E,2767μm,0.1s						
MBDF	Montbardon	0.32	253	ePg	Pb	20 58 32.8	-0.2
MBDF				eSg	Sb	20 58 37.4	-0.6
	comp=E,2μm,0.2s						
RSP	Reno Superiore	0.33	8	Pg	Pg	20 58 32.4	0.0
RSP	Reno Superiore	0.33	8	Sg	Sg	20 58 37.0	-0.2
RSP	Reno Superiore	0.33	8	P	Pg	20 58 32.3	0.0
RSP				S	Sg	20 58 36.6	-0.5
RSP	Reno Superiore	0.33	8	P	Pg	20 58 32.3	0.0
RSP				S	Sg	20 58 37.6	+0.5
BNI	Bardonecchia	0.44	302	P	Pb	20 58 34.6	-0.3
BNI				S	Sg	20 58 39.7	-0.7
BNI	Bardonecchia	0.44	302	⇑P	Pb	20 58 34.7	-0.3

BNI				S	**Sg**	**20 58 40.3**	**-0.1**
BNI				AML	AML		
	comp=E,821µm,0.4s						
BNI				AML	AML		
	comp=N,726µm,0.4s						
BNI				AML	AML		
	comp=N,725µm,0.4s						
BNI				AML	AML		
	comp=E,835µm,0.4s						
BNI				AML	AML		
	comp=N,614µm,0.3s						
BNI				AML	AML		
	comp=N,620µm,0.3s						
BNI				AML	AML		
	comp=E,683µm,0.1s						
BNI				AML	AML		
	comp=E,636µm,0.1s						
SURF	**Saint Ours**	**0.44**	**219**	Pg	**Pb**	**20 58 35.2**	**+0.2**
SURF				Sg	**Sb**	**20 58 41.1**	**-0.4**
SURF	**Saint Ours**	**0.44**	**219**	P	**Pb**	**20 58 35.0**	**0.0**
SURF				S	**Sb**	**20 58 41.5**	**0.0**
CREF	**Crivoux**	**0.50**	**237**	Pg	**Pb**	**20 58 36.2**	**+0.2**
CREF				Sg	**Sb**	**20 58 42.9**	**-0.2**
JAUF	**Jausiers**	**0.51**	**220**	Pg	**Pb**	**20 58 36.4**	**+0.2**
JAUF				Sg	**Sb**	**20 58 43.7**	**+0.3**
OGMO	**Fort Saint-Gob**	**0.53**	**316**	Pg	**Pg**	**20 58 36.2**	**+0.1**
OGMO				Sg	**Sg**	**20 58 43.2**	**-0.1**
OGMO	**Fort Saint-Gob**	**0.53**	**316**	P	**Pg**	**20 58 36.2**	**+0.1**
OGMO				S	**Sg**	**20 58 43.1**	**-0.1**
MONC	**Moncucco Torin**	**0.57**	**64**	P	**Pb**	**20 58 37.3**	**+0.2**
MONC				S	**Sb**	**20 58 47.2**	**+2.2**
MONC	**Moncucco Torin**	**0.57**	**64**	P	**Pb**	**20 58 37.3**	**+0.2**
MONC				AML	AML		
	comp=N,1725µm,0.7s						
MONC				AML	AML		
	comp=E,1715µm,0.4s						
MONC				AML	AML		
	comp=E,1715µm,1.6s						
MONC				AML	AML		
	comp=E,1712µm,0.4s						
MONC				AML	AML		
	comp=N,1603µm,0.3s						
STV	**Sant Anna di V**	**0.58**	**171**	Pg	**Pb**	**20 58 37.8**	**+0.4**
STV	**Sant Anna di V**	**0.58**	**171**	P	**Pg**	**20 58 36.3**	**-0.7**
STV				S	**Sg**	**20 58 43.6**	**-1.2**
STV	**Sant Anna di V**	**0.58**	**171**	⇑P	**Pg**	**20 58 36.3**	**-0.7**
STV				AML	AML		
	comp=E,498µm,0.4s						
STV				AML	AML		
	comp=N,376µm,0.8s						
STV				AML	AML		
	comp=E,498µm,1.6s						
STV				AML	AML		
	comp=N,276µm,0.2s						
STV				AML	AML		
	comp=E,498µm,0.4s						
ENR	**Entracque**	**0.62**	**165**	Pg	**Pb**	**20 58 38.1**	**+0.2**
ENR	**Entracque**	**0.62**	**165**	P	**Pg**	**20 58 36.7**	**-0.9**
ENR				S	**Sg**	**20 58 45.5**	**-0.4**
ENR	**Entracque**	**0.62**	**165**	⇑P	**Pg**	**20 58 36.7**	**-0.9**
ENR				AML	AML		
	comp=N,950µm,0.7s						
ENR				AML	AML		
	comp=E,1024µm,0.1s						
ENR				AML	AML		
	comp=N,784µm,0.1s						
ENR				AML	AML		
	comp=E,1023µm,0.1s						
ISO	**Isola**	**0.65**	**190**	Pg	**Pb**	**20 58 38.8**	**+0.3**
ISO				Sg	**Sb**	**20 58 47.0**	**-0.3**
ISO	**Isola**	**0.65**	**190**	P	**Pb**	**20 58 38.6**	**+0.1**
ISO				S	**Sb**	**20 58 47.0**	**-0.3**
GBOS	**Grotte di Boss**	**0.74**	**142**	Pg	**Pb**	**20 58 40.2**	**+0.2**
GBOS	**Grotte di Boss**	**0.74**	**142**	P	**Pg**	**20 58 39.1**	**-0.8**
GBOS				S	**Sg**	**20 58 48.7**	**-0.9**
GBOS	**Grotte di Boss**	**0.74**	**142**	⇑P	**Pg**	**20 58 39.2**	**-0.8**
GBOS				S	**Sg**	**20 58 48.6**	**-1.1**
GBOS				AML	AML		
	comp=E,612µm,0.3s						
GBOS				AML	AML		
	comp=N,596µm,0.8s						
GBOS				AML	AML		
	comp=N,513µm,0.3s						
GBOS				AML	AML		
	comp=E,486µm,0.2s						
LPG	**La Plagne**	**0.75**	**335**	*e*Pg	**Pg**	**20 58 40.0**	**-0.1**
LPG				*e*Sg	**Sg**	**20 58 49.5**	**-0.5**
	comp=E,244nm,0.2s						
LPL	**La Plagne**	**0.77**	**334**	*e*Pg	**Pg**	**20 58 40.3**	**-0.2**
LPL				*e*Sg	**Sg**	**20 58 50.5**	**-0.2**
	comp=E,219nm,0.2s						
SPIF	**crte de Spivo**	**0.77**	**178**	Pg	**Pn**	**20 58 41.4**	**-0.4**
SPIF				Sg	**Sn**	**20 58 52.0**	**-1.1**
ENAUX	**Enaux**	**0.78**	**203**	Pg	**Pb**	**20 58 41.1**	**+0.4**
ENAUX				Sg	**Sb**	**20 58 51.7**	**+0.7**
TRAV	**Traversella**	**0.79**	**29**	Pg	**Pg**	**20 58 41.0**	**+0.2**
TRAV	**Traversella**	**0.79**	**29**	P	**Pg**	**20 58 39.0**	**-1.9**
TRAV				S	**Sg**	**20 58 48.8**	**-2.6**
TRAV	**Traversella**	**0.79**	**29**	P	**Pg**	**20 58 39.6**	**-1.3**
TRAV				AML	AML		
	comp=E,394µm,0.2s						
TRAV				AML	AML		
	comp=N,336µm,0.3s						
TRAV				AML	AML		
	comp=E,343µm,0.2s						
TRAV				AML	AML		
	comp=N,297µm,0.1s						
ROTM	**Rocchetta Tana**	**0.82**	**88**	P	**Pb**	**20 58 41.9**	**+0.5**
ROTM	**Rocchetta Tana**	**0.82**	**88**	P	**Pb**	**20 58 42.0**	**+0.7**
ROTM				AML	AML		
	comp=E,1325µm,0.4s						
ROTM				AML	AML		
	comp=N,1500µm,0.4s						
ROTM				AML	AML		
	comp=N,1502µm,0.4s						
ROTM				AML	AML		
	comp=E,1323µm,0.4s						
CIRO	**Champorcher**	**0.82**	**18**	Sg	**Sg**	**20 58 52.0**	**-0.4**
CIRO	**Champorcher**	**0.82**	**18**	Pg	**Pg**	**20 58 41.2**	**-0.3**
CIRO	**Champorcher**	**0.82**	**18**	P	**Pg**	**20 58 40.0**	**-1.5**
CIRO				S	**Sg**	**20 58 52.0**	**-0.4**
CIRO	**Champorcher**	**0.82**	**18**	P	**Pg**	**20 58 40.0**	**-1.5**
CIRO				AML	AML		
	comp=E,336µm,0.3s						
CIRO				AML	AML		
	comp=N,236µm,0.4s						
CIRO				AML	AML		
	comp=E,325µm,0.3s						
CIRO				AML	AML		
	comp=N,174µm,0.1s						
TURF	**col de Turini**	**0.86**	**171**	Sg	**Sn**	**20 58 54.4**	**-1.0**
TURF	**col de Turini**	**0.86**	**171**	P	**Pg**	**20 58 41.4**	**-0.8**
TURF				S	**Sn**	**20 58 55.9**	**+0.5**
SAOF	**Saorge**	**0.88**	**163**	P	**Pg**	**20 58 41.6**	**-0.9**
SAOF				S	**Sg**	**20 58 52.6**	**-1.4**
SAOF	**Saorge**	**0.88**	**163**	⇑P	**Pg**	**20 58 41.0**	**-1.4**
SAOF				AML	AML		
	comp=E,282µm,1.3s						
SAOF				AML	AML		
	comp=N,272µm,0.6s						
SAOF				AML	AML		
	comp=E,268µm,0.2s						
SAOF				AML	AML		
	comp=N,232µm,0.2s						
MVIF	**Mont Vial**	**0.93**	**182**	Pg	**Pn**	**20 58 44.1**	**+0.1**
RORO	**Rocca Rossa**	**0.94**	**139**	P	**Pg**	**20 58 42.7**	**-1.0**
RORO				AML	AML		
	comp=E,634µm,1.2s						
RORO				AML	AML		
	comp=N,490µm,1.1s						
RORO				AML	AML		
	comp=N,490µm,0.9s						
RORO				AML	AML		
	comp=E,634µm,0.8s						
RORO				AML	AML		
	comp=N,455µm,0.2s						
RORO				AML	AML		
	comp=E,596µm,0.1s						
ORIF	**Oris-en-Rattie**	**0.95**	**276**	*e*Pg	**Pn**	**20 58 44.1**	**-0.1**
ORIF				*e*Sg	**Sb**	**20 58 56.4**	**+0.5**
	comp=E,231nm,0.3s						
ORIF	**Oris-en-Rattie**	**0.95**	**276**	Pg	**Pn**	**20 58 44.1**	**-0.1**
ORIF	**Oris-en-Rattie**	**0.95**	**276**	AML	AML		
	comp=E,350µm,0.4s						
ORIF				AML	AML		
	comp=N,333µm,0.7s						
ORIF				AML	AML		
	comp=N,333µm,1.3s						
MRGE	**Morge**	**0.95**	**354**	P	**Pg**	**20 58 43.7**	**-0.3**
MRGE				AML	AML		
	comp=E,256µm,0.6s						
MRGE				AML	AML		
	comp=E,256µm,1.4s						
MRGE				AML	AML		
	comp=N,303µm,0.7s						
MRGE				AML	AML		
	comp=N,235µm,0.2s						
MRGE				AML	AML		
	comp=E,197µm,0.2s						
RSL	**Roselend**	**0.96**	**335**	Pg	**Pg**	**20 58 43.9**	**-0.1**
RSL				Sg	**Sb**	**20 58 57.2**	**+0.9**
QLNO	**Quiliano**	**0.96**	**121**	⇑P	**Pg**	**20 58 43.2**	**-0.8**
QLNO				AML	AML		
	comp=N,355µm,1.4s						
QLNO				AML	AML		
	comp=E,578µm,0.4s						
QLNO				AML	AML		
	comp=N,355µm,0.6s						
QLNO				AML	AML		
	comp=N,311µm,0.2s						
QLNO				AML	AML		
	comp=E,541µm,0.2s						
CANO	**Canova, Maglio**	**0.96**	**129**	P	**Pg**	**20 58 43.3**	**-0.8**
CANO				AML	AML		
	comp=E,1055µm,0.3s						
CANO				AML	AML		
	comp=N,866µm,0.3s						
CANO				AML	AML		
	comp=E,1054µm,0.3s						
CANO				AML	AML		
	comp=N,866µm,0.3s						
PCP	**Piancastagn**	**1.00**	**106**	Pg	**Pn**	**20 58 45.2**	**+0.3**
PCP	**Piancastagn**	**1.00**	**106**	P	**Pb**	**20 58 44.0**	**-0.5**
PCP				AML	AML		
	comp=N,352µm,0.2s						
PCP				AML	AML		
	comp=E,230µm,0.4s						
PCP				AML	AML		
	comp=N,352µm,0.2s						
PCP				AML	AML		
	comp=E,206µm,0.4s						
SALSA	**La sagne**	**1.01**	**202**	Pg	**Pn**	**20 58 45.3**	**+0.2**
SALSA				Sg	**Sn**	**20 58 59.0**	**-0.1**
IMI	**Imperia**	**1.04**	**151**	P	**Pb**	**20 58 44.2**	**-0.9**
IMI				AML	AML		
	comp=N,535µm,0.6s						
IMI				AML	AML		
	comp=E,342µm,0.7s						
IMI				AML	AML		
	comp=N,535µm,1.4s						
IMI				AML	AML		
	comp=N,529µm,0.3s						
IMI				AML	AML		
	comp=E,335µm,0.2s						
BURY	**Giardini Botan**	**1.07**	**166**	P	**Pb**	**20 58 44.5**	**-1.1**
CALF	**Calern**	**1.09**	**191**	Pg	**Pn**	**20 58 47.3**	**+1.1**
CALF				Sg	**Sn**	**20 59 01.6**	**+0.6**
GRN	**Grenoble**	**1.11**	**293**	Pg	**Pg**	**20 58 47.5**	**+0.5**
GRN				Sg	**Sn**	**20 59 02.6**	**+0.9**
BLAF	**les Blancs**	**1.21**	**224**	Pg	**Pg**	**20 58 49.8**	**+1.1**
BLAF				Sg	**Sn**	**20 59 06.0**	**+2.2**
TRIGF	**Trigance**	**1.22**	**208**	Pg	**Pg**	**20 58 48.9**	**-0.1**
TRIGF				Sg	**Sn**	**20 59 06.2**	**+2.0**
DIX	**Grande Dixence**	**1.26**	**6**	Pg	**Pg**	**20 58 50.0**	**0.0**
DIX	**Grande Dixence**	**1.26**	**6**	Sg	**Sg**	**20 59 06.8**	**+0.4**
DIX	**Grande Dixence**	**1.26**	**6**	P	**Pn**	**20 58 48.2**	**-0.5**
DIX				AML	AML		
	comp=E,648µm,0.8s						
DIX				AML	AML		
	comp=N,644µm,0.7s						
DIX				AML	AML		
	comp=N,644µm,0.7s						
DIX				AML	AML		
	comp=E,648µm,0.8s						
DIX				AML	AML		
	comp=N,644µm,1.3s						
DIX				AML	AML		
	comp=E,600µm,0.4s						
DIX				AML	AML		
	comp=N,644µm,0.7s						
EILF	**Villa Eilenroc**	**1.28**	**182**	Pg	**Pg**	**20 58 50.8**	**+0.8**
EILF				Sg	**Sg**	**20 59 07.4**	**+0.7**
OGSI	**Sixt**	**1.28**	**346**	Pg	**Pn**	**20 58 49.4**	**+0.6**
RNCA	**Ronca, Sant'Ol**	**1.30**	**105**	Sg	**Sg**	**20 59 09.0**	**+1.7**
RNCA	**Ronca, Sant'Ol**	**1.30**	**105**	P	**Pn**	**20 58 49.1**	**+0.2**
RNCA				AML	AML		
	comp=N,70µm,0.4s						
RNCA				AML	AML		
	comp=E,70µm,0.3s						
RNCA				AML	AML		
	comp=N,70µm,0.4s						
RNCA				AML	AML		
	comp=E,71µm,0.3s						
OGSM	**Saint Maurice**	**1.32**	**307**	Pn	**Pg**	**20 58 50.9**	**0.0**
OGSM				Sn	**Sg**	**20 59 09.0**	**+0.8**
MLYF	**Mely**	**1.33**	**231**	Pn	**Pg**	**20 58 52.2**	**+1.2**
MLYF				Sn	**Sg**	**20 59 09.2**	**+0.9**
OGMY	**Moye**	**1.41**	**319**	Pn	**Pg**	**20 58 53.0**	**+0.5**
OGMY				Sn	**Sg**	**20 59 11.7**	**+0.9**
SMRF	**Simiane la Rot**	**1.44**	**235**	*e*Pg	**Pg**	**20 58 52.8**	**-0.4**
SMRF				*e*Sg	**Sg**	**20 59 12.6**	**+0.6**
	comp=E,77nm,0.3s						
BSTF	**la Bastide-des**	**1.46**	**230**	Pn	**Pg**	**20 58 53.9**	**+0.3**
BSTF				Sn	**Sg**	**20 59 14.2**	**+1.6**
GORR	**Gorreto**	**1.51**	**98**	P	**Pn**	**20 58 52.4**	**+0.6**
GORR				AML	AML		
	comp=E,156µm,0.6s						
GORR				AML	AML		
	comp=N,196µm,0.6s						
GORR				AML	AML		
	comp=N,196µm,0.6s						
GORR				AML	AML		
	comp=E,156µm,0.6s						
RUSF	**Rustrel**	**1.52**	**235**	Pn	**Pg**	**20 58 54.5**	**-0.2**
RUSF				Sn	**Sg**	**20 59 15.0**	**+0.7**
AIGLE	**Aigle**	**1.53**	**353**	Pn	**Pb**	**20 58 54.4**	**+1.0**
LMR	**La Mourre**	**1.57**	**199**	*e*Pg	**Pg**	**20 58 54.6**	**-1.1**
LMR				*e*Sg	**Sg**	**20 59 15.3**	**-0.8**
	comp=E,61nm,0.2s						
ARTF	**Artigues**	**1.59**	**220**	Pn	**Pg**	**20 58 55.2**	**-0.9**
FLAF	**Flassans-sur-l**	**1.59**	**206**	Pn	**Pg**	**20 58 55.7**	**-0.4**
FLAF	**Flassans-sur-l**	**1.59**	**206**	Sn	**Sg**	**20 59 15.7**	**-1.2**
VIVF	**Saint-Julien-l**	**1.80**	**272**	*e*Pn	**Pb**	**20 58 57.3**	**-0.8**
VIVF	**Saint-Julien-l**	**1.80**	**272**	*e*Pg	**Pg**	**20 58 59.5**	**-0.6**
VIVF				*e*Sg	**Sg**	**20 59 23.4**	**0.0**
	comp=E,25nm,0.2s						
CABF	**La Chapelle**	**1.95**	**337**	*e*P	**Pn**	**20 58 59.1**	**+1.1**
CABF	**La Chapelle**	**1.95**	**337**	*e*Pg	**Pb**	**20 59 01.8**	**+1.1**
CABF				*e*Sg	**Sg**	**20 59 27.9**	**-0.4**
	comp=E,16nm,0.3s						
ZONE	**Zone**	**2.26**	**64**	AML	AML		
	comp=E,66µm,0.5s						
ZONE				AML	AML		
	comp=E,66µm,1.5s						
ZONE				AML	AML		
	comp=N,63µm,1.4s						
LASF	**Ste Croix**	**2.51**	**254**	*e*Pn	**Pn**	**20 59 06.6**	**+1.0**
LASF				*e*Sn	**Sn**	**20 59 35.4**	**-0.5**
	comp=N,4.8nm,0.2s						
MAGA	**Magasa**	**2.60**	**67**	AML	AML		
	comp=N,90µm,0.4s						
MAGA				AML	AML		
	comp=E,126µm,0.6s						
MAGA				AML	AML		
	comp=N,89µm,0.3s						
MAGA				AML	AML		
	comp=E,126µm,0.4s						
PGF	**Pioggiola**	**2.62**	**150**	*e*Pn	**Pn**	**20 59 06.1**	**-1.2**
PGF	**Pioggiola**	**2.62**	**150**	*e*Pg	**Pb**	**20 59 13.3**	**+1.2**
PGF				*e*Sn	**Sn**	**20 59 34.7**	**-4.1**
	comp=E,5.8nm,0.2s						
PII	**Pisa**	**2.63**	**114**	AML	AML		
	comp=N,30µm,1.7s						
PII				AML	AML		
	comp=E,32µm,1.6s						
PII				AML	AML		
	comp=N,30µm,0.3s						
PII				AML	AML		
	comp=E,32µm,0.4s						
NDIM	**Novi di Modena**	**2.63**	**87**	AML	AML		
	comp=N,503µm,1.2s						
NDIM				AML	AML		
	comp=E,712µm,0.1s						
NDIM				AML	AML		
	comp=N,503µm,0.8s						
RONC	**Roncone**	**2.67**	**63**	AML	AML		
	comp=N,138µm,0.2s						
RONC				AML	AML		
	comp=E,102µm,0.2s						
RONC				AML	AML		
	comp=E,102µm,1.8s						
MBAL	**Monte Baldo -**	**2.73**	**70**	AML	AML		
	comp=N,45µm,0.9s						
MBAL				AML	AML		
	comp=E,73µm,0.3s						
LUSI	**Trento, Gardas**	**2.87**	**65**	AML	AML		
	comp=E,41µm,0.3s						
LUSI				AML	AML		
	comp=N,66µm,0.5s						
SMF	**Signal de Mont**	**2.98**	**309**	*e*P	**Pn**	**20 59 14.1**	**+2.1**
SMF				*e*Sn	**Sn**	**20 59 44.9**	**-2.5**
SMF				*e*Sg	**Sg**	**20 59 59.8**	**-1.3**
	comp=N,18nm,0.2s						
HINF	**Hinteralfeld**	**3.00**	**355**	*e*P	**Pn**	**20 59 13.7**	**+1.3**
HINF				*e*Sn	**Sn**	**20 59 46.3**	**-1.8**
HINF				*e*Sg	**Sg**	**20 59 59.8**	**-2.1**
	comp=N,6.9nm,0.3s						
DAVA	**Damuels**	**3.09**	**36**	*i* Pn	**Pn**	**20 59 15.4**	**+1.7**
	comp=N,2.0nm,0.2s						
DAVA				*e*Sn	**Sn**	**20 59 51.8**	**+1.4**
	comp=N,12nm,0.4s						
FELD	**Feldberg im Sc**	**3.10**	**10**	Sn	**Sn**	**20 59 50.5**	**-0.2**
FELD	**Feldberg im Sc**	**3.10**	**10**	Pn	**Pn**	**20 59 15.6**	**+1.7**
HAU	**Haudompre**	**3.24**	**350**	*e*P	**Pn**	**20 59 17.3**	**+1.7**
HAU				*e*Sn	**Sn**	**20 59 51.2**	**-2.7**
	comp=N,7.6nm,0.3s						
FETA	**Feichten**	**3.30**	**47**	*i* Pn	**Pn**	**20 59 18.0**	**+1.4**
	comp=N,0.7nm,0.1s						
FETA				*e*Sn	**Sn**	**20 59 56.6**	**+1.0**
	comp=N,1.4nm,0.2s						
AVF	**Avril sur Loir**	**3.33**	**308**	*e*P	**Pn**	**20 59 19.0**	**+2.1**
AVF				*e*Sn	**Sn**	**20 59 55.0**	**-1.2**
AVF				*e*Sg	**Sg**	**21 00 10.9**	**-1.6**
	comp=N,6.4nm,0.3s						
CASP	**Castiglione de**	**3.34**	**126**	AML	AML		
	comp=E,13µm,0.9s						
CASP				AML	AML		
	comp=N,17µm,0.3s						
CASP				AML	AML		
	comp=N,17µm,1.7s						
CTI	**Castel Tesino**	**3.36**	**67**	AML	AML		
	comp=E,38µm,1.3s						
CTI				AML	AML		
	comp=N,56µm,0.2s						
CTI				AML	AML		
	comp=E,38µm,0.7s						
LOR	**Lormes**	**3.38**	**318**	*e*P	**Pn**	**20 59 19.6**	**+2.1**
	baz=138						
LOR				*e*Sn	**Sn**	**20 59 54.5**	**-2.8**
	comp=E,9.7nm,0.2s						
SSF	**Saint Saulge**	**3.42**	**312**	*e*P	**Pn**	**20 59 20.6**	**+2.5**
SSF				*e*Sn	**Sn**	**20 59 55.3**	**-2.9**
	comp=E,6.7nm,0.3s						
BGF	**Bois d'Agland**	**3.51**	**301**	*e*P	**Pn**	**20 59 21.9**	**+2.5**
BGF				*e*Sn	**Sn**	**20 59 58.0**	**-2.6**
	comp=E,22nm,0.3s						
CDF	**Champ du Feu**	**3.59**	**1**	*e*P	**Pn**	**20 59 21.1**	**+0.6**
CDF				*e*Sn	**Sn**	**20 59 58.8**	**-3.8**
	comp=E,6.4nm,0.3s						
RETA	**Reutte**	**3.63**	**42**	*i* Pn	**Pn**	**20 59 22.4**	**+1.3**
	comp=E,1.2nm,0.1s						
RETA				*e*Sn	**Sn**	**21 00 07.7**	**+4.0**
CAF	**Calviac**	**3.66**	**273**	*e*P	**Pn**	**20 59 23.5**	**+2.1**
SQTA	**Sankt Quirin**	**3.68**	**48**	*i* Pn	**Pn**	**20 59 22.4**	**+0.6**
	comp=E,1.0nm,0.2s						
SQTA				*i* Sn	**Sn**	**21 00 05.1**	**+0.2**
	comp=E,2.8nm,0.3s						
SFTF	**Sexfontaines**	**3.70**	**337**	*e*P	**Pn**	**20 59 23.8**	**+1.9**
SFTF				*e*Sn	**Sn**	**21 00 02.7**	**-2.5**
	comp=E,6.1nm,0.2s						
MOTA	**Moosalm**	**3.70**	**46**	*i* Pn	**Pn**	**20 59 22.6**	**+0.5**
	comp=E,1.2nm,0.1s						
MOTA				*i* Sn	**Sn**	**21 00 05.1**	**-0.5**
	comp=E,3.4nm,0.3s						
TCF	**Toulx Ste Croi**	**3.80**	**294**	*e*P	**Pn**	**20 59 25.8**	**+2.4**
TCF				*e*Sn	**Sn**	**21 00 06.3**	**-1.5**
	comp=E,3.7nm,0.2s						
PAGF	**Fort de Pagny**	**3.87**	**345**	*e*P	**Pn**	**20 59 26.0**	**+1.7**
PAGF				*e*Sn	**Sn**	**21 00 06.4**	**-3.0**
	comp=E,2.3nm,0.2s						
MTLF	**Montolieu**	**3.89**	**249**	*e*Pn	**Pn**	**20 59 26.2**	**+1.7**
MTLF				*e*Sn	**Sn**	**21 00 08.9**	**-0.9**
	comp=E,1.6nm,0.2s						
WTTA	**Wattenberg**	**3.93**	**50**	*i* Pn	**Pn**	**20 59 26.6**	**+1.3**
	comp=E,2.7nm,0.2s						
WTTA				*i* Sn	**Sn**	**21 00 13.9**	**+2.6**
	comp=E,6.2nm,0.4s						
WATA	**Walderalm**	**3.95**	**49**	*i* Pn	**Pn**	**20 59 26.5**	**+1.0**
	comp=E,1.0nm,0.2s						
WATA				*i* Sn	**Sn**	**21 00 12.7**	**+1.2**
	comp=E,1.1nm,0.2s						
MEZF	**Maizieres J'vi**	**3.97**	**339**	*e*P	**Pn**	**20 59 27.9**	**+2.3**
MEZF				*e*Sn	**Sn**	**21 00 08.9**	**-2.9**
	comp=E,3.5nm,0.3s						
HYF	**Humbligny**	**4.01**	**309**	*e*P	**Pn**	**20 59 28.9**	**+2.7**
HYF				*e*Sn	**Sn**	**21 00 10.2**	**-2.7**
SAVF	**Savonnieres en**	**4.05**	**340**	*e*P	**Pn**	**20 59 27.9**	**+1.1**
STAL	**STALIGIAL**	**4.13**	**68**	AML	AML		
	comp=N,28µm,0.3s						
STAL				AML	AML		
	comp=E,33µm,0.3s						
STAL				AML	AML		
	comp=E,33µm,1.7s						
ABTA	**Abfaltersbach**	**4.18**	**61**	*i* Pn	**Pn**	**20 59 29.3**	**+0.6**
	comp=E,1.4nm,0.3s						
ABTA				*e*Sn	**Sn**	**21 00 19.1**	**+1.9**
	comp=E,2.3nm,0.5s						
LESA	**Schwarzleotal**	**4.61**	**54**	*i* Pn	**Pn**	**20 59 36.6**	**+2.0**
	comp=E,0.4nm,0.1s						
LESA				*e*Sn	**Sn**	**21 00 27.7**	**0.0**
	comp=E,1.3nm,0.3s						
BIOA	**Bad Ischl, Aus**	**5.30**	**55**	*e*Pn	**Pn**	**20 59 44.5**	**+0.4**
	comp=E,1.7nm,0.2s						
BIOA				*e*Sn	**Sn**	**21 00 45.5**	**+0.7**
	comp=E,1.9nm,0.4s						
OBKA	**Obir**	**5.42**	**69**	*i* Pn	**Pn**	**20 59 47.1**	**+1.5**
	comp=E,0.4nm,0.2s						
MFF	**Saint Martin d**	**5.45**	**292**	*e*P	**Pn**	**20 59 48.6**	**+2.7**
MFF				*e*Sn	**Sn**	**21 00 43.7**	**-4.5**
	comp=E,2.0nm,0.3s						
MFF				*e*Sn	Sb	21 00 44.0	-21
	comp=E,0.7nm,0.1s						
BAIF	**Baives**	**5.62**	**340**	*e*P	**Pn**	**20 59 50.5**	**+2.2**
MOA	**Molln**	**5.75**	**56**	*i* Pn	**Pn**	**20 59 50.4**	**+0.2**
	comp=E,0.2nm,0.1s						
MOA				*e*Sn	**Sn**	**21 00 54.7**	**-1.0**
	comp=E,1.0nm,0.3s						
SOKA	**Soboth**	**5.78**	**69**	*e*Pn	**Pn**	**20 59 51.7**	**+1.0**
	comp=E,0.2nm,0.2s						
SOKA				*e*Sn	**Sn**	**21 00 56.7**	**-0.1**
	comp=E,0.3nm,0.3s						
ETSF	**Etsaut**	**5.93**	**254**	*e*P	**Pn**	**20 59 55.8**	**+3.1**
KHC	**Kasperske Hory**	**6.13**	**43**	*e*PN	**Pn**	**20 59 53.5**	**-1.9**
KHC				*e*SN	**Sn**	**21 00 57.4**	**-7.7**
LDF	**La Druitiere**	**6.29**	**309**	*e*P	**Pn**	**21 00 00.7**	**+3.2**
LDF				*e*Sn	**Sn**	**21 01 05.3**	**-3.7**
	comp=E,0.6nm,0.3s						
CKRC	**Cesky Krumlov**	**6.30**	**48**	*e*PN	**Pn**	**20 59 55.9**	**-1.8**
CKRC				*e*SN	**Sn**	**21 01 02.3**	**-7.1**
SJPF	**Ste Jean**	**6.32**	**257**	*e*P	**Pn**	**20 59 59.9**	**+1.9**
FLN	**La Foliniere**	**6.58**	**309**	*e*P	**Pn**	**21 00 04.1**	**+2.6**
FLN				*e*Sn	**Sn**	**21 01 12.8**	**-3.4**
	comp=E,0.5nm,0.2s						
GRR	**Gorron**	**6.60**	**306**	*e*P	**Pn**	**21 00 03.8**	**+2.0**
GRR				*e*Sn	**Sn**	**21 01 12.7**	**-3.9**
	comp=E,5.1nm,0.4s						
CONA	**Conrad Observa**	**6.75**	**60**	*i* Pn	**Pn**	**21 00 04.6**	**+0.7**
	comp=E,0.3nm,0.2s						
CONA				*e*Sn	**Sn**	**21 01 20.5**	**+0.1**
	comp=E,0.7nm,0.3s						
RONA	**Rosalia, Austr**	**6.93**	**62**	*e*Pn	**Pn**	**21 00 06.8**	**+0.5**
	comp=E,0.8nm,0.2s						
QUIF	**Quistinic**	**7.81**	**297**	*e*P	**Pn**	**21 00 20.5**	**+2.1**

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*IDC **19** 21:09:36.2±1.5, 31°.11S×177°.30W, h0km, mb3.9/2, mbtmp3.9/3, ML3.4/1, Error ellipse: s-maj=57.2km*

s-min=30.5km az=135.0

*NEIC **19** 21:09:43.9±1.7, 30°.71S±0°.05×177°.7W±0°.3, h33km±7km, mb4.4/7, Error ellipse: s-maj=35.4km s-min=7.4km az=89.0*

ISC 19 21:09:42.7±1.0**, 30°.85S**±0°.08×**177°.8W**±0°.2**, h35km, n19,** σ1s**.71**/22**, mb4.2**/7**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.59**	**356**		**Pn**	**21 10 07.8**	**-0.6**
RAO				Sn	**Sn**	**21 10 26.2**	**-1.6**
URZ	**Urewera**	**8.51**	**208**	Pn	**Pn**	**21 11 39.7**	**-3.6**
	0.5nm,0.3s,baz=320,slow=18,SNR=1.8						
URZ				Sn	**Sn**	**21 13 16.6**	**-1.5**
	1.9nm,0.3s,baz=148,slow=23,SNR=5.5						
	7.1nm,0.9s						
BBOO	**Buckleboo**	**39.03**	**255**	P	**P**	**21 17 07.0**	**+0.9**
BBOO				IAmb	IAmb	21 17 15.4	
	comp=Z,21nm,1.5s						
AS31	**Alice Springs**	**43.28**	**267**	P	**P**	**21 17 43.2**	**+2.1**
AS31				IAmb	IAmb	21 17 57.3	
	comp=Z,0.8nm,0.8s						
ASAR	**Alice Springs**	**43.28**	**267**	P	**P**	**21 17 42.4**	**+1.3**
ASAR	**Alice Springs**	**43.28**	**267**	P	**P**	**21 17 42.6**	**+1.5**
	comp=Z,0.8nm,0.6s,baz=104,slow=7.0,SNR=11						
ASAR				PcP	**PcP**	**21 19 32.1**	**+2.3**
	comp=Z,0.1nm,0.4s,baz=106,slow=4.2,SNR=1.3						
	comp=Z,0.8nm,0.6s						
WR8	**Warramunga Arr**	**44.16**	**273**	P	**P**	**21 17 50.4**	**+2.1**
WR8				IAmb	IAmb	21 18 14.6	
	comp=Z,5.9nm,1.2s						
WRA	**Warramunga Arr**	**44.31**	**272**	P	**P**	**21 17 50.9**	**+1.4**
WRA	**Warramunga Arr**	**44.31**	**272**	P	**P**	**21 17 51.5**	**+2.0**
	comp=Z,1.0nm,0.4s,baz=111,slow=8.1,SNR=24						
	comp=Z,1.0nm,0.4s						
FORT	**Forrest**	**46.12**	**255**	P	**P**	**21 18 03.7**	**+0.1**
CASY	**Casey**	**54.84**	**208**	P	**P**	**21 19 10.6**	**+1.6**
CASY				IAmb	IAmb	21 19 36.4	
	comp=Z,8.3nm,1.2s						
QSPA	**South Pole Qui**	**59.26**	**180**		**P**	**21 19 42.6**	**+2.1**
QSPA				IAmb	IAmb	21 19 57.1	
	comp=Z,4.5nm,0.9s						
KURBB	**Kurchatov Arra**	**121.53**	**313**	PKP	**PKiKP**	**21 28 31.5**	**-0.7**
	comp=Z,0.5nm,0.9s,baz=111,slow=2.0,SNR=3.3						
FIA1	**FINESS Array S**	**145.63**	**340**	PKPdf	**PKPbc**	**21 29 15.9**	**-0.9**
FINES	**FINESS Array B**	**145.63**	**340**	PKPbc	**PKPab**	**21 29 16.4**	**-0.8**
	comp=Z,3.1nm,0.7s,baz=50,slow=3.0,SNR=16						
HFS	**Hagfors**	**149.72**	**349**	PKPbc	**PKiKP**	**21 29 28.0**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=28,slow=6.8,SNR=1.4						
AKASG	**Malin Array Be**	**151.77**	**322**	PKPbc	**PKPbc**	**21 29 31.7**	**-1.5**
	comp=Z,0.6nm,0.6s,baz=56,slow=2.2,SNR=4.7						
MMAI	**Mount Meron Ar**	**151.82**	**283**	PKPbc	**PKiKP**	**21 29 34.5**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=63,slow=7.3,SNR=4.2						
BRTR	**Keskin Array B**	**152.98**	**298**	PKPbc	**PKiKP**	**21 29 37.1**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=190,slow=3.5,SNR=3.8						

HEL 19 21:13:51.9±0.2**, 67°.85N**×**20°.20E, h0km, ML1.2, Suspected explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LANU	**Lannavaara**	**0.71**	**73**	PG	Pg	21 14 05.0	-0.5
	baz=255						
LANU				SG	Sg	21 14 14.0	-0.6
KIF	**Kilpisjarvi**	**1.18**	**11**	*e*P	Pg	21 14 13.8	-0.6
KIF	**Kilpisjarvi**	**1.18**	**11**	PG	Pg	21 14 13.9	-0.6
KIF				MSG		21 14 28.7	
	comp=Z,2.1nm,0.2s						
KIF				SB	Sg	21 14 29.3	-0.4
HEF	**Hetta**	**1.41**	**65**	*e*P	Pn	21 14 16.4	-2.4
HEF	**Hetta**	**1.41**	**65**	PG	Pn	21 14 17.1	-1.8
HEF				MSG		21 14 34.4	
	comp=Z,1.2nm,0.2s						
HEF				SG	Sg	21 14 35.3	-1.9
ERTU	**Ertsjaerv**	**1.52**	**148**	PG	Pn	21 14 19.1	-1.2
ERTU				SG	Sg	21 14 39.3	-1.3
KLF	**Kolari**	**1.57**	**111**	PG	Pn	21 14 20.0	-1.0
KLF				MSG		21 14 39.1	
	comp=Z,1.0nm,0.2s						
KLF				SN	Sn	21 14 40.6	-1.4
TRO	**Tromso**	**1.85**	**346**	SG	Sb	21 14 49.5	-0.6
KALU	**Kalix**	**2.36**	**147**	PN	Pn	21 14 31.9	+0.1
	baz=327						
KALU				SB	Sn	21 15 02.7	+1.3
TOF	**Tornio**	**2.41**	**136**	PB	Pn	21 14 33.0	+0.6
TOF				MSG		21 15 03.2	
	comp=Z,0.7nm,0.2s						
TOF				SG	Sb	21 15 05.4	-0.9
ARA0	**ARCESS Array S**	**2.57**	**46**	PB	Pn	21 14 35.9	+1.1
ARA0				SB	Sn	21 15 08.3	+1.7
RNF	**Rovaniemi**	**2.58**	**116**	PB	Pn	21 14 36.0	+1.1
RNF				SG	Sb	21 15 10.2	-1.1
RAJF	**Raja-Jooseppi**	**3.10**	**75**	PG	Pb	21 14 48.3	+0.5
RAJF				SB	Sb	21 15 24.1	-1.9
KEV	**Kevo**	**3.13**	**49**	SB	Sn	21 15 21.9	+1.6
KEV				MSG		21 15 23.6	
	comp=Z,0.6nm,0.2s						
RANF	**Ranua**	**3.18**	**122**	SG	Sb	21 15 30.2	+1.7
KU6	**Riekki**	**4.23**	**111**	SG	Sb	21 16 01.4	+2.8

IDC 19 21:19:09.4±3.4**, 5°.60S**×**129°.39E, h0km, mb3.3**/1**, mbtmp3.4**/3**, ML3.3**/2**, Error ellipse: s-maj=301.3km s-min=32.5km az=69.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.05**	**162**	Pn	Pn	21 22 41.9	-1.6
	0.1nm,0.3s,baz=339,slow=14,SNR=6.6						
WRA				Sn	Sn	21 25 22.7	-8.4
	0.2nm,0.3s,baz=340,slow=22,SNR=5.2						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**18.48**	**167**	P	Pn	21 23 27.8	+0.6
	0.1nm,0.3s,baz=347,slow=12,SNR=12						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**66.73**	**327**	P	P	21 30 02.5	0.0
	0.2nm,0.5s,baz=116,slow=5.9,SNR=1.9						
	0.2nm,0.5s						

IDC 19 21:24:35.6±3.2**, 7°.43S**×**114°.13E, h0km, mb3.3**/3**, mbtmp3.5**/4**, ML3.5**/1**, Error ellipse: s-maj=222.9km s-min=27.5km az=50.0, Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**15.43**	**134**	Pn	Pn	21 28 17.0	+2.2
	0.1nm,0.3s,baz=9.9,slow=18,SNR=2.1						
FITZ				Sn	Sn	21 30 49.9	-17
	0.2nm,0.3s,baz=117,slow=23,SNR=1.5						
	2.9nm,0.9s						
WRA	**Warramunga Arr**	**23.21**	**124**	P	P	21 29 43.2	-1.2
	0.4nm,0.5s,baz=302,slow=11,SNR=9.0						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**24.91**	**133**	P	P	21 30 01.1	+0.5
	1.2nm,0.7s,baz=306,slow=9.4,SNR=13						
	1.2nm,0.7s						
MKAR	**Makanchi Array**	**60.95**	**336**	P	P	21 34 50.6	0.0
	0.1nm,0.5s,baz=154,slow=8.0,SNR=1.8						
	0.1nm,0.5s						

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*IDC **19** 21:29:59.6±1.3, 50°.83N×170°.49W, h0km, mb3.7/11, mbtmp3.7/13, ML3.1/2, Error ellipse: s-maj=35.6km s-min=21.2km az=4.0*

*NEIC **19** 21:30:01.6±2.2, 51°.0N±0°.1×170°.74W±0°.09, h10km±2km, mb3.8/31, ML3.2/11, ML3.1(AEIC), Error ellipse: s-maj=17.9km s-min=8.4km az=163.0*

*AEIC **19** 21:30:08.2±1.9, 51°.18N±0°.07×170°.83W±0°.07, h5km±5km, Error ellipse: s-maj=9.7km s-min=5.8km az=191.0*

ISC 19 21:30:03.5±0.8**, 51°.0N**±0°.1×**170°.71W**±0°.05**, h23km, n232,** σ1s**.18**/235**, mb3.8**/14**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	**Nikolski High**	**2.28**	**29**	Pn	**Pn**	**21 30 39.7**	**-0.1**
NIKH				Sn	**Sn**	**21 31 07.1**	**0.0**
NIKH				IAML		21 31 09.8	
	comp=N,142nm,0.5s						
NIKH				IAML		21 31 10.7	
	comp=E,123nm,0.5s						
NIKH	**Nikolski High**	**2.28**	**29**	P	**Pn**	**21 30 39.7**	**-0.1**
	baz=211						
ATKA	**Atka Island**	**2.48**	**300**		**Pn**	**21 30 42.0**	**-0.5**
ATKA				Sn	**Sn**	**21 31 10.8**	**-1.3**
OKSP	**Okmok Steeple**	**2.70**	**33**		**Pn**	**21 30 45.6**	**0.0**
OKTU	**Okmok Mt. Tuli**	**2.89**	**33**		**Pn**	**21 30 48.5**	**+0.3**
GSTR	**Great Sitkin T**	**3.52**	**290**	Pn	**Pn**	**21 30 57.0**	**+0.3**
GSCK	**Great Sitkin C**	**3.56**	**289**		**Pn**	**21 30 57.3**	**+0.1**
MAPS	**Pakushin South**	**3.63**	**38**		**Pn**	**21 30 58.9**	**+0.6**
MAPS					**Sn**	**21 31 38.9**	**-1.6**
MGOD	**Makushin Gods**	**3.65**	**39**		**Pn**	**21 30 59.3**	**+0.7**
MGOD					**Sn**	**21 31 39.3**	**-1.6**
MREP	**Makushin Rep't**	**3.71**	**39**		**Pn**	**21 31 00.5**	**+1.0**
UNV	**Unalaska Valle**	**3.84**	**40**		**Pn**	**21 31 01.6**	**+0.5**
UNV				Sn	**Sn**	**21 31 45.4**	**0.0**
UNV				IAML		21 31 49.8	
	comp=E,42nm,0.4s						
UNV	**Unalaska Valle**	**3.84**	**40**	P	**Pn**	**21 31 01.8**	**+0.7**
	baz=224						
ADK	**Adak**	**3.84**	**286**	Pn	**Pn**	**21 31 00.6**	**-0.6**
ADK	**Adak**	**3.84**	**286**	IAML		21 31 46.2	
	comp=E,39nm,0.3s						
ADK				IAML		21 31 47.2	
	comp=E,43nm,0.2s						
KIWB	**Kanaga Island**	**4.12**	**284**		**Pn**	**21 31 04.4**	**-0.6**
AKMO	**Akutan Morgan**	**4.22**	**41**		**Pn**	**21 31 07.7**	**+1.4**
AKRB	**Akutan Reef Bi**	**4.22**	**40**		**Pn**	**21 31 07.1**	**+0.7**
LVA	**Lava Point**	**4.26**	**40**	Pn	**Pn**	**21 31 08.4**	**+1.5**
AKUT	**Akutan**	**4.35**	**42**	Pn	**Pn**	**21 31 09.6**	**+1.5**
AKUT				IAML		21 32 23.8	
	comp=N,26nm,2.2s						
AKUT				IAML		21 32 32.8	
	comp=E,29nm,2.5s						
AMKA	**Amchitka**	**6.29**	**277**	Pn	**Pn**	**21 31 33.7**	**-1.2**
S12K	**Black Hills**	**6.99**	**44**	P	**Pn**	**21 31 44.2**	**-0.3**
	baz=231						
SDPT	**Sand Point**	**7.53**	**51**	Pn	**Pn**	**21 31 52.6**	**+0.9**
SDPT	**Sand Point**	**7.53**	**51**	P	**Pn**	**21 31 52.3**	**+0.5**
	baz=239						
CNBA	**Chernabura Isl**	**7.73**	**56**	Pn	**Pn**	**21 31 54.4**	**-0.1**
CHNA	**Chernabura Isl**	**7.74**	**56**	P	**Pn**	**21 31 55.2**	**+0.6**
	baz=245						
M11K	**Mekoryuk**	**9.74**	**13**	P	**Pn**	**21 32 21.5**	**-0.5**
	baz=197						
CHIR	**Chirikof Islan**	**10.21**	**56**	Pn	**Pn**	**21 32 29.1**	**+0.6**
CHIR	**Chirikof Islan**	**10.21**	**56**	P	**Pn**	**21 32 29.0**	**+0.5**
	baz=248						
O16K	**Kokwok River B**	**11.20**	**35**	Pn	**Pn**	**21 32 42.1**	**+0.2**
SII	**Sitkinak Islan**	**11.23**	**54**	Pn	**Pn**	**21 32 42.2**	**-0.3**
SII	**Sitkinak Islan**	**11.23**	**54**	P	**Pn**	**21 32 41.2**	**-1.3**
	baz=247						
Q17K	**Contact Creek**	**11.23**	**44**	P	**Pn**	**21 32 43.3**	**+0.6**
	baz=236						
ACHA	**Angle Creek He**	**11.45**	**45**	Pn	**Pn**	**21 32 46.4**	**+0.8**
Q18K	**Katmai Hardscr**	**11.83**	**44**	P	**Pn**	**21 32 49.7**	**-1.1**
	baz=236						
OHAK	**Old Harbor**	**11.95**	**52**	Pn	**Pn**	**21 32 50.3**	**-2.0**
P18K	**Big Mountain,**	**12.17**	**40**	Pn	**Pn**	**21 32 56.1**	**+0.7**
P18K	**Big Mountain,**	**12.17**	**40**	P	**Pn**	**21 32 54.0**	**-1.3**
	baz=233						
K15K	**Wolf Creek Mou**	**12.38**	**20**	P	**Pn**	**21 32 57.1**	**-0.9**
	baz=208						
O18K	**Koktuh Hills**	**12.46**	**39**	Pn	**Pn**	**21 33 00.3**	**+1.0**
O18K	**Koktuh Hills**	**12.46**	**39**	P	**Pn**	**21 32 58.3**	**-1.0**
	baz=231						
KDAK	**Kodiak Island**	**12.53**	**50**	Pn	**Pn**	**21 32 58.5**	**-1.6**
KDAK	**Kodiak Island**	**12.53**	**50**	Pn	**Pn**	**21 32 58.7**	**-1.5**
	comp=E,0.6nm,0.3s,baz=246,slow=4.1,SNR=15						
KDAK				Sn	**Sn**	**21 35 12.8**	**-6.0**
	comp=E,0.1nm,0.3s,baz=125,slow=20,SNR=1.3						
KDAK	**Kodiak Island**	**12.53**	**50**	P	**Pn**	**21 32 59.1**	**-1.1**
	baz=245						
Q19K	**Cape Douglas,**	**12.58**	**44**	Pn	**Pn**	**21 33 01.0**	**+0.1**
Q20K	**Shuyak Island**	**12.99**	**47**	P	**Pn**	**21 33 04.0**	**-2.4**
	baz=242						
SYI	**Shuyak Island**	**12.99**	**47**	Pn	**Pn**	**21 33 05.3**	**-1.2**
L17K	**Donlin**	**13.05**	**27**	P	**Pn**	**21 33 08.0**	**+0.7**
	baz=217						
N19K	**Bonanza Creek**	**13.35**	**36**	Pn	**Pn**	**21 33 12.7**	**+1.2**
N19K	**Bonanza Creek**	**13.35**	**36**	P	**Pn**	**21 33 08.7**	**-2.7**
	baz=230						
K17K	**Iditarod**	**13.53**	**25**	P	**Pn**	**21 33 12.0**	**-1.8**
	baz=216						
L19K	**White Mountain**	**14.15**	**32**	Pn	**Pn**	**21 33 22.4**	**+0.1**
J18K	**Innoko River**	**14.56**	**26**	Pn	**Pn**	**21 33 28.5**	**+0.6**
J18K	**Innoko River**	**14.56**	**26**	P	**Pn**	**21 33 26.8**	**-1.1**
	baz=217,SNR=7.2						
SEW	**Seward**	**15.02**	**44**	P	**Pn**	**21 33 33.0**	**-1.1**
	baz=242						
H17K	**Granite Mounta**	**15.06**	**18**	P	**Pn**	**21 33 34.0**	**-0.6**
	baz=207						
G16K	**Koyuk River**	**15.06**	**14**	P	**Pn**	**21 33 33.6**	**-1.1**
	baz=201						
F15K	**North Star Dit**	**15.07**	**10**	P	**Pn**	**21 33 34.1**	**-0.6**
	baz=195						
SUA	**Susitna One**	**15.19**	**39**	Pn	**Pn**	**21 33 36.1**	**-0.4**
SUA				IAmb	IAmb	21 33 37.7	
	comp=Z,7.4nm,1.4s						
SUA	**Susitna One**	**15.19**	**39**	P	**Pn**	**21 33 37.3**	**+0.8**
	baz=235						
K20K	**Telida**	**15.25**	**29**	Pn	**Pn**	**21 33 37.2**	**+0.1**
K20K	**Telida**	**15.25**	**29**	P	**Pn**	**21 33 37.4**	**+0.2**
	baz=223						
J19K	**Poorman**	**15.28**	**26**	Pn	**Pn**	**21 33 38.6**	**+1.1**
J19K	**Poorman**	**15.28**	**26**	P	**Pn**	**21 33 37.0**	**-0.5**
	baz=219						
G17K	**Kiwalik Mounta**	**15.44**	**16**	P	**Pn**	**21 33 39.9**	**+0.4**
	baz=204						
PPLA	**Purkeypile**	**15.54**	**33**	Pn	**Pn**	**21 33 42.7**	**+1.6**
PPLA				IAmb	IAmb	21 33 48.8	
	comp=Z,13nm,1.5s						
PPLA	**Purkeypile**	**15.54**	**33**	P	**Pn**	**21 33 41.5**	**+0.4**
	baz=228						
H18K	**Honhosa River**	**15.57**	**20**	P	**Pn**	**21 33 43.2**	**+2.0**
	baz=210						
J20K	**Nowinta River**	**15.83**	**27**	P	**P**	**21 33 47.2**	**-1.1**
	baz=221						
CAST	**Castle Rocks**	**15.93**	**32**	Pn	**Pn**	**21 33 46.5**	**+0.6**
CAST				IAmb	IAmb	21 33 53.8	
	comp=Z,3.3nm,0.8s						
CAST	**Castle Rocks**	**15.93**	**32**	P	**Pn**	**21 33 47.6**	**+1.7**
	baz=227						
KNK	**Knik Glacier**	**16.09**	**41**	P	**Pn**	**21 33 48.5**	**+0.5**
	baz=240						
G18K	**Tagagawik**	**16.16**	**18**	P	**Pn**	**21 33 50.3**	**+1.4**
	baz=208						
CHUM	**Lake Minchumin**	**16.17**	**30**	P	**Pn**	**21 33 48.1**	**-1.0**
	baz=226						
F17K	**Baldwin Pennin**	**16.21**	**14**	P	**Pn**	**21 33 47.4**	**-2.0**
	baz=202						
H19K	**Roundabout Mou**	**16.31**	**21**	P	**Pn**	**21 33 51.4**	**+0.7**
	baz=214						
SML	**Sawmill**	**16.34**	**40**	P	**Pn**	**21 33 51.2**	**0.0**
	baz=239						
HIN	**Hinchinbrook I**	**16.47**	**46**	Pn	**Pn**	**21 33 51.4**	**-1.5**
TRF	**Thorofare Moun**	**16.56**	**33**	P	**Pn**	**21 33 54.8**	**+0.7**
	baz=231						
F18K	**Selawik**	**16.61**	**16**	P	**Pn**	**21 33 54.1**	**-0.4**
	baz=205						
H20K	**Anotleneega Mo**	**16.66**	**23**	P	**P**	**21 33 57.2**	**-0.3**
	baz=217						
G19K	**Purcell Mounta**	**16.69**	**19**	P	**Pn**	**21 33 55.2**	**-0.4**
	baz=211						
E17K	**Hotham Inlet**	**16.73**	**12**	P	**Pn**	**21 33 56.2**	**+0.1**
	baz=200						
BPAW	**Bear Paw Mtn.**	**16.75**	**31**		**Pn**	**21 33 57.4**	**+1.1**
BPAW				IAmb	IAmb	21 34 00.3	
	comp=Z,4.7nm,1.0s						
BPAW	**Bear Paw Mtn.**	**16.75**	**31**	P	**Pn**	**21 33 57.5**	**+1.1**
	baz=228						
SCM	**Sheep Creek Mo**	**16.77**	**41**	P	**Pn**	**21 33 56.9**	**+0.2**
	baz=240						
WAT6	**Susitna Watana**	**16.99**	**38**	P	**Pn**	**21 33 57.8**	**-1.8**
	baz=238						
F19K	**Shaleruckik Mo**	**17.16**	**17**	P	**Pn**	**21 34 00.2**	**-1.2**
	baz=209						
D17K	**Noatak River**	**17.17**	**10**	P	**Pn**	**21 33 59.2**	**-2.3**
	baz=197						
KLU	**Klutina**	**17.20**	**43**	Pn	**Pn**	**21 34 00.0**	**-2.0**
KLU				IAmb	IAmb	21 34 01.5	
	comp=Z,3.7nm,0.5s						
E18K	**Tukpahlearik C**	**17.22**	**13**	P	**Pn**	**21 34 02.0**	**-0.2**
	baz=202						
KAIM	**Kayak Island**	**17.27**	**49**	P	**Pn**	**21 34 00.6**	**-2.2**
	baz=250						
H21K	**Melozitna Rive**	**17.33**	**25**	P	**Pn**	**21 34 03.7**	**+0.1**
	baz=221						
IMAR	**Indian Mountai**	**17.34**	**24**		**Pn**	**21 34 04.3**	**+0.6**
M24K	**Tolsona, Glenn**	**17.38**	**41**	Pn	**Pn**	**21 34 03.7**	**-0.6**
M24K	**Tolsona, Glenn**	**17.38**	**41**	P	**Pn**	**21 34 04.5**	**+0.2**
	baz=241						
DHY	**Denali Highway**	**17.40**	**37**	P	**Pn**	**21 34 03.7**	**-1.0**
	baz=237						
MLY	**Manley**	**17.47**	**29**		**Pn**	**21 34 06.3**	**+0.9**
MLY				IAmb	IAmb	21 34 09.9	
	comp=Z,5.0nm,0.8s						
MLY	**Manley**	**17.47**	**29**	P	**Pn**	**21 34 05.4**	**0.0**
	baz=226,SNR=9.4						
HMT	**Hamilton**	**17.48**	**48**	Pn	**Pn**	**21 34 03.8**	**-1.8**
HMT				IAmb	IAmb	21 34 15.2	
	comp=Z,21nm,1.4s						
BMRM	**Bremner River**	**17.56**	**45**	P	**Pn**	**21 34 07.5**	**+1.0**
	baz=247,SNR=5.2						
NEA2	**Nenana**	**17.70**	**32**	P	**Pn**	**21 34 07.8**	**-0.5**
	baz=230						
F20K	**Avaraart Lake**	**17.75**	**19**	P	**Pn**	**21 34 08.4**	**-0.4**
	baz=212						
E19K	**Redstone River**	**17.81**	**17**		**Pn**	**21 34 09.9**	**+0.4**
E19K	**Redstone River**	**17.81**	**17**	P	**P**	**21 34 10.4**	**+0.3**
	baz=209						
G21K	**Allakaket**	**17.82**	**23**	P	**Pn**	**21 34 10.0**	**+0.3**
	baz=218						
N25K	**Chitina, Valde**	**17.82**	**43**	Pn	**Pn**	**21 34 09.1**	**-0.7**
N25K				IAmb	IAmb	21 34 14.9	
	comp=Z,3.3nm,0.7s						
N25K	**Chitina, Valde**	**17.82**	**43**	P	**Pn**	**21 34 09.4**	**-0.4**
	baz=245						
H22K	**Ishtalitna Cre**	**17.90**	**26**	P	**P**	**21 34 12.4**	**+1.2**
	baz=223						
C17K	**DeLong Mountai**	**17.91**	**9**	P	**Pn**	**21 34 11.1**	**+0.3**
	baz=196						
I23K	**Minto, Yukon-K**	**17.98**	**30**	P	**Pn**	**21 34 11.9**	**+0.4**
	baz=228,SNR=7.6						
PAX	**Paxson**	**18.08**	**39**	P	**Pn**	**21 34 12.7**	**-0.4**
	baz=240						
GLB	**Gilahina Butte**	**18.10**	**44**	Pn	**Pn**	**21 34 11.8**	**-1.3**
GLB				IAmb	IAmb	21 34 18.0	
	comp=Z,7.3nm,0.6s						
C18K	**Utukok River**	**18.29**	**11**	P	**P**	**21 34 15.3**	**-0.2**
H23K	**Yukon River**	**18.38**	**28**	P	**P**	**21 34 14.4**	**-2.0**
H23K	**Yukon River**	**18.38**	**28**	P	**Pn**	**21 34 17.1**	**+0.6**
	baz=226						
F21K	**Alatna River**	**18.39**	**21**	P	**Pn**	**21 34 18.4**	**+1.7**
	baz=216						
K24K	**Donnelly Dome**	**18.40**	**36**	P	**Pn**	**21 34 17.6**	**+0.8**
	baz=238						
MCARA	**McCarthy VSAT**	**18.43**	**45**	P	**Pn**	**21 34 18.4**	**+1.3**
	baz=248						
MESA	**MESA**	**18.52**	**49**	P	**P**	**21 34 16.2**	**-2.1**
	baz=253						
ILAR	**Eielson Array**	**18.55**	**33**	P	**P**	**21 34 17.4**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=230,slow=9.2,SNR=13						
	comp=Z,1.0nm,0.7s						
POKR	**Poker Plat Res**	**18.58**	**32**	P	**P**	**21 34 16.3**	**-2.3**
	baz=232						
D19K	**Kuna River**	**18.58**	**15**	P	**P**	**21 34 18.8**	**+0.1**
	baz=206						
E20K	**Nigu River**	**18.70**	**17**	P	**Pn**	**21 34 21.2**	**+0.7**
	baz=210						
RIDG	**Independent Ri**	**18.72**	**37**	P	**P**	**21 34 20.8**	**+0.6**
	baz=239						
M26K	**Nabesna, AK**	**18.84**	**42**	P	**Pn**	**21 34 22.9**	**+0.7**
	baz=245						
G23K	**Bananza Creek**	**18.87**	**26**	P	**Pn**	**21 34 23.1**	**+0.6**
G23K				IAmb	IAmb	21 34 27.5	
	comp=Z,2.7nm,0.8s						
G23K	**Bananza Creek**	**18.87**	**26**	P	**P**	**21 34 22.3**	**+0.4**
	baz=224,SNR=5.9						
H24K	**Noodor Dome**	**18.90**	**30**		**Pn**	**21 34 23.2**	**+0.4**
H24K				IAmb	IAmb	21 34 25.3	
	comp=Z,4.0nm,0.8s						
H24K	**Noodor Dome**	**18.90**	**30**	P	**P**	**21 34 22.3**	**+0.1**
	baz=229,SNR=8.5						
C19K	**Lookout Ridge**	**18.93**	**12**	P	**P**	**21 34 22.3**	**-0.2**
	baz=202						
J25K	**Salcha River,**	**18.99**	**35**	P	**P**	**21 34 22.9**	**-0.3**
J25K				IAmb	IAmb	21 34 26.7	
	comp=Z,6.8nm,0.7s						
J25K	**Salcha River,**	**18.99**	**35**	P	**P**	**21 34 22.7**	**-0.5**
	baz=236,SNR=13						
D20K	**Etivluk River**	**19.03**	**16**	P	**P**	**21 34 23.9**	**+0.3**
D20K				IAmb	IAmb	21 34 26.3	
	comp=Z,3.3nm,0.7s						
D20K	**Etivluk River**	**19.03**	**16**	P	**P**	**21 34 24.2**	**+0.7**
	baz=208						
CTG	**Chitna Glacier**	**19.05**	**47**	P	**P**	**21 34 23.0**	**-0.9**
	baz=252						
SCRK	**Sand Creek**	**19.17**	**37**	P	**P**	**21 34 24.7**	**-0.5**
SCRK	**Sand Creek**	**19.17**	**37**	P	**P**	**21 34 26.0**	**+0.8**
	baz=240						
COLD	**Coldfoot**	**19.20**	**24**	P	**Pn**	**21 34 27.5**	**+1.0**
	baz=222						
E21K	**Killik River**	**19.29**	**19**	P	**Pn**	**21 34 27.6**	**+0.1**
	baz=213						
M27K	**Edge Creek, AK**	**19.30**	**43**	Pn	**Pn**	**21 34 28.1**	**+0.3**
M27K	**Edge Creek, AK**	**19.30**	**43**	P	**P**	**21 34 27.7**	**+1.0**
	baz=247,SNR=11						
PINM	**Pinnacle**	**19.32**	**50**	P	**P**	**21 34 27.6**	**+0.7**
	baz=255						
PRP	**Porcupine Dome**	**19.46**	**32**	P	**P**	**21 34 28.9**	**+0.5**
	baz=234,SNR=5.3						
PETK	**Petropavlovsk-**	**19.46**	**289**	P	**Pn**	**21 34 31.4**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=74,slow=11,SNR=1.2						
	comp=Z,5.3nm,1.1s						
E22K	**Anaktuvuk Pass**	**19.51**	**21**	P	**Pn**	**21 34 30.5**	**+0.4**
	baz=218						
O28M	**Mount Upton**	**19.53**	**48**	P	**P**	**21 34 29.1**	**-0.3**
	baz=254,SNR=8.0						
J26L	**Joseph Creek**	**19.59**	**36**	P	**P**	**21 34 30.4**	**+0.5**
	baz=239,SNR=14						
G24K	**Hadweenzic Riv**	**19.59**	**28**	P	**P**	**21 34 30.3**	**+0.6**
G24K	**Hadweenzic Riv**	**19.59**	**28**	P	**Pn**	**21 34 31.2**	**+0.1**
	baz=228,SNR=13						
L27K	**Beaver Creek,**	**19.61**	**41**	P	**Pn**	**21 34 31.3**	**-0.1**
	baz=245						
YUK3	**Moose Creek**	**19.71**	**45**	P	**P**	**21 34 32.2**	**+0.9**
	baz=251,SNR=9.9						
C21K	**Knifeblade Rid**	**19.74**	**17**	P	**P**	**21 34 32.6**	**+1.2**
	baz=211						
H25L	**Birch Creek**	**19.82**	**30**	P	**Pn**	**21 34 34.7**	**+1.0**
	baz=232						
D22K	**Ayikyak River**	**19.92**	**19**	P	**P**	**21 34 33.6**	**+0.3**
D22K	**Ayikyak River**	**19.92**	**19**	P	**P**	**21 34 34.2**	**+0.9**
	baz=215						
E23K	**Chandalar**	**19.98**	**23**	P	**P**	**21 34 34.5**	**+0.6**
	baz=222						
F24K	**Squaw Lake**	**20.04**	**26**	P	Pn	21 34 36.3	-0.1
	baz=226,SNR=9.3						
G25K	**Bearman Lake**	**20.05**	**29**	P	**P**	**21 34 34.0**	**-0.7**
	baz=230						
B20K	**Meade River**	**20.10**	**14**	P	**P**	**21 34 34.6**	**-0.6**
	baz=206						
I26K	**Coal Creek Min**	**20.16**	**34**	P	**P**	**21 34 36.5**	**+0.6**
	baz=238,SNR=14						
B21K	**Ikpikpuk River**	**20.17**	**16**	P	**P**	**21 34 37.1**	**+1.1**
B21K				IAmb	IAmb	21 34 38.2	
	comp=Z,3.5nm,0.6s						
B21K	**Ikpikpuk River**	**20.17**	**16**	P	**P**	**21 34 36.7**	**+0.7**
	baz=211						
O29M	**Mount Kennedy**	**20.18**	**50**	P	Pn	21 34 38.9	+0.6
O29M	**Mount Kennedy**	**20.18**	**50**	P	**P**	**21 34 36.7**	**+0.4**
	baz=257,SNR=5.2						
E24K	**Your Creek**	**20.27**	**24**	P	**P**	**21 34 37.5**	**+0.3**
	baz=224						
YUK4	**Talbot Arm**	**20.41**	**47**	P	**P**	**21 34 39.1**	**+0.3**
	baz=254						
D23K	**Nanushuk River**	**20.42**	**21**	P	**P**	**21 34 39.9**	**+1.2**
	baz=218						
TOLK	**Toolik Lake Re**	**20.43**	**22**	P	**P**	**21 34 39.4**	**+0.6**
	baz=221						
YUK6	**Outpost Mounta**	**20.44**	**48**	P	**P**	**21 34 39.5**	**+0.3**
	baz=255						
P29M	**Windy Craggy**	**20.46**	**52**	P	**P**	**21 34 39.9**	**+0.7**
	baz=260						
F25K	**Christian Rive**	**20.72**	**27**	P	**P**	**21 34 42.6**	**+0.6**
	baz=229						
HYT	**Haines Junctio**	**20.82**	**49**		**P**	**21 34 44.6**	**+1.4**
HYT	**Haines Junctio**	**20.82**	**49**	P	**P**	**21 34 43.0**	**-0.2**
	baz=257,SNR=9.6						
M29M	**Somme Creek**	**20.82**	**44**	P	**P**	**21 34 44.7**	**+1.5**
	baz=252,SNR=9.4						
I27K	**Kandik River**	**20.87**	**35**	P	**P**	**21 34 44.4**	**+0.8**
	baz=240,SNR=9.1						
G26K	**Porcupine Rive**	**20.88**	**30**	P	**P**	**21 34 45.2**	**+1.6**
	baz=233						
P30M	**Million Dollar**	**20.93**	**51**	P	**P**	**21 34 44.0**	**-0.4**
	baz=259						
B22K	**Teshekpuk Lake**	**21.00**	**16**	P	**P**	**21 34 45.9**	**+1.0**

B22K				IAmb	IAmb	21 34 46.8	
	comp=Z,4.9nm,0.9s						
B22K	Teshekpuk Lake	21.00	16	P	P	21 34 46.1	+1.1
	baz=212						
DAWY	Dawson	21.01	40	P	P	21 34 46.8	+1.6
	baz=246						
S31K	Pelican	21.02	57	P	P	21 34 45.7	+0.5
	baz=266						
E25K	Arctic Village	21.09	26	P	P	21 34 47.4	+1.4
	baz=228,SNR=6.2						
PLBC	Pleasant Camp	21.12	53	P	P	21 34 46.8	+0.5
	baz=262						
C23K	Itkillik River	21.13	19	P	P	21 34 48.2	+1.8
	baz=217						
N30M	Aishikik Lake	21.16	47	P	P	21 34 47.8	+1.0
	baz=256						
L29M	L29M	21.18	43		P	21 34 48.9	+1.9
L29M				IAmb	IAmb	21 34 52.2	
	comp=Z,5.7nm,0.8s						
L29M	L29M	21.18	43	P	P	21 34 48.9	+1.9
	baz=250,SNR=7.8						
H27K	Steamboat Moun	21.22	33	P	P	21 34 48.3	+0.8
	baz=238,SNR=11						
F26K	Sheenjek River	21.23	28	P	P	21 34 49.1	+1.7
	baz=231,SNR=6.0						
I28M	Miner Creek	21.40	36	P	P	21 34 51.4	+2.0
	baz=242,SNR=15						
C24K	Franklin Bluff	21.45	21	P	P	21 34 51.0	+1.2
	baz=220						
SIT	Sitka	21.46	60	P	P	21 34 51.3	+1.3
	baz=269						
O30N	Mendenhall	21.48	50	P	P	21 34 52.0	+1.8
	baz=258						
G27K	Doyon Strip	21.49	32	P	P	21 34 52.7	+2.4
	baz=237						
K29M	Barlow Dome	21.69	41		P	21 34 53.9	+1.3
K29M				IAmb	IAmb	21 34 59.4	
	comp=Z,3.7nm,0.9s						
K29M	Barlow Dome	21.69	41	P	P	21 34 53.5	+1.0
	baz=249						
D25K	Kavik River	21.71	23	P	P	21 34 54.6	+1.9
	baz=225						
N31M	Braeburn, Yuko	21.78	48	P	P	21 34 55.5	+2.1
	baz=257						
E27K	Coleen River	22.29	29	P	P	21 35 00.2	+1.3
	baz=234						
H29M	Whitestone	22.33	35	P	P	21 34 59.5	+0.2
	baz=243,SNR=7.2						
J30M	Hart River	22.44	40	P	P	21 35 00.9	+0.3
	baz=249						
P32M	Atlin	22.48	53	P	P	21 35 00.2	-0.8
	baz=264						
F28M	Old Crow	22.51	31	P	P	21 35 02.5	+1.3
	baz=238						
M31M	Drury Creek, Y	22.58	46	P	P	21 35 03.0	+0.9
	baz=257						
I30M	Mount Dempster	22.66	38	P	P	21 35 02.7	-0.2
	baz=248,SNR=9.9						
G29M	Pine Creek	22.78	33	P	P	21 35 05.2	+1.2
	baz=242,SNR=5.7						
EPYK	Eagle Plains	23.00	35	P	P	21 35 06.7	+0.4
EPYK	Eagle Plains	23.00	35	P	P	21 35 06.0	-0.3
	baz=245,SNR=12						
D27M	Malcolm River	23.11	27	P	P	21 35 08.6	+1.1
	baz=233						
E28M	Babbage River	23.16	29	P	P	21 35 09.4	+1.4
	baz=236,SNR=5.3						
G30M	tAoh Zraii Nji	23.44	34	P	P	21 35 12.7	+1.9
	baz=244						
E29M	Blow River	23.55	30	P	P	21 35 15.5	+3.7
	baz=239,SNR=7.6						
V35K	Ketchikan	23.61	64	P	P	21 35 15.1	+2.7
	baz=276						
H31M	Peel River	23.66	38	P	P	21 35 15.1	+2.1
	baz=249						
R33M	Jennings River	23.86	54	P	P	21 35 16.7	+1.8
	baz=267						
F30M	Barrier River	23.87	33	P	P	21 35 16.7	+1.8
	baz=243						
MMPY	Sheldon Lake,	24.09	46	P	P	21 35 18.4	+1.3
	baz=260						
G31M	Satah River	24.11	35	P	P	21 35 17.8	+0.7
	baz=247						
YKA	Yellowknife Ar	31.78	47	P	P	21 36 23.6	-2.0
	comp=Z,0.7nm,0.8s,baz=283,slow=9.8,SNR=3.8						
	comp=Z,0.7nm,0.8s						
PDAR	Pinedale Array	41.50	77	P	P	21 37 48.6	-0.4
PDAR	Pinedale Array	41.50	77	P	P	21 37 49.0	0.0
	comp=Z,0.4nm,0.4s,baz=321,slow=7.4,SNR=4.3						
	comp=Z,0.4nm,0.4s						
TXAR	Lajitas Array	53.63	87	P	P	21 39 22.6	-0.5
TXAR	Lajitas Array	53.63	87	P	P	21 39 21.9	-1.2
	comp=Z,0.3nm,0.6s,baz=307,slow=5.2,SNR=4.5						
	comp=Z,0.3nm,0.6s						
ARCES	ARCESS Array B	59.19	353	P	P	21 40 03.1	+1.1
	comp=Z,0.7nm,0.7s,baz=10,slow=5.5,SNR=4.1						
	comp=Z,0.7nm,0.7s						
KURBB	Kurchatov Arra	62.95	318	P	P	21 40 28.4	+0.7
	comp=Z,0.7nm,0.8s,baz=43,slow=6.9,SNR=5.2						
	comp=Z,0.7nm,0.8s						
MKAR	Makanchi Array	64.14	313	P	P	21 40 36.1	+0.4
	comp=Z,0.1nm,0.5s,baz=39,slow=5.7,SNR=2.6						
	comp=Z,0.1nm,0.5s						
BVAR	Borovoye Array	64.33	324	P	P	21 40 38.2	+1.4
	comp=Z,1.4nm,0.8s,baz=43,slow=8.9,SNR=7.1						
	comp=Z,1.4nm,0.8s						
FINES	FINESS Array B	67.10	351	P	P	21 40 55.6	+1.1
	comp=Z,1.5nm,0.8s,baz=16,slow=6.9,SNR=4.2						
	comp=Z,1.5nm,0.8s						
NB2	NORSAR Subarra	68.30	359	P	P	21 41 04.1	+1.9
	comp=Z,0.4nm,0.5s,baz=3.8,slow=6.5						
NOA	NORSAR Array B	68.30	359	P	P	21 41 03.8	+1.6
	comp=Z,0.4nm,0.5s,baz=2.8,slow=6.6,SNR=4.2						
	comp=Z,0.4nm,0.5s						
HFS	Hagfors	69.16	358	P	P	21 41 08.3	+0.8
	comp=Z,1.2nm,0.5s,baz=11,slow=6.2,SNR=16						
	comp=Z,1.2nm,0.5s						
ASAR	Alice Springs	88.87	229	P	P	21 42 54.4	-1.3
	comp=Z,0.3nm,0.7s,baz=24,slow=7.1,SNR=2.7						
	comp=Z,0.3nm,0.7s						

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*LDG **19** 21:31:02.2±0.1, 45°.67N×3°.62E, h5^{km}, Ml2.3/21, Error ellipse: s-maj=2.1km s-min=1.8km az=78.0*

STR 19 21:31:03.1±0.3, **46°N**±2°×°±°, **h8**^{km}, **MLv1.8**/6, **Error ellipse: s-maj=0.0km s-min=0.0km az=11.4, preliminary, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COLF	Collangettes	0.14	154	Pg	Pg	21 31 06.0	-0.2
COLF				Sg	Sg	21 31 08.2	-0.1
PLDF	La Plantade	0.33	2	Pg	Pg	21 31 08.9	-0.7
PLDF				Sg	Sg	21 31 13.1	-0.8
LBL	Lubilhac	0.48	212	Pg	Pg	21 31 12.5	0.0
LBL				Sg	Sg	21 31 19.1	+0.2
AGO	Saint Agoulin	0.53	321	Pg	Pg	21 31 13.0	-0.3
AGO				Sg	Sg	21 31 20.3	+0.1
FRNF	Fournols	0.78	251	Pg	Pg	21 31 17.9	-0.1
FRNF				Sg	Sg	21 31 28.1	-0.1
VERF	Verneugheol	0.79	278	Pg	Pg	21 31 18.0	-0.4
VERF				Sg	Sg	21 31 28.6	-0.1
SMF	Signal de Mont	1.01	9	*e*Pg	Pg	21 31 21.3	-1.3
SMF				*e*Sg	Sg	21 31 34.3	-1.5
	22nm,0.2s						
BGF	Bois d'Agland	1.05	330	*e*PKP1	Pg	21 31 22.3	-1.1
BGF				*e*Sg	Sg	21 31 36.0	-1.1
	10nm,0.3s						
VIVF	Saint-Julien-l	1.09	136	*e*Pg	Pg	21 31 22.0	-2.1
VIVF				*e*Sg	Sg	21 31 36.6	-1.6
	8.8nm,0.2s						
LEUC	Leucamp	1.16	220	Pg	Pg	21 31 24.5	-0.8
LEUC				Sg	Sb	21 31 40.4	-0.1
AVF	Avril sur Loir	1.16	351	*e*PKP1	Pg	21 31 24.0	-1.4
AVF				*e*Sg	Sg	21 31 37.8	-2.6
	6.3nm,0.2s						
TCF	Toulx Ste Croi	1.17	304	*e*Pg	Pg	21 31 23.8	-1.7
TCF				*e*Sg	Sg	21 31 38.4	-2.3
	2.2nm,0.2s						
CAF	Calviac	1.30	237	*e*Pg	Pn	21 31 25.9	-1.8
CAF				*e*Sg	Sb	21 31 43.2	-1.6
	4.5nm,0.2s						
SSF	Saint Saulge	1.42	357	*e*Pg	Pn	21 31 28.5	-0.7
SSF				*e*Sg	Sb	21 31 45.8	-2.3
	7.7nm,0.2s						
OG35	Corcelles	1.43	73	Pn	Pn	21 31 28.3	-1.2
OG35				Sn	Sn	21 31 46.8	-1.7
OGSM	Saint Maurice	1.47	91	Pn	Pn	21 31 29.1	-0.8
OGSM				Sn	Sn	21 31 47.5	-1.8
PLYF	Puligny Montra	1.53	31	Pn	Pn	21 31 29.5	-1.2
PLYF				Sn	Sn	21 31 49.1	-1.8
GRN	Grenoble	1.56	104	Pn	Pn	21 31 30.5	-0.8
GRN				Sn	Sn	21 31 50.1	-1.6
LASF	Ste Croix	1.58	173	*e*Pg	Pb	21 31 32.3	-0.3
LASF				*e*Sg	Sn	21 31 52.0	-0.1
	3.5nm,0.2s						
LOR	Lormes	1.63	6	*e*Pg	Pn	21 31 30.9	-1.3
LOR				*e*Sg	Sn	21 31 52.5	-0.9
	7.6nm,0.2s,baz=178						
HYF	Humbligny	1.76	338	*e*Sg	Sn	21 31 55.9	-0.5
ORIF	Oris-en-Rattie	1.76	114	*e*Sg	Sn	21 31 56.6	-0.1
	2.4nm,0.3s						
CABF	La Chapelle	1.98	60	*e*Pg	Pn	21 31 38.2	+1.2
CABF				*e*Sg	Sn	21 32 02.8	+0.8
	1.3nm,0.2s						
LPG	La Plagne	2.21	93	*e*Sg	Sb	21 32 10.7	-0.6
MTLF	Montolieu	2.51	204	*e*Sg	Sb	21 32 20.3	+0.9
	1.5nm,0.2s						
MFF	Saint Martin d	2.78	291	*e*Pg	Pb	21 31 52.6	-0.4
MFF	Saint Martin d	2.78	291	*e*Pg	Pb	21 31 52.8	-0.2
MFF				*e*Sg	Sb	21 32 28.2	+1.0
	0.7nm,0.2s						
MFF				*e*Sg	Sg	21 32 28.5	-3.8
	1.1nm,0.3s						
MEZF	Maizieres J'vi	3.02	19	*e*Sg	Sb	21 32 35.4	+1.2
	5.5nm,0.4s						
HINF	Hinteralfeld	3.12	45	*e*Sg	Sb	21 32 37.4	+0.5
	0.4nm,0.3s						

IDC 19 21:40:47.5±1.7, **22°.12S**×**172°.63E, h0**^{km}, **mb3.8**/4, **mbtmp3.7**/4, **Error ellipse: s-maj=42.0km s-min=38.0km az=36.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	35.64	260	P	P	21 47 47.0	-0.5
	0.6nm,0.7s,baz=89,slow=7.9,SNR=5.1						
	0.6nm,0.7s						
WRA	Warramunga Arr	35.75	266	P	P	21 47 48.8	+0.4
	0.2nm,0.5s,baz=94,slow=8.0,SNR=6.9						
	0.2nm,0.5s						
VNDA	Vanda	55.70	183	P	P	21 50 24.9	-0.4
	1.8nm,0.4s,baz=172,slow=18,SNR=14						
	1.8nm,0.4s						
ILAR	Eielson Array	92.06	16	P	P	21 53 58.3	+0.3
	0.6nm,1.0s,baz=201,slow=4.8,SNR=4.1						
	0.6nm,1.0s						

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*MEX **19** 22:09:13.9±0.9, 14°.21N×92°.14W, h55^{km}±15^{km}, MD4.3*

*CATAC **19** 22:09:13.1±0.7, 14°N±4°×9°2W±°, h29^{km}±4^{km}, M3.8/7, MLv3.8/7, Error ellipse: s-maj=10.9km s-min=7.2km az=55.0, confirmed*

*GCG **19** 22:09:14.5±1.1, 14°.34N×91°.96W, h47^{km}±12^{km}, MD3.9, ML3.9*

ISC 19 22:09:10.7±1.3, **14°.05N**±0°.06×**92°.16W**±0°.04, **h46**^{km}±23^{km}, **n42**, σ**2**^{s}.**68**/68, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTAL	Retalhuleu	0.65	43	*e*P	Pn	22 09 24.1	+0.4
RTAL				*e*S	Sn	22 09 32.9	-0.1
RTAL	Retalhuleu	0.65	43	P	Pn	22 09 24.1	+0.4
RTAL				S	Sn	22 09 33.1	+0.1
SMCA	Catarina	0.81	6	*i* P	Pn	22 09 25.6	-0.2
SMCA				*i* S	Sn	22 09 34.4	-2.2
SMCA				IAML		22 09 35.1	
	comp=N,2µm,0.2s						
THIG		0.86	353	*e*P	Pn	22 09 26.9	+0.5
THIG				*e*S	Sn	22 09 37.2	-0.7
THIG		0.86	353	*i* P	Pn	22 09 27.0	+0.5
THIG				*i* S	Sn	22 09 37.0	-0.9
THIG				IAML		22 09 38.2	
	comp=E,6µm,0.2s						
STG0	El Palmar, Qui	0.87	65	*i* P	Pn	22 09 26.2	-0.6
STG0				*i* S	Sn	22 09 36.0	-2.5
STG0				IAML		22 09 37.7	
	comp=E,12µm,0.3s						
STG8	El Palmar, Qui	0.88	63	*i* P	Pn	22 09 26.4	-0.5
STG8				*i* S	Sn	22 09 36.0	-2.6
STG8				IAML		22 09 36.9	
	comp=N,17µm,0.2s						
SOKI	Kika Raxquin	1.06	43	*i* P	Pn	22 09 29.3	-0.2
SOKI				IAML		22 09 49.8	
	comp=N,954nm,0.8s						
PATR	El Naranjo	1.06	356	*e*P	Pn	22 09 28.8	-0.7
PATR				*e*S	Sn	22 09 40.3	-3.0
PAVE	Pavencul	1.14	359	*e*P	Pn	22 09 29.8	-0.7
PAVE				*e*S	Sn	22 09 42.2	-2.8
ESSG	Sabana Grande	1.33	75	*i* P	Pn	22 09 33.5	+0.6
ESSG				*i* S	Sn	22 09 48.4	-1.1
ESSG				IAML		22 09 49.6	
	comp=N,2µm,0.2s						
HUEH	Huehuetenango	1.41	27	*e*P	Pn	22 09 34.3	+0.2
HUEH				*e*S	Sn	22 09 49.8	-1.9
HUEH	Huehuetenango	1.41	27	*i* P	Pn	22 09 34.5	+0.4
HUEH	Huehuetenango	1.41	27	P	Pn	22 09 34.4	+0.3
HUEH	Huehuetenango	1.41	27	S	Sn	22 09 50.9	-0.8
FG16	Alotenango, Sa	1.61	82	*i* P	Pn	22 09 33.7	-3.1
FG16				*i* S	Sn	22 09 49.2	-7.4
FG16				IAML		22 09 53.9	
	comp=N,12µm,0.2s						
PCIG		1.94	328	*e*P	Pn	22 09 42.2	+1.0
PCIG				*e*S	Sn	22 10 03.0	-1.3
CCIG	Comitan	2.22	0	*e*P	Pn	22 09 44.8	-0.4
CCIG				*e*S	Sn	22 10 11.5	0.0
CCIG	Comitan	2.22	0	*i* P	Pn	22 09 45.8	+0.6
CCIG				*i* S	Sn	22 10 15.1	+3.6
CCIG				IAML		22 10 18.1	
	comp=N,442nm,0.4s						
NUBE	Las Nubes	2.31	93	*i* P	Pn	22 09 49.2	+2.8
NUBE				*i* S	Sn	22 10 14.6	+0.9
NUBE	Las Nubes	2.31	93	P	Pn	22 09 48.6	+2.1
CEVE	Cerro Verde	2.47	95	P	Pn	22 09 51.8	+3.1
CEVE	Cerro Verde	2.47	95	S	Sn	22 10 21.3	+3.5
JAYA	Jayaque - finc	2.66	98	*i* P	Pn	22 09 53.6	+2.4
JAYA				*i* S	Sn	22 10 24.1	+1.8
JAYA	Jayaque - finc	2.66	98	P	Pn	22 09 53.5	+2.3
PMON	Piamonte	2.78	97	P	Pn	22 09 55.6	+2.8
TGIG		2.87	341	*e*P	Pn	22 09 56.0	+2.0
TGIG				*e*S	Sn	22 10 26.9	-0.4
PETF	Flores	3.60	37	*e*P	Pn	22 10 04.7	+0.7
PETF				*e*S	Sn	22 10 44.0	-1.3
PACA	Pacayal	3.77	98	P	Pn	22 10 09.0	+2.6
HUIG	Huatulco	4.19	295	*e*P	Pn	22 10 14.2	+2.1
HUIG				*e*S	Sn	22 10 52.1	-7.7
PEIG	Puerto Escondi	5.20	292	*e*P	Pn	22 10 28.7	+2.7
PEIG				*e*S	Sn	22 11 19.2	-5.5
YOIG	Yosondua	5.90	299	*e*P	Pn	22 10 40.0	+4.1
YOIG				*e*S	Sn	22 11 37.0	-5.4
TOIG	Toxpalan	6.20	311	*e*P	Pn	22 10 44.5	+4.7
TOIG				*e*S	Sn	22 11 44.2	-5.3
PNIG	Pinotepa	6.22	293	*e*P	Pn	22 10 43.2	+3.2
PNIG				*e*S	Sn	22 11 45.8	-4.0
TXIG	Tlaxiaco	6.28	301	*e*P	Pn	22 10 44.1	+3.1
TXIG				*e*S	Sn	22 11 51.0	-0.6
FTIG	Fresnillo de T	6.91	304	*e*P	Pn	22 10 52.5	+2.9
FTIG				*e*S	Sn	22 11 59.6	-7.4
JAUV	Jalcomulco	6.91	321	*e*P	Pn	22 10 48.8	-0.7
JAUV				*e*S	Sn	22 12 01.9	-5.1
MGIG	Malinaltepec	7.00	298	*e*P	Pn	22 10 54.4	+3.6
MGIG				*e*S	Sn	22 12 07.4	-1.8
CRIG	Cruz Grande	7.24	293	*e*P	Pn	22 10 57.3	+3.3
CRIG				*e*S	Sn	22 12 10.7	-4.2
DAIG	Los Arroyos	7.80	293	*e*P	Pn	22 11 00.3	-1.4
MEIG	Mezcala	8.15	299	*e*P	Pn	22 11 08.0	+1.5
CAIG	El Cayaco	8.37	292	*e*P	Pn	22 11 13.3	+3.9

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*SJA **19** 22:21:57.1±0.6, 29°.20S×71°.48W, h29^{km}±2^{km}, ML3.7, MW3.7*

*GUC **19** 22:21:58.1±0.9, 29°.19S×71°.31W, h50^{km}±6^{km}, ML3.9*

ISC 19 22:21:57.1±1.4, **29°.15S**±0°.03×**71°.57W**±0°.05, **h17**^{km}±9^{km}, **n36**, σ**1**^{s}.**61**/51, **7C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	Las Campanas	0.78	80	*e*P	Pg	22 22 12.2	-0.1
LCO				*e*S	Sg	22 22 21.7	-0.9
LCO	Las Campanas	0.78	80	*e*P	Pg	22 22 11.7	-0.6
CO05	La Serena	0.82	159	⇑*i*P	Pg	22 22 14.1	+1.0
CO05				*i* S	Sb	22 22 24.3	+0.7
CO05				IAML		22 22 29.5	
	comp=N,5µm,0.4s						
AC04	Llanos de Chal	1.04	25	⇑*i*P	Pg	22 22 17.4	+0.2
AC04				*i* S	Sg	22 22 30.9	+0.1
AC04				IAML		22 22 35.9	
	comp=E,6µm,0.2s						
AC04	Llanos de Chal	1.04	25	*e*P	Pb	22 22 11.8	-4.8
AC04				*e*S	Sn	22 22 32.5	+1.5
AC04				IAML		22 22 35.0	
	comp=Z,2µm,0.1s						
GO04	Tololo Observa	1.22	147	⇑*i*P	Pn	22 22 19.3	-0.3
GO04				*i* S	Sb	22 22 34.2	-1.2
GO04				IAML		22 22 39.7	
	comp=N,7µm,0.5s						
GO04	Tololo Observa	1.22	147	*e*P	Pn	22 22 19.3	-0.3
CO06	Fray Jorge	1.52	182	⇑*i*P	Pn	22 22 24.0	+0.5
CO01	Juntas del Tor	1.53	123	⇑*i*P	Pn	22 22 23.6	-0.2
CO01				*i* S	Sn	22 22 41.0	-2.4
CO01				IAML		22 22 44.8	
	comp=E,2µm,0.2s						
CO01	Juntas del Tor	1.53	123	*e*P	Pn	22 22 23.8	-0.1
CO01				IAML		22 22 44.5	
	comp=Z,870nm,0.2s						
CO03	El Pedregal	1.85	156	⇑*i*P	Pn	22 22 28.1	0.0
CO03	El Pedregal	1.85	156	*e*P	Pn	22 22 27.5	-0.6
CO03				IAML		22 22 53.3	
	comp=Z,465nm,0.6s						
GO03	Copiapo	1.95	38	*i* P	Pn	22 22 29.3	-0.1
GO03	Copiapo	1.95	38	*e*P	Pn	22 22 29.5	+0.1
GO03				*e*S	Sn	22 22 55.4	+1.9
AC06	Mina Casimiro	2.08	31	*e*P	Pn	22 22 31.5	+0.2
AC06				*e*S	Sn	22 22 55.9	-1.0
AROD	Rodeo	2.09	120	*e*P	Pn	22 22 32.6	+1.0
CO02	Combarbal	2.11	167	⇑*i*P	Pn	22 22 31.9	+0.2
CO02	Combarbal	2.11	167	*e*P	Pn	22 22 31.8	+0.1
CO02				IAML		22 23 18.3	
	comp=Z,660nm,0.2s						
ACDV	Cuesta del Vie	2.37	116	*e*P	Pn	22 22 25.7	-10
ACDV				IAML		22 23 10.7	
	comp=Z,271nm,0.6s						
ACCO	Cerro Coronel	2.61	124	*e*P	Pn	22 22 40.9	+2.1
AGUA	GUANDACOL	2.71	98	*e*P	Pn	22 22 42.1	+2.1
AGUA				*e*S	Sb	22 23 18.3	+0.1
AGUA				IAML		22 23 23.4	
	comp=Z,209nm,0.5s						
DOCA	Reserva Natura	2.81	130	*e*P	Pn	22 22 38.9	-2.7
DOCA				IAML		22 23 23.4	
	comp=Z,153nm,0.4s						
VCA	Vinchina	2.98	83	*e*P	Pn	22 22 46.6	+2.9
VCA				*e*S	Sn	22 23 19.3	+0.2
VCA				IAML		22 23 47.3	
	comp=Z,200nm,0.3s						
AC01	Pan de Azucar	3.11	16	*e*P	Pn	22 22 44.7	-0.7
AC01				IAML		22 23 38.7	
	comp=Z,110nm,0.3s						
AC02	Maricunga	3.16	44	*e*P	Pn	22 22 46.9	+0.4
AC02				*e*S	Sn	22 23 21.7	-2.4
AC02				IAML		22 23 42.4	
	comp=Z,312nm,0.5s						
RTLS	Leoncito	3.29	144	*e*P	Pn	22 22 50.9	+2.8
RTLS				IAML		22 23 39.5	
	comp=Z,296nm,1.0s						
CFA	Coronel Fontan	3.78	131	*e*P	Pn	22 22 56.1	+1.5
CFA				*e*S	Sn	22 23 32.9	-5.8
ACLC	CERRO LA CRUZ	4.05	95	*e*P	Pn	22 22 59.2	+0.8
ACLC				*e*S	Sn	22 23 48.2	+2.7
ACLC				IAML		22 24 05.2	
	comp=Z,52nm,0.4s						
MT02	Curacav	4.11	175	*e*P	Pn	22 22 59.0	-0.2
MT02				IAML		22 24 41.0	
	comp=Z,204nm,0.3s						
ASAL	Salagasta	4.16	146	*e*P	Pn	22 23 02.7	+2.9
ASAL				*e*S	Sb	22 23 57.7	-2.2
MT04	Ro Olivares	4.42	164	*e*P	Pn	22 23 05.3	+1.7
MT04				IAML		22 24 59.8	
	comp=Z,69nm,0.6s						
MT01	Popeta	4.71	177	*e*P	Pn	22 23 07.3	0.0
MT01				*e*S	Sn	22 24 01.5	0.0
MT01				IAML		22 24 34.8	
	comp=Z,52nm,0.8s						
LMEL	Las Melosas	4.83	166	*e*P	Pn	22 23 09.5	+0.4
LMEL				*e*S	Sn	22 24 07.5	+2.8
ACAN	Cantantal	4.89	131	*e*P	Pn	22 23 10.4	+0.5
ACAN				IAML		22 24 35.3	
	comp=Z,188nm,0.8s						
CYA	Choya	5.11	83	*e*P	Pn	22 23 14.3	+1.3
CYA				*e*S	Sn	22 24 11.1	-0.5
CYA				IAML		22 24 51.3	
	comp=Z,28nm,2.2s						
BO01	Tunca	5.24	176	*e*P	Pn	22 23 14.7	0.0
BO01				*e*S	Sn	22 24 15.4	+0.7
BO01				IAML		22 24 43.5	
	comp=Z,29nm,0.5s						

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*NOU **19** 22:28:05.5, 37°.49S×177°.10E, h2^{km}, MLv3.6/8, Off E. Coast of N. Island, N.Z.*

*WEL **19** 22:28:06.7, 37°.54S×177°.16E, h6^{km}, ML3.7, Mw4.0, Moment Tensor Solution. s6 Moment tensor: Scale 10^{15} Nm; M_{rr}-0.97; $M_{\theta\theta}$0.08; $M_{\phi\phi}$0.89; $M_{r\theta}$-0.36; $M_{\theta\phi}$1.05; $M_{\phi r}$-0.49; Fault plane solution: $M_0$1.43000×10^{15} NP1: ϕ_s36.00000°, δ58.00000°, λ-88.00000°. NP2: ϕ_s212.00000°, δ32.00000°, λ-94.00000°. Principal axes: T 1.7436, Plg13.0000°, Azm124.0000°; N -0.6355, Plg2.0000°, Azm214.0000°; P -1.1081, Plg77.0000°, Azm313.0000°; Stations used: URZ MWZ MXZ RTZ BKZ HIZ NORMAL FAULTING*

*WEL **19** 22:28:06.7±0.7, 38°S±4°×17°7E±°, h8^{km}±6^{km}, M3.6/63, ML4.2/20, MLv3.6/63 Error ellipse: s-maj=5.4km s-min=3.6km az=20.1, confirmed*

ISC 19 22:28:06.2±0.9, **37°.51S**±0°.03×**177°.12E**±0°.02, **h12**^{km}±5^{km}, **n98**, σ**0**^{s}.**70**/103, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSRZ	White Island S	0.04	106	P	Pg	22 28 08.6	+0.1
WSRZ				S	Sg	22 28 10.1	-0.1
WIZ	White Island	0.06	111	P	Pg	22 28 08.6	0.0
WIZ				S	Sg	22 28 09.9	-0.4
WHRZ	Whale Island	0.37	199	P	Pb	22 28 14.2	-0.6
HAZ	Te Kaha	0.58	116	P	Pg	22 28 17.6	+0.1
HAZ				S	Sg	22 28 25.6	+0.4
MARZ	Manawahe	0.60	217	P	Pg	22 28 18.2	+0.4
RUGZ	Raukumara Rang	0.64	136	P	Pg	22 28 18.2	-0.5
RUGZ				S	Sg	22 28 27.2	+0.2
EDRZ	Edgecumbe	0.67	207	P	Pb	22 28 19.9	-0.1
TGRZ	Tauranga	0.72	252	P	Pb	22 28 21.1	+0.4
MYRZ	Mayor Island	0.74	288	P	Pb	22 28 21.7	+0.7
URZ	Urewera	0.75	181	P	Pg	22 28 20.1	-0.7
URZ	Urewera	0.75	181	S	Sg	22 28 30.6	-0.1
URZ	Urewera	0.75	181	P	Pg	22 28 20.3	-0.5
LIRZ	Lichensteins R	0.77	229	P	Pb	22 28 21.9	+0.4
MKRZ	Makatiti	0.82	219	P	Pb	22 28 23.0	+0.6
PKGZ	Pakihiroa	0.84	116	P	Pb	22 28 22.6	-0.1
OMRZ	Omania	0.84	225	P	Pb	22 28 23.4	+0.6
KARZ	Kaharoa	0.86	233	P	Pb	22 28 23.2	0.0
TARZ	Mount Tarawera	0.88	214	P	Pb	22 28 24.0	+0.6
MWZ	Matawai	0.89	159	P	Pg	22 28 22.8	-0.6
MWZ				S	Sg	22 28 34.6	-0.4
MXZ	Matakaoa Point	0.94	94	P	Pg	22 28 23.7	-0.7
MXZ	Matakaoa Point	0.94	94	S	Sb	22 28 37.2	+0.3
MXZ	Matakaoa Point	0.94	94	P	Pg	22 28 23.9	-0.5
NGRZ	Ngongotaha	0.95	231	P	Pb	22 28 25.4	+0.8
TWGZ	Tauwhareparae	0.95	135	P	Pb	22 28 24.7	0.0
RRRZ	Republican Roa	0.96	210	P	Pb	22 28 24.9	+0.1
HLRZ	Highlands Stat	0.96	219	P	Pn	22 28 26.0	+0.4
UTU	Utuhina	0.99	227	P	Pn	22 28 26.7	+0.7
KMRZ	Kaimai	1.00	250	P	Pg	22 28 25.1	-0.4
MUGZ	Murupara	1.01	196	P	Pg	22 28 25.2	-0.5
RAGZ	Rawiri	1.01	167	P	Pg	22 28 25.4	-0.4
PUZ	Puketiti	1.06	122	P	Pb	22 28 27.0	+0.5
HSRZ	Hossack Road	1.06	221	P	Pn	22 28 27.6	+0.6
WMGZ	Waiomatatini S	1.07	107	P	Pn	22 28 27.4	+0.4
TKGZ	Te Karaka	1.09	149	P	Pb	22 28 27.3	+0.2
RTZ	Ruatahuna	1.11	186	P	Pg	22 28 26.9	-0.8
PRRZ	Plateau Road	1.15	210	P	Pb	22 28 28.4	+0.4

GRRZ	Galatos Road	1.16	223	P	Pn	22 28 29.2	+0.9
SNGZ	Shannon Statio	1.28	172	P	Pg	22 28 30.0	-1.0
CNGZ	Carnagh Statio	1.30	139	P	Pb	22 28 32.2	+1.6
RIGZ	Rimuhau	1.30	157	P	Pb	22 28 31.0	+0.4
TOZ	Tahuroa Road	1.31	260	P	Pn	22 28 29.3	-1.0
KUZ	Kuaotunu	1.35	304	P	Pn	22 28 29.8	-1.1
KUZ	Kuaotunu	1.35	304	P	Pn	22 28 29.9	-1.1
MTHZ	Maungataniwha	1.36	189	P	Pn	22 28 30.6	-0.5
RAHZ	Arahi	1.41	181	P	Pg	22 28 32.9	-0.4
MRHZ	Matea Rd	1.44	203	P	Pn	22 28 32.1	-0.1
TLZ	Tolley Road	1.50	236	P	Pn	22 28 33.3	+0.3
PRGZ	Paritu Road	1.54	157	P	Pg	22 28 36.0	+0.3
WHHZ	Waihua	1.57	177	P	Pg	22 28 36.8	+0.4
KNZ	Kokohu	1.57	164	P	Pg	22 28 35.8	-0.6
NMHZ	Naumai	1.61	189	P	Pn	22 28 34.8	+0.3
MKAZ	Moumakai	1.61	284	P	Pn	22 28 33.8	-0.7
RATZ	Rangitukua	1.73	218	P	Pg	22 28 39.3	0.0
BKZ	Black Stump Fm	1.73	196	P	Pn	22 28 36.1	-0.1
BKZ	Black Stump Fm	1.73	196	P	Pn	22 28 36.0	-0.2
WIAZ	Waiheke Island	1.74	294	P	Pn	22 28 36.0	-0.3
MHGZ	Mahia Peninsul	1.76	160	P	Pn	22 28 37.4	+0.9
ARHZ	Aropaoanui	1.76	183	P	Pb	22 28 38.0	-0.4
GRZ	Great Barrier	1.83	313	P	Pn	22 28 36.9	-0.6
ETAZ	East Tamaki Re	1.84	287	P	Pn	22 28 38.7	+1.1
MBAZ	Motutapu North	1.93	292	P	Pn	22 28 38.9	+0.2
NTVZ	North Tongarir	1.96	215	P	Pg	22 28 43.1	-0.6
TMVZ	Te Maari	1.96	214	P	Pg	22 28 43.0	-0.8
MCHZ	McNeill Hill	1.96	190	P	Pb	22 28 41.3	-0.6
KRVZ	Karewarewa	1.97	216	P	Pg	22 28 44.5	+0.5
ETVZ	East Tongariro	1.97	214	P	Pg	22 28 43.5	-0.5
KWHZ	Kaweka Forest	1.99	196	P	Pn	22 28 41.5	+1.7
WTVZ	West Tongariro	2.01	216	P	Pg	22 28 46.9	+2.1
NNVZ	North Ngauruho	2.01	216	P	Pg	22 28 46.1	+1.3
OTVZ	Oturere	2.01	214	P	Pb	22 28 43.2	+0.4
AWAZ	Awhitu Peninsu	2.03	282	P	Pn	22 28 40.5	+0.3
SNVZ	South Ngauruho	2.04	214	P	Pb	22 28 44.0	+0.6
NGZ	Ngauruhoe	2.05	215	P	Pg	22 28 46.0	+0.4
HIZ	Hauiti	2.05	240	P	Pn	22 28 41.3	+0.7
HIZ	Hauiti	2.05	240	P	Pg	22 28 46.2	+0.6
WTAZ	Waiatarua	2.11	285	P	Pb	22 28 45.2	+0.7
FWVZ	Far West T-bar	2.14	215	P	Pg	22 28 47.6	+0.3
MAVZ	Matarangi	2.15	214	P	Pg	22 28 47.6	+0.2
WHVZ	Whangaehu Hut	2.15	214	P	Pb	22 28 45.9	+0.7
CKHZ	Cape Kidnapper	2.15	181	P	Pb	22 28 45.7	+0.6
TRVZ	Turoa	2.18	214	P	Pg	22 28 47.1	-0.8
WNVZ	Wahianoa	2.18	213	P	Pb	22 28 45.7	+0.1
MOVZ	Moawhango	2.18	209	P	Pb	22 28 45.7	0.0
KRHZ	Kereru	2.21	195	P	Pn	22 28 43.7	+0.9
MTVZ	Mangateitei	2.28	214	P	Pb	22 28 48.2	+0.8
KAHZ	Kahuranaki	2.29	185	P	Pn	22 28 44.6	+0.7
VRZ	Vera Road	2.46	228	P	Pg	22 28 52.7	-0.8
PNHZ	Pukenui	2.51	196	P	Pn	22 28 47.4	+0.5
PXZ	Pawanui	2.53	185	P	Pb	22 28 50.5	-1.1
WPHZ	Waipukurau	2.61	192	P	Pb	22 28 52.5	-0.4
TSZ	Takapari Road	2.71	199	P	Pn	22 28 50.4	+0.9
WCZ	Waipu Caves	2.73	304	P	Pn	22 28 49.7	-0.1
PRHZ	Porangahau	2.78	188	P	Pn	22 28 50.7	+0.1
MRZ	Mangatainoka R	3.37	200	P	Pn	22 28 58.4	-0.3
OUZ	Omahuta	3.65	308	P	Pn	22 29 02.6	+0.1
OUZ	Omahuta	3.65	308	P	Pn	22 29 02.9	+0.5
DUWZ	D’Urville Isla	4.13	216	P	Pb	22 29 16.0	-2.8
LTZ	Lake Taylor	6.45	214	P	Pn	22 29 40.7	-0.2

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*IDC **19** 22:30:41.1±1.1, 30°.27S×177°.78W, h0^{km}, mb4.0/5, mbtmp4.0/5, Error ellipse: s-maj=34.1km s-min=29.4km az=34.0*

*NEIC **19** 22:30:46.8±0.5, 30°.47S±0°.08×177°.87W±0°.04, h35^{km}±2^{km}, mb4.6/7, Error ellipse: s-maj=13.0km s-min=5.9km az=173.0*

ISC 19 22:30:47.7±1.0, 30°.40S±0°.09×177°.9W±0°.2, h46^{km}, n24, σ0^{s}.74/22, mb4.1/9, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.15	359	Pn	Pn	22 31 07.9	+0.6
RAO					Sn	22 31 21.8	0.0
STKA	Stephens Creek	34.56	257	P	P	22 37 32.5	+0.6
STKA	Stephens Creek	34.56	257	P	P	22 37 33.5	+1.6
	4.1nm,0.5s,baz=83,slow=9.5,SNR=11						
	4.1nm,0.5s						
BBOO	Buckleboo	39.05	254	P	P	22 38 09.8	-0.3
BBOO				IAmb	IAmb	22 38 15.1	
	comp=Z,38nm,1.5s						
AS31	Alice Springs	43.19	267	P	P	22 38 43.9	-0.5
AS31				IAmb	IAmb	22 38 54.9	
	comp=Z,1.8nm,1.4s						
ASAR	Alice Springs	43.19	267	P	P	22 38 44.5	+0.1
	comp=Z,0.7nm,0.4s,baz=105,slow=7.4,SNR=11						
	comp=Z,0.7nm,0.4s						
WRA	Warramunga Arr	44.18	272	P	P	22 38 51.9	-0.3
WRA	Warramunga Arr	44.18	272	P	P	22 38 52.2	-0.1
	comp=Z,1.3nm,0.4s,baz=111,slow=7.8,SNR=18						
	comp=Z,1.3nm,0.4s						
WB0	Warramunga Arr	44.20	272	P	P	22 38 52.1	-0.4
WB0				IAmb	IAmb	22 39 10.0	
	comp=Z,13nm,1.4s						
KNRA	Kununurra	50.79	274	P	P	22 39 42.2	-1.4
KNRA				IAmb	IAmb	22 39 47.1	
	comp=Z,36nm,1.4s						
QSPA	South Pole Qui	59.71	180	P	P	22 40 47.0	-0.3
QSPA				IAmb	IAmb	22 40 57.2	
	comp=Z,3.5nm,0.9s						
QSPA	South Pole Qui	59.71	180	P	P	22 40 48.8	+1.5
	comp=Z,0.4nm,0.7s,baz=337,slow=1.0,SNR=11						
	comp=Z,0.4nm,0.7s						
SNAA	Sanae	78.15	178	P	P	22 42 41.4	-0.3
	comp=Z,1.0nm,1.0s,baz=9.2,slow=22,SNR=1.7						
	comp=Z,1.0nm,1.0s						
H03S2	Juan Fernandez	80.39	124	T	T	00 10 44.2	
	baz=243,slow=75,SNR=14						
H03S1	Juan Fernandez	80.41	124	T	T	00 10 45.3	
	baz=243,slow=75,SNR=12						
H03S3	Juan Fernandez	80.41	124	T	T	00 10 45.4	
	baz=243,slow=75,SNR=11						
FIA1	FINESS Array S	145.18	340	PKPbc	PKPbc	22 50 18.3	-0.7
FINES	FINESS Array B	145.18	340	PKPbc	PKPbc	22 50 18.4	-0.6
FINES	FINESS Array B	145.18	340	PKPbc	PKPdf	22 50 19.2	-0.1
	comp=Z,2.6nm,0.7s,baz=96,slow=3.8,SNR=12						
NC303	NORSAR Array S	148.57	351	PKPbc	PKPbc	22 50 28.3	-0.5
NB2	NORSAR Subarra	148.77	351	PKP	PKPbc	22 50 29.8	+0.4
	comp=Z,0.4nm,0.7s,baz=11,slow=2.6						
NOA	NORSAR Array B	148.77	351	PKPbc	PKPbc	22 50 28.8	-0.6
	comp=Z,0.4nm,0.6s,baz=14,slow=4.2,SNR=3.7						
HFS	Hagfors	149.26	349	PKPbc	PKPbc	22 50 29.8	-0.8
	comp=Z,1.5nm,0.8s,baz=22,slow=3.7,SNR=2.8						
AKASG	Malin Array Be	151.35	323	PKPbc	PKiKP	22 50 36.1	-0.3
	comp=Z,0.4nm,0.4s,baz=58,slow=0.8,SNR=1.9						

WEL 19 22:32:07.6±0.5, 38°S±3°×17°7E±°, h5^{km}, M2.6/10, ML2.8/13, MLv2.6/10, Error ellipse: s-maj=4.7km s-min=4.2km az=51.2, confirmed, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WIZ	White Island	0.06	52	P	Pg	22 32 09.4	+0.3
WSRZ	White Island S	0.06	40	P	Pg	22 32 09.5	+0.4
WHRZ	Whale Island	0.32	203	P	Pb	22 32 17.1	+1.3
HAZ	Te Kaha	0.55	110	P	Pg	22 32 18.3	0.0
HAZ				S	Sg	22 32 26.3	+0.9
MARZ	Manawahe	0.55	221	P	Pg	22 32 18.9	+0.6
RUGZ	Raukumara Rang	0.59	133	P	Pg	22 32 18.9	-0.2
RUGZ				S	Sg	22 32 27.6	+0.8
URZ	Urewera	0.69	181	P	Pg	22 32 21.1	+0.1
URZ				S	Sg	22 32 30.7	+0.6
MYRZ	Mayor Island	0.76	292	P	Pg	22 32 22.5	+0.2
PKGZ	Pakihiroa	0.81	112	P	Pg	22 32 23.4	+0.1
MWZ	Matawai	0.83	158	P	Pg	22 32 23.6	0.0
MWZ				S	Sg	22 32 34.8	+0.5
TWGZ	Tauwhareparae	0.91	133	P	Pb	22 32 25.5	-0.4
RAGZ	Rawiri	0.96	166	P	Pg	22 32 26.2	+0.2
PUZ	Puketiti	1.03	120	P	Pb	22 32 27.8	-0.1
WMGZ	Waiomatatini S	1.05	104	P	Pn	22 32 28.8	-0.2
MTHZ	Maungataniwha	1.31	190	P	Pb	22 32 32.8	0.0
KUZ	Kuaotunu	1.39	306	P	Pn	22 32 32.1	-1.6

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*THE **19** 22:36:26.3, 38°N±1°×2°1E±°, h10^{km}±1^{km}, M3.1/21, MLh3.1/21*

*ATH **19** 22:36:26.6, 37°.69N×20°.68E, h18^{km}, ML3.2/12, Manual Solution by M.Papanikolaou First location: 2019/06/19 22:37:20, This location: 2021/06/07 20:26:38 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

*IDC **19** 22:36:33.0±1.3, 37°.20N×20°.51E, h112^{km}±25^{km}, mb2.9/5, mbtmp3.2/9, MS3.0/1, Error ellipse: s-maj=34.5km s-min=11.0km az=17.0*

ISC 19 22:36:27.5±0.9, 37°.70N±0°.03×20°.75E±0°.03, h14^{km}±5^{km}, n65, σ1^{s}.12/80, mb3.1/5, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LTHK	Lithakia	0.07	81	P	Pg	22 36 29.8	-0.4
LTHK				S	Sg	22 36 32.3	+0.2
ORTH	Orthonies,Zaky	0.16	344	P	Pg	22 36 31.3	-0.1
ORTH				S	Sg	22 36 34.2	+0.2
CLEM	Kyllini,Ilia,G	0.36	58	P	Pb	22 36 35.4	-0.2
CLEM				S	Sb	22 36 42.4	+1.3
RTZL	Ratzakli, Kefa	0.38	2	P	Pb	22 36 35.2	-0.7
RTZL				S	Sb	22 36 42.2	+0.5
PSDA	Pessada-Kefalo	0.43	342	P	Pb	22 36 36.1	-0.8
PSDA	Pessada-Kefalo	0.43	342	P	Pb	22 36 36.1	-0.8
PSDA				S	Sb	22 36 42.8	-0.6
KTLO	Katakolo	0.46	97	P	Pb	22 36 36.9	-0.3
KTLO	Katakolo	0.46	97	P	Pb	22 36 37.0	-0.3
VLS	Valsamata	0.49	345	P	Pg	22 36 36.8	-0.5
VLS				S	Sg	22 36 44.2	+0.4
ANDM	Andravida	0.50	55	P	Pb	22 36 37.5	-0.5
ANDM				S	Sb	22 36 46.7	+1.5
ANDM	Andravida	0.50	55	P	Pb	22 36 37.7	-0.4
DMLN	Damoulianata-K	0.62	331	P	Pg	22 36 38.7	-0.9
DMLN				S	Sb	22 36 48.4	-0.2
DMLN	Damoulianata-K	0.62	331	P	Pg	22 36 38.6	-0.9
YRMI	Loutra Irminis	0.62	49	P	Pb	22 36 39.9	-0.2
RLS	Riolos of Patr	0.67	57	P	Pb	22 36 40.6	-0.2
RLS				S	Sb	22 36 52.3	+2.2
RLS	Riolos of Patr	0.67	57	P	Pb	22 36 40.7	-0.2
RLS				S	Sb	22 36 50.7	+0.6
AXS	Araxos	0.70	45	S	Sb	22 36 52.7	+1.8
AXS	Araxos	0.70	45	P	Pb	22 36 41.1	-0.3
AXS				S	Sb	22 36 52.0	+1.0
KRES	Krestena	0.70	98	P	Pb	22 36 41.2	-0.2
KRES				S	Sb	22 36 51.7	+0.8
KRES	Krestena	0.70	98	P	Pb	22 36 41.3	-0.2
ZARO	Zacharo	0.74	106	P	Pb	22 36 42.3	+0.1
FSK	Fiskardo	0.77	349	P	Pg	22 36 41.7	-0.8
FSK				S	Sb	22 36 54.0	+0.9
FSK	Fiskardo	0.77	349	P	Pg	22 36 41.6	-0.9
FSK				S	Sb	22 36 53.3	+0.2
AMT	Artemida-Makis	0.78	102	P	Pg	22 36 41.9	-0.7
DRO	Drossia	0.80	71	P	Pb	22 36 43.2	0.0
DRO	Drossia	0.80	71	P	Pb	22 36 43.1	-0.1
EVGI	Lefkada island	0.92	355	P	Pg	22 36 44.6	-0.8
EVGI	Lefkada island	0.92	355	P	Pg	22 36 44.5	-0.8
NYDR	Nydri-Lefkada	1.01	358	P	Pg	22 36 46.2	-0.8
NYDR	Nydri-Lefkada	1.01	358	P	Pg	22 36 46.2	-0.8
ITM	Ithomi	1.07	119	P	Pg	22 36 46.4	-1.7
ITM	Ithomi	1.07	119	P	Pg	22 36 46.3	-1.8
LKD2	Lefkada island	1.09	356	P	Pg	22 36 47.2	-1.3
LKD2	Lefkada island	1.09	356	P	Pg	22 36 47.3	-1.3
PVO	Paravola	1.10	33	P	Pb	22 36 48.5	+0.2
PYL	PYLOS	1.13	135	P	Pg	22 36 47.2	-2.0
TSLK	Tsoukalades, L	1.13	356	P	Pg	22 36 48.0	-1.2
KLV	Kalavryta, Ach	1.16	72	P	Pg	22 36 48.9	-0.9
KLV	Kalavryta, Ach	1.16	72	P	Pg	22 36 48.9	-0.9
EFP	Efpalio	1.17	51	P	Pg	22 36 48.9	-1.0
EFP	Efpalio	1.17	51	P	Pg	22 36 49.1	-0.8
SERG	Sergoula	1.25	55	P	Pg	22 36 50.6	-1.0
SERG	Sergoula	1.25	55	P	Pg	22 36 50.4	-1.2
AMPL	Ampelaki	1.27	16	P	Pn	22 36 51.1	+0.2
GUR	Goura	1.28	79	P	Pg	22 36 51.0	-1.2
GUR	Goura	1.28	79	P	Pg	22 36 50.9	-1.3
ANX	Ano Chora	1.28	46	S	Sn	22 37 10.4	+2.3
KALE	Kalithea	1.30	57	P	Pn	22 36 51.2	0.0
KALE	Kalithea	1.30	57	P	Pn	22 36 51.2	0.0
VLX	Vlachokerasia	1.33	104	P	Pn	22 36 51.1	-0.6
VLX	Vlachokerasia	1.33	104	P	Pn	22 36 51.5	-0.3
EVR	Evrytania	1.47	34	P	Pb	22 36 54.7	0.0
AOS	Alonnisos	2.86	58	P	Pn	22 37 13.2	+0.5
OHR	Ohrid	3.41	1	*i* Pn	Pg	22 37 33.5	+0.7
OHR				*i* Sn	Sg	22 38 29.0	+12
VAY	Valandovo	3.88	21	*i* Pn	Pb	22 37 32.3	-3.3
VAY				*i* Sn	Sn	22 38 13.9	+1.8
IDI	Anoyia	4.11	125	P	Pn	22 37 32.7	+2.8
	1.8nm,0.7s,baz=148,slow=10,SNR=2.0						
IDI				S	Sn	22 38 19.1	+1.2
	4.9nm,0.3s,baz=298,slow=17,SNR=13						
VAE	Valguarnera	5.04	269	P	Pn	22 37 46.1	+3.5
	2.7nm,0.6s,baz=356,slow=9.5,SNR=7.0						
VAE				S	Sn	22 38 40.3	-0.4
	3.4nm,0.5s,baz=173,slow=16,SNR=2.8						
MLR	Muntele Rosu	8.70	25	P	Pn	22 38 44.0	+11
	1.5nm,0.7s,baz=192,slow=15,SNR=4.5						
AKASG	Malin Array Be	14.33	22	P	P	22 39 57.1	+0.1
	0.1nm,0.2s,baz=208,slow=8.9,SNR=4.1						
HFS	Hagfors	22.90	351	P	P	22 41 30.4	-0.2
	0.8nm,0.6s,baz=151,slow=9.2,SNR=1.8						
	0.8nm,0.6s						
FINES	FINESS Array B	24.00	6	P	P	22 41 40.1	-1.3
	0.7nm,0.7s,baz=178,slow=10.0,SNR=4.5						
	0.7nm,0.7s						
NOA	NORSAR Array B	24.12	349	P	P	22 41 42.9	+0.2
	0.5nm,0.9s,baz=160,slow=10,SNR=3.5						
	0.5nm,0.9s						
AKTO	Aktyubinsk	29.33	52	LR	LR	22 56 07.4	
	comp=Z,24nm,18.2s,baz=59,slow=39						
KURBB	Kurchatov Arra	42.37	53	P	P	22 44 19.6	-1.5
	0.2nm,0.5s,baz=280,slow=8.8,SNR=2.6						
	0.2nm,0.5s						
MKAR	Makanchi Array	45.40	58	P	P	22 44 44.3	-1.2
	0.1nm,0.4s,baz=279,slow=7.6,SNR=2.1						
	0.1nm,0.4s						

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*IDC **19** 22:42:14.9±5.0, 19°.53S×177°.92W, h579^{km}±54^{km}, mb3.2/9, mbtmp4.1/10, Error ellipse: s-maj=30.0km s-min=19.4km az=67.0*

*NEIC **19** 22:42:14.7±1.9, 19°.6S±0°.1×177°.92W±0°.06, h571^{km}±8^{km}, mb4.1/18, Error ellipse: s-maj=18.5km s-min=7.6km az=177.0*

ISC 19 22:42:15.5±0.5, 19°.6S±0°.1×177°.86W±0°.10, h600^{km}, n47, σ1^{s}.16/47, mb3.9/17, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.27	294	P	P	22 43 42.1	-1.0
FUTU	Fugatoga	5.21	357	P	P	22 43 48.5	-1.7
NIUE	Niue	7.51	88	P	P	22 44 08.0	-2.2
PINNC	Pines Island,	14.05	255	P	P	22 45 11.1	-3.7
DZM	Mont Dzumac	14.89	258	P	P	22 45 24.2	+1.4
	4.3nm,0.5s,baz=103,slow=21,SNR=11						
LTZ	Lake Taylor	24.62	198	P	P	22 46 48.3	-1.9
LTZ				IAmb	IAmb	22 47 09.7	
	comp=Z,23nm,1.4s						
CTAO	Charters Tower	33.72	263	P	P	22 48 09.0	0.0
TOO	Toolangi	36.57	233	P	P	22 48 32.4	+0.2
TOO				IAmb	IAmb	22 48 32.7	
	comp=Z,7.4nm,1.4s						
COEN	Coen	37.66	272	P	P	22 48 41.6	+0.2
STKA	Stephens Creek	38.33	243	P	P	22 48 46.4	-0.2
STKA	Stephens Creek	38.33	243	P	P	22 48 47.0	+0.5
	comp=Z,1.6nm,0.5s,baz=44,slow=9.4,SNR=3.3						
	comp=Z,1.6nm,0.5s						
BBOO	Buckleboo	43.09	243	P	P	22 49 24.2	-0.1
BBOO				IAmb	IAmb	22 49 26.1	
	comp=Z,15nm,1.2s						
WB0	Warramunga Arr	44.84	261	P	P	22 49 37.5	-0.4
WB0				IAmb	IAmb	22 50 00.7	
	comp=Z,14nm,1.4s						
WRA	Warramunga Arr	44.87	261	P	P	22 49 37.4	-0.7
WRA	Warramunga Arr	44.87	261	P	P	22 49 38.0	-0.1
	comp=Z,2.0nm,0.3s,baz=98,slow=7.3,SNR=46						
	comp=Z,2.0nm,0.3s						
AS31	Alice Springs	44.87	256	P	P	22 49 38.1	0.0
ASAR	Alice Springs	44.87	256	P	P	22 49 37.7	-0.5
ASAR	Alice Springs	44.87	256	P	P	22 49 38.2	+0.1
	comp=Z,2.7nm,0.4s,baz=89,slow=7.9,SNR=28						
ASAR				PcP	PcP	22 51 07.4	+0.8
	comp=Z,0.7nm,0.6s,baz=86,slow=3.5,SNR=3.8						
	comp=Z,2.7nm,0.4s						
FORT	Forrest	49.80	246	P	P	22 50 13.8	-0.9
FORT				IAmb	IAmb	22 50 15.1	
	comp=Z,14nm,0.8s						
FITZ	Fitzroy Crossi	53.29	262	P	P	22 50 40.2	+0.2
MBWA	Marble Bar	58.19	257	P	P	22 51 13.4	-0.4
MBWA				IAmb	IAmb	22 51 14.3	
	comp=Z,4.3nm,0.8s						
VNDA	Vanda	58.87	185	P	P	22 51 17.6	+0.3
VNDA	Vanda	58.87	185	P	P	22 51 18.5	+1.1
	comp=Z,0.5nm,0.6s,baz=44,slow=8.5,SNR=2.5						
	comp=Z,0.5nm,0.6s						
GIRL	Giralia	62.93	254	P	P	22 51 46.2	+1.3
MJAR	Matsushiro Arr	69.52	323	P	P	22 52 25.7	+0.4
MJAR				IAmb	IAmb	22 52 26.7	
	comp=Z,1.8nm,0.6s						
MJAR	Matsushiro Arr	69.52	323	P	P	22 52 25.8	+0.6
	comp=Z,2.2nm,0.5s,baz=146,slow=5.3,SNR=8.0						
	comp=Z,2.2nm,0.5s						
QSPA	South Pole Qui	70.52	180	P	P	22 52 32.0	+1.2
QSPA				IAmb	IAmb	22 52 36.8	
	comp=Z,5.5nm,1.2s						
QSPA	South Pole Qui	70.52	180	P	P	22 52 32.2	+1.4
	comp=Z,2.4nm,0.7s,baz=298,slow=0.8,SNR=16						
	comp=Z,2.4nm,0.7s						
KIWB	Kanaga Island	71.09	0	P	P	22 52 34.1	0.0
ADK	Adak	71.13	1	P	P	22 52 34.7	+0.4
ADK				IAmb	IAmb	22 52 57.8	
	comp=Z,9.4nm,1.1s						
TXAR	Lajitas Array	86.43	57	P	P	22 53 57.7	+1.7
	comp=Z,0.4nm,0.9s,baz=237,slow=4.0,SNR=3.7						
	comp=Z,0.4nm,0.9s						
ILAR	Eielson Array	87.36	13	P	P	22 54 00.1	+0.8
	comp=Z,0.5nm,0.7s,baz=236,slow=6.7,SNR=5.1						
	comp=Z,0.5nm,0.7s						
D20K	Etivluk River	89.35	8	P	P	22 54 09.1	+0.6
D20K				IAmb	IAmb	22 54 10.6	
	comp=Z,1.4nm,1.0s						
CMAR	Chiang Mai Arr	89.92	290	P	P	22 54 14.8	+2.6
	comp=Z,0.5nm,0.4s,baz=110,slow=3.2,SNR=5.0						
	comp=Z,0.5nm,0.4s						
BVAR	Borovoye Array	118.43	320	PKP	PKiKP	22 59 55.8	+0.1
	comp=Z,0.6nm,0.3s,baz=93,slow=5.3,SNR=4.5						
ARCES	ARCESS Array B	128.01	350	PKP	PKiKP	23 00 14.4	+0.2
	comp=Z,1.7nm,1.0s,baz=64,slow=2.8,SNR=6.4						
FINES	FINESS Array B	134.90	344	PKP	PKiKP	23 00 28.1	-0.1
	comp=Z,1.6nm,1.1s,baz=122,slow=1.8,SNR=5.5						
AKASG	Malin Array Be	142.24	332	PKhKP	PKPpre	23 00 36.9	
	comp=Z,0.7nm,0.3s,baz=44,slow=4.2,SNR=9.7						
EKA	Eskdalemuir Ar	144.05	5	PKP	PKPab	23 00 43.8	+0.4
	comp=Z,0.2nm,0.5s,baz=348,slow=2.9,SNR=3.9						
BUR08	Bucovina Ar. S	146.28	332		PKPbc	23 00 49.4	-0.6
BRTR	Keskin Array B	146.29	313	PKPbc	PKiKP	23 00 51.0	-1.6
BRTR	Keskin Array B	146.29	313	PKPbc	PKiKP	23 00 51.3	-1.2
	comp=Z,0.9nm,0.6s,baz=113,slow=3.8,SNR=6.1						
CLL	Collm	147.17	347	*i* PKPbc	PKiKP	23 00 53.0	-0.8
	comp=Z,4.0nm,0.8s						
MMAI	Mount Meron Ar	147.44	301	PKPbc	PKPab	23 00 55.3	-2.4
	comp=Z,1.2nm,0.5s,baz=90,slow=4.3,SNR=5.6						
MLR	Muntele Rosu	147.49	328	PKPbc	PKiKP	23 00 54.4	-0.4
GERES	GERESS Array B	149.32	345	PKPbc	PKiKP	23 00 58.6	+0.2
	comp=Z,0.8nm,0.6s,baz=14,slow=2.8,SNR=9.9						
RDO	Rodhopi	150.65	322	PKPbc	PKiKP	23 01 01.6	+0.4

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*WEL **19** 22:48:42.5, 37°.55S×177°.14E, h7^{km}, ML3.3, Mw3.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14} Nm; M_{rr}-0.81; $M_{\theta\theta}$0.23; $M_{\phi\phi}$0.58; $M_{r\theta}$0.14; $M_{\theta\phi}$1.17; $M_{\phi r}$0.63; Fault plane solution: $M_0$1.44000×10^{14} NP1: ϕ_s191.00000°, δ67.00000°, λ-130.00000°. NP2: ϕ_s76.00000°, δ45.00000°, λ-34.00000°. Principal axes: T 1.7100, Plg13.0000°, Azm309.0000°; N -0.5450, Plg36.0000°, Azm209.0000°; P -1.1650, Plg51.0000°, Azm55.0000°; Stations used: URZ MWZ RTZ OBLIQUE-NORMAL FAULTING*

WEL 19 22:48:42.5±0.4, 38°S±3°×17°7E±°, h4^{km}±3^{km}, M3.3/31, ML3.6/20, MLv3.3/31 Error ellipse: s-maj=3.9km s-min=3.6km az=159.3, confirmed, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSRZ	White Island S	0.05	41	P	Pg	22 48 44.1	+0.5
WIZ	White Island	0.05	56	P	Pg	22 48 44.1	+0.5
WIZ				S	Sg	22 48 45.3	+0.9
WHRZ	Whale Island	0.33	203	P	Pg	22 48 49.8	+0.9
HAZ	Te Kaha	0.55	112	P	Pg	22 48 53.1	0.0
HAZ				S	Sg	22 49 00.9	+0.7
MARZ	Manawahe	0.57	220	P	Pg	22 48 53.8	+0.4
RUGZ	Raukumara Rang	0.59	134	P	Pg	22 48 53.7	-0.2
EDRZ	Edgecumbe	0.64	210	P	Pg	22 48 55.5	+0.7
URZ	Urewera	0.70	182	P	Pg	22 48 56.0	-0.1
URZ				S	Sg	22 49 05.9	+0.6
TGRZ	Tauranga	0.72	256	P	Pg	22 48 56.6	+0.3
LIRZ	Lichensteins R	0.75	233	P	Pb	22 48 58.2	+0.1
MYRZ	Mayor Island	0.77	291	P	Pg	22 48 57.0	-0.2
MKRZ	Makatiti	0.79	222	P	Pb	22 48 58.4	-0.5
PKGZ	Pakihiroa	0.81	113	P	Pg	22 48 58.1	+0.1
MWZ	Matawai	0.84	159	P	Pg	22 48 58.4	-0.3
MWZ				S	Sg	22 49 10.2	+0.7
TARZ	Mount Tarawera	0.85	216	P	Pg	22 48 59.0	+0.2
KARZ	Kaharoa	0.85	236	P	Pg	22 48 59.1	+0.2
TWGZ	Tauwhareparae	0.91	133	P	Pg	22 49 00.3	+0.2
MXZ	Matakaoa Point	0.93	91	P	Pg	22 48 59.4	-0.9
RAGZ	Rawiri	0.97	167	P	Pg	22 49 01.0	-0.1
MUGZ	Murupara	0.97	197	P	Pg	22 49 00.9	-0.2
UTU	Utuhina	0.97	230	P	Pn	22 49 03.8	+0.8
KMRZ	Kaimai	0.99	253	P	Pg	22 49 01.2	-0.4
PUZ	Puketiti	1.03	121	P	Pb	22 49 02.6	-0.3
HSRZ	Hossack Road	1.04	223	P	Pn	22 49 04.1	+0.1
WMGZ	Waiomatatini S	1.05	105	P	Pb	22 49 03.5	+0.3
TKGZ	Te Karaka	1.05	148	P	Pg	22 49 02.8	+0.1
RTZ	Ruatahuna	1.07	187	P	Pg	22 49 02.5	-0.5
SNGZ	Shannon Statio	1.24	173	P	Pg	22 49 05.9	-0.4
RIGZ	Rimuhau	1.25	157	P	Pn	22 49 06.9	0.0
CNGZ	Carnagh Statio	1.25	138	P	Pn	22 49 07.7	+0.9
TOZ	Tahuroa Road	1.31	262	P	Pn	22 49 06.1	-1.5
MTHZ	Maungataniwha	1.32	190	P	Pg	22 49 06.7	-1.1
RAHZ	Arahi	1.36	182	P	Pg	22 49 08.8	+0.2
BKZ	Black Stump Fm	1.69	197	P	Pn	22 49 11.6	-1.4
MHGZ	Mahia Peninsul	1.71	160	P	Pg	22 49 16.1	+0.8
ARHZ	Aropaoanui	1.71	184	P	Pn	22 49 13.6	+0.4
WIAZ	Waiheke Island	1.77	295	P	Pn	22 49 13.4	-0.6
ETAZ	East Tamaki Re	1.86	288	P	Pn	22 49 15.6	+0.3
ETVZ	East Tongariro	1.94	215	P	Pg	22 49 19.2	-0.5
OTVZ	Oturere	1.98	215	P	Pb	22 49 18.9	-0.4
KRHZ	Kereru	2.17	196	P	Pn	22 49 19.4	-0.1

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*PRU **19** 22:56:57.9, 49°.84N×18°.51E, h0^{km}*

IPEC 19 22:56:56.4±0.3, 49°.84N×18°.56E, h1^{km}, ML1.4/4, Error ellipse: s-maj=2.1km s-min=1.7km az=69.0, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.26	270	*e*PG	Pg	22 57 01.8	+0.3
OKC				*e*SG	Sg	22 57 06.6	+1.7
	comp=Z,27nm,0.7s						
STEB	Steborice	0.52	281	*e*PG	Pb	22 57 07.7	-0.6
STEB				*e*SG	Sg	22 57 14.0	+1.1
MORC	Moravsky Berou	0.66	265	*e*Pg	Pg	22 57 09.1	+0.1
	baz=84						
MORC				*e*Sg	Sg	22 57 17.3	-0.3
	6.4nm,0.2s,baz=84						
LANS	Liptovska Anna	0.91	139	*e*PG	Pg	22 57 13.7	-0.1
LANS				*e*SG	Sb	22 57 27.0	-0.6
LANS				*e*LG	Lg	22 57 30.3	
JAVC	Velka Javorina	1.14	211	*e*Pg	Pg	22 57 18.5	+0.3
	baz=30						
KRLC	Kraliky	1.17	282	*e*SG	Sg	22 57 34.4	+0.4
	comp=Z,6.7nm,0.5s						
VYHS	Vyhne	1.36	172	*e*PG	Pg	22 57 21.6	-0.8
VYHS				*e*SG	Sg	22 57 39.9	-0.1
VRAC	Vranov	1.38	248	*e*Pg	Pn	22 57 22.1	-0.8
	baz=67						
VRAC				*e*Sg	Sg	22 57 39.6	-1.2
	4.7nm,0.4s,baz=67						
VRAC	Vranov	1.38	248	*e*PG	Pn	22 57 22.2	-0.7
VRAC				*e*SG	Sg	22 57 39.7	-1.1
DPC	Dobruska-Polom	1.53	290	*e*PG	Pn	22 57 24.7	-0.2
DPC				*e*SG	Sn	22 57 44.8	-0.6
	comp=Z,4.0nm,0.7s						
KRUC	Moravsky	1.61	242	*e*Pg	Pn	22 57 25.7	-0.3

	baz=60						
KRUC				*e*Sg	Sn	22 57 46.9	-0.5
	3.1nm,0.2s,baz=60						
OSTC	Ostas	1.67	296	*e*SG	Sn	22 57 49.0	+0.2
	comp=Z,7.5nm,1.0s						
MODS	Modra-Piesok	1.69	210	*e*SG	Sn	22 57 48.5	-0.9
UPC	Upice	1.77	293	*e*SG	Sg	22 57 52.8	-0.3
	comp=Z,21nm,2.0s						
CHVC	Chvalec	1.77	296	*e*SG	Sg	22 57 53.6	+0.3
	comp=Z,17nm,1.9s						
STHS	Stebnicka Huta	1.80	103	*e*PN	Pb	22 57 30.3	+0.2

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*MOS **19** 23:02:58.3±0.9, 3°.95S×76°.04W, h111^{km}, mb5.1/44, Error ellipse: s-maj=10.3km s-min=5.5km az=104.3*

*NEIC **19** 23:02:59.8, 4°.10S×76°.00W, h100^{km}, Moment Tensor Solution. Duration: 1^{s}4 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.58; M$_{\theta\theta}$0.46; M$_{\phi\phi}$2.12; M$_{r\theta}$-0.06; M$_{\theta\phi}$-0.98; M$_{\phi r}$0.37; Fault plane solution: M$_0$2.60000×10^{16} NP1: φ$_s$332.92000°, δ41.10000°, λ-93.28000°. NP2: φ$_s$157.27000°, δ48.99000°, λ-87.14000°. Principal axes: T 2.5959, Plg4.0000°, Azm245.0000°; N 0.0115, Plg2.0000°, Azm335.0000°; P -2.6074, Plg85.0000°, Azm94.0000°;*

*NEIC **19** 23:02:59.8±1.6, 4°.00S±0°.06×75°.99W±0°.06, h107^{km}±5^{km}, mb5.1/173, Mww4.9/13 Error ellipse: s-maj=9.6km s-min=7.9km az=71.0*

*NEIC **19** 23:02:59.8, 4°.00S×76°.00W, h100^{km}*

*IDC **19** 23:02:59.7±0.3, 4°.00S×76°.06W, h114^{km}±2^{km}, mb4.4/31, mbtmp4.8/39, MS3.3/4, Error ellipse: s-maj=10.1km s-min=7.3km az=79.0*

*VAO **19** 23:03:00.9±0.5, 3°.99S×75°.87W, h117^{km}±3^{km}, mb5.1*

*RSNC **19** 23:03:00.3±0.3, 4°S±3°×7°6W±°, h81^{km}±13^{km}, M4.9, mB5.6, mb5.1, ML4.5, Mw(mB)5.0, MwMwp4.6, Mwp5.0*

*GCMT **19** 23:03:01.8±0.3, 4°.01S±0°.03×76°.08W±0°.03, h113^{km}±3^{km}, MW4.9/85, Moment Tensor Solution. s28,c32; s85,c114; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.77±.08; M$_{\theta\theta}$0.11±.11; M$_{\phi\phi}$2.66±.15; M$_{r\theta}$-0.20±.08; M$_{\theta\phi}$-1.21±.11; M$_{\phi r}$0.73±.12; Best double couple: M$_0$3.05300×10^{16} NP1: φ$_s$336.00000°, δ38.00000°, λ-93.00000°. NP2: φ$_s$160.00000°, δ52.00000°, λ-88.00000°. Principal axes: T 3.2380, Plg7.0000°, Azm248.0000°; N -0.3710, Plg2.0000°, Azm339.0000°; P -2.8680, Plg83.0000°, Azm83.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **19** 23:03:09.0, 3°.51S×73°.92W, h121^{km}±2^{km}, mb4.7*

ISC 19 23:02:59.8±0.3, **4°.02S**±0°.03×**76°.04W**±0°.04, **h117**^{km}±2^{km}, **h117**^{km}**:pP-P, n917,** σ0^{s}**89**/1017, **mb4.9**/183, **8C-25D, Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COHC	Cochancay	3.56	296		Pn	23 03 52.9	-0.5
COHC	Cochancay	3.56	296	P	Pn	23 03 52.9	-0.5
PIAT	Ana Tenorio	3.73	323	P	Pn	23 03 54.9	-1.2
ATAH	Atahualpa	3.88	217	P	Pn	23 03 58.6	+0.5
	2µm,0.5s,baz=26,slow=10,SNR=1788						
ATAH				S	Sn	23 04 42.1	-1.2
	1µm,0.6s,baz=142,slow=20,SNR=9.5						
MCRA	Macar, Loja	3.92	265	P	Pn	23 03 54.8	-3.5
SLOR	San Lorenzo -	4.08	323		Pn	23 04 01.4	+0.5
PTLC	Puerto Leguiza	4.34	17	P	Pn	23 03 59.8	-4.1
BONI	La Bonita	4.68	341	P	Pn	23 04 08.1	-0.6
OTAV	Otavalo	4.86	330		Pn	23 04 12.0	+0.6
OTAV	Otavalo	4.86	330	P	Pn	23 04 12.0	+0.6
OTAV	Otavalo	4.86	330	*e*P	Pn	23 04 12.1	+0.7
OTAV	Otavalo	4.86	330	P	Pn	23 04 11.9	+0.6
CUSE	Cuicocha Este	4.89	331	P	Pn	23 04 14.5	+2.7
CZSB	Cruzeiro do Su	4.96	138		Pn	23 04 13.0	+0.7
CZSB	Cruzeiro do Su	4.96	138	*e*P	Pn	23 04 12.8	+0.5
CZSB	Cruzeiro do Su	4.96	138	P	Pn	23 04 13.0	+0.7
TULM	Tulcn-Chalpat	5.01	340	P	Pn	23 04 14.3	+0.9
	9µm144nm,1.1s						
PAC1	Pacto, Paraso	5.06	327	P	Pn	23 04 15.0	+1.2
FLF1	Flavio Alfaro-	5.25	314	P	Pn	23 04 15.8	-0.5
	13µm601nm,0.5s						
PPLP	Puerto Lpez	5.33	297	P	Pn	23 04 14.3	-2.9
GCUF	Volcan Galeras	5.37	346	P	Pn	23 04 18.9	+0.7
	6µm131nm,0.4s						
FLOC	Florencia	5.57	4		Pn	23 04 20.0	-0.6
FLOC	Florencia	5.57	4	P	Pn	23 04 20.2	-0.4
	3µm17µm260nm,0.9s						
CRUC	La Cruz	5.62	351	P	Pn	23 04 20.3	-1.2
	2µm,0.8s						
BBAC	Balboa, Cauca	6.12	349	P	Pn	23 04 28.7	+0.6
	3µm126nm,0.6s						
TBTG	Tabatinga, AM	6.12	92		Pn	23 04 28.5	+0.5
TBTG	Tabatinga, AM	6.12	92	*e*P	Pn	23 04 28.4	+0.5
TBTG	Tabatinga, AM	6.12	92	P	Pn	23 04 28.5	+0.5
	193µm13µm,0.8s						
GARC	Garzon, Huila	6.18	5	P	Pn	23 04 28.7	-0.3
MACC	Macarena, Meta	6.50	20	P	Pn	23 04 32.9	-0.2
	3µm10µm619nm,0.6s						
POPC	Popayan, Colom	6.54	354	P	Pn	23 04 34.4	+0.5
	3µm69nm,0.8s						
BETC	Betania	6.68	5	P	Pn	23 04 36.7	+1.2
JAMC	Jamundi, Valle	7.21	355	P	Pn	23 04 45.1	+2.2
GR1C	Gorgona, Isla	7.29	343	P	Pn	23 04 45.1	+1.4
	19µm257nm,1.0s						
GUVC	San Jose del G	7.36	28	P	Pn	23 04 44.5	-0.2
URMC	La Uribe, Meta	7.40	13	P	Pn	23 04 45.7	+0.3
	9µm778nm,0.9s						
PRAC	Prado	7.76	9	P	Pn	23 04 50.5	+0.3
	8µm151nm,1.0s						
ORTC	Ortega, Tolima	7.91	6	P	Pn	23 04 52.3	+0.1
	2µm3µm102nm,1.4s						
YOTC	Yotoco, Valle	7.95	358	P	Pn	23 04 52.8	0.0
	1µm60nm,1.2s						
NNA	Nana	7.96	186		Pn	23 04 53.0	+0.1
NNA	Nana	7.96	186	P	Pn	23 04 53.2	+0.3
	163nm,0.3s,baz=312,slow=7.1,SNR=71						
NNA				S	Sn	23 06 14.7	-6.7
	220nm,0.5s,baz=65,slow=19,SNR=8.0						
NNA	Nana	7.96	186	P	Pn	23 04 53.0	+0.1
NNA	Nana	7.96	186	P	Pn	23 04 53.0	+0.1
	8µm221nm,0.4s						
VILC	Villavicencio,	8.41	16	P	Pn	23 04 59.6	+0.6
	13µm753nm,0.6s						
CVER	Cruz Verde, Cu	8.70	13	P	Pn	23 05 05.7	+2.4
PLMC	San Jos del P	8.86	358	P	Pn	23 05 04.7	-0.4
	953nm55nm,0.8s						
CHIC	Chingaza	8.89	15	P	Pn	23 05 05.8	0.0
	2µm271nm,1.1s						
ROSC	El Rosal	8.96	11	P	Pn	23 05 08.5	+1.7
	43nm,0.6s,baz=131,slow=12,SNR=12						
ROSC	El Rosal	8.96	11	P	Pn	23 05 09.0	+2.2
PTGC	Puerto Gaitan,	9.04	26	P	Pn	23 05 07.2	-0.3
	6µm475nm,0.8s						
GUY2C	Guyana, Caldas	9.20	4	P	Pn	23 05 12.8	+2.7
NORC	Norcasia	9.59	7	P	Pn	23 05 15.1	+0.2
	578nm48nm,0.8s						
MAPC	Malpelo	9.71	325	P	Pn	23 05 16.9	+0.3
	3µm38nm,1.1s						
SPBC	San Pablo de B	9.80	12	P	Pn	23 05 19.0	+1.2
	2µm1µm108nm,1.8s						
CBOC	Ciudad Bolivar	9.81	0	P	Pn	23 05 19.9	+1.8
	672nm60nm,0.9s						
SGC2	Sao Gabriel da	9.84	67	P	Pn	23 05 16.1	-2.1
HELC	Santa Helena	10.15	3	P	Pn	23 05 23.0	+0.2
	601nm22nm,1.0s						
RUSC	La Rusia	10.28	17		Pn	23 05 24.8	+0.2
RUSC	La Rusia	10.28	17	P	Pn	23 05 24.6	0.0
	3µm250nm,0.8s						
PTBC	PUERTO BERRIO,	10.60	9	P	Pn	23 05 29.0	+0.4
	500nm45nm,1.0s						
BARC	Barichara	10.92	15	P	Pn	23 05 33.8	+0.8
DBBC	Dabeiba	10.96	359	P	Pn	23 05 38.9	+5.4
TAMC	Tame, Arauca	11.21	22	P	Pn	23 05 36.7	-0.2
	3µm366nm,0.9s						
TEFE	Tefe	11.39	88	*e*P	Pn	23 05 34.2	-5.0
ZARC	Zaragoza, Cauc	11.49	6	P	Pn	23 05 39.5	-1.0
UREC	San Jos de Ur	11.70	2	P	Pn	23 05 45.6	+2.3
	2µm19nm,0.9s						
PAMC	Pamplona, Colo	11.76	16	P	Pn	23 05 45.3	+0.8
APAC	Apartado, Choc	11.85	357	P	Pn	23 05 46.8	+1.6
	29nm,1.4s						
AZU	Azuero	12.46	340	P	Pn	23 05 53.7	+0.4
	43nm,1.0s						
OCAC	Ocana	12.47	13	P	Pn	23 05 53.3	-0.2
BCIP	Isla Barro Col	13.63	344		Pn	23 06 09.5	+1.1
BCIP	Isla Barro Col	13.63	344	P	Pn	23 06 09.5	+1.1
BCIP	Isla Barro Col	13.63	344	P	P	23 06 14.4	+1.2
SJCC	San Jacinto, C	13.85	4	P	Pn	23 06 11.5	+0.2
ARGC	Ariguani, Magd	13.90	7	P	P	23 06 17.2	+1.0
SDV	Santo Domingo	13.90	23		Pn	23 06 11.8	-0.3
SDV	Santo Domingo	13.90	23	P	Pn	23 06 11.7	-0.5
	28nm,0.3s,baz=205,slow=11,SNR=19						
SDV				S	Sn	23 08 46.9	+1.2
	21nm,0.6s,baz=16,slow=19,SNR=1.2						
SDV				LR	LR	23 12 38.2	
	comp=Z,116nm,20.2s,baz=220,slow=42						
SDV	Santo Domingo	13.90	23	*e*P	Pn	23 06 12.1	0.0
SDV	Santo Domingo	13.90	23	P	Pn	23 06 12.0	-0.2
BRU2	Volcan	14.35	332		Pn	23 06 19.1	+1.3
LPAZ	La Paz	14.46	148	Pn	Pn	23 06 19.5	-0.2
LPAZ	La Paz	14.46	148	P	Pn	23 06 20.4	+0.8
	7.3nm,0.5s,baz=328,slow=11,SNR=32						
LPAZ				LR	LR	23 12 20.3	
	comp=Z,83nm,20.9s,baz=316,slow=39						
LPAZ	La Paz	14.46	148	P	Pn	23 06 19.5	-0.2
LPAZ	La Paz	14.46	148	*e*P	Pn	23 06 19.5	-0.2
LPAZ	La Paz	14.46	148	P	Pn	23 06 21.0	+1.3
	25nm,0.8s						
PAYG	Puerto Ayora	14.61	283		Pn	23 06 20.8	-0.2
PB18	Visviri	14.95	155	P	Pn	23 06 26.8	+1.1
BAUV	El Baul	15.14	32		Pn	23 06 26.1	-1.6
SMRC	Santa Marta, M	15.19	7	Pn	Pn	23 06 27.9	-0.4
CRJC	Cerrejon, Guaj	15.26	12	P	P	23 06 30.6	-0.9
MACA	Manacapuru-AM	15.35	87		Pn	23 06 28.0	-2.4
MACA	Manacapuru-AM	15.35	87	*e*P	Pn	23 06 29.1	-1.3
PB16	IPOC Station P	15.60	156		Pn	23 06 33.8	-0.2
LCR2	La Lucha 2	15.80	330		Pn	23 06 36.5	+0.4
HDC	Heredia	16.08	330	*e*P	P	23 06 41.4	+0.8
URIC	Uribia, Colomb	16.12	14	P	Pn	23 06 39.1	-0.8
SOCE	Pocosol	16.66	329		Pn	23 06 46.7	+0.2
JTS	Las Juntas de	16.75	328	P	P	23 06 47.9	0.0
	7.4nm,0.3s,baz=267,slow=20,SNR=4.1						
JTS				LR	LR	23 12 40.3	
	comp=Z,85nm,20.6s,baz=136,slow=35						
BOAV	Boa Vista	16.77	68		Pn	23 06 46.5	-1.3
BOAV	Boa Vista	16.77	68	*e*P	Pn	23 06 46.7	-1.1
PB11	IPOC Station P	16.84	159		Pn	23 06 47.3	-1.6
GO01	Chusmiza	16.93	157	P	Pn	23 06 49.0	-1.3
TA02	Huaiquique	17.15	161	P	P	23 06 51.9	-0.3
HMBC	Humberstone	17.24	160	P	P	23 06 53.1	-0.3
PB08	IPOC Station P	17.38	158	P	P	23 06 54.5	-0.6
TA01	Diego Aracena	17.41	161		P	23 06 54.6	-0.5
PATCX	Punta Patache	17.66	162	P	Pn	23 06 58.7	0.0
VILB	Vilhena	18.00	121		P	23 07 01.6	0.0
VILB	Vilhena	18.00	121	*e*P	P	23 07 01.6	-0.1
PB01	IPOC Station P	18.09	160	P	Pn	23 07 03.8	+0.1
PCRV	Puerto La Cruz	18.11	39	P	Pn	23 07 03.6	-0.4
	32nm,0.6s,baz=212,slow=9.8,SNR=15						
ACON	Acoyapa	18.29	330		Pn	23 07 06.5	+0.3
PB09	IPOC Station P	18.87	160	P	Pn	23 07 12.7	-0.5
SIV	San Ignacio	18.93	130	P	P	23 07 12.6	+0.8
	9.0nm,0.4s,baz=308,slow=9.2,SNR=34						
PB03	IPOC Station P	18.94	162	P	Pn	23 07 13.4	-0.5
VBST	Vila Bela da S	18.94	125	*e*P	P	23 07 11.9	0.0
BOAB	BOACO BROADBAN	18.95	330		P	23 07 12.6	+0.7
PB05	IPOC Station P	19.56	164	P	P	23 07 19.6	+0.9
PB06	IPOC Station P	19.61	162	P	P	23 07 19.6	+0.3
BBSD	Serra de San D	20.01	132	*e*P	P	23 07 23.7	+0.2
PB10	IPOC Station P	20.10	165		P	23 07 24.7	+0.3
PTLB	Pontes e Lacer	20.14	125		P	23 07 24.7	-0.2
PTLB	Pontes e Lacer	20.14	125	*e*P	P	23 07 25.0	0.0
ITTB	Itaituba	20.26	92	*e*P	P	23 07 25.0	-1.2
AF01	San Pedro de A	20.31	159	P	P	23 07 27.6	+0.7
PDRB	Porto dos Gac	20.56	113	*e*P	P	23 07 28.3	-1.2
NPGB	Novo Progresso	20.80	99	*e*P	P	23 07 30.1	-2.0
TGUH	Tegucigalpa,Un	21.13	328	P	P	23 07 35.9	+0.3
CLDB	Colider	21.19	110	*e*P	P	23 07 34.5	-1.7
PB14	IPOC Station P	21.20	166		P	23 07 37.6	+1.0
MAL2	Monte Alegre,	21.92	85		P	23 07 42.9	-1.2
GO02	Mina Guanaco	21.92	164		P	23 07 45.2	+0.9
CCRS	Cacerres, MT,	22.15	128	*e*P	P	23 07 46.3	0.0
MTDJ	Mount Denham	22.15	356	P	P	23 07 47.0	+0.6
NBRS	Nobres	22.45	118	*e*P	P	23 07 49.3	-0.2
ESQI	Esquipulas	22.68	325	P	P	23 07 52.1	+0.3
POCN	Pocone	22.72	125	*e*P	P	23 07 52.2	+0.1
SALV	Santo Antonio	23.23	122	*e*P	P	23 07 57.1	+0.2
SDDR	Presa de Saban	23.33	11	P	P	23 07 59.3	+1.5
CRPR	Cabo Rojo, PR	23.59	22	P	P	23 07 59.1	-1.0
AC02	Maricunga	23.64	164		P	23 08 02.7	+1.6
GTBY	Guantanamo Bay	23.81	2		P	23 08 02.5	+0.4
OBIP	Obispado Ponce	23.81	23	P	P	23 08 01.5	-0.6
CHIV	Chivirico	23.84	359	P	P	23 08 02.4	0.0
CELP	Cerrillos	23.85	23	P	P	23 08 01.1	-1.4
IGPR	InterUniversit	23.94	24		P	23 08 01.9	-1.4
PDPR	Patillas Dam,	24.02	24	P	P	23 08 03.3	-0.7
SJG	San Juan	24.05	24	P	P	23 08 03.5	-0.8
SJG	San Juan	24.05	24	P	P	23 08 03.5	-0.8
HUMP	Col San Antoni	24.20	24	P	P	23 08 04.8	-0.8
NMDO	Nuevo Mundo	24.44	2	P	P	23 08 08.4	+0.6
PP1B	Ponte de Pedra	24.74	125	*e*P	P	23 08 10.9	+0.2
BDQN	Bodoquena, MS	24.89	133	*e*P	P	23 08 12.3	+0.3
GDSD	La Dsirade Is	25.05	36	P	P	23 08 11.8	-1.6
GDSD				IAmb	IAmb	23 08 50.8	
	comp=Z,46nm,1.0s						
MURT	Porto Murtinho	25.05	136	*e*P	P	23 08 13.4	0.0
RVDE	Rio Verde (Bra	25.45	128	*e*P	P	23 08 17.5	+0.4
AQDB	Aquidauana	25.69	131	*e*P	P	23 08 19.9	+0.7
CCIG	Comitan	25.69	322	P	P	23 08 19.3	-0.1
SNDB	Serra Nova Dou	25.73	109	*e*P	P	23 08 19.1	-0.6
GRTK	Grand Turk	25.82	11	P	P	23 08 20.4	+0.1
PRPB	Parauapebas	26.21	96	*e*P	P	23 08 22.9	-1.1
CO01	Juntas del Tor	26.43	168	P	P	23 08 26.9	+0.9
ARAG	Araguaiana, MT	26.51	118	*e*P	P	23 08 26.8	+0.1
DVLD	Doverlandia	26.58	120	*e*P	P	23 08 27.3	-0.1
TEIG	Tepich	26.92	334	P	P	23 08 30.5	+0.3
TEIG				IAmb	IAmb	23 08 33.0	
	comp=Z,76nm,1.4s						
C2SB	Chapadao do Su	27.00	125	*e*P	P	23 08 31.3	+0.3
RPRD	Ribas do Rio P	27.22	129	*e*P	P	23 08 33.3	+0.3
AMBA	Amambai (Brazi	27.72	135	*e*P	P	23 08 37.7	+0.3
TMAB	Tom-Au,PA,Br	27.95	88	*e*P	P	23 08 39.3	-0.2
SJPY	San Joaquin	28.34	139	*e*P	P	23 08 42.3	-0.6
CPUP	Villa Florida	28.52	143		P	23 08 44.3	-0.2
CPUP	Villa Florida	28.52	143	P	P	23 08 44.6	+0.1
	comp=Z,1.3nm,0.5s,baz=181,slow=7.3,SNR=6.8						
CPUP				PcP	PcP	23 11 54.1	+0.6
	comp=Z,1.5nm,0.7s,baz=217,slow=2.7,SNR=4.5						
	comp=Z,1.3nm,0.5s						
CPUP	Villa Florida	28.52	143	P	P	23 08 44.3	-0.2
CPUP				pmax	pmax		
	comp=Z,5.0nm,1.2s						
CPUP	Villa Florida	28.52	143	*e*P	P	23 08 44.0	-0.5
SMTB	Santa Maria do	28.67	101	*e*P	P	23 08 45.9	-0.1
TRCB	Terra Rica	29.35	132	*e*P	P	23 08 51.8	-0.2
ITRB	Iturama	29.50	124	*e*P	P	23 08 53.3	0.0
PCMB	Pacaembu	29.74	128	*e*P	P	23 08 54.6	-0.7
MT08	Bocatoma Ro	29.82	170	P	P	23 08 57.6	+1.4
BDFB	Brasilia	29.89	115		P	23 08 57.1	+0.3
BDFB	Brasilia	29.89	115	P	P	23 08 57.1	+0.3
	comp=Z,6.4nm,0.5s,baz=286,slow=12,SNR=14						
BDFB				LR	LR	23 20 31.2	
	comp=Z,100nm,21.1s,baz=318,slow=35						
	comp=Z,6.4nm,0.5s						
BDFB	Brasilia	29.89	115	P	P	23 08 57.1	+0.3
BDFB				pmax	pmax		
	comp=Z,16nm,1.1s						
LMEL	Las Melosas	30.18	170	P	P	23 09 00.5	+1.3
BO04	La Punta	30.25	171	P	P	23 09 00.4	+0.6
BO04				IAmb	IAmb	23 09 28.9	
	comp=Z,24nm,1.1s						
IPMB	Ipameri, GO	30.57	119	*e*P	P	23 09 02.8	0.0
NBBC	Barra do Corda	30.69	94	*e*P	P	23 09 03.5	-0.3
LDASE	Londrina, Braz	30.84	131	*e*P	P	23 09 05.0	0.0
TLIG	Tlapa	30.88	315	P	P	23 09 06.7	+1.0
PTGB	Pitanga	30.92	134	*e*P	P	23 09 05.1	-0.8
ITQB	Itaqui	31.45	146	*e*P	P	23 09 10.3	-0.1
BB19B	Bebedouro	31.66	125	*e*P	P	23 09 11.5	-0.8
SDBA	SAO DESIDERIO	31.90	107	*e*P	P	23 09 14.3	-0.2
FRTB	Fartura	31.99	129	*e*P	P	23 09 14.0	-1.3
PMNB	Patos De Minas	32.34	119	*e*P	P	23 09 18.3	-0.1
ITAB	Concordia	32.47	138	*e*P	P	23 09 19.7	+0.4
BI02	San Fabin de	32.79	173		P	23 09 21.7	-0.3
JANB	Januaria	33.11	112	*e*P	P	23 09 24.7	-0.3
RCLB	Rio Claro- Sao	33.12	126	*e*P	P	23 09 25.4	+0.3
TBOT	Tacuaremb	33.38	148	*e*P	P	23 09 27.8	+0.6
656A	Willston	33.77	350	P	P	23 09 30.0	-0.6
SPB	Sao Paulo	33.79	128	P	P	23 09 29.9	-0.9
SPB	Sao Paulo	33.79	128	*e*P	P	23 09 30.5	-0.3
SPB	Sao Paulo	33.79	128	P	P	23 09 30.5	-0.3
CPSB	Cacapava Do Su	33.83	143	*e*P	P	23 09 30.0	-1.1
VAO	Valinhos	33.86	127	*e*P	P	23 09 31.0	-0.5
PET01	Itanhaem-SP	34.27	129	*e*P	P	23 09 34.3	-0.7
JRQG	Juriquilla Cam	34.30	317	P	P	23 09 34.9	-0.7
JRQG				IAmb	IAmb	23 10 43.3	
	comp=Z,8.4nm,0.5s						
NBPS	Pedro II - PI	34.50	92	*e*P	P	23 09 37.1	-0.1
CNLB	Canela	34.69	139	*e*P	P	23 09 38.2	-0.4
DIAM	Diamantina, MG	34.70	117	*e*P	P	23 09 38.7	-0.2
MAJ01	Sao Joao Batis	34.73	135	*e*P	P	23 09 38.4	-0.5
PLTB	Pedras Altas	34.73	145	*e*P	P	23 09 38.5	-0.4
BSCB	Bom Sucesso	34.76	122	*e*P	P	23 09 38.7	-0.6
PARB	Paraibuna	35.11	126	*e*P	P	23 09 41.9	-0.4
SLP01	Ubatuba-SP	35.48	126	*e*P	P	23 09 45.7	+0.2
NBMO	Morrinhos-CE	35.93	90	*e*P	P	23 09 48.8	-0.6
LR05	Currie	36.24	175	P	P	23 09 52.1	+0.6
LR05				IAmb	IAmb	23 09 55.8	
	comp=Z,26nm,1.1s						
MAN01	Angra dos Reis	36.24	124	*e*P	P	23 09 52.2	+0.2
NBPB	Pedra_Branca-C	36.36	94	*e*P	P	23 09 52.8	-0.2
VAS01	Vassouras-RJ	36.42	123	*e*P	P	23 09 52.7	-0.8
PLCA	Paso Flores	36.89	173	P	P	23 09 58.1	+0.9
PLCA				IAmb	IAmb	23 09 59.4	
	comp=Z,28nm,1.4s						
PLCA	Paso Flores	36.89	173	P	P	23 09 57.9	+0.7
	comp=Z,11nm,1.0s,baz=352,slow=9.1,SNR=9.2						
PLCA				PcP	PcP	23 12 17.3	+0.8
	comp=Z,3.7nm,0.6s,baz=352,slow=4.3,SNR=4.8						
	comp=Z,11nm,1.0s						
PLCA	Paso Flores	36.89	173	P	P	23 09 58.1	+0.9
PLCA				pmax	pmax		
	comp=Z,28nm,1.4s						
PLCA	Paso Flores	36.89	173	*e*P	P	23 09 58.4	+1.2
PLCA	Paso Flores	36.89	173	P	P	23 09 58.2	+0.9
PLCA				pP	pP	23 10 24.9	+1.5
PLCA				PcP	PcP	23 12 16.9	+0.4
154A	Montrose	37.04	350	P	P	23 09 58.9	+0.4
SJMB	Sao Joao De Ma	37.05	116	*e*P	P	23 09 58.4	-0.4
NHSC	New Hope	37.13	354	P	P	23 10 00.0	+0.8
ZAIG	Zacatecas	37.15	317	P	P	23 10 00.8	+0.9
DUB01	Friburgo-RJ	37.24	122	*e*P	P	23 10 00.3	-0.2
BSFB	Barra de Sao F	37.40	116	*e*P	P	23 10 01.5	-0.2
NBIT	Itapeh - BA	37.64	109	*e*P	P	23 10 03.6	-0.2
NBCL	Cascavel-CE	37.65	92	*e*P	P	23 10 03.7	-0.3
CMC01	Camacan, BA	37.66	110	*e*P	P	23 10 03.9	-0.1
GUA01	Guaratinga, BA	37.69	112	*e*P	P	23 10 04.2	-0.1
CAM01	Campos-RJ	37.75	121	*e*P	P	23 10 04.7	0.0
GOGA	Godfrey	37.88	350	P	P	23 10 05.1	-0.4
GOGA				IAmb	IAmb	23 10 06.9	
	comp=Z,20nm,0.9s						
GOGA	Godfrey	37.88	350	P	P	23 10 05.1	-0.4
GOGA				pmax	pmax		
	comp=Z,20nm,0.9s						
LRAL	Lakeview Retre	38.28	345	P	P	23 10 08.3	-0.7
LRAL				IAmb	IAmb	23 10 09.9	
	comp=Z,31nm,1.1s						
LL01	San Ignacio de	38.34	176	P	P	23 10 09.2	0.0
HKT	Hockley	38.73	332	*i* P	P	23 10 12.8	+0.2
HKT				pmax	pmax		
	comp=Z,10.0nm,1.1s						
NBPA	Parau_RN	38.82	94	*e*P	P	23 10 13.3	-0.5
LL02	Futaleuf	39.19	175		P	23 10 16.8	+0.4
FPAL	Fort Paine	39.40	348		P	23 10 17.5	-0.7
FPAL				IAmb	IAmb	23 10 19.0	
	comp=Z,20nm,0.9s						
NBAN	Anadia - AL	39.86	100	*e*P	P	23 10 22.2	-0.2
NBCA	Caruaru-PE	40.01	98	*e*P	P	23 10 22.5	-1.2
RCBR	Riachuelo	40.03	94	P	P	23 10 23.6	-0.3
RCBR				IAmb	IAmb	23 11 38.5	
	comp=Z,33nm,1.3s						
RCBR	Riachuelo	40.03	94	P	P	23 10 23.6	-0.3
RCBR				pmax	pmax		
	comp=Z,33nm,1.3s						
RCBR	Riachuelo	40.03	94	*e*P	P	23 10 23.5	-0.3
RCBR	Riachuelo	40.03	94	P	P	23 10 24.6	+0.8
RCBR				pP	pP	23 10 51.6	+1.3
SWET	Sewanee	40.12	347	P	P	23 10 23.7	-0.5
SWET				IAmb	IAmb	23 10 24.8	
	comp=Z,30nm,0.8s						
TKL	Tuckaleechee C	40.12	350	P	P	23 10 24.1	-0.2
TKL	Tuckaleechee C	40.12	350	P	P	23 10 24.1	-0.2
TKL				pmax	pmax		
	comp=Z,11nm,0.9s						
NBPV	Pedro Velho	40.65	95	*e*P	P	23 10 28.5	-0.4
TZTN	Tazewell	40.95	351	P	P	23 10 31.1	+0.1
TZTN				IAmb	IAmb	23 10 32.0	
	comp=Z,35nm,0.8s						
JCT	Junction City	41.14	328	P	P	23 10 33.2	+0.4
JCT				IAmb	IAmb	23 10 35.1	
	comp=Z,64nm,1.6s						
JCT				PcP	PcP	23 12 30.3	+0.3
BRDY	Brady	41.37	330		P	23 10 34.8	+0.3
BRDY				IAmb	IAmb	23 10 36.1	
	comp=Z,30nm,0.7s						
BRDY				PcP	PcP	23 12 30.6	-0.1
WVT	Waverly	41.43	346	P	P	23 10 33.4	-1.6
WVT				IAmb	IAmb	23 10 34.0	
	comp=Z,13nm,0.6s						
WVT	Waverly	41.43	346	P	P	23 10 33.4	-1.6
WVT				pmax	pmax		
	comp=Z,13nm,0.6s						
WVT	Waverly	41.43	346	P	P	23 10 33.4	-1.6
WVT				pP	pP	23 11 00.2	-1.4
WVT				PcP	PcP	23 12 30.4	-0.4
HPIG		42.03	319	P	P	23 10 39.6	-0.6
FW06	Azle	42.06	333	P	P	23 10 40.0	-0.1
Z35A	Perchaven, San	42.22	333	P	P	23 10 42.0	+0.5
LCAR	Lake Charles	42.31	342		P	23 10 40.6	-1.5
LCAR				IAmb	IAmb	23 10 42.0	
	comp=Z,24nm,0.9s						
TX31	Lajitas Ar. Si	42.45	323	P	P	23 10 44.1	+0.6
TX31				PcP	PcP	23 12 34.6	+0.1
TXAR	Lajitas Array	42.45	323	P	P	23 10 44.4	+0.9
	comp=Z,4.5nm,0.7s,baz=147,slow=8.2,SNR=51						
TXAR				PcP	PcP	23 12 35.2	+0.7
	comp=Z,4.4nm,0.7s,baz=139,slow=3.8,SNR=12						
TXAR				ScP	ScP	23 16 13.2	-1.4
	comp=Z,0.2nm,0.5s,baz=129,slow=3.4,SNR=2.4						
	comp=Z,4.5nm,0.7s						
SLBS	Sierra La Lagu	43.01	311	P	P	23 10 49.6	+1.5
SLBS				pP	pP	23 11 16.8	+1.9
WCI	Wyandotte Cave	43.09	348	P	P	23 10 47.1	-1.3
WCI				IAmb	IAmb	23 10 48.4	
	comp=Z,51nm,1.2s						
WCI	Wyandotte Cave	43.09	348	P	P	23 10 47.1	-1.3
WCI				pmax	pmax		
	comp=Z,51nm,1.2s						
WCI	Wyandotte Cave	43.09	348	P	P	23 10 47.1	-1.3
WCI				PcP	PcP	23 12 35.9	-0.3
AY03	Cochrane	43.18	177		P	23 10 50.1	+1.2
AY03				IAmb	IAmb	23 10 51.9	
	comp=Z,20nm,0.9s						
X34A	Smith Ranch, M	43.55	334		P	23 10 52.6	+0.4
MVL	Millersville	43.80	360	P	P	23 10 54.9	+0.9
MVL				IAmb	IAmb	23 10 56.3	
	comp=Z,41nm,0.9s						
WMOK	Wichita Mounta	44.09	333	P	P	23 10 56.6	+0.1
WMOK				IAmb	IAmb	23 10 57.8	
	comp=Z,25nm,0.9s						
WMOK	Wichita Mounta	44.09	333	P	P	23 10 56.6	+0.1
WMOK				pmax	pmax		
	comp=Z,25nm,1.0s						
CCM	Cathedral Cave	44.17	343	P	P	23 10 55.5	-1.5
CCM				IAmb	IAmb	23 10 57.9	
	comp=Z,16nm,0.7s						
CCM	Cathedral Cave	44.17	343	P	P	23 10 55.5	-1.5
CCM				pmax	pmax		
	comp=Z,16nm,0.7s						
CCM	Cathedral Cave	44.17	343	P	P	23 10 55.5	-1.5
CCM				PcP	PcP	23 12 39.9	-0.1
SSPA	Standing Stone	44.47	358	P	P	23 10 59.6	+0.2
SSPA				IAmb	IAmb	23 11 01.4	
	comp=Z,21nm,0.8s						
SSPA	Standing Stone	44.47	358	P	P	23 11 00.1	+0.7
SSPA				PcP	PcP	23 12 40.3	-0.6
ACSO	Alum Creek Sta	44.49	352	P	P	23 10 58.9	-0.7
ACSO				IAmb	IAmb	23 11 00.2	
	comp=Z,23nm,0.9s						
MNTX	Cornudas Mount	45.18	324	P	P	23 11 05.7	+0.5

MNTX				IAmb	IAmb	23 11 06.8	
	comp=Z,17nm,0.8s						
M65A	Busby, Falmout	45.62	6	P	P	23 11 09.7	+1.2
	baz=187						
KAN01	Argonia South	45.68	336	P	P	23 11 09.1	+0.1
BINY	Binghamton	46.00	0	P	P	23 11 12.0	+0.6
WES	Weston	46.38	5	P	P	23 11 14.8	+0.4
WES	Weston	46.38	5	P	P	23 11 14.8	+0.4
WES				pmax	pmax		
	comp=Z,21nm,1.1s						
HRV	Adam Dziewonsk	46.48	5	P	P	23 11 15.7	+0.5
HRV	Adam Dziewonsk	46.48	5	P	P	23 11 15.7	+0.5
HRV				pmax	pmax		
	comp=Z,18nm,1.0s						
K57A	Scipio Center	46.53	360	P	P	23 11 16.0	+0.5
HSIG		46.92	317	P	P	23 11 19.1	+0.1
PECO	Prince Edward	47.74	359	P	P	23 11 24.8	-0.1
PECO				IAmb	IAmb	23 11 26.1	
	comp=Z,27nm,0.8s						
Y22D	IRIS PASSCAL I	47.79	325	P	P	23 11 26.8	+1.1
	baz=136						
CBKS	Cedar Bluff	47.91	335	P	P	23 11 27.0	+0.5
CBKS	Cedar Bluff	47.91	335	P	P	23 11 27.0	+0.5
CBKS				pmax	pmax		
	comp=Z,59nm,1.0s						
ANMO	Albuquerque	48.16	326	P	P	23 11 29.6	+1.0
ANMO	Albuquerque	48.16	326	P	P	23 11 29.8	+1.2
	comp=Z,67nm,0.9s,baz=227,slow=8.2,SNR=125						
ANMO				pP	pP	23 11 55.6	-0.4
	comp=Z,4.9nm,0.6s,baz=223,slow=10,SNR=2.9						
	comp=Z,67nm,0.9s						
ANMO	Albuquerque	48.16	326	d iP	P	23 11 29.5	+1.0
ANMO				pmax	pmax		
	comp=Z,62nm,0.9s						
ANMO	Albuquerque	48.16	326	P	P	23 11 29.6	+1.0
ANMO				pP	pP	23 11 57.5	+1.5
SADO	Sadowa	48.64	357	P	P	23 11 31.0	-0.9
SADO				IAmb	IAmb	23 11 32.6	
	comp=Z,40nm,1.3s						
WBO	Williamsburg	48.80	1	P	P	23 11 33.1	0.0
WBO				IAmb	IAmb	23 11 34.0	
	comp=Z,15nm,0.8s						
TUC	Tucson	48.92	320	P	P	23 11 35.0	+0.7
TUC				IAmb	IAmb	23 11 35.8	
	comp=Z,13nm,0.7s						
TUC	Tucson	48.92	320	P	P	23 11 35.0	+0.7
TUC				pmax	pmax		
	comp=Z,13nm,0.7s						
TUC	Tucson	48.92	320	P	P	23 11 34.8	+0.5
TUC				pP	pP	23 12 02.9	+1.2
MNTQ	Montreal, Queb	49.34	2	P	P	23 11 37.6	+0.4
PKME	Peaks-Kenny Pk	49.43	6	P	P	23 11 38.1	+0.2
PKME				IAmb	IAmb	23 11 39.5	
	comp=Z,20nm,0.8s						
GGN	Saint George	49.60	9	P	P	23 11 39.5	+0.3
HAL	Halifax	49.70	12	P	P	23 11 40.1	+0.2
HAL				IAmb	IAmb	23 11 41.9	
	comp=Z,14nm,1.0s						
HAL	Halifax	49.70	12	P	P	23 11 40.1	+0.2
HAL				pmax	pmax		
	comp=Z,14nm,1.0s						
SDCO	Great Sand Dun	49.75	329	P	P	23 11 41.6	+0.8
TRQ	Mont Tremblant	50.03	1	P	P	23 11 42.6	+0.1
TRQ				IAmb	IAmb	23 13 01.5	
	comp=Z,12nm,1.0s						
LMN	Caledonia Moun	50.65	10	P	P	23 11 46.4	-0.6
LMN				IAmb	IAmb	23 11 47.7	
	comp=Z,24nm,0.7s						
OGNE	Ogallala	50.66	335	P	P	23 11 47.7	+0.3
GBN	Guysborough	50.88	13	P	P	23 11 48.8	0.0
GBN				IAmb	IAmb	23 11 49.6	
	comp=Z,42nm,1.4s						
MVCO	Mesa Verde	50.94	327	P	P	23 11 49.7	0.0
MVCO				IAmb	IAmb	23 11 51.8	
	comp=Z,50nm,1.4s						
COWI	Conover	51.23	348	P	P	23 11 50.4	-1.1
COWI				IAmb	IAmb	23 11 50.8	
	comp=Z,12nm,0.9s						
ISCO	Idaho Springs	51.38	331	P	P	23 11 53.4	+0.3
ISCO	Idaho Springs	51.38	331	P	P	23 11 53.4	+0.3
ISCO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
WUAZ	Wupatki	51.41	323	P	P	23 11 54.3	+1.1
LMQ	La Malbaie	51.59	5	P	P	23 11 54.1	0.0
LMQ				IAmb	IAmb	23 11 55.7	
	comp=Z,34nm,1.3s						
BATG	Bathurst New B	51.83	9	P	P	23 11 56.0	+0.1
LDAQ	Lac Daran	51.93	4	P	P	23 11 57.0	+0.3
LDAQ				IAmb	IAmb	23 11 58.4	
	comp=Z,19nm,0.7s						
ESJX	Sierra Juarez	52.16	316	P	P	23 11 59.0	+0.2
BLYC	Blythe	52.25	319	P	P	23 11 59.8	+0.6
BLYC				IAmb	IAmb	23 12 01.5	
	comp=Z,23nm,1.4s						
HMU	Henry Mountain	52.71	326	P	P	23 12 03.7	+0.9
PFO	Pinyon Flats O	53.45	318	P	P	23 12 08.6	+0.3
PFO	Pinyon Flats O	53.45	318	P	P	23 12 08.9	+0.7
	comp=Z,5.5nm,0.9s,baz=111,slow=7.0,SNR=8.9						
PFO				PcP	PcP	23 13 13.5	-0.4
	comp=Z,4.9nm,0.8s,baz=187,slow=4.4,SNR=4.9						
	comp=Z,5.5nm,0.9s						
PFO	Pinyon Flats O	53.45	318	⇓iP	P	23 12 09.3	+1.1
PFO				pmax	pmax		
	comp=Z,27nm,1.5s						
PFO	Pinyon Flats O	53.45	318	P	P	23 12 09.2	+1.0
PFO				pP	pP	23 12 37.8	+1.7
PFO				PcP	PcP	23 13 14.3	+0.4
TBO	Thunder Bay	53.73	349	P	P	23 12 08.3	-1.5
TBO				IAmb	IAmb	23 12 09.6	
	comp=Z,28nm,1.1s						
RSSD	Black Hills	54.12	335	P	P	23 12 13.3	+0.3
RSSD				IAmb	IAmb	23 12 14.9	
	comp=Z,22nm,1.0s						
RSSD	Black Hills	54.12	335	P	P	23 12 13.3	+0.3
RSSD				pmax	pmax		
	comp=Z,22nm,1.0s						
RSSD	Black Hills	54.12	335	P	P	23 12 13.3	+0.3
RSSD				pP	pP	23 12 42.0	+1.2
AGMN	Agassiz Nation	54.91	344	P	P	23 12 17.3	-1.0
AGMN				IAmb	IAmb	23 12 18.3	
	comp=Z,23nm,0.7s						
TPNV	Topopah Spring	55.34	321	P	P	23 12 23.1	+1.2
TPNV				IAmb	IAmb	23 12 24.5	
	comp=Z,24nm,0.9s						
TPNV	Topopah Spring	55.34	321	P	P	23 12 23.1	+1.2
TPNV				pmax	pmax		
	comp=Z,24nm,0.9s						
DUG	Dugway, Tooele	55.43	326	P	P	23 12 23.7	+1.2
DUG				pmax	pmax		
	comp=Z,35nm,1.3s						
DRLN	Deer Lake	55.45	15	P	P	23 12 21.9	-0.2
DRLN				IAmb	IAmb	23 12 22.9	
	comp=Z,22nm,0.9s						
PD31	Pinedale Array	55.57	330	P	P	23 12 23.4	-0.1
PD31				IAmb	IAmb	23 12 24.6	
	comp=Z,19nm,1.2s						
PDAR	Pinedale Array	55.57	330	P	P	23 12 23.2	-0.3
PDAR	Pinedale Array	55.57	330	P	P	23 12 23.4	-0.1
	comp=Z,5.9nm,0.8s,baz=138,slow=9.0,SNR=45						
PDAR				pP	pP	23 12 50.6	-0.9
	comp=Z,1.5nm,0.6s,baz=135,slow=4.9,SNR=3.7						
PDAR				PcP	PcP	23 13 21.4	-0.5
	comp=Z,1.6nm,0.7s,baz=132,slow=4.5,SNR=4.0						
	comp=Z,5.9nm,0.8s						
EPLO	Experimental L	55.63	346	P	P	23 12 22.2	-1.3
EPLO				IAmb	IAmb	23 12 23.3	
	comp=Z,25nm,0.8s						
HWUT	Hardware Ranch	55.75	328	P	P	23 12 24.5	-0.2
AHID	Auburn Hatcher	56.34	329	P	P	23 12 28.8	-0.2
AHID				IAmb	IAmb	23 12 30.0	
	comp=Z,14nm,0.8s						
TPH	Tonopah	56.64	322	P	P	23 12 32.0	+0.8
TPH	Tonopah	56.64	322	P	P	23 12 32.0	+0.8
TPH				pmax	pmax		
	comp=Z,46nm,0.9s						
ULM	Lac du Bonnet	56.69	345	P	P	23 12 29.6	-1.4
ULM	Lac du Bonnet	56.69	345	P	P	23 12 29.7	-1.4
	comp=Z,23nm,0.5s,baz=158,slow=7.7,SNR=54						
ULM				PcP	PcP	23 13 25.5	-0.3
	comp=Z,4.0nm,0.6s,baz=185,slow=3.4,SNR=4.6						
	comp=Z,23nm,0.5s						
ULM	Lac du Bonnet	56.69	345	d iP	P	23 12 29.5	-1.5
LAO	LASA Array	57.10	336	P	P	23 12 33.8	-0.3
ELK	Elko	57.17	325	P	P	23 12 35.5	+0.6
	comp=Z,3.2nm,0.4s,baz=139,slow=4.1,SNR=16						
	comp=Z,3.2nm,0.4s						
NVAR	Mina Array Bea	57.53	321	P	P	23 12 38.3	+0.8
NVAR	Mina Array Bea	57.53	321	P	P	23 12 38.6	+1.1
	comp=Z,19nm,0.8s,baz=134,slow=6.9,SNR=73						
NVAR				pP	pP	23 13 05.5	-0.1
	comp=Z,4.1nm,0.8s,baz=109,slow=6.0,SNR=3.2						
	comp=Z,19nm,0.8s						
LHV	Little Huntoon	57.55	321	P	P	23 12 38.6	+1.3
YHH	Holmes Hill	57.70	331	P	P	23 12 39.3	+0.7
CMB	Columbia Colle	58.62	320	P	P	23 12 45.3	+0.4
CMB	Columbia Colle	58.62	320	P	P	23 12 45.3	+0.4
CMB				pmax	pmax		
	comp=Z,9.0nm,0.9s						
DLMT	Dillon	58.96	331	P	P	23 12 47.7	+0.5
DLMT				IAmb	IAmb	23 12 48.8	
	comp=Z,11nm,0.9s						
SCHQ	Schefferville	59.14	6	P	P	23 12 48.1	+0.1
	comp=Z,72nm,1.3s,baz=197,slow=4.8,SNR=25						
	comp=Z,72nm,1.3s						
LRM	Limekiln Ridge	59.22	331	P	P	23 12 49.4	+0.3
HOPE	Hope Point	59.51	154	P	P	23 12 52.2	+1.6
HOPE				pP	pP	23 13 21.6	+2.6
HOPE				PcP	PcP	23 13 39.3	+2.4
AFDM	Forest Hills D	59.52	320	P	P	23 12 51.4	+0.3
AFDM				IAmb	IAmb	23 12 52.6	
	comp=Z,12nm,0.9s						
WVOR	Wild Horse Val	60.20	325	P	P	23 12 55.9	+0.1
WVOR				IAmb	IAmb	23 12 57.4	
	comp=Z,25nm,0.9s						
WVOR	Wild Horse Val	60.20	325	P	P	23 12 55.9	+0.1
WVOR				pmax	pmax		
	comp=Z,25nm,1.0s						
J08A	Circle Bar Ran	60.70	326	P	P	23 12 58.9	-0.2
BMO	Blue Mountains	61.02	328	P	P	23 13 00.8	-0.4
BMO	Blue Mountains	61.02	328	P	P	23 13 00.8	-0.4
BMO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PMSA	Palmer Station	61.25	174	P	P	23 13 03.5	+1.3
YBH	Yreka Blue Hor	62.21	322	P	P	23 13 08.5	-0.8
	comp=Z,0.7nm,0.7s,baz=158,slow=2.1,SNR=19						
FFC	Flin Flon	62.37	343	P	P	23 13 09.3	-0.6
FFC				IAmb	IAmb	23 13 10.5	
	comp=Z,22nm,0.9s						
FFC	Flin Flon	62.37	343	P	P	23 13 09.3	-0.6
FFC				pmax	pmax		
	comp=Z,22nm,0.9s						
FFC	Flin Flon	62.37	343	P	P	23 13 09.3	-0.6
FFC				pP	pP	23 13 38.2	-0.3
I05D	Terrebonne, OR	62.93	325	P	P	23 13 14.4	+0.5
I05D				IAmb	IAmb	23 13 16.1	
	comp=Z,32nm,0.8s						
NEW	Newport	63.21	331	P	P	23 13 15.3	-0.4
NEW				IAmb	IAmb	23 13 16.9	
	comp=Z,17nm,0.8s						
NEW	Newport	63.21	331	P	P	23 13 15.8	+0.1
	comp=Z,16nm,0.7s,baz=136,slow=5.1,SNR=24						
	comp=Z,16nm,0.7s						
NEW	Newport	63.21	331	P	P	23 13 15.3	-0.4
NEW				pmax	pmax		
	comp=Z,17nm,0.8s						
SMAI	San Martin Ant	64.30	176	P	P	23 13 23.1	+0.7
SMAI				IAmb	IAmb	23 13 25.0	
	comp=Z,33nm,1.1s						
MACI	Morro de la Ar	65.58	57	P	P	23 13 31.9	+0.2
PMOZ	Porto Moniz, M	66.61	52	eP	P	23 13 38.4	+0.3
PMOZ				i Amb		23 13 44.7	
	comp=Z,58nm,2.0s						
FRB	Frobisher Bay	67.82	4	P	P	23 13 44.6	-0.3
FRB				pmax	pmax		
	comp=Z,55nm,1.1s						
IVI	Ivigtut	68.53	14	P	P	23 13 49.5	+0.2
IVI				IAmb	IAmb	23 13 50.7	
	comp=Z,42nm,1.1s						
IVI	Ivigtut	68.53	14	i P	P	23 13 49.2	-0.1
IVI				IAmb	IAmb	23 13 50.4	
	comp=Z,40nm,1.1s						
IVI	Ivigtut	68.53	14	P	P	23 13 49.5	+0.2
IVI				pP	pP	23 14 18.8	+0.3
NRS	Narsarsuaq	69.18	15	P	P	23 13 53.8	+0.3
NRS				IAmb	IAmb	23 13 54.0	
	comp=Z,25nm,0.8s						
NRS	Narsarsuaq	69.18	15	P	P	23 13 53.8	+0.3
NRS				pmax	pmax		
	comp=Z,25nm,0.8s						
NRS	Narsarsuaq	69.18	15	i P	P	23 13 53.1	-0.3
NRS				IAmb	IAmb	23 13 53.9	
	comp=Z,25nm,0.8s						
NUUK	Nuuk	70.39	11	i P	P	23 14 01.5	+0.7
NUUK				IAmb	IAmb	23 14 02.1	
	comp=Z,31nm,1.0s						
BBB	Bella Bella	71.17	329	P	P	23 14 05.7	-0.1
	comp=Z,13nm,0.7s,baz=112,slow=5.4,SNR=4.5						
	comp=Z,13nm,0.7s						
DBIC	Dimbokro	71.85	82	P	P	23 14 11.1	+0.4
DBIC				IAmb	IAmb	23 14 12.1	
	comp=Z,43nm,0.9s						
DBIC	Dimbokro	71.85	82	P	P	23 14 10.8	+0.2
	comp=Z,36nm,0.8s,baz=279,slow=5.3,SNR=24						
	comp=Z,36nm,0.8s						
DBIC	Dimbokro	71.85	82	P	P	23 14 11.1	+0.4
DBIC				pmax	pmax		
	comp=Z,43nm,0.9s						
DBIC	Dimbokro	71.85	82	P	P	23 14 10.9	+0.3
DBIC				pP	pP	23 14 41.7	+1.8
YKA	Yellowknife Ar	72.51	342	P	P	23 14 12.8	-0.8
YKA	Yellowknife Ar	72.51	342	P	P	23 14 12.6	-1.0
	comp=Z,2.8nm,0.5s,baz=132,slow=5.8,SNR=41						
YKA				pP	pP	23 14 42.4	-0.5
	comp=Z,5.3nm,0.8s,baz=141,slow=5.4,SNR=9.6						
	comp=Z,2.8nm,0.5s						
YKA	Yellowknife Ar	72.51	342	P	P	23 14 12.8	-0.8
SFJD	Kangerlussuaq	73.13	10	i P	P	23 14 16.3	-0.9
SFJD				IAmb	IAmb	23 14 17.2	
	comp=Z,12nm,0.7s						
ILON	Igloolik, Nuna	73.34	358	P	P	23 14 18.0	-0.3
ILON				IAmb	IAmb	23 14 18.8	
	comp=Z,22nm,0.7s						
TOAD	Toad River Com	73.77	336	P	P	23 14 21.2	+0.1
	baz=128,SNR=20						
KOTAN	Kotaneelee Air	74.11	337	P	P	23 14 23.9	+0.9
	baz=130						
ISOG	Isortoq, Green	74.45	15	i P	P	23 14 24.3	-0.5
ISOG				IAmb	IAmb	23 14 25.4	
	comp=Z,51nm,0.8s						
PFVI	Vila Bisbo	74.52	50	P	P	23 14 25.9	0.0
PFVI	Vila Bisbo	74.52	50	eP	P	23 14 27.0	+1.1
PFVI				i Amb		23 14 36.0	
	comp=Z,70nm,1.7s						
BEAVL	Fort Liard	74.53	337	P	P	23 14 26.4	+0.9
	baz=129						
AVE	Averroes	74.55	54	P	P	23 14 26.7	+0.5
V35K	Ketchikan	74.62	331	P	P	23 14 26.9	+0.8
	baz=121						
MORF	Marmelete	74.70	50	eP	P	23 14 28.2	+1.2
MORF				IAmb	IAmb	23 14 29.9	
	comp=Z,52nm,1.2s						
MORF	Marmelete	74.70	50	P	P	23 14 27.4	+0.3
MORF				IAmb	IAmb	23 14 29.6	
	comp=Z,51nm,1.2s						
MORF	Marmelete	74.70	50	eP	P	23 14 28.7	+1.7
MORF				i Amb		23 14 30.5	
	comp=Z,52nm,1.5s						
MORF	Marmelete	74.70	50	eP	P	23 14 28.2	+1.2
PTEO	Sao Teotonio	74.72	49	eP	P	23 14 28.5	+1.5
T35M	Bob Quinn	74.86	333	P	P	23 14 28.9	+1.4
	baz=123,SNR=5.6						
ILULI	Ilulissat	75.05	9	i P	P	23 14 28.1	-0.2
ILULI				IAmb	IAmb	23 14 28.2	
	comp=Z,15nm,0.7s						
MESJ	Messejana	75.19	49	eP	P	23 14 30.7	+0.9
MESJ				IAmb	IAmb	23 14 31.5	
	comp=Z,6.5nm,0.9s						
MESJ	Messejana	75.19	49	eP	P	23 14 30.9	+1.1
MESJ	Messejana	75.19	49	eP	P	23 14 30.7	+0.9
PBDV	Barranco-do-Ve	75.23	50	eP	P	23 14 31.1	+1.0
PSBE	So Bento	75.26	48	eP	P	23 14 31.0	+0.8
PSBE				i Amb		23 14 37.1	
	comp=Z,32nm,1.7s						
PCVE	Castro Verde	75.26	50	eP	P	23 14 31.2	+1.0
CRAG	Craig	75.43	330	P	P	23 14 31.4	+0.7
	baz=120						
PVAQ	Vaqueiros	75.44	50	P	P	23 14 31.6	+0.4
PVAQ				IAmb	IAmb	23 17 19.8	
	comp=Z,38nm,1.9s						
PVAQ	Vaqueiros	75.44	50	eP	P	23 14 32.0	+0.8
PBEJ	Beja	75.51	49	eP	P	23 14 33.0	+1.4
WRAK	Wrangell Islan	75.54	331	P	P	23 14 31.9	+0.6
	baz=121						
EVO	Evora	75.55	49	eP	P	23 14 32.5	+0.6
PMTG	Montargil	75.55	48	eP	P	23 14 32.1	+0.3
DLBC	Dease Lake	75.56	334	P	P	23 14 32.4	+0.9
	comp=Z,1.2nm,1.1s,baz=120,slow=5.4,SNR=15						
DLBC				pP	pP	23 15 00.2	-0.9
	comp=Z,0.8nm,0.7s,baz=98,slow=6.4,SNR=8.4						
	comp=Z,1.2nm,1.1s						
PCAS	Casmilo, Conde	75.65	47	eP	P	23 14 32.9	+0.6
PSARD	Sardoal	75.75	48	eP	P	23 14 33.5	+0.5
PSARD				i Amb		23 14 35.1	
	comp=Z,41nm,1.7s						
U33K	Whale Pass	75.75	331	P	P	23 14 33.5	+1.0
	baz=120						
COI	Coimbra	75.76	47	P	P	23 14 33.1	+0.1
COI	Coimbra	75.76	47	eP	P	23 14 33.6	+0.7
COI				i Amb		23 14 34.6	
	comp=Z,63nm,1.1s						
COI	Coimbra	75.76	47	P	P	23 14 33.1	+0.1
COI				pmax	pmax		
	comp=Z,50nm,0.9s						
S34M	Telegraph Cree	75.76	333	P	P	23 14 33.9	+1.3
	baz=122,SNR=7.5						
WRGLY	Wrigley	75.90	340	P	P	23 14 34.1	+0.9
	baz=131						
PTO	Porto	75.91	46	eP	P	23 14 33.8	0.0
PESTR	Estremoz	75.96	48	eP	P	23 14 35.1	+0.9
PESTR				i Amb		23 14 36.9	
	comp=Z,40nm,1.4s						
WTLY	Watson Lake, Y	75.98	336	P	P	23 14 34.9	+1.0
	baz=125						
PBAR	Barrancos	76.18	49	eP	P	23 14 36.2	+0.8
PBAR				i Amb		23 14 38.4	
	comp=Z,17nm,1.2s						
PMRV	Marv??o	76.27	48	eP	P	23 14 36.0	+0.1
PVIS	Viseu	76.29	47	eP	P	23 14 36.2	+0.2
PCBR	Castelo Branco	76.33	48	eP	P	23 14 36.6	+0.4
PGAV	Gavieira, Arco	76.40	45	eP	P	23 14 37.3	+0.6
MTE	Manteigas	76.45	47	P	P	23 14 36.4	-0.5
MTE	Manteigas	76.45	47	eP	P	23 14 37.2	+0.2
R33M	Jennings River	76.49	334	P	P	23 14 37.9	+1.0
	baz=123,SNR=15						
PCAB	Cabril	76.50	46	eP	P	23 14 37.3	+0.1
POLO	Lamas de Olo	76.56	46	eP	P	23 14 37.9	+0.3
POLO				i Amb		23 14 39.0	
	comp=Z,19nm,1.3s						
PVRL	Vila Real	76.59	46	eP	P	23 14 38.2	+0.5
TGTN	Hyland Airport	76.60	337	P	P	23 14 39.0	+1.6
	baz=126						
Q32M	Nakina River	76.83	334	P	P	23 14 40.2	+1.3
	baz=122,SNR=6.2						
BELA	Belgrano 2	76.93	172	P	P	23 14 39.6	+0.7
BELA				IAmb	IAmb	23 14 40.9	
	comp=Z,23nm,1.2s						
MVO	Moncorvo	77.05	46	eP	P	23 14 40.8	+0.5
ICESG	Greenland Ices	77.09	13	i P	P	23 14 39.7	-0.7
ICESG				IAmb	IAmb	23 14 40.9	
	comp=Z,52nm,0.8s						
S32K	Killisnoo	77.12	332	P	P	23 14 41.5	+1.3
	baz=119,SNR=6.6						
SIT	Sitka	77.28	331	P	P	23 14 42.7	+1.5
	baz=118						
PBRG	Braganca	77.44	46	eP	P	23 14 42.9	+0.4
PBRG				i Amb		23 15 09.3	
	comp=Z,19nm,2.1s						
R32K	Eaglecrest	77.49	333	P	P	23 14 43.6	+1.2
	baz=119						
P33M	Teslin, Yukon	77.72	335	P	P	23 14 44.3	+0.6
	baz=121,SNR=12						
P32M	Atlin	77.79	334	P	P	23 14 44.9	+0.9
	baz=120						
BESE	Bessie Mountai	77.80	333	P	P	23 14 45.1	+1.0
BESE				IAmb	IAmb	23 15 16.9	
	comp=Z,20nm,1.0s						
R31K	City Hall, Gus	78.12	332	P	P	23 14 46.7	+0.9
	baz=118						
S31K	Pelican	78.14	332	P	P	23 14 47.0	+1.1
	baz=118						
N32M	Quiet Lake	78.32	335	P	P	23 14 47.8	+0.8
	baz=121						
MMPY	Sheldon Lake,	78.38	337	P	P	23 14 48.3	+1.1
	baz=123,SNR=21						
SOEG	Soedalen	78.44	16	i P	P	23 14 47.5	+0.2
SOEG				IAmb	IAmb	23 14 47.8	
	comp=Z,8.8nm,0.6s						
SKAG	Skagway	78.44	333	P	P	23 14 48.2	+0.7
	baz=119						
PAB	San Pablo	78.57	48	P	P	23 14 49.0	+0.2
PAB	San Pablo	78.57	48	P	P	23 14 49.0	+0.2
PAB				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VNA3	Neumayer Olymp	78.75	162	⇑P	P	23 14 49.8	+0.7
	comp=Z,29nm,0.8s						
WHY	Whitehorse	78.83	335	P	P	23 14 50.3	+0.5
	baz=120,SNR=6.1						
ESDC	Sonseca Array	78.89	48	P	P	23 14 50.1	-0.5
ESDC	Sonseca Array	78.89	48	P	P	23 14 51.1	+0.6
	comp=Z,4.8nm,0.9s,baz=261,slow=6.0,SNR=31						
	comp=Z,4.8nm,0.9s						
ESBB	Sonseca Array	78.89	48	P	P	23 14 50.1	-0.4
PLBC	Pleasant Camp	78.90	333	P	P	23 14 51.4	+1.3
	baz=118						
VNA1	Neumayer--Stat	78.97	162	⇑P	P	23 14 51.6	+1.4
	comp=Z,36nm,1.0s						
FARO	Faro, Yukon	78.99	336	P	P	23 14 51.4	+0.9
	baz=121,SNR=7.1						
TORD	Torodi Ar. Bea	79.01	76	P	P	23 14 51.1	-0.4
TORD	Torodi Ar. Bea	79.01	76	P	P	23 14 51.3	-0.3
	comp=Z,127nm,0.3s,baz=287,slow=6.3,SNR=1.6						
KULLO	Kullorsuaq	79.30	5	i P	P	23 14 47.8	-4.1
KULLO				IAmb	IAmb	23 14 48.7	
	comp=Z,91nm,1.1s						
VNA2	Neumayer--Watz	79.33	162	⇑P	P	23 14 53.1	+0.8
	comp=Z,15nm,0.5s,baz=294,slow=5.4						
BORG	Borgarnes	79.38	21	P	P	23 14 52.8	+0.3
BORG				IAmb	IAmb	23 14 54.6	
	comp=Z,18nm,0.9s						
BORG	Borgarnes	79.38	21	P	P	23 14 52.8	+0.3
BORG				pmax	pmax		
	comp=Z,18nm,0.9s						
M31M	Drury Creek, Y	79.40	336	P	P	23 14 53.8	+1.0
	baz=120,SNR=6.5						
O30N	Mendenhall	79.41	334	P	P	23 14 54.0	+1.1
	baz=118,SNR=7.7						
RES	Resolute Bay	79.41	355	P	P	23 14 52.5	0.0
RES				pmax	pmax		
	comp=Z,12nm,1.0s						
P30M	Million Dollar	79.48	334	P	P	23 14 54.7	+1.4
	baz=118						
P29M	Windy Craggy	79.61	333	P	P	23 14 54.9	+0.9
	baz=117						
N31M	Braeburn, Yuko	79.62	335	P	P	23 14 55.0	+1.0
	baz=119,SNR=5.9						
HYT	Haines Junctio	80.04	334	P	P	23 14 57.3	+0.9
HYT	Haines Junctio	80.04	334	P	P	23 14 57.7	+1.3
	baz=117,SNR=5.9						
SUMG	Summit	80.11	11	P	P	23 14 57.0	+0.1
SUMG				IAmb	IAmb	23 14 58.3	
	comp=Z,43nm,0.9s						
SUMG	Summit	80.11	11	P	P	23 14 57.0	+0.1
SUMG				pmax	pmax		
	comp=Z,43nm,0.9s						
SUMG	Summit	80.11	11	i P	P	23 14 57.0	+0.1
SUMG				IAmb	IAmb	23 14 58.1	
	comp=Z,38nm,0.8s						
C36M	Paulatuk	80.11	344	P	P	23 14 57.8	+1.4
	baz=131						
N30M	Aishikik Lake	80.16	335	P	P	23 14 58.3	+1.3
	baz=118,SNR=10.0						
O29M	Mount Kennedy	80.28	333	P	P	23 14 58.4	+0.6
	baz=116,SNR=10						
PNL	Peninsula	80.38	333	P	P	23 14 59.1	+1.0
	baz=115						
YUK6	Outpost Mounta	80.47	334	P	P	23 15 00.1	+1.2
	baz=116,SNR=6.7						
MAYO	Mayo, Yukon	80.69	337	P	P	23 15 00.8	+1.2
	baz=119						
YUK4	Talbot Arm	80.77	334	P	P	23 15 01.5	+1.1
	baz=116,SNR=8.6						
PINM	Pinnacle	80.95	333	P	P	23 15 02.4	+1.2
	baz=114						
SNAA	Sanae	80.96	162	⇑P	P	23 15 01.7	+0.6
	comp=Z,577nm,1.1s						
SNAA	Sanae	80.96	162	P	P	23 15 01.8	+0.8

SNAA				IAmb	IAmb	23 15 03.1	
	comp=Z,40nm,1.1s						
SNAA	Sanae	80.96	162	P	P	23 15 02.0	+0.9
	comp=Z,20nm,0.8s,baz=279,slow=5.3,SNR=59						
SNAA				pP	pP	23 15 29.5	-1.4
	comp=Z,8.9nm,0.5s,baz=272,slow=9.5,SNR=7.2						
	comp=Z,20nm,0.8s						
SNAA	Sanae	80.96	162	*d i*P	P	23 15 01.3	+0.2
SNAA				pmax	pmax		
	comp=Z,44nm,1.2s						
M29M	Somme Creek	81.19	335	P	P	23 15 03.6	+1.1
	baz=116,SNR=36						
O28M	Mount Upton	81.20	333	P	P	23 15 03.8	+1.0
	baz=115						
DSB	Dublin	81.21	35	P	P	23 15 02.5	-0.2
DSB				IAmb	IAmb	23 17 57.7	
	comp=Z,78nm,1.8s						
H31M	Peel River	81.22	339	P	P	23 15 03.4	+0.9
	baz=121,SNR=27						
YUK8	Steele Glacier	81.23	334	P	P	23 15 03.8	+0.8
	baz=115,SNR=7.7						
J30M	Hart River	81.33	338	P	P	23 15 04.2	+1.0
	baz=119,SNR=20						
L29M	L29M	81.35	336	P	P	23 15 04.0	+0.8
	baz=117						
K29M	Barlow Dome	81.44	337	P	P	23 15 04.5	+0.7
	baz=118,SNR=31						
LOGN	Logan Glacier	81.59	333	P	P	23 15 05.6	+0.9
I30M	Mount Dempster	81.66	338	P	P	23 15 05.8	+0.9
	baz=119,SNR=55						
YUK3	Moose Creek	81.74	334	P	P	23 15 06.3	+0.8
	baz=115,SNR=14						
MESA	MESA	81.76	333	P	P	23 15 06.1	+0.5
	baz=113						
G31M	Satah River	81.77	340	P	P	23 15 05.4	+0.2
G31M	Satah River	81.77	340	P	P	23 15 05.8	+0.6
	baz=121,SNR=51						
CTGM	Chitina Glacie	81.80	333	P	P	23 15 06.5	+0.8
CTGM				IAmb	IAmb	23 15 07.9	
	comp=Z,16nm,0.8s						
CTG	Chitna Glacier	81.80	333	P	P	23 15 06.9	+1.1
	baz=114,SNR=7.4						
F31M	Tsiigehtchic	81.86	341	P	P	23 15 06.3	+0.6
	baz=122,SNR=16						
BARN	Barnard Glacie	81.98	333	P	P	23 15 07.5	+0.8
BARN				IAmb	IAmb	23 15 08.8	
	comp=Z,77nm,1.8s						
J29N	Klondike Camp	82.00	337	P	P	23 15 07.2	+0.6
	baz=117						
A36M	Sachs Harbour	82.14	346	P	P	23 15 07.1	0.0
A36M	Sachs Harbour	82.14	346	P	P	23 15 07.0	-0.1
	baz=130						
BVCY	Beaver Creek	82.18	335	P	P	23 15 08.5	+0.9
	baz=114,SNR=9.2						
INK	Inuvik	82.25	342	P	P	23 15 08.2	+0.5
INK	Inuvik	82.25	342	P	P	23 15 08.2	+0.5
INK				pmax	pmax		
	comp=Z,55nm,1.1s						
INK	Inuvik	82.25	342	P	P	23 15 08.4	+0.7
	baz=122,SNR=24						
DAWY	Dawson	82.28	337	P	P	23 15 08.2	+0.1
	baz=116,SNR=12						
EPYK	Eagle Plains	82.34	339	P	P	23 15 08.8	+0.4
	baz=119,SNR=15						
TGL	Tana Glacier	82.39	333	P	P	23 15 09.4	+0.6
TGL				IAmb	IAmb	23 15 10.7	
	comp=Z,35nm,0.9s						
I29M	Ogilvie Camp,	82.44	338	P	P	23 15 09.4	+0.6
	baz=117,SNR=33						
G30M	tAoh Zraii Nji	82.46	340	P	P	23 15 08.8	-0.1
	baz=119,SNR=5.8						
SCO	Scoresbysund	82.47	16	P	P	23 15 08.6	-0.2
SCO	Scoresbysund	82.47	16	P	P	23 15 08.6	-0.2
SCO				pmax	pmax		
	comp=Z,11nm,0.9s						
SCO	Scoresbysund	82.47	16	*i* P	P	23 15 09.5	+0.6
SCO				IAmb	IAmb	23 15 10.1	
	comp=Z,10nm,0.9s						
CRQE	Cirque	82.50	333	P	P	23 15 10.2	+0.8
	baz=112,SNR=7.7						
CRQM	Cirque	82.53	333	P	P	23 15 09.4	-0.2
CRQM				IAmb	IAmb	23 15 11.3	
	comp=Z,26nm,1.0s						
NEEM	North Greenlan	82.53	5	*i* P	P	23 15 10.2	+0.8
NEEM				IAmb	IAmb	23 15 10.8	
	comp=Z,32nm,1.0s						
M27K	Edge Creek, AK	82.59	335	P	P	23 15 10.7	+0.9
	baz=113,SNR=26						
F30M	Barrier River	82.63	341	P	P	23 15 10.4	+0.6
	baz=120,SNR=33						
BERG	Berg Lake	82.65	332	P	P	23 15 11.1	+1.1
TROLL	Troll, Antarti	82.67	162	⇑P	P	23 15 11.0	+0.8
	comp=Z,768nm,0.6s						
MCARA	McCarthy VSAT	82.71	333	P	P	23 15 11.5	+1.2
	baz=112,SNR=15						
RAR	Rarotonga	82.72	249	P	P	23 15 10.3	-0.9
	comp=Z,5.5nm,0.4s,baz=107,slow=11,SNR=1.6						
	comp=Z,5.5nm,0.4s						
KAIM	Kayak Island	82.82	332	P	P	23 15 12.2	+1.3
	baz=111,SNR=5.6						
BCAR	Beaver Creek A	82.83	335	P	P	23 15 11.7	+0.7
VRDI	Verde Repeater	82.85	333	P	P	23 15 11.6	+0.4
L27K	Beaver Creek,	82.85	335	P	P	23 15 12.1	+1.0
	baz=114,SNR=42						
H29M	Whitestone	82.86	339	P	P	23 15 11.6	+0.6
	baz=117,SNR=32						
G29M	Pine Creek	83.06	339	P	P	23 15 12.5	+0.5
	baz=117,SNR=53						
M26K	Nabesna, AK	83.09	334	P	P	23 15 12.7	+0.4
	baz=112,SNR=13						
I28M	Miner Creek	83.09	338	P	P	23 15 12.9	+0.6
	baz=116,SNR=49						
BMRM	Bremner River	83.27	333	P	P	23 15 13.9	+0.6
	baz=111,SNR=13						
K27K	Chicken	83.34	336	P	P	23 15 14.7	+1.2
	baz=113						
CEST	Esterri de Car	83.39	46	P	P	23 15 15.1	+0.7
CEST				IAmb	IAmb	23 15 16.7	
	comp=Z,14nm,0.9s						
L26K	Log Cabin Wild	83.48	335	P	P	23 15 15.0	+0.7
	baz=112,SNR=9.6						
N25K	Chitina, Valde	83.50	333	P	P	23 15 14.9	+0.5
	baz=111,SNR=9.7						
ESK	Eskdalemuir	83.61	33	P	P	23 15 15.2	+0.1
ESK				IAmb	IAmb	23 17 26.7	
	comp=Z,49nm,1.9s						
ESK	Eskdalemuir	83.61	33	P	P	23 15 15.2	+0.1
ESK				pmax	pmax		
	comp=Z,49nm,1.9s						
EKA	Eskdalemuir Ar	83.64	33	P	P	23 15 14.8	-0.4
	comp=Z,6.3nm,0.8s,baz=255,slow=4.5,SNR=14						
EKA				pP	pP	23 15 45.4	+0.1
	comp=Z,2.1nm,0.6s,baz=242,slow=5.1,SNR=3.4						
	comp=Z,6.3nm,0.8s						
EKA	Eskdalemuir Ar	83.64	33	P	P	23 15 15.4	+0.2
EKA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
EYAK	Cordova Ski Ar	83.66	332	P	P	23 15 15.5	+0.4
	baz=110						
E29M	Blow River	83.70	341	P	P	23 15 15.6	+0.3
	baz=118,SNR=62						
TAM	Tamanrasset	83.79	67	P	P	23 15 17.0	+0.1
TAM	Tamanrasset	83.79	67	P	P	23 15 17.0	+0.1
TAM				pmax	pmax		
	comp=Z,31nm,0.7s						
I27K	Kandik River	83.80	338	P	P	23 15 16.2	+0.3
	baz=114,SNR=24						
DOT	Dot Lake	84.01	335	P	P	23 15 17.4	+0.4
DOT				IAmb	IAmb	23 15 18.4	
	comp=Z,26nm,0.9s						
F28M	Old Crow	84.01	340	P	P	23 15 16.9	0.0
	baz=116,SNR=25						
H27K	Steamboat Moun	84.02	338	P	P	23 15 17.2	+0.2
	baz=114,SNR=24						
HARP	HAARP	84.03	334	P	P	23 15 17.1	+0.1
	baz=110						
KLU	Klutina	84.05	333	P	P	23 15 17.7	+0.4
	baz=110,SNR=22						
SCRK	Sand Creek	84.10	336	P	P	23 15 18.0	+0.5
	baz=112,SNR=23						
J26L	Joseph Creek	84.12	336	P	P	23 15 18.2	+0.6
	baz=112,SNR=30						
P23K	Montague Islan	84.25	331	P	P	23 15 18.2	0.0
	baz=108						
I26K	Coal Creek Min	84.27	337	P	P	23 15 18.1	-0.1
	baz=112,SNR=20						
G27K	Doyon Strip	84.30	339	P	P	23 15 18.2	-0.2
	baz=114,SNR=30						
E28M	Babbage River	84.34	341	P	P	23 15 18.3	-0.2
	baz=116,SNR=23						
PAX	Paxson	84.36	335	P	P	23 15 18.7	-0.1
PAX				IAmb	IAmb	23 15 19.9	
	comp=Z,27nm,0.8s						
PAX	Paxson	84.36	335	P	P	23 15 18.7	-0.1
PAX	Paxson	84.36	335	P	P	23 15 18.8	-0.1
	baz=110,SNR=27						
RIDG	Independent Ri	84.37	335	P	P	23 15 19.1	+0.3
RIDG				IAmb	IAmb	23 15 20.4	
	comp=Z,28nm,0.9s						
RIDG	Independent Ri	84.37	335	P	P	23 15 19.2	+0.3
	baz=111,SNR=21						
M24K	Tolsona, Glenn	84.37	334	P	P	23 15 19.6	+0.7
	baz=109,SNR=16						
GLI	Glacier Island	84.39	332	P	P	23 15 18.6	-0.3
	baz=108						
D28M	Stokes Point	84.41	342	P	P	23 15 19.1	+0.3
	baz=117						
K24K	Donnelly Dome	84.78	335	P	P	23 15 20.8	-0.1
	baz=110						
SCM	Sheep Creek Mo	84.80	333	P	P	23 15 21.4	+0.4
SCM	Sheep Creek Mo	84.80	333	P	P	23 15 21.4	+0.4
SCM				pmax	pmax		
	comp=Z,81nm,1.4s						
SCM	Sheep Creek Mo	84.80	333	P	P	23 15 21.4	+0.4
	baz=108,SNR=11						
E27K	Coleen River	84.85	340	P	P	23 15 21.5	+0.4
	baz=114,SNR=26						
J25K	Salcha River,	84.89	336	P	P	23 15 21.8	+0.3
	baz=110,SNR=27						
PWL	Port Wells	84.96	332	P	P	23 15 21.9	+0.1
PWL	Port Wells	84.96	332	P	P	23 15 21.7	0.0
	baz=107,SNR=7.9						
M23K	Glacier View	84.97	333	P	P	23 15 21.9	+0.1
	baz=108,SNR=6.8						
D27M	Malcolm River	85.08	341	P	P	23 15 22.8	+0.5
	baz=115,SNR=9.4						
DBG	Daneborg	85.09	13	*i* P	P	23 15 22.3	+0.1
DBG				IAmb	IAmb	23 15 23.6	
	comp=Z,12nm,1.1s						
G26K	Porcupine Rive	85.13	339	P	P	23 15 22.6	+0.2
	baz=112,SNR=17						
CLF	Chambon-Foret	85.17	41	P	P	23 15 23.5	+0.4
CLF				IAmb	IAmb	23 15 25.1	
	comp=Z,23nm,0.9s						
KNK	Knik Glacier	85.18	333	P	P	23 15 23.2	+0.3
KNK				IAmb	IAmb	23 15 55.4	
	comp=Z,34nm,1.3s						
KNK	Knik Glacier	85.18	333	P	P	23 15 23.1	+0.3
	baz=107						
DHY	Denali Highway	85.21	334	P	P	23 15 23.1	0.0
	baz=108						
WAT6	Susitna Watana	85.22	334	P	P	23 15 23.4	+0.1
	baz=108,SNR=32						
SML	Sawmill	85.24	333	P	P	23 15 23.1	-0.1
SML	Sawmill	85.24	333	P	P	23 15 23.4	+0.2
	baz=108,SNR=17						
PRP	Porcupine Dome	85.27	337	P	P	23 15 23.5	+0.1
PRP	Porcupine Dome	85.27	337	P	P	23 15 23.4	+0.1
	baz=110,SNR=11						
SEW	Seward	85.27	331	P	P	23 15 23.1	-0.2
	baz=106						
HDA	Harding Lake	85.46	336	P	P	23 15 24.1	-0.1
	baz=109,SNR=18						
O22K	Cooper Landing	85.50	332	P	P	23 15 24.5	+0.1
	baz=106						
FYU	Fort Yukon	85.53	338	P	P	23 15 25.0	+0.6
F26K	Sheenjek River	85.54	339	P	P	23 15 25.4	+0.9
	baz=112,SNR=25						
PMR	Palmer	85.54	333	P	P	23 15 24.6	0.0
	baz=107						
IL31		85.56	336	P	P	23 15 24.3	-0.3
IL31				IAmb	IAmb	23 15 25.7	
	comp=Z,12nm,0.8s						
ILAR	Eielson Array	85.56	336	P	P	23 15 24.4	-0.2
	comp=Z,9.3nm,0.9s,baz=125,slow=3.4,SNR=65						
ILAR				pP	pP	23 15 53.0	-1.8
	comp=Z,5.1nm,0.8s,baz=118,slow=4.0,SNR=8.0						
ILAR				PP	PP	23 18 43.4	-1.5
	comp=Z,1.3nm,0.9s,baz=113,slow=7.0,SNR=7.0						
	comp=Z,9.3nm,0.9s						
BMAR	Burnt Mountain	85.60	339	P	P	23 15 25.6	+0.7
H25L	Birch Creek	85.64	338	P	P	23 15 25.9	+0.9
	baz=110,SNR=27						
WAT1	Susitna Watana	85.65	334	P	P	23 15 25.2	-0.1
	baz=107						
RC01	Rabbit Creek A	85.68	332	P	P	23 15 25.6	+0.3
	baz=106,SNR=8.7						
BRSE	Bradley Lake S	85.79	331	P	P	23 15 26.0	+0.1
	baz=105,SNR=7.2						
POKR	Poker Plat Res	85.89	336	P	P	23 15 26.7	+0.4
	baz=108,SNR=9.0						
G25K	Bearman Lake	85.92	338	P	P	23 15 27.5	+1.1
	baz=110,SNR=20						
COLA	College	85.98	336	*d i*P	P	23 15 26.5	-0.2
COLA				pmax	pmax		
	comp=Z,22nm,1.3s						
COLA	College	85.98	336	P	P	23 15 26.9	+0.2
	baz=108						
F25K	Christian Rive	86.04	339	P	P	23 15 27.9	+0.8
	baz=110,SNR=20						
M22K	Willow	86.04	333	P	P	23 15 27.5	+0.4
	baz=106						
QSPA	South Pole Qui	86.07	180	P	P	23 15 28.2	+0.9
QSPA				IAmb	IAmb	23 15 29.7	
	comp=Z,33nm,1.2s						
QSPA	South Pole Qui	86.07	180	P	P	23 15 27.9	+0.5
	comp=Z,16nm,1.0s,baz=220,slow=0.9,SNR=12						
	comp=Z,16nm,1.0s						
MCK	McKinley	86.08	335	P	P	23 15 27.5	+0.2
	baz=107,SNR=6.6						
C27K	Jago River	86.12	341	P	P	23 15 28.1	+0.7
	baz=112,SNR=16						
E25K	Arctic Village	86.20	339	P	P	23 15 28.6	+0.8
	baz=110,SNR=13						
HOM	Homer	86.21	330	P	P	23 15 28.4	+0.4
	baz=104						
KDAK	Kodiak Island	86.24	329	P	P	23 15 28.0	-0.1
	baz=104						
SUA	Susitna One	86.25	332	P	P	23 15 28.8	+0.5
	baz=105						
CAPN	Captain Cook N	86.26	332	P	P	23 15 28.6	+0.4
	baz=105						
CUT	Chulitna	86.29	333	P	P	23 15 28.5	+0.3
	baz=106						
H24K	Noodor Dome	86.29	337	P	P	23 15 28.5	+0.1
	baz=108,SNR=23						
Q20K	Shuyak Island	86.33	329	P	P	23 15 28.8	+0.3
	baz=104						
NEA2	Nenana	86.39	336	P	P	23 15 29.1	+0.3
	baz=107,SNR=42						
G24K	Hadweenzic Riv	86.41	338	P	P	23 15 29.6	+0.8
	baz=109,SNR=35						
OHAK	Old Harbor	86.48	328	P	P	23 15 29.6	+0.3
	baz=103						
TRF	Thorofare Moun	86.58	334	P	P	23 15 30.0	0.0
	baz=106,SNR=9.5						
I23K	Minto, Yukon-K	86.68	336	P	P	23 15 30.6	+0.4
	baz=107,SNR=42						
SKT	Skwentna	86.75	333	P	P	23 15 30.9	+0.3
SKT	Skwentna	86.75	333	P	P	23 15 31.0	+0.3
	baz=105,SNR=83						
DAG	Danmarks Havn	86.78	11	*i* P	P	23 15 30.0	-0.4
DAG				IAmb	IAmb	23 15 31.3	
	comp=Z,27nm,1.3s						
O20K	Slope Mountain	86.80	331	P	P	23 15 31.2	+0.3
	baz=104						
SII	Sitkinak Islan	86.81	327	P	P	23 15 30.9	-0.1
	baz=102						
F24K	Squaw Lake	86.83	339	P	P	23 15 31.8	+0.9
	baz=108,SNR=25						
N20K	Mount Spurr	86.87	332	P	P	23 15 31.3	0.0
	baz=104						
SPCR	Spurr Chakacha	86.87	332	P	P	23 15 31.1	-0.1
	baz=104,SNR=5.7						
KTH	Kantishna Hill	86.89	334	P	P	23 15 31.6	+0.3
KTH				IAmb	IAmb	23 15 32.4	
	comp=Z,26nm,0.9s						
D25K	Kavik River	86.89	340	P	P	23 15 31.7	+0.6
	baz=110,SNR=38						
H23K	Yukon River	86.94	337	P	P	23 15 31.5	0.0
	baz=107,SNR=18						
P19K	Oil Pt	87.00	330	P	P	23 15 31.8	-0.1
	baz=103						
BPAW	Bear Paw Mtn.	87.06	335	P	P	23 15 32.3	+0.2
	baz=105,SNR=59						
DOU	Dourbes	87.06	40	*d*P	P	23 15 32.3	-0.1
DOU				*d*pP	pP	23 16 03.0	+0.5
R18K	Karluk	87.17	328	P	P	23 15 32.8	+0.1
	baz=102						
MLY	Manley	87.20	336	P	P	23 15 32.7	0.0
	baz=106,SNR=57						
E24K	Your Creek	87.22	339	P	P	23 15 33.5	+0.7
	baz=108,SNR=30						
PPLA	Purkeypile	87.27	334	P	P	23 15 33.6	+0.3
	baz=104,SNR=22						
CAST	Castle Rocks	87.36	334	P	P	23 15 33.4	-0.1
CAST	Castle Rocks	87.36	334	P	P	23 15 33.4	-0.1
	baz=104,SNR=46						
G23K	Bananza Creek	87.38	338	P	P	23 15 34.5	+0.9
	baz=106,SNR=49						
BGES	Gesves	87.42	39	*d*P	P	23 15 33.8	-0.2
BGES				*d*pP	pP	23 16 02.3	-2.0
CHIR	Chirikof Islan	87.45	326	P	P	23 15 34.5	+0.5
	baz=101						
M20K	Styx River	87.46	332	P	P	23 15 33.8	-0.3
	baz=103,SNR=25						
CHUM	Lake Minchumin	87.57	335	P	P	23 15 34.6	+0.2
	baz=104						
COLD	Coldfoot	87.60	338	P	P	23 15 35.7	+1.2
	baz=106,SNR=11						
E23K	Chandalar	87.62	339	P	P	23 15 35.4	+0.6
	baz=107,SNR=18						
D24K	Happy Valley	87.66	340	P	P	23 15 35.2	+0.4
	baz=108,SNR=10.0						
Q18K	Katmai Hardscr	87.68	329	P	P	23 15 35.0	-0.2
	baz=101,SNR=6.6						
H22K	Ishtalitna Cre	87.69	337	P	P	23 15 35.2	+0.2
	baz=105,SNR=13						
TOLK	Toolik Lake Re	87.77	339	P	P	23 15 35.8	+0.4
	baz=107,SNR=12						
C24K	Franklin Bluff	87.79	341	P	P	23 15 36.2	+0.8
	baz=108						
N19K	Bonanza Creek	87.86	331	P	P	23 15 35.6	-0.4
	baz=102,SNR=11						
L20K	Farewell, AK	87.93	333	P	P	23 15 36.0	-0.3
	baz=103,SNR=26						
P18K	Big Mountain,	87.94	330	P	P	23 15 35.8	-0.5
	baz=101,SNR=6.6						
WLF	Walferdange	87.98	40	P	P	23 15 36.9	+0.2
WLF				IAmb	IAmb	23 16 09.0	
	comp=Z,12nm,1.0s						
WLF	Walferdange	87.98	40	P	P	23 15 36.9	+0.2
WLF				pmax	pmax		
	comp=Z,12nm,1.0s						
WLF	Walferdange	87.98	40	*d*P	P	23 15 36.0	-0.8
WLF				*d*pP	pP	23 16 08.1	+1.0
WLF	Walferdange	87.98	40	*e*P	P	23 15 36.9	+0.2
	comp=Z,20nm,1.4s,baz=264,slow=4.7						
WLF				*e*pP	pP	23 16 08.1	+1.0
	baz=266,slow=4.7						
G22K	Bettles	88.01	338	P	P	23 15 37.0	+0.5
	baz=105						
O18K	Koktuh Hills	88.02	330	P	P	23 15 36.7	0.0
	baz=101,SNR=13						
M19K	Big River Lodg	88.05	332	P	P	23 15 36.8	0.0
	baz=102						
Q17K	Contact Creek	88.06	329	P	P	23 15 37.1	+0.1
	baz=101,SNR=21						
H21K	Melozitna Rive	88.20	336	P	P	23 15 37.5	0.0
	baz=104,SNR=16						
K20K	Telida	88.21	334	P	P	23 15 37.4	-0.2
	baz=102						
D23K	Nanushuk River	88.25	340	P	P	23 15 38.7	+1.1
	baz=106,SNR=34						
L19K	White Mountain	88.32	333	P	P	23 15 38.0	-0.1
	baz=102,SNR=18						
F22K	John River	88.41	338	P	P	23 15 39.3	+0.9
	baz=104,SNR=5.4						
J20K	Nowinta River	88.42	335	P	P	23 15 38.4	-0.1
	baz=102,SNR=20						
E22K	Anaktuvuk Pass	88.43	339	P	P	23 15 39.0	+0.4
	baz=105,SNR=26						
ECH	Echery	88.44	42	P	P	23 15 38.2	-0.8
ECH	Echery	88.44	42	P	P	23 15 38.2	-0.8
ECH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
C23K	Itkillik River	88.46	340	P	P	23 15 39.3	+0.8
	baz=106,SNR=39						
P17K	Kvichak River	88.51	329	P	P	23 15 39.1	+0.1
	baz=100,SNR=5.9						
N18K	Kilae Creek	88.51	331	P	P	23 15 38.9	-0.1
	baz=101,SNR=17						
Q16K	King Salmon	88.53	329	P	P	23 15 39.6	+0.6
	baz=100,SNR=7.1						
KEST	Kesra	88.58	54	P	P	23 15 40.2	+0.2
	comp=Z,2.8nm,0.8s,baz=338,slow=5.4,SNR=8.1						
KEST				pP	pP	23 16 10.8	+0.4
	comp=Z,4.7nm,0.9s,baz=210,slow=2.7,SNR=4.1						
	comp=Z,2.8nm,0.8s						
M18K	Stony River	88.63	332	P	P	23 15 39.1	-0.4
	baz=101,SNR=12						
IMAR	Indian Mountai	88.66	336	P	P	23 15 40.0	+0.4
G21K	Allakaket	88.68	337	P	P	23 15 40.1	+0.4
	baz=103,SNR=26						
I20K	Naaghedeneel	88.69	335	P	P	23 15 39.6	-0.1
	baz=102						
F21K	Alatna River	88.83	338	P	P	23 15 41.0	+0.6
	baz=103,SNR=18						
D22K	Ayikyak River	88.93	339	P	P	23 15 41.3	+0.5
	baz=104						
O17K	Koliganek Bris	88.94	330	P	P	23 15 41.2	+0.2
	baz=100,SNR=13						
BUG	Bochum--Univer	88.94	38	*e*P	P	23 15 41.5	+0.4
	comp=Z,6.6nm,0.7s,baz=264,slow=4.7						
BUG				*e*pP	pP	23 16 12.9	+1.4
	baz=266,slow=4.7						
VSL	Villasalto	88.99	50	P	P	23 15 41.5	-0.2
H20K	Anotleneega Mo	89.01	336	P	P	23 15 41.6	+0.3
	baz=102,SNR=45						
J19K	Poorman	89.02	334	P	P	23 15 41.1	-0.2
	baz=101,SNR=11						
N17K	Nushagak Hills	89.11	331	P	P	23 15 42.1	+0.3
	baz=100,SNR=5.8						
L18K	Granite Mounta	89.17	332	P	P	23 15 42.1	+0.1
	baz=100,SNR=8.7						
BFO	Black Forest	89.23	42	*e*P	P	23 15 42.9	+0.2
	comp=Z,3.0nm,0.9s,baz=264,slow=4.7						
P16K	Nushagak River	89.27	329	P	P	23 15 42.7	+0.2
	baz=99						
IBBN	Ibbenburen	89.35	38	*e*P	P	23 15 43.6	+0.5
	comp=Z,6.0nm,0.6s,baz=264,slow=4.7						
IBBN				*e*pP	pP	23 16 14.7	+1.2
	baz=266,slow=4.7						
M17K	Holitna River	89.38	332	P	P	23 15 43.4	+0.3
	baz=99,SNR=10						
J18K	Innoko River	89.40	334	P	P	23 15 43.3	+0.2
	baz=100,SNR=14						
O16K	Kokwok River B	89.41	330	P	P	23 15 42.5	-0.7
	baz=99						
B22K	Teshekpuk Lake	89.52	341	P	P	23 15 44.1	+0.7
	baz=103,SNR=22						
TNS	Taunus Mts	89.53	40	P	P	23 15 44.2	+0.1
TNS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TNS	Taunus Mts	89.53	40	*e*P	P	23 15 44.1	0.0
	comp=Z,7.6nm,1.0s,baz=264,slow=4.7						
CHNA	Chernabura Isl	89.53	325	P	P	23 15 44.0	+0.1
	baz=98						
KASTN	Kahler Asten	89.62	39	*e*P	P	23 15 44.2	-0.3
	comp=Z,2.8nm,0.8s,baz=264,slow=4.7						
F20K	Avaraart Lake	89.65	337	P	P	23 15 44.5	+0.4
	baz=101						
H19K	Roundabout Mou	89.66	336	P	P	23 15 44.9	+0.7
	baz=100,SNR=11						
NOR	Nord	89.66	7	*i* P	P	23 15 44.5	+0.5
NOR				IAmb	IAmb	23 15 45.5	
	comp=Z,10nm,0.9s						
GCSA	Galena City Sc	89.69	335	P	P	23 15 44.5	+0.1
	baz=100						
TUE	Stuetta	89.70	44	P	P	23 15 44.7	-0.5
TUE				IAmb	IAmb	23 15 46.2	
	comp=Z,7.7nm,0.8s						
S14K	Fog Glacier	89.71	326	P	P	23 15 45.4	+0.6
	baz=98						
C21K	Knifeblade Rid	89.73	339	P	P	23 15 45.3	+0.8
	baz=102,SNR=13						
B21K	Ikpikpuk River	89.77	340	P	P	23 15 45.3	+0.7
	baz=102,SNR=15						
N16K	Nishlik Lake	89.88	331	P	P	23 15 46.0	+0.5
	baz=98						
L17K	Donlin	89.90	332	P	P	23 15 46.2	+0.7
	baz=99,SNR=15						
K17K	Iditarod	89.99	333	P	P	23 15 46.5	+0.6

	baz=99,SNR=9.6						
G19K	Purcell Mounta	90.02	336	P	P	23 15 46.6	+0.6
	baz=100,SNR=7.1						
M16K	Timber Creek	90.05	331	P	P	23 15 47.3	+1.1
	baz=98,SNR=5.7						
E20K	Nigu River	90.05	338	P	P	23 15 46.7	+0.6
	baz=101,SNR=10						
SDPT	Sand Point	90.11	325	P	P	23 15 47.8	+1.3
	baz=97						
DAVA	Damuels	90.15	43	*i* P	P	23 15 47.9	+0.7
	comp=Z,9.0nm,0.9s						
DAVA				*i* pP	pP	23 16 18.5	+0.9
	comp=Z,9.6nm,1.0s						
A22K	Sinclair Lake	90.17	341	P	P	23 15 47.1	+0.5
	baz=102						
D20K	Etivluk River	90.29	339	P	P	23 15 47.8	+0.6
	baz=100,SNR=10						
E19K	Redstone River	90.30	338	P	P	23 15 47.4	+0.1
	baz=100,SNR=8.7						
UBR	Ueberruh	90.34	42	*e*P	P	23 15 48.3	+0.3
	comp=Z,9.6nm,0.9s,baz=264,slow=4.7						
UBR				*e*pP	pP	23 16 19.9	+1.5
	baz=266,slow=4.7						
RETH	Rethem/Aller,	90.38	37	*e*P	P	23 15 48.7	+0.9
	comp=Z,5.0nm,0.8s,baz=264,slow=4.7						
RETH				*e*pP	pP	23 16 19.7	+1.5
	baz=266,slow=4.7						
H18K	Honhosa River	90.38	335	P	P	23 15 48.9	+1.2
	baz=99,SNR=8.9						
L16K	Owhat River	90.39	332	P	P	23 15 48.9	+1.2
	baz=98,SNR=8.4						
F19K	Shaleruckik Mo	90.41	337	P	P	23 15 47.7	0.0
	baz=99						
J17K	VABM Dome	90.44	333	P	P	23 15 48.8	+0.9
	baz=98,SNR=6.7						
N15K	Kwethluk River	90.49	330	P	P	23 15 48.6	+0.3
	baz=97						
UBBA	Unterbreizbach	90.58	39	*e*pP	pP	23 16 20.5	+1.4
	baz=266,slow=4.7						
G18K	Tagagawik	90.61	336	P	P	23 15 49.6	+0.8
	baz=98,SNR=11						
GTTG	Gottingen	90.63	39	*e*P	P	23 15 49.8	+0.8
	comp=Z,5.5nm,0.8s,baz=264,slow=4.7						
ZCCA	Zocca	90.64	46	P	P	23 15 49.9	+0.4
FETA	Feichten	90.70	43	*i* P	P	23 15 49.7	-0.1
	comp=Z,9.9nm,1.7s						
FETA				*e*pP	pP	23 16 20.9	+0.7
	comp=Z,7.0nm,1.1s						
B20K	Meade River	90.71	340	P	P	23 15 49.6	+0.6
	baz=100						
RETA	Reutte	90.77	43	*e*P	P	23 15 50.3	+0.4
	comp=Z,5.1nm,1.0s						
RETA				*i* pP	pP	23 16 21.8	+1.4
	comp=Z,5.5nm,1.1s						
D19K	Kuna River	90.80	339	P	P	23 15 50.3	+0.7
	baz=99,SNR=9.1						
NRDL	Niedersach Rie	90.81	38	*e*P	P	23 15 50.5	+0.7
	comp=Z,3.3nm,0.8s,baz=264,slow=4.7						
NRDL				*e*pP	pP	23 16 21.6	+1.4
	baz=266,slow=4.7						
M15K	Kasigluk River	90.84	331	P	P	23 15 50.8	+0.9
	baz=97						
CLZ	Clausthal	90.91	38	*e*P	P	23 15 51.1	+0.7
	comp=Z,4.0nm,0.9s,baz=264,slow=4.7						
O14K	Tigyukauivet M	90.97	329	P	P	23 15 50.6	+0.2
	baz=96						
MOTA	Moosalm	90.99	43	*i* P	P	23 15 50.9	-0.2
	comp=Z,9.3nm,0.9s						
MOTA				*i* pP	pP	23 16 22.6	+1.1
	comp=Z,7.7nm,0.8s						
H17K	Granite Mounta	91.01	335	P	P	23 15 51.1	+0.6
	baz=97,SNR=5.3						
S12K	Black Hills	91.04	326	P	P	23 15 51.1	+0.2
	baz=96						
SQTA	Sankt Quirin	91.05	43	*e*P	P	23 15 51.2	-0.1
	comp=Z,8.3nm,0.8s						
SQTA				*e*pP	pP	23 16 22.5	+0.8
	comp=Z,9.8nm,1.0s						
BSEG	Bad Segeberg	91.07	36	*e*P	P	23 15 51.9	+0.8
	comp=Z,6.1nm,1.0s,baz=264,slow=4.7						
BSEG				*e*pP	pP	23 16 22.4	+0.9
	baz=266,slow=4.7						
J16K	Anvik River	91.11	333	P	P	23 15 52.2	+1.2
	baz=97						
F18K	Selawik	91.11	337	P	P	23 15 51.7	+0.8
	baz=97						
ASSE	Asse, Remlinge	91.12	38	*e*P	P	23 15 51.8	+0.6
	comp=Z,7.8nm,1.2s,baz=264,slow=4.7						
ASSE				*e*pP	pP	23 16 22.4	+0.7
	baz=266,slow=4.7						
I17K	Unalakleet	91.22	334	P	P	23 15 52.5	+1.0
	baz=96						
N14K	Kuskokwak Cree	91.25	330	P	P	23 15 52.6	+0.9
	baz=96						
CTI	Castel Tesino	91.26	44	P	P	23 15 52.0	-0.3
CTI				IAmb	IAmb	23 16 24.6	
	comp=Z,6.7nm,0.7s						
CTI	Castel Tesino	91.26	44	P	P	23 15 52.0	-0.3
CTI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WATA	Walderalm	91.31	43	*i* P	P	23 15 52.4	-0.1
	comp=Z,4.8nm,0.7s						
WATA				*e*pP	pP	23 16 21.6	-1.4
	comp=Z,4.9nm,1.1s						
L15K	Ungalak Mounta	91.34	332	P	P	23 15 53.2	+1.0
	baz=96,SNR=5.4						
WTTA	Wattenberg	91.34	43	P	P	23 15 53.3	+0.5
WTTA				pmax	pmax		
	comp=Z,12nm,1.1s						
WTTA	Wattenberg	91.34	43	*e*P	P	23 15 53.4	+0.7
	comp=Z,5.9nm,0.6s						
WTTA				*i* pP	pP	23 16 24.0	+0.8
	comp=Z,7.1nm,0.8s						
G17K	Kiwalik Mounta	91.38	335	P	P	23 15 53.1	+0.8
	baz=96,SNR=6.5						
C19K	Lookout Ridge	91.41	339	P	P	23 15 53.2	+0.8
	baz=97,SNR=7.6						
K15K	Wolf Creek Mou	91.42	332	P	P	23 15 53.5	+1.0
	baz=96,SNR=5.1						
M14K	Bethel	91.47	331	P	P	23 15 53.7	+1.0
	baz=96						
FLTG	Flechtingen	91.48	38	*e*P	P	23 15 53.8	+0.8
	comp=Z,3.9nm,0.7s,baz=264,slow=4.7						
GORT1	Trebel	91.58	37	*e*P	P	23 15 54.7	+1.4
	comp=Z,9.7nm,0.6s,baz=264,slow=4.7						
E18K	Tukpahlearik C	91.58	337	P	P	23 15 53.6	+0.4
	baz=96						
MOX	Moxa	91.59	40	*e*P	P	23 15 54.3	+0.7
	comp=Z,1.5nm,0.7s,baz=264,slow=4.7						
F17K	Baldwin Pennin	91.73	336	P	P	23 15 54.5	+0.6
	baz=96						
FALS	False Pass	91.74	325	P	P	23 15 54.4	+0.3
	baz=94						
MANZ	Manzenberg	91.85	40	*e*P	P	23 15 55.1	+0.3
	comp=Z,0.7nm,0.9s,baz=264,slow=4.7						
MANZ				*e*pP	pP	23 16 26.4	+1.1
	baz=266,slow=4.7						
L14K	Kuka Creek	91.88	331	P	P	23 15 54.7	+0.1
	baz=95						
ABTA	Abfaltersbach	91.90	43	*i* P	P	23 15 54.9	-0.3
	comp=Z,6.8nm,1.2s						
ABTA				*e*pP	pP	23 16 26.9	+1.2
	comp=Z,6.5nm,0.9s						
ROTZ	Rotzenmuhle	91.90	40	*e*P	P	23 15 55.2	+0.2
	comp=Z,0.8nm,1.0s,baz=264,slow=4.7						
ROTZ				*e*pP	pP	23 16 26.4	+0.9
	baz=266,slow=4.7						
C18K	Utukok River	91.94	339	P	P	23 15 54.8	-0.1
	baz=96						
H16K	Elim	91.96	335	P	P	23 15 54.5	-0.5
	baz=95						
E17K	Hotham Inlet	92.02	337	P	P	23 15 55.8	+0.6
	baz=95,SNR=10						
LESA	Schwarzleotal	92.06	43	*e*P	P	23 15 56.3	+0.3
	comp=Z,6.2nm,1.0s						
LESA				*e*pP	pP	23 16 27.1	+0.7
	comp=Z,6.4nm,1.0s						
A19K	Wainwright	92.06	340	P	P	23 15 56.3	+1.0
	baz=96						
G16K	Koyuk River	92.08	335	P	P	23 15 56.3	+0.8
	baz=95						
TANN	Tannenbergstha	92.11	40	*e*P	P	23 15 56.3	+0.2
	comp=Z,6.4nm,1.2s,baz=264,slow=4.7						
TANN				*e*pP	pP	23 16 28.0	+1.5
	baz=266,slow=4.7						
TSUM	Tsumeb	92.11	109	P	P	23 15 57.2	+0.3
TSUM				IAmb	IAmb	23 15 59.5	
	comp=Z,14nm,1.1s						
M13K	Dall Lake	92.13	330	P	P	23 15 56.8	+1.0
	baz=94						
NB2	NORSAR Subarra	92.15	29	P	P	23 15 56.0	0.0
	comp=Z,5.1nm,1.2s,baz=266,slow=4.6						
NB2				pP	pP	23 16 26.2	-0.2
	comp=Z,13nm,1.2s,baz=269,slow=4.8						
NOA	NORSAR Array B	92.15	29	P	P	23 15 56.0	0.0
	comp=Z,1.3nm,1.0s,baz=268,slow=4.8,SNR=4.1						
NOA				pP	pP	23 16 25.4	-1.1
	comp=Z,4.1nm,0.9s,baz=269,slow=4.7,SNR=15						
	comp=Z,1.3nm,1.0s						
RJOB	Jochberg	92.16	42	*e*P	P	23 15 56.3	-0.1
	comp=Z,4.1nm,1.0s,baz=264,slow=4.7						
RJOB				*e*pP	pP	23 16 27.6	+0.8
	baz=266,slow=4.7						
B18K	Kokolik River	92.23	339	P	P	23 15 57.0	+0.9
	baz=95						
WET	Wettzell	92.30	41	P	P	23 15 57.2	+0.2
WET				pmax	pmax		
	comp=Z,4.0nm,1.5s						
WET	Wettzell	92.30	41	*e*P	P	23 15 57.1	+0.2
	comp=Z,4.9nm,1.2s,baz=264,slow=4.7						
WET				*e*pP	pP	23 16 28.5	+1.1
	baz=266,slow=4.7						
J14K	Nanvaranak Lak	92.40	333	P	P	23 15 57.9	+0.9
	baz=94						
CLL	Collm	92.50	39	*e*P	P	23 15 58.0	+0.2
CLL				*e**PP	pP	23 16 25.0	-3.2
CLL	Collm	92.50	39	*e*P	P	23 15 58.5	+0.7
	comp=Z,2.8nm,1.2s,baz=264,slow=4.7						
CLL				*e*pP	pP	23 16 29.8	+1.6
	baz=266,slow=4.7						
CLL	Collm	92.50	39	*e*P	P	23 15 58.0	+0.2
CLL				*e*pP	pP	23 16 25.0	-3.2
D17K	Noatak River	92.56	338	P	P	23 15 58.6	+1.0
	baz=94						
PRED	Cave del Predi	92.61	44	P	P	23 15 58.5	0.0
C17K	DeLong Mountai	92.65	338	P	P	23 15 58.4	+0.3
	baz=94,SNR=5.4						
MYKA	Terra Mystica	92.67	44	*i* P	P	23 15 58.6	-0.1
	comp=Z,2.6nm,0.8s						
MYKA				*e*pP	pP	23 16 28.7	-0.5
	comp=Z,1.2nm,0.4s						
VNDA	Vanda	92.72	191	P	P	23 15 59.4	+1.1
VNDA	Vanda	92.72	191	P	P	23 15 59.4	+1.1
	comp=Z,2.4nm,0.8s,baz=97,slow=2.9,SNR=8.4						
VNDA				pP	pP	23 16 28.3	-0.4
	comp=Z,1.9nm,0.8s,baz=119,slow=5.0,SNR=3.5						
	comp=Z,2.4nm,0.8s						
VNDA	Vanda	92.72	191	P	P	23 15 59.4	+1.1
VNDA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BIOA	Bad Ischl, Aus	92.72	43	*i* P	P	23 15 59.8	+0.9
	comp=Z,3.8nm,1.1s						
BIOA				*e*pP	pP	23 16 30.8	+1.4
G15K	Niukluk	92.76	335	P	P	23 15 59.4	+0.8
	baz=93						
GEC2	GERESS Array S	92.82	41	*e*P	P	23 15 59.6	+0.2
	comp=Z,3.2nm,1.2s,baz=264,slow=4.7						
GERES	GERESS Array B	92.82	41	P	P	23 15 59.2	-0.3
	comp=Z,0.5nm,0.6s,baz=277,slow=3.5,SNR=6.0						
GERES				pP	pP	23 16 28.5	-1.4
	comp=Z,0.5nm,0.7s,baz=318,slow=1.8,SNR=2.9						
	comp=Z,0.5nm,0.6s						
K13K	Kusilvak Mount	92.86	332	P	P	23 16 00.3	+1.1
	baz=93						
F15K	North Star Dit	93.05	336	P	P	23 16 01.0	+1.0
	baz=93,SNR=6.0						
BRG	Berggiesshubel	93.08	39	*e*P	P	23 16 00.6	+0.2
	comp=Z,3.7nm,1.0s,baz=264,slow=4.7						
BRG				*e*pP	pP	23 16 31.8	+0.9
	baz=266,slow=4.7						
BRG	Berggiesshubel	93.08	39	⇓*e*PKPf	P	23 16 01.1	+0.6
BRG				Amp		23 16 02.1	
	comp=Z,3.7nm,1.0s						
BRG				PKPab	pP	23 16 32.1	+1.2
BRG				Amp		23 16 33.7	
	comp=Z,3.3nm,0.9s						
MOA	Molln	93.15	42	*e*P	P	23 16 01.4	+0.5
	comp=Z,10nm,1.7s						
MOA				*e*pP	pP	23 16 31.6	+0.3
	comp=Z,6.8nm,1.4s						
OBKA	Obir	93.29	44	*i* PcP	P	23 16 03.1	+1.4
	comp=Z,3.1nm,1.5s						
ANM	Nome	93.31	334	P	P	23 16 02.4	+1.2
	baz=92						
HFS	Hagfors	93.32	30	P	P	23 16 01.2	-0.1
	comp=Z,1.3nm,0.8s,baz=282,slow=7.2,SNR=2.8						
HFS				pP	pP	23 16 30.0	-1.8
	comp=Z,2.5nm,0.7s,baz=197,slow=3.0,SNR=4.6						
	comp=Z,1.3nm,0.8s						
C16K	Lisburne Hills	93.44	338	P	P	23 16 01.9	+0.2
	baz=92						
UNV	Unalaska Valle	93.48	324	P	P	23 16 02.5	+0.2
	baz=92						
M11K	Mekoryuk	93.54	330	P	P	23 16 03.1	+0.8
	baz=92						
SOKA	Soboth	93.63	44	*e*P	P	23 16 03.5	+0.3
	comp=Z,2.2nm,1.2s						
SOKA				*i* pP	pP	23 16 33.9	+0.2
	comp=Z,2.5nm,1.1s						
F14K	Arctic Creek	93.74	335	P	P	23 16 03.2	+0.1
	baz=91						
ARSA	Arzberg	93.98	43	*e*P	P	23 16 04.8	0.0
	comp=Z,3.6nm,1.5s						
ARSA				*e*pP	pP	23 16 36.2	+1.0
	comp=Z,1.8nm,1.0s						
TREC	Trest	94.01	41	*e*P	P	23 16 05.4	+0.6
TREC	Trest	94.01	41	P	P	23 16 05.5	+0.6
TREC				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KOOLE	Kule	94.18	113	P	P	23 16 07.0	+0.7
KOOLE				IAmb	IAmb	23 16 08.5	
	comp=Z,11nm,0.8s						
CONA	Conrad Observa	94.23	42	*i* P	P	23 16 06.2	+0.2
	comp=Z,2.9nm,0.8s						
CONA				*e*pP	pP	23 16 37.3	+0.9
	comp=Z,3.6nm,1.1s						
SPITS	Spitsbergen Ar	94.40	12	P	P	23 16 06.3	+0.3
	comp=Z,2.3nm,0.6s,baz=276,slow=3.9,SNR=9.6						
SPITS				pP	pP	23 16 35.6	-0.8
	comp=Z,3.7nm,0.6s,baz=198,slow=8.9,SNR=3.7						
	comp=Z,2.3nm,0.6s						
CHVC	Chvalec	94.41	40	*e*P	P	23 16 06.8	+0.2
CHVC				*e*pP	pP	23 16 39.1	+2.0
CHVC	Chvalec	94.41	40	*e*P	P	23 16 06.8	+0.2
CHVC				*e**PP	pP	23 16 39.1	+2.0
TNA	Tin City	94.41	335	P	P	23 16 07.6	+1.4
	baz=90						
OSTC	Ostas	94.51	40	*e*P	P	23 16 08.0	+0.9
OSTC	Ostas	94.51	40	*e*P	P	23 16 08.0	+0.9
RONA	Rosalia, Austr	94.52	43	*i* P	P	23 16 06.7	-0.5
	comp=Z,1.8nm,0.9s						
RONA				*i* pP	pP	23 16 38.5	+0.9
	comp=Z,3.3nm,0.9s						
DPC	Dobruska-Polom	94.58	40	*e*P	P	23 16 08.4	+1.0
DPC				*e*pP	pP	23 16 39.6	+1.7
DPC	Dobruska-Polom	94.58	40	*e*P	P	23 16 08.4	+1.0
DPC				*e**PP	pP	23 16 39.6	+1.7
KRUC	Moravsky	94.61	41	*e*P	P	23 16 07.6	+0.1
KRUC				*e*		23 16 39.1	
VRAC	Vranov	94.74	41	*e*P	P	23 16 08.4	+0.3
VRAC				*e*		23 16 39.9	
KRLC	Kraliky	94.87	40	*e*P	P	23 16 09.8	+1.0
KRLC				*e*pP	pP	23 16 40.9	+1.7
KRLC	Kraliky	94.87	40	*e*P	P	23 16 09.8	+1.0
KRLC				*e**PP	pP	23 16 40.9	+1.7
NIKH	Nikolski High	94.88	323	P	P	23 16 09.1	+0.4
	baz=90						
MODS	Modra-Piesok	95.18	42	*i* P	P	23 16 10.3	+0.1
MODS				*e*		23 16 41.6	
MODS	Modra-Piesok	95.18	42	*e*PDIFF	P	23 16 10.3	+0.1
MODS	Modra-Piesok	95.18	42	*e*	pP	23 16 41.6	+0.9
P08K	Saint George I	95.26	326	P	P	23 16 11.3	+1.0
	baz=89						
MORC	Moravsky Berou	95.36	41	P	P	23 16 12.0	+1.0
MORC	Moravsky Berou	95.36	41	*e*P	P	23 16 11.7	+0.7
MORC				*e*		23 16 43.5	
MORC	Moravsky Berou	95.36	41	P	P	23 16 12.0	+1.0
MORC				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SPIA	Saint Paul Isl	95.63	327	P	P	23 16 12.3	+0.4
	baz=89						
KGCAE	Kacgae	96.04	113	P	P	23 16 14.4	-0.4
GAMB	Gambell	96.09	334	P	P	23 16 14.0	+0.2
	baz=87						
VYHS	Vyhne	96.22	42	*e*P	P	23 16 15.5	+0.6
VYHS				*e*		23 16 46.2	
VYHS	Vyhne	96.22	42	*e*PDIFF	P	23 16 15.5	+0.6
VYHS	Vyhne	96.22	42	*e*	pP	23 16 46.2	+0.8
ARCES	ARCESS Array B	97.78	20	P	P	23 16 20.9	-0.6
	comp=Z,2.7nm,1.0s,baz=274,slow=4.3,SNR=14						
ARCES				pP	pP	23 16 49.9	-2.1
	comp=Z,2.2nm,0.7s,baz=302,slow=4.8,SNR=4.3						
	comp=Z,2.7nm,1.0s						
BOSA	Boshof	97.97	119	P	Pdif	23 16 23.5	0.0
	comp=Z,1.3nm,0.8s,baz=207,slow=4.5,SNR=1.4						
BOSA				pP	pP	23 16 54.8	+0.8
	comp=Z,2.9nm,0.7s,baz=295,slow=2.7,SNR=3.4						
	comp=Z,1.3nm,0.8s						
FINES	FINESS Array B	99.30	28	P	Pdif	23 16 27.9	-0.5
	comp=Z,0.4nm,0.6s,baz=297,slow=1.3,SNR=4.8						
FINES				PKKPbc	PKKPbc	23 32 51.3	-3.4
	comp=Z,0.2nm,0.4s,baz=90,slow=4.4,SNR=4.9						
	comp=Z,0.4nm,0.6s						
MNK	Minsk	101.33	35	*i* P	Pdif	23 16 36.1	-1.5
	comp=E,5.0nm,0.6s						
MNK				*i* P	Pdif	23 16 36.1	-1.5
	comp=N,2.0nm,0.7s						
MNK				*i* P	Pdif	23 16 36.1	-1.5
	comp=Z,3.0nm,0.7s,baz=279						
MNK				*i* pP	pPdif	23 17 04.9	-3.2
MNK				*i* PP	PP	23 20 47.0	-1.2
MNK				*i* PPP	PPP	23 22 56.3	
MNK				*i* S	SKSac	23 27 04.9	-1.1
MNK				*i* sS	SKKSac	23 27 57.3	+15
MNK				*i* SS	SS	23 35 11.6	+1.4
MNK				*i* SSS	SSS	23 39 04.6	
MNK	Minsk	101.33	35	*i* P	Pdif	23 16 36.0	-1.5
MNK				*i*		23 20 46.9	
MNK				*i* PPP	PPP	23 22 56.2	
MNK				*i* S	SKSac	23 27 04.8	-1.1
MNK				*i* *SS	SKKSac	23 27 57.3	+15
MNK				*i* SS	SS	23 35 11.6	+1.4
MNK				*i* SSS	SSS	23 39 04.5	
MNK				pmax	pmax		
	comp=E,5.0nm,0.6s						
MNK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MNK				pmax	pmax		
	comp=N,2.0nm,0.7s						
MNK				MLR	MLR		
	comp=N,96nm,18.0s						
MNK				MLR	MLR		
	comp=Z,113nm,15.0s						
MNK				MLR	MLR		
	comp=E,106nm,17.0s						
AKASG	Malin Array Be	102.75	39	PP	PP	23 20 57.0	-1.9
	comp=E,0.1nm,0.2s,baz=264,slow=8.2,SNR=4.9						
OBN	Obninsk	106.10	34	*i* P	Pdif	23 16 58.6	-0.1
OBN				*e*		23 21 22.0	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KBZ	Khabaz	113.44	44	PKiKP	PKiKP	23 21 24.4	+0.1
	comp=Z,3.1nm,0.7s,baz=21,slow=1.3,SNR=9.4						
KBZ	Khabaz	113.44	44	*c i*PKIKP	PKiKP	23 21 25.2	+0.9
PET	Petropavlovsk	113.81	327	⇑*i*PKIKP	PKiKP	23 21 25.0	+0.3
NCK	Nalchik	114.00	44	⇓*i*PKIKP	PKiKP	23 21 24.5	-1.0
BRVK	Borovoye	123.82	24	*d i*PKIKP	PKiKP	23 21 44.5	+0.2
BVAR	Borovoye Array	123.88	24	PKP	PKiKP	23 21 44.8	+0.4
	comp=Z,3.4nm,0.6s,baz=284,slow=2.4,SNR=24						
YSS	Yuzhno-Sakhali	125.68	328	⇓*e*PKIKP	PKPdf	23 21 46.3	-1.4
ZALV	Zalesovo Beam	127.82	14	PKP	PKiKP	23 21 52.0	-0.2
	comp=Z,11nm,0.5s,baz=270,slow=1.5,SNR=54						
ZALV				pPKP	pPKPdf	23 22 22.8	-0.6
	comp=Z,2.5nm,0.4s,baz=233,slow=0.7,SNR=3.8						
KURK	Kurchatov	128.82	20	*d i*PKIKP	PKiKP	23 21 54.3	0.0
KURBB	Kurchatov Arra	128.87	21	PKP	PKiKP	23 21 54.5	0.0
	comp=Z,11nm,0.8s,baz=320,slow=2.4,SNR=90						
KURBB				pPKP	pPKPdf	23 22 26.4	+0.9
	comp=Z,2.6nm,0.8s,baz=319,slow=2.5,SNR=3.8						
KLR	Kul'dur	129.13	337	⇓*e*P	Pdif	23 18 47.5	+6.1
KLR				pmax	pmax		
	comp=Z,7.0nm,2.2s						
HEH	HeiHe	129.85	341	PKP	PKPdf	23 21 55.3	-0.3
USA0B	Ussuriysk Arra	132.97	332	*de*PKIKP	PKiKP	23 22 02.7	-0.2
USRK	Ussuriysk Ar.	132.97	332	PKP	PKPdf	23 22 01.9	+0.2
	comp=Z,2.6nm,0.6s,baz=76,slow=7.1,SNR=4.8						
MK31	Makanchi Array	133.43	20	*d i*PKIKP	PKPdf	23 22 02.6	0.0
MKAR	Makanchi Array	133.43	20	PKP	PKPdf	23 22 02.8	+0.2
	comp=Z,2.4nm,0.4s,baz=352,slow=2.0,SNR=43						
MKAR				pPKP	pPKPdf	23 22 34.8	+0.5
	comp=Z,1.0nm,0.5s,baz=315,slow=1.9,SNR=3.7						
AAK	Ala-Archa	133.46	30	*d i*PKIKP	PKiKP	23 22 04.4	+0.2
BNX	BinXian	133.68	337	⇑P	Pdif	23 18 59.5	-2.2
BNX				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MJAR	Matsushiro Arr	134.85	320	PKP	PKPdf	23 22 05.0	-0.5
	comp=Z,2.7nm,0.6s,baz=76,slow=2.0,SNR=9.6						
ULN	Ulaanbaatar	136.23	357	*de*PKIKP	PKPdf	23 22 08.3	+0.4
SONM	Songino Array	136.29	358	PKhKP	PKPpre	23 21 57.8	
	comp=Z,0.3nm,0.3s,baz=337,slow=2.2,SNR=4.0						
SONM				PKP	PKPdf	23 22 08.4	+0.4
	comp=Z,2.9nm,0.9s,baz=355,slow=1.0,SNR=13						
KSH	Kashi	136.51	32	PKP	PKiKP	23 22 09.8	-0.6
KSH				sPKP		23 22 42.6	
ASAR	Alice Springs	139.89	225	PKP	PKPdf	23 22 15.2	0.0
	comp=Z,5.7nm,0.5s,baz=115,slow=2.0,SNR=11						
KSRS	Korea Array	140.13	330	PKhKP	PKPpre	23 22 06.8	
	comp=Z,1.4nm,0.6s,baz=47,slow=4.0,SNR=7.9						
KSRS				PKP	PKPdf	23 22 15.7	+0.5
	comp=Z,4.3nm,0.8s,baz=6.0,slow=1.3,SNR=17						
WRA	Warramunga Arr	141.82	230	PKhKP	PKPpre	23 22 14.4	
	comp=Z,8.1nm,0.8s,baz=118,slow=3.2,SNR=19						
WRA				PKP	PKiKP	23 22 21.0	-0.7
	comp=Z,1.6nm,0.6s,baz=114,slow=1.9,SNR=4.7						
HHC	Hu-ho-hao-te	142.69	350	*e*P	PKiKP	23 22 21.6	-1.4
GTA	Gaotai	144.57	6	PKP	PKPbc	23 22 22.0	-0.1
GTA				pPKP	pPKPdf	23 22 54.6	-0.4
MORW	Morawa	145.12	199	PKPbc	PKPbc	23 22 23.2	-0.7
HNS	HongShan	145.34	345	⇓PKPbc	PKPbc	23 22 24.5	+0.1
HNS				pPKP	pPKPdf	23 22 56.8	+0.6
LZH	Lanzhou	148.08	0	PKPbc	PKiKP	23 22 33.8	-0.5
LZH				sPKP		23 23 06.3	
LYN	LuoYang	148.60	346	⇓PKPbc	PKPbc	23 22 33.8	+0.1
NJ2	Nanjing	148.80	335	*e*P	PKPdf	23 22 30.8	+0.5
NJ2				pmax	pmax		
	comp=Z,20nm,0.8s						
XAN	Xi'an	149.77	352	⇓P	PKPbc	23 22 36.8	+0.1
XAN				pP	pPKPbc	23 23 08.3	0.0
XAN				pmax	pmax		
	comp=Z,65nm,1.0s						
XAN				pmax	pmax		
	comp=Z,170nm,3.8s						
PSA00	Pilbara Seismi	150.19	211	PKPbc	PKPbc	23 22 37.6	-0.4
MBWA	Marble Bar	150.59	211	PKPbc	PKPbc	23 22 38.7	-0.3
FAKI	Fak Fak	150.90	257	PKPbc	PKPbc	23 22 39.9	0.0
GIRL	Giralia	151.67	200	PKPbc	PKPbc	23 22 41.3	-0.1
HYB	Hyderabad	151.76	60	*e*PKiKP	PKiKP	23 22 42.3	+0.1
WHN	Wuhan	151.85	341	⇓PKPbc	PKPbc	23 22 41.6	0.0
PZH	PanZhiHua	157.54	5	PKP	PKPdf	23 22 42.6	-0.7
CMAR	Chiang Mai Arr	164.83	18	PKP	PKPdf	23 22 51.0	0.0
	comp=Z,3.2nm,0.8s,baz=291,slow=1.6,SNR=19						
CMAR				pPKP	pPKPdf	23 23 22.6	-0.3
	comp=Z,0.7nm,0.3s,baz=16,slow=0.7,SNR=2.1						
CMAR				PKPab	PKPab	23 23 46.4	-0.9
	comp=Z,3.1nm,0.8s,baz=327,slow=5.8,SNR=10.0						

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*IDC **19** 23:05:37.5±0.5, 31°.00S×177°.44W, h0^{km}, mb4.4/10, mbtmp4.3/12, ML3.8/2, MS4.2/1, Error ellipse: s-maj=21.4km s-min=18.6km az=128.0*

*NEIC **19** 23:05:42.4±1.1, 30°.84S±0°.08×177°.6W±0°.2, h17km±4km, mb4.9/35, Error ellipse: s-maj=19.1km s-min=11.4km az=91.0*

ISC 19 23:05:42.3±0.4**, 31°.03S**±0°.06×**177°.64W**±0°.08**, h27**km**, n102, σ1§35**/105**, mb4.8**/26**, 2C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.79	352		Pn	23 06 09.8	-1.6
RAO				Sn	Sn	23 06 30.3	-3.0
URZ	Urewera	8.41	210	Pn	Pn	23 07 41.7	-0.6
	0.9nm,0.3s,baz=149,slow=21,SNR=1.7						
URZ				Sn	Sn	23 09 11.8	-4.5
	3.7nm,0.3s,baz=35,slow=9.5,SNR=10						
	7.0nm,0.6s						
BKZ	Black Stump Fm	9.43	209	Pn	Pn	23 07 53.3	-3.2
RPZ	Rata Peaks	15.51	212	Pn	Pn	23 09 13.8	-5.3
	1.4nm,0.3s,baz=49,slow=4.5,SNR=7.2						

RPZ				Sn	Sn	23 11 56.3	-14
	0.5nm,0.3s,baz=9.5,slow=22,SNR=2.0						
PINNC	Pines Island,	15.72	299	Pn	Pn	23 09 21.9	-0.1
PINNC				IAmb	IAmb	23 09 36.2	
	comp=Z,102nm,1.4s						
ONTNC	Ouen Toro	16.65	298	Pn	Pn	23 09 33.1	-0.7
ONTNC				IAmb	IAmb	23 10 03.0	
	comp=Z,140nm,1.6s						
DZM	Mont Dzumac	16.79	298		Pn	23 09 35.7	0.0
DZM				IAmb	IAmb	23 09 54.4	
	comp=Z,92nm,1.5s						
DZM	Mont Dzumac	16.79	298	*e*Pn	P	23 09 36.9	-0.8
	comp=Z,136nm,1.6s						
DZM				*e*LR	LR	23 13 29.3	
	comp=Z,1μm,25.3s						
DZM	Mont Dzumac	16.79	298	Pn	P	23 09 37.8	+0.1
	comp=Z,0.4nm,0.3s,baz=126,slow=15,SNR=6.3						
	comp=Z,4.7nm,0.8s						
RAR	Rarotonga	18.76	63	LR	LR	23 16 25.8	
	comp=Z,768nm,19.3s,baz=216,slow=35						
TBI	Tubuai	26.15	80	*e*S	S	23 15 42.1	-2.5
	comp=Z,2μm,26.0s						
TBI				*e*LR	LR	23 17 40.8	
	comp=Z,2μm,21.0s						
ARMA	Armidale	26.39	263	P	P	23 11 17.8	+1.1
ARMA				IAmb	IAmb	23 11 21.9	
	comp=Z,46nm,1.4s						
EIDS	Eidsvold	28.09	274	P	P	23 11 32.1	+0.4
EIDS				IAmb	IAmb	23 11 54.3	
	comp=Z,31nm,1.6s						
PPT2	Papeete2	28.76	69	*e*S	S	23 16 25.5	-0.5
	comp=Z,472nm,24.5s						
PPT2				*e*LR	LR	23 18 35.1	
	comp=Z,484nm,21.0s						
PPT2				*e*LR	LR	23 18 42.6	
	comp=Z,425nm,21.5s						
TOO	Toolangi	31.01	248	P	P	23 11 58.9	+1.2
CTAO	Charters Tower	34.21	280		P	23 12 27.1	+1.3
CTAO				IAmb	IAmb	23 12 31.1	
	comp=Z,14nm,0.8s						
STKA	Stephens Creek	34.65	258		P	23 12 30.0	+0.6
STKA	Stephens Creek	34.65	258	P	P	23 12 29.9	+0.4
	comp=Z,7.2nm,0.7s,baz=96,slow=9.0,SNR=12						
	comp=Z,7.2nm,0.7s						
BBOO	Buckleboo	39.10	255	P	P	23 13 07.9	+0.5
BBOO				IAmb	IAmb	23 13 17.0	
	comp=Z,31nm,1.2s						
AS31	Alice Springs	43.39	267	P	P	23 13 43.3	+0.5
ASAR	Alice Springs	43.39	267	P	P	23 13 42.5	-0.2
ASAR	Alice Springs	43.39	267	P	P	23 13 43.7	+0.9
	comp=Z,3.2nm,0.7s,baz=104,slow=7.5,SNR=32						
ASAR				PcP	PcP	23 15 32.0	+1.0
	comp=Z,1.4nm,0.8s,baz=124,slow=4.6,SNR=3.0						
	comp=Z,3.2nm,0.7s						
WR8	Warramunga Arr	44.29	273	P	P	23 13 50.6	+0.6
WRA	Warramunga Arr	44.44	273		P	23 13 51.9	+0.7
WRA	Warramunga Arr	44.44	273	P	P	23 13 52.1	+1.0
	comp=Z,5.5nm,0.7s,baz=112,slow=7.8,SNR=20						
	comp=Z,5.5nm,0.7s						
WB0	Warramunga Arr	44.46	273		P	23 13 51.9	+0.6
FORT	Forrest	46.19	256	P	P	23 14 04.9	0.0
FORT				IAmb	IAmb	23 14 10.0	
	comp=Z,18nm,0.8s						
SBA	Scott Base	47.43	184	P	P	23 14 17.3	+3.3
SBA				IAmb	IAmb	23 14 38.8	
	comp=Z,12nm,1.3s						
VNDA	Vanda	47.50	186	P	P	23 14 12.4	-2.1
	comp=Z,0.4nm,0.3s,baz=293,slow=5.5,SNR=3.1						
	comp=Z,0.4nm,0.3s						
FITZ	Fitzroy Crossi	52.67	270	P	P	23 14 54.8	+0.3
CASY	Casey	54.73	208	P	P	23 15 10.4	+1.5
CASY				IAmb	IAmb	23 15 11.9	
	comp=Z,9.2nm,0.8s						
QSPA	South Pole Qui	59.08	180	P	P	23 15 42.8	+2.8
QSPA	South Pole Qui	59.08	180	P	P	23 15 40.9	+1.0
	comp=Z,8.7nm,1.0s,baz=56,slow=3.4,SNR=6.9						
	comp=Z,8.7nm,1.0s						
SYO	Syowa Base	76.57	193⇑	*e*P	P	23 17 30.5	+0.7
SNAA	Sanae	77.52	178	P	P	23 17 34.6	-0.5
	comp=Z,3.7nm,1.0s,baz=180,slow=4.6,SNR=3.7						
	comp=Z,3.7nm,1.0s						
MJAR	Matsushiro Arr	78.94	325	P	P	23 17 42.5	-0.8
MJAR	Matsushiro Arr	78.94	325	P	P	23 17 42.1	-1.2
	comp=Z,2.3nm,1.0s,baz=171,slow=4.7,SNR=5.8						
	comp=Z,2.3nm,1.0s						
H03S2	Juan Fernandez	79.86	123	T	T	00 45 27.0	
	baz=243,slow=75,SNR=30						
H03S1	Juan Fernandez	79.87	123	T	T	00 45 28.1	
	baz=243,slow=75,SNR=27						
H03S3	Juan Fernandez	79.87	123	T	T	00 45 26.9	
	baz=243,slow=75,SNR=24						
H03N3	Juan Fernandez	80.05	123	T	T	00 45 55.7	
	baz=246,slow=73,SNR=8.1						
H03N2	Juan Fernandez	80.05	123	T	T	00 45 41.7	
	baz=246,slow=73,SNR=4.8						
H03N1	Juan Fernandez	80.07	123	T	T	00 45 46.0	
	baz=246,slow=73,SNR=6.4						
KSAR	Wonju Array Be	85.04	319	P	P	23 18 15.8	+0.4
BCW	Bitter Crk WRg	85.47	44	P	P	23 18 18.8	+1.1
GSC	Goldstone, Bar	87.30	46	P	P	23 18 27.3	+0.6
GSC				IAmb	IAmb	23 18 29.3	
	comp=Z,17nm,1.4s						
AFDM	Forest Hills D	87.32	41	P	P	23 18 27.3	+0.7
AFDM				IAmb	IAmb	23 18 28.2	
	comp=Z,7.0nm,1.1s						
QSM	Queen of Sheba	87.70	45		P	23 18 29.2	+0.7
QSM				IAmb	IAmb	23 18 30.3	
	comp=Z,11nm,1.3s						
USRK	Ussuriysk Ar.	87.86	326	P	P	23 18 29.4	+0.5
NVAR	Mina Array Bea	88.49	43	P	P	23 18 32.6	+0.2
NVAR	Mina Array Bea	88.49	43	P	P	23 18 31.9	-0.6
	comp=Z,5.1nm,1.1s,baz=253,slow=5.9,SNR=12						
	comp=Z,5.1nm,1.1s						
NV11	Mina Array Sit	88.58	43	P	P	23 18 33.2	+0.4
NV11				IAmb	IAmb	23 18 35.2	
	comp=Z,5.5nm,1.1s						
TPH	Tonopah	88.88	43	P	P	23 18 34.2	-0.1
W13A	Hualapai Mount	88.99	47		P	23 18 34.9	0.0
W13A				IAmb	IAmb	23 18 37.1	
	comp=Z,5.1nm,1.2s						
TUC	Tucson	89.26	51	P	P	23 18 36.7	+0.6
TUC				IAmb	IAmb	23 18 38.6	
	comp=Z,8.5nm,1.4s						
PINE	Pine Mountain	90.71	37		P	23 18 43.9	+1.3
CN2	Changchun	90.83	323	*e*P	P	23 18 45.4	+2.4
WUAZ	Wupatki	90.85	48	P	P	23 18 43.8	+0.3
ELK	Elko	91.79	42	P	P	23 18 48.5	+0.6
ELK				IAmb	IAmb	23 18 50.1	
	comp=Z,8.2nm,1.6s						
ELK	Elko	91.79	42	P	P	23 18 47.8	-0.1
	comp=Z,0.8nm,0.7s,baz=167,slow=2.7,SNR=5.4						
	comp=Z,0.8nm,0.7s						
ENH	Enshi	92.22	304	P	P	23 18 50.2	+0.4
TXAR	Lajitas Array	92.47	57	P	P	23 18 50.2	-0.9
TXAR	Lajitas Array	92.47	57	P	P	23 18 50.1	-1.0
	comp=Z,1.7nm,1.1s,baz=220,slow=4.9,SNR=8.3						
	comp=Z,1.7nm,1.1s						
G08A	Pilot Rock	92.77	37		P	23 18 52.2	+0.1
HVU	Hansel Valley	93.88	43	P	P	23 18 57.5	+0.1
HVU				IAmb	IAmb	23 18 59.0	
	comp=Z,7.9nm,1.2s						
PLID	Pearl Lake	94.19	39		P	23 18 58.4	-0.4
PLID				IAmb	IAmb	23 19 00.7	
	comp=Z,8.6nm,1.2s						
HHC	Hu-ho-hao-te	96.90	314	*e*P	P	23 19 14.5	+3.4
HHC				pmax	pmax		
	comp=Z,19nm,0.7s						
MKAR	Makanchi Array	118.42	310	PKP	PKPdf	23 24 25.6	-1.5
	comp=Z,0.7nm,0.8s,baz=179,slow=2.2,SNR=2.8						
KSH	Kashi	120.83	300	PKP	PKiKP	23 24 34.9	+2.7
KURBB	Kurchatov Arra	121.75	313	PKP	PKPdf	23 24 31.6	-1.7
	comp=Z,0.6nm,0.7s,baz=112,slow=2.0,SNR=3.6						
BVAR	Borovoye Array	127.07	315	PKP	PKPdf	23 24 42.0	-1.5
	comp=Z,1.1nm,0.7s,baz=97,slow=3.1,SNR=3.2						
KBZ	Khabaz	145.72	303	PKPbc	PKPdf	23 25 18.1	0.0
	comp=Z,5.3nm,1.0s,baz=146,slow=1.1,SNR=10						
FINES	FINESS Array B	145.84	340		PKPdf	23 25 17.7	0.0
FINES	FINESS Array B	145.84	340	PKPbc	PKPdf	23 25 16.8	-0.9
	comp=Z,4.5nm,0.6s,baz=50,slow=3.0,SNR=24						
OBN	Obninsk	145.87	325	PKPdf	PKPdf	23 25 18.2	+0.3
OBN	Obninsk	145.87	325	PKPbc	PKPdf	23 25 18.0	+0.1
	comp=Z,7.2nm,0.4s,baz=114,slow=10.0,SNR=1.4						
KARS	Kars	145.89	298	PKPdf	PKPab	23 25 19.8	0.0
GEVA	Gevas	145.97	294	PKPdf	PKPab	23 25 20.1	-0.2
GURO	Guroymak-BITLI	146.77	294	PKPdf	PKPbc	23 25 22.3	+0.3
MARD	Mardin	147.77	292		PKPdf	23 25 23.2	+1.3
KOPT	Kop Dagi	147.90	297		PKPbc	23 25 24.5	-0.8
NB2	NORSAR Subarra	149.42	352	PKP	PKPbc	23 25 26.7	-1.5
	comp=Z,23nm,1.7s,baz=15,slow=4.3						
NOA	NORSAR Array B	149.42	352	PKPbc	PKPbc	23 25 26.6	-1.5
	comp=Z,3.4nm,1.0s,baz=14,slow=4.2,SNR=6.9						
HFS	Hagfors	149.92	349	PKPbc	PKPbc	23 25 27.8	-1.6
	comp=Z,3.6nm,0.9s,baz=135,slow=0.8,SNR=6.3						
MNK	Minsk	150.28	330	*i* PKiKP	PKPbc	23 25 30.6	+0.2
	comp=E,6.0nm,0.8s						
MNK				*i* PKiKP	PKPbc	23 25 30.6	+0.2
	comp=N,9.0nm,0.9s						
MNK				*i* PKiKP	PKPbc	23 25 30.6	+0.2
	comp=Z,11nm,0.9s,baz=48						
MNK				*i* PP	PP	23 29 05.3	-0.4
MNK				*i* PPP	PPP	23 32 27.6	
MNK				*i* SKS	SKSdf	23 32 29.1	-1.9
MNK				*i* SS	SS	23 48 22.8	+0.9
MNK				*i* SSS	SSS	23 54 04.3	
NACGM	Naroch	150.48	331⇑	*i*PKiKP	PKPbc	23 25 30.1	-0.8
	comp=Z,11nm,1.0s,baz=46						
GAZ	Gaziantep	150.61	292		PKPbc	23 25 32.2	+0.3
ASF	Jabal al Asfar	150.64	281	PKPbc	PKPbc	23 25 32.4	+0.2
	comp=Z,4.5nm,1.0s,baz=169,slow=6.0,SNR=5.2						
PABE	Paberze	151.15	334	PKPdf	PKPdf	23 25 28.2	+1.7
BNN	Bunyan	151.58	295	PKPdf	PKPdf	23 25 28.9	+1.0
EIL	Elat	151.90	276	PKPbc	PKiKP	23 25 35.6	+0.2
	comp=Z,4.9nm,0.9s,baz=145,slow=4.9,SNR=4.5						
MMAI	Mount Meron Ar	151.98	283	PKPbc	PKPbc	23 25 34.8	-0.4
	comp=Z,2.3nm,0.6s,baz=70,slow=10.0,SNR=6.0						
MMAI				PKPab	sPKPbc	23 25 45.3	+0.2
	comp=Z,3.7nm,0.8s,baz=52,slow=1.5,SNR=3.8						
AKASG	Malin Array Be	151.99	322	PKPbc	PKPbc	23 25 34.0	-0.5
AKASG	Malin Array Be	151.99	322	PKPbc	PKPbc	23 25 33.3	-1.2
	comp=Z,2.6nm,0.7s,baz=52,slow=2.4,SNR=11						
AKBB	Malin Array Si	151.99	322		PKPbc	23 25 34.1	-0.4
KIEV	Kiev	152.00	322		PKPbc	23 25 34.3	-0.3
BRTR	Keskin Array B	153.17	297	PKPbc	PKiKP	23 25 38.7	+0.8
	comp=Z,0.5nm,0.5s,baz=146,slow=5.2,SNR=4.9						
BRTR				PKPab	sPKPbc	23 25 48.1	+0.5
	comp=Z,1.2nm,0.8s,baz=72,slow=3.5,SNR=6.7						
CLL	Collm	158.26	342	*i* PKPab	PKPab	23 26 09.1	-1.5
	comp=Z,4.0nm,1.0s						
VRAC	Vranov	158.82	334	PKPab	PKPab	23 26 14.7	+1.6
	comp=Z,1.1nm,0.6s,baz=353,slow=8.1,SNR=3.7						
TORD	Torodi Ar. Bea	162.19	178	PKPab	PKPab	23 26 28.8	+0.2
	comp=Z,161nm,0.3s,baz=208,slow=2.6,SNR=1.5						
DAVOX	Davos/Dischmat	163.23	342	PKPab	PKPab	23 26 32.5	-0.2
	comp=Z,1.0nm,0.4s,baz=226,slow=4.6,SNR=3.2						
ESDC	Sonseca Array	169.95	29	PKPab	PKPab	23 27 01.5	-0.9
	comp=Z,0.4nm,0.9s,baz=294,slow=3.5,SNR=4.7						

IDC ***19*** *23:14:57.1±0.4, 12.°73S×166.°31E, h0^{km}, mb5.0/21, mbtmp4.9/24, ML3.5/2, MS5.4/40, Error ellipse: s-maj=13.2km s-min=12.4km az=23.0*

MOS ***19*** *23:14:57.5±0.9, 12.°67S×166.°24E, h10^{km}, mb5.7/53, MS5.5/30, Error ellipse: s-maj=9.2km s-min=6.2km az=126.3*

BGR ***19*** *23:14:58.8, 13.°30S×166.°18E, h33^{km}, Ms5.7*

NEIC ***19*** *23:14:59.9±1.8, 12.°66S±0.°06×166.°26E±0.°08, h10^{km}±1^{km}, mb5.4/118, Ms_20 5.7/1027, Mww5.7/45, Error ellipse: s-maj=13.9km s-min=9.9km az=60.0*

ISC-PP ***19*** *23:14:59, 12.°66S×166.°26E, h17^{km}, Mwppsm6.1, Moment Tensor Solution. s35 Moment tensor: Scale 10^{18}Nm; M_{rr}0.56±.13; $M_{\theta\theta}$-0.02±.18; $M_{\phi\phi}$-0.42±.17; $M_{r\theta}$0.12±.10; $M_{\theta\phi}$-0.49±.15; $M_{\phi r}$-0.02±.09; Fault plane solution: $M_0$1.64000×10^{18} NP1:ϕ_s9.80000°, δ23.20000°, λ107.40000°. NP2:ϕ_s171.00000°, δ67.90000°, λ82.70000°.*

BJI ***19*** *23:15:00.4, 12.°25S×166.°47E, h20^{km}, mB5.8/80, mb5.2/79, Ms5.6/94, Ms7 5.2/91*

NEIC ***19*** *23:15:00.7, 12.°64S×166.°24E, h14^{km}, Moment Tensor Solution. Duration: 3^{s}7 Moment tensor: Scale 10^{17}Nm; M_{rr}3.84; $M_{\theta\theta}$0.19; $M_{\phi\phi}$-4.03; $M_{r\theta}$0.57; $M_{\theta\phi}$1.46; $M_{\phi r}$-0.44; Fault plane solution: $M_0$4.26000×10^{17} NP1: ϕ_s349.85000°, δ41.40000°, λ100.66000°. NP2: ϕ_s155.75000°, δ49.47000°, λ80.73000°. Principal axes: T 3.9347, Plg82.0000°, Azm12.0000°; N 0.5924, Plg7.0000°, Azm162.0000°; P -4.5270, Plg4.0000°, Azm252.0000°;*

NEIC ***19*** *23:15:00.7, 12.°64S×166.°24E, h14^{km}*

IPGP ***19*** *23:15:02.0, 12.°67S×166.°19E, h15^{km}, Mw5.8, Fault plane solution: NP1:ϕ_s346.00000°, δ25.00000°, λ90.00000°. NP2:ϕ_s166.00000°, δ65.00000°, λ90.00000°.*

NOU ***19*** *23:15:03.9, 12.°59S×166.°12E, h23^{km}, ML5.6/113, Santa Cruz Islands*

GCMT ***19*** *23:15:04.9±0.1, 12.°66S±0.°01×166.°05E, h18^{km}, MW5.8/164, Moment Tensor Solution. s158,c338; s164,c362; Duration: 2^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}4.90±.04; $M_{\theta\theta}$-0.20±.03; $M_{\phi\phi}$-4.70±.04; $M_{r\theta}$2.48±.10; $M_{\theta\phi}$1.47±.03; $M_{\phi r}$-3.33±.10; Best double couple: $M_0$6.51700×10^{17} NP1:ϕ_s356.00000°, δ27.00000°, λ113.00000°. NP2:ϕ_s151.00000°, δ65.00000°, λ79.00000°. Principal axes: T 6.5270, Plg68.0000°, Azm39.0000°; N -0.0170, Plg10.0000°, Azm156.0000°; P -6.5060, Plg19.0000°, Azm249.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 23:15:00.1±0.5**, 12.°63S**±0.°03×**166.°29E**±0.°03**, h15**^{km}±2^{km}**, h15**^{km}**:pP-P, n1560,** σ**1^{s}57**/1247**, mb5.4**/162**, MS5.7**/586**, 69C-34D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUES	Luesalemba Tem	1.99	349	P	Pb	23 15 35.7	-0.3
LUES	Luesalemba Tem	1.99	349	S	Sn	23 15 59.9	+2.0
SANVU	Saraoutou	2.94	163	Pn	Pn	23 15 46.3	-0.1
SANVU				Sn	Sn	23 16 21.8	+0.4
SANVU	Saraoutou	2.94	163	P	Pb	23 15 50.4	-1.9
SANVU	Saraoutou	2.94	163	S	Sb	23 16 27.5	-0.6
VLAKA	Lakatoro	3.63	163	P	Pn	23 15 59.3	+3.5
HURO	Huro Makira	4.81	296	P	Pn	23 16 11.0	-1.0
DVP	Devils Point	5.39	160	P	Pn	23 16 24.1	+4.1
NGOA	Tingoa Renbel	6.18	279	P	Pn	23 16 30.0	-1.0
NGOA	Tingoa Renbel	6.18	279	S	Sn	23 17 40.5	-1.0
ALEG	Aligegeo Malai	6.71	304	P	Pn	23 16 38.1	-0.1
HNR	Honiara	6.99	296		Pn	23 16 42.0	0.0
HNR	Honiara	6.99	296	Pn	Pn	23 16 43.3	+1.3
	2μm,0.8s,baz=186,slow=2.9,SNR=32						
HNR				Sn	Sn	23 18 01.0	-0.4
	83nm,0.3s,baz=217,slow=23,SNR=8.2						
HNR				LR	LR	23 19 33.8	
	comp=Z,25μm,21.7s,baz=128,slow=39						
HNR	Honiara	6.99	296	P	Pn	23 16 43.5	+1.5
HNR	Honiara	6.99	296	S	Sn	23 18 00.4	-0.9
SAVO	Savo Central	7.24	298	P	Pn	23 16 46.7	+1.2
INH	Isangel	7.45	158	P	Pn	23 16 53.1	+4.7
TATA	Tatamba Isabel	7.64	303	P	Pn	23 16 51.9	+0.9
DZM	Mont Dzumac	9.39	179		Pn	23 17 15.1	0.0
DZM	Mont Dzumac	9.39	179	*e*Pn	Pn	23 17 18.9	+3.8
	285nm,1.0s						
DZM				*e*Sn	Sn	23 19 10.7	+10
DZM				*e*LR	LR	23 19 21.9	
	19μm,24.2s						
DZM	Mont Dzumac	9.39	179	Pn	Pn	23 17 13.2	-1.9
	2.3nm,0.3s,baz=355,slow=11,SNR=19						
DZM				Sn	Sn	23 19 11.7	+11
	2.0nm,0.3s,baz=332,slow=21,SNR=1.1						
DZM				LR	LR	23 19 48.6	
	comp=Z,6μm,21.0s,baz=11,slow=31						
	2.6nm,0.3s						
DZM	Mont Dzumac	9.39	179	P	Pn	23 17 18.6	+3.5
YATNC	Mamie plateau,	9.40	177	P	Pn	23 17 18.5	+3.4
ONTNC	Ouen Toro	9.63	179		Pn	23 17 19.3	+1.0
ONTNC	Ouen Toro	9.63	179	P	Pn	23 17 21.1	+2.9
OUENC	Ouen Island, N	9.75	177	P	Pn	23 17 22.7	+2.8
PINNC	Pines Island,	9.99	174		Pn	23 17 24.6	+1.4
PINNC	Pines Island,	9.99	174	P	Pn	23 17 27.4	+4.2
MSVF	Nonsavu	12.43	116		Pn	23 17 59.1	+2.4
MSVF	Nonsavu	12.43	116	LR	LR	23 21 43.5	
	comp=Z,42μm,18.6s,baz=298,slow=33						
MSVF	Nonsavu	12.43	116	P	Pn	23 18 02.3	+5.5
MSVF	Nonsavu	12.43	116	P	Pn	23 17 59.7	+2.9
FUNA	Funafuti	13.32	73		Pn	23 18 09.4	+0.5
FUNA	Funafuti	13.32	73	P	Pn	23 18 12.7	+3.8
DGTI	Dogotuki	13.52	107	P	P	23 18 17.2	-3.5
FUTU	Fugatoga	15.25	98		Pn	23 18 37.4	+2.3
FUTU	Fugatoga	15.25	98	P	P	23 18 40.2	+0.2
LKBA	Tubou, Lakemba	15.40	113	P	P	23 18 42.4	+0.8
RABL	Rabaul	16.29	300	Pn	Pn	23 18 49.3	+0.8
GD1S	Gladstone Soft	18.16	230	P	P	23 19 13.5	+1.3
PMG	Port Moresby	19.05	278		P	23 19 21.2	-0.8
PMG	Port Moresby	19.05	278	P	P	23 19 21.8	-0.1
	1.3nm,0.3s,baz=109,slow=5.2,SNR=12						
PMG				S	Sn	23 22 55.9	-0.2
	5.3nm,0.4s,baz=155,slow=18,SNR=1.2						
	89nm,1.0s						
PMG	Port Moresby	19.05	278	P	Pn	23 19 22.7	0.0
PMG	Port Moresby	19.05	278	P	Pn	23 19 22.8	0.0
PMG	Port Moresby	19.05	278	*ce*P	Pn	23 19 22.9	+0.1
PMG				pmax	pmax		
	comp=Z,129nm,1.2s						
EIDS	Eidsvold	19.14	226		P	23 19 22.9	-0.1
EIDS				IAmb	IAmb	23 19 28.1	
	comp=Z,207nm,1.5s						
EIDS	Eidsvold	19.14	226	P	Pn	23 19 23.8	-0.1
	comp=Z,0.0nmcomp=Z,111nm,0.8s						
EIDS	Eidsvold	19.14	226	P	Pn	23 19 23.9	+0.1
GC1S	Gold Coast 1 S	19.53	216	P	Pn	23 19 29.4	+1.0
CTAO	Charters Tower	20.59	246		P	23 19 38.4	-0.5
CTAO				IAmb	IAmb	23 19 55.7	
	comp=Z,161nm,1.2s						
CTAO	Charters Tower	20.59	246	P	P	23 19 39.6	+0.7
CTAO	Charters Tower	20.59	246	P	P	23 19 38.4	-0.5
CTAO				pmax	pmax		
	comp=Z,161nm,1.3s						
CTAO				MLR	MLR		
	comp=Z,20μm,18.0s						
PATS	Pohnpei	20.90	337	P	P	23 19 42.2	+0.1
PATS	Pohnpei	20.90	337	P	Pn	23 19 44.3	-0.4
AFI	Afiamalu	21.39	96	P	P	23 19 47.6	+0.1
AFI	Afiamalu	21.39	96	P	P	23 19 52.8	+5.3
AFI	Afiamalu	21.39	96	P	P	23 19 47.6	+0.1
AFI				pmax	pmax		
	comp=Z,91nm,1.2s						
AFI				MLR	MLR		
	comp=Z,13μm,18.0s						
RMQ	Roma	21.48	228	P	P	23 19 49.4	+1.1
	comp=Z,94nm,1.4s						
RMQ	Roma	21.48	228	P	P	23 19 51.1	+2.7
MANU	Manus Island	21.49	298		P	23 19 46.8	-1.7
MANU				IAmb	IAmb	23 20 05.0	
	comp=Z,138nm,1.2s						
MTSU	Mount Surprise	21.87	253	P	P	23 19 52.8	+0.2
	comp=Z,77nm,0.9s						
MTSU	Mount Surprise	21.87	253	P	P	23 19 54.1	+1.4
COEN	Coen	22.53	264		P	23 19 58.5	-1.3
COEN	Coen	22.53	264	P	P	23 19 59.3	-0.5
	comp=Z,0.0nmcomp=Z,87nm,1.1s						
COEN	Coen	22.53	264	P	P	23 20 02.2	+2.4
MGCD	Mangrove Creek	24.74	212	P	P	23 20 21.2	0.0
	comp=Z,89nm,0.8s						
MGCD	Mangrove Creek	24.74	212	P	P	23 20 24.7	+3.5
QLP	Quilpie	24.93	233	P	P	23 20 22.5	-0.4
	comp=Z,178nm,1.3s						
QLP	Quilpie	24.93	233	P	P	23 20 25.4	+2.5
RIV	Riverview	25.21	211	P	P	23 20 29.2	+3.9
CMSA	Cobar Meteorol	26.72	222	P	P	23 20 39.3	+0.3
	comp=Z,0.0nmcomp=Z,114nm,1.1s						
CMSA	Cobar Meteorol	26.72	222	P	P	23 20 40.3	+1.2
QIS	Mount Isa	26.73	249	P	P	23 20 38.9	-0.4
	comp=Z,0.0nmcomp=Z,26nm,1.3s						
QIS	Mount Isa	26.73	249	P	P	23 20 40.1	+0.7
HIZ	Hauiti	26.88	165	IAMs_20	IAMs_20	23 30 36.1	
	comp=Z,17μm,19.0s						
YNG	Young	27.02	214	P	P	23 20 42.5	+0.7
	comp=Z,44nm,1.1s						
JAY	Jayapura	27.25	290	P	P	23 20 46.6	+2.5
CNB	Canberra Magne	27.29	211	P	P	23 20 44.9	+0.6
	comp=Z,39nm,1.0s						
CNB	Canberra Magne	27.29	211	P	P	23 20 46.1	+1.8
RTZ	Ruatahuna	27.57	162	P	P	23 20 46.8	0.0
RTZ				IAmb	IAmb	23 21 00.4	
	comp=Z,60nm,1.3s						
OTVZ	Oturere	27.71	164	P	P	23 20 49.4	+1.4
BKZ	Black Stump Fm	27.94	163	P	P	23 20 48.9	-1.0
BKZ				IAmb	IAmb	23 21 09.5	
	comp=Z,83nm,1.6s						
BKZ	Black Stump Fm	27.94	163	P	P	23 20 54.5	+4.5
MRZ	Mangatainoka R	29.09	165	IAMs_20	IAMs_20	23 31 58.2	
	comp=Z,17μm,19.0s						
MRNZ	Matariki Terra	29.22	170	P	P	23 21 03.1	+1.8
BFZ	Birch Farm	29.28	164	IAMs_20	IAMs_20	23 33 14.2	
	comp=Z,23μm,18.0s						
SNZO	South Karori	29.51	167	IAMs_20	IAMs_20	23 32 49.1	
	comp=Z,15μm,19.0s						
THZ	Tophouse	29.59	170	P	P	23 21 05.2	+0.5
STKA	Stephens Creek	29.70	226		P	23 21 05.5	-0.1
STKA	Stephens Creek	29.70	226	P	P	23 21 05.5	-0.1
	comp=Z,0.0nmcomp=Z,389nm,0.9s						
STKA	Stephens Creek	29.70	226	P	P	23 21 05.5	-0.1
	comp=Z,20nm,0.7s,baz=33,slow=10.0,SNR=28						
STKA				S	S	23 25 42.8	-18
	comp=Z,1.6nm,0.5s,baz=231,slow=17,SNR=1.1						
STKA				LR	LR	23 33 04.8	
	comp=Z,16μm,18.4s,baz=63,slow=37						
	comp=Z,20nm,0.7s						
STKA	Stephens Creek	29.70	226	P	P	23 21 07.1	+1.4
KHZ	Kahutara	30.34	169	IAMs_20	IAMs_20	23 33 19.1	
	comp=Z,15μm,18.0s						
KHZ	Kahutara	30.34	169	P	P	23 21 10.1	-1.1
LTZ	Lake Taylor	30.49	171	P	P	23 21 12.4	-0.2
WVZ	Waitaha Valley	30.58	174	P	P	23 21 14.2	+0.9
OXZ	Oxford	30.99	172	P	P	23 21 17.1	+0.1
TOO	Toolangi	31.02	213	P	P	23 21 16.9	-0.5
TOO	Toolangi	31.02	213	P	P	23 21 18.1	+0.7
	comp=Z,16nm,1.3s						
TOO	Toolangi	31.02	213	P	P	23 21 16.9	-0.5
TOO				pmax	pmax		
	comp=Z,14nm,1.0s						
TOO				MLR	MLR		
	comp=Z,4μm,18.0s						
RPZ	Rata Peaks	31.25	173	LR	LR	23 33 58.1	
	comp=Z,10μm,18.3s,baz=349,slow=37						
RPZ	Rata Peaks	31.25	173	P	P	23 21 23.9	+4.7
RPZ	Rata Peaks	31.25	173	P	P	23 21 19.4	+0.2
WR8	Warramunga Arr	31.33	252	P	P	23 21 18.1	-2.2
JCZ	Jackson Bay	31.41	177	P	P	23 21 22.7	+2.0
MQZ	McQueen’s Vall	31.45	171	P	P	23 21 20.7	-0.3
WB2	Warramunga Arr	31.47	252	P	P	23 21 19.8	-1.6
WRA	Warramunga Arr	31.48	252	P	P	23 21 19.5	-2.1
WRA	Warramunga Arr	31.48	252	P	P	23 21 19.4	-2.2
	comp=Z,12nm,1.0s,baz=80,slow=9.0,SNR=31						
WRA				PcP	PcP	23 24 14.8	+0.1
	comp=Z,3.1nm,1.0s,baz=86,slow=3.3,SNR=2.9						
WRA				LR	LR	23 33 12.7	
	comp=Z,7μm,19.0s,baz=81,slow=35						
	comp=Z,12nm,1.0s						
WRA	Warramunga Arr	31.48	252	*i* P	P	23 21 19.7	-1.9
WRA				pmax	pmax		
	comp=Z,12nm,1.0s						
ARCZ	Arundel	31.49	173	P	P	23 21 20.9	-0.5
HTT	Hallett	32.43	226	P	P	23 21 29.8	-0.1
	comp=Z,22nm,1.1s						
HTT	Hallett	32.43	226	P	P	23 21 30.4	+0.5
ARPS	Mount Arapiles	32.55	218	P	P	23 21 30.4	-0.3
	comp=Z,30nm,0.9s						
ARPS	Mount Arapiles	32.55	218	P	P	23 21 32.3	+1.6
AS01	Alice Springs	32.55	246	P	P	23 21 33.1	+2.1
AS31	Alice Springs	32.59	246	P	P	23 21 29.6	-1.8
AS31	Alice Springs	32.59	246	P	P	23 21 29.2	-2.2
	comp=Z,8.3nm,1.0s						
AS12	Alice Springs	32.60	246	P	P	23 21 29.3	-2.0
	comp=Z,30nm,0.9s						
ASAR	Alice Springs	32.60	246	P	P	23 21 29.5	-1.9
ASAR	Alice Springs	32.60	246	P	P	23 21 29.4	-2.0
	comp=Z,16nm,0.9s,baz=75,slow=9.5,SNR=74						
ASAR				PcP	PcP	23 24 15.3	-2.4
	comp=Z,3.3nm,0.8s,baz=69,slow=2.8,SNR=2.6						
ASAR				ScP	ScP	23 28 03.5	+2.1
	comp=Z,1.6nm,1.0s,baz=84,slow=3.4,SNR=3.1						
ASAR				LR	LR	23 34 14.9	
	comp=Z,11μm,19.5s,baz=82,slow=36						
	comp=Z,16nm,0.9s						
KDU	Kakadu	32.98	266	P	P	23 21 35.4	+0.6
WHYH	Whyalla	33.18	228	P	P	23 21 37.3	+1.0
RAR	Rarotonga	33.51	109	LR	LR	23 34 39.0	
	comp=Z,4μm,18.2s,baz=272,slow=35						
GUMO	Guam	33.61	320	LR	LR	23 34 27.2	
	comp=Z,6μm,21.1s,baz=136,slow=35						
SYZ	Scrubby Hill	33.88	176	P	P	23 21 45.8	+3.6
BBOO	Buckleboo	34.17	229	P	P	23 21 44.5	-0.5
BBOO				IAmb	IAmb	23 22 01.9	
	comp=Z,111nm,1.2s						
BBOO	Buckleboo	34.17	229	P	P	23 21 44.5	-0.5

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      comp=Z,78nm,1.4s
BBOO  Buckleboo        34.17 229   P         P         23 21 45.2 +0.2
KNRA  Kununurra        36.48 261   P         P         23 22 04.5 -0.5
KNRA                               IAmb      IAmb      23 22 19.9
      comp=Z,129nm,1.2s
KNRA  Kununurra        36.48 261   P         P         23 22 04.2 -0.8
      comp=Z,0.0nmcomp=Z,103nm,1.1s
SWI   Sorong           36.63 286   P         P         23 22 07.1 +0.7
      comp=Z,1µmcomp=Z,43nm,1.3s
BNDI  Bandanaira       36.83 279   P         P         23 22 10.1 +2.1
FITZ  Fitzroy Crossi   39.51 257   P         P         23 22 29.5 -1.1
FITZ  Fitzroy Crossi   39.51 257   LR        LR        23 38 24.8
      comp=Z,6µm,19.3s,baz=76,slow=36
FITZ  Fitzroy Crossi   39.51 257   P         P         23 22 30.5 -0.1
FORT  Forrest          39.60 237   P         P         23 22 30.5 -0.7
FORT                               IAmb      IAmb      23 22 43.4
      comp=Z,72nm,0.8s
FORT                               IAMs_20   IAMs_20   23 39 18.0
      comp=Z,15µm,19.0s
FORT  Forrest          39.60 237   P         P         23 22 30.3 -0.9
      comp=Z,103nm,0.7s
FORT  Forrest          39.60 237   P         P         23 22 32.6 +1.4
NLAI  Namlea           39.87 280   P         P         23 22 34.6 +1.0
      comp=Z,2µmcomp=Z,128nm,1.9s
TNTI  Ternate          40.85 286   P         P         23 22 41.4 -0.4
TNTI                               IAmb      IAmb      23 23 07.8
      comp=Z,60nm,1.1s
TNTI  Ternate          40.85 286   P         P         23 22 44.0 +2.2
      comp=Z,3µmcomp=Z,30nm,1.0s
SANI  Sanana           41.26 281   P         P         23 22 46.4 +1.2
SOEI  Soe              41.29 270   P         P         23 22 46.6 +1.0
      comp=Z,2µmcomp=Z,58nm,1.0s
BATI  Baumata          41.82 269   P         P         23 22 52.2 +2.4
      comp=Z,2µmcomp=Z,80nm,1.2s
PPT   Papeete          42.82 102   LR        LR        23 36 46.6
      comp=Z,4µm,20.6s,baz=272,slow=31
PPT2  Papeete2         42.82 102  ePKIKP     P         23 22 55.0 -3.0
      comp=Z,740nm,26.5s
PPT2  Papeete2         42.82 102  ePP        PP        23 24 33.4 -4.0
      comp=Z,699nm,24.5s
PPT2                              eS         S         23 29 22.5 +0.4
      comp=Z,4µm,27.5s
PPT2                              eSS        SnSn      23 32 42.7 -6.0
      comp=Z,2µm,27.0s
PPT2                              eLQ        LQ        23 33 13.9
      comp=Z,15µm,26.8s
PPT2                              eLR        LR        23 34 53.6
      comp=Z,9µm,29.8s
PPT2                              eLR        LR        23 34 54.5
      comp=Z,12µm,26.8s
PPTF  Pamatai, Papee   42.83 102   IAMs_20   IAMs_20   23 39 11.7
      comp=Z,6µm,18.0s
TBI   Tubuai           43.26 111  eP         P         23 23 03.4 +2.0
      comp=Z,2µm,26.8s
TBI   Tubuai           43.26 111  ePP        PP        23 24 44.4 +2.4
      comp=Z,2µm,27.8s
TBI                               eS         S         23 29 29.6 +1.3
      comp=Z,11µm,27.2s
TBI                               eSS        SS        23 32 50.7 +8.9
      comp=Z,8µm,29.8s
TBI                               eLQ        LQ        23 33 25.6
      comp=Z,37µm,32.5s
TBI                               eLR        LR        23 35 02.9
      comp=Z,4µm,28.0s
TBI                               eLR        LR        23 35 06.3
      comp=Z,17µm,28.0s
MMRI  Maumere          43.44 271   P         P         23 23 04.8 +1.9
MIDW  Midway           43.58  21   IAMs_20   IAMs_20   23 41 41.0
      comp=Z,6µm,18.0s
SGSI  Sangihe          43.62 289   P         P         23 23 04.7 +0.4
EDFI  Ende, Flores     43.96 270   P         P         23 23 08.4 +1.2
      comp=Z,1µmcomp=Z,27nm,1.2s
PMOR  Pomariorio Ree   44.49  99  eP         P         23 23 17.2 +5.8
      comp=Z,271nm,1.3s
PMOR                              eS         S         23 29 49.8 +3.3
      comp=Z,3µm,27.2s
LUWI  Luwuk            44.63 281   P         P         23 23 12.6 +0.1
LUWI  Luwuk            44.63 281   P         P         23 23 14.1 +1.6
LUWI  Luwuk            44.63 281   P         P         23 23 14.1 +1.6
      comp=Z,3µmcomp=Z,95nm,1.1s
VAH   Vaihoa           44.74  99  eP         P         23 23 18.2 +4.9
      comp=Z,184nm,1.4s
PSA00 Pilbara Seismi   45.13 252   P         P         23 23 16.7 +0.3
MBWA  Marble Bar       45.22 253   IAMs_20   IAMs_20   23 42 37.9
      comp=Z,7µm,18.0s
BNSI  Bone             46.34 276   P         P         23 23 26.9 +0.9
      comp=Z,1µmcomp=Z,42nm,1.1s
KAPI  Kappang          46.55 275   P         P         23 23 27.0 -0.7
KAPI                               IAmb      IAmb      23 23 42.0
      comp=Z,54nm,1.2s
KAPI  Kappang          46.55 275   P         P         23 23 29.0 +1.3
KAPI  Kappang          46.55 275⇑iP          P         23 23 27.9 +0.2
KAPI                               pmax      pmax
      comp=Z,26nm,1.2s
MEEK  Meekatharra      46.75 245   P         P         23 23 28.8 -0.4
      comp=Z,73nm,0.9s
MEEK  Meekatharra      46.75 245   P         P         23 23 30.0 +0.8
SPSI  Sidrap Palu      46.77 276   P         P         23 23 30.6 +1.2
TOLI2 Tolitoli         47.17 283   P         P         23 23 31.1 -1.4
TOLI2                              IAmb      IAmb      23 25 18.1
      comp=Z,23nm,1.1s
TOLI2 Tolitoli         47.17 283   P         P         23 23 33.6 +1.0
PCI   Palu             47.48 280   P         P         23 23 37.8 +2.8
      comp=Z,112nm,1.1s
PLAI  Plampang         47.76 269   P         P         23 23 38.8 +1.6
MPSI  Mapaga           47.78 282   P         P         23 23 37.4 +0.1
      comp=Z,3µmcomp=Z,34nm,1.2s
KLBR  Kellerberrin     48.33 239   P         P         23 23 40.3 -1.0
      comp=Z,100nm,0.8s
KLBR  Kellerberrin     48.33 239   P         P         23 23 43.4 +2.0
HON   Honolulu         48.66  46   IAMs_20   IAMs_20   23 44 28.0
      comp=Z,5µm,18.0s
KIP   Kipapa           48.72  46   IAMs_20   IAMs_20   23 44 46.5
      comp=Z,6µm,18.0s
BLDU  Ballidu          49.03 240   P         P         23 23 48.6 +1.9
NWAO  Narrogin (SRO)   49.04 237   P         P         23 23 46.0 -0.8
NWAO                               IAmb      IAmb      23 23 59.7
      comp=Z,73nm,0.9s
NWAO  Narrogin (SRO)   49.04 237   IAMs_20   IAMs_20   23 44 55.7
      comp=Z,11µm,19.0s
NWAO  Narrogin (SRO)   49.04 237   LR        LR        23 45 07.4
      comp=Z,11µm,19.0s,baz=82,slow=37
NWAO  Narrogin (SRO)   49.04 237   P         P         23 23 46.9 +0.1
NWAO  Narrogin (SRO)   49.04 237   P         P         23 23 46.0 -0.8
NWAO                               pmax      pmax
      comp=Z,73nm,0.9s
NWAO                               MLR       MLR
      comp=Z,11µm,19.0s
KHU   Kahuku           49.11  50   IAMs_20   IAMs_20   23 42 46.9
      comp=Z,7µm,19.0s
HUH   Hualalai         49.21  50   IAMs_20   IAMs_20   23 42 31.6
      comp=Z,8µm,19.0s
MWH   Mokuaweoweo      49.27  50   IAMs_20   IAMs_20   23 42 51.1
      comp=Z,8µm,19.0s
AIN   Ainahou          49.30  50   IAMs_20   IAMs_20   23 43 09.3
      comp=Z,8µm,18.0s
MORW  Morawa           49.35 243   P         P         23 23 48.5 -0.7
MORW                               IAMs_20   IAMs_20   23 44 45.1
      comp=Z,9µm,18.0s
MORW  Morawa           49.35 243   P         P         23 23 48.8 -0.5
      comp=Z,52nm,1.4s
MORW  Morawa           49.35 243   P         P         23 23 50.0 +0.8
HLP   Hilina Pali      49.37  51   IAMs_20   IAMs_20   23 43 11.1
      comp=Z,8µm,19.0s
HMH   Humu‘ula Sheep   49.42  50   IAMs_20   IAMs_20   23 42 56.4
      comp=Z,8µm,19.0s
MLH   Mauna Loa        49.43  50   IAMs_20   IAMs_20   23 42 55.6
      comp=Z,8µm,18.0s
UWE   Uwekahuna        49.46  51   IAMs_20   IAMs_20   23 42 47.2
      comp=Z,7µm,19.0s
POHA  Pohakuloa        49.48  50   IAMs_20   IAMs_20   23 43 06.9
      comp=Z,9µm,19.0s
HATHI Halema‘uma‘u T   49.48  51   IAMs_20   IAMs_20   23 42 20.0
      comp=Z,7µm,20.0s
PUH   Pauahi           49.49  51   IAMs_20   IAMs_20   23 43 06.1
      comp=Z,7µm,19.0s
KHLH  Kahului Airpor   49.52  48   IAMs_20   IAMs_20   23 45 45.8
      comp=Z,8µm,18.0s
HPAH  Hawaii Prepara   49.52  50   IAMs_20   IAMs_20   23 42 58.9
      comp=Z,7µm,19.0s
STCH  Steam Cracks     49.56  51   IAMs_20   IAMs_20   23 42 42.1
      comp=Z,9µm,21.0s
HLK   Haleakala        49.57  48   IAMs_20   IAMs_20   23 42 51.2
      comp=Z,8µm,19.0s
RKGY  Rocky Gully      49.63 235   P         P         23 23 51.0 -0.3
      comp=Z,31nm,0.9s
JOKA  Jonika Flow      49.68  51   IAMs_20   IAMs_20   23 43 02.3
      comp=Z,7µm,19.0s
MUN   Mundaring        49.70 239   P         P         23 23 51.9 +0.1
      comp=Z,137nm,1.1s
MUN   Mundaring        49.70 239   P         P         23 23 52.5 +0.7
MTKN  Mount Kenneth    50.05 239   P         P         23 23 57.4 +2.9
GIRL  Giralia          50.38 251   P         P         23 23 59.3 +2.1
JAGI  Jajag, Banyuwa   51.36 269   P         P         23 24 06.1 +1.5
TAOE  Nuku Hiva Isla   52.69  92   IAMs_20   IAMs_20   23 43 06.1
      comp=Z,7µm,18.0s
TAOE  Nuku Hiva Isla   52.69  92  ePKIKP     P         23 24 13.5 -1.1
      comp=Z,467nm,25.6s
TAOE                              eS         S         23 31 42.8 +0.4
      comp=Z,3µm,25.6s
KKM   Kota Kinabalu    53.11 288   P         P         23 24 16.9 -0.9
KKM   Kota Kinabalu    53.11 288   P         P         23 24 18.7 +1.0
JSG   Sagara           54.08 331   P         P         23 24 24.5 +0.1
JSG   Sagara           54.08 331   P         P         23 24 26.7 +2.4
PCJI  Pacitan          54.31 269   P         P         23 24 26.7 +0.3
UGM   Wanagama         54.99 269   P         P         23 24 30.9 -0.6
UGM   Wanagama         54.99 269   P         P         23 24 32.5 +1.0
INU   Inuyama          55.18 331   P         P         23 24 32.3  0.0
INU   Inuyama          55.18 331   P         P         23 24 34.0 +1.7
SMRI  Semarang         55.22 270   P         P         23 24 33.0 -0.2
SMRI                               IAmb      IAmb      23 24 48.1
      comp=Z,45nm,0.8s
SMRI  Semarang         55.22 270   P         P         23 24 34.5 +1.4
JGF   Kuroka           55.23 331   P         P         23 24 32.7  0.0
JGF                                IAmb      IAmb      23 24 36.1
      comp=Z,77nm,1.3s
JGF   Kuroka           55.23 331   P         P         23 24 33.6 +0.9
JMN   Monobe           55.48 327   P         P         23 24 35.1 +0.6
JMN   Monobe           55.48 327   P         P         23 24 36.9 +2.3
MJAR  Matsushiro Arr   55.61 333   P         P         23 24 35.3 -0.2
      comp=Z,76nm,1.1s,baz=161,slow=7.0,SNR=54
MJAR                               LR        LR        23 48 55.0
      comp=Z,1µm,19.3s,baz=145,slow=37
      comp=Z,76nm,1.1s
MAJO  Matsushiro       55.61 333   P         P         23 24 35.2 -0.3
MAJO                               IAmb      IAmb      23 24 38.4
      comp=Z,78nm,0.9s
MAJO  Matsushiro       55.61 333   P         P         23 24 36.5 +1.0
MAJO  Matsushiro       55.61 333c iP         P         23 24 35.4 -0.1
MAJO                               pmax      pmax
      comp=Z,98nm,1.0s
JMM   Marumori         55.63 336   P         P         23 24 35.8 +0.3
JMM   Marumori         55.63 336   P         P         23 24 36.2 +0.7
STKI  Sintang          55.79 279   P         P         23 24 39.5 +2.3
      comp=Z,35nm,1.1s
JNU   Nakatsue         56.67 324   P         P         23 24 43.5 +0.4
JNU   Nakatsue         56.67 324   P         P         23 24 44.3 +1.2
YULB  Yu-li            56.74 309   P         P         23 24 44.0 +0.3
YULB                               IAmb      IAmb      23 25 02.6
      comp=Z,32nm,0.9s
YULB  Yu-li            56.74 309   P         P         23 24 44.7 +1.0
JSD   Sado             56.83 334   P         P         23 24 44.4 +0.3
JSD   Sado             56.83 334   P         P         23 24 45.1 +1.0
TPUB  Ta-pu            57.19 309   P         P         23 24 47.1 +0.2
TPUB  Ta-pu            57.19 309   P         P         23 24 48.1 +1.1
SSLB  Suanglung        57.22 309   P         P         23 24 45.7 -1.5
SSLB                               IAmb      IAmb      23 25 36.5
      comp=Z,39nm,1.1s
KSM   Kuching          57.29 280   P         P         23 24 47.5 -0.4
KSM                                IAmb      IAmb      23 25 03.8
      comp=Z,42nm,1.1s
KSM   Kuching          57.29 280   P         P         23 24 50.1 +2.2
YHNB  Yeheng           57.40 310   P         P         23 24 48.6 +0.1
YHNB                               IAmb      IAmb      23 25 13.8
      comp=Z,54nm,1.1s
BBJI  Bungbulang       57.88 269   P         P         23 24 54.1 +2.0
LEM   Lembang          58.02 270   LR        LR        23 53 25.3
      comp=Z,929nm,18.2s,baz=104,slow=40
LEM   Lembang          58.02 270   P         P         23 24 53.8 +0.6
      comp=Z,2µmcomp=Z,66nm,1.1s
JTM   Tenmabayashi     58.05 338   P         P         23 24 52.7  0.0
JTM   Tenmabayashi     58.05 338   P         P         23 24 53.2 +0.6
ERM   Erimo            58.39 340   P         P         23 24 55.2 +0.2
ERM                                IAmb      IAmb      23 25 02.5
      comp=Z,39nm,0.9s
ERM   Erimo            58.39 340deP          P         23 24 55.1 +0.1
ERM                                pmax      pmax
      comp=Z,48nm,1.0s
JTU   Tsushima         58.53 324   P         P         23 24 57.6 +1.5
QZH   Quanzhou         59.65 309   P         P         23 25 05.0 +0.9
QZH                                S         S         23 33 14.8 +0.5
QZH                                pmax      pmax
      comp=Z,51nm,1.5s
QZH                                pmax      pmax
      comp=Z,1µm,8.9s
QZH                                LR        LR
      comp=Z,2µm,11.0s
QZH                                LR        LR
      comp=Z,1µm,9.3s
QZH                                LR        LR
      comp=Z,2µm,21.6s
KUR   Kuril'sk         59.95 345   P         P         23 25 04.9 -0.8
KUR                               i S        S         23 33 16.5 -1.0
KUR                                MLR       MLR
      comp=Z,3µm,19.0s
JKA   Kamikawa-asahi   60.45 341   P         P         23 25 09.4 +0.2
JKA                                IAMs_20   IAMs_20   23 48 47.1
      comp=Z,4µm,20.0s
ASAJ  Asahikawa        60.45 341   P         P         23 25 09.4 +0.2
ASAJ                               pmax      pmax
      comp=Z,126nm,1.2s
ASAJ                               MLR       MLR
      comp=Z,4µm,20.0s
TJN   Taejon           61.02 325   P         P         23 25 13.4 +0.2
TJN                                IAMs_20   IAMs_20   23 51 08.8
      comp=Z,7µm,19.0s
TJN   Taejon           61.02 325   P         P         23 25 14.3 +1.1
TJN   Taejon           61.02 325c iP         P         23 25 13.7 +0.5
SSE   Sheshan          61.35 316   P         P         23 25 16.1 +0.5
SSE                                S         S         23 33 35.9  0.0
SSE                                pmax      pmax
      comp=Z,10.0nm,0.6s
SSE                                pmax      pmax
      comp=Z,300nm,3.8s
SSE                                LR        LR
      comp=Z,530nm,18.7s
SSE                                LR        LR
      comp=Z,560nm,19.4s
KSRS  Korea Array      61.48 326   P         P         23 25 17.1 +0.9
      comp=Z,6.0nm,0.8s,baz=139,slow=7.2,SNR=28
      comp=Z,6.0nm,0.8s
KSAR  Wonju Array Be   61.49 326   P         P         23 25 16.8 +0.4
KSAR  Wonju Array Be   61.49 326   P         P         23 25 16.8 +0.4
KS19  Wonju Array Si   61.54 326   P         P         23 25 16.9 +0.1
KS19                               IAmb      IAmb      23 25 29.1
      comp=Z,30nm,1.1s
INCN  Inchon           62.21 325   P         P         23 25 20.1 -1.2
INCN  Inchon           62.21 325   P         P         23 25 24.0 +2.7
INCN  Inchon           62.21 325   P         P         23 25 20.1 -1.2
INCN                               pmax      pmax
      comp=Z,143nm,1.7s
INCN                               MLR       MLR
      comp=Z,2µm,20.0s
DLV    Lat             62.33 291   P         P         23 25 21.9 -0.9
DLV                                IAmb      IAmb      23 25 37.9
      comp=Z,64nm,1.5s
DLV    Lat             62.33 291   P         P         23 25 24.5 +1.8
GZH   Guangzhou        62.81 304   P         P         23 25 27.5 +2.0
GZH                                S         S         23 33 57.3 +2.7
GZH                                pmax      pmax
      comp=Z,930nm,6.0s
GZH                                LR        LR
      comp=Z,820nm,15.1s
GZH                                LR        LR
      comp=Z,850nm,18.6s
GZH                                LR        LR
      comp=Z,1µm,16.5s
YSS   Yuzhno-Sakhali   62.95 342   P         P         23 25 26.5 +0.5
YSS                                IAMs_20   IAMs_20   23 51 28.0
      comp=Z,4µm,20.0s
YSS   Yuzhno-Sakhali   62.95 342   P         P         23 25 29.1 +3.2
YSS   Yuzhno-Sakhali   62.95 342c iP         P         23 25 27.1 +1.2
YSS                                pmax      pmax
      comp=Z,136nm,1.1s
TEY   Ternei           63.38 337⇓eP          P         23 25 27.3 -1.5
TEY                                e                   23 25 30.1
TEY                                pmax      pmax
      comp=E,100nm,2.0s
TEY                                pmax      pmax
      comp=N,100nm,5.1s
TEY                                pmax      pmax
      comp=Z,110nm,6.2s
NJ2   Nanjing          63.52 316 ⇑P          P         23 25 30.8 +0.8
NJ2                                pP        pwP       23 25 38.3 -0.8
NJ2                                S         S         23 34 04.8 +1.7
NJ2                                pmax      pmax
      comp=Z,19nm,0.8s
NJ2                                pmax      pmax
      comp=Z,1µm,5.1s
NJ2                                LR        LR
      comp=Z,840nm,18.9s
NJ2                                LR        LR
      comp=Z,1µm,16.1s
NJ2                                LR        LR
      comp=Z,1µm,17.1s
MSHR  Mys Shultsa      63.69 332⇓eP          P         23 25 32.0 +1.0
MSHR                               pmax      pmax
      comp=Z,112nm,2.0s
VLA   Vladivostok      63.78 333d iP         P         23 25 33.2 +1.6
VLA                                pmax      pmax
      comp=Z,190nm,1.4s
QIZ   Qiongzhong       63.90 299   P         P         23 25 34.0 +1.2
QIZ                                S         S         23 34 11.3 +2.9
QIZ                                pmax      pmax
      comp=Z,680nm,8.0s
QIZ                                LR        LR
      comp=Z,640nm,12.4s
QIZ                                LR        LR
      comp=Z,850nm,15.1s
PSTR  Posyet           63.91 332d iP         P         23 25 34.2 +1.8
USA0B Ussuriysk Arra   64.59 333   P         P         23 25 37.3 +0.4
USA0B Ussuriysk Arra   64.59 333c iP         P         23 25 38.1 +1.2
USRK  Ussuriysk Ar.    64.59 333   P         P         23 25 38.0 +1.1
USRK  Ussuriysk Ar.    64.59 333   P         P         23 25 38.2 +1.4
      comp=Z,66nm,1.0s,baz=140,slow=5.9,SNR=47
      comp=Z,66nm,1.0s
VNDA  Vanda            64.93 181   P         P         23 25 37.5 -1.1
VNDA  Vanda            64.93 181   P         P         23 25 38.5 -0.2
      comp=Z,3.6nm,0.6s,baz=349,slow=6.8,SNR=19
      comp=Z,3.6nm,0.6s
UGL   Uglegorsk        65.06 343  eP         P         23 25 29.5  -10
UGL                               eS         S         23 34 15.7 -5.8
UGL                                pmax      pmax
      comp=Z,2µm,6.0s
UGL                                smax      smax
      comp=E,700nm,5.5s
UGL                                smax      smax
      comp=N,1µm,7.5s
CASY  Casey            65.11 202   P         P         23 25 39.1 -0.9
CASY                               IAmb      IAmb      23 25 51.2
      comp=Z,24nm,0.9s
SBA   Scott Base       65.23 180   P         P         23 25 40.6 +0.1
SBA                                IAmb      IAmb      23 26 14.0
      comp=Z,40nm,1.1s
SBA   Scott Base       65.23 180   P         P         23 25 40.6 +0.1
SBA                                pmax      pmax
      comp=Z,40nm,1.2s
SBA                                MLR       MLR
      comp=Z,3µm,19.0s
CNSH  ChangSha         65.66 309   P         P         23 25 45.4 +1.3
CNSH                               S         S         23 34 27.8 -1.9
CNSH                               LR        LR
      comp=Z,990nm,21.2s
CNSH                               LR        LR
      comp=Z,810nm,12.5s
CNSH                               LR        LR
      comp=Z,1µm,21.0s
PET   Petropavlovsk    65.71 355c iP         P         23 25 44.4 +0.5
PET                               e                    23 28 11.6
PET                               i S        S         23 34 30.8 +1.4
PET                                pmax      pmax
      comp=Z,800nm,5.1s
PET                                pmax      pmax
      comp=Z,600nm,12.3s
PET                                pmax      pmax
      comp=Z,400nm,10.6s
KIWB  Kanaga Island    65.80  11   P         P         23 25 43.7 -0.8
WHN   Wuhan            65.84 312   P         P         23 25 46.8 +1.6
WHN                                sP        pwP       23 25 56.3 +2.0
WHN                                S         S         23 34 31.3 -0.5
WHN                                pmax      pmax
      comp=Z,2µm,5.1s
WHN                                LR        LR
      comp=Z,2µm,11.0s
WHN                                LR        LR
      comp=Z,3µm,16.0s
WHN                                LR        LR
      comp=Z,4µm,19.0s
PEA0B Petropavlovsk-   65.88 354d iP         P         23 25 47.9 +2.8
PETK  Petropavlovsk-   65.88 354   P         P         23 25 45.0 -0.1
PETK  Petropavlovsk-   65.88 354   P         P         23 25 45.2 +0.1
      comp=Z,29nm,1.2s,baz=156,slow=7.5,SNR=8.5
      comp=Z,29nm,1.2s
ADK   Adak             65.92  11   IAMs_20   IAMs_20   23 47 37.9
      comp=Z,4µm,22.0s
BKNI  Bangkinang       65.96 276   P         P         23 25 45.4 -1.0
BKNI  Bangkinang       65.96 276   P         P         23 25 48.0 +1.6
MDJ   Mudanjiang       65.99 332   P         P         23 25 47.3 +1.4
MDJ                                pP        pwP       23 25 52.5 -2.6
MDJ                                S         S         23 34 37.6 +4.4
MDJ                                pmax      pmax
      comp=Z,95nm,1.5s
MDJ                                pmax      pmax
      comp=Z,1µm,8.2s
MDJ                                LR        LR
      comp=Z,790nm,17.2s
MDJ                                LR        LR
      comp=Z,1µm,19.2s
MDJ                                LR        LR
      comp=Z,2µm,20.6s
DL2   Dalian           66.06 323   P         P         23 25 47.3 +0.8
DL2                                S         S         23 34 35.4 +1.2
DL2                                pmax      pmax
      comp=Z,54nm,0.8s
DL2                                pmax      pmax
      comp=Z,850nm,5.0s
DL2                                LR        LR
      comp=Z,2µm,17.5s
DL2                                LR        LR
      comp=Z,1µm,15.5s
DL2                                LR        LR
      comp=Z,2µm,15.9s
UBPT  Khong Chiam      66.27 293   P         P         23 25 50.5 +2.2
TYV   Tymovskoe        66.50 344  eP         P         23 25 49.6 +0.5
TYV                               eS         S         23 34 38.1 -1.0
TYV                                pmax      pmax
      comp=Z,30nm,1.2s
TYV                                pmax      pmax
      comp=Z,400nm,2.6s
TYV                                smax      smax
      comp=N,600nm,4.7s
ATKA  Atka Island      66.73  13   IAMs_20   IAMs_20   23 48 12.5
      comp=Z,4µm,22.0s
SNY   Shenyang         66.94 327 ⇓P          P         23 25 53.5 +1.5
SNY                                S         S         23 34 47.9 +3.1
SNY                                pmax      pmax
      comp=Z,20nm,1.8s
SNY                                pmax      pmax
      comp=Z,830nm,7.8s
SNY                                LR        LR
      comp=Z,1µm,15.3s
SNY                                LR        LR
      comp=Z,650nm,17.2s
SNY                                LR        LR
      comp=Z,2µm,17.1s
TIA   Tai'an           67.14 318   P         P         23 25 53.8 +0.3
TIA                                S         S         23 34 47.1 -0.4
TIA                                ScS       SKSac     23 35 43.4 -7.2
TIA                                pmax      pmax
      comp=Z,30nm,1.2s
TIA                                pmax      pmax
      comp=Z,940nm,8.2s
TIA                                LR        LR
      comp=Z,1µm,17.7s
TIA                                LR        LR
      comp=Z,1µm,20.1s
TIA                                LR        LR
      comp=Z,3µm,18.6s
CN2   Changchun        67.36 329   P         P         23 25 55.0 +0.3
CN2                                S         S         23 34 47.0 -2.9
CN2                                SS        SS        23 39 10.3  0.0
CN2                                pmax      pmax
      comp=Z,70nm,1.0s
CN2                                pmax      pmax
      comp=Z,1µm,5.0s
CN2                                LR        LR
      comp=Z,960nm,17.0s
CN2                                LR        LR
```

	comp=Z,2µm,17.0s						
CN2				LR	LR		
	comp=Z,2µm,18.0s						
KULM	**Kulim**	**67.60**	**281**	P	**P**	**23 25 56.8**	**-0.1**
KULM	**Kulim**	**67.60**	**281**	P	**P**	**23 25 58.5**	**+1.6**
BNX	**BinXian**	**67.85**	**332**	⇑P	**P**	**23 25 58.4**	**+0.7**
BNX				pP	**pwP**	**23 26 05.8**	**-1.1**
BNX				sP	sP	23 26 08.6	+6.2
BNX				PcP	**PcP**	**23 26 24.3**	**0.0**
BNX				S	**S**	**23 34 57.9**	**+2.3**
BNX				pmax	pmax		
	comp=Z,95nm,1.1s						
BNX				pmax	pmax		
	comp=Z,700nm,6.4s						
BNX				LR	LR		
	comp=Z,750nm,15.7s						
BNX				LR	LR		
	comp=Z,630nm,19.1s						
BNX				LR	LR		
	comp=Z,960nm,17.6s						
GRNR	**Gornyy**	**68.30**	**340**	⇑*i*P	**P**	**23 26 02.1**	**+1.6**
GRNR				pmax	pmax		
	comp=N,20nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,40nm,0.9s						
RPSI	**Rantau Prapat**	**68.59**	**278**	P	**P**	**23 26 01.4**	**-1.6**
RPSI				IAmb	IAmb	23 26 17.1	
	comp=Z,52nm,1.3s						
PSI	**Prapat**	**68.61**	**278**	P	**P**	**23 26 04.9**	**+1.5**
PSI	**Prapat**	**68.61**	**278**	P	**P**	**23 26 01.4**	**-2.0**
PSI				pmax	pmax		
	comp=Z,53nm,1.3s						
PSI				MLR	MLR		
	comp=Z,1µm,19.0s						
KLR	**Kul'dur**	**68.71**	**336**	*c i*P	**P**	**23 26 04.1**	**+1.0**
KLR				pmax	pmax		
	comp=Z,127nm,1.3s						
NIKH	**Nikolski High**	**68.74**	**16**	P	**P**	**23 26 01.3**	**-1.9**
	baz=206						
ENH	**Enshi**	**69.30**	**309**	P	**P**	**23 26 07.0**	**-0.2**
ENH	**Enshi**	**69.30**	**309**	P	**P**	**23 26 08.8**	**+1.6**
LYN	**LuoYang**	**69.33**	**315**	P	**P**	**23 26 08.0**	**+0.7**
LYN				sP	pwP	23 26 21.1	+4.7
LYN				S	**S**	**23 35 13.5**	**-0.2**
LYN				sS	sS	23 35 29.4	+10
LYN				pmax	pmax		
	comp=Z,48nm,1.0s						
LYN				pmax	pmax		
	comp=Z,1µm,8.3s						
LYN				LR	LR		
	comp=Z,1µm,17.5s						
LYN				LR	LR		
	comp=Z,1µm,17.5s						
LYN				LR	LR		
	comp=Z,2µm,17.5s						
HNS	**HongShan**	**69.41**	**318**	⇑P	**P**	**23 26 08.8**	**+1.1**
HNS				S	**S**	**23 35 13.9**	**-0.6**
HNS				pmax	pmax		
	comp=Z,45nm,1.5s						
HNS				pmax	pmax		
	comp=Z,1µm,9.7s						
HNS				LR	LR		
	comp=Z,1µm,17.5s						
HNS				LR	LR		
	comp=Z,1µm,17.1s						
HNS				LR	LR		
	comp=Z,2µm,17.9s						
SRIT	**Nakonsritamara**	**69.53**	**284**	P	**P**	**23 26 11.5**	**+2.6**
GSI	**Gunungsitoli**	**69.55**	**276**	P	**P**	**23 26 08.2**	**-0.9**
GSI				IAmb	IAmb	23 26 23.7	
	comp=Z,62nm,1.0s						
GSI	**Gunungsitoli**	**69.55**	**276**	P	**P**	**23 26 11.3**	**+2.2**
SLVN	**Son La**	**69.92**	**298**	P	**P**	**23 26 10.4**	**-0.9**
SLVN				IAmb	IAmb	23 26 26.8	
	comp=Z,24nm,1.2s						
SLVN	**Son La**	**69.92**	**298**	P	**P**	**23 26 12.6**	**+1.3**
BJT	**Baijiatuau**	**70.03**	**321**	P	**P**	**23 26 11.5**	**0.0**
BJT				IAmb	IAmb	23 26 25.4	
	comp=Z,41nm,1.1s						
BJT	**Baijiatuau**	**70.03**	**321**	P	**P**	**23 26 13.1**	**+1.6**
BJT	**Baijiatuau**	**70.03**	**321**	P	**P**	**23 26 11.5**	**0.0**
BJT				pmax	pmax		
	comp=Z,41nm,1.1s						
UNV	**Unalaska Valle**	**70.16**	**17**	P	**P**	**23 26 10.0**	**-1.9**
	baz=208						
TIY	**Taiyuan**	**71.08**	**317**	*e*P	**P**	**23 26 19.1**	**+1.1**
TIY				S	**S**	**23 35 36.1**	**+1.9**
TIY				SKS	**SKSac**	**23 36 15.9**	**-4.6**
TIY				pmax	pmax		
	comp=Z,42nm,1.6s						
TIY				pmax	pmax		
	comp=Z,1µm,4.4s						
TIY				LR	LR		
	comp=Z,540nm,20.6s						
TIY				LR	LR		
	comp=Z,1µm,18.6s						
TIY				LR	LR		
	comp=Z,1µm,18.6s						
HEH	**HeiHe**	**71.26**	**335**	*e*P	**P**	**23 26 19.3**	**+0.6**
HEH				pP	**pwP**	**23 26 26.9**	**-1.1**
HEH				S	**S**	**23 35 36.3**	**+0.7**
HEH				pmax	pmax		
	comp=Z,82nm,1.4s						
HEH				pmax	pmax		
	comp=Z,1µm,7.4s						
HEH				LR	LR		
	comp=Z,960nm,16.9s						
HEH				LR	LR		
	comp=Z,1µm,17.6s						
HEH				LR	LR		
	comp=Z,1µm,18.2s						
XAN	**Xi'an**	**71.58**	**313**	P	**P**	**23 26 21.8**	**+0.7**
XAN				S	**S**	**23 35 38.8**	**-1.2**
XAN				pmax	pmax		
	comp=Z,44nm,1.3s						
XAN				pmax	pmax		
	comp=Z,1µm,4.3s						
XAN				LR	LR		
	comp=Z,1µm,16.5s						
XAN				LR	LR		
	comp=Z,2µm,16.0s						
XAN				LR	LR		
	comp=Z,3µm,18.7s						
P08K	**Saint George I**	**71.85**	**14**	IAMs_20	IAMs_20	23 51 28.1	
	comp=Z,4µm,21.0s						
P08K	**Saint George I**	**71.85**	**14**	P	**P**	**23 26 20.5**	**-1.6**
	baz=205						
FALS	**False Pass**	**71.93**	**18**	P	**P**	**23 26 20.0**	**-2.7**
	baz=211						
KMI	**Kunming**	**72.40**	**302**	⇑P	**P**	**23 26 27.8**	**+1.4**
KMI				S	**S**	**23 35 51.5**	**+1.3**
KMI				pmax	pmax		
	comp=Z,41nm,1.3s						
KMI				pmax	pmax		
	comp=Z,820nm,7.8s						
KMI				LR	LR		
	comp=Z,440nm,16.3s						
KMI				LR	LR		
	comp=Z,770nm,20.2s						
KMI				LR	LR		
	comp=Z,1µm,21.0s						
XLT	**XiLinHaoTe**	**72.45**	**324**	*e*P	**P**	**23 26 27.4**	**+1.2**
XLT				pP	pwP	23 26 38.8	+3.5
XLT				S	**S**	**23 35 52.9**	**+3.1**
XLT				pmax	pmax		
	comp=Z,50nm,1.1s						
XLT				pmax	pmax		
	comp=Z,1µm,5.5s						
XLT				LR	LR		
	comp=Z,1µm,20.7s						
XLT				LR	LR		
	comp=Z,1µm,20.3s						
MA2	**Magadan**	**73.04**	**352**	P	**P**	**23 26 29.8**	**+0.6**
MA2				IAmb	IAmb	23 26 47.4	
	comp=Z,46nm,1.3s						
MA2				IAMs_20	IAMs_20	23 54 51.2	
	comp=Z,4µm,20.0s						
MA2	**Magadan**	**73.04**	**352**	⇓*e*P	**P**	**23 26 29.5**	**+0.3**
MA2				pmax	pmax		
	comp=Z,35nm,1.6s						
S12K	**Black Hills**	**73.06**	**18**	P	**P**	**23 26 27.7**	**-1.8**
	baz=212						
CNBA	**Chernabura Isl**	**73.11**	**20**	IAMs_20	IAMs_20	23 56 23.0	
	comp=Z,4µm,19.0s						
CHNA	**Chernabura Isl**	**73.12**	**20**	P	**P**	**23 26 27.2**	**-2.5**
	baz=215						
CM31	**Chiang Mai Arr**	**73.23**	**294**	P	**P**	**23 26 31.4**	**+0.2**
CM31				IAmb	IAmb	23 26 46.6	
	comp=Z,74nm,1.3s						
CMAR	**Chiang Mai Arr**	**73.23**	**294**	P	**P**	**23 26 31.9**	**+0.6**
CMAR	**Chiang Mai Arr**	**73.23**	**294**	P	**P**	**23 26 32.9**	**+1.7**
	comp=Z,8.1nm,0.8s,baz=121,slow=4.6,SNR=33						
	comp=Z,8.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**73.23**	**294**	*i* P	**P**	**23 26 32.9**	**+1.7**
CMAR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SDPT	**Sand Point**	**73.26**	**19**	P	**P**	**23 26 28.3**	**-2.2**
	baz=214						
CHTO	**Chiang Mai**	**73.35**	**294**	P	**P**	**23 26 32.6**	**+0.7**
CHTO				IAmb	IAmb	23 26 47.1	
	comp=Z,51nm,1.2s						
CHTO	**Chiang Mai**	**73.35**	**294**	P	**P**	**23 26 32.7**	**+0.7**
CHTO	**Chiang Mai**	**73.35**	**294**	P	**P**	**23 26 32.6**	**+0.7**
CHTO				pmax	pmax		
	comp=Z,51nm,1.3s						
CHTO				MLR	MLR		
	comp=Z,600nm,20.0s						
HHC	**Hu-ho-hao-te**	**73.38**	**320**	⇓*i*P	**P**	**23 26 34.5**	**+2.8**
HHC				sP	pwP	23 26 44.5	+3.6
HHC				S	**SKiKP**	**23 36 05.6**	**+2.8**
HHC				pmax	pmax		
	comp=Z,32nm,1.1s						
HHC				pmax	pmax		
	comp=Z,970nm,8.4s						
HHC				LR	LR		
	comp=Z,890nm,16.8s						
HHC				LR	LR		
	comp=Z,1µm,17.7s						
HHC				LR	LR		
	comp=Z,2µm,17.7s						
PZH	**PanZhiHua**	**73.77**	**303**	P	**P**	**23 26 36.1**	**+1.7**
PZH				pP	**sP**	**23 26 39.8**	**+0.6**
PZH				PP	**PP**	**23 29 22.8**	**+3.6**
PZH				S	**SKiKP**	**23 36 05.6**	**+1.7**
PZH				sS	sS	23 36 17.8	+6.7
PZH				SKS	**SKSac**	**23 36 37.3**	**-4.1**
PZH				pmax	pmax		
	comp=Z,20nm,1.1s						
PZH				pmax	pmax		
	comp=Z,320nm,5.8s						
PZH				LR	LR		
	comp=Z,620nm,20.6s						
PZH				LR	LR		
	comp=Z,550nm,20.8s						
PZH				LR	LR		
	comp=Z,410nm,21.1s						
CD2	**Chengdu**	**73.98**	**307**	P	**P**	**23 26 36.3**	**+0.9**
CD2				pP	pwP	23 26 43.6	-0.9
CD2				sP	PcP	23 26 45.9	-4.8
CD2				S	**S**	**23 36 07.6**	**0.0**
CD2				SKS	**SKSac**	**23 36 41.3**	**-1.3**
CD2				SS	**SS**	**23 40 54.9**	**+2.2**
CD2				pmax	pmax		
	comp=Z,40nm,0.9s						
CD2				pmax	pmax		
	comp=Z,2µm,7.5s						
CD2				LR	LR		
	comp=Z,2µm,15.5s						
CD2				LR	LR		
	comp=Z,2µm,18.4s						
CD2				LR	LR		
	comp=Z,1µm,18.3s						
ZEA	**Zeya**	**74.00**	**337**	*e*P	**P**	**23 26 36.5**	**+1.6**
ZEA				*e*		23 29 23.3	
ZEA				*e*S	**S**	**23 36 06.6**	**-0.1**
ZEA				*e*		23 36 42.0	
ZEA				pmax	pmax		
	comp=E,200nm,7.9s						
ZEA				pmax	pmax		
	comp=N,400nm,6.4s						
ZEA				pmax	pmax		
	comp=Z,700nm,6.6s						
ZEA				pmax	pmax		
	comp=N,50nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,70nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,200nm,7.2s						
ZEA				smax	smax		
	comp=N,700nm,12.7s						
ZEA				smax	smax		
	comp=E,500nm,12.1s						
ZEA				MLR	MLR		
	comp=N,700nm,16.0s						
ZEA				MLR	MLR		
	comp=E,500nm,16.0s						
HIA	**Hailar**	**74.00**	**330**	P	**P**	**23 26 35.4**	**+0.3**
HIA	**Hailar**	**74.00**	**330**	P	**P**	**23 26 36.5**	**+1.4**
HIA	**Hailar**	**74.00**	**330**	P	**P**	**23 26 35.4**	**+0.3**
HIA				pmax	pmax		
	comp=Z,129nm,1.3s						
HIA				MLR	MLR		
	comp=Z,2µm,19.0s						
BTO	**Baotou**	**74.22**	**319**	*e*P	**P**	**23 26 39.8**	**+3.1**
BTO				pP	**pwP**	**23 26 46.1**	**+0.2**
BTO				sP	**PcP**	**23 26 48.8**	**-2.8**
BTO				PP	**PP**	**23 29 28.6**	**+5.8**
BTO				S	**S**	**23 36 13.9**	**+3.8**
BTO				sS	sS	23 36 23.0	+7.5
BTO				pmax	pmax		
	comp=Z,65nm,1.5s						
BTO				pmax	pmax		
	comp=Z,3µm,7.6s						
BTO				LR	LR		
	comp=Z,3µm,17.4s						
BTO				LR	LR		
	comp=Z,1µm,20.0s						
BTO				LR	LR		
	comp=Z,2µm,22.8s						
S14K	**Fog Glacier**	**74.33**	**19**	P	**P**	**23 26 34.5**	**-2.4**
	baz=215						
CHIR	**Chirikof Islan**	**75.27**	**21**	IAMs_20	IAMs_20	23 53 06.8	
	comp=Z,4µm,20.0s						
CHIR	**Chirikof Islan**	**75.27**	**21**	P	**P**	**23 26 40.2**	**-2.1**
	baz=218						
TNCH	**TengChong**	**75.90**	**300**	P	**P**	**23 26 47.8**	**+1.0**
TNCH				S	**S**	**23 36 28.1**	**-1.4**
TNCH				SS	**SS**	**23 41 22.8**	**+0.5**
TNCH				pmax	pmax		
	comp=Z,750nm,5.0s						
TNCH				LR	LR		
	comp=Z,710nm,17.3s						
TNCH				LR	LR		
	comp=Z,540nm,16.1s						
TNCH				LR	LR		
	comp=Z,860nm,22.3s						
R16K	**Pilot Point**	**76.00**	**19**	IAMs_20	IAMs_20	23 54 01.3	
	comp=Z,3µm,20.0s						
R16K	**Pilot Point**	**76.00**	**19**	P	**P**	**23 26 44.4**	**-2.0**
	baz=216						
M11K	**Mekoryuk**	**76.03**	**14**	P	**P**	**23 26 45.7**	**-0.7**
	baz=208						
SEY	**Seymchan**	**76.10**	**353**	*ce*P	**P**	**23 26 46.9**	**+0.1**
SEY				pmax	pmax		
	comp=Z,41nm,1.2s						
LZH	**Lanzhou**	**76.21**	**312**	*e*P	**P**	**23 26 50.1**	**+1.8**
LZH				pP	pwP	23 26 56.8	-0.7
LZH				sP	PcP	23 27 00.1	-0.3
LZH				S	**S**	**23 36 35.6**	**+3.1**
LZH				sS	sS	23 36 44.1	+6.1
LZH				SS	**SS**	**23 41 27.3**	**+0.7**
LZH				pmax	pmax		
	comp=Z,57nm,1.3s						
LZH				pmax	pmax		
	comp=Z,1µm,4.8s						
LZH				LR	LR		
	comp=Z,1µm,15.5s						
LZH				LR	LR		
	comp=Z,1µm,15.5s						
LZH				LR	LR		
	comp=Z,2µm,15.5s						
O14K	**Tigyukauivet M**	**76.30**	**16**	P	**P**	**23 26 47.0**	**-1.0**
	baz=213						
SII	**Sitkinak Islan**	**76.35**	**21**	IAMs_20	IAMs_20	23 54 00.2	
	comp=Z,5µm,20.0s						
SII	**Sitkinak Islan**	**76.35**	**21**	P	**P**	**23 26 47.6**	**-0.9**
	baz=220						
O15K	**Ungalikthiuk R**	**76.64**	**17**	P	**P**	**23 26 47.7**	**-2.3**
	baz=214						
M13K	**Dall Lake**	**76.74**	**15**	IAMs_20	IAMs_20	23 55 28.2	
	comp=Z,3µm,20.0s						
M13K	**Dall Lake**	**76.74**	**15**	P	**P**	**23 26 50.3**	**-0.2**
	baz=210						
N14K	**Kuskokwak Cree**	**76.75**	**16**	P	**P**	**23 26 48.8**	**-1.8**
	baz=212						
R18K	**Karluk**	**77.04**	**20**	P	**P**	**23 26 50.7**	**-1.6**
	baz=219						
P16K	**Nushagak River**	**77.06**	**18**	P	**P**	**23 26 50.6**	**-1.8**
	baz=216						
Q17K	**Contact Creek**	**77.11**	**19**	P	**P**	**23 26 50.6**	**-2.2**
	baz=218						
OHAK	**Old Harbor**	**77.18**	**21**	IAMs_20	IAMs_20	23 54 36.0	
	comp=Z,4µm,20.0s						
OHAK	**Old Harbor**	**77.18**	**21**	P	**P**	**23 26 51.7**	**-1.4**
	baz=220						
Q16K	**King Salmon**	**77.19**	**19**	P	**P**	**23 26 52.3**	**-0.8**
	baz=217						
M14K	**Bethel**	**77.38**	**15**	IAMs_20	IAMs_20	23 55 26.5	
	comp=Z,3µm,21.0s						
M14K	**Bethel**	**77.38**	**15**	P	**P**	**23 26 53.9**	**-0.3**
	baz=212						
QSPA	**South Pole Qui**	**77.39**	**180**	P	**P**	**23 26 53.5**	**-0.9**
QSPA	**South Pole Qui**	**77.39**	**180**	IAMs_20	IAMs_20	23 58 47.6	
	comp=Z,3µm,19.0s						
QSPA	**South Pole Qui**	**77.39**	**180**	P	**P**	**23 26 53.9**	**-0.5**
	comp=Z,72nm,1.1s,baz=353,slow=0.9,SNR=139						
QSPA				LR	LR	23 59 17.1	
	comp=Z,3µm,18.7s,baz=34,slow=34						
	comp=Z,72nm,1.1s						
N15K	**Kwethluk River**	**77.39**	**16**	IAMs_20	IAMs_20	23 59 12.5	
	comp=Z,3µm,19.0s						
N15K	**Kwethluk River**	**77.39**	**16**	P	**P**	**23 26 53.2**	**-1.1**
	baz=214						
O16K	**Kokwok River B**	**77.49**	**18**	P	**P**	**23 26 52.0**	**-2.8**
	baz=216						
M15K	**Kasigluk River**	**77.67**	**16**	P	**P**	**23 26 54.7**	**-1.1**
	baz=213						
P17K	**Kvichak River**	**77.67**	**19**	P	**P**	**23 26 52.7**	**-3.1**
	baz=217						
Q18K	**Katmai Hardscr**	**77.69**	**20**	P	**P**	**23 26 54.6**	**-1.5**
	baz=219,SNR=9.9						
L14K	**Kuka Creek**	**77.71**	**15**	P	**P**	**23 26 54.1**	**-1.8**
	baz=211						
K13K	**Kusilvak Mount**	**77.75**	**14**	P	**P**	**23 26 54.9**	**-1.3**
	baz=209						
KDAK	**Kodiak Island**	**77.85**	**21**	IAMs_20	IAMs_20	23 54 33.8	
	comp=Z,4µm,21.0s						
KDAK	**Kodiak Island**	**77.85**	**21**	LR	LR	23 54 57.2	
	comp=Z,4µm,21.3s,baz=213,slow=31						
KDAK	**Kodiak Island**	**77.85**	**21**	P	**P**	**23 26 55.7**	**-1.1**
	baz=221						
O17K	**Koliganek Bris**	**77.93**	**18**	P	**P**	**23 26 55.9**	**-1.3**
	baz=217						
N16K	**Nishlik Lake**	**78.02**	**17**	P	**P**	**23 26 56.9**	**-0.9**
	baz=215,SNR=5.8						
GAMB	**Gambell**	**78.03**	**10**	IAMs_20	IAMs_20	23 55 19.0	
	comp=Z,3µm,21.0s						
GAMB	**Gambell**	**78.03**	**10**	P	**P**	**23 26 56.4**	**-1.2**
	baz=202						
P18K	**Big Mountain,**	**78.21**	**19**	P	**P**	**23 26 56.7**	**-2.2**
	baz=218,SNR=11						
L15K	**Ungalak Mounta**	**78.29**	**15**	P	**P**	**23 26 57.9**	**-1.3**
	baz=212						
Q19K	**Cape Douglas,**	**78.36**	**20**	IAMs_20	IAMs_20	23 55 15.5	
	comp=Z,5µm,21.0s						
M16K	**Timber Creek**	**78.41**	**16**	P	**P**	**23 26 59.6**	**-0.3**
M16K				IAmb	IAmb	23 27 04.4	
	comp=Z,40nm,1.1s						
M16K				IAMs_20	IAMs_20	00 08 28.5	
	comp=Z,3µm,18.0s						
M16K	**Timber Creek**	**78.41**	**16**	P	**P**	**23 26 59.8**	**-0.1**
	baz=215,SNR=16						
N17K	**Nushagak Hills**	**78.51**	**17**	P	**P**	**23 26 59.6**	**-0.9**
	baz=216						
Q20K	**Shuyak Island**	**78.54**	**21**	P	**P**	**23 26 59.7**	**-0.9**
	baz=221						
SYI	**Shuyak Island**	**78.54**	**21**	IAMs_20	IAMs_20	23 55 57.3	
	comp=Z,4µm,20.0s						
O18K	**Koktuh Hills**	**78.58**	**19**	IAMs_20	IAMs_20	23 55 21.2	
	comp=Z,3µm,20.0s						
O18K	**Koktuh Hills**	**78.58**	**19**	P	**P**	**23 26 58.7**	**-2.2**
	baz=218						
J14K	**Nanvaranak Lak**	**78.72**	**14**	P	**P**	**23 27 00.4**	**-1.0**
	baz=210						
CIT	**Chita**	**78.79**	**330**	*e*P	**P**	**23 27 03.2**	**+0.9**
CIT				*e*		23 27 08.8	
CIT				*e*		23 29 57.6	
CIT				*e*		23 37 00.6	
CIT				pmax	pmax		
	comp=Z,342nm,1.4s						
K15K	**Wolf Creek Mou**	**78.81**	**15**	P	**P**	**23 27 01.8**	**-0.3**
K15K				IAmb	IAmb	23 27 13.9	
	comp=Z,38nm,1.1s						
K15K				IAMs_20	IAMs_20	00 07 30.1	
	comp=Z,3µm,18.0s						
K15K	**Wolf Creek Mou**	**78.81**	**15**	P	**P**	**23 27 01.4**	**-0.6**
	baz=212						
L16K	**Owhat River**	**78.84**	**16**	P	**P**	**23 27 00.6**	**-1.6**
	baz=214						
N18K	**Kilae Creek**	**79.02**	**18**	IAMs_20	IAMs_20	23 56 08.9	
	comp=Z,3µm,20.0s						
N18K	**Kilae Creek**	**79.02**	**18**	P	**P**	**23 27 02.4**	**-0.9**
	baz=218						
P19K	**Oil Pt**	**79.05**	**20**	IAMs_20	IAMs_20	23 55 35.8	
	comp=Z,3µm,20.0s						
P19K	**Oil Pt**	**79.05**	**20**	P	**P**	**23 27 01.8**	**-1.7**
	baz=220						
O19K	**Port Alsworth**	**79.12**	**19**	P	**P**	**23 27 00.9**	**-2.9**
	baz=219						
M17K	**Holitna River**	**79.15**	**17**	P	**P**	**23 27 03.6**	**-0.4**
	baz=216						
ILSW	**Iliamna Southw**	**79.34**	**19**	IAMs_20	IAMs_20	23 55 23.3	
	comp=Z,3µm,21.0s						
L17K	**Donlin**	**79.51**	**16**	P	**P**	**23 27 05.0**	**-0.9**
	baz=215,SNR=5.9						
N19K	**Bonanza Creek**	**79.55**	**18**	IAMs_20	IAMs_20	23 56 02.0	
	comp=Z,3µm,21.0s						
N19K	**Bonanza Creek**	**79.55**	**18**	P	**P**	**23 27 03.7**	**-2.6**
	baz=219						
O20K	**Slope Mountain**	**79.58**	**20**	P	**P**	**23 27 04.6**	**-1.8**
	baz=221						
HOM	**Homer**	**79.59**	**20**	IAMs_20	IAMs_20	23 56 21.8	
	comp=Z,5µm,20.0s						
HOM	**Homer**	**79.59**	**20**	P	**P**	**23 27 05.4**	**-1.0**
	baz=222						
CNPM	**China Poot**	**79.63**	**20**	IAMs_20	IAMs_20	23 56 10.9	
	comp=Z,5µm,20.0s						
M18K	**Stony River**	**79.69**	**17**	P	**P**	**23 27 06.7**	**-0.2**
	baz=218						
IMP	**Imphal**	**79.73**	**298**	*e*P	**P**	**23 27 07.7**	**-0.4**
IMP				IAmb	IAmb	23 27 11.6	
	comp=Z,26nm,0.9s						
YAK	**Yakutsk**	**79.75**	**343**	P	**P**	**23 27 07.0**	**-0.2**
YAK	**Yakutsk**	**79.75**	**343**	IAMs_20	IAMs_20	00 06 04.6	
	comp=Z,2µm,18.0s						
YAK	**Yakutsk**	**79.75**	**343**	LR	LR	23 59 26.1	
	comp=Z,1µm,19.7s,baz=138,slow=33						
YAK	**Yakutsk**	**79.75**	**343**	*c i*P	**P**	**23 27 07.0**	**-0.2**
YAK				*e*		23 27 14.5	
YAK				*e*		23 30 05.7	
YAK				*e*PPP	PPP	23 31 59.4	
YAK				*e*S	**S**	**23 37 08.0**	**-1.2**
YAK				*e**SS	**SKKSac**	**23 37 26.2**	**+1.2**
YAK				*e*		23 37 28.2	
YAK				*e*SSS	SSS	23 45 34.6	
YAK				pmax	pmax		
	comp=Z,73nm,1.1s						
YAK				pmax	pmax		
	comp=E,12nm,1.1s						
YAK				pmax	pmax		
	comp=N,23nm,1.3s						
YAK				pmax	pmax		
	comp=Z,168nm,3.2s						
YAK				pmax	pmax		
	comp=N,73nm,2.8s						
YAK				pmax	pmax		
	comp=E,69nm,4.3s						
YAK				smax	smax		
	comp=E,225nm,6.9s						
YAK				smax	smax		
	comp=N,223nm,5.3s						
YAK				MLR	MLR		
	comp=Z,3µm,20.0s						
YAK				MLR	MLR		
	comp=E,1µm,22.0s						
YAK				MLR	MLR		
	comp=N,1µm,23.0s						
J16K	**Anvik River**	**79.88**	**15**	IAMs_20	IAMs_20	23 58 07.3	
	comp=Z,3µm,20.0s						
J16K	**Anvik River**	**79.88**	**15**	P	**P**	**23 27 07.2**	**-0.7**

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      baz=213
ULN   Ulaanbaatar        79.89 324    P        P        23 27 08.4 -0.1
ULN                                   IAmb     IAmb     23 27 12.7
      comp=Z,98nm,1.3s
ULN   Ulaanbaatar        79.89 324c iP        P        23 27 09.3 +0.8
ULN                                   pmax     pmax
      comp=Z,118nm,1.7s
ANM   Nome               79.92  12    IAMs_20  IAMs_20  23 56 29.3
      comp=Z,3µm,21.0s
ANM   Nome               79.92  12    P        P        23 27 07.4 -0.6
      baz=208
BRLK  Bradley Lake       79.92  20    P        P        23 27 08.1 -0.1
BRLK                                  IAmb     IAmb     23 28 01.7
      comp=Z,71nm,1.8s
BRLK                                  IAMs_20  IAMs_20  23 56 09.4
      comp=Z,5µm,21.0s
BRSE  Bradley Lake S     79.95  21    P        P        23 27 07.1 -1.3
      baz=222
K17K  Iditarod           79.99  16    P        P        23 27 08.3 -0.2
      baz=215,SNR=8.5
L18K  Granite Mounta     80.02  17    P        P        23 27 07.0 -1.7
      baz=217,SNR=13
SONM  Songino Array      80.25 324    P        P        23 27 10.8 +0.4
SONM                                  IAmb     IAmb     23 27 14.5
      comp=Z,135nm,1.7s
SONM  Songino Array      80.25 324    P        P        23 27 11.1 +0.7
      comp=Z,34nm,1.1s,baz=133,slow=4.8,SNR=29
SONM                                  LR       LR       00 01 52.6
      comp=Z,924nm,20.7s,baz=114,slow=35
      comp=Z,34nm,1.1s
TNA   Tin City           80.32  11    P        P        23 27 10.1 -0.1
TNA   Tin City           80.32  11    P        P        23 27 09.8 -0.4
      baz=206
J17K  VABM Dome          80.35  15    IAMs_20  IAMs_20  23 57 27.8
      comp=Z,3µm,20.0s
J17K  VABM Dome          80.35  15    P        P        23 27 10.0 -0.4
      baz=214
I17K  Unalakleet         80.36  14    P        P        23 27 10.3 -0.1
      baz=213
M19K  Big River Lodg     80.43  18    P        P        23 27 11.4 +0.5
M19K                                  IAMs_20  IAMs_20  00 01 38.2
      comp=Z,3µm,19.0s
M19K  Big River Lodg     80.43  18    P        P        23 27 10.2 -0.7
      baz=219
BILL  Bilibino           80.45 360    P        P        23 27 10.5 -0.3
BILL                                  IAmb     IAmb     23 27 13.7
      comp=Z,60nm,1.3s
BILL  Bilibino           80.45 360c iP        P        23 27 10.3 -0.6
BILL                                  pmax     pmax
      comp=Z,48nm,1.3s
AZL   Aizawl             80.47 297   eP        P        23 27 11.8 -0.3
AZL                                   IAmb     IAmb     23 27 26.3
      comp=Z,37nm,1.0s
L19K  White Mountain     80.52  17    IAMs_20  IAMs_20  23 59 51.4
      comp=Z,3µm,19.0s
L19K  White Mountain     80.52  17    P        P        23 27 10.6 -0.8
      baz=218
GTA   Gaotai             80.53 314    P        P        23 27 13.8 +1.7
GTA                                   sP       pwP      23 27 25.3 +4.0
GTA                                   S        S        23 37 21.4 +2.7
GTA                                   sS       SKSac    23 37 31.0 +0.9
GTA                                   pmax     pmax
      comp=Z,51nm,1.0s
GTA                                   pmax     pmax
      comp=Z,1µm,7.6s
GTA                                   LR       LR
      comp=Z,1µm,18.3s
GTA                                   LR       LR
      comp=Z,760nm,19.1s
GTA                                   LR       LR
      comp=Z,1µm,18.3s
F14K  Arctic Creek       80.54  11    P        P        23 27 10.0 -1.4
      baz=207
N20K  Mount Spurr        80.56  19    P        P        23 27 09.6 -2.1
      baz=221
SPCR  Spurr Chakacha     80.56  19    P        P        23 27 09.6 -2.1
      baz=221
G15K  Niukluk            80.57  12    P        P        23 27 11.2 -0.4
      baz=209
CAPN  Captain Cook N     80.58  20    IAMs_20  IAMs_20  23 56 04.1
      comp=Z,4µm,21.0s
CAPN  Captain Cook N     80.58  20    P        P        23 27 11.0 -0.7
      baz=222
H16K  Elim               80.65  13    P        P        23 27 11.1 -0.9
      baz=211
SEW   Seward             80.66  21    P        P        23 27 11.2 -1.0
      baz=224
ZIRO  ZIRO               80.70 301   eP        P        23 27 12.7 -0.6
ZIRO                                  IAmb     IAmb     23 27 27.9
      comp=Z,53nm,0.9s
SLKM  Skilak Lake        80.70  20    P        P        23 27 12.2 -0.2
SLKM                                  IAMs_20  IAMs_20  23 56 46.3
      comp=Z,6µm,21.0s
M20K  Styx River         80.80  18    IAMs_20  IAMs_20  23 57 33.8
      comp=Z,3µm,20.0s
M20K  Styx River         80.80  18    P        P        23 27 11.4 -1.6
      baz=220
O22K  Cooper Landing     80.85  20    IAMs_20  IAMs_20  23 57 21.3
      comp=Z,4µm,20.0s
O22K  Cooper Landing     80.85  20    P        P        23 27 11.9 -1.2
      baz=223
J18K  Innoko River       81.02  16    P        P        23 27 13.3 -0.7
      baz=216,SNR=9.5
L20K  Farewell, AK       81.03  18    P        P        23 27 12.9 -1.3
      baz=219,SNR=6.5
BRDH  Bariadhala         81.06 296    LR       LR       00 04 57.9
      comp=Z,422nm,19.2s,baz=119,slow=37
F15K  North Star Dit     81.07  12    IAMs_20  IAMs_20  23 57 14.8
      comp=Z,3µm,21.0s
F15K  North Star Dit     81.07  12    P        P        23 27 13.8 -0.4
      baz=209
FIS   Fire Island        81.17  20    IAMs_20  IAMs_20  23 56 43.6
      comp=Z,5µm,21.0s
SUA   Susitna One        81.23  19    P        P        23 27 15.6 +0.2
SUA                                   IAMs_20  IAMs_20  23 56 26.3
      comp=Z,3µm,21.0s
SUA   Susitna One        81.23  19    P        P        23 27 12.4 -2.9
      baz=222
G16K  Koyuk River        81.27  13    IAMs_20  IAMs_20  23 57 33.1
      comp=Z,3µm,21.0s
G16K  Koyuk River        81.27  13    P        P        23 27 14.1 -1.2
      baz=211
RC01  Rabbit Creek A     81.28  20    P        P        23 27 15.4 -0.1
RC01                                  IAMs_20  IAMs_20  23 57 26.8
      comp=Z,5µm,20.0s
RC01  Rabbit Creek A     81.28  20    P        P        23 27 14.4 -1.0
      baz=223
TEZP  TEZPUR             81.28 300   eP        P        23 27 16.2 -0.1
TEZP                                  IAmb     IAmb     23 27 30.3
      comp=Z,51nm,1.0s
Q23K  Middleton Isla     81.30  22    IAMs_20  IAMs_20  00 04 35.4
      comp=Z,3µm,18.0s
Q23K  Middleton Isla     81.30  22    P        P        23 27 15.3 -0.2
      baz=227
P23K  Montague Islan     81.31  22    IAMs_20  IAMs_20  23 56 36.7
      comp=Z,4µm,21.0s
P23K  Montague Islan     81.31  22    P        P        23 27 13.6 -2.0
      baz=226
SKT   Skwentna           81.36  19    P        P        23 27 13.4 -2.5
      baz=222
H17K  Granite Mounta     81.43  14    IAMs_20  IAMs_20  00 00 16.4
      comp=Z,2µm,19.0s
H17K  Granite Mounta     81.43  14    P        P        23 27 15.2 -1.0
      baz=213
PWL   Port Wells         81.59  21    P        P        23 27 16.4 -0.7
PWL                                   IAmb     IAmb     23 27 32.5
      comp=Z,28nm,1.0s
PWL                                   IAMs_20  IAMs_20  00 03 53.0
      comp=Z,3µm,18.0s
PWL   Port Wells         81.59  21    P        P        23 27 15.6 -1.6
      baz=225,SNR=9.2
M22K  Willow             81.65  19    IAMs_20  IAMs_20  23 57 00.3
      comp=Z,5µm,22.0s
M22K  Willow             81.65  19    P        P        23 27 15.8 -1.5
      baz=223
K20K  Telida             81.66  17    IAMs_20  IAMs_20  00 02 12.6
      comp=Z,3µm,19.0s
K20K  Telida             81.66  17    P        P        23 27 16.7 -0.8
      baz=219
J19K  Poorman            81.74  16    IAMs_20  IAMs_20  00 10 29.6
      comp=Z,2µm,18.0s
J19K  Poorman            81.74  16    P        P        23 27 17.1 -0.7
      baz=218,SNR=5.4
G17K  Kiwalik Mounta     81.74  13    P        P        23 27 17.1 -0.7
      baz=213
PMR   Palmer             81.85  20    IAMs_20  IAMs_20  23 57 03.8
      comp=Z,5µm,21.0s
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PMR   Palmer             81.85  20    P        P        23 27 20.7 +2.3
PMR   Palmer             81.85  20    P        P        23 27 17.2 -1.3
      baz=224
PPLA  Purkeypile         81.86  18    IAMs_20  IAMs_20  00 03 08.8
      comp=Z,3µm,19.0s
PPLA  Purkeypile         81.86  18    P        P        23 27 16.7 -2.0
      baz=221
HIN   Hinchinbrook I     81.91  22    IAMs_20  IAMs_20  23 56 54.4
      comp=Z,4µm,21.0s
KNK   Knik Glacier       81.95  20    IAMs_20  IAMs_20  23 57 55.3
      comp=Z,3µm,21.0s
KNK   Knik Glacier       81.95  20    P        P        23 27 17.9 -1.1
      baz=224
H18K  Honhosa River      81.98  14    IAMs_20  IAMs_20  23 58 31.9
      comp=Z,3µm,20.0s
H18K  Honhosa River      81.98  14    P        P        23 27 18.3 -0.8
      baz=215
GCSA  Galena City Sc     82.01  15    P        P        23 27 18.3 -0.9
      baz=216
GLI   Glacier Island     82.04  21    IAMs_20  IAMs_20  23 57 53.7
      comp=Z,4µm,20.0s
GLI   Glacier Island     82.04  21    P        P        23 27 17.4 -2.1
      baz=226
GHO   Glory Hole Cre     82.05  20    IAMs_20  IAMs_20  23 57 43.0
      comp=Z,5µm,21.0s
CUT   Chulitna           82.08  19    IAMs_20  IAMs_20  00 05 49.8
      comp=Z,3µm,19.0s
CUT   Chulitna           82.08  19    P        P        23 27 17.4 -2.2
      baz=223
FID   Port Fidalgo       82.17  21    IAMs_20  IAMs_20  23 57 13.6
      comp=Z,4µm,21.0s
BOD   Bodaibo            82.18 335   eP        P        23 27 19.8 -0.5
BOD                                   pmax     pmax
      comp=Z,66nm,1.7s
SML   Sawmill            82.27  20    P        P        23 27 20.5 -0.2
SML                                   IAmb     IAmb     23 27 22.6
      comp=Z,22nm,1.2s
SML                                   IAMs_20  IAMs_20  23 58 17.9
      comp=Z,3µm,20.0s
SML   Sawmill            82.27  20    P        P        23 27 19.1 -1.6
      baz=225,SNR=5.7
J20K  Nowinta River      82.28  16    IAMs_20  IAMs_20  00 08 14.0
      comp=Z,3µm,18.0s
J20K  Nowinta River      82.28  16    P        P        23 27 18.4 -2.3
      baz=219,SNR=6.7
CAST  Castle Rocks       82.28  18    IAMs_20  IAMs_20  00 01 24.1
      comp=Z,2µm,19.0s
CAST  Castle Rocks       82.28  18    P        P        23 27 18.8 -2.0
      baz=221,SNR=26
EYAK  Cordova Ski Ar     82.29  22    IAMs_20  IAMs_20  23 56 21.4
      comp=Z,4µm,22.0s
EYAK  Cordova Ski Ar     82.29  22    P        P        23 27 18.9 -1.8
      baz=227
KAIM  Kayak Island       82.36  23    IAMs_20  IAMs_20  00 04 16.3
      comp=Z,5µm,18.0s
KAIM  Kayak Island       82.36  23    P        P        23 27 20.5 -0.6
      baz=228
TAWA  Tawang             82.38 300   eP        P        23 27 24.5 +2.0
TAWA                                  IAmb     IAmb     23 27 37.6
      comp=Z,30nm,0.8s
F17K  Baldwin Pennin     82.41  13    IAMs_20  IAMs_20  23 58 49.2
      comp=Z,3µm,20.0s
F17K  Baldwin Pennin     82.41  13    P        P        23 27 20.8 -0.4
      baz=212
M23K  Glacier View       82.47  20    P        P        23 27 20.4 -1.4
      baz=225
G18K  Tagagawik          82.52  14    P        P        23 27 20.9 -1.0
      baz=214
CHUM  Lake Minchumin     82.57  17    P        P        23 27 20.1 -2.0
      baz=221
RAGM  Ragged Mountai     82.57  22    IAMs_20  IAMs_20  00 06 00.9
      comp=Z,5µm,18.0s
SCM   Sheep Creek Mo     82.63  20    P        P        23 27 22.6  0.0
SCM                                   IAmb     IAmb     23 28 02.5
      comp=Z,24nm,1.0s
SCM   Sheep Creek Mo     82.63  20    P        P        23 27 22.6  0.0
SCM                                   pmax     pmax
      comp=Z,24nm,1.0s
SCM                                   MLR      MLR
      comp=Z,2µm,18.0s
SCM   Sheep Creek Mo     82.63  20    P        P        23 27 21.4 -1.2
      baz=226
I20K  Naaghedeneel       82.68  16    P        P        23 27 20.9 -1.7
      baz=218
DIV   Divide             82.68  21    P        P        23 27 23.0 +0.1
DIV                                   IAMs_20  IAMs_20  23 57 30.6
      comp=Z,4µm,22.0s
SUCK  Suckling Hills     82.70  23    IAMs_20  IAMs_20  00 04 09.2
      comp=Z,5µm,18.0s
H19K  Roundabout Mou     82.75  15    IAMs_20  IAMs_20  23 59 05.4
      comp=Z,3µm,20.0s
H19K  Roundabout Mou     82.75  15    P        P        23 27 22.6 -0.5
      baz=217
E17K  Hotham Inlet       82.83  12    P        P        23 27 23.4 -0.1
      baz=211,SNR=27
TRF   Thorofare Moun     82.84  18    IAMs_20  IAMs_20  23 58 29.0
      comp=Z,3µm,21.0s
TRF   Thorofare Moun     82.84  18    P        P        23 27 20.3 -3.5
      baz=223
KLU   Klutina            82.87  21    IAMs_20  IAMs_20  23 58 19.8
      comp=Z,3µm,20.0s
KLU   Klutina            82.87  21    P        P        23 27 22.0 -2.0
      baz=227
F18K  Selawik            82.89  13    P        P        23 27 22.5 -1.2
      baz=214,SNR=7.8
GOMU  GeErMu             82.93 309    P        P        23 27 26.6 +1.4
GOMU                                  pP       PcP      23 27 30.4 +0.5
GOMU                                  sP       pwP      23 27 35.0 +0.7
GOMU                                  S        SKSac    23 37 48.3 +1.3
GOMU                                  SS       SS       23 43 03.5 -4.2
GOMU                                  pmax     pmax
      comp=Z,24nm,0.8s
GOMU                                  LR       LR
      comp=Z,720nm,18.2s
GOMU                                  LR       LR
      comp=Z,810nm,18.3s
GOMU                                  LR       LR
      comp=Z,2µm,19.2s
WAT1  Susitna Watana     82.93  19    P        P        23 27 22.8 -1.4
      baz=224
BMRM  Bremner River      82.99  22    IAMs_20  IAMs_20  00 06 54.9
      comp=Z,3µm,18.0s
BMRM  Bremner River      82.99  22    P        P        23 27 23.3 -1.2
      baz=228
WAT6  Susitna Watana     83.02  20    P        P        23 27 23.7 -1.1
      baz=225,SNR=8.9
G19K  Purcell Mounta     83.10  14    IAMs_20  IAMs_20  23 59 15.4
      comp=Z,3µm,20.0s
G19K  Purcell Mounta     83.10  14    P        P        23 27 23.6 -1.3
      baz=216,SNR=13
D17K  Noatak River       83.12  11    P        P        23 27 23.9 -1.0
      baz=210,SNR=14
BPAW  Bear Paw Mtn.      83.12  17    P        P        23 27 23.2 -1.9
      baz=222
H20K  Anotleneega Mo     83.12  15    P        P        23 27 24.5 -0.6
      baz=218
KMPM  Mount Pierce       83.13  46    IAMs_20  IAMs_20  23 59 25.0
      comp=Z,2µm,19.0s
M24K  Tolsona, Glenn     83.21  20    P        P        23 27 24.2 -1.4
      baz=226
C16K  Lisburne Hills     83.21  10    IAMs_20  IAMs_20  23 59 04.4
      comp=Z,3µm,21.0s
C16K  Lisburne Hills     83.21  10    P        P        23 27 24.9 -0.5
      baz=208
KCPM  Cahto Peak         83.23  47    IAMs_20  IAMs_20  00 00 28.7
      comp=Z,3µm,19.0s
RND   Reindeer           83.25  19    P        P        23 27 24.6 -1.3
RND                                   IAmb     IAmb     23 28 04.2
      comp=Z,23nm,1.2s
RND                                   IAMs_20  IAMs_20  00 09 09.7
      comp=Z,3µm,18.0s
RND   Reindeer           83.25  19    P        P        23 27 24.6 -1.3
RND                                   pmax     pmax
      comp=Z,23nm,1.2s
WAX   Waxell Ridge       83.29  23    IAMs_20  IAMs_20  00 04 38.0
      comp=Z,5µm,18.0s
ZAK   Zakamensk          83.30 325   eP        P        23 27 26.0 -0.4
ZAK                                   pmax     pmax
      comp=Z,63nm,1.3s
HOPS  Hopland Field      83.33  48    IAMs_20  IAMs_20  00 00 22.5
      comp=Z,5µm,19.0s
KMRM  Mail Ridge         83.34  46    IAMs_20  IAMs_20  00 06 36.5
      comp=Z,3µm,18.0s
E18K  Tukpahlearik C     83.38  12    IAMs_20  IAMs_20  23 58 37.7
      comp=Z,3µm,20.0s
E18K  Tukpahlearik C     83.38  12    P        P        23 27 25.0 -1.3
      baz=212,SNR=15
CRQM  Cirque             83.39  22    P        P        23 27 26.6 -0.1
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CRQM                                  IAmb     IAmb     23 28 13.4
      comp=Z,36nm,1.3s
CRQM                                  IAMs_20  IAMs_20  00 04 06.8
      comp=Z,4µm,18.0s
CRQE  Cirque             83.40  22    P        P        23 27 25.1 -1.6
      baz=229
N25K  Chitina, Valde     83.42  21    IAMs_20  IAMs_20  23 57 20.2
      comp=Z,4µm,22.0s
N25K  Chitina, Valde     83.42  21    P        P        23 27 26.0 -0.8
      baz=228,SNR=8.1
RDOG  Red Dog Mine       83.46  11    IAMs_20  IAMs_20  23 58 41.0
      comp=Z,3µm,21.0s
RDOG  Red Dog Mine       83.46  11    P        P        23 27 25.9 -0.8
      baz=210
MESA  MESA               83.46  23    IAMs_20  IAMs_20  00 05 12.5
      comp=Z,4µm,18.0s
MESA  MESA               83.46  23    P        P        23 27 26.0 -1.2
      baz=230
MAW   Mawson             83.46 202    P        P        23 27 27.2 +0.4
MAW   Mawson             83.46 202    P        P        23 27 26.6 -0.3
      comp=Z,6.6nm,0.9s,baz=125,slow=6.8,SNR=12
MAW                                   LR       LR       23 58 32.3
      comp=Z,1µm,21.9s,baz=100,slow=31
      comp=Z,6.6nm,0.9s
MCK   McKinley           83.47  18    P        P        23 27 25.0 -1.9
      baz=224
KRPM  Rodgers            83.49  45    IAMs_20  IAMs_20  00 05 59.4
      comp=Z,3µm,18.0s
DHY   Denali Highway     83.49  19    IAMs_20  IAMs_20  23 58 28.0
      comp=Z,5µm,21.0s
DHY   Denali Highway     83.49  19    P        P        23 27 25.3 -1.8
      baz=225
F19K  Shaleruckik Mo     83.50  14    P        P        23 27 25.4 -1.5
      baz=215
TGL   Tana Glacier       83.50  23    IAMs_20  IAMs_20  00 04 18.5
      comp=Z,4µm,18.0s
KHMM  Horse Mountain     83.58  46    IAMs_20  IAMs_20  23 59 48.9
      comp=Z,2µm,19.0s
ISLE  Juniper Island     83.59  23    IAMs_20  IAMs_20  00 01 02.8
      comp=Z,4µm,20.0s
GLB   Gilahina Butte     83.59  22    P        P        23 27 27.3 -0.3
GLB                                   IAmb     IAmb     23 28 13.3
      comp=Z,73nm,1.9s
GLB                                   IAMs_20  IAMs_20  00 07 29.8
      comp=Z,2µm,18.0s
BWN   Browne             83.62  18    IAMs_20  IAMs_20  00 06 02.9
      comp=Z,4µm,18.0s
LSA   Lhasa              83.64 302    P        P        23 27 30.3 +1.2
LSA                                   LR       LR
      comp=Z,370nm,10.2s
LSA                                   LR       LR
      comp=Z,940nm,13.3s
YAH   Yahtse             83.66  23    IAMs_20  IAMs_20  00 04 35.6
      comp=Z,4µm,18.0s
IRK   Irkutsk            83.67 327   eP        P        23 27 25.5 -2.6
IRK                                   pmax     pmax
      comp=Z,143nm,2.1s
KRMB  Red Mountain       83.71  45    IAMs_20  IAMs_20  00 07 06.2
      comp=Z,2µm,18.0s
DIB   Dawson Inlet,      83.74  32    IAMs_20  IAMs_20  00 01 18.3
      comp=Z,3µm,20.0s
KBO   Bosley Butte       83.76  44    IAMs_20  IAMs_20  00 01 00.5
      comp=Z,3µm,19.0s
HARP  HAARP              83.76  21    P        P        23 27 27.0 -1.4
      baz=227
C17K  DeLong Mountai     83.78  11    P        P        23 27 27.5 -0.8
      baz=210,SNR=7.7
H21K  Melozitna Rive     83.79  16    P        P        23 27 27.9 -0.6
      baz=220,SNR=7.3
IMAR  Indian Mountai     83.80  15    P        P        23 27 27.9 -0.6
MCARA McCarthy VSAT      83.84  22    P        P        23 27 27.9 -0.9
      baz=230
KSXB  Camp Six Broad     83.85  45    IAMs_20  IAMs_20  00 03 18.0
      comp=Z,3µm,18.0s
MLY   Manley             83.89  17    IAMs_20  IAMs_20  00 02 43.4
      comp=Z,2µm,19.0s
MLY   Manley             83.89  17    P        P        23 27 27.1 -1.9
      baz=222
GRNC  Granite Creek      83.89  23    IAMs_20  IAMs_20  00 00 51.8
      comp=Z,3µm,19.0s
TABL  Table Mountain     83.94  23    P        P        23 27 29.0 -0.6
TABL                                  IAmb     IAmb     23 27 40.5
      comp=Z,22nm,1.0s
TABL                                  IAMs_20  IAMs_20  00 05 36.2
      comp=Z,4µm,18.0s
KEBM  Edson Butte        83.94  44    IAMs_20  IAMs_20  00 02 34.4
      comp=Z,3µm,18.0s
YKU2  Yakutat            83.95  25    IAMs_20  IAMs_20  00 07 13.5
      comp=Z,5µm,18.0s
MOBC  Moresby Island     83.97  32    IAMs_20  IAMs_20  00 00 47.5
      comp=Z,3µm,19.0s
O02D  Mt. Diablo Mer     83.98  47    IAMs_20  IAMs_20  00 00 45.6
      comp=Z,3µm,19.0s
PAX   Paxson             84.04  20    P        P        23 27 28.4 -1.5
      baz=227
NEA2  Nenana             84.05  18    IAMs_20  IAMs_20  23 59 15.8
      comp=Z,3µm,20.0s
NEA2  Nenana             84.05  18    P        P        23 27 27.4 -2.4
      baz=224
PCA   Pinnacle           84.07  24    IAMs_20  IAMs_20  00 04 54.7
      comp=Z,4µm,18.0s
PINM  Pinnacle           84.07  24    P        P        23 27 27.3 -2.8
      baz=232
E19K  Redstone River     84.13  13    IAMs_20  IAMs_20  00 04 26.8
      comp=Z,3µm,19.0s
E19K  Redstone River     84.13  13    P        P        23 27 30.1 -0.1
      baz=216,SNR=13
BARN  Barnard Glacie     84.14  23    P        P        23 27 30.3 -0.3
BARN                                  IAmb     IAmb     23 27 53.1
      comp=Z,25nm,1.3s
F20K  Avaraart Lake      84.15  14    IAMs_20  IAMs_20  23 59 17.3
      comp=Z,3µm,21.0s
F20K  Avaraart Lake      84.15  14    P        P        23 27 29.7 -0.5
      baz=217,SNR=8.7
PNL   Peninsula          84.16  24    P        P        23 27 29.4 -1.0
      baz=233
L02F  Cave Junction      84.17  45    IAMs_20  IAMs_20  00 03 35.5
      comp=Z,3µm,18.0s
CTG   Chitna Glacier     84.20  23    P        P        23 27 29.7 -1.1
      baz=231
CTGM  Chitina Glacie     84.20  23    P        P        23 27 30.7 -0.1
CTGM                                  IAmb     IAmb     23 27 53.9
      comp=Z,15nm,1.0s
CTGM                                  IAMs_20  IAMs_20  00 05 14.9
      comp=Z,3µm,19.0s
BCPM  Bancas Point       84.23  24    IAMs_20  IAMs_20  00 06 32.9
      comp=Z,4µm,18.0s
LOGN  Logan Glacier      84.24  23    IAMs_20  IAMs_20  00 00 43.9
      comp=Z,2µm,19.0s
WRH   Wood River Hil     84.26  18    P        P        23 27 29.7 -1.2
WRH                                   IAmb     IAmb     23 27 45.6
      comp=Z,19nm,1.1s
G21K  Allakaket          84.28  15    IAMs_20  IAMs_20  23 58 45.6
      comp=Z,3µm,21.0s
G21K  Allakaket          84.28  15    P        P        23 27 30.3 -0.6
      baz=219,SNR=7.6
C18K  Utukok River       84.30  11    IAMs_20  IAMs_20  23 59 19.2
      comp=Z,3µm,21.0s
C18K  Utukok River       84.30  11    P        P        23 27 29.9 -1.1
      baz=212
J01E  Myrtle Point       84.33  44    IAMs_20  IAMs_20  00 05 40.6
      comp=Z,3µm,18.0s
H22K  Ishtalitna Cre     84.36  16    P        P        23 27 31.2 -0.1
      baz=221,SNR=8.9
I23K  Minto, Yukon-K     84.37  17    P        P        23 27 29.3 -2.1
      baz=223
SIT   Sitka              84.40  28    IAMs_20  IAMs_20  00 07 48.5
      comp=Z,3µm,18.0s
SIT   Sitka              84.40  28    P        P        23 27 31.2 -0.5
      baz=237
CCB   Clear Creek Bu     84.47  18    P        P        23 27 30.8 -1.1
S31K  Pelican            84.49  27    IAMs_20  IAMs_20  00 08 56.0
      comp=Z,3µm,18.0s
S31K  Pelican            84.49  27    P        P        23 27 32.2  0.0
      baz=236
K24K  Donnelly Dome      84.51  19    IAMs_20  IAMs_20  23 59 10.1
      comp=Z,5µm,21.0s
K24K  Donnelly Dome      84.51  19    P        P        23 27 31.0 -1.2
      baz=227,SNR=7.0
M26K  Nabesna, AK        84.51  21    IAMs_20  IAMs_20  23 57 45.2
      comp=Z,3µm,22.0s
M26K  Nabesna, AK        84.51  21    P        P        23 27 30.8 -1.5
      baz=229,SNR=12
O28M  Mount Upton        84.52  23    IAMs_20  IAMs_20  00 05 11.4
      comp=Z,3µm,18.0s
O28M  Mount Upton        84.52  23    P        P        23 27 31.3 -1.3
      baz=232
HDA   Harding Lake       84.56  19    P        P        23 27 31.2 -1.2
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HDA				IAmb	IAmb	23 27 35.7	
	comp=Z,44nm,1.0s						
HDA				IAMs_20	IAMs_20	00 02 57.4	
	comp=Z,3µm,20.0s						
HDA	Harding Lake	84.56	19	P	P	23 27 31.0	-1.4
	baz=226,SNR=40						
CRAG	Craig	84.58	30	IAMs_20	IAMs_20	00 01 16.5	
	comp=Z,2µm,19.0s						
CRAG	Craig	84.58	30	P	P	23 27 31.8	-0.8
	baz=239						
MENT	Mentasta	84.61	21	IAMs_20	IAMs_20	23 58 56.8	
	comp=Z,3µm,20.0s						
MENT	Mentasta	84.61	21	P	P	23 27 34.5	+1.8
COLA	College	84.62	18	IAMs_20	IAMs_20	00 05 09.7	
	comp=Z,2µm,18.0s						
COLA	College	84.62	18	P	P	23 27 30.5	-2.1
	baz=225						
YBH	Yreka Blue Hor	84.62	45	P	P	23 27 32.8	-0.5
YBH				IAmb	IAmb	23 27 49.5	
	comp=Z,20nm,1.3s						
YBH				IAMs_20	IAMs_20	00 07 46.3	
	comp=Z,2µm,18.0s						
YBH	Yreka Blue Hor	84.62	45	LR	LR	00 00 46.1	
	comp=Z,105nm,18.8s,baz=267,slow=32						
YBH	Yreka Blue Hor	84.62	45	P	P	23 27 32.8	-0.5
YBH				pmax	pmax		
	comp=Z,19nm,1.3s						
YBH				MLR	MLR		
	comp=Z,2µm,18.0s						
ORV	Oroville	84.67	48	IAMs_20	IAMs_20	00 00 21.0	
	comp=Z,3µm,20.0s						
I02E	Swisshome, OR	84.75	43	IAMs_20	IAMs_20	00 05 59.8	
	comp=Z,2µm,18.0s						
RIDG	Independent Ri	84.77	20	P	P	23 27 33.2	-0.3
RIDG				IAmb	IAmb	23 27 36.1	
	comp=Z,32nm,1.2s						
RIDG				IAMs_20	IAMs_20	23 59 17.0	
	comp=Z,3µm,21.0s						
RIDG	Independent Ri	84.77	20	P	P	23 27 32.1	-1.5
	baz=228,SNR=22						
D19K	Kuna River	84.79	12	IAMs_20	IAMs_20	00 00 47.2	
	comp=Z,3µm,20.0s						
D19K	Kuna River	84.79	12	P	P	23 27 33.3	-0.2
	baz=215,SNR=10						
B18K	Kokolik River	84.80	11	P	P	23 27 32.7	-0.8
	baz=211						
L26K	Log Cabin Wild	84.80	21	IAMs_20	IAMs_20	23 59 01.7	
	comp=Z,3µm,20.0s						
L26K	Log Cabin Wild	84.80	21	P	P	23 27 32.4	-1.2
	baz=229						
P29M	Windy Craggy	84.81	25	IAMs_20	IAMs_20	00 05 39.2	
	comp=Z,5µm,18.0s						
P29M	Windy Craggy	84.81	25	P	P	23 27 32.5	-1.3
	baz=234						
H23K	Yukon River	84.81	17	IAMs_20	IAMs_20	00 12 24.9	
	comp=Z,3µm,18.0s						
H23K	Yukon River	84.81	17	P	P	23 27 33.1	-0.6
	baz=223,SNR=15						
F21K	Alatna River	84.83	15	IAMs_20	IAMs_20	00 00 30.3	
	comp=Z,3µm,20.0s						
F21K	Alatna River	84.83	15	P	P	23 27 32.8	-0.9
	baz=219						
ILAR	Eielson Array	84.84	18	P	P	23 27 31.8	-2.0
ILAR	Eielson Array	84.84	18	P	P	23 27 32.2	-1.5
	comp=Z,15nm,1.1s,baz=234,slow=5.0,SNR=54						
ILAR				LR	LR	00 03 09.1	
	comp=Z,1µm,18.8s,baz=220,slow=34						
	comp=Z,15nm,1.1s						
AFDM	Forest Hills D	84.84	48	P	P	23 27 34.3	-0.2
AFDM				IAMs_20	IAMs_20	00 00 32.5	
	comp=Z,5µm,19.0s						
HOLB	Holberg	84.87	36	IAMs_20	IAMs_20	00 04 03.3	
	comp=Z,4µm,18.0s						
O29M	Mount Kennedy	84.87	24	IAMs_20	IAMs_20	00 06 53.7	
	comp=Z,5µm,18.0s						
O29M	Mount Kennedy	84.87	24	P	P	23 27 32.5	-1.7
	baz=234						
M27K	Edge Creek, AK	84.88	22	IAMs_20	IAMs_20	23 57 44.0	
	comp=Z,3µm,22.0s						
M27K	Edge Creek, AK	84.88	22	P	P	23 27 33.6	-0.7
	baz=230,SNR=7.0						
POKR	Poker Plat Res	84.92	18	IAMs_20	IAMs_20	00 00 42.7	
	comp=Z,2µm,19.0s						
POKR	Poker Plat Res	84.92	18	P	P	23 27 32.3	-1.9
	baz=225,SNR=8.9						
U33K	Whale Pass	84.92	29	P	P	23 27 33.0	-1.3
	baz=239						
I03D	Drain, OR	84.93	43	IAMs_20	IAMs_20	00 01 00.4	
	comp=Z,3µm,20.0s						
S32K	Killisnoo	84.96	28	IAMs_20	IAMs_20	00 04 38.4	
	comp=Z,2µm,18.0s						
S32K	Killisnoo	84.96	28	P	P	23 27 33.0	-1.5
	baz=237						
YUK8	Steele Glacier	85.00	23	P	P	23 27 33.2	-1.8
	baz=232						
C19K	Lookout Ridge	85.00	12	IAMs_20	IAMs_20	23 59 53.7	
	comp=Z,3µm,21.0s						
C19K	Lookout Ridge	85.00	12	P	P	23 27 33.9	-0.7
	baz=213,SNR=7.1						
E20K	Nigu River	85.02	13	P	P	23 27 34.5	-0.2
	baz=217,SNR=9.7						
YUK3	Moose Creek	85.03	22	P	P	23 27 33.4	-1.8
	baz=232						
GTK	Tadong	85.06	299	*e*P	P	23 27 36.3	+0.4
GTK				IAmb	IAmb	23 27 39.4	
	comp=Z,148nm,1.7s						
G22K	Bettles	85.10	15	P	P	23 27 34.2	-0.9
	baz=221						
MOY	Mondy	85.17	325	*e*P	P	23 27 36.0	+0.1
MOY				pmax	pmax		
	comp=Z,123nm,2.4s						
J25K	Salcha River,	85.20	19	IAMs_20	IAMs_20	00 00 05.2	
	comp=Z,5µm,20.0s						
J25K	Salcha River,	85.20	19	P	P	23 27 33.7	-2.0
	baz=227,SNR=43						
SCRK	Sand Creek	85.22	20	P	P	23 27 34.5	-1.4
	baz=228,SNR=18						
V35K	Ketchikan	85.25	30	IAMs_20	IAMs_20	00 04 09.2	
	comp=Z,4µm,18.0s						
V35K	Ketchikan	85.25	30	P	P	23 27 34.4	-1.6
	baz=240						
PLBC	Pleasant Camp	85.28	26	P	P	23 27 35.1	-1.0
	baz=236						
BVCY	Beaver Creek	85.29	22	P	P	23 27 34.9	-1.3
	baz=231						
D20K	Etivluk River	85.29	13	P	P	23 27 36.1	+0.1
	baz=216,SNR=11						
H24K	Noodor Dome	85.30	17	IAMs_20	IAMs_20	00 07 05.7	
	comp=Z,3µm,18.0s						
H24K	Noodor Dome	85.30	17	P	P	23 27 33.4	-2.7
	baz=225						
G23K	Bananza Creek	85.33	16	P	P	23 27 35.9	-0.4
G23K				IAMs_20	IAMs_20	00 00 21.6	
	comp=Z,3µm,20.0s						
G23K	Bananza Creek	85.33	16	P	P	23 27 35.6	-0.7
	baz=223,SNR=15						
YUK6	Outpost Mounta	85.33	24	P	P	23 27 35.8	-0.8
	baz=234						
L27K	Beaver Creek,	85.35	21	IAMs_20	IAMs_20	23 58 01.3	
	comp=Z,3µm,22.0s						
L27K	Beaver Creek,	85.35	21	P	P	23 27 36.4	0.0
	baz=230						
BUCK	Buck Mountain	85.36	43	IAMs_20	IAMs_20	00 06 28.9	
	comp=Z,2µm,18.0s						
T33K	Petersburg	85.36	29	P	P	23 27 34.0	-2.5
	baz=239						
BCAR	Beaver Creek A	85.37	21	P	P	23 27 36.1	-0.4
F22K	John River	85.37	15	P	P	23 27 36.8	+0.3
	baz=221						
P30M	Million Dollar	85.42	25	P	P	23 27 36.0	-0.9
	baz=235						
R32K	Eaglecrest	85.43	27	IAMs_20	IAMs_20	00 05 45.6	
	comp=Z,3µm,18.0s						
R32K	Eaglecrest	85.43	27	P	P	23 27 34.0	-2.8
	baz=237						
RUBB	Prince Rupert	85.44	32	IAMs_20	IAMs_20	00 02 38.4	
	comp=Z,3µm,19.0s						
WRAK	Wrangell Islan	85.45	29	IAMs_20	IAMs_20	00 05 14.4	
	comp=Z,2µm,18.0s						
WRAK	Wrangell Islan	85.45	29	P	P	23 27 35.4	-1.6
	baz=239						
YUK4	Talbot Arm	85.46	23	P	P	23 27 37.4	+0.2
	baz=234						
BBB	Bella Bella	85.58	34	LR	LR	00 02 30.7	
	comp=Z,5µm,18.2s,baz=248,slow=33						
J04A	Umpqua Nationa	85.59	44	IAMs_20	IAMs_20	00 01 24.0	
	comp=Z,3µm,19.0s						
HYT	Haines Junctio	85.60	24	IAMs_20	IAMs_20	00 04 51.2	
	comp=Z,4µm,18.0s						
HYT	Haines Junctio	85.60	24	P	P	23 27 37.7	-0.2
	baz=234						
K04D	Chiloquin, OR	85.61	45	IAMs_20	IAMs_20	00 02 48.5	
	comp=Z,3µm,19.0s						
BEKR	Beckworth	85.61	48	IAMs_20	IAMs_20	00 01 16.7	
	comp=Z,3µm,19.0s						
A19K	Wainwright	85.65	11	P	P	23 27 36.9	-0.8
	baz=212						
COLD	Coldfoot	85.67	16	IAMs_20	IAMs_20	00 00 35.5	
	comp=Z,2µm,20.0s						
COLD	Coldfoot	85.67	16	P	P	23 27 38.0	+0.1
	baz=222,SNR=10						
J26L	Joseph Creek	85.70	19	IAMs_20	IAMs_20	23 59 57.5	
	comp=Z,2µm,21.0s						
J26L	Joseph Creek	85.70	19	P	P	23 27 36.9	-1.3
	baz=229						
SKAG	Skagway	85.72	26	IAMs_20	IAMs_20	00 08 05.4	
	comp=Z,2µm,18.0s						
SKAG	Skagway	85.72	26	P	P	23 27 37.5	-0.8
	baz=236						
PRP	Porcupine Dome	85.77	18	P	P	23 27 37.0	-1.6
	baz=227						
ELS	Elsinore Mount	85.80	54	IAMs_20	IAMs_20	00 03 02.1	
	comp=Z,2µm,18.0s						
K27K	Chicken	85.89	20	IAMs_20	IAMs_20	00 05 06.5	
	comp=Z,3µm,18.0s						
K27K	Chicken	85.89	20	P	P	23 27 38.3	-0.7
	baz=230						
E22K	Anaktuvuk Pass	85.94	15	IAMs_20	IAMs_20	00 00 34.6	
	comp=Z,4µm,21.0s						
E22K	Anaktuvuk Pass	85.94	15	P	P	23 27 39.3	0.0
	baz=221						
G24K	Hadweenzic Riv	86.03	17	P	P	23 27 39.2	-0.5
	baz=225,SNR=30						
NLWA	Neilton Lookou	86.03	40	IAMs_20	IAMs_20	00 01 38.5	
	comp=Z,3µm,19.0s						
C21K	Knifeblade Rid	86.05	13	P	P	23 27 39.6	-0.2
	baz=218,SNR=17						
N30M	Aishikik Lake	86.14	24	IAMs_20	IAMs_20	00 08 21.2	
	comp=Z,5µm,18.0s						
N30M	Aishikik Lake	86.14	24	P	P	23 27 38.3	-2.1
	baz=235						
O30N	Mendenhall	86.14	25	IAMs_20	IAMs_20	00 06 50.4	
	comp=Z,4µm,18.0s						
O30N	Mendenhall	86.14	25	P	P	23 27 38.6	-1.9
	baz=236						
M29M	Somme Creek	86.19	23	IAMs_20	IAMs_20	00 06 29.6	
	comp=Z,4µm,18.0s						
M29M	Somme Creek	86.19	23	P	P	23 27 38.8	-1.9
	baz=234						
H25L	Birch Creek	86.20	18	P	P	23 27 38.1	-2.4
	baz=227						
CBB	Campbell River	86.20	37	IAMs_20	IAMs_20	00 01 37.7	
	comp=Z,3µm,20.0s						
J05D	Fort Rock, OR	86.20	44	IAMs_20	IAMs_20	00 06 10.2	
	comp=Z,3µm,18.0s						
B20K	Meade River	86.23	12	IAMs_20	IAMs_20	00 00 44.2	
	comp=Z,4µm,21.0s						
B20K	Meade River	86.23	12	P	P	23 27 40.0	-0.6
	baz=216						
PAHR	Pah Rah Range	86.26	48	IAMs_20	IAMs_20	00 01 38.0	
	comp=Z,5µm,19.0s						
D22K	Ayikyak River	86.31	14	IAMs_20	IAMs_20	00 02 00.2	
	comp=Z,3µm,20.0s						
D22K	Ayikyak River	86.31	14	P	P	23 27 41.6	+0.6
	baz=220,SNR=16						
U35K	Hyder	86.32	30	P	P	23 27 40.7	-0.6
	baz=241						
I26K	Coal Creek Min	86.36	19	IAMs_20	IAMs_20	00 00 08.0	
	comp=Z,5µm,21.0s						
I26K	Coal Creek Min	86.36	19	P	P	23 27 40.9	-0.5
	baz=229,SNR=12						
E23K	Chandalar	86.44	15	IAMs_20	IAMs_20	23 59 55.7	
	comp=Z,3µm,21.0s						
E23K	Chandalar	86.44	15	P	P	23 27 41.2	-0.6
	baz=223,SNR=16						
B21K	Ikpikpuk River	86.45	13	P	P	23 27 41.8	+0.1
	baz=218,SNR=6.5						
G25K	Bearman Lake	86.46	17	P	P	23 27 41.6	-0.2
	baz=226,SNR=11						
P32M	Atlin	86.48	26	IAMs_20	IAMs_20	00 08 52.6	
	comp=Z,2µm,18.0s						
P32M	Atlin	86.48	26	P	P	23 27 41.5	-0.7
	baz=238						
F24K	Squaw Lake	86.50	16	IAMs_20	IAMs_20	00 08 27.4	
	comp=Z,3µm,18.0s						
F24K	Squaw Lake	86.50	16	P	P	23 27 42.3	+0.2
	baz=225,SNR=11						
DSP	Deep Springs	86.54	51	P	P	23 27 43.2	+0.4
PFO	Pinyon Flats O	86.56	55	IAMs_20	IAMs_20	00 01 20.2	
	comp=Z,4µm,19.0s						
PFO	Pinyon Flats O	86.56	55	LR	LR	00 02 35.2	
	comp=Z,4µm,18.1s,baz=260,slow=33						
WHY	Whitehorse	86.57	25	P	P	23 27 41.9	-0.7
	baz=237						
FYU	Fort Yukon	86.58	17	IAMs_20	IAMs_20	00 06 30.5	
	comp=Z,2µm,18.0s						
PINE	Pine Mountain	86.58	44	IAMs_20	IAMs_20	00 02 07.3	
	comp=Z,3µm,19.0s						
NVAR	Mina Array Bea	86.63	50	P	P	23 27 42.7	-0.9
NVAR	Mina Array Bea	86.63	50	P	P	23 27 45.1	+1.5
	comp=Z,1.1nm,0.6s,baz=290,slow=4.6,SNR=6.4						
NVAR				LR	LR	00 01 37.6	
	comp=Z,7µm,18.7s,baz=272,slow=32						
	comp=Z,1.1nm,0.6s						
N31M	Braeburn, Yuko	86.67	24	IAMs_20	IAMs_20	00 06 19.3	
	comp=Z,4µm,18.0s						
N31M	Braeburn, Yuko	86.67	24	P	P	23 27 42.4	-0.6
	baz=236						
YUH	Yuha Desert	86.70	56	P	P	23 27 43.3	-0.5
L29M	L29M	86.71	22	IAMs_20	IAMs_20	00 07 15.3	
	comp=Z,3µm,18.0s						
L29M	L29M	86.71	22	P	P	23 27 41.8	-1.4
	baz=234						
T35M	Bob Quinn	86.73	29	IAMs_20	IAMs_20	00 02 13.3	
	comp=Z,2µm,19.0s						
T35M	Bob Quinn	86.73	29	P	P	23 27 41.4	-2.0
	baz=241						
E24K	Your Creek	86.74	15	IAMs_20	IAMs_20	00 01 07.7	
	comp=Z,3µm,20.0s						
E24K	Your Creek	86.74	15	P	P	23 27 43.2	0.0
	baz=224						
NV11	Mina Array Sit	86.75	50	P	P	23 27 43.8	-0.3
NV11				IAmb	IAmb	23 27 59.2	
	comp=Z,20nm,1.4s						
EVN	Everest	86.76	299	P	P	23 27 44.5	-0.5
S34M	Telegraph Cree	86.78	28	P	P	23 27 42.9	-0.7
	baz=240						
PGC	Sidney	86.79	39	IAMs_20	IAMs_20	00 01 23.3	
	comp=Z,3µm,20.0s						
Q32M	Nakina River	86.79	27	IAMs_20	IAMs_20	00 06 29.7	
	comp=Z,4µm,18.0s						
Q32M	Nakina River	86.79	27	P	P	23 27 42.5	-1.4
	baz=239						
GSC	Goldstone, Bar	86.79	53	IAMs_20	IAMs_20	00 01 57.4	
	comp=Z,3µm,19.0s						
DAWY	Dawson	86.83	21	P	P	23 27 44.0	+0.3
DAWY				IAMs_20	IAMs_20	23 58 56.4	
	comp=Z,3µm,22.0s						
DAWY	Dawson	86.83	21	P	P	23 27 42.2	-1.6
	baz=233						
D23K	Nanushuk River	86.84	14	IAMs_20	IAMs_20	00 01 13.5	
	comp=Z,5µm,20.0s						
D23K	Nanushuk River	86.84	14	P	P	23 27 43.2	-0.5
	baz=222,SNR=13						
TOLK	Toolik Lake Re	86.88	15	P	P	23 27 44.4	+0.5
TOLK				IAmb	IAmb	23 28 30.7	
	comp=Z,21nm,1.5s						
TOLK				IAMs_20	IAMs_20	23 59 47.3	
	comp=Z,3µm,22.0s						
TOLK	Toolik Lake Re	86.88	15	P	P	23 27 42.9	-1.0
	baz=223						
I27K	Kandik River	87.05	19	P	P	23 27 44.2	-0.6
	baz=230,SNR=6.5						
MZP	Montezuma Peak	87.09	51	IAMs_20	IAMs_20	00 02 26.1	
	comp=Z,3µm,19.0s						
F25K	Christian Rive	87.17	17	IAMs_20	IAMs_20	00 01 39.1	
	comp=Z,3µm,20.0s						
F25K	Christian Rive	87.17	17	P	P	23 27 44.5	-0.8
	baz=227,SNR=8.7						
GWY	Greenwater Val	87.17	52	IAMs_20	IAMs_20	00 02 05.3	
	comp=Z,4µm,19.0s						
P33M	Teslin, Yukon	87.20	26	IAMs_20	IAMs_20	00 10 52.4	
	comp=Z,2µm,18.0s						
P33M	Teslin, Yukon	87.20	26	P	P	23 27 43.9	-1.7
	baz=239						
G26K	Porcupine Rive	87.26	18	IAMs_20	IAMs_20	00 02 11.7	
	comp=Z,2µm,20.0s						
G26K	Porcupine Rive	87.26	18	P	P	23 27 45.2	-0.5
	baz=228,SNR=22						
B22K	Teshekpuk Lake	87.27	13	IAMs_20	IAMs_20	00 06 42.7	
	comp=Z,2µm,19.0s						
B22K	Teshekpuk Lake	87.27	13	P	P	23 27 45.3	-0.4
	baz=219						
BMAR	Burnt Mountain	87.35	17	P	P	23 27 46.8	+0.6
K29M	Barlow Dome	87.36	22	IAMs_20	IAMs_20	00 04 24.5	
	comp=Z,3µm,20.0s						
K29M	Barlow Dome	87.36	22	P	P	23 27 44.2	-2.2
	baz=234						
A21K	Barrow	87.41	11	P	P	23 27 45.9	-0.4
	baz=216						
D24K	Happy Valley	87.44	15	IAMs_20	IAMs_20	00 00 50.1	
	comp=Z,3µm,21.0s						
D24K	Happy Valley	87.44	15	P	P	23 27 46.0	-0.5
	baz=224						
A22K	Sinclair Lake	87.47	12	P	P	23 27 46.5	-0.2
	baz=218						
J29N	Klondike Camp	87.47	21	IAMs_20	IAMs_20	23 59 50.5	
	comp=Z,3µm,22.0s						
J29N	Klondike Camp	87.47	21	P	P	23 27 46.7	-0.2
	baz=234						
H27K	Steamboat Moun	87.48	19	IAMs_20	IAMs_20	00 00 54.4	
	comp=Z,4µm,21.0s						
H27K	Steamboat Moun	87.48	19	P	P	23 27 45.7	-1.1
	baz=231						
I28M	Miner Creek	87.50	20	P	P	23 27 45.3	-1.7
	baz=232						
C23K	Itkillik River	87.51	14	IAMs_20	IAMs_20	00 02 10.1	
	comp=Z,3µm,20.0s						
C23K	Itkillik River	87.51	14	P	P	23 27 47.5	+0.7
	baz=222,SNR=11						
DLBC	Dease Lake	87.54	28	LR	LR	00 00 31.8	
	comp=Z,109nm,20.5s,baz=232,slow=31						
E25K	Arctic Village	87.55	16	IAMs_20	IAMs_20	00 01 22.2	
	comp=Z,3µm,21.0s						
E25K	Arctic Village	87.55	16	P	P	23 27 47.1	-0.1
	baz=227,SNR=7.5						
N32M	Quiet Lake	87.58	25	P	P	23 27 46.0	-1.5
	baz=238						
R33M	Jennings River	87.59	27	IAMs_20	IAMs_20	00 07 31.8	
	comp=Z,3µm,18.0s						
R33M	Jennings River	87.59	27	P	P	23 27 45.8	-1.9
	baz=240						
M31M	Drury Creek, Y	87.61	24	P	P	23 27 45.7	-1.9
	baz=237						
F26K	Sheenjek River	87.66	17	IAMs_20	IAMs_20	00 06 06.0	
	comp=Z,3µm,19.0s						
F26K	Sheenjek River	87.66	17	P	P	23 27 47.3	-0.3
	baz=228						
I07A	Izee	87.66	44	IAMs_20	IAMs_20	00 07 50.7	
	comp=Z,3µm,18.0s						
WVOR	Wild Horse Val	87.70	46	IAMs_20	IAMs_20	00 03 14.0	
	comp=Z,3µm,19.0s						
TPNV	Topopah Spring	87.72	52	IAMs_20	IAMs_20	00 02 25.9	
	comp=Z,5µm,19.0s						
TIXI	Tiksi	87.73	349	P	P	23 27 47.1	-0.7
TIXI				IAmb	IAmb	23 27 49.5	
	comp=Z,32nm,1.3s						
TIXI	Tiksi	87.73	349	LR	LR	00 03 55.2	
	comp=Z,1µm,20.8s,baz=150,slow=34						
TIXI	Tiksi	87.73	349	*i* P	P	23 27 46.8	-1.1
TIXI				pmax	pmax		
	comp=Z,27nm,1.3s						
G27K	Doyon Strip	87.81	18	IAMs_20	IAMs_20	00 05 16.1	
	comp=Z,3µm,19.0s						
G27K	Doyon Strip	87.81	18	P	P	23 27 47.6	-0.9
	baz=230						
MAYO	Mayo, Yukon	87.81	22	P	P	23 27 48.8	+0.4
	baz=236						
C24K	Franklin Bluff	87.88	14	IAMs_20	IAMs_20	00 01 57.7	
	comp=Z,3µm,20.0s						
C24K	Franklin Bluff	87.88	14	P	P	23 27 47.9	-0.7
	baz=224						
I29M	Ogilvie Camp,	87.99	20	IAMs_20	IAMs_20	00 05 16.0	
	comp=Z,3µm,19.0s						
I29M	Ogilvie Camp,	87.99	20	P	P	23 27 47.9	-1.4
	baz=234						
FARO	Faro, Yukon	88.04	24	P	P	23 27 47.2	-2.5
	baz=238						
J08A	Circle Bar Ran	88.12	45	IAMs_20	IAMs_20	00 04 29.0	
	comp=Z,3µm,19.0s						
D25K	Kavik River	88.17	15	IAMs_20	IAMs_20	00 06 24.6	
	comp=Z,2µm,20.0s						
D25K	Kavik River	88.17	15	P	P	23 27 49.3	-0.9
	baz=226						
J30M	Hart River	88.21	21	IAMs_20	IAMs_20	00 10 43.0	
	comp=Z,3µm,18.0s						
J30M	Hart River	88.21	21	P	P	23 27 49.0	-1.5
	baz=235						
E07A	Sunnyside	88.28	42	IAMs_20	IAMs_20	00 02 54.9	
	comp=Z,2µm,19.0s						
S11A	Rachel	88.31	51	IAMs_20	IAMs_20	00 02 35.4	
	comp=Z,4µm,19.0s						
SHPR	Sheep Range	88.43	52	IAMs_20	IAMs_20	00 02 35.6	
	comp=Z,2µm,19.0s						
V12A	Nelson	88.44	53	IAMs_20	IAMs_20	00 02 51.0	
	comp=Z,3µm,19.0s						
H29M	Whitestone	88.48	19	IAMs_20	IAMs_20	00 07 24.9	
	comp=Z,2µm,19.0s						
H29M	Whitestone	88.48	19	P	P	23 27 50.0	-1.6
	baz=234						
LLLB	Lillooet	88.48	37	IAMs_20	IAMs_20	00 03 10.0	
	comp=Z,3µm,19.0s						
I30M	Mount Dempster	88.56	21	IAMs_20	IAMs_20	23 59 50.3	
	comp=Z,3µm,22.0s						
I30M	Mount Dempster	88.56	21	P	P	23 27 50.4	-1.8
	baz=235						
E27K	Coleen River	88.71	17	P	P	23 27 51.3	-1.4
	baz=230						
F28M	Old Crow	88.86	18	IAMs_20	IAMs_20	00 05 30.8	
	comp=Z,3µm,19.0s						
F28M	Old Crow	88.86	18	P	P	23 27 52.0	-1.4
	baz=232						
BELA	Belgrano 2	88.88	176	P	P	23 27 51.8	-1.6
BELA				IAmb	IAmb	23 27 55.1	
	comp=Z,52nm,1.5s						
C26K	Camden Bay	88.95	15	P	P	23 27 53.7	0.0
	baz=227						
G29M	Pine Creek	89.00	19	IAMs_20	IAMs_20	00 01 27.8	
	comp=Z,3µm,21.0s						
G29M	Pine Creek	89.00	19	P	P	23 27 53.7	-0.4
	baz=234						
W13A	Hualapai Mount	89.02	54	P	P	23 27 54.6	-0.5
W13A				IAMs_20	IAMs_20	00 08 44.3	
	comp=Z,2µm,18.0s						
C27K	Jago River	89.07	16	IAMs_20	IAMs_20	00 01 52.3	
	comp=Z,3µm,22.0s						
C27K	Jago River	89.07	16	P	P	23 27 53.2	-1.1
	baz=228						
MMPY	Sheldon Lake,	89.08	24	P	P	23 27 52.7	-1.8
	baz=240						
EPYK	Eagle Plains	89.11	20	IAMs_20	IAMs_20	00 01 56.6	
	comp=Z,2µm,21.0s						
EPYK	Eagle Plains	89.11	20	P	P	23 27 53.1	-1.4
	baz=235						
LPIG	La Paz	89.18	65	LR	LR	00 01 32.3	
	comp=Z,1µm,18.9s,baz=261,slow=31						
BMO	Blue Mountains	89.40	44	IAMs_20	IAMs_20	00 08 09.7	
	comp=Z,2µm,18.0s						
SLBS	Sierra La Lagu	89.40	66	IAMs_20	IAMs_20	00 01 10.1	
	comp=Z,2µm,19.0s						
D27M	Malcolm River	89.56	16	IAMs_20	IAMs_20	00 06 41.3	
	comp=Z,3µm,19.0s						
D27M	Malcolm River	89.56	16	P	P	23 27 56.2	-0.4
	baz=231						
E28M	Babbage River	89.57	17	P	P	23 27 56.3	-0.4
	baz=232						
H31M	Peel River	89.59	21	P	P	23 27 54.2	-2.7
	baz=237						
ELK	Elko	89.60	48	P	P	23 27 56.0	-1.7
ELK	Elko	89.60	48	LR	LR	00 04 05.6	
	comp=Z,3µm,18.4s,baz=248,slow=33						
ELK	Elko	89.60	48	P	P	23 27 56.1	-1.7
ELK				pmax	pmax		
	comp=Z,13nm,1.5s						
ELK				MLR	MLR		
	comp=Z,4µm,18.0s						
G30M	tAoh Zraii Nji	89.62	19	IAMs_20	IAMs_20	00 08 19.1	
	comp=Z,2µm,19.0s						
G30M	tAoh Zraii Nji	89.62	19	P	P	23 27 55.5	-1.4
	baz=235						
SPR3	Spring Creek 3	89.77	50	P	P	23 27 58.1	-0.6
TGTN	Hyland Airport	89.78	26	P	P	23 27 56.3	-1.6
	baz=243						
LIRD	Liard River Hi	89.80	28	P	P	23 27 56.4	-1.5

	baz=244						
HSIG		**89.83**	**60**	IAMs_20	IAMs_20	00 02 28.3	
	comp=Z,3µm,19.0s						
E29M	**Blow River**	**89.92**	**18**	IAMs_20	IAMs_20	00 06 04.9	
	comp=Z,3µm,19.0s						
E29M	**Blow River**	**89.92**	**18**	P	**P**	**23 27 56.9**	**-1.4**
	baz=234						
TOAD	**Toad River Com**	**89.97**	**29**	P	**P**	**23 27 57.4**	**-1.4**
	baz=245						
PSUT	**Pine Spring**	**90.00**	**51**	IAMs_20	IAMs_20	00 03 32.0	
	comp=Z,4µm,19.0s						
F30M	**Barrier River**	**90.12**	**19**	IAMs_20	IAMs_20	00 02 35.2	
	comp=Z,2µm,21.0s						
F30M	**Barrier River**	**90.12**	**19**	P	**P**	**23 27 57.6**	**-1.6**
	baz=236						
G31M	**Satah River**	**90.23**	**20**	IAMs_20	IAMs_20	00 02 30.2	
	comp=Z,2µm,21.0s						
G31M	**Satah River**	**90.23**	**20**	P	**P**	**23 27 58.8**	**-0.8**
	baz=237						
D28M	**Stokes Point**	**90.24**	**17**	P	**P**	**23 27 59.4**	**-0.3**
	baz=233						
PLID	**Pearl Lake**	**90.35**	**44**	P	**P**	**23 28 00.6**	**-0.6**
PLID				IAMs_20	IAMs_20	00 04 46.0	
	comp=Z,2µm,19.0s						
KNB	**Kanab**	**90.37**	**52**	IAMs_20	IAMs_20	00 03 56.1	
	comp=Z,3µm,19.0s						
SYO	**Syowa Base**	**90.43**	**197**	⇓*e*P	**P**	**23 28 01.2**	**+0.4**
SYO	**Syowa Base**	**90.43**	**197**	⇑*e*PcP	**PcP**	**23 28 02.3**	**+0.4**
WMQ	**Urumqi**	**90.58**	**315**	⇑P	**P**	**23 28 02.4**	**+0.4**
WMQ				sP	pwP	23 28 13.6	+2.3
WMQ				SKS	**SKSac**	**23 38 32.3**	**-1.0**
WMQ				S	**S**	**23 38 55.1**	**-2.2**
WMQ				pmax	pmax		
	comp=Z,27nm,2.1s						
WMQ				pmax	pmax		
	comp=Z,700nm,5.7s						
WMQ				LR	LR		
	comp=Z,730nm,18.3s						
WMQ				LR	LR		
	comp=Z,750nm,18.3s						
WMQ				LR	LR		
	comp=Z,820nm,22.5s						
NEW	**Newport**	**90.59**	**41**	LR	LR	00 00 38.3	
	comp=Z,1µm,21.7s,baz=260,slow=30						
BEAVL	**Fort Liard**	**90.60**	**28**	P	**P**	**23 27 58.6**	**-3.1**
	baz=245						
F31M	**Tsiigehtchic**	**90.68**	**20**	IAMs_20	IAMs_20	00 03 36.2	
	comp=Z,2µm,20.0s						
F31M	**Tsiigehtchic**	**90.68**	**20**	P	**P**	**23 27 59.9**	**-1.9**
	baz=238						
TUC	**Tucson**	**90.79**	**57**	P	**P**	**23 28 02.7**	**-0.6**
TUC	**Tucson**	**90.79**	**57**	P	**P**	**23 28 02.7**	**-0.6**
TUC				pmax	pmax		
	comp=Z,9.0nm,1.3s						
HLID	**Hailey**	**91.00**	**46**	P	**P**	**23 28 03.3**	**-0.8**
KOTAN	**Kotaneelee Air**	**91.04**	**28**	P	**P**	**23 28 01.4**	**-2.3**
	baz=246						
WUAZ	**Wupatki**	**91.11**	**54**	IAMs_20	IAMs_20	00 00 11.8	
	comp=Z,2µm,21.0s						
INK	**Inuvik**	**91.22**	**19**	IAMs_20	IAMs_20	00 04 11.2	
	comp=Z,2µm,20.0s						
INK	**Inuvik**	**91.22**	**19**	LR	LR	00 08 46.5	
	comp=Z,2µm,18.1s,baz=225,slow=35						
INK	**Inuvik**	**91.22**	**19**	P	**P**	**23 28 02.1**	**-2.1**
	baz=238						
HYB	**Hyderabad**	**91.59**	**287**	*e*P	**P**	**23 28 06.9**	**-0.4**
HYB				*e*PP	**PP**	**23 31 45.1**	**-0.7**
HYB				*e*SKSac	**SKSac**	**23 38 39.8**	**-0.2**
HYB				*e*SS	**SS**	**23 45 14.8**	**+0.3**
HVU	**Hansel Valley**	**91.67**	**48**	IAMs_20	IAMs_20	00 06 15.2	
	comp=Z,3µm,18.0s						
319A	**Douglas**	**91.81**	**58**	P	**P**	**23 28 07.0**	**-1.0**
319A				IAmb	IAmb	23 28 24.8	
	comp=Z,13nm,1.0s						
319A				IAMs_20	IAMs_20	00 04 32.4	
	comp=Z,3µm,19.0s						
TMUT	**Trail Mountain**	**92.19**	**50**	IAMs_20	IAMs_20	00 05 23.0	
	comp=Z,4µm,19.0s						
HMU	**Henry Mountain**	**92.21**	**52**	IAMs_20	IAMs_20	00 05 18.6	
	comp=Z,3µm,19.0s						
MSO	**Missoula**	**92.23**	**43**	IAMs_20	IAMs_20	00 09 42.6	
	comp=Z,2µm,19.0s						
HWUT	**Hardware Ranch**	**92.50**	**48**	IAMs_20	IAMs_20	00 06 13.2	
	comp=Z,3µm,19.0s						
DLMT	**Dillon**	**92.74**	**44**	IAMs_20	IAMs_20	00 06 59.1	
	comp=Z,2µm,18.0s						
AHID	**Auburn Hatcher**	**93.12**	**47**	IAMs_20	IAMs_20	00 05 51.6	
	comp=Z,2µm,19.0s						
FXWY	**Fox Creek**	**93.39**	**46**	IAMs_20	IAMs_20	00 07 44.5	
	comp=Z,2µm,19.0s						
TPAW	**Teton Pass**	**93.41**	**46**	IAMs_20	IAMs_20	00 07 24.9	
	comp=Z,2µm,19.0s						
BOZ	**Bozeman (W)**	**93.45**	**44**	P	**P**	**23 28 15.4**	**+0.1**
BOZ				IAmb	IAmb	23 29 02.1	
	comp=Z,25nm,2.0s						
BOZ	**Bozeman (W)**	**93.45**	**44**	P	**P**	**23 28 15.5**	**+0.1**
BOZ				pmax	pmax		
	comp=Z,25nm,2.0s						
ZSN	**Zaisan**	**93.48**	**318**	*e*P	**P**	**23 28 15.4**	**+0.1**
ZSN				*e*S	**SKSac**	**23 38 49.5**	**+0.2**
ZSN				pmax	pmax		
	comp=Z,17nm,1.0s						
ZSN	**Zaisan**	**93.48**	**318**	*e*P	**P**	**23 28 15.4**	**+0.1**
	comp=Z,17nm,1.0s						
ZSN				*e*S	**SKSac**	**23 38 49.5**	**+0.2**
SNOW	**Snow King Moun**	**93.54**	**46**	IAMs_20	IAMs_20	00 06 52.5	
	comp=Z,2µm,19.0s						
YHB	**Horse Butte**	**93.54**	**45**	IAMs_20	IAMs_20	00 06 32.5	
	comp=Z,3µm,19.0s						
YHL	**Hebgen Lake**	**93.58**	**45**	IAMs_20	IAMs_20	00 07 02.4	
	comp=Z,3µm,19.0s						
LOHW	**Long Hollow**	**93.68**	**46**	IAMs_20	IAMs_20	00 05 44.3	
	comp=Z,2µm,20.0s						
MVCO	**Mesa Verde**	**93.77**	**53**	IAMs_20	IAMs_20	00 06 59.1	
	comp=Z,3µm,19.0s						
YNR	**Norris Junctio**	**93.89**	**45**	IAMs_20	IAMs_20	00 12 53.8	
	comp=Z,2µm,18.0s						
HPIG		**93.91**	**63**	IAMs_20	IAMs_20	00 06 27.4	
	comp=Z,4µm,18.0s						
PMSA	**Palmer Station**	**94.06**	**161**	LR	LR	00 05 14.8	
	comp=Z,1µm,20.6s,baz=234,slow=32						
EPT	**El Paso**	**94.20**	**59**	IAMs_20	IAMs_20	00 04 53.8	
	comp=Z,3µm,19.0s						
BW06	**Boulder Array**	**94.23**	**47**	IAMs_20	IAMs_20	00 06 15.8	
	comp=Z,3µm,19.0s						
PDAR	**Pinedale Array**	**94.23**	**47**	P	**P**	**23 28 19.6**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=300,slow=3.7,SNR=2.3						
PDAR				LR	LR	00 06 56.1	
	comp=Z,2µm,18.6s,baz=246,slow=33						
	comp=Z,0.4nm,0.8s						
Y22D	**IRIS PASSCAL I**	**94.34**	**56**	P	**P**	**23 28 16.6**	**-3.1**
	baz=258						
C36M	**Paulatuk**	**94.74**	**19**	P	**P**	**23 28 17.0**	**-3.5**
	baz=247						
TROLL	**Troll, Antarti**	**94.86**	**185**	⇑P	**P**	**23 28 19.9**	**-1.6**
	comp=Z,802nm,0.8s						
ANMO	**Albuquerque**	**94.90**	**55**	IAMs_20	IAMs_20	00 06 41.2	
	comp=Z,5µm,19.0s						
ANMO	**Albuquerque**	**94.90**	**55**	IAMs_20	IAMs_20	00 06 41.2	
	comp=Z,5µm,19.0s						
ANMO	**Albuquerque**	**94.90**	**55**	LR	LR	00 07 01.6	
	comp=Z,6µm,18.3s,baz=5.5,slow=33						
RLMT	**Red Lodge**	**94.96**	**45**	IAMs_20	IAMs_20	00 08 13.1	
	comp=Z,2µm,18.0s						
MK31	**Makanchi Array**	**95.03**	**317**	P	**P**	**23 28 22.3**	**-0.1**
MK31	**Makanchi Array**	**95.03**	**317**	*c i*P	**P**	**23 28 22.3**	**-0.1**
MKAR	**Makanchi Array**	**95.03**	**317**	P	**P**	**23 28 22.3**	**-0.1**
MKAR	**Makanchi Array**	**95.03**	**317**	P	**P**	**23 28 22.5**	**+0.1**
	comp=Z,7.8nm,0.8s,baz=89,slow=6.2,SNR=35						
MKAR				PKKPbc	**PKKPbc**	**23 45 19.8**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=248,slow=3.5,SNR=7.2						
MKAR				LR	LR	00 13 04.7	
	comp=Z,767nm,19.4s,baz=82,slow=37						
	comp=Z,7.8nm,0.8s						
ZAA0	**Zalesovo Array**	**95.14**	**324**	P	**P**	**23 28 21.5**	**-1.2**
ZALV	**Zalesovo Beam**	**95.14**	**324**	P	**P**	**23 28 21.6**	**-1.1**
ZALV	**Zalesovo Beam**	**95.14**	**324**	P	**P**	**23 28 21.9**	**-0.8**
	comp=Z,39nm,1.1s,baz=106,slow=4.8,SNR=40						
ZALV				LR	LR	00 10 53.7	
	comp=Z,906nm,20.6s,baz=94,slow=35						
	comp=Z,39nm,1.1s						
ZALV	**Zalesovo Beam**	**95.14**	**324**	*i* P	**P**	**23 28 21.8**	**-0.9**
ZALV				pmax	pmax		
	comp=Z,39nm,1.1s						
A36M	**Sachs Harbour**	**95.45**	**17**	P	**P**	**23 28 22.9**	**-0.8**
	baz=246						
SNAA	**Sanae**	**95.58**	**183**	⇑P	**P**	**23 28 22.9**	**-1.8**
	comp=Z,185nm,1.0s						
SNAA	**Sanae**	**95.58**	**183**	P	**P**	**23 28 22.7**	**-1.9**
SNAA				IAmb	IAmb	23 28 26.0	
	comp=Z,21nm,1.2s						
SNAA				IAMs_20	IAMs_20	00 09 28.9	
	comp=Z,2µm,20.0s						
SNAA	**Sanae**	**95.58**	**183**	P	**P**	**23 28 22.8**	**-1.8**
	comp=Z,13nm,1.1s,baz=173,slow=5.2,SNR=18						
SNAA				LR	LR	00 09 48.6	
	comp=Z,2µm,19.8s,baz=158,slow=34						
	comp=Z,13nm,1.1s						
SNAA	**Sanae**	**95.58**	**183**	*ce*P	**P**	**23 28 23.2**	**-1.4**
SNAA				pmax	pmax		
	comp=Z,23nm,1.3s						
ZAIG	**Zacatecas**	**95.83**	**68**	IAMs_20	IAMs_20	00 05 30.4	
	comp=Z,3µm,19.0s						
TXAR	**Lajitas Array**	**96.11**	**61**	P	**P**	**23 28 27.1**	**-0.8**
TXAR	**Lajitas Array**	**96.11**	**61**	P	**P**	**23 28 26.2**	**-1.7**
	comp=Z,0.9nm,1.0s,baz=234,slow=4.2,SNR=5.3						
TXAR				LR	LR	00 06 58.4	
	comp=Z,1µm,18.6s,baz=254,slow=32						
	comp=Z,0.9nm,1.0s						
TXAR	**Lajitas Array**	**96.11**	**61**	P	**P**	**23 28 27.1**	**-0.8**
YKA	**Yellowknife Ar**	**96.13**	**27**	P	**P**	**23 28 25.3**	**-1.7**
	comp=Z,0.5nm,0.8s,baz=267,slow=4.2,SNR=4.4						
YKA				LR	LR	00 11 02.5	
	comp=Z,1µm,18.1s,baz=264,slow=35						
	comp=Z,0.5nm,0.8s						
YKA	**Yellowknife Ar**	**96.13**	**27**	*i* P	**P**	**23 28 27.7**	**+0.7**
SDCO	**Great Sand Dun**	**96.21**	**53**	IAMs_20	IAMs_20	00 03 10.7	
	comp=Z,3µm,22.0s						
VNA3	**Neumayer Olymp**	**96.28**	**181**	⇑P	**P**	**23 28 25.8**	**-1.9**
	comp=Z,3.3nm,0.6s						
K22A	**Casper**	**96.39**	**48**	IAMs_20	IAMs_20	00 11 38.0	
	comp=Z,3µm,18.0s						
MOIG	**Morelia**	**96.50**	**71**	IAMs_20	IAMs_20	00 05 48.2	
	comp=Z,3µm,19.0s						
ISCO	**Idaho Springs**	**96.52**	**51**	IAMs_20	IAMs_20	00 07 46.7	
	comp=Z,4µm,19.0s						
VNA2	**Neumayer--Watz**	**96.54**	**182**	⇑P	**P**	**23 28 27.2**	**-1.7**
	comp=Z,7.6nm,0.8s,baz=174,slow=5.4						
UZB	**Uzynbulak**	**96.54**	**313**	*e*P	**P**	**23 28 29.4**	**-0.2**
UZB				pmax	pmax		
	comp=Z,18nm,1.8s						
UZB	**Uzynbulak**	**96.54**	**313**	*e*P	**P**	**23 28 29.4**	**-0.2**
	comp=Z,18nm,1.8s						
VNA1	**Neumayer--Stat**	**96.84**	**182**	⇑P	**P**	**23 28 29.1**	**-1.1**
	comp=Z,7.4nm,0.8s						
KPKS	**Kokpek**	**96.85**	**313**	*e*P	**P**	**23 28 30.5**	**-0.3**
KPKS				*e*S	**SKSac**	**23 39 07.3**	**-0.3**
KPKS	**Kokpek**	**96.85**	**313**	*e*P	**P**	**23 28 30.6**	**-0.3**
KPKS				*e*S	**SKSac**	**23 39 07.4**	**-0.3**
T25A	**Trinidad**	**96.95**	**54**	IAMs_20	IAMs_20	00 07 46.4	
	comp=Z,4µm,19.0s						
SATY	**Saty**	**96.97**	**312**	*e*P	**P**	**23 28 31.0**	**-0.5**
SATY				*e*S	**SKSac**	**23 39 07.9**	**-0.5**
SATY				pmax	pmax		
	comp=Z,21nm,2.0s						
SATY	**Saty**	**96.97**	**312**	*e*P	**P**	**23 28 31.1**	**-0.5**
	comp=Z,21nm,2.0s						
SATY				*e*S	**SKSac**	**23 39 07.9**	**-0.5**
TDK	**Taldyqorghan**	**97.33**	**314**	*e*P	**P**	**23 28 32.7**	**-0.2**
TDK	**Taldyqorghan**	**97.33**	**314**	*e*P	**P**	**23 28 32.8**	**-0.2**
LAO	**LASA Array**	**97.36**	**44**	IAMs_20	IAMs_20	00 08 43.4	
	comp=Z,2µm,19.0s						
MDOK	**Medeo**	**97.97**	**312**	*e*P	**P**	**23 28 35.5**	**-0.5**
MDOK				*e*S	**SKSac**	**23 39 12.9**	**-0.6**
MDOK	**Medeo**	**97.97**	**312**	*e*P	**P**	**23 28 35.6**	**-0.5**
MDOK				*e*S	**SKSac**	**23 39 13.0**	**-0.6**
AAA	**Alma-Ata**	**98.07**	**312**	*e*P	**P**	**23 28 36.1**	**-0.2**
AAA	**Alma-Ata**	**98.07**	**312**	*e*P	**P**	**23 28 36.2**	**-0.2**
KSH	**Kashi**	**98.15**	**309**	P	Pdif	23 28 39.1	+2.1
KSH				PP	**PP**	**23 32 43.1**	**+6.6**
KSH				SKS	**SKSac**	**23 39 14.0**	**-0.6**
KSH				S	**ScS**	**23 40 05.8**	**+1.5**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,290nm,7.6s						
KSH				LR	LR		
	comp=Z,800nm,16.8s						
KSH				LR	LR		
	comp=Z,760nm,19.6s						
KSH				LR	LR		
	comp=Z,770nm,19.2s						
KURK	**Kurchatov**	**98.19**	**320**	P	**P**	**23 28 35.8**	**-0.8**
KURK				IAmb	IAmb	23 28 38.0	
	comp=Z,40nm,2.0s						
KURK	**Kurchatov**	**98.19**	**320**	P	**P**	**23 28 35.8**	**-0.8**
KURK				pmax	pmax		
	comp=Z,40nm,2.0s						
KURBB	**Kurchatov Arra**	**98.23**	**320**	P	**P**	**23 28 35.3**	**-1.5**
	comp=Z,2.4nm,0.9s,baz=103,slow=3.5,SNR=14						
KURBB				PP	**PP**	**23 32 35.7**	**-0.8**
	comp=Z,7.6nm,1.3s,baz=98,slow=5.6,SNR=4.1						
KURBB				LR	LR	00 15 23.5	
	comp=Z,968nm,18.6s,baz=126,slow=37						
	comp=Z,2.4nm,0.9s						
UNM	**Universidad Na**	**98.30**	**72**	IAMs_20	IAMs_20	00 09 31.0	
	comp=Z,3µm,18.0s						
RSSD	**Black Hills**	**98.44**	**47**	IAMs_20	IAMs_20	00 14 33.1	
	comp=Z,2µm,18.0s						
USHA	**Ushuaia**	**98.57**	**151**	LR	LR	00 05 52.8	
	comp=Z,927nm,19.9s,baz=216,slow=31						
KSCO	**Kaye Shedlock’**	**98.66**	**52**	IAMs_20	IAMs_20	00 12 36.4	
	comp=Z,3µm,18.0s						
DGMT	**Dagmar**	**99.01**	**42**	IAMs_20	IAMs_20	00 13 57.0	
	comp=Z,2µm,18.0s						
JCT	**Junction City**	**99.62**	**61**	IAMs_20	IAMs_20	00 05 10.4	
	comp=Z,2µm,21.0s						
AAK	**Ala-Archa**	**99.74**	**312**	LR	LR	00 14 51.4	
	comp=Z,366nm,19.9s,baz=81,slow=36						
AAK	**Ala-Archa**	**99.74**	**312**	*i* P	**Pdif**	**23 28 45.0**	**+1.0**
AAK				pmax	pmax		
	comp=Z,9.0nm,2.9s						
SGDS	**Sogindy**	**99.76**	**312**	*e*P	**Pdif**	**23 28 43.6**	**-0.3**
ABTX	**Abilene, Hawle**	**100.08**	**59**	IAMs_20	IAMs_20	00 09 09.4	
	comp=Z,3µm,19.0s						
BTLS	**Baital**	**100.39**	**314**	*e*P	**Pdif**	**23 28 46.4**	**-0.1**
BTLS	**Baital**	**100.39**	**314**	*e*P	**Pdif**	**23 28 46.5**	**-0.1**
KVTX	**Kingsville**	**100.82**	**64**	IAMs_20	IAMs_20	00 11 24.5	
	comp=Z,2µm,19.0s						
CBKS	**Cedar Bluff**	**100.86**	**53**	IAMs_20	IAMs_20	00 10 12.8	
	comp=Z,3µm,19.0s						
735A	**Kenedy**	**101.09**	**63**	IAMs_20	IAMs_20	00 11 48.5	
	comp=Z,2µm,18.0s						
E28A	**Huff**	**101.11**	**45**	IAMs_20	IAMs_20	00 11 08.7	
	comp=Z,2µm,19.0s						
K30B	**Basset**	**101.43**	**49**	IAMs_20	IAMs_20	00 14 31.4	
	comp=Z,2µm,18.0s						
R32A	**Long Quarter,**	**101.61**	**53**	IAMs_20	IAMs_20	00 10 44.6	
	comp=Z,3µm,19.0s						
FW07	**Weatherford**	**101.64**	**59**	IAMs_20	IAMs_20	00 10 17.8	
	comp=Z,2µm,20.0s						
WHTX	**Lake Whitney,**	**101.82**	**60**	IAMs_20	IAMs_20	00 10 19.7	
	comp=Z,2µm,19.0s						
BRZS	**Berezniki**	**101.86**	**319**	*e*P	**Pdif**	**23 28 52.8**	**-0.2**
BRZS	**Berezniki**	**101.86**	**319**	*e*P	**Pdif**	**23 28 52.8**	**-0.2**
FW06	**Azle**	**101.86**	**59**	IAMs_20	IAMs_20	00 10 34.8	
	comp=Z,3µm,19.0s						
DZA	**Taraz**	**102.08**	**312**	*e*P	**Pdif**	**23 28 53.9**	**-0.3**
DZA	**Taraz**	**102.08**	**312**	*e*P	**Pdif**	**23 28 53.1**	**-1.1**
SUSD	**Miller**	**102.09**	**47**	IAMs_20	IAMs_20	00 13 26.9	
	comp=Z,2µm,19.0s						
Z35A	**Perchaven, San**	**102.16**	**58**	IAMs_20	IAMs_20	00 10 43.6	
	comp=Z,3µm,19.0s						
IUG	**Iuzhnay**	**102.97**	**311**	*e*P	**Pdif**	**23 28 57.8**	**-0.5**
IUG	**Iuzhnay**	**102.97**	**311**	*e*P	**Pdif**	**23 28 57.8**	**-0.5**
BRLS	**Borolday**	**103.19**	**312**	*e*P	**Pdif**	**23 28 59.3**	**+0.2**
BRLS	**Borolday**	**103.19**	**312**	*e*Pdif	**Pdif**	**23 28 59.3**	**+0.2**
KSU1	**Kansas State U**	**103.32**	**53**	IAMs_20	IAMs_20	00 11 40.7	
	comp=Z,3µm,19.0s						
BVAR	**Borovoye Array**	**103.52**	**322**	Pdiff	**Pdif**	**23 28 59.6**	**-0.7**
	comp=Z,3.7nm,0.9s,baz=88,slow=5.2,SNR=11						
BVAR				PKiKP	**PP**	**23 33 15.8**	**-0.7**
	comp=Z,2.3nm,1.0s,baz=72,slow=2.6,SNR=4.3						
ECSD	**EROS Data Cent**	**103.71**	**48**	IAMs_20	IAMs_20	00 17 15.8	
	comp=Z,3µm,18.0s						
Z38A	**Mt. Pleasant**	**104.04**	**59**	IAMs_20	IAMs_20	00 11 44.4	
	comp=Z,3µm,19.0s						
F33A	**5 Mile Ranch,**	**104.09**	**46**	IAMs_20	IAMs_20	00 12 58.6	
	comp=Z,2µm,19.0s						
NATX	**Nacogdoches**	**104.16**	**60**	IAMs_20	IAMs_20	00 11 34.5	
	comp=Z,3µm,19.0s						
CCIG	**Comitan**	**104.39**	**76**	IAMs_20	IAMs_20	00 12 43.6	
	comp=Z,2µm,18.0s						
RES	**Resolute Bay**	**104.43**	**16**	IAMs_20	IAMs_20	00 13 01.1	
	comp=Z,3µm,21.0s						
AGMN	**Agassiz Nation**	**104.52**	**43**	IAMs_20	IAMs_20	00 14 50.7	
	comp=Z,2µm,19.0s						
441A	**DeRidder**	**105.30**	**61**	IAMs_20	IAMs_20	00 13 00.0	
	comp=Z,2µm,19.0s						
WLAR	**White Oak Lake**	**105.64**	**58**	IAMs_20	IAMs_20	00 12 37.7	
	comp=Z,2µm,19.0s						
Z41A	**Richland Creek**	**105.86**	**59**	IAMs_20	IAMs_20	00 12 51.6	
	comp=Z,3µm,19.0s						
X40A	**Basin Creek Fa**	**105.94**	**58**	IAMs_20	IAMs_20	00 13 03.5	
	comp=Z,3µm,19.0s						
I37A	**Lemond, Waseca**	**106.05**	**48**	IAMs_20	IAMs_20	00 14 43.6	
	comp=Z,2µm,19.0s						
SPMN	**Marine on St.**	**106.51**	**46**	IAMs_20	IAMs_20	00 20 30.8	
	comp=Z,2µm,18.0s						
PETF	**Flores**	**106.64**	**76**	IAMs_20	IAMs_20	00 11 54.2	
	comp=Z,2µm,18.0s						
MTO3	**Montecristo**	**106.74**	**79**	IAMs_20	IAMs_20	00 10 24.9	
	comp=Z,3µm,19.0s						
CCAR	**Cane Creek**	**106.77**	**58**	IAMs_20	IAMs_20	00 17 42.6	
	comp=Z,3µm,18.0s						
ESQI	**Esquipulas**	**106.79**	**78**	IAMs_20	IAMs_20	00 10 28.1	
	comp=Z,3µm,18.0s						
143A	**Socs Landing,**	**106.99**	**59**	IAMs_20	IAMs_20	00 19 45.5	
	comp=Z,2µm,18.0s						
E38A	**The Farm, Brul**	**107.40**	**45**	IAMs_20	IAMs_20	00 18 10.2	
	comp=Z,2µm,18.0s						
VBMS	**Vicksburg**	**107.70**	**60**	IAMs_20	IAMs_20	00 17 29.4	
	comp=Z,2µm,18.0s						
I40A	**Norwalk**	**108.06**	**48**	IAMs_20	IAMs_20	00 20 11.7	
	comp=Z,2µm,18.0s						
G40A	**Rib Lake**	**108.35**	**46**	IAMs_20	IAMs_20	00 11 09.4	
	comp=Z,2µm,21.0s						
PEBM	**Pemiscott Bayo**	**108.46**	**56**	IAMs_20	IAMs_20	00 18 45.2	
	comp=Z,3µm,18.0s						
346A	**Big Creek Wild**	**108.54**	**61**	IAMs_20	IAMs_20	00 17 16.7	
	comp=Z,2µm,18.0s						
TEIG	**Tepich**	**108.58**	**73**	IAMs_20	IAMs_20	00 16 00.4	
	comp=Z,2µm,18.0s						
Y45A	**Yeager Farm, C**	**108.62**	**58**	IAMs_20	IAMs_20	00 20 20.6	
	comp=Z,3µm,18.0s						
TGUH	**Tegucigalpa,Un**	**108.69**	**79**	IAMs_20	IAMs_20	00 11 15.6	
	comp=Z,2µm,18.0s						
OXF	**Oxford**	**108.76**	**58**	IAMs_20	IAMs_20	00 18 47.3	
	comp=Z,2µm,18.0s						
146A	**Union**	**108.96**	**60**	IAMs_20	IAMs_20	00 18 40.7	
	comp=Z,2µm,18.0s						
COWI	**Conover**	**109.08**	**45**	IAMs_20	IAMs_20	00 16 44.7	
	comp=Z,2µm,19.0s						
MSEY	**Mahe Island**	**109.15**	**260**	IAMs_20	IAMs_20	00 17 15.2	
	comp=Z,2µm,19.0s						
Q44A	**Meyer Farm, Va**	**109.21**	**53**	IAMs_20	IAMs_20	00 20 57.8	
	comp=Z,3µm,18.0s						
I42A	**Draeger Farm,**	**109.29**	**48**	IAMs_20	IAMs_20	00 18 12.3	
	comp=Z,2µm,18.0s						
K43A	**Burlington**	**109.73**	**49**	IAMs_20	IAMs_20	00 21 40.2	
	comp=Z,3µm,18.0s						
F42A	**Maple Grove Fa**	**109.79**	**46**	IAMs_20	IAMs_20	00 16 55.5	
	comp=Z,2µm,19.0s						
Z47A	**Carrollton**	**109.82**	**59**	IAMs_20	IAMs_20	00 15 27.4	
	comp=Z,3µm,19.0s						
OLIL	**Olney**	**109.93**	**53**	IAMs_20	IAMs_20	00 21 29.7	
	comp=Z,3µm,18.0s						
FOMA	**Nahampoana Res**	**110.03**	**237**	IAMs_20	IAMs_20	00 15 10.8	
	comp=Z,3µm,20.0s						
H43A	**Windswept, Lux**	**110.09**	**47**	IAMs_20	IAMs_20	00 16 12.7	
	comp=Z,3µm,19.0s						
ARTI	**Arti**	**110.33**	**326**	*i* PKIKP	**PKiKP**	**23 33 30.6**	**-0.9**
ARTI						23 34 05.7	
ARTI				PPP	PPP	23 36 24.6	
ARTI						23 40 42.9	
ARTI				SP	SP	23 43 33.8	+0.2
ARTI				SS	**SS**	**23 49 28.4**	**-4.7**
ARTI				SSS	SSS	23 53 49.1	
ARTI				MLR	MLR		
	comp=Z,964nm,20.0s						
JTS	**Las Juntas de**	**110.33**	**84**	IAMs_20	IAMs_20	00 11 33.1	
	comp=Z,3µm,18.0s						
BRAL	**Brewton**	**110.59**	**61**	IAMs_20	IAMs_20	00 20 12.1	
	comp=Z,3µm,18.0s						
LRAL	**Lakeview Retre**	**110.71**	**59**	IAMs_20	IAMs_20	00 15 45.9	
	comp=Z,3µm,20.0s						
X48A	**Hartselle**	**110.71**	**58**	IAMs_20	IAMs_20	00 11 41.9	
	comp=Z,2µm,21.0s						
HDC	**Heredia**	**111.10**	**84**	IAMs_20	IAMs_20	00 11 58.5	
	comp=Z,2µm,18.0s						
LCR2	**La Lucha 2**	**111.16**	**84**	IAMs_20	IAMs_20	00 11 43.0	
	comp=Z,2µm,19.0s						
I45A	**Fountain**	**111.22**	**48**	IAMs_20	IAMs_20	00 19 47.3	
	comp=Z,2µm,18.0s						
Y49A	**Blount Mountai**	**111.22**	**58**	IAMs_20	IAMs_20	00 18 55.5	
	comp=Z,2µm,19.0s						
CLTN	**Cedars of Leba**	**111.32**	**56**	IAMs_20	IAMs_20	00 16 51.8	
	comp=Z,3µm,19.0s						
VOI	**Vohitsoka**	**111.45**	**240**	IAMs_20	IAMs_20	00 17 41.8	
	comp=Z,3µm,18.0s						
451A	**Vernon**	**111.69**	**62**	IAMs_20	IAMs_20	00 22 29.2	
	comp=Z,3µm,18.0s						
N47A	**Urbana**	**111.75**	**51**	IAMs_20	IAMs_20	00 17 31.8	
	comp=Z,3µm,19.0s						
FPAL	**Fort Paine**	**111.90**	**58**	IAMs_20	IAMs_20	00 17 02.3	
	comp=Z,2µm,19.0s						
BRU2	**Volcan**	**112.28**	**86**	IAMs_20	IAMs_20	00 13 36.7	
	comp=Z,2µm,18.0s						
J47A	**Sunmer**	**112.28**	**48**	IAMs_20	IAMs_20	00 22 08.7	
	comp=Z,3µm,18.0s						
E46A	**Sault Ste Mari**	**112.41**	**45**	IAMs_20	IAMs_20	00 17 30.8	
	comp=Z,2µm,20.0s						
X51A	**Calhoun**	**112.52**	**58**	IAMs_20	IAMs_20	00 17 01.8	
	comp=Z,3µm,19.0s						
152A	**Waverly Hall**	**112.62**	**60**	IAMs_20	IAMs_20	00 17 23.6	
	comp=Z,2µm,19.0s						
CPCT	**Cooper Cave**	**112.79**	**57**	IAMs_20	IAMs_20	00 17 36.9	
	comp=Z,3µm,19.0s						
553A	**Crawfordville**	**112.81**	**62**	IAMs_20	IAMs_20	00 22 07.9	
	comp=Z,3µm,18.0s						
Y52A	**Lilburn**	**113.18**	**58**	IAMs_20	IAMs_20	00 20 50.3	
	comp=Z,2µm,18.0s						
W52A	**Murphy**	**113.28**	**57**	IAMs_20	IAMs_20	00 17 34.9	
	comp=Z,2µm,19.0s						
TIGA	**Tifton**	**113.56**	**61**	IAMs_20	IAMs_20	00 20 22.7	
	comp=Z,2µm,19.0s						
GOGA	**Godfrey**	**113.67**	**59**	IAMs_20	IAMs_20	00 17 45.5	
	comp=Z,2µm,19.0s						
I49A	**Point Hope**	**113.68**	**47**	IAMs_20	IAMs_20	00 19 41.5	
	comp=Z,3µm,19.0s						
SOR	**Soroa**	**113.71**	**71**	IAMs_20	IAMs_20	00 18 59.2	
	comp=Z,2µm,18.0s						
K50A	**Casco**	**113.93**	**49**	IAMs_20	IAMs_20	00 18 58.2	
	comp=Z,3µm,19.0s						
154A	**Montrose**	**113.98**	**60**	IAMs_20	IAMs_20	00 18 43.6	
	comp=Z,2µm,19.0s						
BG3	**Lake Jocassee**	**114.10**	**57**	IAMs_20	IAMs_20	00 18 18.6	
	comp=Z,3µm,19.0s						
656A	**Willston**	**114.44**	**63**	IAMs_20	IAMs_20	00 19 41.1	
	comp=Z,2µm,19.0s						
KIRV	**Kirov**	**114.59**	**329**	⇓*i*PKIKP	**PKiKP**	**23 33 39.5**	**0.0**
OTAV	**Otavalo**	**114.67**	**96**	IAMs_20	IAMs_20	00 14 00.9	
	comp=Z,3µm,18.0s						
PAULI	**Pauline**	**115.02**	**57**	IAMs_20	IAMs_20	00 18 49.0	
	comp=Z,3µm,19.0s						
CAMR	**Camarioca**	**115.23**	**70**	IAMs_20	IAMs_20	00 22 01.6	
	comp=Z,5µm,18.0s						
KMSC	**Kings Mountain**	**115.41**	**57**	IAMs_20	IAMs_20	00 18 34.1	
	comp=Z,3µm,19.0s						
N53A	**Lisbon**	**115.43**	**51**	IAMs_20	IAMs_20	00 24 45.2	
	comp=Z,2µm,18.0s						
257A	**Skidaway Islan**	**115.75**	**61**	IAMs_20	IAMs_20	00 20 11.5	
	comp=Z,2µm,20.0s						
061Z	**Ochoppi**	**115.79**	**67**	IAMs_20	IAMs_20	00 21 25.2	
	comp=Z,2µm,18.0s						
ERPA	**Erie**	**115.93**	**49**	IAMs_20	IAMs_20	00 20 01.3	
	comp=Z,2µm,19.0s						
BIRD	**Birdtown, Kers**	**116.14**	**58**	IAMs_20	IAMs_20	00 22 47.7	
	comp=Z,3µm,19.0s						
VLDQ	**Val d'Or**	**116.78**	**42**	IAMs_20	IAMs_20	00 20 22.4	
	comp=Z,2µm,19.0s						
WVNY	**West Valley, N**	**116.92**	**49**	IAMs_20	IAMs_20	00 20 23.3	
	comp=Z,3µm,19.0s						
APA	**Apatity**	**117.10**	**342**	⇓*i*PKIKP	**PKPdf**	**23 33 41.3**	**-2.8**
APA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BELG	**Belogornoye**	**117.30**	**323**	PKP	**PKPdf**	**23 33 44.2**	**-0.7**
	comp=Z,40nm,1.0s,baz=59,slow=2.4,SNR=9.3						
BELG	**Belogornoye**	**117.30**	**323**	*c i*PKIKP	**PKPdf**	**23 33 43.9**	**-1.0**
DELO	**Deloro Mine**	**117.32**	**46**	IAMs_20	IAMs_20	00 22 35.6	
	comp=Z,3µm,19.0s						

KEV	Kevo	117.46	345	IAMs_20	IAMs_20	00 24 19.9	
	comp=Z,2µm,21.0s						
PECO	Prince Edward	117.86	47	IAMs_20	IAMs_20	00 20 37.0	
	comp=Z,2µm,19.0s						
ARA0	ARCESS Array S	117.99	345	ePKPdf	PKPdf	23 33 45.1	-0.7
ARCES	ARCESS Array B	117.99	345		PKPdf	23 33 45.1	-0.7
ARCES	ARCESS Array B	117.99	345	PKP	PKPdf	23 33 44.9	-1.0
	comp=Z,6.6nm,0.8s,baz=81,slow=2.0,SNR=23						
ARCES				PKKPbc	PKKPbc	23 44 08.2	+0.1
	comp=Z,1.3nm,0.9s,baz=209,slow=1.7,SNR=6.5						
ARCES	ARCESS Array B	117.99	345	PKIKP	PKPdf	23 33 45.1	-0.7
M57A	Sunshine Farm,	118.15	50	IAMs_20	IAMs_20	00 25 25.2	
	comp=Z,3µm,18.0s						
SUMG	Summit	118.31	8		PKPdf	23 33 46.8	0.0
SUMG				IAMs_20	IAMs_20	00 31 26.5	
	comp=Z,2µm,18.0s						
SUMG	Summit	118.31	8	PKIKP	PKPdf	23 33 46.8	0.0
KLMR	Klimovskoe	118.39	334	ePKIKP	PKPdf	23 33 45.0	-1.8
KLMR				e		23 35 01.6	
KLMR				pmax	pmax		
	comp=Z,22nm,1.3s						
MTDJ	Mount Denham	118.47	76	IAMs_20	IAMs_20	00 19 44.7	
	comp=Z,1µm,18.0s						
J57A	Williamstown	118.66	47	IAMs_20	IAMs_20	00 21 16.2	
	comp=Z,2µm,20.0s						
ILULI	Ilulissat	118.67	14	IAMs_20	IAMs_20	00 23 21.4	
	comp=Z,2µm,20.0s						
WBO	Williamsburg	118.87	45	IAMs_20	IAMs_20	00 24 04.7	
	comp=Z,3µm,18.0s						
KUQ	Kuujjuuaa	118.92	30	IAMs_20	IAMs_20	00 22 08.2	
	comp=Z,2µm,20.0s						
LPAZ	La Paz	119.00	117	PKP	PKPdf	23 33 48.4	-1.7
	comp=Z,0.8nm,0.5s,baz=180,slow=5.1,SNR=2.2						
LKRN	Lenkeran, Azer	119.21	307	PKIKP	PKPdf	23 33 48.0	-1.0
HEF	Hetta	119.27	345	eP	PKPdf	23 33 46.0	-2.3
TRO	Tromso	119.42	347	ePKPdf	PKPdf	23 33 49.0	+0.5
LONY	Lake Ozonia	119.43	46	IAMs_20	IAMs_20	00 29 17.4	
	comp=Z,2µm,18.0s						
WUPA	West Chester U	119.50	51	IAMs_20	IAMs_20	00 22 19.0	
	comp=Z,3µm,19.0s						
KIF	Kilpisjarvi	119.50	346	eP	PKPdf	23 33 47.5	-1.2
MAK	Makhachkala	119.51	312	i P	Pdif	23 30 04.4	-7.2
MAK				i		23 33 44.7	
MAK				ePS	PS	23 44 57.6	-3.0
MAK				ePS	PS	23 44 57.8	-2.8
MAK				eSS	SS	23 51 28.9	-5.5
MAK				pmax	pmax		
	comp=Z,46nm,0.8s						
LUPA	Lehigh Univers	119.58	50	IAMs_20	IAMs_20	00 16 56.0	
	comp=Z,2µm,21.0s						
AKT	Akhty	119.60	311	i PKIKP	PKPdf	23 33 49.0	-0.9
AKT				e		23 35 12.2	
AKT				ePPP	PPP	23 37 43.8	
AKT				pmax	pmax		
	comp=Z,18nm,1.2s						
CHIV	Chivirico	119.66	74	IAMs_20	IAMs_20	00 24 22.9	
	comp=Z,1µm,20.0s						
J59A	Piesco	119.72	47	IAMs_20	IAMs_20	00 22 05.2	
	comp=Z,2µm,20.0s						
SEKA	Sheki	120.04	310	PKIKP	PKPdf	23 33 49.6	-1.1
FRNY	Flat Rock	120.08	45	IAMs_20	IAMs_20	00 27 50.6	
	comp=Z,2µm,18.0s						
MNGR	Mingechevir, A	120.20	310	PKIKP	PKPdf	23 33 49.9	-1.0
ACCN	Adirondack Com	120.33	47	IAMs_20	IAMs_20	00 21 44.4	
	comp=Z,2µm,20.0s						
POGA	Pongola	120.68	227	IAMs_20	IAMs_20	00 19 43.9	
	comp=Z,2µm,20.0s						
VT1	Waterbury	120.77	46	IAMs_20	IAMs_20	00 29 08.1	
	comp=Z,2µm,18.0s						
GANJ	Ganja	120.79	310	PKIKP	PKPdf	23 33 51.3	-0.8
NMDO	Nuevo Mundo	121.03	74	IAMs_20	IAMs_20	00 20 56.3	
	comp=Z,2µm,18.0s						
SCHQ	Schefferville	121.07	33	PKP	PKPdf	23 33 50.8	-1.4
	comp=Z,1.3nm,0.9s,baz=214,slow=11,SNR=2.1						
SCHQ				PKKPbc	PKKPab	23 43 54.9	-0.4
	comp=Z,3.3nm,0.9s,baz=173,slow=8.1,SNR=3.9						
J61A	Chester	121.13	47	IAMs_20	IAMs_20	00 23 23.6	
	comp=Z,2µm,19.0s						
VRH	Novokhopyorsk	121.15	323	ePKIKP	PKPdf	23 33 51.5	-0.8
VRH				pmax	pmax		
	comp=Z,24nm,0.9s						
HNH	Hanover	121.24	46	IAMs_20	IAMs_20	00 23 02.5	
	comp=Z,2µm,20.0s						
LBNH	Lisbon	121.37	46	IAMs_20	IAMs_20	00 20 40.8	
	comp=Z,1µm,20.0s						
STEI	Steigen	121.59	348	ePKPdf	PKPdf	23 33 51.1	-1.6
MOS	Moscow	121.60	329	i PKIKP	PKPdf	23 33 52.9	-0.2
MOS				e		23 35 30.9	
MOS				e		23 40 51.0	
MOS				eSS	SS	23 52 05.7	+5.5
NAX	Nakhchivan	121.67	308	PKIKP	PKPdf	23 33 52.7	-1.2
H62A	Milan	121.83	45	IAMs_20	IAMs_20	00 24 34.8	
	comp=Z,2µm,18.0s						
I62A	Tamworth	121.87	46	IAMs_20	IAMs_20	00 23 43.1	
	comp=Z,2µm,20.0s						
SCO	Scoresbysund	121.95	3		PKPdf	23 33 53.2	-0.2
SCO				IAMs_20	IAMs_20	00 24 48.7	
	comp=Z,1µm,20.0s						
SCO	Scoresbysund	121.95	3	PKIKP	PKPdf	23 33 53.2	-0.2
SCO				MLR	MLR		
	comp=Z,1µm,20.0s						
FAUS	Fauske	122.04	347	eP	PKPdf	23 33 52.9	-0.7
FAUS				ePKPdf	PKPdf	23 33 53.0	-0.7
FAUS				ePP	PP	23 35 31.3	+3.6
GNI	Garni	122.07	310		PKPdf	23 33 54.9	+0.1
GNI	Garni	122.07	310	PKP	PKPdf	23 33 52.8	-1.9
	comp=Z,12nm,0.9s,baz=356,slow=4.6,SNR=7.6						
GNI	Garni	122.07	310	c iPKIKP	PKPdf	23 33 55.0	+0.3
GNI	Garni	122.07	310	PKP	PKPdf	23 33 55.2	+0.5
G62A	West of Eustis	122.09	44	IAMs_20	IAMs_20	00 32 57.7	
	comp=Z,2µm,18.0s						
GOF	Gofitskoye	122.18	316	cePKIKP	PKPdf	23 33 54.5	-0.1
NCK	Nalchik	122.19	314	⇓iPKIKP	PKPdf	23 33 55.0	+0.3
LPSR	Galich'ya Gora	122.24	325	ePKIKP	PKPdf	23 33 53.3	-1.1
LPSR				pmax	pmax		
	comp=Z,40nm,1.1s						
I63A	Otisfield	122.36	46	IAMs_20	IAMs_20	00 24 18.9	
	comp=Z,2µm,19.0s						
OBN	Obninsk	122.42	328	PKPdf	PKPdf	23 33 54.2	-0.4
OBN	Obninsk	122.42	328	PKP	PKPdf	23 33 54.2	-0.4
	comp=Z,11nm,0.4s,baz=157,slow=5.2,SNR=7.1						
OBN	Obninsk	122.42	328	cePKIKP	PKPdf	23 33 53.8	-0.9
OBN				i		23 35 31.1	
OBN				ePPP	PPP	23 38 06.9	
OBN				pmax	pmax		
	comp=Z,22nm,1.2s						
OBN	Obninsk	122.42	328	PKP	PKPdf	23 33 54.9	+0.2
VORR	Voronezh	122.44	324	ePKIKP	PKPdf	23 33 54.9	+0.1
VORR				pmax	pmax		
	comp=Z,76nm,1.2s						
D62A	Allapoint, All	122.54	42	IAMs_20	IAMs_20	00 20 38.5	
	comp=Z,2µm,21.0s						
KBZ	Khabaz	122.62	314	PKP	PKPdf	23 33 54.8	-0.6
	comp=Z,3.8nm,0.8s,baz=98,slow=4.4,SNR=9.2						
KBZ	Khabaz	122.62	314	d iPKIKP	PKPdf	23 33 56.0	+0.6
VSR	Storozhevoye	122.64	323	ePKIKP	PKPdf	23 33 53.3	-1.9
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VORD	Divnogorie	122.66	323	ePKIKP	PKPdf	23 33 52.8	-2.5
VORD				pmax	pmax		
	comp=Z,10.0nm,1.1s						
L64A	Middleborough	122.68	48	IAMs_20	IAMs_20	00 26 54.7	
	comp=Z,2µm,18.0s						
KIV	Kislovodsk	122.71	314		PKPdf	23 33 55.0	-0.8
KIV	Kislovodsk	122.71	314	⇑P	PKPdf	23 33 55.6	-0.2
KIV	Kislovodsk	122.71	314	i PKIKP	PKPdf	23 33 55.3	-0.5
KIV				e		23 35 32.3	
KIV				ePS	PS	23 45 26.4	-3.0
KIV				eSS	SS	23 52 15.2	-0.3
KIV				pmax	pmax		
	comp=Z,16nm,1.1s						
KIV	Kislovodsk	122.71	314	PKP	PKPdf	23 33 56.0	+0.2
M65A	Busby, Falmout	122.90	49	P	PKPdf	23 33 51.9	-4.1
	baz=283						
RAYN	Ar Rayn	123.01	290		PKPdf	23 33 56.6	-0.2
RAYN	Ar Rayn	123.01	290	⇑PKIKP	PKPdf	23 33 56.9	0.0
VAGH	Vaagaholmen	123.02	348	ePKPdf	PKPdf	23 33 54.4	-1.1
VAGH				ePP	PP	23 35 34.0	-0.3
KARS	Kars	123.22	310	PKPdf	PKPdf	23 33 57.0	+0.1
KARS	Kars	123.22	310	PKIKP	PKPdf	23 33 57.0	+0.1
MOR8	Moi Rana	123.24	347	ePKPdf	PKiKP	23 33 57.3	+1.1
KONS	Konsvik	123.25	348	eP	PKPdf	23 33 55.8	-0.2
STOK	Stokkvaagen	123.41	347	eP	PKPdf	23 33 54.8	-1.4
FINES	FINESS Array B	123.43	338		PKPdf	23 33 55.0	-1.4
FINES	FINESS Array B	123.43	338	PKP	PKPdf	23 33 55.3	-1.1
	comp=Z,8.0nm,0.9s,baz=72,slow=6.2,SNR=18						
LEIR	Leirfjorden	123.58	347	ePKPdf	PKPdf	23 33 56.5	-0.1
GEVA	Gevas	123.70	308		PKPdf	23 33 57.8	-0.2
BOSA	Boshof	124.32	222	PKP	PKPdf	23 33 57.7	-1.7
	comp=Z,5.3nm,0.9s,baz=156,slow=7.2,SNR=4.7						
EMMW	East Machias	124.33	44	IAMs_20	IAMs_20	00 21 12.9	
	comp=Z,2µm,21.0s						
SDDR	Presa de Saban	124.44	76	IAMs_20	IAMs_20	00 21 03.5	
	comp=Z,2µm,19.0s						
GURO	Guroymak-BITLI	124.45	308		PKPdf	23 33 59.6	+0.3
ANGG	Ammassalik, Gr	124.61	12	IAMs_20	IAMs_20	00 32 54.3	
	comp=Z,1µm,19.0s						
GRTK	Grand Turk	124.65	73	IAMs_20	IAMs_20	00 26 06.1	
	comp=Z,2µm,18.0s						
VSLR	Vesyoloye	124.70	314	⇑ePKIKP	PKPdf	23 33 57.9	-1.6
SOC	Sochi	124.88	315	ePKIKP	PKPdf	23 33 57.8	-2.0
SOC				e		23 35 45.5	
SOC				pmax	pmax		
	comp=Z,15nm,1.2s						
VSU	Vasula	125.12	335	c iPKIKP	PKPdf	23 33 57.8	-1.9
NSS	Namsos	125.19	347	ePKPdf	PKPdf	23 33 58.7	-1.0
IVI	Ivigtut	125.43	20	IAMs_20	IAMs_20	00 21 08.5	
	comp=Z,2µm,22.0s						
LMN	Caledonia Moun	125.72	42	IAMs_20	IAMs_20	00 27 18.4	
	comp=Z,3µm,19.0s						
ANN	Anapa	126.05	317	i PKIKP	PKPdf	23 34 01.8	-0.2
ANN				e		23 34 04.8	
ANN				e		23 35 55.0	
ANN				e		23 41 06.4	
ANN				pmax	pmax		
	comp=Z,30nm,1.4s						
HAL	Halifax	126.95	43	IAMs_20	IAMs_20	00 29 32.2	
	comp=Z,2µm,19.0s						
MNK	Minsk	127.03	331	i PKP	PKPdf	23 34 02.2	-1.3
	comp=E,12nm,0.7s						
MNK				i PKP	PKPdf	23 34 02.2	-1.3
	comp=N,10.0nm,1.0s						
MNK				i PKP	PKPdf	23 34 02.2	-1.3
	comp=Z,16nm,1.0s,baz=54						
MNK				i PP	PP	23 36 00.6	-0.9
MNK				i PPP	PPP	23 38 43.5	
MNK				i SKS	SKSdf	23 41 14.0	-0.8
MNK				i SS	SS	23 53 09.9	+1.4
MNK				i SSS	SSS	23 57 51.3	
MNK	Minsk	127.03	331	i PKIKP	PKPdf	23 34 02.2	-1.3
MNK				i		23 36 00.6	
MNK				i PPP	PPP	23 38 43.4	
MNK				i		23 41 13.9	
MNK				i SS	SS	23 53 09.9	+1.4
MNK				i SSS	SSS	23 57 51.3	
MNK				pmax	pmax		
	comp=E,12nm,0.7s						
MNK				pmax	pmax		
	comp=Z,16nm,1.0s						
MNK				pmax	pmax		
	comp=N,10.0nm,1.0s						
MNK				MLR	MLR		
	comp=N,450nm,20.0s						
MNK				MLR	MLR		
	comp=Z,709nm,21.0s						
MNK				MLR	MLR		
	comp=E,562nm,20.0s						
KMBO	Kilima Mbogo	127.62	259	IAMs_20	IAMs_20	00 26 30.7	
	comp=Z,1µm,20.0s						
PHPEN	Phepeng	128.00	223		PKPdf	23 34 04.9	-1.6
NC303	NORSAR Array S	128.16	345		PKPdf	23 34 05.0	-0.6
PABE	Paberze	128.18	334		PKPdf	23 34 05.0	-0.7
PABE				IAMs_20	IAMs_20	00 34 37.9	
	comp=Z,1µm,20.0s						
SIM	Simferopol'	128.19	318	i PKIKP	PKiKP	23 34 07.1	+0.4
SIM				e		23 36 10.0	
PRSN	Puerto Rico Se	128.33	77	IAMs_20	IAMs_20	00 25 23.8	
	comp=Z,2µm,19.0s						
NB2	NORSAR Subarra	128.36	345	PKPdf	PKPdf	23 34 05.0	-1.0
	comp=Z,27nm,1.7s,baz=29,slow=1.9						
NB2	NORSAR Subarra	128.36	345	PKPdf	PKPdf	23 34 05.0	-1.0
	baz=29,slow=1.9						
NOA	NORSAR Array B	128.36	345	PKP	PKPdf	23 34 04.9	-1.1
	comp=Z,4.5nm,1.0s,baz=34,slow=2.0,SNR=12						
HFS	Hagfors	128.45	343	PKP	PKPdf	23 34 04.5	-1.6
	comp=Z,3.6nm,0.9s,baz=149,slow=3.1,SNR=6.9						
AKASG	Malin Array Be	128.47	326	PKP	PKPdf	23 34 05.2	-1.3
	comp=Z,11nm,1.0s,baz=56,slow=2.1,SNR=23						
AKASG				PP	PP	23 36 10.6	-0.6
	comp=Z,1.7nm,0.8s,baz=43,slow=7.2,SNR=5.4						
AKBB	Malin Array Si	128.47	326		PKPdf	23 34 05.2	-1.2
AKBB	Malin Array Si	128.47	326	c iPKIKP	PKPdf	23 34 05.5	-0.9
AKBB	Malin Array Si	128.47	326	PKP	PKPdf	23 34 06.1	-0.3
NBO00	NORSAR Array S	128.48	345		PKPdf	23 34 05.7	-0.5
KIEV	Kiev	128.48	326		PKPdf	23 34 05.3	-1.1
KIEV	Kiev	128.48	326	IAMs_20	IAMs_20	00 37 21.1	
	comp=Z,1µm,19.0s						
KIEV	Kiev	128.48	326	⇑P	PKPdf	23 34 06.3	-0.1
KIEV	Kiev	128.48	326	⇑PKIKP	PKPdf	23 34 06.3	-0.1
KIEV	Kiev	128.48	326	PKP	PKPdf	23 34 06.1	-0.3
AK08	Malin Array Si	128.49	326	PKP	PKPdf	23 34 06.3	-0.1
BNN	Bunyan	129.06	310	IAMs_20	IAMs_20	00 42 59.2	
	comp=Z,1µm,20.0s						
MI28	Mi28,Pidlybu	129.17	327	PKP	PKPdf	23 34 07.9	+0.2
SKAR	Skarslia	129.38	346	ePKPdf	PKPdf	23 34 08.9	+0.9
SKAR				ePP	PP	23 36 19.4	+2.8
BBSR	BB Station	129.47	58	IAMs_20	IAMs_20	00 26 57.6	
	comp=Z,2µm,19.0s						
SUW	Suwalki	129.50	333	ePKP	PKPdf	23 34 09.2	+0.9
SUW				ePP	PP	23 36 17.6	-0.1
SUW	Suwalki	129.50	333		PKPdf	23 34 07.6	-0.6
SUW	Suwalki	129.50	333	PKIKP	PKPdf	23 34 07.6	-0.6
BAL3X	Bal3x, Balta	129.67	323	PKP	PKPdf	23 34 08.8	0.0
LUBAR	Lubar, Ukraine	129.68	326	PKP	PKPdf	23 34 09.0	+0.2
RNPP9	Sopachiv	129.82	329	PKP	PKPdf	23 34 09.2	+0.3
ASF	Jabal al Asfar	129.83	301	PKP	PKPdf	23 34 10.1	+0.4
	comp=Z,3.1nm,0.9s,baz=68,slow=3.6,SNR=5.6						
RNPP8	Varash	129.88	329	PKP	PKPdf	23 34 09.7	+0.6
ILGA	Ilgaz	129.91	313	IAMs_20	IAMs_20	00 41 10.3	
	comp=Z,2µm,21.0s						
SORM	Soroca	130.29	324	⇑P	PKPdf	23 34 10.0	+0.1
SORM	Soroca	130.29	324	⇑PKIKP	PKPdf	23 34 10.0	+0.1
SORM	Soroca	130.29	324	PKP	PKPdf	23 34 09.6	-0.3
KIRS	Kirsehir-Merke	130.41	311	⇑P	PKPdf	23 34 10.9	+0.3
BR131	Keskin Array S	130.41	312		PKPdf	23 34 10.1	-0.6
BR131	Keskin Array S	130.41	312	PKIKP	PKPdf	23 34 10.1	-0.6
BRTR	Keskin Array B	130.41	312		PKPdf	23 34 09.8	-0.9
BRTR	Keskin Array B	130.41	312	PKP	PKPdf	23 34 10.3	-0.3
	comp=Z,3.0nm,0.9s,baz=119,slow=1.9,SNR=16						
BRTR				SKPbc	SKPbc	23 37 35.2	+1.6
	comp=Z,9.4nm,1.1s,baz=83,slow=1.8,SNR=10						
BR104	Keskin Array S	130.42	312	PKP	PKPdf	23 34 10.3	-0.4
BR106	Keskin Array S	130.43	312	PKP	PKPdf	23 34 10.4	-0.3
KIS	Kishinev	130.60	322	ePKP	PKPdf	23 34 10.0	-0.6
	comp=Z,45nm,2.4s						
KIS	Kishinev	130.60	322	ePP	PP	23 36 25.0	-0.2
KIS				i SKP		23 37 36.0	
KIS	Kishinev	130.60	322	ePKIKP	PKPdf	23 34 10.0	-0.6
KIS				e		23 36 26.0	
KIS				pmax	pmax		
	comp=Z,45nm,2.4s						
LODK	Lodwar	130.63	264	IAMs_20	IAMs_20	00 28 25.8	
	comp=Z,2µm,20.0s						
MILM	Milestii Mici	130.64	322	⇑iPKP	PKPdf	23 34 09.0	-1.6
	comp=Z,120nm,3.0s						
MILM	Milestii Mici	130.64	322	ePP	PP	23 36 33.0	+7.5
MILM				eSKS	SKSdf	23 40 40.0	-42
MILM	Milestii Mici	130.64	322	⇑P	PKPdf	23 34 09.9	-0.8
MILM	Milestii Mici	130.64	322	i PKIKP	PKPdf	23 34 09.0	-1.6
MILM				e		23 36 33.0	
MILM				pmax	pmax		
	comp=Z,120nm,3.0s						
MACA	Manacapuru-AM	130.78	105	IAMs_20	IAMs_20	00 23 45.1	
	comp=Z,1µm,19.0s						
HORU	Horodok	130.79	326	PKP	PKPdf	23 34 10.7	-0.2
MMAI	Mount Meron Ar	130.89	303	PKP	PKPdf	23 34 10.5	-1.2
	comp=Z,3.7nm,0.8s,baz=79,slow=0.7,SNR=6.2						
ANTO	Ankara	130.98	312	PKPdf	PKPdf	23 34 11.7	0.0
ANTO	Ankara	130.98	312	PKIKP	PKPdf	23 34 11.7	0.0
ANTO	Ankara	130.98	312	PKP	PKPdf	23 34 11.9	+0.2
SPB	Sao Paulo	131.18	137	IAMs_20	IAMs_20	00 26 29.9	
	comp=Z,1µm,19.0s						
TPGR	Topolog	131.88	320	⇓P	PKPdf	23 34 13.1	0.0
MDUB	Mudurnu	131.90	314		PKPdf	23 34 12.7	-0.7
CFR	Carcaliu	131.90	321	⇓P	PKPdf	23 34 13.1	0.0
CFR	Carcaliu	131.90	321	⇓PKIKP	PKPdf	23 34 13.1	0.0
EIL	Elat	131.92	299	PKP	PKPdf	23 34 12.9	-0.7
	comp=Z,4.8nm,0.9s,baz=18,slow=1.7,SNR=6.2						
SABA	Saba	132.03	78	IAMs_20	IAMs_20	00 25 22.8	
	comp=Z,2µm,19.0s						
TIRR	Tirgusor	132.07	320	IAMs_20	IAMs_20	00 41 12.0	
	comp=Z,1µm,19.0s						
CSS	Mathiatis	132.09	306		PKPdf	23 34 13.9	0.0
TESR	Tescani	132.13	323	⇓P	PKPdf	23 34 14.1	+0.6
SMRT	St. Maarten	132.20	77	IAMs_20	IAMs_20	00 28 15.2	
	comp=Z,2µm,19.0s						
TLBR	Topalu	132.26	320	⇑P	PKiKP	23 34 15.2	+0.4
HARR	Harsova	132.26	320	⇑P	PKPdf	23 34 14.2	+0.4
HARR	Harsova	132.26	320	⇑PKIKP	PKPdf	23 34 14.2	+0.4
SEUS	St. Eustatius	132.28	78	IAMs_20	IAMs_20	00 25 30.3	
	comp=Z,1µm,19.0s						
BUR08	Bucovina Ar. S	132.35	325		PKPdf	23 34 14.4	+0.4
BURAR	Bucovina Array	132.35	325		PKPdf	23 34 14.7	+0.7
BURAR	Bucovina Array	132.35	325	⇑P	PKPdf	23 34 14.9	+0.9
BURAR	Bucovina Array	132.35	325	⇑PKIKP	PKPdf	23 34 14.9	+0.9
VRI	Vrincioaia	132.42	322	⇑P	PKPdf	23 34 14.1	0.0
VRI	Vrincioaia	132.42	322	⇑PKIKP	PKPdf	23 34 14.1	0.0
PLOR	Plostina	132.47	322	⇑P	PKiKP	23 34 15.7	+0.3
PLOR	Plostina	132.47	322	⇑PKIKP	PKiKP	23 34 15.7	+0.3
KWP	Kalwaria Pacla	132.51	328	ePKP	PKPdf	23 34 13.7	-0.5
KWP				ePP	PP	23 36 37.1	-0.2
BOAV	Boa Vista	132.57	98	IAMs_20	IAMs_20	00 30 32.1	
	comp=Z,1µm,18.0s						
GKP	Gorka Klasztor	132.57	335	ePKP	PKPdf	23 34 13.7	-0.4
PSN	Preselentsi	132.63	319	P	PKPdf	23 34 14.0	-0.5
MLR	Muntele Rosu	133.08	322		PKPdf	23 34 14.8	-0.7
MLR	Muntele Rosu	133.08	322	PKP	PKPdf	23 34 15.2	-0.3
	comp=Z,4.2nm,0.8s,baz=311,slow=2.9,SNR=8.3						
MLR	Muntele Rosu	133.08	322	⇑P	PKPdf	23 34 15.0	-0.5
RGN	Rugen	133.09	339	IAMs_20	IAMs_20	00 35 34.3	
	comp=Z,2µm,20.0s						
DOPR	Dopca	133.16	323	⇑P	PKPdf	23 34 16.3	+0.8
KOLS	Kolonicke sedl	133.17	328	ePKIKP	PKPdf	23 34 16.6	+1.2
KOLS	Kolonicke sedl	133.17	328	ePKP	PKPdf	23 34 16.6	+1.2
KOLS				e		23 37 45.9	
PRD	Provadia	133.32	319	P	PKPdf	23 34 15.2	-0.6
GDHS	Morne Mazeau,	133.40	80	IAMs_20	IAMs_20	00 29 28.3	
	comp=Z,2µm,20.0s						
ANWB	Willy Bob	133.42	78	IAMs_20	IAMs_20	00 26 32.6	
	comp=Z,1µm,19.0s						
TDBA	Terre de Bas,	133.51	80	IAMs_20	IAMs_20	00 25 06.2	
	comp=Z,1µm,20.0s						
CBE	Ff, Capester	133.55	80	IAMs_20	IAMs_20	00 25 46.0	
	comp=Z,2µm,19.0s						
OJC	Ojcow	133.57	331	ePKP	PKPdf	23 34 15.7	-0.4
OJC				ePP	PP	23 36 43.9	-0.2
OJC				eSS	SS	23 54 34.1	+5.1
OJC	Ojcow	133.57	331		PKPdf	23 34 15.3	-0.8
OJC	Ojcow	133.57	331	PKIKP	PKPdf	23 34 15.3	-0.8
VOIR		133.64	322	⇑P	PKPdf	23 34 17.1	+0.6
VOIR		133.64	322	⇑PKIKP	PKPdf	23 34 17.1	+0.6
ABD	La Joyeuse, An	133.68	79	IAMs_20	IAMs_20	00 26 08.5	
	comp=Z,1µm,19.0s						
WIN	Windhoek	133.79	221	IAMs_20	IAMs_20	00 30 41.7	
	comp=Z,2µm,19.0s						
NIE	Niedzica	133.86	330	ePKP	PKPdf	23 34 17.1	+0.3
NIE				ePP	PP	23 36 46.4	+0.5
NIE				eSS	SS	23 54 39.9	+7.3
FDF	Fort de France	133.92	82	IAMs_20	IAMs_20	00 27 05.2	
	comp=Z,2µm,19.0s						
ARR	Arges	133.93	323	⇑P	PKPdf	23 34 18.2	+1.2
MBAR	Mbarara	133.99	257	IAMs_20	IAMs_20	00 29 45.4	
	comp=Z,1µm,20.0s						
GDSD	La Dsirade Is	134.08	79	IAMs_20	IAMs_20	00 26 11.1	
	comp=Z,1µm,19.0s						
HUMR	Humele	134.17	321	⇑P	PKPdf	23 34 16.7	-0.7
MPOM	Morne Pois Mar	134.19	82	IAMs_20	IAMs_20	00 26 57.1	
	comp=Z,2µm,19.0s						
ILAM	Ilet Lapin Mar	134.19	82	IAMs_20	IAMs_20	00 27 04.2	
	comp=Z,2µm,20.0s						
DRGR		134.23	325	⇑P	PKPdf	23 34 17.4	-0.2
DRGR		134.23	325	⇑PKIKP	PKPdf	23 34 17.4	-0.2
LANS	Liptovska Anna	134.45	330	ePKIKP	PKPdf	23 34 18.0	+0.1
LANS	Liptovska Anna	134.45	330	ePKP	PKPdf	23 34 18.0	+0.1
BSEG	Bad Segeberg	134.61	340	ePKPdf	PKPdf	23 34 18.9	+1.0
	baz=37,slow=1.9						
OKC	Ostrava-Krasne	134.62	331	ePKPDF	PKPdf	23 34 19.1	+1.0
OKC				ePP	PP	23 36 52.6	+2.0
OKC				eSS	SS	23 54 51.1	+10
OKC				AMS	AMS	00 37 10.0	
	comp=Z,1µm,18.4s						
OKC	Ostrava-Krasne	134.62	331	ePKIKP	PKPdf	23 34 19.1	+1.0
OKC				e		23 36 52.6	
OKC				MLR	MLR		
	comp=Z,1µm,18.4s						
KSP	Ksiaz	134.74	333	ePKP	PKPdf	23 34 18.1	-0.2
KSP				ePP	PP	23 36 49.7	-1.7
PVL	Pavlikeni	134.77	320	P	PKPdf	23 34 17.2	-1.4
VLAD	Vladila	134.80	321	⇑P	PKPdf	23 34 18.4	-0.2
MORC	Moravsky Berou	134.94	332		PKPdf	23 34 18.3	-0.4
MORC				IAMs_20	IAMs_20	00 38 57.8	
	comp=Z,1µm,19.0s						
MORC	Moravsky Berou	134.94	332	ePKP	PKPdf	23 34 18.8	0.0
MORC				ePP	PP	23 36 53.3	+0.6
MORC	Moravsky Berou	134.94	332	⇓P	PKPdf	23 34 18.9	+0.1
MORC	Moravsky Berou	134.94	332	⇓PKIKP	PKPdf	23 34 18.9	+0.1
OSTC	Ostas	134.98	333	ePKPDF	PKPdf	23 34 20.0	+1.2
OSTC				ePP	PP	23 36 47.5	-5.4
OSTC				eSS	SS	23 55 07.7	+22
OSTC				AMS	AMS	00 38 40.0	
	comp=Z,2µm,19.0s						
OSTC	Ostas	134.98	333	ePKIKP	PKPdf	23 34 20.0	+1.2
OSTC				eSS	SS	23 55 07.7	+22
OSTC				MLR	MLR		
	comp=Z,2µm,19.0s						
GZR	Gura Zlata	135.00	324	⇓P	PKPdf	23 34 18.9	-0.1
GZR	Gura Zlata	135.00	324	⇓PKIKP	PKPdf	23 34 18.9	-0.1
CHVC	Chvalec	135.03	333	ePKPDF	PKPdf	23 34 19.9	+1.0
CHVC				ePP	PP	23 36 48.0	-5.2
CHVC				AMS	AMS	00 38 50.0	
	comp=Z,2µm,20.1s						
CHVC	Chvalec	135.03	333	ePKIKP	PKPdf	23 34 19.9	+1.0
CHVC				MLR	MLR		
	comp=Z,2µm,20.1s						
PSZ	Piszkesteto	135.04	328		PKPdf	23 34 18.2	-0.8
PSZ				IAMs_20	IAMs_20	00 39 49.7	
	comp=Z,1µm,18.0s						
PSZ	Piszkesteto	135.04	328	⇓P	PKiKP	23 34 21.1	+0.6
PSZ	Piszkesteto	135.04	328	⇓PKIKP	PKiKP	23 34 21.1	+0.6
GORT1	Trebel	135.05	339	ePKPdf	PKPdf	23 34 19.9	+1.2
	baz=37,slow=1.9						
KRLC	Kraliky	135.08	332	ePKPDF	PKPdf	23 34 19.9	+0.9
KRLC				ePP	PP	23 36 48.4	-5.2
KRLC				eSS	SS	23 54 50.5	+3.5
KRLC				AMS	AMS	00 40 10.0	
	comp=Z,1µm,18.3s						
KRLC	Kraliky	135.08	332	ePKIKP	PKPdf	23 34 19.9	+0.9
KRLC				eSS	SS	23 54 50.5	+3.5
KRLC				MLR	MLR		
	comp=Z,1µm,18.3s						
DPC	Dobruska-Polom	135.09	333	ePKPDF	PKPdf	23 34 20.2	+1.2
DPC				ePP	PP	23 36 47.6	-6.0
DPC				eSS	SS	23 55 03.7	+17
DPC				AMS	AMS	00 38 10.0	
	comp=Z,1µm,19.3s						
DPC	Dobruska-Polom	135.09	333	ePKIKP	PKPdf	23 34 20.2	+1.2
DPC				MLR	MLR		
	comp=Z,1µm,19.3s						
UPC	Upice	135.11	333	ePKPDF	PKiKP	23 34 20.4	-0.1
UPC				ePP	PP	23 36 48.4	-5.3
UPC				AMS	AMS	00 39 00.0	
	comp=Z,2µm,18.6s						
UPC	Upice	135.11	333	ePKIKP	PKiKP	23 34 20.4	-0.1
UPC				MLR	MLR		
	comp=Z,2µm,18.6s						
SURR	Surduc	135.17	324	⇑P	PKPdf	23 34 19.4	+0.2
VYHS	Vyhne	135.20	329	ePKIKP	PKPdf	23 34 19.6	+0.4
VYHS	Vyhne	135.20	329	ePKP	PKPdf	23 34 19.6	+0.4
VYHS				e		23 37 53.1	
KDZ	Kurdzhali	135.40	318	P	PKPdf	23 34 14.6	-5.2
RDO	Rodhopi	135.50	317		PKPdf	23 34 19.0	-1.0
HERR	Herculane	135.50	323	⇑P	PKPdf	23 34 16.4	-3.5
JAVC	Velka Javorina	135.52	331	ePKP	PKPdf	23 34 20.4	+0.5
JAVC				ePP	PP	23 36 58.6	+2.2
BZS	Buzias	135.53	325	⇓P	PKPdf	23 34 19.2	-0.7
BZS	Buzias	135.53	325	⇓PKIKP	PKPdf	23 34 19.2	-0.7
MPEP	Malo Peshtene	135.55	321	P	PKPdf	23 34 19.8	-0.2
EZN	Ezine	135.57	315	⇑P	PKPdf	23 34 20.3	+0.1
EZN	Ezine	135.57	315	⇑PKIKP	PKPdf	23 34 20.3	+0.1
FLTG	Flechtingen	135.61	338	ePKPdf	PKPdf	23 34 20.6	+0.8
	baz=37,slow=1.9						
FLTG				ePP	PP	23 36 57.1	+0.4

	baz=38,slow=6.2						
FLTG				eSKPab	SKPbc	23 37 52.8	+2.0
	baz=36,slow=4.6						
VRAC	Vranov	135.71	332	PKP	PKPdf	23 34 19.5	-0.7
	comp=Z,3.4nm,0.8s,baz=70,slow=2.7,SNR=7.5						
VRAC	Vranov	135.71	332	ePKP	PKPdf	23 34 19.2	-1.0
VRAC				ePP	PP	23 36 58.7	+1.1
BRG	Berggiesshubel	135.71	335	ePKPdf	PKPdf	23 34 21.0	+0.9
	baz=37,slow=1.9						
BRG				eSKPab	SKPbc	23 37 53.2	+2.0
	baz=36,slow=4.6						
BRG	Berggiesshubel	135.71	335	ePKP	PKPdf	23 34 21.3	+1.2
BRG				Amp		23 34 22.9	
	comp=Z,20nm,1.3s						
BRG	Berggiesshubel	135.71	335	P	PKiKP	23 34 29.6	+7.9
BRG				Amp		23 34 31.4	
	comp=Z,15nm,1.2s						
PVCC	Panska Ves	135.71	334	ePKPDF	PKiKP	23 34 22.0	+0.3
PVCC				ePP	PP	23 36 51.3	-6.2
PVCC				AMS	AMS	00 39 10.0	
	comp=Z,1µm,19.9s						
PVCC	Panska Ves	135.71	334	ePKIKP	PKiKP	23 34 22.0	+0.3
PVCC				MLR	MLR		
	comp=Z,1µm,19.9s						
CLL	Collm	135.76	336		PKPdf	23 34 20.7	+0.5
CLL				IAMs_20	IAMs_20	00 36 35.1	
	comp=Z,1µm,20.0s						
CLL	Collm	135.76	336	⇓iPKIKP	PKPdf	23 34 21.1	+0.9
CLL				i		23 36 58.5	
CLL				pmax	pmax		
	comp=Z,16nm,1.4s						
CLL				MLR	MLR		
	comp=Z,1µm,20.5s						
CLL	Collm	135.76	336	ePKPdf	PKPdf	23 34 21.0	+0.8
	baz=37,slow=1.9						
CLL				eSKPab	SKPbc	23 37 52.6	+1.3
	baz=36,slow=4.6						
CLL	Collm	135.76	336	⇓iPKPdf	PKPdf	23 34 21.1	+0.9
	comp=Z,16nm,1.4s						
CLL				i x	x	23 34 29.2	
CLL				i PP	PP	23 36 58.5	+0.8
CLL				i SKPdf	SKPbc	23 37 52.2	+0.9
CLL				ePKSdf	PKSdf	23 37 59.0	+2.8
CLL				i x	x	23 38 02.2	
CLL				i x	x	23 38 13.9	
CLL				ePPP	PPP	23 39 48.0	
CLL				eSKSac	SKSdf	23 41 30.0	-0.7
CLL				eSKSdf	SKSdf	23 41 30.0	-0.7
CLL				eSdif	Sdif	23 45 12.0	-5.2
CLL				ePPS	PPS	23 49 06.0	
CLL				eSS	SS	23 54 54.0	-0.8
CLL				ex	x	23 57 03.0	
CLL				eSSS	SSS	23 59 54.0	
CLL				ex	x	00 01 12.0	
CLL				ex	x	00 05 00.0	
CLL				AMS	AMS	00 36 00.0	
	comp=N,900nm,19.8s						
CLL				AMS	AMS	00 36 00.0	
	comp=E,600nm,20.9s						
CLL				AMS	AMS	00 36 00.0	
	comp=Z,1µm,20.5s						
NRDL	Niedersach Rie	135.88	339	ePKPdf	PKPdf	23 34 21.3	+1.0
	baz=37,slow=1.9						
NRDL				ePP	PP	23 36 59.0	+0.8
	baz=38,slow=6.2						
NRDL				eSKPab	SKPbc	23 37 53.8	+2.3
	baz=36,slow=4.6						
RICC	Richard	135.90	335	ePP	PP	23 36 57.9	-0.7
RICC				AMS	AMS	00 39 20.0	
	comp=Z,2µm,20.7s						
SRO	Srobarova	135.91	329	ePKIKP	PKiKP	23 34 22.7	+0.5
SRO	Srobarova	135.91	329	ePKP	PKiKP	23 34 22.7	+0.5
RETH	Rethem/Aller,	135.93	340	ePKPdf	PKPdf	23 34 21.4	+1.1
	baz=37,slow=1.9						
RETH				ePP	PP	23 36 58.8	+0.2
	baz=38,slow=6.2						
RETH				eSKPab	SKPbc	23 37 52.6	+0.9
	baz=36,slow=4.6						
BDFB	Brasilia	135.94	129	PKP	PKPdf	23 34 19.3	-2.4
	comp=Z,1.6nm,0.5s,baz=90,slow=7.1,SNR=3.4						
BDFB				SKPbc	SKPbc	23 37 50.6	-2.5
	comp=Z,8.3nm,1.0s,baz=180,slow=3.0,SNR=6.5						
MDVR	Moldovita	135.97	324	⇑P	PKPdf	23 34 19.2	-1.6
KRUC	Moravsky	135.98	332	ePKP	PKPdf	23 34 20.2	-0.5
KRUC				ePP	PP	23 37 00.4	+1.2
ASSE	Asse, Remlinge	135.98	339	ePKPdf	PKPdf	23 34 21.4	+1.0
	baz=37,slow=1.9						
MODS	Modra-Piesok	136.04	330	ePKIKP	PKPdf	23 34 20.4	-0.4
MODS				e		23 37 03.3	
MODS	Modra-Piesok	136.04	330	ePKP	PKPdf	23 34 20.4	-0.4
MODS				ePP	PP	23 37 03.3	+3.6
MODS				e		23 38 00.0	
GOPC	GO Pecny, Ondr	136.08	334	ePKPDF	PKPdf	23 34 21.1	+0.2
GOPC				ePP	PP	23 36 54.4	-5.4
GOPC				eSS	SS	23 55 17.0	+18
GOPC				AMS	AMS	00 38 50.0	
	comp=Z,2µm,20.1s						
GOPC	GO Pecny, Ondr	136.08	334	ePKIKP	PKPdf	23 34 21.1	+0.2
GOPC				MLR	MLR		
	comp=Z,2µm,20.1s						
PRA	Prague	136.12	334	ePKPDF	PKPdf	23 34 19.3	-1.6
PRA				ePP	PP	23 36 57.2	-2.8
PRA				eSS	SS	23 55 01.3	+2.1
PRA				AMS	AMS	00 38 40.0	
	comp=Z,1µm,19.8s						
PRA	Prague	136.12	334	ePKIKP	PKPdf	23 34 19.3	-1.6
PRA				e		23 36 57.2	
PRA				eSS	SS	23 55 01.3	+2.1
PRA				MLR	MLR		
	comp=Z,1µm,19.8s						
PRU	Pruhonice	136.13	334	ePKPDF	PKPdf	23 34 16.4	-4.5
PRU				ePP	PP	23 36 56.8	-3.3
PRU				eSS	SS	23 54 59.6	+0.2
PRU				AMS	AMS	00 38 30.0	
	comp=Z,2µm,19.7s						
PRU	Pruhonice	136.13	334	ePKIKP	PKPdf	23 34 16.4	-4.5
PRU				e		23 36 56.8	
PRU				eSS	SS	23 54 59.6	+0.2
PRU				MLR	MLR		
	comp=Z,2µm,19.7s						
PLNA	Plana	136.21	320	P	PKPdf	23 34 21.3	-0.2
TREC	Trest	136.22	333	ePKPDF	PKiKP	23 34 22.7	-0.1
TREC				ePP	PP	23 36 52.1	-8.7
TREC				AMS	AMS	00 38 10.0	
	comp=Z,2µm,20.7s						
TREC	Trest	136.22	333	ePKIKP	PKiKP	23 34 22.7	-0.1
TREC				MLR	MLR		
	comp=Z,2µm,20.7s						
VTS	Vitosha	136.25	320	P	PKPdf	23 34 18.0	-3.6
NEUB	Neuenburg	136.31	337	ePKPdf	PKPdf	23 34 22.1	+0.9
	baz=37,slow=1.9						
CLZ	Clausthal	136.32	338	ePKPdf	PKPdf	23 34 22.4	+1.1
	baz=37,slow=1.9						
CLZ				ePP	PP	23 37 02.4	+1.2
	baz=38,slow=6.2						
MMB	Musomishta	136.48	318	P	PKPdf	23 34 20.0	-1.9
TRAN	Tran	136.50	321	P	PKPdf	23 34 18.0	-3.9
EKA	Eskdalemuir Ar	136.60	351	PKP	PKPdf	23 34 21.6	-0.1
	comp=Z,2.9nm,0.9s,baz=18,slow=1.7,SNR=6.0						
BOVS	Bovan	136.63	322	⇑P	PKPdf	23 34 21.4	-0.6
TANN	Tannenbergstha	136.67	336	ePKPdf	PKPdf	23 34 23.0	+1.1
	baz=37,slow=1.9						
ZVC	Zvikov	136.69	334	ePKPDF	PKPdf	23 34 22.4	+0.4
ZVC				ePP	PP	23 37 00.5	-3.1
ZVC				eSS	SS	23 55 07.8	+1.6
ZVC				AMS	AMS	00 38 40.0	
	comp=Z,1µm,19.6s						
GTTG	Gottingen	136.71	339	ePKPdf	PKPdf	23 34 22.9	+1.0
	baz=37,slow=1.9						
GTTG				eSKPab	SKPbc	23 37 57.8	+3.6
	baz=36,slow=4.6						
KKB	Krupnik	136.73	319	P	PKPdf	23 34 20.3	-2.0
MORH	Mrgy, Hungar	136.79	327	⇑P	PKPdf	23 34 22.8	+0.5
NKC	Novy Kostel	136.82	336	ePKPDF	PKPdf	23 34 19.0	-3.2
NKC				ePP	PP	23 37 01.3	-3.1
NKC				eSS	SS	23 55 16.6	+9.0
NKC				AMS	AMS	00 34 10.0	
	comp=Z,1µm,21.1s						
NKC	Novy Kostel	136.82	336	ePKIKP	PKPdf	23 34 19.0	-3.2
NKC				e		23 37 01.3	
NKC				MLR	MLR		
	comp=Z,1µm,21.1s						
IBBN	Ibbenburen	136.82	341	ePKPdf	PKPdf	23 34 23.3	+1.2
	baz=37,slow=1.9						
MOX	Moxa	136.82	337	ePKPdf	PKPdf	23 34 23.3	+1.1
	baz=37,slow=1.9						
MOX				ePP	PP	23 37 04.7	+0.3
	baz=38,slow=6.2						
MOX				eSKPab	SKPbc	23 37 58.2	+3.6
	baz=36,slow=4.6						
MOX				eL	L	00 37 24.2	
	comp=Z,1µm,20.7s						
FRGS	Fruska Gora	136.83	325	eP	PKPdf	23 34 20.4	-2.0
RONA	Rosalia, Austr	136.98	330	ePKP	PKPdf	23 34 22.1	-0.5
	comp=Z,15nm,1.1s,SNR=10						
RONA				ePP	PP	23 37 08.4	+2.8
	comp=Z,14nm,1.6s						
CONA	Conrad Observa	137.03	331	ePKiKP	PKiKP	23 34 24.6	0.0
	comp=Z,16nm,1.2s,SNR=7.9						
CONA				ePP	PP	23 37 08.4	+2.4
	comp=Z,7.3nm,1.4s						
CKRC	Cesky Krumlov	137.10	333	ePKPDF	PKPdf	23 34 22.1	-0.7
CKRC				ePP	PP	23 37 06.5	+0.3
CKRC				eSS	SS	23 55 13.0	+1.9
CKRC				AMS	AMS	00 39 50.0	
	comp=Z,2µm,19.5s						
CKRC	Cesky Krumlov	137.10	333	ePKIKP	PKPdf	23 34 22.1	-0.7
CKRC				e		23 37 06.5	
CKRC				eSS	SS	23 55 13.0	+1.9
CKRC				MLR	MLR		
	comp=Z,2µm,19.5s						
MANZ	Manzenberg	137.15	336	ePKPdf	PKPdf	23 34 24.1	+1.3
	baz=37,slow=1.9						
MANZ				ePP	PP	23 37 06.3	-0.1
	baz=38,slow=6.2						
KHC	Kasperske Hory	137.19	334	ex	x	23 34 11.0	
KHC				ePKPDF	PKPdf	23 34 22.5	-0.5
KHC				ePP	PP	23 37 07.3	+0.5
KHC				eSS	SS	23 55 07.5	-4.7
KHC				AMS	AMS	00 38 50.0	
	comp=Z,1µm,20.4s						
KHC	Kasperske Hory	137.19	334	c iPKIKP	PKPdf	23 34 23.8	+0.8
KHC				pmax	pmax		
	comp=Z,11nm,1.3s						
ROTZ	Rotzenmuhle	137.28	335	ePKPdf	PKPdf	23 34 23.9	+0.9
	baz=37,slow=1.9						
ROTZ				ePP	PP	23 37 07.7	+0.5
	baz=38,slow=6.2						
UBBA	Unterbreizbach	137.29	338	ePKPdf	PKPdf	23 34 24.0	+1.1
	baz=37,slow=1.9						
GEC2	GERESS Array S	137.35	333	PKPdf	PKPdf	23 34 23.1	-0.2
GEC2	GERESS Array S	137.35	333	ePKPdf	PKPdf	23 34 24.4	+1.0
	baz=37,slow=1.9						
GEC2				eSKPab	SKiKP	23 38 00.5	-0.5
	baz=36,slow=4.6						
GERES	GERESS Array B	137.35	333		PKPdf	23 34 23.9	+0.5
GERES	GERESS Array B	137.35	333	PKhKP	PKPpre	23 34 12.3	
	comp=Z,1.5nm,0.9s,baz=45,slow=1.7,SNR=11						
GERES				PKP	PKPdf	23 34 23.6	+0.2
	comp=Z,0.8nm,0.6s,baz=43,slow=1.9,SNR=3.5						
GERES				PP	PP	23 37 09.6	+1.7
	comp=Z,1.0nm,1.0s,baz=46,slow=2.8,SNR=4.1						
GERES				SKPbc	SKPbc	23 37 59.0	+2.6
	comp=Z,1.9nm,1.1s,baz=75,slow=7.1,SNR=4.1						
GERES	GERESS Array B	137.35	333	PKIKP	PKPdf	23 34 23.9	+0.5
VAY	Valandovo	137.36	319	i P	PKPdf	23 34 22.8	-0.6
TEKS	Tekeris	137.36	325	eP	PKPdf	23 34 22.4	-1.0
WET	Wettzell	137.48	334	ePKPdf	PKPdf	23 34 24.5	+1.1
	baz=37,slow=1.9						
WET				ePP	PP	23 37 08.9	+0.3
	baz=38,slow=6.2						
KASTN	Kahler Asten	137.54	339	ePKPdf	PKPdf	23 34 24.7	+1.2
	baz=37,slow=1.9						
KASTN				ePP	PP	23 37 10.4	+1.6
	baz=38,slow=6.2						
ARSA	Arzberg	137.67	330	IAMs_20	IAMs_20	00 41 29.2	
	comp=Z,2µm,19.0s						
ARSA	Arzberg	137.67	330	ePKiKP	PKiKP	23 34 25.7	-0.2
	comp=Z,5.9nm,1.2s						
ARSA				ePP	PP	23 37 10.6	+0.7
	comp=Z,7.5nm,1.7s						
BUG	Bochum--Univer	137.72	341	ePKPdf	PKPdf	23 34 24.7	+0.9
	baz=37,slow=1.9						
BUG				ePP	PP	23 37 11.4	+1.6
	baz=38,slow=6.2						
GRA1	Grafenberg Arr	137.73	336	IAMs_20	IAMs_20	00 37 42.4	
	comp=Z,2µm,20.0s						
GRF	Grafenberg Arr	137.73	336	ePKPdf	PKPdf	23 34 25.0	+1.1
	baz=37,slow=1.9						
GRF				eL	L	00 37 53.1	
	comp=Z,1µm,21.2s						
GRFO	Grafenberg	137.73	336	IAMs_20	IAMs_20	00 38 13.4	
	comp=Z,2µm,20.0s						
MOA	Molln	137.83	332	i PKiKP	PKPdf	23 34 25.6	+1.4
	comp=Z,8.0nm,1.3s						
MOA				ePP	PP	23 37 12.7	+1.8
	comp=Z,2.5nm,1.1s						
BBLS	Lazi&#263i	137.84	324	eP	PKPdf	23 34 23.8	-0.6
SJES	Sjenica	137.88	323	eP	PKPdf	23 34 23.4	-1.1
RUDO	Rudo	138.02	324	eP	PKPdf	23 34 22.7	-1.9
BIOA	Bad Ischl, Aus	138.24	332	i PKP	PKPdf	23 34 24.1	-0.8
	comp=Z,7.4nm,1.2s						
BIOA				i PP	PP	23 37 14.2	+0.8
	comp=Z,2.2nm,0.8s						
SOKA	Soboth	138.31	330	i PKiKP	PKPdf	23 34 26.5	+1.3
	comp=Z,9.7nm,1.0s						
SOKA				i PP	PP	23 37 14.1	+0.1
	comp=Z,8.2nm,1.4s						
TNS	Taunus Mts	138.35	339	ePKPdf	PKPdf	23 34 26.3	+1.2
	baz=37,slow=1.9						
TNS				ePP	PP	23 37 13.1	-0.8
	baz=38,slow=6.2						
A051A	Mrakovica	138.50	327	eP	PKPdf	23 34 24.3	-1.2
IDI	Anoyia	138.50	310	PKPdf	PKPdf	23 34 25.4	-0.4
IDI	Anoyia	138.50	310	PKhKP	PKPpre	23 34 18.7	
	comp=Z,12nm,1.0s,baz=270,slow=1.0,SNR=5.8						
BLY	Banja Luka	138.53	326	eP	PKPdf	23 34 16.5	-9.0
RJOB	Jochberg	138.58	333	ePKPdf	PKPdf	23 34 26.5	+0.9
	baz=37,slow=1.9						
OHR	Ohrid	138.60	320	i P	PKPdf	23 34 23.0	-2.9
OBKA	Obir	138.67	330	eP	PKPdf	23 34 24.5	-1.3
OBKA	Obir	138.67	330	ePKiKP	PKiKP	23 34 27.7	-0.3
	comp=Z,5.5nm,1.0s						
OBKA				ePP	PP	23 37 16.2	0.0
	comp=Z,9.7nm,1.3s						
LESA	Schwarzleotal	138.87	333	i PKP	PKPdf	23 34 25.2	-0.9
	comp=Z,9.2nm,1.5s						
LESA				ePP	PP	23 37 21.5	+4.2
	comp=Z,4.5nm,1.1s						
FUR	Furstenfeldbru	138.91	335	ePKPdf	PKPdf	23 34 27.1	+0.9
	baz=37,slow=1.9						
DRME	Dracevica, Mon	138.98	322	eP	PKPdf	23 34 26.4	0.0
MYKA	Terra Mystica	139.01	331	i PKiKP	PKiKP	23 34 28.9	+0.2
	comp=Z,5.5nm,0.8s						
MYKA				i PP	PP	23 37 20.7	+2.5
	comp=Z,1.3nm,0.5s						
BOJS	Bojanci	139.03	329	eP	PKPdf	23 34 20.9	-5.5
A050A	Klekovaca	139.05	327	eP	PKPdf	23 34 21.7	-4.9
BHOU	Houvegnez	139.06	341	dPKPdf	PKPdf	23 34 27.5	+1.2
PRED	Cave del Predi	139.19	331	IAMs_20	IAMs_20	00 40 32.2	
	comp=Z,2µm,20.0s						
BCLA	Clavier	139.23	341	dPKPdf	PKPdf	23 34 25.2	-1.4
STU	Stuttgart	139.26	337	IAMs_20	IAMs_20	00 44 55.8	
	comp=Z,919nm,18.0s						
CEY	Cerknica	139.28	330	eP	PKPdf	23 34 20.5	-6.4
WATA	Walderalm	139.42	333	i PKP	PKPdf	23 34 26.0	-1.2
	comp=Z,16nm,1.1s						
WATA				i PP	PP	23 37 21.7	+0.9
	comp=Z,4.4nm,0.9s						
STON	Ston	139.44	324	eP	PKPdf	23 34 24.6	-2.6
ABTA	Abfaltersbach	139.45	332	ePKP	PKPdf	23 34 26.9	-0.3
	comp=Z,16nm,1.2s						
ABTA				i PP	PP	23 37 22.2	+1.2
	comp=Z,6.9nm,1.2s						
WTTA	Wattenberg	139.45	333	ePKiKP	PKiKP	23 34 29.8	+0.1
	comp=Z,12nm,0.9s,SNR=5.2						
WTTA				i PP	PP	23 37 21.1	+0.1
	comp=Z,21nm,1.7s						
BMRD	Maredsous	139.50	342	dPKPdf	PKPdf	23 34 26.4	-0.7
SABO	M.te Sabotino	139.51	330	IAMs_20	IAMs_20	00 41 27.2	
	comp=Z,1µm,20.0s						
WLF	Walferdange	139.61	340	IAMs_20	IAMs_20	00 40 54.7	
	comp=Z,2µm,20.0s						
WLF	Walferdange	139.61	340	dPKP	PKPdf	23 34 27.2	-0.2
WLF	Walferdange	139.61	340	ePKPdf	PKPdf	23 34 28.6	+1.3
	baz=37,slow=1.9						
WLF				ePP	PP	23 37 23.2	+1.6
	baz=38,slow=6.2						
SKDS	Skadanscina	139.62	330	eP	PKPdf	23 34 23.8	-3.7
MOTA	Moosalm	139.62	334	ePKiKP	PKiKP	23 34 30.2	+0.2
	comp=Z,10nm,1.0s						
MOTA				i PP	PP	23 37 24.0	+1.9
	comp=Z,9.4nm,1.0s						
RETA	Reutte	139.66	334	ePKP	PKPdf	23 34 27.7	+0.1
	comp=Z,9.3nm,1.4s						
RETA				ePP	PP	23 37 20.1	-2.0
	comp=Z,16nm,1.7s						
SQTA	Sankt Quirin	139.67	334	ePKiKP	PKPdf	23 34 29.3	+1.6
	comp=Z,8.1nm,0.8s						
SQTA				i PP	PP	23 37 22.3	0.0
	comp=Z,16nm,1.2s						
STAL	STALIGIAL	139.72	331	IAMs_20	IAMs_20	00 39 04.4	
	comp=Z,1µm,21.0s						
DOU	Dourbes	139.73	342	dPKPdf	PKPdf	23 34 27.8	+0.3
UBR	Ueberruh	139.78	335	ePP	PP	23 37 23.5	+0.6
	baz=38,slow=6.2						
BFO	Black Forest	139.96	337	ePKPdf	PKPdf	23 34 29.4	+1.3
	baz=37,slow=1.9						
BFO				ePP	PP	23 37 22.9	-0.9
	baz=38,slow=6.2						
KEK	Kerkira	140.00	319	IAMs_20	IAMs_20	00 46 08.0	
	comp=Z,1µm,19.0s						
FETA	Feichten	140.03	334	ePKP	PKPdf	23 34 26.9	-1.5
	comp=Z,18nm,1.0s						
FETA				ePP	PP	23 37 26.1	+1.5
	comp=Z,8.0nm,1.4s						
DAVA	Damuels	140.18	335	ePKiKP	PKPdf	23 34 30.2	+1.5
	comp=Z,9.0nm,0.9s						
DAVA				i PP	PP	23 37 27.1	+1.7
	comp=Z,12nm,1.5s						
CTI	Castel Tesino	140.37	332	IAMs_20	IAMs_20	00 38 03.5	
	comp=Z,1µm,20.0s						
ECH	Echery	140.49	338	IAMs_20	IAMs_20	00 40 31.1	
	comp=Z,2µm,20.0s						
FUORN	Ofenpass-Fuorn	140.55	334	IAMs_20	IAMs_20	00 40 40.9	
	comp=Z,1µm,20.0s						
DAVOX	Davos/Dischmat	140.58	334	PKhKP	PKPpre	23 34 23.2	
	comp=Z,11nm,1.1s,baz=270,slow=3.0,SNR=4.6						
SCTE	Santa Cesarea	140.65	320	IAMs_20	IAMs_20	00 42 25.9	
	comp=Z,1µm,21.0s						
TUE	Stuetta	141.05	334	IAMs_20	IAMs_20	00 38 36.3	
	comp=Z,1µm,20.0s						
SGRT	San Giovanni R	141.27	324	IAMs_20	IAMs_20	00 41 23.9	
	comp=Z,1µm,20.0s						
MATE	Matera	141.39	322	⇑P	PKPdf	23 34 29.6	-1.2
GUMA	Gualdo di Mace	141.72	327	IAMs_20	IAMs_20	00 42 06.4	
	comp=Z,1µm,20.0s						
FDMO	Fiordimonte	141.86	328	IAMs_20	IAMs_20	00 40 59.3	
	comp=Z,1µm,21.0s						
ZCCA	Zocca	141.96	331	IAMs_20	IAMs_20	00 43 16.7	
	comp=Z,1µm,20.0s						
SENIN	Lac Senin/Sane	141.97	336	IAMs_20	IAMs_20	00 40 29.6	
	comp=Z,1µm,20.0s						
CAMP	Campotosto	142.04	327	IAMs_20	IAMs_20	00 41 32.1	
	comp=Z,1µm,21.0s						
TIP	Timpagrande	142.24	320	⇓P	PKPdf	23 34 27.8	-4.7
CLF	Chambon-Foret	142.28	342	IAMs_20	IAMs_20	00 41 21.1	
	comp=Z,1µm,20.0s						
PAOL	Paolisi	142.41	324		PKPdf	23 34 32.0	-0.7
PAOL				IAMs_20	IAMs_20	00 45 26.1	
	comp=Z,1µm,20.0s						
CESX	Cesi	142.43	328	IAMs_20	IAMs_20	00 42 58.2	
	comp=Z,1µm,20.0s						
OSSC	Osservatorio P	142.45	330	IAMs_20	IAMs_20	00 40 49.6	
	comp=Z,1µm,21.0s						
MSSA	Maissana	142.67	332	IAMs_20	IAMs_20	00 41 02.2	
	comp=Z,1µm,20.0s						
BNI	Bardonecchia	143.30	336		PKPbc	23 34 32.1	+0.8
BNI				IAMs_20	IAMs_20	00 42 18.7	
	comp=Z,1µm,21.0s						
BNI	Bardonecchia	143.30	336	PKIKP	PKPbc	23 34 32.1	+0.8
CEL	Celeste	143.33	319		PKPab	23 34 31.2	+0.9
WDD	Wied Dalam	145.63	317		PKPdf	23 34 36.8	-1.6
CEST	Esterri de Car	147.44	339		PKPbc	23 34 43.7	-0.3
MAHO	Mahon	148.55	333	IAMs_20	IAMs_20	00 56 38.8	
	comp=Z,1µm,18.0s						
KEST	Kesra	148.99	322		PKPdf	23 34 43.3	-0.8
KEST	Kesra	148.99	322	PKPbc	PKPbc	23 34 48.6	+0.5
	comp=Z,82nm,0.9s,baz=3.8,slow=0.5,SNR=90						
PBRG	Braganca	150.30	349	ePKPbc	PKPbc	23 34 51.0	-0.1
PGAV	Gavieira, Arco	150.39	352	ePKPbc	PKPbc	23 34 51.2	-0.2
PCAB	Cabril	150.60	351	ePKPbc	PKPbc	23 34 51.7	-0.2
POLO	Lamas de Olo	150.90	351	ePKPdf	PKPdf	23 34 47.7	+0.7
POLO				ePKPbc	PKPbc	23 34 52.7	0.0
MVO	Moncorvo	150.97	350	ePKPbc	PKPbc	23 34 52.6	-0.2
RCBR	Riachuelo	151.32	128	IAMs_20	IAMs_20	00 37 55.7	
	comp=Z,1µm,20.0s						
PVIS	Viseu	151.56	351	ePKPbc	PKPbc	23 34 54.5	+0.4
ESBB	Sonseca Array	151.71	344		PKPdf	23 34 48.2	-0.1
ESDC	Sonseca Array	151.72	344	PKPdf	PKPdf	23 34 47.8	-0.5
ESDC	Sonseca Array	151.72	344	PKPbc	PKPbc	23 34 54.0	-0.5
	comp=Z,15nm,1.0s,baz=16,slow=2.0,SNR=17						
MTE	Manteigas	151.81	350		PKPbc	23 34 53.5	-1.3
MTE				IAMs_20	IAMs_20	00 50 10.2	
	comp=Z,1µm,18.0s						
MTE	Manteigas	151.81	350	ePKPdf	PKPdf	23 34 49.0	+0.6
MTE				ePKPbc	PKPbc	23 34 54.8	0.0
PAB	San Pablo	151.94	344		PKPbc	23 34 54.4	-0.7
PAB	San Pablo	151.94	344	IAMs_20	IAMs_20	00 49 20.9	
	comp=Z,933nm,19.0s						
PAB	San Pablo	151.94	344	PKIKP	PKPbc	23 34 54.4	-0.7
COI	Coimbra	152.13	351	IAMs_20	IAMs_20	00 48 12.8	
	comp=Z,2µm,18.0s						
COI	Coimbra	152.13	351	ePKPbc	PKPbc	23 34 55.2	-0.2
PCAS	Casmilo, Conde	152.30	351	ePKPbc	PKPbc	23 34 55.7	-0.1
PCBR	Castelo Branco	152.34	350	ePKPdf	PKPdf	23 34 50.4	+1.3
PCBR				ePKPbc	PKPbc	23 34 56.0	+0.1
CART	Cartagena	152.67	338	IAMs_20	IAMs_20	00 50 52.6	
	comp=Z,1µm,22.0s						
PSARD	Sardoal	152.69	351	ePKPbc	PKPbc	23 34 56.7	0.0
PMRV	Marv??o	152.73	349	ePKPdf	PKPdf	23 34 50.8	+1.1
PMRV				ePKPbc	PKPbc	23 34 56.8	0.0
CMLA	Cha da Macela	152.83	21	IAMs_20	IAMs_20	00 42 06.6	
	comp=Z,2µm,19.0s						
PMTG	Montargil	153.22	350	ePKPbc	PKPbc	23 34 57.2	-0.6
PESTR	Estremoz	153.31	349		PKPdf	23 34 49.5	-1.0
PESTR	Estremoz	153.31	349	ePKPbc	PKPbc	23 34 58.0	0.0
LIS	Lisbon	153.70	352	ePKPdf	PKPdf	23 34 50.6	-0.5
LIS				IAMs_20	IAMs_20	00 49 03.4	
	comp=E,8µm,57.4s						
LIS	Lisbon	153.70	352	ePKIKP	PKPdf	23 34 50.6	-0.5
EVO	Evora	153.71	350	ePKPbc	PKPbc	23 34 59.1	+0.1
PBAR	Barrancos	153.87	348	ePKPbc	PKPbc	23 34 59.4	+0.1
PBEJ	Beja	154.17	349	ePKPbc	PKiKP	23 35 00.9	+0.8
PBEJ				ePKPab	pPKPab	23 35 15.3	-1.7
MESJ	Messejana	154.42	350	ePKPdf	PKPdf	23 34 51.7	-0.5
MESJ				IAMs_20	IAMs_20	00 54 26.9	
	comp=Z,2µm,18.3s						
MESJ	Messejana	154.42	350	ePKPbc	PKPbc	23 35 00.8	+0.3
MESJ	Messejana	154.42	350	ePKIKP	PKPdf	23 34 51.7	-0.5
PCVE	Castro Verde	154.59	349	ePKPdf	PKPdf	23 34 51.9	-0.5
PCVE				ePKPbc	PKPbc	23 35 01.2	+0.4
PVAQ	Vaqueiros	154.75	349	IAMs_20	IAMs_20	00 49 18.1	
	comp=Z,2µm,19.0s						
PVAQ	Vaqueiros	154.75	349	ePKPdf	PKPdf	23 34 52.5	-0.1
MORF	Marmelete	155.01	350	ePKPdf	PKPdf	23 34 52.5	-0.6
MORF				ePP	PP	23 38 53.7	+1.8
MORF				IAMs_20	IAMs_20	00 49 51.8	
	comp=Z,1µm,20.5s						
MORF	Marmelete	155.01	350	ePKPdf	PKPdf	23 34 54.5	+1.5
MORF				ePKPab	pPKPab	23 35 19.1	-1.6
MORF	Marmelete	155.01	350	ePKIKP	PKPdf	23 34 52.5	-0.6
MORF				e		23 38 53.7	
MDT	Midelt	158.25	339	PKPab	PKPab	23 35 32.5	+1.2
	comp=Z,16nm,1.1s,baz=45,slow=4.5,SNR=9.6						
TAM	Tamanrasset	159.10	302	IAMs_20	IAMs_20	00 58 42.7	
	comp=Z,1µm,18.0s						
TORD	Torodi Ar. Bea	164.97	274		PKPdf	23 35 02.0	-2.8
TORD					PKPab	23 36 00.3	-1.0
DBIC	Dimbokro	169.46	237	PKPab	PKPab	23 36 21.4	+0.4
	comp=Z,3.1nm,0.7s,baz=157,slow=4.3,SNR=1.9						

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*NAO **19** 23:24:36.5, 36.°55N×23.°22E, h10km, mb3.8*

*BEO **19** 23:24:50.6±2.5, 37.°85N×20.°07E, h8km±2km, ML3.7/8*

*IDC **19** 23:24:52.5±0.9, 38.°07N×20.°65E, h0km, mb3.7/12, mbtmp3.7/22, ML3.5/8, MS4.0/6, Error ellipse: s-maj=16.4km s-min=13.8km az=9.0*

*ATH **19** 23:24:54.1, 38.°10N×20.°59E, h21km±1km, ML3.9/10, Manual Solution by M.Papanikolaou First location: 2019/06/19 23:25:43, This location: 2021/06/07 20:22:03 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1* *km; Longitude uncertainty: 4 km*

*NEIC **19** 23:24:54.9±1.6, 38°.07N±0°.06×20°.60E±0°.07, h10^{km}±2^{km}, mb4.2/6, Error ellipse: s-maj=11.7km s-min=6.7km az=215.0*

*THE **19** 23:24:54.8, 38°N±1°×2°1E±°, h20^{km}±1^{km}, M3.8/14, MLh3.8/14*

*PDG **19** 23:24:54.9±1.0, 38°.13N×20°.60E, h5^{km}±1^{km}, ML4.0/10, Error ellipse: s-maj=1.1km s-min=1.8km az=0.0*

*AFAD **19** 23:24:55.0, 38°.00N×20°.55E, h15^{km}, ML3.4*

ISC 19 23:24:55.4±0.7, **38°.11N**±0°.02×**20°.63E**±0°.03, **h19**^{km}±2^{km}, **n205**, σ1^{s}.**30**/237, **mb3.8**/15, **MS4.7**/4, **10C-2D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSDA	Pessada-Kefalo	0.04	282	P	Pg	23 24 57.9	-0.9
PSDA				S	Sg	23 25 01.2	+0.1
PSDA	Pessada-Kefalo	0.04	282	P	Pg	23 24 57.8	-0.9
PSDA				S	Sg	23 25 01.2	+0.1
VLS	Valsamata	0.08	335	P	Pg	23 24 58.2	-1.0
VLS				S	Sg	23 25 01.8	+0.2
VLS	Valsamata	0.08	335	P	Pg	23 24 58.0	-1.1
VLS				S	Sg	23 25 01.9	+0.3
RTZL	Ratzakli, Kefa	0.12	105	P	Pg	23 24 58.3	-1.1
RTZL				S	Sg	23 25 02.1	+0.1
DMLN	Damoulianata-K	0.24	303	P	Pg	23 25 00.3	-0.8
DMLN				S	Sg	23 25 05.0	-0.1
ORTH	Orthonies,Zaky	0.26	169	P	Pg	23 25 00.4	-1.0
ORTH				S	Sg	23 25 04.9	-0.6
FSK	Fiskardo	0.36	351	P	Pg	23 25 02.0	-1.0
FSK				S	Sg	23 25 07.7	-0.5
FSK	Fiskardo	0.36	351	P	Pg	23 25 02.1	-0.9
FSK				S	Sg	23 25 08.1	-0.1
LTHK	Lithakia	0.43	158	P	Pg	23 25 02.7	-1.5
LTHK				S	Sb	23 25 10.4	-0.1
LTHK	Lithakia	0.43	158	P	Pg	23 25 02.8	-1.5
LTHK				S	Sb	23 25 09.7	-0.8
CLEM	Kyllini,Ilia,G	0.45	118	P	Pb	23 25 04.6	-0.2
CLEM				S	Sg	23 25 10.0	-0.8
EVGI	Lefkada island	0.51	2	P	Pg	23 25 04.6	-1.3
EVGI	Lefkada island	0.51	2	P	Pg	23 25 04.7	-1.2
ANDM	Andravida	0.52	103	P	Pg	23 25 05.4	-0.5
ANDM	Andravida	0.52	103	P	Pb	23 25 06.1	+0.2
LCHA	Lechaina	0.53	108	P	Pb	23 25 06.3	+0.3
YRMI	Loutra Irminis	0.57	90	P	Pg	23 25 05.7	-1.1
YRMI				S	Sg	23 25 14.5	+0.1
DRAG	Dragano-Lefkad	0.58	356	P	Pg	23 25 06.7	-0.3
AXS	Araxos	0.59	81	P	Pg	23 25 06.0	-1.2
AXS				S	Sg	23 25 15.6	+0.4
AXS	Araxos	0.59	81	P	Pg	23 25 07.0	-0.3
AXS				S	Sg	23 25 14.9	-0.4
NYDR	Nydri-Lefkada	0.61	5	P	Pg	23 25 06.0	-1.6
NYDR	Nydri-Lefkada	0.61	5	P	Pg	23 25 06.0	-1.6
RLS	Riolos of Patr	0.66	94	P	Pg	23 25 07.2	-1.3
RLS	Riolos of Patr	0.66	94	P	Pg	23 25 07.3	-1.2
LKD2	Lefkada island	0.68	2	P	Pg	23 25 07.4	-1.6
LKD2	Lefkada island	0.68	2	P	Pg	23 25 07.3	-1.6
KTLO	Katakolo	0.71	130	P	Pb	23 25 09.4	+0.2
TSLK	Tsoukalades, L	0.72	2	P	Pg	23 25 08.2	-1.4
TSLK	Tsoukalades, L	0.72	2	P	Pg	23 25 08.2	-1.4
DRO	Drossia	0.87	100	P	Pg	23 25 11.0	-1.3
DRO	Drossia	0.87	100	P	Pg	23 25 11.0	-1.3
PVO	Paravola	0.87	54	P	Pg	23 25 11.5	-0.9
PVO	Paravola	0.87	54	P	Pg	23 25 11.6	-0.7
PATC	Patra C	0.91	79	P	Pb	23 25 13.0	+0.5
UPR	University Cam	0.93	79	P	Pb	23 25 13.6	+0.7
AMPL	Ampelaki	0.93	29	P	Pg	23 25 11.9	-1.7
AMT	Artemida-Makis	1.03	124	P	Pg	23 25 14.2	-1.2
EFP	Efpalio	1.05	72	P	Pb	23 25 14.0	-1.0
EFP	Efpalio	1.05	72	P	Pb	23 25 14.1	-1.0
ANX	Ano Chora	1.12	64	P	Pb	23 25 14.9	-1.4
ANX	Ano Chora	1.12	64	P	Pb	23 25 16.0	-0.3
SERG	Sergoula	1.16	74	P	Pb	23 25 15.4	-1.5
SERG	Sergoula	1.16	74	P	Pb	23 25 15.9	-1.0
KLV	Kalavryta, Ach	1.20	93	P	Pn	23 25 16.1	-1.2
KLV	Kalavryta, Ach	1.20	93	P	Pn	23 25 16.4	-0.9
KALE	Kalithea	1.22	76	P	Pn	23 25 16.6	-0.9
KALE	Kalithea	1.22	76	P	Pn	23 25 16.9	-0.7
EVR	Evrytania	1.23	48	P	Pn	23 25 18.2	+0.5
TETR	Tetrakomo, Epi	1.33	22	P	Pn	23 25 19.1	-0.1
GUR	Goura	1.36	97	P	Pn	23 25 19.0	-0.5
GUR	Goura	1.36	97	P	Pn	23 25 19.0	-0.5
ITM	Ithomi	1.38	132		Pn	23 25 20.3	+0.6
ITM	Ithomi	1.38	132	P	Pn	23 25 19.2	-0.5
ITM	Ithomi	1.38	132	P	Pn	23 25 19.9	+0.3
IGT	Igoumenitsa	1.44	351	P	Pn	23 25 20.9	+0.4
IGT	Igoumenitsa	1.44	351	*e*Pg	Pn	23 25 21.1	+0.6
IGT				*e*Sg	Sg	23 25 44.5	+2.4
PYL	PYLOS	1.50	143	P	Pn	23 25 20.9	-0.3
PYL	PYLOS	1.50	143	P	Pn	23 25 20.9	-0.3
AGG	Agios Georgios	1.62	55	P	Pg	23 25 26.6	0.0
AGG				S	Sg	23 25 47.3	-0.3
AGG				*i* IAML		23 25 59.0	
	comp=N,307nm,0.5s						
AGG				*i* IAML		23 26 00.0	
	comp=E,310nm,0.6s						
KEK	Kerkira	1.73	338		Pn	23 25 25.5	+1.0
LIT	Litokhoron	2.46	35		Pn	23 25 35.6	+1.1
LIT	Litokhoron	2.46	35	P	Pn	23 25 36.2	+1.6
LIT				*i* IAML		23 26 23.0	
	comp=N,344nm,0.6s						
LIT				*i* IAML		23 26 33.0	
	comp=E,232nm,0.7s						
SCTE	Santa Cesarea	2.59	320		Pn	23 25 36.4	+0.2
OHR	Ohrid	3.00	2	*i* Pn	Pn	23 25 44.4	+2.3
TIP	Timpagrande	3.22	291		Pn	23 25 44.8	-0.2
TIP	Timpagrande	3.22	291	⇓P	Pn	23 25 45.5	+0.6
TIR	Tirane	3.29	350		Pn	23 25 47.0	+1.1
TIR	Tirane	3.29	350	⇑P	Pn	23 25 46.9	+1.0
VAY	Valandovo	3.54	24	*i* Pn	Pn	23 25 51.4	+2.0
CEL	Celeste	3.74	274		Pn	23 25 51.2	-0.9
MATE	Matera	3.96	311	⇑P	Pn	23 25 56.6	+1.5
ULC	Ulcinj	4.00	345	*e*Pn	Pn	23 25 55.2	-0.4
ULC				*i* Sn	Sn	23 26 41.3	-0.7
APE	Apeiranthos	4.03	103	P	Pn	23 25 56.3	+0.3
APE	Apeiranthos	4.03	103	⇑P	Pn	23 26 00.6	+4.5
CUC	Castrocucco	4.20	298		Pn	23 26 00.0	+1.6
DRME	Dracevica, Mon	4.22	345	*e*Pn	Pn	23 25 58.7	0.0
DRME	Dracevica, Mon	4.22	345	*e*Pn	Pn	23 25 58.9	+0.2
DRME				*i* Sn	Sn	23 26 47.8	+0.3
BUM	Brajici-Budva	4.39	343	*e*Pn	Pn	23 26 00.7	-0.5
BUM				*i* Sn	Sn	23 26 51.5	-0.3
IDI	Anoyia	4.43	128		Pn	23 26 02.8	+1.1
IDI	Anoyia	4.43	128	Pn	Pn	23 26 02.6	+1.0
	0.9nm,0.3s,baz=256,slow=8.7,SNR=9.8						
IDI				Sn	Sn	23 26 52.4	-0.3
	4.6nm,0.3s,baz=85,slow=21,SNR=6.2						
ACER	Acerenza	4.51	308		Pn	23 26 03.3	+0.6
KOCA	Canakkale, Ayv	4.52	70	P	Pn	23 26 00.9	-1.9
BOZC	Bozcaada	4.57	66	P	Pn	23 26 01.9	-1.5
KARB	zmir-Karabur	4.58	81	P	Pn	23 26 00.9	-2.7
GOAD	anakkale-G¶	4.59	62	P	Pn	23 26 03.9	+0.2
GOAD				*i* IAML		23 27 02.0	
	comp=E,32nm,0.6s						
BOSS	Bosilegrad	4.61	17	*e*Pn	Pn	23 26 04.9	+0.9
CEME	Cevo	4.62	344	*e*Pn	Pn	23 26 03.3	-1.0
CEME				*i* Sn	Sn	23 26 57.4	-0.1
ZEYE	Izmir, Urla-Ze	4.63	87	P	Pn	23 26 05.9	+1.7
HCY	Herceg Novi	4.63	340	*e*Pn	Pn	23 26 02.9	-1.5
HCY	Herceg Novi	4.63	340	*e*Pn	Pn	23 26 03.3	-1.1
HCY				*i* Sn	Sn	23 26 57.6	0.0
URLA	Izmir	4.70	85	P	Pn	23 26 06.9	+1.6
URLA				*i* IAML		23 27 43.0	
	comp=N,31nm,0.8s						
URLA				*i* IAML		23 27 47.0	
	comp=E,36nm,1.1s						
EZN	Ezine	4.76	67	⇓P	Pn	23 26 09.2	+3.2
BARS	Barje	4.79	10	*e*Pn	Pn	23 26 07.0	+0.5
IVA	Berane	4.79	353	*e*Pn	Pn	23 26 07.8	+1.2
IVA				*i* Sn	Sn	23 27 01.4	-0.3
KOME	Kolasin	4.81	350	*e*Pn	Pn	23 26 07.9	+1.0
KOME				*i* Sn	Sn	23 27 02.1	-0.1
RDO	Rodhopi	4.85	50		Pn	23 26 09.1	+1.8
BAYC	CANAKKALE_Bayr	4.89	69	P	Pn	23 26 08.5	+0.5
TREB	Trebinje	4.92	340	*e*Pn	Pn	23 26 07.0	-1.3
VAE	Valguarnera	4.97	265	Pn	Pn	23 26 09.8	+0.8
	4.5nm,0.6s,baz=168,slow=13,SNR=4.3						
VAE				Sn	Sn	23 27 05.1	-0.8
	1.4nm,0.3s,baz=68,slow=16,SNR=2.2						
ALN	Alexandroupoli	5.03	55		Pn	23 26 11.7	+1.9
ALN	Alexandroupoli	5.03	55	P	Pn	23 26 11.5	+1.7
BRY	Bratogost	5.05	342	*e*Pn	Pn	23 26 09.0	-1.2
BRY	Bratogost	5.05	342	*e*Pn	Pn	23 26 10.2	0.0
BRY				*i* Sn	Sn	23 27 07.0	-1.0
SELS	Selova	5.12	4	*e*Pn	Pn	23 26 11.3	+0.2
SJES	Sjenica	5.17	355	*e*Pn	Pn	23 26 12.5	+0.6
SJES	Sjenica	5.17	355	*e*Pn	Pn	23 26 11.7	-0.2
SGRT	San Giovanni R	5.23	316		Pn	23 26 13.0	+0.4
STON	Ston	5.26	336	*e*Pn	Pn	23 26 11.2	-1.7
UPM	Unac-Piva	5.26	346	*e*Pn	Pn	23 26 14.1	+1.0
UPM	Unac-Piva	5.26	346	*e*Pn	Pn	23 26 14.1	+1.0
UPM				*i* Sn	Sn	23 27 12.7	-0.6
PLE	Pljevlja	5.30	350	*e*Pn	Pn	23 26 14.5	+0.8
PLE				*i* Sn	Sn	23 27 13.8	-0.5
ZAPS	Zavoj	5.38	16	*e*Pn	Pn	23 26 16.7	+2.0
WDD	Wied Dalam	5.39	247		Pn	23 26 13.9	-0.8
GOCS	Kraljevo Serbi	5.45	2	*e*Pn	Pn	23 26 15.6	-0.1
IVAS	Ivanjica	5.48	356	*e*Pn	Pn	23 26 14.7	-1.3
PAOL	Paolisi	5.52	304		Pn	23 26 17.4	+0.8
BOVS	Bovan	5.58	8	⇑P	Pn	23 26 17.9	+0.5
BOVS	Bovan	5.58	8	*e*Pn	Pn	23 26 18.5	+1.1
RUDO	Rudo	5.59	351	*e*Pn	Pn	23 26 16.4	-1.1
GRUS	Gruza	5.78	1	*e*Pn	Pn	23 26 20.4	+0.3
BBLS	Lazi&#263i	5.83	351	*e*Pn	Pn	23 26 19.0	-1.8
BBLS	Lazi&#263i	5.83	351	*e*Pn	Pn	23 26 19.6	-1.2
ZAGS	Zajecar	5.83	11	*e*Pn	Pn	23 26 20.8	+0.1
TRUS	Trudelj	6.11	358	*e*Pn	Pn	23 26 23.7	-1.0
ARG	Arkhangelos	6.28	105	Pn	Pn	23 26 29.2	+2.3
INTR	Introdacqua	6.47	309		Pn	23 26 30.1	+0.5
TEKS	Tekeris	6.49	353	*e*Pn	Pn	23 26 26.6	-3.3
TEKS	Tekeris	6.49	353	*e*Pn	Pn	23 26 28.4	-1.5
AVAS	Avala Beograd	6.58	359	*e*Pn	Pn	23 26 30.7	-0.5
HERR	Herculane	6.90	11	⇑P	Pn	23 26 35.9	+0.5
CAMP	Campotosto	7.07	311		Pn	23 26 39.4	+1.4
FRGS	Fruska Gora	7.07	355	*e*Pn	Pn	23 26 33.0	-4.9
FRGS	Fruska Gora	7.07	355	*e*Pn	Pn	23 26 36.5	-1.4
A050A	Klekovaca	7.08	335	*e*Pn	Pn	23 26 37.3	-0.7
BLY	Banja Luka	7.12	340	*e*Pn	Pn	23 26 37.7	-0.8
SLATY	Slatina	7.17	341	*e*Pn	Pn	23 26 37.6	-1.5
NRCA	Norcia	7.42	312		Pn	23 26 44.3	+1.6
A051A	Mrakovica	7.44	339	*e*Pn	Pn	23 26 41.4	-1.6
GZR	Gura Zlata	7.46	12	⇑P	Pn	23 26 43.5	+0.3
FDMO	Fiordimonte	7.56	313		Pn	23 26 46.4	+1.8
CESX	Cesi	7.62	309	Pn	Pn	23 26 46.0	+0.7
MURB	Monte Urbino	8.03	312		Pn	23 26 52.5	+1.5
VOIR		8.03	23	⇑P	Pn	23 26 53.8	+2.7
MLR	Muntele Rosu	8.38	27		Pn	23 26 57.8	+2.0
MLR	Muntele Rosu	8.38	27	Pn	Pn	23 26 58.1	+2.2
	0.5nm,0.3s,baz=220,slow=5.0,SNR=20						
MLR				LR	LR	23 30 59.4	
	comp=Z,210nm,18.8s,baz=166,slow=44						
	11nm,0.8s						
MLR	Muntele Rosu	8.38	27	⇑P	Pn	23 26 58.0	+2.2
BOJS	Bojanci	8.41	333	*e*Pn	Pn	23 26 55.7	-0.5
BEHE	Becsehely	8.83	342	Pn	Pn	23 27 02.6	+0.7
VSL	Villasalto	8.89	282	Pn	Pn	23 27 02.8	-0.1
SKDS	Skadanscina	8.92	329	*e*Pn	Pn	23 27 02.1	-1.1
PLOR	Plostina	8.94	28	⇑P	Pn	23 27 06.0	+2.5
VRI	Vrincioaia	8.98	28	⇑P	Pn	23 27 06.9	+2.8
SABO	M.te Sabotino	9.44	329	Pn	Pn	23 27 10.6	+0.2
TEOL	Teolo	9.86	320	Pn	Pn	23 27 16.6	+0.5
BRTR	Keskin Array B	10.27	77	Pn	Pn	23 27 25.6	+3.9
	0.2nm,0.3s,baz=256,slow=12,SNR=6.0						
	0.7nm,0.6s						
CTI	Castel Tesino	10.36	323		Pn	23 27 22.2	-0.9
MOA	Molln	10.79	336	*i* Pn	Pn	23 27 29.7	+0.9
	1.0nm,0.4s						
MOA				*i* Sn	Sn	23 29 25.6	-3.5
	1.5nm,0.5s						
LESA	Schwarzleotal	10.99	330	*i* Pn	Pn	23 27 31.8	+0.2
	1.7nm,0.5s						
LESA				*i* Sn	Sn	23 29 30.6	-3.4
	4.1nm,0.6s						
WTTA	Wattenberg	11.29	327	*e*Pn	Pn	23 27 37.1	+1.3
	2.4nm,0.8s						
WTTA				*e*Sn	Sn	23 29 38.9	-2.5
	12nm,1.2s						
WATA	Walderalm	11.37	327	*i* Pn	Pn	23 27 38.7	+1.8
	3.3nm,0.6s						
WATA				*e*Sn	Sn	23 29 40.9	-2.4
	17nm,1.3s						
FUORN	Ofenpass-Fuorn	11.45	321	Pn	Pn	23 27 38.3	+0.3
FETA	Feichten	11.51	324	*e*Pn	Pn	23 27 41.3	+2.5
	3.4nm,1.0s						
FETA				*i* Sn	Sn	23 29 45.8	-1.0
	3.3nm,0.8s						
VRAC	Vranov	11.57	347	Pn	Pn	23 27 42.2	+2.7
	0.1nm,0.3s,baz=180,slow=13,SNR=1.6						
	1.1nm,0.7s						
MOTA	Moosalm	11.58	326	*e*Pn	Pn	23 27 40.8	+1.0
	5.1nm,1.0s						
MOTA				*e*Sn	Sn	23 29 47.0	-1.5
	9.7nm,1.3s						
DAVOX	Davos/Dischmat	11.75	321	Pn	Pn	23 27 42.8	+0.8
	0.3nm,0.3s,baz=150,slow=18,SNR=1.8						
DAVOX				Sn	Sn	23 29 49.6	-3.0
	0.2nm,0.3s,baz=35,slow=13,SNR=3.9						
	1.7nm,0.6s						
TUE	Stuetta	11.81	319	Pn	Pn	23 27 42.8	-0.1
RETA	Reutte	11.84	325	*e*Pn	Pn	23 27 45.6	+2.4
	4.4nm,1.3s						
RETA				*e*Sn	Sn	23 29 55.5	+0.7
	2.7nm,0.5s						
GERES	GERESS Array B	11.85	337	Pn	Pn	23 27 44.8	+1.5
	baz=148,slow=13,SNR=4.5						
GERES				Sn	Sn	23 29 42.1	-13
	baz=155,slow=24,SNR=1.7						
	0.4nm,0.6s						
DAVA	Damuels	12.10	323	*e*Sn	Sn	23 29 59.4	-1.9
	1.5nm,0.6s						
SENIN	Lac Senin/Sane	12.86	314	Pn	Pn	23 27 59.8	+2.5
MMAI	Mount Meron Ar	13.05	108	Pn	Pn	23 28 00.6	+0.7
	0.5nm,0.3s,baz=278,slow=13,SNR=2.2						
	0.3nm,0.2s						
AKASG	Malin Array Be	14.00	23	Pn	Pn	23 28 11.3	-1.2
	0.2nm,0.3s,baz=212,slow=11,SNR=3.2						
	1.3nm,0.8s						
GHAJ	Ghor Haditha	14.03	114	Pn	Pn	23 28 12.5	-0.6
SUW	Suwalki	16.01	5	Pn	Pn	23 28 39.6	+0.3
PABE	Paberze	17.55	6	Pn	Pn	23 28 57.4	-1.3
PABE				IAmb	IAmb	23 28 59.0	
	comp=Z,17nm,0.9s						
GNI	Garni	18.81	76	LR	LR	23 37 48.2	
	comp=Z,124nm,19.6s,baz=201,slow=41						
ESDC	Sonseca Array	19.20	282	P	P	23 29 18.8	+0.7
	comp=Z,0.1nm,0.3s,baz=50,slow=8.6,SNR=4.5						
ESDC				LR	LR	23 35 04.8	
	comp=Z,92nm,21.8s,baz=134,slow=32						
	comp=Z,0.9nm,1.1s						
MDT	Midelt	21.20	263	P	P	23 29 40.2	+0.3
	comp=Z,1.4nm,0.9s,baz=120,slow=14,SNR=1.9						
	comp=Z,1.4nm,0.9s						
HFS	Hagfors	22.48	351	P	P	23 29 52.7	-0.7
	comp=Z,2.2nm,0.6s,baz=170,slow=10,SNR=8.4						
	comp=Z,2.2nm,0.6s						
EKA	Eskdalemuir Ar	23.54	325	P	P	23 30 04.3	+0.1
	comp=Z,1.5nm,0.7s,baz=125,slow=9.7,SNR=5.6						
	comp=Z,1.5nm,0.7s						
BELG	Belogornoye	23.59	44	P	P	23 30 04.5	-0.3
	comp=Z,5.3nm,0.5s,baz=112,slow=7.3,SNR=4.6						
	comp=Z,5.3nm,0.5s						
FINES	FINESS Array B	23.61	7	P	P	23 30 05.8	+1.0
FINES	FINESS Array B	23.61	7	P	P	23 30 05.2	+0.3
	comp=Z,1.7nm,0.6s,baz=169,slow=7.8,SNR=8.4						
	comp=Z,1.7nm,0.6s						
FIA1	FINESS Array S	23.61	7	P	P	23 30 05.4	+0.6
NC405	NORSAR Array S	23.70	349	P	P	23 30 06.1	+0.3
NC405				IAmb	IAmb	23 30 19.4	
	comp=Z,8.2nm,1.2s						
NB2	NORSAR Subarra	23.70	349	P	P	23 30 05.7	-0.2
	comp=Z,1.8nm,0.9s,baz=157,slow=9.3						
NOA	NORSAR Array B	23.70	349	P	P	23 30 04.8	-1.1
	comp=Z,0.3nm,0.6s,baz=164,slow=10,SNR=6.7						
	comp=Z,0.3nm,0.6s						
TORD	Torodi Ar. Bea	30.03	219	P	P	23 31 02.3	-0.9
	comp=Z,194nm,0.5s,baz=40,slow=9.9,SNR=1.8						
ABKAR	Akbulak array	30.21	56	P	P	23 31 04.7	+0.2
ARCES	ARCESS Array B	31.60	3	P	P	23 31 16.7	+0.2
	comp=Z,1.0nm,0.7s,baz=206,slow=10.0,SNR=4.3						
	comp=Z,1.0nm,0.7s						
BVAR	Borovoye Array	37.10	50	P	P	23 32 04.6	+0.2
	comp=Z,0.4nm,0.5s,baz=261,slow=5.7,SNR=2.6						
	comp=Z,0.4nm,0.5s						
KK31	Karatay Array	37.74	66	P	P	23 32 10.5	+0.5
KKAR	Karatay Array	37.74	66	P	P	23 32 09.3	-0.6
KURBB	Kurchatov Arra	42.20	53	P	P	23 32 46.4	-0.4
	comp=Z,0.5nm,0.6s,baz=282,slow=8.2,SNR=5.1						
	comp=Z,0.5nm,0.6s						
MKAR	Makanchi Array	45.27	58	P	P	23 33 11.5	-0.1
MKAR	Makanchi Array	45.27	58	P	P	23 33 10.9	-0.7
	comp=Z,1.4nm,0.4s,baz=275,slow=6.9,SNR=28						
	comp=Z,1.4nm,0.4s						
ZAA0	Zalesovo Array	45.67	48	P	P	23 33 14.1	-0.5
ZAA0				IAmb	IAmb	23 33 15.1	
	comp=Z,3.5nm,0.7s						
ZALV	Zalesovo Beam	45.67	48	P	P	23 33 14.1	-0.6
	comp=Z,3.2nm,0.5s,baz=280,slow=9.4,SNR=11						
	comp=Z,3.2nm,0.5s						
WMQ	Urumqi	49.72	61	*e*P	P	23 33 50.0	+3.7
WMQ				LR	LR		
	comp=N,800nm,16.9s						
WMQ				LR	LR		
	comp=E,540nm,18.1s						
WMQ				LR	LR		
	comp=Z,850nm,23.8s						
SONM	Songino Array	60.44	51	P	P	23 35 04.1	+0.4
	comp=Z,0.4nm,0.5s,baz=293,slow=7.5,SNR=2.0						
	comp=Z,0.4nm,0.5s						
PALK	Pallekele	62.11	103	LR	LR	00 05 38.6	
	comp=Z,541nm,20.1s,baz=114,slow=39						
HHC	Hu-ho-hao-te	67.00	55	*e*P	P	23 35 47.3	+0.2
HHC				pmax	pmax		
	comp=Z,20nm,0.7s						
SIV	San Ignacio	93.37	252	LR	LR	00 23 05.9	
	comp=Z,513nm,18.0s,baz=286,slow=37						
CPUP	Villa Florida	97.09	242	LR	LR	00 22 04.9	
	comp=Z,218nm,18.1s,baz=83,slow=35						

GII 19 23:32:14.7±0.0, **33°.205N**±0°.003×**35°.595E**±0°.001, **h3**^{km}, **Mws0.7, confirmed, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GOSH	HaGoshrim	0.03	59	P	Pg	23 32 15.5	+0.1
GOSH				S	Sg	23 32 16.1	+0.2
GEM	Giv'at Ha'Em	0.06	84	P	Pg	23 32 16.4	+0.5
GEM				S	Sg	23 32 17.6	+0.9
LVBS	Lehavot Habash	0.08	144	P	Pg	23 32 16.8	+0.6
LVBS				S	Sg	23 32 18.0	+0.7
NATI	Neve Ativ	0.13	64	P	Pg	23 32 18.0	+0.8
NATI				S	Sg	23 32 19.9	+0.9

ATH 19 23:32:28.6, 39°.94N×24°.32E, h16^{km}±1^{km}, **ML1.4**/6, **Manual Solution by M.Kolligri First location: 2019/06/19 23:33:36, This location: 2019/06/20 04:19:38 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OUR	Ouranopolis	0.47	327	P	Pb	23 32 38.5	0.0
OUR				S	Sg	23 32 44.4	0.0
PAIG	Paliouri	0.49	269	P	Pb	23 32 38.6	-0.2
PAIG				S	Sg	23 32 45.1	+0.1
LIA	Limnos Island	0.67	93	P	Pg	23 32 41.6	-0.1
LIA				S	Sg	23 32 50.5	-0.1
THAS	Thassos island	0.74	25	P	Pg	23 32 42.2	-0.8
THAS				S	Sb	23 32 53.0	+0.1
PLG	Polygyros	0.80	303	P	Pb	23 32 43.9	-0.2
PLG				S	Sg	23 32 54.7	0.0
NEO	Neokhori	1.05	234	P	Pb	23 32 48.6	+0.1
KAVA	Kavala	1.07	8	P	Pb	23 32 47.8	-0.9
HORT	Hortiatis	1.14	306	P	Pb	23 32 50.2	+0.2
SRS	Serrai	1.30	335	P	Pn	23 32 52.1	0.0

IDC 19 23:36:21.1±7.5, **21°.87S**×**172°.65W, h0**^{km}, **mb4.1**/3, **mbtmp4.1**/3, **Error ellipse: s-maj=324.5km s-min=37.3km az=144.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	49.08	257	P	P	23 45 09.7	-0.9
	0.6nm,0.4s,baz=96,slow=7.3,SNR=7.9						
	0.6nm,0.4s						
WRA	Warramunga Arr	49.36	262	P	P	23 45 13.3	+0.6
	0.7nm,0.3s,baz=102,slow=7.9,SNR=9.4						
	0.7nm,0.3s						
ILAR	Eielson Array	88.62	11		P	23 49 15.7	+0.2
ILAR	Eielson Array	88.62	11	P	P	23 49 15.4	-0.1
	2.0nm,1.0s,baz=227,slow=6.1,SNR=16						
	2.0nm,1.0s						

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*IDC **19** 23:36:40.8±0.7, 12°.73S×166°.23E, h0^{km}, mb4.6/13, mbtmp4.5/15, ML3.3/1, MS4.6/7, Error ellipse: s-maj=26.1km s-min=17.4km az=87.0*

*NEIC **19** 23:36:42.6±1.2, 12°.61S±0°.09×166°.3E±0°.1, h10^{km}±1^{km}, mb4.9/37, Error ellipse: s-maj=21.6km s-min=12.1km az=63.0*

*GCMT **19** 23:36:47.6±0.3, 12°.73S±0°.03×165°.80E±0°.02, h33^{km}±1^{km}, MW5.1/65, Moment Tensor Solution. s26,c28; s65,c80; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$4.25±.36; M$_{\theta\theta}$-0.41±.25; M$_{\phi\phi}$-3.84±.24; M$_{r\theta}$2.17±.26; M$_{\theta\phi}$2.71±.16; M$_{\phi r}$-1.90±.20; Best double couple: M$_{0}$5.62000×10^{16} NP1:φ$_{s}$346.00000°, δ32.00000°, λ113.00000°. NP2: φ$_{s}$139.00000°, δ61.00000°, λ76.00000°. Principal axes: T 5.1850, Plg71.0000°, Azm18.0000°; N 0.8700, Plg12.0000°, Azm146.0000°; P -6.0550, Plg15.0000°, Azm239.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 23:36:46.6±0.4, **12°.73S**±0°.07×**166°.17E**±0°.08, **h40**^{km}, **n158**, σ1^{s}.**30**/159, **mb4.8**/41, **MS4.7**/7, **2C-3D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	2.88	160		Pn	23 37 29.0	-1.1
HNR	Honiara	6.93	298		Pn	23 38 24.8	-1.0
HNR	Honiara	6.93	298	Pn	Pn	23 38 25.5	-0.3
	234nm,0.5s,baz=175,slow=12,SNR=6.9						
HNR				Sn	Sn	23 39 41.1	-2.4
	16nm,0.3s,baz=217,slow=18,SNR=1.8						
DZM	Mont Dzumac	9.30	178	Pn	Pn	23 38 58.4	+0.1
DZM	Mont Dzumac	9.30	178	Pn	Pn	23 38 58.0	-0.3
	0.3nm,0.3s,baz=89,slow=24,SNR=1.2						
DZM				Sn	Sn	23 41 02.4	+21
	0.8nm,0.3s,baz=123,slow=23,SNR=1.7						
	1.7nm,0.6s						
ONTNC	Ouen Toro	9.53	178	Pn	Pn	23 39 01.1	-0.3
PINNC	Pines Island,	9.91	173	Pn	Pn	23 39 06.3	-0.2
MSVF	Nonsavu	12.49	115	Pn	P	23 39 49.2	-3.8
	0.4nm,0.3s,baz=307,slow=6.4,SNR=6.1						
MSVF				LR	LR	23 43 36.5	
	comp=Z,3μm,18.9s,baz=348,slow=33						
PMG	Port Moresby	18.95	278	P	P	23 40 58.7	-5.9
	8.0nm,0.7s,baz=174,slow=18,SNR=2.0						
EIDS	Eidsvold	18.99	226		Pn	23 41 06.2	+0.3
CTAO	Charters Tower	20.45	246	P	P	23 41 20.6	-0.4
ARMA	Armidale	22.16	215	P	P	23 41 38.8	-0.6
STKA	Stephens Creek	29.55	226		P	23 42 48.1	+0.5
STKA	Stephens Creek	29.55	226	P	P	23 42 48.4	+0.8
	6.3nm,0.8s,baz=21,slow=13,SNR=6.5						
STKA				LR	LR	23 53 01.4	
	comp=Z,857nm,18.3s,baz=30,slow=33						
	6.3nm,0.8s						
WB0	Warramunga Arr	31.27	253	P	P	23 43 01.8	-1.2
WRA	Warramunga Arr	31.34	253	P	P	23 43 04.1	+0.4
WRA	Warramunga Arr	31.34	253	P	P	23 43 02.4	-1.3
	2.5nm,0.9s,baz=82,slow=8.9,SNR=9.8						
WRA				PcP	PcP	23 45 57.8	+0.7
	1.2nm,1.0s,baz=65,slow=1.9,SNR=4.6						
	2.5nm,0.9s						
ASAR	Alice Springs	32.45	246	P	P	23 43 12.7	-0.7
ASAR	Alice Springs	32.45	246	P	P	23 43 12.6	-0.9
	3.5nm,0.8s,baz=78,slow=9.5,SNR=28						
ASAR				LR	LR	23 57 02.1	
	comp=Z,2μm,18.7s,baz=73,slow=38						
	3.5nm,0.8s						
GUMO	Guam	33.61	320	LR	LR	23 56 17.1	
	comp=Z,618nm,19.0s,baz=138,slow=35						
BBOO	Buckleboo	34.02	229	P	P	23 43 27.8	+0.8
FITZ	Fitzroy Crossi	39.38	257	P	P	23 44 13.0	+0.3
DAV	Davao City (W)	44.88	294	LR	LR	00 02 56.7	
	comp=Z,329nm,19.2s,baz=104,slow=35						

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MBWA  Marble Bar        45.08 253  P        P        23 44 59.4 +0.2
MBWA                               IAmb     IAmb     23 45 04.5
      comp=Z,18nm,1.4s
NWAO  Narrogin (SRO)    48.89 237  LR       LR       00 04 20.8
      comp=Z,708nm,19.1s,baz=68,slow=34
INU   Inuyama           55.22 331  P        P        23 46 14.7 -0.9
INU                                IAmb     IAmb     23 46 22.2
      comp=Z,15nm,1.1s
JGF   Kuroka            55.26 331  P        P        23 46 14.9 -1.2
JGF                                IAmb     IAmb     23 46 28.6
      comp=Z,7.6nm,0.9s
JMN   Monobe            55.50 327  P        P        23 46 17.4 -0.4
MJAR  Matsushiro Arr    55.65 333  P        P        23 46 18.3 -0.5
      comp=Z,5.7nm,0.9s,baz=161,slow=6.8,SNR=13
      comp=Z,5.7nm,0.9s
MAJO  Matsushiro        55.65 333  P        P        23 46 18.0 -0.8
MAJO                               IAmb     IAmb     23 46 29.6
      comp=Z,11nm,1.0s
MJB9  Matsu-Tunnel      55.65 333  P        P        23 46 18.6 -0.2
MJB9                               IAmb     IAmb     23 46 30.6
      comp=Z,10nm,1.0s
JNU   Nakatsue          56.68 325  P        P        23 46 26.2  0.0
JNU                                IAmb     IAmb     23 46 28.9
      comp=Z,15nm,1.1s
JSD   Sado              56.87 334  P        P        23 46 27.3 -0.1
JSD                                IAmb     IAmb     23 46 28.8
      comp=Z,18nm,1.1s
JTM   Tenmabayashi      58.10 338           P        23 46 35.7 -0.3
JKA   Kamikawa-asahi    60.51 341           P        23 46 52.1 -0.6
KSRS  Korea Array       61.49 326  P        P        23 46 59.9 +0.4
      comp=Z,2.2nm,0.9s,baz=143,slow=6.8,SNR=7.9
      comp=Z,2.2nm,0.9s
KSAR  Wonju Array Be    61.51 326  P        P        23 46 59.6 +0.1
YSS   Yuzhno-Sakhali    63.01 342  P        P        23 47 08.9 -0.4
NJ2   Nanjing           63.51 316 eP        P        23 47 13.8 +0.8
NJ2                                pmax     pmax
      comp=Z,6.0nm,0.5s
USA0B Ussuriysk Arra    64.63 333           P        23 47 20.2  0.0
USRK  Ussuriysk Ar.     64.63 333  P        P        23 47 21.2 +1.1
      comp=Z,11nm,1.0s,baz=142,slow=6.4,SNR=20
      comp=Z,11nm,1.0s
SBA   Scott Base        65.13 180  P        P        23 47 24.2 +1.3
SBA                                IAmb     IAmb     23 47 36.4
      comp=Z,12nm,1.2s
MDJ   Mudanjiang        66.02 332  P        P        23 47 30.8 +1.6
MDJ                                pmax     pmax
      comp=Z,16nm,1.0s
BNX   BinXian           67.88 332 ⇓P        P        23 47 41.5 +0.6
BNX                                pmax     pmax
      comp=Z,13nm,1.6s
ENH   Enshi             69.28 309  P        P        23 47 49.9 -0.1
ENH                                IAmb     IAmb     23 47 54.4
      comp=Z,13nm,1.1s
HNS   HongShan          69.41 318 ⇑P        P        23 47 52.6 +2.0
HNS                                pmax     pmax
      comp=Z,9.0nm,1.1s
BJT   Baijiatuau        70.04 321  P        P        23 47 54.2 -0.2
HEH   HeiHe             71.30 335 eP        P        23 48 02.4 +0.5
HEH                                pmax     pmax
      comp=Z,13nm,1.0s
XAN   Xi'an             71.56 313  P        P        23 48 04.5 +0.6
XAN                                pmax     pmax
      comp=Z,13nm,0.9s
CMAR  Chiang Mai Arr    73.17 294  P        P        23 48 14.1 +0.3
CMAR  Chiang Mai Arr    73.17 294  P        P        23 48 15.7 +1.9
      comp=Z,1.4nm,0.3s,baz=117,slow=4.2,SNR=7.4
      comp=Z,1.4nm,0.3s
HHC   Hu-ho-hao-te      73.38 320 eP        P        23 48 16.8 +2.1
HHC                                pmax     pmax
      comp=Z,6.0nm,0.7s
PZH   PanZhiHua         73.73 303  P        P        23 48 18.8 +1.7
HIA   Hailar            74.03 330  P        P        23 48 18.4 +0.1
HIA                                IAmb     IAmb     23 48 19.9
      comp=Z,23nm,1.3s
LZH   Lanzhou           76.19 312 eP        P        23 48 33.0 +1.8
LZH                                pP       pP       23 48 39.3 -1.6
LZH                                PcP      PcP      23 48 43.8 +0.7
LZH                                pmax     pmax
      comp=Z,20nm,1.2s
QSPA  South Pole Qui    77.29 180           P        23 48 37.4 +0.6
QSPA  South Pole Qui    77.29 180  P        P        23 48 37.4 +0.6
      comp=Z,17nm,1.0s,baz=7.6,slow=2.5,SNR=27
      comp=Z,17nm,1.0s
ULN   Ulaanbaatar       79.90 324  P        P        23 48 51.5 +0.1
ULN                                IAmb     IAmb     23 48 57.0
      comp=Z,13nm,1.1s
SONM  Songino Array     80.26 324           P        23 48 53.1 -0.3
SONM                               IAmb     IAmb     23 48 58.7
      comp=Z,14nm,1.5s
SONM  Songino Array     80.26 324  P        P        23 48 54.3 +0.9
      comp=Z,2.5nm,0.8s,baz=140,slow=5.3,SNR=12
      comp=Z,2.5nm,0.8s
GTA   Gaotai            80.52 314  P        P        23 48 57.3 +2.3
GTA                                pP       PcP      23 49 00.6 -1.2
GTA                                pmax     pmax
      comp=Z,11nm,1.0s
BILL  Bilibino          80.55   0           P        23 48 53.7 -0.6
BILL                               IAmb     IAmb     23 48 55.4
      comp=Z,10nm,1.1s
CAST  Castle Rocks      82.41  18           P        23 49 03.9 -0.4
IMAR  Indian Mountai    83.92  15  P        P        23 49 11.5 -0.6
HDA   Harding Lake      84.69  19  P        P        23 49 14.4 -1.5
HDA                                IAmb     IAmb     23 49 16.4
      comp=Z,9.3nm,1.1s
RIDG  Independent Ri    84.90  20           P        23 49 16.4 -0.7
J25K  Salcha River,     85.33  19           P        23 49 17.9 -1.3
EVN   Everest           86.71 299           P        23 49 27.6  0.0
EVN                                IAmb     IAmb     23 49 33.4
      comp=Z,13nm,1.3s
NVAR  Mina Array Bea    86.78  50  LR       LR       00 23 10.9
      comp=Z,363nm,18.1s,baz=274,slow=32
BELA  Belgrano 2        88.79 176           P        23 49 35.4 -0.5
BELA                               IAmb     IAmb     23 49 36.6
      comp=Z,7.3nm,1.2s
SYO   Syowa Base        90.31 197⇓eP        P        23 49 43.6 +0.6
SYO   Syowa Base        90.31 197⇑epP       P        23 49 46.9 +3.9
WMQ   Urumqi            90.57 315 eP        P        23 49 43.5 -1.3
WMQ                                pmax     pmax
      comp=Z,12nm,0.7s
MKAR  Makanchi Array    95.03 317           P        23 50 04.7 -0.6
MKAR  Makanchi Array    95.03 317  P        P        23 50 05.9 +0.6
      comp=Z,3.4nm,0.9s,baz=101,slow=6.3,SNR=21
      comp=Z,3.4nm,0.9s
ZAA0  Zalesovo Array    95.16 324           P        23 50 04.3 -1.3
ZAA0                               IAmb     IAmb     23 50 05.9
      comp=Z,6.4nm,1.0s
ZALV  Zalesovo Beam     95.16 324           P        23 50 04.4 -1.3
ZALV  Zalesovo Beam     95.16 324  P        P        23 50 05.4 -0.2
      comp=Z,5.0nm,0.9s,baz=96,slow=5.4,SNR=13
      comp=Z,5.0nm,0.9s
MAKZ  Makanchi          95.24 317  P        P        23 50 04.9 -1.3
MAKZ                               IAmb     IAmb     23 50 11.6
      comp=Z,7.9nm,1.2s
SNAA  Sanae             95.47 183           P        23 50 07.1 +0.1
SNAA                               IAmb     IAmb     23 53 26.3
      comp=Z,5.7nm,0.9s
SNAA  Sanae             95.47 183  P        P        23 50 07.1 +0.1
      comp=Z,3.4nm,1.0s,baz=183,slow=5.4,SNR=7.2
      comp=Z,3.4nm,1.0s
KSH   Kashi             98.13 309  P        P        23 50 19.4 -0.2
KSH                                pmax     pmax
      comp=Z,2.0nm,2.2s
KSH                                LR       LR
      comp=N,450nm,16.8s
KSH                                LR       LR
      comp=E,900nm,17.2s
KSH                                LR       LR
      comp=Z,520nm,17.2s
KURBB Kurchatov Arra    98.23 320  P        P        23 50 18.2 -1.4
      comp=Z,0.6nm,1.0s,baz=108,slow=5.0,SNR=2.6
      comp=Z,0.6nm,1.0s
H03S2 Juan Fernandez   102.75 129  T        T        01 46 10.5
      baz=238,slow=74,SNR=14
H03S1 Juan Fernandez   102.76 129  T        T        01 46 11.9
      baz=238,slow=74,SNR=12
H03S3 Juan Fernandez   102.76 129  T        T        01 46 16.7
      baz=238,slow=74,SNR=12
H03N2 Juan Fernandez   102.91 129  T        T        01 46 23.4
      baz=242,slow=72,SNR=11
H03N3 Juan Fernandez   102.91 129  T        T        01 46 24.2
      baz=242,slow=72,SNR=13
H03N1 Juan Fernandez   102.92 129  T        T        01 46 31.5
      baz=242,slow=72,SNR=15
BVAR  Borovoye Array   103.52 322  Pdiff    Pdif     23 50 42.5 -0.6
      comp=Z,0.4nm,0.4s,baz=93,slow=5.8,SNR=3.0
ARCES ARCESS Array B   118.06 345  PKP      PKPdf    23 55 27.9 -0.7
      comp=Z,0.7nm,0.4s,baz=63,slow=2.2,SNR=16
ROSC  El Rosal         119.82  92  PKP      PKiKP    23 55 35.4 +1.1
      comp=Z,6.3nm,0.5s,baz=128,slow=21,SNR=1.4
KBZ   Khabaz           122.61 314  PKP      PKiKP    23 55 38.7 +0.4
      comp=Z,1.4nm,0.8s,baz=180,slow=2.0,SNR=2.5
FINES FINESS Array B   123.48 338  PKP      PKPdf    23 55 38.5 -0.7
      comp=Z,4.1nm,1.1s,baz=77,slow=8.6,SNR=9.1
MNK   Minsk            127.06 331 i PKP     PKPdf    23 55 44.9 -1.4
      comp=E,10.0nm,0.8s
MNK                               i PKP     PKPdf    23 55 44.9 -1.4
      comp=N,4.0nm,0.7s
MNK                               i PKP     PKPdf    23 55 44.9 -1.4
      comp=Z,5.0nm,0.7s,baz=54
MNK                               i PP      PP       23 57 43.1 -1.6
MNK                               i PPP     PPP      00 00 25.9
MNK                               i SKS     SKSac    00 02 56.7 +7.3
MNK                               i SS      SS       00 14 52.3 +2.7
MNK                               i SSS     SSS      00 19 33.6
MNK                               i LR      LR       00 53 35.6
NACGM Naroch           127.34 332⇓i PKP     PKiKP    23 55 47.3 -0.1
      comp=Z,9.0nm,1.0s,baz=53
NB2   NORSAR Subarra128.42 345  PKP      PKPdf    23 55 48.9 +0.1
      comp=Z,0.3nm,0.6s,baz=37,slow=2.9
NOA   NORSAR Array B 128.42 345  PKP      PKPdf    23 55 48.1 -0.7
      comp=Z,0.9nm,0.9s,baz=168,slow=1.9,SNR=3.8
AKASG Malin Array Be   128.49 326  PKP      PKPdf    23 55 49.0 -0.2
      comp=Z,0.2nm,0.3s,baz=52,slow=3.0,SNR=8.6
AKBB  Malin Array Si   128.49 326  PKP      PKPdf    23 55 49.0 -0.2
AK09  Malin Array Si   128.50 326  PKP      PKPdf    23 55 48.9 -0.3
KIEV  Kiev             128.50 326  PKPdf    PKPdf    23 55 49.0 -0.1
KIEV  Kiev             128.50 326  PKP      PKPdf    23 55 48.9 -0.3
AK10  Malin Array Si   128.53 326  PKP      PKPdf    23 55 48.9 -0.4
BNN   Bunyan           129.04 310  PKPdf    PKPdf    23 55 50.8  0.0
LUBAR Lubar, Ukraine   129.70 326  PKP      PKPdf    23 55 50.9 -0.6
RNPP9 Sopachiv         129.84 329  PKP      PKPdf    23 55 51.3 -0.4
BRTR  Keskin Array B   130.40 312  PKP      PKPdf    23 55 53.4  0.0
      comp=Z,1.3nm,1.0s,baz=336,slow=2.7,SNR=6.8
BRTR                               SKPbc    SKPbc    23 59 18.6 +4.8
      comp=Z,2.1nm,1.1s,baz=103,slow=4.9,SNR=8.2
MMAI  Mount Meron Ar   130.85 303  PKP      PKiKP    23 55 55.0 -0.3
      comp=Z,1.0nm,0.6s,baz=146,slow=1.6,SNR=4.0
ANTO  Ankara           130.96 312  PKPdf    PKPdf    23 55 54.7 +0.3
BUR08 Bucovina Ar. S   132.36 325  PKPdf    PKiKP    23 55 57.8 -0.1
BURAR Bucovina Array   132.37 325  PKPdf    PKiKP    23 55 57.6 -0.3
KOLS  Kolonicke sedl   133.19 328 ePKP      PKiKP    23 55 59.5 +0.1
STHS  Stebnicka Huta   133.42 329 ePKP      PKPdf    23 55 59.0 +0.4
LANS  Liptovska Anna   134.48 330 ePKP      PKiKP    23 56 03.9 +1.9
MORC  Moravsky Berou   134.97 332 ePKP      PKPdf    23 56 01.4 -0.2
BRG   Berggiesshubel   135.76 335 ePKP      PKiKP    23 56 04.2 -0.3
BRG                                Amp               23 56 06.0
      comp=Z,1.7nm,0.9s
CLL   Collm            135.80 336 ePKPdf    PKPdf    23 56 03.0  0.0
CLL                               i x       x        23 56 10.2
KRUC  Moravsky         136.01 332 ePKP      PKPdf    23 56 03.2 -0.2
MODS  Modra-Piesok     136.07 330 ePKP      PKPdf    23 56 04.3 +0.7
RONA  Rosalia, Austr   137.01 330 ePKiKP    PKiKP    23 56 07.7 +0.5
      comp=Z,5.8nm,1.1s
CONA  Conrad Observa   137.06 331 i PKiKP   PKiKP    23 56 08.0 +0.6
      comp=Z,3.4nm,0.9s
GERES GERESS Array B   137.39 333  PKP      PKPdf    23 56 06.3 +0.2
      comp=Z,0.8nm,0.8s,baz=50,slow=2.1,SNR=6.6
ARSA  Arzberg          137.70 330 i PKiKP   PKiKP    23 56 08.3 -0.3
      comp=Z,0.8nm,0.5s
MOA   Molln            137.87 332 ePKiKP    PKiKP    23 56 08.7 -0.3
      comp=Z,2.5nm,1.1s
SOKA  Soboth           138.34 330 ePKP      PKPdf    23 56 08.1 +0.2
      comp=Z,3.1nm,1.1s
OBKA  Obir             138.70 330 i PKP     PKPdf    23 56 08.0 -0.6
      comp=Z,3.7nm,1.6s
LESA  Schwarzleotal    138.91 333 ePKP      PKPdf    23 56 08.8 -0.1
      comp=Z,1.7nm,0.7s
WATA  Walderalm        139.46 333 i PKP     PKPdf    23 56 10.6 +0.5
      comp=Z,2.8nm,0.9s
ABTA  Abfaltersbach    139.49 332 ePKP      PKPdf    23 56 10.1  0.0
      comp=Z,5.3nm,1.3s
WTTA  Wattenberg       139.49 333 i PKiKP   PKiKP    23 56 12.4 -0.1
MOTA  Moosalm          139.66 334 i PKP     PKPdf    23 56 10.7 +0.3
      comp=Z,2.0nm,1.0s
RETA  Reutte           139.69 334 ePKP      PKPdf    23 56 10.9 +0.5
      comp=Z,3.2nm,1.2s
SQTA  Sankt Quirin     139.71 334 ePKP      PKPdf    23 56 11.1 +0.6
      comp=Z,4.1nm,0.7s
FETA  Feichten         140.07 334 i pPKP    PKiKP    23 56 14.2 +0.5
      comp=Z,3.9nm,1.1s
KEST  Kesra            148.99 322  PKPbc    PKiKP    23 56 31.6 -0.6
      comp=Z,20nm,0.9s,baz=1.2,slow=2.3,SNR=24
PBRG  Braganca         150.38 349 ePKPbc    PKPbc    23 56 34.0 -0.1
PGAV  Gavieira, Arco   150.47 352 ePKPdf    PKPdf    23 56 25.5 -3.6
PGAV                              eLR       LR       00 37 05.3
PGAV                              i AMs_20           00 46 56.2
      comp=Z,1µm,18.0s
PCAB  Cabril           150.68 351 ePKPdf    PKPdf    23 56 28.9 -0.4
POLO  Lamas de Olo     150.98 351 ePKPbc    PKiKP    23 56 36.0 -0.2
MVO   Moncorvo         151.05 349 ePKPbc    PKiKP    23 56 36.4 +0.1
MVO                               eLR       LR       00 37 42.0
MVO                               i AMs_20           00 47 59.1
      comp=Z,1µm,18.0s
PVRL  Vila Real        151.06 350 ePKPbc    PKiKP    23 56 36.3  0.0
PVIS  Viseu            151.64 350 ePKPbc    PKiKP    23 56 37.5  0.0
ESDC  Sonseca Array    151.78 344  PKPbc    PKPbc    23 56 37.1 -0.4
      comp=Z,4.3nm,1.0s,baz=14,slow=2.2,SNR=30
MTE   Manteigas        151.88 350 ePKPbc    PKiKP    23 56 38.5 +0.4
MTE                               ePKPab    PKPab    23 56 46.8 +0.1
MTE                               eLR       LR       00 37 14.7
MTE                               i AMs_20           00 50 33.8
      comp=Z,1µm,18.0s
PCAS  Casmilo, Conde   152.38 351 ePKPbc    PKiKP    23 56 38.9 -0.1
PCBR  Castelo Branco   152.42 349 ePKPdf    PKPdf    23 56 30.9 -1.0
PCBR                              ePKPbc    PKiKP    23 56 39.5 +0.4
PSARD Sardoal          152.77 350 ePKPdf    PKPdf    23 56 29.8 -2.7
PSARD                             ePKPbc    PKiKP    23 56 40.3 +0.4
PMRV  Marv??o          152.80 349 ePKPbc    PKPbc    23 56 39.8 +0.1
PMRV                              eLR       LR       00 39 57.9
PMRV                              i AMs_20           00 49 37.9
      comp=Z,2µm,18.0s
PMTG  Montargil        153.30 350 ePKPbc    PKiKP    23 56 41.3 +0.4
EVO   Evora            153.78 350 ePKPab    PKPab    23 56 55.5 +0.8
PBEJ  Beja             154.25 349 ePKPbc    PKiKP    23 56 43.6 +0.7
MESJ  Messejana        154.50 350 ePKPab    PKPab    23 56 58.6 +0.9
PVAQ  Vaqueiros        154.82 349 ePKPbc    PKiKP    23 56 44.5 +0.4
PVAQ                              eLR       LR       00 41 00.6
PVAQ                              i AMs_20           00 49 43.4
      comp=Z,2µm,20.0s
MORF  Marmelete        155.09 350 ePKPdf    PKPdf    23 56 36.5 +0.6
PFVI  Vila Bisbo       155.29 350 ePKPdf    PKPdf    23 56 35.7 -0.3
PMOZ  Porto Moniz, M   159.76   8 eLR       LR       00 36 50.7
PMOZ                              i AMs_20           00 46 30.6
      comp=Z,1µm,18.0s
TORD  Torodi Ar. Bea   164.86 273  PKPab    PKPab    23 57 43.8 +0.2
      comp=Z,108nm,0.3s,baz=60,slow=6.1,SNR=1.4
```

IDC ***19*** *23:47:14.0±1.1, 33°.24S×179°.02W, h0^{km}, mb4.0/4, mbtmp4.0/5, ML4.2/1, Error ellipse: s-maj=34.8km s-min=26.7km az=70.0*

NEIC ***19*** *23:47:18.8±0.6, 33°.45S±0°.07×179°.1W±0°.2, h29^{km}±6^{km}, mb4.3/6, Error ellipse: s-maj=19.0km s-min=10.5km az=89.0*

WEL ***19*** *23:47:18.2±0.6, 34°S±5°×17°9W±1°3, h33^{km}, M4.5/12, mB5.0/9, ML4.9/18, MLv4.7/12, Mw(mB)4.3/9, Error ellipse: s-maj=18.3km s-min=3.2km az=109.4, confirmed*

ISC 19 23:47:19.8±0.7**, 33°.44S**±0°.06×**178°.9W**±0°.1**, h48**^{km}**, n42, σ1°.40**/57**, mb4.2**/7**, South of Kermadec Islands**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time       Res
                                   Op       ISC       h  m  s     ISC
GLKZ  Green Lake         4.25  12  P        Pn       23 48 20.4 -1.6
GLKZ                               S        Sn       23 49 08.8 -1.5
RAO   Raoul Island       4.26  12  Pn       Pn       23 48 22.1 -0.1
RIZ   Raoul Island       4.26  12  P        Pn       23 48 20.4 -1.8
RIZ                                S        Sn       23 49 11.2 +0.6
MXZ   Matakaoa Point     4.70 208           Pn       23 48 26.2 -2.0
WMGZ  Waiomatatini S     4.89 206  P        Pn       23 48 31.3 +0.5
WMGZ                               S        Sn       23 49 28.1 +2.1
PKGZ  Pakihiroa          5.06 208  P        Pn       23 48 32.3 -0.8
PKGZ                               S        Sn       23 49 30.0 -0.3
HAZ   Te Kaha            5.09 211  P        Pn       23 48 34.9 +1.4
HAZ                                S        Sn       23 49 29.6 -1.3
PUZ   Puketiti           5.17 206  P        Pn       23 48 33.1 -1.6
PUZ                                S        Sn       23 49 33.4 +0.4
RUGZ  Raukumara Rang     5.31 211  P        Pn       23 48 36.5 -0.1
RUGZ                               S        Sn       23 49 33.9 -2.6
TWGZ  Tauwhareparae      5.37 207  P        Pn       23 48 37.3 -0.1
TWGZ                               S        Sn       23 49 36.5 -1.4
KUZ   Kuaotunu           5.51 232  P        Pn       23 48 40.7 +1.5
CNGZ  Carnagh Statio     5.55 204  P        Pn       23 48 38.5 -1.4
TKGZ  Te Karaka          5.64 207  S        Sn       23 49 44.3 -0.4
MWZ   Matawai            5.68 210  P        Pn       23 48 40.8 -0.9
MWZ                                S        Sn       23 49 44.8 -0.9
URZ   Urewera            5.80 213  Pn       Pn       23 48 42.8 -0.5
      5.7nm,0.3s,baz=269,slow=3.9,SNR=27
URZ                                Sn       Sn       23 49 44.4 -4.0
      4.3nm,0.3s,baz=94,slow=21,SNR=6.3
      23nm,0.4s
URZ   Urewera            5.80 213  P        Pn       23 48 42.5 -0.7
URZ                                S        Sn       23 49 45.6 -2.9
RAGZ  Rawiri             5.87 210  P        Pn       23 48 43.6 -0.7
RAGZ                               S        Sn       23 49 49.9 -0.3
RIGZ  Rimuhau            5.91 206  P        Pn       23 48 44.5 -0.4
RIGZ                               S        Sn       23 49 48.4 -2.8
PRGZ  Paritu Road        6.06 204  P        Pn       23 48 47.2 +0.3
PRGZ                               S        Sn       23 49 53.2 -1.7
MKAZ  Moumakai           6.08 231  P        Pn       23 48 49.1 +1.9
WCZ   Waipu Caves        6.10 244  P        Pn       23 48 48.6 +1.2
SNGZ  Shannon Statio     6.14 209  P        Pn       23 48 47.1 -0.9
SNGZ                               S        Sn       23 49 56.4 -0.5
RTZ   Ruatahuna          6.15 212           Pn       23 48 47.0 -1.2
KNZ   Kokohu             6.22 205  P        Pn       23 48 48.1 -0.9
MHGZ  Mahia Peninsul     6.26 203  P        Pn       23 48 48.1 -1.5
OUZ   Omahuta            6.46 252  P        Pn       23 48 52.6 +0.3
OTVZ  Oturere            7.20 216  P        Pn       23 49 01.8 -0.9
CTAO  Charters Tower    33.67 284  P        P        23 53 55.7 -0.6
ASAR  Alice Springs     42.28 271  P        P        23 55 08.3 -0.6
      1.5nm,0.7s,baz=113,slow=7.8,SNR=12
      1.5nm,0.7s
WRA   Warramunga Arr    43.54 276  P        P        23 55 18.5 -0.6
WRA   Warramunga Arr    43.54 276  P        P        23 55 18.7 -0.4
      0.6nm,0.3s,baz=118,slow=7.6,SNR=9.9
      0.6nm,0.3s
WB0   Warramunga Arr    43.58 276  P        P        23 55 18.4 -1.0
WB0                                IAmb     IAmb     23 55 28.8
      comp=Z,16nm,1.4s
FITZ  Fitzroy Crossi    51.66 273  P        P        23 56 21.3 -0.8
FITZ                               IAmb     IAmb     23 56 38.8
      comp=Z,3.6nm,1.4s
QSPA  South Pole Qui    56.68 180  P        P        23 56 59.5 +1.4
QSPA                               IAmb     IAmb     23 57 02.7
      comp=Z,4.0nm,0.9s
QSPA  South Pole Qui    56.68 180  P        P        23 57 01.5 +3.3
      comp=Z,2.5nm,0.8s,baz=40,slow=1.2,SNR=11
      comp=Z,2.5nm,0.8s
BELA  Belgrano 2        66.89 172  P        P        23 58 07.6 +1.2
BELA                               IAmb     IAmb     23 58 32.9
      comp=Z,2.9nm,1.2s
SNAA  Sanae             75.15 179  P        P        23 58 57.8 +1.2
      comp=Z,0.7nm,0.7s,baz=175,slow=18,SNR=9.1
      comp=Z,0.7nm,0.7s
FIA1  FINESS Array S   147.69 338  PKPbc    PKPbc    00 06 58.2 -0.1
FINES FINESS Array B   147.69 338  PKPbc    PKPbc    00 06 58.5 +0.1
      comp=Z,1.3nm,0.4s,baz=38,slow=4.6,SNR=29
NB2   NORSAR Subarra151.61 350  PKP      PKiKP    00 07 09.1 +0.6
      comp=Z,0.7nm,0.6s,baz=27,slow=3.0
NOA   NORSAR Array B 151.61 350  PKPbc    PKiKP    00 07 09.0 +0.6
      comp=Z,0.5nm,0.5s,baz=14,slow=4.1,SNR=7.8
HFS   Hagfors          152.04 347  PKPbc    PKiKP    00 07 09.7 +0.4
      comp=Z,1.7nm,0.8s,baz=132,slow=2.1,SNR=2.8
```

NEIC ***19*** *23:57:44.5±2.2, 34°.994N±0°.010×116°.46W±0°.01, h5^{km}±1^{km}, Error ellipse: s-maj=2.8km s-min=1.9km az=195.0*

PAS 19 23:57:45.0±2.1**, 34°.990N**±0°.009×**116°.46W**±0°.01**, h2**^{km}±2^{km}**, ML3.2**/278**, ML2.8**/76(NEIC)**, Error ellipse: s-maj=1.5km s-min=1.4km az=90.0, Southern California**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time       Res
                                   Op       ISC       h  m  s     ISC
HEC   Hector,Ludlow      0.19 147           Pg       23 57 49.2 +0.5
HEC                                         Sg       23 57 52.2 +1.1
DSCC  Desert Studies     0.33  62           Pg       23 57 51.7 +0.4
DSCC                                        Sg       23 57 56.5 +0.9
GSC   Goldstone, Bar     0.42 318           Pg       23 57 53.4 +0.3
GSC                                Sg       Sg       23 57 59.0 +0.4
GSC                                IAML              23 57 59.7
      comp=E,1µm,0.6s
GSC                                IAML              23 57 59.9
      comp=N,719nm,0.5s
RRX   Edison Barstow     0.46 256           Pg       23 57 54.0 +0.2
RRX                                         Sg       23 58 00.9 +1.3
TUQ   Turquoise Moun     0.62  44           Pg       23 57 57.0  0.0
TUQ                                         Sg       23 58 05.7 +0.6
GMRC  Granite Mounta     0.69 107           Pg       23 57 58.1 -0.1
GTM   Goat Mountain      0.70 173           Pg       23 57 58.2 -0.2
GTM                                         Sg       23 58 08.0 +0.6
BBRC  Big Bear Solar     0.82 208           Pg       23 58 00.6 -0.1
BBRC                                        Sg       23 58 11.9 +0.5
VTV   Victorville        0.83 239           Pg       23 58 00.7 -0.3
VTV                                         Sg       23 58 11.8  0.0
MTPC  Mountain Pass      0.89  56           Pg       23 58 01.8 -0.2
CCCA  Chr Cany lake      0.91 306           Pg       23 58 02.4 -0.1
CCCA                                        Sg       23 58 14.5 +0.1
ADO   Adelanto Recei     0.91 242           Sg       23 58 15.1 +0.8
BLAC  Blackrock camp     0.92 176           Pg       23 58 02.3 -0.3
SHOC  Shoshone, Teco     0.92   9           Pg       23 58 02.2 -0.4
HYS   Haystack Butte     0.92 262           Pg       23 58 02.0 -0.6
HYS                                         Sg       23 58 14.3 -0.3
DANC  Danby, Needles     0.95 111           Pg       23 58 03.3  0.0
SVD   Seven Oaks Dam     1.03 211           Pg       23 58 04.2 -0.5
SVD                                         Sg       23 58 17.9 -0.1
QSM   Queen of Sheba     1.03 341           Pg       23 58 04.2 -0.5
QSM                                         Sg       23 58 17.7 -0.4
CFT   Crafton Hills      1.09 210           Pg       23 58 05.5 -0.5
LRMC  Laurel Mtn Rad     1.11 296           Pg       23 58 05.9 -0.5
LRMC                                        Sg       23 58 20.6 -0.2
SBB   Saddle Back Bu     1.16 255           Pg       23 58 06.2 -1.1
SBB                                         Sg       23 58 21.6 -0.7
GWY   Greenwater Val     1.21 352           Pg       23 58 07.0 -1.1
CCAC  Calif City Air     1.29 278           Pg       23 58 09.2 -0.5
PFO   Pinyon Flats O     1.38 180           Pg       23 58 09.7 -1.7
CRY   Cary Ranch         1.44 189           Pn       23 58 11.2 -1.1
CHFC  Chilao Flat St     1.45 244           Pn       23 58 12.3 -0.2
AMDNV Amargosa           1.47   6           Pn       23 58 10.8 -1.7
V12A  Nelson             1.51  60           Pn       23 58 11.1 -2.1
V12A                               IAML              23 58 34.7
      comp=E,106nm,0.3s
V12A                               IAML              23 58 35.9
      comp=N,105nm,0.5s
NEE2  Needles Airpor     1.53  98           Pn       23 58 13.3 -0.1
ELS   Elsinore Mount     1.56 211           Pn       23 58 12.6 -1.3
ELS                                IAML              23 58 35.2
      comp=E,115nm,0.4s
PASC  Pasadena Art C     1.64 241           Pn       23 58 13.9 -1.1
PASC                               IAML              23 58 38.8
      comp=N,126nm,0.7s
PASC                               IAML              23 58 39.6
      comp=E,108nm,0.6s
FRK   Frink              1.72 157           Pb       23 58 17.5 +0.1
ISA   Isabella, Lake     1.78 293           Pn       23 58 16.6 -0.3
ISA                                IAML              23 58 42.3
      comp=E,104nm,0.5s
SHPR  Sheep Range        1.84  35           Pn       23 58 16.5 -1.4
ARVC  Arvin              1.95 275           Pb       23 58 21.4 +0.1
TPNV  Topopah Spring     1.96   5           Pn       23 58 18.2 -1.3
TPNV                               IAML              23 58 50.5
      comp=E,131nm,0.3s
TPNV                               IAML              23 58 51.9
      comp=E,111nm,0.4s
SLVP  Salvation Pass     1.99 151           Pg       23 58 22.6 -0.5
BLYC  Blythe             2.02 127           Pn       23 58 18.0 -2.1
W13A  Hualapai Mount     2.11  86           Pn       23 58 19.6 -2.1
GRAC  Grapevine Rang     2.13 340           Pn       23 58 20.9 -0.9
GLA   Glamis             2.36 145           Pn       23 58 22.5 -2.4
YUH   Yuha Desert        2.38 169           Pn       23 58 23.3 -1.7
GMN   Gold Mountain      2.40 345           Pn       23 58 24.3 -1.2
GMN                                IAML              23 59 02.6
      comp=N,35nm,0.4s
PRN   Pahroc Range       2.67  25           Pn       23 58 27.8 -1.4
PRN                                IAML              23 59 22.0
      comp=N,66nm,0.6s
DSP   Deep Springs       2.67 333           Pn       23 58 27.6 -1.5
CBX   Cerro Bola         2.67 184           Pn       23 58 28.7 -0.6
CBX                                IAML              23 59 16.9
      comp=E,62nm,1.2s
CBX                                IAML              23 59 23.0
      comp=N,60nm,1.2s
S11A  Rachel             2.71  12           Pn       23 58 29.5 -0.2
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S11A				IAML		23 59 23.8	
	comp=E,66nm,1.0s						
MZP	Montezuma Peak	2.81	345		Pn	23 58 30.5	-0.7
ESJX	Sierra Juarez	3.01	172		Pn	23 58 32.9	-1.0
ESJX				IAML		23 59 30.4	
	comp=N,20nm,0.1s						
ESJX				IAML		23 59 30.9	
	comp=E,23nm,0.1s						
Y14A	Wickenburg	3.04	109		Pn	23 58 32.1	-2.1
113A	Mohawk Valley,	3.15	134		Pn	23 58 33.6	-2.1
113A				IAML		23 59 26.1	
	comp=E,18nm,0.6s						
113A				IAML		23 59 28.9	
	comp=N,21nm,0.9s						
KNB	Kanab	3.58	55		Pn	23 58 40.4	-1.3
KNB				IAML		23 59 46.0	
	comp=N,16nm,1.3s						
LHV	Little Huntoon	3.65	334		Pn	23 58 41.9	-0.6
LHV				IAML		23 59 46.1	
	comp=N,12nm,1.3s						
LHV				IAML		00 00 13.3	
	comp=E,15nm,3.4s						
U15A	North Rim	3.68	66		Pn	23 58 42.6	-0.7
U15A				IAML		00 00 01.4	
	comp=E,18nm,1.0s						
NVAR	Mina Array Bea	3.74	337		Pn	23 58 43.1	-0.9
PSUT	Pine Spring	4.11	30		Pn	23 58 48.2	-0.8
PSUT				IAML		23 59 59.5	
	comp=E,13nm,1.4s						
PSUT				IAML		00 00 12.9	
	comp=N,12nm,1.0s						
WUAZ	Wupatki	4.19	81		Pn	23 58 49.1	-1.1
WUAZ				IAML		00 00 04.0	
	comp=N,11nm,0.5s						
WUAZ				IAML		00 00 12.9	
	comp=N,13nm,0.6s						

IDC ***19*** *23:59:45.7±6.2, 15°.86S×174°.94W, h205^{km}±55^{km}, mb4.0/17, mbtmp4.5/17, MS3.0/1, Error ellipse: s-maj=15.8km s-min=13.7km az=97.0*

NEIC ***19*** *23:59:51.9±2.1, 15°.90S±0°.08×174°.88W±0°.07, h259^{km}±5^{km}, mb4.6/78, Error ellipse: s-maj=12.4km s-min=10.0km az=198.0*

BGR ***19*** *23:59:58.9, 15°.76S×174°.84W, h309^{km}±4^{km}*

ISC 19 23:59:53.4±0.3**, 15°.91S**±0°.06×**174°.98W**±0°.06**, h278**^{km}**, n451, σ0^s.95**/441**, mb4.5**/60**, 14C-20D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUTU	Fugatoga	3.43	297		Pn	00 00 53.3	+1.1
AFI	Afiamalu	3.67	58		Pn	00 00 52.3	-2.7
NIUE	Niue	5.76	124		Pn	00 01 17.4	-1.7
MSVF	Nonsavu	6.92	254		Pn	00 01 35.0	+1.5
MSVF	Nonsavu	6.92	254	P	Pn	00 01 34.8	+1.3
	64nm,0.8s,baz=91,slow=10,SNR=25						
MSVF				S	S	00 02 48.8	-5.5
	4.0nm,0.5s,baz=271,slow=23,SNR=0.6						
MSVF				LR	LR	00 03 07.5	
	comp=Z,105nm,19.0s,baz=15,slow=29						
FUNA	Funafuti	9.29	322		Pn	00 02 02.6	-0.3
PINNC	Pines Island,	17.88	245	P	P	00 03 43.1	+0.1
DZM	Mont Dzumac	18.60	248	P	P	00 03 50.0	-1.0
MXZ	Matakaoa Point	22.38	194	P	P	00 04 28.9	+0.5
URZ	Urewera	23.33	196	P	P	00 04 35.3	-1.8
	12nm,0.7s,baz=18,slow=5.6,SNR=3.6						
	12nm,0.7s						
WHZ	Wether Hill Ro	33.14	202	P	P	00 06 04.0	+0.2
ARMA	Armidale	33.78	239	P	P	00 06 09.4	-0.3
ARMA				IAmb	IAmb	00 06 36.2	
	comp=Z,26nm,1.4s						
CTAO	Charters Tower	37.05	258	P	P	00 06 36.5	-1.0
CAN	Canberra	37.52	232	P	P	00 06 40.2	-1.1
CAN				IAmb	IAmb	00 06 41.9	
	comp=Z,33nm,1.4s						
WAKE	Wake Island	39.36	332	P	P	00 06 56.1	-0.4
COEN	Coen	40.44	267		P	00 07 06.1	+0.6
TOO	Toolangi	40.97	230	P	P	00 07 09.2	-0.4
STKA	Stephens Creek	42.47	240	P	P	00 07 21.0	-0.8
STKA				IAmb	IAmb	00 07 53.6	
	comp=Z,49nm,1.4s						
STKA	Stephens Creek	42.47	240	P	P	00 07 21.1	-0.6
	comp=Z,1.6nm,0.3s,baz=97,slow=13,SNR=9.2						
	comp=Z,1.6nm,0.3s						
BBOO	Buckleboo	47.25	240	P	P	00 07 58.0	-1.2
BBOO				IAmb	IAmb	00 08 17.2	
	comp=Z,41nm,1.5s						
WR8	Warramunga Arr	48.10	257		P	00 08 05.0	-0.9
WRA	Warramunga Arr	48.25	257		P	00 08 05.7	-1.4
WRA	Warramunga Arr	48.25	257	P	P	00 08 06.6	-0.5
	comp=Z,17nm,0.5s,baz=91,slow=6.7,SNR=346						
WRA				PcP	PcP	00 09 29.6	+0.1
	comp=Z,0.9nm,0.4s,baz=98,slow=3.5,SNR=2.9						
	comp=Z,17nm,0.5s						
AS31	Alice Springs	48.51	252		P	00 08 08.2	-0.8
ASAR	Alice Springs	48.51	252	P	P	00 08 08.2	-0.8
	comp=Z,44nm,0.4s,baz=87,slow=8.0,SNR=816						
MTN	Manton Dam	52.18	266	P	P	00 08 35.5	-1.0
FAKI	Fak Fak	53.48	278	P	P	00 08 45.3	-0.7
FORT	Forrest	53.83	243		P	00 08 47.2	-1.1
KNRA	Kununurra	53.99	262	P	P	00 08 48.9	-0.7
KNRA				IAmb	IAmb	00 09 33.1	
	comp=Z,21nm,1.2s						
SOEI	Soe	59.39	268	P	P	00 09 27.9	+0.3
PSA00	Pilbara Seismi	61.61	254		P	00 09 41.7	-0.5
MBWA	Marble Bar	61.76	254		P	00 09 42.5	-0.8
MBWA				IAmb	IAmb	00 09 43.6	
	comp=Z,6.8nm,0.6s						
SBA	Scott Base	62.63	184	P	P	00 09 49.8	+1.7
VNDA	Vanda	62.73	186	P	P	00 09 49.6	+0.9
VNDA	Vanda	62.73	186	P	P	00 09 49.9	+1.2
	comp=Z,2.4nm,0.8s,baz=7.8,slow=5.6,SNR=13						
	comp=Z,2.4nm,0.8s						
NWAO	Narrogin (SRO)	63.05	241	P	P	00 09 51.0	-0.6
MORW	Morawa	64.30	245	P	P	00 09 58.9	-0.9
MORW				IAmb	IAmb	00 10 11.2	
	comp=Z,11nm,1.0s						
KIWB	Kanaga Island	67.50	359		P	00 10 19.4	-0.1
MJAR	Matsushiro Arr	68.36	321	P	P	00 10 24.6	-0.6
	comp=Z,2.0nm,0.5s,baz=167,slow=5.4,SNR=6.1						
	comp=Z,2.0nm,0.5s						
NIKH	Nikolski High	68.80	4	P	P	00 10 27.0	-0.5
	baz=186						
UNV	Unalaska Valle	69.85	5	P	P	00 10 33.3	-0.6
	baz=188						
JNU	Nakatsue	71.05	314	P	P	00 10 41.1	-0.5
JNU				IAmb	IAmb	00 10 42.8	
	comp=Z,9.0nm,0.8s						
KKM	Kota Kinabalu	71.49	282	P	P	00 10 44.3	-0.5
SDPT	Sand Point	72.03	9	P	P	00 10 46.5	-0.4
	baz=194						
S12K	Black Hills	72.16	8	P	P	00 10 47.6	-0.1
	baz=193						
P08K	Saint George I	72.37	3	P	P	00 10 48.1	-0.8
	baz=185						
PETK	Petropavlovsk-	72.66	343	P	P	00 10 50.7	0.0
	comp=Z,8.3nm,0.9s,baz=132,slow=6.4,SNR=4.7						
	comp=Z,8.3nm,0.9s						
SPIA	Saint Paul Isl	72.91	3	P	P	00 10 51.9	-0.1
	baz=185						
KMRM	Mail Ridge	73.39	39	P	P	00 10 55.7	+0.3
QSPA	South Pole Qui	74.14	180		P	00 10 59.8	+0.4
QSPA				IAmb	IAmb	00 11 01.5	
	comp=Z,9.0nm,1.1s						
QSPA	South Pole Qui	74.14	180	P	P	00 10 59.8	+0.4
	comp=Z,5.1nm,0.7s,baz=0.9,slow=0.4,SNR=38						
	comp=Z,5.1nm,0.7s						
YUH	Yuha Desert	74.26	49	P	P	00 11 00.3	-0.2
KSXB	Camp Six Broad	74.30	37	P	P	00 11 01.2	+0.6
YBH	Yreka Blue Hor	74.92	38		P	00 11 05.0	+0.8
YBH				IAmb	IAmb	00 11 06.0	
	comp=Z,9.5nm,0.7s						
R18K	Karluk	75.16	11	P	P	00 11 04.9	-0.1
	baz=200						
BEKR	Beckworth	75.23	40	P	P	00 11 05.8	-0.3
BEKR				IAmb	IAmb	00 11 07.5	
	comp=Z,12nm,1.1s						
KSRS	Korea Array	75.47	316	P	P	00 11 08.7	+1.5
	comp=Z,2.3nm,1.0s,baz=132,slow=6.1,SNR=16						
	comp=Z,2.3nm,1.0s						
KSAR	Wonju Array Be	75.48	316		P	00 11 08.2	+0.9
Q17K	Contact Creek	75.56	10	P	P	00 11 06.9	-0.5
	baz=199						
NVAR	Mina Array Bea	75.72	43	P	P	00 11 09.0	0.0
NVAR	Mina Array Bea	75.72	43	P	P	00 11 09.3	+0.3
	comp=Z,6.8nm,0.8s,baz=228,slow=9.6,SNR=28						
	comp=Z,6.8nm,0.8s						
KDAK	Kodiak Island	75.72	12	P	P	00 11 08.0	-0.1
KDAK	Kodiak Island	75.72	12	P	P	00 11 07.5	-0.7
	baz=202						
PAHR	Pah Rah Range	75.75	41		P	00 11 09.2	+0.2
GMN	Gold Mountain	75.79	44	P	P	00 11 09.7	+0.3
GMN				IAmb	IAmb	00 11 10.7	
	comp=Z,6.5nm,0.8s						
NV11	Mina Array Sit	75.82	43	P	P	00 11 09.6	+0.2
NV11				IAmb	IAmb	00 11 10.9	
	comp=Z,12nm,1.1s						
O15K	Ungalikthiuk R	75.83	8	P	P	00 11 08.5	-0.3
	baz=195						
113A	Mohawk Valley,	75.89	50		P	00 11 09.8	0.0
P16K	Nushagak River	75.95	9	P	P	00 11 08.7	-0.7
	baz=197						
Q18K	Katmai Hardscr	76.07	11	P	P	00 11 09.6	-0.7
	baz=200						
TPH	Tonopah	76.24	43	P	P	00 11 11.0	-0.8
HSIG		76.25	54	P	P	00 11 10.6	-1.2
HSIG				IAmb	IAmb	00 11 12.7	
	comp=Z,7.0nm,0.8s						
TPNV	Topopah Spring	76.28	45		P	00 11 11.8	-0.3
N14K	Kuskokwak Cree	76.33	7	P	P	00 11 11.3	-0.2
	baz=193						
P17K	Kvichak River	76.35	10	P	P	00 11 11.3	-0.4
	baz=198						
M11K	Mekoryuk	76.35	4	P	P	00 11 11.4	-0.3
	baz=189						
O16K	Kokwok River B	76.48	9	P	P	00 11 11.8	-0.6
	baz=197						
Q20K	Shuyak Island	76.53	12	P	P	00 11 12.1	-0.6
	baz=202						
M13K	Dall Lake	76.63	6	P	P	00 11 12.5	-0.6
	baz=191						
J05D	Fort Rock, OR	76.73	37		P	00 11 14.4	0.0
J05D				IAmb	IAmb	00 11 16.1	
	comp=Z,12nm,0.8s						
P18K	Big Mountain,	76.74	10	P	P	00 11 13.2	-0.7
	baz=199,SNR=9.1						
N15K	Kwethluk River	76.76	8	P	P	00 11 13.7	-0.3
	baz=195						
O17K	Koliganek Bris	76.80	9	P	P	00 11 14.0	-0.2
	baz=198						
USRK	Ussuriysk Ar.	76.88	324	P	P	00 11 16.3	+1.3
	comp=Z,1.9nm,0.7s,baz=110,slow=8.0,SNR=5.2						
	comp=Z,1.9nm,0.7s						
W13A	Hualapai Mount	76.97	47		P	00 11 16.0	0.0
M14K	Bethel	77.11	7	P	P	00 11 16.2	+0.4
M14K	Bethel	77.11	7	P	P	00 11 15.5	-0.3
	baz=193						
O18K	Koktuh Hills	77.18	10		P	00 11 16.0	-0.3
O18K				IAmb	IAmb	00 11 17.5	
	comp=Z,16nm,1.0s						
O18K	Koktuh Hills	77.18	10	P	P	00 11 15.9	-0.5
	baz=199,SNR=6.9						
M15K	Kasigluk River	77.20	7	P	P	00 11 16.3	0.0
	baz=194,SNR=7.4						
N16K	Nishlik Lake	77.23	8	P	P	00 11 16.4	-0.2
	baz=196						
P19K	Oil Pt	77.34	11	P	P	00 11 16.9	-0.3
	baz=201						
N17K	Nushagak Hills	77.50	9	P	P	00 11 17.5	-0.5
	baz=197						
L14K	Kuka Creek	77.61	6	P	P	00 11 18.0	-0.5
	baz=192						
HOM	Homer	77.65	12	P	P	00 11 18.3	-0.6
	baz=203						
O19K	Port Alsworth	77.65	10	P	P	00 11 18.2	-0.7
O19K	Port Alsworth	77.65	10	P	P	00 11 18.2	-0.7
	baz=200						
M16K	Timber Creek	77.73	8	P	P	00 11 19.5	+0.2
	baz=196,SNR=6.5						
WVOR	Wild Horse Val	77.78	39	P	P	00 11 20.1	-0.1
WVOR				IAmb	IAmb	00 11 21.6	
	comp=Z,7.9nm,0.9s						
N18K	Kilae Creek	77.85	9	P	P	00 11 19.7	-0.4
	baz=199						
O20K	Slope Mountain	77.85	11	P	P	00 11 19.5	-0.6
	baz=202						
TUC	Tucson	77.89	51		P	00 11 21.3	+0.4
TUC				IAmb	IAmb	00 11 22.9	
	comp=Z,6.5nm,0.8s						
BRSE	Bradley Lake S	77.91	12	P	P	00 11 19.7	-0.7
	baz=204						
K13K	Kusilvak Mount	78.01	5	P	P	00 11 20.2	-0.6
	baz=190						
L15K	Ungalak Mounta	78.06	7	P	P	00 11 21.3	+0.2
	baz=193						
N19K	Bonanza Creek	78.21	10	P	P	00 11 21.6	-0.5
	baz=200,SNR=5.6						
M17K	Holitna River	78.31	9	P	P	00 11 22.6	+0.1
	baz=197						
L16K	Owhat River	78.33	7	P	P	00 11 22.8	+0.2
	baz=195						
Q23K	Middleton Isla	78.60	14	P	P	00 11 23.9	-0.2
	baz=208						
M18K	Stony River	78.63	9	P	P	00 11 24.1	-0.1
	baz=199						
K15K	Wolf Creek Mou	78.66	6		P	00 11 25.1	+0.7
K15K				IAmb	IAmb	00 11 26.3	
	comp=Z,14nm,0.9s						
K15K	Wolf Creek Mou	78.66	6	P	P	00 11 24.1	-0.3
	baz=193						
L17K	Donlin	78.89	8	P	P	00 11 26.7	+1.0
	baz=196						
J14K	Nanvaranak Lak	78.91	5	P	P	00 11 25.9	+0.2
	baz=191						
ELK	Elko	78.97	42		P	00 11 26.4	-0.5
L18K	Granite Mounta	79.20	9	P	P	00 11 27.4	+0.1
	baz=198						
M19K	Big River Lodg	79.25	10	P	P	00 11 27.1	-0.5
	baz=200						
NJ2	Nanjing	79.27	308	*e*P	P	00 11 31.4	+3.1
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
RC01	Rabbit Creek A	79.34	12	P	P	00 11 28.0	-0.1
	baz=204						
PWL	Port Wells	79.43	13	P	P	00 11 28.8	+0.2
	baz=206						
M20K	Styx River	79.44	10	P	P	00 11 28.8	+0.1
	baz=201						
K17K	Iditarod	79.45	8	P	P	00 11 29.0	+0.4
	baz=196,SNR=5.2						
GAMB	Gambell	79.47	1	P	P	00 11 28.9	+0.3
	baz=183						
SUA	Susitna One	79.49	12		P	00 11 28.0	-1.0
SUA				IAmb	IAmb	00 11 29.6	
	comp=Z,7.6nm,0.8s						
SUA	Susitna One	79.49	12	P	P	00 11 27.9	-1.1
	baz=204,SNR=7.3						
KAIM	Kayak Island	79.51	15	P	P	00 11 29.0	0.0
	baz=210						
HAWA	Hanford	79.56	35	P	P	00 11 28.8	-0.8
HAWA				IAmb	IAmb	00 11 30.9	
	comp=Z,11nm,1.2s						
GLI	Glacier Island	79.72	13	P	P	00 11 29.4	-0.7
GLI				IAmb	IAmb	00 11 30.9	
	comp=Z,11nm,0.8s						
GLI	Glacier Island	79.72	13	P	P	00 11 30.1	0.0
	baz=207						
J16K	Anvik River	79.73	7	P	P	00 11 30.0	-0.1
	baz=194,SNR=12						
EYAK	Cordova Ski Ar	79.73	14	P	P	00 11 30.3	+0.1
	baz=208						
SKT	Skwentna	79.82	11	P	P	00 11 30.3	-0.3
	baz=203						
L20K	Farewell, AK	79.87	10	P	P	00 11 30.8	-0.2
	baz=200						
U33K	Whale Pass	79.88	22	P	P	00 11 30.5	-0.5
	baz=220						
KNK	Knik Glacier	79.90	13	P	P	00 11 31.0	-0.1
	baz=206						
J17K	VABM Dome	80.01	7	P	P	00 11 32.3	+0.7
	baz=195						
S31K	Pelican	80.23	20	P	P	00 11 32.7	-0.2
	baz=218						
DIV	Divide	80.24	14	P	P	00 11 32.4	-0.5
DIV				IAmb	IAmb	00 11 33.9	
	comp=Z,11nm,0.8s						
SML	Sawmill	80.28	12	P	P	00 11 33.3	+0.1
	baz=206						
I17K	Unalakleet	80.30	6	P	P	00 11 34.0	+0.9
	baz=194						
MESA	MESA	80.37	16	P	P	00 11 33.8	0.0
	baz=212						
BMRM	Bremner River	80.38	14	P	P	00 11 33.9	+0.2
	baz=209						
J18K	Innoko River	80.38	8	P	P	00 11 34.4	+0.7
	baz=198,SNR=9.2						
WRAK	Wrangell Islan	80.39	22	P	P	00 11 33.9	+0.2
	baz=221						
BNX	BinXian	80.42	323	⇑P	P	00 11 34.9	+0.7
BNX				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CUT	Chulitna	80.44	11	P	P	00 11 34.4	+0.5
	baz=204						
SCM	Sheep Creek Mo	80.52	13	P	P	00 11 34.4	0.0
	baz=207						
KLU	Klutina	80.53	14	P	P	00 11 34.8	+0.3
	baz=208						
PPLA	Purkeypile	80.55	10	P	P	00 11 34.1	-0.6
	baz=202						
CRQM	Cirque	80.55	15	P	P	00 11 34.8	0.0
CRQM				IAmb	IAmb	00 11 36.0	
	comp=Z,14nm,1.0s						
ANM	Nome	80.56	4	P	P	00 11 35.0	+0.5
	baz=189						
CRQE	Cirque	80.56	15	P	P	00 11 34.7	0.0
	baz=211						
PNL	Peninsula	80.65	17	P	P	00 11 35.1	0.0
	baz=214						
K20K	Telida	80.67	9	P	P	00 11 35.4	+0.3
	baz=200						
VRDI	Verde Repeater	80.88	15		P	00 11 36.6	+0.1
VRDI				IAmb	IAmb	00 11 37.2	
	comp=Z,6.9nm,0.9s						
H16K	Elim	80.89	6	P	P	00 11 36.6	+0.4
	baz=192						
N25K	Chitina, Valde	80.93	14	P	P	00 11 36.9	+0.2
	baz=209,SNR=6.4						
HLID	Hailey	80.98	40		P	00 11 37.7	+0.3
M24K	Tolsona, Glenn	81.02	13	P	P	00 11 37.5	+0.4
	baz=208						
J19K	Poorman	81.04	9	P	P	00 11 37.2	+0.2
	baz=199						
CAST	Castle Rocks	81.05	10	P	P	00 11 36.5	-0.7
	baz=202						
G15K	Niukluk	81.08	5	P	P	00 11 37.5	+0.3
	baz=190,SNR=6.3						
P29M	Windy Craggy	81.10	18	P	P	00 11 37.4	-0.1
	baz=216						
WAT6	Susitna Watana	81.10	12	P	P	00 11 37.3	-0.3
	baz=206,SNR=5.9						
MCARA	McCarthy VSAT	81.12	15	P	P	00 11 37.1	-0.4
	baz=211						
WAT1	Susitna Watana	81.16	12	P	P	00 11 37.5	-0.3
	baz=206						
CTG	Chitna Glacier	81.20	16	P	P	00 11 37.7	-0.4
	baz=212						
O28M	Mount Upton	81.34	16	P	P	00 11 38.8	-0.3
	baz=214						
PLBC	Pleasant Camp	81.38	19	P	P	00 11 39.2	+0.3
	baz=217						
TNA	Tin City	81.40	3		P	00 11 38.8	0.0
TNA				IAmb	IAmb	00 11 40.9	
	comp=Z,15nm,1.0s						
TNA	Tin City	81.40	3	P	P	00 11 38.8	0.0
	baz=187,SNR=6.2						
F14K	Arctic Creek	81.40	4	P	P	00 11 39.7	+0.9
	baz=188						
TRF	Thorofare Moun	81.40	11		P	00 11 38.8	-0.4
TRF	Thorofare Moun	81.40	11	P	P	00 11 38.5	-0.6
	baz=204,SNR=6.5						
O29M	Mount Kennedy	81.41	17	P	P	00 11 39.7	+0.5
	baz=215						
H17K	Granite Mounta	81.41	6	P	P	00 11 39.3	+0.3
	baz=194						
J20K	Nowinta River	81.43	9	P	P	00 11 39.5	+0.5
	baz=200,SNR=6.1						
HARP	HAARP	81.50	14	P	P	00 11 40.1	+0.6
	baz=209						
GCSA	Galena City Sc	81.59	8	P	P	00 11 40.4	+0.6
	baz=197						
G16K	Koyuk River	81.62	5	P	P	00 11 40.5	+0.5
	baz=192						
DHY	Denali Highway	81.62	12	P	P	00 11 40.4	+0.1
	baz=207						
RND	Reindeer	81.63	12		P	00 11 40.1	-0.1
RND				IAmb	IAmb	00 11 41.3	
	comp=Z,8.3nm,0.9s						
VHRN	Van Horn	81.68	55		P	00 11 41.9	+0.6
VHRN				IAmb	IAmb	00 11 43.1	
	comp=Z,11nm,0.7s						
SKAG	Skagway	81.71	19	P	P	00 11 41.2	+0.6
	baz=218						
P30M	Million Dollar	81.73	18	P	P	00 11 41.7	+0.9
	baz=217						
F15K	North Star Dit	81.74	4	P	P	00 11 42.0	+1.3
	baz=190						
H18K	Honhosa River	81.79	7	P	P	00 11 41.6	+0.6
	baz=196						
SMAI	San Martin Ant	81.84	159	P	P	00 11 41.8	+0.5
SMAI				IAmb	IAmb	00 11 51.4	
	comp=Z,21nm,1.4s						
BPAW	Bear Paw Mtn.	81.87	10	P	P	00 11 40.9	-0.5
	baz=203						
G17K	Kiwalik Mounta	81.88	6	P	P	00 11 41.6	+0.2
	baz=194,SNR=5.5						
YUK8	Steele Glacier	81.88	16	P	P	00 11 41.7	-0.1
	baz=214						
MCK	McKinley	81.91	11	P	P	00 11 42.0	+0.4
	baz=205						
PAX	Paxson	81.93	13	P	P	00 11 42.2	+0.4
	baz=208						
S34M	Telegraph Cree	81.95	22	P	P	00 11 42.3	+0.4
	baz=222						
I20K	Naaghedeneel	81.97	9	P	P	00 11 42.7	+0.9
	baz=200						
YUK6	Outpost Mounta	81.99	17	P	P	00 11 42.7	+0.3
	baz=215						
M26K	Nabesna, AK	82.00	14	P	P	00 11 42.3	+0.1
	baz=211,SNR=10						
YUK3	Moose Creek	82.11	16	P	P	00 11 42.9	-0.1
	baz=213						
HYT	Haines Junctio	82.14	18	P	P	00 11 43.3	+0.3
	baz=216						
TXAR	Lajitas Array	82.15	57		P	00 11 43.9	+0.1
TXAR	Lajitas Array	82.15	57	P	P	00 11 44.5	+0.7
	comp=Z,2.2nm,0.7s,baz=217,slow=6.1,SNR=29						
	comp=Z,2.2nm,0.7s						
M27K	Edge Creek, AK	82.24	15	P	P	00 11 44.3	+0.7
	baz=212,SNR=7.1						
YUK4	Talbot Arm	82.24	17	P	P	00 11 43.9	+0.3
	baz=215						
ANMO	Albuquerque	82.29	50	P	P	00 11 44.1	-0.3
ANMO				IAmb	IAmb	00 11 46.1	
	comp=Z,9.2nm,1.1s						
Q32M	Nakina River	82.33	21	P	P	00 11 43.8	-0.3
	baz=221						
H19K	Roundabout Mou	82.39	8	P	P	00 11 45.0	+1.0
	baz=198,SNR=5.7						
L26K	Log Cabin Wild	82.46	14	P	P	00 11 44.6	+0.1
	baz=210						
G18K	Tagagawik	82.48	7	P	P	00 11 44.9	+0.3
	baz=196,SNR=8.3						
O30N	Mendenhall	82.51	18	P	P	00 11 45.0	+0.2
	baz=217						
H20K	Anotleneega Mo	82.57	8	P	P	00 11 45.7	+0.7
	baz=199,SNR=6.5						
K24K	Donnelly Dome	82.60	13	P	P	00 11 45.5	+0.2
	baz=208						
NEA2	Nenana	82.67	11	P	P	00 11 45.8	+0.3
	baz=205						
F17K	Baldwin Pennin	82.74	6	P	P	00 11 46.2	+0.4
	baz=193						
RIDG	Independent Ri	82.75	13	P	P	00 11 46.2	+0.2
	baz=209						
MLY	Manley	82.77	10	P	P	00 11 45.5	-0.6
	baz=203,SNR=6.2						
N30M	Aishikik Lake	82.77	17	P	P	00 11 46.2	+0.1
	baz=216						
WHY	Whitehorse	82.79	19	P	P	00 11 46.2	-0.2
	baz=218						
L27K	Beaver Creek,	82.85	15	P	P	00 11 46.6	0.0
	baz=212						
BCAR	Beaver Creek A	82.86	15	P	P	00 11 46.3	-0.3
G19K	Purcell Mounta	82.90	7	P	P	00 11 47.4	+0.7
	baz=197,SNR=5.5						
HDA	Harding Lake	82.90	12	P	P	00 11 46.6	-0.1
	baz=207,SNR=6.4						
CCB	Clear Creek Bu	82.95	11	P	P	00 11 46.6	-0.3
CCB				IAmb	IAmb	00 11 47.1	
	comp=Z,9.6nm,1.1s						

H21K	Melozitna Rive	83.02	9	P	P	00 11 47.3	0.0
	baz=201,SNR=8.1						
F18K	Selawik	83.05	6	P	P	00 11 47.6	+0.3
	baz=195,SNR=8.8						
P33M	Teslin, Yukon	83.10	20	P	P	00 11 48.0	+0.1
	baz=220						
R33M	Jennings River	83.10	21	P	P	00 11 48.1	+0.1
	baz=222						
I23K	Minto, Yukon-K	83.12	11	P	P	00 11 48.1	+0.3
	baz=205						
SCRK	Sand Creek	83.14	13	P	P	00 11 48.3	+0.2
	baz=210,SNR=6.5						
COLA	College	83.15	11	P	P	00 11 48.0	+0.1
	baz=206						
N31M	Braeburn, Yuko	83.17	18	P	P	00 11 48.5	+0.3
	baz=218						
IMAR	Indian Mountai	83.19	9	P	P	00 11 48.4	+0.3
M29M	Somme Creek	83.19	16	P	P	00 11 48.3	-0.1
	baz=215						
IL31		83.24	12		P	00 11 47.9	-0.5
IL31				IAmb	IAmb	00 11 49.3	
	comp=Z,9.8nm,1.2s						
ILAR	Eielson Array	83.24	12		P	00 11 47.7	-0.7
ILAR	Eielson Array	83.24	12	P	P	00 11 47.9	-0.6
	comp=Z,2.8nm,0.8s,baz=222,slow=6.2,SNR=22						
	comp=Z,2.8nm,0.8s						
E17K	Hotham Inlet	83.32	5	P	P	00 11 49.4	+0.6
	baz=193,SNR=12						
J25K	Salcha River,	83.40	12	P	P	00 11 48.9	-0.4
J25K				IAmb	IAmb	00 11 50.5	
	comp=Z,6.7nm,0.8s						
J25K	Salcha River,	83.40	12	P	P	00 11 49.4	+0.1
	baz=208,SNR=9.9						
POKR	Poker Plat Res	83.44	11	P	P	00 11 49.3	-0.2
	baz=206						
H22K	Ishtalitna Cre	83.46	10	P	P	00 11 49.9	+0.3
	baz=203,SNR=11						
F19K	Shaleruckik Mo	83.48	7	P	P	00 11 49.7	+0.2
	baz=196,SNR=17						
K27K	Chicken	83.62	14	P	P	00 11 50.7	+0.3
	baz=212						
YHL	Hebgen Lake	83.64	40		P	00 11 52.0	+0.8
YHL				IAmb	IAmb	00 11 53.3	
	comp=Z,11nm,0.8s						
PD31	Pinedale Array	83.66	42	P	P	00 11 50.8	-0.5
PD31				IAmb	IAmb	00 11 52.0	
	comp=Z,5.8nm,0.7s						
PDAR	Pinedale Array	83.66	42	P	P	00 11 50.8	-0.5
PDAR	Pinedale Array	83.66	42	P	P	00 11 51.2	-0.1
	comp=Z,4.9nm,0.6s,baz=210,slow=3.8,SNR=32						
	comp=Z,4.9nm,0.6s						
J26L	Joseph Creek	83.69	13	P	P	00 11 51.5	+0.7
	baz=210,SNR=14						
H23K	Yukon River	83.70	10	P	P	00 11 50.7	-0.1
	baz=204						
BELA	Belgrano 2	83.71	172	P	P	00 11 50.6	-0.2
G21K	Allakaket	83.72	8	P	P	00 11 51.5	+0.7
	baz=201,SNR=9.3						
BOZ	Bozeman (W)	83.74	39	P	P	00 11 51.6	0.0
E18K	Tukpahlearik C	83.76	6	P	P	00 11 51.4	+0.4
	baz=194,SNR=16						
D17K	Noatak River	83.82	5	P	P	00 11 52.0	+0.8
	baz=191,SNR=8.2						
L29M	L29M	83.83	16	P	P	00 11 52.2	+0.8
	baz=215,SNR=11						
F20K	Avaraart Lake	83.93	7	P	P	00 11 52.4	+0.6
	baz=198,SNR=6.9						
H24K	Noodor Dome	84.01	11	P	P	00 11 51.5	-0.8
	baz=206						
E19K	Redstone River	84.14	7	P	P	00 11 53.2	+0.3
	baz=197,SNR=16						
M31M	Drury Creek, Y	84.15	18	P	P	00 11 52.9	-0.2
	baz=219						
PRP	Porcupine Dome	84.17	12		P	00 11 53.1	-0.2
PRP				IAmb	IAmb	00 11 53.9	
	comp=Z,8.2nm,1.0s						
PRP	Porcupine Dome	84.17	12	P	P	00 11 53.5	+0.2
	baz=208,SNR=9.6						
C16K	Lisburne Hills	84.24	4	P	P	00 11 54.0	+0.7
	baz=189						
DAWY	Dawson	84.29	15	P	P	00 11 53.3	-0.5
DAWY				IAmb	IAmb	00 11 54.8	
	comp=Z,6.1nm,0.8s						
DAWY	Dawson	84.29	15	P	P	00 11 54.3	+0.5
	baz=214,SNR=7.6						
F21K	Alatna River	84.39	8	P	P	00 11 54.5	+0.3
	baz=201,SNR=6.9						
G22K	Bettles	84.40	9	P	P	00 11 54.6	+0.5
	baz=202						
G23K	Bananza Creek	84.44	10	P	P	00 11 54.9	+0.4
	baz=204,SNR=7.6						
I26K	Coal Creek Min	84.47	13	P	P	00 11 55.1	+0.5
	baz=210,SNR=5.7						
FARO	Faro, Yukon	84.48	18	P	P	00 11 54.1	-0.7
	baz=220						
C17K	DeLong Mountai	84.58	4	P	P	00 11 55.4	+0.3
	baz=191						
K29M	Barlow Dome	84.58	16	P	P	00 11 56.5	+1.2
	baz=216,SNR=9.1						
BJT	Baijiatuau	84.72	314	P	P	00 11 57.1	+0.7
BJT				IAmb	IAmb	00 11 58.7	
	comp=Z,17nm,1.4s						
H25L	Birch Creek	84.78	11	P	P	00 11 56.0	-0.1
	baz=208						
TOAD	Toad River Com	84.80	23	P	P	00 11 56.1	-0.4
	baz=227						
BILL	Bilibino	84.82	353	P	P	00 11 56.5	+0.2
BILL				IAmb	IAmb	00 11 57.6	
	comp=Z,16nm,1.2s						
COLD	Coldfoot	84.88	9	P	P	00 11 57.9	+1.3
	baz=204,SNR=6.4						
C18K	Utukok River	84.91	5	P	P	00 11 57.1	+0.3
	baz=193						
E20K	Nigu River	85.03	7	P	P	00 11 57.5	+0.1
	baz=198,SNR=14						
D19K	Kuna River	85.05	6	P	P	00 11 57.8	+0.3
	baz=196,SNR=6.3						
I27K	Kandik River	85.06	13	P	P	00 11 57.7	+0.1
	baz=212						
LYN	LuoYang	85.16	308	⇑P	P	00 12 00.3	+1.6
LYN				pmax	pmax		
	comp=Z,18nm,1.1s						
G25K	Bearman Lake	85.17	11	P	P	00 11 57.8	-0.2
	baz=208						
I28M	Miner Creek	85.31	14	P	P	00 11 58.6	-0.3
	baz=214,SNR=5.5						
D20K	Etivluk River	85.42	7	P	P	00 11 59.6	+0.3
	baz=198,SNR=7.2						
E21K	Killik River	85.47	8	P	P	00 11 60.0	+0.4
	baz=200						
E22K	Anaktuvuk Pass	85.48	8	P	P	00 12 00.5	+0.9
	baz=202,SNR=8.6						
J30M	Hart River	85.48	16	P	P	00 12 00.3	+0.5
	baz=217						
C19K	Lookout Ridge	85.49	5	P	P	00 12 00.5	+0.9
	baz=195						
F24K	Squaw Lake	85.52	10	P	P	00 12 00.5	+0.7
	baz=206						
B18K	Kokolik River	85.56	5	P	P	00 12 00.4	+0.5
	baz=193						
H27K	Steamboat Moun	85.62	13	P	P	00 12 01.2	+0.9
	baz=212,SNR=6.4						
E23K	Chandalar	85.73	9	P	P	00 12 02.0	+1.1
	baz=204						
G26K	Porcupine Rive	85.77	12	P	P	00 12 02.2	+1.2
	baz=210,SNR=6.7						
E24K	Your Creek	85.93	10	P	P	00 12 02.3	+0.5
	baz=205						
F25K	Christian Rive	85.98	11	P	P	00 12 02.8	+0.7
	baz=208						
I30M	Mount Dempster	85.99	15	P	P	00 12 02.5	+0.2
	baz=217,SNR=5.9						
C21K	Knifeblade Rid	86.05	7	P	P	00 12 02.7	+0.4
	baz=199						
D22K	Ayikyak River	86.05	8	P	P	00 12 03.1	+0.7
	baz=201						
G27K	Doyon Strip	86.08	13	P	P	00 12 03.3	+0.7
	baz=212						
TOLK	Toolik Lake Re	86.27	9	P	P	00 12 04.1	+0.6
	baz=204						
H29M	Whitestone	86.32	14	P	P	00 12 03.9	+0.2
	baz=215						
F26K	Sheenjek River	86.35	11	P	P	00 12 04.1	+0.3
	baz=210						
D23K	Nanushuk River	86.41	9	P	P	00 12 04.3	+0.3
	baz=203						
A19K	Wainwright	86.44	5	P	P	00 12 04.4	+0.3
	baz=193						
E25K	Arctic Village	86.46	11	P	P	00 12 04.3	-0.1
	baz=208						
B21K	Ikpikpuk River	86.51	7	P	P	00 12 04.5	0.0
	baz=200						
B20K	Meade River	86.60	6	P	P	00 12 04.9	0.0
	baz=197						
MAW	Mawson	86.83	199	P	P	00 12 06.5	+0.3
	comp=Z,3.5nm,0.8s,baz=138,slow=11,SNR=6.1						
	comp=Z,3.5nm,0.8s						
EPYK	Eagle Plains	86.83	14	P	P	00 12 05.7	-0.5
	baz=216						
D24K	Happy Valley	86.86	9	P	P	00 12 06.5	+0.4
	baz=205						
G29M	Pine Creek	86.96	14	P	P	00 12 06.5	-0.3
	baz=215						
F28M	Old Crow	87.14	13	P	P	00 12 07.8	+0.2
	baz=214						
C23K	Itkillik River	87.22	8	P	P	00 12 08.0	+0.1
	baz=203						
E27K	Coleen River	87.27	12	P	P	00 12 08.3	+0.1
	baz=212						
B22K	Teshekpuk Lake	87.33	7	P	P	00 12 08.6	+0.2
	baz=201						
C24K	Franklin Bluff	87.39	9	P	P	00 12 08.4	-0.3
	baz=205						
D25K	Kavik River	87.39	10	P	P	00 12 08.4	-0.4
	baz=207						
G30M	tAoh Zraii Nji	87.44	14	P	P	00 12 08.9	-0.2
	baz=217						
XAN	Xi'an	87.70	306	P	P	00 12 12.3	+1.2
XAN				pmax	pmax		
	comp=Z,13nm,1.1s						
G31M	Satah River	87.87	15	P	P	00 12 11.0	0.0
	baz=219						
E28M	Babbage River	88.03	12	P	P	00 12 12.5	+0.7
	baz=214						
F30M	Barrier River	88.05	14	P	P	00 12 12.3	+0.4
	baz=217						
E29M	Blow River	88.20	13	P	P	00 12 11.5	-1.0
	baz=215						
HHC	Hu-ho-hao-te	88.26	313	*e*P	P	00 12 16.3	+2.7
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KMI	Kunming	89.88	296	P	P	00 12 23.3	+1.6
KMI				pmax	pmax		
	comp=Z,15nm,0.7s						
PZH	PanZhiHua	91.15	297	P	P	00 12 28.6	+1.2
YKA	Yellowknife Ar	91.17	24	P	P	00 12 26.5	0.0
	comp=Z,1.2nm,1.0s,baz=245,slow=4.5,SNR=7.0						
	comp=Z,1.2nm,1.0s						
CMAR	Chiang Mai Arr	91.33	289	P	P	00 12 29.8	+1.5
	comp=Z,2.7nm,0.3s,baz=102,slow=3.6,SNR=8.7						
	comp=Z,2.7nm,0.3s						
A36M	Sachs Harbour	93.75	14	P	P	00 12 37.8	-0.4
	baz=227						
SONM	Songino Array	94.21	319	P	P	00 12 40.2	-0.9
	comp=Z,0.4nm,0.4s,baz=92,slow=4.3,SNR=2.4						
	comp=Z,0.4nm,0.4s						
MKAR	Makanchi Array	110.10	314	PKiKP	PKiKP	00 17 50.9	-1.2
	comp=Z,0.4nm,0.8s,baz=104,slow=3.0,SNR=3.9						
KURBB	Kurchatov Arra	112.58	319	PKiKP	PKiKP	00 17 55.0	-1.5
	comp=Z,0.4nm,0.8s,baz=93,slow=1.9,SNR=3.1						
BVAR	Borovoye Array	117.34	322	PKP	PKPdf	00 18 05.0	-0.6
	comp=Z,1.2nm,0.7s,baz=56,slow=2.6,SNR=5.6						
ARCES	ARCESS Array B	124.89	351	PKP	PKPdf	00 18 18.0	-1.7
	comp=Z,3.1nm,0.9s,baz=51,slow=1.9,SNR=9.1						
FINES	FINESS Array B	132.09	347	PKP	PKPdf	00 18 34.2	+0.6
	comp=Z,0.4nm,0.7s,baz=351,slow=6.3,SNR=4.7						
NOA	NORSAR Array B	134.71	356	PKP	PKPdf	00 18 38.5	-0.1
	comp=Z,0.8nm,0.8s,baz=13,slow=4.0,SNR=3.3						
BSEG	Bad Segeberg	141.83	355	*e*PKPbc	PKPdf	00 18 47.8	-3.9
	baz=10,slow=3.0						
OJC	Ojcow	143.75	344	*e*PKP	PKPab	00 18 53.3	+0.4
CLZ	Clausthal	143.90	354	*e*PKPbc	PKPbc	00 18 54.5	+0.4
	baz=10,slow=3.0						
KSP	Ksiaz	143.99	348	*e*PKP	PKPbc	00 18 54.3	-0.1
CLL	Collm	144.11	351	*e*PKPbc	PKPbc	00 18 54.6	0.0
	baz=10,slow=3.0						
CLL	Collm	144.11	351	*e*PKPdf	PKPab	00 18 54.0	-0.3
	comp=Z,3.0nm,0.9s						
CLL				*e*x	x	00 19 00.0	
CLL				*e*PP	PP	00 22 12.0	-0.4
GTTG	Gottingen	144.23	355	*e*PKPbc	PKPbc	00 18 55.2	+0.2
	baz=10,slow=3.0						
BUR08	Bucovina Ar. S	144.23	336	PKPdf	PKPbc	00 18 55.5	+0.1
BURAR	Bucovina Array	144.25	336	PKPdf	PKPab	00 18 55.2	+0.1
BURAR	Bucovina Array	144.25	336	⇑P	PKPbc	00 18 55.8	+0.4
OSTC	Ostas	144.28	348	*e*PKP	PKPdf	00 18 56.0	-0.2
NIE	Niedzica	144.33	343	*e*PKP	PKPdf	00 18 56.0	-0.4
UPC	Upice	144.36	348	*e*PKP	PKPdf	00 18 56.2	-0.2
BRG	Berggiesshubel	144.39	350	*e*PKPbc	PKPab	00 18 55.3	-0.1
	baz=10,slow=3.0						
BRG	Berggiesshubel	144.39	350	*e*PKP	PKPbc	00 18 55.6	0.0
BRG				Amp		00 18 56.6	
	comp=Z,4.3nm,1.1s						
DPC	Dobruska-Polom	144.45	348	*e*PKP	PKPdf	00 18 56.3	-0.3
BUG	Bochum--Univer	144.51	358	*e*PKPbc	PKPab	00 18 55.5	-0.2
	baz=10,slow=3.0						
STEB	Steborice	144.52	346	*e*PKP	PKPbc	00 18 56.2	+0.2
GAZ	Gaziantep	144.52	313	PKPbc	PKPab	00 18 56.4	-0.1
KRLC	Kraliky	144.61	347	*e*PKP	PKPab	00 18 56.2	-0.1
PVCC	Panska Ves	144.62	349	*e*PKP	PKPdf	00 18 57.3	+0.5
BNN	Bunyan	144.62	316	PKPbc	PKPbc	00 18 56.9	0.0
KASTN	Kahler Asten	144.69	356	*e*PKPbc	PKPbc	00 18 56.6	+0.1
	baz=10,slow=3.0						
MORC	Moravsky Berou	144.72	346	PKPbc	PKPbc	00 18 56.4	-0.3
MORC	Moravsky Berou	144.72	346	*e*PKP	PKPbc	00 18 56.5	-0.2
MORC	Moravsky Berou	144.72	346	⇓P	PKPdf	00 18 57.4	+0.3
ONER	Baraj Valea Uz	144.81	334	⇑P	PKiKP	00 18 59.3	-1.9
BMR	Baia Mare	144.84	338	⇑P	PKPbc	00 18 54.5	-2.5
CFR	Carcaliu	144.93	331	⇑P	PKPbc	00 18 55.9	-1.4
MOX	Moxa	144.94	353	*e*PKPbc	PKPbc	00 18 57.1	-0.2
	baz=10,slow=3.0						
MOX				*e*pPKPbc	pPKPdf	00 20 13.4	+6.3
	baz=7.1,slow=3.4						
MAUC	Maruska	145.03	345	*e*PKP	PKPab	00 18 58.5	+0.6
VRI	Vrincioaia	145.04	333	⇓P	PKPdf	00 18 56.7	-1.0
TPGR	Topolog	145.04	330	⇓P	PKPab	00 18 58.6	+0.5
TANN	Tannenbergstha	145.06	352	*e*PKPbc	PKPdf	00 18 57.5	-0.1
	baz=10,slow=3.0						
PLOR	Plostina	145.08	333	⇑P	PKPab	00 18 58.4	+0.2
PRU	Pruhonice	145.14	349	*e*PKP	PKPab	00 18 58.3	+0.1
GOPC	GO Pecny, Ondr	145.17	349	*e*PKP	PKPab	00 18 58.5	+0.1
UCC	Uccle	145.19	1	PKPdf	PKPdf	00 18 57.4	-0.4
UCC	Uccle	145.19	1	*d*PKP	PKPdf	00 18 57.9	+0.2
BEBN	Eben Emael	145.19	359	*d*PKP	PKPab	00 18 58.7	+0.3
NKC	Novy Kostel	145.24	352	*e*PKP	PKPdf	00 18 57.8	-0.1
OZUR		145.25	334	⇓P	PKPab	00 18 59.3	+0.5
BOSR	Bodos	145.32	334	⇑P	PKPdf	00 18 56.7	-1.5
TIRR	Tirgusor	145.34	330	PKPdf	PKPdf	00 18 58.0	-0.2
VRAC	Vranov	145.38	347	*e*PKP	PKPab	00 18 59.7	+0.5
VRAC	Vranov	145.38	347	⇓P	PKPab	00 18 59.3	+0.2
MEM	Membach	145.38	359	*d*PKP	PKPbc	00 18 58.5	-0.1
HARR	Harsova	145.40	331	⇓P	PKPdf	00 18 58.2	-0.1
BTNL	Ternell	145.40	359	*d*PKP	PKPbc	00 18 58.9	+0.2
BSTI	Sart Tilman	145.41	359	*d*PKP	PKPbc	00 18 58.7	+0.1
TLBR	Topalu	145.45	330	⇓P	PKPbc	00 18 58.9	-0.1
DOPR	Dopca	145.52	335	⇓P	PKPab	00 19 00.2	+0.3
MANZ	Manzenberg	145.53	352	*e*PKPbc	PKPbc	00 18 59.0	-0.1
	baz=10,slow=3.0						
MANZ				*e*pPKPbc	pPKPdf	00 20 15.6	+7.5
	baz=7.1,slow=3.4						
JAVC	Velka Javorina	145.54	345	*e*PKP	PKPab	00 19 01.3	+1.4
BR131	Keskin Array S	145.57	319	PKPdf	PKPdf	00 18 58.7	-0.3
BRTR	Keskin Array B	145.57	319	PKPdf	PKPdf	00 18 58.4	-0.6
BRTR	Keskin Array B	145.57	319	PKPbc	PKPbc	00 18 59.9	+0.1
	comp=Z,7.1nm,0.9s,baz=113,slow=2.0,SNR=37						
BCLA	Clavier	145.57	360	*d*PKP	PKPab	00 18 59.8	0.0
KRUC	Moravsky	145.65	347	*e*PKP	PKPbc	00 18 59.3	-0.2
TNS	Taunus Mts	145.66	356	*e*PKPbc	PKPab	00 19 00.6	+0.3
	baz=10,slow=3.0						
TNS				*e*pPKPbc	pPKPdf	00 20 15.7	+7.3
	baz=7.1,slow=3.4						
MLR	Muntele Rosu	145.67	334	⇑P	PKPab	00 19 00.5	-0.1
BMRD	Maredsous	145.69	0	*d*PKP	PKPbc	00 18 59.7	+0.2
ROTZ	Rotzenmuhle	145.73	352	*e*PKPbc	PKPbc	00 18 59.6	-0.1
	baz=10,slow=3.0						
ROTZ				*e*pPKPbc	pPKPdf	00 20 16.2	+7.8
	baz=7.1,slow=3.4						
KIRS	Kirsehir-Merke	145.73	318	⇑P	PKPab	00 19 00.6	-0.4
DOU	Dourbes	145.90	0	*d*PKP	PKPbc	00 19 00.1	0.0
GRF	Grafenberg Arr	145.93	353	*e*PKPbc	PKPbc	00 19 00.8	+0.5
	baz=10,slow=3.0						
GRFO	Grafenberg	145.93	353	PKPdf	PKPdf	00 18 59.3	+0.2
ANTO	Ankara	146.01	320	PKPbc	PKPbc	00 19 00.8	-0.2
VOIR		146.09	334	⇓P	PKPab	00 19 02.8	+0.6
KHC	Kasperske Hory	146.13	350	*e*PKP	PKPdf	00 19 00.2	+0.7
WET	Wettzell	146.24	351	*e*PKPbc	PKPab	00 19 02.3	-0.3
	baz=10,slow=3.0						
ARR	Arges	146.32	335	⇑P	PKPab	00 19 03.4	+0.4
WLF	Walferdange	146.32	359	*d*PKP	PKPbc	00 19 01.9	+0.5
WLF	Walferdange	146.32	359	*e*PKPbc	PKPbc	00 19 02.1	+0.7
	baz=10,slow=3.0						
WLF				*e*pPKPbc	pPKPab	00 20 17.8	+7.6
	baz=7.1,slow=3.4						
GEC2	GERESS Array S	146.39	350	*e*PKPbc	PKPbc	00 19 01.9	+0.1
	baz=10,slow=3.0						
GERES	GERESS Array B	146.39	350	PKPbc	PKPdf	00 19 00.6	+0.6
GERES	GERESS Array B	146.39	350	PKPbc	PKPbc	00 19 01.2	-0.6
	comp=Z,2.9nm,0.9s,baz=355,slow=1.5,SNR=21						
CONA	Conrad Observa	146.84	347	*i* PKP	PKPbc	00 19 03.7	+0.6
	comp=Z,13nm,1.1s,SNR=8.7						
RONA	Rosalia, Austr	146.96	346	*i* PKP	PKPbc	00 19 04.3	+0.9
	comp=Z,8.8nm,1.2s,SNR=8.3						
SURR	Surduc	146.97	338	⇑P	PKPbc	00 19 04.0	+0.7
GZR	Gura Zlata	147.03	337	⇓P	PKPbc	00 19 03.7	+0.1
MOA	Molln	147.25	348	*e*PKP	PKPbc	00 19 04.5	+0.4
	comp=Z,5.2nm,0.9s						
BZS	Buzias	147.27	338	⇑P	PKPbc	00 19 03.4	-0.8
FUR	Furstenfeldbru	147.42	352	*e*PKPbc	PKPbc	00 19 04.9	+0.4
	baz=10,slow=3.0						
BIOA	Bad Ischl, Aus	147.51	349	*i* PKP	PKPbc	00 19 05.3	+0.5
	comp=Z,4.2nm,1.0s						
BFO	Black Forest	147.55	356	*e*PKPbc	PKPbc	00 19 05.0	+0.1
	baz=10,slow=3.0						
ARSA	Arzberg	147.56	347	*e*PKP	PKPbc	00 19 04.3	-0.6
	comp=Z,5.6nm,1.2s						
RJOB	Jochberg	147.62	350	*e*PKPbc	PKPbc	00 19 05.4	+0.2
	baz=10,slow=3.0						
MMAI	Mount Meron Ar	147.69	307	PKPbc	PKPbc	00 19 05.8	0.0
	comp=Z,2.0nm,0.5s,baz=79,slow=3.7,SNR=8.7						
MORH	Mrgy, Hungar	147.71	342	⇑P	PKPbc	00 19 05.7	+0.4
LESA	Schwarzleotal	147.94	350	*i* PKP	PKPbc	00 19 05.0	-1.0
	comp=Z,3.3nm,0.9s						
UBR	Ueberruh	148.04	354	*e*PKPbc	PKPbc	00 19 05.8	-0.5
	baz=10,slow=3.0						
RETA	Reutte	148.15	353	*i* PKiKP	PKPbc	00 19 07.2	+0.6
	comp=Z,5.0nm,1.1s						
WATA	Walderalm	148.19	352	*i* PKP	PKPbc	00 19 05.3	-1.5
	comp=Z,2.7nm,0.8s						
SOKA	Soboth	148.21	347	*i* PKP	PKPbc	00 19 06.5	-0.2
	comp=Z,4.1nm,1.1s,SNR=5.2						
MOTA	Moosalm	148.25	352	*i* PKP	PKPbc	00 19 07.0	0.0
	comp=Z,8.9nm,1.1s						
WTTA	Wattenberg	148.25	351	*i* PKP	PKPbc	00 19 07.3	+0.3
	comp=Z,3.5nm,0.6s						
FRGS	Fruska Gora	148.29	340	*e*P	PKiKP	00 19 08.0	-0.4
SQTA	Sankt Quirin	148.36	352	*i* PKP	PKPbc	00 19 07.4	+0.2
	comp=Z,1.6nm,0.5s						
DAVA	Damuels	148.45	354	*i* PKP	PKPbc	00 19 07.1	-0.3
	comp=Z,5.2nm,0.9s						
OBKA	Obir	148.47	347	*i* PKiKP	PKiKP	00 19 08.7	-0.1
	comp=Z,5.3nm,1.2s						
MYKA	Terra Mystica	148.54	349	*i* PKP	PKPbc	00 19 07.3	-0.2
	comp=Z,3.7nm,0.9s						
FETA	Feichten	148.62	352	*i* PKP	PKPbc	00 19 08.0	+0.1
	comp=Z,6.7nm,1.2s						
ABTA	Abfaltersbach	148.62	350	*i* PKP	PKPbc	00 19 07.4	-0.4
	comp=Z,6.9nm,0.8s						
TEKS	Tekeris	148.92	340	*e*P	PKPbc	00 19 08.7	+0.2
CEY	Cerknica	149.23	347	*e*P	PKPbc	00 19 08.6	-0.7
BOJS	Bojanci	149.27	346	*e*P	PKiKP	00 19 10.2	-0.1
A051A	Mrakovica	149.30	343	*e*P	PKPbc	00 19 09.3	-0.2
BLY	Banja Luka	149.47	343	*e*P	PKPbc	00 19 10.2	+0.4
BBLS	Lazi&#263i	149.57	339	*e*P	PKPbc	00 19 10.4	+0.2
EZN	Ezine	149.78	326	⇓P	PKPbc	00 19 10.9	+0.2
RUDO	Rudo	149.80	339	*e*P	PKPbc	00 19 09.7	-1.0
A050A	Klekovaca	149.89	343	*e*P	PKPdf	00 19 07.4	+1.6
STON	Ston	151.02	341	*e*P	PKPbc	00 19 11.1	-2.4
ESDC	Sonseca Array	155.05	17	PKPbc	PKPbc	00 19 22.1	
	comp=Z,0.3nm,0.7s,baz=313,slow=3.0,SNR=4.1						
ESDC				PKPab	PKPab	00 19 39.0	-0.3
	comp=Z,2.5nm,1.0s,baz=338,slow=3.7,SNR=13						
TORD	Torodi Ar. Bea	175.77	130	PKPab	PKPab	00 21 10.7	-0.3
	comp=Z,195nm,0.5s,baz=252,slow=3.0,SNR=2.1						

IDC ***20*** *00:04:25.3±0.8, 33°.34S×178°.67W, h0^{km}, mb4.3/4, mbtmp4.3/4, Error ellipse: s-maj=36.4km s-min=28.7km az=56.0*

WEL ***20*** *00:04:29.3±1.0, 34°S±8°×17°8W±1°2, h12^{km}, M4.7/14, mB5.2/9, ML4.9/15, MLv4.8/14, Mw(mB)4.6/9, Error ellipse: s-maj=17.3km s-min=6.6km az=117.5, confirmed*

ISC 20 00:04:27.5±0.8**, 33°.81S**±0°.08×**178°.5W**±0°.1**, h10^{km}, n66,** σ1^{s}**72**/86**, mb4.4**/4**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	4.74	212	P	Pn	00 05 40.3	+1.2
WMGZ				S	Sn	00 06 34.7	+0.6
PKGZ	Pakihiroa	4.93	214	P	Pn	00 05 41.4	-0.3
PKGZ				S	Sn	00 06 39.3	+0.5
HAZ	Te Kaha	4.99	217	P	Pn	00 05 43.7	+1.3
HAZ				S	Sn	00 06 41.7	+1.6
PUZ	Puketiti	5.02	211	P	Pn	00 05 42.0	-1.0
PUZ				S	Sn	00 06 41.8	+0.7
RUGZ	Raukumara Rang	5.20	216	P	Pn	00 05 45.1	-0.5
RUGZ				S	Sn	00 06 47.3	+1.6
TWGZ	Tauwhareparae	5.23	213	P	Pn	00 05 47.1	+1.2
TWGZ				S	Sn	00 06 45.7	-0.6
CNGZ	Carnagh Statio	5.39	209	P	Pn	00 05 47.4	-0.5
WHRZ	Whale Island	5.49	221	P	Pn	00 05 51.3	+1.9
WHRZ				S	Sn	00 06 53.3	+0.8
TKGZ	Te Karaka	5.50	212	P	Pn	00 05 50.4	+0.8
TKGZ				S	Sn	00 06 53.2	+0.3
MWZ	Matawai	5.57	215	P	Pn	00 05 51.0	+0.5
MWZ				S	Sn	00 06 54.3	-0.2
URZ	Urewera	5.71	218	Pn	Pn	00 05 50.9	-1.5
	18nm,0.3s,baz=264,slow=2.5,SNR=32						
URZ				Sn	Sn	00 06 56.8	-1.3
	14nm,0.3s,baz=287,slow=23,SNR=7.6						
URZ	Urewera	5.71	218	P	Pn	00 05 52.5	+0.1
URZ				S	Sn	00 06 56.3	-1.8
RAGZ	Rawiri	5.75	214	P	Pn	00 05 53.7	+0.7
RIGZ	Rimuhau	5.76	211	P	Pn	00 05 53.7	+0.5
RIGZ				S	Sn	00 06 59.9	+0.5
PRGZ	Paritu Road	5.90	209	P	Pn	00 05 55.4	+0.4
PRGZ				S	Sn	00 07 02.3	-0.4
SNGZ	Shannon Statio	6.01	213	P	Pn	00 05 56.8	+0.2
SNGZ				S	Sn	00 07 07.6	+2.1
RTZ	Ruatahuna	6.05	216	P	Pn	00 05 57.2	0.0
MUGZ	Murupara	6.05	218	P	Pn	00 05 57.1	0.0
MUGZ				S	Sn	00 07 05.3	-1.2
MHGZ	Mahia Peninsul	6.08	208	P	Pn	00 05 56.1	-1.4
MHGZ				S	Sn	00 07 06.5	-0.8
MKAZ	Moumakai	6.16	236	P	Pn	00 06 00.6	+2.0
RAHZ	Arahi	6.24	214	P	Pn	00 06 00.2	+0.6
RAHZ				S	Sn	00 07 11.8	+0.8
WCZ	Waipu Caves	6.29	248	P	Pn	00 06 02.8	+2.4
MTHZ	Maungataniwha	6.30	216	P	Pn	00 06 00.4	-0.2
MTHZ				S	Sn	00 07 14.2	+1.5
MRHZ	Matea Rd	6.50	218	P	Pn	00 06 02.8	-0.6
MRHZ				S	Sn	00 07 14.8	-2.8
NMHZ	Naumai	6.51	215	P	Pn	00 06 03.5	0.0
NMHZ				S	Sn	00 07 17.2	-0.7
ARHZ	Aropaoanui	6.56	213	P	Pn	00 06 04.5	+0.4
OUZ	Omahuta	6.72	256	P	Pn	00 06 07.4	+1.2
BKZ	Black Stump Fm	6.72	216	P	Pn	00 06 05.3	-1.0
MCHZ	McNeill Hill	6.84	213	P	Pn	00 06 07.9	-0.1
CKHZ	Cape Kidnapper	6.85	210	P	Pn	00 06 07.1	-0.9
RATZ	Rangitukua	6.87	221	P	Pn	00 06 09.6	+1.3
KWHZ	Kaweka Forest	6.96	215	P	Pn	00 06 08.8	-0.8
KATZ	Kakaramea	6.99	221	P	Pn	00 06 12.8	+2.7
KAHZ	Kahuranaki	7.05	211	P	Pn	00 06 09.8	-1.0
TMVZ	Te Maari	7.08	220	P	Pn	00 06 10.5	-0.9
NTVZ	North Tongarir	7.09	220	P	Pn	00 06 09.9	-1.5
ETVZ	East Tongariro	7.10	220	P	Pn	00 06 10.8	-0.7
OTVZ	Oturere	7.14	220	P	Pn	00 06 11.4	-0.8
KRHZ	Kereru	7.15	214	P	Pn	00 06 10.8	-1.5
SNVZ	South Ngauruho	7.17	220	P	Pn	00 06 12.0	-0.6
NGZ	Ngauruhoe	7.18	220	P	Pn	00 06 13.5	+0.7
FWVZ	Far West T-bar	7.27	220	P	Pn	00 06 13.9	-0.1
WHVZ	Whangaehu Hut	7.27	220	P	Pn	00 06 12.7	-1.3
MAVZ	Matarangi	7.27	220	P	Pn	00 06 14.5	+0.4
MOVZ	Moawhango	7.27	218	P	Pn	00 06 13.2	-0.7
WNVZ	Wahianoa	7.30	219	P	Pn	00 06 13.4	-0.9
RPZ	Rata Peaks	12.83	217	Pn	Pn	00 07 26.9	-3.0
	1.5nm,0.3s,baz=30,slow=18,SNR=1.9						

ASAR	Alice Springs	42.66	271	P	P	00 12 22.4	-2.2
	5.8nm,0.8s,baz=112,slow=7.4,SNR=26						
	5.8nm,0.8s						
WRA	Warramunga Arr	43.96	276	P	P	00 12 32.6	-2.5
	4.1nm,0.5s,baz=119,slow=7.5,SNR=18						
	4.1nm,0.5s						
QSPA	South Pole Qui	56.31	180	P	P	00 14 10.5	+2.2
	2.7nm,0.7s,baz=118,slow=2.2,SNR=8.9						
	2.7nm,0.7s						
SNAA	Sanae	74.76	179	P	P	00 16 10.4	+3.0
	1.3nm,0.9s,baz=199,slow=8.6,SNR=3.7						
	1.3nm,0.9s						
MKAR	Makanchi Array	119.64	309	PKP	PKPdf	00 23 16.4	-1.0
	0.6nm,0.9s,baz=210,slow=4.2,SNR=4.3						
ZALV	Zalesovo Beam	120.30	317	PKP	PKPdf	00 23 16.6	-1.8
	0.4nm,0.4s,baz=116,slow=6.6,SNR=1.6						
KURBB	Kurchatov Arra	123.13	312	PKP	PKPdf	00 23 22.8	-1.1
	0.5nm,0.5s,baz=117,slow=2.1,SNR=3.3						
ARCES	ARCESS Array B	141.82	347	PKhKP	PKPpre	00 23 53.3	
	1.2nm,0.8s,baz=39,slow=6.2,SNR=3.6						
KBZ	Khabaz	146.58	300	PKPbc	PKPdf	00 24 07.4	-0.1
	2.2nm,0.8s,baz=144,slow=2.7,SNR=5.3						
FINES	FINESS Array B	148.18	338	PKPbc	PKPdf	00 24 11.0	+1.5
	3.5nm,0.6s,baz=44,slow=3.8,SNR=36						
MMAI	Mount Meron Ar	151.81	278	PKPbc	PKPdf	00 24 21.0	+4.7
	5.0nm,0.7s,baz=132,slow=1.2,SNR=8.6						
NB2	NORSAR Subarra	152.05	350	PKP	PKPdf	00 24 20.3	+4.5
	comp=Z,3.1nm,0.6s,baz=41,slow=2.7						
NOA	NORSAR Array B	152.05	350	PKPbc	PKPdf	00 24 19.9	+4.1
	comp=Z,0.7nm,0.6s,baz=14,slow=4.1,SNR=7.7						
HFS	Hagfors	152.49	347	PKPbc	PKPdf	00 24 21.3	+4.9
	comp=Z,2.0nm,0.8s,baz=197,slow=4.6,SNR=4.1						
NACGM	Naroch	152.52	328	*e*PKiKP	PKPbc	00 24 22.3	-1.2
	comp=Z,6.0nm,0.8s,baz=50						
AKASG	Malin Array Be	153.69	318	PKPbc	PKPbc	00 24 25.1	-1.1
	comp=Z,1.1nm,0.7s,baz=65,slow=2.1,SNR=4.8						
BRTR	Keskin Array B	153.72	292	PKPbc	PKPbc	00 24 25.0	-1.9
	comp=Z,1.1nm,0.7s,baz=144,slow=4.6,SNR=6.1						
BRTR				PKPab	PKPab	00 24 36.3	-3.4
	comp=Z,1.1nm,0.7s,baz=124,slow=3.6,SNR=6.0						
KOLS	Kolonicke sedl	158.42	321	*e*PKP	PKPdf	00 24 23.3	-1.4
LANS	Liptovska Anna	159.71	324	*e*PKP	PKPab	00 25 00.6	-4.4

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*IDC **20** 00:04:57.6±0.9, 29°.83S×178°.10W, h0^{km}, mb4.6/5, mbtmp4.6/5, Error ellipse: s-maj=32.4km s-min=28.5km az=37.0*

ISC 20 00:05:04.5±1.0, 29°.8S±0°.2×178°.2W±0°.2, h50^{km}, n17, σ0^s.84/12, mb4.6/5, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	34.49	256	P	P	00 11 48.2	+0.4
	20nm,0.8s,baz=97,slow=9.7,SNR=24						
	20nm,0.8s						
ASAR	Alice Springs	43.01	266	P	P	00 12 58.2	-1.1
	1.7nm,0.4s,baz=105,slow=7.4,SNR=6.7						
	1.7nm,0.4s						
WRA	Warramunga Arr	43.95	272	P	P	00 13 07.2	+0.3
	3.9nm,0.3s,baz=110,slow=8.1,SNR=19						
	3.9nm,0.3s						
QSPA	South Pole Qui	60.31	180	P	P	00 15 07.7	-0.2
	7.9nm,0.9s,baz=216,slow=1.6,SNR=9.1						
	7.9nm,0.9s						
SNAA	Sanae	78.76	178	P	P	00 17 01.5	+0.1
	2.6nm,0.8s,baz=192,slow=9.3,SNR=7.7						
	2.6nm,0.8s						
KURBB	Kurchatov Arra	120.58	314	PKP	PKPdf	00 23 49.6	-0.6
	0.3nm,0.3s,baz=111,slow=2.0,SNR=4.1						
H10S3	ASCENSION HYDR	138.33	155	T	T	02 58 52.5	
	baz=15,slow=74,SNR=47						
H10S2	ASCENSION HYDR	138.33	155	T	T	02 58 52.4	
	baz=205,slow=74,SNR=39						
H10N3	ASCENSION HYDR	139.41	155	T	T	03 00 11.9	
	baz=203,slow=75,SNR=78						
H10N1	ASCENSION HYDR	139.41	155	T	T	03 00 09.3	
	baz=203,slow=75,SNR=58						
H10N2	ASCENSION HYDR	139.43	155	T	T	03 00 13.3	
	baz=203,slow=75,SNR=70						
FINES	FINESS Array B	144.53	340	PKP	PKPdf	00 24 34.6	0.0
	5.0nm,0.5s,baz=54,slow=3.6,SNR=15						
NOA	NORSAR Array B	148.13	351	PKPbc	PKPbc	00 24 44.3	+0.2
	0.4nm,0.6s,baz=48,slow=2.1,SNR=4.4						
HFS	Hagfors	148.63	349	PKPbc	PKiKP	00 24 46.1	-0.7
	2.1nm,0.7s,baz=116,slow=3.4,SNR=4.7						
AKASG	Malin Array Be	150.74	323	PKPbc	PKPbc	00 24 50.6	-0.2
	2.0nm,0.6s,baz=53,slow=2.3,SNR=8.2						
MMAI	Mount Meron Ar	151.25	285	PKPbc	PKiKP	00 24 55.1	+1.9
	2.1nm,0.5s,baz=81,slow=5.2,SNR=5.7						
BRTR	Keskin Array B	152.19	299	PKPbc	PKiKP	00 24 55.3	+0.3
	1.0nm,0.5s,baz=149,slow=4.2,SNR=6.7						

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*IDC **20** 00:23:57.6±1.0, 12°.76S×166°.26E, h0^{km}, mb3.9/10, mbtmp3.9/11, ML3.1/1, MS3.8/2, Error ellipse: s-maj=38.5km s-min=22.3km az=93.0*

*NOU **20** 00:24:02.2, 12°.68S×165°.95E, h0^{km}, mb5.1/8, Santa Cruz Islands*

ISC 20 00:24:04.3±0.7, 12°.72S±0°.08×166°.1E±0°.1, h40^{km}, n20, σ1^s.57/19, mb3.8/10, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUES	Luesalemba Tem	2.05	356	P	Pn	00 24 37.2	+0.9
SANVU	Saraoutou	2.93	158	P	Pn	00 24 50.8	+2.4
HURO	Huro Makira	4.66	298	P	Pn	00 25 11.9	-0.3
HURO	Huro Makira	4.66	298	S	Sn	00 26 05.1	+0.1
DVP	Devils Point	5.38	158	P	Pn	00 25 25.6	+3.5
HNR	Honiara	6.84	298	LR	LR	00 28 21.4	
	comp=Z,417nm,20.1s,baz=142,slow=38						
SAVO	Savo Central	7.09	299	P	Pn	00 25 47.1	+1.4
DZM	Mont Dzumac	9.31	178	Pn	Pn	00 26 13.7	-2.5
	0.2nm,0.3s,baz=103,slow=7.4,SNR=2.0						
	6.5nm,1.1s						
WRA	Warramunga Arr	31.25	253	P	P	00 30 20.5	0.0
	0.6nm,1.0s,baz=74,slow=9.0,SNR=2.5						
	0.6nm,1.0s						
ASAR	Alice Springs	32.36	246	P	P	00 30 29.7	-0.6
	0.9nm,1.0s,baz=74,slow=9.2,SNR=4.9						
ASAR				LR	LR	00 42 15.0	
	comp=Z,240nm,18.5s,baz=106,slow=34						
	0.9nm,1.0s						
MJAR	Matsushiro Arr	55.59	333	P	P	00 33 35.4	-0.6
	1.2nm,0.3s,baz=170,slow=9.5,SNR=4.4						
	1.2nm,0.3s						
KSRS	Korea Array	61.43	326	P	P	00 34 18.8	+2.1
	0.3nm,0.3s,baz=142,slow=6.3,SNR=4.9						
	0.3nm,0.3s						
KLR	Kul'dur	68.71	337	P	P	00 35 04.4	+0.7
	1.4nm,0.6s,baz=181,slow=2.0,SNR=4.9						
	1.4nm,0.6s						
QSPA	South Pole Qui	77.30	180	P	P	00 35 54.2	-0.3
	3.0nm,0.9s,baz=24,slow=3.2,SNR=7.3						
	3.0nm,0.9s						
SONM	Songino Array	80.19	324	P	P	00 36 11.7	+1.0
	0.5nm,0.5s,baz=134,slow=4.3,SNR=3.6						
	0.5nm,0.5s						
ILAR	Eielson Array	84.99	18	P	P	00 36 33.5	-1.6
	0.3nm,0.8s,baz=230,slow=6.1,SNR=4.2						
	0.3nm,0.8s						
MKAR	Makanchi Array	94.95	317	P	P	00 37 21.4	-1.2
	0.1nm,0.3s,baz=90,slow=6.1,SNR=4.5						
	0.1nm,0.3s						
ZALV	Zalesovo Beam	95.09	324	P	P	00 37 22.4	-0.6
	0.4nm,0.3s,baz=106,slow=16,SNR=3.9						
	0.4nm,0.3s						
KEST	Kesra	148.92	321	PKPbc	PKPbc	00 43 48.2	-0.2
	4.2nm,0.8s,baz=316,slow=5.4,SNR=6.7						
ESDC	Sonseca Array	151.74	344	PKPbc	PKPbc	00 43 54.0	-1.1
	0.6nm,0.8s,baz=32,slow=1.8,SNR=6.5						

IDC 20 00:49:42.1±9.2, 30°.63S×177°.80W, h0^{km}, mb3.6/2, mbtmp3.6/2, MS3.5/2, Error ellipse: s-maj=396.7km s-min=62.3km az=156.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPT	Papeete	28.76	70	LR	LR	01 05 39.2	
	comp=Z,25nm,19.4s,baz=352,slow=33						
ASAR	Alice Springs	43.27	267	P	P	00 57 45.4	-0.2
	0.4nm,0.6s,baz=113,slow=8.2,SNR=2.1						
	0.4nm,0.6s						
WRA	Warramunga Arr	44.28	272	P	P	00 57 53.8	0.0
	0.5nm,0.4s,baz=113,slow=8.1,SNR=5.3						
	0.5nm,0.4s						
JOW	Kunigami	76.94	312	LR	LR	01 33 16.7	
	comp=Z,120nm,19.5s,baz=36,slow=34						
FINES	FINESS Array B	145.42	340	PKPbc	PKPbc	01 09 20.4	-0.9
	0.4nm,0.5s,baz=40,slow=3.2,SNR=4.4						

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*NOU **20** 00:59:27.5, 18°.47S×177°.81W, h564^{km}, mb4.1/5, Fiji Islands Region*

*IDC **20** 00:59:28.2±4.1, 18°.56S×178°.07W, h535^{km}±46^{km}, mb3.6/8, mbtmp4.5/9, Error ellipse: s-maj=25.7km s-min=19.0km az=1.0*

*NEIC **20** 00:59:28.9±1.9, 18°.4S±0°.1×178°.1W±0°.1, h534^{km}±8^{km}, mb4.5/25, Error ellipse: s-maj=21.0km s-min=16.2km az=152.0*

ISC 20 00:59:29.5±0.5, 18°.4S±0°.1×178°.11W±0°.09, h557^{km}, n59, σ1^s.20/59, mb4.4/21, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	0.69	282	P	P	01 00 35.3	-0.5
DGTI	Dogotuki	2.92	315	P	P	01 00 44.3	-0.4
MSVF	Nonsavu	3.71	279	P	P	01 00 50.0	+0.1
MSVF	Nonsavu	3.71	279	P	P	01 00 50.7	+0.8
FUTU	Fugatoga	4.05	360	P	P	01 00 51.7	-0.6
FUTU	Fugatoga	4.05	360	P	P	01 00 52.0	-0.4
AFI	Afiamalu	7.53	55	P	P	01 01 19.5	-3.5
AFI	Afiamalu	7.53	55	P	P	01 01 19.6	-3.4
NIUE	Niue	7.78	96	P	P	01 01 23.4	-1.9
FUNA	Funafuti	10.14	345	P	P	01 01 47.6	-1.5
PINNC	Pines Island,	14.18	250	P	P	01 02 29.3	-1.1
DZM	Mont Dzumac	14.96	253		P	01 02 36.8	-1.7
DZM	Mont Dzumac	14.96	253	P	P	01 02 36.2	-2.3
	14nm,0.7s,baz=80,slow=24,SNR=13						
URZ	Urewera	20.24	191	P	P	01 03 24.3	-2.9
	5.7nm,0.3s,baz=257,slow=3.0,SNR=11						
	5.7nm,0.3s						
EIDS	Eidsvold	29.38	251		P	01 04 48.2	-0.1
EIDS				IAmb	IAmb	01 04 49.2	
	comp=Z,17nm,0.8s						
ARMA	Armidale	29.96	241	P	P	01 04 53.9	+0.6
ARMA				IAmb	IAmb	01 05 05.0	
	comp=Z,25nm,1.4s						
CAN	Canberra	33.65	233	P	P	01 05 25.1	+0.5
CAN				IAmb	IAmb	01 05 51.8	
	comp=Z,26nm,1.3s						
CTAO	Charters Tower	33.66	261		P	01 05 24.7	-0.1
CTAO				IAmb	IAmb	01 05 26.0	
	comp=Z,20nm,0.8s						
TOO	Toolangi	37.10	231		P	01 05 54.0	+0.8
TOO				IAmb	IAmb	01 05 54.9	
	comp=Z,6.9nm,0.8s						
COEN	Coen	37.40	271	P	P	01 05 56.0	+0.1
STKA	Stephens Creek	38.66	242		P	01 06 06.6	+0.7
STKA	Stephens Creek	38.66	242	P	P	01 06 06.5	+0.6
	comp=Z,19nm,0.7s,baz=93,slow=9.5,SNR=28						
	comp=Z,19nm,0.7s						
BBOO	Buckleboo	43.43	241	P	P	01 06 43.8	+0.1
BBOO				IAmb	IAmb	01 06 44.6	
	comp=Z,14nm,0.7s						
WR8	Warramunga Arr	44.68	260		P	01 06 52.9	-0.7
WR8				IAmb	IAmb	01 06 55.8	
	comp=Z,8.6nm,0.8s						
WRA	Warramunga Arr	44.83	260		P	01 06 53.9	-0.8
WRA	Warramunga Arr	44.83	260	P	P	01 06 54.6	-0.2
	comp=Z,9.5nm,0.4s,baz=97,slow=6.8,SNR=152						
	comp=Z,9.5nm,0.4s						
AS31	Alice Springs	44.94	255		P	01 06 55.4	-0.1
ASAR	Alice Springs	44.94	255		P	01 06 55.6	+0.1
ASAR	Alice Springs	44.94	255	P	P	01 06 55.9	+0.3
	comp=Z,71nm,0.6s,baz=88,slow=8.6,SNR=614						
FORT	Forrest	50.07	245	P	P	01 07 32.9	-0.8
FORT				IAmb	IAmb	01 07 34.2	
	comp=Z,17nm,0.7s						
KNRA	Kununurra	50.73	265	P	P	01 07 38.4	-0.3
KNRA				IAmb	IAmb	01 07 39.8	
	comp=Z,20nm,0.7s						
FITZ	Fitzroy Crossi	53.24	261	P	P	01 07 56.4	-0.4
SOEI	Soe	56.36	270	P	P	01 08 17.2	-1.6
PSA00	Pilbara Seismi	58.07	256	P	P	01 08 30.0	-0.2
PSA00				IAmb	IAmb	01 08 31.0	
	comp=Z,12nm,0.7s						
MBWA	Marble Bar	58.24	256	P	P	01 08 30.9	-0.5
MBWA				IAmb	IAmb	01 08 31.8	
	comp=Z,8.0nm,0.7s						
VNDA	Vanda	60.00	185	P	P	01 08 44.2	+2.0
MORW	Morawa	60.56	247	P	P	01 08 46.3	-0.4
MORW				IAmb	IAmb	01 08 51.1	
	comp=Z,11nm,1.2s						
GIRL	Giralia	63.04	253	P	P	01 09 04.1	+1.2
TOLI2	Tolitoli	63.09	281	P	P	01 09 03.2	-0.2
TOLI2				IAmb	IAmb	01 09 06.3	
	comp=Z,5.4nm,0.7s						
UGM	Wanagama	69.92	268	P	P	01 09 45.6	0.0
QSPA	South Pole Qui	71.67	180	P	P	01 09 55.8	+0.6
QSPA	South Pole Qui	71.67	180	P	P	01 09 55.4	+0.2
	comp=Z,2.2nm,0.9s,baz=133,slow=0.0,SNR=7.0						
	comp=Z,2.2nm,0.9s						
NVAR	Mina Array Bea	79.57	44	P	P	01 10 40.5	+1.1
	comp=Z,1.2nm,0.7s,baz=225,slow=8.4,SNR=8.7						
	comp=Z,1.2nm,0.7s						
TX31	Lajitas Ar. Si	86.00	57	P	P	01 11 13.2	+1.5
TXAR	Lajitas Array	86.00	57	P	P	01 11 14.4	+2.6
	comp=Z,1.6nm,0.8s,baz=218,slow=6.0,SNR=22						
	comp=Z,1.6nm,0.8s						
IMAR	Indian Mountai	86.10	10	P	P	01 11 11.7	+0.5
PDAR	Pinedale Array	87.50	43	P	P	01 11 19.8	+1.1
	comp=Z,0.7nm,0.7s,baz=227,slow=3.7,SNR=5.8						
	comp=Z,0.7nm,0.7s						
CMAR	Chiang Mai Arr	89.31	290	P	P	01 11 28.9	+1.5
	comp=Z,1.1nm,0.4s,baz=101,slow=2.7,SNR=7.3						
	comp=Z,1.1nm,0.4s						
KURBB	Kurchatov Arra	112.42	318	PKiKP	PKiKP	01 17 01.9	-0.5
	comp=Z,0.1nm,0.4s,baz=89,slow=2.1,SNR=5.2						
ARCES	ARCESS Array B	126.83	350	PKP	PKiKP	01 17 29.9	-0.3
	comp=Z,0.6nm,0.7s,baz=17,slow=1.3,SNR=4.9						
FINES	FINESS Array B	133.72	344	PKPdf	PKiKP	01 17 44.1	0.0
BUR08	Bucovina Ar. S	145.15	332	PKPbc	PKPab	01 18 06.6	+0.6
BURAR	Bucovina Array	145.17	332	PKPbc	PKPab	01 18 06.1	0.0
BRTR	Keskin Array B	145.32	315	PKPbc	PKPab	01 18 06.3	-0.8
BRTR	Keskin Array B	145.32	315	PKPbc	PKPab	01 18 06.1	-0.9
	comp=Z,1.0nm,0.7s,baz=147,slow=6.3,SNR=7.6						
CLL	Collm	145.99	348	*i* PKPbc	PKiKP	01 18 10.0	+0.4
	comp=Z,4.0nm,0.6s						
MMAI	Mount Meron Ar	146.64	302	PKPbc	PKPbc	01 18 10.2	+0.6
	comp=Z,1.5nm,0.5s,baz=69,slow=4.7,SNR=8.3						
GERES	GERESS Array B	148.14	345	PKPbc	PKPbc	01 18 12.6	-0.4
	comp=Z,0.7nm,0.6s,baz=14,slow=2.8,SNR=7.6						
RDO	Rodhopi	149.59	323	PKPbc	PKiKP	01 18 16.7	-0.6

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*JMA **20** 01:12:38.8±0.3, 25°N±3°×122°.9E±0°.8, h134^{km}±3^{km}, MV2.8/13, NW OFF ISHIGAKIJIMA IS*

*TAP **20** 01:12:38.7, 24°.88N×122°.95E, h131^{km}, ML3.6, C*

ISC 20 01:12:39.6±1.7, 24°.79N±0°.06×122°.95E±0°.03, h128^{km}±9^{km}, n85, σ0^s.74/156, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.33	170	P	Pn	01 12 57.8	+0.1
YOJ	Yonaguni jima	0.33	170	⇑*i*P	Pn	01 12 57.8	+0.1
YOJ				*i* S	Sn	01 13 11.6	+0.3
JYNG	Yonagunijimaku	0.34	180	P	Pn	01 12 57.8	+0.1
JYNG				S	Sn	01 13 12.1	+0.8
EOS2	EOS2	0.75	240	P	Pn	01 13 00.2	+0.2
EOS2				S	Sn	01 13 16.6	+1.2
EOS3	EOS3	0.76	229	*e*P	Pn	01 13 00.6	+0.5
EOS3				*i* S	Sn	01 13 17.0	+1.5
IRIF	Iriomote-Funau	0.85	122	P	Pn	01 13 00.9	0.0
IRIF				*e*S	Sn	01 13 17.6	+0.5
EOS4	EOS4	0.88	221	P	Pn	01 13 01.1	+0.2
EOS4				S	Sn	01 13 17.8	+1.0
TWC	Suao	1.01	260	P	Pn	01 13 02.0	-0.4
TWC				S	Sn	01 13 18.1	-1.6
SXI1	Grass Mountain	1.02	287	*i* P	Pn	01 13 02.2	-0.4
SXI1				S	Sn	01 13 21.1	+1.2
ESAO	Su ao	1.02	258	*i* P	Pn	01 13 02.4	-0.2
ESAO				*i* S	Sn	01 13 19.2	-0.7
TIPB	Shuangxi	1.03	280	*i* P	Pn	01 13 02.5	-0.1
TIPB				*i* S	Sn	01 13 19.6	-0.6
HATJ	Hateruma jima	1.07	133	P	Pn	01 13 03.7	+0.6
HATJ				*e*S	Sn	01 13 21.6	+0.9
EWUT	Wuta	1.12	252	*e*P	Pn	01 13 03.6	+0.2
EWUT				*e*S	Sn	01 13 21.8	+0.3
JKRS	Kuro-shima	1.12	119	*e*P	Pn	01 13 04.0	+0.6
NDS	Dongshan	1.13	262	*e*P	Pn	01 13 02.3	-1.2
NDS				*e*S	Sn	01 13 20.2	-1.5
ENA	Nanau	1.15	252	*e*P	Pn	01 13 04.1	+0.3
ENA				S	Sn	01 13 22.9	+0.7
TWE	Neicheng	1.16	267	*e*P	Pn	01 13 03.4	-0.5
JIJ	Ishigaki jima	1.17	111	P	Pn	01 13 03.9	-0.1
JIJ				S	Sn	01 13 21.8	-0.8
EAHA	Aohua	1.19	247	P	Pn	01 13 03.8	-0.4
EAHA				*e*S	Sn	01 13 22.9	+0.1
FUSB	Fushanzhiwuyua	1.23	269	P	Pn	01 13 05.0	+0.3
FUSB				*e*S	Sn	01 13 22.9	-0.9
TWA	Mucha	1.25	279	*e*P	Pn	01 13 04.0	-0.8
TWA				*e*S	Sn	01 13 23.2	-0.9
JISG	Ishigakijimahi	1.26	99	P	Pn	01 13 04.6	-0.3
JISG				*e*S	Sn	01 13 23.4	-0.7
ENTT	Nioudou	1.26	263	*i* P	Pn	01 13 05.4	+0.5
ENTT				*e*S	Sn	01 13 24.0	-0.2
YM01	YM01	1.30	286	P	Pn	01 13 05.1	-0.3
YM01				*e*S	Sn	01 13 24.6	-0.3
TWY	Chenhua	1.31	292	P	Pn	01 13 05.3	-0.2
LATG	Datong	1.31	259	*i* P	Pn	01 13 05.8	+0.2
LATG				*i* S	Sn	01 13 25.7	+0.3
ZUZH	Zhuzihu	1.32	286	*e*S	Sn	01 13 25.7	+0.3
ETL	Fush Village	1.36	243	P	Pn	01 13 05.4	-0.6
ETL				S	Sn	01 13 26.0	-0.1
NACB	Ninganchiao	1.38	244	P	Pn	01 13 05.3	-0.9
NACB				*e*S	Sn	01 13 25.7	-0.7
TWD	Chiawan	1.42	240	P	Pn	01 13 06.2	-0.5
TWD				S	Sn	01 13 26.4	-0.9
YHNB	Yeheng	1.43	265	P	Pn	01 13 07.1	+0.2
YHNB				S	Sn	01 13 27.3	-0.3
NSK	Sanguang	1.45	266	P	Pn	01 13 07.0	-0.1
NSK				S	Sn	01 13 27.4	-0.5
ETLH	Xiulin Townshi	1.45	247	*i* P	Pn	01 13 06.8	-0.4
ETLH				*e*S	Sn	01 13 27.3	-0.8
HWA	Hwalien	1.47	237	*e*P	Pn	01 13 06.7	-0.5
NNSB	Datong	1.47	256	P	Pn	01 13 07.2	-0.1
NNSB				*e*S	Sn	01 13 27.7	-0.7
TEYL	Yanliau Villag	1.54	233	*e*P	Pn	01 13 07.1	-0.8
TEYL				*e*S	Sn	01 13 29.0	-0.5
ETM	Tongmen	1.56	238	P	Pn	01 13 07.6	-0.6
ETM				S	Sn	01 13 28.8	-1.3
LXIB	Xiulin Townshi	1.59	242	P	Pn	01 13 08.2	-0.6
LXIB				S	Sn	01 13 29.8	-1.3
JTJ	Tarama	1.60	95	P	Pn	01 13 08.9	+0.1
JTJ				*e*S	Sn	01 13 29.9	-1.0
KSHI	Guanxi Townshi	1.61	270	*e*P	Pn	01 13 09.3	+0.5
KSHI				*e*S	Sn	01 13 31.4	+0.3
SHUL	Shoufeng	1.61	232	*i* P	Pn	01 13 08.7	-0.1
SHUL				*e*S	Sn	01 13 31.0	-0.1
FUSS	Fushou	1.64	251	P	Pn	01 13 09.7	+0.2
FUSS				*e*S	Sn	01 13 31.8	-0.4
WHF	Hehuan Shan	1.66	248	P	Pn	01 13 09.8	-0.1
WHF				*e*S	Sn	01 13 32.0	-0.9
NFF	Wufeng Townshi	1.67	265	*e*P	Pn	01 13 09.3	-0.3
NFF				*e*S	Sn	01 13 31.4	-1.0
TEGC	Jichi Village	1.68	230	*i* P	Pn	01 13 09.6	+0.1
TEGC				*e*S	Sn	01 13 32.3	-0.1
ESL	Shilin	1.69	235	*e*P	Pn	01 13 08.9	-0.9
ESL				*e*S	Sn	01 13 31.1	-1.6
TWT	Tachien	1.70	252	*e*P	Pn	01 13 10.6	+0.6
TWT				S	Sn	01 13 33.3	+0.1
TDCB	Techi	1.71	252	P	Pn	01 13 10.5	+0.3
TDCB				*e*S	Sn	01 13 33.0	-0.5
LIOB	Emei	1.76	266	*e*P	Pn	01 13 10.6	0.0
LIOB				S	Sn	01 13 33.2	-1.0
WARBT	Fenglin Townsh	1.78	233	*i* P	Pn	01 13 10.0	-0.8
WARBT				S	Sn	01 13 33.0	-1.7
EGFH	Guangfu	1.78	231	*e*P	Pn	01 13 10.7	-0.1
EGFH				S	Sn	01 13 34.1	-0.5
OWD	Renai	1.82	243	P	Pn	01 13 11.1	-0.3
OWD				S	Sn	01 13 34.9	-0.8
WUSB	Renai	1.85	245	P	Pn	01 13 11.9	+0.2
WUSB				S	Sn	01 13 35.6	-0.7
WHP	Taichung City	1.89	255	P	Pn	01 13 13.0	+0.7
WHP				S	Sn	01 13 37.3	+0.1
HGSD	Ruisui	1.90	227	P	Pn	01 13 11.9	-0.4
HGSD				*e*S	Sn	01 13 36.7	-0.5
VWDT	VWDT	1.94	238	P	Pn	01 13 13.0	+0.2
VWDT				S	Sn	01 13 37.6	-0.5
EHYH	Wanrong	1.95	229	*e*P	Pn	01 13 12.5	-0.4
EHYH				*e*S	Sn	01 13 37.0	-1.3
EHY	Hungye	1.96	230	*e*P	Pn	01 13 12.4	-0.6
DPDB	Guoxing	1.99	248	*e*P	Pn	01 13 14.1	+0.7
DPDB				*e*S	Sn	01 13 39.9	+0.7
WCS	Beigang Elemen	1.99	249	P	Pn	01 13 14.1	+0.7
WCS				*e*S	Sn	01 13 39.7	+0.5
ECBN	Changbin	2.00	223	*e*P	Pn	01 13 13.4	-0.1
ECBN				*e*S	Sn	01 13 38.9	-0.6
TWQ1	Liyutan	2.03	258	*e*S	Sn	01 13 40.2	+0.2
YULB	Yu-li	2.05	228	P	Pn	01 13 13.5	-0.7
YULB				*e*S	Sn	01 13 38.9	-1.7
SMLT	Sun Moon Lake	2.07	245	*e*P	Pn	01 13 15.4	+0.9
SMLT				*e*S	Sn	01 13 42.5	+1.4
SSLB	Suanglung	2.07	242	*e*P	Pn	01 13 15.6	+1.2
SSLB				*e*S	Sn	01 13 42.4	+1.3
TWF1	Yuli	2.08	227	*e*P	Pn	01 13 14.1	-0.4
TWF1				*e*S	Sn	01 13 40.0	-1.1
TYC	Yuchr	2.10	246	*e*P	Pn	01 13 15.8	+1.1
TYC				S	Sn	01 13 42.7	+1.2
CHKH	Chenggong	2.13	222	P	Pn	01 13 14.7	-0.4
CHKH				S	Sn	01 13 40.9	-1.4
FULB	Fuli	2.19	224	P	Pn	01 13 15.7	-0.1
FULB				*e*S	Sn	01 13 43.6	0.0
WHYT	Xinyi Township	2.20	241	P	Pn	01 13 17.0	+1.0
WHYT				*e*S	Sn	01 13 44.8	+1.0
CHKT	Chengkung	2.22	221	*e*P	Pn	01 13 15.6	-0.6
CHKT				*e*S	Sn	01 13 43.1	-1.1
EHD	Haiduan	2.28	225	*e*P	Pn	01 13 16.7	-0.3
EHD				*e*S	Sn	01 13 44.6	-1.0
ALS	Alishan	2.33	237	*e*P	Pn	01 13 18.6	+0.7
ALS				*e*S	Sn	01 13 47.8	+0.5
EDH	Donghe	2.35	220	*e*P	Pn	01 13 17.5	-0.4
EDH				*e*S	Sn	01 13 46.2	-1.0
ELDTW	Lidau	2.38	228	*e*P	Pn	01 13 18.1	-0.2
ELDTW				*e*S	Sn	01 13 47.7	-0.3
CHN5	Tsauling	2.39	241	*e*P	Pn	01 13 19.4	+1.0
CHN5				*e*S	Sn	01 13 50.2	+2.1
STYH	Taoyuan	2.56	231	P	Pn	01 13 21.1	+0.6
STYH				*e*S	Sn	01 13 52.4	+0.6
CHN4	Tsaushan	2.58	237	*e*P	Pn	01 13 21.8	+1.0
CHN4				*e*S	Sn	01 13 53.7	+1.2
TWGBT	Beinan	2.60	221	*e*P	Pn	01 13 20.6	-0.4
TWG	Pinlang	2.61	222	*e*P	Pn	01 13 20.5	-0.6
TWK	Hsinying	2.71	236	*e*P	Pn	01 13 23.4	+0.9
CHN1	Nanshi	2.73	235	*e*P	Pn	01 13 23.3	+0.6
CHN1				*e*S	Sn	01 13 56.5	+0.7
ECL	Taimali	2.85	220	*e*P	Pn	01 13 24.4	+0.2
MASBT	Mashibuluo	3.03	225	*e*P	Pn	01 13 27.6	+0.9
EAST	Anshuo	3.07	219	*e*P	Pn	01 13 27.3	+0.2

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*IDC **20** 01:12:53.8±0.6, 2°.23S×138°.48E, h0^{km}, mb4.3/14, mbtmp4.4/16, ML4.5/2, MS3.7/6, Error ellipse: s-maj=21.4km s-min=13.1km az=75.0*

*NEIC **20** 01:12:56.5±1.4, 2°.28S±0°.08×138°.48E±0°.07, h10^{km}±1^{km}, mb4.6/42, Error ellipse: s-maj=12.9km s-min=11.5km az=356.0*

*DJA **20** 01:12:57.7±0.3, 2°S±3°×13°9E±°, h17^{km}±3^{km}, M5.0/27, mb4.8/27, mB5.6/8, MLv4.8/9, Mw(mB)5.1/8*

ISC 20 01:12:56.3±0.4, 2°.32S±0°.04×138°.45E±0°.04, h10^{km}, n112, σ1^s.70/114, mb4.7/37, MS4.0/5, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.41	38	P	Pg	01 13 02.2	-2.2
SMPI				S	Sg	01 13 08.9	-1.0
GENI	Genyem	1.74	99	P	Pn	01 13 25.7	-0.8
GENI				S	Sb	01 13 49.9	-0.2
SRPI	Serui, Papua	2.25	281	P	Pn	01 13 33.7	+0.1
JAY	Jayapura	2.26	95	Pn	Pn	01 13 32.8	-0.9
	76nm,0.3s,baz=235,slow=11,SNR=179						
JAY				Sn	Sn	01 14 01.1	-0.7
	93nm,0.3s,baz=130,slow=18,SNR=4.3						
JAY				LR	LR	01 14 42.2	
	comp=Z,2μm,21.0s,baz=283,slow=48						
	190nm,0.3s						
JAY	Jayapura	2.26	95	P	Pn	01 13 32.5	-1.2
JAY				S	Sn	01 14 00.5	-1.2
BAKI	Biak	2.60	295	P	Pn	01 13 38.7	+0.3

RKPI	Ransiki, Papua	4.35	281	P	Pn	01 14 03.6	+1.2
FAKI	Fak Fak	6.23	264		Pn	01 14 27.8	-0.5
FAKI	Fak Fak	6.23	264	P	Pn	01 14 29.4	+1.1
FAKI	Fak Fak	6.23	264	P	Pn	01 14 29.8	+1.5
	0.4nm893nm121nm,0.8s						
MMPI	Merauke	6.41	163	P	Pn	01 14 34.5	+3.8
SAUI	Saumlaki	9.08	231	Pn	Pn	01 15 05.5	-2.0
MSAI	Masohi	9.57	264	P	Pn	01 15 16.7	+2.5
NLAI	Namlea	11.38	265	P	Pn	01 15 43.0	+4.0
	97nm,1.0s						
KDU	Kakadu	11.88	210	P	Pn	01 15 45.9	0.0
COEN	Coen	12.47	158		Pn	01 15 54.5	+0.6
COEN	Coen	12.47	158	P	Pn	01 15 54.6	+0.6
MTN	Manton Dam	12.72	214		Pn	01 15 56.6	-0.8
MTN	Manton Dam	12.72	214	P	Pn	01 15 57.7	+0.3
LUWI	Luwuk	15.72	274	P	Pn	01 16 39.4	+1.3
	95nm,1.1s						
SOEI	Soe	15.92	242	Pn	Pn	01 16 38.0	-2.7
SOEI	Soe	15.92	242	P	P	01 16 43.3	-1.0
	107nm,1.1s						
BBSI	Bau Bau	16.15	258	P	P	01 16 47.9	+1.1
	87nm,1.2s						
KNRA	Kununurra	16.35	215		Pn	01 16 45.4	-0.7
BATI	Baumata	16.65	241	P	P	01 16 53.2	+0.8
	89nm,1.1s						
APSI	Ampana	16.86	274	P	P	01 16 54.7	+0.1
	993nm48nm,1.3s						
GUMO	Guam	17.04	22	LR	LR	01 21 55.1	
	comp=Z,127nm,20.0s,baz=214,slow=32						
WB0	Warramunga Arr	17.79	193		Pn	01 17 02.8	-1.4
EDFI	Ende, Flores	17.86	248	P	P	01 17 06.4	+0.6
	15nm,1.1s						
WR8	Warramunga Arr	17.95	192		Pn	01 17 04.9	-1.3
WR8				IAmb	IAmb	01 17 28.0	
	comp=Z,29nm,0.8s						
WRAB	Tennant Creek	17.96	193	P	Pn	01 17 04.0	-2.3
WRAB				IAmb	IAmb	01 17 28.7	
	comp=Z,25nm,0.7s						
WRA	Warramunga Arr	17.97	193		Pn	01 17 04.4	-2.0
WRA	Warramunga Arr	17.97	193	P	Pn	01 17 05.9	-0.6
	comp=Z,1.9nm,0.3s,baz=18,slow=12,SNR=26						
WRA				S	Sn	01 20 16.9	-10
	comp=Z,4.0nm,0.7s,baz=10,slow=22,SNR=5.2						
	comp=Z,7.6nm,0.5s						
TOLI2	Tolitoli	17.99	281		Pn	01 17 05.9	-0.8
QIS	Mount Isa	18.17	177	P	P	01 17 09.7	+0.6
BNSI	Bone	18.43	263	P	Pn	01 17 13.0	+0.9
	comp=Z,634nmcomp=Z,26nm,0.9s						
TTSI	Tana Toraja	18.63	267	P	Pn	01 17 15.4	+0.9
	comp=Z,31nm,1.0s						
KAPI	Kappang	18.85	261	LR	LR	01 25 59.6	
	comp=Z,163nm,20.7s,baz=90,slow=42						
CTAO	Charters Tower	19.24	157		P	01 17 21.7	+0.8
CTAO				IAmb	IAmb	01 17 30.6	
	comp=Z,28nm,1.1s						
CTAO	Charters Tower	19.24	157	P	Pn	01 17 22.8	+1.0
FITZ	Fitzroy Crossi	20.10	218	P	P	01 17 29.0	-1.3
FITZ	Fitzroy Crossi	20.10	218	P	P	01 17 28.9	-1.3
	comp=Z,2.8nm,0.5s,baz=65,slow=18,SNR=11						
FITZ				S	S	01 21 07.2	-9.0
	comp=Z,17nm,0.7s,baz=157,slow=11,SNR=8.1						
FITZ				LR	LR	01 26 05.9	
	comp=Z,223nm,19.2s,baz=28,slow=39						
	comp=Z,2.8nm,0.5s						
MYLDM	Lahad Datu	21.28	291	P	P	01 17 44.0	+0.8
MYLDM				IAmb	IAmb	01 18 03.6	
	comp=Z,43nm,1.1s						
BKB	Balikpapan	21.57	272	P	P	01 17 45.9	-0.4
AS01	Alice Springs	21.67	191	P	P	01 17 47.5	+0.3
AS31	Alice Springs	21.68	191	P	P	01 17 47.4	0.0
ASAR	Alice Springs	21.68	191	P	P	01 17 46.6	-0.8
ASAR	Alice Springs	21.68	191	P	P	01 17 47.3	-0.1
	comp=Z,15nm,0.8s,baz=23,slow=10,SNR=107						
ASAR				S	S	01 21 43.1	-4.4
	comp=Z,11nm,0.8s,baz=12,slow=22,SNR=13						
	comp=Z,15nm,0.8s						
QLP	Quilpie	24.76	168	P	P	01 18 20.8	+2.6
EIDS	Eidsvold	25.95	153	P	P	01 18 30.7	+1.7
EIDS	Eidsvold	25.95	153	P	P	01 18 31.3	+2.2
MBWA	Marble Bar	26.14	223	P	P	01 18 29.6	-1.3
MBWA				IAmb	IAmb	01 18 34.0	
	comp=Z,12nm,0.9s						
PSA00	Pilbara Seismi	26.35	222	P	P	01 18 33.9	+1.2
STKA	Stephens Creek	29.55	175	P	P	01 19 02.0	+0.8
STKA	Stephens Creek	29.55	175	P	P	01 19 01.7	+0.5
	comp=Z,9.9nm,0.6s,baz=346,slow=9.4,SNR=20						
	comp=Z,9.9nm,0.6s						
STKA	Stephens Creek	29.55	175	P	P	01 19 02.2	+0.9
FORT	Forrest	29.97	198	P	P	01 19 03.8	-1.2
FORT	Forrest	29.97	198	P	P	01 19 06.2	+1.2
BBOO	Buckleboo	30.42	184	P	P	01 19 09.7	+0.8
BBOO	Buckleboo	30.42	184	P	P	01 19 10.6	+1.7
ARMA	Armidale	30.61	157	P	P	01 19 12.6	+1.9
HTT	Hallett	30.96	179	P	P	01 19 13.7	0.0
DZM	Mont Dzumac	33.55	128	P	P	01 19 38.6	+1.9
DZM				IAmb	IAmb	01 19 58.3	
	comp=Z,6.0nm,1.0s						
ONTNC	Ouen Toro	33.68	128	P	P	01 19 42.5	+4.7
MORW	Morawa	34.10	217	P	P	01 19 41.7	+0.4
MORW				IAmb	IAmb	01 19 58.2	
	comp=Z,22nm,1.4s						
JNU	Nakatsue	35.97	349	P	P	01 19 56.1	-1.2
JNU				IAmb	IAmb	01 19 56.6	
	comp=Z,24nm,1.3s						
NWAO	Narrogin (SRO)	36.38	211	LR	LR	01 36 35.3	
	comp=Z,303nm,18.1s,baz=174,slow=39						
PPI	Padang Panjang	38.09	272	P	P	01 20 15.8	+0.2
MJAR	Matsushiro Arr	38.66	360	P	P	01 20 18.0	-2.1
	comp=Z,1.2nm,0.5s,baz=175,slow=8.0,SNR=2.3						
	comp=Z,1.2nm,0.5s						
NJ2	Nanjing	38.91	333	*e*P	P	01 20 26.3	+4.0
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
RPSI	Rantau Prapat	39.83	277	P	P	01 20 29.8	-0.4
RPSI				IAmb	IAmb	01 20 30.9	
	comp=Z,19nm,1.1s						
KSRS	Korea Array	40.76	347	P	P	01 20 36.2	-1.3
	comp=Z,1.2nm,0.4s,baz=162,slow=9.1,SNR=9.3						
	comp=Z,1.2nm,0.4s						
CMAR	Chiang Mai Arr	44.02	300	P	P	01 21 04.1	-0.4
CMAR	Chiang Mai Arr	44.02	300	P	P	01 21 04.3	-0.2
	comp=Z,1.4nm,0.4s,baz=113,slow=5.9,SNR=12						
	comp=Z,1.4nm,0.4s						
LYN	LuoYang	44.05	329	*e*P	P	01 21 04.5	0.0
LYN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KMI	Kunming	44.07	310	P	P	01 21 05.4	+0.4
KMI				pmax	pmax		
	comp=Z,11nm,0.8s						
PZH	PanZhiHua	45.58	311	P	P	01 21 19.1	+2.2
XAN	Xi'an	45.61	325	P	P	01 21 15.9	-1.1
XAN				pmax	pmax		
	comp=Z,15nm,0.7s						
USRK	Ussuriysk Ar.	46.67	354	LR	LR	01 37 30.3	
	comp=Z,146nm,21.1s,baz=335,slow=32						
HEH	HeiHe	53.22	351	*e*P	P	01 22 17.3	+2.6
GTA	Gaotai	54.60	324	P	P	01 22 25.8	+0.5
GTA				pP	sP	01 22 35.4	+5.7
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				LR	LR		
	comp=N,110nm,16.3s						
GTA				LR	LR		
	comp=E,150nm,15.5s						
GTA				LR	LR		
	comp=Z,150nm,19.5s						
SONM	Songino Array	57.26	335	P	P	01 22 42.7	-1.4
	comp=Z,0.3nm,0.5s,baz=138,slow=3.9,SNR=5.3						
	comp=Z,0.3nm,0.5s						
EVN	Everest	58.00	305		P	01 22 50.0	-0.3
EVN				IAmb	IAmb	01 22 51.2	
	comp=Z,9.5nm,0.8s						
WMQ	Urumqi	64.54	322	*e*P	P	01 23 36.4	+2.7
WMQ				LR	LR		
	comp=Z,75nm,15.5s						
CASY	Casey	66.80	192		P	01 23 48.4	+0.6
MKAR	Makanchi Array	69.32	322	P	P	01 24 03.6	-0.4
	comp=Z,6.6nm,1.0s,baz=116,slow=8.2,SNR=31						
	comp=Z,6.6nm,1.0s						
KSH	Kashi	70.63	313	P	P	01 24 13.8	+1.4
KSH				sP	PcP	01 24 27.8	-5.6
KSH				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ZALV	Zalesovo Beam	71.47	330	P	P	01 24 15.0	-2.0
	comp=Z,1.5nm,0.5s,baz=97,slow=4.6,SNR=9.7						
	comp=Z,1.5nm,0.5s						
BOOM	Boomskoye usch	71.69	316		P	01 24 17.6	-1.2
BOOM				IAmb	IAmb	01 24 19.7	
	comp=Z,6.1nm,0.9s						
AAK	Ala-Archa	72.75	316	P	P	01 24 24.7	-0.4
KURK	Kurchatov	73.25	325	P	P	01 24 26.8	-0.8
KURK				IAmb	IAmb	01 24 31.5	
	comp=Z,6.9nm,1.1s						
KURBB	Kurchatov Arra	73.26	325	P	P	01 24 26.6	-1.2
	comp=Z,3.4nm,0.9s,baz=113,slow=5.8,SNR=18						
	comp=Z,3.4nm,0.9s						
SIMJ	Simiganj	75.54	311		P	01 24 41.1	-0.4
SIMJ				IAmb	IAmb	01 24 42.0	
	comp=Z,8.7nm,0.8s						
KKAR	Karatay Array	75.67	316	P	P	01 24 41.5	-0.5
VNDA	Vanda	76.19	175		P	01 24 44.6	+0.4
VNDA				IAmb	IAmb	01 24 45.6	
	comp=Z,3.7nm,0.8s						
VNDA	Vanda	76.19	175	P	P	01 24 44.1	-0.2
	comp=Z,3.6nm,0.7s,baz=326,slow=6.0,SNR=24						
	comp=Z,3.6nm,0.7s						
BVAR	Borovoye Array	78.84	325	P	P	01 24 58.0	-1.5
	comp=Z,7.0nm,0.8s,baz=109,slow=8.0,SNR=45						
	comp=Z,7.0nm,0.8s						
BRVK	Borovoye	78.92	325	P	P	01 24 59.3	-0.6
BRVK				IAmb	IAmb	01 25 00.4	
	comp=Z,6.3nm,0.8s						
H17K	Granite Mounta	80.45	22		P	01 25 10.4	+2.3
G19K	Purcell Mounta	82.04	22		P	01 25 17.1	+0.7
G19K				IAmb	IAmb	01 25 23.9	
	comp=Z,3.3nm,0.8s						
E19K	Redstone River	82.53	21		P	01 25 19.3	+0.3
E19K				IAmb	IAmb	01 25 26.5	
	comp=Z,3.2nm,0.8s						
D19K	Kuna River	82.68	19		P	01 25 20.1	+0.3
D19K				IAmb	IAmb	01 25 21.0	
	comp=Z,2.2nm,0.7s						
AB31	Akbulak array	84.26	320	P	P	01 25 27.7	-0.5
DHY	Denali Highway	84.93	26	P	P	01 25 31.5	-0.1
DHY				IAmb	IAmb	01 25 38.2	
	comp=Z,3.0nm,0.8s						
E23K	Chandalar	85.45	21		P	01 25 34.8	+0.7
E23K				IAmb	IAmb	01 25 42.9	
	comp=Z,7.7nm,1.2s						
ILAR	Eielson Array	85.58	24	P	P	01 25 32.5	-2.1
	comp=Z,0.9nm,0.7s,baz=264,slow=4.5,SNR=11						
	comp=Z,0.9nm,0.7s						
C23K	Itkillik River	85.67	19		P	01 25 35.4	+0.5
C23K				IAmb	IAmb	01 25 36.4	
	comp=Z,5.0nm,0.6s						
J25K	Salcha River,	86.18	25		P	01 25 36.8	-0.8
J25K				IAmb	IAmb	01 25 41.4	
	comp=Z,5.8nm,1.3s						
J26L	Joseph Creek	86.91	25	P	P	01 25 41.4	+0.1
QSPA	South Pole Qui	87.63	180		P	01 25 44.8	0.0
QSPA	South Pole Qui	87.63	180	P	P	01 25 44.0	-0.7
	comp=Z,6.4nm,0.8s,baz=332,slow=1.2,SNR=41						
	comp=Z,6.4nm,0.8s						
TXAR	Lajitas Array	115.31	59	PKP	PKPdf	01 31 39.1	0.0
	comp=Z,0.1nm,0.4s,baz=283,slow=1.4,SNR=1.9						

VAO ***20*** *01:23:19.3±0.6, 33°.57S×69°.01W, h86km±5km, mb5.4*
SJA ***20*** *01:23:25.3±0.6, 33°.59S×68°.91W, h177km±2km, ML5.6, MW5.3*
NEIC ***20*** *01:23:26.2, 33°.65S×69°.40W, h140km, Moment Tensor Solution. Duration: 2s.7 Moment tensor: Scale 10¹⁷Nm; Mrr0.01; Mθθ-0.90; Mφφ0.88; Mrθ0.80; Mθφ1.21; Mφr-0.30; Fault plane solution: M0 1.72000×10¹⁷ NP1: φs344.64000°, δ69.98000°, λ-165.58000°. NP2: φs249.61000°, δ76.47000°, λ-20.61000°. Principal axes: T 1.4994, Plg4.0000°, Azm298.0000°; N 0.3855, Plg66.0000°, Azm38.0000°; P -1.8849, Plg24.0000°, Azm206.0000°;*
NEIC ***20*** *01:23:26.2, 33°.65S×68°.80W, h140km*
MOS ***20*** *01:23:26.6±1.0, 33°.57S×68°.88W, h156km, mb5.3/7, Error ellipse: s-maj=14.2km s-min=7.1km az=94.1*
NEIC ***20*** *01:23:26.3±1.9, 33°.63S±0°.06×68°.76W±0°.09, h150km±6km, mb5.8/34, Mww5.4/19, Mwr5.5(GUC), Error ellipse: s-maj=11.4km s-min=8.3km az=103.0*
GUC ***20*** *01:23:27.6±0.8, 33°.59S×69°.31W, h183km±3km, ML5.5*
IDC ***20*** *01:23:27.2±0.3, 33°.58S×68°.80W, h156km±2km, mb4.9/17, mbtmp5.4/22, MS4.2/14, Error ellipse: s-maj=11.8km s-min=6.7km az=96.0*
GCMT ***20*** *01:23:29.4±0.1, 33°.68S±0°.01×68°.83W±0°.01, h163km, MW5.5/151, Moment Tensor Solution. s127,c201; s151,c272; Duration: 1s.3 Moment tensor: Scale 10¹⁷ Nm; Mrr-0.70±.02; Mθθ-0.41±.03; Mφφ1.11±.03; Mrθ1.26±.02; Mθφ1.23±.03; Mφr-0.17±.02; Best double couple: M0 2.00900×10¹⁷ NP1:φs352.00000°, δ52.00000°, λ-157.00000°. NP2:φs248.00000°, δ72.00000°, λ-40.00000°. Principal axes: T 1.8960, Plg12.0000°, Azm304.0000°; N 0.2250, Plg47.0000°, Azm47.0000°; P -2.1230, Plg41.0000°, Azm203.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
RSNC ***20*** *01:23:37.6±1.0, 33°S±9°×6°8W±1°3, h264km±8km, M5.2, mB5.6, mb5.4, Mw(mB)5.2, MwMwp5.8, Mwp5.8*
ISC 20 01:23:26.9±0.2**, 33°.57S**±0°.02×**68°.90W**±0°.03**, h158**km±1km**, h158**km**:pP-P, n935,** σ**1s.39**/1116**, mb5.6**/96**, 57C-30D, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AVIZ	Vizcacheras	0.34	74	*e*P	Pn	01 23 49.6	+0.9
AAGR	Agrelo	0.48	7	*e*P	Pn	01 23 50.4	+1.1
ARCO	CERRO ARCO	0.72	358	*e*P	Pn	01 23 51.5	+0.8
ARCO				IAML		01 24 14.6	
	comp=Z,27µm,1.1s						
MT08	Bocatoma Ro	0.94	277		Pn	01 23 53.0	+0.7
MT08				Sn	Sn	01 24 11.2	-0.4
MT08	Bocatoma Ro	0.94	277	*e*P	Pn	01 23 53.3	+1.0
MT08				*i* S	Sn	01 24 13.3	+1.7
MT08	Bocatoma Ro	0.94	277	*e*P	Pn	01 23 53.0	+0.7
MT08				*e*S	Sn	01 24 13.8	+2.2
ASAL	Salagasta	0.98	3	*e*P	Pn	01 23 53.3	+0.8
MT04	Ro Olivares	1.05	279	*e*P	Pn	01 23 53.9	+0.8
MT04				*i* S	Sn	01 24 14.2	+1.1
MT04	Ro Olivares	1.05	279	*e*P	Pn	01 23 53.8	+0.6
MT04				*e*S	Sn	01 24 15.2	+2.1
LMEL	Las Melosas	1.12	255		Pn	01 23 53.9	+0.2
LMEL				Sn	Sn	01 24 14.0	-0.1
LMEL	Las Melosas	1.12	255	*e*P	Pn	01 23 54.3	+0.6
LMEL				*i* S	Sn	01 24 15.6	+1.4
LMEL	Las Melosas	1.12	255	*e*P	Pn	01 23 54.1	+0.4
LMEL				*e*S	Sn	01 24 20.6	+6.5
FCH	Farellones	1.19	281	*e*P	Pn	01 23 55.2	+0.8
FCH				*i* S	Sn	01 24 17.2	+1.7
RFA	San Rafael	1.25	163	*e*P	Pn	01 23 55.1	+0.3
RFA				*e*S	Sn	01 24 17.1	+0.9
MT15	Las Vizcachas	1.34	268	*e*P	Pn	01 23 55.9	+0.3
MT15				*i* S	Sn	01 24 17.8	+0.2
MT03	Universidad Ad	1.35	273		Pn	01 23 56.1	+0.4
MT03				Sn	Sn	01 24 18.0	+0.3
MT03	Universidad Ad	1.35	273	⇑*i*P	Pn	01 23 56.1	+0.4
MT03				*i* S	Sn	01 24 18.3	+0.5
MT03				IAML		01 24 19.8	
	comp=N,67µm,0.4s						
MT03	Universidad Ad	1.35	273	*e*P	Pn	01 23 56.1	+0.4
MT03				*e*S	Sn	01 24 19.3	+1.6
MT03				IAML		01 24 21.8	
	comp=Z,28µm,0.3s						
MT16	CCHEN	1.36	275		Pn	01 23 56.1	+0.3
MT16	CCHEN	1.36	275	⇑*e*P	Pn	01 23 56.3	+0.5
MT16				*i* S	Sn	01 24 18.2	+0.3
MT14	Cerro Cal¡n	1.38	277	*e*P	Pn	01 23 56.5	+0.5
MT14				*i* S	Sn	01 24 18.5	+0.3
MT12	Pirque	1.38	263	*e*P	Pn	01 23 56.4	+0.4
MT12				*i* S	Sn	01 24 18.5	+0.2
MT10	Hacienda Santa	1.40	282	⇑*e*P	Pn	01 23 56.9	+0.7
MT10				*i* S	Sn	01 24 19.3	+0.5
BO04	La Punta	1.48	253		Pn	01 23 56.7	-0.3
BO04	La Punta	1.48	253	⇑*i*P	Pn	01 23 57.1	+0.2
BO04				*i* S	Sn	01 24 20.0	0.0
MT05	Renca	1.54	276		Pn	01 23 57.8	+0.1
MT05	Renca	1.54	276	⇑*e*P	Pn	01 23 57.7	+0.1
MT05				*i* S	Sn	01 24 20.6	-0.6
MT05	Renca	1.54	276	*e*P	Pn	01 23 57.6	0.0
MT05				*e*S	Sn	01 24 22.1	+0.9
MT05				IAML		01 24 23.8	
	comp=Z,34µm,0.5s						
PEL	Peldehue	1.55	285		Pn	01 23 56.8	-0.9
PEL	Peldehue	1.55	285	P	Pn	01 23 56.8	-0.9
PEL	Peldehue	1.55	285	⇑*i*P	Pn	01 23 57.9	+0.1
PEL				*i* S	Sn	01 24 21.2	-0.1
PEL	Peldehue	1.55	285	*e*P	Pn	01 23 57.8	+0.1
PEL				*e*S	Sn	01 24 22.0	+0.7
VA03	San Esteban	1.60	300		Pn	01 23 58.6	+0.4
VA03	San Esteban	1.60	300	⇑*i*P	Pn	01 23 58.8	+0.5
VA03				*i* S	Sn	01 24 22.4	+0.1
VA03	San Esteban	1.60	300	*e*P	Pn	01 23 58.7	+0.4
VA03				*e*S	Sn	01 24 20.8	-1.5
VA03				IAML		01 24 26.0	
	comp=Z,43µm,0.5s						
MT09	Talagante	1.75	263		Pn	01 23 59.0	-0.9
MT09	Talagante	1.75	263	⇑*e*P	Pn	01 23 59.2	-0.7
MT09				*i* S	Sn	01 24 23.8	-1.5
RTLS	Leoncito	1.79	349	*e*P	Pn	01 24 01.4	+0.8
RTLS				*e*S	Sn	01 24 20.7	-5.8
RTLS				IAML		01 24 27.4	
	comp=Z,96µm,0.4s						
ROCH	El Roble	1.86	288	⇑*e*P	Pn	01 24 01.0	-0.3
ROCH				⇑*i*P	Pn	01 24 01.0	-0.3
ROCH				*i* S	Sn	01 24 26.4	-1.2
ROCH				*i* S		01 24 26.6	
ROC1	El Roble	1.87	288	*e*P	Pn	01 24 00.8	-0.6
ROC1				*e*S	Sn	01 24 27.1	-0.7
MT02	Curacav	1.90	279		Pn	01 24 00.9	-0.5
MT02	Curacav	1.90	279	*e*P	Pn	01 24 00.7	-0.7
MT02				*i* S	Sn	01 24 26.0	-1.8
MT02	Curacav	1.90	279	*e*P	Pn	01 24 00.6	-0.8
MT02				*e*S	Sn	01 24 27.6	-0.3
MT02				IAML		01 24 29.1	
	comp=Z,23µm,0.6s						
ACAN	Cantantal	1.93	49	*e*P	Pn	01 24 02.0	+0.1
ACAN				IAML		01 24 34.6	
	comp=Z,66µm,0.7s						
BO02	Sierra Bellavi	1.98	231		Pn	01 24 02.1	-0.3
BO02	Sierra Bellavi	1.98	231	*e*P	Pn	01 24 02.4	0.0
BO02				*i* S	Sn	01 24 29.1	-0.7
BO02	Sierra Bellavi	1.98	231	*e*P	Pn	01 24 02.0	-0.3
BO02				*e*S	Sn	01 24 30.7	+1.0
BO02				IAML		01 24 35.7	
	comp=Z,23µm,0.2s						
MT01	Popeta	1.98	261		Pn	01 24 01.2	-1.1
MT01	Popeta	1.98	261	⇑*i*P	Pn	01 24 01.2	-1.1
MT01				*i* S	Sn	01 24 26.9	-2.7
MT01				IAML		01 24 28.8	
	comp=E,33µm,0.2s						
MT01	Popeta	1.98	261	*e*P	Pn	01 24 01.1	-1.1
MT01				*e*S	Sn	01 24 27.5	-2.0
MT01				IAML		01 24 31.7	
	comp=Z,23µm,0.6s						
BO01	Tunca	1.99	245		Pn	01 24 01.5	-1.0
BO01	Tunca	1.99	245	*e*P	Pn	01 24 01.4	-1.0
BO01				*i* S	Sn	01 24 27.9	-1.9
BO01	Tunca	1.99	245	*e*P	Pn	01 24 01.2	-1.2
BO01				*e*S	Sn	01 24 24.3	-5.5
BO01				IAML		01 24 34.0	
	comp=Z,13µm,0.7s						
ZON	Zonda	2.02	5		Pn	01 24 03.2	+0.3
ZON	Zonda	2.02	5	P	Pn	01 24 03.2	+0.3
ZON	Zonda	2.02	5	*e*P	Pn	01 24 03.2	+0.3
ZON				*e*S	Sn	01 24 31.4	+0.7
ZON				IAML		01 24 32.7	
	comp=Z,18µm,0.6s						
CFA	Coronel Fontan	2.04	16	P	Pn	01 24 03.5	+0.4
	comp=Z,16µm,0.5s,baz=197,slow=11						
CFA				S	Sn	01 24 30.8	0.0
	comp=Z,11µm,0.4s,baz=82,slow=19,SNR=31						
CFA				LR	LR	01 24 54.6	
	comp=Z,4µm,19.2s,baz=202,slow=43						
CFA	Coronel Fontan	2.04	16	*e*P	Pn	01 24 03.4	+0.3
CFA				*e*S	Sn	01 24 31.4	+0.6
SJA	San Juan	2.06	8	*e*P	Pn	01 23 57.5	-5.7
SJA				*e*S	Sn	01 24 31.8	+0.6
SJA				IAML		01 24 33.7	
	comp=Z,17µm,0.3s						
EDS3	Malargue	2.23	190	*e*P	Pn	01 24 05.7	+0.2
VA06	Catapilco	2.25	296		Pn	01 24 04.9	-0.5
VA06	Catapilco	2.25	296	⇑*i*P	Pn	01 24 04.7	-0.7
VA06				*i* S	Sn	01 24 32.4	-2.7
RTLL	Cerro Villicun	2.26	9	*e*P	Pn	01 24 05.9	+0.2
RTLL				*e*S	Sn	01 24 35.6	0.0
VA05	Santo Domingo	2.27	267		Pn	01 24 04.0	-1.6
VA05	Santo Domingo	2.27	267	⇑*e*P	Pn	01 24 04.1	-1.5
VA05				*i* S	Sn	01 24 31.7	-3.7
VA01	Torpederas	2.36	283		Pn	01 24 06.3	-0.4
VA01	Torpederas	2.36	283	*e*P	Pn	01 24 05.8	-1.0
VA01				*i* S	Sn	01 24 34.4	-3.1
VA01	Torpederas	2.36	283	*e*P	Pn	01 24 05.8	-1.0
VA01				*e*S	Sn	01 24 37.4	-0.1
VA01				IAML		01 24 40.7	
	comp=Z,16µm,0.7s						
DOCA	Reserva Natura	2.62	357	*e*P	Pn	01 24 10.8	+0.5
DOCA				IAML		01 24 53.0	
	comp=Z,24µm,0.9s						
BO03	Pichilemu	2.71	249	*e*P	Pn	01 24 09.1	-1.8
BO03				*i* S	Sn	01 24 41.2	-3.8
GO05	Hualane	2.89	239	*e*P	Pn	01 24 11.2	-2.1
GO05				*i* S	Sn	01 24 45.2	-3.9
MRA	San Martin	2.91	68	*e*P	Pn	01 24 14.2	+0.6
MRA				IAML		01 24 54.9	
	comp=Z,5µm,1.5s						
CO02	Combarbal	2.95	322		Pn	01 24 14.7	+0.5
CO02	Combarbal	2.95	322	⇑*e*P	Pn	01 24 14.2	0.0
CO02				*i* S	Sn	01 24 49.7	-1.0
CO02	Combarbal	2.95	322	*e*P	Pn	01 24 14.3	+0.2
CO02				*e*S	Sn	01 24 49.9	-0.8
ACCO	Cerro Coronel	2.98	357	*e*P	Pn	01 24 15.5	+0.8
ACCO				*e*S	Sn	01 24 51.6	0.0
ML02	Panimavida	3.02	223		Pn	01 24 13.5	-1.3
ML02	Panimavida	3.02	223	*e*P	Pn	01 24 13.7	-1.0
ML02				*i* S	Sn	01 24 49.7	-2.3
ML02	Panimavida	3.02	223	*e*P	Pn	01 24 13.8	-1.0
ML02				*e*S	Sn	01 24 50.8	-1.1
ML02				IAML		01 25 14.1	
	comp=Z,6µm,0.8s						
ACHE	Chepes	3.06	39	*e*P	Pn	01 24 15.7	+0.2
CO03	El Pedregal	3.12	330		Pn	01 24 16.5	+0.3
CO03	El Pedregal	3.12	330	*e*P	Pn	01 24 16.9	+0.7
CO03				*i* S	Sn	01 24 53.9	-0.5
CO03	El Pedregal	3.12	330	*e*P	Pn	01 24 16.6	+0.5
CO03				*e*S	Sn	01 24 53.8	-0.5
CO03				IAML		01 24 57.4	
	comp=Z,37µm,0.7s						
AVFE	Valle Fertil	3.15	23	*e*P	Pn	01 24 09.9	-6.7
AVFE				*e*S	Sn	01 24 55.0	-0.1
AVFE				IAML		01 24 56.9	
	comp=Z,16µm,1.1s						
ACDV	Cuesta del Vie	3.39	357	*e*P	Pn	01 24 20.4	+0.6
ACDV				*e*S	Sn	01 25 00.8	0.0
ACDV				IAML		01 25 02.0	
	comp=Z,26µm,0.7s						
AROD	Rodeo	3.43	352	*e*P	Pn	01 24 21.2	+0.9
BI02	San Fabin de	3.65	212		Pn	01 24 22.0	-0.9
BI02	San Fabin de	3.65	212	*e*P	Pn	01 24 21.5	-1.4
BI02				IAML		01 25 15.1	
	comp=Z,3µm,0.6s						
CO06	Fray Jorge	3.70	320		Pn	01 24 23.5	-0.1
CO06	Fray Jorge	3.70	320	*e*P	Pn	01 24 22.8	-0.8
CO06				*i* S	Sn	01 25 04.3	-3.3
CO01	Juntas del Tor	3.72	344		Pn	01 24 25.7	+1.6
CO01	Juntas del Tor	3.72	344	*e*P	Pn	01 24 25.7	+1.6
CO01				*e*S	Sn	01 25 08.7	+0.3
CO01				IAML		01 25 13.6	
	comp=Z,15µm,0.5s						
GO04	Tololo Observa	3.75	334		Pn	01 24 24.6	+0.2
GO04	Tololo Observa	3.75	334	⇑*e*P	Pn	01 24 24.7	+0.2
GO04				*i* S	Sn	01 25 07.0	-2.1
GO04	Tololo Observa	3.75	334	*e*P	Pn	01 24 24.3	-0.1
GO04				*e*S	Sn	01 25 07.9	-1.2
AGUA	GUANDACOL	4.08	5	*e*P	Pn	01 24 28.8	+0.2
AGUA				*e*S	Sn	01 25 16.2	-0.4
AGUA				IAML		01 25 21.9	
	comp=Z,17µm,0.6s						
CO05	La Serena	4.15	331		Pn	01 24 28.7	-0.7
CO05	La Serena	4.15	331	*e*P	Pn	01 24 28.6	-0.7
CO05				*i* S	Sn	01 25 13.7	-4.2
ACLC	CERRO LA CRUZ	4.45	22	*e*P	Pn	01 24 32.5	-1.0
ACLC				*e*S	Sn	01 25 23.5	-1.9

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ACLC                                 IAML              01 25 29.9
       comp=Z,4µm,0.8s
CANA   Caviahue         4.66 202  eP      Pn      01 24 21.8  -14
BI05   Punta Hualpn     4.73 227          Pn      01 24 33.4 -3.5
BI05   Punta Hualpn     4.73 227  eP      Pn      01 24 33.2 -3.7
BI05                              i S     Sn      01 25 25.0 -6.5
LCO    Las Campanas     4.80 341          Pn      01 24 37.6 -0.5
LCO    Las Campanas     4.80 341   P      Pn      01 24 37.7 -0.5
LCO    Las Campanas     4.80 341  eP      Pn      01 24 37.6 -0.5
LCO                               eS      Sn      01 25 29.1 -4.5
VCA    Vinchina         4.85   7  eP      Pn      01 24 38.9 +0.1
VCA                               i S     Sn      01 25 32.8 -2.0
VCA    Vinchina         4.85   7  eP      Pn      01 24 38.7 -0.1
VCA                               eS      Sn      01 25 32.7 -2.0
AC04   Llanos de Chal   5.66 340          Pn      01 24 48.0 -1.2
GO03   Copiapo          6.07 349          Pn      01 24 54.1 -0.6
AC06   Mina Casimiro    6.32 348          Pn      01 24 56.8 -1.2
LR03   Panguipulli      6.66 204          Pn      01 24 58.2 -4.2
AC02   Maricunga        6.71 358          Pn      01 25 03.5 -0.2
LR04   Corral           7.27 209          Pn      01 25 03.0 -7.5
PLCA   Paso Flores      7.27 190          Pn      01 25 09.0 -1.6
PLCA   Paso Flores      7.27 190   P      Pn      01 25 09.2 -1.4
       comp=Z,218nm,0.6s,baz=4.7,slow=12,SNR=366
PLCA   Paso Flores      7.27 190  eP      Pn      01 25 04.2 -6.4
AC01   Pan de Azucar    7.54 348          Pn      01 25 12.4 -1.9
LL03   Petrohue         8.05 199          Pn      01 25 17.1 -3.8
VA04   Juan Fernndez    8.28 267          Pn      01 25 22.5 -1.6
GO02   Mina Guanaco     8.40 356          Pn      01 25 23.5 -2.4
PB14   IPOC Station P   9.01 351          Pn      01 25 31.3 -2.8
LL01   San Ignacio de   9.22 196   Pn     Pn      01 25 31.6 -4.8
LL02   Futaleuf         9.88 193   Pn     Pn      01 25 40.4 -4.8
AF01   San Pedro de A  10.60   4          Pn      01 25 53.5 -1.5
PB05   IPOC Station P  10.74 354   Pn     Pn      01 25 52.7 -4.0
PB06   IPOC Station P  10.84 357   Pn     Pn      01 25 55.2 -2.8
ITQB   Itaqui          11.16  73  eP      Pn      01 25 54.8 -7.3
PB03   IPOC Station P  11.50 356          Pn      01 26 03.4 -3.3
PB09   IPOC Station P  11.73 358          Pn      01 26 07.8 -2.0
COYC   Coyhaique       12.24 191          Pn      01 26 11.4 -4.5
CPUP   Villa Florida   12.35  57          Pn      01 26 13.2 -4.3
CPUP   Villa Florida   12.35  57   P      Pn      01 26 15.3 -2.2
       comp=Z,13nm,0.5s,baz=100,slow=11,SNR=68
CPUP                               S      Sn      01 28 28.2 -6.1
       comp=Z,18nm,0.7s,baz=223,slow=20,SNR=1.3
CPUP                               LR     LR      01 31 02.7
       comp=Z,56nm,21.9s,baz=98,slow=37
PB01   IPOC Station P  12.49 357          Pn      01 26 16.6 -2.8
PATCX  Punta Patache   12.75 355   P      Pn      01 26 21.5 -1.3
TA01   Diego Aracena   13.00 355   P      Pn      01 26 24.9 -1.0
PLTB   Pedras Altas    13.02  86  eP      Pn      01 26 21.5 -4.6
HMBC   Humberstone     13.27 356   P      Pn      01 26 28.2 -1.2
PB08   IPOC Station P  13.38 359   P      Pn      01 26 28.6 -2.5
CPSB   Cacapava Do Su  13.50  81  eP      Pn      01 26 27.9 -4.3
CPSB                              eS      Sn      01 28 59.4 -2.4
PB11   IPOC Station P  13.77 357   Pn     Pn      01 26 33.4 -2.4
GO01   Chusmiza        13.85 359   P      Pn      01 26 35.9 -1.3
AY03   Cochrane        13.95 190   P      Pn      01 26 33.6 -4.1
SJPY   San Joaquin     14.05  56  eP      Pn      01 26 32.7 -6.5
PB16   IPOC Station P  15.18 358   P      Pn      01 26 53.9  0.0
AP01   Chacalluta      15.19 355          Pn      01 26 53.8 +0.4
MURT   Porto Murtinho  15.51  43  eP      Pn      01 26 52.3 -5.0
ITAB   Concordia       15.78  71  eP      Pn      01 26 57.7 -2.8
PB18   Visviri         15.92 358   P      Pn      01 27 01.8 -1.1
CNLB   Canela          15.97  79  eP      Pn      01 27 00.5 -2.5
PTGB   Pitanga         17.13  63  eP      P       01 27 15.0 -1.2
LPAZ   La Paz          17.22   2   P      Pn      01 27 18.3 -0.4
LPAZ   La Paz          17.22   2   P      Pn      01 27 19.7 +1.0
       comp=Z,176nm,0.8s,baz=173,slow=8.3,SNR=395
LPAZ                               S      S       01 30 27.5 -2.1
       comp=Z,6.8nm,0.7s,baz=169,slow=17,SNR=1.0
LPAZ   La Paz          17.22   2  eP      P       01 27 11.9 -6.0
LPAZ   La Paz          17.22   2   P      Pn      01 27 19.7 +1.0
       comp=Z,3µmcomp=Z,315nm,1.0s
GO09   Cerro Castillo  17.87 187   P      P       01 27 23.7 -0.2
TRCB   Terra Rica      17.89  57  eP      P       01 27 23.1 -1.4
BBSD   Serra de San D  17.93  27  eP      P       01 27 22.1 -2.9
MAJ01  Sao Joao Batis  18.20  76  eP      P       01 27 28.1 +0.2
MG05   Puerto Natales  18.29 187   P      P       01 27 28.3 -0.2
LDASE  Londrina, Braz  18.61  62  eP      P       01 27 31.9 -0.4
RPRD   Ribas do Rio P  18.77  50  eP      P       01 27 33.1 -0.9
SIV    San Ignacio     18.88  24   P      P       01 27 35.9 +0.6
       comp=Z,195nm,0.7s,baz=205,slow=12,SNR=118
MG02   Cerro Sombrero  19.21 181   P      P       01 27 36.7 -1.8
MG04   Isla Riesco     19.38 185   P      P       01 27 39.4 -0.9
PCMB   Pacaembu        19.62  57  eP      P       01 27 43.3  0.0
GO10   Punta Arenas    19.64 184   P      P       01 27 42.2 -1.0
EFI    East Falkland   19.74 160   P      P       01 27 41.9 -2.3
EFI    East Falkland   19.74 160ceP       P       01 27 42.2 -2.0
EFI                                pmax   pmax
       comp=Z,210nm,0.9s
FRTB   Fartura         19.79  64  eP      P       01 27 44.9 -0.2
PTLB   Pontes e Lacer  20.09  28   P      P       01 27 47.9 -0.4
PTLB   Pontes e Lacer  20.09  28  eP      P       01 27 46.5 -1.7
MG03   Isla Dawson     20.30 183   P      P       01 27 49.4 -0.9
C2SB   Chapadao do Su  20.58  48  eP      P       01 27 52.8 -0.7
PET01  Itanhaem-SP     21.03  70  eP      P       01 27 56.7 -1.6
SALV   Santo Antonio   21.25  37  eP      P       01 27 59.6 -1.1
USHA   Ushuaia         21.26 179   P      P       01 28 00.4 -0.1
       comp=Z,931nm,0.8s,baz=5.0,slow=9.3,SNR=183
       comp=Z,931nm,0.8s
SPB    Sao Paulo       21.28  68   P      P       01 28 00.5 -0.5
SPB    Sao Paulo       21.28  68  eP      P       01 28 00.5 -0.5
MG01   Puerto William  21.38 178   P      P       01 28 00.9 -0.8
ITRB   Iturama         21.52  55  eP      P       01 28 02.9 -0.8
BB19B  Bebedouro       21.92  61  eP      P       01 28 05.8 -2.1
VAO    Valinhos        21.96  67  eP      P       01 28 06.9 -1.3
VILB   Vilhena         22.00  23   P      P       01 28 08.3 -0.3
VILB   Vilhena         22.00  23  eP      P       01 28 06.9 -1.7
NNA    Nana            22.68 339   P      P       01 28 15.5 +0.3
NNA                                IAmb   IAmb    01 28 18.8
       comp=Z,662nm,1.8s
NNA    Nana            22.68 339   P      P       01 28 15.8 +0.7
       comp=Z,84nm,0.7s,baz=181,slow=8.6,SNR=38
NNA                                ScP    ScP     01 35 25.6 +0.6
       comp=Z,2.6nm,0.3s,baz=155,slow=5.3,SNR=3.6
       comp=Z,84nm,0.7s
NNA    Nana            22.68 339c iP      P       01 28 15.6 +0.5
NNA                                pmax   pmax
       comp=Z,449nm,1.7s
NNA    Nana            22.68 339   P      P       01 28 15.0 -0.1
       comp=Z,3µmcomp=Z,157nm,1.2s
PARB   Paraibuna       22.82  70  eP      P       01 28 14.5 -1.9
SLP01  Ubatuba-SP      23.19  70  eP      P       01 28 19.0 -0.9
ARAG   Araguaiana, MT  23.55  45  eP      P       01 28 23.3 +0.2
IPMB   Ipameri, GO     24.18  55  eP      P       01 28 29.1 +0.3
MAN01  Angra dos Reis  24.36  70  eP      P       01 28 30.4 -0.1
PDRB   Porto dos Gac   24.53  30  eP      P       01 28 32.0  0.0
BSCB   Bom Sucesso     24.76  66  eP      P       01 28 33.9 -0.3
PMNB   Patos De Minas  25.05  59  eP      P       01 28 36.8  0.0
VAS01  Vassouras-RJ    25.08  70  eP      P       01 28 36.6 -0.3
CLDB   Colider         25.59  31  eP      P       01 28 41.7 +0.1
CZSB   Cruzeiro do Su  25.95 351   P      P       01 28 44.9 +0.1
CZSB                               IAmb   IAmb    01 28 47.9
       comp=Z,247nm,0.7s
CZSB   Cruzeiro do Su  25.95 351  eP      P       01 28 44.6 -0.2
CZSB   Cruzeiro do Su  25.95 351   P      P       01 28 45.3 +0.5
       comp=Z,4µmcomp=Z,384nm,0.7s
BDFB   Brasilia        25.97  52   P      P       01 28 44.4 -0.8
BDFB                               IAmb   IAmb    01 29 17.9
       comp=Z,314nm,0.9s
BDFB   Brasilia        25.97  52   P      P       01 28 45.0 -0.1
       comp=Z,41nm,0.8s,baz=218,slow=8.2,SNR=28
BDFB                               pP     pP      01 29 17.1 -1.0
       comp=Z,341nm,1.0s,baz=226,slow=8.3,SNR=28
BDFB                               LR     LR      01 39 00.7
       comp=Z,352nm,21.5s,baz=216,slow=36
       comp=Z,41nm,0.8s
DUB01  Friburgo-RJ     26.03  71  eP      P       01 28 46.1 +0.6
CAM01  Campos-RJ       26.73  71  eP      P       01 28 51.2 -0.6
SNDB   Serra Nova Dou  26.85  41  eP      P       01 28 53.1 +0.2
DIAM   Diamantina, MG  27.21  62  eP      P       01 28 56.3  0.0
JANB   Januaria        28.89  56  eP      P       01 29 10.6 -0.5
RIB01  Linhares ES     29.09  68  eP      P       01 29 12.7 -0.1
NPGB   Novo Progresso  29.22  28  eP      P       01 29 12.9 -1.1
TBTG   Tabatinga, AM   29.25 358   P      P       01 29 14.2  0.0
TBTG   Tabatinga, AM   29.25 358  eP      P       01 29 14.4 +0.2
TBTG   Tabatinga, AM   29.25 358   P      P       01 29 14.6 +0.4
       comp=Z,347nm,0.9s
SDBA   SAO DESIDERIO   30.38  52  eP      P       01 29 23.7 -0.6
ESPZ   Base Esperanza  30.77 170   P      P       01 29 25.9 -1.2
ESPZ                               IAmb   IAmb    01 29 28.1
       comp=Z,184nm,0.8s
HOPE   Hope Point      30.78 142   P      P       01 29 28.4 +1.1
HOPE                               pP     pP      01 30 01.2 +0.5
HOPE                               sP     sP      01 30 18.4 -0.6
HOPE                               PcP    PcP     01 32 20.4 -0.2
MCRA   Macar, Loja     30.82 338   P      P       01 29 28.9 +0.8
GUA01  Guaratinga, BA  31.16  64  eP      P       01 29 30.7 -0.4
MACA   Manacapuru-AM   31.21  16   P      P       01 29 31.6 +0.2
MACA                               IAmb   IAmb    01 30 13.0
       comp=Z,283nm,0.8s
MACA   Manacapuru-AM   31.21  16  eP      P       01 29 30.9 -0.6
PMSA   Palmer Station  31.38 176   P      P       01 29 32.8 +0.5
PMSA                               pP     pP      01 30 05.3 -0.8
SMTB   Santa Maria do  31.47  43  eP      P       01 29 34.4 +0.6
ITTB   Itaituba        31.54  26  eP      P       01 29 33.5 -0.9
CMC01  Camacan, BA     32.14  63  eP      P       01 29 37.0 -2.6
COHC   Cochancay       32.42 340   P      P       01 29 44.3 +2.2
       comp=Z,2µmcomp=Z,143nm,1.1s
PRPB   Parauapebas     32.51  37  eP      P       01 29 43.4 +0.6
SGC2   Sao Gabriel da  33.29   4   P      P       01 29 48.5 -1.1
       comp=Z,1µmcomp=Z,91nm,0.9s
PIAT   Ana Tenorio     33.57 343   P      P       01 29 55.3 +2.8
       comp=Z,2µmcomp=Z,119nm,1.2s
PTLC   Puerto Leguiza  34.02 349   P      P       01 29 54.1 -1.8
MAL2   Monte Alegre,   34.28  27   P      P       01 29 57.2 -1.0
FLF1   Flavio Alfaro-  34.60 340   P      P       01 30 03.5 +2.6
       comp=Z,4µmcomp=Z,340nm,1.1s
SMAI   San Martin Ant  34.62 179   P      P       01 29 60.0 -0.5
BONI   La Bonita       34.80 345   P      P       01 30 05.1 +2.2
       comp=Z,47nm,0.8s
OTAV   Otavalo         34.81 343   P      P       01 30 04.3 +1.1
OTAV   Otavalo         34.81 343   P      P       01 30 04.3 +1.1
OTAV                               pmax   pmax
       comp=Z,70nm,1.3s
OTAV   Otavalo         34.81 343  eP      P       01 30 02.7 -0.5
OTAV   Otavalo         34.81 343   P      P       01 30 05.2 +2.0
       comp=Z,771nmcomp=Z,51nm,1.6s
OTAV   Otavalo         34.81 343   P      P       01 30 04.8 +1.6
OTAV                               PcP    PcP     01 32 34.4 +1.3
OTAV                               ScP    ScP     01 36 04.6 +1.0
PAC1   Pacto, Paraso   34.92 343   P      P       01 30 06.0 +2.2
       comp=Z,2µmcomp=Z,185nm,1.0s
TULM   Tulcn-Chalpat   35.11 344   P      P       01 30 08.6 +2.7
       comp=Z,3µmcomp=Z,109nm,0.8s
CMBC   Cumbal          35.34 344   P      P       01 30 10.6 +2.9
GCUF   Volcan Galeras  35.51 345   P      P       01 30 12.2 +2.9
       comp=Z,1µmcomp=Z,60nm,1.0s
FLOC   Florencia       35.54 348   P      P       01 30 10.0 +1.1
FLOC                               IAmb   IAmb    01 30 47.3
       comp=Z,355nm,1.6s
FLOC   Florencia       35.54 348   P      P       01 30 10.7 +1.7
       comp=Z,2µmcomp=Z,102nm,1.4s
MACC   Macarena, Meta  35.83 352   P      P       01 30 11.6 +0.2
       comp=Z,611nmcomp=Z,53nm,0.9s
GARC   Garzon, Huila   36.10 349   P      P       01 30 15.6 +1.6
       comp=Z,1µmcomp=Z,84nm,0.8s
BBAC   Balboa, Cauca   36.26 346   P      P       01 30 16.9 +1.5
       comp=Z,2µmcomp=Z,105nm,0.9s
BETC   Betania         36.58 349   P      P       01 30 20.6 +2.8
BOAV   Boa Vista       36.63  14   P      P       01 30 18.0 -0.2
BOAV   Boa Vista       36.63  14  eP      P       01 30 18.0 -0.2
BOAV   Boa Vista       36.63  14   P      P       01 30 17.9 -0.3
       comp=Z,4µmcomp=Z,45nm,0.9s
TMAB   Tom-Au,PA,Br    36.64  36  eP      P       01 30 18.9 +0.6
POPC   Popayan, Colom  36.66 347   P      P       01 30 20.2 +1.5
       comp=Z,1µmcomp=Z,64nm,1.4s
URMC   La Uribe, Meta  36.98 351   P      P       01 30 22.7 +1.4
       comp=Z,3µmcomp=Z,394nm,0.9s
JAMC   Jamundi, Valle  37.31 347   P      P       01 30 25.3 +1.1
       comp=Z,828nmcomp=Z,59nm,1.2s
GR1C   Gorgona, Isla   37.41 345   P      P       01 30 26.8 +2.0
PRAC   Prado           37.51 350   P      P       01 30 27.4 +1.7
       comp=Z,2µmcomp=Z,135nm,1.4s
PTGC   Puerto Gaitan,  37.69 355   P      P       01 30 26.9 -0.2
       comp=Z,2µmcomp=Z,162nm,0.9s
VILC   Villavicencio,  37.75 352   P      P       01 30 29.4 +1.6
       comp=Z,1µmcomp=Z,184nm,0.8s
ORTC   Ortega, Tolima  37.75 350   P      P       01 30 29.6 +1.9
       comp=Z,2µmcomp=Z,216nm,1.0s
YOTC   Yotoco, Valle   38.01 348   P      P       01 30 30.7 +0.8
       comp=Z,764nmcomp=Z,94nm,0.8s
CVER   Cruz Verde, Cu  38.20 352   P      P       01 30 33.9 +2.0
       comp=Z,169nm,0.7s
MALC   Bahia Malaga    38.22 346   P      P       01 30 33.7 +2.1
CHIC   Chingaza        38.26 352   P      P       01 30 33.4 +1.0
       comp=Z,1µmcomp=Z,91nm,1.2s
NBAN   Anadia - AL     38.27  59  eP      P       01 30 31.3 -0.7
ANIL   Santa Ana       38.35 350   P      P       01 30 33.7 +0.7
       comp=Z,42nm,0.7s
PAYG   Puerto Ayora    38.39 324   P      P       01 30 34.5 +1.4
PAYG                               IAmb   IAmb    01 30 36.2
       comp=Z,335nm,1.3s
ROSC   El Rosal        38.54 351   P      P       01 30 35.6 +0.9
       comp=Z,38nm,0.6s,baz=171,slow=3.3,SNR=17
       comp=Z,38nm,0.6s
ROSC   El Rosal        38.54 351   P      P       01 30 36.7 +2.0
       comp=Z,1µmcomp=Z,59nm,0.8s
PLMC   San Jos del P   38.90 348   P      P       01 30 38.4 +1.1
       comp=Z,3µmcomp=Z,321nm,0.8s
NBPB   Pedra_Branca-C  38.97  51  eP      P       01 30 38.2 +0.2
GUY2C  Guyana, Caldas  39.06 350   P      P       01 30 40.5 +1.4
       comp=Z,1µmcomp=Z,90nm,1.0s
SPBC   San Pablo de B  39.31 352   P      P       01 30 40.7 -0.1
       comp=Z,1µmcomp=Z,64nm,0.9s
NORC   Norcasia        39.33 351   P      P       01 30 41.1 +0.2
       comp=Z,1µmcomp=Z,69nm,0.7s
RUSC   La Rusia        39.44 353   P      P       01 30 43.0 +0.7
RUSC   La Rusia        39.44 353   P      P       01 30 43.2 +0.9
       comp=Z,5µmcomp=Z,369nm,1.0s
CBOC   Ciudad Bolivar  39.79 349   P      P       01 30 45.7 +0.9
       comp=Z,1µmcomp=Z,108nm,0.9s
TAMC   Tame, Arauca    39.88 356   P      P       01 30 45.2 -0.2
       comp=Z,2µmcomp=Z,145nm,0.9s
HELC   Santa Helena    40.04 350   P      P       01 30 47.7 +0.6
       comp=Z,6µmcomp=Z,796nm,0.9s
BARC   Barichara       40.15 353   P      P       01 30 46.6 -1.2
       comp=Z,147µmcomp=Z,215nm,0.8s
PTBC   PUERTO BERRIO,  40.23 351   P      P       01 30 47.1 -1.2
       comp=Z,853nmcomp=Z,84nm,0.6s
BRJC   Barrancabermej  40.58 353   P      P       01 30 49.9 -1.2
       comp=Z,931nmcomp=Z,109nm,0.7s
PAMC   Pamplona, Colo  40.84 354   P      P       01 30 53.5 -0.3
       comp=Z,8µmcomp=Z,32nm,0.7s
DBBC   Dabeiba         40.95 349   P      P       01 30 56.2 +1.9
RCBR   Riachuelo       41.22  55   P      P       01 30 58.5 +2.0
RCBR                               pP     pP      01 31 30.1 -1.2
ZARC   Zaragoza, Cauc  41.22 351   P      P       01 30 56.0 -0.4
       comp=Z,2µmcomp=Z,240nm,0.9s
PTAC   Punta Ardita,   41.37 347   P      P       01 30 59.6 +2.1
       comp=Z,4µmcomp=Z,225nm,1.0s
MPGF   Montagnes des   41.43  25   P      P       01 30 58.1  0.0
MPGF                               pP     pP      01 31 31.1 -1.9
UREC   San Jos de Ur   41.57 350   P      P       01 30 59.3 +0.1
       comp=Z,892nmcomp=Z,52nm,1.1s
OCAC   Ocana           41.79 353   P      P       01 30 59.1 -2.0
       comp=Z,940nmcomp=Z,80nm,0.8s
APAC   Apartado, Choc  41.88 349   P      P       01 31 04.0 +2.3
       comp=Z,72nm,1.0s
SDV    Santo Domingo   42.25 357   P      P       01 31 04.2 -0.7
SDV    Santo Domingo   42.25 357  eP      P       01 31 04.4 -0.5
SDV    Santo Domingo   42.25 357   P      P       01 31 04.4 -0.5
       comp=Z,913nmcomp=Z,62nm,0.9s
BAUV   El Baul         42.28   1   P      P       01 31 04.3 -0.6
BAUV                               IAmb   IAmb    01 31 05.6
       comp=Z,222nm,1.0s
AZU    Azuero          42.53 343   P      P       01 31 08.8 +1.9
       comp=Z,72nm,1.1s
CAPC   Capurgana       42.73 348   P      P       01 31 10.1 +1.5
       comp=Z,53nm,1.0s
GMAL   Guarumal, Vera  42.74 342   P      P       01 31 11.0 +2.3
LCBC   Los crdobas,    42.78 349   P      P       01 31 10.9 +1.9
ARGC   Ariguani, Magd  43.48 352   P      P       01 31 15.1 +0.5
       comp=Z,2µmcomp=Z,270nm,0.9s
ZANG   Zanguenga, Cho  43.55 344  eS      pP      01 31 54.8 +3.8
SJCC   San Jacinto, C  43.63 351   P      P       01 31 14.9 -1.0
       comp=Z,5µmcomp=Z,481nm,1.1s
PCRV   Puerto La Cruz  43.69   6   LR     LR      01 50 32.7
       comp=Z,537nm,18.9s,slow=37
BCIP   Isla Barro Col  43.75 344   P      P       01 31 17.2 +0.4
BCIP                               IAmb   IAmb    01 31 19.4
       comp=Z,141nm,0.8s
BCIP   Isla Barro Col  43.75 344   P      P       01 31 17.2 +0.4
BCIP                               pmax   pmax
       comp=Z,141nm,0.8s
BCIP   Isla Barro Col  43.75 344⇓eP       P       01 31 18.8 +2.0
BCIP   Isla Barro Col  43.75 344   P      P       01 31 18.3 +1.5
KKNTU  Kakintº         43.92 341  eP      P       01 31 19.4 +1.3
CLLRA  Cordillera,     44.05 340⇑iP       P       01 31 21.4 +2.0
RBALA  Bur             44.05 341  eP      P       01 31 20.7 +1.5
PBNVO  Pueblo Nuevo,   44.08 341⇑eP       P       01 31 20.1 +0.8
BRU2   Volcan          44.12 340   P      P       01 31 21.6 +1.7
BRU2                               IAmb   IAmb    01 31 29.0
       comp=Z,131nm,1.2s
ALCO   Alturas Coton,  44.31 340  eP      P       01 31 23.1 +1.7
EDPE   Pejibaye, P     44.72 339⇓eP       P       01 31 27.2 +2.6
SMRC   Santa Marta, M  44.77 353   P      P       01 31 24.2 -0.6
PIEC   Cerro El Cedra  45.28 339⇑eP       P       01 31 31.1 +1.9
PIEC                              eS      pP      01 32 08.8 +3.7
LCR2   La Lucha 2      45.40 339  eP      P       01 31 30.0 -0.1
LCR2                              eS      pP      01 32 10.0 +4.0
VICA   Volcano Irazu   45.59 339  eP      P       01 31 34.4 +2.6
HDC    Heredia         45.68 339   P      P       01 31 33.9 +1.7
HDC                                IAmb   IAmb    01 31 35.9
       comp=Z,213nm,0.9s
HDC    Heredia         45.68 339  eP      P       01 31 32.8 +0.6
VPS8   V Poas          45.89 339  eP      P       01 31 36.5 +2.5
VPL2   V. Platanar     46.05 339⇑eP       P       01 31 37.6 +2.4
SOCE   Pocosol         46.20 338   P      P       01 31 38.1 +1.9
SOCE                               IAmb   IAmb    01 31 39.6
       comp=Z,235nm,1.1s
SOCE   Pocosol         46.20 338⇑eP       P       01 31 38.4 +2.3
JUNT   Juntas          46.21 338  eP      P       01 31 37.9 +1.8
JTS    Las Juntas de   46.21 338   P      P       01 31 37.8 +1.5
JTS    Las Juntas de   46.21 338   LR     LR      01 49 40.0
       comp=Z,188nm,20.8s,baz=146,slow=34
JTS    Las Juntas de   46.21 338   P      P       01 31 37.8 +1.5
JTS                                pmax   pmax
       comp=Z,95nm,1.2s
JTS    Las Juntas de   46.21 338  eP      P       01 31 37.8 +1.5
JTS    Las Juntas de   46.21 338   P      P       01 31 38.0 +1.7
JTS                                pP     pP      01 32 12.8 +0.4
JTS                                ScP    ScP     01 36 48.9 +1.2
VACR   Volcan Arenal   46.30 338⇑eP       P       01 31 39.0 +2.1
VARE2  V. Arenal       46.30 338  eP      P       01 31 38.8 +1.8
TABAC  Tabacon         46.35 338⇑eP       P       01 31 39.5 +2.1
TABAC                             eS      pP      01 32 17.1 +3.7
INVE   Universidad In  46.42 338  eP      P       01 31 39.9 +2.0
QUEB   Quebradon, Cot  46.51 338  eP      P       01 31 40.2 +1.7
TIMP   Tierras Morena  46.51 338  eP      P       01 31 40.2 +1.6
TENO   El Achiote      46.61 338⇑eP       P       01 31 40.7 +1.4
MOTZ   Rio Naranjo     46.62 338  eP      P       01 31 41.3 +1.8
CUI    Cuipilapa       46.63 338  eP      P       01 31 41.3 +1.8
CUI                               eS      pP      01 32 20.0 +4.3
COLC   Colonia         46.65 338  eP      P       01 31 41.5 +1.8
MESS   Mesas           46.71 338  eP      P       01 31 42.3 +2.1
VMAR   Armenia, Volca  46.76 338  eP      P       01 31 41.1 +0.6
VRLE   La Escondida,   46.81 338⇑eP       P       01 31 42.3 +1.3
LAPC   Finca la Perla  46.81 337  eP      P       01 31 42.5 +1.6
PEJA   Penjamo Buenos  46.90 338⇑eP       P       01 31 42.9 +1.3
ESPN   Las Esperanzas  47.82 339   P      P       01 31 49.5 +0.9
ESPN                               IAmb   IAmb    01 31 50.9
       comp=Z,246nm,1.5s
ACON   Acoyapa         47.86 338   P      P       01 31 49.2 +0.2
BOAB   BOACO BROADBAN48.47 338     P      P       01 31 53.5 -0.2
FDF    Fort de France  48.60  10   P      P       01 31 55.2 +0.6
FDF                                pP     pP      01 32 29.9 -0.5
VNA3   Neumayer Olymp  48.78 158 ⇓P       P       01 31 55.8 +0.4
       comp=Z,141nm,1.4s
VNA3                             ⇑S       S       01 38 47.1 +1.2
VNA1   Neumayer--Stat  49.05 157 ⇓P       P       01 31 58.2 +0.8
       comp=Z,164nm,0.9s
VNA2   Neumayer--Watz  49.41 158 ⇓P       P       01 32 00.5 +0.4
       comp=Z,342nm,0.6s,baz=283,slow=7.8
VNA2                             ⇑S       S       01 38 55.5 +1.0
       baz=155,slow=4.0
TGUH   Tegucigalpa,Un  50.50 337   P      P       01 32 09.5 +0.3
TGUH                               IAmb   IAmb    01 32 11.0
       comp=Z,216nm,0.8s
SNAA   Sanae           51.01 158 ⇓P       P       01 32 12.5 +0.2
       comp=Z,16µm,1.0s
SNAA                             ⇑S       S       01 39 17.3 +0.4
SNAA   Sanae           51.01 158   P      P       01 32 12.1 -0.2
SNAA   Sanae           51.01 158   P      P       01 32 12.5 +0.2
       comp=Z,264nm,0.8s,baz=286,slow=6.5,SNR=677
SNAA                               S      S       01 39 16.9 +0.1
       comp=Z,3.9nm,1.0s,baz=146,slow=23,SNR=13
       comp=Z,264nm,0.8s
SNAA   Sanae           51.01 158c iP      P       01 32 12.3 +0.1
SNAA                               pmax   pmax
       comp=Z,398nm,0.9s
PDPR   Patillas Dam,   51.37   4   P      P       01 32 15.3 -0.1
PDPR                               IAmb   IAmb    01 32 52.7
       comp=Z,158nm,0.9s
SJG    San Juan        51.46   3   P      P       01 32 15.4 -0.7
SJG                                IAmb   IAmb    01 32 53.4
       comp=Z,247nm,1.0s
SJG    San Juan        51.46   3   P      P       01 32 15.4 -0.7
SJG                                pmax   pmax
       comp=Z,247nm,1.0s
BANI   BANI            51.69 358   P      P       01 32 18.2 +0.3
MTDJ   Mount Denham    52.16 350   P      P       01 32 21.9 +0.5
MTDJ                               IAmb   IAmb    01 33 00.3
       comp=Z,119nm,1.0s
SDDR   Presa de Saban  52.30 357   P      P       01 32 22.7 +0.3
TROLL  Troll, Antarti  52.72 158 ⇓P       P       01 32 25.4 +0.4
       comp=Z,17µm,0.7s
TROLL                            ⇓S       S       01 39 41.0 +0.7
GTBY   Guantanamo Bay  53.52 353   P      P       01 32 31.6 +0.4
GTBY                               IAmb   IAmb    01 33 10.3
       comp=Z,102nm,0.7s
NVL    N'lazarevskaya  55.68 157  eP      P       01 32 46.0 -0.2
NVL                               e               01 33 45.3
NVL                               eS      S       01 40 14.6 -5.1
NVL                                pmax   pmax
       comp=Z,36nm,0.6s
NVL                                MLR    MLR
       comp=Z,128nm,19.0s
CMIG   Matias Romero   56.15 330   LR     LR      01 53 08.7
       comp=Z,125nm,21.7s,baz=158,slow=32
TEIG   Tepich          56.60 338   P      P       01 32 53.5 +0.2
TEIG                               pP     pP      01 33 30.1 -0.5
TEIG                               PcP    sP      01 33 49.2 +1.0
TEIG                               ScP    ScP     01 37 32.9 +0.6
QSPA   South Pole Qui  56.67 180   P      P       01 32 54.3 +0.8
       comp=Z,378nm,0.7s,baz=158,slow=1.2,SNR=1569
QSPA                               ScP    ScP     01 37 31.9 -0.3
       comp=Z,14nm,1.0s,baz=130,slow=5.0,SNR=4.0
QSPA                               S      S       01 40 35.5 +2.3
       comp=Z,2.8nm,0.9s,baz=230,slow=22,SNR=15
QSPA                               LR     LR      01 57 52.8
       comp=Z,247nm,19.3s,baz=181,slow=36
DWPF   Disney Wildern  62.48 348   P      P       01 33 33.8 +0.4
DWPF                               PcP    pP      01 34 12.4 +0.8
SBA    Scott Base      64.02 191   P      P       01 33 44.8 +1.8
SBA    Scott Base      64.02 191   P      P       01 33 44.5 +1.5
SBA                                PcP    PcP     01 34 17.4 +0.5
VNDA   Vanda           65.02 191   P      P       01 33 51.2 +1.7
       comp=Z,52nm,0.9s,baz=137,slow=5.8,SNR=235
VNDA                               LR     LR      02 01 28.2
       comp=Z,193nm,19.1s,baz=164,slow=35
       comp=Z,52nm,0.9s
VNDA   Vanda           65.02 191   P      P       01 33 51.0 +1.5
VNDA                               PcP    PcP     01 34 21.6 +0.5
BBSR   BB Station      65.71   4   P      P       01 33 54.8 +0.4
BBSR                               pP     pP      01 34 31.9 -0.5
BBSR                               sP     sP      01 34 48.6 -0.9
HKT    Hockley         68.12 335⇓iP       P       01 34 11.3 +1.7
HKT                                pmax   pmax
       comp=Z,32nm,1.2s
SLBS   Sierra La Lagu  69.06 320   P      P       01 34 17.5 +1.8
SLBS                               pP     pP      01 34 56.1 +0.9
BBTS   Babate          69.21  55   LR     LR      02 03 41.7
       comp=Z,184nm,20.4s,baz=111,slow=35
TAOE   Nuku Hiva Isla  69.55 273  eS      S       01 43 10.9 -3.7
       comp=Z,244nm,25.8s
TAOE   Nuku Hiva Isla  69.55 273  eLR     LR      01 55 42.3
       comp=Z,391nm,23.4s
TBI    Tubuai          69.96 255  eLQ     LQ      01 52 45.3
       comp=Z,1µm,29.0s
TBI                               eLR     LR      01 55 54.6
       comp=Z,892nm,26.2s
JCT    Junction City   70.08 332   P      P       01 34 22.7 +0.8
TXAR   Lajitas Array   70.69 328   P      P       01 34 26.5 +0.8
       comp=Z,9.1nm,0.7s,baz=148,slow=8.5,SNR=125
TXAR                               pP     pP      01 35 05.2 +0.8
       comp=Z,20nm,0.8s,baz=158,slow=8.3,SNR=10
TXAR                               PKPPKP P'P'df  02 02 20.1 -1.2
       comp=Z,1.1nm,0.9s,baz=298,slow=2.7,SNR=10
       comp=Z,9.1nm,0.7s
WVT    Waverly         71.56 344   P      P       01 34 30.4 -0.2
WVT    Waverly         71.56 344   P      P       01 34 30.8 +0.3
WVT                                pP     pP      01 35 08.4 -0.9
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TPB05 Hovey Rd          71.91 329   P        P        01 34 34.0 +1.1
TPB16 Coyonosa          72.06 329   P        P        01 34 34.7 +0.9
PCOS  Crockett Middl    72.41 329   P        P        01 34 29.8 -6.1
DBIC  Dimbokro          72.57  69   P        P        01 34 37.7 +0.6
      comp=Z,21nm,0.7s,baz=256,slow=6.2,SNR=23
      comp=Z,21nm,0.7s
MAW   Mawson            72.83 163   P        P        01 34 38.1 +0.3
      comp=Z,26nm,1.3s
MAW   Mawson            72.83 163   P        P        01 34 38.1 +0.3
      comp=Z,81nm,0.8s,baz=212,slow=6.7,SNR=102
      comp=Z,81nm,0.8s
PPT2  Papeete2          72.88 260  eP        P        01 34 40.4 +1.3
      comp=Z,99nm,24.2s
PPT2                               eS        S        01 43 48.8 -4.0
      comp=Z,177nm,24.8s
PPT2  Papeete2          72.88 260  eLQ       LQ       01 54 08.7
      comp=Z,451nm,28.0s
PPT   Papeete           72.89 260   P        P        01 34 40.1 +1.0
      comp=Z,87nm,0.7s,baz=255,slow=20,SNR=6.4
      comp=Z,87nm,0.7s
WCI   Wyandotte Cave    73.24 346   P        P        01 34 39.9 -0.6
CCM   Cathedral Cave    74.23 342   P        P        01 34 46.3  0.0
ANMO  Albuquerque       76.71 329c iP        P        01 35 01.5 +0.8
ANMO                                pmax     pmax
      comp=Z,18nm,1.0s
TSUM  Tsumeb            76.80 104   LR       LR       02 05 39.5
      comp=Z,144nm,18.7s,baz=167,slow=33
TSUM  Tsumeb            76.80 104 i P        P        01 35 00.7 -1.0
KOOLE Kule              76.94 109 i P        P        01 35 02.9 +0.5
PHPEN Phepeng           77.75 112 i P        P        01 35 07.3 +0.5
BOSA  Boshof            77.94 116   P        P        01 35 08.0 +0.1
      comp=Z,49nm,0.7s,baz=244,slow=4.2,SNR=139
      comp=Z,49nm,0.7s
BOSA  Boshof            77.94 116   P        P        01 35 08.0 +0.1
BOSA  Boshof            77.94 116 i P        P        01 35 06.1 -1.8
GRTLG Ghanzi            78.60 108 i P        P        01 35 12.2 +0.6
KGCAE Kacgae            78.60 110 i P        P        01 35 11.9 +0.3
CTZ   Chatham Island    78.76 225   P        P        01 35 13.2 +1.3
MAKGR Makgori           79.06 114 i P        P        01 35 14.1  0.0
SKOMA Sekoma            79.08 112 i P        P        01 35 14.4 +0.3
QNGWA Qangwa            79.52 106 i P        P        01 35 17.3 +0.6
LBTB  Lobatse           80.09 113   LR       LR       02 08 06.7
      comp=Z,86nm,18.6s,baz=224,slow=34
LBTB  Lobatse           80.09 113 i P        P        01 35 18.2 -1.4
KDWAN Kaudwane          80.24 111 i P        P        01 35 21.0 +0.5
PFO   Pinyon Flats O    80.39 321   LR       LR       02 05 03.8
      comp=Z,136nm,18.1s,baz=98,slow=31
PFO   Pinyon Flats O    80.39 321deP         P        01 35 23.1 +2.3
PFO                                 pmax     pmax
      comp=Z,21nm,1.0s
ISCO  Idaho Springs     80.52 332   P        P        01 35 22.8 +1.2
PCAN  Candelaria        80.90  31  eP        pP       01 36 05.0 +2.4
PCAN                              i IAmb     IAmb     01 36 07.2
      comp=Z,101nm,1.3s
PCAN  Candelaria        80.90  31  eP        pP       01 36 05.0 +2.4
PCAN                              i IAmb     IAmb     01 36 07.2
      comp=Z,101nm,1.3s
PICO  Pico              80.96  31  eP        pP       01 36 05.1 +2.2
PICO                              i IAmb     IAmb     01 36 09.5
      comp=Z,141nm,1.2s
PICO  Pico              80.96  31  eP        pP       01 36 05.1 +2.2
PICO                              i IAmb     IAmb     01 36 09.5
      comp=Z,141nm,1.2s
PID   Ribeirinha        81.04  31  eP        pP       01 36 05.5 +2.1
PID                               i IAmb     IAmb     01 36 08.3
      comp=Z,208nm,1.6s
PID   Ribeirinha        81.04  31  eP        pP       01 36 05.5 +2.1
PID                               i IAmb     IAmb     01 36 08.3
      comp=Z,208nm,1.6s
LPHEP Lephephe          81.18 112 i P        P        01 35 25.9 +0.5
PMAN  Manadas           81.21  31  eP        pP       01 36 05.5 +1.3
PMAN                              i IAmb     IAmb     01 36 09.0
      comp=Z,298nm,1.4s
PMAN  Manadas           81.21  31  eP        pP       01 36 05.5 +1.3
PMAN                              i IAmb     IAmb     01 36 09.0
      comp=Z,298nm,1.4s
ROSA  Rosais            81.22  31  eP        pP       01 36 05.8 +1.5
ROSA                              i IAmb     IAmb     01 36 09.1
      comp=Z,198nm,1.6s
ROSA  Rosais            81.22  31  eP        pP       01 36 05.8 +1.5
ROSA                              i IAmb     IAmb     01 36 09.1
      comp=Z,198nm,1.6s
PSMN  Pico do Norte,    81.24  34  eP        pP       01 36 05.5 +1.0
PSMN                              i IAmb     IAmb     01 36 08.2
      comp=Z,112nm,1.9s
PSMN  Pico do Norte,    81.24  34  eP        pP       01 36 05.5 +1.0
PSMN                              i IAmb     IAmb     01 36 08.2
      comp=Z,112nm,1.9s
ADH   Angra Heroismo    81.61  32  eP        pP       01 36 08.4 +2.1
ADH                               i IAmb     IAmb     01 36 10.7
      comp=Z,192nm,1.5s
ADH   Angra Heroismo    81.61  32  eP        pP       01 36 08.4 +2.1
ADH                               i IAmb     IAmb     01 36 10.7
      comp=Z,192nm,1.5s
TORD  Torodi Ar. Bea    81.61  68   P        P        01 35 27.8 +0.2
      comp=Z,81nm,0.3s,baz=266,slow=6.2,SNR=2.0
TORD                                pP       pP       01 36 05.5 -1.5
      comp=Z,113nm,0.3s,baz=272,slow=3.7,SNR=2.3
      comp=Z,81nm,0.3s
CMLA  Cha da Macela     81.64  33  eP        pP       01 36 09.0 +2.4
CMLA                              i IAmb     IAmb     01 36 10.9
      comp=Z,73nm,1.6s
CMLA  Cha da Macela     81.64  33  eP        pP       01 36 09.0 +2.4
CMLA                              i IAmb     IAmb     01 36 10.9
      comp=Z,73nm,1.6s
PAGU  Agualva, Azore    81.72  32  eP        pP       01 36 08.4 +1.5
PAGU                              i IAmb     IAmb     01 36 11.8
      comp=Z,195nm,1.2s
PAGU  Agualva, Azore    81.72  32  eP        pP       01 36 08.4 +1.5
PAGU                              i IAmb     IAmb     01 36 11.8
      comp=Z,195nm,1.2s
BART  Pico Bartolome    81.82  34  eP        pP       01 36 08.3 +0.7
BART                              i IAmb     IAmb     01 36 11.8
      comp=Z,96nm,1.3s
BART  Pico Bartolome    81.82  34  eP        pP       01 36 08.3 +0.7
BART                              i IAmb     IAmb     01 36 11.8
      comp=Z,96nm,1.3s
PMOZ  Porto Moniz, M    82.02  42  epP       pP       01 36 09.7 +0.9
PMOZ                              i Amb               01 36 13.8
      comp=Z,85nm,1.7s
PMOZ                               esP       sP       01 36 22.1 -3.5
PMAR  Madeira           82.11  42  epP       pP       01 36 10.0 +0.6
PMAR                              i Amb               01 36 11.7
      comp=Z,111nm,1.4s
MREMI Moremi            82.84 112 i P        P        01 35 34.6 +0.6
SOOWA Sowa              82.97 110 i P        P        01 35 35.5 +0.7
BROLN Tlhalogang        83.55 111 i P        P        01 35 38.0 +0.2
RSSD  Black Hills       83.69 335   P        P        01 35 38.9 +1.0
PDAR  Pinedale Array    84.60 331   P        P        01 35 43.3 +0.7
      comp=Z,2.7nm,0.7s,baz=137,slow=5.2,SNR=17
PDAR                                pP       pP       01 36 23.2 +0.7
      comp=Z,10nm,0.6s,baz=142,slow=6.2,SNR=13
PDAR                                PKKPbc   PKKPbc   01 53 51.7 -1.8
      comp=Z,1.3nm,0.6s,baz=66,slow=0.9,SNR=11
PDAR                                PKPPKP   P'P'df   02 01 59.8 +3.4
      comp=Z,0.4nm,0.6s,baz=1.9,slow=4.5,SNR=3.8
      comp=Z,2.7nm,0.7s
SYZ   Scrubby Hill      84.66 216   P        P        01 35 43.5 +0.7
MQZ   McQueen's Vall    84.81 220   P        P        01 35 44.4 +0.8
PAWZ  Paruwai Farm      84.82 223   P        P        01 35 44.9 +1.1
TUZ   Tuapeka           84.82 217   P        P        01 35 44.5 +0.9
MUSN  Musina, Limpop    84.85 113 i P        P        01 35 43.8 -0.4
MSWZ  Moikau Station    84.90 223   P        P        01 35 45.5 +1.4
MTW   Mount Morrison    84.93 223   P        P        01 35 45.8 +1.6
ODZ   Otahua Downs      84.94 218   P        P        01 35 44.8 +0.5
KAHZ  Kahuranaki        85.01 225   P        P        01 35 47.2 +2.5
NVAR  Mina Array Bea    85.06 323   P        P        01 35 46.8 +1.8
      comp=Z,5.7nm,0.8s,baz=158,slow=5.7,SNR=25
NVAR                                pP       pP       01 36 25.5 +0.4
      comp=Z,27nm,0.8s,baz=150,slow=5.1,SNR=12
NVAR                                PKKPbc   PKKPbc   01 53 51.6 -0.4
      comp=Z,1.5nm,0.6s,baz=291,slow=2.7,SNR=8.9
      comp=Z,5.7nm,0.8s
GVZ   Greta Valley S    85.10 221   P        P        01 35 46.0 +0.9
KHZ   Kahutara          85.19 221   P        P        01 35 46.9 +1.4
TMZ   Timaru            85.21 219   P        P        01 35 46.3 +0.7
MOPA  Mopani            85.33 115 i P        P        01 35 46.5 -0.1
PNHZ  Pukenui           85.33 224   P        P        01 35 48.4 +2.1
ELK   Elko              85.40 327   LR       LR       02 10 25.1
      comp=Z,193nm,18.8s,baz=150,slow=33
KRHZ  Kereru            85.41 225   P        P        01 35 48.9 +2.2
TCW   Tory Channel      85.59 222   P        P        01 35 49.1 +1.7
LBZ   Lake Benmore      85.64 218   P        P        01 35 48.1 +0.3
LTZ   Lake Taylor       85.64 220   P        P        01 35 49.1 +1.3
BKZ   Black Stump Fm    85.65 225   P        P        01 35 50.1 +2.2
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RPZ   Rata Peaks        85.65 219   P        P        01 35 48.8 +1.0
WHZ   Wether Hill Ro    85.70 216   P        P        01 35 49.0 +1.0
THZ   Tophouse          85.98 221   P        P        01 35 51.1 +1.5
MLZ   Mavora Lakes      85.99 216   P        P        01 35 49.9 +0.5
DUWZ  D'Urville Isla    86.06 223   P        P        01 35 51.5 +1.6
NNZ   Nelson            86.08 222   P        P        01 35 52.1 +2.2
WHVZ  Whangaehu Hut     86.10 225   P        P        01 35 52.1 +1.7
TRVZ  Turoa             86.12 225   P        P        01 35 52.3 +1.8
ETVZ  East Tongariro    86.13 225   P        P        01 35 52.0 +1.6
MAVZ  Matarangi         86.13 225   P        P        01 35 51.9 +1.3
OTVZ  Oturere           86.14 225   P        P        01 35 52.3 +1.8
NGZ   Ngauruhoe         86.17 225   P        P        01 35 52.4 +1.8
NTVZ  North Tongarir    86.17 225   P        P        01 35 51.6 +1.0
WVZ   Waitaha Valley    86.26 219   P        P        01 35 49.9 -0.8
DCZ   Deep Cove         86.39 216   P        P        01 35 51.2 -0.2
FOZ   Fox Glacier       86.42 219   P        P        01 35 52.1 +0.5
JCZ   Jackson Bay       86.57 218   P        P        01 35 52.6 +0.2
DSZ   Denniston Nort    86.60 221   P        P        01 35 52.6 +0.1
ULM   Lac du Bonnet     86.81 343   P        P        01 35 52.0 -0.9
      comp=Z,5.5nm,0.6s,baz=164,slow=4.3,SNR=17
ULM                                 pP       pP       01 36 33.0 -0.1
      comp=Z,46nm,0.8s,baz=159,slow=3.9,SNR=18
ULM                                 PKKPbc   PKKPbc   01 53 45.8 -2.5
      comp=Z,5.1nm,0.7s,baz=2.6,slow=2.5,SNR=11
      comp=Z,5.5nm,0.6s
ULM   Lac du Bonnet     86.81 343   P        P        01 35 52.0 -0.9
ULM                                 *PP      pP       01 36 33.0 -0.1
QRZ   Quartz Range      86.82 222   P        P        01 35 53.8 +0.2
KRI   Karoi             87.71 109 i P        P        01 35 60.0 +1.6
SCHQ  Schefferville     88.06   1   P        P        01 35 58.0 -0.8
      comp=Z,3.2nm,0.7s,baz=162,slow=6.5,SNR=5.9
SCHQ                                PKKPbc   PKKPdf   01 53 42.4 +2.0
      comp=Z,2.4nm,0.9s,baz=179,slow=2.8,SNR=3.7
      comp=Z,3.2nm,0.7s
CHIPN CHIPINGE          88.15 113 i P        P        01 36 01.3 +1.0
MDT   Midelt            89.53  49   LR       LR       02 16 14.2
      comp=Z,86nm,18.1s,baz=232,slow=35
MORF  Marmelete         90.10  44  epP       pP       01 36 50.4 +1.5
MORF                              i Amb               01 37 43.0
      comp=Z,39nm,1.6s
PTEO  Sao Teotonio      90.22  44  eP        P        01 36 10.6 +1.3
PTEO                               epP       pP       01 36 51.2 +1.8
PTEO                              i Amb               01 36 51.9
      comp=Z,61nm,1.4s
PCVE  Castro Verde      90.68  44  epP       pP       01 36 51.9 +0.4
PCVE                              i Amb               01 36 53.9
      comp=Z,34nm,1.5s
PVAQ  Vaqueiros         90.71  44  eP        P        01 36 11.6  0.0
PVAQ                               epP       pP       01 36 52.2 +0.5
PVAQ                              i Amb               01 36 55.6
      comp=Z,36nm,1.5s
MESJ  Messejana         90.72  44  eP        P        01 36 12.1 +0.5
MESJ                               epP       pP       01 36 51.8 +0.1
MESJ                              i Amb               01 36 55.7
      comp=Z,41nm,1.6s
PBEJ  Beja              91.05  44  epP       pP       01 36 53.7 +0.4
PBEJ                              i Amb               01 36 55.5
      comp=Z,26nm,1.1s
EVO   Evora             91.31  43  epP       pP       01 36 54.5  0.0
EVO                               i Amb               01 36 56.4
      comp=Z,21nm,1.3s
PSBE  So Bento          91.54  42  epP       pP       01 36 56.1 +0.5
PSBE                              i Amb               01 36 58.5
      comp=Z,57nm,1.8s
PMTG  Montargil         91.56  43  eP        P        01 36 15.5  0.0
PMTG                               epP       pP       01 36 55.4 -0.2
PMTG                              i Amb               01 36 57.6
      comp=Z,64nm,1.2s
PBAR  Barrancos         91.63  44  epP       pP       01 36 55.7 -0.3
PBAR                              i Amb               01 37 09.3
      comp=Z,20nm,1.5s
PESTR Estremoz          91.78  43  epP       pP       01 36 57.5 +0.8
PESTR                             i Amb               01 37 00.5
      comp=Z,33nm,1.4s
PSARD Sardoal           91.95  42  epP       pP       01 36 57.4 -0.1
PSARD                             i Amb               01 36 59.6
      comp=Z,20nm,1.7s
PCAS  Casmilo, Conde    92.08  42  epP       pP       01 36 58.7 +0.7
PCAS                              i Amb               01 37 01.6
      comp=Z,55nm,2.3s
NEW   Newport           92.16 330   LR       LR       02 14 40.6
      comp=Z,114nm,19.7s,baz=134,slow=33
PMRV  Marv??o           92.27  43  eP        P        01 36 18.4 -0.4
PMRV                               epP       pP       01 36 58.2 -0.7
PMRV                              i Amb               01 37 01.1
      comp=Z,26nm,1.7s
PCBR  Castelo Branco    92.50  43  eP        P        01 36 19.8 -0.1
PCBR                               epP       pP       01 36 59.2 -0.8
PCBR                              i Amb               01 37 02.2
      comp=Z,31nm,1.4s
MTE   Manteigas         92.85  42  eP        P        01 36 24.6 +3.1
MTE                                epP       pP       01 37 01.5 -0.1
MTE                               i Amb               01 37 03.3
      comp=Z,45nm,1.3s
PVIS  Viseu             92.86  42  epP       pP       01 36 59.8 -1.9
PVRL  Vila Real         93.34  41  epP       pP       01 37 03.1 -0.8
PVRL                              i Amb               01 37 06.1
      comp=Z,42nm,1.7s
POLO  Lamas de Olo      93.37  41  epP       pP       01 37 04.1  0.0
POLO                              i Amb               01 37 07.4
      comp=Z,12nm,1.8s
PCAB  Cabril            93.47  41  epP       pP       01 37 02.7 -1.8
PCAB                              i Amb               01 37 05.4
      comp=Z,31nm,1.3s
PGAV  Gavieira, Arco    93.51  41  epP       pP       01 37 03.3 -1.4
MVO   Moncorvo          93.65  42  eP        P        01 36 25.4 +0.2
MVO                                epP       pP       01 37 04.6 -0.8
MVO                               i Amb               01 37 08.8
      comp=Z,30nm,1.2s
PBRG  Braganca          94.24  42  eP        P        01 36 26.8 -1.2
PBRG                               epP       pP       01 37 07.2 -0.9
PBRG                              i Amb               01 37 10.6
      comp=Z,26nm,1.5s
ESDC  Sonseca Array     94.42  45   P        P        01 36 29.6 +0.9
      comp=Z,1.7nm,1.0s,baz=246,slow=3.7,SNR=9.8
ESDC                                pP       pP       01 37 08.5 -0.4
      comp=Z,10nm,1.0s,baz=242,slow=4.3,SNR=22
      comp=Z,1.7nm,1.0s
KEST  Kesra            100.46  54   pP       pP       01 37 36.8 +0.4
      comp=Z,4.0nm,0.8s,baz=26,slow=5.6,SNR=5.5
YKA   Yellowknife Ar   102.52 340   P        Pdif     01 37 05.2 +0.7
      comp=Z,0.7nm,0.8s,baz=136,slow=3.8,SNR=4.3
YKA                                 pP       pPdif    01 37 45.0  0.0
      comp=Z,2.1nm,0.8s,baz=140,slow=3.7,SNR=8.4
YKA                                 PP       PP       01 41 18.4 -1.5
      comp=Z,1.6nm,0.9s,baz=139,slow=7.0,SNR=5.5
YKA                                 PKKPbc   PKKPbc   01 53 03.6 -2.6
      comp=Z,0.8nm,0.8s,baz=319,slow=3.5,SNR=6.9
EKA   Eskdalemuir Ar   104.81  33   pPdiff   pPdif    01 37 54.1 -1.0
      comp=Z,14nm,1.1s,baz=232,slow=4.1,SNR=15
EKA                                 PKKPbc   PKKPbc   01 52 59.3 +0.2
      comp=Z,0.6nm,0.6s,baz=21,slow=7.2,SNR=3.4
DAVA  Damuels          107.01  44 i PKiKP    PKiKP    01 41 33.5 -0.3
      comp=Z,3.9nm,0.7s
DAVA                               ePKKP     PKKPbc   01 52 49.9 -2.3
      comp=Z,8.4nm,0.9s
FETA  Feichten         107.37  45  ePKiKP    PKiKP    01 41 35.3 +0.9
      comp=Z,3.4nm,1.3s
FETA                              i PKKP     PKKPbc   01 52 48.9 -2.2
      comp=Z,4.6nm,1.0s
RETA  Reutte           107.63  44 i PKiKP    PKiKP    01 41 35.7 +0.9
      comp=Z,4.6nm,1.1s
RETA                               ePKKP     PKKPbc   01 52 49.0 -1.1
      comp=Z,3.0nm,0.9s
SQTA  Sankt Quirin     107.75  45  ePKiKP    PKiKP    01 41 34.1 -1.0
      comp=Z,2.4nm,0.7s
SQTA                              i PKKP     PKKPbc   01 52 48.0 -1.8
      comp=Z,3.8nm,0.8s
MOTA  Moosalm          107.75  45 i PKiKP    PKiKP    01 41 36.3 +1.2
      comp=Z,5.9nm,1.1s
MOTA                              i PKKP     PKKPbc   01 52 46.7 -3.2
      comp=Z,3.7nm,0.7s
WTTA  Wattenberg       108.03  45 i PKiKP    PKiKP    01 41 36.8 +1.1
      comp=Z,5.5nm,1.1s
WTTA                               ePKKP     PKKPbc   01 52 47.7 -1.3
      comp=Z,9.5nm,0.9s
WATA  Walderalm        108.03  45  ePKiKP    PKiKP    01 41 36.4 +0.8
      comp=Z,3.1nm,0.8s
WATA                              i PKKP     PKKPbc   01 52 48.1 -0.9
      comp=Z,2.8nm,0.9s
ABTA  Abfaltersbach    108.29  46 i PKiKP    PKiKP    01 41 36.9 +0.8
      comp=Z,8.2nm,1.1s
ABTA                               ePKKP     PKKPbc   01 52 46.4 -1.6
      comp=Z,3.7nm,0.7s
LESA  Schwarzleotal    108.72  45  ePKiKP    PKiKP    01 41 38.0 +1.1
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      comp=Z,4.2nm,1.0s
LESA                               ePKKP     PKKPbc   01 52 45.6 -1.1
      comp=Z,4.0nm,0.9s
MYKA  Terra Mystica    108.91  46 i PKiKP    PKiKP    01 41 38.5 +1.3
      comp=Z,7.8nm,1.3s
MYKA                              i PKKP     PKKPbc   01 52 45.0 -1.0
      comp=Z,4.1nm,1.1s
N31M  Braeburn, Yuko   109.00 332   P        PKiKP    01 41 38.8 +1.9
      baz=126
OBKA  Obir             109.40  47  ePKiKP    PKiKP    01 41 39.3 +1.1
      comp=Z,1.9nm,0.8s
OBKA                               ePKKP     PKKPbc   01 52 43.2 -1.3
      comp=Z,3.1nm,1.4s
BIOA  Bad Ischl, Aus   109.42  45 i PKiKP    PKiKP    01 41 39.5 +1.4
      comp=Z,2.0nm,0.6s
BIOA                               ePKKP     PKKPab   01 52 49.8 -4.0
      comp=Z,3.0nm,0.7s
N30M  Aishikik Lake    109.50 332   P        PKiKP    01 41 38.4 +0.5
      baz=125
SOKA  Soboth           109.78  47  ePKiKP    PKiKP    01 41 39.4 +0.5
      comp=Z,3.2nm,1.2s
SOKA                              i PKKP     PKKPbc   01 52 42.1 -1.2
      comp=Z,2.3nm,1.0s
MOA   Molln            109.87  45  ePKiKP    PKiKP    01 41 40.7 +1.8
      comp=Z,5.6nm,1.4s
MOA                               i PKKP     PKKPbc   01 52 42.5 -0.4
      comp=Z,3.7nm,1.1s
GERES GERESS Array B 110.01  44     PKiKP    PKiKP    01 41 39.5 +0.3
      comp=Z,2.1nm,0.8s,baz=222,slow=1.8,SNR=15
GERES                               PP       PP       01 42 21.5 +6.0
      comp=Z,1.5nm,0.8s,baz=217,slow=4.7,SNR=5.5
GERES                               PKKPbc   PKKPbc   01 52 42.4 -0.2
      comp=Z,1.7nm,0.9s,baz=45,slow=2.6,SNR=11
YUK4  Talbot Arm       110.05 331   P        PKiKP    01 41 39.4 +0.3
      baz=124
C36M  Paulatuk         110.20 342   P        PKiKP    01 41 40.3 +1.4
      baz=133
ARSA  Arzberg          110.34  46 i PKiKP    PKiKP    01 41 40.0 +0.1
      comp=Z,3.0nm,1.1s
ARSA                              i PKKP     PKKPbc   01 52 40.8 -0.6
      comp=Z,1.9nm,0.8s
O28M  Mount Upton      110.37 330   P        PKiKP    01 41 40.8 +1.0
      baz=122
M29M  Somme Creek      110.59 332   P        PKiKP    01 41 40.6 +0.7
      baz=123
CLL   Collm            110.77  42 i PKIKP    PKiKP    01 41 40.9 +0.4
CLL                                 pmax     pmax
      comp=Z,38nm,3.0s
CLL   Collm            110.77  42 i PKiKP    PKiKP    01 41 40.9 +0.4
      comp=Z,38nm,3.0s
CLL                               i x        x        01 42 05.9
MESA  MESA             110.79 329   P        PKiKP    01 41 40.3 -0.2
      baz=121
L29M  L29M             110.83 333   P        PKiKP    01 41 41.0 +0.7
      baz=123
CONA  Conrad Observa   110.86  46  ePKiKP    PKiKP    01 41 41.4 +0.5
      comp=Z,1.2nm,0.8s
CONA                              i PKKP     PKKPbc   01 52 39.8  0.0
      comp=Z,4.5nm,1.0s
CTG   Chitna Glacier   110.95 330   P        PKiKP    01 41 41.1 +0.4
      baz=122
J30M  Hart River       110.98 335   P        PKiKP    01 41 41.4 +0.7
      baz=124
H31M  Peel River       111.00 336   P        PKiKP    01 41 40.9 +0.3
      baz=126
K29M  Barlow Dome      111.00 334   P        PKiKP    01 41 40.9 +0.1
      baz=124
RONA  Rosalia, Austr   111.01  46  ePKiKP    PKiKP    01 41 41.4 +0.3
      comp=Z,3.7nm,1.3s
RONA                               ePKKP     PKKPab   01 52 49.9 +3.1
      comp=Z,3.3nm,1.4s
YUK3  Moose Creek      111.02 331   P        PKiKP    01 41 41.2 +0.3
      baz=122
BVCY  Beaver Creek     111.51 332   P        PKiKP    01 41 41.5 -0.1
      baz=121
CRQE  Cirque           111.58 329   P        PKiKP    01 41 42.2 +0.3
      baz=120
G31M  Satah River      111.63 337   P        PKiKP    01 41 42.0 +0.4
      baz=125
KAIM  Kayak Island     111.73 328   P        PKiKP    01 41 42.5 +0.4
      baz=120
MCARA McCarthy VSAT    111.86 330   P        PKiKP    01 41 42.6 +0.3
      baz=120
M27K  Edge Creek, AK   111.89 331   P        PKiKP    01 41 42.5 +0.1
      baz=121
MODS  Modra-Piesok     111.90  46  ePP       PP       01 42 23.0 -6.0
MODS                               ePDIFF    PKKPdf   01 52 53.7 -1.9
EPYK  Eagle Plains     112.12 336   P        PKiKP    01 41 41.9 -0.7
      baz=123
L27K  Beaver Creek,    112.23 332   P        PKiKP    01 41 43.3 +0.3
      baz=120
G30M  tAoh Zraii Nji   112.30 337   P        PKiKP    01 41 43.4 +0.4
      baz=124
M26K  Nabesna, AK      112.36 331   P        PKiKP    01 41 43.5 +0.3
      baz=120
F30M  Barrier River    112.51 338   P        PKiKP    01 41 44.0 +0.7
      baz=124
H29M  Whitestone       112.60 336   P        PKiKP    01 41 44.3 +0.8
      baz=122
EYAK  Cordova Ski Ar   112.62 329   P        PKiKP    01 41 44.0 +0.4
      baz=118
N25K  Chitina, Valde   112.63 330   P        PKiKP    01 41 44.5 +0.7
      baz=119
BOVS  Bovan            112.64  52  ⇑P        PKiKP    01 41 44.8 +0.5
I28M  Miner Creek      112.75 335   P        PKiKP    01 41 44.5 +0.5
      baz=121
K27K  Chicken          112.81 333   P        PKiKP    01 41 44.7 +0.8
      baz=120
G29M  Pine Creek       112.85 336   P        PKiKP    01 41 44.5 +0.5
      baz=122
P23K  Montague Islan   113.09 328   P        PKiKP    01 41 45.3 +0.7
      baz=117
KLU   Klutina          113.14 329   P        PKiKP    01 41 45.5 +0.7
      baz=118
HARP  HAARP            113.24 331   P        PKiKP    01 41 45.1 +0.2
      baz=118
GLI   Glacier Island   113.36 329   P        PKiKP    01 41 45.5 +0.4
      baz=117
BZS   Buzias           113.41  50  ⇑P        PKiKP    01 41 45.2 -0.5
I27K  Kandik River     113.43 334   P        PKiKP    01 41 46.0 +0.8
      baz=120
SCRK  Sand Creek       113.52 332   P        PKiKP    01 41 46.0 +0.5
      baz=118
M24K  Tolsona, Glenn   113.53 330   P        PKiKP    01 41 46.2 +0.7
      baz=117
LANS  Liptovska Anna   113.55  46  ePP       PP       01 42 44.5 +3.9
LANS                               ePDIFF    PKKPab   01 52 39.0 +3.4
E29M  Blow River       113.60 338   P        PKiKP    01 41 46.6 +1.2
      baz=122
J26L  Joseph Creek     113.61 333   P        PKiKP    01 41 46.6 +1.0
      baz=118
HERR  Herculane        113.62  51  ⇑P        PKiKP    01 41 46.6 +0.5
PAX   Paxson           113.64 331   P        PKiKP    01 41 46.6 +0.9
      baz=118
H27K  Steamboat Moun 113.71 335     P        PKiKP    01 41 46.1 +0.4
      baz=120
RIDG  Independent Ri   113.75 332   P        PKiKP    01 41 46.3 +0.4
      baz=118
SURR  Surduc           113.79  50  ⇑P        PKiKP    01 41 47.1 +0.7
F28M  Old Crow         113.83 337   P        PKiKP    01 41 46.6 +0.7
      baz=120
I26K  Coal Creek Min   113.84 334   P        PKiKP    01 41 46.4 +0.5
      baz=118
SCM   Sheep Creek Mo   113.89 329   P        PKiKP    01 41 47.0 +0.8
      baz=116
PWL   Port Wells       113.89 328   P        PKiKP    01 41 46.6 +0.4
      baz=116
G27K  Doyon Strip      114.04 336   P        PKiKP    01 41 47.4 +1.1
      baz=119
K24K  Donnelly Dome    114.14 332   P        PKiKP    01 41 47.2 +0.6
      baz=117
NB2   NORSAR Subarra114.27  32      PKPdf    PKPdf    01 41 46.7 -0.2
      comp=Z,5.3nm,1.4s,baz=248,slow=1.9
NB2                                 PKKP     PKKPbc   01 52 27.7 -1.0
      comp=Z,4.1nm,0.6s,baz=58,slow=1.6
NB2   NORSAR Subarra114.27  32      P        PKKPab   01 52 33.0 +1.2
      comp=Z,6.9nm,0.7s,baz=67,slow=4.6
NB2   NORSAR Subarra114.27  32      PKPdf    PKPdf    01 41 46.7 -0.2
      baz=248,slow=1.9
NB2   NORSAR Subarra114.27  32      P        PKKPab   01 52 33.0 +1.2
      baz=67,slow=4.6
NOA   NORSAR Array B 114.27  32     PKP      PKPdf    01 41 46.5 -0.4
      comp=Z,0.5nm,0.6s,baz=250,slow=2.2,SNR=4.0
NOA                                 PKKPbc   PKKPab   01 52 33.4 +1.6
      comp=Z,5.2nm,0.7s,baz=66,slow=4.5,SNR=42
SML   Sawmill          114.31 329   P        PKiKP    01 41 47.2 +0.3
      baz=116
J25K  Salcha River,    114.35 333   P        PKiKP    01 41 47.2 +0.2
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      baz=117
WAT6  Susitna Watana   114.39 330   P       PKiKP    01 41 47.7 +0.5
      baz=116
DHY   Denali Highway   114.46 331   P       PKiKP    01 41 48.1 +0.7
      baz=116
BRSE  Bradley Lake S   114.49 327   P       PKiKP    01 41 48.2 +0.8
      baz=115
KDAK  Kodiak Island    114.55 324   P       PKiKP    01 41 48.5 +1.0
      baz=114
PMR   Palmer           114.56 329   P       PKiKP    01 41 48.5 +1.2
      baz=115
RC01  Rabbit Creek A   114.61 328   P       PKiKP    01 41 47.8 +0.3
      baz=115
OHAK  Old Harbor       114.67 323   P       PKiKP    01 41 48.0 +0.4
      baz=114
E27K  Coleen River     114.69 337   P       PKiKP    01 41 48.1 +0.6
      baz=119
Q20K  Shuyak Island    114.80 325   P       PKiKP    01 41 48.6 +0.7
      baz=114
PRP   Porcupine Dome   114.82 333   P       PKiKP    01 41 48.4 +0.5
      baz=116
WAT1  Susitna Watana   114.84 330   P       PKiKP    01 41 48.4 +0.4
      baz=115
G26K  Porcupine Rive   114.84 335   P       PKiKP    01 41 48.5 +0.7
      baz=117
SII   Sitkinak Islan   114.85 323   P       PKiKP    01 41 48.7 +0.6
      baz=114
HDA   Harding Lake     114.88 332   P       PKiKP    01 41 48.3 +0.4
      baz=116
KLBR  Kellerberrin     114.89 186   P       PKiKP    01 41 48.6 -0.6
D27M  Malcolm River    114.99 338   P       PKPdf    01 41 49.0 +0.9
      baz=119
HFS   Hagfors          115.00  33   PKP     PKPdf    01 41 47.5 -0.8
      comp=Z,1.5nm,0.6s,baz=226,slow=6.0,SNR=7.6
HFS                                 PKKPbc  PKKPab   01 52 30.3 +1.7
      comp=Z,8.9nm,0.6s,baz=104,slow=4.7,SNR=51
ILAR  Eielson Array    115.01 332   PKP     PKPdf    01 41 47.7 -0.5
      comp=Z,1.9nm,0.8s,baz=199,slow=1.2,SNR=14
ILAR                                pPKP    pPKiKP   01 42 27.9 -2.3
      comp=Z,2.8nm,1.1s,baz=199,slow=0.9,SNR=3.9
ILAR                                PKKPbc  PKKPab   01 52 30.4 +2.1
      comp=Z,0.7nm,0.8s,baz=286,slow=3.9,SNR=5.1
SUA   Susitna One      115.21 328   P       PKiKP    01 41 49.7 +1.0
      baz=114
H25L  Birch Creek      115.26 334   P       PKiKP    01 41 49.6 +1.1
      baz=116
F26K  Sheenjek River   115.31 336   P       PKiKP    01 41 49.9 +1.2
      baz=117
POKR  Poker Plat Res   115.37 333   P       PKiKP    01 41 49.7 +0.8
      baz=115
MCK   McKinley         115.38 331   P       PKiKP    01 41 49.7 +0.8
      baz=114
R18K  Karluk           115.39 324   P       PKiKP    01 41 49.2 +0.1
      baz=113
O20K  Slope Mountain   115.50 326   P       PKiKP    01 41 49.8 +0.5
      baz=113
Q19K  Cape Douglas,    115.52 325   P       PKiKP    01 41 49.5 +0.2
      baz=113
G25K  Bearman Lake     115.58 335   P       PKiKP    01 41 49.8 +0.6
      baz=116
P19K  Oil Pt           115.61 326   P       PKiKP    01 41 50.1 +0.5
      baz=113
KWP   Kalwaria Pacla   115.68  46  ePKP     PKiKP    01 41 50.7 +0.8
N20K  Mount Spurr      115.75 328   P       PKiKP    01 41 50.3 +0.5
      baz=113
SPCR  Spurr Chakacha   115.75 328   P       PKiKP    01 41 50.2 +0.4
      baz=113
SKT   Skwentna         115.76 329   P       PKiKP    01 41 50.0 +0.3
      baz=113
F25K  Christian Rive   115.78 336   P       PKiKP    01 41 50.6 +1.0
      baz=116
NEA2  Nenana           115.78 332   P       PKiKP    01 41 50.2 +0.5
      baz=114
TRF   Thorofare Moun   115.81 330   P       PKiKP    01 41 50.6 +0.6
      baz=114
H24K  Noodor Dome      115.84 333   P       PKiKP    01 41 50.5 +0.7
      baz=114
E25K  Arctic Village   115.98 336   P       PKiKP    01 41 50.7 +0.7
      baz=115
C27K  Jago River       116.03 338   P       PKiKP    01 41 50.8 +0.7
      baz=116
G24K  Hadweenzic Riv   116.05 334   P       PKiKP    01 41 50.8 +0.6
      baz=114
Q18K  Katmai Hardscr   116.07 324   P       PKiKP    01 41 51.4 +0.9
      baz=112
I23K  Minto, Yukon-K   116.12 332   P       PKiKP    01 41 51.3 +1.0
      baz=114
MLR   Muntele Rosu     116.15  51 ⇑P       PKPdf    01 41 51.1 -0.1
BPAW  Bear Paw Mtn.    116.36 331   P       PKPdf    01 41 50.5 -0.4
      baz=113
Q17K  Contact Creek    116.36 324   P       PKPdf    01 41 50.8 -0.3
      baz=112
M20K  Styx River       116.42 328   P       PKPdf    01 41 51.0 -0.1
      baz=112
P18K  Big Mountain,    116.45 325   P       PKPdf    01 41 51.1 -0.1
      baz=112
H23K  Yukon River      116.46 333   P       PKiKP    01 41 52.0 +1.0
      baz=113
BURAR Bucovina Array   116.48  49 ⇑P       PKiKP    01 41 52.4 +0.7
F24K  Squaw Lake       116.53 335   P       PKiKP    01 41 51.9 +0.8
      baz=114
CAST  Castle Rocks     116.55 330   P       PKiKP    01 41 52.0 +0.8
      baz=112
O18K  Koktuh Hills     116.61 326   P       PKiKP    01 41 51.9 +0.4
      baz=111
MLY   Manley           116.61 332   P       PKiKP    01 41 51.6 +0.3
      baz=112
N19K  Bonanza Creek    116.63 327   P       PKiKP    01 41 51.7 +0.1
      baz=111
PLOR  Plostina         116.75  51 ⇓P       PKPdf    01 41 52.0 -0.2
D25K  Kavik River      116.75 337   P       PKiKP    01 41 52.0 +0.5
      baz=114
VRI   Vrincioaia       116.80  51 ⇑P       PKPdf    01 41 52.0 -0.2
CHUM  Lake Minchumin   116.82 330   P       PKiKP    01 41 52.7 +1.0
      baz=112
R16K  Pilot Point      116.95 323   P       PKiKP    01 41 52.1 +0.1
      baz=111
E24K  Your Creek       116.96 336   P       PKiKP    01 41 52.9 +0.9
      baz=113
L20K  Farewell, AK     116.96 329   P       PKiKP    01 41 53.0 +0.9
      baz=111
P17K  Kvichak River    116.96 325   P       PKiKP    01 41 52.9 +0.8
      baz=111
M19K  Big River Lodg   116.98 328   P       PKiKP    01 41 53.2 +1.2
      baz=111
G23K  Bananza Creek    116.98 334   P       PKiKP    01 41 53.0 +1.0
      baz=112
TESR  Tescani          116.99  50 ⇑P       PKiKP    01 41 52.6 +0.1
CHNA  Chernabura Isl   117.05 319   P       PKiKP    01 41 53.2 +0.9
      baz=110
H22K  Ishtalitna Cre   117.19 333   P       PKiKP    01 41 53.1 +0.7
      baz=112
N18K  Kilae Creek      117.22 326   P       PKiKP    01 41 53.2 +0.7
      baz=110
COLD  Coldfoot         117.24 334   P       PKiKP    01 41 53.3 +0.9
      baz=112
L19K  White Mountain   117.28 328   P       PKiKP    01 41 53.5 +0.8
      baz=110
E23K  Chandalar        117.35 335   P       PKiKP    01 41 53.3 +0.5
      baz=112
K20K  Telida           117.36 330   P       PKiKP    01 41 53.4 +0.6
      baz=110
M18K  Stony River      117.47 327   P       PKiKP    01 41 54.0 +0.9
      baz=110
O17K  Koliganek Bris   117.48 325   P       PKiKP    01 41 53.8 +0.8
      baz=110
CFR   Carcaliu         117.48  52 ⇑P       PKiKP    01 41 54.0 +0.5
D24K  Happy Valley     117.49 337   P       PKiKP    01 41 53.8 +0.9
      baz=112
S14K  Fog Glacier      117.53 321   P       PKiKP    01 41 54.0 +0.6
      baz=110
SUW   Suwalki          117.53  42  ePKP     PKiKP    01 41 53.7 +0.4
TOLK  Toolik Lake Re   117.55 336   P       PKiKP    01 41 53.8 +0.7
      baz=112
G22K  Bettles          117.61 334   P       PKiKP    01 41 54.3 +1.2
      baz=111
H21K  Melozitna Rive   117.65 332   P       PKiKP    01 41 54.0 +0.7
      baz=110
P16K  Nushagak River   117.66 324   P       PKiKP    01 41 54.6 +1.2
      baz=110
C24K  Franklin Bluff   117.66 337   P       PKiKP    01 41 53.7 +0.6
      baz=112
J20K  Nowinta River    117.67 330   P       PKiKP    01 41 53.7 +0.3
      baz=110
VLDR  Vladesti         117.68  52 ⇑P       PKiKP    01 41 54.4 +0.6
SDPT  Sand Point       117.70 320   P       PKiKP    01 41 54.1 +0.5
      baz=110
VASR  Vaslui           117.77  51 ⇑P       PKiKP    01 41 54.4 +0.4
N17K  Nushagak Hills   117.77 326   P       PKiKP    01 41 54.4 +0.8
      baz=109
O16K  Kokwok River B   117.89 325   P       PKiKP    01 41 54.3 +0.4
      baz=109
TLCR                   117.93  52 ⇓P       PKiKP    01 41 54.9 +0.5
I20K  Naaghedeneel     118.02 331   P       PKiKP    01 41 54.8 +0.8
      baz=109
D23K  Nanushuk River   118.04 336   P       PKiKP    01 41 54.9 +1.0
      baz=110
L18K  Granite Mounta   118.11 328   P       PKiKP    01 41 54.7 +0.5
      baz=109
E22K  Anaktuvuk Pass   118.14 335   P       PKiKP    01 41 55.5 +1.2
      baz=110
MMAI  Mount Meron Ar   118.15  67   PKP     PKPdf    01 41 55.1 -0.3
      comp=Z,0.6nm,0.4s,baz=35,slow=3.1,SNR=2.5
MMAI                                PKKPbc  PKKPab   01 52 16.1 -0.5
      comp=Z,3.5nm,0.8s,baz=54,slow=1.4,SNR=4.8
M17K  Holitna River    118.18 327   P       PKiKP    01 41 55.3 +0.9
      baz=109
G21K  Allakaket        118.21 333   P       PKiKP    01 41 55.1 +0.8
      baz=109,SNR=8.1
J19K  Poorman          118.22 330   P       PKiKP    01 41 55.2 +0.7
      baz=109
C23K  Itkillik River   118.33 337   P       PKiKP    01 41 55.6 +1.1
      baz=110
H20K  Anotleneega Mo   118.41 332   P       PKiKP    01 41 55.8 +1.1
      baz=109,SNR=7.5
F21K  Alatna River     118.44 334   P       PKiKP    01 41 55.9 +1.1
      baz=109,SNR=7.4
N16K  Nishlik Lake     118.50 326   P       PKiKP    01 41 55.4 +0.4
      baz=108
J18K  Innoko River     118.52 329   P       PKiKP    01 41 56.4 +1.4
      baz=108
MILM  Milestii Mici    118.52  51 ⇓P       PKPdf    01 41 55.0 -0.5
O15K  Ungalikthiuk R   118.60 324   P       PKiKP    01 41 56.4 +1.2
      baz=108
SORM  Soroca           118.64  49 ⇓P       PKPdf    01 41 54.9 -0.8
S12K  Black Hills      118.67 320   P       PKiKP    01 41 55.9 +0.3
      baz=108
D22K  Ayikyak River    118.69 336   P       PKiKP    01 41 56.2 +0.9
      baz=109
M16K  Timber Creek     118.76 326   P       PKiKP    01 41 56.1 +0.5
      baz=108
L17K  Donlin           118.80 328   P       PKiKP    01 41 56.0 +0.4
      baz=108
K17K  Iditarod         118.97 328   P       PKiKP    01 41 56.9 +1.0
      baz=107
GCSA  Galena City Sc   118.98 331   P       PKiKP    01 41 57.2 +1.4
      baz=108
N15K  Kwethluk River   119.03 325   P       PKiKP    01 41 57.1 +1.0
      baz=107
H19K  Roundabout Mou   119.04 332   P       PKiKP    01 41 56.9 +1.0
      baz=107
ASAR  Alice Springs    119.08 204   PKP     PKPdf    01 41 56.4 -1.1
      comp=Z,8.8nm,0.8s,baz=138,slow=1.8,SNR=65
ASAR                                PP      PP       01 43 17.9 -0.1
      comp=Z,4.8nm,1.1s,baz=156,slow=5.8,SNR=6.2
ASAR                                PKKPbc  PKKPbc   01 52 11.7 +0.5
      comp=Z,1.2nm,0.7s,baz=335,slow=2.7,SNR=9.3
AS31  Alice Springs    119.08 204   P       PKPdf    01 41 56.8 -0.7
AS31  Alice Springs    119.08 204   P       PKPdf    01 41 56.2 -1.3
FALS  False Pass       119.15 319   P       PKiKP    01 41 56.9 +0.5
      baz=108
L16K  Owhat River      119.20 327   P       PKiKP    01 41 57.5 +1.1
      baz=107
F20K  Avaraart Lake    119.22 333   P       PKiKP    01 41 57.4 +1.2
      baz=107
O14K  Tigyukauivet M   119.33 324   P       PKiKP    01 41 57.5 +0.8
      baz=107
BR131 Keskin Array S   119.35  60c iPKIKP   PKiKP    01 41 57.7 +0.1
BRTR  Keskin Array B   119.35  60   PKP     PKPdf    01 41 56.8 -0.7
      comp=Z,2.3nm,0.7s,baz=199,slow=3.1,SNR=17
BRTR                                pPKP    pPKPdf   01 42 38.0 -1.5
      comp=Z,3.6nm,0.8s,baz=202,slow=3.2,SNR=9.3
BRTR                                PKKPbc  PKKPab   01 52 11.2 +0.1
      comp=Z,0.9nm,0.8s,baz=137,slow=3.6,SNR=5.0
B22K  Teshekpuk Lake   119.40 337   P       PKiKP    01 41 57.4 +0.9
      baz=107
WRKA  Warakurna        119.47 198   P       PKPdf    01 41 57.4 -0.7
WRKA                                P       PKPdf    01 41 57.5 -0.7
M15K  Kasigluk River   119.47 326   P       PKiKP    01 41 57.1 +0.2
      baz=106
G19K  Purcell Mounta   119.47 332   P       PKiKP    01 41 57.2 +0.4
      baz=106
C21K  Knifeblade Rid   119.50 336   P       PKiKP    01 41 57.6 +0.8
      baz=107
J17K  VABM Dome        119.51 329   P       PKiKP    01 41 57.5 +0.6
      baz=106
B21K  Ikpikpuk River   119.58 336   P       PKiKP    01 41 58.0 +1.1
      baz=107
QIS   Mount Isa        119.70 211   P       PKPdf    01 41 56.8 -1.9
QIS   Mount Isa        119.70 211   P       PKPdf    01 41 58.3 -0.4
MEEK  Meekatharra      119.70 188   P       PKPdf    01 41 56.3 -2.3
MEEK  Meekatharra      119.70 188   P       PKPdf    01 41 57.5 -1.1
H18K  Honhosa River    119.70 331   P       PKiKP    01 41 58.0 +0.7
      baz=106,SNR=5.6
N14K  Kuskokwak Cree   119.73 325   P       PKPdf    01 41 57.1 -0.2
      baz=106
E20K  Nigu River       119.74 335   P       PKiKP    01 41 57.8 +0.5
      baz=106,SNR=12
NACGM Naroch           119.81  41⇓iPKP      PKPdf    01 41 57.5 -0.1
      comp=Z,13nm,0.8s,baz=253
E19K  Redstone River   119.89 334   P       PKiKP    01 41 58.0 +0.4
      baz=106
F19K  Shaleruckik Mo   119.93 333   P       PKiKP    01 41 58.2 +0.5
      baz=106
KIEV  Kiev             119.97  47 ⇓P       PKPdf    01 41 57.6 -0.5
AKASG Malin Array Be   119.99  47   PKP     PKPdf    01 41 57.4 -0.7
      comp=Z,6.8nm,0.7s,baz=262,slow=2.7,SNR=32
AKASG                               pPKP    pPKPdf   01 42 39.4 -0.8
      comp=Z,4.2nm,0.5s,baz=262,slow=2.5,SNR=7.7
AKASG                               PKKPbc  PKKPbc   01 52 09.1 +1.1
      comp=Z,5.7nm,0.8s,baz=59,slow=4.2,SNR=20
AKBB  Malin Array Si   119.99  47⇑iPKIKP    PKPdf    01 41 56.7 -1.4
D20K  Etivluk River    120.01 335   P       PKiKP    01 41 58.7 +0.8
      baz=106,SNR=7.9
G18K  Tagagawik        120.02 332   P       PKiKP    01 41 58.0 +0.1
      baz=105
A22K  Sinclair Lake    120.08 338   P       PKiKP    01 41 58.1 +0.3
      baz=106
M14K  Bethel           120.09 325   P       PKiKP    01 41 58.2 +0.2
      baz=106
L15K  Ungalak Mounta   120.11 327   P       PKiKP    01 41 58.6 +0.5
      baz=105
J16K  Anvik River      120.14 329   P       PKiKP    01 41 58.9 +0.7
      baz=105
H17K  Granite Mounta   120.28 330   P       PKiKP    01 41 58.7 +0.3
      baz=105,SNR=6.8
K15K  Wolf Creek Mou   120.29 327   P       PKiKP    01 41 59.0 +0.5
      baz=105
MNK   Minsk            120.30  42  i PKP    PKPdf    01 41 58.2 -0.5
      comp=E,9.0nm,1.0s
MNK                                i PKP    PKPdf    01 41 58.2 -0.5
      comp=N,4.0nm,1.3s
MNK                                i PKP    PKPdf    01 41 58.2 -0.5
      comp=Z,29nm,0.8s,baz=254
MNK                                i pPKP   pPKPdf   01 42 38.2 -2.5
MNK                                i PP     PP       01 43 26.1 -1.2
MNK                                i PPP    PPP      01 46 05.0
MNK                                i SKS    SKSdf    01 48 55.5 +0.1
MNK                                i SKKS   SKKSdf   01 59 33.8 -3.7
MNK                                i SS     SS       01 59 44.3 +1.4
MNK                                i SSS    SSS      02 04 12.9
MNK   Minsk            120.30  42  i PKIKP  PKPdf    01 41 58.1 -0.5
MNK                                i                 01 42 38.1
MNK                                i                 01 43 26.1
MNK                                i PPP    PPP      01 46 04.9
MNK                                i                 01 48 55.5
MNK                                i SS     SS       01 59 44.3 +1.4
MNK                                i SSS    SSS      02 04 12.9
MNK                                  pmax   pmax
      comp=N,4.0nm,1.3s
MNK                                  pmax   pmax
      comp=Z,29nm,0.8s
MNK                                  pmax   pmax
      comp=E,9.0nm,1.0s
I17K  Unalakleet       120.34 329   P       PKiKP    01 41 59.2 +0.7
      baz=105
D19K  Kuna River       120.49 335   P       PKiKP    01 41 59.2 +0.5
      baz=104,SNR=8.1
B20K  Meade River      120.53 336   P       PKiKP    01 41 59.4 +0.7
      baz=104
L14K  Kuka Creek       120.58 326   P       PKPdf    01 41 58.9  0.0
      baz=105
UNV   Unalaska Valle   120.58 317   P       PKiKP    01 41 59.3  0.0
      baz=106
F18K  Selawik          120.59 332   P       PKiKP    01 41 59.5 +0.6
      baz=104
M13K  Dall Lake        120.66 325   P       PKiKP    01 41 59.7 +0.5
      baz=105
A21K  Barrow           120.68 338   P       PKiKP    01 41 59.7 +0.7
      baz=104
G17K  Kiwalik Mounta   120.72 331   P       PKiKP    01 41 59.9 +0.7
      baz=104
VSU   Vasula           120.75  37d iPKIKP   PKPdf    01 41 57.9 -1.4
VSU                                 pmax    pmax
      comp=Z,7.0nm,0.6s
E18K  Tukpahlearik C   121.15 333   P       PKiKP    01 42 00.3 +0.2
      baz=103
C19K  Lookout Ridge    121.15 335   P       PKiKP    01 42 00.4 +0.3
      baz=103,SNR=8.6
FINES FINESS Array B   121.16  34   PKP     PKPdf    01 41 59.8 -0.3
      comp=Z,2.6nm,0.6s,baz=123,slow=0.5,SNR=19
FINES                               pPKP    pPKPdf   01 42 41.8 -0.2
      comp=Z,4.7nm,1.0s,baz=101,slow=3.9,SNR=5.2
FINES                               PKKPbc  PKKPbc   01 52 03.1 -0.7
      comp=Z,3.5nm,0.5s,baz=71,slow=4.3,SNR=45
H16K  Elim             121.17 330   P       PKiKP    01 42 00.5 +0.4
      baz=103
F17K  Baldwin Pennin   121.18 332   P       PKiKP    01 42 00.7 +0.6
      baz=103
J14K  Nanvaranak Lak   121.32 328   P       PKiKP    01 42 00.9 +0.5
      baz=103
G16K  Koyuk River      121.39 331   P       PKiKP    01 42 00.8 +0.3
      baz=102,SNR=6.5
E17K  Hotham Inlet     121.54 333   P       PKiKP    01 42 01.5 +0.7
      baz=102
SPITS Spitsbergen Ar   121.62  14   PKP     PKPdf    01 42 00.4 -0.2
      comp=Z,2.4nm,0.5s,baz=176,slow=3.3,SNR=12
SPITS                               PKKPbc  PKKPbc   01 52 01.3 -1.2
      comp=Z,4.2nm,0.6s,baz=98,slow=6.2,SNR=15
C18K  Utukok River     121.62 335   P       PKiKP    01 42 01.4 +0.4
      baz=102
K13K  Kusilvak Mount   121.63 326   P       PKiKP    01 42 01.4 +0.3
      baz=103
NIKH  Nikolski High    121.71 316   P       PKiKP    01 42 02.0 +0.5
      baz=105
A19K  Wainwright       121.88 336   P       PKiKP    01 42 02.2 +0.8
      baz=101
B18K  Kokolik River    121.98 335   P       PKiKP    01 42 02.1 +0.4
      baz=100
G15K  Niukluk          122.00 330   P       PKiKP    01 42 02.3 +0.6
      baz=101
M11K  Mekoryuk         122.03 324   P       PKiKP    01 42 02.5 +0.6
      baz=102
RDOG  Red Dog Mine     122.14 334   P       PKiKP    01 42 02.1 +0.1
      baz=100
D17K  Noatak River     122.14 333   P       PKiKP    01 42 02.5 +0.5
      baz=100,SNR=5.8
C17K  DeLong Mountai   122.31 334   P       PKiKP    01 42 02.6 +0.2
      baz=100,SNR=5.8
WRA   Warramunga Arr   122.35 206   PKP     PKPdf    01 42 03.1 -0.7
      comp=Z,23nm,0.6s,baz=168,slow=1.6,SNR=181
WRA                                 pPKP    pPKPdf   01 42 45.6 -0.2
      comp=Z,4.9nm,0.7s,baz=162,slow=1.7,SNR=3.6
WRA                                 PKKPbc  PKKPbc   01 52 00.2 +1.3
      comp=Z,0.8nm,0.5s,baz=347,slow=4.2,SNR=7.6
WRAB  Tennant Creek    122.36 206d iPKIKP   PKPdf    01 42 03.1 -0.7
F15K  North Star Dit   122.39 331   P       PKiKP    01 42 02.8 +0.3
      baz=100
ANM   Nome             122.48 329   P       PKiKP    01 42 03.6 +0.8
      baz=100
ARCES ARCESS Array B   122.53  25   PKP     PKPdf    01 42 02.2 -0.3
      comp=Z,3.7nm,0.7s,baz=249,slow=3.7,SNR=20
ARCES                               pPKP    pPKPdf   01 42 44.2 -0.3
      comp=Z,2.4nm,0.6s,baz=270,slow=3.3,SNR=4.5
ARCES                               PKKPbc  PKKPab   01 51 56.6 +1.1
      comp=Z,5.2nm,0.7s,baz=83,slow=3.7,SNR=34
P08K  Saint George I   122.94 320   P       PKiKP    01 42 03.9 +0.1
      baz=102
F14K  Arctic Creek     123.04 330   P       PKiKP    01 42 04.4 +0.6
      baz=99
C16K  Lisburne Hills   123.07 334   P       PKiKP    01 42 03.9 +0.1
      baz=98
SPIA  Saint Paul Isl   123.44 320   P       PKiKP    01 42 05.2 +0.4
      baz=101
TNA   Tin City         123.71 330   P       PKiKP    01 42 05.6 +0.5
      baz=98
PSA00 Pilbara Seismi   124.54 190   P       PKPdf    01 42 07.2 -0.7
MBWA  Marble Bar       124.96 190   P       PKPdf    01 42 08.3 -0.4
VSLR  Vesyoloye        125.06  57dePKIKP    PKiKP    01 42 08.5  0.0
GAMB  Gambell          125.12 328   P       PKiKP    01 42 09.0 +1.1
      baz=96
APA   Apatity          125.20  27⇓iPKIKP    PKPdf    01 42 04.9 -2.8
APA                              i                   01 42 45.7
APA                                 pmax    pmax
      comp=Z,8.0nm,0.7s
PMG   Port Moresby     125.22 225c iPKIKP   PKiKP    01 42 09.6 -0.1
OBN   Obninsk          125.34  43   PKP     PKPdf    01 42 07.8 -0.4
      comp=Z,15nm,0.5s,baz=12,slow=1.0,SNR=7.9
OBN   Obninsk          125.34  43c iPKIKP   PKiKP    01 42 08.5 -0.1
OBN                              i                   01 42 46.8
OBN                              e                   01 43 58.9
OBN                              ePPP       PPP      01 46 45.1
OBN                                 pmax    pmax
      comp=Z,19nm,0.7s
LVZ   Lovozero         125.69  27c iPKIKP   PKiKP    01 42 09.5 +0.4
MOS   Moscow           126.03  42  i PKIKP  PKPdf    01 42 09.1 -0.5
MOS                              e                   01 42 52.0
MOS                                 pmax    pmax
      comp=Z,35nm,0.9s
VSR   Storozhevoye     126.21  48  ePKIKP   PKPdf    01 42 07.0 -3.1
VSR                                 pmax    pmax
      comp=Z,10.0nm,1.0s
LPSR  Galich'ya Gora   126.30  46  ePKIKP   PKPdf    01 42 08.7 -1.5
LPSR                                pmax    pmax
      comp=Z,10.0nm,1.0s
VORR  Voronezh         126.31  47  ePKIKP   PKPdf    01 42 09.0 -1.2
VORR                                pmax    pmax
      comp=Z,10.0nm,1.0s
FITZ  Fitzroy Crossi   126.78 197   P       PKPdf    01 42 12.5 +0.2
SHA1  Shidzhatmaz      126.98  58⇓ePKIKP    PKiKP    01 42 12.6  0.0
KIV   Kislovodsk       127.05  57 ⇑P       PKiKP    01 42 13.1 +0.5
KBZ   Khabaz           127.15  58   PKP     PKiKP    01 42 12.4 -0.2
      comp=Z,4.0nm,0.8s,baz=287,slow=3.9,SNR=8.8
KBZ                                 pPKP    pPKPdf   01 42 53.7 -0.4
      comp=Z,7.9nm,0.9s,baz=177,slow=1.1,SNR=6.5
KBZ   Khabaz           127.15  58dePKIKP    PKiKP    01 42 12.6  0.0
KLMR  Klimovskoe       127.52  36  ePKIKP   PKPdf    01 42 11.7 -0.6
KLMR                             e                   01 42 52.5
KLMR                                pmax    pmax
      comp=Z,41nm,1.4s
NCK   Nalchik          127.59  58⇓ePKIKP    PKPdf    01 42 12.4 -0.6
GNI   Garni            127.60  62d iPKIKP   PKiKP    01 42 13.9  0.0
VRH   Novokhopyorsk    127.79  48  ePKIKP   PKPdf    01 42 10.9 -2.2
VRH                                 pmax    pmax
      comp=Z,10.0nm,0.9s
SEKA  Sheki            129.67  62   PKIKP   PKPdf    01 42 16.6 -0.5
KDU   Kakadu           129.69 208   P       PKPdf    01 42 17.4 -0.4
MTN   Manton Dam       130.05 206   P       PKiKP    01 42 19.1 -0.3
AKT   Akhty            130.12  61  i PKIKP  PKiKP    01 42 19.2 +0.3
AKT                              e                   01 42 59.4
AKT                              e                   01 43 11.3
AKT                              e                   01 44 33.8
AKT                                 pmax    pmax
      comp=Z,14nm,1.0s
BELG  Belogornoye      131.56  47   PKP     PKPdf    01 42 20.5 +0.3
      comp=Z,28nm,0.8s,baz=58,slow=1.0,SNR=9.1
BELG                                pPKP    pPKPdf   01 43 02.2  0.0
      comp=Z,29nm,0.8s,baz=242,slow=4.0,SNR=5.2
BELG  Belogornoye      131.56  47d iPKIKP   PKPdf    01 42 20.0 -0.2
KIRV  Kirov            132.55  39   PKP     PKiKP    01 42 22.8 -0.2
      comp=Z,8.6nm,0.5s,baz=327,slow=6.1,SNR=5.2
KIRV  Kirov            132.55  39c iPKIKP   PKiKP    01 42 23.1 +0.1
BILL  Bilibino         133.57 335c iPKIKP   PKiKP    01 42 24.8 -0.1
EDFI  Ende, Flores     136.73 195   PKP     PKPdf    01 42 30.6 -0.7
ARTI  Arti             137.62  41   PKhKP   PKPpre   01 42 24.0
      comp=Z,1.1nm,0.4s,baz=98,slow=1.6,SNR=3.9
ARTI                                PKP     PKPdf    01 42 31.6 +0.2
      comp=Z,17nm,1.0s,baz=251,slow=1.5,SNR=18
ARTI                                SKPbc   SKPbc    01 45 50.6 +0.3
      comp=Z,13nm,1.0s,baz=278,slow=1.1,SNR=8.6
ARTI  Arti             137.62  41  i PKIKP  PKPdf    01 42 32.2 +0.8
JAGI  Jajag, Banyuwa   138.09 185   PKP     PKiKP    01 42 35.7 -0.1
SVE   Sverdlovsk       138.76  40  ePKIKP   PKiKP    01 42 34.7 -1.0
SVE                                 pmax    pmax
      comp=Z,12nm,1.1s
TIXI  Tiksi            140.70 351   PKhKP   PKPpre   01 42 29.5
      comp=Z,5.4nm,0.8s,baz=33,slow=3.4,SNR=5.2
TIXI                                PKP     PKPdf    01 42 36.6  0.0
      comp=Z,3.9nm,0.6s,baz=53,slow=4.9,SNR=7.9
TIXI                                pPKP    pPKPdf   01 43 17.4 -1.3
      comp=Z,11nm,0.9s,baz=34,slow=2.8,SNR=4.5
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TIXI				SKPbc	**SKPbc**	**01 45 57.5**	**-0.7**
	comp=Z,14nm,1.1s,baz=72,slow=2.1,SNR=7.2						
TIXI	**Tiksi**	140.70	351	⇓ePKIKP	**PKPdf**	**01 42 35.5**	**-1.1**
SEY	**Seymchan**	140.93	331	PKhKP	PKPpre	01 42 31.4	
	comp=Z,3.7nm,0.6s,baz=74,slow=3.8,SNR=9.6						
SEY				PKP	**PKPdf**	**01 42 38.0**	**+0.8**
	comp=Z,13nm,0.7s,baz=127,slow=3.6,SNR=21						
SEY				SKPbc	**SKPbc**	**01 45 59.0**	**-0.1**
	comp=Z,9.1nm,1.1s,baz=80,slow=3.9,SNR=6.9						
SEY	**Seymchan**	140.93	331	⇓ePKIKP	**PKPdf**	**01 42 38.6**	**+1.3**
PETK	**Petropavlovsk-**	141.72	315	PKhKP	PKPpre	01 42 31.6	
	comp=Z,3.5nm,0.6s,baz=74,slow=8.8,SNR=6.0						
PETK				PKP	**PKPdf**	**01 42 40.0**	**+1.0**
	comp=Z,8.2nm,0.8s,baz=123,slow=5.5,SNR=5.3						
PETK				pPKP	pPKPdf	01 43 20.6	-0.4
	comp=Z,15nm,1.0s,baz=191,slow=3.0,SNR=3.6						
PETK				PP	**PP**	**01 45 51.8**	**+6.5**
	comp=Z,21nm,1.1s,baz=91,slow=5.8,SNR=6.5						
MA2	**Magadan**	143.21	327	SKPbc	**SKPbc**	**01 46 05.0**	**+0.1**
	comp=Z,11nm,0.7s,baz=127,slow=4.5,SNR=6.1						
MA2	**Magadan**	143.21	327	⇑ePKIKP	**PKiKP**	**01 42 43.2**	**-1.6**
TPI	**Tanjungpandan**	143.72	174	PKP	PKPbc	01 42 42.7	+1.0
LUWI	**Luwuk**	143.86	200	PKP	PKPbc	01 42 42.8	+0.7
APSI	**Ampana**	144.29	198	PKP	PKPbc	01 42 44.1	+0.7
PPI	**Padang Panjang**	144.69	161	PKP	**PKPab**	**01 42 44.6**	**+0.1**
PCI	**Palu**	144.74	195	PKP	**PKPdf**	**01 42 45.5**	**-0.1**
BKB	**Balikpapan**	144.93	190	PKP	**PKPdf**	**01 42 47.8**	**+1.9**
KMSI	**Cibinong**	145.02	203	PKP	**PKPdf**	**01 42 46.0**	**-0.1**
BRVK	**Borovoye**	145.10	44	d iPKIKP	**PKPab**	**01 42 45.4**	**+0.4**
BVAR	**Borovoye Array**	145.18	44	PKPbc	**PKPab**	**01 42 46.1**	**+0.8**
	comp=Z,28nm,0.7s,baz=292,slow=3.6,SNR=195						
BVAR				pPKPbc	pPKPbc	01 43 26.4	0.0
	comp=Z,11nm,0.6s,baz=346,slow=2.5,SNR=2.7						
BVAR				SKPbc	**SKiKP**	**01 46 10.7**	**+0.4**
	comp=Z,8.2nm,0.7s,baz=289,slow=3.5,SNR=6.1						
BVAR				SKKPbc	**SKKPab**	**01 54 08.3**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=98,slow=4.5,SNR=3.5						
KBL	**Kabul**	145.32	76	PKP2	**PKPab**	**01 42 47.2**	**+0.5**
GSI	**Gunungsitoli**	145.49	156	PKP	**PKPab**	**01 42 48.1**	**+0.5**
MRSI	**Marisa**	145.54	199	PKP	**PKPbc**	**01 42 47.2**	**-0.1**
BKNI	**Bangkinang**	145.61	162	PKP	**PKPdf**	**01 42 46.8**	**-0.3**
MNSI	**Mandailing Nat**	145.65	159	PKP	**PKPdf**	**01 42 46.9**	**-0.2**
SMKI	**Samarinda**	145.68	191	PKP	**PKPab**	**01 42 49.7**	**+1.4**
MPSI	**Mapaga**	145.93	196	PKP	**PKPdf**	**01 42 47.6**	**0.0**
SBSI	**Sibolga**	146.16	158	PKP	**PKPbc**	**01 42 49.4**	**+0.2**
CHM	**Chimkent**	146.41	63	ePKIKP	**PKPdf**	**01 42 48.1**	**+0.6**
CHM	**Chimkent**	146.41	63	ePKP	**PKPdf**	**01 42 48.1**	**+0.6**
BRLS	**Borolday**	146.56	61	ePKIKP	**PKPdf**	**01 42 48.1**	**+0.3**
BRLS	**Borolday**	146.56	61	ePKP	**PKPdf**	**01 42 48.2**	**+0.3**
STKI	**Sintang**	146.67	181	PKP	**PKPbc**	**01 42 51.0**	**+0.3**
HYB	**Hyderabad**	146.69	111	ePKPab	**PKPbc**	**01 42 50.8**	**+0.1**
HYB				epPKPab	**pPKPdf**	**01 43 29.5**	**-1.4**
IUG	**Iuzhnay**	146.73	63	ePKIKP	**PKPdf**	**01 42 48.7**	**+0.5**
IUG	**Iuzhnay**	146.73	63	ePKP	**PKPdf**	**01 42 48.8**	**+0.5**
BRZS	**Berezniki**	147.41	48	ePKIKP	**PKPdf**	**01 42 49.8**	**+0.8**
BRZS	**Berezniki**	147.41	48	ePKP	**PKPdf**	**01 42 49.8**	**+0.8**
DZA	**Taraz**	147.66	61	ePKIKP	**PKPdf**	**01 42 50.1**	**+0.5**
DZA	**Taraz**	147.66	61	ePKP	**PKPdf**	**01 42 50.1**	**+0.5**
BSI	**Banda Aceh**	148.44	149	PKP	**PKPbc**	**01 42 54.4**	**-1.1**
YAK	**Yakutsk**	149.14	343	PKP	**PKPdf**	**01 42 51.0**	**-0.4**
	comp=Z,81nm,0.7s,baz=300,slow=1.4,SNR=5.5						
YAK				PKPbc	**PKPbc**	**01 42 55.9**	**+0.2**
	comp=Z,81nm,0.7s,baz=46,slow=0.8,SNR=15						
YAK				pPKPbc	**pPKPbc**	**01 43 36.8**	**-0.7**
	comp=Z,160nm,0.8s,baz=102,slow=0.5,SNR=7.9						
YAK	**Yakutsk**	149.14	343	ePKIKP	**PKPdf**	**01 42 51.3**	**-0.1**
YAK				e		01 43 31.0	
YAK				e		01 46 29.2	
YAK				e		01 49 45.6	
YAK				eSS	SS	02 05 34.6	+7.6
YAK				pmax	pmax		
	comp=Z,120nm,1.4s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.6s						
YAK				pmax	pmax		
	comp=E,18nm,1.5s						
YAK				pmax	pmax		
	comp=Z,59nm,2.0s						
AML	**Almayashu**	149.45	63	P	**PKPdf**	**01 42 54.4**	**+1.3**
	SNR=9.7						
EKS2	**Erkin-Say**	149.47	62	P	**PKPdf**	**01 42 54.3**	**+1.6**
	SNR=12						
KUR	**Kuril'sk**	149.55	303	c iPKHKP	PKPpre	01 42 57.1	
USP	**Ospenovka**	149.94	60	P	**PKPdf**	**01 42 54.4**	**+1.1**
	SNR=9.8						
AAK	**Ala-Archa**	150.00	62	P	**PKPdf**	**01 42 55.0**	**+1.4**
	SNR=21						
AAK	**Ala-Archa**	150.00	62	d iPKHKP	PKPpre	01 42 54.5	
SGDS	**Sogindy**	150.01	60	ePKP	**PKPdf**	**01 42 54.0**	**+0.5**
UCH	**Uchtor**	150.05	62	P	**PKiKP**	**01 43 00.8**	**+0.7**
	SNR=5.5						
CHMS	**Chumysh**	150.15	61	P	**PKiKP**	**01 42 59.9**	**+0.2**
	SNR=18						
KBK	**Karagaybulak**	150.33	62	P	**PKiKP**	**01 43 00.8**	**+0.6**
	SNR=13						
KURBB	**Kurchatov Arra**	150.75	45	PKP	**PKPdf**	**01 42 54.9**	**+0.7**
	comp=Z,4.4nm,0.7s,baz=294,slow=2.2,SNR=49						
KURBB				PKPbc	**PKiKP**	**01 43 00.6**	**0.0**
	comp=Z,39nm,0.7s,baz=300,slow=2.7,SNR=100						
KURBB				pPKPbc	**pPKPbc**	**01 43 39.9**	**-1.8**
	comp=Z,60nm,1.0s,baz=295,slow=3.1,SNR=9.6						
KURK	**Kurchatov**	150.76	44	PKIKP	**PKPdf**	**01 42 54.9**	**+0.6**
KURK						01 43 39.9	
TKM2	**Tokmak 2**	150.78	61	P	**PKPdf**	**01 42 55.5**	**+0.7**
	SNR=18						
KUU	**Kurty**	151.18	59	ePKIKP	**PKPdf**	**01 42 55.7**	**+0.5**
KUU	**Kurty**	151.18	59	ePKP	**PKPdf**	**01 42 55.8**	**+0.5**
TYV	**Tymovskoe**	151.24	316	ePKIKP	**PKiKP**	**01 43 01.7**	**+0.1**
TYV				pmax	pmax		
	comp=Z,200nm,2.0s						
TYV				pmax	pmax		
	comp=Z,55nm,0.9s						
KSH	**Kashi**	151.28	68	PKPbc	**PKPdf**	**01 42 56.3**	**+0.6**
KSH				AMB	AMB		
	comp=Z,290nm,17.5s						
ULHL	**Ulahol**	151.32	62	P	**PKiKP**	**01 43 03.7**	**+1.4**
	SNR=9.1						
AAA	**Alma-Ata**	151.70	60	ePKIKP	**PKPdf**	**01 42 56.6**	**+0.5**
AAA	**Alma-Ata**	151.70	60	ePKP	**PKPdf**	**01 42 56.6**	**+0.5**
MDOK	**Medeo**	151.80	60	ePKIKP	**PKPdf**	**01 42 56.7**	**+0.4**
MDOK	**Medeo**	151.80	60	ePKP	**PKPdf**	**01 42 56.8**	**+0.4**
TDK	**Taldyqorghan**	152.42	56	ePKIKP	**PKPdf**	**01 42 57.3**	**+0.3**
TDK	**Taldyqorghan**	152.42	56	ePKP	**PKPdf**	**01 42 57.4**	**+0.3**
ZALV	**Zalesovo Beam**	152.43	34	PKP	**PKPdf**	**01 42 56.9**	**+0.2**
	comp=Z,3.8nm,0.6s,baz=298,slow=3.2,SNR=16						
ZALV				PKPbc	**PKiKP**	**01 43 03.9**	**0.0**
	comp=Z,64nm,0.8s,baz=304,slow=2.9,SNR=81						
ZALV				pPKPbc	**pPKPbc**	**01 43 44.4**	**-1.1**
	comp=Z,64nm,0.7s,baz=320,slow=2.8,SNR=9.1						
YSS	**Yuzhno-Sakhali**	152.60	309	ePKIKP	**PKiKP**	**01 43 04.7**	**+0.2**
YSS				e		01 43 46.5	
YSS				e		01 43 56.9	
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
SATY	**Saty**	152.80	60	ePKIKP	**PKPdf**	**01 42 57.8**	**0.0**
SATY	**Saty**	152.80	60	ePKP	**PKPdf**	**01 42 57.8**	**0.0**
KPKS	**Kokpek**	152.93	59	ePKIKP	**PKPdf**	**01 42 58.2**	**+0.3**
KPKS	**Kokpek**	152.93	59	ePKP	**PKPdf**	**01 42 58.3**	**+0.3**
UZB	**Uzynbulak**	153.23	60	ePKIKP	**PKPdf**	**01 42 58.7**	**+0.3**
UZB	**Uzynbulak**	153.23	60	ePKP	**PKPdf**	**01 42 58.8**	**+0.3**
ERM	**Erimo**	153.42	298	c iPKIKP	**PKPdf**	**01 43 01.1**	**+2.6**
ERM				pmax	pmax		
	comp=Z,30nm,1.7s						
ASAJ	**Asahikawa**	153.45	303	PKP	**PKPdf**	**01 42 58.8**	**+0.3**
	comp=Z,8.1nm,0.8s,baz=252,slow=11,SNR=6.8						
ASAJ				PKPbc	**PKPbc**	**01 43 06.1**	**-0.2**
	comp=Z,20nm,0.8s,baz=213,slow=5.6,SNR=14						
MK31	**Makanchi Array**	154.49	50	c iPKIKP	**PKPdf**	**01 43 00.2**	**+0.2**
MKAR	**Makanchi Array**	154.49	50	PKP	**PKPdf**	**01 43 00.0**	**+0.1**
	comp=Z,5.3nm,0.7s,baz=320,slow=0.6,SNR=61						
MKAR				PKPbc	**PKiKP**	**01 43 08.6**	**+0.1**
	comp=Z,8.4nm,0.7s,baz=306,slow=1.5,SNR=23						
MKAR				pPKPbc	**pPKPbc**	**01 43 50.4**	**0.0**
	comp=Z,13nm,0.7s,baz=307,slow=1.9,SNR=7.6						
ZSN	**Zaisan**	155.85	47	ePKIKP	**PKPdf**	**01 43 02.3**	**+0.6**
ZSN	**Zaisan**	155.85	47	ePKP	**PKPdf**	**01 43 02.3**	**+0.6**
MJAR	**Matsushiro Arr**	157.64	285	PKP	**PKPdf**	**01 43 04.4**	**0.0**
	comp=Z,0.9nm,0.3s,baz=288,slow=1.2,SNR=5.8						
MJAR				PKPab	**PKPab**	**01 43 37.2**	**-0.3**
	comp=Z,3.2nm,0.5s,baz=121,slow=2.3,SNR=9.8						
MJAR				pPKPab	**pPKPab**	**01 44 18.4**	**-0.3**
	comp=Z,6.7nm,0.9s,baz=103,slow=2.3,SNR=3.6						
KLR	**Kul'dur**	158.09	322	PKP	**PKPdf**	**01 43 04.2**	**-0.3**
	comp=Z,3.7nm,0.8s,baz=342,slow=2.8,SNR=11						
WMQ	**Urumqi**	159.12	54	ePKP	**PKPdf**	**01 43 05.8**	**-0.2**
HEH	**HeiHe**	159.45	329	PKP	**PKPdf**	**01 43 04.9**	**-1.2**
HEH				AMB	AMB		
	comp=Z,260nm,10.2s						
MOY	**Mondy**	160.48	19	ePKIKP	**PKPdf**	**01 43 08.8**	**+1.4**
MOY				e		01 43 51.0	
MOY				pmax	pmax		
	comp=Z,28nm,2.2s						
USRK	**Ussuriysk Ar.**	160.63	309	PKP	**PKPdf**	**01 43 06.8**	**-0.7**
	comp=Z,2.1nm,0.7s,baz=212,slow=6.8,SNR=6.3						
USRK				pPKPab	**pPKPab**	**01 44 30.8**	**-0.1**
	comp=Z,4.3nm,0.8s,baz=87,slow=2.3,SNR=3.6						
CMAR	**Chiang Mai Arr**	161.43	141	PKP	**PKPdf**	**01 43 09.8**	**+0.6**
	comp=Z,5.9nm,0.8s,baz=244,slow=2.7,SNR=24						
CMAR				PKPab	**pPKPdf**	**01 43 52.2**	**+0.7**
	comp=Z,7.2nm,0.9s,baz=233,slow=4.3,SNR=11						
CMAR				pPKPab	**pPKPab**	**01 44 35.1**	**+0.4**
	comp=Z,3.3nm,0.8s,baz=224,slow=3.1,SNR=2.0						
CMAR				PP	**PP**	**01 47 40.3**	**+2.9**
	comp=Z,0.6nm,0.3s,baz=230,slow=4.8,SNR=4.7						
MDJ	**Mudanjiang**	161.94	313	PKP	**PKPdf**	**01 43 08.3**	**-0.7**
ZAK	**Zakamensk**	162.24	17	ePKIKP	**PKPdf**	**01 43 08.4**	**-0.8**
ZAK				e		01 43 51.4	
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
BNX	**BinXian**	162.56	319	⇑PKP	**PKPdf**	**01 43 07.5**	**-2.0**
JNU	**Nakatsue**	163.46	274	PKPab	**PKPab**	**01 44 02.5**	**-0.5**
	comp=Z,10nm,0.9s,baz=61,slow=5.8,SNR=7.2						
JOW	**Kunigami**	163.71	250	PKPab	**PKPab**	**01 44 04.2**	**-0.1**
	comp=Z,21nm,0.5s,baz=186,slow=3.7,SNR=5.6						
SONM	**Songino Array**	165.31	13	PKP	**PKPdf**	**01 43 12.6**	**+0.4**
	comp=Z,3.7nm,0.9s,baz=300,slow=0.2,SNR=21						
SONM				PKPab	**PKPab**	**01 44 10.8**	**+0.1**
	comp=Z,3.1nm,0.9s,baz=335,slow=5.5,SNR=3.9						
SONM				pPKPab	**pPKPab**	**01 44 51.2**	**+0.1**
	comp=Z,8.4nm,0.8s,baz=324,slow=4.8,SNR=10						
SONM				SKKPbc		01 52 45.5	
	comp=Z,2.3nm,1.0s,baz=187,slow=3.5,SNR=3.7						
KSRS	**Korea Array**	165.76	291	PKP	**PKPdf**	**01 43 12.3**	**-0.3**
	comp=Z,2.4nm,0.9s,baz=88,slow=0.5,SNR=12						
KSRS				PKPab	**PKPab**	**01 44 13.2**	**+0.2**
	comp=Z,6.2nm,1.0s,baz=149,slow=0.7,SNR=4.4						
KSRS				pPKPab	**pPKPab**	**01 44 54.8**	**+0.9**
	comp=Z,4.4nm,1.0s,baz=98,slow=4.4,SNR=4.5						
GOMU	**GeErMu**	166.38	74	PKP	**PKPdf**	**01 43 14.9**	**+1.2**
GOMU				PP	**PP**	**01 48 03.6**	**-1.2**
GOMU				AMB	AMB		
	comp=Z,130nm,4.3s						
GOMU				LR	LR		
	comp=Z,160nm,17.8s						
GOMU				LR	LR		
	comp=Z,180nm,18.6s						
GOMU				LR	LR		
	comp=Z,280nm,17.1s						
KMI	**Kunming**	168.87	137	PKP	**PKPdf**	**01 43 16.3**	**+0.7**
XLT	**XiLinHaoTe**	168.98	341	ePKP	**PKPdf**	**01 43 15.1**	**+0.2**
XLT				SKKS		01 54 47.0	
XLT				AMB	AMB		
	comp=Z,150nm,12.0s						
GTA	**Gaotai**	169.21	54	PKP	**PKPdf**	**01 43 16.0**	**+0.7**
GTA				pPKP	pPKPdf	01 43 58.0	+0.4
PZH	**PanZhiHua**	169.27	129	PKP	**PKPdf**	**01 43 15.1**	**-0.6**
DL2	**Dalian**	169.97	305	PKP	**PKPdf**	**01 43 15.0**	**-0.5**
GYA	**Guiyang**	171.94	150	⇓PKP	**PKPdf**	**01 43 16.8**	**-0.3**
GYA				pPKP	pPKPdf	01 43 56.1	-3.4
GYA				PP	**PP**	**01 48 30.8**	**-0.4**
GYA				SS	SS	02 09 30.4	+4.2
GYA				AMB	AMB		
	comp=Z,67nm,10.6s						
GYA				LR	LR		
	comp=Z,96nm,10.1s						
GYA				LR	LR		
	comp=Z,80nm,6.9s						
GYA				LR	LR		
	comp=Z,41nm,8.6s						
BJI	**Beijing**	172.37	329	PKP	**PKPdf**	**01 43 16.8**	**+0.1**
HHC	**Hu-ho-hao-te**	172.72	357	ePKP	**PKPdf**	**01 43 15.3**	**-1.7**
BTO	**Baotou**	172.92	7	ePKP	**PKPdf**	**01 43 17.8**	**+0.7**
BTO				PP	**PP**	**01 48 41.3**	**+5.7**
BTO				AMB	AMB		
	comp=Z,270nm,7.9s						
NJ2	**Nanjing**	173.30	259	ePKP	**PKPdf**	**01 43 17.8**	**+0.5**
LZH	**Lanzhou**	173.53	65	ePKP	**PKPdf**	**01 43 18.8**	**+1.2**
LZH				PP	**PP**	**01 48 43.0**	**+2.9**
LZH				SKKS		01 55 11.8	
LZH				AMB	AMB		
	comp=Z,170nm,5.3s						
TIA	**Tai'an**	174.39	300	PKP	**PKPdf**	**01 43 17.8**	**+0.2**
CNSH	**ChangSha**	174.41	197	PKP	**PKPdf**	**01 43 18.8**	**+0.9**
HNS	**HongShan**	175.18	323	⇑PKP	**PKPdf**	**01 43 18.9**	**+1.1**
XAN	**Xi'an**	178.13	75	PKP	**PKPdf**	**01 43 18.0**	**-0.6**
XAN				pPKP	pPKPdf	01 44 00.8	-0.1
XAN				PP	**PP**	**01 49 02.8**	**+0.7**
XAN				SKKS		01 55 31.5	
XAN				SS	**SS**	**02 10 28.8**	**+1.1**
XAN				AMB	AMB		
	comp=Z,330nm,13.9s						
LYN	**LuoYang**	178.50	311	PKP	**PKPdf**	**01 43 19.3**	**+0.8**
LYN				PP	**PP**	**01 49 09.4**	**+6.4**
LYN				SKKS		01 55 32.6	
LYN				AMB	AMB		
	comp=Z,400nm,3.7s						

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*IDC **20** 01:40:28.8±4.7, 17°.94S×178°.46W, h589^{km}±54^{km}, mb3.1/9, mbtmp4.1/10, Error ellipse: s-maj=29.1km s-min=23.5km az=141.0*

*NEIC **20** 01:40:30.9±2.0, 18°.24S±0°.10×178°.4W±0°.2, h608^{km}±8^{km}, mb4.4/26, Error ellipse: s-maj=23.5km s-min=12.4km az=69.0*

ISC 20 01:40:30.0±0.6, 18°.1S±0°.1×178°.5W±0°.1, h600^{km}, n47, σ1^{s}41/44, mb4.3/23, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	3.36	276		**P**	**01 41 53.6**	**+2.2**
PINNC	**Pines Island,**	13.97	249	P	**P**	**01 43 28.9**	**+0.4**
DZM	**Mont Dzumac**	14.73	252	P	**P**	**01 43 35.8**	**-0.1**
DZM	**Mont Dzumac**	14.73	252	P	**P**	**01 43 35.2**	**-0.7**
	2.5nm,0.5s,baz=270,slow=10,SNR=5.8						
EIDS	**Eidsvold**	29.17	250	P	**P**	**01 45 45.0**	**+0.3**
EIDS				IAmb	IAmb	01 46 03.2	
	comp=Z,12nm,1.3s						
CTAO	**Charters Tower**	33.38	261	P	**P**	**01 46 20.4**	**-0.2**
CTAO				IAmb	IAmb	01 46 55.5	
	comp=Z,11nm,1.2s						
COEN	**Coen**	37.07	271	P	**P**	**01 46 51.7**	**+0.6**
STKA	**Stephens Creek**	38.51	241	P	**P**	**01 47 03.2**	**+0.7**
	comp=Z,1.1nm,0.4s,baz=117,slow=16,SNR=3.1						
	comp=Z,1.1nm,0.4s						
BBOO	**Buckleboo**	43.28	241	P	**P**	**01 47 40.2**	**0.0**
WR8	**Warramunga Arr**	44.41	260	P	**P**	**01 47 48.2**	**-0.9**
WR8				IAmb	IAmb	01 47 48.4	
	comp=Z,13nm,1.4s						
WB0	**Warramunga Arr**	44.53	260	P	**P**	**01 47 49.3**	**-0.8**
WRA	**Warramunga Arr**	44.56	260	P	**P**	**01 47 49.6**	**-0.7**
WRA	**Warramunga Arr**	44.56	260	P	**P**	**01 47 49.5**	**-0.7**
	comp=Z,1.5nm,0.5s,baz=94,slow=7.4,SNR=23						
	comp=Z,1.5nm,0.5s						
AS31	**Alice Springs**	44.70	254	P	**P**	**01 47 51.4**	**0.0**
ASAR	**Alice Springs**	44.70	254	P	**P**	**01 47 50.5**	**-0.9**
ASAR	**Alice Springs**	44.70	254	P	**P**	**01 47 51.0**	**-0.3**
	comp=Z,5.8nm,0.5s,baz=87,slow=8.9,SNR=73						
	comp=Z,5.8nm,0.5s						
SBA	**Scott Base**	60.23	184	P	**P**	**01 49 40.4**	**-0.4**
MJAR	**Matsushiro Arr**	68.04	323	P	**P**	**01 50 29.8**	**-1.0**
	comp=Z,0.9nm,0.3s,baz=123,slow=8.9,SNR=1.8						
	comp=Z,0.9nm,0.3s						
QSPA	**South Pole Qui**	71.95	180	P	**P**	**01 50 53.3**	**-0.4**
QSPA	**South Pole Qui**	71.95	180	P	**P**	**01 50 54.0**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=272,slow=2.8,SNR=5.7						
	comp=Z,0.9nm,0.7s						
CNBA	**Chernabura Isl**	74.39	11	P	**P**	**01 51 06.5**	**-0.9**
NVAR	**Mina Array Bea**	79.59	44	P	**P**	**01 51 35.1**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=228,slow=11,SNR=4.1						
	comp=Z,0.6nm,0.5s						
G16K	**Koyuk River**	84.13	7	P	**P**	**01 52 00.1**	**+1.8**
G19K	**Purcell Mounta**	85.52	9	P	**P**	**01 52 07.8**	**+2.7**
G19K				IAmb	IAmb	01 52 11.3	
	comp=Z,7.3nm,0.8s						
F19K	**Shaleruckik Mo**	86.07	8	P	**P**	**01 52 07.6**	**-0.1**
F19K				IAmb	IAmb	01 52 09.0	
	comp=Z,7.1nm,0.8s						
ILAR	**Eielson Array**	86.08	13	P	**P**	**01 52 05.8**	**-2.0**
	comp=Z,0.4nm,0.4s,baz=223,slow=4.6,SNR=9.7						
	comp=Z,0.4nm,0.4s						
TXAR	**Lajitas Array**	86.13	58	P	**P**	**01 52 09.6**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=218,slow=5.8,SNR=10						
	comp=Z,0.7nm,0.7s						
G21K	**Allakaket**	86.40	10	P	**P**	**01 52 11.9**	**+2.6**
G21K				IAmb	IAmb	01 52 15.4	
	comp=Z,5.7nm,1.1s						
F20K	**Avaraart Lake**	86.56	9	P	**P**	**01 52 08.7**	**-1.3**
F20K				IAmb	IAmb	01 52 11.8	
	comp=Z,6.8nm,0.9s						
E19K	**Redstone River**	86.73	8	P	**P**	**01 52 08.6**	**-2.2**
F21K	**Alatna River**	87.06	9	P	**P**	**01 52 13.6**	**+1.3**
F21K				IAmb	IAmb	01 52 14.5	
	comp=Z,4.8nm,0.8s						
G23K	**Bananza Creek**	87.18	11	P	P	01 52 18.5	+5.5
G23K				IAmb	IAmb	01 52 20.3	
	comp=Z,4.2nm,0.8s						
PDAR	**Pinedale Array**	87.51	43	P	**P**	**01 52 14.5**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=201,slow=2.5,SNR=3.7						
	comp=Z,0.4nm,0.6s						
E22K	**Anaktuvuk Pass**	88.16	10	P	**P**	**01 52 14.9**	**-2.6**
E22K				IAmb	IAmb	01 52 16.0	
	comp=Z,7.5nm,1.1s						
F24K	**Squaw Lake**	88.28	11	P	**P**	**01 52 17.2**	**-1.0**
F24K				IAmb	IAmb	01 52 22.2	
	comp=Z,7.5nm,0.9s						
BMAR	**Burnt Mountain**	88.85	12	P	**P**	**01 52 24.6**	**+3.8**
E27K	**Coleen River**	90.11	13	P	**P**	**01 52 26.9**	**+0.4**
E27K				IAmb	IAmb	01 52 27.7	
	comp=Z,3.9nm,0.7s						
G30M	**tAoh Zraii Nji**	90.40	15	P	P	01 52 34.3	+6.4
G30M				IAmb	IAmb	01 52 35.0	
	comp=Z,5.2nm,0.8s						
G31M	**Satah River**	90.85	16	P	P	01 52 35.1	+5.2
F30M	**Barrier River**	90.99	15	P	**P**	**01 52 31.5**	**+0.9**
INK	**Inuvik**	92.08	15	P	**P**	**01 52 34.6**	**-0.9**
INK				IAmb	IAmb	01 52 35.4	
	comp=Z,3.9nm,0.8s						
ARCES	**ARCESS Array B**	126.50	350	PKP	**PKPdf**	**01 58 23.8**	**-1.3**
	comp=Z,1.4nm,0.9s,baz=50,slow=1.9,SNR=5.7						
FINES	**FINESS Array B**	133.36	344	PKP	**PKPdf**	**01 58 37.6**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=104,slow=0.8,SNR=3.6						
BRTR	**Keskin Array B**	144.89	315	PKP	**PKPdf**	**01 58 59.6**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=98,slow=5.1,SNR=4.5						
CLL	**Collm**	145.64	347	i PKPbc	**PKPdf**	**01 59 01.4**	**+0.6**
	comp=Z,6.0nm,0.9s						
MMAI	**Mount Meron Ar**	146.22	303	PKPbc	**PKPdf**	**01 59 04.0**	**+1.5**
	comp=Z,0.8nm,0.6s,baz=55,slow=6.3,SNR=4.6						
GERES	**GERESS Array B**	147.79	345	PKPbc	**PKPdf**	**01 59 07.5**	**+2.9**
	comp=Z,1.0nm,0.6s,baz=28,slow=3.2,SNR=10						

NOU 20 01:49:33.9, 15°.04S×166°.62E, h65^{km}, MLv3.9/7, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	0.69	126	P	Pn	01 49 49.5	+1.1
VLAKA	**Lakatoro**	1.31	144	P	Pn	01 49 56.2	0.0
DVP	**Devils Point**	3.06	151	P	Pn	01 50 20.1	+0.2
NGOA	**Tingoa Renbel**	7.26	298	P	Pn	01 51 17.4	0.0
ALEG	**Aligegeo Malai**	8.52	316	P	Pn	01 51 34.8	+0.1

GCG 20 01:53:07.9±0.8, 13°.75N×90°.58W, h61^{km}±15^{km}, MD3.9, ML3.2, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FG8	**Yepocapa, Chim**	0.50	2	i P	Pn	01 53 23.7	+3.6
FG16	**Alotenango, Sa**	0.52	8	i P	Pn	01 53 23.5	+3.0
FG16				i S	Sn	01 53 35.7	+6.2
FG16				IAML		01 53 40.4	
	comp=E,2μm,0.2s						
ESSG	**Sabana Grande**	0.67	339	i P	Pn	01 53 22.3	+0.3
ESSG				i S	Sn	01 53 32.7	+0.4
ESSG				IAML		01 53 35.1	
	comp=N,361nm,0.1s						
NUBE	**Las Nubes**	0.79	79	i P	Pn	01 53 23.7	+0.2
NUBE				i S	Sn	01 53 36.1	+1.1
STG0	**El Palmar, Qui**	0.99	312	i P	Pn	01 53 31.5	+5.4
STG0				i S	Sn	01 53 49.0	+9.4
STG0				IAML		01 53 50.5	
	comp=E,620nm,0.2s						
STG8	**El Palmar, Qui**	1.02	313	i P	Pn	01 53 31.4	+4.9
STG8				i S	Sn	01 53 49.5	+9.3
STG8				IAML		01 53 51.5	
	comp=E,338nm,0.1s						
JAYA	**Jayaque - finc**	1.11	95	i P	Pn	01 53 27.3	-0.3
JAYA				i S	Sn	01 53 41.8	-0.3
MTO3	**Montecristo**	1.35	61	i P	Pn	01 53 31.6	+0.8

MEX 20 01:59:52.4±0.7, 17°.07N×94°.87W, h146^{km}±17^{km}, MD4.0, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGIG		1.70	100	eP	Pn	02 00 23.2	-0.7
TGIG				i S	Sn	02 00 45.8	-2.2
HUIG	**Huatulco**	1.75	223	eP	Pn	02 00 22.4	-2.1
HUIG				eS	Sn	02 00 47.5	-1.5
VHO	**Vista Hermosa**	1.78	270	eP	Pn	02 00 23.8	-1.1
VHO				eS	Sn	02 00 47.8	-2.0
TOIG	**Toxpalan**	2.33	296	eP	Pn	02 00 30.0	-1.3
TOIG				eS	Sn	02 00 56.5	-4.7
PEIG	**Puerto Escondi**	2.43	244	eP	Pn	02 00 28.7	-3.8
PEIG				eS	Sn	02 00 59.5	-3.8
YOIG	**Yosondua**	2.57	266	eP	Pn	02 00 32.9	-1.5
YOIG				eS	Sn	02 01 03.6	-3.1
TXIG	**Tlaxiaco**	2.77	274	eP	Pn	02 00 35.8	-1.2
TXIG				eS	Sn	02 01 07.2	-4.1
HLIG	**Huajuapan de L**	2.90	286	eP	Pn	02 00 37.3	-1.2
HLIG				eS	Sn	02 01 09.1	-5.0
JAUV	**Jalcomulco**	2.93	322	eP	Pn	02 00 34.8	-4.0
JAUV				eS	Sn	02 01 07.1	-7.5
PAVE	**Pavencul**	3.19	125	eP	Pn	02 00 44.3	+2.0
PAVE				eS	Sn	02 01 23.5	+2.6
PATR	**El Naranjo**	3.19	127	eP	Pn	02 00 43.8	+1.4
PATR				eS	Sn	02 01 21.9	+0.9
FTIG	**Fresnillo de T**	3.22	286	eP	Pn	02 00 41.5	-1.0
FTIG				eS	Sn	02 01 16.9	-4.4
TLIG	**Tlapa**	3.56	278	eP	Pn	02 00 45.0	-1.9

NOU 20 01:59:57.7, 17°.47S×169°.30E, h177^{km}, mb3.5/8, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INH	**Isangel**	2.07	181	P	Pn	02 00 36.1	+0.8
VLAKA	**Lakatoro**	2.25	307	P	Pn	02 00 37.5	+0.1
MARNC	**Mare, Loyalty**	4.17	197	P	Pn	02 00 59.7	-1.1
YATNC	**Mamie plateau,**	5.10	206	P	Pn	02 01 12.2	-0.7
DZM	**Mont Dzumac**	5.31	210	P	Pn	02 01 15.9	+0.2
PINNC	**Pines Island,**	5.41	198	P	Pn	02 01 17.3	+0.4
OUENC	**Ouen Island, N**	5.44	205	P	Pn	02 01 18.1	+0.8
PLAI	**Plampang**	50.77	273	P	P	02 08 37.8	-2.4

MEX 20 02:00:27.3±0.5, 16°.55N×98°.88W, h10^{km}±4^{km}, MD3.2, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIG	**Cruz Grande**	0.31	307	eP	Pg	02 00 33.2	-0.3
CRIG				eS	Sg	02 00 37.5	-0.1
MGIG	**Malinaltepec**	0.72	19	eP	Pg	02 00 39.7	-1.6
MGIG				eS	Sg	02 00 49.0	-1.7
PNIG	**Pinotepa**	0.73	102	eP	Pg	02 00 39.3	-2.2
PNIG	**Pinotepa**	0.73	102	eP	Pg	02 00 39.4	-2.1
PNIG				eS	Sg	02 00 50.3	-0.8
DAIG	**Los Arroyos**	0.88	302	eP	Pg	02 00 44.0	-0.3
DAIG				eS	Sg	02 00 53.1	-2.6
TLIG	**Tlapa**	1.05	16	eP	Pg	02 00 45.6	-1.9
TLIG				eS	Sg	02 00 58.6	-2.6

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*MOS **20** 02:04:36.2±1.0, 5°.91N×126°.84E, h76^{km}, mb5.4/87, Error ellipse: s-maj=8.9km s-min=3.9km az=123.5*

*BJI **20** 02:04:36.9, 5°.21N×126°.90E, h80^{km}, mB5.1/15, mb5.2/76, Ms4.4/23, Ms7 4.0/27*

*GCMT **20** 02:04:40.8±0.3, 5°.74N±0°.02×126°.79E±0°.02, h57^{km}±1^{km}, MW5.0/108, Moment Tensor Solution. s23,c25;*

s108,c140; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.42±.24; $M_{\theta\theta}$0.90±.18; $M_{\phi\phi}$-4.32±.16; $M_{r\theta}$0.86±.08; $M_{\theta\phi}$-1.22±.17; $M_{\phi r}$-1.80±.11; Best double couple: $M_0$4.54800×10^{16} NP1:ϕ_s35.00000°,δ39.00000°, λ125.00000°. NP2:ϕ_s173.00000°,δ59.00000°,λ65.00000°. Principal axes: T 4.1980, Plg66.0000°, Azm36.0000°; N 0.7030, Plg21.0000°, Azm186.0000°; P -4.8970, Plg11.0000°, Azm280.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

*IDC **20** 02:04:41.9±1.1, 5°.91N×127°.08E, $h74^{km}\pm8^{km}$, mb4.6/28, mbtmp5.0/31, MS3.7/37 Error ellipse: s-maj=14.1km s-min=7.8km az=62.0*

*NEIC **20** 02:04:42.8±1.8, 5°.71N±0°.06×126°.85E±0°.06, $h71^{km}\pm12^{km}$, mb5.0/12, Error ellipse: s-maj=9.3km s-min=7.6km az=223.0*

*DJA **20** 02:04:43.0±0.5, 6°N±4°×12°7E±°, $h78^{km}\pm5^{km}$, M5.0/21, mb5.1/21, mB5.3/12, MLv5.5/13, Mw(mB)4.7/12, MwMwp4.7/2, Mwp5.1/2*

ISC 20 02:04:42.6±0.4**, 5°.75N**±0°.03×**126°.88E**±0°.04**, $h79^{km}\pm3^{km}$, $h79^{km}$:pP-P, n783, σ1°.27**/810**, mb5.2**/177**, 38C-27D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.84**	**316**		**Pn**	**02 05 12.3**	**0.0**
DAV				Sn	**Sn**	**02 05 35.1**	**+0.3**
DAV	**Davao City (W)**	**1.84**	**316**	P	**Pn**	**02 05 12.6**	**+0.3**
	4µm,0.5s,baz=147,slow=1.3,SNR=49						
DAV				S	**Sn**	**02 05 36.3**	**+1.5**
	5µm,0.5s,baz=137,slow=23,SNR=19						
DAV				LR	LR	02 05 52.0	
	comp=Z,2µm,18.9s,baz=118,slow=37						
DAV	**Davao City (W)**	**1.84**	**316**	P	**Pn**	**02 05 13.1**	**+0.8**
DAV	**Davao City (W)**	**1.84**	**316**	S	**Sn**	**02 05 38.0**	**+3.1**
DAV	**Davao City (W)**	**1.84**	**316**	P	**Pn**	**02 05 11.0**	**-1.3**
SGSI	**Sangihe**	**2.45**	**213**	P	**Pn**	**02 05 20.3**	**-0.3**
SGSI				S	**Sn**	**02 05 49.3**	**-0.4**
TNTI	**Ternate**	**4.97**	**174**		**Pn**	**02 05 54.3**	**-0.6**
TNTI				Sn	**Sn**	**02 06 50.7**	**-0.4**
TNTI	**Ternate**	**4.97**	**174**	P	**Pn**	**02 05 54.6**	**-0.3**
TNTI	**Ternate**	**4.97**	**174**	S	**Sn**	**02 06 52.1**	**+1.0**
TNTI	**Ternate**	**4.97**	**174**	P	**Pn**	**02 05 54.7**	**-0.2**
TNTI				S	**Sn**	**02 06 51.6**	**+0.5**
KMSI	**Cibinong**	**5.90**	**209**	P	**Pn**	**02 06 08.7**	**+1.2**
MRSI	**Marisa**	**7.19**	**223**	P	**Pn**	**02 06 25.7**	**+0.5**
TOLI2	**Tolitoli**	**7.63**	**233**		**Pn**	**02 06 29.3**	**-1.8**
TOLI2	**Tolitoli**	**7.63**	**233**	P	**Pn**	**02 06 29.8**	**-1.4**
SANI	**Sanana**	**7.80**	**187**	P	**Pn**	**02 06 30.1**	**-3.4**
LUWI	**Luwuk**	**7.90**	**211**		**Pn**	**02 06 36.0**	**+1.2**
LUWI	**Luwuk**	**7.90**	**211**	P	**Pn**	**02 06 35.9**	**+1.1**
LUWI	**Luwuk**	**7.90**	**211**	P	**Pn**	**02 06 36.3**	**+1.5**
SWI	**Sorong**	**7.90**	**146**	P	**Pn**	**02 06 33.4**	**-1.4**
	0.5nm5µm2µm122nm,0.7s						
SWI	**Sorong**	**7.90**	**146**	P	**Pn**	**02 06 35.3**	**+0.5**
SWI				pmax	pmax		
	comp=Z,117nm,0.7s						
MYLDM	**Lahad Datu**	**8.36**	**266**	P	**Pn**	**02 06 42.4**	**+1.3**
MYLDM	**Lahad Datu**	**8.36**	**266**	S	**Sn**	**02 08 14.8**	**+0.9**
APSI	**Ampana**	**8.43**	**218**	P	**Pn**	**02 06 45.2**	**+3.1**
MPSI	**Mapaga**	**8.80**	**233**	P	**Pn**	**02 06 47.6**	**+0.5**
	comp=Z,1µmcomp=Z,88nm,0.7s						
NLAI	**Namlea**	**8.94**	**179**	P	**Pn**	**02 06 47.4**	**-1.6**
	comp=Z,200nm,0.4s						
PCI	**Palu**	**9.65**	**227**	P	Pn	02 07 06.4	+7.6
TGY	**Tagaytay City**	**10.15**	**325**	P	**Pn**	**02 07 07.8**	**+2.2**
	comp=Z,180nm,0.4s,baz=118,slow=4.6,SNR=4.7						
TGY				LR	LR	02 11 50.2	
	comp=Z,342nm,19.5s,baz=229,slow=42						
FAKI	**Fak Fak**	**10.15**	**148**	P	**Pn**	**02 07 05.1**	**-0.5**
FAKI	**Fak Fak**	**10.15**	**148**	P	**Pn**	**02 07 04.7**	**-0.9**
	comp=Z,52nm,0.8s						
KDI	**Kendari**	**10.54**	**204**	P	**Pn**	**02 07 09.5**	**-1.4**
KKM	**Kota Kinabalu**	**10.61**	**272**		**Pn**	**02 07 12.0**	**+0.1**
KKM	**Kota Kinabalu**	**10.61**	**272**	P	**Pn**	**02 07 13.0**	**+1.1**
KKM	**Kota Kinabalu**	**10.61**	**272**	S	**Sn**	**02 09 08.5**	**-0.6**
TTSI	**Tana Toraja**	**11.23**	**219**	P	**Pn**	**02 07 21.7**	**+1.5**
	comp=Z,2µmcomp=Z,186nm,1.1s						
SPSI	**Sidrap Palu**	**11.98**	**216**	P	**Pn**	**02 07 30.9**	**+0.4**
	comp=Z,57nm,0.8s						
BNSI	**Bone**	**12.14**	**214**	P	**Pn**	**02 07 32.3**	**-0.4**
	comp=Z,944nmcomp=Z,77nm,1.0s						
KAPI	**Kappang**	**12.85**	**214**		**Pn**	**02 07 41.0**	**-1.2**
KAPI	**Kappang**	**12.85**	**214**	P	**Pn**	**02 07 41.8**	**-0.4**
	comp=Z,90nm,0.9s,baz=22,slow=6.1,SNR=20						
KAPI				LR	LR	02 13 30.8	
	comp=Z,389nm,19.7s,baz=20,slow=40						
KAPI	**Kappang**	**12.85**	**214**	P	**Pn**	**02 07 42.5**	**+0.3**
BSSI	**Bau Bau, Buton**	**13.43**	**208**	P	**Pn**	**02 07 50.7**	**+0.7**
	comp=Z,164nm,0.9s						
MMRI	**Maumere**	**15.02**	**198**	P	**Pn**	**02 08 12.0**	**+1.3**
SOEI	**Soe**	**15.62**	**190**	Pn	**Pn**	**02 08 18.8**	**+0.3**
SOEI	**Soe**	**15.62**	**190**	P	**P**	**02 08 20.2**	**-0.9**
GENI	**Genyem**	**15.65**	**122**	P	**Pn**	**02 08 19.4**	**+0.7**
JAY	**Jayapura**	**16.07**	**120**	P	**Pn**	**02 08 23.7**	**-0.3**
	comp=Z,20nm,0.8s,baz=339,slow=7.0,SNR=5.3						
JAY				LR	LR	02 14 05.8	
	comp=Z,336nm,20.9s,baz=16,slow=35						
JAY	**Jayapura**	**16.07**	**120**	P	**P**	**02 08 26.3**	**+0.3**
BATI	**Baumata**	**16.18**	**191**	P	**P**	**02 08 27.9**	**+0.9**
	comp=Z,94nm,0.5s,baz=324,slow=2.4,SNR=7.0						
BATI				LR	LR	02 15 14.3	
	comp=Z,341nm,20.2s,baz=112,slow=39						
BATI	**Baumata**	**16.18**	**191**	P	**Pn**	**02 08 25.9**	**+0.6**
	comp=Z,139nm,1.2s						
WBSI	**Waikabubak, Su**	**17.02**	**206**	P	**Pn**	**02 08 35.3**	**-0.4**
	comp=Z,146nm,0.7s						
KSM	**Kuching**	**17.07**	**256**		**Pn**	**02 08 36.5**	**+0.1**
KSM	**Kuching**	**17.07**	**256**	P	**P**	**02 08 37.8**	**+0.8**
PLAI	**Plampang**	**17.09**	**212**	P	**Pn**	**02 08 36.6**	**0.0**
	comp=Z,2µmcomp=Z,213nm,0.8s						
TWGBT	**Beinan**	**17.86**	**342**	P	**Pn**	**02 08 47.4**	**+1.4**
TWG	**Pinlang**	**17.87**	**342**	P	**P**	**02 08 45.3**	**-0.5**
KMMI	**Kalianget**	**18.10**	**226**	P	**P**	**02 08 48.0**	**-0.3**
	comp=Z,90nm,0.9s						
YULB	**Yu-li**	**18.34**	**344**	P	**P**	**02 08 50.5**	**-0.4**
YULB	**Yu-li**	**18.34**	**344**	P	**Pn**	**02 08 52.7**	**+0.9**
TPUB	**Ta-pu**	**18.45**	**342**		**Pn**	**02 08 52.7**	**-0.5**
TPUB	**Ta-pu**	**18.45**	**342**	P	**Pn**	**02 08 53.8**	**+0.6**
SSLB	**Suanglung**	**18.81**	**343**		**Pn**	**02 08 56.9**	**-0.6**
SSLB	**Suanglung**	**18.81**	**343**	P	**Pn**	**02 08 57.7**	**+0.2**
MTN	**Manton Dam**	**18.95**	**167**		**P**	**02 08 57.2**	**-0.4**
MTN	**Manton Dam**	**18.95**	**167**	P	**P**	**02 08 58.2**	**+0.6**
	comp=Z,48nm,0.7s						
JAGI	**Jajag, Banyuwa**	**18.99**	**222**		**P**	**02 08 57.1**	**-1.0**
JAGI	**Jajag, Banyuwa**	**18.99**	**222**	P	**Pn**	**02 08 59.2**	**-0.4**
JAGI	**Jajag, Banyuwa**	**18.99**	**222**	P	**P**	**02 08 57.5**	**-0.6**
KDU	**Kakadu**	**19.15**	**163**	P	**P**	**02 08 59.8**	**+0.1**
	comp=Z,52nm,1.1s						
KDU	**Kakadu**	**19.15**	**163**	P	**Pn**	**02 09 00.9**	**-0.5**
DLV	**Lat**	**19.17**	**290**		**P**	**02 09 00.3**	**0.0**
DLV	**Lat**	**19.17**	**290**	P	**Pn**	**02 09 01.7**	**-0.3**
GUMO	**Guam**	**19.36**	**65**	P	**P**	**02 09 00.0**	**-2.1**
	comp=Z,114nm,1.0s,baz=201,slow=15,SNR=4.8						
GUMO				LR	LR	02 15 10.6	
	comp=Z,229nm,21.2s,baz=242,slow=33						
YHNB	**Yeheng**	**19.54**	**345**	IAmb	IAmb	02 09 13.8	
	comp=Z,58nm,0.6s						
YHNB	**Yeheng**	**19.54**	**345**	P	**Pn**	**02 09 06.3**	**+0.3**
KNMB	**Chin-men Tao**	**20.31**	**337**		**P**	**02 09 12.9**	**+0.5**
QZH	**Quanzhou**	**20.67**	**338**	⇑*i*P	Pn	02 09 18.1	-1.1
QZH				S	Sn	02 13 08.4	-3.8
QZH				pmax	pmax		
	comp=Z,150nm,0.9s						
QZH				LR	LR		
	comp=Z,260nm,13.7s						
JOW	**Kunigami**	**21.00**	**3**	P	**P**	**02 09 18.5**	**-1.3**
	comp=Z,9.2nm,0.4s,baz=165,slow=24,SNR=4.1						
JOW				LR	LR	02 22 22.6	
	comp=Z,53nm,18.1s,baz=163,slow=51						
	comp=Z,9.2nm,0.4s						
QIZ	**Qiongzhong**	**21.20**	**310**	P	**P**	**02 09 21.8**	**-0.2**
QIZ				sP	**sP**	**02 09 45.1**	**-2.5**
QIZ				S	**S**	**02 13 15.8**	**+2.2**
QIZ				sS	**sS**	**02 13 38.4**	**+0.1**
QIZ				pmax	pmax		
	comp=Z,39nm,1.2s						
QIZ				LR	LR		
	comp=Z,250nm,12.4s						
QIZ				LR	LR		
	comp=Z,220nm,16.3s						
QIZ	**Qiongzhong**	**21.20**	**310**	P	**P**	**02 09 23.3**	**+1.3**
KNRA	**Kununurra**	**21.37**	**175**		**P**	**02 09 25.0**	**+1.1**
KNRA				IAmb	IAmb	02 09 45.2	
	comp=Z,66nm,0.7s						
KNRA	**Kununurra**	**21.37**	**175**	P	**P**	**02 09 24.1**	**+0.3**
	comp=Z,113nm,0.7s						
GZH	**Guangzhou**	**21.62**	**324**	P	**P**	**02 09 28.6**	**+2.2**
GZH				S	**S**	**02 13 24.4**	**+2.8**
LEM	**Lembang**	**22.92**	**237**	LR	LR	02 20 53.0	
	comp=Z,195nm,18.9s,baz=22,slow=42						
UBPT	**Khong Chiam**	**23.05**	**296**	P	**P**	**02 09 44.1**	**+2.5**
FITZ	**Fitzroy Crossi**	**23.73**	**183**	P	**P**	**02 09 48.0**	**+0.3**
	comp=Z,7.9nm,0.8s						
FITZ	**Fitzroy Crossi**	**23.73**	**183**	P	**P**	**02 09 48.6**	**+0.8**
	comp=Z,10.0nm,0.5s,baz=13,slow=8.6,SNR=28						
	comp=Z,10.0nm,0.5s						
FITZ	**Fitzroy Crossi**	**23.73**	**183**	P	**P**	**02 09 48.8**	**+1.0**
PMG	**Port Moresby**	**25.21**	**127**	LR	LR	02 22 28.8	
	comp=Z,176nm,18.6s,baz=313,slow=42						
PMG	**Port Moresby**	**25.21**	**127**	P	**P**	**02 10 00.7**	**-0.5**
PMG				pmax	pmax		
	comp=Z,28nm,1.2s						
COEN	**Coen**	**25.40**	**141**	P	**P**	**02 10 03.9**	**+0.9**
COEN	**Coen**	**25.40**	**141**	P	**P**	**02 10 02.1**	**-0.9**
	comp=Z,34nm,0.9s						
WRAB	**Tennant Creek**	**26.56**	**164**	P	**P**	**02 10 15.1**	**+1.7**
WRAB				IAmb	IAmb	02 10 34.8	
	comp=Z,70nm,1.1s						
WRAB	**Tennant Creek**	**26.56**	**164**	*d i*P	**P**	**02 10 13.3**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,51nm,1.3s						
WRA	**Warramunga Arr**	**26.57**	**164**	P	**P**	**02 10 12.5**	**-1.0**
WRA	**Warramunga Arr**	**26.57**	**164**	P	**P**	**02 10 13.2**	**-0.3**
	comp=Z,13nm,0.6s,baz=342,slow=10,SNR=61						
WRA				PcP	**PcP**	**02 13 36.9**	**+0.5**
	comp=Z,5.1nm,0.6s,baz=338,slow=3.0,SNR=5.5						
WRA				ScP	**ScP**	**02 17 10.4**	**+0.9**
	comp=Z,2.4nm,0.8s,baz=340,slow=3.1,SNR=6.3						
	comp=Z,13nm,0.6s						
WRA	**Warramunga Arr**	**26.57**	**164**	*i* P	**P**	**02 10 13.1**	**-0.4**
WRA				pmax	pmax		
	comp=Z,21nm,0.6s						
WR8	**Warramunga Arr**	**26.63**	**164**	IAmb	IAmb	02 10 39.5	
	comp=Z,54nm,1.1s						
SLVN	**Son La**	**27.11**	**307**	P	**P**	**02 10 22.5**	**+4.1**
SLVN	**Son La**	**27.11**	**307**	P	**P**	**02 10 20.2**	**+1.7**
SRIT	**Nakonsritamara**	**27.20**	**278**	P	**P**	**02 10 19.8**	**+0.5**
SRIT				IAmb	IAmb	02 10 20.7	
	comp=Z,21nm,0.6s						
SRIT	**Nakonsritamara**	**27.20**	**278**	P	**P**	**02 10 19.2**	**-0.1**
NJ2	**Nanjing**	**27.22**	**345**	*e*P	**P**	**02 10 22.3**	**+3.1**
NJ2				pmax	pmax		
	comp=Z,17nm,0.6s						
WHN	**Wuhan**	**27.33**	**336**	P	**P**	**02 10 21.5**	**+1.3**
WHN				pmax	pmax		
	comp=Z,54nm,0.7s						
JNU	**Nakatsue**	**27.48**	**7**	P	**P**	**02 10 21.5**	**-0.1**
MBWA	**Marble Bar**	**27.65**	**194**	P	**P**	**02 10 22.8**	**-0.3**
MBWA	**Marble Bar**	**27.65**	**194**	P	**P**	**02 10 22.6**	**-0.6**
	comp=Z,36nm,0.9s						
MBWA	**Marble Bar**	**27.65**	**194**	P	**P**	**02 10 24.1**	**+1.0**
PSAD1	**Pilbara Seismi**	**27.91**	**194**	P	**P**	**02 10 25.3**	**-0.2**
PSA00	**Pilbara Seismi**	**28.02**	**194**	P	**P**	**02 10 25.9**	**-0.5**
PSA00	**Pilbara Seismi**	**28.02**	**194**	IAmb	IAmb	02 10 59.4	
	comp=Z,31nm,0.8s						
PSA00	**Pilbara Seismi**	**28.02**	**194**	P	**P**	**02 10 27.4**	**+1.0**
PSI	**Prapat**	**28.02**	**265**	LR	LR	02 23 27.6	
	comp=Z,87nm,18.1s,baz=76,slow=40						
PSI	**Prapat**	**28.02**	**265**	P	**P**	**02 10 29.6**	**+2.8**
PSI	**Prapat**	**28.02**	**265**	P	**P**	**02 10 25.1**	**-1.7**
PSI				pmax	pmax		
	comp=Z,12nm,0.8s						
JMN	**Monobe**	**28.59**	**12**	P	**P**	**02 10 31.3**	**-0.1**
QIS	**Mount Isa**	**28.98**	**155**	P	**P**	**02 10 35.3**	**+0.2**
MTSU	**Mount Surprise**	**29.32**	**144**	P	**P**	**02 10 38.4**	**+0.4**
	comp=Z,16nm,0.9s						
MTSU	**Mount Surprise**	**29.32**	**144**	P	**P**	**02 10 40.7**	**+2.6**
ENH	**Enshi**	**29.38**	**328**	P	**P**	**02 10 38.4**	**-0.1**
GSI	**Gunungsitoli**	**29.57**	**263**	P	**P**	**02 10 37.9**	**-2.5**
GSI	**Gunungsitoli**	**29.57**	**263**	P	**P**	**02 10 39.9**	**-0.5**
AS15	**Alice Springs**	**30.01**	**167**	P	**P**	**02 10 44.3**	**+0.2**
	comp=Z,21nm,0.8s						
CMAR	**Chiang Mai Arr**	**30.03**	**297**	P	**P**	**02 10 43.8**	**-0.6**
	comp=Z,7.4nm,0.7s,baz=114,slow=7.1,SNR=22						
CMAR				PcP	**PcP**	**02 13 46.4**	**+1.5**
	comp=Z,8.8nm,1.0s,baz=133,slow=1.1,SNR=14						
CMAR				ScP	**ScP**	**02 17 22.1**	**+1.7**
	comp=Z,1.9nm,0.3s,baz=141,slow=1.8,SNR=9.7						
CMAR				LR	LR	02 25 01.3	
	comp=Z,108nm,19.7s,baz=110,slow=40						
	comp=Z,7.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**30.03**	**297**	*i* P	**P**	**02 10 43.7**	**-0.6**
CMAR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ASAR	**Alice Springs**	**30.04**	**167**	P	**P**	**02 10 43.8**	**-0.5**
ASAR	**Alice Springs**	**30.04**	**167**	P	**P**	**02 10 44.4**	**0.0**
	comp=Z,5.1nm,0.4s,baz=342,slow=7.1,SNR=57						
ASAR				PcP	**PcP**	**02 13 45.2**	**+0.4**
	comp=Z,12nm,0.5s,baz=353,slow=2.5,SNR=19						
ASAR				ScP	**ScP**	**02 17 21.0**	**+0.7**
	comp=Z,2.6nm,0.7s,baz=343,slow=2.8,SNR=7.0						
	comp=Z,5.1nm,0.4s						
AS01	**Alice Springs**	**30.04**	**167**	P	**P**	**02 10 45.1**	**+0.7**
AS08	**Alice Springs**	**30.06**	**167**	P	**P**	**02 10 44.6**	**0.0**
	comp=Z,14nm,0.7s						
KMI	**Kunming**	**30.10**	**312**	P	**P**	**02 10 45.6**	**+0.4**
KMI				pmax	pmax		
	comp=Z,31nm,0.8s						
KMI				LR	LR		
	comp=Z,150nm,19.6s						
KMI				LR	LR		
	comp=Z,180nm,17.3s						
KMI				LR	LR		
	comp=Z,280nm,22.5s						
CHTO	**Chiang Mai**	**30.16**	**298**	P	**P**	**02 10 44.6**	**-0.9**
CHTO	**Chiang Mai**	**30.16**	**298**	P	**P**	**02 10 45.0**	**-0.5**
CHTO	**Chiang Mai**	**30.16**	**298**	P	**P**	**02 10 44.6**	**-0.9**
CHTO	**Chiang Mai**	**30.16**	**298**	P	**P**	**02 10 44.9**	**-0.6**
CHTO				PcP	**PcP**	**02 13 46.1**	**+0.8**
WRKA	**Warakurna**	**30.64**	**177**	P	**P**	**02 10 49.7**	**+0.1**
	comp=Z,9.3nm,0.6s						
GIRL	**Giralia**	**30.81**	**203**	P	**P**	**02 10 52.5**	**+1.4**
GIRL	**Giralia**	**30.81**	**203**	P	**P**	**02 10 51.8**	**+0.7**
	comp=Z,92nm,1.2s						
INU	**Inuyama**	**30.90**	**16**	P	**P**	**02 10 52.4**	**+0.6**
INU	**Inuyama**	**30.90**	**16**	P	**P**	**02 10 51.8**	**0.0**
INU	**Inuyama**	**30.90**	**16**	P	**P**	**02 10 52.1**	**+0.2**
JGF	**Kuroka**	**31.23**	**17**	P	**P**	**02 10 56.6**	**+1.8**
KSRS	**Korea Array**	**31.57**	**2**	P	**P**	**02 10 54.9**	**-2.8**
	comp=Z,1.0nm,0.4s,baz=174,slow=11,SNR=10						
KSRS				PcP	**PcP**	**02 13 49.0**	**+0.4**
	comp=Z,2.7nm,0.6s,baz=181,slow=2.2,SNR=7.9						
KSRS				ScP	**ScP**	**02 17 25.9**	**+0.9**
	comp=Z,0.5nm,0.4s,baz=182,slow=2.1,SNR=4.8						
KSRS				LR	LR	02 24 32.2	
	comp=Z,16µm,21.8s,baz=170,slow=38						
	comp=Z,1.0nm,0.4s						
LYN	**LuoYang**	**31.60**	**337**	P	**P**	**02 10 58.5**	**+0.5**
LYN				pP	pP	02 11 13.5	-1.9
LYN				pmax	pmax		
	comp=Z,33nm,0.8s						
LYN				pmax	pmax		
	comp=Z,170nm,3.5s						
TIA	**Tai'an**	**31.61**	**345**	P	**P**	**02 10 57.9**	**-0.2**
TIA				pmax	pmax		
	comp=Z,16nm,0.7s						
PZH	**PanZhiHua**	**31.63**	**313**	P	**P**	**02 10 58.1**	**-0.5**
PZH				pmax	pmax		
	comp=Z,20nm,0.7s						
TV1H	**Townsville Har**	**31.67**	**142**	P	**P**	**02 11 00.0**	**+1.3**
CTAO	**Charters Tower**	**31.98**	**144**	P	**P**	**02 11 03.4**	**+1.9**
CTAO	**Charters Tower**	**31.98**	**144**	P	**P**	**02 11 03.4**	**+1.9**
CTAO	**Charters Tower**	**31.98**	**144**	P	**P**	**02 11 03.4**	**+1.9**
CTAO	**Charters Tower**	**31.98**	**144**	P	**P**	**02 11 03.1**	**+1.6**
CTAO				pP	**pP**	**02 11 21.1**	**+2.5**
CTAO				PcP	**PcP**	**02 13 51.3**	**+1.3**
MAJO	**Matsushiro**	**32.36**	**17**	P	**P**	**02 11 07.1**	**+2.5**
MAJO	**Matsushiro**	**32.36**	**17**	*de*P	**P**	**02 11 06.9**	**+2.3**
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MJAR	**Matsushiro Arr**	**32.36**	**17**	P	**P**	**02 11 02.3**	**-2.3**
	comp=Z,3.3nm,0.6s,baz=188,slow=9.0,SNR=8.9						
MJAR				ScP	**ScP**	**02 17 28.5**	**+0.7**
	comp=Z,1.6nm,0.5s,baz=189,slow=3.3,SNR=5.8						
MJAR				LR	LR	02 23 23.1	
	comp=Z,172nm,21.8s,baz=200,slow=35						
	comp=Z,3.3nm,0.6s						
XAN	**Xi'an**	**32.70**	**332**	P	**P**	**02 11 06.8**	**-0.9**
XAN				pP	pP	02 11 21.9	-3.2
XAN				pmax	pmax		
	comp=Z,97nm,0.8s						
XAN	**Xi'an**	**32.70**	**332**	P	**P**	**02 11 07.3**	**-0.4**
XAN				pP	**pP**	**02 11 25.4**	**+0.3**
CD2	**Chengdu**	**33.13**	**322**	P	**P**	**02 11 10.8**	**-0.7**
CD2				pmax	pmax		
	comp=Z,30nm,1.0s						
CD2				LR	LR		
	comp=Z,420nm,14.0s						
CD2				LR	LR		
	comp=Z,540nm,17.1s						
CD2				LR	LR		
	comp=Z,220nm,17.1s						
MEEK	**Meekatharra**	**33.18**	**194**	P	**P**	**02 11 11.4**	**-0.5**
	comp=Z,61nm,0.9s						
MEEK	**Meekatharra**	**33.18**	**194**	P	**P**	**02 11 11.8**	**-0.1**
DL2	**Dalian**	**33.34**	**353**	P	**P**	**02 11 15.3**	**+2.1**
DL2				pmax	pmax		
	comp=Z,51nm,0.6s						
HNS	**HongShan**	**33.40**	**342**	⇑P	**P**	**02 11 14.4**	**+0.7**
HNS				pmax	pmax		
	comp=Z,78nm,0.9s						
JSD	**Sado**	**33.76**	**16**	P	**P**	**02 11 16.9**	**+0.1**
JMM	**Marumori**	**34.38**	**20**	P	**P**	**02 11 23.4**	**+1.2**
TIY	**Taiyuan**	**34.43**	**340**	*e*P	**P**	**02 11 24.6**	**+1.9**
TIY				pmax	pmax		
	comp=Z,26nm,0.5s						
BJT	**Baijiatuau**	**35.45**	**346**	P	**P**	**02 11 33.8**	**+2.4**
BJT	**Baijiatuau**	**35.45**	**346**	P	**P**	**02 11 33.7**	**+2.4**
BJT				pmax	pmax		
	comp=Z,78nm,0.9s						
BJT	**Baijiatuau**	**35.45**	**346**	P	**P**	**02 11 33.5**	**+2.1**
BJI	**Beijing**	**35.47**	**346**	P	**P**	**02 11 33.4**	**+1.9**
BJI				S	**S**	**02 17 05.4**	**+4.4**
BJI				pmax	pmax		
	comp=Z,32nm,0.7s						
MORW	**Morawa**	**36.16**	**196**	P	**P**	**02 11 37.2**	**-0.3**
	comp=Z,20nm,0.9s						
HNR	**Honiara**	**36.25**	**114**	LR	LR	02 27 07.1	
	comp=Z,54nm,18.9s,baz=299,slow=37						
QLP	**Quilpie**	**36.28**	**153**	P	**P**	**02 11 38.4**	**-0.3**
	comp=Z,35nm,0.6s						
QLP	**Quilpie**	**36.28**	**153**	P	**P**	**02 11 39.7**	**+1.1**
FORT	**Forrest**	**36.34**	**178**	P	**P**	**02 11 39.4**	**+0.3**
	comp=Z,89nm,0.7s						
FORT	**Forrest**	**36.34**	**178**	P	**P**	**02 11 40.1**	**+1.0**
ALEG	**Aligegeo Malai**	**36.67**	**113**	P	**P**	**02 11 41.4**	**-0.7**
LZH	**Lanzhou**	**36.86**	**328**	⇑P	**P**	**02 11 44.3**	**+0.6**
LZH				sP	sP	02 12 11.6	+1.7
LZH				pmax	pmax		
	comp=Z,93nm,1.0s						
LZH				pmax	pmax		
	comp=Z,190nm,4.5s						
LZH				LR	LR		
	comp=Z,310nm,16.1s						
LZH				LR	LR		
	comp=Z,300nm,16.5s						
LZH				LR	LR		
	comp=Z,400nm,19.2s						
MSHR	**Mys Shultsa**	**36.87**	**5**	*d i*P	**P**	**02 11 45.7**	**+2.3**
MSHR				pmax	pmax		
	comp=Z,33nm,0.7s						
BLDU	**Ballidu**	**37.45**	**194**	P	**P**	**02 11 48.3**	**-0.2**
	comp=Z,26nm,1.6s						
BLDU	**Ballidu**	**37.45**	**194**	P	**P**	**02 11 48.5**	**0.0**
HHC	**Hu-ho-hao-te**	**37.54**	**341**	*e*P	**P**	**02 11 50.9**	**+1.6**
HHC				pmax	pmax		
	comp=Z,31nm,1.5s						
HHC				pmax	pmax		
	comp=Z,48nm,4.9s						
BTO	**Baotou**	**37.85**	**339**	*e*P	**P**	**02 11 54.5**	**+2.6**
BTO				pP	**pwP**	**02 12 12.9**	**-1.2**
BTO				sP	**sP**	**02 12 22.3**	**+4.0**
BTO				PP	**PnPn**	**02 13 27.4**	**+5.5**
BTO				pmax	pmax		
	comp=Z,20nm,0.9s						
BTO				pmax	pmax		
	comp=Z,220nm,6.4s						
CN2	**Changchun**	**37.91**	**358**	P	**P**	**02 11 52.9**	**+0.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KLBR	**Kellerberrin**	**38.14**	**193**	P	**P**	**02 11 54.3**	**0.0**
	comp=Z,98nm,0.8s						
KLBR	**Kellerberrin**	**38.14**	**193**	P	**P**	**02 11 54.9**	**+0.6**
USA0B	**Ussuriysk Arra**	**38.55**	**6**	*ce*P	**P**	**02 11 58.3**	**+0.7**
USRK	**Ussuriysk Ar.**	**38.55**	**6**	P	**P**	**02 11 55.5**	**-2.2**
	comp=Z,13nm,0.5s,baz=187,slow=7.3,SNR=22						
USRK				LR	LR	02 26 23.3	
	comp=Z,69nm,21.8s,baz=174,slow=34						
	comp=Z,13nm,0.5s						
MDJ	**Mudanjiang**	**38.78**	**3**	P	**P**	**02 12 02.0**	**+2.5**
MDJ				pmax	pmax		
	comp=Z,28nm,1.0s						
EIDS	**Eidsvold**	**38.87**	**144**	P	**P**	**02 12 00.3**	**-0.2**
	comp=Z,22nm,0.7s						
EIDS	**Eidsvold**	**38.87**	**144**	P	**P**	**02 12 01.0**	**+0.5**
MUN	**Mundaring**	**38.88**	**195**	P	**P**	**02 12 00.6**	**+0.1**
	comp=Z,34nm,0.8s						
XLT	**XiLinHaoTe**	**39.16**	**348**	*e*P	**P**	**02 12 04.8**	**+2.0**
XLT				pP	pP	02 12 21.9	+1.3
XLT				pmax	pmax		
	comp=Z,45nm,0.6s						
BBOO	**Buckleboo**	**39.33**	**168**	P	**P**	**02 12 04.4**	**+0.1**
	comp=Z,44nm,0.9s						
BBOO	**Buckleboo**	**39.33**	**168**	P	**P**	**02 12 05.3**	**+1.0**
NWAO	**Narrogin (SRO)**	**39.54**	**193**	P	**P**	**02 12 06.5**	**+0.5**
NWAO	**Narrogin (SRO)**	**39.54**	**193**	P	**P**	**02 12 07.2**	**+1.2**
NWAO	**Narrogin (SRO)**	**39.54**	**193**	P	**P**	**02 12 06.4**	**+0.4**
NWAO				pmax	pmax		
	comp=Z,81nm,0.9s						
NWAO	**Narrogin (SRO)**	**39.54**	**193**	P	**P**	**02 12 06.6**	**+0.6**
BNX	**BinXian**	**39.83**	**1**	⇑P	**P**	**02 12 11.0**	**+2.7**
BNX				pmax	pmax		
	comp=Z,9.0nm,0.8s						
WHYH	**Whyalla**	**39.89**	**166**	P	**P**	**02 12 09.7**	**+0.8**
STKA	**Stephens Creek**	**39.97**	**160**	P	**P**	**02 12 09.5**	**-0.1**
	comp=Z,249nm,1.0s						
STKA	**Stephens Creek**	**39.97**	**160**	P	**P**	**02 12 09.8**	**+0.2**
	comp=Z,39nm,0.7s,baz=337,slow=7.5,SNR=53						
STKA				PcP	**PcP**	**02 14 13.8**	**+0.3**
	comp=Z,8.5nm,0.5s,baz=344,slow=4.6,SNR=4.1						
	comp=Z,39nm,0.7s						
STKA	**Stephens Creek**	**39.97**	**160**	P	**P**	**02 12 10.7**	**+1.1**
STKA	**Stephens Creek**	**39.97**	**160**	*ce*P	**P**	**02 12 09.9**	**+0.3**
HTT	**Hallett**	**40.61**	**164**	P	**P**	**02 12 15.3**	**+0.3**
	comp=Z,3.9nm,0.7s						
HTT	**Hallett**	**40.61**	**164**	P	**P**	**02 12 15.9**	**+1.0**
ASAJ	**Asahikawa**	**40.63**	**17**	LR	LR	02 28 01.1	
	comp=Z,103nm,21.4s,baz=206,slow=35						
CMSA	**Cobar Meteorol**	**41.20**	**155**	P	**P**	**02 12 19.7**	**-0.1**
	comp=Z,16nm,0.8s						
CMSA	**Cobar Meteorol**	**41.20**	**155**	P	**P**	**02 12 20.5**	**+0.7**
RKGY	**Rocky Gully**	**41.22**	**192**	P	**P**	**02 12 21.0**	**+1.1**
	comp=Z,62nm,0.8s						
LSA	**Lhasa**	**41.24**	**310**	P	**P**	**02 12 21.2**	**+0.5**
LSA				pmax	pmax		
	comp=Z,19nm,0.6s						
GTA	**Gaotai**	**41.46**	**328**	P	**P**	**02 12 22.6**	**+0.6**
GTA				pmax	pmax		
	comp=Z,61nm,1.0s						
GTA				LR	LR		
	comp=Z,200nm,17.9s						
GTA				LR	LR		
	comp=Z,220nm,15.5s						
GTA				LR	LR		
	comp=Z,270nm,22.3s						
GOMU	**GeErMu**	**42.21**	**320**	P	**P**	**02 12 29.1**	**+0.7**
GOMU				pmax	pmax		
	comp=Z,37nm,1.3s						
GOMU				LR	LR		
	comp=Z,320nm,16.7s						
GOMU				LR	LR		
	comp=Z,220nm,18.1s						
GOMU				LR	LR		
	comp=Z,150nm,17.9s						
ARMA	**Armidale**	**43.08**	**148**	P	**P**	**02 12 35.1**	**-0.1**
	comp=Z,30nm,0.7s						
ARMA	**Armidale**	**43.08**	**148**	P	**P**	**02 12 36.6**	**+1.4**
YSS	**Yuzhno-Sakhali**	**43.27**	**16**	*e*P	**P**	**02 12 37.1**	**+0.8**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KLR	**Kul'dur**	**43.52**	**5**	LR	LR	02 29 08.8	
	comp=Z,40nm,21.6s,baz=184,slow=34						

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KLR   Kul'dur             43.52   5d iP     P       02 12 36.5 -1.8
KLR                                 pmax    pmax
      comp=Z,11nm,0.6s
HIA   Hailar              43.78 353   P     P       02 12 42.5 +2.0
HEH   HeiHe               44.35   0  eP     P       02 12 44.5 -0.5
ARPS  Mount Arapiles      44.56 163   P     P       02 12 47.3 +0.5
      comp=Z,91nm,0.7s
ARPS  Mount Arapiles      44.56 163   P     P       02 12 48.4 +1.6
YNG   Young               44.73 154   P     P       02 12 48.8 +0.5
      comp=Z,12nm,2.4s
ULN   Ulaanbaatar         45.26 341ceP      P       02 12 51.4 -1.0
ULN                                 pmax    pmax
      comp=Z,42nm,1.1s
ULN   Ulaanbaatar         45.26 341   P     P       02 12 52.9 +0.4
SONM  Songino Array       45.44 341   P     P       02 12 52.7 -1.2
      comp=Z,10.0nm,0.8s,baz=160,slow=8.9,SNR=40
SONM                                ScP     ScP     02 18 18.7 +0.9
      comp=Z,0.7nm,0.6s,baz=162,slow=5.3,SNR=3.6
SONM                                LR      LR      02 33 25.1
      comp=Z,117nm,18.1s,baz=113,slow=38
      comp=Z,10.0nm,0.8s
CAN   Canberra            45.86 155   P     P       02 12 57.3 +0.2
      comp=Z,20nm,0.9s
CAN   Canberra            45.86 155   P     P       02 12 60.0 +2.8
PALK  Pallekele           45.89 275   LR    LR      02 33 14.1
      comp=Z,57nm,21.5s,baz=106,slow=37
CNB   Canberra Magne      46.01 154   P     P       02 12 58.9 +0.5
      comp=Z,24nm,2.0s
TOO   Toolangi            46.47 160   P     P       02 13 03.1 +1.2
      comp=Z,9.0nm,1.3s
CIT   Chita               47.42 349  eP     P       02 13 11.6 +2.4
CIT                                  e              02 13 17.2
CIT                                  e              02 13 26.6
CIT                                  e              02 14 39.6
CIT                                 pmax    pmax
      comp=Z,35nm,1.2s
DZM   Mont Dzumac         47.60 127  eP     P       02 13 10.9 -0.2
      comp=Z,32nm,1.1s
DZM   Mont Dzumac         47.60 127  eLR    LR      02 26 43.1
      comp=Z,433nm,22.7s
DZM   Mont Dzumac         47.60 127   LR    LR      02 31 50.7
      comp=Z,289nm,21.1s,baz=232,slow=34
ZEA   Zeya                47.84   0  eP     P       02 13 10.1 -2.2
ZEA                                 pmax    pmax
      comp=Z,10.0nm,0.6s
HYB   Hyderabad           48.60 288  eP     P       02 13 19.8 +1.0
ZAK   Zakamensk           48.68 340  eP     P       02 13 19.6 +0.6
ZAK                                 pmax    pmax
      comp=Z,6.0nm,1.3s
MOY   Mondy               50.55 339  eP     P       02 13 34.0 +0.8
MOY                                 pmax    pmax
      comp=Z,35nm,2.3s
SKR   Severo-Kuril's      51.01  24  eP     P       02 13 32.0 -4.5
SKR                                  eS     S       02 20 43.2 -4.5
SKR                                  eSS    ScS     02 23 26.4 +6.9
SKR                                 pmax    pmax
      comp=Z,300nm,3.0s
SKR                                 pmax    pmax
      comp=Z,134nm,1.2s
SKR                                 MLR     MLR
      comp=Z,300nm,12.0s
WMQ   Urumqi              51.17 324  eP     P       02 13 38.3 +0.4
WMQ                                 pmax    pmax
      comp=Z,30nm,1.5s
WMQ                                 LR      LR
      comp=Z,310nm,19.7s
WMQ                                 LR      LR
      comp=Z,180nm,21.9s
PETK  Petropavlovsk-      53.52  23   P     P       02 13 54.7 -0.3
      comp=Z,8.1nm,0.7s,baz=166,slow=3.1,SNR=8.6
PETK                                LR      LR      02 33 27.3
      comp=Z,56nm,21.7s,baz=172,slow=32
      comp=Z,8.1nm,0.7s
ZSN   Zaisan              54.91 326  eP     P       02 14 04.7 -0.5
ZSN                                 pmax    pmax
      comp=Z,15nm,0.9s
ZSN   Zaisan              54.91 326  eP     P       02 14 04.8 -0.5
      comp=Z,15nm,0.9s
MSVF  Nonsavu             55.64 116   P     P       02 14 11.9 +0.8
MSVF  Nonsavu             55.64 116 i P     P       02 14 11.5 +0.4
MSVF                                pmax    pmax
      comp=Z,18nm,0.8s
MSVF  Nonsavu             55.64 116   P     P       02 14 11.4 +0.4
PDGK  Podgornoye          55.97 320   P     P       02 14 12.0 -1.1
MK31  Makanchi Array      55.99 324  eP     P       02 14 12.5 -0.6
MKAR  Makanchi Array      55.99 324   P     P       02 14 12.9 -0.1
      comp=Z,30nm,0.6s,baz=125,slow=8.1,SNR=348
MKAR                                PcP     PcP     02 15 10.3 -0.4
      comp=Z,16nm,0.8s,baz=124,slow=3.4,SNR=7.8
MKAR                                ScP     ScP     02 19 04.4 +1.4
      comp=Z,3.6nm,0.9s,baz=111,slow=5.3,SNR=6.9
MKAR                                LR      LR      02 38 29.0
      comp=Z,95nm,21.2s,baz=74,slow=36
      comp=Z,30nm,0.6s
MKAR  Makanchi Array      55.99 324 i P     P       02 14 13.0 -0.1
MKAR                                pmax    pmax
      comp=Z,30nm,0.6s
UZB   Uzynbulak           56.18 319  eP     P       02 14 13.8 -0.9
UZB                                 pmax    pmax
      comp=Z,13nm,0.7s
UZB   Uzynbulak           56.18 319  eP     P       02 14 13.9 -0.9
      comp=Z,13nm,0.7s
MAKZ  Makanchi            56.18 324   P     P       02 14 14.3 -0.2
MAKZ                                PcP     PcP     02 15 10.7 -0.7
YAK   Yakutsk             56.20   2   LR    LR      02 36 47.4
      comp=Z,47nm,21.8s,baz=132,slow=34
YAK   Yakutsk             56.20   2⇓eP      P       02 14 14.0 -0.2
YAK                                 pmax    pmax
      comp=Z,46nm,0.6s
TARG  Taragay, Kyrgy      56.36 317   P     P       02 14 16.6 +0.3
TARG                                pmax    pmax
      comp=Z,12nm,0.8s
SATY  Saty                56.55 319  eP     P       02 14 16.4 -0.8
SATY                                pmax    pmax
      comp=Z,20nm,0.8s
SATY  Saty                56.55 319  eP     P       02 14 16.4 -0.8
      comp=Z,20nm,0.8s
KPKS  Kokpek              56.55 319  eP     P       02 14 16.4 -0.8
KPKS  Kokpek              56.55 319  eP     P       02 14 16.4 -0.8
MA2   Magadan             56.72  14   LR    LR      02 41 06.0
      comp=Z,29nm,18.9s,baz=164,slow=39
MA2   Magadan             56.72  14⇑eP      P       02 14 19.1 +1.1
MA2                                 pmax    pmax
      comp=Z,27nm,2.1s
KSH   Kashi               56.73 314   P     P       02 14 19.3 +0.7
KSH                                 sP      pwP     02 14 43.6 +1.6
KSH                                 pmax    pmax
      comp=Z,15nm,1.1s
KSH                                 LR      LR
      comp=Z,170nm,13.4s
KSH                                 LR      LR
      comp=Z,140nm,17.9s
KSH                                 LR      LR
      comp=Z,170nm,18.2s
NIL   Nilore              56.83 307   P     P       02 14 19.0 -0.3
KDJ   Kajisay             56.95 317   P     P       02 14 20.5 +0.3
KDJ                                 pmax    pmax
      comp=Z,35nm,0.9s
TDK   Taldyqorghan        57.44 321  eP     P       02 14 22.6 -0.7
TDK                                 pmax    pmax
      comp=Z,11nm,0.6s
TDK   Taldyqorghan        57.44 321  eP     P       02 14 22.7 -0.7
      comp=Z,11nm,0.6s
ARXS  Arharly             57.44 320 i P     P       02 14 21.4 -2.1
MDOK  Medeo               57.48 318  eP     P       02 14 22.9 -1.0
MDOK  Medeo               57.48 318  eP     P       02 14 22.9 -1.0
AAA   Alma-Ata            57.59 318  eP     P       02 14 23.7 -0.8
AAA   Alma-Ata            57.59 318  eP     P       02 14 23.8 -0.8
ULHL  Ulahol              57.63 317   P     P       02 14 24.9 -0.2
      SNR=6.7
BOOM  Boomskoye usch      57.94 317   P     P       02 14 27.0 -0.1
BOOM                                pmax    pmax
      comp=Z,13nm,1.3s
KUU   Kurty               58.26 319  eP     P       02 14 28.4 -0.8
KUU   Kurty               58.26 319  eP     P       02 14 28.4 -0.8
TKM2  Tokmak 2            58.35 318   P     P       02 14 29.7 -0.3
      SNR=23
TKM2  Tokmak 2            58.35 318 i P     P       02 14 29.2 -0.8
TKM2                                pmax    pmax
      comp=Z,16nm,0.7s
KBK   Karagaybulak        58.68 317   P     P       02 14 32.3  0.0
      SNR=8.3
UCH   Uchtor              58.80 317   P     P       02 14 31.0 -2.5
      SNR=5.2
ZALV  Zalesovo Beam       58.87 332   P     P       02 14 32.0 -1.1
      comp=Z,7.3nm,0.3s,baz=121,slow=5.7,SNR=33
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      comp=Z,7.3nm,0.3s
ZALV  Zalesovo Beam       58.87 332   P     P       02 14 32.0 -1.1
AAK   Ala-Archa           58.98 317   LR    LR      02 43 06.6
      comp=Z,162nm,20.8s,baz=81,slow=39
AAK   Ala-Archa           58.98 317deP      P       02 14 34.1 -0.2
AAK                                 pmax    pmax
      comp=Z,16nm,1.7s
AML   Almayashu           59.33 316   P     P       02 14 36.9 -0.2
      SNR=20
EKS2  Erkin-Say           59.47 317   P     P       02 14 37.8  0.0
      SNR=16
SEY   Seymchan            60.04  13⇓iP      P       02 14 41.6 +0.6
SEY                                 pmax    pmax
      comp=Z,22nm,2.3s
KURK  Kurchatov           60.13 327c iP     P       02 14 41.5 -0.3
KURK                                pmax    pmax
      comp=Z,109nm,1.2s
KURK  Kurchatov           60.13 327   P     P       02 14 41.5 -0.3
KURBB Kurchatov Arra      60.13 327   P     P       02 14 41.5 -0.4
      comp=Z,43nm,0.8s,baz=125,slow=6.3,SNR=333
      comp=Z,43nm,0.8s
KURBB Kurchatov Arra      60.13 327   P     P       02 14 41.2 -0.7
BTLS  Baital              60.23 319  eP     P       02 14 41.8 -0.9
BTLS                                pmax    pmax
      comp=Z,9.0nm,0.8s
BTLS  Baital              60.23 319  eP     P       02 14 41.9 -0.9
      comp=Z,8.7nm,0.8s
ARK   Arkit               60.41 315   P     P       02 14 44.0 -0.1
ARK                                 pmax    pmax
      comp=Z,34nm,0.7s
KBL   Kabul               60.43 307   P     P       02 14 43.5 -1.0
KBL                                 pmax    pmax
      comp=Z,35nm,0.8s
BTK   Batken              60.64 313   P     P       02 14 45.3 -0.4
BTK                                 pmax    pmax
      comp=Z,23nm,0.9s
DZA   Taraz               61.23 316  eP     P       02 14 48.7 -0.9
DZA                                 pmax    pmax
      comp=Z,7.0nm,0.6s
DZA   Taraz               61.23 316  eP     P       02 14 48.7 -0.9
      comp=Z,6.7nm,0.6s
SIMJ  Simiganj            61.55 311   P     P       02 14 51.0 -1.0
SIMJ                                pP      pP      02 15 10.0 -1.1
DZET  Dzherino            61.73 311   P     P       02 14 52.3 -0.8
DZET                                pmax    pmax
      comp=Z,25nm,0.7s
KK31  Karatay Array       61.87 316 i P     P       02 14 52.7 -1.2
IUG   Iuzhnay             61.88 315  eP     P       02 14 53.2 -0.8
IUG                                 pmax    pmax
      comp=Z,21nm,1.1s
IUG   Iuzhnay             61.88 315  eP     P       02 14 53.3 -0.8
      comp=Z,21nm,1.1s
BRLS  Borolday            62.31 316  eP     P       02 14 56.0 -0.8
BRLS                                pmax    pmax
      comp=Z,9.0nm,0.9s
BRLS  Borolday            62.31 316  eP     P       02 14 56.1 -0.8
      comp=Z,9.1nm,0.9s
OTUK  Ortayu              62.62 322   P     P       02 14 57.8 -1.0
BRZS  Berezniki           63.14 324  eP     P       02 15 01.7 -0.4
BRZS  Berezniki           63.14 324  eP     P       02 15 01.8 -0.4
URZ   Urewera             63.92 138   LR    LR      02 42 03.1
      comp=Z,78nm,21.1s,baz=352,slow=35
BKZ   Black Stump Fm      63.99 139   P     P       02 15 09.3 +1.3
ADK   Adak                65.22  35   P     P       02 15 15.6 -0.1
BVA0  Borovoye Array      65.72 326 i P     P       02 15 18.3 -0.6
BVAR  Borovoye Array      65.72 326   P     P       02 15 18.5 -0.5
      comp=Z,24nm,0.6s,baz=118,slow=8.6,SNR=166
BVAR                                LR      LR      02 47 34.7
      comp=Z,64nm,18.5s,baz=290,slow=39
      comp=Z,24nm,0.6s
BRVK  Borovoye            65.79 326c iP     P       02 15 18.9 -0.5
BRVK                                pmax    pmax
      comp=Z,59nm,1.0s
BRVK  Borovoye            65.79 326   P     P       02 15 18.9 -0.5
TIXI  Tiksi               65.83   1   LR    LR      02 45 21.8
      comp=Z,40nm,21.5s,baz=187,slow=37
TIXI  Tiksi               65.83   1ceP      P       02 15 17.5 -1.8
TIXI                                pmax    pmax
      comp=Z,14nm,1.3s
TIXI  Tiksi               65.83   1   P     P       02 15 18.9 -0.4
TIXI                                pP      pP      02 15 38.5 +0.1
ATKA  Atka Island         66.76  35   P     P       02 15 26.1 +0.5
BILL  Bilibino            67.57  15⇑eP      P       02 15 31.1 +0.7
BILL                                pmax    pmax
      comp=Z,3.0nm,0.9s
NIKH  Nikolski High       70.09  35   P     P       02 15 46.2 -0.1
      baz=252
AB31  Akbulak array       70.69 320 i P     P       02 15 49.2 -0.9
SPIA  Saint Paul Isl      70.70  31   P     P       02 15 50.1 +0.2
      baz=250
P08K  Saint George I      70.86  32   P     P       02 15 51.0  0.0
      baz=251
UNV   Unalaska Valle      71.69  35   P     P       02 15 55.8 -0.1
      baz=254
AKTO  Aktyubinsk          72.18 321   LR    LR      02 49 59.1
      comp=Z,115nm,21.1s,baz=148,slow=38
AKTO  Aktyubinsk          72.18 321   P     P       02 15 58.1 -0.9
SVE   Sverdlovsk          72.33 328deP      P       02 15 59.3 -0.5
SVE                                  eS     S       02 25 16.4 -0.4
SVE                                 pmax    pmax
      comp=Z,59nm,1.1s
GAMB  Gambell             72.50  24   P     P       02 16 01.2 +0.6
      baz=246
ARTI  Arti                73.40 327c iP     P       02 16 04.9 -1.3
ARTI                                *PP     pP      02 16 25.1 -0.7
ARTI                                S       SKiKP   02 25 29.8  0.0
ARTI                                SS      SS      02 30 08.7 -4.0
ARTI                                pmax    pmax
      comp=Z,29nm,0.8s
M11K  Mekoryuk            73.73  28   P     P       02 16 08.4 +0.5
      baz=252
S12K  Black Hills         74.64  34   P     P       02 16 13.8 +0.4
      baz=257
TNA   Tin City            74.68  23   P     P       02 16 14.1 +0.7
      baz=250
K13K  Kusilvak Mount      74.90  27   P     P       02 16 15.6 +0.8
      baz=254,SNR=6.1
M13K  Dall Lake           75.10  29   P     P       02 16 16.6 +0.7
      baz=255
F14K  Arctic Creek        75.28  23   P     P       02 16 17.6 +0.8
      baz=251
ANM   Nome                75.37  24   P     P       02 16 18.1 +0.7
      baz=252
SDPT  Sand Point          75.45  34   P     P       02 16 17.9 -0.1
      baz=259
J14K  Nanvaranak Lak      75.62  26   P     P       02 16 19.5 +0.6
      baz=254
L14K  Kuka Creek          75.65  28   P     P       02 16 19.7 +0.7
      baz=255
N14K  Kuskokwak Cree      75.78  30   P     P       02 16 20.4 +0.5
      baz=257
O14K  Tigyukauivet M      75.84  30   P     P       02 16 20.7 +0.5
      baz=257
M14K  Bethel              75.85  29   P     P       02 16 20.6 +0.5
      baz=256
CHNA  Chernabura Isl      75.85  35   P     P       02 16 20.1 -0.2
      baz=260
F15K  North Star Dit      76.01  23   P     P       02 16 21.7 +0.6
      baz=252
G15K  Niukluk             76.05  24   P     P       02 16 21.7 +0.4
      baz=253
S14K  Fog Glacier         76.14  33   P     P       02 16 22.2 +0.1
      baz=259
L15K  Ungalak Mounta      76.29  28   P     P       02 16 23.2 +0.5
      baz=256
K15K  Wolf Creek Mou      76.42  27   P     P       02 16 23.8 +0.4
      baz=256,SNR=5.1
M15K  Kasigluk River      76.44  29   P     P       02 16 23.9 +0.3
      baz=257,SNR=8.5
O15K  Ungalikthiuk R      76.55  30   P     P       02 16 24.5 +0.3
      baz=258
C16K  Lisburne Hills      76.56  21   P     P       02 16 24.4 +0.4
      baz=251,SNR=6.2
N15K  Kwethluk River      76.62  29   P     P       02 16 24.6  0.0
      baz=258
H16K  Elim                76.69  25   P     P       02 16 25.3 +0.4
      baz=255
RAR   Rarotonga           76.69 113   LR    LR      02 46 29.4
      comp=Z,83nm,19.2s,baz=260,slow=33
G16K  Koyuk River         76.84  24   P     P       02 16 26.2 +0.5
      baz=255
J16K  Anvik River         77.06  26   P     P       02 16 27.5 +0.5
      baz=257,SNR=6.1
LKRN  Lenkeran, Azer      77.14 308   P     P       02 16 28.9 +0.9
I17K  Unalakleet          77.16  26   P     P       02 16 28.3 +0.8
      baz=257,SNR=6.1
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D17K  Noatak River        77.19  22   P     P       02 16 28.1 +0.4
      baz=254,SNR=21
L16K  Owhat River         77.23  28   P     P       02 16 28.2 +0.2
      baz=258,SNR=9.5
N16K  Nishlik Lake        77.33  29   P     P       02 16 29.0 +0.4
      baz=259,SNR=8.8
M16K  Timber Creek        77.34  29   P     P       02 16 28.8 +0.2
      baz=259,SNR=6.0
RDOG  Red Dog Mine        77.36  21   P     P       02 16 28.9 +0.3
      baz=254
C17K  DeLong Mountai      77.38  21   P     P       02 16 29.1 +0.4
      baz=253,SNR=8.0
P16K  Nushagak River      77.45  31   P     P       02 16 30.0 +0.7
      baz=260
E17K  Hotham Inlet        77.49  22   P     P       02 16 30.1 +0.8
      baz=255,SNR=15
O16K  Kokwok River B      77.50  30   P     P       02 16 30.2 +0.7
      baz=260,SNR=5.3
F17K  Baldwin Pennin      77.55  23   P     P       02 16 30.4 +0.8
      baz=256
G17K  Kiwalik Mounta      77.56  24   P     P       02 16 30.5 +0.7
      baz=256,SNR=10
H17K  Granite Mounta      77.73  25   P     P       02 16 31.1 +0.4
      baz=257,SNR=9.8
J17K  VABM Dome           77.76  26   P     P       02 16 31.5 +0.6
      baz=258,SNR=7.5
L17K  Donlin              77.86  28   P     P       02 16 32.2 +0.7
      baz=259,SNR=11
K17K  Iditarod            77.97  27   P     P       02 16 32.9 +0.8
      baz=259,SNR=12
O17K  Koliganek Bris      78.03  30   P     P       02 16 32.9 +0.4
      baz=261,SNR=6.0
E18K  Tukpahlearik C      78.04  22   P     P       02 16 32.9 +0.5
      baz=256,SNR=23
Q16K  King Salmon         78.08  31   P     P       02 16 33.2 +0.5
      baz=261
AKT   Akhty               78.08 311  eP     P       02 16 33.1 -0.2
AKT                                  e              02 19 31.3
AKT                                 pmax    pmax
      comp=Z,38nm,0.8s
N17K  Nushagak Hills      78.11  29   P     P       02 16 33.5 +0.6
      baz=260,SNR=5.7
B18K  Kokolik River       78.11  20   P     P       02 16 33.4 +0.6
      baz=254
C18K  Utukok River        78.13  21   P     P       02 16 33.1 +0.1
      baz=255,SNR=9.5
M17K  Holitna River       78.13  28   P     P       02 16 33.7 +0.7
      baz=260,SNR=5.6
F18K  Selawik             78.21  23   P     P       02 16 33.7 +0.4
      baz=257,SNR=5.2
CHIR  Chirikof Islan      78.25  34   P     P       02 16 34.2 +0.5
      baz=263
P17K  Kvichak River       78.27  31   P     P       02 16 34.3 +0.5
      baz=262
H18K  Honhosa River       78.42  25   P     P       02 16 35.1 +0.5
      baz=258
Q17K  Contact Creek       78.42  32   P     P       02 16 33.9 -0.9
      baz=262,SNR=12
G18K  Tagagawik           78.45  24   P     P       02 16 35.0 +0.3
      baz=258,SNR=5.4
SEKA  Sheki               78.47 311   P     P       02 16 36.0 +0.6
MNGR  Mingechevir, A      78.54 310   P     P       02 16 36.6 +0.9
KIRV  Kirov               78.58 329c iP     P       02 16 34.4 -1.1
L18K  Granite Mounta      78.62  28   P     P       02 16 36.0 +0.3
      baz=261,SNR=9.7
N18K  Kilae Creek         78.76  29   P     P       02 16 37.0 +0.4
      baz=262
C19K  Lookout Ridge       78.81  21   P     P       02 16 37.2 +0.5
      baz=257,SNR=14
J18K  Innoko River        78.81  26   P     P       02 16 36.8  0.0
      baz=260,SNR=6.5
BELG  Belogornoye         78.91 322c iP     P       02 16 36.7 -0.7
BELG                                pmax    pmax
      comp=Z,13nm,1.1s
M18K  Stony River         78.91  28   P     P       02 16 37.2 -0.1
      baz=262,SNR=8.5
P18K  Big Mountain,       78.91  31   P     P       02 16 37.0 -0.4
      baz=262
Q18K  Katmai Hardscr      78.93  31   P     P       02 16 36.6 -1.0
      baz=263,SNR=5.8
GCSA  Galena City Sc      78.96  25   P     P       02 16 37.7 +0.2
      baz=260,SNR=5.1
O18K  Koktuh Hills        78.98  30   P     P       02 16 37.9 +0.2
      baz=262,SNR=13
F19K  Shaleruckik Mo      78.99  23   P     P       02 16 37.7 +0.1
      baz=259
R18K  Karluk              79.09  33   P     P       02 16 38.0 -0.3
      baz=264
GANJ  Ganja               79.11 310   P     P       02 16 39.6 +0.7
G19K  Purcell Mounta      79.13  24   P     P       02 16 38.5 +0.1
      baz=260,SNR=18
SII   Sitkinak Islan      79.13  34   P     P       02 16 38.5 -0.2
      baz=264
D19K  Kuna River          79.19  21   P     P       02 16 39.0 +0.2
      baz=258,SNR=19
H19K  Roundabout Mou      79.28  24   P     P       02 16 39.5 +0.3
      baz=260,SNR=16
E19K  Redstone River      79.32  22   P     P       02 16 39.8 +0.3
      baz=259,SNR=24
J19K  Poorman             79.38  26   P     P       02 16 40.2 +0.4
      baz=261,SNR=7.5
N19K  Bonanza Creek       79.46  29   P     P       02 16 40.7 +0.2
      baz=263,SNR=10
L19K  White Mountain      79.47  28   P     P       02 16 40.8 +0.4
      baz=262,SNR=8.5
O19K  Port Alsworth       79.47  30   P     P       02 16 40.8 +0.4
      baz=263
M19K  Big River Lodg      79.64  28   P     P       02 16 42.0 +0.7
      baz=263,SNR=6.7
Q19K  Cape Douglas,       79.67  31   P     P       02 16 40.7 -0.8
      baz=264,SNR=5.0
OHAK  Old Harbor          79.69  33   P     P       02 16 41.5 -0.1
      baz=265
NAX   Nakhchivan          79.71 309   P     P       02 16 42.9 +0.6
D20K  Etivluk River       79.78  21   P     P       02 16 42.0 +0.1
      baz=260,SNR=24
F20K  Avaraart Lake       79.82  23   P     P       02 16 42.5 +0.4
      baz=261,SNR=11
RAYN  Ar Rayn             79.83 293   P     P       02 16 41.8 -1.4
RAYN                                pmax    pmax
      comp=Z,25nm,0.7s
B20K  Meade River         79.83  20   P     P       02 16 42.6 +0.4
      baz=259
E20K  Nigu River          79.85  22   P     P       02 16 42.6 +0.2
      baz=260,SNR=32
H20K  Anotleneega Mo      79.92  25   P     P       02 16 43.1 +0.4
      baz=262,SNR=20
P19K  Oil Pt              79.95  31   P     P       02 16 43.4 +0.4
      baz=264
L20K  Farewell, AK        79.95  28   P     P       02 16 43.5 +0.5
      baz=263,SNR=5.5
K20K  Telida              79.98  27   P     P       02 16 43.6 +0.5
      baz=263,SNR=9.4
I20K  Naaghedeneel        79.99  25   P     P       02 16 43.6 +0.6
      baz=262,SNR=7.9
J20K  Nowinta River       80.05  26   P     P       02 16 43.9 +0.5
      baz=263,SNR=9.8
KDAK  Kodiak Island       80.11  32   LR    LR      02 52 13.5
      comp=Z,17nm,19.6s,baz=241,slow=36
KDAK  Kodiak Island       80.11  32ceP      P       02 16 43.6 -0.3
KDAK                                pmax    pmax
      comp=Z,28nm,0.7s
KDAK  Kodiak Island       80.11  32   P     P       02 16 44.1 +0.2
      baz=265
M20K  Styx River          80.23  28   P     P       02 16 44.9 +0.3
      baz=264,SNR=15
A21K  Barrow              80.27  19   P     P       02 16 44.9 +0.5
      baz=259
Q20K  Shuyak Island       80.28  32   P     P       02 16 44.9 +0.1
      baz=265
O20K  Slope Mountain      80.30  30   P     P       02 16 43.9 -1.1
      baz=265
GNI   Garni               80.31 310c iP     P       02 16 46.0 +0.4
GNI                                 pmax    pmax
      comp=Z,24nm,0.8s
GNI   Garni               80.31 310   P     P       02 16 46.8 +1.2
      comp=Z,28nm,0.9s
C21K  Knifeblade Rid      80.50  21   P     P       02 16 46.0 +0.2
      baz=261,SNR=8.9
N20K  Mount Spurr         80.61  29   P     P       02 16 46.3 -0.3
      baz=265
SPCR  Spurr Chakacha      80.61  29   P     P       02 16 46.4 -0.2
      baz=265
G21K  Allakaket           80.61  24   P     P       02 16 46.7 +0.3
      baz=263,SNR=23
B21K  Ikpikpuk River      80.64  20   P     P       02 16 46.7 +0.2
      baz=261,SNR=22
E21K  Killik River        80.69  22   P     P       02 16 47.0 +0.1
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	baz=262						
F21K	Alatna River	80.71	23	P	P	02 16 46.9	-0.1
	baz=263,SNR=6.8						
A22K	Sinclair Lake	80.73	19	P	P	02 16 47.1	+0.2
	baz=261						
HOM	Homer	80.76	31	P	P	02 16 46.8	-0.5
	baz=266						
H21K	Melozitna Rive	80.79	24	P	P	02 16 47.6	+0.1
	baz=264,SNR=23						
CHUM	Lake Minchumin	80.81	26	P	P	02 16 47.9	+0.3
	baz=264						
CAST	Castle Rocks	80.87	27	P	P	02 16 47.8	-0.1
	baz=265						
SKT	Skwentna	81.00	28	P	P	02 16 47.9	-0.7
	baz=265,SNR=14						
B22K	Teshekpuk Lake	81.15	20	P	P	02 16 49.4	+0.3
	baz=262,SNR=10						
NCK	Nalchik	81.20	313	⇓*i*P	P	02 16 50.3	+0.2
NCK				pmax	pmax		
	comp=Z,24nm,1.0s						
D22K	Ayikyak River	81.22	21	P	P	02 16 50.0	+0.4
	baz=263,SNR=12						
BRSE	Bradley Lake S	81.22	31	P	P	02 16 49.3	-0.5
	baz=266						
F22K	John River	81.25	23	P	P	02 16 50.1	+0.3
	baz=264						
SUA	Susitna One	81.33	29	P	P	02 16 49.9	-0.6
	baz=266						
H22K	Ishtalitna Cre	81.40	24	P	P	02 16 51.1	+0.4
	baz=265,SNR=24						
BPAW	Bear Paw Mtn.	81.42	26	P	P	02 16 50.7	-0.1
	baz=265,SNR=36						
G22K	Bettles	81.45	23	P	P	02 16 51.0	+0.1
	baz=265						
E22K	Anaktuvuk Pass	81.45	22	P	P	02 16 51.3	+0.3
	baz=264,SNR=26						
MLY	Manley	81.60	25	P	P	02 16 52.0	+0.3
	baz=266,SNR=52						
GOF	Gofitskoye	81.60	315	*ce*P	P	02 16 51.8	-0.3
CUT	Chulitna	81.62	28	P	P	02 16 51.9	0.0
	baz=266						
M22K	Willow	81.65	29	P	P	02 16 51.3	-0.7
	baz=267						
TRF	Thorofare Moun	81.68	27	P	P	02 16 52.1	-0.3
	baz=266,SNR=18						
KBZ	Khabaz	81.70	313	P	P	02 16 52.4	-0.2
	comp=Z,16nm,1.1s,baz=107,slow=2.3,SNR=24						
	comp=Z,16nm,1.1s						
KBZ	Khabaz	81.70	313	*i* P	P	02 16 52.0	-0.7
KBZ				pmax	pmax		
	comp=Z,26nm,1.2s						
RC01	Rabbit Creek A	81.80	29	P	P	02 16 52.3	-0.5
	baz=267,SNR=9.4						
KIV	Kislovodsk	81.86	313	⇑P	P	02 16 53.6	0.0
KIV	Kislovodsk	81.86	313	*i* P	P	02 16 53.3	-0.3
KIV				pmax	pmax		
	comp=Z,35nm,0.8s						
KIV	Kislovodsk	81.86	313	P	P	02 16 54.1	+0.5
	comp=Z,274nmcomp=Z,34nm,1.1s						
SHA1	Shidzhatmaz	81.88	313	*de*P	P	02 16 53.9	0.0
D23K	Nanushuk River	81.95	21	P	P	02 16 54.1	+0.7
	baz=265,SNR=17						
COLD	Coldfoot	81.98	23	P	P	02 16 54.4	+0.7
	baz=266,SNR=17						
G23K	Bananza Creek	82.02	23	P	P	02 16 54.6	+0.7
	baz=266,SNR=37						
C23K	Itkillik River	82.05	20	P	P	02 16 54.7	+0.8
	baz=265,SNR=20						
PMR	Palmer	82.11	29	P	P	02 16 54.2	-0.2
PMR	Palmer	82.11	29	P	P	02 16 53.9	-0.5
	baz=268,SNR=6.0						
H23K	Yukon River	82.15	24	P	P	02 16 55.0	+0.3
	baz=266,SNR=35						
I23K	Minto, Yukon-K	82.19	25	P	P	02 16 55.1	+0.3
	baz=267,SNR=24						
E23K	Chandalar	82.27	22	P	P	02 16 55.8	+0.6
	baz=266,SNR=26						
NEA2	Nenana	82.28	26	P	P	02 16 55.6	+0.3
	baz=267						
MCK	McKinley	82.30	27	P	P	02 16 54.9	-0.5
	baz=267,SNR=17						
TOLK	Toolik Lake Re	82.32	22	P	P	02 16 56.0	+0.5
	baz=266,SNR=15						
KNK	Knik Glacier	82.43	29	P	P	02 16 56.0	-0.2
	baz=268,SNR=6.8						
WAT1	Susitna Watana	82.43	27	P	P	02 16 55.8	-0.3
	baz=268						
PWL	Port Wells	82.47	29	P	P	02 16 56.3	0.0
	baz=268,SNR=6.4						
SML	Sawmill	82.50	28	P	P	02 16 56.3	-0.2
	baz=268,SNR=9.0						
VRH	Novokhopyorsk	82.51	321	*e*P	P	02 16 54.6	-2.1
VRH				pmax	pmax		
	comp=Z,30nm,0.8s						
D24K	Happy Valley	82.62	21	P	P	02 16 57.6	+0.7
	baz=267,SNR=13						
E24K	Your Creek	82.69	22	P	P	02 16 57.9	+0.5
	baz=267,SNR=14						
C24K	Franklin Bluff	82.70	20	P	P	02 16 57.6	+0.2
	baz=267						
M23K	Glacier View	82.79	29	P	P	02 16 58.1	+0.1
	baz=269,SNR=6.7						
WAT6	Susitna Watana	82.80	28	P	P	02 16 57.9	-0.3
	baz=269,SNR=21						
COLA	College	82.82	25	P	P	02 16 58.1	+0.1
COLA	College	82.82	25	*d i*P	P	02 16 57.4	-0.6
COLA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
COLA	College	82.82	25	P	P	02 16 58.1	+0.1
	baz=268						
H24K	Noodor Dome	82.84	24	P	P	02 16 58.6	+0.4
	baz=268,SNR=69						
F24K	Squaw Lake	82.89	23	P	P	02 16 59.0	+0.6
	baz=268,SNR=13						
P23K	Montague Islan	82.91	30	P	P	02 16 58.9	+0.3
	baz=269						
SCM	Sheep Creek Mo	82.98	28	P	P	02 16 59.0	-0.1
	baz=269,SNR=9.3						
DHY	Denali Highway	82.98	27	P	P	02 16 59.3	+0.2
	baz=269,SNR=9.3						
POKR	Poker Plat Res	83.00	25	P	P	02 16 58.8	-0.3
	baz=268						
G24K	Hadweenzic Riv	83.03	24	P	P	02 16 59.1	0.0
	baz=268,SNR=27						
GLI	Glacier Island	83.08	29	P	P	02 16 59.5	0.0
	baz=269,SNR=7.5						
HDA	Harding Lake	83.19	26	P	P	02 16 59.3	-0.7
	baz=269,SNR=22						
ILAR	Eielson Array	83.23	26	P	P	02 16 58.0	-2.2
	comp=Z,5.7nm,0.6s,baz=242,slow=5.4,SNR=70						
ILAR				PKKPbc	PKKPbc	02 35 20.4	-2.6
	comp=Z,0.5nm,0.8s,baz=17,slow=2.7,SNR=4.7						
	comp=Z,5.7nm,0.6s						
LABN	Labinsk	83.26	314	*e*P	P	02 16 58.2	-2.6
LABN				*e*		02 20 09.8	
LABN				*e*S	SKSac	02 27 09.2	-6.9
LABN				*e*SS	SS	02 32 41.1	-0.2
LABN				pmax	pmax		
	comp=Z,23nm,0.8s						
ERBR	Yeremizino-Bor	83.40	315	*e*P	P	02 16 59.0	-2.5
ERBR				*e*S	SKSac	02 27 10.6	-6.4
ERBR				*e*SS	SS	02 32 48.5	+5.2
ERBR				*e*SSS	SSS	02 36 10.8	
ERBR				pmax	pmax		
	comp=Z,47nm,0.9s						
D25K	Kavik River	83.50	21	P	P	02 17 01.5	-0.1
	baz=269,SNR=14						
M24K	Tolsona, Glenn	83.52	28	P	P	02 17 02.1	+0.3
	baz=270,SNR=9.3						
G25K	Bearman Lake	83.57	23	P	P	02 17 02.6	+0.7
	baz=270,SNR=17						
KLU	Klutina	83.64	29	P	P	02 17 02.7	+0.2
	baz=270,SNR=11						
H25L	Birch Creek	83.69	24	P	P	02 17 03.4	+0.9
	baz=270,SNR=29						
K24K	Donnelly Dome	83.70	26	P	P	02 17 02.2	-0.5
	baz=270,SNR=10						
KLMR	Klimovskoe	83.72	331	*e*P	P	02 17 00.8	-2.0
KLMR				pmax	pmax		
	comp=Z,47nm,0.9s						
EYAK	Cordova Ski Ar	83.74	30	P	P	02 17 03.0	+0.1
	baz=271						
F25K	Christian Rive	83.76	23	P	P	02 17 03.8	+0.8
	baz=270,SNR=19						
E25K	Arctic Village	83.79	22	P	P	02 17 03.9	+0.9
	baz=270,SNR=17						
VSLR	Vesyoloye	83.79	313	*c i*P	P	02 17 02.8	-0.7
VSLR				pmax	pmax		
	comp=Z,67nm,0.8s						
PRP	Porcupine Dome	83.81	25	P	P	02 17 02.3	-1.0
	baz=270,SNR=14						
PAX	Paxson	83.85	27	P	P	02 17 03.4	-0.1
	baz=270,SNR=14						
J25K	Salcha River,	83.88	26	P	P	02 17 02.7	-0.9
	baz=270,SNR=24						
HARP	HAARP	84.00	28	P	P	02 17 04.5	+0.3
	baz=271						
SOC	Sochi	84.02	313	*e*P	P	02 17 03.0	-1.6
SOC				*e*S	S	02 27 19.1	-3.7
SOC				*e*SS	SS	02 32 54.8	+2.3
SOC				*e*SSS	SSS	02 36 25.7	
SOC				pmax	pmax		
	comp=Z,25nm,0.8s						
C26K	Camden Bay	84.02	20	P	P	02 17 05.4	+1.3
	baz=270						
VORD	Divnogorie	84.05	321	*e*P	P	02 17 02.2	-2.4
VORD				pmax	pmax		
	comp=Z,20nm,0.8s						
VORR	Voronezh	84.08	321	*e*P	P	02 17 02.0	-2.8
VORR				pmax	pmax		
	comp=Z,40nm,0.8s						
RIDG	Independent Ri	84.12	27	P	P	02 17 04.6	-0.2
	baz=271,SNR=19						
VSR	Storozhevoye	84.12	321	*e*P	P	02 17 01.4	-3.6
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LPSR	Galich'ya Gora	84.22	322	*e*P	P	02 17 03.0	-2.5
LPSR				pmax	pmax		
	comp=Z,40nm,0.8s						
N25K	Chitina, Valde	84.28	29	P	P	02 17 06.1	+0.4
	baz=271,SNR=12						
BMRM	Bremner River	84.29	29	P	P	02 17 06.1	+0.4
	baz=272,SNR=6.0						
F26K	Sheenjek River	84.33	23	P	P	02 17 06.9	+1.1
	baz=271,SNR=14						
KAIM	Kayak Island	84.41	30	P	P	02 17 07.1	+0.8
	baz=272						
C27K	Jago River	84.44	21	P	P	02 17 07.2	+0.9
	baz=272,SNR=5.9						
G26K	Porcupine Rive	84.49	23	P	P	02 17 07.3	+0.8
	baz=272,SNR=18						
SCRK	Sand Creek	84.49	26	P	P	02 17 06.8	0.0
	baz=272,SNR=11						
MENT	Mentasta	84.65	27	P	P	02 17 09.2	+1.7
J26L	Joseph Creek	84.66	26	P	P	02 17 07.7	0.0
	baz=272,SNR=23						
I26K	Coal Creek Min	84.80	25	P	P	02 17 08.0	-0.2
	baz=272,SNR=21						
L26K	Log Cabin Wild	84.81	27	P	P	02 17 09.1	+0.8
	baz=272						
MOS	Moscow	84.86	325	*e*P	P	02 17 06.4	-2.2
MOS				*e**PP	pP	02 17 24.4	-4.2
MOS				*e*		02 20 26.8	
MOS				*e*S	S	02 27 24.9	-5.8
MOS				pmax	pmax		
	comp=Z,100nm,1.0s						
MOS				pmax	pmax		
	comp=Z,111nm,0.9s						
M26K	Nabesna, AK	85.00	28	P	P	02 17 10.0	+0.7
	baz=273						
CRQE	Cirque	85.04	30	P	P	02 17 09.9	+0.3
	baz=273,SNR=6.0						
MCARA	McCarthy VSAT	85.04	29	P	P	02 17 09.9	+0.4
	baz=273						
E27K	Coleen River	85.27	22	P	P	02 17 11.0	+0.5
	baz=274,SNR=14						
K27K	Chicken	85.33	26	P	P	02 17 12.0	+1.1
	baz=274						
G27K	Doyon Strip	85.33	23	P	P	02 17 11.8	+0.9
	baz=274,SNR=10						
VNDA	Vanda	85.40	173	P	P	02 17 10.7	-0.2
	comp=Z,13nm,0.8s,baz=314,slow=5.9,SNR=47						
	comp=Z,13nm,0.8s						
H27K	Steamboat Moun	85.42	24	P	P	02 17 12.3	+1.0
	baz=274,SNR=13						
I27K	Kandik River	85.43	25	P	P	02 17 12.0	+0.6
	baz=274,SNR=28						
D27M	Malcolm River	85.43	21	P	P	02 17 12.1	+0.8
	baz=274,SNR=5.1						
OBN	Obninsk	85.50	325	⇑P	P	02 17 11.8	0.0
OBN	Obninsk	85.50	325	*c i*P	P	02 17 10.7	-1.1
OBN				*e*S	S	02 27 45.0	+8.1
OBN				*e*SS	SS	02 33 09.7	-4.0
OBN				pmax	pmax		
	comp=Z,118nm,1.3s						
OBN				MLR	MLR		
	comp=Z,37nm,17.0s						
OBN	Obninsk	85.50	325	P	P	02 17 11.3	-0.5
	comp=Z,778nmcomp=Z,92nm,0.7s						
L27K	Beaver Creek,	85.50	27	P	P	02 17 12.6	+0.8
	baz=274,SNR=12						
M27K	Edge Creek, AK	85.53	28	P	P	02 17 12.8	+0.7
	baz=274,SNR=5.9						
LVZ	Lovozero	85.55	338	⇑*e*P	P	02 17 10.0	-1.9
LVZ				pmax	pmax		
	comp=Z,42nm,1.8s						
ANN	Anapa	85.59	314	*e*P	P	02 17 11.6	-0.9
PPT	Papeete	85.60	108	LR	LR	02 50 15.4	
	comp=Z,40nm,18.8s,baz=276,slow=32						
PPT2	Papeete2	85.60	108	*e*LR	LR	02 44 25.2	
	comp=Z,152nm,32.5s						
PPT2				*e*LR	LR	02 44 27.3	
	comp=Z,197nm,28.0s						
MESA	MESA	85.64	30	P	P	02 17 13.1	+0.4
	baz=274						
MAW	Mawson	85.69	200	LR	LR	02 51 48.5	
	comp=Z,28nm,22.0s,baz=64,slow=33						
CTG	Chitna Glacier	85.88	29	P	P	02 17 14.4	+0.6
	baz=274,SNR=7.7						
F28M	Old Crow	85.97	23	P	P	02 17 14.3	+0.4
	baz=275,SNR=24						
BVCY	Beaver Creek	86.00	28	P	P	02 17 14.9	+0.7
	baz=275						
E28M	Babbage River	86.00	22	P	P	02 17 14.5	+0.4
	baz=275,SNR=8.1						
I28M	Miner Creek	86.14	25	P	P	02 17 15.2	+0.2
	baz=275,SNR=44						
YUK3	Moose Creek	86.24	28	P	P	02 17 15.6	-0.1
	baz=275						
SBA	Scott Base	86.31	172	P	P	02 17 16.8	+1.5
SBA				pmax	pmax		
	comp=Z,12nm,1.0s						
O28M	Mount Upton	86.46	29	P	P	02 17 16.7	-0.2
	baz=275						
TBI	Tubuai	86.46	114	*e*LR	LR	02 44 50.3	
	comp=Z,605nm,27.8s						
PINM	Pinnacle	86.49	30	P	P	02 17 17.1	+0.4
	baz=275						
DAWY	Dawson	86.51	26	P	P	02 17 17.1	+0.4
	baz=276,SNR=8.4						
E29M	Blow River	86.62	22	P	P	02 17 17.2	+0.1
	baz=277						
H29M	Whitestone	86.70	24	P	P	02 17 17.8	+0.3
	baz=277,SNR=6.6						
G29M	Pine Creek	86.75	23	P	P	02 17 18.0	+0.2
	baz=277,SNR=15						
M29M	Somme Creek	87.10	28	P	P	02 17 19.9	+0.1
	baz=277,SNR=5.3						
YUK4	Talbot Arm	87.14	29	P	P	02 17 20.2	+0.1
	baz=277						
L29M	L29M	87.17	27	P	P	02 17 20.1	+0.1
	baz=277,SNR=6.9						
O29M	Mount Kennedy	87.30	30	P	P	02 17 20.7	-0.1
	baz=277						
YUK6	Outpost Mounta	87.33	29	P	P	02 17 21.0	0.0
	baz=277						
EPYK	Eagle Plains	87.34	24	P	P	02 17 20.9	+0.2
	baz=278,SNR=6.8						
K29M	Barlow Dome	87.35	26	P	P	02 17 20.7	-0.2
	baz=278						
G30M	tAoh Zraii Nji	87.45	23	P	P	02 17 21.2	0.0
	baz=279						
F30M	Barrier River	87.52	22	P	P	02 17 21.1	-0.4
	baz=279						
I30M	Mount Dempster	87.65	25	P	P	02 17 22.8	+0.4
	baz=278						
HYT	Haines Junctio	87.76	29	P	P	02 17 23.0	+0.1
	baz=278						
J30M	Hart River	87.76	25	P	P	02 17 23.3	+0.4
	baz=279						
P29M	Windy Craggy	87.80	30	P	P	02 17 23.5	+0.5
	baz=278						
N30M	Aishikik Lake	87.87	29	P	P	02 17 23.6	+0.2
	baz=278						
SIM	Simferopol'	87.93	315	*e*P	P	02 17 21.9	-2.0
SIM				pmax	pmax		
	comp=Z,18nm,0.7s						
MSF	Maaselka	87.99	336	P	P	02 17 23.8	+0.1
MSF				pmax	pmax		
	comp=Z,16nm,0.6s						
P30M	Million Dollar	88.13	30	P	P	02 17 25.0	+0.4
	baz=278						
MMAI	Mount Meron Ar	88.14	303	P	P	02 17 24.7	-0.6
	comp=Z,4.2nm,0.5s,baz=76,slow=7.8,SNR=10.0						
	comp=Z,4.2nm,0.5s						
G31M	Satah River	88.22	23	P	P	02 17 23.9	-0.8
	baz=280						
INK	Inuvik	88.24	22	P	P	02 17 24.5	-0.3
	baz=281						
F31M	Tsiigehtchic	88.32	22	P	P	02 17 24.7	-0.6
	baz=281						
H31M	Peel River	88.39	24	P	P	02 17 25.4	-0.3
	baz=280						
O30N	Mendenhall	88.45	29	P	P	02 17 26.3	+0.2
	baz=279						
N31M	Braeburn, Yuko	88.49	28	P	P	02 17 26.6	+0.4
	baz=279						
PLBC	Pleasant Camp	88.52	30	P	P	02 17 26.3	-0.1
	baz=279						
SPA0	Spitsbergen Ar	88.53	349	*e*P	P	02 17 26.7	+0.5
SPITS	Spitsbergen Ar	88.53	349	P	P	02 17 25.4	-0.8
	comp=Z,2.6nm,0.4s,baz=91,slow=8.3,SNR=18						
SPITS				LR	LR	03 03 55.9	
	comp=Z,30nm,19.2s,baz=31,slow=40						
	comp=Z,2.6nm,0.4s						
ARA0	ARCESS Array S	88.61	340	*e*P	P	02 17 25.4	-1.2
ARCES	ARCESS Array B	88.61	340	P	P	02 17 24.8	-1.8
	comp=Z,10nm,0.8s,baz=84,slow=6.3,SNR=67						
ARCES				PKiKP	PKiKP	02 22 26.4	-0.1
	comp=Z,0.5nm,0.6s,baz=58,slow=3.0,SNR=4.4						
ARCES				PKKPbc	PKKPbc	02 35 08.1	-2.2
	comp=Z,0.2nm,0.3s,baz=260,slow=2.8,SNR=7.1						
	comp=Z,10nm,0.8s						
SGF	Sodankyl	88.69	338	P	P	02 17 25.3	-1.7
SGF				pmax	pmax		
	comp=Z,13nm,1.3s						
KIRS	Kirsehir-Merke	88.70	309	⇑P	P	02 17 27.0	-0.8
S31K	Pelican	88.82	32	P	P	02 17 28.2	+0.4
	baz=279						
BR131	Keskin Array S	88.85	310	*c i*P	P	02 17 27.2	-1.4
BRTR	Keskin Array B	88.85	310	P	P	02 17 27.4	-1.2
	comp=Z,10nm,0.8s,baz=117,slow=3.8,SNR=49						
BRTR				PP	PP	02 20 59.0	+0.4
	comp=Z,0.9nm,0.8s,baz=97,slow=6.3,SNR=4.5						
	comp=Z,10nm,0.8s						
BR106	Keskin Array S	88.86	310	P	P	02 17 27.4	-1.2
	comp=Z,83nmcomp=Z,12nm,0.8s						
BR105	Keskin Array S	88.87	310	P	P	02 17 27.5	-1.2
	comp=Z,123nmcomp=Z,17nm,0.9s						
HAMF	Hammerfest	88.96	341	*e*P	P	02 17 27.2	-1.0
KBS	Kingsbay	89.05	350	*e*P	P	02 17 28.0	-0.5
WHY	Whitehorse	89.06	29	P	P	02 17 29.2	+0.1
	baz=280						
ANTO	Ankara	89.48	310	⇑P	P	02 17 30.8	-0.6
ANTO	Ankara	89.48	310	P	P	02 17 30.7	-0.7
ANTO				pmax	pmax		
	comp=Z,22nm,1.1s						
ANTO	Ankara	89.48	310	P	P	02 17 30.7	-0.7
	comp=Z,120nmcomp=Z,11nm,1.1s						
FARO	Faro, Yukon	89.49	27	P	P	02 17 31.2	+0.2
	baz=281						
CSS	Mathiatis	89.64	305	P	P	02 17 31.7	-0.5
	comp=Z,12nm,0.8s						
R32K	Eaglecrest	89.66	31	P	P	02 17 32.1	+0.3
	baz=280						
S32K	Killisnoo	89.78	32	P	P	02 17 32.8	+0.5
	baz=280						
N32M	Quiet Lake	89.83	29	P	P	02 17 33.1	+0.5
	baz=282						
A36M	Sachs Harbour	90.02	17	P	P	02 17 34.2	+1.1
	baz=289						
FINES	FINESS Array B	90.13	332	P	P	02 17 32.4	-1.4
	comp=Z,3.4nm,0.5s,baz=71,slow=4.8,SNR=38						
FINES				LR	LR	03 00 01.1	
	comp=Z,34nm,21.5s,baz=40,slow=37						
	comp=Z,3.4nm,0.5s						
JETT	Jettan, Norway	90.34	340	*e*P	P	02 17 33.5	-1.3
AK09	Malin Array Si	90.40	321	P	P	02 17 34.0	-1.4
AK08	Malin Array Si	90.42	321	P	P	02 17 34.1	-1.3
VSU	Vasula	90.42	329	*c i*P	P	02 17 32.8	-2.5
VSU				pmax	pmax		
	comp=Z,12nm,0.7s						
AKASG	Malin Array Be	90.42	321	P	P	02 17 33.9	-1.5
	comp=Z,5.0nm,0.7s,baz=66,slow=5.0,SNR=23						
	comp=Z,5.0nm,0.7s						
AKBB	Malin Array Si	90.42	321	*ce*P	P	02 17 33.9	-1.6
AKBB				pmax	pmax		
	comp=Z,17nm,1.0s						
AKBB	Malin Array Si	90.42	321	P	P	02 17 34.1	-1.4
KIEV	Kiev	90.43	321	⇓P	P	02 17 34.3	-1.2
KIEV	Kiev	90.43	321	P	P	02 17 34.4	-1.1
KIEV				pmax	pmax		
	comp=Z,12nm,1.0s						
KIEV	Kiev	90.43	321	P	P	02 17 34.1	-1.4
	comp=Z,49nm,1.0s						
AK07	Malin Array Si	90.46	321	P	P	02 17 34.4	-1.2
MNK	Minsk	90.56	325	*i* P	P	02 17 33.7	-2.3
	comp=E,7.0nm,1.0s						
MNK				*i* P	P	02 17 33.7	-2.3
	comp=Z,22nm,0.9s,baz=80						
MNK				*i* pP	pP	02 17 52.4	-3.9
MNK				*i* PP	PP	02 21 11.1	-0.5
MNK				*i* PPP	PPP	02 23 07.7	
MNK				*i* S	SKSac	02 27 58.3	-2.3
MNK				*i* SS	SS	02 34 27.6	+0.2
MNK				*i* SSS	SSS	02 38 03.8	
MNK				*i* LQ	LQ	02 52 36.9	
MNK				*i* LR	LR	02 58 37.1	
MNK	Minsk	90.56	325	*i* P	P	02 17 33.7	-2.3
MNK				*i* *PP	pP	02 17 52.3	-3.9
MNK				*i*		02 21 11.0	
MNK				*i* PPP	PPP	02 23 07.7	
MNK				*i* S	SKSac	02 27 58.2	-2.3
MNK				*i* SS	SS	02 34 27.6	+0.2
MNK				*i* SSS	SSS	02 38 03.7	
MNK				pmax	pmax		
	comp=E,7.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,22nm,0.9s						
MNK				pmax	pmax		
	comp=N,13nm,0.9s						
MNK				MLR	MLR		
	comp=E,49nm,23.0s						
MNK				MLR	MLR		
	comp=Z,54nm,21.0s						
PURM	Purcari	90.67	317	⇑P	P	02 17 36.4	-0.3
PURM	Purcari	90.67	317	P	P	02 17 36.8	+0.1
	comp=Z,56nm,1.2s						
TRO	Tromso	90.81	341	*e*P	P	02 17 35.2	-1.7
NACGM	Naroch	91.11	325	*e*P	P	02 17 38.0	-0.6
	comp=Z,13nm,0.8s,baz=78						
MI28	Mi28,Pidlybu	91.35	321	P	P	02 17 38.5	-1.3
SORM	Soroca	91.42	318	⇓P	P	02 17 38.8	-1.3
SORM	Soroca	91.42	318	P	P	02 17 38.8	-1.3
LUBAR	Lubar, Ukraine	91.49	320	P	P	02 17 38.7	-1.7
TLCR		91.62	316	⇑P	P	02 17 40.8	-0.4
TLCR		91.62	316	P	P	02 17 40.7	-0.4
DLBC	Dease Lake	91.94	31	LR	LR	02 53 27.4	
	comp=Z,7.1nm,21.5s,baz=230,slow=32						
TPGR	Topolog	91.95	315	⇓P	P	02 17 42.2	-0.5
YLV	Yalova	91.97	311	P	P	02 17 41.8	-1.2
	comp=Z,16nm,0.9s						
VLDR	Vladesti	92.01	316	⇓P	P	02 17 42.3	-0.7
CFR	Carcaliu	92.09	316	⇓P	P	02 17 43.4	0.0
CFR	Carcaliu	92.09	316	P	P	02 17 43.3	0.0
RNPP9	Sopachiv	92.36	322	P	P	02 17 43.3	-1.1
KMPD	K-Podol'skiy	92.58	319	P	P	02 17 43.8	-1.7
STEI	Steigen	92.66	339	*e*P	P	02 17 43.9	-1.6
FAUS	Fauske	92.85	339	*e*P	P	02 17 44.2	-2.1
TESR	Tescani	92.86	317	⇑P	P	02 17 46.2	-0.7
TESR	Tescani	92.86	317	P	P	02 17 46.2	-0.7
	comp=Z,23nm,1.1s						
VRI	Vrincioaia	92.94	316	⇓P	P	02 17 46.8	-0.5
VRI	Vrincioaia	92.94	316	P	P	02 17 47.5	+0.2
VRI	Vrincioaia	92.94	316	P	P	02 17 47.5	+0.2
	comp=Z,14nm,0.9s						
BAND	Balkesir-Ban	92.97	311	⇑P	P	02 17 46.9	-0.6
PLOR	Plostina	92.99	316	⇓P	P	02 17 47.4	-0.2
PLOR	Plostina	92.99	316	P	P	02 17 47.3	-0.2

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NEHR  Nehoiu             93.32 316 ⇓P       P        02 17 49.0 -0.1
SUW   Suwalki            93.36 325 eP       P        02 17 47.9 -1.1
SUW   Suwalki            93.36 325  P       P        02 17 47.9 -1.1
SUW                                 pmax    pmax
      comp=Z,33nm,1.0s
TURR  Turia              93.39 317 ⇑P       P        02 17 48.4 -1.0
MLR   Muntele Rosu       93.55 316  LR      LR       03 06 27.6
      comp=Z,50nm,19.4s,baz=66,slow=40
MLR   Muntele Rosu       93.55 316 ⇓P       P        02 17 49.9 -0.4
MLR   Muntele Rosu       93.55 316  P       P        02 17 50.1 -0.2
MLR                                 pmax    pmax
      comp=Z,13nm,0.8s
BURAR Bucovina Array     93.59 318 ⇓P       P        02 17 50.1 -0.3
BURAR Bucovina Array     93.59 318  P       P        02 17 50.1 -0.3
TAOE  Nuku Hiva Isla     93.80  98 eLR      LR       02 48 04.2
      comp=Z,239nm,25.3s
STNU  Starunia           93.82 320  P       P        02 17 50.3 -1.0
LEIR  Leirfjorden        94.15 338 eP       P        02 17 54.4 +2.1
VOIR                     94.18 316 ⇓P       P        02 17 51.9 -1.1
VOIR                     94.18 316  P       P        02 17 52.1 -1.0
VOIR                                pmax    pmax
      comp=Z,3.0nm,0.9s
RAKU  Rahkiv             94.19 319  P       P        02 17 52.9 -0.1
TOAD  Toad River Com     94.23  30  P       P        02 17 52.8 -0.2
      baz=288
EZN   Ezine              94.40 311 ⇓P       P        02 17 53.2 -0.9
EZN   Ezine              94.40 311  P       P        02 17 53.2 -0.9
EZN   Ezine              94.40 311  P       P        02 17 53.1 -1.0
BMR   Baia Mare          94.72 319 ⇓P       P        02 17 55.4  0.0
BMR   Baia Mare          94.72 319  P       P        02 17 55.1 -0.3
BMR                                 pmax    pmax
      comp=Z,15nm,0.7s
KWP   Kalwaria Pacla     94.74 321 eP       P        02 17 55.2 -0.3
KWP   Kalwaria Pacla     94.74 321  P       P        02 17 55.4 -0.1
KWP                                 pmax    pmax
      comp=Z,15nm,1.0s
KOLS  Kolonicke sedl     95.20 320 i P      P        02 17 58.2 +0.6
DRGR                     95.45 318  P       P        02 17 58.5 -0.3
DRGR                                pmax    pmax
      comp=Z,10.0nm,0.8s
DEV   Deva               95.54 317  P       P        02 17 59.2  0.0
DEV                                 pmax    pmax
      comp=Z,14nm,0.8s
QSPA  South Pole Qui     95.65 180  P       P        02 17 58.8 -0.5
      comp=Z,11nm,0.9s,baz=318,slow=2.6,SNR=26
      comp=Z,11nm,0.9s
STHS  Stebnicka Huta     95.72 321 i P      P        02 18 00.6 +0.6
GZR   Gura Zlata         95.75 317 ⇑P       P        02 17 59.2 -1.1
SURR  Surduc             96.10 317 ⇑P       P        02 18 00.9 -0.9
HERR  Herculane          96.12 316 ⇓P       P        02 18 01.3 -0.5
HFS   Hagfors            96.31 332  P       P        02 18 00.3 -2.0
      comp=Z,2.3nm,0.5s,baz=101,slow=6.2,SNR=18
HFS                                 PKKPbc  PKKPbc   02 34 48.5 -1.8
      comp=Z,1.9nm,0.7s,baz=222,slow=3.8,SNR=6.0
HFS                                 LR      LR       03 04 51.6
      comp=Z,52nm,20.1s,baz=61,slow=38
      comp=Z,2.3nm,0.5s
NIE   Niedzica           96.31 321 eP       P        02 18 02.0 -0.7
NIE   Niedzica           96.31 321  P       P        02 18 03.0 +0.3
NIE                                 pmax    pmax
      comp=Z,2.0nm,1.0s
PAIG  Paliouri           96.37 311  P       P        02 18 01.4 -1.7
PAIG                                pmax    pmax
      comp=Z,20nm,0.9s
OJC   Ojcow              96.39 322 eP       P        02 18 02.8 -0.2
BZS   Buzias             96.48 317 ⇓P       P        02 18 02.5 -1.0
BZS   Buzias             96.48 317  P       P        02 18 02.6 -0.9
BZS                                 pmax    pmax
      comp=Z,6.0nm,1.0s
MDVR  Moldovita          96.63 316 ⇑P       P        02 18 03.4 -0.9
KNT   Kendrikon          96.67 312  P       P        02 18 02.8 -1.7
KNT                                 pmax    pmax
      comp=Z,12nm,0.8s
VAY   Valandovo          96.87 313 i P      P        02 18 03.5 -1.9
LANS  Liptovska Anna     96.91 321 i P      P        02 18 07.0 +1.6
LANS  Liptovska Anna     96.91 321 ePDIFF   P        02 18 07.0 +1.6
BOVS  Bovan              96.92 315 ⇑P       P        02 18 04.7 -0.8
PSZ   Piszkesteto        97.00 320  P       P        02 18 06.1 +0.3
PSZ                                 pmax    pmax
      comp=Z,5.0nm,0.9s
NC602 NORSAR Array S     97.03 333 eP       P        02 18 04.5 -1.1
NORES NORESS Array B     97.03 333  P       P        02 18 04.8 -0.8
NB2   NORSAR Subarra     97.05 334  P       P        02 18 03.4 -2.3
      comp=Z,3.5nm,0.7s,baz=68,slow=4.6
NB2                                 PKKP    PKKPbc   02 34 46.3 -2.0
      comp=Z,0.3nm,0.5s,baz=244,slow=2.6
NB2   NORSAR Subarra     97.05 334  P       P        02 18 03.5 -2.3
NB2   NORSAR Subarra     97.05 334  P       P        02 18 03.4 -2.3
      baz=68,slow=4.6
NOA   NORSAR Array B     97.05 334  P       P        02 18 03.4 -2.3
      comp=Z,3.6nm,0.8s,baz=66,slow=4.6,SNR=20
NOA                                 PKKPbc  PKKPbc   02 34 47.4 -0.9
      comp=Z,0.4nm,0.7s,baz=69,slow=3.4,SNR=4.5
NOA                                 LR      LR       03 05 36.0
      comp=Z,45nm,20.6s,baz=60,slow=38
      comp=Z,3.6nm,0.8s
LIT   Litokhoron         97.22 312  P       P        02 18 05.3 -1.7
LIT                                 pmax    pmax
      comp=Z,16nm,1.1s
VYHS  Vyhne              97.50 320 eP       P        02 18 07.6 -0.5
DOMB  Dombas             97.52 335 eP       P        02 18 07.8  0.0
AGG   Agios Georgios     97.60 310  P       P        02 18 05.3 -3.4
AGG                                 pmax    pmax
      comp=Z,11nm,1.1s
YKA   Yellowknife Ar     97.61  24  P       P        02 18 06.5 -1.6
      comp=Z,1.0nm,0.8s,baz=305,slow=4.9,SNR=13
      comp=Z,1.0nm,0.8s
YKA   Yellowknife Ar     97.61  24 i P      P        02 18 07.9 -0.2
YKA                                 pmax    pmax
      comp=Z,1.0nm,0.7s
MORC  Moravsky Berou     97.92 322 eP       P        02 18 09.2 -0.7
SRO   Srobarova          98.04 320 i P      Pdif     02 18 11.2 +0.7
JAVC  Velka Javorina     98.13 321 eP       Pdif     02 18 12.2 +1.3
OHR   Ohrid              98.22 313 i P      P        02 18 10.2 -1.3
KRLC  Kraliky            98.28 322 eP       P        02 18 11.1 -0.5
KRLC  Kraliky            98.28 322 eP       P        02 18 11.1 -0.5
MORH  Mrgy, Hungar       98.31 318 ⇑P       P        02 18 10.7 -1.0
AKN   Aaknes             98.31 336 eP       P        02 18 10.6 -0.8
KSP   Ksiaz              98.32 323 eP       P        02 18 11.2 -0.5
KSP   Ksiaz              98.32 323  P       Pdif     02 18 11.7  0.0
KSP                                 pmax    pmax
      comp=Z,6.0nm,0.8s
OSTC  Ostas              98.47 323 eP       Pdif     02 18 13.0 +0.6
OSTC  Ostas              98.47 323 eP       Pdif     02 18 13.0 +0.6
DPC   Dobruska-Polom     98.47 323 eP       Pdif     02 18 12.4  0.0
DPC   Dobruska-Polom     98.47 323 eP       Pdif     02 18 12.4  0.0
MODS  Modra-Piesok       98.53 321 i P      Pdif     02 18 14.9 +2.2
MODS  Modra-Piesok       98.53 321 ePDIFF   Pdif     02 18 14.9 +2.2
VRAC  Vranov             98.65 322 ePDIFF   P        02 18 12.7 -0.5
VRAC  Vranov             98.65 322 ⇓P       P        02 18 12.3 -0.9
KRUC  Moravsky           98.86 321 ePDIFF   P        02 18 13.6 -0.5
KRUC  Moravsky           98.86 321  P       Pdif     02 18 14.3 +0.2
KRUC                                pmax    pmax
      comp=Z,3.0nm,1.1s
TREC  Trest              99.34 322  P       Pdif     02 18 16.0 -0.3
TREC                                pmax    pmax
      comp=Z,4.0nm,0.8s
RONA  Rosalia, Austr     99.37 320 ePdiff   Pdif     02 18 15.1 -1.4
      comp=Z,1.7nm,1.0s
BRG   Berggiesshubel     99.71 324  P       Pdif     02 18 17.0 -0.8
BRG                                 pmax    pmax
      comp=Z,6.0nm,0.8s
BLS5  Blasjo             99.90 333 eP       Pdif     02 18 16.7 -1.8
ZVC   Zvikov            100.08 322 ePDIFF   Pdif     02 18 19.3 -0.2
CLL   Collm             100.09 324 eP       Pdif     02 18 23.0 +3.5
CLL                                 pmax    pmax
      comp=Z,5.0nm,1.3s
CKRC  Cesky Krumlov     100.23 322 ePDIFF   Pdif     02 18 20.2  0.0
CKRC  Cesky Krumlov     100.23 322 eP       Pdif     02 18 20.2  0.0
SOKA  Soboth            100.53 319 i Pdiff  Pdif     02 18 20.9 -0.8
      comp=Z,2.3nm,0.8s
KHC   Kasperske Hory    100.57 322 ePDIFF   Pdif     02 18 21.5 -0.3
KHC   Kasperske Hory    100.57 322 eP       Pdif     02 18 21.5 -0.3
GERES GERESS Array B    100.60 322  P       Pdif     02 18 21.6 -0.4
      comp=Z,1.5nm,0.7s,baz=57,slow=4.9,SNR=17
MOA   Molln             100.61 321 i Pdiff  Pdif     02 18 21.5 -0.4
      comp=Z,2.9nm,0.8s
OBKA  Obir              100.90 319 i Pdiff  Pdif     02 18 23.8 +0.4
      comp=Z,3.5nm,1.4s
BIOA  Bad Ischl, Aus    101.06 321 ePdiff   Pdif     02 18 22.9 -1.0
      comp=Z,1.1nm,0.4s
LESA  Schwarzleotal     101.76 321 i Pdiff  Pdif     02 18 25.2 -2.0
      comp=Z,1.7nm,0.9s
ABTA  Abfaltersbach     102.12 320 ePdiff   Pdif     02 18 27.5 -1.2
      comp=Z,2.9nm,1.1s
WTTA  Wattenberg        102.48 321 i Pdiff  Pdif     02 18 29.5 -0.9
      comp=Z,2.6nm,0.6s
MOTA  Moosalm           102.78 321 ePdiff   Pdif     02 18 30.5 -1.3
      comp=Z,1.7nm,0.6s
BOSA  Boshof            102.92 242  PP      PKiKP    02 22 53.7 +0.9
      comp=Z,1.6nm,0.8s,baz=112,slow=6.6,SNR=3.8
RETA  Reutte            102.94 321 i Pdiff  Pdif     02 18 30.8 -1.6
      comp=Z,1.2nm,0.8s
FETA  Feichten          103.14 321 i Pdiff  Pdif     02 18 33.1 -0.3
      comp=Z,1.6nm,1.2s
DAVA  Damuels           103.56 321 ePdiff   Pdif     02 18 34.0 -1.3
      comp=Z,0.7nm,0.4s
NVAR  Mina Array Bea    105.45  48  PKKPbc  PKKPbc   02 34 35.1  +12
      comp=Z,0.2nm,0.3s,baz=136,slow=4.7,SNR=3.8
SNAA  Sanae             107.19 195  PP      PP       02 23 19.7 +1.7
      comp=Z,1.6nm,1.0s,baz=82,slow=7.1,SNR=3.6
KEST  Kesra             108.44 310  PP      PP       02 23 30.9 +2.8
      comp=Z,2.9nm,0.8s,baz=66,slow=4.9,SNR=3.7
PDAR  Pinedale Array    109.74  41  PKKPbc  PKKPbc   02 34 17.6 +7.4
      comp=Z,0.6nm,0.7s,baz=143,slow=3.7,SNR=4.6
ESDC  Sonseca Array     116.03 319  PKP     PKPdf    02 23 16.4 -0.7
      comp=Z,0.2nm,0.6s,baz=26,slow=2.3,SNR=4.2
SCHQ  Schefferville     118.56   9  PKP     PKPdf    02 23 20.8 -0.6
      baz=46,slow=7.4
TXAR  Lajitas Array     120.24  51  PKP     PKPdf    02 23 25.3 -0.3
      comp=Z,0.9nm,0.8s,baz=169,slow=1.1,SNR=11
TXAR                                PKKPbc  PKKPbc   02 33 33.9 +0.3
      comp=Z,1.4nm,0.8s,baz=121,slow=4.8,SNR=15
DBIC  Dimbokro          130.27 284  PKP     PKiKP    02 23 45.6 -0.1
      comp=Z,9.5nm,1.0s,baz=98,slow=3.0,SNR=5.9
PLCA  Paso Flores       141.83 158  PKhKP   PKPpre   02 24 00.9
      comp=Z,2.8nm,0.7s,baz=174,slow=1.6,SNR=8.1
PLCA                                PKP     PKPdf    02 24 06.8 +1.0
      comp=Z,8.0nm,0.7s,baz=200,slow=3.1,SNR=8.0
SDV   Santo Domingo     157.28  50 eP       PKPdf    02 24 30.2 -0.7
CPUP  Villa Florida     159.15 169  PKP     PKPdf    02 24 34.1 +1.5
      comp=Z,0.5nm,0.8s,baz=169,slow=1.0,SNR=3.1
CPUP                                PKPab   PKPab    02 25 10.1 +0.6
      comp=Z,2.7nm,0.9s,baz=69,slow=4.4,SNR=9.7
CZSB  Cruzeiro do Su    160.46  97 eP       PKPdf    02 24 34.6 +0.3
LPAZ  La Paz            161.95 127  PKP     PKPdf    02 24 37.6 +1.0
      comp=Z,3.8nm,0.8s,baz=34,slow=2.3,SNR=15
LPAZ                                PKPab   PKPab    02 25 23.6 +0.7
      comp=Z,3.3nm,0.7s,baz=198,slow=6.3,SNR=6.5
DIAM  Diamantina, MG    164.49 216 eP       PKPdf    02 24 38.5 +0.1
PMNB  Patos De Minas    165.72 207 eP       PKPdf    02 24 39.3 -0.1
JANB  Januaria          167.33 222 eP       PKPdf    02 24 40.4 -0.3
BDFB  Brasilia          168.97 207  PKP     PKPdf    02 24 42.0 +0.2
      comp=Z,0.7nm,0.4s,baz=272,slow=5.4,SNR=3.1
BDFB                                PKPab   PKPab    02 25 54.5 +1.5
      comp=Z,0.8nm,0.4s,baz=244,slow=2.8,SNR=3.5
SMTB  Santa Maria do    173.70 240 eP       PKPdf    02 24 43.6 -0.6
```

ROM 20 02:15:23.1±0.2**, 42°.891N**±0°.004×**13°.162E**±0°.007**, h6**^{km}±1^{km}**, ML0.5**/4**, 3D, Error ellipse: s-maj=0.7km s-min=0.1km az=94.0, Central Italy**

```
Code  Station Name        Δ°   AZ°    Phase ID             Time      Res
                                    Op      ISC        h  m  s     ISC
MC2   Monte Cornacci      0.03  45  P       Pg       02 15 24.2 -0.4
MC2                                 S       Sg       02 15 25.1 -0.5
NRCA  Norcia              0.07 211 ⇓P       Pg       02 15 25.3 +0.5
NRCA                                S       Sg       02 15 26.7 +0.6
NRCA                                AML     AML
      comp=N,284µm,0.7s
NRCA                                AML     AML
      comp=E,422µm,0.4s
NRCA                                AML     AML
      comp=E,434µm,0.4s
NRCA                                AML     AML
      comp=N,342µm,1.2s
MMO1  Montemonaco         0.12  86 ⇓P       Pg       02 15 25.7  0.0
MMO1                                S       Sg       02 15 28.2 +0.7
FDMO  Fiordimonte         0.15 339  P       Pg       02 15 26.6 +0.3
FDMO                                S       Sg       02 15 29.6 +1.1
CSP1  Cessapalombo        0.20   9 ⇓P       Pg       02 15 27.7 +0.5
CSP1                                S       Sg       02 15 31.1 +1.2
CSP1                                AML     AML
      comp=E,29µm,0.3s
CSP1                                AML     AML
      comp=N,23µm,4.1s
MTRA  Matera              0.22 128  P       Pg       02 15 28.8 +1.3
MTRA                                S       Sg       02 15 31.9 +1.5
MF5   Montefalcone A      0.24  66  P       Pg       02 15 28.6 +0.7
MF5                                 S       Sg       02 15 32.9 +1.8
SMA1  SAN MARTINO         0.29 154  P       Pg       02 15 29.2 +0.4
SMA1                                S       Sb       02 15 34.4 -1.5
LNSS  Leonessa            0.30 197  P       Pg       02 15 29.2 +0.2
LNSS                                S       Sb       02 15 35.2 -1.0
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IDC ***20*** *02:17:04.8±1.3, 17°.09N×73°.72E, h0^{km}, mb3.8/10, mbtmp3.9/11, ML4.0/1, MS3.3/2, Error ellipse: s-maj=38.2km s-min=17.3km az=58.0*

NEIC ***20*** *02:17:06.7±1.5, 17°.16N±0°.09×73°.78E±0°.09, h10^{km}±1^{km}, mb4.3/28, Error ellipse: s-maj=17.4km s-min=12.0km az=44.0*

NDI ***20*** *02:17:07.0±3.0, 17°.09N×73°.85E, h15^{km}, ML4.1, MW4.1, mb4.3(NEIC)*

ISC 20 02:17:06.5±0.5**, 17°.13N**±0°.05×**73°.84E**±0°.05**, h17**^{km}**, n55, σ2^s.14**/63**, mb4.1**/20**, Southern India**

```
Code  Station Name        Δ°   AZ°    Phase ID             Time      Res
                                    Op      ISC        h  m  s     ISC
KAD   Karad               0.38  61 eP       Pg       02 17 13.4 -0.9
KAD                                eS       Sg       02 17 18.9 -0.7
KAD                                 IAML             02 17 25.5
      comp=N,4µm,0.6s
BOM   Bombay              2.01 331 eP       Pn       02 17 41.0 +1.4
BOM                                eS       Sn       02 18 05.7 +1.3
BOM                                 IAML             02 18 08.4
      comp=N,1µm,0.2s
BOM                                 IAML             02 18 08.6
      comp=E,2µm,0.3s
LATR  Latur               2.89  63 eP       Pn       02 17 50.4 -1.4
LATR                               eS       Sn       02 18 26.4 +0.3
LATR                                IAML             02 18 41.0
      comp=N,1µm,0.3s
HYB   Hyderabad           4.51  86 ePn      Pn       02 18 16.6 +2.5
HYB                                eSn      Sn       02 19 10.4 +4.1
AKL   Akola               4.66  40 eP       Pn       02 18 16.9 +0.8
AKL                                eS       Sn       02 19 09.3 -0.5
AKL                                 IAML             02 19 29.5
      comp=E,464nm,0.2s
AKL                                 IAML             02 19 29.7
      comp=N,549nm,0.3s
KOD   Kodaikanal          7.71 152 eP       Pn       02 18 58.7 +0.4
KOD                                eS       Sn       02 20 19.4 -5.9
GUNA  GUNA                8.16  23 eP       Pn       02 19 04.0 -0.3
GUNA                               eS       Sn       02 20 33.5 -2.7
GUNA                                IAML             02 21 29.3
      comp=N,158nm,0.5s
AJM   Ajmer               9.34   4 eP       Pn       02 19 19.9 -0.5
AJM                                eS       Sn       02 20 57.5 -7.6
AJM                                 IAML             02 22 03.3
      comp=N,252nm,0.8s
KUDL  Kundal             11.23  12 eP       Pn       02 19 44.8 -1.6
KUDL                               eS       Sn       02 21 44.7 -6.8
KUDL                                IAML             02 22 57.2
      comp=N,265nm,1.6s
PALK  Pallekele          11.87 145  Pn      Pn       02 19 56.4 +1.4
PALK  Pallekele          11.87 145  Pn      Pn       02 19 55.8 +0.8
      comp=N,0.9nm,0.3s,baz=337,slow=7.6,SNR=4.3
PALK                                Sn      Sn       02 22 01.3 -5.9
      comp=N,1.6nm,0.3s,baz=47,slow=23,SNR=4.9
      comp=N,7.1nm,0.7s
EVN   Everest            16.11  46  Pn      Pn       02 20 52.8  0.0
KAAM  Kaadhehdhoo        16.55 183  Pn      Pn       02 20 55.9 -2.0
KAAM                                IAmb    IAmb     02 21 19.1
      comp=Z,50nm,1.0s
KBL   Kabul              17.87 347  Pn      Pn       02 21 13.1 -1.4
LSA   Lhasa              20.19  49  P       P        02 21 40.9 -0.1
LSA                                 IAmb    IAmb     02 21 50.4
      comp=Z,9.4nm,0.7s
SIMJ  Simiganj           21.86 350  P       P        02 21 59.5 +0.9
SIMJ                                IAmb    IAmb     02 22 05.1
      comp=Z,18nm,1.1s
DRK   Karamyk            22.34 356  P       P        02 22 05.0 +1.1
BTK   Batken             23.00 354          P        02 22 12.3 +1.7
BTK                                 IAmb    IAmb     02 22 14.5
      comp=Z,12nm,1.0s
CMAR  Chiang Mai Arr     23.94  83  P       P        02 22 22.4 +2.4
      comp=Z,2.6nm,0.8s,baz=279,slow=9.6,SNR=9.4
      comp=Z,2.6nm,0.8s
ARSB  Arslanbob          24.13 358  P       P        02 22 22.1 +0.5
ARSB                                IAmb    IAmb     02 22 41.3
      comp=Z,11nm,1.4s
TARG  Taragay, Kyrgy     24.75   7  P       P        02 22 28.7 +1.0
KDJ   Kajisay            25.08   6  P       P        02 22 30.6 +0.2
KDJ                                 IAmb    IAmb     02 22 35.2
      comp=Z,13nm,1.2s
AAK   Ala-Archa          25.43   1  P       P        02 22 33.8 +0.3
AAK                                 IAmb    IAmb     02 22 39.3
      comp=Z,5.5nm,1.1s
KK31  Karatay Array      26.05 354  P       P        02 22 38.8 -0.1
KKAR  Karatay Array      26.05 354  P       P        02 22 38.8 -0.1
KKAR  Karatay Array      26.05 354  P       P        02 22 39.3 +0.4
MKAR  Makanchi Array     30.40  12  P       P        02 23 16.9 -0.9
MKAR  Makanchi Array     30.40  12  P       P        02 23 18.6 +0.9
      comp=Z,0.2nm,0.6s,baz=206,slow=12,SNR=2.9
      comp=Z,0.2nm,0.6s
KURBB Kurchatov Arra     33.63   5  P       P        02 23 47.5 +1.6
      comp=Z,1.2nm,0.9s,baz=197,slow=8.5,SNR=6.8
      comp=Z,1.2nm,0.9s
KURK  Kurchatov          33.73   5          P        02 23 46.3 -0.5
KURK                                IAmb    IAmb     02 23 49.3
      comp=Z,3.2nm,0.9s
AB31  Akbulak array      33.98 344          P        02 23 49.6 +0.5
AB31                                IAmb    IAmb     02 23 51.8
      comp=Z,1.8nm,0.8s
ABKAR Akbulak array      33.98 344          P        02 23 50.1 +1.1
ABKAR Akbulak array      33.98 344          P        02 23 50.6 +1.6
ABKAR                               IAmb    IAmb     02 23 51.8
      comp=Z,1.8nm,0.8s
BVAR  Borovoye Array     35.92 356  P       P        02 24 06.4 +0.6
      comp=Z,0.5nm,0.5s,baz=153,slow=10.0,SNR=3.9
      comp=Z,0.5nm,0.5s
ZALV  Zalesovo Beam      37.73  11  P       P        02 24 22.4 +1.2
      comp=Z,0.9nm,0.4s,baz=168,slow=7.6,SNR=4.5
      comp=Z,0.9nm,0.4s
SONM  Songino Array      40.60  34  P       P        02 24 46.1 +0.7
SONM  Songino Array      40.60  34  P       P        02 24 47.8 +2.3
      comp=Z,1.1nm,0.7s,baz=232,slow=7.9,SNR=8.1
      comp=Z,1.1nm,0.7s
ULN   Ulaanbaatar        40.97  34  P       P        02 24 50.2 +1.7
ULN                                 IAmb    IAmb     02 25 15.0
      comp=Z,3.5nm,0.5s
BR131 Keskin Array S     41.45 311  P       P        02 24 53.1 +0.5
BRTR  Keskin Array B     41.45 311  P       P        02 24 53.5 +1.0
BRTR  Keskin Array B     41.45 311  P       P        02 24 54.1 +1.5
      comp=Z,0.6nm,0.9s,baz=79,slow=7.5,SNR=3.1
      comp=Z,0.6nm,0.9s
MLR   Muntele Rosu       48.77 316  P       P        02 25 48.4 -2.3
DAV   Davao City (W)     51.43  95  LR      LR       02 49 04.0
      comp=Z,32nm,20.7s,baz=344,slow=37
FINES FINESS Array B     55.56 334  P       P        02 26 41.5 +0.8
ARCES ARCESS Array B     60.16 342  P       P        02 27 13.8 +0.9
ARCES                               IAmb    IAmb     02 27 28.2
      comp=Z,5.5nm,1.2s
ARCES ARCESS Array B     60.16 342  P       P        02 27 13.4 +0.4
      comp=Z,1.8nm,0.9s,baz=115,slow=5.5,SNR=7.3
      comp=Z,1.8nm,0.9s
LBTB  Lobatse            62.95 229  P       P        02 27 33.8 +1.3
KNRA  Kununurra          63.21 118  P       P        02 27 35.4 +1.1
GUMO  Guam               68.25  82  P       P        02 28 06.6 -0.3
TORD  Torodi Ar. Bea     69.41 278  P       P        02 28 13.7 -0.4
TORD                                IAmb    IAmb     02 28 30.1
      comp=Z,1.8nm,1.4s
WB0   Warramunga Arr     69.86 119  P       P        02 28 17.9 +1.1
WRA   Warramunga Arr     69.90 119  P       P        02 28 18.6 +1.5
      comp=Z,1.3nm,0.6s,baz=306,slow=5.7,SNR=23
      comp=Z,1.3nm,0.6s
WR8   Warramunga Arr     70.04 119  P       P        02 28 18.8 +0.9
ASAR  Alice Springs      71.30 123  P       P        02 28 27.1 +1.5
      comp=Z,1.2nm,0.5s,baz=304,slow=5.9,SNR=18
      comp=Z,1.2nm,0.5s
BORG  Borgarnes          76.85 334  LR      LR       03 06 09.9
      comp=Z,21nm,20.2s,baz=31,slow=38
```

IDC 20 02:22:00.8±3.0**, 33°.27S**×**178°.58W, h0**^{km}**, mb3.7**/2**, mbtmp3.7**/3**, ML3.3**/1**, Error ellipse: s-maj=73.6km s-min=36.2km az=118.0, South of Kermadec Islands**

```
Code  Station Name        Δ°   AZ°    Phase ID             Time      Res
                                    Op      ISC        h  m  s     ISC
URZ   Urewera             6.08 214  Pn      Pn       02 23 31.9  0.0
      0.8nm,0.3s,baz=258,slow=6.8,SNR=8.9
URZ                                 Sn      Sn       02 24 43.3 +1.0
      2.8nm,0.3s,baz=157,slow=21,SNR=5.9
      4.2nm,0.5s
ASAR  Alice Springs      42.55 270  P       P        02 29 58.5 +0.1
      1.1nm,0.7s,baz=112,slow=7.5,SNR=9.7
      1.1nm,0.7s
WRA   Warramunga Arr     43.80 275  P       P        02 30 08.1 -0.4
      0.4nm,0.6s,baz=118,slow=7.9,SNR=2.3
      0.4nm,0.6s
FINES FINESS Array B    147.64 338  PKPbc   PKPbc    02 41 45.6 -0.8
      0.4nm,0.4s,baz=58,slow=4.7,SNR=7.1
```

IDC ***20*** *02:22:38.5±0.9, 31°.98S×178°.04W, h0^{km}, mb4.2/4, mbtmp4.2/5, ML4.0/1, Error ellipse: s-maj=33.0km s-min=26.7km az=82.0*

NEIC ***20*** *02:22:41.3±1.3, 31°.92S±0°.08×178°.0W±0°.2, h10^{km}±1^{km}, mb4.5/8, Error ellipse: s-maj=30.7km s-min=11.3km az=101.0*

ISC 20 02:22:42.3±0.7**, 31°.98S**±0°.07×**178°.1W**±0°.2**, h24**^{km}**, n33, σ1^s.34**/35**, mb4.5**/9**, 3C, Kermadec Islands region**

```
Code  Station Name        Δ°   AZ°    Phase ID             Time      Res
                                    Op      ISC        h  m  s     ISC
RAO   Raoul Island        2.72   3  Pn      Pn       02 23 24.1 -0.4
RAO                                 Sn      Sn       02 23 56.1 -0.6
URZ   Urewera             7.39 211  Pn      Pn       02 24 27.1 -1.6
      2.6nm,0.3s,baz=17,slow=17,SNR=5.9
URZ                                 Sn      Sn       02 25 47.2 -4.6
      2.9nm,0.3s,baz=3.3,slow=19,SNR=5.8
      10nm,0.5s
RTZ   Ruatahuna           7.75 210  Pn      Pn       02 24 35.0 +1.4
PLWZ  Palliser           10.95 207  Pn      Pn       02 25 19.9 +2.4
TUWZ  Tuamarina          11.39 212  Pn      Pn       02 25 26.3 +2.9
CTAO  Charters Tower     34.00 282  P       P        02 29 26.8 +2.4
CTAO                                IAmb    IAmb     02 29 35.2
      comp=Z,13nm,1.5s
COEN  Coen               39.65 288  P       P        02 30 12.5  0.0
AS31  Alice Springs      42.97 269  P       P        02 30 40.8 +1.1
ASAR  Alice Springs      42.97 269  P       P        02 30 40.2 +0.5
ASAR  Alice Springs      42.97 269  P       P        02 30 39.4 -0.3
      comp=Z,1.4nm,0.5s,baz=106,slow=7.3,SNR=14
      comp=Z,1.4nm,0.5s
WR8   Warramunga Arr     43.96 274  P       P        02 30 47.4 -0.3
WR8                                 IAmb    IAmb     02 30 56.1
      comp=Z,6.1nm,0.8s
WRA   Warramunga Arr     44.10 274  P       P        02 30 49.3 +0.5
WRA   Warramunga Arr     44.10 274  P       P        02 30 49.5 +0.6
      comp=Z,3.4nm,0.6s,baz=114,slow=7.8,SNR=24
      comp=Z,3.4nm,0.6s
WB0   Warramunga Arr     44.13 274  P       P        02 30 49.0 -0.1
CASY  Casey              53.71 208  P       P        02 32 02.4 +0.5
CASY                                IAmb    IAmb     02 32 12.0
      comp=Z,3.9nm,0.8s
QSPA  South Pole Qui     58.14 180  P       P        02 32 35.2 +1.3
QSPA                                IAmb    IAmb     02 32 47.5
      comp=Z,5.0nm,0.8s
QSPA  South Pole Qui     58.14 180  P       P        02 32 34.0 +0.2
      comp=Z,3.4nm,0.8s,baz=338,slow=0.8,SNR=9.9
      comp=Z,3.4nm,0.8s
SNAA  Sanae              76.58 178 ⇑P       P        02 34 30.1 -0.3
      comp=Z,28nm,0.5s
SNAA  Sanae              76.58 178  P       P        02 34 30.4 +0.1
      comp=Z,1.2nm,0.9s,baz=186,slow=7.6,SNR=4.6
      comp=Z,1.2nm,0.9s
VNA3  Neumayer Olymp     76.74 176 ⇑P       P        02 34 31.0 -0.2
      comp=Z,9.0nm,0.7s
VNA2  Neumayer--Watz     77.17 177 ⇑P       P        02 34 33.9 +0.3
      comp=Z,5.6nm,0.7s,baz=175,slow=5.5
KURBB Kurchatov Arra    122.11 313  PKP     PKiKP    02 41 34.0 -0.6
      comp=Z,0.5nm,0.6s,baz=114,slow=1.8,SNR=4.7
BVAR  Borovoye Array    127.47 315  PKP     PKPdf    02 41 43.8 -0.8
      comp=Z,0.3nm,0.3s,baz=54,slow=3.7,SNR=3.1
KBZ   Khabaz            145.90 302  PKPbc   PKPab    02 42 20.2 +0.3
      comp=Z,1.0nm,0.5s,baz=153,slow=5.7,SNR=3.8
FIA1  FINESS Array S    146.59 339  PKPdf   PKPab    02 42 21.2 -0.9
FINES FINESS Array B    146.59 339  PKPdf   PKPab    02 42 21.0 -1.1
FINES FINESS Array B    146.59 339  PKPbc   PKPbc    02 42 20.9 -0.1
      comp=Z,5.0nm,0.6s,baz=60,slow=4.6,SNR=23
NC303 NORSAR Array S    150.09 351  PKPdf   PKPdf    02 42 26.1 +0.9
```

NB2	NORSAR Subarra	150.29	351	PKP	PKiKP	02 42 30.8	-0.8
	comp=Z,1.3nm,1.0s,baz=16,slow=4.3						
NOA	NORSAR Array B	150.29	351	PKPbc	PKiKP	02 42 30.9	-0.7
	comp=Z,0.9nm,0.7s,baz=23,slow=3.4,SNR=7.9						
HFS	Hagfors	150.77	348	PKPbc	PKPbc	02 42 31.4	-0.5
	comp=Z,1.4nm,0.5s,baz=106,slow=4.8,SNR=5.3						
MMAI	Mount Meron Ar	151.79	281	PKPbc	PKiKP	02 42 36.4	+0.8
	comp=Z,1.9nm,0.6s,baz=75,slow=10,SNR=3.8						
AKASG	Malin Array Be	152.49	321	PKPbc	PKPbc	02 42 34.9	-1.2
	comp=Z,1.4nm,0.8s,baz=64,slow=1.2,SNR=4.2						

IDC 20 02:55:51.3±1.6**,28°.41N**×**105°.11E,h0^{km},mb3.6**/3**, mbtmp3.6**/5**,ML3.6**/2**,MS3.2**/1**,Error ellipse: s-maj=52.0km s-min=25.5km az=73.0,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.40	211	Pn	Pn	02 58 37.0	+1.4
	0.3nm,0.3s,baz=27,slow=10,SNR=6.6						
	1.0nm,0.3s						
SONM	Songino Array	19.42	3	P	Pn	03 00 20.8	+0.5
	baz=178,slow=11,SNR=4.5						
	0.9nm,0.7s						
MKAR	Makanchi Array	25.61	322	P	P	03 01 22.1	-0.2
	0.7nm,0.7s,baz=115,slow=9.7,SNR=6.5						
	0.7nm,0.7s						
KURBB	Kurchatov Arra	29.93	325	P	P	03 02 00.2	-0.7
	0.2nm,0.3s,baz=122,slow=11,SNR=1.9						
	0.2nm,0.3s						
GUMO	Guam	39.73	103	LR	LR	03 21 07.6	
	comp=Z,32nm,18.1s,baz=110,slow=38						
WRA	Warramunga Arr	55.75	146	P	P	03 05 29.7	-0.4
	0.7nm,0.7s,baz=335,slow=7.5,SNR=2.2						
	0.7nm,0.7s						

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*IDC **20** 02:59:31.5±0.8,2°.21S×138°.57E,h0^{km},mb3.8/6, mbtmp3.8/8,ML3.7/2,MS3.6/13,Error ellipse: s-maj=22.7km s-min=15.3km az=22.0*

*NEIC **20** 02:59:32.3±0.9,2°.18S±0°.06×138°.46E±0°.06,h10^{km}±2^{km}, mb4.2/13,Error ellipse: s-maj=13.6km s-min=5.8km az=49.0*

*DJA **20** 02:59:32.9±0.8,2°S±11°×13°9E±°,h12^{km}±5^{km},M4.3/6, mb4.4/1,MLv4.2/6*

ISC 20 02:59:32.3±0.6**,2°.19S**±0°.07×**138°.45E**±0°.04**,h10^{km},n44,** σ**1^{s}.18**/36**,mb4.0**/9**,MS3.7**/10**,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.33	53	P	Pb	02 59 39.5	-0.7
GENI	Genyem	1.77	103	P	Pn	03 00 02.9	0.0
SRPI	Serui, Papua	2.23	278	P	Pn	03 00 09.6	+0.3
SRPI				S	Sn	03 00 38.4	+1.5
JAY	Jayapura	2.28	98	Pn	Pn	03 00 09.8	-0.3
	8.5nm,0.3s,baz=237,slow=10,SNR=23						
JAY				Lg	Lg	03 00 38.4	
	20nm,0.3s,baz=107,slow=20,SNR=13						
JAY				LR	LR	03 01 21.0	
	comp=Z,1µm,19.9s,baz=252,slow=51						
	27nm,0.3s						
JAY	Jayapura	2.28	98	P	Pn	03 00 09.7	-0.3
JAY				S	Sn	03 00 37.8	-0.4
BAKI	Biak	2.54	293	P	Pb	03 00 16.0	-2.0
BAKI				S	Sb	03 00 47.3	-2.0
FAKI	Fak Fak	6.23	263		Pn	03 01 03.7	-0.7
FAKI	Fak Fak	6.23	263	P	Pn	03 01 05.9	+1.5
COEN	Coen	12.59	158	Pn	Pn	03 02 31.6	0.0
MTN	Manton Dam	12.83	214	Pn	Pn	03 02 35.1	+0.3
DAV	Davao City (W)	15.79	306	LR	LR	03 10 17.0	
	comp=Z,101nm,18.2s,baz=156,slow=41						
KNRA	Kununurra	16.45	215	Pn	Pn	03 03 22.5	-1.0
KNRA				IAmb	IAmb	03 03 53.8	
	comp=Z,22nm,1.0s						
GUMO	Guam	16.92	22	Pn	Pn	03 03 28.6	-0.8
WB0	Warramunga Arr	17.91	192		Pn	03 03 41.4	-0.4
WB0				IAmb	IAmb	03 04 07.3	
	comp=Z,13nm,1.1s						
WR8	Warramunga Arr	18.07	192	Pn	Pn	03 03 41.2	-2.5
WR8				IAmb	IAmb	03 03 58.9	
	comp=Z,6.3nm,0.8s						
WRA	Warramunga Arr	18.10	193		Pn	03 03 41.7	-2.3
WRA	Warramunga Arr	18.10	193	P	Pn	03 03 42.8	-1.1
	comp=Z,0.4nm,0.3s,baz=17,slow=12,SNR=12						
	comp=Z,0.8nm,0.5s						
KAPI	Kappang	18.87	261	P	P	03 03 52.1	-0.7
KAPI				IAmb	IAmb	03 04 16.6	
	comp=Z,22nm,1.4s						
KAPI	Kappang	18.87	261	LR	LR	03 12 59.4	
	comp=Z,70nm,18.8s,baz=88,slow=43						
FITZ	Fitzroy Crossi	20.20	218	P	P	03 04 06.4	-0.9
AS31	Alice Springs	21.80	191	P	P	03 04 24.1	-0.6
ASAR	Alice Springs	21.80	191	P	P	03 04 23.8	-0.8
ASAR	Alice Springs	21.80	191	P	P	03 04 23.5	-1.2
	comp=Z,1.4nm,0.6s,baz=22,slow=11,SNR=19						
	comp=Z,1.4nm,0.6s						
PSA00	Pilbara Seismi	26.44	222	P	P	03 05 09.3	-0.3
PSA00				IAmb	IAmb	03 05 26.5	
	comp=Z,6.0nm,1.4s						
STKA	Stephens Creek	29.68	175	LR	LR	03 18 25.7	
	comp=Z,161nm,18.5s,baz=352,slow=38						
BBOO	Buckleboo	30.54	184	P	P	03 05 46.8	+0.7
TOO	Toolangi	35.80	170	P	P	03 06 31.3	-0.6
TOO				IAmb	IAmb	03 06 35.2	
	comp=Z,7.2nm,1.5s						
JNU	Nakatsue	35.84	349	LR	LR	03 18 46.7	
	comp=Z,94nm,20.2s,baz=150,slow=32						
NWAO	Narrogin (SRO)	36.49	211	LR	LR	03 22 43.5	
	comp=Z,229nm,20.8s,baz=12,slow=38						
URZ	Urewera	50.38	140	LR	LR	03 31 47.2	
	comp=Z,73nm,18.2s,baz=311,slow=38						
KLR	Kul'dur	51.54	354	LR	LR	03 27 14.9	
	comp=Z,49nm,21.9s,baz=217,slow=32						
SONM	Songino Array	57.14	335	LR	LR	03 34 26.2	
	comp=Z,104nm,19.4s,baz=108,slow=37						
CASY	Casey	66.93	192	P	P	03 10 25.2	+0.6
MKAR	Makanchi Array	69.22	322	P	P	03 10 40.8	+1.4
	comp=Z,0.7nm,0.6s,baz=121,slow=8.7,SNR=8.8						
	comp=Z,0.7nm,0.6s						
KURBB	Kurchatov Arra	73.15	325	P	P	03 11 04.1	+1.0
	comp=Z,0.5nm,0.5s,baz=113,slow=5.8,SNR=4.9						
	comp=Z,0.5nm,0.5s						
TIXI	Tiksi	73.97	357	LR	LR	03 41 13.0	
	comp=Z,38nm,21.8s,baz=196,slow=34						
VNDA	Vanda	76.32	175	P	P	03 11 23.6	+2.6
	comp=Z,0.6nm,0.7s,baz=312,slow=5.2,SNR=4.4						
VNDA				LR	LR	03 44 55.8	
	comp=Z,59nm,19.8s,baz=340,slow=36						
	comp=Z,0.6nm,0.7s						
BVAR	Borovoye Array	78.74	325	P	P	03 11 36.2	+1.3
	comp=Z,1.2nm,0.5s,baz=123,slow=5.3,SNR=5.0						
	comp=Z,1.2nm,0.5s						
ILAR	Eielson Array	85.47	24	P	P	03 12 10.1	0.0
	comp=Z,0.2nm,0.8s,baz=267,slow=6.0,SNR=3.2						
	comp=Z,0.2nm,0.8s						
QSPA	South Pole Qui	87.75	180	P	P	03 12 21.3	-0.1
QSPA				IAmb	IAmb	03 12 50.4	
	comp=Z,4.7nm,1.4s						
QSPA	South Pole Qui	87.75	180	LR	LR	03 50 57.6	
	comp=Z,55nm,21.4s,baz=338,slow=35						
ARCES	ARCESS Array B	99.93	341	LR	LR	04 01 32.1	
	comp=Z,16nm,21.5s,baz=78,slow=37						
CPUP	Villa Florida	147.81	153	PKPbc	PKPbc	03 19 18.9	+0.6
	comp=Z,0.3nm,0.7s,baz=87,slow=2.4,SNR=3.0						
LPAZ	La Paz	147.96	126	PKPbc	PKPbc	03 19 20.4	+0.7
	comp=Z,1.4nm,0.8s,baz=276,slow=3.9,SNR=5.4						

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*IDC **20** 02:59:26.3±1.1,30°.64S×178°.03W,h0^{km},mb4.0/5, mbtmp4.0/6,ML3.2/1,MS3.0/1,Error ellipse: s-maj=32.0km s-min=27.8km az=74.0*

*NEIC **20** 02:59:32.6±1.1,30°.9S±0°.1×177°.97W±0°.06,h35^{km}±2^{km}, mb4.4/9,Error ellipse: s-maj=18.7km s-min=8.4km az=356.0*

ISC 20 02:59:33.5±0.9**,30°.96S**±0°.09×**178°.1W**±0°.2**,h46^{km},n31,** σ**1^{s}.31**/25**,mb4.2**/7**,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.71	5		Pn	02 59 59.9	-0.9
MXZ	Matakaoa Point	7.23	203	Pn	Pn	03 01 18.7	+2.1
URZ	Urewera	8.29	207	Pn	Pn	03 01 29.9	-1.2
	0.3nm,0.3s,baz=82,slow=13,SNR=1.7						
URZ				Sn	Sn	03 03 02.6	-0.7
	1.8nm,0.3s,baz=217,slow=23,SNR=8.5						
	5.4nm,0.8s						
RTZ	Ruatahuna	8.65	207	Pn	Pn	03 01 34.7	-1.4
BKZ	Black Stump Fm	9.31	207	Pn	Pn	03 01 45.7	+0.5
BFZ	Birch Farm	10.73	204	Pn	Pn	03 02 02.5	-2.1
DZM	Mont Dzumac	16.41	299	LR	LR	03 08 26.9	
	comp=Z,51nm,18.1s,baz=58,slow=33						
CTAO	Charters Tower	33.81	280	P	P	03 06 12.2	+0.7
CTAO				IAmb	IAmb	03 06 13.3	
	comp=Z,13nm,1.2s						
STKA	Stephens Creek	34.28	258	P	P	03 06 17.1	+1.6
	comp=Z,2.0nm,0.6s,baz=88,slow=12,SNR=4.1						
	comp=Z,2.0nm,0.6s						
BBOO	Buckleboo	38.75	255	P	P	03 06 53.5	0.0
AS31	Alice Springs	43.00	268	P	P	03 07 29.3	+0.6
ASAR	Alice Springs	43.00	268	P	P	03 07 27.4	-1.3
	comp=Z,1.4nm,0.8s,baz=108,slow=7.6,SNR=7.3						
	comp=Z,1.4nm,0.8s						
WR8	Warramunga Arr	43.90	273	P	P	03 07 35.9	0.0
WR8				IAmb	IAmb	03 07 49.2	
	comp=Z,8.6nm,1.0s						
WRA	Warramunga Arr	44.04	273	P	P	03 07 36.2	-0.9
WRA	Warramunga Arr	44.04	273	P	P	03 07 36.0	-1.0
	comp=Z,1.4nm,0.6s,baz=111,slow=8.1,SNR=7.8						
	comp=Z,1.4nm,0.6s						
KNRA	Kununurra	50.67	275	P	P	03 08 28.8	+0.2
QSPA	South Pole Qui	59.16	180	P	P	03 09 30.5	+1.1
QSPA				IAmb	IAmb	03 09 37.4	
	comp=Z,5.3nm,1.3s						
QSPA	South Pole Qui	59.16	180	P	P	03 09 30.8	+1.4
	comp=Z,1.3nm,0.8s,baz=26,slow=0.9,SNR=8.3						
	comp=Z,1.3nm,0.8s						
SNAA	Sanae	77.60	178	P	P	03 11 25.0	+0.6
SNAA				IAmb	IAmb	03 11 29.3	
	comp=Z,0.6nm,0.9s						
SNAA	Sanae	77.60	178	P	P	03 11 26.2	+1.8
	comp=Z,0.6nm,0.5s,baz=186,slow=16,SNR=5.8						
	comp=Z,0.6nm,0.5s						
H03S2	Juan Fernandez	80.22	124	T	T	04 40 46.8	
	baz=238,slow=74,SNR=12						
H03S1	Juan Fernandez	80.23	124	T	T	04 40 46.1	
	baz=238,slow=74,SNR=13						
H03S3	Juan Fernandez	80.24	124	T	T	04 40 46.8	
	baz=238,slow=74,SNR=12						
H03N3	Juan Fernandez	80.42	123	T	T	04 40 54.7	
	baz=242,slow=72,SNR=5.0						
H03N2	Juan Fernandez	80.42	123	T	T	04 41 00.1	
	baz=242,slow=72,SNR=7.2						
H03N1	Juan Fernandez	80.44	123	T	T	04 40 52.3	
	baz=242,slow=72,SNR=6.7						
FINES	FINESS Array B	145.64	340	PKPbc	PKPdf	03 19 04.6	-1.4
	comp=Z,3.1nm,0.5s,baz=52,slow=4.2,SNR=39						
NB2	NORSAR Subarra	149.29	351	PKP	PKPbc	03 19 15.4	-1.1
	comp=Z,0.2nm,0.5s,baz=14,slow=2.8						
NOA	NORSAR Array B	149.29	351	PKPbc	PKPbc	03 19 15.1	-1.5
	comp=Z,0.2nm,0.4s,baz=12,slow=4.1,SNR=3.8						
HFS	Hagfors	149.77	348	PKPbc	PKPbc	03 19 16.0	-1.7
	comp=Z,1.2nm,0.6s,baz=108,slow=3.3,SNR=5.8						
AKASG	Malin Array Be	151.69	322	PKPbc	PKPbc	03 19 21.1	-1.4
	comp=Z,0.6nm,0.5s,baz=64,slow=1.5,SNR=1.9						

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*IDC **20** 03:08:12.4±1.3,2°.21S×138°.56E,h0^{km},mb3.5/3, mbtmp3.5/5,ML3.3/2,MS3.3/2,Error ellipse: s-maj=27.0km s-min=18.1km az=9.0*

*DJA **20** 03:08:14.4±0.3,2°S±5°×13°8E±°,h10^{km},M4.1/7,mb4.3/1, MLv3.9/7*

ISC 20 03:08:14.6±0.9**,2°.24S**±0°.10×**138°.49E**±0°.04**,h10^{km},n12,** σ**0^{s}.64**/13**,mb3.6**/3**,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.33	41	P	Pg	03 08 20.7	-0.4
GENI	Genyem	1.71	102	P	Pn	03 08 44.9	+0.4
GENI				S	Sn	03 09 07.7	+1.3
JAY	Jayapura	2.23	97	Pn	Pn	03 08 51.5	-0.2
	5.4nm,0.3s,baz=127,slow=21,SNR=5.0						
JAY				Lg	Lg	03 09 20.6	
	6.0nm,0.3s,baz=88,slow=17,SNR=3.6						
JAY				LR	LR	03 10 02.5	
	comp=Z,415nm,21.3s,baz=298,slow=51						
	13nm,0.3s						
JAY	Jayapura	2.23	97	P	Pn	03 08 50.8	-0.8
JAY				S	Sn	03 09 19.7	+0.5
SRPI	Serui, Papua	2.28	279	P	Pn	03 08 52.1	-0.2
BAKI	Biak	2.60	294	P	Pn	03 08 57.3	+0.5
BAKI				S	Sn	03 09 28.6	+0.2
FAKI	Fak Fak	6.28	264	P	Pn	03 09 47.4	+0.1
PMG	Port Moresby	11.18	130	LR	LR	03 16 55.6	
	comp=Z,210nm,19.2s,baz=98,slow=47						
WRA	Warramunga Arr	18.06	193	P	Pn	03 12 25.9	+0.1
	0.1nm,0.3s,baz=17,slow=13,SNR=4.7						
	0.7nm,0.5s						
ASAR	Alice Springs	21.76	191	P	P	03 13 05.8	-0.8
	1.1nm,0.9s,baz=24,slow=9.8,SNR=6.9						
	1.1nm,0.9s						
MKAR	Makanchi Array	69.28	322	P	P	03 19 22.4	+0.3
	0.3nm,0.6s,baz=119,slow=8.6,SNR=3.8						
	0.3nm,0.6s						
ILAR	Eielson Array	85.50	24	P	P	03 20 50.5	-2.1
	0.4nm,0.8s,baz=254,slow=4.4,SNR=5.5						
	0.4nm,0.8s						

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*UCR **20** 03:09:01.6±1.3,9°.65N×84°.79W,h22^{km}±2^{km},MW3.7*

*CATAC **20** 03:09:01.3±0.4,10°N±3°×8°5W±°,h6^{km}±2^{km},M3.6/14, MLv3.6/14,Error ellipse: s-maj=5.6km s-min=3.6km az=8.8, confirmed*

ISC 20 03:09:01.1±1.1**,9°.64N**±0°.03×**84°.77W**±0°.02**,h13^{km}**±9^{km}**, n120,** σ**0^{s}.81**/153**,4C-40D,Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BITO	Garabito Jaco	0.15	99	⇑eP	Pb	03 09 06.2	+0.5
BITO				eS	Sb	03 09 09.9	+1.1
PAQE	Paquera	0.24	317	eP	Pb	03 09 07.6	+0.2
PAQE				eS	Sb	03 09 12.4	+0.9
ROBF	Roble, Puntare	0.34	5	eP	Pb	03 09 08.9	-0.1
ROBF				eS	Sb	03 09 14.9	+0.7
ENAS	Puntarenas	0.34	349	⇓iP	Pb	03 09 09.2	+0.1
ENAS				eS	Sb	03 09 15.4	+1.1
OROT	Orotina	0.36	42	⇓iP	Pg	03 09 09.1	+0.7
OROT				eS	Sb	03 09 15.1	+0.1
ARZA	Esparza	0.36	16	⇓iP	Pb	03 09 09.2	-0.3
ARZA				eS	Sb	03 09 15.1	+0.1
PURI	Puriscal	0.49	66	eP	Pg	03 09 11.3	+0.4
ATEO	Atenas	0.51	49	⇑iP	Pb	03 09 11.7	-0.2
ATEO				eS	Sb	03 09 19.2	-0.1
PAR1A	Puntarenas Pro	0.51	95	eP	Pb	03 09 13.0	+1.0
PAR1A				eS	Sn	03 09 22.8	+0.1
SRA1	San Ramn	0.52	33	⇓iP	Pg	03 09 11.8	+0.3
SRA1				eS	Sb	03 09 19.6	-0.2
PALD	Palmares	0.52	39	⇓iP	Pb	03 09 12.2	-0.1
PALD				eS	Sb	03 09 19.9	0.0
RAMO	San Ramon	0.53	34	⇓iP	Pg	03 09 11.9	+0.3
RAMO				eS	Sb	03 09 19.9	-0.2
PICV	PH. Pirrs	0.57	92	eP	Pg	03 09 12.7	+0.5
PICV				eS	Sb	03 09 21.7	+0.8
NARAN	Naranjo de Ala	0.59	40	⇓iP	Pg	03 09 13.2	+0.4
SARCI	Sarchi	0.61	43	eP	Pb	03 09 14.0	+0.3
SARCI				eS	Sb	03 09 23.3	+1.1
TCS1	Tacares	0.61	49	⇓eP	Pb	03 09 13.7	0.0
TCS1				eS	Sb	03 09 23.1	+0.8
TCS1	Tacares	0.61	49	⇓P	Pb	03 09 13.6	-0.1
ACOS	Acosta	0.61	76	eP	Pg	03 09 12.2	-1.1
GREC	Grecia	0.62	47	eP	Pb	03 09 14.0	+0.1
GREC				eS	Sn	03 09 24.8	-0.9
PISJ	San Jernim	0.64	91	eP	Pg	03 09 14.0	+0.4
SANTA	Santa Ana	0.64	63	eP	Pg	03 09 13.6	-0.2
ZARE	Zarcero	0.65	35	⇓iP	Pb	03 09 14.7	+0.2
ZARE				eS	Sb	03 09 24.1	+0.5
BELE	Belen	0.66	60	⇓eP	Pg	03 09 14.0	-0.1
BELE				eS	Sb	03 09 23.3	-0.4
JUNT	Juntas	0.66	344	⇓iP	Pg	03 09 13.9	-0.2
JUNT				eS	Sg	03 09 22.8	-0.1
JTS	Las Juntas de	0.67	344	⇓iP	Pg	03 09 14.0	-0.2
JTS				eS	Sg	03 09 23.5	+0.4
MTEVE	Monteverde	0.67	355	⇓iP	Pg	03 09 14.3	-0.1
ABE2	San Pablo	0.71	85	eP	Pg	03 09 15.2	+0.3
PITB	Pirrs, San	0.73	89	eP	Pg	03 09 15.3	-0.1
RAZU	San Marcos de	0.73	89	eP	Pg	03 09 15.1	-0.4
HDC	Heredia	0.74	61	eP	Pg	03 09 15.6	+0.1
HDC				eS	Sb	03 09 26.4	+0.4
HDC	Heredia	0.74	61	⇓P	Pg	03 09 15.3	-0.1
AMPA	Desamparados	0.74	70	eP	Pg	03 09 15.2	-0.3
LUJA	Lujan	0.74	68	eP	Pg	03 09 15.1	-0.5
VPS8	V Poas	0.74	44	eP	Pg	03 09 15.8	+0.1
CMARA	Lajas Hojancha	0.75	300	eP	Pg	03 09 15.9	+0.3
CMARA				eS	Sn	03 09 28.1	-0.6
CMARA	Lajas Hojancha	0.75	300	P	Pg	03 09 16.0	+0.3
QUEU	Ciudad Quesada	0.75	26	⇓iP	Pb	03 09 16.6	+0.5
SOCE	Pocosol	0.75	11	⇓iP	Pg	03 09 16.0	+0.2
SOCE				eS	Sb	03 09 26.4	+0.1
SOCE	Pocosol	0.75	11	⇓P	Pg	03 09 15.9	+0.2
INDI	Punta indio, G	0.76	287	P	Pg	03 09 16.2	+0.3
INDI	Punta indio, G	0.76	287	S	Sn	03 09 28.2	-0.7
LCR2	La Lucha 2	0.76	83	eP	Pg	03 09 15.4	-0.5
LCR2				eS	Sb	03 09 26.5	-0.1
LCR2	La Lucha 2	0.76	83	P	Pg	03 09 15.3	-0.6
VPS5	V. Poas	0.76	44	⇓eP	Pg	03 09 15.7	-0.3
VPL2	V. Platanar	0.76	30	⇓iP	Pg	03 09 16.1	+0.2
PIEC	Cerro El Cedra	0.80	91	eP	Pg	03 09 16.9	+0.1
TRIO	Tres Rios	0.81	71	eP	Pg	03 09 13.2	-3.6
CHIK	Chiripa	0.81	350	⇓iP	Pg	03 09 16.8	-0.1
CHIK				eS	Sb	03 09 28.5	+0.5
ARE1	Arenal 1	0.81	3	⇓iP	Pg	03 09 17.1	+0.2
ARE1				eS	Sn	03 09 29.6	-0.8
VARE2	V. Arenal	0.81	3	⇓iP	Pg	03 09 17.2	+0.2
CORON	Coronado	0.82	66	eP	Pg	03 09 17.4	+0.2
FORC	Fortuna	0.82	7	⇓eP	Pg	03 09 17.2	+0.1
FORC				eS	Sb	03 09 28.9	+0.5
NICO	Nicoya	0.83	306	i P	Pg	03 09 17.1	-0.1
VACR	Volcan Arenal	0.83	6	⇓iP	Pg	03 09 16.9	-0.4
CEDE	Laguna Cedeo	0.84	4	⇓iP	Pg	03 09 17.6	+0.1
TILA	Tilaran	0.84	346	⇓iP	Pg	03 09 17.0	-0.5
TILA				eS	Sg	03 09 26.6	-2.0
CNAS	Canas	0.85	338	eP	Pg	03 09 17.0	-0.6
TABAC	Tabacon	0.85	0	⇓iP	Pg	03 09 17.8	+0.1
INVE	Universidad In	0.88	341	⇓iP	Pg	03 09 17.6	-0.6
ARTO	Ro Cuarto	0.88	38	⇑eP	Pg	03 09 18.3	0.0
CVIMO	Finca Echandi	0.90	65	eP	Pg	03 09 18.4	-0.2
REPA	Paraso	0.91	78	eP	Pg	03 09 17.7	-1.0
PLVR	Palo Verde	0.91	321	⇓iP	Pg	03 09 18.1	-0.6
PLVR				eS	Sg	03 09 30.9	+0.3
ITAL	Pital	0.94	31	eP	Pb	03 09 18.6	-0.7
TIMP	Tierras Morena	0.97	345	⇓iP	Pb	03 09 19.2	-0.6
VICA	Volcano Irazu	0.97	69	eP	Pg	03 09 20.1	+0.1
PCAYA	Pacayas	0.98	74	eP	Pb	03 09 20.1	0.0
RAFA	San Farael, Vo	0.99	72	eP	Pb	03 09 20.1	-0.3
SACU	Santa Cruz	1.01	308	eP	Pb	03 09 20.1	-0.4
VINA	Juan Vinas	1.04	76	eP	Pb	03 09 20.4	-0.7
VTLA	Turrialba Volc	1.04	70	eP	Pb	03 09 21.1	-0.2
CVTQ	Turrialba Volc	1.05	70	eP	Pg	03 09 21.7	+0.2
VTR0	Volcan Turrial	1.06	69	eP	Pg	03 09 21.9	+0.2
CVTR	Volcan Turrial	1.06	69	eP	Pb	03 09 17.9	-3.7
CVTV	Tajo	1.07	70	eP	Pb	03 09 21.7	0.0
TENO	El Achiote	1.07	349	⇓iP	Pb	03 09 20.3	-1.4
MOTZ	Rio Naranjo	1.08	344	⇓iP	Pb	03 09 21.0	-0.8
VTCV	VTCV, Calle Va	1.08	72	eP	Pb	03 09 21.4	-0.4
CUI	Cuipilapa	1.08	339	⇓iP	Pb	03 09 21.0	-0.8
CUI				eS	Sn	03 09 37.5	+0.6
ABRB	Las Abras (San	1.10	71	eP	Pb	03 09 22.2	+0.1
ABRB				eS	Sb	03 09 36.5	0.0
TURIB	Turrialba	1.10	76	eP	Pb	03 09 22.2	+0.2
COLC	Colonia	1.10	337	eP	Pb	03 09 21.3	-0.8
COVE	Coope Vega, Sa	1.13	19	⇓P	Pb	03 09 21.5	-1.0
COVE	Coope Vega, Sa	1.13	19	S	Sg	03 09 37.6	0.0
HORNC	Hornillas	1.14	339	⇓iP	Pb	03 09 21.8	-1.0
RESJ	San Isidro (Tu	1.17	71	eP	Pn	03 09 23.2	-0.2
VMAR	Armenia, Volca	1.21	344	⇓iP	Pn	03 09 23.2	-0.7
ALIBA	Liberia Airpor	1.22	321	⇓iP	Pn	03 09 23.2	-0.7
ALIBA				eS	Sg	03 09 40.6	+0.2
OCHAL	Ojochal	1.23	116	P	Pn	03 09 22.6	-1.5
GPS3	Bodega del ICE	1.25	332	eP	Pn	03 09 24.7	+0.3
ELI1	Hacienda Flor	1.26	322	eP	Pn	03 09 24.0	-0.5
UPAL	Upala	1.27	349	eP	Pn	03 09 24.2	-0.3
VRLE	La Escondida,	1.28	333	eP	Pn	03 09 23.7	-1.2
LAPC	Finca la Perla	1.29	330	eP	Pn	03 09 23.9	-1.1
VORI	VORI	1.30	334	eP	Pn	03 09 24.2	-0.9
IRES	Siquirres	1.32	70	⇓iP	Pb	03 09 26.0	+0.2
BUAI	Buenos Aires	1.35	336	eP	Pn	03 09 24.8	-0.8
PEJA	Penjamo Buenos	1.35	337	eP	Pn	03 09 25.9	+0.1
TRT2	Tortugero	1.36	48	eP	Pn	03 09 26.2	+0.4
TRT2	Tortugero	1.36	48	P	Pn	03 09 26.3	+0.4
TRT2	Tortugero	1.36	48	S	Sb	03 09 44.2	+0.4
LCHIL	Los Chiles	1.39	2	eP	Pn	03 09 26.5	+0.3
TRT1	Tortuguero	1.42	48	eP	Pn	03 09 26.7	+0.1
BURE	Buenos Aires	1.49	108	eP	Pb	03 09 28.4	-0.3
DRK0	Durika	1.55	104	eP	Pn	03 09 27.8	-0.8
DRK0	Durika	1.55	104	P	Pn	03 09 27.7	-0.9
CARN	Rivas	1.71	334	eP	Pn	03 09 31.6	+1.1
CARN	Rivas	1.71	334	P	Pb	03 09 32.3	0.0
CARN				S	Sg	03 09 57.3	+1.2
CEUA	Cerro Uatsi, L	1.80	91	⇓iP	Pb	03 09 34.2	+0.2
JAPN	Al SSO del Vol	2.07	335	P	Pb	03 09 37.8	-0.9
MORN	Al O del Volca	2.08	336	P	Pb	03 09 38.2	-0.6
MORN				S	Sb	03 10 03.9	-0.7
CLLRA	Cordillera,	2.31	113	eP	Pn	03 09 40.8	+1.8
ACON	Acoyapa	2.34	350	P	Pn	03 09 40.1	+0.7
ACON	Acoyapa	2.34	350	S	Sn	03 10 09.5	+1.4
BQTLY	Boquete Panama	2.44	111	eP	Pb	03 09 43.4	-1.6
ESPN	Las Esperanzas	2.58	10	eP	Pn	03 09 43.3	+0.7
NANN	Nandasmo	2.64	330	P	Pb	03 09 46.6	-1.8
BOAB	BOACO BROADBAN	2.92	343	P	Pn	03 09 48.1	+0.7
COPN	Copaltepe	3.09	325	⇑iP	Pn	03 09 52.1	+2.4
COPN	Copaltepe	3.09	325	P	Pn	03 09 52.7	+3.0

IDC 20 03:14:56.3±3.1**,33°.91S**×**178°.76W,h0^{km},mb3.7**/2**, mbtmp3.8**/3**,ML4.2**/1**,Error ellipse: s-maj=74.2km s-min=36.3km az=119.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	5.48	216	Pn	Pn	03 16 20.3	+1.0
	7.8nm,0.3s,baz=258,slow=3.2,SNR=34						
URZ				Sn	Sn	03 17 22.3	-0.6
	4.1nm,0.3s,baz=85,slow=21,SNR=11						
	14nm,0.3s						
ASAR	Alice Springs	42.41	271	P	P	03 22 52.8	-0.1
	0.7nm,0.6s,baz=117,slow=7.4,SNR=7.1						
	0.7nm,0.6s						
WRA	Warramunga Arr	43.71	276	P	P	03 23 03.0	-0.4
	0.6nm,0.5s,baz=118,slow=7.0,SNR=7.0						
	0.6nm,0.5s						
FINES	FINESS Array B	148.17	338	PKPbc	PKPbc	03 34 42.7	-0.7
	0.4nm,0.5s,baz=27,slow=4.7,SNR=5.5						

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*SJA **20** 03:27:31.4±0.6,24°.39S×70°.12W,h74^{km}±3^{km},ML3.6, MW3.6*

*GUC **20** 03:27:33.2±0.6,24°.37S×70°.03W,h69^{km}±4^{km},ML3.7*

ISC 20 03:27:33.0±1.3**,24°.39S**±0°.03×**70°.14W**±0°.07**,h73^{km}**±10^{km}**, n32,** σ**0^{s}.79**/41**,2C-4D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB14	IPOC Station P	0.34	226	⇑iP	Pn	03 27 45.6	+0.4
PB14				eS	Sn	03 27 54.6	+0.4
PB14	IPOC Station P	0.34	226	i P	Pn	03 27 44.6	-0.6
PB14				⇓iS	Sn	03 27 54.4	+0.3
PB14				IAML		03 27 56.7	
	comp=Z,3µm,0.1s						
GO02	Mina Guanaco	0.92	147	⇓iP	Pn	03 27 50.9	-0.1
GO02				eS	Sn	03 28 03.8	-0.5
GO02				IAML		03 28 05.0	
	comp=N,3µm,0.2s						
GO02	Mina Guanaco	0.92	147	i P	Pn	03 27 50.7	-0.3
GO02				i S	Sn	03 28 04.2	-0.1
GO02				IAML		03 28 05.1	
	comp=Z,2µm,0.1s						
PB10	IPOC Station P	0.95	336	eP	Pn	03 27 51.4	+0.3
PB10				eS	Sn	03 28 04.4	-0.2
PB10	IPOC Station P	0.95	336	i P	Pn	03 27 50.8	-0.3
PB10				i S	Sn	03 28 04.6	0.0
PB10				IAML		03 28 06.9	
	comp=Z,494nm,0.2s						
PB05	IPOC Station P	1.53	358	⇓iP	Pn	03 27 58.3	-0.3
PB05	IPOC Station P	1.53	358	i P	Pn	03 27 58.4	-0.3
PB05				i S	Sn	03 28 18.5	+0.5
PB05				IAML		03 28 22.4	
	comp=Z,296nm,0.2s						
PB06	IPOC Station P	1.75	17	⇑iP	Pn	03 28 01.5	-0.2
PB06				eS	Sn	03 28 22.7	-0.5
PB06				IAML		03 28 27.5	
	comp=N,1µm,0.2s						
PB06	IPOC Station P	1.75	17	i P	Pn	03 28 01.0	-0.6

PB06				*i*S	Sn	03 28 23.8	+0.5
PB06				IAML		03 28 28.1	
	comp=Z,503nm,0.3s						
AC01	Pan de Azucar	1.80	193	*e*P	Pn	03 28 02.9	+0.8
AC01				IAML		03 28 31.4	
	comp=E,1µm,0.3s						
AC01	Pan de Azucar	1.80	193	*i*P	Pn	03 28 02.0	0.0
AC01				*i*S	Sn	03 28 24.6	+0.4
AC01				IAML		03 28 33.9	
	comp=Z,464nm,0.7s						
AF01	San Pedro de A	2.30	52	*e*P	Pn	03 28 09.8	+0.9
AF01	San Pedro de A	2.30	52	IAML		03 28 57.6	
	comp=Z,664nm,0.5s						
PB03	IPOC Station P	2.36	9	⇓*i*P	Pn	03 28 09.1	-0.6
PB03	IPOC Station P	2.36	9	*i*P	Pn	03 28 09.6	-0.2
PB03				*i*S	Sn	03 28 38.5	+0.7
PB03				IAML		03 28 49.7	
	comp=Z,365nm,0.2s						
AC02	Maricunga	2.60	160	*e*P	Pn	03 28 15.6	+2.3
AC02	Maricunga	2.60	160	*i*P	Pn	03 28 14.0	+0.7
AC02				IAML		03 28 53.4	
	comp=Z,196nm,0.3s						
PB09	IPOC Station P	2.71	18	*e*P	Pn	03 28 15.0	+0.5
PB09				IAML		03 28 54.5	
	comp=N,277nm,0.4s						
PB09	IPOC Station P	2.71	18	*i*P	Pn	03 28 15.2	+0.7
PB09				*i*S	Sn	03 28 47.0	+0.7
PB09				IAML		03 29 04.0	
	comp=Z,232nm,0.9s						
AC06	Mina Casimiro	2.96	184	*e*P	Pn	03 28 18.1	+0.3
GO03	Copiapo	3.19	182	*i*P	Pn	03 28 21.5	+0.6
GO03	Copiapo	3.19	182	IAML		03 29 16.9	
	comp=Z,188nm,0.3s						
PB01	IPOC Station P	3.38	10	*e*P	Pn	03 28 23.0	-0.6
PB01				*e*S	Sn	03 29 01.6	-1.0
PB01	IPOC Station P	3.38	10	*i*P	Pn	03 28 23.8	+0.2
PB01				*i*S	Sn	03 29 03.0	+0.3
PB01				IAML		03 29 19.2	
	comp=Z,181nm,0.4s						
TA01	Diego Aracena	3.81	359	*i*P	Pn	03 28 29.4	+0.2
TA01				IAML		03 29 31.8	
	comp=Z,66nm,0.5s						
AC04	Llanos de Chal	3.89	192	*e*P	Pn	03 28 29.9	-0.5
PB08	IPOC Station P	4.33	12	*i*P	Pn	03 28 36.6	-0.1
PB08				IAML		03 29 50.5	
	comp=Z,54nm,0.5s						
AZAP	Zapla	4.63	89	IAML		03 30 13.0	
	comp=Z,22nm,3.0s						
LCO	Las Campanas	4.63	186	IAML		03 29 50.8	
	comp=Z,125nm,0.7s						
VCA	Vinchina	4.66	159	*i*P	Pn	03 28 38.1	-2.9
VCA				IAML		03 30 11.3	
	comp=Z,29nm,1.3s						
GO01	Chusmiza	4.78	11	IAML		03 30 00.7	
	comp=Z,40nm,0.5s						

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*IDC **20** 03:39:26.9±1.4, 12°.10N×87°.09W, h0^{km}, mb3.9/7, mbtmp3.9/7, MS3.0/2, Error ellipse: s-maj=62.4km s-min=16.4km az=52.0*

*CATAC **20** 03:39:28.4±0.3, 12°N±3°×8°8W±°, h15^{km}, M4.0/19, MLv4.0/19, Error ellipse: s-maj=6.9km s-min=2.5km az=23.4, confirmed*

*SNET **20** 03:39:33.6±1.0, 11°.89N×87°.67W, h31^{km}±144^{km}, ML3.5*

*NEIC **20** 03:39:33.4±0.9, 11°.80N±0°.07×87°.4W±0°.1, h48^{km}±13^{km}, mb4.2/24, Error ellipse: s-maj=14.9km s-min=9.1km az=67.0*

ISC 20 03:39:30.7±1.2**, 11°.65N**±0°.05×**87°.51W**±0°.03**, h40**^{km}±13^{km}**, n122,** σ**1^{s}36**/130**, mb4.2**/18**, 23C-5D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	Copaltepe	1.04	60	⇑P	Pn	03 39 49.1	+0.2
CRIN	San Cristobal	1.14	23		Pn	03 39 50.7	+0.5
CRIN	San Cristobal	1.14	23	S	Sn	03 40 06.8	+2.2
CRIN	San Cristobal	1.14	23	⇑P	Pn	03 39 50.8	+0.5
PKGN	Cerro Pekin	1.14	27	⇑P	Pn	03 39 50.4	+0.3
CNGA	Al SSO del Vol	1.16	43	⇑P	Pn	03 39 50.7	+0.2
CNGN	Cerro Negro	1.16	43		Pn	03 39 50.7	+0.2
CNGN	Cerro Negro	1.16	43	⇑P	Pn	03 39 50.7	+0.2
HERN	Volcan Telica	1.16	35	Pn	Pn	03 39 50.7	+0.1
PLRN	Geotermica Pol	1.18	38	P	Pn	03 39 50.0	-0.7
SAPS	Ciudad Sandino	1.20	64	⇑P	Pn	03 39 50.8	-0.2
POLN	Al Sur del Vol	1.21	35	⇑P	Pn	03 39 50.4	-0.7
MOMN	Momotombo	1.22	52	⇑P	Pn	03 39 51.2	-0.1
MOMN				S	Sn	03 40 07.4	+0.9
ILCN	San Idelfonso	1.22	41	⇑P	Pn	03 39 51.4	+0.1
CRUN	El Crucero	1.23	74	⇑P	Pn	03 39 52.0	+0.5
ABCN	Banco Central	1.27	68	P	Pn	03 39 51.9	0.0
MOM2	El Cardon	1.27	52	⇑P	Pn	03 39 52.1	+0.1
MOM2				S	Sn	03 40 08.2	+0.3
APQ3	Volcan Apoyequ	1.28	61	⇓P	Pn	03 39 52.2	+0.2
APQ2	Apoyeque	1.28	65	P	Pn	03 39 51.6	-0.6
APQ2				S	Sn	03 40 10.0	+1.9
USIM	UNAN	1.30	69	Pn	Pn	03 39 52.0	-0.3
USIM	UNAN	1.30	69	P	Pn	03 39 52.4	0.0
UNAN	Cigeo UNAN	1.30	69	⇑P	Pn	03 39 52.2	-0.2
TISN	Laguna Tiscapa	1.31	68	⇑P	Pn	03 39 52.4	-0.2
MAFN	Magfor	1.32	70	P	Pn	03 39 52.3	-0.4
MGAN	Managua	1.33	68	P	Pn	03 39 52.3	-0.6
POTN	Potosi Cosigui	1.34	0	⇑P	Pn	03 39 53.1	+0.1
SABN	Sabanita	1.36	77	⇓P	Pn	03 39 52.0	-1.2
MAS3	Al N del Volca	1.36	74	⇓P	Pn	03 39 52.9	-0.3
MAS3				S	Sn	03 40 11.7	+1.6
NANN	Nandasmo	1.39	78	S	Sn	03 40 13.8	+2.9
NANN	Nandasmo	1.39	78	⇑P	Pn	03 39 54.3	+0.6
WILN	Americas 2	1.39	69	⇑P	Pn	03 39 53.4	-0.3
WILN				S	Sn	03 40 11.3	+0.4
NADN	Granada	1.46	86	P	Pn	03 39 52.7	-1.8
NADN				S	Sn	03 40 14.5	+2.1
CNCH	Conchagua	1.65	349	*e*P	Pn	03 39 57.2	0.0
CNCH	Conchagua	1.65	349	⇑P	Pn	03 39 57.3	0.0
LCND	La Caada	1.69	347	*e*P	Pn	03 39 57.7	0.0
LCND				IAML		03 40 22.9	
	comp=Z,449nm,0.4s						
LCND	La Caada	1.69	347	⇑P	Pn	03 39 57.8	0.0
JAPN	Al SSO del Vol	1.80	94	⇑P	Pn	03 39 59.2	-0.1
MORN	Al O del Volca	1.83	93	⇓P	Pn	03 39 59.1	-0.6
MORN				S	Sn	03 40 21.7	0.0
BLLM	Bellamira	1.92	338	*e*P	Pn	03 40 00.4	-0.5
LCY	Lacayo	1.92	337	*e*P	Pn	03 40 00.6	-0.4
PACA	Pacayal	1.97	336	*e*P	Pn	03 40 01.6	-0.2
PACA				*e*S	Sn	03 40 23.6	-1.7
PACA	Pacayal	1.97	336	S	Sn	03 40 24.8	-0.6
PACA	Pacayal	1.97	336	P	Pn	03 40 01.3	-0.5
BOAB	BOACO BROADBAN	1.97	66		Pn	03 40 00.9	-0.7
BOAB	BOACO BROADBAN	1.97	66	S	Sn	03 40 17.8	-7.4
BOAB	BOACO BROADBAN	1.97	66	⇑P	Pn	03 40 01.0	-0.7
CARN	Rivas	2.01	103	⇓P	Pn	03 40 02.4	+0.3
MATN	Matagalpa	2.01	51	S	Sn	03 40 16.0	-10
MATN	Matagalpa	2.01	51	⇑P	Pn	03 40 01.2	-1.0
TECA	Tecapa	2.07	332	*e*P	Pn	03 40 02.5	-0.7
ACON	Acoyapa	2.31	82		Pn	03 40 07.4	+1.1
ACON	Acoyapa	2.31	82	P	Pn	03 40 05.7	-0.6
ACON	Acoyapa	2.31	82	S	Sn	03 40 28.6	-4.9
RCVN	Varillal2	2.31	34	P	Pn	03 40 06.8	+0.4
RCPN	Sur Rio San Ju	2.32	36	⇑P	Pn	03 40 06.7	+0.1
UESV	Universidad de	2.33	328	P	Pn	03 40 06.6	0.0
UESV	Universidad de	2.33	328	S	Sn	03 40 35.0	+1.0
TGUH	Tegucigalpa,Un	2.40	6		Pn	03 40 08.0	+0.3
TGUH	Tegucigalpa,Un	2.40	6	⇑P	Pn	03 40 08.1	+0.4
LFRS	El Faro	2.48	323	*e*P	Pn	03 40 08.0	-0.6
PAVA	Las Pavas	2.48	326	*e*P	Pn	03 40 09.3	+0.7
PAVA	Las Pavas	2.48	326	P	Pn	03 40 09.9	+1.2
PAVA	Las Pavas	2.48	326	S	Sn	03 40 38.5	+0.8
LOMA	Loma Larga	2.56	321	P	Pn	03 40 09.4	-0.4
LOMA	Loma Larga	2.56	321	S	Sn	03 40 41.3	+1.5
CMARA	Lajas Hojancha	2.62	128	P	Pn	03 40 13.6	+3.1
CMARA	Lajas Hojancha	2.62	128	S	Sn	03 40 37.0	-4.2
INDI	Punta indio, G	2.66	132	S	Sn	03 40 37.8	-4.2
PIC2	El Picacho	2.69	321	*e*P	Pn	03 40 12.2	+0.5
PMON	Piamonte	2.70	320	*e*P	Pn	03 40 11.9	+0.2
PMON	Piamonte	2.70	320	P	Pn	03 40 11.9	+0.2
PMON	Piamonte	2.70	320	S	Sn	03 40 43.6	+0.4
JAYA	Jayaque - finc	2.75	317	*e*P	Pn	03 40 11.5	-0.9
JAYA				*e*S	Sn	03 40 41.9	-2.5
JAYA				IAML		03 40 48.0	
	comp=Z,157nm,0.2s						
JAYA	Jayaque - finc	2.75	317	S	Sn	03 40 43.1	-1.3
JAYA	Jayaque - finc	2.75	317	P	Pn	03 40 12.7	+0.3
JTS	Las Juntas de	2.85	118		Pn	03 40 15.1	+1.3
JTS	Las Juntas de	2.85	118	Pn	Pn	03 40 13.6	-0.2
	baz=325,slow=22						
JTS				Sn	Sn	03 40 46.8	-0.1
	comp=Z,9.5nm,0.3s,baz=168,slow=24,SNR=4.4						
CEVE	Cerro Verde	2.99	317	*e*P	Pn	03 40 16.7	+0.9
CEVE				IAML		03 40 56.8	
	comp=Z,295nm,0.4s						
CEVE	Cerro Verde	2.99	317	S	Sn	03 40 50.0	-0.5
SNJE	San Jose	3.00	317	*e*P	Pn	03 40 15.9	-0.1
SNJE				*e*S	Sn	03 40 49.0	-1.8
NUBE	Las Nubes	3.15	316	*e*P	Pn	03 40 17.3	-0.6
NUBE	Las Nubes	3.15	316	P	Pn	03 40 17.9	0.0
NUBE	Las Nubes	3.15	316	S	Sn	03 40 52.7	-1.6
ESPN	Las Esperanzas	3.19	80	Pn	Pn	03 40 19.6	+1.3
MTO3	Montecristo	3.27	327	*e*P	Pn	03 40 20.4	+0.7
MTO3	Montecristo	3.27	327	P	Pn	03 40 19.5	-0.2
LCR2	La Lucha 2	3.94	118		Pn	03 40 30.4	+1.6
833A	Chaparral WMA,	19.97	328	P	Pn	03 44 01.1	-0.4
833A				IAmb	IAmb	03 44 01.6	
	comp=Z,15nm,0.8s						
ATAH	Atahualpa	20.75	154	LR	LR	03 50 03.0	
	comp=Z,44nm,21.2s,baz=16,slow=30						
DRIO	Del Rio	21.49	327		P	03 44 16.9	+0.9
GOGA	Godfrey	21.98	9	P	P	03 44 20.7	-0.5
GOGA				IAmb	IAmb	03 44 24.4	
	comp=Z,8.7nm,0.8s						
TX31	Lajitas Ar. Si	23.16	322		P	03 44 34.9	+1.1
TXAR	Lajitas Array	23.16	322		P	03 44 35.2	+1.5
TXAR	Lajitas Array	23.16	322	P	P	03 44 34.4	+0.6
	comp=Z,1.6nm,0.6s,baz=136,slow=10.0,SNR=27						
	comp=Z,1.6nm,0.6s						
MIAR	Mount Ida	23.45	347		P	03 44 37.2	+0.7
CPCT	Cooper Cave	23.85	6	P	P	03 44 40.3	+0.1
CPCT				IAmb	IAmb	03 44 42.5	
	comp=Z,5.8nm,0.8s						
MNHN	Monahans	24.14	327	P	P	03 44 44.5	+1.5
CLTN	Cedars of Leba	24.36	2	P	P	03 44 45.3	+0.4
CLTN				IAmb	IAmb	03 44 46.7	
	comp=Z,3.8nm,0.7s						
FCAR	Ozark Folk Cen	24.49	351	P	P	03 44 46.3	+0.2
FCAR				IAmb	IAmb	03 44 46.9	
	comp=Z,4.4nm,0.7s						
LCAR	Lake Charles	24.53	353		P	03 44 46.3	-0.2
LCAR				IAmb	IAmb	03 44 46.8	
	comp=Z,5.1nm,0.6s						
PBMO	Poplar Bluff	25.16	354	P	P	03 44 52.7	+0.6
PBMO				IAmb	IAmb	03 44 53.6	
	comp=Z,3.8nm,0.7s						
WMOK	Wichita Mounta	25.17	338	P	P	03 44 52.9	+0.6
T47A	Sharon Grove	25.23	1		P	03 44 53.1	+0.3
T47A				IAmb	IAmb	03 44 53.5	
	comp=Z,7.7nm,0.7s						
TUL3	Leonard	25.29	344	P	P	03 44 54.3	+0.9
T42A	Van Buren	25.48	353	P	P	03 44 55.0	0.0
MSTX	Muleshoe	26.23	330		P	03 45 02.8	+0.8
MSTX				IAmb	IAmb	03 45 14.0	
	comp=Z,4.7nm,0.8s						
Q51A	Peebles	27.52	7	P	P	03 45 13.3	-0.2
PV12	Saucer Basin,	32.66	328	P	P	03 46 00.3	+1.1
PV12				IAmb	IAmb	03 46 14.6	
	comp=Z,5.0nm,1.0s						
PV18	Skein Mesa, Pa	32.66	328	P	P	03 45 59.9	+0.7
PV18				IAmb	IAmb	03 46 07.3	
	comp=Z,3.2nm,0.7s						
SPMN	Marine on St.	33.76	353	P	P	03 46 07.1	-1.4
F33A	5 Mile Ranch,	34.88	349		P	03 46 16.6	-1.6
PDAR	Pinedale Array	36.45	332	P	P	03 46 32.0	+0.1
	comp=Z,0.3nm,0.5s,baz=119,slow=7.5,SNR=3.0						
	comp=Z,0.3nm,0.5s						
TBO	Thunder Bay	36.92	358		P	03 46 33.8	-1.8
SIV	San Ignacio	37.93	136	P	P	03 46 47.3	+2.7
	comp=Z,4.1nm,0.7s,baz=319,slow=10,SNR=3.9						
	comp=Z,4.1nm,0.7s						
EPLO	Experimental L	38.26	353	P	P	03 46 45.6	-1.3
EPLO				IAmb	IAmb	03 46 46.0	
	comp=Z,3.9nm,0.7s						
LAO	LASA Array	38.34	339	P	P	03 46 49.1	+1.3
ULM	Lac du Bonnet	39.10	351	P	P	03 46 51.4	-2.5
	comp=Z,1.9nm,0.7s,baz=192,slow=6.2,SNR=4.0						
	comp=Z,1.9nm,0.7s						
SCHQ	Schefferville	46.06	16	P	P	03 47 48.6	-1.8
	comp=Z,1.6nm,0.5s,baz=214,slow=6.6,SNR=7.8						
	comp=Z,1.6nm,0.5s						
BDFB	Brasilia	47.58	124	P	P	03 48 02.7	-0.3
	comp=Z,1.8nm,0.6s,baz=302,slow=13,SNR=5.1						
	comp=Z,1.8nm,0.6s						
ILAR	Eielson Array	66.72	336	P	P	03 50 17.9	+0.5
	comp=Z,0.1nm,0.5s,baz=117,slow=6.8,SNR=2.2						
	comp=Z,0.1nm,0.5s						
BORG	Borgarnes	69.46	25	LR	LR	04 20 22.5	
	comp=Z,12nm,18.6s,baz=270,slow=36						
CMAR	Chiang Mai Arr	149.41	348	PKPbc	PKiKP	03 59 17.9	+0.3
	comp=Z,1.5nm,0.3s,baz=0.2,slow=3.9,SNR=7.6						

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*IDC **20** 03:41:43.7±0.8, 18°.11S×66°.96W, h267^{km}±9^{km}, mb3.5/3, mbtmp4.0/10, Error ellipse: s-maj=22.6km s-min=15.4km az=47.0*

*NEIC **20** 03:41:43.5±1.9, 18°.15S±0°.07×66°.96W±0°.07, h273^{km}±6^{km}, mb4.1/7, Error ellipse: s-maj=12.7km s-min=6.4km az=138.0*

*SCB **20** 03:41:44.3±1.3, 18°.22S×67°.10W, h279^{km}±19^{km}, ML3.9/2, MW3.5, Error ellipse: s-maj=9.3km s-min=6.5km az=1.0*

*VAO **20** 03:41:45.7±0.9, 17°.90S×66°.88W, h275^{km}±8^{km}, mb4.1*

ISC 20 03:41:43.9±0.5**, 18°.14S**±0°.05×**67°.06W**±0°.06**, h280**^{km}**, n75,** σ**1^{s}09**/79**, mb3.9**/5**, Central Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEO	Opoqueri	0.89	242	Pg	Pn	03 42 22.8	+0.6
BBOJ	La Paz, Jacaqu	1.58	317	Pg	Pn	03 42 27.5	+1.1
SOEJ	Jacaque	1.58	317	Pg	Pn	03 42 27.5	+1.1
BBOE	La Paz, Chanca	1.59	326	Pg	Pn	03 42 27.6	+1.1
BBOD	La Paz, Gloria	2.10	315	Pg	Pn	03 42 31.5	+1.1
LPAZ	La Paz	2.11	331		Pn	03 42 30.7	+0.1
LPAZ	La Paz	2.11	331	P	Pn	03 42 30.9	+0.4
	36nm,0.3s,baz=94,slow=1.0,SNR=599						
LPAZ				S	S	03 43 05.9	-1.7
	127nm,0.6s,baz=22,slow=24,SNR=36						
LPAZ	La Paz	2.11	331	Pg	Pn	03 42 31.0	+0.4
LPAZ	La Paz	2.11	331	*e*P	Pn	03 42 31.0	+0.4
BBOB	La Paz, Bander	2.24	333	Pg	Pn	03 42 32.1	+0.5
PB16	IPOC Station P	2.33	265		Pn	03 42 32.8	+0.4
PB16	IPOC Station P	2.33	265	Pg	Pn	03 42 33.6	+1.1
PB18	Visviri	2.37	283		Pn	03 42 33.1	+0.4
GO01	Chusmiza	2.52	233		Pn	03 42 34.7	+0.6
GO01	Chusmiza	2.52	233	Pg	Pn	03 42 34.6	+0.5
PB08	IPOC Station P	2.80	225		Pn	03 42 37.4	+0.7
PB08	IPOC Station P	2.80	225	Pg	Pn	03 42 37.2	+0.5
PB11	IPOC Station P	2.93	236		Pn	03 42 37.8	0.0
PB11	IPOC Station P	2.93	236	Pg	Pn	03 42 37.9	+0.1
PB11				Sg	S	03 43 18.7	-2.0
PB11				IAML		03 43 20.3	
	156nm,0.3s						
MOCB	Mochara	3.37	157	Pg	Pn	03 42 43.2	+0.6
TA02	Huaiquique	3.59	233	Pn	Pn	03 42 43.8	-0.7
PB01	IPOC Station P	3.68	218		Pn	03 42 45.4	-0.2
PB01	IPOC Station P	3.68	218	Pg	Pn	03 42 45.6	0.0
PB01				Sg	S	03 43 31.2	-3.7
PB01				IAML		03 43 35.3	
	151nm,0.4s						
TA01	Diego Aracena	3.80	230	Pn	Pn	03 42 46.8	0.0
PATCX	Punta Patache	3.95	227	Pn	Pn	03 42 48.0	-0.6
PB09	IPOC Station P	4.17	209		Pn	03 42 51.9	+0.7
PB09	IPOC Station P	4.17	209	Pg	Pn	03 42 52.1	+0.9
YJA	Yavi	4.27	160	Pg	Pn	03 42 53.0	+0.4
PB03	IPOC Station P	4.63	213		Pn	03 42 56.5	-0.1
AF01	San Pedro de A	4.90	192		Pn	03 43 00.6	+0.9
AF01	San Pedro de A	4.90	192	Pg	Pn	03 43 00.4	+0.7
PB06	IPOC Station P	5.11	207		Pn	03 43 02.1	0.0
PB05	IPOC Station P	5.53	212		Pn	03 43 06.7	-0.4
SIV	San Ignacio	6.12	70	P	Pn	03 43 12.3	-2.0
	9.4nm,0.6s,baz=268,slow=8.7,SNR=58						
BBSD	Serra de San D	6.23	82	*e*P	Pn	03 43 13.5	-2.0
PB10	IPOC Station P	6.26	211		Pn	03 43 15.5	-0.4
PB14	IPOC Station P	7.16	205		Pn	03 43 26.1	-1.2
GO02	Mina Guanaco	7.37	198		Pn	03 43 28.8	-1.0
PTLB	Pontes e Lacer	8.05	72		Pn	03 43 36.7	-1.3
PTLB	Pontes e Lacer	8.05	72	*e*P	Pn	03 43 36.5	-1.5
AC01	Pan de Azucar	8.61	202		Pn	03 43 43.4	-1.5
AC02	Maricunga	8.86	192		Pn	03 43 47.7	-0.8
AC06	Mina Casimiro	9.66	198		Pn	03 43 57.4	-0.5
GO03	Copiapo	9.85	197	Pn	Pn	03 43 58.8	-1.5
AC04	Llanos de Chal	10.67	199	Pn	Pn	03 44 08.4	-2.1
AQDB	Aquidauana	10.98	104	*e*P	Pn	03 44 13.7	-0.6
NNA	Nana	11.25	302	P	Pn	03 44 19.2	+1.4
	7.6nm,0.3s,baz=134,slow=10,SNR=7.2						
NNA				S	S	03 46 21.8	-1.9
	6.9nm,0.4s,baz=225,slow=13,SNR=2.7						
CZSB	Cruzeiro do Su	11.72	331	P	Pn	03 44 22.6	-1.0
CZSB	Cruzeiro do Su	11.72	331	*e*P	Pn	03 44 22.8	-0.8
CO01	Juntas del Tor	12.10	193	Pn	Pn	03 44 27.9	-0.4
CPUP	Villa Florida	12.14	134	P	Pn	03 44 27.6	-1.0
	0.4nm,0.6s,baz=172,slow=10,SNR=3.6						
GO04	Tololo Observa	12.45	195	Pn	Pn	03 44 31.6	-0.9
RPRD	Ribas do Rio P	12.83	103	*e*P	Pn	03 44 36.2	-0.9
CO03	El Pedregal	13.06	194	P	Pn	03 44 39.7	-0.1
CFA	Coronel Fontan	13.45	184	P	Pn	03 44 44.5	+0.1
	4.1nm,0.4s,baz=58,slow=17,SNR=40						
CFA				S	S	03 47 05.7	-7.6
	1.2nm,0.4s,baz=289,slow=23,SNR=3.0						
TBTG	Tabatinga, AM	14.15	348	*e*P	P	03 44 52.7	-0.1
TEFE	Tefe	14.74	10	*e*P	P	03 44 59.2	-0.1
VA03	San Esteban	14.89	192	P	P	03 45 01.8	+0.9
ATAH	Atahualpa	15.54	313	P	P	03 45 10.3	+1.7
	5.4nm,0.6s,baz=177,slow=21,SNR=4.6						
BO02	Sierra Bellavi	16.91	191	P	P	03 45 22.7	-0.3
BO02				IAmb	IAmb	03 45 33.4	
	comp=Z,7.3nm,0.8s						
BDFB	Brasilia	18.40	85	P	P	03 45 39.5	+0.3
	comp=Z,0.9nm,0.4s,baz=277,slow=8.5,SNR=3.1						
COHC	Cochancay	19.64	321	P	P	03 45 54.1	+1.7
SNAA	Sanae	64.88	162	P	P	03 51 54.3	+1.1
SNAA				IAmb	IAmb	03 52 05.6	
	comp=Z,6.2nm,1.4s						
SNAA	Sanae	64.88	162	P	P	03 51 54.0	+0.8
	comp=Z,0.8nm,0.6s,baz=233,slow=7.1,SNR=6.9						
	comp=Z,0.8nm,0.6s						
D62A	Allapoint, All	64.94	359	P	P	03 51 53.6	-0.1
D62A				IAmb	IAmb	03 51 58.6	
	comp=Z,6.8nm,1.3s						
BATG	Bathurst New B	65.12	1	P	P	03 51 54.0	-0.9
QSPA	South Pole Qui	72.03	180	P	P	03 52 39.2	+1.8
QSPA				IAmb	IAmb	03 53 10.1	
	comp=Z,3.8nm,1.3s						
QSPA	South Pole Qui	72.03	180	P	P	03 52 39.0	+1.6
	comp=Z,1.6nm,0.6s,baz=137,slow=1.4,SNR=13						
	comp=Z,1.6nm,0.6s						
PDAR	Pinedale Array	72.13	328	P	P	03 52 38.6	+0.2
TORD	Torodi Ar. Bea	74.59	70	P	P	03 52 51.4	-1.6
TORD				IAmb	IAmb	03 52 51.4	
	comp=Z,3.2nm,1.4s						
YKA	Yellowknife Ar	88.63	340	P	P	03 54 05.8	+0.9
	comp=Z,0.6nm,0.6s,baz=127,slow=3.9,SNR=13						
	comp=Z,0.6nm,0.6s						
ABKAR	Akbulak array	127.50	41	PKPdf	PKPdf	04 00 15.9	+0.4
ASAR	Alice Springs	133.68	207	PKP	PKPdf	04 00 29.0	+0.9
	comp=Z,0.5nm,0.5s,baz=126,slow=1.9,SNR=5.0						
WRA	Warramunga Arr	136.71	210	PKP	PKPdf	04 00 35.2	+1.3
	comp=Z,0.7nm,0.4s,baz=151,slow=1.6,SNR=13						
SONM	Songino Array	149.91	9	PKPbc	PKPbc	04 01 01.9	+0.7
	comp=Z,2.1nm,0.7s,baz=336,slow=1.6,SNR=11						

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*IDC **20** 04:00:18.4±3.4, 55°.56N×86°.14E, h0^{km}, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=27.8km s-min=25.5km az=23.0*

ASRS 20 04:00:15.0±0.7**, 55°.60N**×**86°.16E, h0**^{km}**, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.83	206	I	I	04 12 00.0	
	baz=23,slow=323,SNR=8.1						
ZALV	Zalesovo Beam	1.83	206	Pn	Pb	04 00 49.1	-0.2
	5.3nm,0.3s,baz=24,slow=15,SNR=35						
ZALV				Lg	Lg	04 01 14.7	
	3.4nm,0.3s,baz=23,slow=25,SNR=11						
KURBB	Kurchatov Arra	6.78	226	Pn	Pn	04 01 59.2	+3.6
	0.1nm,0.3s,baz=44,slow=13,SNR=4.4						
KURBB				Lg	Lg	04 03 54.1	
	0.1nm,0.3s,baz=40,slow=29,SNR=4.1						
	0.3nm,0.4s						
MKAR	Makanchi Array	9.14	197	Pn	Pn	04 02 30.7	+2.5
	0.1nm,0.3s,baz=18,slow=16,SNR=2.6						
	0.2nm,0.5s						

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*NNC **20** 04:09:57.6±0.8, 44°.39N×79°.81E, h14^{km}±5^{km}, mb3.0, mpv2.9, Error ellipse: s-maj=7.9km s-min=4.8km az=88.0*

*SOME **20** 04:09:59.3, 44°.33N×79°.73E, h15^{km}*

ISC 20 04:09:58.2±1.1**, 44°.37N**±0°.04×**79°.85E**±0°.04**, h19**^{km}±2^{km}**, n13,** σ**0^{s}61**/23**, 2C-4D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	Jarkent	0.06	228	P	Pg	04 10 02.2	+0.3
	200nm,0.1s						
DJR				S	Sg	04 10 04.1	-0.2
	202nm,0.2s						
DJR	Jarkent	0.06	228	*e*P	Pg	04 10 02.1	+0.3
	200nm,0.1s						
DJR				*e*S	Sg	04 10 04.1	-0.2
	202nm,0.2s						
KNOS	Konyrlen	0.48	268	P	Pg	04 10 07.9	-0.3
	23nm,0.1s						
KNOS				S	Sg	04 10 13.8	-1.0
	43nm,0.2s						
KAPS	Kapalarasan	0.98	339	P	Pg	04 10 17.9	+0.6
	26nm,0.1s						
KAPS				S	Sn	04 10 30.9	+0.5
	32nm,0.1s						
KTMS	Ketmen	0.99	159	*e*P	Pn	04 10 17.4	+0.1
KTMS				*e*S	Sb	04 10 30.1	+0.4
BLB	Baldybastay	1.03	255	P	Pb	04 10 17.1	-0.4
	26nm,0.3s						
BLB				S	Sb	04 10 29.6	-1.0
	11nm,0.2s						
PDGK	Podgornoye	1.08	194	⇑P	Pb	04 10 17.8	-0.6
	1.8nm,0.2s						
PDGK				⇓S	Sn	04 10 32.7	-0.3
	22nm,0.5s						
UZB	Uzynbulak	1.37	206	P	Pb	04 10 23.3	0.0
	2.0nm,0.1s						
UZB				S	Sn	04 10 40.2	+0.1
	33nm,0.2s						
ARXS	Arharly	1.47	264	P	Pb	04 10 24.9	0.0
	2.2nm,0.3s						
ARXS				S	Sb	04 10 43.1	-0.1
	8.6nm,0.1s						
SATY	Saty	1.68	219	P	Pb	04 10 29.1	+0.4
	2.4nm,0.1s						
SATY				S	Sb	04 10 50.1	+0.6
	48nm,0.2s						
KTBS	Karatobe	2.38	255	Pg	Pb	04 10 42.1	+1.5
	1.5nm,0.3s						
KTBS				Lg	Lg	04 11 12.4	
	6.1nm,0.3s						
MAKZ	Makanchi	2.85	31	⇓Pg	Pb	04 10 48.5	-0.1
	0.3nm,0.5s						
MAKZ				⇓Lg	Lg	04 11 25.4	
	0.7nm,0.5s						
MK31	Makanchi Array	2.96	34	⇓Pg	Pb	04 10 49.7	-0.7
	0.2nm,0.3s,baz=211,slow=16,SNR=3.1						
MK31				⇑Lg	Lg	04 11 27.2	
	0.4nm,0.3s,baz=214,slow=28,SNR=4.8						

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*IDC **20** 04:11:28.9±1.6, 12°.29N×87°.82W, h0^{km}, mb3.7/5, mbtmp3.8/5, MS3.2/1, Error ellipse: s-maj=67.6km s-min=20.8km az=62.0*

*NEIC **20** 04:11:31.2±1.8, 11°.99N±0°.08×88°.31W±0°.04, h10^{km}±2^{km}, mb4.2/23, Error ellipse: s-maj=15.6km s-min=3.2km az=204.0*

*SNET **20** 04:11:32.2±0.9, 12°.10N×88°.43W, h10^{km}±15^{km}, ML3.3*

*CATAC **20** 04:11:33.3±0.7, 12°N±4°×8°8W±°, h29^{km}±7^{km}, M3.9/12, MLv3.9/12, Error ellipse: s-maj=9.2km s-min=2.7km az=28.9, confirmed*

*GCG **20** 04:11:34.9±0.3, 12°.16N×88°.48W, h79^{km}±31^{km}, MD4.3*

ISC 20 04:11:33.9±1.4**, 12°.03N**±0°.07×**88°.39W**±0°.05**, h46**^{km}±15^{km}**, n90,** σ**0^{s}99**/100**, mb4.1**/16**, 14C, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC

POTN	Potosi Cosigui	1.30	42	⇑P	Pn	04 11 54.5	-1.1
POTN				S	Sn	04 12 10.5	-1.4
CNCH	Conchagua	1.36	24	⇑*e*P	Pn	04 11 55.7	-0.9
CNCH				*e*S	Sn	04 12 13.9	+0.5
CNCH	Conchagua	1.36	24	S	Sn	04 12 12.8	-0.7
CNCH	Conchagua	1.36	24	⇑P	Pn	04 11 55.6	-0.9
LCND	La Caada	1.37	21	*e*P	Pn	04 11 55.5	-1.0
LCND				IAML		04 12 23.5	
	comp=Z,461nm,0.3s						
LCND	La Caada	1.37	21	⇑P	Pn	04 11 55.6	-1.0
BLLM	Bellamira	1.42	6	*e*P	Pn	04 11 55.7	-1.6
PACA	Pacayal	1.44	3	*e*P	Pn	04 11 57.2	-0.4
PACA				*e*S	Sn	04 12 16.6	+1.2
PACA	Pacayal	1.44	3	P	Pn	04 11 57.3	-0.4
PACA	Pacayal	1.44	3	S	Sn	04 12 15.5	+0.1
CNRM	Centro Naciona	1.46	8	P	Pn	04 11 57.1	-0.7
CNRM	Centro Naciona	1.46	8	S	Sn	04 12 15.6	-0.1
TECA	Tecapa	1.47	356	*e*P	Pn	04 11 57.3	-0.8
TECA				*e*S	Sn	04 12 16.4	+0.3
CRIN	San Cristobal	1.47	63	Pn	Pn	04 11 57.2	-0.9
CRIN	San Cristobal	1.47	63	P	Pn	04 11 57.9	-0.1
CRIN	San Cristobal	1.47	63	S	Sn	04 12 17.0	+0.8
PKGN	Cerro Pekin	1.52	65	⇑P	Pn	04 11 58.0	-0.7
PKGN				S	Sn	04 12 17.9	+0.5
PQSS	Presa 15 de Se	1.60	354	S	Sn	04 12 18.8	-0.4
HERN	Volcan Telica	1.63	69	Pn	Pn	04 11 59.2	-1.1
UESV	Universidad de	1.65	346	S	Sn	04 12 20.5	0.0
UESV	Universidad de	1.65	346	⇑P	Pn	04 11 60.0	-0.5
POLN	Al Sur del Vol	1.66	68	⇑P	Pn	04 11 59.6	-1.0
CNGA	Al SSO del Vol	1.72	74	P	Pn	04 12 00.5	-0.9
CNGA				S	Sn	04 12 22.9	+0.8
LFRS	El Faro	1.72	338	*e*P	Pn	04 12 00.5	-1.0
CNGN	Cerro Negro	1.72	74		Pn	04 12 00.7	-0.7
CNGN	Cerro Negro	1.72	74	S	Sn	04 12 22.9	+0.6
CNGN	Cerro Negro	1.72	74	⇑P	Pn	04 12 00.7	-0.7
CAHU	Cacacuatique	1.74	6	*e*P	Pn	04 12 02.0	+0.1
PAVA	Las Pavas	1.76	342	*e*P	Pn	04 12 01.5	-0.5
PAVA	Las Pavas	1.76	342	S	Sn	04 12 24.1	+0.8
PAVA	Las Pavas	1.76	342	⇑P	Pn	04 12 01.6	-0.5
COPN	Copaltepe	1.77	85	⇑P	Pn	04 12 01.7	-0.3
LOMA	Loma Larga	1.78	335	*e*P	Pn	04 12 02.0	-0.4
UDBS	Universidad Do	1.84	336	S	Sn	04 12 24.6	-0.5
IGN	Direccin Gen	1.84	336	S	Sn	04 12 25.1	-0.2
MOMN	Momotombo	1.85	78	⇑P	Pn	04 12 02.4	-0.8
MOMN				S	Sn	04 12 25.4	0.0
PMON	Piamonte	1.90	332	*e*P	Pn	04 12 03.4	-0.7
PMON	Piamonte	1.90	332	S	Sn	04 12 25.8	-1.1
PMON	Piamonte	1.90	332	P	Pn	04 12 03.3	-0.7
MOM2	El Cardon	1.91	77	⇑P	Pn	04 12 03.4	-0.6
MOM2				S	Sn	04 12 27.0	+0.2
JAYA	Jayaque - finc	1.92	328	*e*P	Pn	04 12 03.8	-0.6
JAYA	Jayaque - finc	1.92	328	*e*P	Pn	04 12 03.7	-0.6
JAYA				*i* S	Sn	04 12 26.2	-1.2
JAYA	Jayaque - finc	1.92	328	⇑P	Pn	04 12 03.5	-0.8
SAPS	Ciudad Sandino	1.95	86	S	Sn	04 12 28.7	+0.9
SAPS	Ciudad Sandino	1.95	86	P	Pn	04 12 06.1	+1.6
APQ3	Volcan Apoyequ	1.99	83	P	Pn	04 12 06.1	+1.0
APQ3				S	Sn	04 12 28.6	-0.3
CEDA	San Andres	2.02	331	S	Sn	04 12 28.9	-0.7
CEDA	San Andres	2.02	331	P	Pn	04 12 04.5	-1.1
UNAN	Cigeo UNAN	2.08	87	P	Pn	04 12 06.4	+0.1
TISN	Laguna Tiscapa	2.08	87	⇑P	Pn	04 12 06.6	+0.3
SBLS	San Blas	2.17	326	*e*P	Pn	04 12 07.6	-0.2
SNJE	San Jose	2.18	327	*e*P	Pn	04 12 07.7	-0.2
TGUH	Tegucigalpa,Un	2.29	28		Pn	04 12 08.9	-0.5
NUBE	Las Nubes	2.31	324	*e*P	Pn	04 12 09.5	-0.1
NUBE				*i* S	Sn	04 12 36.5	-0.4
MTO3	Montecristo	2.54	338	*e*P	Pn	04 12 13.2	+0.3
MTO3	Montecristo	2.54	338	*e*P	Pn	04 12 13.0	+0.1
ESQI	Esquipulas	2.68	340		Pn	04 12 15.8	+1.0
BOAB	BOACO BROADBAN	2.70	81		Pn	04 12 14.5	-0.3
ACON	Acoyapa	3.15	91	Pn	Pn	04 12 19.7	-1.3
JTS	Las Juntas de	3.79	117	Pn	Pn	04 12 28.9	-0.9
LCR2	La Lucha 2	4.87	117		Pn	04 12 43.5	-1.3
833A	Chaparral WMA,	19.20	329	P	Pn	04 15 56.5	+1.2
833A				IAmb	IAmb	04 15 57.5	
	comp=Z,12nm,0.7s						
HNDO	Hondo	20.15	331	P	Pn	04 16 06.2	-0.3
BAUV	El Baul	20.24	97	P	P	04 16 05.5	+0.1
BAUV				IAmb	IAmb	04 16 37.3	
	comp=Z,12nm,1.1s						
BRDY	Brady	21.53	335		P	04 16 20.5	+1.3
OZNA	Ozona	22.19	330		P	04 16 29.1	+2.7
OZNA				IAmb	IAmb	04 16 30.0	
	comp=Z,5.3nm,0.8s						
TXAR	Lajitas Array	22.34	323	P	P	04 16 30.6	+2.7
TXAR	Lajitas Array	22.34	323	P	P	04 16 30.3	+2.3
	comp=Z,1.0nm,0.7s,baz=145,slow=11,SNR=17						
	comp=Z,1.0nm,0.7s						
TX31	Lajitas Ar. Si	22.34	323		P	04 16 30.7	+2.7
HODGE	Hodges	22.80	13	P	P	04 16 34.1	+1.4
HODGE				IAmb	IAmb	04 16 43.9	
	comp=Z,7.4nm,1.2s						
MIAR	Mount Ida	22.91	349		P	04 16 34.9	+1.0
W50A	Signal Mountai	23.24	6	P	P	04 16 36.5	-0.8
W50A				IAmb	IAmb	04 16 56.4	
	comp=Z,11nm,1.3s						
MNHN	Monahans	23.36	328	P	P	04 16 40.6	+2.2
BG3	Lake Jocassee	23.40	11	P	P	04 16 39.3	+0.6
BG3				IAmb	IAmb	04 16 44.1	
	comp=Z,17nm,1.5s						
APMT	Aspermont	23.77	335	P	P	04 16 42.8	+0.6
APMT				IAmb	IAmb	04 16 43.3	
	comp=Z,5.1nm,1.1s						
U49A	Red Boiling Sp	24.50	5	P	P	04 16 49.0	+0.1
U49A				IAmb	IAmb	04 17 14.6	
	comp=Z,5.7nm,1.2s						
FNO	Franklin	24.53	342	P	P	04 16 50.2	+1.0
OK029	Liberty Lake	25.05	342	P	P	04 16 54.5	+0.6
SMWD	Samnorwood	25.37	337	P	P	04 16 57.2	+0.3
SMWD				IAmb	IAmb	04 16 59.6	
	comp=Z,6.4nm,0.8s						
MSTX	Muleshoe	25.48	331	P	P	04 16 57.4	-0.5
MSTX				IAmb	IAmb	04 17 04.0	
	comp=Z,6.1nm,1.0s						
AMTX	Amarillo	25.76	334	P	P	04 17 01.1	+0.7
AMTX				IAmb	IAmb	04 17 03.8	
	comp=Z,4.2nm,0.7s						
R32A	Long Quarter,	27.85	342	P	P	04 17 19.4	+0.2
R32A				IAmb	IAmb	04 17 28.6	
	comp=Z,5.3nm,0.7s						
M44A	Midewin, Midew	29.25	1	P	P	04 17 33.4	+1.8
SPMN	Marine on St.	33.30	354		P	04 18 07.3	+0.2
F33A	5 Mile Ranch,	34.37	350		P	04 18 15.5	-0.9
LPAZ	La Paz	34.54	144	P	P	04 18 17.6	-1.2
	comp=Z,0.3nm,0.4s,baz=342,slow=6.4,SNR=1.7						
	comp=Z,0.3nm,0.4s						
EPLO	Experimental L	37.80	354	P	P	04 18 45.3	-0.4
EPLO				IAmb	IAmb	04 18 45.7	
	comp=Z,5.9nm,0.6s						
ULM	Lac du Bonnet	38.61	352	P	P	04 18 51.7	-0.7
	comp=Z,2.5nm,0.5s,baz=168,slow=8.9,SNR=7.1						
	comp=Z,2.5nm,0.5s						
SIV	San Ignacio	38.80	135	P	P	04 18 55.1	+0.5
	comp=Z,0.8nm,0.7s,baz=331,slow=13,SNR=5.7						
	comp=Z,0.8nm,0.7s						
SCHQ	Schefferville	45.95	17	P	P	04 19 50.0	-2.1
	comp=Z,0.9nm,0.5s,baz=225,slow=13,SNR=3.3						
SCHQ				LR	LR	04 41 00.4	
	comp=Z,26nm,18.6s,baz=198,slow=39						
	comp=Z,0.9nm,0.5s						

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*IDC **20** 04:47:23.3±0.8, 49°.46S×125°.81E, h0^{km}, mb4.2/7, mbtmp4.2/8, ML2.5/1, MS3.5/13, Error ellipse: s-maj=43.9km s-min=16.3km az=96.0*

*NEIC **20** 04:47:24.3±1.0, 49°.39S±0°.03×125°.5E±0°.4, h10^{km}±1^{km}, mb4.5/12, Error ellipse: s-maj=45.7km s-min=5.3km az=92.0*

ISC 20 04:47:24.2±0.6, **49°.42S**±0°.09×**125°.6E**±0°.2, **h10**^{km}, **n41**, σ**0^{s}.89**/26, **mb4.4**/14, **MS3.5**/13, **4C, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W1	Cape Leeuwin H	16.77	326	T	T	05 08 30.7	
	baz=152,slow=74,SNR=98						
H01W2	Cape Leeuwin H	16.78	326	T	T	05 08 26.5	
	baz=152,slow=74,SNR=118						
H01W3	Cape Leeuwin H	16.79	326	T	T	05 08 31.7	
	baz=152,slow=74,SNR=83						
NWAO	Narrogin (SRO)	17.61	336	P	P	04 51 30.5	-0.2
	0.8nm,0.3s,baz=139,slow=5.3,SNR=5.7						
	5.2nm,0.7s						
STKA	Stephens Creek	21.24	40	P	P	04 52 10.2	-0.1
	2.7nm,0.8s,baz=211,slow=12,SNR=4.0						
STKA				LR	LR	04 58 47.5	
	comp=Z,110nm,21.3s,baz=206,slow=32						
	2.7nm,0.8s						
ASAR	Alice Springs	26.52	17	P	P	04 53 01.8	-0.2
ASAR	Alice Springs	26.52	17	P	P	04 53 02.3	+0.3
	6.2nm,0.9s,baz=191,slow=9.2,SNR=25						
ASAR				LR	LR	05 02 16.7	
	comp=Z,122nm,21.7s,baz=252,slow=34						
	6.2nm,0.9s						
AS31	Alice Springs	26.52	17	P	P	04 53 01.3	-0.7
PSA00	Pilbara Seismi	28.16	349	P	P	04 53 08.5	-8.1
PSA00				IAmb	IAmb	04 53 11.5	
	comp=Z,11nm,1.1s						
WRA	Warramunga Arr	30.23	17	P	P	04 53 34.4	-0.7
	comp=Z,2.2nm,0.9s,baz=198,slow=8.3,SNR=7.2						
WRA				LR	LR	05 04 52.9	
	comp=Z,138nm,21.4s,baz=58,slow=35						
	comp=Z,2.2nm,0.9s						
WB0	Warramunga Arr	30.41	17	P	P	04 53 36.4	-0.3
WB0				IAmb	IAmb	04 53 43.6	
	comp=Z,7.2nm,1.1s						
VNDA	Vanda	31.39	166	P	P	04 53 44.6	-0.1
VNDA	Vanda	31.39	166	P	P	04 53 44.8	+0.1
	comp=Z,2.1nm,0.8s,baz=310,slow=8.1,SNR=12						
VNDA				LR	LR	05 05 29.8	
	comp=Z,106nm,18.8s,baz=332,slow=35						
	comp=Z,2.1nm,0.8s						
SBA	Scott Base	32.41	165	P	P	04 53 54.1	+0.4
MAW	Mawson	35.49	216	LR	LR	05 06 11.1	
	comp=Z,47nm,18.2s,baz=89,slow=32						
QSPA	South Pole Qui	40.71	180	P	P	04 55 04.8	+0.1
QSPA				IAmb	IAmb	04 55 13.4	
	comp=Z,9.2nm,1.1s						
QSPA	South Pole Qui	40.71	180	P	P	04 55 04.6	-0.1
	comp=Z,2.9nm,1.0s,baz=15,slow=3.0,SNR=5.7						
QSPA				LR	LR	05 10 56.3	
	comp=Z,114nm,18.9s,baz=342,slow=35						
	comp=Z,2.9nm,1.0s						
PMG	Port Moresby	43.76	32	P	P	04 55 30.2	+0.3
KAPI	Kappang	44.52	352	LR	LR	05 14 09.1	
	comp=Z,30nm,18.4s,baz=184,slow=36						
LEM	Lembang	45.06	334	LR	LR	05 13 41.7	
	comp=Z,90nm,21.6s,baz=186,slow=35						
HNR	Honiara	49.07	47	LR	LR	05 15 59.8	
	comp=Z,42nm,18.1s,baz=70,slow=35						
BELA	Belgrano 2	52.39	185	P	P	04 56 35.5	-0.4
BELA				IAmb	IAmb	04 56 44.0	
	comp=Z,5.3nm,0.9s						
SNAA	Sanae	53.84	198	⇑P	P	04 56 47.0	+0.2
	comp=Z,103nm,1.0s						
SNAA	Sanae	53.84	198	P	P	04 56 47.2	+0.4
SNAA				IAmb	IAmb	04 56 47.9	
	comp=Z,7.0nm,1.0s						
SNAA	Sanae	53.84	198	P	P	04 56 46.9	+0.1
	comp=Z,4.2nm,0.9s,baz=145,slow=9.7,SNR=11						
SNAA				LR	LR	05 18 45.4	
	comp=Z,127nm,19.3s,baz=130,slow=35						
	comp=Z,4.2nm,0.9s						
VNA2	Neumayer--Watz	55.33	197	⇑P	P	04 56 57.8	+0.3
	comp=Z,2.5nm,0.6s,baz=147,slow=8.2						
VNA3	Neumayer Olymp	55.49	196	⇑P	P	04 56 58.7	0.0
	comp=Z,2.9nm,0.8s						
VNA1	Neumayer--Stat	55.72	197	⇑P	P	04 57 00.0	-0.2
	comp=Z,6.7nm,1.0s						
DAV	Davao City (W)	56.25	360	LR	LR	05 20 52.4	
	comp=Z,25nm,20.0s,baz=181,slow=36						
H08S2	Diego Garcia H	60.73	295	T	T	06 03 20.3	
	baz=144,slow=76,SNR=3.7						
H08S1	Diego Carcia H	60.74	295	T	T	06 03 21.3	
	baz=144,slow=76,SNR=4.0						
H08S3	Diego Garcia H	60.75	295	T	T	06 03 21.3	
	baz=144,slow=76,SNR=4.8						
PALK	Pallekele	68.66	311	LR	LR	05 21 32.1	
	comp=Z,30nm,21.9s,baz=226,slow=30						
CM31	Chiang Mai Arr	71.59	333	P	P	04 58 47.4	+1.9
CM31				IAmb	IAmb	04 58 50.1	
	comp=Z,7.1nm,1.1s						
CMAR	Chiang Mai Arr	71.59	333	P	P	04 58 47.5	+1.9
CMAR	Chiang Mai Arr	71.59	333	P	P	04 58 47.6	+2.1
	comp=Z,1.1nm,0.3s,baz=181,slow=5.2,SNR=6.3						
CMAR				LR	LR	05 31 24.0	
	comp=Z,20nm,18.6s,baz=190,slow=37						
	comp=Z,1.1nm,0.3s						
LSA	Lhasa	84.53	330	P	P	04 59 55.6	-2.1
KBL	Kabul	97.48	316	P	P	05 00 57.8	-0.4
H10S2	ASCENSION HYDR	112.25	223	T	T	07 08 50.7	
	baz=69,slow=74,SNR=5.0						
H10S3	ASCENSION HYDR	112.27	223	T	T	07 08 49.8	
	baz=151,slow=74,SNR=5.4						
YKA	Yellowknife Ar	145.23	45	PKPbc	PKPdf	05 07 01.3	+0.5
	comp=Z,1.4nm,0.8s,baz=279,slow=3.7,SNR=15						

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*GCG **20** 04:48:45.0±0.8, 14°.22N×91°.40W, h82^{km}±7^{km}, MD3.7, ML4.0*

*CATAC **20** 04:48:46.2±0.6, 14°N±5°×9°1W±°, h38^{km}±7^{km}, M3.5/12, MLv3.5/12, Error ellipse: s-maj=13.4km s-min=3.6km az=35.9, confirmed*

*SNET **20** 04:48:47.9±0.9, 14°.33N×91°.14W, h17^{km}±18^{km}, ML3.5*

ISC 20 04:48:46.7±1.7, **14°.1N**±0°.1×**91°.37W**±0°.07, **h70**^{km}±10^{km}, **n35**, σ**1^{s}.54**/47, **Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG0	El Palmar, Qui	0.29	4	*i* P	Pn	04 48 60.0	+1.8
STG0				*i* S	Sn	04 49 10.7	+4.2
STG0				IAML		04 49 14.3	
	comp=E,15µm,0.2s						
STG8	El Palmar, Qui	0.31	2	*i* P	Pn	04 49 00.5	+2.2
STG8				IAML		04 49 12.8	
	comp=E,9µm,0.1s						
RTAL	Retalhuleu	0.50	320	*e*P	Pn	04 48 58.5	-1.1
RTAL				*e*S	Sn	04 49 07.4	-1.7
RTAL	Retalhuleu	0.50	320	P	Pn	04 48 58.7	-0.9
RTAL	Retalhuleu	0.50	320	S	Sn	04 49 08.3	-0.7
ESSG	Sabana Grande	0.57	64	*i* P	Pn	04 49 00.3	-0.1
ESSG				*i* S	Sn	04 49 11.4	+1.0
ESSG				IAML		04 49 13.4	
	comp=N,3µm,0.1s						
FG8	Yepocapa, Chim	0.79	81	*i* P	Pn	04 48 59.9	-2.9
FG8				*i* S	Sn	04 49 10.7	-4.0
FG16	Alotenango, Sa	0.84	81	*i* P	Pn	04 49 00.7	-2.7
FG16				*i* S	Sn	04 49 12.6	-3.3
FG16				IAML		04 49 16.3	
	comp=E,20µm,0.2s						
SMCA	Catarina	0.99	316	*i* P	Pn	04 49 03.9	-1.3
SMCA				*i* S	Sn	04 49 17.0	-1.9
SMCA				IAML		04 49 20.0	
	comp=N,753nm,0.2s						
HUEH	Huehuetenango	1.18	354	P	Pn	04 49 07.8	0.0
NUBE	Las Nubes	1.56	98	*e*P	Pn	04 49 12.6	0.0
NUBE				*e*S	Sn	04 49 31.5	-0.6
NUBE	Las Nubes	1.56	98	*i* P	Pn	04 49 12.3	-0.3
NUBE				*i* S	Sn	04 49 33.8	+1.7
NUBE	Las Nubes	1.56	98	P	Pn	04 49 12.6	0.0
RTR	El Retiro	1.69	98	*e*P	Pn	04 49 14.1	-0.2
SBLS	San Blas	1.72	100	*e*P	Pn	04 49 15.3	+0.5
CEVE	Cerro Verde	1.72	100	*e*P	Pn	04 49 15.7	+0.9
CEVE				*e*S	Sn	04 49 36.9	+0.8
CEVE				IAML		04 49 41.0	
	comp=Z,505nm,0.3s						
CEVE	Cerro Verde	1.72	100	P	Pn	04 49 15.7	+0.9
CEVE	Cerro Verde	1.72	100	S	Sn	04 49 37.4	+1.3
SNJE	San Jose	1.73	99	*e*P	Pn	04 49 15.1	+0.1
UNIC	Universidad Ca	1.77	95	P	Pn	04 49 15.8	+0.5
JAYA	Jayaque - finc	1.92	104	*e*P	Pn	04 49 17.3	-0.2
JAYA				*e*S	Sn	04 49 40.1	-0.7
JAYA				IAML		04 49 44.0	
	comp=Z,478nm,0.2s						
JAYA	Jayaque - finc	1.92	104	*i* P	Pn	04 49 16.2	-1.3
JAYA				*i* S	Sn	04 49 41.9	+1.1
JAYA	Jayaque - finc	1.92	104	P	Pn	04 49 17.2	-0.2
CEDA	San Andres	1.94	100	P	Pn	04 49 18.1	+0.4
MTO3	Montecristo	1.96	82	*e*P	Pn	04 49 17.5	-0.5
MTO3	Montecristo	1.96	82	*i* P	Pn	04 49 17.6	-0.5
MTO3	Montecristo	1.96	82	P	Pn	04 49 17.5	-0.5
PMON	Piamonte	2.04	102	*e*P	Pn	04 49 19.6	+0.7
PMON				*e*S	Sn	04 49 43.5	0.0
PMON	Piamonte	2.04	102	P	Pn	04 49 19.7	+0.7
PMON	Piamonte	2.04	102	S	Sn	04 49 45.0	+1.5
LOMA	Loma Larga	2.19	103	P	Pn	04 49 21.5	+0.5
LOMA	Loma Larga	2.19	103	S	Sn	04 49 48.8	+1.6
CCIG	Comitan	2.26	341	S	Sn	04 49 50.9	+1.8
CCIG	Comitan	2.26	341	P	Pn	04 49 22.7	+0.6
PAVA	Las Pavas	2.39	100	P	Pn	04 49 24.1	+0.3

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*IDC **20** 05:17:11.0±1.0, 28°.49N×104°.79E, h0^{km}, mb3.8/7, mbtmp3.8/8, Error ellipse: s-maj=75.1km s-min=18.7km az=58.0*

ISC 20 05:17:13.9±1.2, **28°.6N**±0°.2×**104°.9E**±0°.3, **h19**^{km}, **n8**, σ**0^{s}.40**/8, **mb3.8**/7, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	19.27	3	P	Pn	05 21 38.9	+0.4
	0.5nm,0.4s,baz=172,slow=11,SNR=3.9						
MKAR	Makanchi Array	25.38	322	P	P	05 22 40.1	+0.2
	1.8nm,0.7s,baz=126,slow=10,SNR=17						
	1.8nm,0.7s						
ZALV	Zalesovo Beam	29.31	335	P	P	05 23 14.5	-0.5
	0.6nm,0.4s,baz=120,slow=8.5,SNR=2.3						
	0.6nm,0.4s						
KURBB	Kurchatov Arra	29.70	325	P	P	05 23 18.5	0.0
	1.0nm,0.6s,baz=133,slow=9.3,SNR=11						
	1.0nm,0.6s						
AKTO	Aktyubinsk	41.40	315	P	P	05 24 59.3	+0.3
	0.8nm,0.3s,baz=80,slow=7.7,SNR=3.7						
	0.8nm,0.3s						
WRA	Warramunga Arr	55.98	146	P	P	05 26 51.2	-0.1
	0.4nm,0.5s,baz=338,slow=8.1,SNR=7.8						
	0.4nm,0.5s						
ASAR	Alice Springs	58.96	149	P	P	05 27 12.5	+0.2
	0.5nm,0.7s,baz=320,slow=7.2,SNR=3.0						
	0.5nm,0.7s						
FINES	FINESS Array B	60.06	327	P	P	05 27 19.0	-0.4
	0.4nm,0.5s,baz=42,slow=5.6,SNR=3.9						
	0.4nm,0.5s						

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*IDC **20** 05:22:04.9±2.4, 2°.17N×99°.43E, h126^{km}±30^{km}, mb3.4/4, mbtmp3.8/4, MS3.8/1, Error ellipse: s-maj=278.8km s-min=20.2km az=54.0*

*DJA **20** 05:22:05.5±0.5, 2°N±3°×9°9E±°, h123^{km}±7^{km}, M4.0/11, mb4.3/1, MLv3.8/11*

ISC 20 05:22:04.9±1.0, **2°.06N**±0°.08×**99°.1E**±0°.1, **h150**^{km}, **n13**, σ**2^{s}.12**/13, **mb3.6**/4, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	0.76	348	P	Pn	05 22 25.7	-2.2
	24nm,0.3s,baz=356,slow=5.2,SNR=29						
PSI				S	Sn	05 22 41.6	-3.9
	96nm,0.5s,baz=168,slow=17,SNR=41						
MNSI	Mandailing Nat	1.35	158	P	Pn	05 22 32.3	-0.6
GSI	Gunungsitoli	1.68	244	P	Pn	05 22 36.0	-0.4
SNSI	Sinabang, Aceh	2.77	277	P	Pn	05 22 49.0	-0.4
PPI	Padang Panjang	2.82	152	P	Pn	05 22 50.7	+0.6
SISI	Saibi	3.36	180	P	Pn	05 22 54.0	-2.9
MLSI	Meulaboh, Aceh	3.46	309	P	Pn	05 22 57.4	-0.8
BSI	Banda Aceh	5.09	312	P	Pn	05 23 19.4	-0.2
BATI	Baumata	27.34	117	LR	LR	05 40 28.2	
	comp=Z,198nm,18.1s,baz=102,slow=41						
WRA	Warramunga Arr	40.92	124	P	P	05 29 33.2	+0.3
	1.2nm,0.6s,baz=302,slow=9.1,SNR=13						
	1.2nm,0.6s						
MKAR	Makanchi Array	46.90	344	P	P	05 30 22.4	+2.2
	0.5nm,0.4s,baz=152,slow=8.0,SNR=6.6						
	0.5nm,0.4s						
KURBB	Kurchatov Arra	51.42	343	P	P	05 30 56.8	+2.4
	0.2nm,0.3s,baz=156,slow=6.4,SNR=4.7						
	0.2nm,0.3s						
ZALV	Zalesovo Beam	53.04	349	P	P	05 31 08.2	+1.9
	0.9nm,0.4s,baz=156,slow=6.7,SNR=4.1						
	0.9nm,0.4s						

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*MOS **20** 05:24:08.5±0.9, 36°.72N×71°.27E, h192^{km}, mb4.2/5, Error ellipse: s-maj=13.2km s-min=5.5km az=82.4*

*NEIC **20** 05:24:08.8±2.1, 36°.71N±0°.07×71°.25E±0°.06, h183^{km}±12^{km}, mb4.2/10, Error ellipse: s-maj=9.9km s-min=6.6km az=201.0*

*IDC **20** 05:24:10.9±6.1, 36°.92N×71°.21E, h182^{km}±47^{km}, mb3.5/5, mbtmp4.2/11, Error ellipse: s-maj=55.3km s-min=37.4km az=172.0*

*NNC **20** 05:24:13.4±4.5, 37°.16N×71°.09E, h189^{km}±57^{km}, mb3.2, mpv4.0, Error ellipse: s-maj=39.0km s-min=28.4km az=22.0*

ISC 20 05:24:08.9±0.6, **36°.72N**±0°.05×**71°.38E**±0°.04, **h200**^{km}, **n88**, σ**2^{s}.37**/107, **mb4.0**/10, **10C-8D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIMJ	Simiganj	2.70	316		Pn	05 24 54.0	-1.1
SIMJ				Sn	Sn	05 25 27.0	-4.3
DRK	Karamyk	2.77	7		Pn	05 24 56.7	+0.6
DRK				Sn	Sn	05 25 31.4	-1.8
DRK	Karamyk	2.77	7	PN	Pn	05 24 56.7	+0.6
DRK						05 25 31.4	
KBL	Kabul	2.89	222		Pn	05 24 56.5	-1.0
KBL				Sn	Sn	05 25 31.6	-3.8
KBL	Kabul	2.89	222	PN	Pn	05 24 56.5	-1.0
KBL				S	Sn	05 25 31.6	-3.8
BTK	Batken	3.36	353	Pn	Pn	05 25 04.0	+1.2
BTK	Batken	3.36	353	PN	Pn	05 25 04.1	+1.2
NIL	Nilore	3.43	153		Pn	05 25 04.4	+0.7
NIL	Nilore	3.43	153	PN	Pn	05 25 04.4	+0.7
KSH	Kashi	4.57	51	Pn	Pn	05 25 14.4	-3.5
KSH				Sn	Sn	05 26 03.0	-9.3
KSH				smax	smax		
	comp=N,180nm,0.6s						
KSH				smax	smax		
	comp=E,110nm,0.7s						
ARSB	Arslanbob	4.76	15		Pn	05 25 20.1	-0.2
ARSB	Arslanbob	4.76	15	PN	Pn	05 25 20.1	-0.2
JMU	Jammu	4.94	143	*e*P	Pn	05 25 24.1	+1.6
JMU				*e*S	Sn	05 26 16.3	-4.1
THN	Thein Dam	5.58	139	*e*P	Pn	05 25 31.0	+0.3
THN				*e*S	Sn	05 26 33.2	-2.1
THN				IAML		05 26 35.1	
	comp=E,219nm,0.5s						
AML	Almayashu	5.69	18	P	Pn	05 25 32.7	+0.2
	SNR=82						
NRN	Naryn	5.92	36		Pn	05 25 34.7	-0.7
NRN	Naryn	5.92	36	PN	Pn	05 25 34.7	-0.7
UCH	Uchtor	6.01	23	P	Sn	05 26 43.4	-2.6
	SNR=15						
DHRM	DHARAMSHALA	6.03	136	*e*P	Pn	05 25 37.2	+0.4
DHRM				*e*S	Sn	05 26 43.3	-3.0
DHRM				IAML		05 26 45.7	
	comp=E,507nm,0.4s						
EKS2	Erkin-Say	6.21	17	P	Pn	05 25 39.8	+0.8
	SNR=12						
AAK	Ala-Archa	6.38	21	P	Pn	05 25 41.9	+0.8
	SNR=9.2						
AAK	Ala-Archa	6.38	21		Pn	05 25 41.8	+0.8
AAK	Ala-Archa	6.38	21	P	Pn	05 25 42.0	+0.8
	comp=E,15nm,0.6s,baz=61,slow=22,SNR=14						
AAK				S	Sn	05 26 51.8	-2.4
	comp=E,16nm,0.5s,baz=141,slow=23,SNR=22						
AAK	Ala-Archa	6.38	21	⇓P	Pn	05 25 41.8	+0.6
	comp=E,3.0nm,0.7s						
AAK				⇓S	Sn	05 26 51.6	-2.6
	comp=E,5.2nm,0.5s						
AAK	Ala-Archa	6.38	21	*ce*PN	Pn	05 25 41.7	+0.6
AAK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KK31	Karatay Array	6.41	354		Pn	05 25 41.2	-0.1
KK31	Karatay Array	6.41	354	⇓P	Pn	05 25 40.8	-0.6
	comp=Z,11nm,0.3s,baz=171,slow=12,SNR=145						
KK31				⇑S	Sn	05 26 49.9	-4.8
	comp=Z,61nm,0.6s,baz=181,slow=21,SNR=28						
KK31	Karatay Array	6.41	354	PN	Pn	05 25 41.2	-0.1
KKAR	Karatay Array	6.41	354		Pn	05 25 41.1	-0.3
KKAR	Karatay Array	6.41	354		Pn	05 25 41.1	-0.3
KKAR	Karatay Array	6.41	354	PN	Pn	05 25 41.1	-0.3
KBK	Karagaybulak	6.53	24	P	Pn	05 25 44.6	+1.4
	SNR=5.3						
BOOM	Boomskoye usch	6.75	30		Pn	05 25 46.4	+0.4
BOOM	Boomskoye usch	6.75	30	PN	Pn	05 25 46.4	+0.4
CHMS	Chumysh	6.78	21	⇑P	Pn	05 25 46.4	+0.1
	comp=Z,10.0nm,0.7s						
CHMS				⇑S	Sn	05 26 59.8	-3.7

	comp=Z,16nm,0.6s						
CHMS	Chumysh	6.78	21	PN	Pn	05 25 46.4	+0.1
USP	Ospenovka	6.96	19	P	Pn	05 25 48.3	-0.3
	SNR=11						
TKM2	Tokmak 2	6.99	26	P	Pn	05 25 50.4	+1.3
	SNR=7.8						
TKM2	Tokmak 2	6.99	26	⇑P	Pn	05 25 49.4	+0.3
	comp=Z,18nm,0.7s						
TKM2				⇓S	Sn	05 27 06.1	-2.6
	comp=Z,26nm,0.9s						
TKM2	Tokmak 2	6.99	26	PN	Pn	05 25 49.4	+0.3
KDJ	Kajisay	7.02	38	Pn	Pn	05 25 49.7	+0.2
KDJ	Kajisay	7.02	38	PN	Pn	05 25 49.7	+0.2
TARG	Taragay, Kyrgy	7.06	43		Pn	05 25 50.6	+0.4
TARG	Taragay, Kyrgy	7.06	43	PN	Pn	05 25 50.6	+0.4
HNLY	HANLEY	7.38	120	eP	Pn	05 25 55.3	+0.7
HNLY				eS	Sn	05 27 13.0	-5.5
KLP	Kalpa	7.69	130	eP	Pn	05 25 58.6	+0.1
KLP				eS	Sn	05 27 18.4	-7.2
KLP				IAML		05 27 22.4	
	comp=E,139nm,0.5s						
KLP				IAML		05 27 23.5	
	comp=N,75nm,0.5s						
KUDL	Kundal	9.58	152	eP	Pn	05 26 22.8	+0.1
KUDL				eS	Sn	05 27 59.5	-10
KUDL				AMP		05 28 03.2	
	comp=E,229nm,0.3s						
KUDL				AMP		05 28 06.4	
	comp=N,139nm,0.6s						
MAKZ	Makanchi	12.80	35		Pn	05 27 04.2	+0.5
MAKZ	Makanchi	12.80	35	P	Pn	05 27 04.2	+0.5
MK31	Makanchi Array	12.93	36	deP	P	05 27 07.7	-1.0
MKAR	Makanchi Array	12.93	36	P	P	05 27 08.4	-0.4
MKAR	Makanchi Array	12.93	36	P	Pn	05 27 06.5	+1.1
	comp=N,2.1nm,0.8s,baz=202,slow=9.6,SNR=12						
MKAR	Makanchi Array	12.93	36	ceP	P	05 27 07.4	-1.3
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WMQ	Urumqi	14.32	55	eP	P	05 27 25.5	+1.3
KURBB	Kurchatov Arra	14.82	18	P	P	05 27 29.9	+0.4
	comp=Z,0.6nm,0.3s,baz=207,slow=10,SNR=10						
KURK	Kurchatov	14.92	18		Pn	05 27 30.2	+0.3
KURK	Kurchatov	14.92	18	d iP	P	05 27 31.8	+1.1
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AB31	Akbulak array	15.04	330	P	Pn	05 27 30.9	-0.5
AB31				IAmb	IAmb	05 27 34.4	
	comp=Z,9.1nm,0.8s						
AB31	Akbulak array	15.04	330	⇓P	Pn	05 27 30.1	-1.3
	comp=Z,3.1nm,0.5s,baz=142,slow=11,SNR=80						
AB31				S	S	05 30 07.9	-10
	comp=Z,5.0nm,0.6s,baz=147,slow=22,SNR=13						
AB31	Akbulak array	15.04	330	P	Pn	05 27 30.8	-0.6
AB31				S	S	05 30 07.9	-10
ABKAR	Akbulak array	15.04	330		Pn	05 27 30.8	-0.6
ABKAR				IAmb	IAmb	05 27 34.4	
	comp=Z,9.1nm,0.8s						
BVAR	Borovoye Array	16.32	358	P	Pn	05 27 48.2	+1.4
	comp=Z,5.0nm,0.5s,baz=172,slow=11,SNR=31						
BRVK	Borovoye	16.35	358	P	P	05 27 45.4	-1.1
BRVK	Borovoye	16.35	358	d iP	Pn	05 27 48.1	+0.9
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKTO	Aktyubinsk	16.74	329	P	Pn	05 27 52.7	+0.8
	comp=Z,22nm,0.4s,baz=136,slow=9.4,SNR=47						
AKTO				S	S	05 30 54.1	-1.1
	comp=Z,1.3nm,0.3s,baz=221,slow=16,SNR=4.9						
AKTO	Aktyubinsk	16.74	329	⇑P	P	05 27 51.1	+0.3
	comp=Z,6.9nm,0.4s						
AKTO				⇑S	S	05 30 53.8	-1.4
	comp=Z,1.9nm,0.6s						
ZAA0	Zalesovo Array	19.59	24	P	P	05 28 21.9	+0.3
ZAA0				IAmb	IAmb	05 28 23.8	
	comp=Z,5.0nm,0.8s						
ZALV	Zalesovo Beam	19.59	24	P	P	05 28 23.0	+1.5
ZALV	Zalesovo Beam	19.59	24	P	P	05 28 23.3	+1.7
	comp=Z,4.0nm,0.3s,baz=216,slow=10,SNR=17						
ARTI	Arti	21.54	340	P	P	05 28 41.3	-0.9
ARTI	Arti	21.54	340	c iP	P	05 28 44.7	+2.5
ARTI						05 29 25.1	
ARTI				S	S	05 32 32.7	+5.3
ARTI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PZH	PanZhiHua	27.69	103	P	P	05 29 40.9	+2.3
BR131	Keskin Array S	29.66	287	⇑eP	P	05 29 57.5	+1.6
HHC	Hu-ho-hao-te	31.40	70	eP	P	05 30 12.0	+0.8
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,35nm,3.8s						
AKASG	Malin Array Be	33.05	308	P	P	05 30 25.9	+0.7
	comp=Z,0.5nm,0.5s,baz=80,slow=7.5,SNR=5.4						
	comp=Z,0.5nm,0.5s						
FINES	FINESS Array B	37.47	326	P	P	05 31 04.7	+1.9
	comp=Z,1.1nm,0.4s,baz=120,slow=9.8,SNR=12						
	comp=Z,1.1nm,0.4s						
ARCES	ARCESS Array B	41.06	337	P	P	05 31 34.5	+2.2
ARCES				IAmb	IAmb	05 32 14.6	
	comp=Z,7.9nm,1.3s						
ARCES	ARCESS Array B	41.06	337	P	P	05 31 34.5	+2.2
	comp=Z,1.4nm,0.5s,baz=110,slow=8.5,SNR=17						
	comp=Z,1.4nm,0.5s						
ARCES	ARCESS Array B	41.06	337	P	P	05 31 34.5	+2.2
ARCES				pmax	pmax		
	comp=Z,8.0nm,1.3s						
HFS	Hagfors	43.08	322	P	P	05 31 50.3	+1.4
	comp=Z,2.7nm,0.5s,baz=96,slow=12,SNR=14						
	comp=Z,2.7nm,0.5s						
NORES	NORESS Array B	44.20	322	P	P	05 31 59.0	+1.3
NC303	NORSAR Array S	44.33	323	P	P	05 32 00.9	+2.2
NC303				IAmb	IAmb	05 32 30.1	
	comp=Z,7.7nm,1.2s						
NB201	NORSAR Array S	44.35	323	P	P	05 32 00.5	+1.6
NB2	NORSAR Subarra	44.39	323	P	P	05 32 00.5	+1.2
	comp=Z,0.7nm,0.5s,baz=98,slow=7.9						
NOA	NORSAR Array B	44.39	323	P	P	05 32 00.6	+1.4
	comp=Z,1.2nm,0.6s,baz=96,slow=7.7,SNR=8.2						
	comp=Z,1.2nm,0.6s						
NC204	NORSAR Array S	44.62	323	P	P	05 32 02.7	+1.6
NC204				IAmb	IAmb	05 32 02.7	
	comp=Z,13nm,1.4s						
TIXI	Tiksi	45.45	22	P	P	05 32 09.5	+2.1
TIXI	Tiksi	45.45	22	P	P	05 32 09.5	+2.1
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.2s						

IDC 20 05:24:15.2±2.7**, 5.°23S**×**154.°19E, h0^{km}, mb3.6**/3**, mbtmp3.6**/3**, Error ellipse: s-maj=121.5km s-min=37.5km az=122.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	26.79	225	P	P	05 29 57.2	0.0
	0.4nm,0.4s,baz=57,slow=9.4,SNR=4.8						
	0.4nm,0.4s						
MKAR	Makanchi Array	81.56	319	P	P	05 36 35.2	+0.2
	0.3nm,0.7s,baz=96,slow=6.4,SNR=2.1						
	0.3nm,0.7s						
ILAR	Eielson Array	82.04	22	P	P	05 36 37.0	-0.1
	0.2nm,0.2s,baz=243,slow=4.0,SNR=2.5						
	0.2nm,0.2s						

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*NOU **20** 05:24:24.7, 33.°13S×176.°62W, h82^{km}, mb5.1/11, South of Kermadec Islands*

*IDC **20** 05:24:41.7±0.5, 33.°31S×178.°86W, h0^{km}, mb4.6/15, mbtmp4.6/16, ML4.8/1, MS4.2/45, Error ellipse: s-maj=19.5km s-min=15.6km az=97.0*

*BJI **20** 05:24:42.7, 33.°52S×178.°71W, h10^{km}, mB5.4/5, mb5.1/14, Ms4.7/2, Ms7 4.3/2*

*WEL **20** 05:24:42.3±0.7, 34°S±5°×17°8W±1°1, h33^{km}, M5.2/19, mB5.6/15, ML5.5/19, MLv5.3/19, Mw(mB)5.1/15, Error ellipse: s-maj=14.8km s-min=3.1km az=111.6, confirmed*

*NEIC **20** 05:24:44.1±1.3, 33.°7S±0.°1×178.°83W±0.°06, h10^{km}±1^{km}, mb5.0/48, Error ellipse: s-maj=19.4km s-min=7.8km az=9.0*

*MOS **20** 05:24:47.7±1.2, 33.°50S×179.°10W, h43^{km}, mb5.2/19, Error ellipse: s-maj=14.2km s-min=10.9km az=98.4*

*GCMT **20** 05:24:48.1±0.2, 33.°62S±0.°02×178.°29W±0.°02, h14^{km}, MW5.0/100, Moment Tensor Solution. s52,c71; s100,c136; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.73±.13; $M_{\theta\theta}$-0.26±.09; $M_{\phi\phi}$-2.47±.09; $M_{r\theta}$0.29±.21; $M_{\theta\phi}$-0.87±.06; $M_{\phi r}$2.12±.21; Best double couple: $M_0$3.48600×10^{16} NP1:ϕ_s206.00000°, δ27.00000°, λ102.00000°. NP2:ϕ_s12.00000°, δ64.00000°, λ84.00000°. Principal axes: T 3.4850, Plg70.0000°, Azm269.0000°; N 0.0030, Plg6.0000°, Azm15.0000°; P -3.4860, Plg19.0000°, Azm107.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 05:24:43.3±0.3**, 33.°64S**±0.°05×**178.°74W**±0.°05**, h10^{km}, n319, σ1^{s}.57**/317**, mb5.0**/49**, MS4.4**/45**, 18C-4D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	4.42	9	P	Pn	05 25 45.7	-4.8
GLKZ				S	Sn	05 26 34.6	-7.4
RAO	Raoul Island	4.43	9	Pn	Pn	05 25 46.5	-4.1
	60nm,0.3s,baz=266,slow=17,SNR=3.6						
RAO				Sn	Sn	05 26 35.6	-6.7
	165nm,0.3s,baz=91,slow=19,SNR=6.3						
	145nm,0.3s						
RAO	Raoul Island	4.43	9	P	Pn	05 25 48.0	-2.6
RIZ	Raoul Island	4.44	9	S	Sn	05 26 36.3	-6.1
MXZ	Matakaoa Point	4.59	211	P	Pn	05 25 51.3	-1.5
MXZ	Matakaoa Point	4.59	211	P	Pn	05 25 52.0	-0.8
MXZ				S	Sn	05 26 46.4	+0.2
WMGZ	Waiomatatini S	4.77	208	P	Pn	05 25 55.1	-0.1
WMGZ				S	Sn	05 26 51.6	+1.0
PKGZ	Pakihiroa	4.95	211	P	Pn	05 25 57.0	-0.7
PKGZ				S	Sn	05 26 55.3	+0.3
HAZ	Te Kaha	4.99	214	P	Pn	05 25 58.6	+0.4
HAZ				S	Sn	05 26 57.6	+1.7
PUZ	Puketiti	5.05	208	P	Pn	05 25 57.7	-1.4
PUZ				S	Sn	05 26 57.0	-0.5
RUGZ	Raukumara Rang	5.21	213	P	Pn	05 26 01.0	-0.3
RUGZ				S	Sn	05 27 03.0	+1.5
CNGZ	Carnagh Statio	5.43	206	P	Pn	05 26 03.8	-0.5
CNGZ				S	Sn	05 27 08.2	+1.4
GRZ	Great Barrier	5.43	240	P	Pn	05 26 07.0	+2.6
WHRZ	Whale Island	5.46	218	P	Pn	05 26 06.2	+1.4
WHRZ				S	Sn	05 27 12.3	+4.6
MYRZ	Mayor Island	5.47	227	P	Pn	05 26 07.7	+2.7
KUZ	Kuaotunu	5.49	234	P	Pn	05 26 07.6	+2.4
KUZ	Kuaotunu	5.49	234	P	Pn	05 26 06.8	+1.6
TKGZ	Te Karaka	5.53	209	P	Pn	05 26 06.1	+0.4
TKGZ				S	Sn	05 27 09.0	-0.3
MWZ	Matawai	5.58	212	P	Pn	05 26 05.3	-1.0
MWZ				S	Sn	05 27 09.2	-1.4
URZ	Urewera	5.71	215	Pn	Pn	05 26 08.2	+0.1
	36nm,0.3s,baz=26,slow=5.4,SNR=178						
URZ				Sn	Sn	05 27 12.2	-1.4
	40nm,0.3s,baz=161,slow=19,SNR=8.6						
URZ	Urewera	5.71	215	P	Pn	05 26 07.4	-0.7
URZ	Urewera	5.71	215	P	Pn	05 26 07.2	-0.9
URZ				S	Sn	05 27 12.9	-0.7
RAGZ	Rawiri	5.76	212	P	Pn	05 26 09.3	+0.4
RAGZ				S	Sn	05 27 13.3	-1.8
TGRZ	Tauranga	5.76	224	P	Pn	05 26 10.1	+1.2
EDRZ	Edgecumbe	5.77	218	P	Pn	05 26 11.1	+2.0
EDRZ				S	Sn	05 27 17.5	+2.1
RIGZ	Rimuhau	5.79	208	P	Pn	05 26 08.6	-0.8
RIGZ				S	Sn	05 27 14.1	-1.7
PRGZ	Paritu Road	5.93	206	P	Pn	05 26 10.3	-1.0
PRGZ				S	Sn	05 27 17.8	-1.5
OMRZ	Omania	5.97	220	P	Pn	05 26 14.1	+2.3
KARZ	Kaharoa	5.97	222	P	Pn	05 26 13.8	+2.0
TARZ	Mount Tarawera	5.99	219	P	Pn	05 26 13.9	+1.8
SNGZ	Shannon Statio	6.03	211	P	Pn	05 26 12.3	-0.3
SNGZ				S	Sn	05 27 21.1	-0.6
MUGZ	Murupara	6.04	216	P	Pn	05 26 12.9	+0.1
MUGZ				S	Sn	05 27 20.7	-1.2
RTZ	Ruatahuna	6.05	214	P	Pn	05 26 13.2	+0.3
RTZ				S	Sn	05 27 21.7	-0.6
RRRZ	Republican Roa	6.06	218	P	Pn	05 26 14.6	+1.6
KNZ	Kokohu	6.10	207	P	Pn	05 26 11.6	-1.9
KNZ				S	Sn	05 27 21.4	-1.9
MHGZ	Mahia Peninsul	6.13	205	P	Pn	05 26 12.7	-1.2
MHGZ				S	Sn	05 27 22.7	-1.4
WCZ	Waipu Caves	6.14	246	P	Pn	05 26 17.3	+3.3
HSRZ	Hossack Road	6.18	220	P	Pn	05 26 16.7	+1.9
TOZ	Tahuroa Road	6.21	227	P	Pn	05 26 17.6	+2.6
TOZ				S	Sn	05 27 29.4	+3.3
HRRZ	Handcock Road	6.22	219	P	Pn	05 26 16.9	+1.6
PRRZ	Plateau Road	6.25	218	P	Pn	05 26 15.9	+0.3
PRRZ				S	Sn	05 27 27.0	0.0
RAHZ	Arahi	6.25	211	P	Pn	05 26 15.6	0.0
RAHZ				S	Sn	05 27 26.8	-0.3
MTHZ	Maungataniwha	6.31	213	P	Pn	05 26 15.8	-0.6
MTHZ				S	Sn	05 27 28.8	+0.2
ALRZ	Allen Road	6.32	218	P	Pn	05 26 16.9	+0.3
ALRZ				S	Sn	05 27 29.1	+0.2
WHHZ	Waihua	6.32	210	P	Pn	05 26 17.5	+0.9
WHHZ				S	Sn	05 27 28.4	-0.4
MRHZ	Matea Rd	6.49	216	P	Pn	05 26 18.6	-0.4
NMHZ	Naumai	6.52	212	P	Pn	05 26 19.2	-0.2
OUZ	Omahuta	6.53	254	P	Pn	05 26 23.2	+3.8
KUTZ	Kaahu Road	6.54	221	P	Pn	05 26 20.8	+1.2
ARHZ	Aropaoanui	6.58	210	P	Pn	05 26 19.7	-0.4
TLZ	Tolley Road	6.59	223	P	Pn	05 26 21.5	+1.2
BKZ	Black Stump Fm	6.72	214	P	Pn	05 26 20.8	-1.3
BKZ	Black Stump Fm	6.72	214	P	Pn	05 26 20.6	-1.5
MCHZ	McNeill Hill	6.86	211	P	Pn	05 26 23.4	-0.5
CKHZ	Cape Kidnapper	6.88	208	P	Pn	05 26 22.9	-1.3
RITZ	Rihia Road	6.88	218	P	Pn	05 26 24.4	0.0
KWHZ	Kaweka Forest	6.96	213	P	Pn	05 26 24.4	-1.1
TMVZ	Te Maari	7.07	218	P	Pn	05 26 26.1	-0.8
NTVZ	North Tongarir	7.07	218	P	Pn	05 26 26.6	-0.3
ETVZ	East Tongariro	7.08	218	P	Pn	05 26 26.5	-0.6
KAHZ	Kahuranaki	7.08	209	P	Pn	05 26 24.3	-2.7
HIZ	Hauiti	7.11	225	P	Pn	05 26 28.6	+1.2
OTVZ	Oturere	7.12	218	P	Pn	05 26 27.0	-0.8
KRHZ	Kereru	7.16	212	P	Pn	05 26 26.4	-1.7
PXZ	Pawanui	7.29	208	P	Pn	05 26 28.3	-1.5
BFZ	Birch Farm	8.09	208	P	Pn	05 26 37.5	-3.3
SNZO	South Karori	9.26	212	P	Pn	05 26 55.7	-1.1
QRZ	Quartz Range	9.99	222	P	Pn	05 27 06.8	-0.1
RPZ	Rata Peaks	12.82	215	Pn	Pn	05 27 42.2	-3.5
	2.2nm,0.3s,baz=32,slow=2.1,SNR=6.7						
RPZ				Sn	Sn	05 29 56.8	-12
	3.3nm,0.3s,baz=254,slow=19,SNR=8.9						
RPZ	Rata Peaks	12.82	215	P	Pn	05 27 42.9	-2.8
ODZ	Otahua Downs	14.03	213	P	Pn	05 27 57.7	-4.3
MSVF	Nonsavu	16.10	349		Pn	05 28 28.6	-1.3
MSVF	Nonsavu	16.10	349	LR	LR	05 33 25.5	
	comp=Z,1μm,21.1s,baz=175,slow=33						
MSVF	Nonsavu	16.10	349	i P	Pn	05 28 28.5	-1.5
PINNC	Pines Island,	16.39	309		Pn	05 28 33.2	-0.4
PINNC				IAmb	IAmb	05 28 51.2	
	comp=Z,114nm,1.2s						
ONTNC	Ouen Toro	17.26	307		Pn	05 28 44.0	-0.5
DZM	Mont Dzumac	17.43	308	P	P	05 28 47.9	-0.1
DZM	Mont Dzumac	17.43	308	ePn	Pn	05 28 46.6	-0.1
	comp=Z,169nm,1.4s						
DZM				eLR	LR	05 32 40.3	
	comp=Z,2μm,22.8s						
DZM	Mont Dzumac	17.43	308	P	Pn	05 28 45.8	-0.9
	comp=Z,43nm,0.8s,baz=118,slow=16,SNR=24						
DZM				LR	LR	05 34 35.9	
	comp=Z,3μm,18.1s,baz=130,slow=35						
AFI	Afiamalu	20.64	20		P	05 29 24.6	+1.4
AFI				IAmb	IAmb	05 29 28.3	
	comp=Z,58nm,0.9s						
AFI	Afiamalu	20.64	20	P	P	05 29 24.6	+1.4
AFI				pmax	pmax		
	comp=Z,58nm,1.0s						
RAR	Rarotonga	20.85	58	P	P	05 29 25.2	-0.2
	comp=Z,16nm,0.7s,baz=227,slow=3.7,SNR=4.3						
RAR				LR	LR	05 37 19.7	
	comp=Z,284nm,19.0s,baz=234,slow=36						
	comp=Z,16nm,0.7s						
ARMA	Armidale	25.29	269		P	05 30 09.6	-0.5
ARMA				IAmb	IAmb	05 30 15.1	
	comp=Z,38nm,1.2s						
CAN	Canberra	26.59	257	P	P	05 30 19.8	-2.0
CAN	Canberra	26.59	257	P	P	05 30 19.8	-2.0
CAN				pmax	pmax		
	comp=Z,15nm,1.0s						
EIDS	Eidsvold	27.46	279		P	05 30 29.8	+0.2
EIDS				IAmb	IAmb	05 30 32.3	
	comp=Z,33nm,0.8s						
TBI	Tubuai	27.61	76	eS	S	05 35 12.8	+0.1
	comp=Z,2μm,24.5s						
TBI				eLR	LR	05 37 34.0	
	comp=Z,759nm,24.8s						
TBI				eLR	LR	05 37 37.7	
	comp=Z,2μm,26.5s						
PPT2	Papeete2	30.63	66	eP	P	05 30 58.4	+0.5
	comp=Z,12nm,20.5s						
PPT2				eS	S	05 36 02.0	+1.7
	comp=Z,486nm,23.2s						
PPT2				eLR	LR	05 38 51.8	
	comp=Z,336nm,23.5s						
PPT2				eLR	LR	05 38 58.1	
	comp=Z,389nm,22.2s						
PPT	Papeete	30.64	66	LR	LR	05 43 24.1	
	comp=Z,402nm,18.3s,baz=244,slow=37						
STKA	Stephens Creek	33.27	262	P	P	05 31 20.9	-0.1
STKA	Stephens Creek	33.27	262	P	P	05 31 20.4	-0.5
	comp=Z,3.1nm,0.8s,baz=98,slow=10.0,SNR=5.0						
STKA				PcP	PcP	05 34 02.3	-0.9
	comp=Z,7.4nm,0.8s,baz=0.6,slow=1.8,SNR=7.8						
STKA				LR	LR	05 44 25.1	
	comp=Z,1μm,18.3s,baz=84,slow=36						
	comp=Z,3.1nm,0.8s						
CTAO	Charters Tower	33.85	285		P	05 31 25.2	-0.9
CTAO	Charters Tower	33.85	285	P	P	05 31 25.2	-0.9
CTAO				pmax	pmax		
	comp=Z,32nm,0.7s						
BBOO	Buckleboo	37.59	258	P	P	05 31 57.6	-0.6
BBOO				IAmb	IAmb	05 32 02.4	
	comp=Z,46nm,1.4s						
COEN	Coen	39.68	290	P	P	05 32 16.9	+1.0
COEN				IAmb	IAmb	05 32 36.8	
	comp=Z,26nm,1.1s						
AS31	Alice Springs	42.42	271		P	05 32 38.0	-0.4
ASAR	Alice Springs	42.42	271		P	05 32 38.0	-0.4
ASAR	Alice Springs	42.42	271	P	P	05 32 37.8	-0.6
	comp=Z,27nm,0.8s,baz=111,slow=7.5,SNR=198						
ASAR				LR	LR	05 50 02.9	
	comp=Z,429nm,18.0s,baz=129,slow=36						
	comp=Z,27nm,0.8s						
ASAR	Alice Springs	42.42	271	P	P	05 32 38.0	-0.4
TAOE	Nuku Hiva Isla	43.22	64	eS	S	05 39 13.8	+1.7
	comp=Z,117nm,38.6s						
TAOE				eSS	SS	05 42 29.9	+4.7
	comp=Z,142nm,23.1s						
TAOE				eLR	LR	05 44 47.7	
	comp=Z,338nm,25.4s						
WR8	Warramunga Arr	43.56	276		P	05 32 47.2	-0.5
WR8				IAmb	IAmb	05 32 47.9	
	comp=Z,36nm,0.8s						
WRAB	Tennant Creek	43.70	276	P	P	05 32 48.4	-0.3
WRAB				IAmb	IAmb	05 32 48.9	
	comp=Z,32nm,0.7s						
WRAB	Tennant Creek	43.70	276	P	P	05 32 48.4	-0.3
WRAB				pmax	pmax		
	comp=Z,32nm,0.7s						
WRA	Warramunga Arr	43.70	276		P	05 32 48.3	-0.5
WRA	Warramunga Arr	43.70	276	P	P	05 32 47.8	-0.9
	comp=Z,39nm,0.8s,baz=118,slow=7.3,SNR=163						
WRA				LR	LR	05 50 06.4	
	comp=Z,368nm,19.4s,baz=146,slow=35						
	comp=Z,39nm,0.8s						
WRA	Warramunga Arr	43.70	276	P	P	05 32 48.3	-0.5
WRA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WB0	Warramunga Arr	43.74	276		P	05 32 48.6	-0.5
FORT	Forrest	44.70	258	P	P	05 32 55.8	-0.8
SBA	Scott Base	44.77	184		P	05 32 56.6	+0.1
SBA	Scott Base	44.77	184	P	P	05 32 56.7	+0.1
SBA				pmax	pmax		
	comp=Z,14nm,1.3s						
VNDA	Vanda	44.81	186	P	P	05 32 57.3	+0.4
VNDA	Vanda	44.81	186	P	P	05 32 59.7	+2.8
	comp=Z,1.1nm,0.7s,baz=357,slow=4.5,SNR=4.6						
VNDA				LR	LR	05 49 05.2	
	comp=Z,222nm,19.2s,baz=16,slow=32						
	comp=Z,1.1nm,0.7s						
JAY	Jayapura	48.91	300	LR	LR	05 52 17.8	
	comp=Z,236nm,20.2s,baz=349,slow=34						
KNRA	Kununurra	50.41	277	P	P	05 33 40.5	-0.7
KNRA				IAmb	IAmb	05 34 03.7	
	comp=Z,40nm,1.2s						
FITZ	Fitzroy Crossi	51.81	273		P	05 33 51.1	-0.6
FITZ	Fitzroy Crossi	51.81	273	LR	LR	05 55 49.1	
	comp=Z,1μm,18.2s,baz=110,slow=36						
NWAO	Narrogin (SRO)	52.73	252	P	P	05 33 57.1	-1.3
NWAO				IAmb	IAmb	05 34 12.7	
	comp=Z,32nm,1.4s						
NWAO	Narrogin (SRO)	52.73	252	LR	LR	05 54 50.8	
	comp=Z,254nm,19.3s,baz=72,slow=34						
NWAO	Narrogin (SRO)	52.73	252	P	P	05 33 57.1	-1.3
NWAO				pmax	pmax		
	comp=Z,32nm,1.4s						
FAKI	Fak Fak	54.95	293	P	P	05 34 14.1	-0.7
MORW	Morawa	55.07	256	P	P	05 34 14.2	-1.4
MORW				IAmb	IAmb	05 34 14.6	
	comp=Z,16nm,0.9s						
MBWA	Marble Bar	55.32	266	P	P	05 34 16.3	-1.1
MBWA				IAmb	IAmb	05 34 16.3	
	comp=Z,9.5nm,0.8s						
QSPA	South Pole Qui	56.48	180		P	05 34 26.1	+0.8
QSPA	South Pole Qui	56.48	180	P	P	05 34 27.1	+1.9
	comp=Z,13nm,0.9s,baz=94,slow=0.6,SNR=28						
QSPA				LR	LR	05 56 06.9	
	comp=Z,414nm,19.3s,baz=37,slow=33						
	comp=Z,13nm,0.9s						
BATI	Baumata	57.51	280	LR	LR	06 00 30.0	
	comp=Z,290nm,18.2s,baz=128,slow=38						
GUMO	Guam	58.38	317	LR	LR	05 57 51.7	
	comp=Z,78nm,19.4s,baz=106,slow=34						
KAPI	Kappang	63.62	282	LR	LR	06 03 38.1	
	comp=Z,295nm,19.0s,baz=129,slow=37						
DAV	Davao City (W)	66.46	297	LR	LR	06 04 52.4	
	comp=Z,54nm,18.6s,baz=159,slow=36						
BELA	Belgrano 2	66.67	172	P	P	05 35 33.8	+0.1
BELA				IAmb	IAmb	05 36 02.7	
	comp=Z,9.2nm,1.0s						
MAW	Mawson	69.06	201	P	P	05 35 50.9	+2.0
	comp=Z,10nm,0.9s,baz=104,slow=7.4,SNR=7.5						
	comp=Z,10nm,0.9s						
PMSA	Palmer Station	69.58	155	LR	LR	06 04 19.5	
	comp=Z,202nm,18.0s,baz=225,slow=34						
LEM	Lembang	72.64	273	LR	LR	06 10 29.4	
	comp=Z,228nm,18.1s,baz=165,slow=38						
ESPZ	Base Esperanza	72.85	156	P	P	05 36 14.7	+2.7
USHA	Ushuaia	73.60	146	LR	LR	06 02 38.1	
	comp=Z,367nm,18.8s,baz=170,slow=31						
TROLL	Troll, Antarti	74.64	180	⇑P	P	05 36 22.8	+0.3
	comp=Z,528nm,1.4s						
SNAA	Sanae	74.94	179	⇑P	P	05 36 25.1	+0.9
	comp=Z,180nm,0.9s						
SNAA	Sanae	74.94	179		P	05 36 23.8	-0.4
SNAA				IAmb	IAmb	05 36 37.2	
	comp=Z,19nm,1.2s						
SNAA	Sanae	74.94	179	P	P	05 36 27.6	+3.5
	comp=Z,5.6nm,1.1s,baz=179,slow=6.5,SNR=11						
SNAA				LR	LR	06 08 25.7	
	comp=Z,155nm,18.0s,baz=84,slow=35						
	comp=Z,5.6nm,1.1s						
SNAA	Sanae	74.94	179	ceP	P	05 36 24.4	+0.2
SNAA				pmax	pmax		
	comp=Z,15nm,1.2s						
VNA3	Neumayer Olymp	75.12	176	⇑P	P	05 36 24.9	-0.3
	comp=Z,24nm,0.8s						
VNA2	Neumayer--Watz	75.54	177	⇑P	P	05 36 27.7	+0.1
	comp=Z,18nm,0.6s,baz=178,slow=5.5						
VNA1	Neumayer--Stat	75.78	177	⇑P	P	05 36 30.6	+1.8
	comp=Z,28nm,1.2s						
COYC	Coyhaique	77.02	136		P	05 36 40.1	+3.7
JOW	Kunigami	78.40	313	LR	LR	06 07 40.3	
	comp=Z,50nm,19.4s,baz=204,slow=33						
MJAR	Matsushiro Arr	80.56	326	P	P	05 36 53.5	-2.3
	comp=Z,1.5nm,0.4s,baz=239,slow=9.0,SNR=4.8						
	comp=Z,1.5nm,0.4s						
PLCA	Paso Flores	80.76	133		P	05 37 00.1	+3.0
PLCA				IAmb	IAmb	05 37 02.4	
	comp=Z,14nm,1.4s						
PLCA	Paso Flores	80.76	133	P	P	05 36 58.0	+0.9
	comp=Z,7.8nm,1.2s,baz=156,slow=1.4,SNR=3.9						
PLCA				LR	LR	06 08 47.3	
	comp=Z,79nm,18.0s,baz=234,slow=33						
	comp=Z,7.8nm,1.2s						
PLCA	Paso Flores	80.76	133	P	P	05 37 00.2	+3.0
PLCA				pmax	pmax		
	comp=Z,14nm,1.4s						
JNU	Nakatsue	81.58	319	LR	LR	06 13 44.8	

	comp=Z,58nm,18.0s,baz=138,slow=36						
BO02	**Sierra Bellavi**	**84.17**	**128**		**P**	**05 37 18.2**	**+3.1**
PSI	**Prapat**	**85.16**	**277**	LR	LR	06 16 57.5	
	comp=Z,238nm,18.5s,baz=89,slow=37						
ADK	**Adak**	**85.18**	**1**		**P**	**05 37 19.5**	**+0.2**
ADK	**Adak**	**85.18**	**1**	P	**P**	**05 37 19.5**	**+0.2**
ADK				pmax	pmax		
	comp=Z,42nm,1.4s						
SHEM	**Shemya Is, Ala**	**86.24**	**356**	LR	LR	06 10 55.3	
	comp=Z,106nm,19.4s,baz=179,slow=32						
KSRS	**Korea Array**	**86.42**	**320**	P	**P**	**05 37 25.0**	**-0.8**
	comp=Z,1.8nm,0.9s,baz=133,slow=5.0,SNR=5.5						
	comp=Z,1.8nm,0.9s						
LPIG	**La Paz**	**86.77**	**58**	LR	LR	06 10 25.2	
	comp=Z,243nm,18.4s,baz=198,slow=32						
YSS	**Yuzhno-Sakhali**	**87.39**	**335**	*e*P	**P**	**05 37 30.8**	**+0.5**
YSS				*e*S	**S**	**05 48 08.7**	**-2.0**
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
YSS				smax	smax		
	comp=N,100nm,5.1s						
YSS				smax	smax		
	comp=E,100nm,5.4s						
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
NJ2	**Nanjing**	**87.89**	**311**	⇓P	**P**	**05 37 35.8**	**+2.7**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
PEA0B	**Petropavlovsk-**	**88.79**	**346**	P	**P**	**05 37 37.0**	**+0.1**
PEA0B	**Petropavlovsk-**	**88.79**	**346**	c*e*P	**P**	**05 37 36.4**	**-0.5**
PETK	**Petropavlovsk-**	**88.79**	**346**	P	**P**	**05 37 37.3**	**+0.4**
PETK	**Petropavlovsk-**	**88.79**	**346**	P	**P**	**05 37 36.3**	**-0.6**
	comp=Z,14nm,0.8s,baz=142,slow=5.6,SNR=12						
PETK				LR	LR	06 13 29.9	
	comp=Z,117nm,19.1s,baz=150,slow=33						
	comp=Z,14nm,0.8s						
PETK	**Petropavlovsk-**	**88.79**	**346**	P	**P**	**05 37 37.3**	**+0.4**
PFO	**Pinyon Flats O**	**88.85**	**48**		**P**	**05 37 42.6**	**+4.8**
PFO	**Pinyon Flats O**	**88.85**	**48**	LR	LR	06 14 06.9	
	comp=Z,236nm,18.1s,baz=226,slow=33						
PFO	**Pinyon Flats O**	**88.85**	**48**	P	**P**	**05 37 42.6**	**+4.8**
PFO				pmax	pmax		
	comp=Z,6.0nm,1.2s						
USRK	**Ussuriysk Ar.**	**89.52**	**327**	P	**P**	**05 37 39.0**	**-1.5**
	comp=Z,2.7nm,0.6s,baz=77,slow=4.3,SNR=4.7						
USRK				LR	LR	06 14 36.8	
	comp=Z,117nm,19.3s,baz=105,slow=34						
	comp=Z,2.7nm,0.6s						
QSM	**Queen of Sheba**	**90.19**	**46**	IAmb	IAmb	05 37 51.5	
	comp=Z,13nm,1.2s						
MDJ	**Mudanjiang**	**90.94**	**326**	P	**P**	**05 37 51.3**	**+4.1**
MDJ				pmax	pmax		
	comp=Z,11nm,1.0s						
YBH	**Yreka Blue Hor**	**90.96**	**38**	LR	LR	06 13 26.1	
	comp=Z,13nm,18.4s,baz=243,slow=32						
NVAR	**Mina Array Bea**	**91.03**	**43**	P	**P**	**05 37 47.9**	**-0.2**
	comp=Z,1.4nm,1.0s,baz=218,slow=7.6,SNR=5.4						
	comp=Z,1.4nm,1.0s						
Y14A	**Wickenburg**	**91.23**	**49**	IAmb	IAmb	05 37 54.4	
	comp=Z,6.3nm,1.2s						
TPH	**Tonopah**	**91.41**	**44**	P	**P**	**05 37 51.1**	**+1.3**
TPH				IAmb	IAmb	05 38 03.4	
	comp=Z,11nm,0.9s						
TPH	**Tonopah**	**91.41**	**44**	P	**P**	**05 37 51.1**	**+1.3**
TPH				pmax	pmax		
	comp=Z,11nm,0.9s						
W13A	**Hualapai Mount**	**91.43**	**48**	P	**P**	**05 37 51.0**	**+1.1**
W13A				IAmb	IAmb	05 37 55.1	
	comp=Z,6.0nm,1.3s						
TUC	**Tucson**	**91.61**	**52**	P	**P**	**05 37 51.6**	**+0.9**
TUC				IAmb	IAmb	05 37 56.1	
	comp=Z,7.0nm,1.2s						
TUC	**Tucson**	**91.61**	**52**	P	**P**	**05 37 51.6**	**+0.9**
TUC				pmax	pmax		
	comp=Z,7.0nm,1.2s						
CN2	**Changchun**	**92.35**	**323**	P	**P**	**05 37 52.4**	**-1.3**
CN2				pP	sP	05 37 57.3	+1.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
X16A	**Lo Mia Camp, P**	**92.53**	**50**	P	**P**	**05 37 56.1**	**+1.1**
X16A				IAmb	IAmb	05 38 00.4	
	comp=Z,4.1nm,1.1s						
BNX	**BinXian**	**92.81**	**326**	⇑P	**P**	**05 37 56.5**	**+0.7**
BNX				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NNA	**Nana**	**93.12**	**106**	LR	LR	06 12 36.1	
	comp=Z,194nm,18.2s,baz=246,slow=31						
WUAZ	**Wupatki**	**93.27**	**49**	P	**P**	**05 38 01.7**	**+3.3**
WUAZ				IAmb	IAmb	05 38 05.8	
	comp=Z,4.7nm,0.7s						
KLR	**Kul'dur**	**93.52**	**330**	LR	LR	06 16 38.9	
	comp=Z,199nm,20.0s,baz=148,slow=33						
KLR	**Kul'dur**	**93.52**	**330**	*i* P	**P**	**05 37 58.3**	**-0.6**
KLR				pmax	pmax		
	comp=Z,5.0nm,1.5s						
CMAR	**Chiang Mai Arr**	**93.88**	**289**	PP	**PP**	**05 41 46.8**	**-0.6**
	comp=Z,2.0nm,0.3s,baz=138,slow=4.7,SNR=4.5						
CMAR				LR	LR	06 23 06.5	
	comp=Z,50nm,19.1s,baz=145,slow=37						
CMIG	**Matias Romero**	**94.34**	**72**	LR	LR	06 14 39.9	
	comp=Z,77nm,18.0s,baz=192,slow=32						
ELK	**Elko**	**94.34**	**43**	LR	LR	06 16 32.9	
	comp=Z,133nm,18.8s,baz=265,slow=33						
ATAH	**Atahualpa**	**94.62**	**102**	LR	LR	06 12 18.7	
	comp=Z,90nm,20.3s,baz=273,slow=30						
TXAR	**Lajitas Array**	**94.65**	**58**	P	**P**	**05 38 04.6**	**-0.2**
	comp=Z,0.7nm,1.0s,baz=199,slow=6.2,SNR=6.6						
TXAR				LR	LR	06 15 31.8	
	comp=Z,117nm,18.3s,baz=234,slow=32						
	comp=Z,0.7nm,1.0s						
ANMO	**Albuquerque**	**96.08**	**52**	LR	LR	06 17 01.0	
	comp=Z,135nm,18.1s,baz=330,slow=33						
PZH	**PanZhiHua**	**96.25**	**298**	P	**P**	**05 38 14.8**	**+2.6**
MA2	**Magadan**	**96.25**	**345**	LR	LR	06 17 18.2	
	comp=Z,81nm,20.0s,baz=180,slow=33						
LPAZ	**La Paz**	**97.37**	**115**	LR	LR	06 12 08.6	
	comp=Z,38nm,21.9s,baz=246,slow=29						
HHC	**Hu-ho-hao-te**	**98.03**	**314**	*e*P	Pdif	05 38 20.9	+1.0
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,64nm,4.6s						
NEW	**Newport**	**98.35**	**36**	LR	LR	06 16 28.3	
	comp=Z,320nm,19.5s,baz=224,slow=32						
CPUP	**Villa Florida**	**98.45**	**129**	LR	LR	06 18 47.6	
	comp=Z,62nm,18.6s,baz=74,slow=33						
JTS	**Las Juntas de**	**98.75**	**83**	LR	LR	06 15 53.6	
	comp=Z,119nm,18.6s,baz=284,slow=31						
PDAR	**Pinedale Array**	**98.90**	**44**	LR	LR	06 19 33.4	
	comp=Z,106nm,18.2s,baz=226,slow=33						
SEY	**Seymchan**	**98.98**	**347**	LR	LR	06 16 54.2	
	comp=Z,147nm,21.7s,baz=173,slow=32						
SEY	**Seymchan**	**98.98**	**347**	*e*P	**Pdif**	**05 38 23.9**	**+0.5**
SEY				pmax	pmax		
	comp=Z,4.0nm,1.8s						
O29M	**Mount Kennedy**	**99.25**	**19**	P	**Pdif**	**05 38 27.2**	**+2.3**
O29M				IAmb	IAmb	05 38 30.5	
	comp=Z,5.7nm,0.8s						
LZH	**Lanzhou**	**100.15**	**307**	*e*P	**Pdif**	**05 38 28.8**	**-0.7**
LZH				sP	pwP	05 38 36.8	-1.2
LZH				SKS	**SKSac**	**05 49 08.9**	**+0.4**
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
BILL	**Bilibino**	**102.00**	**354**	*i* P	**Pdif**	**05 38 37.0**	**+0.3**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.3s						
WMQ	**Urumqi**	**114.71**	**307**	*e*PKP	**PKiKP**	**05 43 24.8**	**+1.0**
MK31	**Makanchi Array**	**119.34**	**309**	c *i*PKIKP	**PKPdf**	**05 43 31.0**	**-1.6**
MKAR	**Makanchi Array**	**119.34**	**309**	PKP	**PKPdf**	**05 43 30.9**	**-1.7**
	comp=Z,2.4nm,0.8s,baz=90,slow=1.2,SNR=20						
MKAR	**Makanchi Array**	**119.34**	**309**	c *i*PKIKP	**PKPdf**	**05 43 31.8**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MAKZ	**Makanchi**	**119.55**	**309**		**PKPdf**	**05 43 31.6**	**-1.4**
MAKZ	**Makanchi**	**119.55**	**309**	PKIKP	**PKPdf**	**05 43 31.6**	**-1.4**
ZALV	**Zalesovo Beam**	**120.01**	**317**	PKP	**PKPdf**	**05 43 32.3**	**-1.3**
	comp=Z,1.9nm,0.6s,baz=263,slow=1.2,SNR=7.1						
KSH	**Kashi**	**121.31**	**299**	PKP	**PKPdf**	**05 43 37.3**	**+0.5**
NRN	**Naryn**	**121.92**	**301**		**PKPdf**	**05 43 37.5**	**-0.5**
NRN	**Naryn**	**121.92**	**301**	PKIKP	**PKPdf**	**05 43 37.6**	**-0.5**
BOOM	**Boomskoye usch**	**122.29**	**302**		**PKPdf**	**05 43 38.4**	**-0.2**
BOOM	**Boomskoye usch**	**122.29**	**302**	PKIKP	**PKPdf**	**05 43 38.4**	**-0.2**
KURK	**Kurchatov**	**122.80**	**312**		**PKPdf**	**05 43 37.7**	**-1.3**
KURK	**Kurchatov**	**122.80**	**312**	c *i*PKIKP	**PKPdf**	**05 43 37.8**	**-1.3**
KURK				pmax	pmax		
	comp=Z,12nm,1.3s						
KURBB	**Kurchatov Arra**	**122.83**	**312**	PKP	**PKPdf**	**05 43 37.7**	**-1.4**
	comp=Z,4.4nm,0.7s,baz=112,slow=1.9,SNR=28						
AAK	**Ala-Archa**	**123.35**	**302**	PKP	**PKPdf**	**05 43 39.9**	**-0.7**
	comp=Z,4.0nm,0.8s,baz=74,slow=2.5,SNR=4.9						
KBL	**Kabul**	**124.86**	**291**		**PKPdf**	**05 43 44.0**	**+0.1**
KBL	**Kabul**	**124.86**	**291**	PKIKP	**PKPdf**	**05 43 44.0**	**+0.1**
SIMJ	**Simiganj**	**126.19**	**296**		**PKPdf**	**05 43 46.3**	**+0.1**
KKAR	**Karatay Array**	**126.29**	**302**		**PKPdf**	**05 43 45.1**	**-1.0**
KKAR	**Karatay Array**	**126.29**	**302**	PKIKP	**PKPdf**	**05 43 45.1**	**-1.0**
TULEG	**Thule**	**127.06**	**16**		**PKPdf**	**05 43 46.2**	**-0.3**
BVAR	**Borovoye Array**	**128.24**	**314**	PKP	**PKPdf**	**05 43 48.6**	**-0.8**
	comp=Z,3.7nm,0.6s,baz=72,slow=0.5,SNR=13						
KBS	**Kingsbay**	**134.39**	**357**		**PKiKP**	**05 44 03.1**	**+1.3**
KBS	**Kingsbay**	**134.39**	**357**	c *i*PKIKP	**PKPdf**	**05 44 01.9**	**+1.5**
KBS				pmax	pmax		
	comp=Z,14nm,0.7s						
ABKAR	**Akbulak array**	**134.48**	**308**		**PKPdf**	**05 44 01.2**	**-0.1**
SPITS	**Spitsbergen Ar**	**134.88**	**356**	PKP	**PKPdf**	**05 44 00.7**	**-0.6**
	comp=Z,2.2nm,0.7s,baz=80,slow=5.2,SNR=6.2						
ARTI	**Arti**	**135.25**	**318**		**PKPdf**	**05 44 03.3**	**+0.8**
ARTI	**Arti**	**135.25**	**318**	*i* PKIKP	**PKPdf**	**05 44 01.8**	**-0.7**
ARTI				SS	SS	06 04 26.1	-8.0
ARCES	**ARCESS Array B**	**141.60**	**347**	PKhKP	PKPpre	05 44 06.5	
	comp=Z,2.0nm,0.7s,baz=29,slow=2.8,SNR=8.3						
ARCES				PKP	**PKPdf**	**05 44 14.8**	**+0.9**
	comp=Z,2.5nm,0.8s,baz=60,slow=2.9,SNR=7.3						
BELG	**Belogornoye**	**142.05**	**314**	*i* PKIKP	**PKPdf**	**05 44 12.8**	**-2.3**
AKT	**Akhty**	**142.71**	**296**	*e*PKHKP	PKPpre	05 44 11.8	
AKT				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KLMR	**Klimovskoe**	**143.28**	**330**	*e*PKIKP	PKPbc	05 44 14.5	+0.4
KLMR				pmax	pmax		
	comp=Z,28nm,1.4s						
GNI	**Garni**	**144.90**	**293**	c *i*PKIKP	PKPbc	05 44 20.6	+0.6
GNI				pmax	pmax		
	comp=Z,38nm,1.7s						
VRH	**Novokhopyorsk**	**145.89**	**313**	*e*PKIKP	**PKPdf**	**05 44 19.1**	**-2.7**
VRH				pmax	pmax		
	comp=Z,80nm,0.9s						
GOF	**Gofitskoye**	**146.09**	**302**	c*e*PKP2	**PKPdf**	**05 44 22.2**	**-0.2**
KBZ	**Khabaz**	**146.29**	**300**	PKPbc	**PKPdf**	**05 44 23.2**	**+0.5**
	comp=Z,9.9nm,0.9s,baz=108,slow=0.9,SNR=20						
KBZ	**Khabaz**	**146.29**	**300**	c *i*PKP2	**PKPdf**	**05 44 23.1**	**+0.3**
KIV	**Kislovodsk**	**146.43**	**300**	⇑*e*PKP2	**PKPdf**	**05 44 24.2**	**+1.0**
KIV				pmax	pmax		
	comp=Z,15nm,1.0s						
SHA1	**Shidzhatmaz**	**146.46**	**300**	*i* PKIKP	**PKPdf**	**05 44 21.5**	**-1.9**
MOS	**Moscow**	**146.59**	**322**	*i* PKP2	**PKPdf**	**05 44 22.6**	**-0.3**
MOS				pmax	pmax		
	comp=Z,120nm,1.2s						
VORR	**Voronezh**	**147.26**	**315**	*e*PKIKP	**PKPdf**	**05 44 22.8**	**-1.4**
VORR				pmax	pmax		
	comp=Z,40nm,0.9s						
OBN	**Obninsk**	**147.40**	**322**	c *i*PKP2	**PKPdf**	**05 44 25.3**	**+1.0**
OBN				*e*		05 47 50.2	
OBN				*e*		05 51 30.5	
OBN				pmax	pmax		
	comp=Z,112nm,1.7s						
OBN				MLR	MLR		
	comp=Z,69nm,19.0s						
VORD	**Divnogorie**	**147.43**	**314**	*e*PKIKP	**PKPdf**	**05 44 23.7**	**-0.7**
VORD				pmax	pmax		
	comp=Z,30nm,0.9s						
VSR	**Storozhevoye**	**147.43**	**314**	*e*PKHKP	PKPpre	05 44 22.0	
VSR				pmax	pmax		
	comp=Z,50nm,1.0s						
PUL	**Pulkovo**	**147.63**	**333**	*i* PKIKP	**PKPdf**	**05 44 24.4**	**-0.1**
PUL				pmax	pmax		
	comp=Z,76nm,0.9s						
LABN	**Labinsk**	**147.77**	**302**	*e*PKIKP	**PKPdf**	**05 44 24.2**	**-1.1**
LABN				*i*		05 44 28.2	
LABN				*e*		05 51 31.4	
LABN				pmax	pmax		
	comp=Z,35nm,0.6s						
LABN				pmax	pmax		
	comp=Z,15nm,0.5s						
ERBR	**Yeremizino-Bor**	**147.81**	**304**	*i* PKP2	**PKPdf**	**05 44 26.5**	**+1.2**
ERBR				*e*		05 51 31.4	
ERBR				pmax	pmax		
	comp=Z,67nm,1.3s						
FIA1	**FINESS Array S**	**147.93**	**338**		**PKPdf**	**05 44 26.8**	**+1.9**
FINES	**FINESS Array B**	**147.93**	**338**		**PKPdf**	**05 44 27.0**	**+2.1**
FINES	**FINESS Array B**	**147.93**	**338**	PKPbc	**PKPdf**	**05 44 26.8**	**+1.8**
	comp=Z,31nm,0.7s,baz=82,slow=4.0,SNR=129						
SOC	**Sochi**	**148.60**	**300**	*e*PKIKP	**PKPdf**	**05 44 26.0**	**-0.6**
SOC				*e*		05 47 59.4	
SOC				*e*PPP	PPP	05 51 14.8	
SOC				*e*SS	SS	06 07 02.9	-7.2
SOC				*e*SSS	SSS	06 12 43.5	
SOC						06 42 04.1	
SOC				pmax	pmax		
	comp=Z,29nm,1.0s						
VSU	**Vasula**	**149.88**	**333**	c *i*PKHKP	PKPpre	05 44 29.5	
VSU				pmax	pmax		
	comp=Z,29nm,0.6s						
ANN	**Anapa**	**150.08**	**303**	*i* PKP2	**PKPbc**	**05 44 32.9**	**-1.0**
ANN				*e*		05 51 34.4	
ANN				pmax	pmax		
	comp=Z,61nm,0.9s						
MMAI	**Mount Meron Ar**	**151.54**	**278**	PKPbc	**PKPbc**	**05 44 37.5**	**-0.4**
	comp=Z,36nm,0.7s,baz=86,slow=4.3,SNR=30						
NC405	**NORSAR Array S**	**151.69**	**349**		**PKPbc**	**05 44 36.3**	**-1.0**
NB201	**NORSAR Array S**	**151.82**	**350**		**PKPbc**	**05 44 36.8**	**-0.8**
NB2	**NORSAR Subarra**	**151.84**	**350**	PKP	**PKPbc**	**05 44 36.3**	**-1.4**
	comp=Z,12nm,0.8s,baz=16,slow=4.0						
NOA	**NORSAR Array B**	**151.84**	**350**	PKPbc	**PKPbc**	**05 44 36.6**	**-1.1**
	comp=Z,7.8nm,0.8s,baz=14,slow=4.1,SNR=29						
MNK	**Minsk**	**152.00**	**326**	*i* PKiKP	**PKPbc**	**05 44 37.5**	**-0.6**
MNK				*i* PKiKP	**PKPbc**	**05 44 37.5**	**-0.6**
MNK				*i* PKiKP	**PKPbc**	**05 44 37.5**	**-0.6**
	baz=52						
MNK				*i* PP	**PP**	**05 48 17.7**	**-1.6**
MNK				*i* SKS	**SKSdf**	**05 51 37.9**	**-0.9**
MNK				*i* PPP	PPP	05 51 41.9	
MNK				*i* SKKS	**SKKSdf**	**06 00 23.9**	**-2.6**
MNK				*i* SS	**SS**	**06 07 46.1**	**-0.3**
MNK				*i* SSS	SSS	06 13 30.9	
MNK				*i* LQ	LQ	06 44 09.2	
MNK	**Minsk**	**152.00**	**326**	*i* PKIKP	**PKPbc**	**05 44 37.5**	**-0.6**
MNK				*i*		05 48 17.6	
MNK				*i*		05 51 37.8	
MNK				*i* PPP	PPP	05 51 41.8	
MNK				*i* SS	SS	06 07 46.1	-0.3
MNK				*i* SSS	SSS	06 13 30.8	
NAO01	**NORSAR Array S**	**152.07**	**350**		**PKPbc**	**05 44 37.7**	**-0.5**
NC602	**NORSAR Array S**	**152.08**	**349**		**PKPbc**	**05 44 37.0**	**-1.1**
NACGM	**Naroch**	**152.25**	**328**	*e*PKiKP	**PKPbc**	**05 44 37.9**	**-0.8**
	comp=Z,27nm,0.8s,baz=50						
HFS	**Hagfors**	**152.27**	**347**	PKPbc	**PKPbc**	**05 44 37.2**	**-1.4**
	comp=Z,14nm,0.8s,baz=101,slow=1.5,SNR=30						
SIM	**Simferopol'**	**152.36**	**304**	*i* PKIKP	**PKPbc**	**05 44 37.2**	**-2.1**
SIM				pmax	pmax		
	comp=Z,40nm,1.1s						
DBIC	**Dimbokro**	**152.57**	**167**	PKPbc	**PKPbc**	**05 44 40.5**	**-0.2**
	comp=Z,4.9nm,0.8s,baz=338,slow=4.4,SNR=3.9						
PABE	**Paberze**	**153.04**	**331**		**PKPdf**	**05 44 31.9**	**-1.1**
ILGA	**Ilgaz**	**153.27**	**296**		**PKPbc**	**05 44 41.6**	**-0.2**
AKASG	**Malin Array Be**	**153.40**	**318**		**PKPbc**	**05 44 40.8**	**-0.6**
AKASG	**Malin Array Be**	**153.40**	**318**	PKPbc	**PKPbc**	**05 44 40.5**	**-0.8**
	comp=Z,4.7nm,0.7s,baz=68,slow=2.3,SNR=26						
AKASG	**Malin Array Be**	**153.40**	**318**	PKIKP	**PKPbc**	**05 44 40.8**	**-0.6**
AKBB	**Malin Array Si**	**153.40**	**318**		**PKPbc**	**05 44 40.5**	**-0.9**
AKBB	**Malin Array Si**	**153.40**	**318**	PKIKP	**PKPbc**	**05 44 40.5**	**-0.9**
KIEV	**Kiev**	**153.41**	**318**		**PKPbc**	**05 44 40.5**	**-0.9**
KIEV	**Kiev**	**153.41**	**318**	PKIKP	**PKPbc**	**05 44 40.5**	**-0.9**
BRTR	**Keskin Array B**	**153.43**	**293**		**PKPbc**	**05 44 39.3**	**-2.7**
BRTR	**Keskin Array B**	**153.43**	**293**	PKPbc	**PKPbc**	**05 44 40.6**	**-1.4**
	comp=Z,12nm,0.8s,baz=130,slow=3.6,SNR=45						
BRTR				PKKP		05 53 17.6	
	comp=Z,2.1nm,1.1s,baz=327,slow=8.9,SNR=3.8						
BRTR	**Keskin Array B**	**153.43**	**293**	PKIKP	**PKPbc**	**05 44 39.3**	**-2.7**
CSS	**Mathiatis**	**153.53**	**282**		**PKPbc**	**05 44 41.6**	**-0.6**
ANTO	**Ankara**	**154.07**	**293**		**PKPbc**	**05 44 43.0**	**-0.4**
ANTO	**Ankara**	**154.07**	**293**	PKIKP	**PKPbc**	**05 44 42.0**	**-1.3**
SUW	**Suwalki**	**154.41**	**329**	*e*PKP	**PKPbc**	**05 44 42.6**	**-0.8**
BUR08	**Bucovina Ar. S**	**157.19**	**315**		**PKPab**	**05 45 09.5**	**-0.6**
KWP	**Kalwaria Pacla**	**157.49**	**322**	*e*PKP	**PKPab**	**05 45 09.5**	**-1.7**
OJC	**Ojcow**	**158.54**	**326**	*e*PKP	**PKPdf**	**05 44 40.1**	**-0.5**
BSEG	**Bad Segeberg**	**158.72**	**345**	*e*PKPab	**PKPab**	**05 45 15.5**	**-0.6**
	baz=29,slow=4.3						
GORT1	**Trebel**	**159.36**	**343**	*e*PKPab	**PKPab**	**05 45 17.9**	**-1.0**
	baz=29,slow=4.3						
KSP	**Ksiaz**	**159.59**	**332**	*e*PKP	**PKPab**	**05 45 18.1**	**-2.0**
FLTG	**Flechtingen**	**159.98**	**342**	*e*PKPab	**PKPab**	**05 45 19.9**	**-1.8**
	baz=29,slow=4.3						
RETH	**Rethem/Aller,**	**160.04**	**345**	*e*PKPab	**PKPab**	**05 45 20.4**	**-1.5**
	baz=29,slow=4.3						
VYHS	**Vyhne**	**160.18**	**324**	*e*PKP2	**PKPab**	**05 45 26.2**	**+3.4**
VYHS	**Vyhne**	**160.18**	**324**	*e*PKP	**PKPab**	**05 45 26.2**	**+3.4**
CLL	**Collm**	**160.38**	**338**	⇓*e*PKIKP	**PKPdf**	**05 44 39.0**	**-3.7**
CLL				*i*		05 45 22.1	
CLL				pmax	pmax		
	comp=Z,12nm,1.0s						
CLL	**Collm**	**160.38**	**338**	*e*PKPdf	**PKPdf**	**05 44 43.0**	**+0.3**
CLL				⇓*i*PKPab	**PKPab**	**05 45 22.1**	**-1.4**
	comp=Z,12nm,1.0s						
CLL				*e*PP	PP	05 49 18.0	+12
CLL				AMS	AMS	07 09 00.0	
	comp=Z,100nm,19.5s						
BRG	**Berggiesshubel**	**160.44**	**335**	*e*PKPab	**PKPab**	**05 45 22.2**	**-1.7**
	baz=29,slow=4.3						
CLZ	**Clausthal**	**160.65**	**343**	*e*PKPab	**PKPab**	**05 45 23.4**	**-1.3**
	baz=29,slow=4.3						
IBBN	**Ibbenburen**	**160.76**	**348**	*e*PKPab	**PKPab**	**05 45 23.7**	**-1.4**
	baz=29,slow=4.3						
MODS	**Modra-Piesok**	**161.01**	**326**	*e*PKP2	**PKPab**	**05 45 27.0**	**+0.5**
MODS	**Modra-Piesok**	**161.01**	**326**	*e*PKP	**PKPab**	**05 45 27.0**	**+0.5**
GTTG	**Gottingen**	**161.02**	**343**	*e*PKPab	**PKPab**	**05 45 25.2**	**-1.1**
	baz=29,slow=4.3						
TANN	**Tannenbergstha**	**161.33**	**337**	*e*PKPab	**PKPab**	**05 45 26.7**	**-1.1**
	baz=29,slow=4.3						
MOX	**Moxa**	**161.39**	**339**	*e*PKPab	**PKPab**	**05 45 26.5**	**-1.5**
	baz=29,slow=4.3						
MOX				*e*L	L	07 04 08.0	
	comp=Z,76nm,19.5s						
BUG	**Bochum--Univer**	**161.68**	**348**	*e*PKPab	**PKPab**	**05 45 28.4**	**-0.7**
	baz=29,slow=4.3						
KASTN	**Kahler Asten**	**161.69**	**346**	*e*PKPab	**PKPab**	**05 45 26.1**	**-3.2**
	baz=29,slow=4.3						
MANZ	**Manzenberg**	**161.81**	**337**	*e*PKPab	**PKPab**	**05 45 28.4**	**-1.4**
	baz=29,slow=4.3						
ROTZ	**Rotzenmuhle**	**161.97**	**337**	*e*PKPab	**PKPab**	**05 45 29.7**	**-0.9**
	baz=29,slow=4.3						
GERES	**GERESS Array B**	**162.20**	**332**	PKP	**PKPdf**	**05 44 42.2**	**-2.7**
	comp=Z,0.2nm,0.4s,baz=90,slow=1.3,SNR=3.8						
GERES				PKPab	**PKPab**	**05 45 30.0**	**-1.7**
	comp=Z,1.1nm,0.8s,baz=33,slow=5.4,SNR=6.7						
WET	**Wettzell**	**162.26**	**334**	*e*PKPab	**PKPab**	**05 45 30.7**	**-1.2**
	baz=29,slow=4.3						
GRF	**Grafenberg Arr**	**162.35**	**338**	*e*PKPab	**PKPab**	**05 45 31.4**	**-0.8**
	baz=29,slow=4.3						
GRF				*e*L	L	07 05 01.1	
	comp=Z,97nm,18.7s						
TNS	**Taunus Mts**	**162.61**	**344**	*e*PKPab	**PKPab**	**05 45 31.5**	**-1.9**
	baz=29,slow=4.3						
BMRD	**Maredsous**	**163.15**	**352**	*d*PKP	**PKPab**	**05 45 34.4**	**-1.3**
FUR	**Furstenfeldbru**	**163.66**	**336**	*e*PKPab	**PKPab**	**05 45 36.8**	**-1.2**
	baz=29,slow=4.3						
BFO	**Black Forest**	**164.40**	**342**	*e*PKPab	**PKPab**	**05 45 39.1**	**-2.1**
	baz=29,slow=4.3						
UBR	**Ueberruh**	**164.47**	**337**	*e*PKPab	**PKPab**	**05 45 39.0**	**-2.7**
	baz=29,slow=4.3						
ESDC	**Sonseca Array**	**172.66**	**33**	PKP	**PKPdf**	**05 44 52.8**	**+0.1**
	comp=Z,0.9nm,1.0s,baz=308,slow=3.6,SNR=4.5						

SDD ***20*** *05:26:04.1±2.1, 18°.81N×69°.27W, h124^{km}±16^{km}, MD3.5, ML3.2, MW3.4*

ISC 20 05:26:01.6±3.1**, 18°.9N**±0°.1×**69°.3W**±0°.1**, h133**^{km}±17^{km}**, n11,** σ**1**^{s}.**11**/16**, 10C-3D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATOM	**Hato Mayor del**	**0.10**	**224**	⇑*e*Pg	**Pn**	**05 26 19.2**	**-0.4**
HATOM				IAML		05 27 08.9	
	comp=N,103nm,0.3s						
MIDR	**Miches**	**0.28**	**63**	⇑*e*Pg	**Pn**	**05 26 21.1**	**+1.2**
MIDR				⇑*e*Sg	**Sn**	**05 26 32.7**	**-1.1**
MIDR				IAML		05 26 34.4	
	comp=N,220nm,0.2s						
SMDR	**Samana, DR**	**0.44**	**15**	⇑*e*Pg	**Pn**	**05 26 21.3**	**+0.7**
SMDR				⇑*e*Sg	**Sn**	**05 26 35.3**	**+0.2**
SMDR				IAML		05 26 38.2	
	comp=N,209nm,0.3s						
NADR	**Nagua**	**0.71**	**314**	⇓*e*Pg	**Pn**	**05 26 23.2**	**+0.9**
NADR				⇑*e*Sg	**Sn**	**05 26 36.5**	**-1.5**
NADR				IAML		05 26 38.9	
	comp=N,576nm,0.2s						
BANI	**BANI**	**1.10**	**245**	⇑*e*Pg	**Pn**	**05 26 26.6**	**+0.8**
BANI				⇑*e*Sg	**Sn**	**05 26 43.4**	**-0.7**
BANI				IAML		05 26 50.4	
	comp=N,3µm,0.1s						
ABDR	**Alto Bandera**	**1.25**	**268**	⇑*e*Pg	**Pn**	**05 26 27.2**	**-0.3**
ABDR				⇓*e*Sg	**Sn**	**05 26 47.2**	**-0.1**
ABDR				IAML		05 26 47.5	
	comp=N,1µm,0.1s						
SDDR	**Presa de Saban**	**1.88**	**274**	⇓*e*Pg	**Pn**	**05 26 36.8**	**+2.6**
SDDR				⇑*e*Sg	**Sn**	**05 26 59.3**	**+0.1**
SDDR				IAML		05 27 12.3	
	comp=N,100nm,0.2s						
MASC	**Masc**	**4.82**	**287**	*e*S	Sn	05 27 37.8	-30
MASC	**Masc**	**4.82**	**287**	*e*P	**Pn**	**05 27 12.4**	**+0.1**
QMBU	**Quimbuelo**	**5.36**	**285**	*e*P	**Pn**	**05 27 19.1**	**-0.4**
RCC	**Rio Carpintero**	**6.13**	**282**	*e*P	**Pn**	**05 27 29.4**	**-0.5**

SSNC ***20*** *05:26:37.5±1.5, 19°.89N×71°.94W, h5^{km}, MD3.3, ML2.5*
OSPL ***20*** *05:26:37.4±2.8, 18°.71N×70°.14W, h61^{km}±26^{km}, ML2.7*

ISC 20 05:26:36.0±3.9**, 18°.72N**±0°.08×**70°.2W**±0°.1**, h64**^{km}±33^{km}**, n8,** σ**1**^{s}.**34**/15**, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SDD	**Santo Domingo**	**0.35**	**137**	*i* P	**Pn**	**05 26 48.0**	**+1.0**
SDD				*e*S	**Sn**	**05 26 54.4**	**-0.5**
SC01	**Santiago de lo**	**0.88**	**323**	*i* P	**Pn**	**05 26 51.4**	**-1.4**
SC01				IAML		05 26 56.5	
	comp=Z,69nm,0.2s						
SDDR	**Presa de Saban**	**1.09**	**284**	*e*P	**Pn**	**05 26 56.8**	**+1.3**
SDDR				*e*S	**Sn**	**05 27 09.9**	**-0.1**
SDDR				IAML		05 27 11.7	
	comp=Z,105nm,0.2s						
SDDR				IAML		05 27 11.8	
	comp=Z,113nm,0.2s						
SDDR	**Presa de Saban**	**1.09**	**284**	*i* P	**Pn**	**05 26 57.3**	**+1.8**
SDDR				*e*S	**Sn**	**05 27 10.4**	**+0.4**
SDDR				IAML		05 27 13.4	
	comp=Z,74nm,0.2s						
PODR	**Polo**	**1.19**	**243**	*i* P	**Pn**	**05 26 56.4**	**-0.5**
PODR				*e*S	**Sn**	**05 27 10.1**	**-2.4**
LODU1	**El Espartillar**	**1.29**	**254**	*i* P	**Pn**	**05 26 58.7**	**+0.7**
LODU1				*e*S	**Sn**	**05 27 14.8**	**+0.2**
LODU1				IAML		05 27 18.4	
	comp=Z,129nm,0.4s						
LOVI	**El Cajuil, Ovi**	**1.46**	**231**	*i* P	**Pn**	**05 27 00.5**	**+0.2**
LOVI				*e*S	**Sn**	**05 27 16.6**	**-2.0**
LOVI				IAML		05 27 19.5	
	comp=Z,121nm,1.0s						
LOBH	**Bahia de las A**	**1.64**	**239**	*i* P	**Pn**	**05 27 03.4**	**+0.8**
LOBH				*e*S	**Sn**	**05 27 23.5**	**+0.7**
LOBH				IAML		05 27 32.8	
	comp=Z,72nm,1.4s						

WEL 20 05:30:13.4±1.3**, 34°S**±30°×**17°9W**±4°5**, h33**^{km}**, M4.4**/18**, mB5.0**/10**, ML5.0**/15**, MLv4.4**/18**, Mw(mB)4.4**/10**, Error ellipse: s-maj=69.6km s-min=11.1km az=123.3, confirmed, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**4.80**	**207**	P	Pn	05 31 25.0	+1.6
PKGZ	**Pakihiroa**	**4.98**	**209**	P	Pn	05 31 25.6	-0.2
HAZ	**Te Kaha**	**5.01**	**212**	P	Pn	05 31 28.2	+1.9
RUGZ	**Raukumara Rang**	**5.23**	**212**	P	Pn	05 31 29.8	+0.4
TWGZ	**Tauwhareparae**	**5.28**	**208**	P	Pn	05 31 31.3	+1.3
CNGZ	**Carnagh Statio**	**5.47**	**205**	P	Pn	05 31 33.1	+0.6
TKGZ	**Te Karaka**	**5.56**	**208**	P	Pn	05 31 33.8	0.0
MWZ	**Matawai**	**5.60**	**211**	P	Pn	05 31 35.5	+1.0
MWZ				S	Sn	05 32 40.6	+2.9
RAGZ	**Rawiri**	**5.79**	**210**	P	Pn	05 31 37.3	+0.3
RIGZ	**Rimuhau**	**5.83**	**207**	P	Pn	05 31 37.1	-0.4
PRGZ	**Paritu Road**	**5.97**	**205**	P	Pn	05 31 38.5	-1.0
SNGZ	**Shannon Statio**	**6.06**	**209**	P	Pn	05 31 39.9	-0.8
MHGZ	**Mahia Peninsul**	**6.17**	**204**	P	Pn	05 31 42.0	-0.2
RAHZ	**Arahi**	**6.28**	**210**	P	Pn	05 31 43.3	-0.4
RAHZ				S	Sn	05 32 53.8	-0.5
MTHZ	**Maungataniwha**	**6.33**	**212**	P	Pn	05 31 44.4	0.0
MTHZ				S	Sn	05 32 56.2	+0.6

WHHZ	Waihua	6.35	209	P	Pn	05 31 45.1	+0.4
NMHZ	Naumai	6.55	211	P	Pn	05 31 45.9	-1.6
NMHZ				S	Sn	05 33 01.1	+0.1
ARHZ	Aropaoanui	6.61	209	P	Pn	05 31 46.8	-1.4
KWHZ	Kaweka Forest	6.99	212	P	Pn	05 31 52.2	-1.3

*IDC **20** 05:30:50.7±0.9, 33°.00S×178°.82W, h0^{km}, mb4.2/4, mbtmp4.2/4, Error ellipse: s-maj=35.9km s-min=28.1km az=69.0*

*NEIC **20** 05:30:51.5±0.5, 33°.79S±0°.08×178°.6W±0°.2, h10^{km}±1^{km}, mb4.4/12, Error ellipse: s-maj=30.4km s-min=9.6km az=72.0*

*WEL **20** 05:30:55.9±1.4, 34°S±10°×17°9W±1°5, h33^{km}, M4.5/12, mB5.0/9, ML4.9/13, MLv4.7/12, Mw(mB)4.3/9, Error ellipse: s-maj=20.7km s-min=11.2km az=108.9, confirmed*

ISC 20 05:30:54.5±0.8**, 33°.70S**±0°.07×**178°.6W**±0°.1**, h35^{km}, n45, σ0^{s}.76**/48**, mb4.4**/9**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	4.46	7	Pn	Pn	05 32 00.5	+0.8
PKGZ	Pakihiroa	4.98	212	P	Pn	05 32 07.8	+1.0
PUZ	Puketiti	5.08	210	P	Pn	05 32 09.3	+1.1
RUGZ	Raukumara Rang	5.25	215	P	Pn	05 32 11.3	+0.7
CNGZ	Carnagh Statio	5.45	208	P	Pn	05 32 14.1	+0.9
TKGZ	Te Karaka	5.56	211	P	Pn	05 32 14.8	+0.1
MWZ	Matawai	5.61	213	P	Pn	05 32 16.4	+0.8
URZ	Urewera	5.75	216	Pn	Pn	05 32 17.2	-0.2
	11nm,0.3s,baz=33,slow=7.3,SNR=12						
URZ				Sn	Sn	05 33 23.0	+0.8
	11nm,0.3s,baz=162,slow=18,SNR=3.8						
RAGZ	Rawiri	5.80	213	P	Pn	05 32 18.7	+0.6
RIGZ	Rimuhau	5.82	210	P	Pn	05 32 17.8	-0.5
PRGZ	Paritu Road	5.96	208	P	Pn	05 32 20.4	+0.2
PRGZ				S	Sn	05 33 27.0	-0.2
SNGZ	Shannon Statio	6.07	212	P	Pn	05 32 21.2	-0.5
MUGZ	Murupara	6.09	217	P	Pn	05 32 22.3	+0.3
MUGZ				S	Sn	05 33 31.0	+0.4
WCZ	Waipu Caves	6.26	247	P	Pn	05 32 24.6	+0.3
RAHZ	Arahi	6.29	213	P	Pn	05 32 24.8	0.0
RAHZ				S	Sn	05 33 35.5	+0.1
PRRZ	Plateau Road	6.30	219	P	Pn	05 32 25.3	+0.3
MTHZ	Maungataniwha	6.35	215	P	Pn	05 32 25.9	+0.3
MTHZ				S	Sn	05 33 37.3	+0.3
WHHZ	Waihua	6.36	211	P	Pn	05 32 25.1	-0.5
OUZ	Omahuta	6.66	255	P	Pn	05 32 31.3	+1.4
MSVF	Nonsavu	16.18	348	Pn	Pn	05 34 38.9	-0.5
CTAO	Charters Tower	34.01	284	P	P	05 37 36.7	+1.4
CTAO				IAmb	IAmb	05 37 54.7	
	comp=Z,6.8nm,1.0s						
BBOO	Buckleboo	37.73	258	P	P	05 38 06.2	-0.8
COEN	Coen	39.84	290	P	P	05 38 22.9	-2.0
AS31	Alice Springs	42.57	271	P	P	05 38 46.2	-1.0
AS31				IAmb	IAmb	05 38 47.5	
	comp=Z,1.6nm,0.7s						
ASAR	Alice Springs	42.57	271	P	P	05 38 46.2	-1.1
ASAR	Alice Springs	42.57	271	P	P	05 38 46.5	-0.8
	comp=Z,4.5nm,0.7s,baz=114,slow=7.3,SNR=19						
	comp=Z,4.5nm,0.7s						
WR0	Warramunga Arr	43.68	276	P	P	05 38 55.4	-0.9
WR0				IAmb	IAmb	05 38 57.5	
	comp=Z,9.1nm,1.1s						
WR8	Warramunga Arr	43.72	276	P	P	05 38 55.9	-0.6
WR8				IAmb	IAmb	05 39 08.9	
	comp=Z,8.2nm,1.1s						
WB2	Warramunga Arr	43.85	276	P	P	05 38 57.0	-0.6
WB2				IAmb	IAmb	05 38 57.4	
	comp=Z,6.6nm,0.6s						
WRA	Warramunga Arr	43.86	276	P	P	05 38 56.9	-0.8
WRA	Warramunga Arr	43.86	276	P	P	05 38 56.9	-0.8
	comp=Z,6.1nm,0.7s,baz=117,slow=7.5,SNR=19						
	comp=Z,6.1nm,0.7s						
WB0	Warramunga Arr	43.90	276	P	P	05 38 57.3	-0.6
VNDA	Vanda	44.78	186	P	P	05 39 10.6	+6.4
	comp=Z,0.3nm,0.3s,baz=28,slow=3.5,SNR=6.2						
	comp=Z,0.3nm,0.3s						
FITZ	Fitzroy Crossi	51.97	273	P	P	05 39 59.2	-1.2
QSPA	South Pole Qui	56.42	180		P	05 40 32.7	+0.3
QSPA				IAmb	IAmb	05 40 47.5	
	comp=Z,6.0nm,1.0s						
QSPA	South Pole Qui	56.42	180	P	P	05 40 39.1	+6.7
	comp=Z,1.5nm,0.7s,baz=203,slow=2.0,SNR=6.5						
	comp=Z,1.5nm,0.7s						
KURBB	Kurchatov Arra	122.98	312	PKP	PKPdf	05 49 46.1	-0.5
	comp=Z,0.8nm,0.6s,baz=112,slow=2.1,SNR=6.0						
ARCES	ARCESS Array B	141.69	347	PKP	PKPdf	05 50 22.6	+1.4
	comp=Z,2.0nm,0.8s,baz=47,slow=5.3,SNR=3.8						
FINES	FINESS Array B	148.04	338	PKPbc	PKPbc	05 50 35.4	-0.2
	comp=Z,4.8nm,0.6s,baz=77,slow=4.1,SNR=18						
MMAI	Mount Meron Ar	151.70	278	PKPbc	PKPbc	05 50 45.6	+0.1
	comp=Z,3.0nm,0.5s,baz=55,slow=7.2,SNR=5.2						
NB2	NORSAR Subarra	151.92	350	PKP	PKiKP	05 50 45.4	0.0
	comp=Z,1.0nm,0.8s,baz=17,slow=2.6						
NOA	NORSAR Array B	151.92	350	PKPbc	PKiKP	05 50 45.4	0.0
	comp=Z,0.8nm,0.5s,baz=14,slow=4.1,SNR=7.4						
HFS	Hagfors	152.35	347	PKPbc	PKPbc	05 50 45.9	-0.1
	comp=Z,1.7nm,0.6s,baz=93,slow=10,SNR=4.8						
AKASG	Malin Array Be	153.54	318	PKPbc	PKiKP	05 50 49.5	+0.5
	comp=Z,0.8nm,0.6s,baz=74,slow=2.1,SNR=4.1						
BRTR	Keskin Array B	153.59	293	PKPbc	PKPbc	05 50 49.5	-0.1
	comp=Z,1.7nm,0.8s,baz=113,slow=2.5,SNR=7.5						

IDC 20 05:49:29.1±1.7**, 33°.48S×178°.82W, h0^{km}, mb4.0**/2**, mbtmp4.1**/3**, ML4.1**/1**, Error ellipse: s-maj=49.9km s-min=32.4km az=102.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	5.80	214	Pn	Pn	05 50 56.0	-0.3
	4.8nm,0.3s,baz=14,slow=4.2,SNR=15						
URZ				Sn	Sn	05 52 03.1	-0.5
	6.3nm,0.3s,baz=160,slow=20,SNR=7.1						
	34nm,0.5s						
WRA	Warramunga Arr	43.62	276	P	P	05 57 35.7	+0.4
	2.2nm,0.8s,baz=118,slow=7.4,SNR=6.7						
	2.2nm,0.8s						
QSPA	South Pole Qui	56.64	180	P	P	05 59 14.3	+0.6
	1.5nm,1.1s,baz=24,slow=10.0,SNR=2.0						
	1.5nm,1.1s						
FINES	FINESS Array B	147.76	338	PKPbc	PKPbc	06 09 14.3	-0.6
	1.3nm,0.6s,baz=56,slow=3.4,SNR=8.9						
BRTR	Keskin Array B	153.30	293	PKPbc	PKPbc	06 09 28.1	-1.2
	0.5nm,0.7s,baz=59,slow=3.5,SNR=4.0						

*IDC **20** 05:52:28.8±1.3, 2°.34S×138°.60E, h0^{km}, mb3.4/3, mbtmp3.4/5, ML3.2/2, Error ellipse: s-maj=26.6km s-min=17.7km az=2.0*

*DJA **20** 05:52:32.0±1.1, 2°S±13°×13°9E±°, h17^{km}±7^{km}, M3.5/5, MLv3.5/5*

ISC 20 05:52:33.5±0.9**, 2°.4S**±0°.1×**138°.57E**±0°.05**, h32^{km}, n10, σ0^{s}.64**/12**, mb3.5**/3**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.47	18	P	Pb	05 52 38.3	-5.3
GENI	Genyem	1.60	95	P	Pn	05 52 59.6	-0.1
JAY	Jayapura	2.14	92	Pn	Pn	05 53 06.7	-0.4
	1.7nm,0.3s,baz=209,slow=13,SNR=5.5						
JAY				Lg	Lg	05 53 35.5	
	2.7nm,0.3s,baz=9.2,slow=24,SNR=4.5						
	26nm,1.1s						
JAY	Jayapura	2.14	92	P	Pn	05 53 07.0	0.0
JAY				S	Sn	05 53 33.4	+0.9
SRPI	Serui, Papua	2.39	284	P	Pn	05 53 10.1	-0.5
SRPI				S	Sn	05 53 39.1	+0.3
BAKI	Biak	2.75	297	P	Pn	05 53 16.2	+0.7
BAKI				S	Sn	05 53 47.5	-0.2
WRA	Warramunga Arr	17.88	193	P	Pn	05 56 39.8	-0.2
	0.2nm,0.3s,baz=15,slow=12,SNR=10						
	0.5nm,0.4s						
ASAR	Alice Springs	21.58	192	P	P	05 57 21.1	+0.4
	1.5nm,0.8s,baz=22,slow=11,SNR=13						
	1.5nm,0.8s						
MKAR	Makanchi Array	69.49	322	P	P	06 03 39.7	+0.7
	0.2nm,0.5s,baz=129,slow=9.6,SNR=3.8						
	0.2nm,0.5s						
ILAR	Eielson Array	85.65	24	P	P	06 05 07.7	-1.1
	0.3nm,0.9s,baz=252,slow=4.9,SNR=4.6						
	0.3nm,0.9s						

*RSNC **20** 05:55:22.1±0.3, 0°N±2°×7°7W±°, h0^{km}, M3.3, ML3.2, MLv3.7*

*IGQ **20** 05:55:22.0±0.2, 0°N±1°×7°7W±°, h2^{km}±1^{km}, MLv3.4/24*

ISC 20 05:55:22.6±0.8**, 0°.27N**±0°.02×**77°.40W**±0°.02**, h13^{km}**±6^{km}**, n63, σ1^{s}.06**/86**, 7C-26D, Colombia-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CASC	Dorado de Casc	0.15	157	⇑P	Pg	05 55 25.9	-0.4
CASC				S	Sg	05 55 28.7	-0.3
BONI	La Bonita	0.22	323	⇑P	Pg	05 55 27.2	-0.4
BONI				S	Sg	05 55 30.9	-0.1
BONI	La Bonita	0.22	323	P	Pg	05 55 27.2	-0.4
BONI				S	Sg	05 55 31.2	+0.2
AV03	Acelerografo,	0.23	161	⇓P	Pg	05 55 26.9	-0.8
AV03				S	Sg	05 55 30.4	-0.8
REVN	San Rafael	0.41	213	⇓P	Pg	05 55 30.2	-0.8
REVN				S	Sg	05 55 36.4	-0.2
LAV4	Lava4-Reventad	0.43	213	⇓P	Pg	05 55 30.6	-0.7
REVS	Reventador Sur	0.44	211	⇓P	Pg	05 55 30.7	-0.7
REVS				S	Sg	05 55 37.2	-0.1
APS1	Acelerografo,	0.51	110	⇑P	Pg	05 55 31.6	-1.0
TULM	Tulcn-Chalpat	0.59	318	⇑P	Pg	05 55 33.5	-0.7
TULM				S	Sg	05 55 41.6	-0.5
TULM	Tulcn-Chalpat	0.59	318	P	Pg	05 55 33.5	-0.7
TULM				S	Sg	05 55 41.7	-0.5
ATUL	Tulcn	0.59	327	P	Pg	05 55 33.5	-0.7
CAYA	Cayambe	0.63	251	⇓P	Pg	05 55 34.5	-0.5
CAYA				S	Sg	05 55 43.4	+0.1
ANGU	Angureal	0.65	250	⇓P	Pg	05 55 34.9	-0.5
CAYR	Refugio Cayamb	0.66	247	⇑P	Pg	05 55 35.1	-0.6
CAYR				S	Sg	05 55 44.2	-0.3
YAHU	Yahuarcocha	0.68	278	⇓P	Pg	05 55 35.4	-0.6
CHL2	Volc¡n Chiles	0.74	315	⇑P	Pg	05 55 36.2	-0.9
LNGL	El Angel-Carch	0.76	307	P	Pg	05 55 35.7	-1.9
CMBC	Cumbal	0.79	327	P	Pg	05 55 37.6	-0.5
CMBC				S	Sb	05 55 49.5	+0.4
CMBC	Cumbal	0.79	327	P	Pg	05 55 37.5	-0.5
CMBC				S	Sb	05 55 50.1	+0.9
IMBA	Imbabura, San	0.80	270	⇓P	Pg	05 55 38.4	+0.1
URCU	Urcuqui	0.88	281	⇓P	Pg	05 55 39.3	-0.3
COTA	Cotacachi	0.94	274	⇓P	Pg	05 55 40.8	-0.2
GCUF	Volcan Galeras	0.95	3	P	Pg	05 55 39.5	-1.5
GCUF				S	Sg	05 55 52.4	-1.1
CUIC	Cuicocha-Domo	0.96	272	⇓P	Pg	05 55 40.8	-0.5
CUSE	Cuicocha Este	1.00	272	⇓P	Pg	05 55 41.3	-0.8
CUSE	Cuicocha Este	1.00	272	P	Pg	05 55 41.2	-0.8
CUSE				S	Sb	05 55 56.0	+0.7
AV11	Acelerografo,	1.03	251	P	Pb	05 55 42.9	+0.5
ANTI	Antisana	1.05	227	P	Pg	05 55 41.0	-1.9
OTAV	Otavalo	1.05	268	S	Sg	05 55 57.2	+0.3
OTAV	Otavalo	1.05	268	P	Pg	05 55 41.5	-1.5
OTAV				S	Sg	05 55 56.9	0.0
ANTS	Antisana-Sarah	1.09	225	P	Pg	05 55 42.3	-1.4
ALIT	Ecuador-Imbabu	1.09	298	P	Pg	05 55 42.4	-1.3
LITE1	Lita	1.09	298	⇓P	Pg	05 55 41.4	-2.3
PULU	Pululahua	1.13	257	⇓P	Pg	05 55 43.3	-1.2
ANTG	Antisana-Guama	1.15	228	⇓P	Pg	05 55 43.4	-1.5
FENY	Casa Vinicio C	1.16	249	P	Pb	05 55 45.1	+0.4
YANA	Yana	1.24	252	P	Pg	05 55 45.5	-1.0
GGPC	Guagua Pichinc	1.28	249	P	Pg	05 55 46.5	-0.8
PINO	Pino	1.28	251	⇓P	Pg	05 55 46.4	-1.0
TERV	Terraza Guagua	1.29	250	⇓P	Pg	05 55 46.4	-1.0
TOMA	Boca Toma-Volc	1.29	234	⇓P	Pg	05 55 46.5	-1.0
JUA2	San Juan 2	1.30	248	⇓P	Pg	05 55 46.4	-1.3
GGPT	Toaza - Volcan	1.32	248	⇓P	Pg	05 55 46.7	-1.3
CRUC	La Cruz	1.36	19	P	Pg	05 55 46.5	-2.3
CRUC				S	Sg	05 56 04.9	-1.7
TAMB	Tambo	1.37	225	⇓P	Pg	05 55 47.7	-1.3
BTAM	Cotopaxi Volca	1.38	227	⇓P	Pg	05 55 47.9	-1.2
PAC1	Pacto, Paraso	1.40	270	⇓P	Pn	05 55 47.4	-0.4
PAC1	Pacto, Paraso	1.40	270	P	Pn	05 55 47.4	-0.4
PAC1				S	Sg	05 56 06.3	-1.3
PIAT	Ana Tenorio	1.53	214	P	Pb	05 55 53.5	+2.5
PIAT				S	Sg	05 56 09.3	-2.7
BBAC	Balboa, Cauca	1.74	5	⇓P	Pn	05 55 53.0	+0.3
BBAC	Balboa, Cauca	1.74	5	P	Pn	05 55 53.0	+0.3
BBAC				S	Sb	05 56 17.7	+1.3
BV15	Puerto Quito-O	1.83	266	P	Pb	05 55 55.8	-0.1
BULB	Ulba Tungurahu	1.98	211	⇓P	Pn	05 55 57.0	+0.9
POND	Pondoa	1.99	212	P	Pn	05 55 56.1	-0.1
JUI6	Juive	2.00	212	⇓P	Pn	05 55 57.3	+1.0
ARRY	Arrayan	2.06	211	P	Pn	05 55 57.9	+0.7
BMAS	Trigal station	2.07	212	⇑P	Pn	05 55 56.3	-1.0
FLOC	Florencia	2.17	53	P	Pn	05 55 59.1	+0.6
FLOC	Florencia	2.17	53	P	Pn	05 55 59.2	+0.7
FLOC				S	Sn	05 56 27.4	+2.1
PORT	Chimborazo Vol	2.21	219	P	Pb	05 56 02.6	-0.1
POPC	Popayan, Colom	2.36	18	P	Pn	05 56 03.2	+2.0
POPC				S	Sb	05 56 34.7	+0.4
PTLC	Puerto Leguiza	2.60	92	P	Pn	05 56 05.4	+1.1
PTLC				S	Sn	05 56 34.6	-1.2
GARC	Garzon, Huila	2.69	45	P	Pn	05 56 04.6	-1.1
GARC				S	Sb	05 56 44.4	+0.7

*ASRS **20** 05:59:10.0±0.5, 54°.20N×86°.39E, h0^{km}, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 20 05:59:13.2±2.7**, 54°.20N×86°.39E, h0^{km}, mbtmp3.0**/2**, ML2.7**/2**, Error ellipse: s-maj=22.2km s-min=13.0km az=56.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.96	255	I	I	06 05 42.5	
	baz=73,slow=316,SNR=7.9						
ZALV	Zalesovo Beam	0.96	255	Pg	Pg	05 59 30.4	-1.2
	2.0nm,0.3s,baz=73,slow=17,SNR=13						
ZALV				Lg	Lg	05 59 45.4	
	3.7nm,0.3s,baz=76,slow=29,SNR=8.6						
KURBB	Kurchatov Arra	6.00	236	Pn	Pn	06 00 44.2	+1.1
	0.2nm,0.3s,baz=52,slow=13,SNR=5.8						
	0.7nm,0.4s						
MKAR	Makanchi Array	7.86	201	Pn	Pn	06 01 09.8	+1.0
	0.2nm,0.3s,baz=24,slow=14,SNR=6.9						
	0.3nm,0.4s						

*DJA **20** 06:00:55.7±0.8, 2°N±5°×12°2E±°, h10^{km}, M3.9/7, MLv3.9/7*

*IDC **20** 06:00:59.6±9.0, 1°.13N×123°.33E, h0^{km}, mb3.7/3, mbtmp3.9/4, ML4.8/1, Error ellipse: s-maj=150.8km s-min=118.9km az=116.0*

ISC 20 06:00:53.3±2.0**, 2°.1N**±0°.2×**122°.1E**±0°.1**, h35^{km}, n9, σ1^{s}.60**/11**, mb3.8**/3**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSI	Marisa	1.59	187	P	Pn	06 01 18.6	-0.4
MRSI				S	Sn	06 01 36.7	-1.7
KMSI	Cibinong	2.37	129	P	Sn	06 01 59.0	+1.5
MPSI	Mapaga	2.82	232	P	Pn	06 01 37.6	+1.7
APSI	Ampana	3.00	189	P	Pn	06 01 39.3	+0.9
LUWI	Luwuk	3.16	168	P	Pn	06 01 41.4	+0.9
LUWI				S	Sn	06 02 19.6	+2.6
FITZ	Fitzroy Crossi	20.34	170	P	P	06 05 25.6	-1.1
	2.1nm,0.3s,baz=9.3,slow=8.1,SNR=43						
	6.8nm,0.4s						
WRA	Warramunga Arr	24.94	152	P	P	06 06 11.9	-1.6
	2.0nm,0.8s,baz=329,slow=11,SNR=13						
	2.0nm,0.8s						
ASAR	Alice Springs	28.03	157	P	P	06 06 41.0	-0.3
	0.4nm,0.7s,baz=342,slow=8.8,SNR=4.3						
	0.4nm,0.7s						
STKA	Stephens Creek	38.48	153	P	P	06 08 11.9	-0.3
	1.0nm,0.5s,baz=328,slow=14,SNR=2.9						
	1.0nm,0.5s						

*IDC **20** 06:28:57.9±1.1, 28°.43N×104°.82E, h0^{km}, mb3.8/6, mbtmp3.8/8, ML3.7/1, MS2.6/1, Error ellipse: s-maj=27.8km s-min=20.7km az=69.0*

ISC 20 06:29:00.7±1.0**, 28°.5N**±0°.1×**104°.8E**±0°.2**, h19^{km}, n8, σ0^{s}.85**/8**, mb3.7**/6**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	11.31	210	Pn	Pn	06 31 41.1	-0.2
	1.4nm,0.2s,baz=27,slow=13,SNR=4.2						
CMAR				LR	LR	06 36 45.5	
	comp=Z,29nm,20.3s,baz=30,slow=41						
SONM	Songino Array	19.39	3	P	Pn	06 33 25.9	-0.8
	0.2nm,0.3s,baz=170,slow=9.0,SNR=3.8						
	0.4nm,0.3s						
KSRS	Korea Array	21.33	59	P	P	06 33 47.0	+0.5
	1.7nm,0.7s,baz=252,slow=9.3,SNR=6.9						
	1.7nm,0.7s						
MKAR	Makanchi Array	25.42	322	P	P	06 34 27.0	0.0
	1.5nm,0.7s,baz=129,slow=11,SNR=14						
	1.5nm,0.7s						
USRK	Ussuriysk Ar.	26.79	47	P	P	06 34 39.2	-0.2
	2.9nm,0.6s,baz=248,slow=9.4,SNR=7.7						
	2.9nm,0.6s						
KURBB	Kurchatov Arra	29.74	325	P	P	06 35 06.4	+0.7
	0.5nm,0.4s,baz=133,slow=10,SNR=5.3						
	0.5nm,0.4s						
WRA	Warramunga Arr	55.94	146	P	P	06 38 36.7	-1.0
	0.8nm,0.8s,baz=326,slow=9.4,SNR=4.5						
	0.8nm,0.8s						
ASAR	Alice Springs	58.91	149	P	P	06 38 59.7	+1.0
	0.2nm,0.4s,baz=335,slow=8.7,SNR=2.2						
	0.2nm,0.4s						

*IDC **20** 06:43:23.7±3.1, 33°.64S×178°.74W, h0^{km}, mb3.7/2, mbtmp3.8/3, ML3.9/1, Error ellipse: s-maj=72.3km s-min=36.3km az=117.0*

*WEL **20** 06:43:28.1±0.7, 33°S±12°×17°9W±3°1, h33^{km}, M4.0/12, mB4.6/7, ML4.3/12, MLv4.2/12, Mw(mB)3.7/7, Error ellipse: s-maj=43.0km s-min=4.1km az=111.3, confirmed*

*NOU **20** 06:44:28.9, 37°.93S×178°.58E, h0^{km}, MLv2.7/4, Off E. Coast of N. Island, N.Z.*

ISC 20 06:43:27.3±1.8**, 33°.6S**±0°.1×**178°.6W**±0°.3**, h41^{km}, n24, σ1^{s}.03**/37**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	4.32	8	P	Pn	06 44 31.0	+0.6
GLKZ				S	Sn	06 45 18.9	-0.6
MXZ	Matakaoa Point	4.73	211	P	Pn	06 44 37.1	+1.1
MXZ	Matakaoa Point	4.73	211	P	Pn	06 44 36.8	+0.8
MXZ				S	Sn	06 45 28.6	-1.0
WMGZ	Waiomatatini S	4.90	209	P	Pn	06 44 39.6	+1.2
WMGZ				S	Sn	06 45 35.2	+1.4
PKGZ	Pakihiroa	5.08	211	P	Pn	06 44 40.7	-0.2
PKGZ				S	Sn	06 45 38.8	+0.5
HAZ	Te Kaha	5.12	214	P	Pn	06 44 42.3	+0.9
HAZ				S	Sn	06 45 41.0	+1.7
PUZ	Puketiti	5.18	209	P	Pn	06 44 42.8	+0.6
PUZ				S	Sn	06 45 41.0	+0.2
RUGZ	Raukumara Rang	5.34	213	P	Pn	06 44 44.6	+0.1
TWGZ	Tauwhareparae	5.38	210	P	Pn	06 44 45.1	0.0
TWGZ				S	Sn	06 45 46.3	+0.5
CNGZ	Carnagh Statio	5.56	207	P	Pn	06 44 47.9	+0.5
CNGZ				S	Sn	06 45 50.3	+0.3
TKGZ	Te Karaka	5.66	210	P	Pn	06 44 49.3	+0.5
TKGZ				S	Sn	06 45 51.6	-0.9
MWZ	Matawai	5.71	212	P	Pn	06 44 48.1	-1.4
URZ	Urewera	5.84	215	Pn	Pn	06 44 50.2	-1.1
	3.7nm,0.3s,baz=30,slow=2.1,SNR=19						
URZ				Sn	Sn	06 45 56.3	-0.8
	4.5nm,0.3s,baz=212,slow=20,SNR=7.4						
	20nm,0.6s						
URZ	Urewera	5.84	215	P	Pn	06 44 51.4	+0.1
URZ	Urewera	5.84	215	P	Pn	06 44 51.3	-0.1
URZ				S	Sn	06 45 55.4	-1.6
RIGZ	Rimuhau	5.92	209	P	Pn	06 44 52.5	0.0
RIGZ				S	Sn	06 45 57.9	-1.2
MUGZ	Murupara	6.18	216	P	Pn	06 44 56.4	+0.5
MUGZ				S	Sn	06 46 04.0	-1.3
RTZ	Ruatahuna	6.19	214	P	Pn	06 44 55.5	-0.7
BKZ	Black Stump Fm	6.86	214	P	Pn	06 45 04.4	-0.9
BKZ	Black Stump Fm	6.86	214	P	Pn	06 45 03.6	-1.7
BFZ	Birch Farm	8.22	209	P	Pn	06 45 21.4	-2.5
ASAR	Alice Springs	42.53	271	P	P	06 51 19.5	+0.5
	0.7nm,0.7s,baz=115,slow=7.5,SNR=7.7						
	0.7nm,0.7s						
WRA	Warramunga Arr	43.80	276	P	P	06 51 30.9	+1.6
	1.0nm,0.7s,baz=118,slow=7.4,SNR=9.8						
	1.0nm,0.7s						
FINES	FINESS Array B	147.89	338	PKPbc	PKPab	07 03 09.3	-0.5
	1.0nm,0.6s,baz=62,slow=5.5,SNR=5.3						

GCG 20 06:53:42.8±0.3**, 13°.96N×89°.99W, h7^{km}**±3^{km}**, MD3.7, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NUBE	Las Nubes	0.22	107	*i* P	Pg	06 53 48.1	+1.0
JAYA	Jayaque - finc	0.61	120	*e*	Pg	06 53 54.7	+0.1
JAYA				*i* P	Pg	06 53 54.7	+0.1
JAYA				*i* S	Sb	06 54 04.1	-0.8
MTO3	Montecristo	0.75	55	*i* P	Pb	06 53 57.8	-0.5

*GCG **20** 06:58:54.7±2.1, 15°.23N×94°.33W, h29^{km}±38^{km}, MD4.6*

*MEX **20** 06:58:56.2±1.0, 15°.19N×94°.30W, h19^{km}±47^{km}, MD4.2*

*CATAC **20** 06:58:56.3±1.0, 15°N±6°×9°4W±°, h32^{km}±19^{km}, M4.2/9, MLv4.2/9, Error ellipse: s-maj=13.3km s-min=8.7km az=36.5, confirmed*

ISC 20 06:58:51.0±1.9**, 15°.14N**±0°.05×**94°.33W**±0°.03**, h3^{km}**±13^{km}**, n59, σ2^{s}.54**/87**, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		1.21	62	*e*P	Pg	06 59 14.2	0.0
PCIG				*e*S	Sg	06 59 27.2	-2.6
HUIG	Huatulco	1.83	290	*e*P	Pn	06 59 24.1	+0.8
HUIG				*e*S	Sn	06 59 44.1	-2.8
HUIG	Huatulco	1.83	290	*i* P	Pn	06 59 23.8	+0.6
HUIG				*i* S	Sn	06 59 43.4	-3.5
TGIG		2.00	35	*e*P	Pn	06 59 25.4	-0.3
TGIG				*e*S	Sn	06 59 49.2	-2.0
TGIG		2.00	35	*i* P	Pn	06 59 25.5	-0.2
TGIG				*i* S	Sn	06 59 49.6	-1.7
THIG		2.01	96	*e*P	Pn	06 59 26.7	+1.0
THIG				*e*S	Sn	06 59 49.7	-1.6
THIG		2.01	96	*i* P	Pn	06 59 26.6	+0.9
THIG				*i* S	Sn	06 59 50.7	-0.6
TGBT	Tuxtla Gutierr	2.02	36	*e*P	Pn	06 59 25.1	-0.7
TGBT				*e*S	Sn	06 59 49.5	-2.1
PATR	El Naranjo	2.02	90	*e*P	Pn	06 59 26.6	+0.4
PATR				*e*S	Sn	06 59 48.9	-3.1
PAVE	Pavencul	2.08	88	*e*P	Pn	06 59 27.8	+0.9
PAVE				*e*S	Sn	06 59 49.4	-4.0
SMCA	Catarina	2.19	97	*i* P	Pn	06 59 29.4	+1.1
SMCA				*i* S	Sn	06 59 55.4	-0.6
CCIG	Comitan	2.40	61	*e*P	Pn	06 59 32.0	+0.8
CCIG				*e*S	Sn	07 00 03.5	+2.3
CCIG	Comitan	2.40	61	*i* P	Pn	06 59 32.1	+0.8
CCIG				*i* S	Sn	07 00 02.5	+1.3
CCIG	Comitan	2.40	61	P	Pn	06 59 33.5	+2.2
RTAL	Retalhuleu	2.62	103	*e*P	Pn	06 59 35.1	+1.0
RTAL				*e*S	Sn	07 00 05.0	-1.5
RTAL	Retalhuleu	2.62	103	P	Pn	06 59 35.5	+1.3
HUEH	Huehuetenango	2.73	86	*e*P	Pn	06 59 38.6	+2.7
HUEH				*e*S	Sn	07 00 08.6	-1.0
HUEH	Huehuetenango	2.73	86	*i* P	Pn	06 59 37.4	+1.5
HUEH				*i* S	Sn	07 00 10.3	+0.7
HUEH	Huehuetenango	2.73	86	P	Pn	06 59 38.8	+2.9
HUEH	Huehuetenango	2.73	86	S	Sn	07 00 11.0	+1.5
PEIG	Puerto Escondi	2.85	288	*e*P	Pn	06 59 38.6	+1.3
PEIG				*e*S	Sn	07 00 07.9	-4.3
TUIG	Tuzandepetl	2.88	358	*e*P	Pn	06 59 38.0	+0.2
TUIG				*e*S	Sn	07 00 10.2	-2.7
STG8	El Palmar, Qui	2.96	103	*i* P	Pn	06 59 36.3	-2.8
STG8				*i* S	Sn	07 00 05.9	-9.3
STG0	El Palmar, Qui	2.97	103	*i* P	Pn	06 59 36.7	-2.4
STG0				*i* S	Sn	07 00 09.9	-5.5
OXLC	Oaxaca	2.98	310	*e*S	Sn	07 00 16.7	+1.0
VHO	Vista Hermosa	3.01	310	*e*P	Pn	06 59 42.0	+2.3
VHO				*e*S	Sn	07 00 14.1	-2.2
YOIG	Yosondua	3.54	299	*e*P	Pn	06 59 49.5	+2.5
YOIG				*e*S	Sn	07 00 25.9	-3.6
PNIG	Pinotepa	3.87	289	*e*P	Pn	06 59 53.3	+2.0
PNIG				*e*S	Sn	07 00 32.0	-5.3
TXIG	Tlaxiaco	3.92	303	*e*P	Pn	06 59 54.2	+1.9
TXIG				*e*S	Sn	07 00 38.4	-0.6
TOIG	Toxpalan	3.94	319	*e*P	Pn	06 59 56.1	+3.7
TOIG				*e*S	Sn	07 00 40.5	+1.2
HLIG	Huajuapan de L	4.28	309	*e*P	Pn	07 00 00.5	+3.3
HLIG				*e*S	Sn	07 00 52.8	+5.1
TPIG	Tehuac#an	4.37	319	*e*P	Pn	06 59 58.8	+0.4

TPIG				*e*S	Sn	07 00 43.5	-6.5
NUBE	Las Nubes	4.57	105	S	Sn	07 00 53.7	-1.2
NUBE	Las Nubes	4.57	105	P	Pn	07 00 02.4	+1.3
FTIG	Fresnillo de T	4.57	308	*e*P	Pn	07 00 05.0	+3.8
FTIG				*e*S	Sn	07 00 53.5	-1.3
MGIG	Malinaltepec	4.63	297	*e*P	Pn	07 00 03.6	+1.6
MGIG				*e*S	Sn	07 00 53.5	-2.9
PETF	Flores	4.64	67	*e*P	Pn	07 00 02.9	+0.9
PETF				*e*S	Sn	07 00 49.4	-6.9
PETF	Flores	4.64	67	*i* P	Pn	07 00 03.6	+1.6
PETF				*i* S	Sn	07 00 52.3	-4.1
PETF	Flores	4.64	67	P	Pn	07 00 03.1	+1.2
TLIG	Tlapa	4.73	301	*e*P	Pn	07 00 06.3	+2.9
TLIG				*e*S	Sn	07 00 55.0	-3.7
TLIG	Tlapa	4.73	301	P	Pn	07 00 06.9	+3.6
JAUV	Jalcomulco	4.83	331	*e*P	Pn	07 00 02.8	-1.8
JAUV				*e*S	Sn	07 00 54.1	-6.9
ESQI	Esquipulas	4.86	96	P	Pn	07 00 04.9	-0.1
MTO3	Montecristo	4.86	98	P	Pn	07 00 07.3	+2.1
CRIG	Cruz Grande	4.89	290	*e*P	Pn	07 00 07.5	+2.2
CRIG				*e*S	Sn	07 00 56.4	-6.1
JAYA	Jayaque - finc	4.95	107	S	Sn	07 01 03.5	-0.8
PMON	Piamonte	5.06	106	P	Pn	07 00 09.0	+1.2
LOMA	Loma Larga	5.21	106	S	Sn	07 01 10.3	-0.4
DAIG	Los Arroyos	5.45	291	*e*S	Sn	07 01 06.8	-9.5
PBCV	Popocatepetl	5.57	314	*e*P	Pn	07 00 22.1	+7.0
PBCV				*e*S	Sn	07 01 23.5	+3.8
PBXN	Popocatepetl	5.65	314	*e*P	Pn	07 00 20.8	+4.5
PBXN				*e*S	Sn	07 01 15.6	-6.5
PPM	Popocatepetl	5.67	314	*e*P	Pn	07 00 21.5	+4.9
PPM				*e*S	Sn	07 01 25.0	+2.5
MEIG	Mezcala	5.78	299	*e*P	Pn	07 00 21.7	+4.0
MEIG				*e*S	Sn	07 01 20.5	-4.2
YAIG	Yautepec	5.86	310	*e*P	Pn	07 00 22.3	+3.5
YAIG				*e*S	Sn	07 01 23.2	-3.3
CXUV	Coxquihui	5.89	329	*e*P	Pn	07 00 18.2	-1.0
CXUV				*e*S	Sn	07 01 24.0	-3.3
PLIG	Platanillo	5.92	304	*e*P	Pn	07 00 23.9	+4.2
PLIG				*e*S	Sn	07 01 24.1	-3.9
MAVM	Malinalco, Edo	6.23	308	*e*P	Pn	07 00 28.5	+4.4
MAVM				*e*S	Sn	07 01 32.7	-3.2
AOVM	Tlapan	6.30	311	*e*P	Pn	07 00 29.3	+4.1
AOVM				*e*S	Sn	07 01 37.2	-0.7
ARIG	Puente Sto Nin	6.56	299	*e*P	Pn	07 00 32.1	+3.7
ARIG				*e*S	Sn	07 01 41.7	-2.1

IDC 20 07:00:35.4±3.2**, 54°.17N×86°.75E, h0^{km}, mbtmp2.7**/2**, ML2.5**/2**, Error ellipse: s-maj=27.2km s-min=15.7km az=55.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.16	260	I	I	07 07 20.0	
	baz=78,slow=312,SNR=16						
ZALV	Zalesovo Beam	1.16	260	Pg	Pg	07 00 56.0	-1.6
	0.7nm,0.3s,baz=80,slow=17,SNR=6.6						
ZALV				Lg	Lg	07 01 13.9	
	1.1nm,0.3s,baz=79,slow=29,SNR=6.9						
KURBB	Kurchatov Arra	6.16	238	Pn	Pn	07 02 08.7	+1.2
	baz=53,slow=13,SNR=2.2						
	0.2nm,0.3s						
MKAR	Makanchi Array	7.91	203	Pn	Pn	07 02 32.8	+1.1
	0.1nm,0.3s,baz=26,slow=13,SNR=6.3						
	0.2nm,0.3s						

*IDC **20** 07:04:04.2±0.6, 38°.89S×91°.39W, h0^{km}, mb4.3/13, mbtmp4.3/14, ML3.4/1, MS4.3/24, Error ellipse: s-maj=20.6km s-min=16.1km az=99.0*

*NEIC **20** 07:04:05.9±1.0, 38°.81S±0°.04×91°.5W±0°.2, h10^{km}±1^{km}, mb4.7/58, Error ellipse: s-maj=21.0km s-min=3.8km az=288.0*

*GCMT **20** 07:04:06.9±0.2, 39°.00S±0°.01×91°.69W±0°.01, h12^{km}, MW5.0/117, Moment Tensor Solution. s61,c79; s117,c178; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.17±.09; $M_{\theta\theta}$1.16±.09; $M_{\phi\phi}$0.00±.09; $M_{r\theta}$0.87±.22; $M_{\theta\phi}$-4.42±.07; $M_{\phi r}$-1.40±.23; Best double couple: $M_0$4.69200×10^{16} NP1:ϕ_s85.00000°, δ73.00000°, λ178.00000°. NP2:ϕ_s176.00000°, δ88.00000°, λ17.00000°. Principal axes: T 5.4210, Plg14.0000°, Azm42.0000°; N -1.4590, Plg73.0000°, Azm182.0000°; P -3.9630, Plg11.0000°, Azm309.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 07:04:05.2±0.4**, 38°.84S**±0°.08×**91°.62W**±0°.07**, h10^{km}, n161, σ1^s.16**/135**, mb4.6**/27**, MS4.3**/24**, 6C, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	Juan Fernandez	11.38	68	T	T	07 18 39.5	
	baz=239,slow=74,SNR=1027						
H03S1	Juan Fernandez	11.40	68	T	T	07 18 37.6	
	baz=239,slow=74,SNR=981						
H03S3	Juan Fernandez	11.40	68	T	T	07 18 39.2	
	baz=239,slow=74,SNR=1024						
VA04	Juan Fernndez	11.55	67		Pn	07 06 48.2	-1.9
H03N3	Juan Fernandez	11.58	66	T	T	07 18 53.5	
	baz=240,slow=72,SNR=687						
H03N2	Juan Fernandez	11.58	66	T	T	07 18 44.1	
	baz=240,slow=72,SNR=334						
H03N1	Juan Fernandez	11.60	66	T	T	07 18 50.9	
	baz=240,slow=72,SNR=1272						
LL06	Loncomilla	14.09	110	Pn	Pn	07 07 22.0	-2.8
GO07	Milladeo Hill,	14.22	113	Pn	Pn	07 07 25.9	-0.6
BI05	Punta Hualpn	14.72	88		Pn	07 07 32.4	-1.0
LR03	Panguipulli	14.96	99		Pn	07 07 36.5	-0.2
LL01	San Ignacio de	15.01	110		Pn	07 07 36.9	-0.3
LR05	Currie	15.20	101		Pn	07 07 39.3	-0.6
LL02	Futaleuf	15.54	113		Pn	07 07 43.8	-0.5
LL02				IAmb	IAmb	07 07 53.7	
	comp=Z,84nm,1.5s						
COYC	Coyhaique	15.95	121		Pn	07 07 49.8	+0.3
COYC				IAmb	IAmb	07 08 06.5	
	comp=Z,101nm,1.3s						
AY03	Cochrane	16.22	127		Pn	07 07 53.6	+0.6
BI02	San Fabin de	16.24	89		Pn	07 07 53.6	+0.2
BI02				IAmb	IAmb	07 07 59.2	
	comp=Z,74nm,1.1s						
PLCA	Paso Flores	16.30	103	Pn	Pn	07 07 53.6	-0.7
PLCA	Paso Flores	16.30	103	Pn	Pn	07 07 53.8	-0.5
	baz=251,slow=13,SNR=5.2						
	comp=Z,3.3nm,1.1s						
PLCA	Paso Flores	16.30	103	*e*P	P	07 07 55.8	-1.4
ML02	Panimavida	16.36	85		Pn	07 07 54.1	-0.8
ML02				IAmb	IAmb	07 08 00.8	
	comp=Z,109nm,1.2s						
VA05	Santo Domingo	16.94	78	P	Pn	07 08 02.3	+0.1
VA05				IAmb	IAmb	07 08 06.6	
	comp=Z,88nm,1.1s						
BO01	Tunca	17.07	81		Pn	07 08 04.2	+0.3
MT01	Popeta	17.13	79	P	Pn	07 08 05.0	+0.3
MT09	Talagante	17.37	79	P	P	07 08 08.7	-0.4
MT02	Curacav	17.46	78	P	P	07 08 10.4	+0.4
BO04	La Punta	17.58	80	P	Pn	07 08 09.7	-0.7
BO04				IAmb	IAmb	07 08 33.1	
	comp=Z,62nm,1.4s						
VA06	Catapilco	17.64	75		Pn	07 08 09.8	-1.1
VA06				IAmb	IAmb	07 08 17.5	
	comp=Z,103nm,1.5s						
MT05	Renca	17.71	79	P	Pn	07 08 12.2	+0.2
MT05				IAmb	IAmb	07 08 31.9	
	comp=Z,111nm,1.4s						
MT03	Universidad Ad	17.85	79	P	Pn	07 08 11.7	-1.9
PEL	Peldehue	17.85	78		Pn	07 08 13.6	-0.1
PEL				IAmb	IAmb	07 08 19.7	
	comp=Z,84nm,1.4s						
MT16	CCHEN	17.86	79		Pn	07 08 13.3	-0.5
MT16				IAmb	IAmb	07 08 16.8	
	comp=Z,55nm,1.1s						
LMEL	Las Melosas	17.95	80	P	Pn	07 08 15.2	+0.2
MT08	Bocatoma Ro	18.24	79	P	P	07 08 19.3	+0.4
GO09	Cerro Castillo	18.37	139	P	P	07 08 20.1	+0.2
GO09				IAmb	IAmb	07 08 26.8	
	comp=Z,130nm,1.4s						
CO02	Combarbal	18.50	72		P	07 08 20.9	-0.7
ZON	Zonda	20.08	76	P	Pn	07 08 39.9	-0.8
AC04	Llanos de Chal	20.10	64	P	P	07 08 38.6	-0.5
AC04				IAmb	IAmb	07 08 51.2	
	comp=Z,26nm,0.9s						
CFA	Coronel Fontan	20.39	76	P	P	07 08 42.0	-0.1
	comp=Z,13nm,1.0s,baz=250,slow=11,SNR=28						
	comp=Z,13nm,1.0s						
AC02	Maricunga	22.30	64	P	P	07 09 03.6	+0.3
USHA	Ushuaia	22.37	143	LR	LR	07 15 56.5	
	comp=Z,2μm,19.4s,baz=316,slow=32						
NNA	Nana	29.80	30	LR	LR	07 18 57.3	
	comp=Z,1μm,20.9s,baz=195,slow=30						
LPAZ	La Paz	30.46	49	P	P	07 10 17.9	-0.9
LPAZ	La Paz	30.46	49	P	P	07 10 18.9	+0.1
	comp=Z,10nm,1.1s,baz=211,slow=8.2,SNR=18						
LPAZ				LR	LR	07 19 56.0	
	comp=Z,547nm,19.6s,baz=226,slow=31						
	comp=Z,10nm,1.1s						
LPAZ	La Paz	30.46	49	*e*P	P	07 10 17.4	-1.4
PMSA	Palmer Station	30.57	157	LR	LR	07 19 07.7	
	comp=Z,390nm,19.8s,baz=304,slow=30						
CPUP	Villa Florida	31.29	77	P	P	07 10 24.7	-0.7
CPUP	Villa Florida	31.29	77	P	P	07 10 25.1	-0.3
	comp=Z,4.0nm,0.9s,baz=106,slow=8.5,SNR=19						
CPUP				LR	LR	07 21 02.9	
	comp=Z,103nm,19.9s,baz=100,slow=33						
	comp=Z,4.0nm,0.9s						
PLTB	Pedras Altas	31.65	89	*e*P	P	07 10 28.5	-0.1
SJPY	San Joaquin	32.93	76	*e*P	P	07 10 39.8	0.0
ATAH	Atahualpa	33.74	24	LR	LR	07 21 11.8	
	comp=Z,892nm,21.5s,baz=215,slow=30						
BBSD	Serra de San D	34.59	60	*e*P	P	07 10 54.0	-0.3
ITAB	Concordia	34.82	83	*e*P	P	07 10 55.9	-0.3
SIV	San Ignacio	35.13	58	LR	LR	07 21 32.3	
	comp=Z,85nm,21.5s,baz=279,slow=30						
CZSB	Cruzeiro do Su	35.35	34	P	P	07 11 01.0	+0.1
CZSB	Cruzeiro do Su	35.35	34	*e*P	P	07 11 00.7	-0.1
AQDB	Aquidauana	35.88	70	*e*P	P	07 11 04.7	-0.8
PTGB	Pitanga	36.16	79	*e*P	P	07 11 07.6	-0.3
TRCB	Terra Rica	36.79	76	*e*P	P	07 11 13.2	-0.1
PTLB	Pontes e Lacer	36.81	60	*e*P	P	07 11 13.2	-0.2
RPRD	Ribas do Rio P	37.36	72	*e*P	P	07 11 18.1	0.0
LDASE	Londrina, Braz	37.61	78	*e*P	P	07 11 19.6	-0.6
COHC	Cochancay	37.92	20	P	P	07 11 23.9	+1.2
VILB	Vilhena	37.92	56	P	P	07 11 22.4	-0.5
VILB	Vilhena	37.92	56	*e*P	P	07 11 22.8	0.0
PCMB	Pacaembu	38.51	75	*e*P	P	07 11 27.9	+0.1
FRTB	Fartura	38.83	79	*e*P	P	07 11 30.3	-0.2
SALV	Santo Antonio	38.87	64	*e*P	P	07 11 30.6	-0.2
C2SB	Chapadao do Su	39.05	70	*e*P	P	07 11 32.7	+0.4
TBTG	Tabatinga, AM	39.74	35	P	P	07 11 37.5	-0.5
TBTG	Tabatinga, AM	39.74	35	*e*P	P	07 11 38.0	0.0
ITRB	Iturama	40.32	74	*e*P	P	07 11 42.9	0.0
SPB	Sao Paulo	40.33	81	*e*P	P	07 11 43.4	+0.5
OTAV	Otavalo	40.72	20	*e*P	P	07 11 48.3	+1.6
BB19B	Bebedouro	40.90	77	*e*P	P	07 11 47.8	0.0
VAO	Valinhos	41.01	81	*e*P	P	07 11 48.5	-0.1
PDRB	Porto dos Gac	41.19	58	*e*P	P	07 11 50.1	0.0
ARAG	Araguaiana, MT	41.77	68	*e*P	P	07 11 54.5	-0.3
CLDB	Colider	42.35	59	*e*P	P	07 11 57.7	-1.9
FLOC	Florencia	42.83	24	P	P	07 12 03.9	+0.4
FLOC				IAmb	IAmb	07 12 05.6	
	comp=Z,23nm,1.4s						
TEFE	Tefe	42.89	42	*e*P	P	07 12 04.2	+0.2
IPMB	Ipameri, GO	42.97	74	*e*P	P	07 12 03.9	-0.8
BSCB	Bom Sucesso	43.81	80	*e*P	P	07 12 11.5	0.0
PMNB	Patos De Minas	43.97	76	*e*P	P	07 12 12.8	0.0
VAS01	Vassouras-RJ	44.13	82	*e*P	P	07 12 15.0	+1.0
BDFB	Brasilia	44.59	71	P	P	07 12 17.2	-0.5
BDFB				IAmb	IAmb	07 12 26.3	
	comp=Z,22nm,1.5s						
BDFB	Brasilia	44.59	71	P	P	07 12 15.3	-2.4
	comp=Z,4.8nm,0.8s,baz=254,slow=3.8,SNR=9.2						
BDFB				LR	LR	07 30 14.4	
	comp=Z,587nm,18.3s,baz=235,slow=35						
	comp=Z,4.8nm,0.8s						
SNDB	Serra Nova Dou	44.65	64	*e*P	P	07 12 17.8	-0.4
NPGB	Novo Progresso	45.48	55	*e*P	P	07 12 23.5	-1.2
BELA	Belgrano 2	45.54	166	P	P	07 12 25.4	+0.9
BELA				IAmb	IAmb	07 12 32.1	
	comp=Z,12nm,0.9s						
DIAM	Diamantina, MG	46.22	78	*e*P	P	07 12 31.2	+0.5
ROSC	El Rosal	46.32	24	P	P	07 12 31.2	-0.5
	comp=Z,3.6nm,0.4s,baz=118,slow=18,SNR=6.7						
ROSC				LR	LR	07 30 09.9	
	comp=Z,765nm,18.5s,baz=204,slow=34						
	comp=Z,3.6nm,0.4s						
ITTB	Itaituba	47.30	53	*e*P	P	07 12 38.1	-1.0
RUSC	La Rusia	47.71	25	P	P	07 12 42.3	-0.4
JANB	Januaria	47.71	74	*e*P	P	07 12 41.9	-0.4
SJMB	Sao Joao De Ma	47.89	80	*e*P	P	07 12 44.4	+0.8
SDBA	SAO DESIDERIO	48.97	71	*e*P	P	07 12 50.0	-2.1
JTS	Las Juntas de	49.27	9	LR	LR	07 28 26.2	
	comp=Z,678nm,21.6s,baz=186,slow=30						
SMTB	Santa Maria do	49.42	65	*e*P	P	07 12 55.8	+0.3
PRPB	Parauapebas	49.79	60	*e*P	P	07 12 57.4	-0.9
BOAV	Boa Vista	50.04	42	P	P	07 12 59.2	-0.9
BOAV	Boa Vista	50.04	42	*e*P	P	07 12 59.2	-0.9
TBI	Tubuai	51.09	270	*e*S	S	07 20 20.2	-5.5
	comp=Z,600nm,29.5s						
TBI				*e*SS	SS	07 23 59.7	-1.0
	comp=Z,562nm,24.0s						
TBI				*e*LQ	LQ	07 25 38.3	
	comp=Z,1μm,28.5s						
TBI				*e*LR	LR	07 27 44.8	
	comp=Z,706nm,27.2s						
TBI				*e*LR	LR	07 27 48.1	
	comp=Z,1μm,24.8s						
VNA3	Neumayer Olymp	51.22	156	⇑P	P	07 13 07.4	-0.9
	comp=Z,22nm,0.7s						
SDV	Santo Domingo	51.34	27	LR	LR	07 33 40.8	
	comp=Z,1μm,18.6s,baz=203,slow=35						
QSPA	South Pole Qui	51.39	180	P	P	07 13 10.1	+0.2
	comp=Z,1.3nm,0.9s,baz=81,slow=1.1,SNR=5.4						
QSPA				LR	LR	07 30 56.5	
	comp=Z,303nm,21.3s,baz=128,slow=31						
	comp=Z,1.3nm,0.9s						
VNA1	Neumayer--Stat	51.76	155	⇑P	P	07 13 11.7	-0.7
	comp=Z,21nm,0.8s						
VNA2	Neumayer--Watz	52.00	155	⇑P	P	07 13 09.9	-4.3
	comp=Z,9.9nm,0.6s,baz=258,slow=7.3						
TAOE	Nuku Hiva Isla	52.66	291	*e*LR	LR	07 28 27.1	
	comp=Z,215nm,26.3s						
SNAA	Sanae	53.29	157	⇑P	P	07 13 17.5	-6.3
	comp=Z,136nm,0.8s						
SNAA	Sanae	53.29	157	P	P	07 13 24.3	+0.5
SNAA				IAmb	IAmb	07 13 35.3	
	comp=Z,8.2nm,0.8s						
SNAA	Sanae	53.29	157	P	P	07 13 22.7	-1.1
	comp=Z,4.7nm,0.8s,baz=284,slow=7.7,SNR=15						
SNAA				LR	LR	07 32 27.9	
	comp=Z,147nm,19.4s,baz=275,slow=32						
	comp=Z,4.7nm,0.8s						
PPT2	Papeete2	54.35	276	*e*S	S	07 21 06.7	-3.9
	comp=Z,60nm,25.5s						
PPT2				*e*SS	SKiKP	07 24 45.4	+2.2
	comp=Z,28nm,25.8s						
PPT2				*e*LQ	LQ	07 26 55.2	
	comp=Z,270nm,25.5s						
PPT2				*e*LR	LR	07 29 05.6	
	comp=Z,136nm,27.0s						
PPT2				*e*LR	LR	07 29 13.1	
	comp=Z,226nm,24.0s						
SBA	Scott Base	54.76	195	P	P	07 13 35.1	+0.8
SBA				IAmb	IAmb	07 13 37.3	
	comp=Z,9.1nm,1.1s						
TROLL	Troll, Antarti	54.82	158	⇑P	P	07 13 34.6	-0.5
	comp=Z,750nm,0.7s						
PCRV	Puerto La Cruz	54.86	33	LR	LR	07 36 12.9	
	comp=Z,458nm,18.4s,slow=35						
CMIG	Matias Romero	55.72	356	LR	LR	07 32 03.8	
	comp=Z,162nm,20.2s,baz=177,slow=30						
VNDA	Vanda	55.86	195	P	P	07 13 43.6	+1.3
VNDA				IAmb	IAmb	07 13 45.7	
	comp=Z,7.7nm,1.4s						
VNDA	Vanda	55.86	195	P	P	07 13 42.1	-0.2
	comp=Z,2.0nm,1.0s,baz=109,slow=7.4,SNR=7.0						
VNDA				LR	LR	07 32 28.0	
	comp=Z,226nm,20.8s,baz=78,slow=30						
	comp=Z,2.0nm,1.0s						
MDP	Montagnes des	56.66	49	LR	LR	07 35 45.3	
	comp=Z,328nm,21.1s,baz=214,slow=34						
SJG	San Juan	61.47	28	LR	LR	07 38 43.2	
	comp=Z,230nm,21.8s,baz=175,slow=34						
HNDO	Hondo	68.39	353	P	P	07 15 07.6	+0.8
HNDO				IAmb	IAmb	07 15 09.0	
	comp=Z,6.3nm,0.8s						
DRIO	Del Rio	68.43	352	P	P	07 15 07.3	+0.3
DRIO				IAmb	IAmb	07 15 17.4	
	comp=Z,3.8nm,0.8s						
TXAR	Lajitas Array	68.75	349	P	P	07 15 09.8	+0.6
TXAR	Lajitas Array	68.75	349	P	P	07 15 10.6	+1.4
	comp=Z,3.4nm,0.8s,baz=169,slow=7.4,SNR=25						
	comp=Z,3.4nm,0.8s						
TX31	Lajitas Ar. Si	68.75	349	P	P	07 15 10.3	+1.1
TX31				IAmb	IAmb	07 15 12.8	
	comp=Z,5.3nm,0.9s						
ALPN	Alpine	69.76	349	P	P	07 15 16.2	+0.7
319A	Douglas	71.77	344		P	07 15 28.0	+0.3
319A				IAmb	IAmb	07 15 40.2	
	comp=Z,10nm,1.1s						
MAW	Mawson	72.13	170	P	P	07 15 29.9	+0.6
	comp=Z,3.3nm,0.7s,baz=194,slow=7.8,SNR=7.3						
	comp=Z,3.3nm,0.7s						
TUC	Tucson	73.00	343	P	P	07 15 34.4	-0.5
MSTX	Muleshoe	73.18	350	P	P	07 15 36.5	+0.5
MSTX				IAmb	IAmb	07 15 39.4	
	comp=Z,7.6nm,0.7s						
PAULI	Pauline	73.85	8	P	P	07 15 40.0	+0.2
TKL	Tuckaleechee C	74.48	7	LR	LR	07 44 54.9	
	comp=Z,99nm,18.1s,baz=174,slow=33						
U38A	Gravette	74.95	358	P	P	07 15 46.3	+0.1
U38A				IAmb	IAmb	07 15 54.6	
	comp=Z,5.0nm,0.9s						
Y14A	Wickenburg	75.08	342	P	P	07 15 48.2	+1.2
PV18	Skein Mesa, Pa	78.34	346	P	P	07 16 06.2	+0.6
PRN	Pahroc Range	78.88	341	P	P	07 16 09.8	+1.3
PRN				IAmb	IAmb	07 16 26.7	
	comp=Z,11nm,1.2s						
GMN	Gold Mountain	79.36	339	P	P	07 16 12.1	+0.8
NVAR	Mina Array Bea	80.71	339	P	P	07 16 18.8	+0.3
NVAR	Mina Array Bea	80.71	339	P	P	07 16 20.0	+1.5
	comp=Z,1.3nm,0.7s,baz=188,slow=9.0,SNR=9.3						
	comp=Z,1.3nm,0.7s						
BSUT	Blindstream Ca	80.91	345	P	P	07 16 20.1	+0.4
BSUT				IAmb	IAmb	07 16 29.1	
	comp=Z,6.4nm,1.1s						
PDAR	Pinedale Array	82.84	347	P	P	07 16 30.8	+1.1
PDAR	Pinedale Array	82.84	347	P	P	07 16 30.6	+0.9
	comp=Z,1.1nm,0.7s,baz=165,slow=6.2,SNR=8.5						
	comp=Z,1.1nm,0.7s						
RSSD	Black Hills	83.34	351	P	P	07 16 32.5	+0.3
RSSD				IAmb	IAmb	07 16 53.8	
	comp=Z,5.2nm,0.8s						
SADO	Sadowa	83.98	9	LR	LR	07 49 08.1	
	comp=Z,341nm,20.2s,baz=152,slow=32						
BBTS	Babate	87.85	69	LR	LR	07 52 43.2	
	comp=Z,180nm,20.8s,baz=102,slow=33						
ULM	Lac du Bonnet	88.79	357	P	P	07 16 58.1	-0.5
	comp=Z,0.5nm,0.3s,baz=159,slow=8.6,SNR=3.8						
	comp=Z,0.5nm,0.3s						
BOSA	Boshof	90.73	128	LR	LR	07 52 11.2	
	comp=Z,126nm,18.7s,baz=208,slow=32						
DBIC	Dimbokro	91.62	83	LR	LR	07 53 35.9	
	comp=Z,99nm,21.9s,baz=234,slow=32						
LBTB	Lobatse	93.52	126	LR	LR	07 53 09.2	
	comp=Z,83nm,19.1s,baz=217,slow=32						
GERES	GERESS Array B	127.24	53	PKP	PKPdf	07 23 09.8	+0.3
	comp=Z,0.9nm,0.8s,baz=50,slow=2.1,SNR=5.3						
NACGM	Naroch	136.42	47	*e*PKP	PKPdf	07 23 18.5	-7.9
	comp=Z,6.0nm,0.7s,baz=265						
BRTR	Keskin Array B	138.18	71	PKP	PKPdf	07 23 31.6	+1.2
	comp=Z,0.9nm,0.8s,baz=214,slow=4.2,SNR=3.9						
KBZ	Khabaz	145.81	67	PKPbc	PKPbc	07 23 44.6	+0.4
	comp=Z,5.0nm,1.0s,baz=239,slow=2.7,SNR=7.8						
USRK	Ussuriysk Ar.	147.21	294	PKPbc	PKPbc	07 23 48.2	-0.1
	comp=Z,2.1nm,0.7s,baz=128,slow=3.1,SNR=4.6						
KSRS	Korea Array	149.04	280	PKPbc	PKiKP	07 23 55.8	+1.2
	comp=Z,1.7nm,0.8s,baz=115,slow=4.2,SNR=9.6						
HEH	HeiHe	150.26	305	*e*P	PKPdf	07 23 53.6	+2.9
BNX	BinXian	150.54	296	⇑P	PKiKP	07 24 01.3	+3.8
BNX				pmax	pmax		
	comp=Z,7.0nm,1.4s						
NJ2	Nanjing	154.35	264	*e*P	PKPdf	07 23 58.4	+1.0
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
PZH	PanZhiHua	163.36	226	PKP	PKPdf	07 24 07.1	-1.3
LZH	Lanzhou	167.41	262	*e*PKP	PKPdf	07 24 04.1	-7.4

*IDC **20** 07:06:16.2±0.7, 2°.20S×138°.53E, h0^{km}, mb4.0/9, mbtmp4.0/11, ML3.8/2, MS3.5/9, Error ellipse: s-maj=20.2km s-min=14.3km az=32.0*

*DJA **20** 07:06:18.5±0.6, 2°S±6°×13°8E±°, h19^{km}±6^{km}, M4.3/6, mb4.4/1, MLv4.3/6*

ISC 20 07:06:18.3±0.8**, 2°.48S**±0°.08×**138°.37E**±0°.06**, h10^{km}, n26, σ2^s.40**/17**, mb4.1**/9**, MS3.5**/7**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.60	35	P	Pg	07 06 25.2	-4.7
GENI	Genyem	1.80	94	P	Pn	07 06 48.1	-1.3
SRPI	Serui, Papua	2.21	286	P	Pn	07 06 54.0	-1.1
SRPI				S	Sn	07 07 22.2	-0.3
JAY	Jayapura	2.34	91	Pn	Pn	07 06 55.4	-1.4
	14nm,0.3s,baz=237,slow=11,SNR=37						
JAY				Lg	Lg	07 07 24.9	
	24nm,0.3s,baz=122,slow=20,SNR=8.1						
	34nm,0.3s						
JAY	Jayapura	2.34	91	P	Pn	07 06 54.9	-1.9
BAKI	Biak	2.60	300	P	Pn	07 06 59.8	-0.6
FAKI	Fak Fak	6.13	266	P	Pn	07 07 49.5	+0.6
PMG	Port Moresby	11.12	129	LR	LR	07 14 51.3	
	comp=Z,298nm,18.7s,baz=280,slow=46						
GUMO	Guam	17.22	22	LR	LR	07 16 47.5	
	comp=Z,34nm,19.1s,baz=144,slow=37						
WRA	Warramunga Arr	17.79	192	P	Pn	07 10 27.7	+1.4
	0.5nm,0.3s,baz=16,slow=12,SNR=12						
WRA				S	Sn	07 13 40.9	-3.9
	2.4nm,0.8s,baz=4.3,slow=23,SNR=5.5						
	1.2nm,0.5s						
FITZ	Fitzroy Crossi	19.91	218	S	S	07 14 28.4	-6.1
	8.7nm,0.9s,baz=125,slow=8.9,SNR=4.2						
ASAR	Alice Springs	21.50	191	P	P	07 11 09.4	+2.0
	1.8nm,0.7s,baz=19,slow=11,SNR=19						
ASAR				S	S	07 15 05.3	-0.7
	5.1nm,0.7s,baz=12,slow=22,SNR=12						
	1.8nm,0.7s						
STKA	Stephens Creek	29.40	174	P	P	07 12 25.1	+3.3
	0.9nm,0.3s,baz=357,slow=9.0,SNR=3.0						
STKA				LR	LR	07 26 25.1	
	comp=Z,74nm,19.4s,baz=8.2,slow=41						
	0.9nm,0.3s						
JNU	Nakatsue	36.11	349	LR	LR	07 25 31.3	
	comp=Z,94nm,19.8s,baz=154,slow=32						
NWAO	Narrogin (SRO)	36.20	211	LR	LR	07 29 50.4	
	comp=Z,156nm,21.3s,baz=318,slow=39						
MJAR	Matsushiro Arr	38.82	360	LR	LR	07 26 58.3	
	comp=Z,27nm,18.4s,baz=178,slow=32						
CMAR	Chiang Mai Arr	44.03	300	P	P	07 14 26.5	-0.1
	2.1nm,0.3s,baz=106,slow=4.8,SNR=4.6						
	2.1nm,0.3s						
USRK	Ussuriysk Ar.	46.82	354	LR	LR	07 31 23.8	
	comp=Z,52nm,20.7s,baz=190,slow=32						
KLR	Kul'dur	51.82	354	LR	LR	07 34 09.9	
	comp=Z,47nm,20.7s,baz=182,slow=32						
RAR	Rarotonga	62.93	112	LR	LR	07 41 41.7	
	comp=Z,325nm,20.5s,baz=287,slow=34						
MKAR	Makanchi Array	69.40	322	P	P	07 17 25.5	-1.1
	1.6nm,0.9s,baz=124,slow=8.0,SNR=12						
	1.6nm,0.9s						
KURBB	Kurchatov Arra	73.35	325	P	P	07 17 48.6	-1.7
	0.3nm,0.4s,baz=114,slow=5.9,SNR=7.9						
	0.3nm,0.4s						
VNDA	Vanda	76.03	175	P	P	07 18 06.7	+1.3
	0.3nm,0.4s,baz=294,slow=6.3,SNR=5.6						
	0.3nm,0.4s						
BVAR	Borovoye Array	78.93	325	P	P	07 18 20.9	-1.1
	1.8nm,0.6s,baz=101,slow=7.7,SNR=11						
	1.8nm,0.6s						
ILAR	Eielson Array	85.77	24	P	P	07 18 55.4	-2.2
	0.5nm,1.0s,baz=267,slow=4.9,SNR=5.3						
	0.5nm,1.0s						
QSPA	South Pole Qui	87.46	180	P	P	07 19 07.1	+1.1
	1.4nm,0.9s,baz=87,slow=4.4,SNR=2.9						
	1.4nm,0.9s						

*GII **20** 07:13:29.9±0.0, 27°.107N±0°.003×33°.586E±0°.001, h1^{km}, Mws3.0, confirmed*

*HLW **20** 07:13:42.0, 27°.69N×34°.33E, h20^{km}±2^{km}, Md2.7, Ml2.8*

*SGS **20** 07:13:43.4, 27°.83N×34°.44E, h9^{km}, Ml1.8*

ISC 20 07:13:36.6±0.9**, 27°.51N**±0°.03×**34°.36E**±0°.03**, h12^{km}, n41, σ1^s.52**/41**, Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TR1	Tor 1	0.61	324	P	Pn	07 13 51.6	+0.5

HHRG	**Al Ghardaqah**	**0.76**	**248**	P	Pn	07 13 58.1	+5.0
KRABS	**KRABS**	**0.98**	**53**	S	**Sb**	**07 14 08.2**	**-0.2**
KRABS	**KRABS**	**0.98**	**53**	P	**Pn**	**07 13 57.8**	**+1.7**
TR2	**Tor 2**	**1.04**	**327**	P	**Pn**	**07 13 58.7**	**+1.8**
AYUS	**`Aynunah**	**1.05**	**50**	P	**Pn**	**07 13 58.7**	**+1.6**
AYUS	**`Aynunah**	**1.05**	**50**	S	**Sb**	**07 14 09.9**	**-0.4**
MWLHS	**Almuwaylih**	**1.05**	**77**	P	**Pn**	**07 13 59.9**	**+2.8**
HKAT	**Jabal Katrina**	**1.06**	**342**	P	**Pn**	**07 13 58.7**	**+1.3**
BDAS	**Al Bad`**	**1.12**	**35**	P	**Pg**	**07 13 58.8**	**+0.6**
TAYS	**Tayyib Ism**	**1.13**	**23**	S	**Sb**	**07 14 10.3**	**-2.4**
TAYS	**Tayyib Ism**	**1.13**	**23**	P	**Pg**	**07 13 58.7**	**+0.4**
HDHB	**Dhahab**	**1.23**	**11**	P	**Pg**	**07 14 00.5**	**+0.3**
WTBKS	**WTBKS**	**1.49**	**67**	P	**Pg**	**07 14 06.5**	**+1.4**
HRDS	**Abu Rudays**	**1.52**	**322**	P	**Pg**	**07 14 05.3**	**-0.5**
NUB	**Nuweibaa**	**1.53**	**9**	P	**Pb**	**07 14 04.8**	**-0.1**
JLOS		**1.57**	**39**	P	**Pg**	**07 14 06.1**	**-0.7**
GRB	**Gharib**	**1.59**	**299**	P	**Pg**	**07 14 07.1**	**+0.1**
HAQS	**Haql**	**1.61**	**18**	P	**Pb**	**07 14 05.8**	**-0.4**
JMOS	**Jabal al Moall**	**1.78**	**22**	P	**Pb**	**07 14 08.5**	**-0.6**
HQLS		**1.89**	**19**	P	**Pb**	**07 14 09.8**	**-1.2**
TBKS	**Tabuk**	**2.05**	**69**	P	**Pg**	**07 14 15.3**	**-0.7**
URD06	**Shuwaq**	**2.13**	**91**	P	**Pg**	**07 14 17.3**	**-0.1**
NADB	**Abo Dabab**	**2.17**	**177**	P	**Pg**	**07 14 18.7**	**+0.6**
EIL	**Elat**	**2.21**	**13**	P	**Pb**	**07 14 16.4**	**-0.1**
EIL	**Elat**	**2.21**	**13**	S	**Sg**	**07 14 51.2**	**+3.6**
MBRI	**Mt Berech**	**2.33**	**12**	P	**Pb**	**07 14 17.1**	**-1.4**
MBRI	**Mt Berech**	**2.33**	**12**	S	**Sg**	**07 14 54.1**	**+2.8**
URD05	**Al Faraah**	**2.33**	**96**	P	**Pg**	**07 14 20.2**	**-1.0**
BIDS	**Bi'r al Bayda'**	**2.40**	**105**	P	**Pg**	**07 14 21.7**	**-0.8**
URD12	**Shuwaq**	**2.40**	**83**	P	**Pg**	**07 14 21.1**	**-1.6**
EWJHS	**Al Wajh**	**2.45**	**123**	P	**Pg**	**07 14 22.0**	**-1.6**
HRFI	**Mount Harif**	**2.58**	**13**	P	**Pb**	**07 14 21.6**	**-1.2**
HRFI	**Mount Harif**	**2.58**	**13**	S	**Sg**	**07 15 00.1**	**+0.5**
URD04	**Abu Rakah**	**2.61**	**99**	P	**Pg**	**07 14 24.7**	**-2.0**
KRMI	**Paran Flat**	**2.62**	**7**	P	**Pb**	**07 14 20.7**	**-2.7**
KRMI	**Paran Flat**	**2.62**	**7**	S	**Sg**	**07 14 59.9**	**-0.7**
PRNI	**Paran**	**2.88**	**11**	P	**Pb**	**07 14 25.4**	**-2.6**
PRNI	**Paran**	**2.88**	**11**	S	**Sg**	**07 15 07.3**	**-2.0**
HAGS	**Hagol**	**3.17**	**170**	P	**Pb**	**07 14 33.4**	**+0.6**
HAGS				S	**Sb**	**07 15 10.1**	**-1.4**
BRNS	**Bernies**	**3.65**	**184**	P	**Pb**	**07 14 39.9**	**-1.1**

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*IDC **20** 07:14:48.7±5.4, 42°.23N×141°.97E, h113km±28km, mb3.5/8, mbtmp3.9/9, Error ellipse: s-maj=62.2km s-min=21.7km az=153.0*

*NEIC **20** 07:14:50.9±2.4, 42°.41N±0°.07×141°.5E±0°.1, h114km±7km, mb4.2/19, Error ellipse: s-maj=13.5km s-min=9.0km az=118.0*

*JMA **20** 07:14:51.3±0.1, 42°.4N±0°.4×141°.5E±0°.4, h104km, MV3.1/38, S OFF TOMAKOMAI*

ISC 20 07:14:50.6±0.7, **42°.40N**±0°.04×**141°.57E**±0°.04, **h110**km±5km, **n53**, σ**0^{s}97**/66, **mb4.1**/18, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIAM	**Iburiatsuma**	**0.34**	**49**	*i* P	**Pn**	**07 15 06.9**	**+0.4**
JIAM				S	**Sn**	**07 15 18.7**	**+0.2**
JNB	**Noboribetsu**	**0.40**	**280**	*i* P	**Pn**	**07 15 06.6**	**-0.2**
JNB				S	**Sn**	**07 15 18.4**	**-0.6**
JEW	**Eniwo**	**0.45**	**349**	*i* P	**Pn**	**07 15 07.3**	**+0.1**
JEW				S	**Sn**	**07 15 19.1**	**-0.5**
JKB	**Kayabe**	**0.65**	**218**	*i* P	**Pn**	**07 15 08.8**	**+0.3**
JKB				S	**Sn**	**07 15 21.7**	**-0.2**
JBT2	**Biratori 2**	**0.70**	**57**	*i* P	**Pn**	**07 15 09.2**	**+0.3**
JBT2				*e*S	**Sn**	**07 15 22.8**	**+0.1**
JISS	**Ishikarishitsu**	**0.88**	**353**	*i* P	**Pn**	**07 15 11.0**	**+0.4**
JISS				S	**Sn**	**07 15 25.7**	**0.0**
JNBK	**Urakawa-nobuka**	**0.89**	**97**	*i* P	**Pn**	**07 15 11.2**	**+0.6**
JNBK				*e*S	**Sn**	**07 15 26.5**	**+0.8**
JYM2	**Yakumo 2**	**0.93**	**253**	*i* P	**Pn**	**07 15 11.7**	**+0.6**
JFR	**Furan**	**1.07**	**44**	*e*S	**Sn**	**07 15 29.1**	**0.0**
JOT	**Ohata**	**1.09**	**201**	*i* P	**Pn**	**07 15 13.5**	**+0.8**
JOT				S	**Sn**	**07 15 30.3**	**+0.9**
JSH	**Shimam**	**1.15**	**283**	P	**Pn**	**07 15 14.0**	**+0.7**
ERM	**Erimo**	**1.24**	**107**		**Pn**	**07 15 15.7**	**+1.4**
JCH	**Churui**	**1.34**	**80**	*i* P	**Pn**	**07 15 16.4**	**+0.9**
JCH				S	**Sn**	**07 15 35.3**	**+0.9**
JHR	**Hokuryu**	**1.35**	**5**	P	**Pn**	**07 15 16.6**	**+1.0**
JHR				S	**Sn**	**07 15 35.1**	**+0.5**
JOSM	**Okushiri--Mats**	**1.59**	**259**	*i* P	**Pn**	**07 15 19.0**	**+0.6**
JTM	**Tenmabayashi**	**1.65**	**193**		**Pn**	**07 15 19.6**	**+0.4**
JKK2	**Kamakawa 2**	**1.71**	**30**	P	**Pn**	**07 15 20.6**	**+0.7**
JKK2				S	**Sn**	**07 15 42.0**	**-0.3**
JAR	**Ashorobuto**	**1.85**	**60**	P	**Pn**	**07 15 21.9**	**+0.3**
JAR				S	**Sn**	**07 15 45.1**	**-0.3**
ASAJ	**Asahikawa**	**1.88**	**23**	P	**Pn**	**07 15 21.9**	**0.0**
	16nm,0.3s,baz=217,slow=14,SNR=14						
ASAJ				S	**Sn**	**07 15 46.2**	**+0.3**
	25nm,0.5s,baz=337,slow=3.6,SNR=10						
JKA	**Kamikawa-asahi**	**1.88**	**23**		**Pn**	**07 15 21.7**	**-0.2**
JSS	**Shosan**	**2.01**	**6**	P	**Pn**	**07 15 25.3**	**+1.7**
JMM	**Marumori**	**4.56**	**188**	Pn	**Pn**	**07 15 56.6**	**-0.9**
USRK	**Ussuriysk Ar.**	**7.22**	**288**	P	**Pn**	**07 16 36.1**	**+2.8**
	1.6nm,0.7s,baz=79,slow=15,SNR=2.1						
PEA0B	**Petropavlovsk-**	**15.21**	**40**	Pn	**Pn**	**07 18 18.6**	**-0.6**
PEA0B				IAmb	IAmb	07 18 38.1	
	comp=Z,43nm,1.4s						
SONM	**Songino Array**	**25.26**	**295**	P	**P**	**07 20 07.3**	**+0.9**
SONM	**Songino Array**	**25.26**	**295**	P	**P**	**07 20 06.6**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=87,slow=7.4,SNR=6.1						
	comp=Z,1.2nm,0.7s						
UNV	**Unalaska Valle**	**35.73**	**53**	P	**P**	**07 21 38.0**	**-0.2**
ZALV	**Zalesovo Beam**	**38.56**	**308**	P	**P**	**07 22 02.0**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=102,slow=9.5,SNR=4.1						
	comp=Z,1.0nm,0.3s						
M16K	**Timber Creek**	**39.65**	**41**	P	**P**	**07 22 11.0**	**-0.1**
M16K				IAmb	IAmb	07 22 16.3	
	comp=Z,9.7nm,1.4s						
G18K	**Tagagawik**	**40.03**	**33**	P	**P**	**07 22 14.4**	**+0.1**
M17K	**Holitna River**	**40.38**	**41**	P	**P**	**07 22 18.3**	**+1.1**
M17K				IAmb	IAmb	07 22 34.0	
	comp=Z,8.2nm,1.4s						
D19K	**Kuna River**	**40.56**	**30**	P	**P**	**07 22 18.6**	**0.0**
D19K				IAmb	IAmb	07 22 32.3	
	comp=Z,4.8nm,1.4s						
L18K	**Granite Mounta**	**40.73**	**39**	P	**P**	**07 22 20.9**	**+0.9**
H19K	**Roundabout Mou**	**40.91**	**34**	P	**P**	**07 22 24.7**	**+3.2**
H19K				IAmb	IAmb	07 22 52.9	
	comp=Z,4.2nm,1.4s						
MKAR	**Makanchi Array**	**41.57**	**297**	P	**P**	**07 22 27.4**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=82,slow=11,SNR=9.0						
	comp=Z,0.5nm,0.6s						
MAKZ	**Makanchi**	**41.77**	**297**	P	**P**	**07 22 26.8**	**-2.1**
MAKZ				IAmb	IAmb	07 22 30.3	
	comp=Z,1.8nm,0.6s						
E22K	**Anaktuvuk Pass**	**42.86**	**30**	P	**P**	**07 22 37.3**	**-0.1**
E22K				IAmb	IAmb	07 23 16.4	
	comp=Z,5.5nm,1.5s						
KURK	**Kurchatov**	**42.88**	**304**	P	**P**	**07 22 38.0**	**+0.2**
KURK				IAmb	IAmb	07 22 53.5	
	comp=Z,7.5nm,1.1s						
KURBB	**Kurchatov Arra**	**42.96**	**304**	P	**P**	**07 22 39.1**	**+0.8**
	comp=Z,2.3nm,0.5s,baz=77,slow=8.7,SNR=11						
	comp=Z,2.3nm,0.5s						
D25K	**Kavik River**	**44.84**	**29**	P	**P**	**07 22 53.0**	**-0.2**
D25K				IAmb	IAmb	07 23 00.9	
	comp=Z,4.6nm,1.2s						
ILAR	**Eielson Array**	**44.97**	**35**	P	**P**	**07 22 50.8**	**-3.5**
	comp=Z,0.1nm,0.6s,baz=278,slow=7.8,SNR=2.6						
	comp=Z,0.1nm,0.6s						
BMAR	**Burnt Mountain**	**45.63**	**31**	P	**P**	**07 23 00.9**	**+1.4**
BVAR	**Borovoye Array**	**47.18**	**309**	P	**P**	**07 23 12.6**	**+0.9**
	comp=Z,1.3nm,0.4s,baz=67,slow=9.6,SNR=7.0						
	comp=Z,1.3nm,0.4s						
BOOM	**Boomskoye usch**	**47.30**	**294**	P	**P**	**07 23 11.9**	**-1.1**
L27K	**Beaver Creek,**	**47.45**	**37**	P	**P**	**07 23 13.9**	**+0.2**
H31M	**Peel River**	**49.94**	**32**	P	**P**	**07 23 33.5**	**+0.8**
H31M				IAmb	IAmb	07 24 16.2	
	comp=Z,4.3nm,1.4s						
KKAR	**Karatay Array**	**50.69**	**296**	P	**P**	**07 23 38.8**	**+0.1**
AB31	**Akbulak array**	**54.68**	**307**	P	**P**	**07 24 07.6**	**-0.2**
ABKAR	**Akbulak array**	**54.68**	**307**	P	**P**	**07 24 08.2**	**+0.3**
SPB2	**Spitsbergen Ar**	**55.30**	**348**	P	**P**	**07 24 11.0**	**-0.9**
RES	**Resolute Bay**	**57.39**	**15**	P	**P**	**07 24 26.7**	**-0.1**
RES				IAmb	IAmb	07 24 35.3	
	comp=Z,5.4nm,1.4s						
FINES	**FINESS Array B**	**64.15**	**331**	P	**P**	**07 25 13.2**	**+0.5**
	comp=Z,1.5nm,0.5s,baz=57,slow=7.0,SNR=14						
	comp=Z,1.5nm,0.5s						
HFS	**Hagfors**	**69.27**	**335**	P	**P**	**07 25 45.0**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=40,slow=5.8,SNR=7.4						
	comp=Z,0.7nm,0.3s						

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*IDC **20** 07:14:51.0±4.2, 29°.96N×142°.73E, h0km, mb3.8/6, mbtmp3.8/8, ML3.0/2, Error ellipse: s-maj=159.2km s-min=21.2km az=70.0*

ISC 20 07:14:57.5±2.9, **29°.8N**±0°.3×**142°.4E**±0°.6, **h35**km, **n8**, σ**1^{s}33**/7, **mb4.0**/6, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**7.58**	**333**	Pn	Pn	07 16 40.3	-5.1
	0.2nm,0.3s,baz=144,slow=9.7,SNR=10						
	2.1nm,0.5s						
KSRS	**Korea Array**	**14.27**	**306**	Pn	**Pn**	**07 18 17.4**	**+0.3**
	0.1nm,0.3s,baz=112,slow=12,SNR=8.2						
	1.1nm,0.5s						
SONM	**Songino Array**	**32.95**	**313**	P	**P**	**07 21 28.6**	**-0.3**
	0.8nm,0.6s,baz=110,slow=7.4,SNR=3.7						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**48.94**	**308**	P	**P**	**07 23 39.3**	**-1.0**
	1.2nm,0.7s,baz=93,slow=8.9,SNR=6.2						
	1.2nm,0.7s						
WRA	**Warramunga Arr**	**50.08**	**190**	P	**P**	**07 23 48.1**	**-1.0**
	0.9nm,0.7s,baz=9.1,slow=8.0,SNR=7.7						
	0.9nm,0.7s						
KURBB	**Kurchatov Arra**	**51.32**	**313**	P	**P**	**07 23 56.5**	**-1.7**
	1.1nm,0.5s,baz=89,slow=7.4,SNR=7.6						
	1.1nm,0.5s						
ASAR	**Alice Springs**	**53.81**	**190**	P	**P**	**07 24 18.0**	**+1.2**
	0.1nm,0.4s,baz=356,slow=5.1,SNR=1.6						
	0.1nm,0.4s						
BVAR	**Borovoye Array**	**56.21**	**316**	P	**P**	**07 24 34.9**	**+1.0**
	1.4nm,0.5s,baz=92,slow=9.0,SNR=7.2						
	1.4nm,0.5s						

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*HEL **20** 07:30:26.7±0.1, 63°.97N×28°.10E, h0km, ML1.8, Suspected explosion*

*IDC **20** 07:30:27.8±1.6, 63°.95N×27°.99E, h0km, mbtmp3.0/3, ML2.1/3, Error ellipse: s-maj=24.2km s-min=10.0km az=99.0*

*UPP **20** 07:30:29.9±2.2, 63°.99N×27°.54E, h0km, ML1.5*

ISC 20 07:30:26.3±0.8, **63°.93N**±0°.03×**27°.99E**±0°.04, **h0**km, **n43**, σ**1^{s}27**/66, **Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIF	**Nilsia**	**0.55**	**188**	PG	**Pg**	**07 30 37.6**	**+0.8**
	baz=11						
NIF				SG	**Sg**	**07 30 43.9**	**+0.1**
SUF	**Sumiainen**	**1.47**	**215**	PG	**Pg**	**07 30 54.6**	**+0.1**
	baz=32						
SUF				MSG		07 31 12.6	
	comp=Z,3.4nm,0.2s						
OUL	**Oulu**	**1.47**	**323**	PG	**Pn**	**07 30 53.6**	**-0.5**
	baz=135						
OUL				SG	**Sg**	**07 31 12.6**	**-1.0**
OUF	**Merijarvi**	**1.49**	**289**	PG	**Pn**	**07 30 54.1**	**-0.3**
OUF				MSG		07 31 12.6	
	comp=Z,6.5nm,0.2s						
OUF				SG	**Sg**	**07 31 14.5**	**+0.3**
OBF4	**Vikkela, Lumij**	**1.54**	**307**	PG	**Pn**	**07 30 54.9**	**-0.1**
	baz=121						
OBF4				MSG		07 31 13.1	
	comp=Z,5.6nm,0.2s						
OBF4				SN	**Sg**	**07 31 17.8**	**+2.1**
OBF0	**Syolatti, Pyha**	**1.74**	**291**	PG	**Pn**	**07 30 58.3**	**+0.6**
OBF0				MSG		07 31 19.3	
	comp=Z,7.1nm,0.2s						
OBF0				SG	**Sn**	**07 31 21.6**	**+1.1**
KU1	**Kurvinen**	**1.78**	**22**	PG	**Pn**	**07 30 57.6**	**-0.7**
KU2	**Taivalkoski**	**1.79**	**3**	PG	**Pn**	**07 30 58.3**	**-0.2**
	baz=181						
JOF	**Joensuu**	**1.81**	**123**	PG	**Pn**	**07 30 59.0**	**+0.3**
	baz=310						
JOF				SG	**Sn**	**07 31 22.5**	**+0.2**
KAF	**Kangasniemi**	**1.98**	**204**	PG	**Pb**	**07 31 03.0**	**-0.2**
KAF				MSG		07 31 27.1	
	comp=Z,6.6nm,0.2s						
KAF				SG	**Sg**	**07 31 29.8**	**+0.1**
OBF8	**Ulkokalla**	**2.03**	**284**	PG	**Pn**	**07 31 03.2**	**+1.5**
OBF8				MSG		07 31 28.1	
	comp=Z,3.5nm,0.2s						
MSF	**Maaselka**	**2.04**	**12**	PG	**Pn**	**07 31 02.1**	**+0.2**
	baz=196						
MSF				SG	**Sn**	**07 31 27.0**	**-1.1**
RANF	**Ranua**	**2.16**	**347**	PG	**Pn**	**07 31 04.4**	**+0.9**
RANF				SG	**Sn**	**07 31 31.0**	**+0.1**
KU6	**Riekki**	**2.26**	**20**	PG	**Pn**	**07 31 05.9**	**+1.1**
KU6				MSG		07 31 31.8	
	comp=Z,3.0nm,0.2s						
KU6				SG	**Sn**	**07 31 33.4**	**0.0**
KEF	**Keuruu**	**2.27**	**220**	PG	**Pb**	**07 31 08.1**	**+0.1**
KEF				MSG		07 31 35.6	
	comp=Z,5.3nm,0.2s						
KEF				SG	**Sg**	**07 31 38.1**	**-1.0**
OLKF	**Oulanka, Finla**	**2.48**	**13**	PG	**Pn**	**07 31 09.6**	**+1.7**
OLKF				MSG		07 31 38.2	
	comp=Z,4.0nm,0.2s						
OLKF				SG	**Sn**	**07 31 40.0**	**+1.3**
RUF	**Ruokolahti**	**2.55**	**170**	PG	**Pb**	**07 31 12.2**	**-0.7**
RUF				MSG		07 31 42.9	
	comp=Z,5.4nm,0.2s						
RUF				SG	**Sb**	**07 31 45.7**	**+0.9**
FIA0	**FINESS Array S**	**2.64**	**200**	PB	**Pb**	**07 31 13.2**	**-1.3**
FIA0				MSG		07 31 46.2	
	comp=Z,3.3nm,0.2s						
FIA0				SB	**Sb**	**07 31 48.1**	**+0.6**
FINES	**FINESS Array B**	**2.64**	**200**	Pn	**Pb**	**07 31 13.6**	**-0.9**
	comp=Z,0.8nm,0.3s,baz=23,slow=15,SNR=25						
FINES				Sn	**Sb**	**07 31 46.9**	**-0.6**
	comp=Z,1.8nm,0.3s,baz=21,slow=25,SNR=21						
	comp=Z,2.8nm,0.5s						
TOF	**Tornio**	**2.66**	**326**	SB	**Sn**	**07 31 43.4**	**+0.1**
TOF				MSG		07 31 45.0	
	comp=Z,1.8nm,0.2s						
KALU	**Kalix**	**2.77**	**317**	P	**Pn**	**07 31 13.3**	**+1.4**
KALU				S	**Sn**	**07 31 46.0**	**+0.1**
KALU	**Kalix**	**2.77**	**317**	PB	**Pn**	**07 31 13.4**	**+1.5**
KALU				SN	**Sn**	**07 31 46.8**	**+0.9**
RNF	**Rovaniemi**	**2.82**	**344**	PN	**Pn**	**07 31 10.4**	**-2.1**
RNF				SN	**Sn**	**07 31 47.1**	**0.0**
BURU	**Burvik**	**2.96**	**286**	P	**Pn**	**07 31 15.2**	**+0.7**
BURU	**Burvik**	**2.96**	**286**	PN	**Pn**	**07 31 16.0**	**+1.5**
BURU				SG	**Sb**	**07 31 57.3**	**+0.8**
SJUU	**Sjulsmark**	**3.16**	**303**	P	**Pn**	**07 31 18.2**	**+0.9**
SJUU				S	**Sn**	**07 31 54.9**	**-0.8**
UMAU	**Umeaa**	**3.23**	**272**	PN	**Pn**	**07 31 19.0**	**+0.8**
	baz=84						
VJF	**Virojoki**	**3.41**	**184**	SB	**Sb**	**07 32 10.2**	**+0.8**
KPF	**Kankaanpaa**	**3.43**	**235**	PB	**Pb**	**07 31 25.5**	**-2.3**
	baz=52						
ERTU	**Ertsjaerv**	**3.59**	**320**	P	**Pn**	**07 31 23.9**	**+0.7**
ERTU	**Ertsjaerv**	**3.59**	**320**	SN	**Sn**	**07 32 06.8**	**+0.5**
PAJU	**Pajala**	**3.71**	**329**	P	**Pn**	**07 31 26.1**	**+1.2**
PAJU	**Pajala**	**3.71**	**329**	PN	**Pn**	**07 31 26.5**	**+1.6**
PAJU				SN	**Sn**	**07 32 08.6**	**-0.7**
KLF	**Kolari**	**3.72**	**335**	PN	**Pn**	**07 31 25.9**	**+1.0**
KLF				SN	**Sn**	**07 32 07.8**	**-1.5**
SVAU	**Svanoeiden**	**3.72**	**282**	P	**Pn**	**07 31 25.3**	**+0.3**
HARU	**Harads**	**3.72**	**310**	P	**Pn**	**07 31 25.9**	**+0.9**
BREU	**Bredtraesk**	**4.16**	**274**	P	**Pn**	**07 31 32.0**	**+1.1**
MASU	**Masugnsbyn**	**4.32**	**328**	P	**Pn**	**07 31 34.5**	**+1.2**
DUNU	**Dundret**	**4.45**	**319**	P	**Pn**	**07 31 36.1**	**+1.1**
RAJF	**Raja-Jooseppi**	**4.57**	**2**	SN	**Sn**	**07 32 29.2**	**-1.2**
ARCES	**ARCESS Array B**	**5.72**	**351**	Pn	**Pn**	**07 31 53.5**	**+1.1**
	baz=173,slow=11,SNR=2.6						
ARCES				Sn	**Sn**	**07 32 54.3**	**-4.3**
	comp=Z,0.2nm,0.3s,baz=171,slow=25,SNR=5.8						
ARCES				Lg	Lg	07 33 18.4	
	comp=Z,0.2nm,0.3s,baz=168,slow=34,SNR=3.9						
	comp=Z,2.2nm,1.0s						
I37NO	**I37NO**	**6.38**	**328**	I	I	08 07 05.0	
	baz=141,slow=316,SNR=2.8						
HFS	**Hagfors**	**7.71**	**247**	Pn	**Pn**	**07 32 20.4**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=50,slow=14,SNR=2.5						
HFS				Sn	**Sn**	**07 33 43.0**	**-4.7**
	comp=Z,0.1nm,0.3s,baz=54,slow=29,SNR=1.8						
	comp=Z,1.1nm,0.7s						

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*BJI **20** 07:31:32.7, 20°.66S×179°.10W, h609km, mB4.4/8, mb4.5/26*

*MOS **20** 07:31:32.8±0.8, 21°.13S×179°.22W, h625km, mb5.1/10, Error ellipse: s-maj=12.3km s-min=10.1km az=120.5*

*NOU **20** 07:31:32.5, 21°.25S×179°.04W, h620km, mb4.9/35, Fiji Islands Region*

*IDC **20** 07:31:33.8±1.6, 21°.15S×179°.14W, h625km±19km, mb3.8/18, mbtmp4.8/20, Error ellipse: s-maj=14.8km s-min=10.9km az=84.0*

*NEIC **20** 07:31:33.8±1.8, 21°.2S±0°.1×179°.1W±0°.1, h623km±8km, mb5.1/80, Error ellipse: s-maj=17.0km s-min=15.0km az=96.0*

ISC 20 07:31:32.8±0.3, **21°.20S**±0°.05×**179°.02W**±0°.06, **h619**km, **n509**, σ**0^{s}94**/519, **mb4.7**/77, **7C-2D**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**2.96**	**4**	P	**P**	**07 32 53.6**	**+0.1**
MSVF	**Nonsavu**	**4.42**	**321**		**P**	**07 33 03.3**	**+0.4**
MSVF	**Nonsavu**	**4.42**	**321**	P	**P**	**07 33 03.1**	**+0.2**
	562nm,0.5s,baz=154,slow=6.6,SNR=265						
MSVF	**Nonsavu**	**4.42**	**321**	P	**P**	**07 33 02.7**	**-0.1**
MSVF	**Nonsavu**	**4.42**	**321**	*i* P	**P**	**07 33 02.3**	**-0.5**
TAVE	**Taveuni**	**4.55**	**349**	P	**P**	**07 33 03.9**	**+0.2**
DGTI	**Dogotuki**	**5.02**	**346**	P	**P**	**07 33 06.8**	**-0.4**
FUTU	**Fugatoga**	**6.91**	**7**		**P**	**07 33 23.5**	**+0.5**
FUTU	**Fugatoga**	**6.91**	**7**	P	**P**	**07 33 23.5**	**+0.5**
GLKZ	**Green Lake**	**8.09**	**173**	P	**P**	**07 33 32.1**	**-1.4**
GLKZ				S	**S**	**07 35 09.6**	**-2.8**
AFI	**Afiamalu**	**10.01**	**45**	P	**P**	**07 33 50.3**	**-2.0**
PINNC	**Pines Island,**	**12.64**	**261**	P	**P**	**07 34 17.5**	**-0.3**
DZM	**Mont Dzumac**	**13.55**	**264**		**P**	**07 34 26.3**	**-0.6**
DZM	**Mont Dzumac**	**13.55**	**264**	P	**P**	**07 34 26.0**	**-0.9**
	12nm,0.5s,baz=89,slow=20,SNR=23						
DZM	**Mont Dzumac**	**13.55**	**264**	P	**P**	**07 34 26.1**	**-0.8**
VLAKA	**Lakatoro**	**13.81**	**289**	P	**P**	**07 34 29.2**	**-0.2**
SANVU	**Saraoutou**	**14.28**	**291**	P	**P**	**07 34 33.8**	**0.0**
SANVU	**Saraoutou**	**14.28**	**291**	P	**P**	**07 34 33.7**	**0.0**
GRZ	**Great Barrier**	**15.75**	**197**	P	**P**	**07 34 48.6**	**+1.7**
WCZ	**Waipu Caves**	**15.79**	**200**	P	**P**	**07 34 49.4**	**+2.2**
KUZ	**Kuaotunu**	**16.15**	**195**	P	**P**	**07 34 52.1**	**+1.6**
MXZ	**Matakaoa Point**	**16.47**	**188**	P	**P**	**07 34 52.9**	**-0.5**
MKAZ	**Moumakai**	**16.63**	**196**	P	**P**	**07 34 56.6**	**+1.7**
WMGZ	**Waiomatatini S**	**16.71**	**187**	P	**P**	**07 34 54.5**	**-1.1**
HAZ	**Te Kaha**	**16.73**	**189**	P	**P**	**07 34 55.7**	**-0.1**
TOZ	**Tahuroa Road**	**17.14**	**195**	P	**P**	**07 35 00.5**	**+0.9**
URZ	**Urewera**	**17.32**	**190**	P	**P**	**07 34 59.4**	**-1.8**
	15nm,0.3s,baz=262,slow=1.9,SNR=25						
URZ	**Urewera**	**17.32**	**190**	P	**P**	**07 34 58.8**	**-2.4**
MWZ	**Matawai**	**17.33**	**189**	P	**P**	**07 34 59.5**	**-1.8**
CNGZ	**Carnagh Statio**	**17.39**	**187**	P	**P**	**07 35 00.5**	**-1.4**
TKGZ	**Te Karaka**	**17.39**	**188**	P	**P**	**07 35 01.4**	**-0.4**
TLZ	**Tolley Road**	**17.70**	**194**	P	**P**	**07 35 06.1**	**+1.3**
HIZ	**Hauiti**	**18.04**	**196**	P	**P**	**07 35 09.1**	**+1.3**
RITZ	**Rihia Road**	**18.25**	**193**	P	**P**	**07 35 08.7**	**-1.0**
BKZ	**Black Stump Fm**	**18.31**	**191**	P	**P**	**07 35 08.1**	**-2.2**
TMVZ	**Te Maari**	**18.42**	**193**	P	**P**	**07 35 10.2**	**-1.1**
ETVZ	**East Tongariro**	**18.44**	**193**	P	**P**	**07 35 09.9**	**-1.6**
NGZ	**Ngauruhoe**	**18.50**	**193**	P	**P**	**07 35 11.0**	**-1.1**
MCHZ	**McNeill Hill**	**18.55**	**190**	P	**P**	**07 35 11.0**	**-1.4**
VRZ	**Vera Road**	**18.64**	**195**	P	**P**	**07 35 14.8**	**+1.6**
WNVZ	**Wahianoa**	**18.64**	**193**	P	**P**	**07 35 11.5**	**-2.0**
KRHZ	**Kereru**	**18.80**	**191**	P	**P**	**07 35 12.1**	**-2.6**
NEZ	**North Egmont**	**18.95**	**197**	P	**P**	**07 35 19.3**	**+3.1**
PNHZ	**Pukenui**	**19.09**	**191**	P	**P**	**07 35 14.8**	**-2.5**
PXZ	**Pawanui**	**19.09**	**190**	P	**P**	**07 35 16.0**	**-1.3**
TSZ	**Takapari Road**	**19.28**	**192**	P	**P**	**07 35 18.0**	**-1.0**
BFZ	**Birch Farm**	**19.83**	**191**	P	**P**	**07 35 22.6**	**-1.4**
MRZ	**Mangatainoka R**	**19.93**	**192**	P	**P**	**07 35 23.0**	**-1.9**
OGWZ	**Otaki Gorge**	**20.17**	**193**	P	**P**	**07 35 25.3**	**-1.7**
HOWZ	**Holdsworth Sta**	**20.17**	**192**	P	**P**	**07 35 24.8**	**-2.3**
SNZO	**South Karori**	**20.74**	**193**	P	**P**	**07 35 31.0**	**-1.1**
QRZ	**Quartz Range**	**20.84**	**198**	P	**P**	**07 35 33.0**	**-0.1**
QRZ	**Quartz Range**	**20.84**	**198**	P	**P**	**07 35 32.9**	**-0.1**
NNZ	**Nelson**	**20.97**	**196**	P	**P**	**07 35 33.0**	**-1.1**
THZ	**Tophouse**	**21.60**	**197**	P	**P**	**07 35 38.1**	**-1.8**
DSZ	**Denniston Nort**	**21.90**	**199**	P	**P**	**07 35 41.3**	**-1.2**
KHZ	**Kahutara**	**22.06**	**195**	P	**P**	**07 35 42.1**	**-1.7**
KHZ	**Kahutara**	**22.06**	**195**	P	**P**	**07 35 41.8**	**-2.0**
GVZ	**Greta Valley S**	**22.70**	**195**	P	**P**	**07 35 47.6**	**-1.9**
LTZ	**Lake Taylor**	**22.72**	**197**	P	**P**	**07 35 47.7**	**-2.1**
INZ	**Inchbonnie**	**22.90**	**198**	P	**P**	**07 35 49.8**	**-1.5**
ALEG	**Aligegeo Malai**	**23.14**	**299**	P	**P**	**07 35 53.0**	**-0.9**
OXZ	**Oxford**	**23.29**	**197**	P	**P**	**07 35 53.3**	**-1.5**
WVZ	**Waitaha Valley**	**23.43**	**199**	P	**P**	**07 35 55.0**	**-1.0**
MQZ	**McQueen's Vall**	**23.49**	**195**	P	**P**	**07 35 54.6**	**-1.9**
SAVO	**Savo Central**	**23.65**	**297**	P	**P**	**07 35 58.4**	**0.0**
FOZ	**Fox Glacier**	**24.13**	**200**	P	**P**	**07 36 01.6**	**-0.6**
TMZ	**Timaru**	**24.55**	**197**	P	**P**	**07 36 05.2**	**-0.8**
LBZ	**Lake Benmore**	**24.79**	**199**	P	**P**	**07 36 05.7**	**-2.3**
JCZ	**Jackson Bay**	**24.95**	**201**	P	**P**	**07 36 09.0**	**-0.6**
ODZ	**Otahua Downs**	**25.26**	**197**	P	**P**	**07 36 12.0**	**-0.1**
WKZ	**Wanaka**	**25.55**	**200**	P	**P**	**07 36 14.0**	**-0.7**
EAZ	**Earnscleugh**	**25.82**	**199**	P	**P**	**07 36 16.5**	**-0.6**
MLZ	**Mavora Lakes**	**26.32**	**201**	P	**P**	**07 36 21.8**	**+0.3**
TUZ	**Tuapeka**	**26.38**	**198**	P	**P**	**07 36 21.7**	**-0.3**
DCZ	**Deep Cove**	**26.73**	**202**	P	**P**	**07 36 25.1**	**0.0**
WHZ	**Wether Hill Ro**	**26.84**	**200**	P	**P**	**07 36 25.6**	**-0.4**
EIDS	**Eidsvold**	**27.74**	**256**	P	**P**	**07 36 34.4**	**+0.2**
EIDS				IAmb	IAmb	07 36 34.6	
	comp=Z,12nm,0.6s						
ARMA	**Armidale**	**27.90**	**245**	P	**P**	**07 36 36.4**	**+0.7**
CTAO	**Charters Tower**	**32.48**	**266**		**P**	**07 37 14.7**	**-0.1**
CTAO				IAmb	IAmb	07 37 14.9	
	comp=Z,32nm,0.5s						
CTAO	**Charters Tower**	**32.48**	**266**	P	**P**	**07 37 14.5**	**-0.3**
CTAO	**Charters Tower**	**32.48**	**266**	P	**P**	**07 37 14.7**	**-0.1**
CTAO				pmax	pmax		
	comp=Z,32nm,0.5s						
CTAO	**Charters Tower**	**32.48**	**266**	P	**P**	**07 37 14.4**	**-0.3**
QLP	**Quilpie**	**33.94**	**254**	P	**P**	**07 37 26.4**	**-0.5**
PMG	**Port Moresby**	**34.58**	**285**		**P**	**07 37 32.2**	**-0.1**
PMG				IAmb	IAmb	07 37 32.8	
	comp=Z,63nm,0.8s						
PMG	**Port Moresby**	**34.58**	**285**	P	**P**	**07 37 32.0**	**-0.4**
PMG	**Port Moresby**	**34.58**	**285**	*i* P	**P**	**07 37 31.5**	**-0.8**
PMG				pmax	pmax		
	comp=Z,65nm,0.8s						
PMG	**Port Moresby**	**34.58**	**285**	P	**P**	**07 37 31.6**	**-0.8**
MTSU	**Mount Surprise**	**34.61**	**269**	P	**P**	**07 37 32.3**	**-0.3**
TOO	**Toolangi**	**34.71**	**234**	P	**P**	**07 37 33.7**	**+0.5**
TOO	**Toolangi**	**34.71**	**234**	P	**P**	**07 37 33.7**	**+0.5**
TOO				pmax	pmax		
	comp=Z,200nm,1.9s						
TAU	**Tasmania Unive**	**35.46**	**225**	P	**P**	**07 37 39.8**	**+0.6**
TAU				IAmb	IAmb	07 39 04.2	
	comp=Z,117nm,1.6s						
TAU	**Tasmania Unive**	**35.46**	**225**	P	**P**	**07 37 39.8**	**+0.6**
TAU				pmax	pmax		
	comp=Z,117nm,1.6s						
PATS	**Pohnpei**	**35.66**	**319**	P	**P**	**07 37 41.8**	**+0.6**
STKA	**Stephens Creek**	**36.62**	**245**	P	**P**	**07 37 49.2**	**+0.2**
STKA				IAmb	IAmb	07 39 01.3	
	comp=Z,155nm,1.9s						
STKA	**Stephens Creek**	**36.62**	**245**	P	**P**	**07 37 49.2**	**+0.2**
	comp=Z,1.7nm,0.4s,baz=87,slow=11,SNR=7.1						
	comp=Z,1.7nm,0.4s						
COEN	**Coen**	**36.68**	**275**		**P**	**07 37 49.9**	**+0.3**
COEN				IAmb	IAmb	07 37 50.6	
	comp=Z,43nm,0.8s						
COEN	**Coen**	**36.68**	**275**	P	**P**	**07 37 49.6**	**-0.1**
MANU	**Manus Island**	**37.88**	**296**	P	**P**	**07 37 59.5**	**+0.1**
MANU				IAmb	IAmb	07 39 24.3	
	comp=Z,198nm,1.9s						
BBOO	**Buckleboo**	**41.38**	**244**	P	**P**	**07 38 26.8**	**-0.3**
BBOO				IAmb	IAmb	07 39 48.8	
	comp=Z,108nm,1.8s						
WAKE	**Wake Island**	**42.61**	**340**	P	**P**	**07 38 36.6**	**-0.1**
WAKE	**Wake Island**	**42.61**	**340**	P	**P**	**07 38 36.1**	**-0.6**
JAY	**Jayapura**	**43.37**	**290**	P	**P**	**07 38 42.5**	**-0.3**
	comp=Z,99nm,0.6s,baz=146,slow=4.6,SNR=35						
	comp=Z,99nm,0.6s						
JAY	**Jayapura**	**43.37**	**290**	P	**P**	**07 38 42.3**	**-0.5**
AS01	**Alice Springs**	**43.39**	**258**	P	**P**	**07 38 42.3**	**-0.6**
WR8	**Warramunga Arr**	**43.41**	**263**	P	**P**	**07 38 42.1**	**-0.9**
AS31	**Alice Springs**	**43.43**	**258**	P	**P**	**07 38 43.0**	**-0.2**
ASAR	**Alice Springs**	**43.43**	**258**	P	**P**	**07 38 42.9**	**-0.3**
ASAR	**Alice Springs**	**43.43**	**258**	P	**P**	**07 38 42.7**	**-0.5**
	comp=Z,20nm,0.6s,baz=97,slow=7.7,SNR=270						
	comp=Z,20nm,0.6s						
ASAR	**Alice Springs**	**43.43**	**258**	P	**P**	**07 38 42.9**	**-0.3**
WB0	**Warramunga Arr**	**43.54**	**263**	P	**P**	**07 38 43.1**	**-0.9**
WB0				IAmb	IAmb	07 38 43.7	

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                  comp=Z,30nm,0.6s
WRAB  Tennant Creek     43.55 263   P      P      07 38 43.0 -1.1
WRAB  Tennant Creek     43.55 263 i P      P      07 38 42.6 -1.6
WRAB                                pmax   pmax
                  comp=Z,27nm,0.9s
WRA   Warramunga Arr    43.56 263   P      P      07 38 43.4 -0.8
WRA   Warramunga Arr    43.56 263   P      P      07 38 43.1 -1.2
                  comp=Z,15nm,0.5s,baz=98,slow=7.7,SNR=230
                  comp=Z,15nm,0.5s
WRA   Warramunga Arr    43.56 263 eP      P      07 38 43.0 -1.2
WRA                                 pmax   pmax
                  comp=Z,10.0nm,0.3s
GENI  Genyem            43.81 289   P      P      07 38 46.0 -0.1
KDU   Kakadu            47.02 272   P      P      07 39 09.5 -1.0
FORT  Forrest           48.14 247   P      P      07 39 17.9 -0.7
FORT                                IAmb   IAmb   07 40 48.5
                  comp=Z,32nm,1.1s
MTN   Manton Dam        48.22 272   P      P      07 39 18.9 -0.5
MTN                                 IAmb   IAmb   07 39 19.3
                  comp=Z,30nm,0.7s
MTN   Manton Dam        48.22 272   P      P      07 39 18.6 -0.8
GUMO  Guam              49.53 311   P      P      07 39 29.2 +0.2
GUMO  Guam              49.53 311   P      P      07 39 29.2 +0.2
GUMO                                pmax   pmax
                  comp=Z,150nm,0.9s
GUMO  Guam              49.53 311   P      P      07 39 28.7 -0.3
KNRA  Kununurra         49.66 267   P      P      07 39 29.5 -0.5
FITZ  Fitzroy Crossi    51.99 263   P      P      07 39 46.8  0.0
DRV   Dumont d'Urvil    52.38 199   P      P      07 39 48.9 +0.2
SOEI  Soe               55.57 273   P      P      07 40 12.3 +0.2
PSA00 Pilbara Seismi    56.58 258   P      P      07 40 18.4 -0.4
MBWA  Marble Bar        56.77 258   P      P      07 40 19.5 -0.6
MBWA  Marble Bar        56.77 258   P      P      07 40 19.1 -1.0
SBA   Scott Base        57.11 184   P      P      07 40 24.7 +3.3
SBA   Scott Base        57.11 184   P      P      07 40 24.7 +3.3
SBA                                 pmax   pmax
                  comp=Z,280nm,1.0s
SBA   Scott Base        57.11 184   P      P      07 40 23.9 +2.5
SBA                                 PcP    PcP    07 41 08.0 +0.8
VNDA  Vanda             57.13 185   P      P      07 40 23.6 +2.0
VNDA  Vanda             57.13 185   P      P      07 40 23.3 +1.8
                  comp=Z,5.7nm,0.7s,baz=358,slow=8.0,SNR=47
                  comp=Z,5.7nm,0.7s
VNDA  Vanda             57.13 185   P      P      07 40 23.6 +2.0
VNDA  Vanda             57.13 185   P      P      07 40 23.1 +1.5
MORW  Morawa            58.68 248   P      P      07 40 32.3 -0.6
GIRL  Giralia           61.45 255   P      P      07 40 51.9 +0.7
GIRL                                IAmb   IAmb   07 42 19.3
                  comp=Z,101nm,1.4s
CCD   Concordia, Ant    61.55 194   P      P      07 40 52.2 +0.8
CCD                                 PcP    PcP    07 41 25.2 -0.5
TOLI2 Tolitoli          62.82 283   P      P      07 41 00.7 +0.5
TOLI2 Tolitoli          62.82 283   P      P      07 41 01.0 +0.8
CASY  Casey             62.92 205   P      P      07 40 59.7 -0.2
CASY  Casey             62.92 205   P      P      07 41 00.0 +0.1
JHJ2  Mitsune           66.79 323   P      P      07 41 24.8 +0.2
QSPA  South Pole Qui    68.87 180   P      P      07 41 37.9 +1.1
                  comp=Z,35nm,0.8s,baz=317,slow=0.4,SNR=201
                  comp=Z,35nm,0.8s
QSPA  South Pole Qui    68.87 180   P      P      07 41 37.7 +0.9
QSPA                                PcP    PcP    07 41 57.1 +1.0
UGM   Wanagama          69.00 269   P      P      07 41 38.2 -0.3
UGM                                 IAmb   IAmb   07 42 02.3
                  comp=Z,182nm,1.5s
JGF   Kuroka            70.00 323          P      07 41 43.1 -0.7
JGF   Kuroka            70.00 323   P      P      07 41 43.8 -0.1
MJA0  Matsu Arr-Jizo    70.20 324 eP      P      07 41 44.8 -0.3
MJA0                                pmax   pmax
                  comp=Z,10.0nm,0.6s
MJAR  Matsushiro Arr    70.22 324   P      P      07 41 44.9 -0.3
                  comp=Z,9.5nm,0.6s,baz=157,slow=5.7,SNR=25
                  comp=Z,9.5nm,0.6s
MAJO  Matsushiro        70.22 324          P      07 41 44.6 -0.6
MAJO  Matsushiro        70.22 324   P      P      07 41 44.6 -0.6
MAJO  Matsushiro        70.22 324   P      P      07 41 44.6 -0.6
MAJO                                pmax   pmax
                  comp=Z,24nm,1.0s
MAJO  Matsushiro        70.22 324   P      P      07 41 44.8 -0.3
MJB9  Matsu-Tunnel      70.22 324   P      P      07 41 46.0 +0.8
JSD   Sado              71.30 326   P      P      07 41 52.5 +1.1
JSD                                 IAmb   IAmb   07 44 14.9
                  comp=Z,23nm,1.0s
JSD   Sado              71.30 326   P      P      07 41 52.3 +0.9
ERM   Erimo             71.97 331   P      P      07 41 56.4 +1.2
ERM   Erimo             71.97 331   P      P      07 41 56.4 +1.2
ERM                                 pmax   pmax
                  comp=Z,17nm,1.0s
JNU   Nakatsue          72.14 317   P      P      07 41 56.3 -0.1
KSM   Kuching           72.57 279   P      P      07 41 59.7 +0.4
KIWB  Kanaga Island     72.76   1   P      P      07 41 59.5  0.0
ADK   Adak              72.80   2   P      P      07 41 59.2 -0.5
ADK                                 IAmb   IAmb   07 44 01.1
                  comp=Z,46nm,1.1s
ADK   Adak              72.80   2   P      P      07 41 59.2 -0.5
ADK   Adak              72.80   2   P      P      07 41 59.2 -0.5
ADK                                 pmax   pmax
                  comp=Z,46nm,1.1s
YULB  Yu-li             73.09 304   P      P      07 42 01.4 -0.7
ATKA  Atka Island       73.21   3   P      P      07 42 01.4 -0.6
TPUB  Ta-pu             73.56 304          P      07 42 03.0 -1.7
TPUB                                IAmb   IAmb   07 44 40.6
                  comp=Z,92nm,1.0s
TPUB  Ta-pu             73.56 304   P      P      07 42 03.4 -1.3
SSLB  Suanglung         73.57 304          P      07 42 03.1 -1.7
SSLB                                IAmb   IAmb   07 44 41.0
                  comp=Z,44nm,1.1s
SSLB  Suanglung         73.57 304   P      P      07 42 04.0 -0.8
NIKH  Nikolski High     74.39   6   P      P      07 42 07.8 -0.9
                  baz=190
UNV   Unalaska Valle    75.52   8   P      P      07 42 13.8 -1.1
                  baz=192
YSS   Yuzhno-Sakhali    76.10 334 i P      P      07 42 18.4 +0.1
YSS                                 pmax   pmax
                  comp=Z,9.0nm,0.8s
PEA0B Petropavlovsk-    76.71 346   P      P      07 42 22.2 +0.7
PEA0B Petropavlovsk-    76.71 346 i P      P      07 42 21.8 +0.3
PETK  Petropavlovsk-    76.71 346   P      P      07 42 21.4 -0.1
                  comp=Z,14nm,0.9s,baz=134,slow=7.1,SNR=9.9
                  comp=Z,14nm,0.9s
KSRS  Korea Array       76.79 319   P      P      07 42 23.0 +0.8
                  comp=Z,1.8nm,0.7s,baz=146,slow=6.4,SNR=9.4
                  comp=Z,1.8nm,0.7s
CNBA  Chernabura Isl    77.52  11   P      P      07 42 25.5 -0.3
CNBA                                IAmb   IAmb   07 44 24.3
                  comp=Z,34nm,1.1s
CHNA  Chernabura Isl    77.53  11   P      P      07 42 25.1 -0.8
                  baz=199
SDPT  Sand Point        77.87  11   P      P      07 42 26.4 -1.3
                  baz=198
P08K  Saint George I    77.91   5   P      P      07 42 26.7 -1.1
                  baz=189
S12K  Black Hills       77.95  10   P      P      07 42 27.2 -0.9
                  baz=196
SMAI  San Martin Ant    78.29 159   P      P      07 42 31.7 +1.8
SMAI                                IAmb   IAmb   07 42 32.4
                  comp=Z,53nm,0.8s
MSHR  Mys Shultsa       78.33 325 i P      P      07 42 30.4  0.0
MSHR                                pmax   pmax
                  comp=Z,36nm,1.6s
SPIA  Saint Paul Isl    78.42   5   P      P      07 42 29.9 -0.7
                  baz=188
S14K  Fog Glacier       78.92  11   P      P      07 42 32.7 -0.7
                  baz=198
BELA  Belgrano 2        78.98 173   P      P      07 42 33.7 +0.2
BELA                                IAmb   IAmb   07 42 34.4
                  comp=Z,30nm,0.9s
USA0B Ussuriysk Arra    79.01 326   P      P      07 42 35.4 +1.4
USA0B                               IAmb   IAmb   07 44 59.1
                  comp=Z,37nm,1.2s
USA0B Ussuriysk Arra    79.01 326 i P      P      07 42 34.0  0.0
USRK  Ussuriysk Ar.     79.01 326   P      P      07 42 35.2 +1.2
                  comp=Z,10.0nm,0.8s,baz=131,slow=3.5,SNR=24
                  comp=Z,10.0nm,0.8s
TYV   Tymovskoe         79.29 336 eP      P      07 42 35.9 +0.6
TYV                                 pmax   pmax
                  comp=Z,13nm,1.0s
TYV                                 pmax   pmax
                  comp=Z,100nm,3.7s
NJ2   Nanjing           79.60 310 eP      P      07 42 39.5 +2.1
NJ2                                 pmax   pmax
                  comp=Z,8.0nm,0.6s
SII   Sitkinak Islan    80.25  14   P      P      07 42 39.9 -0.3
                  baz=204
R16K  Pilot Point       80.50  12   P      P      07 42 41.4  0.0
                  baz=200
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MAW   Mawson            80.58 200   P      P      07 42 42.4 +0.5
                  comp=Z,4.2nm,0.7s,baz=170,slow=7.6,SNR=4.3
                  comp=Z,4.2nm,0.7s
OHAK  Old Harbor        81.05  14   P      P      07 42 44.4 +0.1
                  baz=204
R18K  Karluk            81.12  13   P      P      07 42 44.1 -0.4
                  baz=203
Q17K  Contact Creek     81.47  12   P      P      07 42 45.9 -0.6
                  baz=202,SNR=7.7
O14K  Tigyukauivet M    81.48   9   P      P      07 42 46.1 -0.3
                  baz=197
O15K  Ungalikthiuk R    81.63  10   P      P      07 42 46.0 -1.2
                  baz=198
KDAK  Kodiak Island     81.72  14   P      P      07 42 47.4 -0.3
                  baz=205
PNTR  Pine Nut          81.74  43   P      P      07 42 49.1 +0.5
PNTR                                IAmb   IAmb   07 44 41.0
                  comp=Z,126nm,1.0s
P16K  Nushagak River    81.80  11   P      P      07 42 47.6 -0.5
                  baz=200
DSP   Deep Springs      81.81  45   P      P      07 42 49.8 +1.2
DSP                                 IAmb   IAmb   07 44 41.1
                  comp=Z,105nm,1.2s
M11K  Mekoryuk          81.96   6   P      P      07 42 48.5 -0.3
                  baz=192
GRAC  Grapevine Rang    82.00  45   P      P      07 42 50.6 +1.0
Q18K  Katmai Hardscr    82.00  12   P      P      07 42 48.6 -0.7
                  baz=203,SNR=6.1
GWY   Greenwater Val    82.01  46   P      P      07 42 50.9 +0.9
GWY                                 IAmb   IAmb   07 44 41.5
                  comp=Z,57nm,1.1s
N14K  Kuskokwak Cree    82.07   9   P      P      07 42 50.0 +0.7
N14K  Kuskokwak Cree    82.07   9   P      P      07 42 48.7 -0.7
                  baz=196
NVAR  Mina Array Bea    82.19  44   P      P      07 42 51.3 +0.5
NVAR  Mina Array Bea    82.19  44   P      P      07 42 52.0 +1.2
                  comp=Z,2.0nm,0.7s,baz=224,slow=8.0,SNR=12
                  comp=Z,2.0nm,0.7s
P17K  Kvichak River     82.23  12   P      P      07 42 49.9 -0.4
                  baz=201,SNR=6.4
CN2   Changchun         82.28 323   P      P      07 42 51.0 +0.2
CN2                                 pmax   pmax
                  comp=Z,10.0nm,1.1s
O16K  Kokwok River B    82.31  11   P      P      07 42 50.0 -0.6
                  baz=200
M13K  Dall Lake         82.32   8   P      P      07 42 50.4 -0.2
                  baz=195
BNX   BinXian           82.45 325 ⇑P      P      07 42 51.9 +0.2
BNX                                 pmax   pmax
                  comp=Z,10.0nm,0.8s
Q20K  Shuyak Island     82.52  14   P      P      07 42 51.5 -0.2
                  baz=205
N15K  Kwethluk River    82.54   9   P      P      07 42 53.0 +1.2
N15K                                IAmb   IAmb   07 42 53.7
                  comp=Z,18nm,0.8s
N15K  Kwethluk River    82.54   9   P      P      07 42 51.8  0.0
                  baz=198
Q19K  Cape Douglas,     82.54  13   P      P      07 42 51.5 -0.4
                  baz=204
P18K  Big Mountain,     82.65  12   P      P      07 42 52.1 -0.2
                  baz=202
KLR   Kul'dur           82.65 330 i P      P      07 42 52.7 +0.1
KLR                                 pmax   pmax
                  comp=Z,7.0nm,1.0s
O17K  Koliganek Bris    82.66  11   P      P      07 42 52.1 -0.3
                  baz=201
M14K  Bethel            82.83   8   P      P      07 42 53.0 -0.1
                  baz=196
M15K  Kasigluk River    82.95   9   P      P      07 42 54.0 +0.2
                  baz=197
N16K  Nishlik Lake      83.03  10   P      P      07 42 55.0 +0.7
                  baz=199,SNR=7.1
TIA   Tai'an            83.05 313   P      P      07 42 54.8 -0.1
TIA                                 pmax   pmax
                  comp=Z,11nm,0.6s
O18K  Koktuh Hills      83.08  12   P      P      07 42 53.9 -0.6
O18K  Koktuh Hills      83.08  12   P      P      07 42 54.4 -0.1
                  baz=202
J05D  Fort Rock, OR     83.25  38   P      P      07 42 56.6 +0.7
P19K  Oil Pt            83.29  13   P      P      07 42 55.2 -0.4
                  baz=204
L14K  Kuka Creek        83.30   8   P      P      07 42 55.7 +0.2
                  baz=195
N17K  Nushagak Hills    83.35  11   P      P      07 42 55.8  0.0
                  baz=200
M16K  Timber Creek      83.53  10   P      P      07 42 57.2 +0.5
M16K  Timber Creek      83.53  10   P      P      07 42 57.0 +0.4
                  baz=199
O19K  Port Alsworth     83.57  12   P      P      07 42 56.4 -0.4
                  baz=203
K13K  Kusilvak Mount    83.64   7   P      P      07 42 57.6 +0.4
                  baz=194
N18K  Kilae Creek       83.72  11   P      P      07 42 58.3 +0.7
                  baz=202
L15K  Ungalak Mounta    83.78   8   P      P      07 42 57.8 -0.1
                  baz=196
O20K  Slope Mountain    83.81  13   P      P      07 42 57.8 -0.3
                  baz=205
BRSE  Bradley Lake S    83.91  14   P      P      07 42 58.2 -0.4
                  baz=206
L16K  Owhat River       84.10   9   P      P      07 42 59.0 -0.4
                  baz=198
N19K  Bonanza Creek     84.11  12   P      P      07 42 58.9 -0.7
                  baz=203
M17K  Holitna River     84.13  10   P      P      07 42 59.6  0.0
                  baz=200
TUC   Tucson            84.16  52   P      P      07 43 02.6 +2.0
TUC                                 pmax   pmax
                  comp=Z,82nm,1.0s
ESPZ  Base Esperanza    84.36 157   P      P      07 43 01.0 +0.1
ESPZ                                IAmb   IAmb   07 45 32.4
                  comp=Z,68nm,1.1s
K15K  Wolf Creek Mou    84.37   8   P      P      07 43 01.5 +0.7
K15K  Wolf Creek Mou    84.37   8   P      P      07 43 00.5 -0.2
                  baz=196
J14K  Nanvaranak Lak    84.56   7   P      P      07 43 01.5 -0.2
                  baz=194
L17K  Donlin            84.68  10   P      P      07 43 01.6 -0.7
                  baz=199
N20K  Mount Spurr       84.91  13   P      P      07 43 03.0 -0.5
                  baz=205
SPCR  Spurr Chakacha    84.91  13   P      P      07 43 03.1 -0.4
                  baz=205
P23K  Montague Islan    84.92  15   P      P      07 43 03.3 -0.2
                  baz=209
L18K  Granite Mounta    85.02  10   P      P      07 43 03.7 -0.3
                  baz=201
M19K  Big River Lodg    85.13  11   P      P      07 43 04.3 -0.2
                  baz=203
U15A  North Rim         85.14  48   P      P      07 43 06.8 +1.3
K17K  Iditarod          85.23   9   P      P      07 43 03.7 -1.2
                  baz=199
L19K  White Mountain    85.31  11   P      P      07 43 05.5 +0.1
L19K  White Mountain    85.31  11   P      P      07 43 04.3 -1.0
                  baz=203
HNS   HongShan          85.32 313 ⇓P      P      07 43 06.5 +0.6
HNS                                 pmax   pmax
                  comp=Z,10.0nm,0.8s
RC01  Rabbit Creek A    85.34  14   P      P      07 43 04.4 -1.1
                  baz=207
M20K  Styx River        85.35  12   P      P      07 43 05.1 -0.5
                  baz=204
HEH   HeiHe             85.41 329 eP      P      07 43 06.4 +0.3
HEH                                 pmax   pmax
                  comp=Z,11nm,0.8s
J16K  Anvik River       85.45   8   P      P      07 43 05.3 -0.6
                  baz=197
SUA   Susitna One       85.46  13   P      P      07 43 05.6 -0.6
                  baz=206
PWL   Port Wells        85.46  15   P      P      07 43 05.1 -0.9
                  baz=209
LYN   LuoYang           85.46 310   P      P      07 43 07.9 +1.2
LYN                                 pmax   pmax
                  comp=Z,13nm,0.9s
KAIM  Kayak Island      85.63  17   P      P      07 43 06.0 -0.9
                  baz=212
BJI   Beijing           85.72 316   P      P      07 43 08.0 +0.2
BJI                                 pmax   pmax
                  comp=Z,4.0nm,1.2s
L20K  Farewell, AK      85.76  11   P      P      07 43 06.9 -0.6
                  baz=204
SKT   Skwentna          85.76  13   P      P      07 43 06.6 -0.9
                  baz=206
J17K  VABM Dome         85.77   9   P      P      07 43 07.0 -0.4
                  baz=199
GLI   Glacier Island    85.77  15   P      P      07 43 07.1 -0.5
                  baz=210
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EYAK  Cordova Ski Ar    85.82  16   P      P      07 43 06.9 -0.8
                  baz=211
M22K  Willow            85.85  13   P      P      07 43 07.3 -0.5
                  baz=207
KNK   Knik Glacier      85.92  14   P      P      07 43 07.6 -0.6
                  baz=208
PMR   Palmer            85.92  14   P      P      07 43 07.7 -0.5
                  baz=208
I17K  Unalakleet        86.01   8   P      P      07 43 08.1 -0.5
                  baz=197
SIT   Sitka             86.13  22   P      P      07 43 08.2 -1.1
                  baz=220
ANM   Nome              86.14   6   P      P      07 43 08.2 -1.0
                  baz=193
J18K  Innoko River      86.19  10   P      P      07 43 08.7 -0.8
                  baz=201,SNR=5.1
U33K  Whale Pass        86.22  24   P      P      07 43 08.8 -0.9
                  baz=222
V35K  Ketchikan         86.23  25   P      P      07 43 08.4 -1.4
                  baz=224
COYC  Coyhaique         86.27 138   P      P      07 43 11.2 +0.7
SML   Sawmill           86.29  14   P      P      07 43 09.1 -1.0
                  baz=209
CUT   Chulitna          86.40  13   P      P      07 43 09.2 -1.2
                  baz=207
PPLA  Purkeypile        86.46  12   P      P      07 43 10.1 -0.9
                  baz=205
BMRM  Bremner River     86.47  16   P      P      07 43 10.3 -0.6
                  baz=212
S31K  Pelican           86.52  21   P      P      07 43 10.7 -0.4
                  baz=219
MESA  MESA              86.52  18   P      P      07 43 11.0 -0.3
                  baz=214
K20K  Telida            86.53  11   P      P      07 43 11.4 +0.3
                  baz=203
H16K  Elim              86.55   7   P      P      07 43 10.8 -0.3
                  baz=196
SCM   Sheep Creek Mo    86.55  14   P      P      07 43 11.2 -0.1
SCM                                 IAmb   IAmb   07 45 13.3
                  comp=Z,54nm,0.9s
SCM   Sheep Creek Mo    86.55  14   P      P      07 43 11.2 -0.1
SCM                                 pmax   pmax
                  comp=Z,54nm,0.9s
SCM   Sheep Creek Mo    86.55  14   P      P      07 43 11.0 -0.2
                  baz=209
KLU   Klutina           86.59  15   P      P      07 43 10.9 -0.6
                  baz=211
CRQE  Cirque            86.68  17   P      P      07 43 11.6 -0.4
                  baz=213
G15K  Niukluk           86.69   6   P      P      07 43 11.4 -0.4
                  baz=194
S32K  Killisnoo         86.71  22   P      P      07 43 12.4 +0.4
                  baz=221
SEY   Seymchan          86.84 347 i P      P      07 43 12.4 -0.1
SEY                                 pmax   pmax
                  comp=Z,12nm,1.0s
PNL   Peninsula         86.85  19   P      P      07 43 12.6 -0.1
                  baz=217
J19K  Poorman           86.86  10   P      P      07 43 12.8 +0.2
                  baz=202
TNA   Tin City          86.91   5   P      P      07 43 12.8 +0.1
                  baz=190
F14K  Arctic Creek      86.95   5   P      P      07 43 12.9 -0.1
                  baz=192
CAST  Castle Rocks      86.96  12   P      P      07 43 12.6 -0.5
                  baz=205
N25K  Chitina, Valde    87.01  16   P      P      07 43 12.9 -0.6
                  baz=212
TROLL Troll, Antarti    87.03 180 ⇑P      P      07 43 13.2 -0.5
                  comp=Z,395nm,0.5s
WAT6  Susitna Watana    87.11  14   P      P      07 43 13.7 -0.3
                  baz=209
H17K  Granite Mounta    87.12   8   P      P      07 43 13.2 -0.6
                  baz=198
WAT1  Susitna Watana    87.15  13   P      P      07 43 13.3 -0.8
                  baz=208
G16K  Koyuk River       87.26   7   P      P      07 43 13.3 -1.1
                  baz=196
J20K  Nowinta River     87.28  11   P      P      07 43 14.5 -0.1
J20K  Nowinta River     87.28  11   P      P      07 43 13.1 -1.5
                  baz=203
F15K  North Star Dit    87.33   6   P      P      07 43 14.0 -0.8
                  baz=194
P29M  Windy Craggy      87.33  20   P      P      07 43 14.0 -0.9
                  baz=218
SNAA  Sanae             87.33 179 ⇑P      P      07 43 14.2 -0.8
                  comp=Z,83nm,0.5s
SNAA  Sanae             87.33 179   P      P      07 43 14.5 -0.5
SNAA  Sanae             87.33 179   P      P      07 43 14.5 -0.5
                  comp=Z,2.7nm,0.5s,baz=207,slow=9.3,SNR=49
                  comp=Z,2.7nm,0.5s
CHUM  Lake Minchumin    87.33  11   P      P      07 43 13.7 -1.1
                  baz=205
TRF   Thorofare Moun    87.34  12   P      P      07 43 13.8 -1.3
TRF   Thorofare Moun    87.34  12   P      P      07 43 13.9 -1.1
                  baz=207
CTG   Chitna Glacier    87.34  17   P      P      07 43 14.1 -1.0
                  baz=215
B08A  Colville Reser    87.35  35   P      P      07 43 15.5 +0.2
GCSA  Galena City Sc    87.37   9   P      P      07 43 13.9 -1.0
                  baz=201
VNA3  Neumayer Olymp    87.50 177 ⇑P      P      07 43 15.2 -0.5
                  comp=Z,37nm,0.7s
O28M  Mount Upton       87.51  18   P      P      07 43 14.6 -1.5
                  baz=216
H18K  Honhosa River     87.53   9   P      P      07 43 14.4 -1.4
                  baz=199
HARP  HAARP             87.55  15   P      P      07 43 14.4 -1.6
                  baz=211
G17K  Kiwalik Mounta    87.57   8   P      P      07 43 14.6 -1.2
                  baz=197
O29M  Mount Kennedy     87.61  19   P      P      07 43 14.7 -1.6
                  baz=217
DHY   Denali Highway    87.62  14   P      P      07 43 15.6 -0.8
                  baz=209
SRU   San Rafael Swe    87.70  46   P      P      07 43 18.0 +0.6
SRU   San Rafael Swe    87.70  46   P      P      07 43 18.0 +0.6
SRU                                 pmax   pmax
                  comp=Z,118nm,1.5s
BPAW  Bear Paw Mtn.     87.78  12   P      P      07 43 16.0 -1.0
                  baz=206
ZEA   Zeya              87.78 331 i P      P      07 43 17.3 +0.2
I20K  Naaghedeneel      87.79  10   P      P      07 43 16.1 -0.7
                  baz=203
XAN   Xi'an             87.80 308   P      P      07 43 18.4 +0.6
XAN                                 pmax   pmax
                  comp=Z,10.0nm,0.8s
MCK   McKinley          87.86  13   P      P      07 43 16.8 -0.5
                  baz=208
VNA2  Neumayer--Watz    87.93 177 ⇑P      P      07 43 17.4 -0.3
                  comp=Z,17nm,0.8s,baz=178,slow=4.5
MNTX  Cornudas Mount    87.93  55   P      P      07 43 19.3 +0.9
MNTX                                IAmb   IAmb   07 45 14.1
                  comp=Z,73nm,1.1s
T35M  Bob Quinn         87.95  24   P      P      07 43 17.1 -0.8
                  baz=225
P30M  Million Dollar    87.96  20   P      P      07 43 17.0 -0.9
                  baz=219
SKAG  Skagway           87.97  21   P      P      07 43 17.4 -0.4
                  baz=220
YUK8  Steele Glacier    88.05  18   P      P      07 43 18.5 -0.1
                  baz=216
M26K  Nabesna, AK       88.09  16   P      P      07 43 18.4  0.0
                  baz=213
H19K  Roundabout Mou    88.16   9   P      P      07 43 18.5 -0.2
H19K  Roundabout Mou    88.16   9   P      P      07 43 19.2 +0.6
                  baz=201
VNA1  Neumayer--Stat    88.17 177 ⇑P      P      07 43 18.6 -0.2
                  comp=Z,24nm,0.8s
YUK6  Outpost Mounta    88.18  19   P      P      07 43 19.5 +0.4
                  baz=218
G18K  Tagagawik         88.20   8   P      P      07 43 19.3 +0.4
                  baz=199
TX31  Lajitas Ar. Si    88.24  58   P      P      07 43 20.9 +0.9
TXAR  Lajitas Array     88.24  58   P      P      07 43 20.9 +0.9
                  comp=Z,3.0nm,0.8s,baz=202,slow=3.4,SNR=4.5
                  comp=Z,3.0nm,0.8s
TXAR  Lajitas Array     88.24  58   P      P      07 43 21.6 +1.6
YUK3  Moose Creek       88.25  17   P      P      07 43 19.3 -0.1
                  baz=216,SNR=7.8
S34M  Telegraph Cree    88.28  23   P      P      07 43 20.0 +0.6
                  baz=224
HYT   Haines Junctio    88.34  19   P      P      07 43 20.1 +0.3
                  baz=218
M27K  Edge Creek, AK    88.35  16   P      P      07 43 20.3 +0.5
M27K  Edge Creek, AK    88.35  16   P      P      07 43 19.4 -0.4
                  baz=214
H20K  Anotleneega Mo    88.37  10   P      P      07 43 19.2 -0.5
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	baz=202,SNR=7.5						
F17K	Baldwin Pennin	88.40	7	P	P	07 43 19.3	-0.4
	baz=197						
YUK4	Talbot Arm	88.42	18	P	P	07 43 20.1	-0.1
	baz=217						
L26K	Log Cabin Wild	88.53	15	P	P	07 43 20.3	-0.1
	baz=213						
ANMO	Albuquerque	88.59	52	P	P	07 43 21.8	+0.2
ANMO	Albuquerque	88.59	52	P	P	07 43 21.6	0.0
ANMO	Albuquerque	88.59	52	P	P	07 43 22.9	+1.3
ANMO				pmax	pmax		
	comp=Z,148nm,1.5s						
NEA2	Nenana	88.60	12	P	P	07 43 20.0	-0.8
NEA2	Nenana	88.60	12	P	P	07 43 20.5	-0.3
	baz=208						
P32M	Atlin	88.61	21	P	P	07 43 20.5	-0.4
	baz=222						
K24K	Donnelly Dome	88.61	14	P	P	07 43 20.5	-0.3
	baz=211						
Q32M	Nakina River	88.64	22	P	P	07 43 21.1	-0.2
	baz=223						
G19K	Purcell Mounta	88.65	9	P	P	07 43 21.2	+0.3
	baz=200						
BVCY	Beaver Creek	88.66	17	P	P	07 43 21.0	-0.1
	baz=215						
MLY	Manley	88.67	12	P	P	07 43 20.5	-0.6
	baz=206						
HIA	Hailar	88.72	325	i P	P	07 43 21.6	0.0
O30N	Mendenhall	88.74	20	P	P	07 43 21.2	-0.3
	baz=220						
F18K	Selawik	88.74	8	P	P	07 43 21.0	-0.3
	baz=198						
RIDG	Independent Ri	88.78	14	P	P	07 43 20.9	-0.7
	baz=212						
H21K	Melozitna Rive	88.87	11	P	P	07 43 21.9	-0.1
H21K	Melozitna Rive	88.87	11	P	P	07 43 21.6	-0.4
	baz=204,SNR=5.4						
HDA	Harding Lake	88.88	13	P	P	07 43 21.7	-0.3
	baz=210						
L27K	Beaver Creek,	88.94	16	P	P	07 43 22.5	+0.1
	baz=214						
E17K	Hotham Inlet	88.95	7	P	P	07 43 22.5	+0.2
	baz=196						
N30M	Aishikik Lake	88.97	19	P	P	07 43 22.8	+0.2
	baz=219						
IMAR	Indian Mountai	89.01	10	P	P	07 43 22.4	-0.2
WHY	Whitehorse	89.03	20	P	P	07 43 23.1	+0.2
	baz=221						
I23K	Minto, Yukon-K	89.04	12	P	P	07 43 22.6	-0.1
	baz=208						
COLA	College	89.10	13	P	P	07 43 22.5	-0.5
	baz=209						
HHC	Hu-ho-hao-te	89.16	315	eP	P	07 43 26.8	+2.8
HHC				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,53nm,4.4s						
SCRK	Sand Creek	89.18	15	P	P	07 43 23.3	-0.2
	baz=212						
F19K	Shaleruckik Mo	89.21	8	P	P	07 43 23.3	-0.1
	baz=200						
ILAR	Eielson Array	89.21	13	P	P	07 43 23.1	-0.5
	comp=Z,1.6nm,0.9s,baz=224,slow=5.2,SNR=13						
	comp=Z,1.6nm,0.9s						
H22K	Ishtalitna Cre	89.33	11	P	P	07 43 24.4	+0.3
	baz=206,SNR=7.2						
M29M	Somme Creek	89.35	18	P	P	07 43 24.9	+0.5
	baz=217						
P33M	Teslin, Yukon	89.37	21	P	P	07 43 24.8	+0.3
	baz=222						
N31M	Braeburn, Yuko	89.39	19	P	P	07 43 24.3	-0.2
	baz=220						
J25K	Salcha River,	89.40	14	P	P	07 43 24.0	-0.6
J25K	Salcha River,	89.40	14	P	P	07 43 24.1	-0.4
	baz=211						
E18K	Tukpahlearik C	89.42	7	P	P	07 43 24.3	-0.1
	baz=197						
R33M	Jennings River	89.42	22	P	P	07 43 24.1	-0.7
	baz=224						
D17K	Noatak River	89.42	6	P	P	07 43 24.8	+0.4
	baz=195						
CMAR	Chiang Mai Arr	89.45	290	P	P	07 43 27.6	+1.8
	comp=Z,3.0nm,0.7s,baz=122,slow=3.6,SNR=14						
	comp=Z,3.0nm,0.7s						
PLCA	Paso Flores	89.48	134	P	P	07 43 27.1	+1.4
PLCA	Paso Flores	89.48	134	P	P	07 43 27.1	+1.4
	comp=Z,5.0nm,0.7s,baz=235,slow=4.5,SNR=22						
	comp=Z,5.0nm,0.7s						
G21K	Allakaket	89.54	10	P	P	07 43 25.5	+0.5
	baz=204,SNR=7.2						
H23K	Yukon River	89.61	12	P	P	07 43 25.3	-0.1
	baz=207						
BILL	Bilibino	89.64	355	i P	P	07 43 25.1	-0.3
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
K27K	Chicken	89.68	15	P	P	07 43 25.8	0.0
	baz=214						
F20K	Avaraart Lake	89.69	9	P	P	07 43 26.3	+0.6
	baz=202						
J26L	Joseph Creek	89.72	15	P	P	07 43 26.1	0.0
	baz=213,SNR=6.6						
C16K	Lisburne Hills	89.78	5	P	P	07 43 26.0	-0.1
	baz=193						
RDOG	Red Dog Mine	89.78	6	P	P	07 43 26.3	+0.2
	baz=195						
E19K	Redstone River	89.87	8	P	P	07 43 26.3	-0.3
	baz=200						
H24K	Noodor Dome	89.94	12	P	P	07 43 26.7	-0.2
	baz=209						
L29M	L29M	89.97	17	P	P	07 43 27.0	-0.2
	baz=218						
N32M	Quiet Lake	89.98	20	P	P	07 43 26.8	-0.5
	baz=222						
PDAR	Pinedale Array	90.13	44	P	P	07 43 29.3	+0.7
	comp=Z,0.9nm,0.7s,baz=205,slow=2.7,SNR=8.9						
	comp=Z,0.9nm,0.7s						
PRP	Porcupine Dome	90.15	13	P	P	07 43 28.0	0.0
	baz=211						
C17K	DeLong Mountai	90.17	6	P	P	07 43 28.1	+0.2
	baz=195						
F21K	Alatna River	90.19	10	P	P	07 43 28.2	+0.1
	baz=204						
G22K	Bettles	90.24	10	P	P	07 43 28.4	+0.2
	baz=206						
G23K	Bananza Creek	90.31	11	P	P	07 43 28.4	-0.2
	baz=207						
M31M	Drury Creek, Y	90.36	19	P	P	07 43 29.1	+0.1
	baz=221						
DAWY	Dawson	90.40	16	P	P	07 43 29.3	+0.1
	baz=217						
I26K	Coal Creek Min	90.50	14	P	P	07 43 29.7	+0.3
	baz=213						
C18K	Utukok River	90.53	6	P	P	07 43 29.9	+0.2
	baz=197						
DRIO	Del Rio	90.69	59	P	P	07 43 32.2	+1.0
FARO	Faro, Yukon	90.70	20	P	P	07 43 31.1	+0.6
	baz=222						
K29M	Barlow Dome	90.72	17	P	P	07 43 31.4	+0.7
	baz=218						
H25L	Birch Creek	90.73	13	P	P	07 43 30.8	+0.3
	baz=211						
D19K	Kuna River	90.73	8	P	P	07 43 31.2	+0.7
	baz=200						
COLD	Coldfoot	90.74	11	P	P	07 43 31.1	+0.5
COLD				IAmb	IAmb	07 45 36.9	
	comp=Z,48nm,1.2s						
COLD	Coldfoot	90.74	11	P	P	07 43 31.1	+0.5
	baz=207						
E20K	Nigu River	90.76	8	P	P	07 43 30.7	0.0
	baz=201						
G24K	Hadweenzic Riv	90.78	12	P	P	07 43 31.2	+0.5
	baz=209						
EFI	East Falkland	91.00	148	i P	P	07 43 32.6	+0.3
EFI				pmax	pmax		
	comp=Z,59nm,1.3s						
J29N	Klondike Camp	91.02	16	P	P	07 43 32.1	+0.1
	baz=218						
I27K	Kandik River	91.10	15	P	P	07 43 32.0	-0.3
	baz=215						
D20K	Etivluk River	91.13	8	P	P	07 43 33.1	+0.7
	baz=201						
C19K	Lookout Ridge	91.14	7	P	P	07 43 33.0	+0.5
	baz=198						
B18K	Kokolik River	91.16	6	P	P	07 43 33.5	+1.1
	baz=196						
TOAD	Toad River Com	91.18	25	P	P	07 43 33.6	+0.8
	baz=229						
E22K	Anaktuvuk Pass	91.29	10	P	P	07 43 33.6	+0.4
	baz=205						
I28M	Miner Creek	91.38	15	P	P	07 43 34.2	+0.5
	baz=216						
F24K	Squaw Lake	91.42	11	P	P	07 43 34.5	+0.7
	baz=209						
E23K	Chandalar	91.59	11	P	P	07 43 35.3	+0.7
	baz=207						
H27K	Steamboat Moun	91.64	14	P	P	07 43 35.7	+0.9
	baz=215						
MMPY	Sheldon Lake,	91.65	20	P	P	07 43 35.9	+1.0
	baz=224						
I29M	Ogilvie Camp,	91.72	16	P	P	07 43 36.3	+1.2
	baz=218						
G26K	Porcupine Rive	91.74	13	P	P	07 43 36.6	+1.5
	baz=213						
C21K	Knifeblade Rid	91.79	8	P	P	07 43 35.9	+0.6
	baz=203						
D22K	Ayikyak River	91.84	9	P	P	07 43 35.8	+0.2
	baz=204						
F25K	Christian Rive	91.91	12	P	P	07 43 36.6	+0.6
	baz=211						
G27K	Doyon Strip	92.09	14	P	P	07 43 37.3	+0.5
	baz=215						
I30M	Mount Dempster	92.11	17	P	P	07 43 37.4	+0.3
	baz=219						
TOLK	Toolik Lake Re	92.11	10	P	P	07 43 36.9	-0.1
	baz=207						
MT01	Popeta	92.15	128	P	P	07 43 38.6	+0.7
D23K	Nanushuk River	92.22	10	P	P	07 43 37.6	+0.2
	baz=206						
B21K	Ikpikpuk River	92.24	8	P	P	07 43 37.9	+0.5
	baz=203						
B20K	Meade River	92.28	7	P	P	07 43 38.3	+0.7
	baz=200						
F26K	Sheenjek River	92.30	13	P	P	07 43 38.4	+0.6
	baz=212						
H29M	Whitestone	92.38	15	P	P	07 43 38.9	+0.7
	baz=218						
YAK	Yakutsk	92.41	338	eP	P	07 43 38.5	+0.2
YAK				e*PP	pP	07 45 50.7	-0.4
YAK				e		07 47 32.3	
YAK				eS	SKSac	07 53 12.6	0.0
YAK				e		07 53 52.5	
YAK				eSP	SPn	07 55 08.6	-1.3
YAK				pmax	pmax		
	comp=E,2.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,108nm,4.0s						
YAK				pmax	pmax		
	comp=N,57nm,3.8s						
YAK				pmax	pmax		
	comp=E,33nm,3.8s						
YAK				smax	smax		
	comp=N,43nm,2.3s						
YAK				smax	smax		
	comp=E,32nm,2.1s						
G29M	Pine Creek	93.02	15	P	P	07 43 41.7	+0.7
	baz=218						
B22K	Teshekpuk Lake	93.07	8	P	P	07 43 42.2	+1.0
	baz=204						
F28M	Old Crow	93.15	14	P	P	07 43 42.1	+0.5
	baz=216						
ULN	Ulaanbaatar	95.27	319	i P	P	07 43 51.5	-0.4
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TIXI	Tiksi	99.18	345	i P	Pdif	07 44 08.9	+0.3
TIXI				pmax	pmax		
	comp=Z,5.0nm,2.4s						
WMQ	Urumqi	106.67	311	Pdif	Pdif	07 44 44.0	+1.4
BVAR	Borovoye Array	119.00	320	PKP	PKPdf	07 49 11.3	-0.8
	comp=Z,0.9nm,0.3s,baz=99,slow=2.7,SNR=6.7						
SPITS	Spitsbergen Ar	122.50	356	PKP	PKPdf	07 49 18.1	-0.2
	comp=Z,2.8nm,0.7s,baz=106,slow=5.3,SNR=6.7						
BOSA	Boshof	125.21	206	PKP	PKPdf	07 49 25.2	+0.1
	comp=Z,2.0nm,0.7s,baz=107,slow=4.3,SNR=4.6						
ARTI	Arti	125.34	325	i PKIKP	PKPdf	07 49 20.5	-3.7
ARTI						07 51 22.5	
ARTI						07 55 33.4	
ARTI				SS	SS	08 07 33.2	-3.4
ARCES	ARCESS Array B	129.43	349	PKP	PKPdf	07 49 31.4	-0.3
	comp=Z,0.6nm,0.4s,baz=5.7,slow=2.4,SNR=11						
ARCES	ARCESS Array B	129.43	349	ePKIKP	PKPdf	07 49 31.9	+0.2
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	FINESS Array B	136.17	343	PKP	PKPdf	07 49 45.0	+0.5
	comp=Z,0.5nm,0.6s,baz=106,slow=4.2,SNR=4.5						
FINES	FINESS Array B	136.17	343	ePKIKP	PKiKP	07 49 46.5	+0.2
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
OBN	Obninsk	136.91	331⇑	ePKIKP	PKPdf	07 49 45.1	-0.9
OBN				e		07 52 39.9	
OBN				e		07 55 48.0	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KIV	Kislovodsk	138.75	313	i PKIKP	PKPdf	07 49 49.0	-0.9
KIV				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HFS	Hagfors	140.07	350	PKhKP	PKPpre	07 49 44.5	
	comp=Z,0.6nm,0.4s,baz=59,slow=3.5,SNR=5.8						
MNK	Minsk	141.03	335	i PKiKP	PKiKP	07 49 55.3	-1.2
	comp=E,12nm,0.8s						
MNK				i PKiKP	PKiKP	07 49 55.3	-1.2
	comp=N,11nm,0.8s						
MNK				i PKiKP	PKiKP	07 49 55.3	-1.2
	comp=Z,9.0nm,0.7s,baz=42						
MNK				i pPKiKP	pPKiKP	07 52 17.7	-0.2
MNK				i PP	PP	07 53 02.0	-1.1
MNK				i SKS	SKSdf	07 56 03.5	-2.1
MNK				i PPP	PPP	07 56 16.3	
MNK				i SKKS	SKKSdf	08 05 27.1	-4.1
MNK				i SS	SS	08 10 44.1	+1.6
MNK				i SSS	SSS	08 16 11.6	
MNK				i LRM	MLR	08 51 46.8	
	comp=N,1µm,20.8s						
MNK				i LRM	MLR	08 51 54.8	
	comp=E,1µm,21.3s						
MNK				i LRM	MLR	08 52 04.0	
	comp=Z,163nm,20.9s						
MNK	Minsk	141.03	335	i PKIKP	PKiKP	07 49 55.2	-1.2
MNK				i		07 52 17.6	
MNK				i		07 53 01.9	
MNK				i		07 56 03.5	
MNK				i PPP	PPP	07 56 16.2	
MNK				i SS	SS	08 10 44.1	+1.5
MNK				i SSS	SSS	08 16 11.6	
MNK				pmax	pmax		
	comp=E,12nm,0.8s						
MNK				pmax	pmax		
	comp=N,11nm,0.8s						
MNK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MNK				MLR	MLR		
	comp=N,1µm,21.0s						
MNK				MLR	MLR		
	comp=E,1µm,21.0s						
MNK				MLR	MLR		
	comp=Z,163nm,21.0s						
AKASG	Malin Array Be	143.15	330	PKP	PKPab	07 49 54.8	-0.9
	comp=Z,7.5nm,0.5s,baz=44,slow=4.3,SNR=74						
RNPP9	Sopachiv	144.13	333	PKP	PKPbc	07 49 58.1	-0.8
EKA	Eskdalemuir Ar	145.78	4	PKPbc	PKPbc	07 50 03.5	-0.1
	comp=Z,0.8nm,0.5s,baz=356,slow=2.5,SNR=4.5						
BRTR	Keskin Array B	146.59	311	PKPbc	PKPbc	07 50 06.2	-0.5
	comp=Z,1.3nm,0.7s,baz=121,slow=5.0,SNR=5.1						
LANS	Liptovska Anna	148.46	337	eP	PKPdf	07 50 08.7	+2.2
LANS	Liptovska Anna	148.46	337	ePKP	PKPdf	07 50 08.7	+2.2
LANS				e		07 50 12.1	
CLL	Collm	148.51	346	i PKP2	PKPbc	07 50 11.2	+0.3
CLL				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CLL	Collm	148.51	346	i PKPbc	PKPbc	07 50 11.2	+0.3
	comp=Z,5.0nm,1.1s						
CLL				i PKPab	PKPab	07 50 16.5	-0.4
	comp=Z,5.0nm,0.7s						
MORC	Moravsky Berou	148.61	339	ePKP	PKPab	07 50 17.6	+0.2
VYHS	Vyhne	149.24	336	ePKIKP	PKPdf	07 50 05.9	-1.8
VYHS				e		07 50 20.2	
VYHS	Vyhne	149.24	336	ePKP	PKPdf	07 50 05.9	-1.8
VYHS				e		07 50 20.1	
VRAC	Vranov	149.32	340	ePKP	PKPab	07 50 20.7	+0.4
JAVC	Velka Javorina	149.35	338	ePKP	PKPab	07 50 22.0	+1.5
KRUC	Moravsky	149.60	340	ePKP	PKPab	07 50 21.8	+0.3
SMOL	Smolenice	149.73	338	ePKIKP	PKPdf	07 50 07.4	-1.1
MODS	Modra-Piesok	149.90	338	ePKHKP	PKPpre	07 50 09.7	
MODS	Modra-Piesok	149.90	338	ePKP	PKPdf	07 50 09.7	+0.9
MODS				e		07 50 14.9	
GERES	GERESS Array B	150.60	343	PKPbc	PKPbc	07 50 15.6	-0.6
	comp=Z,0.6nm,0.5s,baz=64,slow=3.4,SNR=5.1						
BGES	Gesves	150.70	355	PKP	PKPab	07 50 25.4	-0.6
BMRD	Maredsous	150.81	355	dPKP	PKPab	07 50 24.0	-2.5
ESDC	Sonseca Array	161.11	12	PKPab	PKPab	07 51 10.1	-1.3
	comp=Z,1.0nm,1.0s,baz=353,slow=3.7,SNR=4.5						
KEST	Kesra	163.78	335	PKPab	PKPab	07 51 22.5	-0.7
	comp=Z,3.8nm,0.9s,baz=27,slow=2.3,SNR=4.9						
DBIC	Dimbokro	164.49	158	PKPab	PKPab	07 51 26.9	+0.2
	comp=Z,6.3nm,0.8s,baz=247,slow=5.1,SNR=3.9						

IDC ***20*** *07:32:55.5±3.0, 17.°66S×173.°70W, h27^{km}±20^{km}, mb5.1/24, mbtmp5.3/26, ML4.5/2, MS4.3/48, Error ellipse: s-maj=13.6km s-min=11.2km az=123.0*

BJI ***20*** *07:32:56.2, 17.°21S×173.°47W, h38^{km}, mB5.5/41, mb5.6/74, Ms4.9/49, Ms7 4.6/56*

MOS ***20*** *07:32:56.7±0.9, 17.°65S×173.°82W, h48^{km}, mb5.7/63, MS4.6/6, Error ellipse: s-maj=7.7km s-min=6.9km az=67.5*

NEIC ***20*** *07:32:57.9±1.3, 17.°67S±0.°07×173.°72W±0.°08, h48^{km}±5^{km}, mb5.6/165, Mww5.5/26, Error ellipse: s-maj=11.7km s-min=9.7km az=78.0*

NEIC ***20*** *07:32:57, 17.°65S×173.°00W, h36^{km}, Moment Tensor Solution. Duration: 2^{s}7 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.92; M$_{\theta\theta}$-0.47; M$_{\phi\phi}$1.39; M$_{r\theta}$-0.41; M$_{\theta\phi}$0.20; M$_{\phi r}$1.81; Fault plane solution: M$_0$2.23000×10^{17} NP1:φ$_s$33.23000°, δ20.55000°, λ-46.46000°. NP2:φ$_s$167.81000°, δ75.26000°, λ-104.48000°. Principal axes: T 2.3802, Plg29.0000°, Azm269.0000°; N -0.3363, Plg14.0000°, Azm172.0000°; P -2.0439, Plg57.0000°, Azm59.0000°;*

NEIC ***20*** *07:32:57, 17.°65S×173.°63W, h36^{km}*

NOU ***20*** *07:33:02.1, 17.°84S×173.°39W, h92^{km}, ML5.5/142, Tonga Islands*

GCMT ***20*** *07:33:02.9±0.1, 17.°73S±0.°01×173.°37W, h77^{km}±1^{km}, MW5.4/142, Moment Tensor Solution. s131,c243; s142,c257; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.65±.02; M$_{\theta\theta}$0.04±.02; M$_{\phi\phi}$0.61±.02; M$_{r\theta}$-0.47±.01; M$_{\theta\phi}$-0.23±.02; M$_{\phi r}$1.64±.01; Best double couple: M$_0$1.83400×10^{17} NP1:φ$_s$337.00000°, δ11.00000°, λ-97.00000°. NP2:φ$_s$164.00000°, δ79.00000°, λ-89.00000°. Principal axes: T 1.8560, Plg34.0000°, Azm253.0000°; N -0.0440, Plg1.0000°, Azm344.0000°; P -1.8120, Plg56.0000°, Azm75.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***20*** *07:33:06.9, 16.°47S×173.°83W, h81^{km}±3^{km}*

ISC 20 07:32:57.8±0.2**, 17.°75S**±0.°03×**173.°62W**±0.°03**, h51**^{km}±1^{km}**, h51**^{km}**:pP-P, n1323,** σ1^s**32**/1403**, mb5.6**/197**, MS4.5**/79**, 56C-59D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	3.74	111		Pn	07 33 52.1	-1.0
NIUE				Sn	Sn	07 34 31.8	-4.2
NIUE	Niue	3.74	111	P	Pn	07 33 52.6	-0.5
NIUE				S	Sn	07 34 31.1	-4.9
NIUE	Niue	3.74	111	P	Pn	07 33 53.1	0.0
NIUE	Niue	3.74	111	S	Sn	07 34 32.5	-3.5
NIUE	Niue	3.74	111	P	Pn	07 33 53.2	+0.1
NIUE				S	Sn	07 34 31.7	-4.2
AFI	Afiamalu	4.21	25		Pn	07 33 57.0	-2.6
AFI				Sn	Sn	07 34 39.7	-7.8
AFI	Afiamalu	4.21	25	P	Pn	07 33 57.0	-2.6
LKBA	Tubou, Lakemba	4.97	264	P	Pn	07 34 18.6	+8.6
FUTU	Fugatoga	5.52	308	Pn	Pn	07 34 23.8	+6.3
FUTU	Fugatoga	5.52	308	P	Pn	07 34 24.8	+7.3
TAVE	Taveuni	6.10	279	P	Pn	07 34 34.3	+8.8
DGTI	Dogotuki	6.52	282	P	Pn	07 34 40.0	+8.7
MSVF	Nonsavu	7.94	269		Pn	07 34 59.6	+8.8
MSVF	Nonsavu	7.94	269	Pn	Pn	07 34 58.7	+7.9
	24nm,0.3s,baz=116,slow=12,SNR=53						
MSVF	Nonsavu	7.94	269	P	Pn	07 34 59.4	+8.6
RAO	Raoul Island	12.11	198	Pn	Pn	07 35 49.0	+1.3
	123nm,0.3s,baz=61,slow=23,SNR=4.0						
RAO				Sn	Sn	07 37 54.3	-6.9
	210nm,0.3s,baz=292,slow=22,SNR=7.5						
RAO				LR	LR	07 38 59.9	
	comp=Z,303nm,20.9s,baz=20,slow=30						
RAO	Raoul Island	12.11	198	P	Pn	07 35 49.0	+1.3
GLKZ	Green Lake	12.12	198	P	Pn	07 35 48.4	+0.5
GLKZ				S	Sn	07 37 56.5	-5.0
RAR	Rarotonga	13.50	107		Pn	07 36 04.4	-2.4
RAR	Rarotonga	13.50	107	Pn	Pn	07 36 05.5	-1.3
	33nm,0.3s,baz=254,slow=7.9,SNR=74						
RAR				Sn	Sn	07 38 26.7	-8.6
	6.2nm,0.3s,baz=108,slow=21,SNR=4.5						
	403nm,0.7s						
RAR	Rarotonga	13.50	107	P	Pn	07 36 05.8	-1.0
INH	Isangel	16.32	261	P	P	07 36 48.7	+2.9
DVP	Devils Point	17.34	267	P	P	07 37 00.2	+3.1
MARNC	Mare, Loyalty	17.68	255	P	P	07 37 04.4	+3.5
VLAKA	Lakatoro	18.22	272	P	Pn	07 37 10.9	+3.8
PINNC	Pines Island,	18.42	252		Pn	07 37 09.0	-0.6
PINNC	Pines Island,	18.42	252	P	Pn	07 37 12.2	+2.6
SANVU	Saraoutou	18.52	274	P	P	07 37 09.2	-1.1
SANVU				IAmb	IAmb	07 37 14.4	
	comp=Z,308nm,0.9s						
SANVU	Saraoutou	18.52	274	P	Pn	07 37 13.6	+2.7
YATNC	Mamie plateau,	18.82	254	P	Pn	07 37 16.8	+2.4
OUENC	Ouen Island, N	18.93	253	P	Pn	07 37 17.4	+1.7
DZM	Mont Dzumac	19.23	254		P	07 37 17.5	-0.6
DZM	Mont Dzumac	19.23	254	eP	P	07 37 16.7	-1.4
	comp=Z,580nm,1.2s						
DZM				eS	S	07 40 44.4	-9.0
	comp=Z,737nm,26.6s						
DZM				eLR	LR	07 41 48.4	
	comp=Z,10µm,26.4s						
DZM	Mont Dzumac	19.23	254	P	Pn	07 37 18.4	-1.1
	comp=Z,1.0nm,0.3s,baz=92,slow=14,SNR=23						
DZM				LR	LR	07 43 46.1	
	comp=Z,3µm,20.4s,baz=95,slow=34						
	comp=Z,119nm,1.0s						
DZM	Mont Dzumac	19.23	254	P	Pn	07 37 20.5	+1.0
ONTNC	Ouen Toro	19.26	253		P	07 37 16.8	-1.5
ONTNC				IAmb	IAmb	07 37 22.8	
	comp=Z,307nm,0.9s						
ONTNC	Ouen Toro	19.26	253	P	Pn	07 37 20.8	+1.1
NFK	Norfolk Island	20.29	233	P	Pn	07 37 30.8	-1.1
	comp=Z,251nm,1.2s						
OUZ	Omahuta	20.79	211	P	P	07 37 36.3	+1.5
OUZ	Omahuta	20.79	211	P	P	07 37 36.0	+1.2
GRZ	Great Barrier	20.81	206	P	P	07 37 36.0	+1.0
MXZ	Matakaoa Point	20.98	198	P	P	07 37 39.4	+2.6
MXZ	Matakaoa Point	20.98	198	P	P	07 37 38.4	+1.6
WCZ	Waipu Caves	21.03	208	P	P	07 37 38.1	+0.8
KOUNC	Koumac, New Ca	21.06	259	P		07 37 40.4	
KUZ	Kuaotunu	21.14	204	P	P	07 37 40.7	+2.2
KUZ	Kuaotunu	21.14	204	P	P	07 37 40.5	+2.1
WMGZ	Waiomatatini S	21.18	198	P	P	07 37 41.0	+2.0
WSRZ	White Island S	21.29	201	P	P	07 37 40.0	-0.2
WIZ	White Island	21.30	200	P	P	07 37 40.0	-0.2
HAZ	Te Kaha	21.32	199	P	P	07 37 41.4	+1.0
PKGZ	Pakihiroa	21.33	198	P	P	07 37 41.0	+0.5
ABAZ	Army Bay	21.37	206	P	P	07 37 43.3	+2.3
MYRZ	Mayor Island	21.41	203	P	P	07 37 44.5	+3.1
WIAZ	Waiheke Island	21.41	205	P	P	07 37 43.7	+2.2
PUZ	Puketiti	21.46	198	P	P	07 37 42.6	+0.6
MBAZ	Motutapu North	21.49	206	P	P	07 37 44.8	+2.6
RUGZ	Raukumara Rang	21.54	199	P	P	07 37 43.3	+0.4
HBAZ	Herne Bay Bore	21.63	206	P	P	07 37 46.3	+2.6
ETAZ	East Tamaki Re	21.63	206	P	P	07 37 46.5	+2.7
TWGZ	Tauwhareparae	21.64	198	P	P	07 37 45.6	+1.6
EPAZ	Eden Park BICE	21.64	206	P	P	07 37 46.6	+2.7
WHRZ	Whale Island	21.67	201	P	P	07 37 45.8	+1.6
MKAZ	Moumakai	21.67	205	P	P	07 37 46.4	+2.3
WTAZ	Waiatarua	21.76	206	P	P	07 37 47.7	+2.5
KBAZ	Karaka Road Bo	21.77	205	P	P	07 37 47.7	+2.5
TGRZ	Tauranga	21.80	202	P	P	07 37 48.0	+2.4
AWAZ	Awhitu Peninsu	21.85	206	P	P	07 37 48.1	+2.1
CNGZ	Carnagh Statio	21.86	197	P	P	07 37 48.0	+1.8
MARZ	Manawahe	21.88	201	P	P	07 37 48.1	+1.6
TKGZ	Te Karaka	21.92	198	P	P	07 37 46.9	0.0
MWZ	Matawai	21.93	199	P	P	07 37 48.2	+1.2
EDRZ	Edgecumbe	21.97	201	P	P	07 37 48.8	+1.3

URZ	Urewera	21.99	200	P	P	07 37 48.7	+1.2
	comp=Z,1µm,0.6s,baz=27,slow=5.4,SNR=47						
URZ				S	S	07 41 42.1	-5.3
	comp=Z,175nm,0.8s,baz=228,slow=17,SNR=6.4						
URZ	Urewera	21.99	200	P	P	07 37 49.0	+1.4
URZ	Urewera	21.99	200	P	P	07 37 47.5	-0.1
LIRZ	Lichensteins R	22.00	201	P	P	07 37 48.6	+0.8
KMRZ	Kaimai	22.02	203	P	P	07 37 50.2	+2.2
KARZ	Kaharoa	22.07	202	P	P	07 37 49.3	+0.8
TOZ	Tahuroa Road	22.08	203	P	P	07 37 50.6	+2.0
MKRZ	Makatiti	22.09	201	P	P	07 37 50.7	+1.8
OMRZ	Omania	22.10	201	P	P	07 37 50.8	+2.0
RAGZ	Rawiri	22.11	199	P	P	07 37 49.1	+0.1
NGRZ	Ngongotaha	22.16	202	P	P	07 37 52.5	+3.0
TARZ	Mount Tarawera	22.17	201	P	P	07 37 50.8	+1.1
RIGZ	Rimuhau	22.20	198	P	P	07 37 51.9	+2.0
UTU	Utuhina	22.22	202	P	P	07 37 52.1	+2.0
HLRZ	Highlands Stat	22.23	201	P	P	07 37 52.1	+1.7
RRRZ	Republican Roa	22.26	201	P	P	07 37 51.8	+1.2
MUGZ	Murupara	22.30	200	P	P	07 37 51.0	+0.1
HSRZ	Hossack Road	22.32	201	P	P	07 37 52.4	+1.1
RTZ	Ruatahuna	22.35	200	P	P	07 37 51.4	-0.2
RTZ	Ruatahuna	22.35	200	P	P	07 37 50.4	-1.2
PRGZ	Paritu Road	22.36	198	P	P	07 37 54.6	+2.9
HRRZ	Handcock Road	22.38	201	P	P	07 37 53.1	+1.2
SNGZ	Shannon Statio	22.39	199	P	P	07 37 51.8	-0.2
GRRZ	Galatos Road	22.41	202	P	P	07 37 53.1	+1.0
PRRZ	Plateau Road	22.44	201	P	P	07 37 52.5	0.0
KNZ	Kokohu	22.52	198	P	P	07 37 54.4	+1.1
ALRZ	Allen Road	22.52	201	P	P	07 37 53.4	+0.1
WPRZ	Whakapapatarin	22.54	201	P	P	07 37 54.8	+1.2
MHGZ	Mahia Peninsul	22.57	197	P	P	07 37 56.0	+2.2
TLZ	Tolley Road	22.59	203	P	P	07 37 55.2	+1.0
RAHZ	Arahi	22.60	199	P	P	07 37 53.8	-0.3
MTHZ	Maungataniwha	22.61	200	P	P	07 37 53.9	-0.5
KUTZ	Kaahu Road	22.63	202	P	P	07 37 55.4	+0.8
WHHZ	Waihua	22.70	199	P	P	07 37 56.4	+1.2
MRHZ	Matea Rd	22.74	200	P	P	07 37 54.7	-1.0
WHTZ	Whakaora	22.74	201	P	P	07 37 57.4	+1.6
NMHZ	Naumai	22.85	199	P	P	07 37 56.9	0.0
WATZ	Wairara	22.86	202	P	P	07 37 57.6	+0.6
PAE	Paea	22.90	93	eP	P	07 37 55.5	-2.0
	comp=Z,229nm,1.3s						
PAE				eLR	LR	07 43 31.7	
	comp=Z,884nm,28.2s						
PPT2	Papeete2	22.91	93	eP	P	07 37 54.8	-2.8
	comp=Z,581nm,1.3s						
PPT2				eS	S	07 41 56.1	-7.9
	comp=Z,2µm,27.5s						
PPT2				eLR	LR	07 43 15.0	
	comp=Z,8µm,30.0s						
PPT2				eLR	LR	07 43 23.9	
	comp=Z,4µm,32.5s						
PPT	Papeete	22.91	93	P	P	07 37 58.3	+0.7
	comp=Z,404nm,1.1s,baz=0.4,slow=4.8,SNR=15						
PPT				LR	LR	07 46 19.3	
	comp=Z,360nm,18.2s,baz=255,slow=35						
	comp=Z,404nm,1.1s						
PPTF	Pamatai, Papee	22.92	93	P	P	07 37 58.6	+0.8
ARHZ	Aropaoanui	22.94	199	P	P	07 37 58.3	+0.6
RATZ	Rangitukua	22.99	202	P	P	07 37 58.9	+0.6
HIZ	Hauiti	23.01	204	P	P	07 38 01.1	+2.7
HIZ	Hauiti	23.01	204	P	P	07 38 00.2	+1.7
BKZ	Black Stump Fm	23.01	200	P	P	07 37 58.4	-0.1
BKZ	Black Stump Fm	23.01	200	P	P	07 37 57.2	-1.3
RITZ	Rihia Road	23.06	201	P	P	07 37 58.5	-0.4
KATZ	Kakaramea	23.11	202	P	P	07 37 59.6	0.0
MCHZ	McNeill Hill	23.20	199	P	P	07 37 59.9	-0.4
TVO	Taravao	23.20	94	eP	P	07 37 57.1	-3.5
	comp=Z,275nm,1.2s						
TVO				eLR	LR	07 43 38.3	
	comp=Z,655nm,24.9s						
NTVZ	North Tongarir	23.23	202	P	P	07 38 00.0	-0.7
TMVZ	Te Maari	23.23	201	P	P	07 38 00.0	-0.7
KRVZ	Karewarewa	23.24	202	P	P	07 37 59.8	-1.0
ETVZ	East Tongariro	23.25	201	P	P	07 38 00.1	-0.8
KWHZ	Kaweka Forest	23.27	200	P	P	07 38 00.6	-0.5
WTVZ	West Tongariro	23.27	202	P	P	07 38 00.4	-0.7
NNVZ	North Ngauruho	23.28	202	P	P	07 38 01.2	-0.1
CKHZ	Cape Kidnapper	23.28	198	P	P	07 38 02.8	+1.7
TBI	Tubuai	23.28	108	eP	P	07 38 01.2	0.0
	comp=Z,561nm,1.1s						
TBI				eS	S	07 42 03.6	-6.3
	comp=Z,15µm,32.0s						
TBI				eLR	LR	07 43 31.9	
	comp=Z,32µm,32.5s						
TBI				eLR	LR	07 43 35.5	
	comp=Z,5µm,33.5s						
TWVZ	Taurewa	23.29	202	P	P	07 38 00.1	-1.1
OTVZ	Oturere	23.29	201	P	P	07 38 00.5	-0.8
SNVZ	South Ngauruho	23.32	201	P	P	07 38 01.1	-0.6
NGZ	Ngauruhoe	23.32	202	P	P	07 38 01.8	+0.1
COVZ	Chateau Observ	23.36	202	P	P	07 38 01.9	-0.1
TUVZ	Tukino	23.39	201	P	P	07 38 01.1	-1.1
FWVZ	Far West T-bar	23.41	202	P	P	07 38 01.3	-1.3
MAVZ	Matarangi	23.42	202	P	P	07 38 02.6	-0.2
WHVZ	Whangaehu Hut	23.42	201	P	P	07 38 01.4	-1.3
WNVZ	Wahianoa	23.46	201	P	P	07 38 02.6	-0.4
KAHZ	Kahuranaki	23.46	199	P	P	07 38 03.6	+0.7
MOVZ	Moawhango	23.48	201	P	P	07 38 02.0	-1.0
KRHZ	Kereru	23.48	200	P	P	07 38 02.2	-0.9
PKVZ	Pokaka	23.51	202	P	P	07 38 04.0	+0.6
MTVZ	Mangateitei	23.55	202	P	P	07 38 03.2	-0.6
VRZ	Vera Road	23.58	203	P	P	07 38 05.6	+1.7
PWZ	Pawanui	23.68	198	P	P	07 38 06.9	+2.0
PXZ	Pawanui	23.69	198	P	P	07 38 05.9	+1.1
MHEZ	Mangahewa	23.70	204	P	P	07 38 06.9	+1.8
PNHZ	Pukenui	23.79	200	P	P	07 38 04.4	-1.4
WPHZ	Waipukurau	23.85	199	P	P	07 38 07.2	+0.9
DREZ	Durham Road	23.85	204	P	P	07 38 09.3	+2.9
NEZ	North Egmont	23.96	204	P	P	07 38 10.5	+2.9
PRHZ	Porangahau	23.97	199	P	P	07 38 09.3	+1.8
TSZ	Takapari Road	23.99	200	P	P	07 38 07.8	0.0
PREZ	Palmer Road	24.00	204	P	P	07 38 08.9	+1.1
LREZ	Lake Rotokare	24.01	203	P	P	07 38 08.0	+0.2
KHEZ	Kahui Hut	24.01	204	P	P	07 38 10.2	+2.2
KHEZ	Kahui Hut	24.01	204	P	P	07 38 11.0	+3.0
NBEZ	Newall Road No	24.05	204	P	P	07 38 10.7	+2.4
WAZ	Wanganui	24.05	202	P	P	07 38 09.0	+0.7
DVHZ	Dannevirke	24.15	199	P	P	07 38 09.4	+0.2
ANWZ	Angora Road	24.20	199	P	P	07 38 10.4	+0.8
OHWZ	Ohakea	24.34	201	P	P	07 38 11.3	+0.5
POWZ	Post Office Ro	24.36	200	P	P	07 38 11.3	+0.2
PRWZ	Pori Road	24.44	199	P	P	07 38 12.3	+0.5
BFZ	Birch Farm	24.47	199	P	P	07 38 12.7	+0.6
BFZ	Birch Farm	24.47	199	P	P	07 38 12.6	+0.6
MRZ	Mangatainoka R	24.66	200	P	P	07 38 13.2	-0.7
TIWZ	Tintock	24.67	199	P	P	07 38 14.6	+0.7
CPWZ	Castlepoint	24.69	199	P	P	07 38 15.1	+1.1
PMOR	Pomariorio Ree	24.82	87	eP	P	07 38 13.0	-2.5
	comp=Z,764nm,1.2s						
PMOR				eLR	LR	07 44 23.2	
	comp=Z,4µm,26.3s						
HOWZ	Holdsworth Sta	24.90	200	P	P	07 38 15.7	-0.3
OGWZ	Otaki Gorge	24.94	200	P	P	07 38 15.9	-0.4
TMWZ	Te Maipa	24.97	199	P	P	07 38 18.1	+1.4
VAH	Vaihoa	25.04	88	eP	P	07 38 14.9	-2.6
	comp=Z,395nm,1.1s						
VAH				eLR	LR	07 44 30.7	
	comp=Z,5µm,27.8s						
TRWZ	Traveller	25.30	199	P	P	07 38 21.0	+1.5
DUWZ	D'Urville Isla	25.36	202	P	P	07 38 18.9	-1.3
PAWZ	Paruwai Farm	25.36	200	P	P	07 38 20.3	+0.1
MSWZ	Moikau Station	25.45	200	P	P	07 38 20.6	-0.3
SNZO	South Karori	25.54	201	P	P	07 38 20.8	-0.9
SNZO				IAmb	IAmb	07 38 25.9	
	comp=Z,173nm,0.7s						
SNZO	South Karori	25.54	201	P	P	07 38 22.5	+0.8
BHW	Baring Head	25.57	200	P	P	07 38 21.3	-0.7
BHW				IAmb	IAmb	07 38 23.9	
	comp=Z,99nm,0.7s						
PLWZ	Palliser	25.59	200	P	P	07 38 21.9	-0.4
TUWZ	Tuamarina	25.91	202	P	P	07 38 24.9	-0.2
QRZ	Quartz Range	25.91	205	P	P	07 38 26.0	+0.9
QRZ	Quartz Range	25.91	205	P	P	07 38 26.8	+1.6
TKNZ	Takaka Hill	25.92	204	P	P	07 38 25.7	+0.4
NNZ	Nelson	25.92	203	P	P	07 38 25.9	+0.6
CMWZ	Cape Campbell	26.09	201	P	P	07 38 29.1	+2.3
BSWZ	Blackbirch Sta	26.18	202	P	P	07 38 27.2	-0.4
NGOA	Tingoa Renbel	26.18	280	P	P	07 38 30.4	+2.6
MRNZ	Matariki Terra	26.31	204	P	P	07 38 30.5	+1.7
ALEG	Aligegeo Malai	26.52	286	P	P	07 38 33.2	+2.2
THZ	Tophouse	26.57	203	P	P	07 38 31.3	+0.1
KHZ	Kahutara	26.92	201	P	P	07 38 34.0	-0.2
HNR	Honiara	26.96	284	P	P	07 38 35.3	+0.4
HNR	Honiara	26.96	284	LR	LR	07 47 52.5	
	comp=Z,951nm,18.5s,baz=120,slow=33						
HNR	Honiara	26.96	284	P	P	07 38 38.0	+3.1
HNR	Honiara	26.96	284	P	P	07 38 35.3	+0.4
HNR				pmax	pmax		
	comp=Z,274nm,1.0s						
DSZ	Denniston Nort	26.98	205	P	P	07 38 36.3	+1.4
SAVO	Savo Central	27.19	285	P	P	07 38 39.1	+2.1
TATA	Tatamba Isabel	27.48	286	P	P	07 38 41.7	+2.2
GVZ	Greta Valley S	27.58	201	P	P	07 38 39.7	-0.4
LTZ	Lake Taylor	27.69	203	P	P	07 38 40.1	-1.1
INZ	Inchbonnie	27.95	204	P	P	07 38 42.5	-0.9
MNZS	Menzies Bay Ba	28.19	201	P	P	07 38 45.3	-0.2
OKCZ	Okains Bay	28.24	201	P	P	07 38 47.6	+1.6
OXZ	Oxford	28.25	202	P	P	07 38 45.1	-1.0
RACZ	Rakaia	28.56	202	P	P	07 38 49.2	+0.4
RPZ	Rata Peaks	28.95	203	P	P	07 38 54.1	+1.8
JCZ	Jackson Bay	30.14	206	P	P	07 39 04.3	+1.3
GC1S	Gold Coast 1 S	31.90	245	P	P	07 39 20.5	+1.9
SYZ	Scrubby Hill	32.06	203	P	P	07 39 21.6	+1.9
EIDS	Eidsvold	33.62	251	P	P	07 39 32.0	-1.7
EIDS				IAmb	IAmb	07 39 33.1	
	comp=Z,60nm,1.1s						
EIDS	Eidsvold	33.62	251	P	P	07 39 31.8	-1.9
	comp=Z,64nm,1.3s						
EIDS	Eidsvold	33.62	251	P	P	07 39 32.5	-1.2
TAOE	Nuku Hiva Isla	33.70	79	eP	P	07 39 37.3	+2.7
	comp=Z,281nm,26.6s						
TAOE				eS	S	07 44 54.9	+0.4
	comp=Z,2µm,28.0s						
TAOE				eLR	LR	07 48 08.5	
	comp=Z,3µm,27.2s						
ARMA	Armidale	34.00	242	P	P	07 39 36.2	-0.9
ARMA	Armidale	34.00	242	P	P	07 39 35.9	-1.2
	comp=Z,45nm,0.7s						
ARMA	Armidale	34.00	242	P	P	07 39 38.2	+1.1
NTLH	Newcastle Hard	34.60	237	P	P	07 39 45.2	+3.1
MGCD	Mangrove Creek	35.17	237	P	P	07 39 46.2	-0.8
	comp=Z,95nm,0.7s						
MGCD	Mangrove Creek	35.17	237	P	P	07 39 48.9	+1.9
SYDH	Sydney Hard Ro	35.63	236	P	P	07 39 50.8	-0.1
WOLH	Wollongong Har	35.73	235	P	P	07 39 54.9	+3.2
CNB	Canberra Magne	37.19	235	P	P	07 40 03.2	-1.1
	comp=Z,158nm,0.7s						
CNB	Canberra Magne	37.19	235	P	P	07 40 04.2	-0.1
CAN	Canberra	37.48	235	P	P	07 40 05.0	-1.7
CAN				IAmb	IAmb	07 40 09.7	
	comp=Z,53nm,0.8s						
CAN	Canberra	37.48	235	P	P	07 40 05.2	-1.5
	comp=Z,76nm,0.9s						
CAN	Canberra	37.48	235	P	P	07 40 07.7	+1.0
CAN	Canberra	37.48	235	P	P	07 40 05.0	-1.7
CAN				pmax	pmax		
	comp=Z,53nm,0.8s						
YNG	Young	37.65	237	P	P	07 40 07.8	-0.4
	comp=Z,21nm,2.5s						
CTAO	Charters Tower	37.97	260	P	P	07 40 09.1	-2.0
CTAO				IAmb	IAmb	07 40 12.8	
	comp=Z,77nm,0.8s						
CTAO	Charters Tower	37.97	260	P	P	07 40 10.0	-1.0
CTAO	Charters Tower	37.97	260	P	P	07 40 09.1	-2.0
CTAO				pmax	pmax		
	comp=Z,77nm,0.9s						
CTAO	Charters Tower	37.97	260	P	P	07 40 09.0	-2.0
CTAO				pP	sP	07 40 29.0	-0.8
PMG	Port Moresby	38.95	277	P	P	07 40 18.3	-1.1
PMG				IAmb	IAmb	07 40 23.2	
	comp=Z,95nm,1.0s						
PMG	Port Moresby	38.95	277	LR	LR	07 54 51.9	
	comp=Z,494nm,18.0s,baz=116,slow=34						
PMG	Port Moresby	38.95	277	P	P	07 40 20.8	+1.5
PMG	Port Moresby	38.95	277	P	P	07 40 20.5	+1.2
PMG	Port Moresby	38.95	277	ceP	P	07 40 18.2	-1.1
PMG				pmax	pmax		
	comp=Z,126nm,1.3s						
PMG	Port Moresby	38.95	277	P	P	07 40 19.1	-0.2
PMG				pP	sP	07 40 39.5	+1.4
CMSA	Cobar Meteorol	39.22	242	P	P	07 40 19.8	-1.6
	comp=Z,95nm,0.8s						
CMSA	Cobar Meteorol	39.22	242	P	P	07 40 20.0	-1.4
QLP	Quilpie	39.87	250	P	P	07 40 25.0	-1.8
	comp=Z,232nm,1.0s						
QLP	Quilpie	39.87	250	P	P	07 40 26.3	-0.5
MTSU	Mount Surprise	39.96	263	P	P	07 40 25.8	-2.0
	comp=Z,28nm,0.9s						
MTSU	Mount Surprise	39.96	263	P	P	07 40 26.4	-1.3
GLAD	Gladstone	40.22	227	P	P	07 40 30.4	+0.9
TOO	Toolangi	40.85	233	P	P	07 40 33.9	-1.0
TOO	Toolangi	40.85	233	P	P	07 40 33.7	-1.2
	comp=Z,43nm,1.0s						
TOO	Toolangi	40.85	233	P	P	07 40 33.9	-1.0
TOO				pmax	pmax		
	comp=Z,32nm,0.8s						
CORO	Coronation Par	41.00	226	P	P	07 40 37.4	+1.4
MOO	Moorlands	41.37	225	P	P	07 40 38.2	-0.8
	comp=Z,135nm,1.1s						
MOO	Moorlands	41.37	225	P	P	07 40 40.3	+1.3
TAU	Tasmania Unive	41.48	224	P	P	07 40 39.7	-0.2
TAU				IAmb	IAmb	07 40 41.7	
	comp=Z,126nm,0.9s						
TAU	Tasmania Unive	41.48	224	P	P	07 40 41.5	+1.6
TAU	Tasmania Unive	41.48	224	P	P	07 40 39.7	-0.2
TAU				pmax	pmax		
	comp=Z,126nm,0.9s						
TAU	Tasmania Unive	41.48	224	P	P	07 40 40.5	+0.7
WAKE	Wake Island	41.59	331	P	P	07 40 38.6	-2.4
WAKE	Wake Island	41.59	331	P	P	07 40 41.4	+0.4
WAKE	Wake Island	41.59	331	P	P	07 40 40.0	-1.0
COEN	Coen	41.67	269	P	P	07 40 40.6	-1.2
COEN				IAmb	IAmb	07 40 44.2	
	comp=Z,87nm,0.9s						
COEN	Coen	41.67	269	P	P	07 40 40.1	-1.7
	comp=Z,105nm,0.8s						
COEN	Coen	41.67	269	P	P	07 40 41.5	-0.3
DHH	Diamond Head	41.75	22	P	P	07 40 43.5	+1.2
DHH	Diamond Head	41.75	22	P	P	07 40 43.5	+1.2
KIP	Kipapa	41.82	22	P	P	07 40 43.8	+1.0
KIP	Kipapa	41.82	22	P	P	07 40 43.9	+1.1
KIP	Kipapa	41.82	22	ceP	P	07 40 42.9	+0.1
KIP				pmax	pmax		
	comp=Z,179nm,1.1s						
KIP	Kipapa	41.82	22	P	P	07 40 43.3	+0.5
H11N3	WAKE ISLAND Hy	41.86	332	T	T	08 25 41.0	
	baz=151,slow=76,SNR=59						
H11N1	WAKE ISLAND Hy	41.86	332	T	T	08 25 40.5	
	baz=151,slow=76,SNR=7.3						
H11N2	WAKE ISLAND Hy	41.87	332	T	T	08 25 40.4	
	baz=151,slow=76,SNR=57						
GEXS	Deakin Univers	41.95	232	P	P	07 40 45.3	+1.5
STKA	Stephens Creek	42.72	242	P	P	07 40 49.2	-1.1
STKA	Stephens Creek	42.72	242	P	P	07 40 48.3	-1.9
	comp=Z,256nm,1.3s						
STKA	Stephens Creek	42.72	242	P	P	07 40 49.0	-1.2
	comp=Z,38nm,1.0s,baz=80,slow=9.4,SNR=21						
STKA				LR	LR	07 56 26.8	
	comp=Z,558nm,18.7s,baz=83,slow=33						
	comp=Z,38nm,1.0s						
STKA	Stephens Creek	42.72	242	P	P	07 40 49.1	-1.1
STKA	Stephens Creek	42.72	242	i P	P	07 40 48.6	-1.6
ARPS	Mount Arapiles	43.45	235	P	P	07 40 56.8	+0.8
QIS	Mount Isa	44.16	259	P	P	07 40 59.4	-2.6
	comp=Z,24nm,1.2s						
QIS	Mount Isa	44.16	259	P	P	07 41 00.5	-1.5
HTT	Hallett	45.17	240	P	P	07 41 08.0	-1.9
	comp=Z,17nm,0.9s						
HTT	Hallett	45.17	240	P	P	07 41 11.0	+1.1
WHYH	Whyalla	46.24	241	P	P	07 41 17.4	-0.9
JAY	Jayapura	47.28	283	LR	LR	07 59 55.0	
	comp=Z,468nm,21.9s,baz=62,slow=34						
JAY	Jayapura	47.28	283	P	P	07 41 29.1	+2.4
JAY	Jayapura	47.28	283	P	P	07 41 25.9	-0.8
JAY				pmax	pmax		
	comp=Z,58nm,0.9s						
BBOO	Buckleboo	47.49	242	P	P	07 41 26.0	-2.1
BBOO				IAmb	IAmb	07 41 30.1	
	comp=Z,95nm,1.1s						
BBOO	Buckleboo	47.49	242	P	P	07 41 25.9	-2.1
	comp=Z,98nm,0.9s						
BBOO	Buckleboo	47.49	242	P	P	07 41 28.0	0.0
GENI	Genyem	47.75	283	P	P	07 41 33.1	+2.8
GENI	Genyem	47.75	283	P	P	07 41 32.0	+1.7
WR0	Warramunga Arr	48.95	259	P	P	07 41 37.2	-2.3
WRAB	Tennant Creek	49.14	259	P	P	07 41 39.3	-1.6
WRAB	Tennant Creek	49.14	259	i P	P	07 41 38.6	-2.3
WRAB				pmax	pmax		
	comp=Z,114nm,0.9s						
WRA	Warramunga Arr	49.15	259	P	P	07 41 39.3	-1.7
WRA	Warramunga Arr	49.15	259	P	P	07 41 39.0	-2.0
	comp=Z,98nm,1.0s,baz=93,slow=6.7,SNR=110						
WRA				PcP	PcP	07 43 04.2	+0.3
	comp=Z,33nm,1.0s,baz=91,slow=3.9,SNR=8.1						
WRA				ScP	ScP	07 46 56.5	+1.5
	comp=Z,1.8nm,0.9s,baz=100,slow=4.3,SNR=4.1						
WRA				S	S	07 48 35.0	-8.0
	comp=Z,2.4nm,0.8s,baz=93,slow=14,SNR=5.6						
WRA				LR	LR	08 00 44.9	
	comp=Z,2µm,21.8s,baz=116,slow=34						
	comp=Z,98nm,1.0s						
WRA	Warramunga Arr	49.15	259	eP	P	07 41 38.5	-2.5
WRA				pmax	pmax		
	comp=Z,98nm,0.9s						
AS07	Alice Springs	49.16	254	P	P	07 41 39.7	-1.4
	comp=Z,653nm,0.8s						
AS01	Alice Springs	49.18	254	P	P	07 41 39.8	-1.4
AS31	Alice Springs	49.22	254	P	P	07 41 40.2	-1.4
ASAR	Alice Springs	49.22	254	P	P	07 41 40.0	-1.6
ASAR	Alice Springs	49.22	254	P	P	07 41 40.0	-1.6
	comp=Z,405nm,0.8s,baz=86,slow=8.5,SNR=497						
ASAR				PcP	PcP	07 43 04.2	0.0
	comp=Z,30nm,0.9s,baz=102,slow=4.1,SNR=5.3						
ASAR				ScP	ScP	07 46 58.0	+2.7
	comp=Z,4.8nm,1.0s,baz=91,slow=5.1,SNR=7.2						
ASAR				S	S	07 48 35.8	-8.3
	comp=Z,10nm,1.0s,baz=88,slow=15,SNR=15						
ASAR				P4KPbc		08 19 21.4	
	comp=Z,1.8nm,1.1s,baz=108,slow=4.7,SNR=5.4						
ASAR	Alice Springs	49.22	254	P	P	07 41 40.0	-1.6
GUMO	Guam	51.45	305	LR	LR	07 58 33.8	
	comp=Z,143nm,20.9s,baz=107,slow=30						
KDU	Kakadu	52.12	268	P	P	07 42 01.3	-2.1
	comp=Z,86nm,0.7s						
KDU	Kakadu	52.12	268	P	P	07 42 02.9	-0.5
MTN	Manton Dam	53.37	267	P	P	07 42 11.4	-1.2
MTN	Manton Dam	53.37	267	P	P	07 42 10.5	-2.2
	comp=Z,88nm,0.8s						
MTN	Manton Dam	53.37	267	P	P	07 42 11.7	-0.9
FORT	Forrest	54.20	245	P	P	07 42 16.9	-1.7
FORT	Forrest	54.20	245	P	P	07 42 16.4	-2.2
	comp=Z,155nm,1.0s						
FORT	Forrest	54.20	245	P	P	07 42 19.5	+1.0
WRKA	Warakurna	54.23	252	P	P	07 42 16.9	-2.0
	comp=Z,78nm,0.9s						
FAKI	Fak Fak	55.04	279	P	P	07 42 23.3	-1.6
FAKI				IAmb	IAmb	07 43 03.3	
	comp=Z,40nm,1.0s						
KNRA	Kununurra	55.04	263	P	P	07 42 22.6	-2.2
KNRA	Kununurra	55.04	263	P	P	07 42 22.9	-1.9
	comp=Z,161nm,0.9s						
SWI	Sorong	56.67	281	P	P	07 42 35.6	-0.9
SWI				pmax	pmax		
	comp=Z,251nm,1.1s						
DRV	Dumont d'Urvil	57.33	200	P	P	07 42 40.9	+0.6
DRV				pP	sP	07 43 01.4	+1.9
FITZ	Fitzroy Crossi	57.55	260	P	P	07 42 41.3	-1.4
FITZ	Fitzroy Crossi	57.55	260	P	P	07 42 41.0	-1.7
FITZ	Fitzroy Crossi	57.55	260	LR	LR	08 05 44.6	
	comp=Z,1µm,21.6s,baz=98,slow=34						
FITZ	Fitzroy Crossi	57.55	260	P	P	07 42 41.9	-0.8
SOEI	Soe	60.64	269	P	P	07 43 03.8	-0.5
SOEI	Soe	60.64	269	P	P	07 43 07.1	+2.8
TNTI	Ternate	60.89	281	P	P	07 43 05.0	-0.8
TNTI	Ternate	60.89	281	P	P	07 43 07.4	+1.6
SBA	Scott Base	60.91	185	P	P	07 43 07.1	+2.2
SBA				IAmb	IAmb	07 43 30.4	
	comp=Z,57nm,0.9s						
SBA	Scott Base	60.91	185	P	P	07 43 07.1	+2.2
SBA				pmax	pmax		
	comp=Z,57nm,1.0s						
SBA	Scott Base	60.91	185	P	P	07 43 08.1	+3.2
SBA				pP	sP	07 43 29.0	+4.8
VNDA	Vanda	61.03	186	P	P	07 43 07.9	+2.1
VNDA	Vanda	61.03	186	P	P	07 43 07.0	+1.2
	comp=Z,14nm,0.8s,baz=6.6,slow=6.6,SNR=27						
	comp=Z,14nm,0.8s						
VNDA	Vanda	61.03	186	P	P	07 43 07.9	+2.1
VNDA				pmax	pmax		
	comp=Z,27nm,1.0s						
VNDA	Vanda	61.03	186	P	P	07 43 08.3	+2.6
VNDA				pP	sP	07 43 28.9	+3.8
BATI	Baumata	61.10	268	LR	LR	08 09 31.9	
	comp=Z,368nm,19.7s,baz=124,slow=36						
SANI	Sanana	61.23	278	P	P	07 43 08.1	-0.1
PSAC2	Pilbara Seismi	62.31	255	P	P	07 43 13.1	-2.3
	comp=Z,48nm,0.8s						
PSA00	Pilbara Seismi	62.36	255	P	P	07 43 13.5	-2.2
PSA00				IAmb	IAmb	07 43 17.2	
	comp=Z,30nm,0.8s						
PSA00	Pilbara Seismi	62.36	255	P	P	07 43 14.7	-1.0
MBWA	Marble Bar	62.53	255	P	P	07 43 14.9	-1.9
MBWA				IAmb	IAmb	07 43 57.4	
	comp=Z,44nm,1.0s						
MBWA	Marble Bar	62.53	255	P	P	07 43 14.6	-2.2
	comp=Z,47nm,0.8s						
MBWA	Marble Bar	62.53	255	P	P	07 43 15.9	-0.9
MBWA	Marble Bar	62.53	255	P	P	07 43 15.2	-1.6
MBWA				pP	sP	07 43 36.9	+0.7
MBWA				PcP	PcP	07 43 55.4	-0.3
MEEK	Meekatharra	62.75	249	P	P	07 43 15.9	-2.3
MEEK	Meekatharra	62.75	249	P	P	07 43 19.0	+0.7
MMRI	Maumere	62.86	269	P	P	07 43 17.3	-1.8
KLBR	Kellerberrin	62.98	243	P	P	07 43 18.1	-1.6
	comp=Z,312nm,0.9s						
KLBR	Kellerberrin	62.98	243	P	P	07 43 20.1	+0.4
NWAO	Narrogin (SRO)	63.31	242	P	P	07 43 21.4	-0.4
NWAO	Narrogin (SRO)	63.31	242	P	P	07 43 20.0	-1.8
	comp=Z,180nm,1.0s						
NWAO	Narrogin (SRO)	63.31	242	LR	LR	08 09 05.8	
	comp=Z,329nm,18.4s,baz=105,slow=34						
NWAO	Narrogin (SRO)	63.31	242	P	P	07 43 22.6	+0.7
NWAO	Narrogin (SRO)	63.31	242	P	P	07 43 22.5	+0.7
NWAO	Narrogin (SRO)	63.31	242	P	P	07 43 21.4	-0.4
NWAO				pmax	pmax		
	comp=Z,103nm,1.0s						
NWAO	Narrogin (SRO)	63.31	242	P	P	07 43 22.0	+0.2
NWAO				PcP	PcP	07 43 58.5	-0.1
RKGY	Rocky Gully	63.40	240	P	P	07 43 22.6	+0.2
	comp=Z,117nm,0.9s						
BLDU	Ballidu	63.97	244	P	P	07 43 24.2	-2.0
	comp=Z,101nm,0.9s						
BLDU	Ballidu	63.97	244	P	P	07 43 26.5	+0.3
MUN	Mundaring	64.26	243	P	P	07 43 27.4	-0.7
	comp=Z,230nm,0.9s						
MUN	Mundaring	64.26	243	P	P	07 43 28.8	+0.7
MUN	Mundaring	64.26	243	P	P	07 43 27.2	-0.9
LUWI	Luwuk	64.60	277	P	P	07 43 29.7	-0.8
MTKN	Mount Kenneth	64.63	243	P	P	07 43 31.9	+1.4
	comp=Z,584nm,0.9s						
MTKN	Mount Kenneth	64.63	243	P	P	07 43 32.8	+2.3
MORW	Morawa	64.72	246	P	P	07 43 29.6	-1.6
MORW				IAmb	IAmb	07 43 32.3	
	comp=Z,55nm,0.9s						
MORW	Morawa	64.72	246	P	P	07 43 29.6	-1.6
	comp=Z,72nm,1.2s						
MORW	Morawa	64.72	246	P	P	07 43 31.6	+0.5
DAV	Davao City (W)	64.89	287	LR	LR	08 09 51.7	
	comp=Z,171nm,19.9s,baz=146,slow=34						
H01W1	Cape Leeuwin H	65.69	239	P	P	07 43 39.3	+2.2
	baz=110,slow=7.2,SNR=16						
H01W2	Cape Leeuwin H	65.71	239	P	P	07 43 39.3	+2.2
	baz=110,slow=7.2,SNR=9.3						
H01W3	Cape Leeuwin H	65.71	239	P	P	07 43 39.3	+2.2
	baz=110,slow=7.2,SNR=6.8						
CCD	Concordia, Ant	66.16	195	P	P	07 43 41.4	+1.4
CCD				pP	sP	07 44 02.2	+2.7
KAPI	Kappang	66.24	272	P	P	07 43 38.8	-2.4
KAPI	Kappang	66.24	272	LR	LR	08 11 28.5	
	comp=Z,130nm,19.6s,baz=94,slow=35						
KAPI	Kappang	66.24	272	P	P	07 43 42.4	+1.2
KAPI	Kappang	66.24	272	P	P	07 43 38.8	-2.4
KAPI				pmax	pmax		
	comp=Z,29nm,0.9s						
PLAI	Plampang	67.06	268	P	P	07 43 47.4	+1.0
TOLI2	Tolitoli	67.19	279	P	P	07 43 45.8	-1.4
TOLI2				IAmb	IAmb	07 43 47.6	
	comp=Z,56nm,0.9s						
TOLI2	Tolitoli	67.19	279	P	P	07 43 48.0	+0.8

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GIRL  Giralia          67.30 252   P       P        07 43 47.1 -0.7
GIRL  Giralia          67.30 252   P       P        07 43 47.0 -0.8
      comp=Z,197nm,1.3s
GIRL  Giralia          67.30 252   P       P        07 43 48.5 +0.7
CASY  Casey            68.20 205   P       P        07 43 52.7  0.0
CASY                               IAmb    IAmb     07 43 54.7
      comp=Z,68nm,0.9s
CASY  Casey            68.20 205   P       P        07 43 53.4 +0.7
AMKA  Amchitka         69.11 355   P       P        07 43 58.0 -0.3
KIWB  Kanaga Island    69.37 358   P       P        07 43 59.4 -0.6
ADK   Adak             69.39 358   P       P        07 43 58.8 -1.3
ADK   Adak             69.39 358   P       P        07 44 00.1  0.0
ADK   Adak             69.39 358   P       P        07 43 58.8 -1.3
ADK                                pmax    pmax
      comp=Z,46nm,1.1s
ADK   Adak             69.39 358   P       P        07 43 58.5 -1.5
ADK                                pP      sP       07 44 20.2 +0.6
ATKA  Atka Island      69.66 360   P       P        07 44 01.4 -0.3
ATKA                               IAmb    IAmb     07 44 02.7
      comp=Z,112nm,1.2s
ATKA  Atka Island      69.66 360   P       P        07 44 01.7  0.0
JMM   Marumori         69.96 323   P       P        07 44 03.3 -0.7
JGF   Kuroka           70.51 319   P       P        07 44 06.3 -1.2
JGF   Kuroka           70.51 319   P       P        07 44 07.8 +0.4
NIKH  Nikolski High    70.54   3   P       P        07 44 06.5 -0.6
NIKH                               IAmb    IAmb     07 44 07.4
      comp=Z,58nm,0.9s
NIKH  Nikolski High    70.54   3   P       P        07 44 06.8 -0.4
      baz=185
INU   Inuyama          70.56 319   P       P        07 44 07.2 -0.5
INU   Inuyama          70.56 319   P       P        07 44 08.5 +0.8
MJA0  Matsu Arr-Jizo   70.58 321  eP       P        07 44 07.8  0.0
MJA0                               pmax    pmax
      comp=Z,17nm,0.9s
MJAR  Matsushiro Arr   70.60 320   P       P        07 44 06.8 -1.1
      comp=Z,15nm,0.9s,baz=156,slow=5.6,SNR=26
MJAR                               LR      LR       08 09 40.7
      comp=Z,82nm,21.5s,baz=120,slow=31
      comp=Z,15nm,0.9s
MAJO  Matsushiro       70.60 320   P       P        07 44 06.9 -1.0
MAJO  Matsushiro       70.60 320   P       P        07 44 08.7 +0.8
MAJO  Matsushiro       70.60 320 i P       P        07 44 07.1 -0.8
MAJO                               pmax    pmax
      comp=Z,26nm,1.0s
MAJO  Matsushiro       70.60 320   P       P        07 44 07.5 -0.4
MAJO                               pP      PcP      07 44 29.4 +0.6
MJB9  Matsu-Tunnel     70.60 320   P       P        07 44 07.5 -0.5
JAGI  Jajag, Banyuwa   70.61 267   P       P        07 44 06.8 -1.7
JAGI  Jajag, Banyuwa   70.61 267   P       P        07 44 09.0 +0.5
MYLDM Lahad Datu       70.72 282   P       P        07 44 09.0 -0.1
MYLDM Lahad Datu       70.72 282   P       P        07 44 10.2 +1.1
SHEM  Shemya Is, Ala   70.99 352   LR      LR       08 12 53.3
      comp=Z,129nm,18.5s,baz=142,slow=34
SMY   Shemya           70.99 352   P       P        07 44 08.3 -1.5
SMY                                IAmb    IAmb     07 44 10.9
      comp=Z,81nm,0.9s
SMY   Shemya           70.99 352   P       P        07 44 10.3 +0.5
SMY   Shemya           70.99 352   P       P        07 44 08.3 -1.5
SMY                                pmax    pmax
      comp=Z,81nm,0.9s
JSD   Sado             71.55 322   P       P        07 44 12.7 -0.9
JSD   Sado             71.55 322   P       P        07 44 14.3 +0.7
UNV   Unalaska Valle   71.56   4   P       P        07 44 12.1 -1.2
UNV   Unalaska Valle   71.56   4   P       P        07 44 12.9 -0.4
UNV   Unalaska Valle   71.56   4   P       P        07 44 12.7 -0.6
      baz=187,SNR=7.2
JMN   Monobe           71.58 316   P       P        07 44 13.6 -0.3
JMN                                IAmb    IAmb     07 44 15.9
      comp=Z,59nm,1.1s
JMN   Monobe           71.58 316   P       P        07 44 14.6 +0.6
JOW   Kunigami         71.71 307   LR      LR       08 09 58.4
      comp=Z,156nm,21.9s,baz=208,slow=31
QSPA  South Pole Qui   72.31 180   P       P        07 44 19.8 +1.8
      comp=Z,61nm,0.9s,baz=23,slow=2.9,SNR=31
QSPA                               LR      LR       08 11 57.4
      comp=Z,121nm,21.8s,baz=46,slow=32
      comp=Z,61nm,0.9s
FALS  False Pass       72.83   6   P       P        07 44 19.8 -1.0
      baz=190
KKM   Kota Kinabalu    73.15 282   P       P        07 44 23.1 -0.7
KKM                                IAmb    IAmb     07 44 25.1
      comp=Z,56nm,0.8s
KKM   Kota Kinabalu    73.15 282   P       P        07 44 24.9 +1.1
SAO   San Andreas Ge   73.21  41   P       P        07 44 23.4 -0.2
SAO                                IAmb    IAmb     07 44 25.9
      comp=Z,118nm,1.1s
SAO   San Andreas Ge   73.21  41   P       P        07 44 23.4 -0.2
SAO                                pmax    pmax
      comp=Z,119nm,1.2s
JNU   Nakatsue         73.25 314   P       P        07 44 23.5 -0.5
JNU                                IAmb    IAmb     07 44 25.0
      comp=Z,56nm,1.1s
JNU   Nakatsue         73.25 314   LR      LR       08 10 08.0
      comp=Z,114nm,20.5s,baz=133,slow=30
JNU   Nakatsue         73.25 314   P       P        07 44 24.0  0.0
CNBA  Chernabura Isl   73.26   8   P       P        07 44 22.3 -1.1
CHNA  Chernabura Isl   73.27   8   P       P        07 44 23.0 -0.4
CHNA  Chernabura Isl   73.27   8   P       P        07 44 23.0 -0.4
      baz=194,SNR=6.0
PMPB  Monarch Peak     73.29  42   P       P        07 44 24.3 +0.2
BBGB  Big Mountain B   73.36  42   P       P        07 44 24.9 +0.3
JKA   Kamikawa-asahi   73.42 329   P       P        07 44 24.6  0.0
ASAJ  Asahikawa        73.42 329   LR      LR       08 12 34.9
      comp=Z,117nm,20.7s,baz=172,slow=32
ASAJ  Asahikawa        73.42 329   P       P        07 44 24.6  0.0
ASAJ                               pmax    pmax
      comp=Z,46nm,1.0s
BCW   Bitter Crk WRg   73.43  44   P       P        07 44 25.3 +0.3
BCW                                IAmb    IAmb     07 44 27.5
      comp=Z,92nm,1.0s
HOPS  Hopland Field    73.62  39   P       P        07 44 26.6 +0.7
SDPT  Sand Point       73.66   8   P       P        07 44 24.8 -0.9
SDPT                               IAmb    IAmb     07 44 26.2
      comp=Z,54nm,0.8s
SDPT  Sand Point       73.66   8   P       P        07 44 25.7  0.0
SDPT  Sand Point       73.66   8   P       P        07 44 25.0 -0.7
      baz=193
PASC  Pasadena Art C   73.80  45   P       P        07 44 26.9 -0.2
PASC                               IAmb    IAmb     07 44 28.8
      comp=Z,50nm,0.9s
CBX   Cerro Bola       73.81  48   P       P        07 44 27.6 +0.2
CBX                                IAmb    IAmb     07 44 29.4
      comp=Z,133nm,1.5s
S12K  Black Hills      73.81   7   P       P        07 44 25.6 -1.1
S12K  Black Hills      73.81   7   P       P        07 44 26.2 -0.5
      baz=192
VTX   Valle De La Tr   73.93  49   P       P        07 44 28.3 +0.3
VTX                                IAmb    IAmb     07 44 30.1
      comp=Z,75nm,1.1s
ELS   Elsinore Mount   74.02  46   P       P        07 44 28.8 +0.3
P08K  Saint George I   74.14   2   P       P        07 44 28.3 -0.2
      baz=184
ESJX  Sierra Juarez    74.14  48   P       P        07 44 29.7 +0.3
ESJX                               IAmb    IAmb     07 44 31.8
      comp=Z,103nm,1.2s
UGM   Wanagama         74.21 267   P       P        07 44 28.7 -1.3
UGM   Wanagama         74.21 267   P       P        07 44 30.3 +0.3
SFX   San Felipe       74.41  50   P       P        07 44 30.8 +0.1
SFX                                IAmb    IAmb     07 44 32.3
      comp=Z,53nm,1.0s
LPIG  La Paz           74.44  58   LR      LR       08 08 11.7
      comp=Z,346nm,21.0s,baz=212,slow=28
SRIG  Santa Rosalia    74.46  54   P       P        07 44 30.9 -0.2
SRIG                               IAmb    IAmb     07 44 33.0
      comp=Z,101nm,1.1s
ISA   Isabella, Lake   74.47  44   P       P        07 44 31.3 +0.2
ISA                                IAmb    IAmb     07 44 33.3
      comp=Z,111nm,1.1s
ISA   Isabella, Lake   74.47  44   P       P        07 44 31.3 +0.2
ISA                                pmax    pmax
      comp=Z,111nm,1.1s
SMRI  Semarang         74.53 267   P       P        07 44 32.7 +0.8
O02D  Mt. Diablo Mer   74.54  38   P       P        07 44 31.9 +0.5
O02D                               IAmb    IAmb     07 44 34.3
      comp=Z,132nm,1.3s
CMB   Columbia Colle   74.66  41   P       P        07 44 32.3 +0.2
CMB                                IAmb    IAmb     07 44 34.0
      comp=Z,69nm,1.1s
CMB   Columbia Colle   74.66  41   P       P        07 44 32.3 +0.2
CMB                                pmax    pmax
      comp=Z,69nm,1.1s
PFO   Pinyon Flats O   74.67  47   P       P        07 44 32.6 +0.3
PFO   Pinyon Flats O   74.67  47   LR      LR       08 09 27.0
      comp=Z,291nm,21.6s,baz=236,slow=29
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PFO   Pinyon Flats O   74.67  47   P       P        07 44 32.6 +0.3
PFO                                pmax    pmax
      comp=Z,56nm,1.2s
SPIA  Saint Paul Isl   74.69   2   P       P        07 44 31.6 -0.1
SPIA  Saint Paul Isl   74.69   2   P       P        07 44 30.9 -0.8
      baz=183
S14K  Fog Glacier      74.69   8   P       P        07 44 31.6 -0.2
      baz=194
PEA0B Petropavlovsk-   74.79 343ceP        P        07 44 33.0 +0.6
PETK  Petropavlovsk-   74.79 343   P       P        07 44 31.7 -0.7
PETK  Petropavlovsk-   74.79 343   P       P        07 44 32.6 +0.2
      comp=Z,26nm,0.8s,baz=136,slow=7.9,SNR=26
PETK                               LR      LR       08 12 50.9
      comp=Z,94nm,20.8s,baz=143,slow=32
      comp=Z,26nm,0.8s
AFDM  Forest Hills D   74.86  40   P       P        07 44 33.4 +0.2
AFDM                               IAmb    IAmb     07 44 35.1
      comp=Z,59nm,1.1s
YSS   Yuzhno-Sakhali   75.42 331   P       P        07 44 36.6 +0.5
YSS                                IAmb    IAmb     07 44 37.9
      comp=Z,53nm,0.9s
YSS   Yuzhno-Sakhali   75.42 331   P       P        07 44 36.9 +0.8
YSS   Yuzhno-Sakhali   75.42 331αeP        P        07 44 36.8 +0.7
YSS                               e*SP     sP       07 44 57.2 +1.4
YSS                               eS       S        07 54 14.4 +2.2
YSS                                pmax    pmax
      comp=E,40nm,1.0s
YSS                                pmax    pmax
      comp=Z,50nm,1.0s
YSS                                pmax    pmax
      comp=Z,100nm,4.1s
YSS                                pmax    pmax
      comp=E,100nm,3.3s
YSS                                smax    smax
      comp=N,100nm,8.7s
YSS                                smax    smax
      comp=E,200nm,9.3s
YSS                                MLR     MLR
      comp=N,100nm,16.0s
GLA   Glamis           75.51  48   P       P        07 44 36.6 -0.5
GLA                                IAmb    IAmb     07 44 39.5
      comp=Z,92nm,1.2s
GLA   Glamis           75.51  48   P       P        07 44 36.6 -0.5
GLA                                pmax    pmax
      comp=Z,92nm,1.2s
YULB  Yu-li            75.57 301   P       P        07 44 36.4 -1.2
YULB  Yu-li            75.57 301   P       P        07 44 37.7 +0.1
YBH   Yreka Blue Hor   75.59  37   LR      LR       08 10 24.2
      comp=Z,30nm,21.8s,baz=258,slow=30
MPK   Martis Peak      75.65  40   P       P        07 44 38.4 +0.4
NACB  Ninganchiao      75.68 301   P       P        07 44 36.8 -1.3
NACB  Ninganchiao      75.68 301   P       P        07 44 38.7 +0.5
HATC  Hat Creek Radi   75.73  38   P       P        07 44 38.9 +0.7
SII   Sitkinak Islan   75.80  11   P       P        07 44 38.7 +0.5
SII   Sitkinak Islan   75.80  11   P       P        07 44 38.1  0.0
      baz=199
GRAC  Grapevine Rang   75.97  43   P       P        07 44 40.2 +0.5
SSLB  Suanglung        76.03 301   P       P        07 44 41.8 +1.6
TPUB  Ta-pu            76.08 300   P       P        07 44 41.2 +0.7
YHNB  Yeheng           76.08 302   P       P        07 44 41.5 +0.9
BLYC  Blythe           76.10  47   P       P        07 44 40.2 -0.1
BLYC                               IAmb    IAmb     07 44 42.6
      comp=Z,77nm,1.2s
L04D  Klamath Falls    76.13  37   P       P        07 44 41.3 +0.8
L04D                               IAmb    IAmb     07 44 42.8
      comp=Z,142nm,1.3s
NVAR  Mina Array Bea   76.21  42   P       P        07 44 41.1 -0.1
NVAR  Mina Array Bea   76.21  42   P       P        07 44 41.9 +0.7
      comp=Z,84nm,1.0s,baz=226,slow=9.2,SNR=246
NVAR                               LR      LR       08 10 24.1
      comp=Z,422nm,21.8s,baz=211,slow=30
      comp=Z,84nm,1.0s
R16K  Pilot Point      76.21   9   P       P        07 44 40.1 -0.3
      baz=196
GMN   Gold Mountain    76.22  43   P       P        07 44 41.2 -0.1
GMN                                IAmb    IAmb     07 44 43.3
      comp=Z,90nm,0.9s
HSIG                   76.29  53   P       P        07 44 40.6 -1.0
PAHR  Pah Rah Range    76.30  40   P       P        07 44 41.3 -0.2
PAHR                               IAmb    IAmb     07 44 43.8
      comp=Z,80nm,1.1s
NV11  Mina Array Sit   76.30  42   P       P        07 44 42.0 +0.4
MZP   Montezuma Peak   76.37  43   P       P        07 44 41.8 -0.4
214A  Organ Pipe Nat   76.38  50   P       P        07 44 42.6 +0.5
214A                               IAmb    IAmb     07 44 44.3
      comp=Z,114nm,1.4s
OHAK  Old Harbor       76.59  11   P       P        07 44 42.8 +0.2
OHAK  Old Harbor       76.59  11   P       P        07 44 42.7 +0.1
      baz=200,SNR=10
R18K  Karluk           76.71  10   P       P        07 44 43.1 -0.1
      baz=199
BBJI  Bungbulang       77.07 266   P       P        07 44 46.8 +0.4
Q17K  Contact Creek    77.14  10   P       P        07 44 45.5 -0.3
      baz=197,SNR=22
KSM   Kuching          77.20 276   P       P        07 44 47.8 +0.7
KDAK  Kodiak Island    77.25  11   P       P        07 44 46.5 +0.2
      comp=Z,18nm,0.8s,baz=203,slow=4.2,SNR=15
KDAK                               LR      LR       08 12 05.6
      comp=Z,264nm,21.5s,baz=195,slow=30
      comp=Z,18nm,0.8s
KDAK  Kodiak Island    77.25  11 i P       P        07 44 46.5 +0.2
KDAK                               pmax    pmax
      comp=Z,84nm,1.5s
KDAK  Kodiak Island    77.25  11   P       P        07 44 46.5 +0.2
      baz=201
Y14A  Wickenburg       77.27  48   P       P        07 44 47.1 +0.1
Y14A                               IAmb    IAmb     07 44 49.1
      comp=Z,60nm,0.9s
LEM   Lembang          77.28 267   LR      LR       08 19 07.9
      comp=Z,236nm,20.6s,baz=150,slow=36
O14K  Tigyukauivet M   77.39   6   P       P        07 44 46.8 -0.2
      baz=192
TJN   Taejon           77.47 315   P       P        07 44 49.0 +1.0
O15K  Ungalikthiuk R   77.48   7   P       P        07 44 47.4 -0.1
      baz=194,SNR=5.3
P16K  Nushagak River   77.57   8   P       P        07 44 48.0 -0.1
      baz=195,SNR=13
Q18K  Katmai Hardscr   77.65  10   P       P        07 44 48.5 -0.2
      baz=198,SNR=12
KSRS  Korea Array      77.69 316   P       P        07 44 50.5 +1.3
      comp=Z,35nm,1.0s,baz=133,slow=6.3,SNR=102
KSRS                               LR      LR       08 16 27.9
      comp=Z,25µm,19.3s,baz=115,slow=34
      comp=Z,35nm,1.0s
KSRS  Korea Array      77.69 316  eP       P        07 44 50.5 +1.3
KSRS                               pmax    pmax
      comp=Z,36nm,1.0s
KSAR  Wonju Array Be   77.71 316   P       P        07 44 49.2 -0.1
KSAR  Wonju Array Be   77.71 316   P       P        07 44 49.2 -0.1
PRN   Pahroc Range     77.73  44   P       P        07 44 50.2 +0.5
P17K  Kvichak River    77.95   9   P       P        07 44 50.0 -0.1
      baz=197,SNR=19
N14K  Kuskokwak Cree   78.00   6   P       P        07 44 50.7 +0.3
N14K                               IAmb    IAmb     07 44 52.8
      comp=Z,84nm,1.2s
N14K  Kuskokwak Cree   78.00   6   P       P        07 44 50.5 +0.1
      baz=192,SNR=7.6
TUC   Tucson           78.03  50   P       P        07 44 52.7 +1.3
TUC                                pmax    pmax
      comp=Z,102nm,1.2s
Q20K  Shuyak Island    78.06  11   P       P        07 44 51.2 +0.4
      baz=201,SNR=10
M11K  Mekoryuk         78.09   4   P       P        07 44 52.2 +1.4
      baz=187
O16K  Kokwok River B   78.10   8   P       P        07 44 50.2 -0.8
      baz=195,SNR=19
XMIS  Christmas Isla   78.13 263   P       P        07 44 53.0 +0.8
Q19K  Cape Douglas,    78.14  10   P       P        07 44 51.1 -0.2
      baz=200
E03A  Lebam            78.28  33   P       P        07 44 52.9 +0.6
E03A                               IAmb    IAmb     07 44 54.4
      comp=Z,79nm,1.2s
P18K  Big Mountain,    78.32   9   P       P        07 44 51.8 -0.5
      baz=198,SNR=42
M13K  Dall Lake        78.33   5   P       P        07 44 52.1 -0.1
M13K  Dall Lake        78.33   5   P       P        07 44 53.5 +1.3
      baz=190,SNR=15
TYV   Tymovskoe        78.34 333  eP       P        07 44 53.0 +0.5
TYV                               eS       S        07 54 43.9 -0.1
TYV                                pmax    pmax
      comp=Z,38nm,1.1s
TYV                                pmax    pmax
      comp=Z,100nm,2.3s
TYV                                smax    smax
      comp=N,200nm,7.6s
TYV                                smax    smax
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      comp=E,200nm,7.6s
WVOR  Wild Horse Val   78.39  38   P       P        07 44 53.9 +0.7
WVOR                               pmax    pmax
      comp=Z,69nm,1.4s
O17K  Koliganek Bris   78.41   8   P       P        07 44 52.4 -0.3
      baz=196,SNR=33
N15K  Kwethluk River   78.41   7   P       P        07 44 53.0 +0.3
      baz=193,SNR=6.5
QZH   Quanzhou         78.47 301   P       P        07 44 54.5 +0.7
QZH                                S       S        07 54 48.4 +2.0
QZH                                pmax    pmax
      comp=Z,95nm,0.9s
QZH                                pmax    pmax
      comp=Z,240nm,3.5s
QZH                                LR      LR
      comp=Z,290nm,19.6s
INCN  Inchon           78.56 315   P       P        07 44 54.0 -0.1
INCN                               IAmb    IAmb     07 44 56.5
      comp=Z,84nm,1.1s
INCN  Inchon           78.56 315   P       P        07 44 55.4 +1.3
INCN  Inchon           78.56 315   P       P        07 44 54.0 -0.1
INCN                               pmax    pmax
      comp=Z,83nm,1.1s
MSHR  Mys Shultsa      78.63 322ceP        P        07 44 54.5 +0.2
MSHR                               pmax    pmax
      comp=Z,65nm,1.7s
LCMT  Little Creek M   78.73  45   P       P        07 44 55.3 +0.1
LCMT                               IAmb    IAmb     07 44 57.5
      comp=Z,64nm,1.1s
O18K  Koktuh Hills     78.77   9   P       P        07 44 54.6 -0.1
O18K                               IAmb    IAmb     07 44 56.0
      comp=Z,123nm,1.2s
O18K  Koktuh Hills     78.77   9   P       P        07 44 54.7  0.0
      baz=198,SNR=32
M14K  Bethel           78.79   6   P       P        07 44 55.9 +1.1
      baz=191,SNR=22
M15K  Kasigluk River   78.86   6   P       P        07 44 56.0 +0.8
      baz=193,SNR=48
N16K  Nishlik Lake     78.87   7   P       P        07 44 55.7 +0.4
      baz=194,SNR=13
P19K  Oil Pt           78.90  10   P       P        07 44 55.4  0.0
      baz=200,SNR=6.8
J08A  Circle Bar Ran   79.05  38   P       P        07 44 56.7  0.0
J08A                               IAmb    IAmb     07 44 58.9
      comp=Z,93nm,1.3s
U15A  North Rim        79.07  46   P       P        07 44 57.1 -0.2
U15A                               IAmb    IAmb     07 44 60.0
      comp=Z,125nm,1.2s
N17K  Nushagak Hills   79.12   8   P       P        07 44 56.2 -0.4
N17K  Nushagak Hills   79.12   8   P       P        07 44 56.5 -0.1
      baz=196,SNR=18
USA0B Ussuriysk Arra   79.13 323 i P       P        07 44 57.2 +0.2
USRK  Ussuriysk Ar.    79.13 323   P       P        07 44 58.0 +1.0
      comp=Z,16nm,1.1s,baz=114,slow=2.7,SNR=18
USRK                               LR      LR       08 13 44.0
      comp=Z,202nm,21.9s,baz=118,slow=31
      comp=Z,16nm,1.1s
USRK  Ussuriysk Ar.    79.13 323   P       P        07 44 58.0 +1.0
PSUT  Pine Spring      79.14  44   P       P        07 44 57.3 -0.2
PSUT                               IAmb    IAmb     07 44 59.5
      comp=Z,58nm,1.0s
HOM   Homer            79.19  11   P       P        07 44 57.3 +0.4
      baz=201
O19K  Port Alsworth    79.23  10   P       P        07 44 57.1  0.0
      baz=199,SNR=13
L14K  Kuka Creek       79.30   5   P       P        07 44 58.2 +0.6
L14K  Kuka Creek       79.30   5   P       P        07 44 58.7 +1.2
      baz=191,SNR=26
GNW   Green Mountain   79.33  32   P       P        07 44 57.7 -0.4
M16K  Timber Creek     79.38   7   P       P        07 44 59.4 +1.4
      baz=194,SNR=59
DUN6  Lazy B Ranch     79.40  51   P       P        07 44 59.6 +0.7
O20K  Slope Mountain   79.41  11   P       P        07 44 58.2 -0.1
      baz=200
BRSE  Bradley Lake S   79.43  12   P       P        07 44 58.8 +0.5
      baz=202,SNR=8.2
N18K  Kilae Creek      79.45   9   P       P        07 44 58.4 -0.1
      baz=197,SNR=12
ELK   Elko             79.47  41   LR      LR       08 12 36.6
      comp=Z,466nm,21.8s,baz=226,slow=30
ELK   Elko             79.47  41   P       P        07 44 59.8 +0.5
K13K  Kusilvak Mount   79.73   4   P       P        07 45 01.2 +1.3
      baz=189,SNR=6.0
X18A  Snowflake        79.74  49   P       P        07 45 00.6 -0.2
X18A                               IAmb    IAmb     07 45 03.3
      comp=Z,65nm,1.2s
L15K  Ungalak Mounta   79.75   6   P       P        07 45 00.9 +0.9
      baz=192
N19K  Bonanza Creek    79.79   9   P       P        07 45 00.1 -0.3
      baz=199,SNR=26
M17K  Holitna River    79.93   8   P       P        07 45 01.4 +0.3
M17K                               IAmb    IAmb     07 45 03.4
      comp=Z,64nm,0.9s
M17K  Holitna River    79.93   8   P       P        07 45 02.2 +1.2
      baz=196,SNR=33
L16K  Owhat River      79.99   7   P       P        07 45 02.5 +1.3
      baz=194,SNR=28
Q23K  Middleton Isla   80.06  14   P       P        07 45 01.9 +0.2
      baz=206
BBB   Bella Bella      80.07  26   P       P        07 45 02.4 +0.5
      comp=Z,21nm,0.9s,baz=225,slow=1.4,SNR=4.3
BBB                                LR      LR       08 12 26.2
      comp=Z,125nm,20.5s,baz=228,slow=30
      comp=Z,21nm,0.9s
W18A  Petrified Fore   80.19  48   P       P        07 45 03.0 -0.2
W18A                               IAmb    IAmb     07 45 05.7
      comp=Z,108nm,1.5s
M18K  Stony River      80.24   9   P       P        07 45 02.9 +0.2
      baz=197,SNR=19
E07A  Sunnyside        80.24  34   P       P        07 45 02.9 -0.2
E07A                               IAmb    IAmb     07 45 05.3
      comp=Z,115nm,1.5s
O22K  Cooper Landing   80.31  12   P       P        07 45 03.1 +0.1
      baz=203
HAWA  Hanford          80.31  35   P       P        07 45 03.6 +0.2
HAWA                               IAmb    IAmb     07 45 05.6
      comp=Z,114nm,1.5s
P23K  Montague Islan   80.34  13   P       P        07 45 03.1 -0.1
      baz=205
K15K  Wolf Creek Mou   80.35   6   P       P        07 45 04.8 +1.6
      baz=192,SNR=94
WAH2  Wahluke Slope    80.52  34   P       P        07 45 04.7 +0.2
WAH2                               IAmb    IAmb     07 45 06.6
      comp=Z,98nm,1.5s
N20K  Mount Spurr      80.53  10   P       P        07 45 03.5 -0.8
      baz=201
SPCR  Spurr Chakacha   80.53  10   P       P        07 45 03.7 -0.6
      baz=201
L17K  Donlin           80.54   7   P       P        07 45 05.9 +1.7
      baz=195,SNR=50
SPU   Mount Spurr      80.54  10   P       P        07 45 03.4 -0.9
CRAG  Craig            80.58  22   P       P        07 45 05.5 +0.9
      baz=219
J14K  Nanvaranak Lak   80.62   5   P       P        07 45 05.3 +0.7
      baz=190,SNR=11
E08A  Dider Farm, El   80.63  35   P       P        07 45 04.7 -0.4
E08A                               IAmb    IAmb     07 45 07.2
      comp=Z,189nm,1.8s
MFID  Camas Ranch      80.64  39   P       P        07 45 05.3  0.0
MFID                               IAmb    IAmb     07 45 07.3
      comp=Z,61nm,1.2s
LNOR  Lincton Mounta   80.68  36   P       P        07 45 05.5 +0.1
DUG   Dugway, Tooele   80.72  43   P       P        07 45 06.5 +0.6
DUG                                pmax    pmax
      comp=Z,33nm,1.2s
MDJ   Mudanjiang       80.75 323   P       P        07 45 06.8 +1.0
MDJ                                pP      pP       07 45 19.1 -0.9
MDJ                                S       S        07 55 12.5 +2.7
MDJ                                pmax    pmax
      comp=Z,39nm,1.2s
MDJ                                pmax    pmax
      comp=Z,230nm,3.5s
MDJ                                LR      LR
      comp=Z,140nm,15.7s
MDJ                                LR      LR
      comp=Z,160nm,16.7s
MDJ                                LR      LR
      comp=Z,400nm,20.1s
L18K  Granite Mounta   80.82   8   P       P        07 45 06.9 +1.2
      baz=196
M19K  Big River Lodg   80.84   9   P       P        07 45 05.7 -0.2
      baz=199,SNR=14
RC01  Rabbit Creek A   80.87  11   P       P        07 45 06.1  0.0
      baz=203,SNR=18
PWL   Port Wells       80.93  12   P       P        07 45 05.3 -1.2
PWL                                IAmb    IAmb     07 45 07.3
      comp=Z,56nm,1.0s
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PWL	Port Wells	80.93	12	P	P	07 45 06.4	0.0
	baz=204,SNR=13						
KAIM	Kayak Island	80.95	14	P	P	07 45 06.7	+0.2
	baz=208						
M20K	Styx River	81.02	10	P	P	07 45 06.3	-0.6
	baz=200						
V35K	Ketchikan	81.02	23	P	P	07 45 07.8	+0.9
	baz=220,SNR=6.4						
SUA	Susitna One	81.03	11	P	P	07 45 06.7	-0.4
	baz=202,SNR=24						
L19K	White Mountain	81.04	9	P	P	07 45 07.1	+0.2
	baz=198,SNR=13						
GRNR	Gornyy	81.07	331	⇑*i*P	P	07 45 07.7	+0.3
GRNR				pmax	pmax		
	comp=Z,20nm,1.0s						
U33K	Whale Pass	81.09	22	P	P	07 45 07.2	-0.1
	baz=219						
SIT	Sitka	81.09	20	P	P	07 45 07.5	+0.3
	baz=217						
K17K	Iditarod	81.10	7	P	P	07 45 08.5	+1.3
	baz=195,SNR=24						
EYAK	Cordova Ski Ar	81.20	14	P	P	07 45 08.2	+0.4
EYAK	Cordova Ski Ar	81.20	14	P	P	07 45 07.7	-0.1
	baz=207,SNR=5.1						
GLI	Glacier Island	81.21	13	P	P	07 45 07.7	-0.1
	baz=206,SNR=15						
GAMB	Gambell	81.27	1	P	P	07 45 09.1	+1.0
	baz=182,SNR=5.8						
SKT	Skwentna	81.38	10	P	P	07 45 07.7	-1.0
	baz=201,SNR=19						
MPU	Maple Canyon	81.39	43	P	P	07 45 10.1	+0.5
BGLC	Bering Glacier	81.40	15	P	P	07 45 08.5	-0.3
	baz=209						
J16K	Anvik River	81.41	6	P	P	07 45 10.4	+1.6
	baz=193,SNR=48						
M22K	Willow	81.41	11	P	P	07 45 08.8	-0.1
	baz=203,SNR=20						
NJ2	Nanjing	81.41	307	⇑P	P	07 45 10.4	+0.8
NJ2				S	S	07 55 17.1	-0.1
NJ2				pmax	pmax		
	comp=Z,23nm,0.9s						
KNK	Knik Glacier	81.42	12	P	P	07 45 09.0	0.0
	baz=204,SNR=9.4						
PMR	Palmer	81.45	12	P	P	07 45 08.3	-0.8
PMR	Palmer	81.45	12	P	P	07 45 09.1	0.0
PMR	Palmer	81.45	12	P	P	07 45 08.3	-0.8
PMR				pmax	pmax		
	comp=Z,34nm,1.0s						
PMR	Palmer	81.45	12	P	P	07 45 08.9	-0.1
	baz=204,SNR=23						
L20K	Farewell, AK	81.47	9	P	P	07 45 09.0	-0.2
	baz=199,SNR=28						
S31K	Pelican	81.53	19	P	P	07 45 10.2	+0.6
	baz=216						
WRAK	Wrangell Islan	81.60	22	P	P	07 45 10.7	+0.7
	baz=220,SNR=6.5						
S32K	Killisnoo	81.66	20	P	P	07 45 10.5	+0.2
	baz=217						
J17K	VABM Dome	81.67	7	P	P	07 45 11.6	+1.4
	baz=194,SNR=52						
T33K	Petersburg	81.69	21	P	P	07 45 11.4	+0.9
	baz=219						
DIV	Divide	81.72	13	P	P	07 45 10.2	-0.4
DIV				IAmb	IAmb	07 45 11.7	
	comp=Z,73nm,1.0s						
Y22D	IRIS PASSCAL I	81.72	50	P	P	07 45 13.0	+1.6
	baz=242						
MESA	MESA	81.78	15	P	P	07 45 11.8	+0.7
MESA				IAmb	IAmb	07 45 12.8	
	comp=Z,69nm,1.0s						
MESA	MESA	81.78	15	P	P	07 45 11.7	+0.6
	baz=210,SNR=10						
SML	Sawmill	81.80	12	P	P	07 45 10.9	-0.2
	baz=204,SNR=8.5						
CRNM	Carthage	81.80	51	P	P	07 45 11.7	-0.2
BMRM	Bremner River	81.83	14	P	P	07 45 11.4	+0.2
	baz=208,SNR=16						
M23K	Glacier View	81.91	12	P	P	07 45 11.7	+0.2
	baz=205,SNR=6.3						
I17K	Unalakleet	81.99	6	P	P	07 45 13.4	+1.5
	baz=192,SNR=11						
CUT	Chulitna	81.99	11	P	P	07 45 11.7	-0.2
	baz=202,SNR=11						
CRQE	Cirque	82.00	15	P	P	07 45 12.3	+0.1
	baz=209,SNR=11						
KLU	Klutina	82.01	13	P	P	07 45 12.3	+0.1
	baz=207,SNR=14						
PNL	Peninsula	82.02	17	P	P	07 45 12.4	+0.2
PNL	Peninsula	82.02	17	P	P	07 45 12.6	+0.5
	baz=213,SNR=12						
J18K	Innoko River	82.02	8	P	P	07 45 12.9	+0.8
	baz=196,SNR=60						
SCM	Sheep Creek Mo	82.03	12	P	P	07 45 12.5	+0.2
	baz=205,SNR=25						
TXAR	Lajitas Array	82.09	56	P	P	07 45 14.6	+1.2
	comp=Z,27nm,1.1s,baz=222,slow=5.0,SNR=99						
TXAR				PKKPbc	PKKPbc	08 03 43.7	+0.6
	comp=Z,0.7nm,1.0s,baz=58,slow=3.1,SNR=5.3						
TXAR				LR	LR	08 14 00.5	
	comp=Z,124nm,21.3s,baz=241,slow=30						
	comp=Z,27nm,1.1s						
PV05	Paradox Valley	82.10	46	P	P	07 45 13.8	+0.4
PPLA	Purkeypile	82.12	10	P	P	07 45 11.1	-1.7
	baz=201						
PINM	Pinnacle	82.15	16	P	P	07 45 13.0	+0.1
	baz=212						
K20K	Telida	82.27	9	P	P	07 45 13.4	-0.1
	baz=199,SNR=48						
ANM	Nome	82.30	4	P	P	07 45 14.5	+1.0
	baz=188,SNR=9.3						
R32K	Eaglecrest	82.32	20	P	P	07 45 14.2	+0.4
	baz=217						
MA2	Magadan	82.33	343	LR	LR	08 16 14.9	
	comp=Z,84nm,21.6s,baz=149,slow=32						
MA2	Magadan	82.33	343	*ce*P	P	07 45 12.8	-1.0
MA2				pmax	pmax		
	comp=Z,60nm,2.5s						
MA2	Magadan	82.33	343	P	P	07 45 11.4	-2.4
DLV	Lat	82.34	285	P	P	07 45 16.4	+1.3
KLR	Kul'dur	82.37	327	LR	LR	08 17 23.6	
	comp=Z,136nm,21.9s,baz=128,slow=32						
KLR	Kul'dur	82.37	327	*ce*P	P	07 45 14.0	-0.2
KLR				pmax	pmax		
	comp=Z,19nm,1.0s						
N25K	Chitina, Valde	82.40	14	P	P	07 45 14.4	+0.2
	baz=208,SNR=23						
P29M	Windy Craggy	82.45	17	P	P	07 45 15.4	+0.9
	baz=214,SNR=15						
ANMO	Albuquerque	82.47	50	LR	LR	08 14 35.9	
	comp=Z,323nm,21.0s,baz=326,slow=30						
ANMO	Albuquerque	82.47	50	*ce*P	P	07 45 16.0	+0.7
ANMO				pmax	pmax		
	comp=Z,118nm,1.7s						
M24K	Tolsona, Glenn	82.51	13	P	P	07 45 15.4	+0.7
	baz=206,SNR=16						
MCARA	McCarthy VSAT	82.57	14	P	P	07 45 15.2	+0.2
	baz=209,SNR=8.8						
H16K	Elim	82.59	5	P	P	07 45 16.0	+1.0
	baz=191,SNR=36						
CTG	Chitna Glacier	82.61	15	P	P	07 45 15.8	+0.4
	baz=211,SNR=20						
WAT6	Susitna Watana	82.62	12	P	P	07 45 15.4	0.0
	baz=205,SNR=37						
CAST	Castle Rocks	82.63	10	P	P	07 45 13.8	-1.5
	baz=201						
BNX	BinXian	82.67	323	⇑P	P	07 45 16.0	+0.2
BNX				pP	pP	07 45 28.8	-1.3
BNX				S	SKSac	07 55 31.6	-1.2
BNX				sS	sS	07 55 53.3	-0.2
BNX				pmax	pmax		
	comp=Z,59nm,0.9s						
BNX				pmax	pmax		
	comp=Z,160nm,4.9s						
BNX				LR	LR		
	comp=Z,120nm,20.6s						
BNX				LR	LR		
	comp=Z,95nm,16.3s						
BNX				LR	LR		
	comp=Z,170nm,19.5s						
J19K	Poorman	82.67	8	P	P	07 45 16.4	+0.9
	baz=197,SNR=27						
DL2	Dalian	82.67	315	P	P	07 45 13.0	-3.0
DL2				S	S	07 55 28.1	-1.7
DL2				pmax	pmax		
	comp=Z,71nm,1.0s						
DL2				pmax	pmax		
	comp=Z,150nm,4.2s						
DL2				LR	LR		
	comp=Z,190nm,16.0s						
DL2				LR	LR		
	comp=Z,150nm,16.2s						
DL2				LR	LR		
	comp=Z,260nm,17.2s						
WAT1	Susitna Watana	82.70	11	P	P	07 45 15.5	-0.1
	baz=204						
PLBC	Pleasant Camp	82.71	18	P	P	07 45 16.3	+0.6
	baz=216,SNR=15						
O28M	Mount Upton	82.74	16	P	P	07 45 16.6	+0.4
	baz=212,SNR=21						
CN2	Changchun	82.75	320	P	P	07 45 15.6	-0.7
CN2				S	S	07 55 29.3	-1.1
CN2				pmax	pmax		
	comp=Z,30nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
NEW	Newport	82.76	34	LR	LR	08 14 13.3	
	comp=Z,281nm,21.9s,baz=228,slow=30						
NEW	Newport	82.76	34	P	P	07 45 16.3	0.0
NEW				pmax	pmax		
	comp=Z,23nm,1.9s						
O29M	Mount Kennedy	82.78	17	P	P	07 45 17.0	+0.8
	baz=214,SNR=20						
T35M	Bob Quinn	82.78	22	P	P	07 45 17.1	+0.9
	baz=221,SNR=6.2						
G15K	Niukluk	82.81	4	P	P	07 45 17.1	+1.0
	baz=189,SNR=57						
SNY	Shenyang	82.86	318	⇓P	P	07 45 18.1	+1.2
SNY				S	SKSac	07 55 35.5	+1.2
SNY				pmax	pmax		
	comp=Z,39nm,1.3s						
SNY				pmax	pmax		
	comp=Z,58nm,3.8s						
SNY				LR	LR		
	comp=Z,170nm,22.2s						
SNY				LR	LR		
	comp=Z,150nm,18.6s						
SNY				LR	LR		
	comp=Z,150nm,19.2s						
TRF	Thorofare Moun	82.96	10	P	P	07 45 15.7	-1.5
TRF				IAmb	IAmb	07 45 17.9	
	comp=Z,41nm,0.8s						
TRF	Thorofare Moun	82.96	10	P	P	07 45 16.8	-0.4
	baz=202,SNR=56						
HARP	HAARP	82.98	13	P	P	07 45 17.4	+0.3
	baz=207,SNR=6.5						
SKAG	Skagway	83.02	19	P	P	07 45 18.4	+1.1
SKAG	Skagway	83.02	19	P	P	07 45 18.4	+1.1
	baz=217,SNR=12						
CHUM	Lake Minchumin	83.03	9	P	P	07 45 16.8	-0.5
	baz=200						
J20K	Nowinta River	83.04	8	P	P	07 45 17.9	+0.5
	baz=199,SNR=68						
P30M	Million Dollar	83.08	18	P	P	07 45 18.8	+1.0
	baz=215						
H17K	Granite Mounta	83.09	6	P	P	07 45 18.3	+0.6
	baz=193,SNR=23						
DHY	Denali Highway	83.14	12	P	P	07 45 17.1	-1.1
DHY	Denali Highway	83.14	12	P	P	07 45 18.0	-0.1
	baz=205,SNR=19						
F14K	Arctic Creek	83.15	3	P	P	07 45 18.9	+1.0
	baz=187,SNR=40						
TNA	Tin City	83.17	2	P	P	07 45 19.0	+1.1
	baz=186,SNR=42						
S34M	Telegraph Cree	83.17	21	P	P	07 45 19.1	+1.0
	baz=220,SNR=17						
GCSA	Galena City Sc	83.23	7	P	P	07 45 19.3	+1.0
	baz=196,SNR=20						
YUK8	Steele Glacier	83.28	16	P	P	07 45 19.5	+0.5
	baz=212,SNR=22						
G16K	Koyuk River	83.33	5	P	P	07 45 19.8	+1.0
	baz=191						
YUK6	Outpost Mounta	83.37	16	P	P	07 45 19.9	+0.4
	baz=214,SNR=13						
PAX	Paxson	83.43	13	P	P	07 45 19.1	-0.4
	baz=207,SNR=22						
BPAW	Bear Paw Mtn.	83.45	10	P	P	07 45 18.4	-1.1
	baz=202,SNR=16						
MCK	McKinley	83.46	11	P	P	07 45 19.6	0.0
	baz=204,SNR=35						
H18K	Honhosa River	83.46	6	P	P	07 45 19.9	+0.4
	baz=195,SNR=35						
M26K	Nabesna, AK	83.46	14	P	P	07 45 20.0	+0.3
	baz=209,SNR=47						
F15K	North Star Dit	83.48	4	P	P	07 45 20.3	+0.7
	baz=189,SNR=28						
HYT	Haines Junctio	83.50	17	P	P	07 45 20.7	+0.7
	baz=214,SNR=28						
YUK3	Moose Creek	83.53	15	P	P	07 45 20.4	+0.2
	baz=212,SNR=47						
G17K	Kiwalik Mounta	83.58	5	P	P	07 45 20.8	+0.7
	baz=192,SNR=46						
I20K	Naaghedeneel	83.59	8	P	P	07 45 21.0	+0.9
	baz=198,SNR=24						
QIZ	Qiongzhong	83.59	292	P	P	07 45 19.9	-1.3
QIZ				sP	sP	07 45 37.5	-3.6
QIZ				S	S	07 55 38.6	-1.3
QIZ				pmax	pmax		
	comp=Z,25nm,1.5s						
QIZ				pmax	pmax		
	comp=Z,160nm,3.8s						
QIZ				LR	LR		
	comp=Z,220nm,19.2s						
QIZ				LR	LR		
	comp=Z,350nm,24.7s						
Q32M	Nakina River	83.59	20	P	P	07 45 21.1	+0.5
	baz=219,SNR=10						
P32M	Atlin	83.62	19	P	P	07 45 21.1	+0.6
	baz=218,SNR=8.0						
YUK4	Talbot Arm	83.63	16	P	P	07 45 21.5	+0.8
	baz=214,SNR=16						
DLMT	Dillon	83.65	38	P	P	07 45 20.6	-0.6
DLMT				IAmb	IAmb	07 45 23.3	
	comp=Z,116nm,1.5s						
MNHN	Monahans	83.65	54	P	P	07 45 21.4	0.0
MSO	Missoula	83.68	37	P	P	07 45 20.4	-0.8
MSO				IAmb	IAmb	07 45 22.6	
	comp=Z,88nm,1.6s						
M27K	Edge Creek, AK	83.69	14	P	P	07 45 21.5	+0.6
	baz=210,SNR=66						
MENT	Mentasta	83.77	13	P	P	07 45 21.5	+0.3
MENT	Mentasta	83.77	13	P	P	07 45 22.5	+1.3
O30N	Mendenhall	83.86	17	P	P	07 45 21.7	0.0
O30N				IAmb	IAmb	07 45 23.1	
	comp=Z,34nm,0.9s						
O30N	Mendenhall	83.86	17	P	P	07 45 22.5	+0.8
	baz=216,SNR=42						
L26K	Log Cabin Wild	83.93	13	P	P	07 45 22.5	+0.5
	baz=209,SNR=31						
DLBC	Dease Lake	83.95	21	P	P	07 45 22.2	0.0
	baz=191,slow=7.9						
DLBC				LR	LR	08 16 15.9	
	comp=Z,11nm,19.4s,baz=184,slow=31						
BVCY	Beaver Creek	83.98	15	P	P	07 45 22.9	+0.6
	baz=211,SNR=10						
H19K	Roundabout Mou	84.04	7	P	P	07 45 23.4	+1.0
	baz=196,SNR=66						
H03S2	Juan Fernandez	84.08	123	T	T	09 18 30.6	
	baz=249,slow=75,SNR=125						
H03S1	Juan Fernandez	84.10	123	T	T	09 18 29.9	
	baz=249,slow=75,SNR=99						
H03S3	Juan Fernandez	84.10	123	T	T	09 18 28.6	
	baz=249,slow=75,SNR=111						
K24K	Donnelly Dome	84.11	12	P	P	07 45 23.4	+0.4
	baz=207,SNR=22						
WHY	Whitehorse	84.12	18	P	P	07 45 23.8	+0.6
	baz=217,SNR=19						
ODSA	Odessa	84.14	54	P	P	07 45 24.0	+0.1
ODSA				IAmb	IAmb	07 45 25.9	
	comp=Z,65nm,1.1s						
N30M	Aishikik Lake	84.14	17	P	P	07 45 23.6	+0.4
	baz=215,SNR=16						
PD31	Pinedale Array	84.14	42	P	P	07 45 22.6	-1.3
PD31				IAmb	IAmb	07 45 25.2	
	comp=Z,50nm,1.2s						
PDAR	Pinedale Array	84.14	42	P	P	07 45 23.8	-0.1
	comp=Z,18nm,0.8s,baz=205,slow=3.1,SNR=106						
PDAR				PKKPbc	PKKPbc	08 03 37.2	-2.0
	comp=Z,0.5nm,0.7s,baz=90,slow=4.7,SNR=4.4						
PDAR				LR	LR	08 15 37.7	
	comp=Z,194nm,21.9s,baz=229,slow=30						
	comp=Z,18nm,0.8s						
G18K	Tagagawik	84.15	6	P	P	07 45 23.5	+0.4
	baz=194,SNR=78						
H03N2	Juan Fernandez	84.20	123	T	T	09 18 33.2	
	baz=257,slow=72,SNR=43						
H20K	Anotleneega Mo	84.20	8	P	P	07 45 24.2	+0.9
	baz=198,SNR=56						
H03N3	Juan Fernandez	84.20	123	T	T	09 18 34.4	
	baz=257,slow=72,SNR=29						
H03N1	Juan Fernandez	84.21	123	T	T	09 18 36.8	
	baz=257,slow=72,SNR=25						
NEA2	Nenana	84.22	10	P	P	07 45 22.6	-0.8
NEA2	Nenana	84.22	10	P	P	07 45 22.8	-0.7
	baz=204,SNR=38						
WHN	Wuhan	84.24	304	P	P	07 45 26.4	+2.1
WHN				SKS	SKSac	07 55 43.8	0.0
WHN				S	S	07 55 46.9	+0.9
WHN				pmax	pmax		
	comp=Z,66nm,0.8s						
RIDG	Independent Ri	84.25	12	P	P	07 45 23.8	+0.2
	baz=208,SNR=25						
L27K	Beaver Creek,	84.31	14	P	P	07 45 24.2	+0.3
	baz=210,SNR=22						
BCAR	Beaver Creek A	84.32	14	P	P	07 45 23.4	-0.7
OVMT	Ovando	84.35	37	P	P	07 45 23.9	-0.8
MLY	Manley	84.36	10	P	P	07 45 23.7	-0.5
	baz=202,SNR=79						
R33M	Jennings River	84.36	20	P	P	07 45 25.0	+0.6
	baz=220,SNR=22						
P33M	Teslin, Yukon	84.39	19	P	P	07 45 25.0	+0.5
	baz=219,SNR=14						
CNSH	ChangSha	84.42	302	P	P	07 45 26.3	+1.1
CNSH				S	S	07 55 48.9	+1.0
CNSH				pmax	pmax		
	comp=Z,54nm,1.0s						
CNSH				LR	LR		
	comp=Z,140nm,18.4s						
CNSH				LR	LR		
	comp=Z,190nm,25.9s						
CNSH				LR	LR		
	comp=Z,310nm,40.4s						
HDA	Harding Lake	84.44	11	P	P	07 45 24.1	-0.4
HDA				IAmb	IAmb	07 45 25.6	
	comp=Z,60nm,1.0s						
HDA	Harding Lake	84.44	11	P	P	07 45 24.5	0.0
	baz=206,SNR=60						
SDCO	Great Sand Dun	84.44	48	P	P	07 45 25.0	-0.5
SDCO				IAmb	IAmb	07 45 27.5	
	comp=Z,50nm,1.3s						
F17K	Baldwin Pennin	84.45	5	P	P	07 45 25.3	+0.8
	baz=192						
N31M	Braeburn, Yuko	84.53	17	P	P	07 45 25.6	+0.5
	baz=216,SNR=19						
G19K	Purcell Mounta	84.56	7	P	P	07 45 25.6	+0.5
G19K				IAmb	IAmb	07 45 27.1	
	comp=Z,67nm,0.9s						
G19K	Purcell Mounta	84.56	7	P	P	07 45 26.0	+0.9
	baz=196,SNR=91						
TIA	Tai'an	84.56	311	P	P	07 45 26.3	+0.5
TIA				S	SKSac	07 55 46.8	+1.1
TIA				pmax	pmax		
	comp=Z,59nm,0.8s						
M29M	Somme Creek	84.60	16	P	P	07 45 25.9	+0.4
	baz=214,SNR=38						
H21K	Melozitna Rive	84.63	9	P	P	07 45 25.6	+0.1
H21K				IAmb	IAmb	07 45 27.5	
	comp=Z,81nm,1.2s						
H21K	Melozitna Rive	84.63	9	P	P	07 45 26.1	+0.6
	baz=200,SNR=130						
SCRK	Sand Creek	84.64	13	P	P	07 45 25.9	+0.2
	baz=208,SNR=52						
I23K	Minto, Yukon-K	84.69	10	P	P	07 45 25.4	-0.3
	baz=203,SNR=52						
COLA	College	84.69	11	P	P	07 45 25.6	-0.1
COLA	College	84.69	11	P	P	07 45 25.7	0.0
COLA				pmax	pmax		
	comp=Z,153nm,0.9s						
COLA	College	84.69	11	P	P	07 45 25.8	0.0
	baz=205						
LYMT	Lyon Mountain	84.70	37	P	P	07 45 26.5	0.0
SEY	Seymchan	84.72	345	LR	LR	08 20 42.4	
	comp=Z,109nm,19.7s,baz=148,slow=34						
SEY	Seymchan	84.72	345	*ce*P	P	07 45 26.0	+0.1
SEY				pmax	pmax		
	comp=Z,57nm,1.3s						
F18K	Selawik	84.74	6	P	P	07 45 26.4	+0.4
	baz=193,SNR=53						
ILAR	Eielson Array	84.78	11	P	P	07 45 25.9	-0.4
	comp=Z,12nm,0.7s,baz=233,slow=6.1,SNR=125						
ILAR				LR	LR	08 15 51.1	
	comp=Z,89nm,21.4s,baz=205,slow=30						
	comp=Z,12nm,0.7s						
YMP	Mirror Lake Pl	84.78	40	P	P	07 45 25.8	-1.4
CMIG	Matias Romero	84.86	70	LR	LR	08 13 49.8	
	comp=Z,283nm,21.6s,baz=248,slow=29						
J25K	Salcha River,	84.92	12	P	P	07 45 26.5	-0.5
J25K	Salcha River,	84.92	12	P	P	07 45 27.2	+0.2
	baz=207,SNR=66						
POKR	Poker Plat Res	84.99	11	P	P	07 45 27.3	0.0
	baz=205,SNR=46						
YNE	Yellowstone No	85.01	40	P	P	07 45 27.7	-0.5
YNE				IAmb	IAmb	07 45 30.5	
	comp=Z,58nm,1.3s						
E17K	Hotham Inlet	85.03	5	P	P	07 45 28.3	+0.8
	baz=191,SNR=77						
N32M	Quiet Lake	85.05	18	P	P	07 45 26.9	-0.8
N32M				IAmb	IAmb	07 45 29.6	
	comp=Z,51nm,1.0s						
N32M	Quiet Lake	85.05	18	P	P	07 45 28.5	+0.8
	baz=218,SNR=27						
H22K	Ishtalitna Cre	85.06	9	P	P	07 45 28.1	+0.4
	baz=201,SNR=129						
K27K	Chicken	85.09	13	P	P	07 45 28.8	+1.0
	baz=210						
F19K	Shaleruckik Mo	85.15	6	P	P	07 45 28.6	+0.6
	baz=195,SNR=139						
J26L	Joseph Creek	85.19	13	P	P	07 45 29.2	+0.8
	baz=209,SNR=93						
HEH	HeiHe	85.24	326	*e*P	P	07 45 29.0	+0.2
HEH				sP	sP	07 45 45.9	-2.7
HEH				S	SKSac	07 55 49.8	+0.5
HEH				pmax	pmax		
	comp=Z,21nm,0.8s						
HEH				pmax	pmax		
	comp=Z,130nm,5.0s						
HEH				LR	LR		
	comp=Z,150nm,15.4s						
HEH				LR	LR		
	comp=Z,140nm,15.2s						
HEH				LR	LR		
	comp=Z,170nm,17.4s						
L29M	L29M	85.24	15	P	P	07 45 29.5	+0.9
	baz=214,SNR=93						
H23K	Yukon River	85.28	10	P	P	07 45 28.2	-0.6
H23K	Yukon River	85.28	10	P	P	07 45 28.3	-0.4
	baz=203,SNR=30						
ISCO	Idaho Springs	85.31	46	P	P	07 45 30.2	+0.3
ISCO				pmax	pmax		
	comp=Z,12nm,1.8s						
G21K	Allakaket	85.35	8	P	P	07 45 29.9	+0.8
	baz=199,SNR=96						
GULI	GuiLin	85.43	298	P	P	07 45 32.3	+1.9
GULI				S	SKSac	07 55 53.1	+1.4
GULI				pmax	pmax		
	comp=Z,70nm,1.2s						
GULI				pmax	pmax		
	comp=Z,280nm,5.0s						
GULI				LR	LR		
	comp=Z,90nm,17.8s						
GULI				LR	LR		
	comp=Z,120nm,20.6s						
GULI				LR	LR		
	comp=Z,360nm,34.3s						
E18K	Tukpahlearik C	85.47	5	P	P	07 45 29.5	-0.1
E18K	Tukpahlearik C	85.47	5	P	P	07 45 30.4	+0.8
	baz=192,SNR=125						
M31M	Drury Creek, Y	85.50	17	P	P	07 45 29.9	0.0
	baz=217						
MAW	Mawson	85.51	199	P	P	07 45 31.1	+1.0
	comp=Z,21nm,0.7s,baz=116,slow=4.8,SNR=18						
	comp=Z,21nm,0.7s						
RLMT	Red Lodge	85.52	40	P	P	07 45 30.4	-0.3
D17K	Noatak River	85.55	4	P	P	07 45 30.9	+0.9
	baz=190,SNR=54						
H24K	Noodor Dome	85.57	10	P	P	07 45 29.3	-1.0
	baz=205,SNR=11						
F20K	Avaraart Lake	85.59	7	P	P	07 45 30.9	+0.7
	baz=197						
JCT	Junction City	85.62	56	P	P	07 45 31.7	+0.4
GCMT	Greycliff	85.62	39	P	P	07 45 30.9	-0.2
WTLY	Watson Lake, Y	85.62	21	P	P	07 45 31.0	+0.4

	baz=222,SNR=12						
BKNI	**Bangkinang**	85.66	272	P	P	07 45 34.0	+2.2
PRP	**Porcupine Dome**	85.70	11	P	P	07 45 31.3	+0.3
	baz=207,SNR=105						
DAWY	**Dawson**	85.73	14	P	P	07 45 31.8	+0.7
	baz=213,SNR=84						
LL05	**Los Muermos**	85.79	132	P	P	07 45 32.9	+0.9
E19K	**Redstone River**	85.81	6	P	P	07 45 32.1	+0.8
	baz=196,SNR=153						
SN07	**Snyder 07**	85.82	53	P	P	07 45 31.3	-0.9
FARO	**Faro, Yukon**	85.82	18	P	P	07 45 31.6	+0.1
	baz=218,SNR=18						
RDOG	**Red Dog Mine**	85.92	4	P	P	07 45 32.5	+0.6
	baz=190						
TOAD	**Toad River Com**	85.97	23	P	P	07 45 32.9	+0.6
	baz=226						
I26K	**Coal Creek Min**	85.98	12	P	P	07 45 32.8	+0.6
	baz=209,SNR=46						
C16K	**Lisburne Hills**	85.99	3	P	P	07 45 32.1	-0.1
C16K				IAmb	IAmb	07 45 33.8	
	comp=Z,33nm,0.9s						
C16K	**Lisburne Hills**	85.99	3	P	P	07 45 32.5	+0.4
	baz=188,SNR=28						
K29M	**Barlow Dome**	86.00	15	P	P	07 45 33.1	+0.6
	baz=214,SNR=56						
G22K	**Bettles**	86.01	9	P	P	07 45 33.2	+0.9
	baz=201						
F21K	**Alatna River**	86.02	8	P	P	07 45 32.8	+0.4
	baz=199,SNR=52						
G23K	**Bananza Creek**	86.03	9	P	P	07 45 33.0	+0.5
	baz=203,SNR=67						
LIRD	**Liard River Hi**	86.06	22	P	P	07 45 33.1	+0.4
	baz=225						
LL01	**San Ignacio de**	86.20	133	P	P	07 45 33.9	-0.1
MAYO	**Mayo, Yukon**	86.22	16	P	P	07 45 34.3	+0.8
	baz=216,SNR=9.8						
UBPT	**Khong Chiam**	86.22	287	P	P	07 45 35.3	+0.8
LL02	**Futaleuf**	86.30	134	P	P	07 45 35.5	+1.0
LL02				IAmb	IAmb	07 45 37.5	
	comp=Z,43nm,0.9s						
C17K	**DeLong Mountai**	86.31	4	P	P	07 45 34.1	+0.3
	baz=190,SNR=15						
H25L	**Birch Creek**	86.32	11	P	P	07 45 33.3	-0.5
	baz=206,SNR=10						
J29N	**Klondike Camp**	86.34	15	P	P	07 45 35.3	+1.2
	baz=214						
G24K	**Hadweenzic Riv**	86.43	10	P	P	07 45 34.2	-0.2
	baz=205						
F22K	**John River**	86.47	8	P	P	07 45 35.1	+0.5
	baz=200						
COLD	**Coldfoot**	86.48	9	P	P	07 45 35.6	+1.0
	baz=202,SNR=44						
I27K	**Kandik River**	86.56	13	P	P	07 45 35.5	+0.3
	baz=210,SNR=26						
C18K	**Utukok River**	86.62	5	P	P	07 45 35.6	+0.2
	baz=192,SNR=22						
E20K	**Nigu River**	86.70	6	P	P	07 45 36.5	+0.7
	baz=197,SNR=94						
G25K	**Bearman Lake**	86.72	11	P	P	07 45 35.7	-0.1
	baz=206,SNR=7.2						
D19K	**Kuna River**	86.73	6	P	P	07 45 36.4	+0.5
	baz=195,SNR=46						
MMPY	**Sheldon Lake,**	86.73	18	P	P	07 45 36.8	+0.7
	baz=220,SNR=31						
I28M	**Miner Creek**	86.78	13	P	P	07 45 36.6	+0.3
	baz=212,SNR=42						
BILL	**Bilibino**	86.80	353	*ce*P	P	07 45 36.0	-0.2
BILL				pmax	pmax		
	comp=Z,75nm,1.3s						
BILL				MLR	MLR		
	comp=Z,57nm,19.0s						
HNS	**HongShan**	86.83	311	⇑P	P	07 45 38.0	+1.0
HNS				SKS	SKSac	07 56 00.8	+1.0
HNS				S	ScS	07 56 15.3	-3.5
HNS				pmax	pmax		
	comp=Z,76nm,1.3s						
HNS				LR	LR		
	comp=Z,170nm,20.7s						
HNS				LR	LR		
	comp=Z,250nm,22.6s						
TGTN	**Hyland Airport**	86.84	20	P	P	07 45 37.2	+0.6
	baz=223						
J30M	**Hart River**	86.90	15	P	P	07 45 37.5	+0.6
	baz=215,SNR=34						
BJT	**Baijiatuau**	86.92	314	P	P	07 45 38.1	+0.7
BJI	**Beijing**	86.93	314	P	P	07 45 38.0	+0.6
BJI				S	S	07 56 17.5	+5.5
BJI				pmax	pmax		
	comp=Z,19nm,1.4s						
BJI				pmax	pmax		
	comp=Z,140nm,3.5s						
IPM	**Ipoh**	86.94	276	P	P	07 45 38.6	+0.5
BEAVL	**Fort Liard**	86.97	22	P	P	07 45 37.8	+0.6
	baz=226						
I29M	**Ogilvie Camp,**	87.08	14	P	P	07 45 37.8	+0.2
	baz=214						
D20K	**Etivluk River**	87.09	6	P	P	07 45 38.2	+0.6
	baz=196,SNR=47						
E22K	**Anaktuvuk Pass**	87.10	8	P	P	07 45 38.2	+0.5
	baz=201,SNR=42						
F24K	**Squaw Lake**	87.11	10	P	P	07 45 38.5	+0.8
	baz=205,SNR=23						
H27K	**Steamboat Moun**	87.12	12	P	P	07 45 38.6	+0.8
	baz=210,SNR=37						
E21K	**Killik River**	87.12	7	P	P	07 45 37.9	+0.1
	baz=199						
C19K	**Lookout Ridge**	87.20	5	P	P	07 45 38.8	+0.7
	baz=194,SNR=33						
LR03	**Panguipulli**	87.21	131	P	P	07 45 39.8	+0.8
LR05	**Currie**	87.25	131	P	P	07 45 39.8	+0.7
B18K	**Kokolik River**	87.28	4	P	P	07 45 39.1	+0.6
	baz=191,SNR=5.9						
KOTAN	**Kotaneelee Air**	87.30	22	P	P	07 45 39.2	+0.5
	baz=227						
G26K	**Porcupine Rive**	87.30	11	P	P	07 45 39.4	+0.8
	baz=208,SNR=67						
LYN	**LuoYang**	87.31	307	⇑*i*P	P	07 45 40.6	+1.2
LYN				sP	sP	07 45 59.8	+0.5
LYN				SKS	SKSac	07 56 03.3	+0.3
LYN				S	ScS	07 56 19.8	-3.2
LYN				pmax	pmax		
	comp=Z,190nm,1.0s						
LYN				pmax	pmax		
	comp=Z,280nm,9.6s						
LYN				LR	LR		
	comp=Z,200nm,18.6s						
LYN				LR	LR		
	comp=Z,260nm,24.0s						
LYN				LR	LR		
	comp=Z,580nm,32.3s						
ZEA	**Zeya**	87.32	329	*e*P	P	07 45 39.5	+0.5
ZEA				*e*		07 45 59.3	
ZEA				*e*		07 56 05.4	
ZEA				pmax	pmax		
	comp=N,20nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.0s						
E23K	**Chandalar**	87.34	9	P	P	07 45 39.5	+0.6
	baz=203,SNR=20						
I30M	**Mount Dempster**	87.42	15	P	P	07 45 39.8	+0.4
	baz=215,SNR=84						
E24K	**Your Creek**	87.52	9	P	P	07 45 40.2	+0.5
	baz=204						
KULM	**Kulim**	87.54	276	P	P	07 45 39.7	-1.3
KULM	**Kulim**	87.54	276	P	P	07 45 42.1	+1.1
F25K	**Christian Rive**	87.55	10	P	P	07 45 40.9	+1.1
	baz=207,SNR=13						
G27K	**Doyon Strip**	87.59	12	P	P	07 45 40.7	+0.6
	baz=210,SNR=15						
D22K	**Ayikyak River**	87.69	7	P	P	07 45 41.4	+0.9
	baz=200,SNR=28						
C21K	**Knifeblade Rid**	87.71	7	P	P	07 45 41.4	+0.8
	baz=198,SNR=29						
H29M	**Whitestone**	87.78	14	P	P	07 45 41.5	+0.5
	baz=214,SNR=34						
TOLK	**Toolik Lake Re**	87.89	9	P	P	07 45 41.8	+0.4
	baz=203,SNR=11						
F26K	**Sheenjek River**	87.90	11	P	P	07 45 42.6	+1.1
	baz=208,SNR=12						
E25K	**Arctic Village**	88.03	10	P	P	07 45 43.0	+0.8
	baz=207,SNR=9.8						
D23K	**Nanushuk River**	88.03	8	P	P	07 45 42.9	+0.8
	baz=202,SNR=16						
WMOK	**Wichita Mounta**	88.08	53	P	P	07 45 43.1	-0.1
WMOK				pmax	pmax		
	comp=Z,15nm,2.1s						
PLCA	**Paso Flores**	88.10	132	P	P	07 45 43.9	+0.6
PLCA				IAmb	IAmb	07 45 47.5	
	comp=Z,41nm,1.6s						
PLCA	**Paso Flores**	88.10	132	P	P	07 45 44.9	+1.6
	comp=Z,6.0nm,0.9s,baz=226,slow=6.4,SNR=11						
	comp=Z,6.0nm,0.9s						
PLCA	**Paso Flores**	88.10	132	*e*P	P	07 45 44.7	+1.4
A19K	**Wainwright**	88.16	4	P	P	07 45 42.8	+0.2
	baz=192						
B21K	**Ikpikpuk River**	88.17	7	P	P	07 45 43.0	+0.3
	baz=198						
EPYK	**Eagle Plains**	88.28	14	P	P	07 45 43.7	+0.3
	baz=215,SNR=17						
B20K	**Meade River**	88.29	6	P	P	07 45 43.6	+0.4
	baz=196						
RSSD	**Black Hills**	88.32	42	P	P	07 45 44.0	-0.3
RSSD				pmax	pmax		
	comp=Z,25nm,1.1s						
H31M	**Peel River**	88.40	15	P	P	07 45 43.7	-0.2
	baz=217,SNR=12						
PSI	**Prapat**	88.42	273	LR	LR	08 25 43.3	
	comp=Z,174nm,18.9s,baz=125,slow=36						
PSI	**Prapat**	88.42	273	P	P	07 45 45.3	-0.1
PSI	**Prapat**	88.42	273	P	P	07 45 45.1	-0.3
PSI				pmax	pmax		
	comp=Z,138nm,1.1s						
G29M	**Pine Creek**	88.44	13	P	P	07 45 44.4	+0.3
	baz=214,SNR=9.7						
D24K	**Happy Valley**	88.47	9	P	P	07 45 44.8	+0.7
	baz=204,SNR=6.3						
HKT	**Hockley**	88.59	58	P	P	07 45 46.8	+1.3
HKT				pmax	pmax		
	comp=Z,61nm,1.8s						
TIY	**Taiyuan**	88.60	310	*e*P	P	07 45 47.0	+1.4
TIY				SKS	SKSac	07 56 12.3	+1.5
TIY				S	ScS	07 56 33.8	0.0
TIY				pmax	pmax		
	comp=Z,60nm,0.7s						
TIY				pmax	pmax		
	comp=Z,200nm,3.5s						
TIY				LR	LR		
	comp=Z,68nm,12.4s						
TIY				LR	LR		
	comp=Z,170nm,17.9s						
TIY				LR	LR		
	comp=Z,150nm,20.6s						
F28M	**Old Crow**	88.64	12	P	P	07 45 45.6	+0.6
	baz=212,SNR=12						
XLT	**XiLinHaoTe**	88.69	317	*e*P	P	07 45 46.3	+0.4
XLT				SKS	SKSac	07 56 10.1	-1.0
XLT				S	S	07 56 30.3	+1.4
XLT				pmax	pmax		
	comp=Z,35nm,1.0s						
E27K	**Coleen River**	88.80	11	P	P	07 45 46.6	+0.8
	baz=210,SNR=6.2						
C23K	**Itkillik River**	88.85	8	P	P	07 45 46.6	+0.7
	baz=202,SNR=12						
G30M	**tAoh Zraii Nji**	88.90	14	P	P	07 45 46.4	+0.2
	baz=216,SNR=22						
HIA	**Hailar**	88.94	323	*i* P	P	07 45 46.8	0.0
HIA				pmax	pmax		
	comp=Z,45nm,1.3s						
GYA	**Guiyang**	88.96	298	⇓P	P	07 45 49.5	+1.9
GYA				pP	pP	07 46 01.9	-0.2
GYA				SKS	SKSac	07 56 13.3	-0.2
GYA				S	S	07 56 30.5	-1.7
GYA				pmax	pmax		
	comp=Z,91nm,1.1s						
GYA				pmax	pmax		
	comp=Z,250nm,3.1s						
GYA				LR	LR		
	comp=Z,230nm,11.6s						
GYA				LR	LR		
	comp=Z,81nm,5.0s						
GYA				LR	LR		
	comp=Z,68nm,4.2s						
D25K	**Kavik River**	88.98	9	P	P	07 45 46.8	+0.1
	baz=206						
B22K	**Teshekpuk Lake**	88.99	7	P	P	07 45 46.6	0.0
	baz=199,SNR=8.8						
C24K	**Franklin Bluff**	89.00	8	P	P	07 45 47.2	+0.6
	baz=204						
GSI	**Gunungsitoli**	89.26	272	P	P	07 45 51.1	+1.9
G31M	**Satah River**	89.31	14	P	P	07 45 48.4	+0.3
	baz=217,SNR=31						
A22K	**Sinclair Lake**	89.46	6	P	P	07 45 49.1	+0.4
	baz=198						
F30M	**Barrier River**	89.51	14	P	P	07 45 49.5	+0.4
	baz=216,SNR=5.6						
SRIT	**Nakonsritamara**	89.55	279	P	P	07 45 52.5	+2.0
E28M	**Babbage River**	89.55	12	P	P	07 45 49.8	+0.5
	baz=212,SNR=6.4						
SLVN	**Son La**	89.61	292	P	P	07 45 52.8	+2.1
WRGLY	**Wrigley**	89.64	20	P	P	07 45 50.3	+0.6
	baz=227						
C27K	**Jago River**	89.68	10	P	P	07 45 50.4	+0.5
	baz=208						
E29M	**Blow River**	89.70	12	P	P	07 45 49.9	0.0
	baz=214						
C26K	**Camden Bay**	89.75	10	P	P	07 45 50.0	-0.1
	baz=207						
XAN	**Xi'an**	89.83	306	⇓P	P	07 45 52.1	+0.7
XAN				pP	sP	07 46 09.0	-2.4
XAN				PP	PP	07 49 21.5	-3.2
XAN				SKS	SKSac	07 56 17.6	-0.5
XAN				S	S	07 56 40.9	+1.0
XAN				SS	SS	08 02 40.0	+1.4
XAN				pmax	pmax		
	comp=Z,83nm,1.2s						
XAN				pmax	pmax		
	comp=Z,330nm,3.9s						
XAN				LR	LR		
	comp=Z,210nm,17.3s						
XAN				LR	LR		
	comp=Z,200nm,21.0s						
XAN				LR	LR		
	comp=Z,250nm,23.9s						
D27M	**Malcolm River**	89.83	11	P	P	07 45 50.7	0.0
	baz=211						
F31M	**Tsiigehtchic**	89.85	14	P	P	07 45 51.1	+0.5
	baz=218,SNR=19						
TROLL	**Troll, Antarti**	90.43	179	⇑P	P	07 45 54.4	+0.7
	comp=Z,656nm,1.1s						
HHC	**Hu-ho-hao-te**	90.46	313	⇓*i*P	P	07 45 55.8	+1.5
HHC				SKS	SKSac	07 56 23.6	+2.0
HHC				S	ScS	07 56 48.8	-0.4
HHC				pmax	pmax		
	comp=Z,40nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,4.4s						
HHC				LR	LR		
	comp=Z,120nm,17.7s						
HHC				LR	LR		
	comp=Z,100nm,21.9s						
HHC				LR	LR		
	comp=Z,190nm,20.2s						
VNA3	**Neumayer Olymp**	90.55	175	⇑P	P	07 45 55.2	+1.1
	comp=Z,21nm,0.7s						
INK	**Inuvik**	90.58	14	P	P	07 45 53.3	-0.7
	comp=Z,12nm,0.9s,baz=215,slow=6.4,SNR=17						
	comp=Z,12nm,0.9s						
INK	**Inuvik**	90.58	14	P	P	07 45 54.0	0.0
	baz=218,SNR=12						
SNAA	**Sanae**	90.58	177	⇑P	P	07 45 54.0	-0.3
	comp=Z,214nm,0.7s						
SNAA	**Sanae**	90.58	177	P	P	07 45 54.8	+0.5
SNAA				IAmb	IAmb	07 45 58.7	
	comp=Z,19nm,1.0s						
SNAA	**Sanae**	90.58	177	P	P	07 45 55.1	+0.8
	comp=Z,11nm,0.8s,baz=213,slow=4.9,SNR=22						
	comp=Z,11nm,0.8s						
SNAA	**Sanae**	90.58	177	*ce*P	P	07 45 55.1	+0.8
SNAA				pmax	pmax		
	comp=Z,24nm,1.1s						
PEL	**Peldehue**	90.81	125	P	P	07 45 57.9	+1.8
PEL				pmax	pmax		
	comp=Z,89nm,1.1s						
VNA2	**Neumayer--Watz**	91.04	176	⇑P	P	07 45 57.4	+1.1
	comp=Z,22nm,0.7s,baz=184,slow=3.4						
YAK	**Yakutsk**	91.18	337	*ce*P	P	07 45 56.8	-0.1
YAK				pmax	pmax		
	comp=Z,25nm,1.0s						
VNA1	**Neumayer--Stat**	91.24	175	⇑P	P	07 45 57.0	-0.2
	comp=Z,28nm,1.0s						
BTO	**Baotou**	91.45	312	*e*P	P	07 46 00.8	+1.9
BTO				pP	pP	07 46 14.5	+1.2
BTO				sP	sP	07 46 19.5	+0.7
BTO				SKS	SKSac	07 56 28.8	+1.5
BTO				S	ScS	07 56 57.0	-0.4
BTO				sS	sS	07 57 17.0	-2.1
BTO				pmax	pmax		
	comp=Z,97nm,1.3s						
BTO				pmax	pmax		
	comp=Z,370nm,5.4s						
BTO				LR	LR		
	comp=Z,210nm,14.3s						
BTO				LR	LR		
	comp=Z,230nm,24.5s						
BTO				LR	LR		
	comp=Z,430nm,23.5s						
JTS	**Las Juntas de**	91.83	80	LR	LR	08 16 14.1	
	comp=Z,187nm,21.7s,baz=251,slow=28						
KMI	**Kunming**	91.85	296	⇑P	P	07 46 03.3	+2.1
KMI				SKS	SKSac	07 56 30.8	+0.3
KMI				S	ScS	07 57 00.1	-1.5
KMI				pmax	pmax		
	comp=Z,45nm,0.8s						
KMI				LR	LR		
	comp=Z,160nm,26.9s						
KMI				LR	LR		
	comp=Z,250nm,22.8s						
KMI				LR	LR		
	comp=Z,210nm,19.8s						
MIAR	**Mount Ida**	92.00	54	P	P	07 46 02.4	+1.0
MIAR				pmax	pmax		
	comp=Z,48nm,1.5s						
LCO	**Las Campanas**	92.31	121	P	P	07 46 05.5	+2.0
LCO				pmax	pmax		
	comp=Z,68nm,1.1s						
YKA	**Yellowknife Ar**	92.32	23	P	P	07 46 02.1	-0.1
	comp=Z,4.1nm,1.0s,baz=248,slow=4.1,SNR=18						
YKA				PP	PP	07 49 43.7	+0.1
	comp=Z,0.6nm,0.9s,baz=243,slow=7.8,SNR=3.9						
YKA				LR	LR	08 21 21.6	
	comp=Z,135nm,20.0s,baz=211,slow=32						
	comp=Z,4.1nm,1.0s						
YKA	**Yellowknife Ar**	92.32	23	*e*P	P	07 46 02.6	+0.4
YKA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HDC	**Heredia**	92.53	80	*e*P	P	07 46 06.4	+1.9
NNA	**Nana**	92.72	103	*ce*P	P	07 46 06.4	+1.1
NNA				pmax	pmax		
	comp=Z,51nm,1.3s						
ATAH	**Atahualpa**	92.79	98	LR	LR	08 18 02.3	
	comp=Z,157nm,18.9s,baz=257,slow=29						
CD2	**Chengdu**	92.85	301	P	P	07 46 06.3	+0.8
CD2				SKS	SKSac	07 56 31.3	-4.2
CD2				S	S	07 57 06.3	-1.2
CD2				pmax	pmax		
	comp=Z,30nm,1.0s						
CD2				pmax	pmax		
	comp=Z,140nm,5.3s						
CD2				LR	LR		
	comp=Z,180nm,15.9s						
CD2				LR	LR		
	comp=Z,170nm,12.7s						
CD2				LR	LR		
	comp=Z,150nm,20.9s						
ZON	**Zonda**	92.98	124	P	P	07 46 08.8	+2.6
ZON				pmax	pmax		
	comp=Z,27nm,1.1s						
PZH	**PanZhiHua**	93.14	297	P	P	07 46 08.6	+1.6
PZH				SKS	SKSac	07 56 34.9	-2.5
PZH				S	ScS	07 57 13.0	+0.9
PZH				pmax	pmax		
	comp=Z,50nm,1.0s						
PZH				LR	LR		
	comp=Z,180nm,20.1s						
PZH				LR	LR		
	comp=Z,230nm,18.1s						
PZH				LR	LR		
	comp=Z,80nm,21.6s						
CMAR	**Chiang Mai Arr**	93.15	288	P	P	07 46 08.2	+1.1
	comp=Z,39nm,0.8s,baz=102,slow=4.2,SNR=29						
CMAR				LR	LR	08 23 42.8	
	comp=Z,114nm,21.5s,baz=115,slow=33						
	comp=Z,39nm,0.8s						
CHTO	**Chiang Mai**	93.26	289	P	P	07 46 08.3	+0.7
CHTO	**Chiang Mai**	93.26	289	P	P	07 46 08.6	+1.0
CHTO				pmax	pmax		
	comp=Z,74nm,1.1s						
C36M	**Paulatuk**	93.66	16	P	P	07 46 08.2	0.0
	baz=227						
LZH	**Lanzhou**	94.44	306	*e*P	P	07 46 14.6	+1.7
LZH				SKS	SKSac	07 56 44.0	-0.2
LZH				pmax	pmax		
	comp=Z,45nm,1.0s						
LZH				LR	LR		
	comp=Z,160nm,19.9s						
LZH				LR	LR		
	comp=Z,120nm,19.7s						
LZH				LR	LR		
	comp=Z,330nm,20.8s						
CCM	**Cathedral Cave**	94.94	52	P	P	07 46 14.3	-0.6
CCM				pmax	pmax		
	comp=Z,21nm,1.3s						
OTAV	**Otavalo**	94.99	91	*e*P	P	07 46 17.2	+0.9
A36M	**Sachs Harbour**	95.22	14	P	P	07 46 15.5	+0.2
	baz=226,SNR=7.1						
TNCH	**TengChong**	95.47	294	P	P	07 46 17.8	0.0
TNCH				pmax	pmax		
	comp=Z,200nm,3.7s						
ULM	**Lac du Bonnet**	95.88	39	P	P	07 46 18.4	-0.5
	comp=Z,9.1nm,0.9s,baz=252,slow=3.8,SNR=18						
ULM				LR	LR	08 22 49.8	
	comp=Z,504nm,21.9s,baz=256,slow=31						
	comp=Z,9.1nm,0.9s						
ULN	**Ulaanbaatar**	96.04	318	P	P	07 46 20.1	+0.2
ULN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SONM	**Songino Array**	96.45	318	P	P	07 46 20.9	-0.8
	comp=Z,1.7nm,0.8s,baz=108,slow=3.1,SNR=8.0						
SONM				PP	PP	07 50 14.9	-1.4
	comp=Z,1.6nm,1.1s,baz=103,slow=5.2,SNR=4.1						
SONM				LR	LR	08 26 27.3	
	comp=Z,40nm,21.0s,baz=102,slow=33						
	comp=Z,1.7nm,0.8s						
SONM	**Songino Array**	96.45	318	*e*P	P	07 46 21.7	0.0
SONM				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TIXI	**Tiksi**	97.20	344	LR	LR	08 24 43.4	
	comp=Z,62nm,21.1s,baz=118,slow=32						
TIXI	**Tiksi**	97.20	344	*ce*P	P	07 46 23.8	-0.5
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GTA	**Gaotai**	98.48	309	P	Pdif	07 46 31.6	+0.5
GTA				pP	pP	07 46 41.6	-3.9
GTA				SKS	SKSac	07 57 04.4	-0.6
GTA				S	ScS	07 57 59.8	+3.8
GTA				pmax	pmax		
	comp=Z,11nm,1.1s						
GTA				LR	LR		
	comp=Z,100nm,17.9s						
GTA				LR	LR		
	comp=Z,190nm,19.1s						
GTA				LR	LR		
	comp=Z,380nm,23.1s						
LPAZ	**La Paz**	99.20	110	P	Pdif	07 46 36.7	+1.2
	comp=Z,1.6nm,0.9s,baz=257,slow=4.5,SNR=5.0						
LPAZ				LR	LR	08 20 56.5	
	comp=Z,236nm,19.9s,baz=229,slow=29						
	comp=Z,1.6nm,0.9s						
LPAZ	**La Paz**	99.20	110	*e*P	Pdif	07 46 36.6	+1.2
WMQ	**Urumqi**	108.25	311	Pdif	Pdif	07 47 14.9	+0.5
WMQ				LR	LR		
	comp=Z,180nm,24.1s						
ZSN	**Zaisan**	110.59	315	*i* PKIKP	PKiKP	07 51 24.4	-0.4
ZSN	**Zaisan**	110.59	315	*e*PKiKP	PKiKP	07 51 24.5	-0.4
ZALV	**Zalesovo Beam**	110.94	322	PKiKP	PKiKP	07 51 24.9	-0.3
	comp=Z,1.2nm,0.4s,baz=132,slow=2.2,SNR=6.7						
HYB	**Hyderabad**	111.64	282	*e*PKiKP	PKiKP	07 51 26.8	-0.8
HYB				*e*pPKiKP	pPKiKP	07 51 41.3	-1.3
HYB				*e*SKSac	SKSac	07 58 03.4	-1.9
MKAR	**Makanchi Array**	112.31	314	Pdiff	Pdif	07 47 34.6	+2.4
	comp=Z,0.8nm,0.8s,baz=66,slow=6.0,SNR=4.0						
MKAR				PKiKP	PKiKP	07 51 27.7	-0.4
	comp=Z,3.6nm,0.7s,baz=165,slow=0.3,SNR=24						
MKAR				PKKPbc	PKKPbc	08 02 19.6	-0.3
	comp=Z,0.7nm,0.7s,baz=265,slow=4.0,SNR=4.8						
MAKZ	**Makanchi**	112.52	314	⇓PKIKP	PKiKP	07 51 28.5	0.0
SCHQ	**Schefferville**	113.97	37	PKKPbc	PKKPbc	08 02 14.8	+0.4
	comp=Z,1.5nm,0.6s,baz=104,slow=3.7,SNR=4.5						
UZB	**Uzynbulak**	114.49	310	*e*PKIKP	PKPdf	07 51 31.8	-0.7
UZB	**Uzynbulak**	114.49	310	*e*PKP	PKPdf	07 51 31.9	-0.7

KPKS	**Kokpek**	**114.75**	**310**	*e*PKIKP	PKPdf	07 51 32.3	-0.6
KPKS	**Kokpek**	**114.75**	**310**	*e*PKP	PKPdf	07 51 32.4	-0.6
KURK	**Kurchatov**	**114.75**	**318**	PKIKP	PKPdf	07 51 32.4	-0.2
KURBB	**Kurchatov Arra**	**114.81**	**318**	PKP	PKPdf	07 51 32.4	-0.3
	comp=Z,3.7nm,0.8s,baz=97,slow=1.9,SNR=22						
KURBB				PKKPbc	**PKKPbc**	**08 02 11.4**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=260,slow=4.2,SNR=8.3						
SATY	**Saty**	**114.94**	**310**	*e*PKIKP	PKPdf	07 51 32.8	-0.6
SATY				*e*		07 52 30.9	
SATY	**Saty**	**114.94**	**310**	*e*PKP	PKPdf	07 51 32.8	-0.6
SATY				*e*PP	**PP**	**07 52 30.9**	**-2.1**
TDK	**Taldyqorghan**	**114.97**	**312**	*e*PKIKP	PKPdf	07 51 32.8	-0.4
TDK	**Taldyqorghan**	**114.97**	**312**	*e*PKP	PKPdf	07 51 32.8	-0.4
MDOK	**Medeo**	**115.94**	**310**	*e*PKIKP	**PKPdf**	**07 51 34.6**	**-0.7**
MDOK	**Medeo**	**115.94**	**310**	*e*PKP	**PKPdf**	**07 51 34.7**	**-0.7**
AAA	**Alma-Ata**	**116.03**	**310**	*e*PKIKP	**PKPdf**	**07 51 34.8**	**-0.6**
AAA	**Alma-Ata**	**116.03**	**310**	*e*PKP	**PKPdf**	**07 51 34.9**	**-0.6**
KSH	**Kashi**	**116.69**	**306**	PKP	**PKiKP**	**07 51 38.3**	**+1.4**
KSH				sPKP		07 51 51.8	
KSH				LR	LR		
	comp=Z,100nm,13.1s						
KSH				LR	LR		
	comp=Z,170nm,21.0s						
KSH				LR	LR		
	comp=Z,270nm,22.0s						
BDFB	**Brasilia**	**116.96**	**118**	PKP	**PKPdf**	**07 51 37.3**	**-0.7**
	comp=Z,2.8nm,0.9s,baz=95,slow=5.9,SNR=3.5						
BDFB				PKKPbc	**PKKPbc**	**08 02 03.5**	**+0.3**
	comp=Z,3.4nm,0.9s,baz=78,slow=2.1,SNR=7.0						
BTLS	**Baital**	**118.06**	**312**	*e*PKIKP	**PKPdf**	**07 51 38.6**	**-0.5**
BTLS				*e*		07 52 52.6	
BTLS	**Baital**	**118.06**	**312**	*e*PKP	**PKPdf**	**07 51 38.7**	**-0.5**
BTLS				*e*PP	**PP**	**07 52 52.7**	**-1.9**
BRZS	**Berezniki**	**118.60**	**318**	*e*PKIKP	**PKPdf**	**07 51 39.7**	**-0.3**
BRZS	**Berezniki**	**118.60**	**318**	*e*PKP	**PKPdf**	**07 51 39.7**	**-0.3**
SPITS	**Spitsbergen Ar**	**119.34**	**358**	PKP	**PKiKP**	**07 51 41.0**	**+0.2**
	comp=Z,6.3nm,0.7s,baz=137,slow=8.6,SNR=9.2						
BVAR	**Borovoye Array**	**119.59**	**321**	PKP	**PKPdf**	**07 51 41.9**	**0.0**
	comp=Z,9.0nm,0.6s,baz=93,slow=3.0,SNR=38						
BVAR				PKKPbc	**PKKPbc**	**08 01 55.6**	**+1.1**
	comp=Z,0.7nm,0.7s,baz=272,slow=5.8,SNR=4.2						
BRVK	**Borovoye**	**119.64**	**321**	*i* PKIKP	**PKPdf**	**07 51 41.9**	**0.0**
DZA	**Taraz**	**120.14**	**310**	*e*PKIKP	**PKPdf**	**07 51 42.7**	**-0.5**
DZA	**Taraz**	**120.14**	**310**	*e*PKP	**PKPdf**	**07 51 42.8**	**-0.5**
SMTB	**Santa Maria do**	**120.50**	**112**	*e*P	**PKPdf**	**07 51 44.7**	**-0.1**
IUG	**Iuzhnay**	**121.14**	**309**	*e*PKIKP	**PKPdf**	**07 51 44.6**	**-0.7**
IUG	**Iuzhnay**	**121.14**	**309**	*e*PKP	**PKPdf**	**07 51 44.6**	**-0.7**
BRLS	**Borolday**	**121.22**	**310**	*e*PKIKP	**PKPdf**	**07 51 45.0**	**-0.3**
BRLS	**Borolday**	**121.22**	**310**	*e*PKP	**PKPdf**	**07 51 45.1**	**-0.3**
SVE	**Sverdlovsk**	**124.00**	**327**	*e*PKIKP	**PKiKP**	**07 51 50.8**	**+0.4**
SVE				pmax	pmax		
	comp=Z,18nm,1.1s						
ARTI	**Arti**	**125.32**	**328**	*i* PKIKP	**PKPdf**	**07 51 52.4**	**-0.3**
ARTI						07 53 44.8	
ARTI						07 59 00.9	
ARTI				SS	SS	08 10 30.4	-6.8
ARCES	**ARCESS Array B**	**126.89**	**352**	PKP	**PKPdf**	**07 51 55.5**	**+0.1**
	comp=Z,9.3nm,0.8s,baz=48,slow=1.8,SNR=23						
APA	**Apatity**	**127.27**	**347**	⇓*i*PKIKP	**PKPdf**	**07 51 55.5**	**-0.6**
APA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KIRV	**Kirov**	**128.53**	**333**	PKP	**PKPdf**	**07 51 58.8**	**0.0**
	comp=Z,11nm,0.4s,baz=65,slow=4.9,SNR=3.5						
BOSA	**Boshof**	**130.43**	**202**	PKP	**PKPdf**	**07 52 04.3**	**+0.7**
	comp=Z,5.7nm,1.1s,baz=115,slow=2.1,SNR=5.5						
KLMR	**Klimovskoe**	**130.91**	**339**	*e*PKIKP	**PKPdf**	**07 52 01.3**	**-1.9**
KLMR				pmax	pmax		
	comp=Z,29nm,1.2s						
BELG	**Belogornoye**	**132.73**	**327**	*i* PKIKP	**PKPdf**	**07 52 06.8**	**-0.1**
FINES	**FINESS Array B**	**134.17**	**347**	PKP	**PKPdf**	**07 52 09.3**	**0.0**
	comp=Z,5.3nm,0.9s,baz=52,slow=3.1,SNR=9.9						
PUL	**Pulkovo**	**134.59**	**343**	*i* PKIKP	**PKPdf**	**07 52 10.0**	**-0.2**
PUL				pmax	pmax		
	comp=Z,49nm,0.7s						
MOS	**Moscow**	**135.29**	**335**	*e*PKIKP	**PKPdf**	**07 52 12.1**	**+0.5**
OBN	**Obninsk**	**136.16**	**335**	*de*PKIKP	**PKPdf**	**07 52 13.0**	**-0.2**
OBN				*e*		07 54 48.9	
OBN				*e*PPP	PPP	07 57 48.0	
OBN				pmax	pmax		
	comp=Z,30nm,1.2s						
VRH	**Novokhopyorsk**	**136.44**	**328**	*e*PKIKP	**PKPdf**	**07 52 10.5**	**-3.4**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NB2	**NORSAR Subarra**	**136.62**	**357**	PKP	PKPpre	07 52 03.0	
	comp=Z,9.0nm,1.4s,baz=12,slow=4.0						
NOA	**NORSAR Array B**	**136.62**	**357**	PKP	**PKPdf**	**07 52 14.2**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=16,slow=3.9,SNR=5.6						
VSU	**Vasula**	**136.67**	**345**	*i* PKIKP	**PKPdf**	**07 52 14.1**	**0.0**
MAK	**Makhachkala**	**137.12**	**315**	*c i*P	**Pdif**	**07 49 20.7**	**-1.9**
MAK				*i*		07 52 14.9	
MAK				*e*		07 54 55.7	
MAK				*e*PPP	PPP	07 57 59.9	
MAK				*e*SS	SS	08 13 00.3	-1.8
MAK				*e*SSS	SSS	08 18 05.4	
MAK				pmax	pmax		
	comp=Z,116nm,1.0s						
HFS	**Hagfors**	**137.34**	**355**	PKhKP	PKPpre	07 52 04.7	
	comp=Z,1.2nm,0.6s,baz=75,slow=1.7,SNR=4.0						
HFS				PKP	**PKPdf**	**07 52 15.3**	**0.0**
	comp=Z,3.2nm,0.7s,baz=131,slow=4.1,SNR=7.0						
AKT	**Akhty**	**137.52**	**313**	*e*PKIKP	**PKPdf**	**07 52 16.1**	**-0.3**
AKT				pmax	pmax		
	comp=Z,12nm,0.9s						
VSR	**Storozhevoye**	**137.69**	**330**	*e*PKIKP	**PKPdf**	**07 52 15.0**	**-1.2**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VORD	**Divnogorie**	**137.78**	**329**	*e*PKIKP	**PKPdf**	**07 52 15.3**	**-1.1**
VORD				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GOF	**Gofitskoye**	**139.08**	**320**	*ce*PKIKP	PKPpre	07 52 14.0	
NACGM	**Naroch**	**139.75**	**342**	*e*PKiKP	**PKPdf**	**07 52 20.5**	**+0.7**
	comp=Z,9.0nm,0.7s,baz=31						
MNK	**Minsk**	**139.75**	**341**	*i* PKiKP	**PKPdf**	**07 52 20.6**	**+0.6**
	comp=E,23nm,0.9s						
MNK				*i* PKiKP	**PKPdf**	**07 52 20.6**	**+0.6**
	comp=N,17nm,0.8s						
MNK				*i* PKiKP	**PKPdf**	**07 52 20.6**	**+0.6**
	comp=Z,11nm,0.9s,baz=40						
MNK				*i* PP	**PP**	**07 55 14.1**	**-1.3**
MNK				*i* PPP	PPP	07 58 16.6	
MNK				*i* SKS	**SKSdf**	**07 59 25.6**	**-0.3**
MNK				*i* SKKS	**SKKSdf**	**08 08 53.4**	**-2.6**
MNK				*i* SS	**SS**	**08 13 33.5**	**+1.8**
MNK				*i* SSS	SSS	08 18 46.0	
MNK				*i* LQ	LQ	08 46 44.5	
MNK	**Minsk**	**139.75**	**341**	*i* PKIKP	**PKPdf**	**07 52 20.5**	**+0.6**
MNK				*i*		07 55 14.1	
MNK				*i* PPP	PPP	07 58 16.5	
MNK				*i*		07 59 25.5	
MNK				*i* SS	SS	08 13 33.4	+1.8
MNK				*i* SSS	SSS	08 18 45.9	
MNK				pmax	pmax		
	comp=E,23nm,0.9s						
MNK				pmax	pmax		
	comp=N,17nm,0.8s						
MNK				pmax	pmax		
	comp=Z,11nm,0.9s						
MNK				MLR	MLR		
	comp=N,1µm,22.0s						
MNK				MLR	MLR		
	comp=E,1µm,21.0s						
MNK				MLR	MLR		
	comp=Z,163nm,21.0s						
KBZ	**Khabaz**	**139.81**	**318**	PKP	**PKPdf**	**07 52 20.1**	**-0.3**
	comp=Z,4.4nm,0.9s,baz=66,slow=2.4,SNR=8.1						
KBZ				PP	**PP**	**07 55 20.0**	**+3.5**
	comp=Z,2.5nm,0.9s,baz=73,slow=7.4,SNR=3.6						
KBZ	**Khabaz**	**139.81**	**318**	*e*PKIKP	**PKiKP**	**07 52 22.2**	**-0.5**
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KIV	**Kislovodsk**	**139.84**	**318**	*i* PKIKP	**PKPdf**	**07 52 19.6**	**-0.9**
KIV				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SHA1	**Shidzhatmaz**	**139.96**	**318**	*i* PKIKP	**PKPdf**	**07 52 20.0**	**-1.0**
SUW	**Suwalki**	**141.54**	**344**	*e*PKP	**PKPdf**	**07 52 18.3**	**-4.8**
EKA	**Eskdalemuir Ar**	**141.78**	**9**	PKhKP	PKPpre	07 52 16.1	
	comp=Z,1.2nm,0.7s,baz=0.0,slow=4.2,SNR=4.1						
EKA				PKP	**PKiKP**	**07 52 25.4**	**-1.0**
	comp=Z,2.3nm,0.6s,baz=305,slow=2.4,SNR=6.0						
SOC	**Sochi**	**141.88**	**320**	*e*PKIKP	**PKPdf**	**07 52 22.8**	**-1.3**
SOC				*e*		07 55 29.4	
SOC				*e*SSS	SSS	08 19 19.9	
SOC				pmax	pmax		
	comp=Z,5.0nm,0.4s						
AKASG	**Malin Array Be**	**142.40**	**336**	PKhKP	PKPpre	07 52 20.1	
	comp=Z,4.7nm,0.8s,baz=42,slow=4.2,SNR=15						
AKBB	**Malin Array Si**	**142.40**	**336**	*i* PKIKP	**PKPdf**	**07 52 22.8**	**-2.0**
KIEV	**Kiev**	**142.41**	**336**	⇓P	**PKPdf**	**07 52 20.5**	**-4.3**
KIEV	**Kiev**	**142.41**	**336**	⇓PKIKP	**PKPdf**	**07 52 20.5**	**-4.3**
RNPP9	**Sopachiv**	**143.01**	**340**	PKP	**PKPdf**	**07 52 23.3**	**-2.5**
RAYN	**Ar Rayn**	**143.02**	**286**	⇓PKIKP	**PKPdf**	**07 52 25.2**	**-1.6**
BSEG	**Bad Segeberg**	**143.76**	**356**	*e*PKPbc	PKPbc	07 52 24.7	0.0
	baz=8.8,slow=3.0						
PSBA	**Serra de Santa**	**143.97**	**48**	*e*PKP	PKPbc	07 52 26.2	+0.3
PSBA	**Serra de Santa**	**143.97**	**48**	*e*PKP	PKPbc	07 52 26.2	+0.3
PAGU	**Agualva, Azore**	**144.07**	**47**	*e*PKP	PKPbc	07 52 27.5	+1.3
PAGU	**Agualva, Azore**	**144.07**	**47**	*e*PKP	PKPbc	07 52 27.5	+1.3
BEL	**Belsk**	**144.13**	**345**	*e*PKP	PKPbc	07 52 26.5	+0.6
FOEL	**Foel Wylfa**	**144.14**	**10**	*e*P	**PKPdf**	**07 52 27.3**	**-0.5**
PSCM	**Serra do Cume**	**144.14**	**48**	*e*PKP	PKPbc	07 52 26.8	+0.4
PSCM	**Serra do Cume**	**144.14**	**48**	*e*PKP	PKPbc	07 52 26.8	+0.4
SIM	**Simferopol'**	**144.32**	**325**	*i* PKIKP	**PKPab**	**07 52 26.5**	**+0.1**
SIM				pmax	pmax		
	comp=Z,18nm,0.8s						
HLM1	**Long Mynd**	**144.55**	**10**	*e*P	PKPbc	07 52 27.3	+0.1
GORT1	**Trebel**	**144.62**	**355**	*e*PKPbc	PKPbc	07 52 27.7	+0.4
	baz=8.8,slow=3.0						
RSBS	**Rosebush, Pemb**	**144.75**	**12**	*e*P	**PKPdf**	**07 52 29.6**	**+0.7**
SORM	**Soroca**	**144.78**	**334**	⇑P	PKPbc	07 52 28.4	+0.3
SORM	**Soroca**	**144.78**	**334**	⇑PKIKP	PKPbc	07 52 28.4	+0.3
RUE	**Ruedersdorf**	**144.86**	**352**	*e*PKPbc	**PKPab**	**07 52 27.9**	**-0.2**
	baz=8.8,slow=3.0						
RUE				*e*pPKPbc	**sPKPdf**	**07 52 51.3**	**+1.9**
	baz=7.1,slow=3.0						
RETH	**Rethem/Aller,**	**145.01**	**357**	*e*PKPbc	PKPbc	07 52 29.0	+0.4
	baz=8.8,slow=3.0						
MCH1	**Michaelchurch**	**145.03**	**10**	*e*P	**PKPab**	**07 52 28.9**	**+0.1**
NRDL	**Niedersach Rie**	**145.21**	**356**	*e*PKPbc	**PKPab**	**07 52 29.5**	**+0.2**
	baz=8.8,slow=3.0						
MONM	**Monmouth**	**145.22**	**10**	*e*P	**PKPab**	**07 52 29.7**	**+0.3**
FLTG	**Flechtingen**	**145.28**	**355**	*e*PKPbc	**PKPbc**	**07 52 29.3**	**-0.2**
	baz=8.8,slow=3.0						
FLTG				*e*pPKPbc	**sPKPdf**	**07 52 52.1**	**+2.0**
	baz=7.1,slow=3.0						
PURM	**Purcari**	**145.35**	**331**	⇓P	**PKPdf**	**07 52 30.7**	**+0.7**
STRD	**Stroud**	**145.38**	**9**	*e*P	**PKPbc**	**07 52 29.9**	**0.0**
OLDB	**Oldbury-Upon-S**	**145.43**	**10**	*e*P	**PKPbc**	**07 52 30.1**	**+0.1**
IBBN	**Ibbenburen**	**145.50**	**359**	*e*PKPbc	**PKPab**	**07 52 30.6**	**+0.1**
	baz=8.8,slow=3.0						
PSET	**Sete Cidades**	**145.52**	**48**	*e*PKP	**PKPab**	**07 52 32.0**	**+0.8**
PSET	**Sete Cidades**	**145.52**	**48**	*e*PKP	**PKPab**	**07 52 32.0**	**+0.8**
ASSE	**Asse, Remlinge**	**145.53**	**355**	*e*PKPbc	**PKPab**	**07 52 30.7**	**+0.2**
	baz=8.8,slow=3.0						
ASSE				*e*pPKPbc	**sPKPdf**	**07 52 52.9**	**+2.5**
	baz=7.1,slow=3.0						
MILM	**Milestii Mici**	**145.53**	**332**	*i* PKP	**PKPbc**	**07 52 30.0**	**-0.5**
	comp=Z,105nm,1.2s						
MILM	**Milestii Mici**	**145.53**	**332**	⇑P	**PKPbc**	**07 52 30.0**	**-0.5**
MILM	**Milestii Mici**	**145.53**	**332**	⇑PKIKP	**PKPbc**	**07 52 30.0**	**-0.5**
KWP	**Kalwaria Pacla**	**145.57**	**341**	*e*PKP	**PKPdf**	**07 52 30.5**	**+0.1**
CMLA	**Cha da Macela**	**145.68**	**48**	*e*PKP	**PKPab**	**07 52 32.2**	**+0.5**
CMLA	**Cha da Macela**	**145.68**	**48**	*e*PKP	**PKPab**	**07 52 32.2**	**+0.5**
HTL	**Hartland**	**145.72**	**12**	*e*P	**PKPbc**	**07 52 31.1**	**+0.2**
PGRON	**Lagoa das Cont**	**145.78**	**48**	*e*PKP	**PKPbc**	**07 52 32.0**	**+0.3**
PGRON	**Lagoa das Cont**	**145.78**	**48**	*e*PKP	**PKPbc**	**07 52 32.0**	**+0.3**
CLZ	**Clausthal**	**145.84**	**356**	*e*PKPbc	**PKPab**	**07 52 31.9**	**+0.1**
	baz=8.8,slow=3.0						
OJC	**Ojcow**	**145.86**	**345**	*e*PKP	**PKPbc**	**07 52 31.5**	**0.0**
BART	**Pico Bartolome**	**145.93**	**48**	*e*PKP	**PKiKP**	**07 52 36.3**	**+0.6**
BART	**Pico Bartolome**	**145.93**	**48**	*e*PKP	**PKiKP**	**07 52 36.3**	**+0.6**
WOL	**Wolverton**	**145.97**	**9**	*e*P	**PKPbc**	**07 52 32.1**	**+0.3**
KSP	**Ksiaz**	**146.05**	**349**	*e*PKP	**PKPbc**	**07 52 32.2**	**+0.2**
CLL	**Collm**	**146.10**	**353**	*i* PKP2	**PKPbc**	**07 52 32.5**	**+0.3**
CLL				pmax	pmax		
	comp=Z,172nm,1.0s						
CLL	**Collm**	**146.10**	**353**	*e*PKPbc	**PKPbc**	**07 52 32.4**	**+0.2**
	baz=8.8,slow=3.0						
CLL	**Collm**	**146.10**	**353**	*i* PKPbc	**PKPbc**	**07 52 32.5**	**+0.3**
	comp=Z,172nm,1.0s						
CLL				*e*x	x	07 52 54.0	
CLL				AMS	AMS	08 13 00.0	
	comp=Z,100nm,20.9s						
CLL				AMS	AMS	09 28 00.0	
	comp=Z,200nm,21.3s						
GTTG	**Gottingen**	**146.16**	**356**	*e*PKPbc	**PKPab**	**07 52 32.9**	**-0.1**
	baz=8.8,slow=3.0						
VASR	**Vaslui**	**146.19**	**333**	⇑P	**PKPab**	**07 52 34.0**	**+0.7**
STHS	**Stebnicka Huta**	**146.20**	**342**	*e*PKP2	**PKPab**	**07 52 34.2**	**+0.9**
STHS	**Stebnicka Huta**	**146.20**	**342**	*e*PKP	**PKPab**	**07 52 34.2**	**+0.9**
CCA1	**Carnmenellis**	**146.32**	**13**	*e*P	**PKPab**	**07 52 33.5**	**-0.2**
KOLS	**Kolonicke sedl**	**146.32**	**341**	*e*PKP2	**PKPab**	**07 52 34.3**	**+0.5**
KOLS	**Kolonicke sedl**	**146.32**	**341**	*e*PKP	**PKPab**	**07 52 34.3**	**+0.5**
CHVC	**Chvalec**	**146.33**	**349**	*e*PKP	**PKPab**	**07 52 33.5**	**-0.3**
CHVC	**Chvalec**	**146.33**	**349**	*e*PKP2	**PKPab**	**07 52 33.5**	**-0.3**
OSTC	**Ostas**	**146.34**	**349**	*e*PKP	**PKPab**	**07 52 34.1**	**+0.3**
OSTC	**Ostas**	**146.34**	**349**	*e*PKP2	**PKPab**	**07 52 34.1**	**+0.3**
NEUB	**Neuenburg**	**146.34**	**354**	*e*PKPbc	**PKPbc**	**07 52 33.3**	**+0.4**
	baz=8.8,slow=3.0						
NEUB				*e*pPKPbc	sPKPab	07 52 55.9	+2.1
	baz=7.1,slow=3.0						
PSMN	**Pico do Norte,**	**146.35**	**49**	*e*PKP	**PKPbc**	**07 52 33.7**	**+0.3**
PSMN	**Pico do Norte,**	**146.35**	**49**	*e*PKP	**PKPbc**	**07 52 33.7**	**+0.3**
DYA	**Yadsworthy**	**146.36**	**12**	*e*P	**PKPbc**	**07 52 33.1**	**+0.1**
BUG	**Bochum--Univer**	**146.38**	**359**	*e*PKPbc	**PKPbc**	**07 52 33.2**	**+0.3**
	baz=8.8,slow=3.0						
BRG	**Berggiesshubel**	**146.41**	**351**	*e*PKPbc	**PKPbc**	**07 52 33.4**	**+0.3**
	baz=8.8,slow=3.0						
BRG	**Berggiesshubel**	**146.41**	**351**	*i* PKP	**PKPab**	**07 52 33.7**	**-0.3**
BRG				Amp		07 52 35.2	
	comp=Z,58nm,1.0s						
UPC	**Upice**	**146.42**	**349**	*e*PKP	**PKPab**	**07 52 33.7**	**-0.4**
UPC	**Upice**	**146.42**	**349**	*e*PKP2	**PKPab**	**07 52 33.7**	**-0.4**
BURAR	**Bucovina Array**	**146.45**	**337**	⇓P	**PKPab**	**07 52 35.3**	**+0.9**
BURAR	**Bucovina Array**	**146.45**	**337**	⇓PKP2	**PKPab**	**07 52 35.3**	**+0.9**
NIE	**Niedzica**	**146.46**	**343**	*e*PKP	**PKPbc**	**07 52 33.3**	**-0.1**
DPC	**Dobruska-Polom**	**146.51**	**348**	*e*PKP	**PKPab**	**07 52 34.5**	**0.0**
DPC				AMS	AMS	08 56 20.0	
	comp=Z,200nm,23.9s						
DPC	**Dobruska-Polom**	**146.51**	**348**	*e*PKP2	**PKPab**	**07 52 34.5**	**0.0**
DPC				MLR	MLR		
	comp=Z,200nm,23.9s						
KASTN	**Kahler Asten**	**146.58**	**358**	*e*PKPbc	**PKPbc**	**07 52 34.2**	**+0.5**
	baz=8.8,slow=3.0						
STEB	**Steborice**	**146.61**	**347**	*e*PKP	**PKPab**	**07 52 34.4**	**-0.4**
PVCC	**Panska Ves**	**146.65**	**350**	*e*PKP	**PKPab**	**07 52 34.8**	**-0.1**
PVCC	**Panska Ves**	**146.65**	**350**	*e*PKP2	**PKPab**	**07 52 34.8**	**-0.1**
VLDR	**Vladesti**	**146.68**	**332**	⇓P	**PKPab**	**07 52 35.4**	**+0.2**
KRLC	**Kraliky**	**146.68**	**348**	*e*PKP	**PKPab**	**07 52 34.9**	**-0.3**
KRLC	**Kraliky**	**146.68**	**348**	*e*PKP2	**PKPab**	**07 52 34.9**	**-0.3**
TESR	**Tescani**	**146.78**	**334**	⇑P	**PKPab**	**07 52 35.4**	**-0.2**
MORC	**Moravsky Berou**	**146.81**	**347**	*e*PKP	**PKPab**	**07 52 35.1**	**-0.6**
MORC	**Moravsky Berou**	**146.81**	**347**	⇓P	**PKPab**	**07 52 35.4**	**-0.2**
TLCR		**146.84**	**330**	⇑P	**PKPab**	**07 52 35.7**	**-0.2**
TLCR		**146.84**	**330**	⇑PKP2	**PKPab**	**07 52 35.7**	**-0.2**
SCTR	**Scanteiesti**	**146.85**	**332**	⇓P	**PKPab**	**07 52 36.2**	**+0.3**
MOX	**Moxa**	**146.91**	**354**	*e*PKPdf	**PKPdf**	**07 52 33.1**	**+0.4**
	baz=18,slow=1.5						
MOX				*e*PKPbc	**PKPbc**	**07 52 35.2**	**+0.7**
	baz=8.8,slow=3.0						
MOX				*e*pPKPbc	sPKPab	07 52 57.3	+1.3
	baz=7.1,slow=3.0						
LANS	**Liptovska Anna**	**146.93**	**344**	*e*PKP	**PKPab**	**07 52 36.2**	**0.0**
UCC	**Uccle**	**146.99**	**2**	*d*PKP	**PKPbc**	**07 52 35.3**	**+0.5**
BMR	**Baia Mare**	**147.02**	**339**	⇓P	**PKPab**	**07 52 35.8**	**-0.7**
BMR	**Baia Mare**	**147.02**	**339**	⇓PKP2	**PKPab**	**07 52 35.8**	**-0.7**
BEBN	**Eben Emael**	**147.02**	**1**	*d*PKP	**PKPbc**	**07 52 35.6**	**+0.8**
ONER	**Baraj Valea Uz**	**147.03**	**334**	⇓P	**PKPab**	**07 52 36.6**	**0.0**
TANN	**Tannenbergstha**	**147.05**	**353**	*e*PKPdf	**PKPdf**	**07 52 33.8**	**+0.9**
	baz=18,slow=1.5						
TANN				*e*PKPbc	**PKPbc**	**07 52 35.5**	**+0.5**
	baz=8.8,slow=3.0						
PANC	**Panciu**	**147.07**	**333**	⇑P	**PKPab**	**07 52 36.8**	**+0.1**
PRA	**Prague**	**147.11**	**350**	*e*PKP	**PKPab**	**07 52 36.5**	**-0.3**
PRA	**Prague**	**147.11**	**350**	*e*PKP2	**PKPab**	**07 52 36.5**	**-0.3**
MAUC	**Maruska**	**147.13**	**346**	*e*PKP	**PKPab**	**07 52 36.4**	**-0.5**
CFR	**Carcaliu**	**147.16**	**331**	⇓P	**PKPbc**	**07 52 36.2**	**+0.8**
CFR	**Carcaliu**	**147.16**	**331**	⇓PKP2	**PKPbc**	**07 52 36.2**	**+0.8**
PRU	**Pruhonice**	**147.17**	**350**	*e*PKP	**PKPbc**	**07 52 36.0**	**+0.7**
PRU				AMS	AMS	08 56 30.0	
	comp=Z,200nm,24.9s						
PRU	**Pruhonice**	**147.17**	**350**	*e*PKP2	**PKPbc**	**07 52 36.0**	**+0.7**
PRU				MLR	MLR		
	comp=Z,200nm,24.9s						
GOPC	**GO Pecny, Ondr**	**147.21**	**350**	*e*PKP	**PKPab**	**07 52 36.4**	**-0.8**
GOPC	**GO Pecny, Ondr**	**147.21**	**350**	*e*PKP2	**PKPab**	**07 52 36.4**	**-0.8**
ARCR	**ARCALIA**	**147.21**	**337**	⇑P	**PKPab**	**07 52 37.1**	**-0.2**
MEM	**Membach**	**147.22**	**0**	*d*PKP	**PKPbc**	**07 52 36.1**	**+0.7**
BSTI	**Sart Tilman**	**147.24**	**1**	*d*PKP	**PKPbc**	**07 52 36.4**	**+0.9**
BTNL	**Ternell**	**147.24**	**0**	*d*PKPdf	**PKPdf**	**07 52 32.4**	**-0.8**
BTNL				*d*PKP	**PKPbc**	**07 52 35.9**	**+0.4**
VRI	**Vrincioaia**	**147.26**	**333**	⇓P	**PKPbc**	**07 52 36.5**	**+0.8**
VRI	**Vrincioaia**	**147.26**	**333**	⇓PKP2	**PKPbc**	**07 52 36.5**	**+0.8**
KECS	**Kecovo**	**147.26**	**343**	*e*PKP2	**PKiKP**	**07 52 38.6**	**+0.7**
KECS	**Kecovo**	**147.26**	**343**	*e*PKP	**PKiKP**	**07 52 38.6**	**+0.7**
TPGR	**Topolog**	**147.28**	**330**	⇑P	**PKPbc**	**07 52 36.6**	**+0.8**
PLOR	**Plostina**	**147.30**	**333**	⇑P	**PKPbc**	**07 52 36.2**	**+0.3**
PLOR	**Plostina**	**147.30**	**333**	⇑PKP2	**PKPbc**	**07 52 36.2**	**+0.3**
BCLA	**Clavier**	**147.40**	**1**	*d*PKP	**PKPbc**	**07 52 36.6**	**+0.7**
TURR	**Turia**	**147.41**	**334**	⇓P	**PKPab**	**07 52 37.8**	**-0.4**
BGES	**Gesves**	**147.43**	**2**	*d*PKP	**PKPbc**	**07 52 36.2**	**+0.2**
VRAC	**Vranov**	**147.45**	**348**	PKPbc	**PKPbc**	**07 52 36.3**	**+0.2**
	comp=Z,28nm,1.0s,baz=2.2,slow=2.4,SNR=18						
VRAC	**Vranov**	**147.45**	**348**	*e*PKP	**PKPbc**	**07 52 37.0**	**+0.9**
VRAC	**Vranov**	**147.45**	**348**	⇓P	**PKPab**	**07 52 37.5**	**-0.7**
OZUR		**147.47**	**335**	⇓P	**PKPab**	**07 52 38.0**	**-0.3**
BMRD	**Maredsous**	**147.50**	**2**	*d*PKP	**PKPbc**	**07 52 36.7**	**+0.5**
MANZ	**Manzenberg**	**147.51**	**353**	*e*PKPdf	**PKPdf**	**07 52 34.6**	**+0.9**
	baz=18,slow=1.5						
MANZ				*e*PKPbc	**PKPbc**	**07 52 37.0**	**+0.7**
	baz=8.8,slow=3.0						
TNS	**Taunus Mts**	**147.56**	**358**	*e*PKPdf	**PKPdf**	**07 52 34.2**	**+0.4**
	baz=18,slow=1.5						
TNS				*e*PKPbc	**PKPbc**	**07 52 37.2**	**+0.8**
	baz=8.8,slow=3.0						
TIRR	**Tirgusor**	**147.58**	**330**	⇓P	**PKPbc**	**07 52 37.5**	**+0.9**
TIRR	**Tirgusor**	**147.58**	**330**	⇓PKP2	**PKPbc**	**07 52 37.5**	**+0.9**
HARR	**Harsova**	**147.63**	**331**	⇑P	**PKPab**	**07 52 38.1**	**-0.9**
HARR	**Harsova**	**147.63**	**331**	⇑PKP2	**PKPab**	**07 52 38.1**	**-0.9**
JAVC	**Velka Javorina**	**147.64**	**346**	*e*PKP	**PKiKP**	**07 52 38.7**	**-0.1**
DOU	**Dourbes**	**147.70**	**2**	*d*PKP	**PKPbc**	**07 52 37.6**	**+0.9**
VYHS	**Vyhne**	**147.70**	**344**	*e*PKP2	**PKPbc**	**07 52 37.9**	**+1.1**
VYHS	**Vyhne**	**147.70**	**344**	*e*PKP	**PKPbc**	**07 52 37.9**	**+1.1**
VYHS				*e*		07 52 43.9	
ROTZ	**Rotzenmuhle**	**147.72**	**353**	*e*PKPdf	**PKPdf**	**07 52 34.8**	**+0.8**
	baz=18,slow=1.5						
ROTZ				*e*PKPbc	**PKPbc**	**07 52 37.4**	**+0.5**
	baz=8.8,slow=3.0						
KRUC	**Moravsky**	**147.73**	**348**	*e*PKP	**PKPbc**	**07 52 37.6**	**+0.7**
DOPR	**Dopca**	**147.73**	**335**	⇓P	**PKiKP**	**07 52 38.8**	**-0.2**
ZVC	**Zvikov**	**147.76**	**350**	*e*PKP	**PKPbc**	**07 52 38.0**	**+1.0**
MFTR	**Murfatlar**	**147.78**	**330**	⇓P	**PKiKP**	**07 52 38.5**	**-0.6**
BRTR	**Keskin Array B**	**147.81**	**318**	PKP	**PKPdf**	**07 52 34.4**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=116,slow=5.7,SNR=5.2						
BRTR				PKPbc	**PKPbc**	**07 52 37.9**	**+0.3**
	comp=Z,22nm,0.8s,baz=133,slow=5.2,SNR=13						
JSA	**Saint Aubin**	**147.88**	**11**	*e*P	**PKPbc**	**07 52 37.6**	**+0.4**
MLR	**Muntele Rosu**	**147.89**	**334**	PKPbc	**PKPbc**	**07 52 38.3**	**+0.8**
	comp=Z,42nm,1.1s,baz=40,slow=1.2,SNR=16						
MLR	**Muntele Rosu**	**147.89**	**334**	⇓P	**PKPbc**	**07 52 38.4**	**+0.8**
GRF	**Grafenberg Arr**	**147.90**	**354**	*e*PKPdf	**PKPdf**	**07 52 35.4**	**+1.1**
	baz=18,slow=1.5						
GRF				*e*PKPbc	**PKPbc**	**07 52 38.1**	**+0.7**
	baz=8.8,slow=3.0						
ISR	**Istrita**	**147.93**	**333**	⇓P	**PKiKP**	**07 52 39.0**	**-0.5**
ISR	**Istrita**	**147.93**	**333**	⇓PKP2	**PKiKP**	**07 52 39.0**	**-0.5**
PSZ	**Piszkesteto**	**147.94**	**343**	⇓P	**PKiKP**	**07 52 38.8**	**-0.6**
PSZ	**Piszkesteto**	**147.94**	**343**	⇓PKP2	**PKiKP**	**07 52 38.8**	**-0.6**
KIRS	**Kirsehir-Merke**	**147.96**	**317**	⇓P	**PKiKP**	**07 52 39.1**	**-0.7**
MARR	**Marisel-Cluj**	**148.01**	**338**	⇓P	**PKPbc**	**07 52 38.8**	**+1.0**
DRGR		**148.05**	**339**	⇑P	**PKiKP**	**07 52 39.1**	**-0.6**
DRGR		**148.05**	**339**	⇑PKP2	**PKiKP**	**07 52 39.1**	**-0.6**
KHC	**Kasperske Hory**	**148.16**	**351**	*e*PKP	**PKPbc**	**07 52 38.6**	**+0.5**
KHC				AMS	AMS	08 58 30.0	
	comp=Z,200nm,23.6s						
KHC	**Kasperske Hory**	**148.16**	**351**	*e*PKP2	**PKPbc**	**07 52 38.6**	**+0.5**
KHC				MLR	MLR		
	comp=Z,200nm,23.6s						
WLF	**Walferdange**	**148.16**	**0**	*d*PKP	**PKPbc**	**07 52 37.0**	**-1.0**
WLF				*d*PKiKP	**PKiKP**	**07 52 39.0**	**-0.8**
WLF	**Walferdange**	**148.16**	**0**	*e*PKPdf	**PKPbc**	**07 52 37.2**	**-0.8**
	baz=18,slow=1.5						
WLF				*e*PKPbc	**PKiKP**	**07 52 39.2**	**-0.5**
	baz=8.8,slow=3.0						
MODS	**Modra-Piesok**	**148.19**	**346**	*e*PKP2	**PKPbc**	**07 52 39.1**	**+0.9**
MODS	**Modra-Piesok**	**148.19**	**346**	*e*PKP	**PKPbc**	**07 52 39.1**	**+0.9**
MODS				*e*		07 55 44.8	
MODS				*e*		07 56 19.6	
MODS				*e*		07 56 51.9	
WET	**Wettzell**	**148.24**	**352**	*e*PKPdf	**PKPdf**	**07 52 36.1**	**+1.2**
	baz=18,slow=1.5						
WET				*e*PKPbc	**PKPbc**	**07 52 38.9**	**+0.6**
	baz=8.8,slow=3.0						
WET				*e*pPKPbc	**sPKPab**	**07 53 01.1**	**-0.3**
	baz=7.1,slow=3.0						
ANTO	**Ankara**	**148.25**	**319**	⇓P	**PKiKP**	**07 52 40.1**	**-0.2**
ANTO	**Ankara**	**148.25**	**319**	⇓PKP2	**PKiKP**	**07 52 40.1**	**-0.2**
VOIR		**148.30**	**335**	⇑P	**PKiKP**	**07 52 40.3**	**0.0**
VOIR		**148.30**	**335**	⇑PKP2	**PKiKP**	**07 52 40.3**	**0.0**
CKRC	**Cesky Krumlov**	**148.34**	**350**	*e*PKP	**PKPbc**	**07 52 39.4**	**+0.8**
CKRC				AMS	AMS	09 03 10.0	
	comp=Z,200nm,21.9s						
CKRC	**Cesky Krumlov**	**148.34**	**350**	*e*PKP2	**PKPbc**	**07 52 39.4**	**+0.8**
CKRC				MLR	MLR		
	comp=Z,200nm,21.9s						
GEC2	**GERESS Array S**	**148.42**	**351**	*e*PKPdf	**PKPdf**	**07 52 36.1**	**+0.8**
	baz=18,slow=1.5						
GEC2				*e*PKPbc	**PKPbc**	**07 52 39.3**	**+0.4**
	baz=8.8,slow=3.0						
GERES	**GERESS Array B**	**148.42**	**351**	PKPbc	**PKPbc**	**07 52 39.6**	**+0.8**
	comp=Z,16nm,0.8s,baz=14,slow=2.8,SNR=74						
TNR	**Turnu Rosu**	**148.44**	**336**	⇑P	**PKiKP**	**07 52 40.1**	**-0.4**
TNR	**Turnu Rosu**	**148.44**	**336**	⇑PKP2	**PKiKP**	**07 52 40.1**	**-0.4**
ARR	**Arges**	**148.53**	**335**	⇑P	**PKiKP**	**07 52 41.3**	**+0.6**
SAHE	**Sakarya_HENDEK**	**148.80**	**323**	⇓P	**PKiKP**	**07 52 41.0**	**-0.4**
SIRR	**Siria**	**148.87**	**339**	⇓P	**PKiKP**	**07 52 40.9**	**-0.4**
CONA	**Conrad Observa**	**148.91**	**348**	*e*PKiKP	**PKPbc**	**07 52 41.0**	**+0.8**
	comp=Z,73nm,1.4s,SNR=23						
STU	**Stuttgart**	**148.97**	**356**	*e*PKPdf	**PKPdf**	**07 52 37.6**	**+1.5**
	baz=18,slow=1.5						
STU				*e*PKPbc	**PKPbc**	**07 52 40.5**	**+0.4**
	baz=8.8,slow=3.0						
PRD	**Provadia**	**149.03**	**329**	P	**PKPdf**	**07 52 36.8**	**+0.5**
RONA	**Rosalia, Austr**	**149.04**	**347**	*i* PKP	**PKPdf**	**07 52 37.0**	**+0.7**
	comp=Z,59nm,1.1s,SNR=49						
GZR	**Gura Zlata**	**149.23**	**337**	⇓P	**PKiKP**	**07 52 41.7**	**-0.5**
GZR	**Gura Zlata**	**149.23**	**337**	⇓PKP2	**PKiKP**	**07 52 41.7**	**-0.5**
MOA	**Molln**	**149.29**	**350**	*i* PKiKP	**PKPbc**	**07 52 41.8**	**+0.8**
	comp=Z,31nm,1.2s,SNR=19						
SILT	**Sile**	**149.29**	**324**	⇑P	**PKiKP**	**07 52 42.4**	**+0.1**
FUR	**Furstenfeldbru**	**149.40**	**354**	*e*PKPdf	**PKPdf**	**07 52 37.3**	**+0.5**
	baz=18,slow=1.5						
FUR				*e*PKPbc	**PKPbc**	**07 52 41.8**	**+0.5**
	baz=8.8,slow=3.0						
BZS	**Buzias**	**149.45**	**339**	⇓P	**PKPbc**	**07 52 41.8**	**+0.4**
BZS	**Buzias**	**149.45**	**339**	⇓PKP2	**PKPbc**	**07 52 41.8**	**+0.4**
BFO	**Black Forest**	**149.46**	**357**	*e*PKPdf	**PKPdf**	**07 52 37.9**	**+1.0**
	baz=18,slow=1.5						
BFO				*e*PKPbc	**PKPbc**	**07 52 41.9**	**+0.5**
	baz=8.8,slow=3.0						
BIOA	**Bad Ischl, Aus**	**149.55**	**350**	*i* PKP	**PKPbc**	**07 52 41.8**	**+0.1**
	comp=Z,22nm,1.2s,SNR=11						
SZH	**Strazhitsa**	**149.63**	**331**	P	**PKiKP**	**07 52 42.8**	**-0.2**
ARSA	**Arzberg**	**149.63**	**348**	*i* PKiKP	**PKiKP**	**07 52 42.6**	**-0.3**
	comp=Z,32nm,1.6s,SNR=14						
RJOB	**Jochberg**	**149.63**	**351**	*e*PKPdf	**PKPdf**	**07 52 38.0**	**+0.8**
	baz=18,slow=1.5						
RJOB				*e*PKPbc	**PKPbc**	**07 52 42.2**	**+0.3**
	baz=8.8,slow=3.0						
HERR	**Herculane**	**149.80**	**337**	⇑P	**PKiKP**	**07 52 43.2**	**-0.1**
MMAI	**Mount Meron Ar**	**149.82**	**306**	PKPbc	**PKiKP**	**07 52 43.5**	**-0.3**
	comp=Z,28nm,0.7s,baz=70,slow=2.7,SNR=28						
MMAI				PKPab	**PKPab**	**07 52 49.5**	**+1.1**
	comp=Z,84nm,0.9s,baz=68,slow=4.7,SNR=22						
MORH	**Mrgy, Hungar**	**149.84**	**343**	⇓P	**PKiKP**	**07 52 43.2**	**-0.1**
LESA	**Schwarzleotal**	**149.96**	**351**	*i* PKP	**PKPdf**	**07 52 38.6**	**+0.8**
	comp=Z,27nm,1.4s,SNR=8.9						
JMB	**Yambol**	**149.96**	**329**	P	**PKiKP**	**07 52 43.8**	**+0.2**
UBR	**Ueberruh**	**149.99**	**355**	*e*PKPdf	**PKPdf**	**07 52 38.6**	**+0.8**
	baz=18,slow=1.5						
UBR				*e*PKPbc	**PKPbc**	**07 52 43.2**	**+0.4**
	baz=8.8,slow=3.0						
RETA	**Reutte**	**150.12**	**354**	*i* PKiKP	**PKiKP**	**07 52 43.8**	**-0.2**
	comp=Z,30nm,1.0s,SNR=17						
MDVR	**Moldovita**	**150.14**	**338**	⇑P	**PKiKP**	**07 52 44.3**	**+0.2**
WATA	**Walderalm**	**150.19**	**353**	*i* PKP	**PKPdf**	**07 52 39.2**	**+0.9**
	comp=Z,62nm,1.6s,SNR=15						
MOTA	**Moosalm**	**150.23**	**354**	*i* PKP	**PKPdf**	**07 52 39.3**	**+0.9**
	comp=Z,62nm,1.2s,SNR=22						
WTTA	**Wattenberg**	**150.25**	**353**	*i* PKiKP	**PKPbc**	**07 52 43.9**	**+0.3**
	comp=Z,25nm,0.7s,SNR=18						
SOKA	**Soboth**	**150.28**	**348**	*i* PKP	**PKPdf**	**07 52 38.5**	**+0.2**

	comp=Z,45nm,1.4s,SNR=34						
SQTA	Sankt Quirin	150.34	353	i PKP	PKPdf	07 52 39.5	+1.1
	comp=Z,57nm,1.5s,SNR=15						
DAVA	Damuels	150.40	355	i PKiKP	PKiKP	07 52 44.6	-0.1
	comp=Z,46nm,1.0s,SNR=18						
OBKA	Obir	150.53	348	i PKP	PKPdf	07 52 40.0	+1.2
	comp=Z,29nm,1.6s,SNR=8.4						
MPEP	Malo Peshtene	150.54	334	P	PKPbc	07 52 43.6	-0.6
MYKA	Terra Mystica	150.58	350	ePKP	PKPbc	07 52 44.2	0.0
	comp=Z,60nm,1.8s,SNR=15						
FETA	Feichten	150.59	354	i PKP	PKPdf	07 52 40.1	+1.2
	comp=Z,42nm,0.9s,SNR=15						
ABTA	Abfaltersbach	150.64	351	i PKP	PKPbc	07 52 44.3	-0.1
	comp=Z,48nm,0.8s						
BAND	Balkesir-Ban	150.69	325	⇓P	PKiKP	07 52 45.4	+0.1
DAVOX	Davos/Dischmat	150.90	355	PKPbc	PKiKP	07 52 45.7	-0.1
	comp=Z,27nm,0.8s,baz=166,slow=0.5,SNR=26						
LJU	Ljubljana	150.98	348	ePKPdf	PKPdf	07 52 40.0	+0.6
LJU				i PKPbc	PKiKP	07 52 45.6	-0.1
BOVS	Bovan	151.12	337	⇑P	PKiKP	07 52 46.3	+0.3
KDZ	Kurdzhali	151.19	330	P	PKPbc	07 52 45.5	-0.2
KDZ	Kurdzhali	151.19	330	P	PKPbc	07 52 45.9	+0.2
CEY	Cerknica	151.30	348	ePKPdf	PKPdf	07 52 40.4	+0.5
CEY				ePKPbc	PKPbc	07 52 46.2	+0.3
BOJS	Bojanci	151.35	347	i PKPdf	PKPdf	07 52 40.8	+0.9
BOJS				ePKPbc	PKiKP	07 52 46.9	+0.5
VTS	Vitosha	151.36	333	P	PKiKP	07 52 46.7	-0.1
VTS	Vitosha	151.36	333	P	PKiKP	07 52 46.9	+0.2
ALN	Alexandroupoli	151.39	328	P	PKPbc	07 52 45.7	-0.5
PLNA	Plana	151.39	333	P	PKPdf	07 52 41.2	+1.0
RZN	Rozhen	151.42	330	P	PKPbc	07 52 46.8	+0.3
RDO	Rodhopi	151.46	329	P	PKPbc	07 52 46.1	-0.2
GADA	Gvkgeada	151.99	327	P	PKPbc	07 52 47.7	+0.1
MMB	Musomishta	152.00	332	P	PKPbc	07 52 45.8	-1.8
MMB	Musomishta	152.00	332	P	PKPbc	07 52 46.9	-0.7
EZN	Ezine	152.03	326	P	PKiKP	07 52 48.4	+0.4
EZN	Ezine	152.03	326	⇑P	PKiKP	07 52 48.4	+0.4
EZN	Ezine	152.03	326	⇑PKIKP	PKiKP	07 52 48.4	+0.4
KKB	Krupnik	152.04	333	P	PKPbc	07 52 47.6	0.0
KAVA	Kavala	152.07	330	P	PKPbc	07 52 47.8	0.0
THAS	Thassos island	152.27	329	P	PKPbc	07 52 47.7	-0.5
SRS	Serrai	152.41	331	P	PKPbc	07 52 47.2	-1.3
PRK	Paraskevi	152.47	325	P	PKPbc	07 52 48.7	0.0
LIA	Limnos Island	152.57	327	P	PKiKP	07 52 49.2	+0.1
SKO	Skopje	152.64	335	i P	PKiKP	07 52 49.8	+0.6
BLCB	Balcova	152.64	323	P	PKPab	07 53 00.5	+0.8
KNT	Kendrikon	152.69	332	P	PKPbc	07 52 47.9	-1.3
VAY	Valandovo	152.70	333	i P	PKPbc	07 52 49.0	-0.2
PGAV	Gavieira, Arco	152.80	24	ePKPbc	PKiKP	07 52 50.0	+0.3
PGAV				ePKPab	PKPab	07 53 01.0	+0.6
PGAV				eLR	LR	08 44 30.2	
PGAV				i AMs_20		08 52 45.3	
	comp=Z,138nm,22.0s						
PCAB	Cabril	153.12	24	ePKPdf	PKPdf	07 52 45.1	+2.4
PCAB				ePKPbc	PKiKP	07 52 50.8	+0.5
PCAB				ePKPab	sPKPdf	07 53 02.3	-0.8
BODT	Bodrum	153.36	320	P	PKPbc	07 52 50.3	-0.5
POLO	Lamas de Olo	153.49	24	ePKPdf	PKPdf	07 52 44.7	+1.4
POLO				ePKPbc	PKiKP	07 52 51.8	+0.6
POLO				ePKPab	PKPab	07 53 04.2	+0.9
PBRG	Braganca	153.52	22	ePKPbc	PKiKP	07 52 51.6	+0.5
PBRG				ePKPab	PKPab	07 53 03.9	+0.5
PVRL	Vila Real	153.61	24	ePKiKP	PKiKP	07 52 52.1	+0.8
PVRL				ePKPab	PKPab	07 53 04.0	+0.2
OHR	Ohrid	153.62	335	i P	PKPdf	07 52 44.4	+0.9
MVO	Moncorvo	153.97	24	ePKPdf	PKPdf	07 52 45.7	+1.7
MVO				ePKPbc	PKiKP	07 52 52.9	+0.8
MVO				ePKPab	pPKPbc	07 53 06.1	-0.9
MVO				eLR	LR	08 44 47.4	
MVO				i AMs_20		08 53 44.9	
	comp=Z,95nm,24.0s						
PMOZ	Porto Moniz, M	154.01	50	ePKPab	PKPab	07 53 07.1	+1.2
PMOZ				eLR	LR	08 45 12.1	
PMOZ				i AMs_20		08 53 44.4	
	comp=Z,147nm,24.0s						
PVIS	Viseu	154.01	25	ePKPbc	PKiKP	07 52 52.9	+0.7
PVIS				ePKPab	PKPab	07 53 05.5	0.0
PMAR	Madeira	154.27	50	ePKPab	PKPab	07 53 08.3	+1.2
PCAS	Casmilo, Conde	154.31	27	ePKPdf	PKPdf	07 52 46.2	+1.8
PCAS				ePKPbc	PKiKP	07 52 53.2	+0.4
PCAS				ePKPab	pPKPbc	07 53 07.3	-0.4
KPRO	Kipourio	154.35	333	P	PKPbc	07 52 50.7	-2.1
MTE	Manteigas	154.42	25	ePKPdf	PKPdf	07 52 46.5	+1.9
MTE				ePKPbc	PKiKP	07 52 54.0	+0.9
MTE				eLR	LR	08 45 07.4	
MTE				i AMs_20		08 55 58.0	
	comp=Z,81nm,20.0s						
PSBE	So Bento	154.62	28	ePKPbc	PKiKP	07 52 54.2	+0.8
PSBE				ePKPab	PKPab	07 53 08.9	+0.8
PSARD	Sardoal	154.83	27	ePKPdf	PKPdf	07 52 46.7	+1.5
PSARD				ePKPbc	PKPbc	07 52 54.0	+0.1
PSARD				ePKPab	PKPab	07 53 09.3	+0.3
PCBR	Castelo Branco	154.92	26	ePKPdf	PKPdf	07 52 46.5	+1.3
PCBR				ePKPbc	PKiKP	07 52 54.7	+0.7
ANX	Ano Chora	155.19	330	P	PKPdf	07 52 46.6	+0.8
PMTG	Montargil	155.24	28	ePKPdf	PKPdf	07 52 46.7	+1.0
PMTG				ePKPbc	pPKPdf	07 52 55.4	-5.4
PMTG				ePKPab	pPKPbc	07 53 09.5	-0.1
PMRV	Marv??o	155.30	26	ePKPdf	PKPdf	07 52 47.2	+1.4
PMRV				ePKPbc	pPKPdf	07 52 54.8	-6.1
PMRV				ePKPab	PKPab	07 53 11.1	+0.1
PMRV				eLR	LR	08 45 18.8	
PMRV				i AMs_20		08 55 48.5	
	comp=Z,154nm,20.0s						
PESTR	Estremoz	155.69	27	ePKPdf	PKPdf	07 52 48.1	+1.7
PESTR				ePKPab	PKPab	07 53 12.8	+0.1
EVO	Evora	155.77	28	ePKPab	PKPab	07 53 13.4	+0.3
DRO	Drossia	155.80	329	P	PKPab	07 53 13.5	+0.3
FSK	Fiskardo	155.93	332	P	PKPab	07 53 14.5	+0.8
IDI	Anoyia	156.00	320	P	PKPab	07 53 14.2	0.0
IDI	Anoyia	156.00	320	PKP	PKPdf	07 52 48.3	+1.3
	comp=Z,6.3nm,0.9s,baz=144,slow=4.3,SNR=4.0						
IDI				PKPab	PKPab	07 53 14.6	+0.4
	comp=Z,16nm,0.9s,baz=177,slow=5.0,SNR=5.7						
VLI	Veliai	156.12	326	P	PKPab	07 53 12.1	-2.5
PTEO	Sao Teotonio	156.23	31	ePKPdf	PKPdf	07 52 48.8	+1.7
PTEO				ePKPab	PKPab	07 53 15.3	+0.3
MESJ	Messejana	156.24	30	ePKPdf	PKPdf	07 52 48.6	+1.5
MESJ	Messejana	156.24	30	ePKPdf	PKPdf	07 52 48.5	+1.5
PBEJ	Beja	156.25	29	ePKPdf	PKPdf	07 52 48.5	+1.4
ESDC	Sonseca Array	156.38	20	PKP	PKPdf	07 52 48.4	+1.1
	comp=Z,1.6nm,1.0s,baz=327,slow=2.6,SNR=9.4						
ESDC				PKPab	PKPab	07 53 15.5	-0.1
	comp=Z,3.7nm,1.0s,baz=8.8,slow=3.5,SNR=4.0						
ESDC				PP	PP	07 56 53.9	+1.3
	comp=Z,0.3nm,0.4s,baz=341,slow=4.8,SNR=4.4						
MORF	Marmelete	156.45	31	ePKPdf	PKPdf	07 52 49.1	+1.6
MORF	Marmelete	156.45	31	ePKPdf	PKPdf	07 52 49.2	+1.8
MORF				ePKPab	PKPab	07 53 17.3	+1.2
MORF	Marmelete	156.45	31	ePKIKP	PKPdf	07 52 49.2	+1.8
PCVE	Castro Verde	156.49	30	ePKPab	PKPab	07 53 16.6	+0.5
PFVI	Vila Bisbo	156.50	32	ePKPdf	PKPdf	07 52 49.3	+1.9
PFVI				ePKPab	PKPab	07 53 13.2	-3.0
PBAR	Barrancos	156.50	27	ePKPdf	PKPdf	07 52 49.1	+1.7
PBAR				ePKPab	PKPab	07 53 15.7	-0.5
PVAQ	Vaqueiros	156.82	30	ePKPab	PKPab	07 53 18.6	+1.0
KEST	Kesra	161.90	352	PKP	PKPdf	07 52 54.7	+0.8
	comp=Z,1.5nm,0.5s,baz=29,slow=7.6,SNR=4.1						
MDT	Midelt	162.03	31	PKP	PKPdf	07 52 54.5	+0.4
	comp=Z,7.0nm,0.8s,baz=257,slow=2.8,SNR=7.3						
MDT				PKPab	PKPab	07 53 40.6	+0.1
	comp=Z,8.9nm,0.8s,baz=329,slow=3.6,SNR=6.7						
DBIC	Dimbokro	164.46	134	PKPab	PKPab	07 53 51.7	+0.2
	comp=Z,9.2nm,0.8s,baz=240,slow=5.4,SNR=5.1						
TORD	Torodi Ar. Bea	173.57	135	PKP	PKPdf	07 53 01.8	-0.7
	comp=Z,3.8nm,0.8s,baz=349,slow=2.8,SNR=8.0						
TORD				PKPab	PKPab	07 54 32.0	+0.2
	comp=Z,9.4nm,0.9s,baz=286,slow=3.6,SNR=12						

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*ASRS **20** 07:35:48.0±0.4, 53°.95N×86°.59E, h0^{km}, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 20 07:35:52.0±2.6**, 53°.97N×86°.50E, h0^{km}, mbtmp2.8**/2**, ML2.6**/2**, Error ellipse: s-maj=21.5km s-min=12.8km az=63.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.99	270	I	I	07 42 50.0	
	baz=88,slow=322,SNR=4.5						
ZALV	Zalesovo Beam	0.99	270	Pg	Pg	07 36 10.0	-1.0
	1.0nm,0.3s,baz=88,slow=18,SNR=8.3						
ZALV				Lg	Lg	07 36 25.1	
	1.8nm,0.3s,baz=90,slow=28,SNR=10						
KURBB	Kurchatov Arra	5.93	239	Pn	Pn	07 37 22.5	+1.5
	0.1nm,0.3s,baz=54,slow=14,SNR=3.2						
	0.3nm,0.2s						
MKAR	Makanchi Array	7.67	202	Pn	Pn	07 37 45.9	+0.9
	0.2nm,0.3s,baz=26,slow=14,SNR=7.2						
	0.2nm,0.3s						

IDC 20 07:53:01.4±2.2**, 24°.48S×176°.40W, h0^{km}, mb4.0**/3**, mbtmp4.0**/3**, MS3.3**/3**, Error ellipse: s-maj=71.5km s-min=48.0km az=17.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.48	321	LR	LR	07 57 48.5	
	comp=Z,116nm,20.5s,baz=209,slow=34						
PPT	Papeete	25.94	80	LR	LR	08 07 04.4	
	comp=Z,34nm,19.4s,baz=179,slow=32						
PMG	Port Moresby	37.80	287	LR	LR	08 12 36.4	
	comp=Z,133nm,19.0s,baz=131,slow=31						
ASAR	Alice Springs	45.18	260	P	P	08 01 20.5	+0.1
	2.0nm,0.8s,baz=101,slow=8.5,SNR=13						
	2.0nm,0.8s						
WRA	Warramunga Arr	45.64	266	P	P	08 01 23.5	-0.5
	0.9nm,0.4s,baz=109,slow=8.1,SNR=1.8						
	0.9nm,0.4s						
H03S2	Juan Fernandez	82.54	124	T	T	09 36 24.8	
	baz=244,slow=75,SNR=34						
H03S1	Juan Fernandez	82.55	124	T	T	09 36 21.0	
	baz=244,slow=75,SNR=36						
H03S3	Juan Fernandez	82.56	124	T	T	09 36 25.0	
	baz=244,slow=75,SNR=34						
H03N2	Juan Fernandez	82.70	123	T	T	09 36 30.2	
	baz=250,slow=72,SNR=31						
H03N3	Juan Fernandez	82.70	123	T	T	09 36 28.4	
	baz=250,slow=72,SNR=56						
H03N1	Juan Fernandez	82.72	123	T	T	09 36 25.9	
	baz=250,slow=72,SNR=31						
SNAA	Sanae	84.00	178	P	P	08 05 33.4	+0.1
	1.4nm,0.9s,baz=194,slow=4.2,SNR=3.9						
	1.4nm,0.9s						
AKASG	Malin Array Be	147.19	330	PKPbc	PKPbc	08 12 45.5	-0.9
	0.7nm,0.4s,baz=46,slow=4.4,SNR=4.6						

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*MEX **20** 07:54:14.4±0.7, 14°.81N×92°.39W, h98^{km}±8^{km}, MD3.7*
*GCG **20** 07:54:14.8±0.3, 14°.91N×92°.27W, h86^{km}±3^{km}, MD3.2*
ISC 20 07:54:10.5±2.5**, 14°.6N**±0°.1×**92°.44W**±0°.10**, h102^{km}**±14^{km}**, n11, σ1^{s}97**/21**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.39	27	i P	Pn	07 54 27.3	+1.5
THIG				i S	Sn	07 54 36.7	-0.4
SMCA	Catarina	0.46	50	i P	Pn	07 54 27.3	+1.1
SMCA				i S	Sn	07 54 36.9	-1.1
PATR	El Naranjo	0.59	20	eP	Pn	07 54 27.6	+0.2
PATR				eS	Sn	07 54 38.1	-2.0
PAVE	Pavencul	0.68	22	eP	Pn	07 54 28.6	+0.4
PAVE				eS	Sn	07 54 39.4	-2.0
RTAL	Retalhuleu	0.72	93	eP	Pn	07 54 30.6	+2.3
RTAL				eS	Sn	07 54 43.6	+2.0
STG8	El Palmar, Qui	1.06	96	i P	Pn	07 54 31.4	-0.5
STG0	El Palmar, Qui	1.07	97	eP	Pn	07 54 31.6	-0.4
STG0				i S	Sn	07 54 44.7	-3.6
HUEH	Huehuetenango	1.18	50	eP	Pn	07 54 35.8	+2.5
HUEH				eS	Sn	07 54 50.2	-0.2
PCIG		1.36	327	eP	Pn	07 54 36.8	+1.6
PCIG				eS	Sn	07 54 52.7	-1.1
CCIG	Comitan	1.74	10	eP	Pn	07 54 41.6	+1.7
CCIG				eS	Sn	07 55 01.7	-0.6
TGIG		2.30	344	eP	Pn	07 54 48.5	+1.4
TGIG				eS	Sn	07 55 11.2	-3.9

IDC 20 07:54:51.0±2.2**, 6°.87S×129°.05E, h0^{km}, mb3.5**/1**, mbtmp3.9**/5**, ML4.0**/4**, Error ellipse: s-maj=52.2km s-min=29.1km az=79.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.27	238	Pn	Pn	07 56 24.8	-0.1
	22nm,0.3s,baz=334,slow=4.3,SNR=5.2						
BATI				Sn	Sn	07 57 31.9	-5.5
	14nm,0.3s,baz=98,slow=19,SNR=2.1						
	24nm,0.4s						
FITZ	Fitzroy Crossi	11.65	196	Pn	Pn	07 57 38.1	-0.4
	1.3nm,0.3s,baz=26,slow=9.4,SNR=24						
FITZ				Sn	Sn	07 59 33.1	-16
	1.3nm,0.3s,baz=93,slow=22,SNR=5.8						
	4.8nm,0.5s						
WRA	Warramunga Arr	13.97	159	Pn	Pn	07 58 10.4	0.0
	0.3nm,0.3s,baz=342,slow=13,SNR=12						
WRA				Sn	Sn	08 00 33.1	-13
	1.4nm,0.3s,baz=338,slow=22,SNR=12						
	0.9nm,0.8s						
ASAR	Alice Springs	17.34	165	P	Pn	07 58 55.1	+0.5
	0.3nm,0.3s,baz=340,slow=10,SNR=39						
ASAR				S	Sn	08 01 56.3	-12
	0.6nm,0.5s,baz=344,slow=25,SNR=6.7						
	2.4nm,0.6s						
MKAR	Makanchi Array	67.60	327	P	P	08 05 49.6	0.0
	0.3nm,0.4s,baz=139,slow=6.8,SNR=3.5						
	0.3nm,0.4s						

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*TIF **20** 07:58:41.6, 43°.25N×46°.07E, h2^{km}±1^{km}*
*MOS **20** 07:58:41.1, 43°.21N×46°.17E, h7^{km}, MPVA4.2*
*NORS **20** 07:58:42.2, 43°.19N×46°.17E, h11^{km}, MPVA4.3*
*DRS **20** 07:58:43.6, 43°.20N×46°.12E, h15^{km}*
ISC 20 07:58:42.6±1.0**, 43°.23N**±0°.02×**46°.18E**±0°.02**, h14^{km}**±7^{km}**, n88, σ1^{s}41**/158**, 2C-2D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVE	Vedeno	0.28	188	i Pg	Pb	07 58 48.7	-0.7
DVE				eSg	Sb	07 58 52.4	-1.5
DVE	Vedeno	0.28	188	⇓iPG	Pb	07 58 48.8	-0.6
GROC	Groznyy	0.28	264	ePg	Pg	07 58 48.0	-0.5
GROC				eSg	Sg	07 58 51.8	-0.8
GROC	Groznyy	0.28	264	ePG	Pb	07 58 49.2	-0.2
GROC				eS	Sb	07 58 54.3	+0.3
DLMR	Dylym	0.37	116	ePg	Pb	07 58 50.9	0.0
DLMR				eSg	Sb	07 58 56.5	0.0
DLMR	Dylym	0.37	116	ePG	Pb	07 58 50.8	0.0
DLMR				eS	Sb	07 58 56.4	0.0
DLMR				pmax	pmax		
	comp=Z,122nm,0.2s						
BTLR	Botlikh	0.57	177	ePg	Pb	07 58 53.9	-0.5
BTLR				eSg	Sb	07 59 02.0	-0.3
BTLR	Botlikh	0.57	177	ePG	Pb	07 58 53.8	-0.5
BTLR				eS	Sb	07 59 02.0	-0.3
KRNR	Karanay	0.67	127	ePg	Pb	07 58 55.6	-0.5
KRNR				eSg	Sb	07 59 05.4	+0.2
KRNR	Karanay	0.67	127	ePG	Pb	07 58 55.6	-0.5
KRNR				eS	Sb	07 59 05.4	+0.2
UNCR	Uncukul	0.69	139	ePg	Pb	07 58 56.5	+0.1
UNCR				eSg	Sb	07 59 06.5	+0.8
UNCR	Uncukul	0.69	139	ePG	Pb	07 58 56.4	+0.1
UNCR				eS	Sb	07 59 06.5	+0.8
UNCR				pmax	pmax		
	comp=Z,141nm,0.4s						
HNZR	Khunzah	0.78	150	ePG	Pb	07 58 58.1	+0.1
HNZR				eS	Sb	07 59 09.3	+0.8
XNZR	Khunzakh	0.79	151	ePg	Pb	07 58 58.1	-0.1
XNZR				eSg	Sb	07 59 09.3	+0.5
BUJR	Buynaksk	0.79	121	ePg	Pn	07 59 00.6	+1.3
BUJR				eSg	Sn	07 59 11.8	+0.9
BUJR	Buynaksk	0.79	121	ePG	Pn	07 58 59.6	+0.3
BUJR				eS	Sn	07 59 11.8	+0.9
BUJR				pmax	pmax		
	comp=Z,131nm,0.4s						
ARKR	Arakani	0.87	136	ePg	Pn	07 58 59.9	-0.6
ARKR				eSg	Sn	07 59 12.3	-0.5
ARKR	Arakani	0.87	136	ePG	Pn	07 58 59.8	-0.6
ARKR				eS	Sn	07 59 12.3	-0.5
ARKR				pmax	pmax		
	comp=Z,69nm,0.2s						
SHTL	Shatili	0.95	233	P	Pb	07 59 00.3	-0.6
SHTL				S	Sb	07 59 12.9	-0.5
SHTL	Shatili	0.95	233	PG	Pb	07 59 00.3	-0.6
SHTL				S	Sb	07 59 12.9	-0.5
KANR	Karaman	0.96	92	ePg	Pn	07 59 02.0	+0.5
KANR				eSg	Sn	07 59 16.1	+1.2
KANR	Karaman	0.96	92	ePG	Pn	07 59 02.0	+0.5
KANR				eS	Sn	07 59 16.1	+1.2
KMGR	Komgaron	0.98	260	ePg	Pn	07 59 02.8	+0.9
KMGR				eSg	Sn	07 59 18.1	+2.5
KMGR	Komgaron	0.98	260	ePG	Pn	07 59 02.8	+0.9
KMGR				eS	Sn	07 59 18.1	+2.5
MAK	Makhachkala	1.01	105	ePg	Pn	07 59 03.4	+1.1
MAK				eSg	Sn	07 59 18.1	+1.9
MAK	Makhachkala	1.01	105	⇓iPG	Pn	07 59 02.1	-0.1
MAK				eS	Sn	07 59 17.0	+0.8
MAK				pmax	pmax		
	comp=Z,189nm,0.3s						
MAK				smax	smax		
	comp=N,547nm,0.5s						
MAK				smax	smax		
	comp=N,672nm,0.4s						
GNBR	Gunib	1.02	145	ePg	Pn	07 59 03.1	+0.6
GNBR				eSg	Sn	07 59 18.1	+1.4
GNBR	Gunib	1.02	145	ePG	Pn	07 59 03.5	+1.0
GNBR				eS	Sn	07 59 18.7	+2.1
VLKR	Vladikavkaz	1.12	261	i PG	Pn	07 59 05.1	+1.3
VLKR				eS	Sn	07 59 22.0	+3.0
TRKR	Terskaya	1.16	295	ePG	Pg	07 59 05.3	+0.3
TRKR				eS	Sn	07 59 22.6	+2.5
BTKR	Batakoyurt	1.21	277	ePg	Pg	07 59 06.7	+0.9
BTKR				eSg	Sn	07 59 24.3	+3.1
BTKR	Batakoyurt	1.21	277	ePG	Pg	07 59 06.7	+0.9
BTKR				eS	Sn	07 59 24.3	+3.1
CHRG	Chargali	1.29	226	P	Pg	07 59 06.5	-1.0
CHRG				S	Sg	07 59 23.7	-0.6
KMKR	Kumukh	1.29	148	ePg	Pg	07 59 08.0	+0.5
KMKR				eSg	Sn	07 59 26.4	+2.9
KMKR	Kumukh	1.29	148	ePG	Pg	07 59 08.0	+0.5
KMKR				eS	Sn	07 59 26.4	+2.9
ARNR	Ardon	1.39	269	ePg	Pg	07 59 08.9	-0.4
ARNR				eSg	Sg	07 59 29.4	+2.0
ARNR	Ardon	1.39	269	ePG	Pg	07 59 09.0	-0.3
ARNR				eS	Sg	07 59 29.4	+2.0
GUDG	Gudauri	1.47	239	ePg	Pg	07 59 09.7	-1.2
GUDG				eSg	Sg	07 59 29.1	-0.9
GUDG	Gudauri	1.47	239	ePG	Pg	07 59 09.7	-1.2
PRTR	Priterechnaya	1.48	291	ePg	Pg	07 59 10.4	-0.6
PRTR				eSg	Sg	07 59 31.8	+1.6
PRTR	Priterechnaya	1.48	291	ePG	Pg	07 59 10.4	-0.6
PRTR				eS	Sg	07 59 31.8	+1.6
URKR	Urkarakh	1.51	134	ePg	Pg	07 59 11.8	+0.2
URKR				eSg	Sg	07 59 33.5	+2.2
URKR	Urkarakh	1.51	134	ePG	Pg	07 59 11.8	+0.2
URKR				eS	Sg	07 59 33.5	+2.2
STDR	Stavd-Durt	1.55	276	ePg	Pg	07 59 11.8	-0.6
STDR				eSg	Sg	07 59 33.9	+1.3
STDR	Stavd-Durt	1.55	276	ePG	Pg	07 59 11.8	-0.6
STDR				eS	Sg	07 59 33.9	+1.3
KORR	Kora	1.55	265	ePG	Pg	07 59 11.6	-0.8
KORR				eS	Sg	07 59 33.6	+1.0
LSNR	Lesken	1.72	272	ePg	Pb	07 59 14.2	+0.1
LSNR				eSg	Sg	07 59 38.8	+0.8
LSNR	Lesken	1.72	272	ePN	Pb	07 59 14.1	+0.1
LSNR				eS	Sg	07 59 38.8	+0.8
SEAG	Tbilisi Sea	1.79	215	P	Pg	07 59 16.0	-0.9
SEAG				S	Sg	07 59 40.5	+0.4
SEAG	Tbilisi Sea	1.79	215	PN	Pg	07 59 16.0	-0.9
TBLG	Delisi	1.84	216	P	Pg	07 59 16.6	-1.3
TBLG				S	Sg	07 59 41.5	-0.3
TBLG	Delisi	1.84	216	ePN	Pg	07 59 16.6	-1.3
BTNK	Botanikuri	1.85	214	PN	Pg	07 59 17.2	-1.0
DGRG	David-gareji	1.88	199	P	Pg	07 59 18.6	0.0
DGRG				S	Sg	07 59 43.6	+0.6
DGRG	David-gareji	1.88	199	PN	Pg	07 59 18.6	0.0
NCK	Nalchik	1.90	279	ePg	Pn	07 59 13.6	-1.0
NCK				eSg	Sb	07 59 41.3	+0.6
NCK	Nalchik	1.90	279	ePN	Pn	07 59 13.6	-1.0
NCK				eS	Sb	07 59 41.3	+0.6
DIGR	Digorskoe uzhe	1.93	261	ePg	Pb	07 59 16.9	-0.8
DIGR				eSg	Sb	07 59 42.6	+0.9
DIGR	Digorskoe uzhe	1.93	261	ePN	Pb	07 59 16.9	-0.8
VSHL	Vashlovani	2.01	175	P	Pg	07 59 19.7	-1.4
VSHL				S	Sg	07 59 48.1	+1.0
GARIG	Gari	2.09	253	P	Pb	07 59 19.0	-1.2
GARIG				S	Sg	07 59 47.4	-2.3
AKT	Akhty	2.09	146	ePN	Pg	07 59 21.5	-1.3
AKT				eS	Sb	07 59 45.4	-0.8
KBTC	Kuba-Taba	2.10	287	ePg	Pn	07 59 17.2	-0.2
KBTC				eSg	Sn	07 59 44.6	+1.3
KBTC	Kuba-Taba	2.10	287	ePN	Pn	07 59 17.2	-0.2
KBTC				eS	Sn	07 59 44.6	+1.3
SEKA	Sheki	2.16	159	PN	Pb	07 59 21.2	-0.2
KSMR	Kasumkent	2.17	138	ePg	Pb	07 59 20.7	-1.0
KSMR				eSg	Sb	07 59 49.8	+1.3
KSMR	Kasumkent	2.17	138	ePN	Pb	07 59 20.7	-1.0
KSMR				eS	Sb	07 59 49.8	+1.3
KBZ	Khabaz	2.44	283	i Pn	Pn	07 59 21.2	-0.8
KBZ				eSn	Sn	07 59 53.1	+1.5
KBZ	Khabaz	2.44	283	i PN	Pn	07 59 21.2	-0.8
KBZ				eS	Sn	07 59 53.1	+1.5
BEYR	Belyy Ugol+	2.56	289	ePN	Pn	07 59 23.2	-0.5
BEYR				eS	Sn	07 59 56.6	+1.9
GANJ	Ganja	2.59	178	PN	Pn	07 59 25.9	+1.9
SHA1	Shidzhatmaz	2.61	282	ePn	Pn	07 59 23.8	-0.8
SHA1				eSn	Sn	07 59 57.6	+1.4
SHA1	Shidzhatmaz	2.61	282	ePN	Pn	07 59 24.0	-0.6
SHA1				eS	Sn	07 59 57.8	+1.6
KIV	Kislovodsk	2.64	287	ePn	Pn	07 59 23.6	-1.2
KIV				eSn	Sb	07 59 59.4	-2.6
KIV	Kislovodsk	2.64	287	ePN	Pn	07 59 23.6	-1.2
KIV				eS	Sb	07 59 59.4	-2.6
GOF	Gofitskoye	2.91	310	c ePN	Pn	07 59 21.9	-6.5
GOF				eS	Sn	08 00 06.2	+3.2
GNI	Garni	3.26	200	i PN	Pn	07 59 34.8	+1.4
GNI				pmax	pmax		
	comp=Z,21nm,1.0s						
RPOR	Krasnaya Polya	4.33	278	i PN	Pn	07 59 49.6	+1.6
GUZR	Guzeripl'	4.47	282	i PN	Pn	07 59 51.6	+1.7
GUZR				i S	Sn	08 00 46.3	+4.6
GUZR				pmax	pmax		
	comp=Z,41nm,1.2s						
GUZR				smax	smax		
	comp=Z,125nm,0.7s						
GOYR	Goytkh	5.03	284	i PN	Pn	07 59 59.1	+1.5
GOYR				i S	Sn	08 01 00.2	+4.7
GOYR				pmax	pmax		
	comp=Z,28nm,1.1s						
GOYR				smax	smax		
	comp=Z,40nm,1.3s						
AKTO	Aktyubinsk	10.84	44	Pn	Pn	08 01 17.8	+0.6
	comp=Z,0.3nm,0.3s						
AKTO				Sn	Sn	08 03 07.9	-10
	comp=Z,2.1nm,0.7s						
AKTO	Aktyubinsk	10.84	44	P	Pn	08 01 17.7	+0.6
AB31	Akbulak array	11.27	53	Pn	Pn	08 01 23.6	+0.6
	comp=Z,0.4nm,0.5s,baz=246,slow=12,SNR=17						
AB31				Sn	Sn	08 03 24.4	-4.2
	comp=Z,2.2nm,0.6s,baz=253,slow=23,SNR=5.4						
AB31	Akbulak array	11.27	53	P	Pn	08 01 23.6	+0.6
AB31				S	Sn	08 03 24.4	-4.2
OBN	Obninsk	13.43	336	⇑eP	Pn	08 01 52.2	-0.4
OBN				pmax	pmax		
	comp=Z,24nm,0.4s						
OBN				MLR	MLR		
	comp=Z,30nm,20.0s						
BRVK	Borovoye	18.76	50	i P	P	08 03 00.1	-0.9
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURK	Kurchatov	23.22	60	i P	P	08 03 48.2	-0.8
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	Warramunga Arr	102.08	106	i P	Pdif	08 12 34.8	-1.8
WRA				pmax	pmax		
	comp=Z,1.0nm,0.3s						

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*NEIC **20** 08:00:16.8±1.2, 52°.9N±0°.2×171°.28E±0°.09, h10^{km}±1^{km}, mb3.8/23, Error ellipse: s-maj=28.3km s-min=9.0km az=181.0*
*IDC **20** 08:00:16.4±1.3, 53°.07N×171°.35E, h0^{km}, mb3.6/12, mbtmp3.6/13, ML3.0/1, MS3.9/4, Error ellipse: s-maj=42.0km s-min=14.1km az=8.0*
ISC 20 08:00:18.8±0.9**, 52°.8N**±0°.2×**171°.28E**±0°.05**, h27^{km}, n59,**

σ1ˢ10/52, mb3.8/21, MS3.9/4, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHEM	Shemya Is, Ala	1.71	90	Pn	Pn	08 00 46.3	-0.5
SHEM				Sn	Sb	08 01 09.7	-0.9
SHEM	Shemya Is, Ala	1.71	90	Pn	Pn	08 00 47.2	+0.4
	31nm,0.3s,baz=186,slow=1.1,SNR=42						
SHEM				Sn	Sb	08 01 10.8	+0.1
	110nm,0.3s,baz=211,slow=22,SNR=30						
SMY	Shemya	1.71	90		Pn	08 00 46.9	+0.1
SMY				Sn	Sb	08 01 09.8	-0.9
AMKA	Amchitka	5.14	102	Pn	Pn	08 01 32.9	-1.0
ADK	Adak	7.43	92	Pn	Pn	08 02 04.5	-0.9
PEA0B	Petropavlovsk-	8.22	278	Pn	Pn	08 02 15.4	-0.8
PETK	Petropavlovsk-	8.22	278	Pn	Pn	08 02 15.6	-0.5
PETK	Petropavlovsk-	8.22	278	Pn	Pn	08 02 17.6	+1.5
	0.9nm,0.3s,baz=90,slow=20,SNR=20						
PETK				Sn	Sn	08 03 44.0	-4.0
	1.2nm,0.3s,baz=148,slow=31,SNR=6.4						
	1.5nm,0.4s						
ATKA	Atka Island	8.88	88	Pn	Pn	08 02 24.2	-1.1
K13K	Kusilvak Mount	15.81	45	P	P	08 04 01.3	-1.5
K13K				IAmb	IAmb	08 04 05.2	
	comp=Z,8.5nm,1.4s						
L14K	Kuka Creek	16.46	48	P	P	08 04 08.6	-1.4
L14K				IAmb	IAmb	08 04 12.4	
	comp=Z,6.8nm,1.2s						
K15K	Wolf Creek Mou	17.31	46	P	P	08 04 18.5	-0.9
H18K	Honhosa River	19.72	39		P	08 04 44.9	-1.0
G18K	Tagagawik	19.93	37	P	P	08 04 46.9	-1.3
SII	Sitkinak Islan	20.20	65	P	Pn	08 04 52.6	-0.6
C18K	Utukok River	20.55	29	P	P	08 04 54.0	-1.0
C18K				IAmb	IAmb	08 05 10.8	
	comp=Z,5.0nm,1.4s						
OHAK	Old Harbor	20.65	63	P	P	08 04 55.6	-0.5
OHAK				IAmb	IAmb	08 05 09.9	
	comp=Z,3.9nm,0.7s						
C19K	Lookout Ridge	21.29	29	P	P	08 05 02.4	-0.6
C19K				IAmb	IAmb	08 05 35.1	
	comp=Z,6.2nm,1.4s						
IMAR	Indian Mountai	21.81	39	P	P	08 05 07.9	-0.6
H21K	Melozitna Rive	22.07	40	P	P	08 05 09.7	-1.6
H21K				IAmb	IAmb	08 05 16.2	
	comp=Z,6.6nm,1.5s						
SUA	Susitna One	22.08	52	P	P	08 05 10.3	-1.2
SUA				IAmb	IAmb	08 05 31.7	
	comp=Z,5.1nm,1.2s						
G21K	Allakaket	22.09	38	P	P	08 05 10.0	-1.5
TRF	Thorofare Moun	22.57	47	P	P	08 05 16.4	-0.4
TRF				IAmb	IAmb	08 05 36.7	
	comp=Z,5.7nm,1.2s						
E22K	Anaktuvuk Pass	23.31	35	P	P	08 05 23.7	-0.6
E22K				IAmb	IAmb	08 05 26.9	
	comp=Z,2.3nm,1.1s						
SCM	Sheep Creek Mo	23.74	51	P	P	08 05 27.3	-1.2
E23K	Chandalar	24.05	36	P	P	08 05 30.7	-0.7
E23K				IAmb	IAmb	08 05 34.9	
	comp=Z,3.9nm,1.4s						
TOLK	Toolik Lake Re	24.27	34	P	P	08 05 31.9	-1.5
TOLK				IAmb	IAmb	08 05 40.4	
	comp=Z,2.3nm,0.7s						
ILAR	Eielson Array	24.27	44	P	P	08 05 31.9	-1.5
	comp=Z,0.3nm,0.4s,baz=254,slow=7.3,SNR=12						
	comp=Z,0.3nm,0.4s						
KLR	Kul'dur	24.91	278	P	P	08 05 40.8	+1.5
	comp=Z,0.8nm,0.4s,baz=39,slow=9.0,SNR=4.1						
	comp=Z,0.8nm,0.4s						
E25K	Arctic Village	25.52	37	P	P	08 05 43.3	-1.4
BMAR	Burnt Mountain	25.72	38	P	P	08 05 46.0	-0.5
L27K	Beaver Creek,	26.34	49	P	P	08 05 51.8	-0.4
L27K				IAmb	IAmb	08 06 18.1	
	comp=Z,2.9nm,1.1s						
TIXI	Tiksi	26.44	331	P	P	08 05 52.8	-0.1
TIXI				IAmb	IAmb	08 05 56.1	
	comp=Z,2.3nm,0.8s						
H11N2	WAKE ISLAND Hy	33.14	188	T	T	08 42 12.2	
	baz=4.7,slow=76,SNR=9.0						
H11N3	WAKE ISLAND Hy	33.15	188	T	T	08 42 19.6	
	baz=4.7,slow=76,SNR=7.9						
H11N1	WAKE ISLAND Hy	33.16	188	T	T	08 42 21.0	
	baz=4.7,slow=76,SNR=4.6						
H11S1	WAKE ISLAND Hy	34.37	188	T	T	08 43 44.5	
	baz=4.4,slow=76,SNR=244						
H11S3	WAKE ISLAND Hy	34.38	188	T	T	08 43 44.6	
	baz=4.4,slow=76,SNR=153						
H11S2	WAKE ISLAND Hy	34.39	188	T	T	08 43 45.6	
	baz=4.4,slow=76,SNR=163						
SONM	Songino Array	40.48	290	P	P	08 07 56.1	+1.1
SONM	Songino Array	40.48	290	P	P	08 07 56.5	+1.4
	comp=Z,0.5nm,0.6s,baz=48,slow=6.4,SNR=3.5						
	comp=Z,0.5nm,0.6s						
RES	Resolute Bay	40.99	24	LR	LR	08 27 20.2	
	comp=Z,213nm,21.8s,baz=220,slow=40						
PDAR	Pinedale Array	51.58	67	P	P	08 09 23.1	+0.4
	comp=Z,0.3nm,0.6s,baz=296,slow=11,SNR=2.8						
	comp=Z,0.3nm,0.6s						
KURBB	Kurchatov Arra	53.59	308	P	P	08 09 37.4	+0.3
	comp=Z,0.4nm,0.5s,baz=51,slow=7.3,SNR=5.2						
	comp=Z,0.4nm,0.5s						
MKAR	Makanchi Array	54.24	302	P	P	08 09 41.6	-0.3
MKAR	Makanchi Array	54.24	302	P	P	08 09 41.1	-0.8
	comp=Z,0.2nm,0.4s,baz=42,slow=6.7,SNR=4.8						
	comp=Z,0.2nm,0.4s						
FRB	Frobisher Bay	54.87	28	LR	LR	08 34 44.1	
	comp=Z,119nm,21.6s,baz=264,slow=38						
BVAR	Borovoye Array	55.70	314	P	P	08 09 52.8	+0.4
	comp=Z,0.8nm,0.6s,baz=57,slow=11,SNR=4.4						
	comp=Z,0.8nm,0.6s						
SFJD	Kangerlussuaq	56.46	18	LR	LR	08 38 44.1	
	comp=Z,89nm,18.2s,baz=294,slow=41						
AAK	Ala-Archa	61.12	303	LR	LR	08 40 21.9	
	comp=Z,74nm,19.3s,baz=92,slow=39						
FINES	FINESS Array B	62.83	342	P	P	08 10 41.0	-0.4
	comp=Z,1.5nm,0.9s,baz=35,slow=5.1,SNR=3.6						
	comp=Z,1.5nm,0.9s						
AB31	Akbulak array	62.93	317	P	P	08 10 42.7	+0.3
ABKAR	Akbulak array	62.93	317	P	P	08 10 42.4	0.0
ABKAR	Akbulak array	62.93	317	P	P	08 10 42.3	-0.1
ABKAR				IAmb	IAmb	08 10 43.2	
	comp=Z,1.1nm,0.6s						
TXAR	Lajitas Array	64.35	75	P	P	08 10 53.3	+1.1
	comp=Z,0.5nm,0.4s,baz=300,slow=5.4,SNR=18						
	comp=Z,0.5nm,0.4s						
NB2	NORSAR Subarra	65.44	349	P	P	08 10 58.7	0.0
	comp=Z,0.4nm,0.5s,baz=13,slow=6.9						
NOA	NORSAR Array B	65.44	349	P	P	08 10 58.9	+0.2
	comp=Z,0.6nm,0.6s,baz=22,slow=5.8,SNR=4.2						
	comp=Z,0.6nm,0.6s						
EKA	Eskdalemuir Ar	72.17	357	P	P	08 11 41.4	+0.8
	comp=Z,1.1nm,0.7s,baz=12,slow=4.4,SNR=3.8						
	comp=Z,1.1nm,0.7s						
GERES	GERESS Array B	76.99	345	P	P	08 12 09.7	+0.9
	comp=Z,0.2nm,0.4s,baz=9.7,slow=4.4,SNR=3.9						
	comp=Z,0.2nm,0.4s						

IDC 20 08:00:48.5±53.0, 19°.08S×179°.78W, h0km, mb4.1/3, mbtmp4.1/3, MS4.0/1, Error ellipse: s-maj=961.7km s-min=147.5km az=80.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	36.93	242	P	P	08 07 60.0	+0.5
	2.2nm,0.6s,baz=95,slow=9.4,SNR=5.2						
	2.2nm,0.6s						
WRA	Warramunga Arr	43.15	261	P	P	08 08 50.9	-0.4
	0.5nm,0.3s,baz=98,slow=7.6,SNR=16						
	0.5nm,0.3s						
ASAR	Alice Springs	43.23	255	P	P	08 08 51.5	-0.3
	1.5nm,0.5s,baz=92,slow=8.0,SNR=27						
	1.5nm,0.5s						
NWAO	Narrogin (SRO)	57.52	243	LR	LR	08 33 13.2	
	comp=Z,114nm,18.0s,baz=125,slow=34						

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*IDC **20** 08:03:05.1±0.8, 12°.68S×166°.26E, h0km, mb4.1/13, mbtmp4.1/15, ML4.0/2, MS3.7/4, Error ellipse: s-maj=29.2km s-min=18.6km az=93.0*

ISC 20 08:03:11.1±0.8, 12°.7S±0°.1×166°.1E±0°.2, h35km, n21, σ1ˢ69/19, mb4.1/13, MS3.6/3, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.89	297	Pn	Pn	08 04 49.8	+0.2
	13nm,0.3s,baz=58,slow=3.5,SNR=4.2						
	103nm,0.6s						
DZM	Mont Dzumac	9.33	178	Pn	Pn	08 05 22.8	-0.4
	0.3nm,0.3s,baz=347,slow=22,SNR=6.7						
	3.7nm,1.0s						
MSVF	Nonsavu	12.54	115	LR	LR	08 09 51.0	
	comp=Z,364nm,19.1s,baz=227,slow=33						
STKA	Stephens Creek	29.55	226	P	P	08 09 13.4	+0.9
	1.5nm,0.5s,baz=39,slow=7.9,SNR=3.3						
	1.5nm,0.5s						
WRA	Warramunga Arr	31.32	253	P	P	08 09 27.2	-1.1
	0.8nm,0.9s,baz=88,slow=10,SNR=2.8						
WRA				LR	LR	08 22 06.4	
	comp=Z,120nm,19.1s,baz=39,slow=36						
	0.8nm,0.9s						
ASAR	Alice Springs	32.44	246	P	P	08 09 36.4	-1.8
	0.9nm,0.8s,baz=69,slow=12,SNR=7.0						
ASAR				LR	LR	08 22 20.7	
	comp=Z,197nm,19.0s,baz=72,slow=36						
	0.9nm,0.8s						
PPT	Papeete	42.95	102	LR	LR	08 27 09.8	
	comp=Z,80nm,18.7s,baz=292,slow=34						
MJAR	Matsushiro Arr	55.60	333	P	P	08 12 42.4	-1.0
	1.1nm,0.4s,baz=168,slow=7.7,SNR=6.2						
	1.1nm,0.4s						
KSRS	Korea Array	61.45	326	P	P	08 13 24.1	0.0
	0.5nm,0.4s,baz=143,slow=4.5,SNR=1.8						
	0.5nm,0.4s						
USRK	Ussuriysk Ar.	64.59	333	P	P	08 13 45.7	+0.9
	4.2nm,1.0s,baz=131,slow=3.2,SNR=6.5						
	4.2nm,1.0s						
KLR	Kul'dur	68.72	337	P	P	08 14 11.8	+0.7
	2.7nm,0.8s,baz=155,slow=2.5,SNR=7.2						
	2.7nm,0.8s						
CMAR	Chiang Mai Arr	73.13	294	P	P	08 14 39.8	+1.2
	0.7nm,0.3s,baz=126,slow=9.6,SNR=4.6						
	0.7nm,0.3s						
QSPA	South Pole Qui	77.32	180	P	P	08 15 02.2	+0.3
	7.5nm,1.0s,baz=359,slow=1.2,SNR=15						
	7.5nm,1.0s						
SONM	Songino Array	80.22	324	P	P	08 15 18.8	+0.6
	0.8nm,0.7s,baz=158,slow=1.6,SNR=8.1						
	0.8nm,0.7s						
ILAR	Eielson Array	84.95	18	P	P	08 15 40.4	-1.8
	0.7nm,0.8s,baz=236,slow=5.6,SNR=7.9						
	0.7nm,0.8s						
MKAR	Makanchi Array	94.98	317	P	P	08 16 29.2	-0.9
	0.5nm,0.6s,baz=100,slow=6.6,SNR=6.4						
	0.5nm,0.6s						
ZALV	Zalesovo Beam	95.11	324	P	P	08 16 29.0	-1.4
	0.4nm,0.2s,baz=127,slow=9.8,SNR=3.6						
	0.4nm,0.2s						
ARCES	ARCESS Array B	118.02	345	PKP	PKPdf	08 21 52.6	-1.0
	0.5nm,0.3s,baz=74,slow=2.1,SNR=12						
FINES	FINESS Array B	123.44	338	PKP	PKPdf	08 22 03.1	-1.1
	0.6nm,0.8s,baz=66,slow=4.6,SNR=4.0						
KEST	Kesra	148.95	322	PKPbc	PKPbc	08 22 56.1	+0.3
	7.7nm,0.8s,baz=303,slow=2.0,SNR=8.5						
ESDC	Sonseca Array	151.74	344	PKPbc	PKPdf	08 23 01.3	+5.3
	1.3nm,0.8s,baz=33,slow=2.2,SNR=8.9						

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*IDC **20** 08:05:03.7±2.0, 34°.29N×26°.19E, h0km, mb3.8/5, mbtmp3.7/10, ML3.3/5, MS3.4/1, Error ellipse: s-maj=40.9km s-min=16.6km az=20.0*

*GII **20** 08:05:03.9±0.0, 34°.073N±0°.004×26°.162E±0°.002, h10km, Mws3.7, confirmed*

*THE **20** 08:05:06.8, 34°N±69°×2°6E±3°5, h1km±41km, MLh3.0/3*

*ISK **20** 08:05:06.3, 34°.41N×26°.13E, h8km, ML3.2/15*

*ATH **20** 08:05:08.3±1.1, 34°.55N×25°.95E, h10km, ML3.1/4, Manual Solution by A.Plessa First location: 2019/06/20 08:06:33, This location: 2019/06/20 08:41:53 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 8 km; Longitude uncertainty: 6 km*

ISC 20 08:05:05.0±1.4, 34°.40N±0°.06×26°.28E±0°.03, h17km±9km, n53, σ1ˢ67/57, mb3.6/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	Zakros	0.72	356	Pg	Pn	08 05 20.1	-0.3
ZKR				Sg	Sn	08 05 30.8	-0.2
ZKR	Zakros	0.72	356	P	Pn	08 05 20.3	0.0
ZKR				S	Sn	08 05 31.2	+0.2
ZKR	Zakros	0.72	356	P	Pn	08 05 20.0	-0.3
ZKR				S	Sn	08 05 29.6	-1.4
KARP	Karpathos	1.36	32	Pn	Pg	08 05 33.0	+1.8
KARP				Sn	Sg	08 05 52.8	+3.9
KARP	Karpathos	1.36	32	P	Pg	08 05 34.2	+3.0
KARP	Karpathos	1.36	32	P	Pg	08 05 34.0	+2.8
IDI	Anoyia	1.45	308	Pn	Pg	08 05 32.0	-0.9
IDI				Sn	Sb	08 05 49.9	+0.3
IDI	Anoyia	1.45	308	P	Pn	08 05 29.5	-0.9
IDI				S	Sn	08 05 47.3	-1.8
IDI	Anoyia	1.45	308	Pn	Pg	08 05 32.2	-0.7
	3.8nm,0.3s,baz=135,slow=19,SNR=20						
IDI				Sn	Sg	08 05 53.4	+1.7
	13nm,0.3s,baz=350,slow=22,SNR=6.2						
IDI	Anoyia	1.45	308	P	Pn	08 05 30.3	-0.1
GVD	Gavdhos	1.86	284	Pn	Pb	08 05 37.8	-0.7
GVD				Sn	Sn	08 06 00.5	+1.4
GVD	Gavdhos	1.86	284	P	Pn	08 05 35.3	-0.7
ARG	Arkhangelos	2.36	39	Pn	Pg	08 05 47.4	-2.9
ARG	Arkhangelos	2.36	39	P	Pg	08 05 48.8	-1.5
ARG	Arkhangelos	2.36	39	P	Pg	08 05 48.4	-1.9
DAT	Datca	2.56	24	Pn	Pb	08 05 49.3	-1.2
APE	Apeiranthos	2.73	347	Pn	Pb	08 05 51.6	-1.8
APE	Apeiranthos	2.73	347	P	Pb	08 05 50.8	-2.6
APE	Apeiranthos	2.73	347	P	Pb	08 05 50.0	-3.4
TURN	Turunc	2.86	33	Pn	Pb	08 05 54.3	-1.3
DALY	Dalyan (Mula)	3.10	38	Pn	Pb	08 05 57.9	-1.6
MLSB	Milas	3.14	22	Pn	Pb	08 05 57.6	-2.7
FETY	Fethiye	3.20	45	Pn	Pb	08 05 58.7	-2.6
AKAS	Kas	3.28	55	Pn	Pb	08 06 00.9	-1.9
CAME	Cameli-Denizli	3.54	43	Pn	Pb	08 06 04.1	-3.1
APMY	Acipayam-Deniz	3.93	38	Pn	Pb	08 06 08.9	-4.9
ODEM	Odemis-Izmir	4.13	20	Pn	Pb	08 06 11.6	-5.7
MMAI	Mount Meron Ar	7.73	98	Pn	Pn	08 06 58.9	+2.2
	1.2nm,0.3s,baz=276,slow=14,SNR=1.6						
	0.9nm,0.3s						
YTIR	Yattir	8.03	110	P	Pn	08 07 01.1	+0.2
YTIR	Yattir	8.03	110	S	Sn	08 08 31.9	+0.7
DSI	Dead Sea	8.15	108	P	Pn	08 07 02.1	-0.4
DSI	Dead Sea	8.15	108	S	Sn	08 08 34.9	+0.7
KRMI	Paran Flat	8.33	119	P	Pn	08 07 04.1	-0.9
KRMI	Paran Flat	8.33	119	S	Sn	08 08 36.4	-2.2
GHAJ	Ghor Haditha	8.40	109	P	Pn	08 07 05.6	-0.3
GHAJ	Ghor Haditha	8.40	109	S	Sn	08 08 40.7	+0.4
PRNI	Paran	8.41	116	P	Pn	08 07 05.3	-0.7
PRNI	Paran	8.41	116	S	Sn	08 08 40.2	-0.5
HRFI	Mount Harif	8.60	118	P	Pn	08 07 08.1	-0.6
HRFI	Mount Harif	8.60	118	S	Sn	08 08 45.2	-0.1
MBRI	Mt Berech	8.64	120	P	Pn	08 07 08.7	-0.7
MBRI	Mt Berech	8.64	120	S	Sn	08 08 46.2	-0.3
EIL	Elat	8.74	120	Pn	Pn	08 07 12.4	+1.9
	0.8nm,0.3s,baz=188,slow=11,SNR=4.1						
	2.3nm,0.5s						
EIL	Elat	8.74	120	P	Pn	08 07 09.7	-0.9
EIL	Elat	8.74	120	S	Sn	08 08 47.2	-1.5
KBZ	Khabaz	15.90	49	Pn	P	08 08 52.0	+0.7
	baz=225,slow=6.4,SNR=8.3						
	3.6nm,0.9s						
AKASG	Malin Array Be	16.44	7	Pn	P	08 08 55.6	-1.7
	1.0nm,0.3s,baz=196,slow=11,SNR=5.6						
	0.2nm,0.3s						
GERES	GERESS Array B	17.19	331	P	P	08 09 06.7	+0.8
	baz=153,slow=6.6,SNR=2.6						
	0.4nm,0.8s						
ESDC	Sonseca Array	24.64	291	P	P	08 10 24.3	-0.4
	0.3nm,0.6s,baz=86,slow=8.8,SNR=2.3						
	0.3nm,0.6s						
BVAR	Borovoye Array	36.22	45	P	P	08 12 09.2	+2.5
	0.3nm,0.4s,baz=270,slow=8.6,SNR=1.8						
	0.3nm,0.4s						
KURBB	Kurchatov Arra	40.89	50	P	P	08 12 48.1	+2.1
	1.0nm,0.7s,baz=278,slow=8.4,SNR=8.0						
	1.0nm,0.7s						
MKAR	Makanchi Array	43.43	56	P	P	08 13 09.6	+2.8
	1.5nm,0.6s,baz=276,slow=5.7,SNR=18						
	1.5nm,0.6s						
ZALV	Zalesovo Beam	44.87	46	P	P	08 13 20.2	+2.0
	1.6nm,0.4s,baz=273,slow=10.0,SNR=6.3						
ZALV				LR	LR	08 35 45.8	
	comp=Z,48nm,20.2s,baz=32,slow=41						
	1.6nm,0.4s						

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*IDC **20** 08:13:24.8±3.5, 30°.10N×143°.15E, h0km, mb3.8/7, mbtmp3.7/9, ML3.1/2, Error ellipse: s-maj=139.3km s-min=21.2km az=71.0*

ISC 20 08:13:29.5±1.8, 30°.2N±0°.2×143°.1E±0°.4, h30km, n9, σ1ˢ13/10, mb3.9/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	7.51	328	Pn	Pn	08 15 16.5	-0.5
	0.2nm,0.3s,baz=148,slow=9.7,SNR=16						
MJAR				Sn	Sn	08 16 39.5	-1.7
	baz=155,slow=17,SNR=5.8						
	2.1nm,0.5s						
KSRS	Korea Array	14.54	304	Pn	Pn	08 16 53.2	+0.1
	0.2nm,0.3s,baz=113,slow=12,SNR=7.4						
	1.1nm,0.6s						
SONM	Songino Array	33.12	312	P	P	08 20 04.1	+1.0
	0.5nm,0.5s,baz=109,slow=6.4,SNR=3.5						
	0.5nm,0.5s						
MKAR	Makanchi Array	49.18	308	P	P	08 22 15.1	+0.4
	1.2nm,0.8s,baz=94,slow=9.4,SNR=7.1						
	1.2nm,0.8s						
WRA	Warramunga Arr	50.61	191	P	P	08 22 24.0	-1.8
	0.7nm,0.7s,baz=9.3,slow=8.1,SNR=7.8						
	0.7nm,0.7s						
KURBB	Kurchatov Arra	51.49	313	P	P	08 22 32.4	+0.3
	1.2nm,0.7s,baz=91,slow=7.5,SNR=8.0						
	1.2nm,0.7s						
ASAR	Alice Springs	54.33	190	P	P	08 22 52.8	-0.5
	0.2nm,0.6s,baz=8.7,slow=7.7,SNR=1.8						
	0.2nm,0.6s						
BVAR	Borovoye Array	56.33	316	P	P	08 23 08.0	+0.5
	1.3nm,0.5s,baz=96,slow=8.8,SNR=8.1						
	1.3nm,0.5s						
BRTR	Keskin Array B	84.48	313	P	P	08 26 00.6	+0.8
	0.5nm,0.6s,baz=143,slow=5.3,SNR=4.5						
	0.5nm,0.6s						

STR 20 08:15:30.7±0.4, 46°N±1°×°±°, h0km, MLv1.5/10, Error ellipse: s-maj=0.0km s-min=0.0km az=70.5, preliminary, France

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OG35	Corcelles	0.27	27	Pg	Pb	08 15 37.6	-0.9
OG35				Sg	Sb	08 15 42.3	-1.4
OGSM	Saint Maurice	0.29	133	Pg	Pg	08 15 36.1	0.0
OGSM				Sg	Sg	08 15 40.0	+0.2
OGMY	Moye	0.35	77	Pg	Pg	08 15 38.5	+1.1
OGMY				Sg	Sg	08 15 43.3	+1.3
GRN	Grenoble	0.61	156	Pg	Pg	08 15 42.9	+0.5
GRN				Sg	Sg	08 15 50.3	0.0
RSL	Roselend	0.87	97	Pg	Pg	08 15 47.9	+0.6
RSL				Pn	Pn	08 15 50.4	+0.2
RSL				Sn	Sn	08 16 03.7	0.0
GIMEL	St. Georges /	0.95	39	Pn	Pn	08 15 51.0	-0.3
GIMEL	St. Georges /	0.95	39	Sn	Sn	08 16 06.3	+0.7
ORIF	Oris-en-Rattie	0.95	159	Pn	Pb	08 15 50.0	0.0
ORIF	Oris-en-Rattie	0.95	159	Sn	Sn	08 16 04.7	-0.9
COLF	Collangettes	1.23	257	Pg	Pn	08 15 55.3	+0.1

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*IDC **20** 08:17:05.5±4.2, 30°.12N×143°.25E, h0km, mb3.7/5, mbtmp3.6/7, ML2.9/2, Error ellipse: s-maj=153.9km s-min=28.1km az=70.0*

ISC 20 08:17:10.1±2.2, 30°.3N±0°.2×143°.4E±0°.4, h35km, n7, σ1ˢ80/8, mb3.7/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	7.54	327	Pn	Pn	08 18 56.2	-1.3
	0.2nm,0.3s,baz=149,slow=10,SNR=8.0						
MJAR				Sn	Sn	08 20 20.3	-1.4
	0.1nm,0.3s,baz=159,slow=17,SNR=4.3						
	0.9nm,0.3s						
KSRS	Korea Array	14.64	303	Pn	Pn	08 20 34.2	-0.4
	0.1nm,0.3s,baz=112,slow=12,SNR=5.4						
	1.0nm,0.6s						
SONM	Songino Array	33.20	312	P	P	08 23 45.4	+1.8
	0.6nm,0.4s,baz=114,slow=6.8,SNR=2.6						
	0.6nm,0.4s						
MKAR	Makanchi Array	49.27	307	P	P	08 25 56.1	+0.8
	0.7nm,0.8s,baz=93,slow=8.7,SNR=4.9						
	0.7nm,0.8s						
WRA	Warramunga Arr	50.73	191	P	P	08 26 05.1	-1.5
	0.7nm,0.9s,baz=8.4,slow=7.4,SNR=4.1						
	0.7nm,0.9s						
KURBB	Kurchatov Arra	51.56	313	P	P	08 26 14.9	+2.3
	0.4nm,0.5s,baz=90,slow=7.5,SNR=5.1						
	0.4nm,0.5s						
BVAR	Borovoye Array	56.40	316	P	P	08 26 48.6	+0.7
	0.4nm,0.4s,baz=88,slow=7.2,SNR=4.4						
	0.4nm,0.4s						

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*UCR **20** 08:17:36.6±1.1, 10°.23N×84°.51W, h82km±1km, MW4.0*

*CATAC **20** 08:17:37.4±0.3, 10°N±2°×8°5W±°, h64km±4km, M3.4/13, MLv3.4/13, Error ellipse: s-maj=5.6km s-min=3.3km az=47.6, confirmed*

ISC 20 08:17:37.5±1.3, 10°.20N±0°.03×84°.52W±0°.02, h78km±5km, n149, σ0ˢ92/233, 80C-13D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRA1	San Ramn	0.12	161	⇑iP	Pn	08 17 48.4	-0.6
SRA1				eS	Sn	08 17 57.4	+0.1
RAMO	San Ramon	0.12	155	⇑iP	Pn	08 17 48.5	-0.5
RAMO				eS	Sn	08 17 57.6	+0.3
ZARE	Zarcero	0.13	96	⇑iP	Pn	08 17 49.0	-0.1
ZARE				eS	Sn	08 17 58.5	+0.9
QUEU	Ciudad Quesada	0.15	33	⇑iP	Pn	08 17 48.9	-0.1
QUEU				eS	Sn	08 17 58.1	+0.7
PALD	Palmares	0.16	150	⇑iP	Pn	08 17 48.5	-0.6
PALD				eS	Sn	08 17 57.7	+0.2
NARAN	Naranjo de Ala	0.17	125	⇑iP	Pn	08 17 48.7	-0.4
VPL2	V. Platanar	0.17	51	⇑iP	Pn	08 17 49.0	-0.2
VPL2				eS	Sn	08 17 58.1	+0.4
SARCI	Sarchi	0.20	122	⇑iP	Pn	08 17 48.9	-0.3
SARCI				eS	Sn	08 17 58.2	+0.5
SOCE	Pocosol	0.21	332	⇑iP	Pn	08 17 49.0	-0.2
SOCE				eS	Sn	08 17 58.2	+0.5
SOCE	Pocosol	0.21	332	P	Pn	08 17 49.0	-0.2
GREC	Grecia	0.24	121	⇑eP	Pn	08 17 49.0	-0.4
ARZA	Esparza	0.25	216	⇑iP	Pn	08 17 47.9	-1.4
ATEO	Atenas	0.26	148	⇑iP	Pn	08 17 48.8	-0.7
ATEO				eS	Sn	08 17 58.0	-0.2
TCS1	Tacares	0.26	125	⇑iP	Pn	08 17 49.1	-0.4
TCS1				eS	Sn	08 17 59.3	+1.0
TCS1	Tacares	0.26	125	P	Pn	08 17 49.0	-0.4
VPS8	V Poas	0.27	94	⇑iP	Pn	08 17 49.4	-0.5
VPS5	V. Poas	0.28	91	eP	Pn	08 17 48.7	-1.2
OROT	Orotina	0.28	182	⇑iP	Pn	08 17 49.0	-0.5
OROT				eS	Sn	08 17 58.2	-0.1
POAS	San Pedro de P	0.30	114	⇑eP	Pn	08 17 49.3	-0.4
POAS				eS	Sn	08 17 59.4	+0.7
TUNA	La Fortuna	0.30	335	⇑iP	Pn	08 17 49.5	-0.2
TUNA				eS	Sn	08 17 59.3	+0.8
ROBF	Roble, Puntare	0.30	225	⇓eP	Pn	08 17 49.5	-0.1
ROBF				eS	Sn	08 17 58.9	+0.5
FORC	Fortuna	0.31	331	⇑iP	Pn	08 17 49.6	-0.1
FORC				eS	Sn	08 17 59.2	+0.6
VACR	Volcan Arenal	0.32	330	⇑iP	Pn	08 17 49.6	-0.1
VACR				eS	Sn	08 17 59.5	+0.8
CASO	Castillo	0.32	318	⇑iP	Pn	08 17 49.5	-0.3
CASO				eS	Sn	08 17 59.2	+0.5
MTEVE	Monteverde	0.33	292	⇑iP	Pn	08 17 49.7	-0.3
MTEVE				eS	Sn	08 17 59.9	+0.8
ARE1	Arenal 1	0.33	323	⇑iP	Pn	08 17 49.9	+0.1
ARE1				eS	Sn	08 17 59.6	+0.7
VARE2	V. Arenal	0.33	323	⇑iP	Pn	08 17 49.8	-0.1
VARE2				eS	Sn	08 17 59.6	+0.7
ARTO	Ro Cuarto	0.33	64	⇑iP	Pn	08 17 49.4	-0.4
ARTO				eS	Sn	08 17 59.0	+0.2
CEDE	Laguna Cedeo	0.34	328	⇑iP	Pn	08 17 49.9	-0.1
CEDE				eS	Sn	08 17 59.8	+0.7
ITAL	Pital	0.35	44	⇑iP	Pn	08 17 49.4	-0.6
ITAL				eS	Sn	08 17 58.9	-0.1
ENAS	Puntarenas	0.38	235	eP	Pn	08 17 48.8	-1.3
ENAS				eS	Sn	08 17 59.9	+0.5
TABAC	Tabacon	0.39	321	⇑iP	Pn	08 17 50.2	0.0
TABAC				eS	Sn	08 18 00.9	+1.3
BELE	Belen	0.39	124	⇑iP	Pn	08 17 49.7	-0.6
BELE				eS	Sn	08 17 59.6	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
PURI	Puriscal	0.40	150	⇑eP	Pn	08 17 50.0	-0.5
PURI				eS	Sn	08 18 00.5	+0.5
SANTA	Santa Ana	0.42	129	⇑iP	Pn	08 17 49.8	-0.8
JTS	Las Juntas de	0.44	282	⇑eP	Pn	08 17 50.2	-0.4
JTS				eS	Sn	08 17 60.0	-0.2
JUNT	Juntas	0.44	281	⇑eP	Pn	08 17 50.2	-0.4
JUNT				eS	Sn	08 18 00.2	0.0
HDC	Heredia	0.44	116	⇑iP	Pn	08 17 50.1	-0.6
HDC	Heredia	0.44	116	P	Pn	08 17 50.3	-0.4
CHIK	Chiripa	0.46	303	eP	Pn	08 17 50.9	0.0
CHIK				eS	Sn	08 18 01.9	+1.2
PAVB	Pavas, San Jos	0.47	123	⇑iP	Pn	08 17 50.4	-0.6
PAVB				eS	Sn	08 18 00.7	-0.2
DOMI	Santo Domingo	0.47	117	⇑iP	Pn	08 17 50.6	-0.4
MEXI	Barrio Mexico	0.49	121	eP	Pn	08 17 50.8	-0.4
MEXI				eS	Sn	08 18 01.9	+0.6
CENT	San Jose	0.51	121	⇑iP	Pn	08 17 51.8	+0.5
CENT				eS	Sn	08 18 02.7	+1.2
LUJA	Lujan	0.52	121	⇑iP	Pn	08 17 50.9	-0.5
LUJA				eS	Sn	08 18 02.1	+0.5
LUPE	Guadalupe	0.52	118	⇑iP	Pn	08 17 51.0	-0.4
LUPE				eS	Sn	08 18 02.1	+0.5
TILA	Tilaran	0.52	301	⇓eP	Pn	08 17 51.3	-0.1
TILA				eS	Sn	08 18 02.3	+0.8
SJS	Escuela Geolog	0.52	119	⇑iP	Pn	08 17 51.0	-0.4
SJS				eS	Sn	08 18 02.1	+0.4
ECI	Escuela Centro	0.53	119	⇑iP	Pn	08 17 51.0	-0.4
ECI				eS	Sn	08 18 02.7	+1.0
SJS3	Mercedes San J	0.53	119	⇑iP	Pn	08 17 51.1	-0.3
SJS3				eS	Sn	08 18 02.7	+0.9
ACOS	Acosta	0.53	139	⇑eP	Pn	08 17 50.9	-0.6
ACOS				eS	Sn	08 18 01.9	+0.1
COVE	Coope Vega, Sa	0.53	12	P	Pn	08 17 50.8	-0.6
COVE	Coope Vega, Sa	0.53	12	S	Sn	08 18 01.2	-0.4
AMPA	Desamparados	0.54	124	⇑iP	Pn	08 17 50.9	-0.7
AMPA				eS	Sn	08 18 02.3	+0.3
SARA	Sarapiqu	0.55	62	eP	Pn	08 17 48.5	-3.1
CORON	Coronado	0.55	114	⇑iP	Pn	08 17 51.4	-0.4
CORON				eS	Sn	08 18 04.9	+2.6
PAQE	Paquera	0.56	228	eP	Pn	08 17 51.0	-0.6
PAQE				eS	Sn	08 18 01.9	-0.1
QUEB	Quebradon, Cot	0.56	319	⇑eP	Pn	08 17 51.4	-0.4
QUEB				eS	Sn	08 18 02.5	+0.3
BITO	Garabito Jaco	0.58	190	eP	Pn	08 17 51.6	-0.2
BITO				eS	Sn	08 18 03.0	+0.6
CVIMO	Finca Echandi	0.59	107	⇑iP	Pn	08 17 51.7	-0.5
TRIO	Tres Rios	0.59	119	⇑eP	Pn	08 17 47.8	-4.3
TRIO				eS	Sn	08 17 59.3	-3.6
INVE	Universidad In	0.60	298	⇑iP	Pn	08 17 52.0	-0.1
INVE				eS	Sn	08 18 03.4	+0.5
CNAS	Canas	0.61	293	⇑eP	Pn	08 17 52.1	0.0
CNAS				eS	Sn	08 18 03.8	+0.9
TIMP	Tierras Morena	0.62	308	⇑iP	Pn	08 17 52.2	-0.2
TIMP				eS	Sn	08 18 03.5	+0.1
PICV	PH. Pirrs	0.65	151	⇓eP	Pn	08 17 52.1	-0.5
PICV				eS	Sn	08 18 04.4	+0.7
PAR1A	Puntarenas Pro	0.65	156	⇑eP	Pn	08 17 52.4	-0.2
PAR1A				eS	Sn	08 18 05.1	+1.5
ABE2	San Pablo	0.67	137	⇑eP	Pn	08 17 52.3	-0.7
ABE2				eS	Sn	08 18 04.7	+0.3
TAGO	Cartago	0.67	119	⇑iP	Pn	08 17 52.5	-0.4
TAGO				eS	Sn	08 18 04.8	+0.5
TENO	El Achiote	0.68	318	⇓eP	Pn	08 17 52.9	0.0
TENO				eS	Sn	08 18 04.9	+0.7
LCR2	La Lucha 2	0.68	132	⇑eP	Pn	08 17 52.4	-0.6
LCR2				eS	Sn	08 18 04.6	+0.1
LCR2	La Lucha 2	0.68	132	P	Pn	08 17 52.5	-0.6
PISJ	San Jernim	0.68	145	eP	Pn	08 17 52.2	-0.8
RITA	Parrita	0.70	165	⇓eP	Pn	08 17 52.8	-0.2
RITA				eS	Sn	08 18 05.3	+0.9
VICA	Volcano Irazu	0.70	108	⇑iP	Pn	08 17 52.8	-0.7
VICA				eS	Sn	08 18 04.9	-0.3
PITB	Pirrs, San	0.72	137	eP	Pn	08 17 52.7	-0.8
RAZU	San Marcos de	0.72	138	eP	Pn	08 17 52.8	-0.7
RAZU				eS	Sn	08 18 05.7	+0.5
MOTZ	Rio Naranjo	0.73	312	eP	Pn	08 17 53.6	+0.2
RAFA	San Farael, Vo	0.73	109	⇑eP	Pn	08 17 53.5	-0.3
REPA	Paraso	0.74	120	⇑iP	Pn	08 17 53.3	-0.3
REPA				eS	Sn	08 18 06.1	+0.6
PCAYA	Pacayas	0.75	112	⇑iP	Pn	08 17 53.4	-0.4
PCAYA				eS	Sn	08 18 08.9	+3.0
VTLA	Turrialba Volc	0.76	105	⇑iP	Pn	08 17 53.5	-0.5
CVTQ	Turrialba Volc	0.76	104	⇑iP	Pn	08 17 53.5	-0.6
CVTR	Volcan Turrial	0.77	103	⇑iP	Pn	08 17 49.5	-4.7
CVTR				eS	Sn	08 18 02.4	-4.1
VTR0	Volcan Turrial	0.77	103	⇑eP	Pn	08 17 53.7	-0.5
CVTV	Tajo	0.78	104	⇑iP	Pn	08 17 53.7	-0.5
CUI	Cuipilapa	0.78	306	⇑iP	Pn	08 17 53.9	-0.1
CUI				eS	Sn	08 18 06.4	+0.1
CARI	Cariari	0.79	78	⇑iP	Pn	08 17 53.5	-0.4
CARI				eS	Sn	08 18 06.9	+0.7
PIEC	Cerro El Cedra	0.79	136	⇑eP	Pn	08 17 53.6	-0.7
ABRB	Las Abras (San	0.81	103	⇑iP	Pn	08 17 54.2	-0.3
ABRB				eS	Sn	08 18 09.7	+2.6
VINA	Juan Vinas	0.82	111	⇑eP	Pn	08 17 54.0	-0.4
VINA				eS	Sn	08 18 08.8	+1.7
COLC	Colonia	0.82	305	eP	Pn	08 17 54.0	-0.4
COLC				eS	Sn	08 18 07.2	+0.3
HORNC	Hornillas	0.83	308	⇑iP	Pn	08 17 54.3	-0.2
HORNC				eS	Sn	08 18 07.2	0.0
PLVR	Palo Verde	0.83	281	eP	Pn	08 17 54.5	-0.2
SVQ2	Quepos	0.83	155	eP	Pn	08 17 54.6	0.0
SVQ2				eS	Sn	08 18 07.9	+0.8
QUEP	Quepos	0.84	155	eP	Pn	08 17 54.4	-0.1
VMAR	Armenia, Volca	0.85	316	⇓iP	Pn	08 17 54.6	-0.1
VMAR				eS	Sn	08 18 08.4	+0.9
UPAL	Upala	0.85	325	⇓iP	Pn	08 17 54.4	-0.3
UPAL				eS	Sn	08 18 07.7	+0.2
TRT2	Tortugero	0.85	65	⇑iP	Pn	08 17 54.0	-0.7
TRT2				eS	Sn	08 18 06.7	-0.7
TRT2	Tortugero	0.85	65	P	Pn	08 17 53.9	-0.8
LCHIL	Los Chiles	0.86	347	⇓eP	Pn	08 17 55.5	+0.7
LCHIL				eS	Sn	08 18 08.7	+1.1
MESS	Mesas	0.86	309	⇑iP	Pn	08 17 55.0	+0.2
MESS				eS	Sn	08 18 07.7	0.0
TURIB	Turrialba	0.87	109	⇑iP	Pn	08 17 54.4	-0.6
TURIB				eS	Sn	08 18 08.1	+0.2
RESJ	San Isidro (Tu	0.88	101	⇑iP	Pn	08 17 54.8	-0.3
RESJ				eS	Sn	08 18 08.8	+0.6
TRT1	Tortuguero	0.90	64	⇑eP	Pn	08 17 54.6	-0.7
CMARA	Lajas Hojancha	0.91	259	⇓iP	Pn	08 17 54.9	-0.5
CMARA				eS	Sn	08 18 08.0	-0.8
CMARA	Lajas Hojancha	0.91	259	P	Pn	08 17 55.0	-0.5
CMARA	Lajas Hojancha	0.91	259	S	Sn	08 18 08.2	-0.6
EGUB	Earth Gu¡pi	0.91	89	⇑iP	Pn	08 17 55.2	-0.2
EGUB				eS	Sn	08 18 09.6	+0.8
NICO	Nicoya	0.92	266	eP	Pn	08 17 55.4	-0.1
NICO				eS	Sn	08 18 08.9	+0.1
RVLA	Villa Bonita	0.92	95	⇑iP	Pn	08 17 55.2	-0.3
GPS1	Guardaparques	1.00	305	eP	Pn	08 17 56.9	+0.4
GPS3	Bodega del ICE	1.00	304	eP	Pn	08 17 57.8	+1.2
IRES	Siquirres	1.00	96	⇑iP	Pn	08 17 56.1	-0.4
IRES				eS	Sn	08 18 11.2	+0.6
VRLE	La Escondida,	1.02	305	eP	Pn	08 17 56.6	-0.2
INDI	Punta indio, G	1.02	251	P	Pn	08 17 55.9	-0.9
INDI	Punta indio, G	1.02	251	S	Sn	08 18 09.8	-1.3
PEJA	Penjamo Buenos	1.05	312	eP	Pn	08 17 57.1	0.0
BUAI	Buenos Aires	1.05	310	eP	Pn	08 17 56.8	-0.3
LAPC	Finca la Perla	1.06	302	⇑eP	Pn	08 17 56.9	-0.4
ALIBA	Liberia Airpor	1.08	291	eP	Pn	08 17 57.6	+0.2
TAAN	Batan	1.16	95	eP	Pn	08 17 58.0	-0.4
SAJE	San Jernim	1.30	130	⇑eP	Pn	08 17 59.7	-0.7
SAJE				eS	Sn	08 18 16.9	-0.7
VERH	Veragua Rainfo	1.33	101	⇑eP	Pn	08 18 00.2	-0.5
VERH				eS	Sn	08 18 17.8	-0.3
EDPE	Pejibaye, P	1.39	138	eP	Pn	08 18 01.2	-0.2
LCRUZ	La Cruz	1.40	309	⇓eP	Pn	08 18 01.4	-0.2
DRK0	Durika	1.56	126	eP	Pn	08 18 03.1	-0.6
DRK0	Durika	1.56	126	S	Sn	08 18 23.0	-0.5
DRK0	Durika	1.56	126	P	Pn	08 18 03.3	-0.5
PANP	Palmar Norte	1.61	140	eP	Pn	08 18 04.9	+0.6
CEUA	Cerro Uatsi, L	1.66	110	eP	Pn	08 18 05.5	+0.6
CEUA				eS	Sn	08 18 29.7	+4.1
JAPN	Al SSO del Vol	1.75	319	P	Pn	08 18 05.9	-0.2
JAPN				S	Sn	08 18 27.3	-0.3
EDP2	Potrero Grande	1.77	131	eP	Pn	08 18 06.8	+0.5
ACON	Acoyapa	1.88	340	⇓iP	Pn	08 18 07.4	-0.3
ACON				eS	Sn	08 18 30.4	-0.3
ACON	Acoyapa	1.88	340	P	Pn	08 18 07.5	-0.3
BLUN	Bluefields	1.94	22	⇓iP	Pn	08 18 08.0	-0.6
BLUN	Bluefields	1.94	22	P	Pn	08 18 08.1	-0.6
ESPN	Las Esperanzas	2.00	6	⇓iP	Pn	08 18 09.1	-0.3
ESPN	Las Esperanzas	2.00	6	P	Pn	08 18 09.1	-0.3
FITO	Golfito	2.06	139	eP	Pn	08 18 12.5	+2.2
ALCO	Alturas Coton,	2.07	127	eP	Pn	08 18 10.1	-0.5
BRU2	Volcan	2.28	128	eP	Pn	08 18 12.7	-0.6
BRU2	Volcan	2.28	128	P	Pn	08 18 12.7	-0.6
BRU2	Volcan	2.28	128	S	Sn	08 18 39.9	-0.7
BQTLY	Boquete Panama	2.48	125	eP	Pn	08 18 15.6	-0.5
BOAB	BOACO BROADBAN	2.51	333	P	Pn	08 18 15.8	-0.4
BOAB	BOACO BROADBAN	2.51	333	S	Sn	08 18 46.0	+0.1
PBNVO	Pueblo Nuevo,	2.63	119	eP	Pn	08 18 17.7	-0.2
RBALA	Bur	2.67	119	eP	Pn	08 18 18.1	-0.4
KKNTU	Kakintº	3.00	117	eP	Pn	08 18 21.9	-0.9

IDC ***20*** *08:20:12.0±3.0, 53°.61N×87°.87E, h0^{km}, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=27.0km s-min=17.5km az=57.0*

ASRS 20 08:20:10.0±1.3**, 53°.62N×88°.04E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.94	281	I	I	08 32 00.0	
	0.1nm,1.0s,baz=97,slow=322,SNR=28						
ZALV	Zalesovo Beam	1.94	281	Pn	Pn	08 20 44.7	+0.5
	1.7nm,0.3s,baz=100,slow=10,SNR=17						
ZALV				Lg	Lg	08 21 10.5	
	1.6nm,0.3s,baz=100,slow=25,SNR=21						
KURBB	Kurchatov Arra	6.58	247	Pn	Pn	08 21 49.2	+1.3
	0.1nm,0.3s,baz=61,slow=14,SNR=3.5						
KURBB				Lg	Lg	08 23 37.0	
	baz=57,slow=30,SNR=4.5						
	0.8nm,0.5s						
MKAR	Makanchi Array	7.76	211	Pn	Pn	08 22 06.5	+2.3
	0.2nm,0.3s,baz=28,slow=13,SNR=5.3						
MKAR				Lg	Lg	08 24 14.5	
	0.1nm,0.3s,baz=36,slow=31,SNR=3.1						
	0.3nm,0.4s						

ASRS ***20*** *08:25:11.0±0.8, 54°.62N×86°.45E, h0^{km}, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 20 08:25:15.0±3.6**, 54°.55N×86°.30E, h0^{km}, mbtmp2.7**/2**, ML2.5**/2**, Error ellipse: s-maj=27.2km s-min=16.3km az=45.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.06	236	I	I	08 32 50.0	
	baz=54,slow=318,SNR=7.5						
ZALV	Zalesovo Beam	1.06	236	Pg	Pg	08 25 33.7	-1.6
	1.3nm,0.3s,baz=57,slow=16,SNR=13						
ZALV				Lg	Lg	08 25 50.6	
	2.3nm,0.3s,baz=54,slow=27,SNR=11						
KURBB	Kurchatov Arra	6.16	233	Pn	Pn	08 26 48.3	+1.2
	0.1nm,0.3s,baz=48,slow=14,SNR=3.2						
	0.3nm,0.3s						
MKAR	Makanchi Array	8.18	200	Pn	Pn	08 27 15.7	+0.9
	0.1nm,0.3s,baz=22,slow=14,SNR=2.4						
	0.1nm,0.3s						

NEIC ***20*** *08:27:22.8±1.9, 58°.1S±0°.1×25°.3W±0°.2, h35^{km}±1^{km}, mb5.3/81, Mww5.2/13, Error ellipse: s-maj=18.5km s-min=14.6km az=213.0*

IDC ***20*** *08:27:23.9±1.4, 58°.00S×25°.38W, h46^{km}±11^{km}, mb5.0/20, mbtmp5.2/22, ML4.9/2, MS4.5/31, Error ellipse: s-maj=15.2km s-min=10.6km az=59.0*

GCMT ***20*** *08:27:24.8±0.2, 58°.10S±0°.01×24°.80W±0°.02, h38^{km}, MW5.3/134, Moment Tensor Solution. s110,c168; s134,c216; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.95±.02; $M_{\theta\theta}$0.12±.02; $M_{\phi\phi}$-1.07±.02; $M_{r\theta}$-0.06±.02; $M_{\theta\phi}$0.16±.01; $M_{\phi r}$0.44±.02; Best double couple: $M_0$1.11400×10^{17} NP1:ϕ_s172.00000°, δ33.00000°, λ90.00000°. NP2:ϕ_s352.00000°, δ57.00000°, λ90.00000°. Principal axes: T 1.0430, Plg78.0000°, Azm263.0000°; N 0.1370, Plg0.0000°, Azm172.0000°; P -1.1850, Plg12.0000°, Azm82.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***20*** *08:27:26.1, 57°.78S×24°.48W, h46^{km}, Moment Tensor Solution. Duration: 1^{s}8 Moment tensor: Scale 10^{16}Nm; M_{rr}5.81; $M_{\theta\theta}$0.85; $M_{\phi\phi}$-6.66; $M_{r\theta}$-0.40; $M_{\theta\phi}$1.85; $M_{\phi r}$2.52; Fault plane solution: $M_0$7.02000×10^{16} NP1: ϕ_s164.65000°, δ34.25000°, λ86.57000°. NP2: ϕ_s348.80000°, δ55.82000°, λ92.33000°. Principal axes: T 6.2969, Plg79.0000°, Azm268.0000°; N 1.2790, Plg2.0000°, Azm167.0000°; P -7.5759, Plg11.0000°, Azm77.0000°;*

MOS ***20*** *08:27:26.1±1.1, 58°.07S×25°.62W, h35^{km}, mb5.3/14 Error ellipse: s-maj=20.9km s-min=10.8km az=111.8*

NEIC ***20*** *08:27:26.1, 58°.08S×25°.43W, h46^{km}*

RSNC ***20*** *08:28:10.3±1.8, 56°S±27°×3°0W±2°6, h312^{km}±16^{km}, M4.8, mB5.4, mb5.2, Mw(mB)4.8*

ISC 20 08:27:24.0±0.5**, 58°.13S**±0°.05×**25°.47W**±0°.06**, h48**^{km}±4^{km}**, n636, σ1^{s}11**/626**, mb5.3**/65**, MS4.7**/40**, 14C-7D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	7.25	297		Pn	08 29 10.5	+3.3
HOPE	Hope Point	7.25	297	P	Pn	08 29 10.5	+3.3
VNA1	Neumayer--Stat	14.51	157	⇑P	Pn	08 30 45.8	-0.3
	comp=Z,123nm,0.5s						
VNA3	Neumayer Olymp	14.71	160	⇑P	Pn	08 30 47.8	-1.0
	comp=Z,41nm,0.2s						
VNA2	Neumayer--Watz	14.91	157	⇑P	Pn	08 30 50.5	-0.8
	comp=Z,40nm,0.2s,baz=328,slow=14						
VNA2	Neumayer--Watz	14.91	157	⇓S	Sn	08 33 24.9	-10
	baz=359,slow=1.5						
ESPZ	Base Esperanza	16.16	238	P	P	08 31 11.7	+1.7
SNAA	Sanae	16.46	155	⇑P	Pn	08 31 11.7	+0.5
	comp=Z,2μm,0.6s						
SNAA	Sanae	16.46	155	⇓S	Sn	08 34 01.7	-11
SNAA	Sanae	16.46	155		Pn	08 31 12.2	+0.9
SNAA				IAmb	IAmb	08 31 18.8	
	comp=Z,294nm,1.6s						
SNAA	Sanae	16.46	155	P	Pn	08 31 11.7	+0.5
	comp=Z,8.7nm,0.3s,baz=315,slow=14,SNR=302						
SNAA				S	Sn	08 34 03.4	-9.2
	comp=Z,11nm,0.7s,baz=313,slow=15,SNR=3.9						
	comp=Z,22nm,0.3s						
SNAA	Sanae	16.46	155	iP	Pn	08 31 11.9	+0.7
SNAA				pmax	pmax		
	comp=Z,85nm,1.5s						
TROLL	Troll, Antarti	17.97	152	⇑P	P	08 31 30.8	+0.8
	comp=Z,704nm,0.3s						
TROLL	Troll, Antarti	17.97	152	⇓S	Sn	08 34 36.4	-13
PMSA	Palmer Station	19.34	234	P	Pn	08 31 46.1	-0.2
PMSA				IAmb	IAmb	08 31 54.1	
	comp=Z,133nm,0.8s						
PMSA	Palmer Station	19.34	234	P	Pn	08 31 46.9	+0.6
	comp=Z,1.5nm,0.3s,baz=189,slow=6.7,SNR=4.3						
PMSA				LR	LR	08 38 08.6	
	comp=Z,3μm,20.8s,baz=80,slow=33						
	comp=Z,64nm,1.0s						
PMSA	Palmer Station	19.34	234	eP	P	08 31 40.2	-4.6
EFI	East Falkland	19.68	275		Pn	08 31 49.9	-0.5
EFI				IAmb	IAmb	08 31 59.9	
	comp=Z,150nm,1.3s						
EFI	East Falkland	19.68	275	P	Pn	08 31 49.9	-0.5
EFI				pmax	pmax		
	comp=Z,150nm,1.3s						
NVL	N'lazarevskaya	20.02	144	eP	P	08 31 44.0	-8.2
NVL				e		08 32 06.4	
NVL				ePPP	PPP	08 32 15.0	
NVL				eSS	Sn	08 36 20.7	+42
NVL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BELA	Belgrano 2	20.08	186		P	08 31 53.4	+0.5
SMAI	San Martin Ant	20.86	224		Pn	08 32 03.5	-0.8
USHA	Ushuaia	23.65	259	LR	LR	08 39 37.4	
	comp=Z,4μm,21.2s,baz=102,slow=31						
MG02	Cerro Sombrero	25.02	263	P	P	08 32 43.6	+0.6
MG03	Isla Dawson	25.16	260	P	P	08 32 44.7	+0.4
MG03				IAmb	IAmb	08 33 04.1	
	comp=Z,228nm,1.8s						
MG05	Puerto Natales	27.32	263		P	08 33 04.2	+0.3
MG05				IAmb	IAmb	08 33 07.8	
	comp=Z,95nm,0.8s						
AY03	Cochrane	29.95	271	P	P	08 33 28.8	+1.6
COYC	Coyhaique	30.76	274		P	08 33 35.7	+1.3
COYC	Coyhaique	30.76	274	P	P	08 33 36.2	+1.8
COYC				PcP	PcP	08 36 31.4	+0.7
TRQA	Tornquist	31.02	294	P	P	08 33 36.2	-0.6
TRQA	Tornquist	31.02	294	P	P	08 33 36.2	-0.6
TRQA				pmax	pmax		
	comp=Z,20nm,1.1s						
QSPA	South Pole Qui	32.12	180	P	P	08 33 47.7	+1.3
QSPA	South Pole Qui	32.12	180	P	P	08 33 48.4	+2.0
	comp=Z,37nm,0.6s,baz=213,slow=1.3,SNR=241						
	comp=Z,37nm,0.6s						
QSPA	South Pole Qui	32.12	180	P	P	08 33 48.3	+2.0
QSPA				PcP	PcP	08 36 35.0	+0.8
LL02	Futaleuf	32.24	277		P	08 33 48.1	+0.6
LL02				IAmb	IAmb	08 33 52.2	
	comp=Z,50nm,1.1s						
PLTB	Pedras Altas	32.58	312	eP	P	08 33 50.5	-0.1
LL01	San Ignacio de	33.11	278	P	P	08 33 56.0	+0.9
GO07	Milladeo Hill,	33.26	275	P	P	08 33 55.6	-0.7
PLCA	Paso Flores	33.31	282	P	P	08 33 57.0	+0.1
PLCA				IAmb	IAmb	08 33 59.2	
	comp=Z,43nm,0.8s						
PLCA	Paso Flores	33.31	282	P	P	08 33 58.0	+1.0
	comp=Z,41nm,0.8s,baz=142,slow=8.3,SNR=103						
PLCA				PcP	PcP	08 36 38.4	+0.5
	comp=Z,6.3nm,0.8s,baz=144,slow=2.5,SNR=3.7						
PLCA				ScP	ScP	08 40 18.1	+0.2
	comp=Z,2.2nm,0.9s,baz=130,slow=2.6,SNR=3.8						
	comp=Z,41nm,0.8s						
PLCA	Paso Flores	33.31	282	eP	P	08 33 55.6	-1.3
PLCA	Paso Flores	33.31	282	P	P	08 33 57.5	+0.5
PLCA				PcP	PcP	08 36 38.9	+1.0
PLCA				ScP	ScP	08 40 18.7	+0.8
CPSB	Cacapava Do Su	33.72	313	eP	P	08 34 00.7	+0.2
LL03	Petrohue	33.99	279	P	P	08 34 02.8	+0.1
LL05	Los Muermos	34.36	278	P	P	08 34 06.0	+0.1
LR05	Currie	34.44	281	P	P	08 34 07.5	+0.9
LR03	Panguipulli	35.05	281	P	P	08 34 11.7	-0.3
LR03				IAmb	IAmb	08 34 16.0	
	comp=Z,41nm,0.8s						
LR04	Corral	35.44	280	P	P	08 34 14.4	-0.8
ITQB	Itaqui	35.64	309	eP	P	08 34 16.2	-0.9
PET01	Itanhaem-SP	37.23	326	eP	P	08 34 31.9	+1.3
ML02	Panimavida	37.51	286	P	P	08 34 32.4	-0.6
PARB	Paraibuna	37.65	329	eP	P	08 34 35.4	+1.1
BI05	Punta Hualpn	37.66	283	P	P	08 34 34.4	+0.2
MAN01	Angra dos Reis	37.66	331	eP	P	08 34 35.2	+0.8
MAW	Mawson	37.93	141	P	P	08 34 37.2	+1.1
	comp=Z,7.9nm,0.7s,baz=232,slow=7.1,SNR=14						
	comp=Z,7.9nm,0.7s						
SPB	Sao Paulo	37.93	326	P	P	08 34 37.5	+1.0
SPB	Sao Paulo	37.93	326	eP	P	08 34 36.9	+0.4
SPB	Sao Paulo	37.93	326	P	P	08 34 38.2	+1.7
SPB				sP	pwP	08 34 52.8	+0.3
BO02	Sierra Bellavi	37.95	288	P	P	08 34 38.5	+1.8
DUB01	Friburgo-RJ	38.03	334	eP	P	08 34 37.9	+0.4
VAS01	Vassouras-RJ	38.09	332	eP	P	08 34 38.6	+0.7
CAM01	Campos-RJ	38.11	335	eP	P	08 34 38.1	0.0
VAO	Valinhos	38.35	327	eP	P	08 34 41.3	+1.1
PTGB	Pitanga	38.38	319	eP	P	08 34 40.3	-0.1
BO01	Tunca	38.42	288	P	P	08 34 41.4	+0.9
BO01				IAmb	IAmb	08 34 58.0	
	comp=Z,43nm,1.2s						
BO04	La Punta	38.50	289	P	P	08 34 41.7	+0.4
BO04				IAmb	IAmb	08 34 45.9	
	comp=Z,25nm,0.8s						
MT08	Bocatoma Ro	38.63	290	P	P	08 34 43.6	+1.0
FRTB	Fartura	38.82	323	eP	P	08 34 45.5	+1.5
MT03	Universidad Ad	38.84	289	P	P	08 34 45.3	+1.0
MT03				IAmb	IAmb	08 34 49.7	
	comp=Z,28nm,0.8s						
MT09	Talagante	38.86	289	P	P	08 34 44.7	+0.3
MT09				IAmb	IAmb	08 35 01.8	
	comp=Z,121nm,1.6s						
CPUP	Villa Florida	38.89	311	P	P	08 34 43.7	-0.9
CPUP	Villa Florida	38.89	311	P	P	08 34 43.5	-1.1
	comp=Z,5.0nm,0.8s,baz=16,slow=8.0,SNR=23						
CPUP				PcP	PcP	08 36 54.8	+0.2
	comp=Z,4.1nm,0.8s,baz=281,slow=2.5,SNR=8.2						
CPUP				ScP	ScP	08 40 38.5	+0.1
	comp=Z,0.8nm,0.8s,baz=356,slow=5.6,SNR=3.7						
CPUP				LR	LR	08 49 26.5	
	comp=Z,148nm,20.7s,baz=16,slow=34						
	comp=Z,5.0nm,0.8s						
CPUP	Villa Florida	38.89	311	P	P	08 34 43.9	-0.6
CPUP				PcP	PcP	08 36 54.8	+0.2
MT16	CCHEN	38.90	290	P	P	08 34 45.3	+0.6
MT16				IAmb	IAmb	08 34 50.2	
	comp=Z,32nm,0.8s						
MT01	Popeta	38.92	288	P	P	08 34 45.2	+0.4
PEL	Peldehue	39.21	290	P	P	08 34 47.9	+0.6
PEL				IAmb	IAmb	08 34 54.7	
	comp=Z,35nm,0.7s						
PEL	Peldehue	39.21	290	P	P	08 34 47.9	+0.6
PEL				pmax	pmax		
	comp=Z,35nm,0.7s						
CFA	Coronel Fontan	39.25	294	ScP	ScP	08 40 40.1	+0.2
	comp=Z,2.4nm,0.9s,baz=166,slow=2.3,SNR=5.7						
LDASE	Londrina, Braz	39.28	321	eP	P	08 34 48.9	+1.0
ZON	Zonda	39.51	293	P	P	08 34 49.0	-0.8
ZON	Zonda	39.51	293	P	P	08 34 49.0	-0.8
ZON				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SJPY	San Joaquin	39.60	314	eP	P	08 34 49.9	-0.7
BSCB	Bom Sucesso	39.66	331	eP	P	08 34 51.8	+0.7
RIB01	Linhares ES	40.28	338	eP	P	08 34 57.9	+1.7
TRCB	Terra Rica	40.34	319	eP	P	08 34 57.5	+0.7
SUR	Sutherland	40.35	71	P	P	08 34 55.9	-1.1
SUR				IAmb	IAmb	08 35 09.8	
	comp=Z,94nm,1.9s						
BB19B	Bebedouro	40.63	326	eP	P	08 34 59.8	+0.7
PCMB	Pacaembu	40.98	322	eP	P	08 35 01.9	-0.1
SJMB	Sao Joao De Ma	41.03	337	eP	P	08 35 02.6	+0.2
DIAM	Diamantina, MG	41.98	334	eP	P	08 35 10.6	+0.3
PMNB	Patos De Minas	42.44	330	eP	P	08 35 14.8	+0.7
ITRB	Iturama	42.48	324	eP	P	08 35 14.6	+0.4
LCO	Las Campanas	42.59	293	P	P	08 35 14.5	-0.8
LCO	Las Campanas	42.59	293	P	P	08 35 14.5	-0.8
LCO				pmax	pmax		
	comp=Z,20nm,1.0s						
GUA01	Guaratinga, BA	42.83	340	eP	P	08 35 18.1	+1.0
RPRD	Ribas do Rio P	42.85	319	eP	P	08 35 17.3	+0.1
MURT	Porto Murtinho	43.20	314	eP	P	08 35 18.1	-2.0
IPMB	Ipameri, GO	43.46	328	eP	P	08 35 22.9	+0.7
AQDB	Aquidauana	43.56	317	eP	P	08 35 21.7	-1.3
CMC01	Camacan, BA	43.97	340	eP	P	08 35 27.0	+0.7
SBA	Scott Base	44.07	184	P	P	08 35 28.0	+1.6
SBA				IAmb	IAmb	08 35 31.0	
	comp=Z,48nm,0.9s						
SBA	Scott Base	44.07	184	P	P	08 35 28.0	+1.6
SBA				pmax	pmax		
	comp=Z,48nm,0.9s						
SBA	Scott Base	44.07	184	P	P	08 35 29.6	+3.2
SBA				pP	pP	08 35 40.0	+1.4
C2SB	Chapadao do Su	44.15	321	eP	P	08 35 29.1	+1.4
VNDA	Vanda	44.53	182	P	P	08 35 32.4	+2.3
VNDA				IAmb	IAmb	08 35 34.2	
	comp=Z,45nm,0.8s						
VNDA	Vanda	44.53	182	P	P	08 35 32.7	+2.5
	comp=Z,39nm,0.7s,baz=187,slow=6.5,SNR=201						
VNDA				LR	LR	08 52 59.0	
	comp=Z,448nm,21.6s,baz=179,slow=34						
	comp=Z,39nm,0.7s						
VNDA	Vanda	44.53	182	P	P	08 35 32.4	+2.3
VNDA				pmax	pmax		
	comp=Z,45nm,0.8s						
VNDA	Vanda	44.53	182	P	P	08 35 32.6	+2.5
VNDA				PcP	PP	08 37 14.8	+0.5
JANB	Januaria	45.25	334	eP	P	08 35 36.3	-0.2
CCD	Concordia, Ant	45.46	169	P	P	08 35 38.9	+0.9
BDFB	Brasilia	45.63	329	P	P	08 35 40.4	+0.7
BDFB				IAmb	IAmb	08 35 41.9	
	comp=Z,44nm,0.8s						
BDFB	Brasilia	45.63	329	P	P	08 35 39.7	0.0
	comp=Z,39nm,0.8s,baz=151,slow=5.3,SNR=74						
BDFB				LR	LR	08 53 51.2	
	comp=Z,580nm,20.0s,baz=153,slow=35						
	comp=Z,39nm,0.8s						

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BDFB  Brasilia          45.63 329   P       P        08 35 40.4 +0.7
BDFB                                pmax    pmax
      comp=Z,44nm,0.8s
BOSA  Boshof            45.64  72   P       P        08 35 39.2 -0.4
BOSA  Boshof            45.64  72   P       P        08 35 38.9 -0.7
      comp=Z,2.6nm,0.6s,baz=200,slow=8.1,SNR=7.0
BOSA                                LR      LR       08 50 37.9
      comp=Z,1µm,21.6s,baz=222,slow=31
      comp=Z,2.6nm,0.6s
BOSA  Boshof            45.64  72   P       P        08 35 39.2 -0.4
BOSA                                pmax    pmax
      comp=Z,20nm,1.2s
H04S2 CROZET ISLANDS    45.88 111   T       T        09 26 14.9
      baz=226,slow=75,SNR=463
H04S3 CROZET ISLANDS    45.89 111   T       T        09 26 11.0
      baz=226,slow=75,SNR=8.0
H04S1 CROZET ISLANDS    45.90 111   T       T        09 26 18.1
      baz=226,slow=75,SNR=337
AF01  San Pedro de A    46.52 301   P       P        08 35 46.6 -0.2
ARAG  Araguaiana, MT    46.69 324  eP       P        08 35 47.9 +0.1
PHPEN Phepeng           47.04  67   P       P        08 35 53.2 +2.5
PHPEN                               IAmb    IAmb     08 35 57.2
      comp=Z,54nm,1.5s
SALV  Santo Antonio     47.78 319  eP       P        08 35 56.6 +0.3
SDBA  SAO DESIDERIO     47.95 334  eP       P        08 35 57.8 +0.2
BBSD  Serra de San D    48.42 313  eP       P        08 36 00.1 -1.1
LBTB  Lobatse           48.78  70   P       P        08 36 03.9 -0.2
LBTB                                IAmb    IAmb     08 36 10.7
      comp=Z,49nm,1.6s
LBTB  Lobatse           48.78  70   LR      LR       08 53 06.9
      comp=Z,1µm,18.8s,baz=208,slow=32
LBTB  Lobatse           48.78  70   P       P        08 36 03.9 -0.2
LBTB                                pmax    pmax
      comp=Z,49nm,1.6s
LBTB  Lobatse           48.78  70   P       P        08 36 03.2 -0.9
LBTB                                pP      pP       08 36 14.2 -2.1
PTLB  Pontes e Lacer    49.44 315   P       P        08 36 08.3 -0.7
PTLB                                IAmb    IAmb     08 36 10.9
      comp=Z,22nm,0.6s
PTLB  Pontes e Lacer    49.44 315  eP       P        08 36 08.0 -1.1
KDWAN Kaudwane          49.68  68   P       P        08 36 13.8 +2.8
KDWAN                               IAmb    IAmb     08 36 19.4
      comp=Z,81nm,1.9s
SIV   San Ignacio       49.68 313   LR      LR       08 57 26.1
      comp=Z,205nm,19.6s,baz=130,slow=36
GRTLG Ghanzi            49.74  63   P       P        08 36 11.9 +0.4
GRTLG                               IAmb    IAmb     08 36 26.2
      comp=Z,20nm,1.1s
H10S2 ASCENSION HYDR49.76  14   T       T        09 30 35.3
      baz=187,slow=74,SNR=218
H10S3 ASCENSION HYDR49.76  14   T       T        09 30 43.2
      baz=33,slow=74,SNR=158
GO01  Chusmiza          49.84 302   P       P        08 36 11.6 -1.0
GO01                                IAmb    IAmb     08 36 14.0
      comp=Z,19nm,0.6s
TSUM  Tsumeb            49.94  57   P       P        08 36 12.9 -0.2
TSUM  Tsumeb            49.94  57   LR      LR       08 52 18.0
      comp=Z,820nm,21.7s,baz=149,slow=30
SNDB  Serra Nova Dou    50.05 326  eP       P        08 36 14.2 +0.5
LPHEP Lephephe          50.29  69   P       P        08 36 15.9 +0.3
LPHEP                               IAmb    IAmb     08 36 24.1
      comp=Z,22nm,1.1s
H10N1 ASCENSION HYDR50.88  14   T       T        09 32 08.9
      baz=180,slow=72,SNR=13
H10N3 ASCENSION HYDR50.88  14   T       T        09 32 06.0
      baz=180,slow=72,SNR=11
H10N2 ASCENSION HYDR50.89  14   T       T        09 32 11.4
      baz=180,slow=72,SNR=12
PB16  IPOC Station P    51.15 302   P       P        08 36 22.1 -0.5
CASY  Casey             51.63 159   P       P        08 36 26.0 +1.1
CASY                                IAmb    IAmb     08 36 27.8
      comp=Z,18nm,0.8s
CASY  Casey             51.63 159   P       P        08 36 26.3 +1.4
CASY                                pP      pP       08 36 36.8 -0.5
PB18  Visviri           51.79 302   P       P        08 36 26.7 -0.7
PB18                                IAmb    IAmb     08 37 42.9
      comp=Z,19nm,0.6s
SMTB  Santa Maria do    52.01 332  eP       P        08 36 28.8 +0.4
PDRB  Porto dos Gac     52.13 320  eP       P        08 36 28.7 -0.6
VILB  Vilhena           52.13 315   P       P        08 36 28.7 -0.6
VILB  Vilhena           52.13 315  eP       P        08 36 28.5 -0.8
PHDHD Phuduhudu         52.32  65   P       P        08 36 30.4 -0.4
PHDHD                               IAmb    IAmb     08 36 52.9
      comp=Z,28nm,0.8s
LPAZ  La Paz            52.34 305   P       P        08 36 30.8 -0.8
LPAZ                                IAmb    IAmb     08 36 35.2
      comp=Z,24nm,0.6s
LPAZ  La Paz            52.34 305   P       P        08 36 31.2 -0.4
      comp=Z,32nm,0.6s,baz=265,slow=5.7,SNR=4.7
LPAZ                                PcP     PcP      08 37 43.0 +0.8
      comp=Z,12nm,0.6s,baz=176,slow=4.9,SNR=2.3
LPAZ                                LR      LR       08 58 04.4
      comp=Z,198nm,21.7s,baz=180,slow=35
      comp=Z,32nm,0.6s
LPAZ  La Paz            52.34 305  eP       P        08 36 31.4 -0.2
LPAZ  La Paz            52.34 305   P       P        08 36 31.2 -0.4
LPAZ                                pP      pP       08 36 41.4 -2.4
LPAZ                                PcP     PcP      08 37 43.1 +1.0
CLDB  Colider           52.50 321  eP       P        08 36 31.2 -0.8
RCBR  Riachuelo         52.80 347  eP       P        08 36 36.8 +2.6
NBPB  Pedra_Branca-C    53.59 342  eP       P        08 36 41.0 +1.0
KSANE Kasane            54.68  65   P       P        08 36 47.9 -0.2
KSANE                               IAmb    IAmb     08 37 09.1
      comp=Z,30nm,1.1s
NBCL  Cascavel-CE       54.69 344  eP       P        08 36 49.1 +1.1
DRV   Dumont d’Urvil    55.05 173   P       P        08 36 50.9 +0.9
DRV                                 pP      pP       08 37 01.7 -0.9
PRPB  Parauapebas       55.17 330  eP       P        08 36 52.1 +0.6
NPGB  Novo Progresso    55.95 323  eP       P        08 36 56.9 -0.3
LSZ   Lusaka            58.30  66   P       P        08 37 14.7 +0.8
LSZ                                 IAmb    IAmb     08 37 21.0
      comp=Z,23nm,1.1s
LSZ   Lusaka            58.30  66   LR      LR       08 58 58.0
      comp=Z,1µm,19.1s,baz=191,slow=32
LSZ   Lusaka            58.30  66   P       P        08 37 14.7 +0.8
LSZ                                 pmax    pmax
      comp=Z,23nm,1.1s
TMAB  Tom-Au,PA,Br      58.39 333  eP       P        08 37 15.9 +1.6
ITTB  Itaituba          58.59 324  eP       P        08 37 15.2 -0.6
NNA   Nana              60.06 298   LR      LR       09 01 48.8
      comp=Z,480nm,21.9s,baz=152,slow=34
NNA   Nana              60.06 298  i P      P        08 37 24.9 -1.1
NNA                                 pmax    pmax
      comp=Z,18nm,1.2s
MAL2  Monte Alegre,     60.35 326   P       P        08 37 28.3 +0.4
CZSB  Cruzeiro do Su    61.95 304  eP       P        08 37 37.8 -0.9
TEFE  Tefe              62.47 315  eP       P        08 37 41.1 -1.1
TBTG  Tabatinga, AM     63.94 309  eP       P        08 37 50.6 -1.3
ATAH  Atahualpa         65.04 299   LR      LR       09 06 14.9
      comp=Z,327nm,20.2s,baz=190,slow=36
OPO   Ambohidratompo    65.27  85   LR      LR       08 59 47.1
      comp=Z,441nm,19.9s,baz=3.0,slow=30
SGC2  Sao Gabriel da    66.45 314   P       P        08 38 05.3 -2.9
      comp=Z,41nm,0.9s
BOAV  Boa Vista         66.50 321   P       P        08 38 07.4 -1.1
BOAV  Boa Vista         66.50 321  eP       P        08 38 07.7 -0.7
BOAV  Boa Vista         66.50 321   P       P        08 38 07.2 -1.3
      comp=Z,1µmcomp=Z,158nm,0.8s
DBIC  Dimbokro          66.70  22   P       P        08 38 09.2 -0.5
DBIC                                IAmb    IAmb     08 38 10.7
      comp=Z,16nm,0.6s
DBIC  Dimbokro          66.70  22   P       P        08 38 09.2 -0.5
      comp=Z,12nm,0.5s,baz=202,slow=6.3,SNR=30
DBIC                                LR      LR       09 00 08.4
      comp=Z,359nm,21.0s,baz=203,slow=30
      comp=Z,12nm,0.5s
DBIC  Dimbokro          66.70  22   P       P        08 38 09.2 -0.5
DBIC                                pmax    pmax
      comp=Z,16nm,0.6s
DBIC  Dimbokro          66.70  22   P       P        08 38 09.8 +0.1
MDP   Montagnes des     66.71 330   LR      LR       09 04 27.5
      comp=Z,277nm,21.8s,baz=152,slow=33
MPGF  Montagnes des     66.72 330   P       P        08 38 10.5 +0.6
MCRA  Macar, Loja       68.19 299   P       P        08 38 16.4 -2.9
      comp=Z,28nm,0.9s
COHC  Cochancay         69.55 301   P       P        08 38 27.6  0.0
COHC  Cochancay         69.55 301   P       P        08 38 27.0 -0.6
      comp=Z,68nm,0.8s
PTLC  Puerto Leguiza    69.92 306   P       P        08 38 26.7 -3.3
      comp=Z,755nmcomp=Z,89nm,0.8s
MACC  Macarena, Meta    71.30 308   P       P        08 38 36.4 -1.9
      comp=Z,36nm,0.8s
FLOC  Florencia         71.56 306   P       P        08 38 39.2 -0.7
FLOC                                IAmb    IAmb     08 38 40.7
      comp=Z,25nm,0.8s
OTAV  Otavalo           71.58 303   P       P        08 38 40.6  0.0
OTAV                                IAmb    IAmb     08 38 44.8
      comp=Z,20nm,0.9s
OTAV  Otavalo           71.58 303   P       P        08 38 40.6  0.0
OTAV                                pmax    pmax
      comp=Z,20nm,0.9s
OTAV  Otavalo           71.58 303  eP       P        08 38 40.6  0.0
OTAV  Otavalo           71.58 303   P       P        08 38 39.8 -0.8
      comp=Z,22nm,0.9s
OTAV  Otavalo           71.58 303   P       P        08 38 41.9 +1.3
GARC  Garzon, Huila     72.03 306   P       P        08 38 41.5 -1.5
      comp=Z,877nmcomp=Z,96nm,0.8s
BBAC  Balboa, Cauca     72.64 305   P       P        08 38 45.0 -1.6
      comp=Z,786nmcomp=Z,40nm,0.8s
POPC  Popayan, Colom    72.86 305   P       P        08 38 48.1 +0.2
      comp=Z,35nm,0.8s
BBTS  Babate            72.89   9   LR      LR       09 04 05.0
      comp=Z,277nm,21.6s,baz=49,slow=30
PRAC  Prado             73.15 308   P       P        08 38 47.9 -1.5
      comp=Z,774nmcomp=Z,70nm,0.7s
ORTC  Ortega, Tolima    73.47 307   P       P        08 38 49.7 -1.6
ROSC  El Rosal          73.93 309   P       P        08 38 53.5 -0.9
      comp=Z,36nm,0.8s,baz=161,slow=4.3,SNR=19
      comp=Z,36nm,0.8s
RUSC  La Rusia          74.37 310   P       P        08 38 56.0 -1.1
RUSC                                IAmb    IAmb     08 38 57.0
      comp=Z,25nm,0.8s
TORD  Torodi Ar. Bea    74.44  27   P       P        08 38 56.7 -0.1
      comp=Z,19nm,0.5s,baz=197,slow=5.7,SNR=30
TORD                                LR      LR       09 04 58.8
      comp=Z,363nm,21.4s,baz=190,slow=30
      comp=Z,19nm,0.5s
PLMC  San Jos del P     74.81 307   P       P        08 38 56.9 -2.2
      comp=Z,472nmcomp=Z,72nm,0.8s
PCRV  Puerto La Cruz    75.15 320   P       P        08 39 01.5 +0.5
      comp=Z,168nm,0.8s,baz=164,slow=2.8,SNR=96
PCRV                                LR      LR       09 15 33.1
      comp=Z,152nm,18.3s,slow=38
      comp=Z,168nm,0.8s
BAUV  El Baul           75.22 316   P       P        08 39 01.4 +0.1
TUZ   Tuapeka           75.53 191   P       P        08 39 04.5 +1.6
WHZ   Wether Hill Ro    75.75 190   P       P        08 39 05.1 +0.9
WHZ                                 IAmb    IAmb     08 39 06.8
      comp=Z,47nm,0.9s
WHZ   Wether Hill Ro    75.75 190   P       P        08 39 05.4 +1.3
SDV   Santo Domingo     76.14 314   P       P        08 39 06.6 -0.2
SDV                                 IAmb    IAmb     08 39 08.4
      comp=Z,39nm,0.7s
SDV   Santo Domingo     76.14 314   P       P        08 39 07.2 +0.3
      comp=Z,39nm,0.7s,baz=184,slow=3.0,SNR=20
SDV                                 LR      LR       09 13 56.8
      comp=Z,505nm,20.2s,baz=152,slow=37
      comp=Z,39nm,0.7s
SDV   Santo Domingo     76.14 314  eP       P        08 39 07.1 +0.3
SDV   Santo Domingo     76.14 314   P       P        08 39 06.2 -0.6
      comp=Z,56nm,0.8s
DCZ   Deep Cove         76.24 189   P       P        08 39 08.3 +1.4
DCZ                                 IAmb    IAmb     08 39 14.4
      comp=Z,38nm,0.9s
MLZ   Mavora Lakes      76.26 190   P       P        08 39 07.9 +0.9
MLZ                                 IAmb    IAmb     08 39 18.6
      comp=Z,51nm,1.1s
MLZ   Mavora Lakes      76.26 190   P       P        08 39 07.9 +0.9
EAZ   Earnscleugh       76.28 191   P       P        08 39 08.4 +1.3
ODZ   Otahua Downs      76.33 192   P       P        08 39 08.5 +1.1
DBBC  Dabeiba           76.68 308   P       P        08 39 08.8 -1.0
WKZ   Wanaka            76.71 191   P       P        08 39 11.4 +1.8
TMZ   Timaru            76.94 192   P       P        08 39 11.3 +0.4
MSZ   Milford Sound     76.96 190   P       P        08 39 11.4 +0.4
LBZ   Lake Benmore      77.03 191   P       P        08 39 12.1 +0.7
UREC  San Jos de Ur     77.06 309   P       P        08 39 09.3 -2.5
      comp=Z,191nmcomp=Z,20nm,0.7s
WACZ  Wakanui South     77.28 193   P       P        08 39 14.4 +1.7
ARCZ  Arundel           77.35 192   P       P        08 39 14.5 +1.3
MQZ   McQueen’s Vall    77.42 193   P       P        08 39 14.8 +1.2
RACZ  Rakaia            77.46 193   P       P        08 39 15.1 +1.4
SLBI  Saint Lucia, B    77.58 325  e        P        08 39 14.8 +0.2
RPZ   Rata Peaks        77.59 192   P       P        08 39 16.0 +1.5
RPZ   Rata Peaks        77.59 192   P       P        08 39 15.0 +0.4
      comp=Z,43nm,0.8s,baz=154,slow=0.4,SNR=13
RPZ                                 LR      LR       09 10 15.8
      comp=Z,208nm,19.9s,baz=128,slow=33
      comp=Z,43nm,0.8s
APAC  Apartado, Choc    77.63 308   P       P        08 39 14.8 -0.2
      comp=Z,46nm,0.8s
BIM   Bigot             78.07 325   P       P        08 39 16.6 -0.9
BIM   Bigot             78.07 325  e        P        08 39 19.0 +1.6
LTZ   Lake Taylor       78.37 193   P       P        08 39 19.9 +0.9
ARGC  Ariguani, Magd    78.44 311   P       P        08 39 18.8 -0.7
INZ   Inchbonnie        78.53 193   P       P        08 39 20.2 +0.5
KHZ   Kahutara          78.57 194   P       P        08 39 20.7 +0.8
BSWZ  Blackbirch Sta    79.22 195   P       P        08 39 25.1 +1.6
THZ   Tophouse          79.30 194   P       P        08 39 26.5 +2.4
PAWZ  Paruwai Farm      79.33 196   P       P        08 39 25.2 +1.0
BHW   Baring Head       79.38 195   P       P        08 39 26.1 +1.6
DSZ   Denniston Nort    79.45 193   P       P        08 39 24.7 -0.1
TUWZ  Tuamarina         79.49 195   P       P        08 39 27.3 +2.3
TMWZ  Te Maipa          79.53 196   P       P        08 39 27.3 +2.0
TCW   Tory Channel      79.66 195   P       P        08 39 26.5 +0.5
MRNZ  Matariki Terra    79.67 194   P       P        08 39 26.8 +0.8
NNZ   Nelson            79.77 194   P       P        08 39 27.8 +1.2
HOWZ  Holdsworth Sta    79.79 196   P       P        08 39 27.9 +1.2
BFZ   Birch Farm        79.89 197   P       P        08 39 28.8 +1.6
TKNZ  Takaka Hill       80.01 194   P       P        08 39 28.0 +0.1
MRZ   Mangatainoka R    80.01 196   P       P        08 39 29.1 +1.2
DUWZ  D’Urville Isla    80.11 195   P       P        08 39 29.7 +1.3
PRHZ  Porangahau        80.24 197   P       P        08 39 30.5 +1.4
POWZ  Post Office Ro    80.25 196   P       P        08 39 30.8 +1.6
QRZ   Quartz Range      80.27 194   P       P        08 39 28.0 -1.3
DVHZ  Dannevirke        80.28 197   P       P        08 39 30.8 +1.4
PNHZ  Pukenui           80.65 197   P       P        08 39 33.6 +2.2
KRHZ  Kereru            80.89 197   P       P        08 39 34.2 +1.6
KWHZ  Kaweka Forest     81.10 197   P       P        08 39 35.4 +1.6
WNVZ  Wahianoa          81.32 196   P       P        08 39 37.3 +2.2
TRVZ  Turoa             81.35 196   P       P        08 39 36.7 +1.3
WHVZ  Whangaehu Hut     81.36 196   P       P        08 39 36.8 +1.4
MAVZ  Matarangi         81.38 196   P       P        08 39 37.1 +1.5
FWVZ  Far West T-bar    81.39 196   P       P        08 39 36.8 +1.2
SNVZ  South Ngauruho    81.45 196   P       P        08 39 37.3 +1.5
NGZ   Ngauruhoe         81.47 196   P       P        08 39 37.8 +1.9
OTVZ  Oturere           81.47 196   P       P        08 39 37.0 +1.1
ETVZ  East Tongariro    81.49 197   P       P        08 39 37.5 +1.5
TMVZ  Te Maari          81.51 197   P       P        08 39 37.1 +1.0
NEZ   North Egmont      81.59 195   P       P        08 39 38.4 +1.9
VRZ   Vera Road         81.64 196   P       P        08 39 37.1 +0.5
MWZ   Matawai           81.98 198   P       P        08 39 40.1 +1.6
URZ   Urewera           82.13 198   P       P        08 39 40.0 +0.8
      comp=Z,26nm,0.9s,baz=283,slow=4.0,SNR=9.7
URZ                                 LR      LR       09 13 21.0
      comp=Z,110nm,20.2s,baz=160,slow=34
      comp=Z,26nm,0.9s
URZ   Urewera           82.13 198   P       P        08 39 40.5 +1.3
HIZ   Hauiti            82.22 196   P       P        08 39 39.7  0.0
TLZ   Tolley Road       82.30 197   P       P        08 39 41.2 +1.0
RUGZ  Raukumara Rang    82.32 198   P       P        08 39 42.3 +1.9
HAZ   Te Kaha           82.51 198   P       P        08 39 43.1 +1.9
TOZ   Tahuroa Road      82.90 197   P       P        08 39 43.6 +0.4
SJG   San Juan          83.06 321   P       P        08 39 42.8 -1.2
      comp=Z,32nm,0.9s,baz=157,slow=4.9,SNR=7.8
      comp=Z,32nm,0.9s
JTS   Las Juntas de     83.41 301   P       P        08 39 45.7 -0.3
      comp=Z,12nm,0.7s,baz=72,slow=2.2,SNR=7.8
      comp=Z,12nm,0.7s
ESPN  Las Esperanzas    84.80 303   P       P        08 39 52.7 -0.3
ESPN                                IAmb    IAmb     08 39 53.5
      comp=Z,28nm,0.8s
WCZ   Waipu Caves       84.83 196   P       P        08 39 52.2 -0.8
ACON  Acoyapa           84.99 302   P       P        08 39 53.5 -0.5
OUZ   Omahuta           85.64 196   P       P        08 39 57.6 +0.5
TBI   Tubuai            86.48 230  eS       S        08 50 29.7 -4.2
      comp=Z,857nm,26.2s
TBI   Tubuai            86.48 230  eLR      LR       09 07 28.9
      comp=Z,1µm,26.0s
ATD   Arta Tunnel       88.64  66   LR      LR       09 18 06.3
      comp=Z,43nm,19.1s,baz=195,slow=34
FORT  Forrest           88.69 157   P       P        08 40 12.6 +0.6
ESQI  Esquipulas        89.17 300   P       P        08 40 14.7 +0.4
STKA  Stephens Creek    89.69 169   P       P        08 40 17.0 +0.4
STKA  Stephens Creek    89.69 169   P       P        08 40 16.5 -0.1
      comp=Z,8.3nm,0.8s,baz=174,slow=5.9,SNR=13
STKA                                LR      LR       09 20 38.2
      comp=Z,486nm,18.2s,baz=198,slow=36
      comp=Z,8.3nm,0.8s
STKA  Stephens Creek    89.69 169  eP       P        08 40 17.2 +0.6
STKA                                pmax    pmax
      comp=Z,8.0nm,0.8s
PPT2  Papeete2          91.67 232  eP       P        08 40 22.4 -3.7
      comp=Z,95nm,24.8s
PPT2  Papeete2          91.67 232  eS       S        08 51 12.9  -10
      comp=Z,221nm,31.0s
PPT2  Papeete2          91.67 232  eLR      LR       09 09 51.9
      comp=Z,778nm,27.8s
PPT2                               eLR      LR       09 09 58.4
      comp=Z,870nm,22.2s
PPT   Papeete           91.69 232   LR      LR       09 14 34.7
      comp=Z,425nm,18.1s,baz=147,slow=31
MDT   Midelt            92.27  17   LR      LR       09 16 58.3
      comp=Z,261nm,19.1s,baz=182,slow=32
RAR   Rarotonga         92.34 222   LR      LR       09 17 55.7
      comp=Z,137nm,18.0s,baz=136,slow=33
TEIG  Tepich            93.65 303   P       P        08 40 34.6 -0.2
CMIG  Matias Romero     93.97 296   LR      LR       09 17 02.5
      comp=Z,165nm,22.0s,baz=182,slow=32
TAOE  Nuku Hiva Isla    95.12 244  eLR      LR       09 11 22.7
      comp=Z,604nm,27.5s
ASAR  Alice Springs     96.72 161   P       P        08 40 48.5 -0.6
ASAR  Alice Springs     96.72 161   P       P        08 40 49.0 -0.2
      comp=Z,5.9nm,0.7s,baz=184,slow=3.9,SNR=62
ASAR                                PP      PP       08 44 43.1 -0.2
      comp=Z,0.7nm,0.7s,baz=193,slow=7.1,SNR=5.4
ASAR                                PKiKP   PKiKP    08 45 26.1 +0.5
      comp=Z,0.5nm,0.8s,baz=176,slow=0.5,SNR=4.6
ASAR                                PKKPbc  PKKPbc   08 57 30.8 +2.0
      comp=Z,0.7nm,0.8s,baz=28,slow=1.9,SNR=4.6
ASAR                                P3KPbc           09 00 15.2
      comp=Z,0.9nm,0.9s,baz=16,slow=5.1,SNR=5.9
ASAR                                LR      LR       09 22 09.6
      comp=Z,502nm,19.5s,baz=196,slow=34
      comp=Z,5.9nm,0.7s
ASAR  Alice Springs     96.72 161   P       P        08 40 49.0 -0.2
AS31  Alice Springs     96.72 161   P       P        08 40 48.6 -0.5
KEST  Kesra             97.95  28   LR      LR       09 20 15.2
      comp=Z,376nm,20.2s,baz=226,slow=32
ESDC  Sonseca Array     99.09  17   P       Pdif     08 40 59.7 +0.5
      comp=Z,0.2nm,0.6s,baz=179,slow=7.2,SNR=5.2
ESDC                                LR      LR       09 22 49.6
      comp=Z,113nm,18.0s,baz=172,slow=34
      comp=Z,0.2nm,0.6s
DZM   Mont Dzumac       99.49 191  eLR      LR       09 13 30.6
      comp=Z,285nm,22.3s
WRA   Warramunga Arr   100.44 161   P       Pdif     08 41 05.3 -0.5
      comp=Z,1.3nm,0.7s,baz=198,slow=4.2,SNR=10
WRA                                 PKKPbc  PKKPdf   08 57 21.4 -0.7
      comp=Z,0.8nm,0.7s,baz=356,slow=2.8,SNR=4.9
WRA                                 P3KPbc           09 00 00.2
      comp=Z,1.5nm,1.0s,baz=7.8,slow=4.1,SNR=5.6
WRAB  Tennant Creek    100.45 161  i P      Pdif     08 41 05.9 +0.1
WRAB                                pmax    pmax
      comp=Z,3.0nm,0.9s
TXAR  Lajitas Array    108.56 296   Pdiff   Pdif     08 41 41.8 +0.2
      comp=Z,0.2nm,0.8s,baz=116,slow=5.7,SNR=3.6
TXAR                                PKiKP   PKiKP    08 45 47.9 +0.9
      comp=Z,0.5nm,0.8s,baz=175,slow=2.8,SNR=5.6
BRTR  Keskin Array B   109.24  45   PP      PP       08 46 16.7 -1.5
      comp=Z,0.6nm,0.8s,baz=161,slow=4.8,SNR=3.5
BRTR                                PKKPbc  PKKPbc   08 56 55.3 +2.4
      comp=Z,1.7nm,0.7s,baz=118,slow=2.3,SNR=6.8
WLF   Walferdange      110.53  21  dPKiKP   PKiKP    08 45 50.5 +0.7
ANMO  Albuquerque      114.52 297c iPKIKP   PKPdf    08 45 57.7 -0.5
ANMO                                pmax    pmax
      comp=Z,1.0nm,0.8s
EKA   Eskdalemuir Ar   114.53  14   PKKPbc  PKKPbc   08 56 36.0 +0.4
      comp=Z,0.3nm,0.3s,baz=2.5,slow=3.4,SNR=5.2
AKASG Malin Array Be   117.33  36   PKP     PKPdf    08 46 02.2 -0.5
      comp=Z,1.3nm,0.7s,baz=252,slow=1.4,SNR=4.1
SCHQ  Schefferville    117.45 334   PKP     PKPdf    08 46 02.3 -0.6
      baz=122,slow=1.5
SCHQ                                PP      PP       08 47 15.6 -0.6
      comp=Z,3.0nm,0.8s,baz=176,slow=4.2,SNR=5.1
HFS   Hagfors          121.86  22   PKP     PKPdf    08 46 09.7 -1.4
      comp=Z,1.3nm,0.6s,baz=225,slow=4.0,SNR=4.5
HFS                                 PKKPbc  PKKPbc   08 56 11.2 +2.1
      comp=Z,2.1nm,0.8s,baz=232,slow=4.9,SNR=5.0
PDAR  Pinedale Array   122.22 300   PKP     PKPdf    08 46 11.6 -1.2
      comp=Z,1.5nm,0.5s,baz=124,slow=5.6,SNR=18
NB2   NORSAR Subarra122.23  20   PKKP             08 56 09.1
      comp=Z,1.1nm,0.6s,baz=22,slow=4.4
NOA   NORSAR Array B122.23  20   PKP     PKiKP    08 46 12.1  0.0
      comp=Z,1.6nm,0.9s,baz=201,slow=1.7,SNR=3.4
NOA                                 PKKPbc  PKKPbc   08 56 09.3 +1.6
      comp=Z,1.8nm,0.8s,baz=19,slow=5.2,SNR=8.1
ULM   Lac du Bonnet    122.39 314   PKP     PKPdf    08 46 11.6 -0.9
      comp=Z,8.0nm,0.6s,baz=162,slow=1.8,SNR=26
ULM                                 PP      PP       08 47 49.9 -0.2
      comp=Z,4.5nm,1.0s,baz=149,slow=7.2,SNR=3.6
ULM   Lac du Bonnet    122.39 314  ePKIKP   PKPdf    08 46 12.2 -0.3
ULM                                 pmax    pmax
      comp=Z,8.0nm,0.6s
NVAR  Mina Array Bea   123.04 291   PKP     PKiKP    08 46 15.2 +0.6
      comp=Z,4.0nm,0.7s,baz=151,slow=2.9,SNR=27
VSU   Vasula           123.38  30  i PKIKP  PKPdf    08 46 13.5 -0.6
OBN   Obninsk          123.42  37⇓ePKIKP   PKPdf    08 46 14.3  0.0
OBN                                e                 08 47 55.1
OBN                                ePPP     PPP      08 50 33.6
OBN                                e                 08 53 24.6
OBN                                eSS      SS       09 05 09.8  +30
OBN                                 pmax    pmax
      comp=Z,3.0nm,0.6s
OBN                                 MLR     MLR
      comp=Z,74nm,18.0s
CMAR  Chiang Mai Arr   123.46 110   PKP     PKiKP    08 46 15.7 -0.2
      comp=Z,8.6nm,0.8s,baz=231,slow=3.8,SNR=24
CMAR  Chiang Mai Arr   123.46 110c iPKIKP   PKiKP    08 46 16.2 +0.4
CMAR                                pmax    pmax
      comp=Z,9.0nm,0.8s
FINES FINESS Array B   125.79  28   PKP     PKPdf    08 46 18.0 -0.6
      comp=Z,6.9nm,0.6s,baz=154,slow=1.9,SNR=38
AKTO  Aktyubinsk       127.82  54   PKP     PKPdf    08 46 22.3 -0.6
      comp=Z,5.6nm,0.8s,baz=223,slow=2.5,SNR=12
KSH   Kashi            128.21  75   PKP     PKiKP    08 46 25.3 +0.5
KSH                                 LR      LR
      comp=Z,320nm,22.3s
KSH                                 LR      LR
      comp=Z,240nm,19.2s
KSH                                 LR      LR
      comp=Z,200nm,16.1s
KLMR  Klimovskoe       129.00  35  ePKIKP   PKPdf    08 46 24.1 -0.7
KLMR                                pmax    pmax
      comp=Z,28nm,1.3s
QIZ   Qiongzhong       129.17 121   PKP     PKPdf    08 46 25.8 -0.7
QIZ                                 PP      PP       08 48 40.0 +4.9
QIZ                                 SS      SS       09 05 54.6 +3.1
QIZ                                 AMB     AMB
      comp=Z,200nm,14.3s
QIZ                                 LR      LR
      comp=Z,190nm,14.7s
QIZ                                 LR      LR
      comp=Z,260nm,19.6s
AAK   Ala-Archa        129.78  71   PKP     PKPdf    08 46 26.9 -0.2
      comp=Z,8.0nm,0.6s,baz=134,slow=5.0,SNR=13
AAK   Ala-Archa        129.78  71c iPKIKP   PKiKP    08 46 27.9  0.0
AAK                                 pmax    pmax
      comp=Z,8.0nm,0.7s
KIRV  Kirov            130.51  42   PKP     PKPdf    08 46 26.8 -0.9
      comp=Z,6.3nm,0.4s,baz=217,slow=5.7,SNR=3.7
KIRV  Kirov            130.51  42c iPKIKP   PKiKP    08 46 28.4 -0.2
PZH   PanZhiHua        131.59 107   PKP     PKPdf    08 46 31.3 +0.3
ARTI  Arti             132.29  48   PKP     PKPdf    08 46 30.7 -0.4
      comp=Z,1.1nm,0.3s,baz=208,slow=3.4,SNR=4.4
ARTI  Arti             132.29  48  i PKIKP  PKPdf    08 46 30.9 -0.3
ARTI                                                 08 48 54.7
ARCES ARCESS Array B   132.53  22   PKP     PKPdf    08 46 31.4 +0.1
      comp=Z,3.2nm,0.6s,baz=219,slow=1.7,SNR=21
BRVK  Borovoye         135.06  58c iPKIKP   PKiKP    08 46 37.4 -0.6
BRVK                                pmax    pmax
      comp=Z,4.0nm,0.8s
BVAR  Borovoye Array   135.09  58   PKhKP   PKPpre   08 46 23.9
      comp=Z,0.8nm,0.7s,baz=101,slow=1.5,SNR=4.5
BVAR                                PKP     PKPdf    08 46 37.0 +0.4
      comp=Z,6.3nm,0.6s,baz=248,slow=1.6,SNR=22
BVAR                                SKPbc   SKPbc    08 50 01.4 -1.5
      comp=Z,2.2nm,0.8s,baz=207,slow=3.0,SNR=4.6
MK31  Makanchi Array   136.64  72c iPKIKP   PKPdf    08 46 40.2 +0.5
MKAR  Makanchi Array   136.64  72   PKhKP   PKPpre   08 46 29.4
      comp=Z,1.1nm,0.7s,baz=22,slow=0.2,SNR=12
MKAR                                PKP     PKPdf    08 46 39.4 -0.3
      comp=Z,2.9nm,0.7s,baz=222,slow=1.6,SNR=13
MKAR                                SKPbc   SKPbc    08 50 06.6 -1.4
      comp=Z,2.0nm,1.0s,baz=250,slow=2.5,SNR=6.2
MKAR  Makanchi Array   136.64  72c iPKIKP   PKPdf    08 46 38.5 -1.2
MKAR                                pmax    pmax
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	comp=Z,3.0nm,0.7s						
KURBB	Kurchatov Arra comp=Z,0.9nm,0.7s,baz=234,slow=3.7,SNR=5.7	137.32	66	PKhKP	PKPpre	08 46 31.5	
KURBB	comp=Z,3.2nm,0.6s,baz=236,slow=2.4,SNR=12			PKP	PKPdf	08 46 40.6	-0.1
KURBB	comp=Z,2.1nm,1.1s,baz=231,slow=3.1,SNR=6.7			SKPbc	SKPbc	08 50 09.5	-0.3
WMQ	Urumqi	137.38	79	*e*PKP	PKPdf	08 46 42.1	+0.8
WMQ	comp=Z,220nm,24.9s			LR	LR		
KURK	Kurchatov	137.43	66*c*	*i*PKIKP	PKPdf	08 46 41.5	+0.5
KURK	comp=Z,6.0nm,1.0s			pmax	pmax		
YKA	Yellowknife Ar comp=Z,0.3nm,0.4s,baz=114,slow=2.6,SNR=11	138.33	316	PKhKP	PKPpre	08 46 32.3	
YKA	comp=Z,17nm,0.8s,baz=125,slow=1.7,SNR=59			PKP	PKPdf	08 46 42.6	+0.4
YKA	comp=Z,1.4nm,0.8s,baz=125,slow=5.6,SNR=4.5			PP	PP	08 49 31.2	-2.2
YKA	comp=Z,2.9nm,0.9s,baz=122,slow=1.9,SNR=5.7			SKPbc	SKPbc	08 50 12.5	+0.2
SPITS	Spitsbergen Ar comp=Z,3.5nm,0.8s,baz=170,slow=5.1,SNR=6.0	138.41	12	PKP	PKPdf	08 46 40.2	-1.8
LZH	Lanzhou	140.30	101	*e*PKP	PKiKP	08 46 58.4	+8.9
LZH	comp=N,150nm,16.0s			LR	LR		
LZH	comp=E,170nm,16.5s			LR	LR		
LZH	comp=Z,260nm,18.2s			LR	LR		
GTA	Gaotai	140.66	94	PKP	PKiKP	08 46 50.8	+0.7
GTA	comp=Z,140nm,17.1s			LR	LR		
GTA	comp=Z,160nm,17.1s			LR	LR		
GTA	comp=Z,160nm,19.5s			LR	LR		
XAN	Xi'an	141.31	108	PKP	PKiKP	08 46 51.8	+0.3
XAN	comp=Z,220nm,21.8s			LR	LR		
XAN	comp=Z,180nm,17.3s			LR	LR		
XAN	comp=Z,420nm,19.6s			LR	LR		
ZALV	Zalesovo Beam comp=Z,1.6nm,0.4s,baz=249,slow=3.8,SNR=4.9	142.41	65	PKhKP	PKPpre	08 46 44.7	
ZALV	comp=Z,3.2nm,0.5s,baz=236,slow=1.8,SNR=5.5			PKP	PKPdf	08 46 50.5	+0.6
ZALV	Zalesovo Beam	142.41	65	*e*PKIKP	PKPdf	08 46 48.1	-1.8
ZALV	comp=Z,2.0nm,0.4s			pmax	pmax		
LYN	LuoYang	143.48	112	PKP	PKPdf	08 46 51.4	-1.1
LYN	comp=Z,280nm,21.0s			LR	LR		
LYN	comp=Z,210nm,19.0s			LR	LR		
LYN	comp=Z,410nm,23.1s			LR	LR		
P33M	Teslin, Yukon baz=119	144.43	305	P	PKPbc	08 46 52.6	+0.5
NJ2	Nanjing	144.46	122	⇓PKP	PKPdf	08 46 53.8	-0.4
NJ2	comp=Z,190nm,18.5s			LR	LR		
NJ2	comp=Z,140nm,19.9s			LR	LR		
NJ2	comp=Z,380nm,21.8s			LR	LR		
P32M	Atlin baz=120	144.51	304	P	PKPdf	08 46 53.1	-0.4
S31K	Pelican baz=120,SNR=9.8	144.83	300	P	PKPdf	08 46 54.3	+0.3
MMPY	Sheldon Lake, baz=117,SNR=7.5	144.92	309	P	PKPdf	08 46 54.0	-0.1
N32M	Quiet Lake baz=118	145.00	306	P	PKPdf	08 46 54.5	+0.1
C36M	Paulatuk baz=113,SNR=11	145.15	322	P	PKPbc	08 46 53.6	-0.4
SKAG	Skagway baz=119,SNR=47	145.17	303	P	PKPdf	08 46 54.5	0.0
WHY	Whitehorse baz=118,SNR=40	145.54	305	P	PKPbc	08 46 55.6	-0.1
FARO	Faro, Yukon baz=117,SNR=52	145.61	308	P	PKPab	08 46 56.2	+0.1
PLBC	Pleasant Camp baz=118,SNR=24	145.63	302	P	PKPab	08 46 56.7	+0.5
TIY	Taiyuan	145.95	108	*e*PKPbc	PKPdf	08 46 57.0	+0.2
M31M	Drury Creek, Y baz=116	146.03	307	P	PKPbc	08 46 56.8	-0.2
O30N	Mendenhall baz=117,SNR=65	146.12	305	P	PKPab	08 46 57.8	-0.3
P30M	Million Dollar baz=117	146.21	303	P	PKPab	08 46 58.0	-0.4
N31M	Braeburn, Yuko baz=116,SNR=32	146.31	306	P	PKPbc	08 46 58.2	+0.4
P29M	Windy Craggy baz=118,SNR=52	146.33	302	P	PKPab	08 46 58.5	-0.4
A36M	Sachs Harbour baz=109	146.47	326	P	PKPab	08 46 58.6	-0.4
HYT	Haines Junctio baz=116,SNR=36	146.77	304	P	PKPbc	08 46 59.5	+0.2
HNS	HongShan	146.84	111	⇓PKPbc	PKPab	08 47 01.0	-0.5
HNS	comp=Z,120nm,18.6s			LR	LR		
HNS	comp=Z,140nm,19.6s			LR	LR		
N30M	Aishikik Lake baz=116,SNR=60	146.86	305	P	PKPbc	08 47 00.1	+0.7
BTO	Baotou	146.89	102	*e*PKPbc	PKPbc	08 47 00.6	+0.3
BTO				PP	PP	08 50 32.0	+6.6
BTO				SS	SS	09 09 22.1	+0.4
BTO	comp=Z,830nm,7.3s			AMB	AMB		
O29M	Mount Kennedy baz=116,SNR=8.7	147.01	303	P	PKPbc	08 47 00.4	+0.4
TIA	Tai'an	147.08	115	PKPbc	PKPbc	08 47 00.8	0.0
PNL	Peninsula baz=117,SNR=21	147.09	301	P	PKPbc	08 47 00.2	+0.1
YUK6	Outpost Mounta baz=116,SNR=16	147.19	304	P	PKPbc	08 47 01.2	+0.6
MAYO	Mayo, Yukon baz=113	147.24	309	P	PKPbc	08 47 01.0	+0.6
H31M	Peel River baz=111,SNR=108	147.46	314	P	PKPbc	08 47 01.1	+0.2
YUK4	Talbot Arm baz=115,SNR=108	147.49	304	P	PKPbc	08 47 02.3	+0.9
PINM	Pinnacle baz=116,SNR=35	147.67	302	P	PKPbc	08 47 02.6	+0.8
J30M	Hart River baz=111,SNR=18	147.79	311	P	PKPbc	08 47 02.3	+0.3
F31M	Tsiigehtchic baz=109,SNR=16	147.80	317	P	PKPbc	08 47 01.6	-0.1
G31M	Satah River baz=109,SNR=43	147.82	316	P	PKPbc	08 47 01.6	-0.2
M29M	Somme Creek baz=113,SNR=62	147.86	306	P	PKPbc	08 47 02.6	+0.4
HHC	Hu-ho-hao-te	147.87	104	*e*PKPbc	PKPdf	08 46 56.8	-3.1
O28M	Mount Upton baz=115,SNR=46	147.93	303	P	PKPbc	08 47 03.1	+0.4
YUK8	Steele Glacier baz=114,SNR=42	147.96	304	P	PKPbc	08 47 03.2	+0.5
L29M	L29M baz=112,SNR=62	147.98	308	P	PKPbc	08 47 03.0	+0.5
INK	Inuvik baz=108,SNR=57	148.00	318	P	PKPbc	08 47 02.1	-0.1
K29M	Barlow Dome baz=112,SNR=45	148.01	309	P	PKPbc	08 47 02.7	+0.1
I30M	Mount Dempster baz=110,SNR=165	148.05	312	P	PKPbc	08 47 02.6	-0.1
YUK3	Moose Creek baz=113,SNR=47	148.46	305	P	PKPbc	08 47 03.7	-0.3
MESA	MESA baz=115,SNR=22	148.47	301	P	PKiKP	08 47 04.8	-0.7
J29N	Klondike Camp baz=110	148.51	310	P	PKiKP	08 47 04.7	-0.7
CTG	Chitna Glacier baz=114,SNR=34	148.52	303	P	PKPbc	08 47 04.7	+0.6
EPYK	Eagle Plains baz=108,SNR=37	148.56	314	P	PKPbc	08 47 03.8	-0.1
G30M	tAoh Zraii Nji baz=108,SNR=32	148.57	315	P	PKPbc	08 47 03.9	+0.1
F30M	Barrier River baz=107,SNR=82	148.60	316	P	PKPbc	08 47 03.8	-0.1
I29M	Ogilvie Camp, baz=109	148.86	312	P	PKPbc	08 47 04.3	-0.3
DAWY	Dawson baz=110,SNR=110	148.86	309	P	PKPbc	08 47 04.5	-0.2
BVCY	Beaver Creek baz=112,SNR=33	148.88	306	P	PKPbc	08 47 05.2	+0.4
H29M	Whitestone baz=108,SNR=48	149.15	313	P	PKPbc	08 47 05.1	-0.2
G29M	Pine Creek baz=107,SNR=73	149.22	315	P	PKPbc	08 47 05.3	-0.2
CRQE	Cirque baz=113,SNR=24	149.22	302	P	PKiKP	08 47 06.5	-0.5
MOY	Mondy	149.27	79	*e*PKP2	PKiKP	08 47 06.7	-0.6
MOY	comp=Z,112nm,1.8s			pmax	pmax		
M27K	Edge Creek, AK baz=111,SNR=14	149.30	305	P	PKPbc	08 47 06.1	+0.1
MCARA	McCarthy VSAT baz=112,SNR=15	149.44	303	P	PKiKP	08 47 07.1	-0.1
KAIM	Kayak Island baz=114	149.50	300	P	PKPbc	08 47 06.6	+0.3
L27K	Beaver Creek, baz=110,SNR=27	149.53	306	P	PKiKP	08 47 07.0	-0.5
I28M	Miner Creek baz=108,SNR=40	149.53	311	P	PKPbc	08 47 06.5	+0.1
E29M	Blow River baz=104,SNR=27	149.58	317	P	PKPbc	08 47 06.0	-0.2
BJI	Beijing	149.61	110	PKPbc	PKPbc	08 47 06.9	-0.3
M26K	Nabesna, AK baz=111,SNR=17	149.80	305	P	PKPbc	08 47 07.1	0.0
SONM	Songino Array comp=Z,23nm,0.7s,baz=222,slow=2.8,SNR=87	149.88	89	PKPbc	PKPbc	08 47 07.7	-0.1
SONM	Songino Array comp=Z,1.0nm,0.7s	149.88	89	pmax	pmax		
K27K	Chicken baz=108	149.96	308	P	PKiKP	08 47 08.3	+0.1
BMRM	Bremner River baz=112,SNR=30	149.99	302	P	PKiKP	08 47 08.1	-0.4
D28M	Stokes Point baz=102	150.09	319	P	PKPbc	08 47 06.8	-0.7
F28M	Old Crow baz=104,SNR=63	150.10	316	P	PKPbc	08 47 07.4	-0.2
L26K	Log Cabin Wild baz=109,SNR=64	150.17	306	P	PKiKP	08 47 08.4	-0.3
Q23K	Middleton Isla baz=114	150.20	298	P	PKPbc	08 47 08.1	+0.1
E28M	Babbage River baz=103,SNR=16	150.21	318	P	PKPbc	08 47 07.5	-0.4
N25K	Chitina, Valde baz=111,SNR=31	150.22	303	P	PKiKP	08 47 08.8	-0.2
ULN	Ulaanbaatar	150.24	89*c*	*e*PKIKP	PKPdf	08 46 58.3	-5.3
ULN	comp=Z,4.0nm,1.7s			pmax	pmax		
I27K	Kandik River baz=106,SNR=44	150.25	311	P	PKPbc	08 47 08.4	+0.3
JNU	Nakatsue comp=Z,18nm,0.7s,baz=31,slow=3.0,SNR=17	150.32	137	PKPbc	PKiKP	08 47 09.8	-0.3
EYAK	Cordova Ski Ar baz=112,SNR=28	150.35	300	P	PKiKP	08 47 09.0	-0.1
H27K	Steamboat Moun baz=105,SNR=21	150.38	313	P	PKiKP	08 47 08.7	-0.4
G27K	Doyon Strip baz=104,SNR=24	150.58	314	P	PKPbc	08 47 08.9	+0.1
J26L	Joseph Creek baz=107,SNR=66	150.72	309	P	PKiKP	08 47 09.8	-0.1
SCRK	Sand Creek baz=107,SNR=106	150.74	308	P	PKiKP	08 47 10.0	0.0
HARP	HAARP baz=109,SNR=14	150.75	304	P	PKiKP	08 47 09.8	-0.1
KLU	Klutina baz=110,SNR=41	150.78	302	P	PKiKP	08 47 10.5	+0.4
I26K	Coal Creek Min baz=106,SNR=12	150.78	310	P	PKiKP	08 47 09.6	-0.3
D27M	Malcolm River baz=100	150.85	319	P	PKiKP	08 47 10.1	+0.1
E27K	Coleen River baz=102,SNR=29	150.87	316	P	PKiKP	08 47 09.9	-0.1
P23K	Montague Islan baz=112,SNR=32	150.91	299	P	PKiKP	08 47 10.4	+0.2
RIDG	Independent Ri baz=107,SNR=209	151.04	307	P	PKiKP	08 47 10.6	+0.1
PAX	Paxson baz=108,SNR=62	151.07	305	P	PKPbc	08 47 10.3	+0.2
GLI	Glacier Island baz=111,SNR=21	151.09	301	P	PKiKP	08 47 10.5	-0.1
M24K	Tolsona, Glenn baz=109,SNR=34	151.10	303	P	PKiKP	08 47 11.5	+0.8
DL2	Dalian	151.37	118	PKPbc	PKiKP	08 47 11.9	0.0
G26K	Porcupine Rive baz=102,SNR=6.4	151.43	314	P	PKiKP	08 47 11.3	+0.2
K24K	Donnelly Dome baz=106,SNR=27	151.45	307	P	PKPbc	08 47 11.1	+0.1
J25K	Salcha River, baz=105,SNR=30	151.50	308	P	PKiKP	08 47 11.4	-0.1
SCM	Sheep Creek Mo baz=109,SNR=49	151.52	302	P	PKiKP	08 47 11.6	-0.1
PWL	Port Wells baz=110,SNR=47	151.65	300	P	PKiKP	08 47 11.7	-0.2
M23K	Glacier View baz=109,SNR=40	151.69	302	P	PKiKP	08 47 12.0	+0.1
F26K	Sheenjek River baz=101,SNR=50	151.72	315	P	PKiKP	08 47 11.7	-0.1
PRP	Porcupine Dome baz=104,SNR=43	151.79	310	P	PKPbc	08 47 11.8	0.0
C27K	Jago River baz=97,SNR=14	151.87	319	P	PKiKP	08 47 12.5	+0.4
KNK	Knik Glacier baz=109,SNR=27	151.90	301	P	PKiKP	08 47 12.2	-0.1
SEW	Seward baz=111,SNR=25	151.91	298	P	PKiKP	08 47 12.4	+0.1
DHY	Denali Highway baz=107,SNR=41	151.93	305	P	PKiKP	08 47 12.8	+0.2
WAT6	Susitna Watana baz=107,SNR=5.7	151.94	304	P	PKiKP	08 47 12.8	+0.2
SML	Sawmill baz=108,SNR=47	151.97	302	P	PKiKP	08 47 12.7	+0.2
H25L	Birch Creek baz=102,SNR=15	152.08	312	P	PKiKP	08 47 13.0	+0.5
HDA	Harding Lake baz=105,SNR=26	152.11	308	P	PKPbc	08 47 12.4	+0.1
O22K	Cooper Landing baz=110	152.16	299	P	PKPbc	08 47 12.5	0.0
ILAR	Eielson Array comp=Z,1.0nm,0.8s,baz=312,slow=1.5,SNR=10	152.17	308	PKP	PKPdf	08 47 02.8	-3.0
ILAR	comp=Z,60nm,0.9s,baz=137,slow=2.2,SNR=158			PKPbc	PKPbc	08 47 12.3	-0.1
PMR	Palmer baz=108,SNR=21	152.26	301	P	PKPbc	08 47 12.8	0.0
F25K	Christian Rive baz=100,SNR=39	152.26	315	P	PKiKP	08 47 12.9	0.0
G25K	Bearman Lake baz=101,SNR=35	152.29	313	P	PKiKP	08 47 13.7	+0.8
E25K	Arctic Village baz=99,SNR=49	152.32	316	P	PKiKP	08 47 13.3	+0.3
WAT1	Susitna Watana baz=106	152.37	304	P	PKiKP	08 47 13.4	+0.1
RC01	Rabbit Creek A baz=109,SNR=26	152.37	300	P	PKiKP	08 47 14.0	+0.7
BRSE	Bradley Lake S baz=111,SNR=31	152.38	297	P	PKiKP	08 47 13.3	-0.1
XLT	XiLinHaoTe	152.38	104	*e*PKPbc	PKPbc	08 47 13.8	+0.1
XLT				pPKP	sPKPab	08 47 42.9	+0.7
POKR	Poker Plat Res baz=103,SNR=9.8	152.48	309	P	PKiKP	08 47 13.5	+0.1
KDAK	Kodiak Island baz=113	152.53	292	P	PKPbc	08 47 13.6	+0.1
COLA	College baz=103	152.60	308	P	PKPbc	08 47 13.3	0.0
OHAK	Old Harbor baz=114,SNR=42	152.65	291	P	PKPbc	08 47 13.5	-0.2
M22K	Willow baz=107,SNR=23	152.76	301	P	PKiKP	08 47 14.1	+0.1
Q20K	Shuyak Island baz=112,SNR=9.3	152.76	294	P	PKiKP	08 47 14.4	+0.2
D25K	Kavik River baz=96	152.77	318	P	PKiKP	08 47 14.0	0.0
HOM	Homer baz=110,SNR=5.1	152.78	296	P	PKiKP	08 47 14.3	+0.2
MCK	McKinley baz=104,SNR=26	152.78	306	P	PKiKP	08 47 14.2	+0.1
G24K	Hadweenzic Riv baz=100,SNR=36	152.81	312	P	PKiKP	08 47 14.4	+0.3
H24K	Noodor Dome baz=101,SNR=22	152.81	310	P	PKiKP	08 47 14.2	+0.1
SII	Sitkinak Islan baz=115,SNR=22	152.82	289	P	PKPbc	08 47 14.2	0.0
SUA	Susitna One baz=108,SNR=18	152.96	300	P	PKiKP	08 47 14.8	+0.2
KSRS	Korea Array comp=Z,4.7nm,0.7s,baz=192,slow=2.4,SNR=22	152.98	128	PKPbc	PKPbc	08 47 14.8	-0.4
CUT	Chulitna baz=106,SNR=23	153.01	303	P	PKiKP	08 47 14.7	+0.2
NEA2	Nenana baz=103,SNR=30	153.04	308	P	PKPbc	08 47 14.4	-0.1
F24K	Squaw Lake baz=98,SNR=22	153.10	314	P	PKiKP	08 47 15.1	+0.4
CHIR	Chirikof Islan baz=116,SNR=9.0	153.23	287	P	PKiKP	08 47 15.3	0.0
I23K	Minto, Yukon-K baz=102,SNR=21	153.28	309	P	PKPbc	08 47 14.6	-0.3
TRF	Thorofare Moun baz=104,SNR=22	153.30	305	P	PKiKP	08 47 15.5	+0.2
R18K	Karluk baz=113	153.37	291	P	PKiKP	08 47 15.8	+0.4
O20K	Slope Mountain baz=109	153.39	297	P	PKiKP	08 47 15.5	0.0
E24K	Your Creek baz=96	153.40	315	P	PKiKP	08 47 15.5	+0.2
SKT	Skwentna baz=106,SNR=36	153.46	301	P	PKiKP	08 47 15.8	+0.2
Q19K	Cape Douglas, baz=111,SNR=6.1	153.48	294	P	PKiKP	08 47 16.0	+0.3
H23K	Yukon River baz=100,SNR=9.8	153.49	310	P	PKiKP	08 47 15.8	+0.3
P19K	Oil Pt baz=110,SNR=6.8	153.54	296	P	PKiKP	08 47 15.8	0.0
N20K	Mount Spurr baz=107	153.55	299	P	PKPbc	08 47 15.6	-0.1
SPCR	Spurr Chakacha baz=107	153.55	299	P	PKPbc	08 47 15.6	-0.1
C24K	Franklin Bluff baz=93	153.61	319	P	PKiKP	08 47 15.9	+0.3
D24K	Happy Valley baz=94,SNR=13	153.62	318	P	PKiKP	08 47 15.8	+0.2
BPAW	Bear Paw Mtn. baz=102,SNR=42	153.75	306	P	PKiKP	08 47 16.3	+0.2
G23K	Bananza Creek baz=98,SNR=21	153.82	312	P	PKiKP	08 47 16.9	+0.7
E23K	Chandalar baz=95,SNR=19	153.82	315	P	PKiKP	08 47 16.2	-0.1
MLY	Manley baz=101,SNR=10	153.83	308	P	PKPbc	08 47 16.0	-0.2
TOLK	Toolik Lake Re baz=94,SNR=5.2	153.85	316	P	PKiKP	08 47 16.9	+0.7
COLD	Coldfoot baz=97,SNR=8.0	153.95	313	P	PKiKP	08 47 17.1	+0.7
PPLA	Purkeypile baz=104	154.00	303	P	PKiKP	08 47 17.0	+0.2
Q18K	Katmai Hardscr baz=111,SNR=12	154.05	293	P	PKPbc	08 47 16.7	-0.2
CAST	Castle Rocks baz=103	154.08	304	P	PKiKP	08 47 16.8	0.0
M20K	Styx River baz=105	154.16	301	P	PKPbc	08 47 16.8	-0.3
O19K	Port Alsworth baz=108,SNR=7.9	154.23	297	P	PKPbc	08 47 16.8	-0.3
H22K	Ishtalitna Cre baz=98,SNR=7.0	154.24	310	P	PKiKP	08 47 17.6	+0.6
CHUM	Lake Minchumin baz=102	154.28	305	P	PKiKP	08 47 17.1	0.0
D23K	Nanushuk River baz=93	154.28	317	P	PKiKP	08 47 17.9	+0.8
C23K	Itkillik River baz=91,SNR=10	154.28	319	P	PKiKP	08 47 17.6	+0.6
Q17K	Contact Creek baz=111,SNR=24	154.34	292	P	PKiKP	08 47 18.0	+0.4
P18K	Big Mountain, baz=109,SNR=13	154.41	294	P	PKPbc	08 47 17.5	-0.1
G22K	Bettles baz=96	154.43	312	P	PKiKP	08 47 18.1	+0.7
N19K	Bonanza Creek baz=107,SNR=15	154.49	298	P	PKPbc	08 47 17.5	-0.3
O18K	Koktuh Hills baz=108,SNR=26	154.55	295	P	PKPbc	08 47 17.7	-0.1
E22K	Anaktuvuk Pass baz=93,SNR=9.0	154.65	315	P	PKiKP	08 47 18.8	+0.9
L20K	Farewell, AK baz=104,SNR=7.7	154.66	302	P	PKiKP	08 47 18.1	+0.1
F22K	John River baz=94	154.74	314	P	PKiKP	08 47 18.5	+0.5
M19K	Big River Lodg baz=104	154.75	300	P	PKPbc	08 47 17.7	-0.5
H21K	Melozitna Rive baz=98	154.79	309	P	PKiKP	08 47 18.4	+0.2
CHNA	Chernabura Isl baz=116	154.83	282	P	PKPbc	08 47 18.3	-0.2
Q16K	King Salmon baz=110	154.86	292	P	PKPbc	08 47 18.2	-0.2
R16K	Pilot Point baz=112	154.92	289	P	PKPbc	08 47 18.4	-0.2
P17K	Kvichak River baz=109,SNR=8.2	154.93	293	P	PKPbc	08 47 18.3	-0.3
K20K	Telida baz=102	154.94	304	P	PKPbc	08 47 18.4	-0.1
D22K	Ayikyak River baz=91,SNR=14	155.00	317	P	PKPbc	08 47 18.8	+0.2
L19K	White Mountain baz=104	155.03	301	P	PKPdf	08 47 18.8	+8.9
N18K	Kilae Creek baz=106	155.12	297	P	PKPdf	08 47 19.0	+8.9
J20K	Nowinta River baz=100	155.12	306	P	PKPdf	08 47 19.4	+9.4
G21K	Allakaket baz=95	155.18	311	P	PKPdf	08 47 19.3	+9.3
F21K	Alatna River baz=94	155.22	313	P	PKPdf	08 47 19.3	+9.2
B22K	Teshekpuk Lake baz=87,SNR=10.0	155.24	320	P	PKPdf	08 47 19.5	+10
M18K	Stony River baz=104	155.30	299	P	PKPdf	08 47 18.9	+8.6
I20K	Naaghedeneel baz=98	155.37	307	P	PKPab	08 47 34.4	-1.6
S14K	Fog Glacier baz=114	155.43	286	P	PKPab	08 47 35.7	-1.0
O17K	Koliganek Bris baz=107	155.43	295	P	PKPab	08 47 35.6	-0.9
E21K	Killik River baz=91	155.46	316	P	PKPab	08 47 35.9	-0.6
SDPT	Sand Point baz=115	155.52	283	P	PKPab	08 47 36.1	-0.9
H20K	Anotleneega Mo baz=96,SNR=8.5	155.63	309	P	PKPab	08 47 36.5	-0.7
P16K	Nushagak River baz=108,SNR=6.9	155.63	293	P	PKPab	08 47 36.8	-0.5
B21K	Ikpikpuk River baz=88	155.68	319	P	PKPab	08 47 37.3	0.0
N17K	Nushagak Hills baz=106	155.69	296	P	PKPab	08 47 36.6	-1.0
A22K	Sinclair Lake baz=84	155.70	322	P	PKPab	08 47 37.1	-0.2
J19K	Poorman baz=99	155.73	305	P	PKPab	08 47 37.1	-0.6
C21K	Knifeblade Rid baz=88,SNR=5.6	155.75	318	P	PKPab	08 47 37.9	+0.3
O16K	Kokwok River B baz=107	155.86	294	P	PKPab	08 47 38.1	-0.2
MJAR	Matsushiro Arr comp=Z,0.7nm,0.6s,baz=204,slow=1.7,SNR=4.3	155.87	146	PKPbc	PKPdf	08 47 21.5	+10
MJAR	comp=Z,4.1nm,0.7s,baz=184,slow=4.3,SNR=10			PKPab	PKPab	08 47 38.8	-0.2
L18K	Granite Mounta baz=102	155.87	300	P	PKPab	08 47 37.8	-0.5
M17K	Holitna River baz=104	156.03	298	P	PKPab	08 47 38.0	-1.1
F20K	Avaraart Lake baz=92	156.09	312	P	PKPab	08 47 39.1	0.0
J18K	Innoko River baz=100	156.12	303	P	PKPab	08 47 39.2	-0.2
A21K	Barrow baz=82	156.19	323	P	PKPab	08 47 39.9	+0.5
H19K	Roundabout Mou baz=95,SNR=5.7	156.28	309	P	PKPab	08 47 40.2	+0.3
E20K	Nigu River baz=89,SNR=6.5	156.28	315	P	PKPab	08 47 40.3	+0.3
GCSA	Galena City Sc baz=96,SNR=5.3	156.38	307	P	PKPab	08 47 40.6	+0.2
D20K	Etivluk River baz=88	156.43	317	P	PKPab	08 47 41.1	+0.5
N16K	Nishlik Lake baz=105	156.43	296	P	PKPab	08 47 41.2	+0.4
S12K	Black Hills baz=114	156.48	283	P	PKPab	08 47 40.8	-0.4
B20K	Meade River baz=84	156.53	320	P	PKPab	08 47 41.1	+0.2
O15K	Ungalikthiuk R baz=107	156.58	292	P	PKPab	08 47 42.0	+0.6
G19K	Purcell Mounta baz=93	156.59	310	P	PKPab	08 47 41.9	+0.6
L17K	Donlin baz=102	156.59	300	P	PKPab	08 47 42.0	+0.6
M16K	Timber Creek baz=104,SNR=5.7	156.66	297	P	PKPab	08 47 42.0	+0.2

E19K	**Redstone River**	**156.69**	**313**	P	**PKPab**	**08 47 41.9**	**+0.2**
	baz=90,SNR=16						
K17K	**Iditarod**	**156.71**	**301**	P	**PKPab**	**08 47 42.0**	**+0.1**
	baz=100						
FALS	**False Pass**	**156.84**	**280**	P	**PKPab**	**08 47 42.9**	**+0.3**
	baz=115						
F19K	**Shaleruckik Mo**	**156.89**	**312**	P	**PKPab**	**08 47 42.8**	**+0.3**
	baz=91						
N15K	**Kwethluk River**	**156.99**	**294**	P	**PKPab**	**08 47 43.6**	**+0.3**
	baz=105						
D19K	**Kuna River**	**156.99**	**316**	P	**PKPab**	**08 47 43.1**	**0.0**
	baz=87						
H18K	**Honhosa River**	**157.05**	**307**	P	**PKPab**	**08 47 44.0**	**+0.7**
	baz=94,SNR=8.4						
L16K	**Owhat River**	**157.05**	**298**	P	**PKPab**	**08 47 44.1**	**+0.7**
	baz=102						
J17K	**VABM Dome**	**157.16**	**303**	P	**PKPab**	**08 47 44.7**	**+0.8**
	baz=98						
G18K	**Tagagawik**	**157.22**	**309**	P	**PKPab**	**08 47 44.9**	**+0.9**
	baz=92,SNR=7.4						
O14K	**Tigyukauivet M**	**157.31**	**292**	P	**PKPab**	**08 47 45.1**	**+0.5**
	baz=106						
M15K	**Kasigluk River**	**157.40**	**296**	P	**PKPab**	**08 47 45.3**	**+0.3**
	baz=103						
C19K	**Lookout Ridge**	**157.47**	**318**	P	**PKPab**	**08 47 46.1**	**+1.0**
	baz=84						
F18K	**Selawik**	**157.63**	**311**	P	**PKPab**	**08 47 46.2**	**+0.5**
	baz=90,SNR=9.5						
H17K	**Granite Mounta**	**157.69**	**307**	P	**PKPab**	**08 47 46.6**	**+0.5**
	baz=94						
N14K	**Kuskokwak Cree**	**157.70**	**293**	P	**PKPab**	**08 47 47.1**	**+0.9**
	baz=104,SNR=9.8						
A19K	**Wainwright**	**157.83**	**321**	P	**PKPab**	**08 47 47.1**	**+0.6**
	baz=80						
J16K	**Anvik River**	**157.83**	**302**	P	**PKPab**	**08 47 47.3**	**+0.6**
	baz=97						
I17K	**Unalakleet**	**157.94**	**304**	P	**PKPab**	**08 47 47.1**	**0.0**
	baz=96						
E18K	**Tukpahlearik C**	**157.99**	**313**	P	**PKPab**	**08 47 47.5**	**+0.2**
	baz=87						
L15K	**Ungalak Mounta**	**157.99**	**298**	P	**PKPab**	**08 47 48.0**	**+0.5**
	baz=100						
UNV	**Unalaska Valle**	**158.01**	**276**	P	**PKPab**	**08 47 48.3**	**+0.5**
	baz=117						
M14K	**Bethel**	**158.03**	**295**	P	**PKPab**	**08 47 48.4**	**+0.8**
	baz=102,SNR=7.6						
G17K	**Kiwalik Mounta**	**158.03**	**308**	P	**PKPab**	**08 47 48.3**	**+0.8**
	baz=92,SNR=7.9						
C18K	**Utukok River**	**158.10**	**317**	P	**PKPab**	**08 47 48.5**	**+0.6**
	baz=83						
K15K	**Wolf Creek Mou**	**158.11**	**300**	P	**PKPab**	**08 47 49.1**	**+1.1**
	baz=99,SNR=6.0						
B18K	**Kokolik River**	**158.22**	**319**	P	**PKPab**	**08 47 49.7**	**+1.4**
	baz=81,SNR=8.3						
F17K	**Baldwin Pennin**	**158.28**	**311**	P	**PKPab**	**08 47 48.9**	**+0.3**
	baz=89						
E17K	**Hotham Inlet**	**158.48**	**313**	P	**PKPab**	**08 47 49.8**	**+0.4**
	baz=86,SNR=21						
L14K	**Kuka Creek**	**158.49**	**297**	P	**PKPab**	**08 47 49.8**	**+0.2**
	baz=100						
M13K	**Dall Lake**	**158.62**	**294**	P	**PKPab**	**08 47 51.0**	**+0.8**
	baz=102						
H16K	**Elim**	**158.67**	**306**	P	**PKPab**	**08 47 50.7**	**+0.4**
	baz=92						
G16K	**Koyuk River**	**158.74**	**308**	P	**PKPab**	**08 47 50.5**	**-0.1**
	baz=90						
RDOG	**Red Dog Mine**	**158.81**	**315**	P	**PKPab**	**08 47 50.8**	**-0.1**
	baz=83						
NIKH	**Nikolski High**	**158.85**	**272**	P	**PKPab**	**08 47 51.8**	**+0.3**
	baz=119						
C17K	**DeLong Mountai**	**158.85**	**317**	P	**PKPab**	**08 47 51.8**	**+0.8**
	baz=82,SNR=13						
D17K	**Noatak River**	**158.91**	**314**	P	**PKPab**	**08 47 51.8**	**+0.5**
	baz=84,SNR=13						
J14K	**Nanvaranak Lak**	**159.10**	**300**	P	**PKPab**	**08 47 52.6**	**+0.4**
	baz=96						
G15K	**Niukluk**	**159.44**	**307**	P	**PKPab**	**08 47 54.3**	**+0.6**
	baz=90						
K13K	**Kusilvak Mount**	**159.51**	**298**	P	**PKPab**	**08 47 54.3**	**+0.2**
	baz=98						
MDJ	**Mudanjiang**	**159.54**	**121**	PKP	**PKPdf**	**08 47 15.1**	**-1.1**
C16K	**Lisburne Hills**	**159.67**	**316**	P	**PKPab**	**08 47 55.2**	**+0.6**
	baz=80,SNR=8.6						
F15K	**North Star Dit**	**159.69**	**309**	P	**PKPab**	**08 47 55.6**	**+0.8**
	baz=87,SNR=11						
M11K	**Mekoryuk**	**160.00**	**293**	P	**PKPab**	**08 47 57.3**	**+1.1**
	baz=101						
ANM	**Nome**	**160.02**	**306**	P	**PKPab**	**08 47 57.3**	**+1.1**
	baz=90						
USRK	**Ussuriysk Ar.**	**160.28**	**125**	PKPab	**PKPab**	**08 47 57.5**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=206,slow=4.7,SNR=5.1						
F14K	**Arctic Creek**	**160.40**	**308**	P	**PKPab**	**08 47 58.4**	**+0.6**
	baz=86						
P08K	**Saint George I**	**160.71**	**281**	P	**PKPab**	**08 48 00.6**	**+1.2**
	baz=110						
TNA	**Tin City**	**161.05**	**309**	P	**PKPab**	**08 48 01.4**	**+0.7**
	baz=84						
SPIA	**Saint Paul Isl**	**161.25**	**282**	P	**PKPab**	**08 48 02.5**	**+0.8**
	baz=108						
GAMB	**Gambell**	**162.81**	**303**	P	**PKPab**	**08 48 05.7**	**-2.7**
	baz=86						
KLR	**Kul'dur**	**163.90**	**114**	PKPab	**PKPab**	**08 48 12.3**	**-1.3**
	comp=Z,1.1nm,0.4s,baz=196,slow=5.4,SNR=4.4						
SHEM	**Shemya Is, Ala**	**167.66**	**252**	PKPab	**PKPab**	**08 48 29.3**	**-0.8**
	comp=Z,16nm,0.8s,baz=75,slow=3.4,SNR=6.6						
PETK	**Petropavlovsk-**	**174.66**	**201**	PKP	**PKPdf**	**08 47 26.4**	**-0.6**
	comp=Z,5.5nm,0.9s,baz=161,slow=6.3,SNR=4.9						
PETK				PKPab	**PKPab**	**08 49 00.2**	**-0.9**
	comp=Z,6.1nm,0.8s,baz=148,slow=6.7,SNR=5.4						
SEY	**Seymchan**	**175.06**	**11**	PKP	**PKPdf**	**08 47 26.1**	**-0.6**
	comp=Z,1.7nm,0.8s,baz=234,slow=16,SNR=4.5						

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*ASRS **20** 08:30:26.0±0.5, 53°.81N×86°.77E, h0^{km}, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 20 08:30:29.2±3.3, 53°.88N×86°.89E, h0^{km}, mbtmp2.6/2, ML2.2/2, Error ellipse: s-maj=29.6km s-min=17.2km az=61.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.23**	**274**	I	I	08 38 10.0	
	baz=93,slow=323,SNR=14						
ZALV	**Zalesovo Beam**	**1.23**	**274**	Pg	Pg	08 30 51.3	-1.5
	0.5nm,0.3s,baz=92,slow=17,SNR=4.6						
ZALV				Lg	Lg	08 31 09.0	
	0.7nm,0.3s,baz=96,slow=26,SNR=6.1						
KURBB	**Kurchatov Arra**	**6.08**	**241**	Pn	Pn	08 32 02.2	+1.9
	baz=57,slow=13,SNR=1.6						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**7.68**	**204**	Pn	Pn	08 32 22.9	+0.7
	baz=26,slow=14,SNR=1.7						
	0.1nm,0.2s						

NNC 20 08:36:03.7±9.4, 37°.92N×71°.59E, h0^{km}, mb3.6, mpv3.1, 1C-3D, Error ellipse: s-maj=72.2km s-min=55.6km az=174.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**5.21**	**24**	P	Pn	08 37 23.5	+0.4
	0.7nm,0.5s						
AAK				S	Sn	08 38 24.6	+0.5
	3.2nm,0.6s						
KK31	**Karatay Array**	**5.25**	**351**	⇓P	Pn	08 37 25.8	+2.3
	1.4nm,0.2s,baz=175,slow=13						
KK31				⇑S	Sn	08 38 26.1	+1.4
	6.9nm,0.7s,baz=178,slow=27						
TKM2	**Tokmak 2**	**5.86**	**30**	⇓P	Pn	08 37 30.0	-2.1
	2.0nm,0.8s						
TKM2				⇓S	Sn	08 38 40.6	+0.6
	1.3nm,0.7s						

ROM 20 08:39:21.7±0.1, 38°.498N±0°.004×16°.150E±0°.005, h16^{km}, ML1.5/12, Error ellipse: s-maj=0.5km s-min=0.1km az=331.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FERC	**Galatro**	**0.05**	**201**	P	Pg	08 39 24.9	+0.2
FERC				S	Sg	08 39 27.2	+0.6
PLAC	**Placanica**	**0.23**	**102**	P	Pg	08 39 27.3	+0.3
PLAC				S	Sb	08 39 31.2	-0.4
PLAC				AML	AML		
	comp=E,131µm,1.6s						
PLAC				AML	AML		
	comp=N,268µm,0.6s						
PLAC				AML	AML		
	comp=E,278µm,0.6s						
PLAC				AML	AML		
	comp=N,146µm,1.6s						
PLAC				AML	AML		
	comp=N,127µm,0.2s						
PLAC				AML	AML		
	comp=E,117µm,0.2s						
PLAC				AML	AML		
	comp=N,243µm,0.2s						
PLAC				AML	AML		
	comp=E,263µm,0.2s						
JOPP	**Joppolo**	**0.23**	**298**	P	Pg	08 39 27.2	+0.2
JOPP				S	Sg	08 39 31.1	+0.5
JOPP				AML	AML		
	comp=E,226µm,1.0s						
JOPP				AML	AML		
	comp=N,198µm,0.5s						
JOPP				AML	AML		
	comp=E,184µm,0.1s						
CEL	**Celeste**	**0.31**	**220**	P	Pg	08 39 28.4	+0.1
CEL				S	Sb	08 39 33.4	-0.4
CEL				AML	AML		
	comp=E,732µm,0.4s						
CEL				AML	AML		
	comp=N,302µm,0.3s						
CEL				AML	AML		
	comp=E,730µm,0.4s						
CEL				AML	AML		
	comp=N,328µm,0.3s						
CEL				AML	AML		
	comp=N,87µm,0.4s						
CEL				AML	AML		
	comp=E,144µm,0.4s						
CEL				AML	AML		
	comp=N,76µm,0.2s						
CEL				AML	AML		
	comp=E,163µm,0.4s						
CEL				AML	AML		
	comp=N,87µm,1.6s						
GRI	**Girifalco**	**0.39**	**33**	P	Pg	08 39 29.9	+0.2
GRI				S	Sg	08 39 35.4	+0.3
GRI				AML	AML		
	comp=E,462µm,0.6s						
GRI				AML	AML		
	comp=N,346µm,0.7s						
GRI				AML	AML		
	comp=N,91µm,0.6s						
SICLA	**Scilla**	**0.42**	**235**	P	Pg	08 39 30.2	0.0
SICLA				S	Sb	08 39 36.9	0.0
SOI	**Samo**	**0.43**	**190**	P	Pb	08 39 30.7	-0.3
SOI				S	Sb	08 39 36.8	-0.5
MSRU	**Castanea**	**0.56**	**245**	P	Pb	08 39 33.0	-0.1
CAR1	**CAROLEI**	**0.76**	**4**	P	Pg	08 39 36.6	0.0
CAR1				AML	AML		
	comp=E,298µm,0.4s						
CAR1				AML	AML		
	comp=N,234µm,0.4s						
CAR1				AML	AML		
	comp=E,80µm,0.4s						

ROM 20 08:39:35.0±0.1, 38°.483N±0°.004×16°.143E±0°.006, h9^{km}, ML2.2/22, Error ellipse: s-maj=0.6km s-min=0.2km az=133.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAC	**Placanica**	**0.23**	**98**	P	Pg	08 39 40.6	+0.8
PLAC				S	Sg	08 39 44.8	+1.8
PLAC				AML	AML		
	comp=E,478µm,1.6s						
PLAC				AML	AML		
	comp=E,1060µm,0.4s						
PLAC				AML	AML		
	comp=N,1026µm,0.4s						
PLAC				AML	AML		
	comp=N,492µm,1.6s						
PLAC				AML	AML		
	comp=N,492µm,0.4s						
PLAC				AML	AML		
	comp=E,478µm,0.4s						
JOPP	**Joppolo**	**0.24**	**302**	P	Pg	08 39 40.6	+0.7
JOPP				S	Sg	08 39 44.4	+1.3
JOPP				AML	AML		
	comp=E,1076µm,0.7s						
JOPP				AML	AML		
	comp=N,959µm,0.5s						
JOPP				AML	AML		
	comp=N,959µm,1.5s						
JOPP				AML	AML		
	comp=E,1076µm,1.3s						
CEL	**Celeste**	**0.30**	**221**	P	Pg	08 39 41.7	+0.7
CEL				S	Sb	08 39 46.7	-0.9
CEL				AML	AML		
	comp=E,738µm,1.1s						
CEL				AML	AML		
	comp=N,439µm,0.2s						
CEL				AML	AML		
	comp=N,453µm,0.2s						
CEL				AML	AML		
	comp=E,730µm,0.4s						
CEL				AML	AML		
	comp=E,730µm,1.6s						
CEL				AML	AML		
	comp=E,738µm,0.9s						
CEL				AML	AML		
	comp=N,440µm,0.2s						
GRI	**Girifalco**	**0.40**	**33**	P	Pg	08 39 43.3	+0.4
GRI				S	Sg	08 39 49.1	+0.8
GRI				AML	AML		
	comp=N,346µm,0.7s						
GRI				AML	AML		
	comp=N,346µm,1.3s						
GRI				AML	AML		
	comp=E,462µm,0.6s						
SICLA	**Scilla**	**0.41**	**236**	P	Pg	08 39 43.5	+0.5
SICLA				S	Sb	08 39 50.2	-0.5
SICLA				AML	AML		
	comp=E,490µm,0.2s						
SICLA				AML	AML		
	comp=E,490µm,0.2s						
SICLA				AML	AML		
	comp=N,336µm,0.2s						
SOI	**Samo**	**0.42**	**190**	P	Pg	08 39 43.7	+0.6
SOI				S	Sb	08 39 50.0	-1.0
SOI				AML	AML		
	comp=N,160µm,0.2s						
SOI				AML	AML		
	comp=E,234µm,1.1s						
MSRU	**Castanea**	**0.54**	**246**	P	Pb	08 39 46.3	-0.5
MSRU				S	Sb	08 39 54.7	0.0
MSRU				AML	AML		
	comp=N,214µm,0.9s						
MSRU				AML	AML		
	comp=E,355µm,0.3s						
CAR1	**CAROLEI**	**0.77**	**4**	P	Pg	08 39 49.8	-0.1
CAR1				S	Sb	08 40 01.1	-0.2
CAR1				AML	AML		
	comp=N,234µm,0.4s						
CAR1				AML	AML		
	comp=E,298µm,0.4s						
TIP	**Timpagrande**	**0.84**	**34**	P	Pg	08 39 51.4	+0.1
TIP				S	Sb	08 40 03.6	+0.1
CELI	**Celico**	**0.96**	**17**	P	Pg	08 39 53.5	-0.1

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*IDC **20** 08:40:25.9±0.7, 17°.49N×122°.41E, h31^{km}±5^{km}, mb4.0/22, mbtmp4.2/24, ML4.5/2, MS3.6/4, Error ellipse: s-maj=19.7km s-min=11.2km az=73.0*

*NEIC **20** 08:40:26.8±2.2, 17°.53N±0°.06×122°.5E±0°.1, h32^{km}±6^{km}, mb4.4/26, Error ellipse: s-maj=16.2km s-min=9.0km az=100.0*

ISC 20 08:40:26.0±0.4, 17°.51N±0°.05×122°.47E±0°.09, h31^{km}, n74, σ0ˢ.98/73, mb4.4/34, MS3.8/3, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**3.69**	**204**	Pn	**Pn**	**08 41 21.6**	**+0.6**
	104nm,0.3s,baz=84,slow=6.9,SNR=6.0						
TGY				Sn	**Sn**	**08 42 06.8**	**+3.3**
	92nm,0.3s,baz=130,slow=17,SNR=3.1						
	108nm,0.3s						
TWG	**Pinlang**	**5.45**	**346**	Pn	**Pn**	**08 41 44.5**	**-0.6**
YULB	**Yu-li**	**5.96**	**350**		**Pn**	**08 41 52.2**	**0.0**
TPUB	**Ta-pu**	**6.02**	**344**	Pn	**Pn**	**08 41 54.0**	**+1.1**
SSLB	**Suanglung**	**6.41**	**347**	Pn	**Pn**	**08 41 58.2**	**-0.1**
NACB	**Ninganchiao**	**6.68**	**353**	Pn	**Pn**	**08 42 01.6**	**-0.5**
YOJ	**Yonaguni jima**	**6.94**	**4**	Pn	**Pn**	**08 42 05.7**	**+0.1**
YHNB	**Yeheng**	**7.20**	**352**	Pn	**Pn**	**08 42 08.3**	**-1.0**
JOW	**Kunigami**	**10.72**	**29**	Pn	**Pn**	**08 42 57.7**	**+0.2**
JOW	**Kunigami**	**10.72**	**29**	Pn	**Pn**	**08 42 58.5**	**+1.0**
	4.3nm,0.3s,baz=71,slow=28,SNR=5.0						
	7.4nm,0.4s						
DAV	**Davao City (W)**	**10.81**	**163**	LR	LR	08 47 53.7	
	comp=Z,225nm,20.3s,baz=354,slow=41						
LUWI	**Luwuk**	**18.43**	**179**	P	**P**	**08 44 36.7**	**-2.3**
KSM	**Kuching**	**19.92**	**218**	P	**P**	**08 44 55.2**	**-0.1**
INCN	**Inchon**	**20.23**	**10**	P	**P**	**08 44 58.2**	**-0.5**
INCN				IAmb	IAmb	08 45 04.9	
	comp=Z,13nm,0.7s						
KSAR	**Wonju Array Be**	**20.42**	**12**	P	**P**	**08 45 00.8**	**+0.1**
KSRS	**Korea Array**	**20.44**	**13**	P	**P**	**08 45 00.6**	**-0.3**
	comp=Z,2.8nm,0.6s,baz=196,slow=11,SNR=16						
	comp=Z,2.8nm,0.6s						
GUMO	**Guam**	**21.93**	**97**	LR	LR	08 52 27.6	
	comp=Z,46nm,20.0s,baz=261,slow=33						
CM31	**Chiang Mai Arr**	**22.39**	**276**	P	**P**	**08 45 22.8**	**+0.7**
CMAR	**Chiang Mai Arr**	**22.39**	**276**	P	**P**	**08 45 20.8**	**-1.3**
	comp=Z,0.8nm,0.3s,baz=117,slow=8.2,SNR=8.2						
	comp=Z,0.8nm,0.3s						
JAY	**Jayapura**	**26.82**	**136**	P	**P**	**08 46 02.2**	**-1.6**
	comp=Z,25nm,0.9s,baz=73,slow=8.2,SNR=3.5						
	comp=Z,25nm,0.9s						
JAY	**Jayapura**	**26.82**	**136**	PKIKP	**P**	**08 46 02.2**	**-1.6**
USRK	**Ussuriysk Ar.**	**27.80**	**15**	P	**P**	**08 46 12.6**	**+0.3**
USRK	**Ussuriysk Ar.**	**27.80**	**15**	P	**P**	**08 46 11.8**	**-0.4**
	comp=Z,2.7nm,0.6s,baz=196,slow=5.9,SNR=9.3						
	comp=Z,2.7nm,0.6s						
KLR	**Kul'dur**	**32.53**	**11**	P	**P**	**08 46 54.9**	**+0.8**
	comp=Z,4.0nm,0.8s,baz=232,slow=8.1,SNR=9.7						
	comp=Z,4.0nm,0.8s						
ULN	**Ulaanbaatar**	**32.81**	**341**	P	**P**	**08 46 56.9**	**+0.2**
SONM	**Songino Array**	**32.99**	**340**	P	**P**	**08 47 01.1**	**+2.8**
SONM	**Songino Array**	**32.99**	**340**	P	**P**	**08 46 58.5**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=163,slow=12,SNR=3.8						
	comp=Z,1.2nm,0.7s						
SONM	**Songino Array**	**32.99**	**340**	*e*PKIKP	**P**	**08 46 58.5**	**+0.2**
WB0	**Warramunga Arr**	**38.85**	**162**	P	**P**	**08 47 48.0**	**-0.6**
WB0				IAmb	IAmb	08 47 58.5	
	comp=Z,5.2nm,0.8s						
WRA	**Warramunga Arr**	**39.00**	**162**	P	**P**	**08 47 48.7**	**-1.2**
WRA	**Warramunga Arr**	**39.00**	**162**	P	**P**	**08 47 49.8**	**0.0**
	comp=Z,2.4nm,0.8s,baz=343,slow=9.4,SNR=11						
WRA				pP	**pP**	**08 47 59.0**	**+0.8**
	comp=Z,4.0nm,0.6s,baz=342,slow=9.2,SNR=14						
	comp=Z,2.4nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**41.99**	**82**	T	T	09 33 20.3	
	baz=276,slow=74,SNR=499						
H11S1	**WAKE ISLAND Hy**	**42.00**	**82**	T	T	09 33 24.5	
	baz=276,slow=74,SNR=411						
H11S2	**WAKE ISLAND Hy**	**42.01**	**82**	T	T	09 33 28.8	
	baz=276,slow=74,SNR=632						
H11N1	**WAKE ISLAND Hy**	**42.07**	**80**	T	T	09 33 26.6	
	baz=275,slow=75,SNR=179						
H11N2	**WAKE ISLAND Hy**	**42.08**	**80**	T	T	09 33 29.7	
	baz=275,slow=75,SNR=143						
H11N3	**WAKE ISLAND Hy**	**42.09**	**80**	T	T	09 33 27.9	
	baz=275,slow=75,SNR=172						
AS31	**Alice Springs**	**42.42**	**164**	P	**P**	**08 48 18.6**	**+0.5**
ASAR	**Alice Springs**	**42.42**	**164**	P	**P**	**08 48 18.4**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=344,slow=7.1,SNR=15						
ASAR				pP	**pP**	**08 48 27.6**	**+1.2**
	comp=Z,0.7nm,0.6s,baz=344,slow=7.8,SNR=4.2						
	comp=Z,0.8nm,0.6s						
MKAR	**Makanchi Array**	**44.09**	**320**	P	**P**	**08 48 30.0**	**-1.4**
MKAR	**Makanchi Array**	**44.09**	**320**	P	**P**	**08 48 31.5**	**+0.1**
	comp=Z,1.7nm,0.4s,baz=113,slow=8.1,SNR=20						
MKAR				PcP	**PcP**	**08 50 16.6**	**+0.4**
	comp=Z,2.9nm,1.1s,baz=108,slow=4.0,SNR=4.6						
	comp=Z,1.7nm,0.4s						
MAKZ	**Makanchi**	**44.29**	**320**	P	**P**	**08 48 32.8**	**-0.1**
PEA0B	**Petropavlovsk-**	**44.89**	**30**	P	**P**	**08 48 38.3**	**+0.7**
PETK	**Petropavlovsk-**	**44.89**	**30**	P	**P**	**08 48 38.5**	**+0.9**
PETK	**Petropavlovsk-**	**44.89**	**30**	P	**P**	**08 48 38.8**	**+1.2**
	comp=Z,3.4nm,0.8s,baz=215,slow=5.1,SNR=5.8						
	comp=Z,3.4nm,0.8s						
NRN	**Naryn**	**46.27**	**311**	P	**P**	**08 48 50.2**	**+1.2**
NRN				IAmb	IAmb	08 48 50.8	
	comp=Z,5.0nm,0.9s						
KURK	**Kurchatov**	**48.06**	**324**	P	**P**	**08 49 01.6**	**-0.9**
KURK				IAmb	IAmb	08 49 03.9	
	comp=Z,4.1nm,1.0s						
KURBB	**Kurchatov Arra**	**48.07**	**324**	P	**P**	**08 49 02.5**	**0.0**
	comp=Z,3.3nm,0.6s,baz=119,slow=8.0,SNR=16						
KURBB				pP	**pP**	**08 49 11.8**	**+0.5**
	comp=Z,2.0nm,0.6s,baz=120,slow=7.9,SNR=5.4						
	comp=Z,3.3nm,0.6s						
KK31	**Karatay Array**	**50.63**	**312**	P	**P**	**08 49 22.1**	**-0.2**
KK31				IAmb	IAmb	08 49 22.9	
	comp=Z,7.4nm,1.4s						
KKAR	**Karatay Array**	**50.63**	**312**	P	**P**	**08 49 21.3**	**-1.0**
KKAR				IAmb	IAmb	08 49 22.9	
	comp=Z,7.7nm,1.4s						
STKA	**Stephens Creek**	**52.42**	**159**	P	**P**	**08 49 35.5**	**-0.1**
	comp=Z,3.3nm,1.1s,baz=306,slow=14,SNR=2.6						
STKA				pP	**pP**	**08 49 43.8**	**-0.5**
	comp=Z,1.5nm,0.6s,baz=326,slow=6.0,SNR=2.7						
	comp=Z,3.3nm,1.1s						
BVAR	**Borovoye Array**	**53.66**	**324**	P	**P**	**08 49 44.5**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=114,slow=3.6,SNR=4.1						
BVAR				PcP	**PcP**	**08 50 49.6**	**-1.1**
	comp=Z,1.9nm,0.7s,baz=101,slow=3.0,SNR=4.3						
	comp=Z,1.1nm,0.5s						
BRVK	**Borovoye**	**53.73**	**324**	P	**P**	**08 49 44.5**	**-0.7**
BRVK				IAmb	IAmb	08 50 04.4	
	comp=Z,4.2nm,1.1s						
AMKA	**Amchitka**	**55.93**	**39**	P	**P**	**08 50 01.6**	**+0.5**
ADK	**Adak**	**58.48**	**39**	P	**P**	**08 50 18.6**	**-0.5**
ABKAR	**Akbulak array**	**59.05**	**317**	P	**P**	**08 50 22.1**	**-1.0**
ABKAR				IAmb	IAmb	08 50 24.4	
	comp=Z,5.7nm,1.3s						
AKTO	**Aktyubinsk**	**60.46**	**318**	P	**P**	**08 50 32.0**	**-0.7**
	comp=Z,1.3nm,0.5s,baz=94,slow=5.9,SNR=4.1						
	comp=Z,1.3nm,0.5s						
ARTI	**Arti**	**61.28**	**325**	P	**P**	**08 50 37.7**	**-0.5**
	comp=Z,2.6nm,0.6s,baz=70,slow=5.5,SNR=3.2						
	comp=Z,2.6nm,0.6s						
C16K	**Lisburne Hills**	**67.28**	**23**	P	**P**	**08 51 18.6**	**+1.2**
C16K				IAmb	IAmb	08 51 20.8	
	comp=Z,3.2nm,1.0s						
L16K	**Owhat River**	**69.09**	**30**	P	**P**	**08 51 29.5**	**+0.8**
L16K				IAmb	IAmb	08 51 51.4	
	comp=Z,7.0nm,1.4s						
M16K	**Timber Creek**	**69.32**	**31**	P	**P**	**08 51 31.2**	**+1.0**
M16K				IAmb	IAmb	08 52 05.2	
	comp=Z,6.3nm,1.2s						
J17K	**VABM Dome**	**69.33**	**28**	P	**P**	**08 51 31.8**	**+1.5**
J17K				IAmb	IAmb	08 51 38.7	
	comp=Z,3.3nm,1.0s						
G18K	**Tagagawik**	**69.62**	**25**	P	**P**	**08 51 33.0**	**+1.0**
K17K	**Iditarod**	**69.67**	**29**	P	**P**	**08 51 33.8**	**+1.4**
K17K				IAmb	IAmb	08 51 34.8	
	comp=Z,3.0nm,0.9s						
N17K	**Nushagak Hills**	**70.18**	**31**	P	**P**	**08 51 36.8**	**+1.2**
N17K				IAmb	IAmb	08 51 49.4	
	comp=Z,4.9nm,1.2s						
F20K	**Avaraart Lake**	**70.83**	**24**	P	**P**	**08 51 39.8**	**+0.4**
ILAR	**Eielson Array**	**74.60**	**26**	P	**P**	**08 52 01.4**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=252,slow=4.0,SNR=5.6						
	comp=Z,0.2nm,0.5s						
ARCES	**ARCESS Array B**	**76.16**	**339**	P	**P**	**08 52 10.4**	**-0.3**
	comp=Z,2.0nm,0.7s,baz=79,slow=6.8,SNR=4.8						
	comp=Z,2.0nm,0.7s						
SPITS	**Spitsbergen Ar**	**76.23**	**348**	P	**P**	**08 52 10.7**	**-0.3**
	comp=Z,5.1nm,0.7s,baz=84,slow=8.5,SNR=16						
	comp=Z,5.1nm,0.7s						
FINES	**FINESS Array B**	**77.81**	**331**	P	**P**	**08 52 19.7**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=56,slow=4.8,SNR=7.6						
	comp=Z,0.7nm,0.4s						
HFS	**Hagfors**	**83.96**	**332**	P	**P**	**08 52 52.0**	**-1.1**
	comp=Z,1.4nm,0.7s,baz=93,slow=7.4,SNR=4.7						
HFS				LR	LR	09 35 27.1	
	comp=Z,165nm,19.4s,baz=198,slow=39						
	comp=Z,1.4nm,0.7s						
NB2	**NORSAR Subarra**	**84.67**	**333**	P	**P**	**08 52 56.0**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=62,slow=5.3						
NOA	**NORSAR Array B**	**84.67**	**333**	P	**P**	**08 52 55.5**	**-1.2**
	comp=Z,1.1nm,0.7s,baz=63,slow=5.1,SNR=7.5						
NOA				LR	LR	09 33 52.3	
	comp=Z,37nm,18.4s,baz=200,slow=38						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,1.1nm,0.7s						
YKA	Yellowknife Ar	88.63	23	P	P	08 53 15.9	+0.1
	comp=Z,1.1nm,0.7s,baz=309,slow=5.2,SNR=6.2						
	comp=Z,1.1nm,0.7s						

IDC 20 08:44:47.8±8.3**,1°.15N**×**122°.78E,h0**^{km}**,mb3.5**/3**,**
mbtmp3.6/3**,MS3.1**/1**,Error ellipse: s-maj=202.5km**
s-min=130.0km az=60.0,Minahassa Peninsula,
Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.33	172	LR	LR	08 57 12.6	
	comp=Z,58nm,19.6s,baz=206,slow=38						
WRA	Warramunga Arr	23.83	152	P	P	08 50 03.6	+0.9
	0.5nm,0.7s,baz=327,slow=11,SNR=6.8						
	0.5nm,0.7s						
ASAR	Alice Springs	26.93	157	P	P	08 50 31.9	+0.9
	0.6nm,0.7s,baz=337,slow=7.1,SNR=5.1						
	0.6nm,0.7s						
STKA	Stephens Creek	37.37	153	P	P	08 52 00.4	-2.0
	1.6nm,0.8s,baz=348,slow=9.3,SNR=3.1						
	1.6nm,0.8s						

IDC 20 08:44:49.0±3.2**,46°.54N**×**154°.97E,h0**^{km}**,mb3.7**/2**,**
mbtmp3.6/3**,ML2.1**/1**,Error ellipse: s-maj=78.7km**
s-min=54.3km az=35.0,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	6.81	14	Pn	Pn	08 46 30.1	0.0
	0.2nm,0.3s,baz=192,slow=10,SNR=5.2						
	2.4nm,1.0s						
FINES	FINESS Array B	64.77	336	P	P	08 55 28.7	0.0
	0.6nm,0.6s,baz=49,slow=8.6,SNR=3.7						
	0.6nm,0.6s						
TXAR	Lajitas Array	76.47	62	P	P	08 56 40.8	0.0
	0.3nm,0.6s,baz=299,slow=4.7,SNR=6.2						
	0.3nm,0.6s						

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*NEIC **20** 08:47:08.3±1.2,21°.9N±0°.1×143°.4E±0°.2,h210^{km}±9^{km},*
mb4.1/32,Error ellipse: s-maj=27.3km s-min=14.8km
az=94.0

*IDC **20** 08:47:09.1±2.3,21°.91N×143°.38E,h224^{km}±22^{km},*
mb3.6/18,mbtmp4.2/20,Error ellipse: s-maj=17.4km
s-min=10.2km az=88.0

ISC 20 08:47:06.5±0.6**,21°.84N**±0°.07×**143°.4E**±0°.1**,h200**^{km}**,n55,**
σ**0**^{s}**.78**/57**,mb4.1**/31**,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	5.34	349	Pn	Pn	08 48 26.3	+1.0
JCJ	Chichijima	5.34	349	P	Pn	08 48 25.7	+0.5
	80nm,0.3s,baz=180,slow=0.0						
JCJ				S	Sn	08 49 26.3	-1.2
	baz=180,slow=0.0						
MJAR	Matsushiro Arr	15.32	344	P	Pn	08 50 33.0	+0.4
MJAR	Matsushiro Arr	15.32	344	P	Pn	08 50 33.0	+0.4
	1.1nm,0.3s,baz=169,slow=7.7,SNR=7.0						
MAJO	Matsushiro	15.32	344	P	Pn	08 50 33.4	+0.8
MAJO				IAmb	IAmb	08 50 38.9	
	comp=Z,13nm,1.4s						
JMM	Marumori	16.12	353	P	P	08 50 42.9	+1.1
ERM	Erimo	20.12	360	P	P	08 51 25.2	+0.2
ERM				IAmb	IAmb	08 51 38.8	
	comp=Z,6.2nm,0.8s						
KSRS	Korea Array	20.50	323	P	P	08 51 31.0	+1.8
	comp=Z,2.8nm,0.7s,baz=145,slow=9.0,SNR=17						
	comp=Z,2.8nm,0.7s						
JKA	Kamikawa-asahi	22.22	359	P	P	08 51 47.4	+0.7
JKA				IAmb	IAmb	08 51 48.8	
	comp=Z,6.0nm,0.9s						
ASAJ	Asahikawa	22.23	359	P	P	08 51 47.6	+0.9
	comp=Z,2.3nm,0.4s,baz=22,slow=3.1,SNR=6.1						
	comp=Z,2.3nm,0.4s						
USRK	Ussuriysk Ar.	24.20	340	P	P	08 52 04.7	0.0
	comp=Z,0.5nm,0.4s,baz=134,slow=8.8,SNR=5.9						
	comp=Z,0.5nm,0.4s						
KLR	Kul'dur	28.85	344	P	P	08 52 46.2	0.0
	comp=Z,4.8nm,0.5s,baz=159,slow=7.2,SNR=16						
	comp=Z,4.8nm,0.5s						
SONM	Songino Array	39.33	320	P	P	08 54 15.9	-0.5
	comp=Z,0.7nm,0.4s,baz=135,slow=7.5,SNR=4.3						
	comp=Z,0.7nm,0.4s						
KNRA	Kununurra	39.94	202	P	P	08 54 22.0	+0.5
SEY	Seymchan	41.52	6	P	P	08 54 34.0	+0.1
	comp=Z,4.3nm,0.7s,baz=162,slow=7.5,SNR=11						
	comp=Z,4.3nm,0.7s						
WB0	Warramunga Arr	42.27	193	P	P	08 54 40.8	+0.3
WB0				IAmb	IAmb	08 54 46.3	
	comp=Z,6.2nm,1.1s						
WRA	Warramunga Arr	42.45	193	P	P	08 54 41.6	-0.4
WRA	Warramunga Arr	42.45	193	P	P	08 54 42.8	+0.8
	comp=Z,2.5nm,0.9s,baz=17,slow=9.3,SNR=20						
	comp=Z,2.5nm,0.9s						
ADK	Adak	42.97	36	P	P	08 54 45.9	+0.2
ADK				IAmb	IAmb	08 54 49.8	
	comp=Z,6.3nm,1.0s						
FITZ	Fitzroy Crossi	43.32	205	P	P	08 54 49.7	+0.7
ATKA	Atka Island	44.48	36	P	P	08 54 57.7	-0.1
AS31	Alice Springs	46.16	192	P	P	08 55 11.1	-0.2
ASAR	Alice Springs	46.16	192	P	P	08 55 10.7	-0.7
ASAR	Alice Springs	46.16	192	P	P	08 55 11.8	+0.5
	comp=Z,0.4nm,0.3s,baz=12,slow=6.3,SNR=13						
	comp=Z,0.4nm,0.3s						
UNV	Unalaska Valle	49.40	37	P	P	08 55 35.5	-0.2
UNV				IAmb	IAmb	08 55 45.6	
	comp=Z,10.0nm,1.2s						
LVA	Lava Point	49.76	37	P	P	08 55 38.3	-0.3
S12K	Black Hills	52.43	36	P	P	08 55 57.2	-1.2
STKA	Stephens Creek	53.44	182	P	P	08 56 06.2	+0.2
	comp=Z,1.5nm,0.7s,baz=15,slow=12,SNR=2.4						
	comp=Z,1.5nm,0.7s						
CNBA	Chernabura Isl	53.55	37	P	P	08 56 05.8	-0.7
MKAR	Makanchi Array	54.72	313	P	P	08 56 15.3	+0.1
	comp=Z,0.8nm,0.8s,baz=75,slow=1.4,SNR=6.5						
MKAR				PcP	PcP	08 57 14.6	-0.7
	comp=Z,0.3nm,0.4s,baz=77,slow=3.2,SNR=4.4						
	comp=Z,0.8nm,0.8s						
J16K	Anvik River	55.63	27	P	P	08 56 21.8	+0.5
C16K	Lisburne Hills	55.97	21	P	P	08 56 24.1	+0.5
C16K				IAmb	IAmb	08 56 25.3	
	comp=Z,4.6nm,1.0s						
E18K	Tukpahlearik C	57.20	22	P	P	08 56 33.3	+0.9
E18K				IAmb	IAmb	08 56 34.6	
	comp=Z,6.1nm,1.3s						
KURBB	Kurchatov Arra	57.53	317	P	P	08 56 34.3	-0.7
	comp=Z,4.0nm,0.7s,baz=94,slow=7.6,SNR=30						
	comp=Z,4.0nm,0.7s						
H19K	Roundabout Mou	58.08	25		P	08 56 39.3	+0.8
H19K				IAmb	IAmb	08 56 40.4	
	comp=Z,2.9nm,0.7s						
C19K	Lookout Ridge	58.23	21		P	08 56 40.5	+0.9
C19K				IAmb	IAmb	08 56 41.2	
	comp=Z,4.1nm,0.6s						
D19K	Kuna River	58.49	22	P	P	08 56 41.9	+0.5
D19K				IAmb	IAmb	08 56 42.8	
	comp=Z,5.3nm,1.3s						
J20K	Nowinta River	58.64	27		P	08 56 43.2	+0.8
J20K				IAmb	IAmb	08 56 44.6	
	comp=Z,6.2nm,1.4s						
F20K	Avaraart Lake	58.84	24	P	P	08 56 44.8	+1.0
D20K	Etivluk River	59.08	22		P	08 56 46.3	+0.9
CAST	Castle Rocks	59.34	28	P	P	08 56 47.7	+0.4
G21K	Allakaket	59.52	25	P	P	08 56 49.2	+0.7
G21K				IAmb	IAmb	08 56 50.4	
	comp=Z,5.4nm,1.3s						
H21K	Melozitna Rive	59.57	26	P	P	08 56 49.4	+0.6
H21K				IAmb	IAmb	08 56 50.9	
	comp=Z,2.6nm,0.8s						
D22K	Ayikyak River	60.49	22		P	08 56 55.9	+0.9
ILAR	Eielson Array	61.84	27	P	P	08 57 03.1	-0.9
	comp=Z,1.8nm,0.7s,baz=260,slow=5.4,SNR=22						
	comp=Z,1.8nm,0.7s						
BVAR	Borovoye Array	62.67	319	P	P	08 57 09.4	-0.4
	comp=Z,4.7nm,0.4s,baz=86,slow=6.9,SNR=19						
	comp=Z,4.7nm,0.4s						
I28M	Miner Creek	64.83	27		P	08 57 24.1	+0.3
AB31	Akbulak array	69.56	316		P	08 57 52.7	-1.1
AB31				IAmb	IAmb	08 57 53.6	
	comp=Z,2.9nm,0.7s						
ABKAR	Akbulak array	69.56	316	P	P	08 57 52.8	-0.9
ABKAR				IAmb	IAmb	08 57 53.6	
	comp=Z,2.9nm,0.7s						
YKA	Yellowknife Ar	76.25	28	P	P	08 58 31.9	-0.8
	comp=Z,1.5nm,0.8s,baz=300,slow=11,SNR=16						
	comp=Z,1.5nm,0.8s						
ARCES	ARCESS Array B	78.84	342	P	P	08 58 45.6	-1.3
	comp=Z,1.0nm,0.5s,baz=77,slow=7.6,SNR=8.0						
	comp=Z,1.0nm,0.5s						
KBZ	Khabaz	82.39	314	P	P	08 59 06.2	0.0
	comp=Z,2.1nm,0.7s,baz=206,slow=6.9,SNR=4.9						
	comp=Z,2.1nm,0.7s						
NVAR	Mina Array Bea	82.92	52	P	P	08 59 09.4	-0.1
	comp=Z,1.4nm,0.7s,baz=278,slow=5.1,SNR=13						
	comp=Z,1.4nm,0.7s						
FINES	FINESS Array B	83.12	335	P	P	08 59 08.0	-1.7
	comp=Z,0.8nm,0.3s,baz=59,slow=4.5,SNR=10.0						
	comp=Z,0.8nm,0.3s						
PLCA	Paso Flores	145.73	131	PKPbc	PKPdf	09 06 22.6	+1.2
	comp=Z,1.3nm,0.7s,baz=269,slow=3.9,SNR=8.0						

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*IDC **20** 08:55:09.4±3.8,53°.61N×88°.14E,h0^{km},mbtmp2.5/2,*
ML1.9/2,Error ellipse: s-maj=35.4km s-min=20.1km
az=53.0

ASRS 20 08:55:11.0±1.2**,53°.62N**×**87°.94E,h0**^{km}**,M2.6,The**
earthquakes of Russia in 2019. Obninsk, GS RAS, 214
p + CD-ROM, 2021.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.88	281	I	I	09 07 00.0	
	0.1nm,1.0s,baz=97,slow=324,SNR=28						
ZALV	Zalesovo Beam	1.88	281	Pn	Pb	08 55 45.8	-0.4
	1.0nm,0.3s,baz=96,slow=17,SNR=7.6						
ZALV				Lg	Lg	08 56 12.4	
	1.2nm,0.3s,baz=98,slow=26,SNR=13						
	2.4nm,0.3s						
KURBB	Kurchatov Arra	6.53	246	Lg	Lg	08 58 39.0	
	0.1nm,0.3s,baz=63,slow=32,SNR=7.4						
MKAR	Makanchi Array	7.73	210	Pn	Pn	08 57 04.6	-0.2
	baz=28,slow=14,SNR=1.5						
	0.2nm,0.5s						

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*SJA **20** 08:56:09.0±0.6,22°.20S×68°.84W,h128^{km}±2^{km},ML3.6,*
MW3.7

*GUC **20** 08:56:10.9±0.8,22°.17S×68°.80W,h118^{km}±3^{km},ML3.6*

ISC 20 08:56:09.3±1.4**,22°.19S**±0°.03×**68°.89W**±0°.04**,h132**^{km}±8^{km}**,**
n28,σ**1**^{s}**.04**/48**,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.51	320	*e*P	Pn	08 56 29.2	+0.3
PB09				*i* S	Sn	08 56 42.9	-0.8
PB09	IPOC Station P	0.51	320	*e*P	Pn	08 56 28.9	0.0
PB09				*e*S	Sn	08 56 43.7	-0.1
PB09				IAML		08 56 44.5	
	comp=Z,1µm,0.2s						
PB03	IPOC Station P	0.81	280	*e*P	Pn	08 56 31.6	+0.6
PB03				*i* S	Sn	08 56 47.5	+0.1
PB03				IAML		08 56 48.9	
	comp=E,2µm,0.4s						
PB03	IPOC Station P	0.81	280	*e*P	Pn	08 56 31.5	+0.5
PB03				*e*S	Sn	08 56 47.6	+0.1
PB03				IAML		08 56 49.3	
	comp=Z,2µm,0.2s						
PB06	IPOC Station P	0.81	231	*e*P	Pn	08 56 31.5	+0.4
PB06				*i* S	Sn	08 56 47.3	-0.2
PB06				IAML		08 56 48.2	
	comp=E,2µm,0.3s						
PB06	IPOC Station P	0.81	231	*e*P	Pn	08 56 31.4	+0.4
PB06				*e*S	Sn	08 56 47.9	+0.4
PB06				IAML		08 56 49.0	
	comp=Z,1µm,0.4s						
AF01	San Pedro de A	1.01	139	*e*P	Pn	08 56 32.3	-0.5
AF01				*i* S	Sn	08 56 48.9	-1.8
AF01				IAML		08 57 01.8	
	comp=E,2µm,0.3s						
AF01	San Pedro de A	1.01	139	*e*P	Pn	08 56 32.4	-0.4
AF01				*e*S	Sn	08 56 49.5	-1.2
AF01				IAML		08 57 04.1	
	comp=Z,1µm,0.7s						
PB01	IPOC Station P	1.27	334	*e*P	Pn	08 56 35.5	+0.2
PB01				*i* S	Sn	08 56 54.7	-0.2
PB01				IAML		08 56 56.2	
	comp=N,980nm,0.3s						
PB01	IPOC Station P	1.27	334	*e*P	Pn	08 56 35.3	+0.1
PB01				*e*S	Sn	08 56 55.5	+0.7
PB01				IAML		08 56 57.6	
	comp=Z,438nm,0.1s						
PB05	IPOC Station P	1.38	241	*e*P	Pn	08 56 37.2	+0.8
PB05				*i* S	Sn	08 56 57.2	+0.2
PB05				IAML		08 57 01.3	
	comp=N,741nm,0.4s						
PB05	IPOC Station P	1.38	241	*e*P	Pn	08 56 37.2	+0.8
PB05				*e*S	Sn	08 56 58.0	+1.0
PB05				IAML		08 57 06.1	
	comp=Z,302nm,0.9s						
TA01	Diego Aracena	2.01	323	*e*P	Pn	08 56 43.5	0.0
TA01				*i* S	Sn	08 57 09.6	-0.2
TA01				IAML		08 57 11.6	
	comp=N,459nm,0.4s						
TA01	Diego Aracena	2.01	323	*e*P	Pn	08 56 43.6	0.0
TA01				*e*S	Sn	08 57 10.7	+0.9
TA01				IAML		08 57 11.9	
	comp=Z,160nm,0.6s						
PB10	IPOC Station P	2.02	229	*e*P	Pn	08 56 44.5	+0.8
PB10				*e*S	Sn	08 57 10.4	+0.3
PB10				IAML		08 57 13.3	
	comp=Z,196nm,0.4s						
TA02	Huaiquique	2.23	329	*e*P	Pn	08 56 28.5	-18
TA02				IAML		08 57 17.4	
	comp=Z,339nm,0.1s						
PB11	IPOC Station P	2.52	343	*e*P	Pn	08 56 50.0	-0.1
PB11				*i* S	Sn	08 57 20.6	-0.7
PB11	IPOC Station P	2.52	343	*e*P	Pn	08 56 49.9	-0.1
PB11				*e*S	Sn	08 57 19.8	-1.5
PB11				IAML		08 57 25.5	
	comp=Z,221nm,0.3s						
GO01	Chusmiza	2.52	353	*e*P	Pn	08 56 50.9	+0.5
GO01				*i* S	Sn	08 57 21.9	-0.1
GO01	Chusmiza	2.52	353	*e*P	Pn	08 56 51.2	+0.7
GO01				*e*S	Sn	08 57 22.4	+0.5
PB14	IPOC Station P	2.80	209	*e*P	Pn	08 56 54.5	+0.8
PB14				*e*S	Sn	08 57 24.5	-3.5
PB14				IAML		08 57 24.6	
	comp=Z,236nm,0.5s						
GO02	Mina Guanaco	3.03	192	*e*P	Pn	08 56 42.0	-15
GO02				*e*S	Sn	08 57 22.7	-11
SALTA		3.10	131	*e*P	Pn	08 56 59.3	+1.5
SALTA				*e*P		08 57 01.3	
SALTA				*e*P		08 57 02.1	
YJA	Yavi	3.13	90	*e*P	Pn	08 56 59.1	+1.0
YJA				*e*S	Sn	08 57 36.8	+1.1
PB16	IPOC Station P	3.88	351	*e*P	Pn	08 57 09.1	+1.0
PB16				*e*S	Sn	08 57 49.9	-3.7
AC01	Pan de Azucar	4.24	201	*e*P	Pn	08 57 11.5	-0.8
AC01				*e*S	Sn	08 57 43.0	-18
AC01				IAML		08 58 24.5	
	comp=Z,78nm,0.6s						
AC02	Maricunga	4.63	183	*e*P	Pn	08 57 18.7	+0.6
AC02				*e*S	Sn	08 58 24.4	+13
FSA	Cafayete	4.72	146	*e*P	Pn	08 57 19.7	+0.7
FSA				*e*S	Sn	08 57 54.9	-18

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*ASRS **20** 09:04:54.0±0.7,54°.02N×86°.52E,h0^{km},M2.8,The*
earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p +
CD-ROM, 2021.

IDC 20 09:04:58.0±2.6**,54°.05N**×**86°.52E,h0**^{km}**,mbtmp3.2**/2**,**
ML2.8/2**,Error ellipse: s-maj=21.7km s-min=12.8km**
az=61.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.01	265	I	I	09 11 45.0	
	baz=84,slow=310,SNR=5.4						
ZALV	Zalesovo Beam	1.01	265	Pg	Pg	09 05 16.1	-1.2
	1.6nm,0.3s,baz=87,slow=19,SNR=12						
ZALV				Lg	Lg	09 05 31.8	
	4.2nm,0.3s,baz=83,slow=31,SNR=20						
KURBB	Kurchatov Arra	5.98	238	Pn	Pn	09 06 28.6	+0.9
	0.2nm,0.3s,baz=55,slow=13,SNR=8.3						
	1.8nm,0.5s						
MKAR	Makanchi Array	7.75	202	Pn	Pn	09 06 53.0	+1.0
	0.2nm,0.3s,baz=26,slow=14,SNR=6.3						
	0.3nm,0.2s						

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*WEL **20** 09:05:21.7±1.1,37°S±5°×17°9E±°,h12^{km},M3.2/14,*
ML3.6/19,MLv3.2/14,Error ellipse: s-maj=12.2km
s-min=6.1km az=96.9,confirmed

*NOU **20** 09:05:22.0,37°.22S×179°.24E,h9^{km},MLv3.6/10,Off E.*
Coast of N. Island, N.Z.

ISC 20 09:05:21.3±2.7**,37°.09S**±0°.07×**179°.2E**±0°.1**,h9**^{km}±11^{km}**,**
n59,σ**0**^{s}**.65**/67**,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.88	237	P	Pg	09 05 38.2	+0.1
MXZ	Matakaoa Point	0.88	237	S	Sg	09 05 49.2	-0.3
MXZ	Matakaoa Point	0.88	237	P	Pg	09 05 38.2	+0.1
MXZ				S	Sg	09 05 49.0	-0.6
WMGZ	Waiomatatini S	0.98	222	P	Pn	09 05 42.0	+0.8
WMGZ				S	Sn	09 05 56.0	+0.9
PKGZ	Pakihiroa	1.20	230	P	Pg	09 05 44.5	+0.2
PKGZ				S	Sn	09 06 01.3	+0.6
PUZ	Puketiti	1.25	218	P	Pg	09 05 45.4	+0.2
PUZ				S	Sn	09 06 02.7	+0.8
HAZ	Te Kaha	1.33	240	P	Pn	09 05 45.0	-1.1
HAZ				S	Sg	09 06 05.0	+0.8
TWGZ	Tauwhareparae	1.47	222	P	Pb	09 05 49.1	+0.2
TWGZ				S	Sg	09 06 08.3	-0.3
RUGZ	Raukumara Rang	1.51	234	P	Pb	09 05 49.5	-0.1
CNGZ	Carnagh Statio	1.61	210	P	Pb	09 05 51.3	+0.2
TKGZ	Te Karaka	1.74	219	P	Pn	09 05 52.3	+0.6
TKGZ				S	Sb	09 06 14.9	-0.4
MWZ	Matawai	1.84	227	P	Pn	09 05 53.6	+0.6
MWZ				S	Sn	09 06 15.9	-0.5
RIGZ	Rimuhau	1.99	215	P	Pn	09 05 55.5	+0.3
URZ	Urewera	2.05	235	P	Pn	09 05 56.3	+0.4
URZ	Urewera	2.05	235	S	Sn	09 06 21.5	-0.1
URZ	Urewera	2.05	235	P	Pn	09 05 56.4	+0.4
PRGZ	Paritu Road	2.12	210	P	Pn	09 05 57.2	+0.3
MARZ	Manawahe	2.22	246	P	Pn	09 05 58.2	-0.2
SNGZ	Shannon Statio	2.26	221	P	Pn	09 05 59.0	+0.2
KNZ	Kokohu	2.29	212	P	Pn	09 05 59.1	-0.1
MHGZ	Mahia Peninsul	2.31	207	P	Pn	09 05 59.8	+0.3
RTZ	Ruatahuna	2.34	229	P	Pn	09 06 00.8	+0.8
MUGZ	Murupara	2.39	234	P	Pn	09 06 01.0	+0.3
TGRZ	Tauranga	2.45	254	P	Pn	09 06 01.4	-0.1
OMRZ	Omania	2.49	245	P	Pn	09 06 02.7	+0.7
RAHZ	Arahi	2.49	222	P	Pn	09 06 02.4	+0.4
RRRZ	Republican Roa	2.49	239	P	Pn	09 06 02.8	+0.7
WHHZ	Waihua	2.53	218	P	Pn	09 06 02.8	+0.2
MTHZ	Maungataniwha	2.58	226	P	Pn	09 06 03.8	+0.5
PRRZ	Plateau Road	2.65	237	P	Pn	09 06 04.7	+0.4
NMHZ	Naumai	2.77	223	P	Pn	09 06 06.7	+0.7
ARHZ	Aropaoanui	2.79	218	P	Pn	09 06 06.2	0.0
KUZ	Kuaotunu	2.84	276	P	Pn	09 06 06.7	-0.1
KUZ	Kuaotunu	2.84	276	P	Pn	09 06 05.2	-1.5
BKZ	Black Stump Fm	2.99	225	P	Pn	09 06 08.8	-0.2
BKZ	Black Stump Fm	2.99	225	S	Sn	09 06 44.0	-1.0
BKZ	Black Stump Fm	2.99	225	P	Pn	09 06 08.8	-0.2
TOZ	Tahuroa Road	3.04	257	P	Pn	09 06 08.7	-0.9
KUTZ	Kaahu Road	3.04	242	P	Pn	09 06 10.4	+0.8
GRZ	Great Barrier	3.15	284	P	Pn	09 06 11.0	-0.1
KWHZ	Kaweka Forest	3.21	223	P	Pn	09 06 11.3	-0.7
MKAZ	Moumakai	3.26	269	P	Pn	09 06 11.4	-1.1
WIAZ	Waiheke Island	3.30	274	P	Pn	09 06 13.5	+0.4
KRHZ	Kereru	3.40	221	P	Pn	09 06 13.6	-0.9
TMVZ	Te Maari	3.44	233	P	Pn	09 06 14.9	-0.3
ETVZ	East Tongariro	3.45	233	P	Pn	09 06 14.9	-0.4
NTVZ	North Tongarir	3.45	233	P	Pn	09 06 15.3	0.0
ETAZ	East Tamaki Re	3.45	271	P	Pn	09 06 15.8	+0.7
MBAZ	Motutapu North	3.49	274	P	Pn	09 06 16.3	+0.6
OTVZ	Oturere	3.49	233	P	Pn	09 06 15.6	-0.3
SNVZ	South Ngauruho	3.52	232	P	Pn	09 06 16.0	-0.4
FWVZ	Far West T-bar	3.62	232	P	Pn	09 06 17.6	-0.1
WNVZ	Wahianoa	3.63	231	P	Pn	09 06 17.7	-0.1
AWAZ	Awhitu Peninsu	3.67	269	P	Pn	09 06 18.0	-0.3
HIZ	Hauiti	3.75	246	P	Pn	09 06 20.6	+1.3
WCZ	Waipu Caves	4.10	285	P	Pn	09 06 24.4	+0.2
BFZ	Birch Farm	4.28	212	P	Pn	09 06 24.5	-2.0
OUZ	Omahuta	4.93	291	P	Pn	09 06 36.7	+1.2
OUZ	Omahuta	4.93	291	P	Pn	09 06 35.0	-0.5

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*IDC **20** 09:13:13.2±0.9,33°.96S×178°.82W,h0^{km},mb4.1/4,*
mbtmp4.2/5,ML4.7/1,MS3.7/2,Error ellipse: s-maj=33.4km
s-min=28.4km az=140.0

*NEIC **20** 09:13:15.9±2.9,34°.20S±0°.08×178°.9W±0°.1,h10^{km}±1^{km},*
mb4.4/8,Error ellipse: s-maj=21.2km s-min=12.2km
az=104.0

*WEL **20** 09:13:15.9±1.1,34°S±8°×17°8W±1°3,h33^{km},M4.5/18,*
mB5.1/11,ML4.8/21,MLv4.7/18,Mw(mB)4.5/11,Error
ellipse: s-maj=18.3km s-min=8.7km az=114.8,confirmed

*NOU **20** 09:13:18.4,34°.86S×177°.72W,h100^{km},mb4.4/9,South of*
Kermadec Islands

ISC 20 09:13:17.6±0.9**,34°.14S**±0°.08×**178°.5W**±0°.1**,h37**^{km}**,n72,**
σ**1**^{s}**.16**/79**,mb4.3**/6**,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.28	216	Pn	Pn	09 14 19.6	-0.5
MXZ	Matakaoa Point	4.28	216	P	Pn	09 14 20.9	+0.8
MXZ	Matakaoa Point	4.28	216	P	Pn	09 14 19.4	-0.7
MXZ				S	Sn	09 15 09.7	+1.0
HAZ	Te Kaha	4.69	219	P	Pn	09 14 25.9	+0.1
HAZ				S	Sn	09 15 21.3	+2.4
PUZ	Puketiti	4.71	213	P	Pn	09 14 24.4	-1.6
PUZ				S	Sn	09 15 20.4	+1.0
RAO	Raoul Island	4.90	6	Pn	Pn	09 14 32.7	+4.0
TWGZ	Tauwhareparae	4.92	214	P	Pn	09 14 29.0	0.0
TWGZ				S	Sn	09 15 26.9	+2.2
CNGZ	Carnagh Statio	5.08	211	P	Pn	09 14 30.3	-0.7
TKGZ	Te Karaka	5.20	213	P	Pn	09 14 32.6	-0.1
TKGZ				S	Sn	09 15 32.5	+1.2
MWZ	Matawai	5.26	216	P	Pn	09 14 32.5	-1.2
MWZ				S	Sn	09 15 33.4	+0.3
KUZ	Kuaotunu	5.38	239	P	Pn	09 14 40.1	+5.0
KUZ	Kuaotunu	5.38	239	P	Pn	09 14 35.4	+0.2
URZ	Urewera	5.42	219	Pn	Pn	09 14 35.3	-0.5
	26nm,0.3s,baz=19,slow=2.0,SNR=60						
URZ				Sn	Sn	09 15 36.4	-0.5
	9.2nm,0.3s,baz=137,slow=20,SNR=11						
	56nm,0.3s						
URZ	Urewera	5.42	219	P	Pn	09 14 35.0	-0.8
URZ	Urewera	5.42	219	S	Sn	09 15 36.5	-0.4
URZ	Urewera	5.42	219	P	Pn	09 14 34.8	-0.9
URZ				S	Sn	09 15 37.1	+0.2
RAGZ	Rawiri	5.45	216	P	Pn	09 14 36.5	+0.3
RIGZ	Rimuhau	5.45	212	P	Pn	09 14 35.4	-0.9
RIGZ				S	Sn	09 15 38.4	+0.6
MARZ	Manawahe	5.47	224	P	Pn	09 14 36.5	0.0
PRGZ	Paritu Road	5.58	210	P	Pn	09 14 37.4	-0.6
SNGZ	Shannon Statio	5.71	215	P	Pn	09 14 39.6	-0.2
OMRZ	Omania	5.72	225	P	Pn	09 14 40.4	+0.4
KARZ	Kaharoa	5.74	226	P	Pn	09 14 41.3	+1.1
KNZ	Kokohu	5.75	211	P	Pn	09 14 39.2	-1.1
RTZ	Ruatahuna	5.75	218		Pn	09 14 40.0	-0.4
RTZ	Ruatahuna	5.75	218	P	Pn	09 14 40.3	-0.1
MUGZ	Murupara	5.76	220	P	Pn	09 14 40.0	-0.5
MHGZ	Mahia Peninsul	5.77	209	P	Pn	09 14 39.7	-0.9
RAHZ	Arahi	5.94	215	P	Pn	09 14 42.9	0.0
WHHZ	Waihua	5.99	214	P	Pn	09 14 44.0	+0.4
MTHZ	Maungataniwha	6.01	217	P	Pn	09 14 44.0	+0.1
TOZ	Tahuroa Road	6.03	232		Pn	09 14 44.4	+0.3
WCZ	Waipu Caves	6.13	251	P	Pn	09 14 45.7	+0.2
MRHZ	Matea Rd	6.21	220	P	Pn	09 14 46.1	-0.6
NMHZ	Naumai	6.21	216	P	Pn	09 14 46.5	-0.2
ARHZ	Aropaoanui	6.25	214	P	Pn	09 14 46.9	-0.4
TLZ	Tolley Road	6.37	227	P	Pn	09 14 49.8	+0.9
BKZ	Black Stump Fm	6.42	217		Pn	09 14 48.8	-0.8
BKZ	Black Stump Fm	6.42	217	P	Pn	09 14 48.5	-1.1
BKZ	Black Stump Fm	6.42	217	S	Sn	09 16 01.1	-0.5
BKZ	Black Stump Fm	6.42	217	P	Pn	09 14 48.6	-0.9
MCHZ	McNeill Hill	6.54	215	P	Pn	09 14 51.4	+0.3
CKHZ	Cape Kidnapper	6.54	211	P	Pn	09 14 50.3	-0.8
OUZ	Omahuta	6.59	258	P	Pn	09 14 52.1	+0.2
RITZ	Rihia Road	6.62	222	P	Pn	09 14 51.4	-0.8
HIZ	Hauiti	6.90	229	P	Pn	09 14 58.0	+1.9
BFZ	Birch Farm	7.74	211	P	Pn	09 15 05.7	-2.0
BFZ	Birch Farm	7.74	211	S	Sn	09 16 29.1	-4.9
CTZ	Chatham Island	9.69	172		Pn	09 15 36.0	+1.7

STKA	Stephens Creek	33.38	263	LR	LR	09 32 52.7	
	comp=Z,142nm,18.0s,baz=196,slow=36						
CTAO	Charters Tower	34.16	285	P	P	09 19 59.4	+0.1
AS31	Alice Springs	42.61	271	P	P	09 21 09.2	-1.2
ASAR	Alice Springs	42.61	271	P	P	09 21 08.9	-1.5
ASAR	Alice Springs	42.61	271	P	P	09 21 09.6	-0.8
	2.3nm,0.7s,baz=111,slow=7.5,SNR=28						
ASAR				PcP	PcP	09 23 01.4	-0.7
	0.5nm,0.6s,baz=121,slow=3.7,SNR=4.3						
ASAR				LR	LR	09 38 54.2	
	comp=Z,72nm,18.0s,baz=162,slow=36						
	2.3nm,0.7s						
WR8	Warramunga Arr	43.80	276	P	P	09 21 19.0	-1.0
WR8				IAmb	IAmb	09 21 20.9	
	comp=Z,4.9nm,0.8s						
WRA	Warramunga Arr	43.94	276	P	P	09 21 19.4	-1.7
WRA	Warramunga Arr	43.94	276	P	P	09 21 19.9	-1.2
	comp=Z,3.8nm,0.6s,baz=117,slow=7.4,SNR=44						
	comp=Z,3.8nm,0.6s						
WB0	Warramunga Arr	43.98	277	P	P	09 21 20.4	-1.0
WB0				IAmb	IAmb	09 21 38.2	
	comp=Z,18nm,1.4s						
KNRA	Kununurra	50.66	278	P	P	09 22 11.9	-1.6
FITZ	Fitzroy Crossi	52.02	273	P	P	09 22 22.2	-1.4
FITZ				IAmb	IAmb	09 22 24.6	
	comp=Z,5.2nm,1.4s						
FITZ	Fitzroy Crossi	52.02	273	P	P	09 22 22.2	-1.4
	comp=Z,4.6nm,0.9s,baz=154,slow=7.8,SNR=5.7						
	comp=Z,4.6nm,0.9s						
QSPA	South Pole Qui	55.98	180	P	P	09 22 55.5	+3.5
QSPA				IAmb	IAmb	09 23 10.8	
	comp=Z,3.7nm,1.1s						
QSPA	South Pole Qui	55.98	180	P	P	09 22 54.7	+2.7
	comp=Z,0.6nm,0.8s,baz=268,slow=1.9,SNR=5.1						
	comp=Z,0.6nm,0.8s						
MKAR	Makanchi Array	119.80	309	PKP	PKiKP	09 32 03.7	+0.2
	comp=Z,0.2nm,0.5s,baz=240,slow=2.0,SNR=4.4						
KURBB	Kurchatov Arra	123.31	312	PKP	PKiKP	09 32 10.4	+0.1
	comp=Z,0.4nm,0.5s,baz=115,slow=2.0,SNR=4.9						
BVAR	Borovoye Array	128.73	314	PKP	PKiKP	09 32 21.5	+0.6
	comp=Z,0.9nm,0.5s,baz=188,slow=2.2,SNR=4.3						
ARCES	ARCESS Array B	142.13	347	PKP	PKPdf	09 32 44.7	0.0
	comp=Z,0.9nm,0.7s,baz=22,slow=6.7,SNR=4.0						
FINES	FINESS Array B	148.47	338	PKPbc	PKiKP	09 33 00.1	-0.8
	comp=Z,3.6nm,0.5s,baz=79,slow=4.1,SNR=19						
NB2	NORSAR Subarra	152.36	350	PKP	PKiKP	09 33 10.1	+1.0
	comp=Z,0.4nm,0.5s,baz=17,slow=2.6						
NOA	NORSAR Array B	152.36	350	PKPbc	PKiKP	09 33 09.4	+0.4
	comp=Z,0.5nm,0.6s,baz=12,slow=4.5,SNR=6.6						
NOA				PKPab	sPKPbc	09 33 19.9	-2.4
	comp=Z,1.6nm,1.0s,baz=13,slow=4.0,SNR=3.4						
HFS	Hagfors	152.80	347	PKPbc	PKiKP	09 33 10.9	+1.0
	comp=Z,1.0nm,0.5s,baz=51,slow=4.7,SNR=4.8						
AKASG	Malin Array Be	153.90	318	PKPbc	PKiKP	09 33 13.1	+0.6
	comp=Z,0.6nm,0.5s,baz=49,slow=2.1,SNR=4.8						

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*ROM **20** 09:15:58.8±0.1, 38°.502N±0°.007×16°.148E±0°.009, h19^{km}±1^{km}, ML3.3/92, Mw3.3, Error ellipse: s-maj=0.8km s-min=0.6km az=140.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.95; M$_{\theta\theta}$0.37; M$_{\phi\phi}$0.58; M$_{r\theta}$-0.44; M$_{\theta\phi}$0.62; M$_{\phi r}$-0.44; Fault plane solution: M$_0$1.19536×10^{14} NP1:φ$_s$43.00000°,δ61.00000°, λ-87.00000°. NP2:φ$_s$217.00000°,δ29.00000°, λ-95.00000°.*

*IDC **20** 09:15:58.5±1.5, 38°.57N×16°.64E, h0^{km}, mb3.6/2, mbtmp3.5/5, ML1.5/2, MS4.0/3 Error ellipse: s-maj=32.2km s-min=20.5km az=158.0*

*PDG **20** 09:15:59.1±0.3, 38°.51N×16°.18E, h11^{km}±1^{km}, ML3.4/8, Error ellipse: s-maj=0.8km s-min=1.2km az=0.0*

ISC 20 09:15:59.2±0.8**, 38°.53N**±0°.03×**16°.17E**±0°.03**, h17**^{km}±5^{km}**, n67, σ1^{s}35**/80**, MS4.1**/3**, 10C-4D, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FERC	Galatro	0.09	203	P	Pg	09 16 02.2	-0.5
FERC				S	Sg	09 16 05.2	+0.3
PLAC	Placanica	0.23	112	⇑P	Pg	09 16 04.6	+0.1
PLAC				S	Sg	09 16 08.7	+0.7
PLAC				AML	AML		
	comp=N,71800μm,0.6s						
PLAC				AML	AML		
	comp=N,30400μm,0.7s						
PLAC				AML	AML		
	comp=N,30400μm,1.3s						
PLAC				AML	AML		
	comp=E,27350μm,0.6s						
PLAC				AML	AML		
	comp=E,75800μm,0.6s						
JOPP	Joppolo	0.24	288	⇑P	Pg	09 16 04.5	-0.1
JOPP				S	Sg	09 16 08.5	+0.2
JOPP				AML	AML		
	comp=N,10975μm,1.1s						
JOPP				AML	AML		
	comp=E,13100μm,0.2s						
GRI	Girifalco	0.35	34	⇓P	Pb	09 16 06.8	-0.2
GRI				S	Sb	09 16 12.9	+0.6
GRI				AML	AML		
	comp=E,12950μm,0.7s						
GRI				AML	AML		
	comp=N,12150μm,0.6s						
GRI				AML	AML		
	comp=N,12150μm,1.4s						
CEL	Celeste	0.35	219	⇑P	Pg	09 16 05.6	-1.0
CEL				S	Sg	09 16 10.6	-0.9
CEL				AML	AML		
	comp=N,5625μm,0.6s						
CEL				AML	AML		
	comp=N,5660μm,0.6s						
CEL				AML	AML		
	comp=E,9670μm,0.5s						
CEL				AML	AML		
	comp=E,9710μm,0.5s						
SICLA	Scilla	0.45	232	P	Pg	09 16 07.6	-0.8
SICLA				AML	AML		
	comp=N,4800μm,0.5s						
SICLA				AML	AML		
	comp=E,5765μm,0.7s						
GMB	Gambarie	0.45	217	P	Pg	09 16 07.3	-1.2
GMB				AML	AML		
	comp=N,15100μm,0.7s						
GMB				AML	AML		
	comp=E,17950μm,0.5s						
SOI	Samo	0.47	191	⇑P	Pg	09 16 07.6	-1.1
SOI				S	Sg	09 16 13.9	-1.1
SOI				AML	AML		
	comp=E,3545μm,1.2s						
SOI				AML	AML		
	comp=N,2445μm,1.1s						
MSRU	Castanea	0.59	243	P	Pg	09 16 09.9	-1.0
MSRU				AML	AML		
	comp=E,6050μm,0.8s						
MSRU				AML	AML		
	comp=N,4060μm,1.0s						
MTTG	Motta San Giov	0.65	215	P	Pg	09 16 11.0	-1.1
MTTG				AML	AML		
	comp=E,2225μm,0.8s						
MTTG				AML	AML		
	comp=N,3495μm,1.5s						
MTTG				AML	AML		
	comp=E,2225μm,1.2s						
MTTG				AML	AML		
	comp=N,3495μm,0.5s						
CAR1	CAROLEI	0.72	2	⇑P	Pb	09 16 13.3	-0.1
CAR1				S	Sb	09 16 23.9	+0.9
CAR1				AML	AML		
	comp=E,9230μm,0.4s						
CAR1				AML	AML		
	comp=N,8215μm,1.6s						
CAR1				AML	AML		
	comp=E,11460μm,0.5s						
CAR1				AML	AML		
	comp=N,8215μm,1.6s						
CAR1				AML	AML		
	comp=N,9240μm,0.4s						
CAR1				AML	AML		
	comp=N,8215μm,0.4s						
MPNC	Port Mandanici	0.75	239	P	Pg	09 16 12.8	-1.1
MPNC				AML	AML		
	comp=N,4295μm,0.7s						
MPNC				AML	AML		
	comp=E,5640μm,0.4s						
SPS2	Spezzano della	0.77	10	P	Pb	09 16 14.5	+0.2
SPS2				AML	AML		
	comp=E,1160μm,0.4s						
SPS2				AML	AML		
	comp=N,1820μm,0.4s						
SPS2				AML	AML		
	comp=E,1160μm,1.6s						
SPS2				AML	AML		
	comp=N,1820μm,1.6s						
IST3	Stromboli F	0.78	290	P	Pg	09 16 13.5	-1.0
IST3				AML	AML		
	comp=N,6185μm,0.7s						
IST3				AML	AML		
	comp=E,4485μm,0.2s						
IST3				AML	AML		
	comp=N,6185μm,1.3s						
MILZ	Milazzo	0.78	251	P	Pg	09 16 13.4	-1.1
MILZ				AML	AML		
	comp=E,14350μm,0.5s						
MILZ				AML	AML		
	comp=N,6125μm,0.6s						
TIP	Timpagrande	0.79	35	⇑P	Pb	09 16 14.1	-0.5
TIP				AML	AML		
	comp=E,1335μm,0.5s						
TIP				AML	AML		
	comp=E,1315μm,0.5s						
TIP				AML	AML		
	comp=N,1260μm,1.4s						
TIP				AML	AML		
	comp=N,1265μm,1.4s						
CELI	Celico	0.91	17	P	Pb	09 16 16.5	-0.1
CELI				AML	AML		
	comp=E,1007μm,1.1s						
CELI				AML	AML		
	comp=E,2515μm,1.1s						
CELI				AML	AML		
	comp=E,1008μm,1.1s						
CELI				AML	AML		
	comp=E,1008μm,0.9s						
CELI				AML	AML		
	comp=E,2515μm,0.9s						
CELI				AML	AML		
	comp=N,3505μm,1.0s						
CELI				AML	AML		
	comp=N,1380μm,1.0s						
AIO	Antillo	0.93	233	⇓P	Pg	09 16 16.3	-1.0
AIO				AML	AML		
	comp=E,1210μm,0.6s						
AIO				AML	AML		
	comp=N,1450μm,0.5s						
NOV	Novara	0.96	239	P	Pg	09 16 16.5	-1.3
NOV				AML	AML		
	comp=E,4245μm,0.7s						
NOV				AML	AML		
	comp=N,3240μm,0.4s						
LLI	Lipari	0.96	265	P	Pg	09 16 16.6	-1.3
LLI				AML	AML		
	comp=E,14750μm,0.4s						
LLI				AML	AML		
	comp=N,29350μm,0.8s						
LADO	San Nicola del	0.98	40	P	Pn	09 16 18.8	+0.5
CET2	Cetraro	1.01	350	P	Pg	09 16 17.7	-1.1
CET2				AML	AML		
	comp=E,3645μm,0.6s						
CET2				AML	AML		
	comp=N,6550μm,0.5s						
PIPA	Pietrapaola	1.07	28	P	Pn	09 16 20.4	+0.8
PIPA				AML	AML		
	comp=E,1032μm,0.5s						
PIPA				AML	AML		
	comp=N,884μm,0.8s						
PIPA				AML	AML		
	comp=E,1045μm,0.5s						
PIPA				AML	AML		
	comp=N,912μm,0.8s						
PIPA				AML	AML		
	comp=N,912μm,1.2s						
PIPA				AML	AML		
	comp=E,1032μm,1.5s						
PIPA				AML	AML		
	comp=E,1045μm,1.5s						
PIPA				AML	AML		
	comp=N,884μm,1.2s						
TDS	Terranova Siba	1.13	7	P	Pb	09 16 20.0	-0.4
TDS				AML	AML		
	comp=E,520μm,0.8s						
TDS				AML	AML		
	comp=N,532μm,1.3s						
MUCR	Ucria	1.13	245	P	Pg	09 16 19.1	-2.0
MUCR				AML	AML		
	comp=N,1040μm,1.0s						
MUCR				AML	AML		
	comp=E,611μm,0.6s						
MNO	Monte Soro	1.31	243	P	Pn	09 16 22.8	-0.2
MNO				AML	AML		
	comp=E,1130μm,0.7s						
MNO				AML	AML		
	comp=N,974μm,0.8s						
MNO				AML	AML		
	comp=N,974μm,1.2s						
MNO				AML	AML		
	comp=E,1130μm,1.3s						
MSFR	San Fratello	1.34	249	P	Pn	09 16 22.1	-1.2
MSFR				AML	AML		
	comp=N,250μm,0.8s						
MSFR				AML	AML		
	comp=E,398μm,1.1s						
MSFR				AML	AML		
	comp=N,250μm,1.2s						
SALB	San Lorenzo Be	1.35	6	P	Pn	09 16 23.6	+0.1
SALB				AML	AML		
	comp=E,520μm,1.2s						
SALB				AML	AML		
	comp=N,414μm,0.7s						
SALB				AML	AML		
	comp=N,414μm,1.3s						
MMN	Mormanno	1.36	354	P	Pn	09 16 22.9	-0.6
CUC	Castrocucco	1.48	349	P	Pn	09 16 24.2	-1.0
CUC				AML	AML		
	comp=E,1075μm,1.2s						
CUC				AML	AML		
	comp=E,1001μm,1.2s						
CUC				AML	AML		
	comp=N,616μm,1.0s						
CUC				AML	AML		
	comp=E,1001μm,0.8s						
CUC				AML	AML		
	comp=N,616μm,1.0s						
CUC				AML	AML		
	comp=E,1075μm,0.8s						
CUC				AML	AML		
	comp=N,600μm,0.5s						
GALF	Gagliano Caste	1.51	238	P	Pb	09 16 27.3	+0.5
HLNI	Lentini	1.57	221	⇓P	Pn	09 16 26.4	+0.1
HLNI				AML	AML		
	comp=E,421μm,1.3s						
HLNI				AML	AML		
	comp=N,457μm,0.7s						
HLNI				AML	AML		
	comp=N,457μm,1.3s						
HLNI				AML	AML		
	comp=E,421μm,0.7s						
BULG	Bulgheria - Ca	1.66	338	P	Pn	09 16 27.0	-0.7
BULG				AML	AML		
	comp=E,684μm,0.5s						
BULG				AML	AML		
	comp=E,712μm,0.5s						
BULG				AML	AML		
	comp=N,888μm,0.8s						
BULG				AML	AML		
	comp=N,864μm,0.8s						
SIRI	Monte Sirino -	1.66	352	P	Pn	09 16 26.7	-1.1
SIRI				AML	AML		
	comp=E,682μm,0.4s						
SIRI				AML	AML		
	comp=N,567μm,0.6s						
SIRI				AML	AML		
	comp=N,574μm,0.6s						
SIRI				AML	AML		
	comp=E,696μm,0.4s						
MGR	Morigerati	1.67	344	P	Pn	09 16 27.2	-0.6
MGR				AML	AML		
	comp=E,634μm,0.9s						
MGR				AML	AML		
	comp=N,417μm,0.9s						
MGR				AML	AML		
	comp=E,634μm,1.1s						
MGR				AML	AML		
	comp=N,417μm,1.1s						
VAE	Valguarnera	1.74	233	Pn	Pg	09 16 35.8	+3.1
	comp=N,2.9nm,0.3s,baz=56,slow=3.6,SNR=7.8						
VAE				Sn	Sg	09 17 01.1	+5.7
	comp=N,3.8nm,0.3s,baz=62,slow=20,SNR=4.6						
	comp=N,36nm,0.8s						
MCEL	Monticello	1.81	351	P	Pn	09 16 29.5	-0.3
CRAC	Craco	1.84	6	P	Pg	09 16 33.5	-1.1
SLCN	Sala Consilina	1.90	347	P	Pn	09 16 29.9	-1.1
CMPR	Campora	1.91	340	P	Pn	09 16 30.3	-0.8
CMPR				AML	AML		
	comp=N,306μm,1.2s						
CMPR				AML	AML		
	comp=N,306μm,0.8s						
CMPR				AML	AML		
	comp=E,337μm,0.9s						
PTRP	Pietrapertosa	1.99	358	P	Pb	09 16 35.0	0.0
CDRU	Civita di Ruta	2.06	341	P	Pn	09 16 32.9	-0.4
CDRU				AML	AML		
	comp=E,355μm,1.1s						
CDRU				AML	AML		
	comp=N,158μm,0.6s						
CDRU				AML	AML		
	comp=E,355μm,0.9s						
MATE	Matera	2.15	11	P	Pb	09 16 36.6	-1.2
TAR1	Taranto	2.17	23	P	Pn	09 16 36.0	+1.5
MRLC	Muro Lucano	2.28	347	P	Pn	09 16 37.8	+1.6
SCTE	Santa Cesarea	2.35	49	P	Pn	09 16 37.3	+0.2
MCRV	Calabrutti - M	2.38	341	P	Pn	09 16 38.3	+0.8
AMUR	Altamura	2.39	8	P	Pb	09 16 39.9	-2.1
AMUR				AML	AML		
	comp=N,99μm,0.4s						
AMUR				AML	AML		
	comp=E,142μm,1.0s						
PALZ	Palazzo San Ge	2.41	356	P	Pb	09 16 40.7	-1.6
SNAL	S. Angelo Dei	2.50	343	P	Pn	09 16 40.9	+1.6
SNAL				AML	AML		
	comp=E,344μm,0.8s						
SNAL				AML	AML		
	comp=N,348μm,1.0s						
MTMR	Montemarano	2.55	340	P	Pn	09 16 39.8	-0.1
KEK	Kerkira	3.06	66	P	Pn	09 16 49.0	+2.2
KEK				AML	AML		
	comp=N,162μm,0.4s						
KEK				AML	AML		
	comp=E,127μm,0.7s						
ULC	Ulcinj	4.16	33	*e*Pn	Pn	09 17 02.7	+0.8
ULC				*i* Sn	Sn	09 17 49.9	-0.2
HCY	Herceg Novi	4.29	24	⇑*i*Pn	Pn	09 17 03.9	+0.1
HCY				*i* Sn	Sn	09 17 53.2	-0.3
BUM	Brajici-Budva	4.30	28	*e*Pn	Pn	09 17 04.5	+0.6
BUM				*e*Sn	Sn	09 17 53.4	-0.3
DRME	Dracevica, Mon	4.31	31	⇓*i*Pn	Pn	09 17 04.3	+0.2
DRME				*i* Sn	Sn	09 17 53.9	-0.1
CEME	Cevo	4.52	27	⇑*i*Pn	Pn	09 17 07.1	+0.1
CEME				*i* Sn	Sn	09 17 59.0	-0.2
BRY	Bratogost	4.72	22	⇑*i*Pn	Pn	09 17 10.0	+0.2
BRY				*i* Sn	Sn	09 18 03.5	-0.7
KOME	Kolasin	5.00	29	⇑*i*Pn	Pn	09 17 14.3	+0.6
KOME				*i* Sn	Sn	09 18 10.2	-1.0
IVA	Berane	5.17	32	*e*Pn	Pn	09 17 17.0	+1.0
IVA				*e*Sn	Sn	09 18 15.2	-0.1
IDI	Anoyia	7.70	112	Pn	Pn	09 17 46.0	-4.7
	comp=E,1.0nm,0.3s,baz=91,slow=17,SNR=7.2						
IDI				Sn	Sn	09 19 11.6	-5.9
	comp=E,2.0nm,0.3s,baz=360,slow=23,SNR=7.0						
	comp=E,2.6nm,0.3s						
ESDC	Sonseca Array	15.68	280	Pn	P	09 19 45.3	+1.9
	comp=E,0.6nm,0.9s,baz=80,slow=11,SNR=4.1						
FINES	FINESS Array B	23.75	12	P	P	09 21 09.8	-0.5
	comp=E,1.9nm,0.5s,baz=187,slow=8.6,SNR=18						
	comp=E,1.9nm,0.5s						
ARCES	ARCESS Array B	31.46	6	LR	LR	09 36 45.9	
	comp=E,116nm,21.6s,baz=269,slow=40						
MKAR	Makanchi Array	48.02	58	P	P	09 24 38.2	+0.8
	comp=E,0.2nm,0.6s,baz=289,slow=7.6,SNR=4.5						
	comp=E,0.2nm,0.6s						
YAK	Yakutsk	66.44	28	LR	LR	10 00 09.1	
	comp=E,112nm,20.3s,baz=297,slow=40						
KLR	Kul'dur	75.73	38	LR	LR	10 02 47.8	
	comp=E,221nm,21.2s,baz=254,slow=37						

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*IDC **20** 09:23:53.8±3.8, 53°.80N×88°.29E, h0^{km}, mbtmp2.9/3, ML2.4/3, Error ellipse: s-maj=37.4km s-min=21.4km az=47.0*

ASRS 20 09:23:53.0±1.2**, 53°.78N×88°.28E, h0**^{km}**, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	2.06	276	I	I	09 36 30.0	
	0.1nm,1.0s,baz=92,slow=319,SNR=10						
ZALV	Zalesovo Beam	2.06	276	Pn	Pn	09 24 29.8	+1.0
	1.6nm,0.3s,baz=91,slow=12,SNR=28						
ZALV				Lg	Lg	09 24 59.2	
	2.0nm,0.3s,baz=93,slow=23,SNR=17						
	9.6nm,0.6s						
KURBB	Kurchatov Arra	6.78	246	Pn	Pn	09 25 34.9	+1.3
	0.1nm,0.3s,baz=62,slow=14,SNR=8.6						
	1.2nm,0.4s						
MKAR	Makanchi Array	7.97	211	Pn	Pn	09 25 52.2	+2.1
	0.1nm,0.3s,baz=29,slow=14,SNR=2.3						
	0.2nm,0.4s						

IDC 20 09:31:35.5±2.2**, 4°.77S×128°.37E, h0**^{km}**, mb3.4**/1**, mbtmp3.2**/3**, ML3.1**/2**, Error ellipse: s-maj=136.5km s-min=31.6km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.16	159	Pn	Pn	09 35 25.0	+0.8
	0.1nm,0.3s,baz=338,slow=13,SNR=2.0						
WRA				Sn	Sn	09 38 08.8	-15
	0.1nm,0.3s,baz=340,slow=22,SNR=5.1						
	0.4nm,0.9s						
ASAR	Alice Springs	19.53	165	P	P	09 36 04.3	-0.3
	0.1nm,0.3s,baz=343,slow=9.7,SNR=8.4						
	0.4nm,0.5s						
MKAR	Makanchi Array	65.49	327	P	P	09 42 20.6	0.0
	0.2nm,0.4s,baz=123,slow=7.6,SNR=2.7						
	0.2nm,0.4s						

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*IDC **20** 09:37:52.6±1.9, 33°.69S×179°.94E, h0^{km}, mb4.4/4, mbtmp4.3/5, ML4.0/1, MS3.4/3, Error ellipse: s-maj=49.0km s-min=27.5km az=53.0*

*NEIC **20** 09:37:54.9±0.9, 33°.88S±0°.08×180°.0W±0°.2, h10^{km}±2^{km}, mb4.4/8, Error ellipse: s-maj=28.7km s-min=4.5km az=118.0*

*WEL **20** 09:37:56.2±1.1, 34°S±6°×18°0E±1°3, h12^{km}, mB5.0/2, ML4.6/13, MLv4.5/12, Mw(mB)4.3/2, Error ellipse: s-maj=16.8km s-min=7.2km az=94.4, confirmed*

ISC 20 09:37:58.5±1.3**, 33°.76S**±0°.08×**179°.7E**±0°.1**, h35**^{km}**, n45, σ1^{s}47**/51**, mb4.4**/8**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	3.96	196	Pn	Pn	09 38 54.0	-2.8
MXZ	Matakaoa Point	3.96	196	P	Pn	09 38 55.9	-0.8
MXZ				S	Sn	09 39 39.9	-2.1
MXZ				T	T	09 42 36.4	
WMGZ	Waiomatatini S	4.18	194	P	Pn	09 38 59.5	-0.3
WMGZ				S	Sn	09 39 47.3	-0.2
HAZ	Te Kaha	4.29	201	P	Pn	09 38 59.8	-1.4
HAZ				S	Sn	09 39 47.9	-2.1
PKGZ	Pakihiroa	4.31	198	P	Pn	09 38 59.7	-1.9
PKGZ				S	Sn	09 39 51.3	+0.8
PUZ	Puketiti	4.46	195	P	Pn	09 39 02.4	-1.3
PUZ				S	Sn	09 39 54.3	0.0
RUGZ	Raukumara Rang	4.51	201	P	Pn	09 39 04.0	-0.4
RUGZ				S	Sn	09 39 55.6	-0.1
TWGZ	Tauwhareparae	4.63	197	P	Pn	09 39 03.7	-2.3
TWGZ				S	Sn	09 40 01.8	+3.3
CNGZ	Carnagh Statio	4.87	194	P	Pn	09 39 08.0	-1.2
CNGZ				S	Sn	09 40 06.6	+2.2
MWZ	Matawai	4.90	201	P	Pn	09 39 09.1	-0.5
MWZ				S	Sn	09 40 07.0	+1.9
TKGZ	Te Karaka	4.91	197	P	Pn	09 39 08.8	-0.9
TKGZ				S	Sn	09 40 07.9	+2.6
WCZ	Waipu Caves	4.92	242	P	Pn	09 39 08.7	-1.3
URZ	Urewera	4.96	204	Pn	Pn	09 39 09.5	-0.9
	5.0nm,0.3s,baz=40,slow=2.4,SNR=22						
URZ				Sn	Sn	09 40 07.6	+1.0

	4.6nm,0.3s,baz=79,slow=23,SNR=5.9						
	14nm,0.4s						
URZ	Urewera	4.96	204	P	Pn	09 39 09.2	-1.3
URZ				S	Sn	09 40 03.8	-2.8
RIGZ	Rimuhau	5.18	197	P	Pn	09 39 13.1	-0.5
RIGZ				S	Sn	09 40 11.2	-0.9
TOZ	Tahuroa Road	5.24	220		Pn	09 39 14.8	+0.5
OUZ	Omahuta	5.26	252	P	Pn	09 39 12.7	-1.9
RTZ	Ruatahuna	5.33	204		Pn	09 39 15.0	-0.6
PRGZ	Paritu Road	5.36	196	P	Pn	09 39 14.4	-1.6
SNGZ	Shannon Statio	5.37	200	P	Pn	09 39 15.6	-0.5
SNGZ				S	Sn	09 40 17.6	+1.0
BKZ	Black Stump Fm	5.99	205		Pn	09 39 23.6	-1.1
BKZ	Black Stump Fm	5.99	205	P	Pn	09 39 23.3	-1.4
BKZ				S	Sn	09 40 32.6	+0.6
MSVF	Nonsavu	16.03	354	LR	LR	09 46 15.0	
	comp=Z,163nm,18.5s,baz=202,slow=32						
DZM	Mont Dzumac	16.51	311	LR	LR	09 46 42.0	
	comp=Z,231nm,20.9s,baz=168,slow=32						
AS31	Alice Springs	41.13	272	P	P	09 45 40.7	+1.2
ASAR	Alice Springs	41.13	272	P	P	09 45 40.5	+1.0
ASAR	Alice Springs	41.13	272	P	P	09 45 39.6	+0.2
	4.3nm,0.8s,baz=113,slow=7.7,SNR=37						
	4.3nm,0.8s						
WR8	Warramunga Arr	42.30	277	P	P	09 45 50.4	+1.4
WR8				IAmb	IAmb	09 45 57.8	
	comp=Z,8.8nm,0.9s						
WRAB	Tennant Creek	42.43	277	P	P	09 45 51.7	+1.7
WRAB				IAmb	IAmb	09 45 52.5	
	comp=Z,8.2nm,0.8s						
WRA	Warramunga Arr	42.44	277	P	P	09 45 51.7	+1.6
WRA	Warramunga Arr	42.44	277	P	P	09 45 51.2	+1.1
	comp=Z,4.5nm,0.7s,baz=117,slow=7.8,SNR=39						
	comp=Z,4.5nm,0.7s						
WB0	Warramunga Arr	42.47	277	P	P	09 45 51.3	+0.9
WB0				IAmb	IAmb	09 45 59.2	
	comp=Z,8.6nm,0.9s						
FITZ	Fitzroy Crossi	50.53	274	P	P	09 46 55.2	+1.6
FITZ				IAmb	IAmb	09 47 38.9	
	comp=Z,6.5nm,1.4s						
QSPA	South Pole Qui	56.36	180	P	P	09 47 36.9	+1.0
QSPA	South Pole Qui	56.36	180	P	P	09 47 36.5	+0.6
	comp=Z,3.5nm,0.6s,baz=239,slow=0.3,SNR=36						
	comp=Z,3.5nm,0.6s						
SNAA	Sanae	74.84	179	P	P	09 49 34.6	-0.4
SNAA	Sanae	74.84	179	P	P	09 49 34.0	-1.0
	comp=Z,2.9nm,1.1s,baz=190,slow=12,SNR=3.5						
	comp=Z,2.9nm,1.1s						
H03S2	Juan Fernandez	80.21	124	T	T	11 18 21.3	
	baz=236,SNR=5.3						
H03S1	Juan Fernandez	80.22	124	T	T	11 18 19.7	
	baz=236						
H03S3	Juan Fernandez	80.23	124	T	T	11 18 21.7	
	baz=236						
H03N3	Juan Fernandez	80.42	124	T	T	11 18 27.8	
	baz=239,slow=72,SNR=32						
H03N2	Juan Fernandez	80.42	124	T	T	11 18 26.7	
	baz=239,slow=72,SNR=18						
H03N1	Juan Fernandez	80.44	124	T	T	11 18 26.9	
	baz=239,slow=72,SNR=34						
CPUP	Villa Florida	99.36	130	LR	LR	10 28 42.7	
	comp=Z,7.8nm,19.6s,baz=40,slow=31						
FINES	FINESS Array B	147.54	337	PKPbc	PKPbc	09 57 37.0	-1.1
	comp=Z,0.5nm,0.6s,baz=57,slow=5.1,SNR=4.3						

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*SDD **20** 09:50:09.3±1.8, 18°.68N×72°.44W, h144^{km}±19^{km}, MD3.4, ML2.9, MW3.4*

*OSPL **20** 09:50:13.3±1.4, 19°.09N×72°.86W, h0^{km}±7^{km}, ML2.5*

ISC 20 09:50:16.0±3.3**, 19°.15N**±0°.07×**71°.9W**±0°.1**, h130**^{km}±20^{km}**, n9, σ2^{s}.74**/17**, 11C-1D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LODA1	ITESIL, Dajabo	0.43	24	*i* P	Pn	09 50 30.8	-3.9
LODA1				*e*S	Sn	09 50 47.2	-1.7
SDDR	Presa de Saban	0.59	106	⇑*e*Pg	Pn	09 50 33.3	-2.4
SDDR				⇓*e*Sg	Sn	09 50 52.3	+1.7
SDDR				IAML		09 51 01.1	
	comp=N,39nm,0.5s						
MCDR	Montecristi	0.77	16	⇑*e*Pg	Pn	09 50 35.9	-1.1
MCDR				⇑*e*Sg	Sn	09 50 55.3	+2.5
MCDR				IAML		09 50 56.2	
	comp=N,93nm,1.0s						
LODU1	El Espartillar	0.88	153	*i* P	Pn	09 50 38.8	+0.9
LUDR	Luperon	1.15	50	⇑*e*Pg	Pn	09 50 40.9	+0.5
LUDR				⇑*e*Sg	Sn	09 51 05.0	+6.0
LUDR				IAML		09 51 15.3	
	comp=N,193nm,0.8s						
LOBH	Bahia de las A	1.30	169	*i* P	Pn	09 50 42.0	0.0
LOBH				*e*S	Sn	09 51 04.1	+2.5
LOBH				IAML		09 51 05.0	
	comp=Z,66nm,1.9s						
BANI	BANI	1.63	117	⇑*e*Pg	Pn	09 50 43.7	-2.0
BANI				IAML		09 51 05.8	
	comp=N,92nm,2.1s						
BANI				⇑*e*Sg	Sn	09 51 05.9	-2.5
HATOM	Hato Mayor del	2.40	98	⇑*e*Pg	Pn	09 50 53.8	-1.2
HATOM				⇑*e*Sg	Sn	09 51 26.1	+1.2
HATOM				IAML		09 51 41.0	
	comp=N,21nm,2.4s						
MIDR	Miches	2.69	93	⇑*e*Pg	Pn	09 50 56.8	-1.8
MIDR				⇑*e*Sg	Sn	09 51 33.2	+1.8
MIDR				IAML		09 51 58.9	
	comp=N,29nm,2.7s						

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*IDC **20** 09:50:55.6±1.4, 12°.95S×34°.06E, h0^{km}, mb3.9/5, mbtmp3.9/6, ML4.1/1, MS3.3/3, Error ellipse: s-maj=68.8km s-min=30.1km az=113.0*

ISC 20 09:50:55.3±1.2**, 13°.4S**±0°.1×**34°.6E**±0°.2**, h10**^{km}**, n17, σ3^{s}.49**/20**, mb4.0**/5**, Malawi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRI	Karoi	5.92	234	*i* P	Pn	09 52 25.3	+2.0
KRI				*i* S	Sn	09 53 25.2	-6.1
BROLN	Tlhalogang	10.35	221	*i* P	Pn	09 53 31.9	+7.8
BROLN				IAML		09 56 38.7	
	comp=N,168nm,0.9s						
SOOWA	Sowa	10.74	227	*i* P	Pn	09 53 33.4	+4.0
SOOWA				*i* S	Sn	09 55 36.8	+6.9
SOOWA				IAML		09 56 37.7	
	comp=N,318nm,0.6s						
MREMI	Moremi	11.39	216	*i* P	Pn	09 53 45.4	+7.1
MREMI				*i* S	Sn	09 55 42.0	-3.9
MREMI				IAML		09 57 13.8	
	comp=N,505nm,0.3s						
PHDHD	Phuduhudu	11.78	234	*i* P	Pn	09 53 51.2	+7.6
PHDHD				*i* S	Sn	09 55 51.5	-3.9
LPHEP	Lephephe	12.94	219	*i* P	Pn	09 54 05.6	+6.2
LPHEP				*i* S	Sn	09 56 24.8	+1.1
LPHEP				IAML		09 57 47.5	
	comp=N,90nm,0.9s						
KDWAN	Kaudwane	13.71	222	*i* P	Pn	09 54 17.3	+7.4
KDWAN				*i* S	Sn	09 56 43.4	+1.0
KDWAN				IAML		09 58 20.9	
	comp=N,148nm,0.9s						
QNGWA	Qangwa	14.26	243	*i* P	P	09 54 22.7	-2.2
QNGWA				*i* S	Sn	09 56 56.6	+0.6
QNGWA				IAML		09 58 28.3	
	comp=N,71nm,2.4s						
LBTB	Lobatse	14.36	215	LR	LR	09 59 52.0	
	comp=N,81nm,18.5s,baz=22,slow=37						
MAKGR	Makgori	15.43	215	*i* P	Pn	09 54 34.0	+0.7
MAKGR				*i* S	Sn	09 57 21.4	-2.9
MAKGR				IAML		09 59 36.1	
	comp=N,97nm,0.7s						
BOSA	Boshof	17.48	208	Pn	Pn	09 55 03.3	+3.9
	comp=N,0.4nm,0.3s,baz=27,slow=10,SNR=6.9						
BOSA				Sn	Sn	09 58 19.6	+5.5
	comp=N,0.9nm,0.3s,baz=330,slow=22,SNR=3.5						
BOSA				Lg	Lg	10 00 07.5	
	comp=N,1.4nm,0.3s,baz=304,slow=20,SNR=6.4						
BOSA				LR	LR	10 01 41.7	
	comp=N,91nm,20.0s,baz=20,slow=37						
	comp=N,1.5nm,0.5s						
BRTR	Keskin Array B	52.84	359	P	P	10 00 10.2	-1.0
	comp=N,1.1nm,0.6s,baz=176,slow=9.3,SNR=7.2						
	comp=N,1.1nm,0.6s						
GERES	GERESS Array B	64.67	345	P	P	10 01 31.3	-2.1
	comp=N,1.0nm,0.8s,baz=143,slow=3.4,SNR=7.9						
	comp=N,1.0nm,0.8s						
BVAR	Borovoye Array	72.92	22	P	P	10 02 25.3	+0.7
	comp=N,0.7nm,0.3s,baz=213,slow=5.1,SNR=4.5						
BVAR				LR	LR	10 39 27.0	
	comp=N,28nm,19.2s,baz=204,slow=40						
	comp=N,0.7nm,0.3s						
MKAR	Makanchi Array	73.56	32	P	P	10 02 29.7	+1.2
	comp=N,0.6nm,0.7s,baz=227,slow=4.8,SNR=6.8						
	comp=N,0.6nm,0.7s						
KURBB	Kurchatov Arra	74.38	27	P	P	10 02 34.7	+1.5
	comp=N,0.6nm,0.6s,baz=230,slow=6.0,SNR=5.7						
	comp=N,0.6nm,0.6s						
NVAR	Mina Array Bea	145.38	321	PKP	PKPab	10 10 34.7	+0.4
	comp=N,1.5nm,0.8s,baz=59,slow=5.1,SNR=9.9						

GCG 20 09:52:55.6±0.8**, 13°.62N×91°.41W, h30**^{km}±6^{km}**, MD3.8, ML2.9, MW2.7, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG8	El Palmar, Qui	0.83	4	*i* P	Pb	09 53 16.0	+4.4
STG8				*i* S	Sn	09 53 32.3	+10
STG8				IAML		09 53 37.4	
	comp=N,324nm,0.2s						
ESSG	Sabana Grande	0.95	37	*i* P	Pn	09 53 12.7	-0.3
ESSG				*i* S	Sb	09 53 26.3	+0.5
ESSG				IAML		09 53 27.7	
	comp=E,197nm,0.2s						
ESSG				IAML		09 53 34.1	
	comp=Z,140nm,0.8s						
FG8	Yepocapa, Chim	1.04	52	*i* P	Pn	09 53 13.4	-0.9
FG16	Alotenango, Sa	1.09	53	*i* P	Pn	09 53 14.0	-1.1
FG16				IAML		09 53 32.5	
	comp=N,1µm,0.2s						
NUBE	Las Nubes	1.61	80	*i* P	Pn	09 53 22.4	+0.2

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*RSNC **20** 10:01:55.1±0.0, 10°N±1°×7°3W±°, h108^{km}±3^{km}, M2.6, mb3.1, ML2.4*

*FUNV **20** 10:01:57.5, 10°.41N×72°.96W, h36^{km}, MW3.5*

ISC 20 10:01:53.8±1.6**, 10°.48N**±0°.05×**73°.04W**±0°.04**, h118**^{km}±15^{km}**, n21, σ1^{s}.89**/38**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRJC	Cerrejon, Guaj	0.56	16	P	Pn	10 02 12.4	+0.3
CRJC				S	Sn	10 02 25.4	-0.4
ARGC	Ariguani, Magd	1.34	243	P	Pn	10 02 21.0	+1.7
ARGC				S	Sn	10 02 37.6	-1.0
SMRC	Santa Marta, M	1.35	301	P	Pn	10 02 19.1	-0.3
SMRC				S	Sn	10 02 36.8	-2.0
URIC	Uribia, Colomb	1.59	40	P	Pn	10 02 23.3	+1.1
URIC				S	Sn	10 02 45.1	+1.3
SJCC	San Jacinto, C	2.18	255	P	Pn	10 02 29.9	+0.3
SJCC				S	Sn	10 02 56.9	0.0
OCAC	Ocana	2.24	187	P	Pn	10 02 30.7	+0.3
OCAC				S	Sn	10 02 58.5	+0.1
CAPV	Capacho	2.69	165	*e*P	Pn	10 02 37.0	+0.7
CAPV				*e*S	Sn	10 03 05.1	-3.7
SDV	Santo Domingo	2.85	123	P	Pn	10 02 43.1	+4.8
SDV				S	Sn	10 03 12.7	+0.2
SOCV	Socops	3.06	135	*e*P	Pn	10 02 41.8	+0.8
SOCV				*e*S	Sn	10 03 13.4	-3.9
PAMC	Pamplona, Colo	3.13	174	P	Pn	10 02 43.6	+1.3
PAMC				S	Sn	10 03 21.4	+1.8
ZARC	Zaragoza, Cauc	3.47	211	P	Pn	10 02 47.1	+0.8
ZARC				S	Sn	10 03 25.0	-1.8
BRJC	Barrancabermej	3.55	191	P	Pn	10 02 47.8	+0.4
BRJC				S	Sn	10 03 28.9	+0.1
LCBC	Los crdobas,	3.66	244	P	Pn	10 02 51.1	+2.3
BARC	Barichara	3.86	182	P	Pn	10 02 53.4	+1.6
BARC				S	Sn	10 03 36.6	0.0
PTBC	PUERTO BERRIO,	4.16	200	P	Pn	10 02 56.6	+1.1
PTBC				S	Sn	10 03 41.9	-1.4
HELC	Santa Helena	4.92	210	P	Pn	10 03 08.0	+1.9
HELC				S	Sn	10 04 00.0	-2.2
BAUV	El Baul	5.16	107	*e*P	Pn	10 03 09.8	+0.9
BAUV				*e*S	Sn	10 04 02.5	-4.9
NORC	Norcasia	5.21	200	P	Pn	10 03 08.7	-1.0
	3.4nm,1.4s						
NORC				S	Sn	10 04 08.1	-0.6
	3.4nm,1.4s						
BENV	Beln	5.38	95	*e*P	Pn	10 03 12.1	+0.1
CBOC	Ciudad Bolivar	5.45	213	P	Pn	10 03 14.2	+1.2
GUY2C	Guyana, Caldas	5.70	204	P	Pn	10 03 17.6	+0.9

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*TEH **20** 10:20:27.6, 33°.54N×59°.61E, h11^{km}±17^{km}*

*MOS **20** 10:20:27.8±1.2, 33°.57N×59°.71E, h12^{km}, mb4.7/43, Error ellipse: s-maj=5.3km s-min=4.3km az=60.9*

*IDC **20** 10:20:27.0±0.5, 33°.43N×59°.58E, h0^{km}, mb4.2/28, mbtmp4.3/32, ML3.8/3, MS3.5/30, Error ellipse: s-maj=14.3km s-min=10.2km az=2.0*

*THR **20** 10:20:28.2±0.0, 33°.56N×59°.60E, h10^{km}±5^{km}, ML4.6*

*NEIC **20** 10:20:29.6±1.8, 33°.53N±0°.07×59°.61E±0°.09, h10^{km}±1^{km}, mb4.5/72, Error ellipse: s-maj=13.3km s-min=10.7km az=307.0*

ISC 20 10:20:28.9±0.9**, 33°.55N**±0°.03×**59°.59E**±0°.03**, h8**^{km}±5^{km}**, n399, σ1^{s}.50**/370**, mb4.5**/117**, MS3.6**/33**, 14C-1D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFRZ	Afriz	0.50	256	Pg	Pg	10 20 38.3	-0.3
AFRZ				Sg	Sg	10 20 45.8	+0.5
SHRT	Shahrakht	0.59	81	Pg	Pg	10 20 39.6	-0.7
SHRT	Shahrakht	0.59	81	*e*PgA		10 20 39.2	
SHRT				*e*Sg	Sb	10 20 48.7	-1.3
SHRT				IAML		10 20 49.2	
	comp=Z,84nm,1.0s						
BAGH	Bagheran - Bir	0.83	203	Pg	Pg	10 20 43.8	-1.2
IDAH	Dahanechah	0.84	164	Pg	Pg	10 20 43.3	-1.9
ITEG	Tejag	0.96	228	Pg	Pg	10 20 47.3	-0.1
IKOO	Kooshah	1.23	204	Pg	Pg	10 20 51.9	-0.7
BSRN	Basiran	1.63	194	Pg	Pn	10 20 58.7	+0.6
BSRN	Basiran	1.63	194	*e*PnA		10 20 58.5	
BSRN				IAML		10 21 25.7	
	comp=Z,7.3nm,1.0s						
TBJM	Torbat-e-JAM	1.82	19	Pn	Pn	10 21 00.9	+0.2
TBHD	Torbat heydari	1.88	351	Pn	Pn	10 21 01.9	+0.4
TABS	Tabas	2.07	273	*e*PnA		10 21 04.6	
TABS				IAML		10 21 39.0	
	comp=Z,7.0nm,1.0s						
NHDN	Nehbandan	2.19	170	Pn	Pn	10 21 06.3	+0.6
TAPT	Tabas- Tapeh t	2.42	304	Pn	Pn	10 21 09.6	+0.7
JRKH	Jarkhoshk	2.43	15	Pn	Pn	10 21 10.1	+1.1
TPRV	Parvadeh(Tabas	2.49	259	Pn	Pn	10 21 11.0	+1.1
TNSJ	Nastanj	2.52	280	Pn	Pn	10 21 11.0	+0.7
IMOG	Moghan	2.56	355	Pn	Pn	10 21 11.7	+0.8
IMYA	Miami	2.81	8	Pn	Pn	10 21 15.3	+0.9
IPAY	Payeh	2.93	351	Pn	Pn	10 21 17.2	+1.1
IAKL	Akhelmad	3.12	348	Pn	Pn	10 21 19.9	+1.3
IKRD	Kardeh	3.22	359	Pn	Pn	10 21 20.9	+0.9
SBZV	Sabzevar	3.27	331	Pn	Pn	10 21 21.9	+1.2
SBZV	Sabzevar	3.27	331	*e*PnA		10 21 21.7	
SBZV				IAML		10 22 23.7	
	comp=Z,2.5nm,1.0s						
KRM1	Kerman Provinc	3.62	214	Pn	Pn	10 21 26.2	+0.6
ZRDN	Zarand Kerman	3.65	226	Pn	Pn	10 21 26.9	+0.9
ISFR	Sfrayin	3.73	340	Pn	Pn	10 21 28.0	+1.0
SHRO	Shahrood	3.82	311	*e*PnA		10 21 28.6	
SHRO				IAML		10 23 16.9	
	comp=Z,1.0nm,1.0s						
IEMG	Emamgholi	3.93	349	Pn	Pn	10 21 31.1	+1.3
ZHSF	Zahedan	4.05	165	Pn	Pn	10 21 31.5	0.0
ZHSF	Zahedan	4.05	165	*e*PnA		10 21 31.9	
ZHSF				IAML		10 22 55.5	
	comp=Z,0.3nm,1.0s						
CHMN	Cheshme madani	4.08	206	Pn	Pn	10 21 32.8	+0.9
KHGB	Koh Gabri	4.13	221	Pn	Pn	10 21 33.6	+1.1
KRBR	Kerman	4.30	215	Pn	Pn	10 21 36.3	+1.4
KRBR	Kerman	4.30	215	*e*PnA		10 21 37.4	
KRBR				IAML		10 22 54.0	
	comp=Z,2.4nm,1.0s						
YZKH	Yazd	4.36	256	*e*PnA		10 21 36.5	
YZKH				IAML		10 22 42.1	
	comp=Z,0.9nm,1.0s						
BJRD	Bojnurd	4.51	337	*e*PnA		10 21 38.3	
BJRD				IAML		10 23 13.8	
	comp=Z,0.3nm,1.0s						
ICHK	Chekchek	4.55	255	Pn	Pn	10 21 39.3	+1.0
NGRK	Negar Kerman	4.60	213	Pn	Pn	10 21 40.4	+1.3
IMEH	Mehriz	4.73	244	Pn	Pn	10 21 42.5	+1.7
ANAR	Anarak	4.92	267	Pn	Pn	10 21 44.5	+1.2
MRVT	Maraveh tapeh	5.00	326	Pn	Pn	10 21 45.5	+1.3
MRVT	Maraveh tapeh	5.00	326	*e*PnA		10 21 45.2	
MRVT				IAML		10 21 50.1	
	comp=Z,0.5nm,1.0s						
IMND	Minoodasht	5.04	318	Pn	Pn	10 21 45.7	+1.0
IANJ	Anjilo	5.06	294	Pn	Pn	10 21 46.4	+1.1
ISAD	Sadrabad	5.24	253	Pn	Pn	10 21 49.1	+1.3
IKIA	Kiasar	5.53	300	Pn	Pn	10 21 52.8	+1.0
IGLO	Ghaloghah	5.57	304	Pn	Pn	10 21 54.2	+1.9
ILAS	Lasjerd	5.78	290	Pn	Pn	10 21 56.0	+0.9
KHNJ	Kahnooj	5.82	197	Pn	Pn	10 21 56.9	+1.3
IFIR	Firoozkooh	6.01	292	Pn	Pn	10 21 59.3	+0.8
IZEF	Zefreh	6.12	266	Pn	Pn	10 22 01.2	+1.3
IALA	Alasht	6.12	296	Pn	Pn	10 22 01.6	+1.6
ISFB	Sefidab	6.16	279	Pn	Pn	10 22 00.7	+0.3
KRSH	Karshahi	6.23	276	Pn	Pn	10 22 02.9	+1.6
IRAM	Ramesheh	6.33	256	Pn	Pn	10 22 04.0	+1.4
IGAR	Gharneh	6.45	262	Pn	Pn	10 22 05.7	+1.3
IPRN	Peran	6.54	296	Pn	Pn	10 22 07.1	+1.6
IDMV	Damavand	6.56	290	Pn	Pn	10 22 07.4	+1.5
SRVN	Saravan	6.59	158	Pn	Pn	10 22 07.7	+1.4
SRVN	Saravan	6.59	158	*e*Pn	Pn	10 22 08.5	+2.3
SRVN				IAML		10 24 30.2	
	comp=Z,110nm,1.0s						
DAMV	Damavand	6.62	290	*e*PnA		10 22 08.1	
DAMV				IAML		10 22 10.7	
	comp=Z,120nm,1.0s						
IVRN	Varamin	6.67	285	Pn	Pn	10 22 08.4	+1.1
IKLH	Kolahrood	6.71	270	Pn	Pn	10 22 09.4	+1.5
GHVR	GHOM	6.95	280	*e*Pn	Pn	10 22 13.9	+2.7
GHVR				IAML		10 24 42.5	
	comp=Z,170nm,1.0s						
IQOM	Qom	7.18	283	Pn	Pn	10 22 15.6	+1.1
MZPU	Pul - Mazandar	7.19	296	Pn	Pn	10 22 16.5	+1.9
KLNJ	Kolanjah	7.24	252	Pn	Pn	10 22 17.0	+1.7
IPIR	Pirpir	7.35	266	Pn	Pn	10 22 18.5	+1.7
CHTH	Charan	7.36	291	*e*Pn	Pn	10 22 18.9	+2.0
CHTH				IAML		10 22 22.3	
	comp=Z,86nm,1.0s						
ZNGN	Zangian	7.49	261	Pn	Pn	10 22 20.3	+1.5
KLST	Kelardasht - M	7.60	295	Pn	Pn	10 22 22.0	+1.8
JHBN	Jahan bin	7.62	262	Pn	Pn	10 22 22.4	+1.8
KBL	Kabul	7.90	80	Pn	Pn	10 22 25.8	+1.5
KBL	Kabul	7.90	80	P	Pn	10 22 25.8	+1.5
ASAO	Ashtian	8.00	280	*e*Pn	Pn	10 22 28.3	+2.6
IGZV	Ghazvin	8.20	293	Pn	Pn	10 22 30.0	+1.6
QABG	Abgarm-Qazvin	8.53	287	Pn	Pn	10 22 34.1	+1.2
HAGD	Aghdareh	8.75	281	Pn	Pn	10 22 37.8	+1.8
GTMR	Gotvand	8.87	266	*e*PnA		10 22 40.9	
GTMR				IAML		10 22 51.3	
	comp=Z,51nm,1.0s						
HGHA	Hamedan- Ghaye	9.07	285	Pn	Pn	10 22 42.1	+1.8
DZET	Dzherino	9.12	52	P	Pn	10 22 42.4	+1.5
DZET				pmax	pmax		
	comp=Z,49nm,0.6s						
SIMJ	Simiganj	9.16	54		Pn	10 22 41.5	0.0
HSAM	Samen	9.16	277	Pn	Pn	10 22 43.0	+1.4
WSAR	Wadi Sarin	10.31	185	Pn	Pn	10 22 55.5	-1.6
	baz=49,slow=24,SNR=4.3						
BTK	Batken	11.09	51		Pn	10 23 06.9	-1.0
BTK	Batken	11.09	51	P	Pn	10 23 06.9	-1.0
NIL	Nilore	11.39	86		Pn	10 23 12.6	+0.7
NIL	Nilore	11.39	86	P	Pn	10 23 12.6	+0.7
DRK	Karamyk	11.46	55		Pn	10 23 12.6	-0.5
DRK	Karamyk	11.46	55	P	Pn	10 23 12.6	-0.5
JASL	Jaisalmer	11.79	121	*e*P	Pn	10 23 17.1	-0.3
JASL				IAML		10 24 28.7	
	comp=E,52nm,0.8s						
IUG	Iuzhnay	11.89	41	*e*P	Pn	10 23 17.2	-1.7
IUG	Iuzhnay	11.89	41	*e*P	Pn	10 23 17.2	-1.7
AKT	Akhty	12.29	313	*e*P	Pn	10 23 26.4	+2.1
AKT				*e*S	Sn	10 25 44.7	+3.1
AKT				pmax	pmax		
	comp=Z,10.0nm,0.5s						
AKT				smax	smax		
	comp=E,10.0nm,0.6s						
AKT				smax	smax		
	comp=N,12nm,0.6s						
BRLS	Borolday	12.41	37	*e*P	Pn	10 23 20.2	-5.6
BRLS	Borolday	12.41	37	*e*P	Pn	10 23 20.3	-5.6
SEKA	Sheki	12.47	311	P	Pn	10 23 28.5	+1.8
KK31	Karatay Array	12.81	39		Pn	10 23 29.5	-1.8
KK31	Karatay Array	12.81	39	P	Pn	10 23 29.5	-1.8
KKAR	Karatay Array	12.81	39		Pn	10 23 29.6	-1.7
KKAR	Karatay Array	12.81	39		Pn	10 23 29.2	-2.1
KKAR	Karatay Array	12.81	39	P	Pn	10 23 29.6	-1.7
JMU	Jammu	12.86	90	*e*P	Pn	10 23 30.2	-1.8
JMU				IAML		10 25 47.7	
	comp=E,118nm,0.4s						
JMU				*e*S	Sn	10 25 54.8	-0.4
BKNR	BIKANER	12.99	111	*e*P	Pn	10 23 32.8	-1.0
BKNR				*e*S	Sn	10 25 58.0	-0.6
DZA	Taraz	13.11	41	*e*P	Pn	10 23 33.4	-2.0
DZA	Taraz	13.11	41	*e*P	Pn	10 23 33.4	-2.0
ARSB	Arslanbob	13.16	50		Pn	10 23 33.7	-2.5
ARSB	Arslanbob	13.16	50	P	Pn	10 23 33.7	-2.5
MAK	Makhachkala	13.35	318	*c* *i*P	Pn	10 23 31.0	-7.6
MAK				pmax	pmax		
	comp=Z,162nm,1.4s						
MAK				MLR	MLR		
	comp=Z,206nm,13.0s						
THN	Thein Dam	13.58	90	*e*P	Pn	10 23 42.5	+0.7
THN				*e*S	Sn	10 26 15.4	+2.5
GNI	Garni	13.59	303	Pn	Pn	10 23 45.4	+3.4
	comp=Z,1.1nm,0.3s,baz=313,slow=5.5,SNR=7.3						
	comp=Z,2.8nm,0.3s						
GNI	Garni	13.59	303	P	Pn	10 23 43.0	+0.9
	comp=Z,15nm,0.7s						
AML	Almayashu	14.04	48	P	Pn	10 23 45.4	-3.0
	SNR=19						
DHRM	DHARAMSHALA	14.10	91	*e*P	Pn	10 23 47.7	-1.5
DHRM				*e*P	Pn	10 23 47.7	-1.5
DHRM				IAML		10 23 60.0	
	comp=N,34nm,0.7s						
DHRM				IAML		10 24 02.1	
	comp=E,30nm,0.6s						
DHRM				*e*S	Sn	10 26 26.5	+0.6
EKS2	Erkin-Say	14.38	47	P	Pn	10 23 51.4	-1.5
	SNR=20						
KSH	Kashi	14.44	61	P	Pn	10 23 49.9	-3.9
KSH				pP	P	10 23 54.9	-5.8
KSH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KSH				LR	LR		
	comp=N,520nm,7.2s						
KSH				LR	LR		
	comp=E,410nm,10.0s						
KSH				LR	LR		
	comp=Z,480nm,7.9s						
AAK	Ala-Archa	14.81	48	P	Pn	10 23 57.9	-0.9
	SNR=25						
AAK	Ala-Archa	14.81	48		Pn	10 23 57.9	-0.9
AAK	Ala-Archa	14.81	48	Pn	Pn	10 23 57.7	-1.1
	comp=Z,43nm,0.7s,baz=46,slow=23,SNR=11						
AAK	Ala-Archa	14.81	48	*c* *e*P	Pn	10 23 57.7	-1.1
AAK				pmax	pmax		
	comp=Z,70nm,1.0s						
AJM	Ajmer	14.81	114	*e*P	Pn	10 23 56.7	-2.1
AJM				IAML		10 25 56.6	
	comp=E,69nm,0.1s						
AJM				IAML		10 25 56.6	
	comp=N,73nm,0.8s						
AJM				*e*S	Sn	10 26 44.4	+1.3
FRU1	Bishkek	14.99	48		Pn	10 23 60.0	-1.1
FRU1	Bishkek	14.99	48	P	Pn	10 24 00.0	-1.1
KBK	Karagaybulak	15.10	49	P	Pn	10 24 01.1	-1.6
	SNR=16						
USP	Ospenovka	15.16	46	P	Pn	10 24 00.6	-2.8
	SNR=16						
CHMS	Chumysh	15.17	47	P	Pn	10 24 04.5	+1.1
	SNR=5.6						
NRN	Naryn	15.20	54		Pn	10 24 03.2	-0.9
NRN				IAmb	IAmb	10 24 17.1	
	comp=Z,19nm,1.0s						
NRN	Naryn	15.20	54	P	Pn	10 24 03.2	-0.9
NRN				pmax	pmax		
	comp=Z,19nm,1.0s						
SGDS	Sogindy	15.35	46	*e*P	Pn	10 24 04.4	-1.4
TKM2	Tokmak 2	15.65	49	P	Pn	10 24 06.9	-3.0
	SNR=28						
BOOM	Boomskoye usch	15.65	51		Pn	10 24 08.5	-1.4
BOOM				IAmb	IAmb	10 24 23.6	
	comp=Z,18nm,0.8s						

BOOM	Boomskoye usch	15.65	51	P	Pn	10 24 08.5	-1.4
BOOM				pmax	pmax		
	comp=Z,18nm,0.8s						
AB31	Akbulak array	15.69	1	Pn	Pn	10 24 07.3	-3.0
ABKAR	Akbulak array	15.69	1		Pn	10 24 07.5	-2.7
KLP	Kalpa	15.86	92	eP	Pn	10 24 12.4	-0.4
KLP				eS	Sn	10 27 09.6	+0.6
RAYN	Ar Rayn	15.89	235		Pn	10 24 13.1	0.0
RAYN				IAmb	IAmb	10 24 20.8	
	comp=Z,19nm,0.7s						
RAYN	Ar Rayn	15.89	235	P	Pn	10 24 13.1	0.0
RAYN				pmax	pmax		
	comp=Z,19nm,0.7s						
BTLS	Baital	16.00	40	eP	Pn	10 24 13.2	-1.0
BTLS	Baital	16.00	40	eP	Pn	10 24 13.3	-1.0
HNLY	HANLEY	16.25	87	eP	Pn	10 24 17.6	-0.5
HNLY				eS	Sn	10 27 19.0	+0.3
KDJ	Kajisay	16.30	53	P	Pn	10 24 17.6	-0.7
KDJ				pmax	pmax		
	comp=Z,23nm,0.9s						
KBZ	Khabaz	16.51	313	Pn	Pn	10 24 20.6	-0.1
	comp=Z,0.3nm,0.3s,baz=118,slow=13,SNR=9.4						
	comp=Z,2.4nm,0.7s						
KBZ	Khabaz	16.51	313	ceP	P	10 24 22.6	-0.8
TARG	Taragay, Kyrgy	16.55	55		Pn	10 24 21.4	-0.3
TARG	Taragay, Kyrgy	16.55	55	P	Pn	10 24 21.4	-0.3
TARG				pmax	pmax		
	comp=Z,32nm,1.4s						
AAA	Alma-Ata	16.63	50	eP	Pn	10 24 20.5	-1.8
AAA	Alma-Ata	16.63	50	eP	Pn	10 24 20.6	-1.8
SHA1	Shidzhatmaz	16.66	313	i P	Pn	10 24 22.6	-0.3
MDOK	Medeo	16.69	50	eP	Pn	10 24 21.4	-1.8
MDOK	Medeo	16.69	50	eP	Pn	10 24 21.4	-1.8
KIV	Kislovodsk	16.76	313	i P	Pn	10 24 24.4	+0.4
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
KIV	Kislovodsk	16.76	313	P	Pn	10 24 25.1	+1.1
	comp=Z,14nm,0.5s						
AKTO	Aktyubinsk	16.91	357	P	Pn	10 24 23.2	-2.6
	comp=Z,3.1nm,0.5s,baz=155,slow=12,SNR=5.0						
AKTO				LR	LR	10 31 28.7	
	comp=Z,129nm,21.0s,baz=145,slow=39						
JOSI	Joshimath	17.19	95	eP	Pn	10 24 28.7	-0.9
JOSI				eS	Sn	10 27 40.3	-0.7
PRZ	Przheval'sk	17.27	53	P	P	10 24 36.2	+4.2
PRZ				pmax	pmax		
	comp=Z,25nm,1.2s						
SATY	Saty	17.52	52	eP	Pn	10 24 32.0	-1.6
SATY	Saty	17.52	52	eP	Pn	10 24 32.1	-1.6
ARXS	Arharly	17.70	48	i P	Pn	10 24 34.8	-1.1
KPKS	Kokpek	17.89	51	eP	Pn	10 24 36.9	-1.2
KPKS	Kokpek	17.89	51	eP	Pn	10 24 36.9	-1.2
UZB	Uzynbulak	17.96	52	eP	Pn	10 24 37.9	-1.2
UZB	Uzynbulak	17.96	52	eP	Pn	10 24 38.0	-1.2
BRZS	Berezniki	19.05	27	eP	P	10 24 49.2	-2.2
BRZS	Berezniki	19.05	27	eP	P	10 24 49.2	-2.2
ASF	Jabal al Asfar	19.11	272	P	P	10 24 52.4	+0.1
	comp=Z,0.1nm,0.3s,baz=163,slow=8.6,SNR=6.0						
ASF				LR	LR	10 33 39.7	
	comp=Z,154nm,19.2s,baz=105,slow=42						
	comp=Z,3.7nm,1.0s						
BNN	Bunyan	19.86	292	P	P	10 25 01.7	+1.2
MMAI	Mount Meron Ar	20.23	275	P	P	10 25 04.1	-0.4
	comp=Z,0.6nm,0.2s,baz=80,slow=16,SNR=1.4						
	comp=Z,0.6nm,0.2s						
BELG	Belogornoye	20.72	339	P	P	10 25 10.4	+0.9
	comp=Z,41nm,1.0s,baz=283,slow=3.5,SNR=5.3						
BELG				LR	LR	10 35 03.6	
	comp=Z,146nm,19.1s,baz=66,slow=42						
	comp=Z,41nm,1.0s						
BELG	Belogornoye	20.72	339	i P	P	10 25 09.1	-0.4
BELG				pmax	pmax		
	comp=Z,12nm,0.8s						
DIKM	Dikmen	20.86	300	P	P	10 25 11.5	+0.3
	comp=Z,23nm,0.9s						
BVAR	Borovoye Array	20.95	18	P	P	10 25 13.1	+1.0
	comp=Z,8.4nm,0.6s,baz=193,slow=11,SNR=45						
BVAR				S	S	10 29 04.5	-1.0
	comp=Z,5.3nm,0.7s,baz=203,slow=22,SNR=7.0						
	comp=Z,8.4nm,0.6s						
BRVK	Borovoye	20.95	18		P	10 25 13.2	+1.1
BRVK				IAmb	IAmb	10 25 20.9	
	comp=Z,24nm,1.1s						
BRVK	Borovoye	20.95	18	ceP	P	10 25 13.1	+1.1
BRVK				pmax	pmax		
	comp=Z,20nm,1.3s						
EIL	Elat	21.33	266	P	P	10 25 17.3	+1.0
	comp=Z,14nm,0.9s,baz=66,slow=2.0,SNR=9.4						
EIL				LR	LR	10 34 35.0	
	comp=Z,44nm,18.9s,baz=72,slow=40						
	comp=Z,14nm,0.9s						
MAKZ	Makanchi	21.53	45		P	10 25 19.6	+1.1
MAKZ				IAmb	IAmb	10 25 22.8	
	comp=Z,25nm,0.9s						
MAKZ	Makanchi	21.53	45	P	P	10 25 19.6	+1.1
MAKZ				pmax	pmax		
	comp=Z,25nm,1.0s						
BR104	Keskin Array S	21.68	294	P	P	10 25 20.4	+0.2
	comp=Z,90nmcomp=Z,12nm,0.9s						
BR131	Keskin Array S	21.68	294		P	10 25 21.8	+1.6
BR131	Keskin Array S	21.68	294	i P	P	10 25 21.6	+1.3
BRTR	Keskin Array B	21.68	294		P	10 25 20.9	+0.7
BRTR	Keskin Array B	21.68	294	P	P	10 25 20.6	+0.3
	comp=Z,9.0nm,1.0s,baz=110,slow=11,SNR=20						
	comp=Z,9.0nm,1.0s						
BRTR	Keskin Array B	21.68	294	ceP	P	10 25 21.5	+1.3
BRTR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BR105	Keskin Array S	21.70	294	P	P	10 25 20.6	+0.2
	comp=Z,122nmcomp=Z,15nm,0.8s						
BR106	Keskin Array S	21.70	294	P	P	10 25 20.6	+0.2
	comp=Z,103nmcomp=Z,13nm,0.8s						
MK31	Makanchi Array	21.71	46	ceP	P	10 25 21.5	+1.1
MKAR	Makanchi Array	21.71	46	P	P	10 25 21.4	+1.0
	comp=Z,14nm,0.9s,baz=234,slow=9.9,SNR=51						
MKAR				LR	LR	10 35 05.5	
	comp=Z,95nm,20.3s,baz=240,slow=40						
	comp=Z,14nm,0.9s						
KURBB	Kurchatov Arra	22.00	33	P	P	10 25 24.8	+1.5
	comp=Z,8.4nm,0.8s,baz=233,slow=9.5,SNR=29						
KURBB				LR	LR	10 34 44.7	
	comp=Z,197nm,19.0s,baz=179,slow=39						
	comp=Z,8.4nm,0.8s						
KURK	Kurchatov	22.10	33		P	10 25 25.8	+1.3
KURK				IAmb	IAmb	10 25 29.4	
	comp=Z,21nm,1.1s						
KURK	Kurchatov	22.10	33	ceP	P	10 25 25.1	+0.7
KURK				pmax	pmax		
	comp=Z,23nm,1.1s						
ANTO	Ankara	22.34	294	P	P	10 25 27.5	+0.2
	comp=Z,5.4nm,1.2s						
SIM	Simferopol'	22.68	308	eP	P	10 25 17.7	-13
SIM				pmax	pmax		
	comp=Z,24nm,1.2s						
ARTI	Arti	22.85	358		P	10 25 32.8	+0.4
ARTI				IAmb	IAmb	10 25 56.6	
	comp=Z,20nm,0.7s						
ARTI	Arti	22.85	358	P	P	10 25 32.8	+0.4
ARTI				pmax	pmax		
	comp=Z,20nm,0.7s						
VORD	Divnogorie	22.86	326	eP	P	10 25 32.5	-0.1
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSR	Storozhevoye	23.09	326	eP	P	10 25 33.5	-1.4
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SVE	Sverdlovsk	23.29	1	eP	P	10 25 41.3	+4.4
SVE				pmax	pmax		
	comp=Z,29nm,1.4s						
EVN	Everest	24.01	96		P	10 25 44.7	-0.3
WMQ	Urumqi	24.11	57	eP	P	10 25 50.6	+5.5
WMQ				pmax	pmax		
	comp=Z,25nm,0.7s						
WMQ				LR	LR		
	comp=N,390nm,12.5s						
WMQ				LR	LR		
	comp=Z,150nm,20.7s						
YLV	Yalova	25.03	295	P	P	10 25 53.4	-0.1
	comp=Z,22nm,1.0s						
KIRV	Kirov	25.95	348	LR	LR	10 36 05.8	
	comp=Z,49nm,21.5s,baz=23,slow=36						
KIRV	Kirov	25.95	348	i P	P	10 26 01.8	+0.2
PURM	Purcari	26.02	309	P	P	10 26 02.6	+0.3
OBN	Obninsk	26.90	330	LR	LR	10 38 18.5	
	comp=Z,124nm,20.8s,baz=42,slow=40						
OBN	Obninsk	26.90	330	ceP	P	10 26 10.0	-0.1
OBN				e		10 26 56.3	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,82nm,18.0s						
ZAA0	Zalesovo Array	27.09	34		P	10 26 12.5	+0.6
ZAA0				IAmb	IAmb	10 26 19.4	
	comp=Z,7.8nm,0.8s						
ZALV	Zalesovo Beam	27.09	34		P	10 26 12.3	+0.4
ZALV	Zalesovo Beam	27.09	34	P	P	10 26 12.6	+0.6
	comp=Z,3.3nm,0.5s,baz=234,slow=10,SNR=10						
ZALV				LR	LR	10 37 00.2	
	comp=Z,59nm,19.4s,baz=204,slow=36						
	comp=Z,3.3nm,0.5s						
ZALV	Zalesovo Beam	27.09	34	i P	P	10 26 14.0	+2.1
ZALV				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SORM	Soroca	27.54	311	P	P	10 26 15.6	-0.3
	comp=Z,732nmcomp=Z,14nm,0.8s						
BISRR	Bisoca	27.85	305	P	P	10 26 19.0	+0.1
	comp=Z,2µmcomp=Z,24nm,1.3s						
AK09	Malin Array Si	27.95	317	P	P	10 26 19.8	+0.1
AK10	Malin Array Si	27.97	317	P	P	10 26 19.4	-0.4
AK07	Malin Array Si	27.97	317	P	P	10 26 19.5	-0.3
AK08	Malin Array Si	27.98	317	P	P	10 26 19.6	-0.3
AK06	Malin Array Si	27.99	317	P	P	10 26 19.7	-0.3
AK05	Malin Array Si	28.00	317	P	P	10 26 19.8	-0.3
AK02	Malin Array Si	28.02	317	P	P	10 26 19.8	-0.4
AKASG	Malin Array Be	28.03	317	P	P	10 26 20.0	-0.3
	comp=Z,6.3nm,0.6s,baz=117,slow=8.2,SNR=16						
AKASG				PcP	PcP	10 29 33.7	-1.2
	comp=Z,0.7nm,0.5s,baz=84,slow=3.0,SNR=4.5						
	comp=Z,6.3nm,0.6s						
AKBB	Malin Array Si	28.03	317	ceP	P	10 26 20.3	0.0
AKBB				pmax	pmax		
	comp=Z,16nm,0.8s						
AKBB	Malin Array Si	28.03	317	P	P	10 26 20.1	-0.2
AK01	Malin Array Si	28.03	317	P	P	10 26 20.1	-0.2
KIEV	Kiev	28.03	317		P	10 26 20.3	-0.1
KIEV	Kiev	28.03	317	P	P	10 26 20.3	-0.1
KIEV				pmax	pmax		
	comp=Z,18nm,0.8s						
AK03	Malin Array Si	28.04	317	P	P	10 26 19.5	-0.9
AK12	Malin Array Si	28.04	317	P	P	10 26 20.2	-0.2
AK11	Malin Array Si	28.05	317	P	P	10 26 20.2	-0.3
AK14	Malin Array Si	28.06	317	P	P	10 26 20.2	-0.4
AK04	Malin Array Si	28.07	317	P	P	10 26 20.2	-0.5
AK16	Malin Array Si	28.08	317	P	P	10 26 20.1	-0.7
AK13	Malin Array Si	28.08	317	P	P	10 26 20.2	-0.6
AK15	Malin Array Si	28.08	317	P	P	10 26 20.4	-0.4
AK17	Malin Array Si	28.11	317	P	P	10 26 20.9	-0.2
AK18	Malin Array Si	28.13	317	P	P	10 26 20.8	-0.4
AK22	Malin Array Si	28.14	317	P	P	10 26 20.9	-0.4
AK19	Malin Array Si	28.16	317	P	P	10 26 20.9	-0.6
AK21	Malin Array Si	28.16	317	P	P	10 26 20.9	-0.6
AK20	Malin Array Si	28.17	317	P	P	10 26 20.8	-0.8
MLR	Muntele Rosu	28.36	305		P	10 26 23.7	+0.2
MLR				IAmb	IAmb	10 26 29.7	
	comp=Z,11nm,1.2s						
MLR	Muntele Rosu	28.36	305	P	P	10 26 23.7	+0.2
MLR				pmax	pmax		
	comp=Z,11nm,1.2s						
MLR	Muntele Rosu	28.36	305	P	P	10 26 22.7	-0.8
	comp=Z,8.9nm,1.4s						
LUBAR	Lubar, Ukraine	28.56	315	P	P	10 26 24.4	-0.7
MI30	MI30,Zelenitsa	28.64	316	P	P	10 26 25.1	-0.7
	comp=Z,28nm,0.7s						
MI29	MI29, Kamyanyy	28.70	316	P	P	10 26 25.3	-1.0
	comp=Z,98nm,1.0s						
BURAR	Bucovina Array	29.38	309		P	10 26 33.0	+0.5
BURAR				IAmb	IAmb	10 26 36.8	
	comp=Z,6.4nm,0.7s						
BUR08	Bucovina Ar. S	29.40	309	IAmb	IAmb	10 26 36.7	
	comp=Z,4.6nm,0.7s						
RNPP5	Staryi Chortor	30.17	316	P	P	10 26 39.1	-0.2
RNPP8	Varash	30.23	316	P	P	10 26 39.8	0.0
RNPP9	Sopachiv	30.24	316	P	P	10 26 39.7	-0.2
KLMR	Klimovskoe	30.27	341	eP	P	10 26 38.5	-1.6
KLMR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MNK	Minsk	30.55	323	i P	P	10 26 39.4	-3.2
	comp=E,20nm,0.9s						
MNK				i P	P	10 26 39.4	-3.2
	comp=N,12nm,0.8s						
MNK				i P	P	10 26 39.4	-3.2
	comp=Z,4.0nm,0.8s,baz=120						
MNK				i PP	PnPn	10 27 37.0	-4.4
MNK				i PPP	PPP	10 27 45.1	
MNK				i S	S	10 31 39.8	-4.6
MNK				i SS	SnSn	10 33 14.2	-6.2
MNK				i SSS	SSS	10 33 29.0	
MNK				i LQ	LQ	10 36 44.9	
MNK				i LR	LR	10 38 48.0	
MNK				i LRM	MLR	10 40 13.7	
	comp=Z,64nm,18.0s						
MNK				i LRM	MLR	10 40 30.7	
	comp=N,329nm,17.5s						
MNK				i LRM	MLR	10 40 57.8	
	comp=E,575nm,16.0s						
MNK	Minsk	30.55	323	i P	P	10 26 39.4	-3.2
MNK				i PPP	PPP	10 27 45.1	
MNK				i S	S	10 31 39.7	-4.6
MNK				i SSS	SSS	10 33 28.9	
MNK				pmax	pmax		
	comp=E,20nm,0.9s						
MNK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,12nm,0.8s						
MNK				MLR	MLR		
	comp=Z,64nm,18.0s						
MNK				MLR	MLR		
	comp=N,329nm,18.0s						
MNK				MLR	MLR		
	comp=E,575nm,16.0s						
DRGR		30.84	306	P	P	10 26 48.7	+3.3
DRGR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KWP	Kalwaria Pacla	31.54	312	eP	P	10 26 52.5	+1.0
KWP	Kalwaria Pacla	31.54	312	P	P	10 26 51.4	-0.1
	comp=Z,11nm,0.9s						
KOLS	Kolonicke sedl	31.63	310	eP	P	10 26 56.9	+4.6
KOLS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KOLS	Kolonicke sedl	31.63	310	eP	P	10 26 56.9	+4.6
GTA	Gaotai	32.66	68	P	P	10 27 03.3	+1.7
GTA				pP	sP	10 27 07.4	+1.5
GTA				pmax	pmax		
	comp=Z,19nm,0.8s						
GTA				LR	LR		
	comp=N,130nm,14.3s						
GTA				LR	LR		
	comp=E,150nm,14.3s						
GTA				LR	LR		
	comp=Z,120nm,17.1s						
NIE	Niedzica	33.00	311	eP	P	10 27 06.2	+1.9
NIE	Niedzica	33.00	311	P	P	10 27 06.1	+1.8
NIE				pmax	pmax		
	comp=Z,3.0nm,1.1s						
NIE	Niedzica	33.00	311	P	P	10 27 05.1	+0.8
	comp=Z,3.5nm,1.1s						
VSU	Vasula	33.21	329	ceP	P	10 27 07.5	+1.6
VSU				pmax	pmax		
	comp=Z,15nm,1.7s						
OJC	Ojcow	33.51	312	eP	P	10 27 09.6	+0.9
OJC	Ojcow	33.51	312	P	P	10 27 09.7	+0.9
OJC				pmax	pmax		
	comp=Z,15nm,0.8s						
OJC	Ojcow	33.51	312	P	P	10 27 08.7	-0.1
	comp=Z,15nm,0.8s						
MORC	Moravsky Berou	34.83	311	eP	P	10 27 23.1	+2.9
MOY	Mondy	34.86	46	eP	P	10 27 23.4	+2.8
MOY				pmax	pmax		
	comp=Z,14nm,1.6s						
FIA1	FINESS Array S	35.22	333		P	10 27 23.6	+0.3
FINES	FINESS Array B	35.22	333	P	P	10 27 23.2	-0.1
	comp=Z,2.6nm,0.4s,baz=132,slow=8.1,SNR=18						
	comp=Z,2.6nm,0.4s						
FINES	FINESS Array B	35.22	333	ceP	P	10 27 26.7	+3.4
FINES				pmax	pmax		
	comp=Z,3.0nm,0.4s						
RONA	Rosalia, Austr	35.30	307	epP	P	10 27 25.8	+1.5
	comp=Z,0.1nm,0.3s						
KRLC	Kraliky	35.37	311	P	P	10 27 25.2	+0.3
KRLC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KRUC	Moravsky	35.44	309	eP	P	10 27 28.4	+3.0
CONA	Conrad Observa	35.62	307	eP	P	10 27 27.8	+0.7
	comp=Z,1.3nm,0.8s						
DPC	Dobruska-Polom	35.72	311	P	P	10 27 28.7	+0.8
DPC				pmax	pmax		
	comp=Z,8.0nm,1.2s						
DPC	Dobruska-Polom	35.72	311	P	P	10 27 27.4	-0.5
	comp=Z,8.2nm,1.2s						
ARSA	Arzberg	35.76	306	i pP	pP	10 27 31.5	+0.2
	comp=Z,2.4nm,0.9s						
KSP	Ksiaz	35.83	312	eP	P	10 27 30.6	+1.8
KSP	Ksiaz	35.83	312	P	P	10 27 30.4	+1.6
KSP				pmax	pmax		
	comp=Z,6.0nm,1.1s						
UPC	Upice	35.94	311	P	P	10 27 30.8	+1.1
UPC				pmax	pmax		
	comp=Z,13nm,1.1s						
SOKA	Soboth	36.04	305	epP	pP	10 27 34.0	+0.2
	comp=Z,2.8nm,1.0s						
OBKA	Obir	36.36	304	eP	P	10 27 33.8	+0.3
	comp=Z,2.3nm,0.8s						
MOA	Molln	36.67	307	epP	pP	10 27 39.5	+0.3
	comp=Z,0.6nm,0.7s						
PRED	Cave del Predi	37.03	304		P	10 27 40.9	+1.7
GEC2	GERESS Array S	37.16	308	P	P	10 27 40.9	+0.6
GEC2				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GERES	GERESS Array B	37.16	308	P	P	10 27 40.2	0.0
GERES	GERESS Array B	37.16	308	P	P	10 27 40.6	+0.4
	comp=Z,2.2nm,0.8s,baz=100,slow=6.9,SNR=12						
GERES				PcP	PcP	10 29 59.4	-0.9
	comp=Z,0.9nm,0.7s,baz=103,slow=2.9,SNR=4.2						
	comp=Z,2.2nm,0.8s						
KHC	Kasperske Hory	37.28	309	P	P	10 27 44.4	+3.2
KHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KHC	Kasperske Hory	37.28	309	P	P	10 27 40.8	-0.4
	comp=Z,6.6nm,0.7s						
SONM	Songino Array	37.66	54		P	10 27 46.0	+1.4
SONM	Songino Array	37.66	54	P	P	10 27 45.1	+0.5
	comp=Z,2.6nm,0.9s,baz=269,slow=10,SNR=16						
SONM				LR	LR	10 45 31.1	
	comp=Z,65nm,18.1s,baz=260,slow=40						
	comp=Z,2.6nm,0.9s						
SONM	Songino Array	37.66	54	P	P	10 27 46.0	+1.4
SONM				pmax	pmax		
	comp=Z,7.0nm,1.3s						
LESA	Schwarzleotal	37.70	306	eP	P	10 27 44.5	-0.4
	comp=Z,3.2nm,0.7s						
ABTA	Abfaltersbach	37.77	305	eP	P	10 27 43.3	-2.2
	comp=Z,3.6nm,1.2s						
CLL	Collm	37.96	312	eP	P	10 27 46.0	-0.9
CLL				i		10 27 49.2	
CLL	Collm	37.96	312	eP	P	10 27 46.0	-0.9
CLL				i x	x	10 27 49.2	
	comp=Z,6.0nm,0.9s						
CLL				AMS	AMS	14 39 00.0	
	comp=Z,100nm,19.2s						
CHTO	Chiang Mai	38.00	103		P	10 27 47.1	-0.5
CHTO	Chiang Mai	38.00	103	P	P	10 27 47.1	-0.5
CHTO				pmax	pmax		
	comp=Z,14nm,0.8s						
ULN	Ulaanbaatar	38.10	54	ceP	P	10 27 50.8	+2.5
ULN				pmax	pmax		
	comp=Z,20nm,2.5s						
CM31	Chiang Mai Arr	38.18	103	P	P	10 27 49.3	+0.2
CM31				IAmb	IAmb	10 27 55.5	
	comp=Z,12nm,0.8s						
CMAR	Chiang Mai Arr	38.18	103		P	10 27 47.7	-1.4
CMAR	Chiang Mai Arr	38.18	103	P	P	10 27 48.4	-0.8
	comp=Z,7.2nm,0.8s,baz=296,slow=8.4,SNR=31						
CMAR				PcP	PcP	10 30 03.3	-0.5
	comp=Z,1.4nm,0.3s,baz=283,slow=5.1,SNR=4.7						
	comp=Z,7.2nm,0.8s						
WTTA	Wattenberg	38.40	305	epP	pP	10 27 53.5	-0.5
	comp=Z,5.7nm,0.9s						
WTTA				ePcP	PcP	10 30 03.6	-0.7
	comp=Z,1.7nm,0.5s						
WATA	Walderalm	38.45	306	eP	P	10 27 51.4	+0.2
	comp=Z,2.7nm,1.1s						
WATA				ePcP	PcP	10 30 03.4	-0.9
	comp=Z,2.5nm,0.9s						
SQTA	Sankt Quirin	38.69	305	i P	P	10 27 53.4	+0.2
	comp=Z,2.7nm,0.7s						
SQTA				ePcP	PcP	10 30 04.7	-0.4
	comp=Z,4.1nm,0.7s						
MOTA	Moosalm	38.77	306	i pP	P	10 27 54.8	+0.8
	comp=Z,4.5nm,1.5s						
MOTA				ePcP	PcP	10 30 04.4	-0.9
	comp=Z,7.4nm,1.4s						
RETA	Reutte	39.01	306	eP	P	10 27 54.8	-1.1
	comp=Z,2.3nm,0.5s						
FETA	Feichten	39.01	305	epP	P	10 27 56.8	+0.8
	comp=Z,3.1nm,1.0s						
FETA				ePcP	PcP	10 30 04.5	-1.6
	comp=Z,3.5nm,0.8s						
DAVA	Damuels	39.60	305	eP	P	10 27 59.2	-1.7
	comp=Z,3.3nm,1.0s						
DAVA				i PcP	PcP	10 30 07.5	-0.5
	comp=Z,4.7nm,1.0s						
HFS	Hagfors	39.90	326	P	P	10 28 03.3	+0.3
	comp=Z,2.9nm,0.7s,baz=99,slow=9.3,SNR=8.4						
	comp=Z,2.9nm,0.7s						
ARCES	ARCESS Array B	40.69	342	P	P	10 28 09.7	+0.3
ARCES	ARCESS Array B	40.69	342	P	P	10 28 09.8	+0.3
	comp=Z,1.5nm,0.7s,baz=129,slow=9.6,SNR=4.7						
ARCES				LR	LR	10 47 02.3	
	comp=Z,131nm,18.2s,baz=96,slow=39						
	comp=Z,1.5nm,0.7s						
KEST	Kesra	41.03	288	P	P	10 28 14.2	+1.4
KEST	Kesra	41.03	288	P	P	10 28 12.7	-0.2
	comp=Z,17nm,0.9s,baz=0.1,slow=2.3,SNR=13						
	comp=Z,17nm,0.9s						
NC405	NORSAR Array S	41.16	327		P	10 28 14.4	+1.0
NC405				IAmb	IAmb	10 28 15.8	
	comp=Z,9.9nm,1.2s						
SENIN	Lac Senin/Sane	41.36	304		P	10 28 16.2	+0.7
NB2	NORSAR Subarra	41.37	327	P	P	10 28 14.9	-0.3
	comp=Z,2.7nm,1.0s,baz=113,slow=7.9						
NOA	NORSAR Array B	41.37	327	P	P	10 28 14.9	-0.3
	comp=Z,1.2nm,0.8s,baz=111,slow=8.0,SNR=5.8						
	comp=Z,1.2nm,0.8s						
LYN	LuoYang	43.40	73	P	P	10 28 34.1	+2.1
LYN				pmax	pmax		
	comp=Z,14nm,0.8s						
LYN				pmax	pmax		
	comp=Z,170nm,4.5s						
SRIT	Nakonsritamara	44.42	115		P	10 28 39.9	-0.5
KULM	Kulim	47.35	117		P	10 29 03.1	-0.5
PSI	Prapat	47.79	121	P	P	10 29 05.5	-1.6
PSI				pmax	pmax		
	comp=Z,14nm,1.0s						
RPSI	Rantau Prapat	47.86	121		P	10 29 05.5	-2.0
EKA	Eskdalemuir Ar	47.94	317	P	P	10 29 07.5	-0.1
	comp=Z,1.6nm,0.7s,baz=116,slow=7.8,SNR=4.3						
	comp=Z,1.6nm,0.7s						
SPITS	Spitsbergen Ar	48.41	349	LR	LR	10 53 02.7	
	comp=Z,71nm,18.0s,baz=102,slow=40						
ESDC	Sonseca Array	50.45	296	P	P	10 29 26.0	-1.2
	comp=Z,2.1nm,0.6s,baz=62,slow=7.9,SNR=19						
	comp=Z,2.1nm,0.6s						
ZEA	Zeya	50.87	45	eP	P	10 29 32.3	+2.3
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HEH	HeiHe	51.38	50	eP	P	10 29 34.6	+0.7
HEH				pmax	pmax		
	comp=Z,19nm,0.8s						
YAK	Yakutsk	51.74	34	LR	LR	10 53 00.7	
	comp=Z,78nm,19.0s,baz=263,slow=38						
TIXI	Tiksi	52.02	22	LR	LR	10 54 52.6	
	comp=Z,47nm,18.8s,baz=204,slow=40						
TIXI	Tiksi	52.02	22	i P	P	10 29 39.2	+0.8
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BNX	BinXian	52.15	55	⇓P	P	10 29 40.8	+1.0
BNX				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KLR	Kul'dur	54.33	50	LR	LR	10 55 28.8	
	comp=Z,90nm,18.6s,baz=283,slow=39						
KLR	Kul'dur	54.33	50	ceP	P	10 29 56.3	+0.6
KLR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KSRS	Korea Array	54.65	65	P	P	10 29 58.4	+0.1
	comp=Z,2.5nm,0.7s,baz=282,slow=6.6,SNR=11						
	comp=Z,2.5nm,0.7s						
USRK	Ussuriysk Ar.	55.68	56	P	P	10 30 05.3	-0.3

USRK	Ussuriysk Ar.	55.68	56	P	P	10 30 05.1	-0.4
	comp=Z,3.9nm,0.8s,baz=276,slow=6.8,SNR=16						
	comp=Z,3.9nm,0.8s						
USRK	Ussuriysk Ar.	55.68	56	P	P	10 30 05.3	-0.3
TORD	Torodi Ar. Bea	56.18	263	P	P	10 30 08.7	-0.9
TORD	Torodi Ar. Bea	56.18	263	P	P	10 30 08.4	-1.2
	comp=Z,2.3nm,0.8s,baz=26,slow=7.0,SNR=9.9						
	comp=Z,2.3nm,0.8s						
BORG	Borgarnes	56.40	329	LR	LR	10 56 28.6	
	comp=Z,52nm,18.3s,baz=58,slow=38						
VOI	Vohitsoka	56.48	194	P	P	10 30 11.8	+0.3
JNU	Nakatsue	58.40	69	LR	LR	10 57 39.4	
	comp=Z,36nm,18.2s,baz=38,slow=38						
SEY	Seymchan	61.93	31	LR	LR	11 00 46.4	
	comp=Z,76nm,18.6s,baz=265,slow=39						
SEY	Seymchan	61.93	31	*ce*P	P	10 30 49.4	+0.7
SEY				pmax	pmax		
	comp=Z,8.0nm,0.8s						
YSS	Yuzhno-Sakhali	62.04	50		P	10 30 49.1	-0.6
YSS	Yuzhno-Sakhali	62.04	50	*e*P	P	10 30 49.8	+0.1
YSS				pmax	pmax		
	comp=Z,100nm,4.0s						
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
YSS				MLR	MLR		
	comp=N,100nm,14.0s						
YSS				MLR	MLR		
	comp=E,100nm,16.0s						
MA2	Magadan	62.30	35	LR	LR	10 59 57.9	
	comp=E,42nm,20.0s,baz=296,slow=38						
MJAR	Matsushiro Arr	62.69	63	P	P	10 30 53.2	-1.1
	comp=E,2.3nm,0.8s,baz=281,slow=7.3,SNR=7.3						
MJAR				LR	LR	11 00 35.2	
	comp=E,30nm,18.3s,baz=331,slow=38						
	comp=E,2.3nm,0.8s						
JTM	Tenmabayashi	63.13	57	P	P	10 30 56.7	-0.4
ERM	Erimo	64.11	55	P	P	10 31 03.4	-0.2
ERM	Erimo	64.11	55	P	P	10 31 03.4	-0.2
ERM				pmax	pmax		
	comp=Z,14nm,1.1s						
BILL	Bilibino	65.19	23	*i* P	P	10 31 12.8	+2.6
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KGCAE	Kacgae	66.45	218	P	P	10 31 19.6	+0.6
LBTB	Lobatse	66.62	214	P	P	10 31 20.2	+0.2
LBTB	Lobatse	66.62	214	LR	LR	11 04 33.9	
	comp=Z,47nm,20.5s,baz=44,slow=40						
LBTB	Lobatse	66.62	214	P	P	10 31 20.2	+0.2
LBTB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SFJD	Kangerlussuaq	66.89	336	LR	LR	10 59 34.3	
	comp=Z,44nm,19.7s,baz=50,slow=35						
PETK	Petropavlovsk-	68.41	40	LR	LR	11 04 17.5	
	comp=Z,56nm,18.7s,baz=315,slow=38						
BOSA	Boshof	69.87	212	P	P	10 31 40.2	-0.2
BOSA	Boshof	69.87	212	P	P	10 31 39.2	-1.1
	comp=Z,4.2nm,0.6s,baz=31,slow=5.6,SNR=9.4						
BOSA				LR	LR	11 04 00.2	
	comp=Z,32nm,19.6s,baz=24,slow=38						
	comp=Z,4.2nm,0.6s						
BOSA	Boshof	69.87	212	P	P	10 31 40.2	-0.2
BOSA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
RES	Resolute Bay	70.73	353	LR	LR	11 06 09.1	
	comp=Z,11nm,21.9s,baz=344,slow=39						
C16K	Lisburne Hills	73.11	16	IAmb	IAmb	10 32 04.8	
	comp=Z,5.6nm,1.3s						
B20K	Meade River	73.36	12	P	P	10 32 01.8	+1.1
C18K	Utukok River	73.72	14	IAmb	IAmb	10 32 09.7	
	comp=Z,4.3nm,0.8s						
B21K	Ikpikpuk River	74.14	12		P	10 32 06.0	+0.7
B21K				IAmb	IAmb	10 32 12.6	
	comp=Z,7.0nm,1.1s						
D19K	Kuna River	74.47	14	IAmb	IAmb	10 32 14.9	
	comp=Z,3.9nm,0.8s						
D20K	Etivluk River	74.57	13	P	P	10 32 07.3	-0.7
A36M	Sachs Harbour	74.70	2	P	P	10 32 08.3	-0.3
E18K	Tukpahlearik C	74.86	15	IAmb	IAmb	10 32 16.2	
	comp=Z,4.5nm,0.8s						
D22K	Ayikyak River	75.12	12		P	10 32 12.6	+1.5
D22K				IAmb	IAmb	10 32 18.9	
	comp=Z,5.4nm,0.9s						
F15K	North Star Dit	75.33	17	IAmb	IAmb	10 32 14.3	
	comp=Z,3.8nm,0.9s						
E19K	Redstone River	75.53	14	IAmb	IAmb	10 32 19.9	
	comp=Z,3.2nm,0.8s						
TOLK	Toolik Lake Re	75.83	11	IAmb	IAmb	10 32 20.5	
	comp=Z,4.9nm,0.6s						
E22K	Anaktuvuk Pass	75.93	12	IAmb	IAmb	10 32 21.8	
	comp=Z,3.3nm,1.0s						
E23K	Chandalar	76.36	11		P	10 32 18.1	-0.2
E23K				IAmb	IAmb	10 32 25.4	
	comp=Z,3.6nm,0.8s						
F21K	Alatna River	76.45	13	IAmb	IAmb	10 32 26.3	
	comp=Z,3.0nm,0.9s						
E24K	Your Creek	76.52	10	IAmb	IAmb	10 32 26.0	
	comp=Z,3.8nm,0.8s						
E25K	Arctic Village	76.90	9	IAmb	IAmb	10 32 27.8	
	comp=Z,4.8nm,0.9s						
COLD	Coldfoot	77.02	11	IAmb	IAmb	10 32 28.9	
	comp=Z,4.1nm,0.9s						
F25K	Christian Rive	77.38	10	IAmb	IAmb	10 32 32.0	
	comp=Z,5.4nm,1.1s						
F26K	Sheenjek River	77.49	9	IAmb	IAmb	10 32 31.2	
	comp=Z,2.9nm,0.9s						
BMAR	Burnt Mountain	77.68	9		P	10 32 26.7	+1.0
G24K	Hadweenzic Riv	77.94	11	IAmb	IAmb	10 32 34.6	
	comp=Z,6.4nm,0.9s						
H21K	Melozitna Rive	77.97	13	IAmb	IAmb	10 32 34.5	
	comp=Z,3.6nm,0.9s						
INK	Inuvik	77.98	5	LR	LR	11 13 20.5	
	comp=Z,19nm,18.1s,baz=254,slow=41						
H23K	Yukon River	78.41	12	IAmb	IAmb	10 32 37.2	
	comp=Z,5.1nm,0.9s						
G27K	Doyon Strip	78.64	8	IAmb	IAmb	10 32 37.4	
	comp=Z,3.2nm,0.8s						
G30M	tAoh Zraii Nji	79.06	6	IAmb	IAmb	10 32 38.6	
	comp=Z,5.4nm,1.1s						
ILAR	Eielson Array	79.82	11	P	P	10 32 36.9	-0.6
	comp=Z,0.4nm,0.7s,baz=334,slow=5.1,SNR=4.8						
	comp=Z,0.4nm,0.7s						
CAST	Castle Rocks	80.12	14	P	P	10 32 38.8	-0.3
CAST				IAmb	IAmb	10 32 45.7	
	comp=Z,6.7nm,0.9s						
YKA	Yellowknife Ar	84.18	357	P	P	10 33 00.3	0.0
	comp=Z,2.3nm,0.9s,baz=359,slow=6.4,SNR=7.8						
YKA				LR	LR	11 14 48.1	
	comp=Z,20nm,18.2s,baz=299,slow=39						
	comp=Z,2.3nm,0.9s						
KDAK	Kodiak Island	85.07	17	LR	LR	11 19 31.9	
	comp=Z,49nm,18.4s,baz=353,slow=42						
WRA	Warramunga Arr	88.84	115	P	P	10 33 23.1	-0.7
	comp=Z,1.4nm,0.8s,baz=317,slow=4.1,SNR=9.0						
	comp=Z,1.4nm,0.8s						
ASAR	Alice Springs	90.72	118	P	P	10 33 32.0	-0.5
	comp=Z,0.6nm,0.6s,baz=313,slow=5.1,SNR=14						
	comp=Z,0.6nm,0.6s						
BBB	Bella Bella	94.36	5	LR	LR	11 19 43.3	
	comp=Z,18nm,21.5s,baz=53,slow=38						
NEW	Newport	98.50	358	LR	LR	11 23 28.4	
	comp=Z,20nm,18.1s,baz=350,slow=38						
QSPA	South Pole Qui	123.37	180	PKP	PKPdf	10 39 23.7	-1.9
	comp=Z,1.5nm,0.9s,baz=253,slow=1.8,SNR=6.6						

*NEIC **20** 10:25:59.3±0.5, 36.°51N±0.°01×98.°956W±0.°009, h7^{km}±1^{km}, mb_Lg2.7/95, ML2.9/21, ML2.6/26, Error ellipse: s-maj=1.8km s-min=0.9km az=199.0*

NEIC 20 10:25:59.1±0.4**, 36.°52N**±0.°01×**98.°970W**±0.°007**, h5**^{km}±1^{km}**, Error ellipse: s-maj=1.9km s-min=0.7km az=174.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK038	West end E0370	0.19	103		Pg	10 26 03.3	+0.5
OK038				Sg	Sg	10 26 06.2	+0.9
OK038				IAML		10 26 06.9	
	3μm,0.4s						
ELIS	Ellis County	0.58	219		Pg	10 26 10.6	+0.3
ELIS				Sg	Sg	10 26 18.4	+0.5
ELIS				IAML		10 26 20.2	
	comp=E,885nm,0.4s						
ELIS				IAML		10 26 25.4	
	comp=N,873nm,0.3s						
CROK	Carrier	0.80	91		Pg	10 26 14.5	+0.1
CROK					Sg	10 26 25.3	+0.6
CROK				IAML		10 26 32.5	
	comp=E,525nm,0.3s						
CROK				IAML		10 26 39.6	
	comp=N,434nm,0.3s						
CSTR	Hydro, Custer	0.90	165		Pg	10 26 16.3	-0.1
CSTR					Sb	10 26 28.9	-0.6
KAN14	Manchester OK	0.92	61		Pg	10 26 16.6	-0.2
KAN14					Sg	10 26 28.9	+0.2
KAN14				IAML		10 26 36.3	
	comp=N,378nm,0.1s						
KAN10	Anthony SW Sta	0.93	49		Pg	10 26 16.7	-0.2
KAN10					Sg	10 26 28.4	-0.5
GC02	Grant County #	0.95	69		Pg	10 26 17.4	0.0
GC02					Sg	10 26 29.9	+0.2
KAN05	Bluff City Nor	1.06	56		Pg	10 26 19.5	+0.1
KAN05					Sg	10 26 33.3	+0.1
KAN08	Anthony NE Sta	1.07	48		Pg	10 26 19.2	-0.4
KAN08				IAML		10 26 40.0	
	comp=E,385nm,0.1s						
DRZT	Darrouzett	1.07	266		Pb	10 26 20.0	-0.2
DRZT					Sg	10 26 34.0	+0.4
KAN01	Argonia South	1.16	57		Pg	10 26 20.8	-0.5
KAN01				IAML		10 26 41.6	
	comp=E,263nm,0.3s						
KAN09	Caldwell North	1.25	60		Pg	10 26 22.4	-0.6
KAN09					Sg	10 26 39.2	+0.1
KAN13	South Haven SW	1.29	67		Pn	10 26 23.3	-0.6
KAN13					Sb	10 26 41.0	+0.2
OKCSW	OKLAHOMA CITY	1.67	131		Pn	10 26 29.4	+0.5
OK051	E0350 and S346	1.72	90		Pb	10 26 30.4	-0.7
SMWD	Samnorwood	1.75	217		Pn	10 26 30.9	+0.8
WMOK	Wichita Mounta	1.78	175		Pn	10 26 30.8	+0.2
WMOK				IAmb_Lg		10 26 56.8	
	comp=Z,57nm,0.7s						
R32A	Long Quarter,	1.91	6		Pb	10 26 33.5	-1.0
DEOK	Depew	2.11	108		Pn	10 26 36.0	+1.0
X34A	Smith Ranch, M	2.13	154		Pb	10 26 36.9	-1.2
X34A				IAmb_Lg		10 27 05.7	
	comp=Z,26nm,1.1s						
CBKS	Cedar Bluff	2.37	345		Pn	10 26 40.2	+1.5
CBKS				IAmb_Lg		10 27 14.9	
	comp=Z,33nm,0.8s						
WTFS	Witchita Falls	2.78	171		Pn	10 26 46.0	+1.8
RTBA	Rita Blanca	3.04	270		Pn	10 26 48.7	+0.8
KSU1	Kansas State U	3.18	35	IAmb_Lg		10 27 40.2	
	comp=Z,15nm,0.8s						
RLO	Rose Lookout	3.21	95	IAmb_Lg		10 27 46.2	
	comp=Z,17nm,0.8s						
DKNS	Dickens	3.27	210		Pn	10 26 53.0	+1.9
DKNS				IAmb_Lg		10 27 44.8	
	comp=Z,23nm,0.8s						
APMT	Aspermont	3.32	197		Pn	10 26 52.9	+1.2
FW03	Perrin-Whitt E	3.55	168	IAmb_Lg		10 27 56.3	
	comp=Z,16nm,0.7s						
FW06	Azle	3.73	161	IAmb_Lg		10 27 57.7	
	comp=Z,15nm,0.8s						
SN07	Snyder 07	3.77	205	IAmb_Lg		10 27 58.7	
	comp=Z,22nm,0.8s						
KSCO	Kaye Shedlock'	3.82	312	IAmb_Lg		10 28 01.8	
	comp=Z,22nm,0.8s						
FW07	Weatherford	3.93	165	IAmb_Lg		10 28 06.3	
	comp=Z,12nm,1.0s						
SN05	Snyder 5	3.96	204	IAmb_Lg		10 28 06.7	
	comp=Z,29nm,1.1s						
MSTX	Muleshoe	4.02	232	IAmb_Lg		10 28 14.7	
	comp=Z,15nm,0.8s						
POST	Post	4.03	212	IAmb_Lg		10 28 14.4	
	comp=Z,26nm,0.9s						
HHAR	Hobbs	4.06	92	IAmb_Lg		10 28 09.3	
	comp=Z,16nm,0.8s						
FW13	Cleburne	4.35	163	IAmb_Lg		10 28 24.4	
	comp=Z,25nm,1.3s						
T25A	Trinidad	4.41	280	IAmb_Lg		10 28 22.9	
	comp=Z,16nm,0.8s						
TREL	Terrell	4.46	147	IAmb_Lg		10 28 28.8	
	comp=Z,25nm,0.8s						
Z38A	Mt. Pleasant	4.62	134	IAmb_Lg		10 28 28.7	
	comp=Z,19nm,0.8s						
WHTX	Lake Whitney,	4.69	164	IAmb_Lg		10 28 31.0	
	comp=Z,15nm,1.1s						
SGCY	Sterling City	4.93	202	IAmb_Lg		10 28 48.8	
	comp=Z,9.8nm,0.7s						
P38A	Dawn	5.29	53	IAmb_Lg		10 28 53.2	
	comp=Z,12nm,0.7s						
ODSA	Odessa	5.29	215	IAmb_Lg		10 28 42.9	
	comp=Z,8.8nm,0.8s						
SDCO	Great Sand Dun	5.36	285	IAmb_Lg		10 29 00.6	
	comp=Z,14nm,1.0s						
X40A	Basin Creek Fa	5.40	110	IAmb_Lg		10 28 58.4	
	comp=Z,8.9nm,0.7s						
Q24A	Divide	5.47	298	IAmb_Lg		10 28 53.8	
	comp=Z,11nm,0.7s						
WLAR	White Oak Lake	5.57	119	IAmb_Lg		10 29 05.8	
	comp=Z,15nm,1.1s						
UALR	University of	5.67	106	IAmb_Lg		10 29 08.5	
	comp=Z,13nm,1.0s						
435B	Jarrell	5.84	168	IAmb_Lg		10 29 07.0	
	comp=Z,18nm,0.9s						
MNHN	Monahans	6.05	212	IAmb_Lg		10 29 18.8	
	comp=Z,12nm,1.1s						
ISCO	Idaho Springs	6.17	304	IAmb_Lg		10 29 30.0	
	comp=Z,6.8nm,0.7s						
ANMO	Albuquerque	6.29	258	IAmb_Lg		10 29 29.4	
	comp=Z,3.2nm,0.8s						
LCAR	Lake Charles	6.33	92	IAmb_Lg		10 29 19.1	
	comp=Z,11nm,1.3s						
T42A	Van Buren	6.34	83	IAmb_Lg		10 29 28.3	
	comp=Z,6.5nm,0.9s						
CCM	Cathedral Cave	6.35	74	IAmb_Lg		10 29 20.6	
	comp=Z,9.1nm,0.8s						
PBMO	Poplar Bluff	6.87	85	IAmb_Lg		10 29 50.2	
	comp=Z,9.4nm,0.9s						
MNTX	Cornudas Mount	7.17	230	IAmb_Lg		10 29 50.0	
	comp=Z,10nm,1.1s						
ECSD	EROS Data Cent	7.43	13	IAmb_Lg		10 30 04.2	
	comp=Z,10nm,1.2s						
N41A	Harden Midland	7.60	54	IAmb_Lg		10 30 00.4	
	comp=Z,11nm,0.9s						
PV13	Radium Mtn., P	8.02	285	IAmb_Lg		10 30 19.9	
	comp=Z,5.1nm,1.1s						
PV03	Paradox Valley	8.05	285	IAmb_Lg		10 30 22.8	
	comp=Z,5.1nm,1.3s						
RSSD	Black Hills	8.52	335	IAmb_Lg		10 30 40.7	
	comp=Z,6.4nm,1.0s						

*HEL **20** 11:11:36.1±0.2, 68.°15N×33.°26E, h0^{km}, ML1.8, Explosion*
*UPP **20** 11:11:37.5±3.1, 68.°02N×33.°00E, h0^{km}, ML1.7*
*KOLA **20** 11:11:37.9, 68.°08N×33.°09E, h0^{km}, ML2.1, Error ellipse: s-maj=2.6km s-min=1.7km az=90.0, Olenegorsk City, Mines*
*IDC **20** 11:11:39.2±2.0, 68.°18N×32.°79E, h0^{km}, mbtmp3.0/3, ML1.9/2, Error ellipse: s-maj=24.0km s-min=14.0km az=60.0*

ISC 20 11:11:36.7±0.8**, 68.°09N**±0.°03×**33.°11E**±0.°03**, h0**^{km}**, n43, σ1.^{s}37**/66**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA0	Apatity Array	0.49	185	P	Pg	11 11 45.7	-0.3
APA0				S	Sg	11 11 53.0	+0.6
APA	Apatity	0.54	168	P	Pg	11 11 47.1	+0.1
APA				S	Sg	11 11 54.1	+0.2
LVZ	Lovozero	0.61	108	P	Pg	11 11 48.6	+0.2
LVZ				S	Sg	11 11 57.6	+1.3
LVZ	Lovozero	0.61	108	PG	Pb	11 11 50.0	-0.3
LVZ				SG	Sg	11 11 54.0	-2.4
TERR	Teriberka	1.33	32	P	Pg	11 12 01.8	-0.5
TERR				S	Sg	11 12 19.3	-0.2
VRF	Varrio	1.37	257	PG	Pg	11 12 01.9	-1.0
	baz=67						
VRF				MSG		11 12 19.4	
	comp=Z,13nm,0.2s						
VRF				SG	Sg	11 12 19.8	-0.7
KVDA	Kovda	1.41	184	P	Pn	11 12 02.5	-1.1
KVDA				S	Sg	11 12 20.9	-1.0
RAJF	Raja-Jooseppi	1.82	284	PG	Pn	11 12 09.8	+0.6
RAJF				SN	Sn	11 12 32.5	-0.5
OLKF	Oulanka, Finla	2.29	221	PB	Pn	11 12 16.7	+1.0
OLKF				MSG		11 12 46.3	
	comp=Z,2.8nm,0.2s						
OLKF				SG	Sb	11 12 48.2	+0.6
KU6	Riekki	2.43	213	PN	Pn	11 12 18.9	+1.3
KU6				MSG		11 12 50.2	
	comp=Z,2.1nm,0.2s						
KU6				SB	Sb	11 12 51.6	0.0
VADS	Vadso	2.44	328	P	Pn	11 12 18.4	+0.7
VADS				S	Sn	11 12 48.9	+0.7
VADS	Vadso	2.44	328	*e*P	Pn	11 12 18.3	+0.5
MSF	Maaselka	2.71	218	PN	Pn	11 12 23.4	+1.9
MSF				SB	Sb	11 13 00.4	+0.7
KEV	Kevo	2.77	310	*e*P	Pn	11 12 23.2	+1.0
KEV	Kevo	2.77	310	PB	Pn	11 12 23.4	+1.2
KEV				MSG		11 12 57.7	
	comp=Z,3.3nm,0.2s						
KEV				SG	Sb	11 13 00.5	-0.8
KU1	Kurvinen	2.90	211	PN	Pn	11 12 25.8	+1.8
KU2	Taivalkoski	3.07	221	PN	Pn	11 12 28.4	+2.0
ARA0	ARCESS Array S	3.12	301	PN	Pn	11 12 28.1	+1.1
ARA0				SG	Sb	11 13 12.2	+0.8
ARCES	ARCESS Array B	3.12	301	Pn	Pn	11 12 27.4	+0.3
	comp=Z,0.1nm,0.3s,baz=116,slow=14,SNR=16						
ARCES				Sn	Sn	11 13 05.4	+0.5
	comp=Z,0.1nm,0.3s,baz=113,slow=23,SNR=2.5						
ARCES				Lg	Lg	11 13 11.6	
	comp=Z,0.4nm,0.3s,baz=114,slow=25,SNR=6.0						
	comp=Z,0.3nm,0.2s						
ARCES	ARCESS Array B	3.12	301	P	Pn	11 12 27.6	+0.5
ARCES				S	Sn	11 13 05.7	+0.8
RNF	Rovaniemi	3.12	245	PN	Pn	11 12 27.9	+0.8
RNF				SN	Sn	11 13 06.0	+0.9
RANF	Ranua	3.24	233	PN	Pn	11 12 29.1	+0.4
HEF	Hetta	3.53	280	PN	Pn	11 12 33.1	+0.3
	baz=93						
HEF				SN	Sn	11 13 15.1	-0.1
KLF	Kolari	3.59	260	PN	Pn	11 12 33.3	-0.3
KTK1	Kautokeino	3.74	289	SB	Sn	11 13 24.5	+4.2
PAJU	Pajala	3.98	259	P	Pn	11 12 38.5	-0.4
PAJU	Pajala	3.98	259	PN	Pn	11 12 38.7	-0.2
PAJU				SN	Sn	11 13 27.5	+1.3
TOF	Tornio	3.98	244	PN	Pn	11 12 39.4	+0.5
TOF				SN	Sn	11 13 24.6	-1.6
LANU	Lannavaara	4.17	275	PN	Pn	11 12 41.9	+0.4
LANU				SG	Sb	11 13 46.1	+4.4
OUL	Oulu	4.17	227	PN	Pn	11 12 43.0	+1.5
MASU	Masugnsbyn	4.27	267	P	Pn	11 12 42.5	-0.4
KALU	Kalix	4.43	244	P	Pn	11 12 44.3	-0.8
KALU				S	Sn	11 13 34.9	-2.5
ERTU	Ertsjaerv	4.50	255	P	Pn	11 12 45.7	-0.3
ERTU	Ertsjaerv	4.50	255	PN	Pn	11 12 45.8	-0.3
ERTU				SN	Sn	11 13 37.7	-1.2
KIF	Kilpisjarvi	4.61	287	SG	Sb	11 13 56.1	+1.8
KUA	Kurravaara	4.80	274	P	Pn	11 12 49.4	-0.8
KUA				S	Sn	11 13 44.6	-1.7
KOVU	Salmi	4.84	278	P	Pn	11 12 50.4	-0.3
DUNU	Dundret	4.89	264	P	Pn	11 12 51.5	+0.1
RATU	Laukkuluspa	5.10	273	P	Pn	11 12 53.7	-0.6
I37NO	I37NO	5.40	287	I	I	11 42 50.0	
	baz=94,slow=316,SNR=2.4						
FAUS	Fauske	6.80	272	S	Sn	11 14 31.4	-4.2
FINES	FINESS Array B	7.31	208	Pn	Pn	11 13 25.3	+0.6
	comp=Z,0.1nm,0.3s,baz=27,slow=13,SNR=2.2						
	comp=Z,1.5nm,1.0s						
SPITS	Spitsbergen Ar	11.16	342	Pn	Pn	11 14 15.0	-2.2
	comp=Z,0.8nm,0.7s,baz=142,slow=16,SNR=0.7						

*IDC **20** 11:22:38.2±2.1, 30.°94S×177.°36W, h0^{km}, mb3.7/4, mbtmp3.7/4, MS3.2/3, Error ellipse: s-maj=55.8km s-min=40.3km az=31.0*

ISC 20 11:22:41.2±1.7**, 31.°4S**±0.°1×**177.°6W**±0.°2**, h10**^{km}**, n9, σ1.^{s}61**/7**, mb3.8**/4**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	8.15	211	Pn	Pn	11 24 38.7	-0.9
	0.4nm,0.3s,baz=147,slow=17,SNR=1.6						
URZ				Sn	Sn	11 26 11.3	-0.4
	1.2nm,0.3s,baz=47,slow=24,SNR=6.4						
MSVF	Nonsavu	14.14	343	LR	LR	11 29 15.6	
	comp=Z,56nm,19.8s,baz=175,slow=29						
DZM	Mont Dzumac	17.00	299	LR	LR	11 32 02.6	
	comp=Z,101nm,18.6s,baz=109,slow=33						
STKA	Stephens Creek	34.63	258	P	P	11 29 32.5	+1.8
	1.4nm,0.6s,baz=104,slow=4.2,SNR=3.2						
	1.4nm,0.6s						
ASAR	Alice Springs	43.43	268	P	P	11 30 44.6	+0.1
	0.8nm,0.8s,baz=105,slow=7.3,SNR=14						
	0.8nm,0.8s						
WRA	Warramunga Arr	44.50	273	P	P	11 30 52.0	-1.2
	0.5nm,0.4s,baz=111,slow=8.1,SNR=14						
	0.5nm,0.4s						
QSPA	South Pole Qui	58.75	180	P	P	11 32 40.4	+1.2
	0.7nm,0.8s,baz=315,slow=7.1,SNR=1.7						
	0.7nm,0.8s						
TXAR	Lajitas Array	92.60	57	LR	LR	12 08 04.1	
	comp=Z,12nm,19.5s,baz=198,slow=30						
FINES	FINESS Array B	146.17	340	PKPbc	PKPdf	11 42 18.1	-1.8
	0.7nm,0.6s,baz=27,slow=2.1,SNR=6.3						

*DNK **20** 11:22:47.7±3.0, 71.°13N×53.°67W, h11^{km}±7^{km}, ML3.1*
*OTT **20** 11:22:47.9±0.1, 71.°13N×53.°53W, h18^{km}, ML3.9/7, Western Greenland. 558km east from Clyde River, Nu Eastern Arctic Background Seismic Zone.*

ISC 20 11:22:46.8±1.0**, 71.°14N**±0.°04×**53.°65W**±0.°05**, h30**^{km}±10^{km}**, n28, σ2.^{s}27**/44**, Western Kalaallit Nunaat**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NUUG	Nuugaatsiaq	0.43	20	*i* P	Pb	11 22 55.2	-0.9
NUUG				*i* S	Sb	11 23 00.7	-1.7
NUUG				IAML		11 23 09.0	
	comp=Z,551nm,0.2s						
UMMG	Uummannaq	0.68	132	*i* P	Pb	11 23 00.6	+0.4
UMMG				*i* S	Sb	11 23 09.3	0.0
UMMG				IAML		11 23 13.9	
	comp=Z,1μm,0.2s						
UPNV	Upernavik	1.83	336	*i* P	Pn	11 23 19.1	+3.0
UPNV				*i* S	Sn	11 23 42.5	+4.5
UPNV				IAML		11 23 48.2	
	comp=Z,451nm,0.2s						
ILULI	Ilulissat	2.12	155	PN	Pn	11 23 22.2	+2.2
ILULI				SN	Sn	11 23 47.7	+2.5
ILULI				Trac		11 23 54.0	
	comp=Z,223nm,0.2s						
ILULI	Ilulissat	2.12	155	*i* P	Pn	11 23 22.5	+2.5
ILULI				*i* S	Sn	11 23 48.2	+3.0
ILULI				IAML		11 23 57.0	
	comp=Z,254nm,0.2s						
KULLO	Kullorsuaq	3.62	345	PN	Pn	11 23 42.8	+2.2
KULLO				SN	Sn	11 24 23.9	+1.7
KULLO				Trac		11 24 38.9	
	comp=Z,173nm,0.3s						
KULLO	Kullorsuaq	3.62	345	*i* P	Pn	11 23 42.8	+2.2
KULLO				*i* S	Sn	11 24 23.4	+1.2
KULLO				IAML		11 24 41.0	
	comp=Z,92nm,0.3s						
SFJD	Kangerlussuaq	4.30	164	PN	Pn	11 23 51.5	+1.5
SFJD				SN	Sn	11 24 38.8	-0.2
SFJD	Kangerlussuaq	4.30	164	*i* P	Pn	11 23 51.3	+1.3
SFJD				*i* S	Sn	11 24 38.9	-0.1
SFJD				IAML		11 25 02.1	
	comp=Z,40nm,0.2s						
SUMG	Summit	4.96	66	IAML		11 25 19.3	
	comp=Z,126nm,0.6s						
CLRN	Clyde River	4.97	269	PN	Pn	11 24 00.9	+1.8
CLRN				SN	Sn	11 24 56.1	+0.6
CLRN				Trac		11 24 57.8	
	comp=Z,62nm,0.3s						
ICESG	Greenland Ices	5.20	107	*i* P	Pn	11 24 05.2	+2.6
ICESG				*i* S	Sn	11 25 00.9	-0.7
ICESG				IAML		11 25 30.9	
	comp=Z,156nm,0.7s						
NEEM	North Greenlan	6.38	5	*i* P	Pn	11 24 20.8	+2.0
NEEM				*i* S	Sn	11 25 28.3	-2.3
NEEM				IAML		11 26 14.1	
	comp=Z,59nm,0.9s						
NUUK	Nuuk	7.03	173	*e*P	Pn	11 24 27.8	+0.5
NUUK				*i* S	Sn	11 25 43.5	-2.5
NUUK				IAML		11 26 32.3	
	comp=Z,42nm,0.7s						
POIN	Pond Inlet	7.70	293	PN	Pn	11 24 38.7	+2.2
POIN				SN	Sn	11 26 01.2	-1.2
POIN				Trac		11 26 04.3	
	comp=Z,9.3nm,0.3s						
ISOG	Isortoq, Green	7.79	129	*i* P	Pn	11 24 22.1	-16
ISOG				*i* S	Sn	11 26 01.6	-3.0
ISOG				IAML		11 26 57.3	

	comp=Z,62nm,0.7s						
ANGG	**Ammassalik, Gr**	**8.08**	**125**	*i* P	Pn	11 24 34.7	-7.1
ANGG				IAML		11 27 03.7	
	comp=Z,56nm,0.9s						
SOEG	**Soedalen**	**8.27**	**100**	*i* P	**Pn**	**11 24 45.4**	**+1.1**
SOEG				*i* S	**Sn**	**11 26 12.0**	**-4.5**
SOEG				IAML		11 27 06.5	
	comp=Z,123nm,0.5s						
FRB	**Frobisher Bay**	**9.34**	**225**	SN	**Sn**	**11 26 39.7**	**-3.0**
ILON	**Igloolik, Nuna**	**9.64**	**273**	PN	**Pn**	**11 25 03.5**	**+0.3**
ILON				SN	**Sn**	**11 26 46.4**	**-3.9**
ILON				Trac		11 26 49.8	
	comp=Z,0.5nm,0.1s						
IVI	**Ivigtut**	**10.21**	**165**	*e*P	**Pn**	**11 25 12.8**	**+1.8**
IVI				*e*S	Sn	11 26 57.3	-6.8
IVI				IAML		11 28 20.2	
	comp=Z,20nm,0.9s						
DBG	**Daneborg**	**10.33**	**57**	*i* P	**Pn**	**11 25 13.2**	**+0.7**
DBG				*e*S	Sn	11 26 58.9	-8.0
DBG				IAML		11 28 13.7	
	comp=Z,16nm,0.8s						
SCO	**Scoresbysund**	**10.38**	**78**	*i* P	**Pn**	**11 25 15.9**	**+2.6**
SCO				*i* S	Sn	11 26 58.9	-9.5
SCO				IAML		11 28 09.0	
	comp=Z,21nm,0.9s						
NRS	**Narsarsuaq**	**10.54**	**158**	*i* P	**Pn**	**11 25 15.2**	**-0.3**
NRS				*i* S	Sn	11 27 03.9	-8.4
NRS				IAML		11 28 23.0	
	comp=Z,23nm,0.8s						
DAG	**Danmarks Havn**	**11.02**	**44**	*i* P	**Pn**	**11 25 22.0**	**+0.1**
DAG				*i* P	**Pn**	**11 25 22.0**	**+0.1**
DAG				*i* S	Sn	11 27 14.8	-9.1
DAG				IAML		11 28 45.2	
	comp=Z,18nm,0.7s						
EUNU	**Eureka**	**11.83**	**333**	PN	**Pn**	**11 25 33.8**	**+0.8**
EUNU				SN	Sn	11 27 38.1	-5.6
EUNU				Trac		11 27 41.2	
	comp=Z,4.9nm,0.4s						
RES	**Resolute Bay**	**12.42**	**305**	PN	**Pn**	**11 25 42.9**	**+1.9**
RES				SN	**Sn**	**11 27 53.2**	**-4.8**
RES				Trac		11 28 05.3	
	comp=Z,6.6nm,0.8s						
BLKN	**Baker Lake**	**17.08**	**268**	PN	**Pn**	**11 26 44.8**	**+1.9**
BLKN				Trac		11 29 51.7	
	comp=Z,0.2nm,0.0s						

*NEIC **20** 11:23:03.6±0.3, 36°.289N±0°.009×97°.51W±0°.01, h7^{km}±4^{km}, Error ellipse: s-maj=1.3km s-min=1.2km az=142.0*

NEIC 20 11:23:03.5±0.2**, 36°.283N**±0°.009×**97°.510W**±0°.007, **h5**^{km}±2^{km}**, mb_Lg2.8**/97**, ML3.0**/58**, ML3.0**/40**, Error ellipse: s-maj=1.3km s-min=0.8km az=183.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	**0.44**	**300**	Pg	Pg	11 23 12.6	+0.5
CROK					Sg	11 23 18.5	+0.7
CROK				IAML		11 23 18.8	
	comp=E,2µm,0.3s						
OK029	**Liberty Lake**	**0.49**	**175**		Pg	11 23 13.3	+0.4
OK029					Sg	11 23 20.2	+0.9
BLOK	**Blackwell**	**0.53**	**26**		Pg	11 23 14.2	+0.4
BLOK					Sg	11 23 21.5	+0.8
OK051	**E0350 and S346**	**0.59**	**68**		Pg	11 23 15.1	+0.3
OK051					Sg	11 23 22.8	+0.4
OK051				IAML		11 23 25.3	
	comp=E,695nm,0.2s						
OK051				IAML		11 23 29.5	
	comp=E,938nm,0.2s						
GC02	**Grant County #**	**0.63**	**334**		Pg	11 23 15.8	+0.1
ADOK	**Arcadia Dam**	**0.64**	**170**		Pg	11 23 16.1	+0.3
OK052	**Battle Ridge R**	**0.64**	**117**		Pg	11 23 16.2	+0.4
OK052				IAML		11 23 25.3	
	comp=E,911nm,0.4s						
QUOK	**Quay**	**0.66**	**100**		Pg	11 23 16.5	+0.3
QUOK					Sg	11 23 25.2	+0.5
QUOK				IAML		11 23 25.7	
	comp=N,752nm,0.4s						
KAN13	**South Haven SW**	**0.73**	**2**		Pg	11 23 17.7	+0.2
KAN13					Sg	11 23 27.6	+0.6
KAN14	**Manchester OK**	**0.76**	**332**		Pg	11 23 18.3	0.0
KAN14					Sg	11 23 28.6	+0.4
KAN14				IAML		11 23 29.2	
	comp=E,1µm,0.1s						
KAN14				IAML		11 23 31.8	
	comp=N,1µm,0.2s						
KAN09	**Caldwell North**	**0.85**	**354**		Pg	11 23 19.9	-0.1
KAN09					Sg	11 23 31.3	+0.2
KAN05	**Bluff City Nor**	**0.87**	**341**		Pg	11 23 20.2	-0.1
KAN05					Sg	11 23 32.1	+0.4
KAN05				IAML		11 23 36.4	
	comp=N,965nm,0.2s						
KAN05				IAML		11 23 37.0	
	comp=E,700nm,0.2s						
OKCSW	**OKLAHOMA CITY**	**0.88**	**176**	IAML		11 23 37.4	
	comp=E,480nm,0.6s						
OKCSW				IAML		11 23 40.0	
	comp=N,729nm,0.5s						
KAN01	**Argonia South**	**0.89**	**347**		Pg	11 23 20.5	-0.1
KAN01					Sg	11 23 32.6	+0.3
KAN01				IAML		11 23 32.7	
	comp=N,459nm,0.3s						
KAN01				IAML		11 23 34.1	
	comp=E,449nm,0.1s						
DEOK	**Depew**	**0.93**	**118**		Pg	11 23 21.4	0.0
DEOK					Sg	11 23 33.9	+0.5
DEOK				IAML		11 23 34.3	
	comp=N,438nm,0.5s						
KAN10	**Anthony SW Sta**	**0.96**	**331**		Pg	11 23 21.7	-0.3
KAN10					Sg	11 23 34.6	+0.1
KAN08	**Anthony NE Sta**	**1.01**	**339**	IAML		11 23 37.0	
	comp=N,393nm,0.1s						
KAN08				IAML		11 23 45.5	
	comp=E,324nm,0.1s						
OK038	**West end E0370**	**1.01**	**281**		Pg	11 23 22.7	-0.3
OK038					Sg	11 23 36.5	+0.3
T35A	**Sooner Cattle**	**1.02**	**52**	IAML		11 23 37.5	
	comp=E,280nm,0.3s						
T35A				IAML		11 23 37.5	
	comp=E,426nm,0.2s						
FNO	**Franklin**	**1.03**	**175**		Pg	11 23 23.0	-0.3
FNO					Sb	11 23 37.2	-0.4
CSTR	**Hydro, Custer**	**1.15**	**237**		Pg	11 23 25.0	-0.6
CSTR					Sb	11 23 40.9	-0.1
ELIS	**Ellis County**	**1.56**	**263**		Pn	11 23 32.2	+0.3
X34A	**Smith Ranch, M**	**1.70**	**189**		Pb	11 23 35.0	-0.2
WMOK	**Wichita Mounta**	**1.86**	**214**		Pn	11 23 36.7	+0.7
RLO	**Rose Lookout**	**2.02**	**93**		Pn	11 23 39.2	+1.0
R32A	**Long Quarter,**	**2.34**	**336**		Pn	11 23 44.4	+1.7
SMWD	**Samnorwood**	**2.52**	**243**		Pn	11 23 46.0	+0.9
WTFS	**Witchita Falls**	**2.63**	**198**		Pn	11 23 47.8	+1.2
HHAR	**Hobbs**	**2.88**	**89**		Pb	11 23 53.1	-2.4
MIAR	**Mount Ida**	**3.65**	**117**		Pn	11 24 01.7	+1.1
MIAR				IAmb_Lg		11 25 08.5	
	comp=Z,29nm,0.8s						
AMTX	**Amarillo**	**3.67**	**249**	IAmb_Lg		11 25 00.1	
	comp=Z,29nm,0.8s						
ABTX	**Abilene, Hawle**	**4.05**	**206**	IAmb_Lg		11 25 22.1	
	comp=Z,20nm,0.9s						
X40A	**Basin Creek Fa**	**4.22**	**114**	IAmb_Lg		11 25 20.9	
	comp=Z,30nm,0.8s						
RTBA	**Rita Blanca**	**4.22**	**274**		Pn	11 24 09.2	+0.6
SN07	**Snyder 07**	**4.23**	**222**	IAmb_Lg		11 25 20.0	
	comp=Z,30nm,0.8s						
MGMO	**Mountain Grove**	**4.30**	**77**	IAmb_Lg		11 25 20.6	
	comp=Z,19nm,0.7s						
WHAR	**Wooly Hollow**	**4.36**	**102**	IAmb_Lg		11 25 26.0	
	comp=Z,31nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.38**	**94**	IAmb_Lg		11 25 29.2	
	comp=Z,18nm,0.8s						
SN05	**Snyder 5**	**4.39**	**220**	IAmb_Lg		11 25 26.8	
	comp=Z,27nm,0.9s						
WLAR	**White Oak Lake**	**4.44**	**124**	IAmb_Lg		11 25 33.5	
	comp=Z,25nm,0.8s						
UALR	**University of**	**4.47**	**108**	IAmb_Lg		11 25 36.5	
	comp=Z,23nm,0.8s						
P38A	**Dawn**	**4.58**	**42**	IAmb_Lg		11 25 37.5	
	comp=Z,21nm,0.7s						
POST	**Post**	**4.59**	**227**	IAmb_Lg		11 25 40.0	
	comp=Z,23nm,0.7s						
R40A	**Maddies Statio**	**4.63**	**63**		Pn	11 24 14.5	+0.4
KSCO	**Kaye Shedlock'**	**4.89**	**305**	IAmb_Lg		11 25 47.5	
	comp=Z,19nm,0.8s						
Z41A	**Richland Creek**	**4.91**	**127**	IAmb_Lg		11 25 45.7	
	comp=Z,26nm,0.8s						
NATX	**Nacogdoches**	**5.09**	**152**	IAmb_Lg		11 25 57.1	
	comp=Z,15nm,0.9s						
BRDY	**Brady**	**5.14**	**194**	IAmb_Lg		11 25 55.0	
	comp=Z,14nm,0.9s						
BGNE	**Belgrade**	**5.14**	**355**	IAmb_Lg		11 25 58.1	
	comp=Z,25nm,0.8s						
LCAR	**Lake Charles**	**5.15**	**91**	IAmb_Lg		11 25 44.6	
	comp=Z,19nm,1.0s						
T42A	**Van Buren**	**5.21**	**80**	IAmb_Lg		11 25 53.8	
	comp=Z,14nm,0.7s						
SGCY	**Sterling City**	**5.29**	**216**	IAmb_Lg		11 26 04.2	
	comp=Z,24nm,0.7s						
CCM	**Cathedral Cave**	**5.31**	**69**	IAmb_Lg		11 25 52.0	
	comp=Z,19nm,0.7s						
P40A	**Paris**	**5.40**	**51**	IAmb_Lg		11 25 58.5	
	comp=Z,21nm,0.8s						
T25A	**Trinidad**	**5.61**	**281**	IAmb_Lg		11 26 09.8	
	comp=Z,24nm,0.9s						
PBMO	**Poplar Bluff**	**5.72**	**83**	IAmb_Lg		11 26 14.4	
	comp=Z,14nm,0.8s						
FVM	**French Village**	**5.91**	**71**	IAmb_Lg		11 26 15.1	
	comp=Z,13nm,0.8s						
OZNA	**Ozona**	**6.14**	**210**	IAmb_Lg		11 26 31.2	
	comp=Z,15nm,0.8s						
CGM3	**Cape Girardeau**	**6.38**	**79**	IAmb_Lg		11 26 23.0	
	comp=Z,20nm,1.1s						
MLDN	**Muldoon**	**6.49**	**177**	IAmb_Lg		11 26 48.7	
	comp=Z,12nm,0.8s						
SDCO	**Great Sand Dun**	**6.56**	**285**	IAmb_Lg		11 26 39.0	
	comp=Z,11nm,0.8s						
K30B	**Basset**	**6.59**	**346**	IAmb_Lg		11 26 46.2	
	comp=Z,20nm,0.9s						
MNHN	**Monahans**	**6.59**	**223**	IAmb_Lg		11 26 40.0	
	comp=Z,11nm,0.8s						
S44A	**Carbondale**	**6.76**	**76**	IAmb_Lg		11 26 37.5	
	comp=Z,16nm,0.8s						
SIUC	**Southern Illin**	**6.79**	**75**	IAmb_Lg		11 26 39.2	
	comp=Z,17nm,0.9s						
HNDO	**Hondo**	**6.90**	**193**	IAmb_Lg		11 26 45.9	
	comp=Z,16nm,0.8s						
ISCO	**Idaho Springs**	**7.29**	**301**	IAmb_Lg		11 27 00.9	
	comp=Z,13nm,0.9s						
DRIO	**Del Rio**	**7.32**	**202**	IAmb_Lg		11 26 55.1	
	comp=Z,9.5nm,0.7s						
SAND	**Sanderson**	**7.40**	**213**	IAmb_Lg		11 27 00.8	
	comp=Z,11nm,0.7s						
ANMO	**Albuquerque**	**7.41**	**262**	IAmb_Lg		11 27 07.2	
	comp=Z,2.9nm,0.8s						
ANMO	**Albuquerque**	**7.41**	**262**	IAmb_Lg		11 27 08.9	
	comp=Z,2.8nm,0.8s						
PLAL	**Pickwick Lake**	**7.79**	**97**	IAmb_Lg		11 27 19.5	
	comp=Z,6.7nm,0.8s						
ALPN	**Alpine**	**7.81**	**223**	IAmb_Lg		11 27 26.3	
	comp=Z,7.3nm,0.9s						
833A	**Chaparral WMA,**	**8.10**	**192**	IAmb_Lg		11 27 36.1	
	comp=Z,9.5nm,1.0s						
I40A	**Norwalk**	**9.25**	**33**	IAmb_Lg		11 27 54.4	
	comp=Z,7.4nm,0.8s						
K22A	**Casper**	**9.43**	**315**	IAmb_Lg		11 28 19.2	
	comp=Z,9.4nm,1.0s						
SPMN	**Marine on St.**	**9.62**	**20**	IAmb_Lg		11 28 11.9	
	comp=Z,6.9nm,0.9s						

*NNC **20** 11:47:26.8±1.3, 43°.70N×69°.73E, h0^{km}, mb3.6, mpv3.1, Error ellipse: s-maj=7.1km s-min=4.5km az=146.0, Suspected Mining explosion.*

*SOME **20** 11:47:26.4, 43°.67N×69°.70E*

*KRNET **20** 11:47:27.2±0.1, 43°.55N×69°.58E, mb2.9*

ISC 20 11:47:26.6±1.7**, 43°.65N**±0°.05×**69°.52E**±0°.08**, h0**^{km}**, n16,** σ**1**^{s}**36**/27**, 13C-6D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRLS	**Borolday**	**0.67**	**160**	P	**Pn**	**11 47 43.6**	**+0.3**
	3.8nm,0.4s						
BRLS				S	**Sn**	**11 47 57.1**	**+2.6**
	26nm,0.5s						
KK31	**Karatay Array**	**0.91**	**127**	⇑P	**Pg**	**11 47 42.7**	**-1.3**
	3.0nm,0.5s,baz=319,slow=17,SNR=35						
KK31				S	**Sg**	**11 47 54.2**	**-1.5**
	30nm,0.5s,baz=318,slow=32,SNR=65						
KKAR	**Karatay Array**	**0.91**	**127**	⇑*e*P	**Pg**	**11 47 42.8**	**-1.2**
KKAR				⇑*e*S	**Sg**	**11 47 54.4**	**-1.3**
IUG	**Iuzhnay**	**1.55**	**166**	P	**Pb**	**11 47 55.6**	**-0.6**
	27nm,0.4s						
IUG				S	**Sg**	**11 48 17.4**	**+1.0**
	94nm,0.5s						
TRKS	**Terek-Say**	**2.44**	**150**	⇑*e*P	**Pb**	**11 48 09.9**	**-1.5**
TRKS				⇑*e*S	**Sb**	**11 48 40.8**	**-1.2**
MNAS	**Manas**	**2.48**	**117**	⇑*e*P	**Pn**	**11 48 09.9**	**+1.6**
MNAS				⇑*e*S	**Sn**	**11 48 40.8**	**+1.4**
ARK	**Arkit**	**2.58**	**135**	⇑*e*P	**Pn**	**11 48 11.0**	**+1.2**
ARK				⇑*e*S	**Sn**	**11 48 43.1**	**+1.2**
MRKS	**Merke**	**2.86**	**107**	Pg	**Pb**	**11 48 19.0**	**+0.5**
	2.3nm,0.3s						
MRKS				Lg	Lg	11 48 57.0	
	18nm,0.4s						
AML	**Almayashu**	**3.42**	**115**	⇑*i*P	**Pn**	**11 48 23.1**	**+1.5**
AML				⇑*e*S	**Sn**	**11 49 04.5**	**+1.5**
ARSB	**Arslanbob**	**3.46**	**131**	⇑*e*P	**Pn**	**11 48 23.2**	**+1.4**
ARSB				⇑*e*S	**Sn**	**11 49 03.9**	**+0.3**
BTLS	**Baital**	**3.53**	**65**	Pg	**Pg**	**11 48 32.8**	**-1.4**
	16nm,0.4s						
BTLS				Lg	Lg	11 49 21.3	
	4.8nm,0.5s						
AAK	**Ala-Archa**	**3.78**	**104**	Pg	**Pb**	**11 48 33.5**	**-0.7**
	1.9nm,0.5s						
AAK				Lg	Lg	11 49 23.1	
	0.6nm,0.6s						
ARLS	**Aral**	**3.96**	**115**	⇓*e*P	**Pn**	**11 48 30.6**	**+1.8**
ARLS				⇓*e*S	**Sn**	**11 49 16.7**	**+0.6**
TKM2	**Tokmak 2**	**4.50**	**97**	⇓Pg	**Pb**	**11 48 46.3**	**-0.2**
	2.6nm,0.6s						
TKM2				⇓Lg	Lg	11 49 44.3	
	3.5nm,0.7s						
BOOM	**Boomskoye usch**	**4.84**	**102**	⇓*e*P	**Pn**	**11 48 43.0**	**+2.1**
BOOM				⇓*e*S	**Sn**	**11 49 38.4**	**+0.6**
OTUK	**Ortayu**	**4.99**	**22**	Pg	**Pn**	**11 48 43.4**	**+0.6**
OTUK				Lg	Lg	11 49 39.0	

IDC 20 12:10:55.5±1.9**, 7°.27S**×**129°.80E, h0**^{km}**, mb3.5**/2**, mbtmp3.6**/5**, ML3.6**/3**, Error ellipse: s-maj=71.0km s-min=23.3km az=80.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.50**	**200**	Pn	Pn	12 13 42.8	+1.6
	0.2nm,0.3s,baz=18,slow=13,SNR=9.1						
FITZ				Sn	Sn	12 15 50.8	+0.3
	1.2nm,0.3s,baz=191,slow=20,SNR=8.5						
	3.0nm,1.0s						
WRA	**Warramunga Arr**	**13.35**	**161**	Pn	Pn	12 14 06.4	0.0
	0.4nm,0.3s,baz=339,slow=14,SNR=11						
WRA				Sn	Sn	12 16 35.1	-0.5
	0.5nm,0.3s,baz=338,slow=23,SNR=7.6						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**16.77**	**167**	Pn	Pn	12 14 51.5	-0.6
	0.3nm,0.3s,baz=344,slow=9.6,SNR=18						
	1.1nm,0.5s						
MKAR	**Makanchi Array**	**68.34**	**327**	P	P	12 21 57.9	-0.9
	0.1nm,0.4s,baz=109,slow=9.9,SNR=1.9						
	0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**72.63**	**329**	P	P	12 22 25.7	+0.8
	0.3nm,0.6s,baz=126,slow=5.6,SNR=2.4						
	0.3nm,0.6s						

KOLA 20 12:12:22.1, 67°.66N×33°.74E, h0^{km}**, ML1.4, Error ellipse: s-maj=2.8km s-min=1.5km az=140.0, Khibiny, mines Kirovsk, Yukspor, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APA	**Apatity**	**0.16**	**235**	P	Pg	12 12 25.0	-0.2
APA0	**Apatity Array**	**0.29**	**260**	P	Pg	12 12 27.3	-0.4
APA0				S	Sg	12 12 31.1	-0.3
APA0	**Apatity Array**	**0.29**	**260**	S	Sb	12 12 35.5	-0.1
LVZ	**Lovozero**	**0.42**	**55**	P	Pg	12 12 29.7	-0.5
LVZ				S	Sg	12 12 35.6	0.0
KVDA	**Kovda**	**1.03**	**200**	P	Pg	12 12 40.0	-1.8
KVDA				S	Sg	12 12 54.2	-1.0
TERR	**Teriberka**	**1.63**	**17**	S	Sn	12 13 12.3	-1.4
VADS	**Vadso**	**2.94**	**329**	S	Sn	12 13 44.9	-1.0
ARCES	**ARCESS Array B**	**3.56**	**306**	S	Sn	12 13 59.6	-1.6

*HVO **20** 12:33:31.4±0.7, 20°.77N±0°.06×156°.06W±0°.05, h23^{km}±7^{km}, Error ellipse: s-maj=10.6km s-min=3.2km az=219.0*

NEIC 20 12:33:28.8±1.4**, 20°.79N**±0°.07×**156°.04W**±0°.07, **h35**^{km}±10^{km}**, ML3.0**/49**, ML3.0**/15(HVO)**, Error ellipse: s-maj=13.1km s-min=3.7km az=221.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HLK	**Haleakala**	**0.20**	**261**		Pn	12 33 36.2	-0.6
HLK					Sn	12 33 40.1	-3.1
HLK	**Haleakala**	**0.20**	**261**	IAML		12 33 40.4	
	comp=N,742nm,0.4s						
HLK				IAML		12 33 40.4	
	comp=E,674nm,0.2s						
KHLH	**Kahului Airpor**	**0.38**	**287**		Pn	12 33 38.8	+1.1
KHLH					Sn	12 33 44.4	+0.3
KHLH	**Kahului Airpor**	**0.38**	**287**	IAML		12 33 45.0	
	comp=N,2µm,0.2s						
KHLH				IAML		12 33 45.1	
	comp=E,2µm,0.5s						
MHA	**Mahukona**	**0.61**	**168**		Pn	12 33 41.7	+0.6
HUH	**Hualalai**	**1.12**	**170**		Pn	12 33 48.4	+0.2
HUH					Sn	12 34 01.3	-1.2
HUH	**Hualalai**	**1.12**	**170**	IAML		12 34 06.8	
	comp=N,375nm,0.4s						
KKH	**Kailua Kona**	**1.13**	**179**		Pn	12 33 48.5	+0.4
KKH					Sn	12 34 00.7	-1.7
POHA	**Pohakuloa**	**1.13**	**155**		Pn	12 33 48.2	-0.2
POHA					Sn	12 34 00.3	-2.5
HMH	**Humu‘ula Sheep**	**1.29**	**156**		Pn	12 33 50.9	+0.2
HMH					Sn	12 34 05.0	-1.9
HMH	**Humu‘ula Sheep**	**1.29**	**156**	IAML		12 34 06.5	
	comp=E,218nm,3.0s						
HMH				IAML		12 34 27.1	
	comp=N,191nm,3.1s						
ALEP	**Alea Permanent**	**1.30**	**163**		Pn	12 33 51.1	+0.3
ALEP					Sn	12 34 05.2	-1.8
CPH	**Captain Cook**	**1.30**	**175**		Pn	12 33 50.5	0.0
MWH	**Mokuaweoweo**	**1.36**	**162**		Pn	12 33 51.6	-0.2
MWH					Sn	12 34 06.9	-2.0
MWH	**Mokuaweoweo**	**1.36**	**162**	IAML		12 34 15.4	
	comp=N,224nm,1.4s						
MLH	**Mauna Loa**	**1.43**	**154**		Pn	12 33 52.6	+0.2
MLH					Sn	12 34 07.8	-2.3
MLH	**Mauna Loa**	**1.43**	**154**	IAML		12 34 40.1	
	comp=E,157nm,3.8s						
MLH				IAML		12 34 45.7	
	comp=N,195nm,3.1s						
RSD	**Rainshed**	**1.50**	**151**		Pn	12 33 53.7	+0.3
RSD					Sn	12 34 09.6	-2.2
AIN	**Ainahou**	**1.51**	**159**		Pn	12 33 53.8	+0.2
AIN					Sn	12 34 09.8	-2.3
AIN	**Ainahou**	**1.51**	**159**	IAML		12 34 11.7	
	comp=E,200nm,0.3s						
UWE	**Uwekahuna**	**1.53**	**153**		Pn	12 33 53.8	0.0
UWE					Sn	12 34 10.3	-2.3
UWB	**Uwekahuna Bluf**	**1.54**	**152**		Pn	12 33 53.8	-0.1
UWB					Sn	12 34 10.6	-2.0
SBLHI	**Steaming Bluff**	**1.54**	**152**		Pn	12 33 53.8	-0.1
SBLHI					Sn	12 34 10.2	-2.5
OBL	**Observatory Le**	**1.54**	**152**		Pn	12 33 53.9	0.0
OBL					Sn	12 34 10.7	-2.0
WRMHI	**West Rim**	**1.54**	**153**		Pn	12 33 53.9	-0.1
WRMHI					Sn	12 34 10.6	-2.2
HATHI	**Halema‘uma‘u T**	**1.54**	**152**		Pn	12 33 53.9	-0.1
HATHI					Sn	12 34 09.9	-2.9
HATHI	**Halema‘uma‘u T**	**1.54**	**152**	IAML		12 34 35.8	
	comp=N,244nm,3.5s						
HATHI				IAML		12 34 39.4	
	comp=E,189nm,3.3s						
BYL	**Byron's Ledge**	**1.55**	**152**		Pn	12 33 54.1	0.0
BYL					Sn	12 34 10.3	-2.7
BYL	**Byron's Ledge**	**1.55**	**152**	IAML		12 34 47.1	
	comp=E,228nm,4.2s						
SDHHI	**Sand Hill**	**1.56**	**153**		Pn	12 33 54.3	+0.1
SDHHI					Sn	12 34 11.9	-1.3
RIM	**Rim**	**1.56**	**152**		Pn	12 33 54.4	+0.1
RIM					Sn	12 34 11.9	-1.4
KKO	**Keanakako'i**	**1.56**	**152**		Pn	12 33 54.3	0.0
KKO					Sn	12 34 11.2	-2.2
KHU	**Kahuku**	**1.59**	**165**		Pn	12 33 54.4	-0.3
KHU					Sn	12 34 11.1	-3.0
KHU	**Kahuku**	**1.59**	**165**	IAML		12 34 17.6	
	comp=N,204nm,2.3s						
KHU				IAML		12 34 22.3	
	comp=E,232nm,2.6s						
PUH	**Pauahi**	**1.61**	**151**		Pn	12 33 54.7	-0.1
PUH					Sn	12 34 11.9	-2.5
PUH	**Pauahi**	**1.61**	**151**	IAML		12 34 33.7	
	comp=N,222nm,2.5s						
WMR	**Waimanalo Ridg**	**1.62**	**289**		Pn	12 33 55.2	+0.2
WMR					Sn	12 34 13.0	-1.7
KNHH	**Kane Nui o Ham**	**1.62**	**150**		Pn	12 33 55.2	+0.1
HLP	**Hilina Pali**	**1.64**	**155**		Pn	12 33 55.4	+0.2
HLP					Sn	12 34 12.4	-2.7
STCH	**Steam Cracks**	**1.64**	**148**		Pn	12 33 55.2	-0.1
STCH					Sn	12 34 12.0	-3.2
STCH	**Steam Cracks**	**1.64**	**148**	IAML		12 34 14.1	
	comp=E,137nm,0.1s						
STCH				IAML		12 34 42.0	
	comp=N,141nm,3.4s						
NPOC	**North of Pu‘u**	**1.64**	**148**		Pn	12 33 55.3	0.0
NPOC					Sn	12 34 12.1	-3.1
JCUZ	**Jacuzzi**	**1.65**	**148**		Pn	12 33 55.6	+0.2
JCUZ					Sn	12 34 13.8	-1.6
HTC	**Hot Caves**	**1.66**	**159**		Pn	12 33 55.5	+0.1
JOKA	**Jonika Flow**	**1.66**	**144**		Pn	12 33 55.6	+0.1
JOKA					Sn	12 34 14.0	-1.6
JOKA	**Jonika Flow**	**1.66**	**144**	IAML		12 34 32.7	
	comp=N,206nm,2.3s						
JOKA				IAML		12 34 57.7	
	comp=E,133nm,3.7s						
DHH	**Diamond Head**	**1.71**	**286**		Pn	12 33 56.5	+0.3
DHH					Sn	12 34 15.7	-1.2
HON	**Honolulu**	**1.91**	**287**		Pn	12 33 59.6	+0.7
HON					Sn	12 34 20.3	-1.4
KIP	**Kipapa**	**1.95**	**289**		Pn	12 33 59.7	+0.2
KIP					Sn	12 34 20.8	-1.9
KIP	**Kipapa**	**1.95**	**289**	IAML		12 35 16.2	
	comp=E,102nm,4.0s						
OPA	**Opana**	**2.04**	**296**		Pn	12 34 00.8	+0.1
OPA					Sn	12 34 23.1	-2.0
KEKH	**Kekaha**	**3.62**	**290**		Pn	12 34 23.0	+0.5
KEKH					Sn	12 35 00.8	-3.1

TRN 20 12:36:44.3, 17°.02N×62°.37W, h16^{km}**, MD3.7, South-east of Nevis., Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBFL	**Flemmings, Mon**	**0.30**	**150**	*e*P	Pn	12 36 52.8	-1.3
MBFL				*e*S	Sb	12 36 57.7	+1.6
SKOC	**St. Kitts, UWI**	**0.44**	**309**	*e*P	Pb	12 36 54.5	+0.8
SKI	**Saint Kitts**	**0.47**	**312**	*e*P	Pn	12 36 55.8	-0.7
ANBD	**Bethesda, Anti**	**0.58**	**87**	*e*P	Pn	12 36 58.4	+0.6
ANBD				*e*S	Sn	12 37 07.4	+0.4
ANWB	**Willy Bob**	**0.86**	**41**	*e*P	Pn	12 37 03.4	+1.8
ANWB				*e*S	Sn	12 37 17.0	+3.1
TBG	**Guadaloupe-3**	**1.35**	**149**	*e*P	Pg	12 37 10.3	0.0
TBG				*e*S	Sg	12 37 28.1	+0.2
MAGL	**Barre de l'ile**	**1.49**	**135**	*e*P	Pg	12 37 12.8	-0.1
MAGL				*e*S	Sg	12 37 33.2	+0.9
DSLB	**Salisbury**	**1.81**	**150**	*e*P	Pb	12 37 17.2	0.0
DSLB				*e*S	Sb	12 37 40.5	+0.9
MDN	**Morne-Daniel**	**1.93**	**151**	*e*P	Pb	12 37 19.1	0.0
MDN				*e*S	Sb	12 37 42.8	-0.1
BIM	**Bigot**	**2.78**	**153**	*e*P	Pn	12 37 30.8	+2.6
SLBI	**Saint Lucia, B**	**3.27**	**155**	*e*P	Pn	12 37 36.8	+2.0
SLBI				*e*S	Sn	12 38 15.5	+2.2

*IDC **20** 12:54:54.7±0.8, 2°.27S×138°.53E, h0^{km}, mb3.9/8, mbtmp3.9/10, ML3.7/2, MS3.4/6, Error ellipse: s-maj=19.4km s-min=15.4km az=25.0*

*DJA **20** 12:54:57.6±0.5, 2°S±5°×13°9E±°, h19^{km}±4^{km}, M4.2/6, mb4.4/1, MLv4.1/6*

ISC 20 12:54:56.4±0.8, 2°.39S±0°.08×138°.41E±0°.04, h10km, n20, σ1ˢ.73/20, mb3.9/7, MS3.4/3, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.50	37	P	Pg	12 55 04.0	-2.1
GENI	Genyem	1.77	97	P	Pn	12 55 28.3	+1.2
SRPI	Serui, Papua	2.23	283	P	Pn	12 55 33.4	0.0
SRPI				S	Sn	12 56 01.2	+0.2
JAY	Jayapura	2.30	93	Pn	Pn	12 55 33.8	-0.6
	7.2nm,0.3s,baz=226,slow=11,SNR=25						
JAY				Lg	Lg	12 56 02.4	
	7.3nm,0.3s,baz=325,slow=16,SNR=4.5						
	17nm,0.3s						
JAY	Jayapura	2.30	93	P	Pn	12 55 34.4	0.0
JAY				S	Sn	12 56 02.1	-0.7
BAKI	Biak	2.59	297	P	Pn	12 55 38.2	-0.2
BAKI				S	Sn	12 56 08.3	-1.6
FAKI	Fak Fak	6.18	265	P	Pn	12 56 29.2	+1.5
PMG	Port Moresby	11.15	129	LR	LR	13 03 30.1	
	comp=Z,183nm,19.2s,baz=269,slow=46						
BATI	Baumata	16.58	241	LR	LR	13 06 00.1	
	comp=Z,170nm,20.6s,baz=102,slow=40						
WRA	Warramunga Arr	17.89	193	P	Pn	12 59 07.2	+1.6
	0.4nm,0.3s,baz=15,slow=12,SNR=16						
WRA				S	Sn	13 02 19.3	-6.0
	2.5nm,0.9s,baz=9.0,slow=22,SNR=5.2						
	0.8nm,0.4s						
KAPI	Kappang	18.80	261	LR	LR	13 07 23.5	
	comp=Z,46nm,18.1s,baz=90,slow=40						
FITZ	Fitzroy Crossi	20.02	218	P	P	12 59 30.1	+0.6
	2.8nm,0.9s,baz=22,slow=11,SNR=1.9						
	2.8nm,0.9s						
ASAR	Alice Springs	21.60	191	P	P	12 59 47.8	+1.2
	3.5nm,0.9s,baz=10,slow=11,SNR=24						
ASAR				S	S	13 03 46.0	-0.1
	4.7nm,0.8s,baz=12,slow=22,SNR=15						
	3.5nm,0.9s						
STKA	Stephens Creek	29.49	174	P	P	13 01 01.9	+1.1
	0.6nm,0.5s,baz=354,slow=9.5,SNR=3.6						
STKA				LR	LR	13 13 52.3	
	comp=Z,76nm,18.6s,baz=18,slow=38						
	0.6nm,0.5s						
NWAO	Narrogin (SRO)	36.30	211	LR	LR	13 16 35.5	
	comp=Z,81nm,20.1s,baz=84,slow=36						
MKAR	Makanchi Array	69.35	322	P	P	13 06 03.7	-0.6
	1.3nm,0.8s,baz=116,slow=8.2,SNR=5.2						
	1.3nm,0.8s						
ZALV	Zalesovo Beam	71.51	330	P	P	13 06 16.7	-0.6
	1.9nm,0.7s,baz=98,slow=6.1,SNR=4.3						
ZALV				LR	LR	13 36 18.8	
	comp=Z,16nm,21.5s,baz=115,slow=35						
	1.9nm,0.7s						
KURBB	Kurchatov Arra	73.29	325	P	P	13 06 27.2	-0.8
	0.9nm,0.8s,baz=114,slow=5.5,SNR=8.2						
	0.9nm,0.8s						
BVAR	Borovoye Array	78.88	325	P	P	13 07 00.5	+0.7
	3.2nm,0.7s,baz=113,slow=7.5,SNR=15						
	3.2nm,0.7s						
ILAR	Eielson Array	85.67	24	P	P	13 07 34.9	-0.2
	0.4nm,0.8s,baz=271,slow=5.6,SNR=5.8						
	0.4nm,0.8s						

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*NEIC **20** 12:58:41.2±1.7, 27°.6N±0°.1×104°.8E±0°.2, h10km±2km, mb4.2/6, Error ellipse: s-maj=33.1km s-min=8.5km az=137.0*

*IDC **20** 12:58:43.4±0.7, 28°.40N×104°.75E, h0km, mb3.9/10, mbtmp3.9/12, ML3.9/1, Error ellipse: s-maj=24.3km s-min=15.6km az=62.0*

ISC 20 12:58:44.5±1.4, 28°.2N±0°.2×104°.7E±0°.1, h10km, n25, σ1ˢ.02/21, mb4.0/14, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENH	Enshi	4.67	63		Pn	12 59 56.7	+1.6
GZH	Guangzhou	9.36	121	P	Pn	13 00 59.5	+0.1
GZH				S	Sn	13 02 45.1	+0.3
GZH				smax	smax		
	comp=N,36nm,0.7s						
GZH				smax	smax		
	comp=E,33nm,0.7s						
CMAR	Chiang Mai Arr	11.06	210	Pn	Pn	13 01 26.9	+4.0
	comp=E,0.7nm,0.8s,baz=16,slow=12,SNR=8.5						
SONM	Songino Array	19.61	3	P	P	13 03 12.4	-0.6
	comp=E,0.4nm,0.3s,baz=177,slow=12,SNR=6.8						
	comp=E,1.3nm,0.5s						
KSAR	Wonju Array Be	21.51	59	P	P	13 03 33.0	-0.6
KS19	Wonju Array Si	21.52	59	P	P	13 03 33.1	-0.6
KS19				IAmb	IAmb	13 03 49.0	
	comp=Z,11nm,1.2s						
KSRS	Korea Array	21.55	59	P	P	13 03 33.1	-0.8
	comp=Z,3.9nm,0.8s,baz=242,slow=10,SNR=14						
	comp=Z,3.9nm,0.8s						
MKAR	Makanchi Array	25.50	323	P	P	13 04 14.8	+1.8
MKAR	Makanchi Array	25.50	323	P	P	13 04 12.4	-0.6
	comp=Z,1.9nm,0.8s,baz=127,slow=11,SNR=14						
	comp=Z,1.9nm,0.8s						
USA0B	Ussuriysk Arra	27.02	47	P	P	13 04 24.5	-2.2
USA0B				IAmb	IAmb	13 04 26.8	
	comp=Z,6.3nm,0.7s						
USRK	Ussuriysk Ar.	27.02	47	P	P	13 04 25.1	-1.6
	comp=Z,4.6nm,0.6s,baz=252,slow=8.3,SNR=15						
	comp=Z,4.6nm,0.6s						
ZALV	Zalesovo Beam	29.52	336	P	P	13 04 49.8	+1.0
ZALV	Zalesovo Beam	29.52	336	P	P	13 04 48.2	-0.6
	comp=Z,1.3nm,0.6s,baz=137,slow=9.3,SNR=5.6						
	comp=Z,1.3nm,0.6s						
KURBB	Kurchatov Arra	29.84	326	P	P	13 04 51.8	0.0
	comp=Z,0.5nm,0.4s,baz=132,slow=9.6,SNR=11						
	comp=Z,0.5nm,0.4s						
BVAR	Borovoye Array	35.36	324	P	P	13 05 40.0	-0.1
	comp=Z,0.5nm,0.5s,baz=133,slow=11,SNR=2.8						
	comp=Z,0.5nm,0.5s						
AB31	Akbulak array	39.97	314	P	P	13 06 20.2	+1.1
AB31				IAmb	IAmb	13 06 23.4	
	comp=Z,2.0nm,0.9s						
ABKAR	Akbulak array	39.97	314	P	P	13 06 19.9	+0.8
WRA	Warramunga Arr	55.84	146	P	P	13 08 23.4	+1.2
	comp=Z,1.8nm,0.7s,baz=335,slow=7.5,SNR=23						
	comp=Z,1.8nm,0.7s						
ASAR	Alice Springs	58.80	148	P	P	13 08 44.6	+1.5
	comp=Z,0.9nm,0.4s,baz=327,slow=6.2,SNR=7.9						
	comp=Z,0.9nm,0.4s						
FINES	FINESS Array B	60.22	327	P	P	13 08 52.1	-0.4
	comp=Z,1.0nm,0.8s,baz=72,slow=6.2,SNR=5.3						
	comp=Z,1.0nm,0.8s						
D19K	Kuna River	66.63	23	P	P	13 09 34.5	-0.4
D19K				IAmb	IAmb	13 09 38.0	
	comp=Z,2.8nm,1.0s						
D20K	Etivluk River	67.08	23	P	P	13 09 37.7	-0.1
GERES	GERESS Array B	69.91	315	P	P	13 09 56.0	+0.2
	comp=Z,0.3nm,0.5s,baz=65,slow=7.5,SNR=3.9						
	comp=Z,0.3nm,0.5s						
QSPA	South Pole Qui	118.03	180	PKP	PKiKP	13 17 30.6	-0.3
	comp=Z,1.0nm,1.0s,baz=90,slow=1.7,SNR=6.7						
SNAA	Sanae	122.04	201	PKP	PKiKP	13 17 38.4	-0.2
	comp=Z,2.1nm,1.2s,baz=154,slow=20,SNR=5.1						

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*IDC **20** 13:00:04.5±1.3, 12°.14N×143°.97E, h0km, mb3.8/8, mbtmp3.8/8, MS3.4/3, Error ellipse: s-maj=36.1km s-min=22.4km az=126.0*

ISC 20 13:00:08.4±1.1, 12°.2N±0°.2×143°.9E±0°.2, h26km, n12, σ1ˢ.17/10, mb3.9/8, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.71	33	Pn	Pn	13 00 36.1	-0.5
	46nm,0.3s,baz=352,slow=16,SNR=38						
GUMO				Sn	Sn	13 00 58.1	+0.6
	30nm,0.3s,baz=188,slow=21,SNR=18						
GUMO				LR	LR	13 01 15.1	
	comp=Z,70nm,18.1s,baz=204,slow=42						
DAV	Davao City (W)	18.76	256	LR	LR	13 11 06.6	
	comp=Z,128nm,21.0s,baz=41,slow=35						
WRA	Warramunga Arr	33.25	197	P	P	13 06 43.7	-0.1
	0.5nm,0.7s,baz=18,slow=8.9,SNR=2.6						
	0.5nm,0.7s						
KLR	Kul'dur	38.32	347	LR	LR	13 22 03.0	
	comp=Z,45nm,19.1s,baz=191,slow=34						
YAK	Yakutsk	50.85	351	LR	LR	13 30 27.6	
	comp=Z,28nm,18.4s,baz=202,slow=36						
MKAR	Makanchi Array	61.88	317	P	P	13 10 26.8	+1.1
	0.3nm,0.6s,baz=90,slow=8.8,SNR=3.1						
	0.3nm,0.6s						
ZALV	Zalesovo Beam	62.25	325	P	P	13 10 28.3	+0.4
	0.5nm,0.5s,baz=111,slow=7.9,SNR=2.0						
	0.5nm,0.5s						
KURBB	Kurchatov Arra	65.12	320	P	P	13 10 47.8	+0.9
	0.7nm,0.6s,baz=103,slow=6.4,SNR=9.6						
	0.7nm,0.6s						
ILAR	Eielson Array	70.26	25	P	P	13 11 17.8	-1.3
	0.3nm,0.8s,baz=254,slow=4.6,SNR=3.4						
	0.3nm,0.8s						
BVAR	Borovoye Array	70.48	322	P	P	13 11 21.4	+0.8
	2.2nm,0.4s,baz=101,slow=7.3,SNR=12						
	2.2nm,0.4s						
NVAR	Mina Array Bea	88.55	51	P	P	13 13 01.0	+1.6
	0.3nm,0.5s,baz=276,slow=4.6,SNR=4.0						
	0.3nm,0.5s						
FINES	FINESS Array B	92.06	335	P	P	13 13 13.6	-1.4
	0.9nm,0.6s,baz=68,slow=4.8,SNR=8.5						
	0.9nm,0.6s						

IDC 20 13:04:32.2±2.6, 20°.94S×179°.04W, h0km, mb3.9/5, mbtmp3.9/5, Error ellipse: s-maj=140.5km s-min=26.1km az=149.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	36.72	244	P	P	13 11 40.5	-0.8
	0.8nm,0.5s,baz=102,slow=10,SNR=3.9						
	0.8nm,0.5s						
ASAR	Alice Springs	43.47	257	P	P	13 12 37.7	+0.1
	2.9nm,0.9s,baz=92,slow=8.1,SNR=20						
	2.9nm,0.9s						
WRA	Warramunga Arr	43.58	263	P	P	13 12 38.5	+0.1
	0.7nm,0.3s,baz=97,slow=7.9,SNR=19						
	0.7nm,0.3s						
NVAR	Mina Array Bea	82.01	44	P	P	13 16 54.3	-0.3
	0.5nm,0.7s,baz=236,slow=8.7,SNR=4.1						
	0.5nm,0.7s						
ILAR	Eielson Array	88.96	13	P	P	13 17 28.6	+0.3
	0.3nm,0.6s,baz=226,slow=5.7,SNR=6.0						
	0.3nm,0.6s						

IDC 20 13:07:16.2±1.9, 10°.01N×126°.03E, h0km, mb3.6/4, mbtmp3.6/4, MS2.9/2, Error ellipse: s-maj=196.5km s-min=30.1km az=69.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	16.19	203	LR	LR	13 18 53.5	
	comp=Z,43nm,18.1s,baz=54,slow=43						
GUMO	Guam	18.77	77	LR	LR	13 17 33.9	
	comp=Z,35nm,20.7s,baz=226,slow=33						
WRA	Warramunga Arr	30.87	165	P	P	13 13 34.8	+0.4
	0.4nm,0.8s,baz=346,slow=9.0,SNR=1.9						
	0.4nm,0.8s						
SONM	Songino Array	41.18	340	P	P	13 15 03.6	+1.0
	0.5nm,0.6s,baz=167,slow=8.9,SNR=1.8						
	0.5nm,0.6s						
MKAR	Makanchi Array	52.09	323	P	P	13 16 28.3	+0.2
	0.4nm,0.6s,baz=119,slow=8.0,SNR=4.0						
	0.4nm,0.6s						
FINES	FINESS Array B	86.00	332	P	P	13 19 57.1	-1.3
	0.4nm,0.4s,baz=70,slow=5.8,SNR=7.1						
	0.4nm,0.4s						

RSNC 20 13:10:35.9±0.0, 7°N±1°×7°3W±°, h150km±2km, M3.3, mb3.7, ML2.9, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.23	191	P	Pn	13 10 56.2	-0.4
BARC				S	Sn	13 11 11.9	-0.4
BRJC	Barrancabermej	0.62	284	P	Pn	13 10 57.6	-0.3
BRJC				S	Sn	13 11 14.8	+0.2
PAMC	Pamplona, Colo	0.68	40	P	Pn	13 10 59.0	+0.2
PAMC				S	Sn	13 11 16.1	-0.2
RUSC	La Rusia	0.92	176	P	Pn	13 11 00.2	-0.4
RUSC				S	Sn	13 11 18.7	-0.8
PTBC	PUERTO BERRIO,	1.34	258	P	Pn	13 11 02.7	-1.1
PTBC				S	Sn	13 11 23.0	-2.1
TAMC	Tame, Arauca	1.39	106	P	Pn	13 11 04.5	+0.1
TAMC				S	Sn	13 11 25.3	-0.9
OCAC	Ocana	1.42	353	P	Pn	13 11 04.3	-0.5
OCAC				S	Sn	13 11 26.1	-0.9
SPBC	San Pablo de B	1.48	219	P	Pn	13 11 05.0	-0.4
SPBC				S	Sn	13 11 25.8	-2.2
ZARC	Zaragoza, Cauc	1.83	292	P	Pn	13 11 08.9	-0.2
ZARC				S	Sn	13 11 33.9	-0.7
NORC	Norcasia	2.12	234	P	Pn	13 11 12.2	-0.4
NORC				S	Sn	13 11 40.1	-0.7
CHIC	Chingaza	2.25	195	P	Pn	13 11 14.6	+0.1
CHIC				S	Sn	13 11 43.4	-0.7
ROSC	El Rosal	2.29	211	P	Pn	13 11 15.7	+0.8
ROSC				S	Sn	13 11 46.6	+1.7
HELC	Santa Helena	2.46	255	P	Pn	13 11 17.4	+0.6
HELC				S	Sn	13 11 48.6	+0.3
UREC	San Jos de Ur	2.55	291	P	Pn	13 11 16.7	-0.9
UREC				S	Sn	13 11 46.8	-3.0
GUY2C	Guyana, Caldas	2.72	234	P	Pn	13 11 20.3	0.0
GUY2C				S	Sn	13 11 57.9	+3.5
VILC	Villavicencio,	2.75	192	P	Pn	13 11 19.5	-0.8
VILC				S	Sn	13 11 53.6	-0.9
PTGC	Puerto Gaitan,	2.79	159	P	Pn	13 11 19.2	-1.5
PTGC				S	Sn	13 11 53.1	-2.2
CBOC	Ciudad Bolivar	3.01	252	P	Pn	13 11 23.0	-0.6
CBOC				S	Sn	13 12 00.8	+0.4
DBBC	Dabeiba	3.05	274	P	Pn	13 11 24.4	+0.4
DBBC				S	Sn	13 11 59.7	-1.6
ARGC	Ariguani, Magd	3.21	340	P	Pn	13 11 25.9	-0.1
ARGC				S	Sn	13 12 05.1	+0.3
ANIL	Santa Ana	3.23	224	P	Pn	13 11 27.7	+1.2
ANIL				S	Sn	13 12 06.7	+1.1
PRAC	Prado	3.54	209	P	Pn	13 11 29.5	-0.8
PRAC				S	Sn	13 12 11.1	-1.4
ORTC	Ortega, Tolima	3.57	216	P	Pn	13 11 30.5	-0.2
ORTC				S	Sn	13 12 13.2	0.0
APAC	Apartado, Choc	3.58	288	P	Pn	13 11 29.8	-0.9
APAC				S	Sn	13 12 09.7	-3.4
PLMC	San Jos del P	3.66	239	P	Pn	13 11 31.6	-0.2
PLMC				S	Sn	13 12 12.9	-2.3
SJCC	San Jacinto, C	3.66	327	P	Pn	13 11 30.2	-1.7
SJCC				S	Sn	13 12 11.6	-3.7
CRJC	Cerrejon, Guaj	4.18	3	P	Pn	13 11 36.4	-2.2
YOTC	Yotoco, Valle	4.26	229	P	Pn	13 11 38.4	-1.3
YOTC				S	Sn	13 12 29.7	+0.4
SMRC	Santa Marta, M	4.45	346	P	Pn	13 11 41.0	-1.1
SMRC				S	Sn	13 12 29.1	-4.5
MACC	Macarena, Meta	4.70	189	P	Pn	13 11 43.0	-2.4
MACC				S	Sn	13 12 34.7	-4.9
URIC	Uribia, Colomb	4.98	13	P	Pn	13 11 46.3	-2.8
URIC				S	Sn	13 12 43.0	-3.2
POPC	Popayan, Colom	5.52	220	P	Pn	13 11 55.8	-0.7

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*IDC **20** 13:10:44.4±1.0, 31°.03S×177°.70W, h0km, mb4.1/4, mbtmp4.1/4, MS3.6/4, Error ellipse: s-maj=31.6km s-min=22.1km az=101.0*

*NEIC **20** 13:10:50.3±1.1, 30°.98S±0°.06×178°.0W±0°.2, h35km±2km, mb4.4/12, Error ellipse: s-maj=22.5km s-min=9.3km az=272.0*

ISC 20 13:10:50.7±0.8, 31°.07S±0°.06×178°.1W±0°.2, h46km, n39, σ1ˢ.76/36, mb4.4/11, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.82	5		Pn	13 11 17.4	-2.1
RAO				Sn	Sn	13 11 37.6	-3.8
RAO	Raoul Island	1.82	5	Pn	Pn	13 11 17.4	-2.1
	124nm,0.3s,baz=97,slow=20,SNR=6.4						
RAO				Sn	Sn	13 11 41.2	-0.1
	443nm,0.3s,baz=94,slow=21,SNR=5.6						
MXZ	Matakaoa Point	7.13	204	Pn	Pn	13 12 32.5	+0.1
MXZ				Sn	Sn	13 13 50.9	-1.2
URZ	Urewera	8.19	208	Pn	Pn	13 12 42.3	-4.6
	0.9nm,0.3s,baz=2.1,slow=9.4,SNR=1.9						
URZ				Sn	Sn	13 14 15.4	-2.7
	2.0nm,0.3s,baz=22,slow=21,SNR=6.2						
RTZ	Ruatahuna	8.55	207	Pn	Pn	13 12 48.9	-3.1
BKZ	Black Stump Fm	9.22	207	Pn	Pn	13 12 57.6	-3.5
CTZ	Chatham Island	12.70	175	Pn	Pn	13 13 42.8	-5.8
THZ	Tophouse	12.89	212	Pn	Pn	13 13 48.1	-3.3
KHZ	Kahutara	13.16	208	Pn	Pn	13 13 50.4	-4.4
MSVF	Nonsavu	13.73	344	LR	LR	13 18 37.6	
	comp=Z,140nm,18.2s,baz=232,slow=34						
DZM	Mont Dzumac	16.47	299	LR	LR	13 20 09.2	
	comp=Z,192nm,18.6s,baz=193,slow=34						
RAR	Rarotonga	19.12	63	LR	LR	13 20 04.6	
	comp=Z,114nm,20.9s,baz=185,slow=30						
ARMA	Armidale	26.00	264	P	P	13 16 19.8	+0.2
ARMA				IAmb	IAmb	13 16 48.0	
	comp=Z,8.9nm,1.1s						
EIDS	Eidsvold	27.70	274	P	P	13 16 35.5	+0.8
EIDS				IAmb	IAmb	13 17 14.8	
	comp=Z,21nm,1.4s						
CTAO	Charters Tower	33.84	280	P	P	13 17 29.2	+0.3
CTAO				IAmb	IAmb	13 17 46.2	
	comp=Z,8.4nm,1.1s						
STKA	Stephens Creek	34.26	258	P	P	13 17 33.3	+0.8
STKA	Stephens Creek	34.26	258	P	P	13 17 36.4	+4.0
	comp=Z,3.1nm,0.7s,baz=81,slow=9.6,SNR=5.1						
	comp=Z,3.1nm,0.7s						
BBOO	Buckleboo	38.72	255	P	P	13 18 11.4	+0.9
AS31	Alice Springs	43.00	268	P	P	13 18 46.6	+0.7
ASAR	Alice Springs	43.00	268	P	P	13 18 46.8	+0.9
ASAR	Alice Springs	43.00	268	P	P	13 18 48.5	+2.6
	comp=Z,1.6nm,0.7s,baz=104,slow=7.2,SNR=17						
	comp=Z,1.6nm,0.7s						
WRA	Warramunga Arr	44.05	273	P	P	13 18 55.0	+0.6
WRA	Warramunga Arr	44.05	273	P	P	13 18 55.8	+1.4
	comp=Z,1.4nm,0.4s,baz=112,slow=8.0,SNR=30						
	comp=Z,1.4nm,0.4s						
WB0	Warramunga Arr	44.08	273	P	P	13 18 55.3	+0.8
WB0				IAmb	IAmb	13 19 17.2	
	comp=Z,9.6nm,1.1s						
FITZ	Fitzroy Crossi	52.29	270	P	P	13 19 57.3	-0.5
FITZ				IAmb	IAmb	13 19 57.7	
	comp=Z,3.0nm,1.3s						
CASY	Casey	54.52	208	P	P	13 20 13.9	+0.3
CASY				IAmb	IAmb	13 20 14.6	
	comp=Z,3.6nm,0.8s						
QSPA	South Pole Qui	59.04	180	P	P	13 20 47.1	+1.3
QSPA	South Pole Qui	59.04	180	P	P	13 20 47.0	+1.1
	comp=Z,2.1nm,1.0s,baz=305,slow=2.3,SNR=5.7						
	comp=Z,2.1nm,1.0s						
SNAA	Sanae	77.49	178	P	P	13 22 42.5	+1.4
SNAA				IAmb	IAmb	13 23 17.2	
	comp=Z,6.2nm,1.4s						
MJAR	Matsushiro Arr	78.75	325	LR	LR	13 57 36.2	
	comp=Z,76nm,18.1s,baz=172,slow=36						
MKAR	Makanchi Array	118.14	310	PKP	PKPdf	13 29 32.0	-0.4
	comp=Z,0.2nm,0.6s,baz=149,slow=3.0,SNR=3.0						
KURBB	Kurchatov Arra	121.49	313	PKP	PKPdf	13 29 38.1	-0.5
	comp=Z,0.6nm,0.7s,baz=100,slow=1.8,SNR=8.3						
BVAR	Borovoye Array	126.83	315	PKP	PKiKP	13 29 49.2	-0.1
	comp=Z,0.7nm,0.6s,baz=64,slow=3.4,SNR=3.5						
FINES	FINESS Array B	145.75	340	PKPbc	PKPbc	13 30 24.0	+0.1
	comp=Z,4.5nm,0.6s,baz=49,slow=2.5,SNR=25						
NB2	NORSAR Subarra	149.40	351	PKP	PKPbc	13 30 33.1	-0.9
	comp=Z,0.5nm,0.4s,baz=15,slow=4.1						
NOA	NORSAR Array B	149.40	351	PKPbc	PKPbc	13 30 34.2	+0.2
	comp=Z,0.6nm,0.5s,baz=13,slow=4.1,SNR=5.1						
HFS	Hagfors	149.88	348	PKPbc	PKiKP	13 30 36.8	+0.7
	comp=Z,1.0nm,0.5s,baz=82,slow=11,SNR=4.9						
MMAI	Mount Meron Ar	151.61	283	PKPbc	PKiKP	13 30 41.7	+1.0
	comp=Z,1.8nm,0.5s,baz=90,slow=4.3,SNR=3.9						
AKASG	Malin Array Be	151.78	322	PKPbc	PKiKP	13 30 40.5	+0.2
	comp=Z,1.7nm,0.6s,baz=57,slow=2.3,SNR=8.5						

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*NNC **20** 13:19:33.0±1.0, 50°.08N×79°.14E, h0km, mb2.9, mpv2.7, Error ellipse: s-maj=21.5km s-min=5.2km az=58.0, Suspected Mining explosion.*

*IDC **20** 13:19:34.5±1.0, 50°.05N×78°.73E, h0km, mbtmp2.6/2, ML2.1/2, Error ellipse: s-maj=14.2km s-min=6.4km az=67.0*

ISC 20 13:19:34.9±1.0, 50°.03N±0°.05×78°.74E±0°.09, h0km, n18, σ0ˢ.85/29, 9C-14D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.57	345	⇓P	Pg	13 19 45.1	-0.7
KUR07				⇓S	Sg	13 19 54.6	+1.5
KUR06	Kurchatov Arra	0.59	346	⇑P	Pg	13 19 45.1	-1.0
KUR06				⇓S	Sg	13 19 54.5	+0.8
KUR14	Kurchatov Arra	0.59	351	⇓P	Pg	13 19 45.4	-0.7
KUR14				⇓S	Sg	13 19 54.4	+0.6
KUR15	Kurchatov Arra	0.60	349	⇑P	Pg	13 19 45.3	-1.0
KUR15				⇓S	Sg	13 19 55.3	+1.2
KURBB	Kurchatov Arra	0.60	347	Pg	Pg	13 19 45.5	-1.0
	1.0nm,0.3s,baz=165,slow=19,SNR=49						
KURBB				Lg	Lg	13 19 54.9	
	1.4nm,0.3s,baz=168,slow=31,SNR=14						
KURBB	Kurchatov Arra	0.60	347	⇑P	Pg	13 19 45.3	-1.2
	14nm,0.3s						
KURBB				⇑S	Sb	13 19 56.8	-0.6
	84nm,0.6s						
KUR16	Kurchatov Arra	0.61	345	⇑P	Pg	13 19 45.7	-1.0
KUR16				⇓S	Sg	13 19 55.2	+0.6
KUR05	Kurchatov Arra	0.62	348	⇑P	Pg	13 19 45.9	-1.0
KUR05				⇓S	Sg	13 19 55.5	+0.6
KUR17	Kurchatov Arra	0.62	344	⇓P	Pg	13 19 45.9	-1.0
KUR17				⇓S	Sg	13 19 55.8	+0.9
KUR04	Kurchatov Arra	0.64	349	⇑P	Pg	13 19 46.2	-1.0
KUR04				⇓S	Sg	13 19 55.9	+0.5
KURK	Kurchatov	0.69	353	P	Pg	13 19 46.9	-1.1
	5.8nm,0.7s						
KURK				⇑S	Sg	13 19 56.9	-0.1
	94nm,0.9s						
MAKZ	Makanchi	3.88	145	Pg	Pb	13 20 45.0	+0.9
	0.7nm,0.1s						
MAKZ				Lg	Lg	13 21 32.0	
	13nm,0.8s						
MK31	Makanchi Array	4.01	143	Pn	Pn	13 20 37.8	+0.3
	0.2nm,0.3s,baz=327,slow=10,SNR=14						
MK31				⇑Pg	Pb	13 20 46.6	+0.3
	0.4nm,0.3s,baz=323,slow=15,SNR=15						
MK31				⇓Lg	Lg	13 21 40.2	
	10.0nm,0.7s,baz=333,slow=38,SNR=23						
MKAR	Makanchi Array	4.01	143	Pn	Pn	13 20 37.6	+0.1
	0.1nm,0.3s,baz=322,slow=10,SNR=20						
MKAR				Pg	Pb	13 20 45.5	-0.9
	0.5nm,0.3s,baz=327,slow=15,SNR=13						
MKAR				Lg	Lg	13 21 40.7	
	1.0nm,0.3s,baz=331,slow=23,SNR=19						
	0.4nm,0.6s						
OTUK	Ortayu	4.57	249	⇓Pn	Pn	13 20 45.2	0.0
	0.5nm,0.4s						
OTUK				⇓Lg	Lg	13 22 01.7	
	5.1nm,1.1s						
I46RU	ZALESOVO INFRA	5.43	41	I	I	13 54 10.0	
	baz=228,slow=321,SNR=11						
ZALV	Zalesovo Beam	5.43	41	Pn	Pn	13 20 57.5	+0.6
	0.2nm,0.3s,baz=228,slow=13,SNR=5.3						
ZALV				Lg	Lg	13 22 26.4	
	0.2nm,0.3s,baz=231,slow=31,SNR=5.4						
	1.0nm,0.5s						
BVAR	Borovoye Array	6.01	303	Sn	Sn	13 22 14.8	+0.2
	baz=119,slow=23,SNR=3.6						
BVAR				Lg	Lg	13 22 42.0	
	baz=120,slow=24,SNR=4.0						

IDC 20 13:19:42.2±3.3, 30°.55S×177°.69W, h0km, mb3.8/3, mbtmp3.8/3, MS4.6/1, Error ellipse: s-maj=69.0km s-min=23.8km az=109.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.30	351	Pn	Pn	13 20 09.3	+1.6
	54nm,0.3s,baz=87,slow=18,SNR=5.1						
RAO				Sn	Sb	13 20 24.8	0.0
	198nm,0.3s,baz=180,slow=22,SNR=9.2						
STKA	Stephens Creek	34.70	257	P	P	13 26 35.1	+1.2
	1.6nm,0.5s,baz=94,slow=8.7,SNR=4.5						
	1.6nm,0.5s						
ASAR	Alice Springs	43.37	267	P	P	13 27 46.3	-0.2
	0.3nm,0.4s,baz=101,slow=7.2,SNR=5.2						
ASAR				LR	LR	13 46 27.9	
	comp=Z,653nm,18.3s,baz=9.5,slow=37						
	0.3nm,0.4s						
WRA	Warramunga Arr	44.37	272	P	P	13 27 53.5	-1.0
	0.6nm,0.4s,baz=110,slow=8.1,SNR=12						
	0.6nm,0.4s						
FINES	FINESS Array B	145.37	340	PKPbc	PKPbc	13 39 19.7	-1.5
	1.4nm,0.7s,baz=40,slow=4.0,SNR=5.6						

IDC 20 13:23:39.3±7.4, 19°.50S×177°.87W, h0km, mb3.8/2, mbtmp3.8/2, Error ellipse: s-maj=311.6km s-min=116.6km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.87**	**261**	P	P	13 31 56.1	+0.3
	0.6nm,0.3s,baz=96,slow=8.3,SNR=36						
	0.6nm,0.3s						
ASAR	**Alice Springs**	**44.87**	**256**	P	P	13 31 55.2	-0.6
	0.6nm,0.6s,baz=90,slow=8.4,SNR=7.2						
	0.6nm,0.6s						
AKASG	**Malin Array Be**	**142.20**	**332**	PKP	PKPdf	13 43 12.9	-0.7
	0.4nm,0.3s,baz=45,slow=4.0,SNR=5.6						

IDC ***20*** *13:28:56.4±0.6, 2°.15S×138°.54E, h0^{km}, mb4.0/12, mbtmp4.1/15, ML4.3/3, MS3.9/23, Error ellipse: s-maj=16.8km s-min=12.9km az=42.0*

NEIC ***20*** *13:28:57.9±2.7, 2°.28S±0°.10×138°.44E±0°.07, h10^{km}±1^{km}, mb4.5/18, Error ellipse: s-maj=16.6km s-min=11.7km az=184.0*

DJA ***20*** *13:28:58.3±0.5, 2°S±4°×13°8E±°, h13^{km}±4^{km}, M4.7/9, mb4.7/5, MLv4.7/9*

GCMT ***20*** *13:29:01.9±0.3, 1°.98S±0°.02×138°.37E±0°.02, h14^{km}±2^{km}, MW4.7/72, Moment Tensor Solution. s7,c7; s72,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.45±.09; $M_{\theta\theta}$0.62±.06; $M_{\phi\phi}$-1.07±.08; $M_{r\theta}$0.47±.16; $M_{\theta\phi}$0.94±.05; $M_{\phi r}$-0.06±.12; Best double couple: $M_0$1.39000×10^{16} NP1:ϕ_s18.00000°,δ65.00000°,λ165.00000°. NP2: ϕ_s115.00000°,δ76.00000°,λ25.00000°. Principal axes: T 1.2580, Plg27.0000°, Azm339.0000°; N 0.2690, Plg62.0000°, Azm141.0000°; P -1.5230, Plg7.0000°, Azm245.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 13:28:57.8±0.4**, 2°.33S**±0°.05×**138°.42E**±0°.03**, h10^{km}, n79, σ1^{s}51**/69**, mb4.3**/24**, MS3.9**/23**, 1C, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.44**	**41**	P	**Pg**	**13 29 05.1**	**-1.4**
GENI	**Genyem**	**1.76**	**99**	P	**Pn**	**13 29 29.2**	**+0.7**
GENI				S	**Sg**	**13 29 53.5**	**-1.1**
SRPI	**Serui, Papua**	**2.23**	**282**	P	**Pn**	**13 29 34.5**	**-0.4**
SRPI				S	**Sn**	**13 30 02.8**	**+0.3**
JAY	**Jayapura**	**2.29**	**95**	Pn	**Pn**	**13 29 34.8**	**-0.9**
	26nm,0.3s,baz=243,slow=10,SNR=69						
JAY				Lg	Lg	13 30 03.6	
	132nm,0.3s,baz=130,slow=21,SNR=26						
	63nm,0.3s						
JAY	**Jayapura**	**2.29**	**95**	P	**Pn**	**13 29 35.6**	**-0.1**
JAY				S	**Sn**	**13 30 04.9**	**+0.9**
BAKI	**Biak**	**2.58**	**296**	P	**Pn**	**13 29 39.2**	**-0.4**
BAKI				S	**Sn**	**13 30 09.3**	**-1.7**
RKPI	**Ransiki, Papua**	**4.32**	**281**	P	**Pn**	**13 30 03.6**	**-0.1**
KMPI	**Kaimana, Papua**	**4.89**	**254**	P	**Pn**	**13 30 14.0**	**+2.4**
FAKI	**Fak Fak**	**6.20**	**264**	Pn	**Pn**	**13 30 29.5**	**0.0**
FAKI	**Fak Fak**	**6.20**	**264**	P	**Pn**	**13 30 29.7**	**+0.2**
	0.2nm28nm,0.6s						
COEN	**Coen**	**12.47**	**158**		**Pn**	**13 31 53.7**	**-1.9**
MTN	**Manton Dam**	**12.70**	**214**		**Pn**	**13 31 58.9**	**+0.2**
DAV	**Davao City (W)**	**15.86**	**306**	LR	LR	13 39 23.5	
	comp=Z,521nm,18.1s,baz=132,slow=40						
KNRA	**Kununurra**	**16.33**	**215**		**Pn**	**13 32 46.0**	**-1.4**
KNRA				IAmb	IAmb	13 33 15.4	
	comp=Z,62nm,1.5s						
BATI	**Baumata**	**16.62**	**241**	Pn	**P**	**13 32 54.1**	**+0.5**
	comp=Z,8.9nm,0.3s,baz=179,slow=2.5,SNR=8.0						
	comp=Z,14nm,0.4s						
GUMO	**Guam**	**17.06**	**22**	LR	LR	13 38 51.7	
	comp=Z,183nm,20.2s,baz=202,slow=35						
WB0	**Warramunga Arr**	**17.78**	**193**		**P**	**13 33 07.2**	**+0.9**
WR8	**Warramunga Arr**	**17.94**	**192**		**Pn**	**13 33 07.7**	**+0.1**
WR8				IAmb	IAmb	13 33 37.4	
	comp=Z,30nm,1.2s						
WRA	**Warramunga Arr**	**17.96**	**193**		**Pn**	**13 33 08.0**	**+0.2**
WRA	**Warramunga Arr**	**17.96**	**193**	P	**P**	**13 33 09.2**	**+0.9**
	comp=Z,0.7nm,0.3s,baz=17,slow=12,SNR=22						
WRA				S	**Sn**	**13 36 23.4**	**-4.8**
	comp=Z,8.0nm,0.9s,baz=11,slow=22,SNR=5.0						
WRA				LR	LR	13 40 35.9	
	comp=Z,678nm,20.6s,baz=39,slow=38						
	comp=Z,2.9nm,0.7s						
KAPI	**Kappang**	**18.82**	**261**	LR	LR	13 42 50.2	
	comp=Z,238nm,18.1s,baz=87,slow=44						
CTAO	**Charters Tower**	**19.24**	**157**		**Pn**	**13 33 23.7**	**+0.3**
CTAO				IAmb	IAmb	13 33 34.5	
	comp=Z,15nm,0.9s						
FITZ	**Fitzroy Crossi**	**20.07**	**218**	P	**P**	**13 33 32.1**	**+0.5**
FITZ	**Fitzroy Crossi**	**20.07**	**218**	P	**P**	**13 33 32.7**	**+1.1**
	comp=Z,3.8nm,0.9s,baz=43,slow=12,SNR=10						
FITZ				LR	LR	13 43 05.6	
	comp=Z,367nm,18.0s,baz=40,slow=42						
	comp=Z,3.8nm,0.9s						
MYLDM	**Lahad Datu**	**21.25**	**291**	P	**P**	**13 33 43.1**	**-1.3**
MYLDM				IAmb	IAmb	13 33 53.4	
	comp=Z,41nm,1.3s						
AS31	**Alice Springs**	**21.66**	**191**		**P**	**13 33 49.8**	**+1.0**
AS31				IAmb	IAmb	13 34 14.2	
	comp=Z,7.0nm,0.7s						
ASAR	**Alice Springs**	**21.66**	**191**		**P**	**13 33 49.4**	**+0.6**
ASAR	**Alice Springs**	**21.66**	**191**	P	**P**	**13 33 49.8**	**+1.0**
	comp=Z,5.1nm,0.8s,baz=22,slow=11,SNR=54						
ASAR				S	**S**	**13 37 49.1**	**+0.3**
	comp=Z,13nm,0.8s,baz=11,slow=21,SNR=9.9						
	comp=Z,5.1nm,0.8s						
TGY	**Tagaytay City**	**23.81**	**314**	LR	LR	13 43 56.6	
	comp=Z,439nm,19.6s,baz=128,slow=38						
EIDS	**Eidsvold**	**25.95**	**153**	P	**P**	**13 34 29.1**	**-1.5**
MBWA	**Marble Bar**	**26.11**	**223**	P	**P**	**13 34 28.8**	**-3.4**
MBWA				IAmb	IAmb	13 34 41.2	
	comp=Z,9.9nm,0.9s						
PSA00	**Pilbara Seismi**	**26.32**	**222**	P	**P**	**13 34 31.1**	**-3.0**
STKA	**Stephens Creek**	**29.55**	**175**	P	**P**	**13 35 03.7**	**+0.9**
	comp=Z,1.0nm,0.4s,baz=354,slow=8.9,SNR=4.7						
STKA				LR	LR	13 48 43.7	
	comp=Z,368nm,18.3s,baz=350,slow=40						
	comp=Z,1.0nm,0.4s						
BBOO	**Buckleboo**	**30.41**	**184**	P	**P**	**13 35 11.0**	**+0.6**
JOW	**Kunigami**	**30.60**	**342**	LR	LR	13 45 23.4	
	comp=Z,396nm,20.5s,baz=342,slow=32						
MORW	**Morawa**	**34.08**	**217**	P	**P**	**13 35 42.2**	**-0.4**
MORW				IAmb	IAmb	13 36 17.2	
	comp=Z,11nm,1.4s						
QIZ	**Qiongzhong**	**35.21**	**308**	P	**P**	**13 35 51.8**	**-0.8**
QIZ				S	**S**	**13 41 23.8**	**-2.5**
QIZ				LR	LR		
	comp=E,200nm,17.2s						
QIZ				LR	LR		
	comp=Z,320nm,16.3s						
JNU	**Nakatsue**	**35.97**	**349**	LR	LR	13 48 01.3	
	comp=Z,226nm,21.1s,baz=170,slow=32						
NWAO	**Narrogin (SRO)**	**36.36**	**211**	LR	LR	13 51 17.3	
	comp=Z,490nm,21.4s,baz=46,slow=37						
NJ2	**Nanjing**	**38.91**	**333**	*e*P	**P**	**13 36 24.1**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NJ2				LR	LR		
	comp=N,190nm,18.9s						
NJ2				LR	LR		
	comp=E,250nm,22.7s						
NJ2				LR	LR		
	comp=Z,550nm,19.9s						
KSRS	**Korea Array**	**40.76**	**347**	P	**P**	**13 36 37.0**	**-2.1**
	comp=Z,0.5nm,0.6s,baz=158,slow=10.0,SNR=4.6						
	comp=Z,0.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**44.00**	**300**		**P**	**13 37 04.3**	**-1.5**
CMAR	**Chiang Mai Arr**	**44.00**	**300**	P	**P**	**13 37 04.7**	**-1.2**
	comp=Z,0.5nm,0.5s,baz=126,slow=6.9,SNR=7.6						
CMAR				LR	LR	13 56 44.2	
	comp=Z,61nm,19.0s,baz=115,slow=38						
	comp=Z,0.5nm,0.5s						
PZH	**PanZhiHua**	**45.56**	**311**	P	**P**	**13 37 19.0**	**+0.6**
JKA	**Kamikawa-asahi**	**46.39**	**4**	P	**P**	**13 37 23.1**	**-1.4**
JKA				IAmb	IAmb	13 38 05.9	
	comp=Z,11nm,1.4s						
BNX	**BinXian**	**48.85**	**350**	⇑P	**P**	**13 37 47.3**	**+3.8**
BNX				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC	**Hu-ho-hao-te**	**49.46**	**333**	*e*P	**P**	**13 37 49.4**	**+0.9**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,70nm,3.7s						
HHC				LR	LR		
	comp=N,250nm,21.9s						
HHC				LR	LR		
	comp=E,140nm,21.0s						
HHC				LR	LR		
	comp=Z,320nm,21.9s						
HEH	**HeiHe**	**53.23**	**351**	*e*P	**P**	**13 38 18.4**	**+2.0**
HEH				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA	**Gaotai**	**54.59**	**324**	*e*P	**P**	**13 38 28.1**	**+1.3**
GTA				sP	sP	13 38 35.8	+4.5
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SONM	**Songino Array**	**57.25**	**335**	LR	LR	14 03 31.0	
	comp=Z,334nm,19.7s,baz=144,slow=36						
EVN	**Everest**	**57.98**	**305**	P	**P**	**13 38 52.3**	**+0.5**
SHEM	**Shemya Is, Ala**	**62.51**	**24**	LR	LR	14 01 02.7	
	comp=Z,76nm,21.9s,baz=262,slow=31						
YAK	**Yakutsk**	**64.53**	**355**	LR	LR	14 04 21.1	
	comp=Z,113nm,22.0s,baz=176,slow=33						
SEY	**Seymchan**	**65.94**	**7**	LR	LR	14 07 20.6	
	comp=Z,30nm,20.0s,baz=206,slow=35						
MKAR	**Makanchi Array**	**69.31**	**322**		**P**	**13 40 04.8**	**-0.8**
MKAR	**Makanchi Array**	**69.31**	**322**	P	**P**	**13 40 05.5**	**-0.1**
	comp=Z,3.8nm,0.9s,baz=119,slow=7.5,SNR=19						
MKAR				LR	LR	14 09 26.2	
	comp=Z,51nm,21.5s,baz=83,slow=35						
	comp=Z,3.8nm,0.9s						
MAKZ	**Makanchi**	**69.51**	**322**		**P**	**13 40 06.4**	**-0.4**
KSH	**Kashi**	**70.61**	**313**	P	**P**	**13 40 17.3**	**+3.4**
KSH				pP	sP	13 40 22.4	+4.0
KSH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KSH				LR	LR		
	comp=N,1μm,18.9s						
KSH				LR	LR		
	comp=E,340nm,16.1s						
KSH				LR	LR		
	comp=Z,150nm,17.9s						
ZALV	**Zalesovo Beam**	**71.46**	**330**		**P**	**13 40 15.7**	**-2.8**
ZALV	**Zalesovo Beam**	**71.46**	**330**	P	**P**	**13 40 16.4**	**-2.2**
	comp=Z,1.5nm,0.7s,baz=104,slow=6.3,SNR=5.3						
	comp=Z,1.5nm,0.7s						
AAK	**Ala-Archa**	**72.73**	**316**	LR	LR	14 15 42.0	
	comp=Z,73nm,18.7s,baz=118,slow=39						
KURK	**Kurchatov**	**73.24**	**325**		**P**	**13 40 28.6**	**-0.6**
KURK				IAmb	IAmb	13 40 32.0	
	comp=Z,4.8nm,1.1s						
KURBB	**Kurchatov Arra**	**73.25**	**325**	P	**P**	**13 40 28.9**	**-0.3**
	comp=Z,3.2nm,1.1s,baz=111,slow=5.8,SNR=14						
	comp=Z,3.2nm,1.1s						
KKAR	**Karatay Array**	**75.66**	**316**	P	**P**	**13 40 43.8**	**+0.3**
VNDA	**Vanda**	**76.18**	**175**	P	**P**	**13 40 47.8**	**+2.0**
	comp=Z,0.9nm,0.9s,baz=312,slow=7.5,SNR=5.6						
	comp=Z,0.9nm,0.9s						
BVAR	**Borovoye Array**	**78.84**	**325**	P	**P**	**13 41 02.0**	**+0.9**
	comp=Z,3.7nm,0.7s,baz=133,slow=8.3,SNR=15						
	comp=Z,3.7nm,0.7s						
KDAK	**Kodiak Island**	**80.92**	**30**	LR	LR	14 13 35.3	
	comp=Z,54nm,19.9s,baz=238,slow=33						
ILAR	**Eielson Array**	**85.61**	**24**	P	**P**	**13 41 35.8**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=258,slow=5.1,SNR=6.1						
ILAR				LR	LR	14 16 05.1	
	comp=Z,44nm,20.4s,baz=252,slow=33						
	comp=Z,0.6nm,0.8s						
BMAR	**Burnt Mountain**	**87.16**	**22**	P	**P**	**13 41 45.1**	**+1.1**
BCAR	**Beaver Creek A**	**87.44**	**27**	P	**P**	**13 41 46.7**	**+1.3**
QSPA	**South Pole Qui**	**87.62**	**180**	P	**P**	**13 41 47.2**	**+0.9**
QSPA	**South Pole Qui**	**87.62**	**180**	P	**P**	**13 41 47.4**	**+1.1**
	comp=Z,1.9nm,0.9s,baz=116,slow=1.0,SNR=8.1						
	comp=Z,1.9nm,0.9s						
H27K	**Steamboat Moun**	**88.10**	**24**	P	**P**	**13 41 49.1**	**+0.6**
H27K				IAmb	IAmb	13 42 08.4	
	comp=Z,6.6nm,1.4s						
INK	**Inuvik**	**91.42**	**22**	LR	LR	14 16 41.2	
	comp=Z,44nm,21.2s,baz=242,slow=31						
BBB	**Bella Bella**	**93.95**	**38**	LR	LR	14 22 17.5	
	comp=Z,63nm,18.1s,baz=235,slow=34						
GNI	**Garni**	**94.31**	**310**	LR	LR	14 28 52.9	
	comp=Z,25nm,19.6s,baz=96,slow=38						
KBZ	**Khabaz**	**95.60**	**314**	LR	LR	14 31 43.0	
	comp=Z,29nm,18.5s,baz=93,slow=39						
CPUP	**Villa Florida**	**147.70**	**153**	PKPbc	**PKiKP**	**13 48 45.4**	**-0.3**
	comp=Z,0.9nm,0.9s,baz=97,slow=20,SNR=3.0						
LPAZ	**La Paz**	**147.90**	**126**	PKPbc	**PKiKP**	**13 48 46.6**	**-0.5**
	comp=Z,1.6nm,0.7s,baz=147,slow=4.4,SNR=4.7						

IDC ***20*** *13:31:01.7±0.9, 2°.13S×138°.45E, h0^{km}, mb4.1/8, mbtmp4.2/11, ML4.2/3, MS4.0/3, Error ellipse: s-maj=30.8km s-min=19.5km az=77.0*

NEIC ***20*** *13:31:03.2±1.4, 2°.2S±0°.1×138°.41E±0°.06, h10^{km}±2^{km}, mb4.3/9, Error ellipse: s-maj=19.3km s-min=4.1km az=27.0*

DJA ***20*** *13:31:04.1±0.3, 2°S±5°×13°8E±°, h10^{km}, M4.5/7, mb4.7/2, MLv4.4/7*

ISC 20 13:31:06.3±0.7**, 2°.18S**±0°.08×**138°.39E**±0°.04**, h36^{km}, n34, σ1^{s}87**/35**, mb4.1**/11**, MS4.2**/3**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.37**	**60**	P	Pn	13 31 10.9	-4.1
SMPI				S	**Sn**	**13 31 14.7**	**-6.9**
GENI	**Genyem**	**1.82**	**103**	P	**Pn**	**13 31 35.6**	**+0.4**
GENI				S	**Sn**	**13 32 00.8**	**+3.7**
SRPI	**Serui, Papua**	**2.17**	**278**	P	**Pn**	**13 31 40.4**	**+0.5**
SRPI				S	**Sn**	**13 32 08.2**	**+2.7**
JAY	**Jayapura**	**2.34**	**98**	Pn	**Pn**	**13 31 41.8**	**-0.5**
	18nm,0.3s,baz=122,slow=16,SNR=1.5						
JAY				Lg	Lg	13 32 10.3	
	24nm,0.3s,baz=121,slow=22,SNR=6.0						
	89nm,0.4s						
JAY	**Jayapura**	**2.34**	**98**	P	**Pn**	**13 31 41.8**	**-0.5**
JAY				S	**Sn**	**13 32 11.8**	**+2.0**
BAKI	**Biak**	**2.48**	**293**	P	**Pn**	**13 31 44.7**	**+0.5**
FAKI	**Fak Fak**	**6.18**	**263**	Pn	**Pn**	**13 32 35.5**	**+0.5**
FAKI	**Fak Fak**	**6.18**	**263**	P	**Pn**	**13 32 35.9**	**+0.8**
	0.2nm68nm,0.8s						
COEN	**Coen**	**12.63**	**158**	Pn	**Pn**	**13 34 01.3**	**-2.2**
MTN	**Manton Dam**	**12.80**	**214**	Pn	**Pn**	**13 34 03.1**	**-2.8**
BATI	**Baumata**	**16.66**	**241**	Pn	**P**	**13 34 59.4**	**0.0**
	8.0nm,0.3s,baz=80,slow=1.3,SNR=6.7						
	33nm,0.5s						
TOLI2	**Tolitoli**	**17.90**	**280**	Pn	**Pn**	**13 35 10.5**	**-2.2**
TOLI2				IAmb	IAmb	13 35 18.1	
	comp=Z,13nm,0.9s						
WB0	**Warramunga Arr**	**17.91**	**192**		**P**	**13 35 12.9**	**-0.2**
WRA	**Warramunga Arr**	**18.10**	**192**	P	**Pn**	**13 35 14.6**	**-0.4**
WRA	**Warramunga Arr**	**18.10**	**192**	P	**P**	**13 35 15.4**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=14,slow=12,SNR=2.5						
	comp=Z,3.3nm,0.7s						
CTAO	**Charters Tower**	**19.39**	**157**		**Pn**	**13 35 33.9**	**+3.2**
CTAO				IAmb	IAmb	13 35 34.8	
	comp=Z,9.4nm,0.8s						
AS31	**Alice Springs**	**21.80**	**191**	P	**P**	**13 35 55.1**	**-0.3**
AS31				IAmb	IAmb	13 36 20.1	
	comp=Z,5.8nm,0.8s						
ASAR	**Alice Springs**	**21.80**	**191**	P	**P**	**13 35 55.1**	**-0.3**
ASAR	**Alice Springs**	**21.80**	**191**	P	**P**	**13 35 55.4**	**0.0**
	comp=Z,8.9nm,0.9s,baz=21,slow=10,SNR=3.2						
ASAR				S	**S**	**13 39 54.5**	**-0.2**
	comp=Z,11nm,0.8s,baz=13,slow=20,SNR=7.4						
	comp=Z,8.9nm,0.9s						
HNR	**Honiara**	**22.61**	**109**	LR	LR	13 45 24.1	
	comp=Z,195nm,18.2s,baz=338,slow=38						
EIDS	**Eidsvold**	**26.10**	**153**	P	**P**	**13 36 37.4**	**+0.5**
EIDS				IAmb	IAmb	13 36 41.6	
	comp=Z,14nm,0.9s						
PSA00	**Pilbara Seismi**	**26.41**	**222**	P	**P**	**13 36 39.4**	**-0.4**
PSA00				IAmb	IAmb	13 37 08.0	
	comp=Z,7.4nm,0.8s						
STKA	**Stephens Creek**	**29.70**	**174**	P	**P**	**13 37 09.1**	**+0.1**
STKA	**Stephens Creek**	**29.70**	**174**	P	**P**	**13 37 10.2**	**+1.2**
	comp=Z,2.1nm,0.7s,baz=332,slow=11,SNR=3.2						
	comp=Z,2.1nm,0.7s						
TUWZ	**Tuamarina**	**50.49**	**145**	P	**P**	**13 40 01.3**	**+0.5**
RPZ	**Rata Peaks**	**50.51**	**150**	LR	LR	13 59 51.1	
	comp=Z,219nm,20.5s,baz=334,slow=34						
MKAR	**Makanchi Array**	**69.17**	**322**	P	**P**	**13 42 10.6**	**+1.3**
	comp=Z,1.2nm,0.7s,baz=116,slow=7.5,SNR=5.9						
	comp=Z,1.2nm,0.7s						
ZALV	**Zalesovo Beam**	**71.32**	**330**	P	**P**	**13 42 22.1**	**0.0**
	comp=Z,0.5nm,0.3s,baz=90,slow=5.8,SNR=1.8						
	comp=Z,0.5nm,0.3s						
KURBB	**Kurchatov Arra**	**73.11**	**325**	P	**P**	**13 42 34.2**	**+1.2**
	comp=Z,1.1nm,0.8s,baz=115,slow=5.6,SNR=5.1						
	comp=Z,1.1nm,0.8s						
BVAR	**Borovoye Array**	**78.69**	**325**	P	**P**	**13 43 06.4**	**+1.6**
	comp=Z,1.7nm,0.5s,baz=128,slow=9.7,SNR=5.9						
	comp=Z,1.7nm,0.5s						
MAW	**Mawson**	**82.50**	**202**	LR	LR	14 16 50.1	
	comp=Z,100nm,19.7s,baz=71,slow=33						
ILAR	**Eielson Array**	**85.48**	**25**	P	**P**	**13 43 40.4**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=246,slow=5.2,SNR=5.1						
	comp=Z,0.9nm,0.8s						
QSPA	**South Pole Qui**	**87.77**	**180**	P	**P**	**13 43 50.8**	**-0.7**
QSPA	**South Pole Qui**	**87.77**	**180**	P	**P**	**13 43 52.4**	**+0.9**
	comp=Z,1.4nm,0.7s,baz=260,slow=1.8,SNR=5.4						
	comp=Z,1.4nm,0.7s						

IDC 20 13:37:51.6±6.7**, 31°.31S**×**177°.34W, h0^{km}, mb3.5**/2**, mbtmp3.5**/2**, Error ellipse: s-maj=294.7km s-min=57.2km az=157.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.63**	**268**	P	P	13 45 57.8	-0.3
	0.4nm,0.7s,baz=111,slow=7.7,SNR=4.3						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**44.70**	**273**	P	P	13 46 06.6	-0.1
	0.7nm,0.8s,baz=113,slow=7.1,SNR=3.2						
	0.7nm,0.8s						
FINES	**FINESS Array B**	**146.19**	**340**	PKPbc	PKPdf	13 57 32.5	+0.3
	0.9nm,0.5s,baz=48,slow=4.0,SNR=11						

GCG 20 13:42:21.0±0.8**, 14°.21N**×**91°.52W, h78^{km}**±10^{km}**, MD3.8, ML3.4, MW3.0, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG0	**El Palmar, Qui**	**0.28**	**38**	*i* P	Pn	13 42 35.1	+1.9
STG0				*i* S	Sn	13 42 46.0	+3.9
STG0				IAML		13 42 51.6	
	comp=E,2μm,0.2s						
STG0				IAML		13 42 53.2	
	comp=Z,672nm,0.2s						
STG8	**El Palmar, Qui**	**0.29**	**34**	*i* P	Pn	13 42 35.6	+2.3
STG8				*i* S	Sn	13 42 47.0	+4.5
STG8				IAML		13 42 48.6	
	comp=Z,544nm,0.1s						
STG8				IAML		13 42 50.4	
	comp=N,1μm,0.2s						
SOKI	**Kika Raxquin**	**0.62**	**11**	*i* P	Pn	13 42 37.3	+1.1
ESSG	**Sabana Grande**	**0.69**	**75**	*i* P	Pn	13 42 36.6	+0.1
ESSG				*i* S	Sn	13 42 48.7	+0.6
ESSG				IAML		13 42 49.3	
	comp=N,523nm,0.1s						
ESSG				IAML		13 42 49.8	
	comp=Z,352nm,0.7s						
FG8	**Yepocapa, Chim**	**0.93**	**87**	*i* P	Pn	13 42 36.2	-3.1
FG8				*i* S	Sn	13 42 48.1	-4.8
FG16	**Alotenango, Sa**	**0.98**	**86**	*i* P	Pn	13 42 37.3	-2.6
FG16				*i* S	Sn	13 42 50.1	-3.9
FG16				IAML		13 42 52.9	
	comp=Z,1μm,0.4s						
FG16				IAML		13 42 53.5	
	comp=E,8μm,0.2s						
NUBE	**Las Nubes**	**1.72**	**100**	*i* P	Pn	13 42 49.4	+0.1
NUBE				*i* S	Sn	13 43 10.3	-0.3
JAYA	**Jayaque - finc**	**2.09**	**105**	*i* P	Pn	13 42 54.6	+0.5
MTO3	**Montecristo**	**2.10**	**84**	*i* P	Pn	13 42 55.4	+0.9

IDC ***20*** *13:46:11.3±0.8, 2°.17S×138°.46E, h0^{km}, mb3.9/9, mbtmp3.9/11, ML4.0/2, MS3.6/10, Error ellipse: s-maj=27.1km s-min=17.8km az=76.0*

NEIC ***20*** *13:46:12.5±1.8, 2°.3S±0°.1×138°.35E±0°.07, h10^{km}±1^{km}, mb4.2/11, Error ellipse: s-maj=21.6km s-min=11.7km az=359.0*

DJA ***20*** *13:46:12.0±0.4, 2°S±5°×13°8E±°, h10^{km}, M4.7/7, mb5.4/1, MLv4.3/7*

ISC 20 13:46:12.6±0.6**, 2°.23S**±0°.07×**138°.39E**±0°.04**, h10^{km}, n41, σ1^{s}33**/36**, mb4.1**/13**, MS3.5**/6**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.40**	**53**	P	**Pg**	**13 46 20.0**	**-0.5**
GENI	**Genyem**	**1.81**	**102**	P	**Pn**	**13 46 44.1**	**+0.2**
GENI				S	**Sn**	**13 47 08.3**	**+1.4**
SRPI	**Serui, Papua**	**2.18**	**279**	P	**Pn**	**13 46 48.6**	**-0.3**
SRPI				S	**Sb**	**13 47 17.2**	**-2.0**
JAY	**Jayapura**	**2.33**	**97**	Pn	**Pn**	**13 46 50.8**	**-0.3**
	25nm,0.3s,baz=236,slow=11,SNR=136						
JAY				Lg	Lg	13 47 19.5	
	21nm,0.3s,baz=359,slow=22,SNR=7.5						
JAY				LR	LR	13 48 03.7	
	comp=Z,971nm,18.6s,baz=240,slow=50						
	93nm,0.5s						
JAY	**Jayapura**	**2.33**	**97**	P	**Pn**	**13 46 49.3**	**-1.7**
BAKI	**Biak**	**2.50**	**294**	P	**Pn**	**13 46 52.9**	**-0.5**
RKPI	**Ransiki, Papua**	**4.27**	**280**	P	**Pn**	**13 47 18.1**	**+0.4**
KMPI	**Kaimana, Papua**	**4.89**	**253**	P	**Pn**	**13 47 28.1**	**+1.9**
FAKI	**Fak Fak**	**6.17**	**264**	Pn	**Pn**	**13 47 42.5**	**-1.4**
COEN	**Coen**	**12.57**	**158**	Pn	**Pn**	**13 49 12.2**	**+0.4**
MTN	**Manton Dam**	**12.76**	**214**	Pn	**Pn**	**13 49 16.3**	**+2.1**
KNRA	**Kununurra**	**16.39**	**215**	Pn	**Pn**	**13 50 00.7**	**-2.2**
KNRA				IAmb	IAmb	13 50 39.0	
	comp=Z,19nm,1.1s						
GUMO	**Guam**	**16.98**	**22**	LR	LR	13 56 32.0	
	comp=Z,81nm,18.3s,baz=202,slow=37						
WB0	**Warramunga Arr**	**17.86**	**192**		**Pn**	**13 50 19.9**	**-1.5**
WB0				IAmb	IAmb	13 50 47.0	
	comp=Z,11nm,1.1s						
WR8	**Warramunga Arr**	**18.02**	**192**		**Pn**	**13 50 22.4**	**-1.0**
WR8				IAmb	IAmb	13 50 39.8	
	comp=Z,8.4nm,1.1s						
WRA	**Warramunga Arr**	**18.04**	**192**		**Pn**	**13 50 22.7**	**-0.9**
WRA	**Warramunga Arr**	**18.04**	**192**	P	**P**	**13 50 23.9**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=19,slow=12,SNR=13						
WRA				LR	LR	13 57 54.0	
	comp=Z,367nm,20.5s,baz=352,slow=39						
	comp=Z,1.0nm,0.4s						
KAPI	**Kappang**	**18.80**	**261**	LR	LR	13 59 04.7	
	comp=Z,118nm,19.6s,baz=91,slow=41						
FITZ	**Fitzroy Crossi**	**20.13**	**218**	P	Pn	13 50 48.8	+0.1
	comp=Z,2.1nm,1.0s,baz=75,slow=3.8,SNR=3.6						
	comp=Z,2.1nm,1.0s						
AS31	**Alice Springs**	**21.75**	**191**	P	**P**	**13 51 04.9**	**+0.5**
ASAR	**Alice Springs**	**21.75**	**191**	P	**P**	**13 51 04.0**	**-0.5**
ASAR	**Alice Springs**	**21.75**	**191**	P	**P**	**13 51 04.8**	**+0.3**
	comp=Z,2.9nm,0.8s,baz=20,slow=11,SNR=22						
ASAR				LR	LR	14 00 09.5	
	comp=Z,287nm,18.7s,baz=31,slow=38						
	comp=Z,2.9nm,0.8s						
EIDS	**Eidsvold**	**26.05**	**153**	P	**P**	**13 51 45.5**	**-0.9**
EIDS				IAmb	IAmb	13 51 54.8	
	comp=Z,16nm,1.2s						
MBWA	**Marble Bar**	**26.16**	**223**	P	**P**	**13 51 44.9**	**-2.5**
MBWA				IAmb	IAmb	13 52 03.8	
	comp=Z,9.1nm,1.1s						
PSA00	**Pilbara Seismi**	**26.37**	**222**	P	**P**	**13 51 46.0**	**-3.2**
PSA00				IAmb	IAmb	13 52 27.3	
	comp=Z,6.1nm,0.9s						
STKA	**Stephens Creek**	**29.64**	**174**	P	**P**	**13 52 17.6**	**-0.8**
STKA	**Stephens Creek**	**29.64**	**174**	P	**P**	**13 52 18.9**	**+0.5**
	comp=Z,1.6nm,0.7s,baz=340,slow=8.9,SNR=4.2						
STKA				LR	LR	14 05 20.0	
	comp=Z,206nm,20.0s,baz=4.7,slow=39						
	comp=Z,1.6nm,0.7s						
LEM	**Lembang**	**31.01**	**261**	LR	LR	14 07 44.9	
	comp=Z,78nm,18.5s,baz=136,slow=42						
MJAR	**Matsushiro Arr**	**38.57**	**360**	LR	LR	14 06 21.5	
	comp=Z,50nm,19.0s,baz=187,slow=31						
MSVF	**Nonsavu**	**41.85**	**114**	LR	LR	14 09 20.9	
	comp=Z,76nm,20.9s,baz=200,slow=33						
CMAR	**Chiang Mai Arr**	**43.92**	**300**	P	**P**	**13 54 22.2**	**+2.2**
	comp=Z,0.9nm,0.4s,baz=116,slow=6.2,SNR=6.1						
	comp=Z,0.9nm,0.4s						
RAR	**Rarotonga**	**63.00**	**113**	LR	LR	14 21 44.6	
	comp=Z,28nm,21.6s,baz=76,slow=34						
MKAR	**Makanchi Array**	**69.22**	**322**	P	**P**	**13 57 19.4**	**-0.3**
MKAR	**Makanchi Array**	**69.22**	**322**	P	**P**	**13 57 19.7**	**0.0**
	comp=Z,1.1nm,0.7s,baz=117,slow=7.3,SNR=11						
	comp=Z,1.1nm,0.7s						
MAKZ	**Makanchi**	**69.41**	**322**		**P**	**13 57 20.4**	**-0.5**
MAKZ				IAmb	IAmb	13 57 27.2	
	comp=Z,2.6nm,0.9s						
KSH	**Kashi**	**70.53**	**313**	P	**P**	**13 57 29.4**	**+1.3**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KURBB	**Kurchatov Arra**	**73.15**	**325**	P	**P**	**13 57 43.3**	**-0.2**
	comp=Z,1.2nm,0.9s,baz=117,slow=5.3,SNR=6.7						

	comp=Z,1.2nm,0.9s						
BVAR	Borovoye Array	78.74	325	P	P	13 58 15.1	-0.2
	comp=Z,2.5nm,0.8s,baz=108,slow=9.5,SNR=12						
	comp=Z,2.5nm,0.8s						
ILAR	Eielson Array	85.53	24	P	P	13 58 51.0	+0.4
	comp=Z,0.5nm,0.9s,baz=249,slow=4.1,SNR=5.2						
	comp=Z,0.5nm,0.9s						
QSPA	South Pole Qui	87.71	180	P	P	13 59 03.0	+1.4
QSPA	South Pole Qui	87.71	180	P	P	13 59 02.7	+1.2
	comp=Z,0.8nm,0.9s,baz=63,slow=12,SNR=1.8						
	comp=Z,0.8nm,0.9s						

*IDC **20** 13:48:09.3±1.5, 2°.31N×128°.12E, h0^{km}, mb3.9/5, mbtmp4.0/5, MS3.8/2, Error ellipse: s-maj=131.7km s-min=18.5km az=67.0*

*DJA **20** 13:48:29.5±0.9, 2°N±5°×12°8E±°, h109^{km}±11^{km}, M4.0/6, mB5.1/1, mb4.4/1, MLv3.7/6, Mw(mB)4.5/1*

ISC 20 13:48:10.4±1.4**, 2°.4N**±0°.2×**128°.4E**±0°.2**, h10^{km}, n9, σ0^{s}58**/7**, mb4.2**/5**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	3.11	294	P	Pg	13 49 14.4	+4.2
SGSI				S	Sg	13 49 50.4	-0.2
MSAI	Masohi	5.77	175	P	Pb	13 49 51.6	+0.4
WRA	Warramunga Arr	22.99	166	P	P	13 53 15.9	+0.3
	2.6nm,0.4s,baz=344,slow=10,SNR=21						
	2.6nm,0.4s						
JOW	Kunigami	24.26	360	LR	LR	14 01 54.8	
	comp=Z,136nm,21.0s,baz=252,slow=34						
ASAR	Alice Springs	26.49	169	P	P	13 53 47.6	-0.6
	0.2nm,0.5s,baz=351,slow=9.2,SNR=1.2						
	0.2nm,0.5s						
STKA	Stephens Creek	36.35	161	P	P	13 55 14.2	-0.6
	0.8nm,0.3s,baz=345,slow=9.3,SNR=6.9						
	0.8nm,0.3s						
MKAR	Makanchi Array	59.56	325	P	P	13 58 14.9	+0.6
	1.2nm,0.4s,baz=117,slow=7.9,SNR=17						
	1.2nm,0.4s						
KURBB	Kurchatov Arra	63.72	327	P	P	13 58 42.4	+0.1
	1.2nm,0.5s,baz=127,slow=6.1,SNR=14						
	1.2nm,0.5s						
IDI	Anoyia	99.58	306	LR	LR	14 52 19.3	
	comp=Z,65nm,21.9s,baz=305,slow=39						

*BER **20** 13:48:59.8±4.7, 71°.56N×12°.12W, h10^{km}, Mw3.6, Confirmed Earthquake*

ISC 20 13:48:56.7±1.5**, 71°.6N**±0°.1×**12°.3W**±0°.1**, h10^{km}, n11, σ2^{s}28**/19**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMI	Jan Mayen	1.32	119	eP	Pg	13 49 22.2	+0.3
JMI				eS	Sb	13 49 37.3	-1.0
JMIC	Jan Mayen	1.35	115	eP	Pb	13 49 22.2	+0.2
JMIC				eS	Sb	13 49 37.5	-1.8
JMIC				IAML		13 49 40.9	
	comp=Z,35nm,0.2s						
JNW	Jan Mayen West	1.35	113	eP	Pb	13 49 22.1	0.0
JNW				eS	Sb	13 49 37.8	-1.6
JNW				IAML		13 49 40.7	
	comp=Z,48nm,0.2s						
JNE	Jan Mayen East	1.41	113	eP	Pb	13 49 23.1	+0.1
JNE				eS	Sn	13 49 38.9	-2.1
JNE				IAML		13 49 41.9	
	comp=Z,82nm,0.3s						
DBG	Daneborg	3.60	323	eP	Pn	13 49 54.5	+2.1
DBG				eS	Sn	13 50 32.7	-2.2
DBG	Daneborg	3.60	323	i P	Pn	13 49 54.2	+1.8
DBG				i S	Sn	13 50 32.5	-2.4
DAG	Danmarks Havn	5.49	344	eP	Pn	13 50 20.4	+2.0
DAG				eS	Sn	13 51 17.3	-4.1
DAG	Danmarks Havn	5.49	344	i P	Pn	13 50 20.2	+1.9
DAG				i S	Sn	13 51 18.8	-2.6
HSPB	Hornsund (broa	9.18	41	eP	Pn	13 51 11.3	+2.4
HSPB				IAML		13 51 11.7	
	comp=Z,1.4nm,0.3s						
KBS	Kingsbay	9.49	29	eP	Pn	13 51 15.1	+2.0
KBS				IAML		13 51 16.9	
	comp=Z,0.7nm,0.1s						
SPA0	Spitsbergen Ar	9.83	35	eP	Pn	13 51 21.3	+3.5

*IDC **20** 14:01:16.1±0.9, 28°.49N×104°.90E, h0^{km}, mb3.8/9, mbtmp3.8/11, ML4.0/1, MS3.3/1, Error ellipse: s-maj=25.8km s-min=16.5km az=60.0*

ISC 20 14:01:19.0±0.9**, 28°.5N**±0°.1×**104°.9E**±0°.2**, h19^{km}, n11, σ0^{s}44**/11**, mb3.8**/9**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.41	210	Pn	Pn	14 04 01.4	+0.2
	1.8nm,0.9s,baz=10,slow=12,SNR=11						
CMAR				LR	LR	14 08 54.3	
	comp=Z,137nm,19.9s,baz=40,slow=40						
SONM	Songino Array	19.32	3	P	Pn	14 05 44.6	+0.3
	0.5nm,0.3s,baz=182,slow=12,SNR=6.3						
	1.4nm,0.7s						
KSRS	Korea Array	21.21	59	P	P	14 06 03.9	+0.2
	3.3nm,0.8s,baz=235,slow=11,SNR=10						
	3.3nm,0.8s						
MKAR	Makanchi Array	25.42	322	P	P	14 06 45.2	-0.2
	1.9nm,0.7s,baz=122,slow=12,SNR=21						
	1.9nm,0.7s						
USRK	Ussuriysk Ar.	26.67	47	P	P	14 06 56.6	-0.1
	2.5nm,0.8s,baz=263,slow=7.7,SNR=6.0						
	2.5nm,0.8s						
ZALV	Zalesovo Beam	29.36	336	P	P	14 07 20.7	+0.1
	0.4nm,0.3s,baz=123,slow=10,SNR=2.2						
	0.4nm,0.3s						
KURBB	Kurchatov Arra	29.74	325	P	P	14 07 24.1	0.0
	1.2nm,0.7s,baz=132,slow=9.5,SNR=13						
	1.2nm,0.7s						
BVAR	Borovoye Array	35.27	324	P	P	14 08 11.9	-0.5
	0.8nm,0.7s,baz=120,slow=8.8,SNR=4.4						
	0.8nm,0.7s						
WRA	Warramunga Arr	55.94	146	P	P	14 10 55.2	-0.9
	1.0nm,0.7s,baz=338,slow=8.2,SNR=8.8						
	1.0nm,0.7s						
ASAR	Alice Springs	58.92	149	P	P	14 11 17.6	+0.4
	0.5nm,0.5s,baz=331,slow=6.2,SNR=11						
	0.5nm,0.5s						
GERES	GERESS Array B	69.87	315	P	P	14 12 28.9	+0.3
	0.3nm,0.5s,baz=64,slow=3.1,SNR=3.7						
	0.3nm,0.5s						

*IDC **20** 14:06:29.8±1.8, 26°.25N×110°.57W, h0^{km}, mb3.0/1, mbtmp3.0/4, ML3.3/3, MS2.6/2, Error ellipse: s-maj=25.3km s-min=21.2km az=159.0*

*MEX **20** 14:06:31.8±0.4, 26°.46N×110°.74W, h11^{km}±6^{km}, MD4.2*

ISC 20 14:06:26.6±1.2**, 26°.38N**±0°.03×**110°.67W**±0°.03**, h13^{km}**±10^{km}**, n21, σ1^{s}97**/35**, 2C-2D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NE77	Loreto B.C.S	0.72	240	eP	Pn	14 06 43.7	+1.2
NE77				eS	Sb	14 06 52.3	+1.4
NE77				IAML		14 06 54.4	
	comp=N,5µm,0.6s						
NE77				⇓e		14 06 54.8	
NE77				IAML		14 06 54.8	
	comp=E,4µm,0.8s						
SNIRB	San Nicol¡s	0.81	282	⇑eP	Pn	14 06 43.9	+0.2
SNIRB				eS	Sg	14 06 51.7	-1.1
SNIRB				IAML		14 06 56.0	
	comp=N,3µm,0.6s						
SNIRB				⇑e		14 06 56.0	
UAGRB	Rancho Ultima	0.97	213	⇓eP	Pn	14 06 47.5	+1.5
UAGRB				eS	Sn	14 07 00.8	+1.1
GUYB	Guaymas	1.52	353	eP	Pb	14 06 54.3	-0.4
GUYB				eS	Sn	14 07 11.1	-2.1
GUYB	Guaymas	1.52	353	eP	Pb	14 06 54.3	-0.4
GUYB				i S	Sn	14 07 11.6	-1.6
TSIG	Topolobambo	1.66	118	eP	Pg	14 06 58.5	+0.1
TSIG				eS	Sg	14 07 19.8	-0.1
SRIG	Santa Rosalia	1.69	304	eP	Pn	14 06 55.0	-0.8
SRIG				eS	Sn	14 07 12.1	-5.3
SRIG	Santa Rosalia	1.69	304	eP	Pn	14 06 56.3	+0.5
SRIG				eS	Sn	14 07 15.7	-1.7
CSIG	Choix	2.10	77	eP	Pb	14 07 04.5	-0.1
CSIG				eS	Sb	14 07 29.2	-1.5
LPIG	La Paz	2.29	172	Pn	Pb	14 07 06.6	-1.2
	comp=N,11nm,0.3s,baz=4.8,slow=9.1,SNR=5.0						
LPIG				LR	LR	14 07 32.3	
	comp=N,45nm,18.6s,baz=228,slow=29						
	comp=N,31nm,0.3s						
HSIG		2.64	355	eP	Pn	14 07 10.1	+1.1
HSIG				eS	Sn	14 07 40.7	-0.2
BKIRB	Bahia Kino	2.73	335	eP	Pg	14 07 21.9	+2.9
BKIRB				eS	Sg	14 08 08.6	+14
SLBS	Sierra La Lagu	2.76	166	eP	Pb	14 07 15.3	-0.7
SLBS				eS	Sb	14 07 50.4	+0.6
SLBS	Sierra La Lagu	2.76	166	eP	Pb	14 07 13.8	-2.1
SLBS				eS	Sb	14 07 49.0	-0.8
SFQB	San Francisqui	2.81	316	eP	Pn	14 07 11.6	+0.4
SSIG	Sanalona	3.54	115	eP	Pn	14 07 20.2	-1.1
SSIG				eS	Sn	14 08 05.7	+2.5
NZIG	Nacozari, Sono	4.09	14	eP	Pb	14 07 36.1	-2.6
NZIG				eS	Sn	14 08 19.8	+2.8
PDIG	Papasquiaro	4.94	105	eP	Pb	14 07 49.7	-3.4
PDIG				eS	Sb	14 08 51.6	-0.9
TXAR	Lajitas Array	6.86	63	Pn	Pn	14 08 11.7	+4.7
	comp=N,0.1nm,0.3s,baz=244,slow=13,SNR=5.3						
TXAR				Sn	Sn	14 09 29.4	+4.4
	comp=N,0.3nm,0.3s,baz=243,slow=17,SNR=7.4						
TXAR				Lg	Lg	14 10 06.1	
	comp=N,0.4nm,0.3s,baz=248,slow=29,SNR=6.5						
TXAR				LR	LR	14 11 02.5	
	comp=N,110nm,18.1s,baz=245,slow=40						
	comp=N,0.2nm,0.4s						
NVAR	Mina Array Bea	13.63	334	Pn	P	14 09 49.3	+0.6
	comp=N,0.1nm,0.3s,baz=160,slow=8.0,SNR=2.0						
	comp=N,0.3nm,0.6s						
ILAR	Eielson Array	44.81	339	P	P	14 14 46.2	+6.3
	comp=N,0.2nm,0.7s,baz=118,slow=7.3,SNR=4.9						
	comp=N,0.2nm,0.7s						

*IDC **20** 14:07:41.1±0.8, 2°.23S×138°.51E, h0^{km}, mb3.8/7, mbtmp3.8/9, ML3.7/2, MS3.2/2, Error ellipse: s-maj=22.7km s-min=15.4km az=22.0*

*DJA **20** 14:07:43.7±0.6, 2°S±6°×13°8E±°, h14^{km}±4^{km}, M4.0/7, MLv4.0/7*

ISC 20 14:07:45.9±0.8**, 2°.2S**±0°.1×**138°.42E**±0°.05**, h36^{km}, n17, σ1^{s}49**/17**, mb3.9**/8**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.34	58	P	Pn	14 07 51.2	-3.1
GENI	Genyem	1.80	104	P	Pn	14 08 15.1	+0.7
SRPI	Serui, Papua	2.20	278	P	Pn	14 08 19.6	-0.3
JAY	Jayapura	2.31	99	Pn	Pn	14 08 20.9	-0.6
	21nm,0.3s,baz=234,slow=11,SNR=162						
JAY				Lg	Lg	14 08 51.0	
	12nm,0.3s,baz=256,slow=18,SNR=8.8						
	42nm,0.3s						
JAY	Jayapura	2.31	99	P	Pn	14 08 21.3	-0.2
JAY				S	Sn	14 08 50.5	+1.8
BAKI	Biak	2.51	293	P	Pn	14 08 24.1	-0.1
BAKI				S	Sn	14 08 54.7	+1.2
PMG	Port Moresby	11.28	130	LR	LR	14 15 58.7	
	comp=Z,95nm,21.8s,baz=338,slow=45						
WRA	Warramunga Arr	18.11	192	P	Pn	14 11 53.5	-1.2
	0.3nm,0.3s,baz=15,slow=12,SNR=11						
	0.7nm,0.4s						
ASAR	Alice Springs	21.81	191	P	P	14 12 35.2	+0.1
	1.4nm,0.7s,baz=23,slow=10,SNR=18						
	1.4nm,0.7s						
STKA	Stephens Creek	29.70	175	LR	LR	14 26 47.1	
	comp=Z,67nm,20.5s,baz=24,slow=39						
MKAR	Makanchi Array	69.19	322	P	P	14 18 51.4	+2.4
	1.6nm,1.0s,baz=117,slow=7.8,SNR=9.2						
	1.6nm,1.0s						
KSH	Kashi	70.50	313	P	P	14 18 56.1	-1.3
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ZALV	Zalesovo Beam	71.33	330	P	P	14 19 03.9	+2.1
	comp=Z,0.5nm,0.4s,baz=96,slow=1.4,SNR=1.9						
	comp=Z,0.5nm,0.4s						
KURBB	Kurchatov Arra	73.12	325	P	P	14 19 13.7	+1.0
	comp=Z,0.9nm,0.9s,baz=114,slow=4.9,SNR=4.3						
	comp=Z,0.9nm,0.9s						
BVAR	Borovoye Array	78.71	325	P	P	14 19 45.6	+1.1
	comp=Z,1.4nm,0.7s,baz=102,slow=6.8,SNR=7.4						
	comp=Z,1.4nm,0.7s						
ILAR	Eielson Array	85.47	24	P	P	14 20 19.3	-0.4
	comp=Z,0.2nm,0.8s,baz=260,slow=7.4,SNR=4.6						
	comp=Z,0.2nm,0.8s						
QSPA	South Pole Qui	87.77	180	P	P	14 20 30.3	-0.8
	comp=Z,1.0nm,0.9s,baz=196,slow=10.0,SNR=2.2						
	comp=Z,1.0nm,0.9s						

*IDC **20** 14:17:53.2±1.4, 2°.19S×138°.43E, h0^{km}, mb3.5/3, mbtmp3.5/5, ML3.4/2, Error ellipse: s-maj=35.8km s-min=27.6km az=68.0*

*DJA **20** 14:17:54.9±0.6, 2°S±5°×13°8E±°, h10^{km}±4^{km}, M4.0/7, mb4.3/1, MLv3.8/7*

ISC 20 14:17:58.5±0.9**, 2°.2S**±0°.1×**138°.38E**±0°.05**, h36^{km}, n11, σ1^{s}43**/14**, mb3.5**/3**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.40	56	P	Pn	14 18 01.9	-5.6
GENI	Genyem	1.83	102	P	Pn	14 18 26.7	-0.7
GENI				S	Sn	14 18 50.5	+1.2
SRPI	Serui, Papua	2.16	279	P	Pn	14 18 29.1	-2.9
SRPI				S	Sn	14 18 59.4	+1.8
JAY	Jayapura	2.34	97	Pn	Pn	14 18 32.6	-1.9
	6.4nm,0.3s,baz=206,slow=13,SNR=7.9						
JAY				Lg	Lg	14 19 00.7	
	7.9nm,0.3s,baz=125,slow=21,SNR=10						
	35nm,0.6s						
JAY	Jayapura	2.34	97	P	Pn	14 18 33.4	-1.1
JAY				S	Sn	14 19 03.5	+1.4
BAKI	Biak	2.49	294	P	Pn	14 18 35.9	-0.6
BAKI				S	Sn	14 19 06.3	+0.7
FAKI	Fak Fak	6.16	263	P	Pn	14 19 27.2	+0.1
WRA	Warramunga Arr	18.06	192	P	Pn	14 22 07.1	+0.4
	0.2nm,0.3s,baz=20,slow=12,SNR=2.1						
	0.5nm,0.4s						
ASAR	Alice Springs	21.76	191	P	P	14 22 46.5	-0.7
	0.6nm,0.6s,baz=20,slow=11,SNR=6.3						
	0.6nm,0.6s						
MKAR	Makanchi Array	69.19	322	P	P	14 29 01.6	0.0
	0.3nm,0.6s,baz=108,slow=9.4,SNR=2.7						
	0.3nm,0.6s						
BVAR	Borovoye Array	78.72	325	P	P	14 29 57.8	+0.7
	0.6nm,0.5s,baz=98,slow=3.0,SNR=3.9						
	0.6nm,0.5s						

*NEIC **20** 14:30:06.5±2.4, 33°.35S±0°.05×119°.52E±0°.08, h10^{km}±1^{km}, mb4.2/12, Error ellipse: s-maj=13.8km s-min=5.9km az=54.0*

*IDC **20** 14:30:07.8±1.2, 33°.08S×119°.35E, h0^{km}, mb4.5/2, mbtmp4.4/6, ML4.4/4, Error ellipse: s-maj=27.9km s-min=13.5km az=176.0*

*NOU **20** 14:30:08.7, 33°.24S×119°.30E, h0^{km}, mb4.3/11, Western Australia*

*AUST **20** 14:30:09.4±0.3, 33°S±3°×11°9E±°, h10^{km}, mb4.5/6, ML4.2/10, Error ellipse: s-maj=5.6km s-min=3.6km az=176.6*

*CUPWA **20** 14:30:11.0±4.3, 33°.24S×119°.24E, h2^{km}±16^{km}, ML4.3, Region: WESTERN AUSTRALIA*

ISC 20 14:30:06.3±1.6**, 33°.30S**±0°.04×**119°.49E**±0°.04**, h7^{km}**±11^{km}**, n76, σ2^{s}13**/80**, mb4.8**/6**, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUKUL	Kulin High Sch	1.29	299	P	Pn	14 30 30.2	-0.6
AUKUL				S	Sb	14 30 44.2	-3.6
GNOT	Gnowangerup To	1.35	242	P	Pg	14 30 32.8	+0.6
GNOT				S	Sg	14 30 49.8	+0.2
CORI2	Corrigin	1.90	309	P	Pb	14 30 41.7	+0.3
CORI2				S	Sn	14 31 03.0	-0.4
NWAO	Narrogin (SRO)	1.93	281	P	Pn	14 30 40.5	+0.9
NWAO	Narrogin (SRO)	1.93	281	Pn	Pn	14 30 40.9	+1.3
	159nm,0.3s,baz=102,slow=15,SNR=1503						
NWAO				Lg	Lg	14 31 03.0	
	864nm,0.3s,baz=8.6,slow=18,SNR=51						
NWAO	Narrogin (SRO)	1.93	281	P	Pn	14 30 40.9	+1.3
NWAO	Narrogin (SRO)	1.93	281	S	Sn	14 31 03.0	-1.1
NWAO	Narrogin (SRO)	1.93	281	P	Pn	14 30 40.5	+0.9
NWAO				S	Sn	14 31 02.6	-1.5
PING	Pingelly	2.25	290	P	Pn	14 30 45.5	+1.6
PING	Pingelly	2.25	290	S	Sn	14 31 12.8	+0.9
KLBR	Kellerberrin	2.25	319	P	Pn	14 30 45.5	+1.5
KLBR	Kellerberrin	2.25	319	S	Sn	14 31 13.1	+1.1
KLBR	Kellerberrin	2.25	319	P	Pn	14 30 45.1	+1.1
KLBR	Kellerberrin	2.25	319	S	Sn	14 31 13.2	+1.2
KLBR	Kellerberrin	2.25	319	P	Pn	14 30 45.5	+1.5
RKGY	Rocky Gully	2.46	237	P	Pb	14 30 49.1	-1.8
RKGY				S	Sb	14 31 20.0	-1.5
RKGY	Rocky Gully	2.46	237	P	Pb	14 30 49.1	-1.8
MEKS	Meckering Sout	2.62	307	P	Pb	14 30 52.9	-0.7
KOO6	Koorda	3.00	325	P	Pn	14 30 56.5	+2.2
KOO6				S	Sb	14 31 35.8	-1.2
AUHAR	St Anne's Scho	3.03	273	P	Pn	14 30 55.9	+1.2
MUN	Mundaring	3.07	295	P	Pn	14 30 55.8	+0.5
MUN	Mundaring	3.07	295	S	Sn	14 31 30.3	-1.8
MUN	Mundaring	3.07	295	P	Pn	14 30 55.7	+0.5
MUN	Mundaring	3.07	295	P	Pn	14 30 55.8	+0.5
MUN	Mundaring	3.07	295	S	Sn	14 31 30.3	-1.8
BLDU	Ballidu	3.58	318	P	Pn	14 31 02.4	+0.3
BLDU	Ballidu	3.58	318	S	Sn	14 31 40.4	-4.3
BLDU	Ballidu	3.58	318	P	Pn	14 31 02.6	+0.4
BLDU	Ballidu	3.58	318	P	Pn	14 31 02.4	+0.3
MORW	Morawa	5.15	324		Pn	14 31 24.3	+0.5
MORW	Morawa	5.15	324	P	Pn	14 31 24.4	+0.5
MORW	Morawa	5.15	324	S	Sn	14 32 20.9	-2.7
MORW	Morawa	5.15	324	P	Pn	14 31 24.4	+0.5
MORW	Morawa	5.15	324	P	Pn	14 31 24.4	+0.5
MEEK	Meekatharra	6.69	353	P	Pn	14 31 46.8	+1.8
MEEK	Meekatharra	6.69	353	S	Sn	14 32 58.3	-3.1
MEEK	Meekatharra	6.69	353	P	Pn	14 31 46.8	+1.8
FORT	Forrest	7.69	73		Pn	14 32 03.9	+5.2
FORT	Forrest	7.69	73	P	Pn	14 32 03.7	+4.9
	comp=Z,0.6nmcomp=Z,50nm,0.7s						
FORT	Forrest	7.69	73	S	Sn	14 33 31.9	+5.8
FORT	Forrest	7.69	73	P	Pn	14 32 03.7	+5.0
WRKA	Warakurna	11.26	45	P	Pn	14 32 50.5	+2.7
GIRL	Giralia	11.59	335	Pn	Pn	14 32 48.5	-3.6
GIRL	Giralia	11.59	335	P	Pn	14 32 52.0	-0.2
	comp=Z,28nm,1.4s						
PSAD3	Pilbara Seismi	11.62	1	P	Pn	14 32 52.2	-0.4
PSA00	Pilbara Seismi	11.69	2	Pn	Pn	14 32 52.9	-0.7
PSA00	Pilbara Seismi	11.69	2	Pn	Pn	14 32 52.5	-1.0
PSA00	Pilbara Seismi	11.69	2	P	Pn	14 32 53.8	+0.3
	comp=Z,8.6nm,0.5s						
MBWA	Marble Bar	12.10	1	Pn	Pn	14 32 58.4	-0.8
MBWA	Marble Bar	12.10	1	P	Pn	14 32 58.3	-0.8
MULG	Mulgathing	12.75	80	P	Pn	14 33 11.2	+3.1
	comp=Z,17nm,2.2s						
BBOO	Buckleboo	13.90	93	Pn	Pn	14 33 23.4	-0.4
BBOO	Buckleboo	13.90	93	P	P	14 33 27.8	-4.3
	comp=Z,29nm,2.6s						
AS10	Alice Springs	15.87	57	P	Pn	14 33 50.5	+0.3
	comp=Z,23nm,1.0s						
ASAR	Alice Springs	15.88	57		Pn	14 33 49.7	-0.7
ASAR	Alice Springs	15.88	57	Pn	Pn	14 33 51.8	+1.4
	comp=Z,1.0nm,0.3s,baz=226,slow=10,SNR=108						
ASAR				Sn	Sn	14 36 38.3	-8.3
	comp=Z,0.5nm,0.3s,baz=238,slow=22,SNR=9.2						
ASAR				Lg	Lg	14 38 31.4	
	comp=Z,0.4nm,0.3s,baz=229,slow=23,SNR=7.1						
	comp=Z,17nm,0.9s						
AS31	Alice Springs	15.88	57		Pn	14 33 50.0	-0.4
FITZ	Fitzroy Crossi	16.11	22	Pn	Pn	14 33 52.5	-0.8
FITZ	Fitzroy Crossi	16.11	22	Pn	Pn	14 33 52.5	-0.8
	comp=Z,2.8nm,0.3s,baz=206,slow=12,SNR=68						
	comp=Z,7.9nm,0.4s						
STKA	Stephens Creek	18.68	92	P	Pn	14 34 25.3	0.0
STKA	Stephens Creek	18.68	92	P	Pn	14 34 29.4	+4.1
	comp=Z,0.5nm,0.3s,baz=247,slow=8.3,SNR=7.3						
	comp=Z,4.4nm,0.9s						
WRA	Warramunga Arr	18.76	49		P	14 34 26.1	+0.1
WRA	Warramunga Arr	18.76	49	P	Pn	14 34 26.4	0.0
	comp=Z,1.0nm,0.3s,baz=230,slow=12,SNR=49						
WRA				S	Sn	14 37 41.3	-15
	comp=Z,1.1nm,0.6s,baz=228,slow=21,SNR=4.9						
	comp=Z,1.9nm,0.3s						
WB2	Warramunga Arr	18.77	49	P	Pn	14 34 26.6	+0.1
WB2				IAmb	IAmb	14 34 28.1	
	comp=Z,7.0nm,0.7s						
WR8	Warramunga Arr	18.85	49	P	Pn	14 34 27.5	0.0
WR8				IAmb	IAmb	14 34 29.4	
	comp=Z,9.2nm,0.7s						
WB0	Warramunga Arr	18.93	48	P	P	14 34 25.4	-2.4
WB0				IAmb	IAmb	14 34 41.0	
	comp=Z,10nm,1.2s						
KNRA	Kununurra	19.45	28		Pn	14 34 35.9	+1.3
KNRA				IAmb	IAmb	14 34 41.5	
	comp=Z,24nm,1.4s						
MTN	Manton Dam	22.97	30	P	P	14 35 10.8	-0.7
TAU	Tasmania Unive	23.81	122		P	14 35 19.9	+0.2
TAU				IAmb	IAmb	14 35 48.1	
	comp=Z,16nm,1.1s						
CTAO	Charters Tower	27.20	68	P	P	14 35 49.6	-1.1
CTAO				IAmb	IAmb	14 35 57.8	
	comp=Z,6.2nm,1.1s						
PLWZ	Palliser	44.37	117	P	P	14 38 14.7	-2.7
QSPA	South Pole Qui	56.81	180	P	P	14 39 50.2	-0.9
QSPA	South Pole Qui	56.81	180	P	P	14 39 55.0	+3.9
	comp=Z,2.6nm,1.0s,baz=296,slow=7.9,SNR=5.6						
	comp=Z,2.6nm,1.0s						
PZH	PanZhiHua	61.82	342	P	P	14 40 30.0	+3.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC	Hu-ho-hao-te	74.15	354	eP	P	14 41 46.5	+3.2
HHC				pmax	pmax		
	comp=Z,30nm,0.6s						
HHC				pmax	pmax		
	comp=Z,80nm,4.5s						
KURBB	Kurchatov Arra	91.06	335	P	P	14 43 13.9	+3.0
	comp=Z,1.8nm,0.2s,baz=141,slow=4.7,SNR=2.4						
	comp=Z,1.8nm,0.2s						

AUST 20 14:40:41.1±0.5**, 33°S**±4°×**11°9E**±°**, h10^{km}, ML2.5**/7**, Error ellipse: s-maj=7.7km s-min=7.0km az=12.1, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	1.69	278	P	Pn	14 41 10.6	-0.2
NWAO	Narrogin (SRO)	1.69	278	S	Sn	14 41 32.6	+0.1
KLBR	Kellerberrin	2.02	322	P	Pb	14 41 16.7	-1.2
KLBR	Kellerberrin	2.02	322	S	Sb	14 41 42.9	-0.3
RKGY	Rocky Gully	2.35	232	P	Pn	14 41 19.9	+0.2
RKGY				S	Sn	14 41 49.9	+1.3
MUN	Mundaring	2.82	295	P	Pn	14 41 27.6	+1.3
MUN	Mundaring	2.82	295	S	Sn	14 41 59.5	-0.8
BLDU	Ballidu	3.34	319	P	Pn	14 41 34.0	+0.6
BLDU	Ballidu	3.34	319	S	Sn	14 42 10.2	-3.0
MORW	Morawa	4.94	326	S	Sn	14 42 49.5	-3.0
FORT	Forrest	7.88	75	P	Pn	14 42 34.2	-1.5
FORT	Forrest	7.88	75	S	Sn	14 43 58.1	-6.9

CUPWA 20 14:41:40.9±2.9**, 33°.26S**×**119°.14E, h2^{km}**±16^{km}**, ML2.5, Region: WESTERN AUSTRALIA, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUKUL	Kulin High Sch	1.02	305	P	Pg	14 41 59.9	-0.6
AUKUL				S	Sg	14 42 13.9	+0.1
GNOT	Gnowangerup To	1.12	233	P	Pg	14 42 02.5	+0.1
GNOT	Gnowangerup To	1.12	233	S	Sn	14 42 19.1	-0.5
NWAO	Narrogin (SRO)	1.64	281	P	Pn	14 42 10.6	-0.1
NWAO				S	Sb	14 42 32.6	-0.3
PING	Pingelly	1.96	292	P	Pn	14 42 15.8	+0.6
PING				S	Sn	14 42 41.0	+0.7
KLBR	Kellerberrin	2.04	324	P	Pn	14 42 16.7	+0.5
KLBR				S	Sn	14 42 42.9	+0.7
RKGY	Rocky Gully	2.25	233	P	Pn	14 42 19.9	+0.8
RKGY	Rocky Gully	2.25	233	S	Sb	14 42 49.9	-0.5
MUN	Mundaring	2.79	297	P	Pn	14 42 27.6	+1.1
MUN	Mundaring	2.79	297	S	Sn	14 42 59.5	-1.2
BLDU	Ballidu	3.35	321	P	Pn	14 42 34.0	-0.3
FORT	Forrest	7.96	74	P	Pn	14 43 34.2	-3.5

*GCG **20** 14:43:10.3±1.1, 14°.78N×89°.21W, h4^{km}±8^{km}, MD3.6, ML3.6*

*CATAC **20** 14:43:10.2±0.4, 15°N±3°×8°9W±°, h4^{km}±2^{km}, M4.0/25, MLv4.0/25, Error ellipse: s-maj=6.8km s-min=3.0km az=25.5, confirmed*

*SNET **20** 14:43:11.1±1.1, 14°.63N×89°.11W, h1^{km}±5^{km}, ML3.4*
ISC 20 14:43:08.4±1.2**, 14°.81N**±0°.03×**89°.09W**±0°.03**, h14**^{km}±9^{km}**, n81, σ0^{s}.35**/90**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESQI	Esquipulas	0.35	225	*e*P	Pb	14 43 16.6	+0.1
ESQI				*e*S	Sb	14 43 21.1	-0.7
ESQI	Esquipulas	0.35	225	P	Pb	14 43 16.5	+0.1
MTO3	Montecristo	0.48	213	*e*P	Pb	14 43 18.6	-0.2
MTO3				*e*S	Sg	14 43 25.0	+0.3
MTO3	Montecristo	0.48	213	*i* P	Pb	14 43 18.6	-0.2
MTO3	Montecristo	0.48	213	S	Sg	14 43 25.0	+0.3
MTO3	Montecristo	0.48	213	P	Pb	14 43 18.7	-0.2
LLGN	La Laguna	0.66	168	*e*P	Pg	14 43 21.3	0.0
LLGN				*e*S	Sg	14 43 29.6	-0.4
LLGN	La Laguna	0.66	168	P	Pg	14 43 21.2	0.0
UNIC	Universidad Ca	0.94	209	S	Sg	14 43 39.0	+0.2
UNIC	Universidad Ca	0.94	209	P	Pg	14 43 26.6	+0.1
CEDA	San Andres	1.04	197	S	Sn	14 43 43.2	+0.1
CEDA	San Andres	1.04	197	P	Pn	14 43 29.7	+1.1
LOAL	Lomas de Alarc	1.05	220	*e*P	Pn	14 43 29.0	+0.3
LOAL	Lomas de Alarc	1.05	220	P	Pn	14 43 28.8	+0.1
LOAL	Lomas de Alarc	1.05	220	S	Sn	14 43 43.8	+0.6
LFU	La Fuente	1.05	181	*e*P	Pg	14 43 28.8	0.0
RTR	El Retiro	1.05	211	*e*P	Pn	14 43 29.3	+0.3
SNJE	San Jose	1.06	208	*e*P	Pn	14 43 29.1	+0.1
LBRS	Las Brisas	1.06	178	*e*P	Pn	14 43 28.8	-0.2
PIC2	El Picacho	1.07	189	*e*P	Pn	14 43 29.4	+0.2
BOQS	Boqueron	1.08	190	*e*P	Pn	14 43 29.2	-0.1
UDBS	Universidad Do	1.09	183	S	Sg	14 43 43.5	-0.1
UDBS	Universidad Do	1.09	183	P	Pn	14 43 29.3	0.0
IGN	Direccin Gen	1.09	184	P	Pg	14 43 29.6	+0.1
IGN	Direccin Gen	1.09	184	S	Sg	14 43 43.8	0.0
SBLS	San Blas	1.09	208	*e*P	Pg	14 43 29.7	+0.1
UEES	Universidad Ev	1.09	188	P	Pg	14 43 29.5	-0.1
UEES	Universidad Ev	1.09	188	S	Sg	14 43 43.6	-0.3
PAVA	Las Pavas	1.10	172	S	Sg	14 43 43.9	-0.1
PAVA	Las Pavas	1.10	172	P	Pn	14 43 29.4	-0.1
CEVE	Cerro Verde	1.10	208	*e*P	Pg	14 43 30.2	+0.4
CEVE				*e*S	Sn	14 43 44.5	-0.4
CEVE	Cerro Verde	1.10	208	S	Sn	14 43 45.4	+0.5
CEVE	Cerro Verde	1.10	208	P	Pg	14 43 30.3	+0.4
SEMO	Seminario San	1.11	187	P	Pg	14 43 30.3	+0.6
SEMO	Seminario San	1.11	187	S	Sg	14 43 44.0	-0.3
UTEC	Universidad Te	1.11	186	S	Sg	14 43 44.0	-0.3
UTEC	Universidad Te	1.11	186	P	Pg	14 43 30.2	+0.4
PMON	Piamonte	1.11	191	*e*P	Pg	14 43 29.9	0.0
PMON				*e*S	Sb	14 43 43.9	+0.1
PMON	Piamonte	1.11	191	P	Pg	14 43 29.8	-0.1
PMON	Piamonte	1.11	191	S	Sn	14 43 44.5	-0.3
NUBE	Las Nubes	1.12	217	*e*P	Pg	14 43 30.2	+0.1
NUBE	Las Nubes	1.12	217	*e*P	Pg	14 43 30.2	+0.1
NUBE				*i* S	Sn	14 43 45.3	+0.1
NUBE	Las Nubes	1.12	217	P	Pg	14 43 30.2	+0.1
ITCA	Escuela Especi	1.14	189	S	Sg	14 43 45.2	-0.2
ITCA	Escuela Especi	1.14	189	P	Pg	14 43 31.1	+0.6
LOMA	Loma Larga	1.16	184	*e*P	Pg	14 43 30.7	-0.2
LOMA	Loma Larga	1.16	184	P	Pg	14 43 30.6	-0.2
LOMA	Loma Larga	1.16	184	S	Sn	14 43 46.0	-0.1
LFRS	El Faro	1.18	179	*e*P	Pb	14 43 30.7	+0.1
PANCS	Alcalda de	1.19	184	S	Sn	14 43 46.3	-0.5
PANCS	Alcalda de	1.19	184	P	Pg	14 43 31.5	0.0
JAYA	Jayaque - finc	1.20	197	*e*P	Pg	14 43 31.5	-0.1
JAYA				*e*S	Sb	14 43 45.6	-0.8
JAYA				IAML		14 43 50.7	
	comp=Z,1µm,0.3s						
JAYA	Jayaque - finc	1.20	197	*i* P	Pg	14 43 31.5	-0.1
JAYA				*i* S	Sg	14 43 47.7	+0.5
JAYA	Jayaque - finc	1.20	197	P	Pg	14 43 31.5	-0.1
JAYA	Jayaque - finc	1.20	197	S	Sn	14 43 46.8	-0.2
UESV	Universidad de	1.20	166	S	Sn	14 43 46.9	0.0
UESV	Universidad de	1.20	166	P	Pg	14 43 31.3	-0.3
SNVI	San Vicente	1.21	168	*e*P	Pn	14 43 30.6	-0.5
PQSS	Presa 15 de Se	1.28	156	*e*P	Pb	14 43 32.1	-0.3
PQSS	Presa 15 de Se	1.28	156	S	Sg	14 43 49.8	-0.1
PQSS	Presa 15 de Se	1.28	156	P	Pb	14 43 32.5	+0.2
CAHU	Cacacuatique	1.34	140	*e*P	Pb	14 43 33.5	+0.2
TECA	Tecapa	1.42	156	*e*P	Pb	14 43 34.9	+0.1
TECA				*e*P	Pb	14 43 34.9	+0.1
PACA	Pacayal	1.52	151	*e*P	Pb	14 43 37.0	+0.4
PACA				*e*S	Sg	14 43 56.9	-0.7
PACA	Pacayal	1.52	151	P	Pb	14 43 37.0	+0.4
PACA	Pacayal	1.52	151	S	Sg	14 43 57.2	-0.4
RANC	El Ranchito	1.57	150	P	Pn	14 43 29.3	-6.7
LCY	Lacayo	1.58	151	*e*P	Pb	14 43 37.4	0.0
BLLM	Bellamira	1.59	149	*e*P	Pb	14 43 37.6	0.0
CNRM	Centro Naciona	1.60	146	P	Pb	14 43 37.8	+0.1
LCND	La Caada	1.89	142	*e*P	Pb	14 43 42.4	-0.3
TGUH	Tegucigalpa,Un	1.91	113	P	Pb	14 43 43.5	+0.4
TGUH				S	Sb	14 44 08.1	+1.2
CNCH	Conchagua	1.95	141	*e*P	Pb	14 43 43.3	-0.5
CNCH	Conchagua	1.95	141	P	Pb	14 43 43.7	0.0
CNCH	Conchagua	1.95	141	S	Sb	14 44 08.2	+0.2
STG0	El Palmar, Qui	2.21	260	IAML		14 44 30.1	
	comp=E,242nm,0.3s						
PETF	Flores	2.23	340	*i* P	Pb	14 43 47.9	-0.5
PETF				*i* S	Sb	14 44 16.1	+0.3
PETF	Flores	2.23	340	P	Pb	14 43 48.0	-0.5
SOKI	Kika Raxquin	2.24	271	IAML		14 44 28.9	
	comp=N,776nm,0.7s						
PKGN	Cerro Pekin	2.95	136	P	Pg	14 44 04.8	-0.3
RCPN	Sur Rio San Ju	3.17	113	P	Pn	14 43 58.3	+0.3

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*NOU **20** 14:44:31.0, 22°.08S×170°.02E, h0^{km}, MLv3.9/9, Southeast of Loyalty Islands*
*IDC **20** 14:44:34.9±8.3, 21°.87S×170°.01E, h82^{km}±53^{km}, mb3.2/3, mbtmp3.6/4, ML3.8/1, MS3.4/3, Error ellipse: s-maj=122.6km s-min=60.9km az=178.0*
ISC 20 14:44:27.5±2.5**, 22°.2S**±0°.1×**170°.3E**±0°.2**, h10**^{km}**, n14, σ1^{s}.76**/12**, mb3.3**/3**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	2.20	290	P	Pn	14 45 05.0	+0.9
PINNC	Pines Island,	2.62	261	P	Pn	14 45 12.0	+2.0
INH	Isangel	2.83	341	P	Pn	14 45 13.9	+1.1
YATNC	Mamie plateau,	3.12	273	P	Pn	14 45 17.6	+0.7
OUENC	Ouen Island, N	3.17	266	P	Pn	14 45 19.7	+2.3
ONTNC	Ouen Toro	3.52	268	P	Pn	14 45 23.2	+0.9
DZM	Mont Dzumac	3.54	272	P	Pn	14 45 24.7	+2.1
	10nm,0.3s,baz=118,slow=13,SNR=600						
DZM				S	Sn	14 46 03.5	-1.1
	25nm,0.4s,baz=39,slow=22,SNR=8.9						
	21nm,0.3s						
DZM	Mont Dzumac	3.54	272	P	Pn	14 45 24.7	+2.1
DVP	Devils Point	4.89	336	P	Pn	14 45 42.9	+1.7
RAO	Raoul Island	12.74	126	LR	LR	14 51 14.7	
	comp=Z,150nm,20.7s,baz=124,slow=30						
STKA	Stephens Creek	27.20	243	P	P	14 50 11.1	-0.5
	1.7nm,0.6s,baz=73,slow=11,SNR=4.5						
	1.7nm,0.6s						
ASAR	Alice Springs	33.45	260	P	P	14 51 03.4	-3.6
	0.2nm,0.8s,baz=100,slow=9.0,SNR=2.2						
ASAR				LR	LR	15 03 57.9	
	comp=Z,45nm,19.4s,baz=80,slow=35						
	0.2nm,0.8s						
WRA	Warramunga Arr	33.54	267	P	P	14 51 06.1	-1.7
	0.3nm,0.7s,baz=99,slow=8.0,SNR=1.7						
	0.3nm,0.7s						
NWAO	Narrogin (SRO)	47.76	245	LR	LR	15 12 25.7	
	comp=Z,63nm,18.8s,baz=60,slow=35						

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*IDC **20** 14:47:50.6±0.9, 28°.67N×87°.40E, h0^{km}, mb3.7/12, mbtmp3.7/13, ML3.3/1, MS3.2/5, Error ellipse: s-maj=39.9km s-min=16.1km az=55.0*
*DMN **20** 14:47:51.9±0.0, 28°.85N×87°.52E, h10^{km}, Ml4.5/10, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 20 14:47:51.6±3.1**, 28°.82N**±0°.10×**87°.51E**±0°.09**, h4**^{km}±21^{km}**, n27, σ1^{s}.31**/36**, mb3.7**/12**, MS3.3**/4**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUN	Gumba	1.70	238	Pg	Pb	14 48 24.1	+0.5
	baz=237,slow=0.0						
GUN				Sg	Sg	14 48 46.7	+0.5
	1µm,0.3s,baz=237,slow=0.0						
ODAN	Odare	1.95	183	Pg	Pg	14 48 29.4	+0.4
	baz=183,slow=0.0						
ODAN				Sg	Sg	14 48 53.8	-0.5
	1µm,0.8s,baz=183,slow=0.0						
RAMN	Ramite	2.03	204	Pg	Pg	14 48 30.2	-0.2
	baz=203,slow=0.0						
RAMN				Sg	Sg	14 48 56.7	0.0
	847nm,0.5s,baz=203,slow=0.0						
KKN	Kakani	2.22	243	Pg	Pg	14 48 33.7	-0.4
	baz=242,slow=0.0						
KKN				Sg	Sg	14 49 02.6	-0.3
	baz=242,slow=0.0						
PKI	Pulchoki	2.23	237	Pg	Pg	14 48 34.6	+0.2
	baz=236,slow=0.0						
PKI				Sg	Sg	14 49 03.4	0.0
	2µm,0.7s,baz=236,slow=0.0						
PKIN	Phulchoki	2.24	237	Pg	Pg	14 48 34.3	-0.2
	baz=236,slow=0.0						
PKIN				Sg	Sg	14 49 03.5	0.0
	2µm,0.7s,baz=236,slow=0.0						
DMN	Daman	2.44	241	Pg	Pg	14 48 37.8	-0.6
	baz=240,slow=0.0						
DMN				Sg	Sg	14 49 09.9	-0.1
	799nm,0.5s,baz=240,slow=0.0						
GKN	Gorkha	2.66	253	Pg	Pb	14 48 41.4	+1.6
	baz=252,slow=0.0						
GKN				Sg	Sg	14 49 16.1	-0.9
	721nm,0.4s,baz=252,slow=0.0						
DANN	Dangsing	3.33	263	Pg	Pg	14 48 54.5	-1.0
	baz=262,slow=0.0						
DANN				Sg	Sg	14 49 36.1	-2.6
	252nm,0.6s,baz=262,slow=0.0						
KOLN	Koldanda	3.60	254	Pg	Pb	14 48 58.8	+2.8
	baz=254,slow=0.0						
KOLN				Sg	Sg	14 49 45.4	-2.0
	299nm,0.7s,baz=254,slow=0.0						
PYUN	Piuthan	4.04	261	Pg	Pb	14 49 06.9	+3.4
	baz=260,slow=0.0						
PYUN				Sg	Sg	14 49 59.8	-1.8
	294nm,0.7s,baz=260,slow=0.0						
CMAR	Chiang Mai Arr	14.69	132	Pn	P	14 51 23.9	-2.7
	0.1nm,0.3s,baz=329,slow=8.8,SNR=13						
CMAR				LR	LR	14 58 06.9	
	comp=Z,31nm,18.7s,baz=175,slow=42						
MKAR	Makanchi Array	18.41	349	P	P	14 52 08.3	+0.7
	0.1nm,0.3s,baz=147,slow=13,SNR=8.3						
	0.4nm,0.5s						
KURBB	Kurchatov Arra	22.82	345	P	P	14 52 56.0	+0.8
	1.0nm,0.7s,baz=160,slow=10,SNR=4.9						
	1.0nm,0.7s						
SONM	Songino Array	23.97	32	P	P	14 53 07.7	+0.7
	0.9nm,0.5s,baz=224,slow=12,SNR=5.9						
	0.9nm,0.5s						
ZALV	Zalesovo Beam	25.19	356	P	P	14 53 19.5	+1.6
	0.7nm,0.5s,baz=197,slow=4.5,SNR=1.8						
	0.7nm,0.5s						
BVAR	Borovoye Array	27.29	337	P	P	14 53 38.8	+1.9
	0.3nm,0.5s,baz=156,slow=11,SNR=1.7						
BVAR				LR	LR	15 05 37.6	
	comp=Z,27nm,18.5s,baz=197,slow=39						
	0.3nm,0.5s						
LEM	Lembang	40.39	148	LR	LR	15 16 59.3	
	comp=Z,113nm,19.8s,baz=346,slow=43						
AKASG	Malin Array Be	48.44	314	P	P	14 56 34.5	-0.4
	0.3nm,0.5s,baz=77,slow=7.8,SNR=4.3						
	0.3nm,0.5s						
FINES	FINESS Array B	51.53	327	P	P	14 56 58.1	0.0
	1.2nm,0.8s,baz=90,slow=7.6,SNR=4.4						
	1.2nm,0.8s						
ARCES	ARCESS Array B	53.58	337	P	P	14 57 13.4	+0.2
	0.9nm,0.7s,baz=116,slow=8.4,SNR=1.3						
	0.9nm,0.7s						
PETK	Petropavlovsk-	55.81	43	LR	LR	15 21 44.8	
	comp=Z,26nm,20.4s,baz=190,slow=36						
HFS	Hagfors	57.48	325	P	P	14 57 41.7	+0.2
	1.8nm,0.7s,baz=96,slow=13,SNR=4.6						
	1.8nm,0.7s						
GERES	GERESS Array B	58.56	312	P	P	14 57 48.7	-0.7
	0.5nm,0.7s,baz=90,slow=4.0,SNR=5.3						
GERES				LR	LR	15 27 04.4	
	comp=Z,25nm,20.5s,baz=66,slow=40						
	0.5nm,0.7s						
NOA	NORSAR Array B	58.66	326	P	P	14 57 49.8	-0.1
	0.5nm,0.8s,baz=87,slow=6.9,SNR=3.2						
	0.5nm,0.8s						
WRA	Warramunga Arr	66.28	131	P	P	14 58 40.6	-0.6
	1.0nm,0.7s,baz=326,slow=6.6,SNR=14						
	1.0nm,0.7s						
ASAR	Alice Springs	68.68	135	P	P	14 58 56.3	-0.1
	1.0nm,0.6s,baz=318,slow=6.1,SNR=25						
	1.0nm,0.6s						

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*NEIC **20** 15:07:34.2±1.4, 16°.24S±0°.09×173°.76W±0°.09, h146^{km}±11^{km}, mb4.6/26, Error ellipse: s-maj=15.7km s-min=9.8km az=219.0*
*IDC **20** 15:07:36.5±0.8, 16°.15S×174°.24W, h145^{km}±8^{km}, mb3.7/10, mbtmp4.2/11, MS3.3/3, Error ellipse: s-maj=24.9km s-min=15.9km az=146.0*
ISC 20 15:07:35.0±0.5**, 16°.26S**±0°.07×**173°.80W**±0°.06**, h150**^{km}**, n88, σ1^{s}.36**/83**, mb4.4**/20**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.04	40		Pn	15 08 21.7	-1.4
AFI				Sn	Sn	15 08 56.4	-3.8
AFI	Afiamalu	3.04	40	P	Pn	15 08 22.2	-0.9
FUTU	Fugatoga	4.60	294		Pn	15 08 43.4	+0.2
NIUE	Niue	4.64	128		Pn	15 08 43.3	-0.4
NIUE				Sn	Sn	15 09 33.7	-3.4
NIUE	Niue	4.64	128	P	Pn	15 08 44.0	+0.4
NIUE				S	Sn	15 09 33.8	-3.4
MSVF	Nonsavu	7.94	258		Pn	15 09 29.7	+2.1
MSVF	Nonsavu	7.94	258	LR	LR	15 12 06.8	
	comp=Z,192nm,18.0s,baz=109,slow=36						
PINNC	Pines Island,	18.77	247	P	P	15 11 41.5	-1.3
DZM	Mont Dzumac	19.53	250	P	P	15 11 49.3	-1.9
DZM				IAmb	IAmb	15 11 56.4	
	comp=Z,37nm,1.0s						
DZM	Mont Dzumac	19.53	250	P	P	15 11 50.7	-0.4
	comp=Z,39nm,1.1s,baz=87,slow=18,SNR=9.2						
ONTNC	Ouen Toro	19.58	249	P	P	15 11 50.0	-1.5
ONTNC				IAmb	IAmb	15 11 54.8	
	comp=Z,48nm,1.0s						
WCZ	Waipu Caves	22.27	206	P	P	15 12 18.9	-1.0
MXZ	Matakaoa Point	22.34	197	P	P	15 12 19.6	-1.0
MXZ	Matakaoa Point	22.34	197	P	P	15 12 21.1	+0.5
WMGZ	Waiomatatini S	22.55	196	P	P	15 12 24.3	+1.7
HAZ	Te Kaha	22.67	198	P	P	15 12 24.5	+0.8
PKGZ	Pakihiroa	22.69	197	P	P	15 12 24.2	+0.3
PUZ	Puketiti	22.83	196	P	P	15 12 25.5	+0.3
RUGZ	Raukumara Rang	22.89	198	P	P	15 12 26.6	+0.7
MKAZ	Moumakai	22.95	203	P	P	15 12 25.6	-0.6
TWGZ	Tauwhareparae	23.00	197	P	P	15 12 27.5	+0.6
CNGZ	Carnagh Statio	23.23	196	P	P	15 12 29.9	+1.1
MWZ	Matawai	23.28	197	P	P	15 12 28.5	-0.8
TKGZ	Te Karaka	23.29	197	P	P	15 12 29.4	0.0
URZ	Urewera	23.33	198	P	P	15 12 29.9	+0.1
TOZ	Tahuroa Road	23.38	202	P	P	15 12 30.1	-0.1
RIGZ	Rimuhau	23.56	197	P	P	15 12 32.7	+0.8
RTZ	Ruatahuna	23.70	198	P	P	15 12 32.9	-0.3
RTZ				IAmb	IAmb	15 12 35.8	
	comp=Z,21nm,0.9s						
SNGZ	Shannon Statio	23.75	197	P	P	15 12 34.3	+0.7
PRRZ	Plateau Road	23.78	199	P	P	15 12 33.4	-0.4
TLZ	Tolley Road	23.91	201	P	P	15 12 36.2	+1.2
RAHZ	Arahi	23.95	198	P	P	15 12 35.9	+0.5
HIZ	Hauiti	24.31	202	P	P	15 12 39.3	+0.7
BKZ	Black Stump Fm	24.36	199	P	P	15 12 37.7	-1.5
MCHZ	McNeill Hill	24.55	198	P	P	15 12 40.9	+0.1
TMVZ	Te Maari	24.56	200	P	P	15 12 40.3	-0.8
ETVZ	East Tongariro	24.57	200	P	P	15 12 41.3	+0.1
KWHZ	Kaweka Forest	24.61	198	P	P	15 12 41.6	+0.1
OTVZ	Oturere	24.61	200	P	P	15 12 40.5	-1.1
PNHZ	Pukenui	25.13	198	P	P	15 12 45.7	-0.5
DVHZ	Dannevirke	25.50	198	P	P	15 12 50.9	+1.5
ANWZ	Angora Road	25.55	197	P	P	15 12 50.6	+0.7
BFZ	Birch Farm	25.82	198	P	P	15 12 52.5	+0.2
MRZ	Mangatainoka R	26.00	199	P	P	15 12 52.4	-1.5
HOWZ	Holdsworth Sta	26.24	199	P	P	15 12 57.3	+1.2
OGWZ	Otaki Gorge	26.27	199	P	P	15 12 55.7	-0.7
HNR	Honiara	26.46	282	LR	LR	15 21 31.9	
	comp=Z,33nm,20.4s,baz=224,slow=32						
TUWZ	Tuamarina	27.23	200	P	P	15 13 04.7	-0.2
KHZ	Kahutara	28.24	200	P	P	15 13 12.8	-1.1
INZ	Inchbonnie	29.25	203	P	P	15 13 21.9	-0.9
WHZ	Wether Hill Ro	33.26	204	P	P	15 13 57.4	-0.6
EIDS	Eidsvold	33.97	249	P	P	15 14 02.6	-1.8
EIDS				IAmb	IAmb	15 14 22.5	
	comp=Z,11nm,1.3s						
ARMA	Armidale	34.58	240	P	P	15 14 08.6	-1.1
ARMA				IAmb	IAmb	15 14 42.7	
	comp=Z,17nm,1.4s						
H11S2	WAKE ISLAND Hy	39.50	330	T	T	15 56 11.0	
	baz=146,slow=75,SNR=25						
H11S3	WAKE ISLAND Hy	39.52	330	T	T	15 56 11.0	
	baz=146,slow=75,SNR=30						
H11S1	WAKE ISLAND Hy	39.52	330	T	T	15 56 10.2	
	baz=146,slow=75,SNR=19						
H11N3	WAKE ISLAND Hy	40.47	331	T	T	15 57 23.2	
	baz=144,slow=75,SNR=8.1						
H11N1	WAKE ISLAND Hy	40.47	331	T	T	15 57 22.3	
	baz=144,SNR=8.9						
H11N2	WAKE ISLAND Hy	40.48	331	T	T	15 57 25.8	
	baz=144,slow=75,SNR=8.5						
COEN	Coen	41.55	267	P	P	15 15 06.9	-1.3
COEN				IAmb	IAmb	15 15 23.3	
	comp=Z,20nm,1.3s						
TOO	Toolangi	41.63	231	P	P	15 15 07.5	-1.1
STKA	Stephens Creek	43.28	241	P	P	15 15 21.0	-0.9
STKA	Stephens Creek	43.28	241	P	P	15 15 20.8	-1.2
	comp=Z,11nm,0.8s,baz=91,slow=10.0,SNR=18						
	comp=Z,11nm,0.8s						
BBOO	Buckleboo	48.05	240	P	P	15 15 58.2	-1.3
BBOO				IAmb	IAmb	15 16 13.0	
	comp=Z,23nm,1.3s						
WR8	Warramunga Arr	49.13	257	P	P	15 16 06.7	-1.1
WB0	Warramunga Arr	49.24	258	P	P	15 16 07.5	-1.2
WB0				IAmb	IAmb	15 16 20.8	
	comp=Z,12nm,1.5s						
WRA	Warramunga Arr	49.28	258	P	P	15 16 07.6	-1.4
	comp=Z,0.9nm,0.7s,baz=95,slow=6.8,SNR=19						
	comp=Z,0.9nm,0.7s						
AS31	Alice Springs	49.48	253	P	P	15 16 08.7	-1.9
ASAR	Alice Springs	49.48	253	P	P	15 16 08.3	-2.3
ASAR	Alice Springs	49.48	253	P	P	15 16 09.2	-1.4
	comp=Z,9.1nm,0.7s,baz=86,slow=8.4,SNR=82						
	comp=Z,9.1nm,0.7s						
KNRA	Kununurra	55.06	262	P	P	15 16 51.0	-0.8
KNRA				IAmb	IAmb	15 17 01.2	
	comp=Z,17nm,1.2s						
FITZ	Fitzroy Crossi	57.66	259	P	P	15 17 09.4	-0.7
FITZ	Fitzroy Crossi	57.66	259	P	P	15 17 09.7	-0.4
	comp=Z,3.5nm,0.9s,baz=101,slow=5.2,SNR=2.4						
	comp=Z,3.5nm,0.9s						
SBA	Scott Base	62.37	185	P	P	15 17 41.8	+0.6
SBA				IAmb	IAmb	15 17 45.4	
	comp=Z,4.8nm,1.1s						
VNDA	Vanda	62.49	186	P	P	15 17 41.9	-0.1
VNDA				IAmb	IAmb	15 17 45.7	
	comp=Z,6.2nm,1.2s						
VNDA	Vanda	62.49	186	P	P	15 17 45.0	+2.9
	comp=Z,2.1nm,0.9s,baz=13,slow=5.4,SNR=7.9						
	comp=Z,2.1nm,0.9s						
PSA00	Pilbara Seismi	62.59	254	P	P	15 17 43.3	-0.4
PSA00				IAmb	IAmb	15 17 44.1	
	comp=Z,9.5nm,0.9s						
MBWA	Marble Bar	62.76	254	P	P	15 17 43.9	-0.9
MBWA				IAmb	IAmb	15 17 44.7	
	comp=Z,5.6nm,0.8s						
GIRL	Giralia	67.59	252	P	P	15 18 16.3	+0.4
CASY	Casey	69.47	205	P	P	15 18 26.3	-0.5
QSPA	South Pole Qui	73.79	180	P	P	15 18 53.8	+0.9
QSPA	South Pole Qui	73.79	180	P	P	15 18 55.4	+2.6
	comp=Z,3.5nm,0.9s,baz=42,slow=3.9,SNR=8.0						
	comp=Z,3.5nm,0.9s						
TXAR	Lajitas Array	81.41	56	P	P	15 19 40.1	+4.4
	comp=Z,0.3nm,0.9s,baz=254,slow=4.9,SNR=2.6						
TXAR				pP	pP	15 20 15.2	+2.6
	comp=Z,1.0nm,1.1s,baz=217,slow=6.1,SNR=4.3						
	comp=Z,0.3nm,0.9s						
PDAR	Pinedale Array	83.16	42	P	P	15 19 47.5	+2.8
	comp=Z,0.4nm,0.7s,baz=188,slow=4.3,SNR=3.7						
PDAR				pP	pP	15 20 23.2	+1.6
	comp=Z,0.5nm,0.8s,baz=279,slow=4.2,SNR=2.5						
	comp=Z,0.4nm,0.7s						
ILAR	Eielson Array	83.36	11	P	P	15 19 46.7	+1.9
	comp=Z,0.6nm,1.0s,baz=211,slow=5.5,SNR=9.0						
ILAR				pP	pP	15 20 24.2	+2.2
	comp=Z,0.3nm,0.6s,baz=232,slow=6.3,SNR=3.0						
	comp=Z,0.6nm,1.0s						
CMIG	Matias Romero	84.53	71	LR	LR	15 51 44.1	
	comp=Z,36nm,18.7s,baz=328,slow=31						
SNAA	Sanae	92.08	177	P	P	15 20 28.8	+1.9
	comp=Z,2.3nm,1.0s,baz=139,slow=3.1,SNR=4.1						
	comp=Z,2.3nm,1.0s						
BRTR	Keskin Array B	146.57	320	PKPbc	PKPab	15 26 59.5	-1.1
	comp=Z,2.2nm,1.1s,baz=2.9,slow=2.5,SNR=5.1						

ISC 20 15:20:27.9±1.5**, 26°.02N**±0°.05×**110°.58W**±0°.10**, h15**^{km}**, n6, σ1^{s}.22**/9**, 3C-1D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NE77	Loreto B.C.S	0.70	270	⇑*e*P	Pb	15 20 42.1	+0.3
UAGRB	Rancho Ultima	0.76	234	⇑*e*P	Pg	15 20 42.9	+0.2
UAGRB				*e*S	Sb	15 20 54.1	+1.1
SNIRB	San Nicol¡s	1.02	301	*e*P	Pg	15 20 47.5	-0.1
SNIRB				*e*S	Sn	15 20 59.8	-1.8
SNIRB				IAML		15 21 07.8	
	comp=N,371nm,0.7s						
SNIRB				⇑*e*		15 21 07.8	
SNIRB				IAML		15 21 10.0	
	comp=E,284nm,0.4s						
SNIRB				⇓*e*		15 21 10.0	
GUYB	Guaymas	1.89	352	*e*P	Pn	15 21 00.6	+1.0
GUYB				*e*S	Sn	15 21 22.4	-0.8
SRIG	Santa Rosalia	1.97	311	*e*P	Pn	15 21 00.6	-0.1
SLBS	Sierra La Lagu	2.39	166	*e*P	Pn	15 21 05.0	-1.6
SLBS				*e*S	Sn	15 21 34.1	-1.6

NNC 20 15:39:29.5±11.0**, 37°.11N**×**70°.83E, h0**^{km}**, mb3.7, mpv3.3, 2C-2D, Error ellipse: s-maj=92.5km s-min=78.0km az=168.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.00	358	⇑P	Pn	15 41 01.7	+2.2
	1.2nm,0.3s,baz=178,slow=13						
KK31				⇑S	Sn	15 42 11.1	+2.3
	3.3nm,0.4s,baz=186,slow=23,SNR=12						
AAK	Ala-Archa	6.20	26	P	Pn	15 41 02.2	-0.2
	0.7nm,0.4s						
AAK				S	Sn	15 42 15.4	+1.3
	1.8nm,0.8s						
TKM2	Tokmak 2	6.86	31	⇓P	Pn	15 41 10.5	-1.1
	1.5nm,0.5s						
TKM2				⇓S	Sn	15 42 28.9	-1.6
	1.6nm,0.7s						

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*NEIC **20** 15:46:31.4±1.6, 3°.29N±0°.08×122°.7E±0°.1, h502^{km}±10^{km}, mb4.1/21, Error ellipse: s-maj=17.9km s-min=10.9km az=84.0*
*IDC **20** 15:46:35.2±2.6, 3°.12N×122°.68E, h556^{km}±37^{km}, mb3.1/9, mbtmp4.2/12, Error ellipse: s-maj=39.2km s-min=13.3km az=57.0*
ISC 20 15:46:31.0±0.5**, 3°.34N**±0°.08×**122°.8E**±0°.1**, h500**^{km}**, n43, σ1^{s}.14**/48**, mb3.9**/18**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOLI2	Tolitoli	2.99	222	P	P	15 47 41.3	-0.7
LUWI	Luwuk	4.36	180	P	P	15 47 51.5	-0.9
LUWI					S	15 48 57.7	-0.9
TNTI	Ternate	5.23	119	P	P	15 48 01.7	+1.6
TNTI					S	15 49 11.5	-1.4
KKM	Kota Kinabalu	7.09	293	P	P	15 48 17.7	-0.5
KAPI	Kappang	8.84	200	P	P	15 48 39.7	+3.5
	8.7nm,0.8s,baz=286,slow=5.3,SNR=3.7						
FAKI	Fak Fak	11.31	123	P	P	15 49 02.8	+0.5
BATI	Baumata	13.49	176	P	P	15 49 26.4	+1.0
	21nm,0.3s,baz=43,slow=2.7,SNR=10						
MTN	Manton Dam	18.09	153	P	P	15 50 11.6	-0.7
JAY	Jayapura	18.82	108	P	P	15 50 21.3	+2.2
	4.9nm,0.4s,baz=216,slow=9.8,SNR=10						
KNRA	Kununurra	19.80	163	P	P	15 50 27.4	-0.4
TPUB	Ta-pu	19.95	354	P	P	15 50 30.9	+1.7
YULB	Yu-li	19.98	356	P	P	15 50 29.9	+0.4
YULB				IAmb	IAmb	15 50 52.3	
	comp=Z,7.7nm,1.0s						
FITZ	Fitzroy Crossi	21.49	173	P	P	15 50 42.4	-0.8

MANU	**Manus Island**	**25.14**	**102**	P	**P**	**15 51 14.7**	**-1.2**
MANU				IAmb	IAmb	15 51 55.4	
	comp=Z,2.1nm,0.8s						
WB0	**Warramunga Arr**	**25.64**	**154**	P	**P**	**15 51 19.2**	**-1.1**
WB0				IAmb	IAmb	15 51 19.3	
	comp=Z,7.6nm,1.1s						
WRA	**Warramunga Arr**	**25.77**	**154**	P	**P**	**15 51 20.0**	**-1.4**
	comp=Z,2.5nm,0.5s,baz=337,slow=9.5,SNR=63						
	comp=Z,2.5nm,0.5s						
WR8	**Warramunga Arr**	**25.85**	**154**	P	**P**	**15 51 20.9**	**-1.3**
WR8				IAmb	IAmb	15 52 01.5	
	comp=Z,13nm,1.4s						
AS31	**Alice Springs**	**28.95**	**159**	P	**P**	**15 51 48.9**	**-0.4**
ASAR	**Alice Springs**	**28.95**	**159**	P	**P**	**15 51 48.8**	**-0.6**
ASAR	**Alice Springs**	**28.95**	**159**	P	**P**	**15 51 49.0**	**-0.3**
	comp=Z,1.4nm,0.3s,baz=335,slow=7.7,SNR=91						
	comp=Z,1.4nm,0.3s						
BBOO	**Buckleboo**	**38.09**	**162**	P	**P**	**15 53 06.3**	**-0.1**
BBOO				IAmb	IAmb	15 53 35.2	
	comp=Z,29nm,1.4s						
STKA	**Stephens Creek**	**39.32**	**154**	P	**P**	**15 53 16.5**	**0.0**
STKA	**Stephens Creek**	**39.32**	**154**	P	**P**	**15 53 16.7**	**+0.2**
	comp=Z,2.0nm,0.5s,baz=325,slow=9.9,SNR=7.6						
	comp=Z,2.0nm,0.5s						
ARMA	**Armidale**	**43.42**	**143**	P	**P**	**15 53 50.3**	**+1.1**
ARMA				IAmb	IAmb	15 54 10.1	
	comp=Z,14nm,1.2s						
CAN	**Canberra**	**45.64**	**150**	P	**P**	**15 54 06.7**	**+0.4**
SONM	**Songino Array**	**46.52**	**345**	P	**P**	**15 54 14.3**	**+1.5**
	comp=Z,0.6nm,0.6s,baz=156,slow=7.4,SNR=3.6						
	comp=Z,0.6nm,0.6s						
MKAR	**Makanchi Array**	**55.69**	**327**	P	**P**	**15 55 20.1**	**+0.7**
MKAR				PcP	**PcP**	**15 56 10.8**	**-0.8**
MKAR	**Makanchi Array**	**55.69**	**327**	P	**P**	**15 55 20.5**	**+1.1**
	comp=Z,1.4nm,0.3s,baz=127,slow=7.8,SNR=32						
MKAR				PcP	**PcP**	**15 56 11.2**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=122,slow=4.3,SNR=6.2						
	comp=Z,1.4nm,0.3s						
MAKZ	**Makanchi**	**55.87**	**327**	P	**P**	**15 55 21.5**	**+0.8**
MAKZ				IAmb	IAmb	15 55 21.9	
	comp=Z,2.0nm,0.5s						
MAKZ				PcP	**PcP**	**15 56 09.9**	**-2.4**
KDJ	**Kajisay**	**56.07**	**320**	P	**P**	**15 55 23.5**	**+1.1**
ZALV	**Zalesovo Beam**	**59.21**	**335**	P	**P**	**15 55 43.0**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=163,slow=5.8,SNR=3.0						
	comp=Z,0.5nm,0.3s						
KURBB	**Kurchatov Arra**	**60.00**	**329**	P	**P**	**15 55 49.1**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=134,slow=6.7,SNR=16						
	comp=Z,0.9nm,0.5s						
KURK	**Kurchatov**	**60.01**	**329**	P	**P**	**15 55 49.4**	**+0.7**
KURK				IAmb	IAmb	15 55 49.8	
	comp=Z,3.3nm,0.6s						
KKAR	**Karatay Array**	**60.87**	**318**	P	**P**	**15 55 53.9**	**-0.8**
BKZ	**Black Stump Fm**	**64.97**	**136**	P	**P**	**15 56 20.9**	**-0.3**
PLWZ	**Palliser**	**65.28**	**139**	P	**P**	**15 56 22.5**	**-0.6**
BVAR	**Borovoye Array**	**65.54**	**328**	P	**P**	**15 56 24.7**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=141,slow=9.3,SNR=3.8						
	comp=Z,0.3nm,0.4s						
AB31	**Akbulak array**	**69.99**	**322**	P	**P**	**15 56 50.3**	**-1.4**
ABKAR	**Akbulak array**	**69.99**	**322**	P	**P**	**15 56 50.5**	**-1.2**
ABKAR	**Akbulak array**	**69.99**	**322**	P	**P**	**15 56 50.6**	**-1.1**
ABKAR				IAmb	IAmb	15 56 52.6	
	comp=Z,1.0nm,0.8s						
D19K	**Kuna River**	**82.91**	**21**	P	**P**	**15 58 03.3**	**+0.8**
D19K				IAmb	IAmb	15 58 36.9	
	comp=Z,5.0nm,1.4s						
B21K	**Ikpikpuk River**	**84.30**	**20**	P	**P**	**15 58 09.7**	**+0.4**
B21K				IAmb	IAmb	15 58 13.6	
	comp=Z,4.6nm,1.1s						
FINES	**FINESS Array B**	**90.31**	**331**	P	**P**	**15 58 36.6**	**-1.3**
	comp=Z,0.9nm,0.9s,baz=74,slow=15,SNR=3.5						
	comp=Z,0.9nm,0.9s						

PRE ***20*** *15:56:05.9±1.0, 28°.40S×23°.00E, h0^{km}, ML2.3, Suspected explosion*

IDC ***20*** *15:56:08.4±6.1, 28°.35S×23°.16E, h0^{km}, Error ellipse: s-maj=36.9km s-min=33.7km az=100.0*

ISC 20 15:56:06.1±1.0**, 28°.41S**±0°.04×**23°.01E**±0°.04**, h0^{km}, n17, σ0^{s}.91**/29**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALKP	**Alkanpan, Nort**	**1.67**	**203**	*e*P	**Pb**	**15 56 37.6**	**-0.2**
ALKP				*e*S	**Sg**	**15 56 59.8**	**+0.1**
ALKP				IAML		15 57 14.4	
	comp=Z,69nm,0.7s						
I47ZA	**BOSHOF INFRASO**	**1.97**	**97**	I	I	16 06 40.0	
	comp=Z,0.1nm,0.3s,baz=278,slow=351,SNR=0.9						
BOSA	**Boshof**	**1.99**	**96**	Pn	**Pn**	**15 56 41.6**	**+0.4**
	comp=Z,1.0nm,0.3s,baz=282,slow=16,SNR=21						
BOSA				Lg	Lg	15 57 07.9	
	comp=Z,3.8nm,0.3s,baz=197,slow=20,SNR=23						
BOSA				Rg	Rg	15 57 18.1	
	comp=Z,31nm,0.7s,baz=187,slow=19,SNR=5.0						
BOSA	**Boshof**	**1.99**	**96**	*e*P	**Pn**	**15 56 40.9**	**-0.2**
BOSA				*e*S	**Sb**	**15 57 08.2**	**-0.5**
BOSA				IAML		15 57 25.1	
	comp=Z,45nm,0.7s						
AUGR	**Augrabies**	**2.36**	**265**	*e*P	**Pn**	**15 56 46.7**	**+0.6**
AUGR				*e*S	**Sn**	**15 57 16.5**	**+0.7**
AUGR				IAML		15 57 24.2	
	comp=Z,21nm,0.3s						
SWZ	**Schweizer**	**2.39**	**60**	*e*P	**Pn**	**15 56 47.3**	**+0.6**
SWZ				*e*S	**Sn**	**15 57 17.9**	**+1.0**
SWZ				IAML		15 57 30.8	
	comp=Z,20nm,0.4s						
BRAK	**Brakfontein**	**3.36**	**182**	*e*P	**Pn**	**15 57 01.2**	**+1.2**
BRAK				*e*S	**Sn**	**15 57 40.9**	**+0.3**
BRAK				IAML		15 57 56.8	
	comp=Z,15nm,0.3s						
BFON	**Badsfontein, M**	**3.43**	**170**	*e*P	**Pn**	**15 57 01.7**	**+0.7**
BFON				*e*S	**Sn**	**15 57 42.2**	**-0.2**
BFON				IAML		15 57 59.6	
	comp=Z,14nm,0.4s						
FRAZ	**Fraserburg**	**3.77**	**201**	*e*P	**Pn**	**15 57 06.2**	**+0.5**
FRAZ				*e*S	**Sn**	**15 57 51.0**	**+0.2**
FRAZ				IAML		15 58 07.2	
	comp=Z,12nm,0.3s						
GRAN	**Grantham**	**3.94**	**190**	*e*P	**Pn**	**15 57 08.0**	**0.0**
GRAN				*e*S	**Sn**	**15 57 53.6**	**-1.5**
GRAN				IAML		15 58 17.7	
	comp=Z,14nm,0.4s						
GRAF	**Camdeboo Natio**	**4.06**	**162**	*e*P	**Pn**	**15 57 10.4**	**+0.8**
GRAF				*e*S	**Sn**	**15 57 58.4**	**+0.4**
GRAF				IAML		15 58 28.4	
	comp=Z,8.5nm,0.4s						
ROOI	**Rooidraai Farm**	**4.10**	**174**	*e*P	**Pn**	**15 57 11.0**	**+0.9**
ROOI				*e*S	**Sn**	**15 57 57.5**	**-1.3**
ROOI				IAML		15 58 18.9	
	comp=Z,9.8nm,0.3s						
LBTB	**Lobatse**	**4.10**	**35**	*e*P	**Pn**	**15 57 10.5**	**+0.3**
LBTB				*e*S	**Sn**	**15 57 57.8**	**-1.1**
LBTB				IAML		15 58 18.3	
	comp=Z,6.4nm,0.4s						
CVNA	**Calvinia**	**4.16**	**222**	*e*P	**Pn**	**15 57 11.4**	**+0.4**
CVNA				*e*S	**Sn**	**15 57 59.1**	**-1.3**
CVNA				IAML		15 58 23.5	
	comp=Z,18nm,0.4s						
SUR	**Sutherland**	**4.39**	**205**	*e*P	**Pn**	**15 57 15.2**	**+1.0**
SUR				*e*S	**Sn**	**15 58 05.4**	**-0.8**
SUR				IAML		15 58 34.2	
	comp=Z,9.1nm,0.4s						
KOMG	**Komaggas**	**5.03**	**253**	*e*P	**Pn**	**15 57 24.1**	**+1.3**
KOMG				*e*S	**Sn**	**15 58 19.5**	**-2.2**
KOMG				IAML		15 58 48.8	
	comp=Z,7.3nm,1.0s						
I35NA	**TSUMEB INFRASO**	**10.44**	**330**	I	I	17 01 40.0	
	baz=153,slow=317,SNR=11						

JMA ***20*** *16:23:19.6±0.2, 34°N±3°×13°7E±°, h357^{km}, MV2.6/22, SE OFF KII PENINSULA*

IDC ***20*** *16:23:20.8±12.0, 33°.68N×137°.17E, h361^{km}±71^{km}, mb3.3/1, mbtmp3.6/4, Error ellipse: s-maj=192.9km s-min=56.1km az=110.0*

ISC 20 16:23:19.9±2.2**, 33°.7N**±0°.3×**137°.3E**±0°.1**, h352^{km}, n9, σ0^{s}.60**/9**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HMMJ	**Hamamatsu 2**	**1.22**	**17**	*e*P	**Pn**	**16 24 06.9**	**+0.2**
JWT	**Wachi**	**2.23**	**316**	*e*P	**Pn**	**16 24 13.4**	**+0.4**
BSO4	**Boso 4**	**2.83**	**62**	*e*S	**S**	**16 25 05.2**	**+0.9**
BSO3	**Boso 3**	**2.88**	**66**	*e*S	**S**	**16 25 05.2**	**+0.4**
JHO	**Hitachi**	**3.96**	**42**	P	**Pn**	**16 24 27.6**	**-0.9**
JNU	**Nakatsue**	**5.40**	**266**	P	**Pn**	**16 24 44.2**	**+0.1**
	1.6nm,0.4s,baz=342,slow=15,SNR=2.3						
KSRS	**Korea Array**	**8.51**	**299**	P	**Pn**	**16 25 20.2**	**+0.1**
	0.7nm,0.5s,baz=111,slow=12,SNR=4.8						
USRK	**Ussuriysk Ar.**	**11.28**	**340**	P	**P**	**16 25 53.0**	**-0.3**
	1.1nm,0.5s,baz=151,slow=11,SNR=11						
FINES	**FINESS Array B**	**70.18**	**332**	P	**P**	**16 33 54.6**	**-0.2**
	1.4nm,0.9s,baz=62,slow=5.6,SNR=5.9						
	1.4nm,0.9s						

ISN ***20*** *16:28:53.8±1.2, 33°.80N×47°.48E, h21^{km}±7^{km}, ML2.9*

TEH ***20*** *16:28:53.7, 33°.76N×47°.38E, h8^{km}±137^{km}*

ISC 20 16:28:54.1±0.9**, 33°.77N**±0°.04×**47°.38E**±0°.03**, h10^{km}, n12, σ1^{s}.05**/16**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKFM	**Kafar-mosalman**	**0.46**	**122**	Pg	**Pg**	**16 29 02.6**	**-0.5**
KCHF	**Cheshme Sefid,**	**0.58**	**331**	Pg	**Pg**	**16 29 04.7**	**-0.7**
IDOB	**Doab**	**0.66**	**89**	Pg	**Pg**	**16 29 06.8**	**-0.2**
IBZA	**Bozab**	**0.80**	**30**	Pg	**Pb**	**16 29 10.3**	**-0.1**
ILBA	**Ilam Banvizeh**	**0.99**	**262**	Pg	**Pb**	**16 29 13.1**	**-0.4**
SNQR	**Sonqor, Kerman**	**1.10**	**11**	Pg	**Pg**	**16 29 15.1**	**-0.3**
IDHR	**Dehrash**	**1.24**	**319**	Pg	**Pg**	**16 29 17.6**	**-0.3**
IDHR				Sg	**Sn**	**16 29 36.0**	**+1.4**
GLG1	**Gilan-e-Gharb**	**1.27**	**286**	Pg	**Pg**	**16 29 18.3**	**-0.2**
IBDR	**Badra**	**1.38**	**242**	*e*Pg	**Pg**	**16 29 21.0**	**+0.3**
IBDR				*e*Sg	**Sg**	**16 29 39.0**	**+0.4**
IBDR				AML	AML	16 29 46.9	
	comp=N,223nm,0.8s						
IBDR				AML	AML	16 29 53.6	
	comp=E,182nm,0.8s						
HAGD	**Aghdareh**	**1.79**	**54**	Pg	**Pb**	**16 29 27.0**	**-0.2**
RAFI	**Al-Rafai**	**2.31**	**208**	*e*Pn	**Pn**	**16 29 33.0**	**+0.8**
RAFI				*e*Sn	**Sb**	**16 30 03.0**	**-1.4**
BHD	**Baghdad**	**2.56**	**260**	*e*Pn	**Pn**	**16 29 37.0**	**+1.4**
BHD				*e*Sn	**Sb**	**16 30 09.0**	**-2.6**

GCMT ***20*** *16:29:59.9±0.4, 7°.39S±0°.05×125°.37E±0°.05, h439^{km}±2^{km}, MW5.1/57, Moment Tensor Solution. s57,c75; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.22±.29; M$_{\theta\theta}$3.04±.35; M$_{\phi\phi}$1.18±.44; M$_{r\theta}$-1.72±.48; M$_{\theta\phi}$2.09±.47; M$_{\phi r}$1.49±.49; Best double couple: M$_0$4.83000×10^{16} NP1:φ$_s$216.00000°,δ45.00000°,λ-124.00000°. NP2: φ$_s$79.00000°,δ54.00000°,λ-61.00000°. Principal axes: T 4.4500, Plg5.0000°, Azm149.0000°; N 0.7610, Plg23.0000°, Azm241.0000°; P -5.2110, Plg66.0000°, Azm48.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

NEIC ***20*** *16:30:00.9±1.5, 7°.40S±0°.04×125°.49E±0°.07, h438^{km}±5^{km}, mb4.9/178, Mww5.0/12 Error ellipse: s-maj=11.2km s-min=3.4km az=120.0*

NEIC ***20*** *16:30:00.9, 7°.41S×125°.49E, h440^{km}*

NEIC ***20*** *16:30:00.9, 7°.51S×125°.59E, h440^{km}, Moment Tensor Solution. Duration: 1^{s}.7 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.54; M$_{\theta\theta}$3.40; M$_{\phi\phi}$0.14; M$_{r\theta}$-0.45; M$_{\theta\phi}$2.53; M$_{\phi r}$1.40; Fault plane solution: M$_0$4.54000×10^{16} NP1:φ$_s$85.06000°, δ48.64000°,λ-54.70000°. NP2:φ$_s$218.08000°,δ52.22000°, λ-123.28000°. Principal axes: T 4.7905, Plg2.0000°, Azm331.0000°; N -0.5452, Plg26.0000°, Azm240.0000°; P -4.2452, Plg64.0000°, Azm65.0000°;*

DJA ***20*** *16:30:00.9±0.1, 8°S±1°×12°5E±°, h433^{km}±2^{km}, M4.8/83, mb5.1/83, mB5.3/54, MLv5.6/26, Mw(mB)4.8/54, MwMwp4.7/8, Mwp5.0/8*

MOS ***20*** *16:30:00.4±0.8, 7°.40S×125°.54E, h449^{km}, mb5.0/30, Error ellipse: s-maj=9.9km s-min=5.5km az=117.6*

IDC ***20*** *16:30:01.6±0.4, 7°.42S×125°.49E, h443^{km}±4^{km}, mb4.3/29, mbtmp5.1/34, Error ellipse: s-maj=9.7km s-min=5.9km az=63.0*

ISC 20 16:30:00.8±0.3**, 7°.44S**±0°.03×**125°.49E**±0°.04**, h442^{km}**±2^{km}**, h443^{km}:pP-P, n813, σ1^{s}.21**/858**, mb4.8**/177**, 22C-14D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**2.60**	**208**		**P**	**16 31 05.1**	**+0.7**
SOEI				S	**S**	**16 31 54.5**	**-1.6**
SOEI	**Soe**	**2.60**	**208**	P	**P**	**16 31 05.6**	**+1.1**
SOEI	**Soe**	**2.60**	**208**	S	**S**	**16 31 56.1**	**0.0**
SOEI	**Soe**	**2.60**	**208**	P	**P**	**16 31 05.2**	**+0.7**
SOEI				S	**S**	**16 31 54.9**	**-1.2**
BATI	**Baumata**	**3.29**	**213**	P	**P**	**16 31 10.8**	**+1.3**
	9μm,0.5s,baz=69,slow=1.0,SNR=2703						
BATI				S	**S**	**16 32 01.7**	**-3.5**
	7μm,0.6s,baz=40,slow=1.2,SNR=8.6						
BATI	**Baumata**	**3.29**	**213**	P	**P**	**16 31 10.3**	**+0.8**
BATI				S	**S**	**16 32 02.7**	**-2.5**
MMRI	**Maumere**	**3.44**	**250**		**P**	**16 31 09.7**	**-0.9**
MMRI				S	**S**	**16 32 04.0**	**-3.3**
MMRI	**Maumere**	**3.44**	**250**	P	**P**	**16 31 10.4**	**-0.2**
MMRI	**Maumere**	**3.44**	**250**	S	**S**	**16 32 08.0**	**+0.7**
MMRI	**Maumere**	**3.44**	**250**	P	**P**	**16 31 09.8**	**-0.9**
MMRI				S	**S**	**16 32 05.5**	**-1.8**
BBSI	**Bau Bau**	**3.49**	**304**	P	**P**	**16 31 12.9**	**+1.8**
BBSI				S	**S**	**16 32 08.1**	**-0.1**
EDFI	**Ende, Flores**	**3.98**	**251**	P	**P**	**16 31 14.2**	**-1.2**
EDFI				S	**S**	**16 32 12.8**	**-3.2**
NLAI	**Namlea**	**4.47**	**21**	P	**P**	**16 31 21.3**	**+1.5**
NLAI				S	**S**	**16 32 24.2**	**+0.2**
KDI	**Kendari**	**4.49**	**320**	P	**P**	**16 31 20.9**	**+1.0**
KDI				S	**S**	**16 32 24.4**	**+0.1**
AAI	**Ambon**	**4.60**	**36**	P	**P**	**16 31 22.3**	**+1.3**
BSSI	**Bau Bau, Buton**	**5.13**	**284**	P	**P**	**16 31 27.3**	**+1.2**
	2.1nm7μm643nm,0.9s						
BNDI	**Bandanaira**	**5.26**	**57**	P	**P**	**16 31 29.2**	**+1.9**
BNDI	**Bandanaira**	**5.26**	**57**	P	**P**	**16 31 27.7**	**+0.4**
	3.0nm599nm,1.1s						
MSAI	**Masohi**	**5.32**	**40**	P	**P**	**16 31 27.4**	**-0.5**
	3.9nm221nm,0.8s						
SANI	**Sanana**	**5.38**	**5**	P	**P**	**16 31 29.5**	**+0.9**
SANI	**Sanana**	**5.38**	**5**	P	**P**	**16 31 29.1**	**+0.5**
	3.0nm2μm10μm1μm,1.1s						
BASI	**Baing, Sumba**	**5.59**	**240**	P	**P**	**16 31 29.8**	**-0.8**
WSI	**Waingapu**	**5.59**	**246**	P	**P**	**16 31 29.8**	**-0.9**
BKSI	**Bulukumba**	**5.74**	**291**	P	**P**	**16 31 33.1**	**+0.9**
	4μm416nm,0.6s						
SAUI	**Saumlaki**	**5.78**	**96**		**P**	**16 31 32.0**	**-0.6**
SAUI				S	**S**	**16 32 43.8**	**-3.7**
SAUI	**Saumlaki**	**5.78**	**96**	P	**P**	**16 31 33.6**	**+1.0**
SAUI	**Saumlaki**	**5.78**	**96**	S	**S**	**16 32 47.4**	**-0.1**
SAUI	**Saumlaki**	**5.78**	**96**	P	**P**	**16 31 33.1**	**+0.5**
BNSI	**Bone**	**6.15**	**299**	P	**P**	**16 31 37.9**	**+1.5**
	2.4nm5μm697nm,0.8s						
KAPI	**Kappang**	**6.20**	**293**		**P**	**16 31 36.0**	**-0.9**
KAPI				S	**S**	**16 32 53.5**	**-1.9**
KAPI	**Kappang**	**6.20**	**293**	P	**P**	**16 31 39.1**	**+2.2**
	105nm,0.4s,baz=125,slow=6.9,SNR=64						
KAPI				S	**S**	**16 32 56.9**	**+1.5**
	34nm,0.6s,baz=240,slow=24,SNR=6.4						
KAPI	**Kappang**	**6.20**	**293**	P	**P**	**16 31 39.1**	**+2.2**
KAPI	**Kappang**	**6.20**	**293**	*i* P	**P**	**16 31 38.7**	**+1.8**
WBSI	**Waikabubak, Su**	**6.42**	**250**	P	**P**	**16 31 37.0**	**-2.2**
SPSI	**Sidrap Palu**	**6.66**	**301**	P	**P**	**16 31 42.8**	**+0.9**
	0.6nm200nm,0.8s						
LUWI	**Luwuk**	**6.91**	**337**		**P**	**16 31 43.4**	**-1.1**
LUWI	**Luwuk**	**6.91**	**337**	P	**P**	**16 31 46.3**	**+1.8**
LUWI	**Luwuk**	**6.91**	**337**	P	**P**	**16 31 46.1**	**+1.6**
TTSI	**Tana Toraja**	**7.14**	**307**	P	**P**	**16 31 48.9**	**+1.9**
	1.7nm2μm5μm574nm,0.8s						
APSI	**Ampana**	**7.54**	**329**	P	**P**	**16 31 52.9**	**+1.7**
	2.7nm8μm925nm,0.8s						
MTN	**Manton Dam**	**7.72**	**134**		**P**	**16 31 53.4**	**+0.2**
MTN	**Manton Dam**	**7.72**	**134**	P	**P**	**16 31 53.2**	**0.0**
	comp=Z,0.0nmcomp=Z,6μm,0.4s						
MTN	**Manton Dam**	**7.72**	**134**	P	**P**	**16 31 53.9**	**+0.7**
PLAI	**Plampang**	**7.76**	**259**	P	**P**	**16 31 51.6**	**-2.1**
	comp=Z,5.3nmcomp=Z,3μmcomp=Z,14μmcomp=Z,908nm,0.6s						
FAKI	**Fak Fak**	**8.09**	**57**		**P**	**16 31 56.1**	**-1.1**
FAKI				S	**S**	**16 33 25.7**	**-6.9**
FAKI	**Fak Fak**	**8.09**	**57**	P	**P**	**16 31 57.8**	**+0.6**
FAKI	**Fak Fak**	**8.09**	**57**	P	**P**	**16 31 57.3**	**+0.1**
	comp=Z,9μmcomp=Z,1μm,0.8s						
KMSI	**Cibinong**	**8.10**	**349**	P	**P**	**16 31 58.2**	**+0.9**
TNTI	**Ternate**	**8.37**	**13**		**P**	**16 31 59.9**	**-0.4**
TNTI	**Ternate**	**8.37**	**13**	P	**P**	**16 32 00.6**	**+0.4**
TNTI	**Ternate**	**8.37**	**13**	P	**P**	**16 31 59.3**	**-0.9**
	comp=Z,2μmcomp=Z,269nm,0.8s						
PCI	**Palu**	**8.60**	**319**	P	**P**	**16 32 05.6**	**+2.9**
	comp=Z,8μmcomp=Z,759nm,1.0s						
KDU	**Kakadu**	**8.62**	**128**	P	**P**	**16 32 02.2**	**-0.8**
	comp=Z,1μm,0.6s						
KDU	**Kakadu**	**8.62**	**128**	S	**S**	**16 33 40.5**	**-2.8**
KDU	**Kakadu**	**8.62**	**128**	P	**P**	**16 32 02.6**	**-0.3**
MRSI	**Marisa**	**8.63**	**336**	P	**P**	**16 32 04.4**	**+1.4**
SWI	**Sorong**	**8.70**	**42**	P	**P**	**16 32 04.1**	**+0.2**
	comp=Z,4μmcomp=Z,440nm,0.6s						
KNRA	**Kununurra**	**8.79**	**159**		**P**	**16 32 05.1**	**+0.4**
KNRA	**Kununurra**	**8.79**	**159**	P	**P**	**16 32 04.9**	**+0.2**
	comp=Z,529nm,1.0s						
KMPI	**Kaimana, Papua**	**8.99**	**66**	P	**P**	**16 32 07.5**	**+0.5**
	comp=Z,6μmcomp=Z,692nm,0.6s						
MPSI	**Mapaga**	**9.53**	**324**	P	**P**	**16 32 14.9**	**+2.0**
	comp=Z,2μmcomp=Z,5μmcomp=Z,488nm,0.8s						
TOLI2	**Tolitoli**	**9.71**	**331**		**P**	**16 32 14.9**	**+0.1**
TOLI2	**Tolitoli**	**9.71**	**331**	P	**P**	**16 32 16.7**	**+1.8**
SRBI	**Singaraja**	**10.21**	**266**	P	**P**	**16 32 19.8**	**-0.5**
	comp=Z,74nm,0.9s						
RKPI	**Ransiki, Papua**	**10.47**	**56**	P	**P**	**16 32 23.4**	**+0.2**
	comp=Z,2μmcomp=Z,232nm,0.6s						
BKB	**Balikpapan**	**10.54**	**305**	P	**P**	**16 32 27.8**	**+3.8**
BKB	**Balikpapan**	**10.54**	**305**	P	**P**	**16 32 28.5**	**+4.6**
FITZ	**Fitzroy Crossi**	**10.59**	**179**		**P**	**16 32 25.0**	**+0.6**
FITZ	**Fitzroy Crossi**	**10.59**	**179**	P	**P**	**16 32 24.7**	**+0.3**
	comp=Z,137nm,1.0s						
FITZ	**Fitzroy Crossi**	**10.59**	**179**	P	**P**	**16 32 25.1**	**+0.6**
	comp=Z,345nm,0.3s,baz=16,slow=9.5,SNR=2685						
FITZ				S	**S**	**16 34 20.9**	**-1.9**
	comp=Z,275nm,0.8s,baz=185,slow=20,SNR=18						
FITZ	**Fitzroy Crossi**	**10.59**	**179**	P	**P**	**16 32 25.0**	**+0.6**
SMKI	**Samarinda**	**10.79**	**310**	P	**P**	**16 32 30.8**	**+4.1**
SGSI	**Sangihe**	**11.05**	**0**	P	**P**	**16 32 30.1**	**+0.5**
JAGI	**Jajag, Banyuwa**	**11.28**	**264**		**P**	**16 32 30.1**	**-1.9**
JAGI	**Jajag, Banyuwa**	**11.28**	**264**	P	**P**	**16 32 30.5**	**-1.5**
JAGI	**Jajag, Banyuwa**	**11.28**	**264**	P	**P**	**16 32 30.2**	**-1.8**
	comp=Z,59nm,0.5s						
KMMI	**Kalianget**	**11.44**	**271**	P	**P**	**16 32 36.1**	**+2.3**
	comp=Z,4μmcomp=Z,55nm,0.8s						
GMJI	**Gumukmas**	**11.96**	**265**	P	**P**	**16 32 38.6**	**-0.9**
SRPI	**Serui, Papua**	**12.05**	**63**	P	**P**	**16 32 41.3**	**+0.8**
	comp=Z,2μmcomp=Z,296nm,0.8s						
BAKI	**Biak**	**12.27**	**60**	P	**P**	**16 32 45.1**	**+2.3**
	comp=Z,5μmcomp=Z,491nm,0.7s						
WAMI	**Wamena**	**13.62**	**76**	P	**P**	**16 33 00.0**	**+2.6**
	comp=Z,2μmcomp=Z,184nm,0.9s						
PCJI	**Pacitan**	**14.20**	**266**	P	**P**	**16 33 02.5**	**-1.2**
	comp=Z,55nm,0.8s						
SMPI	**Sarmi**	**14.24**	**68**	P	**P**	**16 33 05.0**	**+0.9**
	comp=Z,2μmcomp=Z,315nm,1.0s						
MYLDM	**Lahad Datu**	**14.35**	**331**	P	**P**	**16 33 06.4**	**+1.2**
MYLDM	**Lahad Datu**	**14.35**	**331**	P	**P**	**16 33 07.9**	**+2.6**
DAV	**Davao City (W)**	**14.42**	**0**	P	**P**	**16 33 06.8**	**+0.8**
	comp=Z,221nm,0.4s,baz=275,slow=5.5,SNR=4.7						
DAV				S	**S**	**16 35 38.1**	**-0.9**
	comp=Z,260nm,0.6s,baz=228,slow=22,SNR=9.0						
DAV	**Davao City (W)**	**14.42**	**0**	P	**P**	**16 33 07.5**	**+1.5**
WOJI	**Wonogiri, Jawa**	**14.45**	**267**	P	**P**	**16 33 06.0**	**-0.3**
	comp=Z,50nm,0.7s						
MBWA	**Marble Bar**	**14.73**	**202**		**P**	**16 33 09.6**	**+0.3**
MBWA	**Marble Bar**	**14.73**	**202**	P	**P**	**16 33 09.6**	**+0.3**
WB0	**Warramunga Arr**	**14.99**	**146**		**P**	**16 33 11.9**	**-0.2**
PSA00	**Pilbara Seismi**	**15.07**	**201**		**P**	**16 33 13.2**	**+0.2**
PSA00	**Pilbara Seismi**	**15.07**	**201**	P	**P**	**16 33 12.1**	**-0.9**
PSA00	**Pilbara Seismi**	**15.07**	**201**	P	**P**	**16 33 12.7**	**-0.2**
	comp=Z,346nm,0.5s						
PSA00	**Pilbara Seismi**	**15.07**	**201**	P	**P**	**16 33 13.4**	**+0.5**
WRAB	**Tennant Creek**	**15.10**	**146**	P	**P**	**16 33 13.0**	**-0.3**
WRAB	**Tennant Creek**	**15.10**	**146**	*i* P	**P**	**16 33 13.2**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,717nm,1.0s						
WRA	**Warramunga Arr**	**15.10**	**146**		**P**	**16 33 13.0**	**-0.3**
WRA	**Warramunga Arr**	**15.10**	**146**	P	**P**	**16 33 13.2**	**-0.1**
	comp=Z,464nm,0.4s,baz=324,slow=11,SNR=1146						
WRA				S	**S**	**16 35 50.9**	**-1.5**
	comp=Z,76nm,1.0s,baz=318,slow=20,SNR=17						
WRA	**Warramunga Arr**	**15.10**	**146**	*i* P	**P**	**16 33 12.5**	**-0.8**
WRA				pmax	pmax		
	comp=Z,464nm,0.4s						
WR8	**Warramunga Arr**	**15.20**	**146**		**P**	**16 33 14.2**	**-0.2**
GENI	**Genyem**	**15.39**	**73**	P	**P**	**16 33 17.3**	**+0.9**
GENI	**Genyem**	**15.39**	**73**	P	**P**	**16 33 16.4**	**0.0**
	comp=Z,3μmcomp=Z,238nm,1.2s						
STKI	**Sintang**	**15.84**	**297**	P	**P**	**16 33 21.9**	**+0.6**
	comp=Z,165nm,1.3s						
JAY	**Jayapura**	**15.92**	**73**	P	**P**	**16 33 22.3**	**+0.2**
	comp=Z,127nm,0.8s,baz=232,slow=6.0,SNR=41						
JAY				S	**S**	**16 36 09.9**	**+1.4**
	comp=Z,15nm,0.9s,baz=101,slow=23,SNR=3.9						
JAY	**Jayapura**	**15.92**	**73**	P	**P**	**16 33 21.6**	**-0.6**
	comp=Z,1μmcomp=Z,141nm,0.8s						
KKM	**Kota Kinabalu**	**16.28**	**325**		**P**	**16 33 25.5**	**-0.5**
KKM	**Kota Kinabalu**	**16.28**	**325**	P	**P**	**16 33 27.3**	**+1.3**
KSM	**Kuching**	**17.55**	**300**	P	**P**	**16 33 38.5**	**-0.9**
KSM	**Kuching**	**17.55**	**300**	P	**P**	**16 33 39.6**	**+0.3**
WRKA	**Warakurna**	**17.70**	**172**	P	**P**	**16 33 40.2**	**-0.6**
	comp=Z,120nm,1.1s						
LEM	**Lembang**	**17.75**	**271**	P	**P**	**16 33 41.8**	**+0.1**
	comp=Z,29nm,0.5s,baz=358,slow=10,SNR=7.2						
LEM				S	**S**	**16 36 43.7**	**+0.3**
	comp=Z,17nm,0.9s,baz=288,slow=22,SNR=1.5						
LEM	**Lembang**	**17.75**	**271**	P	**P**	**16 33 41.7**	**+0.1**
	comp=Z,58nm,1.0s						
AS31	**Alice Springs**	**18.04**	**154**		**P**	**16 33 44.3**	**-0.1**
AS31	**Alice Springs**	**18.04**	**154**	P	**P**	**16 33 44.6**	**+0.3**
	comp=Z,94nm,0.5s						
ASAR	**Alice Springs**	**18.04**	**154**	P	**P**	**16 33 44.2**	**-0.1**
ASAR	**Alice Springs**	**18.04**	**154**	P	**P**	**16 33 44.4**	**0.0**
	comp=Z,109nm,0.4s,baz=332,slow=11,SNR=970						
ASAR				S	**S**	**16 36 49.0**	**+1.0**
	comp=Z,133nm,0.9s,baz=343,slow=22,SNR=26						
ASAR				PcP	**PcP**	**16 37 55.1**	**0.0**
	comp=Z,4.0nm,0.3s,baz=350,slow=1.4,SNR=2.3						
ASAR				ScP	**ScP**	**16 40 48.0**	**-0.1**
	comp=Z,6.0nm,1.0s,baz=356,slow=30,SNR=4.3						
ASAR				PKiKP	**PKiKP**	**16 45 45.2**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=0.0,slow=0.0,SNR=4.5						
ASAR	**Alice Springs**	**18.04**	**154**	P	**P**	**16 33 44.2**	**-0.1**
AS01	**Alice Springs**	**18.06**	**154**	P	**P**	**16 33 44.9**	**+0.4**
CNJI	**Cibinong**	**18.21**	**269**	P	**P**	**16 33 44.8**	**-1.3**
	comp=Z,53nm,1.0s						
TPI	**Tanjungpandan**	**18.36**	**284**	P	**P**	**16 33 48.4**	**+0.8**
	comp=Z,79nm,0.8s						
COEN	**Coen**	**18.53**	**112**		**P**	**16 33 48.7**	**-0.5**
COEN	**Coen**	**18.53**	**112**	P	**P**	**16 33 48.0**	**-1.2**
	comp=Z,191nm,0.9s						
COEN	**Coen**	**18.53**	**112**	P	**P**	**16 33 48.8**	**-0.5**
GIRL	**Giralia**	**18.60**	**214**		**P**	**16 33 50.6**	**+0.9**
GIRL	**Giralia**	**18.60**	**214**	P	**P**	**16 33 50.1**	**+0.3**
	comp=Z,174nm,1.0s						
GIRL	**Giralia**	**18.60**	**214**	P	**P**	**16 33 50.9**	**+1.1**
QIS	**Mount Isa**	**18.89**	**135**	P	**P**	**16 33 52.2**	**-0.3**
	comp=Z,337nm,1.0s						
QIS	**Mount Isa**	**18.89**	**135**	P	**P**	**16 33 53.2**	**+0.6**
CGJI	**Cibinong**	**19.67**	**271**	P	**P**	**16 33 59.2**	**-0.6**
	comp=Z,71nm,0.9s						
PPBI	**Pangkal Pinang**	**19.98**	**284**	P	**P**	**16 34 04.5**	**+1.8**
MEEK	**Meekatharra**	**20.18**	**198**	P	**P**	**16 34 04.6**	**+0.2**
	comp=Z,327nm,0.8s						
MEEK	**Meekatharra**	**20.18**	**198**	P	**P**	**16 34 05.0**	**+0.6**
MTSU	**Mount Surprise**	**21.19**	**122**	P	**P**	**16 34 14.4**	**+0.7**
MDSI	**Maura Dua**	**21.40**	**277**	P	**P**	**16 34 16.3**	**+0.7**
PMG	**Port Moresby**	**21.52**	**97**	P	**P**	**16 34 17.1**	**+0.4**
PMG	**Port Moresby**	**21.52**	**97**	P	**P**	**16 34 17.2**	**+0.5**
	comp=Z,83nm,0.6s,baz=206,slow=0.5,SNR=47						
	comp=Z,83nm,0.6s						
PMG	**Port Moresby**	**21.52**	**97**	P	**P**	**16 34 17.7**	**+1.0**
PMG	**Port Moresby**	**21.52**	**97**	*ce*P	**P**	**16 34 16.8**	**+0.1**
PMG				pmax	pmax		
	comp=Z,55nm,0.7s						
TGY	**Tagaytay City**	**21.88**	**348**	P	**P**	**16 34 20.4**	**+0.5**
	comp=Z,117nm,0.3s,baz=274,slow=14,SNR=1.7						
	comp=Z,117nm,0.3s						
MANU	**Manus Island**	**22.44**	**77**		**P**	**16 34 25.8**	**+0.7**
MORW	**Morawa**	**23.29**	**201**	P	**P**	**16 34 32.3**	**-0.1**
MORW	**Morawa**	**23.29**	**201**	P	**P**	**16 34 32.4**	**-0.1**
	comp=Z,20nm,0.7s						
MORW	**Morawa**	**23.29**	**201**	P	**P**	**16 34 32.9**	**+0.4**
FORT	**Forrest**	**23.34**	**174**	P	**P**	**16 34 33.3**	**+0.4**
FORT	**Forrest**	**23.34**	**174**	P	**P**	**16 34 33.0**	**+0.1**
	comp=Z,462nm,0.7s						
FORT	**Forrest**	**23.34**	**174**	P	**P**	**16 34 33.6**	**+0.7**
BLDU	**Ballidu**	**24.48**	**199**	P	**P**	**16 34 43.1**	**0.0**

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           comp=Z,54nm,0.9s
BLDU  Ballidu          24.48 199   P      P        16 34 43.6 +0.5
KLBR  Kellerberrin     25.09 196   P      P        16 34 48.2 -0.4
           comp=Z,86nm,0.9s
KLBR  Kellerberrin     25.09 196   P      P        16 34 49.0 +0.4
DLV    Lat             25.63 319   P      P        16 34 53.5 -0.2
DLV    Lat             25.63 319   P      P        16 34 54.7 +1.0
MUN   Mundaring        25.90 198   P      P        16 34 55.4 -0.3
           comp=Z,32nm,1.0s
QLP   Quilpie          26.07 139   P      P        16 34 57.8 +0.4
           comp=Z,101nm,0.7s
QLP   Quilpie          26.07 139   P      P        16 34 58.9 +1.5
NWAO  Narrogin (SRO)   26.49 196   P      P        16 35 01.4 +0.4
NWAO  Narrogin (SRO)   26.49 196   P      P        16 35 01.7 +0.7
NWAO  Narrogin (SRO)   26.49 196   P      P        16 35 01.9 +0.9
NWAO  Narrogin (SRO)   26.49 196   P      P        16 35 01.4 +0.4
RABL  Rabaul           26.73  85   P      P        16 35 02.9 -0.4
BBOO  Buckleboo        27.08 160   P      P        16 35 06.7 +0.5
BBOO  Buckleboo        27.08 160   P      P        16 35 06.0 -0.2
           comp=Z,100nm,0.6s
BBOO  Buckleboo        27.08 160   P      P        16 35 06.9 +0.7
IPM   Ipoh             27.14 295   P      P        16 35 07.8 +0.9
WHYH  Whyalla          27.82 158   P      P        16 35 13.4 +0.7
KULM  Kulim            27.83 296   P      P        16 35 12.8 -0.2
KULM  Kulim            27.83 296   P      P        16 35 14.5 +1.5
RPSI  Rantau Prapat    28.36 290   P      P        16 35 18.2 +0.5
PSI   Prapat           28.40 290   P      P        16 35 18.2  0.0
           comp=Z,15nm,0.6s,baz=112,slow=10,SNR=6.3
           comp=Z,15nm,0.6s
PSI   Prapat           28.40 290   P      P        16 35 19.1 +0.9
STKA  Stephens Creek   28.57 150   P      P        16 35 19.9 +0.6
STKA                               pP     PP       16 36 33.7 -1.8
STKA  Stephens Creek   28.57 150   P      P        16 35 19.7 +0.4
           comp=Z,293nm,0.9s
STKA  Stephens Creek   28.57 150   P      P        16 35 20.2 +0.9
           comp=Z,54nm,0.8s,baz=323,slow=9.0,SNR=87
STKA                               ScP    ScP      16 41 15.9 -0.4
           comp=Z,6.3nm,0.7s,baz=338,slow=9.9,SNR=3.0
           comp=Z,54nm,0.8s
STKA  Stephens Creek   28.57 150   P      P        16 35 20.5 +1.2
STKA  Stephens Creek   28.57 150 i P      P        16 35 20.5 +1.2
HTT   Hallett          28.70 156   P      P        16 35 21.0 +0.6
           comp=Z,54nm,0.7s
HTT   Hallett          28.70 156   P      P        16 35 21.7 +1.3
EIDS  Eidsvold         30.23 129   P      P        16 35 32.9 -1.1
SRIT  Nakonsritamara   30.33 301          P        16 35 34.0 -0.8
SRIT  Nakonsritamara   30.33 301   P      P        16 35 36.4 +1.6
QIZ   Qiongzhong       30.49 330   P      P        16 35 36.5 +0.3
QIZ                                pP     pP       16 36 50.0 -4.1
QIZ                                S      S        16 40 11.8 +6.4
QIZ                                sS     SS       16 42 42.9 +2.9
QIZ                                pmax   pmax
           comp=Z,12nm,0.8s
CMSA  Cobar Meteorol   30.50 144   P      P        16 35 36.8 +0.7
           comp=Z,54nm,0.9s
CMSA  Cobar Meteorol   30.50 144   P      P        16 35 37.5 +1.4
TPUB  Ta-pu            30.92 351          P        16 35 38.8 -1.0
TPUB                               IAmb   IAmb     16 35 40.7
           comp=Z,45nm,0.9s
TPUB  Ta-pu            30.92 351   P      P        16 35 40.3 +0.4
BSI   Banda Aceh       32.76 292   P      P        16 35 54.4 -1.4
           comp=Z,48nm,2.1s
ARPS  Mount Arapiles   32.78 155   P      P        16 35 56.4 +0.8
           comp=Z,273nm,0.7s
ARPS  Mount Arapiles   32.78 155   P      P        16 35 57.0 +1.4
ARMA  Armidale         33.50 136   P      P        16 36 03.5 +1.4
ARMA  Armidale         33.50 136   P      P        16 36 03.6 +1.5
           comp=Z,13nm,0.8s
TATA  Tatamba Isabel   33.99  94   P      P        16 36 06.4 +0.1
SAVO  Savo Central     34.00  95   P      P        16 36 06.5 +0.1
HNR   Honiara          34.13  96   P      P        16 36 07.1 -0.4
HNR   Honiara          34.13  96   P      P        16 36 09.3 +1.8
HNR   Honiara          34.13  96   P      P        16 36 07.1 -0.4
HNR                                pmax   pmax
           comp=Z,124nm,0.8s
HNR   Honiara          34.13  96   P      P        16 36 07.2 -0.3
ALEG  Aligegeo Malai   34.87  95   P      P        16 36 13.1 -0.6
TOO   Toolangi         35.06 152   P      P        16 36 15.2 +0.1
TOO   Toolangi         35.06 152   P      P        16 36 16.8 +1.7
           comp=Z,7.8nm,2.0s
TOO   Toolangi         35.06 152   P      P        16 36 15.2 +0.1
TOO                                pmax   pmax
           comp=Z,70nm,1.0s
CAN   Canberra         35.14 145   P      P        16 36 16.2 +0.4
CAN   Canberra         35.14 145   P      P        16 36 17.4 +1.6
           comp=Z,33nm,0.9s
CAN   Canberra         35.14 145   P      P        16 36 17.8 +2.0
CAN   Canberra         35.14 145   P      P        16 36 16.2 +0.4
CAN                                pmax   pmax
           comp=Z,250nm,0.9s
CAN   Canberra         35.14 145   P      P        16 36 17.9 +2.1
CAN                                PcP    PcP      16 38 35.8 +0.3
CNB   Canberra Magne   35.34 145   P      P        16 36 19.2 +1.6
           comp=Z,22nm,1.5s
SLVN  Son La           35.59 324   P      P        16 36 21.0 +1.2
CMAR  Chiang Mai Arr   36.72 315   P      P        16 36 29.1 -0.1
CMAR                                      PcP      16 38 41.7 +1.2
CMAR  Chiang Mai Arr   36.72 315   P      P        16 36 29.9 +0.8
           comp=Z,6.7nm,0.7s,baz=143,slow=6.7,SNR=69
CMAR                               PcP    PcP      16 38 42.3 +1.8
           comp=Z,8.5nm,0.6s,baz=167,slow=2.6,SNR=30
CMAR                               ScP    ScP      16 41 46.1 +1.3
           comp=Z,4.2nm,0.8s,baz=159,slow=3.2,SNR=14
           comp=Z,6.7nm,0.7s
CMAR  Chiang Mai Arr   36.72 315 i P      P        16 36 29.8 +0.7
CMAR                               pmax   pmax
           comp=Z,9.0nm,0.6s
CHTO  Chiang Mai       36.96 315          P        16 36 30.9 -0.2
CHTO                                      sP       16 38 42.6 -0.2
CHTO  Chiang Mai       36.96 315   P      P        16 36 32.8 +1.7
CHTO  Chiang Mai       36.96 315   P      P        16 36 30.9 -0.2
CHTO  Chiang Mai       36.96 315   P      P        16 36 31.7 +0.6
CHTO                               PcP    sP       16 38 42.7 -0.2
GYA   Guiyang          38.33 332 ⇓P      P        16 36 43.4 +0.9
GYA                                pmax   pmax
           comp=Z,18nm,0.8s
KMI   Kunming          39.23 326   P      P        16 36 51.6 +1.7
KMI                                PcP    PcP      16 38 49.9 +1.4
KMI                                S      S        16 42 16.3 -1.4
KMI                                sS     sS       16 44 44.5 -0.9
KMI                                SS     SS       16 45 35.1 +1.2
KMI                                pmax   pmax
           comp=Z,15nm,0.6s
KMI                                LR     LR
           comp=N,97nm,13.8s
KMI                                LR     LR
           comp=E,130nm,16.2s
KMI                                LR     LR
           comp=Z,120nm,17.5s
WHN   Wuhan            39.25 345   P      P        16 36 50.8 +1.1
WHN                                S      S        16 42 18.5 +1.1
WHN                                pmax   pmax
           comp=Z,80nm,0.9s
NJ2   Nanjing          39.78 351 ⇓P      P        16 36 54.8 +0.8
NJ2                                S      S        16 42 24.8 -0.4
NJ2                                SS     SS       16 45 49.3 +5.2
NJ2                                pmax   pmax
           comp=Z,18nm,0.5s
ENH   Enshi            40.52 338   P      P        16 36 58.2 -1.9
ENH                                IAmb   IAmb     16 37 01.6
           comp=Z,20nm,0.7s
ENH   Enshi            40.52 338   P      P        16 37 00.7 +0.6
ENH   Enshi            40.52 338   P      P        16 36 59.8 -0.3
ENH                                PcP    PcP      16 38 53.4 +1.0
JNU   Nakatsue         40.66   7   P      P        16 37 01.2 +0.1
           comp=Z,5.8nm,0.8s,baz=235,slow=3.6,SNR=6.4
JNU                                PcP    PcP      16 38 52.3 -0.5
           comp=Z,6.0nm,0.9s,baz=180,slow=2.0,SNR=3.6
           comp=Z,5.8nm,0.8s
PZH   PanZhiHua        40.86 327   P      P        16 37 03.3 +0.3
SANVU Saraoutou        41.59 105   P      P        16 37 08.9 +0.1
SANVU Saraoutou        41.59 105   P      P        16 37 09.5 +0.7
SANVU Saraoutou        41.59 105   P      P        16 37 09.7 +0.9
TNCH  TengChong        41.61 322   P      P        16 37 09.3 +0.2
TNCH                               pP     pP       16 38 32.9 +0.6
TNCH                               pmax   pmax
           comp=Z,10.0nm,0.6s
TNCH                               pmax   pmax
           comp=Z,90nm,4.1s
JMN   Monobe           41.71  11   P      P        16 37 09.9 +0.4
JMN                                IAmb   IAmb     16 37 11.8
           comp=Z,27nm,0.9s
JMN   Monobe           41.71  11   P      P        16 37 11.5 +2.0
NOUC  Port Laguerre    41.91 115   P      P        16 37 11.5 +0.2

DZM   Mont Dzumac      42.03 115   P      P        16 37 12.7 +0.3
DZM   Mont Dzumac      42.03 115   P      P        16 37 13.2 +0.9
           comp=Z,12nm,0.6s,baz=255,slow=9.6,SNR=21
           comp=Z,12nm,0.6s
DZM   Mont Dzumac      42.03 115   P      P        16 37 13.5 +1.2
DZM   Mont Dzumac      42.03 115   P      P        16 37 12.7 +0.3
YATNC Mamie plateau,   42.43 115   P      P        16 37 17.8 +2.4
LYN   LuoYang          43.54 344 ⇑P      P        16 37 24.6 +0.7
LYN                                pP     pwP      16 38 53.8 +1.1
LYN                                PcP    PcP      16 39 03.8 +1.4
LYN                                S      S        16 43 17.5 -2.2
LYN                                sS     SS       16 47 13.6  +26
LYN                                pmax   pmax
           comp=Z,24nm,0.7s
TJN   Taejon           43.62   2   P      P        16 37 26.0 +1.5
TJN   Taejon           43.62   2 i P      P        16 37 25.1 +0.6
INU   Inuyama          43.93  14   P      P        16 37 27.1 +0.2
TIA   Tai'an           44.13 350   P      P        16 37 27.8 -0.7
TIA                                PcP    PcP      16 39 05.6 +1.2
TIA                                S      S        16 43 24.9 -3.1
TIA                                pmax   pmax
           comp=Z,9.0nm,1.0s
XAN   Xi'an            44.14 340 ⇑P      P        16 37 27.8 -0.9
XAN                                PcP    PcP      16 39 05.0 +0.4
XAN                                S      S        16 43 27.4 -1.0
XAN                                pmax   pmax
           comp=Z,48nm,0.7s
XAN                                AMB    AMB
           comp=Z,61nm,3.8s
XAN                                LR     LR
           comp=N,140nm,15.1s
XAN                                LR     LR
           comp=E,130nm,18.0s
XAN                                LR     LR
           comp=Z,190nm,18.2s
XAN   Xi'an            44.14 340   P      P        16 37 27.8 -0.9
XAN                                PcP    PcP      16 39 05.0 +0.4
JGF   Kuroka           44.25  14   P      P        16 37 30.8 +1.3
KSAR  Wonju Array Be   44.70   3   P      P        16 37 32.8 -0.1
KSAR                                      PcP      16 39 06.7 +0.3
KSAR  Wonju Array Be   44.70   3   P      P        16 37 32.8 -0.1
KSRS  Korea Array      44.72   3   P      P        16 37 34.0 +1.0
           comp=Z,7.1nm,0.7s,baz=180,slow=8.9,SNR=36
KSRS                               PcP    PcP      16 39 07.4 +1.1
           comp=Z,6.4nm,0.7s,baz=187,slow=3.1,SNR=21
           comp=Z,7.1nm,0.7s
MAJO  Matsushiro       45.35  14   P      P        16 37 37.5 -0.5
MAJO  Matsushiro       45.35  14   P      P        16 37 38.1 +0.1
MAJO  Matsushiro       45.35  14 i P      P        16 37 36.9 -1.1
MAJO                               pmax   pmax
           comp=Z,19nm,0.9s
MAJO  Matsushiro       45.35  14   P      P        16 37 37.7 -0.2
MAJO                               pP     pP       16 39 03.7 +2.0
MAJO                               PcP    PcP      16 39 08.8 +0.2
MJAR  Matsushiro Arr   45.35  14   P      P        16 37 37.8 -0.2
           comp=Z,19nm,0.7s,baz=189,slow=8.5,SNR=38
MJAR                               PcP    PcP      16 39 09.4 +0.7
           comp=Z,6.1nm,0.9s,baz=192,slow=4.2,SNR=6.6
           comp=Z,19nm,0.7s
HNS   HongShan         45.73 348 ⇓P      P        16 37 40.8 -0.1
HNS                                sP     sP       16 39 53.0 -0.6
HNS                                S      S        16 43 48.5 -2.2
HNS                                pmax   pmax
           comp=Z,21nm,0.9s
DL2   Dalian           46.25 356   P      P        16 37 45.1 +0.3
DL2                                PcP    PcP      16 39 12.6 +0.9
DL2                                S      S        16 43 55.6 -2.3
DL2                                pmax   pmax
           comp=Z,45nm,0.8s
JSD   Sado             46.78  14   P      P        16 37 49.8 +0.9
JMM   Marumori         47.28  17   IAmb   IAmb     16 37 56.7
           comp=Z,40nm,0.5s
JMM   Marumori         47.28  17   P      P        16 37 53.9 +1.2
LZH   Lanzhou          47.84 336 eP      P        16 37 57.4 +0.2
LZH                                PcP    pP       16 39 19.8 -2.1
LZH                                S      S        16 44 20.1 -0.6
LZH   Lanzhou          47.84 336   SS     SKiKP    16 47 59.4  -58
LZH                                pmax   pmax
           comp=Z,37nm,1.0s
BJT   Baijiatuau       48.00 350   P      P        16 37 58.5 +0.4
BJI   Beijing          48.02 350   P      P        16 37 58.1 -0.1
BJI                                PcP    PcP      16 39 19.6 +1.5
BJI                                S      S        16 44 18.1 -4.5
BJI                                pmax   pmax
           comp=Z,6.0nm,0.7s
LSA   Lhasa            49.53 320   P      P        16 38 10.6 +0.3
LSA                                IAmb   IAmb     16 38 12.5
           comp=Z,17nm,0.5s
LSA   Lhasa            49.53 320   P      P        16 38 10.6 +0.3
LSA                                pmax   pmax
           comp=Z,17nm,0.5s
HHC   Hu-ho-hao-te     49.73 346 eP      P        16 38 14.9 +3.7
HHC                                pmax   pmax
           comp=Z,19nm,0.6s
HHC                                pmax   pmax
           comp=Z,41nm,3.8s
MSHR  Mys Shultsa      50.05   5ceP      P        16 38 13.4 +0.1
MSHR                               pmax   pmax
           comp=Z,26nm,1.0s
JTM   Tenmabayashi     50.09  15   P      P        16 38 14.1 +0.5
JTM                                PcP    PcP      16 39 25.6 -0.1
JTM   Tenmabayashi     50.09  15   P      P        16 38 15.1 +1.5
CN2   Changchun        51.00 360   P      P        16 38 20.3  0.0
CN2                                pmax   pmax
           comp=Z,10.0nm,0.6s
EVN   Everest          51.33 315   P      P        16 38 23.6 -0.1
EVN                                PcP    PcP      16 39 31.3 -0.1
USA0B Ussuriysk Arra   51.73   6 i P      P        16 38 26.1 +0.5
USRK  Ussuriysk Ar.    51.73   6   P      P        16 38 26.3 +0.7
           comp=Z,8.8nm,0.7s,baz=194,slow=7.1,SNR=44
           comp=Z,8.8nm,0.7s
ERM   Erimo            51.80  17   P      P        16 38 27.0 +0.8
ERM   Erimo            51.80  17   P      P        16 38 27.9 +1.7
ERM   Erimo            51.80  17   P      P        16 38 27.0 +0.8
ERM                                pmax   pmax
           comp=Z,20nm,0.9s
ERM   Erimo            51.80  17   P      P        16 38 27.4 +1.3
ERM                                sP     sP       16 40 43.3 +1.5
JEM   Erimo            51.80  17   P      P        16 38 28.0 +1.8
XLT   XiLinHaoTe       51.81 351 eP      P        16 38 26.8 +0.5
XLT                                S      S        16 45 13.4 -1.0
XLT                                pmax   pmax
           comp=Z,23nm,0.9s
MDJ   Mudanjiang       51.95   4   P      P        16 38 28.4 +1.2
MDJ                                pP     pP       16 39 54.9 +1.1
MDJ                                S      S        16 45 16.1 +0.1
MDJ                                ScS    ScS      16 47 30.9 +0.9
MDJ                                pmax   pmax
           comp=Z,57nm,1.0s
MSVF  Nonsavu          52.15 107   P      P        16 38 29.2  0.0
MSVF  Nonsavu          52.15 107   P      P        16 38 31.5 +2.2
MSVF  Nonsavu          52.15 107   P      P        16 38 29.3  0.0
MSVF                               pmax   pmax
           comp=Z,24nm,0.9s
MSVF  Nonsavu          52.15 107   P      P        16 38 31.3 +2.0
GTA   Gaotai           52.34 335   P      P        16 38 31.5 +1.2
GTA                                PcP    PcP      16 39 35.8 +1.4
GTA                                pP     pwP      16 40 02.0 -1.2
GTA                                sP     sP       16 40 55.3  +10
GTA                                S      S        16 45 21.8 +0.1
GTA                                pmax   pmax
           comp=Z,10.0nm,1.0s
HYB   Hyderabad        52.54 299 eP      P        16 38 31.7 -0.3
HYB                              ePcP    PcP      16 39 35.2 -0.3
HYB                              epP     pP       16 40 00.3 +0.4
HYB                              ePP     PP       16 40 37.7 +0.8
HYB                              eS      S        16 45 25.0 -0.1
BNX   BinXian          52.97   2 ⇑P      P        16 38 34.6 +0.1
BNX                                pmax   pmax
           comp=Z,13nm,1.0s
DGTI  Dogotuki         53.67 105   P      P        16 38 41.7 +1.5
BKZ   Black Stump Fm   55.52 133   P      P        16 38 53.1 +0.1
RTZ   Ruatahuna        55.69 132   P      P        16 38 54.4 +0.3
YSS   Yuzhno-Sakhali   56.29  14   P      P        16 38 56.9 -1.0
YSS   Yuzhno-Sakhali   56.29  14   P      P        16 38 59.7 +1.8
YSS   Yuzhno-Sakhali   56.29  14ceP      P        16 38 58.4 +0.5
YSS                                pmax   pmax
           comp=Z,22nm,1.3s
KLR   Kul'dur          56.70   5ceP      P        16 39 00.5 -0.3
ULN   Ulaanbaatar      57.43 345   P      P        16 39 06.5 +0.4
ULN                                IAmb   IAmb     16 39 07.9
           comp=Z,24nm,0.9s
ULN   Ulaanbaatar      57.43 345ceP      P        16 39 06.9 +0.9

ULN                                pmax   pmax
           comp=Z,21nm,0.7s
ULN   Ulaanbaatar      57.43 345   P      P        16 39 07.0 +1.0
ULN                                PcP    PcP      16 39 55.0 +1.0
HEH   HeiHe            57.48   1 eP      P        16 39 06.5 +0.4
HEH                                pP     PcP      16 39 53.8 -0.1
HEH                                S      S        16 46 25.9 -2.7
HEH                                pmax   pmax
           comp=Z,49nm,0.9s
SONM  Songino Array    57.57 345   P      P        16 39 07.2 +0.2
SONM                               PcP    PcP      16 39 54.6  0.0
SONM  Songino Array    57.57 345   P      P        16 39 08.1 +1.1
           comp=Z,15nm,0.8s,baz=163,slow=8.1,SNR=56
SONM                               PcP    PcP      16 39 55.2 +0.7
           comp=Z,5.0nm,0.7s,baz=163,slow=4.3,SNR=7.9
           comp=Z,15nm,0.8s
TYV   Tymovskoe        59.94  12 eP      P        16 39 23.7 +0.9
TYV                                pmax   pmax
           comp=Z,13nm,1.0s
TYV                                pmax   pmax
           comp=Z,200nm,4.3s
DRV   Dumont d’Urvil   59.97 173   P      P        16 39 23.4 +0.6
DRV                                PcP    PcP      16 40 03.9 +0.3
CIT   Chita            60.11 352 eP      P        16 39 22.8 -1.2
CIT                              e                 16 40 02.2
CIT                              e                 16 40 52.2
CIT                                pmax   pmax
           comp=Z,73nm,2.7s
ZAK   Zakamensk        60.73 344 eP      P        16 39 28.4 +0.2
ZEA   Zeya             60.97   1 eP      P        16 39 30.4 +0.9
ZEA                              e                 16 40 09.3
ZEA                                pmax   pmax
           comp=N,10.0nm,1.1s
ZEA                                pmax   pmax
           comp=Z,10.0nm,1.1s
WMQ   Urumqi           61.42 330 eP      P        16 39 34.3 +1.4
MOY   Mondy            62.53 343 eP      P        16 39 41.1 +1.1
MOY                                pmax   pmax
           comp=Z,24nm,2.1s
NIL   Nilore           64.18 313   P      P        16 39 50.5 -0.5
NIL                                IAmb   IAmb     16 39 52.9
           comp=Z,13nm,0.7s
NIL   Nilore           64.18 313   P      P        16 39 50.5 -0.5
NIL                                pmax   pmax
           comp=Z,13nm,0.7s
NIL   Nilore           64.18 313   P      P        16 39 51.2 +0.2
NIL                                PcP    PcP      16 40 21.2 -0.4
KSH   Kashi            65.39 320   P      P        16 39 59.4 +0.7
KSH                                pP     pP       16 41 38.6 +6.7
KSH                                pmax   pmax
           comp=Z,15nm,0.6s
ZSN   Zaisan           65.40 331 eP      P        16 39 58.6 +0.2
ZSN   Zaisan           65.40 331 eP      P        16 39 58.7 +0.2
UZB   Uzynbulak        65.66 324 eP      P        16 40 00.3  0.0
UZB   Uzynbulak        65.66 324 eP      P        16 40 00.4 +0.1
SATY  Saty             65.96 324 eP      P        16 40 02.3 +0.1
SATY  Saty             65.96 324 eP      P        16 40 02.4 +0.1
KPKS  Kokpek           66.05 324 eP      P        16 40 02.8 +0.2
KPKS  Kokpek           66.05 324 eP      P        16 40 02.9 +0.2
PEA0B Petropavlovsk-   66.22  21ceP      P        16 40 05.4 +2.0
PETK  Petropavlovsk-   66.22  21   P      P        16 40 03.8 +0.4
PETK                               PcP    PcP      16 40 28.8 -0.8
PETK  Petropavlovsk-   66.22  21   P      P        16 40 04.1 +0.7
           comp=Z,42nm,0.7s,baz=221,slow=2.7,SNR=136
PETK                               PcP    PcP      16 40 29.6 +0.1
           comp=Z,6.4nm,0.6s,baz=202,slow=4.6,SNR=4.4
           comp=Z,42nm,0.7s
PETK  Petropavlovsk-   66.22  21   P      P        16 40 03.8 +0.4
MK31  Makanchi Array   66.22 329ceP      P        16 40 04.1 +0.5
MKAR  Makanchi Array   66.22 329   P      P        16 40 03.7 +0.1
MKAR  Makanchi Array   66.22 329   P      P        16 40 04.2 +0.5
           comp=Z,18nm,0.5s,baz=127,slow=7.7,SNR=267
MKAR                               pP     pP       16 41 37.2 +0.3
           comp=Z,1.2nm,0.7s,baz=132,slow=8.3,SNR=1.4
MKAR                               S      S        16 48 16.9 -0.1
           comp=Z,1.6nm,1.1s,baz=148,slow=7.1,SNR=8.6
           comp=Z,18nm,0.5s
MKAR  Makanchi Array   66.22 329 i P      P        16 40 04.1 +0.5
MKAR                               pmax   pmax
           comp=Z,19nm,0.5s
MAKZ  Makanchi         66.39 329   P      P        16 40 04.6 -0.1
MAKZ                               IAmb   IAmb     16 40 06.0
           comp=Z,12nm,0.7s
MAKZ  Makanchi         66.39 329   P      P        16 40 04.6 -0.1
MAKZ                               pmax   pmax
           comp=Z,12nm,0.7s
MAKZ  Makanchi         66.39 329   P      P        16 40 05.1 +0.4
MAKZ                               PcP    PcP      16 40 30.6 +0.1
PET   Petropavlovsk    66.49  21ceP      P        16 40 06.7 +1.7
PET                                pmax   pmax
           comp=Z,46nm,1.7s
MDOK  Medeo            66.82 323 eP      P        16 40 07.7 +0.1
MDOK  Medeo            66.82 323 eP      P        16 40 07.8 +0.1
AAA   Alma-Ata         66.92 323 eP      P        16 40 08.2 +0.1
AAA                                pmax   pmax
           comp=Z,11nm,0.4s
AAA   Alma-Ata         66.92 323 eP      P        16 40 08.2 +0.1
           comp=Z,11nm,0.4s
ARXS  Arharly          66.99 325 i P      P        16 40 08.1 -0.5
BOOM  Boomskoye usch   67.09 322   IAmb   IAmb     16 40 11.1
           comp=Z,13nm,0.6s
TDK   Taldyqorghan     67.15 326 eP      P        16 40 09.6 +0.2
TDK                                pmax   pmax
           comp=Z,11nm,0.4s
TDK   Taldyqorghan     67.15 326 eP      P        16 40 09.6 +0.2
           comp=Z,11nm,0.4s
TKM2  Tokmak 2         67.55 323   P      P        16 40 12.9 +0.8
           SNR=8.8
CCD   Concordia, Ant   67.63 181   P      P        16 40 13.9 +1.5
CCD                                PcP    PcP      16 40 35.6  0.0
CCD                                pP     pwP      16 41 47.5 -1.2
KUU   Kurty            67.67 324 eP      P        16 40 12.9 +0.3
KUU                                pmax   pmax
           comp=Z,9.0nm,0.6s
KUU   Kurty            67.67 324 eP      P        16 40 12.9 +0.3
           comp=Z,9.4nm,0.6s
KBL   Kabul            67.68 312   P      P        16 40 13.1 -0.1
KBL   Kabul            67.68 312   P      P        16 40 13.1 -0.1
KBL                                pmax   pmax
           comp=Z,13nm,0.9s
AAK   Ala-Archa        68.06 322   P      P        16 40 16.4 +1.1
           SNR=11
AAK   Ala-Archa        68.06 322   P      P        16 40 16.0 +0.7
AAK                                IAmb   IAmb     16 40 17.2
           comp=Z,12nm,0.6s
AAK   Ala-Archa        68.06 322 i P      P        16 40 15.7 +0.5
AAK   Ala-Archa        68.06 322   P      P        16 40 16.3 +1.1
AAK                                PcP    PcP      16 40 39.2 +1.5
AML   Almayashu        68.27 321   P      P        16 40 17.9 +1.1
           SNR=13
ARSB  Arslanbob        68.29 320   IAmb   IAmb     16 42 01.8
           comp=Z,24nm,1.2s
USP   Ospenovka        68.40 322   P      P        16 40 17.9 +0.7
           SNR=7.6
EKS2  Erkin-Say        68.51 322   P      P        16 40 19.2 +1.2
           SNR=7.7
YAK   Yakutsk          69.34   2   P      P        16 40 22.5 +0.1
YAK   Yakutsk          69.34   2d iP      P        16 40 22.8 +0.5
YAK                              e                 16 40 42.6
YAK                              e*PP    pP       16 41 55.1 -1.0
YAK                              e                 16 43 02.5
YAK                              eS      S        16 48 54.7 +1.9
YAK                              e                 16 49 42.6
YAK                                pmax   pmax
           comp=Z,85nm,0.9s
YAK                                pmax   pmax
           comp=E,4.0nm,1.1s
YAK                                pmax   pmax
           comp=N,13nm,1.0s
YAK                                pmax   pmax
           comp=Z,30nm,2.1s
YAK                                pmax   pmax
           comp=E,12nm,2.3s
YAK                                pmax   pmax
           comp=N,23nm,2.5s
YAK                                smax   smax
           comp=E,43nm,1.9s
YAK                                smax   smax
           comp=N,17nm,1.8s
YAK   Yakutsk          69.34   2   P      P        16 40 22.8 +0.5
SIMJ  Simiganj         69.59 316   P      P        16 40 24.6 -0.1
SIMJ                               IAmb   IAmb     16 42 08.6
           comp=Z,25nm,1.1s
SIMJ  Simiganj         69.59 316   P      P        16 40 24.7 +0.1
SIMJ                               pP     pP       16 41 60.0 +0.7
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BTLS	**Baital**	**69.67**	**324**	*e*P	**P**	**16 40 25.1**	**+0.3**
BTLS	**Baital**	**69.67**	**324**	*e*P	**P**	**16 40 25.1**	**+0.3**
MA2	**Magadan**	**69.78**	**13**	P	**P**	**16 40 25.8**	**+0.7**
MA2	**Magadan**	**69.78**	**13**	P	**P**	**16 40 26.6**	**+1.5**
MA2	**Magadan**	**69.78**	**13**	*ce*P	**P**	**16 40 26.7**	**+1.6**
MA2				pmax	pmax		
	comp=Z,65nm,1.0s						
MA2	**Magadan**	**69.78**	**13**	P	**P**	**16 40 26.3**	**+1.2**
MA2				PcP	**PcP**	**16 40 45.0**	**+0.5**
ZAA0	**Zalesovo Array**	**70.07**	**336**	IAmb	IAmb	16 40 27.7	
	comp=Z,62nm,1.5s						
ZALV	**Zalesovo Beam**	**70.07**	**336**	P	**P**	**16 40 26.0**	**-1.0**
ZALV	**Zalesovo Beam**	**70.07**	**336**	P	**P**	**16 40 26.6**	**-0.4**
	comp=Z,18nm,0.5s,baz=136,slow=4.7,SNR=74						
ZALV				pP	**pwP**	**16 42 03.4**	**-1.4**
	comp=Z,1.8nm,0.8s,baz=123,slow=5.5,SNR=2.1						
ZALV				S	**S**	**16 48 58.7**	**-2.9**
	comp=Z,3.7nm,0.6s,baz=138,slow=12,SNR=13						
	comp=Z,18nm,0.5s						
DZA	**Taraz**	**70.16**	**321**	*e*P	**P**	**16 40 28.1**	**+0.3**
DZA	**Taraz**	**70.16**	**321**	*e*P	**P**	**16 40 28.1**	**+0.3**
IUG	**Iuzhnay**	**70.60**	**320**	*e*P	**P**	**16 40 30.7**	**+0.1**
IUG	**Iuzhnay**	**70.60**	**320**	*e*P	**P**	**16 40 30.7**	**+0.1**
KURBB	**Kurchatov Arra**	**70.61**	**330**	P	**P**	**16 40 30.6**	**+0.4**
	comp=Z,10nm,0.7s,baz=137,slow=5.1,SNR=129						
KURBB				pP	**pP**	**16 42 06.0**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=136,slow=5.2,SNR=1.6						
KURBB				S	**S**	**16 48 59.3**	**-8.6**
	comp=Z,0.4nm,0.6s,baz=137,slow=13,SNR=7.0						
	comp=Z,10nm,0.7s						
KURK	**Kurchatov**	**70.63**	**331**	P	**P**	**16 40 30.4**	**0.0**
KURK				IAmb	IAmb	16 40 31.4	
	comp=Z,18nm,0.6s						
KURK	**Kurchatov**	**70.63**	**331**	*de*P	**P**	**16 40 30.7**	**+0.3**
KURK				pmax	pmax		
	comp=Z,14nm,0.8s						
KKAR	**Karatay Array**	**70.78**	**321**	P	**P**	**16 40 31.4**	**-0.1**
KKAR	**Karatay Array**	**70.78**	**321**	P	**P**	**16 40 31.4**	**-0.1**
BRLS	**Borolday**	**71.17**	**320**	*e*P	**P**	**16 40 33.9**	**+0.1**
BRLS	**Borolday**	**71.17**	**320**	*e*P	**P**	**16 40 33.9**	**+0.1**
VNDA	**Vanda**	**72.58**	**172**	P	**P**	**16 40 42.2**	**+0.8**
VNDA	**Vanda**	**72.58**	**172**	P	**P**	**16 40 42.5**	**+1.0**
	comp=Z,4.1nm,0.5s,baz=314,slow=6.1,SNR=26						
	comp=Z,4.1nm,0.5s						
VNDA	**Vanda**	**72.58**	**172**	P	**P**	**16 40 42.2**	**+0.8**
SMY	**Shemya**	**72.74**	**29**	P	**P**	**16 40 44.8**	**+2.1**
MAW	**Mawson**	**72.93**	**201**	P	**P**	**16 40 44.4**	**+0.9**
	comp=Z,2.6nm,0.5s,baz=120,slow=19,SNR=2.4						
	comp=Z,2.6nm,0.5s						
SEY	**Seymchan**	**73.13**	**12**	*ce*P	**P**	**16 40 45.9**	**+1.2**
SEY				pmax	pmax		
	comp=Z,99nm,1.3s						
BRZS	**Berezniki**	**73.22**	**328**	*e*P	**P**	**16 40 46.1**	**+0.5**
BRZS	**Berezniki**	**73.22**	**328**	*e*P	**P**	**16 40 46.1**	**+0.5**
BVAR	**Borovoye Array**	**76.10**	**329**	P	**P**	**16 41 02.2**	**+0.4**
	comp=Z,21nm,0.9s,baz=137,slow=7.1,SNR=85						
BVAR				pP	**pP**	**16 42 39.4**	**+1.0**
	comp=Z,0.5nm,0.4s,baz=115,slow=6.5,SNR=1.3						
	comp=Z,21nm,0.9s						
BRVK	**Borovoye**	**76.18**	**329**	P	**P**	**16 41 02.3**	**+0.1**
BRVK				IAmb	IAmb	16 41 03.9	
	comp=Z,20nm,0.8s						
BRVK	**Borovoye**	**76.18**	**329**	*ce*P	**P**	**16 41 02.7**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,39nm,1.3s						
ADK	**Adak**	**76.92**	**33**	P	**P**	**16 41 06.8**	**+0.5**
ADK				IAmb	IAmb	16 41 11.4	
	comp=Z,27nm,0.9s						
ADK	**Adak**	**76.92**	**33**	P	**P**	**16 41 07.9**	**+1.6**
ADK	**Adak**	**76.92**	**33**	P	**P**	**16 41 06.8**	**+0.5**
ADK				pmax	pmax		
	comp=Z,27nm,1.0s						
ATKA	**Atka Island**	**78.41**	**33**	P	**P**	**16 41 15.3**	**+0.9**
TIXI	**Tiksi**	**78.96**	**1**	P	**P**	**16 41 16.4**	**-0.5**
TIXI	**Tiksi**	**78.96**	**1**	*e*P	**P**	**16 41 14.0**	**-2.9**
TIXI				pmax	pmax		
	comp=Z,22nm,0.9s						
AB31	**Akbulak array**	**80.11**	**323**	IAmb	IAmb	16 41 24.9	
	comp=Z,23nm,1.3s						
ABKAR	**Akbulak array**	**80.11**	**323**	P	**P**	**16 41 23.5**	**-0.1**
ABKAR	**Akbulak array**	**80.11**	**323**	IAmb	IAmb	16 41 24.9	
	comp=Z,24nm,1.3s						
BILL	**Bilibino**	**80.60**	**14**	P	**P**	**16 41 26.2**	**+0.4**
BILL	**Bilibino**	**80.60**	**14**	*i* P	**P**	**16 41 26.4**	**+0.7**
BILL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NIKH	**Nikolski High**	**81.67**	**34**	P	**P**	**16 41 32.0**	**+0.4**
	baz=246						
AKTO	**Aktyubinsk**	**81.72**	**323**	P	**P**	**16 41 32.7**	**+0.8**
	comp=Z,17nm,0.8s,baz=106,slow=4.4,SNR=24						
AKTO				pP	**pP**	**16 43 11.2**	**+1.1**
	comp=Z,2.3nm,0.7s,baz=103,slow=4.6,SNR=2.1						
	comp=Z,17nm,0.8s						
QSPA	**South Pole Qui**	**82.54**	**180**	P	**P**	**16 41 36.1**	**+0.1**
QSPA				IAmb	IAmb	16 41 37.6	
	comp=Z,13nm,0.9s						
QSPA	**South Pole Qui**	**82.54**	**180**	P	**P**	**16 41 36.3**	**+0.3**
	comp=Z,8.6nm,0.5s,baz=270,slow=0.2,SNR=127						
QSPA				pP	**pP**	**16 43 15.5**	**+1.1**
	comp=Z,2.5nm,0.8s,baz=304,slow=3.6,SNR=2.9						
	comp=Z,8.6nm,0.5s						
SPIA	**Saint Paul Isl**	**82.72**	**30**	P	**P**	**16 41 38.6**	**+1.8**
SPIA	**Saint Paul Isl**	**82.72**	**30**	P	**P**	**16 41 37.7**	**+0.9**
	baz=244						
P08K	**Saint George I**	**82.82**	**30**	P	**P**	**16 41 38.6**	**+1.3**
	baz=245						
UNV	**Unalaska Valle**	**83.31**	**34**	IAmb	IAmb	16 41 47.9	
	comp=Z,16nm,0.6s						
UNV	**Unalaska Valle**	**83.31**	**34**	P	**P**	**16 41 40.4**	**+0.5**
UNV	**Unalaska Valle**	**83.31**	**34**	P	**P**	**16 41 40.1**	**+0.2**
	baz=248,SNR=8.0						
AKUT	**Akutan**	**83.82**	**33**	P	**P**	**16 41 43.0**	**+0.6**
ARTI	**Arti**	**83.82**	**329**	P	**P**	**16 41 42.1**	**-0.3**
ARTI				IAmb	IAmb	16 41 44.2	
	comp=Z,17nm,0.9s						
ARTI	**Arti**	**83.82**	**329**	P	**P**	**16 41 42.5**	**+0.1**
	comp=Z,9.2nm,0.8s,baz=137,slow=2.9,SNR=8.8						
ARTI				pP	**pP**	**16 43 22.4**	**+1.5**
	comp=Z,2.7nm,0.7s,baz=152,slow=4.0,SNR=2.1						
	comp=Z,9.2nm,0.8s						
ARTI	**Arti**	**83.82**	**329**	*d i*P	**P**	**16 41 42.6**	**+0.1**
ARTI				*PP	**pP**	**16 43 21.5**	**+0.6**
ARTI						16 44 58.1	
ARTI				S	**SKSac**	**16 51 22.5**	**+0.1**
ARTI				SS	**SS**	**16 57 03.8**	**-4.0**
ARTI				pmax	pmax		
	comp=Z,27nm,1.1s						
RAYN	**Ar Rayn**	**83.85**	**295**	P	**P**	**16 41 43.2**	**-0.2**
RAYN				IAmb	IAmb	16 41 45.0	
	comp=Z,22nm,0.8s						
RAYN	**Ar Rayn**	**83.85**	**295**	P	**P**	**16 41 43.2**	**-0.2**
RAYN				pmax	pmax		
	comp=Z,22nm,0.9s						
LKRN	**Lenkeran, Azer**	**84.37**	**310**	P	**P**	**16 41 46.7**	**+1.2**
GAMB	**Gambell**	**85.06**	**23**	P	**P**	**16 41 49.2**	**+0.8**
	baz=242						
AKT	**Akhty**	**85.81**	**313**	*e*P	**P**	**16 41 52.8**	**+0.1**
AKT				pmax	pmax		
	comp=Z,24nm,1.0s						
M11K	**Mekoryuk**	**85.96**	**28**	P	**P**	**16 41 52.9**	**+0.2**
	baz=248						
MNGR	**Mingechevir, A**	**86.12**	**312**	P	**P**	**16 41 55.5**	**+1.5**
SEKA	**Sheki**	**86.14**	**312**	P	**P**	**16 41 55.5**	**+1.3**
S12K	**Black Hills**	**86.37**	**33**	IAmb	IAmb	16 41 55.5	
	comp=Z,46nm,1.3s						
S12K	**Black Hills**	**86.37**	**33**	P	**P**	**16 41 54.6**	**-0.3**
	baz=251,SNR=6.0						
GANJ	**Ganja**	**86.66**	**312**	P	**P**	**16 41 58.1**	**+1.4**
NAX	**Nakhchivan**	**86.97**	**310**	P	**P**	**16 41 59.5**	**+1.3**
SDPT	**Sand Point**	**87.12**	**33**	P	**P**	**16 41 59.4**	**+1.0**
SDPT	**Sand Point**	**87.12**	**33**	P	**P**	**16 41 58.3**	**-0.1**
	baz=253,SNR=17						
K13K	**Kusilvak Mount**	**87.24**	**26**	IAmb	IAmb	16 42 00.6	
	comp=Z,32nm,1.2s						
K13K	**Kusilvak Mount**	**87.24**	**26**	P	**P**	**16 41 59.6**	**+0.7**
	baz=249,SNR=7.5						
M13K	**Dall Lake**	**87.29**	**28**	P	**P**	**16 42 00.1**	**+1.0**
	baz=250						
TNA	**Tin City**	**87.31**	**22**	P	**P**	**16 41 59.2**	**+0.2**
	baz=246						
CHNA	**Chernabura Isl**	**87.46**	**34**	P	**P**	**16 41 59.8**	**-0.2**
	baz=253						
S14K	**Fog Glacier**	**87.89**	**33**	P	**P**	**16 42 02.4**	**+0.2**
	baz=253,SNR=5.6						
O14K	**Tigyukauivet M**	**87.91**	**29**	P	**P**	**16 42 01.9**	**-0.1**
O14K	**Tigyukauivet M**	**87.91**	**29**	P	**P**	**16 42 02.6**	**+0.6**
	baz=252,SNR=8.1						
ANM	**Nome**	**87.91**	**24**	P	**P**	**16 42 02.4**	**+0.4**
	baz=248						
L14K	**Kuka Creek**	**87.91**	**27**	P	**P**	**16 42 02.5**	**+0.5**
	baz=251,SNR=6.2						
N14K	**Kuskokwak Cree**	**87.92**	**29**	IAmb	IAmb	16 42 03.5	
	comp=Z,18nm,0.8s						
N14K	**Kuskokwak Cree**	**87.92**	**29**	P	**P**	**16 42 02.5**	**+0.5**
	baz=252						
J14K	**Nanvaranak Lak**	**88.01**	**26**	P	**P**	**16 42 03.0**	**+0.6**
	baz=250						
M14K	**Bethel**	**88.05**	**28**	IAmb	IAmb	16 42 04.9	
	comp=Z,23nm,0.8s						
M14K	**Bethel**	**88.05**	**28**	P	**P**	**16 42 03.2**	**+0.6**
	baz=251,SNR=14						
BELG	**Belogornoye**	**88.51**	**323**	P	**P**	**16 42 05.0**	**0.0**
	comp=Z,6.4nm,0.5s,baz=275,slow=4.9,SNR=9.3						
BELG				pP	**pP**	**16 43 45.6**	**+0.5**
	comp=Z,7.7nm,0.6s,baz=90,slow=4.0,SNR=1.9						
	comp=Z,6.4nm,0.5s						
BELG	**Belogornoye**	**88.51**	**323**	*i* P	**P**	**16 42 03.8**	**-1.2**
BELG				pmax	pmax		
	comp=Z,5.0nm,1.4s						
L15K	**Ungalak Mounta**	**88.57**	**27**	P	**P**	**16 42 05.0**	**-0.1**
	baz=252						
O15K	**Ungalikthiuk R**	**88.59**	**30**	IAmb	IAmb	16 42 06.7	
	comp=Z,18nm,0.8s						
O15K	**Ungalikthiuk R**	**88.59**	**30**	P	**P**	**16 42 05.6**	**+0.4**
	baz=253,SNR=10						
G15K	**Niukluk**	**88.60**	**24**	P	**P**	**16 42 04.8**	**-0.3**
	baz=249						
F15K	**North Star Dit**	**88.62**	**23**	IAmb	IAmb	16 42 06.5	
	comp=Z,20nm,1.3s						
F15K	**North Star Dit**	**88.62**	**23**	P	**P**	**16 42 05.5**	**+0.2**
	baz=249,SNR=7.6						
M15K	**Kasigluk River**	**88.63**	**28**	P	**P**	**16 42 05.7**	**+0.3**
	baz=252,SNR=11						
GEVA	**Gevas**	**88.67**	**309**	IAmb	IAmb	16 43 53.7	
	comp=Z,36nm,1.5s						
K15K	**Wolf Creek Mou**	**88.74**	**27**	P	**P**	**16 42 06.5**	**+0.6**
	baz=252						
N15K	**Kwethluk River**	**88.75**	**29**	P	**P**	**16 42 05.7**	**-0.3**
N15K				IAmb	IAmb	16 42 08.2	
	comp=Z,21nm,0.8s						
N15K	**Kwethluk River**	**88.75**	**29**	P	**P**	**16 42 06.6**	**+0.6**
	baz=253,SNR=12						
KIRV	**Kirov**	**89.12**	**329**	P	**P**	**16 42 07.2**	**-0.5**
	comp=Z,4.7nm,0.5s,baz=179,slow=6.5,SNR=3.8						
KIRV				pP	**pP**	**16 43 49.3**	**+1.7**
	comp=Z,6.1nm,0.5s,baz=56,slow=8.6,SNR=1.2						
	comp=Z,4.7nm,0.5s						
KIRV	**Kirov**	**89.12**	**329**	*ce*P	**P**	**16 42 07.6**	**-0.1**
H16K	**Elim**	**89.20**	**24**	P	**P**	**16 42 08.0**	**0.0**
	baz=251,SNR=5.3						
C16K	**Lisburne Hills**	**89.32**	**20**	IAmb	IAmb	16 42 09.5	
	comp=Z,16nm,0.8s						
C16K	**Lisburne Hills**	**89.32**	**20**	P	**P**	**16 42 08.5**	**+0.1**
	baz=248,SNR=19						
J16K	**Anvik River**	**89.46**	**26**	IAmb	IAmb	16 42 10.7	
	comp=Z,11nm,0.7s						
J16K	**Anvik River**	**89.46**	**26**	P	**P**	**16 42 09.7**	**+0.5**
	baz=252,SNR=6.7						
P16K	**Nushagak River**	**89.46**	**30**	P	**P**	**16 42 09.7**	**+0.4**
	baz=255,SNR=12						
N16K	**Nishlik Lake**	**89.47**	**29**	P	**P**	**16 42 10.2**	**+0.8**
	baz=254,SNR=8.9						
L16K	**Owhat River**	**89.49**	**27**	IAmb	IAmb	16 42 10.5	
	comp=Z,8.7nm,0.7s						
L16K	**Owhat River**	**89.49**	**27**	P	**P**	**16 42 09.6**	**+0.2**
	baz=253,SNR=11						
M16K	**Timber Creek**	**89.53**	**28**	IAmb	IAmb	16 42 12.4	
	comp=Z,6.6nm,0.6s						
M16K	**Timber Creek**	**89.53**	**28**	P	**P**	**16 42 09.9**	**+0.3**
	baz=254,SNR=6.0						
O16K	**Kokwok River B**	**89.56**	**30**	IAmb	IAmb	16 42 11.1	
	comp=Z,20nm,1.4s						
O16K	**Kokwok River B**	**89.56**	**30**	P	**P**	**16 42 10.1**	**+0.4**
	baz=255,SNR=7.4						
I17K	**Unalakleet**	**89.60**	**25**	P	**P**	**16 42 10.4**	**+0.6**
	baz=252						
KBZ	**Khabaz**	**89.77**	**314**	P	**P**	**16 42 11.2**	**+0.2**
	comp=Z,4.1nm,0.8s,baz=110,slow=4.3,SNR=9.1						
	comp=Z,4.1nm,0.8s						
KBZ	**Khabaz**	**89.77**	**314**	*ce*P	**P**	**16 42 12.1**	**+1.0**
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CHIR	**Chirikof Islan**	**89.90**	**34**	P	**P**	**16 42 11.7**	**+0.3**
	baz=257						
D17K	**Noatak River**	**89.91**	**21**	P	**P**	**16 42 12.0**	**+0.8**
	baz=250,SNR=95						
KIV	**Kislovodsk**	**89.96**	**314**	*i* P	**P**	**16 42 12.9**	**+0.8**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
RDOG	**Red Dog Mine**	**90.09**	**21**	P	**P**	**16 42 12.5**	**+0.5**
	baz=250						
O17K	**Koliganek Bris**	**90.09**	**30**	P	**P**	**16 42 12.5**	**+0.3**
	baz=256,SNR=6.9						
G17K	**Kiwalik Mounta**	**90.11**	**24**	P	**P**	**16 42 12.5**	**+0.3**
	baz=252,SNR=17						
C17K	**DeLong Mountai**	**90.14**	**20**	P	**P**	**16 42 12.6**	**+0.3**
	baz=250,SNR=26						
L17K	**Donlin**	**90.14**	**27**	P	**P**	**16 42 13.0**	**+0.6**
	baz=254,SNR=5.7						
J17K	**VABM Dome**	**90.15**	**26**	P	**P**	**16 42 12.7**	**+0.3**
J17K				IAmb	IAmb	16 42 13.7	
	comp=Z,7.8nm,0.8s						
J17K	**VABM Dome**	**90.15**	**26**	P	**P**	**16 42 12.8**	**+0.5**
	baz=254,SNR=8.2						
E17K	**Hotham Inlet**	**90.16**	**22**	P	**P**	**16 42 12.8**	**+0.4**
	baz=251,SNR=8.5						
F17K	**Baldwin Pennin**	**90.17**	**23**	P	**P**	**16 42 12.6**	**+0.2**
	baz=252						
H17K	**Granite Mounta**	**90.24**	**24**	IAmb	IAmb	16 42 14.0	
	comp=Z,9.6nm,0.8s						
H17K	**Granite Mounta**	**90.24**	**24**	P	**P**	**16 42 13.2**	**+0.4**
	baz=253,SNR=18						
N17K	**Nushagak Hills**	**90.24**	**29**	P	**P**	**16 42 13.4**	**+0.5**
	baz=255						
P17K	**Kvichak River**	**90.27**	**30**	P	**P**	**16 42 12.8**	**-0.2**
	baz=256						
K17K	**Iditarod**	**90.30**	**27**	IAmb	IAmb	16 42 14.6	
	comp=Z,14nm,0.8s						
K17K	**Iditarod**	**90.30**	**27**	P	**P**	**16 42 13.5**	**+0.4**
	baz=254						
Q17K	**Contact Creek**	**90.33**	**31**	P	**P**	**16 42 12.6**	**-0.9**
	baz=256,SNR=16						
M17K	**Holitna River**	**90.34**	**28**	IAmb	IAmb	16 42 15.1	
	comp=Z,7.2nm,0.8s						
M17K	**Holitna River**	**90.34**	**28**	P	**P**	**16 42 14.1**	**+0.7**
	baz=255,SNR=6.2						
ACHA	**Angle Creek He**	**90.61**	**31**	IAmb	IAmb	16 42 14.9	
	comp=Z,9.7nm,0.7s						
E18K	**Tukpahlearik C**	**90.72**	**22**	P	**P**	**16 42 15.1**	**+0.2**
	baz=252						
F18K	**Selawik**	**90.83**	**23**	P	**P**	**16 42 15.3**	**-0.1**
	baz=253						
SII	**Sitkinak Islan**	**90.85**	**33**	P	**P**	**16 42 16.4**	**+0.6**
	baz=258,SNR=6.0						
Q18K	**Katmai Hardscr**	**90.87**	**31**	P	**P**	**16 42 15.0**	**-1.0**
	baz=257,SNR=7.5						
C18K	**Utukok River**	**90.88**	**21**	P	**P**	**16 42 15.6**	**-0.2**
C18K				IAmb	IAmb	16 42 16.7	
	comp=Z,12nm,0.9s						
C18K	**Utukok River**	**90.88**	**21**	P	**P**	**16 42 15.8**	**0.0**
	baz=252,SNR=16						
L18K	**Granite Mounta**	**90.89**	**27**	P	**P**	**16 42 16.3**	**+0.5**
	baz=256,SNR=9.5						
N18K	**Kilae Creek**	**90.90**	**29**	P	**P**	**16 42 16.3**	**+0.3**
	baz=256						
B18K	**Kokolik River**	**90.91**	**20**	P	**P**	**16 42 16.4**	**+0.6**
	baz=251						
R18K	**Karluk**	**90.92**	**32**	P	**P**	**16 42 15.5**	**-0.6**
	baz=258						
P18K	**Big Mountain,**	**90.92**	**30**	P	**P**	**16 42 15.1**	**-1.1**
	baz=257						
H18K	**Honhosa River**	**90.93**	**24**	P	**P**	**16 42 15.6**	**-0.4**
	baz=254						
G18K	**Tagagawik**	**91.02**	**23**	P	**P**	**16 42 16.1**	**-0.3**
	baz=254,SNR=10						
O18K	**Koktuh Hills**	**91.04**	**30**	P	**P**	**16 42 16.5**	**-0.1**
	baz=257						
M18K	**Stony River**	**91.12**	**28**	P	**P**	**16 42 17.4**	**+0.5**
	baz=257,SNR=11						
J18K	**Innoko River**	**91.19**	**26**	P	**P**	**16 42 16.6**	**-0.6**
J18K				IAmb	IAmb	16 42 18.1	
	comp=Z,10.0nm,1.1s						
J18K	**Innoko River**	**91.19**	**26**	P	**P**	**16 42 17.2**	**0.0**
	baz=256,SNR=11						
GCSA	**Galena City Sc**	**91.44**	**25**	P	**P**	**16 42 18.2**	**-0.1**
	baz=256						
OHAK	**Old Harbor**	**91.47**	**33**	IAmb	IAmb	16 42 19.7	
	comp=Z,12nm,0.8s						
OHAK	**Old Harbor**	**91.47**	**33**	P	**P**	**16 42 19.6**	**+1.0**
OHAK	**Old Harbor**	**91.47**	**33**	P	**P**	**16 42 18.8**	**+0.2**
	baz=259,SNR=8.6						
C19K	**Lookout Ridge**	**91.58**	**20**	P	**P**	**16 42 19.7**	**+0.7**
	baz=253,SNR=27						
N19K	**Bonanza Creek**	**91.60**	**29**	IAmb	IAmb	16 42 20.6	
	comp=Z,15nm,0.9s						
N19K	**Bonanza Creek**	**91.60**	**29**	P	**P**	**16 42 19.7**	**+0.4**
	baz=258,SNR=11						
F19K	**Shaleruckik Mo**	**91.61**	**23**	IAmb	IAmb	16 42 19.7	
	comp=Z,22nm,1.7s						
F19K	**Shaleruckik Mo**	**91.61**	**23**	P	**P**	**16 42 18.7**	**-0.4**
	baz=255						
Q19K	**Cape Douglas,**	**91.62**	**31**	P	**P**	**16 42 19.0**	**-0.4**
	baz=258						
G19K	**Purcell Mounta**	**91.70**	**23**	P	**P**	**16 42 19.4**	**-0.2**
G19K	**Purcell Mounta**	**91.70**	**23**	P	**P**	**16 42 19.8**	**+0.2**
	baz=256,SNR=47						
L19K	**White Mountain**	**91.72**	**27**	IAmb	IAmb	16 42 21.0	
	comp=Z,6.8nm,0.8s						
L19K	**White Mountain**	**91.72**	**27**	P	**P**	**16 42 20.0**	**+0.2**
	baz=257,SNR=11						
J19K	**Poorman**	**91.79**	**26**	IAmb	IAmb	16 42 21.2	
	comp=Z,14nm,1.4s						
J19K	**Poorman**	**91.79**	**26**	P	**P**	**16 42 20.0**	**+0.1**
	baz=257,SNR=9.1						
H19K	**Roundabout Mou**	**91.80**	**24**	IAmb	IAmb	16 42 21.3	
	comp=Z,15nm,1.1s						
H19K	**Roundabout Mou**	**91.80**	**24**	P	**P**	**16 42 20.1**	**+0.2**
	baz=256,SNR=16						
M19K	**Big River Lodg**	**91.88**	**28**	P	**P**	**16 42 20.8**	**+0.4**
	baz=258,SNR=6.8						
D19K	**Kuna River**	**91.92**	**21**	P	**P**	**16 42 20.5**	**0.0**
	baz=255						
KDAK	**Kodiak Island**	**91.95**	**32**	P	**P**	**16 42 20.3**	**-0.5**
KDAK				IAmb	IAmb	16 42 21.7	
	comp=Z,14nm,0.8s						
KDAK	**Kodiak Island**	**91.95**	**32**	P	**P**	**16 42 20.3**	**-0.5**
KDAK				pmax	pmax		
	comp=Z,14nm,0.9s						
KDAK	**Kodiak Island**	**91.95**	**32**	P	**P**	**16 42 20.9**	**+0.1**
	baz=259						
P19K	**Oil Pt**	**91.97**	**30**	P	**P**	**16 42 21.3**	**+0.4**
	baz=259						
E19K	**Redstone River**	**91.98**	**22**	P	**P**	**16 42 21.2**	**+0.4**
	baz=256						
Q20K	**Shuyak Island**	**92.20**	**31**	P	**P**	**16 42 22.9**	**+0.9**
	baz=260						
L20K	**Farewell, AK**	**92.23**	**27**	P	**P**	**16 42 22.3**	**+0.2**
	baz=258,SNR=14						
K20K	**Telida**	**92.33**	**26**	IAmb	IAmb	16 42 23.7	
	comp=Z,5.4nm,0.7s						
K20K	**Telida**	**92.33**	**26**	P	**P**	**16 42 22.9**	**+0.4**
	baz=258,SNR=11						
O20K	**Slope Mountain**	**92.36**	**30**	P	**P**	**16 42 23.0**	**+0.3**
	baz=259						
H20K	**Anotleneega Mo**	**92.43**	**24**	P	**P**	**16 42 23.1**	**+0.2**
	baz=258,SNR=7.1						
F20K	**Avaraart Lake**	**92.45**	**23**	IAmb	IAmb	16 42 24.3	
	comp=Z,13nm,0.8s						
F20K	**Avaraart Lake**	**92.45**	**23**	P	**P**	**16 42 23.2**	**+0.3**
	baz=257,SNR=22						
I20K	**Naaghedeneel**	**92.45**	**25**	P	**P**	**16 42 23.3**	**+0.3**
	baz=258						
M20K	**Styx River**	**92.46**	**28**	IAmb	IAmb	16 42 24.2	
	comp=Z,7.2nm,0.8s						
M20K	**Styx River**	**92.46**	**28**	P	**P**	**16 42 23.3**	**+0.1**
	baz=259						
J20K	**Nowinta River**	**92.46**	**26**	IAmb	IAmb	16 42 23.8	
	comp=Z,5.7nm,0.7s						
J20K	**Nowinta River**	**92.46**	**26**	P	**P**	**16 42 23.4**	**+0.3**
	baz=258,SNR=9.8						
D20K	**Etivluk River**	**92.51**	**21**		**P**	**16 42 23.1**	**-0.2**
D20K	**Etivluk River**	**92.51**	**21**	P	**P**	**16 42 23.6**	**+0.3**
	baz=256						
E20K	**Nigu River**	**92.56**	**21**	P	**P**	**16 42 24.0**	**+0.5**
	baz=256						
B20K	**Meade River**	**92.64**	**20**	IAmb	IAmb	16 42 25.2	
	comp=Z,12nm,0.8s						
B20K	**Meade River**	**92.64**	**20**	P	**P**	**16 42 24.0**	**+0.3**
	baz=256						
IMAR	**Indian Mountai**	**92.99**	**24**	P	**P**	**16 42 24.9**	**-0.5**
PPLA	**Purkeypile**	**93.08**	**27**	P	**P**	**16 42 26.9**	**+0.8**
	baz=260						
A21K	**Barrow**	**93.14**	**18**	P	**P**	**16 42 27.4**	**+1.4**
	baz=256						
G21K	**Allakaket**	**93.19**	**23**	P	**P**	**16 42 26.2**	**-0.2**
	baz=259						
CAPN	**Captain Cook N**	**93.20**	**29**	P	**P**	**16 42 26.9**	**+0.4**
	baz=261						
CAST	**Castle Rocks**	**93.22**	**27**	P	**P**	**16 42 26.0**	**-0.6**
	baz=260						
SKT	**Skwentna**	**93.22**	**28**	P	**P**	**16 42 24.9**	**-1.7**
SKT				IAmb	IAmb	16 42 26.0	
	comp=Z,6.1nm,0.7s						
SKT	**Skwentna**	**93.22**	**28**	P	**P**	**16 42 25.6**	**-1.0**
	baz=260,SNR=7.5						
BRSE	**Bradley Lake S**	**93.23**	**30**	P	**P**	**16 42 26.2**	**-0.6**
	baz=261						
C21K	**Knifeblade Rid**	**93.26**	**21**	P	**P**	**16 42 27.0**	**+0.4**
	baz=258						
H21K	**Melozitna Rive**	**93.31**	**24**	P	**P**	**16 42 27.0**	**+0.1**
	baz=259,SNR=8.0						
F21K	**Alatna River**	**93.34**	**23**	P	**P**	**16 42 27.6**	**+0.5**
	baz=259						
E21K	**Killik River**	**93.40**	**21**	IAmb	IAmb	16 42 28.4	
	comp=Z,14nm,0.8s						
E21K	**Killik River**	**93.40**	**21**	P	**P**	**16 42 27.3**	**0.0**
	baz=258						
B21K	**Ikpikpuk River**	**93.41**	**20**	P	**P**	**16 42 27.9**	**+0.6**
	baz=258,SNR=15						
SUA	**Susitna One**	**93.50**	**29**	P	**P**	**16 42 27.2**	**-0.9**
	baz=261,SNR=11						
A22K	**Sinclair Lake**	**93.59**	**19**	P	**P**	**16 42 28.5**	**+0.5**
	baz=258						
SLKM	**Skilak Lake**	**93.61**	**30**	P	**P**	**16 42 27.3**	**-1.2**
BPAW	**Bear Paw Mtn.**	**93.81**	**26**	IAmb	IAmb	16 42 30.4	
	comp=Z,4.7nm,0.6s						
BPAW	**Bear Paw Mtn.**	**93.81**	**26**	P	**P**	**16 42 29.0**	**-0.3**
	baz=261,SNR=10						
O22K	**Cooper Landing**	**93.85**	**30**	P	**P**	**16 42 29.6**	**+0.1**
	baz=262						
CUT	**Chulitna**	**93.87**	**28**	P	**P**	**16 42 29.4**	**-0.1**
	baz=262						
F22K	**John River**	**93.89**	**22**	P	**P**	**16 42 30.1**	**+0.6**
	baz=260,SNR=8.6						
RC01	**Rabbit Creek A**	**93.93**	**29**	P	**P**	**16 42 29.0**	**-0.9**
	baz=262						
SEW	**Seward**	**93.93**	**30**	P	**P**	**16 42 29.4**	**-0.4**
	baz=262						
H22K	**Ishtalitna Cre**	**93.93**	**24**	P	**P**	**16 42 30.0**	**+0.2**
	baz=261,SNR=7.7						
D22K	**Ayikyak River**	**93.94**	**21**	IAmb	IAmb	16 42 31.3	
	comp=Z,11nm,1.1s						
D22K	**Ayikyak River**	**93.94**	**21**	P	**P**	**16 42 30.0**	**+0.2**
	baz=260,SNR=7.4						
B22K	**Teshekpuk Lake**	**93.96**	**20**	P	**P**	**16 42 29.9**	**+0.2**
	baz=259,SNR=8.7						
TRF	**Thorofare Moun**	**94.02**	**27**	P	**P**	**16 42 30.2**	**-0.3**
	baz=262						
MLY	**Manley**	**94.06**	**25**	IAmb	IAmb	16 42 31.9	
	comp=Z,7.6nm,0.6s						
MLY	**Manley**	**94.06**	**25**	P	**P**	**16 42 30.3**	**-0.1**
	baz=261,SNR=20						
BELA	**Belgrano 2**	**94.09**	**184**	P	**P**	**16 42 30.8**	**+0.4**
BELA				IAmb	IAmb	16 42 32.0	
	comp=Z,13nm,1.1s						
E22K	**Anaktuvuk Pass**	**94.13**	**22**	P	**P**	**16 42 31.1**	**+0.4**
	baz=260,SNR=33						
SNAA	**Sanae**	**94.16**	**194**	⇑P	**P**	**16 42 31.9**	**+1.0**
	comp=Z,72nm,0.4s						
SNAA	**Sanae**	**94.16**	**194**	P	**P**	**16 42 31.9**	**+1.0**
SNAA				IAmb	IAmb	16 42 33.1	
	comp=Z,6.9nm,1.1s						
SNAA	**Sanae**	**94.16**	**194**	P	**P**	**16 42 32.2**	**+1.3**
	comp=Z,2.8nm,0.4s,baz=202,slow=6.0,SNR=40						
SNAA				pP	**pP**	**16 44 12.9**	**+1.2**
	comp=Z,1.9nm,0.7s,baz=126,slow=8.7,SNR=4.5						
	comp=Z,2.8nm,0.4s						
SNAA	**Sanae**	**94.16**	**194**	*ce*P	**P**	**16 42 31.6**	**+0.7**
SNAA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KLMR	**Klimovskoe**	**94.48**	**331**	*e*P	**P**	**16 42 29.2**	**-3.1**
KLMR				e*PP	**pP**	**16 44 09.4**	**-3.4**

KLMR				e		16 46 24.4	
KLMR				pmax	pmax		
	comp=Z,13nm,1.0s						
PWL	Port Wells	94.58	29	IAmb	IAmb	16 46 26.1	
	comp=Z,9.2nm,1.0s						
PWL	Port Wells	94.58	29	P	P	16 42 32.1	-0.7
	baz=263						
KNK	Knik Glacier	94.58	29	P	P	16 42 32.6	-0.2
	baz=263						
G23K	Bananza Creek	94.60	23	IAmb	IAmb	16 42 34.3	
	comp=Z,14nm,0.9s						
G23K	Bananza Creek	94.60	23	P	P	16 42 33.2	+0.3
	baz=262,SNR=18						
COLD	Coldfoot	94.60	23	IAmb	IAmb	16 42 34.2	
	comp=Z,17nm,1.1s						
COLD	Coldfoot	94.60	23	P	P	16 42 33.1	+0.3
	baz=262,SNR=21						
RND	Reindeer	94.65	27	P	P	16 42 31.8	-1.4
RND	Reindeer	94.65	27	P	P	16 42 31.8	-1.4
RND				pmax	pmax		
	comp=Z,17nm,0.7s						
I23K	Minto, Yukon-K	94.66	25	P	P	16 42 33.1	+0.1
	baz=262,SNR=25						
MCK	McKinley	94.66	26	IAmb	IAmb	16 42 33.0	
	comp=Z,8.8nm,0.9s						
MCK	McKinley	94.66	26	P	P	16 42 32.1	-1.1
	baz=263						
H23K	Yukon River	94.67	24	IAmb	IAmb	16 42 34.3	
	comp=Z,12nm,0.8s						
H23K	Yukon River	94.67	24	P	P	16 42 33.4	+0.2
	baz=262,SNR=18						
D23K	Nanushuk River	94.67	21	P	P	16 42 33.8	+0.7
	baz=262,SNR=18						
SML	Sawmill	94.69	28	P	P	16 42 33.0	-0.4
	baz=263,SNR=5.8						
NEA2	Nenana	94.71	26	IAmb	IAmb	16 42 34.8	
	comp=Z,6.2nm,0.6s						
NEA2	Nenana	94.71	26	P	P	16 42 33.6	+0.3
	baz=263,SNR=9.1						
WAT1	Susitna Watana	94.72	27	P	P	16 42 32.6	-0.9
	baz=263						
C23K	Itkillik River	94.82	20	P	P	16 42 33.3	-0.4
C23K	Itkillik River	94.82	20	P	P	16 42 34.0	+0.3
	baz=262,SNR=12						
E23K	Chandalar	94.94	22	P	P	16 42 34.9	+0.5
	baz=262,SNR=22						
M23K	Glacier View	94.98	28	P	P	16 42 34.5	-0.1
	baz=264						
TOLK	Toolik Lake Re	95.03	21	IAmb	IAmb	16 42 36.1	
	comp=Z,9.7nm,0.8s						
TOLK	Toolik Lake Re	95.03	21	P	P	16 42 35.0	+0.3
	baz=263,SNR=10						
WAT6	Susitna Watana	95.06	28	P	P	16 42 34.4	-0.7
	baz=264						
WRH	Wood River Hil	95.11	26	IAmb	IAmb	16 42 34.9	
	comp=Z,11nm,0.8s						
SCM	Sheep Creek Mo	95.17	28	P	P	16 42 35.1	-0.5
	baz=264						
GLI	Glacier Island	95.18	29	P	P	16 42 35.2	-0.4
	baz=264						
DHY	Denali Highway	95.28	27	IAmb	IAmb	16 42 36.6	
	comp=Z,7.3nm,0.7s						
DHY	Denali Highway	95.28	27	P	P	16 42 35.7	-0.4
	baz=264,SNR=11						
H24K	Noodor Dome	95.35	24	IAmb	IAmb	16 42 37.4	
	comp=Z,12nm,0.8s						
H24K	Noodor Dome	95.35	24	P	P	16 42 36.3	0.0
	baz=264,SNR=19						
E24K	Your Creek	95.36	22	IAmb	IAmb	16 42 37.4	
	comp=Z,9.9nm,1.6s						
E24K	Your Creek	95.36	22	P	P	16 42 36.3	0.0
	baz=264						
D24K	Happy Valley	95.36	21	IAmb	IAmb	16 42 37.7	
	comp=Z,12nm,0.8s						
D24K	Happy Valley	95.36	21	P	P	16 42 36.6	+0.5
	baz=263,SNR=6.6						
BOSA	Boshof	95.37	240	P	P	16 42 38.0	+0.6
	comp=Z,3.3nm,0.7s,baz=113,slow=3.8,SNR=9.6						
BOSA				pP	pP	16 44 19.9	+1.8
	comp=Z,1.9nm,0.8s,baz=73,slow=3.6,SNR=2.9						
	comp=Z,3.3nm,0.7s						
Q23K	Middleton Isla	95.41	31	P	P	16 42 36.8	+0.2
	baz=265						
OBN	Obninsk	95.43	325	⇑*e*P	P	16 42 36.1	-0.6
OBN				*e**PP	pwP	16 44 22.2	+5.0
OBN				*e*		16 46 34.6	
OBN				*e*PPP	PPP	16 48 38.2	
OBN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
POKR	Poker Plat Res	95.46	25	P	P	16 42 36.7	-0.1
	baz=264						
C24K	Franklin Bluff	95.47	20	P	P	16 42 36.8	+0.2
	baz=264						
F24K	Squaw Lake	95.53	23	P	P	16 42 36.8	-0.2
F24K				IAmb	IAmb	16 42 38.7	
	comp=Z,9.5nm,0.9s						
F24K	Squaw Lake	95.53	23	P	P	16 42 37.4	+0.4
	baz=264,SNR=16						
HDA	Harding Lake	95.60	26	IAmb	IAmb	16 42 36.6	
	comp=Z,7.0nm,0.9s						
HDA	Harding Lake	95.60	26	P	P	16 42 35.7	-1.7
	baz=265						
G24K	Hadweenzic Riv	95.60	24	IAmb	IAmb	16 42 38.7	
	comp=Z,10nm,0.9s						
G24K	Hadweenzic Riv	95.60	24	P	P	16 42 37.6	+0.2
	baz=264,SNR=11						
ILAR	Eielson Array	95.66	25	P	P	16 42 35.7	-1.9
ILAR	Eielson Array	95.66	25	P	P	16 42 36.0	-1.6
	comp=Z,2.2nm,0.6s,baz=233,slow=5.4,SNR=33						
ILAR				PP	PP	16 46 31.9	-4.2
	comp=Z,0.4nm,0.8s,baz=267,slow=7.2,SNR=4.1						
	comp=Z,2.2nm,0.6s						
ILAR	Eielson Array	95.66	25	P	P	16 42 35.7	-1.9
M24K	Tolsona, Glenn	95.74	28	P	P	16 42 38.3	+0.2
	baz=265						
VNA2	Neumayer--Watz	95.76	194	⇑P	P	16 42 38.6	+0.5
	comp=Z,2.5nm,0.6s,baz=140,slow=4.5						
KLU	Klutina	95.80	29	P	P	16 42 38.3	-0.2
	baz=265						
EYAK	Cordova Ski Ar	95.81	30	P	P	16 42 38.4	0.0
	baz=265						
KIRS	Kirsehir-Merke	95.86	309	⇓P	P	16 42 38.9	-0.4
K24K	Donnelly Dome	96.06	27	P	P	16 42 39.1	-0.4
	baz=266						
BR104	Keskin Array S	96.12	309	P	P	16 42 39.8	-0.7
	comp=Z,4.2nm,1.1s						
BR131	Keskin Array S	96.12	309	IAmb	IAmb	16 42 40.5	
	comp=Z,5.1nm,0.9s						
BRTR	Keskin Array B	96.12	309	P	P	16 42 39.3	-1.2
BRTR	Keskin Array B	96.12	309	P	P	16 42 40.0	-0.5
	comp=Z,2.6nm,0.8s,baz=124,slow=5.1,SNR=15						
	comp=Z,2.6nm,0.8s						
BRTR	Keskin Array B	96.12	309	*i* P	P	16 42 40.0	-0.5
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PAX	Paxson	96.13	27	IAmb	IAmb	16 42 40.8	
	comp=Z,9.6nm,1.3s						
PAX	Paxson	96.13	27	P	P	16 42 39.4	-0.5
	baz=266						
BR106	Keskin Array S	96.14	309	P	P	16 42 39.9	-0.7
G25K	Bearman Lake	96.15	24	P	P	16 42 39.9	+0.1
	baz=266						
H25L	Birch Creek	96.23	24	P	P	16 42 40.2	+0.1
	baz=266,SNR=12						
D25K	Kavik River	96.25	21	IAmb	IAmb	16 42 41.0	
	comp=Z,6.5nm,1.1s						
D25K	Kavik River	96.25	21	P	P	16 42 40.2	0.0
	baz=266						
PRP	Porcupine Dome	96.29	25	P	P	16 42 40.2	-0.5
	baz=266						
J25K	Salcha River,	96.30	26	P	P	16 42 39.3	-1.3
	baz=266,SNR=8.3						
F25K	Christian Rive	96.39	23	P	P	16 42 41.5	+0.5
	baz=266,SNR=5.7						
BMRM	Bremner River	96.40	29	P	P	16 42 41.5	+0.3
	baz=266						
KAIM	Kayak Island	96.43	30	P	P	16 42 41.8	+0.6
	baz=266						
N25K	Chitina, Valde	96.44	29	P	P	16 42 41.5	+0.1
	baz=266						
E25K	Arctic Village	96.45	22	IAmb	IAmb	16 42 42.8	
	comp=Z,6.6nm,0.9s						
E25K	Arctic Village	96.45	22	P	P	16 42 41.6	+0.4
	baz=266,SNR=6.3						
RIDG	Independent Ri	96.47	27	P	P	16 42 40.8	-0.5
	baz=266,SNR=7.2						
BMAR	Burnt Mountain	96.79	23	P	P	16 42 43.2	+0.5
SCRK	Sand Creek	96.86	26	IAmb	IAmb	16 46 44.0	
	comp=Z,12nm,1.5s						
SCRK	Sand Creek	96.86	26	P	P	16 42 42.8	-0.4
	baz=267						
MENT	Mentasta	96.93	27	IAmb	IAmb	16 42 44.3	
	comp=Z,4.2nm,0.7s						
MENT	Mentasta	96.93	27	P	P	16 42 43.8	+0.4
F26K	Sheenjek River	96.97	23	IAmb	IAmb	16 42 45.3	
	comp=Z,11nm,1.4s						
F26K	Sheenjek River	96.97	23	P	P	16 42 44.2	+0.7
	baz=268,SNR=5.0						
J26L	Joseph Creek	97.07	26	P	P	16 42 43.9	-0.3
	baz=268,SNR=19						
G26K	Porcupine Rive	97.08	23	IAmb	IAmb	16 42 45.7	
	comp=Z,8.0nm,0.9s						
G26K	Porcupine Rive	97.08	23	P	Pdif	16 42 44.7	+0.7
	baz=268,SNR=13						
C27K	Jago River	97.20	21	P	Pdif	16 42 45.2	+0.7
	baz=268						
I26K	Coal Creek Min	97.27	25	IAmb	IAmb	16 42 45.5	
	comp=Z,4.4nm,0.9s						
I26K	Coal Creek Min	97.27	25	P	Pdif	16 42 45.2	+0.3
	baz=268,SNR=6.3						
MESA	MESA	97.67	30	P	P	16 42 46.7	-0.3
	baz=268						
K27K	Chicken	97.70	26	IAmb	IAmb	16 42 48.7	
	comp=Z,7.3nm,0.9s						
M27K	Edge Creek, AK	97.76	28	P	P	16 42 47.3	0.0
	baz=269						
L27K	Beaver Creek,	97.80	27	IAmb	IAmb	16 42 48.7	
	comp=Z,5.2nm,0.7s						
L27K	Beaver Creek,	97.80	27	P	Pdif	16 42 47.8	+0.4
	baz=269,SNR=9.3						
BCAR	Beaver Creek A	97.82	27	P	P	16 42 47.5	+0.1
G27K	Doyon Strip	97.91	24	IAmb	IAmb	16 42 50.0	
	comp=Z,6.6nm,1.4s						
G27K	Doyon Strip	97.91	24	P	Pdif	16 42 48.4	+0.6
	baz=270,SNR=5.8						
I27K	Kandik River	97.92	25	P	Pdif	16 42 48.6	+0.8
	baz=270,SNR=12						
E27K	Coleen River	97.94	22	P	Pdif	16 42 48.3	+0.4
	baz=270,SNR=7.2						
H27K	Steamboat Moun	97.96	24	IAmb	IAmb	16 42 49.9	
	comp=Z,14nm,1.4s						
H27K	Steamboat Moun	97.96	24	P	Pdif	16 42 48.6	+0.6
	baz=270,SNR=15						
D27M	Malcolm River	98.17	21	P	P	16 42 49.0	+0.1
	baz=271						
BVCY	Beaver Creek	98.23	28	P	Pdif	16 42 49.6	+0.3
	baz=270						
YUK3	Moose Creek	98.42	29	P	P	16 42 50.4	0.0
	baz=270						
F28M	Old Crow	98.60	23	P	Pdif	16 42 51.1	+0.3
	baz=272,SNR=6.6						
I28M	Miner Creek	98.62	25	P	Pdif	16 42 51.4	+0.4
	baz=271,SNR=10						
E28M	Babbage River	98.70	22	P	Pdif	16 42 51.5	+0.3
	baz=272,SNR=5.0						
DAWY	Dawson	98.88	26	P	P	16 42 52.5	+0.3
	baz=271						
PNL	Peninsula	98.96	31	P	P	16 42 52.8	+0.3
	baz=271						
H29M	Whitestone	99.24	24	P	Pdif	16 42 53.9	+0.3
	baz=273						
YUK4	Talbot Arm	99.30	29	P	Pdif	16 42 54.5	+0.2
	baz=272						
I29M	Ogilvie Camp,	99.31	25	P	Pdif	16 42 54.2	+0.2
	baz=273						
E29M	Blow River	99.31	22	P	Pdif	16 42 54.2	+0.3
	baz=273						
G29M	Pine Creek	99.35	23	P	Pdif	16 42 54.2	+0.1
	baz=273,SNR=7.3						
M29M	Somme Creek	99.35	28	P	Pdif	16 42 54.5	+0.1
	baz=272						
YUK6	Outpost Mounta	99.44	29	P	Pdif	16 42 55.1	+0.1
	baz=272						
L29M	L29M	99.48	27	P	Pdif	16 42 55.5	+0.7
	baz=272						
AK09	Malin Array Si	99.64	320	P	Pdif	16 42 55.2	-0.5
AK10	Malin Array Si	99.66	320	P	Pdif	16 42 55.3	-0.5
AKASG	Malin Array Be	99.68	320	P	Pdif	16 42 55.2	-0.7
	comp=Z,2.3nm,0.7s,baz=80,slow=4.0,SNR=12						
AKASG				pP	pwP	16 44 37.6	-2.4
	comp=Z,0.5nm,0.3s,baz=75,slow=4.1,SNR=2.3						
	comp=Z,2.3nm,0.7s						
AKBB	Malin Array Si	99.68	320	*ce*P	Pdif	16 42 55.1	-0.8
AKBB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AKBB	Malin Array Si	99.68	320	P	Pdif	16 42 55.2	-0.7
KIEV	Kiev	99.69	320	⇓P	Pdif	16 42 55.7	-0.2
K29M	Barlow Dome	99.72	27	P	Pdif	16 42 56.4	+0.4
	baz=273						
P29M	Windy Craggy	99.80	31	P	Pdif	16 42 56.4	+0.1
	baz=272						
HYT	Haines Junctio	99.87	30	P	Pdif	16 42 56.9	+0.2
	baz=272						
JURR	Jurilovca	99.89	314	⇑P	Pdif	16 42 55.7	-1.2
N30M	Aishikik Lake	100.04	29	P	Pdif	16 42 57.0	-0.4
	baz=273						
G30M	tAoh Zraii Nji	100.05	23	P	Pdif	16 42 56.6	-0.7
	baz=275,SNR=5.3						
I30M	Mount Dempster	100.12	25	P	Pdif	16 42 57.5	-0.2
	baz=274						
F30M	Barrier River	100.16	23	P	Pdif	16 42 57.7	0.0
	baz=275						
P30M	Million Dollar	100.17	30	P	Pdif	16 42 57.7	-0.3
	baz=273						
J30M	Hart River	100.19	26	P	Pdif	16 42 57.8	-0.2
	baz=274						
TIRR	Tirgusor	100.22	314	⇓P	Pdif	16 42 57.0	-1.4
ARCES	ARCESS Array B	100.42	339	P	Pdif	16 42 58.9	+0.1
	comp=Z,0.8nm,0.6s,baz=69,slow=6.6,SNR=5.8						
ARCES				PKiKP	PKiKP	16 47 23.4	+0.6
	comp=Z,1.1nm,0.5s,baz=112,slow=0.6,SNR=9.8						
ARCES				PKKPbc	PKKPbc	16 59 12.5	-3.5
	comp=Z,0.4nm,0.4s,baz=251,slow=3.7,SNR=8.9						
MNK	Minsk	100.43	324	*i* P	Pdif	16 42 57.9	-1.3
	comp=E,13nm,0.9s						
MNK				*i* P	Pdif	16 42 57.9	-1.3
	comp=N,5.0nm,0.8s						
MNK				*i* P	Pdif	16 42 57.9	-1.3
	comp=Z,9.0nm,0.8s,baz=88						
MNK				*i* pP	pPdif	16 44 36.7	-2.6
MNK				*i* PP	PP	16 47 10.4	-2.0
MNK				*i* PPP	PPP	16 49 22.4	
MNK				*i* S	SKSac	16 52 54.3	-0.3
MNK				*i* SS	SS	17 01 05.4	+1.6
MNK				*i* SSS	SSS	17 05 00.8	
MNK				*i* LRM	MLR	17 28 45.9	
	comp=Z,21nm,17.2s						
MNK	Minsk	100.43	324	*i* P	Pdif	16 42 57.9	-1.3
MNK				*i*		16 47 10.4	
MNK				*i* PPP	PPP	16 49 22.3	
MNK				*i* S	SKSac	16 52 54.2	-0.3
MNK				*i* SS	SS	17 01 05.4	+1.6
MNK				*i* SSS	SSS	17 05 00.7	
MNK				pmax	pmax		
	comp=N,5.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,13nm,0.9s						
MNK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MNK				MLR	MLR		
	comp=N,39nm,22.0s						
MNK				MLR	MLR		
	comp=Z,21nm,17.0s						
S31K	Pelican	100.66	32	P	Pdif	16 43 00.0	0.0
	baz=273						
G31M	Satah River	100.82	23	P	Pdif	16 43 01.2	+0.6
	baz=277						
H31M	Peel River	100.92	24	P	Pdif	16 43 00.8	-0.3
	baz=276						
INK	Inuvik	100.93	22	P	Pdif	16 43 01.2	+0.1
	baz=278						
F31M	Tsiigehtchic	100.96	23	P	Pdif	16 43 01.6	+0.4
	baz=277						
FINES	FINESS Array B	101.00	331	PKiKP	PKiKP	16 47 24.7	+0.7
	comp=Z,0.9nm,0.4s,baz=108,slow=3.0,SNR=13						
NACGM	Naroch	101.06	324	*e*P	Pdif	16 43 03.7	+1.8
	comp=Z,9.0nm,0.8s,baz=87						
SPITS	Spitsbergen Ar	101.12	349	P	Pdif	16 43 01.5	-0.3
	comp=Z,3.5nm,0.7s,baz=94,slow=11,SNR=8.5						
WHY	Whitehorse	101.17	30	P	Pdif	16 43 02.5	+0.1
	baz=275						
RNPP5	Staryi Chortor	101.78	321	P	Pdif	16 43 04.5	-0.7
P33M	Teslin, Yukon	102.23	30	P	Pdif	16 43 07.1	0.0
	baz=276						
U33K	Whale Pass	102.49	34	P	Pdif	16 43 08.4	+0.2
	baz=275						
HFS	Hagfors	107.20	331	PKiKP	PKiKP	16 47 35.0	-0.6
	comp=Z,1.7nm,0.8s,baz=82,slow=2.0,SNR=2.5						
NB2	NORSAR Subarra	108.11	332	PKPdf	PKiKP	16 47 35.9	-1.4
	comp=Z,0.7nm,0.7s,baz=68,slow=1.9						
NOA	NORSAR Array B	108.11	332	Pdiff	Pdif	16 43 31.8	-1.4
	comp=Z,0.6nm,0.8s,baz=71,slow=4.6,SNR=3.3						
NOA				PKiKP	PKiKP	16 47 37.4	+0.2
	comp=Z,1.6nm,0.8s,baz=78,slow=2.1,SNR=6.7						
GERES	GERESS Array B	109.86	319	PKiKP	PKiKP	16 47 41.1	+0.1
	comp=Z,1.1nm,0.5s,baz=66,slow=1.0,SNR=13						
GERES				PKKPab	PKKPab	16 58 59.0	+0.7
	comp=Z,0.1nm,0.3s,baz=285,slow=5.2,SNR=4.2						
YKA	Yellowknife Ar	110.09	25	PKiKP	PKiKP	16 47 40.8	-0.1
	comp=Z,0.8nm,0.6s,baz=308,slow=2.0,SNR=4.5						
DAVOX	Davos/Dischmat	112.83	318	PKiKP	PKiKP	16 47 46.8	0.0
	comp=Z,1.3nm,0.4s,baz=6.0,slow=23,SNR=3.9						
BTNL	Ternell	114.15	322	*d*PP	PP	16 48 49.0	-2.6
BCLA	Clavier	114.70	323	*d*PKiKP	PKiKP	16 47 50.5	+0.5
BCLA				*d*PP	PP	16 48 54.9	-0.5
BGES	Gesves	114.84	323	*d*PP	PP	16 48 56.7	+0.3
NVAR	Mina Array Bea	115.06	51	PKP	PKiKP	16 47 52.4	+0.9
	comp=Z,1.1nm,0.8s,baz=233,slow=1.4,SNR=6.8						
NVAR				PP	PP	16 48 55.2	-3.5
	comp=Z,0.3nm,0.6s,baz=282,slow=7.1,SNR=3.6						
DOU	Dourbes	115.24	322	*d*PKPdf	PKiKP	16 47 51.7	+0.6
KEST	Kesra	115.49	306	PKP	PKiKP	16 47 52.6	+0.4
	comp=Z,2.4nm,0.7s,baz=306,slow=8.0,SNR=3.7						
BLKN	Baker Lake	116.07	19		PKPdf	16 47 51.8	-0.4
ELK	Elko	116.87	48		PKiKP	16 47 55.3	+0.4
ELK	Elko	116.87	48	PKIKP	PKiKP	16 47 55.3	+0.4
EKA	Eskdalemuir Ar	117.36	330	PKP	PKPdf	16 47 55.1	+0.1
	comp=Z,0.9nm,0.4s,baz=49,slow=3.6,SNR=13						
EGMT	Eagleton	118.35	39		PKPdf	16 47 56.2	-1.1
PDAR	Pinedale Array	120.36	44	PKP	PKiKP	16 48 02.0	+0.4
	comp=Z,1.2nm,0.5s,baz=105,slow=0.7,SNR=17						
PDAR				PKKPab	PKKPab	16 58 12.5	+0.3
	comp=Z,1.0nm,0.6s,baz=118,slow=5.1,SNR=10.0						
PV10	Paradox Valley	122.13	49		PKPdf	16 48 05.1	0.0
TORD	Torodi Ar. Bea	124.50	281	PKP	PKPdf	16 48 10.2	+0.3
	comp=Z,51nm,0.3s,baz=77,slow=2.2,SNR=1.5						
ESDC	Sonseca Array	124.62	314	PKP	PKiKP	16 48 10.3	+0.4
	comp=Z,2.3nm,0.8s,baz=8.9,slow=3.0,SNR=15						
ULM	Lac du Bonnet	125.20	31	PKP	PKPdf	16 48 10.2	0.0
	comp=Z,3.9nm,0.5s,baz=194,slow=2.3,SNR=5.9						
PBRG	Braganca	125.72	317	*e*PKPdf	PKiKP	16 48 12.2	+0.2
POLO	Lamas de Olo	126.62	317	*e*PKPdf	PKiKP	16 48 15.0	+1.1
PGAV	Gavieira, Arco	126.67	318	*e*PKPdf	PKiKP	16 48 14.6	+0.6
MTE	Manteigas	126.86	316	*e*PKPdf	PKiKP	16 48 15.4	+1.0
MNTX	Cornudas Mount	126.92	56		PKPdf	16 48 11.3	-2.8
PCBR	Castelo Branco	127.05	315	*e*PKPdf	PKiKP	16 48 15.4	+0.7
PMRV	Marv??o	127.16	315	*e*PKPdf	PKiKP	16 48 15.8	+0.9
PBAR	Barrancos	127.41	313	*e*PKPdf	PKiKP	16 48 16.7	+1.2
PSARD	Sardoal	127.63	315	*e*PKPdf	PKiKP	16 48 17.2	+1.4
MESJ	Messejana	128.40	313	*e*PKPdf	PKiKP	16 48 18.4	+1.0
TXAR	Lajitas Array	128.97	58	PKP	PKiKP	16 48 19.1	+0.1
	comp=Z,1.5nm,0.6s,baz=249,slow=1.7,SNR=15						
TXAR				SKPbc	SKiKP	16 50 58.2	-14
	comp=Z,3.1nm,1.1s,baz=276,slow=3.6,SNR=9.3						
PLCA	Paso Flores	129.84	164	PKP	PKiKP	16 48 20.7	+0.3
	comp=Z,2.2nm,0.7s,baz=3.9,slow=1.6,SNR=11						
PLCA				SKPbc	SKPab	16 51 01.0	+0.9
	comp=Z,9.5nm,1.2s,baz=234,slow=4.2,SNR=9.1						
DBIC	Dimbokro	130.74	272	PKP	PKiKP	16 48 23.2	+0.4
	comp=Z,5.7nm,0.4s,baz=118,slow=2.4,SNR=14						
DBIC				SKPbc	SKPbc	16 51 03.9	-0.3
	comp=Z,11nm,0.7s,baz=105,slow=4.1,SNR=9.2						
DRIO	Del Rio	131.50	57		PKPdf	16 48 21.5	-1.4
SCHQ	Schefferville	131.72	10	PKP	PKiKP	16 48 23.9	+0.3
	comp=Z,5.5nm,0.6s,baz=317,slow=1.2,SNR=16						
SCHQ				SKPbc	SKPbc	16 51 06.6	+0.1
	comp=Z,3.8nm,0.8s,baz=11,slow=0.9,SNR=7.1						
ZON	Zonda	138.93	161		PKPpre	16 48 31.0	
ZON	Zonda	138.93	161	PKIKP	PKPdf	16 48 31.0	-5.8
CLTN	Cedars of Leba	139.28	41		PKPpre	16 48 31.3	
U49A	Red Boiling Sp	139.38	40		PKPpre	16 48 31.0	
LCO	Las Campanas	140.54	157		PKPpre	16 48 34.5	
LCO	Las Campanas	140.54	157	PKHKP	PKPpre	16 48 34.5	
Q56A	Snyder Ridge,	141.49	31		PKPpre	16 48 36.6	
AC06	Mina Casimiro	142.16	157		PKPdf	16 48 39.5	-3.1
AC02	Maricunga	143.09	158		PKPab	16 48 42.7	+0.7
T59A	Double "B" Far	143.89	32		PKPab	16 48 43.6	-0.4
ITAB	Concordia	145.45	184	*e*P	PKPdf	16 48 46.5	-1.9
CPUP	Villa Florida	146.32	175	PKPbc	PKPbc	16 48 52.0	+0.3
	comp=Z,9.6nm,0.8s,baz=63,slow=1.7,SNR=36						
SJPY	San Joaquin	147.72	177	*e*P	PKPdf	16 48 50.5	-1.7
PTGB	Pitanga	147.95	184	*e*P	PKPdf	16 48 51.0	-1.6
VAO	Valinhos	148.86	194	*e*P	PKPdf	16 48 52.0	-2.2
PB11	IPOC Station P	149.13	151		PKPdf	16 48 51.3	-3.5
LDASE	Londrina, Braz	149.18	186	*e*P	PKPdf	16 48 52.6	-2.0
TRCB	Terra Rica	149.89	183	*e*P	PKPdf	16 48 53.9	-1.9
RIB01	Linhares ES	150.00	207	*e*P	PKPdf	16 48 53.9	-2.0
BSCB	Bom Sucesso	150.16	199	*e*P	PKPdf	16 48 54.0	-2.3
SJMB	Sao Joao De Ma	150.89	207	*e*P	PKPdf	16 48 55.2	-2.1
MURT	Porto Murtinho	150.92	174	*e*P	PKPdf	16 48 55.3	-2.0
BB19B	Bebedouro	151.07	192	*e*P	PKPdf	16 48 55.6	-2.0
GUA01	Guaratinga, BA	152.05	211	*e*P	PKPdf	16 48 56.9	-2.2
DIAM	Diamantina, MG	152.28	203	*e*P	PKPdf	16 48 57.3	-2.3
ITRB	Iturama	152.72	189	*e*P	PKPdf	16 48 58.1	-2.0
LPAZ	La Paz	152.84	150	PKP	PKPdf	16 49 01.5	+0.5
	comp=Z,2.8nm,0.9s,baz=100,slow=3.0,SNR=8.0						
LPAZ				PKPbc	PKiKP	16 49 09.6	+0.8
	comp=Z,4.4nm,0.5s,baz=72,slow=1.9,SNR=15						
LPAZ				PKPab	PKPab	16 49 21.4	-0.1
	comp=Z,16nm,0.6s,baz=223,slow=1.2,SNR=8.0						
LPAZ	La Paz	152.84	150	*e*P	PKPdf	16 48 58.6	-2.4
PMNB	Patos De Minas	152.99	197	*e*P	PKPdf	16 48 58.4	-2.1
BDFB	Brasilia	156.18	196	PKP	PKPdf	16 49 05.5	+0.4
	comp=Z,1.0nm,0.4s,baz=158,slow=9.2,SNR=3.1						
SALV	Santo Antonio	156.78	177	*e*P	PKPdf	16 49 03.8	-1.9
PTLB	Pontes e Lacer	156.80	169	*e*P	PKPdf	16 49 03.6	-2.0

HEL ***20*** *16:41:54.2±0.1, 59°.80N×27°.42E, h0^{km}, ML1.9, Explosion*

EST ***20*** *16:41:54.5±0.1, 59°.80N×27°.39E, h0^{km}, ML1.9(HEL), Explosion*

IDC ***20*** *16:41:56.5±2.0, 59°.93N×27°.35E, h0^{km}, mbtmp2.9/3, ML2.3/3, Error ellipse: s-maj=16.8km s-min=10.0km az=111.0*

ISC 20 16:41:53.5±0.8**, 59°.81N**±0°.02×**27°.36E**±0°.03**, h0^{km}, n33,** σ**1^{s}.28**/63**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
EE04	Vaivara Sinima	0.51	148	*e*P	Pg	16 42 03.4	+0.2
EE04				*e*S	Sg	16 42 10.1	+0.3
VJF	Virojoki	0.74	8	*e*P	Pg	16 42 07.7	0.0
VJF				*e*S	Sg	16 42 17.7	+0.5
PVF	Pernaja	1.05	315	*e*P	Pg	16 42 13.7	0.0
PVF				*e*SB	Sg	16 42 28.0	+0.8
EE03	Tooma soojaam,	1.09	211	*e*P	Pg	16 42 14.6	+0.3
EE03				*e*PN	Pn	16 42 16.7	+0.8
EE03				*e*S	Sg	16 42 28.3	-0.1
HEL1	Helsinki	1.30	288	*e*PB	Pg	16 42 18.2	-0.1
HEL1				*e*S	Sg	16 42 34.7	-0.5
VSU	Vasula	1.39	194	*e*P	Pg	16 42 18.9	-1.1
VSU	Vasula	1.39	194	*e*P	Pg	16 42 18.9	-1.1
VSU				*e*PN	Pb	16 42 20.6	+0.4
VSU				*e*S	Sg	16 42 36.9	-1.0
VSU				*e*SN	Sn	16 42 40.9	+1.9
NUR	Nurmijarvi	1.53	299	*e*PG	Pn	16 42 22.2	+0.2
NUR				*e*PN	Pg	16 42 23.7	+1.0
NUR				*e*S	Sg	16 42 41.9	-0.6
NUR				*e*SN	Sn	16 42 44.6	+2.1
NUR				MSG		16 42 46.1	
	comp=Z,14nm,0.2s						
MEF	Metsahovi	1.54	287	*e*P	Pn	16 42 22.2	0.0
MEF	Metsahovi	1.54	287	*e*PG	Pn	16 42 22.6	+0.4
MEF				*e*S	Sn	16 42 42.3	-0.6
MEF				MSG		16 42 47.9	
	comp=Z,6.2nm,0.1s						
EE08	Sarghaua, Vand	1.58	224	*e*PG	Pb	16 42 23.4	-0.2
EE08				*e*SG	Sn	16 42 43.7	-0.2
FIA0	FINESS Array S	1.76	340	*e*P	Pn	16 42 25.3	+0.1
FIA0				*e*SN	Sb	16 42 49.6	+0.4
FIA0				MSG		16 42 52.2	
	comp=Z,5.8nm,0.1s						
FINES	FINESS Array B	1.76	340	Pg	Pn	16 42 25.3	+0.1
	comp=Z,0.8nm,0.3s,baz=160,slow=17,SNR=67						
FINES				Lg	Lg	16 42 48.5	
	comp=Z,2.0nm,0.3s,baz=158,slow=26,SNR=17						
FINES				Rg	Rg	16 42 59.3	
	comp=Z,4.9nm,0.7s,baz=157,slow=29,SNR=4.5						

FIA1	FINESS Array S	1.76	340	eP	Pn	16 42 25.3	+0.1
FIA1				eSN	Sb	16 42 49.6	+0.4
FIA1				MSG		16 42 52.1	
	comp=Z,7.4nm,0.2s						
RUF	Ruokolahti	1.80	25	eP	Pn	16 42 25.4	-0.4
RUF				eSG	Sn	16 42 49.7	+0.3
RUF				MSG		16 42 52.5	
	comp=Z,14nm,0.2s						
EE07	Piusa Caves, O	1.97	178	ePG	Pb	16 42 29.8	-0.5
EE07				eSG	Sb	16 42 55.0	-0.3
TVF	Tvarminne	2.07	273	ePB	Pb	16 42 31.1	-0.8
TVF				eSG	Sb	16 42 58.7	+0.5
TVF				MSG		16 43 00.4	
	comp=Z,5.4nm,0.1s						
MTSE	Matsula	2.12	240	eP	Pn	16 42 31.1	+0.9
MTSE	Matsula	2.12	240	ePG	Pb	16 42 32.5	-0.2
MTSE				eSG	Sg	16 43 01.1	-0.5
KAF	Kangasniemi	2.37	348	eP	Pn	16 42 34.7	+1.1
KAF				eSG	Sb	16 43 08.0	+1.2
KAF				MSG		16 43 10.5	
	comp=Z,5.3nm,0.2s						
EE06	Soera, Palade,	2.45	252	eP	Pn	16 42 36.5	+1.8
EE06				ePG	Pb	16 42 38.4	0.0
EE06				eSB	Sb	16 43 08.4	-0.8
KEF	Keuruu	2.66	334	eP	Pn	16 42 39.1	+1.5
KEF	Keuruu	2.66	334	eP	Pn	16 42 39.2	+1.6
KEF				ePB	Pb	16 42 40.8	-1.2
KEF				eSG	Sb	16 43 16.8	+1.7
SUF	Sumiainen	2.98	349	eP	Pn	16 42 43.4	+1.4
SUF				ePB	Pb	16 42 45.9	-1.5
SUF				eSG	Sb	16 43 26.0	+1.7
RAF	Rauma	3.03	296	eP	Pn	16 42 44.8	+2.1
RAF	Rauma	3.03	296	eP	Pn	16 42 44.5	+1.9
RAF				eSG	Sb	16 43 27.8	+2.1
KPF	Kankaanpaa	3.29	310	eP	Pn	16 42 47.9	+1.7
SLIT	Slitere, Latvi	3.43	233	eP	Pn	16 42 49.0	+1.0
JOF	Joensuu	3.66	30	eP	Pn	16 42 50.8	-0.4
JOF	Joensuu	3.66	30	eP	Pn	16 42 52.0	+0.7
HFS	Hagfors	6.87	279	Pn	Pn	16 43 35.5	+0.2
	comp=Z,0.1nm,0.3s,baz=89,slow=14,SNR=5.1						
HFS				Sn	Sn	16 44 51.4	-2.7
	comp=Z,0.1nm,0.3s,baz=93,slow=25,SNR=4.4						
HFS				Lg	Lg	16 45 25.0	
	comp=Z,0.2nm,0.3s,baz=78,slow=28,SNR=2.2						
	comp=Z,0.9nm,0.7s						
NOA	NORSAR Array B	8.08	286	Pn	Pn	16 43 51.1	-0.9
	baz=90,slow=14,SNR=4.4						
NOA				Sn	Sn	16 45 18.6	-5.3
	baz=87,slow=18,SNR=2.1						
	comp=Z,0.1nm,0.3s						
ARCES	ARCESS Array B	9.80	356	Pn	Pn	16 44 13.8	-1.6
	comp=Z,0.1nm,0.3s,baz=169,slow=16,SNR=11						
ARCES				Sn	Sn	16 45 57.2	-8.9
	comp=Z,0.1nm,0.3s,baz=177,slow=23,SNR=1.5						
	comp=Z,0.9nm,0.9s						

NOU ***20*** *16:58:57.1, 18°.88S×174°.42W, h239^{km}, mb4.4/11, Tonga Islands*

NEIC ***20*** *16:59:03.3±1.4, 19°.4S±0°.1×175°.9W±0°.2, h186^{km}±9^{km}, mb4.5/28, Error ellipse: s-maj=22.2km s-min=18.3km az=51.0*

IDC ***20*** *16:59:10.4±2.6, 19°.44S×175°.94W, h260^{km}±23^{km}, mb3.6/12, mbtmp4.3/14, Error ellipse: s-maj=19.1km s-min=15.3km az=112.0*

ISC 20 16:59:10.5±1.7**, 19°.46S**±0°.09×**175°.9W**±0°.1**, h263**^{km}±14^{km}**, n84, σ0^{s}.95**/85**, mb4.1**/22**, 1D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	2.99	294	P	Pn	17 00 03.0	-0.7
TAVE	Taveuni	4.66	305	P	Pn	17 00 22.0	-0.7
DGTI	Dogotuki	5.18	307	P	Pn	17 00 27.9	-1.1
NIUE	Niue	5.69	87	Pn	Pn	17 00 26.6	-8.6
MSVF	Nonsavu	5.96	286		Pn	17 00 38.9	+0.4
MSVF	Nonsavu	5.96	286	P	Pn	17 00 39.7	+1.2
	51nm,0.5s,baz=284,slow=23,SNR=84						
MSVF	Nonsavu	5.96	286	P	Pn	17 00 39.5	+1.0
AFI	Afiamalu	6.80	36	Pn	Pn	17 00 37.7	-11
PINNC	Pines Island,	15.83	256	P	Pn	17 02 41.1	+1.0
PINNC	Pines Island,	15.83	256	P	Pn	17 02 42.6	+2.4
YATNC	Mamie plateau,	16.27	258	P	Pn	17 02 48.4	+3.0
DZM	Mont Dzumac	16.68	258		P	17 02 48.4	+0.1
DZM				IAmb	IAmb	17 02 57.4	
	comp=Z,16nm,0.9s						
DZM	Mont Dzumac	16.68	258	P	Pn	17 02 51.9	+1.6
	comp=Z,8.7nm,0.6s,baz=76,slow=18,SNR=17						
DZM	Mont Dzumac	16.68	258	P	Pn	17 02 52.4	+2.1
ONTNC	Ouen Toro	16.70	257	P	P	17 02 48.0	-0.3
ONTNC				IAmb	IAmb	17 03 20.7	
	comp=Z,20nm,0.9s						
TOZ	Tahuroa Road	19.68	201	P	P	17 03 18.8	-1.4
TOZ				IAmb	IAmb	17 03 22.9	
	comp=Z,30nm,1.4s						
URZ	Urewera	19.69	196	P	P	17 03 19.8	-0.5
	comp=Z,7.5nm,0.4s,baz=327,slow=2.7,SNR=12						
URZ				S	S	17 06 45.0	-2.8
	comp=Z,8.9nm,0.8s,baz=41,slow=22,SNR=5.9						
URZ	Urewera	19.69	196	P	P	17 03 19.8	-0.5
RTZ	Ruatahuna	20.06	196	P	P	17 03 24.0	-0.4
BKZ	Black Stump Fm	20.70	197	P	P	17 03 29.7	-1.5
BKZ				IAmb	IAmb	17 03 59.9	
	comp=Z,31nm,1.4s						
BFZ	Birch Farm	22.19	196	P	P	17 03 43.6	-1.5
TUWZ	Tuamarina	23.54	199	P	P	17 03 57.0	-0.4
TATA	Tatamba Isabel	25.95	292	P	P	17 04 19.2	-0.3
EIDS	Eidsvold	31.00	253	P	P	17 05 03.3	-0.7
EIDS				IAmb	IAmb	17 05 21.9	
	comp=Z,16nm,1.4s						
ARMA	Armidale	31.27	243	P	P	17 05 05.8	-0.6
CTAO	Charters Tower	35.54	262		P	17 05 43.0	-0.2
COEN	Coen	39.48	272	P	P	17 06 15.4	-0.7
COEN				IAmb	IAmb	17 06 29.6	
	comp=Z,18nm,1.4s						
STKA	Stephens Creek	39.99	243	P	P	17 06 20.3	+0.2
STKA	Stephens Creek	39.99	243	P	P	17 06 20.2	+0.1
	comp=Z,2.6nm,0.7s,baz=97,slow=12,SNR=6.3						
	comp=Z,2.6nm,0.7s						
BBOO	Buckleboo	44.75	243	P	P	17 06 56.7	-1.7
BBOO				IAmb	IAmb	17 07 18.6	
	comp=Z,20nm,1.3s						
WR8	Warramunga Arr	46.52	261		P	17 07 11.6	-0.8
AS31	Alice Springs	46.65	255		P	17 07 13.1	-0.3
AS31				IAmb	IAmb	17 07 15.6	
	comp=Z,6.4nm,0.6s						
AS31				PcP	PcP	17 08 43.0	+0.4
WB0	Warramunga Arr	46.65	261		P	17 07 12.9	-0.5
WB0				IAmb	IAmb	17 07 14.0	
	comp=Z,9.5nm,0.9s						
ASAR	Alice Springs	46.65	255		P	17 07 12.4	-1.0
ASAR				PcP	PcP	17 08 43.3	+0.6
ASAR	Alice Springs	46.65	255	P	P	17 07 13.2	-0.2
	comp=Z,18nm,0.6s,baz=92,slow=8.3,SNR=277						
ASAR				PcP	PcP	17 08 43.0	+0.4
	comp=Z,1.3nm,0.7s,baz=112,slow=3.7,SNR=4.5						
	comp=Z,18nm,0.6s						
WRA	Warramunga Arr	46.68	261		P	17 07 12.6	-1.0
WRA				PcP	PcP	17 08 42.3	-0.5
WRA	Warramunga Arr	46.68	261	P	P	17 07 13.2	-0.3
	comp=Z,3.2nm,0.4s,baz=98,slow=6.5,SNR=64						
WRA				PcP	PcP	17 08 42.7	-0.1
	comp=Z,0.7nm,0.6s,baz=92,slow=3.6,SNR=2.8						
	comp=Z,3.2nm,0.4s						
MTN	Manton Dam	51.11	269	P	P	17 07 45.8	-1.3
KNRA	Kununurra	52.68	265	P	P	17 07 57.8	-0.8
KNRA				IAmb	IAmb	17 08 09.2	
	comp=Z,23nm,1.4s						
FITZ	Fitzroy Crossi	55.10	261	P	P	17 08 15.6	-0.5
SBA	Scott Base	59.04	184	P	P	17 08 44.4	+1.8
VNDA	Vanda	59.12	185	P	P	17 08 44.7	+1.5
PSA00	Pilbara Seismi	59.80	256	P	P	17 08 49.0	+0.2
PSA00				IAmb	IAmb	17 08 51.4	
	comp=Z,7.4nm,0.8s						
MORW	Morawa	62.02	247	P	P	17 09 03.3	-0.3
MORW				IAmb	IAmb	17 09 11.0	
	comp=Z,11nm,1.2s						
MJAR	Matsushiro Arr	70.55	322	P	P	17 09 58.9	+1.6
MJAR	Matsushiro Arr	70.55	322	P	P	17 09 56.8	-0.5
	comp=Z,3.0nm,0.8s,baz=153,slow=5.9,SNR=8.7						
	comp=Z,3.0nm,0.8s						
MJB9	Matsu-Tunnel	70.56	322	P	P	17 09 57.8	+0.4
MJB9				IAmb	IAmb	17 09 58.7	
	comp=Z,3.5nm,0.8s						
QSPA	South Pole Qui	70.61	180	P	P	17 09 58.7	+1.4
QSPA				IAmb	IAmb	17 10 08.6	
	comp=Z,5.5nm,1.3s						
QSPA	South Pole Qui	70.61	180	P	P	17 09 58.6	+1.2
	comp=Z,1.0nm,0.7s,baz=108,slow=1.8,SNR=7.0						
	comp=Z,1.0nm,0.7s						
JKA	Kamikawa-asahi	73.77	330	P	P	17 10 17.5	+1.5
JKA				IAmb	IAmb	17 10 38.6	
	comp=Z,16nm,1.5s						
PETK	Petropavlovsk-	75.79	344	P	P	17 10 27.6	+0.2
	comp=Z,1.8nm,0.7s,baz=142,slow=4.7,SNR=2.6						
	comp=Z,1.8nm,0.7s						
NVAR	Mina Array Bea	78.94	43	P	P	17 10 45.7	+0.2
	comp=Z,1.8nm,0.8s,baz=223,slow=9.5,SNR=6.7						
	comp=Z,1.8nm,0.8s						
TXAR	Lajitas Array	84.86	57	P	P	17 11 16.8	+0.5
	comp=Z,1.2nm,0.9s,baz=209,slow=7.2,SNR=8.9						
	comp=Z,1.2nm,0.9s						
PDAR	Pinedale Array	86.88	43	P	P	17 11 25.1	-0.9
	comp=Z,0.2nm,0.5s,baz=232,slow=4.8,SNR=2.3						
	comp=Z,0.2nm,0.5s						
ILAR	Eielson Array	86.88	12	P	P	17 11 24.1	-1.1
	comp=Z,0.6nm,0.8s,baz=222,slow=6.6,SNR=7.2						
	comp=Z,0.6nm,0.8s						
CMAR	Chiang Mai Arr	91.61	289	P	P	17 11 48.8	+0.4
	comp=Z,1.2nm,0.9s,baz=127,slow=3.6,SNR=7.4						
	comp=Z,1.2nm,0.9s						
SONM	Songino Array	96.25	319	P	P	17 12 09.3	+0.1
	comp=Z,0.3nm,0.4s,baz=108,slow=4.7,SNR=1.7						
	comp=Z,0.3nm,0.4s						
MKAR	Makanchi Array	111.89	314	PKiKP	PKiKP	17 17 13.6	-0.7
	comp=Z,0.3nm,0.7s,baz=74,slow=2.8,SNR=4.6						
KURBB	Kurchatov Arra	114.60	318	PKP	PKPdf	17 17 18.4	-0.9
	comp=Z,0.3nm,0.4s,baz=98,slow=2.2,SNR=2.1						
BVAR	Borovoye Array	119.52	321	PKP	PKPdf	17 17 28.4	-0.3
	comp=Z,1.1nm,0.5s,baz=75,slow=3.2,SNR=7.9						
ARCES	ARCESS Array B	128.23	351	PKP	PKPdf	17 17 44.7	-0.2
	comp=Z,2.1nm,0.9s,baz=46,slow=6.9,SNR=9.1						
FINES	FINESS Array B	135.30	345	PKhKP	PKPpre	17 17 50.6	
	comp=Z,1.6nm,0.7s,baz=129,slow=5.2,SNR=3.7						
FINES				PKP	PKPdf	17 17 58.8	+0.3
	comp=Z,1.4nm,0.9s,baz=63,slow=1.8,SNR=3.6						
HFS	Hagfors	138.79	353	PKhKP	PKPpre	17 17 59.6	
	comp=Z,1.5nm,0.9s,baz=86,slow=2.0,SNR=1.9						
AKASG	Malin Array Be	143.00	333	PKhKP	PKPpre	17 18 09.4	
	comp=Z,0.7nm,0.5s,baz=42,slow=3.7,SNR=8.3						
CLL	Collm	147.44	350	⇓ iPKPbc	PKPbc	17 18 23.4	+0.1
	comp=Z,7.0nm,0.9s						
BRTR	Keskin Array B	147.53	315	PKPbc	PKPbc	17 18 24.6	+0.4
	comp=Z,1.9nm,0.7s,baz=73,slow=3.0,SNR=9.4						
MMAI	Mount Meron Ar	148.95	302	PKPbc	PKiKP	17 18 29.1	0.0
	comp=Z,3.6nm,0.6s,baz=72,slow=2.9,SNR=5.8						
GERES	GERESS Array B	149.67	347	PKPbc	PKPbc	17 18 29.5	+0.3
	comp=Z,1.3nm,0.7s,baz=32,slow=2.3,SNR=14						
RONA	Rosalia, Austr	150.12	343	i PKP	PKPbc	17 18 30.1	-0.1
	comp=Z,3.3nm,0.6s						
MOA	Molln	150.49	346	ePKP	PKPbc	17 18 30.7	-0.4
	comp=Z,0.6nm,0.5s						
ARSA	Arzberg	150.74	344	i PKP	PKPbc	17 18 31.2	-0.5
	comp=Z,0.6nm,0.6s						
BIOA	Bad Ischl, Aus	150.78	347	ePKP	PKPbc	17 18 31.2	-0.6
	comp=Z,0.6nm,0.5s						
LESA	Schwarzleotal	151.23	348	i PKP	PKiKP	17 18 33.3	0.0
	comp=Z,1.5nm,0.5s						
SOKA	Soboth	151.40	344	i PKP	PKPbc	17 18 33.0	-0.3
	comp=Z,2.8nm,0.9s						
RETA	Reutte	151.51	350	ePKP	PKPbc	17 18 33.5	0.0
	comp=Z,1.1nm,0.4s						
WATA	Walderalm	151.53	349	ePKP	PKiKP	17 18 33.8	-0.2
	comp=Z,1.9nm,0.5s						
WTTA	Wattenberg	151.58	349	i PKP	PKPbc	17 18 33.9	+0.1
	comp=Z,7.1nm,0.6s						
MOTA	Moosalm	151.60	350	i PKP	PKPbc	17 18 33.9	+0.1
	comp=Z,2.7nm,0.8s						
OBKA	Obir	151.68	345	i PKP	PKiKP	17 18 35.1	+0.8
	comp=Z,1.7nm,0.8s						
SQTA	Sankt Quirin	151.70	350	i PKP	PKiKP	17 18 34.2	-0.1
	comp=Z,3.1nm,0.6s						
MYKA	Terra Mystica	151.78	346	ePKP	PKPbc	17 18 33.7	-0.5
	comp=Z,1.3nm,0.4s						
DAVA	Damuels	151.84	352	ePKP	PKiKP	17 18 34.8	+0.1
	comp=Z,2.0nm,0.7s						
ABTA	Abfaltersbach	151.91	348	i PKP	PKPbc	17 18 34.2	-0.3
	comp=Z,4.8nm,0.6s						
FETA	Feichten	151.97	350	i PKP	PKiKP	17 18 35.1	+0.2
	comp=Z,2.5nm,0.9s						

IDC 20 17:11:53.4±3.2**, 30°.25S**×**177°.66W, h0**^{km}**, mb3.3**/2**, mbtmp3.3**/2**, Error ellipse: s-maj=67.5km s-min=25.4km az=101.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.02	347	Pn	Pn	17 12 16.4	+1.4
	34nm,0.3s,baz=68,slow=22,SNR=1.7						
RAO				Sn	Sn	17 12 29.0	-1.0
	242nm,0.3s,baz=14,slow=23,SNR=12						
URZ	Urewera	9.08	207	Pn	Pn	17 14 01.9	-3.8
	0.2nm,0.3s,baz=141,slow=13,SNR=0.9						
URZ				Sn	Sn	17 15 41.9	-6.8
	0.2nm,0.3s,baz=125,slow=15,SNR=2.1						
ASAR	Alice Springs	43.41	267	P	P	17 19 57.9	-0.3
	0.2nm,0.6s,baz=108,slow=7.1,SNR=5.3						
	0.2nm,0.6s						
WRA	Warramunga Arr	44.39	272	P	P	17 20 05.9	0.0
	0.3nm,0.5s,baz=110,slow=8.0,SNR=6.6						
	0.3nm,0.5s						
FINES	FINESS Array B	145.11	340	PKPbc	PKPbc	17 31 30.2	-1.4
	0.3nm,0.4s,baz=61,slow=2.9,SNR=5.2						

IDC 20 17:14:00.5±2.3**, 31°.01S**×**177°.53W, h0**^{km}**, mb3.5**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=65.0km s-min=43.0km az=43.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.47	210	Pn	Pn	17 15 59.0	-5.4
	0.3nm,0.3s,baz=176,slow=13,SNR=1.7						
URZ				Sn	Sn	17 17 31.6	-9.1
	0.9nm,0.3s,baz=96,slow=22,SNR=6.6						
ASAR	Alice Springs	43.48	267	P	P	17 22 05.5	-0.3
	0.4nm,1.0s,baz=112,slow=8.4,SNR=4.5						
	0.4nm,1.0s						
WRA	Warramunga Arr	44.53	273	P	P	17 22 14.2	0.0
	0.2nm,0.3s,baz=112,slow=8.0,SNR=4.9						
	0.2nm,0.3s						
QSPA	South Pole Qui	59.10	180	P	P	17 24 02.1	-0.4
	2.1nm,1.1s,baz=154,slow=12,SNR=2.6						
	2.1nm,1.1s						
FINES	FINESS Array B	145.86	340	PKPbc	PKPdf	17 33 40.5	0.0
	1.3nm,1.0s,baz=35,slow=5.1,SNR=3.9						

IDC ***20*** *17:20:03.5±1.8, 31°.08S×177°.50W, h0^{km}, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=46.7km s-min=25.2km az=87.0*

ISC 20 17:20:07.4±1.6**, 31°.05S**±0°.10×**177°.5W**±0°.3**, h27**^{km}**, n6, σ0^{s}.72**/6**, mb3.6**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.82	349	Pn	Pn	17 20 36.2	-0.8
	49nm,0.3s,baz=277,slow=23,SNR=1.6						
RAO				Sn	Sb	17 21 03.3	+0.8
	37nm,0.3s,baz=79,slow=21,SNR=1.5						
URZ	Urewera	8.45	210	Sn	Sn	17 23 34.4	-8.1
	0.6nm,0.3s,baz=54,slow=15,SNR=2.0						
ASAR	Alice Springs	43.50	267	P	P	17 28 08.4	-0.3
	0.3nm,0.6s,baz=105,slow=7.2,SNR=10						
	0.3nm,0.6s						
WRA	Warramunga Arr	44.55	273	P	P	17 28 17.5	+0.3
	0.3nm,0.4s,baz=111,slow=8.0,SNR=5.8						
	0.3nm,0.4s						
QSPA	South Pole Qui	59.06	180	P	P	17 30 05.3	+0.3
	1.3nm,1.1s,baz=169,slow=12,SNR=2.1						
	1.3nm,1.1s						
FINES	FINESS Array B	145.90	340	PKPbc	PKPdf	17 39 43.1	+0.1
	0.8nm,0.6s,baz=17,slow=2.6,SNR=7.4						

DJA ***20*** *17:47:16.4±1.3, 4°N±11°×12°6E±°, h36^{km}±20^{km}, M4.5/11, mB5.1/6, mb4.8/7, MLv4.5/11, Mw(mB)4.4/6*

IDC ***20*** *17:47:17.4±1.5, 4°.26N×125°.58E, h84^{km}±15^{km}, mb3.9/15, mbtmp4.3/17, MS3.6/2, Error ellipse: s-maj=25.6km s-min=9.4km az=81.0*

NEIC ***20*** *17:47:17.8±2.1, 4°.33N±0°.06×125°.7E±0°.1, h82^{km}±6^{km}, mb4.4/24, Error ellipse: s-maj=14.7km s-min=8.1km az=88.0*

ISC 20 17:47:18.6±0.5**, 4°.32N**±0°.05×**125°.73E**±0°.08**, h100**^{km}**, n62, σ1^{s}.54**/64**, mb4.3**/26**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	0.66	198	P	Pn	17 47 31.1	-4.6
DAV	Davao City (W)	2.74	357	Pn	Pn	17 47 57.9	-3.0
DAV	Davao City (W)	2.74	357	P	Pn	17 47 59.3	-1.6
	105nm,0.3s,baz=130,slow=8.1,SNR=1.6						
DAV				S	Sn	17 48 33.5	0.0
	257nm,0.5s,baz=152,slow=21,SNR=8.3						
DAV				LR	LR	17 48 42.0	
	comp=Z,21nm,21.6s,baz=128,slow=30						
TNTI	Ternate	3.88	155		Pn	17 48 14.2	-2.0
TNTI	Ternate	3.88	155	P	Pn	17 48 13.8	-2.4
KMSI	Cibinong	4.11	205	P	Pn	17 48 16.6	-2.7
MRSI	Marisa	5.38	225	P	Pn	17 48 34.7	-1.8
	437nm,0.8s						
TOLI2	Tolitoli	5.88	237		Pn	17 48 40.7	-2.6
LUWI	Luwuk	6.09	209		Pn	17 48 46.1	-0.1
LUWI	Luwuk	6.09	209	P	Pn	17 48 47.0	+0.8
SANI	Sanana	6.33	178	P	Pn	17 48 45.7	-3.7
MPSI	Mapaga	7.04	236	P	Pn	17 48 57.1	-2.0
	0.2nm980nm20nm,0.5s						
MYLDM	Lahad Datu	7.26	277	Pn	Pn	17 49 01.8	-0.3
TTSI	Tana Toraja	9.40	219	P	Pn	17 49 32.3	+1.1
	58nm,0.7s						
KKM	Kota Kinabalu	9.63	281	Pn	Pn	17 49 34.6	+0.1
SPSI	Sidrap Palu	10.16	216	P	Pn	17 49 42.4	+0.9
BNSI	Bone	10.32	213	P	Pn	17 49 45.8	+2.0
KAPI	Kappang	11.03	213	P	Pn	17 49 50.3	-3.0
	9.7nm,0.4s,baz=199,slow=6.6,SNR=3.9						
KAPI				LR	LR	17 53 35.7	
	comp=Z,28nm,21.1s,baz=72,slow=35						
MTN	Manton Dam	17.87	163	P	P	17 51 17.2	-3.0
MTN				IAmb	IAmb	17 51 20.6	
	comp=Z,33nm,1.4s						
DLV	Lat	18.67	295	P	P	17 51 26.7	-2.4
DLV				IAmb	IAmb	17 51 33.9	
	comp=Z,17nm,1.1s						
KNRA	Kununurra	20.09	171	P	P	17 51 44.8	+0.5
FITZ	Fitzroy Crossi	22.27	180	P	P	17 52 07.1	-0.6
FITZ	Fitzroy Crossi	22.27	180	P	P	17 52 06.7	-1.0
	comp=Z,5.4nm,0.5s,baz=3.6,slow=6.9,SNR=28						
	comp=Z,5.4nm,0.5s						
WB0	Warramunga Arr	25.40	161		P	17 52 36.8	-0.1
WRAB	Tennant Creek	25.54	161	P	P	17 52 38.6	+0.4
WRA	Warramunga Arr	25.55	161	P	P	17 52 38.5	+0.2
WRA	Warramunga Arr	25.55	161	P	P	17 52 38.1	-0.1
	comp=Z,7.9nm,0.7s,baz=342,slow=10,SNR=41						
WRA				PcP	PcP	17 56 07.7	+0.4
	comp=Z,0.5nm,0.5s,baz=322,slow=2.9,SNR=2.8						
	comp=Z,7.9nm,0.7s						
WR8	Warramunga Arr	25.61	161		P	17 52 38.8	-0.1
WR8				IAmb	IAmb	17 52 40.8	
	comp=Z,8.0nm,1.0s						
MBWA	Marble Bar	25.99	193	P	P	17 52 43.0	+0.7
MBWA				IAmb	IAmb	17 52 44.0	
	comp=Z,11nm,0.9s						
PSA00	Pilbara Seismi	26.37	192	P	P	17 52 45.7	+0.1
PSA00				IAmb	IAmb	17 53 09.2	
	comp=Z,13nm,1.1s						
AS31	Alice Springs	28.93	164		P	17 53 08.7	+0.1
ASAR	Alice Springs	28.93	164	P	P	17 53 08.8	+0.3
	comp=Z,2.0nm,0.4s,baz=341,slow=7.0,SNR=235						
ASAR				PcP	PcP	17 56 16.1	+0.7
	comp=Z,0.6nm,0.4s,baz=342,slow=2.3,SNR=6.3						
	comp=Z,2.0nm,0.4s						
CMAR	Chiang Mai Arr	29.72	300	P	P	17 53 16.6	+1.0
	comp=Z,2.0nm,0.8s,baz=112,slow=7.1,SNR=14						
	comp=Z,2.0nm,0.8s						
CHTO	Chiang Mai	29.87	301	P	P	17 53 18.1	+1.2
CHTO				IAmb	IAmb	17 53 18.8	
	comp=Z,4.9nm,0.7s						
JMN	Monobe	30.23	14	P	P	17 53 20.7	+0.8
INU	Inuyama	32.60	17	P	P	17 53 41.3	+0.6
INU				IAmb	IAmb	17 53 50.7	
	comp=Z,7.3nm,1.0s						
JGF	Kuroka	32.93	18	P	P	17 53 44.0	+0.4
JGF				IAmb	IAmb	17 54 17.8	
	comp=Z,11nm,1.4s						
KSRS	Korea Array	33.04	3	P	P	17 53 44.3	-0.2
	comp=Z,0.4nm,0.4s,baz=183,slow=9.6,SNR=4.1						
	comp=Z,0.4nm,0.4s						
NWAO	Narrogin (SRO)	37.91	192	P	P	17 54 25.8	-0.4
	comp=Z,31nm,1.3s,baz=334,slow=5.6,SNR=2.2						
	comp=Z,31nm,1.3s						
BBOO	Buckleboo	38.20	166	P	P	17 54 29.6	+0.9
EIDS	Eidsvold	38.42	141	P	P	17 54 30.4	-0.3
STKA	Stephens Creek	39.03	158	P	P	17 54 36.8	+1.2
STKA	Stephens Creek	39.03	158	P	P	17 54 36.6	+1.0
	comp=Z,7.3nm,0.6s,baz=334,slow=9.0,SNR=17						
STKA				PcP	PcP	17 56 44.7	+0.7
	comp=Z,1.1nm,0.5s,baz=337,slow=2.2,SNR=1.6						
	comp=Z,7.3nm,0.6s						
USRK	Ussuriysk Ar.	40.10	7	P	P	17 54 46.6	+2.2
	comp=Z,1.4nm,0.7s,baz=184,slow=8.5,SNR=2.7						
	comp=Z,1.4nm,0.7s						
JKA	Kamikawa-asahi	42.34	18	P	P	17 55 04.4	+1.7
JKA				IAmb	IAmb	17 55 38.8	
	comp=Z,12nm,1.5s						
EVN	Everest	43.84	307	P	P	17 55 15.5	-0.4
EVN				IAmb	IAmb	17 55 47.4	
	comp=Z,8.6nm,1.4s						
SONM	Songino Array	46.43	342	PcP	PcP	17 57 08.9	+0.2
	comp=Z,1.0nm,0.6s,baz=162,slow=4.4,SNR=6.4						
PETK	Petropavlovsk-	55.27	23	P	P	17 56 43.4	+1.9
	comp=Z,0.9nm,0.6s,baz=204,slow=6.0,SNR=4.5						
	comp=Z,0.9nm,0.6s						
MKAR	Makanchi Array	56.51	325	P	P	17 56 49.5	-1.0
	comp=Z,0.8nm,0.4s,baz=120,slow=8.0,SNR=16						
	comp=Z,0.8nm,0.4s						
MAKZ	Makanchi	56.70	325	P	P	17 56 50.9	-0.9
KURBB	Kurchatov Arra	60.71	328	P	P	17 57 20.2	+0.7
	comp=Z,0.9nm,0.5s,baz=129,slow=6.3,SNR=9.3						
	comp=Z,0.9nm,0.5s						
BVAR	Borovoye Array	66.29	327	P	P	17 57 55.8	-0.4
	comp=Z,0.4nm,0.4s,baz=134,slow=8.3,SNR=4.8						
	comp=Z,0.4nm,0.4s						
TIXI	Tiksi	67.28	1	P	P	17 58 01.6	-0.5
TIXI				IAmb	IAmb	17 58 02.6	
	comp=Z,2.3nm,0.7s						
AB31	Akbulak array	71.07	321	P	P	17 58 25.5	-0.5
ABKAR	Akbulak array	71.07	321	P	P	17 58 23.9	-2.1
CASY	Casey	71.28	186	P	P	17 58 27.4	+0.5
CASY				IAmb	IAmb	17 59 07.5	
	comp=Z,9.3nm,1.4s						
VNDA	Vanda	84.13	173	P	P	17 59 38.9	+0.8
	comp=Z,1.4nm,0.5s,baz=306,slow=4.3,SNR=1.8						
	comp=Z,1.4nm,0.5s						
ARCES	ARCESS Array B	89.56	340	P	P	18 00 03.9	-0.6
	comp=Z,2.8nm,1.1s,baz=73,slow=4.2,SNR=5.4						
	comp=Z,2.8nm,1.1s						
SPITS	Spitsbergen Ar	89.72	349	LR	LR	18 45 21.2	
	comp=Z,28nm,19.4s,baz=348,slow=39						
FINES	FINESS Array B	90.85	332	P	P	18 00 08.5	-2.2
	comp=Z,2.2nm,1.0s,baz=87,slow=4.8,SNR=4.6						
QSPA	South Pole Qui	94.22	180	P	P	18 00 26.7	+0.4
	comp=Z,1.7nm,1.1s,baz=318,slow=3.7,SNR=5.7						
	comp=Z,1.7nm,1.1s						
RES	Resolute Bay	97.41	10	LR	LR	18 45 12.6	
	comp=Z,24nm,21.3s,baz=341,slow=36						

IDC 20 17:49:21.0±3.9**, 47°.58N**×**92°.92W, h0**^{km}**, mbtmp2.8**/2**, ML0.9**/1**, Error ellipse: s-maj=39.7km s-min=17.7km az=84.0, Minnesota**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULM	Lac du Bonnet	3.31	325	Pn	Pn	17 50 12.6	-1.4
	0.2nm,0.3s,baz=142,slow=12,SNR=1.2						
ULM				Lg	Lg	17 51 03.3	
	5.4nm,0.3s,baz=232,slow=19,SNR=23						
	0.8nm,0.3s						
I10CA	LAC DU BONNET	3.33	323	I	I	18 10 00.0	
	baz=142,slow=312,SNR=6.2						
PDAR	Pinedale Array	12.68	254	Pn	Pn	17 52 20.5	-2.3
	0.2nm,0.5s,baz=74,slow=12,SNR=2.2						
PDAR				Lg	Lg	17 55 52.2	
	0.1nm,0.3s,baz=66,slow=27,SNR=2.4						

IDC 20 17:57:41.8±2.2**, 7°.92S**×**159°.99E, h0**^{km}**, mb3.7**/3**, mbtmp3.7**/3**, Error ellipse: s-maj=48.1km s-min=25.3km**

az=79.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.50**	**181**	Pn	Pb	17 58 10.3	-0.2
	57nm,0.3s,baz=354,slow=9.2,SNR=118						
HNR				Sn	Sg	17 58 29.9	-0.1
	361nm,0.3s,baz=6.2,slow=20,SNR=16						
H11S2	**WAKE ISLAND Hy**	**27.07**	**14**	T	T	18 31 42.5	
	baz=194,slow=76,SNR=606						
H11S3	**WAKE ISLAND Hy**	**27.07**	**14**	T	T	18 31 42.9	
	baz=194,slow=76,SNR=458						
H11S1	**WAKE ISLAND Hy**	**27.09**	**14**	T	T	18 31 44.1	
	baz=194,slow=76,SNR=325						
WRA	**Warramunga Arr**	**27.56**	**242**	P	P	18 03 31.1	+0.3
	0.6nm,0.3s,baz=66,slow=9.0,SNR=10						
	0.6nm,0.3s						
H11N1	**WAKE ISLAND Hy**	**28.29**	**14**	T	T	18 33 14.7	
	baz=194,slow=76,SNR=296						
H11N3	**WAKE ISLAND Hy**	**28.30**	**14**	T	T	18 33 12.5	
	baz=194,slow=76,SNR=243						
H11N2	**WAKE ISLAND Hy**	**28.31**	**14**	T	T	18 33 11.5	
	baz=194,slow=76,SNR=234						
ASAR	**Alice Springs**	**29.49**	**235**	P	P	18 03 47.5	-0.4
	0.2nm,0.7s,baz=61,slow=9.7,SNR=8.3						
ASAR				PcP	PcP	18 06 53.0	-0.8
	0.3nm,0.8s,baz=84,slow=2.6,SNR=4.6						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**87.39**	**318**	P	P	18 10 31.5	+0.4
	0.4nm,0.5s,baz=100,slow=5.3,SNR=1.7						
	0.4nm,0.5s						

IDC ***20*** *17:58:42.0±0.5, 23°.46N×143°.70E, h0^{km}, mb4.5/27, mbtmp4.5/31, ML4.1/3, MS3.6/35, Error ellipse: s-maj=18.0km s-min=10.5km az=77.0*

MOS ***20*** *17:58:42.7±1.0, 23°.47N×143°.73E, h15^{km}, mb4.8/35, Error ellipse: s-maj=12.5km s-min=5.2km az=111.5*

NEIC ***20*** *17:58:44.1±1.4, 23°.55N±0°.08×143°.7E±0°.1, h10^{km}±1^{km}, mb4.8/231, Error ellipse: s-maj=21.6km s-min=13.0km az=255.0*

JMA ***20*** *17:58:47.7±0.3, 23°.7N±1°.0×14°4E± °, h110^{km}, MV4.7/20, IOTO ISLANDS REGION*

ISC 20 17:58:46.9±0.4, **23°.53N**±0°.05×**143°.67E**±0°.08, **h31**^{km}, **n512**, σ**1^s.22**/413, **mb4.8**/175, **MS3.6**/35, **16C-1D, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	**3.37**	**337**	P	**Pn**	**17 59 37.9**	**+0.5**
JHH2				*e*S	**Sn**	**18 00 15.4**	**-1.0**
CBIJ	**Chichi jima**	**3.79**	**340**	*e*P	**Pn**	**17 59 43.2**	**0.0**
CBIJ				S	**Sn**	**18 00 26.1**	**-0.6**
JCJ	**Chichijima**	**3.79**	**340**		**Pn**	**17 59 43.3**	**+0.1**
JCJ				Sn	**Sn**	**18 00 26.3**	**-0.5**
JCJ	**Chichijima**	**3.79**	**340**	Pn	**Pn**	**17 59 42.5**	**-0.7**
	96nm,0.3s						
JCJ				Sn	**Sn**	**18 00 24.5**	**-2.3**
GUMO	**Guam**	**9.96**	**173**	LR	LR	18 04 32.9	
	comp=Z,396nm,18.4s,baz=14,slow=36						
JHJ2	**Mitsune**	**10.13**	**341**	Pn	**Pn**	**18 01 08.4**	**-1.7**
JHJ2	**Mitsune**	**10.13**	**341**	*e*P	**Pn**	**18 01 09.7**	**-0.5**
BSO1	**Boso 1**	**11.33**	**349**	P	**Pn**	**18 01 25.2**	**-0.9**
BSO1				*e*S	**Sn**	**18 03 25.1**	**-6.2**
BSO3	**Boso 3**	**11.56**	**347**	P	**Pn**	**18 01 29.3**	**-0.2**
BSO4	**Boso 4**	**11.78**	**347**	P	**Pn**	**18 01 32.3**	**-0.3**
BSO4				*e*S	**Sn**	**18 03 38.2**	**-4.8**
JOD2	**Odawara 2**	**12.35**	**342**	*e*P	**Pn**	**18 01 39.0**	**-1.6**
JIE	**Ise**	**12.41**	**332**	*e*P	**Pn**	**18 01 39.1**	**-2.3**
JNY	**Yasuok**	**12.82**	**338**	*e*P	**Pn**	**18 01 45.9**	**-1.1**
JAO	**Obara**	**12.95**	**336**	*e*P	**Pn**	**18 01 48.5**	**-0.3**
INU	**Inuyama**	**13.12**	**335**		**Pn**	**18 01 49.6**	**-1.4**
JGF	**Kuroka**	**13.21**	**337**		**Pn**	**18 01 50.4**	**-2.0**
MJAR	**Matsushiro Arr**	**13.80**	**341**	Pn	**Pn**	**18 02 00.1**	**-0.2**
	0.4nm,0.3s,baz=155,slow=12,SNR=13						
	5.1nm,0.7s						
MAJO	**Matsushiro**	**13.80**	**341**		**Pn**	**18 01 59.6**	**-0.7**
MAJO	**Matsushiro**	**13.80**	**341**	*i* P	**Pn**	**18 01 59.3**	**-1.0**
MJB9	**Matsu-Tunnel**	**13.80**	**341**		**Pn**	**18 02 00.3**	**-0.1**
JOW	**Kunigami**	**14.32**	**286**		**Pn**	**18 02 06.6**	**-0.9**
JOW	**Kunigami**	**14.32**	**286**	LR	LR	18 07 09.1	
	comp=Z,256nm,20.1s,baz=199,slow=35						
JMM	**Marumori**	**14.50**	**351**		**Pn**	**18 02 08.8**	**-1.1**
JNU	**Nakatsue**	**14.75**	**313**	Pn	**Pn**	**18 02 10.6**	**-2.8**
JNU					**P**	**18 02 18.5**	**-0.6**
JNU	**Nakatsue**	**14.75**	**313**	Pn	**Pn**	**18 02 13.6**	**+0.2**
	0.8nm,0.3s,baz=25,slow=13,SNR=1.9						
	1.6nm,0.3s						
JSD	**Sado**	**15.18**	**344**	Pn	**Pn**	**18 02 14.4**	**-4.6**
ERM	**Erimo**	**18.44**	**359**	P	**P**	**18 02 57.3**	**-2.5**
ERM	**Erimo**	**18.44**	**359**	*i* P	**P**	**18 02 59.9**	**+0.2**
TJN	**Taejon**	**19.03**	**316**	P	**P**	**18 03 06.9**	**+0.6**
TJN				pmax	pmax		
	comp=Z,53nm,1.0s						
KSRS	**Korea Array**	**19.37**	**319**	P	**P**	**18 03 10.4**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=134,slow=11,SNR=32						
KSRS				LR	LR	18 10 21.4	
	comp=Z,101μm,18.2s,baz=130,slow=36						
	comp=Z,12nm,0.8s						
KSAR	**Wonju Array Be**	**19.38**	**319**		**P**	**18 03 09.1**	**-1.0**
KS19	**Wonju Array Si**	**19.43**	**319**	P	**P**	**18 03 09.7**	**-1.1**
INCN	**Inchon**	**20.17**	**317**	P	Pn	18 03 20.3	-0.5
INCN				pmax	pmax		
	comp=Z,26nm,1.0s						
JKA	**Kamikawa-asahi**	**20.55**	**358**		**P**	**18 03 23.9**	**+1.1**
ASAJ	**Asahikawa**	**20.55**	**358**	P	**P**	**18 03 23.6**	**+0.8**
	comp=Z,16nm,1.1s,baz=188,slow=11,SNR=13						
	comp=Z,16nm,1.1s						
MSHR	**Mys Shultsa**	**21.65**	**334**	*ce*P	**P**	**18 03 35.6**	**+0.9**
MSHR				pmax	pmax		
	comp=Z,53nm,1.7s						
USA0B	**Ussuriysk Arra**	**22.74**	**338**		**P**	**18 03 44.9**	**-1.4**
USRK	**Ussuriysk Ar.**	**22.74**	**338**		**P**	**18 03 44.5**	**-1.8**
USRK	**Ussuriysk Ar.**	**22.74**	**338**	P	**P**	**18 03 47.2**	**+0.9**
	comp=Z,11nm,0.7s,baz=170,slow=11,SNR=17						
USRK				LR	LR	18 12 32.9	
	comp=Z,87nm,18.6s,baz=173,slow=36						
	comp=Z,11nm,0.7s						
YSS	**Yuzhno-Sakhali**	**23.38**	**358**		**P**	**18 03 52.0**	**-0.8**
YSS	**Yuzhno-Sakhali**	**23.38**	**358**	*ce*P	**P**	**18 03 53.8**	**+1.0**
YSS				pmax	pmax		
	comp=Z,15nm,1.0s						
TGY	**Tagaytay City**	**23.44**	**250**	LR	LR	18 13 21.4	
	comp=Z,107nm,18.7s,baz=105,slow=38						
DAV	**Davao City (W)**	**23.87**	**230**	LR	LR	18 11 48.1	
	comp=Z,185nm,20.0s,baz=66,slow=33						
MANU	**Manus Island**	**25.68**	**171**	P	**P**	**18 04 12.6**	**-1.6**
BNX	**BinXian**	**25.78**	**333**	⇑P	**P**	**18 04 16.3**	**+1.4**
BNX				pmax	pmax		
	comp=Z,9.0nm,0.8s						
JAY	**Jayapura**	**26.05**	**187**	LR	LR	18 12 59.6	
	comp=Z,129nm,20.9s,baz=243,slow=33						
JAY	**Jayapura**	**26.05**	**187**	P	**P**	**18 04 18.7**	**+1.1**
JAY				pmax	pmax		
	comp=Z,17nm,1.8s						
TYV	**Tymovskoe**	**27.30**	**359**	*e*P	**P**	**18 04 28.1**	**-0.4**
TYV				*e*S	**S**	**18 09 06.0**	**+0.1**
TYV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TYV				pmax	pmax		
	comp=Z,100nm,2.6s						
TYV				smax	smax		
	comp=N,100nm,3.6s						
TYV				smax	smax		
	comp=E,200nm,3.6s						
KLR	**Kul'dur**	**27.31**	**343**	LR	LR	18 15 51.2	
	comp=E,119nm,19.3s,baz=150,slow=38						
KLR	**Kul'dur**	**27.31**	**343**	*ce*P	**P**	**18 04 30.1**	**+1.4**
KLR				pmax	pmax		
	comp=Z,36nm,0.7s						
HEH	**HeiHe**	**29.54**	**339**	*e*P	**P**	**18 04 49.6**	**+1.1**
HEH				pmax	pmax		
	comp=Z,15nm,1.0s						
HEH				LR	LR		
	comp=N,120nm,14.8s						
HEH				LR	LR		
	comp=E,120nm,15.4s						
HEH				LR	LR		
	comp=Z,210nm,16.2s						
PETK	**Petropavlovsk-**	**31.40**	**16**	LR	LR	18 15 49.2	
	comp=Z,102nm,21.6s,baz=175,slow=33						
ZEA	**Zeya**	**32.61**	**342**	*e*P	**P**	**18 05 16.7**	**+1.2**
ZEA				pmax	pmax		
	comp=E,10.0nm,1.0s						
ZEA				pmax	pmax		
	comp=N,20nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,30nm,0.7s						
PMG	**Port Moresby**	**32.91**	**174**	P	**P**	**18 05 17.2**	**-1.3**
	comp=Z,12nm,0.5s,baz=264,slow=11,SNR=3.6						
	comp=Z,12nm,0.5s						
SHEM	**Shemya Is, Ala**	**37.21**	**31**	LR	LR	18 18 26.1	
	comp=Z,72nm,21.7s,baz=273,slow=32						
ULN	**Ulaanbaatar**	**37.85**	**319**	*ce*P	**P**	**18 06 01.6**	**+0.7**
ULN				pmax	pmax		
	comp=Z,12nm,1.7s						
PZH	**PanZhiHua**	**37.99**	**283**	P	**P**	**18 06 03.4**	**+1.1**
PZH				pmax	pmax		
	comp=Z,20nm,0.7s						
SONM	**Songino Array**	**38.24**	**319**	P	**P**	**18 06 04.1**	**0.0**
	comp=Z,1.7nm,0.6s,baz=125,slow=7.9,SNR=11						
SONM				LR	LR	18 22 42.3	
	comp=Z,80nm,18.2s,baz=110,slow=38						
	comp=Z,1.7nm,0.6s						
YAK	**Yakutsk**	**39.65**	**350**		**P**	**18 06 15.8**	**+0.2**
YAK				IAmb	IAmb	18 06 16.8	
	comp=Z,25nm,0.8s						
YAK	**Yakutsk**	**39.65**	**350**	*e*P	**P**	**18 06 15.9**	**+0.4**
YAK				*e**PP	**pP**	**18 06 18.7**	**-4.2**
YAK				*e*		18 08 21.6	
YAK				*e*S	**S**	**18 12 20.0**	**+3.5**
YAK				*e**SS	**pS**	**18 12 25.3**	**+0.6**
YAK				*e*SS	**SS**	**18 15 13.8**	**+1.5**
YAK				*e*		18 16 23.3	
YAK				pmax	pmax		
	comp=Z,23nm,0.9s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.1s						
YAK				smax	smax		
	comp=N,49nm,3.1s						
YAK				smax	smax		
	comp=E,25nm,2.8s						
SEY	**Seymchan**	**39.82**	**6**	*ce*P	**P**	**18 06 18.4**	**+1.4**
SEY				pmax	pmax		
	comp=Z,6.0nm,1.7s						
GTA	**Gaotai**	**40.20**	**304**	*e*P	**P**	**18 06 22.3**	**+1.6**
GTA				sP	pwP	18 06 43.3	+8.1
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GTA				LR	LR		
	comp=N,190nm,14.7s						
GTA				LR	LR		
	comp=E,82nm,16.7s						
GTA				LR	LR		
	comp=Z,110nm,17.1s						
ZAK	**Zakamensk**	**41.19**	**321**	*e*P	**P**	**18 06 27.8**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ADK	**Adak**	**41.45**	**37**		**P**	**18 06 28.5**	**-2.0**
ADK	**Adak**	**41.45**	**37**	P	**P**	**18 06 31.2**	**+0.6**
ADK				pmax	pmax		
	comp=Z,15nm,1.3s						
CMAR	**Chiang Mai Arr**	**41.93**	**272**	P	**P**	**18 06 36.2**	**+1.2**
	comp=Z,0.8nm,0.5s,baz=60,slow=7.3,SNR=6.6						
CMAR				LR	LR	18 25 04.9	
	comp=Z,44nm,18.8s,baz=200,slow=38						
	comp=Z,0.8nm,0.5s						
MOY	**Mondy**	**43.04**	**322**	*e*P	**P**	**18 06 44.5**	**+0.8**
MOY				pmax	pmax		
	comp=Z,12nm,1.3s						
CTAO	**Charters Tower**	**43.43**	**176**		**P**	**18 06 46.2**	**-0.8**
CTAO				IAmb	IAmb	18 06 47.0	
	comp=Z,13nm,0.8s						
GOMU	**GeErMu**	**43.78**	**298**	P	**P**	**18 06 52.6**	**+2.3**
GOMU				pP	pP	18 06 57.3	-0.5
GOMU				sP	sP	18 07 01.3	+0.4
GOMU				pmax	pmax		
	comp=Z,34nm,0.9s						
WR8	**Warramunga Arr**	**44.14**	**192**	P	**P**	**18 06 51.7**	**-1.0**
WR8				IAmb	IAmb	18 06 52.3	
	comp=Z,31nm,1.8s						
WRA	**Warramunga Arr**	**44.16**	**193**		**P**	**18 06 51.0**	**-1.9**
WRA	**Warramunga Arr**	**44.16**	**193**	P	**P**	**18 06 51.6**	**-1.3**
	comp=Z,4.8nm,0.6s,baz=17,slow=8.9,SNR=47						
WRA				PcP	**PcP**	**18 08 37.9**	**+0.4**
	comp=Z,1.2nm,0.7s,baz=13,slow=3.6,SNR=3.1						
	comp=Z,4.8nm,0.6s						
FITZ	**Fitzroy Crossi**	**44.96**	**205**	P	**P**	**18 06 58.5**	**-0.8**
	comp=Z,3.3nm,0.6s,baz=7.7,slow=9.5,SNR=9.9						
	comp=Z,3.3nm,0.6s						
BILL	**Bilibino**	**46.64**	**11**	*ce*P	**P**	**18 07 13.1**	**+1.1**
BILL				pmax	pmax		
	comp=Z,16nm,2.5s						
LSA	**Lhasa**	**47.03**	**289**	IAmb	IAmb	18 07 19.6	
	comp=Z,10nm,0.9s						
LSA	**Lhasa**	**47.03**	**289**	P	**P**	**18 07 18.6**	**+2.4**
LSA				pmax	pmax		
	comp=Z,12nm,0.8s						
P08K	**Saint George I**	**47.29**	**33**	P	**P**	**18 07 17.2**	**0.0**
	baz=246						
ASAR	**Alice Springs**	**47.87**	**192**	P	**P**	**18 07 20.6**	**-1.5**
	comp=Z,3.4nm,0.7s,baz=14,slow=10,SNR=60						
ASAR				PcP	**PcP**	**18 08 50.6**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=20,slow=3.0,SNR=4.6						
ASAR				LR	LR	18 26 16.8	
	comp=Z,88nm,20.3s,baz=291,slow=35						
	comp=Z,3.4nm,0.7s						
UNV	**Unalaska Valle**	**47.89**	**38**		**P**	**18 07 21.2**	**-0.7**
UNV				IAmb	IAmb	18 07 25.6	
	comp=Z,12nm,0.9s						
UNV	**Unalaska Valle**	**47.89**	**38**	P	**P**	**18 07 21.6**	**-0.3**
	baz=251						
LVA	**Lava Point**	**48.25**	**37**		**P**	**18 07 24.4**	**-0.4**
TIXI	**Tiksi**	**48.88**	**354**		**P**	**18 07 28.6**	**-0.6**
TIXI	**Tiksi**	**48.88**	**354**	*ce*P	**P**	**18 07 29.7**	**+0.4**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GAMB	**Gambell**	**49.77**	**24**	P	**P**	**18 07 37.0**	**+0.9**
	baz=238						
DZM	**Mont Dzumac**	**50.46**	**152**		**P**	**18 07 42.2**	**+0.2**
DZM				IAmb	IAmb	18 07 55.2	
	comp=Z,13nm,0.7s						
DZM	**Mont Dzumac**	**50.46**	**152**	P	**P**	**18 07 41.3**	**-0.8**
	comp=Z,11nm,0.9s,baz=355,slow=9.7,SNR=7.0						
	comp=Z,11nm,0.9s						
S12K	**Black Hills**	**50.90**	**36**	P	**P**	**18 07 44.1**	**-0.9**
	baz=254						
EVN	**Everest**	**51.01**	**288**	IAmb	IAmb	18 08 04.8	
	comp=Z,19nm,1.3s						
SDPT	**Sand Point**	**51.68**	**37**	P	**P**	**18 07 50.0**	**-0.7**
	baz=256						
K13K	**Kusilvak Mount**	**51.76**	**28**	IAmb	IAmb	18 07 53.5	
	comp=Z,12nm,1.0s						
K13K	**Kusilvak Mount**	**51.76**	**28**	P	**P**	**18 07 52.4**	**+1.2**
	baz=246,SNR=5.3						
M13K	**Dall Lake**	**51.77**	**30**	P	**P**	**18 07 52.1**	**+0.9**
	baz=249						
CHNA	**Chernabura Isl**	**52.05**	**38**	P	**P**	**18 07 53.4**	**0.0**
	baz=257						
TNA	**Tin City**	**52.09**	**23**	P	**P**	**18 07 54.6**	**+1.1**
	baz=240,SNR=5.6						
O14K	**Tigyukauivet M**	**52.37**	**32**	P	**P**	**18 07 55.5**	**-0.3**
	baz=252						
N14K	**Kuskokwak Cree**	**52.38**	**31**	P	**P**	**18 07 55.8**	**0.0**
	baz=251						
L14K	**Kuka Creek**	**52.41**	**29**	P	**P**	**18 07 57.0**	**+1.0**
	baz=249						
S14K	**Fog Glacier**	**52.42**	**36**	P	**P**	**18 07 56.8**	**+0.4**
	baz=256						
M14K	**Bethel**	**52.53**	**30**	IAmb	IAmb	18 07 59.6	
	comp=Z,18nm,1.0s						
M14K	**Bethel**	**52.53**	**30**	P	**P**	**18 07 57.8**	**+0.9**
	baz=250,SNR=7.6						
J14K	**Nanvaranak Lak**	**52.56**	**27**	P	**P**	**18 07 57.9**	**+0.8**
	baz=247						
ANM	**Nome**	**52.58**	**25**	P	**P**	**18 07 58.5**	**+1.2**
	baz=244						
F14K	**Arctic Creek**	**52.63**	**24**	P	**P**	**18 07 59.0**	**+1.4**
	baz=242						
O15K	**Ungalikthiuk R**	**53.05**	**33**	IAmb	IAmb	18 08 02.6	
	comp=Z,14nm,1.1s						
O15K	**Ungalikthiuk R**	**53.05**	**33**	P	**P**	**18 08 01.5**	**+0.7**
	baz=253,SNR=7.4						
L15K	**Ungalak Mounta**	**53.06**	**29**	P	**P**	**18 08 01.4**	**+0.5**
	baz=250						
ZAA0	**Zalesovo Array**	**53.07**	**321**		**P**	**18 08 00.7**	**-0.4**
ZAA0				IAmb	IAmb	18 08 01.9	
	comp=Z,9.7nm,0.7s						
ZALV	**Zalesovo Beam**	**53.07**	**321**		**P**	**18 08 00.8**	**-0.2**
ZALV	**Zalesovo Beam**	**53.07**	**321**	P	**P**	**18 08 01.2**	**+0.2**
	comp=Z,14nm,0.6s,baz=107,slow=7.5,SNR=50						
ZALV				LR	LR	18 30 41.0	
	comp=Z,50nm,21.2s,baz=96,slow=36						
	comp=Z,14nm,0.6s						
M15K	**Kasigluk River**	**53.10**	**31**	P	**P**	**18 08 01.7**	**+0.6**
	baz=251						
N15K	**Kwethluk River**	**53.22**	**31**	IAmb	IAmb	18 08 04.0	
	comp=Z,14nm,1.0s						
N15K	**Kwethluk River**	**53.22**	**31**	P	**P**	**18 08 02.9**	**+0.8**
	baz=252,SNR=8.2						
K15K	**Wolf Creek Mou**	**53.26**	**28**	IAmb	IAmb	18 08 04.5	
	comp=Z,8.4nm,0.9s						
K15K	**Wolf Creek Mou**	**53.26**	**28**	P	**P**	**18 08 02.7**	**+0.4**
	baz=249,SNR=5.7						
G15K	**Niukluk**	**53.28**	**25**	P	**P**	**18 08 03.4**	**+1.0**
	baz=245						
F15K	**North Star Dit**	**53.36**	**24**	IAmb	IAmb	18 08 05.3	
	comp=Z,9.8nm,1.1s						
F15K	**North Star Dit**	**53.36**	**24**	P	**P**	**18 08 04.2**	**+1.2**
	baz=244,SNR=5.6						
MK31	**Makanchi Array**	**53.80**	**312**	*ce*P	**P**	**18 08 07.6**	**+1.0**
MKAR	**Makanchi Array**	**53.80**	**312**		**P**	**18 08 07.1**	**+0.5**
MKAR	**Makanchi Array**	**53.80**	**312**	P	**P**	**18 08 07.5**	**+0.9**
	comp=Z,5.3nm,0.6s,baz=91,slow=9.2,SNR=69						
	comp=Z,5.3nm,0.6s						
H16K	**Elim**	**53.84**	**26**	P	**P**	**18 08 07.2**	**+0.7**
	baz=247						
P16K	**Nushagak River**	**53.92**	**33**	P	**P**	**18 08 08.2**	**+1.0**
	baz=255						
N16K	**Nishlik Lake**	**53.94**	**31**	P	**P**	**18 08 08.4**	**+1.0**
	baz=253						
L16K	**Owhat River**	**53.98**	**30**	P	**P**	**18 08 08.0**	**+0.4**
	baz=252						
J16K	**Anvik River**	**54.01**	**27**	P	**P**	**18 08 09.0**	**+1.2**
	baz=250						
M16K	**Timber Creek**	**54.01**	**30**	IAmb	IAmb	18 08 09.8	
	comp=Z,7.7nm,0.9s						
M16K	**Timber Creek**	**54.01**	**30**	P	**P**	**18 08 08.5**	**+0.7**
	baz=253,SNR=7.1						
MAKZ	**Makanchi**	**54.02**	**312**		**P**	**18 08 08.3**	**+0.1**
MAKZ				IAmb	IAmb	18 08 10.2	
	comp=Z,11nm,0.9s						
O16K	**Kokwok River B**	**54.02**	**32**	IAmb	IAmb	18 08 09.7	
	comp=Z,7.2nm,0.9s						
O16K	**Kokwok River B**	**54.02**	**32**	P	**P**	**18 08 08.6**	**+0.7**
	baz=255,SNR=7.8						
G16K	**Koyuk River**	**54.09**	**25**	P	**P**	**18 08 08.6**	**+0.3**
	baz=246						
I17K	**Unalakleet**	**54.18**	**27**	P	**P**	**18 08 10.3**	**+1.3**
	baz=249						
C16K	**Lisburne Hills**	**54.30**	**21**	P	**P**	**18 08 10.7**	**+0.8**
	baz=241,SNR=7.2						
CHIR	**Chirikof Islan**	**54.47**	**37**	P	**P**	**18 08 11.8**	**+0.6**
	baz=260						
O17K	**Koliganek Bris**	**54.55**	**32**	P	**P**	**18 08 12.6**	**+0.8**
	baz=256,SNR=7.8						
L17K	**Donlin**	**54.64**	**29**	P	**P**	**18 08 13.6**	**+1.2**
	baz=253,SNR=12						
J17K	**VABM Dome**	**54.69**	**28**	IAmb	IAmb	18 08 15.2	
	comp=Z,13nm,1.1s						
J17K	**VABM Dome**	**54.69**	**28**	P	**P**	**18 08 14.1**	**+1.4**
	baz=251,SNR=8.3						
N17K	**Nushagak Hills**	**54.70**	**31**	IAmb	IAmb	18 08 15.3	
	comp=Z,10nm,0.9s						
N17K	**Nushagak Hills**	**54.70**	**31**	P	**P**	**18 08 14.1**	**+1.1**
	baz=255,SNR=8.8						
P17K	**Kvichak River**	**54.74**	**33**	P	**P**	**18 08 13.4**	**+0.2**
	baz=256						
G17K	**Kiwalik Mounta**	**54.79**	**25**	P	**P**	**18 08 14.5**	**+1.1**
	baz=248,SNR=7.2						
D17K	**Noatak River**	**54.79**	**22**	P	**P**	**18 08 14.6**	**+1.2**
	baz=244,SNR=15						
Q17K	**Contact Creek**	**54.81**	**34**	P	**P**	**18 08 14.4**	**+0.6**
	baz=258						
K17K	**Iditarod**	**54.81**	**29**	P	**P**	**18 08 14.9**	**+1.2**
	baz=252,SNR=13						
M17K	**Holitna River**	**54.82**	**30**	IAmb	IAmb	18 08 16.1	
	comp=Z,13nm,0.9s						
M17K	**Holitna River**	**54.82**	**30**	P	**P**	**18 08 14.9**	**+1.2**
	baz=254,SNR=8.4						
H17K	**Granite Mounta**	**54.87**	**26**	IAmb	IAmb	18 08 16.2	
	comp=Z,9.2nm,0.8s						
H17K	**Granite Mounta**	**54.87**	**26**	P	**P**	**18 08 15.1**	**+1.0**
	baz=249,SNR=8.4						
F17K	**Baldwin Pennin**	**54.92**	**24**	P	**P**	**18 08 15.2**	**+0.8**
	baz=247						
E17K	**Hotham Inlet**	**54.97**	**23**	P	**P**	**18 08 16.1**	**+1.4**
	baz=246,SNR=7.9						
RDOG	**Red Dog Mine**	**55.01**	**22**	P	**P**	**18 08 16.4**	**+1.4**
	baz=244						
C17K	**DeLong Mountai**	**55.10**	**21**	P	**P**	**18 08 16.9**	**+1.2**
	baz=244,SNR=8.8						
STKA	**Stephens Creek**	**55.13**	**182**	P	**P**	**18 08 15.0**	**-1.2**
	comp=Z,4.0nm,0.7s,baz=356,slow=7.0,SNR=14						
	comp=Z,4.0nm,0.7s						
Q18K	**Katmai Hardscr**	**55.34**	**34**	P	**P**	**18 08 16.9**	**-0.8**
	baz=258,SNR=5.8						
N18K	**Kilae Creek**	**55.36**	**31**	P	**P**	**18 08 18.3**	**+0.6**
	baz=256						
L18K	**Granite Mounta**	**55.39**	**29**	IAmb	IAmb	18 08 20.3	
	comp=Z,10nm,1.2s						
L18K	**Granite Mounta**	**55.39**	**29**	P	**P**	**18 08 18.8**	**+1.0**
	baz=254,SNR=6.1						
P18K	**Big Mountain,**	**55.39**	**33**	P	**P**	**18 08 17.7**	**-0.2**
	baz=258						
SII	**Sitkinak Islan**	**55.39**	**36**	P	**P**	**18 08 18.1**	**+0.2**
	baz=260						
R18K	**Karluk**	**55.42**	**35**	P	**P**	**18 08 18.6**	**+0.5**
	baz=260						
O18K	**Koktuh Hills**	**55.50**	**32**	P	**P**	**18 08 19.7**	**+1.0**
	baz=257,SNR=14						
E18K	**Tukpahlearik C**	**55.54**	**23**	IAmb	IAmb	18 08 21.3	
	comp=Z,13nm,0.8s						
E18K	**Tukpahlearik C**	**55.54**	**23**	P	**P**	**18 08 20.3**	**+1.5**
	baz=247						
H18K	**Honhosa River**	**55.56**	**26**	IAmb	IAmb	18 08 20.7	
	comp=Z,8.6nm,0.9s						
H18K	**Honhosa River**	**55.56**	**26**	P	**P**	**18 08 19.8**	**+0.7**
	baz=251						
F18K	**Selawik**	**55.58**	**24**	P	**P**	**18 08 20.0**	**+0.9**
	baz=248						
M18K	**Stony River**	**55.59**	**30**	P	**P**	**18 08 20.3**	**+1.0**
	baz=256,SNR=9.4						
G18K	**Tagagawik**	**55.70**	**25**	IAmb	IAmb	18 08 22.3	
	comp=Z,13nm,1.0s						
G18K	**Tagagawik**	**55.70**	**25**	P	**P**	**18 08 20.6**	**+0.5**
	baz=250,SNR=17						
J18K	**Innoko River**	**55.72**	**28**	P	**P**	**18 08 20.6**	**+0.4**
	baz=253						
C18K	**Utukok River**	**55.84**	**21**	P	**P**	**18 08 21.8**	**+0.7**
	baz=246,SNR=6.0						
B18K	**Kokolik River**	**55.94**	**20**	P	**P**	**18 08 23.3**	**+1.6**
	baz=244						
OHAK	**Old Harbor**	**55.98**	**36**	P	**P**	**18 08 22.4**	**+0.2**
	baz=261						
N19K	**Bonanza Creek**	**56.06**	**31**	IAmb	IAmb	18 08 26.7	
	comp=Z,7.5nm,0.9s						
N19K	**Bonanza Creek**	**56.06**	**31**	P	**P**	**18 08 23.8**	**+1.0**
	baz=257,SNR=6.2						
Q19K	**Cape Douglas,**	**56.09**	**34**	P	**P**	**18 08 23.4**	**+0.4**
	baz=259						
L19K	**White Mountain**	**56.21**	**30**	P	**P**	**18 08 24.5**	**+0.7**
	baz=256,SNR=6.4						
J19K	**Poorman**	**56.34**	**28**	IAmb	IAmb	18 08 26.5	
	comp=Z,11nm,0.9s						
J19K	**Poorman**	**56.34**	**28**	P	**P**	**18 08 25.6**	**+0.9**
	baz=254,SNR=16						
M19K	**Big River Lodg**	**56.35**	**30**	P	**P**	**18 08 25.7**	**+1.0**
	baz=257						
F19K	**Shaleruckik Mo**	**56.36**	**24**	P	**P**	**18 08 25.9**	**+1.2**
	baz=250						
G19K	**Purcell Mounta**	**56.39**	**25**	IAmb	IAmb	18 08 27.1	
	comp=Z,6.2nm,0.8s						
G19K	**Purcell Mounta**	**56.39**	**25**	P	**P**	**18 08 25.6**	**+0.7**
	baz=251,SNR=10						
P19K	**Oil Pt**	**56.44**	**33**	P	**P**	**18 08 25.6**	**+0.2**
	baz=259						
H19K	**Roundabout Mou**	**56.45**	**26**	IAmb	IAmb	18 08 27.5	
	comp=Z,16nm,1.1s						
H19K	**Roundabout Mou**	**56.45**	**26**	P	**P**	**18 08 26.4**	**+1.0**
	baz=252,SNR=15						
KDAK	**Kodiak Island**	**56.45**	**35**	P	**P**	**18 08 25.6**	**+0.1**
	baz=261						
KURK	**Kurchatov**	**56.45**	**316**		**P**	**18 08 25.3**	**-0.3**
KURK	**Kurchatov**	**56.45**	**316**	*ce*P	**P**	**18 08 26.3**	**+0.7**
KURK				pmax	pmax		
	comp=Z,25nm,1.3s						
KURBB	**Kurchatov Arra**	**56.50**	**316**	P	**P**	**18 08 26.5**	**+0.5**

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      comp=Z,14nm,0.6s,baz=93,slow=7.8,SNR=202
KURBB                             LR     LR     18 34 36.2
      comp=Z,109nm,18.2s,baz=182,slow=38
      comp=Z,14nm,0.6s
A19K  Wainwright        56.53  20 P      P      18 08 27.4 +1.5
      baz=245
PRZ   Przheval'sk       56.55 306 P      P      18 08 29.0 +2.3
PRZ                               pmax   pmax
      comp=Z,20nm,0.9s
C19K  Lookout Ridge     56.56  21 P      P      18 08 27.7 +1.6
      baz=247,SNR=19
Q20K  Shuyak Island     56.68  34 P      P      18 08 27.7 +0.6
      baz=261
L20K  Farewell, AK      56.72  30 P      P      18 08 28.2 +0.8
      baz=257,SNR=5.9
E19K  Redstone River    56.77  23 IAmb   IAmb   18 08 29.7
      comp=Z,7.9nm,0.8s
E19K  Redstone River    56.77  23 P      P      18 08 28.5 +0.8
      baz=250
O20K  Slope Mountain    56.82  32 P      P      18 08 29.2 +1.0
      baz=260
D19K  Kuna River        56.82  22 IAmb   IAmb   18 08 30.0
      comp=Z,13nm,1.1s
D19K  Kuna River        56.82  22 P      P      18 08 28.9 +0.9
      baz=249
K20K  Telida            56.84  28 IAmb   IAmb   18 08 30.6
      comp=Z,9.7nm,0.9s
K20K  Telida            56.84  28 P      P      18 08 29.3 +1.1
      baz=256
M20K  Styx River        56.93  30 P      P      18 08 29.8 +0.8
      baz=258
J20K  Nowinta River     57.01  28 P      P      18 08 30.5 +1.1
      baz=255,SNR=27
I20K  Naaghedeneel      57.03  27 P      P      18 08 30.7 +1.2
      baz=255
H20K  Anotleneega Mo    57.06  26 P      P      18 08 30.9 +1.2
      baz=254,SNR=27
F20K  Avaraart Lake     57.19  24 IAmb   IAmb   18 08 32.6
      comp=Z,7.6nm,0.8s
F20K  Avaraart Lake     57.19  24 P      P      18 08 31.5 +1.0
      baz=252,SNR=16
E20K  Nigu River        57.41  23 P      P      18 08 33.2 +1.0
      baz=251
D20K  Etivluk River     57.41  22 P      P      18 08 33.3 +1.1
      baz=250
KDJ   Kajisay           57.47 306 IAmb   IAmb   18 08 36.1
      comp=Z,11nm,1.5s
KDJ   Kajisay           57.47 306 P      P      18 08 35.3 +2.0
KDJ                               pmax   pmax
      comp=Z,5.0nm,1.2s
PPLA  Purkeypile        57.57  29 P      P      18 08 34.4 +0.8
      baz=258
IMAR  Indian Mountai    57.64  25 P      P      18 08 34.4 +0.5
B20K  Meade River       57.69  20 P      P      18 08 35.3 +1.3
      baz=249,SNR=6.6
SKT   Skwentna          57.69  30 IAmb   IAmb   18 08 35.7
      comp=Z,7.8nm,1.0s
SKT   Skwentna          57.69  30 P      P      18 08 34.2 -0.1
      baz=259,SNR=6.9
BRSE  Bradley Lake S    57.70  33 P      P      18 08 34.4 +0.1
      baz=261
CHUM  Lake Minchumin    57.73  28 P      P      18 08 35.7 +1.3
      baz=257,SNR=5.3
CAST  Castle Rocks      57.73  29 IAmb   IAmb   18 08 36.4
      comp=Z,12nm,0.9s
CAST  Castle Rocks      57.73  29 P      P      18 08 35.5 +1.0
      baz=258,SNR=18
G21K  Allakaket         57.88  25 IAmb   IAmb   18 08 37.7
      comp=Z,8.5nm,0.9s
G21K  Allakaket         57.88  25 P      P      18 08 36.6 +1.1
      baz=255
H21K  Melozitna Rive    57.94  26 IAmb   IAmb   18 08 38.2
      comp=Z,11nm,1.0s
H21K  Melozitna Rive    57.94  26 P      P      18 08 37.3 +1.4
      baz=256,SNR=18
SUA   Susitna One       57.97  31 P      P      18 08 35.6 -0.7
      baz=260
F21K  Alatna River      58.08  24 P      P      18 08 37.2 +0.3
      baz=254,SNR=5.8
C21K  Knifeblade Rid    58.18  22 P      P      18 08 38.9 +1.4
      baz=252
E21K  Killik River      58.25  23 IAmb   IAmb   18 08 40.1
      comp=Z,10.0nm,1.1s
E21K  Killik River      58.25  23 P      P      18 08 39.0 +0.9
      baz=253,SNR=9.7
KTH   Kantishna Hill    58.27  29 IAmb   IAmb   18 08 40.0
      comp=Z,10.0nm,1.2s
BPAW  Bear Paw Mtn.     58.34  28 IAmb   IAmb   18 08 40.6
      comp=Z,9.6nm,0.9s
BPAW  Bear Paw Mtn.     58.34  28 P      P      18 08 39.4 +0.6
      baz=258,SNR=13
BOOM  Boomskoye usch    58.37 306 IAmb   IAmb   18 08 42.0
      comp=Z,4.7nm,0.6s
BOOM  Boomskoye usch    58.37 306 P      P      18 08 41.1 +1.6
BOOM                              pmax   pmax
      comp=Z,9.0nm,0.8s
B21K  Ikpikpuk River    58.39  21 IAmb   IAmb   18 08 41.3
      comp=Z,6.1nm,0.8s
B21K  Ikpikpuk River    58.39  21 P      P      18 08 40.0 +1.1
      baz=252
RC01  Rabbit Creek A    58.39  32 P      P      18 08 38.8 -0.4
      baz=262
SEW   Seward            58.39  33 IAmb   IAmb   18 08 39.9
      comp=Z,13nm,1.0s
SEW   Seward            58.39  33 P      P      18 08 39.0 -0.1
      baz=262
TRF   Thorofare Moun    58.53  29 P      P      18 08 40.3 +0.1
      baz=260,SNR=12
H22K  Ishtalitna Cre    58.56  26 P      P      18 08 41.6 +1.3
      baz=257,SNR=11
KSH   Kashi             58.59 303 P      P      18 08 45.4 +4.3
KSH                               sP     sP     18 08 52.1 +0.1
KSH                               pmax   pmax
      comp=Z,7.0nm,0.7s
MLY   Manley            58.64  27 IAmb   IAmb   18 08 42.9
      comp=Z,9.9nm,1.0s
MLY   Manley            58.64  27 P      P      18 08 41.8 +1.0
      baz=258,SNR=17
F22K  John River        58.64  24 P      P      18 08 42.2 +1.3
      baz=255,SNR=13
A22K  Sinclair Lake     58.72  20 P      P      18 08 42.7 +1.5
      baz=250,SNR=7.2
G22K  Bettles           58.75  25 P      P      18 08 42.2 +0.7
      baz=256
PMR   Palmer            58.75  31 P      P      18 08 41.9 +0.3
      baz=262
D22K  Ayikyak River     58.83  22 P      P      18 08 43.6 +1.5
      baz=254,SNR=11
E22K  Anaktuvuk Pass    58.94  23 IAmb   IAmb   18 08 45.3
      comp=Z,8.4nm,1.0s
E22K  Anaktuvuk Pass    58.94  23 P      P      18 08 44.0 +1.1
      baz=255,SNR=11
B22K  Teshekpuk Lake    59.00  21 IAmb   IAmb   18 08 45.3
      comp=Z,8.6nm,0.8s
B22K  Teshekpuk Lake    59.00  21 P      P      18 08 44.1 +0.9
      baz=252
PWL   Port Wells        59.04  32 P      P      18 08 43.7  0.0
PWL   Port Wells        59.04  32 P      P      18 08 43.6  0.0
      baz=263,SNR=5.1
KNK   Knik Glacier      59.05  31 P      P      18 08 43.8 +0.1
      baz=262
RND   Reindeer          59.16  29 IAmb   IAmb   18 08 45.1
      comp=Z,6.8nm,0.8s
SML   Sawmill           59.16  31 P      P      18 08 44.6 +0.1
      baz=262,SNR=8.1
MCK   McKinley          59.17  29 P      P      18 08 44.4 -0.1
      baz=261,SNR=5.6
WAT1  Susitna Watana    59.20  30 P      P      18 08 44.6 -0.2
      baz=262
I23K  Minto, Yukon-K    59.23  27 IAmb   IAmb   18 08 46.4
      comp=Z,5.9nm,0.9s
I23K  Minto, Yukon-K    59.23  27 P      P      18 08 45.8 +0.9
      baz=259,SNR=7.0
NEA2  Nenana            59.26  28 IAmb   IAmb   18 08 46.8
      comp=Z,8.3nm,0.9s
NEA2  Nenana            59.26  28 P      P      18 08 45.9 +0.8
      baz=260,SNR=5.1
G23K  Bananza Creek     59.28  25 IAmb   IAmb   18 08 47.7
      comp=Z,10nm,0.9s
G23K  Bananza Creek     59.28  25 P      P      18 08 46.4 +1.2
      baz=258,SNR=14
H23K  Yukon River       59.29  26 IAmb   IAmb   18 08 47.7
      comp=Z,9.3nm,0.8s
H23K  Yukon River       59.29  26 P      P      18 08 46.6 +1.3
      baz=259,SNR=13
COLD  Coldfoot          59.32  24 IAmb   IAmb   18 08 47.9
      comp=Z,5.9nm,0.8s
COLD  Coldfoot          59.32  24 P      P      18 08 46.9 +1.4
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      baz=257,SNR=7.1
AAK   Ala-Archa         59.42 307 LR     LR     18 36 40.2
      comp=Z,52nm,18.2s,baz=66,slow=38
AAK   Ala-Archa         59.42 307ceP     P      18 08 46.8  0.0
AAK                               pmax   pmax
      comp=Z,6.0nm,1.7s
M23K  Glacier View      59.44  31 P      P      18 08 47.0 +0.5
      baz=263
WAT6  Susitna Watana    59.54  30 P      P      18 08 47.5 +0.2
      baz=262,SNR=13
D23K  Nanushuk River    59.55  22 IAmb   IAmb   18 08 49.4
      comp=Z,7.3nm,1.0s
D23K  Nanushuk River    59.55  22 P      P      18 08 48.7 +1.6
      baz=256,SNR=5.4
SCM   Sheep Creek Mo    59.64  31 P      P      18 08 48.4 +0.5
      baz=263,SNR=11
GLI   Glacier Island    59.64  32 P      P      18 08 48.0 +0.2
      baz=264
E23K  Chandalar         59.72  24 P      P      18 08 50.0 +1.7
      baz=258,SNR=14
DHY   Denali Highway    59.77  29 P      P      18 08 49.3 +0.5
      baz=262
C23K  Itkillik River    59.79  21 P      P      18 08 50.0 +1.4
      baz=256,SNR=10
CCB   Clear Creek Bu    59.80  28 IAmb   IAmb   18 09 35.9
      comp=Z,3.9nm,0.6s
TOLK  Toolik Lake Re    59.86  23 IAmb   IAmb   18 08 51.7
      comp=Z,5.7nm,0.9s
TOLK  Toolik Lake Re    59.86  23 P      P      18 08 50.5 +1.2
      baz=257
Q23K  Middleton Isla    59.88  34 P      P      18 08 49.9 +0.4
      baz=266
H24K  Noodor Dome       59.97  26 IAmb   IAmb   18 08 52.1
      comp=Z,8.9nm,0.9s
H24K  Noodor Dome       59.97  26 P      P      18 08 51.1 +1.1
      baz=260,SNR=18
POKR  Poker Plat Res    60.03  27 P      P      18 08 51.0 +0.6
      baz=261
HDA   Harding Lake      60.14  28 IAmb   IAmb   18 08 51.5
      comp=Z,5.8nm,0.9s
HDA   Harding Lake      60.14  28 P      P      18 08 50.9 -0.3
      baz=262
E24K  Your Creek        60.14  24 P      P      18 08 52.3 +1.1
E24K                              IAmb   IAmb   18 08 53.7
      comp=Z,7.5nm,0.9s
E24K  Your Creek        60.14  24 P      P      18 08 52.8 +1.6
      baz=259,SNR=8.6
M24K  Tolsona, Glenn    60.21  31 P      P      18 08 52.6 +0.8
      baz=264
IL31                    60.21  28        P      18 08 50.6 -1.0
IL31                              IAmb   IAmb   18 08 52.0
      comp=Z,7.8nm,0.9s
ILAR  Eielson Array     60.21  28        P      18 08 50.4 -1.2
ILAR  Eielson Array     60.21  28 P      P      18 08 51.0 -0.7
      comp=Z,5.8nm,0.9s,baz=260,slow=5.6,SNR=50
ILAR                              LR     LR     18 35 48.4
      comp=Z,41nm,18.8s,baz=260,slow=37
      comp=Z,5.8nm,0.9s
ILAR  Eielson Array     60.21  28 P      P      18 08 51.0 -0.7
D24K  Happy Valley      60.24  22 IAmb   IAmb   18 08 53.8
      comp=Z,9.1nm,1.1s
D24K  Happy Valley      60.24  22 P      P      18 08 53.1 +1.3
      baz=258
F24K  Squaw Lake        60.26  24 IAmb   IAmb   18 08 54.6
      comp=Z,6.9nm,1.1s
F24K  Squaw Lake        60.26  24 P      P      18 08 53.3 +1.3
      baz=260,SNR=6.6
KLU   Klutina           60.27  31 IAmb   IAmb   18 08 53.8
      comp=Z,12nm,1.2s
KLU   Klutina           60.27  31 P      P      18 08 52.8 +0.6
      baz=265,SNR=5.9
EYAK  Cordova Ski Ar    60.27  32 P      P      18 08 52.7 +0.6
      baz=265
G24K  Hadweenzic Riv    60.27  25 IAmb   IAmb   18 08 54.6
      comp=Z,12nm,0.9s
G24K  Hadweenzic Riv    60.27  25 P      P      18 08 53.5 +1.4
      baz=260,SNR=13
C24K  Franklin Bluff    60.41  22 P      P      18 08 54.1 +1.2
      baz=257
K24K  Donnelly Dome     60.57  29 P      P      18 08 54.7 +0.5
      baz=264
PAX   Paxson            60.62  30 P      P      18 08 54.9 +0.3
      baz=264,SNR=5.1
ARSB  Arslanbob         60.67 305 IAmb   IAmb   18 09 16.0
      comp=Z,10.0nm,1.0s
HARP  HAARP             60.71  30 P      P      18 08 55.8 +0.7
      baz=265
G25K  Bearman Lake      60.82  25 P      P      18 08 57.2 +1.4
      baz=262
J25K  Salcha River,     60.84  28 P      P      18 08 56.5 +0.5
      baz=264
H25L  Birch Creek       60.86  26 P      P      18 08 57.0 +1.0
      baz=262,SNR=11
BMRM  Bremner River     60.86  32 P      P      18 08 56.8 +0.6
      baz=266,SNR=5.3
PRP   Porcupine Dome    60.88  27 P      P      18 08 55.8 -0.6
      baz=263
KAIM  Kayak Island      60.89  33 P      P      18 08 56.9 +0.5
      baz=267
N25K  Chitina, Valde    60.91  31 P      P      18 08 57.1 +0.5
      baz=266
RIDG  Independent Ri    60.98  29 IAmb   IAmb   18 08 58.0
      comp=Z,10nm,1.0s
RIDG  Independent Ri    60.98  29 P      P      18 08 57.2 +0.2
      baz=264,SNR=7.8
F25K  Christian Rive    61.12  24 IAmb   IAmb   18 09 01.4
      comp=Z,10nm,1.1s
F25K  Christian Rive    61.12  24 P      P      18 08 59.7 +1.9
      baz=262,SNR=13
D25K  Kavik River       61.13  22 P      P      18 08 59.4 +1.4
      baz=260,SNR=13
E25K  Arctic Village    61.22  24 IAmb   IAmb   18 09 01.5
      comp=Z,13nm,1.1s
E25K  Arctic Village    61.22  24 P      P      18 09 00.0 +1.5
      baz=261,SNR=9.8
GLB   Gilahina Butte    61.27  32 IAmb   IAmb   18 09 00.7
      comp=Z,11nm,1.2s
DOT   Dot Lake          61.31  29 IAmb   IAmb   18 09 00.4
      comp=Z,6.4nm,1.0s
ARK   Arkit             61.38 306 P      P      18 09 01.7 +1.6
ARK                               pmax   pmax
      comp=Z,8.0nm,1.2s
SCRK  Sand Creek        61.38  29 P      P      18 08 59.7  0.0
      baz=265,SNR=22
BMAR  Burnt Mountain    61.50  25        P      18 09 01.9 +1.4
BVAR  Borovoye Array    61.58 319 P      P      18 09 02.0 +0.8
      comp=Z,30nm,0.6s,baz=90,slow=7.7,SNR=190
BVAR                              LR     LR     18 36 08.3
      comp=Z,38nm,20.4s,baz=88,slow=36
      comp=Z,30nm,0.6s
CRQE  Cirque            61.59  32 P      P      18 09 01.7 +0.5
      baz=268,SNR=5.1
J26L  Joseph Creek      61.60  28 IAmb   IAmb   18 09 02.3
      comp=Z,11nm,0.9s
J26L  Joseph Creek      61.60  28 P      P      18 09 01.4 +0.1
      baz=265,SNR=18
BRVK  Borovoye          61.64 319        P      18 09 01.8 +0.2
BRVK  Borovoye          61.64 319ceP     P      18 09 02.4 +0.8
BRVK                              pmax   pmax
      comp=Z,37nm,1.3s
MCARA McCarthy VSAT     61.65  32 IAmb   IAmb   18 09 03.7
      comp=Z,9.1nm,0.8s
MCARA McCarthy VSAT     61.65  32 P      P      18 09 02.0 +0.5
      baz=267
F26K  Sheenjek River    61.70  24 P      P      18 09 03.2 +1.4
      baz=263,SNR=8.9
M26K  Nabesna, AK       61.71  30 P      P      18 09 02.7 +0.7
      baz=267
C26K  Camden Bay        61.73  22 P      P      18 09 03.4 +1.5
      baz=261
G26K  Porcupine Rive    61.75  25 IAmb   IAmb   18 09 07.0
      comp=Z,11nm,1.1s
G26K  Porcupine Rive    61.75  25 P      P      18 09 03.6 +1.6
      baz=264,SNR=11
C27K  Jago River        62.10  22 P      P      18 09 05.6 +1.2
      baz=262
MESA  MESA              62.14  33 P      P      18 09 05.2 +0.1
      baz=269
K27K  Chicken           62.22  29 IAmb   IAmb   18 09 07.2
      comp=Z,8.5nm,1.4s
K27K  Chicken           62.22  29 P      P      18 09 06.0 +0.8
      baz=267
M27K  Edge Creek, AK    62.23  31 IAmb   IAmb   18 09 07.3
      comp=Z,16nm,1.8s
M27K  Edge Creek, AK    62.23  31 P      P      18 09 06.0 +0.4
      baz=268
GRNC  Granite Creek     62.25  32 IAmb   IAmb   18 09 07.2
      comp=Z,7.5nm,0.9s
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KK31  Karatay Array     62.28 308 IAmb   IAmb   18 09 07.9
      comp=Z,5.9nm,0.9s
KKAR  Karatay Array     62.28 308        P      18 09 06.5 +0.4
KKAR  Karatay Array     62.28 308 IAmb   IAmb   18 09 07.9
      comp=Z,6.2nm,0.9s
L27K  Beaver Creek,     62.28  30 IAmb   IAmb   18 09 07.6
      comp=Z,14nm,1.8s
L27K  Beaver Creek,     62.28  30 P      P      18 09 06.3 +0.5
      baz=268,SNR=6.8
BCAR  Beaver Creek A    62.30  30        P      18 09 06.0 +0.1
CTG   Chitna Glacier    62.45  32 P      P      18 09 07.5 +0.5
      baz=269
I27K  Kandik River      62.51  27 P      P      18 09 07.9 +0.6
      baz=266
G27K  Doyon Strip       62.58  25 P      P      18 09 08.7 +1.1
      baz=266
H27K  Steamboat Moun    62.59  26 P      P      18 09 09.0 +1.3
      baz=266,SNR=20
BVCY  Beaver Creek      62.71  30 P      P      18 09 09.0 +0.4
      baz=269
E27K  Coleen River      62.71  24 IAmb   IAmb   18 09 17.9
      comp=Z,12nm,1.6s
E27K  Coleen River      62.71  24 P      P      18 09 09.6 +1.1
      baz=265
YUK3  Moose Creek       62.89  31 P      P      18 09 10.5 +0.5
      baz=270
PINM  Pinnacle          62.99  33 P      P      18 09 11.1 +0.6
      baz=270
O28M  Mount Upton       63.01  32 P      P      18 09 11.1 +0.1
      baz=270,SNR=5.2
D27M  Malcolm River     63.03  23 P      P      18 09 11.8 +1.1
      baz=265
I28M  Miner Creek       63.20  27 IAmb   IAmb   18 09 13.6
      comp=Z,6.2nm,1.0s
I28M  Miner Creek       63.20  27 P      P      18 09 12.4 +0.5
      baz=268,SNR=10
YUK8  Steele Glacier    63.22  32 P      P      18 09 13.0 +0.7
      baz=270
F28M  Old Crow          63.32  25 IAmb   IAmb   18 09 15.0
      comp=Z,10nm,1.1s
F28M  Old Crow          63.32  25 P      P      18 09 13.7 +1.2
      baz=267,SNR=11
DAWY  Dawson            63.40  29 IAmb   IAmb   18 09 15.0
      comp=Z,10.0nm,1.2s
DAWY  Dawson            63.40  29 P      P      18 09 13.7 +0.5
      baz=269
PNL   Peninsula         63.43  34 P      P      18 09 13.9 +0.5
      baz=272
E28M  Babbage River     63.50  24 P      P      18 09 15.3 +1.6
      baz=267,SNR=7.5
YUK4  Talbot Arm        63.76  32 P      P      18 09 17.2 +1.4
      baz=271,SNR=5.6
O29M  Mount Kennedy     63.82  33 IAmb   IAmb   18 09 18.6
      comp=Z,7.3nm,0.9s
O29M  Mount Kennedy     63.82  33 P      P      18 09 17.4 +1.3
      baz=272
M29M  Somme Creek       63.82  30 IAmb   IAmb   18 09 18.3
      comp=Z,6.9nm,0.8s
M29M  Somme Creek       63.82  30 P      P      18 09 16.7 +0.6
      baz=271,SNR=9.9
H29M  Whitestone        63.87  26 IAmb   IAmb   18 09 18.3
      comp=Z,11nm,1.1s
H29M  Whitestone        63.87  26 P      P      18 09 17.1 +1.0
      baz=269,SNR=6.0
I29M  Ogilvie Camp,     63.88  27 IAmb   IAmb   18 09 18.1
      comp=Z,9.0nm,1.2s
I29M  Ogilvie Camp,     63.88  27 P      P      18 09 17.3 +1.0
      baz=270
YUK6  Outpost Mounta    63.91  32 P      P      18 09 17.7 +0.9
      baz=272
L29M  L29M              63.97  30 P      P      18 09 18.3 +1.4
      baz=271,SNR=9.8
G29M  Pine Creek        64.01  25 IAmb   IAmb   18 09 19.8
      comp=Z,12nm,1.2s
G29M  Pine Creek        64.01  25 P      P      18 09 18.4 +1.2
      baz=269,SNR=7.4
SIMJ  Simiganj          64.08 303        P      18 09 18.7 +0.4
SIMJ                              IAmb   IAmb   18 09 20.1
      comp=Z,8.6nm,0.9s
E29M  Blow River        64.09  24 P      P      18 09 18.6 +1.0
      baz=268
DZET  Dzherino          64.19 303 P      P      18 09 20.2 +1.2
DZET                              pmax   pmax
      comp=Z,8.0nm,0.8s
K29M  Barlow Dome       64.23  29 IAmb   IAmb   18 09 20.9
      comp=Z,7.4nm,1.1s
K29M  Barlow Dome       64.23  29 P      P      18 09 19.5 +0.8
      baz=271,SNR=8.8
P29M  Windy Craggy      64.27  34 P      P      18 09 20.3 +1.3
      baz=273
HYT   Haines Junctio    64.33  32 IAmb   IAmb   18 09 21.8
      comp=Z,8.6nm,1.2s
HYT   Haines Junctio    64.33  32 P      P      18 09 19.9 +0.4
      baz=272
N30M  Aishikik Lake     64.50  32 P      P      18 09 21.2 +0.7
      baz=273
EPYK  Eagle Plains      64.53  26 P      P      18 09 21.3 +0.7
      baz=271
P30M  Million Dollar    64.64  33 P      P      18 09 22.2 +0.9
      baz=273
I30M  Mount Dempster    64.69  27 P      P      18 09 22.5 +0.8
      baz=271
G30M  tAoh Zraii Nji    64.72  25 P      P      18 09 22.2 +0.4
      baz=271,SNR=11
J30M  Hart River        64.73  28 P      P      18 09 22.7 +0.7
      baz=272,SNR=5.8
KBL   Kabul             64.85 298        P      18 09 23.9 +0.5
KBL   Kabul             64.85 298 P      P      18 09 24.3 +0.9
KBL                               pmax   pmax
      comp=Z,14nm,0.9s
F30M  Barrier River     64.88  25 P      P      18 09 24.1 +1.3
      baz=271,SNR=8.8
PLBC  Pleasant Camp     64.98  34 P      P      18 09 24.5 +1.0
      baz=274
O30N  Mendenhall        65.03  32 P      P      18 09 24.8 +0.9
      baz=274
S31K  Pelican           65.17  35 P      P      18 09 25.9 +1.2
      baz=275
G31M  Satah River       65.49  25 P      P      18 09 27.4 +0.7
      baz=272,SNR=12
H31M  Peel River        65.52  27 IAmb   IAmb   18 09 28.8
      comp=Z,8.8nm,0.9s
H31M  Peel River        65.52  27 P      P      18 09 27.4 +0.5
      baz=273,SNR=9.0
WHY   Whitehorse        65.63  32 P      P      18 09 27.9 +0.1
      baz=275
F31M  Tsiigehtchic      65.67  25 P      P      18 09 28.7 +0.8
      baz=273
INK   Inuvik            65.72  24 IAmb   IAmb   18 09 29.5
      comp=Z,9.1nm,1.1s
INK   Inuvik            65.72  24 P      P      18 09 27.3 -0.8
INK                               pmax   pmax
      comp=Z,7.0nm,1.3s
INK   Inuvik            65.72  24 P      P      18 09 28.6 +0.5
      baz=273
M31M  Drury Creek, Y    65.73  31 P      P      18 09 29.0 +0.6
      baz=275,SNR=5.2
R32K  Eaglecrest        66.04  35 P      P      18 09 30.6 +0.2
      baz=276
S32K  Killisnoo         66.10  36 P      P      18 09 31.4 +0.7
      baz=277
FARO  Faro, Yukon       66.22  31 IAmb   IAmb   18 09 33.4
      comp=Z,8.1nm,1.2s
FARO  Faro, Yukon       66.22  31 P      P      18 09 32.5 +1.0
      baz=276
P32M  Atlin             66.31  33 P      P      18 09 33.3 +1.0
      baz=276
P33M  Teslin, Yukon     66.69  33 P      P      18 09 35.4 +0.8
      baz=277
SVE   Sverdlovsk        66.87 324 eP     P      18 09 36.5 +0.8
SVE                               pmax   pmax
      comp=Z,11nm,0.8s
U33K  Whale Pass        67.07  37 P      P      18 09 37.0  0.0
      baz=278
Q32M  Nakina River      67.13  34 P      P      18 09 38.0 +0.4
      baz=278
MMPY  Sheldon Lake,     67.14  30 IAmb   IAmb   18 09 39.8
      comp=Z,7.3nm,1.4s
MMPY  Sheldon Lake,     67.14  30 P      P      18 09 38.7 +1.2
      baz=277
CRAG  Craig             67.16  38 P      P      18 09 37.9 +0.3
      baz=279
R33M  Jennings River    67.73  33 P      P      18 09 42.2 +0.9
      baz=279
S34M  Telegraph Cree    67.87  35 IAmb   IAmb   18 09 44.4
      comp=Z,9.4nm,1.1s
S34M  Telegraph Cree    67.87  35 P      P      18 09 43.2 +1.1
      baz=279
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ARTI	**Arti**	**68.16**	**323**		**P**	**18 09 43.6**	**-0.3**
ARTI	**Arti**	**68.16**	**323**	LR	LR	18 41 33.6	
	comp=Z,50nm,18.7s,baz=26,slow=38						
ARTI	**Arti**	**68.16**	**323**	*c* *i*P	**P**	**18 09 44.5**	**+0.5**
ARTI						18 10 07.7	
ARTI						18 12 10.6	
ARTI				S	**S**	**18 18 44.7**	**+2.8**
ARTI				SS	**SS**	**18 23 05.0**	**+0.6**
ARTI				pmax	pmax		
	comp=Z,11nm,0.7s						
A36M	**Sachs Harbour**	**68.17**	**20**	IAmb	IAmb	18 09 46.0	
	comp=Z,8.6nm,1.1s						
A36M	**Sachs Harbour**	**68.17**	**20**	P	**P**	**18 09 44.3**	**+0.7**
	baz=279						
T35M	**Bob Quinn**	**68.50**	**36**	P	**P**	**18 09 46.7**	**+0.6**
	baz=280						
AB31	**Akbulak array**	**68.55**	**316**	IAmb	IAmb	18 09 47.5	
	comp=Z,4.8nm,0.7s						
ABKAR	**Akbulak array**	**68.55**	**316**		**P**	**18 09 46.3**	**-0.2**
ABKAR	**Akbulak array**	**68.55**	**316**	IAmb	IAmb	18 09 47.5	
	comp=Z,4.8nm,0.7s						
WTLY	**Watson Lake, Y**	**68.69**	**32**	P	**P**	**18 09 48.5**	**+1.2**
	baz=280						
TGTN	**Hyland Airport**	**68.70**	**31**	P	**P**	**18 09 48.3**	**+1.0**
	baz=280						
C36M	**Paulatuk**	**69.00**	**22**	IAmb	IAmb	18 09 50.1	
	comp=Z,7.5nm,0.9s						
C36M	**Paulatuk**	**69.00**	**22**	P	**P**	**18 09 49.1**	**+0.2**
	baz=281						
AKTO	**Aktyubinsk**	**69.53**	**317**	LR	LR	18 43 07.8	
	comp=Z,44nm,18.3s,baz=174,slow=38						
WRGLY	**Wrigley**	**70.54**	**29**	P	**P**	**18 09 59.5**	**+0.9**
	baz=284						
TOAD	**Toad River Com**	**70.73**	**33**	P	**P**	**18 10 00.7**	**+0.9**
	baz=284						
KIRV	**Kirov**	**72.39**	**327**	LR	LR	18 44 11.6	
	comp=Z,46nm,19.2s,baz=64,slow=38						
KIRV	**Kirov**	**72.39**	**327**	*c* *e*P	**P**	**18 10 11.2**	**+1.5**
SPITS	**Spitsbergen Ar**	**74.11**	**350**	P	**P**	**18 10 20.6**	**+1.0**
	comp=Z,2.5nm,0.8s,baz=52,slow=9.6,SNR=4.3						
	comp=Z,2.5nm,0.8s						
YKA	**Yellowknife Ar**	**74.63**	**28**	P	**P**	**18 10 23.1**	**+0.2**
	comp=Z,3.8nm,0.8s,baz=299,slow=5.9,SNR=9.0						
YKA				LR	LR	18 41 52.7	
	comp=Z,36nm,21.2s,baz=294,slow=35						
	comp=Z,3.8nm,0.8s						
YKAW1	**Yellowknife Wh**	**74.69**	**28**	IAmb	IAmb	18 10 24.4	
	comp=Z,9.5nm,1.1s						
BELG	**Belogornoye**	**75.25**	**321**	LR	LR	18 45 08.2	
	comp=Z,50nm,20.1s,baz=71,slow=37						
KLMR	**Klimovskoe**	**76.33**	**331**	*e*P	**P**	**18 10 30.0**	**-2.6**
KLMR				e*PP	**pP**	**18 10 37.5**	**-3.1**
KLMR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
B08A	**Colville Reser**	**77.22**	**43**	IAmb	IAmb	18 10 39.4	
	comp=Z,5.5nm,0.8s						
ARCES	**ARCESS Array B**	**77.33**	**341**	P	**P**	**18 10 38.2**	**+0.1**
ARCES				IAmb	IAmb	18 10 40.0	
	comp=Z,10nm,0.8s						
ARCES	**ARCESS Array B**	**77.33**	**341**	P	**P**	**18 10 39.2**	**+1.1**
	comp=Z,8.6nm,0.8s,baz=59,slow=7.2,SNR=20						
ARCES				LR	LR	18 49 39.4	
	comp=Z,43nm,19.6s,baz=72,slow=40						
	comp=Z,8.6nm,0.8s						
J05D	**Fort Rock, OR**	**77.78**	**48**		**P**	**18 10 41.7**	**+0.4**
J05D				IAmb	IAmb	18 10 43.4	
	comp=Z,7.8nm,0.8s						
MSF	**Maaselka**	**78.17**	**338**	P	**P**	**18 10 43.7**	**+0.8**
MSF				pmax	pmax		
	comp=Z,24nm,1.0s						
SGF	**Sodankyl**	**78.19**	**339**	P	**P**	**18 10 43.8**	**+0.9**
SGF				pmax	pmax		
	comp=Z,17nm,0.8s						
NEW	**Newport**	**78.63**	**42**	LR	LR	18 40 01.7	
	comp=Z,22nm,18.8s,baz=187,slow=32						
AKT	**Akhty**	**79.01**	**310**	*e*P	**P**	**18 10 48.0**	**-0.1**
AKT				*e*		18 10 57.1	
AKT				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BEKR	**Beckworth**	**79.63**	**51**	IAmb	IAmb	18 10 52.9	
	comp=Z,7.9nm,0.8s						
OUL	**Oulu**	**79.72**	**338**	P	**P**	**18 10 52.3**	**+1.0**
OBN	**Obninsk**	**80.22**	**326**	*d* *e*P	**P**	**18 10 54.5**	**+0.3**
OBN				*i*		18 11 02.7	
OBN				*e*		18 13 57.5	
OBN				*i* S	**S**	**18 20 48.7**	**-8.4**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CMB	**Columbia Colle**	**80.30**	**53**	P	**P**	**18 10 55.2**	**+0.1**
VSR	**Storozhevoye**	**80.55**	**322**	*e*P	**P**	**18 10 54.8**	**-1.3**
VSR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KBZ	**Khabaz**	**81.42**	**314**	P	**P**	**18 11 01.8**	**+0.9**
	comp=Z,5.3nm,0.7s,baz=90,slow=5.4,SNR=13						
KBZ				LR	LR	18 49 57.4	
	comp=Z,24nm,19.2s,baz=94,slow=38						
	comp=Z,5.3nm,0.7s						
KBZ	**Khabaz**	**81.42**	**314**	*c* *e*P	**P**	**18 11 02.0**	**+1.1**
KIV	**Kislovodsk**	**81.47**	**314**	*i* P	**P**	**18 11 02.3**	**+1.0**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NVAR	**Mina Array Bea**	**81.66**	**52**	P	**P**	**18 11 02.7**	**+0.1**
NVAR	**Mina Array Bea**	**81.66**	**52**	P	**P**	**18 11 03.5**	**+0.9**
	comp=Z,3.4nm,0.8s,baz=267,slow=5.6,SNR=17						
	comp=Z,3.4nm,0.8s						
FINES	**FINESS Array B**	**81.72**	**335**	P	**P**	**18 11 02.3**	**+0.2**
	comp=Z,2.3nm,0.5s,baz=73,slow=4.6,SNR=38						
FINES				LR	LR	18 50 29.6	
	comp=Z,29nm,18.7s,baz=356,slow=38						
	comp=Z,2.3nm,0.5s						
FINES	**FINESS Array B**	**81.72**	**335**	*i* P	**P**	**18 11 02.2**	**+0.1**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
DSP	**Deep Springs**	**82.32**	**53**	IAmb	IAmb	18 11 08.4	
	comp=Z,12nm,1.7s						
R11B	**Troy Canyon, C**	**83.64**	**51**	IAmb	IAmb	18 11 14.4	
	comp=Z,11nm,1.8s						
QSM	**Queen of Sheba**	**83.70**	**54**	IAmb	IAmb	18 11 14.4	
	comp=Z,5.5nm,0.9s						
GWY	**Greenwater Val**	**83.76**	**53**	IAmb	IAmb	18 11 14.7	
	comp=Z,5.9nm,0.8s						
FFC	**Flin Flon**	**84.04**	**32**		**P**	**18 11 14.7**	**+0.4**
MNK	**Minsk**	**84.86**	**328**	*i* P	**P**	**18 11 17.7**	**-0.8**
MNK				*i* P	**P**	**18 11 17.7**	**-0.8**
	comp=N,5.0nm,0.8s						
MNK				*i* P	**P**	**18 11 17.7**	**-0.8**
	comp=Z,4.0nm,0.7s,baz=56						
MNK				*i* PP	**PP**	**18 14 34.0**	**-0.5**
MNK				*i* PPP	PPP	18 16 26.2	
MNK				*i* S	**SKSac**	**18 21 40.0**	**-0.5**
MNK				*i* SS	**SS**	**18 27 18.9**	**+2.6**
MNK				*i* SSS	SSS	18 30 48.9	
MNK				*i* LQ	LQ	18 43 26.8	
MNK				*i* LR	LR	18 50 55.9	
MNK	**Minsk**	**84.86**	**328**	*i* P	**P**	**18 11 17.6**	**-0.8**
MNK				*i*		18 14 33.9	
MNK				*i* PPP	PPP	18 16 26.2	
MNK				*i* S	**SKSac**	**18 21 40.0**	**-0.5**
MNK				*i* SS	**SS**	**18 27 18.8**	**+2.6**
MNK				*i* SSS	SSS	18 30 48.8	
MNK				pmax	pmax		
	comp=E,8.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,5.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
PDAR	**Pinedale Array**	**85.78**	**45**	P	**P**	**18 11 23.8**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=248,slow=1.6,SNR=6.7						
PDAR				LR	LR	18 45 00.5	
	comp=Z,30nm,19.7s,baz=278,slow=32						
	comp=Z,0.8nm,0.7s						
KNB	**Kanab**	**86.20**	**51**	IAmb	IAmb	18 11 27.6	
	comp=Z,9.2nm,0.8s						
AK03	**Malin Array Si**	**86.27**	**325**	P	**P**	**18 11 24.1**	**-1.4**
AKASG	**Malin Array Be**	**86.28**	**325**	P	**P**	**18 11 24.6**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=55,slow=5.1,SNR=12						
	comp=Z,0.8nm,0.4s						
KIEV	**Kiev**	**86.29**	**325**	P	**P**	**18 11 24.8**	**-0.8**
AK04	**Malin Array Si**	**86.30**	**325**	P	**P**	**18 11 24.6**	**-1.1**
SRU	**San Rafael Swe**	**86.86**	**49**	IAmb	IAmb	18 11 29.9	
	comp=Z,5.8nm,0.7s						
HFS	**Hagfors**	**87.21**	**337**	P	**P**	**18 11 29.3**	**-0.7**
	comp=Z,2.5nm,0.7s,baz=54,slow=7.3,SNR=7.5						
HFS				LR	LR	18 54 11.9	
	comp=Z,23nm,18.6s,baz=40,slow=38						
	comp=Z,2.5nm,0.7s						
NB2	**NORSAR Subarra**	**87.40**	**339**	P	**P**	**18 11 30.0**	**-0.9**
	comp=Z,7.1nm,0.9s,baz=44,slow=4.6						
NB2	**NORSAR Subarra**	**87.40**	**339**	P	**P**	**18 11 30.0**	**-0.9**
NB2	**NORSAR Subarra**	**87.40**	**339**	P	**P**	**18 11 30.0**	**-0.9**
	baz=44,slow=4.6						
NOA	**NORSAR Array B**	**87.40**	**339**	P	**P**	**18 11 29.6**	**-1.3**
	comp=Z,5.3nm,1.0s,baz=59,slow=4.2,SNR=18						
NOA				LR	LR	18 54 43.7	
	comp=Z,37nm,20.0s,baz=35,slow=38						
	comp=Z,5.3nm,1.0s						
Y14A	**Wickenburg**	**87.44**	**54**	IAmb	IAmb	18 11 33.2	
	comp=Z,5.7nm,1.0s						
SFJD	**Kangerlussuaq**	**89.11**	**6**	LR	LR	18 51 50.9	
	comp=Z,27nm,20.5s,baz=334,slow=36						
BRTR	**Keskin Array B**	**89.41**	**314**	P	**P**	**18 11 40.2**	**-0.8**
	comp=Z,1.2nm,0.7s,baz=98,slow=4.0,SNR=7.2						
	comp=Z,1.2nm,0.7s						
FRB	**Frobisher Bay**	**89.41**	**14**	LR	LR	18 53 11.2	
	comp=Z,27nm,21.8s,baz=18,slow=36						
AGMN	**Agassiz Nation**	**90.88**	**35**	IAmb	IAmb	18 11 48.8	
	comp=Z,4.4nm,0.8s						
EPLO	**Experimental L**	**91.12**	**33**	IAmb	IAmb	18 11 49.5	
	comp=Z,5.0nm,1.0s						
ANMO	**Albuquerque**	**91.72**	**51**	*c* *e*P	**P**	**18 11 52.8**	**+0.9**
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.8s						
T25A	**Trinidad**	**92.02**	**48**	IAmb	IAmb	18 11 54.9	
	comp=Z,3.5nm,0.9s						
VRAC	**Vranov**	**93.55**	**328**	LR	LR	18 56 42.8	
	comp=Z,42nm,19.5s,baz=51,slow=37						
GERES	**GERESS Array B**	**95.24**	**329**	LR	LR	19 00 02.0	
	comp=Z,30nm,18.2s,baz=302,slow=39						
TXAR	**Lajitas Array**	**96.62**	**54**	P	**P**	**18 12 15.1**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=266,slow=3.3,SNR=4.1						
	comp=Z,0.4nm,0.8s						
SCHQ	**Schefferville**	**97.69**	**17**	LR	LR	18 58 28.1	
	comp=Z,23nm,20.7s,baz=297,slow=37						
DAVOX	**Davos/Dischmat**	**98.51**	**330**	LR	LR	19 02 50.5	
	comp=Z,25nm,18.8s,baz=78,slow=39						
PLCA	**Paso Flores**	**146.60**	**129**	PKPbc	**PKPbc**	**18 18 26.1**	**+0.5**
	comp=Z,2.7nm,0.6s,baz=235,slow=3.2,SNR=15						
LPAZ	**La Paz**	**149.30**	**82**	PKPbc	**PKPbc**	**18 18 34.1**	**0.0**
	comp=Z,0.8nm,0.7s,baz=53,slow=0.4,SNR=4.2						

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*IDC **20** 18:10:15.5±5.3, 62.°14S×164.°89E, h0^{km}, mb3.8/3, mbtmp3.8/4, ML3.5/1, MS3.7/15, Error ellipse: s-maj=238.4km s-min=26.0km az=72.0*

ISC 20 18:10:16.8±4.5**, 62.°1S**±0.°4×**16°5E**±°**, h10^{km}, n28,** σ**0.^{s}48**/7**, mb3.8**/3**, MS3.8**/13**, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**15.49**	**183**	Pn	**Pn**	**18 13 54.6**	**-0.3**
	0.2nm,0.3s,baz=0.6,slow=13,SNR=7.9						
VNDA				LR	LR	18 18 57.2	
	comp=Z,352nm,18.5s,baz=8.0,slow=34						
	2.1nm,0.9s						
RPZ	**Rata Peaks**	**18.81**	**14**	LR	LR	18 21 09.3	
	comp=Z,278nm,20.7s,baz=175,slow=35						
QSPA	**South Pole Qui**	**27.95**	**180**	LR	LR	18 26 19.5	
	comp=Z,131nm,18.9s,baz=18,slow=34						
STKA	**Stephens Creek**	**33.81**	**323**	LR	LR	18 28 23.8	
	comp=Z,86nm,18.6s,baz=201,slow=32						
H01W1	**Cape Leeuwin H**	**41.68**	**287**	T	T	19 02 01.2	
	baz=146,slow=76,SNR=82						
H01W2	**Cape Leeuwin H**	**41.69**	**287**	T	T	19 02 01.5	
	baz=146,slow=76,SNR=98						
H01W3	**Cape Leeuwin H**	**41.70**	**287**	T	T	19 02 02.5	
	baz=146,slow=76,SNR=113						
ASAR	**Alice Springs**	**43.83**	**317**	P	**P**	**18 18 23.4**	**+0.5**
	1.0nm,0.9s,baz=166,slow=7.5,SNR=8.9						
	1.0nm,0.9s						
MSVF	**Nonsavu**	**45.31**	**18**	LR	LR	18 36 17.9	
	comp=Z,130nm,18.0s,baz=174,slow=34						
SNAA	**Sanae**	**46.20**	**185**	P	**P**	**18 18 41.7**	**+0.5**
	2.3nm,1.1s,baz=188,slow=7.1,SNR=4.2						
SNAA				LR	LR	18 36 46.2	
	comp=Z,96nm,19.9s,baz=116,slow=34						
	2.3nm,1.1s						
WRA	**Warramunga Arr**	**47.18**	**319**	P	**P**	**18 18 49.1**	**-0.3**
	0.9nm,1.0s,baz=162,slow=8.1,SNR=3.8						
	0.9nm,1.0s						
HNR	**Honiara**	**52.74**	**354**	LR	LR	18 37 24.4	
	comp=Z,67nm,20.2s,baz=221,slow=31						
PMG	**Port Moresby**	**54.22**	**338**	LR	LR	18 39 37.7	
	comp=Z,88nm,18.8s,baz=188,slow=32						
H03S2	**Juan Fernandez**	**71.52**	**128**	T	T	19 40 58.2	
	baz=204,slow=74,SNR=18						
H03S1	**Juan Fernandez**	**71.52**	**128**	T	T	19 40 59.5	
	baz=204,slow=74,SNR=16						
H03S3	**Juan Fernandez**	**71.53**	**128**	T	T	19 40 59.5	
	baz=204,slow=74,SNR=13						
GUMO	**Guam**	**77.12**	**340**	LR	LR	18 52 57.0	
	comp=Z,12nm,18.5s,baz=154,slow=33						
BOSA	**Boshof**	**83.93**	**215**	LR	LR	18 56 38.9	
	comp=Z,71nm,19.7s,baz=184,slow=33						
H08S2	**Diego Garcia H**	**84.44**	**264**	T	T	19 55 39.1	
	baz=151,slow=76,SNR=32						
H08S1	**Diego Carcia H**	**84.45**	**264**	T	T	19 55 39.8	
	baz=151,slow=76,SNR=22						
H08S3	**Diego Garcia H**	**84.46**	**264**	T	T	19 55 36.7	
	baz=151,slow=76,SNR=36						
LBTB	**Lobatse**	**87.25**	**216**	LR	LR	18 58 26.2	
	comp=Z,91nm,19.7s,baz=158,slow=33						
TSUM	**Tsumeb**	**94.89**	**211**	LR	LR	19 03 17.6	
	comp=Z,70nm,21.8s,baz=156,slow=34						
CMAR	**Chiang Mai Arr**	**95.53**	**299**	LR	LR	19 03 01.7	
	comp=Z,11nm,21.2s,baz=205,slow=33						
LSZ	**Lusaka**	**95.69**	**222**	LR	LR	19 06 02.8	
	comp=Z,49nm,18.4s,baz=142,slow=35						
JNU	**Nakatsue**	**98.83**	**332**	LR	LR	19 02 04.7	
	comp=Z,22nm,21.1s,baz=206,slow=32						
AKASG	**Malin Array Be**	**153.53**	**265**	PKPbc	**PKiKP**	**18 30 14.1**	**-0.2**
	0.2nm,0.4s,baz=87,slow=1.3,SNR=1.7						
AKASG				PKPab	**PKPab**	**18 30 26.4**	**-0.3**
	0.1nm,0.3s,baz=113,slow=2.9,SNR=4.4						
ESDC	**Sonseca Array**	**156.51**	**202**	PKPab	**PKPab**	**18 30 39.6**	**-0.2**
	0.4nm,0.7s,baz=153,slow=6.6,SNR=4.2						

IDC 20 18:13:19.7±9.3**, 30.°59S**×**177.°93W, h0**^{km}**, mb3.2**/2**, mbtmp3.2**/2**, Error ellipse: s-maj=400.2km s-min=60.3km az=155.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.16**	**267**	P	P	18 21 22.3	-0.1
	0.3nm,0.6s,baz=105,slow=7.2,SNR=6.7						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**44.17**	**272**	P	P	18 21 30.2	-0.2
	0.1nm,0.3s,baz=111,slow=8.0,SNR=1.4						
	0.1nm,0.3s						
FINES	**FINESS Array B**	**145.35**	**340**	PKPbc	PKPbc	18 32 57.8	-0.8
	0.9nm,0.8s,baz=57,slow=3.0,SNR=5.2						

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*JMA **20** 18:15:49.5±0.1, 42.°9N±0.°6×141.°6E±0.°7, h152^{km}±1^{km}, MV2.9/37, ISHIKARI DEPRESSION*

*IDC **20** 18:15:51.8±4.2, 43.°30N×141.°55E, h158^{km}±20^{km}, mb3.4/6, mbtmp3.8/7, MS3.3/1, Error ellipse: s-maj=111.4km s-min=36.5km az=160.0*

*SKHL **20** 18:15:51.0±0.5, 42.°30N×142.°40E, h172^{km}±4^{km}, mb4.7/3, msha5.0/3*

ISC 20 18:15:49.0±0.9**, 42.°86N**±0.°06×**141.°63E**±0.°05**, h156**^{km}±6^{km}**, n38,** σ**0.^{s}85**/47**, mb3.8**/6**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JEW	**Eniwo**	**0.13**	**261**	P	**Pn**	**18 16 10.1**	**+0.2**
JEW				*e*S	**Sn**	**18 16 25.3**	**-0.4**
JIAM	**Iburiatsuma**	**0.32**	**137**	P	**Pn**	**18 16 10.9**	**+0.6**
JIAM				*e*S	**Sn**	**18 16 27.8**	**+1.3**
JISS	**Ishikarishitsu**	**0.44**	**340**	P	**Pn**	**18 16 10.8**	**+0.1**
JISS				*e*S	**Sn**	**18 16 26.8**	**-0.5**
JBT2	**Biratori 2**	**0.55**	**98**	*i* P	**Pn**	**18 16 11.7**	**+0.4**
JBT2				S	**Sn**	**18 16 28.7**	**+0.5**
JNB	**Noboribetsu**	**0.58**	**228**	*i* P	**Pn**	**18 16 11.6**	**+0.2**
JFR	**Furan**	**0.77**	**67**	P	**Pn**	**18 16 12.6**	**0.0**
JFR				*e*S	**Sn**	**18 16 29.9**	**-0.8**
JAB	**Ashibetsu**	**0.78**	**34**	P	**Pn**	**18 16 13.0**	**+0.4**
JAB				S	**Sn**	**18 16 30.5**	**-0.2**
JHR	**Hokuryu**	**0.89**	**5**	P	**Pn**	**18 16 13.7**	**+0.4**
JHR				S	**Sn**	**18 16 32.3**	**+0.1**
JNBK	**Urakawa-nobuka**	**1.01**	**124**	*i* P	**Pn**	**18 16 15.7**	**+1.2**
JCH	**Churui**	**1.30**	**100**	*i* P	**Pn**	**18 16 17.1**	**+0.1**
JCH				S	**Sn**	**18 16 37.8**	**-0.6**
JKK2	**Kamakawa 2**	**1.30**	**39**	*i* P	**Pn**	**18 16 17.0**	**0.0**
JKK2				S	**Sn**	**18 16 37.7**	**-0.8**
ASAJ	**Asahikawa**	**1.44**	**29**	P	**Pn**	**18 16 18.1**	**-0.2**
	35nm,0.5s,baz=225,slow=7.2,SNR=45						
JOT	**Ohata**	**1.54**	**196**	*i* P	**Pn**	**18 16 20.0**	**+0.6**
JSS	**Shosan**	**1.55**	**6**	P	**Pn**	**18 16 19.6**	**+0.2**
JAR	**Ashorobuto**	**1.63**	**74**	*i* P	**Pn**	**18 16 20.9**	**+0.6**
JOSM	**Okushiri--Mats**	**1.77**	**245**	P	**Pn**	**18 16 21.7**	**-0.2**
JOMM	**Oshimamatsumae**	**1.80**	**223**	P	**Pn**	**18 16 22.7**	**+0.6**
JTKR	**Abashiri--Toko**	**2.00**	**55**	*i* P	**Pn**	**18 16 25.2**	**+0.8**
JTKR				S	**Sn**	**18 16 53.0**	**+1.4**
JAK	**Akkeshi**	**2.26**	**86**	P	**Pn**	**18 16 27.4**	**0.0**
JAK				S	**Sn**	**18 16 56.2**	**-0.8**
AKK	**Akkeshi**	**2.37**	**85**	*e*P	**Pn**	**18 16 28.7**	**0.0**
AKK				*e*S	**Sn**	**18 16 57.7**	**-1.7**
NMR	**Nemuro--Hokkai**	**3.05**	**79**	*e*P	**Pn**	**18 16 36.7**	**-0.4**
NMR				*e*S	**Sn**	**18 17 12.3**	**-2.1**
YUK	**Yuzh-Kuril'sk**	**3.30**	**68**	*e*P	**Pn**	**18 16 41.5**	**+1.2**
YUK				AMB	AMB	18 16 42.0	
	80nm,0.3s						
YUK				*e*S	**Sn**	**18 17 21.6**	**+1.5**
YUK				A	A	18 17 25.7	
	110nm,0.5s						
YUK				A	A	18 17 25.7	
	80nm,0.5s						
SHO	**Shikotan**	**3.93**	**73**	*e*P	**Pn**	**18 16 48.9**	**+0.5**
SHO				AMB	AMB	18 16 51.0	
	30nm,0.3s						
SHO				*e*S	**Sn**	**18 17 32.6**	**-1.9**
SHO				A	A	18 17 37.0	
	60nm,0.3s						
SHO				A	A	18 17 37.0	
	50nm,0.3s						
KUR	**Kuril'sk**	**5.08**	**60**	*e*P	**Pn**	**18 17 05.4**	**+1.9**
KUR				AMB	AMB	18 17 07.7	
	30nm,0.7s						
KUR				*e*S	**Sn**	**18 18 02.9**	**+1.1**
KUR				A	A	18 18 09.9	
	30nm,0.6s						
KUR				A	A	18 18 09.9	
	20nm,0.6s						
PETK	**Petropavlovsk-**	**14.83**	**41**	P	**Pn**	**18 19 10.4**	**-0.4**
	2.0nm,0.8s,baz=230,slow=7.2,SNR=4.4						
H11N2	**WAKE ISLAND Hy**	**31.37**	**129**	T	T	18 53 57.4	
	baz=318,slow=75						
H11N1	**WAKE ISLAND Hy**	**31.38**	**129**	T	T	18 53 59.4	
	baz=318						
H11N3	**WAKE ISLAND Hy**	**31.39**	**129**	T	T	18 53 56.7	
	baz=318,slow=75						
H11S1	**WAKE ISLAND Hy**	**32.24**	**131**	T	T	18 55 05.0	
	baz=326,slow=74						
H11S3	**WAKE ISLAND Hy**	**32.24**	**131**	T	T	18 55 03.4	
	baz=326,slow=74						
H11S2	**WAKE ISLAND Hy**	**32.26**	**131**	T	T	18 55 06.2	
	baz=326						
ZALV	**Zalesovo Beam**	**38.31**	**307**	P	**P**	**18 22 54.5**	**+0.3**
	0.7nm,0.3s,baz=79,slow=7.8,SNR=4.1						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**41.40**	**297**	P	**P**	**18 23 19.7**	**-0.1**
	0.2nm,0.5s,baz=90,slow=8.1,SNR=2.9						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**42.74**	**303**	P	**P**	**18 23 30.6**	**0.0**
	1.0nm,0.4s,baz=79,slow=9.4,SNR=18						
	1.0nm,0.4s						
BVAR	**Borovoye Array**	**46.92**	**308**	P	**P**	**18 24 03.9**	**+0.3**
	0.8nm,0.4s,baz=67,slow=9.0,SNR=8.0						
	0.8nm,0.4s						
KAPI	**Kappang**	**51.62**	**208**	LR	LR	18 46 04.6	
	comp=Z,31nm,21.8s,baz=334,slow=35						
FINES	**FINESS Array B**	**63.77**	**331**	P	**P**	**18 26 03.4**	**-0.4**
	0.8nm,0.6s,baz=53,slow=8.3,SNR=8.9						
	0.8nm,0.6s						
HFS	**Hagfors**	**68.87**	**335**	P	**P**	**18 26 36.2**	**-0.1**
	1.4nm,0.9s,baz=58,slow=5.4,SNR=1.9						
	1.4nm,0.9s						

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*KRNET **20** 18:51:40.6±0.1, 41.°48N×71.°79E, h20^{km}, mb3.2*

*NNC **20** 18:51:41.8±1.0, 41.°51N×71.°79E, h0^{km}, mb3.4, mpv3.5, Error ellipse: s-maj=9.1km s-min=3.1km az=4.0*

*SOME **20** 18:51:41.0, 41.°55N×71.°72E, h5^{km}*

*ISU **20** 18:51:41, 41.°48N×71.°70E, h19^{km}*

ISC 20 18:51:41.1±1.1**, 41.°47N**±0.°02×**71.°78E**±0.°02**, h5**^{km}±9^{km}**, n63,** σ**1.^{s}41**/108**, 43C-13D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARK	**Arkit**	**0.36**	**22**	⇑*i*P	**Pg**	**18 51 47.8**	**-0.3**
ARK				⇑*i*S	**Sg**	**18 51 52.5**	**-0.3**
KSNS	**Kasansay**	**0.37**	**213**	P	Pg	18 51 45.2	-3.0
KSNS				S	**Sg**	**18 51 51.0**	**-2.1**
NAM	**Namangan**	**0.48**	**191**	P	**Pg**	**18 51 51.2**	**+0.7**
NAM				S	**Sg**	**18 51 58.9**	**+2.1**
TRKS	**Terek-Say**	**0.49**	**278**	⇑*i*P	**Pg**	**18 51 49.6**	**-0.9**
TRKS				⇑*i*S	**Sg**	**18 51 56.2**	**-0.7**
ANR	**Andizhan**	**0.83**	**148**	S	**Sn**	**18 52 13.0**	**+0.7**
ARSB	**Arslanbob**	**0.91**	**99**	⇑*i*P	**Pb**	**18 51 57.5**	**-2.1**
ARSB				⇑*i*S	**Sb**	**18 52 10.0**	**-2.1**
TSTA	**Tashata**	**1.03**	**149**	P	**Pb**	**18 52 00.9**	**-0.6**
TSTA				S	**Sg**	**18 52 16.1**	**+1.8**
FRG	**Fergana**	**1.09**	**180**	P	**Pb**	**18 52 02.6**	**0.0**
FRG				S	**Sn**	**18 52 18.2**	**-0.5**
PSK	**Pskem**	**1.15**	**294**	P	**Pn**	**18 52 00.2**	**-3.9**
PSK				S	**Sb**	**18 52 15.8**	**-3.2**
MNAS	**Manas**	**1.15**	**28**	⇑*i*P	**Pn**	**18 52 02.0**	**-2.1**
MNAS				⇑*i*S	**Sb**	**18 52 17.3**	**-1.7**
MINT	**Mingtut**	**1.17**	**212**	P	**Pn**	**18 52 04.5**	**+0.2**
MINT				S	**Sn**	**18 52 20.6**	**-0.1**
OHH	**Osh**	**1.21**	**141**	⇑*i*P	**Pn**	**18 52 03.2**	**-1.6**
OHH				⇑*i*S	**Sb**	**18 52 19.4**	**-1.2**
CHMI	**Chimion**	**1.21**	**189**	P	**Pn**	**18 52 04.7**	**-0.2**
CHMI				S	**Sn**	**18 52 21.4**	**-0.3**
CHMG	**Chimgan**	**1.33**	**274**	P	**Pn**	**18 52 05.5**	**-1.1**
CHMG				S	**Sn**	**18 52 23.1**	**-1.7**
CHRV	**Charvak**	**1.39**	**278**	P	**Pn**	**18 52 06.6**	**-0.7**
CHRV				S	**Sn**	**18 52 25.3**	**-0.7**
DZA	**Taraz**	**1.46**	**347**	P	**Pb**	**18 52 09.6**	**+0.7**
	83nm,0.1s						
DZA				S	**Sg**	**18 52 29.6**	**+1.4**
	570nm,0.3s						
IUG	**Iuzhnay**	**1.48**	**298**	P	**Pn**	**18 52 08.4**	**-0.1**
	71nm,0.1s						
IUG				S	**Sn**	**18 52 28.2**	**-0.1**
	482nm,0.2s						
AML	**Almayashu**	**1.57**	**64**	⇑*e*P	**Pn**	**18 52 09.6**	**-0.6**
AML				⇑*i*S	**Sn**	**18 52 30.4**	**-0.8**
BTK	**Batken**	**1.59**	**208**	⇑*i*P	**Pn**	**18 52 09.8**	**-0.2**
BTK				⇑*i*S	**Sb**	**18 52 31.3**	**-0.1**
SALK	**Salom-Alik**	**1.65**	**110**	⇑*i*P	**Pn**	**18 52 10.8**	**-0.1**
SALK				⇑*i*S	**Sn**	**18 52 32.7**	**+0.1**
MRKS	**Merke**	**1.67**	**40**	P	**Pn**	**18 52 11.9**	**+0.7**
	32nm,0.3s						
MRKS				S	**Sb**	**18 52 34.1**	**+0.3**
	100nm,0.2s						
MRKS	**Merke**	**1.67**	**40**	*e*P	**Pn**	**18 52 11.8**	**+0.7**
	32nm,0.3s						
MRKS				*e*S	**Sb**	**18 52 33.7**	**-0.1**
	100nm,0.2s						
TGS	**TashGRES**	**1.70**	**269**	S	**Sg**	**18 52 39.8**	**+4.0**
CHM	**Chimkent**	**1.84**	**298**	*e*P	**Pb**	**18 52 15.0**	**-0.3**
	125nm,0.2s						
CHM				*e*S	**Sb**	**18 52 38.9**	**+0.3**
	364nm,0.3s						
TAS	**Tashkent**	**1.88**	**266**	S	**Sn**	**18 52 38.3**	**+0.2**
KK31	**Karatay Array**	**1.89**	**330**	⇑Pn	**Pn**	**18 52 14.5**	**+0.4**
	4.7nm,0.2s,baz=143,slow=16,SNR=137						
KK31				⇑Sn	**Sb**	**18 52 40.6**	**+0.5**
	56nm,0.5s,baz=147,slow=32,SNR=10						
KKAR	**Karatay Array**	**1.89**	**330**	⇓*i*P	**Pn**	**18 52 14.7**	**+0.6**
KKAR				⇓*i*S	**Sb**	**18 52 39.3**	**-0.7**
EKS2	**Erkin-Say**	**1.91**	**51**	⇑*i*P	**Pn**	**18 52 14.7**	**+0.2**
EKS2				⇑*i*S	**Sb**	**18 52 39.6**	**-1.1**
ARLS	**Aral**	**1.94**	**77**	⇓*e*P	**Pn**	**18 52 14.0**	**-1.0**
ARLS				⇓*e*S	**Sn**	**18 52 40.5**	**+0.6**
SFK	**Sufi-Kurgan**	**1.95**	**137**	⇑*e*P	**Pn**	**18 52 15.5**	**+0.3**
SFK				⇑*e*S	**Sb**	**18 52 41.3**	**-0.9**
DRK	**Karamyk**	**1.98**	**180**	⇓*i*P	**Pn**	**18 52 16.2**	**+0.5**
DRK				⇓*i*S	**Sb**	**18 52 42.4**	**-0.7**
NZBK	**Nazarbek**	**2.02**	**264**	S	**Sg**	**18 52 46.2**	**+0.1**
BRLS	**Borolday**	**2.13**	**318**	Pg	**Pn**	**18 52 17.8**	**+0.4**
	15nm,0.2s						
BRLS				Lg	Lg	18 52 44.8	
	85nm,0.2s						

BRLS	Borolday	2.13	318	eP	Pn	18 52 17.8	+0.4
	15nm,0.2s						
BRLS				eS	Sn	18 52 43.6	-0.6
	85nm,0.2s						
UCH	Uchtor	2.18	69	⇑iP	Pn	18 52 18.7	+0.2
UCH				⇑iS	Sn	18 52 46.6	+0.5
AAK	Ala-Archa	2.33	59	Pn	Pb	18 52 23.1	-0.8
	0.3nm,0.4s						
AAK				Lg	Lg	18 52 55.2	
	0.3nm,0.3s						
AAK	Ala-Archa	2.33	59	⇑eP	Pn	18 52 20.7	+0.3
AAK				⇑iS	Sn	18 52 50.1	+0.6
FRU1	Bishkek	2.51	57	⇓iP	Pn	18 52 23.2	+0.5
FRU1				⇓iS	Sn	18 52 54.1	+0.4
KBK	Karagaybulak	2.64	62	⇑iP	Pn	18 52 25.1	+0.5
KBK				⇑iS	Sn	18 52 57.3	+0.2
CHMS	Chumysh	2.68	54	P	Pn	18 52 16.0	-9.0
	125nm,0.2s						
CHMS				S	Sn	18 52 40.7	-17
	364nm,0.3s						
CHMS	Chumysh	2.68	54	⇑iP	Pn	18 52 25.6	+0.5
CHMS				⇑iS	Sn	18 52 58.2	+0.2
USP	Ospenovka	2.70	47	⇑iP	Pn	18 52 25.8	+0.5
USP				⇑iS	Sn	18 52 58.5	+0.1
GAR	Garm	2.71	205	⇑iP	Pn	18 52 26.2	+0.7
GAR				⇑iS	Sn	18 52 59.5	+0.8
SGDS	Sogindy	2.89	46	Pg	Pb	18 52 33.8	+0.5
	4.7nm,0.3s						
SGDS				Lg	Lg	18 53 11.1	
	8.1nm,0.3s						
JNKS	Jany-Kuch	2.95	97	⇓iP	Pn	18 52 29.3	+0.4
JNKS				⇓iS	Sn	18 53 05.0	+0.2
NRN	Naryn	3.17	89	⇑eP	Pn	18 52 32.1	+0.1
NRN				⇑iS	Sn	18 53 09.8	-0.6
TKM2	Tokmak 2	3.18	62	⇑Pg	Pb	18 52 37.7	-0.6
	1.1nm,0.5s						
TKM2				⇓Lg	Lg	18 53 21.8	
	7.2nm,0.5s						
TKM2	Tokmak 2	3.18	62	⇑iP	Pn	18 52 32.6	+0.5
TKM2				⇑iS	Sn	18 53 10.4	-0.2
BOOM	Boomskoye usch	3.26	70	⇑iP	Pn	18 52 33.9	+0.7
BOOM				⇑iS	Sn	18 53 12.5	0.0
ULHL	Ulahol	3.42	75	⇑eP	Pn	18 52 35.9	+0.5
ULHL				⇑iS	Sn	18 53 16.2	-0.2
KST	Kastek	3.48	62	Pg	Pb	18 52 45.1	+1.7
	1.5nm,0.2s						
KST				Lg	Lg	18 53 29.6	
	18nm,0.4s						
KST	Kastek	3.48	62	eP	Pb	18 52 45.1	+1.7
	1.5nm,0.2s						
KST				eS	Sg	18 53 30.4	-2.5
	18nm,0.3s						
MTBS	Maitube	3.83	63	Pg	Pb	18 52 51.3	+2.1
	1.3nm,0.1s						
MTBS				Lg	Lg	18 53 41.0	
	11nm,0.2s						
MTBS	Maitube	3.83	63	eP	Pb	18 52 51.3	+2.1
	1.3nm,0.1s						
MTBS				eS	Sg	18 53 41.0	-3.0
	11nm,0.2s						
BTLS	Baital	3.94	24	Pg	Pb	18 52 52.2	+1.2
	2.8nm,0.3s						
BTLS				Lg	Lg	18 53 43.6	
	1.4nm,0.2s						
BTLS	Baital	3.94	24	eP	Pb	18 52 52.2	+1.2
	2.8nm,0.3s						
BTLS				eS	Sb	18 53 42.9	+4.0
	1.4nm,0.2s						
KDJ	Kajisay	4.09	79	⇓iP	Pn	18 52 45.3	+0.8
KDJ				⇓iS	Sn	18 53 32.5	-0.4
KUU	Kurty	4.14	53	Pg	Pb	18 52 56.7	+2.2
	2.1nm,0.1s						
KUU				Lg	Lg	18 53 50.3	
	13nm,0.2s						
KUU	Kurty	4.14	53	eP	Pb	18 52 56.7	+2.2
	2.1nm,0.1s						
KUU				eS	Sg	18 53 50.5	-3.6
	13nm,0.2s						
KTBS	Karatobe	4.26	57	Pg	Pb	18 52 58.7	+2.2
	0.9nm,0.2s						
KTBS				Lg	Lg	18 53 53.5	
	6.1nm,0.4s						
MDOK	Medeo	4.26	65	Pg	Pb	18 52 59.0	+2.4
	1.8nm,0.3s						
MDOK				Lg	Lg	18 53 54.4	
	4.3nm,0.6s						
KOTS	Kotyrbulak	4.33	64	Pg	Pb	18 53 01.2	+3.4
	1.3nm,0.3s						
KOTS				Lg	Lg	18 53 58.7	
	9.9nm,0.4s						
KOTS	Kotyrbulak	4.33	64	eP	Pb	18 53 01.2	+3.4
	1.3nm,0.3s						
KOTS				eS	Sg	18 53 58.7	-1.4
	9.9nm,0.4s						

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*IDC **20** 18:55:11.2±1.8, 30°.79S×177°.38W, h0^{km}, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=48.3km s-min=23.6km az=82.0*

ISC 20 18:55:14.4±1.6**, 30°.93S**±0°.08×**177°.7W**±0°.3**, h27^{km}, n6, σ2^{s}.58**/8**, mb3.5**/3**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.68	353	Pn	Pn	18 55 40.5	-1.6
	72nm,0.3s,baz=117,slow=12,SNR=7.8						
RAO				Sn	Sb	18 56 04.7	-0.8
	63nm,0.3s,baz=120,slow=23,SNR=2.2						
URZ	Urewera	8.48	209	Pn	Pn	18 57 12.2	-3.2
	0.2nm,0.3s,baz=292,slow=19,SNR=2.1						
URZ				Sn	Sn	18 58 49.5	-0.7
	0.6nm,0.3s,baz=114,slow=17,SNR=1.4						
ASAR	Alice Springs	43.36	267	P	P	19 03 17.4	+2.8
	0.1nm,0.4s,baz=104,slow=7.1,SNR=8.7						
	0.1nm,0.4s						
WRA	Warramunga Arr	44.39	273	P	P	19 03 25.8	+2.8
	0.3nm,0.4s,baz=111,slow=7.9,SNR=4.5						
	0.3nm,0.4s						
QSPA	South Pole Qui	59.18	180	P	P	19 05 14.7	+1.9
	1.0nm,1.0s,baz=182,slow=18,SNR=1.8						
	1.0nm,1.0s						
FINES	FINESS Array B	145.74	340	PKPbc	PKPab	19 14 50.5	0.0
	0.4nm,0.4s,baz=57,slow=1.8,SNR=9.3						

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*MEX **20** 19:02:11.4±0.9, 14°.68N×92°.61W, h80^{km}±14^{km}, MD3.8*
*GCG **20** 19:02:11.8±0.4, 14°.73N×92°.46W, h77^{km}±6^{km}, MD3.7, ML3.4*

ISC 20 19:02:06.9±2.5**, 14°.4N**±0°.1×**92°.7W**±0°.1**, h69^{km}**±21^{km}**, n11, σ2^{s}.12**/21**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.69	40	eP	Pn	19 02 22.6	+1.0
THIG				eS	Sn	19 02 32.1	-0.4
SMCA	Catarina	0.79	53	i P	Pn	19 02 24.3	+1.5
SMCA				i S	Sn	19 02 34.5	-0.1
SMCA				IAML		19 02 35.1	
	comp=N,1µm,0.2s						
PATR	El Naranjo	0.88	33	i P	Pn	19 02 24.4	+0.3
PATR				i S	Sn	19 02 34.3	-2.5
PAVE	Pavencul	0.97	33	eP	Pn	19 02 25.6	+0.4
PAVE				eS	Sn	19 02 36.6	-2.2
RTAL	Retalhuleu	1.01	81	eP	Pn	19 02 28.9	+3.5
RTAL				eS	Sn	19 02 40.6	+1.3
STG8	El Palmar, Qui	1.33	87	i P	Pn	19 02 29.7	-0.2
STG8				i S	Sn	19 02 43.4	-3.7
STG0	El Palmar, Qui	1.34	88	i P	Pn	19 02 29.8	-0.1
STG0				i S	Sn	19 02 43.8	-3.4
STG0				IAML		19 02 46.3	
	comp=E,2µm,0.1s						
PCIG		1.41	340	eP	Pn	19 02 31.5	+0.9
PCIG				eS	Sn	19 02 46.6	-1.8
HUEH	Huehuetenango	1.51	51	eS	Sn	19 02 52.8	+1.6
CCIG	Comitan	1.98	17	eP	Pn	19 02 40.0	+1.6
CCIG				eS	Sn	19 03 01.8	-0.6
TGIG		2.42	351	eP	Pn	19 02 46.5	+2.2
TGIG				eS	Sn	19 03 09.9	-3.0

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*IDC **20** 19:04:29.3±0.9, 30°.64S×177°.66W, h0^{km}, mb4.2/6, mbtmp4.1/7, ML3.4/1, MS3.6/13, Error ellipse: s-maj=26.3km s-min=19.6km az=99.0*
*NEIC **20** 19:04:30.5±0.5, 30°.70S±0°.05×177°.5W±0°.2, h10^{km}±2^{km}, mb4.6/10, Error ellipse: s-maj=29.2km s-min=8.8km az=92.0*

ISC 20 19:04:30.0±0.7**, 30°.80S**±0°.05×**177°.7W**±0°.1**, h10^{km}, n60, σ1^{s}.56**/48**, mb4.4**/12**, MS3.5**/11**, 2C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	1.55	352	P	Pn	19 04 57.2	-0.5
GLKZ				S	Sg	19 05 18.8	-1.1
RAO	Raoul Island	1.56	352		Pn	19 04 57.2	-0.6
RAO	Raoul Island	1.56	352	Pn	Pn	19 04 56.3	-1.5
	165nm,0.3s,baz=83,slow=7.6,SNR=8.6						
RAO				Sn	Sg	19 05 17.7	-2.5
	390nm,0.3s,baz=81,slow=22,SNR=9.5						
RIZ	Raoul Island	1.57	352	P	Pb	19 04 57.9	-1.2
WMGZ	Waiomatatini S	7.71	204	P	Pn	19 06 20.4	-1.9
PKGZ	Pakihiroa	7.87	205	P	Pn	19 06 21.6	-2.9
HAZ	Te Kaha	7.89	207	P	Pn	19 06 22.4	-2.4
HAZ				S	Sn	19 07 54.1	+0.1
PUZ	Puketiti	7.99	204	P	Pn	19 06 24.0	-2.2
PUZ				S	Sn	19 07 54.4	-2.3
RUGZ	Raukumara Rang	8.11	207	P	Pn	19 06 27.3	-0.6
TWGZ	Tauwhareparae	8.18	205	P	Pn	19 06 26.8	-2.1
MWZ	Matawai	8.49	206	P	Pn	19 06 30.2	-2.9
MWZ				S	Sn	19 08 07.4	-1.6
URZ	Urewera	8.59	209	Pn	Pn	19 06 30.5	-3.9
	0.4nm,0.3s,baz=94,slow=19,SNR=2.1						
URZ				Sn	Sn	19 08 09.0	-2.4
	1.5nm,0.3s,baz=317,slow=23,SNR=8.1						
URZ	Urewera	8.59	209	P	Pn	19 06 31.0	-3.4
URZ				S	Sn	19 08 09.3	-2.1
RTZ	Ruatahuna	8.95	208	Pn	Pn	19 06 37.4	-2.0
KNZ	Kokohu	9.04	204	P	Pn	19 06 36.9	-3.7
KNZ				S	Sn	19 08 18.7	-3.8
BKZ	Black Stump Fm	9.62	208	Pn	Pn	19 06 46.5	-2.1
BFZ	Birch Farm	11.02	205	P	Pn	19 07 16.0	+8.3
BFZ				S	Sn	19 09 02.3	-8.7
MRZ	Mangatainoka R	11.26	207	S	Sn	19 09 07.7	-9.1
CTZ	Chatham Island	12.94	177	Pn	Pn	19 07 29.3	-4.5
THZ	Tophouse	13.31	212	P	Pn	19 07 40.1	+1.1
KHZ	Kahutara	13.56	209	P	Pn	19 07 37.7	-4.6
MSVF	Nonsavu	13.58	342	LR	LR	19 12 09.0	
	comp=Z,261nm,18.2s,baz=181,slow=34						
GVZ	Greta Valley S	14.22	209	P	Pn	19 07 46.8	-4.7
DZM	Mont Dzumac	16.66	298	Pn	Pn	19 08 25.2	+1.4
	0.2nm,0.3s,baz=147,slow=12,SNR=3.0						
	2.4nm,0.9s						
RAR	Rarotonga	18.69	64	LR	LR	19 15 25.1	
	comp=Z,100nm,18.3s,baz=192,slow=35						
ARMA	Armidale	26.39	263	P	P	19 10 07.3	+0.5
ARMA				IAmb	IAmb	19 10 15.9	
	comp=Z,23nm,1.4s						
EIDS	Eidsvold	28.04	273	P	P	19 10 22.1	+0.5
EIDS				IAmb	IAmb	19 10 55.5	
	comp=Z,18nm,1.4s						
PPT	Papeete	28.72	69	LR	LR	19 21 43.1	
	comp=Z,67nm,18.2s,baz=221,slow=36						
HNR	Honiara	29.78	311	LR	LR	19 20 12.8	
	comp=Z,69nm,19.6s,baz=160,slow=32						
CTAO	Charters Tower	34.14	280	P	P	19 11 16.0	+0.6
CTAO				IAmb	IAmb	19 11 33.6	
	comp=Z,10nm,1.1s						
STKA	Stephens Creek	34.67	257	P	P	19 11 21.9	+2.1
STKA	Stephens Creek	34.67	257	P	P	19 11 21.6	+1.8
	comp=Z,2.5nm,0.6s,baz=113,slow=12,SNR=6.8						
STKA				LR	LR	19 24 53.5	
	comp=Z,129nm,18.3s,baz=184,slow=35						
	comp=Z,2.5nm,0.6s						
BBOO	Buckleboo	39.13	255	P	P	19 11 58.9	+1.1
AS31	Alice Springs	43.37	267	P	P	19 12 33.4	+0.6
ASAR	Alice Springs	43.37	267	P	P	19 12 33.1	+0.3
ASAR	Alice Springs	43.37	267	P	P	19 12 33.4	+0.5
	comp=Z,0.9nm,0.6s,baz=104,slow=7.2,SNR=18						
ASAR				PcP	PcP	19 14 21.5	+0.1
	comp=Z,0.4nm,0.5s,baz=120,slow=3.8,SNR=5.8						
ASAR				LR	LR	19 30 48.6	
	comp=Z,181nm,18.1s,baz=111,slow=36						
	comp=Z,0.9nm,0.6s						
WR8	Warramunga Arr	44.25	272	P	P	19 12 40.1	+0.2
WR8				IAmb	IAmb	19 12 58.7	
	comp=Z,6.7nm,1.1s						
WRA	Warramunga Arr	44.40	272	P	P	19 12 41.9	+0.8
WRA	Warramunga Arr	44.40	272	P	P	19 12 41.6	+0.5
	comp=Z,1.2nm,0.4s,baz=113,slow=7.8,SNR=15						
	comp=Z,1.2nm,0.4s						
WB0	Warramunga Arr	44.42	273	P	P	19 12 41.9	+0.7
FITZ	Fitzroy Crossi	52.64	270	P	P	19 13 46.5	+1.9
	comp=Z,6.8nm,1.1s,baz=98,slow=14,SNR=2.6						
	comp=Z,6.8nm,1.1s						
GUMO	Guam	56.97	315	LR	LR	19 37 15.6	
	comp=Z,27nm,19.2s,baz=120,slow=35						
BATI	Baumata	57.98	277	LR	LR	19 40 00.2	
	comp=Z,276nm,18.3s,baz=151,slow=37						
QSPA	South Pole Qui	59.31	180	P	P	19 14 34.4	+2.6
	comp=Z,1.9nm,0.8s,baz=34,slow=2.3,SNR=8.5						
	comp=Z,1.9nm,0.8s						
KAPI	Kappang	63.96	280	LR	LR	19 44 13.4	
	comp=Z,34nm,18.1s,baz=58,slow=37						
DAV	Davao City (W)	66.05	295	LR	LR	19 42 54.7	
	comp=Z,16nm,20.7s,baz=304,slow=35						
VNA3	Neumayer Olymp	77.89	176	⇑P	P	19 16 25.1	-2.5
	comp=Z,4.4nm,0.8s						
VNA2	Neumayer--Watz	78.32	177	⇑P	P	19 16 30.6	+0.7
	comp=Z,1.9nm,0.7s,baz=179,slow=3.7						
SHEM	Shemya Is, Ala	83.49	355	LR	LR	19 47 11.4	
	comp=Z,41nm,20.8s,baz=280,slow=31						
NVAR	Mina Array Bea	88.34	43	P	P	19 17 23.3	+1.1
	comp=Z,1.4nm,1.0s,baz=250,slow=5.8,SNR=4.4						
	comp=Z,1.4nm,1.0s						
MA2	Magadan	93.75	345	LR	LR	19 54 57.1	
	comp=Z,17nm,20.1s,baz=173,slow=32						
CPUP	Villa Florida	99.51	128	LR	LR	19 59 46.6	
	comp=Z,9.7nm,18.2s,baz=29,slow=33						
KURBB	Kurchatov Arra	121.57	313	PKP	PKiKP	19 23 25.5	+1.9
	comp=Z,0.4nm,0.7s,baz=115,slow=2.1,SNR=2.3						
FINES	FINESS Array B	145.62	340		PKPdf	19 24 06.8	-1.0
FINES	FINESS Array B	145.62	340	PKPbc	PKPdf	19 24 06.9	-0.9
	comp=Z,1.7nm,0.4s,baz=50,slow=3.6,SNR=28						
NB2	NORSAR Subarra	149.19	352	PKP	PKiKP	19 24 20.1	+0.8
	comp=Z,2.0nm,0.8s,baz=16,slow=4.3						
HFS	Hagfors	149.69	349	PKPbc	PKPbc	19 24 20.0	+0.7
	comp=Z,2.2nm,0.8s,baz=106,slow=3.7,SNR=3.9						
AKASG	Malin Array Be	151.79	323	PKPbc	PKPbc	19 24 23.8	-0.7
	comp=Z,0.4nm,0.5s,baz=61,slow=1.9,SNR=4.4						
AKASG				PKPab	PKPab	19 24 32.1	-1.4
	comp=Z,1.8nm,0.8s,baz=49,slow=3.1,SNR=7.1						
MMAI	Mount Meron Ar	151.90	283	PKPab	PKPab	19 24 34.4	-0.3
	comp=Z,0.4nm,0.3s,baz=111,slow=5.5,SNR=2.6						
BRTR	Keskin Array B	153.04	298	PKPab	PKPab	19 24 40.6	+1.2
	comp=Z,0.5nm,0.6s,baz=90,slow=2.5,SNR=3.9						

IDC 20 19:04:42.4±3.5**, 6°.02S**×**127°.80E, h392^{km}**±36^{km}**, mb2.6**/1**, mbtmp3.7**/4**, Error ellipse: s-maj=68.4km s-min=18.0km az=65.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	5.84	224	P	Pn	19 06 13.1	+0.1
	30nm,0.4s,baz=38,slow=2.5,SNR=17						
WRA	Warramunga Arr	15.23	156	P	P	19 07 57.5	-0.2
	1.0nm,0.6s,baz=333,slow=11,SNR=15						
ASAR	Alice Springs	18.51	162	P	P	19 08 32.8	0.0
	0.8nm,0.4s,baz=347,slow=12,SNR=22						
ASAR				S	S	19 11 43.8	+1.0
	0.4nm,0.7s,baz=350,slow=19,SNR=4.1						
MKAR	Makanchi Array	66.22	328	P	P	19 14 49.5	0.0
	0.3nm,0.6s,baz=123,slow=5.3,SNR=2.4						
	0.3nm,0.6s						

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*IDC **20** 19:17:56.6±9.9, 2°.25N×128°.29E, h228^{km}±94^{km}, mb3.3/6, mbtmp3.8/6, Error ellipse: s-maj=93.5km s-min=18.7km az=62.0*
*NEIC **20** 19:17:58.6±1.2, 2°.3N±0°.1×128°.0E±0°.2, h250^{km}±8^{km}, mb4.2/11, Error ellipse: s-maj=32.3km s-min=19.4km az=77.0*
*DJA **20** 19:17:58.7±0.7, 2°N±5°×12°8E±°, h209^{km}±4^{km}, M4.0/10, mB4.7/2, mb4.0/3, MLv3.9/10, Mw(mB)3.9/2*

ISC 20 19:17:58.7±0.9**, 2°.2N**±0°.1×**128°.2E**±0°.1**, h250^{km}, n26, σ1^{s}.06**/27**, mb3.9**/10**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.67	209		Pn	19 18 37.7	-0.7
TNTI	Ternate	1.67	209	P	Pn	19 18 37.9	-0.5
SGSI	Sangihe	3.01	298	P	Pn	19 18 50.9	-0.5
SGSI				S	S	19 19 32.5	-0.5
KMSI	Cibinong	4.51	249	P	Pn	19 19 10.9	+2.2
SANI	Sanana	4.79	207	P	Pn	19 19 12.1	0.0
	0.3nm2µm57nm,0.9s						
LUWI	Luwuk	6.32	239	Pn	Pn	19 19 28.8	-2.0
MRSI	Marisa	6.48	254	P	Pn	19 19 36.2	+3.3
	0.1nm26nm,0.5s						
MTN	Manton Dam	15.27	169		P	19 21 21.5	-0.1
KNRA	Kununurra	17.81	178		P	19 21 50.6	+1.2
KNRA				IAmb	IAmb	19 22 09.4	
	comp=Z,28nm,1.4s						
FITZ	Fitzroy Crossi	20.37	187	P	P	19 22 14.2	-2.6
FITZ				IAmb	IAmb	19 22 30.0	
	comp=Z,2.8nm,1.3s						
FITZ	Fitzroy Crossi	20.37	187	P	P	19 22 17.1	+0.3
	comp=Z,5.5nm,1.1s,baz=4.5,slow=9.2,SNR=2.7						
	comp=Z,5.5nm,1.1s						
WB0	Warramunga Arr	22.71	165	P	P	19 22 38.9	-0.5
WB0				IAmb	IAmb	19 22 55.7	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	22.86	165	P	P	19 22 39.7	-1.0
	comp=Z,1.5nm,0.4s,baz=344,slow=10,SNR=22						
	comp=Z,1.5nm,0.4s						
WR8	Warramunga Arr	22.91	165	P	P	19 22 40.8	-0.5
WR8				IAmb	IAmb	19 22 41.4	
	comp=Z,8.5nm,1.3s						
AS31	Alice Springs	26.35	168	P	P	19 23 11.3	-0.9
ASAR	Alice Springs	26.35	168	P	P	19 23 11.5	-0.7
ASAR	Alice Springs	26.35	168	P	P	19 23 11.6	-0.5
	comp=Z,1.1nm,0.6s,baz=352,slow=7.6,SNR=32						
ASAR				PcP	PcP	19 26 31.7	+0.5
	comp=Z,0.3nm,0.4s,baz=357,slow=1.9,SNR=7.1						
	comp=Z,1.1nm,0.6s						
BBOO	Buckleboo	35.65	169	P	P	19 24 33.6	+0.4
BBOO				IAmb	IAmb	19 24 55.9	
	comp=Z,19nm,1.2s						
STKA	Stephens Creek	36.24	160		P	19 24 38.2	-0.1
STKA	Stephens Creek	36.24	160	P	P	19 24 38.1	-0.1
	comp=Z,0.9nm,0.3s,baz=339,slow=7.2,SNR=8.8						
	comp=Z,0.9nm,0.3s						
MKAR	Makanchi Array	59.60	325	P	P	19 27 37.2	+0.7
	comp=Z,0.2nm,0.4s,baz=120,slow=7.9,SNR=4.8						
	comp=Z,0.2nm,0.4s						
KURBB	Kurchatov Arra	63.77	327	P	P	19 28 04.2	+0.1
	comp=Z,0.4nm,0.5s,baz=128,slow=5.8,SNR=6.9						
	comp=Z,0.4nm,0.5s						
KURK	Kurchatov	63.77	327	P	P	19 28 03.1	-1.0
KURK				IAmb	IAmb	19 28 05.7	
	comp=Z,3.6nm,1.4s						
VNDA	Vanda	81.78	173	P	P	19 29 50.0	+0.8
QSPA	South Pole Qui	92.16	180		P	19 30 41.0	+1.3
QSPA				IAmb	IAmb	19 30 56.3	
	comp=Z,3.3nm,1.4s						
PMSA	Palmer Station	116.97	174	PKPdf	PKPdf	19 36 12.2	-1.2

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*NOU **20** 19:18:35.4, 41°.18S×175°.96E, h50^{km}, MLv3.8/12, North Island, New Zealand*
*WEL **20** 19:18:37.2±0.6, 41°S±3°×17°6E±°, h24^{km}±5^{km}, M3.6/50, ML4.1/13, MLv3.6/50, Error ellipse: s-maj=3.8km s-min=3.3km az=161.4, confirmed*

ISC 20 19:18:37.5±1.0**, 40°.95S**±0°.02×**175°.60E**±0°.02**, h33^{km}**±3^{km}**, n86, σ1^{s}.00**/95**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRCS	Masterton Wair	0.03	93	P	Pb	19 18 42.7	-0.3
WRCS				S	Sb	19 18 46.8	+0.1
HOWZ	Holdsworth Sta	0.08	307	P	Pb	19 18 43.0	-0.3
HOWZ				S	Sb	19 18 46.7	-0.5
MTW	Mount Morrison	0.22	200	P	Pn	19 18 44.3	0.0
MTW				S	Sb	19 18 49.2	+0.2
TMWZ	Te Maipa	0.27	126	P	Pn	19 18 45.2	+0.1
TMWZ				S	Sn	19 18 50.9	+1.2
TIWZ	Tintock	0.28	51	P	Pn	19 18 45.3	+0.1
TIWZ				S	Sn	19 18 50.7	+0.9
MRZ	Mangatainoka R	0.29	356	P	Pn	19 18 45.2	-0.2
MRZ				S	Sn	19 18 50.4	+0.1
OGWZ	Otaki Gorge	0.35	292	P	Pn	19 18 46.2	-0.2
OGWZ				S	Sn	19 18 52.0	-0.1
TRMS	Tiraumea	0.40	47	P	Pn	19 18 47.2	+0.1
TRMS				S	Sn	19 18 54.2	+0.8
CAW	Cannon Point	0.44	248	P	Pn	19 18 47.3	-0.2
CAW				S	Sn	19 18 54.0	-0.3
PAWZ	Paruwai Farm	0.45	197	P	Pn	19 18 47.7	-0.1
TRWZ	Traveller	0.45	172	P	Pn	19 18 47.6	-0.1
CPWZ	Castlepoint	0.46	85	P	Pn	19 18 48.5	+0.8
CPFS	Castlepoint Fi	0.47	84	P	Pn	19 18 48.6	+0.7
PRWZ	Pori Road	0.48	36	P	Pn	19 18 48.7	+0.5
KIW	Kapiti Island	0.53	279	P	Pn	19 18 49.1	+0.3
MSWZ	Moikau Station	0.54	210	P	Pn	19 18 48.8	-0.1
BFZ	Birch Farm	0.56	62	P	Pb	19 18 49.1	+0.1
BFZ	Birch Farm	0.56	62	S	Sn	19 18 58.4	+1.2
BFZ	Birch Farm	0.56	62	P	Pb	19 18 49.3	+0.3
POWZ	Post Office Ro	0.57	13	P	Pn	19 18 49.6	+0.3
PLWZ	Palliser	0.67	203	P	Pb	19 18 50.6	-0.4
WEL	Wellington	0.71	242	P	Pn	19 18 51.9	+0.6
BHW	Baring Head	0.72	230	P	Pn	19 18 51.5	+0.2
SNZO	South Karori	0.77	242	P	Pn	19 18 52.3	+0.3
OHWZ	Ohakea	0.77	343	P	Pn	19 18 53.6	+1.5
DVHZ	Dannevirke	0.78	34	P	Pb	19 18 52.4	-0.2
ANWZ	Angora Road	0.82	54	P	Pb	19 18 52.9	-0.5
TSZ	Takapari Road	0.93	17	P	Pn	19 18 55.0	+0.7
TCW	Tory Channel	1.04	255	P	Pb	19 18 56.2	-0.7
PRHZ	Porangahau	1.04	49	P	Pn	19 18 55.8	0.0
WPHZ	Waipukurau	1.09	36	P	Pn	19 18 57.1	+0.6
PNHZ	Pukenui	1.13	24	P	Pn	19 18 57.7	+0.6
WAZ	Wanganui	1.28	338	P	Pb	19 19 02.0	+0.9
DUWZ	D'Urville Isla	1.28	276	P	Pb	19 19 00.3	-0.8
CMWZ	Cape Campbell	1.32	232	P	Pb	19 19 05.7	+4.0
PXZ	Pawanui	1.33	47	P	Pn	19 18 59.4	-0.3
TUWZ	Tuamarina	1.34	248	P	Pn	19 19 00.6	+0.7
KRHZ	Kereru	1.43	24	P	Pn	19 19 01.6	+0.4
BSWZ	Blackbirch Sta	1.51	239	P	Pn	19 19 02.2	0.0
KAHZ	Kahuranaki	1.51	41	P	Pn	19 19 02.2	-0.1
MOVZ	Moawhango	1.54	4	P	Pn	19 19 04.0	+1.2
MTVZ	Mangateitei	1.56	356	P	Pb	19 19 05.4	-0.6
WNVZ	Wahianoa	1.62	360	P	Pb	19 19 05.7	-1.2
KWHZ	Kaweka Forest	1.65	23	P	Pn	19 19 04.6	+0.4
TRVZ	Turoa	1.65	359	P	Pb	19 19 06.3	-1.1
WHVZ	Whangaehu Hut	1.66	360	P	Pb	19 19 06.4	-1.3
PKVZ	Pokaka	1.67	353	P	Pb	19 19 07.2	-0.5
MAVZ	Matarangi	1.68	359	P	Pb	19 19 06.9	-1.1
TUVZ	Tukino	1.68	1	P	Pb	19 19 07.1	-0.8
FWVZ	Far West T-bar	1.69	359	P	Pb	19 19 06.9	-1.3
NNZ	Nelson	1.70	260	P	Pn	19 19 05.8	+1.0
MCHZ	McNeill Hill	1.72	30	P	Pn	19 19 05.5	+0.4
COVZ	Chateau Observ	1.75	358	P	Pb	19 19 07.7	-1.3
LREZ	Lake Rotokare	1.75	328	P	Pb	19 19 08.9	0.0
SNVZ	South Ngauruho	1.76	1	P	Pb	19 19 07.9	-1.4
NGZ	Ngauruhoe	1.77	360	P	Pb	19 19 08.2	-1.3
OTVZ	Oturere	1.78	2	P	Pn	19 19 07.6	+1.4
ETVZ	East Tongariro	1.81	3	P	Pb	19 19 08.5	-1.7
NNVZ	North Ngauruho	1.81	0	P	Pb	19 19 08.6	-1.6
WTVZ	West Tongariro	1.83	360	P	Pb	19 19 08.7	-1.7
TMVZ	Te Maari	1.83	2	P	Pb	19 19 08.7	-1.8
NTVZ	North Tongarir	1.85	2	P	Pn	19 19 08.7	+1.7
KRVZ	Karewarewa	1.85	1	P	Pb	19 19 09.1	-1.7
TWVZ	Taurewa	1.88	356	P	Pn	19 19 08.9	+1.5
BKZ	Black Stump Fm	1.91	21	P	Pn	19 19 07.7	-0.1
BKZ	Black Stump Fm	1.91	21	P	Pn	19 19 07.9	+0.1
PREZ	Palmer Road	1.95	325	P	Pb	19 19 12.0	-0.4
RITZ	Rihia Road	1.98	6	P	Pb	19 19 10.9	-2.0
ARHZ	Aropaoanui	1.99	33	P	Pn	19 19 09.2	+0.3
TKNZ	Takaka Hill	2.00	267	P	Pn	19 19 10.1	+1.1
NEZ	North Egmont	2.04	325	P	Pb	19 19 13.2	-0.7
KHEZ	Kahui Hut	2.05	323	P	Pb	19 19 13.5	-0.7
KHEZ	Kahui Hut	2.05	323	P	Pb	19 19 13.5	-0.7
KHZ	Kahutara	2.13	226	P	Pn	19 19 09.4	-1.4
KHZ	Kahutara	2.13	226	S	Sn	19 19 34.5	-1.6
KHZ	Kahutara	2.13	226	P	Pn	19 19 09.8	-1.0
THZ	Tophouse	2.19	247	P	Pn	19 19 11.2	-0.4
MRNZ	Matariki Terra	2.19	257	P	Pn	19 19 12.3	+0.6
MRHZ	Matea Rd	2.20	17	P	Pn	19 19 12.0	+0.2
WATZ	Wairara	2.24	3	P	Pn	19 19 13.6	+1.2
QRZ	Quartz Range	2.33	272	P	Pn	19 19 14.8	+1.2
QRZ	Quartz Range	2.33	272	P	Pn	19 19 14.8	+1.2
HIZ	Hauiti	2.50	346	P	Pn	19 19 18.0	+2.1
URZ	Urewera	2.93	24	P	Pn	19 19 21.5	-0.2
URZ	Urewera	2.93	24	S	Sn	19 19 55.4	-0.3
RPZ	Rata Peaks	4.36	229	P	Pn	19 19 40.5	-0.9

*IDC **20** 19:24:49.3±1.4, 28°.40N×104°.83E, h0^{km}, mb3.5/5, mbtmp3.5/6, ML3.5/1, MS3.5/1, Error ellipse: s-maj=42.8km s-min=23.6km az=53.0*

ISC 20 19:24:52.2±1.5**, 28°.4N**±0°.2×**104°.9E**±0°.2**, h19^{km}, n7,** σ**0^{s}89**/6**, mb3.5**/5**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	19.41	3	P	P	19 29 17.6	+0.4
	0.1nm,0.3s,baz=175,slow=11,SNR=4.0						
	0.7nm,0.7s						
KSRS	Korea Array	21.30	59	P	P	19 29 37.9	+0.2
	0.8nm,0.5s,baz=237,slow=9.4,SNR=4.9						
	0.8nm,0.5s						
MKAR	Makanchi Array	25.45	322	P	P	19 30 19.8	+1.0
	1.2nm,0.7s,baz=133,slow=11,SNR=11						
	1.2nm,0.7s						
ZALV	Zalesovo Beam	29.41	336	P	P	19 30 53.1	-1.1
	0.3nm,0.3s,baz=160,slow=8.9,SNR=1.8						
	0.3nm,0.3s						
KURBB	Kurchatov Arra	29.78	325	P	P	19 30 57.4	-0.1
	0.3nm,0.5s,baz=132,slow=9.2,SNR=6.7						
	0.3nm,0.5s						
LEM	Lembang	35.16	175	LR	LR	19 47 33.3	
	comp=Z,84nm,20.9s,baz=260,slow=39						
ASAR	Alice Springs	58.88	149	P	P	19 34 49.9	-0.1
	0.3nm,0.6s,baz=337,slow=6.7,SNR=5.6						
	0.3nm,0.6s						

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*IDC **20** 19:28:53.4±1.4, 28°.41N×104°.91E, h0^{km}, mb3.7/5, mbtmp3.6/6, ML3.6/1, MS3.3/2, Error ellipse: s-maj=34.5km s-min=23.3km az=51.0*

ISC 20 19:28:56.2±1.5**, 28°.4N**±0°.2×**104°.9E**±0°.2**, h19^{km}, n8,** σ**0^{s}53**/6**, mb3.7**/5**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	19.41	3	P	P	19 33 21.2	-0.1
	0.2nm,0.3s,baz=184,slow=13,SNR=4.2						
	0.6nm,0.6s						
KSRS	Korea Array	21.27	59	P	P	19 33 41.9	+0.4
	1.5nm,0.7s,baz=240,slow=10,SNR=5.6						
	1.5nm,0.7s						
MKAR	Makanchi Array	25.48	322	P	P	19 34 23.8	+0.6
	1.1nm,0.6s,baz=129,slow=11,SNR=13						
	1.1nm,0.6s						
USRK	Ussuriysk Ar.	26.74	47	P	P	19 34 34.1	-0.5
	2.0nm,0.7s,baz=249,slow=7.9,SNR=4.4						
	2.0nm,0.7s						
KURBB	Kurchatov Arra	29.81	325	P	P	19 35 01.6	-0.2
	0.4nm,0.6s,baz=132,slow=9.4,SNR=7.8						
	0.4nm,0.6s						
KBZ	Khabaz	51.25	305	LR	LR	20 04 32.4	
	comp=Z,29nm,19.8s,baz=33,slow=42						
ASAR	Alice Springs	58.85	149	P	P	19 38 53.8	0.0
	0.3nm,0.5s,baz=330,slow=6.8,SNR=8.8						
	0.3nm,0.5s						
BORG	Borgarnes	78.20	339	LR	LR	20 20 28.7	
	comp=Z,16nm,19.5s,baz=290,slow=40						

IDC 20 19:34:00.8±2.1**, 30°.42S**×**178°.56W, h0^{km}, mb3.7**/3**, mbtmp3.7**/3**, Error ellipse: s-maj=59.2km s-min=37.0km az=42.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.62	267	P	P	19 41 59.3	+0.2
	0.5nm,0.7s,baz=108,slow=7.3,SNR=9.2						
	0.5nm,0.7s						
WRA	Warramunga Arr	43.61	272	P	P	19 42 07.4	+0.3
	0.5nm,0.3s,baz=114,slow=7.2,SNR=15						
	0.5nm,0.3s						
QSPA	South Pole Qui	59.69	180	P	P	19 44 07.4	+0.6
	0.8nm,0.8s,baz=12,slow=7.1,SNR=6.2						
	0.8nm,0.8s						
FINES	FINESS Array B	145.00	340	PKPbc	PKPbc	19 53 36.1	-2.4
	1.5nm,0.8s,baz=66,slow=4.8,SNR=7.5						

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*IDC **20** 20:07:41.4±4.3, 37°.69N×71°.40E, h114^{km}±37^{km}, mb3.4/10, mbtmp3.8/16, Error ellipse: s-maj=32.5km s-min=21.6km az=7.0*

*NNC **20** 20:07:43.4±2.4, 37°.80N×71°.60E, h204^{km}±31^{km}, mb2.9, mpv3.8, Error ellipse: s-maj=22.4km s-min=15.2km az=22.0*

ISC 20 20:07:40.9±1.0**, 37°.67N**±0°.09×**71°.34E**±0°.08**, h109^{km}, n31,** σ**1^{s}71**/40**, mb3.6**/9**, 6C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	4.81	21	P	Pn	20 08 52.7	+1.3
	SNR=84						
UCH	Uchtor	5.16	27	P	Sn	20 09 55.7	+0.8
	SNR=13						
EKS2	Erkin-Say	5.32	20	P	Pn	20 08 59.9	+1.7
	SNR=8.3						
KK31	Karatay Array	5.46	354	⇑P	Pn	20 09 02.2	+2.3
	39nm,0.5s,baz=176,slow=12,SNR=222						
KK31				⇓S	Sn	20 10 05.9	+4.3
	20nm,0.3s,baz=181,slow=24,SNR=9.7						
AAK	Ala-Archa	5.52	25	P	Pn	20 09 02.2	+1.4
	SNR=19						
AAK	Ala-Archa	5.52	25	P	Pn	20 09 02.1	+1.3
	14nm,0.4s,baz=191,slow=4.8,SNR=30						
AAK				S	Sn	20 10 03.5	+0.5
	15nm,0.5s,baz=156,slow=20,SNR=16						
AAK	Ala-Archa	5.52	25	P	Pn	20 09 01.3	+0.5
	0.3nm,0.4s						
AAK				S	Sn	20 10 05.0	+2.0
	1.7nm,0.5s						
KBK	Karagaybulak	5.70	28	P	Pn	20 09 05.6	+2.4
	SNR=6.4						
CHMS	Chumysh	5.92	25	P	Pn	20 09 07.4	+1.2
	SNR=11						
CHMS	Chumysh	5.92	25	⇑P	Pn	20 09 07.0	+0.8
	9.2nm,0.4s						
CHMS				⇑S	Sn	20 10 14.3	+1.6
	12nm,0.6s						
USP	Ospenovka	6.09	22	P	Pn	20 09 09.4	+1.0
	SNR=19						
TKM2	Tokmak 2	6.17	30	P	Pn	20 09 10.7	+1.0
	SNR=14						
TKM2	Tokmak 2	6.17	30	⇑P	Pn	20 09 10.3	+0.6
	5.6nm,0.6s						
TKM2				⇓S	Sn	20 10 19.0	+0.1
	5.2nm,0.7s						
MKAR	Makanchi Array	12.19	38	P	Pn	20 10 28.6	-2.2
	0.3nm,0.6s,baz=225,slow=15,SNR=4.6						
KURBB	Kurchatov Arra	13.93	19	P	Pn	20 10 51.5	-1.8
	0.3nm,0.6s,baz=206,slow=10,SNR=5.2						
AB31	Akbulak array	14.21	328	P	Pn	20 10 56.9	-0.1
	2.0nm,0.5s,baz=136,slow=14,SNR=88						
AB31				⇓S	Sn	20 13 31.0	-2.6
	6.8nm,0.6s,baz=149,slow=23,SNR=7.0						
BVAR	Borovoye Array	15.37	358	P	Pn	20 11 11.8	+0.1
	1.2nm,0.6s,baz=164,slow=13,SNR=6.5						
BVAR				S	Sn	20 13 57.6	-3.8
	0.7nm,0.6s,baz=152,slow=26,SNR=2.9						
AKTO	Aktyubinsk	15.92	328	P	Pn	20 11 19.2	+0.7
	5.2nm,0.4s,baz=142,slow=16,SNR=15						
AKTO				S	Sn	20 14 11.0	-3.8
	3.0nm,0.5s,baz=117,slow=11,SNR=3.8						
AKTO	Aktyubinsk	15.92	328	⇑P	Pn	20 11 18.9	+0.3
	3.6nm,0.6s						
AKTO				⇑S	Sn	20 14 12.1	-2.7
	3.8nm,0.8s						
ZALV	Zalesovo Beam	18.74	25	P	P	20 11 49.7	-1.2
	0.9nm,0.3s,baz=226,slow=10,SNR=6.2						
GNI	Garni	20.82	285	P	P	20 12 14.8	+1.0
	4.3nm,0.5s,baz=72,slow=19,SNR=3.6						
	4.3nm,0.5s						
BRTR	Keskin Array B	29.36	286	P	P	20 13 33.2	-0.4
	0.4nm,0.5s,baz=112,slow=8.8,SNR=3.8						
	0.4nm,0.5s						
AKASG	Malin Array Be	32.44	307	P	P	20 14 01.3	+0.9
	0.3nm,0.4s,baz=78,slow=7.2,SNR=4.2						
	0.3nm,0.4s						
FINES	FINESS Array B	36.67	325	P	P	20 14 36.8	+0.1
	1.0nm,0.7s,baz=132,slow=8.8,SNR=5.2						
	1.0nm,0.7s						
ARCES	ARCESS Array B	40.17	337	P	P	20 15 06.2	+0.2
	2.0nm,0.9s,baz=113,slow=8.8,SNR=10						
	2.0nm,0.9s						
HFS	Hagfors	42.32	321	P	P	20 15 23.9	+0.3
	2.6nm,0.4s,baz=98,slow=11,SNR=21						
	2.6nm,0.4s						
NB2	NORSAR Subarra	43.62	322	P	P	20 15 34.2	+0.1
	comp=Z,0.6nm,0.5s,baz=93,slow=7.9						
NOA	NORSAR Array B	43.62	322	P	P	20 15 34.0	0.0
	comp=Z,0.6nm,0.5s,baz=96,slow=7.6,SNR=5.8						
	comp=Z,0.6nm,0.5s						
EKA	Eskdalemuir Ar	51.64	315	P	P	20 16 35.9	-0.2
	comp=Z,0.3nm,0.4s,baz=76,slow=7.1,SNR=4.3						
	comp=Z,0.3nm,0.4s						
ESDC	Sonseca Array	57.16	297	P	P	20 17 15.1	-1.2
	comp=Z,0.3nm,0.5s,baz=74,slow=7.4,SNR=4.8						
	comp=Z,0.3nm,0.5s						
ASAR	Alice Springs	84.70	125	P	P	20 20 03.1	+0.4
	comp=Z,0.4nm,1.0s,baz=315,slow=4.7,SNR=4.4						
	comp=Z,0.4nm,1.0s						

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*NOU **20** 20:06:59.2, 30°.41S×174°.64W, h149^{km}, mb4.9/9, Kermadec Islands Region*

*WEL **20** 20:07:57.9±0.7, 33°S±6°×17°9W±1°4, h33^{km}, M4.9/13, mB5.3/7, ML5.0/15, MLv5.0/13, Mw(mB)4.8/7, Error ellipse: s-maj=19.0km s-min=3.9km az=109.4, confirmed*

*NEIC **20** 20:07:59.5±2.5, 33°.28S±0°.09×179°.2W±0°.1, h40^{km}±6^{km}, mb4.6/19, Error ellipse: s-maj=15.0km s-min=11.6km az=118.0*

*IDC **20** 20:08:00.4±1.8, 33°.21S×179°.32W, h53^{km}±16^{km}, mb4.1/7, mbtmp4.5/9, ML4.4/2, MS3.4/9, Error ellipse: s-maj=20.1km s-min=10.8km az=109.0*

ISC 20 20:07:58.1±0.5**, 33°.29S**±0°.05×**179°.07W**±0°.08**, h35^{km}, n111,** σ**1^{s}92**/107**, mb4.6**/18**, MS3.4**/6**, 5C, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.13	14	P	Pn	20 08 59.2	+0.5
GLKZ				S	Sn	20 09 47.3	+1.5
RAO	Raoul Island	4.14	14	Pn	Pn	20 09 00.2	+1.3
RAO	Raoul Island	4.14	14	P	Pn	20 08 59.7	+0.8
	39nm,0.3s,baz=76,slow=20,SNR=2.2						
RAO				S	Sn	20 09 49.3	+3.2
	243nm,0.3s,baz=270,slow=20,SNR=3.8						
	137nm,0.2s						
RIZ	Raoul Island	4.15	14	P	Pn	20 09 00.4	+1.4
MXZ	Matakaoa Point	4.77	206	Pn	Pn	20 09 06.5	-1.0
MXZ	Matakaoa Point	4.77	206	P	Pn	20 09 09.1	+1.6
MXZ	Matakaoa Point	4.77	206	P	Pn	20 09 09.5	+2.0
MXZ				S	Sn	20 10 02.6	+1.1
WMGZ	Waiomatatini S	4.96	204	P	Pn	20 09 11.6	+1.5
WMGZ				S	Sn	20 10 06.3	+0.1
PKGZ	Pakihiroa	5.12	206	P	Pn	20 09 13.3	+0.9
PKGZ				S	Sn	20 10 12.3	+2.0
HAZ	Te Kaha	5.14	209	P	Pn	20 09 14.0	+1.4
HAZ				S	Sn	20 10 12.6	+2.0
PUZ	Puketiti	5.24	204	P	Pn	20 09 13.7	-0.3
PUZ				S	Sn	20 10 13.7	+0.5
RUGZ	Raukumara Rang	5.36	209	P	Pn	20 09 17.1	+1.4
GRZ	Great Barrier	5.38	235	P	Pn	20 09 19.7	+3.8
TWGZ	Tauwhareparae	5.43	205	P	Pn	20 09 17.5	+0.9
TWGZ				S	Sn	20 10 20.6	+2.6
KUZ	Kuaotunu	5.49	230	P	Pn	20 09 21.3	+3.9
KUZ	Kuaotunu	5.49	230	P	Pn	20 09 21.8	+4.4
CNGZ	Carnagh Statio	5.63	202	P	Pn	20 09 19.8	+0.4
TKGZ	Te Karaka	5.71	205	P	Pn	20 09 20.0	-0.4
TKGZ				S	Sn	20 10 25.5	+0.8
MWZ	Matawai	5.74	208	P	Pn	20 09 20.8	-0.1
URZ	Urewera	5.85	211	P	Pn	20 09 22.1	-0.2
	5.7nm,0.3s,baz=14,slow=3.6,SNR=47						
URZ				S	Sn	20 10 27.3	-0.8
	70nm,0.3s,baz=66,slow=20,SNR=9.2						
URZ				LR	LR	20 11 45.6	
	comp=Z,128nm,20.1s,baz=34,slow=39						
	26nm,0.2s						
URZ	Urewera	5.85	211	P	Pn	20 09 24.5	+2.2
URZ	Urewera	5.85	211	P	Pn	20 09 22.2	-0.1
WIAZ	Waiheke Island	5.90	232	P	Pn	20 09 27.6	+4.6
RAGZ	Rawiri	5.93	208	P	Pn	20 09 25.8	+2.4
RIGZ	Rimuhau	5.98	204	P	Pn	20 09 25.1	+0.9
WCZ	Waipu Caves	6.04	242	P	Pn	20 09 28.6	+3.7
MBAZ	Motutapu North	6.04	233	P	Pn	20 09 30.4	+5.4
MKAZ	Moumakai	6.06	230	P	Pn	20 09 29.6	+4.3
PRGZ	Paritu Road	6.14	203	P	Pn	20 09 27.8	+1.5
MUGZ	Murupara	6.18	212	P	Pn	20 09 28.0	+1.2
SNGZ	Shannon Statio	6.20	207	P	Pn	20 09 28.5	+1.3
RTZ	Ruatahuna	6.20	210		Pn	20 09 27.7	+0.4
TOZ	Tahuroa Road	6.26	223		Pn	20 09 25.1	-2.9
KNZ	Kokohu	6.30	204	P	Pn	20 09 27.4	-1.1
MHGZ	Mahia Peninsul	6.34	202	P	Pn	20 09 29.2	+0.1
OUZ	Omahuta	6.37	250	P	Pn	20 09 32.5	+3.0
OUZ	Omahuta	6.37	250	P	Pn	20 09 32.6	+3.2
MRHZ	Matea Rd	6.63	212	P	Pn	20 09 33.6	+0.5
BKZ	Black Stump Fm	6.87	210		Pn	20 09 35.7	-0.7
BKZ	Black Stump Fm	6.87	210	P	Pn	20 09 36.9	+0.5
BKZ	Black Stump Fm	6.87	210	P	Pn	20 09 35.5	-0.9
HIZ	Hauiti	7.17	222	Pn	Pn	20 09 43.1	+2.6
HIZ	Hauiti	7.17	222	P	Pn	20 09 44.1	+3.6
HIZ	Hauiti	7.17	222	P	Pn	20 09 43.7	+3.2
BFZ	Birch Farm	8.27	206	Pn	Pn	20 09 52.9	-2.7
BFZ	Birch Farm	8.27	206	P	Pn	20 09 53.5	-2.1
MRZ	Mangatainoka R	8.51	209	Pn	Pn	20 09 55.8	-3.0
MSWZ	Moikau Station	9.28	207	Pn	Pn	20 10 06.3	-3.1
PLWZ	Palliser	9.41	207	Pn	Pn	20 10 08.9	-2.3
SNZO	South Karori	9.41	210	P	Pn	20 10 09.2	-2.0
BHW	Baring Head	9.43	209	Pn	Pn	20 10 08.0	-3.4
TCW	Tory Channel	9.52	212	Pn	Pn	20 10 08.7	-3.9
TUWZ	Tuamarina	9.84	212	Pn	Pn	20 10 13.3	-3.8
CTZ	Chatham Island	10.61	170	P	Pn	20 10 28.0	+0.5
KHZ	Kahutara	10.82	210	P	Pn	20 10 27.2	-3.2
RPZ	Rata Peaks	12.96	214	P	Pn	20 10 54.7	-4.9
	6.5nm,0.7s,baz=39,slow=6.5,SNR=1.7						
RPZ				S	Sn	20 13 08.3	-14
	4.6nm,0.3s,baz=40,slow=19,SNR=7.8						
MSVF	Nonsavu	15.71	350	LR	LR	20 16 30.3	
	comp=Z,93nm,19.6s,baz=174,slow=33						
WHZ	Wether Hill Ro	16.05	215	Pn	Pn	20 11 40.0	-1.1
WHZ				IAmb	IAmb	20 11 53.0	
	comp=Z,43nm,1.5s						
DZM	Mont Dzumac	16.99	307	LR	LR	20 17 07.1	
	comp=Z,175nm,18.1s,baz=170,slow=33						
EIDS	Eidsvold	27.12	279	P	P	20 13 38.7	+0.8
EIDS				IAmb	IAmb	20 14 16.4	
	comp=Z,17nm,1.5s						
STKA	Stephens Creek	33.04	261	P	P	20 14 28.5	-1.8
STKA	Stephens Creek	33.04	261	P	P	20 14 30.8	+0.5
	comp=Z,0.8nm,0.6s,baz=107,slow=18,SNR=2.9						
STKA				LR	LR	20 26 30.3	
	comp=Z,75nm,20.1s,baz=42,slow=34						
	comp=Z,0.8nm,0.6s						
CTAO	Charters Tower	33.49	284	P	P	20 14 35.6	+1.3
CTAO				IAmb	IAmb	20 14 38.3	
	comp=Z,11nm,1.1s						
BBOO	Buckleboo	37.39	258	P	P	20 15 06.8	-0.9
BBOO				IAmb	IAmb	20 15 09.8	
	comp=Z,22nm,1.2s						
COEN	Coen	39.30	290	P	P	20 15 22.1	-1.8
COEN				IAmb	IAmb	20 15 33.8	
	comp=Z,15nm,1.2s						
AS31	Alice Springs	42.13	271		P	20 15 47.0	-0.3
AS31				IAmb	IAmb	20 15 48.1	
	comp=Z,3.6nm,0.3s						
ASAR	Alice Springs	42.13	271	P	P	20 15 47.2	0.0
	comp=Z,4.7nm,0.4s,baz=108,slow=7.3,SNR=125						
ASAR				PcP	PcP	20 17 39.0	-2.4
	comp=Z,0.5nm,0.5s,baz=126,slow=4.0,SNR=2.8						
ASAR				LR	LR	20 31 13.9	
	comp=Z,56nm,20.0s,baz=246,slow=33						
	comp=Z,4.7nm,0.4s						
WR8	Warramunga Arr	43.25	276	P	P	20 15 55.8	-0.5
WRA	Warramunga Arr	43.39	276	P	P	20 15 55.7	-1.7
WRA	Warramunga Arr	43.39	276	P	P	20 15 56.7	-0.7
	comp=Z,5.5nm,0.7s,baz=114,slow=7.8,SNR=51						
	comp=Z,5.5nm,0.7s						
WB0	Warramunga Arr	43.42	276	P	P	20 15 56.5	-1.2
WB0				IAmb	IAmb	20 15 58.6	
	comp=Z,7.1nm,0.7s						
SBA	Scott Base	45.10	184	P	P	20 16 11.4	+1.1
JAY	Jayapura	48.49	301	P	P	20 16 37.8	0.0
	comp=Z,3.2nm,0.6s,baz=98,slow=10,SNR=1.4						
	comp=Z,3.2nm,0.6s						
KNRA	Kununurra	50.09	277	P	P	20 16 49.6	-0.2
FITZ	Fitzroy Crossi	51.51	273	P	P	20 17 00.1	-0.5
MORW	Morawa	54.88	256	P	P	20 17 23.1	-2.2
MBWA	Marble Bar	55.06	266	P	P	20 17 24.7	-1.9
MBWA				IAmb	IAmb	20 17 53.8	
	comp=Z,17nm,1.3s						
QSPA	South Pole Qui	56.83	180	P	P	20 17 41.0	+2.1
QSPA				IAmb	IAmb	20 17 43.9	
	comp=Z,6.5nm,0.8s						
QSPA	South Pole Qui	56.83	180	P	P	20 17 41.6	+2.7
	comp=Z,5.1nm,0.6s,baz=23,slow=3.0,SNR=63						
	comp=Z,5.1nm,0.6s						
BELA	Belgrano 2	67.05	172	P	P	20 18 48.4	+1.2
BELA				IAmb	IAmb	20 18 49.9	
	comp=Z,5.1nm,0.6s						
TROLL	Troll, Antarti	74.99	181	⇑P	P	20 19 36.6	+1.0
	comp=Z,130nm,0.4s						
SNAA	Sanae	75.30	179	⇑P	P	20 19 38.5	+1.2
	comp=Z,32nm,0.3s						
SNAA	Sanae	75.30	179	P	P	20 19 38.3	+1.2
SNAA				IAmb	IAmb	20 19 50.0	
	comp=Z,5.5nm,1.3s						
SNAA	Sanae	75.30	179	P	P	20 19 38.4	+1.2
	comp=Z,1.5nm,0.3s,baz=206,slow=7.0,SNR=40						
	comp=Z,1.5nm,0.3s						
VNA3	Neumayer Olymp	75.49	176	⇑P	P	20 19 39.4	+1.2
	comp=Z,16nm,0.7s						
VNA2	Neumayer--Watz	75.91	177	⇑P	P	20 19 42.2	+1.5
	comp=Z,10nm,0.7s,baz=172,slow=5.6						
VNA1	Neumayer--Stat	76.15	177	⇑P	P	20 19 43.4	+1.4
	comp=Z,7.0nm,0.7s						
H03S2	Juan Fernandez	79.63	124	T	T	21 48 22.9	
	baz=235,slow=74,SNR=73						
H03S1	Juan Fernandez	79.64	124	T	T	21 48 24.0	
	baz=235,slow=74,SNR=75						
H03S3	Juan Fernandez	79.65	124	T	T	21 48 23.0	
	baz=235,slow=74,SNR=72						
H03N3	Juan Fernandez	79.84	123	T	T	21 48 31.5	
	baz=240,slow=72,SNR=134						
H03N2	Juan Fernandez	79.84	123	T	T	21 48 35.5	
	baz=240,slow=72,SNR=70						
H03N1	Juan Fernandez	79.86	123	T	T	21 48 35.3	
	baz=240,slow=72,SNR=97						
PLCA	Paso Flores	81.20	133	P	P	20 20 13.2	+2.7
	comp=Z,1.7nm,0.7s,baz=248,slow=5.4,SNR=8.3						
	comp=Z,1.7nm,0.7s						
LPIG	La Paz	86.82	59	LR	LR	20 52 29.1	
	comp=Z,33nm,18.3s,baz=56,slow=31						
MA2	Magadan	95.83	345	LR	LR	20 57 43.8	
	comp=Z,13nm,20.4s,baz=116,slow=31						
ANMO	Albuquerque	96.08	52	LR	LR	20 55 49.6	
	comp=Z,22nm,20.3s,baz=310,slow=30						
PV13	Radium Mtn., P	96.49	48	P	P	20 21 23.4	-0.7
PDAR	Pinedale Array	98.84	44	LR	LR	21 01 25.5	
	comp=Z,11nm,18.6s,baz=240,slow=32						
MKAR	Makanchi Array	118.91	309	PKP	PKPdf	20 26 40.6	-1.9
	comp=Z,0.4nm,0.5s,baz=191,slow=1.3,SNR=9.4						
KURBB	Kurchatov Arra	122.39	313	PKP	PKPdf	20 26 46.8	-2.3
	comp=Z,0.9nm,0.5s,baz=116,slow=1.9,SNR=14						
BVAR	Borovoye Array	127.80	314	PKP	PKPdf	20 26 58.4	-1.0
	comp=Z,0.8nm,0.5s,baz=143,slow=2.1,SNR=9.1						
SPITS	Spitsbergen Ar	134.51	356	PKP	PKPdf	20 27 10.7	-0.8
	comp=Z,3.0nm,0.7s,baz=80,slow=4.6,SNR=6.0						
ARCES	ARCESS Array B	141.19	347	PKhKP	PKPpre	20 27 18.6	
	comp=Z,1.3nm,0.8s,baz=85,slow=2.7,SNR=8.5						
FINES	FINESS Array B	147.50	338	PKPbc	PKPbc	20 27 36.6	-1.1
	comp=Z,4.2nm,0.6s,baz=57,slow=3.0,SNR=29						
MMAI	Mount Meron Ar	151.21	279	PKPbc	PKPbc	20 27 47.5	-0.4
	comp=Z,1.4nm,0.4s,baz=83,slow=6.8,SNR=8.4						
NB2	NORSAR Subarra	151.44	350	PKP	PKPbc	20 27 47.0	-0.6
	comp=Z,1.9nm,0.7s,baz=17,slow=2.6						
NOA	NORSAR Array B	151.44	350	PKPbc	PKPbc	20 27 47.2	-0.3
	comp=Z,2.9nm,0.9s,baz=17,slow=4.6,SNR=18						
HFS	Hagfors	151.86	346	PKPbc	PKPbc	20 27 47.7	-0.8
	comp=Z,4.6nm,0.7s,baz=90,slow=3.1,SNR=16						
HFS				PKPab	sPKPdf	20 27 55.5	-0.3
	comp=Z,1.2nm,0.5s,baz=56,slow=5.6,SNR=5.4						
DBIC	Dimbokro	152.97	167	PKPbc	PKPbc	20 27 51.7	-0.7
	comp=Z,3.0nm,0.6s,baz=187,slow=2.9,SNR=5.5						
BRTR	Keskin Array B	153.03	293	PKPbc	PKPbc	20 27 49.8	-2.2
	comp=Z,1.2nm,0.7s,baz=130,slow=3.9,SNR=9.3						

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*NEIC **20** 20:13:38.5±1.3, 20°.95S±0°.05×67°.9W±0°.2, h200^{km}±16^{km}, ML4.0(GUC), Error ellipse: s-maj=23.7km s-min=6.1km az=98.0*

*SJA **20** 20:13:38.0±0.6, 20°.95S×67°.82W, h192^{km}±4^{km}, ML3.8, MW3.7*

*SCB **20** 20:13:40.9±1.3, 20°.98S×67°.79W, h151^{km}±17^{km}, ML3.9/2, MW3.3, Error ellipse: s-maj=6.5km s-min=4.7km az=0.0*

*GUC **20** 20:13:41.1±0.5, 20°.95S×67°.92W, h181^{km}±4^{km}, ML4.0*

*IDC **20** 20:13:42.6±2.1, 20°.71S×67°.47W, h193^{km}±24^{km}, mb3.1/4, mbtmp3.5/6, Error ellipse: s-maj=50.7km s-min=17.6km az=73.0*

*VAO **20** 20:13:43.8±1.7, 20°.71S×67°.30W, h167^{km}±12^{km}, mb4.2*

ISC 20 20:13:39.5±0.7**, 20°.95S**±0°.04×**67°.77W**±0°.04**, h173^{km}**±7^{km}**, n90,** σ**1^{s}44**/124**, mb3.3**/3**, 11C, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	1.53	302		Pn	20 14 12.2	+0.6
PB08				Sn	Sn	20 14 36.0	-0.3
PB08	IPOC Station P	1.53	302	⇑*i*P	Pn	20 14 12.2	+0.6
PB08				*i* S	Sn	20 14 36.4	+0.1
PB08	IPOC Station P	1.53	302	Pg	Pn	20 14 12.1	+0.6
PB08	IPOC Station P	1.53	302	*e*P	Pn	20 14 12.2	+0.6
PB08				*e*S	Sn	20 14 37.1	+0.8
PB08				IAML		20 14 37.7	
	comp=Z,272nm,0.7s						
PB01	IPOC Station P	1.61	266		Pn	20 14 11.9	-0.1
PB01	IPOC Station P	1.61	266	⇑*i*P	Pn	20 14 12.0	-0.1
PB01				*i* S	Sn	20 14 36.0	-1.2
PB01				IAML		20 14 38.5	
	comp=N,648nm,0.2s						
PB01	IPOC Station P	1.61	266	Pg	Pn	20 14 12.1	0.0
PB01	IPOC Station P	1.61	266	*e*P	Pn	20 14 11.9	-0.1
PB01				*e*S	Sn	20 14 37.2	0.0
PB01				IAML		20 14 38.4	
	comp=Z,409nm,0.2s						
PB09	IPOC Station P	1.61	238		Pn	20 14 13.0	+0.9
PB09				Sn	Sn	20 14 37.3	-0.2
PB09	IPOC Station P	1.61	238	⇑*i*P	Pn	20 14 13.1	+0.9
PB09				*i* S	Sn	20 14 37.2	-0.2
PB09				IAML		20 14 39.0	
	comp=N,532nm,0.3s						
PB09	IPOC Station P	1.61	238	Pg	Pn	20 14 13.0	+0.9
PB09	IPOC Station P	1.61	238	*e*P	Pn	20 14 12.6	+0.4
PB09				*e*S	Sn	20 14 37.5	+0.1
PB09				IAML		20 14 39.7	
	comp=Z,411nm,0.3s						
PX03	IPOC Station P	1.83	287	*e*P	Pn	20 14 14.1	-0.2
PX03				*e*S	Sn	20 14 40.1	-1.2
GO01	Chusmiza	1.85	313		Pn	20 14 15.2	+0.3
GO01	Chusmiza	1.85	313	⇑*i*P	Pn	20 14 15.3	+0.3
GO01				*i* S	Sn	20 14 42.3	-0.1
GO01	Chusmiza	1.85	313	Pg	Pn	20 14 15.3	+0.3
GO01	Chusmiza	1.85	313	*e*P	Pn	20 14 14.9	-0.1
GO01				*e*S	Sn	20 14 42.7	+0.3
MOCB	Mochara	2.01	99	Pg	Pn	20 14 17.6	+1.0
MOCB				Sg	Sn	20 14 45.3	0.0
MOCB				IAML		20 14 47.3	
	comp=Z,589nm,0.6s						
AF01	San Pedro de A	2.03	191	*e*S	Sn	20 14 54.2	+8.6
HMBC	Humberstone	2.10	288		Pn	20 14 16.6	-0.7
HMBC	Humberstone	2.10	288	⇑*i*P	Pn	20 14 16.8	-0.5
HMBC				*i* S	Sn	20 14 44.6	-2.0
HMBC				IAML		20 14 46.2	
	comp=N,646nm,0.2s						
HMBC	Humberstone	2.10	288	*e*P	Pn	20 14 16.9	-0.5
HMBC				*e*S	Sn	20 14 45.7	-0.8
HMBC				IAML		20 14 47.2	
	comp=Z,560nm,0.2s						
PB11	IPOC Station P	2.13	303		Pn	20 14 17.7	-0.1
PB11	IPOC Station P	2.13	303	⇑*i*P	Pn	20 14 17.7	-0.1
PB11				*i* S	Sn	20 14 45.9	-1.5
PB11				IAML		20 14 48.8	
	comp=E,1μm,0.2s						
PB11	IPOC Station P	2.13	303	Pg	Pn	20 14 17.8	+0.1
PB11				Sg	Sn	20 14 46.3	-1.0
PB11				IAML		20 14 49.0	
	comp=E,554nm,0.6s						
PB11	IPOC Station P	2.13	303	*e*P	Pn	20 14 17.7	-0.1
PB11				*e*S	Sn	20 14 46.9	-0.4
PB11				IAML		20 14 49.5	
	comp=Z,402nm,0.3s						
PB03	IPOC Station P	2.15	239		Pn	20 14 18.1	+0.1
PB03	IPOC Station P	2.15	239	⇑*i*P	Pn	20 14 18.1	+0.1
PB03				*i* S	Sn	20 14 46.4	-1.3

PB03				IAML		20 14 47.6	
	comp=E,1µm,0.3s						
PB03	IPOC Station P	2.15	239	*e*P	Pn	20 14 18.0	+0.1
PB03				*e*S	Sn	20 14 47.0	-0.7
PB03				IAML		20 14 48.1	
	comp=Z,640nm,0.2s						
PATCX	Punta Patache	2.24	273		Pn	20 14 18.6	-0.3
PATCX	Punta Patache	2.24	273	⇑*i*P	Pn	20 14 18.5	-0.3
PATCX				*i* S	Sn	20 14 47.8	-1.5
PATCX				IAML		20 14 49.9	
	comp=N,1µm,0.2s						
PATCX	Punta Patache	2.24	273	*e*P	Pn	20 14 18.7	-0.1
PATCX				*e*S	Sn	20 14 48.6	-0.7
PATCX				IAML		20 14 50.0	
	comp=Z,478nm,0.4s						
TA01	Diego Aracena	2.29	279		Pn	20 14 18.9	-0.4
TA01	Diego Aracena	2.29	279	⇑*i*P	Pn	20 14 18.9	-0.4
TA01				*i* S	Sn	20 14 47.8	-2.5
TA01				IAML		20 14 49.2	
	comp=E,670nm,0.3s						
TA01	Diego Aracena	2.29	279	*e*P	Pn	20 14 18.9	-0.4
TA01				*e*S	Sn	20 14 49.5	-0.7
TA01				IAML		20 14 51.8	
	comp=Z,156nm,0.2s						
TA02	Huaiquique	2.32	287		Pn	20 14 19.0	-0.7
TA02	Huaiquique	2.32	287	*e*P	Pn	20 14 19.1	-0.5
TA02				*e*S	Sn	20 14 48.5	-2.3
TA02	Huaiquique	2.32	287	*e*P	Pn	20 14 19.3	-0.3
TA02				*e*S	Sn	20 14 50.2	-0.5
TA02				IAML		20 14 51.1	
	comp=Z,420nm,0.1s						
SOEO	Opoqueri	2.38	357	Pg	Pn	20 14 22.5	+1.6
PB06	IPOC Station P	2.42	224		Pn	20 14 21.4	+0.4
PB06	IPOC Station P	2.42	224	*i* P	Pn	20 14 21.3	+0.3
PB06				*i* S	Sn	20 14 52.7	-0.6
PB06				IAML		20 14 54.2	
	comp=E,1µm,0.1s						
PB06	IPOC Station P	2.42	224	*e*P	Pn	20 14 21.7	+0.7
PB06				*e*S	Sn	20 14 52.8	-0.6
PB06				IAML		20 14 56.1	
	comp=Z,309nm,0.2s						
YJA	Yavi	2.42	121	Pg	Pn	20 14 22.6	+1.2
YJA	Yavi	2.42	121	*e*P	Pn	20 14 22.5	+1.2
YJA				*e*S	Sn	20 14 54.4	+0.6
AOVT	TarijaAcel	2.91	102	Pg	Pn	20 14 27.4	+0.4
PB05	IPOC Station P	2.95	230		Pn	20 14 27.1	-0.2
PB05	IPOC Station P	2.95	230	⇑*i*P	Pn	20 14 27.3	0.0
PB05				*i* S	Sn	20 15 02.4	-2.1
PB05				IAML		20 15 04.8	
	comp=N,300nm,0.3s						
PB05	IPOC Station P	2.95	230	*e*P	Pn	20 14 27.6	+0.2
PB05				*e*S	Sn	20 15 03.0	-1.5
PB05				IAML		20 15 05.9	
	comp=Z,162nm,0.3s						
PB16	IPOC Station P	3.08	327		Pn	20 14 30.5	+1.2
PB16	IPOC Station P	3.08	327	⇑*i*P	Pn	20 14 30.6	+1.2
PB16				*i* S	Sn	20 15 08.3	+0.2
PB16				IAML		20 15 10.7	
	comp=N,138nm,0.6s						
PB16	IPOC Station P	3.08	327	Pg	Pn	20 14 30.9	+1.5
PB16	IPOC Station P	3.08	327	*e*P	Pn	20 14 25.3	-4.1
PB16				*e*S	Sn	20 15 06.6	-1.5
PB16				IAML		20 15 11.1	
	comp=Z,74nm,0.7s						
AP01	Chacalluta	3.53	316	*e*P	Pn	20 14 17.3	-17
AP01				IAML		20 15 22.6	
	comp=Z,169nm,0.3s						
PB10	IPOC Station P	3.63	225		Pn	20 14 35.0	-0.7
PB10	IPOC Station P	3.63	225	*e*P	Pn	20 14 35.2	-0.4
PB10				*e*S	Sn	20 15 17.1	-2.5
PB10				IAML		20 15 19.3	
	comp=Z,55nm,0.5s						
PB18	Visviri	3.71	334	Pn	Pn	20 14 35.2	-2.1
BBOJ	La Paz, Jacaqu	3.98	354	Pg	Pn	20 14 42.8	+2.2
BBOE	La Paz, Chanca	4.12	357	Pg	Pn	20 14 44.8	+2.3
BBOD	La Paz, Gloria	4.36	349	Pg	Pn	20 14 47.2	+1.6
PB14	IPOC Station P	4.39	213		Pn	20 14 45.1	-0.6
PB14	IPOC Station P	4.39	213	*e*P	Pn	20 14 45.4	-0.3
PB14				*e*S	Sn	20 15 34.3	-3.2
PB14				IAML		20 15 36.7	
	comp=Z,111nm,0.3s						
GO02	Mina Guanaco	4.52	201	*e*S	Sn	20 15 38.9	-1.5
GO02				IAML		20 15 43.1	
	comp=Z,133nm,0.5s						
LPAZ	La Paz	4.65	356		Pn	20 14 50.4	+1.0
LPAZ	La Paz	4.65	356	P	Pn	20 14 51.0	+1.6
	comp=Z,2.2nm,0.3s,baz=128,slow=2.9,SNR=21						
LPAZ	La Paz	4.65	356	Pg	Pn	20 14 50.5	+1.0
LPAZ	La Paz	4.65	356	*e*P	Pn	20 14 50.6	+1.2
LPAZ				*e*S	Sn	20 15 43.5	-0.6
BBOB	La Paz, Bander	4.80	356	Pg	Pn	20 14 52.5	+1.3
AC01	Pan de Azucar	5.79	206		Pn	20 15 01.9	-1.7
AC02	Maricunga	5.99	192		Pn	20 15 06.5	-0.3
AC06	Mina Casimiro	6.80	200	Pn	Pn	20 15 14.1	-2.9
GO03	Copiapo	6.99	198	Pn	Pn	20 15 17.0	-2.4
BBSD	Serra de San D	7.73	62	*e*P	Pn	20 15 26.3	-3.0
BBSD				*e*S	Sn	20 16 49.0	-7.1
AC04	Llanos de Chal	7.82	202	Pn	Pn	20 15 27.1	-3.4
LCO	Las Campanas	8.46	198	Pn	Pn	20 15 35.7	-3.3
GO04	Tololo Observa	9.58	196	Pn	Pn	20 15 50.8	-3.1
PTLB	Pontes e Lacer	9.86	58		Pn	20 15 55.2	-2.1
PTLB	Pontes e Lacer	9.86	58	*e*P	Pn	20 15 55.4	-1.9
CPUP	Villa Florida	10.96	121	P	Pn	20 16 12.1	+0.4
	comp=Z,0.4nm,0.5s,baz=142,slow=12,SNR=3.3						
SNDB	Serra Nova Dou	18.13	63	*e*P	P	20 17 38.8	+0.1
IPMB	Ipameri, GO	18.67	84	*e*P	P	20 17 45.2	+0.5
PLCA	Paso Flores	19.86	186	P	Pn	20 18 02.2	+1.3
	comp=Z,1.3nm,0.6s,baz=338,slow=11,SNR=6.6						
	comp=Z,1.3nm,0.6s						
ITTB	Itaituba	20.21	37	*e*P	P	20 18 00.4	-0.8
SMTB	Santa Maria do	22.87	61	*e*P	P	20 18 28.3	+0.1
JANB	Januaria	23.05	79	*e*P	P	20 18 29.5	-0.4
TXAR	Lajitas Array	60.80	324	P	P	20 23 32.4	-1.1
	comp=Z,0.2nm,0.6s,baz=138,slow=2.0,SNR=2.1						
	comp=Z,0.2nm,0.6s						
QSPA	South Pole Qui	69.24	180	P	P	20 24 29.8	+2.3
	comp=Z,1.2nm,0.9s,baz=50,slow=2.0,SNR=6.5						
	comp=Z,1.2nm,0.9s						
PDAR	Pinedale Array	74.18	329	P	P	20 24 59.1	+1.8
	comp=Z,0.3nm,0.4s,baz=134,slow=11,SNR=2.4						
	comp=Z,0.3nm,0.4s						
WRA	Warramunga Arr	133.96	209	PKP	PKiKP	20 32 39.0	+0.8
	comp=Z,0.3nm,0.6s,baz=152,slow=1.5,SNR=2.6						
ZALV	Zalesovo Beam	141.00	26	PKP	PKPdf	20 32 48.7	0.0
	comp=Z,0.4nm,0.4s,baz=347,slow=5.9,SNR=2.1						
MKAR	Makanchi Array	144.56	36	PKP	PKPdf	20 32 55.9	+0.6
	comp=Z,1.3nm,0.8s,baz=323,slow=3.0,SNR=10						

IDC ***20*** *20:20:28.5±3.1, 37.°76N×20.°88E, h0^{km}, mb3.3/6, mbtmp3.2/7, ML2.7/1, Error ellipse: s-maj=59.6km s-min=32.5km az=34.0*

THE ***20*** *20:20:31.5, 38°N±2°×2°1E±°, h0^{km}±4^{km}, M3.3/15, MLh3.3/15*

ATH ***20*** *20:20:31.7, 37.°66N×20.°66E, h15^{km}±1^{km}, ML3.1/13, Manual Solution by F.Xalaris First location: 2019/06/20 20:21:26, This location: 2019/06/20 20:58:08 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*

ISC 20 20:20:30.7±1.0**, 37.°63N**±0.°04×**20.°70E**±0.°04**, h18**^{km}±3^{km}**, n61, σ0^{s}.73**/81**, mb3.3**/6**, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRI1	kERI	0.09	73	P	Pg	20 20 34.4	+0.1
KRI1				S	Sg	20 20 36.6	-0.2
LTHK	Lithakia	0.13	54	P	Pg	20 20 34.9	+0.2
LTHK				S	Sg	20 20 37.3	-0.1
LTHK	Lithakia	0.13	54	P	Pg	20 20 34.8	+0.2
LTHK				S	Sg	20 20 37.4	0.0
ORTH	Orthonies,Zaky	0.22	358	P	Pb	20 20 36.5	+0.6
ORTH				S	Sg	20 20 39.2	-0.3
ZAK2	Zakynthos	0.22	45	P	Pg	20 20 37.1	+1.1
ZAK2				S	Sg	20 20 41.5	+2.1
CLEM	Kyllini,Ilia,G	0.43	53	P	Pn	20 20 40.6	-1.3
CLEM				S	Sb	20 20 46.5	+0.6
RTZL	Ratzakli, Kefa	0.44	7	P	Pb	20 20 40.3	+0.2
RTZL				S	Sb	20 20 47.6	+1.2
KTLO	Katakolo	0.49	89	P	Pn	20 20 42.0	-0.8
KTLO				S	Sn	20 20 50.1	-0.7
PSDA	Pessada-Kefalo	0.49	349	P	Pb	20 20 41.1	+0.3
PSDA				S	Sb	20 20 48.8	+1.2
PSDA	Pessada-Kefalo	0.49	349	P	Pg	20 20 40.9	+0.4
PSDA				S	Sg	20 20 47.2	0.0
VLS	Valsamata	0.55	351	P	Pb	20 20 41.9	+0.2
VLS				S	Sb	20 20 50.9	+1.6
VLS	Valsamata	0.55	351	P	Pb	20 20 42.0	+0.2
VLS				S	Sg	20 20 49.5	+0.4
ANDM	Andravida	0.57	52	P	Pn	20 20 43.1	-0.7
ANDM				S	Sn	20 20 52.5	-0.3
ANDM	Andravida	0.57	52	P	Pn	20 20 42.6	-1.2
ARG2	Argostoli	0.57	343	P	Pg	20 20 42.8	+0.8
DMLN	Damoulianata-K	0.66	337	P	Pb	20 20 43.9	+0.3
DMLN	Damoulianata-K	0.66	337	P	Pb	20 20 43.9	+0.3
YRMI	Loutra Irminis	0.69	47	P	Pn	20 20 45.1	-0.5
YRMI				S	Sg	20 20 54.0	+0.4
KRES	Krestena	0.73	93	P	Pn	20 20 46.6	+0.5
KRES	Krestena	0.73	93	P	Pn	20 20 46.7	+0.5
RLS	Riolos of Patr	0.74	55	P	Pn	20 20 46.0	-0.2
RLS				S	Sn	20 20 57.7	+0.8
RLS	Riolos of Patr	0.74	55	P	Pn	20 20 46.0	-0.2
RLS				S	Sn	20 20 56.3	-0.7
ZARO	Zacharo	0.77	101	P	Pn	20 20 47.8	+1.2
AXS	Araxos	0.77	43	P	Pn	20 20 46.4	-0.3
AXS				S	Sn	20 20 58.0	+0.2
AXS	Araxos	0.77	43	P	Pn	20 20 46.5	-0.3
VSK1	VASILIKIADES	0.78	352	P	Pb	20 20 46.1	+0.3
AMT	Artemida-Makis	0.81	97	P	Pn	20 20 47.9	+0.8
AMT				S	Sn	20 20 58.3	-0.4
FSK	Fiskardo	0.83	352	P	Pb	20 20 46.7	+0.1
FSK	Fiskardo	0.83	352	P	Pb	20 20 47.1	+0.5
DRO	Drossia	0.86	68	P	Pn	20 20 48.3	+0.4
DRO				S	Sn	20 21 02.0	+2.0
DRO	Drossia	0.86	68	P	Pn	20 20 48.8	+0.9
DRO				S	Sn	20 21 00.2	+0.2
EVGI	Lefkada island	0.99	358	P	Pg	20 20 50.0	+0.1
EVGI	Lefkada island	0.99	358	P	Pg	20 20 50.0	+0.1
ITM	Ithomi	1.07	115	P	Pg	20 20 51.9	+0.4
NYDR	Nydri-Lefkada	1.08	360	P	Pg	20 20 51.5	-0.1
NYDR	Nydri-Lefkada	1.08	360	P	Pg	20 20 51.6	0.0
PYL2	Kinigos	1.09	132	P	Pg	20 20 51.9	0.0
PYL	PYLOS	1.11	131	P	Pg	20 20 51.8	-0.3
MTHA	Methoni	1.14	135	P	Pg	20 20 53.8	+1.1
LKD2	Lefkada island	1.15	358	P	Pg	20 20 52.9	-0.2
PVO	Paravola	1.18	33	P	Pg	20 20 53.7	+0.3
TSLK	Tsoukalades, L	1.19	358	P	Pg	20 20 54.1	+0.3
EFP	Efpalio	1.24	50	P	Pg	20 20 54.6	0.0
SERG	Sergoula	1.32	54	P	Pg	20 20 56.0	-0.2
GUR	Goura	1.33	76	P	Pg	20 20 56.4	-0.1
ANX	Ano Chora	1.36	45	P	Pg	20 20 56.5	-0.4
VLX	Vlachokerasia	1.36	101	P	Pg	20 20 56.7	-0.2
KALE	Kalithea	1.36	56	P	Pg	20 20 56.8	-0.2
EVR	Evrytania	1.55	34	P	Pg	20 21 00.9	+0.4
TETR	Tetrakomo, Epi	1.77	15	P	Pg	20 21 04.5	-0.1
MAKR	Makrakomi, Fth	1.78	39	P	Pg	20 21 04.1	-0.8
LOUT	Loutraki	1.83	78	P	Pg	20 21 05.7	-0.3
IGT	Igoumenitsa	1.92	351	P	Pb	20 21 05.6	+0.4
BRTR	Keskin Array B	10.33	74	Pn	Pn	20 22 58.6	+0.5
	0.1nm,0.3s,baz=258,slow=13,SNR=2.0						
	0.2nm,0.7s						
HFS	Hagfors	22.96	351	P	P	20 25 34.5	+0.7
	0.8nm,0.6s,baz=149,slow=12,SNR=5.6						
	0.8nm,0.6s						
FINES	FINESS Array B	24.07	6	P	P	20 25 43.5	-1.1
	0.5nm,0.4s,baz=179,slow=9.4,SNR=8.2						
	0.5nm,0.4s						
NOA	NORSAR Array B	24.18	349	P	P	20 25 44.1	-1.7
	0.4nm,0.9s,baz=184,slow=16,SNR=1.2						
	0.4nm,0.9s						
KURBB	Kurchatov Arra	42.44	53	P	P	20 28 22.7	-1.5
	0.2nm,0.5s,baz=282,slow=9.3,SNR=3.2						
	0.2nm,0.5s						
MKAR	Makanchi Array	45.46	58	P	P	20 28 48.6	0.0
	0.2nm,0.6s,baz=271,slow=8.1,SNR=1.7						
	0.2nm,0.6s						
ZALV	Zalesovo Beam	45.95	48	P	P	20 28 51.2	-1.1
	0.5nm,0.4s,baz=265,slow=6.8,SNR=2.3						
	0.5nm,0.4s						
VNDA	Vanda	136.72	169	PKP	PKiKP	20 39 51.2	-1.2
	2.2nm,0.4s,baz=170,slow=14,SNR=22						

IDC ***20*** *20:33:20.1±0.7, 38.°64N×139.°38E, h0^{km}, mb3.8/18, mbtmp3.7/24, ML3.0/6, MS2.3/2, Error ellipse: s-maj=18.3km s-min=13.8km az=119.0*

NEIC ***20*** *20:33:21.9±2.0, 38.°59N±0.°05×139.°45E±0.°06, h4^{km}±5^{km}, mb4.3/19, Error ellipse: s-maj=8.6km s-min=6.5km az=146.0*

JMA ***20*** *20:33:23.4±0.1, 38.°6N±0.°2×139.°5E±0.°2, h13^{km}, MD4.0/40, MV4.2/40, W OFF YAMAGATA PREF*

JMA Felt III J1 at W OFF YAMAGATA PREF .

NIED ***20*** *20:33:23.4, 38.°61N×139.°45E, h13^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$4.27; M$_{\theta\theta}$-2.99; M$_{\phi\phi}$-1.28; M$_{r\theta}$2.26; M$_{\theta\phi}$-2.17; M$_{\phi r}$2.36; Fault plane solution: M$_{0}$5.46000×10^{14} NP1: φ$_{s}$243.00000°, δ27.00000°, λ103.00000°. NP2: φ$_{s}$49.00000°, δ63.00000°, λ83.00000°.*

ISC 20 20:33:22.9±0.8**, 38.°59N**±0.°03×**139.°44E**±0.°03**, h16**^{km}±5^{km}**, n97, σ1^{s}.25**/83**, mb4.0**/29**, 8D, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAW	Awa shima	0.21	228	P	Pg	20 33 28.1	+0.4
JAW				*e*S	Sg	20 33 31.7	+0.7
JAW	Awa shima	0.21	228	A	A	20 33 28.1	
	comp=N,8.0nm,0.5s,comp=E,10.0nm,0.5s						
JYA	Atsumi	0.21	90	P	Pg	20 33 27.9	0.0
JYA				*e*S	Sg	20 33 31.2	0.0
JYA	Atsumi	0.21	90	A	A	20 33 27.9	
	comp=N,169nm,0.3s,comp=E,292nm,0.3s						
JYYZ	Yamagatayuza	0.57	42	*e*P	Pb	20 33 34.9	+0.5
JYYZ	Yamagatayuza	0.57	42	A	A	20 33 34.9	
	comp=N,9.0nm,3.1s,comp=E,10.0nm,2.9s						
JTB	Tobi-shima	0.61	8	⇓P	Pg	20 33 34.6	-0.3
JTB				⇓*e*S	Sg	20 33 42.9	-0.1
JTB	Tobi-shima	0.61	8	A	A	20 33 34.6	
	comp=N,7.0nm,0.3s,comp=E,9.0nm,0.4s						
JYS	Shirataka	0.61	127	⇓P	Pg	20 33 34.9	-0.1
JYS				⇓*e*S	Sg	20 33 43.2	0.0
JYS	Shirataka	0.61	127	A	A	20 33 34.9	
	comp=N,9.0nm,0.8s,comp=E,12nm,1.5s						
JNS	Sasagawa	0.78	187	⇓P	Pb	20 33 38.2	+0.1
JNS				⇓*e*S	Sb	20 33 48.7	+0.3
JNS	Sasagawa	0.78	187	A	A	20 33 38.2	
	comp=N,6.0nm,0.6s,comp=E,12nm,0.5s						
JYK	Kaneyama	0.79	65	P	Pg	20 33 37.9	-0.4
JYK				*e*S	Sg	20 33 48.5	-0.1
JYK	Kaneyama	0.79	65	A	A	20 33 37.9	
	comp=N,6.0nm,0.4s,comp=E,4.0nm,0.3s						
JYAR	Yonezawaarcadi	0.88	141	A	A	20 33 40.0	
	comp=N,20nm,0.5s,comp=E,14nm,1.3s						
JOU	Okura	0.98	103	⇓P	Pg	20 33 41.4	-0.6
JOU				⇓*e*S	Sg	20 33 54.6	-0.4
JOU	Okura	0.98	103	A	A	20 33 41.4	
	comp=N,6.0nm,0.6s,comp=E,5.0nm,0.6s						
JSD	Sado	1.08	239		Pg	20 33 42.5	-1.4
JSD	Sado	1.08	239	P	Pn	20 33 43.0	-0.4
JSD	Sado	1.08	239	P	Pg	20 33 42.5	-1.4
JSD				*e*S	Sn	20 33 57.6	-0.4
JYW	Yuwa	1.12	32	A	A	20 33 43.7	
	comp=N,16nm,0.8s,comp=E,12nm,0.8s						
JOFO	Osakifurukawao	1.15	89	A	A	20 33 44.5	
	comp=N,13nm,0.2s,comp=E,10.0nm,1.0s						
JFY	Yanaizu	1.20	170	A	A	20 33 45.5	
	comp=N,3.0nm,1.4s,comp=E,4.0nm,0.9s						
JIZZ	Izumozaki	1.21	209	A	A	20 33 45.7	
	comp=N,18nm,0.3s,comp=E,27nm,0.3s						
JRG	Rokugo	1.23	49	A	A	20 33 45.5	
	comp=N,5.0nm,1.3s,comp=E,7.0nm,0.3s						
JMM	Marumori	1.29	124		Pn	20 33 46.4	+0.3
JMM	Marumori	1.29	124	P	Pn	20 33 46.7	+0.5
JMM	Marumori	1.29	124	A	A	20 33 46.7	
	comp=N,3.0nm,2.0s,comp=E,5.0nm,0.4s						
JOG3	Oga3	1.35	348	A	A	20 33 47.6	
	comp=N,10.0nm,0.9s,comp=E,9.0nm,1.4s						
JMST	Minamisoumatoc	1.43	127	A	A	20 33 49.0	
	comp=N,3.0nm,1.8s,comp=E,3.0nm,3.5s						
JSB	Shiboa	1.67	167	A	A	20 33 52.7	
	comp=N,2.0nm,2.1s,comp=E,3.0nm,2.7s						
JFK	Kawauchi	1.67	137	A	A	20 33 52.6	
	comp=N,2.0nm,1.0s,comp=E,2.0nm,0.4s						
JJN	Nakama	1.80	215	A	A	20 33 54.9	
	comp=N,3.0nm,0.5s,comp=E,4.0nm,6.3s						
MJB9	Matsu-Tunnel	2.27	206		Pn	20 34 01.2	+1.5
MAJO	Matsushiro	2.27	206		Pn	20 34 00.1	+0.4
MAJO	Matsushiro	2.27	206	P	Pn	20 34 00.2	+0.4
MJAR	Matsushiro Arr	2.27	206	Pn	Pn	20 33 59.5	-0.2
MJAR	Matsushiro Arr	2.27	206	Pn	Pn	20 34 00.0	+0.3
	comp=E,3.7nm,0.3s,baz=11,slow=17,SNR=116						
MJAR				LR	LR	20 34 27.7	
	comp=E,25nm,20.0s,baz=42,slow=30						
MJAR				Sn	Sn	20 34 28.9	+1.5
	comp=E,5.9nm,0.3s,baz=51,slow=28,SNR=5.5						
	comp=E,26nm,0.3s						
JTM	Tenmabayashi	2.52	29		Pn	20 34 03.9	+0.7
JTM	Tenmabayashi	2.52	29	P	Pn	20 34 04.3	+1.1
JGF	Kuroka	3.42	210		Pn	20 34 17.1	+1.5
ERM	Erimo	4.44	39	Pn	Pn	20 34 31.2	+1.7
ERM	Erimo	4.44	39	P	Pn	20 34 31.8	+2.3
JEM	Erimo	4.44	39	P	Pn	20 34 32.5	+3.0
ASAJ	Asahikawa	6.00	22	Pn	Pn	20 34 50.0	-1.0
	comp=E,0.1nm,0.3s,baz=193,slow=14,SNR=1.5						
	comp=E,1.1nm,0.3s						
JKA	Kamikawa-asahi	6.01	22	Pn	Pn	20 34 49.8	-1.2
USA0B	Ussuriysk Arra	7.92	317	Pn	Pn	20 35 17.1	-0.2
USRK	Ussuriysk Ar.	7.92	317	Pn	Pn	20 35 18.3	+1.0
USRK	Ussuriysk Ar.	7.92	317	Pn	Pn	20 35 16.3	-1.0
	comp=E,0.4nm,0.3s,baz=126,slow=13,SNR=5.6						
	comp=E,1.0nm,0.3s						
JNU	Nakatsue	8.84	234	Pn	Pn	20 35 29.6	-0.4
	comp=E,0.2nm,0.3s,baz=138,slow=17,SNR=1.9						
	comp=E,2.2nm,0.7s						
KSRS	Korea Array	9.16	266	Pn	Pn	20 35 33.5	-0.9
	comp=E,1.2nm,0.3s,baz=73,slow=14,SNR=11						
KSRS				Sn	Sn	20 37 20.0	+2.9
	comp=E,0.9nm,0.3s,baz=74,slow=24,SNR=7.1						
	comp=E,2.0nm,0.3s						
KSAR	Wonju Array Be	9.20	266	Pn	Pn	20 35 36.3	+1.5
KS19	Wonju Array Si	9.20	267	Pn	Pn	20 35 37.1	+2.2
KS19					Sn	20 37 22.4	+4.5
KLR	Kul'dur	11.98	335	LR	LR	20 40 14.1	
	comp=E,38nm,18.1s,baz=143,slow=35						
PETK	Petropavlovsk-	19.21	35	P	P	20 37 45.9	-0.1
	comp=E,0.2nm,0.3s,baz=140,slow=14,SNR=2.4						
	comp=E,1.3nm,0.7s						
MA2	Magadan	22.21	15	P	P	20 38 17.3	-1.0
	comp=E,2.7nm,0.4s,baz=140,slow=8.9,SNR=2.2						
	comp=E,2.7nm,0.4s						
SEY	Seymchan	25.60	14	P	P	20 38 49.6	-1.5
	comp=E,2.3nm,0.8s,baz=190,slow=10,SNR=7.1						
	comp=E,2.3nm,0.8s						
SONM	Songino Array	25.63	302	P	P	20 38 49.6	-2.0
	comp=E,0.3nm,0.4s,baz=97,slow=9.3,SNR=2.9						
	comp=E,0.3nm,0.4s						
H11N2	WAKE ISLAND Hy	30.29	121	T	T	21 10 17.2	
	baz=315,slow=75,SNR=5.4						
H11N1	WAKE ISLAND Hy	30.29	121	T	T	21 10 09.6	
	baz=315,slow=75,SNR=3.4						
H11N3	WAKE ISLAND Hy	30.30	121	T	T	21 10 09.9	
	baz=315,slow=75,SNR=1.9						
ZALV	Zalesovo Beam	39.71	311	P	P	20 40 53.1	-1.1
	comp=E,0.6nm,0.5s,baz=90,slow=7.2,SNR=3.8						
	comp=E,0.6nm,0.5s						
CM31	Chiang Mai Arr	40.44	252		S	20 47 10.5	+2.0
MKAR	Makanchi Array	41.98	300	P	P	20 41 12.0	-1.0
	comp=E,0.4nm,0.7s,baz=87,slow=10,SNR=5.2						
	comp=E,0.4nm,0.7s						
O15K	Ungalikthiuk R	43.13	41	P	P	20 41 20.4	-1.7
C18K	Utukok River	43.59	27	P	P	20 41 25.7	-0.1
KURBB	Kurchatov Arra	43.82	306	P	P	20 41 26.5	-1.3
	comp=E,0.4nm,0.4s,baz=81,slow=7.6,SNR=7.4						
	comp=E,0.4nm,0.4s						
G18K	Tagagawik	44.11	31	P	P	20 41 31.3	+1.3
G18K				IAmb	IAmb	20 41 51.1	
	comp=Z,3.8nm,0.7s						
G19K	Purcell Mounta	44.77	31	P	P	20 41 35.9	+0.6
G19K				IAmb	IAmb	20 41 56.0	
	comp=Z,2.6nm,0.8s						
H19K	Roundabout Mou	44.98	32	IAmb	IAmb	20 41 58.8	
	comp=Z,4.7nm,0.8s						
E24K	Your Creek	48.21	29	P	P	20 42 03.8	+1.5
E24K				IAmb	IAmb	20 42 33.4	
	comp=Z,3.5nm,1.3s						
BVAR	Borovoye Array	48.37	311	P	P	20 42 03.1	-0.6
	comp=Z,0.7nm,0.6s,baz=70,slow=8.4,SNR=6.2						
BVAR				PcP	PcP	20 43 30.2	+0.3
	comp=Z,0.3nm,0.5s,baz=132,slow=2.2,SNR=4.4						
	comp=Z,0.7nm,0.6s						
ILAR	Eielson Array	49.03	33	P	P	20 42 08.1	-0.4
	comp=Z,0.8nm,0.7s,baz=268,slow=5.2,SNR=10						
	comp=Z,0.8nm,0.7s						
F26K	Sheenjek River	49.87	29	P	P	20 42 17.4	+2.4
F26K				IAmb	IAmb	20 42 17.9	
	comp=Z,2.3nm,0.8s						
SCRK	Sand Creek	50.37	34	P	P	20 42 19.5	+0.6
SCRK				IAmb	IAmb	20 42 20.1	
	comp=Z,2.1nm,0.6s						
L27K	Beaver Creek,	51.48	35	P	P	20 42 28.5	+1.4
BCAR	Beaver Creek A	51.50	35	P	P	20 42 29.0	+1.7
M27K	Edge Creek, AK	51.59	36	P	P	20 42 29.4	+1.2
M27K				IAmb	IAmb	20 43 12.2	
	comp=Z,4.3nm,1.3s						
I28M	Miner Creek	51.85	32	P	P	20 42 31.5	+1.6
I28M				IAmb	IAmb	20 42 55.2	
	comp=Z,2.4nm,0.8s						
EPYK	Eagle Plains	52.95	30	P	P	20 42 39.6	+1.5
I30M	Mount Dempster	53.35	32	P	P	20 42 42.5	+1.3
I30M				IAmb	IAmb	20 42 43.5	
	comp=Z,2.9nm,0.7s						
ARTI	Arti	54.26	317	P	P	20 42 47.5	-0.2
AB31	Akbulak array	55.74	309	P	P	20 42 58.1	-0.5
AB31				IAmb	IAmb	20 42 59.2	
	comp=Z,2.2nm,0.7s						
ABKAR	Akbulak array	55.74	309	P	P	20 42 58.4	-0.2
ABKAR	Akbulak array	55.74	309	IAmb	IAmb	20 42 59.2	
	comp=Z,2.2nm,0.7s						
MMPY	Sheldon Lake,	56.27	34	P	P	20 43 03.7	+1.5
WRA	Warramunga Arr	58.42	186	P	P	20 43 17.6	-0.1
	comp=Z,1.6nm,0.9s,baz=5.0,slow=7.3,SNR=5.4						
	comp=Z,1.6nm,0.9s						
ASAR	Alice Springs	62.15	186	P	P	20 43 41.9	-1.3
	comp=Z,0.5nm,0.8s,baz=14,slow=12,SNR=2.6						
	comp=Z,0.5nm,0.8s						
FINES	FINESS Array B	66.70	331	P	P	20 44 12.5	-0.1
FINES	FINESS Array B	66.70	331	P	P	20 44 11.8	-0.8
	comp=Z,0.7nm,0.6s,baz=61,slow=9.0,SNR=5.3						
	comp=Z,0.7nm,0.6s						
HFS	Hagfors	72.02	335	P	P	20 44 45.0	-0.6
	comp=Z,0.6nm,0.4s,baz=35,slow=6.2,SNR=7.6						
	comp=Z,0.6nm,0.4s						
AKASG	Malin Array Be	72.11	321	P	P	20 44 45.7	-0.5
	comp=Z,1.1nm,0.4s,baz=45,slow=6.2,SNR=8.0						
	comp=Z,1.1nm,0.4s						
NOA	NORSAR Array B	72.14	336	P	P	20 44 45.8	-0.5
	comp=Z,0.6nm,0.6s,baz=40,slow=6.1,SNR=3.4						
	comp=Z,0.6nm,0.6s						
NVAR	Mina Array Bea	75.29	53	P	P	20 45 06.5	+1.1
	comp=Z,0.5nm,0.6s,baz=291,slow=5.4,SNR=4.3						
	comp=Z,0.5nm,0.6s						
BRTR	Keskin Array B	76.65	310	P	P	20 45 13.8	+0.7
	comp=Z,0.7nm,0.7s,baz=124,slow=2.6,SNR=4.3						
	comp=Z,0.7nm,0.7s						
PDAR	Pinedale Array	77.67	45	P	P	20 45 18.7	-0.2
	comp=Z,0.4nm,0.6s,baz=25,slow=2.0,SNR=3.6						
	comp=Z,0.4nm,0.6s						
GERES	GERESS Array B	80.56	327	P	P	20 45 34.3	-0.1
	comp=Z,0.3nm,0.5s,baz=35,slow=7.3,SNR=3.6						
	comp=Z,0.3nm,0.5s						

SKHL ***20*** *20:35:46.6±0.4, 47.°80N×145.°70E, h508^{km}±7^{km}, mb4.3/4, msha4.6/2*

MOS ***20*** *20:35:46.5±1.1, 47.°89N×145.°15E, h490^{km}, mb3.9/1, Error ellipse: s-maj=20.2km s-min=11.8km az=81.2*

IDC ***20*** *20:35:47.1±1.0, 47.°96N×145.°04E, h477^{km}±13^{km}, mb3.0/9, mbtmp4.0/16, Error ellipse: s-maj=19.3km s-min=14.0km az=126.0*

JMA ***20*** *20:35:49.0±0.4, 47°N±3°×14°5E±°, h507^{km}, MV3.6/17, SOUTHERN SEA OF OKHOTSK*

ISC 20 20:35:46.5±0.6**, 47.°59N**±0.°06×**145.°28E**±0.°09**, h500**^{km}**, n43, σ1^{s}.41**/55**, mb3.5**/9**, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YSS	Yuzhno-Sakhali	1.83	251	*e*PN	P	20 36 51.2	+0.5
YSS				*e*S	S	20 37 41.3	-1.7
YSS				pmax	pmax		
	comp=Z,60nm,0.9s						

YSS				smax	smax		
	comp=N,60nm,0.9s						
YSS				smax	smax		
	comp=E,40nm,0.8s						
YSS	Yuzhno-Sakhali	1.83	251	*e*P	P	20 36 51.2	+0.5
YSS				AMB	AMB	20 36 51.8	
	comp=E,40nm,0.8s						
YSS				*e*S	S	20 37 41.3	-1.7
YSS				A	A	20 37 42.0	
	comp=E,50nm,0.6s						
YSS				A	A	20 37 42.0	
	comp=E,20nm,0.6s						
JSE	Soyaes	3.23	216	*e*P	P	20 37 00.3	+1.3
JWK2	Keihoku	3.26	227	*e*P	P	20 37 01.0	+1.8
JRBN	Rebuntou	3.62	235	*e*P	P	20 37 02.7	+0.8
JRA	Rausu	3.65	182	*e*P	P	20 37 03.9	+1.7
TYV	Tymovskoe	3.70	333	*e*PN	P	20 37 00.6	-1.7
TYV				pmax	pmax		
	comp=Z,12nm,0.6s						
TYV				pmax	pmax		
	comp=Z,100nm,2.1s						
TYV	Tymovskoe	3.70	333	*e*P	P	20 37 00.6	-1.7
TYV				AMB	AMB	20 37 00.9	
	comp=Z,10.0nm,0.6s						
JTKR	Abashiri--Toko	3.74	195	*e*P	P	20 37 04.5	+1.6
SHO	Shikotan	3.88	163	*e*PN	P	20 37 04.3	+0.4
SHO				*e*S	S	20 38 05.3	-1.7
SHO				smax	smax		
	comp=E,69nm,0.4s						
SHO				smax	smax		
	comp=N,47nm,0.3s						
SHO	Shikotan	3.88	163	*e*P	P	20 37 04.5	+0.6
SHO				AMB	AMB	20 37 05.4	
	comp=N,60nm,0.5s						
SHO				*e*S	S	20 38 05.6	-1.4
SHO				A	A	20 38 08.7	
	comp=N,50nm,0.5s						
SHO				A	A	20 38 08.7	
	comp=N,70nm,0.5s						
ASAJ	Asahikawa	3.94	209	P	P	20 37 06.2	+1.7
	comp=N,19nm,0.7s,baz=350,slow=5.2,SNR=14						
ASAJ				S	S	20 38 08.3	+0.3
	comp=N,5.3nm,0.9s,baz=91,slow=28,SNR=1.9						
JKA	Kamikawa-asahi	3.94	209	*e*P	P	20 37 06.2	+1.7
JKA				*e*S	S	20 38 08.3	+0.3
NMR	Nemuro--Hokkai	4.23	176	*e*P	P	20 37 06.5	-0.3
NMR				*e*S	S	20 38 10.8	-1.5
NEM2	Nemuro 2	4.24	175	*e*P	P	20 37 06.5	-0.4
NEM2				*e*S	S	20 38 10.7	-1.6
JAR	Ashorobuto	4.42	194	*e*P	P	20 37 10.0	+1.6
AKK	Akkeshi	4.58	184	*e*P	P	20 37 09.9	+0.1
AKK				*e*S	S	20 38 15.2	-2.5
JCH	Churui	5.16	196	P	P	20 37 15.1	+0.2
JCH				*e*S	S	20 38 24.1	-3.0
JNBK	Urakawa-nobuka	5.60	200	P	P	20 37 19.7	+0.7
JNBK				*e*S	S	20 38 32.5	-2.1
NKL	Nikolayevsk	6.29	334	*e*P	P	20 37 23.4	-2.0
NKL				AMB	AMB	20 37 23.9	
	comp=N,40nm,0.4s						
JOT	Ohata	6.90	207	*e*P	P	20 37 32.2	+0.5
JOT				*e*S	S	20 38 54.1	-3.7
JANG	Nango	7.70	202	*e*S	S	20 39 10.8	-2.1
KLR	Kul'dur	9.15	285	P	P	20 37 54.3	-0.4
	comp=N,3.7nm,0.6s,baz=89,slow=11,SNR=9.2						
KLR	Kul'dur	9.15	285	*e*P	P	20 37 54.6	-0.1
PETK	Petropavlovsk-	9.67	51	P	P	20 38 00.4	+0.3
	comp=N,3.7nm,0.8s,baz=226,slow=6.9,SNR=6.2						
USRK	Ussuriysk Ar.	9.86	255	P	P	20 38 02.9	+0.5
	comp=N,5.1nm,0.6s,baz=60,slow=12,SNR=12						
MA2	Magadan	12.44	13	P	P	20 38 28.0	-1.3
	comp=N,6.9nm,0.5s,baz=200,slow=10,SNR=7.5						
MA2	Magadan	12.44	13	PN	P	20 38 28.0	-1.3
MA2	Magadan	12.44	13	*e*P	P	20 38 28.0	-1.3
SEY	Seymchan	15.89	12	P	P	20 39 04.2	-1.3
	comp=N,8.7nm,0.5s,baz=186,slow=9.4,SNR=35						
KSRS	Korea Array	16.28	238	P	P	20 39 12.2	+2.2
	comp=N,1.8nm,0.7s,baz=39,slow=11,SNR=6.7						
ILAR	Eielson Array	39.24	39	P	P	20 42 31.1	+0.3
	comp=N,1.1nm,0.7s,baz=277,slow=8.7,SNR=10						
	comp=N,1.1nm,0.7s						
KURK	Kurchatov	42.38	300	P	P	20 42 56.4	+0.5
KURK						20 44 39.9	
KURK	Kurchatov	42.38	300	*e*P	P	20 42 56.4	+0.5
KURBB	Kurchatov Arra	42.47	300	P	P	20 42 56.4	-0.2
	comp=N,0.6nm,0.6s,baz=67,slow=8.4,SNR=4.8						
KURBB				PcP	PcP	20 44 39.9	+1.9
	comp=N,0.4nm,0.5s,baz=81,slow=3.2,SNR=4.3						
	comp=N,0.6nm,0.6s						
ARCES	ARCESS Array B	55.19	338	P	P	20 44 30.3	-0.6
	comp=N,1.4nm,0.9s,baz=47,slow=7.3,SNR=1.6						
	comp=N,1.4nm,0.9s						
FINES	FINESS Array B	60.87	331	P	P	20 45 08.8	-0.7
	comp=N,0.9nm,0.4s,baz=31,slow=6.3,SNR=14						
	comp=N,0.9nm,0.4s						
NB2	NORSAR Subarra	65.55	337	P	P	20 45 39.3	-0.3
	comp=Z,0.8nm,0.4s,baz=31,slow=6.5						
NOA	NORSAR Array B	65.55	337	P	P	20 45 39.3	-0.3
	comp=Z,0.6nm,0.5s,baz=39,slow=7.4,SNR=8.6						
	comp=Z,0.6nm,0.5s						
HFS	Hagfors	65.65	336	P	P	20 45 39.6	-0.6
	comp=Z,1.2nm,0.3s,baz=27,slow=4.5,SNR=13						
	comp=Z,1.2nm,0.3s						
PDAR	Pinedale Array	68.44	50	P	P	20 45 59.1	+1.1
	comp=Z,0.4nm,0.6s,baz=283,slow=7.6,SNR=2.6						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	71.66	191	P	P	20 46 22.4	+5.4
	comp=Z,0.8nm,0.5s,baz=359,slow=5.1,SNR=6.5						
	comp=Z,0.8nm,0.5s						
GERES	GERESS Array B	75.18	329	P	P	20 46 37.4	+0.4
	comp=Z,0.2nm,0.5s,baz=29,slow=6.8,SNR=2.2						
	comp=Z,0.2nm,0.5s						

*IDC **20** 20:36:16.7±0.7, 8°.20S×116°.73E, h0^{km}, mb4.1/10, mbtmp4.1/13, ML3.9/3, MS3.2/6, Error ellipse: s-maj=19.8km s-min=10.3km az=54.0*

*NEIC **20** 20:36:17.9±2.1, 8°.22S±0°.09×116°.61E±0°.06, h10^{km}±2^{km}, mb4.3/6, Error ellipse: s-maj=15.6km s-min=10.6km az=356.0*

*DJA **20** 20:36:18.9±0.2, 8°S±2°×11°7E±°, h10^{km}, M4.5/21, mB4.9/3, mb4.6/10, MLv4.5/21, Mw(mB)4.1/3*

ISC 20 20:36:21.3±0.5,**8°.20S**±0°.05×**116°.62E**±0°.04,**h35**^{km},**n62**, σ**1^{s}.35**/66,**mb4.2**/11,**MS3.5**/4,**Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	Plampang	1.30	119	P	Pn	20 36 43.0	0.0
PLAI	Plampang	1.30	119	P	Pn	20 36 43.2	+0.2
PLAI				S	Sn	20 37 01.3	+2.1
SRBI	Singaraja	1.40	275	P	Pn	20 36 43.8	-0.6
SRBI				S	Sn	20 37 03.1	+1.5
DNP	Denpasar	1.47	251	P	Pn	20 36 46.3	+0.9
JAGI	Jajag, Banyuwa	2.46	264		Pn	20 36 58.0	-1.0
JAGI	Jajag, Banyuwa	2.46	264	P	Pn	20 36 58.2	-0.7
JAGI	Jajag, Banyuwa	2.46	264	P	Pn	20 36 58.1	-0.8
KMMI	Kalianget	2.87	293	P	Pn	20 37 04.9	+0.3
WBSI	Waikabubak, Su	3.09	118	P	Pn	20 37 07.3	-0.4
GMJI	Gumukmas	3.15	268	P	Pn	20 37 08.4	0.0
WSI	Waingapu	3.91	112	P	Pn	20 37 18.8	-0.2
BSSI	Bau Bau, Buton	4.35	62	P	Pn	20 37 24.5	-0.5
BASI	Baing, Sumba	4.39	117	P	Pn	20 37 28.0	+2.5
KAPI	Kappang	4.44	45		Pn	20 37 25.4	-0.8
KAPI	Kappang	4.44	45	Pn	Pn	20 37 25.7	-0.6
	3.9nm,0.3s,baz=197,slow=6.7,SNR=9.9						
KAPI				Sn	Sn	20 38 16.7	0.0
	22nm,0.3s,baz=168,slow=20,SNR=16						
KAPI				Lg	Lg	20 38 36.4	
	9.5nm,0.3s,baz=242,slow=8.1,SNR=3.9						
KAPI				LR	LR	20 38 51.4	
	comp=Z,47nm,21.3s,baz=224,slow=35						
	8.1nm,0.3s						
KAPI	Kappang	4.44	45	P	Pn	20 37 25.6	-0.6
EDFI	Ende, Flores	5.04	97	P	Pn	20 37 34.6	0.0
	0.3nm793nm105nm,1.1s						
BNSI	Bone	5.12	43	P	Pn	20 37 35.6	0.0
	0.7nm55nm,0.7s						
BNSI				S	Sn	20 38 33.9	+0.3
	0.7nm55nm,0.7s						
SPSI	Sidrap Palu	5.25	37	P	Pn	20 37 36.8	-0.5
	0.3nm902nm31nm,0.7s						
PCJI	Pacitan	5.39	270	P	Pn	20 37 39.1	-0.2
	0.5nm98nm,1.3s						
PCJI				S	Sn	20 38 42.4	+2.3
	0.5nm98nm,1.3s						
MMRI	Maumere	5.57	95		Pn	20 37 38.9	-2.9
MMRI	Maumere	5.57	95	P	Pn	20 37 42.9	+1.1
MMRI	Maumere	5.57	95	P	Pn	20 37 42.4	+0.6
TTSI	Tana Toraja	6.03	32	P	Pn	20 37 47.9	-0.2
	0.2nm24nm,0.7s						
TTSI				S	Sn	20 38 57.7	+1.7
	0.2nm24nm,0.7s						
UGM	Wanagama	6.04	272	Pn	Pn	20 37 50.3	+1.9
UGM	Wanagama	6.04	272	P	Pn	20 37 50.0	+1.7
UGM	Wanagama	6.04	272	P	Pn	20 37 49.2	+0.9
	0.4nm95nm,1.3s						
BATI	Baumata	7.23	107	Pn	Pn	20 38 02.6	-2.0
	4.7nm,0.3s,baz=284,slow=5.2,SNR=5.7						
BATI				Sn	Sn	20 39 25.8	+0.1
	baz=285,slow=20						
	19nm,0.6s						
BATI	Baumata	7.23	107	P	Pn	20 38 05.0	+0.4
	0.3nm66nm,1.0s						
SOEI	Soe	7.71	102	Pn	Pn	20 38 11.6	+0.3
SOEI	Soe	7.71	102	P	Pn	20 38 11.8	+0.5
	39nm,0.8s						
FITZ	Fitzroy Crossi	13.18	139	Pn	Pn	20 39 24.0	-2.1
FITZ	Fitzroy Crossi	13.18	139	Pn	Pn	20 39 23.8	-2.3
	0.5nm,0.3s,baz=336,slow=11,SNR=9.6						
	5.7nm,0.8s						
MBWA	Marble Bar	13.23	167		Pn	20 39 25.0	-1.8
PSA00	Pilbara Seismi	13.65	167	Pn	Pn	20 39 30.2	-2.4
KNRA	Kununurra	14.01	123	Pn	Pn	20 39 36.0	-1.4
GIRL	Giralia	14.54	189		Pn	20 39 41.4	-3.3
MTN	Manton Dam	14.99	109	Pn	Pn	20 39 47.8	-3.0
DAV	Davao City (W)	17.61	31	LR	LR	20 48 39.4	
	comp=Z,70nm,18.2s,baz=232,slow=42						
WB0	Warramunga Arr	20.70	126		P	20 40 58.0	-0.8
WB0				IAmb	IAmb	20 41 02.4	
	comp=Z,14nm,1.1s						
WRA	Warramunga Arr	20.75	126		P	20 40 58.4	-0.8
WRA	Warramunga Arr	20.75	126	P	P	20 40 58.2	-1.0
	comp=Z,7.8nm,0.7s,baz=299,slow=12,SNR=41						
WRA				S	S	20 44 50.1	+1.0
	comp=Z,0.4nm,0.7s,baz=298,slow=27,SNR=3.0						
	comp=Z,7.8nm,0.7s						
WR8	Warramunga Arr	20.88	126		P	20 41 00.1	-0.6
WR8				IAmb	IAmb	20 41 05.0	
	comp=Z,16nm,0.8s						
TGY	Tagaytay City	22.57	11	LR	LR	20 52 22.5	
	comp=Z,33nm,19.0s,baz=2.5,slow=43						
AS31	Alice Springs	22.60	135		P	20 41 18.6	-0.5
AS31				IAmb	IAmb	20 41 22.7	
	comp=Z,2.9nm,0.6s						
ASAR	Alice Springs	22.60	135		P	20 41 18.4	-0.7
ASAR	Alice Springs	22.60	135	P	P	20 41 18.8	-0.4
	comp=Z,5.5nm,0.5s,baz=311,slow=8.9,SNR=69						
ASAR				S	S	20 45 27.7	+3.0
	comp=Z,0.3nm,0.8s,baz=24,slow=12,SNR=2.0						
	comp=Z,5.5nm,0.5s						
CMAR	Chiang Mai Arr	31.72	327	P	P	20 42 43.4	+1.3
	comp=Z,0.5nm,0.7s,baz=143,slow=8.4,SNR=2.5						
	comp=Z,0.5nm,0.7s						
STKA	Stephens Creek	33.08	139	P	P	20 42 54.0	+0.1
STKA	Stephens Creek	33.08	139	P	P	20 42 54.2	+0.3
	comp=Z,5.3nm,0.7s,baz=310,slow=9.7,SNR=12						
	comp=Z,5.3nm,0.7s						
USRK	Ussuriysk Ar.	53.98	14	P	P	20 45 42.7	+0.9
	comp=Z,2.6nm,0.7s,baz=208,slow=11,SNR=6.9						
	comp=Z,2.6nm,0.7s						
SONM	Songino Array	56.52	352	P	P	20 46 00.5	+0.2
	comp=Z,1.3nm,0.6s,baz=175,slow=10,SNR=7.6						
	comp=Z,1.3nm,0.6s						
MKAR	Makanchi Array	62.70	334	P	P	20 46 43.2	+0.5
	comp=Z,1.9nm,0.7s,baz=142,slow=7.8,SNR=12						
	comp=Z,1.9nm,0.7s						
SIMJ	Simiganj	64.26	320		P	20 46 51.2	-2.1
SIMJ				IAmb	IAmb	20 46 51.9	
	comp=Z,4.3nm,0.8s						
KURBB	Kurchatov Arra	67.23	335	P	P	20 47 13.0	+1.0
	comp=Z,0.3nm,0.3s,baz=149,slow=4.4,SNR=4.4						
	comp=Z,0.3nm,0.3s						
ZALV	Zalesovo Beam	67.48	340	P	P	20 47 13.7	+0.2
	comp=Z,1.8nm,0.7s,baz=164,slow=3.3,SNR=7.0						
	comp=Z,1.8nm,0.7s						
VNDA	Vanda	73.14	171	P	P	20 47 49.2	+1.3
	comp=Z,1.3nm,0.9s,baz=310,slow=5.7,SNR=4.1						
	comp=Z,1.3nm,0.9s						
AKTO	Aktyubinsk	77.24	326	LR	LR	21 27 22.7	
	comp=Z,22nm,18.5s,baz=20,slow=40						
TIXI	Tiksi	80.10	4	LR	LR	21 27 48.3	
	comp=Z,25nm,18.5s,baz=205,slow=39						
LSZ	Lusaka	86.37	255	LR	LR	21 22 06.4	
	comp=Z,30nm,18.5s,baz=148,slow=32						
CPUP	Villa Florida	145.17	190	PKPbc	PKPdf	20 55 55.9	-0.2
	comp=Z,1.0nm,0.7s,baz=204,slow=10.0,SNR=5.6						
LPAZ	La Paz	155.22	169	PKPab	PKPab	20 56 39.0	+1.6
	comp=Z,0.8nm,0.5s,baz=199,slow=1.6,SNR=4.4						

*IDC **20** 20:36:31.7±1.1, 28°.36N×143°.67E, h0^{km}, mb3.8/11, mbtmp3.9/16, ML3.8/5, MS2.7/2, Error ellipse: s-maj=29.0km s-min=16.8km az=90.0*

*NEIC **20** 20:36:33.7±1.6, 28°.44N±0°.05×143°.66E±0°.09, h10^{km}±2^{km}, mb4.5/22, Error ellipse: s-maj=15.7km s-min=4.4km az=60.0*

*NIED **20** 20:36:38.8, 28°.50N×143°.16E, h59^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.27; $M_{\theta\theta}$0.87; $M_{\phi\phi}$-1.14; $M_{r\theta}$-0.09; $M_{\theta\phi}$0.43; $M_{\phi r}$0.46; Fault plane solution: $M_0$1.16000×10^{15} NP1: ϕ_s122.00000°, δ78.00000°, λ-11.00000°. NP2: ϕ_s214.00000°, δ79.00000°, λ-168.00000°.*

*JMA **20** 20:36:38.8±0.3, 28°.5N±0°.8×14°3E±°, h59^{km}, MV4.6/33, NEAR CHICHIJIMA ISLAND*

ISC 20 20:36:37.7±0.9,**28°.50N**±0°.05×**143°.5E**±0°.1,**h40**^{km},**n76**, σ**2^{s}.10**/73,**mb4.3**/19,**Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	1.81	220	P	Pn	20 37 06.1	-0.3
CBIJ				*e*S	Sn	20 37 25.9	-2.2
JCJ	Chichijima	1.81	220		Pn	20 37 06.0	-0.4
JCJ	Chichijima	1.81	220	Pn	Pn	20 37 04.5	-1.8
JCJ				Sn	Sn	20 37 24.4	-3.7
JHH2	Haha-jima-NKT2	2.19	212	P	Pn	20 37 11.3	-0.3
JHCJ	Hachijojimakas	5.56	326	S	Sn	20 38 58.5	-2.0
JHJ2	Mitsune	5.58	326	Pn	Pn	20 37 58.8	+0.7
JHJ2				Sn	Sn	20 38 54.8	-6.2
JHJ2	Mitsune	5.58	326	*e*P	Pn	20 37 58.4	+0.3
JHJ2				*e*S	Sn	20 38 58.7	-2.3
JMKN	Mikurajimanish	6.33	329	*e*S	Sn	20 39 18.4	-1.1
JMYK	Miyake Tsubota	6.49	330	*e*S	Sn	20 39 21.9	-1.5
BSO1	Boso 1	6.50	341	*e*P	Pn	20 38 10.0	-0.3
BSO1				*e*S	Sn	20 39 21.5	-1.4
BSO3	Boso 3	6.78	339	*e*P	Pn	20 38 15.6	+1.3
BSO4	Boso 4	7.01	338	*e*S	Sn	20 39 36.6	+0.6
JOD2	Odawara 2	7.71	332	*e*P	Pn	20 38 28.9	+1.4
JOD2				*e*S	Sn	20 39 51.4	-2.1
JHMK	Hamakita	7.97	324	*e*P	Pn	20 38 33.0	+2.2
JIE	Ise	8.25	317	*e*P	Pn	20 38 37.7	+2.9
JNY	Yasuok	8.35	326	*e*P	Pn	20 38 39.0	+2.8
JRY	Ryogami san	8.44	334	*e*P	Pn	20 38 38.8	+1.3
JRY				*e*S	Sn	20 40 07.7	-3.8
JAO	Obara	8.58	323	*e*P	Pn	20 38 42.2	+2.9
JAG	Ashikaga	8.61	338	*e*P	Pn	20 38 40.1	+0.4
JAG				*e*S	Sn	20 40 12.0	-3.5
INU	Inuyama	8.77	323	Pn	Pn	20 38 39.3	-2.6
JGF	Kuroka	8.79	325		Pn	20 38 43.9	+1.7
MJAR	Matsushiro Arr	9.18	332	Pn	Pn	20 38 48.1	+0.6
MJAR	Matsushiro Arr	9.18	332	Pn	Pn	20 38 48.8	+1.4
	0.6nm,0.3s,baz=160,slow=12,SNR=12						
MJAR				Sn	Sn	20 40 29.9	+0.4
	0.5nm,0.3s,baz=182,slow=27,SNR=7.0						
	4.3nm,0.4s						
MAJO	Matsushiro	9.18	332		Pn	20 38 48.5	+1.0
MJB9	Matsu-Tunnel	9.18	332		Pn	20 38 48.5	+1.0
JMM	Marumori	9.61	347		Pn	20 38 52.0	-1.5
JSD	Sado	10.47	337		Pn	20 39 05.0	-0.2
JNU	Nakatsue	11.78	296		Pn	20 39 23.0	-0.1
JNU	Nakatsue	11.78	296	Pn	Pn	20 39 24.5	+1.4
	0.2nm,0.3s,baz=47,slow=18,SNR=4.5						
JNU				LR	LR	20 43 37.0	
	comp=Z,45nm,21.5s,baz=108,slow=36						
	9.5nm,1.1s						
ERM	Erimo	13.49	359	Pn	Pn	20 39 43.1	-3.4
JKA	Kamikawa-asahi	15.61	358	Pn	Pn	20 40 13.3	-1.3
ASAJ	Asahikawa	15.61	358	Pn	Pn	20 40 13.1	-1.6
	2.3nm,0.3s,baz=220,slow=11,SNR=17						
ASAJ				Sn	Sn	20 42 56.5	-10
	0.6nm,0.3s,baz=96,slow=28,SNR=5.8						
	4.8nm,0.3s						
KSRS	Korea Array	15.81	308	Pn	Pn	20 40 18.6	+1.2
	0.4nm,0.3s,baz=119,slow=11,SNR=16						
	2.7nm,0.6s						
INCN	Inchon	16.72	307	Pn	Pn	20 40 28.5	-0.5
INCN				IAmb	IAmb	20 40 32.0	
	comp=Z,45nm,1.4s						
USRK	Ussuriysk Ar.	18.17	333	P	P	20 40 46.6	-0.1
USRK	Ussuriysk Ar.	18.17	333	P	Pn	20 40 49.1	+2.2
	comp=Z,0.6nm,0.3s,baz=156,slow=8.8,SNR=9.5						
	comp=Z,1.0nm,0.4s						
NACB	Ninganchiao	20.08	263	P	P	20 41 07.5	-0.4
NACB				IAmb	IAmb	20 41 25.0	
	comp=Z,38nm,1.5s						
YHNB	Yeheng	20.13	264	P	P	20 41 08.7	+0.2
YHNB				IAmb	IAmb	20 41 09.8	
	comp=Z,19nm,0.8s						
YULB	Yu-li	20.58	261	P	P	20 41 13.2	0.0
SSLB	Suanglung	20.76	262	P	P	20 41 16.3	+1.1
SSLB				IAmb	IAmb	20 41 17.1	
	comp=Z,31nm,1.4s						
KLR	Kul'dur	22.58	340	P	P	20 41 37.0	+2.5
	comp=Z,0.5nm,0.3s,baz=181,slow=6.8,SNR=9.1						
	comp=Z,0.5nm,0.3s						
H11N2	WAKE ISLAND Hy	23.05	107	T	T	21 06 55.7	
	baz=297						
H11N1	WAKE ISLAND Hy	23.05	107	T	T	21 06 55.7	
	baz=297						
H11N3	WAKE ISLAND Hy	23.06	107	T	T	21 06 55.7	
	baz=297						
H11S3	WAKE ISLAND Hy	23.45	110	T	T	21 07 28.8	
	baz=297,slow=75,SNR=3.1						
H11S1	WAKE ISLAND Hy	23.45	110	T	T	21 07 28.8	
	baz=297,slow=75,SNR=3.1						
H11S2	WAKE ISLAND Hy	23.47	110	T	T	21 07 28.8	
	baz=297,slow=75,SNR=3.7						
PETK	Petropavlovsk-	26.74	19	LR	LR	20 54 26.1	
	comp=Z,13nm,19.9s,baz=183,slow=40						
ULN	Ulaanbaatar	34.13	315	P	P	20 43 19.5	+0.6
ULN				IAmb	IAmb	20 43 22.1	
	comp=Z,5.2nm,0.7s						
SONM	Songino Array	34.54	314	P	P	20 43 23.1	+0.7
SONM	Songino Array	34.54	314	P	P	20 43 24.6	+2.3
	comp=Z,3.4nm,0.7s,baz=119,slow=8.2,SNR=25						
	comp=Z,3.4nm,0.7s						
CMAR	Chiang Mai Arr	41.86	266	P	P	20 44 24.0	-0.1
	comp=Z,0.4nm,0.7s,baz=76,slow=8.3,SNR=1.9						
	comp=Z,0.4nm,0.7s						
WRA	Warramunga Arr	48.96	191	P	P	20 45 19.4	-0.8
	comp=Z,1.5nm,0.5s,baz=12,slow=8.5,SNR=6.6						
	comp=Z,1.5nm,0.5s						
ZALV	Zalesovo Beam	49.20	318	P	P	20 45 22.5	+0.8
	comp=Z,0.3nm,0.3s,baz=97,slow=12,SNR=2.5						
	comp=Z,0.3nm,0.3s						
MK31	Makanchi Array	50.49	309	P	P	20 45 32.5	+0.9
MKAR	Makanchi Array	50.49	309	P	P	20 45 33.6	+1.9
MKAR	Makanchi Array	50.49	309	P	P	20 45 32.9	+1.2
	comp=Z,1.6nm,0.8s,baz=92,slow=9.2,SNR=16						
	comp=Z,1.6nm,0.8s						
MAKZ	Makanchi	50.70	309	P	P	20 45 34.1	+0.9
ASAR	Alice Springs	52.68	191	P	P	20 45 47.6	-0.6
	comp=Z,0.1nm,0.4s,baz=12,slow=6.3,SNR=1.1						
	comp=Z,0.1nm,0.4s						
KURK	Kurchatov	52.84	314	P	P	20 45 49.6	+0.5
KURK				IAmb	IAmb	20 45 50.9	
	comp=Z,2.8nm,0.7s						
KURBB	Kurchatov Arra	52.90	314	P	P	20 45 50.2	+0.7
	comp=Z,2.3nm,0.7s,baz=90,slow=7.8,SNR=28						
	comp=Z,2.3nm,0.7s						
TARG	Taragay, Kyrgy	54.12	303	IAmb	IAmb	20 46 02.4	
	comp=Z,5.1nm,0.9s						
NRN	Naryn	55.51	303	IAmb	IAmb	20 46 11.8	
	comp=Z,6.0nm,1.2s						
ILAR	Eielson Array	55.93	29	P	P	20 46 11.5	+0.1
	comp=Z,0.4nm,0.8s,baz=266,slow=6.1,SNR=5.3						
	comp=Z,0.4nm,0.8s						
ARSB	Arslanbob	57.76	303	IAmb	IAmb	20 46 27.4	
	comp=Z,4.4nm,0.7s						
BVAR	Borovoye Array	57.80	317	P	P	20 46 25.1	+0.3
	comp=Z,1.6nm,0.5s,baz=94,slow=7.6,SNR=12						
	comp=Z,1.6nm,0.5s						
KK31	Karatay Array	59.21	305	IAmb	IAmb	20 46 37.3	
	comp=Z,3.6nm,0.7s						
KKAR	Karatay Array	59.21	305		P	20 46 35.4	+0.6
KKAR	Karatay Array	59.21	305	IAmb	IAmb	20 46 37.3	
	comp=Z,3.7nm,0.7s						
NIL	Nilore	59.33	294	P	P	20 46 36.7	+0.8
SIMJ	Simiganj	61.34	301		P	20 46 50.5	+0.9
AB31	Akbulak array	64.95	314		P	20 47 13.7	+0.5
AB31				IAmb	IAmb	20 47 20.8	
	comp=Z,3.9nm,1.2s						
ABKAR	Akbulak array	64.95	314	P	P	20 47 14.1	+0.9
ABKAR	Akbulak array	64.95	314	P	P	20 47 14.2	+1.0
ABKAR				IAmb	IAmb	20 47 20.8	
	comp=Z,3.9nm,1.2s						
URZ	Urewera	73.48	153	LR	LR	21 15 48.7	
	comp=Z,366nm,21.9s,baz=26,slow=32						
FINES	FINESS Array B	77.20	334	P	P	20 48 27.9	+0.8
	comp=Z,1.5nm,0.8s,baz=82,slow=4.0,SNR=7.4						
	comp=Z,1.5nm,0.8s						

*AEIC **20** 20:38:37.3±1.8, 51°.14N±0°.05×179°.89W±0°.05, h13^{km}±6^{km}, Error ellipse: s-maj=7.0km s-min=4.1km az=181.0*

NEIC 20 20:38:36.0±0.8,**51°.02N**±0°.03×**179°.91W**±0°.06, **h21**^{km}±12^{km},**ML3.1**/8,**ML2.6**(AEIC),**Error ellipse: s-maj=6.1km s-min=3.5km az=123.0,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMKA	Amchitka	0.61	306		Pb	20 38 48.3	+0.2
AMKA					Pn	20 38 56.4	+6.9
AMKA					Sb	20 38 56.5	+0.2
CESW	Semis' Southwe	0.94	340		Pb	20 38 53.8	+0.1
CESW					Sb	20 39 05.6	-0.1
CERB	Semis' Cerberu	0.96	343		Pn	20 38 54.4	+0.2
CERB					Sb	20 39 06.6	+0.4
CEPE	Semis' Perret	0.99	344		Pb	20 38 54.2	-0.2
GASW	Gareloi Southw	1.01	41		Pb	20 38 54.3	-0.4
GASW					Sb	20 39 07.1	-0.4
CETU	Semis' Tuman	1.02	339		Pb	20 38 55.0	0.0
CETU					Sn	20 39 08.4	-0.3
GALAA	Gareloi Lava P	1.03	43		Pb	20 38 54.9	-0.2
CEAP	Semis' Anvil P	1.04	342		Pn	20 38 55.3	0.0
GANO	Gareloi North	1.06	40		Pn	20 38 54.8	-0.8
GANE	Gareloi Northe	1.07	41		Pn	20 38 55.1	-0.7
GANE					Sb	20 39 08.9	-0.5
LSSE	Little Sitkin	1.32	314		Pb	20 38 59.8	-0.3
LSPA	Little Sitkin	1.33	315		Pb	20 39 00.1	-0.2
LSPA					Sn	20 39 16.5	0.0
LSPA					Sb	20 39 18.8	+1.8
LSNW	Little Sitkin	1.37	315		Sb	20 39 18.1	+0.2
TASE	Tanaga Southea	1.43	54		Pn	20 39 01.0	+0.3
TANO	Tanaga North	1.43	51		Pn	20 39 00.9	+0.2
KIWB	Kanaga Island	1.92	63		Pn	20 39 07.5	+0.1
KICM	Kanaga Island	1.92	61		Pn	20 39 08.4	+1.0
KICM					Pb	20 39 09.1	-1.2
KIRH	Kanaga Island	1.97	62		Pn	20 39 08.9	+0.8
KIRH					Pb	20 39 09.2	-1.9
ADK	Adak	2.19	66		Pn	20 39 11.2	0.0
ADK				IAML		20 39 46.8	
	114nm,0.4s						
ADK	Adak	2.19	66		Sn	20 39 38.4	+0.7
GSCK	Great Sitkin C	2.54	66		Pn	20 39 17.2	+1.2
GSTR	Great Sitkin T	2.63	64		Pn	20 39 16.7	-0.5
ATKA	Atka Island	3.75	69		Pn	20 39 34.3	+1.7
ATKA	Atka Island	3.75	69	IAML		20 40 29.5	
	comp=N,25nm,0.8s						
SHEM	Shemya Is, Ala	4.09	297	Pn	Pn	20 39 37.4	+0.2
SHEM				IAML		20 42 20.9	
	comp=N,24nm,0.1s						
SMY	Shemya	4.09	297	Pn	Pn	20 39 37.3	+0.1
SMY				IAML		20 40 07.2	
	comp=N,31nm,0.1s						
SMY	Shemya	4.09	297	P	Pn	20 39 37.3	+0.1

JMA 20 20:38:37.5±0.1,**33°.5N**±0°.2×**134°.4E**±0°.4,**h31**^{km},**MV0.5**/18, **SE OFF SHIKOKU,Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRT2	Murotomisaki 2	0.22	245	P	Pb	20 38 43.8	-0.3
MRT2				*e*S	Sb	20 38 48.1	-0.4
JAI	Aioi	0.32	11	S	Sb	20 38 50.5	-0.1
JMN	Monobe	0.48	301	Pn	Sb	20 38 54.7	-0.1

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMN	Monobe	0.48	301	P	Pb	20 38 47.5	-0.3
JMN				eS	Sb	20 38 54.9	0.0

DJA 20 20:45:11.0±0.4, 2°S±4°×10°0E±°, h49^{km}±33^{km}, M4.1/8, mB5.1/1, mb4.4/2, MLv4.0/8, Mw(mB)4.4/1, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SISI	Saibi	1.08	324	P	Pn	20 45 30.1	+0.3
PPI	Padang Panjang	1.87	21	P	Pn	20 45 41.0	+0.4
PPI				S	Sn	20 46 03.5	+0.5
MNAI	Manna	3.87	124	P	Pn	20 46 08.5	+0.4
GSI	Gunungsitoli	4.10	328	P	Pn	20 46 10.7	-0.5
MDSI	Maura Dua	4.99	117	P	Pn	20 46 24.4	+1.0
LWLI	Liwa	5.15	123	P	Pn	20 46 26.4	+0.7
	0.3nm2µm69nm,0.7s						
CNJI	Cibinong	8.95	125	P	Pn	20 47 16.4	-1.4

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*IDC **20** 20:45:54.6±0.8, 28.°79S×178.°19W, h242^{km}±21^{km}, mb3.0/2, mbtmp3.6/2, Error ellipse: s-maj=137.1km s-min=29.0km az=164.0*

ISC 20 20:45:54.7±1.2, 28.°8S±0.°4×178.°1W±0.°2, h250^{km}, n7, σ1.^{s}11/9, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	0.46	155	P	Pn	20 46 27.8	+0.4
	522nm,0.2s,baz=52,slow=20,SNR=27						
RAO				S	S	20 46 52.2	-1.0
	660nm,0.2s,baz=23,slow=20,SNR=5.0						
ASAR	Alice Springs	43.09	265	P	P	20 53 30.9	+0.2
	0.5nm,0.6s,baz=97,slow=6.9,SNR=11						
ASAR				PcP	PP	20 55 16.0	-0.3
	0.2nm,0.4s,baz=111,slow=3.4,SNR=1.9						
	0.5nm,0.6s						
WRA	Warramunga Arr	43.94	271	P	P	20 53 37.2	-0.2
	0.4nm,0.4s,baz=112,slow=6.5,SNR=8.9						
	0.4nm,0.4s						
NOA	NORSAR Array B	147.19	352	PKPbc	PKPbc	21 05 07.6	-0.3
	0.4nm,0.8s,baz=27,slow=1.2,SNR=1.9						
HFS	Hagfors	147.69	349	PKPbc	PKPbc	21 05 07.7	-1.4
	0.9nm,0.6s,baz=5.2,slow=3.1,SNR=1.7						
AKASG	Malin Array Be	149.97	324	PKPbc	PKPbc	21 05 15.0	-0.1
	0.1nm,0.3s,baz=55,slow=2.6,SNR=4.8						
MMAI	Mount Meron Ar	151.00	287	PKPbc	PKiKP	21 05 20.7	+2.0
	2.4nm,0.8s,baz=99,slow=4.8,SNR=4.6						

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*IDC **20** 21:03:44.5±3.0, 21.°79S×177.°36W, h291^{km}±28^{km}, mb3.2/6, mbtmp4.0/9, Error ellipse: s-maj=23.8km s-min=20.8km az=114.0*

ISC 20 21:03:45.3±1.0, 21.°8S±0.°1×177.°4W±0.°1, h300^{km}, n11, σ0.^{s}95/10, mb3.5/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	5.87	313	P	Pn	21 05 12.9	-0.5
	1.8nm,0.4s,baz=135,slow=20,SNR=1.5						
DZM	Mont Dzumac	14.99	266	P	Pn	21 07 04.3	+0.5
	8.8nm,0.9s,baz=88,slow=19,SNR=5.2						
URZ	Urewera	17.08	195	P	P	21 07 23.1	-1.9
	4.1nm,0.3s,baz=76,slow=4.2,SNR=7.7						
STKA	Stephens Creek	37.74	246	P	P	21 10 33.8	+0.6
	1.3nm,0.5s,baz=90,slow=11,SNR=6.8						
	1.3nm,0.5s						
ASAR	Alice Springs	44.77	258	P	P	21 11 30.6	+0.5
	3.1nm,0.8s,baz=91,slow=8.2,SNR=29						
	3.1nm,0.8s						
WRA	Warramunga Arr	44.98	263	P	P	21 11 31.2	-0.5
	0.5nm,0.4s,baz=95,slow=8.0,SNR=15						
	0.5nm,0.4s						
QSPA	South Pole Qui	68.29	180	P	P	21 14 15.3	+1.0
	0.6nm,0.6s,baz=88,slow=0.8,SNR=6.7						
	0.6nm,0.6s						
TXAR	Lajitas Array	87.29	57	P	P	21 15 59.0	+0.2
	0.4nm,0.8s,baz=252,slow=5.3,SNR=5.2						
	0.4nm,0.8s						
ILAR	Eielson Array	89.44	13	P	P	21 16 07.8	-0.1
	0.2nm,0.3s,baz=204,slow=4.5,SNR=1.5						
	0.2nm,0.3s						
AKASG	Malin Array Be	144.40	331	PKP	PKPbc	21 22 44.1	-0.8
	0.8nm,0.5s,baz=44,slow=4.0,SNR=8.8						
GERES	GERESS Array B	151.58	344	PKPbc	PKiKP	21 23 04.0	-0.5
	0.2nm,0.5s,baz=37,slow=5.7,SNR=4.0						

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*IDC **20** 21:11:31.2±1.5, 33.°75S×179.°98E, h0^{km}, mb4.4/5, mbtmp4.4/6, ML4.1/1, MS3.5/7, Error ellipse: s-maj=40.6km s-min=26.2km az=51.0*

*WEL **20** 21:11:35.5±0.5, 34°S±4°×18°0E±°, h33^{km}, M4.7/11, mB5.1/1, ML4.7/13, MLv4.7/11, Mw(mB)4.5/1, Error ellipse: s-maj=9.5km s-min=4.3km az=109.0, confirmed*

*NEIC **20** 21:11:37.5±0.8, 34.°0S±0.°1×179.°4E±0.°2, h10^{km}±1^{km}, mb4.6/9, Error ellipse: s-maj=24.3km s-min=16.1km az=111.0*

ISC 20 21:11:37.2±0.7, 33.°72S±0.°06×179.°66E±0.°08, h35^{km}, n54, σ1.^{s}73/53, mb4.7/13, MS3.4/5, 4C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	3.99	196	Pn	Pn	21 12 33.8	-2.0
MXZ	Matakaoa Point	3.99	196	P	Pn	21 12 35.0	-0.9
WMGZ	Waiomatatini S	4.22	193	P	Pn	21 12 37.8	-1.1
WMGZ				S	Sn	21 13 28.1	+1.1
HAZ	Te Kaha	4.31	200	P	Pn	21 12 38.6	-1.6
PKGZ	Pakihiroa	4.34	197	P	Pn	21 12 41.1	+0.4
PUZ	Puketiti	4.49	194	P	Pn	21 12 41.3	-1.5
PUZ				S	Sn	21 13 34.5	+0.7
RUGZ	Raukumara Rang	4.54	200	P	Pn	21 12 42.7	-0.8
RUGZ				S	Sn	21 13 34.4	-0.6
TWGZ	Tauwhareparae	4.66	196	P	Pn	21 12 44.0	-1.1
TWGZ				S	Sn	21 13 38.6	+0.8
GLKZ	Green Lake	4.90	26	P	Pn	21 12 48.4	+0.1
GLKZ				S	Sn	21 13 41.5	-2.3
WCZ	Waipu Caves	4.90	242	P	Pn	21 12 47.9	-0.5
CNGZ	Carnagh Statio	4.90	193	P	Pn	21 12 46.5	-1.9
CNGZ				S	Sn	21 13 45.3	+1.5
MWZ	Matawai	4.92	200	P	Pn	21 12 47.4	-1.3
MWZ				S	Sn	21 13 46.3	+1.9
TKGZ	Te Karaka	4.94	197	P	Pn	21 12 47.8	-1.0
TKGZ				S	Sn	21 13 44.4	-0.3
URZ	Urewera	4.98	204	Pn	Pn	21 12 46.7	-2.8
	6.3nm,0.3s,baz=50,slow=7.9,SNR=20						
URZ				Sn	Sn	21 13 41.8	-4.0
	0.4nm,0.3s,baz=314,slow=20,SNR=1.0						
	14nm,0.3s						
URZ	Urewera	4.98	204	P	Pn	21 12 47.3	-2.1
RAGZ	Rawiri	5.10	200	P	Pn	21 12 50.7	-0.5
OUZ	Omahuta	5.23	252	P	Pn	21 12 51.0	-1.8
OUZ				S	Sn	21 13 48.3	-3.5
RTZ	Ruatahuna	5.35	203		Pn	21 12 53.1	-1.5
PRGZ	Paritu Road	5.39	195	P	Pn	21 12 52.2	-2.9
SNGZ	Shannon Statio	5.39	200	P	Pn	21 12 54.3	-0.8
KNZ	Kokohu	5.53	196	P	Pn	21 12 54.5	-2.5
MHGZ	Mahia Peninsul	5.61	194	P	Pn	21 12 54.6	-3.5
MTHZ	Maungataniwha	5.61	203	P	Pn	21 12 57.7	-0.4
BKZ	Black Stump Fm	6.01	204	P	Pn	21 13 02.2	-1.4
MSVF	Nonsavu	15.98	354	Pn	P	21 15 25.2	+2.6
MSVF	Nonsavu	15.98	354	LR	LR	21 20 27.1	
	comp=Z,88nm,18.9s,baz=195,slow=33						
DZM	Mont Dzumac	16.44	311	LR	LR	21 20 30.6	
	comp=Z,457nm,19.6s,baz=140,slow=32						
HNR	Honiara	30.21	319	LR	LR	21 27 50.7	
	comp=Z,56nm,21.5s,baz=186,slow=32						
STKA	Stephens Creek	31.93	263	P	P	21 18 01.4	+1.8
	1.5nm,0.8s,baz=58,slow=13,SNR=2.9						
STKA				LR	LR	21 29 13.4	
	comp=Z,102nm,19.7s,baz=92,slow=33						
	1.5nm,0.8s						
BBOO	Buckleboo	36.27	259	P	P	21 18 38.2	+1.0
BBOO				IAmb	IAmb	21 19 18.8	
	comp=Z,28nm,1.2s						
ASAR	Alice Springs	41.08	272	P	P	21 19 19.1	+1.4
	comp=Z,13nm,0.9s,baz=112,slow=7.6,SNR=64						
ASAR				LR	LR	21 36 03.0	
	comp=Z,46nm,18.1s,baz=120,slow=36						
	comp=Z,13nm,0.9s						
WR8	Warramunga Arr	42.24	277		P	21 19 29.0	+1.8
WR8				IAmb	IAmb	21 19 36.7	
	comp=Z,18nm,1.1s						
WRA	Warramunga Arr	42.38	277		P	21 19 29.2	+0.9
WRA	Warramunga Arr	42.38	277	P	P	21 19 29.3	+0.9
	comp=Z,8.8nm,0.8s,baz=119,slow=7.6,SNR=34						
	comp=Z,8.8nm,0.8s						
WB0	Warramunga Arr	42.42	277		P	21 19 30.1	+1.5
WB0				IAmb	IAmb	21 19 31.6	
	comp=Z,30nm,1.1s						
VNDA	Vanda	44.61	185	LR	LR	21 34 51.0	
	comp=Z,48nm,19.9s,baz=8.5,slow=31						
FITZ	Fitzroy Crossi	50.48	274		P	21 20 33.5	+1.6
FITZ				IAmb	IAmb	21 20 34.2	
	comp=Z,3.1nm,0.9s						
CASY	Casey	51.29	209	P	P	21 20 39.0	+1.7
CASY				IAmb	IAmb	21 20 52.8	
	comp=Z,3.5nm,1.0s						
QSPA	South Pole Qui	56.40	180		P	21 21 15.4	+0.5
QSPA	South Pole Qui	56.40	180	P	P	21 21 14.9	0.0
	comp=Z,4.1nm,0.6s,baz=48,slow=2.7,SNR=41						
QSPA				LR	LR	21 42 41.7	
	comp=Z,77nm,18.2s,baz=44,slow=33						
	comp=Z,4.1nm,0.6s						
SNAA	Sanae	74.89	179	⇑P	P	21 23 12.2	-1.7
	comp=Z,62nm,0.8s						
SNAA	Sanae	74.89	179	P	P	21 23 12.2	-1.7
	comp=Z,2.2nm,1.0s,baz=201,slow=7.7,SNR=4.5						
	comp=Z,2.2nm,1.0s						
VNA3	Neumayer Olymp	75.13	177	⇑P	P	21 23 14.0	-1.3
	comp=Z,10nm,0.7s						
VNA2	Neumayer--Watz	75.53	178	⇑P	P	21 23 15.9	-1.7
	comp=Z,8.1nm,0.7s,baz=172,slow=5.9						
VNA1	Neumayer--Stat	75.78	177	⇑P	P	21 23 17.1	-1.8
	comp=Z,11nm,1.0s						
H03S2	Juan Fernandez	80.28	124	T	T	22 51 55.0	
	baz=234,slow=74,SNR=18						
H03S1	Juan Fernandez	80.29	124	T	T	22 51 43.1	
	baz=234,slow=74,SNR=22						
H03S3	Juan Fernandez	80.30	124	T	T	22 51 45.8	
	baz=234,slow=74,SNR=16						
H03N3	Juan Fernandez	80.49	124	T	T	22 52 07.7	
	baz=239,slow=72,SNR=102						
H03N2	Juan Fernandez	80.50	124	T	T	22 52 06.4	
	baz=239,slow=72,SNR=52						
H03N1	Juan Fernandez	80.51	124	T	T	22 52 06.8	
	baz=239,slow=72,SNR=103						
PV18	Skein Mesa, Pa	97.56	49		Pdif	21 25 13.3	+5.3
KURBB	Kurchatov Arra	121.89	313	PKP	PKiKP	21 30 27.1	-0.2
	comp=Z,0.1nm,0.5s,baz=116,slow=3.0,SNR=1.2						
FINES	FINESS Array B	147.48	337	PKPbc	PKPbc	21 31 15.6	-1.1
	comp=Z,2.3nm,1.0s,baz=40,slow=3.2,SNR=5.9						

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*NNC **20** 21:14:21.8±1.4, 41.°01N×78.°04E, h0^{km}, mb3.0, mpv2.8, Error ellipse: s-maj=9.3km s-min=5.9km az=168.0*

*KRNET **20** 21:14:22.0±0.1, 41.°01N×78.°11E, h18^{km}, mb2.3*

*SOME **20** 21:14:21.2, 41.°03N×78.°17E, h10^{km}*

ISC 20 21:14:20.9±1.9, 41.°00N±0.°07×78.°09E±0.°04, h6^{km}±18^{km}, n29, σ1.^{s}57/42, 14C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDJ	Kajisay	1.32	329	⇑iP	Pb	21 14 46.6	+0.3
KDJ				⇑iS	Sg	21 15 04.5	+1.1
PRZ	Przheval'sk	1.50	9	⇑eP	Pb	21 14 49.7	+0.3
PRZ				⇑eS	Sg	21 15 10.5	+1.3
NRN	Naryn	1.64	286	⇑iP	Pg	21 14 53.2	+0.9
NRN				⇑iS	Sg	21 15 15.4	+1.9
JNKS	Jany-Kuch	1.84	273	⇑iP	Pb	21 14 56.2	+1.0
JNKS				⇑iS	Sg	21 15 21.2	+1.0
SATY	Saty	2.07	6	Pg	Pg	21 15 00.8	+0.1
	2.4nm,0.2s						
SATY				Lg	Lg	21 15 28.9	
	7.2nm,0.1s						
BOOM	Boomskoye usch	2.19	314	⇑eP	Pb	21 15 01.1	0.0
BOOM				⇑eS	Sb	21 15 30.1	+1.5
UZB	Uzynbulak	2.26	18	Pg	Pg	21 15 03.9	-0.3
	2.9nm,0.3s						
UZB				Lg	Lg	21 15 33.4	
	7.4nm,0.2s						
MDOK	Medeo	2.30	341	Pg	Pb	21 15 01.7	-1.3
	1.0nm,0.4s						
MDOK				Pg	Pg	21 15 04.4	-0.6
	2.0nm,0.3s						
MDOK				Lg	Lg	21 15 34.5	
	4.3nm,0.5s						
MDOK				Lg	Lg	21 15 34.6	
	5.2nm,0.7s						
KOTS	Kotyrbulak	2.35	342	Pg	Pb	21 15 05.4	+1.6
	1.9nm,0.2s						
KOTS				Lg	Lg	21 15 36.6	
	35nm,0.5s						
KOTS	Kotyrbulak	2.35	342	eP	Pb	21 15 05.2	+1.5
	1.9nm,0.2s						
KOTS				eS	Sg	21 15 36.1	-0.3
	35nm,0.5s						
MTBS	Maitube	2.46	330	Pg	Pb	21 15 07.5	+1.8
	1.6nm,0.1s						
MTBS				Lg	Lg	21 15 39.6	
	8.8nm,0.3s						
MTBS	Maitube	2.46	330	eP	Pb	21 15 07.5	+1.8
	1.6nm,0.1s						
MTBS				eS	Sg	21 15 39.6	-0.4
	8.8nm,0.3s						
KPKS	Kokpek	2.50	10	Pg	Pg	21 15 08.2	-0.8
	0.7nm,0.2s						
KPKS				Lg	Lg	21 15 41.6	
	12nm,0.3s						
PDGK	Podgornoye	2.55	24	⇑Pg	Pb	21 15 08.2	+0.9
	1.7nm,0.4s						
PDGK				⇑Lg	Lg	21 15 43.0	
	6.4nm,0.6s						
KST	Kastek	2.58	323	Pg	Pg	21 15 09.9	-0.6
	1.0nm,0.2s						
KST				Lg	Lg	21 15 43.8	
	4.3nm,0.2s						
KST	Kastek	2.58	323	eP	Pg	21 15 09.9	-0.6
	1.0nm,0.2s						
KST				eS	Sg	21 15 43.8	-0.2
	4.3nm,0.2s						
TKM2	Tokmak 2	2.67	317	⇓Pg	Pb	21 15 08.7	-0.7
	0.8nm,0.5s						
TKM2				⇓Lg	Lg	21 15 46.1	
	2.6nm,0.5s						
KTBS	Karatobe	2.91	339	Pg	Pb	21 15 14.9	+1.7
	1.3nm,0.4s						
KTBS				Lg	Lg	21 15 52.8	
	8.6nm,0.2s						
ARLS	Aral	2.96	288	⇑eP	Pb	21 15 12.1	-2.1
ARLS				⇑eS	Sb	21 15 47.8	-2.9
KTMS	Ketmen	2.97	34	Pg	Pb	21 15 15.8	+1.5
	0.5nm,0.2s						
KTMS				Lg	Lg	21 15 54.0	
	5.1nm,0.1s						
KTMS	Ketmen	2.97	34	eP	Pb	21 15 15.8	+1.5
	0.5nm,0.2s						
KTMS				eS	Sg	21 15 54.0	-2.2
	5.1nm,0.1s						
BLB	Baldybastay	3.11	5	Pg	Pb	21 15 18.7	+1.9
	3.0nm,0.5s						
BLB				Lg	Lg	21 15 59.4	
	6.8nm,0.3s						
AAK	Ala-Archa	3.15	303	Pg	Pb	21 15 17.2	-0.1
	0.2nm,0.4s						
AAK				Lg	Lg	21 16 00.9	
	0.4nm,0.4s						
KUU	Kurty	3.17	336	Pg	Pb	21 15 20.1	+2.4
	1.6nm,0.1s						
KUU				Lg	Lg	21 16 01.2	
	5.0nm,0.1s						
KUU	Kurty	3.17	336	eP	Pb	21 15 20.0	+2.4
	1.6nm,0.1s						
KUU				eS	Sg	21 16 01.2	-1.5
	5.0nm,0.1s						
ARXS	Arharly	3.22	357	Pg	Pb	21 15 20.6	+2.0
	1.0nm,0.2s						
ARXS				Lg	Lg	21 16 02.2	
	5.3nm,0.3s						
KNOS	Konyrlen	3.45	13	Pg	Pg	21 15 25.2	-1.9
	0.6nm,0.1s						
KNOS				Lg	Lg	21 16 10.0	
	12nm,0.1s						
DJR	Jarkent	3.56	20	Pg	Pb	21 15 26.7	+2.3
	0.5nm,0.1s						
DJR				Lg	Lg	21 16 12.8	
	2.9nm,0.4s						
DJR	Jarkent	3.56	20	eP	Pb	21 15 26.7	+2.3
	0.5nm,0.1s						
DJR				eS	Sg	21 16 12.9	-2.3
	2.8nm,0.3s						

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*IDC **20** 21:14:24.3±1.4, 34.°09S×179.°33E, h0^{km}, mb4.3/4, mbtmp4.3/5, ML3.8/1, Error ellipse: s-maj=33.5km s-min=27.6km az=81.0*

*WEL **20** 21:14:25.7±1.3, 34°S±6°×18°0E±1°4, h33^{km}, M4.5/10, mB4.9/4, ML4.6/13, MLv4.5/10, Mw(mB)4.2/4, Error ellipse: s-maj=18.6km s-min=8.3km az=90.1, confirmed*

*NEIC **20** 21:14:31.1±1.9, 35.°4S±0.°1×178.°5E±0.°1, h10^{km}±2^{km}, mb4.4/14, Error ellipse: s-maj=20.4km s-min=17.6km az=331.0*

ISC 20 21:14:25.4±1.0, 34.°18S±0.°06×179.°3E±0.°1, h10^{km}, n48, σ2.^{s}84/49, mb4.4/10, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	3.47	193	Pn	Pn	21 15 06.7	-13
MXZ	Matakaoa Point	3.47	193	P	Pn	21 15 22.2	+2.8
MXZ				S	Sb	21 16 06.9	-2.1
HAZ	Te Kaha	3.77	199	P	Pb	21 15 30.8	-1.2
HAZ				S	Sb	21 16 17.0	-0.8
PUZ	Puketiti	3.97	192	P	Pn	21 15 30.6	+4.3
PUZ				S	Sb	21 16 20.3	-3.3
TWGZ	Tauwhareparae	4.12	195	P	Pb	21 15 34.0	-4.1
TWGZ				S	Sb	21 16 27.1	-1.0
CNGZ	Carnagh Statio	4.38	191	P	Pn	21 15 34.9	+3.0
CNGZ				S	Sb	21 16 32.4	-2.9
MWZ	Matawai	4.38	199	P	Pn	21 15 36.9	+4.9
MWZ				S	Sb	21 16 32.4	-3.0
WCZ	Waipu Caves	4.42	245	P	Pn	21 15 36.6	+4.0
URZ	Urewera	4.43	203	Pn	Pn	21 15 35.5	+2.9
	4.3nm,0.3s,baz=17,slow=4.1,SNR=2.4						
URZ				Sn	Sn	21 16 30.8	+6.5
	5.1nm,0.3s,baz=53,slow=20,SNR=1.1						
	30nm,0.5s						
URZ	Urewera	4.43	203	P	Pn	21 15 37.0	+4.4
URZ				S	Sb	21 16 32.2	-4.7
RAGZ	Rawiri	4.56	199	P	Pn	21 15 39.1	+4.6
TOZ	Tahuroa Road	4.69	220		Pn	21 15 22.0	-14
TOZ	Tahuroa Road	4.69	220	P	Pb	21 15 45.8	-1.9
RTZ	Ruatahuna	4.80	202	Pn	Pn	21 15 23.4	-14
OUZ	Omahuta	4.81	256	P	Pn	21 15 40.1	+2.3
SNGZ	Shannon Statio	4.85	198	P	Pn	21 15 43.0	+4.6
SNGZ				S	Sb	21 16 45.3	-3.6
KNZ	Kokohu	5.00	195	P	Pn	21 15 42.0	+1.5
RAHZ	Arahi	5.05	200	P	Pn	21 15 44.7	+3.6
MTHZ	Maungataniwha	5.06	202	P	Pn	21 15 45.3	+4.0
NMHZ	Naumai	5.30	201	P	Pn	21 15 49.0	+4.4
BKZ	Black Stump Fm	5.46	204	Pn	Pn	21 15 47.5	+0.7
BKZ	Black Stump Fm	5.46	204	P	Pn	21 15 50.7	+3.9
HIZ	Hauiti	5.61	218	Pn	Pn	21 15 37.6	-11
NTVZ	North Tongarir	5.70	210	P	Pb	21 16 00.4	-4.6
TMVZ	Te Maari	5.71	209	P	Pb	21 16 02.6	-2.5
OTVZ	Oturere	5.76	209	P	Pb	21 16 07.0	+0.9
NGZ	Ngauruhoe	5.80	210	P	Pb	21 16 04.0	-2.7
KAHZ	Kahuranaki	5.93	198	P	Pn	21 15 56.3	+3.0
MRZ	Mangatainoka R	7.11	203	Pn	Pn	21 15 56.3	-13
NIUE	Niue	17.84	35	P	P	21 18 55.6	+21
STKA	Stephens Creek	31.58	264	P	P	21 20 45.9	-2.3
BBOO	Buckleboo	35.89	260	P	P	21 21 22.8	-2.8
AS31	Alice Springs	40.80	273	P	P	21 22 07.9	+0.8
ASAR	Alice Springs	40.80	273	P	P	21 22 07.7	+0.5
	7.0nm,1.0s,baz=111,slow=7.4,SNR=12						
	7.0nm,1.0s						
WR0	Warramunga Arr	41.97	278	P	P	21 22 17.5	+0.8
WR0				IAmb	IAmb	21 22 17.9	
	comp=Z,13nm,1.4s						
WR8	Warramunga Arr	42.00	278	P	P	21 22 17.1	+0.1
WR8				IAmb	IAmb	21 22 24.9	
	comp=Z,14nm,1.4s						
WB2	Warramunga Arr	42.13	278	P	P	21 22 18.7	+0.6
WB2				IAmb	IAmb	21 22 24.7	
	comp=Z,16nm,1.4s						
WRAB	Tennant Creek	42.14	278	P	P	21 22 19.4	+1.3
WRAB				IAmb	IAmb	21 22 19.7	
	comp=Z,8.7nm,1.1s						
WRA	Warramunga Arr	42.14	278	P	P	21 22 18.3	+0.2
WRA	Warramunga Arr	42.14	278	P	P	21 22 18.0	-0.2
	comp=Z,3.9nm,0.8s,baz=118,slow=7.6,SNR=14						
	comp=Z,3.9nm,0.8s						
WB0	Warramunga Arr	42.18	278	P	P	21 22 18.9	+0.5
WB0				IAmb	IAmb	21 22 20.1	
	comp=Z,11nm,1.2s						
KNRA	Kununurra	48.87	279	P	P	21 23 09.7	-1.7
FITZ	Fitzroy Crossi	50.21	274	P	P	21 23 22.2	+0.5
FITZ				IAmb	IAmb	21 23 22.6	
	comp=Z,0.9nm,0.7s						
QSPA	South Pole Qui	55.94	180		P	21 24 03.8	+0.4
QSPA				IAmb	IAmb	21 24 04.2	
	comp=Z,4.2nm,0.8s						
QSPA	South Pole Qui	55.94	180	P	P	21 24 03.8	+0.4
	comp=Z,3.8nm,0.6s,baz=13,slow=2.7,SNR=23						
	comp=Z,3.8nm,0.6s						
GIRL	Giralia	57.52	263	P	P	21 24 15.6	+0.4
NVAR	Mina Array Bea	92.55	44	P	P	21 27 37.0	0.0
	comp=Z,0.1nm,0.2s,baz=247,slow=3.9,SNR=2.1						
	comp=Z,0.1nm,0.2s						
FINES	FINESS Array B	147.79	336	PKPbc	PKPab	21 34 11.3	-0.8
	comp=Z,0.9nm,0.9s,baz=42,slow=3.7,SNR=3.4						

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*IDC **20** 21:15:59.0±0.8, 33.°58S×67.°94W, h195^{km}±8^{km}, mb3.6/7, mbtmp4.0/11, Error ellipse: s-maj=27.0km s-min=11.6km az=87.0*

*SJA **20** 21:15:58.1±0.8, 33.°55S×67.°56W, h214^{km}±3^{km}, ML4.2, MW4.0*

*NEIC **20** 21:15:59.2±1.9, 33.°58S±0.°06×67.°69W±0.°06, h205^{km}±6^{km}, mb4.6/28, Error ellipse: s-maj=9.3km s-min=6.5km az=138.0*

ISC 20 21:15:59.4±0.6, 33.°52S±0.°04×67.°65W±0.°05, h206^{km}±5^{km}, n140, σ1.^{s}28/170, mb4.3/19, 3C, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AVIZ	Vizcacheras	0.72	274	eP	Pn	21 16 28.4	+0.1
AVIZ				eS	S	21 16 50.7	0.0
AAGR	Agrelo	1.08	294	eP	Pn	21 16 31.1	+0.6
AAGR				IAML		21 16 55.6	
	comp=Z,180nm,0.3s						
ARCO	CERRO ARCO	1.27	302	eP	Pn	21 16 32.2	+0.2
ARCO				eS	S	21 16 57.8	+0.8
ARCO				IAML		21 17 12.1	
	comp=Z,276nm,0.3s						
ACAN	Cantantal	1.31	18	eP	Pn	21 16 32.5	+0.3
ACAN				eS	S	21 16 56.7	-0.6
ACAN				IAML		21 17 01.0	
	comp=Z,850nm,0.5s						
ASAL	Salagasta	1.36	313	eP	Pn	21 16 33.1	+0.5
ASAL				eS	S	21 16 59.4	+1.3
RFA	San Rafael	1.42	208	eP	Pn	21 16 32.7	-0.3
RFA				eS	S	21 16 58.0	-1.0
MRA	San Martin	1.97	56	eP	Pn	21 16 38.4	+0.2
CFA	Coronel Fontan	1.98	345	P	Pn	21 16 38.1	-0.2
	comp=Z,109nm,0.2s,baz=202,slow=7.5,SNR=1228						
CFA				S	S	21 17 06.6	-1.4
	comp=Z,270nm,0.3s,baz=158,slow=24,SNR=14						
CFA	Coronel Fontan	1.98	345	eP	Pn	21 16 38.1	-0.2
CFA				eS	S	21 17 07.8	-0.2
MT08	Bocatoma Ro	1.98	272		Pn	21 16 38.1	-0.3
MT08				Sn	S	21 17 08.2	0.0
MT08	Bocatoma Ro	1.98	272	eP	Pn	21 16 39.2	+0.9
MT08				eS	S	21 17 21.6	+13
MT04	Ro Olivares	2.08	273	eP	Pn	21 16 40.0	+0.6
SJA	San Juan	2.13	339	eP	Pn	21 16 39.4	-0.5
SJA				eS	S	21 17 11.3	+0.4
SJA				IAML		21 17 14.7	
	comp=Z,638nm,0.3s						
LMEL	Las Melosas	2.15	261		Pn	21 16 39.8	-0.3
LMEL				Sn	S	21 17 12.3	+1.0
LMEL	Las Melosas	2.15	261	eS	S	21 17 19.4	+8.1
ZON	Zonda	2.15	336		Pn	21 16 40.2	+0.1
ZON				Sn	S	21 17 10.9	-0.3
ZON	Zonda	2.15	336	eP	Pn	21 16 40.1	0.0
ZON				eS	S	21 17 11.3	+0.1
ZON				IAML		21 17 12.1	
	comp=Z,928nm,0.2s						
RTLS	Leoncito	2.21	321	eP	Pn	21 16 41.4	+0.5
RTLS				eS	S	21 17 13.1	+0.5
RTLS				IAML		21 17 14.5	
	comp=Z,2µm,0.3s						

RTLL	Cerro Villicun	2.29	342	eP	Pn	21 16 41.8	+0.2
RTLL				eS	S	21 17 13.5	-0.4
MT03	Universidad Ad	2.39	270		Pn	21 16 42.2	-0.4
MT03				Sn	S	21 17 17.0	+1.3
MT16	CCHEN	2.40	271		Pn	21 16 43.2	+0.6
MT16				Sn	S	21 17 18.2	+2.3
ACHE	Chepes	2.50	20	eP	Pn	21 16 43.7	-0.2
BO04	La Punta	2.50	259		Pn	21 16 43.6	-0.1
BO04				Sn	S	21 17 17.7	-0.2
VA03	San Esteban	2.54	287		Pn	21 16 44.6	+0.3
VA03				Sn	S	21 17 19.0	+0.2
VA03	San Esteban	2.54	287	eP	Pn	21 16 44.8	+0.5
VA03				IAML		21 17 24.3	
	comp=Z,541nm,0.1s						
PEL	Peldehue	2.57	278		Pn	21 16 44.0	-0.4
PEL				Sn	S	21 17 19.3	+0.2
PEL	Peldehue	2.57	278	eP	Pn	21 16 49.3	+4.8
MT05	Renca	2.58	272		Pn	21 16 44.6	-0.1
MT05				Sn	S	21 17 19.8	+0.4
MT05	Renca	2.58	272	eP	Pn	21 16 44.7	+0.1
MT05				eS	S	21 17 20.2	+0.8
MT05				IAML		21 17 23.4	
	comp=Z,497nm,0.3s						
EDS3	Malargue	2.66	212	eP	Pn	21 16 45.8	+0.1
MT09	Talagante	2.79	264		Pn	21 16 46.1	-0.9
MT09				Sn	S	21 17 22.8	-1.0
AVFE	Valle Fertil	2.86	3	eP	Pn	21 16 47.8	-0.1
AVFE				eS	S	21 17 24.1	-1.2
AVFE				IAML		21 17 25.9	
	comp=Z,647nm,0.8s						
ROC1	El Roble	2.87	280	eP	Pn	21 16 47.3	-0.8
ROC1				eS	S	21 17 10.4	-15
BO02	Sierra Bellavi	2.88	243		Pn	21 16 47.6	-0.5
BO02				Sn	S	21 17 26.1	+0.5
BO02	Sierra Bellavi	2.88	243	eP	Pn	21 16 48.0	-0.1
BO02				eS	S	21 17 32.3	+6.6
BO02				IAML		21 17 33.8	
	comp=Z,272nm,0.1s						
MT02	Curacav	2.93	274		Pn	21 16 47.5	-1.0
MT02				Sn	S	21 17 24.0	-2.3
MT02	Curacav	2.93	274	eP	Pn	21 16 47.7	-0.8
MT02				IAML		21 17 30.5	
	comp=Z,209nm,0.7s						
BO01	Tunca	2.98	252		Pn	21 16 48.1	-0.9
BO01				Sn	S	21 17 25.6	-1.8
BO01	Tunca	2.98	252	eP	Pn	21 16 48.1	-0.9
BO01				eS	S	21 17 26.4	-1.1
MT01	Popeta	3.02	263		Pn	21 16 48.4	-1.1
MT01	Popeta	3.02	263	eP	Pn	21 16 47.6	-2.0
MT01				eS	S	21 17 25.3	-3.0
MT01				IAML		21 17 27.0	
	comp=Z,318nm,0.2s						
ACCO	Cerro Coronel	3.16	337	eP	Pn	21 16 52.5	+0.8
ACCO				eS	S	21 17 32.9	+0.9
VA06	Catapilco	3.21	286		Pn	21 16 50.7	-1.1
VA06				Sn	S	21 17 30.3	-1.9
VA05	Santo Domingo	3.31	267		Pn	21 16 51.1	-1.8
VA01	Torpederas	3.38	277		Pn	21 16 53.0	-0.8
VA01	Torpederas	3.38	277	eP	Pn	21 16 53.2	-0.7
VA01				eS	S	21 17 31.6	-4.4
VA01				IAML		21 17 35.2	
	comp=Z,242nm,0.4s						
ACDV	Cuesta del Vie	3.57	339	eP	Pn	21 16 57.0	+0.7
ACDV				eS	S	21 17 40.0	-0.4
ACDV				IAML		21 17 44.0	
	comp=Z,703nm,0.4s						
CO02	Combarbal	3.66	308		Pn	21 16 56.8	-0.5
CO02				Sn	S	21 17 41.9	-0.4
CO02	Combarbal	3.66	308	eP	Pn	21 16 57.5	+0.1
AROD	Rodeo	3.69	335	eP	Pn	21 16 58.9	+1.0
CO03	El Pedregal	3.71	315		Pn	21 16 58.7	+0.7
CO03					S	21 17 43.0	-0.4
ML02	Panimavida	3.82	233		Pn	21 16 57.8	-1.4
AGUA	GUANDACOL	4.09	350	eP	Pn	21 17 03.0	+0.4
AGUA				IAML		21 17 55.9	
	comp=Z,882nm,0.3s						
CO01	Juntas del Tor	4.10	329		Pn	21 17 05.0	+2.0
CO01	Juntas del Tor	4.10	329	eS	S	21 17 53.7	+1.3
CO01				IAML		21 17 59.1	
	comp=Z,436nm,0.3s						
CO01				IAML		21 17 59.2	
	comp=Z,357nm,0.5s						
ACLC	CERRO LA CRUZ	4.13	9	eS	S	21 17 50.7	-2.3
ACLC				IAML		21 17 53.8	
	comp=Z,379nm,0.4s						
GO04	Tololo Observa	4.28	320		Pn	21 17 04.7	-0.4
BI02	San Fabin de	4.31	222		Pn	21 17 04.2	-1.1
BI02	San Fabin de	4.31	222	eP	Pn	21 17 04.0	-1.3
CO06	Fray Jorge	4.41	309		Pn	21 17 05.9	-0.6
CO05	La Serena	4.72	319		Pn	21 17 09.8	-0.6
VCA	Vinchina	4.79	354	eS	S	21 18 06.0	-2.0
LCO	Las Campanas	5.20	329		Pn	21 17 15.5	-1.3
BI05	Punta Hualpn	5.56	233		Pn	21 17 17.7	-3.3
AC04	Llanos de Chal	6.06	330		Pn	21 17 27.1	-0.5
GO03	Copiapo	6.32	339		Pn	21 17 30.4	-0.5
TRQA	Tornquist	6.46	136		Pn	21 17 30.6	-2.0
AC06	Mina Casimiro	6.57	339		Pn	21 17 34.2	0.0
AC02	Maricunga	6.79	349		Pn	21 17 36.8	-0.7
LR03	Panguipulli	7.17	210		Pn	21 17 38.2	-3.5
LR05	Currie	7.54	206		Pn	21 17 43.7	-2.9
PLCA	Paso Flores	7.56	197		Pn	21 17 45.3	-1.5
PLCA	Paso Flores	7.56	197	P	Pn	21 17 45.1	-1.7
	comp=Z,6.2nm,0.7s,baz=9.3,slow=12,SNR=20						
AC01	Pan de Azucar	7.78	340		Pn	21 17 50.5	+0.6
LR04	Corral	7.86	214		Pn	21 17 44.3	-6.3
LL03	Petrohue	8.49	205	Pn	Pn	21 17 55.6	-3.2
GO02	Mina Guanaco	8.50	348		Pn	21 17 59.8	+0.3
LL05	Los Muermos	9.12	209	Pn	Pn	21 18 01.3	-5.8
PB14	IPOC Station P	9.19	344		Pn	21 18 08.3	-0.1
LL01	San Ignacio de	9.60	202	Pn	Pn	21 18 08.5	-4.7
LL06	Loncomilla	9.88	207	Pn	Pn	21 18 10.6	-6.2
PB10	IPOC Station P	10.29	345	Pn	Pn	21 18 22.3	-0.1
PB05	IPOC Station P	10.87	347		Pn	21 18 29.8	0.0
PB06	IPOC Station P	10.91	351		Pn	21 18 30.4	0.0
CPUP	Villa Florida	11.47	54	P	P	21 18 40.4	-2.3
	comp=Z,0.6nm,0.6s,baz=257,slow=18,SNR=3.3						
PB03	IPOC Station P	11.58	350		Pn	21 18 38.6	-0.4
PB09	IPOC Station P	11.77	353	Pn	Pn	21 18 41.3	0.0
COYC	Coyhaique	12.51	195	P	Pn	21 18 49.6	-0.7
PB01	IPOC Station P	12.54	352	Pn	Pn	21 18 50.3	-0.8
PATCX	Punta Patache	12.85	349	Pn	Pn	21 18 54.6	-0.3
TA01	Diego Aracena	13.10	350	Pn	Pn	21 18 56.9	-1.0
HMBC	Humberstone	13.34	351		Pn	21 19 01.0	-0.1
PB08	IPOC Station P	13.40	354		Pn	21 19 01.2	-0.8
PB11	IPOC Station P	13.82	352		Pn	21 19 05.7	-1.5
GO01	Chusmiza	13.87	354	P	P	21 19 09.5	-0.4
AY03	Cochrane	14.22	194	P	P	21 19 12.1	-0.9
PB16	IPOC Station P	15.22	353	P	P	21 19 26.0	+1.1
LPAZ	La Paz	17.17	358		Pn	21 19 48.7	+0.7
LPAZ	La Paz	17.17	358	P	Pn	21 19 48.4	+0.4
	comp=Z,2.7nm,0.5s,baz=174,slow=4.1,SNR=17						
SIV	San Ignacio	18.44	20	P	Pn	21 20 01.5	-0.8
	comp=Z,3.4nm,0.6s,baz=202,slow=11,SNR=13						
MG05	Puerto Natales	18.48	190		P	21 19 58.9	-0.8
MG05				IAmb	IAmb	21 20 01.8	
	comp=Z,19nm,0.9s						
MG02	Cerro Sombrero	19.28	183	P	P	21 20 09.1	+0.7
EFI	East Falkland	19.43	162	P	P	21 20 07.6	-2.4
MG04	Isla Riesco	19.53	187	P	P	21 20 10.3	-0.6
PTLB	Pontes e Lacer	19.58	25	P	P	21 20 12.5	+0.7
MG03	Isla Dawson	20.42	185	P	P	21 20 20.6	+0.1
USHA	Ushuaia	21.31	181	P	P	21 20 29.6	-0.2
	comp=Z,6.0nm,0.5s,baz=83,slow=15,SNR=1.9						
	comp=Z,6.0nm,0.5s						
RUSC	La Rusia	39.54	351	P	P	21 23 12.0	+1.1
RUSC				IAmb	IAmb	21 23 12.7	
	comp=Z,11nm,0.5s						
BAUV	El Baul	42.23	359	P	P	21 23 32.1	-0.2
BAUV				IAmb	IAmb	21 24 14.2	
	comp=Z,17nm,1.2s						
BELA	Belgrano 2	46.74	171	P	P	21 24 07.8	+0.6
VNA3	Neumayer Olymp	48.44	158	⇑P	P	21 24 20.5	+0.1
	comp=Z,0.3nm,0.2s						
VNA2	Neumayer--Watz	49.05	158	⇑P	P	21 24 25.5	+0.4
	comp=Z,0.7nm,0.4s,baz=282,slow=7.5						
SNAA	Sanae	50.66	158	⇑P	P	21 24 37.5	+0.3
	comp=Z,33nm,0.3s						
SNAA	Sanae	50.66	158	P	P	21 24 37.3	+0.1
SNAA	Sanae	50.66	158	P	P	21 24 37.6	+0.4
	comp=Z,1.7nm,0.3s,baz=286,slow=7.4,SNR=21						
	comp=Z,1.7nm,0.3s						
PDPR	Patillas Dam,	51.27	2	P	P	21 24 42.0	-0.3
PDPR				IAmb	IAmb	21 25 17.2	
	comp=Z,28nm,1.2s						
OBIP	Obispado Ponce	51.29	1	P	P	21 24 42.9	+0.5
CELP	Cerrillos	51.32	1	P	P	21 24 42.7	+0.1
CELP				IAmb	IAmb	21 25 04.6	
	comp=Z,27nm,1.1s						
UUPR	Utuado, UPR, P	51.49	1	P	P	21 24 43.1	-0.9
UUPR				IAmb	IAmb	21 25 18.2	
	comp=Z,17nm,0.8s						
QSPA	South Pole Qui	56.72	180	P	P	21 25 22.0	+0.7
QSPA				IAmb	IAmb	21 25 22.4	
	comp=Z,3.7nm,0.6s						
QSPA	South Pole Qui	56.72	180	P	P	21 25 21.9	+0.6
	comp=Z,3.1nm,0.5s,baz=177,slow=7.2,SNR=18						
	comp=Z,3.1nm,0.5s						
TEIG	Tepich	56.96	337	P	P	21 25 24.1	+0.8
GOGA	Godfrey	68.22	346	P	P	21 26 37.7	+0.2
GOGA				IAmb	IAmb	21 27 12.8	
	comp=Z,17nm,1.4s						
W50A	Signal Mountai	70.34	345	P	P	21 26 51.0	+0.5
W50A				IAmb	IAmb	21 27 10.3	
	comp=Z,7.2nm,1.0s						
SWET	Sewanee	70.49	344	P	P	21 26 51.6	+0.1
SWET				IAmb	IAmb	21 26 54.5	
	comp=Z,20nm,1.5s						
TXAR	Lajitas Array	71.21	327	P	P	21 26 56.9	+0.9
	comp=Z,0.3nm,0.6s,baz=143,slow=7.1,SNR=3.6						
	comp=Z,0.3nm,0.6s						
TX31	Lajitas Ar. Si	71.21	327	P	P	21 26 56.9	+0.9
U49A	Red Boiling Sp	71.70	345	P	P	21 26 59.0	+0.4
WVT	Waverly	71.81	343	P	P	21 26 59.7	+0.4
WVT				IAmb	IAmb	21 27 00.2	
	comp=Z,4.1nm,0.6s						
L56A	Greenwood	75.84	352	P	P	21 27 20.3	-2.3
L56A				IAmb	IAmb	21 27 24.4	
	comp=Z,17nm,1.4s						
BOSA	Boshof	77.02	116	P	P	21 27 32.8	+2.9
	comp=Z,1.2nm,0.7s,baz=229,slow=1.5,SNR=4.2						
	comp=Z,1.2nm,0.7s						
PDAR	Pinedale Array	85.07	330	P	P	21 28 12.2	+0.3
	comp=Z,0.6nm,0.6s,baz=131,slow=4.1,SNR=4.8						
	comp=Z,0.6nm,0.6s						
NVAR	Mina Array Bea	85.66	322	P	P	21 28 16.0	+1.2
	comp=Z,0.2nm,0.3s,baz=138,slow=3.8,SNR=2.3						
	comp=Z,0.2nm,0.3s						
YHL	Hebgen Lake	87.45	331	P	P	21 28 25.2	+1.7
BPMT	Black Pine Rid	89.67	330	P	P	21 28 34.6	+0.7
WRA	Warramunga Arr	122.84	205	PKP	PKPdf	21 34 30.6	-0.7
	comp=Z,1.0nm,1.1s,baz=153,slow=1.6,SNR=1.9						
BVAR	Borovoye Array	144.42	44	PKP	PKPdf	21 35 11.3	+0.9
	comp=Z,0.6nm,0.5s,baz=323,slow=2.8,SNR=1.9						
KURBB	Kurchatov Arra	149.98	45	PKPbc	PKiKP	21 35 25.4	-0.1
	comp=Z,0.4nm,0.6s,baz=307,slow=3.1,SNR=4.1						
ZALV	Zalesovo Beam	151.80	35	PKPbc	PKiKP	21 35 29.2	0.0
	comp=Z,0.7nm,0.4s,baz=291,slow=6.1,SNR=2.9						
PZH	PanZhiHua	168.46	125	PKP	PKPdf	21 35 41.5	-0.2

GCG 20 21:18:37.6±1.2**,13°.97N**×**90°.90W,h82**^{km}±42^{km}**,MD3.5, ML3.6,Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESSG	Sabana Grande	0.42	9	i P	Pn	21 18 51.4	+0.3
ESSG				i S	Sn	21 19 01.6	+0.6
ESSG				IAML		21 19 01.9	
	comp=E,1µm,0.2s						
FG16	Alotenango, Sa	0.49	51	i P	Pn	21 18 52.7	+1.0
FG16				i S	Sn	21 19 03.9	+1.8
FG16				IAML		21 19 04.5	
	comp=N,5µm,0.2s						
STG0	El Palmar, Qui	0.63	317	eP	Pn	21 18 57.2	+4.3
STG0				IAML		21 19 14.1	
	comp=E,938nm,0.1s						
STG8	El Palmar, Qui	0.65	318	eP	Pn	21 18 57.7	+4.5
STG8				i S	Sn	21 19 12.5	+7.8
STG8				IAML		21 19 20.3	
	comp=E,508nm,0.2s						
SOKI	Kika Raxquin	0.98	330	IAML		21 19 15.9	
	comp=E,447nm,0.3s						
NUBE	Las Nubes	1.09	93	eP	Pn	21 18 58.7	+0.7
NUBE				i S	Sn	21 19 13.4	+0.1

IDC 20 21:37:23.2±1.5**,67°.93N**×**20°.04E,h0**^{km}**,mbtmp2.8**/3**, ML1.8**/3**,Error ellipse: s-maj=24.7km s-min=8.3km az=124.0,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALU	Saltoluokta	0.81	227	eP	Pb	21 37 40.6	+0.6
KIF	Kilpisjarvi	1.11	14	eP	Pn	21 37 48.5	+2.6
ARCES	ARCESS Array B	2.56	49	Pn	Pn	21 38 07.8	+2.0
	0.4nm,0.3s,baz=231,slow=14,SNR=27						
ARCES				Lg	Lg	21 38 42.1	
	1.0nm,0.3s,baz=230,slow=18,SNR=15						
	0.9nm,0.3s						
FINES	FINESS Array B	7.00	156	Pn	Pn	21 39 08.3	+1.4
	0.1nm,0.3s,baz=337,slow=12,SNR=1.3						
FINES				Lg	Lg	21 41 01.8	
	0.2nm,0.3s,baz=340,slow=28,SNR=6.9						
	0.9nm,1.0s						
NOA	NORSAR Array B	7.89	213	Pn	Pn	21 39 14.9	-4.2
	baz=26,slow=13,SNR=1.9						
NOA				Lg	Lg	21 41 32.0	
	baz=39,slow=24,SNR=2.0						
	1.0nm,1.0s						
HFS	Hagfors	8.30	203	Lg	Lg	21 41 45.9	
	0.1nm,0.3s,baz=34,slow=27,SNR=2.1						

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*AEIC **20** 21:40:51.2±0.8, 52°.66N±0°.09×163°.41W±0°.08, h24^{km}±9^{km}, Error ellipse: s-maj=14.0km s-min=3.6km az=153.0*

NEIC 20 21:40:51.9±1.5**,52°.88N**±0°.04×**163°.66W**±0°.07**,h10**^{km}±2^{km}**, ML2.8**/16**,ML2.8**(AEIC)**,Error ellipse: s-maj=8.4km s-min=5.6km az=225.0,South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WESE	West Dahl East	1.69	341		Pn	21 41 21.7	+0.2
WESE					Sg	21 41 45.5	-0.8
AKUT	Akutan	1.78	316	Pn	Pn	21 41 22.6	-0.1
AKUT					Sn	21 41 46.1	+0.7
AKUT				IAML		21 41 49.0	
	comp=E,77nm,0.5s						
AKUT				IAML		21 41 50.4	
	comp=N,85nm,0.3s						
WECS	Westdahl Cape	1.79	339		Pn	21 41 23.3	+0.5
AHB	Akutan Harbor	1.79	315		Pn	21 41 23.3	+0.5
AHB					Sb	21 41 47.9	+0.7
AKBBA	Akutan Broad B	1.83	313		Pn	21 41 23.7	+0.4
AKBBA					Sb	21 41 48.3	0.0
WEBT	Westdahl Beart	1.84	340		Pn	21 41 23.7	+0.2
SSLS	Shishaldin Sou	1.85	354		Pn	21 41 23.5	-0.2
SSLS					Sb	21 41 48.8	-0.2
ISLZ	Isanotski Laza	1.85	359		Pn	21 41 22.8	-0.9
ISLZ					Sb	21 41 48.2	-0.8
LVA	Lava Point	1.91	313	Pn	Pn	21 41 25.1	+0.6
LVA					Sb	21 41 51.0	+0.2
LVA				IAML		21 41 53.7	
	comp=N,92nm,0.6s						
SSBA	Shishaldin	1.92	352		Pn	21 41 24.1	-0.5
SSBA					Sb	21 41 51.6	+0.6
ISNN	Isanotski Nort	1.96	358		Sb	21 41 52.0	-0.1
UNV	Unalaska Valle	1.96	301		Pn	21 41 24.9	-0.2
UNV					Sn	21 41 50.2	+0.4
UNV					Sb	21 41 50.6	-1.5
UNV				IAML		21 41 52.1	
	comp=N,68nm,0.3s						
UNV				IAML		21 41 52.7	
	comp=E,73nm,0.2s						
FALS	False Pass	1.99	4		Pn	21 41 25.0	-0.5
FALS					Sn	21 41 50.3	-0.1
FALS					Sb	21 41 51.3	-1.6
MREP	Makushin Rep't	2.07	298		Sn	21 41 53.9	+1.2
MTBL	Makushin Table	2.11	302		Sn	21 41 54.4	+0.7
MGOD	Makushin Gods	2.13	297		Pn	21 41 27.5	-0.1
OKTU	Okmok Mt. Tuli	2.69	283		Pn	21 41 35.1	-0.1
OKNC	Okmok New Cone	2.75	284		Pn	21 41 35.9	-0.1
OKRE	Okmok R'deer P	2.79	285		Pn	21 41 36.6	+0.1
S12K	Black Hills	2.98	18		Pn	21 41 38.5	-0.8
S12K				Sn	Sn	21 42 14.2	-0.8
S12K				IAML		21 42 16.6	
	comp=N,23nm,0.3s						
S12K				IAML		21 42 16.6	
	comp=E,29nm,0.6s						
CNBA	Chernabura Isl	3.10	49	Pn	Pn	21 41 42.0	+1.2
SDPT	Sand Point	3.11	36		Pn	21 41 39.0	-1.9
SDPT				IAML		21 42 23.1	
	comp=N,22nm,1.0s						
NIKH	Nikolski High	3.15	274	Pn	Pn	21 41 37.5	-4.0
ADK	Adak	8.03	268		Pn	21 42 49.1	+0.6
O18K	Koktuh Hills	8.41	30	Pn	Pn	21 42 53.0	-0.7

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*IDC **20** 21:45:04.2±0.5, 30°.89S×177°.45W, h0^{km}, mb4.5/18, mbtmp4.4/18, MS4.3/44, Error ellipse: s-maj=19.1km s-min=15.6km az=86.0*

*BJI **20** 21:45:05.1, 30°.52S×176°.76W, h14^{km}, mB5.2/7, mb5.0/19, Ms4.8/6, Ms7 4.5/7*

*NEIC **20** 21:45:06.9±2.0, 31°.01S±0°.04×177°.4W±0°.1, h10^{km}±1^{km}, mb5.1/72, Error ellipse: s-maj=16.9km s-min=4.7km az=106.0*

*MOS **20** 21:45:09.2±0.9, 30°.94S×177°.56W, h34^{km}, mb5.2/20, Error ellipse: s-maj=12.9km s-min=9.6km az=103.9*

*GCMT **20** 21:45:10.9±0.3, 31°.12S±0°.03×177°.07W±0°.03, h28^{km}±1^{km}, MW4.9/75, Moment Tensor Solution. s35,c44; s75,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.17±.16; $M_{\theta\theta}$0.24±.10; $M_{\phi\phi}$-2.41±.10; $M_{r\theta}$0.38±.21; $M_{\theta\phi}$0.42±.09; $M_{\phi r}$2.12±.16; Best double couple: $M_0$3.17600×10^{16} NP1:ϕ_s156.00000°,δ26.00000°,λ64.00000°. NP2: ϕ_s5.00000°,δ67.00000°,λ102.00000°. Principal axes: T 3.0920, Plg66.0000°, Azm296.0000°; N 0.1710, Plg11.0000°, Azm180.0000°; P -3.2600, Plg21.0000°, Azm85.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 21:45:08.4±0.3**,31°.10S**±0°.03×**177°.63W**±0°.06**,h27**^{km}**, n358,**σ**2^{s}.05**/322**,mb5.0**/82**,MS4.4**/57**,30C-7D,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	1.85	352	P	Pn	21 45 36.1	-2.3
GLKZ				S	Sn	21 45 58.2	-2.6
RAO	Raoul Island	1.86	352		Pn	21 45 37.0	-1.5
RAO	Raoul Island	1.86	352	Pn	Pn	21 45 35.4	-3.1
	430nm,0.3s,baz=162,slow=3.9,SNR=28						
RAO				Sn	Sn	21 45 55.1	-6.0
	872nm,0.3s,baz=139,slow=20,SNR=13						
RAO	Raoul Island	1.86	352	P	Pn	21 45 37.0	-1.5
RIZ	Raoul Island	1.87	352	P	Pn	21 45 36.4	-2.2
RIZ				S	Sn	21 46 00.4	-0.9
HAZ	Te Kaha	7.64	208	P	Pn	21 46 57.3	-0.6
HAZ				S	Sn	21 48 25.8	+2.1
PUZ	Puketiti	7.74	205	P	Pn	21 46 56.7	-2.6
PUZ				S	Sn	21 48 26.2	+0.2
MWZ	Matawai	8.24	208	P	Pn	21 47 04.0	-2.2
MWZ				S	Sn	21 48 39.5	+1.0
WCZ	Waipu Caves	8.25	232	P	Pn	21 47 16.0	+10
URZ	Urewera	8.35	210	Pn	Pn	21 47 04.5	-3.2
	1.8nm,0.3s,baz=0.0,slow=5.1,SNR=7.2						
URZ				Sn	Sn	21 48 40.6	-0.5
	6.9nm,0.3s,baz=113,slow=17,SNR=11						
URZ	Urewera	8.35	210	P	Pn	21 47 05.9	-1.8
URZ				S	Sn	21 48 41.9	+0.9
RTZ	Ruatahuna	8.71	209		Pn	21 47 13.4	+0.7
BKZ	Black Stump Fm	9.37	209	P	Pn	21 47 17.0	-4.8
BKZ				S	Sn	21 49 02.3	-4.0
PXZ	Pawanui	9.97	205	P	Pn	21 47 30.6	+0.7
PXZ				S	Sn	21 49 16.7	-4.2
BFZ	Birch Farm	10.77	206	P	Pn	21 47 39.0	-1.9
BFZ				S	Sn	21 49 32.6	-7.8
MRZ	Mangatainoka R	11.01	208	P	Pn	21 47 40.9	-3.3
MRZ				S	Sn	21 49 38.4	-8.0
QRZ	Quartz Range	12.55	217	P	Pn	21 48 04.0	-1.1
QRZ				S	Sn	21 50 17.0	-7.0
CTZ	Chatham Island	12.64	177	Pn	Pn	21 48 04.0	-2.3
CTZ	Chatham Island	12.64	177	P	Pn	21 48 04.4	-1.9
CTZ				S	Sn	21 50 12.8	-13
NFK	Norfolk Island	12.67	276	P	P	21 48 17.0	-0.8
	comp=Z,108nm,1.3s						
THZ	Tophouse	13.08	213	P	Pn	21 48 12.7	+0.3
THZ				S	Sn	21 50 28.5	-8.5
KHZ	Kahutara	13.32	210	P	Pn	21 48 10.8	-4.8
KHZ				S	Sn	21 50 32.0	-11
DSZ	Denniston Nort	13.60	216	P	Pn	21 48 14.4	-5.1
DSZ				S	Sn	21 50 39.0	-11
MSVF	Nonsavu	13.87	343		Pn	21 48 23.4	-0.1
MSVF	Nonsavu	13.87	343	LR	LR	21 52 28.4	
	comp=Z,1µm,19.1s,baz=176,slow=32						
MSVF	Nonsavu	13.87	343	P	Pn	21 48 23.4	-0.1
GVZ	Greta Valley S	13.98	210	P	Pn	21 48 22.5	-2.3
GVZ				S	Sn	21 50 47.6	-11
LTZ	Lake Taylor	14.17	212	Pn	Pn	21 48 27.9	+0.6
LTZ	Lake Taylor	14.17	212	P	Pn	21 48 24.4	-2.9
LTZ				S	Sn	21 50 51.8	-12
MQZ	McQueen's Vall	14.75	209	P	Pn	21 48 29.1	-6.0
RPZ	Rata Peaks	15.45	212	Pn	Pn	21 48 41.3	-3.2
	comp=Z,1.3nm,0.3s,baz=87,slow=0.3,SNR=5.3						
RPZ				Sn	Sn	21 51 17.5	-17
	comp=Z,0.4nm,0.3s,baz=310,slow=19,SNR=1.1						
PINNC	Pines Island,	15.76	299		P	21 48 56.6	+4.3
PINNC				IAmb	IAmb	21 48 58.0	
	comp=Z,327nm,1.7s						
LBZ	Lake Benmore	16.37	212	Pn	P	21 48 58.9	0.0
ODZ	Otahua Downs	16.68	210		P	21 49 02.0	-0.3
DZM	Mont Dzumac	16.83	298		P	21 49 09.7	+5.4
DZM	Mont Dzumac	16.83	298	ePn	P	21 49 05.6	+1.3
	comp=Z,368nm,1.4s						
DZM				eLR	LR	21 53 00.5	
	comp=Z,3µm,23.1s						
DZM	Mont Dzumac	16.83	298	Pn	P	21 49 07.2	+2.9
	comp=Z,0.9nm,0.3s,baz=119,slow=14,SNR=21						
DZM				LR	LR	21 54 33.3	
	comp=Z,4µm,18.3s,baz=139,slow=34						
RAR	Rarotonga	18.79	63	LR	LR	21 56 18.2	
	comp=Z,376nm,18.5s,baz=262,slow=36						
LHI	Lord Howe Isla	19.91	263	P	Pn	21 49 43.4	+3.6
LHI				IAmb	IAmb	21 49 51.0	
	comp=Z,88nm,0.9s						
LHI	Lord Howe Isla	19.91	263	P	Pn	21 49 43.6	+3.8
	comp=Z,117nm,1.4s						
TBI	Tubuai	26.16	80	eP	P	21 50 36.3	-4.3
	comp=Z,429nm,43.8s						
TBI				eS	S	21 55 04.5	-6.4
	comp=Z,714nm,23.0s						
TBI				eLR	LR	21 57 00.2	
	comp=Z,971nm,28.8s						
TBI				eLR	LR	21 57 04.6	
	comp=Z,3µm,26.2s						
ARMA	Armidale	26.39	263		P	21 50 46.9	+4.1
ARMA	Armidale	26.39	263	P	P	21 50 47.4	+4.6
	comp=Z,39nm,1.1s						
EIDS	Eidsvold	28.09	274		P	21 51 00.5	+2.5
EIDS				IAmb	IAmb	21 51 14.0	
	comp=Z,36nm,0.9s						
EIDS	Eidsvold	28.09	274	P	P	21 51 00.5	+2.5
	comp=Z,48nm,0.9s						
CAN	Canberra	28.16	252	P	P	21 51 01.6	+3.1
	comp=Z,30nm,1.5s						
YNG	Young	28.69	255	P	P	21 51 06.7	+3.4
	comp=Z,21nm,1.1s						
PPT2	Papeete2	28.79	69	eLR	LR	21 58 13.3	
	comp=Z,640nm,25.0s						
PPT2				eLR	LR	21 58 15.9	
	comp=Z,533nm,27.2s						
PPT	Papeete	28.80	69	LR	LR	22 02 00.1	
	comp=Z,529nm,18.1s,baz=258,slow=36						
HNR	Honiara	30.00	311	LR	LR	22 01 22.5	
	comp=Z,492nm,21.1s,baz=165,slow=33						
TAU	Tasmania Unive	30.16	237	P	P	21 51 18.6	+2.5
TAU				IAmb	IAmb	21 51 29.4	
	comp=Z,58nm,1.2s						
TAU	Tasmania Unive	30.16	237	P	P	21 51 18.7	+2.5
TAU				pmax	pmax		
	comp=Z,58nm,1.2s						
TOO	Toolangi	30.99	248	P	P	21 51 27.3	+3.7
TOO	Toolangi	30.99	248	P	P	21 51 26.6	+3.0
	comp=Z,10nm,1.3s						
TOO	Toolangi	30.99	248	P	P	21 51 27.3	+3.7
TOO				pmax	pmax		
	comp=Z,30nm,1.6s						
CMSA	Cobar Meteorol	31.25	260	P	P	21 51 28.5	+2.6
	comp=Z,37nm,0.8s						
QLP	Quilpie	33.59	268	P	P	21 51 48.6	+2.0

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      comp=Z,92nm,0.8s
ARPS  Mount Arapiles  33.91 249   P       P       21 51 51.3 +2.1
      comp=Z,30nm,0.9s
CTAO  Charters Tower  34.23 280           P       21 51 54.4 +2.3
CTAO  Charters Tower  34.23 280   P       P       21 51 54.4 +2.3
CTAO                              pmax    pmax
      comp=Z,57nm,0.9s
STKA  Stephens Creek  34.63 258           P       21 51 57.3 +1.8
STKA  Stephens Creek  34.63 258   P       P       21 51 57.5 +2.0
      comp=Z,273nm,0.9s
STKA  Stephens Creek  34.63 258   P       P       21 51 57.5 +2.0
      comp=Z,4.5nm,0.5s,baz=100,slow=11,SNR=23
STKA                              LR      LR      22 05 27.7
      comp=Z,949nm,18.4s,baz=71,slow=35
      comp=Z,4.5nm,0.5s
STKA  Stephens Creek  34.63 258 i P       P       21 51 58.4 +2.9
HTT   Hallett         36.62 255   P       P       21 52 14.1 +1.5
      comp=Z,11nm,0.9s
MTSU  Mount Surprise  36.74 282   P       P       21 52 14.9 +1.2
      comp=Z,25nm,1.0s
BBOO  Buckleboo       39.09 255           P       21 52 34.2 +0.8
BBOO                              IAmb    IAmb    21 52 57.8
      comp=Z,40nm,1.1s
BBOO  Buckleboo       39.09 255   P       P       21 52 34.2 +0.8
      comp=Z,32nm,0.8s
PMG   Port Moresby    39.19 296   LR      LR      22 06 13.6
      comp=Z,401nm,19.1s,baz=158,slow=32
QIS   Mount Isa       39.69 275   P       P       21 52 40.7 +2.2
      comp=Z,20nm,1.1s
COEN  Coen            39.77 286   P       P       21 52 40.8 +1.6
COEN                              IAmb    IAmb    21 52 57.6
      comp=Z,33nm,0.9s
COEN  Coen            39.77 286   P       P       21 52 41.8 +2.5
      comp=Z,33nm,0.9s
TAOE  Nuku Hiva Isla  41.30  66 eLR       LR      22 03 59.3
      comp=Z,379nm,26.0s
AS31  Alice Springs   43.39 268   P       P       21 53 10.5 +1.6
AS31  Alice Springs   43.39 268   P       P       21 53 10.3 +1.4
      comp=Z,13nm,0.8s
ASAR  Alice Springs   43.39 268   P       P       21 53 10.2 +1.3
ASAR  Alice Springs   43.39 268   P       P       21 53 10.5 +1.6
      comp=Z,7.4nm,0.9s,baz=106,slow=7.3,SNR=38
ASAR                              PcP     PcP     21 54 57.8 +0.6
      comp=Z,3.5nm,0.9s,baz=122,slow=3.9,SNR=2.3
ASAR                              ScP     ScP     21 58 50.1 +3.4
      comp=Z,8.5nm,1.0s,baz=112,slow=4.2,SNR=19
ASAR                              S       S       21 59 23.5  -12
      comp=Z,2.6nm,1.0s,baz=81,slow=9.2,SNR=4.7
ASAR                              LR      LR      22 11 05.3
      comp=Z,985nm,18.6s,baz=110,slow=36
      comp=Z,7.4nm,0.9s
WR8   Warramunga Arr  44.30 273   P       P       21 53 17.6 +1.3
WR8                               IAmb    IAmb    21 53 33.1
      comp=Z,26nm,0.8s
WB2   Warramunga Arr  44.43 273   P       P       21 53 17.7 +0.4
WRAB  Tennant Creek   44.44 273   P       P       21 53 18.3 +1.0
WRAB                              IAmb    IAmb    21 53 34.1
      comp=Z,32nm,0.8s
WRAB  Tennant Creek   44.44 273 i P       P       21 53 18.4 +1.1
WRAB                              pmax    pmax
      comp=Z,11nm,0.6s
WRA   Warramunga Arr  44.44 273           P       21 53 17.8 +0.4
WRA   Warramunga Arr  44.44 273   P       P       21 53 18.3 +0.9
      comp=Z,11nm,0.5s,baz=113,slow=7.8,SNR=116
WRA                               PcP     PP      21 55 01.5 +0.2
      comp=Z,6.1nm,1.1s,baz=122,slow=3.4,SNR=2.5
WRA                               ScP     ScP     21 58 54.8 +3.8
      comp=Z,8.1nm,1.1s,baz=113,slow=4.3,SNR=9.6
WRA                               LR      LR      22 11 26.7
      comp=Z,1µm,18.1s,baz=78,slow=36
      comp=Z,11nm,0.5s
WB0   Warramunga Arr  44.47 273   P       P       21 53 18.7 +1.1
FORT  Forrest         46.18 256           P       21 53 31.6 +0.6
FORT  Forrest         46.18 256   P       P       21 53 31.1 +0.2
      comp=Z,55nm,0.8s
SBA   Scott Base      47.37 184           P       21 53 42.0 +2.4
SBA                               IAmb    IAmb    21 54 06.8
      comp=Z,18nm,1.1s
SBA   Scott Base      47.37 184   P       P       21 53 42.0 +2.4
SBA                               pmax    pmax
      comp=Z,18nm,1.1s
VNDA  Vanda           47.43 186   P       P       21 53 43.0 +2.9
VNDA  Vanda           47.43 186   P       P       21 53 42.6 +2.5
      comp=Z,1.0nm,0.7s,baz=26,slow=7.9,SNR=4.8
VNDA                              LR      LR      22 10 05.5
      comp=Z,264nm,20.8s,baz=18,slow=32
      comp=Z,1.0nm,0.7s
VNDA  Vanda           47.43 186   P       P       21 53 43.0 +2.9
VNDA                              pmax    pmax
      comp=Z,7.0nm,1.0s
WRKA  Warakurna       47.71 263   P       P       21 53 43.1 +0.1
      comp=Z,15nm,0.8s
JAY   Jayapura        48.50 298   P       P       21 53 49.3  0.0
      comp=Z,15nm,0.9s,baz=182,slow=4.4,SNR=7.4
JAY                               LR      LR      22 11 47.5
      comp=Z,205nm,21.9s,baz=348,slow=33
      comp=Z,15nm,0.9s
MTN   Manton Dam      50.41 279   P       P       21 54 03.8 +0.1
MTN                               IAmb    IAmb    21 55 38.8
      comp=Z,64nm,1.4s
KNRA  Kununurra       51.08 275   P       P       21 54 12.2 +3.4
FITZ  Fitzroy Crossi  52.68 270   LR      LR      22 16 18.1
      comp=Z,817nm,18.4s,baz=109,slow=36
NWAO  Narrogin (SRO)  54.45 250   LR      LR      22 15 06.6
      comp=Z,219nm,19.6s,baz=83,slow=33
CASY  Casey           54.67 208   P       P       21 54 35.9 +1.3
PSA00 Pilbara Seismi  56.20 264   P       P       21 54 46.1 -0.2
PSA00                             IAmb    IAmb    21 55 06.2
      comp=Z,20nm,1.2s
MBWA  Marble Bar      56.47 264   P       P       21 54 48.0 -0.3
MBWA                              IAmb    IAmb    21 56 41.0
      comp=Z,53nm,1.8s
MORW  Morawa          56.64 254   P       P       21 54 49.7 +0.3
GUMO  Guam            57.20 315   LR      LR      22 17 45.4
      comp=Z,201nm,18.7s,baz=118,slow=34
BATI  Baumata         58.05 278   LR      LR      22 20 25.2
      comp=Z,1µm,18.7s,baz=128,slow=36
QSPA  South Pole Qui  59.01 180   P       P       21 55 07.7 +2.0
QSPA  South Pole Qui  59.01 180   P       P       21 55 07.3 +1.6
      comp=Z,7.5nm,1.0s,baz=64,slow=1.1,SNR=19
      comp=Z,7.5nm,1.0s
GIRL  Giralia         60.53 260   P       P       21 55 18.0 +1.5
KAPI  Kappang         64.05 280   LR      LR      22 23 12.6
      comp=Z,204nm,20.1s,baz=103,slow=36
DAV   Davao City (W)  66.21 295   LR      LR      22 24 21.8
      comp=Z,72nm,19.6s,baz=142,slow=36
BELA  Belgrano 2      69.05 172           P       21 56 12.0 +0.8
BELA                              IAmb    IAmb    21 56 30.4
      comp=Z,8.8nm,0.9s
MAW   Mawson          71.77 201   P       P       21 56 29.4 +1.5
      comp=Z,12nm,1.2s,baz=156,slow=11,SNR=4.0
      comp=Z,12nm,1.2s
LEM   Lembang         73.46 272   LR      LR      22 30 39.9
      comp=Z,407nm,18.4s,baz=157,slow=37
TGY   Tagaytay City   74.12 298   LR      LR      22 26 21.8
      comp=Z,89nm,21.6s,baz=58,slow=33
TROLL Troll, Antarti  77.17 180 ⇑P       P       21 57 01.1 +1.6
      comp=Z,832nm,1.1s
SNAA  Sanae           77.45 178 ⇑P       P       21 57 02.0 +1.1
      comp=Z,90nm,0.6s
SNAA  Sanae           77.45 178   P       P       21 57 00.8 -0.2
      comp=Z,2.6nm,0.9s,baz=177,slow=6.6,SNR=5.7
      comp=Z,2.6nm,0.9s
SNAA  Sanae           77.45 178ceP       P       21 57 02.8 +1.9
SNAA                              pmax    pmax
      comp=Z,5.0nm,1.3s
VNA3  Neumayer Olymp  77.59 176 ⇑P       P       21 57 02.5 +0.9
      comp=Z,16nm,0.6s
VNA2  Neumayer--Watz  78.03 177 ⇑P       P       21 57 05.4 +1.3
      comp=Z,12nm,0.8s,baz=172,slow=5.8
COYC  Coyhaique       78.21 136   P       P       21 57 05.9 +0.3
COYC                              IAmb    IAmb    21 57 12.9
      comp=Z,34nm,1.1s
VNA1  Neumayer--Stat  78.25 176 ⇑P       P       21 57 04.8 -0.5
      comp=Z,12nm,0.9s
MJAR  Matsushiro Arr  79.00 325   P       P       21 57 07.5 -2.3
      comp=Z,3.6nm,1.0s,baz=164,slow=4.9,SNR=11
MJAR                              LR      LR      22 27 27.1
      comp=Z,58nm,20.0s,baz=132,slow=32
      comp=Z,3.6nm,1.0s
LL02  Futaleuf        79.64 134   P       P       21 57 13.6 +0.2
LL02                              IAmb    IAmb    21 57 20.4
      comp=Z,18nm,1.1s
LL01  San Ignacio de  79.73 133   P       P       21 57 13.5 -0.4
H03N2 Juan Fernandez  80.01 123   T       T       23 23 55.0
      SNR=4.2
H03N1 Juan Fernandez  80.03 123   T       T       23 26 53.8
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      SNR=9.8
JNU   Nakatsue        80.29 318   LR      LR      22 31 22.7
      comp=Z,51nm,18.6s,baz=127,slow=35
PLCA  Paso Flores     81.80 133   P       P       21 57 25.9 +0.7
      comp=Z,5.8nm,1.1s,baz=180,slow=3.0,SNR=4.0
PLCA                              LR      LR      22 25 55.2
      comp=Z,137nm,18.5s,baz=240,slow=30
      comp=Z,5.8nm,1.1s
KIWB  Kanaga Island   82.60   0   P       P       21 57 28.8 +0.2
ADK   Adak            82.63   1   P       P       21 57 28.5 -0.3
ADK                               IAmb    IAmb    21 57 30.9
      comp=Z,19nm,0.9s
ADK   Adak            82.63   1   P       P       21 57 28.5 -0.3
ADK                               pmax    pmax
      comp=Z,19nm,0.9s
DLV    Lat            82.68 289   P       P       21 57 30.6 +0.4
DLV                               IAmb    IAmb    21 57 53.9
      comp=Z,12nm,0.9s
GSTR  Great Sitkin T  82.85   1   P       P       21 57 29.9 -0.1
ATKA  Atka Island     83.00   2   P       P       21 57 30.0 -0.7
ATKA                              IAmb    IAmb    21 57 44.1
      comp=Z,19nm,1.0s
JKA   Kamikawa-asahi  83.20 332   P       P       21 57 32.6 +0.6
JKA                               IAmb    IAmb    21 57 40.3
      comp=Z,18nm,1.0s
ASAJ  Asahikawa       83.21 332   LR      LR      22 33 46.7
      comp=Z,148nm,18.1s,baz=116,slow=35
ASAJ  Asahikawa       83.21 332   P       P       21 57 32.6 +0.6
ASAJ                              pmax    pmax
      comp=Z,18nm,1.0s
TJN   Taejon          84.64 318 i P       P       21 57 40.5 +1.0
LPIG  La Paz          84.64  58   LR      LR      22 29 57.3
      comp=Z,411nm,18.1s,baz=224,slow=32
KSRS  Korea Array     85.08 319   P       P       21 57 41.3 -0.4
      comp=Z,1.3nm,0.7s,baz=148,slow=5.9,SNR=7.4
      comp=Z,1.3nm,0.7s
KSAR  Wonju Array Be  85.10 319   P       P       21 57 41.5 -0.3
KSAR  Wonju Array Be  85.10 319   P       P       21 57 41.5 -0.3
MT01  Popeta          85.19 127   P       P       21 57 42.6  0.0
YSS   Yuzhno-Sakhali  85.51 334 eP       P       21 57 45.3 +1.7
YSS                               pmax    pmax
      comp=Z,20nm,0.9s
PSI   Prapat          85.82 276   LR      LR      22 37 18.0
      comp=Z,250nm,19.3s,baz=106,slow=36
PFO   Pinyon Flats O  86.45  47   P       P       21 57 48.5 -0.3
PFO   Pinyon Flats O  86.45  47   LR      LR      22 30 58.5
      comp=Z,288nm,18.2s,baz=218,slow=32
PFO   Pinyon Flats O  86.45  47 i P       P       21 57 48.6 -0.2
PFO                               pmax    pmax
      comp=Z,6.0nm,1.0s
PETK  Petropavlovsk-  86.57 345   P       P       21 57 49.1 +0.4
PETK  Petropavlovsk-  86.57 345   P       P       21 57 48.6 -0.1
      comp=Z,2.2nm,0.6s,baz=104,slow=7.4,SNR=5.8
PETK                              LR      LR      22 29 42.4
      comp=Z,99nm,21.8s,baz=149,slow=31
      comp=Z,2.2nm,0.6s
PETK  Petropavlovsk-  86.57 345   P       P       21 57 49.1 +0.4
NJ2   Nanjing         86.94 310 eP       P       21 57 53.4 +2.4
NJ2                               pmax    pmax
      comp=Z,5.0nm,0.6s
O02D  Mt. Diablo Mer  87.24  39   P       P       21 57 51.4 -1.0
PSTR  Posyet          87.34 325 i P       P       21 57 53.9 +1.2
GSC   Goldstone, Bar  87.34  46   P       P       21 57 52.9 -0.1
GSC                               IAmb    IAmb    21 57 55.6
      comp=Z,13nm,1.2s
GSC   Goldstone, Bar  87.34  46   P       P       21 57 52.9 -0.1
GSC                               pmax    pmax
      comp=Z,13nm,1.3s
QSM   Queen of Sheba  87.75  45   P       P       21 57 55.1 +0.3
QSM                               IAmb    IAmb    21 59 33.9
      comp=Z,7.6nm,0.7s
USA0B Ussuriysk Arra  87.92 326 i P       P       21 57 56.5 +1.1
USRK  Ussuriysk Ar.   87.92 326   P       P       21 57 55.7 +0.3
USRK  Ussuriysk Ar.   87.92 326   P       P       21 57 55.5 +0.1
      comp=Z,3.6nm,0.8s,baz=116,slow=4.4,SNR=7.0
      comp=Z,3.6nm,0.8s
USRK  Ussuriysk Ar.   87.92 326   P       P       21 57 55.7 +0.3
DSP   Deep Springs    88.02  43   P       P       21 57 56.7 +0.6
YBH   Yreka Blue Hor  88.39  38   LR      LR      22 33 02.9
      comp=Z,14nm,18.6s,baz=240,slow=33
GMN   Gold Mountain   88.39  44   P       P       21 57 58.7 +0.5
GMN                               IAmb    IAmb    21 58 09.1
      comp=Z,11nm,1.4s
NVAR  Mina Array Bea  88.54  43   P       P       21 57 58.1 -0.7
NVAR  Mina Array Bea  88.54  43   P       P       21 57 58.5 -0.4
      comp=Z,6.1nm,1.1s,baz=217,slow=7.1,SNR=10
NVAR                              LR      LR      22 30 59.4
      comp=Z,206nm,19.1s,baz=254,slow=31
      comp=Z,6.1nm,1.1s
NV11  Mina Array Sit  88.62  43   P       P       21 57 59.0 -0.2
NV11                              IAmb    IAmb    21 58 10.0
      comp=Z,15nm,1.6s
TPNV  Topopah Spring  88.77  45   P       P       21 58 00.1 +0.2
TPNV                              IAmb    IAmb    21 58 10.4
      comp=Z,18nm,1.4s
TPNV  Topopah Spring  88.77  45   P       P       21 58 00.1 +0.2
TPNV                              pmax    pmax
      comp=Z,18nm,1.5s
Y14A  Wickenburg      88.86  49   P       P       21 58 01.2 +0.9
Y14A                              IAmb    IAmb    21 58 11.7
      comp=Z,24nm,1.7s
TPH   Tonopah         88.93  43   P       P       21 58 00.6 -0.1
TPH   Tonopah         88.93  43   P       P       21 58 00.6 -0.1
TPH                               pmax    pmax
      comp=Z,101nm,1.6s
W13A  Hualapai Mount  89.03  47   P       P       21 57 59.5 -1.7
SHPR  Sheep Range     89.14  46   P       P       21 58 02.4 +0.8
TUC   Tucson          89.30  51   P       P       21 58 02.0 -0.4
TUC                               IAmb    IAmb    21 58 15.2
      comp=Z,12nm,1.3s
TUC   Tucson          89.30  51   P       P       21 58 02.0 -0.4
TUC                               pmax    pmax
      comp=Z,12nm,1.3s
MDJ   Mudanjiang      89.38 325   P       P       21 58 03.5 +1.2
MDJ                               S       S       22 08 56.9 +6.5
MDJ                               pmax    pmax
      comp=Z,13nm,1.4s
MDJ                               LR      LR
      comp=Z,170nm,16.1s
PRN   Pahroc Range    89.79  45   P       P       21 58 04.5 -0.2
PRN                               IAmb    IAmb    21 58 15.6
      comp=Z,19nm,1.3s
X16A  Lo Mia Camp, P  90.17  49   P       P       21 58 06.5 -0.1
J05D  Fort Rock, OR   90.26  37   P       P       21 58 06.2 -0.5
J05D                              IAmb    IAmb    21 58 33.9
      comp=Z,13nm,1.4s
DUN6  Lazy B Ranch    90.59  52   P       P       21 58 07.5 -0.9
TIA   Tai'an          90.68 313   P       P       21 58 09.6 +1.0
TIA                               pmax    pmax
      comp=Z,12nm,1.1s
PINE  Pine Mountain   90.76  37   P       P       21 58 09.2 +0.2
PINE                              IAmb    IAmb    21 58 11.7
      comp=Z,13nm,1.3s
U15A  North Rim       90.87  47   P       P       21 58 09.9  0.0
U15A                              IAmb    IAmb    21 58 31.5
      comp=Z,20nm,1.4s
CN2   Changchun       90.89 323   P       P       21 58 09.9 +0.5
CN2                               pP      pP      21 58 14.6 -2.1
CN2                               pmax    pmax
      comp=Z,20nm,0.9s
WUAZ  Wupatki         90.89  48   P       P       21 58 09.8  0.0
WUAZ                              IAmb    IAmb    21 58 31.4
      comp=Z,11nm,1.1s
KDAK  Kodiak Island   91.02  13   LR      LR      22 35 35.3
      comp=Z,87nm,18.2s,baz=207,slow=33
X18A  Snowflake       91.21  50   P       P       21 58 12.3 +0.9
X18A                              IAmb    IAmb    21 58 14.3
      comp=Z,10.0nm,1.4s
BNX   BinXian         91.26 325 ⇑P       P       21 58 11.0 -0.1
BNX                               pmax    pmax
      comp=Z,8.0nm,1.0s
KLR   Kul'dur         91.80 330   LR      LR      22 37 44.9
      comp=Z,83nm,19.1s,baz=182,slow=34
KLR   Kul'dur         91.80 330ceP       P       21 58 13.7 +0.2
KLR                               pmax    pmax
      comp=Z,12nm,1.4s
N15K  Kwethluk River  92.08   9   P       P       21 58 15.0 +0.5
N15K                              IAmb    IAmb    21 58 29.7
      comp=Z,7.1nm,0.8s
ENH   Enshi           92.26 304   P       P       21 58 16.4 +0.3
ENH                               IAmb    IAmb    21 58 42.4
      comp=Z,19nm,1.3s
O18K  Koktuh Hills    92.49  11   P       P       21 58 17.0 +0.5
O18K                              IAmb    IAmb    21 58 36.8
      comp=Z,9.5nm,0.9s
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TXAR  Lajitas Array   92.50  57   P       P       21 58 15.8 -1.5
      comp=Z,1.0nm,1.0s,baz=214,slow=6.0,SNR=6.7
TXAR                              LR      LR      22 34 44.5
      comp=Z,157nm,18.0s,baz=240,slow=32
      comp=Z,1.0nm,1.0s
CMIG  Matias Romero   92.67  72   LR      LR      22 31 54.4
      comp=Z,75nm,19.4s,baz=184,slow=30
LYN   LuoYang         92.69 309   P       P       21 58 19.6 +1.7
LYN                               pP      pP      21 58 23.8 -1.5
LYN                               S       S       22 09 24.8 +3.7
LYN                               pmax    pmax
      comp=Z,10.0nm,0.5s
LYN                               LR      LR
      comp=Z,180nm,14.9s
LYN                               LR      LR
      comp=Z,130nm,13.4s
LYN                               LR      LR
      comp=Z,190nm,14.9s
G08A  Pilot Rock      92.82  37   P       P       21 58 19.0 +0.5
NNA   Nana            92.93 106   LR      LR      22 30 38.0
      comp=Z,110nm,21.9s,baz=232,slow=29
HNS   HongShan        92.94 312 eP       P       21 58 20.5 +1.5
HNS                               SKS     SKSac   22 08 56.6 +5.6
HNS                               LR      LR
      comp=Z,120nm,19.1s
HNS                               LR      LR
      comp=Z,100nm,17.5s
Q16A  Castle Valley   93.11  46   P       P       21 58 20.5 +0.4
MFID  Camas Ranch     93.25  40   P       P       21 58 19.9 -0.6
ANMO  Albuquerque     93.77  51   LR      LR      22 36 18.6
      comp=Z,275nm,18.1s,baz=322,slow=33
CMAR  Chiang Mai Arr  93.93 289   P       P       21 58 24.4 +0.4
      comp=Z,0.3nm,0.3s,baz=126,slow=5.0,SNR=2.0
CMAR                              LR      LR      22 43 54.3
      comp=Z,44nm,19.1s,baz=105,slow=38
      comp=Z,0.3nm,0.3s
MA2   Magadan         94.05 344   LR      LR      22 35 57.5
      comp=Z,110nm,21.1s,baz=148,slow=32
HLID  Hailey          94.13  41   P       P       21 58 23.6 -1.0
ATAH  Atahualpa       94.20 101   LR      LR      22 35 47.9
      comp=Z,100nm,18.0s,baz=242,slow=32
PV01  Paradox Valley  94.26  48   P       P       21 58 25.4 -0.1
XAN   Xi'an           94.79 307   P       P       21 58 35.1 +7.4
XAN                               pmax    pmax
      comp=Z,7.0nm,1.4s
NEW   Newport         95.75  36   LR      LR      22 38 33.6
      comp=Z,253nm,18.1s,baz=195,slow=34
PZH   PanZhiHua       95.91 297   P       P       21 58 36.8 +3.7
PDAR  Pinedale Array  96.42  43   P       P       21 58 33.8 -1.4
      comp=Z,0.4nm,0.8s,baz=224,slow=4.1,SNR=3.8
PDAR                              LR      LR      22 37 47.3
      comp=Z,111nm,18.4s,baz=200,slow=33
      comp=Z,0.4nm,0.8s
HHC   Hu-ho-hao-te    96.95 314 eP               21 58 39.0
HHC                               pmax    pmax
      comp=Z,7.0nm,0.8s
HHC                               pmax    pmax
      comp=Z,83nm,4.6s
JTS   Las Juntas de   97.51  83   LR      LR      22 33 42.3
      comp=Z,119nm,19.8s,baz=272,slow=30
LPAZ  La Paz          97.57 114   LR      LR      22 34 14.6
      comp=Z,53nm,21.7s,baz=232,slow=30
DLBC  Dease Lake      97.64  23   LR      LR      22 34 26.7
      comp=Z,8.8nm,21.2s,baz=206,slow=30
RLMT  Red Lodge       98.00  42   P       P       21 58 41.1 -1.1
ILAR  Eielson Array   98.54  13   P       P       21 58 43.8 -0.1
      comp=Z,0.5nm,0.8s,baz=207,slow=5.8,SNR=4.6
ILAR                              LR      LR      22 38 55.5
      comp=Z,66nm,18.9s,baz=194,slow=33
      comp=Z,0.5nm,0.8s
J26L  Joseph Creek    98.96  14   P       Pdif    21 58 46.3 +0.4
CPUP  Villa Florida   99.30 128   LR      LR      22 40 15.8
      comp=Z,30nm,18.1s,baz=104,slow=33
LZH   Lanzhou         99.39 306 eP       Pdif    21 58 46.8 -1.8
LZH                               sP      sP      21 58 57.8 -0.7
LZH                               SKS     SKSac   22 09 27.6 +2.2
LZH                               pmax    pmax
      comp=Z,12nm,1.0s
LZH                               LR      LR
      comp=Z,120nm,16.7s
LZH                               LR      LR
      comp=Z,140nm,15.8s
LZH                               LR      LR
      comp=Z,140nm,16.7s
BILL  Bilibino        99.57 354 i P       Pdif    21 58 49.9 +1.5
BILL                              pmax    pmax
      comp=Z,2.0nm,0.9s
BILL                              MLR     MLR
      comp=Z,88nm,18.0s
WMQ   Urumqi         113.91 308 ePKP     PKiKP   22 03 46.5 +1.8
MK31  Makanchi Array 118.46 310c iPKIKP  PKiKP   22 03 54.3 +0.9
MKAR  Makanchi Array 118.46 310          PKPdf   22 03 52.7 -0.7
MKAR  Makanchi Array 118.46 310   PKP     PKPdf   22 03 53.1 -0.2
      comp=Z,0.4nm,0.4s,baz=104,slow=1.5,SNR=6.1
MKAR                              PKKPbc  PKKPab  22 14 11.7  0.0
      comp=Z,0.4nm,0.9s,baz=309,slow=8.4,SNR=3.6
ZALV  Zalesovo Beam  118.76 318   PKP     PKiKP   22 03 54.3 +0.6
      comp=Z,1.6nm,0.7s,baz=90,slow=1.4,SNR=4.2
KSH   Kashi          120.87 300   PKP     PKiKP   22 04 10.3  +12
KURK  Kurchatov      121.76 313           PKPdf   22 03 59.0 -0.4
KURK  Kurchatov      121.76 313c iPKIKP  PKPdf   22 03 58.8 -0.7
KURK                              pmax    pmax
      comp=Z,5.0nm,1.3s
KURBB Kurchatov Arra 121.80 313   PKP     PKPdf   22 03 59.1 -0.4
      comp=Z,1.8nm,0.7s,baz=114,slow=1.9,SNR=12
AAK   Ala-Archa      122.76 303c iPKIKP  PKiKP   22 04 03.0 +0.9
AAK                               pmax    pmax
      comp=Z,4.0nm,1.7s
KBL   Kabul          124.78 293           PKiKP   22 04 07.4 +1.0
KBL   Kabul          124.78 293   PKIKP   PKiKP   22 04 07.4 +1.0
SIMJ  Simiganj       125.88 297   PKPdf   PKiKP   22 04 08.8 +0.5
BVAR  Borovoye Array 127.12 315   PKP     PKPdf   22 04 09.8 +0.1
      comp=Z,2.8nm,0.8s,baz=119,slow=2.1,SNR=11
BRVK  Borovoye       127.19 315c iPKIKP  PKiKP   22 04 11.4 +1.1
BRVK                              pmax    pmax
      comp=Z,4.0nm,1.3s
SVE   Sverdlovsk     132.64 321 ePKIKP   PKiKP   22 04 30.8  +10
ABKAR Akbulak array  133.60 310           PKiKP   22 04 23.8 +0.5
ARTI  Arti           133.93 320           PKiKP   22 04 23.9 +0.1
ARTI  Arti           133.93 320   PKP     PKPdf   22 04 22.2 -0.3
      comp=Z,1.6nm,0.5s,baz=16,slow=5.3,SNR=4.1
ARTI  Arti           133.93 320 i PKIKP   PKPdf   22 04 22.8 +0.3
ARTI                                              22 06 53.1
ARTI                              SS      SS      22 24 38.1 -1.0
ARCES ARCESS Array B 139.34 348   PKP     PKPdf   22 04 29.4 -2.8
      comp=Z,1.2nm,0.7s,baz=55,slow=1.7,SNR=5.7
BELG  Belogornoye    140.91 316 i PKIKP   PKPdf   22 04 36.8 +1.4
KLMR  Klimovskoe     141.53 332 ePKIKP   PKPdf   22 04 36.0 -0.3
KLMR                              pmax    pmax
      comp=Z,13nm,1.2s
AKT   Akhty          142.38 299 ePKIKP   PKPdf   22 04 39.4 +0.8
AKT                               pmax    pmax
      comp=Z,13nm,0.8s
GNI   Garni          144.67 297c iPKIKP  PKPdf   22 04 42.6 -0.2
GNI                               pmax    pmax
      comp=Z,43nm,1.7s
MOS   Moscow         145.09 325 i PKIKP   PKPbc   22 04 41.4 -0.8
MOS                               pmax    pmax
      comp=Z,73nm,1.2s
NCK   Nalchik        145.29 303c iPKIKP  PKPab   22 04 44.0 +0.5
GOF   Gofitskoye     145.46 305cePKIKP  PKPab   22 04 44.5 +0.5
KBZ   Khabaz         145.76 303   PKPbc   PKPdf   22 04 43.3 -1.0
      comp=Z,8.8nm,0.8s,baz=170,slow=2.2,SNR=15
KBZ   Khabaz         145.76 303c iPKP2   PKPab   22 04 45.3 +0.1
PUL   Pulkovo        145.76 335c iPKP2   PKPab   22 04 46.3 +1.6
PUL                               pmax    pmax
      comp=Z,64nm,0.6s
LPSR  Galich'ya Gora 145.85 320 ePKIKP   PKPdf   22 04 43.4 -0.7
LPSR                              pmax    pmax
      comp=Z,80nm,1.0s
KIV   Kislovodsk     145.88 304           PKPab   22 04 46.2 +0.4
KIV   Kislovodsk     145.88 304 ⇓P       PKPab   22 04 46.4 +0.6
KIV   Kislovodsk     145.88 304 i PKP2    PKPab   22 04 45.8  0.0
KIV                               pmax    pmax
      comp=Z,12nm,0.9s
FINES FINESS Array B 145.91 340   PKPbc   PKPdf   22 04 44.3 +0.3
      comp=Z,16nm,0.7s,baz=49,slow=3.3,SNR=84
OBN   Obninsk        145.93 325           PKPab   22 04 45.4  0.0
OBN   Obninsk        145.93 325 ⇓P       PKPbc   22 04 44.9  0.0
OBN   Obninsk        145.93 325c iPKP2   PKPbc   22 04 44.7 -0.2
OBN                             e                 22 08 10.5
OBN                             ePPP     PPP     22 11 20.0
OBN                             e                 22 11 51.2
OBN                             eSS      SS      22 26 53.5 -5.7
OBN                               pmax    pmax
```

	comp=Z,147nm,1.7s						
OBN				MLR	MLR		
	comp=Z,70nm,20.0s						
VORR	**Voronezh**	**146.07**	**318**	*e*PKIKP	**PKPdf**	**22 04 43.9**	**-0.6**
VORR				pmax	pmax		
	comp=Z,50nm,1.0s						
VSR	**Storozhevoye**	**146.26**	**317**	*e*PKIKP	**PKPdf**	**22 04 43.6**	**-1.3**
VSR				pmax	pmax		
	comp=Z,50nm,1.2s						
VORD	**Divnogorie**	**146.28**	**317**	*e*PKIKP	**PKPdf**	**22 04 44.0**	**-0.9**
VORD				pmax	pmax		
	comp=Z,40nm,1.1s						
ERBR	**Yeremizino-Bor**	**147.10**	**307**	*i* PKP2	**PKPab**	**22 04 49.7**	**-0.6**
ERBR				*e*		22 11 54.3	
ERBR				pmax	pmax		
	comp=Z,47nm,0.9s						
LABN	**Labinsk**	**147.15**	**305**	*i* PKP2	**PKiKP**	**22 04 51.8**	**+0.6**
LABN				pmax	pmax		
	comp=Z,9.0nm,0.5s						
VSU	**Vasula**	**147.99**	**336**	*c i*PKIKP	**PKPdf**	**22 04 48.8**	**+1.3**
VSU				pmax	pmax		
	comp=Z,44nm,1.7s						
NC303	**NORSAR Array S**	**149.29**	**351**	*e*P	**PKPbc**	**22 04 54.1**	**+0.2**
NC204	**NORSAR Array S**	**149.31**	**352**	*e*P	**PKPab**	**22 04 58.3**	**-0.4**
ANN	**Anapa**	**149.41**	**307**	*i* PKP2	**PKiKP**	**22 04 55.6**	**-0.2**
ANN				pmax	pmax		
	comp=Z,61nm,1.1s						
NB2	**NORSAR Subarra**	**149.49**	**352**	PKP	**PKPbc**	**22 04 54.0**	**-0.5**
	comp=Z,5.4nm,0.8s,baz=13,slow=4.1						
NOA	**NORSAR Array B**	**149.49**	**352**	PKP	**PKPdf**	**22 04 48.1**	**-1.9**
	comp=Z,2.2nm,0.6s,baz=14,slow=4.1,SNR=11						
NOA				PKPbc	**PKPbc**	**22 04 54.1**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=49,slow=1.8,SNR=6.1						
HFS	**Hagfors**	**149.99**	**349**	PKPbc	**PKPbc**	**22 04 55.2**	**-0.4**
	comp=Z,6.1nm,0.7s,baz=66,slow=4.9,SNR=11						
MNK	**Minsk**	**150.35**	**329**	*i* PKiKP	**PKPbc**	**22 04 57.0**	**+0.2**
	comp=E,7.0nm,0.8s						
MNK				*i* PKiKP	**PKPbc**	**22 04 57.0**	**+0.2**
	comp=N,6.0nm,0.8s						
MNK				*i* PKiKP	**PKPbc**	**22 04 57.0**	**+0.2**
	comp=Z,11nm,0.9s,baz=48						
MNK				*i* PP	**PP**	**22 08 31.9**	**-0.3**
MNK				*i* PPP	PPP	22 11 54.7	
MNK				*i* SKS	**SKSdf**	**22 11 57.8**	**+0.6**
MNK				*i* SKKS	**SKKSdf**	**22 20 49.5**	**-0.9**
MNK				*i* SS	**SS**	**22 27 53.0**	**+4.3**
MNK				*i* SSS	SSS	22 33 34.2	
MNK				*i* LQ	LQ	23 03 59.5	
MNK				*i* LR	LR	23 15 31.0	
MNK	**Minsk**	**150.35**	**329**	*i* PKIKP	**PKPbc**	**22 04 56.9**	**+0.2**
MNK				*i*		22 08 31.9	
MNK				*i* PPP	PPP	22 11 54.7	
MNK				*i*		22 11 57.8	
MNK				*i* SS	SS	22 27 53.0	+4.3
MNK				*i* SSS	SSS	22 33 34.1	
MNK				pmax	pmax		
	comp=N,6.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,11nm,0.9s						
MNK				pmax	pmax		
	comp=E,7.0nm,0.8s						
NACGM	**Naroch**	**150.54**	**331**	⇑*i*PKiKP	**PKPbc**	**22 04 57.3**	**+0.1**
	comp=Z,12nm,0.9s,baz=46						
SIM	**Simferopol'**	**151.63**	**308**	*i* PKIKP	**PKPbc**	**22 05 00.2**	**+0.2**
SIM				pmax	pmax		
	comp=Z,66nm,1.1s						
MMAI	**Mount Meron Ar**	**152.00**	**283**	PKPbc	**PKiKP**	**22 05 02.7**	**+1.0**
	comp=Z,15nm,0.8s,baz=70,slow=7.3,SNR=17						
AKASG	**Malin Array Be**	**152.05**	**322**		**PKiKP**	**22 05 01.2**	**+0.1**
AKASG	**Malin Array Be**	**152.05**	**322**	PKPbc	**PKPbc**	**22 04 59.9**	**-0.9**
	comp=Z,6.5nm,0.7s,baz=48,slow=2.9,SNR=15						
KIEV	**Kiev**	**152.06**	**322**		**PKiKP**	**22 05 01.3**	**+0.2**
KIEV	**Kiev**	**152.06**	**322**	⇑P	**PKPbc**	**22 05 01.0**	**+0.2**
KIEV	**Kiev**	**152.06**	**322**	⇑PKIKP	**PKPbc**	**22 05 01.0**	**+0.2**
KIRS	**Kirsehir-Merke**	**153.08**	**296**	⇑P	**PKiKP**	**22 05 04.2**	**+0.4**
BRTR	**Keskin Array B**	**153.21**	**297**		**PKPbc**	**22 05 02.9**	**-1.1**
BRTR	**Keskin Array B**	**153.21**	**297**	PKPbc	**PKPbc**	**22 05 02.4**	**-1.5**
	comp=Z,5.2nm,1.0s,baz=134,slow=3.6,SNR=18						
ANTO	**Ankara**	**153.82**	**298**		**PKiKP**	**22 05 06.4**	**+1.1**
ANTO	**Ankara**	**153.82**	**298**	⇓P	**PKiKP**	**22 05 06.4**	**+1.1**
ANTO	**Ankara**	**153.82**	**298**	PKIKP	**PKiKP**	**22 05 06.4**	**+1.1**
SORM	**Soroca**	**153.92**	**318**	⇑P	**PKPab**	**22 05 13.1**	**-5.2**
MILM	**Milestii Mici**	**154.25**	**315**	⇓P	**PKPab**	**22 05 17.0**	**-2.7**
BEL	**Belsk**	**155.24**	**332**	*e*PKP	**PKPab**	**22 05 20.0**	**-3.7**
GKP	**Gorka Klasztor**	**155.36**	**338**	*e*PKP	PKPab	22 05 15.0	-9.1
TPGR	**Topolog**	**155.43**	**311**	⇑P	PKPab	22 05 17.3	-7.6
EKA	**Eskdalemuir Ar**	**155.46**	**8**	PKPab	**PKPab**	**22 05 24.6**	**+0.1**
	comp=Z,2.5nm,0.8s,baz=335,slow=3.7,SNR=4.5						
CFR	**Carcaliu**	**155.47**	**312**	⇑P	PKPdf	22 05 09.7	+10
HARR	**Harsova**	**155.81**	**311**	⇑P	PKPab	22 05 15.6	-11
BURAR	**Bucovina Array**	**155.97**	**320**	⇑P	PKPdf	22 05 11.9	+12
KOLS	**Kolonicke sedl**	**156.68**	**325**	*e*PKP2	**PKPab**	**22 05 24.6**	**-5.5**
KOLS	**Kolonicke sedl**	**156.68**	**325**	*e*PKP	**PKPab**	**22 05 24.6**	**-5.5**
MLR	**Muntele Rosu**	**156.69**	**315**	⇓P	PKPab	22 05 16.1	-14
STHS	**Stebnicka Huta**	**156.83**	**328**	*e*PKIKP	**PKPdf**	**22 05 06.0**	**+5.0**
STHS	**Stebnicka Huta**	**156.83**	**328**	*e*PKP	**PKPdf**	**22 05 06.0**	**+5.0**
STHS				*e*		22 05 39.7	
NIE	**Niedzica**	**157.25**	**329**	*e*PKP	**PKPab**	**22 05 25.4**	**-7.2**
ARR	**Arges**	**157.54**	**316**	⇓P	PKPab	22 05 22.3	-12
KSP	**Ksiaz**	**157.72**	**336**	*e*PKP	PKPab	22 05 25.3	-9.2
LANS	**Liptovska Anna**	**157.82**	**329**	*e*PKP	**PKPdf**	**22 04 56.7**	**-5.5**
LANS				*e*		22 05 29.0	
OKC	**Ostrava-Krasne**	**157.85**	**332**	AMS	AMS	23 31 20.0	
	comp=Z,100nm,22.0s						
OSTC	**Ostas**	**157.99**	**336**	*e*PKP	**PKPab**	**22 05 28.5**	**-7.2**
OSTC				AMS	AMS	23 20 20.0	
	comp=Z,100nm,20.3s						
CHVC	**Chvalec**	**158.02**	**336**	AMS	AMS	23 19 50.0	
	comp=Z,100nm,21.9s						
UPC	**Upice**	**158.10**	**336**	*e*PKP	PKPab	22 05 46.4	+10
UPC				AMS	AMS	23 19 50.0	
	comp=Z,100nm,20.0s						
ASSE	**Asse, Remlinge**	**158.12**	**346**	*e*PKPab	**PKPab**	**22 05 35.8**	**-0.2**
	baz=20,slow=4.5						
DPC	**Dobruska-Polom**	**158.12**	**336**	AMS	AMS	23 28 00.0	
	comp=Z,100nm,18.9s						
MORC	**Moravsky Berou**	**158.13**	**333**	*e*PKP	**PKPab**	**22 05 36.1**	**-0.3**
KRLC	**Kraliky**	**158.18**	**334**	*e*PKP	PKPab	22 05 46.4	+10
BRG	**Berggiesshubel**	**158.45**	**340**	*e*PKPab	**PKPab**	**22 05 38.1**	**+0.5**
	baz=20,slow=4.5						
BRG	**Berggiesshubel**	**158.45**	**340**	*e*PKP	**PKPab**	**22 05 38.5**	**+0.9**
BRG				Amp		22 05 39.4	
	comp=Z,4.0nm,0.9s						
BRG	**Berggiesshubel**	**158.45**	**340**	P	**PKPab**	**22 05 43.5**	**+5.9**
BRG				Amp		22 05 44.6	
	comp=Z,9.5nm,1.4s						
PSZ	**Piszkesteto**	**158.52**	**326**	⇑P	**PKPab**	**22 05 38.0**	**-0.2**
PSZ	**Piszkesteto**	**158.52**	**326**	⇑PKP2	**PKPab**	**22 05 38.0**	**-0.2**
PVCC	**Panska Ves**	**158.56**	**338**	*e*PKP	PKPab	22 05 47.3	+9.2
GZR	**Gura Zlata**	**158.62**	**318**	⇓P	PKPdf	22 05 15.7	+12
JAVC	**Velka Javorina**	**158.81**	**331**	*e*PKP	**PKPab**	**22 05 40.4**	**+1.1**
VRAC	**Vranov**	**158.88**	**333**	*e*PKP	**PKPab**	**22 05 40.0**	**+0.4**
GOPC	**GO Pecny, Ondr**	**159.02**	**337**	AMS	AMS	23 27 20.0	
	comp=Z,100nm,22.9s						
PRU	**Pruhonice**	**159.04**	**338**	AMS	AMS	23 33 00.0	
	comp=Z,100nm,19.4s						
KRUC	**Moravsky**	**159.16**	**333**	*e*PKP	**PKPab**	**22 05 40.8**	**+0.1**
TANN	**Tannenbergstha**	**159.28**	**342**	*e*PKPab	**PKPab**	**22 05 40.0**	**-1.3**
	baz=20,slow=4.5						
MOX	**Moxa**	**159.29**	**343**	*e*L	L	23 40 01.3	
	comp=Z,106nm,18.2s						
TREC	**Trest**	**159.30**	**335**	AMS	AMS	23 28 20.0	
	comp=Z,100nm,21.3s						
ZVC	**Zvikov**	**159.63**	**337**	AMS	AMS	23 30 30.0	
	comp=Z,100nm,18.1s						
ROTZ	**Rotzenmuhle**	**159.94**	**341**	*e*PKPab	**PKPab**	**22 05 44.7**	**+0.6**
	baz=20,slow=4.5						
KHC	**Kasperske Hory**	**160.09**	**338**	*e*PKP	**PKPab**	**22 05 45.8**	**+0.9**
KHC				AMS	AMS	23 30 50.0	
	comp=Z,200nm,14.8s						
KHC	**Kasperske Hory**	**160.09**	**338**	*e*PKP2	**PKPab**	**22 05 45.8**	**+0.9**
KHC				MLR	MLR		
	comp=Z,200nm,14.8s						
CKRC	**Cesky Krumlov**	**160.12**	**336**	*e*PKP	**PKPab**	**22 05 49.2**	**+4.2**
CKRC				AMS	AMS	23 31 30.0	
	comp=Z,100nm,15.9s						
CKRC	**Cesky Krumlov**	**160.12**	**336**	*e*PKP2	**PKPab**	**22 05 49.2**	**+4.2**
CKRC				MLR	MLR		
	comp=Z,100nm,15.9s						
GRF	**Grafenberg Arr**	**160.27**	**343**	*e*PKPab	**PKPab**	**22 05 45.8**	**+0.3**
	baz=20,slow=4.5						
GRF				*e*L	L	23 22 24.6	
	comp=Z,102nm,19.7s						
RONA	**Rosalia, Austr**	**160.29**	**331**	*e*PKP	**PKPab**	**22 05 45.9**	**+0.1**
	comp=Z,6.3nm,1.2s						
GEC2	**GERESS Array S**	**160.30**	**337**	*e*PKPab	**PKPab**	**22 05 45.5**	**-0.4**
	baz=20,slow=4.5						
GERES	**GERESS Array B**	**160.30**	**337**	PKPab	**PKPab**	**22 05 45.6**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=318,slow=1.8,SNR=3.6						
WET	**Wettzell**	**160.30**	**339**	*e*PKPab	**PKPab**	**22 05 45.8**	**+0.1**
	baz=20,slow=4.5						
TNS	**Taunus Mts**	**160.36**	**348**	*e*PKPab	**PKPab**	**22 05 45.0**	**-1.0**
	baz=20,slow=4.5						
MOA	**Molln**	**160.96**	**335**	*e*PKP	**PKPab**	**22 05 48.8**	**+0.1**
	comp=Z,5.2nm,1.2s						
WLF	**Walferdange**	**161.24**	**352**	*e*PKPab	**PKPab**	**22 05 50.5**	**+0.7**
	baz=20,slow=4.5						
BIOA	**Bad Ischl, Aus**	**161.32**	**336**	*i* PKP	**PKPab**	**22 05 50.6**	**+0.4**
	comp=Z,8.4nm,1.3s						
RJOB	**Jochberg**	**161.56**	**337**	*e*PKPab	**PKPab**	**22 05 52.1**	**+0.8**
	baz=20,slow=4.5						
SOKA	**Soboth**	**161.62**	**331**	*i* PKP	**PKPab**	**22 05 51.7**	**0.0**
	comp=Z,6.1nm,1.6s						
LESA	**Schwarzleotal**	**161.88**	**337**	*e*PKP	**PKPab**	**22 05 53.6**	**+0.8**
	comp=Z,7.0nm,1.6s						
OBKA	**Obir**	**161.96**	**332**	*e*PKP	**PKPab**	**22 05 53.6**	**+0.4**
	comp=Z,1.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**162.12**	**178**		**PKPab**	**22 05 56.0**	**+1.5**
MYKA	**Terra Mystica**	**162.21**	**334**	*i* PKP	**PKPab**	**22 05 53.6**	**-0.7**
	comp=Z,3.6nm,1.0s						
WATA	**Walderalm**	**162.31**	**339**	*e*PKP	**PKPab**	**22 05 53.8**	**-0.9**
	comp=Z,5.6nm,1.1s						
WTTA	**Wattenberg**	**162.35**	**339**	*e*PKP	**PKPab**	**22 05 55.5**	**+0.5**
	comp=Z,2.9nm,0.7s						
RETA	**Reutte**	**162.41**	**341**	*e*PKP	**PKPab**	**22 05 55.0**	**-0.1**
	comp=Z,6.5nm,1.4s						
MOTA	**Moosalm**	**162.44**	**340**	*e*PKP	**PKPab**	**22 05 55.3**	**0.0**
	comp=Z,5.8nm,1.1s						
ABTA	**Abfaltersbach**	**162.52**	**336**	*e*PKP	**PKPab**	**22 05 55.4**	**-0.2**
	comp=Z,3.7nm,1.0s						
SQTA	**Sankt Quirin**	**162.52**	**340**	*e*PKP	**PKPab**	**22 05 56.6**	**+1.0**
	comp=Z,3.0nm,0.6s						
DAVA	**Damuels**	**162.83**	**342**	*e*PKP	**PKPab**	**22 05 57.1**	**0.0**
	comp=Z,2.5nm,0.7s						
FETA	**Feichten**	**162.84**	**340**	*e*PKP	**PKPab**	**22 05 58.0**	**+0.9**
	comp=Z,5.6nm,1.1s						

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*IDC **20** 22:16:35.9±0.9, 30°.92S×177°.52W, h0^{km}, mb4.2/7, mbtmp4.2/7, MS3.8/28, Error ellipse: s-maj=29.2km s-min=20.5km az=97.0*

*NEIC **20** 22:16:38.5±0.9, 30°.90S±0°.05×177°.4W±0°.1, h10^{km}±1^{km}, mb4.6/15, Error ellipse: s-maj=21.9km s-min=5.7km az=73.0*

ISC 20 22:16:39.6±0.6**, 31°.18S**±0°.05×**177°.54W**±0°.09**, h27^{km}, n76,** σ**2^{s}.46**/62**, mb4.5**/13**, MS3.9**/26**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**1.94**	**350**	P	**Pn**	**22 17 07.9**	**-2.9**
GLKZ				S	**Sn**	**22 17 34.2**	**-0.1**
RAO	**Raoul Island**	**1.95**	**350**		**Pn**	**22 17 07.7**	**-3.2**
RAO				Sg	**Sn**	**22 17 32.1**	**-2.4**
RAO	**Raoul Island**	**1.95**	**350**	Pn	**Pn**	**22 17 07.3**	**-3.6**
	165nm,0.3s,baz=125,slow=12,SNR=8.6						
RAO				Sn	**Sn**	**22 17 30.4**	**-4.2**
	368nm,0.3s,baz=197,slow=19,SNR=7.5						
RIZ	**Raoul Island**	**1.96**	**350**	P	**Pn**	**22 17 08.8**	**-2.2**
RIZ				S	**Sn**	**22 17 32.1**	**-2.7**
HAZ	**Te Kaha**	**7.61**	**209**	P	**Pn**	**22 18 27.7**	**-1.0**
HAZ				S	**Sn**	**22 19 55.1**	**+1.0**
PUZ	**Puketiti**	**7.70**	**206**	S	**Sn**	**22 19 55.4**	**-0.9**
MWZ	**Matawai**	**8.21**	**208**	P	**Pn**	**22 18 35.4**	**-1.5**
MWZ				S	**Sn**	**22 20 07.6**	**-1.2**
WCZ	**Waipu Caves**	**8.27**	**233**	P	Pn	22 18 44.1	+6.3
URZ	**Urewera**	**8.32**	**210**	Pn	**Pn**	**22 18 34.6**	**-3.9**
	0.4nm,0.3s,baz=24,slow=17,SNR=1.6						
URZ				Sn	**Sn**	**22 20 09.7**	**-1.8**
	5.4nm,0.3s,baz=17,slow=19,SNR=13						
URZ	**Urewera**	**8.32**	**210**	P	**Pn**	**22 18 36.0**	**-2.5**
URZ				S	**Sn**	**22 20 11.1**	**-0.4**
KNZ	**Kokohu**	**8.75**	**205**	P	**Pn**	**22 18 40.7**	**-3.6**
KNZ				S	**Sn**	**22 20 17.8**	**-4.2**
BKZ	**Black Stump Fm**	**9.34**	**210**	P	**Pn**	**22 18 50.6**	**-1.9**
BKZ				S	**Sn**	**22 20 34.8**	**-2.0**
PXZ	**Pawanui**	**9.94**	**206**	S	**Sn**	**22 20 46.8**	**-4.3**
TSZ	**Takapari Road**	**10.31**	**209**	S	**Sn**	**22 20 56.1**	**-4.4**
BFZ	**Birch Farm**	**10.73**	**206**	S	**Sn**	**22 21 04.1**	**-6.6**
MRZ	**Mangatainoka R**	**10.98**	**209**	S	**Sn**	**22 21 09.6**	**-7.2**
CTZ	**Chatham Island**	**12.55**	**177**	P	**Pn**	**22 19 35.9**	**-0.4**
CTZ				S	Sn	22 21 42.6	-13
MSVF	**Nonsavu**	**13.97**	**342**	LR	LR	22 24 00.7	
	comp=Z,297nm,19.7s,baz=172,slow=32						
ODZ	**Otahua Downs**	**16.65**	**210**	Pn	**P**	**22 20 34.1**	**+0.9**
ODZ				IAmb	IAmb	22 21 02.0	
	comp=Z,36nm,1.3s						
DZM	**Mont Dzumac**	**16.94**	**299**		**P**	**22 20 37.4**	**+0.8**
DZM				IAmb	IAmb	22 20 42.2	
	comp=Z,49nm,1.5s						
DZM	**Mont Dzumac**	**16.94**	**299**	*e*Pn	**P**	**22 20 40.2**	**+3.6**
	comp=Z,70nm,1.5s						
DZM				*e*LR	LR	22 24 41.4	
	comp=Z,928nm,22.9s						
DZM	**Mont Dzumac**	**16.94**	**299**	Pn	**P**	**22 20 39.1**	**+2.4**
	comp=Z,0.4nm,0.3s,baz=104,slow=13,SNR=5.2						
RAR	**Rarotonga**	**18.75**	**62**	LR	LR	22 27 37.5	
	comp=Z,170nm,19.5s,baz=267,slow=36						
TBI	**Tubuai**	**26.10**	**80**	*e*S	**S**	**22 26 40.8**	**-0.2**
	comp=Z,1µm,25.2s						
TBI				*e*LR	LR	22 28 41.0	
	comp=Z,1µm,25.5s						
ARMA	**Armidale**	**26.46**	**264**	P	**P**	**22 22 17.9**	**+3.3**
ARMA				IAmb	IAmb	22 22 33.1	
	comp=Z,22nm,1.5s						
PPT2	**Papeete2**	**28.74**	**68**	*e*LR	LR	22 29 42.1	
	comp=Z,156nm,25.0s						
PPT2				*e*LR	LR	22 29 51.8	
	comp=Z,214nm,24.5s						
PPT	**Papeete**	**28.75**	**68**	LR	LR	22 31 37.0	
	comp=Z,96nm,19.0s,baz=240,slow=32						
HNR	**Honiara**	**30.11**	**311**	LR	LR	22 32 53.5	
	comp=Z,184nm,20.7s,baz=168,slow=33						
CTAO	**Charters Tower**	**34.32**	**280**	P	**P**	**22 23 25.8**	**+1.7**
CTAO				IAmb	IAmb	22 23 40.4	
	comp=Z,7.8nm,0.8s						
STKA	**Stephens Creek**	**34.70**	**258**	P	**P**	**22 23 29.6**	**+2.4**
STKA	**Stephens Creek**	**34.70**	**258**	P	**P**	**22 23 28.9**	**+1.7**
	comp=Z,2.7nm,0.7s,baz=97,slow=10,SNR=8.7						
STKA				LR	LR	22 35 58.8	
	comp=Z,304nm,19.1s,baz=42,slow=34						
	comp=Z,2.7nm,0.7s						
BBOO	**Buckleboo**	**39.15**	**255**	P	**P**	**22 24 07.5**	**+2.5**
BBOO				IAmb	IAmb	22 24 32.1	
	comp=Z,20nm,1.3s						
COEN	**Coen**	**39.87**	**286**	P	**P**	**22 24 12.0**	**+0.7**
COEN				IAmb	IAmb	22 24 13.9	
	comp=Z,11nm,1.1s						
PTCN	**Pitcairn Islan**	**42.03**	**94**	P	**P**	**22 24 28.5**	**-0.4**
AS31	**Alice Springs**	**43.47**	**268**	P	**P**	**22 24 41.5**	**+0.8**
ASAR	**Alice Springs**	**43.47**	**268**	P	**P**	**22 24 42.6**	**+1.9**
ASAR	**Alice Springs**	**43.47**	**268**	P	**P**	**22 24 40.7**	**0.0**
	comp=Z,1.6nm,0.5s,baz=105,slow=7.3,SNR=31						
ASAR				LR	LR	22 42 34.3	
	comp=Z,232nm,18.5s,baz=113,slow=36						
	comp=Z,1.6nm,0.5s						
WR8	**Warramunga Arr**	**44.39**	**273**	P	**P**	**22 24 48.9**	**+0.8**
WR8				IAmb	IAmb	22 25 02.4	
	comp=Z,5.2nm,0.8s						
WRA	**Warramunga Arr**	**44.53**	**273**	P	**P**	**22 24 50.2**	**+1.0**
WRA	**Warramunga Arr**	**44.53**	**273**	P	**P**	**22 24 48.8**	**-0.4**
	comp=Z,3.9nm,0.6s,baz=113,slow=7.7,SNR=33						
WRA				LR	LR	22 42 55.5	
	comp=Z,354nm,18.0s,baz=181,slow=36						
	comp=Z,3.9nm,0.6s						
WB0	**Warramunga Arr**	**44.55**	**273**	P	**P**	**22 24 50.0**	**+0.5**
WB0				IAmb	IAmb	22 25 03.3	
	comp=Z,6.1nm,0.6s						
VNDA	**Vanda**	**47.36**	**186**	LR	LR	22 41 27.0	
	comp=Z,84nm,21.2s,baz=17,slow=31						
KNRA	**Kununurra**	**51.16**	**275**	P	**P**	**22 25 42.4**	**+1.8**
FITZ	**Fitzroy Crossi**	**52.76**	**270**	P	**P**	**22 25 54.2**	**+1.8**
FITZ	**Fitzroy Crossi**	**52.76**	**270**	P	**P**	**22 25 52.9**	**+0.4**
	comp=Z,2.7nm,0.7s,baz=154,slow=3.9,SNR=1.5						
FITZ				LR	LR	22 47 18.2	
	comp=Z,294nm,19.6s,baz=126,slow=35						
	comp=Z,2.7nm,0.7s						
GUMO	**Guam**	**57.31**	**315**	LR	LR	22 48 47.8	
	comp=Z,74nm,19.1s,baz=104,slow=34						
BATI	**Baumata**	**58.15**	**278**	LR	LR	22 52 31.7	
	comp=Z,408nm,18.3s,baz=126,slow=37						
QSPA	**South Pole Qui**	**58.93**	**180**	P	**P**	**22 26 39.7**	**+3.5**
QSPA				IAmb	IAmb	22 27 00.9	
	comp=Z,6.9nm,1.0s						
QSPA	**South Pole Qui**	**58.93**	**180**	P	**P**	**22 26 39.1**	**+2.9**
	comp=Z,0.9nm,0.7s,baz=116,slow=0.8,SNR=9.0						
	comp=Z,0.9nm,0.7s						
KAPI	**Kappang**	**64.14**	**280**	LR	LR	22 54 31.3	
	comp=Z,56nm,19.7s,baz=84,slow=36						
DAV	**Davao City (W)**	**66.31**	**295**	LR	LR	22 55 41.8	
	comp=Z,34nm,19.2s,baz=152,slow=35						
SNAA	**Sanae**	**77.37**	**178**	LR	LR	23 00 18.7	
	comp=Z,39nm,20.1s,baz=312,slow=34						
MJAR	**Matsushiro Arr**	**79.11**	**325**	LR	LR	22 59 10.7	
	comp=Z,25nm,19.6s,baz=154,slow=32						
JNU	**Nakatsue**	**80.40**	**318**	LR	LR	22 58 22.3	
	comp=Z,42nm,20.1s,baz=140,slow=31						
PLCA	**Paso Flores**	**81.69**	**133**	LR	LR	22 57 48.5	
	comp=Z,51nm,18.1s,baz=242,slow=30						
ASAJ	**Asahikawa**	**83.31**	**332**	LR	LR	23 02 57.0	
	comp=Z,69nm,18.4s,baz=68,slow=34						
SHEM	**Shemya Is, Ala**	**83.87**	**355**	LR	LR	23 01 41.1	
	comp=Z,98nm,19.6s,baz=142,slow=32						
PETK	**Petropavlovsk-**	**86.67**	**345**	P	**P**	**22 29 20.7**	**+0.4**
	comp=Z,1.2nm,0.7s,baz=204,slow=14,SNR=1.6						
PETK				LR	LR	23 06 01.5	
	comp=Z,35nm,18.5s,baz=143,slow=34						
	comp=Z,1.2nm,0.7s						
USRK	**Ussuriysk Ar.**	**88.03**	**326**	LR	LR	23 02 56.7	
	comp=Z,32nm,21.8s,baz=231,slow=32						
KLR	**Kul'dur**	**91.91**	**329**	P	**P**	**22 29 45.7**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=102,slow=5.4,SNR=3.9						
	comp=Z,1.0nm,0.6s						
TXAR	**Lajitas Array**	**92.47**	**57**	LR	LR	23 06 19.2	
	comp=Z,57nm,18.2s,baz=240,slow=32						
CMIG	**Matias Romero**	**92.62**	**72**	LR	LR	23 05 23.7	
	comp=Z,44nm,18.4s,baz=170,slow=32						
ANMO	**Albuquerque**	**93.75**	**51**	LR	LR	23 08 21.1	
	comp=Z,91nm,18.1s,baz=319,slow=33						
NEW	**Newport**	**95.77**	**36**	LR	LR	23 05 50.9	
	comp=Z,73nm,20.7s,baz=156,slow=31						
PDAR	**Pinedale Array**	**96.42**	**43**	LR	LR	23 10 45.0	
	comp=Z,55nm,18.0s,baz=198,slow=34						
LPAZ	**La Paz**	**97.46**	**114**	LR	LR	23 05 38.9	
	comp=Z,28nm,19.9s,baz=248,slow=30						
CPUP	**Villa Florida**	**99.19**	**128**	LR	LR	23 12 06.7	
	comp=Z,11nm,18.0s,baz=82,slow=34						
BVAR	**Borovoye Array**	**127.24**	**315**	PKP	**PKiKP**	**22 35 41.7**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=108,slow=3.2,SNR=2.1						
KBZ	**Khabaz**	**145.87**	**303**	PKPbc	**PKPdf**	**22 36 15.8**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=127,slow=5.1,SNR=3.7						
FINES	**FINESS Array B**	**146.01**	**340**	PKPbc	**PKPdf**	**22 36 14.9**	**-0.4**
	comp=Z,2.1nm,0.4s,baz=60,slow=3.7,SNR=40						
NB2	**NORSAR Subarra**	**149.58**	**352**	PKP	**PKPbc**	**22 36 25.6**	**-0.3**
	comp=Z,2.6nm,1.1s,baz=13,slow=4.4						
NOA	**NORSAR Array B**	**149.58**	**352**	PKPbc	**PKPbc**	**22 36 24.4**	**-1.5**
	comp=Z,0.4nm,0.6s,baz=16,slow=4.2,SNR=3.4						
HFS	**Hagfors**	**150.09**	**349**	PKPbc	**PKPbc**	**22 36 26.0**	**-1.0**
	comp=Z,1.5nm,0.8s,baz=342,slow=2.3,SNR=4.4						
MMAI	**Mount Meron Ar**	**152.10**	**283**	PKPbc	**PKPbc**	**22 36 32.8**	**0.0**
	comp=Z,2.3nm,0.8s,baz=90,slow=7.5,SNR=4.1						
AKASG	**Malin Array Be**	**152.16**	**322**	PKPbc	**PKPbc**	**22 36 32.5**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=49,slow=2.4,SNR=6.1						
AKASG				PKPab	**sPKPbc**	**22 36 41.6**	**-0.2**
	comp=Z,2.4nm,0.6s,baz=49,slow=2.7,SNR=14						
BRTR	**Keskin Array B**	**153.32**	**297**	PKPbc	**PKPbc**	**22 36 34.8**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=30,slow=24,SNR=2.1						

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*IDC **20** 22:24:23.3±0.8, 1°.72S×128°.40E, h0^{km}, mb4.1/9, mbtmp4.2/13, ML4.1/3, MS3.9/1, Error ellipse: s-maj=44.9km s-min=14.6km az=74.0*

*NEIC **20** 22:24:25.5±0.9, 1°.77S±0°.07×128°.31E±0°.08, h10^{km}±1^{km}, mb4.1/9, Error ellipse: s-maj=15.6km s-min=10.7km az=234.0*

*DJA **20** 22:24:26.8±0.2, 2°S±2°×12°8E±°, h10^{km}, M4.3/13, mB5.2/2, mb4.7/7, MLv4.0/13, Mw(mB)4.6/2*

ISC 20 22:24:28.5±0.5**, 1°.78S**±0°.05×**128°.27E**±0°.07**, h35^{km}, n43,** σ**1^{s}.72**/46**, mb4.1**/11**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.69**	**157**	P	**Pn**	**22 24 57.1**	**+1.5**
MSAI				S	**Sn**	**22 25 20.4**	**+4.4**
NLAI	**Namlea**	**1.86**	**219**	P	**Pn**	**22 24 58.3**	**+0.4**
AAI	**Ambon**	**1.89**	**182**	P	**Pn**	**22 24 59.9**	**+1.5**
SANI	**Sanana**	**2.29**	**263**	P	**Pn**	**22 25 02.9**	**-1.0**
TNTI	**Ternate**	**2.69**	**340**		**Pn**	**22 25 09.0**	**-0.4**
TNTI	**Ternate**	**2.69**	**340**	P	**Pn**	**22 25 09.2**	**-0.2**
SWI	**Sorong**	**3.13**	**73**	P	**Pn**	**22 25 16.8**	**+1.4**
SWI				S	**Sn**	**22 25 55.6**	**+4.0**
FAKI	**Fak Fak**	**4.14**	**106**	Pn	**Pn**	**22 25 28.6**	**-0.7**
FAKI	**Fak Fak**	**4.14**	**106**	P	**Pn**	**22 25 28.9**	**-0.4**
LUWI	**Luwuk**	**5.54**	**278**	Pn	**Pn**	**22 25 48.6**	**0.0**
LUWI	**Luwuk**	**5.54**	**278**	P	**Pn**	**22 25 48.4**	**-0.2**
	0.4nm59nm,0.7s						
APSI	**Ampana**	**6.67**	**277**	P	**Pn**	**22 26 05.0**	**+0.9**
MRSI	**Marisa**	**6.71**	**289**	P	**Pn**	**22 26 04.6**	**-0.1**
	1µm87nm,0.5s						
TOLI2	**Tolitoli**	**8.02**	**291**		**Pn**	**22 26 23.6**	**+1.0**
MPSI	**Mapaga**	**8.63**	**284**	P	**Pn**	**22 26 31.7**	**+0.7**
	35nm,0.8s						
SPSI	**Sidrap Palu**	**8.76**	**255**	P	**Pn**	**22 26 35.2**	**+2.4**
KAPI	**Kappang**	**9.09**	**249**	Pn	**Pn**	**22 26 38.3**	**+1.1**
	2.5nm,0.3s,baz=132,slow=13,SNR=2.0						
	5.9nm,0.2s						
DAV	**Davao City (W)**	**9.19**	**343**		**Pn**	**22 26 37.6**	**-1.2**
DAV	**Davao City (W)**	**9.19**	**343**	Pn	**Pn**	**22 26 35.9**	**-2.9**
	161nm,0.4s,baz=4.2,slow=11,SNR=4.6						
MTN	**Manton Dam**	**11.35**	**166**	Pn	**Pn**	**22 27 07.9**	**-0.4**
KNRA	**Kununurra**	**13.82**	**178**	Pn	**Pn**	**22 27 41.0**	**-1.0**
FITZ	**Fitzroy Crossi**	**16.42**	**189**		**Pn**	**22 28 17.1**	**+0.7**
FITZ	**Fitzroy Crossi**	**16.42**	**189**	Pn	**Pn**	**22 28 15.9**	**-0.5**
	0.3nm,0.3s,baz=28,slow=13,SNR=2.9						
	4.3nm,0.7s						
WB0	**Warramunga Arr**	**18.85**	**162**	P	**P**	**22 28 44.1**	**-1.6**
WB0				IAmb	IAmb	22 28 48.3	
	comp=Z,7.2nm,0.9s						
WRA	**Warramunga Arr**	**19.00**	**162**	P	**P**	**22 28 44.9**	**-2.5**
WRA	**Warramunga Arr**	**19.00**	**162**	P	**P**	**22 28 45.4**	**-2.0**
	comp=Z,0.9nm,0.3s,baz=334,slow=13,SNR=18						
WRA				S	**Sn**	**22 32 14.2**	**-6.1**
	comp=Z,0.4nm,0.7s,baz=348,slow=22,SNR=1.5						
	comp=Z,1.2nm,0.3s						
WR8	**Warramunga Arr**	**19.06**	**162**	P	**P**	**22 28 46.9**	**-1.2**
WR8				IAmb	IAmb	22 29 22.7	
	comp=Z,10nm,1.2s						
COEN	**Coen**	**19.07**	**130**		**P**	**22 28 47.8**	**-0.4**
COEN				IAmb	IAmb	22 28 56.9	
	comp=Z,33nm,1.4s						
AS31	**Alice Springs**	**22.43**	**166**	P	**P**	**22 29 24.1**	**-0.4**
AS31				IAmb	IAmb	22 29 25.7	
	comp=Z,3.6nm,0.8s						
ASAR	**Alice Springs**	**22.43**	**166**	P	**P**	**22 29 24.1**	**-0.4**
ASAR	**Alice Springs**	**22.43**	**166**	P	**P**	**22 29 23.3**	**-1.2**
	comp=Z,6.9nm,0.3s,baz=345,slow=12,SNR=108						
ASAR				PcP	**PcP**	**22 33 19.8**	**+1.3**
	comp=Z,0.7nm,0.8s,baz=11,slow=2.4,SNR=4.2						
	comp=Z,6.9nm,0.3s						
BBOO	**Buckleboo**	**31.72**	**167**	P	**P**	**22 30 48.8**	**-0.4**
STKA	**Stephens Creek**	**32.47**	**159**	P	**P**	**22 30 54.8**	**-1.0**
	comp=Z,0.6nm,0.4s,baz=39,slow=8.2,SNR=3.3						
	comp=Z,0.6nm,0.4s						
NWAO	**Narrogin (SRO)**	**32.67**	**197**	LR	LR	22 46 28.0	
	comp=Z,195nm,19.2s,baz=86,slow=40						
USRK	**Ussuriysk Ar.**	**45.90**	**4**	P	**P**	**22 32 47.1**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=175,slow=7.8,SNR=2.5						
	comp=Z,0.8nm,0.6s						
EVN	**Everest**	**49.58**	**310**	P	**P**	**22 33 17.0**	**-0.3**
EVN				IAmb	IAmb	22 33 19.2	
	comp=Z,6.0nm,1.2s						
SONM	**Songino Array**	**52.98**	**342**	P	**P**	**22 33 43.0**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=155,slow=8.3,SNR=1.7						
	comp=Z,0.2nm,0.3s						
MKAR	**Makanchi Array**	**62.95**	**326**	P	**P**	**22 34 51.3**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=125,slow=8.2,SNR=17						
	comp=Z,1.7nm,0.8s						
KURBB	**Kurchatov Arra**	**67.19**	**328**	P	**P**	**22 35 18.6**	**-0.4**
	comp=Z,2.3nm,0.2s,baz=129,slow=5.4,SNR=5.1						
	comp=Z,2.3nm,0.2s						
BVAR	**Borovoye Array**	**72.76**	**328**	P	**P**	**22 35 53.2**	**0.0**
	comp=Z,1.4nm,0.7s,baz=134,slow=4.2,SNR=5.9						
	comp=Z,1.4nm,0.7s						
TIXI	**Tiksi**	**73.31**	**0**	P	**P**	**22 35 56.5**	**+0.4**
VNDA	**Vanda**	**77.80**	**173**	P	**P**	**22 36 22.9**	**+1.2**
	comp=Z,1.0nm,0.8s,baz=284,slow=4.3,SNR=5.8						
	comp=Z,1.0nm,0.8s						

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
QSPA	South Pole Qui	88.16	180	P	P	22 37 17.4	+1.7
	comp=Z,0.9nm,0.7s,baz=264,slow=2.0,SNR=7.1						
	comp=Z,0.9nm,0.7s						

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*CATAC **20** 22:52:49.4±0.5, 13°N±2°×8°9W±°, h23^{km}±3^{km}, M4.3/22, MLv4.3/22, Error ellipse: s-maj=5.9km s-min=3.2km az=32.6, confirmed*

*SNET **20** 22:52:50.1±3.7, 13.°02N×89.°40W, h33^{km}, ML4.0*

*GCG **20** 22:52:51.3±1.0, 13.°05N×89.°51W, h43^{km}±25^{km}, MD4.0, ML3.9*

ISC 20 22:52:44.9±1.6**, 12.°81N**±0.°06×**89.°46W**±0.°04**, h13**^{km}±9^{km}**, n70, σ0.^{s}69**/81**, 5C-3D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	0.84	1	*e*P	Pn	22 53 03.2	+0.6
JAYA	Jayaque - finc	0.84	1	*i* P	Pn	22 53 03.2	+0.6
JAYA				*i* S	Sb	22 53 13.3	+0.5
JAYA	Jayaque - finc	0.84	1	S	Sg	22 53 12.3	-0.2
JAYA	Jayaque - finc	0.84	1	⇑P	Pn	22 53 03.2	+0.6
PANCS	Alcalda de	0.85	19	P	Pg	22 53 01.1	-0.2
PANCS	Alcalda de	0.85	19	S	Sg	22 53 12.1	-0.4
ITCA	Escuela Especi	0.88	12	*e*P	Pn	22 53 03.5	+0.5
ITCA				*e*S	Sb	22 53 14.1	+0.2
ITCA	Escuela Especi	0.88	12	S	Sg	22 53 13.2	-0.3
ITCA	Escuela Especi	0.88	12	P	Pn	22 53 03.5	+0.5
LOMA	Loma Larga	0.88	19	*e*P	Pn	22 53 04.0	+0.9
LOMA				*e*S	Sg	22 53 13.4	-0.1
LOMA	Loma Larga	0.88	19	⇓P	Pn	22 53 03.8	+0.8
LFRS	El Faro	0.90	25	*i* P	Pn	22 53 04.0	+0.6
PMON	Piamonte	0.91	9	*e*P	Pn	22 53 04.1	+0.7
PMON	Piamonte	0.91	9	S	Sb	22 53 14.8	+0.1
PMON	Piamonte	0.91	9	⇑P	Pn	22 53 04.2	+0.7
SEMO	Seminario San	0.92	14	S	Sg	22 53 14.7	-0.1
SEMO	Seminario San	0.92	14	P	Pn	22 53 04.4	+0.8
UTEC	Universidad Te	0.93	16	P	Pn	22 53 04.3	+0.7
UTEC	Universidad Te	0.93	16	S	Sg	22 53 14.6	-0.3
UEES	Universidad Ev	0.93	13	*e*P	Pn	22 53 04.3	+0.6
UEES				*e*S	Sg	22 53 14.5	-0.7
UEES	Universidad Ev	0.93	13	⇑P	Pn	22 53 04.4	+0.6
BOQS	Boqueron	0.94	11	*i* P	Pn	22 53 04.7	+0.7
IGN	Direccin Gen	0.95	17	P	Pn	22 53 05.0	+1.1
IGN	Direccin Gen	0.95	17	S	Sg	22 53 15.3	-0.4
PIC2	El Picacho	0.95	12	*e*P	Pn	22 53 05.0	+0.8
PIC2				*e*S	Sb	22 53 16.5	+0.5
CEDA	San Andres	0.99	4	*e*P	Pn	22 53 05.2	+0.6
CEDA	San Andres	0.99	4	S	Sg	22 53 16.9	-0.2
CEDA	San Andres	0.99	4	P	Pn	22 53 05.1	+0.6
LBRS	Las Brisas	1.01	24	*e*P	Pn	22 53 06.0	+1.1
CEVE	Cerro Verde	1.03	351	*e*P	Pn	22 53 06.1	+0.9
CEVE	Cerro Verde	1.03	351	S	Sg	22 53 18.3	0.0
CEVE	Cerro Verde	1.03	351	⇑P	Pn	22 53 06.2	+1.0
PAVA	Las Pavas	1.04	29	*e*P	Pn	22 53 05.9	+0.7
PAVA				*e*S	Sg	22 53 17.7	-0.8
PAVA	Las Pavas	1.04	29	P	Pn	22 53 06.0	+0.7
SBLS	San Blas	1.04	351	*e*P	Pn	22 53 06.3	+1.0
UESV	Universidad de	1.05	38	S	Sb	22 53 18.1	-0.6
UESV	Universidad de	1.05	38	P	Pn	22 53 06.2	+0.8
SNJE	San Jose	1.07	352	*e*P	Pn	22 53 06.5	+0.8
NUBE	Las Nubes	1.13	344	*e*P	Pg	22 53 07.4	+0.6
NUBE	Las Nubes	1.13	344	*i* P	Pg	22 53 07.4	+0.6
NUBE				*i* S	Sb	22 53 20.3	-0.9
NUBE	Las Nubes	1.13	344	P	Pg	22 53 07.2	+0.4
TECA	Tecapa	1.16	54	*e*P	Pg	22 53 07.8	+0.5
UNIC	Universidad Ca	1.17	356	S	Sb	22 53 20.9	-1.2
UNIC	Universidad Ca	1.17	356	P	Pg	22 53 08.1	+0.6
PQSS	Presa 15 de Se	1.20	47	P	Pg	22 53 08.6	+0.7
PQSS	Presa 15 de Se	1.20	47	S	Sb	22 53 21.9	-0.9
LOAL	Lomas de Alarc	1.23	345	S	Sg	22 53 24.7	+0.2
LOAL	Lomas de Alarc	1.23	345	P	Pg	22 53 09.0	+0.4
PACA	Pacayal	1.29	59	*e*P	Pg	22 53 10.6	+0.8
PACA	Pacayal	1.29	59	S	Sn	22 53 26.0	+0.1
PACA	Pacayal	1.29	59	⇓P	Pg	22 53 10.3	+0.6
RANC	El Ranchito	1.30	61	*e*P	Pn	22 53 02.1	-6.7
VSM	San Miguel	1.31	62	*e*P	Pg	22 53 10.8	+0.6
BLLM	Bellamira	1.35	62	*e*P	Pg	22 53 11.0	+0.1
CNRM	Centro Naciona	1.42	62	S	Sn	22 53 29.2	+0.2
CNRM	Centro Naciona	1.42	62	P	Pg	22 53 12.4	+0.1
CAHU	Cacacuatique	1.55	52	*e*P	Pb	22 53 13.9	+0.3
MTO3	Montecristo	1.59	4	*i* P	Pb	22 53 13.9	-0.3
MTO3	Montecristo	1.59	4	*i* P	Pb	22 53 13.9	-0.3
MTO3	Montecristo	1.59	4	S	Sn	22 53 31.9	-1.5
MTO3	Montecristo	1.59	4	⇑P	Pb	22 53 13.9	-0.3
LCND	La Caada	1.61	72	*i* P	Pg	22 53 15.2	-0.6
LCND				*e*P	Pb	22 53 15.6	+1.1
LCND	La Caada	1.61	72	⇓P	Pg	22 53 15.1	-0.7
CNCH	Conchagua	1.65	73	*e*P	Pb	22 53 15.6	+0.4
ESQI	Esquipulas	1.75	4	*e*P	Pb	22 53 16.3	-0.6
ESQI				*e*S	Sn	22 53 36.1	-1.1
ESQI	Esquipulas	1.75	4	P	Pb	22 53 16.4	-0.6
POTN	Potosi Cosigui	1.92	84	P	Pb	22 53 19.1	-0.5
POTN				S	Sb	22 53 43.3	-0.2
PKGN	Cerro Pekin	2.43	93	P	Pb	22 53 26.6	-1.8
PKGN				S	Sn	22 53 54.9	+1.1
STG0	El Palmar, Qui	2.44	312	*i* P	Pg	22 53 32.0	+0.3
STG0				IAML		22 54 08.9	
	comp=E,1μm,0.2s						
STG8	El Palmar, Qui	2.46	312	*e*P	Pg	22 53 32.2	+0.1
STG8				*e*S	Sg	22 54 03.7	-0.4
STG8				IAML		22 54 18.2	
	comp=E,555nm,0.3s						

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*IDC **20** 22:56:48.0±1.1, 28.°38N×104.°81E, h0^{km}, mb3.9/7, mbtmp3.8/8, ML3.7/1, MS3.1/2, Error ellipse: s-maj=32.0km s-min=19.4km az=57.0*

*NEIC **20** 22:56:49.1±0.7, 28.°35N±0.°07×104.°6E±0.°2, h10^{km}±2^{km}, mb4.4/24, Error ellipse: s-maj=23.8km s-min=10.4km az=254.0*

ISC 20 22:56:49.5±0.6**, 28.°42N**±0.°04×**104.°84E**±0.°05**, h10**^{km}**, n42, σ1.^{s}37**/48**, mb4.3**/19**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	Chengdu	2.66	339	Pn	Pn	22 57 34.3	+1.9
CD2				Pg	Pg	22 57 38.9	-1.5
CD2				Sn	Sb	22 58 08.3	-1.5
CD2				Sg	Sg	22 58 13.3	-1.5
CD2				smax	smax		
	comp=N,820nm,0.7s						
CD2				smax	smax		
	comp=E,2μm,0.7s						
PZH	PanZhiHua	3.35	236	Pn	Pb	22 57 45.1	-3.9
PZH				Pg	Pg	22 57 54.3	+0.6
PZH				Sg	Sg	22 58 36.5	-0.6
PZH				smax	smax		
	comp=N,110nm,0.7s						
PZH				smax	smax		
	comp=E,90nm,0.8s						
ENH	Enshi	4.46	64		Pn	22 57 59.6	+2.4
XAN	Xi'an	6.60	31	Pn	Pn	22 58 28.0	+1.4
XAN				Pg	Pb	22 58 49.9	+5.5
XAN				Sn	Sn	22 59 39.6	-2.4
XAN				Sg	Sg	23 00 18.3	-3.1
XAN				smax	smax		
	comp=N,220nm,1.1s						
XAN				smax	smax		
	comp=E,300nm,0.9s						
XAN				LR	LR		
	comp=N,320nm,5.7s						
XAN				LR	LR		
	comp=E,380nm,5.2s						
XAN				LR	LR		
	comp=Z,400nm,5.7s						
CNSH	ChangSha	7.14	90	P	Pn	22 58 35.1	+1.2
CNSH				S	Sn	22 59 53.8	-1.3
CNSH				smax	smax		
	comp=N,68nm,1.0s						
CNSH				smax	smax		
	comp=E,38nm,0.8s						
LZH	Lanzhou	7.69	354	Pg	Pg	22 59 19.4	+2.7
LZH				Sg	Sg	23 00 59.9	+3.6
LZH				smax	smax		
	comp=N,24nm,1.0s						
LZH				smax	smax		
	comp=E,56nm,1.0s						
LZH				LR	LR		
	comp=N,150nm,6.4s						
LZH				LR	LR		
	comp=E,310nm,5.8s						
LZH				LR	LR		
	comp=Z,140nm,9.6s						
SONM	Songino Array	19.42	3	P	P	23 01 16.8	+0.8
	comp=Z,0.2nm,0.3s,baz=180,slow=10,SNR=5.3						
	comp=Z,0.9nm,0.6s						
WMQ	Urumqi	20.63	323	*e*P	Pn	23 01 33.9	+2.6
KSRS	Korea Array	21.32	59	P	P	23 01 36.7	+0.2
	comp=Z,2.6nm,0.7s,baz=244,slow=10,SNR=12						
	comp=Z,2.6nm,0.7s						
JNU	Nakatsue	22.83	72	LR	LR	23 11 16.9	
	comp=Z,63nm,21.4s,baz=180,slow=38						
MKAR	Makanchi Array	25.45	322	P	P	23 02 17.7	+0.1
	comp=Z,1.1nm,0.6s,baz=129,slow=11,SNR=16						
	comp=Z,1.1nm,0.6s						
USRK	Ussuriysk Ar.	26.79	47	P	P	23 02 29.9	+0.3
	comp=Z,2.4nm,0.7s,baz=250,slow=8.0,SNR=7.4						
	comp=Z,2.4nm,0.7s						
MJAR	Matsushiro Arr	29.18	65	LR	LR	23 14 20.9	
	comp=Z,33nm,19.1s,baz=196,slow=36						
ZALV	Zalesovo Beam	29.42	336	P	P	23 02 52.8	-0.1
	comp=Z,0.6nm,0.4s,baz=138,slow=9.4,SNR=2.6						
	comp=Z,0.6nm,0.4s						
KURBB	Kurchatov Arra	29.78	325	P	P	23 02 56.5	+0.3
	comp=Z,0.7nm,0.3s,baz=132,slow=9.9,SNR=5.0						
	comp=Z,0.7nm,0.3s						
WRA	Warramunga Arr	55.90	146	P	P	23 06 27.4	-0.3
	comp=Z,0.7nm,0.7s,baz=335,slow=8.3,SNR=5.2						
	comp=Z,0.7nm,0.7s						
WR8	Warramunga Arr	55.99	146	P	P	23 06 27.1	-1.2
ASAR	Alice Springs	58.87	149	P	P	23 06 48.8	+0.1
	comp=Z,0.4nm,0.4s,baz=331,slow=6.6,SNR=5.6						
	comp=Z,0.4nm,0.4s						
B20K	Meade River	66.27	22	P	P	23 07 37.9	+0.5
D19K	Kuna River	66.41	24	P	P	23 07 38.5	+0.1
D19K				IAmb	IAmb	23 07 40.2	
	comp=Z,1.8nm,0.9s						
D20K	Etivluk River	66.86	23	P	P	23 07 41.8	+0.5
D20K				IAmb	IAmb	23 07 43.2	
	comp=Z,2.2nm,0.8s						
E19K	Redstone River	67.05	25	P	P	23 07 42.3	-0.1
E19K				IAmb	IAmb	23 07 54.3	
	comp=Z,3.3nm,1.5s						
M14K	Bethel	67.15	32	P	P	23 07 43.4	+0.2
J17K	VABM Dome	67.62	29	P	P	23 07 46.7	+0.5
J17K				IAmb	IAmb	23 08 15.3	
	comp=Z,4.6nm,1.4s						
K17K	Iditarod	68.18	30	P	P	23 07 50.5	+0.9
K17K				IAmb	IAmb	23 07 52.1	
	comp=Z,3.1nm,0.8s						
N15K	Kwethluk River	68.21	32	P	P	23 07 50.6	+0.6
N15K				IAmb	IAmb	23 08 19.5	
	comp=Z,4.5nm,1.1s						
C23K	Itkillik River	68.45	21	P	P	23 07 51.6	+0.4
C23K				IAmb	IAmb	23 07 57.1	
	comp=Z,5.7nm,1.5s						
M16K	Timber Creek	68.46	31	P	P	23 07 52.1	+0.7
J18K	Innoko River	68.60	29	P	P	23 07 52.3	0.0
O15K	Ungalikthiuk R	68.67	33	P	P	23 07 53.2	+0.3
G21K	Allakaket	68.75	25	P	P	23 07 53.5	+0.3
D23K	Nanushuk River	68.78	22	P	P	23 07 53.5	+0.2
D23K				IAmb	IAmb	23 08 34.6	
	comp=Z,3.1nm,1.1s						
IMAR	Indian Mountai	68.86	25	P	P	23 07 52.3	-1.6
J19K	Poorman	68.86	28	P	P	23 07 52.4	-1.6
J19K				IAmb	IAmb	23 08 21.6	
	comp=Z,3.8nm,1.5s						
M17K	Holitna River	69.02	31	P	P	23 07 55.8	+0.9
O16K	Kokwok River B	69.36	33	P	P	23 07 57.4	+0.3
J20K	Nowinta River	69.39	27	P	P	23 07 57.5	+0.2
J20K				IAmb	IAmb	23 08 31.9	
	comp=Z,4.8nm,1.4s						
E23K	Chandalar	69.51	23	P	P	23 07 58.5	+0.5
E23K				IAmb	IAmb	23 08 15.8	
	comp=Z,3.2nm,1.4s						
E24K	Your Creek	69.89	23	P	P	23 08 00.2	-0.1
MLY	Manley	70.39	26	P	P	23 08 03.5	+0.1
BPAW	Bear Paw Mtn.	70.69	27	P	P	23 08 05.7	+0.4
PPLA	Purkeypile	70.71	28	P	P	23 08 05.9	+0.4
PPLA				IAmb	IAmb	23 08 10.8	
	comp=Z,4.2nm,1.0s						

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*MDD **20** 22:57:12.9±0.7, 36.°15N×0.°89W, h0^{km}, mb_Lg2.5/30, Error ellipse: s-maj=5.5km s-min=3.5km az=148.0*

*CNRM **20** 22:57:13.4, 36.°15N×1.°06W, h52^{km}, ML2.6*

ISC 20 22:57:10.8±2.2**, 36.°00N**±0.°04×**0.°70W**±0.°05**, h23**^{km}±20^{km}**, n46, σ1.^{s}83**/69**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENIJ	Nijar	1.56	309	Pg	Pn	22 57 37.3	+0.1
ENIJ				Sg	Sn	22 57 54.4	-2.3
ENIJ	Nijar	1.56	309	Pg	Pn	22 57 37.3	+0.1
ENIJ				Sn	Sn	22 57 54.3	-2.3
ENIJ				*i* IVmb_Lg		22 57 55.5	
CART	Cartagena	1.61	351	Pn	Pn	22 57 37.4	-0.3
CART				Sg	Sn	22 57 54.8	-3.0
CART	Cartagena	1.61	351	P	Pn	22 57 37.5	-0.3
CART	Cartagena	1.61	351	S	Sn	22 57 54.3	-3.6
TAF	Taforalt	1.83	230	P	Pn	22 57 41.8	+0.9
TAF	Taforalt	1.83	230	S	Sn	22 58 03.7	+0.3
TLOR	Lorca, Murcia	1.84	335	Sn	Sn	22 58 02.0	-1.5
ELOR	Lorca, Murcia	1.84	333	Sn	Sn	22 58 01.6	-2.1
ELOR				*i* IVmb_Lg		22 58 02.8	
EALB	Alboran	1.90	269	Pn	Pn	22 57 42.3	+0.6
EALB				Sn	Sn	22 58 03.5	-1.4
EALB	Alboran	1.90	269	Sn	Sn	22 58 05.1	+0.2
EALB				*i* IVmb_Lg		22 58 07.7	
EMEL	Melilla	1.96	250	Pn	Pn	22 57 45.3	+2.6
ETRV	Los Montesinos	2.02	359	Pn	Pn	22 57 44.3	+0.8
ETRV				Sn	Sn	22 58 07.3	-0.7
ETRV				*i* IVmb_Lg		22 58 09.3	
GOG	Mont Gurugu	2.02	248	P	Pn	22 57 44.1	+0.5
GOG	Mont Gurugu	2.02	248	S	Sn	22 58 04.8	-3.5
EZAR	Zarzadilla de	2.04	337	Pn	Pn	22 57 44.4	+0.6
EZAR				Sn	Sn	22 58 07.1	-1.5
EZAR				*i* IVmb_Lg		22 58 10.3	
JBK	JBK	2.25	223	P	Pn	22 57 48.4	+1.5
JBK	JBK	2.25	223	S	Sn	22 58 15.4	+1.3
ELGU	Los Guajares,	2.52	291	Pn	Pn	22 57 51.3	+0.8
ELGU				Sn	Sn	22 58 19.2	-1.1
ELGU	Los Guajares,	2.52	291	Pn	Pn	22 57 51.2	+0.8
ELGU				Sn	Sn	22 58 19.3	-1.1
ELGU				*i* IVmb_Lg		22 58 20.7	
EQES	Quesada	2.62	314	Pg	Pn	22 57 54.8	+2.9
EQES				Sn	Sn	22 58 25.9	+2.9
EQES				*i* IVmb_Lg		22 58 29.4	
AFON	Font Roja	2.67	3	Pn	Pn	22 57 53.8	+1.3
AFON				Sn	Sn	22 58 25.6	+1.4
AFON				*i* IVmb_Lg		22 58 28.5	
EBEN2	Beniarda presa	2.71	8	Pn	Pn	22 57 54.0	+1.1
EBEN2				Sn	Sn	22 58 24.3	-0.7
EBEN2				*i* IVmb_Lg		22 58 29.8	
E0803	Jimena (Jaen)	2.88	310	Pg	Pn	22 57 58.6	+3.2
E0803				Sn	Sn	22 58 31.7	+2.3
E0802	Ubeda,Jaen	2.95	314	Sn	Sn	22 58 33.3	+2.2
EGOR	Sierra Gorda,	2.96	293	Pg	Pb	22 58 02.3	-0.7
EGOR				Sn	Sn	22 58 36.1	+4.6
EGOR				*i* IVmb_Lg		22 58 38.6	
AKLM	AKL	2.98	241	P	Pn	22 57 57.5	+0.7
AKLM	AKL	2.98	241	S	Sn	22 58 30.6	-1.3
EMAL	Malaga-Limoner	3.11	285	Sn	Sn	22 58 31.0	-3.8
EVIV	Cofrentes, Val	3.28	354	Pn	Pn	22 58 02.7	+1.8
EVIV				Sn	Sn	22 58 38.8	-0.4
EVIV				*i* IVmb_Lg		22 58 45.3	
EMIJ	Mijas	3.34	281	Sn	Sn	22 58 36.9	-3.7
EMIJ	Mijas	3.34	281	Pn	Pn	22 58 03.2	+1.5
EMIJ				Sn	Sn	22 58 38.6	-2.0
EMIJ				*i* IVmb_Lg		22 58 43.0	
EIBI	Ibiza	3.44	28	Pn	Pn	22 58 04.0	+1.0
EIBI				Sn	Sn	22 58 40.8	-2.1
EIBI	Ibiza	3.44	28	Pn	Pn	22 58 03.9	+1.0
EIBI				Sn	Sn	22 58 41.4	-1.5
EIBI				*i* IVmb_Lg		22 58 42.6	
ECHE	Chera	3.60	357	Pn	Pn	22 58 06.5	+1.3
ECHE				Sn	Sn	22 58 45.2	-1.8
ECHE	Chera	3.60	357	Pn	Pn	22 58 06.5	+1.3
ECHE				Sn	Sn	22 58 46.4	-0.6
ECHE				*i* IVmb_Lg		22 58 55.7	
PSIM	Granatula de C	3.73	320	Pn	Pn	22 58 08.5	+1.5
PSIM				Sn	Sn	22 58 50.0	-0.1
EADA	Adamuz	3.78	306	Pn	Pn	22 58 08.8	+1.0
EADA	Adamuz	3.78	306	Sn	Sn	22 58 51.0	-0.6
EADA				*i* IVmb_Lg		22 59 07.3	
ECAB	El Cabril	4.31	300	Pn	Pn	22 58 16.0	+1.0
ECAB	El Cabril	4.31	300	Pn	Pn	22 58 16.1	+1.2
ECAB				Sn	Sn	22 59 04.6	+0.1
ECAB				*i* IVmb_Lg		22 59 10.7	
EMOS	Mosqueruela	4.37	2	Pn	Pn	22 58 18.3	+2.4
EMOS				Sn	Sn	22 59 06.6	+0.5
EMOS				*i* IVmb_Lg		22 59 11.9	
PAB	San Pablo	4.57	322	Pn	Pn	22 58 20.6	+2.0
PAB				Sn	Sn	22 59 09.5	-1.6
PAB				*i* IVmb_Lg		22 59 15.5	
MD31	MD31	4.58	228	P	Pn	22 58 19.2	+0.4
MD31	MD31	4.58	228	S	Sn	22 59 08.8	-2.6
ETOS	Mallorca	4.68	35	Sn	Sn	22 59 14.1	+0.4
ETOS				*i* IVmb_Lg		22 59 17.4	

NNC 20 23:07:23.6±6.5**, 36.°98N**×**70.°58E, h0**^{km}**, mb3.8, mpv3.5, 5C-1D, Error ellipse: s-maj=52.7km s-min=45.3km az=145.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.67	24	P	Pn	23 08 50.7	+1.2
	SNR=68						
KK31	Karatay Array	6.11	360	⇑P	Pn	23 08 56.8	+1.6
	2.6nm,0.3s,baz=177,slow=13,SNR=62						
KK31				⇓S	Sn	23 10 07.8	+1.9
	4.3nm,0.5s,baz=186,slow=22,SNR=9.5						
EKS2	Erkin-Say	6.18	22	P	Pn	23 08 57.3	+1.0
	SNR=9.3						
AAK	Ala-Archa	6.40	27	P	Pn	23 08 59.8	+0.6
	SNR=8.6						
AAK	Ala-Archa	6.40	27	P	Pn	23 08 59.3	+0.1
	0.1nm,0.4s						
AAK				S	Sn	23 10 14.8	+1.7
	0.3nm,0.6s						
KBK	Karagaybulak	6.59	29	P	Pn	23 09 02.5	+0.7
	SNR=8.4						
CHMS	Chumysh	6.81	27	P	Pn	23 09 05.0	+0.2
	SNR=6.3						
CHMS	Chumysh	6.81	27	⇑P	Pn	23 09 04.6	-0.1
	3.1nm,0.5s						
CHMS				⇑S	Sn	23 10 23.3	+0.4
	4.0nm,0.6s						
USP	Ospenovka	6.96	24	P	Pn	23 09 06.8	0.0
	SNR=6.3						
TKM2	Tokmak 2	7.07	31	P	Pn	23 09 08.2	-0.4
	SNR=19						
TKM2	Tokmak 2	7.07	31	⇑P	Pn	23 09 07.5	-1.0
	5.5nm,0.4s						
TKM2				⇑S	Sn	23 10 29.3	-0.4
	1.6nm,0.8s						

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*NEIC **20** 23:15:11.1±2.3, 34.°01S±0.°09×179.°6E±0.°1, h10^{km}±1^{km}, mb5.1/36, Error ellipse: s-maj=17.6km s-min=14.6km az=86.0*

*WEL **20** 23:15:12.5±0.7, 34°S±5°×18°0E±°, h33^{km}, M5.1/18, mB5.5/4, ML5.2/18, MLv5.2/18, Mw(mB)5.0/4, Error ellipse: s-maj=12.0km s-min=6.1km az=102.0, confirmed*

*GCMT **20** 23:15:13.1±0.2, 33.°79S±0.°01×179.°68E±0.°02, h13^{km}, MW5.0/106, Moment Tensor Solution. s60,c93; s106,c171; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.43±.13; M$_{\theta\theta}$2.07±.10; M$_{\phi\phi}$0.36±.09; M$_{r\theta}$1.84±.27; M$_{\theta\phi}$3.61±.08; M$_{\phi r}$0.58±.25; Best double couple: M$_0$4.35500×10^{16} NP1:φ$_s$15.00000°, δ45.00000°, λ-147.00000°. NP2:φ$_s$261.00000°, δ67.00000°, λ-50.00000°. Principal axes: T 5.3480, Plg13.0000°, Azm323.0000°; N -1.9820, Plg36.0000°, Azm63.0000°; P -3.3620, Plg51.0000°, Azm216.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **20** 23:15:13.9, 34.°20S×179.°39E, h37^{km}, mB5.5/3, mb5.1/10, Ms4.7/3, Ms7 4.5/4*

*NOU **20** 23:15:14.2, 34.°19S×179.°93W, h51^{km}, mb5.1/30, South of Kermadec Islands*

*IDC **20** 23:15:15.4±1.8, 34.°00S×179.°60E, h58^{km}±15^{km}, mb4.4/12, mbtmp4.6/16, MS4.2/43, Error ellipse: s-maj=18.2km s-min=10.5km az=108.0*

ISC 20 23:15:13.8±0.4**, 33.°97S**±0.°05×**179.°71E**±0.°06**, h35**^{km}**, n208, σ1.^{s}99**/180**, mb5.1**/53**, MS4.3**/46**, 6C-1D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.76	197		Pn	23 16 07.3	-2.0
MXZ	Matakaoa Point	3.76	197	P	Pn	23 16 08.9	-0.4
MXZ	Matakaoa Point	3.76	197	P	Pn	23 16 09.5	+0.2
MXZ				T	T	23 19 50.9	
WMGZ	Waiomatatini S	3.98	195	P	Pn	23 16 13.7	+1.4
HAZ	Te Kaha	4.09	202	P	Pn	23 16 14.2	+0.4
WIZ	White Island	4.10	209	P	Pn	23 16 17.4	+3.5
PKGZ	Pakihiroa	4.11	198	P	Pn	23 16 14.1	+0.1
PKGZ				S	Sn	23 17 05.5	+4.7
GRZ	Great Barrier	4.16	236	P	Pn	23 16 14.6	-0.2
PUZ	Puketiti	4.26	196	P	Pn	23 16 17.1	+0.9
PUZ				S	Sn	23 17 09.9	+5.2
KUZ	Kuaotunu	4.28	229	P	Pn	23 16 17.0	+0.6
KUZ	Kuaotunu	4.28	229	P	Pn	23 16 17.0	+0.6
RUGZ	Raukumara Rang	4.31	202	P	Pn	23 16 18.8	+1.8
TWGZ	Tauwhareparae	4.42	198	P	Pn	23 16 19.8	+1.3
CNGZ	Carnagh Statio	4.67	195	P	Pn	23 16 22.5	+0.8
CNGZ				S	Sn	23 17 21.7	+7.1
MWZ	Matawai	4.70	201	P	Pn	23 16 23.4	+1.1
TKGZ	Te Karaka	4.71	198	P	Pn	23 16 23.2	+1.0
TKGZ				S	Sn	23 17 19.5	+3.9
URZ	Urewera	4.77	205	P	Pn	23 16 23.6	+0.5
	104nm,0.5s,baz=67,slow=5.3,SNR=30						
URZ				S	Sn	23 17 15.2	-2.0
	328nm,0.8s,baz=21,slow=13,SNR=3.5						
URZ	Urewera	4.77	205	P	Pn	23 16 23.6	+0.5
WCZ	Waipu Caves	4.82	244	P	Pn	23 16 23.6	-0.3
TOZ	Tahuroa Road	5.08	221		Pn	23 16 26.7	-0.6
TOZ	Tahuroa Road	5.08	221	P	Pn	23 16 29.6	+2.2
GLKZ	Green Lake	5.11	24	P	Pn	23 16 26.8	-1.0
RAO	Raoul Island	5.12	24	P	Pn	23 16 29.1	+1.1
	263nm,0.6s,baz=112,slow=19,SNR=2.0						
RAO				S	Sn	23 17 30.8	+4.9
	200nm,0.3s,baz=107,slow=19,SNR=2.2						
RAO				LR	LR	23 17 51.9	
	comp=Z,1μm,20.4s,baz=150,slow=30						
RTZ	Ruatahuna	5.13	205		Pn	23 16 28.4	+0.2
RTZ	Ruatahuna	5.13	205	P	Pn	23 16 29.4	+1.2
OUZ	Omahuta	5.19	254	P	Pn	23 16 27.4	-1.6
KNZ	Kokohu	5.30	197	P	Pn	23 16 29.9	-0.5
KNZ				S	Sn	23 17 33.1	+2.9
TLZ	Tolley Road	5.50	217	P	Pn	23 16 36.1	+2.7
BKZ	Black Stump Fm	5.79	206		Pn	23 16 35.4	-1.9
BKZ	Black Stump Fm	5.79	206	P	Pn	23 16 37.4	+0.1
BKZ				S	Sn	23 17 46.7	+4.2
HIZ	Hauiti	5.99	219		Pn	23 16 40.3	+0.3
HIZ	Hauiti	5.99	219	P	Pn	23 16 40.6	+0.6
BFZ	Birch Farm	7.24	201		Pn	23 16 53.7	-3.4
BFZ	Birch Farm	7.24	201	P	Pn	23 16 55.9	-1.2
MRZ	Mangatainoka R	7.44	205		Pn	23 16 56.4	-3.4
MRNZ	Matariki Terra	9.23	215	Pn	Pn	23 17 19.9	-4.6
THZ	Tophouse	9.45	213		Pn	23 17 23.6	-3.9
KHZ	Kahutara	9.73	208		Pn	23 17 27.4	-3.7
CTZ	Chatham Island	10.16	165		Pn	23 17 34.2	-2.9
CTZ	Chatham Island	10.16	165	P	Pn	23 17 35.9	-1.2
LTZ	Lake Taylor	10.55	211	Pn	Pn	23 17 42.2	-0.3
RPZ	Rata Peaks	11.83	212	P	Pn	23 17 55.6	-4.4
	13nm,0.5s,baz=334,slow=2.9,SNR=5.4						
RPZ				S	Sn	23 20 05.6	-5.2
	20nm,0.8s,baz=0.7,slow=11,SNR=3.7						
OUENC	Ouen Island, N	16.14	312	P	P	23 19 03.0	+2.1
MSVF	Nonsavu	16.24	354		Pn	23 19 00.2	+0.9
MSVF	Nonsavu	16.24	354	P	Pn	23 18 59.4	+0.1
	18nm,1.0s,baz=179,slow=13,SNR=2.2						
MSVF	Nonsavu	16.24	354	P	Pn	23 19 00.6	+1.2
YATNC	Mamie plateau,	16.38	313	P	P	23 19 04.7	+1.1
ONTNC	Ouen Toro	16.46	311	Pn	Pn	23 19 02.1	0.0
DZM	Mont Dzumac	16.64	312		Pn	23 19 03.5	-1.0
DZM	Mont Dzumac	16.64	312	*e*Pn	P	23 19 10.8	+4.2
	46nm,1.2s						
DZM				*e*LR	LR	23 23 02.8	
	5μm,24.6s						
DZM	Mont Dzumac	16.64	312	P	Pn	23 19 04.4	-0.1
	4.4nm,0.9s,baz=141,slow=18,SNR=2.0						

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DZM   Mont Dzumac      16.64 312  P       P        23 19 09.8 +3.2
LHI   Lord Howe Isla   17.54 272  Pn      Pn       23 19 11.8 -3.7
DGTI  Dogotuki         17.59   0  P       P        23 19 19.4 +2.3
RAR   Rarotonga        22.13  60  LR      LR       23 26 41.5
      comp=Z,206nm,21.8s,baz=248,slow=31
WOLH  Wollongong Har   23.83 261  P       P        23 20 23.4 -0.2
ARMA  Armidale         23.99 271  P       P        23 20 22.0 -3.3
ARMA                              IAmb    IAmb     23 20 31.6
      comp=Z,58nm,1.5s
ARMA  Armidale         23.99 271  P       P        23 20 27.3 +2.0
      comp=Z,28nm,1.7s
ARMA  Armidale         23.99 271  P       P        23 20 27.7 +2.4
CNB   Canberra Magne   24.96 258  P       P        23 20 37.0 +3.0
      comp=Z,42nm,1.2s
CNB   Canberra Magne   24.96 258  P       P        23 20 36.6 +2.6
YNG   Young            25.87 260  P       P        23 20 44.9 +2.6
      comp=Z,33nm,1.3s
EIDS  Eidsvold         26.24 281          P        23 20 43.1 -2.5
EIDS  Eidsvold         26.24 281  P       P        23 20 46.7 +1.0
TOO   Toolangi         27.90 253  P       P        23 21 02.9 +2.3
      comp=Z,14nm,2.3s
CMSA  Cobar Meteorol   28.64 265  P       P        23 21 08.5 +1.4
      comp=Z,18nm,1.9s
CMSA  Cobar Meteorol   28.64 265  P       P        23 21 08.7 +1.6
TBI   Tubuai           28.95  77 eP       P        23 21 06.3 -3.6
      comp=Z,775nm,36.0s
TBI                              eS       S        23 25 59.6 +1.2
      comp=Z,5µm,27.5s
TBI                              eLR      LR       23 28 34.2
      comp=Z,878nm,28.0s
TBI                              eLR      LR       23 28 38.5
      comp=Z,1µm,25.2s
HNR   Honiara          30.43 319  LR      LR       23 31 38.5
      comp=Z,497nm,20.6s,baz=175,slow=32
ARPS  Mount Arapiles   30.88 254  P       P        23 21 28.8 +2.0
      comp=Z,78nm,1.0s
ARPS  Mount Arapiles   30.88 254  P       P        23 21 29.1 +2.2
QLP   Quilpie          31.39 274  P       P        23 21 32.4 +0.8
      comp=Z,41nm,1.2s
QLP   Quilpie          31.39 274  P       P        23 21 32.3 +0.8
STKA  Stephens Creek   31.94 263          P        23 21 35.1 -1.2
STKA  Stephens Creek   31.94 263  P       P        23 21 37.8 +1.4
      comp=Z,99nm,1.4s
STKA  Stephens Creek   31.94 263  P       P        23 21 36.4 +0.1
      comp=Z,14nm,1.1s,baz=96,slow=10.0,SNR=12
STKA                              LR      LR       23 33 06.8
      comp=Z,424nm,18.5s,baz=97,slow=34
      comp=Z,14nm,1.1s
STKA  Stephens Creek   31.94 263  P       P        23 21 37.7 +1.4
PPT2  Papeete2         31.95  67 eP       P        23 21 41.8 +5.3
      comp=Z,117nm,34.2s
PPT2                             eS       S        23 26 44.1 -1.5
      comp=Z,1µm,39.5s
PPT2                             eLR      LR       23 29 53.0
      comp=Z,290nm,26.5s
PPT2                             eLR      LR       23 30 00.1
      comp=Z,304nm,23.2s
PPTF  Pamatai, Papee   31.95  67  P       P        23 21 37.1 +0.6
PPT   Papeete          31.96  67  LR      LR       23 32 51.8
      comp=Z,120nm,19.5s,baz=222,slow=33
CTAO  Charters Tower   32.69 286  P       P        23 21 42.6 -0.4
CTAO                              IAmb    IAmb     23 21 44.7
      comp=Z,14nm,1.0s
HTT   Hallett          33.78 259  P       P        23 21 53.4 +1.0
      comp=Z,23nm,1.1s
HTT   Hallett          33.78 259  P       P        23 21 53.7 +1.3
WHYH  Whyalla          34.97 260  P       P        23 22 03.8 +1.2
MTSU  Mount Surprise   35.28 288  P       P        23 22 06.0 +0.5
      comp=Z,8.3nm,1.5s
MTSU  Mount Surprise   35.28 288  P       P        23 22 07.2 +1.7
BBOO  Buckleboo        36.26 259          P        23 22 13.6 -0.2
BBOO                              IAmb    IAmb     23 22 15.3
      comp=Z,68nm,0.9s
BBOO  Buckleboo        36.26 259  P       P        23 22 14.1 +0.4
      comp=Z,79nm,1.2s
BBOO  Buckleboo        36.26 259  P       P        23 22 14.3 +0.6
QIS   Mount Isa        37.83 280  P       P        23 22 27.0 -0.2
      comp=Z,34nm,1.1s
QIS   Mount Isa        37.83 280  P       P        23 22 27.6 +0.4
COEN  Coen             38.59 292  P       P        23 22 33.9 +0.2
COEN                              IAmb    IAmb     23 23 27.7
      comp=Z,37nm,1.4s
AS01  Alice Springs    41.09 272  P       P        23 22 54.6 +0.2
AS31  Alice Springs    41.13 272          P        23 22 55.2 +0.5
AS31                              IAmb    IAmb     23 22 56.5
      comp=Z,25nm,1.1s
AS31  Alice Springs    41.13 272  P       P        23 22 55.0 +0.3
      comp=Z,24nm,1.0s
ASAR  Alice Springs    41.13 272          P        23 22 54.8 +0.1
ASAR  Alice Springs    41.13 272  P       P        23 22 55.0 +0.2
      comp=Z,70nm,1.0s,baz=113,slow=7.6,SNR=270
ASAR                              LR      LR       23 39 16.8
      comp=Z,382nm,18.1s,baz=123,slow=35
      comp=Z,70nm,1.0s
WR8   Warramunga Arr   42.31 277          P        23 23 04.0 -0.4
WR8                               IAmb    IAmb     23 23 06.2
      comp=Z,54nm,1.1s
WB2   Warramunga Arr   42.44 277  P       P        23 23 05.2 -0.2
WRAB  Tennant Creek    42.45 277  P       P        23 23 04.8 -0.7
WRAB                              IAmb    IAmb     23 23 07.2
      comp=Z,58nm,1.1s
WRA   Warramunga Arr   42.45 277          P        23 23 05.2 -0.4
WRA   Warramunga Arr   42.45 277  P       P        23 23 04.2 -1.3
      comp=Z,61nm,1.1s,baz=119,slow=7.6,SNR=57
WRA                               LR      LR       23 40 31.0
      comp=Z,192nm,18.9s,baz=64,slow=36
      comp=Z,61nm,1.1s
WB0   Warramunga Arr   42.49 278          P        23 23 05.2 -0.7
WB0                               IAmb    IAmb     23 23 07.6
      comp=Z,75nm,1.1s
FORT  Forrest          43.37 259          P        23 23 12.8  0.0
FORT  Forrest          43.37 259  P       P        23 23 12.7 -0.1
      comp=Z,80nm,1.1s
FORT  Forrest          43.37 259  P       P        23 23 13.2 +0.4
SBA   Scott Base       44.35 184  P       P        23 23 20.8 +0.8
SBA                               IAmb    IAmb     23 24 03.5
      comp=Z,12nm,0.5s
VNDA  Vanda            44.36 185  P       P        23 23 19.7 -0.5
      comp=Z,0.5nm,0.3s,baz=330,slow=12,SNR=3.7
VNDA                              LR      LR       23 38 18.8
      comp=Z,288nm,19.1s,baz=24,slow=31
      comp=Z,0.5nm,0.3s
TAOE  Nuku Hiva Isla   44.53  65 eLR      LR       23 35 34.8
      comp=Z,268nm,23.4s
WRKA  Warakurna        45.23 267  P       P        23 23 27.0 -0.8
      comp=Z,50nm,1.0s
KDU   Kakadu           47.77 285  P       P        23 23 47.1 -0.7
      comp=Z,47nm,1.5s
GENI  Genyem           48.30 302  P       P        23 23 52.7 +0.8
MTN   Manton Dam       48.77 283          P        23 23 55.0 -0.5
MTN   Manton Dam       48.77 283  P       P        23 23 55.4 -0.1
      comp=Z,60nm,1.2s
MTN   Manton Dam       48.77 283  P       P        23 23 55.7 +0.2
KNRA  Kununurra        49.18 279  P       P        23 23 58.2 -0.4
KNRA  Kununurra        49.18 279  P       P        23 23 58.8 +0.2
      comp=Z,94nm,1.0s
FITZ  Fitzroy Crossi   50.54 274          P        23 24 08.7 -0.2
FITZ  Fitzroy Crossi   50.54 274  P       P        23 24 09.1 +0.1
      comp=Z,9.3nm,1.4s
FITZ  Fitzroy Crossi   50.54 274  LR      LR       23 43 52.3
      comp=Z,396nm,21.5s,baz=116,slow=34
FITZ  Fitzroy Crossi   50.54 274  P       P        23 24 09.4 +0.5
NWAO  Narrogin (SRO)   51.40 253  LR      LR       23 44 40.5
      comp=Z,238nm,20.2s,baz=84,slow=34
KLBR  Kellerberrin     51.44 254  P       P        23 24 16.0 +0.4
MEEK  Meekatharra      52.59 261  P       P        23 24 22.9 -1.3
MEEK  Meekatharra      52.59 261  P       P        23 24 23.9 -0.3
PSA00 Pilbara Seismi   53.72 267  P       P        23 24 33.0 +0.4
PSA00                             IAmb    IAmb     23 24 42.4
      comp=Z,50nm,1.5s
MORW  Morawa           53.73 257  P       P        23 24 33.1 +0.4
MORW                              IAmb    IAmb     23 24 44.4
      comp=Z,25nm,1.1s
FAKI  Fak Fak          53.89 294  P       P        23 24 33.2 -0.7
SOEI  Soe              56.06 282          P        23 24 49.1 -0.6
SOEI  Soe              56.06 282  P       P        23 24 52.1 +2.4
QSPA  South Pole Qui   56.15 180          P        23 24 49.9 +0.2
QSPA                              IAmb    IAmb     23 24 52.6
      comp=Z,44nm,1.2s
QSPA  South Pole Qui   56.15 180  P       P        23 24 49.3 -0.4
      comp=Z,18nm,0.8s,baz=24,slow=7.1,SNR=92
QSPA                              LR      LR       23 46 27.5
      comp=Z,455nm,18.7s,baz=42,slow=33
      comp=Z,18nm,0.8s
BATI  Baumata          56.30 281  LR      LR       23 48 26.0
      comp=Z,543nm,19.9s,baz=144,slow=35
GUMO  Guam             57.77 319  LR      LR       23 46 03.2
      comp=Z,134nm,21.9s,baz=124,slow=32
KAPI  Kappang          62.43 283  LR      LR       23 52 12.9
      comp=Z,108nm,20.6s,baz=103,slow=36
DAV   Davao City (W)   65.46 298  LR      LR       23 54 13.9
      comp=Z,104nm,20.5s,baz=142,slow=36
BELA  Belgrano 2       66.51 173          P        23 25 58.8 -0.6
BELA                              IAmb    IAmb     23 26 12.0
      comp=Z,8.2nm,1.0s
MAW   Mawson           68.29 202  LR      LR       23 55 23.4
      comp=Z,505nm,18.8s,baz=98,slow=35
PMSA  Palmer Station   69.81 156  LR      LR       23 50 29.8
      comp=Z,402nm,18.3s,baz=241,slow=30
LEM   Lembang          71.37 274  LR      LR       23 57 28.0
      comp=Z,108nm,20.2s,baz=168,slow=36
ESPZ  Base Esperanza   73.07 157  P       P        23 26 40.8 +0.9
ESPZ                              IAmb    IAmb     23 26 50.5
      comp=Z,22nm,0.9s
USHA  Ushuaia          74.06 146  LR      LR       23 50 17.8
      comp=Z,549nm,19.8s,baz=204,slow=28
TROLL Troll, Antarti   74.29 181 ⇑P       P        23 26 46.5 -0.7
      comp=Z,215nm,0.9s
SNAA  Sanae            74.64 179 ⇑P       P        23 26 48.5 -0.6
      comp=Z,204nm,1.0s
SNAA  Sanae            74.64 179          P        23 26 48.4 -0.7
SNAA                              IAmb    IAmb     23 26 50.2
      comp=Z,22nm,1.2s
SNAA  Sanae            74.64 179  P       P        23 26 47.5 -1.6
      comp=Z,14nm,1.1s,baz=184,slow=4.8,SNR=17
SNAA                              LR      LR       23 57 49.3
      comp=Z,241nm,19.0s,baz=178,slow=34
      comp=Z,14nm,1.1s
VNA3  Neumayer Olymp   74.87 177 ⇑P       P        23 26 49.9 -0.5
      comp=Z,14nm,0.6s
VNA2  Neumayer--Watz   75.28 178 ⇑P       P        23 26 51.1 -1.6
      comp=Z,9.4nm,0.6s,baz=174,slow=5.0
VNA1  Neumayer--Stat   75.52 177 ⇑P       P        23 26 54.0  0.0
      comp=Z,22nm,1.0s
H03S2 Juan Fernandez   80.10 124  T       T        00 55 26.3
      baz=234,slow=74,SNR=122
H03S1 Juan Fernandez   80.11 124  T       T        00 55 32.2
      baz=234,slow=74,SNR=110
H03S3 Juan Fernandez   80.12 124  T       T        00 55 27.9
      baz=234,slow=74,SNR=158
MJAR  Matsushiro Arr   80.12 327  P       P        23 27 17.4 -2.6
      comp=Z,0.8nm,0.4s,baz=160,slow=5.4,SNR=5.7
MJAR                              LR      LR       00 01 00.3
      comp=Z,55nm,18.3s,baz=126,slow=34
      comp=Z,0.8nm,0.4s
H03N3 Juan Fernandez   80.31 124  T       T        00 55 44.2
      baz=239,slow=72,SNR=450
H03N2 Juan Fernandez   80.32 124  T       T        00 55 40.6
      baz=239,slow=72,SNR=364
H03N1 Juan Fernandez   80.33 124  T       T        00 55 43.3
      baz=239,slow=72,SNR=541
JNU   Nakatsue         80.99 320  LR      LR       23 58 33.2
      comp=Z,72nm,19.4s,baz=138,slow=32
PLCA  Paso Flores      81.48 134          P        23 27 27.6  0.0
PLCA  Paso Flores      81.48 134  P       P        23 27 28.5 +0.9
      comp=Z,2.3nm,0.6s,baz=209,slow=4.7,SNR=5.1
PLCA                              LR      LR       23 59 44.0
      comp=Z,112nm,18.2s,baz=244,slow=33
      comp=Z,2.3nm,0.6s
BI02  San Fabin de     83.52 130          P        23 27 38.4 +0.1
BI02                              IAmb    IAmb     23 27 48.3
      comp=Z,8.9nm,1.1s
PSI   Prapat           83.92 277  LR      LR       00 05 56.4
      comp=Z,152nm,18.6s,baz=135,slow=36
ASAJ  Asahikawa        84.75 334  LR      LR       23 58 41.3
      comp=Z,276nm,21.4s,baz=178,slow=31
QIZ   Qiongzhong       84.82 297  P       P        23 27 43.0 -1.9
QIZ                               S       S        23 38 15.0 +4.2
QIZ                               pmax    pmax
      comp=Z,25nm,1.7s
QIZ                               LR      LR
      comp=Z,120nm,15.1s
QIZ                               LR      LR
      comp=Z,170nm,22.0s
MT01  Popeta           85.25 128  P       P        23 27 48.2 +1.1
MT01                              IAmb    IAmb     23 27 55.4
      comp=Z,18nm,1.0s
KSRS  Korea Array      85.85 321  P       P        23 27 48.0 -1.6
      comp=Z,0.6nm,0.3s,baz=142,slow=5.8,SNR=5.4
      comp=Z,0.6nm,0.3s
SHEM  Shemya Is, Ala   86.47 357  LR      LR       00 00 49.1
      comp=Z,166nm,21.2s,baz=172,slow=32
NJ2   Nanjing          87.14 312 eP       P        23 27 59.1 +3.0
NJ2                               pmax    pmax
      comp=Z,12nm,0.6s
LPIG  La Paz           88.05  59  LR      LR       00 00 13.6
      comp=Z,86nm,19.4s,baz=240,slow=31
PETK  Petropavlovsk-   88.81 347  P       P        23 28 02.2 -1.3
      comp=Z,5.7nm,1.0s,baz=88,slow=10,SNR=6.2
PETK                              LR      LR       00 03 53.3
      comp=Z,49nm,19.5s,baz=164,slow=33
      comp=Z,5.7nm,1.0s
USRK  Ussuriysk Ar.    89.10 328  LR      LR       00 02 16.4
      comp=Z,52nm,21.9s,baz=161,slow=32
YUH   Yuha Desert      89.73  50          P        23 28 10.8 +2.4
PFO   Pinyon Flats O   90.03  49  P       P        23 28 09.9 -0.1
      comp=Z,2.0nm,0.7s,baz=208,slow=2.1,SNR=4.4
PFO                               LR      LR       00 03 51.7
      comp=Z,85nm,18.2s,baz=221,slow=32
      comp=Z,2.0nm,0.7s
TIA   Tai'an           91.01 314  P       P        23 28 15.0 +0.7
TIA                               pmax    pmax
      comp=Z,7.0nm,0.8s
GYA   Guiyang          91.67 301 ⇓P       P        23 28 20.5 +2.8
GYA                               pmax    pmax
      comp=Z,31nm,0.8s
NVAR  Mina Array Bea   92.16  44  P       P        23 28 19.7 -0.1
      comp=Z,0.3nm,0.3s,baz=213,slow=11,SNR=4.8
NVAR                              LR      LR       00 04 32.0
      comp=Z,188nm,18.6s,baz=246,slow=32
      comp=Z,0.3nm,0.3s
TPH   Tonopah          92.55  45  P       P        23 28 21.6 -0.1
CMAR  Chiang Mai Arr   92.78 290  LR      LR       00 12 14.1
      comp=Z,24nm,19.8s,baz=125,slow=37
LYN   LuoYang          92.79 310 eP       P        23 28 24.4 +1.9
LYN                               S       S        23 39 25.8 +0.6
LYN                               pmax    pmax
      comp=Z,8.0nm,0.7s
LYN                               LR      LR
      comp=Z,150nm,17.6s
LYN                               LR      LR
      comp=Z,170nm,19.5s
LYN                               LR      LR
      comp=Z,320nm,19.6s
I03D  Drain, OR        93.10  38  P       P        23 28 23.2 -0.5
KLR   Kul'dur          93.16 331  LR      LR       00 02 45.2
      comp=Z,70nm,21.6s,baz=140,slow=31
KMI   Kunming          93.73 298  P       P        23 28 34.6 +7.2
KMI                               pmax    pmax
      comp=Z,10.0nm,0.9s
KMI                               LR      LR
      comp=Z,130nm,17.5s
NNA   Nana             94.26 107  LR      LR       00 01 10.3
      comp=Z,232nm,21.7s,baz=232,slow=29
PZH   PanZhiHua        95.26 298  P       P        23 28 36.3 +2.1
N15K  Kwethluk River   95.26  10  P       P        23 28 31.9 -1.4
N15K                              IAmb    IAmb     23 32 14.5
      comp=Z,13nm,1.4s
ELK   Elko             95.47  44  LR      LR       00 05 19.2
      comp=Z,198nm,19.4s,baz=252,slow=31
ATAH  Atahualpa        95.82 103  LR      LR       00 02 09.4
      comp=Z,62nm,21.5s,baz=229,slow=29
MA2   Magadan          96.24 346  LR      LR       00 06 41.5
      comp=Z,104nm,21.6s,baz=157,slow=32
BBB   Bella Bella      97.15  29  LR      LR       00 03 27.4
      comp=Z,67nm,21.6s,baz=178,slow=30
ANMO  Albuquerque      97.30  53  LR      LR       00 08 16.4
      comp=Z,147nm,18.1s,baz=331,slow=33
HHC   Hu-ho-hao-te     97.34 315 eP       Pdif     23 28 45.8 +2.4
HHC                               pmax    pmax
      comp=Z,8.0nm,0.5s
HHC                               pmax    pmax
      comp=Z,51nm,4.5s
LPAZ  La Paz           98.40 116  LR      LR       00 04 58.0
      comp=Z,114nm,21.8s,baz=203,slow=30
SEY   Seymchan         99.02 348  LR      LR       00 08 21.5
      comp=Z,203nm,21.9s,baz=158,slow=32
CPUP  Villa Florida    99.23 130  LR      LR       00 05 36.6
      comp=Z,95nm,21.9s,baz=90,slow=30
NEW   Newport          99.39  37  LR      LR       00 08 25.7
      comp=Z,100nm,19.3s,baz=188,slow=32
WMQ   Urumqi          113.89 308 ePKP     PKiKP    23 33 50.3 +1.6
WMQ                               LR      LR
      comp=Z,83nm,20.3s
MKAR  Makanchi Array  118.55 309  PKP     PKPdf    23 33 55.8 -1.7
      comp=Z,0.3nm,0.8s,baz=153,slow=4.4,SNR=3.6
KURBB Kurchatov Arra  122.10 312  PKP     PKPdf    23 34 01.1 -3.1
      comp=Z,0.4nm,0.4s,baz=115,slow=1.9,SNR=4.4
BVAR  Borovoye Array  127.54 314  PKP     PKPdf    23 34 11.9 -2.7
      comp=Z,0.5nm,0.7s,baz=45,slow=2.3,SNR=4.0
FINES FINESS Array B  147.73 336  PKPbc   PKPdf    23 34 50.2 -0.9
      comp=Z,5.6nm,1.0s,baz=32,slow=4.2,SNR=12
MMAI  Mount Meron Ar  150.31 278  PKPbc   PKPbc    23 34 59.5 -2.0
      comp=Z,0.3nm,0.3s,baz=29,slow=9.1,SNR=3.9
NACGM Naroch          151.81 326⇑iPKiKP   PKPbc    23 35 02.8 -1.4
      comp=Z,8.0nm,1.0s,baz=52
NB2   NORSAR Subarra151.91 348  PKP     PKiKP    23 35 08.8 +4.2
      comp=Z,0.6nm,0.6s,baz=18,slow=2.6
NOA   NORSAR Array B151.91 348  PKPbc   PKPbc    23 35 02.6 -1.6
      comp=Z,0.9nm,0.9s,baz=15,slow=4.6,SNR=7.3
HFS   Hagfors         152.27 345  PKPbc   PKPbc    23 35 04.0 -1.1
      comp=Z,3.3nm,0.8s,baz=48,slow=3.8,SNR=6.3
BRTR  Keskin Array B  152.35 292  PKPbc   PKPbc    23 35 03.5 -2.6
      comp=Z,0.2nm,0.5s,baz=61,slow=2.2,SNR=2.2
AKASG Malin Array Be  152.76 317  PKPbc   PKPbc    23 35 05.2 -1.2
      comp=Z,0.1nm,0.3s,baz=63,slow=2.2,SNR=1.5
KOLS  Kolonicke sedl  157.55 319 ePKP     PKPab    23 35 31.6 -6.4
CLL   Collm           160.16 335 i PKPab  PKPab    23 35 46.9 -2.2
      comp=Z,3.0nm,1.2s
CLL                              ex       x        23 36 01.0
CLL                               AMS     AMS      00 46 00.0
      comp=Z,100nm,21.9s
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*IDC **21** 00:14:44.0±1.5, 14°.47N×120°.42E, h98^{km}±32^{km}, mb3.6/7, mbtmp3.9/7, Error ellipse: s-maj=108.7km s-min=69.5km az=33.0*

ISC 21 00:14:44.5±2.2**, 14°.5N**±0°.8×**120°.4E**±0°.8**, h100**^{km}**, n8, σ0^{s}.26**/9**, mb3.8**/7**, Luzon**

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Code  Station Name        Δ°  AZ°    Phase ID          Time      Res
                                     Op      ISC       h  m  s   ISC
TGY   Tagaytay City     0.66 129  P       Pn       00 15 01.6  0.0
      4µm,0.3s,baz=299,slow=3.0,SNR=77
TGY                               S       Sn       00 15 14.4 -0.1
      1µm,0.3s,baz=298,slow=21,SNR=8.9
MKAR  Makanchi Array   45.21 323  P       P        00 22 51.6  0.0
      0.2nm,0.3s,baz=104,slow=8.5,SNR=5.3
      0.2nm,0.3s
ZALV  Zalesovo Beam    48.20 333  P       P        00 23 14.3 -0.4
      0.6nm,0.4s,baz=121,slow=9.1,SNR=2.7
      0.6nm,0.4s
KURBB Kurchatov Arra   49.35 326  P       P        00 23 23.7 +0.1
      0.7nm,0.8s,baz=132,slow=7.9,SNR=5.1
      0.7nm,0.8s
ARCES ARCESS Array B   78.22 339  P       P        00 26 32.9 +0.1
      1.7nm,1.0s,baz=79,slow=6.4,SNR=3.6
      1.7nm,1.0s
SPITS Spitsbergen Ar   78.73 348  P       P        00 26 35.9 +0.3
      2.7nm,0.8s,baz=98,slow=10,SNR=2.7
      2.7nm,0.8s
FINES FINESS Array B   79.44 331  P       P        00 26 39.5  0.0
      0.6nm,0.5s,baz=55,slow=5.8,SNR=10
      0.6nm,0.5s
HFS   Hagfors          85.62 331  P       P        00 27 11.5 -0.2
      0.9nm,0.7s,baz=72,slow=4.7,SNR=1.6
      0.9nm,0.7s
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*IDC **21** 00:16:44.0±0.7, 2°.19S×138°.43E, h0^{km}, mb4.1/12, mbtmp4.1/14, ML3.9/2, MS3.8/31, Error ellipse: s-maj=22.1km s-min=15.1km az=69.0*

*DJA **21** 00:16:45.7±0.5, 2°S±8°×13°9E±°, h17^{km}±3^{km}, M4.7/7, mb4.8/1, MLv4.6/7*

*NEIC **21** 00:16:46.3±1.6, 2°.2S±0°.1×138°.46E±0°.06, h10^{km}±1^{km}, mb4.5/24, Error ellipse: s-maj=18.2km s-min=10.6km az=185.0*

ISC 21 00:16:45.6±1.4**, 2°.22S**±0°.06×**138°.44E**±0°.04**, h10**^{km}±9^{km}**, n82, σ1^{s}.01**/63**, mb4.5**/26**, MS3.8**/26**, 2D, Irian Jaya**

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Code  Station Name        Δ°  AZ°    Phase ID          Time      Res
                                     Op      ISC       h  m  s   ISC
SMPI  Sarmi             0.36  50  P       Pg       00 16 52.0 -0.7
SMPI                              S       Sg       00 16 57.2 -0.2
GENI  Genyem            1.77 102  P       Pn       00 17 15.9 -0.3
SRPI  Serui, Papua      2.23 279  P       Pn       00 17 21.3 -1.3
SRPI                              S       Sn       00 17 50.6 +0.5
JAY   Jayapura          2.28  97  Pn      Pn       00 17 23.1 -0.3
      11nm,0.3s,baz=244,slow=12,SNR=34
JAY                               Sn      Sn       00 17 51.9 +0.3
      15nm,0.3s,baz=309,slow=21,SNR=3.8
JAY                               LR      LR       00 18 35.1
      comp=Z,4µm,21.7s,baz=276,slow=48
      44nm,0.4s
JAY   Jayapura          2.28  97  P       Pn       00 17 22.7 -0.7
JAY                               S       Sn       00 17 51.0 -0.6
BAKI  Biak              2.55 294  P       Pn       00 17 26.3 -0.7
BAKI                              S       Sn       00 17 57.3 -0.7
RKPI  Ransiki, Papua    4.32 279  P       Pn       00 17 51.7 +0.3
FAKI  Fak Fak           6.22 263  Pn      Pn       00 18 18.0 +0.5
FAKI  Fak Fak           6.22 263  P       Pn       00 18 17.5 -0.1
PMG   Port Moresby     11.23 130  LR      LR       00 25 26.9
      comp=Z,2µm,18.3s,baz=323,slow=46
COEN  Coen             12.56 158  Pn      Pn       00 19 45.6 +1.0
MTN   Manton Dam       12.79 214  Pn      Pn       00 19 47.3 -0.4
GUMO  Guam             16.95  22  LR      LR       00 26 36.6
      comp=Z,120nm,20.5s,baz=150,slow=35
WB0   Warramunga Arr   17.88 193          Pn       00 20 55.4 +0.8
WR8   Warramunga Arr   18.04 192  P       Pn       00 20 56.9 +0.3
WRA   Warramunga Arr   18.06 193          Pn       00 20 56.7 -0.1
WRA   Warramunga Arr   18.06 193  P       Pn       00 20 56.1 -0.7
      0.7nm,0.3s,baz=15,slow=11,SNR=12
WRA                               S       Sn       00 24 06.8  -12
      3.1nm,0.8s,baz=14,slow=23,SNR=4.9
WRA                               LR      LR       00 28 52.1
      comp=Z,334nm,18.5s,baz=12,slow=40
      1.8nm,0.5s
KAPI  Kappang          18.85 261  LR      LR       00 30 45.0
      comp=Z,256nm,21.2s,baz=84,slow=45
CTAO  Charters Tower   19.33 157  P       P        00 21 11.9 +0.7
FITZ  Fitzroy Crossi   20.16 218  P       P        00 21 21.1 +0.8
FITZ  Fitzroy Crossi   20.16 218  P       P        00 21 20.0 -0.3
      2.3nm,0.6s,baz=37,slow=15,SNR=7.5
FITZ                              S       S        00 24 56.8  -10
      5.1nm,0.8s,baz=192,slow=16,SNR=2.5
      2.3nm,0.6s
AS31  Alice Springs    21.76 191          P        00 21 37.8 +0.2
ASAR  Alice Springs    21.77 191          P        00 21 36.6 -1.0
ASAR  Alice Springs    21.77 191  P       P        00 21 37.0 -0.6
      4.3nm,0.8s,baz=23,slow=10,SNR=34
ASAR                              S       S        00 25 32.8 -5.7
      5.7nm,0.9s,baz=11,slow=21,SNR=11
ASAR                              LR      LR       00 30 42.0
      comp=Z,671nm,18.0s,baz=13,slow=38
      4.3nm,0.8s
EIDS  Eidsvold         26.04 153          P        00 22 19.3 +0.2
MBWA  Marble Bar       26.20 223  P       P        00 22 20.8 +0.1
PSA00 Pilbara Seismi   26.41 222  P       P        00 22 22.3 -0.3
PSA00                             IAmb    IAmb     00 22 52.1
      comp=Z,15nm,1.1s
PSA00 Pilbara Seismi   26.41 222  P       P        00 22 22.6  0.0
PSA00                             IAmb    IAmb     00 22 31.5
      comp=Z,8.5nm,1.2s
STKA  Stephens Creek   29.65 175  P       P        00 22 52.9 +1.5
      comp=Z,1.7nm,0.5s,baz=330,slow=10,SNR=3.5
STKA                              LR      LR       00 35 51.8
      comp=Z,606nm,18.4s,baz=348,slow=39
      comp=Z,1.7nm,0.5s
H11S3 WAKE ISLAND Hy 34.59  52  T       T        00 59 27.1
      baz=236,slow=74,SNR=5.6
H11S2 WAKE ISLAND Hy 34.60  52  T       T        00 59 29.4
      baz=236
H11S1 WAKE ISLAND Hy 34.61  52  T       T        00 59 28.8
      baz=236,slow=74,SNR=4.0
JNU   Nakatsue         35.87 349  LR      LR       00 36 09.5
      comp=Z,151nm,21.4s,baz=197,slow=32
KSRS  Korea Array      40.66 347  P       P        00 24 25.7 -0.4
      comp=Z,0.5nm,0.3s,baz=146,slow=6.7,SNR=4.7
      comp=Z,0.5nm,0.3s
MSVF  Nonsavu          41.81 114  LR      LR       00 42 28.0
      comp=Z,154nm,18.1s,baz=292,slow=37
CMAR  Chiang Mai Arr   43.96 300  P       P        00 24 53.3  0.0
      comp=Z,1.9nm,0.8s,baz=118,slow=5.8,SNR=12
CMAR                              PcP     PcP      00 26 40.1 +0.8
      comp=Z,0.8nm,0.3s,baz=100,slow=1.2,SNR=4.6
CMAR                              LR      LR       00 46 09.7
      comp=Z,34nm,18.2s,baz=115,slow=40
      comp=Z,1.9nm,0.8s
XAN   Xi'an            45.52 325 ⇓P       P        00 25 05.6  0.0
XAN                               pP      sP       00 25 09.8 -0.4
```

XAN				pmax	pmax		
	comp=Z,12nm,0.7s						
ASAJ	**Asahikawa**	**46.28**	**4**	LR	LR	00 42 24.0	
	comp=Z,80nm,21.7s,baz=182,slow=33						
USRK	**Ussuriysk Ar.**	**46.58**	**354**	LR	LR	00 42 49.1	
	comp=Z,50nm,20.8s,baz=178,slow=34						
BNX	**BinXian**	**48.75**	**350**	⇓P	**P**	**00 25 29.8**	**-0.7**
BNX				pmax	pmax		
	comp=Z,6.0nm,1.0s						
XLT	**XiLinHaoTe**	**50.10**	**339**	*e*P	**P**	**00 25 40.4**	**-0.6**
XLT				pP	sP	00 25 44.9	-0.7
XLT				pmax	pmax		
	comp=Z,10.0nm,0.6s						
URZ	**Urewera**	**50.36**	**140**	LR	LR	00 48 13.3	
	comp=Z,202nm,18.6s,baz=311,slow=38						
RPZ	**Rata Peaks**	**50.44**	**150**	LR	LR	00 46 59.8	
	comp=Z,287nm,19.3s,baz=334,slow=36						
KLR	**Kul'dur**	**51.57**	**354**	LR	LR	00 44 15.0	
	comp=Z,117nm,21.5s,baz=199,slow=32						
SONM	**Songino Array**	**57.17**	**335**	P	**P**	**00 26 32.7**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=152,slow=9.6,SNR=3.3						
	comp=Z,0.6nm,0.7s						
PETK	**Petropavlovsk-**	**57.45**	**14**	LR	LR	00 54 22.7	
	comp=Z,30nm,18.1s,baz=213,slow=39						
EVN	**Everest**	**57.94**	**305**		**P**	**00 26 39.7**	**+0.5**
PALK	**Pallekele**	**58.38**	**280**	LR	LR	00 52 35.6	
	comp=Z,72nm,20.4s,baz=124,slow=37						
MA2	**Magadan**	**62.38**	**7**	LR	LR	00 57 04.7	
	comp=Z,28nm,18.1s,baz=189,slow=39						
SHEM	**Shemya Is, Ala**	**62.41**	**24**	LR	LR	00 50 05.0	
	comp=Z,51nm,21.8s,baz=287,slow=32						
RAR	**Rarotonga**	**62.96**	**113**	LR	LR	00 54 04.8	
	comp=Z,29nm,18.2s,baz=292,slow=36						
YAK	**Yakutsk**	**64.43**	**355**	LR	LR	00 51 55.3	
	comp=Z,92nm,21.9s,baz=179,slow=33						
MKAR	**Makanchi Array**	**69.24**	**322**	P	**P**	**00 27 52.8**	**-0.1**
	comp=Z,4.8nm,1.0s,baz=117,slow=7.2,SNR=21						
	comp=Z,4.8nm,1.0s						
MAKZ	**Makanchi**	**69.44**	**322**		**P**	**00 27 53.5**	**-0.5**
TARG	**Taragay, Kyrgy**	**70.05**	**316**	P	**P**	**00 27 59.1**	**+0.7**
TARG				IAmb	IAmb	00 28 07.4	
	comp=Z,8.7nm,1.5s						
KSH	**Kashi**	**70.56**	**313**	P	**P**	**00 28 02.8**	**+1.6**
KSH				PcP	**PcP**	**00 28 21.4**	**-1.0**
KSH				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KDJ	**Kajisay**	**70.63**	**316**	P	**P**	**00 28 01.5**	**-0.2**
KDJ				IAmb	IAmb	00 28 04.5	
	comp=Z,3.4nm,0.9s						
ZALV	**Zalesovo Beam**	**71.38**	**330**	P	**P**	**00 28 05.2**	**-0.6**
	comp=Z,1.5nm,0.6s,baz=112,slow=4.0,SNR=7.5						
	comp=Z,1.5nm,0.6s						
BOOM	**Boomskoye usch**	**71.62**	**316**		**P**	**00 28 08.2**	**+0.6**
BOOM				IAmb	IAmb	00 28 10.4	
	comp=Z,4.1nm,0.9s						
PPT	**Papeete**	**72.16**	**108**	LR	LR	00 57 30.7	
	comp=Z,33nm,18.6s,baz=209,slow=34						
AAK	**Ala-Archa**	**72.67**	**316**	LR	LR	01 02 45.3	
	comp=Z,33nm,19.3s,baz=130,slow=38						
KURBB	**Kurchatov Arra**	**73.18**	**325**	P	**P**	**00 28 16.1**	**-0.4**
	comp=Z,3.1nm,1.0s,baz=111,slow=5.1,SNR=9.8						
	comp=Z,3.1nm,1.0s						
ARSB	**Arslanbob**	**73.31**	**314**	P	**P**	**00 28 18.4**	**+0.7**
L14K	**Kuka Creek**	**77.57**	**25**	P	**P**	**00 28 42.2**	**+0.7**
L14K				IAmb	IAmb	00 28 45.6	
	comp=Z,4.7nm,1.0s						
BVAR	**Borovoye Array**	**78.76**	**325**	P	**P**	**00 28 48.4**	**0.0**
	comp=Z,6.4nm,0.7s,baz=114,slow=6.6,SNR=25						
	comp=Z,6.4nm,0.7s						
BRVK	**Borovoye**	**78.83**	**325**		**P**	**00 28 48.5**	**-0.3**
KDAK	**Kodiak Island**	**80.82**	**30**	LR	LR	01 00 04.6	
	comp=Z,77nm,21.5s,baz=231,slow=32						
E18K	**Tukpahlearik C**	**81.27**	**20**		**P**	**00 29 02.5**	**+0.9**
E18K				IAmb	IAmb	00 29 09.9	
	comp=Z,3.2nm,1.1s						
STLK	**Strandline Lak**	**82.40**	**27**	P	**P**	**00 29 07.3**	**-0.5**
STLK				IAmb	IAmb	00 29 08.0	
	comp=Z,4.1nm,0.7s						
E19K	**Redstone River**	**82.45**	**21**		**P**	**00 29 08.2**	**+0.3**
E19K				IAmb	IAmb	00 29 13.3	
	comp=Z,3.0nm,0.9s						
MAW	**Mawson**	**82.47**	**202**	LR	LR	01 04 02.2	
	comp=Z,107nm,19.9s,baz=92,slow=34						
ILAR	**Eielson Array**	**85.50**	**24**	P	**P**	**00 29 23.3**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=265,slow=5.0,SNR=6.0						
ILAR				LR	LR	01 03 38.9	
	comp=Z,40nm,20.4s,baz=220,slow=33						
	comp=Z,0.6nm,0.7s						
AKTO	**Aktyubinsk**	**85.60**	**321**	LR	LR	01 10 24.0	
	comp=Z,38nm,19.5s,baz=214,slow=38						
BMAR	**Burnt Mountain**	**87.06**	**22**		**P**	**00 29 32.5**	**+1.3**
G26K	**Porcupine Rive**	**87.25**	**23**	P	**P**	**00 29 33.3**	**+1.3**
G26K				IAmb	IAmb	00 30 16.5	
	comp=Z,6.0nm,1.4s						
F26K	**Sheenjek River**	**87.28**	**22**	P	**P**	**00 29 33.9**	**+1.7**
F26K				IAmb	IAmb	00 29 37.6	
	comp=Z,4.6nm,1.2s						
QSPA	**South Pole Qui**	**87.72**	**180**	P	**P**	**00 29 34.5**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=33,slow=3.0,SNR=6.3						
QSPA				LR	LR	01 10 24.2	
	comp=Z,136nm,18.1s,baz=1.5,slow=37						
	comp=Z,0.8nm,0.7s						
H27K	**Steamboat Moun**	**88.00**	**24**		**P**	**00 29 36.1**	**+0.4**
H27K				IAmb	IAmb	00 29 37.7	
	comp=Z,4.4nm,1.2s						
KIRV	**Kirov**	**91.37**	**328**	LR	LR	01 12 44.5	
	comp=Z,52nm,21.2s,baz=305,slow=37						
SPITS	**Spitsbergen Ar**	**98.46**	**350**	LR	LR	01 14 34.0	
	comp=Z,28nm,21.7s,baz=78,slow=35						
YKA	**Yellowknife Ar**	**99.75**	**27**	LR	LR	01 09 13.2	
	comp=Z,33nm,22.0s,baz=308,slow=32						
LPAZ	**La Paz**	**147.95**	**126**	PKPbc	**PKPbc**	**00 36 33.5**	**+0.5**
	comp=Z,4.1nm,1.0s,baz=206,slow=3.7,SNR=10						

CATAC 21 00:43:28.2±0.7**,12°N**±9°×**8°6W**±°**,h134^{km}**±5^{km}**,M2.4**/14**,**
MLv2.4/14**,Error ellipse: s-maj=22.4km s-min=7.0km**
az=33.8,confirmed,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NADN	**Granada**	**0.18**	**19**	P	Pn	00 43 47.2	+0.8
NANN	**Nandasmo**	**0.36**	**355**	P	Pn	00 43 48.9	+1.9
NANN	**Nandasmo**	**0.36**	**355**	S	Sn	00 44 04.2	+2.9
SABN	**Sabanita**	**0.38**	**350**	P	Pn	00 43 47.9	+0.8
JAPN	**Al SSO del Vol**	**0.41**	**97**	P	Pn	00 43 48.7	+1.6
JAPN				S	Sn	00 44 04.1	+2.6
MASN	**Masaya**	**0.41**	**352**	P	Pn	00 43 48.2	+1.0
MORN	**Al O del Volca**	**0.44**	**94**	P	Pn	00 43 48.5	+1.2
MAS3	**Al N del Volca**	**0.45**	**350**	P	Pn	00 43 48.1	+0.7
UNAN	**Cigeo UNAN**	**0.56**	**342**	P	Pn	00 43 48.8	+0.8
AERN	**Aeropuerto Man**	**0.57**	**353**	P	Pn	00 43 48.8	+0.7
SAPS	**Ciudad Sandino**	**0.66**	**333**	P	Pn	00 43 49.6	+0.9
SAPS	**Ciudad Sandino**	**0.66**	**333**	S	Sn	00 44 06.1	+1.9
CARN	**Rivas**	**0.68**	**125**	P	Pn	00 43 49.8	+1.0
CARN				S	Sn	00 44 06.3	+1.9
COPN	**Copaltepe**	**0.77**	**321**	P	Pn	00 43 49.8	+0.3
MOMN	**Momotombo**	**0.94**	**332**	P	Pn	00 43 51.4	+0.5
MOMN				S	Sn	00 44 09.0	+0.8
MOM2	**El Cardon**	**0.94**	**336**	P	Pn	00 43 51.4	+0.6
MOM2				S	Sn	00 44 08.6	+0.5
BOAB	**BOACO BROADBAN**	**0.96**	**26**	P	Pn	00 43 51.5	+0.4
BOAB	**BOACO BROADBAN**	**0.96**	**26**	S	Sn	00 44 08.7	+0.3
ACON	**Acoyapa**	**0.98**	**67**	S	Sn	00 44 09.0	+0.4
ACON	**Acoyapa**	**0.98**	**67**	P	Pn	00 43 51.6	+0.4

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*NEIC **21** 00:59:00.9±1.3, 43°.6N±0°.1×128°.5W±0°.2, h10^{km}±2^{km}, mb4.0/8, ML3.2/30, Error ellipse: s-maj=24.2km s-min=16.4km az=236.0*

*IDC **21** 01:00:59:01.8±3.0, 43°.95N×128°.36W, h0^{km}, mb3.3/4, mbtmp3.3/5, ML2.8/1, MS3.1/2, Error ellipse: s-maj=66.3km s-min=22.1km az=55.0*

ISC 21 00:59:01.3±1.4**,43°.7N**±0°.1×**128°.5W**±0°.1**,h10^{km},n33,**
σ1^{s}.38/25**,mb3.9**/7**,Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEBM	**Edson Butte**	**3.19**	**104**	Pn	**Pn**	**00 59 49.7**	**-1.9**
KEBM				IAML		01 00 23.8	
	comp=N,49nm,2.1s						
KEBM				IAML		01 00 26.2	
	comp=E,60nm,2.0s						
J01E	**Myrtle Point**	**3.41**	**98**	Pn	**Pn**	**00 59 52.8**	**-1.7**
J01E				IAML		01 01 16.1	
	comp=N,38nm,2.6s						
I02E	**Swisshome, OR**	**3.41**	**82**	Pn	**Pn**	**00 59 54.4**	**-0.1**
I02E				IAML		01 01 09.2	
	comp=N,39nm,3.0s						
I02E				IAML		01 01 45.4	
	comp=E,48nm,2.3s						
K02D	**Willamette Mer**	**3.71**	**105**	Pn	**Pn**	**00 59 56.8**	**-2.0**
HEBO	**Mount Hebo**	**3.73**	**65**	Pn	**Pn**	**00 59 57.9**	**-1.1**
HEBO				IAML		01 01 23.3	
	comp=N,94nm,2.0s						
I03D	**Drain, OR**	**3.77**	**89**	Pn	**Pn**	**00 59 58.2**	**-1.1**
G03D	**McMinnville, O**	**4.05**	**67**	Pn	**Pn**	**01 00 03.0**	**-0.3**
G03D				IAML		01 02 02.1	
	comp=N,38nm,2.6s						
G03D				IAML		01 02 03.6	
	comp=E,44nm,2.7s						
F03A	**Seaside**	**4.17**	**57**	Pn	**Pn**	**01 00 05.7**	**+0.8**
H04D	**Lebanon**	**4.25**	**77**	Pn	**Pn**	**01 00 05.7**	**-0.3**
BBOR	**Butler Butte**	**4.36**	**99**	Pn	**Pn**	**01 00 07.5**	**-0.2**
H04A	**Detroit Lake**	**4.67**	**76**	Pn	**Pn**	**01 00 11.7**	**-0.1**
H04A				IAML		01 00 53.9	
	comp=N,13nm,2.0s						
H04A				IAML		01 01 18.4	
	comp=E,14nm,3.4s						
WISH	**Wishkah**	**4.76**	**43**	Pn	**Pn**	**01 00 13.8**	**+0.8**
NVAR	**Mina Array Bea**	**9.37**	**121**	Pn	**Pn**	**01 01 20.1**	**+3.5**
	comp=E,0.1nm,0.3s,baz=304,slow=12,SNR=4.4						
	comp=E,0.2nm,0.3s						
PDAR	**Pinedale Array**	**13.87**	**87**	LR	LR	01 08 00.4	
	comp=E,62nm,18.0s,baz=280,slow=39						
TABL	**Table Mountain**	**18.37**	**340**	P	**Pn**	**01 03 13.6**	**-2.5**
ANMO	**Albuquerque**	**19.16**	**110**	LR	LR	01 11 24.4	
	comp=E,74nm,21.0s,baz=350,slow=39						
YKA	**Yellowknife Ar**	**20.48**	**19**	P	**P**	**01 03 38.6**	**-0.3**
	comp=E,1.7nm,0.9s,baz=209,slow=10,SNR=4.6						
	comp=E,1.7nm,0.9s						
ULM	**Lac du Bonnet**	**23.08**	**62**	P	**P**	**01 04 06.8**	**-0.1**
	comp=E,3.4nm,1.0s,baz=266,slow=10,SNR=4.3						
	comp=E,3.4nm,1.0s						
ILAR	**Eielson Array**	**23.46**	**340**	P	**P**	**01 04 10.8**	**+0.2**
	comp=E,0.4nm,0.6s,baz=155,slow=9.3,SNR=6.0						
	comp=E,0.4nm,0.6s						
O16K	**Kokwok River B**	**23.95**	**322**	P	**P**	**01 04 16.6**	**+1.2**
O16K				IAmb	IAmb	01 04 18.5	
	comp=Z,4.4nm,0.9s						
L19K	**White Mountain**	**24.05**	**329**	P	**P**	**01 04 17.2**	**+0.9**
L19K				IAmb	IAmb	01 04 23.8	
	comp=Z,3.5nm,0.9s						
BPAW	**Bear Paw Mtn.**	**24.05**	**336**	P	**P**	**01 04 16.5**	**+0.1**
TXAR	**Lajitas Array**	**24.50**	**118**	P	**P**	**01 04 22.6**	**+1.8**
	comp=Z,0.4nm,0.8s,baz=310,slow=9.7,SNR=5.2						
	comp=Z,0.4nm,0.8s						
J19K	**Poorman**	**25.46**	**332**	P	**P**	**01 04 29.9**	**+0.8**
J18K	**Innoko River**	**25.51**	**330**		**P**	**01 04 30.5**	**+1.0**
J18K				IAmb	IAmb	01 04 31.4	
	comp=Z,3.1nm,0.8s						
L16K	**Owhat River**	**25.59**	**325**	P	**P**	**01 04 30.8**	**+0.6**
H19K	**Roundabout Mou**	**26.73**	**334**		**P**	**01 04 41.6**	**+1.1**
H19K				IAmb	IAmb	01 04 48.2	
	comp=Z,4.0nm,1.0s						
H11N3	**WAKE ISLAND Hy**	**58.37**	**268**	T	T	02 12 04.4	
	baz=50,slow=75,SNR=59						
H11N2	**WAKE ISLAND Hy**	**58.37**	**268**	T	T	02 12 06.2	
	baz=50,slow=75,SNR=17						
H11N1	**WAKE ISLAND Hy**	**58.38**	**268**	T	T	02 12 05.2	
	baz=50,slow=75,SNR=26						
H11S1	**WAKE ISLAND Hy**	**59.29**	**267**	T	T	02 13 18.5	
	baz=50,slow=75,SNR=16						
H11S2	**WAKE ISLAND Hy**	**59.30**	**267**	T	T	02 13 18.4	
	baz=50,slow=75,SNR=17						
H11S3	**WAKE ISLAND Hy**	**59.31**	**267**	T	T	02 13 20.7	
	baz=50,slow=75,SNR=7.5						

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*IDC **21** 01:46:30.9±0.8, 56°.86N×34°.03W, h0^{km}, mb3.8/17, mbtmp3.9/21, ML3.3/4, MS3.6/69, Error ellipse: s-maj=23.6km s-min=12.9km az=1.0*

*BGR **21** 01:46:32.9, 58°.12N×35°.69W, h10^{km}, mb4.2*

*NEIC **21** 01:46:32.5±2.6, 56°.95N±0°.08×34°.0W±0°.1, h10^{km}±1^{km}, mb4.4/51, Error ellipse: s-maj=17.6km s-min=5.5km az=225.0*

*GCMT **21** 01:46:35.5±0.3, 56°.93N±0°.03×34°.12W±0°.03, h19^{km}±1^{km}, MW4.7/84, Moment Tensor Solution. s6,c6; s84,c100; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.73±.11; $M_{\theta\theta}$0.62±.09; $M_{\phi\phi}$0.10±.07; $M_{r\theta}$0.27±.15; $M_{\theta\phi}$1.23±.05; $M_{\phi r}$0.16±.14; Best double couple: $M_0$1.28500×10^{16} NP1:ϕ_s6.00000°,δ71.00000°,λ-172.00000°. NP2: ϕ_s274.00000°,δ82.00000°,λ-19.00000°. Principal axes: T 1.6590, Plg7.0000°, Azm321.0000°; N -0.7490, Plg70.0000°, Azm72.0000°; P -0.9110, Plg19.0000°, Azm229.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 01:46:32.5±0.5**,56°.94N**±0°.08×**34°.08W**±0°.05**,h13^{km},n133,**
σ1^{s}.53/67**,mb4.3**/46**,MS3.5**/65**,Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRS	**Narsarsuaq**	**7.22**	**311**	Pn	**Pn**	**01 48 19.2**	**+1.6**
NRS	**Narsarsuaq**	**7.22**	**311**	*i* P	**Pn**	**01 48 20.7**	**+3.2**
NRS				*i* S	Sb	01 49 52.5	-11
IVI	**Ivigtut**	**8.42**	**306**	Pn	**Pn**	**01 48 35.1**	**+1.0**
ANGG	**Ammassalik, Gr**	**8.88**	**350**	Pn	**Pn**	**01 48 39.4**	**-0.9**
ANGG	**Ammassalik, Gr**	**8.88**	**350**	*i* S	**Sn**	**01 50 14.4**	**-5.6**
ISOG	**Isortoq, Green**	**8.96**	**347**	*i* P	**Pn**	**01 48 41.1**	**-0.2**
ISOG				*i* S	Sn	01 50 45.3	+23
BORG	**Borgarnes**	**9.98**	**33**	Pn	**Pn**	**01 48 58.0**	**+2.5**
	2.0nm,0.3s,baz=212,slow=8.5,SNR=12						
BORG				Sn	**Sn**	**01 50 50.4**	**+3.2**
	0.5nm,0.3s,baz=90,slow=20,SNR=6.9						
BORG				LR	LR	01 51 54.9	
	comp=Z,850nm,18.7s,baz=235,slow=32						
	6.6nm,0.4s						
SFJD	**Kangerlussuaq**	**12.69**	**329**	LR	LR	01 53 41.7	
	comp=Z,766nm,18.9s,baz=137,slow=34						
SUMG	**Summit**	**15.81**	**355**		**Pn**	**01 50 14.8**	**-0.1**
EKA	**Eskdalemuir Ar**	**17.24**	**82**	P	**Pn**	**01 50 33.0**	**+0.3**
	baz=291,slow=12						
	2.9nm,1.0s						
FRB	**Frobisher Bay**	**18.18**	**306**	P	**P**	**01 50 44.9**	**+0.4**
	0.1nm,0.3s,baz=104,slow=13,SNR=8.1						
FRB				LR	LR	01 56 38.6	
	comp=Z,148nm,20.6s,baz=80,slow=33						
	7.1nm,0.8s						
SCHQ	**Schefferville**	**18.40**	**277**	P	**Pn**	**01 50 47.0**	**0.0**
	0.2nm,0.3s,baz=71,slow=6.6,SNR=6.7						
SCHQ				LR	LR	01 56 57.4	
	comp=Z,152nm,18.2s,baz=62,slow=34						
	2.4nm,0.6s						
ICQ	**Pointe Anglais**	**21.04**	**264**	P	**P**	**01 51 18.2**	**+2.4**
ICQ				IAmb	IAmb	01 51 27.0	
	comp=Z,13nm,0.9s						
BATG	**Bathurst New B**	**21.70**	**257**	P	**P**	**01 51 22.1**	**-0.8**
LMN	**Caledonia Moun**	**21.95**	**253**		**P**	**01 51 24.6**	**-1.1**
LMN				IAmb	IAmb	01 51 30.6	
	comp=Z,15nm,0.9s						
NB2	**NORSAR Subarra**	**23.32**	**61**	P	**P**	**01 51 40.2**	**+0.2**
	comp=Z,16nm,1.7s,baz=280,slow=10						
NOA	**NORSAR Array B**	**23.32**	**61**	P	**P**	**01 51 40.1**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=280,slow=10.0,SNR=5.0						
NOA				LR	LR	01 59 33.2	
	comp=Z,44nm,21.0s,baz=290,slow=34						
	comp=Z,0.8nm,0.7s						
D62A	**Allapoint, All**	**23.43**	**260**		**P**	**01 51 42.3**	**+1.3**
D62A				IAmb	IAmb	01 51 49.8	
	comp=Z,6.9nm,0.9s						
CLF	**Chambon-Foret**	**23.61**	**97**		**P**	**01 51 41.4**	**-1.4**
F64A	**Sherman**	**23.82**	**257**	P	**P**	**01 51 43.6**	**-1.3**
ILON	**Igloolik, Nuna**	**24.12**	**320**	P	**P**	**01 51 43.8**	**-3.7**
HFS	**Hagfors**	**24.71**	**62**	P	**P**	**01 51 53.3**	**+0.3**
	comp=Z,2.8nm,0.7s,baz=237,slow=8.1,SNR=5.8						
HFS				LR	LR	01 59 51.6	
	comp=Z,57nm,20.6s,baz=248,slow=32						
	comp=Z,2.8nm,0.7s						
PESTR	**Estremoz**	**25.08**	**125**	P	**P**	**01 51 54.1**	**-2.4**
PESTR				IAmb	IAmb	01 52 02.3	
	comp=Z,10nm,1.0s						
G62A	**West of Eustis**	**25.40**	**258**	P	**P**	**01 52 02.0**	**+2.6**
ESDC	**Sonseca Array**	**26.13**	**118**	P	**P**	**01 52 05.4**	**-0.7**
ESDC	**Sonseca Array**	**26.13**	**118**	P	**P**	**01 52 05.7**	**-0.4**
	comp=Z,1.1nm,0.9s,baz=318,slow=7.6,SNR=6.4						
ESDC				LR	LR	02 00 36.9	
	comp=Z,224nm,18.2s,baz=311,slow=32						
	comp=Z,1.1nm,0.9s						
GRF	**Grafenberg Arr**	**27.58**	**86**	*e*P	P	01 52 26.3	+7.3
	comp=Z,5.1nm,1.2s,baz=303,slow=8.7						
CLL	**Collm**	**27.70**	**81**	*e*P	**P**	**01 52 19.0**	**-1.1**
CLL				*i* x	x	01 52 25.0	
CLL				*i* x	x	01 52 27.5	
CLL				*e*S	**S**	**01 57 03.0**	**+1.3**
CLL				*e*x	x	01 57 33.0	
ARCES	**ARCESS Array B**	**28.29**	**40**	P	**P**	**01 52 24.0**	**-1.2**
ARCES				IAmb	IAmb	01 53 05.1	
	comp=Z,13nm,1.4s						
ARCES	**ARCESS Array B**	**28.29**	**40**	P	**P**	**01 52 24.8**	**-0.4**
	comp=Z,2.6nm,0.8s,baz=264,slow=8.1,SNR=10						
ARCES				LR	LR	02 01 39.6	
	comp=Z,112nm,18.1s,baz=258,slow=32						
	comp=Z,2.6nm,0.8s						
DAVOX	**Davos/Dischmat**	**28.51**	**92**	LR	LR	02 03 07.3	
	comp=Z,184nm,18.3s,baz=294,slow=35						
RES	**Resolute Bay**	**28.68**	**331**	LR	LR	02 03 33.2	
	comp=Z,111nm,19.6s,baz=274,slow=36						
GERES	**GERESS Array B**	**29.40**	**85**	P	**P**	**01 52 35.2**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=321,slow=7.6,SNR=1.6						
GERES				LR	LR	02 05 03.3	
	comp=Z,39nm,19.0s,baz=292,slow=38						
	comp=Z,0.1nm,0.3s						
BLKN	**Baker Lake**	**30.09**	**310**		**P**	**01 52 41.1**	**0.0**
FINES	**FINESS Array B**	**30.17**	**56**	P	**P**	**01 52 42.4**	**+0.5**
FINES	**FINESS Array B**	**30.17**	**56**	P	**P**	**01 52 41.8**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=271,slow=8.8,SNR=5.6						
FINES				LR	LR	02 04 36.4	
	comp=Z,77nm,18.0s,baz=273,slow=36						
	comp=Z,1.6nm,0.7s						
SADO	**Sadowa**	**30.37**	**266**	LR	LR	02 03 40.8	
	comp=Z,99nm,20.6s,baz=54,slow=34						
MDT	**Midelt**	**31.47**	**127**	LR	LR	02 03 53.6	
	comp=Z,55nm,19.2s,baz=328,slow=33						
FDMO	**Fiordimonte**	**32.65**	**95**	P	**P**	**01 53 04.6**	**+0.7**
FDMO				IAmb	IAmb	01 53 05.3	
	comp=Z,4.2nm,0.9s						
EYMN	**Ely**	**35.15**	**280**	P	**P**	**01 53 26.5**	**+0.9**
EYMN				IAmb	IAmb	01 53 26.7	
	comp=Z,3.6nm,0.8s						
EPLO	**Experimental L**	**35.34**	**284**	P	**P**	**01 53 26.9**	**-0.2**
EPLO				IAmb	IAmb	01 53 33.6	
	comp=Z,4.9nm,0.8s						
KEST	**Kesra**	**35.89**	**107**	P	**P**	**01 53 32.0**	**-0.1**
	comp=Z,3.3nm,1.1s,baz=323,slow=10,SNR=6.3						
KEST				LR	LR	02 07 21.7	
	comp=Z,62nm,18.9s,baz=307,slow=35						
	comp=Z,3.3nm,1.1s						
ULM	**Lac du Bonnet**	**36.14**	**286**	P	**P**	**01 53 35.6**	**+1.6**
	comp=Z,0.9nm,0.5s,baz=54,slow=8.7,SNR=3.1						
ULM				LR	LR	02 07 03.0	
	comp=Z,181nm,18.7s,baz=48,slow=34						
	comp=Z,0.9nm,0.5s						
BURAR	**Bucovina Array**	**36.37**	**79**		**P**	**01 53 37.7**	**+1.6**
KIEV	**Kiev**	**36.67**	**72**		**P**	**01 53 36.4**	**-2.1**
KIEV				IAmb	IAmb	01 53 45.3	
	comp=Z,5.2nm,0.9s						
AKASG	**Malin Array Be**	**36.67**	**72**	P	**P**	**01 53 38.4**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=305,slow=8.5,SNR=11						
AKASG				LR	LR	02 08 50.9	
	comp=Z,36nm,19.0s,baz=308,slow=36						
	comp=Z,1.4nm,0.6s						
AKBB	**Malin Array Si**	**36.67**	**72**		**P**	**01 53 36.4**	**-2.1**
AKBB				IAmb	IAmb	01 53 45.2	
	comp=Z,5.8nm,0.9s						
VAE	**Valguarnera**	**37.27**	**100**	LR	LR	02 07 10.5	
	comp=Z,157nm,19.0s,baz=320,slow=33						
MLR	**Muntele Rosu**	**38.08**	**81**	LR	LR	02 08 38.4	
	comp=Z,49nm,21.5s,baz=280,slow=35						
YKA	**Yellowknife Ar**	**38.50**	**313**	LR	LR	02 09 08.7	
	comp=Z,215nm,19.3s,baz=98,slow=35						
TKL	**Tuckaleechee C**	**39.27**	**259**	LR	LR	02 09 15.7	
	comp=Z,88nm,18.4s,baz=49,slow=35						
KIRV	**Kirov**	**41.84**	**51**	LR	LR	02 10 34.3	
	comp=Z,46nm,19.8s,baz=303,slow=34						
INK	**Inuvik**	**42.01**	**327**	LR	LR	02 11 38.1	
	comp=Z,163nm,18.2s,baz=42,slow=36						
F31M	**Tsiigehtchic**	**42.60**	**326**	IAmb	IAmb	01 54 29.5	
	comp=Z,7.8nm,0.9s						
BBTS	**Babate**	**44.26**	**155**	LR	LR	02 09 57.7	
	comp=Z,72nm,21.5s,baz=220,slow=32						
F28M	**Old Crow**	**44.32**	**328**	IAmb	IAmb	01 54 45.7	
	comp=Z,4.5nm,1.1s						
BELG	**Belogornoye**	**44.81**	**59**	LR	LR	02 12 08.9	
	comp=Z,49nm,19.0s,baz=286,slow=34						
SJG	**San Juan**	**45.56**	**225**	LR	LR	02 14 45.2	
	comp=Z,25nm,18.0s,baz=110,slow=37						
G26K	**Porcupine Rive**	**45.89**	**329**	IAmb	IAmb	01 54 56.6	
	comp=Z,3.0nm,0.9s						
BRTR	**Keskin Array B**	**46.16**	**82**	P	**P**	**01 54 57.8**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=313,slow=4.3,SNR=3.9						
	comp=Z,0.6nm,0.7s						
ARTI	**Arti**	**47.00**	**49**	LR	LR	02 13 30.0	
	comp=Z,71nm,19.3s,baz=346,slow=34						
DLBC	**Dease Lake**	**47.04**	**314**	LR	LR	02 14 27.1	
	comp=Z,35nm,18.7s,baz=29,slow=36						
G23K	**Bananza Creek**	**47.77**	**331**		**P**	**01 55 09.2**	**+0.4**
G23K				IAmb	IAmb	01 55 11.7	
	comp=Z,3.5nm,1.1s						
PDAR	**Pinedale Array**	**48.16**	**287**	P	**P**	**01 55 12.4**	**0.0**
	comp=Z,0.3nm,0.6s,baz=53,slow=8.6,SNR=4.2						
PDAR				LR	LR	02 14 21.2	
	comp=Z,111nm,19.1s,baz=32,slow=35						
	comp=Z,0.3nm,0.6s						
HYT	**Haines Junctio**	**48.18**	**320**	IAmb	IAmb	01 55 15.4	
	comp=Z,4.1nm,0.9s						
NEW	**Newport**	**48.19**	**297**	LR	LR	02 14 32.1	
	comp=Z,205nm,18.1s,baz=33,slow=35						
KBZ	**Khabaz**	**48.27**	**71**	P	**P**	**01 55 15.1**	**+2.3**
	comp=Z,1.0nm,0.7s,baz=302,slow=4.3,SNR=3.8						
KBZ				LR	LR	02 16 27.9	
	comp=Z,52nm,18.1s,baz=315,slow=37						
	comp=Z,1.0nm,0.7s						
ILAR	**Eielson Array**	**48.35**	**328**	P	**P**	**01 55 14.9**	**+1.7**
ILAR	**Eielson Array**	**48.35**	**328**	P	**P**	**01 55 14.7**	**+1.5**
	comp=Z,2.2nm,0.9s,baz=40,slow=6.0,SNR=22						
ILAR				LR	LR	02 15 38.6	
	comp=Z,101nm,19.1s,baz=42,slow=36						
	comp=Z,2.2nm,0.9s						
HDA	**Harding Lake**	**48.63**	**328**	IAmb	IAmb	01 55 18.9	
	comp=Z,3.6nm,0.9s						
I23K	**Minto, Yukon-K**	**48.77**	**329**	IAmb	IAmb	01 55 20.2	
	comp=Z,5.6nm,1.3s						
WRH	**Wood River Hil**	**48.92**	**328**	IAmb	IAmb	01 55 19.4	
	comp=Z,3.4nm,1.0s						
E19K	**Redstone River**	**48.99**	**335**	IAmb	IAmb	01 55 32.2	
	comp=Z,3.4nm,0.8s						
NEA2	**Nenana**	**49.11**	**329**	IAmb	IAmb	01 55 21.6	
	comp=Z,3.3nm,1.1s						
MLY	**Manley**	**49.24**	**330**	IAmb	IAmb	01 55 22.5	
	comp=Z,2.3nm,0.8s						
IMAR	**Indian Mountai**	**49.30**	**332**	P	**P**	**01 55 21.8**	**+1.3**
BBB	**Bella Bella**	**50.56**	**307**	LR	LR	02 14 59.1	
	comp=Z,74nm,18.6s,baz=352,slow=34						
CAST	**Castle Rocks**	**50.86**	**329**	IAmb	IAmb	01 55 34.4	
	comp=Z,3.2nm,1.0s						
AKTO	**Aktyubinsk**	**50.94**	**55**	LR	LR	02 16 49.9	
	comp=Z,75nm,18.4s,baz=278,slow=36						
PV03	**Paradox Valley**	**51.02**	**282**	P	**P**	**01 55 33.8**	**-0.4**
H18K	**Honhosa River**	**51.13**	**333**	IAmb	IAmb	01 55 37.0	
	comp=Z,3.4nm,0.9s						
J19K	**Poorman**	**51.37**	**331**	IAmb	IAmb	01 55 40.5	
	comp=Z,8.5nm,1.4s						
K20K	**Telida**	**51.46**	**330**	IAmb	IAmb	01 55 39.2	
	comp=Z,3.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**51.52**	**133**	P	**P**	**01 55 36.4**	**-1.4**
TORD	**Torodi Ar. Bea**	**51.52**	**133**	LR	LR	02 15 36.5	
	comp=Z,100nm,21.7s,baz=348,slow=34						
GNI	**Garni**	**51.78**	**73**	LR	LR	02 18 10.5	
	comp=Z,22nm,18.6s,baz=334,slow=37						
ANMO	**Albuquerque**	**52.18**	**278**	LR	LR	02 16 34.3	
	comp=Z,110nm,19.5s,baz=134,slow=34						
PCRV	**Puerto La Cruz**	**52.30**	**219**	LR	LR	02 16 20.5	
	comp=Z,29nm,18.7s,slow=34						
ELK	**Elko**	**52.57**	**289**	LR	LR	02 17 13.8	
	comp=Z,140nm,18.1s,baz=46,slow=35						
AB31	**Akbulak array**	**52.65**	**55**	P	**P**	**01 55 45.9**	**0.0**
ABKAR	**Akbulak array**	**52.65**	**55**	P	**P**	**01 55 46.0**	**0.0**
L18K	**Granite Mounta**	**53.10**	**330**	IAmb	IAmb	01 55 51.4	
	comp=Z,3.0nm,0.9s						
ASF	**Jabal al Asfar**	**53.51**	**86**	LR	LR	02 19 30.8	
	comp=Z,39nm,21.2s,baz=331,slow=37						
CNPM	**China Poot**	**53.70**	**326**	P	**P**	**01 55 54.8**	**+1.3**
MDP	**Montagnes des**	**53.74**	**203**	LR	LR	02 13 31.6	
	comp=Z,25nm,19.8s,baz=89,slow=30						
BVAR	**Borovoye Array**	**54.28**	**46**	P	**P**	**01 55 58.8**	**+0.9**
	comp=Z,2.0nm,0.6s,baz=310,slow=6.9,SNR=15						

BVAR				LR	LR	02 20 08.3	
	comp=Z,24nm,19.6s,baz=328,slow=37						
	comp=Z,2.0nm,0.6s						
EIL	Elat	54.36	89	LR	LR	02 20 35.0	
	comp=Z,12nm,20.4s,baz=248,slow=38						
O18K	Koktuh Hills	54.62	328	P	P	01 56 00.0	-0.2
TXAR	Lajitas Array	54.93	271	P	P	01 56 03.7	+0.7
	comp=Z,0.2nm,0.7s,baz=63,slow=5.8,SNR=3.5						
	comp=Z,0.2nm,0.7s						
DBIC	Dimbokro	55.13	144	LR	LR	02 17 02.8	
	comp=Z,138nm,18.5s,baz=340,slow=33						
KDAK	Kodiak Island	55.52	325	LR	LR	02 20 14.2	
	comp=Z,96nm,18.2s,baz=49,slow=36						
YBH	Yreka Blue Hor	55.64	295	LR	LR	02 18 51.8	
	comp=Z,7.6nm,20.8s,baz=36,slow=35						
O16K	Kokwok River B	55.66	329	P	P	01 56 09.1	+1.4
O16K				IAmb	IAmb	01 56 10.2	
	comp=Z,5.0nm,1.1s						
NVAR	Mina Array Bea	55.87	289	LR	LR	02 18 48.1	
	comp=Z,131nm,21.3s,baz=53,slow=35						
PFO	Pinyon Flats O	58.57	284	LR	LR	02 20 41.0	
	comp=Z,113nm,19.5s,baz=71,slow=35						
ZALV	Zalesovo Beam	58.80	37	LR	LR	02 21 04.0	
	comp=Z,16nm,18.7s,baz=336,slow=35						
KURBB	Kurchatov Arra	59.30	43	P	P	01 56 34.2	+0.7
	comp=Z,1.9nm,0.7s,baz=324,slow=7.1,SNR=14						
	comp=Z,1.9nm,0.7s						
CMIG	Matias Romero	60.00	255	LR	LR	02 21 44.4	
	comp=Z,76nm,20.1s,baz=32,slow=35						
SEY	Seymchan	60.36	357	LR	LR	02 23 29.3	
	comp=Z,31nm,18.0s,baz=11,slow=37						
YAK	Yakutsk	60.69	9	LR	LR	02 21 58.5	
	comp=Z,20nm,18.9s,baz=328,slow=35						
JTS	Las Juntas de	60.73	241	LR	LR	02 23 14.3	
	comp=Z,50nm,18.7s,baz=328,slow=36						
RCBR	Riachuelo	62.57	182	LR	LR	02 19 13.9	
	comp=Z,14nm,19.3s,baz=286,slow=31						
MA2	Magadan	63.77	357	LR	LR	02 24 11.9	
	comp=Z,30nm,19.6s,baz=358,slow=35						
MKAR	Makanchi Array	63.87	43	P	P	01 57 04.9	+0.5
MKAR	Makanchi Array	63.87	43	P	P	01 57 05.3	+0.9
	comp=Z,1.2nm,0.7s,baz=330,slow=6.1,SNR=12						
MKAR				LR	LR	02 24 00.5	
	comp=Z,31nm,19.0s,baz=235,slow=35						
	comp=Z,1.2nm,0.7s						
AAK	Ala-Archa	64.17	51	LR	LR	02 24 06.7	
	comp=Z,44nm,18.9s,baz=342,slow=35						
PETK	Petropavlovsk-	69.89	352	LR	LR	02 29 12.9	
	comp=Z,54nm,18.7s,baz=15,slow=37						
SONM	Songino Array	70.54	27	LR	LR	02 30 34.8	
	comp=Z,37nm,18.4s,baz=264,slow=38						
BDFB	Brasilia	73.23	194	LR	LR	02 26 37.5	
	comp=Z,19nm,19.8s,baz=139,slow=33						
ATAH	Atahualpa	73.38	226	LR	LR	02 28 46.5	
	comp=Z,24nm,22.0s,baz=6.1,slow=35						
KLR	Kul'dur	73.55	10	LR	LR	02 31 04.0	
	comp=Z,23nm,18.6s,baz=340,slow=36						
SIV	San Ignacio	76.07	207	LR	LR	02 28 06.2	
	comp=Z,26nm,18.5s,baz=295,slow=33						
XLT	XiLinHaoTe	76.45	22	eP	P	01 58 20.6	-1.1
XLT				pP	pP	01 58 25.3	0.0
XLT				pmax	pmax		
	comp=Z,6.0nm,0.6s						
NNA	Nana	77.22	223	LR	LR	02 32 05.0	
	comp=Z,20nm,19.9s,baz=342,slow=35						
HHC	Hu-ho-hao-te	78.37	26	eP	P	01 58 31.0	-1.4
HHC				pmax	pmax		
	comp=Z,18nm,0.6s						
HHC				pmax	pmax		
	comp=Z,38nm,3.5s						
ASAJ	Asahikawa	79.28	2	LR	LR	02 33 51.8	
	comp=Z,28nm,19.3s,baz=26,slow=36						
TSUM	Tsumeb	87.25	132	LR	LR	02 34 09.2	
	comp=Z,42nm,21.8s,baz=338,slow=33						
LSZ	Lusaka	88.44	121	LR	LR	02 39 47.2	
	comp=Z,55nm,18.1s,baz=336,slow=36						
PZH	PanZhiHua	88.91	39	P	P	01 59 26.3	-0.4
LBTB	Lobatse	95.78	128	LR	LR	02 42 37.6	
	comp=Z,73nm,18.9s,baz=358,slow=35						
BOSA	Boshof	98.78	130	LR	LR	02 41 43.9	
	comp=Z,41nm,21.3s,baz=22,slow=34						
ASAR	Alice Springs	145.63	20	PKPbc	PKPdf	02 06 08.9	-1.4
	comp=Z,1.4nm,0.6s,baz=346,slow=2.2,SNR=7.3						
QSPA	South Pole Qui	146.83	180	PKPbc	PKPbc	02 06 12.8	-0.1
	comp=Z,0.4nm,0.8s,baz=315,slow=2.9,SNR=0.9						

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*IDC **21** 02:01:37.3±1.2, 28°.46N×105°.12E, h0^{km}, mb3.7/5, mbtmp3.6/7, ML4.0/2, MS2.8/2, Error ellipse: s-maj=31.3km s-min=22.7km az=88.0*

ISC 21 02:01:40.2±1.0**, 28°.5N**±0°.1×**105°.1E**±0°.2**, h19^{km}, n8,** σ**0^{s}.51**/7**, mb3.7**/5**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.47	211	Pn	Pn	02 04 23.2	+0.2
	0.4nm,0.3s,baz=29,slow=14,SNR=4.2						
CMAR				LR	LR	02 09 02.4	
	comp=Z,16nm,19.9s,baz=215,slow=39						
	0.8nm,0.3s						
SONM	Songino Array	19.36	3	P	Pn	02 06 06.4	+0.6
	0.4nm,0.3s,baz=188,slow=8.7,SNR=2.3						
	0.5nm,0.5s						
KSRS	Korea Array	21.08	59	P	P	02 06 23.6	+0.3
	1.5nm,0.6s,baz=247,slow=11,SNR=7.9						
	1.5nm,0.6s						
MKAR	Makanchi Array	25.56	322	P	P	02 07 07.5	-0.4
	0.5nm,0.7s,baz=129,slow=12,SNR=6.3						
	0.5nm,0.7s						
USRK	Ussuriysk Ar.	26.57	47	P	P	02 07 16.3	-0.6
	1.8nm,0.6s,baz=251,slow=10,SNR=5.6						
	1.8nm,0.6s						
KVAR	Kislovodsk Arr	51.51	305	LR	LR	02 37 57.3	
	comp=Z,35nm,21.9s,baz=93,slow=42						
WRA	Warramunga Arr	55.80	146	P	P	02 11 16.2	-0.1
	0.6nm,0.8s,baz=335,slow=8.4,SNR=4.9						
	0.6nm,0.8s						
ASAR	Alice Springs	58.79	149	P	P	02 11 37.3	-0.1
	0.3nm,0.4s,baz=323,slow=7.9,SNR=2.2						
	0.3nm,0.4s						

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*IDC **21** 02:02:32.3±1.4, 33°.95S×178°.86W, h0^{km}, mb4.3/2, mbtmp4.3/3, ML4.3/1, Error ellipse: s-maj=54.4km s-min=28.4km az=140.0*

*WEL **21** 02:02:33.8±0.9, 34°S±7°×17°9W±1°6, h33^{km}, mB5.0/4, ML4.7/10, MLv4.5/6, Mw(mB)4.3/4, Error ellipse: s-maj=23.0km s-min=3.9km az=111.8, confirmed*

*NOU **21** 02:02:36.1, 34°.31S×178°.25W, h114^{km}, MLv4.9/7, South of Kermadec Islands*

ISC 21 02:02:34.7±0.9**, 34°.03S**±0°.07×**178°.3W**±0°.1**, h37^{km}, n53,** σ**1^{s}.62**/71**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.47	217	S	Sn	02 04 29.5	-1.2
WMGZ	Waiomatatini S	4.63	214	P	Pn	02 03 43.2	+1.3
WMGZ				S	Sn	02 04 35.1	+0.8
GLKZ	Green Lake	4.76	4	P	Pn	02 03 41.3	-2.5
GLKZ				S	Sn	02 04 33.8	-3.9
PKGZ	Pakihiroa	4.82	216	P	Pn	02 03 43.5	-1.2
PKGZ				S	Sn	02 04 39.5	+0.2
HAZ	Te Kaha	4.89	219	P	Pn	02 03 45.8	+0.2
HAZ				S	Sn	02 04 42.5	+1.6
PUZ	Puketiti	4.90	214	P	Pn	02 03 43.1	-2.7
PUZ				S	Sn	02 04 41.3	0.0
RUGZ	Raukumara Rang	5.10	218	P	Pn	02 03 48.7	0.0
RUGZ				S	Sn	02 04 45.1	-1.3
TWGZ	Tauwhareparae	5.12	215	P	Pn	02 03 48.9	+0.2
TWGZ				S	Sn	02 04 48.0	+1.5
CNGZ	Carnagh Statio	5.26	211	P	Pn	02 03 51.8	+1.0
CNGZ				S	Sn	02 04 52.2	+2.1
TKGZ	Te Karaka	5.39	214	P	Pn	02 03 52.5	+0.1
TKGZ				S	Sn	02 04 53.1	-0.1
MWZ	Matawai	5.46	217	P	Pn	02 03 52.6	-0.9
MWZ				S	Sn	02 04 54.5	-0.5
URZ	Urewera	5.62	220	Pn	Pn	02 03 54.5	-1.1
	10nm,0.3s,baz=336,slow=1.6,SNR=28						
URZ				Sn	Sn	02 04 56.7	-2.1
	8.3nm,0.3s,baz=149,slow=22,SNR=9.6						
	36nm,0.4s						
URZ	Urewera	5.62	220	P	Pn	02 03 54.8	-0.8
URZ	Urewera	5.62	220	P	Pn	02 03 54.6	-0.9
URZ				S	Sn	02 04 56.1	-2.7
RAGZ	Rawiri	5.64	217	P	Pn	02 03 56.4	+0.4
RIGZ	Rimuhau	5.64	213	P	Pn	02 03 55.9	-0.1
RIGZ				S	Sn	02 04 58.9	-0.7
SNGZ	Shannon Statio	5.90	215	P	Pn	02 03 59.0	-0.6
SNGZ				S	Sn	02 05 04.6	-1.3
KNZ	Kokohu	5.94	212	P	Pn	02 03 58.7	-1.3
KNZ				S	Sn	02 05 04.7	-2.1
RTZ	Ruatahuna	5.95	218	P	Pn	02 03 57.5	-2.8
MUGZ	Murupara	5.96	220	P	Pn	02 04 00.3	0.0
MUGZ				S	Sn	02 05 04.2	-3.1
RAHZ	Arahi	6.13	216	P	Pn	02 04 02.5	-0.1
RAHZ				S	Sn	02 05 09.7	-1.8
MKAZ	Moumakai	6.14	238	P	Pn	02 04 03.3	+0.5
BKZ	Black Stump Fm	6.62	218	P	Pn	02 04 08.3	-1.1
BKZ	Black Stump Fm	6.62	218	S	Sn	02 05 20.8	-2.7
CKHZ	Cape Kidnapper	6.73	212	P	Pn	02 04 10.4	-0.4
OUZ	Omahuta	6.78	258	P	Pn	02 04 12.7	+1.2
OUZ	Omahuta	6.78	258	P	Pn	02 04 11.8	+0.2
TMVZ	Te Maari	7.00	222	P	Pn	02 04 14.0	-0.7
NTVZ	North Tongarir	7.00	222	P	Pn	02 04 13.4	-1.4
ETVZ	East Tongariro	7.01	222	P	Pn	02 04 14.2	-0.6
KRHZ	Kereru	7.04	216	P	Pn	02 04 14.1	-1.1
NNVZ	North Ngauruho	7.06	222	P	Pn	02 04 15.4	-0.1
SNVZ	South Ngauruho	7.08	222	P	Pn	02 04 15.4	-0.5
HIZ	Hauiti	7.11	229	P	Pn	02 04 16.1	+0.1
PXZ	Pawanui	7.13	211	P	Pn	02 04 15.4	-0.9
MOVZ	Moawhango	7.18	220	P	Pn	02 04 16.0	-1.2
WNVZ	Wahianoa	7.21	221	P	Pn	02 04 16.9	-0.7
PNHZ	Pukenui	7.34	215	P	Pn	02 04 16.4	-2.9
BFZ	Birch Farm	7.93	212	P	Pn	02 04 25.1	-2.2
	76nm,1.9s						
BFZ	Birch Farm	7.93	212	P	Pn	02 04 24.8	-2.5
TMWZ	Te Maipa	8.43	211	P	Pn	02 04 32.1	-2.1
QRZ	Quartz Range	9.95	224	P	Pn	02 04 54.3	-0.7
THZ	Tophouse	10.38	219	P	Pn	02 04 59.3	-1.6
ASAR	Alice Springs	42.78	271	P	P	02 10 28.4	-0.4
	3.2nm,0.8s,baz=110,slow=7.4,SNR=29						
	3.2nm,0.8s						
WRA	Warramunga Arr	44.10	276	P	P	02 10 38.7	-0.7
	1.7nm,0.4s,baz=118,slow=7.6,SNR=24						
	1.7nm,0.4s						
KURBB	Kurchatov Arra	123.36	312	PKP	PKiKP	02 21 29.5	+2.1
	0.4nm,0.5s,baz=117,slow=1.9,SNR=6.1						
BVAR	Borovoye Array	128.77	314	PKP	PKiKP	02 21 40.4	+2.3
	0.5nm,0.4s,baz=88,slow=2.4,SNR=3.2						
ARCES	ARCESS Array B	142.06	347	PKP	PKiKP	02 22 05.6	+0.9
	0.9nm,0.8s,baz=96,slow=2.4,SNR=3.7						
FINES	FINESS Array B	148.42	338	PKPbc	PKiKP	02 22 18.9	+1.0
	2.0nm,0.5s,baz=39,slow=6.1,SNR=24						
NB2	NORSAR Subarra	152.28	350	PKP	PKiKP	02 22 28.6	+2.6
	comp=Z,0.4nm,0.5s,baz=17,slow=2.6						
NOA	NORSAR Array B	152.28	350	PKPbc	PKiKP	02 22 28.6	+2.6
	comp=Z,0.3nm,0.6s,baz=21,slow=4.6,SNR=5.2						
HFS	Hagfors	152.72	347	PKPbc	PKiKP	02 22 29.9	+3.0
	comp=Z,1.4nm,0.7s,baz=123,slow=5.5,SNR=5.8						
BRTR	Keskin Array B	153.91	292	PKPbc	PKiKP	02 22 33.0	+2.8
	comp=Z,0.3nm,0.5s,baz=123,slow=5.3,SNR=2.4						
BRTR				PKPab	PKPab	02 22 43.2	-0.3
	comp=Z,0.7nm,0.7s,baz=50,slow=1.9,SNR=4.8						

CATAC 21 02:22:50.7±0.5**, 11°N**±5°×**8°6W**±°**, h145^{km}**±3^{km}**, M2.7**/18**, MLv2.7**/18**, Error ellipse: s-maj=12.8km s-min=5.0km az=38.7, confirmed, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORN	Al O del Volca	0.19	72	P	Pn	02 23 11.3	+0.9
MORN				S	Sn	02 23 26.9	+1.6
NADN	Granada	0.33	323	P	Pn	02 23 11.2	+0.5
NADN				S	Sn	02 23 27.6	+1.6
CARN	Rivas	0.43	134	P	Pn	02 23 11.9	+0.8
CARN				S	Sn	02 23 28.8	+2.2
NANN	Nandasmo	0.53	328	P	Pn	02 23 13.3	+1.6
NANN	Nandasmo	0.53	328	S	Sn	02 23 29.4	+1.7
SABN	Sabanita	0.57	326	P	Pn	02 23 12.8	+0.9
UNAN	Cigeo UNAN	0.75	326	P	Pn	02 23 13.6	+0.5
UNAN				S	Sn	02 23 31.8	+1.7
WILN	Americas 2	0.75	333	P	Pn	02 23 14.1	+1.1
WILN				S	Sn	02 23 32.4	+2.3
TISN	Laguna Tiscapa	0.78	327	P	Pn	02 23 14.0	+0.8
ACON	Acoyapa	0.81	53	P	Pn	02 23 13.9	+0.5
ACON	Acoyapa	0.81	53	S	Sn	02 23 31.8	+1.1
SAPS	Ciudad Sandino	0.88	321	S	Sn	02 23 33.7	+1.9
SAPS	Ciudad Sandino	0.88	321	P	Pn	02 23 14.4	+0.4
APQ3	Volcan Apoyequ	0.94	326	P	Pn	02 23 14.8	+0.3
APQ3				S	Sn	02 23 33.2	+0.6
BOAB	BOACO BROADBAN	0.97	10	P	Pn	02 23 15.1	+0.3
BOAB	BOACO BROADBAN	0.97	10	S	Sn	02 23 34.0	+0.9
COPN	Copaltepe	1.01	313	P	Pn	02 23 14.7	-0.5
MOM2	El Cardon	1.14	326	P	Pn	02 23 16.1	-0.1
MOM2				S	Sn	02 23 36.4	+0.6
MOMN	Momotombo	1.15	323	P	Pn	02 23 16.4	0.0
MOMN				S	Sn	02 23 36.7	+0.7
CNGN	Cerro Negro	1.31	320	P	Pn	02 23 18.2	+0.2
CNGN	Cerro Negro	1.31	320	S	Sn	02 23 39.3	+0.3
PLRN	Geotermica Pol	1.42	320	P	Pn	02 23 19.0	-0.1
PLRN				S	Sn	02 23 41.6	+0.8
MATN	Matagalpa	1.44	356	P	Pn	02 23 19.7	+0.3
MATN	Matagalpa	1.44	356	S	Sn	02 23 41.3	0.0
PKGN	Cerro Pekin	1.62	317	P	Pn	02 23 21.0	-0.2
PKGN				S	Sn	02 23 45.3	+0.7
CRIN	San Cristobal	1.69	316	S	Sn	02 23 45.8	-0.3
CRIN	San Cristobal	1.69	316	P	Pn	02 23 22.1	0.0

IDC 21 02:26:33.6±2.2**, 31°.58S**×**179°.61W, h0^{km}, mb3.5**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=63.8km s-min=41.7km az=43.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	41.69	269	P	P	02 34 24.4	+0.1
	0.3nm,0.5s,baz=106,slow=7.6,SNR=4.2						
	0.3nm,0.5s						
WRA	Warramunga Arr	42.78	274	P	P	02 34 32.9	-0.3
	0.3nm,0.3s,baz=114,slow=8.3,SNR=6.7						
	0.3nm,0.3s						
QSPA	South Pole Qui	58.53	180	P	P	02 36 31.4	-0.3
	0.4nm,0.6s,baz=193,slow=7.3,SNR=1.4						
	0.4nm,0.6s						
FINES	FINESS Array B	145.75	338	PKPbc	PKPdf	02 46 13.2	-0.2
	1.0nm,0.8s,baz=27,slow=3.4,SNR=5.0						

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*IDC **21** 02:36:01.1±1.5, 19°.36N×66°.67W, h0^{km}, mb3.6/4, mbtmp3.6/4, MS3.0/4, Error ellipse: s-maj=47.9km s-min=31.2km az=80.0*

*OSPL **21** 02:36:04.9±2.3, 19°.24N×66°.36W, h31^{km}±32^{km}, ML3.9*

*NEIC **21** 02:36:04.0±1.4, 19°.14N±0°.05×66°.51W±0°.04, h35^{km}±2^{km}, mb4.1/5, ML3.9/30, Md3.6/19(RSPR), Error ellipse: s-maj=8.8km s-min=6.8km az=24.0*

*RSPR **21** 02:36:04.8, 19°.19N×66°.50W, h30^{km}±13^{km}, MD3.5/19*

ISC 21 02:36:00.8±1.4**, 19°.24N**±0°.04×**66°.59W**±0°.04**, h13^{km}**±9^{km}**, n99,** σ**2^{s}.21**/110**, mb4.0**/7**, MS3.1**/4**, 14C-5D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMPR	Esperanza - Ma	0.76	176		Pn	02 36 16.8	-0.3
EMPR				Sn	Sb	02 36 25.3	-0.7
EMPR				IAML		02 36 27.1	
	comp=E,9µm,0.5s						
EMPR				IAML		02 36 28.6	
	comp=N,6µm,0.4s						
EMPR	Esperanza - Ma	0.76	176	⇑eP	Pn	02 36 16.9	-0.3
EMPR	Esperanza - Ma	0.76	176	eS	Sn	02 36 26.6	-1.9
AOPR	Arecibo Observ	0.90	190		Pn	02 36 18.7	-0.4
AOPR				Sn	Sg	02 36 29.2	-0.8
AOPR				IAML		02 36 36.8	
	comp=N,7µm,0.4s						
AOPR	Arecibo Observ	0.90	190	⇑eP	Pn	02 36 18.9	-0.2
AOPR	Arecibo Observ	0.90	190	eS	Sn	02 36 31.2	-0.8
ECPR	Experimental S	0.94	167	⇑eP	Pg	02 36 19.0	+0.1
ECPR	Experimental S	0.94	167	eS	Sb	02 36 30.0	-1.3
UUPR	Utuado, UPR, P	0.99	187		Pg	02 36 19.8	0.0
UUPR	Utuado, UPR, P	0.99	187	⇑eP	Pg	02 36 19.9	+0.1
GCPR	Guaynabo City	1.04	152		Pb	02 36 20.3	-0.3
GCPR				Sn	Sb	02 36 32.2	-2.1
GCPR	Guaynabo City	1.04	152	⇑eP	Pb	02 36 20.5	-0.1
GCPR	Guaynabo City	1.04	152	eS	Sb	02 36 33.1	-1.1
PRSN	Puerto Rico Se	1.14	207		Pn	02 36 22.5	0.0
PRSN	Puerto Rico Se	1.14	207	⇑eP	Pg	02 36 22.7	-0.1
LSP	Las Mesas	1.16	204		Pg	02 36 23.0	0.0
LSP					Sn	02 36 37.3	-1.0
LSP	Las Mesas	1.16	204	⇑eP	Pg	02 36 23.0	0.0
LSP	Las Mesas	1.16	204	eS	Sn	02 36 37.3	-1.0
CELP	Cerrillos	1.16	179		Pb	02 36 22.2	-0.4
CELP	Cerrillos	1.16	179		Sn	02 36 37.0	-1.3
CELP	Cerrillos	1.16	179	⇑eP	Pn	02 36 22.5	-0.1
CELP	Cerrillos	1.16	179	eS	Sn	02 36 37.0	-1.3
OBIP	Obispado Ponce	1.19	181		Pn	02 36 22.7	-0.4
OBIP				IAML		02 36 42.5	
	comp=E,2µm,0.5s						
OBIP				IAML		02 36 45.7	
	comp=N,1µm,0.4s						
OBIP	Obispado Ponce	1.19	181		Sb	02 36 37.1	-1.4
OBIP	Obispado Ponce	1.19	181	⇓eP	Pb	02 36 23.1	-0.1
OBIP	Obispado Ponce	1.19	181	eS	Sb	02 36 37.1	-1.4
IDE	Isla Desecheo	1.19	225		Pg	02 36 23.7	0.0
IDE	Isla Desecheo	1.19	225	⇑eP	Pg	02 36 23.7	0.0
SJG	San Juan	1.20	159		Pn	02 36 22.5	-0.6
SJG				IAML		02 36 42.0	
	comp=N,1µm,0.6s						
SJG	San Juan	1.20	159	LR	LR	02 37 07.7	
	comp=N,162nm,20.9s,baz=300,slow=50						
SJG	San Juan	1.20	159	⇓eP	Pn	02 36 22.9	-0.3
SJG	San Juan	1.20	159	i P	Pn	02 36 22.6	-0.6
SJG				eS	Sb	02 36 36.3	-2.4
SJG				IAML		02 36 49.9	
	comp=Z,798nm,0.3s						
GBPR	Guanica, Bosqu	1.29	192		Pg	02 36 25.2	-0.3
GBPR	Guanica, Bosqu	1.29	192	⇓eP	Pg	02 36 25.2	-0.3
HUMP	Col San Antoni	1.30	147		Pn	02 36 23.8	-0.7
HUMP				IAML		02 36 43.7	
	comp=N,1µm,0.2s						
HUMP				IAML		02 36 47.7	
	comp=E,2µm,0.2s						
HUMP	Col San Antoni	1.30	147		Sb	02 36 39.4	-2.2
HUMP	Col San Antoni	1.30	147	⇓eP	Pn	02 36 24.2	-0.4
HUMP	Col San Antoni	1.30	147	eS	Sb	02 36 39.4	-2.2
CRPR	Cabo Rojo, PR	1.32	202		Pb	02 36 25.1	-0.2
CRPR				IAML		02 36 49.9	
	comp=E,1µm,0.7s						
CRPR				IAML		02 36 50.0	
	comp=N,1µm,0.5s						
CRPR	Cabo Rojo, PR	1.32	202		Sn	02 36 41.7	-0.7
CRPR	Cabo Rojo, PR	1.32	202	⇑eP	Pb	02 36 25.3	-0.1
CRPR	Cabo Rojo, PR	1.32	202	i P	Pb	02 36 25.2	-0.2
CRPR				eS	Sn	02 36 41.5	-0.8
CRPR				IAML		02 36 52.9	
	comp=Z,2µm,0.6s						
PDPR	Patillas Dam,	1.33	156		Pn	02 36 24.3	-0.7
PDPR	Patillas Dam,	1.33	156	⇑eP	Pn	02 36 25.0	0.0
PDPR	Patillas Dam,	1.33	156	eS	Sb	02 36 39.1	-3.4
MLPR	Magueyes Islan	1.33	199	⇑eP	Pb	02 36 25.6	0.0
MLPR	Magueyes Islan	1.33	199	eS	Sb	02 36 41.4	-1.2
IGPR	InterUniversit	1.35	160		Pn	02 36 24.8	-0.4
IGPR				IAML		02 36 46.5	
	comp=E,2µm,0.3s						
IGPR				IAML		02 36 49.2	
	comp=N,2µm,0.3s						
IGPR	InterUniversit	1.35	160		Sb	02 36 40.3	-2.7
IGPR	InterUniversit	1.35	160	⇓eP	Pb	02 36 25.4	-0.5
IGPR	InterUniversit	1.35	160	eS	Sb	02 36 40.3	-2.7
SMDR	Samana, DR	2.45	272	⇑eP	Pn	02 36 42.3	+1.8
DR12	Loma Pena Alta	2.68	261		Pn	02 36 46.1	+2.4
BANI	BANI	3.67	257		Pn	02 37 00.8	+3.5
SC01	Santiago de lo	3.91	273		Pn	02 37 03.9	+3.3
SC01				IAML		02 38 29.2	
	comp=N,350nm,0.9s						
SC01	Santiago de lo	3.91	273	⇑eP	Pn	02 37 03.1	+2.5
SKI	Saint Kitts	4.12	117	eP	Pn	02 37 05.4	+1.9
SKI	Saint Kitts	4.12	117	eS	Sb	02 37 58.3	-4.7
SDDR	Presa de Saban	4.45	267		Pn	02 37 11.9	+3.9
SDDR				IAML		02 38 25.2	
	comp=N,169nm,1.1s						
SDDR	Presa de Saban	4.45	267	eP	Pn	02 37 11.9	+3.9
SDDR				eS	Sn	02 38 03.4	+3.7
SDDR	Presa de Saban	4.45	267	i P	Pn	02 37 11.8	+3.9
LODU1	El Espartillar	4.71	260	i P	Pn	02 37 15.8	+4.3
LOVI	El Cajuil, Ovi	4.75	253	i P	Pn	02 37 15.8	+3.7
LOVI				eS	Sn	02 38 06.4	-0.7
LOVI				IAML		02 38 26.1	
	comp=Z,95nm,0.9s						
GRTK	Grand Turk	4.82	299	Pn	Pn	02 37 14.0	+0.9
GRTK				IAML		02 38 11.4	
	comp=Z,95nm,0.4s						
GRTK				IAML		02 38 13.6	
	comp=Z,91nm,0.4s						
GRTK	Grand Turk	4.82	299	eP	Pn	02 37 15.2	+2.1
GRTK				eS	Sn	02 38 06.2	-2.7
GRTK	Grand Turk	4.82	299	i P	Pn	02 37 14.4	+1.3
GRTK				eS	Sn	02 38 06.8	-2.1
GRTK				IAML		02 38 24.1	
	comp=Z,75nm,1.7s						
MBFL	Flemmings, Mon	4.85	120	eP	Pn	02 37 15.3	+1.8
LOBH	Bahia de las A	4.98	255	i P	Pn	02 37 18.5	+3.2
ANBD	Bethesda, Anti	5.08	115	eP	Pn	02 37 18.1	+1.5
MAGL	Barre de l'ile	6.03	122	eP	Pn	02 37 33.0	+3.3
MAGL	Barre de l'ile	6.03	122	eS	Sn	02 38 43.5	+4.9
DSLB	Salisbury	6.22	127	eP	Pn	02 37 37.3	+5.0
MASC	Masc	7.26	279	eP	Pn	02 37 46.5	-0.1
MASC				eS	Sn	02 39 04.9	-4.0
QMBU	Quimbuelo	7.80	278	eP	Pn	02 37 53.1	-1.0
QMBU				eS	Sn	02 39 18.4	-4.0
MOAC	Moa	8.00	282	eP	Pn	02 37 55.7	-1.0
MOAC				eS	Sn	02 39 21.9	-5.2
NMDO	Nuevo Mundo	8.01	281	Pn	Pn	02 37 56.4	-0.4
NMDO	Nuevo Mundo	8.01	281	eP	Pn	02 37 57.1	+0.3
NMDO				eS	Sn	02 39 23.2	-4.1
GTBY	Guantanamo Bay	8.06	276	IAmb	IAmb	02 37 56.6	
	comp=Z,55nm,1.5s						
GTBY				eP	Pn	02 37 57.7	+0.1
GTBY				eS	Sn	02 39 25.3	-3.4
RCC	Rio Carpintero	8.62	277	eP	Pn	02 38 03.9	-1.3
RCC				eS	Sn	02 39 37.6	-4.7
PINC	Pinares de May	8.75	280	eP	Pn	02 38 05.0	-2.0
YAR	Yar	9.27	279	eP	Pn	02 38 13.1	-1.0
YAR				eS	Sn	02 39 52.9	-5.4
BAUV	El Baul	10.33	188	Pn	Pn	02 38 32.9	+4.2
BBSR	BB Station	13.19	7	Pn	Pn	02 39 07.1	-0.7
RUSC	La Rusia	14.70	206	Pn	Pn	02 39 28.6	-0.3
TKL	Tuckaleechee C	22.30	321	LR	LR	02 51 12.4	
	comp=Z,24nm,18.6s,baz=175,slow=41						
TX31	Lajitas Ar. Si	35.13	294	P	P	02 42 55.8	+1.5
TXAR	Lajitas Array	35.13	294	P	P	02 42 55.3	+0.9
TXAR	Lajitas Array	35.13	294	P	P	02 42 55.9	+1.5
	comp=Z,0.1nm,0.4s,baz=112,slow=9.8,SNR=7.9						
	comp=Z,0.1nm,0.4s						
LPAZ	La Paz	35.34	183	P	P	02 42 59.9	+3.2
	comp=Z,0.5nm,0.4s,baz=334,slow=7.7,SNR=4.8						
	comp=Z,0.5nm,0.4s						
EPLO	Experimental L	37.32	331	P	P	02 43 13.6	+0.9
EPLO				IAmb	IAmb	02 43 31.2	
	comp=Z,3.0nm,1.1s						
PB16	IPOC Station P	37.45	185	P	P	02 43 11.3	-3.3
PB16				IAmb	IAmb	02 43 20.6	
	comp=Z,4.8nm,1.3s						
GO01	Chusmiza	38.75	184	P	P	02 43 21.9	-3.6
GO01				IAmb	IAmb	02 43 30.1	
	comp=Z,2.4nm,0.8s						
PB11	IPOC Station P	38.87	185	P	P	02 43 22.6	-3.6
BDFB	Brasilia	39.19	151	LR	LR	03 00 27.7	
	comp=Z,26nm,18.6s,baz=139,slow=37						
PDAR	Pinedale Array	43.05	313	P	P	02 44 00.2	-0.4
MDT	Midelt	56.61	63	LR	LR	03 06 35.3	
	comp=Z,17nm,20.6s,baz=196,slow=32						
ESDC	Sonseca Array	57.08	55	LR	LR	03 08 06.3	
	comp=Z,14nm,19.5s,baz=236,slow=34						
ILAR	Eielson Array	68.64	333	P	P	02 47 04.4	+1.0
	comp=Z,0.2nm,0.5s,baz=80,slow=6.0,SNR=2.7						
	comp=Z,0.2nm,0.5s						
ARCES	ARCESS Array B	72.88	22	P	P	02 47 31.4	+2.3
	comp=Z,3.7nm,1.0s,baz=285,slow=2.4,SNR=3.6						
	comp=Z,3.7nm,1.0s						

NNC 21 02:36:46.7±6.6**, 37°.11N**×**70°.65E, h0^{km}, mb4.1, mpv3.8, 3C, Error ellipse: s-maj=52.5km s-min=49.7km az=138.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	5.98	359	Pn	Pn	02 38 17.5	+0.9
	3.6nm,0.3s,baz=178,slow=10,SNR=73						
KK31				⇑Sn	Sn	02 39 26.7	+1.0
	2.7nm,0.3s,baz=191,slow=25,SNR=7.5						

AAK	Ala-Archa	6.26	27	Pn	Pn	02 38 20.4	-0.1
	1.0nm,0.4s						
AAK				Sn	Sn	02 39 34.6	+1.8
	3.4nm,0.8s						
TKM2	Tokmak 2	6.93	32	⇑Pn	Pn	02 38 28.9	-0.8
	6.5nm,0.4s						
TKM2				⇑Sn	Sn	02 39 49.9	+0.5
	2.9nm,0.8s						

ASIES ***21*** *02:45:39.1, 24°.52N×120°.12E, h28^{km}, ML4.0, Mw3.3, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}-0.23; $M_{\theta\theta}$0.37; $M_{\phi\phi}$-0.14; $M_{r\theta}$-0.19; $M_{\theta\phi}$-1.03; $M_{\phi r}$-0.12; Fault plane solution: $M_0$1.09853×10^{21} NP1: ϕ_s352.13000°, δ76.83000°, λ-8.92000°. NP2:ϕ_s84.18000°, δ81.31000°, λ-166.68000°. Principal axes: T Plg3.1160°, Azm217.7360°; N Plg74.1380°, Azm116.6920°; P Plg15.5370°, Azm308.6030°;*

TAP ***21*** *02:45:39.1, 24°.52N×120°.12E, h28^{km}±1^{km}, ML4.0, D*

ISC 21 02:45:39.4±1.0**, 24°.52N**±0°.02×**120°.12E**±0°.02**, h29**^{km}±11^{km}**, n133,** σ0^{s}.**64**/219**, 5C-16D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WDJ	Dajia District	0.50	109	P	Pn	02 45 50.1	-0.5
WDJ				i S	Sn	02 45 58.1	-0.3
WCH1	Changhua City	0.59	138	eP	Pb	02 45 50.9	-0.3
WCH1				eS	Sn	02 46 00.2	-0.3
WCHH	Zhanghua	0.59	137	eP	Pn	02 45 51.6	-0.2
WCHH				eS	Sn	02 46 00.5	0.0
NSY	Sanyi	0.59	100	⇓iP	Pn	02 45 51.9	0.0
NSY				i S	Sn	02 46 00.9	+0.3
NMLH	Miaoli	0.61	88	⇓P	Pb	02 45 51.4	-0.3
NMLH				i S	Sn	02 46 00.5	-0.6
TWQ1	Liyutan	0.62	106	⇓iP	Pn	02 45 52.1	-0.2
TWQ1				i S	Sn	02 46 01.3	0.0
TCU	Taichung	0.63	126	P	Pn	02 45 52.0	-0.3
TCU				eS	Sn	02 46 00.9	-0.5
WRL	Guolierlin Hig	0.66	159	eP	Pb	02 45 52.3	-0.1
WRL				S	Sn	02 46 02.7	+0.6
WTCT	Ta-ch'eng	0.67	167	eP	Pb	02 45 52.2	-0.3
WTCT				eS	Sb	02 46 01.6	+0.1
VWUC	VWUC	0.77	308	⇓iP	Pn	02 45 54.0	-0.3
VWUC				S	Sn	02 46 04.4	-0.5
WHP	Taichung City	0.79	107	⇓iP	Pn	02 45 54.5	-0.2
WHP				i S	Sb	02 46 05.1	0.0
NSTT	Nanjuang	0.81	82	⇑iP	Pn	02 45 55.0	+0.1
NSTT				i S	Sn	02 46 06.2	+0.3
WNT	Mingjian	0.82	141	⇓iP	Pb	02 45 54.8	-0.3
WNT				S	Sn	02 46 06.5	+0.3
HSN	Hsinchu	0.82	70	eP	Pn	02 45 56.2	+1.2
HSN				eS	Sn	02 46 08.8	+2.5
LIOB	Emei	0.83	81	⇑iP	Pn	02 45 55.2	+0.1
LIOB				eS	Sn	02 46 06.4	0.0
SBCB	Hsinchu	0.83	71	eP	Pn	02 45 55.6	+0.4
SBCB				eS	Sn	02 46 07.5	+0.9
WCS	Beigang Elemen	0.86	122	⇓iP	Pn	02 45 55.3	-0.2
WCS				S	Sn	02 46 07.2	+0.1
WTK	Tuku	0.86	163	P	Pn	02 45 55.3	-0.3
WTK				eS	Sn	02 46 07.8	+0.7
WSF	Szhu	0.88	174	eP	Pn	02 45 55.6	-0.2
WSF				S	Sn	02 46 08.3	+0.7
WDL	Douliou City	0.89	154	P	Pn	02 45 55.8	-0.1
WDL				eS	Sn	02 46 08.6	+0.9
WJS	Zhushan	0.89	141	⇓P	Pn	02 45 55.8	-0.2
WJS				eS	Sn	02 46 08.2	+0.3
TYC	Yuchr	0.91	132	⇓iP	Pn	02 45 56.0	-0.2
TYC				eS	Sn	02 46 09.2	+0.9
WDLH	Douliu	0.91	155	⇓P	Pn	02 45 56.0	-0.2
WDLH				eS	Sn	02 46 09.5	+1.2
NFF	Wufeng Townshi	0.92	83	⇑P	Pb	02 45 56.5	-0.3
NFF				S	Sn	02 46 08.8	+0.1
WGK	Gukeng	0.92	154	eP	Pn	02 45 56.5	+0.1
WGK				eS	Sn	02 46 09.6	+1.0
SMLT	Sun Moon Lake	0.95	131	⇓iP	Pn	02 45 56.8	-0.2
SMLT				eS	Sn	02 46 10.6	+1.0
TDCB	Techi	0.98	105	⇓P	Pn	02 45 57.3	-0.1
TDCB				eS	Sb	02 46 09.8	-0.8
WSL	Shuilin Townsh	0.99	174	P	Pn	02 45 57.2	-0.2
WSL				eS	Sb	02 46 12.1	+1.3
KSHI	Guanxi Townshi	1.00	75	eP	Pb	02 45 58.1	0.0
KSHI				eS	Sb	02 46 11.3	+0.5
TWT	Tachien	1.00	105	P	Pn	02 45 57.5	-0.2
TWT				eS	Sn	02 46 09.8	-1.1
CHN2	Minshiung	1.03	162	i P	Pb	02 45 58.5	-0.2
CHN2				i S	Sb	02 46 12.9	+1.1
PTMZ	Houxiangcun	1.05	300	⇓P	Pn	02 45 58.2	+0.1
PTMZ				i S	Sb	02 46 12.2	-0.1
CHN5	Tsauling	1.05	151	⇓P	Pn	02 45 57.8	-0.4
CHN5				i S	Sn	02 46 11.8	-0.1
WUSB	Renai	1.05	120	⇓iP	Pn	02 45 58.3	0.0
WUSB				S	Sn	02 46 12.2	+0.1
CHY	Chiayi	1.05	165	⇑eP	Pb	02 45 58.6	-0.4
CHY				S	Sb	02 46 13.8	+1.3
SSLB	Suanglung	1.05	133	P	Pn	02 45 57.8	-0.4
SSLB	Suanglung	1.05	133	S	Sb	02 46 12.6	+0.1
SSLB	Suanglung	1.05	133	⇓iP	Pn	02 45 57.8	-0.4
SSLB				eS	Sn	02 46 12.0	0.0
WHYT	Xinyi Township	1.06	140	eP	Pn	02 45 58.1	-0.2
WHYT				eS	Sb	02 46 12.7	+0.1
FUSS	Fushou	1.06	104	eP	Pb	02 45 58.8	-0.5
FUSS				S	Sn	02 46 12.1	-0.4
NCUH	Zhongli	1.07	65	eP	Pb	02 45 58.8	-0.6
NCUH				eS	Sb	02 46 13.4	+0.5
PNG	Penghu	1.08	209	eP	Pn	02 45 58.2	-0.3
PNG				S	Sn	02 46 12.5	0.0
WHF	Hehuan Shan	1.11	109	i P	Pb	02 46 00.1	-0.2
WHF				S	Sb	02 46 14.6	0.0
OWD	Renai	1.12	120	i P	Pn	02 45 59.4	+0.2
OWD				S	Sn	02 46 13.6	-0.1
PHUB	P'eng-hu	1.12	207	eP	Pn	02 45 59.0	-0.1
PHUB				eS	Sn	02 46 13.0	-0.5
NSK	Sanguang	1.14	82	eP	Pn	02 45 59.4	-0.1
NSK				eS	Sn	02 46 14.1	-0.1
NNS	Nan Shan	1.15	94	eP	Pb	02 46 00.7	0.0
NNSB	Datong	1.16	94	eP	Pb	02 46 00.1	-0.8
NNSB				eS	Sn	02 46 13.8	-0.8
YHNB	Yeheng	1.16	82	P	Pn	02 45 59.7	0.0
YHNB	Yeheng	1.16	82	S	Sb	02 46 15.5	0.0
YHNB	Yeheng	1.16	82	eP	Pn	02 45 59.5	-0.1
YHNB				eS	Sn	02 46 14.0	-0.6
ICHU	Yijhu	1.16	173	eP	Pb	02 46 00.3	-0.6
ICHU				eS	Sb	02 46 16.4	+0.8
WCKO	Fanlu	1.16	157	eP	Pn	02 45 59.9	+0.2
WCKO				i S	Sb	02 46 15.5	-0.1
CHN8	Yiju	1.17	176	eP	Pn	02 46 00.1	+0.3
CHN8				eS	Sb	02 46 15.9	+0.2
ALS	Alishan	1.18	148	eP	Pn	02 46 00.0	-0.2
ALS				eS	Sb	02 46 16.1	-0.3
VWDT	VWDT	1.20	129	⇑P	Pb	02 46 00.8	-0.7
VWDT				eS	Sn	02 46 16.0	+0.4
ETLH	Xiulin Townshi	1.28	104	eP	Pb	02 46 02.1	-0.9
LXIB	Xiulin Townshi	1.28	112	eP	Pn	02 46 01.9	+0.4
LXIB				eS	Sn	02 46 17.2	-0.6
LATG	Datong	1.28	89	eP	Pb	02 46 02.3	-0.7
LATG				eS	Sn	02 46 17.6	-0.2
NWLT	Wulai	1.29	78	eP	Pn	02 46 01.6	+0.1
NWLT				eS	Sn	02 46 17.6	-0.1
TWK	Hsinying	1.29	165	eP	Pn	02 46 01.8	+0.3
TWK				i S	Sb	02 46 20.2	+0.9
TPUB	Ta-pu	1.30	159	P	Pn	02 46 01.5	-0.1
TPUB	Ta-pu	1.30	159	S	Sb	02 46 20.0	+0.5
TPUB	Ta-pu	1.30	159	eP	Pn	02 46 01.6	-0.1
TPUB				eS	Sn	02 46 18.6	+0.6
TWS1	Kuangyinshan	1.32	63	eP	Pb	02 46 03.4	-0.1
WDGT	Dungji	1.32	199	eP	Pn	02 46 01.6	-0.2
WDGT				eS	Sn	02 46 18.3	-0.1
ENTT	Nioudou	1.32	84	eP	Pn	02 46 02.2	+0.2
ENTT				eS	Sn	02 46 18.4	-0.2
TATO	Taipei	1.33	70	P	Pb	02 46 03.7	0.0
TATO	Taipei	1.33	70	S	Sb	02 46 21.2	+0.9
SNST	Tainan City	1.34	165	eP	Pn	02 46 02.4	+0.3
SNST				eS	Sb	02 46 20.0	-0.6
WTP	Ta-pu	1.34	160	eP	Pb	02 46 03.1	-0.9
WTP				eS	Sb	02 46 20.3	-0.6
FUSB	Fushanzhiwuyua	1.36	79	eP	Pn	02 46 02.7	+0.2
TSCK	Chigu Township	1.36	181	P	Pb	02 46 03.7	-0.6
TSCK				eS	Sb	02 46 21.2	-0.1
ETM	Tongmen	1.37	113	eP	Pn	02 46 03.1	+0.5
ETM				eS	Sn	02 46 19.5	-0.3
CHN1	Nanshi	1.38	164	P	Pn	02 46 02.9	+0.2
CHN1				i S	Sb	02 46 21.1	-0.7
SSHA	Shanhua	1.38	174	eP	Pn	02 46 03.0	+0.2
SSHA				eS	Sb	02 46 21.4	-0.5
NACB	Ninganchiao	1.39	104	eP	Pn	02 46 03.1	+0.3
NACB				i S	Sn	02 46 20.1	-0.1
ESL	Shilin	1.39	120	P	Pn	02 46 03.4	+0.6
ESL				S	Sn	02 46 20.6	+0.4
WARBT	Fenglin Townsh	1.41	124	P	Pn	02 46 03.3	+0.3
WARBT				S	Sb	02 46 21.6	-1.0
TWA	Mucha	1.41	71	eP	Pn	02 46 03.4	+0.2
TWA				eS	Sb	02 46 21.6	-1.1
TWD	Chiawan	1.42	108	eP	Pn	02 46 03.6	+0.4
TWD				eS	Sn	02 46 21.5	+0.6
ETL	Fush Village	1.42	104	eP	Pn	02 46 03.6	+0.3
TWE	Neicheng	1.42	81	eP	Pb	02 46 05.2	-0.1
TWE				eS	Sb	02 46 22.0	-1.1
VCHM	Qimei	1.45	206	eP	Pn	02 46 03.1	-0.5
ZUZH	Zhuzihu	1.45	63	eP	Pn	02 46 04.4	+0.7
ZUZH				eS	Sn	02 46 21.8	+0.1
CHN3	Shinhua	1.45	171	eP	Pb	02 46 04.9	-0.9
NDS	Dongshan	1.46	85	eP	Pn	02 46 04.2	+0.4
YM01	YM01	1.46	64	eP	Pn	02 46 04.2	+0.3
YM01				eS	Sn	02 46 22.8	+0.7
EGFH	Guangfu	1.46	125	eP	Pn	02 46 04.4	+0.5
EGFH				eS	Sn	02 46 22.9	+0.8
STYH	Taoyuan	1.47	156	eP	Pn	02 46 04.5	+0.6
STYH				eS	Sb	02 46 23.6	-0.8
ENA	Nanau	1.48	93	eP	Pb	02 46 05.0	-1.3
EAHA	Aohua	1.49	97	eP	Pn	02 46 04.4	+0.2
EAHA				eS	Sn	02 46 23.5	+0.8
EHY	Hungye	1.49	132	eP	Pn	02 46 05.1	+0.9
EHY				eS	Sb	02 46 24.5	-0.5
SHUL	Shoufeng	1.51	119	eP	Pb	02 46 05.5	-1.3
SHUL				eS	Sn	02 46 24.1	+1.0
EWUT	Wuta	1.51	92	eP	Pb	02 46 05.8	-1.1
EWUT				eS	Sn	02 46 23.0	-0.3
EHYH	Wanrong	1.52	132	eP	Pn	02 46 05.3	+0.7
EHYH				eS	Sn	02 46 24.2	+0.9
KNM	Kinmen	1.54	267	eP	Pb	02 46 07.3	0.0
YULB	Yu-li	1.55	136	P	Pb	02 46 06.6	-1.0
YULB	Yu-li	1.55	136	S	Sb	02 46 27.4	+0.6
YULB	Yu-li	1.55	136	eP	Pn	02 46 05.8	+0.7
YULB				eS	Sb	02 46 25.6	-1.2
ELDTW	Lidau	1.56	148	eP	Pb	02 46 06.3	-1.3
HGSD	Ruisui	1.57	130	eP	Pb	02 46 06.5	-1.3
KNMB	Chin-men Tao	1.58	268	eP	Pn	02 46 05.8	+0.4
TWC	Suao	1.58	86	eP	Pb	02 46 06.6	-1.4
TWC				eS	Sn	02 46 25.0	+0.1
TWF1	Yuli	1.58	137	eP	Pn	02 46 06.4	+0.9
TIPB	Shuangxi	1.62	73	eP	Pn	02 46 06.4	+0.4
TNOU	National Taiwa	1.63	67	eP	Pn	02 46 06.6	+0.5
TNOU				eS	Sn	02 46 26.4	+0.3
MATB	Ma-tsu	1.64	355	eP	Pb	02 46 07.9	-1.0
MATB				eS	Sn	02 46 27.3	+1.0
SCST	Cishan	1.66	168	eP	Pb	02 46 08.9	-0.4
EHD	Haiduan	1.69	144	eP	Pb	02 46 08.9	-0.9
FULB	Fuli	1.70	140	eP	Pn	02 46 08.1	+1.0
SXI1	Grass Mountain	1.70	70	eP	Pn	02 46 07.7	+0.5
TWB1	Santiao Chiao	1.77	74	eP	Pn	02 46 08.2	+0.1
SSD	Sandimen	1.82	165	eP	Pn	02 46 09.1	+0.2
SSD				eS	Sn	02 46 31.5	+0.5
LONT	Longtian	1.85	150	eP	Pn	02 46 09.7	+0.5
MHZQ	Yeshan	1.86	328	eP	Pb	02 46 11.0	-1.8
TSMG	Majia	1.87	165	eP	Pn	02 46 09.6	+0.2
TSMG				eS	Sn	02 46 32.4	+0.4
EDH	Donghe	1.88	145	eP	Pn	02 46 10.8	+1.2
TWG	Pinlang	1.90	152	eP	Pn	02 46 10.9	+1.0
TWGBT	Beinan	1.91	152	P	Pn	02 46 11.3	+1.3
TWGBT	Beinan	1.91	152	S	Sb	02 46 38.0	+1.0
TWGBT	Beinan	1.91	152	eP	Pn	02 46 10.4	+0.5
EOS2	EOS2	1.93	92	eP	Pb	02 46 12.6	-1.2
MASBT	Mashibuluo	1.95	166	eP	Pn	02 46 10.9	+0.3
AXDP	Jialang	1.99	282	eP	Pn	02 46 12.0	+0.9
EOS4	EOS4	2.04	101	eP	Pn	02 46 12.6	+1.1
EOS4				eS	Sn	02 46 37.9	+2.0
PCYT	Pengchaiyu	2.09	58	eP	Pn	02 46 13.5	+1.1
SCZT	Fangliau	2.18	168	eP	Pn	02 46 14.8	+1.0
ZPLA	Ao Xicun	2.24	255	eP	Pn	02 46 14.9	+0.3
SLIU	Shizi	2.37	165	eP	Pn	02 46 17.0	+0.6
XPSS	Dashiqiu	2.40	2	eP	Pn	02 46 17.7	+0.9
DSXP	Dongshan	2.59	252	eP	Pn	02 46 19.5	+0.2
SXFK	Yanhouchang	2.92	310	eP	Pn	02 46 24.2	+0.3

IDC ***21*** *02:50:30.0±1.7, 2°.27N×126°.52E, h0^{km}, mb3.6/5, mbtmp3.7/5, Error ellipse: s-maj=124.9km s-min=20.5km az=69.0*

DJA ***21*** *02:50:34.5±0.4, 2°N±4°×12°7E±°, h10^{km}, M4.1/7, mb4.5/3, MLv3.9/7*

ISC 21 02:50:35.9±1.4**, 2°.45N**±0°.10×**126°.9E**±0°.2**, h53**^{km}**, n8,** σ0^{s}.**91**/9**, mb3.7**/4**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.83	312	P	Pn	02 51 04.1	-0.9
SGSI				S	Sn	02 51 27.2	+0.1
MRSI	Marisa	5.33	248	P	Pn	02 51 52.6	-0.3
	0.1nm39nm,0.5s						
LUWI	Luwuk	5.39	230	P	Pn	02 51 53.9	+0.2
FITZ	Fitzroy Crossi	20.46	183	P	P	02 55 08.0	-1.3
	7.7nm,1.2s,baz=0.0,slow=12,SNR=1.9						
	7.7nm,1.2s						
WRA	Warramunga Arr	23.43	162	P	P	02 55 40.0	-0.6
	2.2nm,0.7s,baz=339,slow=11,SNR=13						
	2.2nm,0.7s						
ASAR	Alice Springs	26.84	166	P	P	02 56 11.8	+0.2
	0.4nm,0.6s,baz=340,slow=8.3,SNR=5.2						
	0.4nm,0.6s						
MKAR	Makanchi Array	58.69	326	P	P	03 00 29.0	+0.9
	0.2nm,0.4s,baz=120,slow=6.4,SNR=3.7						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	62.90	328	P	P	03 00 57.7	+1.1
	0.4nm,0.5s,baz=129,slow=6.3,SNR=7.0						
	0.4nm,0.5s						

IDC 21 03:20:26.5±2.3**, 33°.54S**×**178°.74W, h0**^{km}**, mb3.8**/2**, mbtmp4.0**/3**, ML4.1**/1**, Error ellipse: s-maj=61.3km s-min=33.8km az=125.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	5.79	214	Pn	Pn	03 21 53.7	+0.1
	5.1nm,0.3s,baz=327,slow=6.1,SNR=19						
URZ				Sn	Sn	03 23 00.4	-0.2
	4.5nm,0.3s,baz=78,slow=22,SNR=6.5						
	12nm,0.3s						
ASAR	Alice Springs	42.41	271	P	P	03 28 23.1	+0.1
	1.0nm,0.7s,baz=108,slow=7.5,SNR=11						
	1.0nm,0.7s						
WRA	Warramunga Arr	43.69	276	P	P	03 28 33.2	-0.2
	1.2nm,0.6s,baz=116,slow=8.0,SNR=12						
	1.2nm,0.6s						
FINES	FINESS Array B	147.84	338	PKPbc	PKPbc	03 40 11.9	-0.7
	1.0nm,0.5s,baz=45,slow=4.1,SNR=16						
BRTR	Keskin Array B	153.39	293	PKPbc	PKPbc	03 40 26.6	-0.2
	0.8nm,0.8s,baz=180,slow=0.4,SNR=4.3						

ATH ***21*** *03:34:03.0, 34°.72N×25°.06E, h11^{km}±3^{km}, ML3.8/5, Manual Solution by A.Moschou First location: 2019/06/21 03:35:05, This location: 2019/06/21 07:18:09 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*

THE ***21*** *03:34:07.7, 35°N±2°×2°5E±°, h0^{km}±2^{km}, M3.2/8, MLh3.2/8*

IDC ***21*** *03:34:09.0±2.3, 35°.09N×25°.28E, h0^{km}, mb3.1/2, mbtmp3.3/6, ML3.1/4, Error ellipse: s-maj=41.3km s-min=9.2km az=17.0*

ISC 21 03:34:05.5±1.9**, 34°.82N**±0°.06×**24°.90E**±0°.05**, h6**^{km}±12^{km}**, n24,** σ0^{s}.**71**/37**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TMBK	Timbaki Herakl	0.27	337	P	Pb	03 34 12.4	-0.4
TMBK				S	Sb	03 34 18.1	+0.4
IDI	Anoyia	0.47	359	P	Pb	03 34 15.9	-0.2
IDI				S	Sb	03 34 23.1	-0.3
IDI	Anoyia	0.47	359	Pg	Pb	03 34 16.0	-0.2
	81nm,0.3s,baz=193,slow=14,SNR=501						
IDI				Lg	Lg	03 34 21.4	
	405nm,0.3s,baz=270,slow=23,SNR=63						
IDI				LR	LR	03 34 32.0	
	comp=Z,35nm,19.2s,baz=308,slow=61						
IDI	Anoyia	0.47	359	P	Pb	03 34 15.5	-0.6
IDI				S	Sb	03 34 22.5	-0.9
IACM	Heraklion	0.50	17	P	Pb	03 34 17.3	+0.5
IACM				S	Sb	03 34 24.9	+0.5
PRNS	Prines Rethymn	0.63	329	P	Pb	03 34 18.8	-0.1
PRNS				S	Sn	03 34 29.4	-2.0
GVD	Gavdhos	0.67	272	P	Pb	03 34 18.9	-0.5
GVD	Gavdhos	0.67	272	P	Pb	03 34 19.0	-0.5
GVD				S	Sb	03 34 29.3	+0.3
CHNB	Souda	0.95	315	P	Pb	03 34 24.3	-0.1
CHNB				S	Sn	03 34 39.4	+0.1
IMMV	Iera Moni Meta	0.98	311	P	Pb	03 34 24.6	-0.4
IMMV				S	Sb	03 34 38.0	-0.2
CHAN	Chania	0.99	315	P	Pn	03 34 25.2	-0.7
CHAN				S	Sb	03 34 37.7	-0.5
CHAN	Chania	0.99	315	P	Pb	03 34 24.9	-0.1
CHAN				S	Sn	03 34 40.9	+0.7
KNDR	Palaiochora Ch	1.07	293	P	Pn	03 34 27.0	-0.1
KNDR				S	Sn	03 34 42.5	+0.2
KNDR	Palaiochora Ch	1.07	293	P	Pn	03 34 27.0	-0.1
KNDR				S	Sn	03 34 44.6	+2.2
THERA	Ancient Thera,	1.61	17	P	Pg	03 34 36.3	-0.1
THERA				S	Sg	03 34 58.1	+0.8
ANKY	Antikythira Is	1.67	309	P	Pn	03 34 35.5	+0.2
MHLO	Agia Marina, M	1.91	348	P	Pb	03 34 40.8	+0.1
MHLO				S	Sb	03 35 05.3	+0.5
APE	Apeiranthos	2.30	13	P	Pb	03 34 46.1	-1.3
BRTR	Keskin Array B	8.51	52	Pn	Pn	03 36 10.4	+0.9
	0.1nm,0.3s,baz=231,slow=15,SNR=3.7						
	0.4nm,0.5s						
AKASG	Malin Array Be	16.18	10	Pn	Pn	03 37 53.4	0.0
	0.5nm,0.3s,baz=204,slow=12,SNR=4.3						
	0.1nm,0.3s						
GERES	GERESS Array B	16.28	333	Pn	P	03 37 58.2	+0.3
	baz=152,slow=12,SNR=10						
	0.8nm,0.6s						
KBZ	Khabaz	16.51	52	Pn	P	03 38 00.1	-0.1
	0.2nm,0.3s,baz=260,slow=7.0,SNR=6.5						
	2.2nm,0.7s						
ESDC	Sonseca Array	23.43	290	P	P	03 39 22.9	+7.5
	0.2nm,0.5s,baz=81,slow=9.8,SNR=5.0						
	0.2nm,0.5s						
MKAR	Makanchi Array	44.14	56	P	P	03 42 14.7	-0.1
	0.2nm,0.6s,baz=270,slow=9.9,SNR=3.1						
	0.2nm,0.6s						

JMA 21 03:39:58.8±0.1**, 38°.7N**±0°.4×**139°.5E**±0°.5**, h12**^{km}±1^{km}**, MV0.7**/15**, W OFF YAMAGATA PREF, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYA	Atsumi	0.18	112	P	Pg	03 40 02.8	+0.1
JYA				eS	Sg	03 40 06.0	+0.5
JAW	Awa shima	0.29	225	S	Sg	03 40 08.9	+0.3
JYS	Shirataka	0.62	135	eP	Pg	03 40 10.8	-0.1
JYK	Kaneyama	0.71	69	S	Sg	03 40 21.7	-0.3

NIED ***21*** *03:41:10.8, 42°.10N×142°.57E, h53^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.30; $M_{\theta\theta}$-0.65; $M_{\phi\phi}$0.36; $M_{r\theta}$0.36; $M_{\theta\phi}$3.61; $M_{\phi r}$-2.35; Fault plane solution: $M_0$4.35000×10^{14} NP1: ϕ_s266.00000°, δ57.00000°, λ2.00000°. NP2:ϕ_s175.00000°, δ89.00000°, λ147.00000°.*

JMA ***21*** *03:41:10.8±0.2, 42°N±1°×142°.6E±1°.0, h53^{km}±1^{km}, MV3.8/37, S OFF URAKAWA*

JMA Felt I J1 at S OFF URAKAWA .

MOS ***21*** *03:41:10.3±1.2, 42°.06N×142°.58E, h55^{km}, mb4.0/5, Error ellipse: s-maj=12.5km s-min=7.9km az=67.5*

IDC ***21*** *03:41:12.4±2.2, 42°.15N×142°.75E, h68^{km}±16^{km}, mb3.3/7, mbtmp3.7/10, MS2.4/1, Error ellipse: s-maj=29.0km s-min=13.5km az=106.0*

SKHL ***21*** *03:41:12.2±0.8, 42°.10N×142°.70E, h64^{km}±6^{km}, mb5.0/3*

ISC 21 03:41:12.0±0.8**, 42°.08N**±0°.04×**142°.57E**±0°.03**, h51**^{km}±6^{km}**, n64,** σ1^{s}.**33**/81**, mb3.6**/12**, 1C-15D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNBK	Urakawa-nobuka	0.24	35	⇓iP	Pn	03 41 19.2	-1.5
JNBK				⇓S	Sn	03 41 26.0	-1.0
JSHD	Hidakashinhida	0.34	347	⇓iP	Pn	03 41 20.3	-1.2
JSHD				⇓S	Sn	03 41 27.8	-0.6
ERM	Erimo	0.45	99	P	Pn	03 41 22.2	-0.5
ERM	Erimo	0.45	99c	iPN	Pn	03 41 22.1	-0.6
JEM	Erimo	0.45	98	P	Pn	03 41 22.3	-0.4
JEM	Erimo	0.45	98	i P	Pn	03 41 22.1	-0.5
JEM				S	Sn	03 41 30.5	+0.2
JTHR	Tokachihiroo	0.58	69	⇓iP	Pn	03 41 23.4	-0.9
JTHR				⇓S	Sn	03 41 32.5	-0.7
JBT2	Biratori 2	0.71	348	i P	Pn	03 41 24.4	-1.5
JBT2				S	Sn	03 41 34.9	-1.2
JIAM	Iburiatsuma	0.72	319	P	Pn	03 41 25.6	-0.5
JIAM				eS	Sn	03 41 37.2	+0.9
JCH	Churui	0.79	48	⇓iP	Pn	03 41 25.9	-1.1
JCH				⇓S	Sn	03 41 37.3	-0.6
JFR	Furan	1.08	1	i P	Pn	03 41 29.6	-1.2
JFR				eS	Sn	03 41 42.7	-2.1
JEW	Eniwo	1.12	313	i P	Pn	03 41 30.1	-1.2
JEW				S	Sn	03 41 45.7	-0.1
JKB	Kayabe	1.16	261	⇓iP	Pn	03 41 30.5	-1.3
JKB				⇓S	Sn	03 41 45.1	-1.6
JNB	Noboribetsu	1.20	289	i P	Pn	03 41 30.4	-2.0
JNB				S	Sn	03 41 45.9	-1.7
JOB	Onbets	1.25	48	⇓iP	Pn	03 41 32.8	-0.2
JOB				⇓S	Sn	03 41 49.8	+1.1
JOT	Ohata	1.33	239	⇓iP	Pn	03 41 33.0	-1.3
JOT				⇓S	Sn	03 41 49.9	-1.0
JAB	Ashibetsu	1.44	350	S	Sn	03 41 54.5	+1.0
JISS	Ishikarishitsu	1.46	325	i P	Pn	03 41 35.0	-1.0
JAR	Ashorobuto	1.50	36	⇓iP	Pn	03 41 35.4	-1.2
AKK	Akkeshi	1.92	60	eP	Pn	03 41 41.3	-1.0
AKK				eS	Sn	03 42 02.8	-2.5
ASAJ	Asahikawa	2.03	1	P	Pn	03 41 43.9	+0.1
	52nm,0.3s,baz=222,slow=9.8,SNR=76						
ASAJ				S	Sn	03 42 07.7	-0.3
	98nm,0.4s,baz=22,slow=29,SNR=7.9						
NMR	Nemuro--Hokkai	2.66	60	ePN	Pn	03 41 50.6	-1.8
NMR				eS	Sn	03 42 21.2	-2.2
NMR	Nemuro--Hokkai	2.66	60	eP	Pn	03 41 51.1	-1.3
NMR				eS	Sn	03 42 20.5	-2.9
GLVR	Golovnino	2.73	52	ePN	Pn	03 41 53.2	-0.1
GLVR				eS	Sn	03 42 24.8	-0.2
GLVR				pmax	pmax		
	comp=Z,251nm,0.2s						
GLVR				pmax	pmax		
	comp=N,43nm,0.3s						
GLVR				pmax	pmax		
	comp=E,69nm,0.2s						
GLVR				smax	smax		
	comp=E,814nm,0.3s						
GLVR				smax	smax		
	comp=N,1μm,0.2s						
GLVR	Golovnino	2.73	52	eP	Pn	03 41 53.2	-0.1
GLVR				AMB	AMB	03 41 53.8	
	comp=N,250nm,0.2s						
GLVR				eS	Sn	03 42 24.8	-0.2
GLVR				A	A	03 42 27.6	
	comp=N,1μm,0.2s						
GLVR				A	A	03 42 27.6	
	comp=N,810nm,0.2s						
RUSJ	Misakicho	2.82	43	ePN	Pn	03 41 55.1	+0.6
RUSJ				eS	Sn	03 42 29.5	+2.3
YUK	Yuzh-Kuril'sk	3.10	50	ePN	Pn	03 41 58.6	+0.2
YUK				eS	Sn	03 42 34.5	+0.2
YUK				pmax	pmax		
	comp=N,50nm,0.2s						
YUK				pmax	pmax		
	comp=Z,150nm,0.2s						
YUK				pmax	pmax		
	comp=E,87nm,0.1s						
YUK				smax	smax		
	comp=E,539nm,0.5s						
YUK				smax	smax		
	comp=N,348nm,0.4s						
YUK	Yuzh-Kuril'sk	3.10	50	eP	Pn	03 41 58.2	-0.2

YUK				AMB	AMB	03 41 59.9	
	comp=N,160nm,0.2s						
YUK				*e*S	**Sn**	**03 42 33.3**	**-1.0**
YUK				A	A	03 42 36.9	
	comp=N,420nm,0.4s						
YUK				A	A	03 42 36.9	
	comp=N,610nm,0.4s						
SHO	**Shikotan**	**3.60**	**59**	*e*PN	**Pn**	**03 42 05.8**	**+0.5**
SHO				*e*S	**Sn**	**03 42 44.6**	**-1.9**
SHO				pmax	pmax		
	comp=E,26nm,0.3s						
SHO				pmax	pmax		
	comp=Z,30nm,0.3s						
SHO				pmax	pmax		
	comp=N,14nm,0.2s						
SHO				smax	smax		
	comp=E,175nm,0.2s						
SHO				smax	smax		
	comp=N,231nm,0.4s						
SHO	**Shikotan**	**3.60**	**59**	*e*P	**Pn**	**03 42 04.3**	**-1.0**
SHO				AMB	AMB	03 42 06.4	
	comp=N,30nm,0.2s						
SHO				*e*S	**Sn**	**03 42 44.6**	**-1.9**
SHO				A	A	03 42 47.1	
	comp=N,270nm,0.3s						
SHO				A	A	03 42 47.1	
	comp=N,190nm,0.3s						
JSD	**Sado**	**5.22**	**221**	P	**Pn**	**03 42 28.3**	**+0.8**
TEY	**Ternei**	**5.24**	**306**	*e*PN	**Pn**	**03 42 25.8**	**-2.0**
MJA0	**Matsu Arr-Jizo**	**6.47**	**213**	*e*PN	**Pn**	**03 42 45.2**	**+0.6**
MAJO	**Matsushiro**	**6.48**	**213**	P	**Pn**	**03 42 46.1**	**+1.3**
MAJO	**Matsushiro**	**6.48**	**213**	*i* PN	**Pn**	**03 42 45.6**	**+0.8**
MJAR	**Matsushiro Arr**	**6.48**	**213**	P	**Pn**	**03 42 46.3**	**+1.4**
	comp=N,3.3nm,0.4s,baz=20,slow=14,SNR=10						
MJAR				LR	LR	03 45 44.7	
	comp=N,34nm,21.4s,baz=20,slow=41						
USRK	**Ussuriysk Ar.**	**8.02**	**289**	P	**Pn**	**03 43 08.8**	**+2.9**
	comp=N,2.8nm,0.6s,baz=94,slow=14,SNR=7.4						
KSRS	**Korea Array**	**12.18**	**253**	P	**Pn**	**03 44 06.3**	**+3.6**
	comp=N,3.0nm,0.5s,baz=63,slow=14,SNR=11						
KSRS	**Korea Array**	**12.18**	**253**	*e*PN	Pn	03 44 07.9	+5.2
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BILL	**Bilibino**	**28.95**	**18**	*i* P	**P**	**03 47 06.3**	**+0.2**
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BILL	**Bilibino**	**28.95**	**18**	*e*P	**P**	**03 47 06.3**	**+0.2**
H11N2	**WAKE ISLAND Hy**	**30.34**	**130**	T	T	04 18 52.0	
	baz=324,slow=75,SNR=63						
H11N1	**WAKE ISLAND Hy**	**30.35**	**130**	T	T	04 18 51.3	
	baz=324,slow=75,SNR=62						
H11N3	**WAKE ISLAND Hy**	**30.36**	**130**	T	T	04 18 52.5	
	baz=324,slow=75,SNR=39						
TIK	**Tiksi**	**30.40**	**351**	*e*P	**P**	**03 47 19.8**	**+1.0**
TIXI	**Tiksi**	**30.41**	**351**	*i* P	**P**	**03 47 19.8**	**+0.9**
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.0s						
H11S1	**WAKE ISLAND Hy**	**31.20**	**132**	T	T	04 20 02.7	
	baz=325,slow=76,SNR=46						
H11S3	**WAKE ISLAND Hy**	**31.21**	**132**	T	T	04 20 00.2	
	baz=325,slow=76,SNR=38						
H11S2	**WAKE ISLAND Hy**	**31.22**	**132**	T	T	04 19 59.4	
	baz=325,slow=76,SNR=34						
MKAR	**Makanchi Array**	**42.38**	**298**	P	**P**	**03 48 59.9**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=69,slow=7.9,SNR=2.6						
	comp=Z,0.3nm,0.6s						
KURK	**Kurchatov**	**43.67**	**304**	*i* P	**P**	**03 49 12.8**	**+1.3**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KURK	**Kurchatov**	**43.67**	**304**	*e*P	**P**	**03 49 12.8**	**+1.3**
KURBB	**Kurchatov Arra**	**43.75**	**304**	P	**P**	**03 49 11.0**	**-1.2**
	comp=Z,0.9nm,0.5s,baz=75,slow=8.8,SNR=4.5						
	comp=Z,0.9nm,0.5s						
ILAR	**Eielson Array**	**44.80**	**35**	P	**P**	**03 49 18.4**	**-1.9**
	comp=Z,0.2nm,0.5s,baz=256,slow=5.0,SNR=4.6						
	comp=Z,0.2nm,0.5s						
ILAR	**Eielson Array**	**44.80**	**35**	*e*P	**P**	**03 49 20.9**	**+0.5**
BVAR	**Borovoye Array**	**47.95**	**309**	P	**P**	**03 49 44.4**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=78,slow=9.6,SNR=6.6						
	comp=Z,1.0nm,0.4s						
BRVK	**Borovoye**	**48.00**	**309**	*i* P	**P**	**03 49 44.5**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRVK	**Borovoye**	**48.00**	**309**	*e*P	**P**	**03 49 44.5**	**-1.1**
WRA	**Warramunga Arr**	**62.18**	**189**	P	**P**	**03 51 26.8**	**-1.3**
	comp=Z,0.2nm,0.4s,baz=4.8,slow=6.8,SNR=4.7						
	comp=Z,0.2nm,0.4s						
FINES	**FINESS Array B**	**64.78**	**332**	P	**P**	**03 51 43.3**	**-1.5**
	comp=Z,1.2nm,0.8s,baz=36,slow=7.1,SNR=5.7						
	comp=Z,1.2nm,0.8s						
FINES	**FINESS Array B**	**64.78**	**332**	*e*P	**P**	**03 51 46.6**	**+1.8**
FINES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KIV	**Kislovodsk**	**68.31**	**310**	*e*P	**P**	**03 52 08.8**	**+1.0**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV	**Kislovodsk**	**68.31**	**310**	*e*P	**P**	**03 52 08.8**	**+1.0**
HFS	**Hagfors**	**69.86**	**335**	P	**P**	**03 52 15.5**	**-1.5**
	comp=Z,0.4nm,0.5s,baz=69,slow=8.1,SNR=5.0						
	comp=Z,0.4nm,0.5s						

IDC 21 03:49:52.8±7.5**,30°.79S×177°.82W,h0^{km},mb3.6**/2**,mbtmp3.6**/2**,Error ellipse: s-maj=314.1km s-min=60.4km az=156.0,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.25**	**267**	P	P	03 57 55.7	-0.4
	0.3nm,0.3s,baz=104,slow=7.3,SNR=4.4						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**44.27**	**272**	P	P	03 58 04.4	0.0
	0.4nm,0.3s,baz=111,slow=8.0,SNR=9.9						
	0.4nm,0.3s						
FINES	**FINESS Array B**	**145.56**	**340**	PKPbc	PKPdf	04 09 31.6	-0.7
	1.5nm,1.0s,baz=60,slow=3.4,SNR=4.5						

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*PRU **21** 03:52:11.5,47°.40N×15°.11E,h10^{km},Leoben*

*VIE **21** 03:52:11.2±0.1,47°.37N×15°.07E,h8^{km}±1^{km},mb2.1/18, ml2.6/17,Error ellipse: s-maj=0.7km s-min=0.6km az=137.0   3 km WSW of Leoben*

ISC 21 03:52:11.2±1.0**,47°.39N**±0°.01×**15°.09E**±0°.02**,h7**^{km}±9^{km}**, n48,**σ**0^{s}.91**/89**,1D,Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSA	**Arzberg**	**0.33**	**115**	*i* Pg	**Pg**	**03 52 18.2**	**+0.5**
	142nm,0.4s,SNR=377						
ARSA				*e*Sg	**Sg**	**03 52 22.5**	**+0.5**
	107nm,0.4s						
SOKA	**Soboth**	**0.71**	**183**	Pg	**Pg**	**03 52 24.7**	**-0.2**
	5.4nm,0.5s,SNR=35						
SOKA				*e*Sg	**Sg**	**03 52 34.2**	**-0.1**
	8.1nm,0.3s						
MOA	**Molln**	**0.72**	**310**	*e*Pg	**Pg**	**03 52 25.0**	**-0.1**
	3.1nm,0.3s,SNR=42						
MOA				*e*Sg	**Sg**	**03 52 35.4**	**+0.9**
	15nm,0.4s						
PERS	**Pernice**	**0.76**	**178**	⇓*i*Pg	**Pg**	**03 52 25.5**	**-0.3**
PERS				*i* Sg	**Sg**	**03 52 35.1**	**-0.5**
PERS				IAML		03 52 37.2	
	comp=Z,30nm,0.1s						
RONA	**Rosalia, Austr**	**0.88**	**69**	*e*Pg	**Pg**	**03 52 28.5**	**+0.4**
	comp=Z,5.8nm,0.3s,SNR=37						
RONA				Sg	**Sn**	**03 52 41.8**	**-1.2**
	comp=Z,25nm,0.7s						
OBKA	**Obir**	**0.96**	**203**	*e*Pg	**Pg**	**03 52 29.4**	**-0.2**
	comp=Z,2.3nm,0.3s,SNR=32						
OBKA				Sg	**Sb**	**03 52 42.5**	**-0.5**
	comp=Z,35nm,0.5s						
ZAVS	**Zavodnje**	**0.96**	**183**	*i* Pg	**Pg**	**03 52 29.4**	**-0.2**
ZAVS				*i* Sg	**Sg**	**03 52 41.6**	**-0.4**
ZAVS				IAML		03 52 43.6	
	comp=Z,33nm,0.1s						
GROS	**Grobnik**	**0.97**	**163**	*i* Pg	**Pg**	**03 52 29.3**	**-0.6**
GROS				*e*Sg	**Sg**	**03 52 41.0**	**-1.5**
GROS				IAML		03 52 43.6	
	comp=Z,23nm,0.1s						
BIOA	**Bad Ischl, Aus**	**1.03**	**288**	*e*Pg	**Pg**	**03 52 30.4**	**-0.5**
	comp=Z,2.5nm,0.3s,SNR=14						
BIOA				*e*Sg	**Sn**	**03 52 46.4**	**-0.3**
	comp=Z,120nm,0.3s						
MOZS	**Mozjanca**	**1.18**	**202**	*i* Pg	**Pb**	**03 52 33.5**	**-0.5**
MOZS				*e*Sg	**Sg**	**03 52 49.7**	**+0.5**
MOZS				IAML		03 52 51.7	
	comp=Z,7.2nm,0.1s						
KOGS	**Kog**	**1.23**	**139**	*i* Pg	**Pg**	**03 52 35.0**	**+0.1**
KOGS				*e*Sg	**Sn**	**03 52 51.7**	**0.0**
KOGS				IAML		03 52 58.5	
	comp=Z,19nm,0.1s						
MYKA	**Terra Mystica**	**1.25**	**233**	*e*Pg	**Pn**	**03 52 34.3**	**-0.8**
	comp=Z,2.4nm,0.3s,SNR=13						
MYKA				*e*Sg	**Sg**	**03 52 51.4**	**+0.1**
	comp=Z,6.0nm,0.4s						
DOBS	**Dobrina**	**1.27**	**168**	*i* Pg	**Pn**	**03 52 35.1**	**-0.3**
DOBS				*i* Sg	**Sb**	**03 52 51.7**	**-0.3**
DOBS				IAML		03 52 54.5	
	comp=Z,13nm,0.1s						
GORS	**Gorjuse**	**1.31**	**215**	*i* Sg	**Sb**	**03 52 52.6**	**-0.6**
GORS				IAML		03 52 57.1	
	comp=Z,14nm,0.2s						
VNDS	**Vrh nad Dolski**	**1.32**	**192**	*i* Pg	**Pb**	**03 52 36.1**	**-0.1**
VNDS				*i* Sg	**Sb**	**03 52 52.6**	**-0.7**
VNDS				IAML		03 52 55.8	
	comp=Z,5.4nm,0.2s						
PDKS	**Podkum**	**1.33**	**183**	*i* Pg	**Pg**	**03 52 36.9**	**+0.2**
PDKS				*e*Sg	**Sg**	**03 52 54.1**	**+0.1**
PDKS				IAML		03 52 54.6	
	comp=Z,2.5nm,0.1s						
LOBO	**Lobor**	**1.41**	**151**	*e*Pg	**Pg**	**03 52 39.2**	**+0.9**
LOBO				Sg	**Sg**	**03 52 56.5**	**+0.1**
CRNS	**Crni Vrh**	**1.43**	**204**	*i* Pg	**Pb**	**03 52 38.1**	**-0.1**
CRNS				*e*Sg	**Sg**	**03 52 57.9**	**+0.8**
CRNS				IAML		03 53 01.3	
	comp=Z,4.7nm,0.2s						
GOLS	**Golise**	**1.43**	**165**	*i* Pg	**Pb**	**03 52 38.3**	**+0.1**
GOLS				*e*Sg	**Sn**	**03 52 56.0**	**-0.6**
GOLS				IAML		03 53 02.8	
	comp=Z,17nm,0.2s						
CADS	**Cadrg**	**1.49**	**219**	*i* Pg	**Pb**	**03 52 38.9**	**-0.3**
CADS				*i* Sg	**Sg**	**03 52 58.8**	**-0.3**
CADS				IAML		03 52 59.9	
	comp=Z,6.7nm,0.1s						
GBAS	**Gorenja Brezov**	**1.52**	**197**	*i* Pg	**Pb**	**03 52 40.0**	**+0.2**
GBAS				*e*Sg	**Sn**	**03 52 58.7**	**-0.2**
GBAS				IAML		03 53 02.1	
	comp=Z,2.9nm,0.2s						
CKRC	**Cesky Krumlov**	**1.52**	**340**	*e*PG	**Pb**	**03 52 40.1**	**+0.3**
CKRC				*e*SG	**Sg**	**03 52 59.9**	**-0.3**
KALN	**Kalnik**	**1.57**	**143**	*e*Pn	**Pg**	**03 52 42.1**	**+0.7**
KALN				Sg	**Sg**	**03 53 01.2**	**-0.5**
ROBS	**Robic**	**1.58**	**224**	*i* Pg	**Pb**	**03 52 40.5**	**-0.2**
ROBS				*e*Sg	**Sb**	**03 53 01.2**	**+0.4**
ROBS				IAML		03 53 05.3	
	comp=Z,4.2nm,0.2s						
CRES	**Cresnjevec Ost**	**1.59**	**171**	*e*Pg	**Pb**	**03 52 40.2**	**-0.6**
CRES				*e*Sg	**Sg**	**03 53 01.8**	**-0.4**
CRES				IAML		03 53 06.0	
	comp=Z,3.7nm,0.2s						
VISS	**Visnje**	**1.60**	**186**	*i* Pg	**Pb**	**03 52 40.5**	**-0.5**
VISS				*e*Sg	**Sg**	**03 53 02.1**	**-0.4**
VISS				IAML		03 53 07.8	
	comp=Z,5.1nm,0.2s						
PTJ	**Puntijarka**	**1.60**	**157**	*e*Pn	**Pg**	**03 52 42.4**	**+0.4**
PTJ				Sn	**Sg**	**03 53 03.7**	**+1.0**
LESA	**Schwarzleotal**	**1.64**	**272**	*e*Pg	**Pb**	**03 52 41.2**	**-0.5**
	comp=Z,2.0nm,0.3s,SNR=40						
LESA				*e*Sg	**Sg**	**03 53 05.5**	**+1.7**
	comp=Z,18nm,0.4s						
MODS	**Modra-Piesok**	**1.77**	**55**	*e*PG	**Pb**	**03 52 43.6**	**-0.4**
MODS				*e*SG	**Sb**	**03 53 06.6**	**+0.1**
MODS				*e*LG	Lg	03 53 10.8	
ABTA	**Abfaltersbach**	**1.87**	**251**	*e*Pg	**Pg**	**03 52 46.8**	**-0.4**
	comp=Z,5.9nm,0.5s,SNR=8.0						
ABTA				*e*Sg	**Sb**	**03 53 09.1**	**-0.3**
	comp=Z,5.9nm,0.5s						
KRUC	**Moravsky**	**1.89**	**27**	*e*PN	**Pb**	**03 52 45.1**	**-0.9**
KRUC				*e*SG	**Sb**	**03 53 10.3**	**+0.5**
TREC	**Trest**	**1.92**	**8**	*e*PG	**Pb**	**03 52 47.0**	**+0.4**
TREC				*e*SG	**Sg**	**03 53 12.1**	**-0.9**
	comp=Z,21nm,0.2s						
KHC	**Kasperske Hory**	**2.01**	**330**	*e*PG	**Pb**	**03 52 47.1**	**-1.1**
KHC				*e*SG	**Sb**	**03 53 13.2**	**-0.2**
	comp=Z,23nm,0.6s						
ZVC	**Zvikov**	**2.13**	**344**	*e*SG	**Sb**	**03 53 18.3**	**+1.4**
	comp=Z,14nm,0.2s						
VRAC	**Vranov**	**2.17**	**27**	*e*PN	**Pb**	**03 52 49.9**	**-0.9**
VRAC				*e*SG	**Sb**	**03 53 16.8**	**-1.0**
JAVC	**Velka Javorina**	**2.27**	**49**	*e*PN	**Pb**	**03 52 51.5**	**-1.1**
WTTA	**Wattenberg**	**2.35**	**268**	*e*Pg	**Pb**	**03 52 55.1**	**+1.1**
	comp=Z,26nm,0.2s,SNR=29						
WTTA				Sg	**Sg**	**03 53 28.6**	**+1.9**
	comp=Z,7.5nm,0.4s						
WATA	**Walderalm**	**2.39**	**270**	*e*Pg	**Pb**	**03 52 55.8**	**+1.2**
	comp=Z,3.4nm,0.2s,SNR=10						
WATA				Sg	**Sg**	**03 53 28.1**	**+0.2**
	comp=Z,4.3nm,0.2s						
SQTA	**Sankt Quirin**	**2.65**	**268**	*e*Pg	**Pb**	**03 53 00.1**	**+1.2**
	comp=Z,11nm,0.5s,SNR=7.6						
SQTA				*e*Sg	**Sg**	**03 53 36.8**	**+0.6**
	comp=Z,8.0nm,0.4s						
MOTA	**Moosalm**	**2.71**	**270**	*e*Pg	**Pg**	**03 53 01.8**	**-1.3**
	comp=Z,2.5nm,0.2s						
MOTA				Sg	**Sg**	**03 53 38.4**	**+0.2**
	comp=Z,5.1nm,0.3s						
PRA	**Prague**	**2.72**	**351**	*e*SG	**Sg**	**03 53 38.5**	**0.0**
MORC	**Moravsky Berou**	**2.89**	**33**	*e*PN	**Pn**	**03 52 59.4**	**+1.7**
MORC				*e*SN	**Sn**	**03 53 34.3**	**+1.6**
KRLC	**Kraliky**	**2.91**	**22**	*e*SG	**Sg**	**03 53 44.4**	**-0.3**
	comp=Z,8.3nm,0.3s						
RETA	**Reutte**	**2.94**	**273**	*e*Pg	**Pg**	**03 53 06.2**	**-1.3**
	comp=Z,0.1nm,0.1s,SNR=9.0						
RETA				Sg	**Sg**	**03 53 44.8**	**-0.7**
	comp=Z,2.9nm,0.3s						
FETA	**Feichten**	**2.99**	**265**	*e*Pg	**Pg**	**03 53 06.9**	**-1.7**
	comp=Z,4.7nm,0.4s,SNR=9.2						
PVCC	**Panska Ves**	**3.16**	**354**	*e*SG	**Sg**	**03 53 51.6**	**-1.0**
	comp=Z,17nm,0.3s						
DAVA	**Damuels**	**3.54**	**270**	*i* Pn	**Pn**	**03 53 09.6**	**+2.9**
	comp=Z,1.6nm,0.2s						
DAVA				*e*Pg	**Pg**	**03 53 17.3**	**-1.7**
	comp=Z,5.0nm,0.3s,SNR=6.6						
DAVA				Sg	**Sg**	**03 54 05.6**	**+0.6**
	comp=Z,4.2nm,0.4s						
CLL	**Collm**	**4.15**	**342**	*e*Sg	**Sg**	**03 54 21.0**	**-3.5**
	comp=Z,11nm,0.6s						

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*IDC **21** 03:53:40.1±1.4,36°.09N×142°.01E,h0^{km},mb3.8/8, mbtmp3.8/11,ML3.2/3,MS3.1/4,Error ellipse: s-maj=29.0km s-min=27.5km az=60.0*

*NIED **21** 03:53:43.4,36°.21N×141°.98E,h44^{km},MW3.8,Moment Tensor Solution.   s3   Moment tensor: Scale 10^{14}Nm; M$_{rr}$5.21; M$_{\theta\theta}$-0.52; M$_{\phi\phi}$-4.69; M$_{r\theta}$1.79; M$_{\theta\phi}$-2.38; M$_{\phi r}$0.72; Fault plane solution: M$_{0}$5.84000×10^{14} NP1: ϕ_{s}190.00000°,δ40.00000°,λ68.00000°.   NP2:ϕ_{s}38.00000°, δ54.00000°,λ108.00000°.*

*JMA **21** 03:53:43.4±0.2,36°.2N±0°.4×14°2E±°,h44^{km},MV3.6/36, FAR E OFF IBARAKI PREF*

ISC 21 03:53:43.2±0.9**,36°.15N**±0°.05×**142°.00E**±0°.08**,h23**^{km}**,n39,** σ**1^{s}.22**/34**,mb3.8**/8**,MS3.5**/3**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**1.16**	**280**	P	**Pb**	**03 54 03.4**	**-1.2**
JHYU				S	**Sb**	**03 54 18.4**	**-0.7**
JIHU	**Itakohorinouch**	**1.21**	**262**	*e*P	**Pb**	**03 54 04.5**	**-0.9**
JHO	**Hitachi**	**1.25**	**292**	*i* P	**Pn**	**03 54 03.9**	**-1.3**
ONAJ	**Iwakimizuishiy**	**1.36**	**315**	P	**Pn**	**03 54 05.7**	**-1.1**
JFK	**Kawauchi**	**1.51**	**324**	P	**Pn**	**03 54 08.3**	**-0.6**
BSO1	**Boso 1**	**1.71**	**210**	P	**Pb**	**03 54 11.7**	**-2.0**
BSO1				S	**Sb**	**03 54 33.2**	**-1.4**
BSO3	**Boso 3**	**1.81**	**223**	P	**Pb**	**03 54 13.4**	**-2.2**
BSO3				*e*S	**Sb**	**03 54 36.7**	**-1.0**
JOTO	**OTAMA OYAMA**	**1.94**	**317**	*i* P	**Pb**	**03 54 15.2**	**-2.8**
JMM	**Marumori**	**1.97**	**331**	P	**Pn**	**03 54 14.7**	**-0.4**
JMM	**Marumori**	**1.97**	**331**	P	**Pn**	**03 54 14.4**	**-0.7**
JAG	**Ashikaga**	**2.08**	**278**	*i* P	**Pn**	**03 54 16.4**	**-0.3**
JFY	**Yanaizu**	**2.23**	**305**	P	**Pn**	**03 54 19.2**	**+0.4**
JKT	**Katashina**	**2.30**	**286**	P	**Pn**	**03 54 20.0**	**+0.2**
JRY	**Ryogami san**	**2.52**	**268**	P	**Pn**	**03 54 22.4**	**-0.3**
JOD2	**Odawara 2**	**2.53**	**250**	P	**Pn**	**03 54 23.4**	**+0.4**
MJAR	**Matsushiro Arr**	**3.09**	**278**	Pn	**Pn**	**03 54 31.2**	**+0.6**
	1.0nm,0.3s,baz=102,slow=8.8,SNR=83						
MJAR				LR	LR	03 55 54.1	
	comp=Z,69nm,18.1s,baz=264,slow=43						
	19nm,0.7s						
MAJO	**Matsushiro**	**3.09**	**278**	P	**Pn**	**03 54 32.0**	**+1.4**
JHJ2	**Mitsune**	**3.53**	**211**	P	**Pn**	**03 54 36.4**	**-0.2**
JSD	**Sado**	**3.54**	**303**	P	**Pn**	**03 54 37.8**	**+1.1**
JGF	**Kuroka**	**3.81**	**263**	P	**Pn**	**03 54 42.7**	**+2.1**
ERM	**Erimo**	**5.92**	**8**	P	**Pn**	**03 55 07.8**	**-1.7**
ASAJ	**Asahikawa**	**7.97**	**3**	Pn	**Pn**	**03 55 38.2**	**+0.6**
	0.6nm,0.3s,baz=176,slow=13,SNR=1.6						
	1.5nm,0.3s						
USRK	**Ussuriysk Ar.**	**11.10**	**319**	Pn	**Pn**	**03 56 22.5**	**+2.1**
	0.1nm,0.3s,baz=101,slow=13,SNR=8.4						
	0.7nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**27.29**	**120**	T	T	04 28 09.9	
	baz=312,slow=74,SNR=9.3						
H11N1	**WAKE ISLAND Hy**	**27.30**	**120**	T	T	04 28 18.2	
	baz=312,slow=74,SNR=8.5						
H11N3	**WAKE ISLAND Hy**	**27.31**	**120**	T	T	04 28 21.2	
	baz=312,slow=74,SNR=7.3						
H11S1	**WAKE ISLAND Hy**	**27.98**	**122**	T	T	04 28 55.5	
	baz=314,slow=75,SNR=12						
H11S3	**WAKE ISLAND Hy**	**27.98**	**122**	T	T	04 28 52.7	
	baz=314,slow=75,SNR=12						
H11S2	**WAKE ISLAND Hy**	**28.00**	**122**	T	T	04 28 53.9	
	baz=314,slow=75,SNR=11						
SONM	**Songino Array**	**28.68**	**305**	P	**P**	**03 59 39.1**	**+0.7**
	2.0nm,0.9s,baz=103,slow=8.4,SNR=6.6						
	2.0nm,0.9s						
ZALV	**Zalesovo Beam**	**42.86**	**313**	P	**P**	**04 01 39.6**	**+0.2**
	0.5nm,0.4s,baz=94,slow=8.9,SNR=3.6						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**44.99**	**303**	P	**P**	**04 01 57.0**	**+0.3**
	0.9nm,0.7s,baz=80,slow=10,SNR=8.6						
MKAR				LR	LR	04 20 47.7	
	comp=Z,26nm,21.6s,baz=150,slow=36						
	0.9nm,0.7s						
KURBB	**Kurchatov Arra**	**46.92**	**309**	P	**P**	**04 02 11.6**	**-0.2**
	1.1nm,0.6s,baz=83,slow=8.2,SNR=7.2						
	1.1nm,0.6s						
ILAR	**Eielson Array**	**49.99**	**32**	P	**P**	**04 02 36.3**	**+1.1**
	0.5nm,0.6s,baz=262,slow=6.7,SNR=7.5						
	0.5nm,0.6s						
AAK	**Ala-Archa**	**51.33**	**299**	LR	LR	04 25 58.7	
	comp=Z,38nm,18.1s,baz=145,slow=38						
BVAR	**Borovoye Array**	**51.52**	**313**	P	**P**	**04 02 48.2**	**+1.3**
	1.2nm,0.9s,baz=81,slow=9.2,SNR=4.6						
	1.2nm,0.9s						
WRA	**Warramunga Arr**	**56.26**	**189**	P	**P**	**04 03 22.1**	**+0.3**
	1.4nm,1.1s,baz=8.2,slow=7.0,SNR=3.7						
	1.4nm,1.1s						
AKASG	**Malin Array Be**	**75.28**	**323**	P	**P**	**04 05 24.3**	**+0.1**
	0.7nm,0.6s,baz=49,slow=4.9,SNR=5.0						
	0.7nm,0.6s						
SADO	**Sadowa**	**91.26**	**28**	LR	LR	04 50 08.8	
	comp=Z,16nm,18.4s,baz=306,slow=37						

IDC 21 04:01:58.5±10.0**,21°.89S×148°.72E,h0^{km},mbtmp3.0**/2**, ML2.8**/2**,Error ellipse: s-maj=95.6km s-min=81.2km az=29.0,Queensland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.57**	**276**	Pn	Pn	04 05 12.9	+0.5
	baz=97,slow=13,SNR=0.9						
WRA				Lg	Lg	04 09 07.3	
	0.1nm,0.3s,baz=105,slow=25,SNR=5.0						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**13.78**	**260**	Pn	Pn	04 05 15.4	+0.2
	0.1nm,0.3s,baz=86,slow=13,SNR=1.7						
ASAR				Lg	Lg	04 09 09.2	
	0.1nm,0.3s,baz=80,slow=29,SNR=4.9						
	0.2nm,0.5s						
I22FR	**PORTLAGUERRE I**	**16.81**	**94**	I	I	05 33 00.0	
	0.1nm,0.7s,baz=264,slow=314,SNR=5.7						

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*DNK **21** 04:13:29.4±2.0,78°.93N×3°.64E,h36^{km}±18^{km},ML1.3*

*FCIAR **21** 04:13:29.0,79°.30N×4°.94E,h10^{km},station ZFI2 has station magnitude of 3.50 station OMEGA has station magnitude of 3.50*

*BER **21** 04:13:29.9±3.6,79°.01N×3°.40E,h26^{km}±17^{km},Mw3.3, ML1.3(DNK),Confirmed Earthquake*

ISC 21 04:13:25.6±1.8**,78°.97N**±0°.06×**3°.42E**±0°.05**,h25**^{km}±17^{km}**, n21,**σ**2^{s}.68**/38**,2C,Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.64**	**87**	⇑*i*P	**Pb**	**04 13 55.1**	**-0.1**
KBS				*e*S	**Sn**	**04 14 12.8**	**-0.4**
KBS				IAML		04 14 17.6	
	comp=Z,17nm,0.2s						
KBS	**Kingsbay**	**1.64**	**87**	*e*P	**Pb**	**04 13 55.1**	**-0.1**
KBS				*e*S	**Sn**	**04 14 12.2**	**-0.9**
BRBB	**Barentsburg B**	**2.33**	**107**	*e*P	**Pb**	**04 14 06.1**	**-0.7**
BRBA	**Barentsburg A**	**2.34**	**108**	*e*P	**Pb**	**04 14 06.5**	**-0.6**
BRBA				*e*S	**Sn**	**04 14 31.9**	**+1.5**
SPA0	**Spitsbergen Ar**	**2.69**	**101**	*e*P	**Pn**	**04 14 09.8**	**+2.5**
SPA0				*e*S	**Sn**	**04 14 40.0**	**+0.9**
SPA0	**Spitsbergen Ar**	**2.69**	**101**	⇑*i*P	**Pb**	**04 14 10.8**	**-2.3**
SPA0				*e*S	**Sn**	**04 14 40.2**	**+1.1**
SPA0				IAML		04 14 45.2	
	comp=Z,7.8nm,0.6s						
HSPB	**Hornsund (broa**	**3.21**	**122**	*e*P	**Pn**	**04 14 13.3**	**-1.1**
HSPB				*e*S	**Sn**	**04 14 50.0**	**-1.7**
HSPB	**Hornsund (broa**	**3.21**	**122**	*e*P	**Pb**	**04 14 18.3**	**-3.5**
HSPB				*e*S	**Sn**	**04 14 52.9**	**+1.2**
HSPB				IAML		04 14 57.1	
	comp=Z,2.2nm,0.4s						
NOR	**Nord**	**4.28**	**317**	*e*P	**Pn**	**04 14 30.7**	**+1.7**
NOR				*e*S	**Sn**	**04 15 18.1**	**0.0**
NOR				IAML		04 15 21.0	
	comp=Z,1.0nm,0.2s						
NOR	**Nord**	**4.28**	**317**	*e*P	**Pn**	**04 14 30.7**	**+1.7**
NOR				*e*S	**Sn**	**04 15 18.1**	**0.0**
NOR				IAML		04 15 21.0	
	comp=Z,1.0nm,0.2s						
DAG	**Danmarks Havn**	**5.12**	**256**	*e*P	**Pn**	**04 14 41.9**	**+1.3**
DAG				*e*S	**Sn**	**04 15 35.3**	**-3.6**
DAG				IAML		04 15 44.6	
	comp=Z,1.9nm,0.2s						
DAG	**Danmarks Havn**	**5.12**	**256**	*e*P	**Pn**	**04 14 41.9**	**+1.3**
DAG				*e*S	**Sn**	**04 15 35.3**	**-3.6**
DAG				IAML		04 15 44.6	
	comp=Z,1.9nm,0.2s						
HOPEN	**Hopen**	**5.19**	**107**	*e*P	**Pn**	**04 14 43.4**	**+1.8**
HOPEN				*e*S	**Sn**	**04 15 39.4**	**-1.1**
HOPEN	**Hopen**	**5.19**	**107**	*e*P	**Pn**	**04 14 44.5**	**+3.0**
HOPEN				*e*S	**Sn**	**04 15 39.7**	**-0.9**
HOPEN				IAML		04 15 42.6	
	comp=Z,3.4nm,0.4s						
DBG	**Daneborg**	**7.14**	**241**	*e*P	**Pn**	**04 15 09.5**	**+1.3**
DBG				*e*S	**Sn**	**04 16 23.7**	**-4.7**
DBG				IAML		04 16 26.8	
	comp=Z,0.7nm,0.4s						
DBG	**Daneborg**	**7.14**	**241**	*e*P	**Pn**	**04 15 09.5**	**+1.3**
DBG				*e*S	**Sn**	**04 16 23.7**	**-4.7**
DBG				IAML		04 16 26.8	
	comp=Z,0.7nm,0.4s						
ZFI2	**Zemlya Franca-**	**7.82**	**56**	*e*P	**Pn**	**04 15 19.5**	**+2.0**
ZFI2				*e*S	**Sn**	**04 16 39.3**	**-5.7**
	comp=Z,14nm,1.5s						
OMEGA	**Omega**	**7.83**	**56**	*e*P	**Pn**	**04 15 19.5**	**+1.7**
OMEGA				*e*S	**Sn**	**04 16 39.3**	**-6.1**
	comp=Z,12nm,1.7s						
JNW	**Jan Mayen West**	**8.53**	**207**	*e*P	**Pn**	**04 15 31.0**	**+3.8**
JNE	**Jan Mayen East**	**8.55**	**207**	*e*P	**Pn**	**04 15 31.1**	**+3.5**
JMIC	**Jan Mayen**	**8.57**	**207**	*e*P	**Pn**	**04 15 31.2**	**+3.3**

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*SOME **21** 04:14:12.9,39°.87N×74°.15E,h5^{km}*

*KRNET **21** 04:14:14.9±0.1,39°.92N×74°.35E,h20^{km},mb3.5*

*NNC **21** 04:14:14.8±2.9,39°.80N×74°.29E,h0^{km},mb3.8,mpv3.4, Error ellipse: s-maj=21.8km s-min=10.8km az=166.0*

ISC 21 04:14:15.1±1.1**,39°.88N**±0°.05×**74°.33E**±0°.03**,h10**^{km}**,n44,** σ**1^{s}.82**/77**,31C-21D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALK	**Salom-Alik**	**1.08**	**339**	⇓*i*P	**Pg**	**04 14 34.7**	**-1.1**
SALK				⇓*e*S	**Sg**	**04 14 49.2**	**-0.6**
OHH	**Osh**	**1.35**	**299**	⇓*i*P	**Pn**	**04 14 39.8**	**-0.3**
OHH				⇓*e*S	**Sg**	**04 14 58.1**	**-0.4**
JNKS	**Jany-Kuch**	**1.55**	**40**	⇓*e*P	**Pn**	**04 14 42.8**	**-0.2**
JNKS				⇓*e*S	**Sb**	**04 15 03.3**	**-0.5**
ARSB	**Arslanbob**	**1.77**	**325**	⇑*e*P	**Pb**	**04 14 47.1**	**-0.7**
ARSB				⇑*e*S	**Sg**	**04 15 10.6**	**-1.5**
ARLS	**Aral**	**1.98**	**360**	⇑*e*P	**Pb**	**04 14 50.0**	**-1.3**
ARLS				⇑*e*S	**Sb**	**04 15 16.2**	**+0.1**

DRK	Karamyk	1.99	259	⇑eP	Pb	04 14 51.3	-0.3
DRK				⇑eS	Sg	04 15 17.8	-1.4
NRN	Naryn	2.00	39	⇑eP	Pn	04 14 50.2	+0.9
NRN				⇑eS	Sb	04 15 16.1	-0.9
AML	Almayashu	2.30	348	P	Pb	04 14 57.4	+0.5
	SNR=11						
UCH	Uchtor	2.35	3	P	Pg	04 14 58.8	-1.4
	SNR=6.2						
UCH	Uchtor	2.35	3	⇑eP	Pb	04 14 55.6	-2.2
UCH				⇑eS	Sb	04 15 24.7	-2.4
ARK	Arkit	2.63	318	⇓eP	Pn	04 14 59.0	+1.3
ARK				⇓eS	Sn	04 15 31.3	+1.6
BTK	Batken	2.71	275	⇑eP	Pb	04 15 00.9	-2.7
BTK				⇑eS	Sb	04 15 34.5	-2.4
AAK	Ala-Archa	2.76	2	P	Pg	04 15 06.7	-1.3
	SNR=11						
AAK	Ala-Archa	2.76	2	Pg	Pg	04 15 05.8	-2.2
	2.2nm,0.5s						
AAK				Lg	Lg	04 15 43.5	
	4.9nm,0.7s						
AAK	Ala-Archa	2.76	2	⇑eP	Pn	04 15 01.0	+1.5
AAK				⇑eS	Sn	04 15 34.7	+1.7
ULHL	Ulahol	2.77	31	P	Pb	04 15 06.1	+1.3
	SNR=15						
ULHL	Ulahol	2.77	31	⇓eP	Pn	04 15 01.1	+1.4
ULHL				⇓eS	Sn	04 15 35.0	+1.6
EKS2	Erkin-Say	2.81	352	⇑eP	Pn	04 15 01.8	+1.6
EKS2				⇑eS	Sn	04 15 36.1	+1.9
KBK	Karagaybulak	2.81	9	P	Pb	04 15 04.8	-0.8
	SNR=7.6						
KBK	Karagaybulak	2.81	9	⇓eP	Pn	04 15 01.8	+1.5
KBK				⇓eS	Sn	04 15 36.1	+1.7
BOOM	Boomskoye usch	2.88	24	⇓eP	Pn	04 15 02.7	+1.5
BOOM				⇓eS	Sn	04 15 37.5	+1.6
TRKS	Terek-Say	2.93	305	⇑eP	Pn	04 15 02.9	+1.0
TRKS				⇑eS	Sn	04 15 38.5	+1.2
MNAS	Manas	2.95	333	⇑eP	Pn	04 15 03.8	+1.7
MNAS				⇑eS	Sn	04 15 39.6	+2.0
MRKS	Merke	2.98	344	eP	Pb	04 15 08.0	-0.3
	9.1nm,0.5s						
MRKS				eS	Sg	04 15 48.0	-2.8
	18nm,0.5s						
KDJ	Kajisay	3.12	43	⇑eP	Pn	04 15 06.1	+1.7
KDJ				⇑eS	Sn	04 15 43.3	+1.5
TKM2	Tokmak 2	3.19	17	P	Pb	04 15 09.8	-2.0
	SNR=8.0						
TKM2	Tokmak 2	3.19	17	⇑Pn	Pb	04 15 09.4	-2.5
	9.5nm,0.7s						
TKM2				⇑Sn	Sb	04 15 50.9	+0.1
	18nm,0.5s						
TKM2	Tokmak 2	3.19	17	⇓eP	Pn	04 15 06.9	+1.5
TKM2				⇓eS	Sn	04 15 44.9	+1.3
GAR	Garm	3.23	256	⇓eP	Pn	04 15 08.3	+2.3
GAR				⇓eS	Sn	04 15 47.4	+2.8
USP	Ospenovka	3.39	2	⇑eP	Pn	04 15 09.7	+1.6
USP				⇑eS	Sn	04 15 49.6	+1.3
KST	Kastek	3.39	21	eP	Pb	04 15 16.8	+1.5
	11nm,0.4s						
KST				eS	Sg	04 16 02.6	-1.4
	25nm,0.5s						
MTBS	Maitube	3.61	25	Pg	Pb	04 15 20.6	+1.6
	12nm,0.5s						
MTBS				Lg	Lg	04 16 10.2	
	14nm,0.6s						
MTBS	Maitube	3.61	25	eP	Pb	04 15 20.2	+1.2
	2.4nm,0.1s						
MTBS				eS	Sg	04 16 08.7	-2.4
	9.4nm,0.1s						
MDOK	Medeo	3.86	31	Pg	Pb	04 15 25.3	+1.9
	10nm,0.8s						
MDOK				Pg	Pb	04 15 25.3	+1.9
	9.8nm,0.6s						
MDOK				Lg	Lg	04 16 18.7	
	10nm,1.1s						
MDOK				Lg	Lg	04 16 22.2	
	9.8nm,1.3s						
KRBS	Karabastau	3.94	14	Pg	Pb	04 15 26.8	+2.1
	9.9nm,0.4s						
KRBS				Lg	Lg	04 16 20.3	
	12nm,0.6s						
KOTS	Kotyrbulak	3.95	31	Pg	Pg	04 15 27.4	-3.3
	12nm,0.5s						
KOTS				Lg	Lg	04 16 21.4	
	33nm,0.7s						
KOTS	Kotyrbulak	3.95	31	eP	Pg	04 15 27.4	-3.3
	12nm,0.5s						
KOTS				eS	Sg	04 16 21.4	-0.5
	33nm,0.7s						
PRZ	Przheval'sk	4.02	48	⇓eP	Pn	04 15 18.8	+1.9
PRZ				⇓eS	Sn	04 16 05.3	+1.1
KTBS	Karatobe	4.21	24	Pg	Pb	04 15 31.9	+2.6
	7.9nm,0.5s						
KTBS				Lg	Lg	04 16 28.8	
	13nm,0.5s						
KK31	Karatay Array	4.31	320	⇑Pn	Pn	04 15 22.8	+2.0
	0.4nm,0.3s,baz=123,slow=12,SNR=4.7						
KK31				⇑Pg	Pb	04 15 32.9	+1.9
	0.8nm,0.3s,baz=146,slow=16,SNR=9.5						
KK31				⇑Sn	Sn	04 16 15.0	+3.8
	2.7nm,0.5s,baz=130,slow=25,SNR=4.5						
KK31				⇓Lg	Lg	04 16 31.7	
	4.0nm,0.3s,baz=126,slow=29,SNR=5.0						
KKAR	Karatay Array	4.31	320	⇑eP	Pn	04 15 22.7	+1.9
KKAR				⇑eS	Sn	04 16 12.3	+1.2
BRLS	Borolday	4.62	314	Pg	Pb	04 15 38.2	+2.0
	3.5nm,0.5s						
BRLS				Lg	Lg	04 16 39.9	
	5.4nm,0.4s						
BRLS	Borolday	4.62	314	eP	Pb	04 15 35.2	-0.9
	1.1nm,0.1s						
BRLS				eS	Sb	04 16 34.4	+2.5
	4.3nm,0.3s						
BTLS	Baital	5.16	358	eP	Pb	04 15 48.6	+3.2
	0.8nm,0.6s						
BTLS				eS	Sg	04 16 57.7	-3.1
	4.9nm,0.7s						

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*BER **21** 04:20:40.6±4.6, 79°.86N×2°.48E, h10^{km}, Mw3.7, ML2.8(NAO), Confirmed Earthquake*

*NAO **21** 04:20:40.5±0.7, 79°.82N×2°.59E, h15^{km}, ML2.8*

*FCIAR **21** 04:20:41.0, 80°.00N×4°.71E, h10^{km}, station ZFI2 has station magnitude of 3.60 station OMEGA has station magnitude of 3.70*

*DNK **21** 04:20:42.2±4.5, 79°.81N×2°.84E, h36^{km}±33^{km}, ML1.9*

*KOLA **21** 04:20:44.3, 79°.76N×4°.53E, h0^{km}, ML2.1, Error ellipse: s-maj=47.2km s-min=26.7km az=30.0, Greenland sea, Knipovich ridge, north*

ISC 21 04:20:37.5±1.0**, 79°.82N**±0°.06×**2°.44E**±0°.05**, h10^{km}, n37, σ2ˢ.28**/62**, 2C, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	1.98	112	Pn	Pn	04 21 12.2	+1.2
KBS				Sn	Sn	04 21 33.9	-1.7
KBS	Kingsbay	1.98	112	P	Pn	04 21 11.7	+0.8
KBS				S	Sn	04 21 30.8	-4.9
KBS	Kingsbay	1.98	112	⇑iP	Pn	04 21 12.0	+1.1
KBS				eS	Sn	04 21 33.4	-2.3
KBS				IAML		04 21 43.8	
	comp=Z,22nm,0.5s						
KBS	Kingsbay	1.98	112	⇑iP	Pn	04 21 12.1	+1.2
KBS				i S	Sn	04 21 33.8	-1.9
BRBB	Barentsburg B	2.85	121	Pn	Pn	04 21 26.1	+3.3
BRBB				Sn	Sn	04 21 57.5	+0.4
BRBB	Barentsburg B	2.85	121	P	Pn	04 21 25.8	+3.0
BRBB				S	Sn	04 21 58.3	+1.2
BRBB	Barentsburg B	2.85	121	Pn	Pn	04 21 26.1	+3.3
BRBB				Sn	Sn	04 21 57.5	+0.4
BRBA	Barentsburg A	2.87	122	Pn	Pn	04 21 25.8	+2.6
BRBA				Sn	Sn	04 21 57.2	-0.5
BRBA	Barentsburg A	2.87	122	Pn	Pn	04 21 25.8	+2.6
BRBA				Sn	Sn	04 21 57.2	-0.5
BRBA				IAML		04 22 00.6	
	comp=Z,16nm,0.5s						
SPA0	Spitsbergen Ar	3.13	115	Pn	Pn	04 21 28.9	+2.1
	baz=291,slow=18						
SPA0				Sn	Sn	04 22 03.4	-0.7
	baz=291,slow=37						
SPA0	Spitsbergen Ar	3.13	115	eP	Pn	04 21 28.6	+1.8
SPA0				eS	Sn	04 22 03.0	-1.2
SPA0	Spitsbergen Ar	3.13	115	Pn	Pn	04 21 28.9	+2.1
	baz=291,slow=18						
SPA0				Sn	Sn	04 22 03.4	-0.7
	baz=291,slow=37						
SPA0				IAML		04 22 14.8	
	comp=Z,19nm,0.6s						
SPITS	Spitsbergen Ar	3.13	115	P	Pn	04 21 28.6	+1.8
SPITS				S	Sn	04 22 02.6	-1.6
NOR	Nord	3.56	309	Pn	Pn	04 21 35.7	+3.0
NOR				Sn	Sn	04 22 12.8	-2.0
NOR	Nord	3.56	309	eP	Pn	04 21 35.1	+2.4
NOR				eS	Sn	04 22 11.9	-2.9
NOR				IAML		04 22 27.6	
	comp=Z,3.4nm,0.2s						
NOR	Nord	3.56	309	eP	Pn	04 21 35.1	+2.4
NOR				eS	Sn	04 22 11.9	-2.9
NOR				IAML		04 22 27.6	
	comp=Z,3.4nm,0.2s						
HSPB	Hornsund (broa	3.86	130	Pn	Pn	04 21 39.7	+3.0
HSPB				Sn	Sn	04 22 20.9	-1.1
HSPB	Hornsund (broa	3.86	130	P	Pn	04 21 39.7	+3.0
HSPB				S	Sn	04 22 19.5	-2.5
HSPB	Hornsund (broa	3.86	130	eP	Pn	04 21 37.3	+0.6
HSPB				eS	Sn	04 22 19.5	-2.5
HSPB	Hornsund (broa	3.86	130	eP	Pn	04 21 39.8	+3.0
HSPB				eS	Sn	04 22 19.8	-2.2
HSPB				IAML		04 22 26.1	
	comp=Z,10.0nm,0.5s						
DAG	Danmarks Havn	5.24	245	i P	Pn	04 21 56.9	+1.3
DAG				eS	Sn	04 22 51.5	-4.5
DAG				IAML		04 22 56.4	
	comp=Z,10nm,0.2s						
DAG	Danmarks Havn	5.24	245	i P	Pn	04 21 56.9	+1.3
DAG				eS	Sn	04 22 51.5	-4.5
DAG				IAML		04 22 56.4	
	comp=Z,10nm,0.2s						
HOPEN	Hopen	5.67	114	Pn	Pn	04 22 02.9	+1.4
HOPEN				Sn	Sn	04 23 03.7	-2.7
HOPEN	Hopen	5.67	114	eP	Pn	04 22 02.7	+1.2
HOPEN				eS	Sn	04 23 02.3	-4.1
HOPEN	Hopen	5.67	114	eP	Pn	04 22 03.4	+1.9
HOPEN				eS	Sn	04 23 03.8	-2.7
HOPEN				IAML		04 23 06.6	
	comp=Z,4.0nm,0.4s						
DBG	Daneborg	7.44	234	Pn	Pn	04 22 27.7	+1.9
DBG				Sn	Sn	04 23 44.4	-5.7
DBG	Daneborg	7.44	234	i P	Pn	04 22 27.1	+1.2
DBG				eS	Sn	04 23 42.2	-7.9
DBG				IAML		04 23 48.8	
	comp=Z,5.2nm,1.0s						
DBG	Daneborg	7.44	234	i P	Pn	04 22 27.1	+1.2
DBG				eS	Sn	04 23 42.2	-7.9
DBG				IAML		04 23 48.8	
	comp=Z,5.2nm,1.0s						
ZFI2	Zemlya Franca-	7.52	61	eP	Pn	04 22 28.2	+1.3
ZFI2				eS	Sn	04 23 44.7	-7.4
	comp=Z,17nm,0.6s						
OMEGA	Omega	7.54	61	eP	Pn	04 22 28.2	+1.0
OMEGA				eS	Sn	04 23 44.7	-7.9
	comp=Z,18nm,1.9s						
JNW	Jan Mayen West	9.22	203	eP	Pn	04 22 52.7	+2.5
JNW				eS	Sn	04 24 28.7	-5.1
JNW				IAML		04 24 43.4	
	comp=Z,6.1nm,0.5s						
JNE	Jan Mayen East	9.25	202	eP	Pn	04 22 53.4	+2.7
JNE				IAML		04 24 33.4	
	comp=Z,11nm,0.5s						
JMIC	Jan Mayen	9.27	203	eP	Pn	04 22 53.3	+2.4
JMIC				eS	Sn	04 24 30.0	-5.0
JMIC				IAML		04 24 39.5	
	comp=Z,5.5nm,0.5s						
NEEM	North Greenlan	10.47	285	eP	Pn	04 23 06.7	-0.9
NEEM				i S	Sn	04 24 56.3	-8.5
NEEM				IAML		04 24 59.1	
	comp=Z,5.7nm,0.3s						
NEEM	North Greenlan	10.47	285	eP	Pn	04 23 06.7	-0.9
NEEM				i S	Sn	04 24 56.3	-8.5
NEEM				IAML		04 24 59.1	
	comp=Z,5.7nm,0.3s						
SUMG	Summit	11.81	255	i P	Pn	04 23 26.1	+0.2
SUMG				i S	Sn	04 25 27.6	-10
SUMG				IAML		04 25 35.5	
	comp=Z,0.9nm,0.3s						
SUMG	Summit	11.81	255	i P	Pn	04 23 26.1	+0.2
SUMG				i S	Sn	04 25 27.6	-10
SUMG				IAML		04 25 35.5	
	comp=Z,0.9nm,0.3s						

JMA 21 04:25:06.3±0.4**, 30°.1N**±0°.8×**14°3E**±°**, h40^{km}, MV3.7**/12**, NEAR TORISHIMA IS, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.01	192	eS	Sn	04 26 28.1	+1.7
JHJ2	Mitsune	4.02	320	eP	Pn	04 26 07.2	+1.9
JHJ2				eS	Sn	04 26 53.6	+2.4
BSO1	Boso 1	4.86	341	eP	Pn	04 26 18.7	+2.3
BSO1				eS	Sn	04 27 13.6	+2.5
BSO3	Boso 3	5.14	338	eP	Pn	04 26 23.9	+3.4
BSO3				eS	Sn	04 27 21.9	+3.4
JOD2	Odawara 2	6.10	329	eP	Pn	04 26 37.2	+3.2
JRY	Ryogami san	6.82	332	eP	Pn	04 26 47.1	+3.3
JAG	Ashikaga	6.97	337	eP	Pn	04 26 49.0	+3.1
JAG				eS	Sn	04 28 03.6	-0.4

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*IDC **21** 04:37:18.5±0.8, 23°.79N×125°.77E, h0^{km}, mb3.9/12, mbtmp3.9/14, ML3.6/2, MS3.3/7, Error ellipse: s-maj=35.4km s-min=17.3km az=72.0*

*NEIC **21** 04:37:20.1±2.2, 23°.85N±0°.10×126°.07E±0°.09, h10^{km}±1^{km}, mb4.3/13, Error ellipse: s-maj=17.9km s-min=11.7km az=146.0*

*JMA **21** 04:37:20.4±0.2, 23°.8N±0°.8×126°.1E±0°.8, h54^{km}, MD4.5/22, MV4.1/22, NEAR MIYAKOJIMA ISLAND*

ISC 21 04:37:19.4±2.1**, 23°.86N**±0°.06×**126°.10E**±0°.05**, h8^{km}**±12^{km}**, n83, σ1ˢ.24**/75**, mb4.1**/18**, MS3.2**/7**, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	Gusukube	1.09	325	P	Pg	04 37 40.8	+0.3
JOGS				eS	Sn	04 37 56.0	-0.3
JOGS	Gusukube	1.09	325	A	A	04 37 40.8	
	comp=N,23nm,1.1s,comp=E,28nm,1.5s						
JMJ2	Miyako jima3	1.12	321	eP	Pn	04 37 41.0	-0.4
JMJ2				eS	Sb	04 37 55.6	-0.2
JMJ2	Miyako jima3	1.12	321	A	A	04 37 41.0	
	comp=N,21nm,2.1s,comp=E,18nm,2.8s						
JMJ	Miyako jima 2	1.20	322	P	Pn	04 37 41.1	-1.3
JIRB	Irabujima	1.28	319	eP	Pb	04 37 43.4	-0.3
JIRB				S	Sn	04 38 00.6	-0.3
JIRB	Irabujima	1.28	319	A	A	04 37 43.4	
	comp=N,10.0nm,6.5s,comp=E,15nm,1.8s						
JIKM	Ikemajima	1.31	324	eP	Pn	04 37 43.5	-0.5
JIKM				eS	Sn	04 38 01.3	-0.4
JIKM	Ikemajima	1.31	324	A	A	04 37 43.5	
	comp=N,17nm,2.9s,comp=E,14nm,2.4s						
JTJ	Tarama	1.49	302	P	Pn	04 37 46.1	-0.3
JTJ				eS	Sn	04 38 04.6	-1.5
JTJ	Tarama	1.49	302	A	A	04 37 46.1	
	comp=N,19nm,2.5s,comp=E,12nm,1.1s						
JISG	Ishigakijimahi	1.79	294	eP	Pn	04 37 50.1	-0.4
JISG				eS	Sn	04 38 12.6	-0.8
JISG	Ishigakijimahi	1.79	294	A	A	04 37 50.1	
	comp=N,6.0nm,3.9s,comp=E,7.0nm,3.7s						
JIJ	Ishigaki jima	1.86	286	P	Pn	04 37 51.6	+0.1
JKRS	Kuro-shima	1.95	281	eP	Pn	04 37 53.1	+0.3
JKRS				eS	Sn	04 38 16.4	-0.9
JKRS	Kuro-shima	1.95	281	A	A	04 37 53.1	
	comp=N,16nm,3.5s,comp=E,13nm,1.9s						
HATJ	Hateruma jima	2.11	276	eP	Pn	04 37 54.4	-0.5
HATJ				eS	Sn	04 38 18.7	-2.7
HATJ	Hateruma jima	2.11	276	A	A	04 37 54.4	
	comp=N,8.0nm,3.1s,comp=E,8.0nm,1.7s						
IRIF	Iriomote-Funau	2.22	283	P	Pn	04 37 56.3	-0.1
IRIF				S	Sn	04 38 23.1	-0.9
IRIF	Iriomote-Funau	2.22	283	A	A	04 37 56.3	
	comp=N,7.0nm,5.0s,comp=E,6.0nm,1.7s						
JKE	Kume jima 2	2.53	14	eP	Pn	04 38 01.1	+0.4
JJT3	Tamagusuku3	2.74	34	eP	Pn	04 38 03.5	-0.1
YOJ	Yonaguni jima	2.88	283		Pn	04 38 06.4	+0.8
YOJ	Yonaguni jima	2.88	283	eP	Pn	04 38 06.0	+0.4
JAGN	Aguni-jima	2.90	21	P	Pn	04 38 05.5	-0.4
JYNG	Yonagunijimaku	2.94	282	eP	Pn	04 38 06.3	-0.1
JYNG				S	Sn	04 38 39.6	-2.2
JNTH	Nagotoyohara	3.17	33	eP	Pn	04 38 09.7	+0.2
JOW	Kunigami	3.55	33		Pn	04 38 14.6	-0.2
JOW	Kunigami	3.55	33	Pn	Pn	04 38 13.8	-1.0
	comp=E,22nm,0.3s,baz=131,slow=24,SNR=14						
JOW				Sn	Sn	04 38 54.1	-2.9
	comp=E,15nm,0.3s,baz=256,slow=19,SNR=4.1						
JOW	Kunigami	3.55	33	P	Pn	04 38 14.6	-0.2
JOW	Kunigami	3.55	33	P	Pn	04 38 14.5	-0.2
JYRO	Yoronjima	3.80	34	eP	Pn	04 38 17.7	-0.5
NACB	Ninganchiao	4.13	275		Pn	04 38 21.5	-1.3
NACB	Ninganchiao	4.13	275	P	Pn	04 38 21.5	-1.3
YHNB	Yeheng	4.39	282	P	Pn	04 38 27.0	+0.6
YULB	Yu-li	4.43	265		Pn	04 38 24.8	-2.1
YULB	Yu-li	4.43	265	P	Pn	04 38 25.4	-1.5
SSLB	Suanglung	4.71	270		Pn	04 38 29.2	-1.6
SSLB	Suanglung	4.71	270	P	Pn	04 38 29.2	-1.6
TWGBT	Beinan	4.73	258	P	Pn	04 38 29.7	-1.3
TWG	Pinlang	4.74	258		Pn	04 38 29.0	-2.1
JMZ	Minamidaito 2	5.04	66	P	Pn	04 38 32.6	-2.7
TPUB	Ta-pu	5.05	265		Pn	04 38 34.0	-1.5
JNU	Nakatsue	10.13	23	Pn	Pn	04 39 40.9	-4.3
	comp=E,0.5nm,0.3s,baz=4.8,slow=5.7,SNR=4.0						
KSRS	Korea Array	13.64	6	Pn	Pn	04 40 33.7	+0.7
	comp=E,0.2nm,0.3s,baz=179,slow=13,SNR=4.4						
	comp=E,0.6nm,0.3s						
MJAR	Matsushiro Arr	16.39	37	Pn	P	04 41 15.1	+2.5
	comp=E,0.2nm,0.3s,baz=223,slow=11,SNR=5.8						
	comp=E,1.6nm,0.3s						
JMM	Marumori	18.78	39	P	P	04 41 38.5	-0.5
JMM				IAmb	IAmb	04 41 41.7	
	comp=Z,10nm,0.7s						
GUMO	Guam	20.48	117	LR	LR	04 48 46.3	
	comp=Z,36nm,21.6s,baz=107,slow=33						
TOLI2	Tolitoli	23.20	194	P	P	04 42 26.5	-0.3
TOLI2				IAmb	IAmb	04 42 29.3	
	comp=Z,5.9nm,0.8s						
SONM	Songino Array	28.60	332	LR	LR	04 55 34.8	
	comp=Z,56nm,18.7s,baz=110,slow=38						
PETK	Petropavlovsk-	37.71	31	LR	LR	05 02 09.6	
	comp=Z,29nm,18.4s,baz=166,slow=39						
H11N1	WAKE ISLAND Hy	38.01	88	T	T	05 25 08.9	
	baz=283						
H11N2	WAKE ISLAND Hy	38.01	88	T	T	05 25 08.0	
	baz=283,slow=74						
H11N3	WAKE ISLAND Hy	38.03	88	T	T	05 25 08.4	
	baz=283,slow=74						
KNRA	Kununurra	39.38	176	P	P	04 44 50.0	+0.4
FITZ	Fitzroy Crossi	41.71	181	P	P	04 45 08.1	-0.8
MKAR	Makanchi Array	41.74	314	P	P	04 45 08.8	-0.2
MKAR	Makanchi Array	41.74	314	P	P	04 45 07.7	-1.2
	comp=Z,0.4nm,0.4s,baz=101,slow=9.2,SNR=9.1						
	comp=Z,0.4nm,0.4s						
ZALV	Zalesovo Beam	43.02	325	P	P	04 45 18.3	-0.9
	comp=Z,0.8nm,0.4s,baz=104,slow=6.1,SNR=2.6						
	comp=Z,0.8nm,0.4s						
WRA	Warramunga Arr	44.27	169	P	P	04 45 28.8	-0.8
WRA	Warramunga Arr	44.27	169	P	P	04 45 29.7	+0.1
	comp=Z,4.7nm,0.7s,baz=350,slow=8.8,SNR=35						
	comp=Z,4.7nm,0.7s						
WR8	Warramunga Arr	44.32	169	P	P	04 45 30.2	+0.3
KURK	Kurchatov	45.26	319	P	P	04 45 36.4	-0.8
KURBB	Kurchatov Arra	45.29	319	P	P	04 45 35.9	-1.6
	comp=Z,1.4nm,0.2s,baz=114,slow=7.1,SNR=1.4						
	comp=Z,1.4nm,0.2s						
AAK	Ala-Archa	46.28	307	LR	LR	05 05 32.8	
	comp=Z,82nm,18.1s,baz=124,slow=37						
ASAR	Alice Springs	47.85	170	P	P	04 45 58.2	+0.4
	comp=Z,0.5nm,0.6s,baz=355,slow=14,SNR=18						
	comp=Z,0.5nm,0.6s						
BVAR	Borovoye Array	50.79	320	P	P	04 46 20.5	+0.4
	comp=Z,0.6nm,0.6s,baz=90,slow=7.5,SNR=1.7						
	comp=Z,0.6nm,0.6s						
AB31	Akbulak array	56.88	314	P	P	04 47 05.4	+0.8
AB31				IAmb	IAmb	04 47 15.9	
	comp=Z,2.0nm,0.8s						
ABKAR	Akbulak array	56.88	314	P	P	04 47 05.4	+0.7
ABKAR				IAmb	IAmb	04 47 15.9	
	comp=Z,2.0nm,0.8s						
D19K	Kuna River	62.82	24	P	P	04 47 45.2	0.0
D19K				IAmb	IAmb	04 47 53.3	
	comp=Z,4.1nm,0.9s						
D20K	Etivluk River	63.38	23	P	P	04 47 51.2	+2.3
D20K				IAmb	IAmb	04 47 57.5	
	comp=Z,2.7nm,0.9s						
E22K	Anaktuvuk Pass	65.15	24	P	P	04 48 02.5	+1.9
E22K				IAmb	IAmb	04 48 40.1	
	comp=Z,3.2nm,1.1s						
ILAR	Eielson Array	67.42	28	P	P	04 48 16.8	+1.7
	comp=Z,0.2nm,0.4s,baz=262,slow=6.5,SNR=1.6						
	comp=Z,0.2nm,0.4s						
GNI	Garni	68.67	306	LR	LR	05 19 55.2	
	comp=Z,21nm,18.6s,baz=74,slow=37						
KBZ	Khabaz	69.17	310	LR	LR	05 24 03.2	
	comp=Z,13nm,19.7s,baz=98,slow=41						
FIA1	FINESS Array S	73.96	331	P	P	04 48 55.4	+0.4
FINES	FINESS Array B	73.96	331	P	P	04 48 55.4	+0.4
	comp=Z,0.9nm,0.5s,baz=65,slow=5.1,SNR=11						
	comp=Z,0.9nm,0.5s						
AKASG	Malin Array Be	76.07	319	P	P	04 49 07.4	0.0
	comp=Z,0.3nm,0.4s,baz=61,slow=5.7,SNR=1.7						
	comp=Z,0.3nm,0.4s						
HFS	Hagfors	80.00	332	P	P	04 49 29.0	-0.1
	comp=Z,2.5nm,0.9s,baz=77,slow=7.8,SNR=4.4						
	comp=Z,2.5nm,0.9s						
NB2	NORSAR Subarra	80.56	333	P	P	04 49 33.2	+1.1
	comp=Z,0.3nm,0.5s,baz=57,slow=5.6						
NOA	NORSAR Array B	80.56	333	P	P	04 49 32.4	+0.3
	comp=Z,0.5nm,0.6s,baz=60,slow=5.4,SNR=3.7						
	comp=Z,0.5nm,0.6s						
YKA	Yellowknife Ar	81.47	24	P	P	04 49 37.6	+0.8
	comp=Z,0.4nm,0.7s,baz=309,slow=5.7,SNR=2.6						
	comp=Z,0.4nm,0.7s						
BORG	Borgarnes	88.14	347	LR	LR	05 33 22.1	
	comp=Z,22nm,18.6s,baz=315,slow=38						

IDC 21 04:52:56.1±2.1**, 30°.65S×177°.59W, h0^{km}, mb3.6**/3**, mbtmp3.6**/3**, Error ellipse: s-maj=61.0km s-min=42.7km az=41.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.45	267	P	P	05 01 01.3	+0.1
	0.4nm,0.6s,baz=105,slow=7.4,SNR=5.2						
	0.4nm,0.6s						
WRA	Warramunga Arr	44.46	272	P	P	05 01 08.9	-0.4
	0.7nm,0.6s,baz=111,slow=7.9,SNR=6.5						
	0.7nm,0.6s						
QSPA	South Pole Qui	59.46	180	P	P	05 03 00.4	-0.2
	0.9nm,1.0s,baz=6.3,slow=9.2,SNR=1.7						
	0.9nm,1.0s						
FINES	FINESS Array B	145.50	340	PKPbc	PKPdf	05 12 34.9	-0.6
	1.1nm,0.6s,baz=62,slow=4.5,SNR=6.4						

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*SOF **21** 04:57:15.7, 45°.60N±0°.02×26°.44E±0°.02, h150^{km}±1^{km}, MD3.3/5*

*BUC **21** 04:57:16.4±0.2, 45°.61N×26°.45E, h144^{km}±1^{km}, ml3.8/64, Error ellipse: s-maj=1.4km s-min=1.1km az=11.0*

*SIGU **21** 04:57:16.2, 45°.60N×26°.43E, h145^{km}, mb3.1*

*CFUSG **21** 04:57:17.4, 45°.61N×26°.64E, h139^{km}, mb2.9/3, Romania Magtype MSH 3.3 from 2 stations*

*BEO **21** 04:57:26.4±0.3, 45°.17N×25°.20E, h0^{km}, ML2.5/10*

ISC 21 04:57:15.6±1.2**, 45°.62N**±0°.03×**26°.45E**±0°.02**, h151^{km}**±5^{km}**, n111, σ0ˢ.80**/168**, 70C-46D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BISRR	Bisoca	0.20	111	⇑P	Pn	04 57 36.9	+0.9
BISRR				⇓S	Sn	04 57 51.1	-0.4
NEHR	Nehoiu	0.22	209	⇑P	Pn	04 57 36.8	+0.7
NEHR				⇓S	Sn	04 57 51.8	+0.2
PLOR	Plostina	0.27	31	⇑P	Pn	04 57 36.3	+0.2
PLOR				⇓S	Sn	04 57 51.8	-0.1
VRI	Vrincioaia	0.31	39	⇑P	Pn	04 57 36.6	+0.3
VRI				⇑S	Sn	04 57 52.2	+0.1
MLR	Muntele Rosu	0.38	250	⇑P	Pn	04 57 37.1	+0.4
MLR				⇓S	Sn	04 57 52.6	0.0
MLR	Muntele Rosu	0.38	250	ePg	Pn	04 57 37.0	+0.4
MLR				eSg	Sn	04 57 47.4	-5.2
ISR	Istrita	0.51	172	⇑P	Pn	04 57 37.9	+0.7
ISR				⇑S	Sn	04 57 52.6	-0.8
TURR	Turia	0.53	325	⇑P	Pn	04 57 37.4	+0.2
TURR				⇓S	Sn	04 57 53.3	-0.5

PANC	Panciu	0.55	63	⇑P	Pn	04 57 38.0	+0.8
PANC				⇑S	Sn	04 57 53.9	+0.2
COSR	Cosmesti PH	0.65	69	⇑P	Pn	04 57 38.4	+0.6
COSR				⇓S	Sn	04 57 55.1	+0.4
OZUR		0.66	316	⇑P	Pn	04 57 37.9	-0.1
OZUR				⇓S	Sn	04 57 54.0	-1.1
ONER	Baraj Valea Uz	0.71	357	⇑P	Pn	04 57 38.7	+0.4
ONER				⇓S	Sn	04 57 55.3	-0.4
PGOR	Pogoanele	0.81	152	⇓P	Pn	04 57 39.3	+0.4
DOPR	Dopca	0.82	295	⇓P	Pn	04 57 39.2	+0.2
DOPR				⇓S	Sn	04 57 56.5	-0.3
TUDR		0.86	91	⇓P	Pn	04 57 39.6	+0.4
TUDR				⇑S	Sn	04 57 57.1	-0.1
TESR	Tescani	0.90	9	⇑P	Pn	04 57 39.6	0.0
TESR				⇓S	Sn	04 57 56.9	-1.1
IZVR	Izvoarele	0.93	94	⇑P	Pn	04 57 39.9	+0.1
IZVR				⇑S	Sn	04 57 57.1	-1.1
SULR		0.95	188	⇑P	Pn	04 57 40.1	+0.1
SULR				⇑S	Sn	04 57 59.2	+0.6
SCHL	Schela	0.98	97	⇑P	Pn	04 57 40.7	+0.5
SCHL				⇓S	Sn	04 57 58.7	-0.2
SCHLR	Schela	0.98	98	⇑P	Pn	04 57 40.6	+0.3
SCHLR				⇑S	Sn	04 57 59.1	+0.1
VOIR		1.00	260	⇓P	Pn	04 57 40.5	0.0
VOIR				⇓S	Sn	04 57 59.1	-0.3
NEGRR	Negrea	1.01	94	⇑P	Pn	04 57 41.1	+0.6
NEGRR				⇑S	Sn	04 57 59.7	+0.3
VARL	Varlezi	1.02	74	⇓P	Pn	04 57 40.9	+0.4
VARL				⇓S	Sn	04 57 59.4	-0.2
BIR	Birlad	1.05	51	⇓P	Pn	04 57 41.4	+0.6
BIR				⇑S	Sn	04 57 59.8	-0.2
MTUR	Matau	1.05	248	⇓P	Pn	04 57 41.4	+0.5
SCTR	Scanteiesti	1.09	87	⇑P	Pn	04 57 41.9	+0.8
SCTR				⇑S	Sn	04 58 00.6	0.0
TATR	Tatarca	1.12	91	⇑P	Pn	04 57 42.2	+0.7
TATR				⇑S	Sn	04 58 01.2	0.0
GISR	Galati	1.14	98	⇓P	Pn	04 57 42.4	+0.8
GISR				⇑S	Sn	04 58 01.9	+0.4
VLDR	Vladesti	1.17	78	⇑P	Pn	04 57 42.5	+0.7
VLDR				⇓S	Sn	04 58 01.7	-0.2
AMRR	Amara	1.19	148	⇑P	Pn	04 57 42.9	+0.8
AMRR				⇑S	Sn	04 58 03.0	+0.7
INCR	INCERC-Sediu C	1.20	190	⇑P	Pn	04 57 42.7	+0.5
INCR				⇓S	Sn	04 58 02.7	+0.3
BUC	Bucharest	1.23	192	⇑S	Sn	04 58 03.5	+0.5
CIOR	Ciorogarla	1.24	199	⇑S	Sn	04 58 03.2	0.0
GIUM	Giurgiulesti	1.24	96	⇓P	Pn	04 57 43.4	+0.8
GIUM				⇑S	Sn	04 58 03.3	0.0
GIUM	Giurgiulesti	1.24	96	P	Pn	04 57 43.4	+0.8
GIUM				S	Sn	04 58 03.2	0.0
CFR	Carcaliu	1.27	110	⇑P	Pn	04 57 43.0	+0.2
CFR				⇑S	Sn	04 58 03.4	-0.2
ARR	Arges	1.30	259	⇓P	Pn	04 57 44.1	+0.9
ARR				⇑S	Sn	04 58 05.2	+0.8
BUC1	Bucharest	1.31	193	⇑S	Sn	04 58 04.6	+0.3
BIZ	Bicaz	1.34	350	⇑S	Sn	04 58 05.7	+0.6
VASR	Vaslui	1.38	42	⇑P	Pn	04 57 44.4	+0.4
VASR				⇓S	Sn	04 58 05.0	-0.7
HARR	Harsova	1.40	131	⇑P	Pn	04 57 44.8	+0.6
SGRR	Singureni	1.44	194	⇑P	Pn	04 57 44.8	+0.2
SGRR				⇑S	Sn	04 58 05.9	-0.7
CICN	Ciocanesti	1.48	164	⇑P	Pn	04 57 45.4	+0.5
CICN				⇓S	Sn	04 58 07.7	+0.2
HUMR	Humele	1.51	224	⇓P	Pn	04 57 45.5	+0.2
HUMR				⇑S	Sn	04 58 07.4	-0.6
TNR	Turnu Rosu	1.53	272	⇓S	Sn	04 58 08.9	+0.6
TLBR	Topalu	1.56	133	⇑P	Pn	04 57 46.5	+0.7
TLBR				⇑S	Sn	04 58 08.2	-0.7
TPGR	Topolog	1.59	118	⇑P	Pn	04 57 46.4	+0.2
CVDA	Cernavoda	1.71	138	⇓P	Pn	04 57 47.4	-0.1
CVDA				⇓S	Sn	04 58 11.3	-0.6
TLCR		1.72	104	⇓P	Pn	04 57 48.0	+0.4
TLCR				⇓S	Sn	04 58 11.9	-0.1
COPA	Copaceanca	1.73	211	⇓P	Pn	04 57 48.0	+0.4
COPA				⇑S	Sn	04 58 11.5	-0.6
ICOR	Ion Corvin	1.79	147	⇑P	Pn	04 57 49.2	+0.9
ICOR				⇓S	Sn	04 58 13.1	-0.2
TIRR	Tirgusor	1.81	129	⇑P	Pn	04 57 49.2	+0.6
TIRR				⇓S	Sn	04 58 13.0	-0.9
LOT	Lotru	1.89	266	⇑P	Pn	04 57 50.1	+0.5
LOT				⇑S	Sn	04 58 16.6	+1.0
JURR	Jurilovca	1.92	116	⇑P	Pn	04 57 50.4	+0.7
MFTR	Murfatlar	2.01	135	⇑P	Pn	04 57 51.5	+0.6
MFTR				⇑S	Sn	04 58 17.3	-0.7
MILM	Milestii Mici	2.09	51	⇑P	Pn	04 57 51.9	+0.1
MILM	Milestii Mici	2.09	51	⇑*i*P	Pn	04 57 51.8	+0.1
	33nm,0.1s						
MILM				*e*S	Sn	04 58 17.5	-2.1
	180nm,0.1s						
MILM	Milestii Mici	2.09	51	P	Pn	04 57 51.8	+0.1
MILM				S	Sn	04 58 17.7	-1.9
KIS	Kishinev	2.14	49	*e*P	Pn	04 57 53.0	+0.6
KIS				*e*S	Sn	04 58 19.2	-1.5
	310nm,0.3s						
TSCT	Constanta Port	2.14	132	⇑P	Pn	04 57 52.9	+0.5
TSCT				⇑S	Sn	04 58 20.2	-0.5
BURAR	Bucovina Array	2.17	337	⇑P	Pn	04 57 54.0	+1.2
VLAD	Vladila	2.18	223	⇓P	Pn	04 57 52.8	-0.1
EFOR	EFORIE	2.19	134	⇑S	Sn	04 58 21.3	-0.3
CJR	Cluj-Napoca	2.26	300	⇓P	Pn	04 57 53.9	+0.1
PSN	Preselentsi	2.32	148	P	Pn	04 57 55.6	+1.0
PSN				*e*S	Sn	04 58 24.7	+0.2
MANR	Mangalia	2.36	139	⇑P	Pn	04 57 55.8	+0.8
MANR				⇑S	Sn	04 58 25.2	-0.2
SZH	Strazhitsa	2.38	188	P	Pn	04 57 55.6	+0.3
SZH				S	Sn	04 58 24.7	-1.1
NEF	NEVSHA	2.43	166	P	Pn	04 57 56.7	+0.8
SRE	Strehaia	2.49	248	⇓P	Pn	04 57 56.6	0.0
MARR	Marisel-Cluj	2.54	296	⇓P	Pn	04 57 57.0	-0.3
PRD	Provadia	2.56	164	P	Pn	04 57 58.2	+0.8
GZR	Gura Zlata	2.59	266	⇑P	Pn	04 57 58.3	+0.4
GZR				⇓S	Sn	04 58 31.4	+0.8
GZR	Gura Zlata	2.59	266	*e*Pn	Pn	04 57 58.2	+0.3
GZR				*e*Sn	Sn	04 58 21.3	-9.2
PVL	Pavlikeni	2.66	201	P	Pn	04 57 59.1	+0.4
SORM	Soroca	2.83	27	P	Pn	04 58 00.7	-0.1
DRGR		2.85	296	⇓P	Pn	04 58 00.6	-0.4
VALD	Valchedram	2.89	229	P	Pn	04 58 01.4	-0.1
NSLU	Nyzhne Selyshc	2.92	333	*e*Pn	Pn	04 58 07.2	+5.4
HERR	Herculane	2.94	257	⇓P	Pn	04 58 01.8	-0.4
MPEP	Malo Peshtene	2.98	222	P	Pn	04 58 03.0	+0.3
SURR	Surduc	3.03	274	⇓P	Pn	04 58 03.5	+0.2
BLKB	Belogradchik	3.35	235	*e*Pn	Pn	04 58 06.7	-0.8
BZS	Buzias	3.39	272	⇓P	Pn	04 58 07.7	-0.2
BZS	Buzias	3.39	272	*e*Pn	Pn	04 58 07.7	-0.2
MDVR	Moldovita	3.45	258	⇓P	Pn	04 58 09.2	+0.4
MDVR	Moldovita	3.45	258	*e*Pn	Pn	04 58 08.5	-0.3
MDVR				*e*Sn	Sn	04 58 40.4	-10
BORS2	Bor- Borsko je	3.50	246	*e*Pn	Pn	04 58 07.1	-2.3
BORS2				*e*Sn	Sn	04 58 40.1	-11
ZAGS	Zajecar	3.51	240	*e*Pn	Pn	04 58 08.3	-1.1
ZAGS				*e*Sn	Sn	04 58 39.7	-11
BRIU	Brid	3.59	320	*e*Pn	Pn	04 58 11.0	+0.6
BRIU				Pm		04 58 12.5	
BRIU				*e*Sn	Sn	04 58 54.7	+1.6
BRIU				Sm		04 59 32.6	
KUBS	Kucevo	3.59	252	*e*Pn	Pn	04 58 08.6	-2.0
KUBS				*e*Sn	Sn	04 58 43.2	-10
ZAPS	Zavoj	3.60	231	*e*Pn	Pn	04 58 10.1	-0.6
ZAPS				*e*Sn	Sn	04 58 43.0	-10
VRSS	Vrsac	3.65	264	*e*Pn	Pn	04 58 10.7	-0.5
BOVS	Bovan	3.92	241	⇑P	Pn	04 58 14.7	-0.1
BOVS	Bovan	3.92	241	*e*Pn	Pn	04 58 14.6	-0.2
BOVS				*e*Sn	Sn	04 58 51.8	-9.0
HOLU	Holmets	4.02	318	*e*Pn	Pn	04 58 16.3	+0.3
BOSS	Bosilegrad	4.24	224	*e*Pn	Pn	04 58 19.3	+0.4
STZU	Stuzhytsa	4.28	324	*e*Pn	Pn	04 58 21.1	+1.7
TARU	Tarkhankut	4.29	91	Pm		04 58 20.6	
	comp=Z,20nm,0.3s						
TARU				*e*x	x	04 59 07.9	
TARU				*e*S	Sn	04 59 09.5	+0.3
TARU				Sm		04 59 10.9	
	comp=N,5.0nm,0.3s						
TARU				Sm		04 59 10.9	
	comp=E,6.0nm,0.4s						
BARS	Barje	4.35	232	*e*Pn	Pn	04 58 20.5	0.0
BARS				*e*Sn	Sn	04 59 00.6	-10
KOLS	Kolonicke sedl	4.37	321	*e*P	Pn	04 58 21.2	+0.6
GRUS	Gruza	4.43	249	*e*Pn	Pn	04 58 21.3	-0.2
GOCS	Kraljevo Serbi	4.48	245	*e*Pn	Pn	04 58 21.8	-0.4
SELS	Selova	4.51	240	*e*Pn	Pn	04 58 22.7	+0.2
SELS				*e*Sn	Sn	04 59 05.0	-10
TRUS	Trudelj	4.51	254	*e*Pn	Pn	04 58 22.3	-0.2
DNZ2	Donuzlav2	4.76	91	*e*S	Sn	04 59 19.3	-1.2
DNZ2				Sm		04 59 19.4	
	comp=N,22nm,0.4s						
DNZ2				Sm		04 59 19.4	
	comp=E,16nm,0.4s						
IVAS	Ivanjica	4.94	248	*e*Pn	Pn	04 58 27.8	-0.4
TEKS	Tekeris	5.02	260	*e*Pn	Pn	04 58 28.8	-0.4
SEV	Sevastopol'	5.22	99	P	Pn	04 58 31.9	0.0
SEV				Pm		04 58 32.0	
SEV				S	Sn	04 59 30.5	-1.0
SEV				Sm		04 59 31.9	
SEV	Sevastopol'	5.22	99	*i* P	Pn	04 58 31.9	0.0
SEV				Pm		04 58 32.0	
	comp=Z,6.0nm,0.3s						
SEV				*e*S	Sn	04 59 30.5	-1.0
SEV				Sm		04 59 31.9	
	comp=N,5.0nm,0.5s,comp=E,7.0nm,0.5s						
SUDU	Sudak	6.08	94	P	Pn	04 58 43.3	0.0
SUDU				Pm		04 58 43.4	
SUDU				S	Sn	04 59 54.6	+2.7
SUDU				Sm		04 59 54.6	
SUDU	Sudak	6.08	94	*e*P	Pn	04 58 43.3	0.0
SUDU				Pm		04 58 43.4	
	comp=Z,5.0nm,0.3s						
SUDU				*e*S	Sn	04 59 50.6	-1.3
SUDU				Sm		04 59 54.6	
	comp=N,24nm,0.5s						
SUDU				Sm		04 59 54.6	
	comp=E,8.0nm,0.4s						

IDC ***21*** *05:01:27.5±1.2, 10°.39N×126°.82E, h0^{km}, mb3.9/8, mbtmp3.9/9, MS3.0/3, Error ellipse: s-maj=76.6km s-min=19.4km az=76.0*

ISC 21 05:01:34.1±1.1**, 10°.17N**±0°.08×**126°.3E**±0°.4**, h42**^{km}**, n11,** σ**1^{s}.49**/11**, mb3.9**/8**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	3.16	193	Pn	Pn	05 02 24.0	+2.5
	120nm,0.3s,baz=264,slow=22,SNR=0.9						
DAV				Sn	Sn	05 02 55.2	-2.7
	62nm,0.3s,baz=304,slow=7.1,SNR=3.9						
DAV				LR	LR	05 03 25.9	
	comp=Z,269nm,22.0s,baz=38,slow=34						
GUMO	Guam	18.49	78	LR	LR	05 11 45.8	
	comp=Z,38nm,20.7s,baz=104,slow=34						
WRA	Warramunga Arr	30.96	165	P	P	05 07 46.4	-1.1
	0.5nm,0.8s,baz=346,slow=9.3,SNR=2.0 0.5nm,0.8s						
ASAR	Alice Springs	34.45	168	P	P	05 08 18.8	+0.8
	0.3nm,0.7s,baz=348,slow=8.7,SNR=4.4 0.3nm,0.7s						
ASAJ	Asahikawa	36.65	20	LR	LR	05 25 38.3	
	comp=Z,26nm,18.1s,baz=310,slow=40						
SONM	Songino Array	41.12	340	P	P	05 09 13.9	-0.3
	0.5nm,0.6s,baz=170,slow=8.1,SNR=2.3 0.5nm,0.6s						
MKAR	Makanchi Array	52.12	323	P	P	05 10 40.5	+0.3
	0.6nm,0.7s,baz=127,slow=8.0,SNR=6.0						
MKAR				PcP	PcP	05 11 50.8	-1.0
	0.2nm,0.5s,baz=108,slow=4.7,SNR=1.9 0.6nm,0.7s						
KURBB	Kurchatov Arra	56.16	325	P	P	05 11 10.1	+0.6
	0.8nm,0.2s,baz=127,slow=7.3,SNR=1.2 0.8nm,0.2s						
SPITS	Spitsbergen Ar	84.11	349	P	P	05 14 00.3	+0.1
	4.2nm,1.0s,baz=41,slow=7.7,SNR=1.9 4.2nm,1.0s						
ARCES	ARCESS Array B	84.29	340	P	P	05 14 00.8	-0.5
	0.9nm,0.5s,baz=76,slow=5.8,SNR=5.4 0.9nm,0.5s						
FINES	FINESS Array B	85.98	332	P	P	05 14 09.3	-0.5
	0.8nm,0.6s,baz=57,slow=5.1,SNR=7.5 0.8nm,0.6s						

IDC ***21*** *05:03:02.9±1.5, 33°.49S×178°.66W, h0^{km}, mb3.9/4, mbtmp3.9/5, ML4.3/1, MS3.4/2, Error ellipse: s-maj=41.2km s-min=31.4km az=58.0*

WEL ***21*** *05:03:06.6±0.8, 33°S±10°×17°9W±2°3, h33^{km}, mB4.8/7, ML4.7/13, MLv4.4/10, Mw(mB)4.1/7, Error ellipse: s-maj=32.2km s-min=4.0km az=111.8, confirmed*

ISC 21 05:03:07.0±0.9**, 33°.59S**±0°.07×**178°.4W**±0°.1**, h41**^{km}**, n30,** σ**1^{s}.83**/43**, mb3.9**/4**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.33	6	P	Pn	05 04 08.5	-1.8
GLKZ				S	Sn	05 04 57.2	-2.4
WMGZ	Waiomatatini S	4.95	210	P	Pn	05 04 19.0	+0.3
WMGZ				S	Sn	05 05 14.8	+0.2
PKGZ	Pakihiroa	5.13	213	P	Pn	05 04 20.0	-1.3
PKGZ				S	Sn	05 05 16.3	-2.9
HAZ	Te Kaha	5.18	216	P	Pn	05 04 21.5	-0.4
HAZ				S	Sn	05 05 20.3	-0.1
PUZ	Puketiti	5.23	210	P	Pn	05 04 20.7	-1.9
PUZ				S	Sn	05 05 18.9	-2.7
RUGZ	Raukumara Rang	5.40	215	P	Pn	05 04 24.9	-0.2
TWGZ	Tauwhareparae	5.43	212	P	Pn	05 04 25.6	+0.2
TWGZ				S	Sn	05 05 27.4	+0.7
WHRZ	Whale Island	5.67	220	P	Pn	05 04 31.1	+2.4
TKGZ	Te Karaka	5.71	211	P	Pn	05 04 28.9	-0.3
TKGZ				S	Sn	05 05 32.3	-1.1
MWZ	Matawai	5.76	214	P	Pn	05 04 28.4	-1.6
MWZ				S	Sn	05 05 32.9	-2.0
URZ	Urewera	5.91	217	Pn	Pn	05 04 30.1	-1.8
	7.7nm,0.3s,baz=266,slow=3.3,SNR=31						
URZ				Sn	Sn	05 05 35.6	-2.6
	7.3nm,0.3s,baz=250,slow=16,SNR=6.4 18nm,0.4s						
URZ	Urewera	5.91	217	P	Pn	05 04 30.2	-1.7
URZ				S	Sn	05 05 36.0	-2.2
MARZ	Manawahe	5.93	221	P	Pn	05 04 32.2	-0.1
RAGZ	Rawiri	5.95	213	P	Pn	05 04 32.1	-0.5
RAGZ				S	Sn	05 05 37.5	-2.0
RIGZ	Rimuhau	5.97	210	P	Pn	05 04 32.3	-0.5
RIGZ				S	Sn	05 05 39.5	-0.5
PRGZ	Paritu Road	6.11	208	P	Pn	05 04 33.7	-1.0
PRGZ				S	Sn	05 05 39.7	-3.6
SNGZ	Shannon Statio	6.21	212	P	Pn	05 04 35.4	-0.8
SNGZ				S	Sn	05 05 44.0	-1.9
MUGZ	Murupara	6.25	217	S	Sn	05 05 42.8	-3.9
TOZ	Tahuroa Road	6.45	228	P	Pn	05 04 41.6	+2.3
MTHZ	Maungataniwha	6.50	215	P	Pn	05 04 39.2	-0.9
MTHZ				S	Sn	05 05 50.3	-2.8
OUZ	Omahuta	6.80	254	P	Pn	05 04 45.6	+1.5
TLZ	Tolley Road	6.81	224	P	Pn	05 04 44.9	+0.5
DZM	Mont Dzumac	17.61	307	LR	LR	05 12 41.1	
	comp=Z,137nm,21.1s,baz=123,slow=33						
STKA	Stephens Creek	33.54	262	LR	LR	05 23 58.2	
	comp=Z,60nm,18.1s,baz=164,slow=38						
ASAR	Alice Springs	42.68	271	P	P	05 11 00.0	0.0
	0.6nm,0.3s,baz=110,slow=7.7,SNR=11 0.6nm,0.3s						
WRA	Warramunga Arr	43.96	276	P	P	05 11 10.3	+0.1
	1.3nm,0.5s,baz=116,slow=7.9,SNR=14 1.3nm,0.5s						
QSPA	South Pole Qui	56.53	180	P	P	05 12 48.3	+3.3
	0.6nm,0.9s,baz=333,slow=2.3,SNR=1.4 0.6nm,0.9s						
SNAA	Sanae	74.99	179	P	P	05 14 45.8	+2.2
	2.0nm,1.2s,baz=342,slow=10,SNR=2.7 2.0nm,1.2s						
FINES	FINESS Array B	147.98	338	PKPbc	PKiKP	05 22 48.5	-0.4
	0.8nm,0.4s,baz=34,slow=4.4,SNR=18						
BRTR	Keskin Array B	153.65	293	PKPbc	PKiKP	05 23 02.4	+0.9
	0.9nm,0.8s,baz=330,slow=2.3,SNR=4.1						

IDC ***21*** *05:12:36.4±3.0, 6°.73N×73°.03W, h167^{km}±23^{km}, mb3.1/5, mbtmp3.7/6, Error ellipse: s-maj=59.7km s-min=26.1km az=95.0*

RSNC ***21*** *05:12:37.3±0.0, 7°N±1°×7°3W±°, h146^{km}±2^{km}, M3.4, mb3.8, ML3.2*

ISC 21 05:12:35.8±0.8**, 6°.86N**±0°.03×**73°.12W**±0°.04**, h155**^{km}±6^{km}**, n41,** σ**1^{s}.25**/73**, mb3.7**/5**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.27	193	P	Pn	05 12 57.1	-0.1
BARC				S	Sn	05 13 12.4	-1.1
PAMC	Pamplona, Colo	0.64	41	P	Pn	05 13 00.0	+1.0
PAMC				S	Sn	05 13 16.6	-0.2
RUSC	La Rusia	0.96	178	P	Pn	05 13 01.2	-0.1
RUSC				S	Sn	05 13 19.6	-1.3
PTBC	PUERTO BERRIO,	1.36	257	P	Pn	05 13 03.6	-0.8
PTBC				S	Sn	05 13 24.2	-2.1
OCAC	Ocana	1.38	352	P	Pn	05 13 05.2	+0.4
OCAC				S	Sn	05 13 27.2	+0.2
TAMC	Tame, Arauca	1.39	108	P	Pn	05 13 05.6	+0.9
TAMC				S	Sn	05 13 27.1	+0.3
SPBC	San Pablo de B	1.53	218	P	Pn	05 13 05.9	-0.2
SPBC				S	Sn	05 13 28.6	-0.8
ZARC	Zaragoza, Cauc	1.83	290	P	Pn	05 13 09.3	0.0
ZARC				S	Sn	05 13 35.2	+0.1
NORC	Norcasia	2.16	234	P	Pn	05 13 12.9	-0.3
NORC				S	Sn	05 13 41.3	-0.7
CHIC	Chingaza	2.30	195	P	Pn	05 13 15.1	-0.1
CHIC				S	Sn	05 13 44.7	-0.8
ROSC	El Rosal	2.33	211	P	Pn	05 13 17.3	+1.7
	182nm,0.3s,baz=298,slow=11,SNR=86						
ROSC				S	Sn	05 13 47.0	+0.7
	286nm,0.3s,baz=186,slow=23,SNR=6.6						
ROSC	El Rosal	2.33	211	P	Pn	05 13 17.0	+1.4
ROSC				S	Sn	05 13 46.9	+0.7
HELC	Santa Helena	2.48	255	P	Pn	05 13 18.6	+1.3
HELC				S	Sn	05 13 48.5	-0.8
CVER	Cruz Verde, Cu	2.51	202	P	Pn	05 13 18.5	+0.7
CVER				S	Sn	05 13 50.1	0.0
UREC	San Jos de Ur	2.55	290	P	Pn	05 13 17.1	-0.7
UREC				S	Sn	05 13 48.0	-2.2
GUY2C	Guyana, Caldas	2.76	234	P	Pn	05 13 21.7	+0.9
GUY2C				S	Sn	05 13 54.2	-1.4
VILC	Villavicencio,	2.79	192	P	Pn	05 13 20.5	-0.4
VILC				S	Sn	05 13 54.6	-1.2
NIZA	Niza - Manizal	2.94	233	P	Pn	05 13 27.0	+4.1
NIZA				S	Sn	05 14 01.0	+1.6
CBOC	Ciudad Bolivar	3.04	251	P	Pn	05 13 24.5	+0.5
CBOC				S	Sn	05 14 01.1	-0.2
DBBC	Dabeiba	3.07	273	P	Pn	05 13 24.6	+0.3
DBBC				S	Sn	05 14 01.0	-0.9
ARGC	Ariguani, Magd	3.18	340	P	Pn	05 13 27.1	+1.5
ARGC				S	Sn	05 14 06.2	+1.8
ANIL	Santa Ana	3.27	224	P	Pn	05 13 28.3	+1.2
ANIL				S	Sn	05 14 07.2	+0.4
APAC	Apartado, Choc	3.58	287	P	Pn	05 13 30.7	-0.1
APAC				S	Sn	05 14 12.6	-0.9
PRAC	Prado	3.58	209	P	Pn	05 13 30.4	-0.5
PRAC				S	Sn	05 14 13.0	-0.7
ORTC	Ortega, Tolima	3.62	216	P	Pn	05 13 31.4	+0.1
ORTC				S	Sn	05 14 14.7	+0.3
SJCC	San Jacinto, C	3.64	326	P	Pn	05 13 30.9	-0.7
SJCC				S	Sn	05 14 12.4	-2.6
PLMC	San Jos del P	3.69	238	P	Pn	05 13 33.0	+0.7
PLMC				S	Sn	05 14 15.6	-0.6
LCBC	Los crdobas,	3.78	302	P	Pn	05 13 33.0	-0.3
LCBC				S	Sn	05 14 17.0	-1.0
CRJC	Cerrejon, Guaj	4.14	3	P	Pn	05 13 37.3	-0.8
CRJC				S	Sn	05 14 24.4	-2.3
YOTC	Yotoco, Valle	4.30	228	P	Pn	05 13 39.7	-0.5
YOTC				S	Sn	05 14 29.2	-1.1
GUVC	San Jose del G	4.32	173	P	Pn	05 13 39.9	-0.4
GUVC				S	Sn	05 14 26.6	-4.1
SMRC	Santa Marta, M	4.41	346	P	Pn	05 13 42.4	+0.8
SMRC				S	Sn	05 14 30.5	-2.4
POPC	Popayan, Colom	5.56	220	P	Pn	05 13 56.8	-0.2
	9.7nm,0.7s						
FLOC	Florencia	5.82	206	P	Pn	05 13 59.7	-0.5
TXAR	Lajitas Array	36.44	312	P	P	05 19 27.3	+1.5
	0.1nm,0.6s,baz=126,slow=13,SNR=1.6 0.1nm,0.6s						
ULM	Lac du Bonnet	47.25	340	P	P	05 20 53.2	+0.1
	0.8nm,0.4s,baz=137,slow=6.6,SNR=4.2 0.8nm,0.4s						
PDAR	Pinedale Array	48.05	324	P	P	05 21 00.7	+1.0
	0.2nm,0.6s,baz=105,slow=6.9,SNR=2.1 0.2nm,0.6s						
SCHQ	Schefferville	48.10	5	P	P	05 21 00.2	+0.5
	1.2nm,0.6s,baz=160,slow=12,SNR=3.6 1.2nm,0.6s						
YKA	Yellowknife Ar	63.23	340	P	P	05 22 47.2	0.0
	0.6nm,0.6s,baz=137,slow=5.5,SNR=10.0 0.6nm,0.6s						
ASAR	Alice Springs	149.13	234	PKPbc	PKPbc	05 32 05.2	-1.5
	0.2nm,0.5s,baz=98,slow=3.5,SNR=2.4						
WRA	Warramunga Arr	150.35	241	PKPbc	PKiKP	05 32 09.1	-1.4
	0.2nm,0.4s,baz=103,slow=3.6,SNR=4.9						

IDC ***21*** *05:23:04.1±1.6, 43°.79N×128°.65W, h0^{km}, mb3.6/6, mbtmp3.4/11, ML2.9/5, MS3.2/12, Error ellipse: s-maj=38.7km s-min=15.3km az=39.0*

NEIC ***21*** *05:23:05.6±1.8, 43°.64N±0°.10×128°.4W±0°.1, h10^{km}±2^{km}, mb4.1/38, ML3.3/46, Error ellipse: s-maj=20.3km s-min=12.8km az=226.0*

ISC 21 05:23:05.9±0.8**, 43°.76N**±0°.08×**128°.45W**±0°.08**, h10**^{km}**, n309,** σ**0^{s}.82**/294**, mb4.2**/23**, MS3.1**/8**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEBM	Edson Butte	3.13	105	Pn	Pn	05 23 53.6	-1.8
KEBM				IAML		05 24 17.6	
	comp=E,82nm,2.0s						
KEBM				IAML		05 24 50.4	
	comp=N,62nm,2.1s						
J01E	Myrtle Point	3.34	99		Pn	05 23 56.6	-1.6
J01E				IAML		05 24 47.4	
	comp=E,66nm,2.4s						
I02E	Swisshome, OR	3.34	82	Pn	Pn	05 23 57.3	-0.9
I02E				IAML		05 24 46.0	
	comp=E,56nm,2.4s						
I02E				IAML		05 25 04.3	
	comp=N,49nm,2.8s						
HEBO	Mount Hebo	3.66	65	Pn	Pn	05 24 00.9	-1.8
I03D	Drain, OR	3.70	89		Pn	05 24 02.6	-0.5
G03D	McMinnville, O	3.99	67		Pn	05 24 06.0	-1.0
G03D				IAML		05 25 00.3	
	comp=N,52nm,2.1s						
G03D				IAML		05 25 05.8	
	comp=E,48nm,3.0s						
F03A	Seaside	4.10	56		Pn	05 24 07.4	-1.3
H04D	Lebanon	4.18	77		Pn	05 24 09.2	-0.6
H04D				IAML		05 24 48.9	
	comp=E,32nm,3.0s						
H04D				IAML		05 26 21.3	
	comp=N,42nm,2.2s						
BBOR	Butler Butte	4.30	100		Pn	05 24 11.4	-0.2
E03A	Lebam	4.44	49	Pn	Pn	05 24 13.0	-0.3
E03A				IAML		05 24 57.2	
	comp=N,35nm,3.1s						
E03A				IAML		05 26 18.1	
	comp=E,37nm,1.9s						
G04A	Mulino	4.51	69		Pn	05 24 12.9	-1.4
G04A				IAML		05 24 59.3	
	comp=N,44nm,2.1s						
H04A	Detroit Lake	4.60	76		Pn	05 24 15.5	0.0
J04A	Umpqua Nationa	4.64	94		Pn	05 24 16.5	+0.2
YBH	Yreka Blue Hor	4.69	114	Pn	Pn	05 24 14.9	-1.9
	baz=314,slow=6.2,SNR=5.9						
YBH				Sn	Sn	05 25 13.4	+2.2
	baz=52,slow=1.4,SNR=1.7						
NLWA	Neilton Lookou	4.86	40	Pn	Pn	05 24 19.5	+0.5
NLWA				IAML		05 25 15.2	
	comp=N,21nm,2.5s						
NLWA				IAML		05 25 50.3	
	comp=N,31nm,3.2s						
HOOD	Mount Hood Mea	5.11	70		Pn	05 24 22.0	-0.6
HOOD				IAML		05 25 03.9	
	comp=N,29nm,1.2s						
I05D	Terrebonne, OR	5.16	81		Pn	05 24 22.0	-1.3
I05D				IAML		05 27 17.9	
	comp=N,29nm,3.9s						
I05D				IAML		05 27 47.2	
	comp=E,24nm,3.6s						
PINE	Pine Mountain	5.44	87		Pn	05 24 27.8	+0.6
PINE				IAML		05 26 08.3	
	comp=E,15nm,3.6s						
PINE				IAML		05 26 43.3	
	comp=N,19nm,4.0s						
GNW	Green Mountain	5.48	44		Pn	05 24 27.8	+0.2
D05A	Enumclaw	5.70	51		Pn	05 24 29.8	-0.7
CLRS	Cowichan Lake	5.88	29	Pn	Pn	05 24 33.2	+0.1
MXC	Moxie City	6.42	61		Pn	05 24 40.2	-0.3

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I07A  Izee             6.47  84        Pn     05 24 41.0 -0.4
HAWA  Hanford          6.84  64        Pn     05 24 46.5 +0.2
HOLB  Holberg          6.89   2  Pn    Pn     05 24 48.0 +1.0
G08A  Pilot Rock       6.96  74        Pn     05 24 48.1 +0.1
D08A  Wollman Farm,    7.47  60        Pn     05 24 53.5 -1.4
NEW   Newport          9.08  56  Pn    Pn     05 25 11.2 -5.8
      comp=N,0.1nm,0.3s,baz=14,slow=18,SNR=1.6
NEW                              LR    LR     05 28 41.7
      comp=N,112nm,19.9s,baz=258,slow=37
NVAR  Mina Array Bea   9.32 121  Pn    Pn     05 25 22.5 +2.0
      comp=N,0.1nm,0.3s,baz=309,slow=15,SNR=3.1
      comp=N,0.6nm,0.7s
ELK   Elko            10.25 103  Pn    Pn     05 25 37.7 +4.5
      baz=220,slow=5.6,SNR=3.8
ELK                              LR    LR     05 29 49.1
      comp=N,102nm,19.7s,baz=272,slow=39
      comp=N,0.6nm,0.6s
V35K  Ketchikan       11.76 351  P     Pn     05 25 55.2 +1.5
      baz=168
CRAG  Craig           12.11 347  P     Pn     05 25 59.8 +1.5
      baz=163
U33K  Whale Pass      12.73 348  P     Pn     05 26 08.4 +1.6
      baz=164
T35M  Bob Quinn       13.29 356  P     Pn     05 26 15.3 +0.8
      baz=174
PDAR  Pinedale Array  13.81  88  Pn    P      05 26 27.7 -2.7
      comp=N,0.1nm,0.3s,baz=294,slow=13,SNR=1.6
PDAR                             LR    LR     05 32 04.6
      comp=N,65nm,18.5s,baz=282,slow=39
      comp=N,0.1nm,0.3s
SIT   Sitka           14.01 344  P     Pn     05 26 25.8 +1.6
      baz=159
S34M  Telegraph Cree  14.28 354  P     Pn     05 26 29.6 +1.6
      baz=172
DLBC  Dease Lake      14.73 357  Pn    Pn     05 26 33.5 -0.8
      baz=172,slow=13,SNR=3.3
R32K  Eaglecrest      15.02 348  P     Pn     05 26 39.9 +1.8
      baz=163
TOAD  Toad River Com  15.25   6  P     Pn     05 26 42.1 +1.0
      baz=188
Q32M  Nakina River    15.41 353  P     Pn     05 26 45.4 +2.0
      baz=169
Y14A  Wickenburg      15.50 124        Pn     05 26 46.4 +1.8
PV05  Paradox Valley  15.68 105  Pn    Pn     05 26 45.6 -1.4
PV22  Blue Mesa, Par  15.70 103  Pn    Pn     05 26 46.2 -1.0
PV22                             IAmb  IAmb   05 26 57.4
      comp=Z,13nm,1.4s
R33M  Jennings River  15.74 355  Pn    Pn     05 26 49.6 +1.9
R33M  Jennings River  15.74 355  P     Pn     05 26 49.2 +1.6
      baz=173
PV15  Paradox Valley  15.99 103  Pn    Pn     05 26 49.3 -1.9
P32M  Atlin           16.18 350  P     Pn     05 26 54.7 +1.4
      baz=166
PLBC  Pleasant Camp   16.45 346  P     Pn     05 26 58.5 +1.8
      baz=159
BEAVL Fort Liard      16.58   6  P     Pn     05 26 59.5 +1.3
      baz=188
KOTAN Kotaneelee Air  16.62   8  P     Pn     05 26 60.0 +1.3
      baz=191
P33M  Teslin, Yukon   16.69 352  P     Pn     05 27 01.3 +1.6
      baz=169
P29M  Windy Craggy    16.88 344  P     P      05 27 03.8 -0.4
      baz=156
P30M  Million Dollar  17.18 345  P     Pn     05 27 07.2 +1.3
      baz=159
PNL   Peninsula       17.28 341  P     P      05 27 09.0 +0.4
      baz=152
WHY   Whitehorse      17.37 349  P     P      05 27 10.2 +0.5
      baz=164
O30N  Mendenhall      17.65 348  P     P      05 27 13.2 +0.5
      baz=161
O29M  Mount Kennedy   17.67 343  P     P      05 27 13.0  0.0
      baz=155
PINM  Pinnacle        17.86 340  P     P      05 27 16.0 +0.9
      baz=151
HYT   Haines Junctio  17.94 346  P     P      05 27 16.4 +0.5
      baz=158
YUK6  Outpost Mounta  18.21 344  P     P      05 27 20.1 +1.0
      baz=156
N31M  Braeburn, Yuko  18.29 349  P     P      05 27 20.9 +1.3
      baz=163
MESA  MESA            18.36 338  P     P      05 27 21.5 +0.8
      baz=147
O28M  Mount Upton     18.44 342  P     Pn     05 27 22.3 +0.6
      baz=152
N30M  Aishikik Lake   18.46 347  P     Pn     05 27 22.6 +0.9
      baz=160
BGLC  Bering Glacier  18.69 336  P     Pn     05 27 25.1 +0.7
      baz=145
FARO  Faro, Yukon     18.73 353  P     Pn     05 27 25.4 +0.5
      baz=169
M31M  Drury Creek, Y  18.81 351  P     Pn     05 27 26.5 +0.6
      baz=166
YUK8  Steele Glacier  18.81 343  P     Pn     05 27 26.4 +0.3
      baz=154
KAIM  Kayak Island    18.87 335  P     Pn     05 27 27.1 +0.4
      baz=142
CTG   Chitna Glacier  18.88 340  P     P      05 27 27.1 +0.7
      baz=150
MMPY  Sheldon Lake,   18.97 356  P     P      05 27 28.1 +0.9
      baz=174
ANMO  Albuquerque     19.11 110  P     Pn     05 27 32.0 +2.1
      baz=38,slow=7.3,SNR=4.1
ANMO                             LR    LR     05 35 20.3
      comp=Z,142nm,20.1s,baz=41,slow=38
      comp=Z,0.4nm,0.7s
CRQE  Cirque          19.16 338  P     Pn     05 27 30.4 +0.2
      baz=146
YUK3  Moose Creek     19.40 343  P     P      05 27 32.8 +0.7
      baz=153
M29M  Somme Creek     19.62 346  P     P      05 27 34.7 +0.4
      baz=158
WRGLY Wrigley         19.72   7  P     Pn     05 27 37.3 +0.5
WRGLY Wrigley         19.72   7  P     P      05 27 36.0 +0.7
      baz=190
BMRM  Bremner River   19.76 336  P     P      05 27 36.5 +0.7
      baz=143
P23K  Montague Islan  19.91 331  P     Pn     05 27 38.7 -0.3
      baz=136
KSCO  Kaye Shedlock’  19.91  95  P     P      05 27 36.6 -1.2
KSCO                             IAmb  IAmb   05 27 51.6
      comp=Z,8.3nm,0.6s
BVCY  Beaver Creek    20.05 343  P     P      05 27 40.4 +1.4
      baz=153
L29M  L29M            20.18 347  P     P      05 27 41.5 +1.1
      baz=159
M27K  Edge Creek, AK  20.23 342  P     P      05 27 41.8 +0.8
      baz=151
N25K  Chitina, Valde  20.28 337  P     P      05 27 42.5 +1.0
      baz=144
FFC   Flin Flon       20.34  48  P     P      05 27 42.2  0.0
FFC                              IAmb  IAmb   05 27 51.2
      comp=Z,9.9nm,0.9s
YKA   Yellowknife Ar  20.44  19  P     P      05 27 42.6 -0.5
      comp=Z,2.3nm,0.8s,baz=210,slow=10,SNR=11
YKA                              LR    LR     05 35 18.9
      comp=Z,43nm,18.3s,baz=230,slow=36
      comp=Z,2.3nm,0.8s
GLI   Glacier Island  20.46 333  P     P      05 27 44.3 +0.9
      baz=138
YKAW1 Yellowknife Wh  20.46  19  P     P      05 27 44.4 +1.0
YKAW1                            IAmb  IAmb   05 27 47.0
      comp=Z,6.9nm,1.0s
YKAW3 Yellowknife Wh  20.50  18  P     P      05 27 44.1 +0.3
YKAW3                            IAmb  IAmb   05 27 52.4
      comp=Z,6.4nm,0.9s
KLU   Klutina         20.57 336  P     Pn     05 27 47.9 +1.1
KLU   Klutina         20.57 336  P     P      05 27 45.6 +1.0
      baz=142
KDAK  Kodiak Island   20.58 321  LR    LR     05 33 11.7
      comp=Z,52nm,20.5s,baz=162,slow=30
KDAK  Kodiak Island   20.58 321  P     P      05 27 45.8 +1.1
      baz=123
OHAK  Old Harbor      20.61 320  P     Pn     05 27 46.5 -0.8
      baz=120
K29M  Barlow Dome     20.79 349  P     P      05 27 48.1 +1.1
      baz=161
BCAR  Beaver Creek A  20.83 343  P     P      05 27 47.9 +0.4
L27K  Beaver Creek,   20.84 343  P     P      05 27 48.6 +1.1
      baz=152
PWL   Port Wells      20.86 332  P     P      05 27 48.8 +1.1
      baz=136
Q20K  Shuyak Island   20.96 324  P     P      05 27 49.7 +0.9
      baz=125
BRSE  Bradley Lake S  20.97 328  P     P      05 27 50.2 +1.3
      baz=130
HARP  HAARP           21.08 338  P     P      05 27 51.2 +1.1
      baz=144
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M24K  Tolsona, Glenn  21.13 337  P     P      05 27 52.1 +1.5
      baz=142
CHIR  Chirikof Islan  21.14 314  P     P      05 27 51.8 +1.1
      baz=114
L26K  Log Cabin Wild  21.15 341  P     P      05 27 50.4 -0.4
L26K  Log Cabin Wild  21.15 341  P     P      05 27 51.8 +1.0
      baz=149
MENT  Mentasta        21.16 341  P     P      05 27 51.1 +0.1
MENT                             IAmb  IAmb   05 27 56.2
      comp=Z,7.6nm,1.2s
SCM   Sheep Creek Mo  21.26 335  P     P      05 27 52.8 +0.7
      baz=140
DAWY  Dawson          21.28 347  P     P      05 27 53.0 +0.7
      baz=158
KNK   Knik Glacier    21.30 333  P     P      05 27 53.1 +0.7
      baz=137
R18K  Karluk          21.33 320  P     P      05 27 52.8  0.0
      baz=119
J30M  Hart River      21.33 351  P     P      05 27 53.3 +0.4
      baz=164
M23K  Glacier View    21.35 334  P     P      05 27 53.2 +0.2
      baz=139
RC01  Rabbit Creek A  21.50 331  P     P      05 27 55.1 +0.5
      baz=134
SML   Sawmill         21.55 334  P     P      05 27 55.8 +0.6
      baz=138
PAX   Paxson          21.63 339  P     P      05 27 56.7 +0.6
      baz=145
PMR   Palmer          21.65 333  P     P      05 27 56.7 +0.5
      baz=136
K27K  Chicken         21.75 344  P     P      05 27 57.6 +0.3
      baz=152
P19K  Oil Pt          21.91 325  P     P      05 27 59.6 +0.5
      baz=126
WAT6  Susitna Watana  21.95 336  P     P      05 28 00.0 +0.4
      baz=140
I30M  Mount Dempster  21.96 351  P     P      05 28 00.4 +0.7
      baz=164
M22K  Willow          22.10 332  P     P      05 28 01.7 +0.7
      baz=135
RIDG  Independent Ri  22.11 341        P      05 28 02.8 +1.6
RIDG                             IAmb  IAmb   05 28 03.7
      comp=Z,13nm,1.2s
RIDG  Independent Ri  22.11 341  P     P      05 28 01.5 +0.2
      baz=147,SNR=6.7
SCRK  Sand Creek      22.11 342        P      05 28 02.6 +1.3
SCRK  Sand Creek      22.11 342  P     P      05 28 01.6 +0.3
      baz=149
SUA   Susitna One     22.11 331  P     P      05 28 01.3  0.0
      baz=133
Q18K  Katmai Hardscr  22.13 322  P     P      05 28 01.8 +0.3
      baz=121
DHY   Denali Highway  22.23 337  P     P      05 28 02.9 +0.3
DHY                              IAmb  IAmb   05 28 05.9
      comp=Z,9.1nm,1.0s
DHY   Denali Highway  22.23 337  P     P      05 28 03.0 +0.3
      baz=142
H31M  Peel River      22.34 354  P     P      05 28 04.2 +0.6
      baz=168
I29M  Ogilvie Camp,   22.34 349  P     P      05 28 04.3 +0.8
      baz=161
Q17K  Contact Creek   22.34 320  P     P      05 28 04.2 +0.4
      baz=119
WAT1  Susitna Watana  22.39 336  P     P      05 28 04.6 +0.5
      baz=139
J26L  Joseph Creek    22.47 343  P     P      05 28 05.0 -0.1
      baz=150
I28M  Miner Creek     22.66 348  P     P      05 28 07.0 -0.1
      baz=158
SKT   Skwentna        22.74 331  P     P      05 28 08.2 +0.3
      baz=133
F33A  5 Mile Ranch,   22.84  73  P     P      05 28 09.8 +0.8
F33A                             IAmb  IAmb   05 28 18.6
      comp=Z,8.7nm,1.1s
O18K  Koktuh Hills    22.85 324  P     P      05 28 09.3 +0.2
      baz=123
ECSD  EROS Data Cent  22.93  79  P     P      05 28 10.7 +0.6
ECSD                             IAmb  IAmb   05 28 17.8
      comp=Z,9.3nm,1.1s
CHNA  Chernabura Isl  22.94 310  P     P      05 28 09.3 -0.7
      baz=106
J25K  Salcha River,   22.97 341  P     P      05 28 10.1 -0.3
      baz=147
ULM   Lac du Bonnet   23.02  62  P     P      05 28 11.4 +0.6
      comp=Z,3.1nm,0.8s,baz=274,slow=11,SNR=6.5
      comp=Z,3.1nm,0.8s
I27K  Kandik River    23.08 346  P     P      05 28 11.2 -0.3
      baz=155
N19K  Bonanza Creek   23.10 327        P      05 28 12.8 +1.1
N19K  Bonanza Creek   23.10 327  P     P      05 28 11.8  0.0
      baz=126
I26K  Coal Creek Min  23.10 344  P     P      05 28 11.8 +0.3
      baz=152
EPYK  Eagle Plains    23.11 352  P     P      05 28 11.8 +0.1
      baz=164
H29M  Whitestone      23.16 350  P     P      05 28 12.4 +0.1
      baz=161
MCK   McKinley        23.19 337  P     P      05 28 12.3 -0.2
      baz=140
M20K  Styx River      23.24 330  P     P      05 28 13.2  0.0
      baz=130
S14K  Fog Glacier     23.36 313  P     P      05 28 13.9 -0.5
      baz=109
TRF   Thorofare Moun  23.38 335  P     P      05 28 14.5 -0.1
      baz=137
G31M  Satah River     23.43 354  P     P      05 28 14.8 -0.1
      baz=169
ILAR  Eielson Array   23.47 340  P     P      05 28 14.7 -0.7
      comp=Z,0.6nm,0.8s,baz=164,slow=9.1,SNR=6.9
      comp=Z,0.6nm,0.8s
SDPT  Sand Point      23.57 311  P     P      05 28 15.9 -0.4
      baz=106
N18K  Kilae Creek     23.59 325  P     P      05 28 16.2 -0.4
      baz=124
PPLA  Purkeypile      23.59 333  P     P      05 28 18.2 +1.5
PPLA  Purkeypile      23.59 333  P     P      05 28 15.8 -0.9
      baz=133
CCB   Clear Creek Bu  23.60 339  P     P      05 28 16.6  0.0
O17K  Koliganek Bris  23.62 323  P     P      05 28 16.2 -0.7
      baz=120
H27K  Steamboat Moun  23.64 347  P     P      05 28 16.5 -0.5
      baz=156
G30M  tAoh Zraii Nji  23.66 352  P     P      05 28 16.5 -0.7
      baz=166
P16K  Nushagak River  23.67 321  P     P      05 28 16.6 -0.7
      baz=117
M19K  Big River Lodg  23.72 329  P     P      05 28 17.5 -0.3
      baz=128
PRP   Porcupine Dome  23.78 342  P     P      05 28 17.7 -0.8
      baz=148
G29M  Pine Creek      23.78 351  P     P      05 28 17.4 -1.0
      baz=162
POKR  Poker Plat Res  23.89 340  P     P      05 28 18.4 -0.9
      baz=144
NEA2  Nenana          23.89 338  P     P      05 28 19.2 -0.2
NEA2                             IAmb  IAmb   05 28 32.1
      comp=Z,12nm,1.5s
NEA2  Nenana          23.89 338  P     P      05 28 18.7 -0.7
      baz=141
L20K  Farewell, AK    23.90 331  P     P      05 28 18.6 -0.9
      baz=130
F31M  Tsiigehtchic    23.91 355  P     P      05 28 18.9 -0.6
      baz=170
CAST  Castle Rocks    23.92 334  P     P      05 28 19.0 -0.7
      baz=134
O16K  Kokwok River B  23.98 322  P     P      05 28 19.6 -0.7
      baz=118
M18K  Stony River     24.02 327  P     P      05 28 19.9 -0.8
      baz=125
N17K  Nushagak Hills  24.05 324        P      05 28 22.6 +1.7
N17K                             IAmb  IAmb   05 28 23.3
      comp=Z,6.2nm,0.9s
N17K  Nushagak Hills  24.05 324  P     P      05 28 20.6 -0.3
      baz=121
L19K  White Mountain  24.06 329        P      05 28 21.7 +0.6
L19K                             IAmb  IAmb   05 28 22.2
      comp=Z,5.2nm,1.0s
L19K  White Mountain  24.06 329  P     P      05 28 20.4 -0.7
      baz=128
BPAW  Bear Paw Mtn.   24.07 336  P     P      05 28 20.8 -0.3
      baz=137
G27K  Doyon Strip     24.19 347  P     P      05 28 22.1 -0.2
      baz=156
F30M  Barrier River   24.23 353  P     P      05 28 22.6 +0.1
      baz=167
CHUM  Lake Minchumin  24.32 334  P     P      05 28 23.2 -0.2
      baz=135
EPLO  Experimental L  24.38  64        P      05 28 24.2  0.0
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EPLO                             IAmb  IAmb   05 28 31.6
      comp=Z,5.6nm,1.0s
I23K  Minto, Yukon-K  24.40 339  P     P      05 28 24.1 -0.1
      baz=141
TXAR  Lajitas Array   24.45 118  P     P      05 28 25.9 +0.8
      comp=Z,0.4nm,0.8s,baz=298,slow=6.6,SNR=6.4
      comp=Z,0.4nm,0.8s
H25L  Birch Creek     24.48 343  P     P      05 28 24.8  0.0
      baz=148
S12K  Black Hills     24.53 311  P     P      05 28 25.1 -0.4
      baz=105
K20K  Telida          24.53 332  P     P      05 28 25.6 +0.2
K20K                             IAmb  IAmb   05 28 55.0
      comp=Z,7.6nm,1.5s
K20K  Telida          24.53 332  P     P      05 28 24.9 -0.5
      baz=131
WMOK  Wichita Mounta  24.57 101  P     P      05 28 25.3 -0.7
H24K  Noodor Dome     24.58 341  P     P      05 28 26.0 +0.2
      baz=144
M17K  Holitna River   24.62 326  P     P      05 28 26.0 -0.1
      baz=122
F28M  Old Crow        24.68 350  P     P      05 28 26.4 -0.3
      baz=160
G26K  Porcupine Rive  24.68 346  P     P      05 28 26.8 +0.1
      baz=153
MLY   Manley          24.69 337  P     P      05 28 26.8 -0.1
MLY                              IAmb  IAmb   05 28 28.1
      comp=Z,4.6nm,1.0s
MLY   Manley          24.69 337  P     P      05 28 26.9 +0.1
      baz=139,SNR=7.8
N16K  Nishlik Lake    24.70 323  P     P      05 28 27.1 +0.2
      baz=119
INK   Inuvik          24.75 355  P     P      05 28 27.2  0.0
      baz=171
L18K  Granite Mounta  24.78 328        P      05 28 27.5  0.0
L18K                             IAmb  IAmb   05 28 29.6
      comp=Z,6.1nm,1.1s
L18K  Granite Mounta  24.78 328  P     P      05 28 27.6  0.0
      baz=125,SNR=5.1
G25K  Bearman Lake    24.97 343  P     P      05 28 29.6 +0.4
      baz=148
H23K  Yukon River     24.98 339  P     P      05 28 29.3 -0.1
      baz=142
M16K  Timber Creek    25.05 324  P     P      05 28 30.1 +0.1
      baz=120
J20K  Nowinta River   25.11 333  P     P      05 28 30.1 -0.4
      baz=132
N15K  Kwethluk River  25.14 322  P     P      05 28 31.5 +0.6
N15K  Kwethluk River  25.14 322  P     P      05 28 30.8  0.0
      baz=116
E29M  Blow River      25.19 352  P     P      05 28 30.8 -0.4
      baz=164
G24K  Hadweenzic Riv  25.21 342  P     P      05 28 31.7 +0.3
G24K                             IAmb  IAmb   05 28 33.2
      comp=Z,3.8nm,1.1s
G24K  Hadweenzic Riv  25.21 342  P     P      05 28 31.3 -0.1
      baz=146
BMAR  Burnt Mountain  25.25 345  P     P      05 28 32.3 +0.4
O14K  Tigyukauivet M  25.29 319  P     P      05 28 32.5 +0.3
      baz=113
L17K  Donlin          25.36 327  P     P      05 28 32.9 +0.1
      baz=123,SNR=5.4
F26K  Sheenjek River  25.41 346  P     P      05 28 33.7 +0.4
      baz=153
E27K  Coleen River    25.45 349  P     P      05 28 33.7 +0.1
      baz=157
J19K  Poorman         25.48 332  P     P      05 28 33.9  0.0
      baz=130,SNR=8.6
H22K  Ishtalitna Cre  25.52 338  P     P      05 28 34.6 +0.3
      baz=139,SNR=8.5
J18K  Innoko River    25.53 330        P      05 28 34.5 +0.2
J18K                             IAmb  IAmb   05 28 35.5
      comp=Z,5.4nm,0.9s
J18K  Innoko River    25.53 330  P     P      05 28 34.3  0.0
      baz=127,SNR=5.8
E28M  Babbage River   25.58 351  P     P      05 28 35.3 +0.5
      baz=161
F25K  Christian Rive  25.59 345  P     P      05 28 35.1 +0.2
      baz=150
L16K  Owhat River     25.61 325  P     P      05 28 35.3 +0.2
      baz=120,SNR=8.9
I20K  Naaghedeneel    25.63 334  P     P      05 28 35.5 +0.3
      baz=133
M15K  Kasigluk River  25.64 323  P     P      05 28 35.6 +0.2
      baz=117
K17K  Iditarod        25.68 328        P      05 28 35.8 +0.1
K17K  Iditarod        25.68 328  P     P      05 28 35.2 -0.5
      baz=124,SNR=5.7
H21K  Melozitna Rive  25.74 337  P     P      05 28 36.0 -0.2
      baz=136,SNR=5.8
C36M  Paulatuk        25.76   4  P     P      05 28 36.1 -0.2
      baz=187
N14K  Kuskokwak Cree  25.76 321  P     P      05 28 36.2 -0.2
      baz=114
G23K  Bananza Creek   25.81 340  P     P      05 28 37.1 +0.2
      baz=142
EYMN  Ely             25.91  68        P      05 28 38.1  0.0
EYMN                             IAmb  IAmb   05 28 45.7
      comp=Z,5.2nm,1.0s
F24K  Squaw Lake      25.98 343  P     P      05 28 38.6 +0.1
      baz=146
E25K  Arctic Village  26.04 345  P     P      05 28 38.6 -0.4
      baz=151
M14K  Bethel          26.23 322  P     P      05 28 40.4 -0.2
      baz=115
H20K  Anotleneega Mo  26.23 335  P     P      05 28 40.6 -0.1
      baz=133,SNR=7.9
IMAR  Indian Mountai  26.24 337  P     P      05 28 40.9 +0.1
COLD  Coldfoot        26.26 341  P     P      05 28 41.4 +0.4
      baz=143
G22K  Bettles         26.34 340  P     P      05 28 41.6  0.0
      baz=140
J17K  VABM Dome       26.35 329  P     P      05 28 42.6 +0.8
      baz=124
D27M  Malcolm River   26.36 350  P     P      05 28 42.2 +0.3
      baz=159
GCSA  Galena City Sc  26.38 333  P     P      05 28 42.2 +0.2
      baz=129
L15K  Ungalak Mounta  26.43 324  P     P      05 28 42.3 -0.3
      baz=118
G21K  Allakaket       26.56 338  P     P      05 28 44.5 +0.8
G21K                             IAmb  IAmb   05 28 45.6
      comp=Z,7.5nm,1.4s
G21K  Allakaket       26.56 338  P     P      05 28 43.5 -0.1
      baz=137
E24K  Your Creek      26.57 343  P     P      05 28 43.8  0.0
      baz=146
UNV   Unalaska Valle  26.72 306  P     P      05 28 44.8 -0.3
      baz=97
M13K  Dall Lake       26.72 321  P     P      05 28 45.3 +0.2
      baz=113
H19K  Roundabout Mou  26.74 334        P      05 28 45.4 +0.2
H19K  Roundabout Mou  26.74 334  P     P      05 28 45.0 -0.2
      baz=131,SNR=5.5
K15K  Wolf Creek Mou  26.74 325  P     P      05 28 45.1 -0.3
      baz=118
E23K  Chandalar       26.80 342  P     P      05 28 45.9  0.0
      baz=144
L14K  Kuka Creek      26.80 323  P     P      05 28 45.8  0.0
      baz=115
J16K  Anvik River     26.87 328  P     P      05 28 46.5 +0.1
      baz=121
F21K  Alatna River    27.07 339  P     P      05 28 48.8 +0.5
      baz=138
C27K  Jago River      27.09 348  P     P      05 28 48.7 +0.4
      baz=155
I17K  Unalakleet      27.23 329  P     P      05 28 49.9 +0.3
      baz=122
D25K  Kavik River     27.24 346  P     P      05 28 50.3 +0.5
      baz=151
TOLK  Toolik Lake Re  27.27 343  P     P      05 28 50.2 +0.1
      baz=145
G19K  Purcell Mounta  27.35 335  P     P      05 28 51.5 +0.7
      baz=131
E22K  Anaktuvuk Pass  27.36 341  P     P      05 28 51.4 +0.6
      baz=141
H17K  Granite Mounta  27.53 331  P     P      05 28 52.6 +0.2
      baz=125
C26K  Camden Bay      27.53 348  P     P      05 28 52.6 +0.3
      baz=154
D24K  Happy Valley    27.55 344  P     P      05 28 52.8 +0.3
      baz=147
F20K  Avaraart Lake   27.56 337  P     P      05 28 53.4 +0.8
      baz=134
G18K  Tagagawik       27.68 334  P     P      05 28 53.5 -0.2
      baz=128
J14K  Nanvaranak Lak  27.79 325  P     P      05 28 54.5 -0.2
      baz=117
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K13K	Kusilvak Mount	27.90	323	P	P	05 28 55.8	+0.1
	baz=114						
C24K	Franklin Bluff	28.00	345	P	P	05 28 56.6	+0.1
	baz=148						
M11K	Mekoryuk	28.03	320	P	P	05 28 57.0	+0.1
	baz=109						
G17K	Kiwalik Mounta	28.11	332	P	P	05 28 57.6	0.0
	baz=125						
D22K	Ayikyak River	28.14	342	P	P	05 28 58.3	+0.5
	baz=141						
H16K	Elim	28.20	330	P	P	05 28 58.7	+0.4
	baz=122						
E19K	Redstone River	28.27	337	P	P	05 28 58.6	-0.3
	baz=132						
A36M	Sachs Harbour	28.35	2	P	P	05 28 59.8	+0.1
	baz=185						
F18K	Selawik	28.44	334	P	P	05 29 00.5	+0.1
	baz=128						
C23K	Itkillik River	28.47	344	P	P	05 29 00.8	+0.1
	baz=145						
E20K	Nigu River	28.54	339	P	P	05 29 01.4	-0.1
	baz=135						
G16K	Koyuk River	28.64	331	P	P	05 29 02.2	-0.1
	baz=122						
C21K	Knifeblade Rid	28.84	341	P	P	05 29 04.0	-0.1
	baz=138						
F17K	Baldwin Pennin	28.85	333	P	P	05 29 04.3	+0.2
	baz=126						
D20K	Etivluk River	28.97	339	P	P	05 29 05.5	+0.2
	baz=135						
G15K	Niukluk	29.04	329	P	P	05 29 05.9	+0.1
	baz=120						
B21K	Ikpikpuk River	29.15	342	P	P	05 29 06.6	-0.2
	baz=139						
D19K	Kuna River	29.22	338	P	P	05 29 07.4	-0.1
	baz=133						
E18K	Tukpahlearik C	29.24	335	P	P	05 29 07.9	+0.3
	baz=128						
SPIA	Saint Paul Isl	29.29	312	P	P	05 29 08.2	+0.1
	baz=99						
F15K	North Star Dit	29.62	330	P	P	05 29 11.3	+0.3
	baz=120						
A22K	Sinclair Lake	30.29	343	P	P	05 29 16.9	+0.1
	baz=140						
C17K	DeLong Mountai	30.65	336	P	P	05 29 19.6	-0.5
	baz=126						
TNA	Tin City	30.75	329	P	P	05 29 20.3	-0.6
	baz=116						
C16K	Lisburne Hills	31.20	334		P	05 29 24.9	0.0
C16K	Lisburne Hills	31.20	334	P	P	05 29 25.5	+0.6
	baz=123						
SADO	Sadowa	34.90	71	LR	LR	05 44 29.6	
	comp=Z,58nm,18.9s,baz=324,slow=37						
TKL	Tuckaleechee C	34.96	88	LR	LR	05 44 53.6	
	comp=Z,111nm,18.1s,baz=328,slow=37						
SHEM	Shemya Is, Ala	38.36	304	LR	LR	05 43 00.5	
	comp=Z,21nm,21.9s,baz=233,slow=31						
CMIG	Matias Romero	38.85	123	LR	LR	05 45 31.8	
	comp=Z,18nm,22.0s,baz=123,slow=35						
MA2	Magadan	49.28	318	LR	LR	05 51 51.0	
	comp=Z,24nm,18.5s,baz=178,slow=35						
H11N3	WAKE ISLAND Hy	58.43	268	T	T	06 36 10.7	
	baz=49,slow=75,SNR=207						
H11N2	WAKE ISLAND Hy	58.43	268	T	T	06 36 10.8	
	baz=49,slow=75,SNR=127						
H11N1	WAKE ISLAND Hy	58.45	268	T	T	06 36 11.9	
	baz=49,slow=75,SNR=91						
H11S1	WAKE ISLAND Hy	59.36	267	T	T	06 37 17.7	
	baz=50,slow=75,SNR=36						
H11S2	WAKE ISLAND Hy	59.36	267	T	T	06 37 19.5	
	baz=50,slow=75,SNR=37						
H11S3	WAKE ISLAND Hy	59.38	267	T	T	06 37 20.1	
	baz=50,slow=75,SNR=23						
PCRV	Puerto La Cruz	64.17	101	LR	LR	06 02 50.3	
	comp=Z,30nm,21.5s,slow=37						
XLT	XiLinHaoTe	75.47	318	*e*P	P	05 34 49.4	-0.8
XLT				sP	pwP	05 34 56.6	+0.3
XLT				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SONM	Songino Array	76.81	326	P	P	05 34 57.5	-0.3
	comp=Z,0.8nm,0.6s,baz=60,slow=4.0,SNR=5.0						
	comp=Z,0.8nm,0.6s						
HHC	Hu-ho-hao-te	79.96	318	*e*P	P	05 35 15.1	-0.2
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC				pmax	pmax		
	comp=Z,74nm,4.1s						
KURBB	Kurchatov Arra	83.11	343	P	P	05 35 30.4	-1.2
	comp=Z,1.0nm,0.8s,baz=21,slow=5.2,SNR=5.8						
	comp=Z,1.0nm,0.8s						
PZH	PanZhiHua	96.30	316	P	P	05 36 35.8	+0.8

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*IDC **21** 05:25:09.5±3.8, 53°.54N×87°.62E, h0^{km}, mbtmp2.4/2, ML2.1/2, Error ellipse: s-maj=34.9km s-min=17.4km az=56.0*

ASRS 21 05:25:09.0±0.4**, 53°.49N×87°.43E, h0^{km}, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.62	288	I	I	05 35 30.0	
	0.1nm,0.8s,baz=104,slow=318,SNR=31						
ZALV	Zalesovo Beam	1.62	288	Pg	Pn	05 25 39.2	+0.4
	0.7nm,0.3s,baz=105,slow=12,SNR=6.1						
ZALV				Lg	Lg	05 26 04.2	
	0.9nm,0.3s,baz=115,slow=24,SNR=4.9						
KURBB	Kurchatov Arra	6.19	246	Pn	Pn	05 26 45.0	+3.4
	baz=53,slow=14,SNR=1.8						
	0.2nm,0.3s						
MKAR	Makanchi Array	7.47	208	Pn	Pn	05 27 01.9	+2.7
	0.1nm,0.3s,baz=30,slow=16,SNR=1.8						
MKAR				Lg	Lg	05 29 09.5	
	baz=36,slow=31,SNR=2.1						
	0.1nm,0.4s						

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*IDC **21** 05:34:19.9±0.8, 33°.40S×178°.76W, h0^{km}, mb4.3/5, mbtmp4.4/6, ML4.4/1, MS3.6/7, Error ellipse: s-maj=31.8km s-min=24.9km az=85.0*

*WEL **21** 05:34:21.3±0.8, 34°S±6°×17°8W±1°5, h33^{km}, M4.6/13, mB5.2/10, ML4.9/18, MLv4.8/13, Mw(mB)4.5/10, Error ellipse: s-maj=20.1km s-min=3.4km az=109.6, confirmed*

*NEIC **21** 05:34:22.4±2.5, 33°.47S±0°.06×178°.7W±0°.2, h10^{km}±1^{km}, mb4.4/11, Error ellipse: s-maj=26.6km s-min=5.5km az=109.0*

ISC 21 05:34:24.5±0.6**, 33°.58S**±0°.06×**178°.5W**±0°.1**, h41^{km}, n73, σ1^{s}.89**/84**, mb4.3**/12**, MS3.7**/5**, 3C, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	4.33	7	P	Pn	05 35 24.9	-3.0
GLKZ				S	Sn	05 36 13.1	-4.1
RAO	Raoul Island	4.34	7	Pn	Pn	05 35 26.4	-1.6
RIZ	Raoul Island	4.35	6	S	Sn	05 36 15.3	-2.3
MXZ	Matakaoa Point	4.75	212	Pn	Pn	05 35 32.8	-0.9
WMGZ	Waiomatatini S	4.92	210	P	Pn	05 35 34.8	-1.1
WMGZ				S	Sn	05 36 31.4	-0.2
PKGZ	Pakihiroa	5.11	212	P	Pn	05 35 36.0	-2.4
PKGZ				S	Sn	05 36 34.4	-1.7
HAZ	Te Kaha	5.15	215	P	Pn	05 35 37.9	-1.2
HAZ				S	Sn	05 36 37.5	+0.2
PUZ	Puketiti	5.20	210	P	Pn	05 35 37.1	-2.8
PUZ				S	Sn	05 36 36.6	-2.0
RUGZ	Raukumara Rang	5.37	214	P	Pn	05 35 41.5	-0.8
RUGZ				S	Sn	05 36 41.9	-0.9
TWGZ	Tauwhareparae	5.41	211	P	Pn	05 35 41.8	-0.8
TWGZ				S	Sn	05 36 41.1	-2.6
CNGZ	Carnagh Statio	5.58	208	P	Pn	05 35 41.0	-3.9
TKGZ	Te Karaka	5.68	210	P	Pn	05 35 45.0	-1.4
TKGZ				S	Sn	05 36 48.1	-2.2
KUZ	Kuaotunu	5.70	235	P	Pn	05 35 47.1	+0.5
MWZ	Matawai	5.74	213	P	Pn	05 35 44.9	-2.3
MWZ				S	Sn	05 36 48.9	-2.8
OPRZ	Ohinepanea	5.86	222	P	Pn	05 35 47.8	-1.0
URZ	Urewera	5.88	216	Pn	Pn	05 35 46.5	-2.5
	9.2nm,0.3s,baz=258,slow=3.0,SNR=54						
URZ				Sn	Sn	05 36 51.4	-3.7
	8.4nm,0.3s,baz=142,slow=19,SNR=6.1						
	80nm,0.6s						
URZ	Urewera	5.88	216	P	Pn	05 35 47.3	-1.7
URZ				S	Sn	05 36 51.7	-3.3
MARZ	Manawahe	5.89	220	P	Pn	05 35 48.2	-1.1
RAGZ	Rawiri	5.92	213	P	Pn	05 35 47.1	-2.6
RAGZ				S	Sn	05 36 53.7	-2.6
RIGZ	Rimuhau	5.95	210	P	Pn	05 35 48.1	-2.0
RIGZ				S	Sn	05 36 55.1	-1.8
PRGZ	Paritu Road	6.08	208	P	Pn	05 35 50.3	-1.6
PRGZ				S	Sn	05 36 57.7	-2.5
SNGZ	Shannon Statio	6.19	212	P	Pn	05 35 51.5	-1.8
SNGZ				S	Sn	05 37 00.7	-2.1
RTZ	Ruatahuna	6.22	215		Pn	05 35 50.8	-3.0
KNZ	Kokohu	6.25	209	P	Pn	05 35 50.4	-3.8
MKAZ	Moumakai	6.27	234	P	Pn	05 35 55.8	+1.4
MHGZ	Mahia Peninsul	6.27	207	P	Pn	05 35 52.1	-2.4
WCZ	Waipu Caves	6.35	246	P	Pn	05 35 56.0	+0.5
TOZ	Tahuroa Road	6.41	228	P	Pn	05 35 56.2	-0.1
MTHZ	Maungataniwha	6.47	214	P	Pn	05 35 56.3	-1.0
TLZ	Tolley Road	6.78	224	P	Pn	05 36 00.6	-0.8
HIZ	Hauiti	7.30	226	P	Pn	05 36 08.4	-0.2
MSVF	Nonsavu	16.09	348	LR	LR	05 43 15.5	
	comp=Z,167nm,20.4s,baz=167,slow=34						
NIUE	Niue	16.35	30	Pn	Pn	05 38 10.7	-0.3
DZM	Mont Dzumac	17.56	307	LR	LR	05 43 56.2	
	comp=Z,320nm,19.6s,baz=170,slow=33						
EIDS	Eidsvold	27.65	279	P	P	05 40 08.0	-0.6
EIDS				IAmb	IAmb	05 40 10.7	
	comp=Z,7.5nm,1.1s						
PPT	Papeete	30.43	66	LR	LR	05 49 51.5	
	comp=Z,43nm,19.5s,baz=212,slow=30						
STKA	Stephens Creek	33.48	262	LR	LR	05 54 03.9	
	comp=Z,197nm,18.4s,baz=40,slow=36						
CTAO	Charters Tower	34.04	284	P	P	05 41 04.9	+0.1
CTAO				IAmb	IAmb	05 41 17.4	
	comp=Z,10nm,1.1s						
BBOO	Buckleboo	37.81	258	P	P	05 41 36.2	-0.8
BBOO				IAmb	IAmb	05 41 47.7	
	comp=Z,7.7nm,1.1s						
AS31	Alice Springs	42.63	271	P	P	05 42 15.8	-1.3
ASAR	Alice Springs	42.63	271	P	P	05 42 15.1	-2.0
ASAR	Alice Springs	42.63	271	P	P	05 42 16.6	-0.5
	comp=Z,4.5nm,0.8s,baz=112,slow=7.4,SNR=33						
ASAR				PcP	PcP	05 44 09.2	+0.5
	comp=Z,0.5nm,0.8s,baz=95,slow=2.7,SNR=2.2						
ASAR				LR	LR	05 59 01.8	
	comp=Z,90nm,19.8s,baz=96,slow=35						
	comp=Z,4.5nm,0.8s						
WR8	Warramunga Arr	43.76	276	P	P	05 42 25.1	-1.1
WR8				IAmb	IAmb	05 42 27.9	
	comp=Z,5.7nm,0.8s						
WRA	Warramunga Arr	43.90	276	P	P	05 42 26.7	-0.7
WRA	Warramunga Arr	43.90	276	P	P	05 42 26.9	-0.4
	comp=Z,6.4nm,0.7s,baz=117,slow=7.2,SNR=30						
	comp=Z,6.4nm,0.7s						
FITZ	Fitzroy Crossi	52.02	273	P	P	05 43 29.8	-0.4
FITZ				IAmb	IAmb	05 43 46.7	
	comp=Z,2.2nm,1.1s						
FITZ	Fitzroy Crossi	52.02	273	LR	LR	06 05 27.8	
	comp=Z,150nm,18.1s,baz=117,slow=36						
FAKI	Fak Fak	55.12	293	P	P	05 43 54.2	+1.3
QSPA	South Pole Qui	56.54	180	P	P	05 44 05.4	+2.9
QSPA				IAmb	IAmb	05 44 17.2	
	comp=Z,3.8nm,0.7s						
QSPA	South Pole Qui	56.54	180	P	P	05 44 05.6	+3.1
	comp=Z,3.9nm,1.1s,baz=191,slow=0.5,SNR=9.2						
	comp=Z,3.9nm,1.1s						
DAV	Davao City (W)	66.62	296	LR	LR	06 12 18.5	
	comp=Z,26nm,20.6s,baz=130,slow=34						
SNAA	Sanae	74.99	179	⇑P	P	05 46 04.4	+3.2
	comp=Z,10nm,0.5s						
SNAA	Sanae	74.99	179	P	P	05 46 04.7	+3.5
SNAA				IAmb	IAmb	05 46 30.1	
	comp=Z,3.9nm,1.1s						
SNAA	Sanae	74.99	179	P	P	05 46 05.3	+4.1
	comp=Z,1.1nm,1.1s,baz=134,slow=14,SNR=1.9						
	comp=Z,1.1nm,1.1s						
VNA3	Neumayer Olymp	75.17	176	⇑P	P	05 46 03.2	+1.1
	comp=Z,2.1nm,0.7s						
VNA2	Neumayer--Watz	75.59	177	⇑P	P	05 46 06.0	+1.4
	comp=Z,1.9nm,0.8s,baz=188,slow=2.3						
PETK	Petropavlovsk-	88.79	346	P	P	05 47 14.1	+0.7
	comp=Z,2.8nm,0.9s,baz=158,slow=5.9,SNR=4.8						
	comp=Z,2.8nm,0.9s						
MKAR	Makanchi Array	119.47	309	PKP	PKiKP	05 53 10.0	+0.6
	comp=Z,0.3nm,0.5s,baz=132,slow=2.1,SNR=4.1						
KURBB	Kurchatov Arra	122.95	312	PKP	PKiKP	05 53 16.5	+0.5
	comp=Z,0.5nm,0.7s,baz=106,slow=2.0,SNR=4.8						
BVAR	Borovoye Array	128.35	314	PKP	PKiKP	05 53 27.7	+1.0
	comp=Z,0.5nm,0.4s,baz=75,slow=3.2,SNR=2.4						
GNI	Garni	145.07	294	PKPdf	PKPdf	05 53 58.7	+1.2
FIA1	FINESS Array S	147.96	338	PKPdf	PKPbc	05 54 03.7	-0.8
FINES	FINESS Array B	147.96	338	PKPdf	PKPbc	05 54 03.5	-1.0
FINES	FINESS Array B	147.96	338	PKPbc	PKiKP	05 54 05.8	-0.6
	comp=Z,5.7nm,0.8s,baz=38,slow=5.0,SNR=25						
ARPR	Arapgir-MALATY	149.97	291	PKPbc	PKiKP	05 54 12.1	+0.6
MMAI	Mount Meron Ar	151.74	278	PKPbc	PKiKP	05 54 15.9	+0.7
	comp=Z,1.3nm,0.4s,baz=204,slow=1.5,SNR=6.2						
NB2	NORSAR Subarra	151.82	350	PKP	PKiKP	05 54 15.4	+1.0
	comp=Z,1.7nm,0.9s,baz=17,slow=2.6						
NOA	NORSAR Array B	151.82	350	PKPbc	PKiKP	05 54 15.2	+0.8
	comp=Z,1.4nm,0.8s,baz=14,slow=4.1,SNR=4.7						
BNN	Bunyan	151.91	291	PKPdf	PKPdf	05 54 08.8	+0.1
BNN				PKPbc	PKiKP	05 54 15.5	0.0
HFS	Hagfors	152.26	347	PKPbc	PKiKP	05 54 15.7	+0.4
	comp=Z,1.6nm,0.7s,baz=76,slow=1.8,SNR=5.8						
AKASG	Malin Array Be	153.49	319	PKPbc	PKiKP	05 54 19.0	+0.9
	comp=Z,1.4nm,0.8s,baz=61,slow=1.8,SNR=5.3						
BRTR	Keskin Array B	153.60	293	PKPbc	PKiKP	05 54 18.9	-0.1
	comp=Z,1.7nm,0.9s,baz=134,slow=3.6,SNR=7.6						
TORD	Torodi Ar. Bea	159.66	181	PKPab	PKPab	05 54 58.7	+0.9
	comp=Z,63nm,0.3s,baz=222,slow=1.9,SNR=1.3						

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*FCIAR **21** 05:39:14.0, 79°.75N×21°.13E, h10^{km}, station OMEGA has station magnitude of 3.80 station ZFI2 has station magnitude of 3.70*

*BER **21** 05:39:14.0±4.8, 80°.03N×20°.16E, h15^{km}±28^{km}, ML2.5, ML3.7(NAO), Confirmed Earthquake*

*IDC **21** 05:39:15.5±2.0, 79°.64N×21°.06E, h0^{km}, mb3.5/3, mbtmp3.5/6, ML2.8/3, MS3.1/2, Error ellipse: s-maj=26.7km s-min=10.2km az=142.0*

*KOLA **21** 05:39:17.3, 79°.69N×20°.54E, h0^{km}, ML2.4, Error ellipse: s-maj=98.2km s-min=50.9km az=60.0, Spitsbergen*

ISC 21 05:39:17.7±1.7**, 79°.55N**±0°.07×**21°.59E**±0°.04**, h26^{km}**±12^{km}**, n46, σ2^{s}.15**/71**, mb3.4**/3**, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPA0	Spitsbergen Ar	1.71	219	Pn	Pn	05 39 44.2	-1.5
	baz=32,slow=16						
SPA0				Pg	Pb	05 39 47.5	-0.9
	baz=39,slow=37						
SPA0				Sn	Sb	05 40 11.6	+2.2
	baz=21,slow=37						
SPA0	Spitsbergen Ar	1.71	219	*e*P	Pn	05 39 42.9	-2.9
SPA0				*e*S	Sn	05 40 05.7	-1.0
SPA0	Spitsbergen Ar	1.71	219	Pn	Pn	05 39 44.2	-1.5
	baz=32,slow=16						
SPA0				Pg	Pb	05 39 47.5	-0.9
	baz=39,slow=37						
SPA0				Sn	Sb	05 40 11.6	+2.2
	baz=21,slow=37						
SPITS	Spitsbergen Ar	1.71	219	Pg	Pn	05 39 47.1	+1.3
	baz=31,slow=17						
SPITS				Lg	Lg	05 40 10.0	
	baz=32,slow=23						
SPITS	Spitsbergen Ar	1.71	219	P	Pn	05 39 44.2	-1.5
SPITS				S	Sn	05 40 04.8	-1.9
KBS	Kingsbay	1.92	256	Pn	Pn	05 39 43.0	-5.5
KBS				Sn	Sn	05 40 07.8	-4.0
KBS	Kingsbay	1.92	256	P	Pn	05 39 42.7	-5.9
KBS				S	Sn	05 40 00.9	-11
KBS	Kingsbay	1.92	256	*e*P	Pn	05 39 42.9	-5.7
KBS				*e*S	Sn	05 40 07.6	-4.2
KBS				IAML		05 40 10.9	
	comp=Z,191nm,0.3s						
KBS	Kingsbay	1.92	256	*e*P	Pn	05 39 42.9	-5.6
KBS				*i* S	Sn	05 40 07.6	-4.2
BRBB	Barentsburg B	2.05	228	Pn	Pn	05 39 48.2	-2.2
BRBB	Barentsburg B	2.05	228	P	Pn	05 39 50.5	+0.1
BRBB				S	Sn	05 40 12.7	-2.4
BRBB	Barentsburg B	2.05	228	Pn	Pn	05 39 48.2	-2.2
BRBA	Barentsburg A	2.08	228	Pn	Pn	05 39 48.5	-2.2
BRBA				Sn	Sb	05 40 19.9	0.0
BRBA	Barentsburg A	2.08	228	Pn	Pn	05 39 48.5	-2.2
BRBA				Sn	Sb	05 40 19.9	0.0
HSPB	Hornsund (broa	2.84	209	Pn	Pn	05 40 00.8	-0.5
HSPB				Pg	Pb	05 40 08.0	+0.5
HSPB	Hornsund (broa	2.84	209	P	Pn	05 40 02.1	+0.9
HSPB				S	Sn	05 40 36.8	+2.2
HSPB	Hornsund (broa	2.84	209	*e*P	Pn	05 40 01.9	+0.6
HSPB				*e*S	Sn	05 40 37.5	+3.0
HSPB	Hornsund (broa	2.84	209	*e*P	Pn	05 40 02.7	+1.4
HSPB				*e*Pg	Pb	05 40 08.1	+0.5
HOPEN	Hopen	3.13	165	Pn	Pn	05 40 07.7	+2.4
HOPEN				Sn	Sb	05 40 49.4	-0.9
HOPEN				Sg	Sn	05 41 04.5	+23
HOPEN	Hopen	3.13	165	*e*P	Pn	05 40 04.2	-1.0
HOPEN				*e*S	Sn	05 40 43.1	+1.3
HOPEN	Hopen	3.13	165	*e*P	Pn	05 40 08.1	+2.8
HOPEN				*e*Pg	Pb	05 40 19.0	+6.4
HOPEN				*e*S	Sb	05 40 47.5	-2.9
HOPEN				*e*Sg	Sn	05 41 04.5	+23
HOPEN				IAML		05 41 14.0	
	comp=Z,89nm,0.4s						
ZFI2	Zemlya Franca-	4.61	62	*e*P	Pn	05 40 23.8	-1.7
ZFI2				*e*S	Sn	05 41 15.1	-3.0
	comp=Z,66nm,1.2s						
OMEGA	Omega	4.62	62	*e*P	Pn	05 40 23.8	-1.9
OMEGA				*e*S	Sn	05 41 15.1	-3.2
	comp=Z,70nm,0.7s						
VADS	Vadso	9.68	164	P	Pn	05 41 37.4	+2.5
VADS				S	Sn	05 43 22.6	+0.1
VADS	Vadso	9.68	164	*e*P	Pn	05 41 37.6	+2.6
KEV	Kevo	9.94	169	Pn	Pn	05 41 39.4	+0.8
KEV				Sn	Sn	05 43 28.5	-0.5
KEV	Kevo	9.94	169	*e*P	Pn	05 41 40.7	+2.1
JETT	Jettan, Norway	10.05	182	Sn	Sn	05 43 29.1	-2.8
JETT	Jettan, Norway	10.05	182	Sn	Sn	05 43 29.1	-2.8
ARA0	ARCESS Array S	10.12	172	Pn	Pn	05 41 41.5	+0.5
	baz=2.3,slow=11						
ARA0				Sn	Sn	05 43 30.8	-2.7
	baz=3.1,slow=22						
ARA0	ARCESS Array S	10.12	172	*e*P	Pn	05 41 42.9	+1.9
ARA0				Sn	Sn	05 43 30.8	-2.7
	baz=3.1,slow=22						
ARCES	ARCESS Array B	10.12	172	Pn	Pn	05 41 41.9	+0.9
	comp=Z,0.4nm,0.3s,baz=1.4,slow=10,SNR=29						
ARCES				Sn	Sn	05 43 30.8	-2.7
	comp=Z,0.9nm,0.3s,baz=13,slow=20,SNR=7.8						
ARCES				LR	LR	05 46 21.3	
	comp=Z,22nm,18.2s,baz=105,slow=42						
	comp=Z,0.8nm,0.3s						
ARCES	ARCESS Array B	10.12	172	P	Pn	05 41 42.9	+1.9
ARCES				S	Sn	05 43 31.7	-1.7
KIF	Kilpisjarvi	10.60	182	Pn	Pn	05 41 46.6	-1.0
KIF				Sn	Sn	05 43 40.0	-5.2
KIF	Kilpisjarvi	10.60	182	*e*P	Pn	05 41 48.3	+0.7
TERR	Teriberka	10.96	154	P	Pn	05 41 53.1	+0.6
TERR				S	Sn	05 43 52.5	-1.6
HEF	Hetta	11.21	176	Pn	Pn	05 41 57.0	+1.0
HEF				Sn	Sn	05 43 58.2	-2.0
HEF	Hetta	11.21	176	*e*P	Pn	05 41 56.8	+0.8
APA0	Apatity Array	12.38	159	S	Sn	05 44 26.6	-2.2
KVDA	Kovda	13.28	160	S	Sn	05 44 51.0	+0.4
FINES	FINESS Array B	18.24	173	P	Pn	05 43 29.4	+0.8
	baz=7.3,slow=15,SNR=2.2						
	comp=Z,1.3nm,0.9s						
HFS	Hagfors	19.66	192	P	Pn	05 43 45.2	-0.5
	comp=Z,0.2nm,0.3s,baz=2.8,slow=8.9,SNR=6.0						
	comp=Z,0.9nm,0.5s						
AKASG	Malin Array Be	29.09	170	P	P	05 45 18.6	+3.0
	comp=Z,0.3nm,0.4s,baz=350,slow=8.9,SNR=0.9						
	comp=Z,0.3nm,0.4s						
KURBB	Kurchatov Arra	34.78	111	P	P	05 46 08.0	+2.6
	comp=Z,0.3nm,0.6s,baz=345,slow=8.0,SNR=4.9						
	comp=Z,0.3nm,0.6s						
MKAR	Makanchi Array	39.12	108	P	P	05 46 45.3	+2.8
	comp=Z,0.4nm,0.6s,baz=349,slow=6.7,SNR=3.4						
	comp=Z,0.4nm,0.6s						
TORD	Torodi Ar. Bea	67.08	201	LR	LR	06 21 23.6	
	comp=Z,65nm,18.2s,baz=214,slow=38						

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*IDC **21** 05:39:19.8±0.7, 31°.32S×177°.61W, h0^{km}, mb4.3/8, mbtmp4.3/9, ML4.6/1, Error ellipse: s-maj=26.0km s-min=18.8km az=91.0*

*NEIC **21** 05:39:21.6±1.6, 31°.34S±0°.07×177°.6W±0°.2, h10^{km}±1^{km}, mb4.7/17, Error ellipse: s-maj=25.4km s-min=10.5km az=78.0*

ISC 21 05:39:23.7±0.6**, 31°.40S**±0°.07×**177°.7W**±0°.1**, h26^{km}, n42, σ1^{s}.23**/45**, mb4.6**/17**, 3C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.15	355		Pn	05 39 55.6	-2.3
RAO	Raoul Island	2.15	355	Pn	Pn	05 39 56.4	-1.5
	197nm,0.3s,baz=107,slow=7.5,SNR=13						
RAO				Sn	Sn	05 40 23.1	-0.7
	322nm,0.3s,baz=66,slow=20,SNR=5.6						
	469nm,0.3s						
URZ	Urewera	8.05	210	Pn	Pn	05 41 15.5	-3.4
	0.6nm,0.3s,baz=314,slow=12,SNR=1.3						
URZ				Sn	Sn	05 42 41.2	-7.8
	5.4nm,0.3s,baz=259,slow=19,SNR=9.5						
RPZ	Rata Peaks	15.15	213	Pn	Pn	05 42 52.5	-3.5
	0.9nm,0.3s,baz=324,slow=17,SNR=1.4						
ONTNC	Ouen Toro	16.76	299	Pn	Pn	05 43 14.2	-2.6
DZM	Mont Dzumac	16.91	300	Pn	P	05 43 22.0	+1.4
	0.1nm,0.3s,baz=69,slow=18,SNR=4.4						
EIDS	Eidsvold	28.04	275	P	P	05 45 14.2	+1.2
EIDS				IAmb	IAmb	05 45 28.9	
	comp=Z,8.6nm,1.1s						
TOO	Toolangi	30.80	248	P	P	05 45 39.0	+1.6
CTAO	Charters Tower	34.20	280	P	P	05 46 09.0	+1.7
CTAO				IAmb	IAmb	05 46 14.8	
	comp=Z,6.6nm,0.8s						
STKA	Stephens Creek	34.50	258	P	P	05 46 09.3	-0.4
STKA	Stephens Creek	34.50	258	P	P	05 46 10.6	+0.9
	comp=Z,2.8nm,0.6s,baz=93,slow=9.5,SNR=6.6						
	comp=Z,2.8nm,0.6s						
BBOO	Buckleboo	38.94	255	P	P	05 46 47.8	+0.3
BBOO				IAmb	IAmb	05 47 10.4	
	comp=Z,26nm,1.3s						
AS31	Alice Springs	43.30	268	P	P	05 47 24.3	+0.7
ASAR	Alice Springs	43.30	268	P	P	05 47 23.5	-0.1
ASAR	Alice Springs	43.30	268	P	P	05 47 24.7	+1.1
	comp=Z,3.4nm,0.6s,baz=103,slow=7.1,SNR=37						
ASAR				PcP	PcP	05 49 12.1	-0.2
	comp=Z,0.5nm,0.5s,baz=123,slow=3.7,SNR=2.4						
	comp=Z,3.4nm,0.6s						
WR8	Warramunga Arr	44.24	273	P	P	05 47 32.4	+1.2
WR8				IAmb	IAmb	05 47 57.0	
	comp=Z,10nm,1.1s						
WRA	Warramunga Arr	44.38	273	P	P	05 47 32.9	+0.6
WRA	Warramunga Arr	44.38	273	P	P	05 47 32.8	+0.6
	comp=Z,4.8nm,0.5s,baz=112,slow=8.0,SNR=25						
WRA				PcP	PcP	05 49 15.2	-0.8
	comp=Z,0.8nm,0.8s,baz=107,slow=3.7,SNR=2.6						
	comp=Z,4.8nm,0.5s						
FORT	Forrest	46.03	256	P	P	05 47 45.3	+0.1
QSPA	South Pole Qui	58.71	180	P	P	05 49 20.1	+1.1
QSPA				IAmb	IAmb	05 49 46.6	
	comp=Z,9.5nm,1.2s						
QSPA	South Pole Qui	58.71	180	P	P	05 49 20.1	+1.1
	comp=Z,2.3nm,0.7s,baz=44,slow=0.9,SNR=13						
	comp=Z,2.3nm,0.7s						
SNAA	Sanae	77.15	178	⇑P	P	05 51 14.1	-0.6
	comp=Z,58nm,1.3s						
SNAA	Sanae	77.15	178	P	P	05 51 14.0	-0.6
SNAA				IAmb	IAmb	05 51 40.5	
	comp=Z,8.7nm,1.4s						
SNAA	Sanae	77.15	178	P	P	05 51 15.1	+0.4
	comp=Z,1.9nm,0.9s,baz=191,slow=16,SNR=6.3						
	comp=Z,1.9nm,0.9s						
VNA3	Neumayer Olymp	77.29	176	⇑P	P	05 51 15.4	0.0
	comp=Z,6.6nm,0.7s						
VNA2	Neumayer--Watz	77.73	177	⇑P	P	05 51 17.1	-0.7
	comp=Z,3.6nm,0.7s,baz=174,slow=5.7						
ADK	Adak	82.94	1	P	P	05 51 45.5	-0.3
ADK				IAmb	IAmb	05 51 47.7	
	comp=Z,4.3nm,0.8s						
SHEM	Shemya Is, Ala	84.08	355	P	P	05 51 52.1	+0.5
SMY	Shemya	84.08	355	P	P	05 51 52.0	+0.3
PEA0B	Petropavlovsk-	86.84	345	P	P	05 52 05.4	-0.1
PEA0B				IAmb	IAmb	05 52 19.3	
	comp=Z,16nm,1.3s						
PETK	Petropavlovsk-	86.84	345	P	P	05 52 06.0	+0.5
	comp=Z,1.0nm,0.6s,baz=176,slow=6.1,SNR=2.5						
	comp=Z,1.0nm,0.6s						
USRK	Ussuriysk Ar.	88.13	326	P	P	05 52 13.7	+1.8
NVAR	Mina Array Bea	88.81	43	P	P	05 52 15.6	0.0

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,0.9nm,0.8s,baz=254,slow=4.7,SNR=4.6						
	comp=Z,0.9nm,0.8s						
N15K	Kwethluk River	92.39	9	P	P	05 52 31.5	+0.2
N15K				IAmb	IAmb	05 52 59.9	
	comp=Z,9.9nm,1.4s						
ILAR	Eielson Array	98.85	13	P	P	05 53 00.4	-0.3
	comp=Z,0.2nm,0.7s,baz=209,slow=4.8,SNR=2.9						
	comp=Z,0.2nm,0.7s						
KURBB	Kurchatov Arra	121.95	313	PKP	PKPdf	05 58 14.7	-0.5
	comp=Z,0.7nm,0.8s,baz=124,slow=1.9,SNR=5.1						
FINES	FINESS Array B	146.17	340	PKPbc	PKPdf	05 58 59.7	-0.2
	comp=Z,4.1nm,0.5s,baz=50,slow=3.7,SNR=27						
HFS	Hagfors	150.27	348	PKPbc	PKPbc	05 59 11.6	-0.2
	comp=Z,2.6nm,0.8s,baz=72,slow=4.8,SNR=5.1						
MMAI	Mount Meron Ar	151.99	282	PKPbc	PKiKP	05 59 18.3	+1.2
	comp=Z,0.6nm,0.3s,baz=96,slow=1.4,SNR=1.0						
AKASG	Malin Array Be	152.24	322	PKPbc	PKPbc	05 59 16.2	-0.4
	comp=Z,0.6nm,0.5s,baz=55,slow=3.0,SNR=10.0						
BRTR	Keskin Array B	153.28	297	PKPbc	PKiKP	05 59 20.2	+0.5
	comp=Z,0.4nm,0.6s,baz=161,slow=0.9,SNR=2.1						
TORD	Torodi Ar. Bea	161.82	178	PKPab	PKPab	06 00 09.2	+0.7
	comp=Z,94nm,0.4s,baz=169,slow=3.0,SNR=1.8						

*IDC **21** 06:09:27.7±3.6, 54°.29N×87°.27E, h0^{km}, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=32.8km s-min=21.2km az=45.0*

ASRS 21 06:09:26.0±1.3**, 54°.22N×87°.11E, h0^{km}, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.38	260	I	I	06 18 30.0	
	baz=77,slow=317,SNR=13						
ZALV	Zalesovo Beam	1.38	260	Pg	Pb	06 09 53.5	+0.9
	0.7nm,0.3s,baz=74,slow=16,SNR=5.2						
ZALV				Lg	Lg	06 10 15.4	
	1.5nm,0.3s,baz=80,slow=25,SNR=6.7						
KURBB	Kurchatov Arra	6.36	239	Pn	Pn	06 11 04.5	+3.6
	0.1nm,0.3s,baz=54,slow=13,SNR=4.8						
	0.5nm,0.5s						
MKAR	Makanchi Array	8.04	204	Pn	Pn	06 11 29.0	+4.9
	baz=27,slow=14,SNR=2.5						
MKAR				Lg	Lg	06 13 40.8	
	baz=20,slow=34,SNR=2.0						
	0.1nm,0.4s						

IDC 21 06:19:01.0±2.9**, 30°.14S×177°.97W, h0^{km}, mb3.6**/3**, mbtmp3.6**/3**, Error ellipse: s-maj=83.7km s-min=43.2km az=37.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.15	267	P	P	06 27 03.4	-0.3
	0.2nm,0.6s,baz=107,slow=8.3,SNR=4.2						
	0.2nm,0.6s						
WRA	Warramunga Arr	44.12	272	P	P	06 27 11.4	+0.1
	0.2nm,0.3s,baz=111,slow=8.0,SNR=4.8						
	0.2nm,0.3s						
QSPA	South Pole Qui	59.97	180	P	P	06 29 08.8	-0.2
	3.4nm,1.3s,baz=10,slow=5.9,SNR=2.0						
	3.4nm,1.3s						
FINES	FINESS Array B	144.91	340	PKP	PKPbc	06 38 38.9	+0.4
	0.5nm,0.5s,baz=64,slow=8.7,SNR=5.2						

*IDC **21** 06:37:05.1±2.6, 5°.35S×147°.13E, h186^{km}±25^{km}, mb3.4/5, mbtmp3.9/7, Error ellipse: s-maj=40.7km s-min=20.5km az=109.0*

ISC 21 06:37:05.9±1.0**, 5°.39S**±0°.09×**147°.1E**±0°.3**, h195^{km}, n7, σ0^s.61**/8**, mb3.6**/5**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.99	180	P	Pn	06 38 07.1	-0.2
	6.4nm,0.3s,baz=294,slow=20,SNR=2.0						
PMG				S	Sn	06 38 55.3	-0.4
	18nm,0.3s,baz=360,slow=15,SNR=2.5						
WRA	Warramunga Arr	19.08	220	P	P	06 41 14.1	+0.2
	2.4nm,0.3s,baz=43,slow=11,SNR=58						
ASAR	Alice Springs	22.19	214	P	P	06 41 47.1	+0.7
	8.6nm,0.6s,baz=41,slow=7.4,SNR=127						
	8.6nm,0.6s						
PETK	Petropavlovsk-	58.96	7	P	P	06 46 45.2	+0.5
	0.5nm,0.5s,baz=190,slow=7.3,SNR=4.2						
	0.5nm,0.5s						
VNDA	Vanda	72.51	177	P	P	06 48 11.3	+0.5
	1.1nm,0.4s,baz=346,slow=6.8,SNR=7.0						
	1.1nm,0.4s						
MKAR	Makanchi Array	77.11	320	P	P	06 48 37.1	-0.7
	0.1nm,0.4s,baz=108,slow=4.7,SNR=1.5						
	0.1nm,0.4s						
ILAR	Eielson Array	84.88	23	P	P	06 49 18.1	-0.4
	0.3nm,0.6s,baz=258,slow=4.7,SNR=6.4						
	0.3nm,0.6s						

*IDC **21** 06:38:28.6±2.0, 6°.06S×149°.62E, h56^{km}±17^{km}, mb4.3/21, mbtmp4.6/21, ML3.6/1, MS4.4/42, Error ellipse: s-maj=19.2km s-min=10.1km az=91.0*

*NEIC **21** 06:38:29.1, 6°.06S×149°.79E, h50^{km}*

*NEIC **21** 06:38:29.8±2.0, 6°.09S±0°.07×149°.78E±0°.06, h58^{km}±6^{km}, mb4.9/57, Mww5.3/17, Error ellipse: s-maj=10.5km s-min=7.9km az=139.0*

*NEIC **21** 06:38:29.1, 6°.16S×149°.89E, h50^{km}, Moment Tensor Solution. Duration: 2^s.2 Moment tensor: Scale 10^{17}Nm; M_{rr}1.10; $M_{\theta\theta}$-1.17; $M_{\phi\phi}$0.08; $M_{r\theta}$0.08; $M_{\theta\phi}$-0.03; $M_{\phi r}$-0.05; Fault plane solution: $M_0$1.14000×10^{17} NP1: ϕ_s265.56000°, δ43.12000°, λ85.82000°. NP2:ϕ_s91.27000°, δ47.02000°, λ93.90000°. Principal axes: T 1.1029, Plg87.0000°, Azm54.0000°; N 0.0745, Plg3.0000°, Azm269.0000°; P -1.1774, Plg2.0000°, Azm179.0000°;*

*GCMT **21** 06:38:30.5±0.1, 6°.31S±0°.01×149°.82E±0°.01, h49^{km}, MW5.3/129, Moment Tensor Solution. s129,c203; s121,c208; Duration: 1^s.2 Moment tensor: Scale 10^{17} Nm; M_{rr}1.28±.02; $M_{\theta\theta}$-1.39±.01; $M_{\phi\phi}$0.10±.02; $M_{r\theta}$0.10±.01; $M_{\theta\phi}$-0.08±.01; $M_{\phi r}$-0.06±.01; Best double couple: $M_0$1.34200×10^{17} NP1:ϕ_s264.00000°, δ43.00000°, λ85.00000°. NP2:ϕ_s90.00000°, δ47.00000°, λ94.00000°. Principal axes: T 1.2870, Plg86.0000°, Azm54.0000°; N 0.1090, Plg3.0000°, Azm267.0000°; P -1.3980, Plg2.0000°, Azm177.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **21** 06:38:31.4, 5°.46S×149°.92E, h59^{km}, mB5.1/27, mb4.7/47, Ms4.8/50, Ms7 4.7/51*

*DJA **21** 06:38:31.1±0.6, 6°S±3°×15°0E±°, h57^{km}±6^{km}, M5.0/31, mb5.1/31, mB5.5/12, Mw(mB)4.9/12, MwMwp5.0/6, Mwp5.2/6*

ISC 21 06:38:28.9±0.4**, 6°.13S**±0°.04×**149°.87E**±0°.04**, h58^{km}**±3^{km}**, h59^{km}:pP-P, n232, σ1^s.88**/235**, mb4.9**/88**, MS4.5**/59**, 1C-4D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	2.99	50		Pn	06 39 15.7	+1.7
PMG	Port Moresby	4.22	219		Pn	06 39 31.7	+1.0
PMG	Port Moresby	4.22	219	P	Pn	06 39 31.0	+0.3
	252nm,0.3s,baz=28,slow=5.2,SNR=34						
PMG				S	Sn	06 40 16.3	-2.4
	1μm,0.7s,baz=290,slow=2.5,SNR=2.7						
MANU	Manus Island	4.77	328		Pn	06 39 38.2	-0.1
JAY	Jayapura	9.82	291	P	Pn	06 40 50.1	+2.6
	9.5nm,0.5s,baz=117,slow=5.7,SNR=8.8						
JAY				LR	LR	06 45 13.1	
	comp=Z,2μm,18.3s,baz=88,slow=42						
JAY	Jayapura	9.82	291	P	Pn	06 40 50.3	+2.8
	37nm,1.2s						
COEN	Coen	10.19	220		Pn	06 40 52.9	+0.3
COEN	Coen	10.19	220	P	Pn	06 40 52.4	-0.2
GENI	Genyem	10.29	290	P	Pn	06 41 07.4	+13
SMPI	Sarmi	11.86	290	P	Pn	06 41 17.6	+2.2
	3μm57nm,1.2s						
MTSU	Mount Surprise	13.10	204	P	Pn	06 41 33.8	+1.4
	comp=Z,46nm,1.1s						
CTAO	Charters Tower	14.31	194		Pn	06 41 49.4	+0.8
PATS	Pohnpei	15.39	33	P	Pn	06 42 02.7	0.0
	comp=Z,164nm,1.2s						
QIS	Mount Isa	17.46	214	P	Pn	06 42 28.6	0.0
	comp=Z,88nm,1.1s						
KDU	Kakadu	18.35	248	P	P	06 42 38.1	-0.8
	comp=Z,60nm,0.7s						
EIDS	Eidsvold	19.16	177		Pn	06 42 49.1	-0.1
EIDS				IAmb	IAmb	06 42 52.7	
	comp=Z,54nm,0.9s						
EIDS	Eidsvold	19.16	177	P	Pn	06 42 50.3	+1.1
	comp=Z,74nm,0.9s						
SWI	Sorong	19.29	285	P	Pn	06 42 53.0	+2.2
	comp=Z,2μmcomp=Z,39nm,0.9s						
SANVU	Saraoutou	19.37	120		P	06 42 50.1	0.0
MTN	Manton Dam	19.63	249		P	06 42 52.4	-0.6
MTN				IAmb	IAmb	06 43 08.0	
	comp=Z,83nm,1.1s						
MTN	Manton Dam	19.63	249	P	P	06 42 52.8	-0.2
	comp=Z,64nm,0.5s						
BNDI	Bandanaira	19.94	274	P	Pn	06 43 00.5	+2.0
GUMO	Guam	20.21	346	P	P	06 42 59.8	+0.6
	comp=Z,43nm,0.5s,baz=141,slow=7.9,SNR=7.0						
GUMO				LR	LR	06 50 47.4	
	comp=Z,989nm,18.3s,baz=156,slow=37						
WB0	Warramunga Arr	20.25	227		P	06 43 00.7	+1.0
RMQ	Roma	20.27	183	P	Pn	06 43 02.3	+0.1
	comp=Z,120nm,1.4s						
WR8	Warramunga Arr	20.29	226		P	06 43 00.5	+0.4
WRAB	Tennant Creek	20.38	226	P	P	06 43 02.2	+1.0
WRA	Warramunga Arr	20.40	226	P	P	06 43 00.0	-1.3
WRA	Warramunga Arr	20.40	226	P	P	06 43 01.6	+0.3
	comp=Z,35nm,0.6s,baz=52,slow=11,SNR=38						
WRA				S	S	06 46 41.6	-5.2
	comp=Z,2.0nm,0.7s,baz=54,slow=26,SNR=1.7						
WRA				PcP	PcP	06 47 11.1	-1.1
	comp=Z,4.3nm,0.8s,baz=51,slow=2.4,SNR=4.9						
WRA				ScP	ScP	06 50 44.8	+0.8
	comp=Z,2.5nm,0.7s,baz=46,slow=2.6,SNR=6.3						
WRA				LR	LR	06 52 04.7	
	comp=Z,2μm,18.5s,baz=41,slow=40						
	comp=Z,35nm,0.6s						
QLP	Quilpie	21.03	194	P	P	06 43 10.7	+2.6
	comp=Z,422nm,1.2s						
MSAI	Masohi	21.05	277	P	P	06 43 11.9	+3.6
	comp=Z,126nm,0.6s						
DZM	Mont Dzumac	22.53	136	P	P	06 43 26.6	+2.3
DZM				IAmb	IAmb	06 43 41.5	
	comp=Z,46nm,0.7s						
DZM	Mont Dzumac	22.53	136	*e*P	P	06 43 26.1	+1.8
	comp=Z,116nm,0.9s						
DZM				*e*S	S	06 47 23.5	-4.2
	comp=Z,2μm,25.4s						
DZM				*e*LR	LR	06 49 02.5	
	comp=Z,6μm,24.6s						
ONTNC	Ouen Toro	22.70	137		P	06 43 26.8	+0.9
ONTNC				IAmb	IAmb	06 43 28.4	
	comp=Z,39nm,0.8s						
KNRA	Kununurra	22.77	244		P	06 43 25.9	-0.9
KNRA				IAmb	IAmb	06 43 39.5	
	comp=Z,89nm,0.9s						
KNRA	Kununurra	22.77	244	P	P	06 43 25.5	-1.2
	comp=Z,99nm,1.0s						
NLAI	Namlea	22.87	276	P	P	06 43 31.3	+3.5
	comp=Z,33nm,0.9s						
AS17	Alice Springs	23.18	220	P	P	06 43 31.0	+0.2
	comp=Z,47nm,1.0s						
AS31	Alice Springs	23.23	220	P	P	06 43 31.6	+0.2
AS31	Alice Springs	23.23	220	P	P	06 43 32.5	+1.2
	comp=Z,21nm,0.6s						
ASAR	Alice Springs	23.23	220		P	06 43 31.7	+0.4
ASAR	Alice Springs	23.23	220	P	P	06 43 31.9	+0.5
	comp=Z,9.3nm,0.6s,baz=52,slow=8.8,SNR=34						
ASAR				PcP	PcP	06 47 15.3	-2.4
	comp=Z,1.6nm,0.6s,baz=9.4,slow=3.4,SNR=1.4						
ASAR				S	S	06 47 34.9	-4.3
	comp=Z,4.3nm,1.0s,baz=31,slow=22,SNR=5.1						
ASAR				ScP	ScP	06 50 52.8	+1.7
	comp=Z,1.2nm,0.7s,baz=49,slow=3.6,SNR=4.3						
ASAR				LR	LR	06 53 23.5	
	comp=Z,2μm,19.6s,baz=40,slow=39						
	comp=Z,9.3nm,0.6s						
CMSA	Cobar Meteorol	25.57	188	P	P	06 43 54.1	+1.5
	comp=Z,52nm,1.2s						
SOEI	Soe	25.60	260	P	P	06 43 57.9	+4.7
	comp=Z,1μmcomp=Z,81nm,1.2s						
BATI	Baumata	26.24	259	LR	LR	06 56 22.5	
	comp=Z,2μm,21.8s,baz=101,slow=41						
FITZ	Fitzroy Crossi	26.46	241	P	P	06 44 00.7	-0.1
FITZ				IAmb	IAmb	06 44 17.9	
	comp=Z,45nm,0.9s						
FITZ	Fitzroy Crossi	26.46	241	P	P	06 44 00.5	-0.3
	comp=Z,49nm,1.1s						
FITZ	Fitzroy Crossi	26.46	241	LR	LR	06 55 47.8	
	comp=Z,587nm,18.8s,baz=64,slow=40						
STKA	Stephens Creek	26.75	196	P	P	06 44 03.5	+0.2
STKA	Stephens Creek	26.75	196	P	P	06 44 04.6	+1.3
	comp=Z,328nm,1.1s						
STKA	Stephens Creek	26.75	196	P	P	06 44 03.0	-0.3
	comp=Z,4.6nm,0.5s,baz=352,slow=11,SNR=18						
STKA				LR	LR	06 54 39.1	
	comp=Z,2μm,22.0s,baz=30,slow=36						
	comp=Z,4.6nm,0.5s						
WRKA	Warakurna	27.93	225	P	P	06 44 13.5	-0.5
	comp=Z,18nm,1.0s						
EDFI	Ende, Flores	28.05	263	P	P	06 44 13.6	-1.7
	comp=Z,43nm,1.0s						
HTT	Hallett	29.00	199	P	P	06 44 25.0	+1.5
	comp=Z,4.4nm,1.0s						
BBOO	Buckleboo	29.50	204	P	P	06 44 28.3	+0.5
MSVF	Nonsavu	29.84	115		P	06 44 32.8	+1.8
MSVF				IAmb	IAmb	06 44 40.1	
	comp=Z,37nm,0.8s						
MSVF	Nonsavu	29.84	115	P	P	06 44 33.6	+2.6
	comp=Z,15nm,0.7s,baz=266,slow=8.8,SNR=10						
	comp=Z,15nm,0.7s						
KAPI	Kappang	29.99	271	LR	LR	06 59 29.4	
	comp=Z,389nm,19.9s,baz=83,slow=42						
ARPS	Mount Arapiles	31.37	192	P	P	06 44 46.5	+2.3
	comp=Z,88nm,1.0s						
TOO	Toolangi	31.55	187	P	P	06 44 46.3	+0.4
TOO	Toolangi	31.55	187	P	P	06 44 47.3	+1.5
	comp=Z,9.8nm,1.2s						
FORT	Forrest	31.94	217		P	06 44 48.8	-0.6
FORT	Forrest	31.94	217	P	P	06 44 49.4	+0.1
	comp=Z,68nm,0.8s						
MBWA	Marble Bar	32.78	240		P	06 44 56.6	-0.2
MBWA	Marble Bar	32.78	240	P	P	06 44 56.2	-0.6
	comp=Z,48nm,1.3s						
PSAB2	Pilbara Seismi	32.82	239	P	P	06 44 56.6	-0.6
	comp=Z,47nm,1.3s						
PSAA2	Pilbara Seismi	32.84	239	P	P	06 44 56.7	-0.7
	comp=Z,49nm,1.2s						
PSA00	Pilbara Seismi	32.84	239		P	06 44 56.5	-0.9
PSA00	Pilbara Seismi	32.84	239	P	P	06 44 56.7	-0.7
	comp=Z,51nm,1.3s,comp=Z,0.0nm						
PSAB3	Pilbara Seismi	32.84	239	P	P	06 44 56.5	-0.9
	comp=Z,43nm,1.4s						
PSAA1	Pilbara Seismi	32.85	239	P	P	06 44 56.9	-0.5
	comp=Z,50nm,1.3s						
PSAC1	Pilbara Seismi	32.86	239	P	P	06 44 56.7	-0.8
	comp=Z,47nm,0.9s						
PSAD3	Pilbara Seismi	32.93	239	P	P	06 44 57.4	-0.7
	comp=Z,47nm,1.2s						
JCJ	Chichijima	33.86	348	LR	LR	06 58 54.1	
	comp=Z,406nm,19.1s,baz=135,slow=36						
MEEK	Meekatharra	36.08	232	P	P	06 45 25.0	-0.3
	comp=Z,87nm,1.2s						
OUZ	Omahuta	36.27	146	P	P	06 45 29.9	+3.2
GIRL	Giralia	38.07	241	P	P	06 45 42.8	+0.6
GIRL	Giralia	38.07	241	P	P	06 45 42.2	-0.1
	comp=Z,129nm,1.3s						
RAO	Raoul Island	38.12	131	LR	LR	06 58 58.1	
	comp=Z,577nm,20.7s,baz=12,slow=32						
JOW	Kunigami	38.88	328	LR	LR	06 58 39.2	
	comp=Z,814nm,19.9s,baz=103,slow=31						
MORW	Morawa	39.25	230	P	P	06 45 51.7	-0.3
	comp=Z,25nm,1.2s						
KLBR	Kellerberrin	39.28	226	P	P	06 45 51.2	-1.1
	comp=Z,102nm,0.9s						
BLDU	Ballidu	39.52	228	P	P	06 45 54.5	+0.2
	comp=Z,23nm,1.9s						
NWAO	Narrogin (SRO)	40.39	224	P	P	06 46 01.4	-0.1
NWAO	Narrogin (SRO)	40.39	224	LR	LR	07 04 08.2	
	comp=Z,2μm,18.4s,baz=54,slow=38						
URZ	Urewera	40.41	146	LR	LR	07 00 40.9	
	comp=Z,1μm,21.2s,baz=305,slow=33						
HAZ	Te Kaha	40.44	145	P	P	06 46 04.6	+2.9
DSZ	Denniston Nort	40.48	154	P	P	06 46 08.0	+5.9
YULB	Yu-li	40.50	317	P	P	06 46 02.2	-0.2
YULB				IAmb	IAmb	06 46 21.1	
	comp=Z,20nm,0.9s						
RTZ	Ruatahuna	40.60	147	P	P	06 46 05.0	+1.9
MUN	Mundaring	40.60	226	P	P	06 46 03.0	-0.2
	comp=Z,33nm,1.2s						
BKZ	Black Stump Fm	40.73	148	P	P	06 46 08.1	+3.8
NACB	Ninganchiao	40.83	319	P	P	06 46 06.2	+1.0
NACB				IAmb	IAmb	06 46 41.9	
	comp=Z,36nm,1.1s						
PUZ	Puketiti	40.92	145	P	P	06 46 05.8	0.0
THZ	Tophouse	40.98	153	P	P	06 46 08.6	+2.4
TSZ	Takapari Road	41.11	149	P	P	06 46 09.8	+2.4
TCW	Tory Channel	41.16	152	P	P	06 46 09.8	+2.0
TUWZ	Tuamarina	41.18	152	P	P	06 46 10.4	+2.5
MRZ	Mangatainoka R	41.37	150	P	P	06 46 13.6	+4.2
RKGY	Rocky Gully	41.52	223	P	P	06 46 11.0	+0.2
	comp=Z,25nm,1.4s						
LTZ	Lake Taylor	41.53	155	P	P	06 46 14.1	+3.4
BFZ	Birch Farm	41.72	149	P	P	06 46 14.5	+2.2
KHZ	Kahutara	41.78	153	P	P	06 46 14.6	+1.9
RPZ	Rata Peaks	41.81	157	LR	LR	07 01 54.8	
	comp=Z,738nm,19.4s,baz=316,slow=34						
RPZ	Rata Peaks	41.81	157	P	P	06 46 15.9	+2.9
LEM	Lembang	41.98	267	LR	LR	07 07 53.0	
	comp=Z,326nm,20.2s,baz=156,slow=42						
GVZ	Greta Valley S	42.01	154	P	P	06 46 17.1	+2.5
MLZ	Mavora Lakes	42.19	161	P	P	06 46 19.0	+2.9
TMZ	Timaru	42.36	157	P	P	06 46 19.2	+1.7
MQZ	McQueen’s Vall	42.45	155	P	P	06 46 20.9	+2.8
JNU	Nakatsue	43.00	336	P	P	06 46 21.0	-1.8
	comp=Z,4.2nm,0.5s,baz=33,slow=3.3,SNR=5.6						
	comp=Z,4.2nm,0.5s						
MJAR	Matsushiro Arr	43.83	346	P	P	06 46 27.9	-1.5
	comp=Z,4.9nm,0.8s,baz=166,slow=8.8,SNR=9.9						
MJAR				LR	LR	07 02 56.3	
	comp=Z,284nm,20.1s,baz=161,slow=34						
	comp=Z,4.9nm,0.8s						
MAJO	Matsushiro	43.84	346	P	P	06 46 28.5	-1.0
MAJO				IAmb	IAmb	06 46 43.1	
	comp=Z,36nm,1.1s						
MAJO	Matsushiro	43.84	346	P	P	06 46 27.8	-1.6
MJB9	Matsu-Tunnel	43.84	346		P	06 46 28.7	-0.8
MJB9				IAmb	IAmb	06 46 44.1	
	comp=Z,34nm,1.1s						
JMM	Marumori	44.58	350	P	P	06 46 34.6	-0.8
JMM				IAmb	IAmb	06 46 48.6	
	comp=Z,54nm,1.3s						
JSD	Sado	45.25	347	P	P	06 46 39.5	-1.2
JSD				IAmb	IAmb	06 46 55.2	
	comp=Z,35nm,1.0s						
SSE	Sheshan	46.07	325	P	P	06 46 48.3	+1.1
SSE				S	S	06 53 30.3	+1.6
SSE				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SSE				pmax	pmax		
	comp=Z,92nm,3.5s						
SSE				LR	LR		
	comp=Z,300nm,23.7s						
SSE				LR	LR		
	comp=Z,340nm,23.4s						
QIZ	Qiongzhong	46.69	303	P	P	06 46 53.0	+0.7
QIZ				S	S	06 53 37.9	-0.1
QIZ				pmax	pmax		
	comp=Z,140nm,9.8s						
QIZ				LR	LR		
	comp=Z,270nm,16.4s						
QIZ				LR	LR		
	comp=Z,430nm,31.6s						
KSRS	Korea Array	47.95	336	P	P	06 47 00.1	-1.8
	comp=Z,6.0nm,0.7s,baz=155,slow=8.1,SNR=20						
	comp=Z,6.0nm,0.7s						
KSAR	Wonju Array Be	47.96	336	P	P	06 47 02.3	+0.4
KS19	Wonju Array Si	48.02	336	P	P	06 47 02.7	+0.4
KS19				IAmb	IAmb	06 47 15.3	
	comp=Z,25nm,1.1s						
NJ2	Nanjing	48.12	324	*e*P	P	06 47 04.8	+1.6
NJ2				pmax	pmax		
	comp=Z,9.0nm,1.2s						
NJ2				LR	LR		
	comp=Z,700nm,19.4s						
NJ2				LR	LR		
	comp=Z,510nm,24.6s						
NJ2				LR	LR		
	comp=Z,1μm,21.8s						
ERM	Erimo	48.31	353	P	P	06 47 03.4	-1.0
WHN	Wuhan	49.87	319	P	P	06 47 24.4	+7.8
KULM	Kulim	50.43	282	P	P	06 47 21.6	+0.4
KULM				IAmb	IAmb	06 48 03.1	
	comp=Z,33nm,1.5s						
JKA	Kamikawa-asahi	50.44	353		P	06 47 20.1	-0.6
ASAJ	Asahikawa	50.45	353	P	P	06 47 20.5	-0.3
	comp=Z,6.9nm,0.4s,baz=187,slow=15,SNR=6.1						
ASAJ				LR	LR	07 09 07.0	
	comp=Z,181nm,19.6s,baz=182,slow=36						
	comp=Z,6.9nm,0.4s						
PSI	Prapat	51.64	278	LR	LR	07 11 56.3	
	comp=Z,304nm,21.0s,baz=129,slow=39						
DL2	Dalian	51.89	332	P	P	06 47 32.1	+0.4
DL2				pP	pP	06 47 45.0	-2.2
DL2				S	S	06 54 49.3	-1.0
DL2				pmax	pmax		
	comp=Z,34nm,0.8s						
DL2				pmax	pmax		
	comp=Z,240nm,8.6s						
DL2				LR	LR		
	comp=Z,560nm,22.2s						
DL2				LR	LR		
	comp=Z,550nm,23.1s						
DL2				LR	LR		
	comp=Z,1μm,22.9s						
TIA	Tai'an	52.12	326	P	P	06 47 34.8	+1.3
TIA				PcP	PcP	06 48 47.3	+2.5
TIA				PP	PP	06 49 25.9	-6.5
TIA				pmax	pmax		
	comp=Z,15nm,0.9s						
TIA				pmax	pmax		
	comp=Z,110nm,5.1s						
TIA				LR	LR		
	comp=Z,560nm,19.8s						
TIA				LR	LR		
	comp=Z,580nm,20.0s						
TIA				LR	LR		
	comp=Z,1μm,20.2s						
USRK	Ussuriysk Ar.	52.63	344	P	P	06 47 37.6	+0.5
USRK	Ussuriysk Ar.	52.63	344	P	P	06 47 37.3	+0.2
	comp=Z,3.8nm,0.7s,baz=165,slow=7.3,SNR=4.0						
USRK				LR	LR	07 07 36.1	
	comp=Z,528nm,21.9s,baz=158,slow=33						
	comp=Z,3.8nm,0.7s						
GYA	Guiyang	52.93	310	⇓P	P	06 47 41.6	+1.8
GYA				pmax	pmax		
	comp=Z,19nm,0.7s						
MDJ	Mudanjiang	53.71	342	P	P	06 47 47.0	+2.0
MDJ				S	S	06 55 17.8	+2.9
MDJ				sS	sS	06 55 41.0	+0.8
MDJ				pmax	pmax		
	comp=Z,17nm,1.9s						
MDJ				pmax	pmax		
	comp=Z,140nm,8.9s						
MDJ				LR	LR		
	comp=Z,360nm,23.5s						
MDJ				LR	LR		
	comp=Z,310nm,23.1s						
MDJ				LR	LR		
	comp=Z,990nm,24.2s						
HNS	HongShan	54.32	326	⇓P	P	06 47 51.1	+1.5
HNS				sP	sP	06 48 13.6	+1.7
HNS				S	S	06 55 20.4	-3.0
HNS				pmax	pmax		
	comp=Z,15nm,1.3s						
HNS				LR	LR		
	comp=Z,420nm,19.6s						
HNS				LR	LR		
	comp=Z,550nm,19.6s						
HNS				LR	LR		
	comp=Z,890nm,20.1s						
BNX	BinXian	55.40	341	⇓P	P	06 47 56.5	-0.8
BNX				pP	pP	06 48 11.4	-1.7
BNX				sP	sP	06 48 20.6	+0.8
BNX				S	S	06 55 39.5	+1.9
BNX				pmax	pmax		
	comp=Z,39nm,0.9s						
BNX				pmax	pmax		
	comp=Z,170nm,5.8s						
BNX				LR	LR		
	comp=Z,240nm,20.1s						
BNX				LR	LR		
	comp=Z,250nm,23.9s						

BNX				LR	LR		
	comp=Z,670nm,27.1s						
CMAR	**Chiang Mai Arr**	**55.84**	**297**	P	**P**	**06 47 58.2**	**-2.7**
	comp=Z,1.1nm,0.3s,baz=113,slow=7.7,SNR=1.6						
	comp=Z,1.1nm,0.3s						
PZH	**PanZhiHua**	**56.79**	**307**	P	**P**	**06 48 10.0**	**+2.3**
KLR	**Kul'dur**	**57.36**	**346**	LR	LR	07 10 51.8	
	comp=Z,262nm,20.9s,baz=160,slow=34						
CD2	**Chengdu**	**57.43**	**313**	P	**P**	**06 48 13.8**	**+1.7**
CD2				S	**S**	**06 56 08.9**	**+3.7**
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
CD2				LR	LR		
	comp=Z,520nm,24.0s						
CD2				LR	LR		
	comp=Z,550nm,23.5s						
XLT	**XiLinHaoTe**	**58.39**	**332**	*e*P	**P**	**06 48 20.4**	**+1.8**
XLT				pP	pP	06 48 36.8	+2.4
XLT				sP	sP	06 48 44.3	+3.3
XLT				sS	sS	06 56 40.4	-2.8
XLT				pmax	pmax		
	comp=Z,170nm,6.0s						
XLT				LR	LR		
	comp=Z,490nm,20.8s						
XLT				LR	LR		
	comp=Z,620nm,20.4s						
HHC	**Hu-ho-hao-te**	**58.48**	**327**	*e*P	**P**	**06 48 22.9**	**+3.6**
HHC				S	**S**	**06 56 16.8**	**-1.8**
HHC				sS	pS	06 56 38.3	+2.1
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,93nm,5.5s						
HHC				LR	LR		
	comp=Z,370nm,19.8s						
HHC				LR	LR		
	comp=Z,330nm,19.4s						
HHC				LR	LR		
	comp=Z,880nm,19.6s						
BTO	**Baotou**	**59.17**	**325**	*e*P	**P**	**06 48 28.3**	**+4.2**
BTO				PP	**PP**	**06 50 36.3**	**+0.8**
BTO				pmax	pmax		
	comp=Z,13nm,0.6s						
BTO				pmax	pmax		
	comp=Z,81nm,5.4s						
BTO				LR	LR		
	comp=Z,600nm,19.6s						
BTO				LR	LR		
	comp=Z,890nm,17.3s						
BTO				LR	LR		
	comp=Z,1μm,19.6s						
PETK	**Petropavlovsk-**	**59.39**	**5**	P	**P**	**06 48 24.6**	**-0.6**
	comp=Z,8.5nm,0.5s,baz=165,slow=6.3,SNR=65						
PETK				LR	LR	07 11 09.6	
	comp=Z,367nm,20.5s,baz=192,slow=33						
	comp=Z,8.5nm,0.5s						
HEH	**HeiHe**	**59.43**	**343**	*e*P	**P**	**06 48 25.4**	**-0.2**
HEH				pP	**pP**	**06 48 37.5**	**-4.0**
HEH				pmax	pmax		
	comp=Z,13nm,1.8s						
HEH				LR	LR		
	comp=Z,140nm,17.8s						
HEH				LR	LR		
	comp=Z,160nm,18.6s						
HEH				LR	LR		
	comp=Z,560nm,22.6s						
PPT2	**Papeete2**	**60.13**	**107**	*e*P	**P**	**06 48 27.2**	**-3.9**
	comp=Z,173nm,26.8s						
PPT2	**Papeete2**	**60.13**	**107**	*e*PP	**PP**	**06 50 44.1**	**-0.2**
	comp=Z,81nm,26.8s						
PPT2				*e*S	**S**	**06 56 38.0**	**-2.6**
	comp=Z,197nm,27.2s						
PPT2				*e*LQ	LQ	07 03 45.7	
	comp=Z,1μm,32.8s						
PPT2				*e*LR	LR	07 06 17.2	
	comp=Z,167nm,31.2s						
PPT2				*e*LR	LR	07 06 22.9	
	comp=Z,172nm,23.0s						
LZH	**Lanzhou**	**60.20**	**318**	*e*P	**P**	**06 48 32.4**	**+1.1**
LZH				pP	pP	06 48 45.3	-1.8
LZH				S	**S**	**06 56 37.6**	**-3.5**
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				LR	LR		
	comp=Z,310nm,19.9s						
LZH				LR	LR		
	comp=Z,490nm,20.1s						
LZH				LR	LR		
	comp=Z,710nm,22.3s						
TBI	**Tubuai**	**60.70**	**113**	*e*P	**P**	**06 48 31.6**	**-3.2**
	comp=Z,602nm,34.0s						
TBI				*e*S	**S**	**06 56 43.7**	**-3.9**
	comp=Z,2μm,40.5s						
TBI				*e*LQ	LQ	07 03 53.2	
	comp=Z,5μm,37.8s						
TBI				*e*LR	LR	07 06 33.7	
	comp=Z,1μm,25.8s						
TBI				*e*LR	LR	07 06 41.7	
	comp=Z,4μm,35.5s						
DRV	**Dumont d'Urvil**	**60.82**	**184**	P	**P**	**06 48 36.0**	**+1.2**
DRV				pP	**pP**	**06 48 47.8**	**-2.2**
SHEM	**Shemya Is, Ala**	**62.15**	**16**	LR	LR	07 12 28.3	
	comp=Z,386nm,20.1s,baz=201,slow=33						
ADK	**Adak**	**64.47**	**22**	P	**P**	**06 49 00.4**	**+1.0**
ADK				IAmb	IAmb	06 49 12.7	
	comp=Z,10nm,1.0s						
GTA	**Gaotai**	**64.69**	**319**	*e*P	**P**	**06 49 04.0**	**+2.8**
GTA				sS	sS	06 57 57.3	-6.6
GTA				SS	**SS**	**07 01 43.4**	**-6.1**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA				LR	LR		
	comp=Z,250nm,16.4s						
GTA				LR	LR		
	comp=Z,220nm,23.6s						
GTA				LR	LR		
	comp=Z,340nm,24.7s						
MA2	**Magadan**	**65.50**	**1**	LR	LR	07 17 14.2	
	comp=Z,260nm,19.6s,baz=182,slow=36						
ULN	**Ulaanbaatar**	**65.62**	**330**	P	**P**	**06 49 07.0**	**-0.1**
ULN				IAmb	IAmb	06 49 21.7	
	comp=Z,12nm,1.2s						
CASY	**Casey**	**65.91**	**196**	P	**P**	**06 49 08.9**	**+0.4**
CASY				pP	**pP**	**06 49 20.9**	**-2.7**
SONM	**Songino Array**	**65.94**	**329**	P	**P**	**06 49 09.4**	**+0.3**
SONM				IAmb	IAmb	06 49 24.2	
	comp=Z,9.9nm,1.1s						
SONM	**Songino Array**	**65.94**	**329**	P	**P**	**06 49 09.1**	**0.0**
	comp=Z,2.3nm,0.4s,baz=146,slow=4.8,SNR=15						
SONM				LR	LR	07 15 34.4	
	comp=Z,221nm,20.6s,baz=108,slow=34						
	comp=Z,2.3nm,0.4s						
SEY	**Seymchan**	**68.89**	**1**	P	**P**	**06 49 27.1**	**-0.2**
	comp=Z,2.5nm,0.2s,baz=186,slow=5.7,SNR=9.0						
	comp=Z,2.5nm,0.2s						
TAOE	**Nuku Hiva Isla**	**69.36**	**97**	*e*P	**P**	**06 49 31.9**	**+0.6**
	comp=Z,124nm,26.4s						
TAOE				*e*S	**S**	**06 58 30.6**	**-3.8**
	comp=Z,72nm,26.1s						
TAOE				*e*SS	**SS**	**07 03 04.9**	**+2.4**
	comp=Z,76nm,34.3s						
TAOE				*e*LR	LR	07 10 39.7	
	comp=Z,286nm,23.3s						
EVN	**Everest**	**69.56**	**303**	P	**P**	**06 49 33.5**	**+0.5**
PALK	**Pallekele**	**70.27**	**280**	LR	LR	07 23 58.2	
	comp=Z,58nm,19.1s,baz=110,slow=39						
PALK	**Pallekele**	**70.27**	**280**	P	**P**	**06 49 35.6**	**-1.3**
CCD	**Concordia, Ant**	**70.58**	**187**	P	**P**	**06 49 39.2**	**+1.1**
CCD				pP	**pP**	**06 49 51.7**	**-1.5**
VNDA	**Vanda**	**71.63**	**177**	P	**P**	**06 49 45.7**	**+1.8**
VNDA				IAmb	IAmb	06 49 59.5	
	comp=Z,25nm,1.0s						
VNDA	**Vanda**	**71.63**	**177**	P	**P**	**06 49 44.1**	**+0.3**
	comp=Z,8.2nm,0.6s,baz=329,slow=6.5,SNR=42						
VNDA				LR	LR	07 17 57.6	
	comp=Z,224nm,19.7s,baz=352,slow=33						
	comp=Z,8.2nm,0.6s						
VNDA	**Vanda**	**71.63**	**177**	P	**P**	**06 49 45.4**	**+1.6**
VNDA				pP	**pP**	**06 49 58.0**	**-1.1**
SBA	**Scott Base**	**72.23**	**176**	P	**P**	**06 49 50.1**	**+2.7**
SBA				IAmb	IAmb	06 50 03.7	
	comp=Z,24nm,1.2s						
HYB	**Hyderabad**	**74.18**	**290**	*e*P	**P**	**06 50 00.6**	**+0.4**
HYB				*e*sP	**sP**	**06 50 22.9**	**0.0**
HYB				*e*S	**S**	**06 59 29.3**	**-0.4**
WMQ	**Urumqi**	**74.77**	**318**	*e*P	**P**	**06 50 05.3**	**+2.2**
WMQ				LR	LR		
	comp=Z,410nm,19.3s						
WMQ				LR	LR		
	comp=Z,450nm,14.7s						
WMQ				LR	LR		
	comp=Z,230nm,21.1s						
O14K	**Tigyukauivet M**	**75.82**	**24**	P	**P**	**06 50 08.8**	**+0.2**
O14K				IAmb	IAmb	06 50 52.4	
	comp=Z,9.7nm,1.0s						
N14K	**Kuskokwak Cree**	**76.08**	**23**	P	**P**	**06 50 10.3**	**+0.2**
N14K				IAmb	IAmb	06 50 48.3	
	comp=Z,9.2nm,1.0s						
KDAK	**Kodiak Island**	**78.69**	**27**	LR	LR	07 21 52.2	
	comp=Z,227nm,19.4s,baz=241,slow=33						
TIXI	**Tiksi**	**78.85**	**353**	LR	LR	07 26 42.5	
	comp=Z,95nm,19.1s,baz=170,slow=37						
MKAR	**Makanchi Array**	**79.43**	**320**	P	**P**	**06 50 28.1**	**-1.0**
MKAR	**Makanchi Array**	**79.43**	**320**	P	**P**	**06 50 27.1**	**-2.0**
	comp=Z,0.7nm,0.4s,baz=96,slow=8.1,SNR=11						
	comp=Z,0.7nm,0.4s						
ZALV	**Zalesovo Beam**	**80.66**	**327**		**P**	**06 50 33.9**	**-1.6**
ZALV	**Zalesovo Beam**	**80.66**	**327**	P	**P**	**06 50 33.2**	**-2.3**
	comp=Z,3.2nm,0.5s,baz=115,slow=6.7,SNR=12						
	comp=Z,3.2nm,0.5s						
G18K	**Tagagawik**	**80.93**	**19**	P	**P**	**06 50 35.1**	**-1.7**
K20K	**Telida**	**81.05**	**22**	P	**P**	**06 50 37.1**	**-0.3**
J20K	**Nowinta River**	**81.48**	**22**		**P**	**06 50 39.5**	**-0.1**
KSH	**Kashi**	**81.60**	**311**	P	P	06 50 46.6	+5.6
KSH				pP	pP	06 50 55.8	-1.6
KSH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KSH				LR	LR		
	comp=Z,400nm,17.2s						
KSH				LR	LR		
	comp=Z,270nm,16.5s						
KSH				LR	LR		
	comp=Z,230nm,16.5s						
C19K	**Lookout Ridge**	**82.67**	**16**	P	**P**	**06 50 44.5**	**-1.4**
H21K	**Melozitna Rive**	**82.77**	**21**	P	**P**	**06 50 45.7**	**-0.7**
KURK	**Kurchatov**	**83.03**	**323**		**P**	**06 50 47.0**	**-1.1**
KURK				IAmb	IAmb	06 51 09.5	
	comp=Z,15nm,1.6s						
KURBB	**Kurchatov Arra**	**83.06**	**323**	P	**P**	**06 50 46.3**	**-1.9**
	comp=Z,0.8nm,0.6s,baz=95,slow=5.8,SNR=12						
KURBB				PKKPbc	**PKKPbc**	**07 09 12.1**	**0.0**
	comp=Z,0.2nm,0.4s,baz=288,slow=2.9,SNR=4.2						
KURBB				LR	LR	07 26 15.4	
	comp=Z,333nm,21.3s,baz=160,slow=35						
	comp=Z,0.8nm,0.6s						
MAW	**Mawson**	**83.22**	**203**	P	**P**	**06 50 47.2**	**-1.6**
	comp=Z,2.4nm,0.5s,baz=91,slow=6.0,SNR=2.2						
MAW				LR	LR	07 25 41.9	
	comp=Z,486nm,21.3s,baz=86,slow=34						
	comp=Z,2.4nm,0.5s						
AAK	**Ala-Archa**	**83.47**	**314**	LR	LR	07 27 23.1	
	comp=Z,423nm,21.8s,baz=94,slow=35						
DHY	**Denali Highway**	**83.53**	**24**	P	**P**	**06 50 50.4**	**-0.2**
QSPA	**South Pole Qui**	**83.84**	**180**		**P**	**06 50 53.2**	**+1.1**
QSPA	**South Pole Qui**	**83.84**	**180**	P	**P**	**06 50 51.2**	**-0.9**
	comp=Z,17nm,0.9s,baz=335,slow=1.4,SNR=41						
QSPA				LR	LR	07 26 15.1	
	comp=Z,367nm,21.1s,baz=35,slow=34						
	comp=Z,17nm,0.9s						
G23K	**Bananza Creek**	**84.28**	**20**		**P**	**06 50 53.9**	**-0.3**
ILAR	**Eielson Array**	**84.49**	**23**	P	**P**	**06 50 52.3**	**-3.0**
	comp=Z,2.0nm,0.8s,baz=255,slow=5.3,SNR=18						
ILAR				LR	LR	07 28 40.0	
	comp=Z,180nm,18.7s,baz=249,slow=36						
L26K	**Log Cabin Wild**	**85.17**	**25**	P	**P**	**06 50 57.3**	**-1.4**
D23K	**Nanushuk River**	**85.21**	**18**		**P**	**06 50 58.4**	**-0.4**
D23K				IAmb	IAmb	06 51 36.2	
	comp=Z,11nm,1.1s						
M27K	**Edge Creek, AK**	**85.53**	**26**	P	**P**	**06 50 59.7**	**-1.0**
M27K				IAmb	IAmb	06 52 06.1	
	comp=Z,5.6nm,0.9s						
J26L	**Joseph Creek**	**85.67**	**23**		**P**	**06 51 00.2**	**-1.0**
KKAR	**Karatay Array**	**86.43**	**314**	P	**P**	**06 51 04.1**	**-1.3**
G26K	**Porcupine Rive**	**86.59**	**21**		**P**	**06 51 06.0**	**+0.4**
G26K				IAmb	IAmb	06 51 50.5	
	comp=Z,10nm,1.1s						
HYT	**Haines Junctio**	**86.97**	**28**	P	**P**	**06 51 08.4**	**+0.6**
HYT				IAmb	IAmb	06 51 42.4	
	comp=Z,9.2nm,1.0s						
L29M	**L29M**	**87.41**	**26**		**P**	**06 51 08.9**	**-0.9**
L29M				IAmb	IAmb	06 51 23.5	
	comp=Z,5.8nm,0.9s						
I28M	**Miner Creek**	**87.46**	**23**		**P**	**06 51 08.4**	**-1.6**
K29M	**Barlow Dome**	**87.91**	**25**		**P**	**06 51 10.5**	**-1.7**
K29M				IAmb	IAmb	06 51 25.9	
	comp=Z,7.3nm,0.9s						
BVAR	**Borovoye Array**	**88.56**	**324**	P	**P**	**06 51 13.6**	**-1.8**
	comp=Z,1.5nm,0.4s,baz=111,slow=5.3,SNR=8.1						
BVAR				LR	LR	07 32 51.1	
	comp=Z,78nm,18.6s,baz=91,slow=37						
	comp=Z,1.5nm,0.4s						
DLBC	**Dease Lake**	**90.02**	**31**	LR	LR	07 25 46.9	
	comp=Z,35nm,20.4s,baz=232,slow=32						
SYO	**Syowa Base**	**91.44**	**200⇑**	*e*P	**P**	**06 51 29.8**	**+1.3**
SYO	**Syowa Base**	**91.44**	**200⇓**	*e*pP	pP	06 51 46.2	+1.3
YBH	**Yreka Blue Hor**	**92.12**	**48**	LR	LR	07 25 36.9	
	comp=Z,28nm,21.8s,baz=269,slow=31						
NVAR	**Mina Array Bea**	**95.20**	**52**	P	**P**	**06 51 47.5**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=280,slow=3.4,SNR=1.6						
NVAR				LR	LR	07 27 30.2	
	comp=Z,191nm,20.9s,baz=267,slow=31						
	comp=Z,0.3nm,0.5s						
AKTO	**Aktyubinsk**	**95.86**	**320**	LR	LR	07 34 19.4	
	comp=Z,369nm,21.5s,baz=59,slow=35						
ARTI	**Arti**	**95.88**	**326**	LR	LR	07 34 36.1	
	comp=Z,518nm,21.8s,baz=91,slow=35						
BELA	**Belgrano 2**	**96.08**	**179**	P	**P**	**06 51 50.0**	**+0.3**
PFO	**Pinyon Flats O**	**96.41**	**57**	LR	LR	07 27 57.7	
	comp=Z,429nm,20.6s,baz=246,slow=31						
NEW	**Newport**	**96.54**	**42**	LR	LR	07 28 31.9	
	comp=Z,134nm,21.2s,baz=276,slow=31						
YKA	**Yellowknife Ar**	**97.96**	**28**	LR	LR	07 32 22.4	
	comp=Z,290nm,21.6s,baz=292,slow=33						
FINES	**FINESS Array B**	**111.03**	**335**	Pdiff	**Pdif**	**06 52 56.5**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=83,slow=3.5,SNR=4.5						
AKASG	**Malin Array Be**	**113.84**	**323**	PKKPbc	PKKPbc	07 07 43.8	-1.6
	comp=Z,0.5nm,0.4s,baz=266,slow=3.5,SNR=3.5						
BOSA	**Boshof**	**116.49**	**234**	PKP	**PKPdf**	**06 57 06.6**	**-0.6**
	comp=Z,3.3nm,1.0s,baz=56,slow=3.6,SNR=2.3						
STHS	**Stebnicka Huta**	**119.06**	**324**	*e*PDIFF	**Pdif**	**06 53 34.1**	**+1.4**
PLCA	**Paso Flores**	**120.42**	**145**	PKP	**PKPdf**	**06 57 14.4**	**0.0**
	comp=Z,2.9nm,0.5s,baz=235,slow=3.4,SNR=45						
MORC	**Moravsky Berou**	**120.99**	**326**	*e*	PKiKP	06 57 25.7	+10
JAVC	**Velka Javorina**	**121.38**	**325**	*e*	PKiKP	06 57 28.2	+12
MODS	**Modra-Piesok**	**121.85**	**325**	*e*PKP	**PKiKP**	**06 57 17.7**	**+0.8**
CLL	**Collm**	**122.55**	**329**	*e*PP	PP	06 58 59.0	+4.0
CLL				*e*PPP	PPP	07 01 31.0	
CLL				*e*PS	**PS**	**07 08 45.0**	**-6.1**
CLL				*e*PPS	PPS	07 10 13.0	
CLL				*e*x	x	07 14 48.0	
CLL				*e*SS	SS	07 15 30.0	-1.8
CLL				*e*SSS	SSS	07 20 06.0	
CLL				*e*x	x	07 29 38.0	
CLL				AMS	AMS	07 51 00.0	
	comp=N,200nm,21.8s						
CLL				AMS	AMS	07 51 00.0	
	comp=E,200nm,19.1s						
CLL				AMS	AMS	07 51 00.0	
	comp=Z,400nm,20.9s						
ROSC	**El Rosal**	**136.01**	**89**	PKP	**PKPdf**	**06 57 44.7**	**-0.4**
	comp=Z,9.2nm,0.4s,baz=55,slow=22,SNR=6.0						
LPAZ	**La Paz**	**136.30**	**121**	PKhKP	PKPpre	06 57 32.6	
	comp=Z,1.3nm,0.7s,baz=230,slow=1.7,SNR=8.1						
LPAZ				PKP	**PKPdf**	**06 57 46.6**	**+0.8**
	comp=Z,5.6nm,0.9s,baz=35,slow=6.2,SNR=12						
CPUP	**Villa Florida**	**138.32**	**142**	PKP	**PKiKP**	**06 57 49.6**	**-1.0**
	comp=Z,1.1nm,0.7s,baz=69,slow=0.9,SNR=9.2						
PTLB	**Pontes e Lacer**	**144.15**	**127**	PKPdf	PKPbc	06 57 57.8	+0.3
VILB	**Vilhena**	**144.62**	**122**		**PKPdf**	**06 57 59.6**	**-0.6**
BDFB	**Brasilia**	**152.04**	**141**	PKP	**PKPdf**	**06 58 13.0**	**+0.7**
	comp=Z,6.0nm,0.8s,baz=197,slow=4.4,SNR=11						
BDFB				PKPbc	**PKiKP**	**06 58 19.6**	**+0.3**
	comp=Z,18nm,0.5s,baz=243,slow=0.8,SNR=45						
DBIC	**Dimbokro**	**154.88**	**273**	PKPbc	**PKPbc**	**06 58 24.0**	**-1.0**
	comp=Z,3.3nm,0.6s,baz=18,slow=1.2,SNR=4.4						

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*ASRS **21** 06:46:08.0±0.8, 54°.40N×86°.10E, h0^{km}, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 21 06:46:09.8±3.0,**54°.43N×86°.20E,h0^{km},mbtmp2.7**/2,**ML2.4**/2,**Error ellipse: s-maj=21.7km s-min=13.9km az=46.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.94**	**240**	I	I	06 52 20.0	
	baz=59,slow=321,SNR=0.9						
ZALV	**Zalesovo Beam**	**0.94**	**240**	Pg	Pg	06 46 25.9	-1.9
	1.2nm,0.3s,baz=58,slow=17,SNR=7.4						
ZALV				Lg	Lg	06 46 41.0	
	1.9nm,0.3s,baz=58,slow=28,SNR=7.9						
KURBB	**Kurchatov Arra**	**6.04**	**234**	Pn	Pn	06 47 41.9	+1.6
	baz=48,slow=13,SNR=3.5						
KURBB				Sn	Sn	06 48 50.9	+0.9
	baz=17,slow=29,SNR=1.5						
KURBB				Lg	Lg	06 49 21.9	
	baz=48,slow=30,SNR=1.6						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**8.04**	**200**	Pn	Pn	06 48 08.3	+0.5
	0.1nm,0.3s,baz=23,slow=9.4,SNR=5.2						
	0.2nm,0.3s						

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*MOS **21** 06:50:52.2±1.2, 47°.15N×0°.59W, h9^{km}, mb4.4/7, Error ellipse: s-maj=10.2km s-min=5.4km az=48.7*

*NEIC **21** 06:50:54.2, 47°.16N×0°.59W, h1^{km}*

*NEIC **21** 06:50:55.2±1.9, 47°.14N±0°.04×0°.57W±0°.08, h8^{km}±2^{km}, mb4.3/10, Mwr4.0/8, Error ellipse: s-maj=11.2km s-min=4.1km az=234.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.55; $M_{\theta\theta}$-0.66; $M_{\phi\phi}$0.11; $M_{r\theta}$0.24; $M_{\theta\phi}$-1.31; $M_{\phi r}$0.15; Fault plane solution: $M_0$1.48000×10^{15} NP1:ϕ_s187.82000°,δ82.75000°, λ-3.11000°. NP2:ϕ_s278.21000°,δ86.92000°, λ-172.74000°. Principal axes: T 1.0961, Plg3.0000°, Azm53.0000°; N 0.5857, Plg82.0000°, Azm301.0000°; P -1.6818, Plg7.0000°, Azm143.0000°;*

*IDC **21** 06:50:56.3±1.0, 46°.96N×0°.25W, h0^{km}, mb3.9/8, mbtmp3.9/14, ML3.9/6, MS3.8/8 Error ellipse: s-maj=20.5km s-min=15.7km az=142.0*

*MED_RC **21** 06:50:56.0±0.6, 47°.22N×0°.49W, h16^{km}±2^{km}, MW4.1/18, Moment Tensor Solution.Mantle waves: s18,c23; Duration: 1^{s}1 Moment tensor: Scale 10^{15}Nm; M_{rr}0.21±.12; $M_{\theta\theta}$-0.05±.12; $M_{\phi\phi}$-0.16±.12; $M_{r\theta}$-0.99±.27; $M_{\theta\phi}$-1.52±.14; $M_{\phi r}$-0.19±.25; Best double couple: $M_0$1.82000×10^{15} NP1:ϕ_s358.00000°,δ56.00000°, λ2.00000°. NP2:ϕ_s267.00000°,δ88.00000°,λ146.00000°. Principal axes: T 1.6800, Plg24.0000°, Azm217.0000°; N 0.2700, Plg56.0000°, Azm84.0000°; P -1.9500, Plg22.0000°, Azm318.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*

*LDG **21** 06:50:57.7±0.1, 47°.13N×0°.41W, h5^{km}, Ml5.2/41 Error ellipse: s-maj=1.4km s-min=1.3km az=39.0*

*STR **21** 06:50:58.0±0.5, 47°N±2°×°±°, h10^{km}±4^{km}, MLv4.8/7, Error ellipse: s-maj=0.0km s-min=0.0km az=33.3, preliminary*

*INMG **21** 06:50:57.9±2.2, 47°.03N×0°.56W, h14^{km}±17^{km}, ML3.6, Error ellipse: s-maj=10.3km s-min=6.4km az=21.0, #DIST_RANGE: REGIONAL #IPMA_REGION: France*

*NAO **21** 06:50:59.2, 47°.15N×0°.54W, h10^{km}, mb3.5*

*BNS **21** 06:50:59.4±0.4, 47°.17N×0°.15W, h10^{km}, ML4.8*

*BGR **21** 06:51:01.5±0.5, 47°.14N×0°.00W, h10^{km}, ML5.0/4, Error ellipse: s-maj=14.5km s-min=5.6km az=167.0*

*BGS **21** 06:51:03.2±0.9, 47°.59N×0°.61W, h16^{km}±999^{km}, ML4.5, ML4.5*

*UCC **21** 06:51:05.8, 47°.15N×0°.54W, h10^{km}, ML4.2/16*

*VIE **21** 06:51:50.8, 48°.21N×5°.23E, h11^{km}, mb3.3/2, ml3.5/2 146 km WNW of Thann*

ISC 21 06:50:56.1±0.3,**47°.15N**±0°.01×**0°.50W**±0°.01,**h10^{km},n482,** σ**2^{s}40**/629,**mb4.2**/17,**MS4.3**/7,**2C-47D,France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MFF	**Saint Martin d**	**0.60**	**156**	*e*Pg	**Pg**	**06 51 06.6**	**-1.0**
MFF				*e*Sg	**Sg**	**06 51 13.8**	**-1.7**
MFF	**Saint Martin d**	**0.60**	**156**	Pg	**Pb**	**06 51 10.0**	**+1.4**
MFF				Sg	**Sg**	**06 51 16.8**	**+1.3**
TSDF	**Thoir-sur-Di**	**0.89**	**47**	Pg	**Pg**	**06 51 13.9**	**+0.8**
TSDF				Sg	**Sg**	**06 51 25.6**	**+0.9**
CHIF	**Chize**	**1.02**	**176**	Pg	**Pg**	**06 51 15.4**	**-0.2**
CHIF				Sg	**Sg**	**06 51 28.0**	**-0.8**
GRR	**Gorron**	**1.27**	**349**	*e*Pn	**Pn**	**06 51 21.1**	**+1.3**
GRR	**Gorron**	**1.27**	**349**	*e*Pg	**Pn**	**06 51 21.6**	**+1.8**
GRR				*e*Sg	**Sn**	**06 51 39.4**	**+2.5**
	14μm,0.3s						
SDOF	**Saint-Denis-d'**	**1.27**	**210**	Pn	**Pn**	**06 51 20.7**	**+0.9**
SDOF				Pg	**Pb**	**06 51 21.3**	**+1.3**
SDOF				Sg	**Sb**	**06 51 38.0**	**+1.7**
BEGF	**Beganne - 5601**	**1.28**	**292**	Pn	**Pn**	**06 51 21.8**	**+1.8**
BEGF				Sn	**Sb**	**06 51 39.5**	**+2.7**
UNIO	**Chateau-d'Oler**	**1.34**	**201**	Pn	**Pn**	**06 51 22.0**	**+1.2**
UNIO				Sn	**Sb**	**06 51 39.8**	**+1.4**
LDF	**La Druitiere**	**1.47**	**10**	*e*Pn	**Pn**	**06 51 23.5**	**+0.9**
LDF	**La Druitiere**	**1.47**	**10**	*e*Pg	**Pb**	**06 51 25.4**	**+1.9**
LDF				*e*Sg	**Sn**	**06 51 43.9**	**+2.0**
	18μm,0.4s						
FLN	**La Foliniere**	**1.62**	**0**	*e*Pn	**Pn**	**06 51 25.4**	**+0.8**
	baz=177						
FLN	**La Foliniere**	**1.62**	**0**	*e*Pg	**Pn**	**06 51 27.3**	**+2.7**
FLN				*e*Sg	**Sb**	**06 51 49.5**	**+3.0**
	12μm,0.3s						
LOUF	**Saint-Loup**	**1.62**	**341**	Pn	**Pn**	**06 51 25.8**	**+1.2**
LOUF				Pg	**Pb**	**06 51 27.7**	**+1.6**
LOUF				Sn	**Sn**	**06 51 47.9**	**+2.3**
GUEF	**Guhenno - 56**	**1.62**	**298**	Pn	**Pn**	**06 51 26.4**	**+1.6**
GUEF				Pg	**Pb**	**06 51 28.3**	**+2.2**
GUEF				Sn	**Sn**	**06 51 49.2**	**+3.5**
SGMF	**Saint Gilles**	**1.78**	**309**	*e*Pn	**Pn**	**06 51 28.3**	**+1.5**
SGMF	**Saint Gilles**	**1.78**	**309**	*e*Pg	**Pb**	**06 51 30.5**	**+1.8**
SGMF				*e*Sg	**Sb**	**06 51 54.7**	**+3.7**
	3μm,0.4s						
PLEF	**Pleven - 22200**	**1.83**	**318**	Pn	**Pn**	**06 51 28.9**	**+1.4**
PLEF				Pg	**Pb**	**06 51 31.4**	**+1.9**
PLEF				Sn	**Sb**	**06 51 55.8**	**+3.3**
QUIF	**Quistinic**	**1.96**	**294**	*e*Pn	**Pn**	**06 51 31.0**	**+1.6**
QUIF	**Quistinic**	**1.96**	**294**	*e*Pg	**Pb**	**06 51 34.3**	**+2.4**
QUIF				*e*Sg	**Sb**	**06 51 59.7**	**+3.3**
	3μm,0.3s						
TCF	**Toulx Ste Croi**	**2.05**	**114**	*e*Pn	**Pn**	**06 51 30.2**	**-0.5**
TCF	**Toulx Ste Croi**	**2.05**	**114**	*e*Pg	**Pn**	**06 51 32.8**	**+2.1**
TCF				*e*Sg	**Sn**	**06 51 57.7**	**+1.3**
	10μm,0.4s						
CLF	**Chambon-Foret**	**2.07**	**64**		**Pn**	**06 51 30.8**	**0.0**
CLF	**Chambon-Foret**	**2.07**	**64**	Pn	**Pn**	**06 51 30.8**	**0.0**
CLF				Pg	**Pb**	**06 51 34.3**	**+0.7**
CLF				Sn	**Sb**	**06 52 00.6**	**+1.2**
PLOF	**Ploemeur**	**2.08**	**288**	Pn	**Pn**	**06 51 32.5**	**+1.6**
PLOF				Pg	**Pb**	**06 51 36.4**	**+2.6**
PLOF				Sn	**Sb**	**06 52 02.9**	**+3.3**
HYF	**Humbligny**	**2.15**	**86**	*e*Pn	**Pn**	**06 51 32.1**	**+0.2**
HYF	**Humbligny**	**2.15**	**86**	*e*Pg	**Pb**	**06 51 35.9**	**+0.9**
HYF				*e*Sg	**Sb**	**06 52 01.9**	**+0.2**
LRVF	**chteau la Riv**	**2.20**	**176**	Pn	**Pn**	**06 51 33.2**	**+0.5**
LRVF				Pg	**Pb**	**06 51 37.5**	**+1.5**
LRVF				Sn	**Sb**	**06 52 04.9**	**+1.6**
ROSF	**Rostrenen**	**2.22**	**303**	*e*Pn	**Pn**	**06 51 34.6**	**+1.7**
ROSF	**Rostrenen**	**2.22**	**303**	*e*Pg	**Pb**	**06 51 39.1**	**+2.9**
ROSF				*e*Sg	**Sb**	**06 52 07.0**	**+3.2**
	5μm,0.5s						
ROSF	**Rostrenen**	**2.22**	**303**	*e*P	**Pn**	**06 51 34.5**	**+1.6**
ROSF				IAML		06 52 13.8	
	comp=N,2μm,0.5s						
ROSF				IAML		06 52 13.8	
	comp=E,2μm,0.4s						
ROSF	**Rostrenen**	**2.22**	**303**	Sn	**Sb**	**06 52 06.9**	**+3.2**
ROSF	**Rostrenen**	**2.22**	**303**	Pn	**Pn**	**06 51 34.7**	**+1.8**
ROSF	**Rostrenen**	**2.22**	**303**	Pg	**Pb**	**06 51 38.9**	**+2.7**
JDC	**Jersey Dam (Cr**	**2.29**	**334**	*e*P	**Pn**	**06 51 33.9**	**+0.1**
JDC				IAML		06 52 16.3	
	comp=N,8μm,0.2s						
JDC				IAML		06 52 17.1	
	comp=E,5μm,0.2s						
JDG	**Jersey Dam (Ga**	**2.29**	**334**	*e*P	**Pn**	**06 51 33.9**	**-0.1**
JDG				IAML		06 52 19.3	
	comp=N,2μm,0.4s						
JDG				IAML		06 52 20.0	
	comp=E,2μm,0.5s						
JRS	**Jersey**	**2.31**	**333**	*e*P	**Pn**	**06 51 34.6**	**+0.5**
JRS				IAML		06 52 14.7	
	comp=E,1μm,0.4s						

JRS				IAML		06 52 22.2	
	comp=N,789nm,0.4s						
JSA	Saint Aubin	2.33	332	eP	Pn	06 51 34.5	+0.2
JSA				IAML		06 52 18.6	
	comp=E,3µm,0.3s						
JSA				IAML		06 52 19.1	
	comp=N,2µm,0.6s						
JSA	Saint Aubin	2.33	332	Pn	Pn	06 51 35.1	+0.7
JSA	Saint Aubin	2.33	332	Sn	Sb	06 52 10.8	+4.0
JSA	Saint Aubin	2.33	332	Pg	Pb	06 51 39.8	+1.7
JLP	Les Platons	2.35	334	eP	Pn	06 51 35.0	+0.3
BGF	Bois d'Agland	2.37	103	ePn	Pn	06 51 34.6	-0.4
BGF	Bois d'Agland	2.37	103	ePg	Pb	06 51 39.6	+0.7
BGF				eSg	Sn	06 52 06.6	+2.4
	comp=N,13µm,0.4s						
VERF	Verneugheol	2.49	123	Pn	Pn	06 51 36.1	-0.6
VERF				Pg	Pb	06 51 40.8	-0.1
OLIV	Plomelin	2.59	289	Pn	Pn	06 51 39.4	+1.4
OLIV				Pg	Pg	06 51 46.9	+1.2
OLIV				Sn	Sb	06 52 19.8	+5.5
LOCF	Locquirec - 29	2.63	307	Pn	Pn	06 51 40.7	+2.2
LOCF				Pg	Pb	06 51 46.2	+3.1
LOCF				Sn	Sb	06 52 20.3	+4.9
AVF	Avril sur Loir	2.66	96	ePn	Pn	06 51 38.5	-0.5
AVF	Avril sur Loir	2.66	96	ePg	Pb	06 51 44.8	+1.0
AVF				eSg	Sn	06 52 13.6	+2.3
	comp=N,3µm,0.4s						
AGO	Saint Agoulin	2.73	112	Pn	Pn	06 51 39.5	-0.5
AGO				Pg	Pb	06 51 45.3	+0.2
SSF	Saint Saulge	2.74	90	ePn	Pn	06 51 39.8	-0.3
SSF	Saint Saulge	2.74	90	ePg	Pb	06 51 46.8	+1.7
SSF				eSg	Sb	06 52 18.2	-0.5
	comp=N,2µm,0.4s						
CAF	Calviac	2.85	140	ePn	Pn	06 51 40.9	-0.8
CAF	Calviac	2.85	140	ePg	Pb	06 51 49.3	+2.2
CAF				eSn	Sn	06 52 12.7	-3.3
CAF				eSg	Sb	06 52 24.8	+2.8
	comp=N,3µm,0.3s						
CFF	Clermont-Ferra	2.86	118	Pn	Pn	06 51 41.6	-0.1
CFF				Pg	Pb	06 51 48.2	+1.1
CFF				Sn	Sb	06 52 24.4	+2.3
LOR	Lormes	2.98	86	ePn	Pn	06 51 42.7	-0.7
	baz=268						
LOR	Lormes	2.98	86	ePg	Pb	06 51 51.0	+1.8
	baz=268						
LOR				eSn	Sn	06 52 21.0	+1.9
LOR				eSg	Sb	06 52 25.5	-0.1
	comp=N,2µm,0.3s						
LOR	Lormes	2.98	86	Pn	Pn	06 51 42.6	-0.7
LOR	Lormes	2.98	86	Sn	Sb	06 52 25.2	-0.4
CAMF	Camaret-sur-Me	3.00	294	Pn	Pn	06 51 45.6	+2.0
CAMF				Pg	Pb	06 51 54.1	+4.6
SMF	Signal de Mont	3.02	98	ePn	Pn	06 51 43.2	-0.7
SMF	Signal de Mont	3.02	98	ePg	Pb	06 51 50.7	+0.8
SMF				eSg	Sb	06 52 25.4	-1.4
	comp=N,2µm,0.2s						
MONQ	Montcuq	3.02	156	Pn	Pn	06 51 43.5	-0.4
MONQ				Pg	Pb	06 51 51.3	+1.3
MONQ				Sn	Sb	06 52 27.6	+0.7
PLDF	La Plantade	3.08	111	Pn	Pn	06 51 44.0	-0.8
PLDF				Pg	Pb	06 51 52.3	+1.4
LEUC	Leucamp	3.20	137	Pn	Pn	06 51 45.7	-0.8
LEUC				Pg	Pb	06 51 55.5	+2.5
LBL	Lubilhac	3.23	125	Pn	Pn	06 51 46.4	-0.5
LBL				Pg	Pb	06 51 56.1	+2.5
COLF	Collangettes	3.33	118	Pn	Pn	06 51 47.7	-0.6
COLF				Pg	Pb	06 51 57.8	+2.5
TERF	Tercis-les-Bai	3.50	187	Pn	Pn	06 51 50.4	0.0
CRAS	Crastes	3.53	165	Pn	Pn	06 51 50.4	-0.5
CRAS				Pg	Pb	06 52 02.0	+3.3
CRAS				Sn	Sn	06 52 29.3	-3.5
PLYF	Puligny Montra	3.59	91	Pn	Pn	06 51 50.8	-1.0
PLYF				Sn	Sn	06 52 29.3	-5.0
URDF	Urds	3.71	181	Pn	Pn	06 51 53.7	+0.3
URDF				Sn	Sn	06 52 36.2	-0.9
HMNX	Herstmonceux	3.76	8	IAML		06 53 07.0	
	comp=N,4µm,0.3s						
HMNX				IAML		06 53 08.3	
	comp=E,4µm,0.7s						
SFTF	Sexfontaines	3.89	72	ePn	Pn	06 51 55.1	-0.8
SFTF	Sexfontaines	3.89	72	ePg	Pb	06 52 08.3	+3.6
SFTF				eSn	Sn	06 52 37.6	-4.0
SFTF				eSg	Sb	06 52 54.6	+2.7
	comp=E,1µm,0.3s						
OSSF	Osses	3.93	188	Pn	Pn	06 51 55.8	-0.7
OSSF				Sn	Sn	06 52 39.0	-3.5
ORDF	Ordiarp	3.94	185	Pn	Pn	06 51 55.8	-0.8
MEZF	Maizieres J'vi	3.98	68	ePn	Pn	06 51 56.3	-0.8
	baz=251						
MEZF	Maizieres J'vi	3.98	68	ePg	Pb	06 52 09.5	+3.2
	baz=251						
MEZF				eSn	Sn	06 52 40.1	-3.7
MEZF				eSg	Sb	06 52 57.5	+3.1
	comp=E,3µm,0.4s						
EALK	Alkurruntz	3.99	191	Pn	Pn	06 51 56.6	-0.8
DYA	Yadsworthy	4.00	327	eP	Pn	06 51 57.6	+0.2
DYA				IAML		06 53 10.8	
	comp=N,675nm,0.4s						
DYA				IAML		06 53 11.7	
	comp=E,462nm,0.5s						
DYA	Yadsworthy	4.00	327	Pn	Pn	06 51 57.6	+0.2
SAVF	Savonnieres en	4.06	67	ePn	Pn	06 51 57.6	-0.6
	baz=247						
SAVF	Savonnieres en	4.06	67	ePg	Pb	06 52 10.9	+3.3
SAVF				eSg	Sb	06 53 01.0	+4.2
	comp=E,650nm,0.4s						
SAVF	Savonnieres en	4.06	67	Pn	Pn	06 51 57.6	-0.6
PYLO	Lourdes	4.06	175	Pn	Pn	06 51 57.0	-1.2
ATE	Arette	4.06	182	Pn	Pn	06 51 57.0	-1.3
SJPF	Ste Jean	4.07	187	ePn	Pn	06 51 57.1	-1.2
SJPF	Ste Jean	4.07	187	ePg	Pb	06 52 11.7	+3.9
SJPF				eSg	Sb	06 53 02.1	+5.2
	comp=E,1µm,0.3s						
LAJAS	L'Hospitalet-d	4.11	139	Pn	Pn	06 51 58.4	-0.6
LABF	Labassere	4.12	174	Pn	Pn	06 51 57.8	-1.3
EPF	Esparros	4.16	171	ePn	Pn	06 51 58.6	-1.0
EPF	Esparros	4.16	171	ePg	Pb	06 52 13.2	+3.8
EPF				eSn	Sn	06 52 44.3	-4.0
EPF				eSg	Sb	06 53 05.1	+5.4
	comp=E,1µm,0.3s						
WOL	Wolverton	4.20	354	eP	Pn	06 52 00.3	+0.2
WOL				IAML		06 53 16.5	
	comp=E,789nm,0.5s						
WOL				IAML		06 53 18.8	
	comp=N,1µm,0.8s						
ETSF	Etsaut	4.25	181	ePn	Pn	06 51 59.5	-1.4
ETSF	Etsaut	4.25	181	ePg	Pb	06 52 14.4	+3.5
ETSF				eSn	Sn	06 52 46.2	-4.4
ETSF				eSg	Sb	06 53 07.5	+5.2
	comp=N,1µm,0.5s						
MTLF	Montolieu	4.26	152	ePn	Pn	06 52 00.1	-1.0
MTLF	Montolieu	4.26	152	ePg	Pb	06 52 14.7	+3.6
MTLF				eSn	Sn	06 52 45.6	-5.2
MTLF				eSg	Sb	06 53 08.3	+5.7
	comp=N,795nm,0.3s						
MTLF	Montolieu	4.26	152	Pn	Pn	06 52 00.0	-1.0
VIVF	Saint-Julien-l	4.27	121	ePn	Pn	06 52 01.1	-0.1
VIVF	Saint-Julien-l	4.27	121	ePg	Pb	06 52 15.3	+4.0
VIVF				eSg	Sb	06 53 08.3	+5.4
	comp=N,2µm,0.5s						
BAIF	Baives	4.27	45	ePn	Pn	06 52 00.9	-0.2
BAIF	Baives	4.27	45	ePg	Pg	06 52 16.3	-1.6
BAIF				eSn	Sn	06 52 46.9	-4.1
BAIF				eSg	Sg	06 53 10.1	-3.1
	comp=N,422nm,0.3s						
VIEF	Viey	4.28	175	Pn	Pn	06 51 59.5	-1.8
FOURG	Fourg	4.31	88	Pn	Pn	06 52 01.6	0.0
OG35	Corcelles	4.33	103	Pn	Pn	06 52 02.0	0.0
LASF	Ste Croix	4.33	134	ePn	Pn	06 52 01.6	-0.4
LASF				eSg	Sg	06 53 11.4	-3.8
	comp=N,2µm,0.6s						
MLS	Moulis	4.34	164	Pn	Pn	06 52 01.3	-0.8
CCA1	Carnmenellis	4.37	316	eP	Pn	06 52 03.5	+1.1
CCA1				IAML		06 53 25.0	
	comp=N,375nm,0.5s						
CCA1				IAML		06 53 27.5	
	comp=E,274nm,0.5s						
CCA1	Carnmenellis	4.37	316	Pn	Pn	06 52 03.6	+1.2
BBOU	Bougnies	4.38	41	dP	Pn	06 52 02.8	+0.3
BBOU				dPg	Pg	06 52 18.6	-1.2
CANF	Canfranc	4.38	180	Pn	Pn	06 52 02.1	-0.7
SBD	Saint Breward	4.40	323	eP	Pn	06 52 03.6	+0.8
SBD				IAML		06 53 22.1	
	comp=N,528nm,0.5s						
SBD				IAML		06 53 25.6	
	comp=E,315nm,0.5s						
RIVEL	MONT RIVEL	4.42	93	Pn	Pn	06 52 03.0	-0.2
PAGF	Fort de Pagny	4.42	69	ePn	Pn	06 52 02.0	-1.2
PAGF	Fort de Pagny	4.42	69	ePg	Pb	06 52 17.6	+3.8
PAGF				eSg	Sb	06 53 13.3	+6.1
	comp=E,2µm,0.6s						
DUNF	Dun	4.44	158	Pn	Pn	06 52 02.8	-0.6
EARA	Aranguren	4.44	190	Pn	Pn	06 52 04.1	+0.6
SWN1	Swindon	4.45	349	IAML		06 53 26.1	
	comp=N,1µm,0.5s						
SWN1				IAML		06 53 34.0	
	comp=E,1µm,0.6s						
DOU	Dourbes	4.49	47	dP	Pn	06 52 04.0	0.0
DOU				dS	Sn	06 52 53.0	-3.3
	comp=Z,425nm,0.0s						
SALF	Salau	4.55	164	Pn	Pn	06 52 03.8	-1.2
CABF	La Chapelle	4.55	94	ePn	Pn	06 52 04.3	-0.8
CABF				eSg	Sb	06 53 15.6	+4.7
	comp=Z,839nm,0.5s						
ETNF	Estrennes	4.55	73	Pn	Pn	06 52 03.5	-1.6
OGSM	Saint Maurice	4.56	107	Pn	Pn	06 52 05.3	+0.2
GENF	Genat	4.57	160	Pn	Pn	06 52 04.5	-0.8
BZEV	Zevekote	4.58	28	dS	Sn	06 52 56.1	-2.3
	comp=E,1µm,0.0s						
OGMY	Moye	4.59	104	Pn	Pn	06 52 04.9	-0.6
GIVF	Givet	4.61	48	ePn	Pn	06 52 05.7	0.0
GIVF	Givet	4.61	48	ePg	Pg	06 52 22.7	-1.5
GIVF				eSn	Sn	06 52 55.5	-3.7
GIVF				eSg	Sg	06 53 20.5	-3.4
	comp=E,779nm,0.4s						
BOUC	Bouclans	4.61	86	Pn	Pn	06 52 04.8	-1.0
BSKQ	Steenkerk	4.63	39	dP	Pn	06 52 05.8	-0.1
BSKQ				dPg	Pg	06 52 23.3	-1.4
BSKQ				dS	Sn	06 52 56.9	-2.8
	comp=E,430nm,0.0s						
FNEB	Nbias	4.63	156	Pn	Pn	06 52 05.4	-0.7
MANO	Manonville	4.63	66	Pn	Pn	06 52 05.1	-0.9
HTL	Hartland	4.66	327	eP	Pn	06 52 06.8	+0.4
HTL				IAML		06 53 28.6	
	comp=N,583nm,0.6s						
HTL				IAML		06 53 33.7	
	comp=E,832nm,0.5s						
HTL	Hartland	4.66	327	Pn	Pn	06 52 06.8	+0.4
BRQR	Ronquire	4.66	40	dP	Pn	06 52 06.6	+0.2
BRQR				dPg	Pg	06 52 24.8	-0.5
BOST	Ostende	4.67	28	dP	Pn	06 52 06.0	-0.6
BOST				dS	Sn	06 52 57.8	-3.1
	comp=E,413nm,0.0s						
GIMEL	St. Georges /	4.69	95	Pn	Pn	06 52 06.3	-0.6
BMRD	Maredsous	4.70	46	dP	Pn	06 52 07.1	+0.1
BMRD				dS	Sn	06 52 58.7	-2.9
	comp=E,638nm,0.0s						
HAU	Haudompre	4.71	77	ePn	Pn	06 52 05.5	-1.8
HAU	Haudompre	4.71	77	ePg	Pb	06 52 23.0	+4.2
HAU				eSg	Sb	06 53 21.9	+6.3
	comp=E,1µm,0.5s						
CEST	Esterri de Car	4.72	164		Pn	06 52 06.7	-0.7
GRN	Grenoble	4.74	111	Pn	Pn	06 52 07.0	-0.6
CLAF	Gruissan	4.75	146	Pn	Pn	06 52 07.0	-0.7
STRD	Stroud	4.76	347	eP	Pn	06 52 07.9	+0.1
STRD				IAML		06 53 38.8	
	comp=E,1µm,0.7s						
STRD				IAML		06 53 48.4	
	comp=N,1µm,0.7s						
BRANT	Les Verrieres	4.77	90	Pn	Pn	06 52 07.7	-0.4
CARF	Carcanieres	4.80	156	Pn	Pn	06 52 08.0	-0.5
PAND	Andorre	4.85	162	Pn	Pn	06 52 08.4	-0.8
UCC	Uccle	4.86	39		Pn	06 52 08.5	-0.6
UCC	Uccle	4.86	39	P	Pn	06 52 08.5	-0.6
UCC	Uccle	4.86	39	dP	Pn	06 52 08.9	-0.2
UCC				dS	Sn	06 53 01.7	-3.7
	comp=E,444nm,0.0s						
NEUF	Neufchef	4.88	61	Pn	Pn	06 52 08.4	-1.0
CHMF	Charmoille	4.88	86	Pn	Pn	06 52 08.7	-0.9
RONF	Ronchamp	4.88	81	Pn	Pn	06 52 07.8	-1.8
BGES	Gesves	4.91	47	dP	Pn	06 52 10.0	+0.1
BGES				dS	Sn	06 53 03.5	-3.4
	comp=Z,437nm,0.0s						
MONM	Monmouth	4.93	343	eP	Pn	06 52 10.2	+0.1
MONM				IAML		06 53 37.8	
	comp=E,545nm,0.5s						
MONM				IAML		06 53 41.8	
	comp=N,662nm,0.5s						
XAFF	Xaffevillers	4.96	73	Pn	Pn	06 52 08.7	-1.9
ORIF	Oris-en-Rattie	4.97	114	eP	Pn	06 52 11.1	+0.3
ORIF				eSg	Sb	06 53 29.6	+6.5
	comp=N,473nm,0.6s						
HINF	Hinteralfeld	5.03	80	ePn	Pn	06 52 09.8	-1.8
HINF	Hinteralfeld	5.03	80	ePg	Pb	06 52 29.4	+5.2
HINF				eSg	Sb	06 53 30.9	+6.2
	comp=N,830nm,0.4s						
BCLA	Clavier	5.04	47	dP	Pn	06 52 11.8	0.0
BCLA				dS	Sn	06 53 05.9	-4.1
	comp=Z,336nm,0.0s						
ELMS	Elmsett, Ipswi	5.04	11	eP	Pn	06 52 12.6	+0.8
ELMS				IAML		06 53 40.5	
	comp=N,1µm,0.5s						
ELMS				IAML		06 53 51.7	
	comp=E,1µm,0.4s						
FILF	Fillols	5.08	154	Pn	Pn	06 52 11.1	-1.1
SAUF	chteau de Sau	5.08	127	Pn	Pn	06 52 12.3	+0.1
VALC	Valcebollere	5.10	158	Pn	Pn	06 52 12.9	+0.3
WLF	Walferdange	5.10	58	Pn	Pn	06 52 12.5	0.0
WLF				Sn	Sn	06 53 05.0	-6.3
WLF	Walferdange	5.10	58		Pn	06 52 11.9	-0.6
WLF	Walferdange	5.10	58	Pn	Pn	06 52 11.5	-0.9
WLF	Walferdange	5.10	58	P	Pn	06 52 11.9	-0.6
WLF	Walferdange	5.10	58	dP	Pn	06 52 11.8	-0.6
WLF				dPg	Pg	06 52 31.4	-2.3
WLF				dSg	Sg	06 53 39.4	-0.2
	comp=E,614nm,0.0s						
WLF	Walferdange	5.10	58	ePn	Pn	06 52 12.2	-0.3
WLF				eSg	Sg	06 53 34.6	-5.0
OGSI	Sixt	5.12	100	Pn	Pn	06 52 12.7	-0.1
MCH1	Michaelchurch	5.12	342	eP	Pn	06 52 12.6	-0.1
MCH1				IAML		06 53 44.3	
	comp=N,355nm,0.5s						
MCH1				IAML		06 53 46.9	
	comp=E,418nm,0.5s						
MCH1	Michaelchurch	5.12	342	Pn	Pn	06 52 12.5	-0.3
TORNY	Torny/Romont	5.12	91	Pn	Pn	06 52 12.4	-0.5
RSL	Roselend	5.14	104	Pn	Pn	06 52 13.4	+0.1
RSL	Roselend	5.14	104	P	Pn	06 52 13.7	+0.5
AIGLE	Aigle	5.19	96	Pn	Pn	06 52 13.9	+0.1
SJAF	Saint Jean de	5.25	151	Pn	Pn	06 52 13.4	-1.2
LVIA	Vianden	5.25	55	dP	Pn	06 52 13.8	-0.8
LVIA				dPg	Pg	06 52 33.8	-2.8
LVIA				dS	Sn	06 53 09.9	-5.3
	comp=E,390nm,0.0s						
BOURR	Bourrignon	5.27	84	Pn	Pn	06 52 14.2	-0.7
LPL	La Plagne	5.27	105	eP	Pn	06 52 15.9	+0.9
LPL				eSg	Sg	06 53 42.4	-2.8
	comp=E,553nm,0.8s						
BSTI	Sart Tilman	5.28	47	dP	Pn	06 52 14.8	-0.1
BSTI				dPg	Pb	06 52 34.0	+5.6
EJON	La Jonquera	5.28	152	Pn	Pn	06 52 14.1	-0.9
EJON				Sn	Sn	06 53 09.7	-6.3
ECH	Echery	5.28	76		Pn	06 52 12.5	-2.6
ECH	Echery	5.28	76	Pn	Pn	06 52 12.6	-2.4
ECH	Echery	5.28	76	P	Pn	06 52 12.5	-2.6
ECH	Echery	5.28	76	ePn	Pn	06 52 12.9	-2.2
ECH				eSn	Sn	06 53 08.2	-7.8
ECH				eSg	Sb	06 53 37.2	+5.2
LKLB	Kalborn	5.29	54	dP	Pn	06 52 14.9	-0.2
LKLB				dS	Sn	06 53 13.5	-2.5
	comp=N,411nm,0.0s						
RUSF	Rustrel	5.29	125	Pn	Pn	06 52 14.8	-0.3
LPG	La Plagne	5.29	106	eP	Pn	06 52 16.3	+0.9
LPG				eSg	Sg	06 53 43.4	-2.4
	comp=N,414nm,0.5s						
ILLF	Illfurth	5.29	81	Pn	Pn	06 52 14.9	-0.3
SMRF	Simiane la Rot	5.32	124	ePn	Pn	06 52 15.7	+0.2
SMRF	Simiane la Rot	5.32	124	ePg	Pg	06 52 34.9	-2.9
SMRF				eSg	Sg	06 53 42.0	-4.7
	comp=N,524nm,0.6s						
BLCH	La Chartreuse	5.33	47	dP	Pn	06 52 14.7	-0.9
BLCH				dPg	Pg	06 52 35.7	-2.4
BLCH				dS	Sn	06 53 16.2	-0.8
	comp=Z,427nm,0.0s						
WALT	Westhalten	5.33	78	Pn	Pn	06 52 13.5	-2.1
OGMO	Fort Saint-Gob	5.36	109	Pn	Pn	06 52 17.0	+0.9
BHOU	Houvegnez	5.37	51	dP	Pn	06 52 16.1	-0.1
BHOU				dS	Sn	06 53 13.1	-4.9
	comp=N,536nm,0.0s						
CDF	Champ du Feu	5.39	74	ePn	Pn	06 52 14.4	-2.2
CDF	Champ du Feu	5.39	74	ePg	Pb	06 52 36.1	+5.7
CDF				eSg	Sb	06 53 42.2	+7.0
	comp=N,644nm,0.5s						
MRGE	Morge	5.40	102	P	Pn	06 52 17.7	+0.8
BNI	Bardonecchia	5.42	110		Pn	06 52 17.3	+0.3
BNI	Bardonecchia	5.42	110	P	Pn	06 52 17.3	+0.3
BSTF	la Bastide-des	5.42	125	Pn	Pn	06 52 17.6	+0.7
MLYF	Mely	5.42	123	Pn	Pn	06 52 17.4	+0.5
SENIN	Lac Senin/Sane	5.42	95		Pn	06 52 17.1	0.0
SENIN	Lac Senin/Sane	5.42	95	P	Pn	06 52 17.3	+0.2
VOEL	Voellerdingen	5.43	68	Pn	Pn	06 52 15.0	-2.0
WLS	Welschbruch	5.45	74	Pn	Pn	06 52 14.6	-2.7
BEBN	Eben Emael	5.47	46	dP	Pn	06 52 17.6	+0.1
BEBN				dPg	Pg	06 52 39.7	-1.0
BMOL	Mol	5.48	40	dP	Pn	06 52 18.2	+0.6
BMOL				dP	Pn	06 52 18.3	+0.7
BMOL				dS	Sn	06 53 18.0	-2.6
BMOL				dS	Sn	06 53 20.1	-0.5
	comp=E,318nm,0.0s						
MEM	Membach	5.52	49	dP	Pn	06 52 18.0	-0.3
MEM				dP	Pn	06 52 18.1	-0.1
MEM				dS	Sn	06 53 17.8	-3.9
	comp=Z,436nm,0.0s						
CIEL	Dossenheim-sur	5.54	69	Pn	Pn	06 52 16.0	-2.6
RRL	Rocca Remolon	5.54	111	Pn	Pn	06 52 19.5	+0.7
RSBS	Rosebush, Pemb	5.55	332	eP	Pn	06 52 18.9	+0.2
RSBS				IAML		06 54 03.5	
	comp=E,143nm,0.5s						
RSBS				IAML		06 54 03.8	
	comp=N,113nm,0.4s						
DIX	Grande Dixence	5.55	98	Pn	Pn	06 52 19.3	+0.3
DIX	Grande Dixence	5.55	98	P	Pn	06 52 19.5	+0.5
BALST	Balsthal	5.59	85	Pn	Pn	06 52 18.3	-1.0
BALST	Balsthal	5.59	85	ePn	Pn	06 52 19.0	-0.2
BALST				eSg	Sb	06 53 46.7	+6.0
HLM1	Long Mynd	5.59	345	eP	Pn	06 52 19.0	-0.3
HLM1				IAML		06 54 07.4	
	comp=E,215nm,0.8s						
HLM1				IAML		06 54 07.5	
	comp=N,151nm,0.7s						
BLAF	les Blancs	5.60	122	Pn	Pn	06 52 19.6	+0.2
VOGT	Vogtsburg - To	5.61	77	Pn	Pn	06 52 18.4	-1.1
CREF	Crivoux	5.61	115	Pn	Pn	06 52 20.6	+0.9
MBDF	Montbardon	5.62	113	eP	Pn	06 52 20.7	+0.9
MBDF				eSg	Sg	06 53 51.5	-4.9
	comp=N,430nm,0.6s						
WACR	West Acre	5.63	7	eP	Pn	06 52 20.2	+0.4
WACR				IAML		06 54 07.2	
	comp=E,279nm,0.5s						
WACR				IAML		06 54 12.4	
	comp=N,493nm,0.6s						
VANNI	Vissoie, Val d	5.65	97	P	Pn	06 52 21.1	+0.9
BOPT	Opiter	5.65	43	dP	Pn	06 52 20.0	-0.1
OGDI	Digne	5.65	120	Pn	Pn	06 52 20.0	-0.1
DREG	Dreilaegerbach	5.67	49	ePn	Pn	06 52 19.7	-0.5
DREG				eSn	Sn	06 53 20.6	-4.7
	comp=N,306nm,0.2s						
ARTF	Artigues	5.69	126	Pn	Pn	06 52 20.4	-0.3
KLL	Kalltalsperre	5.70	50	ePn	Pn	06 52 20.1	-0.6
KLL				eSn	Sn	06 53 21.3	-4.8
	comp=N,262nm,0.5s						
HILG	Hillesheim	5.70	54	ePn	Pn	06 52 20.4	-0.3
HILG				eSn	Sn	06 53 21.2	-4.9
	comp=N,368nm,0.2s						
LAUCH	Lauchernalp	5.73	94	P	Pn	06 52 22.0	+0.6
JAUF	Jausiers	5.75	116	Pn	Pn	06 52 22.5	+0.9
RSP	Reno Superiore	5.75	107	Pn	Pn	06 52 22.8	+1.2
KIZ	Kirchzarten	5.76	79	Pn	Pn	06 52 18.9	-2.6
SURF	Saint Ours	5.77	115	Pn	Pn	06 52 22.8	+0.9
CIRO	Champorcher	5.79	103	Pn	Pn	06 52 23.2	+0.9
FELD	Feldberg im Sc	5.81	80	Pn	Pn	06 52 20.3	-2.1
EMBD	Embd, Matterta	5.81	96	Pn	Pn	06 52 23.0	+0.6
LEMB	Lembach	5.85	68	Pn	Pn	06 52 20.9	-1.8
SULZ	Cheisacher	5.87	83	ePn	Pn	06 52 22.7	-0.4
SULZ				eSg	Sb	06 53 56.9	+8.1
BHB	Bricherasio	5.88	110	Pn	Pn	06 52 24.9	+1.7
SATI	Passo dei Sala	5.92	99	Pn	Pn	06 52 22.7	-1.3
BERGE	Lenzkirch (DE)	5.93	80	ePn	Pn	06 52 21.9	-2.0
BERGE				eSn	Sn	06 53 23.1	-8.8
BERGE				eSg	Sb	06 53 58.3	+7.8
TRIGF	Trigance	5.93	122	Pn	Pn	06 52 24.5	+0.5
RODG	Roetgen-Dahlhe	5.93	45	ePn	Pn	06 52 24.0	+0.1
RODG				eSn	Sn	06 53 28.2	-3.7
ENAUX	Enaux	5.94	118	Pn	Pn	06 52 24.4	+0.3
TRAV	Traversella	5.94	103	Pn	Pn	06 52 25.4	+1.3
STB	Steinbach	5.95	52	ePn	Pn	06 52 23.6	-0.5
STB				eSn	Sn	06 53 27.8	-4.4
	comp=N,329nm,0.5s						
METMA	Mettma DE	5.97	81	ePn	Pn	06 52 22.9	-1.5
METMA				eSg	Sb	06 54 00.1	+8.5
OPP	Oppenau	6.00	74	Pn	Pn	06 52 22.5	-2.4
ABH	Alteburg	6.01	60	Pn	Pn	06 52 23.4	-1.5
ABH	Alteburg	6.01	60	ePn	Pn	06 52 23.5	-1.5
FOEL	Foel Wylfa	6.01	344	eP	Pn	06 52 25.0	+0.1
FOEL				IAML		06 54 24.7	
	comp=N,334nm,0.5s						
FOEL				IAML		06 54 27.6	
	comp=E,227nm,0.5s						
SALSA	La sagne	6.02	120	Pn	Pn	06 52 25.2	0.0
BGG	Burgeitz	6.03	57	ePn	Pn	06 52 24.3	-0.9
BGG				eSn	Sn	06 53 29.1	-5.1
	comp=E,166nm,0.4s						
NEEW	Neewiller pres	6.05	69	Pn	Pn	06 52 23.6	-1.9
BABA	Baden-Baden-Ne	6.05	72	Pn	Pn	06 52 23.3	-2.2
STNC	Stoke	6.05	350	IAML		06 54 26.7	
	comp=N,438nm,0.6s						
STNC				IAML		06 54 29.5	
	comp=E,544nm,0.5s						
ISO	Isola	6.07	117	Pn	Pn	06 52 26.2	+0.4
BFO	Black Forest	6.07	76		Pn	06 52 23.6	-2.3
BFO	Black Forest	6.07	76	P	Pn	06 52 23.6	-2.3
BFO	Black Forest	6.07	76	ePn	Pn	06 52 23.7	-2.3
FLAF	Flassans-sur-l	6.07	126	Pn	Pn	06 52 25.9	0.0
SLE	Schleitheim	6.13	81	Pn	Pn	06 52 24.8	-1.9
SLE	Schleitheim	6.13	81	ePn	Pn	06 52 25.1	-1.6
STV	Sant Anna di V	6.20	115	Pn	Pn	06 52 29.0	+1.3
CALF	Calern	6.23	120	Pn	Pn	06 52 28.5	+0.4
LMR	La Mourre	6.25	125	eP	Pn	06 52 28.4	+0.1
LMR	La Mourre	6.25	125	ePg	Pg	06 52 51.5	-4.2
LMR				eSg	Sg	06 54 08.8	-7.7
	comp=E,156nm,0.6s						
SPIF	crte de Spivo	6.25	117	Pn	Pn	06 52 29.0	+0.6
ENR	Entracque	6.27	115	Pn	Pn	06 52 29.9	+1.2
LBWR	Ladybower, Pea	6.31	353	eP	Pn	06 52 29.7	+0.5
LBWR				IAML		06 54 31.4	
	comp=N,358nm,0.6s						
LBWR				IAML		06 54 32.8	
	comp=E,340nm,0.8s						
NAST	IGS Nastaetten	6.32	58	eSn	Sn	06 53 36.1	-5.4
	comp=E,217nm,0.2s						
BNS	Bensberg	6.33	50	ePn	Pn	06 52 28.9	-0.4
BNS				eSn	Sn	06 53 37.4	-4.2
	comp=E,605nm,0.4s						
EMING	Emmingen-Lipti	6.37	80	ePn	Pn	06 52 28.8	-1.2
TURF	col de Turini	6.38	117	Pn	Pn	06 52 31.1	+0.7
HOBG	Hohbusch	6.42	50	ePn	Pn	06 52 30.2	-0.4
LAUG	Laupendahl	6.44	46	ePn	Pn	06 52 30.1	-0.7
LAUG				eSn	Sn	06 53 39.2	-5.1
	comp=E,169nm,0.3s						
PIAF	les Granges de	6.45	115	Pn	Pn	06 52 32.5	+1.4
ESCA	l'Escarene	6.45	118	Pn	Pn	06 52 31.9	+0.8
BODE	Bodenheim	6.46	61	ePn	Pn	06 52 30.9	-0.3
WALHA	Wallhausen, DE	6.56	81	ePn	Pn	06 52 31.8	-0.7
GUT	Gutenstein	6.57	78	Pn	Pn	06 52 31.3	-1.4
WLF1	Llynfaes	6.64	339	eP	Pn	06 52 33.8	+0.3
WLF1				IAML		06 54 34.6	
	comp=E,111nm,0.4s						
WLF1				IAML		06 54 45.6	
	comp=N,101nm,0.5s						
TNS	Taunus Mts	6.68	59	ePn	Pn	06 52 32.9	-1.2
STU	Stuttgart	6.71	72	Pn	Pn	06 52 36.3	+1.7
STU	Stuttgart	6.71	72	P	Pn	06 52 36.3	+1.7
WME	Myndd Eilian	6.71	340	eP	Pn	06 52 35.1	+0.5
RORO	Rocca Rossa	6.73	114	Pn	Pn	06 52 36.2	+1.3
PLONS	Plons/SG	6.75	87	ePn	Pn	06 52 35.2	0.0
WPS	Cemaes, Angles	6.76	339	eP	Pn	06 52 35.9	+0.6
WPS				IAML		06 54 38.5	
	comp=N,58nm,0.5s						

WPS				IAML		06 54 42.8	
	comp=E,56nm,0.5s						
CANO	Canova, Maglio	6.79	112	Pn	Pn	06 52 36.5	+0.8
TUE	Stuetta	6.79	92		Pn	06 52 36.9	+0.9
TUE	Stuetta	6.79	92	P	Pn	06 52 36.0	0.0
	comp=E,2.6nmcomp=E,3µmcomp=E,187nm,0.6s						
ECAL	Calabor	6.85	223	Pn	Pn	06 52 36.3	-0.3
ECAL				Sn	Sn	06 53 50.7	-4.0
HPK	Haverah Park	6.86	354	eP	Pn	06 52 36.9	+0.3
HPK				IAML		06 53 55.6	
	comp=N,277nm,0.3s						
HPK				IAML		06 54 46.1	
	comp=E,259nm,0.7s						
PBRG	Braganca	6.96	222	ePn	Pn	06 52 37.7	-0.4
PBRG				eSn	Sn	06 53 53.6	-3.7
PBRG				i AML	AML	06 53 57.3	
PBRG				i AML	AML	06 53 58.4	
PBRG				i AML	AML	06 54 14.5	
MILB	Miltenberg	7.04	64	ePn	Pn	06 52 37.7	-1.5
DAVA	Damuels	7.07	85	eSg	Sg	06 54 37.6	-5.4
	comp=E,128nm,0.5s						
DAVOX	Davos/Dischmat	7.12	89	Pn	Pn	06 52 40.3	0.0
	comp=E,5.3nm,0.3s,baz=288,slow=14,SNR=29						
DAVOX				Sn	Sn	06 53 56.6	-4.7
	comp=E,8.2nm,0.3s,baz=300,slow=18,SNR=1.9						
DAVOX				Lg	Lg	06 54 35.6	
	comp=E,6.3nm,0.3s,baz=292,slow=11,SNR=3.8						
DAVOX				LR	LR	06 54 57.6	
	comp=E,32nm,19.5s,baz=52,slow=35						
	comp=E,16nm,0.4s						
UCM	Universidad Co	7.12	197	Pn	Pn	06 52 39.8	-0.4
UCM				Sn	Sn	06 53 55.7	-5.5
DSB	Dublin	7.17	330	Pn	Pn	06 52 40.6	-0.3
UBR	Ueberruh	7.22	82	ePn	Pn	06 52 40.9	-0.7
GDLE	Glaisdale, N Y	7.29	359	eP	Pn	06 52 42.5	0.0
GDLE				IAML		06 55 11.6	
	comp=N,308nm,0.6s						
GDLE				IAML		06 55 12.3	
	comp=E,290nm,0.4s						
FUORN	Ofenpass-Fuorn	7.40	90		Pn	06 52 45.4	+1.1
MSSA	Maissana	7.56	108	Pn	Pn	06 52 47.4	+1.0
ECHE	Chera	7.56	183	Pn	Pn	06 52 45.2	-1.2
IOMK	Kirk Michael	7.57	342	eP	Pn	06 52 46.0	-0.4
IOMK				IAML		06 54 40.2	
	comp=N,17nm,0.4s						
IOMK				IAML		06 55 09.9	
	comp=E,19nm,0.6s						
PGAV	Gavieira, Arco	7.59	230	ePn	Pn	06 52 45.7	-1.1
PGAV				eSn	Sn	06 54 07.2	-5.6
PGAV				i AML	AML	06 54 10.4	
PGAV				i AML	AML	06 54 11.5	
PGAV				i AML	AML	06 54 12.8	
MVO	Moncorvo	7.60	220	ePn	Pn	06 52 46.9	0.0
MVO				eSn	Sn	06 54 07.4	-5.7
MVO				i AML	AML	06 54 09.9	
MVO				i AML	AML	06 54 11.1	
MVO				i AML	AML	06 54 32.8	
PCAB	Cabril	7.65	227	ePn	Pn	06 52 47.6	+0.1
PCAB				eSn	Sn	06 54 09.7	-4.6
PCAB				i AML	AML	06 54 13.8	
PCAB				i AML	AML	06 54 24.9	
PCAB				i AML	AML	06 54 26.1	
RETA	Reutte	7.67	83	i Pn	Pn	06 52 48.1	+0.3
	comp=E,8.1nm,0.6s						
RETA				eSg	Sg	06 54 56.7	-5.3
	comp=E,35nm,0.4s						
FETA	Feichten	7.67	87	ePn	Pn	06 52 49.1	+1.2
	comp=E,7.4nm,0.5s						
FETA				i Sn	Sn	06 54 10.6	-4.3
	comp=E,14nm,0.3s						
FETA				Sg	Sg	06 54 58.1	-4.0
	comp=E,55nm,0.7s						
EDMD	Edmundbyers	7.75	354	eP	Pn	06 52 48.2	-0.6
EDMD				IAML		06 54 14.3	
	comp=N,82nm,0.2s						
EDMD				IAML		06 55 21.1	
	comp=E,111nm,0.6s						
ETOS	Mallorca	7.76	161	Pn	Pn	06 52 48.1	-1.0
ETOS				Sn	Sn	06 54 11.1	-5.9
POLO	Lamas de Olo	7.79	225	ePn	Pn	06 52 49.1	-0.5
POLO				eSn	Sn	06 54 15.0	-2.8
POLO				i AML	AML	06 54 19.9	
POLO				i AML	AML	06 54 21.9	
POLO				i AML	AML	06 54 51.1	
PVRL	Vila Real	7.83	224	ePn	Pn	06 52 50.1	+0.1
ESBB	Sonseca Array	7.88	200		Pn	06 52 49.4	-1.3
ESDC	Sonseca Array	7.88	200		Pn	06 52 49.4	-1.3
ESDC	Sonseca Array	7.88	200	Pn	Pn	06 52 49.8	-1.0
	comp=E,3.6nm,0.3s,baz=24,slow=13,SNR=53						
ESDC				Sn	Sn	06 54 12.7	-7.3
	comp=E,6.7nm,0.3s,baz=23,slow=22,SNR=6.6						
ESDC				Lg	Lg	06 55 02.6	
	baz=22,slow=29						
	comp=E,4.4nm,0.3s						
MOTA	Moosalm	7.90	84	ePn	Pn	06 52 51.8	+0.7
	comp=E,0.1nm,0.1s,SNR=4.9						
MOTA				i Sn	Sn	06 54 14.0	-6.6
	comp=E,16nm,0.3s						
MOTA				Sg	Sg	06 55 04.4	-5.1
	comp=E,84nm,0.8s						
VAL	Valentia	7.94	311	Pn	Pn	06 52 52.2	+0.7
VAL				Sn	Sn	06 54 17.9	-3.4
SQTA	Sankt Quirin	7.98	85	ePn	Pn	06 52 53.1	+0.9
	comp=E,5.7nm,0.2s,SNR=7.0						
SQTA				i Sn	Sn	06 54 17.7	-4.8
	comp=E,21nm,0.4s						
SQTA				eSg	Sg	06 55 05.0	-7.0
	comp=E,82nm,0.6s						
MAHO	Mahon	8.03	153	Sn	Sn	06 54 14.5	-9.1
MAHO				Pn	Pn	06 52 51.8	-1.0
MAHO	Mahon	8.03	153		Pn	06 52 51.5	-1.2
PAB	San Pablo	8.10	202		Pn	06 52 52.7	-1.0
PAB	San Pablo	8.10	202	P	Pn	06 52 52.7	-1.0
PGF	Pioggiola	8.17	121	ePn	Pn	06 52 54.7	0.0
GRFO	Grafenberg	8.20	68	Pn	Pn	06 52 54.9	-0.2
GRFO	Grafenberg	8.20	68	P	Pn	06 52 54.9	-0.2
GRA1	Grafenberg Arr	8.21	68	Pn	Pn	06 52 54.5	-0.6
GRF	Grafenberg Arr	8.21	68	P	Pn	06 52 54.5	-0.6
GRF	Grafenberg Arr	8.21	68	eSg	Sg	06 55 13.1	-6.1
WATA	Walderalm	8.22	84	i Pn	Pn	06 52 56.3	+0.8
	comp=E,3.7nm,0.3s						
EIBI	Ibiza	8.23	170	Pn	Pn	06 52 54.5	-1.0
WTTA	Wattenberg	8.27	85	ePn	Pn	06 52 57.2	+1.0
	comp=E,8.0nm,0.3s,SNR=16						
WTTA				i Sn	Sn	06 54 24.3	-5.3
	comp=E,28nm,0.6s						
PVIS	Viseu	8.35	222	ePn	Pn	06 52 56.9	-0.3
PVIS				eSn	Sn	06 54 26.6	-4.9
ESK	Eskdalemuir	8.35	349	Pn	Pn	06 52 54.9	-2.2
ESK	Eskdalemuir	8.35	349	P	Pn	06 52 54.9	-2.2
PTO	Porto	8.36	227	ePn	Pn	06 52 56.2	-1.1
EKA	Eskdalemuir Ar	8.37	350	Pn	Pn	06 52 56.1	-1.2
	baz=163,slow=14						
EKA				Sn	Sn	06 54 24.1	-7.5
	baz=165,slow=25						
EKA				Lg	Lg	06 55 25.5	
	baz=173,slow=27						
CTI	Castel Tesino	8.44	93	Pn	Pn	06 52 59.7	+1.2
CTI	Castel Tesino	8.44	93	P	Pn	06 52 59.7	+1.2
MTE	Manteigas	8.45	220		Pn	06 52 58.0	-0.5
MTE	Manteigas	8.45	220	ePn	Pn	06 52 58.5	0.0
MTE				eSn	Sn	06 54 27.6	-6.4
MTE				i AML	AML	06 54 57.8	
MTE				i AML	AML	06 54 58.1	
MTE				i AML	AML	06 55 11.7	
TEOL	Teolo	8.62	98	Pn	Pn	06 53 01.2	+0.3
PCBR	Castelo Branco	8.89	217	ePn	Pn	06 53 03.8	-0.7
PCBR				eSn	Sn	06 54 38.8	-5.8
PCBR				i AML	AML	06 55 07.3	
PCBR				i AML	AML	06 55 11.1	
PCBR				i AML	AML	06 55 11.5	
ABTA	Abfaltersbach	8.91	88	i Pn	Pn	06 53 06.8	+1.9
	comp=E,2.5nm,0.2s						
ABTA				eSn	Sn	06 54 42.4	-3.0
	comp=E,3.6nm,0.3s						
CIMO	Cimolais	8.93	91		Pn	06 53 06.2	+1.1
LESA	Schwarzleotal	8.97	83	Pn	Pn	06 53 06.5	+0.9
	comp=E,2.5nm,0.2s,SNR=7.4						
LESA				eSn	Sn	06 54 39.1	-7.5
	comp=E,10nm,0.4s						
COI	Coimbra	8.99	222		Pn	06 53 05.0	-0.9
COI	Coimbra	8.99	222	ePn	Pn	06 53 05.6	-0.4
COI				eSn	Sn	06 54 44.1	-3.1
COI	Coimbra	8.99	222	P	Pn	06 53 05.0	-0.9
STAL	STALIGIAL	9.12	91	Pn	Pn	06 53 08.6	+0.9
PCAS	Casmilo, Conde	9.16	222	ePn	Pn	06 53 08.2	0.0
PCAS				eSn	Sn	06 54 46.9	-4.4
PCAS				i AML	AML	06 54 49.3	
PCAS				i AML	AML	06 54 49.3	
PCAS				i AML	AML	06 55 21.2	
PMRV	Marv??o	9.20	216	ePn	Pn	06 53 08.5	-0.4
PMRV				eSn	Sn	06 54 44.8	-7.6
PSARD	Sardoal	9.38	219	ePn	Pn	06 53 11.2	0.0
PSARD				eSn	Sn	06 54 50.7	-6.0
PSARD				i AML	AML	06 54 53.8	
PSARD				i AML	AML	06 54 56.8	
PSARD				i AML	AML	06 55 24.6	
EADA	Adamuz	9.46	200	Pn	Pn	06 53 12.0	-0.4
EADA				Sn	Sn	06 54 49.8	-9.0
KHC	Kasperske Hory	9.62	73	ePN	Pn	06 53 13.6	-1.0
KHC				eSN	Sn	06 54 55.0	-7.7
KHC				AMS	AMS	06 57 00.0	
	comp=E,200nm,7.2s						
KHC	Kasperske Hory	9.62	73	eP	Pn	06 53 13.6	-1.0
KHC				e		06 54 55.0	
KHC				MLR	MLR		
	comp=Z,200nm,7.2s						
KHC	Kasperske Hory	9.62	73	P	Pn	06 53 13.1	-1.5
	comp=Z,298nmcomp=Z,27nm,0.8s						
EBAD	Badajoz	9.65	212	Pn	Pn	06 53 14.4	-0.5
EBAD				Sn	Sn	06 54 55.1	-8.1
GEC2	GERESS Array S	9.68	75		Pn	06 53 14.4	-0.9
GERES	GERESS Array B	9.68	75	Pn	Pn	06 53 14.1	-1.3
	comp=Z,0.3nm,0.3s,baz=269,slow=14,SNR=24						
GERES				Sn	Sn	06 54 57.3	-6.8
	comp=Z,0.4nm,0.3s,baz=267,slow=20,SNR=1.6						
GERES				Lg	Lg	06 55 57.4	
	comp=Z,0.8nm,0.3s,baz=268,slow=31,SNR=6.0						
	comp=Z,3.8nm,0.4s						
PRED	Cave del Predi	9.68	89		Pn	06 53 15.7	+0.3
PSBE	So Bento	9.73	221	ePn	Pn	06 53 16.4	+0.3
ECAB	El Cabril	9.76	204	Pn	Pn	06 53 15.8	-0.7
ECAB				Sn	Sn	06 54 56.0	-10
CLL	Collm	9.76	60		Pn	06 53 15.4	-1.1
CLL	Collm	9.76	60	i P	Pn	06 53 16.4	-0.1
CLL				pmax	pmax		
	comp=Z,400nm,20.9s						
CLL	Collm	9.76	60	P	Pn	06 53 15.1	-1.4
	comp=Z,7.8nm,0.7s						
CLL	Collm	9.76	60	i Pn	Pn	06 53 16.4	-0.1
CLL				ePg		06 53 57.0	
CLL				eSglp		06 56 05.0	
	comp=N,200nm,21.5s						
CLL				eSg		06 56 09.0	
	comp=Z,49nm,0.9s						
CLL				eAMS	AMS	06 56 32.0	
CLL				AMS	AMS	06 57 00.0	
	comp=Z,100nm,19.3s						
PESTR	Estremoz	9.76	215	Pn	Pn	06 53 16.9	+0.4
PESTR				Sn	Sn	06 54 59.3	-6.9
PESTR	Estremoz	9.76	215	ePn	Pn	06 53 16.5	0.0
PESTR				eSn	Sn	06 54 59.6	-6.6
PMTG	Montargil	9.85	218	ePn	Pn	06 53 16.9	-0.7
PMTG				eSn	Sn	06 55 02.2	-6.0
PMTG				i AML	AML	06 55 05.0	
PMTG				i AML	AML	06 55 05.6	
PMTG				i AML	AML	06 55 07.4	
MOA	Molln	10.02	81	i Pn	Pn	06 53 20.7	+0.7
	comp=Z,0.8nm,0.2s						
ZVC	Zvikov	10.06	71	ePN	Pn	06 53 20.2	-0.3
CKRC	Cesky Krumlov	10.07	75	ePN	Pn	06 53 20.3	-0.4
CKRC				AMS	AMS	06 57 10.0	
	comp=Z,300nm,8.0s						
CKRC	Cesky Krumlov	10.07	75	eP	Pn	06 53 20.3	-0.4
CKRC				MLR	MLR		
	comp=Z,300nm,8.0s						
PBAR	Barrancos	10.17	211	Pn	Pn	06 53 21.7	-0.4
PBAR				Sn	Sn	06 55 07.3	-8.8
PBAR	Barrancos	10.17	211	eP	Pn	06 53 21.7	-0.4
PBAR				S	Sn	06 55 08.8	-7.3
PBAR				i AML	AML	06 55 27.1	
PBAR				i AML	AML	06 55 28.7	
PBAR				i AML	AML	06 55 39.9	
BRG	Berggiesshubel	10.20	63	Pn	Pn	06 53 23.1	+0.7
BRG				Amp		06 53 24.9	
	comp=Z,6.8nm,0.9s						
EVO	Evora	10.22	215	Pn	Pn	06 53 21.7	-1.0
EVO				Sn	Sn	06 55 08.1	-9.3
EVO	Evora	10.22	215	eP	Pn	06 53 22.2	-0.6
EVO				eS	Sn	06 55 09.0	-8.4
OBKA	Obir	10.34	88	i Pn	Pn	06 53 25.4	+0.9
	comp=Z,1.8nm,0.5s						
EGOR	Sierra Gorda,	10.38	196	Pn	Pn	06 53 24.8	-0.3
PMAFR	Mafra	10.40	221	Pn	Pn	06 53 24.7	-0.5
PMAFR	Mafra	10.40	221	eP	Pn	06 53 25.6	+0.3
PARRA	Arraiolos	10.41	220	eP	Pn	06 53 19.4	-6.0
PARRA				eS	Sn	06 55 07.6	-14
EMIN	Mina Concepcio	10.42	208	Sn	Sn	06 55 12.4	-10
EMIN				Pn	Pn	06 53 24.4	-1.1
VSL	Villasalto	10.49	133	Pn	Pn	06 53 25.1	-1.4
PBEJ	Beja	10.60	213	eP	Pn	06 53 27.6	-0.4
PBEJ				eS	Sn	06 55 18.4	-8.4
EGRO	El Granado	10.90	211	Pn	Pn	06 53 31.3	-0.8
EGRO				Sn	Sn	06 55 26.1	-8.0
MESJ	Messejana	10.90	214	Pn	Pn	06 53 30.8	-1.3
MESJ	Messejana	10.90	214	eP	Pn	06 53 30.4	-1.7
MESJ	Messejana	10.90	214	P	Pn	06 53 30.8	-1.3
ARSA	Arzberg	10.91	84	ePn	Pn	06 53 33.5	+1.3
	comp=Z,0.8nm,0.2s						
PCVE	Castro Verde	11.02	213	Pn	Pn	06 53 32.6	-1.1
PCVE	Castro Verde	11.02	213	eP	Pn	06 53 33.3	-0.4
CONA	Conrad Observa	11.09	80	i Pn	Pn	06 53 35.3	+0.5
	comp=Z,0.9nm,0.2s						
CONA				i Sn	Sn	06 55 34.2	-4.7
	comp=Z,5.4nm,0.4s						
PVAQ	Vaqueiros	11.10	211	Pn	Pn	06 53 34.7	-0.1
PVAQ	Vaqueiros	11.10	211	Pn	Pn	06 53 32.3	-2.5
PVAQ	Vaqueiros	11.10	211	eP	Pn	06 53 34.8	-0.1
PBDV	Barranco-do-Ve	11.32	212	eP	Pn	06 53 37.4	-0.5
RONA	Rosalia, Austr	11.40	81	ePn	Pn	06 53 40.4	+1.5
	comp=Z,0.2nm,0.1s						
CHVC	Chvalec	11.43	66	ePN	Pn	06 53 39.1	-0.2
CHVC				AMS	AMS	06 58 10.0	
	comp=Z,200nm,8.4s						
CHVC	Chvalec	11.43	66	eP	Pn	06 53 39.1	-0.2
CHVC				MLR	MLR		
	comp=Z,200nm,8.4s						
KRUC	Moravsky	11.46	74	ePN	Pn	06 53 38.6	-1.1
KRUC				e		06 56 54.3	
MORF	Marmelete	11.54	214	Pn	Pn	06 53 38.8	-2.0
MORF	Marmelete	11.54	214	eP	Pn	06 53 39.7	-1.1
MORF	Marmelete	11.54	214	P	Pn	06 53 38.8	-2.0
DPC	Dobruska-Polom	11.56	68	P	Pn	06 53 40.2	-0.9
	comp=Z,2.9nm,0.6s						
VRAC	Vranov	11.61	73	ePN	Pn	06 53 39.7	-2.0
VRAC				e		06 56 57.9	
KSP	Ksiaz	11.63	65	P	Pn	06 53 40.5	-1.5
	comp=Z,5.0nm,0.9s						
MODS	Modra-Piesok	12.03	78	eP	Pn	06 53 46.0	-1.5
MODS	Modra-Piesok	12.03	78	ePN	Pn	06 53 46.0	-1.5
SNART	Snartemo	12.13	20	i P	Pn	06 53 46.2	-2.6
SNART				i S	Sn	06 55 52.8	-11
BJUU	Bjuv	12.25	38	i P	Pn	06 53 48.0	-2.4
BJUU				i S	Sn	06 55 57.1	-10
HOMB	Homborsund	12.39	23	i P	Pn	06 53 50.6	-1.7
HOMB				i S	Sn	06 56 01.3	-9.1
ONAU	Onsala	12.75	32	i P	Pn	06 53 54.7	-2.5
ONAU				i S	Sn	06 56 09.7	-9.3
NC602	NORSAR Array S	15.31	23	Pn	Pn	06 54 29.9	-2.1
NC602				IAmb	IAmb	06 55 11.7	
	comp=Z,19nm,1.4s						
NBO00	NORSAR Array S	15.37	21	Pn	Pn	06 54 30.8	-2.0
NBO00				IAmb	IAmb	06 54 41.4	
	comp=Z,19nm,1.4s						
HFS	Hagfors	15.44	27	Pn	Pn	06 54 30.5	-3.3
	comp=Z,0.3nm,0.3s,baz=223,slow=14,SNR=7.9						
HFS				Sn	Sn	06 57 08.9	-16
	comp=Z,0.2nm,0.3s,baz=196,slow=15,SNR=1.3						
HFS				LR	LR	07 01 27.1	
	comp=Z,50nm,20.4s,baz=156,slow=41						
	comp=Z,0.9nm,0.4s						
NB2	NORSAR Subarra	15.48	22	P	Pn	06 54 33.8	-0.5
	comp=Z,1.9nm,0.7s,baz=211,slow=11						
NOA	NORSAR Array B	15.48	22	Pn	Pn	06 54 31.1	-3.2
	comp=Z,0.1nm,0.3s,baz=209,slow=10,SNR=7.0						
NOA				Sn	Sn	06 57 12.1	-14
	baz=56,slow=6.4,SNR=1.3						
NOA				LR	LR	07 01 25.9	
	comp=Z,44nm,18.2s,baz=210,slow=40						
	comp=Z,0.2nm,0.4s						
KSV	Kosov	17.22	77	P	Pn	06 54 55.4	-1.2
BUR08	Bucovina Ar. S	17.39	79	P	Pn	06 54 59.8	+1.0
RNPP8	Varash	17.67	67	P	Pn	06 55 00.9	-1.2
RNPP9	Sopachiv	17.70	66	P	Pn	06 55 01.0	-1.4
KMPD	K-Podol'skiy	18.12	76	P	Pn	06 55 06.6	-1.0
TESR	Tescani	18.56	82	P	P	06 55 11.7	-1.2
	comp=Z,4.2nm,0.8s						
NACGM	Naroch	18.74	55	eP	P	06 55 14.8	0.0
	comp=Z,10.0nm,1.0s,baz=257						
MI28	Mi28,Pidlybu	18.80	68	P	P	06 55 14.1	-1.4
MNK	Minsk	19.29	57	i P	P	06 55 16.4	-4.3
	comp=E,22nm,0.8s						
MNK				i P	P	06 55 16.4	-4.3
	comp=N,24nm,0.8s						
MNK				i P	P	06 55 16.4	-4.3
	comp=Z,8.0nm,1.0s,baz=259						
MNK				i PP	sP	06 55 29.2	+4.3
MNK				i PPP	PPP	06 55 38.8	
MNK				i S	Sn	06 58 53.4	-4.5
MNK				i SS	SnSn	06 59 08.6	-3.0
MNK				i LR	LR	07 01 49.0	
MNK				i LRM	MLR	07 03 37.3	
	comp=N,93nm,17.6s						
MNK				i LRM	MLR	07 03 39.0	
	comp=Z,26nm,9.5s						
MNK				i LRM	MLR	07 04 20.2	
	comp=E,174nm,20.7s						
MNK	Minsk	19.29	57	i P	P	06 55 16.4	-4.3
MNK				i S	Sn	06 58 53.3	-4.5
MNK				pmax	pmax		
	comp=N,24nm,0.8s						
MNK				pmax	pmax		
	comp=E,22nm,0.8s						
MNK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MNK				MLR	MLR		
	comp=N,93nm,18.0s						
MNK				MLR	MLR		
	comp=Z,26nm,10.0s						
MNK				MLR	MLR		
	comp=E,174nm,21.0s						
SORM	Soroca	19.42	76	P	P	06 55 21.2	-1.1
	comp=E,515nmcomp=E,14nm,1.0s						
AK20	Malin Array Si	19.65	69	P	P	06 55 23.1	-1.7
AK19	Malin Array Si	19.65	69	P	P	06 55 23.5	-1.3
AK21	Malin Array Si	19.67	68	P	P	06 55 23.7	-1.3
AK14	Malin Array Si	19.71	69	P	P	06 55 24.2	-1.3
KIEV	Kiev	19.78	69	P	P	06 55 24.6	-1.5
KIEV	Kiev	19.78	69	P	P	06 55 24.6	-1.5
KIEV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KIEV	Kiev	19.78	69	P	P	06 55 25.0	-1.1
	comp=Z,30nm,1.2s						
AKASG	Malin Array Be	19.79	69	P	P	06 55 25.3	-1.0
	comp=Z,0.9nm,0.3s,baz=264,slow=12,SNR=15						
	comp=Z,2.3nm,0.7s						
AKBB	Malin Array Si	19.79	69	P	P	06 55 25.5	-0.8
AKBB				IAmb	IAmb	06 55 28.2	
	comp=Z,7.9nm,1.0s						
AKBB	Malin Array Si	19.79	69	P	P	06 55 25.5	-0.8
AKBB				pmax	pmax		
	comp=Z,8.0nm,1.0s						
AKBB	Malin Array Si	19.79	69	P	P	06 55 25.0	-1.3
AK10	Malin Array Si	19.81	69	P	P	06 55 25.2	-1.3
VSU	Vasula	19.83	45⇑	eP	P	06 55 24.4	-2.2
VSU				pmax	pmax		
	comp=Z,17nm,1.1s						
FINES	FINESS Array B	20.89	37	P	P	06 55 37.6	-0.6
FINES	FINESS Array B	20.89	37	P	P	06 55 38.4	+0.2
	comp=Z,3.3nm,0.4s,baz=231,slow=8.4,SNR=39						
	comp=Z,3.3nm,0.4s						
FIA1	FINESS Array S	20.90	37	P	P	06 55 37.8	-0.4
APE	Apeiranthos	21.69	108⇓	eP	P	06 55 44.2	-2.8
APE				pmax	pmax		
	comp=Z,13nm,1.1s						
OBN	Obninsk	24.35	57	LR	LR	07 06 51.6	
	comp=Z,70nm,18.1s,baz=284,slow=39						
OBN	Obninsk	24.35	57	eP	P	06 56 12.7	-1.1
OBN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRTR	Keskin Array B	25.72	94	P	P	06 56 27.1	+0.4
	comp=Z,0.7nm,0.5s,baz=285,slow=8.4,SNR=4.8						
	comp=Z,0.7nm,0.5s						
ARCES	ARCESS Array B	25.86	21	P	P	06 56 27.1	-0.3
	comp=Z,2.3nm,0.4s,baz=215,slow=9.4,SNR=43						
KEV	Kevo	26.38	21	P	P	06 56 30.2	-1.9
KEV				IAmb	IAmb	06 57 04.9	
	comp=Z,11nm,1.1s						
KEV	Kevo	26.38	21	P	P	06 56 30.2	-1.9
KEV				pmax	pmax		
	comp=Z,11nm,1.1s						
KLMR	Klimovskoe	26.73	44	eP	P	06 56 33.3	-2.0
KLMR				S	S	07 01 11.2	+0.6
KLMR				pmax	pmax		
	comp=Z,23nm,1.5s						
LVZ	Lovozero	27.42	28⇓	eP	P	06 56 37.6	-3.9
LVZ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KBZ	Khabaz	30.35	80⇑	eP	P	06 57 05.4	-2.4
KBZ				pmax	pmax		
	comp=Z,2.0nm,1.2s						
SFJD	Kangerlussuaq	32.43	326	LR	LR	07 09 57.7	
	comp=Z,48nm,21.3s,baz=62,slow=35						
TORD	Torodi Ar. Bea	33.94	176	P	P	06 57 39.6	+0.1
	comp=Z,72nm,0.4s,baz=355,slow=10,SNR=3.7						
ARTI	Arti	36.53	53	P	P	06 58 01.7	+0.3
ARTI	Arti	36.53	53	P	P	06 58 02.6	+1.2
	comp=Z,3.9nm,0.8s,baz=267,slow=8.3,SNR=3.8						
	comp=Z,3.9nm,0.8s						
SCHQ	Schefferville	41.01	306	P	P	06 58 42.1	+3.1
	comp=Z,1.8nm,0.6s,baz=52,slow=12,SNR=3.1						
	comp=Z,1.8nm,0.6s						
BVAR	Borovoye Array	44.16	55	P	P	06 59 04.9	+0.3
	comp=Z,1.0nm,0.5s,baz=281,slow=8.4,SNR=3.7						
	comp=Z,1.0nm,0.5s						
KK31	Karatay Array	48.68	67	P	P	06 59 39.8	-0.5
KK31				IAmb	IAmb	06 59 43.8	
	comp=Z,3.9nm,1.3s						
KK31	Karatay Array	48.68	67	P	P	06 59 39.8	-0.5
KK31				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KKAR	Karatay Array	48.68	67	P	P	06 59 39.9	-0.4
KKAR				IAmb	IAmb	06 59 43.8	
	comp=Z,4.1nm,1.3s						
KKAR	Karatay Array	48.68	67	P	P	06 59 39.9	-0.4
KKAR				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KURBB	Kurchatov Arra	49.75	55	P	P	06 59 50.3	+2.0
	comp=Z,1.0nm,0.5s,baz=296,slow=8.8,SNR=6.3						
	comp=Z,1.0nm,0.5s						
KURK	Kurchatov	49.76	55	P	P	06 59 50.3	+1.9
ZALV	Zalesovo Beam	51.51	49	P	P	07 00 04.4	+2.8
	comp=Z,1.1nm,0.4s,baz=289,slow=9.0,SNR=4.8						
	comp=Z,1.1nm,0.4s						
WMQ	Urumqi	58.68	58	eP	P	07 00 55.3	+1.7
WMQ				LR	LR		
	comp=Z,240nm,21.3s						
ILAR	Eielson Array	65.38	345	P	P	07 01 42.5	+4.4
	comp=Z,0.3nm,0.8s,baz=30,slow=7.5,SNR=4.3						
	comp=Z,0.3nm,0.8s						
PDAR	Pinedale Array	70.71	312	LR	LR	07 32 59.2	
	comp=Z,218nm,19.9s,baz=268,slow=36						
HHC	Hu-ho-hao-te	73.64	47	eP	P	07 02 27.4	-2.3
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,37nm,5.0s						
ANMO	Albuquerque	74.78	305	LR	LR	07 33 48.5	
	comp=Z,280nm,20.6s,baz=10,slow=34						
TXAR	Lajitas Array	77.26	299	LR	LR	07 33 55.1	
	comp=Z,147nm,21.1s,baz=284,slow=33						
CMIG	Matias Romero	80.58	285	LR	LR	07 36 48.6	
	comp=Z,335nm,20.2s,baz=288,slow=34						

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*IDC **21** 06:55:11.7±3.3, 54°.30N×87°.21E, h0km, mbtmp2.9/2, ML2.7/2, Error ellipse: s-maj=30.6km s-min=19.2km az=49.0*

ASRS 21 06:55:10.0±1.2, 54°.21N×87°.03E, h0km, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	1.33	260	I	I	07 04 00.0	
	baz=77,slow=319,SNR=3.5						
ZALV	**Zalesovo Beam**	1.33	260	Pg	Pn	06 55 37.2	+1.4
	1.4nm,0.3s,baz=74,slow=17,SNR=14						
ZALV				Lg	Lg	06 55 57.9	
	2.3nm,0.3s,baz=75,slow=27,SNR=8.8						
KURBB	**Kurchatov Arra**	6.32	239	Pn	Pn	06 56 48.7	+4.4
	0.1nm,0.3s,baz=54,slow=13,SNR=7.3						
	0.6nm,0.4s						
MKAR	**Makanchi Array**	8.01	204	Pn	Pn	06 57 12.2	+4.6
	0.2nm,0.3s,baz=24,slow=13,SNR=6.0						
	0.2nm,0.3s						

ASRS ***21*** *07:00:21.0±0.8, 54°.16N×86°.43E, h0^{km}, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*
IDC 21 07:00:23.2±2.8**, 54°.13N×86°.50E, h0**^{km}**, mbtmp2.7**/2**, ML2.5**/2**, Error ellipse: s-maj=23.7km s-min=14.0km az=58.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	1.01	260	I	I	07 06 50.0	
	baz=79,slow=313,SNR=3.8						
ZALV	**Zalesovo Beam**	1.01	260	Pg	Pg	07 00 41.5	-1.0
	0.6nm,0.3s,baz=77,slow=17,SNR=3.8						
ZALV				Lg	Lg	07 00 57.0	
	1.4nm,0.3s,baz=79,slow=32,SNR=5.7						
KURBB	**Kurchatov Arra**	6.01	237	Pn	Pn	07 01 54.0	+0.6
	0.1nm,0.3s,baz=53,slow=13,SNR=6.7						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	7.82	202	Pn	Pn	07 02 19.3	+1.1
	0.1nm,0.3s,baz=24,slow=12,SNR=6.0						
	0.2nm,0.3s						

THE ***21*** *07:02:10.9, 38°N±2°×2°1E±°, h14^{km}±2^{km}, M3.3/18, MLh3.3/18*
PDG ***21*** *07:02:11.1±0.3, 37°.62N×20°.64E, h6^{km}±1^{km}, ML3.4/8, Error ellipse: s-maj=1.0km s-min=1.9km az=0.0*
ATH ***21*** *07:02:11.1, 37°.67N×20°.66E, h18^{km}, ML3.2/12, Manual Solution by I.Dede First location: 2019/06/21 07:03:04, This location: 2019/06/21 09:25:29 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
ISC 21 07:02:10.8±1.2**, 37°.67N**±0°.04×**20°.65E**±0°.04**, h12**^{km}±6^{km}**, n55, σ0^{s}.81**/97**, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LTHK	**Lithakia**	0.15	74	P	Pg	07 02 14.3	-0.1
ORTH	**Orthonies,Zaky**	0.19	11	P	Pb	07 02 15.8	-0.5
ORTH				S	Sb	07 02 19.0	+1.1
RTZL	**Ratzakli, Kefa**	0.42	13	P	Pb	07 02 19.9	-0.3
RTZL				S	Sb	07 02 27.5	+0.9
CLEM	**Kyllini,Ilia,G**	0.44	60	P	Pg	07 02 20.1	+0.5
CLEM				S	Sg	07 02 26.0	+0.4
PSDA	**Pessada-Kefalo**	0.45	353	P	Pb	07 02 20.5	-0.2
PSDA				S	Sb	07 02 28.0	+0.6
PSDA	**Pessada-Kefalo**	0.45	353	P	Pb	07 02 20.5	-0.2
PSDA				S	Sb	07 02 26.7	-0.7
VLS	**Valsamata**	0.51	355	P	Pb	07 02 21.5	-0.3
VLS				S	Sb	07 02 30.1	+0.9
VLS	**Valsamata**	0.51	355	P	Pb	07 02 21.5	-0.3
VLS				S	Sg	07 02 28.0	+0.3
KTLO	**Katakolo**	0.53	92	P	Pb	07 02 22.1	0.0
KTLO				S	Sb	07 02 30.3	+0.5
KTLO	**Katakolo**	0.53	92	P	Pb	07 02 21.9	-0.2
KTLO				S	Sg	07 02 28.7	+0.4
ANDM	**Andravida**	0.59	57	P	Pg	07 02 22.4	+0.1
ANDM				S	Sb	07 02 32.6	+1.3
ANDM	**Andravida**	0.59	57	P	Pg	07 02 22.1	-0.2
DMLN	**Damoulianata-K**	0.61	339	P	Pb	07 02 23.4	-0.1
DMLN				S	Sn	07 02 33.8	-1.4
DMLN	**Damoulianata-K**	0.61	339	P	Pb	07 02 23.3	-0.2
DMLN				S	Sb	07 02 32.1	0.0
YRMI	**Loutra Irminis**	0.70	52	P	Pg	07 02 24.4	-0.1
YRMI				S	Sg	07 02 33.5	-0.3
RLS	**Riolos of Patr**	0.76	59	P	Pg	07 02 25.6	+0.1
RLS				S	Sn	07 02 37.7	-1.0
RLS	**Riolos of Patr**	0.76	59	P	Pg	07 02 25.5	+0.1
RLS				S	Sg	07 02 35.2	-0.2
KRES	**Krestena**	0.78	95	P	Pg	07 02 26.1	+0.3
KRES				S	Sn	07 02 39.0	-0.2
KRES	**Krestena**	0.78	95	P	Pg	07 02 26.0	+0.1
KRES				S	Sg	07 02 36.4	+0.4
AXS	**Araxos**	0.78	47	P	Pg	07 02 25.8	-0.1
AXS				S	Sg	07 02 36.4	+0.2
FSK	**Fiskardo**	0.80	355	P	Pb	07 02 26.2	-0.4
FSK				S	Sb	07 02 36.9	-0.4
DRO	**Drossia**	0.89	71	P	Pb	07 02 28.4	+0.2
DRO				S	Sn	07 02 41.5	-0.5
DRO	**Drossia**	0.89	71	P	Pg	07 02 27.7	-0.3
DRO				S	Sg	07 02 39.7	+0.1
EVGI	**Lefkada island**	0.95	0	P	Pb	07 02 29.0	-0.3
EVGI				S	Sn	07 02 44.7	+1.1
EVGI	**Lefkada island**	0.95	0	P	Pb	07 02 28.9	-0.3
EVGI				S	Sg	07 02 41.5	-0.2
NYDR	**Nydri-Lefkada**	1.05	2	P	Pb	07 02 30.5	-0.4
NYDR				S	Sn	07 02 46.1	+0.3
NYDR	**Nydri-Lefkada**	1.05	2	P	Pb	07 02 30.4	-0.4
NYDR				S	Sg	07 02 44.3	-0.3
LKD2	**Lefkada island**	1.12	0	P	Pb	07 02 31.8	-0.4
LKD2				S	Sn	07 02 49.6	+1.8
LKD2	**Lefkada island**	1.12	0	P	Pb	07 02 31.8	-0.4
LKD2				S	Sg	07 02 46.8	-0.2
ITM	**Ithomi**	1.13	115	P	Pb	07 02 31.3	-1.0
ITM				S	Sn	07 02 48.1	+0.2
ITM	**Ithomi**	1.13	115	P	Pb	07 02 31.6	-0.7
ITM				S	Sb	07 02 46.7	-0.2
TSLK	**Tsoukalades, L**	1.16	0	P	Pg	07 02 32.7	-0.4
TSLK				S	Sn	07 02 52.5	+3.8
PVO	**Paravola**	1.17	36	P	Pg	07 02 33.3	-0.1
KLV	**Kalavryta, Ach**	1.25	72	P	Pn	07 02 33.8	-0.4
KLV	**Kalavryta, Ach**	1.25	72	P	Pn	07 02 33.8	-0.4
KLV				S	Sb	07 02 50.0	-0.4
EFP	**Efpalio**	1.25	52	P	Pb	07 02 34.0	-0.3
EFP	**Efpalio**	1.25	52	P	Pn	07 02 33.9	-0.2
EFP				S	Sb	07 02 49.3	-1.1
SERG	**Sergoula**	1.34	56	P	Pn	07 02 35.3	-0.1
ANX	**Ano Chora**	1.36	47	P	Pb	07 02 36.2	-0.2
GUR	**Goura**	1.37	78	P	Pn	07 02 35.7	-0.2
GUR				S	Sn	07 02 53.0	-0.9
KALE	**Kalithea**	1.38	58	P	Pn	07 02 35.9	-0.1
KALE				S	Sn	07 02 53.7	-0.5
IGT	**Igoumenitsa**	1.88	353	P	Pg	07 02 45.7	-1.2
AGG	**Agios Georgios**	1.89	44	P	Pb	07 02 45.8	+0.5
VLI	**Veliai**	2.06	117	P	Pn	07 02 46.2	+1.0
THL	**Klokotos Trika**	2.18	29	P	Pb	07 02 49.0	-1.2
TIP	**Timpagrande**	3.41	297	P	Pn	07 03 04.0	+0.1
OHR	**Ohrid**	3.44	2	*i* Pn	Pb	07 03 09.3	-2.5
ULC	**Ulcinj**	4.43	346	*e*Pn	Pn	07 03 18.4	+0.6
ULC				*i* Sn	Sn	07 04 10.0	+0.7
DRME	**Dracevica, Mon**	4.65	346	*e*Pn	Pn	07 03 22.2	+1.3
DRME				*i* Sn	Sn	07 04 15.3	+0.4
BUM	**Brajici-Budva**	4.82	344	*e*Pn	Pn	07 03 24.8	+1.5
BUM				*i* Sn	Sn	07 04 19.4	+0.3
CEME	**Cevo**	5.05	345	*e*Pn	Pn	07 03 26.7	+0.2
CEME				*i* Sn	Sn	07 04 24.3	-0.5
IVA	**Berane**	5.23	354	*e*Pn	Pn	07 03 30.4	+1.4
IVA				*i* Sn	Sn	07 04 29.1	-0.1
KOME	**Kolasin**	5.25	351	*e*Pn	Pn	07 03 30.8	+1.6
KOME				*i* Sn	Sn	07 04 29.6	-0.1
BRY	**Bratogost**	5.47	344	*e*Pn	Pn	07 03 33.8	+1.5
BRY				*i* Sn	Sn	07 04 34.8	-0.5
UPM	**Unac-Piva**	5.69	347	*e*Pn	Pn	07 03 36.8	+1.5
UPM				*i* Sn	Sn	07 04 40.2	-0.4

IDC ***21*** *07:02:42.1±3.1, 54°.25N×87°.15E, h0^{km}, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=27.5km s-min=17.9km az=66.0*
ASRS 21 07:02:41.0±0.8**, 54°.18N×87°.11E, h0**^{km}**, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	1.37	261	I	I	07 11 40.0	
	0.1nm,0.9s,baz=77,slow=315,SNR=12						
ZALV	**Zalesovo Beam**	1.37	261	Pg	Pb	07 03 07.7	+0.2
	1.2nm,0.3s,baz=78,slow=16,SNR=6.6						
ZALV				Lg	Lg	07 03 26.0	
	0.6nm,0.3s,baz=76,slow=32,SNR=1.6						
KURBB	**Kurchatov Arra**	6.34	239	Pn	Pn	07 04 18.9	+3.3
	0.1nm,0.3s,baz=56,slow=14,SNR=6.7						
KURBB				Lg	Lg	07 06 05.3	
	baz=52,slow=30,SNR=1.5						
	0.9nm,0.7s						
MKAR	**Makanchi Array**	8.01	204	Pn	Pn	07 04 40.7	+2.2
	0.1nm,0.3s,baz=28,slow=14,SNR=2.4						
MKAR				Lg	Lg	07 06 59.7	
	0.1nm,0.3s,baz=35,slow=30,SNR=1.7						
	0.1nm,0.4s						

IDC ***21*** *07:05:30.3±3.7, 54°.54N×87°.04E, h0^{km}, mbtmp2.6/2, ML2.0/2, Error ellipse: s-maj=33.1km s-min=22.6km az=43.0*
ASRS 21 07:05:31.0±1.2**, 54°.39N×86°.80E, h0**^{km}**, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	1.25	250	I	I	07 13 40.0	
	baz=68,slow=318,SNR=0.7						
ZALV	**Zalesovo Beam**	1.25	250	Pg	Pb	07 05 55.2	-0.1
	0.7nm,0.3s,baz=66,slow=15,SNR=4.5						
ZALV				Lg	Lg	07 06 16.7	
	1.1nm,0.3s,baz=67,slow=27,SNR=4.9						
KURBB	**Kurchatov Arra**	6.30	237	Pn	Pn	07 07 06.5	+1.4
	baz=53,slow=14,SNR=2.9						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	8.13	202	Pn	Pn	07 07 34.6	+4.4
	baz=24,slow=13,SNR=1.6						
	0.2nm,0.6s						

IDC ***21*** *07:09:54.6±1.1, 28°.40N×104°.76E, h0^{km}, mb3.7/6, mbtmp3.7/7, ML2.9/1, MS3.9/1, Error ellipse: s-maj=39.0km s-min=20.2km az=53.0*
ISC 21 07:09:58.0±0.9**, 28°.6N**±0°.1×**104°.9E**±0°.2**, h19**^{km}**, n9, σ1^{s}.12**/8**, mb3.7**/6**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	11.45	210	Pn	Pn	07 12 41.7	+1.0
	baz=28,slow=13						
SONM	**Songino Array**	19.28	3	P	Pn	07 14 24.0	+1.2
	baz=196,slow=10,SNR=1.8						
	0.4nm,0.4s						
KSRS	**Korea Array**	21.18	59	P	P	07 14 43.0	+0.7
	1.6nm,0.5s,baz=241,slow=9.6,SNR=8.7						
	1.6nm,0.5s						
MKAR	**Makanchi Array**	25.40	322	P	P	07 15 24.4	+0.2
	2.0nm,0.7s,baz=124,slow=11,SNR=14						
	2.0nm,0.7s						
KURBB	**Kurchatov Arra**	29.71	325	P	P	07 16 02.4	-0.5
	1.4nm,0.8s,baz=133,slow=9.5,SNR=14						
	1.4nm,0.8s						
WRA	**Warramunga Arr**	55.97	146	P	P	07 19 33.9	-1.4
	0.7nm,0.7s,baz=335,slow=7.3,SNR=3.1						
	0.7nm,0.7s						
BRTR	**Keskin Array B**	58.65	301	LR	LR	07 49 40.7	
	comp=Z,98nm,19.9s,baz=65,slow=41						
ASAR	**Alice Springs**	58.95	149	P	P	07 19 56.2	-0.1
	0.3nm,0.5s,baz=326,slow=6.6,SNR=4.8						
	0.3nm,0.5s						
AKASG	**Malin Array Be**	59.66	314	P	P	07 19 59.9	-1.1
	0.1nm,0.3s,baz=68,slow=6.9,SNR=2.0						
	0.1nm,0.3s						

ASRS ***21*** *07:10:12.0±0.6, 54°.54N×83°.60E, h0^{km}, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*
IDC 21 07:10:15.5±1.6**, 54°.57N×83°.78E, h0**^{km}**, mbtmp2.9**/3**, ML2.4**/3**, Error ellipse: s-maj=15.3km s-min=9.2km az=8.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	0.87	135	I	I	07 15 50.0	
	baz=317,slow=319,SNR=7.9						
ZALV	**Zalesovo Beam**	0.87	135	Pg	Pg	07 10 31.8	-0.4
	1.7nm,0.3s,baz=320,slow=16,SNR=16						
ZALV				Lg	Lg	07 10 45.4	
	4.9nm,0.3s,baz=319,slow=14,SNR=9.3						
KURBB	**Kurchatov Arra**	5.09	221	Pn	Pn	07 11 33.2	+0.2
	0.1nm,0.3s,baz=40,slow=14,SNR=11						
KURBB				Pg	Pb	07 11 47.0	+1.6
	0.1nm,0.3s,baz=38,slow=16,SNR=16						
KURBB				Sn	Sn	07 12 30.2	-2.1
	0.1nm,0.3s,baz=42,slow=28,SNR=4.5						
KURBB				Lg	Lg	07 12 56.6	
	0.1nm,0.3s,baz=39,slow=34,SNR=4.6						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	7.85	188	Pn	Pn	07 12 11.0	+0.2
	0.1nm,0.3s,baz=7.8,slow=12,SNR=3.7						
MKAR				Lg	Lg	07 14 21.4	
	0.1nm,0.3s,baz=9.3,slow=28,SNR=2.8						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	8.08	264	Pn	Pn	07 12 13.5	-0.6
	0.1nm,0.3s,baz=65,slow=15,SNR=5.1						
	1.3nm,0.5s						

WEL 21 07:10:55.4±1.2**, 34°S**±7°×**17°9E**±°**, h12**^{km}**, M4.0**/10**, mB4.3**/2**, ML4.2**/14**, MLv4.0**/10**, Mw(mB)3.5**/2**, Error ellipse: s-maj=11.9km s-min=8.7km az=60.3, confirmed, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	4.07	191	P	Pn	07 11 57.1	-0.4
HAZ	**Te Kaha**	4.15	198	P	Pn	07 11 59.6	+1.1
PKGZ	**Pakihiroa**	4.18	195	P	Pn	07 11 59.3	+0.3
PUZ	**Puketiti**	4.35	192	P	Pn	07 12 00.3	-1.0
TWGZ	**Tauwhareparae**	4.50	195	P	Pn	07 12 03.9	+0.5
TWGZ				S	Sn	07 12 58.3	+2.6
WCZ	**Waipu Caves**	4.68	242	P	Pn	07 12 06.6	+0.8
CNGZ	**Carnagh Statio**	4.76	192	P	Pn	07 12 05.7	-1.2
MWZ	**Matawai**	4.76	198	P	Pn	07 12 07.5	+0.5
TKGZ	**Te Karaka**	4.78	195	P	Pn	07 12 07.3	0.0
TKGZ				S	Sn	07 13 03.9	+1.3
URZ	**Urewera**	4.81	202	P	Pn	07 12 07.3	-0.4
URZ				S	Sn	07 13 03.1	-0.2
RAGZ	**Rawiri**	4.94	199	P	Pn	07 12 09.7	+0.2
OUZ	**Omahuta**	5.01	252	P	Pn	07 12 10.3	-0.1
OUZ				S	Sn	07 13 08.7	+0.5
RIGZ	**Rimuhau**	5.06	195	P	Pn	07 12 09.9	-1.1
RIGZ				S	Sn	07 13 09.2	-0.2
RTZ	**Ruatahuna**	5.18	202	P	Pn	07 12 12.6	-0.2
SNGZ	**Shannon Statio**	5.23	198	P	Pn	07 12 13.2	-0.2
SNGZ				S	Sn	07 13 15.0	+1.3
PRGZ	**Paritu Road**	5.24	193	P	Pn	07 12 12.8	-0.7
RAHZ	**Arahi**	5.42	200	P	Pn	07 12 16.4	+0.3
MTHZ	**Maungataniwha**	5.44	202	P	Pn	07 12 17.3	+1.0
HIZ	**Hauiti**	5.96	217	P	Pn	07 12 26.5	+3.0

ASRS ***21*** *07:15:21.0±1.0, 54°.40N×86°.80E, h0^{km}, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*
IDC 21 07:15:06.1±3.2**, 54°.94N×84°.07E, h0**^{km}**, mbtmp2.6**/2**, ML2.1**/2**, Error ellipse: s-maj=28.2km s-min=15.8km az=13.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	1.09	156	I	I	07 22 50.0	
	baz=335,slow=319,SNR=3.9						
ZALV	**Zalesovo Beam**	1.09	156	Pg	Pg	07 15 25.3	-1.6
	1.7nm,0.3s,baz=339,slow=18,SNR=16						
ZALV				Lg	Lg	07 15 42.7	
	2.3nm,0.3s,baz=346,slow=28,SNR=3.7						
KURBB	**Kurchatov Arra**	5.48	220	Pn	Pn	07 16 28.3	-0.6
	baz=39,slow=14,SNR=6.1						
KURBB				Pg	Pb	07 16 43.9	+1.3
	baz=36,slow=15,SNR=4.9						
KURBB				Lg	Lg	07 17 56.0	
	baz=26,slow=30,SNR=4.9						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	8.24	189	Pn	Pn	07 17 08.4	+1.7
	baz=2.3,slow=13,SNR=1.2						
MKAR				Lg	Lg	07 19 25.2	
	0.1nm,0.3s,baz=21,slow=29,SNR=2.9						
	0.2nm,0.6s						

CATAC ***21*** *07:17:18.5±0.7, 13°N±4°×9°0W±°, h25^{km}±3^{km}, M2.9/13, MLv2.9/13, Error ellipse: s-maj=8.4km s-min=5.3km az=30.8, confirmed*
SNET ***21*** *07:17:19.3±0.9, 13°.18N×89°.52W, h49^{km}±11^{km}, ML2.9*
GCG ***21*** *07:17:19.3±0.6, 13°.18N×89°.62W, h48^{km}±11^{km}, MD3.5*
ISC 21 07:17:18.3±2.5**, 13°.1N**±0°.1×**89°.59W**±0°.07**, h33**^{km}±8^{km}**, n42, σ0^{s}.39**/49**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAYA	**Jayaque - finc**	0.59	13	*e*P	Pb	07 17 30.5	+0.1
JAYA				IAML		07 17 40.6	
	comp=Z,1μm,0.2s						
JAYA	**Jayaque - finc**	0.59	13	*i* P	Pb	07 17 30.4	+0.1
JAYA				*i* S	Sb	07 17 38.6	-0.1
JAYA	**Jayaque - finc**	0.59	13	P	Pb	07 17 30.6	+0.1
PMON	**Piamonte**	0.68	23	S	Sb	07 17 40.9	-0.3
PMON	**Piamonte**	0.68	23	P	Pn	07 17 32.2	+0.4
LOMA	**Loma Larga**	0.69	36	*e*P	Pn	07 17 31.8	-0.1
LOMA				*e*S	Sb	07 17 41.3	-0.2
LOMA				IAML		07 17 42.4	
	comp=Z,307nm,0.2s						
LOMA	**Loma Larga**	0.69	36	P	Pn	07 17 31.8	-0.1
UEES	**Universidad Ev**	0.72	28	S	Sb	07 17 42.0	-0.2
UEES	**Universidad Ev**	0.72	28	P	Pn	07 17 32.4	+0.1
UTEC	**Universidad Te**	0.72	31	P	Pn	07 17 32.5	+0.2
UTEC	**Universidad Te**	0.72	31	S	Sb	07 17 42.1	-0.1
CEDA	**San Andres**	0.74	14	S	Sb	07 17 42.7	-0.2
CEDA	**San Andres**	0.74	14	P	Pn	07 17 31.5	-1.0
CEVE	**Cerro Verde**	0.75	357	P	Pn	07 17 31.9	-0.9
CEVE	**Cerro Verde**	0.75	357	S	Sb	07 17 43.5	+0.3
SBLS	**San Blas**	0.76	357	*e*P	Pn	07 17 32.8	-0.1
SBLS				*e*S	Sn	07 17 44.1	+0.7
SNJE	**San Jose**	0.79	359	*e*P	Pn	07 17 33.1	-0.2
RTR	**El Retiro**	0.82	356	*e*P	Pb	07 17 34.5	+0.3
NUBE	**Las Nubes**	0.84	347	*e*P	Pn	07 17 33.8	-0.2
NUBE				*e*S	Sn	07 17 44.7	-0.6
NUBE	**Las Nubes**	0.84	347	*e*P	Pn	07 17 33.7	-0.3
NUBE				*e*S	Sn	07 17 45.4	+0.1
NUBE	**Las Nubes**	0.84	347	P	Pn	07 17 33.8	-0.2
PAVA	**Las Pavas**	0.89	45	*e*P	Pn	07 17 35.0	+0.3
PAVA				*e*S	Sn	07 17 46.5	-0.1
PAVA				IAML		07 17 47.9	
	comp=Z,542nm,0.4s						
PAVA	**Las Pavas**	0.89	45	P	Pn	07 17 35.1	+0.4
UNIC	**Universidad Ca**	0.90	2	S	Sn	07 17 47.4	+0.8
UNIC	**Universidad Ca**	0.90	2	P	Pn	07 17 34.8	+0.1
UESV	**Universidad de**	0.95	54	P	Pn	07 17 35.0	-0.4
UESV	**Universidad de**	0.95	54	S	Sn	07 17 47.4	-0.6
PQSS	**Presa 15 de Se**	1.14	61	*e*P	Pn	07 17 37.7	-0.2
PQSS	**Presa 15 de Se**	1.14	61	S	Sn	07 17 51.7	-0.7
PQSS	**Presa 15 de Se**	1.14	61	P	Pn	07 17 37.8	-0.1
LCY	**Lacayo**	1.30	75	*e*P	Pn	07 17 40.1	-0.2
LCY				IAML		07 17 40.4	
	comp=Z,162nm,0.2s						
MTO3	**Montecristo**	1.33	9	*i* P	Pn	07 17 40.7	-0.2
MTO3				*e*S	Sn	07 17 57.3	-0.3
MTO3	**Montecristo**	1.33	9	*i* P	Pn	07 17 40.6	-0.2
MTO3	**Montecristo**	1.33	9	P	Pn	07 17 40.6	-0.2
BLLM	**Bellamira**	1.36	74	*e*P	Pn	07 17 41.0	-0.1
ESQI	**Esquipulas**	1.49	9	*e*P	Pn	07 17 43.0	0.0
ESQI	**Esquipulas**	1.49	9	S	Sn	07 18 01.7	+0.4
ESQI	**Esquipulas**	1.49	9	P	Pn	07 17 43.1	+0.2
LCND	**La Caada**	1.67	82	*i* P	Pn	07 17 45.1	-0.1
LCND	**La Caada**	1.67	82	P	Pn	07 17 45.1	-0.1
LCND	**La Caada**	1.67	82	S	Sn	07 18 06.4	+0.9
CNCH	**Conchagua**	1.72	83	*e*P	Pn	07 17 45.9	-0.1

IDC ***21*** *07:18:32.6±4.2, 53°.76N×88°.12E, h0^{km}, mbtmp2.6/2, ML2.1/2, Error ellipse: s-maj=41.0km s-min=20.6km az=45.0*
ASRS 21 07:18:31.0±0.8**, 53°.73N×88°.23E, h0**^{km}**, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	2.03	278	I	I	07 31 00.0	
	0.2nm,0.9s,baz=94,slow=326,SNR=24						
ZALV	**Zalesovo Beam**	2.03	278	Pg	Pb	07 19 08.6	-0.2
	0.7nm,0.3s,baz=96,slow=10,SNR=6.2						
ZALV				Lg	Lg	07 19 34.2	
	1.1nm,0.3s,baz=90,slow=20,SNR=5.1						
KURBB	**Kurchatov Arra**	6.73	246	Pn	Pn	07 20 13.1	+2.1
	baz=63,slow=14,SNR=4.1						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	7.92	211	Pn	Pn	07 20 29.2	+1.9
	baz=32,slow=14,SNR=1.2						
	0.1nm,0.5s						

ASRS ***21*** *07:23:23.0±1.1, 53°.69N×87°.97E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*
IDC 21 07:23:25.1±3.2**, 53°.57N×87°.90E, h0**^{km}**, mbtmp2.5**/2**, ML1.8**/2**, Error ellipse: s-maj=26.8km s-min=15.5km az=66.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	1.87	283	I	I	07 35 25.0	
	baz=97,slow=320,SNR=10						
ZALV	**Zalesovo Beam**	1.87	283	Pg	Pn	07 23 58.1	-0.2
	0.3nm,0.3s,baz=100,slow=19,SNR=9.1						
ZALV				Lg	Lg	07 24 24.2	
	0.9nm,0.3s,baz=99,slow=26,SNR=11						
KURBB	**Kurchatov Arra**	6.48	247	Pn	Pn	07 25 03.1	+1.4
	baz=66,slow=14,SNR=2.4						
KURBB				Lg	Lg	07 26 51.9	
	baz=63,slow=32,SNR=7.1						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	7.68	210	Pn	Pn	07 25 20.0	+1.8
	baz=28,slow=16,SNR=1.7						
MKAR				Sn	Sn	07 26 44.0	-1.9
	baz=39,slow=21,SNR=2.7						
MKAR				Lg	Lg	07 27 27.4	
	baz=30,slow=32,SNR=7.6						
	0.1nm,0.3s						

NOU ***21*** *07:27:36.0, 31°.35S×176°.30W, h46^{km}, mb5.1/28, Kermadec Islands Region*
IDC ***21*** *07:27:36.7±0.4, 31°.02S×177°.52W, h0^{km}, mb4.7/19, mbtmp4.6/20, ML3.7/1, MS4.8/38, Error ellipse: s-maj=16.8km s-min=14.4km az=86.0*
NEIC ***21*** *07:27:40.5, 31°.03S×177°.57W, h20^{km}*
NEIC ***21*** *07:27:40.5, 31°.33S×177°.22W, h20^{km}, Moment Tensor Solution. Duration: 2^{s}2 Moment tensor: Scale 10^{16}Nm; M_{rr}7.36; $M_{\theta\theta}$-1.38; $M_{\phi\phi}$-5.98; $M_{r\theta}$-0.38; $M_{\theta\phi}$-2.05; $M_{\phi r}$2.08; Fault plane solution: $M_0$7.39000×10^{16} NP1: ϕ_s207.86000°, δ38.24000°, λ101.68000°. NP2: ϕ_s13.12000°, δ52.69000°, λ80.94000°. Principal axes: T 7.7275, Plg80.0000°, Azm244.0000°; N -0.7349, Plg7.0000°, Azm19.0000°; P -6.9926, Plg7.0000°, Azm110.0000°;*
NEIC ***21*** *07:27:40.2±1.4, 31°.08S±0°.08×177°.6W±0°.1, h15^{km}±3^{km}, mb5.3/68, Mww5.2/25 Error ellipse: s-maj=14.7km s-min=10.8km az=111.0*
GCMT ***21*** *07:27:42.1±0.1, 31°.09S±0°.01×177°.15W±0°.01, h13^{km}, MW5.2/128, Moment Tensor Solution. s85,c124; s128,c195; Duration: 1^{s}0 Moment tensor: Scale 10^{16} Nm; M_{rr}6.07±.16; $M_{\theta\theta}$-0.55±.10; $M_{\phi\phi}$-5.52±.11; $M_{r\theta}$1.34±.28; $M_{\theta\phi}$-1.56±.08; $M_{\phi r}$4.81±.30; Best double couple: $M_0$7.82100×10^{16} NP1: ϕ_s196.00000°, δ25.00000°, λ91.00000°. NP2: ϕ_s16.00000°, δ65.00000°, λ90.00000°. Principal axes: T 7.8710, Plg70.0000°, Azm285.0000°; N -0.0960, Plg0.0000°, Azm16.0000°; P -7.7700, Plg20.0000°, Azm106.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

Triangular moment-rate function

ISC 21 07:27:41.0±0.3**, 31°.19S**±0°.05×**177°.46W**±0°.06**, h27^{km}, n284, σ1^{s}.88**/275**, mb5.2**/56**, MS4.9**/45**, 7C-10D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.96	348	P	Pn	07 28 09.0	-3.5
RAO	Raoul Island	1.97	348		Pn	07 28 10.0	-2.6
RAO	Raoul Island	1.97	348	Pn	Pn	07 28 09.6	-3.0
	602nm,0.3s,baz=116,slow=12,SNR=28						
RIZ	Raoul Island	1.98	348	P	Pn	07 28 09.5	-3.2
MXZ	Matakaoa Point	7.25	208	S	Sn	07 30 43.8	-2.8
WMGZ	Waiomatatini S	7.44	206	P	Pn	07 29 23.3	-4.4
WMGZ				S	Sn	07 30 47.6	-3.5
PKGZ	Pakihiroa	7.61	208	P	Pn	07 29 26.4	-3.6
PKGZ				S	Sn	07 30 53.3	-2.1
HAZ	Te Kaha	7.63	210	P	Pn	07 29 27.4	-2.9
HAZ				S	Sn	07 30 56.2	+0.2
PUZ	Puketiti	7.72	206	P	Pn	07 29 26.3	-5.3
PUZ				S	Sn	07 30 55.5	-2.5
RUGZ	Raukumara Rang	7.86	209	P	Pn	07 29 29.4	-4.1
RUGZ				S	Sn	07 31 00.7	-0.9
TWGZ	Tauwhareparae	7.92	207	P	Pn	07 29 30.0	-4.3
TWGZ				S	Sn	07 31 00.1	-2.8
KUZ	Kuaotunu	7.92	224	P	Pn	07 29 35.6	+1.3
CNGZ	Carnagh Statio	8.10	205	P	Pn	07 29 31.5	-5.2
CNGZ				S	Sn	07 31 06.3	-1.1
TKGZ	Te Karaka	8.19	207	P	Pn	07 29 32.9	-5.2
TKGZ				S	Sn	07 31 06.8	-2.9
MWZ	Matawai	8.23	209	P	Pn	07 29 33.8	-4.9
MWZ				S	Sn	07 31 07.1	-3.6
OPRZ	Ohinepanea	8.27	215	P	Pn	07 29 36.9	-2.2
WCZ	Waipu Caves	8.31	233	P	Pn	07 29 42.7	+3.0
URZ	Urewera	8.35	211	Pn	Pn	07 29 36.1	-4.0
	2.5nm,0.3s,baz=265,slow=3.1,SNR=9.6						
URZ	Urewera	8.35	211	P	Pn	07 29 36.7	-3.5
URZ				S	Sn	07 31 09.0	-4.4
RAGZ	Rawiri	8.41	209	P	Pn	07 29 35.7	-5.4
RAGZ				S	Sn	07 31 11.3	-4.0
MBAZ	Motutapu North	8.44	227	P	Pn	07 29 43.4	+2.0
RIGZ	Rimuhau	8.46	206	P	Pn	07 29 36.6	-5.2
RIGZ				S	Sn	07 31 11.4	-5.0
MKAZ	Moumakai	8.49	224	P	Pn	07 29 44.3	+2.1
OUZ	Omahuta	8.50	239	P	Pn	07 29 47.2	+5.0
PRGZ	Paritu Road	8.61	205	P	Pn	07 29 37.5	-6.2
PRGZ				S	Sn	07 31 16.2	-3.7
MUGZ	Murupara	8.68	212	P	Pn	07 29 40.1	-4.6
MUGZ				S	Sn	07 31 18.0	-3.7
SNGZ	Shannon Statio	8.69	208	P	Pn	07 29 40.2	-4.7
RTZ	Ruatahuna	8.70	210	P	Pn	07 29 41.3	-3.8
RTZ				S	Sn	07 31 17.2	-5.0
TOZ	Tahuroa Road	8.73	220	P	Pn	07 29 44.7	-0.7
KNZ	Kokohu	8.77	206	P	Pn	07 29 39.5	-6.4
KNZ				S	Sn	07 31 19.9	-4.0
MHGZ	Mahia Peninsul	8.80	204	P	Pn	07 29 40.1	-6.3
MHGZ				S	Sn	07 31 17.9	-6.7
MTHZ	Maungataniwha	8.96	210	P	Pn	07 29 45.1	-3.5
HIZ	Hauiti	9.65	219	P	Pn	07 29 59.6	+1.6
HIZ	Hauiti	9.65	219	P	Pn	07 29 59.2	+1.1
CTZ	Chatham Island	12.54	177	P	Pn	07 30 33.1	-4.4
KHZ	Kahutara	13.31	210	P	Pn	07 30 47.5	-0.6
MSVF	Nonsavu	14.00	342		Pn	07 30 55.6	-2.2
MSVF	Nonsavu	14.00	342	LR	LR	07 34 52.9	
	comp=Z,2μm,19.4s,baz=172,slow=32						
MSVF	Nonsavu	14.00	342	P	Pn	07 30 58.3	+0.6
RPZ	Rata Peaks	15.45	213	Pn	Pn	07 31 10.8	-6.3
	2.1nm,0.3s,baz=38,slow=3.3,SNR=6.9						
PINNC	Pines Island,	15.93	299		P	07 31 24.6	-2.1
PINNC	Pines Island,	15.93	299	P	P	07 31 30.5	+3.8
OUENC	Ouen Island, N	16.50	298	P	P	07 31 35.4	+2.4
ODZ	Otahua Downs	16.67	211	P	Pn	07 31 30.3	-2.3
ONTNC	Ouen Toro	16.86	298	P	P	07 31 40.4	+3.4
DZM	Mont Dzumac	17.00	298	Pn	P	07 31 35.8	-2.9
DZM				IAmb	IAmb	07 31 43.9	
	comp=Z,274nm,1.5s						
DZM	Mont Dzumac	17.00	298	*e*Pn	P	07 31 38.0	-0.7
	comp=Z,391nm,1.6s						
DZM				*e*LR	LR	07 35 31.5	
	comp=Z,6μm,24.8s						
DZM	Mont Dzumac	17.00	298	Pn	P	07 31 39.1	+0.5
	comp=Z,0.4nm,0.3s,baz=126,slow=20,SNR=23						
DZM				LR	LR	07 37 07.1	
	comp=Z,8μm,18.3s,baz=137,slow=34						
DZM	Mont Dzumac	17.00	298	P	P	07 31 41.9	+3.2
RAR	Rarotonga	18.70	62	P	P	07 31 54.9	-2.4
	comp=Z,2.5nm,0.3s,baz=57,slow=3.8,SNR=3.2						
RAR				LR	LR	07 38 59.0	
	comp=Z,1μm,18.0s,baz=239,slow=37						
	comp=Z,43nm,0.8s						
ARMA	Armidale	26.52	264	P	P	07 33 17.5	+1.0
ARMA	Armidale	26.52	264	P	P	07 33 18.9	+2.4
EIDS	Eidsvold	28.24	274	P	P	07 33 31.8	0.0
EIDS	Eidsvold	28.24	274	P	P	07 33 32.9	+1.0
PPT2	Papeete2	28.68	68	*e*P	P	07 33 34.4	-1.5
	comp=Z,69nm,26.8s						
PPT2				*e*S	S	07 38 21.2	-2.2
	comp=Z,2μm,24.0s						
PPT2				*e*LR	LR	07 40 52.5	
	comp=Z,1μm,21.0s						
PPT2				*e*LR	LR	07 40 58.2	
	comp=Z,1μm,20.5s						
PPT	Papeete	28.70	68	LR	LR	07 44 23.1	
	comp=Z,2μm,18.1s,baz=226,slow=35						
HNR	Honiara	30.17	311	LR	LR	07 43 56.8	
	comp=Z,909nm,20.6s,baz=168,slow=33						
TOO	Toolangi	31.09	248		P	07 33 56.8	-0.2
CMSA	Cobar Meteorol	31.37	260	P	P	07 34 01.1	+1.6
QLP	Quilpie	33.74	268	P	P	07 34 20.4	+0.1
ARPS	Mount Arapiles	34.02	249	P	P	07 34 24.2	+1.6
CTAO	Charters Tower	34.39	280	P	P	07 34 25.9	-0.1
CTAO	Charters Tower	34.39	280	P	P	07 34 27.2	+1.2
STKA	Stephens Creek	34.76	258	P	P	07 34 29.4	+0.3
	comp=Z,8.1nm,0.5s,baz=97,slow=10,SNR=22						
STKA				LR	LR	07 48 07.1	
	comp=Z,2μm,18.2s,baz=86,slow=35						
	comp=Z,8.1nm,0.5s						
STKA	Stephens Creek	34.76	258	P	P	07 34 29.9	+0.8
HTT	Hallett	36.73	255	P	P	07 34 46.5	+0.4
MTSU	Mount Surprise	36.90	282	P	P	07 34 48.8	+1.2
WHYH	Whyalla	37.91	255	P	P	07 34 56.8	+0.8
BBOO	Buckleboo	39.21	255		P	07 35 06.3	-0.5
BBOO	Buckleboo	39.21	255	P	P	07 35 08.6	+1.7
QIS	Mount Isa	39.84	275	P	P	07 35 12.1	-0.2
COEN	Coen	39.94	286	P	P	07 35 11.4	-1.7
COEN				IAmb	IAmb	07 35 15.1	
	comp=Z,131nm,1.9s						
COEN	Coen	39.94	286	P	P	07 35 14.0	+0.9
TAOE	Nuku Hiva Isla	41.20	65	*e*S	S	07 41 39.2	+3.3
	comp=Z,303nm,24.3s						
TAOE				*e*LR	LR	07 46 44.0	
	comp=Z,646nm,21.1s						
AS01	Alice Springs	43.49	268	P	P	07 35 42.4	+0.2
AS31	Alice Springs	43.53	268		P	07 35 42.2	-0.3
ASAR	Alice Springs	43.53	268	P	P	07 35 41.6	-0.9
	comp=Z,14nm,0.8s,baz=106,slow=7.2,SNR=115						
ASAR				PcP	PcP	07 37 29.4	-0.8
	comp=Z,3.4nm,0.7s,baz=103,slow=4.6,SNR=1.9						
ASAR				ScP	ScP	07 41 23.9	+4.0
	comp=Z,2.6nm,0.9s,baz=105,slow=3.6,SNR=10						
ASAR				LR	LR	07 53 27.4	
	comp=Z,1μm,18.4s,baz=108,slow=36						
	comp=Z,14nm,0.8s						
WRA	Warramunga Arr	44.59	273	P	P	07 35 50.3	-0.8
WRA	Warramunga Arr	44.59	273	P	P	07 35 50.6	-0.4
	comp=Z,17nm,0.4s,baz=111,slow=8.0,SNR=147						
WRA				PcP	PcP	07 37 33.0	-0.8
	comp=Z,5.4nm,0.8s,baz=116,slow=3.0,SNR=2.7						
WRA				ScP	ScP	07 41 27.6	+3.4
	comp=Z,2.9nm,1.1s,baz=113,slow=3.7,SNR=5.0						
WRA				LR	LR	07 54 16.3	
	comp=Z,4μm,18.0s,baz=129,slow=36						
	comp=Z,17nm,0.4s						
WB0	Warramunga Arr	44.62	273		P	07 35 50.3	-1.0
WB0				IAmb	IAmb	07 36 11.3	
	comp=Z,81nm,1.2s						
FORT	Forrest	46.30	256		P	07 36 02.6	-1.8
FORT	Forrest	46.30	256	P	P	07 36 04.5	+0.1
SBA	Scott Base	47.29	184	P	P	07 36 14.1	+2.6
SBA				IAmb	IAmb	07 36 26.0	
	comp=Z,48nm,1.5s						
VNDA	Vanda	47.36	186	P	P	07 36 14.3	+2.3
VNDA	Vanda	47.36	186	P	P	07 36 14.1	+2.0
	comp=Z,2.0nm,0.9s,baz=13,slow=6.9,SNR=6.3						
VNDA				LR	LR	07 52 34.1	
	comp=Z,857nm,20.6s,baz=22,slow=32						
	comp=Z,2.0nm,0.9s						
JAY	Jayapura	48.67	297	LR	LR	07 57 06.5	
	comp=Z,489nm,18.1s,baz=180,slow=36						
KDU	Kakadu	49.51	280	P	P	07 36 29.9	+0.4
KNRA	Kununurra	51.23	275		P	07 36 41.9	-0.6
KNRA				IAmb	IAmb	07 37 33.9	
	comp=Z,33nm,1.2s						
FITZ	Fitzroy Crossi	52.82	270		P	07 36 52.9	-1.4
FITZ	Fitzroy Crossi	52.82	270	LR	LR	07 59 34.8	
	comp=Z,2μm,18.4s,baz=120,slow=36						
FITZ	Fitzroy Crossi	52.82	270	P	P	07 36 54.5	+0.2
KLBR	Kellerberrin	54.53	251	P	P	07 37 06.0	-0.7
NWAO	Narrogin (SRO)	54.55	250	LR	LR	07 57 48.4	
	comp=Z,438nm,20.4s,baz=85,slow=33						
CASY	Casey	54.66	208		P	07 37 07.6	+0.5
MEEK	Meekatharra	55.46	257	P	P	07 37 12.6	-0.9
GUMO	Guam	57.37	315	LR	LR	08 00 38.3	
	comp=Z,679nm,18.8s,baz=130,slow=35						
BATI	Baumata	58.21	278	LR	LR	08 03 25.8	
	comp=Z,4μm,18.3s,baz=143,slow=37						
QSPA	South Pole Qui	58.92	180	P	P	07 37 39.3	+1.7
QSPA	South Pole Qui	58.92	180	P	P	07 37 38.9	+1.4
	comp=Z,27nm,1.0s,baz=24,slow=1.5,SNR=48						
QSPA				LR	LR	08 00 31.2	
	comp=Z,829nm,19.4s,baz=41,slow=33						
	comp=Z,27nm,1.0s						
KAPI	Kappang	64.20	280	LR	LR	08 07 38.1	
	comp=Z,1μm,18.0s,baz=115,slow=37						
DAV	Davao City (W)	66.38	295	LR	LR	08 08 44.1	
	comp=Z,199nm,18.2s,baz=164,slow=37						
PMSA	Palmer Station	71.36	155	LR	LR	08 06 34.3	
	comp=Z,955nm,18.3s,baz=244,slow=33						
MAW	Mawson	71.73	201	P	P	07 39 01.3	+1.1
	comp=Z,7.2nm,0.8s,baz=236,slow=3.1,SNR=5.2						
MAW				LR	LR	08 10 50.0	
	comp=Z,1μm,18.7s,baz=106,slow=36						
	comp=Z,7.2nm,0.8s						
LEM	Lembang	73.61	272	LR	LR	08 12 05.6	
	comp=Z,739nm,19.3s,baz=152,slow=36						
TGY	Tagaytay City	74.30	298	LR	LR	08 14 00.1	
	comp=Z,175nm,18.1s,baz=196,slow=38						
ESPZ	Base Esperanza	74.66	156	P	P	07 39 18.9	+1.4
ESPZ				IAmb	IAmb	07 39 21.6	
	comp=Z,39nm,1.1s						
USHA	Ushuaia	75.01	146	LR	LR	08 05 57.0	
	comp=Z,509nm,18.4s,baz=210,slow=31						
SYO	Syowa Base	76.45	193	⇑*e*pP	P	07 39 31.0	+3.3
SYO	Syowa Base	76.45	193	⇓*e*sP	sP	07 39 33.2	-3.9
TROLL	Troll, Antarti	77.08	180	⇑P	P	07 39 32.0	+0.5
	comp=Z,421nm,0.5s						
SNAA	Sanae	77.36	178	⇑P	P	07 39 33.0	+0.1
	comp=Z,120nm,0.9s						
SNAA	Sanae	77.36	178		P	07 39 33.8	+0.9
SNAA	Sanae	77.36	178	P	P	07 39 33.0	+0.1
	comp=Z,5.8nm,1.0s,baz=204,slow=8.5,SNR=17						
SNAA				LR	LR	08 11 11.5	
	comp=Z,643nm,19.6s,baz=167,slow=34						
	comp=Z,5.8nm,1.0s						
VNA3	Neumayer Olymp	77.49	176	⇑P	P	07 39 33.0	-0.6
	comp=Z,15nm,0.7s						
VNA2	Neumayer--Watz	77.93	177	⇑P	P	07 39 36.2	+0.2
	comp=Z,17nm,0.9s,baz=171,slow=5.7						
COYC	Coyhaique	78.05	136		P	07 39 39.1	+2.0
COYC				IAmb	IAmb	07 39 50.6	
	comp=Z,48nm,1.3s						
VNA1	Neumayer--Stat	78.15	176	⇑P	P	07 39 37.6	+0.3
	comp=Z,16nm,1.0s						
MJAR	Matsushiro Arr	79.15	325	P	P	07 39 41.1	-2.1
	comp=Z,1.6nm,0.4s,baz=162,slow=5.5,SNR=6.9						
MJAR				LR	LR	08 12 13.3	
	comp=Z,146nm,19.1s,baz=136,slow=34						
	comp=Z,1.6nm,0.4s						
LL02	Futaleuf	79.47	134		P	07 39 46.2	+1.1
LL02				IAmb	IAmb	07 39 47.9	
	comp=Z,22nm,0.9s						
H03S2	Juan Fernandez	79.64	123	T	T	09 07 22.1	
	baz=238,slow=74,SNR=6.6						
H03S1	Juan Fernandez	79.66	123	T	T	09 07 32.1	
	baz=238,slow=74,SNR=9.2						
H03S3	Juan Fernandez	79.66	123	T	T	09 07 25.4	
	baz=238,slow=74,SNR=8.7						
JSD	Sado	80.31	326	P	P	07 39 48.8	-0.6
JNU	Nakatsue	80.45	318	LR	LR	08 14 15.4	
	comp=Z,112nm,19.0s,baz=126,slow=35						
ERM	Erimo	81.37	331		P	07 39 55.8	+0.9
ERM				IAmb	IAmb	07 40 12.2	
	comp=Z,20nm,0.9s						
PLCA	Paso Flores	81.63	133		P	07 39 58.5	+1.8
PLCA				IAmb	IAmb	07 40 00.3	
	comp=Z,56nm,1.8s						
PLCA	Paso Flores	81.63	133	P	P	07 39 57.7	+0.9
	comp=Z,9.4nm,0.9s,baz=216,slow=6.1,SNR=12						
PLCA				LR	LR	08 09 05.5	
	comp=Z,800nm,18.9s,baz=239,slow=30						
	comp=Z,9.4nm,0.9s						
AMKA	Amchitka	82.26	358		P	07 39 58.7	-0.6
KIWB	Kanaga Island	82.69	0		P	07 40 01.8	+0.2
ADK	Adak	82.72	0		P	07 40 01.4	-0.4
ADK				IAmb	IAmb	07 40 02.7	
	comp=Z,19nm,0.7s						
ATKA	Atka Island	83.09	2		P	07 40 03.1	-0.5
ATKA				IAmb	IAmb	07 40 04.9	
	comp=Z,24nm,1.0s						
ASAJ	Asahikawa	83.35	332	LR	LR	08 16 04.1	
	comp=Z,381nm,18.2s,baz=113,slow=35						
BI02	San Fabin de	83.44	129		P	07 40 06.3	0.0
BI02				IAmb	IAmb	07 40 08.6	
	comp=Z,14nm,0.9s						
ML02	Panimavida	83.84	128		P	07 40 09.6	+1.3
SHEM	Shemya Is, Ala	83.89	355	LR	LR	08 14 01.4	
	comp=Z,526nm,18.9s,baz=112,slow=33						
LPIG	La Paz	84.56	58	LR	LR	08 12 21.9	
	comp=Z,1μm,18.3s,baz=223,slow=32						
BO02	Sierra Bellavi	84.82	128		P	07 40 14.1	+0.8
BO01	Tunca	84.84	127		P	07 40 14.9	+1.5
BO01				IAmb	IAmb	07 40 16.6	
	comp=Z,31nm,1.5s						
MT01	Popeta	85.02	127		P	07 40 14.8	+0.5
VA01	Torpederas	85.22	126		P	07 40 16.0	+0.7
KSRS	Korea Array	85.25	319	P	P	07 40 14.7	-0.3
	comp=Z,2.7nm,0.8s,baz=150,slow=5.7,SNR=7.1						
	comp=Z,2.7nm,0.8s						
MT09	Talagante	85.25	127	P	P	07 40 15.8	+0.2
MT09				IAmb	IAmb	07 40 18.8	
	comp=Z,31nm,1.1s						
KSAR	Wonju Array Be	85.26	319		P	07 40 15.6	+0.5
MT05	Renca	85.64	127		P	07 40 18.8	+1.3
ESJX	Sierra Juarez	85.67	48	P	P	07 40 18.5	+1.0
ESJX				IAmb	IAmb	07 40 23.0	
	comp=Z,42nm,1.9s						
QIZ	Qiongzhong	85.75	295	P	P	07 40 17.9	-0.1
QIZ				S	S	07 50 47.8	-1.5
QIZ				SS	SS	07 56 25.3	-1.5
QIZ				pmax	pmax		
	comp=Z,200nm,9.0s						
QIZ				LR	LR		
	comp=Z,190nm,16.5s						
QIZ				LR	LR		
	comp=Z,200nm,19.2s						
MT16	CCHEN	85.77	127	P	P	07 40 19.2	+1.1
MT16				IAmb	IAmb	07 40 21.6	
	comp=Z,25nm,0.9s						
PEL	Peldehue	85.82	126		P	07 40 19.1	+0.7
ELS	Elsinore Mount	85.82	46		P	07 40 18.9	+0.7
PSI	Prapat	85.97	276	LR	LR	08 20 17.2	
	comp=Z,685nm,19.0s,baz=99,slow=37						
PFO	Pinyon Flats O	86.40	47		P	07 40 22.3	+1.2
PFO				IAmb	IAmb	07 40 24.7	
	comp=Z,32nm,1.6s						
PFO	Pinyon Flats O	86.40	47	LR	LR	08 13 42.7	
	comp=Z,1μm,18.4s,baz=236,slow=32						
ISA	Isabella, Lake	86.53	44		P	07 40 21.6	0.0
ISA				IAmb	IAmb	07 40 29.1	
	comp=Z,25nm,1.1s						
PETK	Petropavlovsk-	86.69	345		P	07 40 22.0	+0.2
PETK	Petropavlovsk-	86.69	345	P	P	07 40 21.7	-0.1
	comp=Z,4.6nm,0.8s,baz=119,slow=6.5,SNR=9.9						
PETK				LR	LR	08 12 05.8	
	comp=Z,253nm,21.5s,baz=153,slow=31						
	comp=Z,4.6nm,0.8s						
NJ2	Nanjing	87.11	310	*e*P	P	07 40 26.6	+2.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,1.4s						
GSC	Goldstone, Bar	87.30	46	P	P	07 40 26.1	+0.7
GSC				IAmb	IAmb	07 40 28.8	
	comp=Z,34nm,1.3s						
AFDM	Forest Hills D	87.35	41		P	07 40 26.2	+0.8
AFDM				IAmb	IAmb	07 40 28.3	
	comp=Z,22nm,1.5s						
QSM	Queen of Sheba	87.71	45		P	07 40 27.6	+0.4
WAKR	Walker	87.91	42		P	07 40 29.5	+1.1
USRK	Ussuriysk Ar.	88.07	326	P	P	07 40 29.0	+0.4
	comp=Z,6.9nm,0.7s,baz=126,slow=4.2,SNR=14						
	comp=Z,6.9nm,0.7s						
MPK	Martis Peak	88.11	41	P	P	07 40 29.3	-0.1
LCO	Las Campanas	88.16	123		P	07 40 30.8	+0.8
LCO				IAmb	IAmb	07 40 34.0	
	comp=Z,20nm,1.4s						
YBH	Yreka Blue Hor	88.37	38	LR	LR	08 15 38.4	
	comp=Z,49nm,18.5s,baz=240,slow=33						
NVAR	Mina Array Bea	88.51	42	P	P	07 40 31.9	+0.7
NVAR	Mina Array Bea	88.51	42	P	P	07 40 32.1	+0.9
	comp=Z,2.8nm,0.7s,baz=218,slow=7.6,SNR=16						
NVAR				LR	LR	08 16 05.8	
	comp=Z,842nm,18.2s,baz=260,slow=33						
	comp=Z,2.8nm,0.7s						
TPNV	Topopah Spring	88.73	45		P	07 40 33.0	+0.8
TPNV				IAmb	IAmb	07 40 39.7	
	comp=Z,39nm,1.6s						
PAHR	Pah Rah Range	88.76	41		P	07 40 31.9	-0.4
PAHR				IAmb	IAmb	07 40 39.1	
	comp=Z,16nm,1.4s						
V12A	Nelson	88.78	46		P	07 40 33.0	+0.6
V12A				IAmb	IAmb	07 40 36.2	
	comp=Z,33nm,1.6s						
TPH	Tonopah	88.90	43	P	P	07 40 34.3	+1.3
SHPR	Sheep Range	89.10	46		P	07 40 35.2	+1.2
TUC	Tucson	89.25	51		P	07 40 36.1	+1.5
TUC				IAmb	IAmb	07 40 39.6	
	comp=Z,38nm,1.7s						
S11A	Rachel	89.49	44	P	P	07 40 36.5	+0.8
MDJ	Mudanjiang	89.54	325	P	P	07 40 36.0	+0.4
MDJ				pP	pwP	07 40 49.0	-0.3
MDJ				sS	sS	07 51 33.4	-2.7
MDJ				pmax	pmax		
	comp=Z,17nm,1.5s						
MDJ				LR	LR		
	comp=Z,260nm,19.2s						
MDJ				LR	LR		
	comp=Z,300nm,17.9s						
MDJ				LR	LR		
	comp=Z,450nm,20.6s						
TLIG	Tlapa	89.83	69	P	P	07 40 38.8	+1.0
R11B	Troy Canyon, C	90.05	44		P	07 40 39.6	+1.2
X16A	Lo Mia Camp, P	90.12	49		P	07 40 40.0	+1.2
X16A				IAmb	IAmb	07 40 42.9	
	comp=Z,17nm,1.1s						
TIA	Tai'an	90.84	313	P	P	07 40 42.4	+0.5
TIA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TIA				pmax	pmax		
	comp=Z,260nm,4.9s						
TIA				LR	LR		
	comp=Z,100nm,11.0s						
TIA				LR	LR		
	comp=Z,120nm,14.1s						
TIA				LR	LR		
	comp=Z,99nm,10.0s						
CN2	Changchun	91.05	323	*e*P	P	07 40 41.9	-0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,200nm,18.0s						
CN2				LR	LR		
	comp=Z,200nm,18.0s						
CN2				LR	LR		
	comp=Z,200nm,18.6s						
BNX	BinXian	91.42	325	⇓P	P	07 40 43.5	-0.8
BNX				pmax	pmax		
	comp=Z,19nm,1.0s						
ELK	Elko	91.81	42	LR	LR	08 18 28.5	
	comp=Z,805nm,18.2s,baz=274,slow=33						
TXAR	Lajitas Array	92.43	57		P	07 40 50.4	+0.8
TXAR	Lajitas Array	92.43	57	P	P	07 40 50.2	+0.6
	comp=Z,1.6nm,1.0s,baz=198,slow=7.5,SNR=9.9						
TXAR				LR	LR	08 17 36.6	
	comp=Z,474nm,18.0s,baz=210,slow=32						
	comp=Z,1.6nm,1.0s						
NNA	Nana	92.76	106	LR	LR	08 14 39.9	
	comp=Z,367nm,19.1s,baz=204,slow=30						
LYN	LuoYang	92.86	309	P	P	07 40 52.3	+1.1
LYN				SKS	SKSac	07 51 21.8	-1.4
LYN				pmax	pmax		
	comp=Z,16nm,0.8s						
LYN				LR	LR		
	comp=Z,280nm,16.8s						
LYN				LR	LR		
	comp=Z,230nm,15.1s						
LYN				LR	LR		
	comp=Z,470nm,19.2s						
HNS	HongShan	93.10	312	⇑P	P	07 40 53.9	+1.6
HNS				SKS	SKSac	07 51 22.8	-1.6
HNS				LR	LR		
	comp=Z,220nm,18.0s						
HNS				LR	LR		
	comp=Z,230nm,18.8s						
HNS				LR	LR		
	comp=Z,310nm,19.1s						
ANMO	Albuquerque	93.71	51		P	07 40 56.3	+0.8
HVU	Hansel Valley	93.90	43		P	07 40 56.3	+0.2
HVU				IAmb	IAmb	07 41 02.9	
	comp=Z,11nm,1.2s						
CMAR	Chiang Mai Arr	94.10	289	P	P	07 40 57.4	0.0
	comp=Z,1.4nm,0.3s,baz=109,slow=5.9,SNR=2.0						
CMAR				PP	PP	07 44 43.7	-0.5
	comp=Z,1.5nm,0.3s,baz=140,slow=5.2,SNR=6.6						
	comp=Z,1.4nm,0.3s						
PB11	IPOC Station P	94.22	116	P	P	07 40 59.4	+1.1
PB11				IAmb	IAmb	07 41 00.9	
	comp=Z,13nm,0.9s						
PB16	IPOC Station P	95.15	115		P	07 41 04.9	+1.9
PB16				IAmb	IAmb	07 41 07.5	
	comp=Z,19nm,1.4s						
NEW	Newport	95.74	36	LR	LR	08 21 18.4	
	comp=Z,741nm,18.0s,baz=218,slow=34						
PZH	PanZhiHua	96.08	297	P	P	07 41 07.9	+1.5
XLT	XiLinHaoTe	96.24	318	*e*P	P	07 41 09.3	+2.7
XLT				pP	pP	07 41 13.3	-0.5
XLT				SKS	SKSac	07 51 40.4	-0.8
XLT				S	ScS	07 52 26.3	+1.3
XLT				sS	sS	07 52 37.8	+1.6
XLT				pmax	pmax		
	comp=Z,10.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,56nm,5.5s						
XLT				LR	LR		
	comp=Z,160nm,16.6s						
XLT				LR	LR		
	comp=Z,200nm,14.5s						
PDAR	Pinedale Array	96.39	43	P	P	07 41 06.8	-0.8
	comp=Z,0.6nm,0.7s,baz=204,slow=3.3,SNR=5.4						
PDAR				PP	PP	07 44 59.9	-2.1
	comp=Z,0.2nm,0.3s,baz=268,slow=7.7,SNR=2.4						
	comp=Z,0.6nm,0.7s						
HHC	Hu-ho-hao-te	97.11	314	*e*P	P	07 41 13.3	+2.6
HHC				S	S	07 52 32.3	+0.2
HHC				sS	sS	07 52 48.0	+4.1
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,49nm,4.8s						
HHC				LR	LR		
	comp=Z,120nm,16.3s						
HHC				LR	LR		
	comp=Z,130nm,16.1s						
HHC				LR	LR		
	comp=Z,200nm,17.5s						
LPAZ	La Paz	97.40	114	P	Pdif	07 41 15.4	+2.0
	comp=Z,0.8nm,0.7s,baz=197,slow=4.8,SNR=4.7						
	comp=Z,0.8nm,0.7s						
BTO	Baotou	97.94	313	*e*P	Pdif	07 41 15.8	+1.3
BTO				SKS	SKSac	07 51 55.3	+5.1
BTO				S	ScS	07 52 42.3	+3.0
BTO				pmax	pmax		
	comp=Z,25nm,0.6s						
BTO				pmax	pmax		
	comp=Z,150nm,4.3s						
BTO				LR	LR		

	comp=Z,310nm,17.1s						
BTO				LR	LR		
	comp=Z,330nm,15.0s						
BTO				LR	LR		
	comp=Z,240nm,17.2s						
ILAR	**Eielson Array**	**98.59**	**13**	P	Pdif	07 41 15.4	-1.2
	comp=Z,0.3nm,0.7s,baz=211,slow=7.4,SNR=4.5						
ILAR				PP	**PP**	**07 45 17.8**	**-0.3**
	comp=Z,0.4nm,0.9s,baz=206,slow=6.0,SNR=5.0						
	comp=Z,0.3nm,0.7s						
CPUP	**Villa Florida**	**99.13**	**128**	P	**Pdif**	**07 41 21.6**	**+1.5**
	comp=Z,0.5nm,0.9s,baz=101,slow=2.4,SNR=3.8						
	comp=Z,0.5nm,0.9s						
WMQ	**Urumqi**	**114.08**	**308**	*e*PKP	**PKiKP**	**07 46 18.3**	**+0.8**
WMQ				LR	LR		
	comp=Z,130nm,23.5s						
MKAR	**Makanchi Array**	**118.63**	**310**		**PKiKP**	**07 46 25.4**	**-0.8**
MKAR	**Makanchi Array**	**118.63**	**310**	PKP	**PKiKP**	**07 46 25.1**	**-1.1**
	comp=Z,0.7nm,0.6s,baz=220,slow=0.9,SNR=7.0						
ZALV	**Zalesovo Beam**	**118.93**	**318**	PKP	**PKiKP**	**07 46 25.5**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=132,slow=4.1,SNR=1.6						
KSH	**Kashi**	**121.04**	**300**	PKP	**PKiKP**	**07 46 32.5**	**+1.2**
KURBB	**Kurchatov Arra**	**121.97**	**313**	PKP	**PKiKP**	**07 46 31.3**	**-1.2**
	comp=Z,2.2nm,0.6s,baz=112,slow=1.9,SNR=22						
AAK	**Ala-Archa**	**122.93**	**303**	PKP	**PKiKP**	**07 46 33.8**	**-1.2**
	comp=Z,0.8nm,0.3s,baz=241,slow=7.3,SNR=4.4						
SCHQ	**Schefferville**	**126.51**	**42**	PKP	**PKPdf**	**07 46 39.7**	**-1.3**
	comp=Z,2.4nm,0.9s,baz=71,slow=1.9,SNR=5.1						
BVAR	**Borovoye Array**	**127.29**	**315**	PKP	**PKPdf**	**07 46 41.4**	**-1.2**
	comp=Z,1.8nm,0.6s,baz=27,slow=0.3,SNR=7.4						
SPITS	**Spitsbergen Ar**	**132.52**	**356**	PKP	**PKiKP**	**07 46 51.2**	**-1.8**
	comp=Z,4.3nm,0.8s,baz=100,slow=7.9,SNR=4.6						
ARTI	**Arti**	**134.10**	**320**	PKP	**PKiKP**	**07 46 55.6**	**-1.0**
	comp=Z,1.3nm,0.4s,baz=230,slow=4.0,SNR=4.9						
AKTO	**Aktyubinsk**	**134.97**	**312**	PKP	**PKiKP**	**07 46 57.6**	**-1.0**
	comp=Z,2.1nm,0.7s,baz=65,slow=7.4,SNR=3.8						
ARCES	**ARCESS Array B**	**139.46**	**348**	PKhKP	PKPpre	07 46 57.1	
	comp=Z,2.4nm,0.7s,baz=59,slow=2.5,SNR=8.3						
GNI	**Garni**	**144.84**	**297**		**PKPdf**	**07 47 15.2**	**-0.4**
KBZ	**Khabaz**	**145.93**	**303**	PKPbc	**PKPab**	**07 47 17.4**	**-0.9**
	comp=Z,18nm,0.9s,baz=75,slow=5.3,SNR=25						
FIA1	**FINESS Array S**	**146.04**	**340**		**PKPab**	**07 47 16.5**	**-1.7**
FINES	**FINESS Array B**	**146.04**	**340**	PKPbc	**PKPbc**	**07 47 16.3**	**-1.3**
	comp=Z,11nm,0.4s,baz=42,slow=3.6,SNR=124						
KIV	**Kislovodsk**	**146.05**	**304**		**PKPab**	**07 47 17.7**	**-1.2**
OBN	**Obninsk**	**146.08**	**325**		**PKPab**	**07 47 17.5**	**-1.0**
NB2	**NORSAR Subarra**	**149.60**	**352**	PKP	**PKPbc**	**07 47 26.0**	**-1.3**
	comp=Z,112nm,2.0s,baz=14,slow=2.6						
NB2	**NORSAR Subarra**	**149.60**	**352**	PKP	**PKPbc**	**07 47 26.0**	**-1.3**
	baz=14,slow=2.6						
NOA	**NORSAR Array B**	**149.60**	**352**	PKPbc	**PKPbc**	**07 47 26.3**	**-1.0**
	comp=Z,4.0nm,0.8s,baz=14,slow=4.2,SNR=18						
HFS	**Hagfors**	**150.11**	**349**	PKPbc	**PKPbc**	**07 47 27.5**	**-1.0**
	comp=Z,9.9nm,0.8s,baz=173,slow=1.2,SNR=19						
MNK	**Minsk**	**150.50**	**330**	*i* PKiKP	**PKiKP**	**07 47 28.8**	**-1.5**
	comp=E,14nm,0.8s						
MNK				*i* PKiKP	**PKiKP**	**07 47 28.8**	**-1.5**
	comp=N,12nm,0.7s						
MNK				*i* PKiKP	**PKiKP**	**07 47 28.8**	**-1.5**
	comp=Z,14nm,0.7s,baz=49						
MNK				*i* PP	**PP**	**07 51 04.0**	**-1.6**
MNK				*i* PPP	PPP	07 54 26.5	
MNK				*i* SKS	**SKSdf**	**07 54 27.0**	**-2.9**
MNK				*i* SS	SS	08 09 51.1	-32
MNK				*i* SSS	SSS	08 16 05.8	
NACGM	**Naroch**	**150.69**	**331**	*e*PKiKP	**PKiKP**	**07 47 30.5**	**-0.2**
MMAI	**Mount Meron Ar**	**152.16**	**282**	PKPbc	**PKiKP**	**07 47 34.5**	**-0.1**
	comp=Z,6.3nm,0.6s,baz=93,slow=4.2,SNR=13						
AKASG	**Malin Array Be**	**152.21**	**322**	PKPbc	**PKiKP**	**07 47 33.3**	**-0.7**
	comp=Z,3.9nm,0.6s,baz=50,slow=2.6,SNR=21						
BRTR	**Keskin Array B**	**153.38**	**297**	PKPbc	**PKiKP**	**07 47 36.4**	**-0.6**
	comp=Z,1.4nm,0.6s,baz=117,slow=0.3,SNR=8.9						
DBIC	**Dimbokro**	**154.64**	**163**	PKPbc	**PKiKP**	**07 47 41.3**	**+1.2**
	comp=Z,6.3nm,0.8s,baz=198,slow=4.5,SNR=5.2						
EKA	**Eskdalemuir Ar**	**155.53**	**8**	PKPab	**PKPab**	**07 47 56.0**	**-1.4**
	comp=Z,1.0nm,0.7s,baz=3.4,slow=3.9,SNR=3.9						
KOLS	**Kolonicke sedl**	**156.83**	**326**	*e*PKP	**PKPab**	**07 48 03.7**	**+0.4**
STHS	**Stebnicka Huta**	**156.98**	**328**	*e*PKP	**PKPab**	**07 48 03.0**	**-0.9**
LANS	**Liptovska Anna**	**157.97**	**329**	*e*PKP	PKPdf	07 47 41.7	+6.8
LANS				*e*		07 48 09.6	
MORC	**Moravsky Berou**	**158.28**	**333**	*e*PKP	**PKPab**	**07 48 11.2**	**+1.7**
CLL	**Collm**	**158.46**	**342**	*e*PKPdf	**PKPdf**	**07 47 36.0**	**+0.6**
CLL				⇓*i*PKPab	**PKPab**	**07 48 09.4**	**-0.7**
	comp=Z,39nm,2.1s						
CLL				*i* x	x	07 48 19.9	
BRG	**Berggiesshubel**	**158.58**	**340**	*e*PKP	**PKPab**	**07 48 11.0**	**+0.3**
BRG				Amp		07 48 12.8	
	comp=Z,6.3nm,1.0s						
JAVC	**Velka Javorina**	**158.96**	**331**	*e*PKP	**PKPab**	**07 48 12.5**	**0.0**
VRAC	**Vranov**	**159.03**	**334**	*e*PKP	**PKPab**	**07 48 12.6**	**-0.1**
KRUC	**Moravsky**	**159.30**	**334**	*e*PKP	**PKPab**	**07 48 13.3**	**-0.6**
MODS	**Modra-Piesok**	**159.50**	**331**	*e*PKP	**PKPab**	**07 48 14.6**	**-0.2**
MODS				*e*		07 58 20.8	
MODS				*e*		07 59 15.2	
MODS				*e*		07 59 23.6	
MODS				*e*		07 59 37.0	
MODS				*e*		07 59 47.2	
GRF	**Grafenberg Arr**	**160.40**	**343**	*e*PKP	**PKPab**	**07 48 18.1**	**-0.6**
	baz=23,slow=4.3						
CONA	**Conrad Observa**	**160.43**	**332**	*e*PKP	**PKPab**	**07 48 19.3**	**+0.3**
	comp=Z,10nm,1.1s						
RONA	**Rosalia, Austr**	**160.44**	**331**	*e*PKP	**PKPab**	**07 48 19.0**	**0.0**
	comp=Z,13nm,1.2s						
BTNL	**Ternell**	**160.44**	**353**	*d*PKP	**PKPab**	**07 48 18.9**	**+0.1**
GERES	**GERESS Array B**	**160.44**	**338**	PKPab	**PKPab**	**07 48 18.8**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=28,slow=6.0,SNR=8.6						
BCLA	**Clavier**	**160.68**	**355**	*d*PKPdf	**PKPdf**	**07 47 39.9**	**+2.0**
BCLA				*d*PKP	**PKPab**	**07 48 19.1**	**-0.7**
BGES	**Gesves**	**160.73**	**355**	*d*PKP	**PKPab**	**07 48 18.7**	**-1.3**
BMRD	**Maredsous**	**160.83**	**356**	*d*PKP	**PKPab**	**07 48 20.1**	**-0.4**
DOU	**Dourbes**	**161.05**	**356**	*d*PKP	**PKPab**	**07 48 20.6**	**-0.8**
MOA	**Molln**	**161.10**	**335**	*e*PKP	**PKPab**	**07 48 21.8**	**0.0**
	comp=Z,6.2nm,1.4s						
ARSA	**Arzberg**	**161.11**	**332**	*e*PKP	**PKPab**	**07 48 21.8**	**-0.1**
	comp=Z,3.7nm,0.8s						
WLF	**Walferdange**	**161.35**	**353**	*d*PKPdf	**PKPdf**	**07 47 40.2**	**+1.5**
BIOA	**Bad Ischl, Aus**	**161.46**	**336**	*e*PKP	**PKPab**	**07 48 23.1**	**-0.2**
	comp=Z,20nm,1.8s						
SOKA	**Soboth**	**161.77**	**332**	*e*PKP	**PKPab**	**07 48 24.7**	**-0.2**
	comp=Z,12nm,1.3s						
LESA	**Schwarzleotal**	**162.02**	**337**	*e*PKP	**PKPab**	**07 48 26.0**	**+0.1**
	comp=Z,12nm,1.1s						
TORD	**Torodi Ar. Bea**	**162.03**	**177**	PKP	**PKPdf**	**07 47 40.0**	**-0.4**
	comp=Z,31nm,0.3s,baz=207,slow=1.6,SNR=1.6						
TORD				PKPab	**PKPab**	**07 48 26.9**	**+0.4**
	comp=Z,55nm,0.4s,baz=171,slow=3.9,SNR=2.4						
MYKA	**Terra Mystica**	**162.36**	**334**	*e*PKP	**PKPab**	**07 48 26.5**	**-0.9**
	comp=Z,4.9nm,0.9s						
WATA	**Walderalm**	**162.44**	**339**	*e*PKP	**PKPab**	**07 48 27.8**	**-0.1**
	comp=Z,14nm,1.2s						
WTTA	**Wattenberg**	**162.49**	**339**	*e*PKP	**PKPab**	**07 48 28.4**	**+0.4**
	comp=Z,20nm,1.3s						
RETA	**Reutte**	**162.54**	**341**	*e*PKP	**PKPab**	**07 48 28.0**	**-0.2**
	comp=Z,12nm,1.5s						
MOTA	**Moosalm**	**162.58**	**340**	*e*PKP	**PKPab**	**07 48 28.2**	**-0.2**
	comp=Z,12nm,1.1s						
SQTA	**Sankt Quirin**	**162.66**	**340**	*e*PKP	**PKPab**	**07 48 28.9**	**+0.1**
	comp=Z,3.3nm,0.5s						
ABTA	**Abfaltersbach**	**162.66**	**336**	*e*PKP	**PKPab**	**07 48 28.4**	**-0.3**
	comp=Z,4.8nm,0.9s						
PGAV	**Gavieira, Arco**	**166.19**	**36**	*e*PKPdf	**PKPdf**	**07 47 47.9**	**+4.3**
POLO	**Lamas de Olo**	**166.87**	**36**	*e*PKPdf	**PKPdf**	**07 47 41.0**	**-3.1**
PBRG	**Braganca**	**167.05**	**33**	*e*PKPdf	**PKPdf**	**07 47 47.3**	**+3.1**
PVIS	**Viseu**	**167.29**	**39**	*e*PKPdf	**PKPdf**	**07 47 47.6**	**+3.2**
MVO	**Moncorvo**	**167.41**	**35**	*e*PKPdf	**PKPdf**	**07 47 48.8**	**+4.3**
PCAS	**Casmilo, Conde**	**167.41**	**42**	*e*PKPdf	**PKPdf**	**07 47 45.2**	**+0.7**
PSBE	**So Bento**	**167.58**	**45**	*e*PKPdf	**PKPdf**	**07 47 48.2**	**+3.6**
MTE	**Manteigas**	**167.70**	**39**	*e*PKPdf	**PKPdf**	**07 47 48.2**	**+3.5**
PCBR	**Castelo Branco**	**168.13**	**41**	*e*PKPdf	**PKPdf**	**07 47 47.6**	**+2.7**
PMTG	**Montargil**	**168.20**	**45**	*e*PKPdf	**PKPdf**	**07 47 49.7**	**+4.7**
PMRV	**Marv??o**	**168.46**	**42**	*e*PKPdf	**PKPdf**	**07 47 47.6**	**+2.4**
EVO	**Evora**	**168.66**	**47**	*e*PKPdf	**PKPdf**	**07 47 47.3**	**+1.9**
PESTR	**Estremoz**	**168.71**	**45**	*e*PKPdf	**PKPdf**	**07 47 46.4**	**+1.0**
PTEO	**Sao Teotonio**	**168.75**	**53**	*e*PKPdf	**PKPdf**	**07 47 48.8**	**+3.4**
PFVI	**Vila Bisbo**	**168.88**	**55**	*e*PKPdf	**PKPdf**	**07 47 48.5**	**+3.0**
MORF	**Marmelete**	**168.92**	**54**	*e*PKPdf	**PKPdf**	**07 47 44.9**	**-0.7**
MESJ	**Messejana**	**168.93**	**50**	*e*PKPdf	**PKPdf**	**07 47 47.0**	**+1.5**
PBEJ	**Beja**	**169.05**	**49**	*e*PKPdf	**PKPdf**	**07 47 50.5**	**+4.9**
PCVE	**Castro Verde**	**169.16**	**51**	*e*PKPdf	**PKPdf**	**07 47 50.3**	**+4.6**
PBAR	**Barrancos**	**169.48**	**46**	*e*PKPdf	**PKPdf**	**07 47 49.7**	**+3.8**
ESDC	**Sonseca Array**	**170.01**	**30**	PKP	**PKPdf**	**07 47 46.2**	**0.0**
	comp=Z,0.2nm,0.3s,baz=342,slow=2.0,SNR=1.6						
ESDC				PKPab	**PKPab**	**07 49 00.4**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=289,slow=4.5,SNR=4.2						

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*ASRS **21** 07:31:30.0±1.2, 54°.21N×86°.41E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 21 07:31:29.8±3.2**, 54°.22N×86°.64E, h0**^{km}**, mbtmp2.6**/2**, ML2.4**/2**, Error ellipse: s-maj=24.6km s-min=16.1km az=53.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.11**	**257**	I	I	07 37 50.0	
	baz=74,slow=314,SNR=3.1						
ZALV	**Zalesovo Beam**	**1.11**	**257**	Pg	Pg	07 31 51.3	+0.3
	1.4nm,0.3s,baz=74,slow=17,SNR=10						
ZALV				Lg	Lg	07 32 05.6	
	4.5nm,0.3s,baz=74,slow=18,SNR=16						
KURBB	**Kurchatov Arra**	**6.13**	**237**	Pn	Pn	07 33 03.0	+1.5
	0.1nm,0.3s,baz=53,slow=14,SNR=5.1						
KURBB				Lg	Lg	07 34 44.2	
	baz=62,slow=32,SNR=4.4						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.93**	**202**	Pn	Pn	07 33 26.3	0.0
	0.1nm,0.3s,baz=25,slow=14,SNR=1.7						
MKAR				Lg	Lg	07 35 40.7	
	0.1nm,0.3s,baz=25,slow=32,SNR=5.4						
	0.1nm,0.4s						

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*IDC **21** 07:32:37.2±3.6, 54°.35N×87°.14E, h0^{km}, mbtmp2.6/2, ML2.3/2, Error ellipse: s-maj=32.3km s-min=20.2km az=55.0*

ASRS 21 07:32:37.0±1.0**, 54°.26N×86°.81E, h0**^{km}**, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.21**	**256**	I	I	07 40 40.0	
	baz=73,slow=316,SNR=5.5						
ZALV	**Zalesovo Beam**	**1.21**	**256**	Pg	Pn	07 33 02.1	+0.9
	1.1nm,0.3s,baz=76,slow=18,SNR=6.6						
ZALV				Lg	Lg	07 33 22.8	
	1.7nm,0.3s,baz=73,slow=30,SNR=3.5						
KURBB	**Kurchatov Arra**	**6.24**	**238**	Pn	Pn	07 34 14.4	+4.2
	baz=55,slow=14,SNR=2.7						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**8.01**	**203**	Pn	Pn	07 34 38.2	+3.7
	baz=25,slow=14,SNR=1.4						
	0.1nm,0.3s						

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*NEIC **21** 07:38:07.5±1.9, 48°.67N±0°.01×122°.29W±0°.02, h10^{km}±1^{km}, Error ellipse: s-maj=2.9km s-min=2.0km az=334.0*

*SEA **21** 07:38:07.9±2.0, 48°.69N±0°.01×122°.24W±0°.02, h13^{km}±3^{km}, ML2.9/15, ML2.8/44(NEIC), Error ellipse: s-maj=1.8km s-min=1.6km az=88.0*

PNSN 21 07:38:07.9, 48°.69N×122°.24W, h13^{km}**, MD2.9, Fault plane solution: NP1:**ϕ$_s$70.00000°**,** δ60.00000°**,** λ100.00000°.**, Washington**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBW	**Mount Baker**	**0.24**	**67**		Pg	07 38 13.1	-0.1
A04D	**Lummi Island**	**0.31**	**276**		Pg	07 38 13.9	-0.4
A04D				IAML		07 38 19.4	
	comp=N,701nm,0.3s						
A04D				IAML		07 38 20.3	
	comp=E,787nm,0.2s						
A04D	**Lummi Island**	**0.31**	**276**		Sg	07 38 19.0	+0.4
ERW	**Mount Erie**	**0.35**	**228**		Pg	07 38 13.6	-1.4
ERW					Sg	07 38 18.7	-1.0
MCW	**Mount Constitu**	**0.39**	**269**		Pg	07 38 14.9	-0.9
MCW					Sg	07 38 20.8	-0.4
B05A	**Bryant**	**0.44**	**167**		Pg	07 38 15.4	-1.1
B05A					Sg	07 38 22.5	0.0
SVOH	**Skagit Valley**	**0.48**	**213**		Pg	07 38 16.2	-1.1
SVOH					Sg	07 38 23.7	0.0
UWFH	**University of**	**0.53**	**255**		Pg	07 38 17.4	-1.0
JCW	**Jim Creek**	**0.54**	**157**		Pg	07 38 17.3	-1.2
JCW					Sg	07 38 25.2	-0.4
RPW	**Rockport**	**0.54**	**116**		Pg	07 38 17.5	-1.0
SNB	**Saturna Island**	**0.62**	**278**		Pg	07 38 19.1	-1.0
SNB					Sg	07 38 28.1	-0.2
SWID	**South Whidbey**	**0.69**	**190**		Pg	07 38 20.7	-0.7
SWID					Sg	07 38 30.6	+0.2
BEVT	**Boeing Everett**	**0.77**	**182**		Pg	07 38 22.1	-0.7
BEVT					Sg	07 38 33.1	+0.1
VGZ	**Gonzales**	**0.77**	**249**		Pg	07 38 21.2	-1.7
VGZ					Sg	07 38 31.0	-2.0
B011	**North Saanich**	**0.80**	**268**		Pg	07 38 21.6	-1.9
B011					Sg	07 38 31.9	-2.1
PGC	**Sidney**	**0.81**	**268**		Pg	07 38 21.6	-1.8
PGC				IAML		07 38 33.4	
	comp=E,245nm,0.4s						
PGC	**Sidney**	**0.81**	**268**		Sg	07 38 32.1	-2.0
SQM	**Sequim**	**0.82**	**221**		Pg	07 38 22.4	-1.4
SQM					Pb	07 38 22.5	-1.4
SQM					Sg	07 38 34.0	-0.5
EVGW	**Everett Gatewa**	**0.84**	**176**		Pg	07 38 23.4	-0.7
EVGW					Sb	07 38 35.5	+0.1
BLN	**Blyn Mountain**	**0.84**	**216**		Pg	07 38 22.6	-1.6
BLN					Sg	07 38 33.9	-1.3
BLH	**Bald Hill**	**0.86**	**171**		Pg	07 38 23.4	-1.2
LYNC	**Lynnwood City**	**0.87**	**182**		Pg	07 38 23.8	-0.8
LYNC					Sb	07 38 36.4	+0.3
HOPB	**Hope**	**0.88**	**37**		Pg	07 38 23.9	-1.1
HOPB					Sg	07 38 35.6	-0.9
GPW	**Glacier Peak**	**0.93**	**128**		Pg	07 38 24.3	-1.6
HTW	**Haystack Looko**	**0.94**	**160**		Pb	07 38 24.3	-1.8
KINR	**Kitsap County**	**0.98**	**196**		Pb	07 38 25.3	-1.3
KINR					Sb	07 38 39.3	-0.1
B013	**Quilcene**	**0.99**	**207**		Pb	07 38 24.6	-2.2
B04A	**Port Angeles**	**1.05**	**234**		Pb	07 38 25.7	-2.3
STW	**Striped Peak**	**1.10**	**241**		Pb	07 38 26.9	-1.8
HDW	**Hoodsport**	**1.18**	**208**		Pn	07 38 27.6	-2.5
GNW	**Green Mountain**	**1.19**	**199**		Pn	07 38 27.8	-2.4
GNW				IAML		07 38 44.1	
	comp=E,168nm,0.5s						
GMW	**Gold Mountain**	**1.20**	**198**		Pn	07 38 28.1	-2.3
WRW	**Wenatchee Ridg**	**1.23**	**132**		Pn	07 38 29.2	-1.7
CLRS	**Cowichan Lake**	**1.26**	**277**		Pn	07 38 29.0	-2.1
NLLB	**Nanaimo Lost L**	**1.27**	**296**		Pn	07 38 29.4	-1.9
OSD	**Olympics--Snow**	**1.31**	**229**		Pn	07 38 30.4	-1.6
NLW	**Nelson Butte**	**1.41**	**115**		Pn	07 38 33.0	-0.3
SHB	**Sechelt**	**1.41**	**311**		Pn	07 38 31.3	-1.9
WSLR	**Whistler**	**1.50**	**343**		Pn	07 38 33.9	-0.7
D05A	**Enumclaw**	**1.51**	**174**		Pn	07 38 33.5	-1.2
D05A				IAML		07 38 55.5	
	comp=E,153nm,0.5s						
OLQ	**Olympics--Lake**	**1.58**	**222**		Pn	07 38 35.4	-0.1
ETW	**Entiat**	**1.68**	**130**		Pn	07 38 37.2	+0.1
NLWA	**Neilton Lookou**	**1.70**	**221**		Pn	07 38 36.9	-0.4
C03A	**Quillayute Air**	**1.72**	**245**	Pn	Pn	07 38 36.9	-0.6
C03A				IAML		07 38 47.4	
	comp=E,132nm,2.6s						
C03A				IAML		07 39 22.4	
	comp=N,130nm,1.7s						
TXB	**Texada**	**1.76**	**306**		Pn	07 38 37.1	-0.9
B927	**Port Alberni**	**1.78**	**288**		Pn	07 38 37.2	-1.0
PABB	**Port Alberni**	**1.78**	**288**		Pn	07 38 37.3	-1.0
LTY	**Liberty**	**1.78**	**143**	Pn	Pn	07 38 38.0	-0.3
LTY				IAML		07 39 02.6	
	comp=E,92nm,0.4s						
OBSR	**Observation Ro**	**1.81**	**171**		Pn	07 38 38.6	-0.4
WTV	**Waterville**	**1.82**	**122**		Pn	07 38 39.7	+0.8
RCS	**Mount Rainier-**	**1.85**	**169**		Pn	07 38 39.4	-0.3
PANH	**Panhandle Gap,**	**1.88**	**167**		Pn	07 38 39.4	-0.4
TBM	**Table Mountain**	**1.88**	**143**		Pn	07 38 40.8	+1.1
WISH	**Wishkah**	**1.88**	**214**	Pn	Pn	07 38 39.4	-0.3
WISH				IAML		07 38 49.7	
	comp=E,63nm,3.8s						
WISH				IAML		07 39 33.2	
	comp=N,65nm,2.5s						
REMR	**Mount Rainier-**	**1.89**	**172**		Pn	07 38 39.6	-0.4
B017	**Montesano**	**1.91**	**208**		Pn	07 38 40.7	+0.6
LLLB	**Lillooet**	**1.93**	**7**		Pn	07 38 40.1	-0.3
LLLB				IAML		07 39 09.8	
	comp=N,101nm,0.4s						
LLLB				IAML		07 39 10.4	
	comp=E,78nm,0.8s						
B08A	**Colville Reser**	**1.96**	**99**		Pn	07 38 41.3	+0.5
LON	**Longmire**	**1.96**	**171**		Pn	07 38 40.7	-0.2
EBG	**Ellensburg**	**2.11**	**147**		Pb	07 38 45.5	-0.5
OZB	**Mount Ozzard**	**2.17**	**278**	Pn	Pn	07 38 43.2	-0.5
OZB				IAML		07 39 13.5	
	comp=E,79nm,2.9s						
NAC	**Naches**	**2.18**	**154**		Pn	07 38 44.3	+0.5
KOSW	**Kosmos**	**2.23**	**179**		Pn	07 38 45.1	+0.5
E03A	**Lebam**	**2.33**	**203**	Pn	Pn	07 38 45.0	-0.7
E03A				IAML		07 39 23.2	
	comp=E,48nm,0.8s						
E03A				IAML		07 39 24.1	
	comp=N,48nm,0.7s						
ERK	**Elk Rock**	**2.39**	**182**		Pn	07 38 47.4	+0.6
B201	**Coldwater, Mou**	**2.39**	**180**		Pn	07 38 47.2	+0.5
CBB	**Campbell River**	**2.45**	**304**		Pn	07 38 47.0	-0.5
B202	**Windy Ridge, M**	**2.45**	**178**		Pn	07 38 48.4	+0.8
STD	**Studebaker Rid**	**2.45**	**180**		Pn	07 38 48.8	+1.1
MXC	**Moxie City**	**2.49**	**147**		Pn	07 38 48.0	0.0
MXC				IAML		07 39 25.3	
	comp=N,53nm,1.0s						
SEPW	**September Lobe**	**2.49**	**179**		Pn	07 38 49.8	+1.5
ESD	**East Dome**	**2.50**	**179**		Pn	07 38 49.8	+1.5
FL2	**Flat Top 2**	**2.50**	**182**		Pn	07 38 49.4	+1.1
RADR	**Rader Ridge**	**2.50**	**206**	Pn	Pn	07 38 48.2	-0.1
FHE	**Frenchman Hill**	**2.54**	**132**		Pb	07 38 52.8	-0.4
JLK	**June Lake**	**2.55**	**179**		Pn	07 38 50.4	+1.5
AWST	**Adams West**	**2.57**	**173**		Pn	07 38 51.0	+1.8
CDFW	**Cedar Flats**	**2.58**	**177**		Pn	07 38 50.9	+1.6
WAH2	**Wahluke Slope**	**2.65**	**136**		Pn	07 38 50.3	+0.1
LOCW	**Locke Island**	**2.74**	**135**		Pb	07 38 56.4	-0.3
D08A	**Wollman Farm,**	**2.77**	**125**		Pn	07 38 50.6	-1.3
D08A				IAML		07 39 40.5	
	comp=E,21nm,0.5s						
RSW	**Rattlesnake Hi**	**2.91**	**141**		Pn	07 38 54.6	+0.6
HAWA	**Hanford**	**2.94**	**140**		Pn	07 38 53.6	-0.6
HAWA				IAML		07 39 38.9	
	comp=E,30nm,0.7s						
HAWA				IAML		07 39 40.1	
	comp=E,31nm,0.6s						
HOOD	**Mount Hood Mea**	**3.39**	**173**	Pn	Pn	07 39 00.3	-0.3
G03D	**McMinnville, O**	**3.55**	**192**	Pn	Pn	07 39 01.8	-0.9
H04A	**Detroit Lake**	**4.01**	**179**	Pn	Pn	07 39 08.5	-0.5
MPOR	**Mary's Peak**	**4.28**	**193**		Pn	07 39 14.1	+1.3
I07A	**Izee**	**4.98**	**157**	Pn	Pn	07 39 22.9	+0.5
BMO	**Blue Mountains**	**5.12**	**137**	Pn	Pn	07 39 23.9	-0.4
BMO				IAML		07 40 21.5	
	comp=E,4.1nm,3.9s						
BMO				IAML		07 41 18.4	
	comp=E,5.2nm,4.2s						
PLID	**Pearl Lake**	**5.59**	**128**	Pn	Pn	07 39 32.0	+1.1

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*ASRS **21** 07:39:32.0±0.9, 54°.30N×86°.89E, h0^{km}, M2.8, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*IDC **21** 07:39:35.8±2.6, 54°.25N×86°.82E, h0^{km}, mbtmp3.1/3, ML2.7/3, Error ellipse: s-maj=21.6km s-min=14.2km az=62.0*

ISC 21 07:39:37.6±3.7**, 54°.2N**±0°.2×**86°.6E**±0°.2**, h0**^{km}**, n5,** σ**0**^{s}**.86**/6**, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.08**	**256**	I	I	07 47 50.0	
	baz=72,slow=319,SNR=18						
ZALV	**Zalesovo Beam**	**1.08**	**256**	Pg	**Pg**	**07 39 57.8**	**-0.4**
	2.3nm,0.3s,baz=75,slow=16,SNR=20						
ZALV				Lg	Lg	07 40 15.1	
	4.6nm,0.3s,baz=74,slow=27,SNR=11						
KURBB	**Kurchatov Arra**	**6.10**	**237**	Pn	**Pn**	**07 41 09.8**	**+0.8**
	0.1nm,0.3s,baz=54,slow=14,SNR=6.7						
KURBB				Sn	**Sn**	**07 42 19.1**	**-0.4**
	0.1nm,0.3s,baz=52,slow=22,SNR=5.4						
KURBB				Lg	Lg	07 42 54.9	
	0.1nm,0.3s,baz=52,slow=31,SNR=2.6						
	0.9nm,0.4s						
MKAR	**Makanchi Array**	**7.92**	**202**	Pn	**Pn**	**07 41 33.5**	**-0.5**
	0.2nm,0.3s,baz=26,slow=14,SNR=8.9						
MKAR				Sn	**Sn**	**07 43 05.1**	**+0.7**
	0.2nm,0.3s,baz=26,slow=26,SNR=5.2						
MKAR				Lg	Lg	07 43 49.8	
	0.1nm,0.3s,baz=24,slow=33,SNR=1.6						
	0.2nm,0.3s						
BVAR	**Borovoye Array**	**9.70**	**269**	Pn	**Pn**	**07 41 59.0**	**+0.7**
	baz=64,slow=15,SNR=3.1						
	0.5nm,0.4s						

IDC 21 07:59:44.4±2.2**, 7°.04S×129°.27E, h0**^{km}**, mb3.7**/1**, mbtmp3.6**/4**, ML3.6**/3**, MS4.0**/1**, Error ellipse: s-maj=86.5km s-min=29.1km az=75.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.55**	**197**	Pn	Pn	08 02 29.9	-0.7
	0.2nm,0.3s,baz=20,slow=12,SNR=1.9						
FITZ				Sn	Sn	08 04 25.1	-15
	0.8nm,0.3s,baz=39,slow=18,SNR=6.4						
	3.0nm,0.8s						
WRA	**Warramunga Arr**	**13.74**	**159**	Pn	Pn	08 03 01.0	+0.3
	0.5nm,0.3s,baz=339,slow=13,SNR=16						
WRA				Sn	Sn	08 05 21.6	-13
	0.5nm,0.3s,baz=335,slow=22,SNR=9.8						
	1.2nm,0.5s						
ASAR	**Alice Springs**	**17.12**	**165**	Pn	Pn	08 03 45.7	+0.3
	0.1nm,0.3s,baz=340,slow=10,SNR=6.7						
ASAR				Sn	Sn	08 06 39.4	-17
	0.1nm,0.3s,baz=338,slow=25,SNR=5.2						
	0.3nm,0.5s						
STKA	**Stephens Creek**	**27.26**	**157**	LR	LR	08 18 20.6	
	comp=Z,334nm,19.3s,baz=355,slow=41						
MKAR	**Makanchi Array**	**67.86**	**327**	P	P	08 10 44.6	0.0
	0.4nm,0.5s,baz=124,slow=8.0,SNR=5.2						
	0.4nm,0.5s						

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*IDC **21** 08:01:04.2±3.4, 54°.23N×87°.19E, h0^{km}, mbtmp2.6/2, ML2.2/2, Error ellipse: s-maj=30.4km s-min=20.2km az=56.0*

ASRS 21 08:01:05.0±1.5**, 54°.19N×87°.15E, h0**^{km}**, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.40**	**261**	I	I	08 10 20.0	
	baz=78,slow=315,SNR=1.8						
ZALV	**Zalesovo Beam**	**1.40**	**261**	Pg	Pn	08 01 29.1	-2.6
	1.4nm,0.3s,baz=80,slow=16,SNR=20						
ZALV				Lg	Lg	08 01 50.0	
	0.8nm,0.3s,baz=80,slow=27,SNR=5.4						
KURBB	**Kurchatov Arra**	**6.37**	**239**	Pn	Pn	08 02 40.6	+0.5
	baz=54,slow=13,SNR=5.5						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**8.03**	**205**	Pn	Pn	08 03 04.5	+1.7
	0.1nm,0.3s,baz=21,slow=6.2,SNR=1.8						
MKAR				Lg	Lg	08 05 19.3	
	0.1nm,0.3s,baz=23,slow=30,SNR=1.9						
	0.1nm,0.5s						

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*ASRS **21** 08:07:10.0±1.0, 54°.02N×86°.49E, h0^{km}, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 21 08:07:12.9±2.8**, 54°.03N×86°.51E, h0**^{km}**, mbtmp2.8**/2**, ML2.6**/2**, Error ellipse: s-maj=23.1km s-min=13.8km az=61.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.00**	**266**	I	I	08 13 50.0	
	baz=84,slow=316,SNR=6.8						
ZALV	**Zalesovo Beam**	**1.00**	**266**	Pg	Pg	08 07 30.7	-1.4
	0.9nm,0.3s,baz=86,slow=18,SNR=6.0						
ZALV				Lg	Lg	08 07 46.5	
	1.5nm,0.3s,baz=87,slow=29,SNR=7.0						
KURBB	**Kurchatov Arra**	**5.96**	**238**	Pn	Pn	08 08 43.5	+1.2
	0.1nm,0.3s,baz=56,slow=13,SNR=4.7						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**7.72**	**202**	Pn	Pn	08 09 07.6	+1.0
	0.1nm,0.3s,baz=25,slow=14,SNR=4.4						
	0.1nm,0.3s						

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*IDC **21** 08:11:05.2±4.0, 53°.57N×87°.88E, h0^{km}, mbtmp2.5/1, ML2.6/1, Error ellipse: s-maj=37.5km s-min=18.1km*

az=50.0

ASRS 21 08:11:04.0±1.1**,53°.56N×87°.70E,h0^{km},M2.6,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZALV	Zalesovo Beam	1.75	284	Pg	Pg	08 11 39.0	+1.4
	0.5nm,0.3s,baz=102,slow=13,SNR=8.3						
ZALV				Lg	Lg	08 12 04.2	
	1.8nm,0.3s,baz=101,slow=21,SNR=14						
I46RU	ZALESOVO INFRA	1.75	284	I	I	08 22 10.0	
	0.2nm,0.9s,baz=100,slow=316,SNR=10						
KURBB	Kurchatov Arra	6.37	246	Lg	Lg	08 14 30.2	
	baz=47,slow=29,SNR=2.3						
MKAR	Makanchi Array	7.61	209	Pn	Pn	08 12 59.3	+3.2
	0.1nm,0.3s,baz=25,slow=11,SNR=4.1						
	0.2nm,0.4s						

IDC ***21*** *08:16:42.6±1.8,33°.70S×179°.92E,h0^{km},mb4.4/5, mbtmp4.4/6,ML3.9/1,MS3.5/2,Error ellipse: s-maj=48.4km s-min=25.8km az=51.0*

NEIC ***21*** *08:16:45.1±1.3,33°.95S±0°.06×179°.9E±0°.2,h10^{km}±1^{km}, mb4.3/11,Error ellipse: s-maj=25.1km s-min=9.6km az=78.0*

WEL ***21*** *08:16:46.0±0.7,34°S±5°×17°9E±°,h12^{km},M4.5/12, mB5.0/3,ML4.5/14,MLv4.5/12,Mw(mB)4.3/3,Error ellipse: s-maj=9.6km s-min=6.0km az=97.7,confirmed*

ISC 21 08:16:48.7±0.8**,33°.73S**±0°.06×**179°.64E**±0°.09**,h35^{km},n46,** σ**1^s.78**/52**,mb4.3**/11**,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	3.98	195	Pn	Pn	08 17 44.0	-3.1
WMGZ	Waiomatatini S	4.20	193	P	Pn	08 17 49.4	-0.8
HAZ	Te Kaha	4.29	200	P	Pn	08 17 51.6	+0.2
HAZ				S	Sn	08 18 45.0	+4.8
PKGZ	Pakihiroa	4.32	197	P	Pn	08 17 51.0	-0.8
PKGZ				S	Sn	08 18 44.4	+3.5
KUZ	Kuaotunu	4.39	226	P	Pn	08 17 57.7	+4.8
PUZ	Puketiti	4.47	194	P	Pn	08 17 52.4	-1.6
PUZ				S	Sn	08 18 44.3	-0.5
RUGZ	Raukumara Rang	4.52	200	P	Pn	08 17 53.6	-1.0
TWGZ	Tauwhareparae	4.64	196	P	Pn	08 17 55.0	-1.2
TGRZ	Tauranga	4.84	214	P	Pn	08 18 00.7	+1.6
WCZ	Waipu Caves	4.88	242	P	Pn	08 17 57.9	-1.6
CNGZ	Carnagh Statio	4.88	193	P	Pn	08 17 57.9	-1.7
CNGZ				S	Sn	08 18 55.4	+0.5
MWZ	Matawai	4.90	200	P	Pn	08 17 58.9	-1.0
GLKZ	Green Lake	4.92	26	P	Pn	08 18 00.4	+0.4
TKGZ	Te Karaka	4.92	197	P	Pn	08 17 57.7	-2.3
TKGZ				S	Sn	08 18 58.1	+2.4
URZ	Urewera	4.96	204	Pn	Pn	08 17 58.7	-2.0
	4.6nm,0.3s,baz=23,slow=7.7,SNR=22						
URZ				Sn	Sn	08 18 55.1	-1.7
	baz=18,slow=20						
	32nm,0.6s						
URZ	Urewera	4.96	204	P	Pn	08 17 59.4	-1.2
URZ				S	Sn	08 18 55.2	-1.7
MKAZ	Moumakai	4.97	226	P	Pn	08 18 06.6	+5.9
RAGZ	Rawiri	5.08	200	P	Pn	08 18 02.3	-0.1
RIGZ	Rimuhau	5.19	196	P	Pn	08 18 01.8	-2.1
OUZ	Omahuta	5.21	252	P	Pn	08 18 02.1	-1.9
OUZ				S	Sn	08 18 59.5	-3.3
TOZ	Tahuroa Road	5.22	219		Pn	08 18 04.0	-0.1
TOZ	Tahuroa Road	5.22	219	P	Pn	08 18 04.6	+0.4
MUGZ	Murupara	5.28	205	P	Pn	08 18 04.4	-0.5
PRGZ	Paritu Road	5.37	195	P	Pn	08 18 03.8	-2.6
PRGZ				S	Sn	08 19 06.1	-0.8
MHGZ	Mahia Peninsul	5.59	194	P	Pn	08 18 06.1	-3.2
MHGZ				S	Sn	08 19 13.8	+1.5
MSVF	Nonsavu	15.99	355	LR	LR	08 24 53.9	
	comp=Z,200nm,18.3s,baz=9.4,slow=31						
DZM	Mont Dzumac	16.44	312	LR	LR	08 26 15.7	
	comp=Z,130nm,18.8s,baz=162,slow=34						
BBOO	Buckleboo	36.25	259	P	P	08 23 49.0	+0.5
BBOO				IAmb	IAmb	08 23 50.0	
	comp=Z,6.7nm,0.9s						
AS31	Alice Springs	41.06	272		P	08 24 30.1	+1.1
AS31				IAmb	IAmb	08 24 31.8	
	comp=Z,1.7nm,0.8s						
ASAR	Alice Springs	41.06	272		P	08 24 29.1	+0.1
ASAR	Alice Springs	41.06	272	P	P	08 24 30.1	+1.1
	comp=Z,5.0nm,0.8s,baz=115,slow=8.3,SNR=37						
	comp=Z,5.0nm,0.8s						
WR8	Warramunga Arr	42.22	277	P	P	08 24 40.0	+1.4
WR8				IAmb	IAmb	08 24 41.9	
	comp=Z,8.2nm,1.1s						
WRA	Warramunga Arr	42.36	277	P	P	08 24 40.7	+1.1
WRA	Warramunga Arr	42.36	277	P	P	08 24 40.3	+0.6
	comp=Z,3.5nm,0.6s,baz=120,slow=7.8,SNR=20						
	comp=Z,3.5nm,0.6s						
FITZ	Fitzroy Crossi	50.46	274	P	P	08 25 43.9	+0.6
FITZ				IAmb	IAmb	08 25 51.8	
	comp=Z,1.3nm,0.9s						
FITZ	Fitzroy Crossi	50.46	274	P	P	08 25 44.6	+1.4
	comp=Z,3.7nm,0.6s,baz=138,slow=7.8,SNR=7.2						
	comp=Z,3.7nm,0.6s						
QSPA	South Pole Qui	56.39	180		P	08 26 25.8	-0.4
QSPA	South Pole Qui	56.39	180	P	P	08 26 26.8	+0.5
	comp=Z,3.9nm,0.6s,baz=17,slow=1.2,SNR=39						
	comp=Z,3.9nm,0.6s						
SMAI	San Martin Ant	67.10	158	P	P	08 27 36.5	-1.6
SMAI				IAmb	IAmb	08 27 49.3	
	comp=Z,2.6nm,1.0s						
SNAA	Sanae	74.88	179	P	P	08 28 23.4	-2.0
SNAA	Sanae	74.88	179	P	P	08 28 24.0	-1.4
	comp=Z,1.4nm,1.0s,baz=193,slow=18,SNR=3.6						
	comp=Z,1.4nm,1.0s						
MAJO	Matsushiro	79.89	327	P	P	08 28 55.5	+1.8
MAJO				IAmb	IAmb	08 29 13.7	
	comp=Z,5.6nm,1.1s						
MJB9	Matsu-Tunnel	79.89	327	P	P	08 28 57.0	+3.3
MJB9				IAmb	IAmb	08 29 09.7	
	comp=Z,5.9nm,1.2s						
KULM	Kulim	83.80	281	P	P	08 29 15.1	+0.2
MARD	Mardin	146.51	288	PKPdf	PKPdf	08 36 24.2	-0.7
FINES	FINESS Array B	147.49	337	PKPbc	PKPdf	08 36 26.4	+0.9
	comp=Z,0.6nm,0.7s,baz=26,slow=3.5,SNR=4.7						

ASRS ***21*** *08:26:27.0±1.1,54°.69N×83°.63E,h0^{km},M2.3,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 21 08:26:29.4±1.7**,54°.70N×83°.84E,h0^{km},mbtmp2.9**/3**, ML2.3**/3**,Error ellipse: s-maj=14.7km s-min=10.0km az=12.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.95	142	I	I	08 32 20.0	
	baz=318,slow=312,SNR=5.0						
ZALV	Zalesovo Beam	0.95	142	Pg	Pg	08 26 46.6	-0.9
	3.8nm,0.3s,baz=323,slow=20,SNR=25						
ZALV				Lg	Lg	08 27 01.0	
	7.5nm,0.3s,baz=324,slow=28,SNR=16						
KURBB	Kurchatov Arra	5.21	220	Pn	Pn	08 27 49.6	+1.2
	0.1nm,0.3s,baz=36,slow=12,SNR=2.7						
KURBB				Sn	Sn	08 28 49.0	-0.2
	baz=32,slow=21,SNR=1.5						
KURBB				Lg	Lg	08 29 10.5	
	0.1nm,0.3s,baz=42,slow=34,SNR=5.2						
	0.5nm,0.3s						
MKAR	Makanchi Array	7.98	188	Pn	Pn	08 28 26.3	-0.3
	0.1nm,0.3s,baz=12,slow=14,SNR=2.9						
MKAR				Sn	Sn	08 29 57.3	-0.1
	0.1nm,0.3s,baz=16,slow=24,SNR=2.3						
MKAR				Lg	Lg	08 30 42.1	
	0.1nm,0.3s,baz=3.9,slow=28,SNR=6.3						
	0.2nm,0.5s						
BVAR	Borovoye Array	8.13	264	Pn	Pn	08 28 27.0	-1.5
	baz=69,slow=15,SNR=4.8						
	0.8nm,0.5s						

WEL 21 08:29:23.1±0.3**,39°S**±2°×**17°6E**±°**,h5^{km},M2.1**/25**, ML2.3**/23**,MLv2.1**/25**,Error ellipse: s-maj=3.1km s-min=2.6km az=136.5,confirmed,North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATZ	Rangitukua	0.09	245	P	Pg	08 29 25.8	+0.7
RITZ	Rihia Road	0.15	186	P	Pg	08 29 26.9	+0.7
WATZ	Wairara	0.16	317	P	Pg	08 29 26.9	+0.5
WATZ				S	Sg	08 29 29.8	+1.3
WHTZ	Whakaora	0.17	21	P	Pg	08 29 27.4	+0.8
HATZ	Hinemaiaia	0.18	111	P	Pg	08 29 26.8	+0.1
HATZ				S	Sg	08 29 29.2	+0.2
KATZ	Kakaramea	0.20	224	P	Pg	08 29 27.8	+0.6
NTVZ	North Tongarir	0.31	210	P	Pg	08 29 29.8	+0.5
NTVZ				S	Sg	08 29 34.7	+1.3
TMVZ	Te Maari	0.32	205	P	Pg	08 29 29.8	+0.5
TMVZ				S	Sg	08 29 34.9	+1.3
KRVZ	Karewarewa	0.32	215	P	Pg	08 29 30.0	+0.6
KRVZ				S	Sg	08 29 34.8	+1.1
ETVZ	East Tongariro	0.33	203	P	Pg	08 29 30.0	+0.3
ETVZ				S	Sg	08 29 35.3	+1.2
KUTZ	Kaahu Road	0.34	353	P	Pg	08 29 30.1	+0.5
WTVZ	West Tongariro	0.36	218	P	Pg	08 29 30.8	+0.6
NNVZ	North Ngauruho	0.37	214	P	Pg	08 29 30.8	+0.6
OTVZ	Oturere	0.37	206	P	Pg	08 29 30.9	+0.5
WPRZ	Whakapapatarin	0.38	36	P	Pg	08 29 30.8	+0.4
SNVZ	South Ngauruho	0.40	207	P	Pg	08 29 31.5	+0.5
NGZ	Ngauruhoe	0.41	212	P	Pg	08 29 31.6	+0.5
TWVZ	Taurewa	0.42	235	P	Pg	08 29 31.4	+0.2
TWVZ				S	Sg	08 29 37.1	+0.3
MRHZ	Matea Rd	0.42	91	P	Pg	08 29 31.3	+0.1
COVZ	Chateau Observ	0.46	215	P	Pg	08 29 32.5	+0.6
TUVZ	Tukino	0.47	202	P	Pg	08 29 32.7	+0.5
FWVZ	Far West T-bar	0.50	211	P	Pg	08 29 33.2	+0.5
MAVZ	Matarangi	0.50	209	P	Pg	08 29 33.4	+0.6
WHVZ	Whangaehu Hut	0.51	206	P	Pg	08 29 33.3	+0.4
TRVZ	Turoa	0.54	209	P	Pg	08 29 33.8	+0.3
WNVZ	Wahianoa	0.54	203	P	Pg	08 29 33.9	+0.3
TLZ	Tolley Road	0.56	332	P	Pg	08 29 33.7	-0.2
BKZ	Black Stump Fm	0.59	125	P	Pg	08 29 34.9	+0.5
BKZ	Black Stump Fm	0.59	125	P	Pg	08 29 34.8	+0.4
BKZ				S	Sg	08 29 42.9	+0.9
MOVZ	Moawhango	0.59	189	P	Pg	08 29 34.3	-0.1
HSRZ	Hossack Road	0.59	29	P	Pb	08 29 36.0	+0.1
PKVZ	Pokaka	0.62	222	P	Pg	08 29 35.1	+0.1
MTVZ	Mangateitei	0.64	210	P	Pg	08 29 35.6	+0.2
KWHZ	Kaweka Forest	0.73	145	P	Pb	08 29 37.8	-0.6
MTHZ	Maungataniwha	0.75	92	P	Pb	08 29 38.2	-0.5
NMHZ	Naumai	0.77	111	P	Pb	08 29 39.5	+0.5
MUGZ	Murupara	0.78	64	P	Pb	08 29 39.3	+0.2
HIZ	Hauiti	0.86	291	P	Pg	08 29 40.0	+0.4
HIZ	Hauiti	0.86	291	P	Pg	08 29 39.7	+0.1
MCHZ	McNeill Hill	0.89	134	P	Pn	08 29 41.8	-0.4
KRHZ	Kereru	0.90	155	P	Pg	08 29 40.8	+0.4
VRZ	Vera Road	0.92	251	P	Pg	08 29 40.7	0.0
RAHZ	Arahi	0.95	96	P	Pb	08 29 42.2	+0.2
ARHZ	Aropaoanui	0.97	117	P	Pn	08 29 43.4	0.0
PNHZ	Pukenui	1.11	167	P	Pg	08 29 44.5	+0.1
TOZ	Tahuroa Road	1.13	345	P	Pg	08 29 44.1	-0.7
TSZ	Takapari Road	1.23	177	P	Pg	08 29 46.6	-0.1
KAHZ	Kahuranaki	1.24	142	P	Pn	08 29 48.5	+1.4
WPHZ	Waipukurau	1.31	161	P	Pg	08 29 48.7	+0.5
PXZ	Pawanui	1.42	148	P	Pg	08 29 52.7	+2.4
NEZ	North Egmont	1.46	252	P	Pg	08 29 51.3	+0.3
KHEZ	Kahui Hut	1.52	252	P	Pn	08 29 51.4	+0.3
KHEZ	Kahui Hut	1.52	252	P	Pg	08 29 53.2	+0.9
TKGZ	Te Karaka	1.59	77	P	Pn	08 29 50.3	-1.6
MKAZ	Moumakai	1.81	342	P	Pb	08 29 55.9	-0.8
HAZ	Te Kaha	1.84	55	P	Pb	08 29 57.1	-0.1

IDC ***21*** *08:33:35.8±12.0,34°.25N×82°.59E,h0^{km},mb3.5/6, mbtmp3.6/8,ML2.9/2,Error ellipse: s-maj=237.3km s-min=47.8km az=122.0*

ISC 21 08:33:43.0±11.0**,34°.6N**±0°.8×**8°2E**±°**,h35^{km},n8,** σ**1^s.43**/8**, mb3.6**/5**,Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	12.22	359	Pn	Pn	08 36 33.6	-0.9
	0.1nm,0.3s,baz=173,slow=13,SNR=5.5						
	0.4nm,0.5s						
KURBB	Kurchatov Arra	16.30	351	Pn	Pn	08 37 29.5	+0.4
	baz=169,slow=11,SNR=8.3						
	1.6nm,0.7s						
BVAR	Borovoye Array	20.36	339	P	P	08 38 17.0	+0.7
	0.7nm,0.5s,baz=156,slow=11,SNR=3.6						
	0.7nm,0.5s						
BRTR	Keskin Array B	38.88	292	P	P	08 41 03.3	-1.9
	0.3nm,0.4s,baz=90,slow=4.3,SNR=1.4						
	0.3nm,0.4s						
AKASG	Malin Array Be	41.42	310	P	P	08 41 27.5	+1.6
	0.2nm,0.4s,baz=75,slow=8.9,SNR=1.9						
	0.2nm,0.4s						
FINES	FINESS Array B	44.38	325	P	P	08 41 48.7	-1.0
	1.0nm,0.8s,baz=110,slow=7.6,SNR=2.1						
	1.0nm,0.8s						
HFS	Hagfors	50.32	323	P	P	08 42 37.0	+1.1
	1.0nm,0.5s,baz=103,slow=10,SNR=5.8						
	1.0nm,0.5s						
NOA	NORSAR Array B	51.51	324	P	P	08 42 45.7	+0.8
	0.5nm,0.7s,baz=87,slow=7.5,SNR=2.2						
	0.5nm,0.7s						

IDC ***21*** *08:37:14.6±0.3,30°.74S×177°.46W,h0^{km},mb5.4/32, mbtmp5.3/32,MS6.1/57,Error ellipse: s-maj=10.9km s-min=9.2km az=79.0*

MOS ***21*** *08:37:15.7±1.0,30°.81S×177°.56W,h13^{km},mb6.0/33, MS6.2/39,Error ellipse: s-maj=10.0km s-min=7.0km az=107.9*

NEIC ***21*** *08:37:16.9±1.5,30°.86S±0°.06×177°.5W±0°.1,h14^{km}±1^{km}, mb5.9/121,Ms_20 6.5/833,Mww6.2/67,Error ellipse: s-maj=16.9km s-min=10.4km az=92.0*

BJI ***21*** *08:37:16.7,30°.84S×177°.54W,h20^{km},mB6.3/78, mb5.8/58,Ms6.3/91,Ms7 6.1/89*

ISC-PP ***21*** *08:37:16,30°.86S×177°.47W,h26^{km},Mwppsm6.5, Moment Tensor Solution. s24 Moment tensor: Scale 10^{18}Nm; M_{rr}0.68±.15; $M_{\theta\theta}$-0.17±.16; $M_{\phi\phi}$-0.52±.16; $M_{r\theta}$0.00±.11; $M_{\theta\phi}$0.30±.23; $M_{\phi r}$0.17±.17; Fault plane solution: $M_0$6.10000×10^{18} NP1:ϕ_s151.40000°,δ33.60000°, λ77.60000°. NP2:ϕ_s346.20000°,δ57.30000°,λ98.10000°.*

NEIC ***21*** *08:37:17,30°.86S×177°.47W,h18^{km}*

NEIC ***21*** *08:37:17,30°.86S×176°.77W,h18^{km},Moment Tensor Solution. Duration: 6^s.5 Moment tensor: Scale 10^{18}Nm; M_{rr}2.69; $M_{\theta\theta}$-0.17; $M_{\phi\phi}$-2.52; $M_{r\theta}$0.03; $M_{\theta\phi}$-0.69; $M_{\phi r}$0.72; Fault plane solution: $M_0$2.79000×10^{18} NP1: ϕ_s198.47000°,δ37.82000°,λ95.19000°. NP2:ϕ_s11.92000°, δ52.36000°,λ85.99000°. Principal axes: T 2.7910, Plg82.0000°, Azm261.0000°; N 0.0072, Plg3.0000°, Azm14.0000°; P -2.7982, Plg7.0000°, Azm105.0000°;*

NOU ***21*** *08:37:17.9,31°.18S×177°.12W,h22^{km},ML6.0/134, Kermadec Islands Region*

BGR ***21*** *08:37:18.9,31°.40S×178°.65W,h33^{km},Ms6.5*

IPGP ***21*** *08:37:20.0,30°.81S×177°.42W,h11^{km},Mw6.3,Fault plane solution: NP1:ϕ_s209.00000°,δ26.00000°,λ103.00000°. NP2:ϕ_s15.00000°,δ64.00000°,λ84.00000°.*

GCMT ***21*** *08:37:24.0±0.0,30°.80S×177°.08W,h12^{km},MW6.3/170, Moment Tensor Solution. s162,c376; s170,c703; Duration: 3^s.3 Moment tensor: Scale 10^{18}Nm; M_{rr}2.39±.01; $M_{\theta\theta}$0.02±.01; $M_{\phi\phi}$-2.40±.01; $M_{r\theta}$0.47±.03; $M_{\theta\phi}$-0.78±.01; $M_{\phi r}$1.72±.03; Best double couple: $M_0$3.08000×10^{18} NP1:ϕ_s197.00000°,δ27.00000°, λ91.00000°. NP2:ϕ_s16.00000°,δ63.00000°,λ89.00000°. Principal axes: T 2.9590, Plg72.0000°, Azm284.0000°; N 0.2480, Plg1.0000°, Azm16.0000°; P -3.2010, Plg18.0000°, Azm106.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 21 08:37:16.3±0.4**,30°.94S**±0°.02×**177°.34W**±0°.03**,h13^{km}**±1^{km}**, h12^{km}:pP-P,n1939,** σ**2^s.16**/1806**,mb5.8**/187**,MS6.5**/520**, 75C-51D,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	1.75	343	P	Pn	08 37 43.7	-2.6
RAO	Raoul Island	1.76	343	Pn	Pn	08 37 44.4	-2.0
	2μm,0.3s,baz=146,slow=13,SNR=78						
RAO				Sn	Sn	08 38 08.3	-0.3
	9μm,0.3s,baz=128,slow=20,SNR=4.3						
RAO				LR	LR	08 38 14.9	
	comp=Z,173μm,21.7s,baz=137,slow=39						
RAO	Raoul Island	1.76	343	P	Pg	08 37 50.1	+0.1
RAO	Raoul Island	1.76	343	⇑P	Pn	08 37 44.3	-2.1
RIZ	Raoul Island	1.77	343	P	Pn	08 37 44.7	-1.9
RIZ				S	Sb	08 38 10.9	+0.3
MXZ	Matakaoa Point	7.53	207	Pn	Pn	08 39 04.5	-1.2
MXZ	Matakaoa Point	7.53	207	P	Pn	08 39 03.3	-2.5
MXZ				S	Sn	08 40 30.2	-0.8
WMGZ	Waiomatatini S	7.71	206	P	Pn	08 39 04.8	-3.5
WMGZ				S	Sn	08 40 34.0	-1.4
PKGZ	Pakihiroa	7.88	207	P	Pn	08 39 06.4	-4.2
PKGZ				S	Sn	08 40 38.1	-1.6
HAZ	Te Kaha	7.91	209	P	Pn	08 39 07.8	-3.1
HAZ				S	Sn	08 40 42.7	+2.4
PUZ	Puketiti	7.99	206	P	Pn	08 39 07.1	-5.1
PUZ				S	Sn	08 40 41.2	-1.2
GRZ	Great Barrier	8.01	227	P	Pn	08 39 14.7	+2.3
RUGZ	Raukumara Rang	8.13	209	P	Pn	08 39 11.3	-2.8
KUZ	Kuaotunu	8.18	223	P	Pn	08 39 15.9	+1.2
TWGZ	Tauwhareparae	8.19	207	P	Pn	08 39 10.6	-4.3
TWGZ				S	Sn	08 40 45.6	-1.7
CNGZ	Carnagh Statio	8.37	205	P	Pn	08 39 13.4	-3.9
CNGZ				S	Sn	08 40 51.4	-0.4
TKGZ	Te Karaka	8.47	207	P	Pn	08 39 14.0	-4.6
TKGZ				S	Sn	08 40 51.6	-2.5
MWZ	Matawai	8.50	208	P	Pn	08 39 14.8	-4.4
MWZ				S	Sn	08 40 53.5	-1.5
OPRZ	Ohinepanea	8.54	215	P	Pn	08 39 17.7	-1.9
WCZ	Waipu Caves	8.55	232	P	Pn	08 39 23.1	+3.3
MARZ	Manawahe	8.59	214	P	Pn	08 39 20.3	-0.2
TGRZ	Tauranga	8.60	216	P	Pn	08 39 20.4	0.0
URZ	Urewera	8.62	211	Pn	Pn	08 39 15.8	-4.9
	5.3nm,0.3s,baz=16,slow=7.4,SNR=40						
URZ				Sn	Sn	08 40 55.0	-2.8
	111nm,0.3s,baz=112,slow=19,SNR=10						
URZ	Urewera	8.62	211	P	Pn	08 39 16.3	-4.4
URZ				S	Sn	08 40 56.6	-1.1
EDRZ	Edgecumbe	8.66	213	P	Pn	08 39 21.7	+0.4
RAGZ	Rawiri	8.69	208	P	Pn	08 39 18.1	-3.6
OUZ	Omahuta	8.72	238	P	Pn	08 39 22.6	+0.4
OUZ	Omahuta	8.72	238	P	Pn	08 39 25.6	+3.4
OUZ	Omahuta	8.72	238	⇑P	Pn	08 39 24.5	+2.4
RIGZ	Rimuhau	8.73	206	P	Pn	08 39 17.3	-5.0
MKAZ	Moumakai	8.75	223	P	Pn	08 39 23.9	+1.3
ETAZ	East Tamaki Re	8.79	225	P	Pn	08 39 29.8	+6.7
MKRZ	Makatiti	8.81	214	P	Pn	08 39 26.7	+3.2
KARZ	Kaharoa	8.83	215	P	Pn	08 39 21.6	-2.1
OMRZ	Omania	8.83	214	P	Pn	08 39 22.3	-1.4
KMRZ	Kaimai	8.85	217	P	Pn	08 39 23.6	-0.3
TARZ	Mount Tarawera	8.87	213	P	Pn	08 39 24.1	-0.2
PRGZ	Paritu Road	8.88	205	P	Pn	08 39 19.0	-5.4
NGRZ	Ngongotaha	8.92	215	P	Pn	08 39 28.8	+3.8
MUGZ	Murupara	8.95	211	P	Pn	08 39 20.5	-4.7
RRRZ	Republican Roa	8.95	213	P	Pn	08 39 26.7	+1.4
HLRZ	Highlands Stat	8.96	214	P	Pn	08 39 26.4	+1.0
SNGZ	Shannon Statio	8.96	208	P	Pn	08 39 22.9	-2.5
RTZ	Ruatahuna	8.97	210	P	Pn	08 39 22.1	-3.6
TOZ	Tahuroa Road	9.00	219	P	Pn	08 39 27.0	+1.1
AWAZ	Awhitu Peninsu	9.03	225	P	Pn	08 39 32.8	+6.4
KNZ	Kokohu	9.04	206	P	Pn	08 39 20.7	-5.8
HSRZ	Hossack Road	9.06	214	P	Pn	08 39 29.9	+3.1
MHGZ	Mahia Peninsul	9.07	204	P	Pn	08 39 21.1	-5.9
HRRZ	Handcock Road	9.10	214	P	Pn	08 39 29.7	+2.3
PRRZ	Plateau Road	9.14	213	P	Pn	08 39 26.9	-1.0
RAHZ	Arahi	9.18	208	P	Pn	08 39 24.9	-3.6
ALRZ	Allen Road	9.21	213	P	Pn	08 39 26.9	-2.0
MTHZ	Maungataniwha	9.23	210	P	Pn	08 39 25.0	-4.1
WHHZ	Waihua	9.26	207	P	Pn	08 39 26.1	-3.5
MRHZ	Matea Rd	9.40	211	P	Pn	08 39 27.3	-4.1
KUTZ	Kaahu Road	9.40	215	P	Pn	08 39 33.2	+1.7
TLZ	Tolley Road	9.42	217	P	Pn	08 39 32.6	+0.8
NMHZ	Naumai	9.45	209	P	Pn	08 39 28.7	-3.5
ARHZ	Aropaoanui	9.51	208	P	Pn	08 39 28.5	-4.5
WATZ	Wairara	9.62	214	P	Pn	08 39 34.5	0.0
BKZ	Black Stump Fm	9.64	210	P	Pn	08 39 34.2	-0.6
BKZ	Black Stump Fm	9.64	210	P	Pn	08 39 29.6	-5.2
RATZ	Rangitukua	9.72	214	P	Pn	08 39 34.5	-1.4
RITZ	Rihia Road	9.77	213	P	Pn	08 39 35.0	-1.6
MCHZ	McNeill Hill	9.79	208	P	Pn	08 39 33.2	-3.5
CKHZ	Cape Kidnapper	9.82	206	P	Pn	08 39 31.4	-5.9
KWHZ	Kaweka Forest	9.88	209	P	Pn	08 39 35.3	-2.8
HIZ	Hauiti	9.91	218	P	Pn	08 39 38.0	-0.5
HIZ	Hauiti	9.91	218	P	Pn	08 39 37.0	-1.6
NTVZ	North Tongarir	9.95	213	P	Pn	08 39 35.0	-4.2
TMVZ	Te Maari	9.95	213	P	Pn	08 39 35.2	-3.9
ETVZ	East Tongariro	9.96	213	P	Pn	08 39 36.6	-2.8
KRVZ	Karewarewa	9.96	213	P	Pn	08 39 38.4	-0.9
WTVZ	West Tongariro	10.01	213	P	Pn	08 39 39.1	-0.7
NNVZ	North Ngauruho	10.01	213	P	Pn	08 39 38.2	-1.7
OTVZ	Oturere	10.01	213	P	Pn	08 39 36.1	-3.8
KAHZ	Kahuranaki	10.02	207	P	Pn	08 39 33.1	-6.9
SNVZ	South Ngauruho	10.04	213	P	Pn	08 39 37.3	-3.1
TWVZ	Taurewa	10.04	214	P	Pn	08 39 39.9	-0.5
NGZ	Ngauruhoe	10.05	213	P	Pn	08 39 39.2	-1.3
KRHZ	Kereru	10.09	209	P	Pn	08 39 35.0	-5.9
COVZ	Chateau Observ	10.10	213	P	Pn	08 39 40.9	-0.2
FWVZ	Far West T-bar	10.13	213	P	Pn	08 39 38.6	-3.1
WHVZ	Whangaehu Hut	10.14	213	P	Pn	08 39 40.9	-0.9
MAVZ	Matarangi	10.14	213	P	Pn	08 39 42.2	+0.3
MOVZ	Moawhango	10.16	212	P	Pn	08 39 37.7	-4.3
WNVZ	Wahianoa	10.17	213	P	Pn	08 39 39.3	-2.9
TRVZ	Turoa	10.17	213	P	Pn	08 39 40.7	-1.5
PXZ	Pawanui	10.23	206	P	Pn	08 39 35.3	-7.5
PKVZ	Pokaka	10.26	214	P	Pn	08 39 42.4	-0.9
MTVZ	Mangateitei	10.28	213	P	Pn	08 39 41.4	-2.1
PNHZ	Pukenui	10.39	209	P	Pn	08 39 39.3	-5.8
WPHZ	Waipukurau	10.42	207	P	Pn	08 39 39.2	-6.2
VRZ	Vera Road	10.42	216	P	Pn	08 39 45.7	+0.3
PRHZ	Porangahau	10.52	206	P	Pn	08 39 40.2	-6.6
TSZ	Takapari Road	10.61	209	P	Pn	08 39 42.1	-5.9
DVHZ	Dannevirke	10.73	208	P	Pn	08 39 45.7	-4.0
ANWZ	Angora Road	10.75	206	P	Pn	08 39 46.1	-3.8
WAZ	Wanganui	10.80	213	P	Pn	08 39 49.0	-1.6
LREZ	Lake Rotokare	10.86	216	P	Pn	08 39 53.4	+2.1
NEZ	North Egmont	10.87	218	P	Pn	08 39 52.8	+1.1
PKE	Pukeiti	10.88	218	P	Pn	08 39 55.8	+4.1
KHEZ	Kahui Hut	10.93	218	P	Pn	08 39 54.5	+1.9
POWZ	Post Office Ro	10.97	209	P	Pn	08 39 50.9	-2.0
NBEZ	Newall Road No	10.99	219	P	Pn	08 39 56.2	+3.0
PRWZ	Pori Road	11.02	208	P	Pn	08 39 48.9	-4.8
BFZ	Birch Farm	11.03	206	P	Pn	08 39 50.8	-2.9
BFZ	Birch Farm	11.03	206	P	Pn	08 39 46.7	-7.0
MRZ	Mangatainoka R	11.27	209	P	Pn	08 39 50.3	-6.8
HOWZ	Holdsworth Sta	11.50	208	P	Pn	08 39 53.7	-6.5
TMWZ	Te Maipa	11.53	206	P	Pn	08 39 53.4	-7.2
OGWZ	Otaki Gorge	11.57	210	P	Pn	08 39 53.9	-7.4
KIW	Kapiti Island	11.72	210	P	Pn	08 39 56.0	-7.2
MTW	Mount Morrison	11.72	208	P	Pn	08 39 56.6	-6.7
TRWZ	Traveller	11.86	206	P	Pn	08 39 58.6	-6.5
CAW	Cannon Point	11.86	209	P	Pn	08 39 58.8	-6.3
PAWZ	Paruwai Farm	11.94	207	P	Pn	08 40 00.1	-6.2
MSWZ	Moikau Station	12.04	208	P	Pn	08 40 00.1	-7.6
DUWZ	D’Urville Isla	12.12	213	P	Pn	08 40 03.0	-5.7
PLWZ	Palliser	12.17	207	P	Pn	08 40 02.4	-7.0
SNZO	South Karori	12.18	210	⇑P	Pn	08 40 10.8	+1.4
BHW	Baring Head	12.19	209	P	Pn	08 40 06.7	-3.0
TCW	Tory Channel	12.28	211	P	Pn	08 40 03.2	-7.7
TUWZ	Tuamarina	12.61	211	P	Pn	08 40 09.2	-6.2
NNZ	Nelson	12.70	214	P	Pn	08 40 09.4	-7.3
LKBA	Tubou, Lakemba	12.72	354	P	Pn	08 40 21.2	+4.2
CMWZ	Cape Campbell	12.75	210	P	Pn	08 40 17.2	-0.1
TKNZ	Takaka Hill	12.77	215	P	Pn	08 40 12.7	-4.8
CTZ	Chatham Island	12.79	178	P	Pn	08 40 15.7	-2.1
CTZ	Chatham Island	12.79	178	P	Pn	08 40 15.1	-2.6
CTZ				S	Sn	08 42 28.1	-12
QRZ	Quartz Range	12.83	217	P	Pn	08 40 17.5	-0.9
QRZ	Quartz Range	12.83	217	S	Sn	08 42 40.3	-0.8
QRZ	Quartz Range	12.83	217	P	Pn	08 40 13.3	-5.1
BSWZ	Blackbirch Sta	12.87	211	P	Pn	08 40 14.7	-4.2
NFK	Norfolk Island	12.90	275	P	Pn	08 40 23.6	+4.1
	comp=Z,0.0nmcomp=Z,716nm,1.8s						
MRNZ	Matariki Terra	13.14	215	P	Pn	08 40 16.7	-6.0
THZ	Tophouse	13.35	213	P	Pn	08 40 19.4	-6.1
NIUE	Niue	13.58	31	P	Pn	08 40 22.6	-6.1
	comp=Z,0.0nmcomp=Z,329nm,0.9s						
NIUE	Niue	13.58	31	⇑P	Pn	08 40 22.3	-6.4
KHZ	Kahutara	13.58	210	P	Pn	08 40 21.3	-7.3
MSVF	Nonsavu	13.80	341		Pn	08 40 30.8	-1.0
MSVF	Nonsavu	13.80	341	Pn	Pn	08 40 31.0	-0.8
	comp=Z,2.7nm,0.3s,baz=161,slow=12,SNR=15						
MSVF				LR	LR	08 44 27.2	
	comp=Z,49μm,20.7s,baz=168,slow=32						
MSVF	Nonsavu	13.80	341	P	Pn	08 40 34.3	+2.5

MSVF	Nonsavu	13.80	341	P	Pn	08 40 30.8	-1.0
MSVF	Nonsavu	13.80	341	⇓P	Pn	08 40 31.9	+0.1
DSZ	Denniston Nort	13.88	216	P	Pn	08 40 29.1	-3.6
GVZ	Greta Valley S	14.25	210	P	Pn	08 40 31.8	-5.9
TAVE	Taveuni	14.36	350	P	Pn	08 40 44.6	-1.8
LTZ	Lake Taylor	14.44	212	P	Pn	08 40 33.3	-7.1
AMCZ	Amberley	14.58	210	P	Pn	08 40 39.4	-2.9
INZ	Inchbonnie	14.78	214	P	Pn	08 40 39.4	-5.7
DGTI	Dogotuki	14.82	349	P	P	08 40 49.3	-2.2
OKCZ	Okains Bay	14.86	208	P	Pn	08 40 38.8	-7.3
OXZ	Oxford	14.97	211	P	Pn	08 40 41.2	-6.4
MQZ	McQueen's Vall	15.01	209	P	Pn	08 40 38.5	-10
AKCZ	Akaroa Harbour	15.04	208	P	Pn	08 40 41.8	-6.7
RACZ	Rakaia	15.25	210	P	Pn	08 40 45.5	-5.7
MHCZ	Mount Hutt	15.35	212	P	Pn	08 40 46.8	-5.8
WVZ	Waitaha Valley	15.39	215	P	Pn	08 40 47.8	-5.3
WACZ	Wakanui South	15.55	210	P	Pn	08 40 49.3	-5.9
RPZ	Rata Peaks	15.72	213	Pn	Pn	08 40 53.2	-4.3
	comp=Z,6.4nm,0.3s,baz=60,slow=3.0,SNR=28						
RPZ				Sn	Sn	08 43 38.1	-14
	comp=Z,13nm,0.3s,baz=56,slow=18,SNR=5.8						
RPZ				LR	LR	08 47 01.3	
	comp=Z,50µm,21.3s,baz=38,slow=37						
RPZ	Rata Peaks	15.72	213	P	Pn	08 40 55.0	-2.5
RPZ	Rata Peaks	15.72	213	P	Pn	08 40 52.4	-5.1
GCSZ	Gaunt Creek Bo	15.77	215	P	Pn	08 40 53.6	-4.5
ARCZ	Arundel	15.85	212	P	Pn	08 40 53.3	-5.8
PINNC	Pines Island,	15.91	298	P	P	08 41 04.1	+0.5
MARNC	Mare, Loyalty	16.15	302	P	P	08 41 07.6	+1.3
FOZ	Fox Glacier	16.18	215	P	Pn	08 40 59.0	-4.4
TMZ	Timaru	16.27	211	P	Pn	08 40 58.7	-5.8
OUENC	Ouen Island, N	16.48	297	P	P	08 41 12.3	+2.3
INH	Isangel	16.58	310	P	P	08 41 12.7	+1.6
LBZ	Lake Benmore	16.64	213	P	Pn	08 41 05.2	-4.0
ONTNC	Ouen Toro	16.84	297	P	P	08 41 13.8	-0.2
ONTNC	Ouen Toro	16.84	297	P	P	08 41 16.2	+2.3
ONTNC	Ouen Toro	16.84	297	⇑P	P	08 41 14.5	+0.6
ODZ	Otahua Downs	16.94	210	P	Pn	08 41 11.6	-1.4
ODZ	Otahua Downs	16.94	210	P	Pn	08 41 06.8	-6.2
DZM	Mont Dzumac	16.98	297		P	08 41 17.0	+1.4
DZM	Mont Dzumac	16.98	297	ePn	P	08 41 17.0	+1.4
	comp=Z,1µm,1.2s						
DZM				eLR	LR	08 45 12.4	
	comp=Z,224µm,25.6s						
DZM	Mont Dzumac	16.98	297	Pn	P	08 41 16.2	+0.6
	comp=Z,3.0nm,0.3s,baz=126,slow=14,SNR=63						
DZM				LR	LR	08 46 37.1	
	comp=Z,157µm,18.3s,baz=133,slow=34						
DZM	Mont Dzumac	16.98	297	P	P	08 41 18.2	+2.6
DZM	Mont Dzumac	16.98	297	⇑P	P	08 41 16.9	+1.4
JCZ	Jackson Bay	17.09	216	P	Pn	08 41 14.5	-0.5
JCZ	Jackson Bay	17.09	216	P	Pn	08 41 09.6	-5.4
WKZ	Wanaka	17.52	214	P	Pn	08 41 15.0	-5.3
HHSZ	Highcliff Hill	17.63	209	P	Pn	08 41 18.6	-3.0
EAZ	Earnscleugh	17.69	212	P	Pn	08 41 19.9	-2.4
AFI	Afiamalu	17.70	18	P	P	08 41 24.8	+1.2
AFI	Afiamalu	17.70	18	⇓P	Pn	08 41 19.9	-2.8
MSZ	Milford Sound	17.95	216	P	Pn	08 41 21.9	-3.7
TUZ	Tuapeka	18.10	210	P	Pn	08 41 24.2	-3.2
MLZ	Mavora Lakes	18.35	214	P	Pn	08 41 28.2	-2.4
RAR	Rarotonga	18.49	63	P	P	08 41 31.2	-1.0
RAR				IAmb	IAmb	08 41 40.9	
	comp=Z,593nm,1.2s						
RAR	Rarotonga	18.49	63	P	P	08 41 28.3	-3.8
	comp=Z,290nm,0.9s,baz=224,slow=9.1,SNR=16						
RAR				S	Sn	08 44 42.8	-16
	comp=Z,61nm,0.7s,baz=270,slow=20,SNR=3.1						
RAR				LR	LR	08 49 10.3	
	comp=Z,35µm,18.3s,baz=244,slow=39						
RAR	Rarotonga	18.49	63	P	P	08 41 31.2	-1.0
RAR	Rarotonga	18.49	63	P	P	08 41 31.2	-1.0
RAR				pmax	pmax		
	comp=Z,593nm,1.2s						
RAR	Rarotonga	18.49	63	⇓P	P	08 41 30.0	-2.2
DVP	Devils Point	18.60	312	P	Pn	08 41 38.2	+4.5
SYZ	Scrubby Hill	18.77	210	P	Pn	08 41 35.7	+0.2
SYZ	Scrubby Hill	18.77	210	P	Pn	08 41 35.9	+0.4
WHZ	Wether Hill Ro	18.82	213	P	P	08 41 33.1	-2.6
DCZ	Deep Cove	18.90	216	P	Pn	08 41 38.0	+0.9
KOUNC	Koumac, New Ca	19.50	298	P	P	08 41 45.9	+1.4
KOUNC	Koumac, New Ca	19.50	298	⇑P	P	08 41 46.4	+1.9
APZ	The Paps	19.50	211	P	P	08 41 42.1	-1.0
LHI	Lord Howe Isla	20.19	262	P	Pn	08 41 53.6	+1.0
	comp=Z,0.0nmcomp=Z,327nm,1.0s						
LHI	Lord Howe Isla	20.19	262	⇑P	Pn	08 41 55.2	+2.5
VLAKA	Lakatoro	20.30	313	P	Pn	08 41 56.0	+2.0
SANVU	Saraoutou	20.93	314	P	P	08 41 58.3	-0.6
SANVU				IAmb	IAmb	08 42 16.3	
	comp=Z,365nm,1.2s						
SANVU	Saraoutou	20.93	314	P	Pn	08 42 02.5	+1.1
SANVU	Saraoutou	20.93	314	⇑P	P	08 41 57.9	-1.0
FUNA	Funafuti	22.53	351	P	P	08 42 15.1	-1.0
FUNA	Funafuti	22.53	351	P	P	08 42 18.6	+2.5
GC1S	Gold Coast 1 S	25.48	269	P	P	08 42 46.4	+2.1
TBI	Tubuai	25.88	80	eP	P	08 42 57.8	+10
	comp=Z,688nm,1.3s						
TBI				eS	S	08 47 19.5	+1.8
	comp=Z,379µm,26.0s						
TBI				eLR	LR	08 49 03.8	
	comp=Z,440µm,31.2s						
TBI				eLR	LR	08 49 07.0	
	comp=Z,79µm,30.8s						
NTLH	Newcastle Hard	26.31	258	P	P	08 42 53.0	+1.2
ARMA	Armidale	26.66	263	P	P	08 42 53.4	-1.7
ARMA				IAmb	IAmb	08 43 24.4	
	comp=Z,206nm,0.9s						
ARMA	Armidale	26.66	263	P	P	08 42 57.4	+2.3
	comp=Z,0.0nmcomp=Z,280nm,1.2s						
ARMA	Armidale	26.66	263	P	P	08 42 57.0	+1.9
ARMA	Armidale	26.66	263	⇑P	P	08 42 56.5	+1.5
RIV	Riverview	26.71	255	P	P	08 42 56.2	+0.9
	comp=Z,156nm,1.2s						
MGCD	Mangrove Creek	26.79	257	P	P	08 42 58.4	+2.4
	comp=Z,152nm,0.8s						
MGCD	Mangrove Creek	26.79	257	P	P	08 42 58.5	+2.4
WOLH	Wollongong Har	26.93	254	P	P	08 42 59.7	+2.4
SYDH	Sydney Hard Ro	27.06	256	P	P	08 43 00.7	+2.2
CNB	Canberra Magne	28.15	252	P	P	08 43 09.5	+1.1
	comp=Z,0.0nmcomp=Z,100nm,0.9s						
CNB	Canberra Magne	28.15	252	P	P	08 43 10.2	+1.8
EIDS	Eidsvold	28.34	273		P	08 43 09.8	-0.3
EIDS				IAmb	IAmb	08 43 28.5	
	comp=Z,111nm,0.8s						
EIDS	Eidsvold	28.34	273	P	P	08 43 10.3	+0.2
	comp=Z,0.0nmcomp=Z,174nm,1.2s						
EIDS	Eidsvold	28.34	273	P	P	08 43 11.8	+1.7
EIDS	Eidsvold	28.34	273	⇑P	P	08 43 10.2	+0.2
MILA	Mila	28.35	248	P	P	08 43 09.8	-0.3
	comp=Z,71nm,0.9s						
CAN	Canberra	28.45	252		P	08 43 11.9	+0.9
CAN	Canberra	28.45	252	P	P	08 43 11.6	+0.5
	comp=Z,0.0nmcomp=Z,99nm,1.0s						
CAN	Canberra	28.45	252	P	P	08 43 12.6	+1.6
CAN	Canberra	28.45	252	P	P	08 43 11.9	+0.9
CAN				pmax	pmax		
	comp=Z,90nm,1.0s						
CAN				MLR	MLR		
	comp=Z,37µm,19.0s						
CAN	Canberra	28.45	252	⇓P	P	08 43 12.4	+1.4
PAE	Paea	28.45	69	ePKP2	P	08 43 08.0	-3.1
	comp=Z,93nm,1.4s						
PAE				eS	S	08 47 55.5	-2.7
	comp=Z,3µm,24.2s						
PAE				eLR	LR	08 50 19.0	
	comp=Z,6µm,21.0s						
PPT2	Papeete2	28.49	69	ePKP2	P	08 43 13.7	+2.2
	comp=Z,180nm,1.4s						
PPT2				eS	S	08 48 01.1	+2.0
	comp=Z,79µm,24.8s						
PPT2				eLR	LR	08 50 10.7	
	comp=Z,52µm,32.5s						
PPT2				eLR	LR	08 50 10.8	
	comp=Z,81µm,31.0s						
PPT	Papeete	28.50	69	P	P	08 43 13.5	+1.9
	comp=Z,83nm,0.9s,baz=252,slow=20,SNR=5.1						
PPT				LR	LR	08 54 08.3	
	comp=Z,43µm,18.2s,baz=247,slow=36						
	comp=Z,83nm,0.9s						
TVO	Taravao	28.65	69	ePKP2	P	08 43 19.3	+6.4
	comp=Z,101nm,1.4s						
TVO				eS	S	08 47 59.5	-2.0
	comp=Z,3µm,24.7s						
TVO				eLR	LR	08 50 24.0	
	comp=Z,7µm,21.0s						
GD1S	Gladstone Soft	28.78	276	P	P	08 43 15.9	+1.9
YNG	Young	28.98	254	P	P	08 43 16.8	+1.1
	comp=Z,66nm,1.0s						
GLAD	Gladstone	29.62	241	P	P	08 43 22.1	+0.8
RMQ	Roma	30.00	270	P	P	08 43 09.7	-15
HNR	Honiara	30.09	311	LR	LR	08 53 25.3	
	comp=Z,20µm,20.3s,baz=146,slow=32						
ALEG	Aligegeo Malai	30.11	313	P	P	08 43 29.3	+3.4
CORO	Coronation Par	30.34	240	P	P	08 43 28.6	+1.0
TAU	Tasmania Unive	30.46	237	P	P	08 43 29.4	+0.7
TAU				IAmb	IAmb	08 44 03.2	
	comp=Z,207nm,1.5s						
TAU	Tasmania Unive	30.46	237	P	P	08 43 29.4	+0.7
TAU				pmax	pmax		
	comp=Z,207nm,1.5s						
MOO	Moorlands	30.47	238	P	P	08 43 29.4	+0.6
	comp=Z,0.0nmcomp=Z,115nm,1.4s						
MOO	Moorlands	30.47	238	P	P	08 43 30.8	+2.0
PMOR	Pomariorio Ree	31.27	66	eP	P	08 43 35.3	-0.8
	comp=Z,165nm,1.2s						
PMOR				eS	S	08 48 40.7	-1.9
	comp=Z,9µm,23.4s						
PMOR				eLR	LR	08 51 39.1	
	comp=Z,32µm,21.3s						
TOO	Toolangi	31.28	248		P	08 43 36.3	+0.2
TOO	Toolangi	31.28	248	P	P	08 43 36.5	+0.4
	comp=Z,0.0nmcomp=Z,50nm,1.0s						
TOO	Toolangi	31.28	248	P	P	08 43 36.3	+0.2
TOO				pmax	pmax		
	comp=Z,47nm,1.0s						
TOO	Toolangi	31.28	248	⇑P	P	08 43 36.7	+0.6
VAH	Vaihoa	31.35	67	eP	P	08 43 34.8	-2.0
	comp=Z,259nm,1.6s						
VAH				eS	S	08 48 42.4	-1.4
	comp=Z,6µm,23.3s						
VAH				eLR	LR	08 51 40.5	
	comp=Z,24µm,21.0s						
CMSA	Cobar Meteorol	31.52	259	P	P	08 43 38.8	+0.6
	comp=Z,0.0nmcomp=Z,310nm,1.4s						
CMSA	Cobar Meteorol	31.52	259	P	P	08 43 39.2	+1.0
MLBS	Spotswood, Mel	31.76	247	P	P	08 43 41.9	+1.7
GEXS	Deakin Univers	32.24	246	P	P	08 43 45.7	+1.2
QLP	Quilpie	33.86	268	P	P	08 43 58.9	+0.2
	comp=Z,0.0nmcomp=Z,353nm,0.9s						
QLP	Quilpie	33.86	268	P	P	08 43 59.7	+1.0
QLP	Quilpie	33.86	268	⇑P	P	08 43 58.7	0.0
ARPS	Mount Arapiles	34.21	249	P	P	08 44 01.8	+0.2
	comp=Z,191nm,0.9s						
ARPS	Mount Arapiles	34.21	249	P	P	08 44 02.7	+1.0
CTAO	Charters Tower	34.45	280		P	08 44 04.9	+1.0
CTAO				IAmb	IAmb	08 44 33.0	
	comp=Z,257nm,1.1s						
CTAO	Charters Tower	34.45	280	IAMs_20	IAMs_20	08 56 56.3	
	comp=Z,90µm,18.0s						
CTAO	Charters Tower	34.45	280	P	P	08 44 05.0	+1.0
CTAO	Charters Tower	34.45	280	P	P	08 44 04.9	+1.0
CTAO				pmax	pmax		
	comp=Z,257nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,90µm,18.0s						
CTAO	Charters Tower	34.45	280	⇑P	P	08 44 04.8	+0.8
STKA	Stephens Creek	34.92	258		P	08 44 08.3	+0.4
STKA	Stephens Creek	34.92	258	P	P	08 44 08.3	+0.4
	comp=Z,0.0nmcomp=Z,2µm,1.0s						
STKA	Stephens Creek	34.92	258	P	P	08 44 08.1	+0.2
	comp=Z,96nm,0.8s,baz=98,slow=12,SNR=136						
STKA				S	S	08 49 41.5	+2.4
	comp=Z,4.5nm,0.9s,baz=108,slow=19,SNR=1.5						
STKA				LR	LR	08 57 51.8	
	comp=Z,58µm,18.0s,baz=95,slow=36						
	comp=Z,96nm,0.8s						
STKA	Stephens Creek	34.92	258	P	P	08 44 08.6	+0.7
HTT	Hallett	36.91	254	P	P	08 44 24.9	0.0
	comp=Z,41nm,0.9s						
HTT	Hallett	36.91	254	P	P	08 44 25.1	+0.2
HTT	Hallett	36.91	254	⇓P	P	08 44 24.6	-0.4
MTSU	Mount Surprise	36.96	281	P	P	08 44 25.8	+0.3
	comp=Z,75nm,0.8s						
MTSU	Mount Surprise	36.96	281	P	P	08 44 26.2	+0.7
PTPS	Port Pirie	37.71	255	P	P	08 44 32.6	+0.9
XMAS	Kiritimati	37.88	34		P	08 44 33.0	-0.2
XMAS				IAmb	IAmb	08 44 55.6	
	comp=Z,317nm,1.1s						
XMAS	Kiritimati	37.88	34	P	P	08 44 35.8	+2.6
XMAS	Kiritimati	37.88	34	⇓P	P	08 44 36.6	+3.4
WHYH	Whyalla	38.08	255	P	P	08 44 36.1	+1.3
PMG	Port Moresby	39.35	295	LR	LR	08 58 27.5	
	comp=Z,17µm,19.8s,baz=125,slow=32						
PMG	Port Moresby	39.35	295	P	P	08 44 48.0	+2.3
PMG	Port Moresby	39.35	295	P	P	08 44 48.2	+2.5
BBOO	Buckleboo	39.38	255	P	P	08 44 44.5	-1.3
BBOO				IAmb	IAmb	08 45 12.1	
	comp=Z,372nm,1.5s						
BBOO	Buckleboo	39.38	255	P	P	08 44 44.7	-1.0
	comp=Z,0.0nmcomp=Z,133nm,1.4s						
BBOO	Buckleboo	39.38	255	P	P	08 44 44.8	-1.0
QIS	Mount Isa	39.92	274	P	P	08 44 49.8	-0.7
	comp=Z,0.0nmcomp=Z,79nm,1.0s						
QIS	Mount Isa	39.92	274	P	P	08 44 51.8	+1.4
COEN	Coen	39.97	286	P	P	08 44 50.6	-0.2
COEN	Coen	39.97	286	P	P	08 44 50.7	-0.2
	comp=Z,0.0nmcomp=Z,146nm,1.0s						
COEN	Coen	39.97	286	P	P	08 44 51.8	+1.0
COEN	Coen	39.97	286	⇑P	P	08 44 51.2	+0.4
TAOE	Nuku Hiva Isla	41.00	66	ePKP2	P	08 44 47.7	-12
	comp=Z,1µm,25.9s						
TAOE				eS	S	08 51 06.6	-5.1
	comp=Z,10µm,24.7s						
TAOE				eSS	SS	08 54 09.2	-4.6
	comp=Z,24µm,25.9s						
TAOE				eLR	LR	08 55 57.5	
	comp=Z,38µm,28.9s						
AS17	Alice Springs	43.58	267	P	P	08 45 19.9	-0.5
	comp=Z,133nm,0.8s						
AS01	Alice Springs	43.61	267	P	P	08 45 22.4	+1.8
AS31	Alice Springs	43.65	267	P	P	08 45 19.8	-1.2
AS31	Alice Springs	43.65	267	P	P	08 45 20.4	-0.5
	comp=Z,0.0nmcomp=Z,33nm,0.8s						
ASAR	Alice Springs	43.65	267	⇑P	P	08 45 19.2	-1.7
ASAR	Alice Springs	43.65	267	P	P	08 45 19.0	-1.9
	comp=Z,28nm,0.6s,baz=110,slow=7.9,SNR=358						
ASAR				PcP	PcP	08 47 07.0	-1.2
	comp=Z,19nm,0.7s,baz=108,slow=3.8,SNR=4.5						
ASAR				ScP	ScP	08 51 01.9	+2.4
	comp=Z,11nm,1.5s,baz=104,slow=4.6,SNR=4.9						
ASAR				LR	LR	09 03 38.2	
	comp=Z,64µm,18.5s,baz=104,slow=36						
	comp=Z,28nm,0.6s						
MANU	Manus Island	44.03	304	P	P	08 45 23.0	-1.0
WR9	Warramunga Arr	44.53	272	P	P	08 45 26.4	-1.6
WRAB	Tennant Creek	44.69	272	P	P	08 45 27.9	-1.4
WRAB				IAmb	IAmb	08 45 50.7	
	comp=Z,119nm,0.8s						
WRAB	Tennant Creek	44.69	272	deP	P	08 45 27.7	-1.5
WRAB				pmax	pmax		
	comp=Z,114nm,0.7s						
WRAB				MLR	MLR		
	comp=Z,86µm,17.0s						
WRA	Warramunga Arr	44.69	272	P	P	08 45 27.6	-1.7
WRA	Warramunga Arr	44.69	272	P	P	08 45 27.4	-1.9
	comp=Z,95nm,0.6s,baz=114,slow=8.0,SNR=274						
WRA				PcP	PcP	08 47 11.5	-0.3
	comp=Z,26nm,0.8s,baz=115,slow=3.1,SNR=2.7						
WRA				ScP	ScP	08 51 04.9	+1.1
	comp=Z,10nm,0.9s,baz=109,slow=4.6,SNR=6.5						
WRA				S	S	08 52 07.5	+1.7
	comp=Z,6.8nm,0.9s,baz=110,slow=15,SNR=5.0						
WRA				LR	LR	09 03 40.9	
	comp=Z,73µm,18.2s,baz=110,slow=36						
	comp=Z,95nm,0.6s						
FORT	Forrest	46.46	255	P	P	08 45 41.8	-1.4
FORT	Forrest	46.46	255	P	P	08 45 41.4	-1.8
	comp=Z,0.0nmcomp=Z,485nm,0.8s						
FORT	Forrest	46.46	255	P	P	08 45 43.8	+0.6
FORT	Forrest	46.46	255	⇓P	P	08 45 41.5	-1.7
SBA	Scott Base	47.55	185	P	P	08 45 53.3	+2.3
SBA	Scott Base	47.55	185	P	P	08 45 53.3	+2.3
SBA				pmax	pmax		
	comp=Z,241nm,1.3s						
SBA				MLR	MLR		
	comp=Z,19µm,18.0s						
VNDA	Vanda	47.62	186	P	P	08 45 53.6	+2.0
VNDA	Vanda	47.62	186	P	P	08 45 53.9	+2.3
	comp=Z,13nm,0.9s,baz=20,slow=5.3,SNR=16						
VNDA				S	S	08 52 53.4	+6.9
	comp=Z,1.2nm,0.8s,baz=84,slow=10,SNR=1.6						
VNDA				LR	LR	09 02 22.2	
	comp=Z,12µm,20.6s,baz=30,slow=32						
	comp=Z,13nm,0.9s						
WRKA	Warakurna	47.98	263	P	P	08 45 53.1	-2.1
	comp=Z,0.0nmcomp=Z,74nm,1.1s						
JAY	Jayapura	48.65	297	S	S	08 53 03.6	+1.1
	comp=Z,4.0nm,0.6s,baz=115,slow=14,SNR=1.7						
JAY				LR	LR	09 06 36.5	
	comp=Z,11µm,18.6s,baz=117,slow=36						
JAY	Jayapura	48.65	297	P	P	08 45 59.3	-1.1
	comp=Z,10µmcomp=Z,2µmcomp=Z,52nm,0.9s						
GENI	Genyem	49.01	297	P	P	08 46 05.0	+1.9
GENI	Genyem	49.01	297	P	P	08 46 01.9	-1.2
KDU	Kakadu	49.57	280	P	P	08 46 07.2	-0.2
	comp=Z,0.0nmcomp=Z,77nm,1.1s						
KDU	Kakadu	49.57	280	P	P	08 46 08.8	+1.4
SMPI	Sarmi	50.52	296	P	P	08 46 13.8	-0.8
	comp=Z,11µmcomp=Z,3µmcomp=Z,66nm,1.6s						
MTN	Manton Dam	50.63	279	P	P	08 46 13.8	-1.6
MTN				IAmb	IAmb	08 47 44.6	
	comp=Z,57nm,0.7s						
MTN	Manton Dam	50.63	279	P	P	08 46 13.9	-1.6
	comp=Z,0.0nmcomp=Z,87nm,1.2s						
MTN	Manton Dam	50.63	279	P	P	08 46 16.2	+0.8
MTN	Manton Dam	50.63	279	⇑P	P	08 46 14.0	-1.4
KNRA	Kununurra	51.32	274	P	P	08 46 19.6	-0.9
	comp=Z,0.0nmcomp=Z,107nm,0.9s						
FITZ	Fitzroy Crossi	52.93	270	P	P	08 46 31.8	-0.8
FITZ	Fitzroy Crossi	52.93	270	P	P	08 46 31.2	-1.4
FITZ	Fitzroy Crossi	52.93	270	S	S	08 54 01.7	-0.1
	comp=Z,4.3nm,0.9s,baz=120,slow=20,SNR=1.6						
FITZ				LR	LR	09 08 59.7	
	comp=Z,55µm,18.1s,baz=103,slow=36						
SAUI	Saumlaki	52.99	284	IAMs_20	IAMs_20	09 09 12.6	
	comp=Z,43µm,18.0s						
BAKI	Biak	53.04	295	P	P	08 46 35.0	+1.6
	comp=Z,11µmcomp=Z,4µmcomp=Z,118nm,1.0s						
HLP	Hilina Pali	54.25	26	P	P	08 46 42.5	+0.4
MWH	Mokuaweoweo	54.31	25	P	P	08 46 43.0	-0.2
PUH	Pauahi	54.35	26	P	P	08 46 42.5	-0.4
UWE	Uwekahuna	54.37	26	P	P	08 46 42.7	-0.4
BYL	Byron's Ledge	54.37	26	P	P	08 46 42.5	-0.6
BYL				IAmb	IAmb	08 46 48.8	
	comp=Z,213nm,1.1s						
POHA	Pohakuloa	54.59	25	P	P	08 46 44.6	-0.2
POHA	Pohakuloa	54.59	25	P	P	08 46 46.8	+2.0
KLBR	Kellerberrin	54.72	251	P	P	08 46 43.4	-2.1
	comp=Z,147nm,1.0s						
KLBR	Kellerberrin	54.72	251	P	P	08 46 45.2	-0.3
NWAO	Narrogin (SRO)	54.74	250	P	P	08 46 44.7	-1.0
	comp=Z,67nm,1.4s						
NWAO	Narrogin (SRO)	54.74	250	LR	LR	09 08 52.5	
	comp=Z,9µm,18.4s,baz=92,slow=35						
CASY	Casey	54.93	208	P	P	08 46 47.0	+0.5
CASY				IAmb	IAmb	08 46 56.4	
	comp=Z,121nm,0.8s						
CASY	Casey	54.93	208	IAMs_20	IAMs_20	09 10 02.6	
	comp=Z,28µm,18.0s						
CASY	Casey	54.93	208	⇑P	P	08 46 46.0	-0.5
KIP	Kipapa	55.27	22	P	P	08 46 49.7	+0.3
KIP				IAmb	IAmb	08 46 55.2	
	comp=Z,204nm,1.1s						
KIP	Kipapa	55.27	22	P	P	08 46 49.7	+0.3
KIP	Kipapa	55.27	22	P	P	08 46 50.1	+0.7
KIP	Kipapa	55.27	22	P	P	08 46 49.7	+0.3
KIP				pmax	pmax		
	comp=Z,204nm,1.1s						
KHLH	Kahului Airpor	55.31	24	P	P	08 46 49.5	-0.2
MEEK	Meekatharra	55.62	257	P	P	08 46 49.6	-2.6
	comp=Z,0.0nmcomp=Z,150nm,1.3s						
MEEK	Meekatharra	55.62	257	P	P	08 46 52.1	-0.1
MUN	Mundaring	55.85	250	P	P	08 46 53.3	-0.4
	comp=Z,41nm,1.3s						
MUN	Mundaring	55.85	250	P	P	08 46 55.0	+1.3
BLDU	Ballidu	55.87	252	P	P	08 46 51.7	-2.2
	comp=Z,45nm,1.1s						
BLDU	Ballidu	55.87	252	P	P	08 46 55.1	+1.2
PSAC2	Pilbara Seismi	56.43	263	P	P	08 46 55.6	-2.3
	comp=Z,33nm,1.0s						
PSAB3	Pilbara Seismi	56.46	263	P	P	08 46 56.1	-2.1
	comp=Z,46nm,1.3s						
PSA00	Pilbara Seismi	56.47	263	P	P	08 46 56.1	-2.2
PSA00	Pilbara Seismi	56.47	263	P	P	08 46 56.2	-2.1
	comp=Z,32nm,1.0s						
PSA00	Pilbara Seismi	56.47	263	P	P	08 46 59.7	+1.4
MBWA	Marble Bar	56.73	264	P	P	08 46 58.0	-2.1
MBWA	Marble Bar	56.73	264	P	P	08 46 57.4	-2.8
	comp=Z,0.0nmcomp=Z,54nm,1.0s						
MBWA	Marble Bar	56.73	264	P	P	08 47 00.3	+0.2
MBWA	Marble Bar	56.73	264	⇑P	P	08 46 58.0	-2.1
MORW	Morawa	56.93	254	P	P	08 46 59.6	-1.8
MORW	Morawa	56.93	254	P	P	08 46 59.3	-2.2
	comp=Z,0.0nmcomp=Z,73nm,1.0s						
MORW	Morawa	56.93	254	P	P	08 47 02.8	+1.4
MORW	Morawa	56.93	254	⇑P	P	08 47 00.6	-0.9
SWI	Sorong	57.07	291	P	P	08 47 01.8	-0.8
	comp=Z,10µmcomp=Z,3µmcomp=Z,80nm,0.9s						
GUMO	Guam	57.27	315	P	P	08 47 01.4	-2.4
	comp=Z,79nm,0.8s,baz=153,slow=13,SNR=4.9						
GUMO				LR	LR	09 09 56.3	
	comp=Z,11µm,19.0s,baz=136,slow=34						
	comp=Z,79nm,0.8s						
SOEI	Soe	58.00	278	P	P	08 47 08.8	-0.4
SOEI	Soe	58.00	278	P	P	08 47 08.5	-0.8
SOEI				IAmb	IAmb	08 47 33.9	
	comp=Z,230nm,1.2s						
SOEI	Soe	58.00	278	P	P	08 47 11.2	+1.9
SOEI	Soe	58.00	278	P	P	08 47 10.1	+0.8
	comp=Z,3µmcomp=Z,119nm,1.3s						
SOEI	Soe	58.00	278	⇑P	P	08 47 10.1	+0.8
BATI	Baumata	58.29	277	LR	LR	09 12 49.1	
	comp=Z,91µm,18.4s,baz=130,slow=37						
MIDW	Midway	58.83	360	IAMs_20	IAMs_20	09 12 34.5	
	comp=Z,28µm,18.0s						
QSPA	South Pole Qui	59.17	180	P	P	08 47 17.6	+0.8
QSPA	South Pole Qui	59.17	180	P	P	08 47 18.5	+1.8
	comp=Z,110nm,1.0s,baz=56,slow=2.1,SNR=111						
QSPA				S	S	08 55 31.8	+7.9
	comp=Z,2.0nm,0.9s,baz=90,slow=5.1,SNR=1.5						
QSPA				LR	LR	09 12 52.5	
	comp=Z,14µm,18.0s,baz=42,slow=36						
	comp=Z,110nm,1.0s						
MMRI	Maumere	60.29	278	P	P	08 47 24.2	-0.8
MMRI				IAmb	IAmb	08 47 30.5	
	comp=Z,157nm,1.0s						
MMRI				IAMs_20	IAMs_20	09 14 39.1	
	comp=Z,25µm,18.0s						
MMRI	Maumere	60.29	278	P	P	08 47 25.6	+0.6
MMRI	Maumere	60.29	278	P	P	08 47 24.1	-0.9
	comp=Z,9µmcomp=Z,5µmcomp=Z,208nm,1.6s						
SANI	Sanana	60.67	287	P	P	08 47 26.6	-1.0
SANI	Sanana	60.67	287	P	P	08 47 28.4	+0.8
	comp=Z,9µmcomp=Z,3µmcomp=Z,69nm,1.4s						
EDFI	Ende, Flores	60.70	278	P	P	08 47 26.4	-1.5
	comp=Z,2µmcomp=Z,56nm,1.0s						
GIRL	Giralia	60.81	260	P	P	08 47 27.6	-0.9
GIRL	Giralia	60.81	260	P	P	08 47 27.8	-0.7
	comp=Z,0.0nmcomp=Z,214nm,1.3s						
GIRL	Giralia	60.81	260	P	P	08 47 30.7	+2.2
GIRL	Giralia	60.81	260	⇑P	P	08 47 28.1	-0.4
BASI	Baing, Sumba	60.91	276	P	P	08 47 29.0	-0.3
WSI	Waingapu	61.43	276	P	P	08 47 32.8	+0.1
WBSI	Waikabubak, Su	62.22	275	P	P	08 47 38.9	+0.8
	comp=Z,8µmcomp=Z,3µmcomp=Z,106nm,0.9s						
LUWI	Luwuk	63.88	286	P	P	08 47 48.7	-0.5
LUWI	Luwuk	63.88	286	P	P	08 47 47.8	-1.4
LUWI				IAmb	IAmb	08 48 32.6	
	comp=Z,168nm,1.2s						
LUWI	Luwuk	63.88	286	P	P	08 47 50.3	+1.1
LUWI	Luwuk	63.88	286	P	P	08 47 50.1	+0.9
	comp=Z,10µmcomp=Z,3µmcomp=Z,110nm,1.2s						
PLAI	Plampang	64.00	275	P	P	08 47 50.5	+0.6
PLAI	Plampang	64.00	275	P	P	08 47 48.8	-1.1
	comp=Z,9µmcomp=Z,3µmcomp=Z,145nm,0.8s						
KAPI	Kappang	64.27	280	P	P	08 47 51.5	-0.1
KAPI				IAmb	IAmb	08 48 16.4	
	comp=Z,103nm,1.4s						
KAPI	Kappang	64.27	280	LR	LR	09 15 46.4	
	comp=Z,9µm,18.8s,baz=118,slow=36						
KAPI	Kappang	64.27	280	P	P	08 47 53.4	+1.7
KAPI	Kappang	64.27	280	ceP	P	08 47 51.6	-0.1
KAPI				pmax	pmax		
	comp=Z,88nm,1.5s						
KAPI				MLR	MLR		
	comp=Z,23µm,17.0s						

BNSI	Bone	64.29	281	P	P	08 47 52.0	+0.2
	comp=Z,8µmcomp=Z,3µmcomp=Z,76nm,1.6s						
SPSI	Sidrap Palu	64.81	281	P	P	08 47 54.1	-1.1
TWSI	Taliwang, Sumb	64.81	275	P	P	08 47 54.5	-0.7
TTSI	Tana Toraja	65.25	282	P	P	08 47 58.4	+0.3
DAV	Davao City (W)	66.37	295	LR	LR	09 16 05.9	
	comp=Z,3µm,19.7s,baz=130,slow=35						
PCI	Palu	66.40	284	P	P	08 48 06.4	+0.9
	comp=Z,9µmcomp=Z,4µmcomp=Z,135nm,1.3s						
SRBI	Singaraja	66.56	275	P	P	08 48 05.6	-1.0
	comp=Z,4µmcomp=Z,137nm,0.8s						
MPSI	Mapaga	67.03	285	P	P	08 48 06.9	-2.6
	comp=Z,8µmcomp=Z,3µmcomp=Z,41nm,0.9s						
JAGI	Jajag, Banyuwa	67.28	274	P	P	08 48 08.9	-2.2
JAGI				IAmb	IAmb	08 48 20.0	
	comp=Z,139nm,1.1s						
JAGI				IAMs_20	IAMs_20	09 17 24.5	
	comp=Z,20µm,20.0s						
JAGI	Jajag, Banyuwa	67.28	274	P	P	08 48 12.2	+1.0
JAGI	Jajag, Banyuwa	67.28	274	P	P	08 48 08.8	-2.4
	comp=Z,7µmcomp=Z,3µmcomp=Z,123nm,0.9s						
JAGI	Jajag, Banyuwa	67.28	274	⇑P	P	08 48 09.6	-1.5
GMJI	Gumukmas	67.99	274	P	P	08 48 14.4	-1.2
	comp=Z,3µmcomp=Z,123nm,0.9s						
KMMI	Kalianget	68.15	275	P	P	08 48 17.0	+0.4
	comp=Z,9µmcomp=Z,4µmcomp=Z,158nm,1.4s						
SMAI	San Martin Ant	68.72	158	P	P	08 48 19.7	+0.4
SMAI				IAmb	IAmb	08 48 45.3	
	comp=Z,146nm,1.0s						
BELA	Belgrano 2	69.17	172	P	P	08 48 22.0	-0.1
BELA				IAmb	IAmb	08 48 36.6	
	comp=Z,162nm,1.3s						
PCJI	Pacitan	69.97	272	P	P	08 48 26.6	-1.3
NGJI	Ngawi	70.14	273	P	P	08 48 30.3	+1.3
WOJI	Wonogiri, Jawa	70.36	273	P	P	08 48 29.4	-0.9
	comp=Z,9µmcomp=Z,274nm,1.4s						
UGM	Wanagama	70.67	272	P	P	08 48 32.5	+0.2
MYLDM	Lahad Datu	70.91	288	P	P	08 48 35.5	+1.9
PMSA	Palmer Station	71.54	155	LR	LR	09 15 54.3	
	comp=Z,9µm,18.4s,baz=243,slow=32						
MAW	Mawson	72.01	200	P	P	08 48 38.5	-0.8
	comp=Z,17nm,1.2s						
MAW	Mawson	72.01	200	P	P	08 48 41.1	+1.7
	comp=Z,20nm,0.9s,baz=122,slow=9.5,SNR=9.1						
MAW				LR	LR	09 20 47.8	
	comp=Z,28µm,18.3s,baz=114,slow=36						
	comp=Z,20nm,0.9s						
CMJI	Cimerak	72.52	271	P	P	08 48 41.1	-2.2
KKM	Kota Kinabalu	73.27	288	P	P	08 48 45.9	-2.0
KKM	Kota Kinabalu	73.27	288	P	P	08 48 50.8	+2.9
BBJI	Bungbulang	73.36	271	P	P	08 48 48.3	-0.2
XMI	Christmas Isla	73.58	268	P	P	08 48 51.0	+1.3
XMIS	Christmas Isla	73.60	267	P	P	08 48 51.1	+1.3
LEM	Lembang	73.71	272	LR	LR	09 23 04.3	
	comp=Z,20µm,18.6s,baz=114,slow=37						
CNJI	Cibinong	73.89	271	P	P	08 48 50.8	-0.6
	comp=Z,2µmcomp=Z,81nm,1.0s						
STKI	Sintang	73.95	280	P	P	08 48 50.8	-1.0
TGY	Tagaytay City	74.28	297	P	P	08 48 53.1	-0.5
	comp=Z,116nm,0.3s,baz=114,slow=20,SNR=3.6						
TGY				LR	LR	09 18 23.9	
	comp=Z,4µm,21.0s,baz=118,slow=33						
MG03	Isla Dawson	74.67	144	P	P	08 48 55.8	+0.4
MG03				IAmb	IAmb	08 49 25.9	
	comp=Z,345nm,1.9s						
MG05	Puerto Natales	74.73	141	P	P	08 48 56.2	+0.4
ESPZ	Base Esperanza	74.85	156	P	P	08 48 56.2	0.0
USHA	Ushuaia	75.15	146	LR	LR	09 14 44.8	
	comp=Z,6µm,21.9s,baz=232,slow=30						
CGJI	Cibinong	75.47	271	P	P	08 48 58.1	-2.5
	comp=Z,132nm,1.2s						
MG01	Puerto William	75.49	146	P	P	08 49 00.9	+0.9
JHJ2	Mitsune	75.49	324	P	P	08 48 58.6	-1.6
JHJ2	Mitsune	75.49	324	P	P	08 49 02.4	+2.2
KSM	Kuching	75.68	281	P	P	08 49 00.0	-1.8
KSM	Kuching	75.68	281	P	P	08 49 03.1	+1.2
TPI	Tanjungpandan	75.73	275	P	P	08 49 03.7	+1.5
	comp=Z,8µmcomp=Z,2µmcomp=Z,50nm,1.3s						
MG02	Cerro Sombrero	75.87	143	P	P	08 49 03.4	+1.1
SYO	Syowa Base	76.72	193	⇑eP	P	08 49 06.1	-0.7
SYO	Syowa Base	76.72	193	⇑ipP	pP	08 49 10.0	+0.9
SYO	Syowa Base	76.72	193	⇓isP	sP	08 49 12.6	+2.7
AY03	Cochrane	76.97	137	P	P	08 49 09.4	+0.8
AY03				IAmb	IAmb	08 49 13.3	
	comp=Z,139nm,1.4s						
KASI	Kota Agung	77.04	271	P	P	08 49 08.7	-0.9
TROLL	Troll, Antarti	77.34	180	⇑P	P	08 49 10.5	+0.1
	comp=Z,2µm,0.8s						
TROLL				⇓S	S	08 59 00.9	+0.8
PPBI	Pangkal Pinang	77.34	275	P	P	08 49 09.6	-1.6
JOW	Kunigami	77.45	312	P	P	08 49 09.2	-2.3
	comp=Z,43nm,0.8s,baz=137,slow=19,SNR=6.5						
JOW				LR	LR	09 18 42.5	
	comp=Z,6µm,21.2s,baz=136,slow=32						
	comp=Z,43nm,0.8s						
JSG	Sagara	77.55	324	P	P	08 49 11.2	-0.7
JSG	Sagara	77.55	324	P	P	08 49 13.4	+1.5
SNAA	Sanae	77.60	178	⇑P	P	08 49 12.1	+0.2
	comp=Z,1µm,1.2s						
SNAA				⇓S	S	08 59 03.8	+1.0
SNAA	Sanae	77.60	178	P	P	08 49 12.1	+0.2
SNAA				IAmb	IAmb	08 49 26.2	
	comp=Z,177nm,1.4s						
SNAA	Sanae	77.60	178	P	P	08 49 12.0	+0.2
	comp=Z,20nm,0.8s,baz=194,slow=13,SNR=44						
SNAA				S	S	08 59 08.4	+5.5
	comp=Z,1.7nm,1.1s,baz=180,slow=20,SNR=1.8						
SNAA				LR	LR	09 22 32.1	
	comp=Z,6µm,18.6s,baz=194,slow=35						
	comp=Z,20nm,0.8s						
VNA3	Neumayer Olymp	77.73	176	⇑P	P	08 49 12.5	0.0
	comp=Z,113nm,0.8s						
VNA3				⇓S	S	08 59 03.2	-0.9
MDSI	Maura Dua	77.83	272	P	P	08 49 11.0	-3.0
	comp=Z,6µmcomp=Z,3µmcomp=Z,163nm,1.2s						
COYC	Coyhaique	78.15	136	P	P	08 49 16.1	+0.8
COYC				IAmb	IAmb	08 49 40.3	
	comp=Z,108nm,1.0s						
VNA2	Neumayer--Watz	78.17	177	⇑P	P	08 49 15.3	+0.4
	comp=Z,73nm,0.7s,baz=175,slow=5.2						
VNA2				⇓S	S	08 59 08.7	-0.1
	baz=277,slow=0.0						
VNA1	Neumayer--Stat	78.40	176	⇑P	P	08 49 16.6	+0.5
	comp=Z,133nm,1.2s						
INU	Inuyama	78.67	323	P	P	08 49 17.3	-0.8
INU				IAmb	IAmb	08 49 32.2	
	comp=Z,80nm,1.0s						
INU	Inuyama	78.67	323	P	P	08 49 19.2	+1.1
JGF	Kuroka	78.70	324	P	P	08 49 16.1	-2.1
JGF	Kuroka	78.70	324	P	P	08 49 19.3	+1.0
JMM	Marumori	78.83	327	P	P	08 49 18.2	-0.6
JMM	Marumori	78.83	327	P	P	08 49 21.5	+2.6
MJAR	Matsushiro Arr	79.01	325	P	P	08 49 18.1	-1.8
MJAR	Matsushiro Arr	79.01	325	P	P	08 49 17.6	-2.4
	comp=Z,29nm,0.9s,baz=161,slow=5.9,SNR=25						
MJAR				S	S	08 59 19.0	+0.4
	comp=Z,1.1nm,0.7s,baz=106,slow=18,SNR=2.2						
MJAR				LR	LR	09 20 05.6	
	comp=Z,5µm,21.4s,baz=131,slow=33						
	comp=Z,29nm,0.9s						
MAJO	Matsushiro	79.01	325	P	P	08 49 18.7	-1.3
MAJO				IAmb	IAmb	08 49 49.7	
	comp=Z,82nm,1.2s						
MAJO	Matsushiro	79.01	325	P	P	08 49 20.2	+0.2
MAJO	Matsushiro	79.01	325	P	P	08 49 18.7	-1.3
MAJO				pmax	pmax		
	comp=Z,83nm,1.3s						
MJB9	Matsu-Tunnel	79.02	325	P	P	08 49 19.4	-0.6
JMN	Monobe	79.10	320	P	P	08 49 19.6	-1.0
JMN	Monobe	79.10	320	P	P	08 49 23.1	+2.5
KSI	Kapahiang	79.62	272	P	P	08 49 23.4	-0.5
TWGBT	Beinan	79.63	304	P	P	08 49 25.5	+1.9
H03S2	Juan Fernandez	79.69	123	T	T	10 17 14.2	
	baz=239,slow=74,SNR=6.2						
H03S1	Juan Fernandez	79.70	123	T	T	10 17 06.2	
	baz=239,slow=74,SNR=7.3						
H03S3	Juan Fernandez	79.71	123	T	T	10 17 12.4	
	baz=239,slow=74,SNR=7.4						
YULB	Yu-li	79.84	305	P	P	08 49 23.4	-1.4
YULB	Yu-li	79.84	305	P	P	08 49 27.0	+2.2
H03N3	Juan Fernandez	79.88	123	T	T	10 17 26.7	
	baz=254,slow=71,SNR=4.2						
H03N2	Juan Fernandez	79.89	123	T	T	10 17 26.2	
	baz=254,slow=71,SNR=5.0						
H03N1	Juan Fernandez	79.90	123	T	T	10 17 23.5	
	baz=254,slow=71,SNR=5.9						
PAF	Port-aux-Franc	80.07	218	IAMs_20	IAMs_20	09 21 48.0	
	comp=Z,16µm,18.0s						
JSD	Sado	80.17	326	P	P	08 49 27.3	+1.1
TPUB	Ta-pu	80.26	305	P	P	08 49 25.1	-1.9
TPUB				IAmb	IAmb	08 49 36.1	
	comp=Z,77nm,0.9s						
TPUB	Ta-pu	80.26	305	P	P	08 49 28.0	+1.0
SSLB	Suanglung	80.34	305	P	P	08 49 24.1	-3.4
SSLB				IAmb	IAmb	08 49 43.2	
	comp=Z,52nm,0.7s						
SSLB	Suanglung	80.34	305	P	P	08 49 27.1	-0.4
JNU	Nakatsue	80.34	318	P	P	08 49 25.6	-1.7
JNU				IAmb	IAmb	08 49 41.4	
	comp=Z,70nm,1.0s						
JNU	Nakatsue	80.34	318	P	P	08 49 25.8	-1.4
	comp=Z,25nm,0.8s,baz=115,slow=2.3,SNR=13						
JNU				LR	LR	09 20 40.5	
	comp=Z,3µm,21.7s,baz=112,slow=32						
	comp=Z,25nm,0.8s						
JNU	Nakatsue	80.34	318	P	P	08 49 29.1	+1.8
LR05	Currie	81.07	132	P	P	08 49 31.1	-0.2
LR05				IAmb	IAmb	08 49 36.6	
	comp=Z,204nm,1.3s						
JTM	Tenmabayashi	81.08	329	P	P	08 49 33.1	+2.1
ERM	Erimo	81.21	331	P	P	08 49 31.8	+0.2
ERM				IAmb	IAmb	08 49 37.8	
	comp=Z,79nm,0.8s						
ERM	Erimo	81.21	331	P	P	08 49 33.0	+1.4
ERM	Erimo	81.21	331	*ce*P	P	08 49 31.8	+0.2
ERM				pmax	pmax		
	comp=Z,91nm,0.8s						
ERM				MLR	MLR		
	comp=Z,11µm,19.0s						
JEM	Erimo	81.21	331	P	P	08 49 33.2	+1.6
PLCA	Paso Flores	81.72	133	P	P	08 49 35.6	+0.8
	comp=Z,27nm,1.0s,baz=236,slow=7.4,SNR=39						
PLCA				S	S	08 59 51.8	+4.3
	comp=Z,1.9nm,1.1s,baz=221,slow=21,SNR=1.4						
PLCA				LR	LR	09 19 38.0	
	comp=Z,7µm,18.6s,baz=243,slow=31						
	comp=Z,27nm,1.0s						
PLCA	Paso Flores	81.72	133	*e*P	P	08 49 35.0	+0.2
YUK	Yuzh-Kuril'sk	81.84	334	*e*P	P	08 49 32.7	-2.2
YUK				*e*S	S	08 59 44.7	-3.2
YUK				pmax	pmax		
	comp=Z,146nm,1.0s						
YUK				pmax	pmax		
	comp=N,60nm,1.1s						
AMKA	Amchitka	82.01	358	P	P	08 49 34.9	-0.8
EFI	East Falkland	82.03	147	P	P	08 49 37.0	+0.9
EFI	East Falkland	82.03	147	⇑*e*P	P	08 49 37.7	+1.6
EFI				pmax	pmax		
	comp=Z,437nm,2.5s						
EFI				MLR	MLR		
	comp=Z,6µm,17.0s						
KUR	Kuril'sk	82.15	336	*c i*P	P	08 49 36.1	-0.4
KUR				*e*		08 52 48.3	
KUR				*e*S	SKSac	08 59 52.3	-4.2
KUR				pmax	pmax		
	comp=Z,3µm,8.8s						
KUR				MLR	MLR		
	comp=N,17µm,17.0s						
KUR				MLR	MLR		
	comp=Z,15µm,17.0s						
KIWB	Kanaga Island	82.44	0	P	P	08 49 37.3	-0.6
ADK	Adak	82.47	0	P	P	08 49 37.7	-0.3
ADK	Adak	82.47	0	P	P	08 49 38.8	+0.8
ADK	Adak	82.47	0	P	P	08 49 37.7	-0.3
ADK				pmax	pmax		
	comp=Z,181nm,0.9s						
ADK				MLR	MLR		
	comp=Z,13µm,20.0s						
QZH	Quanzhou	82.73	305	P	P	08 49 40.8	+0.7
QZH				S	SKSac	08 59 57.4	-4.0
QZH				pmax	pmax		
	comp=Z,3µm,9.6s						
QZH				LR	LR		
	comp=Z,3µm,17.5s						
QZH				LR	LR		
	comp=Z,5µm,20.1s						
QZH				LR	LR		
	comp=Z,6µm,19.7s						
ATKA	Atka Island	82.83	2	P	P	08 49 39.1	-0.8
ATKA	Atka Island	82.83	2	P	P	08 49 41.2	+1.3
DLV	Lat	82.87	288	P	P	08 49 42.9	+1.6
BKNI	Bangkinang	82.98	275	P	P	08 49 40.6	-1.1
BKNI	Bangkinang	82.98	275	P	P	08 49 39.5	-2.2
BKNI				IAmb	IAmb	08 50 09.2	
	comp=Z,137nm,1.0s						
BKNI				IAMs_20	IAMs_20	09 29 24.5	
	comp=Z,19µm,19.0s						
PPI	Padang Panjang	83.13	274	P	P	08 49 44.0	+1.5
	comp=Z,6µmcomp=Z,2µmcomp=Z,26nm,0.5s						
JKA	Kamikawa-asahi	83.18	332	IAMs_20	IAMs_20	09 27 42.1	
	comp=Z,14µm,18.0s						
ASAJ	Asahikawa	83.18	332	P	P	08 49 42.2	+0.3
	comp=Z,68nm,0.7s,baz=194,slow=12,SNR=25						
ASAJ				S	S	09 00 05.6	+4.0
	comp=Z,1.0nm,0.3s,baz=195,slow=20,SNR=1.6						
ASAJ				LR	LR	09 21 54.0	
	comp=Z,13µm,21.0s,baz=170,slow=32						
	comp=Z,68nm,0.7s						
SHEM	Shemya Is, Ala	83.65	355	P	P	08 49 43.7	-0.4
	comp=Z,63nm,0.9s,baz=92,slow=18,SNR=13						
SHEM				S	S	09 00 07.0	+1.1
	comp=Z,2.3nm,0.3s,baz=226,slow=18,SNR=1.4						
SHEM				LR	LR	09 24 11.6	
	comp=Z,10µm,18.4s,baz=174,slow=34						
	comp=Z,63nm,0.9s						
SMY	Shemya	83.65	355	IAMs_20	IAMs_20	09 23 51.5	
	comp=Z,16µm,20.0s						
SMY	Shemya	83.65	355	P	P	08 49 45.5	+1.4
NIKH	Nikolski High	83.88	5	P	P	08 49 46.4	+1.1
NIKH	Nikolski High	83.88	5	P	P	08 49 43.9	-1.5
	baz=187						
NIKH				S	S	09 00 07.7	-0.6
	baz=187						
ML02	Panimavida	83.91	128	P	P	08 49 46.1	-0.1
ML02				IAmb	IAmb	08 49 54.6	
	comp=Z,87nm,1.0s						
LPIG	La Paz	84.33	58	S	S	09 00 15.5	+1.4
	comp=Z,8.6nm,0.6s,baz=197,slow=19,SNR=2.2						
LPIG				LR	LR	09 22 04.8	
	comp=Z,33µm,18.1s,baz=225,slow=32						
MNSI	Mandailing Nat	84.47	274	P	P	08 49 49.2	-0.1
	comp=Z,4µmcomp=Z,49nm,0.7s						
SKR	Severo-Kuril's	84.59	343	*c i*P	P	08 49 49.5	+0.6
SKR				*i* S	S	09 00 16.7	+1.3
SKR				pmax	pmax		
	comp=Z,2µm,7.7s						
SKR				smax	smax		
	comp=E,6µm,12.2s						
SKR				smax	smax		
	comp=N,4µm,10.8s						
SKR				MLR	MLR		
	comp=Z,7µm,19.0s						
TJN	Taejon	84.68	318	P	P	08 49 51.5	+1.7
TJN	Taejon	84.68	318	*ce*P	P	08 49 49.1	-0.7
RAMR	Ramage Ranch	84.84	43	IAMs_20	IAMs_20	09 22 30.3	
	comp=Z,21µm,19.0s						
CCX	Cicese	84.88	48	P	P	08 49 51.5	+0.6
CCX				IAmb	IAmb	08 49 57.6	
	comp=Z,196nm,1.9s						
BO02	Sierra Bellavi	84.89	128	P	P	08 49 50.7	-0.6
SSE	Sheshan	84.89	311	P	P	08 49 51.8	+0.8
SSE				S	S	09 00 21.4	+2.1
SSE				pmax	pmax		
	comp=Z,13nm,0.7s						
SSE				pmax	pmax		
	comp=Z,1µm,9.0s						
SSE				LR	LR		
	comp=Z,1µm,22.7s						
SSE				LR	LR		
	comp=Z,1µm,22.2s						
VA05	Santo Domingo	84.95	126	P	P	08 49 50.9	-0.6
VA05				IAmb	IAmb	08 49 55.0	
	comp=Z,190nm,1.6s						
UNV	Unalaska Valle	84.95	6	P	P	08 49 52.6	+1.9
UNV	Unalaska Valle	84.95	6	P	P	08 49 49.8	-0.9
	baz=189						
UNV				S	S	09 00 18.8	-0.1
	baz=189						
TJX	Tijuana	85.05	47	IAMs_20	IAMs_20	09 25 43.7	
	comp=Z,23µm,18.0s						
KSRS	Korea Array	85.13	319	P	P	08 49 51.4	-0.6
	comp=Z,14nm,0.7s,baz=139,slow=5.2,SNR=28						
KSRS				LR	LR	09 25 41.3	
	comp=Z,1820µm,19.1s,baz=130,slow=34						
	comp=Z,14nm,0.7s						
IPM	Ipoh	85.13	278	P	P	08 49 54.2	+1.5
KSAR	Wonju Array Be	85.14	319	P	P	08 49 51.6	-0.5
KSAR	Wonju Array Be	85.14	319	P	P	08 49 51.6	-0.5
KS19	Wonju Array Si	85.19	319	P	P	08 49 51.7	-0.7
KS19				IAmb	IAmb	08 50 08.9	
	comp=Z,50nm,1.2s						
BCW	Bitter Crk WRg	85.23	44	IAMs_20	IAMs_20	09 28 17.0	
	comp=Z,17µm,18.0s						
CPE	Camp Elliot	85.27	47	IAMs_20	IAMs_20	09 25 50.0	
	comp=Z,21µm,18.0s						
PMPB	Monarch Peak	85.28	43	P	P	08 49 54.4	+1.5
TKX	Tecate	85.37	48	P	P	08 49 53.1	-0.3
TKX				IAmb	IAmb	08 50 07.8	
	comp=Z,183nm,1.8s						
TKX				IAMs_20	IAMs_20	09 25 53.2	
	comp=Z,23µm,18.0s						
BBGB	Big Mountain B	85.40	42	P	P	08 49 54.4	+0.9
GZH	Guangzhou	85.42	300	P	P	08 49 53.0	-0.8
GZH				S	S	09 00 25.1	+0.2
GZH				LR	LR		
	comp=Z,2µm,15.9s						
GZH				LR	LR		
	comp=Z,4µm,20.4s						
GZH				LR	LR		
	comp=Z,6µm,20.4s						
PASC	Pasadena Art C	85.45	46	P	P	08 49 54.0	+0.3
PASC				IAmb	IAmb	08 50 11.3	
	comp=Z,52nm,1.1s						
PASC				IAMs_20	IAMs_20	09 27 55.9	
	comp=Z,18µm,18.0s						
YSS	Yuzhno-Sakhali	85.48	334	P	P	08 49 53.7	+0.2
YSS				IAMs_20	IAMs_20	09 23 39.8	
	comp=Z,14µm,21.0s						
YSS	Yuzhno-Sakhali	85.48	334	P	P	08 49 55.8	+2.3
YSS	Yuzhno-Sakhali	85.48	334	*c i*P	P	08 49 54.7	+1.2
YSS				pmax	pmax		
	comp=Z,114nm,0.8s						
SFX	San Felipe	85.51	50	IAMs_20	IAMs_20	09 24 13.2	
	comp=Z,22µm,18.0s						
ELS	Elsinore Mount	85.57	46	IAMs_20	IAMs_20	09 23 59.1	
	comp=Z,18µm,18.0s						
QIZ	Qiongzhong	85.74	295	P	P	08 49 56.3	+0.8
QIZ				S	S	09 00 26.0	-2.3
QIZ				SS	SS	09 05 58.4	-7.1
QIZ				pmax	pmax		
	comp=Z,2µm,8.6s						
QIZ				LR	LR		
	comp=Z,2µm,15.1s						
QIZ				LR	LR		
	comp=Z,4µm,14.4s						
MT03	Universidad Ad	85.80	127	P	P	08 49 55.1	-0.8
MT03				IAmb	IAmb	08 50 28.9	
	comp=Z,95nm,1.1s						
LMEL	Las Melosas	85.81	127	P	P	08 49 56.2	+0.1
LMEL				IAmb	IAmb	08 50 07.2	
	comp=Z,165nm,1.4s						
MT16	CCHEN	85.83	127	P	P	08 49 56.0	0.0
MT16				IAmb	IAmb	08 50 23.6	
	comp=Z,117nm,1.1s						
KULM	Kulim	85.87	279	P	P	08 49 55.4	-1.0
KULM				IAmb	IAmb	08 50 02.5	
	comp=Z,143nm,1.6s						
KULM	Kulim	85.87	279	P	P	08 49 56.6	+0.3
INCN	Inchon	85.88	319	P	P	08 49 55.9	+0.1
INCN				IAmb	IAmb	08 50 00.2	
	comp=Z,34nm,0.7s						
INCN	Inchon	85.88	319	P	P	08 49 57.0	+1.2
INCN				S	SKSac	09 00 22.4	+1.1
INCN	Inchon	85.88	319	P	P	08 49 58.4	+2.6
INCN	Inchon	85.88	319	P	P	08 49 55.9	+0.1
INCN				pmax	pmax		
	comp=Z,34nm,0.7s						
INCN				MLR	MLR		
	comp=Z,4µm,18.0s						
HOPS	Hopland Field	85.96	39	P	P	08 49 56.1	-0.1
RPSI	Rantau Prapat	86.00	276	P	P	08 49 54.7	-2.3
RPSI				IAmb	IAmb	08 50 02.9	
	comp=Z,78nm,1.2s						
RPSI				IAMs_20	IAMs_20	09 29 20.7	
	comp=Z,14µm,20.0s						
PSI	Prapat	86.06	276	LR	LR	09 29 31.8	
	comp=Z,13µm,19.7s,baz=128,slow=36						
PSI	Prapat	86.06	276	P	P	08 49 54.7	-2.7
PSI				pmax	pmax		
	comp=Z,78nm,1.2s						
PSI				MLR	MLR		
	comp=Z,14µm,20.0s						
PFO	Pinyon Flats O	86.15	47	P	P	08 49 58.4	+1.0
PFO				IAmb	IAmb	08 50 11.3	
	comp=Z,122nm,1.6s						
PFO	Pinyon Flats O	86.15	47	IAMs_20	IAMs_20	09 22 46.6	
	comp=Z,20µm,19.0s						
PFO	Pinyon Flats O	86.15	47	LR	LR	09 23 16.0	
	comp=Z,22µm,18.2s,baz=236,slow=32						
PFO	Pinyon Flats O	86.15	47	P	P	08 49 58.4	+1.0
PFO				pmax	pmax		
	comp=Z,122nm,1.6s						
MT08	Bocatoma Ro	86.17	127	P	P	08 49 58.4	+0.5
MT08				IAmb	IAmb	08 50 02.4	
	comp=Z,109nm,1.4s						
PET	Petropavlovsk	86.19	346	P	P	08 49 56.7	-0.2
PET				IAmb	IAmb	08 50 31.0	
	comp=Z,102nm,1.4s						
PET	Petropavlovsk	86.19	346	P	P	08 49 57.1	+0.2
PET	Petropavlovsk	86.19	346	*d i*P	P	08 49 56.4	-0.5
PET				*e*S	S	09 00 30.4	-0.7
PET				*e*SS	SS	09 06 10.9	-0.1
PET				pmax	pmax		
	comp=Z,2µm,10.5s						
PET				pmax	pmax		
	comp=Z,2µm,8.2s						
PET				pmax	pmax		
	comp=Z,45nm,0.7s						
PET				smax	smax		
	comp=E,3µm,12.4s						
PET				smax	smax		
	comp=N,2µm,11.5s						
PET				smax	smax		
	comp=E,3µm,10.2s						
PET				smax	smax		
	comp=N,2µm,9.2s						
CCAC	Calif City Air	86.21	45	IAMs_20	IAMs_20	09 28 39.0	
	comp=Z,17µm,18.0s						
ISA	Isabella, Lake	86.28	44	IAMs_20	IAMs_20	09 25 11.7	
	comp=Z,13µm,19.0s						
FALS	False Pass	86.28	8	P	P	08 49 56.9	-0.3
	baz=192						
FALS				S	S	09 00 32.4	+0.5
	baz=192						
GSI	Gunungsitoli	86.45	274	IAMs_20	IAMs_20	09 29 56.5	
	comp=Z,19µm,20.0s						
GSI	Gunungsitoli	86.45	274	P	P	08 49 59.6	+0.4
GSI	Gunungsitoli	86.45	274	P	P	08 49 58.5	-0.7
	comp=Z,205nm,1.4s						
TEY	Ternei	86.45	329	⇓*e*P	P	08 49 58.4	0.0
TEY				*e*		09 00 23.9	
TEY				pmax	pmax		
	comp=Z,200nm,9.5s						
TEY				pmax	pmax		
	comp=N,100nm,8.8s						
PEA0B	Petropavlovsk-	86.48	345	P	P	08 49 58.5	+0.1
PEA0B				IAmb	IAmb	08 50 12.4	
	comp=Z,96nm,0.8s						
PEA0B	Petropavlovsk-	86.48	345	P	P	08 49 58.5	+0.1
PEA0B				pmax	pmax		
	comp=Z,96nm,0.8s						
PETK	Petropavlovsk-	86.48	345	P	P	08 49 57.9	-0.4
	comp=Z,38nm,0.7s,baz=160,slow=5.0,SNR=66						
PETK				LR	LR	09 25 57.0	
	comp=Z,8µm,19.2s,baz=154,slow=34						
	comp=Z,38nm,0.7s						
PETK	Petropavlovsk-	86.48	345	P	P	08 49 58.0	-0.4
BUCR	Buckhorn Ranch	86.67	42	IAMs_20	IAMs_20	09 24 03.6	
	comp=Z,20µm,19.0s						
JCC	Jacoby Creek,	86.76	38	IAMs_20	IAMs_20	09 25 01.7	
	comp=Z,24µm,19.0s						
CNBA	Chernabura Isl	86.77	10	IAMs_20	IAMs_20	09 28 58.2	
	comp=Z,17µm,19.0s						
CHNA	Chernabura Isl	86.78	10	P	P	08 49 59.3	-0.4
CHNA	Chernabura Isl	86.78	10	P	P	08 50 00.5	+0.8
	baz=195						
CHNA				S	S	09 00 38.1	+1.4

	baz=195						
CMB	Columbia Colle	86.78	42	P	P	08 50 00.6	+0.3
CMB				IAmb	IAmb	08 50 18.9	
	comp=Z,79nm,1.1s						
CMB				IAMs_20	IAMs_20	09 28 06.7	
	comp=Z,24µm,18.0s						
CMB	Columbia Colle	86.78	42	P	P	08 50 00.6	+0.3
CMB				pmax	pmax		
	comp=Z,79nm,1.1s						
CMB				MLR	MLR		
	comp=Z,24µm,18.0s						
HJU	Haeju	86.78	318	P	P	08 49 59.9	-0.3
HJU				S	SKSac	09 00 18.5	-8.2
HJU				AmB			
	comp=Z,3µm,6.5s						
HJU				AMS	AMS		
	comp=Z,964nm,9.2s						
GLA	Glamis	86.82	48	IAMs_20	IAMs_20	09 26 31.4	
	comp=Z,23µm,18.0s						
HSIG		86.87	53	IAMs_20	IAMs_20	09 27 19.2	
	comp=Z,19µm,18.0s						
NJ2	Nanjing	87.03	310	⇑P	P	08 50 02.4	+0.9
NJ2				sP	pwP	08 50 16.1	+4.8
NJ2				S	S	09 00 36.1	-4.2
NJ2				SS	SS	09 06 24.1	+0.1
NJ2				pmax	pmax		
	comp=Z,25nm,1.3s						
NJ2				pmax	pmax		
	comp=Z,3µm,8.4s						
NJ2				LR	LR		
	comp=Z,4µm,18.1s						
NJ2				LR	LR		
	comp=Z,2µm,18.2s						
NJ2				LR	LR		
	comp=Z,5µm,18.1s						
GSC	Goldstone, Bar	87.05	45	IAMs_20	IAMs_20	09 25 06.2	
	comp=Z,18µm,18.0s						
HHU	Hamhung	87.10	321	P	P	08 49 58.9	-2.8
HHU				S	SKSac	09 00 16.3	-12
HHU				AmB			
	comp=Z,2µm,4.8s						
HHU				AMS	AMS		
	comp=Z,66µm,33.5s						
PAYG	Puerto Ayora	87.12	89	IAMs_20	IAMs_20	09 21 34.4	
	comp=Z,15µm,19.0s						
MSHR	Mys Shultsa	87.13	325	ceP	P	08 50 01.3	-0.5
MSHR				pmax	pmax		
	comp=Z,125nm,1.1s						
MSHR				MLR	MLR		
	comp=Z,7µm,19.0s						
UBPT	Khong Chiam	87.14	290	P	P	08 50 04.1	+1.6
SDPT	Sand Point	87.15	10	IAMs_20	IAMs_20	09 29 22.0	
	comp=Z,13µm,20.0s						
SDPT	Sand Point	87.15	10	P	P	08 50 03.2	+1.7
SDPT	Sand Point	87.15	10	P	P	08 50 01.0	-0.5
	baz=194						
SDPT				S	S	09 00 40.7	+0.4
	baz=194						
VLA	Vladivostok	87.17	325	⇑eP	P	08 50 02.3	+0.4
VLA				pmax	pmax		
	comp=Z,35nm,0.7s						
VLA				MLR	MLR		
	comp=Z,5µm,19.0s						
ORV	Oroville	87.22	40	IAMs_20	IAMs_20	09 24 23.0	
	comp=Z,23µm,19.0s						
S12K	Black Hills	87.28	9	P	P	08 50 02.0	-0.1
S12K				IAmb	IAmb	08 50 06.8	
	comp=Z,98nm,0.8s						
S12K				IAMs_20	IAMs_20	09 28 04.4	
	comp=Z,16µm,20.0s						
S12K	Black Hills	87.28	9	P	P	08 50 01.8	-0.4
	baz=193						
S12K				S	S	09 00 42.2	+0.5
	baz=193						
PSTR	Posyet	87.36	324	⇓eP	P	08 50 02.9	+0.1
P08K	Saint George I	87.44	4	P	P	08 50 02.4	-0.5
	baz=187						
P08K				S	S	09 00 45.0	+1.9
	baz=187						
QSM	Queen of Sheba	87.45	45	IAMs_20	IAMs_20	09 29 11.7	
	comp=Z,15µm,18.0s						
PYAG	Pyongyang	87.46	319	P	P	08 50 03.5	+0.1
PYAG				S	SKSac	09 00 23.6	-7.3
PYAG				AmB			
	comp=Z,2µm,6.6s						
PYAG				AMS	AMS		
	comp=Z,59nm,2.5s						
BLYC	Blythe	87.47	48	IAMs_20	IAMs_20	09 26 51.4	
	comp=Z,19µm,18.0s						
UGL	Uglegorsk	87.50	335	d iP	P	08 49 59.2	-4.2
UGL				eS	SKSac	09 00 24.0	-6.6
UGL				pmax	pmax		
	comp=Z,3µm,9.3s						
UGL				pmax	pmax		
	comp=Z,100nm,0.8s						
UGL				smax	smax		
	comp=N,3µm,11.0s						
UGL				smax	smax		
	comp=E,5µm,11.0s						
UGL				MLR	MLR		
	comp=N,6µm,19.0s						
UGL				MLR	MLR		
	comp=E,5µm,19.0s						
UGL				MLR	MLR		
	comp=Z,5µm,20.0s						
WAKR	Walker	87.65	42	IAMs_20	IAMs_20	09 21 54.6	
	comp=Z,24µm,20.0s						
KBO	Bosley Butte	87.67	36	P	P	08 50 05.9	+1.4
GWY	Greenwater Val	87.72	45	P	P	08 50 04.7	-0.3
GWY				IAMs_20	IAMs_20	09 29 28.8	
	comp=Z,16µm,18.0s						
DSP	Deep Springs	87.73	43	IAMs_20	IAMs_20	09 24 41.9	
	comp=Z,17µm,19.0s						
M02C	Callahan	87.79	38	IAMs_20	IAMs_20	09 21 27.9	
	comp=Z,18µm,20.0s						
GRAC	Grapevine Rang	87.84	44	IAMs_20	IAMs_20	09 29 24.9	
	comp=Z,20µm,18.0s						
MPK	Martis Peak	87.85	41	P	P	08 50 06.4	+0.7
USA0B	Ussuriysk Arra	87.92	326	P	P	08 50 05.0	-0.6
USA0B				IAmb	IAmb	08 50 09.3	
	comp=Z,52nm,0.8s						
USA0B	Ussuriysk Arra	87.92	326	P	P	08 50 05.0	-0.6
USA0B				pmax	pmax		
	comp=Z,52nm,0.8s						
USRK	Ussuriysk Ar.	87.92	326	P	P	08 50 05.1	-0.4
USRK	Ussuriysk Ar.	87.92	326	P	P	08 50 05.3	-0.3
	comp=Z,53nm,0.8s,baz=135,slow=3.2,SNR=41						
USRK				LR	LR	09 23 16.8	
	comp=Z,5µm,21.5s,baz=144,slow=32						
	comp=Z,53nm,0.8s						
L02F	Cave Junction	87.94	37	IAMs_20	IAMs_20	09 25 09.8	
	comp=Z,20µm,19.0s						
SPIA	Saint Paul Isl	87.97	4	P	P	08 50 05.3	-0.2
	baz=186						
SPIA				S	S	09 00 50.8	+2.6
	baz=186						
GMN	Gold Mountain	88.10	44	P	P	08 50 06.4	-0.5
YBH	Yreka Blue Hor	88.11	38	IAMs_20	IAMs_20	09 25 18.4	
	comp=Z,16µm,20.0s						
YBH	Yreka Blue Hor	88.11	38	P	P	08 50 07.1	+0.5
	comp=Z,1.0nm,0.8s,baz=221,slow=4.2,SNR=12						
YBH				LR	LR	09 25 38.8	
	comp=Z,1µm,18.3s,baz=243,slow=33						
S14K	Fog Glacier	88.19	10	P	P	08 50 06.3	-0.4
	baz=195						
S14K				S	S	09 00 53.5	+3.0
	baz=195						
LCO	Las Campanas	88.20	123	P	P	08 50 07.8	0.0
LCO				IAmb	IAmb	08 50 11.5	
	comp=Z,85nm,1.4s						
LCO	Las Campanas	88.20	123	P	P	08 50 07.8	0.0
LCO				pmax	pmax		
	comp=Z,85nm,1.4s						
NVAR	Mina Array Bea	88.25	42	P	P	08 50 07.6	0.0
NVAR	Mina Array Bea	88.25	42	P	P	08 50 07.7	+0.1
	comp=Z,30nm,0.8s,baz=252,slow=5.0,SNR=63						
NVAR				PKPPKP	P'P'df	09 16 00.5	+5.1
	comp=Z,0.5nm,0.5s,baz=33,slow=1.8,SNR=4.3						
NVAR				LR	LR	09 24 34.2	
	comp=Z,22µm,18.9s,baz=232,slow=32						
	comp=Z,30nm,0.8s						
RYN	Ryan	88.25	42	IAMs_20	IAMs_20	09 24 48.8	
	comp=Z,24µm,19.0s						
K02D	Willamette Mer	88.30	36	IAMs_20	IAMs_20	09 21 39.5	
	comp=Z,20µm,20.0s						
CHGN	Chignik	88.38	10	S	S	09 00 55.2	+3.2
	baz=196						
CHIR	Chirikof Islan	88.39	12	P	P	08 50 07.0	-0.5
	baz=199						
CHIR				S	S	09 00 54.8	+2.7
	baz=199						
CFA	Coronel Fontan	88.46	126	LR	LR	09 23 55.4	
	comp=Z,5µm,18.3s,baz=217,slow=32						
SRIT	Nakonsritamara	88.47	281	P	P	08 50 09.7	+0.8
TPNV	Topopah Spring	88.47	45	IAMs_20	IAMs_20	09 30 20.8	
	comp=Z,15µm,18.0s						
J01E	Myrtle Point	88.50	36	IAMs_20	IAMs_20	09 25 35.8	
	comp=Z,22µm,20.0s						
TRQA	Tornquist	88.65	134	P	P	08 50 09.6	+0.1
TRQA				IAmb	IAmb	08 50 14.2	
	comp=Z,66nm,1.4s						
TRQA	Tornquist	88.65	134	P	P	08 50 09.6	+0.1
TRQA				pmax	pmax		
	comp=Z,66nm,1.5s						
L04D	Klamath Falls	88.66	38	IAMs_20	IAMs_20	09 30 59.1	
	comp=Z,18µm,18.0s						
MOIG	Morelia	88.70	66	IAMs_20	IAMs_20	09 23 20.6	
	comp=Z,16µm,19.0s						
CNSH	ChangSha	88.72	304	P	P	08 50 09.3	-0.4
CNSH				S	SKSac	09 00 45.0	+6.0
CNSH				pmax	pmax		
	comp=Z,12nm,1.4s						
CNSH				LR	LR		
	comp=Z,3µm,18.0s						
CNSH				LR	LR		
	comp=Z,1µm,17.3s						
CNSH				LR	LR		
	comp=Z,4µm,17.7s						
W13A	Hualapai Mount	88.73	47	IAMs_20	IAMs_20	09 27 39.8	
	comp=Z,18µm,18.0s						
TYV	Tymovskoe	88.78	336	eP	P	08 50 11.1	+1.7
TYV				eS	S	09 00 55.8	-0.3
TYV				pmax	pmax		
	comp=Z,700nm,3.6s						
TYV				pmax	pmax		
	comp=Z,53nm,0.8s						
TYV				smax	smax		
	comp=N,9.0nm,2.2s						
TYV				smax	smax		
	comp=E,12nm,2.2s						
TYV				smax	smax		
	comp=N,1µm,4.9s						
TYV				smax	smax		
	comp=E,2µm,4.9s						
SUJ	Sinuiju	88.89	319	P	P	08 50 08.9	-1.3
SUJ				AmB			
	comp=Z,2µm,4.7s						
GULI	GuiLin	88.90	300	P	P	08 50 12.4	+1.7
GULI				S	SKSac	09 00 46.8	+6.6
GULI				pmax	pmax		
	comp=Z,20nm,1.2s						
GULI				LR	LR		
	comp=Z,2µm,22.2s						
GULI				LR	LR		
	comp=Z,3µm,20.1s						
GULI				LR	LR		
	comp=Z,5µm,21.1s						
TULE	Intermountain	88.92	38	IAMs_20	IAMs_20	09 26 07.0	
	comp=Z,19µm,19.0s						
LHMI	Lhok Sumawe	88.99	277	IAMs_20	IAMs_20	09 32 26.9	
	comp=Z,13µm,19.0s						
TUC	Tucson	89.00	51	P	P	08 50 11.7	+0.6
TUC				IAmb	IAmb	08 50 25.7	
	comp=Z,181nm,1.6s						
TUC	Tucson	89.00	51	IAMs_20	IAMs_20	09 29 10.3	
	comp=Z,17µm,18.0s						
TUC	Tucson	89.00	51	P	P	08 50 11.7	+0.6
TUC				pmax	pmax		
	comp=Z,181nm,1.6s						
TUC				MLR	MLR		
	comp=Z,17µm,18.0s						
WHN	Wuhan	89.13	307	P	P	08 50 10.3	-1.3
WHN				sP	pwP	08 50 18.8	-2.5
WHN				S	SKSac	09 00 46.8	+5.5
WHN				pmax	pmax		
	comp=Z,5µm,8.4s						
WHN				LR	LR		
	comp=Z,7µm,17.5s						
WHN				LR	LR		
	comp=Z,4µm,11.9s						
WHN				LR	LR		
	comp=Z,14µm,19.2s						
I03D	Drain, OR	89.18	36	IAMs_20	IAMs_20	09 22 28.8	
	comp=Z,18µm,20.0s						
S11A	Rachel	89.23	44	IAMs_20	IAMs_20	09 30 37.8	
	comp=Z,20µm,18.0s						
K04D	Chiloquin, OR	89.24	38	IAMs_20	IAMs_20	09 26 05.4	
	comp=Z,16µm,19.0s						
ZAIG	Zacatecas	89.34	63	IAMs_20	IAMs_20	09 25 55.5	
	comp=Z,12µm,18.0s						
SII	Sitkinak Islan	89.35	13	IAMs_20	IAMs_20	09 30 12.3	
	comp=Z,14µm,20.0s						
SII	Sitkinak Islan	89.35	13	P	P	08 50 11.3	-0.7
	baz=200						
SII				S	S	09 01 08.0	+6.7
	baz=200						
MDJ	Mudanjiang	89.39	325	P	P	08 50 12.3	-0.2
MDJ				pP	pwP	08 50 23.3	+1.1
MDJ				S	S	09 01 01.4	-0.8
MDJ				pmax	pmax		
	comp=Z,21nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,3µm,8.9s						
MDJ				LR	LR		
	comp=Z,4µm,20.6s						
MDJ				LR	LR		
	comp=Z,5µm,17.9s						
MDJ				LR	LR		
	comp=Z,8µm,20.6s						
J04A	Umpqua Nationa	89.49	37	IAMs_20	IAMs_20	09 26 21.1	
	comp=Z,14µm,19.0s						
PRN	Pahroc Range	89.50	45	IAMs_20	IAMs_20	09 30 46.0	
	comp=Z,15µm,18.0s						
TLIG	Tlapa	89.64	69	IAMs_20	IAMs_20	09 26 45.0	
	comp=Z,13µm,18.0s						
BUCK	Buck Mountain	89.72	36	IAMs_20	IAMs_20	09 22 36.2	
	comp=Z,22µm,20.0s						
R16K	Pilot Point	89.72	10	P	P	08 50 12.3	-1.3
	baz=197						
DL2	Dalian	89.73	317	⇑iP	P	08 50 12.3	-1.9
DL2				SKS	SKSac	09 00 44.8	+0.4
DL2				S	S	09 01 03.8	-1.8
DL2				pmax	pmax		
	comp=Z,66nm,0.8s						
DL2				pmax	pmax		
	comp=Z,3µm,9.3s						
DL2				LR	LR		
	comp=Z,3µm,19.9s						
DL2				LR	LR		
	comp=Z,5µm,21.6s						
DL2				LR	LR		
	comp=Z,8µm,27.0s						
X16A	Lo Mia Camp, P	89.87	49	IAMs_20	IAMs_20	09 28 07.2	
	comp=Z,21µm,18.0s						
J05D	Fort Rock, OR	89.97	37	IAMs_20	IAMs_20	09 22 58.9	
	comp=Z,20µm,20.0s						
HEBO	Mount Hebo	90.08	35	IAMs_20	IAMs_20	09 22 53.3	
	comp=Z,21µm,20.0s						
H04D	Lebanon	90.08	36	IAMs_20	IAMs_20	09 22 46.6	
	comp=Z,24µm,20.0s						
UNM	Universidad Na	90.10	68	IAMs_20	IAMs_20	09 22 13.2	
	comp=Z,12µm,19.0s						
OHAK	Old Harbor	90.14	13	P	P	08 50 15.4	-0.2
	baz=201						
OHAK				S	S	09 01 12.5	+4.0
	baz=201						
R18K	Karluk	90.25	12	P	P	08 50 15.3	-0.8
	baz=200						
R18K				S	S	09 01 13.4	+3.9
	baz=200						
G03D	McMinnville, O	90.31	35	IAMs_20	IAMs_20	09 23 02.7	
	comp=Z,19µm,20.0s						
LCMT	Little Creek M	90.35	46	IAMs_20	IAMs_20	09 27 09.6	
	comp=Z,18µm,18.0s						
H04A	Detroit Lake	90.47	36	IAMs_20	IAMs_20	09 27 09.0	
	comp=Z,22µm,19.0s						
PINE	Pine Mountain	90.48	37	IAMs_20	IAMs_20	09 23 25.3	
	comp=Z,17µm,20.0s						
SNY	Shenyang	90.57	320	⇑P	P	08 50 17.1	-0.9
SNY				pmax	pmax		
	comp=Z,20nm,0.9s						
SNY				pmax	pmax		
	comp=Z,1µm,7.6s						
SNY				LR	LR		
	comp=Z,1µm,24.9s						
SNY				LR	LR		
	comp=Z,2µm,22.0s						
SNY				LR	LR		
	comp=Z,4µm,24.7s						
U15A	North Rim	90.58	47	IAMs_20	IAMs_20	09 30 48.7	
	comp=Z,20µm,18.0s						
Q17K	Contact Creek	90.66	11	P	P	08 50 17.4	-0.9
	baz=198						
Q17K				S	S	09 01 15.3	+1.8
	baz=198						
F03A	Seaside	90.69	34	IAMs_20	IAMs_20	09 23 41.5	
	comp=Z,14µm,20.0s						
ACHA	Angle Creek He	90.71	11	IAMs_20	IAMs_20	09 31 32.1	
	comp=Z,14µm,20.0s						
TIA	Tai'an	90.76	313	P	P	08 50 18.9	-0.2
TIA				pP	pwP	08 50 29.8	+1.0
TIA				sP	sP	08 50 33.3	+11
TIA				PP	PP	08 53 53.4	-1.7
TIA				pmax	pmax		
	comp=Z,32nm,0.8s						
TIA				pmax	pmax		
	comp=Z,3µm,8.5s						
TIA				LR	LR		
	comp=Z,3µm,22.1s						
TIA				LR	LR		
	comp=Z,5µm,20.4s						
TIA				LR	LR		
	comp=Z,9µm,24.2s						
KDAK	Kodiak Island	90.80	13	IAMs_20	IAMs_20	09 28 54.7	
	comp=Z,15µm,19.0s						
KDAK	Kodiak Island	90.80	13	P	P	08 50 19.4	+0.7
	comp=Z,22nm,1.1s,baz=226,slow=10,SNR=3.8						
KDAK				LR	LR	09 27 43.0	
	comp=Z,5µm,18.3s,baz=207,slow=33						
	comp=Z,22nm,1.1s						
KDAK	Kodiak Island	90.80	13	P	P	08 50 18.6	-0.1
	baz=201						
KDAK				S	S	09 01 16.4	+1.8
	baz=201						
O14K	Tigyukauivet M	90.84	8	IAMs_20	IAMs_20	09 32 12.5	
	comp=Z,16µm,20.0s						
O14K	Tigyukauivet M	90.84	8	P	P	08 50 19.1	+0.2
	baz=194						
O14K				S	S	09 01 18.6	+3.7
	baz=194						
X18A	Snowflake	90.91	50	IAMs_20	IAMs_20	09 28 30.7	
	comp=Z,21µm,18.0s						
CN2	Changchun	90.92	322	eP	P	08 50 18.8	-0.8
CN2				PP	PP	08 53 55.8	-0.4
CN2				SS	SS	09 07 19.0	-1.2
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,1µm,7.0s						
CN2				LR	LR		
	comp=Z,3µm,19.6s						
CN2				LR	LR		
	comp=Z,4µm,19.6s						
CN2				LR	LR		
	comp=Z,6µm,19.6s						
Q16K	King Salmon	90.93	11	P	P	08 50 18.8	-0.4
	baz=198						
Q16K				S	S	09 01 17.4	+1.7
	baz=198						
O15K	Ungalikthiuk R	90.95	9	IAMs_20	IAMs_20	09 32 04.4	
	comp=Z,12µm,19.0s						
O15K	Ungalikthiuk R	90.95	9	P	P	08 50 19.5	+0.1
	baz=195						
O15K				S	S	09 01 18.7	+2.8
	baz=195						
SPR3	Spring Creek 3	90.96	44	IAMs_20	IAMs_20	09 31 50.5	
	comp=Z,17µm,18.0s						
GRNR	Gornyy	91.02	333	eP	P	08 50 16.5	-3.5
F04D	Rainier, OR	91.06	34	IAMs_20	IAMs_20	09 24 03.3	
	comp=Z,14µm,20.0s						
P16K	Nushagak River	91.07	10	P	P	08 50 19.7	-0.2
	baz=197						
P16K				S	S	09 01 17.6	+0.7
	baz=197						
E03A	Lebam	91.13	34	IAMs_20	IAMs_20	09 29 08.0	
	comp=Z,19µm,19.0s						
Q18K	Katmai Hardscr	91.18	11	P	P	08 50 20.2	-0.4
	baz=199						
Q18K				S	S	09 01 20.2	+1.9
	baz=199						
BNX	BinXian	91.28	325	⇓P	P	08 50 20.3	-0.9
BNX				S	S	09 01 18.8	-0.7
BNX				pmax	pmax		
	comp=Z,70nm,0.9s						
BNX				pmax	pmax		
	comp=Z,2µm,8.9s						
BNX				LR	LR		
	comp=Z,3µm,19.0s						
BNX				LR	LR		
	comp=Z,2µm,15.7s						
BNX				LR	LR		
	comp=Z,7µm,19.5s						
G05A	Wamic	91.30	36	IAMs_20	IAMs_20	09 23 26.9	
	comp=Z,22µm,20.0s						
NKL	Nikolayevsk	91.36	336	eP	P	08 50 22.6	+1.2
NKL				e		08 54 03.6	
NKL				eS	SKSac	09 00 50.4	-2.7
NKL				pmax	pmax		
	comp=N,32nm,1.2s						
NKL				pmax	pmax		
	comp=E,59nm,1.3s						
NKL				pmax	pmax		
	comp=Z,244nm,1.3s						
NKL				smax	smax		
	comp=E,666nm,6.5s						
NKL				smax	smax		
	comp=N,254nm,5.3s						
NKL				MLR	MLR		
	comp=E,24µm,16.0s						
NKL				MLR	MLR		
	comp=N,14µm,19.0s						
NKL				MLR	MLR		
	comp=Z,39µm,18.0s						
I07A	Izee	91.43	38	IAMs_20	IAMs_20	09 27 28.4	
	comp=Z,18µm,19.0s						
N14K	Kuskokwak Cree	91.44	8	P	P	08 50 21.8	+0.1
	baz=194,SNR=9.3						
N14K				S	S	09 01 23.9	+3.6
	baz=194						
M11K	Mekoryuk	91.45	6	P	P	08 50 22.2	+0.6
	baz=190						
M11K				S	S	09 01 25.1	+4.8
	baz=190						
P17K	Kvichak River	91.46	11	P	P	08 50 21.4	-0.3
	baz=198						
P17K				S	S	09 01 21.1	+0.6
	baz=198						
ELK	Elko	91.55	42	IAMs_20	IAMs_20	09 24 50.1	
	comp=Z,25µm,20.0s						
ELK	Elko	91.55	42	P	P	08 50 22.8	-0.2
	comp=Z,14nm,0.8s,baz=222,slow=6.6,SNR=23						
ELK				LR	LR	09 25 11.5	
	comp=Z,23µm,19.6s,baz=238,slow=31						
	comp=Z,14nm,0.8s						
EPT	El Paso	91.59	54	IAMs_20	IAMs_20	09 27 31.2	
	comp=Z,17µm,19.0s						
NLWA	Neilton Lookou	91.59	33	IAMs_20	IAMs_20	09 25 15.3	
	comp=Z,24µm,20.0s						
O16K	Kokwok River B	91.59	10	IAMs_20	IAMs_20	09 32 00.5	
	comp=Z,13µm,20.0s						
O16K	Kokwok River B	91.59	10	P	P	08 50 22.0	-0.4
	baz=196						
O16K				S	S	09 01 22.5	+0.8
	baz=196						
Q20K	Shuyak Island	91.61	13	P	P	08 50 22.0	-0.5
	baz=201						
Q20K				S	S	09 01 23.0	+1.1
	baz=201						
G06A	Carlson Farm,	91.64	36	IAMs_20	IAMs_20	09 27 37.9	
	comp=Z,14µm,19.0s						
SLVN	Son La	91.66	294	P	P	08 50 25.2	+1.5
Q19K	Cape Douglas,	91.68	12	IAMs_20	IAMs_20	09 31 50.9	
	comp=Z,15µm,20.0s						
Q19K	Cape Douglas,	91.68	12	P	P	08 50 22.5	-0.3
	baz=200						
Q19K				S	S	09 01 24.5	+1.9
	baz=200						
M13K	Dall Lake	91.74	7	P	P	08 50 23.5	+0.5
	baz=192						
M13K				S	S	09 01 28.1	+5.1
	baz=192						
KLR	Kul'dur	91.79	329	P	P	08 50 23.7	+0.2

	comp=Z,35nm,0.7s,baz=130,slow=4.9,SNR=43						
KLR				LR	LR	09 30 30.5	
	comp=Z,4µm,18.7s,baz=150,slow=35						
	comp=Z,35nm,0.7s						
P18K	Big Mountain,	91.84	11	IAMs_20	IAMs_20	09 32 16.2	
	comp=Z,15µm,20.0s						
P18K	Big Mountain,	91.84	11	P	P	08 50 23.4	-0.2
	baz=199						
P18K				S	S	09 01 25.7	+1.6
	baz=199						
N15K	Kwethluk River	91.88	9	IAMs_20	IAMs_20	09 32 52.9	
	comp=Z,15µm,20.0s						
N15K	Kwethluk River	91.88	9	P	P	08 50 23.9	+0.2
	baz=195,SNR=17						
N15K				S	S	09 01 28.7	+4.4
	baz=195						
O17K	Koliganek Bris	91.91	10	P	P	08 50 24.0	+0.2
	baz=197						
O17K				S	S	09 01 25.6	+1.0
	baz=197						
MVU	Marysvale	91.92	45	IAMs_20	IAMs_20	09 28 06.2	
	comp=Z,18µm,18.0s						
OZB	Mount Ozzard	92.00	31	IAMs_20	IAMs_20	09 25 54.7	
	comp=Z,19µm,19.0s						
HOLB	Holberg	92.12	29	IAMs_20	IAMs_20	09 25 43.8	
	comp=Z,13µm,20.0s						
TX31	Lajitas Ar. Si	92.20	57	P	P	08 50 25.8	-0.3
TX31				IAmb	IAmb	08 50 55.9	
	comp=Z,72nm,1.6s						
TXAR	Lajitas Array	92.20	57	P	P	08 50 26.3	+0.2
TXAR	Lajitas Array	92.20	57	P	P	08 50 26.5	+0.4
	comp=Z,7.5nm,1.0s,baz=236,slow=5.1,SNR=33						
TXAR				PKPPKP	P'P'df	09 15 49.7	-0.1
	comp=Z,0.1nm,0.6s,baz=54,slow=2.0,SNR=1.7						
TXAR				LR	LR	09 27 01.1	
	comp=Z,12µm,18.1s,baz=230,slow=32						
	comp=Z,7.5nm,1.0s						
M14K	Bethel	92.22	7	IAMs_20	IAMs_20	09 32 59.0	
	comp=Z,14µm,19.0s						
M14K	Bethel	92.22	7	P	P	08 50 25.8	+0.6
	baz=193						
M14K				S	S	09 01 30.7	+3.5
	baz=193						
O18K	Koktuh Hills	92.29	11	P	P	08 50 25.6	0.0
	baz=199						
O18K				S	S	09 01 30.2	+2.2
	baz=199						
GYA	Guiyang	92.31	299	⇓P	P	08 50 27.3	+0.6
GYA				SKS	SKSac	09 00 57.9	-2.2
GYA				S	S	09 01 25.3	-4.7
GYA				pmax	pmax		
	comp=Z,21nm,1.2s						
GYA				pmax	pmax		
	comp=Z,2µm,9.0s						
GYA				LR	LR		
	comp=Z,2µm,21.0s						
GYA				LR	LR		
	comp=Z,3µm,19.1s						
GYA				LR	LR		
	comp=Z,5µm,20.2s						
M15K	Kasigluk River	92.31	8	P	P	08 50 26.1	+0.4
	baz=194,SNR=18						
M15K				S	S	09 01 31.6	+3.4
	baz=194						
MNTX	Cornudas Mount	92.33	54	IAMs_20	IAMs_20	09 29 52.7	
	comp=Z,14µm,18.0s						
N16K	Nishlik Lake	92.35	9	P	P	08 50 26.4	+0.5
	baz=196,SNR=13						
N16K				S	S	09 01 32.5	+4.0
	baz=196						
CMIG	Matias Romero	92.38	72	LR	LR	09 24 32.1	
	comp=Z,4µm,18.9s,baz=246,slow=31						
ENH	Enshi	92.38	304	P	P	08 50 28.4	+1.6
DIB	Dawson Inlet,	92.42	25	IAMs_20	IAMs_20	09 28 28.5	
	comp=Z,11µm,19.0s						
P19K	Oil Pt	92.43	12	IAMs_20	IAMs_20	09 32 25.8	
	comp=Z,11µm,20.0s						
P19K	Oil Pt	92.43	12	P	P	08 50 26.8	+0.5
	baz=201						
P19K				S	S	09 01 30.9	+1.5
	baz=201						
F07A	Phinny Hill Vi	92.46	36	IAMs_20	IAMs_20	09 28 21.5	
	comp=Z,20µm,19.0s						
CMBY	CAMPBELL BAY	92.48	277	*e*P	P	08 50 22.5	-5.1
HMU	Henry Mountain	92.48	47	IAMs_20	IAMs_20	09 30 08.1	
	comp=Z,11µm,18.0s						
CLRS	Cowichan Lake	92.51	32	IAMs_20	IAMs_20	09 25 49.4	
	comp=Z,19µm,20.0s						
G08A	Pilot Rock	92.54	37	IAMs_20	IAMs_20	09 28 19.7	
	comp=Z,14µm,19.0s						
DUG	Dugway, Tooele	92.62	44	IAMs_20	IAMs_20	09 32 46.5	
	comp=Z,21µm,18.0s						
N17K	Nushagak Hills	92.62	10	P	P	08 50 28.8	+1.6
	baz=197						
N17K				S	S	09 01 32.6	+1.6
	baz=197						
Y22D	IRIS PASSCAL I	92.65	52	P	P	08 50 28.7	+0.5
	baz=234						
Y22D				S	S	09 01 38.8	+6.0
	baz=234						
CNPM	China Poot	92.69	13	IAMs_20	IAMs_20	09 29 46.5	
	comp=Z,20µm,20.0s						
PGC	Sidney	92.70	32	IAMs_20	IAMs_20	09 25 36.4	
	comp=Z,13µm,20.0s						
L14K	Kuka Creek	92.72	7	P	P	08 50 28.1	+0.6
	baz=193						
L14K				S	S	09 01 35.1	+3.4
	baz=193						
NNA	Nana	92.72	106	LR	LR	09 27 01.1	
	comp=Z,7µm,18.1s,baz=240,slow=32						
NNA	Nana	92.72	106	⇓*e*P	P	08 50 29.7	+0.8
NNA				pmax	pmax		
	comp=Z,72nm,1.5s						
NNA				MLR	MLR		
	comp=Z,9µm,17.0s						
HOM	Homer	92.73	13	IAMs_20	IAMs_20	09 30 08.6	
	comp=Z,16µm,20.0s						
HOM	Homer	92.73	13	P	P	08 50 27.4	-0.2
	baz=202						
HOM				S	S	09 01 35.1	+3.2
	baz=202						
O19K	Port Alsworth	92.76	11	IAMs_20	IAMs_20	09 32 35.3	
	comp=Z,16µm,19.0s						
O19K	Port Alsworth	92.76	11	P	P	08 50 27.4	-0.2
	baz=200						
O19K				S	S	09 01 35.3	+3.2
	baz=200						
ILSW	Iliamna Southw	92.76	12	IAMs_20	IAMs_20	09 32 45.4	
	comp=Z,16µm,20.0s						
LYN	LuoYang	92.78	309	P	P	08 50 28.1	-0.4
LYN				pP	sP	08 50 31.8	+0.1
LYN				pmax	pmax		
	comp=Z,86nm,0.8s						
LYN				pmax	pmax		
	comp=Z,3µm,8.6s						
LYN				LR	LR		
	comp=Z,5µm,17.9s						
LYN				LR	LR		
	comp=Z,6µm,19.6s						
LYN				LR	LR		
	comp=Z,9µm,18.6s						
Q16A	Castle Valley	92.82	46	IAMs_20	IAMs_20	09 28 43.9	
	comp=Z,16µm,19.0s						
CBB	Campbell River	92.84	31	IAMs_20	IAMs_20	09 26 30.1	
	comp=Z,24µm,20.0s						
M16K	Timber Creek	92.85	9	IAMs_20	IAMs_20	09 33 13.7	
	comp=Z,15µm,19.0s						
M16K	Timber Creek	92.85	9	P	P	08 50 28.8	+0.6
	baz=196						
M16K				S	S	09 01 38.2	+5.2
	baz=196						
O20K	Slope Mountain	92.94	12	P	P	08 50 28.1	-0.6
	baz=201						
O20K				S	S	09 01 37.4	+3.4
	baz=201						
BGU	Big Grassy Mou	92.95	43	IAMs_20	IAMs_20	09 25 07.2	
	comp=Z,17µm,20.0s						
MFID	Camas Ranch	92.96	40	IAMs_20	IAMs_20	09 26 14.1	
	comp=Z,16µm,20.0s						
N18K	Kilae Creek	92.96	10	P	P	08 50 28.4	-0.3
	baz=198						
N18K				S	S	09 01 37.0	+3.0
	baz=198						
BRLK	Bradley Lake	92.97	13	IAMs_20	IAMs_20	09 30 12.7	
	comp=Z,18µm,19.0s						
BRSE	Bradley Lake S	92.98	13	P	P	08 50 29.1	+0.2
	baz=203						
BRSE				S	S	09 01 37.1	+2.9
	baz=203						
HNS	HongShan	93.02	312	⇓P	P	08 50 29.9	+0.4
HNS				SKS	SKSac	09 01 03.6	+0.4
HNS				S	S	09 01 33.8	-1.7
HNS				SS	SS	09 07 50.5	-0.1
HNS				pmax	pmax		
	comp=Z,38nm,0.9s						
HNS				pmax	pmax		
	comp=Z,2µm,10.8s						
HNS				LR	LR		
	comp=Z,3µm,20.6s						
HNS				LR	LR		
	comp=Z,4µm,20.7s						
HNS				LR	LR		
	comp=Z,5µm,22.6s						
K13K	Kusilvak Mount	93.11	6	P	P	08 50 29.3	0.0
	baz=191						
K13K				S	S	09 01 39.7	+4.6
	baz=191						
L15K	Ungalak Mounta	93.18	7	P	P	08 50 29.3	-0.4
	baz=194						
L15K				S	S	09 01 38.4	+2.6
	baz=194						
MPU	Maple Canyon	93.22	45	IAMs_20	IAMs_20	09 32 40.3	
	comp=Z,16µm,18.0s						
BBB	Bella Bella	93.30	28	IAMs_20	IAMs_20	09 32 42.0	
	comp=Z,16µm,18.0s						
BBB	Bella Bella	93.30	28	P	P	08 50 31.2	+0.8
	comp=Z,24nm,1.0s,baz=238,slow=9.5,SNR=3.2						
BBB				LR	LR	09 27 15.7	
	comp=Z,15µm,18.9s,baz=222,slow=32						
	comp=Z,24nm,1.0s						
E08A	Dider Farm, El	93.31	36	IAMs_20	IAMs_20	09 28 57.9	
	comp=Z,22µm,19.0s						
N19K	Bonanza Creek	93.31	11	IAMs_20	IAMs_20	09 33 13.0	
	comp=Z,14µm,19.0s						
N19K	Bonanza Creek	93.31	11	P	P	08 50 28.9	-1.6
	baz=200						
N19K				S	S	09 01 38.6	+1.3
	baz=200						
SRU	San Rafael Swe	93.34	46	IAMs_20	IAMs_20	09 31 07.6	
	comp=Z,12µm,18.0s						
PB09	IPOC Station P	93.39	118	P	P	08 50 32.2	+0.2
PB09				IAmb	IAmb	08 50 36.7	
	comp=Z,117nm,1.7s						
M17K	Holitna River	93.42	9	IAMs_20	IAMs_20	09 33 18.8	
	comp=Z,11µm,20.0s						
M17K	Holitna River	93.42	9	P	P	08 50 30.5	-0.3
	baz=197,SNR=10						
M17K				S	S	09 01 41.2	+3.2
	baz=197						
L16K	Owhat River	93.45	8	IAMs_20	IAMs_20	09 33 32.5	
	comp=Z,11µm,20.0s						
L16K	Owhat River	93.45	8	P	P	08 50 30.3	-0.5
	baz=195						
L16K				S	S	09 01 40.9	+2.7
	baz=195						
ANMO	Albuquerque	93.47	51	P	P	08 50 32.2	+0.3
ANMO	Albuquerque	93.47	51	IAMs_20	IAMs_20	09 29 08.6	
	comp=Z,23µm,18.0s						
ANMO	Albuquerque	93.47	51	IAMs_20	IAMs_20	09 29 08.6	
	comp=Z,23µm,18.0s						
ANMO	Albuquerque	93.47	51	LR	LR	09 28 44.5	
	comp=Z,28µm,18.1s,baz=325,slow=33						
ANMO	Albuquerque	93.47	51	P	P	08 50 32.2	+0.3
ANMO				pmax	pmax		
	comp=Z,23nm,1.1s						
CTU	Camp Tracy	93.57	44	IAMs_20	IAMs_20	09 33 26.5	
	comp=Z,19µm,18.0s						
SEW	Seward	93.57	14	IAMs_20	IAMs_20	09 30 37.0	
	comp=Z,14µm,20.0s						
SEW	Seward	93.57	14	P	P	08 50 30.0	-1.4
	baz=204						
SEW				S	S	09 01 40.6	+1.3
	baz=204						
Q23K	Middleton Isla	93.62	15	IAMs_20	IAMs_20	09 29 55.5	
	comp=Z,16µm,20.0s						
Q23K	Middleton Isla	93.62	15	P	P	08 50 30.7	-1.0
	baz=206						
Q23K				S	S	09 01 44.2	+4.4
	baz=206						
PB01	IPOC Station P	93.63	117	P	P	08 50 33.5	+0.5
BJI	Beijing	93.71	315	P	P	08 50 36.8	+4.2
BJI				pmax	pmax		
	comp=Z,11nm,0.8s						
BJI				pmax	pmax		
	comp=Z,700nm,8.5s						
BJI				LR	LR		
	comp=Z,2µm,16.8s						
BJI				LR	LR		
	comp=Z,1µm,17.7s						
BJI				LR	LR		
	comp=Z,3µm,18.6s						
M18K	Stony River	93.75	10	P	P	08 50 31.7	-0.5
	baz=198						
M18K				S	S	09 01 44.3	+3.5
	baz=198						
K15K	Wolf Creek Mou	93.78	7	IAMs_20	IAMs_20	09 33 57.0	
	comp=Z,13µm,18.0s						
K15K	Wolf Creek Mou	93.78	7	P	P	08 50 32.3	-0.1
	baz=194						
K15K				S	S	09 01 44.0	+3.0
	baz=194						
E09A	Wood Farm, Sta	93.79	36	IAMs_20	IAMs_20	09 25 05.6	
	comp=Z,13µm,20.0s						
SLKM	Skilak Lake	93.79	13	IAMs_20	IAMs_20	09 30 39.9	
	comp=Z,12µm,19.0s						
HLID	Hailey	93.84	40	IAMs_20	IAMs_20	09 32 41.4	
	comp=Z,16µm,18.0s						
CAPN	Captain Cook N	93.86	13	IAMs_20	IAMs_20	09 30 56.4	
	comp=Z,21µm,19.0s						
CAPN	Captain Cook N	93.86	13	S	S	09 01 46.9	+5.1
	baz=202						
O22K	Cooper Landing	93.86	13	IAMs_20	IAMs_20	09 30 48.7	
	comp=Z,11µm,19.0s						
O22K	Cooper Landing	93.86	13	S	S	09 01 43.6	+1.8
	baz=204						
P23K	Montague Islan	93.90	15	IAMs_20	IAMs_20	09 30 21.8	
	comp=Z,17µm,19.0s						
P23K	Montague Islan	93.90	15	P	P	08 50 32.6	-0.4
	baz=206						
P23K				S	S	09 01 45.4	+3.2
	baz=206						
MA2	Magadan	93.96	344	P	P	08 50 33.2	-0.1
	comp=Z,12nm,0.8s,baz=144,slow=8.6,SNR=5.0						
MA2				LR	LR	09 31 21.6	
	comp=Z,7µm,19.1s,baz=154,slow=35						
	comp=Z,12nm,0.8s						
MA2	Magadan	93.96	344	P	P	08 50 34.3	+1.0
ATAH	Atahualpa	93.98	101	LR	LR	09 24 14.8	
	comp=Z,5µm,19.7s,baz=248,slow=30						
CRAG	Craig	94.00	23	P	P	08 50 33.2	-0.4
	baz=217						
CRAG				S	S	09 01 52.1	+8.8
	baz=217						
L17K	Donlin	94.01	9	P	P	08 50 34.0	+0.5
	baz=196,SNR=8.0						
L17K				S	S	09 01 48.8	+5.7
	baz=196						
J14K	Nanvaranak Lak	94.02	6	IAMs_20	IAMs_20	09 30 31.3	
	comp=Z,12µm,20.0s						
J14K	Nanvaranak Lak	94.02	6	P	P	08 50 33.5	+0.1
	baz=192						
J14K				S	S	09 01 45.1	+2.0
	baz=192						
TCUT	Toone Canyon	94.03	44	IAMs_20	IAMs_20	09 26 02.8	
	comp=Z,14µm,20.0s						
BSUT	Blindstream Ca	94.06	45	IAMs_20	IAMs_20	09 34 03.7	
	comp=Z,17µm,18.0s						
N20K	Mount Spurr	94.06	12	P	P	08 50 33.3	-0.5
	baz=202						
N20K				S	S	09 01 44.5	+0.7
	baz=202						
SPCR	Spurr Chakacha	94.07	12	P	P	08 50 33.1	-0.8
	baz=202						
SPCR				S	S	09 01 45.4	+1.5
	baz=202						
CMAR	Chiang Mai Arr	94.12	289	P	P	08 50 35.4	+0.3
CMAR	Chiang Mai Arr	94.12	289	P	P	08 50 35.6	+0.6
	comp=Z,1.2nm,0.3s,baz=116,slow=5.4,SNR=12						
CMAR				PP	PP	08 54 21.1	-0.7
	comp=Z,1.4nm,0.3s,baz=117,slow=6.7,SNR=5.5						
CMAR				LR	LR	09 32 55.7	
	comp=Z,2µm,21.4s,baz=120,slow=36						
	comp=Z,1.2nm,0.3s						
RUBB	Prince Rupert	94.12	25	IAMs_20	IAMs_20	09 28 05.5	
	comp=Z,13µm,19.0s						
CHTO	Chiang Mai	94.30	289	P	P	08 50 35.9	0.0
CHTO	Chiang Mai	94.30	289	P	P	08 50 37.0	+1.1
CHTO	Chiang Mai	94.30	289	P	P	08 50 35.9	0.0
CHTO				pmax	pmax		
	comp=Z,13nm,1.1s						
L18K	Granite Mounta	94.31	10	IAMs_20	IAMs_20	09 33 47.4	
	comp=Z,12µm,20.0s						
L18K	Granite Mounta	94.31	10	P	P	08 50 34.5	-0.4
	baz=198,SNR=10						
L18K				S	S	09 01 46.5	+0.7
	baz=198						
M19K	Big River Lodg	94.36	11	IAMs_20	IAMs_20	09 33 46.6	
	comp=Z,12µm,20.0s						
M19K	Big River Lodg	94.36	11	P	P	08 50 34.2	-0.9
	baz=200						
M19K				S	S	09 01 46.3	0.0
	baz=200						
STLK	Strandline Lak	94.41	12	IAMs_20	IAMs_20	09 33 37.0	
	comp=Z,11µm,20.0s						
V35K	Ketchikan	94.42	24	IAMs_20	IAMs_20	09 27 38.1	
	comp=Z,12µm,20.0s						
V35K	Ketchikan	94.42	24	P	P	08 50 36.3	+0.8
	baz=218						
V35K				S	S	09 01 54.8	+7.9
	baz=218						
RC01	Rabbit Creek A	94.42	13	P	P	08 50 35.8	+0.4
	baz=204						
RC01				S	S	09 01 49.4	+2.7
	baz=204						
HIN	Hinchinbrook I	94.46	15	IAMs_20	IAMs_20	09 30 27.5	
	comp=Z,18µm,19.0s						
HEH	HeiHe	94.47	328	*e*P	P	08 50 35.1	-0.8
HEH				pP	sP	08 50 39.6	+0.6
HEH				SKS	SKSac	09 01 11.6	+1.1
HEH				S	ScS	09 01 51.4	+2.6
HEH				pmax	pmax		
	comp=Z,23nm,1.1s						
HEH				pmax	pmax		
	comp=Z,1µm,9.4s						
HEH				LR	LR		
	comp=Z,6µm,19.3s						
HEH				LR	LR		
	comp=Z,5µm,20.3s						
HEH				LR	LR		
	comp=Z,12µm,19.7s						
PWL	Port Wells	94.49	14	IAMs_20	IAMs_20	09 31 03.3	
	comp=Z,15µm,20.0s						
PWL	Port Wells	94.49	14	P	P	08 50 35.9	+0.2
	baz=205						
PWL				S	S	09 01 48.1	+0.7
	baz=205						
GAMB	Gambell	94.50	3	P	P	08 50 36.0	+0.4
	baz=185						
GAMB				S	S	09 01 48.5	+1.3
	baz=185						
KAIM	Kayak Island	94.51	16	P	P	08 50 36.5	+0.7
	baz=208						
KAIM				S	S	09 01 52.3	+4.7
	baz=208						
U33K	Whale Pass	94.52	23	P	P	08 50 36.5	+0.6
	baz=217						
U33K				S	S	09 01 54.5	+6.7
	baz=217						
M20K	Styx River	94.55	11	IAMs_20	IAMs_20	09 33 51.5	
	comp=Z,14µm,19.0s						
M20K	Styx River	94.55	11	P	P	08 50 35.7	-0.3
	baz=201						
M20K				S	S	09 01 50.8	+2.8
	baz=201						
L19K	White Mountain	94.55	10	P	P	08 50 35.9	-0.2
	baz=199,SNR=10						
L19K				S	S	09 01 49.6	+1.7
	baz=199						
SIT	Sitka	94.57	22	P	P	08 50 35.7	-0.4
	baz=215						
SIT				S	S	09 01 53.4	+5.3
	baz=215						
K17K	Iditarod	94.57	9	IAMs_20	IAMs_20	09 34 16.1	
	comp=Z,12µm,19.0s						
K17K	Iditarod	94.57	9	P	P	08 50 35.8	-0.2
	baz=196						
K17K				S	S	09 01 51.8	+3.8
	baz=196						
KMI	Kunming	94.57	296	P	P	08 50 37.1	-0.2
KMI				S	S	09 01 49.9	-0.3
KMI				SS	SS	09 08 13.1	-0.7
KMI				pmax	pmax		
	comp=Z,18nm,0.8s						
KMI				pmax	pmax		
	comp=Z,1µm,9.2s						
KMI				LR	LR		
	comp=Z,6µm,17.7s						
KMI				LR	LR		
	comp=Z,2µm,18.0s						
KMI				LR	LR		
	comp=Z,3µm,20.5s						
SUA	Susitna One	94.58	12	IAMs_20	IAMs_20	09 31 19.5	
	comp=Z,18µm,19.0s						
SUA	Susitna One	94.58	12	P	P	08 50 35.9	-0.4
	baz=203						
SUA				S	S	09 01 49.7	+1.4
	baz=203						
TIY	Taiyuan	94.65	312	*e*P	P	08 50 38.0	+0.8
TIY				PP	PP	08 54 23.3	-2.5
TIY				SKS	SKSac	09 01 12.8	+0.5
TIY				S	S	09 01 43.3	-6.8
TIY				pmax	pmax		
	comp=Z,1µm,9.4s						
TIY				LR	LR		
	comp=Z,2µm,24.1s						
TIY				LR	LR		
	comp=Z,4µm,21.0s						
TIY				LR	LR		
	comp=Z,4µm,26.1s						
EYAK	Cordova Ski Ar	94.76	15	IAMs_20	IAMs_20	09 30 53.6	
	comp=Z,17µm,19.0s						
EYAK	Cordova Ski Ar	94.76	15	P	P	08 50 38.0	+1.1
EYAK	Cordova Ski Ar	94.76	15	P	P	08 50 36.8	-0.1
	baz=207						
EYAK				S	S	09 01 52.6	+2.9
	baz=207						
GLI	Glacier Island	94.77	14	IAMs_20	IAMs_20	09 30 49.6	
	comp=Z,14µm,20.0s						
GLI	Glacier Island	94.77	14	P	P	08 50 37.3	+0.3
	baz=206						
GLI				S	S	09 01 51.8	+2.0
	baz=206						
FID	Port Fidalgo	94.78	15	IAMs_20	IAMs_20	09 30 27.8	
	comp=Z,16µm,20.0s						
LLLB	Lillooet	94.81	32	IAMs_20	IAMs_20	09 31 19.2	
	comp=Z,20µm,19.0s						
J16K	Anvik River	94.84	8	IAMs_20	IAMs_20	09 34 39.3	
	comp=Z,12µm,19.0s						
J16K	Anvik River	94.84	8	P	P	08 50 37.5	+0.2
	baz=194						
J16K				S	S	09 01 51.8	+1.4
	baz=194						
XAN	Xi'an	94.89	307	⇑P	P	08 50 39.9	+1.6
XAN				pP	pwP	08 50 47.8	-0.3
XAN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,2µm,9.6s						
XAN				LR	LR		
	comp=Z,2µm,12.4s						
XAN				LR	LR		
	comp=Z,7µm,19.0s						
XAN				LR	LR		
	comp=Z,12µm,20.6s						
SKT	Skwentna	94.91	12	IAMs_20	IAMs_20	09 33 43.3	
	comp=Z,16µm,20.0s						
SKT	Skwentna	94.91	12	P	P	08 50 38.1	+0.4
	baz=202						
SKT				S	S	09 01 52.1	+1.0
	baz=202						
M22K	Willow	94.96	13	IAMs_20	IAMs_20	09 31 30.6	
	comp=Z,16µm,19.0s						
M22K	Willow	94.96	13	P	P	08 50 37.4	-0.4
	baz=203						
M22K				S	S	09 01 54.4	+3.0
	baz=203						
KNK	Knik Glacier	94.97	13	IAMs_20	IAMs_20	09 36 10.0	
	comp=Z,11µm,19.0s						
KNK	Knik Glacier	94.97	13	P	P	08 50 37.8	-0.2
	baz=205						
KNK				S	S	09 01 54.4	+2.8
	baz=205						
L20K	Farewell, AK	94.98	11	P	P	08 50 37.4	-0.6
	baz=200						

L20K				S	S	09 01 53.2	+1.5	baz=200
PMR	**Palmer**	95.00	13	P	P	08 50 39.8	+1.8	
PMR	**Palmer**	95.00	13	P	P	08 50 37.7	-0.3	baz=204
PMR				S	S	09 01 53.7	+2.0	baz=204
WRAK	**Wrangell Islan**	95.03	23	P	P	08 50 38.8	+0.6	baz=218
WRAK				S	S	09 01 59.6	+7.5	baz=218
S31K	**Pelican**	95.03	21	P	P	08 50 38.2	0.0	baz=215
S31K				S	S	09 01 58.8	+6.7	baz=215
J17K	**VABM Dome**	95.13	8	IAMs_20	IAMs_20	09 34 44.9		comp=Z,13µm,19.0s
J17K	**VABM Dome**	95.13	8	P	P	08 50 38.5	-0.1	baz=196
J17K				S	S	09 01 58.0	+5.2	baz=196
T33K	**Petersburg**	95.14	23	S	S	09 02 00.1	+7.0	baz=217
S32K	**Killisnoo**	95.14	22	P	P	08 50 38.5	-0.2	baz=216
S32K				S	S	09 01 58.9	+5.8	baz=216
GHO	**Glory Hole Cre**	95.21	13	IAMs_20	IAMs_20	09 36 30.1		comp=Z,10µm,18.0s
DIV	**Divide**	95.28	15	IAMs_20	IAMs_20	09 31 03.1		comp=Z,12µm,19.0s
MESA	**MESA**	95.33	17	IAMs_20	IAMs_20	09 30 46.8		comp=Z,19µm,20.0s
MESA	**MESA**	95.33	17	P	P	08 50 39.4	-0.4	baz=210
MESA				S	S	09 01 58.1	+2.9	baz=210
WAX	**Waxell Ridge**	95.35	16	IAMs_20	IAMs_20	09 30 48.1		comp=Z,23µm,20.0s
YKU2	**Yakutat**	95.35	18	IAMs_20	IAMs_20	09 28 10.4		comp=Z,13µm,20.0s
SML	**Sawmill**	95.36	13	IAMs_20	IAMs_20	09 31 53.1		comp=Z,11µm,19.0s
SML	**Sawmill**	95.36	13	P	P	08 50 39.0	-0.7	baz=205
SML				S	S	09 01 57.8	+2.8	baz=205
BMRM	**Bremner River**	95.39	15	IAMs_20	IAMs_20	09 31 23.3		comp=Z,19µm,19.0s
BMRM	**Bremner River**	95.39	15	P	P	08 50 40.0	+0.1	baz=208
BMRM				S	S	09 01 59.2	+3.8	baz=208
I17K	**Unalakleet**	95.42	7	IAMs_20	IAMs_20	09 34 58.5		comp=Z,12µm,19.0s
I17K	**Unalakleet**	95.42	7	P	P	08 50 39.8	-0.1	baz=194
I17K				S	S	09 01 57.7	+2.4	baz=194
MSTX	**Muleshoe**	95.42	54	IAMs_20	IAMs_20	09 29 53.6		comp=Z,18µm,19.0s
U35K	**Hyder**	95.44	25	IAMs_20	IAMs_20	09 28 19.2		comp=Z,14µm,20.0s
U35K	**Hyder**	95.44	25	P	P	08 50 40.0	-0.1	baz=219
U35K				S	S	09 02 01.1	+5.3	baz=219
M23K	**Glacier View**	95.46	14	P	P	08 50 40.8	+0.6	baz=205
M23K				S	S	09 01 58.7	+2.8	baz=205
NEW	**Newport**	95.47	36	P	P	08 50 41.5	+0.9	comp=Z,2.0nm,0.8s,baz=221,slow=7.6,SNR=5.0
NEW				PP	PP	08 54 32.1	+0.2	comp=Z,3.1nm,1.0s,baz=252,slow=6.4,SNR=3.2
NEW				LR	LR	09 26 56.7		comp=Z,27µm,20.0s,baz=222,slow=31 comp=Z,2.0nm,0.8s
KVTX	**Kingsville**	95.48	61	IAMs_20	IAMs_20	09 32 08.0		comp=Z,16µm,18.0s
J18K	**Innoko River**	95.50	9	IAMs_20	IAMs_20	09 34 44.7		comp=Z,11µm,20.0s
J18K	**Innoko River**	95.50	9	P	P	08 50 40.9	+0.6	baz=198
J18K				S	S	09 01 57.6	+1.5	baz=198
CUT	**Chulitna**	95.53	12	IAMs_20	IAMs_20	09 31 50.8		comp=Z,18µm,19.0s
CUT	**Chulitna**	95.53	12	P	P	08 50 40.4	0.0	baz=203
CUT				S	S	09 02 00.3	+3.9	baz=203
YAH	**Yahtse**	95.55	17	IAMs_20	IAMs_20	09 30 35.2		comp=Z,18µm,20.0s
CRQM	**Cirque**	95.55	16	IAMs_20	IAMs_20	09 30 46.6		comp=Z,23µm,20.0s
R31K	**City Hall, Gus**	95.55	21	P	P	08 50 41.0	+0.4	baz=215
CRQE	**Cirque**	95.56	16	P	P	08 50 40.6	-0.1	baz=209
CRQE				S	S	09 02 04.1	+7.1	baz=209
PNL	**Peninsula**	95.56	18	P	P	08 50 40.1	-0.5	baz=212
PNL				S	S	09 02 00.4	+3.6	baz=212
KLU	**Klutina**	95.57	15	IAMs_20	IAMs_20	09 31 13.9		comp=Z,13µm,19.0s
KLU	**Klutina**	95.57	15	P	P	08 50 41.2	+0.4	baz=207
KLU				S	S	09 01 58.8	+1.8	baz=207
SCM	**Sheep Creek Mo**	95.58	14	IAMs_20	IAMs_20	09 36 17.1		comp=Z,11µm,19.0s
SCM	**Sheep Creek Mo**	95.58	14	P	P	08 50 40.5	-0.3	baz=206
SCM				S	S	09 02 00.5	+3.5	baz=206
ISLE	**Juniper Island**	95.61	17	IAMs_20	IAMs_20	09 31 06.0		comp=Z,20µm,20.0s
TGL	**Tana Glacier**	95.62	16	IAMs_20	IAMs_20	09 30 57.3		comp=Z,22µm,20.0s
ANM	**Nome**	95.65	5	IAMs_20	IAMs_20	09 35 22.4		comp=Z,12µm,19.0s
ANM	**Nome**	95.65	5	P	P	08 50 40.5	-0.4	baz=190
ANM				S	S	09 02 00.3	+3.0	baz=190
PPLA	**Purkeypile**	95.65	11	IAMs_20	IAMs_20	09 34 37.9		comp=Z,16µm,19.0s
PPLA	**Purkeypile**	95.65	11	P	P	08 50 39.7	-1.4	baz=202
PPLA				S	S	09 02 02.0	+4.3	baz=202
COHC	**Cochancay**	95.67	96	P	P	08 50 41.7	-0.6	
PCA	**Pinnacle**	95.70	18	IAMs_20	IAMs_20	09 28 23.4		comp=Z,18µm,20.0s
PINM	**Pinnacle**	95.70	18	P	P	08 50 40.8	-0.6	baz=211
PINM				S	S	09 02 03.1	+5.0	baz=211
SDCO	**Great Sand Dun**	95.71	49	IAMs_20	IAMs_20	09 31 44.8		comp=Z,15µm,18.0s
BCPM	**Bancas Point**	95.74	18	IAMs_20	IAMs_20	09 28 23.5		comp=Z,14µm,20.0s
TABL	**Table Mountain**	95.76	17	IAMs_20	IAMs_20	09 28 47.2		comp=Z,17µm,20.0s
K20K	**Telida**	95.78	10	P	P	08 50 42.1	+0.5	baz=200
K20K				S	S	09 02 02.2	+3.6	baz=200
FXWY	**Fox Creek**	95.81	42	IAMs_20	IAMs_20	09 27 16.5		comp=Z,21µm,20.0s
R32K	**Eaglecrest**	95.81	21	P	P	08 50 41.3	-0.5	baz=216
PBA	**Port Blair**	95.83	280⇑	*e*P	P	08 50 37.7	-5.3	
GRNC	**Granite Creek**	95.86	17	IAMs_20	IAMs_20	09 30 44.7		comp=Z,17µm,20.0s
VRDI	**Verde Repeater**	95.89	16	IAMs_20	IAMs_20	09 31 18.4		comp=Z,20µm,20.0s
N25K	**Chitina, Valde**	95.96	15	IAMs_20	IAMs_20	09 31 23.3		comp=Z,14µm,19.0s
N25K	**Chitina, Valde**	95.96	15	P	P	08 50 42.8	+0.3	baz=208
N25K				S	S	09 02 04.7	+4.3	baz=208
P29M	**Windy Craggy**	95.98	19	IAMs_20	IAMs_20	09 28 11.1		comp=Z,13µm,20.0s
P29M	**Windy Craggy**	95.98	19	P	P	08 50 42.6	-0.1	baz=214
P29M				S	S	09 02 06.0	+5.5	baz=214
DLMT	**Dillon**	95.99	40	IAMs_20	IAMs_20	09 29 49.2		comp=Z,20µm,20.0s
H16K	**Elim**	95.99	6	P	P	08 50 42.1	-0.4	baz=193
H16K				S	S	09 02 03.9	+3.7	baz=193
GLB	**Gilahina Butte**	96.00	15	IAMs_20	IAMs_20	09 31 32.2		comp=Z,16µm,19.0s
PZH	**PanZhiHua**	96.06	297	P	P	08 50 42.8	-1.1	
PZH				PP	PP	08 54 41.0	+4.0	
PZH				SKS	SKSac	09 01 17.9	-2.6	
PZH				sS	sS	09 02 12.6	+5.8	
PZH				SS	SS	09 08 32.9	-1.8	
PZH				pmax	pmax			comp=Z,890nm,10.0s
PZH				LR	LR			comp=Z,5µm,18.0s
PZH				LR	LR			comp=Z,2µm,17.5s
PZH				LR	LR			comp=Z,5µm,19.6s
M24K	**Tolsona, Glenn**	96.07	14	IAMs_20	IAMs_20	09 31 51.0		comp=Z,13µm,20.0s
M24K	**Tolsona, Glenn**	96.07	14	P	P	08 50 42.8	-0.2	baz=207
M24K				S	S	09 02 05.1	+4.0	baz=207
T25A	**Trinidad**	96.08	50	IAMs_20	IAMs_20	09 32 00.7		comp=Z,10µm,18.0s
XLT	**XiLinHaoTe**	96.12	318	*e*P	P	08 50 41.8	-1.9	
XLT				SKS	SKSac	09 01 18.8	-1.1	
XLT				SS	SS	09 08 27.3	-7.6	
XLT				pmax	pmax			comp=Z,11nm,1.2s
XLT				pmax	pmax			comp=Z,830nm,9.6s
XLT				LR	LR			comp=Z,300nm,17.9s
XLT				LR	LR			comp=Z,2µm,19.1s
XLT				LR	LR			comp=Z,5µm,19.6s
MCARA	**McCarthy VSAT**	96.13	16	IAMs_20	IAMs_20	09 31 34.7		comp=Z,18µm,19.0s
MCARA	**McCarthy VSAT**	96.13	16	P	P	08 50 43.7	+0.5	baz=209
MCARA				S	S	09 02 05.4	+3.8	baz=209
BW06	**Boulder Array**	96.13	43	IAMs_20	IAMs_20	09 29 54.3		comp=Z,20µm,19.0s
LOGN	**Logan Glacier**	96.13	17	IAMs_20	IAMs_20	09 28 58.8		comp=Z,17µm,20.0s
PDAR	**Pinedale Array**	96.13	43	P	P	08 50 43.4	-0.6	
PDAR	**Pinedale Array**	96.13	43	P	P	08 50 43.2	-0.7	comp=Z,4.7nm,0.8s,baz=236,slow=5.8,SNR=19
PDAR				PP	PP	08 54 37.8	+0.4	comp=Z,2.6nm,1.1s,baz=269,slow=5.9,SNR=4.9
PDAR				PKKPbc	PKKPbc	09 07 30.9	-1.0	comp=Z,1.1nm,0.8s,baz=39,slow=3.4,SNR=5.4
PDAR				LR	LR	09 29 46.0		comp=Z,12µm,18.5s,baz=228,slow=33 comp=Z,4.7nm,0.8s
CAST	**Castle Rocks**	96.16	11	IAMs_20	IAMs_20	09 35 03.2		comp=Z,15µm,19.0s
CAST	**Castle Rocks**	96.16	11	P	P	08 50 41.8	-1.5	baz=202
CAST				S	S	09 02 03.5	+1.6	baz=202
J19K	**Poorman**	96.16	9	IAMs_20	IAMs_20	09 35 04.1		comp=Z,11µm,20.0s
J19K	**Poorman**	96.16	9	P	P	08 50 41.4	-1.9	baz=199
J19K				S	S	09 02 05.5	+3.8	baz=199
CTG	**Chitna Glacier**	96.17	17	P	P	08 50 43.4	-0.2	baz=211
CTG				S	S	09 02 04.8	+2.5	baz=211
CTGM	**Chitina Glacie**	96.17	17	IAMs_20	IAMs_20	09 31 14.8		comp=Z,14µm,20.0s
WAT6	**Susitna Watana**	96.18	13	P	P	08 50 43.5	-0.1	baz=205
WAT6				S	S	09 02 04.4	+2.1	baz=205
G15K	**Niukluk**	96.18	6	P	P	08 50 42.3	-1.1	baz=192
G15K				S	S	09 02 03.5	+1.7	baz=192
T35M	**Bob Quinn**	96.19	24	IAMs_20	IAMs_20	09 28 52.9		comp=Z,13µm,19.0s
T35M	**Bob Quinn**	96.19	24	P	P	08 50 43.4	-0.2	baz=219
T35M				S	S	09 02 08.2	+5.8	baz=219
PLBC	**Pleasant Camp**	96.23	20	P	P	08 50 44.0	+0.3	baz=215
PLBC				S	S	09 02 07.5	+5.0	baz=215
735A	**Kenedy**	96.23	60	IAMs_20	IAMs_20	09 26 49.8		comp=Z,12µm,20.0s
WAT1	**Susitna Watana**	96.25	13	P	P	08 50 43.8	+0.1	baz=205
WAT1				S	S	09 02 05.9	+3.3	baz=205
O28M	**Mount Upton**	96.29	17	IAMs_20	IAMs_20	09 28 54.1		comp=Z,18µm,20.0s
O28M	**Mount Upton**	96.29	17	P	P	08 50 43.2	-1.1	baz=212
O28M				S	S	09 02 06.6	+2.9	baz=212
O29M	**Mount Kennedy**	96.32	18	IAMs_20	IAMs_20	09 28 32.9		comp=Z,12µm,20.0s
O29M	**Mount Kennedy**	96.32	18	P	P	08 50 45.1	+0.8	baz=213
O29M				S	S	09 02 07.9	+4.4	baz=213
YHB	**Horse Butte**	96.39	41	IAMs_20	IAMs_20	09 29 50.9		comp=Z,15µm,19.0s
DGPR	**DIGLIPUR**	96.43	281	*e*P	P	08 50 40.1	-5.6	
YHL	**Hebgen Lake**	96.46	41	IAMs_20	IAMs_20	09 28 07.7		comp=Z,15µm,20.0s
TNA	**Tin City**	96.46	4	P	P	08 50 45.3	+0.8	baz=188
TNA				S	S	09 02 06.9	+2.6	baz=188
F14K	**Arctic Creek**	96.48	5	P	P	08 50 45.3	+0.6	baz=190
F14K				S	S	09 02 06.1	+1.7	baz=190
KTH	**Kantishna Hill**	96.48	12	IAMs_20	IAMs_20	09 34 53.7		comp=Z,17µm,20.0s
TRF	**Thorofare Moun**	96.50	12	IAMs_20	IAMs_20	09 32 33.2		comp=Z,20µm,20.0s
TRF	**Thorofare Moun**	96.50	12	P	P	08 50 44.4	-0.6	baz=203,SNR=12
TRF				S	S	09 02 05.8	+0.8	baz=203
H17K	**Granite Mounta**	96.53	7	IAMs_20	IAMs_20	09 35 42.7		comp=Z,15µm,20.0s
H17K	**Granite Mounta**	96.53	7	P	P	08 50 44.4	-0.5	baz=195
H17K				S	S	09 02 06.3	+1.5	baz=195
SKAG	**Skagway**	96.53	20	P	P	08 50 45.5	+0.5	baz=215
SKAG				S	S	09 02 07.6	+2.5	baz=215
HARP	**HAARP**	96.55	14	P	P	08 50 45.0	-0.1	baz=208
HARP				S	S	09 02 07.7	+2.5	baz=208
J20K	**Nowinta River**	96.55	10	P	P	08 50 44.9	-0.1	baz=200
J20K				S	S	09 02 08.1	+3.0	baz=200
CHUM	**Lake Minchumin**	96.55	11	P	P	08 50 43.4	-1.7	baz=202
CHUM				S	S	09 02 07.7	+2.6	baz=202
P30M	**Million Dollar**	96.61	19	P	P	08 50 44.9	-0.6	baz=214
P30M				S	S	09 02 08.0	+2.0	baz=214
S34M	**Telegraph Cree**	96.61	23	P	P	08 50 46.3	+0.8	baz=219
S34M				S	S	09 02 08.4	+2.5	baz=219
Q24A	**Divide**	96.63	48	IAMs_20	IAMs_20	09 32 37.1		comp=Z,19µm,18.0s
SEY	**Seymchan**	96.63	347	P	P	08 50 45.2	-0.2	comp=Z,12nm,0.7s,baz=157,slow=7.7,SNR=24
SEY				LR	LR	09 33 15.3		comp=Z,7µm,18.5s,baz=152,slow=35 comp=Z,12nm,0.7s
YNM	**Yellowstone No**	96.65	41	IAMs_20	IAMs_20	09 28 05.9		comp=Z,18µm,20.0s
YNR	**Norris Junctio**	96.66	41	IAMs_20	IAMs_20	09 28 16.1		comp=Z,17µm,20.0s
BOZ	**Bozeman (W)**	96.67	40	IAMs_20	IAMs_20	09 28 54.1		comp=Z,15µm,20.0s
AMTX	**Amarillo**	96.67	53	IAMs_20	IAMs_20	09 30 43.5		comp=Z,22µm,19.0s
DHY	**Denali Highway**	96.70	13	IAMs_20	IAMs_20	09 37 04.6		comp=Z,10µm,18.0s
DHY	**Denali Highway**	96.70	13	P	P	08 50 45.9	-0.1	baz=206
DHY				S	S	09 02 09.2	+2.4	baz=206
GCSA	**Galena City Sc**	96.71	9	P	P	08 50 45.5	-0.2	baz=198
GCSA				S	S	09 02 09.2	+2.9	baz=198
RND	**Reindeer**	96.72	12	IAMs_20	IAMs_20	09 32 25.0		comp=Z,15µm,19.0s
G16K	**Koyuk River**	96.72	6	IAMs_20	IAMs_20	09 32 24.8		comp=Z,11µm,20.0s
G16K	**Koyuk River**	96.72	6	P	P	08 50 45.7	-0.1	baz=193
G16K				S	S	09 02 09.3	+2.8	baz=193
HERN	**Volcan Telica**	96.80	79	IAMs_20	IAMs_20	09 27 01.3		comp=Z,11µm,19.0s
ISCO	**Idaho Springs**	96.81	47	IAMs_20	IAMs_20	09 35 00.7		comp=Z,19µm,18.0s
F15K	**North Star Dit**	96.83	5	IAMs_20	IAMs_20	09 34 12.7		comp=Z,14µm,20.0s
F15K	**North Star Dit**	96.83	5	P	P	08 50 45.8	-0.5	baz=191
F15K				S	S	09 02 11.4	+3.9	baz=191
YUK8	**Steele Glacier**	96.84	17	P	P	08 50 46.9	+0.1	baz=212
YUK8				S	S	09 02 11.5	+3.2	baz=212
CD2	**Chengdu**	96.86	302	P	P	08 50 47.3	0.0	
CD2				sP	pwP	08 51 02.3	+5.2	
CD2				SKS	SKSac	09 01 23.4	-0.9	
CD2				S	S	09 02 09.3	-0.1	
CD2				pmax	pmax			comp=Z,20nm,0.4s
CD2				pmax	pmax			comp=Z,2µm,8.7s
CD2				LR	LR			comp=Z,3µm,16.8s
CD2				LR	LR			comp=Z,5µm,19.0s
CD2				LR	LR			comp=Z,4µm,15.9s
H18K	**Honhosa River**	96.91	8	IAMs_20	IAMs_20	09 35 42.0		comp=Z,13µm,20.0s
H18K	**Honhosa River**	96.91	8	P	P	08 50 46.8	+0.1	baz=196
H18K				S	S	09 02 11.4	+3.1	baz=196
YUK6	**Outpost Mounta**	96.91	18	P	P	08 50 47.0	-0.1	baz=213
YUK6				S	S	09 02 12.2	+3.3	baz=213
BPAW	**Bear Paw Mtn.**	96.97	11	IAMs_20	IAMs_20	09 35 09.8		comp=Z,14µm,20.0s
BPAW	**Bear Paw Mtn.**	96.97	11	P	P	08 50 46.9	-0.1	baz=203
BPAW				S	S	09 02 10.4	+1.6	baz=203
PAX	**Paxson**	96.99	14	IAMs_20	IAMs_20	09 32 12.3		comp=Z,11µm,20.0s
PAX	**Paxson**	96.99	14	P		08 50 47.6		baz=207
PAX				S	S	09 02 11.3	+2.2	baz=207
G17K	**Kiwalik Mounta**	97.00	7	P	P	08 50 47.1	+0.1	baz=194
G17K				S	S	09 02 10.5	+1.6	baz=194
ZEA	**Zeya**	97.00	330	*e*P	P	08 50 47.2	-0.1	
ZEA				*e*		08 54 43.5		
ZEA				*e*		09 01 27.5		
ZEA				*e*S	S	09 02 07.9	-1.5	
ZEA				*e*SS	SS	09 08 47.8	+1.2	
ZEA				pmax	pmax			comp=E,100nm,8.9s
ZEA				pmax	pmax			comp=N,100nm,8.3s
ZEA				pmax	pmax			comp=Z,400nm,8.1s
ZEA				pmax	pmax			comp=N,10.0nm,1.0s
ZEA				pmax	pmax			comp=Z,20nm,0.8s
ZEA				pmax	pmax			comp=E,200nm,12.8s
ZEA				pmax	pmax			comp=N,200nm,13.2s
ZEA				pmax	pmax			comp=Z,400nm,12.8s
ZEA				smax	smax			comp=N,1µm,16.2s
ZEA				smax	smax			comp=E,2µm,12.2s
MCK	**McKinley**	97.00	12	IAMs_20	IAMs_20	09 32 36.5		comp=Z,16µm,19.0s
MCK	**McKinley**	97.00	12	P	P	08 50 45.6	-1.6	baz=204
MCK				S	S	09 02 11.3	+2.3	baz=204
HHC	**Hu-ho-hao-te**	97.02	314	*e*P	Pdif	08 50 50.5	+2.5	
HHC				PP	PP	08 54 48.9	+4.8	
HHC				S	S	09 02 07.4	-3.1	
HHC				pmax	pmax			comp=Z,9.0nm,0.6s
HHC				pmax	pmax			comp=Z,950nm,7.7s
HHC				LR	LR			comp=Z,2µm,19.0s
HHC				LR	LR			comp=Z,2µm,20.6s
HHC				LR	LR			comp=Z,5µm,20.6s
M26K	**Nabesna, AK**	97.02	15	IAMs_20	IAMs_20	09 32 18.3		comp=Z,16µm,19.0s
M26K	**Nabesna, AK**	97.02	15	P	Pdif	08 50 48.8	+1.4	baz=209
M26K				S	S	09 02 12.7	+3.3	baz=209
HYT	**Haines Junctio**	97.05	18	IAMs_20	IAMs_20	09 29 15.2		comp=Z,11µm,20.0s
HYT	**Haines Junctio**	97.05	18	P	Pdif	08 50 48.2	+0.6	baz=214
HYT				S	S	09 02 12.0	+2.2	baz=214
Q32M	**Nakina River**	97.07	22	P	P	08 50 47.3	-0.5	baz=218
Q32M				S	S	09 02 12.9	+2.7	baz=218
I20K	**Naaghedeneel**	97.08	10	IAMs_20	IAMs_20	09 35 42.5		comp=Z,11µm,19.0s
I20K	**Naaghedeneel**	97.08	10	P	P	08 50 46.7	-0.7	baz=200
YUK3	**Moose Creek**	97.08	17	P	P	08 50 47.6	-0.2	baz=211
YUK3				S	S	09 02 12.6	+2.3	baz=211
P32M	**Atlin**	97.12	21	P	P	08 50 47.9	+0.1	baz=217
P32M				S	S	09 02 13.6	+3.2	baz=217
YUK4	**Talbot Arm**	97.18	18	P	Pdif	08 50 49.6	+1.3	baz=213
YNE	**Yellowstone No**	97.22	41	P	Pdif	08 50 49.2	+0.3	
YNE				IAmb	IAmb	08 51 06.6		comp=Z,45nm,1.3s
YNE				IAMs_20	IAMs_20	09 28 24.8		

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       comp=Z,19µm,20.0s
JTS    Las Juntas de     97.24  82 LR        LR        09 25 51.9
       comp=Z,9µm,19.5s,baz=250,slow=30
M27K   Edge Creek, AK    97.25  16 P         P         08 50 48.3 -0.1
M27K                               IAMs_20   IAMs_20   09 32 22.2
       comp=Z,19µm,19.0s
M27K   Edge Creek, AK    97.25  16 P         Pdif      08 50 48.7 +0.2
       baz=210
M27K                               S         S         09 02 14.5 +3.0
       baz=210
BWN    Browne            97.31  12 IAMs_20   IAMs_20   09 33 07.4
       comp=Z,21µm,20.0s
MENT   Mentasta          97.33  15 P         P         08 50 48.7  0.0
MENT                               IAMs_20   IAMs_20   09 32 30.5
       comp=Z,12µm,19.0s
MENT   Mentasta          97.33  15 P         Pdif      08 50 49.5 +0.7
O30N   Mendenhall        97.39  19 IAMs_20   IAMs_20   09 29 15.3
       comp=Z,13µm,20.0s
O30N   Mendenhall        97.39  19 P         P         08 50 48.9 -0.1
       baz=215
O30N                               S         S         09 02 18.1 +5.5
       baz=215
DLBC   Dease Lake        97.39  23 P         Pdif      08 50 50.5 +1.3
       comp=Z,0.1nm,1.0s,baz=209,slow=10,SNR=2.4
DLBC                               PP        PP        08 54 48.4 +1.8
       comp=Z,0.1nm,0.9s,baz=203,slow=9.2,SNR=2.3
DLBC                               LR        LR        09 26 25.5
       comp=Z,562nm,21.4s,baz=198,slow=30
LPAZ   La Paz            97.40 114 P         P         08 50 50.7 -0.2
LPAZ   La Paz            97.40 114 P         Pdif      08 50 52.6 +1.6
       comp=Z,1.8nm,0.8s,baz=223,slow=7.5,SNR=11
LPAZ                               PKKP      PKKPbc    09 07 27.7 +0.1
       comp=Z,2.0nm,1.1s,baz=63,slow=4.5,SNR=4.2
LPAZ                               LR        LR        09 28 22.5
       comp=Z,4µm,18.6s,baz=228,slow=31
       comp=Z,1.8nm,0.8s
LPAZ   La Paz            97.40 114 eP        Pdif      08 50 51.2 +0.2
L26K   Log Cabin Wild    97.49  15 IAMs_20   IAMs_20   09 32 53.7
       comp=Z,15µm,19.0s
L26K   Log Cabin Wild    97.49  15 P         Pdif      08 50 50.7 +1.2
       baz=209
L26K                               S         S         09 02 14.0 +0.6
       baz=209
H19K   Roundabout Mou    97.51   9 IAMs_20   IAMs_20   09 35 57.7
       comp=Z,11µm,20.0s
H19K   Roundabout Mou    97.51   9 P         Pdif      08 50 49.7 +0.3
       baz=198
H19K                               S         S         09 02 13.2  0.0
       baz=198
BVCY   Beaver Creek      97.53  16 P         Pdif      08 50 50.4 +0.7
       baz=211
BVCY                               S         S         09 02 15.8 +2.1
       baz=211
G18K   Tagagawik         97.59   8 IAMs_20   IAMs_20   09 36 24.9
       comp=Z,15µm,20.0s
G18K   Tagagawik         97.59   8 P         Pdif      08 50 50.2 +0.4
       baz=196
G18K                               S         S         09 02 16.5 +2.4
       baz=196
WHY    Whitehorse        97.64  20 IAMs_20   IAMs_20   09 30 39.0
       comp=Z,17µm,19.0s
WHY    Whitehorse        97.64  20 P         P         08 50 49.5 -0.8
       baz=216
WHY                                S         S         09 02 16.7 +1.8
       baz=216
K24K   Donnelly Dome     97.67  14 IAMs_20   IAMs_20   09 32 55.3
       comp=Z,15µm,19.0s
K24K   Donnelly Dome     97.67  14 P         P         08 50 50.0 -0.2
       baz=207,SNR=6.5
K24K                               S         S         09 02 16.0 +1.2
       baz=207
H20K   Anotleneega Mo    97.68   9 P         P         08 50 50.0 -0.2
       baz=199
H20K                               S         S         09 02 18.5 +3.7
       baz=199
N30M   Aishikik Lake     97.69  18 IAMs_20   IAMs_20   09 29 27.0
       comp=Z,12µm,20.0s
N30M   Aishikik Lake     97.69  18 P         P         08 50 49.8 -0.5
       baz=214
N30M                               S         S         09 02 16.5 +1.4
       baz=214
BOAB   BOACO BROADBAN97.70      80 IAMs_20   IAMs_20   09 27 22.3
       comp=Z,21µm,19.0s
RLMT   Red Lodge         97.71  42 IAMs_20   IAMs_20   09 34 51.8
       comp=Z,20µm,18.0s
OTAV   Otavalo           97.75  94 eP        Pdif      08 50 52.6 +0.3
NEA2   Nenana            97.76  12 IAMs_20   IAMs_20   09 33 20.6
       comp=Z,16µm,20.0s
NEA2   Nenana            97.76  12 P         P         08 50 50.6  0.0
       baz=204
NEA2                               S         S         09 02 16.4 +0.9
       baz=204
TNCH   TengChong         97.80 294 ⇓P        Pdif      08 50 55.4 +3.4
TNCH                               PP        PP        08 54 47.5 -3.0
TNCH                               pmax      pmax
       comp=Z,90nm,0.6s
TNCH                               pmax      pmax
       comp=Z,900nm,9.3s
TNCH                               LR        LR
       comp=Z,2µm,16.1s
TNCH                               LR        LR
       comp=Z,3µm,16.6s
TNCH                               LR        LR
       comp=Z,5µm,19.1s
RIDG   Independent Ri    97.80  14 IAMs_20   IAMs_20   09 32 56.8
       comp=Z,14µm,19.0s
RIDG   Independent Ri    97.80  14 P         P         08 50 50.1 -0.7
       baz=208,SNR=5.2
RIDG                               S         S         09 02 16.6 +0.6
       baz=208
R33M   Jennings River    97.83  22 P         P         08 50 50.3 -0.8
       baz=219
R33M                               S         S         09 02 18.4 +1.8
       baz=219
WRH    Wood River Hil    97.83  12 P         Pdif      08 50 51.4 +0.6
WRH                                IAmb      IAmb      08 51 17.7
       comp=Z,20nm,1.1s
WRH                                IAMs_20   IAMs_20   09 32 52.3
       comp=Z,13µm,19.0s
BTO    Baotou            97.85 313 eP        P         08 50 48.3 -3.3
BTO                                sP        pwP       08 50 58.8 -2.6
BTO                                PP        PP        08 54 55.8 +5.3
BTO                                S         S         09 02 10.5 -7.0
BTO                                pmax      pmax
       comp=Z,14nm,0.5s
BTO                                pmax      pmax
       comp=Z,2µm,9.7s
BTO                                LR        LR
       comp=Z,6µm,18.9s
BTO                                LR        LR
       comp=Z,5µm,18.3s
BTO                                LR        LR
       comp=Z,9µm,18.7s
F17K   Baldwin Pennin    97.85   6 P         P         08 50 50.0 -0.9
       baz=194
F17K                               S         S         09 02 18.8 +2.7
       baz=194
L27K   Beaver Creek,     97.87  15 IAMs_20   IAMs_20   09 32 42.6
       comp=Z,17µm,19.0s
L27K   Beaver Creek,     97.87  15 P         P         08 50 51.1  0.0
       baz=210
L27K                               S         S         09 02 16.9 +0.3
       baz=210
MLY    Manley            97.88  11 IAMs_20   IAMs_20   09 40 06.7
       comp=Z,12µm,18.0s
MLY    Manley            97.88  11 P         P         08 50 50.5 -0.6
       baz=203
MLY                                S         S         09 02 14.0 -2.6
       baz=203
BCAR   Beaver Creek A    97.88  16 P         P         08 50 50.5 -0.7
DOT    Dot Lake          97.89  14 IAMs_20   IAMs_20   09 37 29.1
       comp=Z,12µm,19.0s
P33M   Teslin, Yukon     97.89  21 P         P         08 50 51.0 -0.4
       baz=218
P33M                               S         S         09 02 15.8 -1.2
       baz=218
HDA    Harding Lake      97.98  13 P         Pdif      08 50 51.7 +0.1
       baz=206,SNR=6.0
HDA                                S         S         09 02 17.0 -0.4
       baz=206
G19K   Purcell Mounta    98.02   8 P         Pdif      08 50 52.3 +0.6
       baz=198
G19K                               S         S         09 02 17.5 -0.1
       baz=198
CCB    Clear Creek Bu    98.04  12 IAMs_20   IAMs_20   09 33 16.9
       comp=Z,12µm,19.0s
N31M   Braeburn, Yuko    98.06  19 IAMs_20   IAMs_20   09 29 47.1
       comp=Z,11µm,20.0s
N31M   Braeburn, Yuko    98.06  19 P         P         08 50 51.3 -0.7
       baz=215
N31M                               S         S         09 02 18.6 +0.3
       baz=215
H21K   Melozitna Rive    98.14  10 Pdiff     P         08 50 52.2  0.0
       baz=201
H21K                               S         S         09 02 20.1 +1.4
       baz=201
M29M   Somme Creek       98.15  17 IAMs_20   IAMs_20   09 32 19.2
       comp=Z,17µm,20.0s
M29M   Somme Creek       98.15  17 Pdiff     P         08 50 52.3 -0.1
       baz=213
M29M                               S         S         09 02 18.1 -1.0
       baz=213
F18K   Selawik           98.17   7 Pdiff     Pdif      08 50 52.7 +0.4
       baz=195
F18K                               S         S         09 02 19.4 +0.7
       baz=195
SCRK   Sand Creek        98.19  14 IAMs_20   IAMs_20   09 37 48.1
       comp=Z,11µm,19.0s
SCRK   Sand Creek        98.19  14 Pdiff     Pdif      08 50 52.9 +0.2
       baz=209
SCRK                               S         S         09 02 20.4 +0.9
       baz=209
I23K   Minto, Yukon-K    98.22  12 IAMs_20   IAMs_20   09 35 46.7
       comp=Z,18µm,20.0s
I23K   Minto, Yukon-K    98.22  12 Pdiff     P         08 50 52.4 -0.1
       baz=204
I23K                               S         S         09 02 17.2 -2.1
       baz=204
COLA   College           98.24  12 P         Pdif      08 50 53.1 +0.4
COLA   College           98.24  12 IAMs_20   IAMs_20   09 33 05.2
       comp=Z,16µm,20.0s
COLA   College           98.24  12 P         Pdif      08 50 53.9 +1.3
COLA   College           98.24  12 P         Pdif      08 50 53.1 +0.5
COLA                               pmax      pmax
       comp=Z,10.0nm,0.8s
COLA   College           98.24  12 Pdiff     Pdif      08 50 52.9 +0.3
       baz=205
COLA                               S         S         09 02 18.9 -0.5
       baz=205
HKT    Hockley           98.27  60 IAMs_20   IAMs_20   09 29 04.5
       comp=Z,13µm,20.0s
HKT    Hockley           98.27  60⇓eP        Pdif      08 50 55.0 +1.4
HKT                                pmax      pmax
       comp=Z,14nm,1.8s
HKT                                MLR       MLR
       comp=Z,8µm,17.0s
KSCO   Kaye Shedlock'    98.29  49 IAMs_20   IAMs_20   09 32 25.1
       comp=Z,13µm,18.0s
IMAR   Indian Mountai    98.31  10 P         Pdif      08 50 53.6 +0.7
ILAR   Eielson Array     98.32  13 P         Pdif      08 50 53.3 +0.2
ILAR   Eielson Array     98.32  13 P         P         08 50 51.6 -1.4
       comp=Z,3.5nm,0.9s,baz=208,slow=3.6,SNR=16
ILAR                               PP        PP        08 54 53.4  0.0
       comp=Z,2.0nm,0.9s,baz=204,slow=5.7,SNR=4.4
ILAR                               PKKPbc    PKKPbc    09 07 27.5 +1.2
       comp=Z,1.2nm,0.9s,baz=16,slow=3.0,SNR=5.1
ILAR                               LR        LR        09 31 13.0
       comp=Z,5µm,19.3s,baz=198,slow=33
       comp=Z,3.5nm,0.9s
ILAR   Eielson Array     98.32  13 P         Pdif      08 50 53.3 +0.2
E17K   Hotham Inlet      98.42   6 Pdiff     Pdif      08 50 54.2 +0.8
       baz=194
E17K                               S         S         09 02 19.7 -1.3
       baz=194
J25K   Salcha River,     98.47  13 IAMs_20   IAMs_20   09 38 27.5
       comp=Z,12µm,19.0s
J25K   Salcha River,     98.47  13 Pdiff     Pdif      08 50 54.8 +0.9
       baz=207
J25K                               S         S         09 02 20.0 -1.7
       baz=207
POKR   Poker Plat Res    98.53  12 IAMs_20   IAMs_20   09 32 55.0
       comp=Z,14µm,20.0s
POKR   Poker Plat Res    98.53  12 Pdiff     Pdif      08 50 54.2 +0.2
       baz=206
POKR                               S         S         09 02 17.3 -4.7
       baz=206
N32M   Quiet Lake        98.56  20 Pdiff     Pdif      08 50 54.4 +0.1
       baz=217
N32M                               S         S         09 02 20.8 -1.8
       baz=217
H22K   Ishtalitna Cre    98.58  10 Pdiff     P         08 50 53.0 -1.2
       baz=202
H22K                               S         S         09 02 20.4 -2.0
       baz=202
F19K   Shaleruckik Mo    98.60   8 IAMs_20   IAMs_20   09 36 56.5
       comp=Z,15µm,20.0s
F19K   Shaleruckik Mo    98.60   8 Pdiff     P         08 50 53.8 -0.3
       baz=197
F19K                               S         S         09 02 20.1 -2.4
       baz=197
WMOK   Wichita Mounta    98.61  55 IAMs_20   IAMs_20   09 31 39.9
       comp=Z,14µm,18.0s
K27K   Chicken           98.65  15 IAMs_20   IAMs_20   09 33 11.3
       comp=Z,17µm,19.0s
K27K   Chicken           98.65  15 Pdiff     Pdif      08 50 54.8 +0.2
       baz=210
K27K                               S         S         09 02 22.8 -0.2
       baz=210
J26L   Joseph Creek      98.74  14 Pdiff     Pdif      08 50 55.5 +0.5
       baz=209
J26L                               S         S         09 02 22.4 -1.6
       baz=209
L29M   L29M              98.79  17 IAMs_20   IAMs_20   09 32 30.2
       comp=Z,17µm,20.0s
L29M   L29M              98.79  17 Pdiff     P         08 50 55.2 -0.1
       baz=213
L29M                               S         S         09 02 23.4 -1.0
       baz=213
H23K   Yukon River       98.81  11 IAMs_20   IAMs_20   09 34 18.2
       comp=Z,16µm,19.0s
H23K   Yukon River       98.81  11 Pdiff     P         08 50 54.7 -0.6
       baz=204
H23K                               S         S         09 02 22.7 -1.7
       baz=204
G21K   Allakaket         98.84   9 Pdiff     Pdif      08 50 55.6 +0.2
       baz=201
G21K                               S         S         09 02 23.2 -1.4
       baz=201
E18K   Tukpahlearik C    98.87   6 Pdiff     P         08 50 55.4 -0.1
       baz=195
E18K                               S         S         09 02 22.5 -2.2
       baz=195
D17K   Noatak River      98.92   5 Pdiff     P         08 50 55.7 +0.1
       baz=192
D17K                               S         S         09 02 23.9 -1.2
       baz=192
M31M   Drury Creek, Y    99.03  19 IAMs_20   IAMs_20   09 30 07.7
       comp=Z,12µm,19.0s
M31M   Drury Creek, Y    99.03  19 Pdiff     Pdif      08 50 56.1 -0.2
       baz=216
F20K   Avaraart Lake     99.05   8 Pdiff     Pdif      08 50 56.1 -0.2
       baz=199
WTLY   Watson Lake, Y    99.08  22 Pdiff     Pdif      08 50 56.5 -0.1
       baz=221
H24K   Noodor Dome       99.11  12 IAMs_20   IAMs_20   09 34 03.1
       comp=Z,16µm,20.0s
H24K   Noodor Dome       99.11  12 Pdiff     Pdif      08 50 56.1 -0.5
       baz=205
CPUP   Villa Florida     99.20 128 P         Pdif      08 50 58.9 +0.9
       comp=Z,1.9nm,1.2s,baz=238,slow=2.2,SNR=6.6
CPUP                               PKKPbc    PKKPbc    09 07 21.8 -0.2
       comp=Z,0.9nm,0.9s,baz=349,slow=0.5,SNR=5.0
CPUP                               LR        LR        09 29 58.4
       comp=Z,2µm,18.7s,baz=94,slow=32
       comp=Z,1.9nm,1.2s
PRP    Porcupine Dome    99.25  13 IAMs_20   IAMs_20   09 36 34.0
       comp=Z,10µm,19.0s
PRP    Porcupine Dome    99.25  13 Pdiff     Pdif      08 50 57.5 +0.2
       baz=207
E19K   Redstone River    99.26   8 IAMs_20   IAMs_20   09 37 16.9
       comp=Z,14µm,19.0s
E19K   Redstone River    99.26   8 Pdiff     Pdif      08 50 57.8 +0.6
       baz=198
RDOG   Red Dog Mine      99.28   5 IAMs_20   IAMs_20   09 34 08.4
       comp=Z,15µm,20.0s
RDOG   Red Dog Mine      99.28   5 Pdiff     Pdif      08 50 56.8 -0.4
       baz=193
DAWY   Dawson            99.30  16 Pdiff     Pdif      08 50 57.7 +0.3
       baz=212
C16K   Lisburne Hills    99.32   4 IAMs_20   IAMs_20   09 37 39.3
       comp=Z,10µm,20.0s
C16K   Lisburne Hills    99.32   4 Pdiff     Pdif      08 50 57.3  0.0
       baz=190
FARO   Faro, Yukon       99.35  19 Pdiff     Pdif      08 50 59.3 +1.6
       baz=217
TOAD   Toad River Com    99.36  25 Pdiff     Pdif      08 50 58.8 +1.0
       baz=224
BILL   Bilibino          99.44 354 IAMs_20   IAMs_20   09 30 37.3
       comp=Z,14µm,21.0s
BILL   Bilibino          99.44 354⇑eP        Pdif      08 51 00.4 +2.5
BILL                               pmax      pmax
       comp=Z,6.0nm,0.8s
BILL                               MLR       MLR
       comp=Z,12µm,19.0s
LIRD   Liard River Hi    99.47  24 Pdiff     Pdif      08 50 58.9 +0.6
       baz=223
LZH    Lanzhou           99.50 306 ⇑P        Pdif      08 50 59.8 +0.6
LZH                                SKS       SKSac     09 01 38.9 +1.2
LZH                                pmax      pmax
       comp=Z,910nm,5.7s
LZH                                LR        LR
       comp=Z,4µm,18.7s
LZH                                LR        LR
       comp=Z,1µm,18.4s
LZH                                LR        LR
       comp=Z,5µm,19.6s
F21K   Alatna River      99.51   9 IAMs_20   IAMs_20   09 37 09.6
       comp=Z,11µm,19.0s
F21K   Alatna River      99.51   9 Pdiff     Pdif      08 50 57.5 -0.9
       baz=201
G22K   Bettles           99.51  10 Pdiff     Pdif      08 50 58.2 -0.1
       baz=202
I26K   Coal Creek Min    99.53  14 Pdiff     Pdif      08 50 58.7 +0.2
       baz=209
G23K   Bananza Creek     99.55  11 IAMs_20   IAMs_20   09 36 50.7
       comp=Z,13µm,19.0s
G23K   Bananza Creek     99.55  11 Pdiff     Pdif      08 50 58.8 +0.3
       baz=204
K29M   Barlow Dome       99.56  17 IAMs_20   IAMs_20   09 33 14.4
       comp=Z,16µm,20.0s
K29M   Barlow Dome       99.56  17 Pdiff     Pdif      08 50 59.5 +0.7
       baz=214
C17K   DeLong Mountai    99.67   5 Pdiff     Pdif      08 50 59.4 +0.3
       baz=192
MAYO   Mayo, Yukon       99.77  17 Pdiff     Pdif      08 51 00.4 +0.9
       baz=215
H25L   Birch Creek       99.86  12 Pdiff     Pdif      08 50 59.5 -0.4
       baz=207
J29N   Klondike Camp     99.90  16 IAMs_20   IAMs_20   09 33 46.4
       comp=Z,16µm,20.0s
J29N   Klondike Camp     99.90  16 Pdiff     Pdif      08 51 00.2  0.0
       baz=214
G24K   Hadweenzic Riv    99.96  12 IAMs_20   IAMs_20   09 39 39.7
       comp=Z,14µm,19.0s
G24K   Hadweenzic Riv    99.96  12 Pdiff     Pdif      08 50 59.7 -0.7
       baz=206
F22K   John River        99.96  10 Pdiff     Pdif      08 50 59.5 -0.8
       baz=202
COLD   Coldfoot          99.99  10 IAMs_20   IAMs_20   09 35 12.5
       comp=Z,11µm,19.0s
COLD   Coldfoot          99.99  10 Pdiff     Pdif      08 51 00.6 +0.2
       baz=204
C18K   Utukok River     100.01   6 IAMs_20   IAMs_20   09 34 32.6
       comp=Z,16µm,19.0s
C18K   Utukok River     100.01   6 Pdiff     Pdif      08 51 00.5 -0.1
       baz=194
OK029  Liberty Lake     100.09  54 IAMs_20   IAMs_20   09 32 56.9
       comp=Z,19µm,19.0s
I27K   Kandik River     100.11  14 Pdiff     Pdif      08 51 01.0 -0.1
       baz=211
E20K   Nigu River       100.15   8 Pdiff     Pdif      08 51 01.3 +0.1
       baz=198
D19K   Kuna River       100.16   7 IAMs_20   IAMs_20   09 36 22.7
       comp=Z,15µm,20.0s
D19K   Kuna River       100.16   7 Pdiff     Pdif      08 51 01.5 +0.3
       baz=197
FYU    Fort Yukon       100.24  12 IAMs_20   IAMs_20   09 37 43.1
       comp=Z,10µm,19.0s
MMPY   Sheldon Lake,    100.25  20 Pdiff     Pdif      08 51 02.0 +0.2
       baz=219
G25K   Bearman Lake     100.26  12 Pdiff     Pdif      08 51 02.4 +0.8
       baz=207
TGTN   Hyland Airport   100.32  22 Pdiff     Pdif      08 51 03.4 +1.3
       baz=221
I28M   Miner Creek      100.34  15 IAMs_20   IAMs_20   09 33 54.1
       comp=Z,16µm,20.0s
I28M   Miner Creek      100.34  15 Pdiff     Pdif      08 51 03.0 +0.8
       baz=212
LAO    LASA Array       100.35  41 IAMs_20   IAMs_20   09 36 51.7
       comp=Z,12µm,18.0s
BEAVL  Fort Liard       100.39  24 Pdiff     Pdif      08 51 03.0 +0.6
       baz=224
J30M   Hart River       100.46  17 IAMs_20   IAMs_20   09 33 53.2
       comp=Z,17µm,20.0s
J30M   Hart River       100.46  17 Pdiff     Pdif      08 51 03.1 +0.4
       baz=215
D20K   Etivluk River    100.53   8 IAMs_20   IAMs_20   09 37 59.6
       comp=Z,13µm,20.0s
D20K   Etivluk River    100.53   8 Pdiff     Pdif      08 51 02.6 -0.3
       baz=198
E21K   Killik River     100.59   9 Pdiff     Pdif      08 51 02.8 -0.4
       baz=200
E22K   Anaktuvuk Pass   100.60   9 IAMs_20   IAMs_20   09 37 35.3
       comp=Z,10µm,20.0s
E22K   Anaktuvuk Pass   100.60   9 Pdiff     Pdif      08 51 03.7 +0.5
       baz=202
C19K   Lookout Ridge    100.60   6 Pdiff     Pdif      08 51 03.1 -0.1
       baz=196
F24K   Squaw Lake       100.63  11 IAMs_20   IAMs_20   09 35 15.4
       comp=Z,17µm,20.0s
F24K   Squaw Lake       100.63  11 Pdiff     Pdif      08 51 04.4 +1.1
       baz=206
I29M   Ogilvie Camp,    100.64  16 IAMs_20   IAMs_20   09 34 10.9
       comp=Z,11µm,20.0s
I29M   Ogilvie Camp,    100.64  16 Pdiff     Pdif      08 51 03.9 +0.5
       baz=214
441A   DeRidder         100.65  61 IAMs_20   IAMs_20   09 32 18.4
       comp=Z,10µm,20.0s
B18K   Kokolik River    100.65   6 Pdiff     Pdif      08 51 04.6 +1.3
       baz=194
H27K   Steamboat Moun   100.67  14 IAMs_20   IAMs_20   09 34 47.7
       comp=Z,12µm,19.0s
H27K   Steamboat Moun   100.67  14 Pdiff     Pdif      08 51 04.2 +0.7
       baz=211
KOTAN  Kotaneelee Air   100.70  24 Pdiff     Pdif      08 51 04.3 +0.6
       baz=225
E23K   Chandalar        100.85  10 IAMs_20   IAMs_20   09 35 58.1
       comp=Z,12µm,19.0s
E23K   Chandalar        100.85  10 Pdiff     Pdif      08 51 05.1 +0.8
       baz=204
G26K   Porcupine Rive   100.85  13 IAMs_20   IAMs_20   09 37 33.3
       comp=Z,11µm,19.0s
G26K   Porcupine Rive   100.85  13 Pdiff     Pdif      08 51 04.8 +0.6
       baz=209
I30M   Mount Dempster   100.98  16 IAMs_20   IAMs_20   09 34 01.0
       comp=Z,16µm,20.0s
I30M   Mount Dempster   100.98  16 Pdiff     Pdif      08 51 05.0 -0.1
       baz=215
E24K   Your Creek       101.04  11 IAMs_20   IAMs_20   09 37 49.1
       comp=Z,16µm,20.0s
E24K   Your Creek       101.04  11 Pdiff     Pdif      08 51 05.2 +0.1
       baz=205
BCIP   Isla Barro Col   101.05  86 IAMs_20   IAMs_20   09 29 34.5
       comp=Z,10µm,19.0s
F25K   Christian Rive   101.08  12 IAMs_20   IAMs_20   09 35 03.3
       comp=Z,12µm,20.0s
F25K   Christian Rive   101.08  12 Pdiff     Pdif      08 51 06.2 +0.9
       baz=208
G27K   Doyon Strip      101.15  14 IAMs_20   IAMs_20   09 34 45.2
       comp=Z,13µm,20.0s
G27K   Doyon Strip      101.15  14 Pdiff     Pdif      08 51 06.5 +0.9
       baz=211
C21K   Knifeblade Rid   101.17   8 Pdiff     Pdif      08 51 07.0 +1.4
       baz=200
D22K   Ayikyak River    101.17   9 IAMs_20   IAMs_20   09 36 39.6
       comp=Z,16µm,20.0s
D22K   Ayikyak River    101.17   9 Pdiff     Pdif      08 51 05.8 +0.1
       baz=202
IMP    Imphal           101.31 292 eP        Pdif      08 51 01.5 -5.9
H29M   Whitestone       101.34  15 IAMs_20   IAMs_20   09 34 52.5
       comp=Z,11µm,20.0s
H29M   Whitestone       101.34  15 Pdiff     Pdif      08 51 07.4 +0.9
       baz=214
TOLK   Toolik Lake Re   101.39  10 Pdiff     Pdif      08 51 07.1 +0.4
       baz=204
F26K   Sheenjek River   101.44  12 IAMs_20   IAMs_20   09 38 28.9
       comp=Z,13µm,19.0s
F26K   Sheenjek River   101.44  12 Pdiff     Pdif      08 51 08.3 +1.4
       baz=209
D23K   Nanushuk River   101.53  10 IAMs_20   IAMs_20   09 38 37.0
       comp=Z,11µm,20.0s
D23K   Nanushuk River   101.53  10 Pdiff     Pdif      08 51 08.8 +1.6
       baz=203
A19K   Wainwright       101.53   6 Pdiff     Pdif      08 51 08.0 +0.9
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	baz=194						
E25K	Arctic Village	101.56	12	IAMs_20	IAMs_20	09 35 31.1	
	comp=Z,11µm,20.0s						
E25K	Arctic Village	101.56	12	Pdiff	Pdif	08 51 08.8	+1.3
	baz=208						
KOHI	KOHIMA	101.61	293	eP	Pdif	08 51 02.8	-6.1
B21K	Ikpikpuk River	101.63	8	IAMs_20	IAMs_20	09 39 04.5	
	comp=Z,13µm,20.0s						
B21K	Ikpikpuk River	101.63	8	Pdiff	Pdif	08 51 09.0	+1.4
	baz=200						
B20K	Meade River	101.71	7	IAMs_20	IAMs_20	09 37 14.7	
	comp=Z,12µm,20.0s						
B20K	Meade River	101.71	7	Pdiff	Pdif	08 51 08.6	+0.6
	baz=198						
EPYK	Eagle Plains	101.84	16	IAMs_20	IAMs_20	09 34 58.8	
	comp=Z,11µm,20.0s						
EPYK	Eagle Plains	101.84	16	Pdiff	Pdif	08 51 09.3	+0.6
	baz=215						
H31M	Peel River	101.95	17	IAMs_20	IAMs_20	09 34 39.7	
	comp=Z,15µm,20.0s						
H31M	Peel River	101.95	17	Pdiff	Pdif	08 51 09.5	+0.3
	baz=217						
YAK	Yakutsk	101.96	337	eP	Pdif	08 51 09.1	-0.2
YAK				e		08 55 20.6	
YAK				ePPP	PPP	08 57 31.9	
YAK				eS	SKSac	09 01 48.8	+0.8
YAK				e*SS	pS	09 02 47.8	-6.0
YAK				eSS	SS	09 09 51.1	-4.6
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,953nm,7.5s						
YAK				pmax	pmax		
	comp=N,272nm,9.4s						
YAK				pmax	pmax		
	comp=E,234nm,6.8s						
YAK				smax	smax		
	comp=N,1µm,7.8s						
YAK				smax	smax		
	comp=E,441nm,7.5s						
D24K	Happy Valley	101.97	10	IAMs_20	IAMs_20	09 36 45.7	
	comp=Z,14µm,19.0s						
D24K	Happy Valley	101.97	10	Pdiff	Pdif	08 51 10.1	+0.9
	baz=205						
G29M	Pine Creek	102.00	15	IAMs_20	IAMs_20	09 35 14.8	
	comp=Z,13µm,20.0s						
G29M	Pine Creek	102.00	15	Pdiff	Pdif	08 51 09.2	-0.2
	baz=214						
F28M	Old Crow	102.20	14	Pdiff	Pdif	08 51 10.8	+0.5
	baz=212						
MIAR	Mount Ida	102.22	57	IAMs_20	IAMs_20	09 30 37.6	
	comp=Z,10µm,20.0s						
C23K	Itkillik River	102.34	9	IAMs_20	IAMs_20	09 39 14.4	
	comp=Z,10µm,20.0s						
C23K	Itkillik River	102.34	9	Pdiff	Pdif	08 51 11.3	+0.5
	baz=203						
E27K	Coleen River	102.35	13	Pdiff	Pdif	08 51 11.4	+0.5
	baz=211						
B22K	Teshekpuk Lake	102.45	8	IAMs_20	IAMs_20	09 37 46.2	
	comp=Z,10µm,19.0s						
B22K	Teshekpuk Lake	102.45	8	Pdiff	Pdif	08 51 12.1	+0.8
	baz=201						
G30M	tAoh Zraii Nji	102.46	15	IAMs_20	IAMs_20	09 35 28.0	
	comp=Z,11µm,19.0s						
G30M	tAoh Zraii Nji	102.46	15	Pdiff	Pdif	08 51 11.5	0.0
	baz=215						
BGNE	Belgrade	102.46	49	IAMs_20	IAMs_20	09 38 15.5	
	comp=Z,12µm,18.0s						
DGMT	Dagmar	102.47	41	IAMs_20	IAMs_20	09 39 52.9	
	comp=Z,15µm,18.0s						
D25K	Kavik River	102.50	11	IAMs_20	IAMs_20	09 38 55.9	
	comp=Z,14µm,20.0s						
D25K	Kavik River	102.50	11	Pdiff	Pdif	08 51 12.9	+1.3
	baz=207						
C24K	Franklin Bluff	102.51	10	IAMs_20	IAMs_20	09 37 03.8	
	comp=Z,11µm,19.0s						
C24K	Franklin Bluff	102.51	10	Pdiff	Pdif	08 51 12.2	+0.7
	baz=205						
ZIRO	ZIRO	102.67	294	eP	Pdif	08 51 07.6	-6.0
G31M	Satah River	102.87	16	IAMs_20	IAMs_20	09 35 38.8	
	comp=Z,16µm,20.0s						
G31M	Satah River	102.87	16	Pdiff	Pdif	08 51 13.3	+0.2
	baz=217						
A22K	Sinclair Lake	102.89	7	Pdiff	Pdif	08 51 13.7	+0.5
	baz=200						
143A	Socs Landing,	102.93	60	IAMs_20	IAMs_20	09 31 58.5	
	comp=Z,16µm,20.0s						
ROCAM	Rodrigues Isla	102.95	237	IAMs_20	IAMs_20	09 35 38.0	
	comp=Z,10µm,18.0s						
A21K	Barrow	103.03	7	Pdiff	Pdif	08 51 14.4	+0.6
	baz=198						
TEZP	TEZPUR	103.07	293	eP	Pdif	08 51 08.8	-6.3
F30M	Barrier River	103.07	15	IAMs_20	IAMs_20	09 35 48.2	
	comp=Z,10µm,20.0s						
F30M	Barrier River	103.07	15	Pdiff	Pdif	08 51 14.2	+0.1
	baz=216						
WRGLY	Wrigley	103.11	22	Pdiff	Pdif	08 51 15.8	+1.5
	baz=226						
E28M	Babbage River	103.11	13	IAMs_20	IAMs_20	09 36 25.0	
	comp=Z,13µm,19.0s						
E28M	Babbage River	103.11	13	Pdiff	Pdif	08 51 14.8	+0.5
	baz=213						
C27K	Jago River	103.22	11	IAMs_20	IAMs_20	09 41 24.7	
	comp=Z,11µm,20.0s						
C27K	Jago River	103.22	11	Pdiff	Pdif	08 51 16.3	+1.5
	baz=209						
E29M	Blow River	103.26	14	IAMs_20	IAMs_20	09 36 18.0	
	comp=Z,18µm,19.0s						
E29M	Blow River	103.26	14	Pdiff	Pdif	08 51 16.5	+1.5
	baz=214						
C26K	Camden Bay	103.27	11	Pdiff	Pdif	08 51 15.7	+0.8
	baz=208						
VBMS	Vicksburg	103.36	60	IAMs_20	IAMs_20	09 33 14.0	
	comp=Z,11µm,19.0s						
D27M	Malcolm River	103.38	13	Pdiff	Pdif	08 51 16.0	+0.4
	baz=212						
F31M	Tsiigehtchic	103.41	16	IAMs_20	IAMs_20	09 33 42.1	
	comp=Z,13µm,20.0s						
F31M	Tsiigehtchic	103.41	16	Pdiff	Pdif	08 51 15.5	-0.1
	baz=218						
SUSD	Miller	103.47	46	IAMs_20	IAMs_20	09 34 49.9	
	comp=Z,9µm,19.0s						
E28A	Huff	103.50	44	IAMs_20	IAMs_20	09 33 43.3	
	comp=Z,13µm,19.0s						
ULN	Ulaanbaatar	103.56	318	P	Pdif	08 51 17.4	+0.4
D28M	Stokes Point	103.87	13	Pdiff	Pdif	08 51 17.5	-0.1
	baz=214						
L34A	Svendsen Farm,	103.89	49	IAMs_20	IAMs_20	09 37 00.3	
	comp=Z,13µm,18.0s						
SONM	Songino Array	103.92	318	Pdiff	Pdif	08 51 16.2	-2.4
	comp=Z,1.6nm,0.6s,baz=128,slow=4.9,SNR=7.3						
SONM				PKiKP	PKiKP	08 55 34.0	-2.1
	comp=Z,0.9nm,0.5s,baz=132,slow=4.1,SNR=3.7						
SONM				PKKPbc	PKKPbc	09 07 09.5	-0.1
	comp=Z,1.8nm,0.9s,baz=298,slow=3.1,SNR=7.2						
PALK	Pallekele	103.95	270	P	PKiKP	08 55 39.4	+2.3
INK	Inuvik	104.14	15	Pdiff	Pdif	08 51 21.8	+2.9
	comp=Z,1.8nm,0.8s,baz=199,slow=5.1,SNR=3.9						
INK				PKiKP	PKiKP	08 55 30.6	-5.1
	comp=Z,5.7nm,1.1s,baz=207,slow=2.3,SNR=5.5						
INK	Inuvik	104.14	15	Pdiff	Pdif	08 51 17.8	-1.1
	baz=218						
TAWA	Tawang	104.26	294	eP	Pdif	08 51 14.8	-6.1
P38A	Dawn	104.67	53	IAMs_20	IAMs_20	09 35 35.3	
	comp=Z,17µm,18.0s						
Y45A	Yeager Farm, C	104.84	59	IAMs_20	IAMs_20	09 35 01.3	
	comp=Z,12µm,19.0s						
Z47A	Carrollton	105.64	61	IAMs_20	IAMs_20	09 34 17.5	
	comp=Z,13µm,20.0s						
P40A	Paris	105.65	53	IAMs_20	IAMs_20	09 36 07.0	
	comp=Z,11µm,19.0s						
YKA	Yellowknife Ar	105.68	25	Pdiff	Pdif	08 51 24.9	-1.0
	comp=Z,0.2nm,0.7s,baz=232,slow=4.6,SNR=1.7						
YKA				PKiKP	PKiKP	08 55 37.8	-0.9
	comp=Z,0.8nm,0.6s,baz=262,slow=5.5,SNR=8.6						
YKA				PKKPbc	PKKPbc	09 07 01.6	-2.9
	comp=Z,2.1nm,0.9s,baz=32,slow=3.6,SNR=7.0						
YKA				PKKP	PKKPab	09 07 16.7	-0.3
	comp=Z,2.0nm,0.8s,baz=37,slow=3.3,SNR=6.0						
SCIA	State Center	105.94	51	IAMs_20	IAMs_20	09 36 16.7	
	comp=Z,15µm,18.0s						
LRAL	Lakeview Retre	106.37	61	IAMs_20	IAMs_20	09 36 45.9	
	comp=Z,12µm,19.0s						
GTK	Tadong	106.72	292	eP	Pdif	08 51 25.5	-6.0
I37A	Lemond, Waseca	106.78	49	IAMs_20	IAMs_20	09 38 55.7	
	comp=Z,17µm,18.0s						
KAAM	Kaadhehdhoo	107.07	260	IAMs_20	IAMs_20	09 44 50.8	
	comp=Z,16µm,18.0s						
WVT	Waverly	107.12	58	IAMs_20	IAMs_20	09 40 37.3	
	comp=Z,17µm,18.0s						
Y49A	Blount Mountai	107.17	61	IAMs_20	IAMs_20	09 35 32.0	
	comp=Z,11µm,19.0s						
AGMN	Agassiz Nation	107.20	44	IAMs_20	IAMs_20	09 34 39.3	
	comp=Z,14µm,20.0s						
C36M	Paulatuk	107.22	17	IAMs_20	IAMs_20	09 35 52.8	
	comp=Z,10µm,20.0s						
C36M	Paulatuk	107.22	17	PKiKP	PKiKP	08 55 40.6	-0.7
	baz=226						
MTDJ	Mount Denham	107.34	79	IAMs_20	IAMs_20	09 31 43.9	
	comp=Z,10µm,19.0s						
L40A	Anamosa	107.34	51	IAMs_20	IAMs_20	09 37 18.8	
	comp=Z,17µm,18.0s						
Q44A	Meyer Farm, Va	107.47	55	IAMs_20	IAMs_20	09 37 33.5	
	comp=Z,18µm,19.0s						
SPB	Sao Paulo	107.58	132	IAMs_20	IAMs_20	09 36 18.2	
	comp=Z,8µm,19.0s						
SPMN	Marine on St.	107.70	48	IAMs_20	IAMs_20	09 39 08.0	
	comp=Z,14µm,18.0s						
HDIL	Hopedale	108.00	53	IAMs_20	IAMs_20	09 43 55.1	
	comp=Z,9µm,18.0s						
ULM	Lac du Bonnet	108.08	42	Pdiff	Pdif	08 51 35.8	-1.0
	comp=Z,0.5nm,0.4s,baz=212,slow=13,SNR=1.6						
ULM				PKiKP	PKiKP	08 55 39.5	-4.0
	comp=Z,1.0nm,0.5s,baz=239,slow=18,SNR=3.7						
ULM				PKKPbc	PKKPbc	09 06 56.5	0.0
	comp=Z,1.4nm,0.6s,baz=45,slow=4.3,SNR=3.8						
ULM				PKKP	PKKPdf	09 07 09.6	-1.6
	comp=Z,6.3nm,0.8s,baz=53,slow=4.4,SNR=8.9						
I40A	Norwalk	108.53	50	IAMs_20	IAMs_20	09 39 36.2	
	comp=Z,12µm,18.0s						
U49A	Red Boiling Sp	108.78	58	IAMs_20	IAMs_20	09 36 57.3	
	comp=Z,12µm,19.0s						
A36M	Sachs Harbour	108.78	15	IAMs_20	IAMs_20	09 39 10.0	
	comp=Z,11µm,20.0s						
A36M	Sachs Harbour	108.78	15	PKiKP	PKiKP	08 55 44.1	-0.1
	baz=226						
SDV	Santo Domingo	108.81	91	IAMs_20	IAMs_20	09 36 07.4	
	comp=Z,10µm,19.0s						
TIXI	Tiksi	108.94	344	PKKPbc	PKKPbc	09 06 54.8	+0.5
	comp=Z,3.6nm,0.5s,baz=324,slow=5.5,SNR=3.5						
TIXI				PKKPab	PKKPab	09 07 03.9	+1.5
	comp=Z,0.8nm,0.3s,baz=335,slow=5.1,SNR=5.1						
Y52A	Lilburn	108.94	61	IAMs_20	IAMs_20	09 36 32.9	
	comp=Z,10µm,19.0s						
GOGA	Godfrey	109.20	62	IAMs_20	IAMs_20	09 35 38.9	
	comp=Z,9µm,20.0s						
M44A	Midewin, Midew	109.21	53	IAMs_20	IAMs_20	09 44 31.3	
	comp=Z,13µm,18.0s						
G40A	Rib Lake	109.38	48	IAMs_20	IAMs_20	09 40 37.5	
	comp=Z,14µm,18.0s						
HQIL	Hanson Quary C	109.50	52	IAMs_20	IAMs_20	09 44 50.2	
	comp=Z,16µm,18.0s						
I42A	Draeger Farm,	109.65	50	IAMs_20	IAMs_20	09 42 13.8	
	comp=Z,10µm,18.0s						
EYMN	Ely	109.68	45	IAMs_20	IAMs_20	09 35 48.1	
	comp=Z,13µm,20.0s						
FOMA	Nahampoana Res	110.07	222	IAMs_20	IAMs_20	09 37 46.1	
	comp=Z,13µm,18.0s						
HMDM	Hanimaadhoo	110.15	266	IAMs_20	IAMs_20	09 42 18.5	
	comp=Z,10µm,19.0s						
HYB	Hyderabad	110.62	278	ePKiKP	PKiKP	08 55 50.4	+1.1
HYB				ePP	PP	08 56 24.4	-1.5
H43A	Windswept, Lux	110.64	50	IAMs_20	IAMs_20	09 40 32.9	
	comp=Z,12µm,18.0s						
L46A	Eue Claire	110.66	53	IAMs_20	IAMs_20	09 45 43.6	
	comp=Z,15µm,18.0s						
S51A	Beattyville	110.83	58	IAMs_20	IAMs_20	09 41 06.7	
	comp=Z,15µm,18.0s						
F42A	Maple Grove Fa	110.91	49	IAMs_20	IAMs_20	09 41 33.9	
	comp=Z,14µm,18.0s						
I45A	Fountain	111.49	51	IAMs_20	IAMs_20	09 40 04.4	
	comp=Z,13µm,18.0s						
NHSC	New Hope	111.59	64	IAMs_20	IAMs_20	09 44 28.3	
	comp=Z,9µm,18.0s						
Y57A	Sumter	111.79	63	IAMs_20	IAMs_20	09 38 25.5	
	comp=Z,12µm,19.0s						
J47A	Sunmer	112.13	52	IAMs_20	IAMs_20	09 43 38.6	
	comp=Z,15µm,18.0s						
Y58A	Scranton	112.30	63	IAMs_20	IAMs_20	09 40 34.0	
	comp=Z,10µm,18.0s						
VOI	Vohitsoka	112.52	224	IAMs_20	IAMs_20	09 37 20.1	
	comp=Z,10µm,19.0s						
W57A	Gilead	112.53	62	IAMs_20	IAMs_20	09 43 06.1	
	comp=Z,13µm,18.0s						
BDFB	Brasilia	112.80	126	PKKPbc	PKKPbc	09 06 40.3	-0.2
	comp=Z,1.1nm,0.3s,baz=53,slow=5.1,SNR=4.4						
BDFB				PKKPab	PKKPab	09 06 49.4	-1.6
	comp=Z,2.6nm,0.6s,baz=36,slow=8.7,SNR=5.6						
BDFB				PKKP	PKKPdf	09 06 59.6	-0.7
	comp=Z,2.9nm,0.6s,baz=54,slow=8.7,SNR=3.1						
X58A	Rowland	112.80	62	IAMs_20	IAMs_20	09 43 08.2	
	comp=Z,9µm,18.0s						
Y60A	Bolivia	113.45	63	IAMs_20	IAMs_20	09 39 00.5	
	comp=Z,10µm,20.0s						
K50A	Casco	113.46	53	IAMs_20	IAMs_20	09 42 26.8	
	comp=Z,16µm,18.0s						
E46A	Sault Ste Mari	113.61	49	IAMs_20	IAMs_20	09 41 24.4	
	comp=Z,15µm,19.0s						
R55A	Marlinton	113.61	58	IAMs_20	IAMs_20	09 43 12.4	
	comp=Z,11µm,18.0s						
W59A	Clinton	113.71	62	IAMs_20	IAMs_20	09 43 46.4	
	comp=Z,13µm,18.0s						
WMQ	Urumqi	114.01	308	ePKP	PKiKP	08 55 57.8	+2.7
WMQ				PP	PP	08 56 52.6	+2.9
WMQ				AMB	AMB		
	comp=Z,640nm,6.9s						
WMQ				LR	LR		
	comp=Z,2µm,16.3s						
WMQ				LR	LR		
	comp=Z,4µm,15.5s						
WMQ				LR	LR		
	comp=Z,3µm,19.9s						
S57A	Dark Hollow, R	114.28	59	IAMs_20	IAMs_20	09 44 56.2	
	comp=Z,15µm,18.0s						
ERPA	Erie	115.06	55	IAMs_20	IAMs_20	09 42 18.2	
	comp=Z,9µm,18.0s						
R58B	Mineral	115.15	59	IAMs_20	IAMs_20	09 41 33.1	
	comp=Z,16µm,19.0s						
J55A	Hilton	116.95	54	IAMs_20	IAMs_20	09 46 39.1	
	comp=Z,15µm,18.0s						
BOSA	Boshof	116.98	202	PKP	PKiKP	08 56 02.1	+0.6
	comp=Z,6.8nm,0.9s,baz=170,slow=4.6,SNR=5.3						
BOSA				PKKPbc	PKKPbc	09 06 25.8	-0.7
	comp=Z,5.3nm,1.0s,baz=333,slow=4.5,SNR=4.0						
ZSN	Zaisan	117.06	311	ePKIKP	PKPdf	08 55 59.9	-0.8
ZSN	Zaisan	117.06	311	ePKP	PKPdf	08 55 59.9	-0.8
RES	Resolute Bay	117.59	17	PKP	PKPdf	08 55 59.5	-1.4
	comp=Z,9.3nm,0.9s,baz=263,slow=3.8,SNR=12						
SMTB	Santa Maria do	117.69	121	eP	PKiKP	08 56 03.2	+0.1
P61A	Hammonton	117.99	59	IAMs_20	IAMs_20	09 46 02.2	
	comp=Z,13µm,18.0s						
J57A	Williamstown	118.26	54	IAMs_20	IAMs_20	09 46 54.8	
	comp=Z,14µm,18.0s						
MK31	Makanchi Array	118.56	310	i PKIKP	PKPdf	08 56 02.1	-1.6
MKAR	Makanchi Array	118.56	310	PKP	PKPdf	08 56 01.6	-2.0
	comp=Z,3.9nm,0.6s,baz=72,slow=2.0,SNR=17						
MKAR				PKKPbc	PKKPbc	09 06 21.0	+0.1
	comp=Z,0.8nm,0.7s,baz=286,slow=4.7,SNR=4.8						
MAKZ	Makanchi	118.77	310	PKIKP	PKPdf	08 56 01.6	-2.5
ZALV	Zalesovo Beam	118.81	318	PKP	PKPdf	08 56 03.0	-0.9
	comp=Z,4.4nm,0.7s,baz=112,slow=0.8,SNR=9.2						
ZALV	Zalesovo Beam	118.81	318	PKIKP	PKPdf	08 56 03.0	-0.9
SHLS	Shalkode	119.49	305	ePKIKP	PKPdf	08 56 04.0	-1.7
SHLS	Shalkode	119.49	305	ePKP	PKPdf	08 56 04.0	-1.7
PDGK	Podgornoye	119.52	305	PKIKP	PKPdf	08 56 02.4	-3.4
UZB	Uzynbulak	119.80	305	ePKIKP	PKPdf	08 56 05.0	-1.3
UZB	Uzynbulak	119.80	305	ePKP	PKPdf	08 56 05.0	-1.3
MPOM	Morne Pois Mar	119.86	91	IAMs_20	IAMs_20	09 43 14.2	
	comp=Z,8µm,19.0s						
ILAM	Ilet Lapin Mar	120.00	90	IAMs_20	IAMs_20	09 47 39.8	
	comp=Z,7µm,18.0s						
KPKS	Kokpek	120.12	305	ePKIKP	PKPdf	08 56 05.7	-1.2
KPKS	Kokpek	120.12	305	ePKP	PKPdf	08 56 05.8	-1.2
SATY	Saty	120.21	305	ePKIKP	PKPdf	08 56 05.8	-1.3
SATY	Saty	120.21	305	ePKP	PKPdf	08 56 05.8	-1.3
TDK	Taldyqorghan	120.71	307	ePKIKP	PKPdf	08 56 06.7	-1.1
TDK	Taldyqorghan	120.71	307	ePKP	PKPdf	08 56 06.8	-1.1
TDK				LR	LR	09 47 51.3	
	comp=Z,2µm,17.3s						
ARXS	Arharly	120.91	306	i PKIKP	PKPdf	08 56 05.8	-2.6
KSH	Kashi	121.01	300	PKP	PKPdf	08 56 08.0	-0.8
KSH				PP	PP	08 57 43.0	+4.3
KSH				SKS	SKSdf	09 03 13.8	-6.8
KSH				SKKS	SKKSac	09 04 32.1	-5.6
KSH				AMB	AMB		
	comp=Z,630nm,14.1s						
KSH				LR	LR		
	comp=Z,2µm,17.2s						
KSH				LR	LR		
	comp=Z,3µm,18.2s						
KSH				LR	LR		
	comp=Z,3µm,20.3s						
MDOK	Medeo	121.19	305	ePKIKP	PKPdf	08 56 07.8	-1.2
MDOK				MLR	MLR		
	comp=Z,1µm,20.0s						
MDOK	Medeo	121.19	305	ePKP	PKPdf	08 56 07.9	-1.2
MDOK				LR	LR	09 48 01.9	
	comp=Z,1µm,19.8s						
SKOMA	Sekoma	121.22	203	i P	PKiKP	08 56 10.0	+0.2
LPHEP	Lephephe	121.61	205	i P	PKiKP	08 56 11.0	+0.4
I62A	Tamworth	121.64	55	IAMs_20	IAMs_20	09 48 59.4	
	comp=Z,13µm,18.0s						
KURK	Kurchatov	121.83	313	P	PKPdf	08 56 07.8	-1.9
KURK	Kurchatov	121.83	313	PKIKP	PKPdf	08 56 08.3	-1.5
KURBB	Kurchatov Arra	121.87	313	PKP	PKPdf	08 56 08.3	-1.6
	comp=Z,14nm,0.7s,baz=107,slow=1.9,SNR=65						
KURBB				PKKPbc	PKKPbc	09 06 08.9	+0.3
	comp=Z,1.0nm,0.9s,baz=284,slow=4.7,SNR=5.3						
KURBB	Kurchatov Arra	121.87	313	PKIKP	PKPdf	08 56 07.9	-2.0
TKM2	Tokmak 2	122.17	304	P	PKPdf	08 56 09.9	-1.1
	SNR=17						
TKM2	Tokmak 2	122.17	304	PKIKP	PKPdf	08 56 09.3	-1.7
KBK	Karagaybulak	122.57	304	P	PKPdf	08 56 11.3	-0.4
	SNR=8.8						
AAK	Ala-Archa	122.89	303	P	PKPdf	08 56 12.2	-0.1
AAK	Ala-Archa	122.89	303	PKIKP	PKPdf	08 56 11.4	-0.9
SGDS	Sogindy	122.98	304	ePKP	PKPdf	08 56 11.3	-1.1
USP	Ospenovka	123.03	304	P	PKPdf	08 56 11.6	-0.8
	SNR=11						
BROLN	Tlhalogang	123.09	208	i P	PKPdf	08 56 13.5	+0.1
KGCAE	Kacgae	123.32	202	i P	PKiKP	08 56 14.3	+0.2
AML	Almayashu	123.35	303	P	PKPdf	08 56 13.4	-0.1
	SNR=7.8						
EKS2	Erkin-Say	123.41	303	P	PKPdf	08 56 13.0	-0.3
	SNR=8.8						
E62A	Clayton Lake	123.49	52	IAMs_20	IAMs_20	09 49 29.0	
	comp=Z,13µm,18.0s						
BTLS	Baital	123.73	306	ePKIKP	PKPdf	08 56 12.4	-1.2
BTLS	Baital	123.73	306	ePKP	PKPdf	08 56 12.4	-1.2
D62A	Allapoint, All	123.90	51	IAMs_20	IAMs_20	09 48 44.9	
	comp=Z,13µm,19.0s						
G65A	Princeton	124.56	54	IAMs_20	IAMs_20	09 48 06.6	
	comp=Z,12µm,18.0s						
KBL	Kabul	124.96	293	P	PKPdf	08 56 16.3	-0.3
GRTLG	Ghanzi	125.03	201	i P	PKiKP	08 56 17.6	+0.2
OTUK	Ortayu	125.45	310	PKIKP	PKPdf	08 56 16.2	-0.7
BRZS	Berezniki	125.47	312	ePKIKP	PKPdf	08 56 15.9	-0.9
BRZS	Berezniki	125.47	312	ePKP	PKPdf	08 56 16.0	-0.9
FRB	Frobisher Bay	125.54	31	PKP	PKPdf	08 56 15.2	-1.2
	comp=Z,11nm,0.8s,baz=290,slow=3.4,SNR=10						
KK31	Karatay Array	125.85	303	i PKIKP	PKPdf	08 56 16.6	-1.2
IUG	Iuzhnay	126.01	302	ePKIKP	PKPdf	08 56 16.9	-1.3
IUG	Iuzhnay	126.01	302	ePKP	PKPdf	08 56 16.9	-1.3
SCHQ	Schefferville	126.25	42	PKP	PKPdf	08 56 18.4	+0.2
	comp=Z,14nm,0.9s,baz=304,slow=3.6,SNR=13						
BRLS	Borolday	126.32	303	ePKIKP	PKPdf	08 56 17.6	-1.1
BRLS	Borolday	126.32	303	ePKP	PKPdf	08 56 17.6	-1.1
QNGWA	Qangwa	126.76	202	i P	PKiKP	08 56 21.9	+1.0
BVA0	Borovoye Array	127.19	315	i PKIKP	PKPdf	08 56 19.0	-1.0
BVAR	Borovoye Array	127.19	315	PKP	PKPdf	08 56 19.6	-0.4
	comp=Z,14nm,0.7s,baz=90,slow=2.9,SNR=29						
BRVK	Borovoye	127.25	315	P	PKPdf	08 56 17.4	-2.7
BRVK	Borovoye	127.25	315	PKIKP	PKPdf	08 56 19.6	-0.5
KULLO	Kullorsuaq	127.47	17	i P	PKiKP	08 56 21.8	+1.3
NEEM	North Greenlan	127.62	13	i P	PKiKP	08 56 23.0	+1.9
LSZ	Lusaka	127.91	212	IAMs_20	IAMs_20	09 47 21.4	
	comp=Z,9µm,19.0s						
RCBR	Riachuelo	128.08	128	IAMs_20	IAMs_20	09 48 27.7	
	comp=Z,9µm,19.0s						
TSUM	Tsumeb	128.13	198	IAMs_20	IAMs_20	09 51 55.0	
	comp=Z,13µm,18.0s						
UPNV	Upernavik	128.38	19	i P	PKiKP	08 56 24.8	+2.5
NOR	Nord	128.70	4	i P	PKiKP	08 56 23.6	+0.8
DQM	DQM	129.68	271	P	PKiKP	08 56 31.5	+5.0
NUUG	Nuugaatsiaq	129.68	20	i P	PKiKP	08 56 26.0	+1.1
MHTO	MHTO	129.73	273	P	PKiKP	08 56 28.1	+1.5
WSAR	Wadi Sarin	130.02	276	P	PKiKP	08 56 30.3	+3.1
JMDO	Jabal Madar	130.15	274	P	PKiKP	08 56 31.3	+3.9
UMMG	Uummannaq	130.34	21	i P	PKiKP	08 56 26.4	+0.1
SMDO	Samad	130.45	275	P	PKiKP	08 56 31.6	+3.4
	SNR=5.5						
BIDO	Bidbid	130.55	276	P	PKiKP	08 56 29.6	+1.4
BSY	Bisya	131.06	274	P	PKiKP	08 56 30.3	+1.0
	SNR=7.4						
ILULI	Ilulissat	131.24	23	i P	PKiKP	08 56 28.4	+0.3
HOQ	Hoqain	131.27	275	P	PKiKP	08 56 31.2	+1.6
	SNR=7.2						
RBK	Rabkut	131.52	266	P	PKiKP	08 56 33.6	+3.2
KBS	Kingsbay	131.75	358	d i PKIKP	PKiKP	08 56 29.9	+0.9
KBS				pmax	pmax		
	comp=Z,17nm,0.8s						
KBS				MLR	MLR		
	comp=Z,3µm,18.0s						
KBS	Kingsbay	131.75	358	ePKPdf	PKiKP	08 56 30.1	+1.1
ARQ	Araqi	131.86	275	P	PKiKP	08 56 34.0	+3.2
	SNR=6.7						
SOHO	SOHO	132.13	276	P	PKiKP	08 56 31.2	-0.1
ABTO	Aybut	132.24	266	P	PKiKP	08 56 37.6	+5.8
SFJD	Kangerlussuaq	132.24	25	i P	PKPdf	08 56 29.6	+0.5
SPA0	Spitsbergen Ar	132.28	356	ePKPdf	PKiKP	08 56 30.3	+0.2
SPITS	Spitsbergen Ar	132.28	356	PKP	PKPdf	08 56 28.6	-0.4
	comp=Z,21nm,0.8s,baz=60,slow=7.0,SNR=14						
SVE	Sverdlovsk	132.68	321	i PKIKP	PKiKP	08 56 32.5	+1.1
SVE				e		08 58 55.3	
SVE				pmax	pmax		
	comp=Z,22nm,0.9s						
SVE				MLR	MLR		
	comp=Z,7µm,21.0s						
SVE				MLR	MLR		
	comp=E,5µm,21.0s						
UOSS	Minazif	132.70	277	P	PKiKP	08 56 36.6	+4.1
HATD	Hatta, Dubai	132.72	276	P	PKiKP	08 56 33.6	+1.1
ASHO	Ashiyiah	132.73	276	P	PKiKP	08 56 35.4	+2.8
MDH	Madha	132.74	277	P	PKiKP	08 56 34.8	+2.3
NUUK	Nuuk	132.76	29	i P	PKiKP	08 56 31.4	+0.1
ALNE	Al Ain	132.78	275	P	PKiKP	08 56 36.6	+3.9
KIBK	Kibwezi	132.78	232	P	PKiKP	08 56 39.0	+5.8
UMZA	Um Al Zommool	132.80	273	P	PKiKP	08 56 37.2	+4.5
MASF	Masafi	132.88	277	P	PKiKP	08 56 33.4	+0.5
BANOM	Banah	132.94	278	P	PKiKP	08 56 35.7	+2.7
DAG	Danmarks Havn	133.01	7	PKP	PKPdf	08 56 30.4	0.0
DAG	Danmarks Havn	133.01	7	i P	PKPdf	08 56 30.8	+0.4
SUMG	Summit	133.06	16	IAMs_20	IAMs_20	09 57 02.7	
	comp=Z,9µm,19.0s						
SUMG	Summit	133.06	16	i P	PKiKP	08 56 33.0	+0.7
SHME	Shamm	133.12	278	P	PKiKP	08 56 37.0	+3.7
HOPEN	Hopen	133.15	353	ePKPdf	PKiKP	08 56 35.4	+3.6
HOPEN				ePP	PP	08 58 57.7	+0.4
HOPEN				eSS	SS	09 16 41.2	+1.5
HOPEN				IVMs_BB	IVMs_BB	09 53 13.0	
	comp=Z,2µm,14.9s						
FAQ	Al Faqa, Dubai	133.15	276	P	PKiKP	08 56 33.4	0.0
NAZ	Nazwa, Dubai	133.17	276	P	PKPdf	08 56 30.2	-2.0
ASUD	Al Ashush, Dub	133.34	276	P	PKiKP	08 56 33.9	+0.1
HSPB	Hornsund (broa	133.47	356	ePKPdf	PKPdf	08 56 31.8	+0.5
HSPB				eL	L	09 47 49.7	
	comp=Z,6µm,23.2s						
AJN	Ajban	133.61	276	P	PKPdf	08 56 32.6	-0.4
AB31	Akbulak array	133.69	310	i PKHKP	PKPpre	08 56 18.5	
ARTI	Arti	133.97	320	IAMs_20	IAMs_20	09 54 04.0	
	comp=Z,9µm,22.0s						
MZR	Muzera	134.35	273	P	PKiKP	08 56 38.5	+2.6
ICESG	Greenland Ices	134.88	20	i P	PKPdf	08 56 33.6	-0.9
AKTO	Aktyubinsk	134.89	312	PKHKP	PKPpre	08 56 22.5	
DBG	Daneborg	135.05	9	i P	PKPdf	08 56 31.8	-2.4
GHWR	Ruwais	135.21	274	P	PKiKP	08 56 39.6	+2.0
IVI	Ivigtut	135.26	32	i P	PKPdf	08 56 35.1	+0.1
JRN	Qarnain Island	135.56	275	P	PKiKP	08 56 42.1	+3.9
SLWR	Sila	136.26	273	P	PKiKP	08 56 41.6	+1.9
NRS	Narsarsuaq	136.53	32	i P	PKPdf	08 56 37.7	+0.3
TRNA	Turayna	136.90	274	P	PKiKP	08 56 41.3	+0.4
H10S3	ASCENSION HYDR	136.99	154	T	T	11 31 23.0	
	baz=204,slow=74,SNR=19						
H10S2	ASCENSION HYDR	137.00	154	T	T	11 31 23.2	

	baz=16,slow=74,SNR=17						
ISOG	**Isortoq, Green**	**137.09**	**24**	*i* P	**PKPdf**	**08 56 35.7**	**-2.6**
SMRA	**Abu-Samra**	**137.23**	**274**	P	**PKiKP**	**08 56 43.0**	**+1.4**
ANGG	**Ammassalik, Gr**	**137.51**	**23**	*i* P	**PKPdf**	**08 56 35.9**	**-3.2**
SOEG	**Soedalen**	**137.77**	**18**	*i* P	**PKPdf**	**08 56 36.3**	**-3.2**
SAKB	**Bahrain**	**137.87**	**276**	P	**PKPdf**	**08 56 40.7**	**-0.2**
VADS	**Vadso**	**138.01**	**347**	*e*PKPdf	**PKiKP**	**08 56 41.6**	**-0.3**
H10N3	**ASCENSION HYDR**	**138.08**	**154**	T	T	11 32 42.6	
	baz=203,slow=75,SNR=42						
H10N1	**ASCENSION HYDR**	**138.08**	**154**	T	T	11 32 44.5	
	baz=203,slow=75,SNR=55						
KIRV	**Kirov**	**138.09**	**325**	⇑*i*PKIKP	**PKiKP**	**08 56 41.7**	**-0.6**
H10N2	**ASCENSION HYDR**	**138.09**	**154**	T	T	11 32 43.9	
	baz=203,slow=75,SNR=41						
SCO	**Scoresbysund**	**138.10**	**12**	IAMs_20	IAMs_20	10 03 32.5	
	comp=Z,11µm,18.0s						
SCO	**Scoresbysund**	**138.10**	**12**	*i* P	**PKPdf**	**08 56 35.9**	**-4.1**
ATD	**Arta Tunnel**	**138.16**	**251**	IAMs_20	IAMs_20	09 54 29.5	
	comp=Z,8µm,19.0s						
ATD	**Arta Tunnel**	**138.16**	**251**	P	**PKiKP**	**08 56 49.2**	**+5.3**
LVZ	**Lovozero**	**138.53**	**342**	c *i*PKIKP	**PKPdf**	**08 56 41.5**	**+0.5**
HAMF	**Hammerfest**	**138.57**	**350**	*e*PKPdf	**PKPdf**	**08 56 41.3**	**+0.4**
HAMF				*e*PP	**PP**	**08 59 32.1**	**+0.6**
HAMF				*e*SS	SS	09 17 45.7	+1.2
HAMF				IVMs_BB	IVMs_BB	09 58 16.4	
	comp=Z,2µm,19.5s						
LODK	**Lodwar**	**138.78**	**235**	P	**PKiKP**	**08 56 45.8**	**+0.5**
APA	**Apatity**	**139.10**	**343**	⇓*i*PKHKP	PKPpre	08 56 35.2	
APA				*i*		08 59 31.0	
APA				*i* PS		09 09 56.0	
APA				*i* SS	SS	09 17 50.0	-1.0
APA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
APA				pmax	pmax		
	comp=Z,16nm,0.8s						
ARA0	**ARCESS Array S**	**139.24**	**348**	*e*PKPdf	**PKPdf**	**08 56 37.0**	**-5.1**
ARA0				IVmB_BB		08 57 02.3	
	comp=Z,363nm,2.3s						
ARA0				*e*PP	**PP**	**08 59 36.9**	**+1.2**
ARA0				*e*SS	SS	09 17 53.9	+1.4
ARA0				IVMs_BB	IVMs_BB	09 58 12.2	
	comp=Z,3µm,20.9s						
ARCES	**ARCESS Array B**	**139.24**	**348**	PKhKP	PKPpre	08 56 34.6	
	comp=Z,15nm,0.7s,baz=30,slow=1.9,SNR=28						
JNW	**Jan Mayen West**	**139.39**	**6**	*e*PKPdf	**PKPdf**	**08 56 38.0**	**-4.3**
JNW				*e*PP	**PP**	**08 59 38.6**	**+2.1**
JNW				*e*SS	SS	09 18 00.8	+6.6
JNW				IVMs_BB	IVMs_BB	09 57 38.5	
	comp=Z,2µm,17.5s						
JMIC	**Jan Mayen**	**139.43**	**6**	*e*PKPdf	**PKPdf**	**08 56 40.2**	**-2.2**
JMIC				*e*PP	**PP**	**08 59 42.6**	**+5.8**
JMIC				*e*SS	SS	09 17 59.5	+4.9
JNE	**Jan Mayen East**	**139.44**	**6**	*e*PKPdf	**PKPdf**	**08 56 39.8**	**-2.7**
JNE				IVmB_BB		08 56 46.3	
	comp=Z,307nm,2.0s						
JNE				*e*PP	**PP**	**08 59 39.1**	**+2.3**
JNE				*e*SS	SS	09 18 01.3	+6.5
JNE				IVMs_BB	IVMs_BB	09 57 49.2	
	comp=Z,2µm,21.7s						
JMI	**Jan Mayen**	**139.47**	**6**	*e*PKPdf	**PKPdf**	**08 56 37.2**	**-5.3**
JMI				IVmB_BB		08 56 50.4	
	comp=Z,505nm,3.3s						
JMI				*e*PP	**PP**	**08 59 37.8**	**+0.8**
JMI				*e*SS	SS	09 17 58.5	+3.5
JMI				IVMs_BB	IVMs_BB	09 57 41.0	
	comp=Z,1µm,17.5s						
JETT	**Jettan, Norway**	**140.04**	**350**	*e*PKPdf	**PKPdf**	**08 56 39.3**	**-4.3**
JETT				IVmB_BB		08 56 57.8	
	comp=Z,499nm,2.9s						
JETT				*e*PP	**PP**	**08 59 41.6**	**+0.9**
JETT				*e*SS	SS	09 18 02.6	+0.7
JETT				IVMs_BB	IVMs_BB	09 51 08.3	
	comp=Z,2µm,24.3s						
KBD	**Kabd**	**141.19**	**279**	P	**PKPdf**	**08 56 43.3**	**-3.6**
RAYN	**Ar Rayn**	**141.38**	**270**	P	**PKPdf**	**08 56 42.9**	**-4.6**
KLMR	**Klimovskoe**	**141.50**	**332**	*e*PKIKP	**PKPdf**	**08 56 44.8**	**-1.7**
KLMR				*e*		08 59 47.1	
KLMR				SS	SS	09 18 13.4	-6.2
KLMR				pmax	pmax		
	comp=Z,50nm,1.1s						
KLMR				MLR	MLR		
	comp=Z,7µm,21.0s						
LOF	**Lofoten**	**142.23**	**353**	*e*PKPdf	**PKPdf**	**08 56 47.9**	**+0.3**
STEI	**Steigen**	**142.24**	**352**	*e*PKPdf	**PKPdf**	**08 56 45.2**	**-2.4**
AKT	**Akhty**	**142.52**	**299**	*e*PKIKP	**PKPdf**	**08 56 46.0**	**-3.1**
AKT				*e*		09 00 04.9	
AKT				*e*PPP	PPP	09 03 05.9	
AKT				*e*		09 03 56.2	
AKT				pmax	pmax		
	comp=Z,57nm,1.2s						
MAK	**Makhachkala**	**142.62**	**301**	*e*PKIKP	**PKPdf**	**08 56 44.7**	**-4.3**
MAK				*e*		08 59 53.1	
MAK				*e*SS	SS	09 18 28.9	-5.3
MAK				pmax	pmax		
	comp=Z,126nm,0.9s						
FAUS	**Fauske**	**142.76**	**352**	*e*PKPdf	**PKPdf**	**08 56 45.0**	**-3.5**
FAUS				IVmB_BB		08 56 60.0	
	comp=Z,512nm,2.5s						
FAUS				*e*PP	**PP**	**08 59 58.1**	**+1.0**
FAUS				*e*SS	SS	09 18 34.8	+1.4
VAGH	**Vaagaholmen**	**143.61**	**353**	*e*PKPdf	**PKPdf**	**08 56 48.9**	**-1.1**
KONS	**Konsvik**	**143.85**	**353**	*e*P	PKPbc	08 56 48.4	+0.2
MOR8	**Moi Rana**	**144.02**	**352**	*e*PKPdf	PKPbc	08 56 49.4	+0.7
STOK	**Stokkvaagen**	**144.02**	**353**	*e*PKPdf	**PKPdf**	**08 56 50.9**	**+0.1**
LEIR	**Leirfjorden**	**144.23**	**353**	*e*PKPdf	**PKPab**	**08 56 48.5**	**-0.5**
GNI	**Garni**	**144.83**	**297**		PKPbc	08 56 52.5	+0.2
GNI	**Garni**	**144.83**	**297**	P	**PKPab**	**08 56 49.1**	**-3.1**
GNI	**Garni**	**144.83**	**297**	PKIKP	PKPbc	08 56 52.5	+0.2
VRH	**Novokhopyorsk**	**144.83**	**317**	*e*PKIKP	**PKPab**	**08 56 51.1**	**-0.5**
VRH				pmax	pmax		
	comp=Z,20nm,0.8s						
MOS	**Moscow**	**145.10**	**325**	*i* PKIKP	**PKPbc**	**08 56 50.7**	**-1.7**
MOS						09 54 22.0	
MOS				pmax	pmax		
	comp=Z,255nm,1.2s						
GOF	**Gofitskoye**	**145.57**	**306**	c *e*PKIKP	**PKPdf**	**08 56 53.4**	**-0.7**
PUL	**Pulkovo**	**145.72**	**335**	⇓*e*PKIKP	**PKPdf**	**08 56 53.5**	**-0.4**
FINES	**FINESS Array B**	**145.85**	**340**		**PKPdf**	**08 56 53.1**	**-1.0**
FINES	**FINESS Array B**	**145.85**	**340**	PKPbc	**PKPdf**	**08 56 53.4**	**-0.7**
	comp=Z,231nm,0.8s,baz=40,slow=4.1,SNR=218						
KBZ	**Khabaz**	**145.89**	**303**	PKPbc	**PKPdf**	**08 56 54.8**	**+0.1**
	comp=Z,88nm,1.1s,baz=70,slow=2.7,SNR=29						
NSS	**Namsos**	**145.89**	**353**	*e*PKPdf	**PKPbc**	**08 56 54.6**	**-0.1**
LPSR	**Galich'ya Gora**	**145.89**	**320**	*e*PKIKP	**PKPdf**	**08 56 53.2**	**-1.2**
LPSR				pmax	pmax		
	comp=Z,370nm,0.8s						
LPSR				MLR	MLR		
	comp=Z,6µm,20.0s						
OBN	**Obninsk**	**145.94**	**325**		**PKPdf**	**08 56 54.4**	**0.0**
OBN	**Obninsk**	**145.94**	**325**	⇓P	**PKPab**	**08 56 55.8**	**+0.2**
OBN	**Obninsk**	**145.94**	**325**	c *i*PKP2	**PKPdf**	**08 56 54.1**	**-0.3**
OBN				*i*		09 00 15.7	
OBN				pmax	pmax		
	comp=Z,219nm,1.0s						
OBN				MLR	MLR		
	comp=Z,4µm,20.0s						
KIV	**Kislovodsk**	**146.00**	**304**		**PKPbc**	**08 56 55.9**	**+0.1**
KIV	**Kislovodsk**	**146.00**	**304**	P	**PKPdf**	**08 56 55.3**	**+0.3**
KIV	**Kislovodsk**	**146.00**	**304**	⇑P	**PKPbc**	**08 56 55.8**	**0.0**
KIV	**Kislovodsk**	**146.00**	**304**	*i* PKP2	**PKPdf**	**08 56 54.5**	**-0.5**
KIV				*e*		09 00 12.8	
KIV				*e*PPP	PPP	09 03 28.3	
KIV				*e*SS	SS	09 19 02.1	-11
KIV				pmax	pmax		
	comp=Z,134nm,1.0s						
KIV				MLR	MLR		
	comp=Z,4µm,25.0s						
VORR	**Voronezh**	**146.12**	**318**	*e*PKIKP	**PKPdf**	**08 56 54.0**	**-0.8**
VORR				pmax	pmax		
	comp=Z,270nm,0.8s						
VSR	**Storozhevoye**	**146.32**	**318**	*e*PKIKP	**PKPdf**	**08 56 54.2**	**-1.0**
VSR				pmax	pmax		
	comp=Z,200nm,0.9s						
VORD	**Divnogorie**	**146.34**	**317**	*e*PKP2	**PKPdf**	**08 56 54.8**	**-0.4**
VORD				pmax	pmax		
	comp=Z,170nm,0.9s						
ERBR	**Yeremizino-Bor**	**147.20**	**308**	*i* PKP2	**PKPbc**	**08 56 59.8**	**+0.7**
ERBR				pmax	pmax		
	comp=N,195nm,0.8s						
ERBR				pmax	pmax		
	comp=E,75nm,0.8s						
ERBR				pmax	pmax		
	comp=Z,425nm,0.9s						
LABN	**Labinsk**	**147.27**	**306**	*i* PKP2	**PKiKP**	**08 57 01.6**	**-0.1**
LABN				*e*		09 00 28.7	
LABN				pmax	pmax		
	comp=N,35nm,0.8s						
LABN				pmax	pmax		
	comp=Z,144nm,0.8s						
LABN				pmax	pmax		
	comp=E,31nm,0.5s						
SOC	**Sochi**	**148.19**	**304**	*e*PKIKP	**PKPdf**	**08 56 57.7**	**-0.9**
SOC				*e*		09 00 29.8	
SOC				*e*PPP	PPP	09 03 45.0	
SOC				*e*SSS	SSS	09 25 06.9	
SOC				pmax	pmax		
	comp=Z,117nm,0.8s						
DOMB	**Dombas**	**148.61**	**354**	*e*PKPdf	**PKPbc**	**08 57 01.0**	**-1.4**
DOMB				IVmB_BB		08 57 13.1	
	comp=Z,1µm,2.3s						
DOMB				*e*PP	**PP**	**09 00 31.8**	**-0.1**
AKN	**Aaknes**	**148.62**	**356**	*e*PKPbc	**PKPbc**	**08 57 01.3**	**-1.2**
AKN				*e*PP	**PP**	**09 00 32.9**	**+0.9**
FOO	**Floro**	**149.29**	**358**	*e*PKPdf	**PKPdf**	**08 57 01.5**	**+1.8**
FOO				IVmB_BB		08 57 09.3	
	comp=Z,1µm,2.7s						
FOO				*e*SS	SS	09 19 50.3	+2.7
NB2	**NORSAR Subarra**	**149.37**	**352**	PKP	**PKPbc**	**08 57 03.7**	**-0.7**
	comp=Z,530nm,2.5s,baz=12,slow=2.7						
NB2	**NORSAR Subarra**	**149.37**	**352**	PKP	**PKPbc**	**08 57 03.7**	**-0.7**
	baz=12,slow=2.7						
NOA	**NORSAR Array B**	**149.37**	**352**	PKPbc	**PKPbc**	**08 57 03.7**	**-0.7**
	comp=Z,31nm,0.7s,baz=15,slow=2.7,SNR=54						
ANN	**Anapa**	**149.51**	**307**	*i* PKP2	**PKPbc**	**08 57 04.4**	**-0.8**
ANN				pmax	pmax		
	comp=Z,278nm,0.9s						
ANN				pmax	pmax		
	comp=N,58nm,1.0s						
ANN				pmax	pmax		
	comp=E,41nm,1.0s						
NC602	**NORSAR Array S**	**149.62**	**351**	*e*PKPdf	**PKPbc**	**08 57 03.1**	**-1.9**
HYA	**Hoyanger**	**149.68**	**357**	*e*PKPdf	**PKPdf**	**08 57 02.0**	**+1.6**
HYA				*e*SS	SS	09 19 53.7	+1.8
SUE	**Sulen**	**149.84**	**358**	*e*PKPdf	**PKPdf**	**08 57 02.6**	**+2.0**
HFS	**Hagfors**	**149.88**	**349**	PKPbc	**PKPbc**	**08 57 03.9**	**-1.7**
	comp=E,61nm,0.8s,baz=66,slow=3.5,SNR=42						
SKAR	**Skarslia**	**150.02**	**354**	*e*PKPdf	**PKPdf**	**08 57 03.1**	**+2.1**
MNK	**Minsk**	**150.34**	**330**	*i* PKiKP	**PKPbc**	**08 57 07.2**	**+0.4**
	comp=E,18nm,1.0s						
MNK				*i* PKiKP	**PKPbc**	**08 57 07.2**	**+0.4**
	comp=N,22nm,0.8s						
MNK				*i* PKiKP	**PKPbc**	**08 57 07.2**	**+0.4**
	comp=Z,111nm,0.8s,baz=48						
MNK				*i* PP	**PP**	**09 00 41.7**	**-0.5**
MNK				*i* PPP	PPP	09 04 03.6	
MNK				*i* SKS	**SKSdf**	**09 04 06.2**	**-2.8**
MNK				*i* SS	**SS**	**09 20 05.5**	**+5.3**
MNK				*i* SSS	SSS	09 25 40.8	
MNK				*i* LQ	LQ	09 56 00.2	
MNK				*i* LRM	MLR	10 03 40.9	
	comp=Z,7µm,20.4s						
MNK				*i* LRM	MLR	10 04 50.4	
	comp=E,4µm,19.8s						
MNK				*i* LRM	MLR	10 06 23.6	
	comp=N,4µm,20.2s						
MNK	**Minsk**	**150.34**	**330**	*i* PKIKP	**PKPbc**	**08 57 07.2**	**+0.4**
MNK				*i*		09 00 41.6	
MNK				*i* PPP	PPP	09 04 03.5	
MNK				*i*		09 04 06.2	
MNK				*i* SS	SS	09 20 05.4	+5.3
MNK				*i* SSS	SSS	09 25 40.8	
MNK				pmax	pmax		
	comp=E,18nm,1.0s						
MNK				pmax	pmax		
	comp=Z,111nm,0.8s						
MNK				pmax	pmax		
	comp=N,22nm,0.8s						
ASK	**Askoy**	**150.40**	**357**	*e*PKPdf	**PKPdf**	**08 57 02.5**	**+1.0**
ASK				*e*SS	SS	09 20 04.0	+4.0
BER	**Bergen**	**150.50**	**357**	*e*PKPdf	**PKPdf**	**08 57 03.1**	**+1.4**
BER				*e*PP	**PP**	**09 00 44.0**	**+1.4**
BER				*e*SS	SS	09 20 05.5	+4.5
OSL	**Oslo**	**150.50**	**352**	*e*P	**PKiKP**	**08 57 09.6**	**+1.8**
NACGM	**Naroch**	**150.52**	**331**	*e*PKiKP	**PKPbc**	**08 57 07.6**	**+0.3**
ODD1	**Odda**	**150.90**	**356**	*e*P	**PKPbc**	**08 57 08.0**	**-0.2**
KONO	**Kongsberg**	**150.91**	**353**		**PKPbc**	**08 57 08.1**	**0.0**
KONO	**Kongsberg**	**150.91**	**353**	PKIKP	**PKPbc**	**08 57 08.1**	**0.0**
KONO	**Kongsberg**	**150.91**	**353**	*e*PKPdf	**PKPdf**	**08 57 05.0**	**+2.7**
PABE	**Paberze**	**151.18**	**335**	IAMs_20	IAMs_20	10 04 19.9	
	comp=Z,6µm,22.0s						
STRU	**Stroemstad**	**151.31**	**351**	*i* P	**PKPdf**	**08 57 04.5**	**+1.5**
BLS5	**Blasjo**	**151.40**	**356**	*e*PKPdf	**PKPdf**	**08 57 04.7**	**+1.5**
BLS5				IVmB_BB		08 57 45.0	
	comp=Z,1µm,4.4s						
BLS5				*e*SS	SS	09 20 15.4	+4.3
KMY	**Karmoy**	**151.67**	**357**	*e*P	**PKPbc**	**08 57 10.0**	**+0.2**
SIM	**Simferopol'**	**151.73**	**309**	*e*PKIKP	**PKPdf**	**08 57 06.3**	**+2.2**
SIM				pmax	pmax		
	comp=Z,1µm,7.6s						
SIM				pmax	pmax		
	comp=Z,240nm,0.8s						
SIM				pmax	pmax		
	comp=Z,290nm,15.0s						
SIM				pmax	pmax		
	comp=E,700nm,13.0s						
DIKM	**Dikmen**	**151.79**	**301**	⇑P	**PKPbc**	**08 57 09.2**	**-1.5**
HWQ	**Hawqa**	**151.84**	**286**	*e*P	**PKPdf**	**08 57 07.8**	**+3.0**
GHAJ	**Ghor Haditha**	**151.89**	**279**	IAMs_20	IAMs_20	10 09 13.0	
	comp=Z,7µm,19.0s						
BHL	**Bhannes**	**152.06**	**285**	*e*P	**PKPdf**	**08 57 08.2**	**+3.1**
AKASG	**Malin Array Be**	**152.07**	**323**		**PKPdf**	**08 57 04.0**	**-0.4**
AKASG	**Malin Array Be**	**152.07**	**323**	PKPbc	**PKPbc**	**08 57 10.0**	**-1.0**
	comp=Z,23nm,0.7s,baz=49,slow=2.9,SNR=10						
AKASG	**Malin Array Be**	**152.07**	**323**	PKIKP	**PKPbc**	**08 57 10.0**	**-1.0**
AKBB	**Malin Array Si**	**152.07**	**323**	PKP	**PKPdf**	**08 57 04.2**	**-0.2**
AK01	**Malin Array Si**	**152.09**	**323**	PKP	**PKPdf**	**08 57 04.0**	**-0.4**
KIEV	**Kiev**	**152.09**	**323**	IAMs_20	IAMs_20	10 06 02.5	
	comp=Z,7µm,22.0s						
KIEV	**Kiev**	**152.09**	**323**	⇑P	**PKPdf**	**08 57 06.7**	**+2.3**
KIEV	**Kiev**	**152.09**	**323**	⇑PKIKP	**PKPdf**	**08 57 06.7**	**+2.3**
AK23	**Malin Array Si**	**152.09**	**323**	PKP	**PKPdf**	**08 57 04.3**	**-0.1**
AK09	**Malin Array Si**	**152.09**	**322**	PKP	**PKPdf**	**08 57 04.2**	**-0.2**
AK04	**Malin Array Si**	**152.09**	**323**	PKP	**PKPdf**	**08 57 04.1**	**-0.3**
MMAI	**Mount Meron Ar**	**152.21**	**283**	PKPbc	**PKiKP**	**08 57 12.5**	**+0.2**
	comp=Z,41nm,0.6s,baz=82,slow=3.2,SNR=40						
HOMB	**Homborsund**	**152.38**	**353**	*e*PKPdf	**PKPdf**	**08 57 07.8**	**+3.2**
HOMB				IVmB_BB		08 57 26.1	
	comp=Z,1µm,2.7s						
HOMB	**Homborsund**	**152.38**	**353**	*i* P	**PKPdf**	**08 57 07.3**	**+2.7**
BORU	**Boraas**	**152.41**	**348**	*i* P	**PKPdf**	**08 57 07.0**	**+2.3**
SNART	**Snartemo**	**152.43**	**355**	*e*P	**PKPbc**	**08 57 11.5**	**0.0**
SUW	**Suwalki**	**152.61**	**333**	IAMs_20	IAMs_20	10 17 22.9	
	comp=Z,5µm,19.0s						
BZK	**Bozkurt**	**152.64**	**302**	⇑P	**PKiKP**	**08 57 13.2**	**+0.4**
MI28	**Mi28,Pidlybu**	**152.74**	**324**	PKP	**PKPdf**	**08 57 05.0**	**-0.4**
ONAU	**Onsala**	**152.78**	**349**	*i* P	**PKPdf**	**08 57 08.3**	**+3.1**
BLEU	**Blekinge**	**153.01**	**344**	*i* P	**PKPdf**	**08 57 07.9**	**+2.3**
FABU	**Falkenberg**	**153.02**	**348**	*i* P	**PKPdf**	**08 57 08.2**	**+2.6**
PCED	**Cedros**	**153.21**	**65**	*e*PKP	**PKPdf**	**08 57 10.0**	**+3.5**
PCED	**Cedros**	**153.21**	**65**	*e*PKP	**PKPdf**	**08 57 10.0**	**+3.5**
DEL	**Delary**	**153.29**	**346**	*i* P	**PKPdf**	**08 57 08.9**	**+2.9**
LUBAR	**Lubar, Ukraine**	**153.29**	**322**	PKP	**PKPdf**	**08 57 05.6**	**-0.7**
BR131	**Keskin Array S**	**153.36**	**298**	P	**PKPdf**	**08 57 04.9**	**-2.0**
	SNR=23						
BRTR	**Keskin Array B**	**153.36**	**298**		**PKPdf**	**08 57 06.1**	**-0.8**
BRTR	**Keskin Array B**	**153.36**	**298**	PKPbc	**PKPbc**	**08 57 13.6**	**-0.8**
	comp=Z,11nm,0.8s,baz=124,slow=2.7,SNR=16						
BR104	**Keskin Array S**	**153.36**	**298**	PKP	**PKPdf**	**08 57 06.2**	**-0.7**
BR106	**Keskin Array S**	**153.37**	**298**	PKP	**PKPdf**	**08 57 06.2**	**-0.7**
BR105	**Keskin Array S**	**153.38**	**298**	PKP	**PKPdf**	**08 57 06.2**	**-0.7**
CIDE	**Kastamonu/Cide**	**153.42**	**303**	⇓P	**PKPbc**	**08 57 12.0**	**-2.3**
ROSA	**Rosais**	**153.56**	**64**	*e*PKP	**PKiKP**	**08 57 20.9**	**+6.0**
ROSA	**Rosais**	**153.56**	**64**	*e*PKP	**PKiKP**	**08 57 20.9**	**+6.0**
SRBC	**Serra Branca**	**153.67**	**64**	*e*PKP	**PKPdf**	**08 57 08.7**	**+1.6**
SRBC	**Serra Branca**	**153.67**	**64**	*e*PKP	**PKPdf**	**08 57 08.7**	**+1.6**
PID	**Ribeirinha**	**153.69**	**65**	*e*PKP	**PKPdf**	**08 57 00.1**	**-7.1**
PID	**Ribeirinha**	**153.69**	**65**	*e*PKP	**PKPdf**	**08 57 00.1**	**-7.1**
BJUU	**Bjuv**	**153.83**	**347**	*i* P	**PKPdf**	**08 57 09.4**	**+2.6**
SORM	**Soroca**	**153.97**	**319**	⇑P	**PKPbc**	**08 57 13.3**	**-1.9**
SORM	**Soroca**	**153.97**	**319**	⇑PKIKP	**PKPbc**	**08 57 13.3**	**-1.9**
ANTO	**Ankara**	**153.97**	**298**		**PKPbc**	**08 57 14.8**	**-0.9**
ANTO	**Ankara**	**153.97**	**298**	P	**PKPdf**	**08 57 07.5**	**-0.2**
ANTO	**Ankara**	**153.97**	**298**	⇑P	**PKPdf**	**08 57 10.4**	**+2.8**
ANTO	**Ankara**	**153.97**	**298**	PKIKP	**PKPbc**	**08 57 14.8**	**-0.9**
CSS	**Mathiatis**	**154.01**	**287**	IAMs_20	IAMs_20	10 10 07.5	
	comp=Z,6µm,20.0s						
LUNU	**Lund**	**154.16**	**346**	*i* P	**PKPdf**	**08 57 09.9**	**+2.6**
PSBA	**Serra de Santa**	**154.26**	**64**	*e*PKP	**PKPdf**	**08 57 05.9**	**-2.2**
PSBA	**Serra de Santa**	**154.26**	**64**	*e*PKP	**PKPdf**	**08 57 05.9**	**-2.2**
KIS	**Kishinev**	**154.27**	**316**	*e*PKP	**PKPdf**	**08 57 05.7**	**-2.0**
	comp=Z,450nm,8.7s						
KIS	**Kishinev**	**154.27**	**316**	*e*PKIKP	**PKPdf**	**08 57 05.7**	**-2.0**
KIS				*e*		09 01 14.0	
KIS				pmax	pmax		
	comp=Z,450nm,8.7s						
COP	**Copenhagen**	**154.31**	**347**	*i* P	**PKPdf**	**08 57 09.5**	**+2.0**
MILM	**Milestii Mici**	**154.31**	**316**	*e*PKP	**PKPdf**	**08 57 05.0**	**-2.8**
	comp=Z,940nm,8.8s						
MILM	**Milestii Mici**	**154.31**	**316**	⇑P	**PKPbc**	**08 57 14.5**	**-1.5**
MILM	**Milestii Mici**	**154.31**	**316**	*e*PKIKP	**PKPdf**	**08 57 05.0**	**-2.8**
MILM				*e*		09 01 13.0	
MILM				pmax	pmax		
	comp=Z,940nm,8.8s						
PAGU	**Agualva, Azore**	**154.37**	**64**	*e*PKP	**PKPbc**	**08 57 14.8**	**-1.7**
PAGU	**Agualva, Azore**	**154.37**	**64**	*e*PKP	**PKPbc**	**08 57 14.8**	**-1.7**
R9F13	**Warsaw-Wawer**	**154.78**	**333**	*e*PKP	**PKPab**	**08 57 34.9**	**+3.0**
DBIC	**Dimbokro**	**154.85**	**162**	PKP	**PKPdf**	**08 57 10.1**	**+0.5**
	comp=Z,12nm,1.0s,baz=184,slow=3.0,SNR=5.2						
RGN	**Rugen**	**155.20**	**345**	IAMs_20	IAMs_20	10 14 17.6	
	comp=Z,7µm,19.0s						
JURR	**Jurilovca**	**155.25**	**311**	⇓P	**PKPdf**	**08 57 14.0**	**+4.9**
EKA	**Eskdalemuir Ar**	**155.27**	**8**	PKP	**PKPdf**	**08 57 09.9**	**+1.0**
	comp=Z,2.0nm,0.7s,baz=5.7,slow=0.7,SNR=3.7						
EKA				PKPab	**PKPab**	**08 57 33.5**	**-0.4**
	comp=Z,13nm,0.9s,baz=348,slow=2.5,SNR=8.7						
GKP	**Gorka Klasztor**	**155.30**	**339**	*e*PKPdf	**PKPdf**	**08 57 07.8**	**-1.1**
GKP				*e*L	L	10 05 15.4	
	comp=Z,8µm,22.6s						
CFR	**Carcaliu**	**155.55**	**313**	⇑P	**PKPdf**	**08 57 16.7**	**+7.2**
CFR	**Carcaliu**	**155.55**	**313**	⇑PKIKP	**PKPdf**	**08 57 16.7**	**+7.2**
TIRR	**Tirgusor**	**155.69**	**311**	IAMs_20	IAMs_20	10 09 00.3	
	comp=Z,6µm,21.0s						
CMLA	**Cha da Macela**	**155.81**	**66**	*e*PKP	**PKPdf**	**08 57 12.2**	**+2.1**
CMLA	**Cha da Macela**	**155.81**	**66**	*e*PKP	**PKPdf**	**08 57 12.2**	**+2.1**
HARR	**Harsova**	**155.90**	**312**	⇑P	**PKPdf**	**08 57 16.0**	**+6.0**
HARR	**Harsova**	**155.90**	**312**	⇑PKIKP	**PKPdf**	**08 57 16.0**	**+6.0**
BURAR	**Bucovina Array**	**156.01**	**320**	⇓P	PKPdf	08 57 18.1	+7.8
BURAR	**Bucovina Array**	**156.01**	**320**	⇓PKIKP	PKPdf	08 57 18.1	+7.9
ISP	**Isparta**	**156.06**	**294**	IAMs_20	IAMs_20	10 15 37.3	
	comp=Z,5µm,20.0s						
VRI	**Vrincioaia**	**156.09**	**315**	⇑PKIKP	PKPdf	08 57 19.5	+9.2
PLOR	**Plostina**	**156.15**	**315**	⇑P	**PKPdf**	**08 57 17.2**	**+6.8**
PLOR	**Plostina**	**156.15**	**315**	⇑PKIKP	**PKPdf**	**08 57 17.2**	**+6.8**
GRER		**156.18**	**314**	⇓P	**PKPdf**	**08 57 17.7**	**+7.3**
PSMN	**Pico do Norte,**	**156.27**	**68**	*e*PKP	**PKPdf**	**08 57 13.2**	**+2.4**
PSMN	**Pico do Norte,**	**156.27**	**68**	*e*PKP	**PKPdf**	**08 57 13.2**	**+2.4**
BSEG	**Bad Segeberg**	**156.36**	**349**	*e*PKPdf	**PKPdf**	**08 57 11.9**	**+1.6**
	baz=21,slow=1.0						
ISK	**Istanbul-Kandi**	**156.46**	**303**	P	**PKPdf**	**08 57 10.7**	**-0.2**
ISR	**Istrita**	**156.57**	**314**	⇑PKIKP	PKPdf	08 57 21.8	+11
KOLS	**Kolonicke sedl**	**156.69**	**326**	*e*PKP	PKPab	08 57 26.6	-14
KOLS				*e*		08 57 39.7	
MLR	**Muntele Rosu**	**156.75**	**315**	IAMs_20	IAMs_20	10 19 43.1	
	comp=Z,5µm,18.0s						
DSB	**Dublin**	**156.76**	**14**	IAMs_20	IAMs_20	10 04 56.8	
	comp=Z,9µm,20.0s						
STHS	**Stebnicka Huta**	**156.83**	**328**	*e*PKIKP	**PKPdf**	**08 57 12.9**	**+1.8**
STHS	**Stebnicka Huta**	**156.83**	**328**	*e*PKP	**PKPdf**	**08 57 12.9**	**+1.8**
STHS				*e*		08 57 40.6	
DOPR	**Dopca**	**156.84**	**317**	⇑P	PKPdf	08 57 20.2	+9.0
OJC	**Ojcow**	**156.86**	**331**	*e*PKPdf	**PKPdf**	**08 57 10.3**	**-0.8**
OJC				*e*L	L	10 07 52.4	
	comp=Z,8µm,21.0s						
PRD	**Provadia**	**156.88**	**309**	*e*P	**PKPdf**	**08 57 13.9**	**+2.5**
CTYL	**Yalikoy Yolu**	**156.88**	**304**	⇓P	**PKPdf**	**08 57 19.1**	**+7.7**
GORT1	**Trebel**	**157.08**	**347**	*e*PKPdf	**PKPdf**	**08 57 13.0**	**+1.8**
	baz=21,slow=1.0						
NIE	**Niedzica**	**157.25**	**329**	*e*PKPdf	**PKPdf**	**08 57 11.2**	**-0.4**
NIE				*e*L	L	10 11 12.6	
	comp=Z,4µm,20.2s						
KULA	**Kula-Manisa**	**157.39**	**297**	P	**PKPdf**	**08 57 11.2**	**-1.1**
ARR	**Arges**	**157.60**	**316**	⇑P	**PKPdf**	**08 57 15.1**	**+2.7**
RETH	**Rethem/Aller,**	**157.67**	**349**	*e*PKPdf	**PKPdf**	**08 57 14.0**	**+2.0**
	baz=21,slow=1.0						
RETH				*e*PKPab	**PKPab**	**08 57 43.0**	**-1.2**
KSP	**Ksiaz**	**157.67**	**337**	*e*PKPdf	**PKPdf**	**08 57 12.0**	**-0.1**
KSP				*e*L	L	10 17 28.3	
	comp=Z,8µm,18.8s						
FLTG	**Flechtingen**	**157.72**	**346**	*e*PKPdf	**PKPdf**	**08 57 13.7**	**+1.7**
	baz=21,slow=1.0						
MARR	**Marisel-Cluj**	**157.72**	**321**	⇑P	PKPdf	08 57 21.3	+8.8
JMB	**Yambol**	**157.74**	**308**	*e*P	**PKPdf**	**08 57 14.3**	**+1.8**
JMB	**Yambol**	**157.74**	**308**	P	**PKPdf**	**08 57 14.3**	**+1.8**
NRDL	**Niedersach Rie**	**157.78**	**348**	*e*PKPdf	**PKPdf**	**08 57 14.0**	**+1.9**
	baz=21,slow=1.0						
NRDL				*e*PKPab	**PKPab**	**08 57 42.6**	**-2.1**
SZH	**Strazhitsa**	**157.79**	**310**	P	**PKPdf**	**08 57 11.5**	**-1.0**
LANS	**Liptovska Anna**	**157.81**	**330**	*e*PKIKP	**PKPdf**	**08 57 14.3**	**+1.9**
LANS	**Liptovska Anna**	**157.81**	**330**	*e*PKP	**PKPdf**	**08 57 14.3**	**+1.9**
LANS				*e*		08 57 28.9	
LANS				*e*		08 57 45.1	
OKC	**Ostrava-Krasne**	**157.82**	**333**	*e*PKPDF	**PKPdf**	**08 57 12.5**	**+0.2**
OKC				AMS	AMS	10 12 40.0	
	comp=Z,5µm,18.3s						
OKC	**Ostrava-Krasne**	**157.82**	**333**	*e*PKIKP	**PKPdf**	**08 57 12.5**	**+0.2**
OKC				MLR	MLR		
	comp=Z,5µm,18.3s						
HUMR	**Humele**	**157.83**	**314**	⇓P	**PKPdf**	**08 57 20.1**	**+7.5**
EDRB	**Edirne**	**157.84**	**306**	P	**PKPdf**	**08 57 10.9**	**-1.7**
STEB	**Steborice**	**157.89**	**333**	*e*PKPAB	**PKPab**	**08 57 43.9**	**-1.5**
OSTC	**Ostas**	**157.94**	**337**	*e*PKPDF	**PKPdf**	**08 57 13.0**	**+0.5**
OSTC				AMS	AMS	10 11 10.0	
	comp=Z,5µm,20.2s						
OSTC	**Ostas**	**157.94**	**337**	*e*PKIKP	**PKPdf**	**08 57 13.0**	**+0.5**
OSTC				MLR	MLR		
	comp=Z,5µm,20.2s						
CHVC	**Chvalec**	**157.97**	**337**	*e*PKPDF	**PKPdf**	**08 57 12.3**	**-0.3**
CHVC				*e*PKPAB	**pPKPab**	**08 57 47.6**	**-0.5**
CHVC				AMS	AMS	10 11 00.0	
	comp=Z,7µm,19.6s						
CHVC	**Chvalec**	**157.97**	**337**	*e*PKIKP	**PKPdf**	**08 57 12.3**	**-0.3**
CHVC				MLR	MLR		
	comp=Z,7µm,19.6s						
ASSE	**Asse, Remlinge**	**158.02**	**347**	*e*PKPdf	**PKPdf**	**08 57 15.1**	**+2.7**
	baz=21,slow=1.0						
UPC	**Upice**	**158.05**	**337**	*e*PKPDF	**PKPdf**	**08 57 13.2**	**+0.6**
UPC				AMS	AMS	10 19 40.0	
	comp=Z,7µm,17.9s						
UPC	**Upice**	**158.05**	**337**	*e*PKIKP	**PKPdf**	**08 57 13.2**	**+0.6**
UPC				MLR	MLR		
	comp=Z,7µm,17.9s						
DPC	**Dobruska-Polom**	**158.08**	**336**	*e*PKPDF	**PKPdf**	**08 57 13.4**	**+0.7**
DPC				AMS	AMS	10 20 50.0	
	comp=Z,6µm,17.7s						
DPC	**Dobruska-Polom**	**158.08**	**336**	*e*PKIKP	**PKPdf**	**08 57 13.4**	**+0.7**
DPC				MLR	MLR		
	comp=Z,6µm,17.7s						
MORC	**Moravsky Berou**	**158.11**	**333**	*e*PKP	**PKPdf**	**08 57 12.8**	**0.0**
MORC				*e*		08 57 51.1	
KRLC	**Kraliky**	**158.15**	**335**	*e*PKPDF	**PKPdf**	**08 57 12.6**	**-0.2**
KRLC				*e*PKPAB	**PKPab**	**08 57 46.9**	**+0.4**
KRLC				AMS	AMS	10 23 00.0	
	comp=Z,6µm,17.6s						
KRLC	**Kraliky**	**158.15**	**335**	*e*PKIKP	**PKPdf**	**08 57 12.6**	**-0.2**
KRLC				*e*		08 57 46.9	
KRLC				MLR	MLR		
	comp=Z,6µm,17.6s						
CLL	**Collm**	**158.25**	**342**	IAMs_20	IAMs_20	10 16 24.5	
	comp=Z,7µm,19.0s						
CLL	**Collm**	**158.25**	**342**	*e*PKIKP	**PKPdf**	**08 57 15.0**	**+2.2**
CLL				*e*		08 57 47.0	
CLL				*e*		09 01 24.0	
CLL				pmax	pmax		
	comp=Z,32nm,0.7s						
CLL				pmax	pmax		
	comp=Z,7µm,18.1s						
CLL	**Collm**	**158.25**	**342**	*e*PKPdf	**PKPdf**	**08 57 14.9**	**+2.2**
	baz=21,slow=1.0						
CLL				*e*PKPab	**PKPab**	**08 57 45.2**	**-1.7**
CLL	**Collm**	**158.25**	**342**	*e*PKPdf	**PKPdf**	**08 57 15.0**	**+2.2**
CLL				*e*PKPdif	sPKPdf	08 57 27.0	+11
CLL				*e*PKPab	**PKPab**	**08 57 47.0**	**+0.2**
	comp=Z,32nm,0.7s						
CLL				*i* x	x	08 57 51.3	
CLL				*i* x	x	08 57 59.6	
CLL				*e*PP	**PP**	**09 01 24.0**	**-2.4**
CLL				*i* x	x	09 02 08.3	
CLL				*e*PPP	PPP	09 05 06.0	
CLL				*e*PPPP		09 07 24.0	
CLL				*e*PSKS		09 11 53.0	

CLL				ePPS	PPS	09 14 47.0	
CLL				eSS	SS	09 21 22.0	-3.7
CLL				ePSPS		09 22 56.0	
CLL				eSSS	SSS	09 27 30.0	
CLL				ex	x	09 29 53.0	
CLL				eSSSS		09 31 36.0	
CLL				ex	x	09 33 45.0	
CLL				AMS	AMS	10 16 00.0	
	comp=N,6µm,18.9s						
CLL				AMS	AMS	10 16 00.0	
	comp=E,4µm,19.2s						
CLL				AMS	AMS	10 16 00.0	
	comp=Z,7µm,19.2s						
CLL				AMS	AMS	10 19 00.0	
CLL				AMS	AMS	10 20 00.0	
	comp=Z,7µm,18.1s						
IBBN	Ibbenburen	158.32	352	ePKPdf	PKPdf	08 57 15.8	+3.0
	baz=21,slow=1.0						
IBBN				ePKPab	PKPab	08 57 48.2	+1.1
MAUC	Maruska	158.32	332	ePKPDF	PKPdf	08 57 13.6	+0.6
CLZ	Clausthal	158.35	347	ePKPdf	PKPdf	08 57 15.4	+2.4
	baz=21,slow=1.0						
CLZ				ePKPab	PKPab	08 57 46.4	-0.9
BRG	Berggiesshubel	158.39	340	ePKPdf	PKPdf	08 57 14.7	+1.7
	baz=21,slow=1.0						
BRG				ePKPab	PKPab	08 57 44.9	-2.5
BRG	Berggiesshubel	158.39	340	⇓ePKPf		08 57 14.8	
BRG				Amp		08 57 16.8	
	comp=Z,4.5nm,0.9s						
BRG				PKPab	PKPab	08 57 50.0	+2.5
BRG				Amp		08 58 02.9	
	comp=Z,29nm,0.8s						
BRG	Berggiesshubel	158.39	340	PP	PP	09 01 28.0	+0.8
PVCC	Panska Ves	158.50	339	ePKPDF	PKPdf	08 57 13.8	+0.6
PVCC				ePKPAB	pPKPab	08 57 49.5	-0.8
PVCC				AMS	AMS	10 17 10.0	
	comp=Z,8µm,19.3s						
PVCC	Panska Ves	158.50	339	ePKIKP	PKPdf	08 57 13.8	+0.6
PVCC				MLR	MLR		
	comp=Z,8µm,19.3s						
PSZ	Piszkesteto	158.53	327	IAMs_20	IAMs_20	10 15 59.8	
	comp=Z,8µm,20.0s						
RICC	Richard	158.63	340	ePKPDF	PKPdf	08 57 12.8	-0.5
RICC				ePKPAB	pPKPab	08 57 50.1	-0.8
RICC				AMS	AMS	10 16 10.0	
	comp=Z,6µm,19.0s						
NEUB	Neuenburg	158.65	344	ePKPdf	PKPdf	08 57 15.4	+2.1
	baz=21,slow=1.0						
NEUB				ePKPab	PKPab	08 57 47.7	-0.9
BLCB	Balcova	158.66	297	P	PKPdf	08 57 13.1	-0.6
ALN	Alexandroupoli	158.67	304	P	PKPdf	08 57 11.5	-2.1
BODT	Bodrum	158.70	293	P	PKPdf	08 57 16.2	+2.4
GTTG	Gottingen	158.71	347	ePKPdf	PKPdf	08 57 16.1	+2.7
	baz=21,slow=1.0						
GTTG				ePKPab	PKPab	08 57 48.2	-0.6
JAVC	Velka Javorina	158.79	332	ePKP	PKPdf	08 57 13.9	+0.3
JAVC				e		08 57 52.4	
EZN	Ezine	158.82	301	P	PKPdf	08 57 12.3	-1.5
SRE	Strehaia	158.84	316	⇑P	PKPdf	08 57 20.9	+7.1
VRAC	Vranov	158.85	334	ePKP	PKPdf	08 57 14.3	+0.7
VRAC				e		08 57 51.7	
KDZ	Kurdzhali	158.90	307	eP	PKPdf	08 57 15.7	+1.8
KDZ	Kurdzhali	158.90	307	P	PKPdf	08 57 12.8	-1.1
RDO	Rodhopi	158.94	305	P	PKPdf	08 57 11.2	-2.8
PRA	Prague	158.95	339	ePKPDF	PKPdf	08 57 14.2	+0.5
PRA				AMS	AMS	10 14 20.0	
	comp=Z,7µm,20.1s						
PRA	Prague	158.95	339	ePKIKP	PKPdf	08 57 14.2	+0.5
PRA				MLR	MLR		
	comp=Z,7µm,20.1s						
GOPC	GO Pecny, Ondr	158.97	338	ePKPDF	PKPdf	08 57 14.6	+0.8
GOPC				AMS	AMS	10 26 50.0	
	comp=Z,5µm,16.7s						
GOPC	GO Pecny, Ondr	158.97	338	ePKIKP	PKPdf	08 57 14.6	+0.8
GOPC				MLR	MLR		
	comp=Z,5µm,16.7s						
PRU	Pruhonice	158.98	338	ePKPDF	PKPdf	08 57 13.4	-0.3
PRU				AMS	AMS	10 19 20.0	
	comp=Z,6µm,18.7s						
PRU	Pruhonice	158.98	338	ePKIKP	PKPdf	08 57 13.4	-0.3
PRU				MLR	MLR		
	comp=Z,6µm,18.7s						
KARP	Karpathos	159.02	289	IAMs_20	IAMs_20	10 23 27.0	
	comp=Z,5µm,20.0s						
PRK	Paraskevi	159.02	300	P	PKPdf	08 57 11.5	-2.6
PLD	Plovdiv	159.09	308	P	PKPdf	08 57 12.6	-1.6
KRUC	Moravsky	159.12	334	ePKP	PKPdf	08 57 14.3	+0.4
KRUC				e		08 57 52.7	
MPEP	Malo Peshtene	159.19	312	eP	PKPdf	08 57 16.5	+2.3
BZS	Buzias	159.19	320	⇑P	PKPdf	08 57 13.9	-0.2
BZS	Buzias	159.19	320	⇑PKIKP	PKPdf	08 57 13.9	-0.2
TANN	Tannenbergstha	159.21	342	ePKPdf	PKPdf	08 57 16.3	+2.2
	baz=21,slow=1.0						
TANN				ePKPab	PKPab	08 57 51.0	-0.1
MOX	Moxa	159.21	344	ePKPdf	PKPdf	08 57 15.8	+1.8
	baz=21,slow=1.0						
MOX				ePKPab	PKPab	08 57 51.2	+0.2
MOX				eL	L	10 18 50.4	
	comp=Z,7µm,18.5s						
VALD	Valchedram	159.22	314	eP	PKPdf	08 57 16.8	+2.6
BUG	Bochum--Univer	159.23	352	ePKPdf	PKPdf	08 57 15.6	+1.7
	baz=21,slow=1.0						
BUG				ePKPab	sPKPab	08 57 55.4	+1.2
TREC	Trest	159.26	336	ePKPDF	PKPdf	08 57 14.2	+0.1
TREC				AMS	AMS	10 20 30.0	
	comp=Z,8µm,18.0s						
TREC	Trest	159.26	336	ePKIKP	PKPdf	08 57 14.2	+0.1
TREC				MLR	MLR		
	comp=Z,8µm,18.0s						
RZN	Rozhen	159.28	307	P	PKPdf	08 57 16.7	+2.1
KASTN	Kahler Asten	159.31	350	ePKPdf	PKPdf	08 57 15.1	+1.0
	baz=21,slow=1.0						
SRO	Srobarova	159.32	329	ePKP2	PKPab	08 57 54.2	+2.6
SRO	Srobarova	159.32	329	ePKP	PKPab	08 57 54.2	+2.6
MODS	Modra-Piesok	159.33	332	ePKIKP	PKPdf	08 57 14.7	+0.5
MODS	Modra-Piesok	159.33	332	ePKP	PKPdf	08 57 14.7	+0.5
MODS				e		08 57 33.0	
MODS				e		08 57 54.4	
SIGR	SIGRI	159.34	300	P	PKPdf	08 57 11.9	-2.6
UBBA	Unterbreizbach	159.40	347	ePKPdf	PKPdf	08 57 15.8	+1.8
	baz=21,slow=1.0						
UBBA				ePKPab	PKPab	08 57 52.1	+0.4
CHOS	Chios island	159.41	297	P	PKPdf	08 57 15.3	+0.6
ZVC	Zvikov	159.57	338	ePKPDF	PKPdf	08 57 15.2	+0.7
ZVC				AMS	AMS	10 22 50.0	
	comp=Z,7µm,17.3s						
LIA	Limnos Island	159.63	302	P	PKPdf	08 57 13.0	-1.8
MDVR	Moldovita	159.64	318	⇑P	PKPdf	08 57 12.8	-2.0
MANZ	Manzenberg	159.69	342	ePKPdf	PKPdf	08 57 16.5	+1.9
	baz=21,slow=1.0						
MANZ				ePKPab	pPKPab	08 57 54.5	-1.0
KAVA	Kavala	159.72	306	P	PKPdf	08 57 12.6	-2.3
THAS	Thassos island	159.72	304	P	PKPdf	08 57 13.2	-1.7
PLNA	Plana	159.82	311	eP	PKPdf	08 57 17.7	+2.6
ROTZ	Rotzenmuhle	159.87	342	ePKPdf	PKPdf	08 57 16.5	+1.8
	baz=21,slow=1.0						
ROTZ				ePKPab	sPKPab	08 57 56.6	-0.6
VTS	Vitosha	159.87	311	eP	PKPdf	08 57 16.9	+1.7
VTS	Vitosha	159.87	311	P	PKPdf	08 57 14.4	-0.9
MMB	Musomishta	160.02	308	eP	PKPdf	08 57 16.7	+1.4
MMB	Musomishta	160.02	308	P	PKPdf	08 57 13.1	-2.2
KHC	Kasperske Hory	160.04	339	ePKPDF	PKPdf	08 57 14.4	-0.6
KHC				ePKPAB	PKPab	08 57 54.2	-0.5
KHC				ex	x	08 58 06.0	
KHC				AMS	AMS	10 23 00.0	
	comp=Z,10µm,17.3s						
KHC	Kasperske Hory	160.04	339	ePKIKP	PKPdf	08 57 14.4	-0.6
KHC				e		08 57 54.2	
KHC				MLR	MLR		
	comp=Z,10µm,17.3s						
CKRC	Cesky Krumlov	160.07	337	ePKPDF	PKPdf	08 57 15.4	+0.3
CKRC				ex	x	09 01 35.4	
CKRC				AMS	AMS	10 24 30.0	
	comp=Z,7µm,17.2s						
CKRC	Cesky Krumlov	160.07	337	ePKIKP	PKPdf	08 57 15.4	+0.3
CKRC				e		09 01 35.4	
CKRC				MLR	MLR		
	comp=Z,7µm,17.2s						
APE	Apeiranthos	160.10	294	P	PKPdf	08 57 15.3	-0.2
UCC	Uccle	160.12	357	dPKPdf	PKPdf	08 57 13.5	-1.5
UCC				dPKP	PKPab	08 57 54.3	-0.6
GRF	Grafenberg Arr	160.19	343	ePKPdf	PKPdf	08 57 17.0	+1.8
	baz=21,slow=1.0						
GRF				ePKPab	pPKPab	08 57 57.3	-0.4
GRF				eL	L	10 15 01.1	
	comp=Z,6µm,19.2s						
MEM	Membach	160.19	354	dPKP	PKPab	08 57 58.6	+3.3
BTNL	Ternell	160.20	353	dPKPdf	PKPdf	08 57 14.9	-0.3
BTNL				dPKP	PKPab	08 57 51.6	-3.7
WET	Wettzell	160.24	340	ePKPdf	PKPdf	08 57 16.5	+1.3
	baz=21,slow=1.0						
WET				ePKPab	PKPab	08 57 56.6	+1.0
GEC2	GERESS Array S	160.25	338	ePKPdf	PKPdf	08 57 17.0	+1.6
	baz=21,slow=1.0						
GEC2				ePKPab	pPKPab	08 57 57.0	-1.1
GERES	GERESS Array B	160.25	338	PKP	PKPdf	08 57 15.0	-0.3
	comp=Z,1.8nm,0.8s,baz=32,slow=5.2,SNR=5.2						
GERES				PKPab	PKPab	08 57 55.9	+0.2
	comp=Z,6.1nm,0.8s,baz=27,slow=4.9,SNR=7.2						
TNS	Taunus Mts	160.25	349	ePKPdf	PKPdf	08 57 16.8	+1.5
	baz=21,slow=1.0						
TNS				ePKPab	pPKPab	08 57 57.0	-0.9
BSTI	Sart Tilman	160.25	355	dPKP	PKPab	08 57 57.5	+1.9
RONA	Rosalia, Austr	160.27	332	ePKP	PKPdf	08 57 15.4	+0.1
	comp=Z,0.5nm,0.3s						
RONA				ePKP	sPKPab	08 57 58.5	-0.5
	comp=Z,14nm,0.8s						
THERA	Ancient Thera,	160.27	292	P	PKPdf	08 57 14.0	-1.6
KKB	Krupnik	160.31	309	eP	PKPdf	08 57 17.4	+1.8
KKB	Krupnik	160.31	309	P	PKPdf	08 57 13.0	-2.6
SRS	Serrai	160.31	307	P	PKPdf	08 57 13.2	-2.4
OUR	Ouranopolis	160.34	304	P	PKPdf	08 57 13.2	-2.4
MORH	Mrgy, Hungar	160.34	325	⇑P	PKPdf	08 57 15.6	+0.2
BCLA	Clavier	160.44	355	dPKPdf	PKPdf	08 57 17.6	+2.2
BCLA				dPKP	PKPab	08 57 55.3	-1.0
BGES	Gesves	160.49	355	dPKPdf	PKPdf	08 57 19.2	+3.8
BGES				dPKP	pPKPab	08 57 58.5	-0.3
BMRD	Maredsous	160.59	356	dPKPdf	PKPdf	08 57 15.7	+0.2
BMRD				dPKP	pPKPab	08 57 58.9	-0.4
PLG	Polygyros	160.70	305	P	PKPdf	08 57 14.2	-1.8
PAIG	Paliouri	160.71	303	P	PKPdf	08 57 13.2	-2.8
KARY	Karystos	160.73	297	P	PKPdf	08 57 17.6	+1.5
KNT	Kendrikon	160.76	308	P	PKPdf	08 57 13.7	-2.4
DOU	Dourbes	160.81	356	dPKPdf	PKPdf	08 57 10.3	-5.5
DOU				dPKP	PKPab	08 57 53.0	-5.0
AOS	Alonnisos	160.82	301	P	PKPdf	08 57 13.2	-2.9
KYMI	Kymi, Euboea I	160.82	299	P	PKPdf	08 57 13.4	-2.8
HORT	Hortiatis	160.86	306	P	PKPdf	08 57 13.4	-2.9
IDI	Anoyia	160.89	289	PKP	PKPdf	08 57 16.2	-0.3
IDI	Anoyia	160.89	289	P	PKPdf	08 57 16.0	-0.4
MOA	Molln	160.92	336	ePP	PP	09 01 40.7	-0.4
	comp=Z,1.5nm,0.5s						
THE	Thessaloniki	160.94	306	P	PKPdf	08 57 13.5	-2.7
ARSA	Arzberg	160.94	332	ePKP	PKPdf	08 57 16.3	+0.2
	comp=Z,0.6nm,0.5s						
ARSA				ePKP	pPKPab	08 58 00.2	-0.8
	comp=Z,11nm,1.1s						
ARSA				ePP	PP	09 01 41.0	-0.2
	comp=Z,0.2nm,0.3s						
WLF	Walferdange	161.11	353	dPKPdf	PKPdf	08 57 15.9	-0.2
WLF				dPKP	PKPab	08 57 59.1	-0.1
WLF	Walferdange	161.11	353	ePKPdf	PKPdf	08 57 17.7	+1.6
	baz=21,slow=1.0						
WLF				ePKPab	sPKPab	08 58 02.4	-0.1
PTL	Penteli	161.16	298	P	PKPdf	08 57 14.3	-2.4
ATHU	Athens Univers	161.25	298	P	PKPdf	08 57 13.8	-2.8
BIOA	Bad Ischl, Aus	161.27	336	ePKP	PKPdf	08 57 16.7	+0.3
	comp=Z,1.5nm,0.5s						
BIOA				ePKP	pPKPab	08 58 01.7	-0.9
	comp=Z,3.0nm,0.5s						
BIOA				ePP	PP	09 01 42.3	-0.6
	comp=Z,0.9nm,0.3s						
LIT	Litokhoron	161.48	305	P	PKPdf	08 57 14.3	-2.6
STU	Stuttgart	161.51	346	ePKPdf	PKPdf	08 57 17.9	+1.3
	baz=21,slow=1.0						
STU				ePKPab	PKPab	08 58 01.4	+0.3
RJOB	Jochberg	161.51	338	ePKPdf	PKPdf	08 57 17.7	+1.0
	baz=21,slow=1.0						
RJOB				ePKPab	PKPab	08 58 00.3	-1.0
VILL	Villia	161.55	299	P	PKPdf	08 57 16.8	-0.3
FUR	Furstenfeldbru	161.58	342	ePKPdf	PKPdf	08 57 17.9	+1.2
	baz=21,slow=1.0						
FUR				ePKPab	PKPab	08 57 59.6	-1.9
GROS	Grobnik	161.58	331	ePKPdf	PKPdf	08 57 15.6	-1.2
GROS				ePP	PP	09 01 45.7	+0.9
GVD	Gavdhos	161.60	288	P	PKPdf	08 57 16.4	-0.7
SOKA	Soboth	161.60	332	ePKP	PKPdf	08 57 16.6	-0.3
	comp=Z,5.1nm,1.1s						
SOKA				ePKP	pPKPab	08 58 03.2	-0.9
	comp=Z,12nm,0.8s						
SOKA				ePP	PP	09 01 43.0	-1.9
	comp=Z,6.3nm,1.3s						
IMMV	Iera Moni Meta	161.61	290	P	PKPdf	08 57 16.5	-0.6
LKR	Lokris	161.63	300	P	PKPdf	08 57 18.4	+1.3
TYRN	Tyrnavos	161.82	304	P	PKPdf	08 57 18.5	+1.3
LESA	Schwarzleotal	161.83	338	ePKP	PKPdf	08 57 16.7	-0.3
	comp=Z,1.0nm,0.4s						
LESA				ePKP	PKPab	08 58 01.2	-1.5
	comp=Z,1.4nm,0.4s						
LESA				ePP	PP	09 01 44.5	-1.4
	comp=Z,0.4nm,0.3s						
AXAR	Agios Charalam	161.85	301	P	PKPdf	08 57 15.0	-2.3
LTK	Loutraki	161.85	298	P	PKPdf	08 57 15.0	-2.4
OBKA	Obir	161.93	333	i PKP	PKPdf	08 57 17.0	-0.2
	comp=Z,0.2nm,0.3s						
OBKA				ePKP	PKPab	08 58 01.8	-1.3
	comp=Z,10nm,1.0s						
OBKA				ePP	PP	09 01 45.6	-1.1
	comp=Z,1.8nm,0.7s						
AGG	Agios Georgios	162.00	302	P	PKPdf	08 57 14.7	-2.8
THL	Klokotos Trika	162.03	304	P	PKPdf	08 57 15.4	-2.0
ANKY	Antikythira Is	162.09	291	P	PKPdf	08 57 18.9	+1.3
BFO	Black Forest	162.10	348		PKPab	08 58 02.7	-1.0
BFO	Black Forest	162.10	348	PKP2	PKPab	08 58 02.7	-1.0
BFO	Black Forest	162.10	348	ePKPdf	PKPdf	08 57 18.9	+1.6
	baz=21,slow=1.0						
BFO				ePKPab	PKPab	08 58 03.1	-0.7
MOZS	Mozjanca	162.15	332	ePKPdf	PKPdf	08 57 16.2	-1.2
MOZS				ePKPab	PKPab	08 57 59.0	-5.0
MAKR	Makrakomi, Fth	162.15	302	P	PKPdf	08 57 15.6	-2.0
MYKA	Terra Mystica	162.18	335	ePP	PP	09 01 45.8	-2.0
	comp=Z,0.8nm,0.4s						
OHR	Ohrid	162.19	310	i Pn	PKPdf	08 57 20.1	+2.4
KTHA	Kythira Island	162.21	293	P	PKPdf	08 57 15.5	-2.2
VLI	Veliai	162.21	294	P	PKPdf	08 57 15.7	-2.0
WATA	Walderalm	162.25	340	ePKP	PKPdf	08 57 16.9	-0.7
	comp=Z,1.8nm,0.4s						
WATA				ePKP	PKPab	08 58 00.7	-3.9
	comp=Z,6.3nm,0.6s						
WATA				ePP	PP	09 01 48.5	+0.2
	comp=Z,0.2nm,0.3s						
TORD	Torodi Ar. Bea	162.27	177		PKPdf	08 57 18.3	-0.1
TORD	Torodi Ar. Bea	162.27	177	PKP	PKPdf	08 57 19.4	+1.0
	comp=Z,56nm,0.3s,baz=191,slow=0.5,SNR=3.6						
TORD				PKPab	PKPab	08 58 05.4	+0.2
	comp=Z,45nm,0.4s,baz=181,slow=3.1,SNR=1.8						
WTTA	Wattenberg	162.29	340	ePKP	PKPdf	08 57 17.4	-0.3
	comp=Z,1.3nm,0.4s						
WTTA				ePKP	PKPab	08 58 01.7	-3.2
	comp=Z,18nm,1.2s						
WTTA				ePP	PP	09 01 47.9	-0.7
	comp=Z,2.9nm,0.8s						
PUK	Puka	162.30	313	P	PKPdf	08 57 16.0	-1.7
UBR	Ueberruh	162.33	343	ePKPdf	PKPdf	08 57 18.9	+1.3
	baz=21,slow=1.0						
RETA	Reutte	162.34	342	ePKP	PKPdf	08 57 17.6	+0.1
	comp=Z,0.3nm,0.4s						
RETA				ePKP	PKPab	08 57 59.8	-5.1
	comp=Z,9.6nm,0.8s						
RETA				ePP	PP	09 01 47.0	-1.6
	comp=Z,1.8nm,0.4s						
GUR	Goura	162.35	299	P	PKPdf	08 57 16.4	-1.5
NEST	Nestorio	162.35	307	P	PKPdf	08 57 17.1	-0.8
KALE	Kalithea	162.36	300	P	PKPdf	08 57 16.2	-1.6
MOTA	Moosalm	162.38	341	ePKP	PKPdf	08 57 17.7	-0.1
	comp=Z,0.1nm,0.2s						
MOTA				ePKP	PKPab	08 57 59.9	-5.3
	comp=Z,7.4nm,0.8s						
MOTA				ePP	PP	09 01 47.6	-1.3
	comp=Z,0.4nm,0.4s						
PENT	Pentalofos	162.39	307	P	PKPdf	08 57 19.2	+1.3
SERG	Sergoula	162.41	300	P	PKPdf	08 57 16.4	-1.5
EVR	Evrytania	162.42	302	P	PKPdf	08 57 17.5	-0.5
KBN	Korca	162.43	308	P	PKPdf	08 57 16.7	-1.2
GBAS	Gorenja Brezov	162.44	332	ePKPdf	PKPdf	08 57 17.7	+0.1
BOJS	Bojanci	162.45	329	ePKPdf	PKPdf	08 57 17.7	0.0
BOJS				ePKPab	PKPab	08 57 59.7	-5.6
ANX	Ano Chora	162.45	301	P	PKPdf	08 57 16.5	-1.6
KLV	Kalavryta, Ach	162.46	299	P	PKPdf	08 57 15.9	-2.1
SQTA	Sankt Quirin	162.46	340	ePKP	PKPdf	08 57 17.8	+0.1
	comp=Z,0.8nm,0.3s						
SQTA				ePKP	PKPab	08 57 57.1	-8.4
	comp=Z,6.2nm,0.6s						
SQTA				ePP	PP	09 01 45.0	-4.3
	comp=Z,0.4nm,0.3s						
ABTA	Abfaltersbach	162.47	337	i PKP	PKPdf	08 57 17.3	-0.5
	comp=Z,7.3nm,1.1s						
ABTA				ePKP	PKPab	08 57 56.2	-9.3
	comp=Z,8.0nm,0.8s						
ABTA				ePP	PP	09 01 48.1	-1.4
	comp=Z,0.2nm,0.2s						
VLX	Vlachokerasia	162.48	297	P	PKPdf	08 57 16.5	-1.6
EFP	Efpalio	162.52	300	P	PKPdf	08 57 16.4	-1.5
PVO	Paravola	162.73	301	P	PKPdf	08 57 15.9	-2.3
FETA	Feichten	162.78	341	ePKP	PKPdf	08 57 18.5	+0.4
	comp=Z,2.3nm,0.6s						
FETA				ePKP	PKPab	08 58 00.3	-6.7
	comp=Z,10nm,1.0s						
FETA				ePP	PP	09 01 50.0	-1.0
	comp=Z,3.8nm,0.9s						
JAN	Janina	162.82	305	P	PKPdf	08 57 16.6	-1.7
DRO	Drossia	162.82	299	P	PKPdf	08 57 16.8	-1.5
STAL	STALIGIAL	162.83	336		PKPab	08 58 06.0	-1.1
AMPL	Ampelaki	162.85	303	P	PKPdf	08 57 16.7	-1.6
ITM	Ithomi	162.88	296	P	PKPdf	08 57 18.2	-0.2
RLS	Riolos of Patr	162.97	300	P	PKPdf	08 57 19.6	+1.2
AXS	Araxos	162.99	300	P	PKPdf	08 57 19.0	+0.6
PMOZ	Porto Moniz, M	163.02	78	ePKPdf	PKPdf	08 57 20.9	+2.1
PMOZ				eLR	LR	09 53 18.8	
PMOZ				eLQ	LQ	09 59 04.9	
PMOZ				i AMs_20		10 12 54.2	
	comp=Z,5µm,18.0s						
IGT	Igoumenitsa	163.23	306	P	PKPdf	08 57 17.2	-1.4
PMAR	Madeira	163.26	79	ePKPdf	PKPdf	08 57 22.0	+2.9
FUL	Funchal	163.28	79	ePKPdf	PKPdf	08 57 24.2	+5.4
LKD2	Lefkada island	163.30	303	P	PKPdf	08 57 18.1	-0.6
SRN	Sarande	163.31	307	P	PKPdf	08 57 17.2	-1.5
EVGI	Lefkada island	163.37	302	P	PKPdf	08 57 18.2	-0.6
FSK	Fiskardo	163.50	302	P	PKPdf	08 57 17.5	-1.4
KEK	Kerkira	163.52	307	P	PKPdf	08 57 19.7	+0.8
VLS	Valsamata	163.58	301	P	PKPdf	08 57 17.4	-1.7
PSDA	Pessada-Kefalo	163.60	301	P	PKPdf	08 57 17.5	-1.4
PMPST	Porto Santo, M	163.74	77	ePKPdf	PKPdf	08 57 20.8	+1.5
PGAV	Gavieira, Arco	165.93	36	ePKPdf	PKPdf	08 57 21.8	+0.8
PGAV				eLR	LR	09 56 37.7	
PGAV				eLQ	LQ	10 02 30.5	
PGAV				i AMs_20		10 15 52.9	
	comp=Z,5µm,18.0s						
PCAB	Cabril	166.24	36	ePKPdf	PKPdf	08 57 23.0	+1.8
POLO	Lamas de Olo	166.60	36	ePKPdf	PKPdf	08 57 22.4	+0.8
ECAL	Calabor	166.68	32	PKP	PKPdf	08 57 20.6	-1.0
PBRG	Braganca	166.78	32	ePKPdf	PKPdf	08 57 22.1	+0.4
PVIS	Viseu	167.03	38	ePKPdf	PKPdf	08 57 23.8	+1.9
MVO	Moncorvo	167.14	35	ePKPdf	PKPdf	08 57 23.9	+1.9
MVO				eLR	LR	09 56 40.7	
MVO				eLQ	LQ	10 02 44.3	
MVO				i AMs_20		10 07 27.1	
	comp=Z,11µm,20.0s						
PCAS	Casmilo, Conde	167.15	42	ePKPdf	PKPdf	08 57 23.9	+1.9
PSBE	So Bento	167.32	44	ePKPdf	PKPdf	08 57 23.6	+1.5
MTE	Manteigas	167.44	38	ePKPdf	PKPdf	08 57 23.8	+1.6
MTE				eLR	LR	09 58 55.0	
MTE				eLQ	LQ	10 01 16.2	
MTE				i AMs_20		10 12 39.9	
	comp=Z,10µm,18.0s						
LIS	Lisbon	167.58	48	ePKPdf	PKPdf	08 57 22.5	+0.3
LIS				ePP	PP	09 02 17.6	+0.9
LIS				eSS	SS	09 23 02.9	-1.1
LIS				IAMs_20	IAMs_20	10 09 24.9	
	comp=Z,12µm,21.3s						
LIS	Lisbon	167.58	48	ePKPdf	PKPdf	08 57 25.0	+2.7
LIS	Lisbon	167.58	48	ePKIKP	PKPdf	08 57 22.5	+0.3
LIS				e		09 02 17.5	
LIS				eSS	SS	09 23 02.9	-1.0
PSARD	Sardoal	167.64	43	ePKPdf	PKPdf	08 57 24.0	+1.6
PCBR	Castelo Branco	167.87	40	ePKPdf	PKPdf	08 57 23.5	+1.1
PMTG	Montargil	167.94	45	ePKPdf	PKPdf	08 57 24.2	+1.7
PMRV	Marv??o	168.20	41	ePKPdf	PKPdf	08 57 24.4	+1.7
PMRV				eLR	LR	09 56 15.5	
PMRV				eLQ	LQ	10 01 45.6	
PMRV				i AMs_20		10 08 20.1	
	comp=Z,4µm,20.0s						
EVO	Evora	168.41	46	PKP	PKPdf	08 57 23.0	+0.2
EVO	Evora	168.41	46	ePKPdf	PKPdf	08 57 24.9	+2.1
PESTR	Estremoz	168.46	44	PKP	PKPdf	08 57 23.2	+0.4
PESTR	Estremoz	168.46	44	ePKPdf	PKPdf	08 57 24.6	+1.7
PTEO	Sao Teotonio	168.50	52	ePKPdf	PKPdf	08 57 24.0	+1.1
EJON	La Jonquera	168.51	359	PKP	PKPdf	08 57 22.4	-0.4
PFVI	Vila Bisbo	168.65	54	PKP	PKPdf	08 57 21.9	-1.1
PFVI	Vila Bisbo	168.65	54	ePKPdf	PKPdf	08 57 24.6	+1.6
MORF	Marmelete	168.68	53	ePKPdf	PKPdf	08 57 23.3	+0.2
MORF				ePP	PP	09 02 22.9	+0.4
MORF				eSS	SS	09 23 14.2	-1.2
MORF				IAMs_20	IAMs_20	10 13 37.0	
	comp=Z,9µm,19.7s						
MORF	Marmelete	168.68	53	ePKPdf	PKPdf	08 57 25.4	+2.3
MORF	Marmelete	168.68	53	ePKIKP	PKPdf	08 57 23.3	+0.2
MORF				e		09 02 23.0	
MESJ	Messejana	168.68	50	ePKPdf	PKPdf	08 57 23.3	+0.3
MESJ				ePP	PP	09 02 22.8	+0.4
MESJ				eSS	SS	09 23 14.1	-1.0
MESJ				IAMs_20	IAMs_20	10 15 03.3	
	comp=Z,13µm,18.6s						
MESJ	Messejana	168.68	50	ePKPdf	PKPdf	08 57 25.3	+2.2
MESJ	Messejana	168.68	50	ePKIKP	PKPdf	08 57 23.3	+0.3
MESJ				e		09 02 22.8	
MESJ				eSS	SS	09 23 14.1	-1.0
PBEJ	Beja	168.80	48	ePKPdf	PKPdf	08 57 27.0	+3.8
EBAD	Badajoz	168.87	43	PKP	PKPdf	08 57 23.3	+0.2
PCVE	Castro Verde	168.92	50	PKP	PKPdf	08 57 24.0	+0.8
PCVE	Castro Verde	168.92	50	ePKPdf	PKPdf	08 57 25.7	+2.5
PBAR	Barrancos	169.23	45	PKP	PKPdf	08 57 24.3	+0.9
PBAR	Barrancos	169.23	45	ePKPdf	PKPdf	08 57 24.6	+1.3
PVAQ	Vaqueiros	169.26	50	PKP	PKPdf	08 57 24.1	+0.7
PVAQ	Vaqueiros	169.26	50	ePKPdf	PKPdf	08 57 26.2	+2.8
PVAQ				eLR	LR	09 57 24.4	
PVAQ				i AMs_20		10 15 43.6	
	comp=Z,12µm,18.0s						
EGRO	El Granado	169.34	49	PKP	PKPdf	08 57 24.0	+0.6
UCM	Universidad Co	169.49	26	PKP	PKPdf	08 57 23.5	0.0
PAB	San Pablo	169.68	32	⇑PKIKP	PKPdf	08 57 25.0	+1.3
EMIN	Mina Concepcio	169.71	46	PKP	PKPdf	08 57 24.4	+0.7
ESDC	Sonseca Array	169.74	30	PKP	PKPdf	08 57 23.9	+0.2
	comp=Z,1.9nm,0.8s,baz=320,slow=1.4,SNR=12						
ESDC				PKPab	PKPab	08 58 38.2	+0.5
	comp=Z,4.3nm,0.9s,baz=336,slow=3.8,SNR=5.0						
ESDC				PP	PP	09 02 27.5	+0.3
	comp=Z,1.0nm,0.8s,baz=348,slow=4.2,SNR=2.6						
ECAB	El Cabril	170.25	41	PKP	PKPdf	08 57 25.0	+1.0
EADA	Adamuz	170.64	38	PKP	PKPdf	08 57 24.7	+0.4
ESPR	Espera	170.78	48	PKP	PKPdf	08 57 23.7	-0.6
ECHE	Chera	170.87	18	PKP	PKPdf	08 57 24.3	-0.1
MAHO	Mahon	170.97	352	PKP	PKPdf	08 57 24.4	+0.1
AVE	Averroes	171.13	72	PKP	PKPdf	08 57 25.1	+0.4
ETOS	Mallorca	171.19	359	PKP	PKPdf	08 57 25.6	+1.1
TIO	Tiouine	171.47	88	PKP	pPKPdf	08 57 26.5	-0.8
TIO				PKP	PKPdf	08 57 25.0	0.0
EMIJ	Mijas	171.65	46	PKP	PKPdf	08 57 24.0	-0.8
EGOR	Sierra Gorda,	171.66	41	PKP	PKPdf	08 57 24.7	-0.2
EMAL	Malaga-Limoner	171.72	44	PKP	PKPdf	08 57 24.7	-0.1
EQTA	Presa de Quent	171.95	37	PKP	PKPdf	08 57 24.7	-0.3
KEST	Kesra	172.65	312	PKPab	PKPab	08 58 51.1	+0.2
	comp=Z,10nm,0.8s,baz=56,slow=4.9,SNR=7.5						
KEST	Kesra	172.65	312	P	PKPdf	08 57 14.3	-11
ENIJ	Nijar	172.75	33	PKP	PKPdf	08 57 25.6	+0.3
IFR	Ifrane	172.92	67	PKP	PKPdf	08 57 26.2	+0.5

JMA ***21*** *08:37:55.9±0.2, 25°N±1°×14°1E±°, h167^{km}, IOTO ISLANDS REGION*

IDC ***21*** *08:37:55.2±2.7, 24°.77N×141°.30E, h171^{km}±17^{km}, mb3.6/14, mbtmp4.0/17, Error ellipse: s-maj=31.0km s-min=14.8km az=173.0*

NEIC ***21*** *08:37:59.4±1.9, 25°.0N±0°.1×141°.2E±0°.2, h183^{km}±7^{km}, mb4.2/20, Error ellipse: s-maj=21.0km s-min=15.9km az=114.0*

ISC 21 08:37:57.7±0.7, **24°.95N**±0°.09×**141°.14E**±0°.09, **h181**^{km}, n258,σ0^{s}85/261,mb4.0/24,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	1.92	29	P	Pn	08 38 33.8	-0.1
JHH2				eS	Sn	08 39 02.4	+0.2
JHH2	Haha-jima-NKT2	1.92	29	A	A	08 38 33.8	
	comp=N,12nm,0.4s,comp=E,11nm,0.4s						
CBIJ	Chichi jima	2.33	24	P	Pn	08 38 39.0	+0.4
CBIJ				S	Sn	08 39 11.4	+1.1
JCJ	Chichijima	2.33	24		Pn	08 38 38.8	+0.3
JCJ	Chichijima	2.33	24	P	Pn	08 38 37.7	-0.8
	comp=E,146nm,0.3s,baz=180,slow=0.0						
JCJ				S	Sn	08 39 09.2	-1.2
	baz=180,slow=0.0						
JHJ2	Mitsune	8.21	352	Pn	Pn	08 39 52.1	-1.6
JHJ2	Mitsune	8.21	352	eP	Pn	08 39 55.1	+1.3
BSO3	Boso 3	9.83	357	P	Pn	08 40 13.8	-0.9
BSO4	Boso 4	10.03	356	P	Pn	08 40 17.5	+0.1
BSO4				eS	Sn	08 42 07.8	-1.2
JAG	Ashikaga	11.53	353	P	Pn	08 40 35.6	-1.4
MJAR	Matsushiro Arr	11.82	348	P	Pn	08 40 42.8	+2.0
	comp=E,0.8nm,0.3s,baz=161,slow=13,SNR=4.3						
MAJO	Matsushiro	11.82	348	Pn	Pn	08 40 39.7	-1.1
JFK	Kawauchi	12.38	359	eP	Pn	08 40 46.5	-1.4
JFK				eS	Sn	08 42 55.4	-10
JMM	Marumori	12.88	359		Pn	08 40 52.9	-1.2
KSRS	Korea Array	16.80	321	P	Pn	08 41 44.3	+1.8
	comp=E,0.8nm,0.6s,baz=135,slow=12,SNR=5.3						
SSLB	Suanglung	18.43	271	P	P	08 41 59.8	+0.2
PEA0B	Petropavlovsk-	30.76	20	P	P	08 43 57.9	+2.1
PETK	Petropavlovsk-	30.76	20	P	P	08 43 57.4	+1.5
COEN	Coen	38.72	177	P	P	08 45 06.1	+1.7
CMAR	Chiang Mai Arr	39.62	269	P	P	08 45 11.4	-0.5
	comp=E,1.2nm,0.4s,baz=67,slow=9.0,SNR=7.5						
	comp=E,1.2nm,0.4s						
ADK	Adak	41.74	39	P	P	08 45 28.9	+0.1
ADK				IAmb	IAmb	08 45 31.4	
	comp=Z,11nm,1.4s						
EVN	Everest	48.40	286	P	P	08 46 23.7	+1.3
EVN				IAmb	IAmb	08 46 30.9	
	comp=Z,3.9nm,0.7s						
AKUT	Akutan	48.70	39	P	P	08 46 23.4	-0.1
MKAR	Makanchi Array	51.14	311	P	P	08 46 42.8	+0.8
MKAR	Makanchi Array	51.14	311	P	P	08 46 43.0	+0.9
	comp=Z,1.5nm,0.6s,baz=93,slow=9.0,SNR=18						
	comp=Z,1.5nm,0.6s						
TNA	Tin City	51.72	24	P	P	08 46 46.9	+0.8
	baz=244						
F14K	Arctic Creek	52.28	25	P	P	08 46 51.3	+1.1
	baz=246						
ANM	Nome	52.29	26	P	P	08 46 51.0	+0.7
	baz=247						
L14K	Kuka Creek	52.33	30	P	P	08 46 51.3	+0.7
	baz=252						
CHNA	Chernabura Isl	52.37	39	P	P	08 46 51.4	+0.4
	baz=260						
J14K	Nanvaranak Lak	52.39	29	P	P	08 46 51.3	+0.3
	baz=250						
N14K	Kuskokwak Cree	52.39	32	P	P	08 46 51.8	+0.8
	baz=254						
O14K	Tigyukauivet M	52.42	33	P	P	08 46 52.2	+0.9
	baz=255						
M14K	Bethel	52.49	31	P	P	08 46 52.2	+0.5
	baz=254						
F15K	North Star Dit	53.02	25	P	P	08 46 56.4	+0.8
F15K				IAmb	IAmb	08 47 27.7	
	comp=Z,4.4nm,1.1s						
F15K	North Star Dit	53.02	25	P	P	08 46 56.1	+0.5
	baz=247						
M15K	Kasigluk River	53.08	32	P	P	08 46 56.8	+0.8
	baz=255						
K15K	Wolf Creek Mou	53.14	29	P	P	08 46 58.0	+1.5
K15K				IAmb	IAmb	08 47 41.1	
	comp=Z,9.9nm,1.5s						
K15K	Wolf Creek Mou	53.14	29	P	P	08 46 57.5	+1.0
	baz=253						
N15K	Kwethluk River	53.23	32	P	P	08 46 57.4	+0.2
	baz=256						
H16K	Elim	53.58	27	P	P	08 47 00.2	+0.6
	baz=250						
G16K	Koyuk River	53.79	26	P	P	08 47 01.7	+0.5
	baz=250						
C16K	Lisburne Hills	53.82	22	P	P	08 47 02.7	+1.3
	baz=245						
J16K	Anvik River	53.84	28	P	P	08 47 02.6	+1.0
	baz=253						
KURBB	Kurchatov Arra	53.88	316	P	P	08 47 02.1	0.0
	comp=Z,1.7nm,0.5s,baz=92,slow=8.0,SNR=16						
	comp=Z,1.7nm,0.5s						
L16K	Owhat River	53.91	30	P	P	08 47 02.7	+0.6
	baz=255						
N16K	Nishlik Lake	53.94	32	P	P	08 47 02.4	0.0
	baz=257						
I17K	Unalakleet	53.98	28	P	P	08 47 04.0	+1.5
I17K				IAmb	IAmb	08 47 15.0	
	comp=Z,5.7nm,1.1s						
I17K	Unalakleet	53.98	28	P	P	08 47 03.5	+0.9
	baz=252						
M16K	Timber Creek	53.98	31	P	P	08 47 03.3	+0.6
	baz=256						
P16K	Nushagak River	54.01	34	P	P	08 47 02.8	-0.1
	baz=258						
O16K	Kokwok River B	54.08	33	P	P	08 47 04.2	+0.9
	baz=258						
D17K	Noatak River	54.36	23	P	P	08 47 06.6	+1.3
	baz=247						
G17K	Kiwalik Mounta	54.50	26	P	P	08 47 07.9	+1.6
	baz=251						
J17K	VABM Dome	54.53	29	P	P	08 47 07.2	+0.7
	baz=254						
L17K	Donlin	54.55	30	P	P	08 47 06.9	+0.1
	baz=256						
RDOG	Red Dog Mine	54.56	22	P	P	08 47 08.0	+1.2
	baz=247						
F17K	Baldwin Pennin	54.58	25	P	P	08 47 07.5	+0.6
	baz=250						
E17K	Hotham Inlet	54.59	24	P	P	08 47 08.1	+1.2
	baz=249						
O17K	Koliganek Bris	54.61	33	P	P	08 47 06.9	-0.2
	baz=259						
H17K	Granite Mounta	54.62	27	P	P	08 47 07.7	+0.5
	baz=252						
C17K	DeLong Mountai	54.63	22	P	P	08 47 08.0	+0.7
	baz=247						
K17K	Iditarod	54.69	29	P	P	08 47 09.3	+1.6
K17K				IAmb	IAmb	08 47 31.6	
	comp=Z,6.6nm,1.4s						
K17K	Iditarod	54.69	29	P	P	08 47 08.2	+0.4
	baz=256						
N17K	Nushagak Hills	54.72	32	P	P	08 47 08.3	+0.3
	baz=258						
M17K	Holitna River	54.78	31	P	P	08 47 09.1	+0.6
	baz=257						
P17K	Kvichak River	54.83	34	P	P	08 47 07.7	-1.1
	baz=260						
Q17K	Contact Creek	54.96	35	P	P	08 47 10.2	+0.3
	baz=261						
E18K	Tukpahlearik C	55.15	24	P	P	08 47 11.5	+0.5
E18K	Tukpahlearik C	55.15	24	P	P	08 47 11.4	+0.5
	baz=250						
F18K	Selawik	55.23	25	P	P	08 47 12.7	+1.2
	baz=252						
L18K	Granite Mounta	55.31	30	P	P	08 47 13.3	+1.1
	baz=258						
H18K	Honhosa River	55.31	27	P	P	08 47 13.4	+1.2
	baz=254						
N18K	Kilae Creek	55.37	32	P	P	08 47 12.7	0.0
	baz=259						
C18K	Utukok River	55.38	22	P	P	08 47 13.0	+0.3
C18K	Utukok River	55.38	22	P	P	08 47 12.5	-0.2
	baz=249						
G18K	Tagagawik	55.41	26	P	P	08 47 13.9	+1.0
G18K	Tagagawik	55.41	26	P	P	08 47 13.5	+0.6
	baz=253						
B18K	Kokolik River	55.44	21	P	P	08 47 13.8	+0.8
	baz=248						
P18K	Big Mountain,	55.48	34	P	P	08 47 13.1	-0.4
	baz=261						
M18K	Stony River	55.56	31	P	P	08 47 13.8	-0.2
	baz=259						
O18K	Koktuh Hills	55.56	33	P	P	08 47 14.0	-0.1
	baz=260						
J18K	Innoko River	55.57	29	P	P	08 47 14.8	+0.8
	baz=257						
SII	Sitkinak Islan	55.64	37	P	P	08 47 14.7	0.0
	baz=264						
GCSA	Galena City Sc	55.81	27	P	P	08 47 16.4	+0.7
	baz=256						
A19K	Wainwright	55.99	20	P	P	08 47 17.4	+0.5
	baz=248						
F19K	Shaleruckik Mo	56.02	25	P	P	08 47 17.6	+0.5
	baz=253						
C19K	Lookout Ridge	56.08	22	P	P	08 47 18.6	+0.9
C19K				IAmb	IAmb	08 47 19.9	
	comp=Z,3.9nm,0.8s						
C19K	Lookout Ridge	56.08	22	P	P	08 47 18.5	+0.9
	baz=250,SNR=6.5						
G19K	Purcell Mounta	56.09	26	P	P	08 47 18.6	+0.9
	baz=254						
L19K	White Mountain	56.14	31	P	P	08 47 18.9	+0.7
	baz=259						
J19K	Poorman	56.17	28	P	P	08 47 18.8	+0.6
	baz=257						
H19K	Roundabout Mou	56.18	26		P	08 47 19.3	+1.0
H19K				IAmb	IAmb	08 47 20.3	
	comp=Z,3.2nm,0.9s						
H19K	Roundabout Mou	56.18	26	P	P	08 47 18.6	+0.3
	baz=256						
M19K	Big River Lodg	56.30	31	P	P	08 47 19.0	-0.3
	baz=260						
D19K	Kuna River	56.39	23	P	P	08 47 20.4	+0.6
	baz=252						
E19K	Redstone River	56.40	24	P	P	08 47 20.7	+0.8
	baz=254						
P19K	Oil Pt	56.52	34	P	P	08 47 20.9	0.0
	baz=262						
KDAK	Kodiak Island	56.64	36	P	P	08 47 20.8	-0.8
	baz=264						
L20K	Farewell, AK	56.64	30	P	P	08 47 22.1	+0.4
	baz=260						
K20K	Telida	56.72	29	P	P	08 47 22.9	+0.7
	baz=259						
H20K	Anotleneega Mo	56.81	27	P	P	08 47 23.7	+0.9
	baz=257						
I20K	Naaghedeneel	56.83	27	P	P	08 47 23.5	+0.7
	baz=258						
J20K	Nowinta River	56.84	28	P	P	08 47 23.7	+0.7
	baz=259						
F20K	Avaraart Lake	56.85	25	P	P	08 47 23.8	+0.7
	baz=255						
O20K	Slope Mountain	56.88	33	P	P	08 47 23.8	+0.3
	baz=263						
M20K	Styx River	56.89	31	P	P	08 47 23.1	-0.5
	baz=261						
D20K	Etivluk River	56.98	23	P	P	08 47 24.7	+0.7
	baz=253,SNR=16						
E20K	Nigu River	57.00	23	P	P	08 47 24.9	+0.7
	baz=254						
B20K	Meade River	57.18	21	P	P	08 47 26.6	+1.3
	baz=252						
PPLA	Purkeypile	57.48	30	P	P	08 47 27.7	0.0
	baz=261						
CHUM	Lake Minchumin	57.58	29	P	P	08 47 28.9	+0.7
	baz=261						
G21K	Allakaket	57.58	26	P	P	08 47 28.6	+0.4
	baz=258						
CAST	Castle Rocks	57.61	29	P	P	08 47 28.7	+0.2
	baz=261						
SKT	Skwentna	57.65	31	P	P	08 47 28.7	-0.1
	baz=262						
H21K	Melozitna Rive	57.69	27	P	P	08 47 29.5	+0.5
	baz=259						
C21K	Knifeblade Rid	57.74	22	P	P	08 47 30.3	+1.1
	baz=255						
F21K	Alatna River	57.74	25	P	P	08 47 30.4	+1.1
	baz=257						
E21K	Killik River	57.84	23	P	P	08 47 31.0	+1.0
	baz=256						
B21K	Ikpikpuk River	57.92	22	P	P	08 47 31.6	+1.2
	baz=255						
A22K	Sinclair Lake	58.18	20	P	P	08 47 33.6	+1.4
	baz=254						
BPAW	Bear Paw Mtn.	58.19	29	P	P	08 47 33.0	+0.5
	baz=262						
F22K	John River	58.30	25	P	P	08 47 34.5	+1.3
	baz=258						
H22K	Ishtalitna Cre	58.31	26	P	P	08 47 34.2	+0.9
	baz=260						
D22K	Ayikyak River	58.41	23	P	P	08 47 35.1	+1.2
	baz=257,SNR=11						
RC01	Rabbit Creek A	58.41	32	P	P	08 47 34.7	+0.7
	baz=265						
TRF	Thorofare Moun	58.41	29	P	P	08 47 34.6	+0.4
	baz=263						
MLY	Manley	58.44	28	P	P	08 47 35.2	+1.0
	baz=261						
G22K	Bettles	58.44	25	P	P	08 47 34.7	+0.6
	baz=260						
SEW	Seward	58.46	33	P	P	08 47 35.4	+1.0
	baz=266						
B22K	Teshekpuk Lake	58.50	21	P	P	08 47 36.2	+1.8
	baz=256						
E22K	Anaktuvuk Pass	58.56	24	P	P	08 47 36.3	+1.3
	baz=258						
PMR	Palmer	58.74	32	P	P	08 47 36.3	+0.1
	baz=265						
G23K	Bananza Creek	58.98	26	P	P	08 47 38.8	+0.9
	baz=261						
BVAR	Borovoye Array	58.99	318	P	P	08 47 37.9	-0.3
	comp=Z,1.0nm,0.4s,baz=88,slow=6.8,SNR=6.6						
	comp=Z,1.0nm,0.4s						
COLD	Coldfoot	59.00	25	P	P	08 47 39.2	+1.2
	baz=260						
I23K	Minto, Yukon-K	59.03	27	P	P	08 47 38.6	+0.4
	baz=263						
MCK	McKinley	59.05	29	P	P	08 47 39.1	+0.7
	baz=264						
H23K	Yukon River	59.05	27	P	P	08 47 39.1	+0.7
	baz=262						
PWL	Port Wells	59.07	33	P	P	08 47 38.2	-0.4
	baz=266						
NEA2	Nenana	59.09	28	P	P	08 47 38.9	+0.3
	baz=263						
WAT1	Susitna Watana	59.13	30	P	P	08 47 39.3	+0.3
	baz=265						
D23K	Nanushuk River	59.13	23		P	08 47 39.9	+1.0
D23K	Nanushuk River	59.13	23	P	P	08 47 39.8	+0.9
	baz=259,SNR=8.6						
SML	Sawmill	59.14	31	P	P	08 47 38.8	-0.3
	baz=266						
C23K	Itkillik River	59.33	22	P	P	08 47 41.2	+1.0
	baz=259,SNR=5.2						
E23K	Chandalar	59.36	24	P	P	08 47 41.6	+1.1
	baz=261						
M23K	Glacier View	59.43	31	P	P	08 47 41.7	+0.7
	baz=266						
TOLK	Toolik Lake Re	59.47	23	P	P	08 47 42.0	+0.7
	baz=260						
WAT6	Susitna Watana	59.48	31	P	P	08 47 41.8	+0.2
	baz=266						
SCM	Sheep Creek Mo	59.62	31	P	P	08 47 42.4	0.0
	baz=266						
GLI	Glacier Island	59.68	33	P	P	08 47 42.9	+0.2
	baz=267						
H24K	Noodor Dome	59.73	27	P	P	08 47 43.8	+0.7
	baz=264						
E24K	Your Creek	59.78	24	P	P	08 47 44.6	+1.2
E24K				IAmb	IAmb	08 47 45.6	
	comp=Z,3.8nm,0.7s						
E24K	Your Creek	59.78	24	P	P	08 47 44.4	+1.0
	baz=262						
D24K	Happy Valley	59.82	23	P	P	08 47 45.1	+1.5
	baz=261						
POKR	Poker Plat Res	59.84	28	P	P	08 47 44.4	+0.6
	baz=264						
F24K	Squaw Lake	59.93	25	P	P	08 47 45.2	+0.8
	baz=263,SNR=6.9						
C24K	Franklin Bluff	59.96	22	P	P	08 47 45.6	+1.1
	baz=260						
G24K	Hadweenzic Riv	59.99	26	P	P	08 47 45.3	+0.6
	baz=263,SNR=5.8						
ILAR	Eielson Array	60.04	28	P	P	08 47 43.9	-1.2
	comp=Z,1.5nm,0.8s,baz=261,slow=6.4,SNR=22						
	comp=Z,1.5nm,0.8s						
M24K	Tolsona, Glenn	60.18	31	P	P	08 47 46.7	+0.5
	baz=267						
EYAK	Cordova Ski Ar	60.33	33	P	P	08 47 47.7	+0.6
	baz=269						
K24K	Donnelly Dome	60.45	29	P	P	08 47 48.4	+0.4
	baz=267						
G25K	Bearman Lake	60.54	26	P	P	08 47 49.4	+1.0
	baz=265						
PAX	Paxson	60.55	30	P	P	08 47 49.1	+0.3
	baz=267						
H25L	Birch Creek	60.61	26	P	P	08 47 50.1	+1.2
	baz=265						
HARP	HAARP	60.67	31	P	P	08 47 49.9	+0.5
	baz=268						
PRP	Porcupine Dome	60.67	27	P	P	08 47 50.0	+0.4
	baz=266						
J25K	Salcha River,	60.67	28	P	P	08 47 49.5	0.0
	baz=267						
D25K	Kavik River	60.71	23	P	P	08 47 51.0	+1.3
	baz=263						
F25K	Christian Rive	60.79	25		P	08 47 51.4	+1.1
F25K				IAmb	IAmb	08 47 52.9	
	comp=Z,2.8nm,0.8s						
F25K	Christian Rive	60.79	25	P	P	08 47 51.1	+0.8
	baz=265,SNR=6.2						
RIDG	Independent Ri	60.86	29	P	P	08 47 50.7	-0.1
	baz=268						
E25K	Arctic Village	60.87	24	P	P	08 47 51.5	+0.8
	baz=264,SNR=5.1						
BMRM	Bremner River	60.90	33	P	P	08 47 51.3	+0.2
	baz=269						
N25K	Chitina, Valde	60.91	32	P	P	08 47 51.3	+0.1
	baz=269						
KAIM	Kayak Island	60.98	34	P	P	08 47 51.7	+0.1
	baz=270						
SCRK	Sand Creek	61.25	29	P	P	08 47 53.1	-0.4
	baz=268,SNR=8.3						
F26K	Sheenjek River	61.37	25	P	P	08 47 55.0	+0.8
	baz=266,SNR=7.9						
J26L	Joseph Creek	61.45	28	P	P	08 47 55.1	+0.3
	baz=268,SNR=8.7						
G26K	Porcupine Rive	61.46	26	P	P	08 47 55.4	+0.7
	baz=267						
L26K	Log Cabin Wild	61.52	30	P	P	08 47 55.7	+0.5
	baz=269						
I26K	Coal Creek Min	61.65	28	P	P	08 47 56.3	+0.4
	baz=268						
M26K	Nabesna, AK	61.67	31	P	P	08 47 56.0	-0.3
	baz=270						
C27K	Jago River	61.68	23	P	P	08 47 56.4	+0.3
	baz=265						
K27K	Chicken	62.09	29	P	P	08 47 59.2	+0.3
	baz=270						
M27K	Edge Creek, AK	62.19	31	P	P	08 47 59.6	-0.2
	baz=271						
L27K	Beaver Creek,	62.21	30	P	P	08 48 00.2	+0.4
	baz=271						
MESA	MESA	62.22	33	P	P	08 48 00.0	-0.1
	baz=272						
I27K	Kandik River	62.30	27	P	P	08 48 00.4	+0.1
	baz=270						
G27K	Doyon Strip	62.30	26	P	P	08 48 01.6	+1.2
	baz=269						
H27K	Steamboat Moun	62.34	27	P	P	08 48 01.3	+0.7
	baz=269,SNR=6.4						
E27K	Coleen River	62.36	24	P	P	08 48 01.1	+0.4
	baz=268						
CTG	Chitna Glacier	62.49	32	P	P	08 48 01.3	-0.6
	baz=272						
D27M	Malcolm River	62.62	23	P	P	08 48 03.2	+0.7
	baz=268						
YUK3	Moose Creek	62.88	32	P	P	08 48 04.8	+0.3
	baz=272						
I28M	Miner Creek	63.00	27	P	P	08 48 06.1	+1.0
	baz=271,SNR=10						
F28M	Old Crow	63.00	25	P	P	08 48 06.2	+1.2
	baz=270,SNR=9.0						
O28M	Mount Upton	63.06	33	P	P	08 48 05.8	+0.1
	baz=273						
PINM	Pinnacle	63.07	33	P	P	08 48 06.0	+0.4
	baz=274						
E28M	Babbage River	63.13	24	P	P	08 48 06.5	+0.7
	baz=270						
YUK8	Steele Glacier	63.24	32	P	P	08 48 07.4	+0.5
	baz=273						
DAWY	Dawson	63.27	29	P	P	08 48 06.9	+0.1
	baz=272						
H29M	Whitestone	63.62	27	P	P	08 48 09.2	+0.2
	baz=272						
I29M	Ogilvie Camp,	63.68	27	P	P	08 48 09.7	+0.2
	baz=273,SNR=5.6						
G29M	Pine Creek	63.73	26	P	P	08 48 10.2	+0.4
	baz=272,SNR=7.1						
E29M	Blow River	63.74	24	P	P	08 48 10.9	+1.2
	baz=272						
YUK4	Talbot Arm	63.77	32	P	P	08 48 11.7	+1.4
	baz=274						
M29M	Somme Creek	63.78	31	P	P	08 48 09.7	-0.5
	baz=274						
L29M	L29M	63.89	30	P	P	08 48 12.3	+1.4
	baz=274,SNR=5.3						
YUK6	Outpost Mounta	63.94	32	P	P	08 48 11.8	+0.4
	baz=275						
K29M	Barlow Dome	64.11	29	P	P	08 48 13.1	+0.7
	baz=274						
EPYK	Eagle Plains	64.28	26	P	P	08 48 13.6	+0.3
	baz=274,SNR=7.4						
HYT	Haines Junctio	64.37	32	P	P	08 48 14.3	+0.1
	baz=276						
P29M	Windy Craggy	64.37	34	P	P	08 48 14.5	+0.4
	baz=276						
G30M	tAoh Zraii Nji	64.44	26	P	P	08 48 14.9	+0.5
	baz=274,SNR=5.4						
I30M	Mount Dempster	64.50	28	P	P	08 48 15.4	+0.5
	baz=274,SNR=5.5						
N30M	Aishikik Lake	64.51	32	P	P	08 48 16.1	+1.2
	baz=276						
F30M	Barrier River	64.57	25	P	P	08 48 15.7	+0.5
	baz=274,SNR=5.7						
J30M	Hart River	64.57	28	P	P	08 48 16.2	+0.8
	baz=275						
P30M	Million Dollar	64.71	33	P	P	08 48 16.6	+0.3
	baz=276						
O30N	Mendenhall	65.06	32	P	P	08 48 18.3	-0.2
	baz=277						
PLBC	Pleasant Camp	65.09	34	P	P	08 48 19.0	+0.4
	baz=277						
N31M	Braeburn, Yuko	65.13	32	P	P	08 48 19.1	+0.2
	baz=277						
G31M	Satah River	65.21	26	P	P	08 48 19.6	+0.4
	baz=276,SNR=5.8						
H31M	Peel River	65.29	27	P	P	08 48 20.2	+0.4
	baz=276,SNR=5.1						
S31K	Pelican	65.35	36	P	P	08 48 19.9	-0.4
	baz=278						
INK	Inuvik	65.36	24	P	P	08 48 20.4	+0.2
	comp=Z,3.6nm,0.7s,baz=275,slow=4.0,SNR=8.5						
	comp=Z,3.6nm,0.7s						
INK	Inuvik	65.36	24	P	P	08 48 20.2	+0.1
	baz=276						
F31M	Tsiigehtchic	65.36	25	P	P	08 48 20.3	+0.1
	baz=276						
WHY	Whitehorse	65.67	33	P	P	08 48 23.3	+0.8
	baz=278						
M31M	Drury Creek, Y	65.69	31	P	P	08 48 23.5	+1.0
	baz=278						
AB31	Akbulak array	65.92	315	P	P	08 48 24.2	0.0
ABKAR	Akbulak array	65.92	315	P	P	08 48 24.2	0.0
ABKAR	Akbulak array	65.92	315	P	P	08 48 24.2	0.0
P32M	Atlin	66.41	34	P	P	08 48 28.0	+0.9
	baz=279						
P33M	Teslin, Yukon	66.75	33	P	P	08 48 30.1	+0.7
	baz=280						
MMPY	Sheldon Lake,	67.07	30	P	P	08 48 31.9	+0.6
	baz=280						
WRAK	Wrangell Islan	67.70	37	P	P	08 48 35.4	+0.1
	baz=282						
S34M	Telegraph Cree	68.04	35	P	P	08 48 38.1	+0.7
	baz=282						
C36M	Paulatuk	68.57	22	P	P	08 48 40.6	+0.2
	baz=284						
TGTN	Hyland Airport	68.67	31	P	P	08 48 41.7	+0.5
	baz=283						
T35M	Bob Quinn	68.71	36	P	P	08 48 42.5	+0.9
	baz=283						
WRGLY	Wrigley	70.41	29	P	P	08 48 52.5	+0.7
	baz=286						
TOAD	Toad River Com	70.82	33	P	P	08 48 55.7	+1.2
	baz=286						
KOTAN	Kotaneelee Air	71.03	32	P	P	08 48 57.1	+1.5
	baz=287						
SPITS	Spitsbergen Ar	72.31	350	P	P	08 49 03.2	+0.2
	comp=Z,0.8nm,0.5s,baz=77,slow=9.2,SNR=4.3						
	comp=Z,0.8nm,0.5s						
YKA	Yellowknife Ar	74.47	28	P	P	08 49 15.1	-0.6
	comp=Z,0.6nm,0.6s,baz=298,slow=6.5,SNR=8.1						
	comp=Z,0.6nm,0.6s						
NEW	Newport	79.12	42	P	P	08 49 40.6	-1.7
	comp=Z,2.3nm,0.8s,baz=289,slow=3.4,SNR=5.9						
	comp=Z,2.3nm,0.8s						

FINES	FINESS Array B	79.44	334	P	P	08 49 42.0	-1.6
	comp=Z,0.7nm,0.5s,baz=62,slow=5.5,SNR=5.7 comp=Z,0.7nm,0.5s						
NVAR	Mina Array Bea	82.58	51	P	P	08 50 00.4	-0.6
	comp=Z,1.0nm,0.6s,baz=311,slow=4.9,SNR=6.3 comp=Z,1.0nm,0.6s						
ELK	Elko	83.67	48	P	P	08 50 06.5	0.0
	comp=Z,1.1nm,0.8s,baz=288,slow=9.6,SNR=4.8 comp=Z,1.1nm,0.8s						
AKASG	Malin Array Be	83.78	324	P	P	08 50 05.0	-1.6
	comp=Z,0.1nm,0.3s,baz=52,slow=4.8,SNR=2.2 comp=Z,0.1nm,0.3s						
PDAR	Pinedale Array	86.39	44	P	P	08 50 18.0	-2.0
	comp=Z,0.2nm,0.5s,baz=317,slow=6.6,SNR=2.4 comp=Z,0.2nm,0.5s						
TORD	Torodi Ar. Bea	125.24	309	PKP	PKPdf	08 56 35.6	-2.1
	comp=Z,19nm,0.3s,baz=30,slow=3.3,SNR=3.6						
PLCA	Paso Flores	149.28	129	PKPbc	PKPbc	08 57 22.8	-2.3
	comp=Z,1.8nm,0.9s,baz=270,slow=2.0,SNR=3.1						
LPAZ	La Paz	151.33	78	PKPbc	PKPbc	08 57 29.4	-2.0
	comp=Z,0.5nm,0.4s,baz=270,slow=2.0,SNR=1.5						

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*IDC **21** 08:40:19.9±3.2, 54°.04N×87°.41E, h0^{km}, mbtmp2.7/2, ML2.1/2, Error ellipse: s-maj=26.7km s-min=17.9km az=58.0*

ASRS 21 08:40:16.0±0.8**, 54°.09N×87°.46E, h0^{km}, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.56	266	I	I	08 50 10.0	
	baz=83,slow=322,SNR=2.0						
ZALV	Zalesovo Beam	1.56	266	Pg	Pg	08 40 47.2	+1.2
	1.6nm,0.3s,baz=88,slow=18,SNR=9.7						
ZALV				Lg	Lg	08 41 08.5	
	2.5nm,0.3s,baz=86,slow=27,SNR=14						
KURBB	Kurchatov Arra	6.48	241	Pn	Pn	08 41 56.9	+4.4
	baz=54,slow=13,SNR=2.5						
KURBB				Lg	Lg	08 43 43.9	
	baz=54,slow=33,SNR=1.7 0.3nm,0.2s						
MKAR	Makanchi Array	8.01	206	Pn	Pn	08 42 17.7	+4.1
	baz=28,slow=14,SNR=1.5						
MKAR				Lg	Lg	08 44 31.1	
	0.1nm,0.3s,baz=18,slow=26,SNR=2.0 0.1nm,0.3s						

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*IDC **21** 08:40:36.4±0.7, 30°.82S×177°.43W, h0^{km}, mb4.7/13, mbtmp4.7/13, Error ellipse: s-maj=23.7km s-min=22.2km az=70.0*

*NEIC **21** 08:40:38.3±1.6, 30°.85S±0°.07×177°.52W±0°.04, h10^{km}±1^{km}, mb5.1/29, Error ellipse: s-maj=12.5km s-min=3.4km az=152.0*

ISC 21 08:40:40.6±0.5**, 30°.84S**±0°.06×**177°.6W**±0°.1**, h27^{km}, n61,** σ**1^{s}.11**/63**, mb5.0**/29**, 1C-1D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.61	349	Pn	Pn	08 41 06.7	-0.6
RAO	Raoul Island	1.61	349	Pn	Pn	08 41 06.0	-1.3
	baz=165,slow=20						
RAO				Sn	Sn	08 41 28.3	+1.1
	932nm,0.3s,baz=162,slow=20,SNR=1.9						
MXZ	Matakaoa Point	7.52	206	Pn	Pn	08 42 27.5	-1.0
DZM	Mont Dzumac	16.75	298	Pn	Pn	08 44 31.7	-1.8
EIDS	Eidsvold	28.13	273	P	P	08 46 30.0	-0.4
EIDS				IAmb	IAmb	08 46 40.6	
	comp=Z,19nm,0.9s						
CAN	Canberra	28.28	252	P	P	08 46 29.9	-2.0
TAU	Tasmania Unive	30.34	237	P	P	08 46 47.4	-2.5
TAU				IAmb	IAmb	08 46 48.2	
	comp=Z,33nm,1.0s						
CTAO	Charters Tower	34.23	280	P	P	08 47 25.7	+1.4
STKA	Stephens Creek	34.74	257	P	P	08 47 29.8	+1.3
STKA	Stephens Creek	34.74	257	P	P	08 47 31.1	+2.5
	comp=Z,9.4nm,0.6s,baz=98,slow=13,SNR=1.6 comp=Z,9.4nm,0.6s						
BBOO	Buckleboo	39.20	255	P	P	08 48 07.2	+0.7
ASAR	Alice Springs	43.45	267	P	P	08 48 41.7	+0.2
ASAR	Alice Springs	43.45	267	P	P	08 48 42.4	+0.9
	comp=Z,3.9nm,0.4s,baz=112,slow=8.0,SNR=1.5						
ASAR				ScP	ScP	08 54 22.9	+3.8
	comp=Z,1.0nm,0.8s,baz=106,slow=3.9,SNR=2.5 comp=Z,3.9nm,0.4s						
WRAB	Tennant Creek	44.48	272	P	P	08 48 50.2	+0.5
WRAB				IAmb	IAmb	08 48 51.1	
	comp=Z,31nm,0.9s						
WRA	Warramunga Arr	44.48	272	P	P	08 48 49.9	+0.1
WRA	Warramunga Arr	44.48	272	P	P	08 48 50.0	+0.2
	comp=Z,17nm,0.8s,baz=114,slow=7.9,SNR=3.6 comp=Z,17nm,0.8s						
SBA	Scott Base	47.62	184	P	P	08 49 16.3	+2.6
SBA				IAmb	IAmb	08 49 23.7	
	comp=Z,19nm,1.1s						
CASY	Casey	54.92	208	P	P	08 50 08.0	-0.6
CASY				IAmb	IAmb	08 50 22.6	
	comp=Z,25nm,1.0s						
SYO	Syowa Base	76.77	193	⇑iP	P	08 52 28.6	-0.5
SYO	Syowa Base	76.77	193	⇓ipP	P	08 52 31.6	+2.5
COYC	Coyhaique	78.36	136	P	P	08 52 38.3	-0.3
COYC				IAmb	IAmb	08 52 56.5	
	comp=Z,25nm,1.1s						
JGF	Kuroka	78.50	324	P	P	08 52 38.8	-0.5
MJAR	Matsushiro Arr	78.81	325	P	P	08 52 40.8	-0.2
	comp=Z,4.8nm,0.9s,baz=158,slow=6.0,SNR=3.7 comp=Z,4.8nm,0.9s						
LL02	Futaleuf	79.78	134	P	P	08 52 45.0	-1.4
LL02				IAmb	IAmb	08 52 49.7	
	comp=Z,13nm,1.0s						
ERM	Erimo	81.03	331	P	P	08 52 54.1	+1.4
AMKA	Amchitka	81.91	358	P	P	08 52 56.4	-0.7
PLCA	Paso Flores	81.94	133	P	P	08 52 57.1	-0.9
PLCA	Paso Flores	81.94	133	P	P	08 52 57.9	-0.1
	comp=Z,9.3nm,1.1s,baz=254,slow=7.4,SNR=4.6 comp=Z,9.3nm,1.1s						
ADK	Adak	82.38	1	P	P	08 52 59.0	-0.6
JKA	Kamikawa-asahi	83.00	332	P	P	08 53 03.7	+0.6
JKA				IAmb	IAmb	08 53 11.4	
	comp=Z,14nm,1.1s						
ASAJ	Asahikawa	83.00	332	P	P	08 53 04.1	+1.0
	comp=Z,13nm,0.9s,baz=164,slow=18,SNR=4.1 comp=Z,13nm,0.9s						
BI02	San Fabin de	83.73	129	P	P	08 53 06.9	-0.5
BI02				IAmb	IAmb	08 53 07.2	
	comp=Z,8.0nm,0.8s						
KSRS	Korea Array	84.92	319	P	P	08 53 13.2	+0.2
	comp=Z,3.6nm,0.9s,baz=141,slow=6.6,SNR=4.9 comp=Z,3.6nm,0.9s						
BO02	Sierra Bellavi	85.11	128	P	P	08 53 13.7	-0.7
BO02				IAmb	IAmb	08 53 18.9	
	comp=Z,17nm,1.0s						
MT01	Popeta	85.31	127	P	P	08 53 14.3	-1.0
MT01				IAmb	IAmb	08 53 15.4	
	comp=Z,16nm,0.9s						
MT02	Curacav	85.72	126	P	P	08 53 16.4	-1.0
MT02				IAmb	IAmb	08 53 29.9	
	comp=Z,16nm,1.1s						
PEA0B	Petropavlovsk-	86.33	345	P	P	08 53 20.0	+0.3
PEA0B				IAmb	IAmb	08 53 45.1	
	comp=Z,16nm,1.1s						
PETK	Petropavlovsk-	86.33	345	P	P	08 53 19.8	+0.1
PETK	Petropavlovsk-	86.33	345	P	P	08 53 20.0	+0.4
	comp=Z,7.0nm,0.9s,baz=159,slow=5.8,SNR=4.9 comp=Z,7.0nm,0.9s						
USRK	Ussuriysk Ar.	87.73	326	P	P	08 53 27.2	+0.6
	comp=Z,6.1nm,0.9s,baz=131,slow=4.4,SNR=4.5 comp=Z,6.1nm,0.9s						
GWY	Greenwater Val	87.80	45	P	P	08 53 27.7	+0.3
GWY				IAmb	IAmb	08 53 28.8	
	comp=Z,9.9nm,1.0s						
PNTR	Pine Nut	88.02	41	P	P	08 53 28.5	0.0
BEKR	Beckworth	88.12	40	P	P	08 53 29.0	+0.1
YBH	Yreka Blue Hor	88.16	38	P	P	08 53 28.6	-0.3
	comp=Z,0.2nm,0.9s,baz=209,slow=13,SNR=2.7						
NVAR	Mina Array Bea	88.32	42	P	P	08 53 30.2	+0.3
NVAR	Mina Array Bea	88.32	42	P	P	08 53 29.9	0.0
	comp=Z,5.0nm,0.8s,baz=241,slow=4.3,SNR=5.0 comp=Z,5.0nm,0.8s						
PAHR	Pah Rah Range	88.56	41	P	P	08 53 30.8	-0.1
PAHR				IAmb	IAmb	08 53 31.6	
	comp=Z,9.4nm,1.1s						
TPH	Tonopah	88.71	43	P	P	08 53 32.5	+0.7
KLR	Kul'dur	91.60	330	P	P	08 53 45.4	+0.7
	comp=Z,3.1nm,0.7s,baz=112,slow=9.7,SNR=3.1 comp=Z,3.1nm,0.7s						
ELK	Elko	91.62	42	P	P	08 53 46.2	+0.9
	comp=Z,2.3nm,0.8s,baz=249,slow=7.6,SNR=4.1 comp=Z,2.3nm,0.8s						
PDAR	Pinedale Array	96.20	43	P	P	08 54 06.0	-0.3
	comp=Z,0.7nm,0.8s,baz=243,slow=4.2,SNR=3.1 comp=Z,0.7nm,0.8s						
MKAR	Makanchi Array	118.34	310	PKP	PKPdf	08 59 24.4	-0.8
	comp=Z,1.1nm,0.7s,baz=101,slow=2.9,SNR=2.1						
BVAR	Borovoye Array	126.98	316	PKP	PKPdf	08 59 41.6	0.0
	comp=Z,4.4nm,0.8s,baz=102,slow=1.0,SNR=2.7						
ARCES	ARCESS Array B	139.10	348	PKP	PKiKP	09 00 05.4	-0.8
	comp=Z,3.7nm,0.7s,baz=45,slow=1.4,SNR=2.5						
FINES	FINESS Array B	145.69	340	PKPbc	PKPdf	09 00 15.5	-0.2
	comp=Z,15nm,0.6s,baz=41,slow=3.8,SNR=5.9						
NOA	NORSAR Array B	149.24	352	PKPbc	PKPbc	09 00 25.2	-0.8
	comp=Z,7.0nm,0.9s,baz=14,slow=2.7,SNR=3.4						
HFS	Hagfors	149.75	349	PKPbc	PKPbc	09 00 26.8	-0.5
	comp=Z,12nm,0.8s,baz=29,slow=3.3,SNR=3.4						
AKASG	Malin Array Be	151.87	323	PKPbc	PKPbc	09 00 32.0	-0.5
	comp=Z,12nm,0.9s,baz=52,slow=3.2,SNR=4.6						
MMAI	Mount Meron Ar	151.99	283	PKPbc	PKiKP	09 00 34.5	+0.7
	comp=Z,7.5nm,0.6s,baz=82,slow=3.1,SNR=4.3						
BRTR	Keskin Array B	153.13	298	PKPbc	PKPbc	09 00 35.8	-0.1
	comp=Z,3.2nm,0.9s,baz=122,slow=2.8,SNR=3.5						
TORD	Torodi Ar. Bea	162.38	178	PKPab	PKPab	09 01 26.6	-1.0
	comp=Z,24nm,0.3s,baz=197,slow=1.5,SNR=1.0						

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*IDC **21** 08:42:12.6±1.6, 30°.84S×177°.46W, h0^{km}, mb4.4/5, mbtmp4.4/5, Error ellipse: s-maj=41.9km s-min=32.1km az=116.0*

ISC 21 08:42:15.8±1.9**, 30°.8S**±0°.2×**177°.3W**±0°.3**, h27^{km}, n8,** σ**0^{s}.74**/8**, mb4.3**/4**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.58	341	Pn	Pn	08 42 42.2	+0.1
	baz=141,slow=23						
STKA	Stephens Creek	34.98	257	P	P	08 49 06.8	+1.0
	2.6nm,0.6s,baz=107,slow=14,SNR=0.8 2.6nm,0.6s						
ASAR	Alice Springs	43.68	267	P	P	08 50 17.8	-0.8
	2.0nm,0.8s,baz=110,slow=7.7,SNR=1.0						
ASAR				PcP	PcP	08 52 04.9	-0.6
	0.8nm,0.6s,baz=108,slow=3.6,SNR=0.5 2.0nm,0.8s						
WRA	Warramunga Arr	44.70	272	P	P	08 50 26.0	-0.8
	3.7nm,0.8s,baz=114,slow=8.1,SNR=1.7 3.7nm,0.8s						
FITZ	Fitzroy Crossi	52.95	270	P	P	08 51 30.0	-0.1
	12nm,1.0s,baz=145,slow=12,SNR=1.8 12nm,1.0s						
ILAR	Eielson Array	98.14	13	P	Pdif	08 55 52.0	+2.5
	1.0nm,0.8s,baz=206,slow=5.1,SNR=1.1 1.0nm,0.8s						
FINES	FINESS Array B	145.68	340	PKPbc	PKPab	09 01 52.1	+0.4
	3.6nm,0.8s,baz=36,slow=4.2,SNR=1.2						
TORD	Torodi Ar. Bea	162.46	177	PKPab	PKPab	09 03 03.3	0.0
	33nm,0.3s,baz=184,slow=4.2,SNR=1.5						

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*ASRS **21** 08:45:34.0±1.2, 54°.14N×87°.17E, h0^{km}, M2.9, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 21 08:45:37.5±2.7**, 54°.09N×87°.11E, h0^{km}, mbtmp3.0**/3**, ML2.6**/3**, Error ellipse: s-maj=23.3km s-min=14.0km az=65.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.36	265	I	I	08 54 50.0	
	0.1nm,0.9s,baz=81,slow=318,SNR=16						
ZALV	Zalesovo Beam	1.36	265	Pg	Pg	08 46 02.2	-1.3
	4.1nm,0.3s,baz=83,slow=16,SNR=28						
ZALV				Lg	Lg	08 46 21.9	
	2.3nm,0.3s,baz=82,slow=29,SNR=11						
KURBB	Kurchatov Arra	6.29	240	Pn	Pn	08 47 11.7	+0.2
	0.1nm,0.3s,baz=53,slow=13,SNR=5.9						
KURBB				Lg	Lg	08 48 56.9	
	baz=44,slow=35,SNR=5.0 0.7nm,0.4s						
MKAR	Makanchi Array	7.92	205	Pn	Pn	08 47 35.0	+1.1
	0.1nm,0.3s,baz=24,slow=11,SNR=2.1						
MKAR				Sn	Sn	08 49 04.1	-0.1
	0.1nm,0.3s,baz=27,slow=26,SNR=3.1						
MKAR				Lg	Lg	08 49 46.3	
	0.1nm,0.3s,baz=24,slow=29,SNR=5.4 0.2nm,0.4s						
BVAR	Borovoye Array	10.01	271	Pn	Pn	08 48 03.0	+0.5
	0.1nm,0.3s,baz=68,slow=14,SNR=2.8						
BVAR				Sn	Sn	08 49 49.1	-6.2
	baz=78,slow=22,SNR=6.3 0.6nm,0.4s						

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*NOU **21** 08:49:54.7, 30°.99S×175°.02W, h0^{km}, ML5.0/22, Kermadec Islands Region*

*IDC **21** 08:50:10.6±0.5, 30°.88S×177°.44W, h0^{km}, mb4.6/16, mbtmp4.6/17, ML3.5/1, Error ellipse: s-maj=18.6km s-min=16.1km az=83.0*

*NEIC **21** 08:50:12.6±1.7, 30°.94S±0°.10×177°.4W±0°.2, h10^{km}±1^{km}, mb4.9/32, Error ellipse: s-maj=23.2km s-min=15.4km az=74.0*

*BJI **21** 08:50:14.7, 31°.04S×177°.59W, h33^{km}, mB5.4/1, mb5.2/14, Ms7 5.4/3*

ISC 21 08:50:14.4±0.4**, 31°.01S**±0°.05×**177°.42W**±0°.08**, h27^{km}, n150,** σ**1^{s}.69**/166**, mb5.0**/51**, 6C-4D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.79	346	P	Pn	08 50 41.9	-1.6
RAO	Raoul Island	1.80	346		Pn	08 50 42.3	-1.4
RAO	Raoul Island	1.80	346	Pn	Pn	08 50 41.5	-2.1
	390nm,0.3s,baz=291,slow=6.1,SNR=9.5						
RAO				Sn	Sn	08 50 59.6	-5.9
	610nm,0.3s,baz=89,slow=20,SNR=5.7						
RAO	Raoul Island	1.80	346	P	Pn	08 50 42.9	-0.7
RIZ	Raoul Island	1.81	346	P	Pn	08 50 42.1	-1.7
RIZ				S	Sn	08 51 04.4	-1.4
MXZ	Matakaoa Point	7.43	207	S	Sn	08 53 24.5	+0.1
WMGZ	Waiomatatini S	7.62	206	P	Pn	08 51 60.0	-3.6
WMGZ				S	Sn	08 53 27.6	-1.4
PKGZ	Pakihiroa	7.79	207	P	Pn	08 52 01.9	-4.0
PKGZ				S	Sn	08 53 33.1	-0.1
HAZ	Te Kaha	7.81	209	P	Pn	08 52 05.2	-1.0
HAZ				S	Sn	08 53 34.0	+0.3
PUZ	Puketiti	7.90	206	P	Pn	08 52 04.4	-3.0
PUZ				S	Sn	08 53 34.7	-1.2
TWGZ	Tauwhareparae	8.09	207	P	Pn	08 52 07.8	-2.4
TWGZ				S	Sn	08 53 40.7	-0.1
CNGZ	Carnagh Statio	8.28	205	P	Pn	08 52 09.2	-3.5
TKGZ	Te Karaka	8.37	206	P	Pn	08 52 09.8	-4.1
TKGZ				S	Sn	08 53 45.6	-2.0
MWZ	Matawai	8.41	208	P	Pn	08 52 10.9	-3.5
MWZ				S	Sn	08 53 45.7	-2.9
WCZ	Waipu Caves	8.45	232	P	Pn	08 52 19.3	+4.2
URZ	Urewera	8.52	210	Pn	Pn	08 52 12.7	-3.3
	2.6nm,0.3s,baz=263,slow=4.9,SNR=9.1						
URZ				Sn	Sn	08 53 49.8	-1.4
	14nm,0.3s,baz=301,slow=22,SNR=10						
URZ	Urewera	8.52	210	P	Pn	08 52 15.4	-0.6
URZ	Urewera	8.52	210	P	Pn	08 52 11.7	-4.3
URZ				S	Sn	08 53 49.5	-1.6
RAGZ	Rawiri	8.59	208	P	Pn	08 52 12.9	-4.1
RAGZ				S	Sn	08 53 51.4	-1.7
OUZ	Omahuta	8.62	238	P	Pn	08 52 23.1	+5.7
RIGZ	Rimuhau	8.64	206	P	Pn	08 52 13.7	-4.0
RIGZ				S	Sn	08 53 52.9	-1.3
SNGZ	Shannon Statio	8.87	208	P	Pn	08 52 16.1	-4.7
SNGZ				S	Sn	08 53 56.5	-3.3
BKZ	Black Stump Fm	9.54	210	P	Pn	08 52 30.1	+0.1
HIZ	Hauiti	9.81	218	P	Pn	08 52 36.2	+2.5
HIZ	Hauiti	9.81	218	P	Pn	08 52 32.5	-1.2
OTVZ	Oturere	9.91	213	P	Pn	08 52 32.2	-3.0
OTVZ				S	Sn	08 54 24.4	-1.2
BFZ	Birch Farm	10.93	206	P	Pn	08 52 46.0	-3.0
QRZ	Quartz Range	12.73	217	P	Pn	08 53 16.1	+2.5
RPZ	Rata Peaks	15.63	213	Pn	Pn	08 53 49.8	-2.9
	2.8nm,0.3s,baz=48,slow=1.3,SNR=7.3						
RPZ				Sn	Sn	08 56 31.2	-14
	0.9nm,0.3s,baz=12,slow=17,SNR=1.8						
RPZ	Rata Peaks	15.63	213	P	Pn	08 53 50.8	-1.9
ODZ	Otahua Downs	16.85	210	P	Pn	08 54 05.5	-2.8
DZM	Mont Dzumac	16.94	298	Pn	P	08 54 12.6	+1.2
	0.3nm,0.3s,baz=118,slow=13,SNR=9.6						
JCZ	Jackson Bay	16.99	216	P	Pn	08 54 08.2	-2.0
RAR	Rarotonga	18.59	63	P	Pn	08 54 29.2	-0.7
	1.5nm,0.3s,baz=252,slow=19,SNR=4.4 45nm,0.9s						
SYZ	Scrubby Hill	18.67	210	P	P	08 54 26.2	-4.0
ARMA	Armidale	26.57	263	P	P	08 55 52.2	+1.8
ARMA	Armidale	26.57	263	P	P	08 55 52.7	+2.3
ARMA	Armidale	26.57	263	P	P	08 55 54.2	+3.8
EIDS	Eidsvold	28.26	274		P	08 56 06.2	+0.8
EIDS				IAmb	IAmb	08 56 08.8	
	comp=Z,12nm,0.8s						
EIDS	Eidsvold	28.26	274	P	P	08 56 07.1	+1.6
	comp=Z,21nm,0.9s						
YNG	Young	28.89	254	P	P	08 56 13.0	+2.0
	comp=Z,21nm,1.8s						
TOO	Toolangi	31.19	248	P	P	08 56 32.5	+1.2
CMSA	Cobar Meteorol	31.44	259	P	P	08 56 36.0	+2.5
CMSA	Cobar Meteorol	31.44	259	P	P	08 56 35.6	+2.1
QLP	Quilpie	33.78	268	P	P	08 56 55.9	+1.8
	comp=Z,59nm,1.9s						
QLP	Quilpie	33.78	268	P	P	08 56 56.1	+2.0
ARPS	Mount Arapiles	34.12	249	P	P	08 56 58.9	+2.0
	comp=Z,21nm,1.1s						
CTAO	Charters Tower	34.39	280		P	08 56 59.8	+0.4
CTAO				IAmb	IAmb	08 57 04.4	
	comp=Z,36nm,0.7s						
CTAO	Charters Tower	34.39	280	P	P	08 57 01.2	+1.8
STKA	Stephens Creek	34.83	258		P	08 57 03.1	0.0
STKA	Stephens Creek	34.83	258	P	P	08 57 05.0	+1.9
	comp=Z,125nm,1.0s						
STKA	Stephens Creek	34.83	258	P	P	08 57 04.3	+1.2
	comp=Z,17nm,0.8s,baz=91,slow=9.3,SNR=24 comp=Z,17nm,0.8s						
STKA	Stephens Creek	34.83	258	P	P	08 57 05.1	+2.0
HTT	Hallett	36.81	254	P	P	08 57 21.2	+0.9
	comp=Z,7.6nm,1.1s						
HTT	Hallett	36.81	254	P	P	08 57 21.1	+0.9
MTSU	Mount Surprise	36.90	281	P	P	08 57 22.9	+1.9
	comp=Z,21nm,0.8s						
BBOO	Buckleboo	39.28	255		P	08 57 40.8	-0.2
BBOO				IAmb	IAmb	08 57 57.1	
	comp=Z,18nm,0.8s						
BBOO	Buckleboo	39.28	255	P	P	08 57 41.1	+0.1
	comp=Z,26nm,0.7s						
BBOO	Buckleboo	39.28	255	P	P	08 57 41.1	+0.1
QIS	Mount Isa	39.85	275	P	P	08 57 47.3	+1.4
	comp=Z,12nm,1.6s						
QIS	Mount Isa	39.85	275	P	P	08 57 47.3	+1.4
AS17	Alice Springs	43.50	267	P	P	08 58 15.9	+0.2
	comp=Z,15nm,0.7s						
AS01	Alice Springs	43.53	267	P	P	08 58 16.8	+0.8
AS31	Alice Springs	43.57	267		P	08 58 16.4	+0.1
AS31	Alice Springs	43.57	267	P	P	08 58 17.2	+0.9
ASAR	Alice Springs	43.57	267		P	08 58 15.7	-0.7
ASAR	Alice Springs	43.57	267	P	P	08 58 16.1	-0.2
	comp=Z,5.7nm,0.6s,baz=104,slow=7.5,SNR=60						
ASAR				PcP	PcP	09 00 03.9	+0.1
	comp=Z,5.3nm,0.8s,baz=114,slow=4.3,SNR=9.2 comp=Z,5.7nm,0.6s						
WR9	Warramunga Arr	44.46	273	P	P	08 58 24.0	+0.6
WRAB	Tennant Creek	44.61	272	P	P	08 58 24.3	-0.4
WRAB				IAmb	IAmb	08 58 26.9	
	comp=Z,19nm,0.8s						
WRA	Warramunga Arr	44.62	272		P	08 58 23.7	-1.0
WRA	Warramunga Arr	44.62	272	P	P	08 58 24.4	-0.3
	comp=Z,24nm,0.8s,baz=113,slow=7.6,SNR=55						
WRA				PcP	PcP	09 00 07.5	+0.2
	comp=Z,4.1nm,0.8s,baz=114,slow=3.2,SNR=5.5 comp=Z,24nm,0.8s						
FORT	Forrest	46.37	256	P	P	08 58 37.9	-0.6
FORT	Forrest	46.37	256	P	P	08 58 38.4	0.0
	comp=Z,43nm,0.7s						
FORT	Forrest	46.37	256	P	P	08 58 38.4	0.0
SBA	Scott Base	47.47	184	P	P	08 58 49.5	+3.1
SBA				IAmb	IAmb	08 58 51.9	
	comp=Z,17nm,1.3s						
VNDA	Vanda	47.55	186	P	P	08 58 46.8	-0.2
VNDA	Vanda	47.55	186	P	P	08 58 47.0	+0.1
	comp=Z,1.1nm,0.8s,baz=234,slow=23,SNR=6.8 comp=Z,1.1nm,0.8s						
WRKA	Warakurna	47.90	263	P	P	08 58 50.3	-0.2
	comp=Z,15nm,1.0s						
JAY	Jayapura	48.62	297	P	P	08 58 55.7	-0.4
	comp=Z,10nm,0.7s,baz=154,slow=7.4,SNR=4.7 comp=Z,10nm,0.7s						
KDU	Kakadu	49.51	280	P	P	08 59 03.7	+0.9
	comp=Z,19nm,2.1s						
MTN	Manton Dam	50.57	279	P	P	08 59 11.8	+0.9
MTN				IAmb	IAmb	08 59 12.2	
	comp=Z,16nm,0.8s						
MTN	Manton Dam	50.57	279	P	P	08 59 11.3	+0.4
	comp=Z,29nm,1.8s						
FITZ	Fitzroy Crossi	52.85	270	P	P	08 59 27.0	-1.0
FITZ	Fitzroy Crossi	52.85	270	P	P	08 59 28.1	+0.1
	comp=Z,3.0nm,2.1s						
FITZ	Fitzroy Crossi	52.85	270	P	P	08 59 27.2	-0.7
	comp=Z,5.9nm,0.7s,baz=173,slow=9.1,SNR=12 comp=Z,5.9nm,0.7s						
FITZ	Fitzroy Crossi	52.85	270	P	P	08 59 28.0	+0.1
CASY	Casey	54.84	208		P	08 59 42.4	+0.6
CASY				IAmb	IAmb	08 59 44.4	
	comp=Z,16nm,0.8s						
MEEK	Meekatharra	55.53	257	P	P	08 59 47.5	0.0
	comp=Z,20nm,1.3s						
MORW	Morawa	56.84	254	P	P	08 59 55.1	-1.6
MORW				IAmb	IAmb	09 00 03.8	
	comp=Z,24nm,1.4s						
QSPA	South Pole Qui	59.11	180	P	P	09 00 15.1	+2.9
	comp=Z,10nm,0.9s,baz=48,slow=2.9,SNR=18 comp=Z,10nm,0.9s						
GIRL	Giralia	60.73	260	P	P	09 00 23.8	-0.1
GIRL	Giralia	60.73	260	P	P	09 00 24.5	+0.7
	comp=Z,57nm,1.1s						
TNTI	Ternate	61.12	290	P	P	09 00 23.7	-2.9
SYO	Syowa Base	76.64	193	⇓eP	P	09 02 03.0	+0.8
SYO	Syowa Base	76.64	193	⇓ePcP	PcP	09 02 15.2	+1.6
TROLL	Troll, Antarti	77.27	180	⇑P	P	09 02 06.4	+0.4
	comp=Z,243nm,0.8s						
SNAA	Sanae	77.54	178	⇑P	P	09 02 07.8	+0.4
	comp=Z,72nm,0.9s						
SNAA	Sanae	77.54	178	P	P	09 02 07.4	0.0
SNAA				IAmb	IAmb	09 02 33.8	
	comp=Z,9.3nm,1.0s						
SNAA	Sanae	77.54	178	P	P	09 02 07.9	+0.5
	comp=Z,3.0nm,1.0s,baz=216,slow=1.8,SNR=4.5 comp=Z,3.0nm,1.0s						
VNA3	Neumayer Olymp	77.67	176	⇑P	P	09 02 08.9	+0.9
	comp=Z,16nm,0.7s						
VNA2	Neumayer--Watz	78.11	177	⇑P	P	09 02 11.6	+1.1
	comp=Z,6.7nm,0.6s,baz=173,slow=5.1						
VNA1	Neumayer--Stat	78.34	176	⇑P	P	09 02 11.8	+0.1
	comp=Z,9.8nm,0.9s						
JGF	Kuroka	78.71	324	P	P	09 02 13.5	-0.7
JGF				IAmb	IAmb	09 02 33.1	
	comp=Z,12nm,1.2s						
MJAR	Matsushiro Arr	79.02	325	P	P	09 02 15.5	-0.4
	comp=Z,3.8nm,0.9s,baz=160,slow=5.9,SNR=6.1 comp=Z,3.8nm,0.9s						
JSD	Sado	80.18	326	P	P	09 02 22.5	+0.4
PLCA	Paso Flores	81.73	133	P	P	09 02 32.2	+1.4
	comp=Z,2.1nm,0.9s,baz=205,slow=5.7,SNR=3.7 comp=Z,2.1nm,0.9s						
AMKA	Amchitka	82.08	358	P	P	09 02 31.7	-0.1
KIWB	Kanaga Island	82.50	0	P	P	09 02 35.0	+0.9
ADK	Adak	82.53	0		P	09 02 34.5	+0.3
ADK				IAmb	IAmb	09 02 37.5	
	comp=Z,14nm,0.9s						
ASAJ	Asahikawa	83.20	332	P	P	09 02 38.5	+0.6
	comp=Z,6.2nm,0.7s,baz=218,slow=14,SNR=4.8 comp=Z,6.2nm,0.7s						
BO02	Sierra Bellavi	84.91	128	P	P	09 02 48.8	+1.6
BO02				IAmb	IAmb	09 03 03.7	
	comp=Z,16nm,1.4s						
MT01	Popeta	85.11	127		P	09 02 48.9	+0.7
KSRS	Korea Array	85.13	319	P	P	09 02 47.5	-0.3
	comp=Z,2.4nm,0.8s,baz=149,slow=6.0,SNR=7.0 comp=Z,2.4nm,0.8s						
MT02	Curacav	85.53	126	P	P	09 02 49.6	-0.7
MT02				IAmb	IAmb	09 03 03.4	
	comp=Z,17nm,1.4s						
PETK	Petropavlovsk-	86.52	345	P	P	09 02 54.7	+0.3
	comp=Z,4.7nm,0.5s,baz=127,slow=6.3,SNR=6.8						

	comp=Z,4.7nm,0.5s						
CO02	Combarbal	86.78	125	P	P	09 02 57.2	+0.6
CO02				IAmb	IAmb	09 02 59.8	
	comp=Z,9.0nm,0.8s						
NJ2	Nanjing	87.01	310	*e*P	P	09 02 58.9	+1.6
NJ2				pmax	pmax		
	comp=Z,11nm,0.9s						
GWY	Greenwater Val	87.82	45	P	P	09 03 02.0	+0.7
USRK	Ussuriysk Ar.	87.94	326	P	P	09 03 02.2	+0.8
USRK	Ussuriysk Ar.	87.94	326	P	P	09 03 01.6	+0.1
	comp=Z,6.4nm,0.8s,baz=149,slow=4.1,SNR=8.7						
	comp=Z,6.4nm,0.8s						
NVAR	Mina Array Bea	88.35	42	P	P	09 03 03.0	-0.8
	comp=Z,1.3nm,0.7s,baz=221,slow=8.2,SNR=7.6						
NVAR				PKiKP	PKiKP	09 08 04.2	-0.8
	comp=Z,0.8nm,0.7s,baz=359,slow=1.9,SNR=3.6						
	comp=Z,1.3nm,0.7s						
TPH	Tonopah	88.74	43	P	P	09 03 06.1	+0.4
PINE	Pine Mountain	90.58	37	P	P	09 03 13.7	-0.5
PINE				IAmb	IAmb	09 03 34.0	
	comp=Z,11nm,1.2s						
U15A	North Rim	90.68	47		P	09 03 15.7	+0.8
U15A				IAmb	IAmb	09 03 31.2	
	comp=Z,5.0nm,0.8s						
TIA	Tai'an	90.74	313	P	P	09 03 16.8	+1.9
TIA				pmax	pmax		
	comp=Z,13nm,0.7s						
CN2	Changchun	90.92	323	*e*P	P	09 03 16.8	+1.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BNX	BinXian	91.29	325	⇑P	P	09 03 18.0	+0.9
BNX				pmax	pmax		
	comp=Z,9.0nm,0.8s						
M11K	Mekoryuk	91.52	6	P	P	09 03 17.0	-0.8
KLR	Kul'dur	91.81	329	P	P	09 03 20.3	+0.8
	comp=Z,3.8nm,0.7s,baz=127,slow=1.9,SNR=7.2						
	comp=Z,3.8nm,0.7s						
ILSW	Iliamna Southw	92.84	12	P	P	09 03 24.5	+0.3
HNS	HongShan	93.00	312	⇓P	P	09 03 26.9	+1.6
PZH	PanZhiHua	96.02	297	P	P	09 03 41.6	+2.0
HHC	Hu-ho-hao-te	97.01	314	*e*P	P	09 03 46.1	+2.4
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
TNCH	TengChong	97.76	294	⇓P	P	09 03 46.3	-1.3
TNCH				S	S	09 15 04.8	-7.2
TNCH				SS	SS	09 21 50.3	-3.2
LZH	Lanzhou	99.48	306	*e*P	Pdif	09 03 57.1	+2.1
LZH				pP	sP	09 04 05.9	+1.5
LZH				sP	pwP	09 04 13.3	+4.1
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
WMQ	Urumqi	113.99	308	*e*PKP	PKiKP	09 08 51.3	+0.5
WMQ				LR	LR		
	comp=Z,1µm,23.1s						
MKAR	Makanchi Array	118.54	310	PKP	PKPdf	09 08 58.8	-0.6
	comp=Z,0.6nm,0.5s,baz=186,slow=0.5,SNR=6.0						
KURBB	Kurchatov Arra	121.86	313	PKP	PKPdf	09 09 04.6	-1.0
	comp=Z,1.8nm,0.6s,baz=111,slow=1.9,SNR=15						
BVAR	Borovoye Array	127.18	315	PKP	PKiKP	09 09 16.2	-0.1
	comp=Z,2.7nm,0.6s,baz=64,slow=3.4,SNR=5.4						
ARCES	ARCESS Array B	139.28	348	PKhKP	PKPpre	09 09 31.2	
	comp=Z,2.2nm,0.8s,baz=350,slow=2.7,SNR=6.0						
KBZ	Khabaz	145.86	303	PKPbc	PKPab	09 09 51.6	+0.1
	comp=Z,7.2nm,0.8s,baz=331,slow=1.9,SNR=13						
FINES	FINESS Array B	145.88	340	PKPbc	PKPdf	09 09 49.9	0.0
	comp=Z,12nm,0.6s,baz=51,slow=3.5,SNR=53						
NB2	NORSAR Subarra	149.42	352	PKP	PKiKP	09 10 00.8	-0.6
	comp=Z,8.2nm,1.0s,baz=17,slow=4.3						
NOA	NORSAR Array B	149.42	352	PKPbc	PKPbc	09 09 59.9	-0.4
	comp=Z,2.9nm,0.7s,baz=14,slow=4.2,SNR=13						
HFS	Hagfors	149.93	349	PKPbc	PKiKP	09 10 02.0	-0.4
	comp=Z,6.1nm,0.7s,baz=76,slow=0.6,SNR=10.0						
HFS				PKPab	PKPab	09 10 07.0	-0.2
	comp=Z,4.1nm,0.6s,baz=57,slow=9.0,SNR=5.4						
AKASG	Malin Array Be	152.08	322	PKPbc	PKPbc	09 10 06.7	-0.1
	comp=Z,4.8nm,0.6s,baz=52,slow=2.6,SNR=29						
AKASG				PKPab	sPKPbc	09 10 16.8	+0.3
	comp=Z,4.2nm,0.6s,baz=51,slow=2.9,SNR=8.6						
MMAI	Mount Meron Ar	152.15	283	PKPbc	PKiKP	09 10 08.7	+0.7
	comp=Z,7.3nm,0.6s,baz=97,slow=3.9,SNR=12						
MMAI				PKPab	PKPab	09 10 17.8	+0.4
	comp=Z,3.8nm,0.6s,baz=253,slow=8.6,SNR=4.0						
BRTR	Keskin Array B	153.32	298	PKPbc	PKiKP	09 10 10.7	+0.4
	comp=Z,1.6nm,0.8s,baz=75,slow=1.6,SNR=5.5						
BRTR				PKPab	PKPab	09 10 22.6	+0.3
	comp=Z,3.2nm,0.8s,baz=114,slow=3.7,SNR=9.8						
CLL	Collm	158.29	342	*e*PKPab	PKPab	09 10 44.0	+1.2
GERES	GERESS Array B	160.28	338	PKPab	PKPab	09 10 51.7	0.0
	comp=Z,1.1nm,0.8s,baz=55,slow=5.2,SNR=3.9						

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*IDC **21** 08:51:02.2±10.0, 13°.82N×92°.02W, h0^{km}, mb3.7/2, mbtmp3.6/3, ML3.5/1, Error ellipse: s-maj=292.3km s-min=125.3km az=32.0*

*GCG **21** 08:51:08.9±1.6, 13°.94N×93°.28W, h35^{km}±999^{km}, MD4.7, ML3.8*

*MEX **21** 08:51:10.7±0.5, 14°.17N×93°.32W, h10^{km}±128^{km}, MD4.2*

ISC 21 08:51:08.2±1.3**, 14°.13N**±0°.09×**93°.30W**±0°.03**, h10^{km}, n37, σ2^{s}82**/49**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.27	52	*e*P	Pn	08 51 30.7	-1.3
THIG				*e*S	Sb	08 51 44.8	-3.8
THIG		1.27	52	*e*P	Pn	08 51 30.7	-1.3
THIG				IAML		08 51 49.6	
	comp=E,1µm,0.5s						
SMCA	Catarina	1.39	58	*i* P	Pn	08 51 32.7	-1.0
SMCA				IAML		08 51 58.3	
	comp=E,656nm,0.5s						
PATR	El Naranjo	1.43	46	*e*P	Pn	08 51 32.8	-1.5
PATR				*e*S	Sb	08 51 50.5	-2.9
PAVE	Pavencul	1.52	46	*e*P	Pn	08 51 34.3	-1.4
PAVE				*e*S	Sn	08 51 53.6	-2.0
PCIG		1.57	3	*e*P	Pn	08 51 34.5	-1.7
PCIG				*e*S	Sn	08 51 49.8	-6.8
RTAL	Retalhuleu	1.60	76	*e*P	Pn	08 51 35.7	-1.0
RTAL				*e*S	Sn	08 51 56.8	-0.7
STG8	El Palmar, Qui	1.91	80	*e*P	Pn	08 51 37.6	-3.5
STG0	El Palmar, Qui	1.92	81	*e*P	Pn	08 51 37.9	-3.3
HUEH	Huehuetenango	2.10	55	*e*P	Pn	08 51 43.8	+0.1
HUEH				*e*S	Sn	08 52 08.6	-1.5
HUEH	Huehuetenango	2.10	55	*i* P	Pn	08 51 44.2	+0.5
HUEH				IAML		08 52 29.4	
	comp=E,1µm,0.7s						
CCIG	Comitan	2.42	27	*e*P	Pn	08 51 49.2	+1.2
CCIG				*e*S	Sn	08 52 17.1	-0.7
CCIG	Comitan	2.42	27	*i* P	Pn	08 51 49.8	+1.8
CCIG				*i* S	Sn	08 52 21.3	+3.5
CCIG				IAML		08 52 24.3	
	comp=N,694nm,0.6s						
TGIG		2.64	4	*e*P	Pn	08 51 50.9	0.0
TGIG				*e*S	Sn	08 52 23.4	+0.3
TGIG		2.64	4	*i* P	Pn	08 51 51.6	+0.6
TGIG				*i* S	Sn	08 52 24.2	+1.0
TGIG				IAML		08 52 29.5	
	comp=N,375nm,0.6s						
FG8	Yepocapa, Chim	2.66	87	*i* P	Pn	08 51 45.6	-5.6
FG16	Alotenango, Sa	2.71	87	*i* P	Pn	08 51 46.6	-5.5
FG16				IAML		08 52 25.9	
	comp=N,1µm,0.5s						
HUIG	Huatulco	3.17	301	*e*P	Pn	08 51 58.2	+0.1
HUIG				*e*S	Sn	08 52 32.7	-3.4
PEIG	Puerto Escondi	4.16	297	*e*P	Pn	08 52 11.7	-0.1
PEIG				*e*S	Sn	08 52 51.7	-8.9
PETF	Flores	4.32	50	*e*S	Sn	08 53 07.0	+2.6
VHO	Vista Hermosa	4.42	312	*e*P	Pn	08 52 17.0	+1.4
VHO				*e*S	Sn	08 53 02.2	-5.0
YOIG	Yosondua	4.91	304	*e*P	Pn	08 52 22.2	-0.2
YOIG				*e*S	Sn	08 53 15.0	-4.5
PNIG	Pinotepa	5.18	296	*e*P	Pn	08 52 26.1	+0.3
PNIG				*e*S	Sn	08 53 15.2	-11
TXIG	Tlaxiaco	5.31	306	*e*P	Pn	08 52 29.5	+1.6
TXIG				*e*S	Sn	08 53 22.8	-6.5
TOIG	Toxpalan	5.36	318	*e*P	Pn	08 52 30.1	+1.7
TOIG				*e*S	Sn	08 53 29.3	-0.9
HLIG	Huajuapan de L	5.69	311	*e*P	Pn	08 52 36.5	+3.5
HLIG				*e*S	Sn	08 53 43.5	+5.0
FTIG	Fresnillo de T	5.98	310	*e*P	Pn	08 52 40.4	+3.4
FTIG				*e*S	Sn	08 53 36.9	-8.7
MGIG	Malinaltepec	6.00	302	*e*P	Pn	08 52 39.5	+2.3
MGIG				*e*S	Sn	08 53 40.0	-6.1
TLIG	Tlapa	6.11	305	*e*P	Pn	08 52 41.2	+2.4
CRIG	Cruz Grande	6.20	296	*e*P	Pn	08 52 39.1	-0.7
CRIG				*e*S	Sn	08 53 40.2	-11
PPM	Popocatepetl	7.09	315	*e*P	Pn	08 52 58.2	+5.7
MEIG	Mezcala	7.16	303	*e*P	Pn	08 52 55.8	+2.7
YAIG	Yautepec	7.26	311	*e*P	Pn	08 52 56.4	+1.8
ARIG	Puente Sto Nin	7.93	302	*e*P	Pn	08 53 06.5	+2.8
TXAR	Lajitas Array	17.92	329	P	P	08 55 23.5	+5.1
	baz=139,slow=12,SNR=3.4						
	comp=N,1.1nm,0.9s						
YKA	Yellowknife Ar	50.62	347	P	P	09 00 07.2	0.0
	comp=N,1.3nm,0.7s,baz=153,slow=7.0,SNR=8.1						
	comp=N,1.3nm,0.7s						
ILAR	Eielson Array	62.23	337	P	P	09 01 30.4	+0.5
	comp=N,0.3nm,0.7s,baz=107,slow=7.3,SNR=2.7						
	comp=N,0.3nm,0.7s						

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*IDC **21** 08:55:54.8±2.9, 30°.76S×177°.45W, h0^{km}, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=60.4km s-min=26.6km az=104.0*

ISC 21 08:55:54.9±2.5**, 30°.97S**±0°.08×**177°.0W**±0°.3**, h35^{km}, n6, σ2^{s}27**/8**, mb3.8**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.89	335	Pn	Pn	08 56 23.8	-0.9
	76nm,0.3s,baz=128,slow=20,SNR=5.5						
RAO				Sn	Sn	08 56 45.6	-1.7
	166nm,0.3s,baz=108,slow=20,SNR=5.2						
URZ	Urewera	8.75	212	Pn	Pn	08 57 56.2	-2.7
	0.2nm,0.3s,baz=23,slow=4.4,SNR=2.3						
URZ				Sn	Sn	08 59 35.7	-0.5
	0.8nm,0.3s,baz=24,slow=20,SNR=1.7						
STKA	Stephens Creek	35.20	258	P	P	09 02 49.2	+3.4
	0.7nm,0.3s,baz=105,slow=12,SNR=4.1						
	0.7nm,0.3s						
ASAR	Alice Springs	43.95	267	P	P	09 03 59.0	+0.2
	0.2nm,0.4s,baz=112,slow=8.0,SNR=4.7						
	0.2nm,0.4s						
WRA	Warramunga Arr	44.99	272	P	P	09 04 08.8	+1.7
	0.6nm,0.4s,baz=114,slow=8.0,SNR=10						
	0.6nm,0.4s						
FINES	FINESS Array B	145.97	340	PKPbc	PKiKP	09 15 33.8	+0.3
	0.7nm,0.4s,baz=42,slow=3.9,SNR=12						

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*SNET **21** 08:56:15.8±0.8, 13°.90N×90°.56W, h81^{km}±6^{km}, ML3.3*

*GCG **21** 08:56:15.8±0.8, 13°.93N×90°.55W, h81^{km}±4^{km}, MD4.2, ML4.0, MW3.3*

*CATAC **21** 08:56:15.6±0.5, 14°N±2°×9°1W±°, h29^{km}±3^{km}, M3.8/27, mb3.8/1, MLv3.8/27, Error ellipse: s-maj=5.8km s-min=2.4km az=28.8, confirmed*

ISC 21 08:56:17.2±1.3**, 13°.81N**±0°.07×**90°.56W**±0°.04**, h80^{km}**±8^{km}**, n76, σ1^{s}35**/93**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESSJ	San Jos, E	0.26	166	*e*P	Pn	08 56 28.2	-1.1
FG8	Yepocapa, Chim	0.44	0	*i* P	Pn	08 56 31.1	+0.4
FG8				*e*S	Sn	08 56 43.2	+2.6
FG16	Alotenango, Sa	0.46	6	*i* P	Pn	08 56 30.9	0.0
FG16				*i* S	Sn	08 56 43.3	+2.4
FG16				IAML		08 56 46.6	
	comp=E,19µm,0.3s						
ESSG	Sabana Grande	0.62	336	*i* P	Pn	08 56 29.9	-2.3
ESSG				*i* S	Sn	08 56 41.1	-2.2
ESSG				IAML		08 56 43.2	
	comp=N,3µm,0.1s						
NUBE	Las Nubes	0.77	83	*e*P	Pn	08 56 32.2	-1.6
NUBE				*e*S	Sn	08 56 45.2	-0.8
NUBE				IAML		08 56 48.7	
	comp=Z,415nm,0.2s						
NUBE	Las Nubes	0.77	83	*e*P	Pn	08 56 32.3	-1.5
NUBE				*e*S	Sn	08 56 45.5	-0.5
NUBE	Las Nubes	0.77	83	P	Pn	08 56 32.5	-1.2
LOAL	Lomas de Alarc	0.78	76	P	Pn	08 56 32.6	-1.3
LOAL	Lomas de Alarc	0.78	76	S	Sn	08 56 46.5	+0.3
RTR	El Retiro	0.90	85	*e*P	Pn	08 56 34.4	-0.8
RTR				IAML		08 56 56.2	
	comp=Z,371nm,0.3s						
CEVE	Cerro Verde	0.91	89	*e*P	Pn	08 56 34.3	-1.2
CEVE				*e*S	Sn	08 56 49.4	+0.2
CEVE	Cerro Verde	0.91	89	P	Pn	08 56 34.4	-1.1
SBLS	San Blas	0.91	88	*e*P	Pn	08 56 34.4	-1.1
SBLS				*e*S	Sn	08 56 49.6	+0.5
SBLS				IAML		08 56 51.4	
	comp=Z,314nm,0.2s						
SNJE	San Jose	0.93	87	*e*P	Pn	08 56 34.4	-1.3
SNJE				*e*P		08 56 34.5	
STG0	El Palmar, Qui	0.97	309	*e*P	Pn	08 56 38.2	+2.1
STG0				*e*S	Sn	08 56 56.2	+6.0
STG0				IAML		08 57 01.5	
	comp=E,9µm,0.2s						
STG8	El Palmar, Qui	0.99	310	*i* P	Pn	08 56 38.8	+2.4
STG8				*e*S	Sn	08 56 57.7	+6.9
STG8				IAML		08 56 59.0	
	comp=N,4µm,0.2s						
UNIC	Universidad Ca	1.00	80	S	Sn	08 56 50.3	-0.4
UNIC	Universidad Ca	1.00	80	P	Pn	08 56 34.8	-1.5
JAYA	Jayaque - finc	1.09	98	*e*P	Pn	08 56 36.4	-1.2
JAYA				*e*S	Sn	08 56 52.0	-0.8
JAYA				IAML		08 56 56.3	
	comp=Z,2µm,0.3s						
JAYA	Jayaque - finc	1.09	98	*i* P	Pn	08 56 36.3	-1.2
JAYA				*e*S	Sn	08 56 52.8	-0.1
JAYA	Jayaque - finc	1.09	98	P	Pn	08 56 36.3	-1.2
PMON	Piamonte	1.22	95	*e*P	Pn	08 56 38.0	-1.0
PMON	Piamonte	1.22	95	P	Pn	08 56 37.9	-1.2
PMON	Piamonte	1.22	95	S	Sn	08 56 55.5	+0.1
ITCA	Escuela Especi	1.26	96	P	Pn	08 56 38.1	-1.4
ITCA	Escuela Especi	1.26	96	S	Sn	08 56 56.7	+0.4
UEES	Universidad Ev	1.29	94	S	Sn	08 56 57.9	+0.8
UEES	Universidad Ev	1.29	94	P	Pn	08 56 39.2	-0.8
MTO3	Montecristo	1.30	63	*i* P	Pn	08 56 38.5	-1.8
MTO3	Montecristo	1.30	63	*i* P	Pn	08 56 38.6	-1.6
MTO3	Montecristo	1.30	63	P	Pn	08 56 39.8	-0.5
MTO3	Montecristo	1.30	63	S	Sn	08 56 57.9	+0.3
RTAL	Retalhuleu	1.30	303	*e*P	Pn	08 56 38.0	-2.0
RTAL				*e*S	Sn	08 56 56.0	-1.3
RTAL	Retalhuleu	1.30	303	P	Pn	08 56 38.3	-1.8
SEMO	Seminario San	1.31	95	S	Sn	08 56 58.2	+0.8
SEMO	Seminario San	1.31	95	P	Pn	08 56 39.6	-0.5
PANCS	Alcalda de	1.36	98	P	Pn	08 56 40.2	-0.6
PANCS	Alcalda de	1.36	98	S	Sn	08 56 59.2	+0.6
LOMA	Loma Larga	1.36	97	P	Pn	08 56 39.9	-1.0
LOMA	Loma Larga	1.36	97	S	Sn	08 56 59.7	+0.9
ESQI	Esquipulas	1.40	58	*i* P	Pn	08 56 40.1	-1.2
ESQI	Esquipulas	1.40	58	P	Pn	08 56 41.0	-0.4
ESQI	Esquipulas	1.40	58	S	Sn	08 57 00.2	+0.7
LFRS	El Faro	1.47	97	*e*P	Pn	08 56 41.6	-0.7
PAVA	Las Pavas	1.58	93	*e*P	Pn	08 56 42.8	-1.0
PAVA	Las Pavas	1.58	93	P	Pn	08 56 42.7	-1.0
PAVA	Las Pavas	1.58	93	S	Sn	08 57 05.0	+1.2
UESV	Universidad de	1.74	96	P	Pn	08 56 45.1	-0.6
UESV	Universidad de	1.74	96	S	Sn	08 57 08.2	+0.9
HUEH	Huehuetenango	1.75	329	*i* P	Pn	08 56 44.4	-1.7
HUEH				IAML		08 57 18.9	
	comp=N,452nm,0.5s						
HUEH	Huehuetenango	1.75	329	S	Sn	08 57 08.3	+0.4
HUEH	Huehuetenango	1.75	329	P	Pn	08 56 45.6	-0.4
SMCA	Catarina	1.79	305	*i* P	Pn	08 56 44.6	-1.8
SMCA				*i* S	Sn	08 57 06.8	-1.8
SMCA				IAML		08 57 10.3	
	comp=N,550nm,0.2s						
PQSS	Presa 15 de Se	1.96	95	*e*P	Pn	08 56 47.5	-1.0
PQSS	Presa 15 de Se	1.96	95	P	Pn	08 56 47.7	-0.9
PQSS	Presa 15 de Se	1.96	95	S	Sn	08 57 14.0	+1.6
THIG		1.98	304	*i* P	Pn	08 56 47.6	-1.2
THIG				IAML		08 57 15.3	
	comp=E,1µm,0.4s						
PACA	Pacayal	2.21	99	P	Pn	08 56 51.6	-0.4
PACA	Pacayal	2.21	99	S	Sn	08 57 20.1	+1.5
LCND	La Caada	2.65	101	*e*P	Pn	08 56 57.3	-0.6
LCND	La Caada	2.65	101	P	Pn	08 56 57.1	-0.7
LCND	La Caada	2.65	101	S	Sn	08 57 30.3	+1.3
CNCH	Conchagua	2.71	101	P	Pn	08 56 58.0	-0.8
CNCH	Conchagua	2.71	101	S	Sn	08 57 32.1	+1.4
TGUH	Tegucigalpa,Un	3.21	85	P	Pn	08 57 05.4	-0.1
TGUH				S	Sn	08 57 44.8	+2.1
PKGN	Cerro Pekin	3.67	108	P	Pn	08 57 12.1	+0.3
PKGN				S	Sn	08 57 54.8	+0.9
PLRN	Geotermica Pol	3.89	108	P	Pn	08 57 14.3	-0.4
PLRN				S	Sn	08 58 00.4	+1.1
CNGA	Al SSO del Vol	3.98	109	P	Pn	08 57 15.3	-0.7
CNGA				S	Sn	08 58 01.9	+0.3
CNGN	Cerro Negro	3.98	109	P	Pn	08 57 16.0	0.0
CNGN	Cerro Negro	3.98	109	S	Sn	08 58 02.0	+0.4
MOMN	Momotombo	4.16	109	P	Pn	08 57 17.9	-0.5
MOMN				S	Sn	08 58 06.4	+0.4
COPN	Copaltepe	4.20	112	P	Pn	08 57 18.4	-0.5
SAPS	Ciudad Sandino	4.37	111	P	Pn	08 57 20.5	-0.7
SAPS	Ciudad Sandino	4.37	111	S	Sn	08 58 11.5	+0.5
BOAB	BOACO BROADBAN	4.96	105	P	Pn	08 57 29.4	+0.1
BOAB	BOACO BROADBAN	4.96	105	S	Sn	08 58 27.4	+2.0

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*ASRS **21** 08:57:51.0±1.0, 53°.60N×87°.95E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 21 08:57:54.9±3.0**, 53°.58N×87°.87E, h0^{km}, mbtmp3.1**/2**, ML2.6**/2**, Error ellipse: s-maj=23.7km s-min=16.0km az=66.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.85	283	I	I	09 09 35.0	
	0.2nm,1.2s,baz=97,slow=326,SNR=4.4						
ZALV	Zalesovo Beam	1.85	283	Pn	Pn	08 58 27.7	-0.1
	1.5nm,0.3s,baz=97,slow=16,SNR=9.2						
ZALV				Lg	Lg	08 58 53.7	
	5.4nm,0.3s,baz=101,slow=24,SNR=17						
KURBB	Kurchatov Arra	6.47	247	Pn	Pn	08 59 32.3	+1.0
	0.1nm,0.3s,baz=61,slow=13,SNR=4.3						
KURBB				Sn	Sn	09 00 44.4	-1.3
	baz=66,slow=25,SNR=2.0						
KURBB				Lg	Lg	09 01 20.5	
	baz=61,slow=34,SNR=2.6						
	1.0nm,0.5s						
MKAR	Makanchi Array	7.67	210	Pn	Pn	08 59 48.9	+1.1
	0.1nm,0.3s,baz=27,slow=14,SNR=2.4						
MKAR				Sn	Sn	09 01 15.2	-0.3
	0.1nm,0.3s,baz=22,slow=29,SNR=2.1						
MKAR				Lg	Lg	09 01 56.9	
	0.1nm,0.3s,baz=30,slow=32,SNR=3.7						
	0.6nm,0.5s						

IDC 21 08:58:30.4±2.8**, 30°.36S×177°.47W, h0^{km}, mb3.7**/2**, mbtmp3.7**/2**, Error ellipse: s-maj=60.0km s-min=28.2km az=95.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.17	340	Pn	Pg	08 58 52.9	0.0
	30nm,0.3s,baz=114,slow=20,SNR=1.6						
RAO				Sn	Sn	08 59 13.6	+2.9
	62nm,0.3s,baz=198,slow=20,SNR=2.1						
URZ	Urewera	9.06	208	Sn	Sn	09 02 09.3	-16
	0.3nm,0.3s,baz=308,slow=22,SNR=1.8						
ASAR	Alice Springs	43.57	267	P	P	09 06 36.5	+0.1
	0.5nm,0.7s,baz=111,slow=8.1,SNR=5.0						
	0.5nm,0.7s						
WRA	Warramunga Arr	44.55	272	P	P	09 06 44.1	-0.2
	1.2nm,0.6s,baz=113,slow=8.2,SNR=6.8						
	1.2nm,0.6s						
FINES	FINESS Array B	145.26	340	PKPbc	PKPbc	09 18 08.5	-0.6
	1.5nm,0.5s,baz=41,slow=4.4,SNR=11						

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*JMA **21** 08:59:23.7±0.4, 44°N±2°×14°8E±°, h0^{km}, MV3.5/16, SE OFF ETOROFU*

*SKHL **21** 08:59:26.4±0.0, 44°.60N×148°.10E, h45^{km}±5^{km}, mb4.3/2*

ISC 21 08:59:21.9±3.5**, 44°.53N**±0°.09×**148°.5E**±0°.2**, h50^{km}, n14, σ1^{s}88**/25**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	0.83	328	*e*P	Pn	08 59 38.0	+0.6
KUR				AMB	AMB	08 59 38.1	
	180nm,0.3s						
KUR				*e*S	Sn	08 59 46.7	-2.0
KUR				A	A	08 59 50.1	
	500nm,0.4s						
KUR				A	A	08 59 50.1	
	600nm,0.4s						
SHO	Shikotan	1.37	242	*e*P	Pn	08 59 46.2	+1.6
SHO				*e*S	Pn	08 59 46.2	+1.6
YUK	Yuzh-Kuril'sk	1.96	256	*e*S	Sn	09 00 12.8	-3.2
YUK				*e*P	Pn	08 59 53.6	+0.9
YUK				AMB	AMB	08 59 56.1	
	70nm,0.2s						
YUK				A	A	09 00 17.6	
	110nm,0.4s						
YUK				A	A	09 00 17.6	
	90nm,0.4s						
NEM2	Nemuro 2	2.31	241	*e*P	Pn	08 59 57.8	+0.4
NEM2				*e*S	Sn	09 00 22.7	-1.9
NMR	Nemuro--Hokkai	2.31	241	*e*S	Sn	09 00 23.0	-1.8
NMR				*e*P	Pn	08 59 57.8	+0.3
JRA	Rausu	2.50	257	*e*P	Pn	09 00 02.1	+2.1
JKHN	Kushirohamanak	2.82	240	*e*P	Pn	09 00 05.3	+0.9
JKHN				*e*S	Sn	09 00 36.5	-0.6
JNK	Nakash	2.88	252	*e*P	Pn	09 00 07.3	+2.0
JNK				*e*S	Sn	09 00 38.5	-0.3
AKK	Akkeshi	3.05	241	*e*P	Pn	09 00 08.5	+0.9
AKK				*e*S	Sn	09 00 41.4	-1.5
JAK	Akkeshi	3.15	242	*e*P	Pn	09 00 09.9	+0.8
JAK				*e*S	Sn	09 00 43.6	-1.8
JAR	Ashorobuto	3.63	252	*e*P	Pn	09 00 18.7	+3.1
JAR				*e*S	Sn	09 00 58.3	+1.0
JOB	Onbets	3.75	246	*e*P	Pn	09 00 19.4	+2.1
JOB				*e*S	Sn	09 00 59.8	-0.3
JNBK	Urakawa-nobuka	4.75	244	*e*P	Pn	09 00 32.7	+1.7
JANG	Nango	6.63	234	*e*S	Sn	09 02 06.9	-4.0

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*IDC **21** 09:02:54.6±3.6, 54°.33N×87°.24E, h0^{km}, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=32.2km s-min=20.8km az=49.0*

ASRS 21 09:02:55.0±0.5**, 54°.33N×86°.91E, h0^{km}, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.29	254	I	I	09 11 00.0	
	baz=74,slow=324,SNR=7.1						
ZALV	Zalesovo Beam	1.29	254	Pg	Pn	09 03 20.8	+0.5
	1.2nm,0.3s,baz=76,slow=17,SNR=6.8						
ZALV				Lg	Lg	09 03 41.2	
	1.2nm,0.3s,baz=71,slow=27,SNR=5.6						
KURBB	Kurchatov Arra	6.32	237	Pn	Pn	09 04 32.9	+3.5
	0.1nm,0.3s,baz=57,slow=14,SNR=2.8						
	0.3nm,0.3s						
MKAR	Makanchi Array	8.10	203	Pn	Pn	09 04 54.8	+1.0
	0.1nm,0.3s,baz=26,slow=13,SNR=2.1						
	0.6nm,0.9s						

IDC 21 09:04:40.2±3.3**, 29°.35S×177°.62W, h0^{km}, mb3.5**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=94.0km s-min=42.1km az=37.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.51	266	P	P	09 12 45.5	-0.2
	0.2nm,0.6s,baz=102,slow=7.1,SNR=5.4						
	0.2nm,0.6s						
WRA	Warramunga Arr	44.40	271	P	P	09 12 52.9	0.0
	0.4nm,0.7s,baz=110,slow=8.3,SNR=5.3						
	0.4nm,0.7s						
QSPA	South Pole Qui	60.76	180	P	P	09 14 53.7	0.0
	1.6nm,0.9s,baz=11,slow=5.2,SNR=3.7						
	1.6nm,0.9s						
FINES	FINESS Array B	144.27	341	PKP	PKPdf	09 24 16.7	-0.8
	0.5nm,0.5s,baz=63,slow=5.2,SNR=7.3						

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*ASRS **21** 09:11:07.0±1.0, 53°.56N×87°.69E, h0^{km}, M3.0, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 21 09:11:10.7±2.8**, 53°.49N×87°.69E, h0^{km}, mbtmp3.0**/2**, ML2.8**/2**, Error ellipse: s-maj=25.2km s-min=14.9km az=66.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.77	286	I	I	09 22 10.0	

	0.6nm,1.1s,baz=101,slow=317,SNR=29						
ZALV	Zalesovo Beam	1.77	286	Pn	Pn	09 11 42.8	+0.2
	1.5nm,0.3s,baz=102,slow=13,SNR=6.7						
ZALV				Lg	Lg	09 12 06.0	
	2.2nm,0.3s,baz=106,slow=25,SNR=11						
KURBB	Kurchatov Arra	6.34	247	Pn	Pn	09 12 46.6	+1.3
	0.1nm,0.3s,baz=62,slow=14,SNR=5.6						
KURBB				Lg	Lg	09 14 29.9	
	0.1nm,0.3s,baz=62,slow=32,SNR=7.0						
	0.7nm,0.5s						
MKAR	Makanchi Array	7.54	210	Pn	Pn	09 13 02.6	+0.7
	0.3nm,0.3s,baz=29,slow=14,SNR=9.0						
MKAR				Sn	Sn	09 14 28.5	+0.4
	0.1nm,0.3s,baz=24,slow=21,SNR=4.9						
MKAR				Lg	Lg	09 15 09.8	
	0.1nm,0.3s,baz=31,slow=31,SNR=5.9						
	0.5nm,0.4s						

WEL 21 09:11:35.1±1.6, 34°S±10°×18°0E±1°5, h12km, M4.2/10, mB4.7/4, ML4.5/15, MLv4.3/10, Mw(mB)3.9/4, Error ellipse: s-maj=19.7km s-min=12.6km az=71.2, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	4.16	194	P	Pn	09 12 38.4	-0.1
HAZ	Te Kaha	4.26	201	P	Pn	09 12 41.2	+1.5
PKGZ	Pakihiroa	4.28	197	P	Pn	09 12 40.6	+0.5
KUZ	Kuaotunu	4.38	226	P	Pn	09 12 46.3	+4.8
PUZ	Puketiti	4.44	195	P	Pn	09 12 41.6	-0.6
RUGZ	Raukumara Rang	4.48	201	P	Pn	09 12 44.8	+1.9
TWGZ	Tauwhareparae	4.60	197	P	Pn	09 12 44.5	0.0
WIAZ	Waiheke Island	4.78	230	P	Pb	09 12 54.2	-4.5
CNGZ	Carnagh Statio	4.84	194	P	Pn	09 12 47.1	-0.8
MWZ	Matawai	4.87	200	P	Pn	09 12 48.3	+0.1
TKGZ	Te Karaka	4.88	197	P	Pn	09 12 47.5	-0.9
WCZ	Waipu Caves	4.88	242	P	Pn	09 12 47.8	-0.5
URZ	Urewera	4.93	204	P	Pn	09 12 49.7	+0.7
URZ				S	Sn	09 13 44.4	-1.6
RAGZ	Rawiri	5.05	201	P	Pn	09 12 51.4	+0.6
RIGZ	Rimuhau	5.16	197	P	Pn	09 12 51.8	-0.3
RIGZ				S	Sn	09 13 54.3	+2.8
OUZ	Omahuta	5.22	252	P	Pn	09 12 51.4	-1.5
OUZ				S	Sn	09 13 51.5	-1.5
SNGZ	Shannon Statio	5.34	200	P	Pn	09 12 53.8	-0.8
RAHZ	Arahi	5.54	201	P	Pn	09 12 57.6	+0.3
MHGZ	Mahia Peninsul	5.55	194	P	Pn	09 12 53.7	-3.8
TLZ	Tolley Road	5.64	215	P	Pn	09 13 01.5	+2.7
BKZ	Black Stump Fm	5.96	205	P	Pn	09 13 02.0	-1.1
HIZ	Hauiti	6.12	218	P	Pn	09 13 08.1	+2.6
OTVZ	Oturere	6.27	210	P	Pn	09 13 08.7	+1.2
VRZ	Vera Road	6.64	215	P	Pn	09 13 14.2	+1.7

GCG 21 09:11:55.3±0.3, 13°.29N×90°.46W, h33km±10km, MD4.0, ML3.1, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NUBE	Las Nubes	0.90	48	*i* P	Pn	09 12 11.9	+0.2
NUBE				*i* S	Sb	09 12 25.1	+0.8
JAYA	Jayaque - finc	1.05	70	*i* P	Pn	09 12 13.5	-0.3
JAYA				*e*S	Sn	09 12 27.7	+0.3
STG0	El Palmar, Qui	1.41	323	*e*P	Pb	09 12 24.2	+2.9
STG0				*e*S	Sb	09 12 46.8	+7.8
STG0				IAML		09 12 56.7	
	comp=E,212nm,0.5s						
STG8	El Palmar, Qui	1.44	323	*i* P	Pb	09 12 25.4	+3.7
STG8				IAML		09 12 57.8	
	comp=N,124nm,0.2s						

IDC 21 09:13:55.9±1.8, 33°.67S×180°.00E, h0km, mb4.5/4, mbtmp4.5/5, ML4.0/1, Error ellipse: s-maj=47.9km s-min=27.2km az=53.0

NEIC 21 09:13:58.6±0.9, 33°.69S±0°.10×180°.0W±0°.2, h10km±1km, mb4.6/9, Error ellipse: s-maj=24.3km s-min=14.5km az=293.0

WEL 21 09:14:00.2±1.6, 34°S±11°×18°0E±1°0, h12km, M4.8/10, ML4.8/13, MLv4.8/10, Error ellipse: s-maj=15.7km s-min=9.9km az=38.4, confirmed

ISC 21 09:14:01.7±0.9, 33°.69S±0°.08×179°.69E±0°.09, h35km, n43, σ1s.62/40, mb4.5/9, 3D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.03	196	Pn	Pn	09 15 01.4	+0.4
WMGZ	Waiomatatini S	4.25	194	P	Pn	09 15 03.8	-0.2
WMGZ				S	Sn	09 15 56.0	+3.6
HAZ	Te Kaha	4.35	200	P	Pn	09 15 03.7	-1.6
PKGZ	Pakihiroa	4.37	197	P	Pn	09 15 03.6	-2.0
KUZ	Kuaotunu	4.46	226	P	Pn	09 15 12.7	+5.9
PUZ	Puketiti	4.53	195	P	Pn	09 15 06.8	-1.0
RUGZ	Raukumara Rang	4.57	200	P	Pn	09 15 08.6	+0.1
TWGZ	Tauwhareparae	4.69	197	P	Pn	09 15 09.6	-0.5
RAO	Raoul Island	4.87	25	Pn	Pn	09 15 10.2	-2.3
OPRZ	Ohinepanea	4.87	211	P	Pn	09 15 13.5	+1.1
TGRZ	Tauranga	4.91	214	P	Pn	09 15 14.7	+1.8
CNGZ	Carnagh Statio	4.94	194	P	Pn	09 15 11.9	-1.5
WCZ	Waipu Caves	4.94	241	P	Pn	09 15 12.7	-0.7
MWZ	Matawai	4.96	200	P	Pn	09 15 13.5	-0.2
TKGZ	Te Karaka	4.97	197	P	Pn	09 15 12.6	-1.3
EDRZ	Edgecumbe	5.02	208	P	Pn	09 15 15.1	+0.5
URZ	Urewera	5.02	204	Pn	Pn	09 15 12.9	-1.7
	5.0nm,0.3s,baz=267,slow=2.6,SNR=7.5						
URZ				Sn	Sn	09 16 07.0	-4.3
	baz=93,slow=13						
	45nm,0.6s						
URZ	Urewera	5.02	204	P	Pn	09 15 13.3	-1.2
URZ				S	Sn	09 16 09.5	-1.8
OUZ	Omahuta	5.26	251	P	Pn	09 15 16.1	-1.8
OUZ				S	Sn	09 16 16.0	-1.3
BBOO	Buckleboo	36.30	259	P	P	09 21 02.6	+0.6
AS31	Alice Springs	41.11	272		P	09 21 44.6	+2.1
ASAR	Alice Springs	41.11	272		P	09 21 44.2	+1.7
ASAR	Alice Springs	41.11	272	P	P	09 21 43.7	+1.2
	7.1nm,0.9s,baz=113,slow=7.2,SNR=27						
	7.1nm,0.9s						
WR8	Warramunga Arr	42.27	277		P	09 21 53.4	+1.4
WR8				IAmb	IAmb	09 22 02.1	
	comp=Z,13nm,1.1s						
WRA	Warramunga Arr	42.41	277		P	09 21 53.7	+0.6
WRA	Warramunga Arr	42.41	277	P	P	09 21 54.5	+1.4
	comp=Z,5.9nm,0.8s,baz=116,slow=8.2,SNR=22						
	comp=Z,5.9nm,0.8s						
WB0	Warramunga Arr	42.44	277	P	P	09 21 55.2	+1.8
WB0				IAmb	IAmb	09 21 57.1	
	comp=Z,18nm,1.1s						
KNRA	Kununurra	49.12	278	P	P	09 22 48.3	+2.1
FITZ	Fitzroy Crossi	50.51	274		P	09 22 58.7	+2.1
FITZ				IAmb	IAmb	09 23 05.2	
	comp=Z,5.4nm,1.2s						
QSPA	South Pole Qui	56.43	180		P	09 23 40.5	+0.8
QSPA				IAmb	IAmb	09 23 47.8	
	comp=Z,13nm,1.0s						
QSPA	South Pole Qui	56.43	180	P	P	09 23 40.2	+0.6
	comp=Z,4.6nm,0.6s,baz=6.8,slow=2.6,SNR=21						
	comp=Z,4.6nm,0.6s						
SNAA	Sanae	74.92	179	⇓P	P	09 25 38.0	-0.6
	comp=Z,102nm,1.0s						
SNAA	Sanae	74.92	179	P	P	09 25 38.2	-0.5
SNAA				IAmb	IAmb	09 25 45.0	
	comp=Z,10nm,1.2s						
SNAA	Sanae	74.92	179	P	P	09 25 37.2	-1.5
	comp=Z,3.3nm,1.1s,baz=299,slow=2.8,SNR=4.4						
	comp=Z,3.3nm,1.1s						
VNA3	Neumayer Olymp	75.15	177	⇓P	P	09 25 39.4	-0.6
	comp=Z,8.1nm,0.8s						
VNA2	Neumayer--Watz	75.56	178	⇓P	P	09 25 41.6	-0.7
	comp=Z,5.3nm,0.8s,baz=178,slow=4.7						
H03S2	Juan Fernandez	80.27	124	T	T	10 54 20.6	
	baz=234,slow=74,SNR=9.9						
H03S1	Juan Fernandez	80.28	124	T	T	10 54 21.6	
	baz=234,slow=74,SNR=8.7						
H03S3	Juan Fernandez	80.29	124	T	T	10 54 19.5	
	baz=234,slow=74,SNR=9.5						
H03N3	Juan Fernandez	80.48	124	T	T	10 54 32.8	
	baz=239,slow=72,SNR=36						
H03N2	Juan Fernandez	80.48	124	T	T	10 54 31.5	
	baz=239,slow=72,SNR=25						
H03N1	Juan Fernandez	80.50	124	T	T	10 54 32.0	
	baz=239,slow=72,SNR=33						
FINES	FINESS Array B	147.47	337	PKPbc	PKPbc	09 33 40.6	-0.5
	comp=Z,1.3nm,0.9s,baz=38,slow=3.4,SNR=5.7						

IDC 21 09:17:23.4±5.6, 30°.14S×177°.66W, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=215.3km s-min=52.9km az=150.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	34.82	257	P	P	09 24 16.9	+0.8
	0.5nm,0.3s,baz=120,slow=8.5,SNR=4.6						
	0.5nm,0.3s						
ASAR	Alice Springs	43.41	267	P	P	09 25 27.4	-0.8
	0.4nm,0.7s,baz=104,slow=7.3,SNR=5.4						
	0.4nm,0.7s						
WRA	Warramunga Arr	44.38	272	P	P	09 25 35.3	-0.6
	0.5nm,0.3s,baz=111,slow=8.1,SNR=9.4						
	0.5nm,0.3s						
FINES	FINESS Array B	145.00	340	PKPbc	PKPbc	09 37 00.8	-0.4
	0.9nm,0.6s,baz=48,slow=2.8,SNR=5.7						

IDC 21 09:25:46.7±9.0, 30°.43S×177°.54W, h0km, mb3.4/2, mbtmp3.4/2, Error ellipse: s-maj=388.2km s-min=58.3km az=155.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.51	267	P	P	09 33 51.8	-0.4
	0.3nm,0.6s,baz=115,slow=8.6,SNR=4.3						
	0.3nm,0.6s						
WRA	Warramunga Arr	44.50	272	P	P	09 34 00.2	+0.1
	0.6nm,0.7s,baz=112,slow=7.6,SNR=4.9						
	0.6nm,0.7s						
FINES	FINESS Array B	145.31	340	PKPbc	PKPbc	09 45 24.6	-0.9
	0.4nm,0.4s,baz=57,slow=5.0,SNR=7.5						

IDC 21 09:28:21.9±3.3, 6°.65S×145°.73E, h126km±30km, mb3.6/4, mbtmp3.8/6, Error ellipse: s-maj=43.8km s-min=29.0km az=57.0

ISC 21 09:28:18.9±1.9, 6°.5S±0°.2×145°.7E±0°.2, h95km, n7, σ1s.56/8, mb3.7/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.28	153	P	Pn	09 29 09.5	+1.1
	21nm,0.3s,baz=288,slow=16,SNR=6.0						
PMG				S	Sn	09 29 46.7	+0.2
	86nm,0.3s,baz=139,slow=19,SNR=7.8						
WRA	Warramunga Arr	17.32	218	P	Pn	09 32 16.7	+1.8
	0.6nm,0.9s,baz=39,slow=12,SNR=4.7						
ASAR	Alice Springs	20.49	212	P	P	09 32 47.8	-1.6
	0.3nm,0.3s,baz=46,slow=9.0,SNR=6.8						
FITZ	Fitzroy Crossi	22.68	238	P	P	09 33 12.5	-0.2
	3.2nm,0.9s,baz=66,slow=12,SNR=1.1						
	3.2nm,0.9s						
STKA	Stephens Creek	25.56	188	P	P	09 33 38.3	-0.7
	0.8nm,0.5s,baz=12,slow=12,SNR=6.2						
	0.8nm,0.5s						
CMAR	Chiang Mai Arr	52.29	299	P	P	09 37 22.2	+1.0
	1.1nm,0.3s,baz=108,slow=7.1,SNR=4.4						
	1.1nm,0.3s						
QSPA	South Pole Qui	83.50	180	P	P	09 40 34.3	-1.8
	0.5nm,0.4s,baz=67,slow=7.7,SNR=1.9						
	0.5nm,0.4s						

NOU 21 09:28:48.3, 38°.64S×175°.75E, h175km, MLv3.6/14, North Island, New Zealand

WEL 21 09:28:51.1±1.1, 39°S±8°×17°6E±°, h154km±7km, M3.0/49, ML2.4/16, MLv3.0/49, Error ellipse: s-maj=11.0km s-min=8.7km az=151.7, confirmed

ISC 21 09:28:44.4±1.2, 38°.53S±0°.04×175°.76E±0°.05, h202km±7km, n141, σ2s.20/150, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUTZ	Kaahu Road	0.07	51	P	Pn	09 29 12.6	+1.7
WATZ	Wairara	0.18	186	P	Pn	09 29 12.7	+1.8
TLZ	Tolley Road	0.27	320	P	Pn	09 29 12.9	+1.8
TLZ				S	S	09 29 30.6	-1.2
WPRZ	Whakapapatarin	0.32	88	P	Pn	09 29 12.8	+1.6
RATZ	Rangitukua	0.33	178	P	Pn	09 29 13.0	+1.7
HSRZ	Hossack Road	0.44	60	P	Pn	09 29 13.3	+1.8
KATZ	Kakaramea	0.44	186	P	Pn	09 29 13.6	+2.0
RITZ	Rihia Road	0.45	170	P	Pn	09 29 13.7	+2.2
ALRZ	Allen Road	0.46	94	P	Pn	09 29 13.2	+1.7
KRVZ	Karewarewa	0.57	189	P	Pn	09 29 14.1	+2.0
NTVZ	North Tongarir	0.57	186	P	Pn	09 29 14.2	+2.1
TMVZ	Te Maari	0.58	184	P	Pn	09 29 14.4	+2.3
TMVZ				S	S	09 29 32.4	-1.5
TWVZ	Taurewa	0.59	205	P	Pn	09 29 14.1	+1.9
WTVZ	West Tongariro	0.60	192	P	Pn	09 29 14.3	+2.1
MRHZ	Matea Rd	0.60	120	P	Pn	09 29 13.7	+1.6
MRHZ				S	S	09 29 31.2	-2.6
ETVZ	East Tongariro	0.60	183	P	Pn	09 29 14.3	+2.0
NNVZ	North Ngauruho	0.61	190	P	Pn	09 29 14.3	+2.0
OTVZ	Oturere	0.63	186	P	Pn	09 29 14.5	+2.0
NGZ	Ngauruhoe	0.65	191	P	Pn	09 29 14.5	+2.0
SNVZ	South Ngauruho	0.66	188	P	Pn	09 29 14.6	+2.1
COVZ	Chateau Observ	0.69	194	P	Pn	09 29 14.7	+2.1
HIZ	Hauiti	0.71	271	P	Pn	09 29 14.6	+2.0
HIZ	Hauiti	0.71	271	P	Pn	09 29 14.6	+2.0
FWVZ	Far West T-bar	0.74	192	P	Pn	09 29 15.0	+1.9
TUVZ	Tukino	0.74	186	P	Pn	09 29 15.1	+2.2
TUVZ				S	S	09 29 33.1	-2.1
MAVZ	Matarangi	0.75	192	P	Pn	09 29 15.3	+2.1
WHVZ	Whangaehu Hut	0.76	190	P	Pn	09 29 15.2	+2.1
TRVZ	Turoa	0.78	192	P	Pn	09 29 15.5	+2.2
MUGZ	Murupara	0.80	86	P	Pn	09 29 14.5	+1.4
WNVZ	Wahianoa	0.80	189	P	Pn	09 29 15.5	+2.2
PKVZ	Pokaka	0.82	203	P	Pn	09 29 15.4	+2.2
TOZ	Tahuroa Road	0.82	346	P	Pn	09 29 15.2	+1.9
BKZ	Black Stump Fm	0.85	138	P	Pn	09 29 15.5	+2.1
BKZ	Black Stump Fm	0.85	138	P	Pn	09 29 15.5	+2.1
BKZ				S	S	09 29 34.2	-1.8
MOVZ	Moawhango	0.87	180	P	Pn	09 29 15.5	+2.0
MOVZ				S	S	09 29 33.9	-2.4
MTVZ	Mangateitei	0.88	195	P	Pn	09 29 16.0	+2.4
MTHZ	Maungataniwha	0.91	111	P	Pn	09 29 15.9	+2.1
MTHZ				S	S	09 29 35.0	-1.4
RTZ	Ruatahuna	0.96	95	P	Pn	09 29 16.0	+1.8
RTZ				S	S	09 29 35.5	-1.6
VRZ	Vera Road	0.98	232	P	Pn	09 29 16.5	+2.4
NMHZ	Naumai	1.00	125	P	Pn	09 29 17.4	+3.0
KWHZ	Kaweka Forest	1.03	150	P	Pn	09 29 17.1	+2.5
URZ	Urewera	1.10	76	P	Pn	09 29 16.4	+1.4
URZ	Urewera	1.10	76	P	Pn	09 29 16.4	+1.4
URZ				S	S	09 29 36.2	-2.2
RAHZ	Arahi	1.11	111	P	Pn	09 29 17.7	+2.6
MCHZ	McNeill Hill	1.17	141	P	Pn	09 29 18.7	+3.2
KRHZ	Kereru	1.21	157	P	Pn	09 29 18.4	+2.6
ARHZ	Aropaoanui	1.21	127	P	Pn	09 29 18.7	+2.9
SNGZ	Shannon Statio	1.27	102	P	Pn	09 29 18.8	+2.5
WHHZ	Waihua	1.28	116	P	Pn	09 29 19.1	+2.8
WAZ	Wanganui	1.36	206	P	Pn	09 29 19.7	+2.7
DREZ	Durham Road	1.38	241	P	Pn	09 29 20.0	+2.9
LREZ	Lake Rotokare	1.40	228	P	Pn	09 29 20.5	+3.2
MWZ	Matawai	1.41	82	P	Pn	09 29 19.4	+2.0
PNHZ	Pukenui	1.42	166	P	Pn	09 29 20.1	+2.5
PREZ	Palmer Road	1.48	237	P	Pn	09 29 20.8	+2.7
NEZ	North Egmont	1.49	240	P	Pn	09 29 21.2	+3.0
MKAZ	Moumakai	1.50	342	P	Pn	09 29 20.6	+2.3
CKHZ	Cape Kidnapper	1.52	138	P	Pn	09 29 21.6	+3.2
PKE	Pukeiti	1.53	244	P	Pn	09 29 21.4	+2.9
KAHZ	Kahuranaki	1.53	146	P	Pn	09 29 21.7	+3.1
TSZ	Takapari Road	1.53	174	P	Pn	09 29 21.1	+2.6
KHEZ	Kahui Hut	1.56	240	P	Pn	09 29 21.7	+2.9
KHEZ	Kahui Hut	1.56	240	P	Pn	09 29 21.7	+2.9
KNZ	Kokohu	1.58	109	P	Pn	09 29 21.5	+2.7
RIGZ	Rimuhau	1.58	97	P	Pn	09 29 21.6	+2.6
RUGZ	Raukumara Rang	1.62	70	P	Pn	09 29 20.6	+1.2
WPHZ	Waipukurau	1.62	161	P	Pn	09 29 22.1	+2.8
NBEZ	Newall Road No	1.65	243	P	Pn	09 29 22.5	+3.0
TKGZ	Te Karaka	1.65	87	P	Pn	09 29 22.4	+2.9
OHWZ	Ohakea	1.71	191	P	Pn	09 29 23.2	+3.1
ETAZ	East Tamaki Re	1.71	337	P	Pn	09 29 22.5	+2.3
NMEZ	Namu Road	1.71	238	P	Pn	09 29 23.0	+3.0
PRGZ	Paritu Road	1.71	104	P	Pn	09 29 22.8	+2.7
AWAZ	Awhitu Peninsu	1.71	329	P	Pn	09 29 22.8	+2.6
PXZ	Pawanui	1.73	150	P	Pn	09 29 23.1	+2.9
HAZ	Te Kaha	1.78	65	P	Pn	09 29 22.2	+1.5
KUZ	Kuaotunu	1.79	359	P	Pn	09 29 23.0	+2.1
KUZ	Kuaotunu	1.79	359	P	Pn	09 29 23.1	+2.1
MHGZ	Mahia Peninsul	1.79	111	P	Pn	09 29 24.0	+3.1
DVHZ	Dannevirke	1.79	170	P	Pn	09 29 23.3	+2.4
WIAZ	Waiheke Island	1.81	344	P	Pn	09 29 23.5	+2.4
WTAZ	Waiatarua	1.85	329	P	Pn	09 29 24.5	+2.9
PRHZ	Porangahau	1.86	159	P	Pn	09 29 24.5	+2.9
MBAZ	Motutapu North	1.89	339	P	Pn	09 29 24.4	+2.4
CNGZ	Carnagh Statio	1.93	89	P	Pn	09 29 25.3	+3.1
PKGZ	Pakihiroa	1.95	71	P	Pn	09 29 24.7	+2.2
ANWZ	Angora Road	2.00	164	P	Pn	09 29 25.9	+2.9
PRWZ	Pori Road	2.03	175	P	Pn	09 29 26.0	+2.8
MRZ	Mangatainoka R	2.13	184	P	Pn	09 29 26.6	+2.2
BFZ	Birch Farm	2.18	170	P	Pn	09 29 27.1	+2.3
BFZ	Birch Farm	2.18	170	S	S	09 29 55.4	-0.6
BFZ	Birch Farm	2.18	170	P	Pn	09 29 27.3	+2.4
WMGZ	Waiomatatini S	2.21	72	P	Pn	09 29 27.5	+2.2
GRZ	Great Barrier	2.29	354	P	Pn	09 29 28.8	+2.6
OGWZ	Otaki Gorge	2.33	191	P	Pn	09 29 28.7	+2.3
HOWZ	Holdsworth Sta	2.37	184	P	Pn	09 29 29.0	+2.1
CPWZ	Castlepoint	2.40	172	P	Pn	09 29 30.0	+2.9
KIW	Kapiti Island	2.42	195	P	Pn	09 29 29.4	+2.0
TMWZ	Te Maipa	2.57	178	P	Pn	09 29 31.2	+2.1
CAW	Cannon Point	2.62	191	P	Pn	09 29 31.9	+2.2
MTW	Mount Morrison	2.63	184	P	Pn	09 29 31.6	+1.8
DUWZ	D’Urville Isla	2.67	211	P	Pn	09 29 32.2	+1.9
WCZ	Waipu Caves	2.82	336	P	Pn	09 29 35.2	+3.1
WEL	Wellington	2.85	195	P	Pn	09 29 34.4	+2.1
PAWZ	Paruwai Farm	2.86	185	P	Pn	09 29 34.2	+1.8
TRWZ	Traveller	2.86	181	P	Pn	09 29 34.4	+1.9
SNZO	South Karori	2.89	196	P	Pn	09 29 34.3	+1.6
SNZO	South Karori	2.89	196	P	S	09 30 09.0	-1.0
MSWZ	Moikau Station	2.91	188	P	Pn	09 29 34.7	+1.7
TCW	Tory Channel	2.91	203	P	Pn	09 29 35.0	+2.0
BHW	Baring Head	2.95	193	P	Pn	09 29 35.2	+1.8
PLWZ	Palliser	3.06	187	P	Pn	09 29 36.3	+1.6
TUWZ	Tuamarina	3.21	205	P	Pn	09 29 39.0	+2.5
NNZ	Nelson	3.25	214	P	Pn	09 29 38.6	+1.6
TKNZ	Takaka Hill	3.30	220	P	Pn	09 29 38.8	+1.1
QRZ	Quartz Range	3.38	226	P	Pn	09 29 39.8	+1.2
QRZ	Quartz Range	3.38	226	P	Pn	09 29 39.6	+1.0
CMWZ	Cape Campbell	3.42	200	P	Pn	09 29 41.8	+2.7
BSWZ	Blackbirch Sta	3.49	204	P	Pn	09 29 41.8	+1.9
MRNZ	Matariki Terra	3.67	218	P	Pn	09 29 43.3	+1.2
THZ	Tophouse	3.90	213	P	Pn	09 29 46.5	+1.6
KHZ	Kahutara	4.23	203	P	Pn	09 29 51.2	+2.2
KHZ	Kahutara	4.23	203	P	Pn	09 29 51.0	+2.0
GVZ	Greta Valley S	4.89	204	P	Pn	09 29 58.9	+1.6
LTZ	Lake Taylor	5.00	211	P	Pn	09 30 00.1	+1.3
AMCZ	Amberley	5.20	206	P	Pn	09 30 02.6	+1.3
INZ	Inchbonnie	5.32	217	P	Pn	09 30 03.6	+0.8
OXZ	Oxford	5.55	209	P	Pn	09 30 06.5	+0.7
OKCZ	Okains Bay	5.57	201	P	Pn	09 30 07.2	+1.2
MQZ	McQueen’s Vall	5.67	203	P	Pn	09 30 07.7	+0.4
AKCZ	Akaroa Harbour	5.75	201	P	Pn	09 30 09.4	+1.1
RACZ	Rakaia	5.86	207	P	Pn	09 30 10.4	+0.6
WACZ	Wakanui South	6.16	207	P	Pn	09 30 14.5	+0.9
RPZ	Rata Peaks	6.28	213	P	Pn	09 30 17.1	+1.9
RPZ	Rata Peaks	6.28	213	P	Pn	09 30 17.0	+1.8
GCSZ	Gaunt Creek Bo	6.30	219	P	Pn	09 30 17.6	+2.1
ARCZ	Arundel	6.42	211	P	Pn	09 30 17.2	+0.2
TMZ	Timaru	6.85	210	P	Pn	09 30 23.6	+1.1
ODZ	Otahua Downs	7.54	209	P	Pn	09 30 33.4	+1.9
ODZ	Otahua Downs	7.54	209	P	Pn	09 30 33.5	+1.9
GLKZ	Green Lake	10.63	31	P	P	09 31 17.3	-1.4

IDC 21 09:30:48.5±2.9, 30°.84S×177°.75W, h0km, mb3.4/2, mbtmp3.6/3, ML3.1/1, Error ellipse: s-maj=67.3km s-min=23.9km az=107.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.59	355	Pn	Pb	09 31 18.5	-0.2
	56nm,0.3s,baz=49,slow=20,SNR=2.0						
RAO				Sn	Sg	09 31 39.4	0.0
	76nm,0.3s,baz=44,slow=20,SNR=3.8						
URZ	Urewera	8.53	208	Pn	Pn	09 32 52.7	-0.5
	0.2nm,0.3s,baz=342,slow=16,SNR=1.9						
URZ				Sn	Sn	09 34 24.3	-5.8
	0.4nm,0.3s,baz=128,slow=12,SNR=2.0						
	12nm,1.0s						
ASAR	Alice Springs	43.30	267	P	P	09 38 52.1	-0.1
	0.2nm,0.4s,baz=106,slow=6.9,SNR=5.3						
	0.2nm,0.4s						
WRA	Warramunga Arr	44.33	272	P	P	09 39 00.6	0.0
	0.4nm,0.4s,baz=111,slow=8.0,SNR=8.3						
	0.4nm,0.4s						
FINES	FINESS Array B	145.63	340	PKPbc	PKPdf	09 50 27.1	-0.9
	0.6nm,0.5s,baz=46,slow=4.0,SNR=8.8						

IDC 21 09:35:09.2±3.5, 55°.50N×86°.32E, h0km, mbtmp2.6/2, ML2.3/2, Error ellipse: s-maj=29.0km s-min=27.4km az=163.0

ASRS 21 09:35:04.0±1.0, 55°.60N×86°.22E, h0km, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.84	207	I	I	09 46 55.0	
	baz=24,slow=320,SNR=8.7						
ZALV	Zalesovo Beam	1.84	207	Pn	Pg	09 35 40.7	+1.4
	2.1nm,0.3s,baz=31,slow=16,SNR=20						
ZALV				Lg	Lg	09 36 05.1	
	2.0nm,0.3s,baz=29,slow=25,SNR=9.5						
KURBB	Kurchatov Arra	6.80	226	Pn	Pn	09 36 50.7	+5.8
	baz=45,slow=14,SNR=1.7						
KURBB				Lg	Lg	09 38 45.7	
	baz=51,slow=29						
	0.1nm,0.3s						
MKAR	Makanchi Array	9.15	197	Pn	Pn	09 37 20.5	+3.3
	0.1nm,0.3s,baz=22,slow=17,SNR=1.8						
	0.1nm,0.4s						

ASRS 21 09:35:21.0±1.6, 53°.74N×91°.05E, h0km, M2.9, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.

IDC 21 09:35:29.7±3.2, 53°.53N×90°.58E, h0km, mbtmp3.0/3, ML2.5/3, Error ellipse: s-maj=27.1km s-min=21.2km az=61.0

ISC 21 09:35:32.6±4.5, 53°.5N±0°.1×90°.3E±0°.3, h0km, n4, σ0s.79/6, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	3.32	281	I	I	09 57 05.0	
	0.1nm,1.8s,baz=90,slow=313,SNR=15						
ZALV	Zalesovo Beam	3.32	281	Pn	Pn	09 36 25.6	-0.2
	0.6nm,0.3s,baz=100,slow=17,SNR=5.7						
ZALV				Pg	Pb	09 36 32.9	+0.6
	1.3nm,0.3s,baz=92,slow=14,SNR=12						
ZALV				Lg	Lg	09 37 19.1	
	1.7nm,0.3s,baz=94,slow=32,SNR=6.9						
	1.9nm,0.5s						
KURBB	Kurchatov Arra	7.81	254	Pn	Pn	09 37 26.6	-0.8
	0.1nm,0.3s,baz=64,slow=14,SNR=6.0						
KURBB				Sn	Sn	09 38 56.1	-0.4
	0.1nm,0.3s,baz=67,slow=25,SNR=6.6						
KURBB				Lg	Lg	09 39 40.5	
	baz=61,slow=33						
	0.6nm,0.4s						
MKAR	Makanchi Array	8.43	221	Pn	Pn	09 37 35.6	-0.3
	0.2nm,0.3s,baz=32,slow=12,SNR=8.1						
MKAR				Sn	Sn	09 39 12.5	+0.7
	baz=38,slow=13,SNR=1.2						
MKAR				Lg	Lg	09 40 00.6	
	baz=38,slow=31,SNR=2.1						
	0.5nm,0.5s						

IDC 21 09:37:10.5±3.5, 30°.12S×177°.50W, h0km, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=70.6km s-min=32.7km az=102.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.94	337	Pn	Pn	09 37 31.0	0.0
	140nm,0.3s,baz=126,slow=19,SNR=13						
RAO				Sn	Sb	09 37 42.2	-0.5
	641nm,0.3s,baz=34,slow=19,SNR=13						
ASAR	Alice Springs	43.55	266	P	P	09 45 16.2	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	0.3nm,0.8s,baz=111,slow=8.3,SNR=2.1						
	0.3nm,0.8s						
WRA	**Warramunga Arr**	**44.52**	**272**	P	P	09 45 24.0	-0.1
	0.5nm,0.3s,baz=110,slow=8.1,SNR=24						
	0.5nm,0.3s						
FINES	**FINESS Array B**	**145.03**	**340**	PKPbc	PKPbc	09 56 47.6	-0.9
	1.0nm,0.7s,baz=29,slow=3.2,SNR=4.8						

IDC 21 09:38:44.4±2.6**, 30°.90S**×**177°.49W, h0^{km}, mb3.5**/2**, mbtmp3.5**/2**, Error ellipse: s-maj=60.3km s-min=29.4km az=102.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.68**	**347**	Pn	Pb	09 39 15.9	-0.3
	58nm,0.3s,baz=71,slow=18,SNR=1.5						
RAO				Sn	Sb	09 39 37.7	-0.1
	80nm,0.3s,baz=49,slow=20,SNR=2.0						
URZ	**Urewera**	**8.58**	**210**	Pn	Pn	09 40 44.6	-5.2
	0.5nm,0.3s,baz=113,slow=13,SNR=1.2						
URZ				Sn	Sn	09 42 22.1	-5.2
	1.0nm,0.3s,baz=170,slow=6.1,SNR=1.6						
ASAR	**Alice Springs**	**43.52**	**267**	P	P	09 46 50.2	+0.3
	0.3nm,0.6s,baz=102,slow=7.3,SNR=5.1						
ASAR				PcP	PcP	09 48 37.5	-0.5
	0.1nm,0.4s,baz=102,slow=3.8,SNR=1.5						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**44.55**	**272**	P	P	09 46 57.8	-0.5
	0.7nm,0.6s,baz=112,slow=7.9,SNR=8.3						
	0.7nm,0.6s						
FINES	**FINESS Array B**	**145.76**	**340**	PKPbc	PKPdf	09 58 23.5	-0.6
	0.9nm,0.4s,baz=48,slow=4.3,SNR=11						

IDC 21 09:48:02.1±1.4**, 6°.91S**×**155°.47E, h0^{km}, mb3.6**/5**, mbtmp3.6**/5**, Error ellipse: s-maj=46.3km s-min=32.0km az=122.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.25**	**236**	P	P	09 53 21.1	-0.1
	0.6nm,0.5s,baz=60,slow=9.6,SNR=7.0						
WRA				PcP	PcP	09 57 01.8	0.0
	0.5nm,1.0s,baz=58,slow=2.3,SNR=1.7						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**26.58**	**229**	P	P	09 53 41.6	-0.7
	0.2nm,0.7s,baz=63,slow=9.0,SNR=6.3						
ASAR				PcP	PcP	09 57 06.6	-0.4
	0.5nm,1.0s,baz=57,slow=3.9,SNR=1.9						
	0.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**61.17**	**295**	P	P	09 58 19.7	+0.6
	1.6nm,0.6s,baz=110,slow=6.7,SNR=7.6						
	1.6nm,0.6s						
QSPA	**South Pole Qui**	**83.07**	**180**	P	P	10 00 30.0	+0.5
	0.7nm,0.6s,baz=32,slow=13,SNR=1.6						
	0.7nm,0.6s						
ILAR	**Eielson Array**	**83.12**	**21**	P	P	10 00 28.8	-0.8
	0.2nm,0.6s,baz=238,slow=5.1,SNR=2.3						
	0.2nm,0.6s						

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*IDC **21** 09:50:15.9±3.2, 54°.20N×87°.29E, h0^{km}, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=24.9km s-min=19.0km az=57.0*

ASRS 21 09:50:12.0±1.0**, 54°.22N**×**87°.25E, h0^{km}, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.46**	**260**	I	I	09 59 50.0	
	0.1nm,0.7s,baz=80,slow=316,SNR=7.9						
ZALV	**Zalesovo Beam**	**1.46**	**260**	Pg	Pb	09 50 42.4	+2.4
	1.4nm,0.3s,baz=79,slow=16,SNR=12						
ZALV				Lg	Lg	09 51 03.4	
	1.5nm,0.3s,baz=80,slow=27,SNR=5.4						
KURBB	**Kurchatov Arra**	**6.43**	**239**	Pn	Pn	09 51 52.1	+4.1
	baz=56,slow=14,SNR=2.0						
KURBB				Sn	Sn	09 53 05.2	+3.2
	baz=59,slow=20,SNR=2.6						
KURBB				Lg	Lg	09 53 40.9	
	0.1nm,0.3s,baz=58,slow=32,SNR=2.3						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**8.08**	**205**	Pn	Pn	09 52 16.0	+5.5
	0.1nm,0.3s,baz=24,slow=14,SNR=1.6						
MKAR				Lg	Lg	09 54 33.0	
	0.1nm,0.3s,baz=19,slow=27,SNR=1.8						
	0.1nm,0.2s						

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*ASRS **21** 09:54:52.0±0.8, 53°.62N×86°.91E, h0^{km}, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 21 09:54:55.2±2.6**, 53°.70N**×**86°.79E, h0^{km}, mbtmp2.8**/2**, ML2.5**/2**, Error ellipse: s-maj=23.0km s-min=14.1km az=67.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.20**	**283**	I	I	10 03 10.0	
	baz=100,slow=315,SNR=6.6						
ZALV	**Zalesovo Beam**	**1.20**	**283**	Pg	Pg	09 55 17.3	-0.8
	1.6nm,0.3s,baz=100,slow=16,SNR=10						
ZALV				Lg	Lg	09 55 34.4	
	1.4nm,0.3s,baz=105,slow=29,SNR=8.3						
KURBB	**Kurchatov Arra**	**5.94**	**242**	Pn	Pn	09 56 25.1	+0.7
	0.1nm,0.3s,baz=59,slow=14,SNR=2.9						
KURBB				Lg	Lg	09 58 03.4	
	baz=63,slow=34						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**7.49**	**204**	Pn	Pn	09 56 47.1	+1.5
	0.1nm,0.3s,baz=25,slow=14,SNR=7.7						
	0.2nm,0.3s						

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*NEIC **21** 09:59:36.6±0.6, 36°.317N±0°.008×97°.73W±0°.01, h5^{km}±1^{km}, mb_Lg2.9/55, ML3.1/59, ML2.9/36, Error ellipse: s-maj=2.6km s-min=1.4km az=37.0*

NEIC 21 09:59:36.6±0.7**, 36°.316N**±0°.009×**97°.735W**±0°.007**, h8^{km}**±**4^{km}, Error ellipse: s-maj=1.4km s-min=0.8km az=186.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.28**	**313**		Pg	09 59 42.4	+0.3
CROK				IAML		09 59 46.8	
	comp=E,4µm,0.4s						
CROK				IAML		09 59 46.9	
	comp=N,4µm,0.4s						
GC02	**Grant County #**	**0.54**	**349**		Pg	09 59 47.2	+0.1
GC02					Sg	09 59 55.0	+0.7
OK029	**Liberty Lake**	**0.57**	**156**		Pg	09 59 47.6	+0.1
OK029					Sg	09 59 55.4	+0.5
BLOK	**Blackwell**	**0.61**	**43**		Pg	09 59 48.5	+0.2
BLOK					Sg	09 59 56.4	+0.1
OK048	**Pawnee Station**	**0.65**	**81**		Pg	09 59 49.1	+0.1
KAN14	**Manchester OK**	**0.67**	**344**		Pg	09 59 49.4	0.0
KAN14					Sg	09 59 58.6	+0.5
KAN14				IAML		09 59 58.8	
	comp=N,739nm,0.3s						
KAN14				IAML		10 00 03.4	
	comp=E,666nm,0.1s						
BCOK	**Bluff Creek, N**	**0.67**	**171**		Pg	09 59 49.4	0.0
BCOK					Sb	09 59 59.0	-0.9
KAN13	**South Haven SW**	**0.72**	**17**		Pg	09 59 50.6	+0.1
KAN13					Sg	10 00 00.4	+0.4
ADOK	**Arcadia Dam**	**0.73**	**156**		Pg	09 59 51.0	+0.5
KAN17	**Caldwell West**	**0.73**	**358**		Pg	09 59 50.6	+0.1
KAN17					Sg	10 00 00.6	+0.6
KAN17				IAML		10 00 02.9	
	comp=E,866nm,0.3s						
OK051	**E0350 and S346**	**0.75**	**75**		Pg	09 59 51.0	0.0
OK051					Sg	10 00 00.7	-0.1
OK051				IAML		10 00 12.5	
	comp=E,692nm,0.2s						
OK051				IAML		10 00 12.6	
	comp=E,646nm,0.2s						
KAN05	**Bluff City Nor**	**0.80**	**352**		Pg	09 59 51.9	0.0
KAN05					Sg	10 00 02.6	+0.3
KAN05				IAML		10 00 05.4	
	comp=E,688nm,0.2s						
KAN05				IAML		10 00 06.1	
	comp=N,718nm,0.2s						
OK004	**Okla Sci Mus**	**0.82**	**165**		Pg	09 59 52.2	-0.1
OK004					Sg	10 00 03.6	+0.7
OK052	**Battle Ridge R**	**0.82**	**113**		Pg	09 59 52.5	+0.1
OK052					Sg	10 00 03.4	+0.4
OK052				IAML		10 00 05.8	
	comp=N,771nm,0.4s						
KAN09	**Caldwell North**	**0.82**	**7**		Pg	09 59 52.4	0.0
KAN09				IAmb_Lg		10 00 02.5	
	comp=Z,127nm,0.8s						
KAN09					Sg	10 00 03.4	+0.3
OK038	**West end E0370**	**0.83**	**282**		Pg	09 59 52.4	-0.1
OK038					Sg	10 00 03.7	+0.4
KAN01	**Argonia South**	**0.84**	**359**		Pg	09 59 52.5	-0.1
KAN01					Sg	10 00 03.8	+0.2
QUOK	**Quay**	**0.84**	**100**		Pg	09 59 52.7	-0.1
QUOK					Sg	10 00 04.1	+0.4
QUOK				IAML		10 00 11.5	
	comp=E,665nm,0.2s						
KAN10	**Anthony SW Sta**	**0.86**	**340**		Pg	09 59 52.8	-0.2
KAN10					Sg	10 00 04.4	+0.3
KAN08	**Anthony NE Sta**	**0.93**	**348**		Pg	09 59 54.2	-0.2
KAN08					Sg	10 00 06.8	+0.3
KAN08				IAML		10 00 07.7	
	comp=N,461nm,0.1s						
KAN08				IAML		10 00 08.3	
	comp=E,554nm,0.1s						
OKCSW	**OKLAHOMA CITY**	**0.94**	**165**		Pg	09 59 54.4	-0.2
OKCSW					Sb	10 00 08.0	+0.2
OKCSW				IAML		10 00 12.3	
	comp=N,604nm,0.5s						
OKCSW				IAML		10 00 15.3	
	comp=E,640nm,0.5s						
KAN12	**Harper NE Stat**	**1.00**	**348**		Pg	09 59 55.6	-0.2
KAN12					Sg	10 00 09.0	+0.2
KAN12				IAML		10 00 13.1	
	comp=E,648nm,0.4s						
CSTR	**Hydro, Custer**	**1.02**	**229**		Pg	09 59 56.1	-0.1
FNO	**Franklin**	**1.09**	**165**		Pg	09 59 57.0	-0.5
FNO					Sb	10 00 12.2	0.0
FNO				IAML		10 00 17.4	
	comp=E,332nm,0.3s						
DEOK	**Depew**	**1.11**	**115**		Pg	09 59 57.3	-0.5
DEOK				IAML		10 00 14.3	
	comp=E,343nm,0.1s						
T35A	**Sooner Cattle**	**1.15**	**58**		Pg	09 59 58.2	-0.4
T35A				IAML		10 00 18.1	
	comp=E,284nm,0.3s						
ELIS	**Ellis County**	**1.38**	**260**		Pb	10 00 02.5	-0.2
TUL3	**Leonard**	**1.62**	**104**		Pn	10 00 05.8	+0.3
X34A	**Smith Ranch, M**	**1.71**	**183**		Pb	10 00 07.9	-0.4
WMOK	**Wichita Mounta**	**1.79**	**209**		Pn	10 00 08.1	+0.2
WMOK	**Wichita Mounta**	**1.79**	**209**		Pn	10 00 08.3	+0.4
DRZT	**Darrouzett**	**2.07**	**274**		Pb	10 00 15.0	+0.6
RLO	**Rose Lookout**	**2.20**	**93**		Pb	10 00 15.2	-1.4
R32A	**Long Quarter,**	**2.24**	**340**		Pn	10 00 14.7	+0.7
LOOK	**Love County**	**2.36**	**169**		Pb	10 00 18.4	-1.1
SMWD	**Samnorwood**	**2.37**	**240**		Pn	10 00 16.7	+0.9
SMWD				IAmb_Lg		10 00 51.3	
	comp=Z,50nm,0.8s						
WTFS	**Witchita Falls**	**2.61**	**193**		Pn	10 00 18.7	-0.4
U38A	**Gravette**	**2.71**	**86**		Pn	10 00 19.9	-0.5
KSU1	**Kansas State U**	**2.92**	**17**	Pn	Pn	10 00 23.3	0.0
KSU1				IAmb_Lg		10 01 17.1	
	comp=Z,35nm,0.8s						
CBKS	**Cedar Bluff**	**2.96**	**328**		Pn	10 00 23.3	-0.7
Z35A	**Perchaven, San**	**3.00**	**172**	Pn	Pn	10 00 23.9	-0.6
HHAR	**Hobbs**	**3.07**	**90**		Pn	10 00 25.7	+0.3
HHAR				IAmb_Lg		10 01 13.0	
	comp=Z,23nm,0.7s						
FW06	**Azle**	**3.34**	**177**	Pn	Pn	10 00 28.4	-0.7
AMTX	**Amarillo**	**3.52**	**247**		Pn	10 00 31.3	-0.4
AMTX				IAmb_Lg		10 01 26.2	
	comp=Z,24nm,1.0s						
PLPT	**Palo Pinto**	**3.53**	**188**	Pn	Pn	10 00 31.4	-0.3
APMT	**Aspermont**	**3.57**	**214**	Pn	Pn	10 00 32.5	+0.1
FW07	**Weatherford**	**3.60**	**181**	Pn	Pn	10 00 32.1	-0.7
DKNS	**Dickens**	**3.72**	**226**	Pn	Pn	10 00 33.8	-0.6
DKNS				IAmb_Lg		10 01 42.0	
	comp=Z,21nm,1.0s						
Z38A	**Mt. Pleasant**	**3.80**	**143**		Pn	10 00 35.0	-0.4
MIAR	**Mount Ida**	**3.83**	**116**	Pn	Pn	10 00 35.5	-0.3
MIAR				IAmb_Lg		10 01 41.9	
	comp=Z,29nm,0.8s						
FW13	**Cleburne**	**3.96**	**176**	Pn	Pn	10 00 37.9	+0.2
FW13				IAmb_Lg		10 01 43.6	
	comp=Z,26nm,1.3s						
ABTX	**Abilene, Hawle**	**4.01**	**204**	Pn	Pn	10 00 39.5	+1.2
ABTX				IAmb_Lg		10 01 48.5	
	comp=Z,18nm,0.8s						
RTBA	**Rita Blanca**	**4.04**	**273**		Pn	10 00 40.4	+1.6
SN07	**Snyder 07**	**4.14**	**220**	IAmb_Lg		10 01 48.8	
	comp=Z,27nm,0.8s						
WHTX	**Lake Whitney,**	**4.32**	**177**	Pn	Pn	10 00 40.8	-1.8
X40A	**Basin Creek Fa**	**4.40**	**113**	Pn	Pn	10 00 44.4	+0.7
X40A				IAmb_Lg		10 02 05.3	
	comp=Z,34nm,0.7s						
MGMO	**Mountain Grove**	**4.47**	**78**	Pn	Pn	10 00 43.7	-1.0
MGMO				IAmb_Lg		10 02 06.9	
	comp=Z,21nm,0.9s						
POST	**Post**	**4.49**	**225**	Pn	Pn	10 00 44.1	-0.9
WHAR	**Wooly Hollow**	**4.54**	**101**	Pn	Pn	10 00 44.3	-1.4
FCAR	**Ozark Folk Cen**	**4.56**	**94**	Pn	Pn	10 00 45.3	-0.6
FCAR				IAmb_Lg		10 02 06.0	
	comp=Z,19nm,0.7s						
237A	**Washetta, Mont**	**4.59**	**159**	Pn	Pn	10 00 46.6	+0.3
WLAR	**White Oak Lake**	**4.61**	**123**	Pn	Pn	10 00 44.6	-2.0
UALR	**University of**	**4.66**	**108**	Pn	Pn	10 00 46.7	-0.6
P38A	**Dawn**	**4.68**	**44**	Pn	Pn	10 00 45.4	-2.2
KSCO	**Kaye Shedlock’**	**4.72**	**306**	Pn	Pn	10 00 46.9	-1.4
KSCO				IAmb_Lg		10 02 14.9	
	comp=Z,22nm,0.9s						
MSTX	**Muleshoe**	**4.75**	**242**	Pn	Pn	10 00 47.9	-0.7
R40A	**Maddies Statio**	**4.78**	**64**		Pn	10 00 48.4	-0.5
N35A	**Tabor**	**4.83**	**19**	Pn	Pn	10 00 48.7	-0.8
BGNE	**Belgrade**	**5.09**	**356**	Pn	Pn	10 00 53.5	+0.2
SGCY	**Sterling City**	**5.21**	**214**	IAmb_Lg		10 02 27.1	
	comp=Z,25nm,0.8s						
LCAR	**Lake Charles**	**5.33**	**91**	IAmb_Lg		10 02 26.9	
	comp=Z,16nm,0.8s						
T25A	**Trinidad**	**5.42**	**281**	Pn	Pn	10 00 57.4	-0.6
CCAR	**Cane Creek**	**5.44**	**114**	IAmb_Lg		10 02 42.8	
	comp=Z,30nm,0.8s						
CCM	**Cathedral Cave**	**5.46**	**70**	Pn	Pn	10 01 01.1	+2.7
435B	**Jarrell**	**5.52**	**179**	IAmb_Lg		10 02 38.0	
	comp=Z,18nm,0.8s						
OGNE	**Ogallala**	**5.72**	**325**	IAmb_Lg		10 02 44.7	
	comp=Z,19nm,0.7s						
PBMO	**Poplar Bluff**	**5.90**	**83**	IAmb_Lg		10 02 47.2	
	comp=Z,24nm,0.8s						
143A	**Socs Landing,**	**6.35**	**123**	IAmb_Lg		10 03 10.6	
	comp=Z,22nm,0.7s						
SLM	**Saint Louis**	**6.40**	**67**	IAmb_Lg		10 03 00.2	
	comp=Z,18nm,0.8s						
HNDO	**Hondo**	**6.89**	**191**	IAmb_Lg		10 03 26.8	
	comp=Z,23nm,1.1s						
P43A	**Skaggs, Pawnee**	**7.29**	**60**	IAmb_Lg		10 03 32.8	
	comp=Z,21nm,0.8s						
DRIO	**Del Rio**	**7.29**	**200**	IAmb_Lg		10 03 46.1	
	comp=Z,8.8nm,0.8s						
ALPN	**Alpine**	**7.71**	**221**	IAmb_Lg		10 03 56.8	
	comp=Z,8.8nm,0.7s						
OLIL	**Olney**	**8.03**	**70**	IAmb_Lg		10 04 08.1	
	comp=Z,17nm,1.0s						

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*IDC **21** 10:04:26.0±1.1, 30°.80S×177°.57W, h0^{km}, mb3.9/5, mbtmp3.9/5, Error ellipse: s-maj=30.9km s-min=22.2km az=96.0*

*NEIC **21** 10:04:28.0±1.5, 30°.68S±0°.08×177°.7W±0°.2, h10^{km}±1^{km}, mb4.3/7, Error ellipse: s-maj=29.7km s-min=10.0km az=249.0*

ISC 21 10:04:32.2±1.0**, 30°.80S**±0°.08×**177°.8W**±0°.2**, h46^{km}, n19, σ1^{s}.87**/23**, mb4.1**/9**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.55**	**356**	Pn	**Pn**	**10 04 53.6**	**-3.7**
RAO				Sn	**Sn**	**10 05 13.9**	**-2.3**
RAO	**Raoul Island**	**1.55**	**356**	Pn	**Pn**	**10 04 55.7**	**-1.6**
	60nm,0.3s,baz=139,slow=19,SNR=2.0						
RAO				Sn	**Sn**	**10 05 18.1**	**+1.9**
	183nm,0.3s,baz=90,slow=20,SNR=5.0						
URZ	**Urewera**	**8.54**	**208**	Pn	Pn	10 06 27.2	-5.9
	0.3nm,0.3s,baz=270,slow=1.0,SNR=2.7						
URZ				Sn	**Sn**	**10 08 02.9**	**-5.2**
	1.9nm,0.3s,baz=175,slow=20,SNR=9.2						
STKA	**Stephens Creek**	**34.56**	**257**	P	**P**	**10 11 17.9**	**+1.4**
	0.8nm,0.3s,baz=113,slow=13,SNR=2.3						
	0.8nm,0.3s						
BBOO	**Buckleboo**	**39.03**	**255**	P	**P**	**10 11 55.4**	**+0.9**
AS31	**Alice Springs**	**43.26**	**267**	P	**P**	**10 12 30.0**	**+0.6**
AS31				IAmb	IAmb	10 12 52.7	
	comp=Z,0.6nm,1.0s						
ASAR	**Alice Springs**	**43.26**	**267**	P	**P**	**10 12 31.2**	**+1.8**
	comp=Z,0.6nm,0.6s,baz=105,slow=7.5,SNR=11						
ASAR				PcP	**PcP**	**10 14 19.1**	**+1.1**
	comp=Z,0.3nm,0.4s,baz=108,slow=3.7,SNR=5.4						
	comp=Z,0.6nm,0.6s						
WR8	**Warramunga Arr**	**44.15**	**273**	P	**P**	**10 12 36.5**	**0.0**
WR8				IAmb	IAmb	10 12 56.1	
	comp=Z,8.4nm,1.4s						
WRA	**Warramunga Arr**	**44.29**	**272**	P	**P**	**10 12 38.3**	**+0.7**
WRA	**Warramunga Arr**	**44.29**	**272**	P	**P**	**10 12 39.2**	**+1.6**
	comp=Z,1.4nm,0.5s,baz=113,slow=7.7,SNR=11						
WRA				PcP	**PP**	**10 14 22.2**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=110,slow=3.0,SNR=1.2						
	comp=Z,1.4nm,0.5s						
WB0	**Warramunga Arr**	**44.31**	**273**	P	**P**	**10 12 39.6**	**+1.8**
WB0				IAmb	IAmb	10 13 01.4	
	comp=Z,13nm,1.4s						
FITZ	**Fitzroy Crossi**	**52.53**	**270**	P	**P**	**10 13 41.9**	**+0.8**
FITZ				IAmb	IAmb	10 14 07.1	
	comp=Z,2.2nm,1.1s						
QSPA	**South Pole Qui**	**59.31**	**180**	P	**P**	**10 14 30.3**	**+1.2**
QSPA				IAmb	IAmb	10 14 38.8	
	comp=Z,8.6nm,1.4s						
QSPA	**South Pole Qui**	**59.31**	**180**	P	**P**	**10 14 30.1**	**+1.0**
	comp=Z,1.3nm,0.8s,baz=68,slow=0.7,SNR=5.5						
	comp=Z,1.3nm,0.8s						
NVAR	**Mina Array Bea**	**88.42**	**43**	P	**P**	**10 17 19.4**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=260,slow=1.8,SNR=3.8						
	comp=Z,0.6nm,0.8s						
FIA1	**FINESS Array S**	**145.58**	**340**	PKPdf	**PKPab**	**10 24 05.6**	**+0.4**
FINES	**FINESS Array B**	**145.58**	**340**	PKPdf	**PKPab**	**10 24 05.6**	**+0.4**
FINES	**FINESS Array B**	**145.58**	**340**	PKPbc	**PKPab**	**10 24 05.2**	**0.0**
	comp=Z,1.9nm,0.4s,baz=46,slow=4.1,SNR=32						
AKASG	**Malin Array Be**	**151.73**	**322**	PKPbc	**PKPbc**	**10 24 21.4**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=64,slow=2.0,SNR=5.3						

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*SOME **21** 10:07:48.8, 40°.72N×69°.60E, h5^{km}*

*NNC **21** 10:07:50.7±1.7, 40°.79N×69°.66E, h0^{km}, mb3.5, mpv3.3, Error ellipse: s-maj=12.3km s-min=6.7km az=34.0, Suspected Mining explosion.*

*KRNET **21** 10:07:51.8±0.1, 40°.79N×69°.66E, h22^{km}, mb3.3*

*ISU **21** 10:07:53, 40°.90N×69°.68E, h5^{km}*

ISC 21 10:07:51.1±1.1**, 40°.84N**±0°.03×**69°.53E**±0°.05**, h0^{km}, n27, σ1^{s}.49**/46**, 13C-15D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NZBK	**Nazarbek**	**0.49**	**321**	S	**Sb**	**10 08 13.6**	**+3.1**
CHMG	**Chimgan**	**0.80**	**27**	P	**Pg**	**10 08 06.5**	**+0.1**
CHMG				S	**Sg**	**10 08 16.7**	**-0.1**
CHRV	**Charvak**	**0.86**	**21**	P	**Pg**	**10 08 07.7**	**0.0**
CHRV				S	**Sg**	**10 08 18.9**	**+0.1**
BTK	**Batken**	**1.25**	**128**	⇑*i*P	**Pg**	**10 08 13.7**	**-1.5**
BTK				⇑*i*S	**Sg**	**10 08 29.5**	**-1.9**
TRKS	**Terek-Say**	**1.40**	**60**	⇓*e*P	**Pg**	**10 08 16.3**	**-1.6**
TRKS				⇓*e*S	**Sg**	**10 08 35.0**	**-1.0**
CHMI	**Chimion**	**1.62**	**110**	P	**Pb**	**10 08 22.1**	**+0.2**
CHMI				S	**Sb**	**10 08 43.5**	**+0.6**
FRG	**Fergana**	**1.78**	**104**	P	**Pn**	**10 08 24.1**	**+1.0**
FRG				S	**Sn**	**10 08 47.4**	**+0.9**
GAR	**Garm**	**1.93**	**162**	⇓*i*P	**Pn**	**10 08 25.9**	**+0.5**
GAR				⇓*i*S	**Sn**	**10 08 50.7**	**+0.3**
ARK	**Arkit**	**2.07**	**62**	⇑*i*P	**Pn**	**10 08 28.3**	**+1.1**
ARK				⇑*i*S	**Sb**	**10 08 55.3**	**-0.6**
BRLS	**Borolday**	**2.20**	**6**	Pg	**Pn**	**10 08 26.5**	**-2.5**
	34nm,0.3s						
BRLS				Lg	Lg	10 08 55.2	
	68nm,0.3s						
BRLS	**Borolday**	**2.20**	**6**	*e*P	**Pn**	**10 08 26.5**	**-2.5**
	34nm,0.4s						
BRLS				*e*S	**Sn**	**10 08 55.2**	**-1.7**
	68nm,0.3s						
DRK	**Karamyk**	**2.21**	**127**	⇓*i*P	**Pn**	**10 08 29.7**	**+0.4**
DRK				⇓*i*S	**Sn**	**10 08 57.3**	**-0.1**
KK31	**Karatay Array**	**2.38**	**18**	⇓Pg	**Pb**	**10 08 34.9**	**0.0**
	2.4nm,0.2s,baz=191,slow=10.0,SNR=20						
KK31				⇓Lg	Lg	10 09 06.4	
	17nm,0.3s,baz=196,slow=32,SNR=20						
OHH	**Osh**	**2.49**	**96**	⇑*e*P	**Pn**	**10 08 34.6**	**+1.5**
OHH				⇑*e*S	**Sn**	**10 09 04.2**	**0.0**
ARSB	**Arslanbob**	**2.65**	**78**	⇓*i*P	**Pn**	**10 08 36.4**	**+1.1**
ARSB				⇓*i*S	**Sn**	**10 09 08.8**	**+0.5**
MNAS	**Manas**	**2.77**	**53**	⇑*i*P	**Pn**	**10 08 38.4**	**+1.5**
MNAS				⇑*i*S	**Sn**	**10 09 12.4**	**+1.3**
SFK	**Sufi-Kurgan**	**3.14**	**104**	⇑*e*P	**Pn**	**10 08 42.7**	**+0.6**
SFK				⇑*e*S	**Sn**	**10 09 20.0**	**-0.4**
SALK	**Salom-Alik**	**3.25**	**88**	⇓*e*P	**Pn**	**10 08 44.3**	**+0.7**
SALK				⇓*e*S	**Sn**	**10 09 23.2**	**+0.1**
MRKS	**Merke**	**3.35**	**54**	Pg	**Pb**	**10 08 50.2**	**-1.3**
	8.0nm,0.4s						
MRKS				Lg	Lg	10 09 35.6	
	17nm,0.4s						
MRKS	**Merke**	**3.35**	**54**	*e*P	**Pb**	**10 08 50.7**	**-0.8**
	1.6nm,0.2s						
MRKS				*e*S	**Sb**	**10 09 35.1**	**+2.1**
	16nm,0.3s						
AML	**Almayashu**	**3.38**	**66**	⇓*i*P	**Pn**	**10 08 46.9**	**+1.3**
AML				⇓*i*S	**Sn**	**10 09 27.1**	**+0.5**
ARLS	**Aral**	**3.75**	**73**	⇑*e*P	**Pn**	**10 08 51.6**	**+1.2**
ARLS				⇑*e*S	**Sn**	**10 09 35.4**	**+0.1**
AAK	**Ala-Archa**	**4.12**	**63**	Pg	**Pb**	**10 09 06.1**	**+1.4**
	0.5nm,0.4s						
AAK				Lg	Lg	10 09 60.0	
	1.2nm,0.7s						
TKM2	**Tokmak 2**	**4.98**	**63**	⇑Pg	**Pb**	**10 09 20.9**	**+1.6**
	1.6nm,0.4s						
TKM2				⇓Lg	Lg	10 10 25.7	
	3.3nm,0.6s						
KST	**Kastek**	**5.28**	**63**	Pg	**Pb**	**10 09 25.4**	**+1.1**
	2.2nm,0.6s						
KST				Lg	Lg	10 10 35.8	
	7.2nm,0.6s						
KST	**Kastek**	**5.28**	**63**	*e*P	**Pb**	**10 09 25.4**	**+1.1**
	2.2nm,0.6s						
KST				*e*S	**Sg**	**10 10 35.8**	**-4.9**
	7.2nm,0.6s						
KRBS	**Karabastau**	**5.38**	**56**	Pg	**Pb**	**10 09 28.5**	**+2.5**
	1.6nm,0.3s						
KRBS				Lg	Lg	10 10 41.1	
	2.5nm,0.3s						

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*NEIC **21** 10:14:32.5±1.6, 5°.38S±0°.06×151°.98E±0°.08, h51^{km}±5^{km}, mb4.7/118, Error ellipse: s-maj=12.3km s-min=7.7km az=113.0*

*IDC **21** 10:14:34.0±0.6, 5°.35S×151°.82E, h66^{km}±4^{km}, mb4.3/22, mbtmp4.6/25, MS4.3/7, Error ellipse: s-maj=14.7km s-min=9.4km az=97.0*

*DJA **21** 10:14:42.0±0.7, 6°S±4°×15°2E±°, h127^{km}±8^{km}, M4.7/18, mb4.7/18, mB5.2/2, Mw(mB)4.5/2*

ISC 21 10:14:32.0±0.4**, 5°.36S**±0°.05×**151°.92E**±0°.06**, h45^{km}, n355, σ1^{s}.39**/339**, mb4.7**/86**, MS4.3**/6**, 2C, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.19**	**12**		**Pn**	**10 14 52.8**	**+0.6**
RABL				Sn	**Sn**	**10 15 09.1**	**+1.8**
MANU	**Manus Island**	**5.62**	**306**		**Pn**	**10 15 53.4**	**+0.4**
PMG	**Port Moresby**	**6.20**	**229**		**Pn**	**10 16 01.5**	**+0.4**
PMG	**Port Moresby**	**6.20**	**229**	P	**Pn**	**10 16 02.9**	**+1.9**
	62nm,0.4s,baz=46,slow=9.5,SNR=32						
PMG				S	**Sn**	**10 17 12.7**	**+2.0**
	110nm,0.7s,baz=126,slow=24,SNR=12						
PMG				LR	LR	10 18 34.4	
	comp=Z,1µm,20.5s,baz=16,slow=39						
HNR	**Honiara**	**8.93**	**117**	P	**Pn**	**10 16 42.3**	**+3.9**
	74nm,0.5s,baz=214,slow=3.6,SNR=3.7						
HNR				LR	LR	10 19 41.5	
	comp=Z,1µm,19.7s,baz=294,slow=34						
JAY	**Jayapura**	**11.54**	**284**	P	**Pn**	**10 17 15.3**	**+1.0**
	3.2nm,0.6s,baz=124,slow=11,SNR=1.2						
COEN	**Coen**	**12.13**	**225**	Pn	**Pn**	**10 17 22.1**	**-0.3**
SMPI	**Sarmi**	**13.60**	**284**	P	**P**	**10 17 50.3**	**0.0**
	30nm,1.7s						
CTAO	**Charters Tower**	**15.64**	**200**	Pn	**Pn**	**10 18 09.3**	**-0.2**
SANVU	**Saraoutou**	**18.05**	**125**	P	**P**	**10 18 36.5**	**-3.1**

EIDS	**Eidsvold**	**19.91**	**182**		**P**	**10 18 57.9**	**-2.1**
EIDS				IAmb	IAmb	10 19 05.3	
	comp=Z,53nm,1.1s						
GUMO	**Guam**	**20.09**	**340**	P	**P**	**10 19 01.9**	**0.0**
GUMO	**Guam**	**20.09**	**340**	P	**P**	**10 19 02.4**	**+0.5**
	comp=Z,189nm,1.0s,baz=168,slow=8.3,SNR=5.6						
GUMO				LR	LR	10 26 33.5	
	comp=Z,527nm,18.5s,baz=99,slow=36						
	comp=Z,189nm,1.0s						
SWI	**Sorong**	**21.10**	**282**	P	**P**	**10 19 15.8**	**+2.8**
	comp=Z,40nm,0.8s						
DZM	**Mont Dzumac**	**21.76**	**141**	P	**P**	**10 19 19.4**	**-0.7**
DZM				IAmb	IAmb	10 19 22.9	
	comp=Z,43nm,1.4s						
DZM	**Mont Dzumac**	**21.76**	**141**	P	**P**	**10 19 20.6**	**+0.6**
	comp=Z,14nm,0.6s,baz=299,slow=6.9,SNR=32						
	comp=Z,14nm,0.6s						
MTN	**Manton Dam**	**21.82**	**249**		**P**	**10 19 21.4**	**+0.7**
MTN				IAmb	IAmb	10 19 34.5	
	comp=Z,27nm,0.8s						
ONTNC	**Ouen Toro**	**21.94**	**142**	P	**P**	**10 19 21.6**	**-0.3**
ONTNC				IAmb	IAmb	10 19 53.7	
	comp=Z,32nm,1.1s						
WB0	**Warramunga Arr**	**22.27**	**228**		**P**	**10 19 25.0**	**-0.5**
WR8	**Warramunga Arr**	**22.31**	**228**		**P**	**10 19 25.8**	**-0.1**
WR8				IAmb	IAmb	10 19 27.8	
	comp=Z,27nm,0.8s						
WRAB	**Tennant Creek**	**22.41**	**228**	P	**P**	**10 19 26.6**	**-0.3**
WRAB				IAmb	IAmb	10 19 28.7	
	comp=Z,26nm,0.8s						
WRA	**Warramunga Arr**	**22.42**	**228**	P	**P**	**10 19 25.4**	**-1.7**
WRA	**Warramunga Arr**	**22.42**	**228**	P	**P**	**10 19 26.4**	**-0.7**
	comp=Z,22nm,0.7s,baz=52,slow=10,SNR=76						
WRA				ScP	**ScP**	**10 26 52.3**	**-2.6**
	comp=Z,9.2nm,1.1s,baz=52,slow=2.5,SNR=18						
WRA				LR	LR	10 27 13.6	
	comp=Z,706nm,21.6s,baz=288,slow=34						
	comp=Z,22nm,0.7s						
PINNC	**Pines Island,**	**22.79**	**140**	P	**P**	**10 19 29.7**	**-1.2**
AAI	**Ambon**	**23.71**	**273**	P	**P**	**10 19 42.2**	**+2.1**
	comp=Z,57nm,1.3s						
NLAI	**Namlea**	**24.84**	**274**	P	**P**	**10 19 52.1**	**+1.7**
	comp=Z,46nm,0.9s						
ARMA	**Armidale**	**24.93**	**181**	P	**P**	**10 19 49.5**	**-1.7**
ARMA				IAmb	IAmb	10 20 05.4	
	comp=Z,29nm,1.1s						
KNRA	**Kununurra**	**24.94**	**244**	P	**P**	**10 19 50.3**	**-1.0**
KNRA				IAmb	IAmb	10 20 15.2	
	comp=Z,27nm,0.9s						
AS31	**Alice Springs**	**25.15**	**222**		**P**	**10 19 53.3**	**+0.1**
ASAR	**Alice Springs**	**25.15**	**222**	P	**P**	**10 19 52.9**	**-0.3**
	comp=Z,46nm,0.8s,baz=55,slow=7.8,SNR=120						
ASAR				pP	**pP**	**10 20 07.5**	**+2.4**
	comp=Z,27nm,0.8s,baz=58,slow=8.6,SNR=11						
ASAR				ScP	**ScP**	**10 27 00.1**	**-2.1**
	comp=Z,3.2nm,0.9s,baz=44,slow=2.9,SNR=16						
	comp=Z,46nm,0.8s						
SOEI	**Soe**	**27.75**	**259**	P	**P**	**10 20 16.4**	**-0.5**
STKA	**Stephens Creek**	**28.10**	**199**	P	**P**	**10 20 19.5**	**-0.1**
	comp=Z,2.6nm,0.6s,baz=24,slow=13,SNR=6.0						
STKA				pP	**pwP**	**10 20 34.3**	**+0.1**
	comp=Z,3.9nm,0.8s,baz=21,slow=13,SNR=2.4						
STKA				LR	LR	10 33 02.9	
	comp=Z,857nm,18.4s,baz=13,slow=40						
	comp=Z,2.6nm,0.6s						
FITZ	**Fitzroy Crossi**	**28.62**	**242**	P	**P**	**10 20 23.3**	**-1.1**
DAV	**Davao City (W)**	**29.04**	**295**	LR	LR	10 31 46.7	
	comp=Z,576nm,18.4s,baz=50,slow=36						
BBOO	**Buckleboo**	**31.06**	**206**	P	**P**	**10 20 45.7**	**-0.2**
BBOO				IAmb	IAmb	10 21 03.5	
	comp=Z,23nm,1.4s						
FORT	**Forrest**	**33.80**	**219**	P	**P**	**10 21 09.2**	**-0.8**
JMN	**Monobe**	**42.47**	**338**	P	**P**	**10 22 23.5**	**+0.7**
JNU	**Nakatsue**	**43.17**	**334**	IAmb	IAmb	10 22 31.9	
	comp=Z,13nm,0.9s						
MJAR	**Matsushiro Arr**	**43.62**	**344**	P	**P**	**10 22 30.6**	**-1.4**
	comp=Z,7.3nm,1.0s,baz=167,slow=7.7,SNR=12						
MJAR				pP	**sP**	**10 22 47.8**	**-2.1**
	comp=Z,2.5nm,0.8s,baz=158,slow=9.6,SNR=2.9						
	comp=Z,7.3nm,1.0s						
MAJO	**Matsushiro**	**43.62**	**344**	P	**P**	**10 22 30.8**	**-1.3**
MJB9	**Matsu-Tunnel**	**43.62**	**344**		**P**	**10 22 31.6**	**-0.5**
JSD	**Sado**	**45.01**	**345**	IAmb	IAmb	10 22 44.7	
	comp=Z,9.7nm,0.9s						
DLV	**Lat**	**46.49**	**292**		**P**	**10 22 56.2**	**+0.7**
KSRS	**Korea Array**	**48.11**	**334**	P	**P**	**10 23 07.5**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=152,slow=6.8,SNR=9.0						
	comp=Z,1.3nm,0.6s						
NJ2	**Nanjing**	**48.74**	**322**	*e*P	**P**	**10 23 14.0**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,9.0nm,1.5s						
BKNI	**Bangkinang**	**51.12**	**275**		**P**	**10 23 29.5**	**-1.3**
USRK	**Ussuriysk Ar.**	**52.50**	**342**	P	**P**	**10 23 41.0**	**+0.5**
USRK	**Ussuriysk Ar.**	**52.50**	**342**	P	**P**	**10 23 41.0**	**+0.5**
	comp=Z,4.7nm,0.8s,baz=175,slow=9.0,SNR=15						
USRK				pP	**sP**	**10 23 57.6**	**-1.4**
	comp=Z,2.4nm,0.8s,baz=178,slow=8.2,SNR=3.7						
	comp=Z,4.7nm,0.8s						
ENH	**Enshi**	**53.90**	**314**		**P**	**10 23 51.2**	**0.0**
SRIT	**Nakonsritamara**	**53.98**	**285**	P	**P**	**10 23 51.1**	**-0.9**
HNS	**HongShan**	**54.88**	**324**	⇑P	**P**	**10 23 59.4**	**+1.4**
HNS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BNX	**BinXian**	**55.38**	**339**	⇑P	**P**	**10 24 01.8**	**+0.3**
BNX				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**57.33**	**296**	P	**P**	**10 24 15.7**	**-0.2**
CMAR	**Chiang Mai Arr**	**57.33**	**296**	P	**P**	**10 24 15.6**	**-0.3**
	comp=Z,2.2nm,0.3s,baz=118,slow=5.3,SNR=19						
	comp=Z,2.2nm,0.3s						
CHTO	**Chiang Mai**	**57.44**	**296**	P	**P**	**10 24 16.5**	**-0.3**
CHTO				IAmb	IAmb	10 24 18.4	
	comp=Z,9.0nm,1.2s						
PZH	**PanZhiHua**	**57.98**	**306**	P	**P**	**10 24 22.8**	**+2.2**
PETK	**Petropavlovsk-**	**58.45**	**4**	P	**P**	**10 24 23.5**	**+0.3**
	comp=Z,2.9nm,0.8s,baz=168,slow=7.6,SNR=8.4						
PETK				pP	**sP**	**10 24 40.3**	**-1.2**
	comp=Z,1.2nm,0.6s,baz=163,slow=5.7,SNR=3.0						
	comp=Z,2.9nm,0.8s						
XLT	**XiLinHaoTe**	**58.71**	**330**	*e*P	**P**	**10 24 26.5**	**+1.2**
XLT				pP	pP	10 24 39.3	+0.9
XLT				sP	sP	10 24 47.1	+3.4
XLT				PcP	**PcP**	**10 25 16.1**	**+1.3**
XLT				pmax	pmax		
	comp=Z,13nm,0.9s						
HHC	**Hu-ho-hao-te**	**59.00**	**325**	*e*P	**P**	**10 24 29.1**	**+1.8**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,93nm,4.9s						
HEH	**HeiHe**	**59.31**	**342**	*e*P	**P**	**10 24 29.3**	**+0.1**
HEH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
LZH	**Lanzhou**	**61.03**	**316**	*e*P	**P**	**10 24 43.8**	**+2.4**
LZH				sP	sP	10 25 06.0	+6.0
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
ADK	**Adak**	**63.00**	**21**	P	**P**	**10 24 53.5**	**-0.6**
ADK				IAmb	IAmb	10 24 56.7	
	comp=Z,7.9nm,1.2s						
SONM	**Songino Array**	**66.33**	**328**	P	**P**	**10 25 16.0**	**-0.2**
SONM				IAmb	IAmb	10 25 19.5	
	comp=Z,4.5nm,0.7s						
SONM	**Songino Array**	**66.33**	**328**	P	**P**	**10 25 15.5**	**-0.7**
	comp=Z,4.1nm,0.6s,baz=141,slow=6.5,SNR=13						
SONM				pP	**sP**	**10 25 33.9**	**-0.9**
	comp=Z,1.4nm,0.6s,baz=154,slow=2.7,SNR=2.4						
	comp=Z,4.1nm,0.6s						
NIKH	**Nikolski High**	**66.89**	**25**	P	**P**	**10 25 18.5**	**-0.9**
CASY	**Casey**	**67.22**	**197**		**P**	**10 25 21.9**	**+0.5**
CASY				IAmb	IAmb	10 25 22.6	
	comp=Z,11nm,1.2s						
EVN	**Everest**	**70.88**	**302**	P	**P**	**10 25 43.9**	**-1.6**
VNDA	**Vanda**	**72.31**	**178**	P	**P**	**10 25 53.2**	**+0.8**
VNDA	**Vanda**	**72.31**	**178**	P	**P**	**10 25 52.9**	**+0.4**
	comp=Z,3.3nm,0.8s,baz=315,slow=6.1,SNR=15						
VNDA				pP	**sP**	**10 26 11.1**	**+1.0**
	comp=Z,1.8nm,0.8s,baz=349,slow=5.6,SNR=3.4						
	comp=Z,3.3nm,0.8s						
O14K	**Tigyukauivet M**	**74.31**	**23**	P	**P**	**10 26 05.3**	**+0.8**
	baz=229						
CHIR	**Chirikof Islan**	**74.59**	**28**	P	**P**	**10 26 07.0**	**+0.8**
	baz=235						
N14K	**Kuskokwak Cree**	**74.59**	**22**	P	**P**	**10 26 07.1**	**+1.1**
	baz=228						
R16K	**Pilot Point**	**74.75**	**26**	P	**P**	**10 26 07.3**	**+0.3**
	baz=233						
O15K	**Ungalikthiuk R**	**74.82**	**23**	P	**P**	**10 26 08.4**	**+1.0**
	baz=230						
K13K	**Kusilvak Mount**	**74.92**	**20**	P	**P**	**10 26 09.2**	**+1.2**
	baz=225						
M14K	**Bethel**	**75.04**	**21**	P	**P**	**10 26 09.7**	**+1.1**
	baz=228						
L14K	**Kuka Creek**	**75.18**	**21**	IAmb	IAmb	10 26 13.4	
	comp=Z,8.6nm,0.7s						
L14K	**Kuka Creek**	**75.18**	**21**	P	**P**	**10 26 10.1**	**+0.7**
	baz=227						
N15K	**Kwethluk River**	**75.36**	**23**	P	**P**	**10 26 11.5**	**+1.0**
	baz=230						
M15K	**Kasigluk River**	**75.47**	**22**	P	**P**	**10 26 12.0**	**+0.8**
	baz=229						
WMQ	**Urumqi**	**75.56**	**318**	*e*P	**P**	**10 26 14.4**	**+2.2**
WMQ				LR	LR		
	comp=N,690nm,20.7s						
WMQ				LR	LR		
	comp=E,660nm,19.7s						
WMQ				LR	LR		
	comp=Z,420nm,18.7s						
O16K	**Kokwok River B**	**75.78**	**24**	P	**P**	**10 26 14.6**	**+1.6**
	baz=232						
L15K	**Ungalak Mounta**	**75.83**	**21**	P	**P**	**10 26 14.8**	**+1.6**
	baz=228						
J14K	**Nanvaranak Lak**	**75.86**	**19**	P	**P**	**10 26 14.6**	**+1.4**
	baz=226						
Q17K	**Contact Creek**	**75.89**	**26**	P	**P**	**10 26 14.4**	**+0.6**
	baz=234						
N16K	**Nishlik Lake**	**76.06**	**23**	P	**P**	**10 26 15.6**	**+1.0**
	baz=231						
R18K	**Karluk**	**76.11**	**27**	P	**P**	**10 26 16.1**	**+1.2**
	baz=236						
P17K	**Kvichak River**	**76.21**	**25**	P	**P**	**10 26 16.6**	**+1.3**
	baz=233						
K15K	**Wolf Creek Mou**	**76.23**	**20**	P	**P**	**10 26 17.2**	**+1.7**
	baz=228,SNR=7.9						
O17K	**Koliganek Bris**	**76.29**	**24**	P	**P**	**10 26 17.2**	**+1.4**
	baz=233						
M16K	**Timber Creek**	**76.33**	**22**		**P**	**10 26 14.8**	**-1.3**
M16K				IAmb	IAmb	10 26 19.9	
	comp=Z,7.2nm,0.8s						
M16K	**Timber Creek**	**76.33**	**22**	P	**P**	**10 26 17.6**	**+1.5**
	baz=231,SNR=5.2						
OHAK	**Old Harbor**	**76.45**	**27**	P	**P**	**10 26 17.2**	**+0.5**
	baz=237						
Q18K	**Katmai Hardscr**	**76.49**	**25**	P	**P**	**10 26 18.1**	**+0.9**
	baz=235						
ANM	**Nome**	**76.57**	**18**	P	**P**	**10 26 19.3**	**+1.9**
	baz=224						
L16K	**Owhat River**	**76.58**	**22**	P	**P**	**10 26 18.4**	**+0.9**
	baz=230						
N17K	**Nushagak Hills**	**76.71**	**23**	P	**P**	**10 26 19.7**	**+1.5**
	baz=232						
P18K	**Big Mountain,**	**76.83**	**25**	P	**P**	**10 26 19.5**	**+0.6**
	baz=234						
F14K	**Arctic Creek**	**76.95**	**17**	P	**P**	**10 26 20.7**	**+1.2**
	baz=223						
KDAK	**Kodiak Island**	**77.07**	**27**	P	**P**	**10 26 21.3**	**+1.0**
	baz=237						
O18K	**Koktuh Hills**	**77.10**	**24**	P	**P**	**10 26 21.0**	**+0.5**
	baz=234						
M17K	**Holitna River**	**77.15**	**22**	P	**P**	**10 26 21.8**	**+1.2**
	baz=232						
J16K	**Anvik River**	**77.21**	**20**	P	**P**	**10 26 21.9**	**+0.9**
	baz=229						
Q19K	**Cape Douglas,**	**77.23**	**26**	P	**P**	**10 26 21.8**	**+0.6**
	baz=236						
G15K	**Niukluk**	**77.28**	**18**	P	**P**	**10 26 22.7**	**+1.4**
	baz=225						
L17K	**Donlin**	**77.28**	**22**	P	**P**	**10 26 22.5**	**+1.1**
	baz=231						
N18K	**Kilae Creek**	**77.31**	**23**	P	**P**	**10 26 23.1**	**+1.5**
	baz=234						
I17K	**Unalakleet**	**77.58**	**19**	P	**P**	**10 26 24.6**	**+1.6**
	baz=228						
H16K	**Elim**	**77.59**	**18**	P	**P**	**10 26 24.2**	**+1.2**
	baz=227						
Q20K	**Shuyak Island**	**77.60**	**26**	P	**P**	**10 26 24.1**	**+0.8**
	baz=237						
F15K	**North Star Dit**	**77.61**	**17**	P	**P**	**10 26 24.5**	**+1.3**
	baz=224						
K17K	**Iditarod**	**77.65**	**21**	P	**P**	**10 26 24.5**	**+1.1**
	baz=231						
J17K	**VABM Dome**	**77.81**	**20**	IAmb	IAmb	10 26 28.7	
	comp=Z,6.5nm,0.7s						
J17K	**VABM Dome**	**77.81**	**20**	P	**P**	**10 26 24.7**	**+0.4**
	baz=230,SNR=5.7						
P19K	**Oil Pt**	**77.81**	**25**	P	**P**	**10 26 24.4**	**0.0**
	baz=236						
L18K	**Granite Mounta**	**77.93**	**22**	IAmb	IAmb	10 26 29.5	
	comp=Z,6.1nm,0.8s						
L18K	**Granite Mounta**	**77.93**	**22**	P	**P**	**10 26 26.1**	**+1.1**
	baz=232,SNR=6.8						
G16K	**Koyuk River**	**78.07**	**18**	P	**P**	**10 26 27.0**	**+1.3**
	baz=227						
TIXI	**Tiksi**	**78.34**	**353**	P	**P**	**10 26 27.6**	**+0.5**
H17K	**Granite Mounta**	**78.53**	**19**	IAmb	IAmb	10 26 32.3	
	comp=Z,7.6nm,0.7s						
H17K	**Granite Mounta**	**78.53**	**19**	P	**P**	**10 26 30.1**	**+1.8**
	baz=229,SNR=9.3						
L19K	**White Mountain**	**78.60**	**23**	IAmb	IAmb	10 26 32.9	
	comp=Z,7.4nm,0.6s						
L19K	**White Mountain**	**78.60**	**23**	P	**P**	**10 26 30.1**	**+1.3**
	baz=234,SNR=6.6						
M19K	**Big River Lodg**	**78.62**	**23**	P	**P**	**10 26 29.6**	**+0.7**
	baz=235						
G17K	**Kiwalik Mounta**	**78.67**	**18**	P	**P**	**10 26 30.2**	**+1.2**
	baz=228,SNR=7.2						
J18K	**Innoko River**	**78.68**	**21**		**P**	**10 26 27.1**	**-2.0**
J18K				IAmb	IAmb	10 26 32.8	
	comp=Z,6.5nm,0.7s						
J18K	**Innoko River**	**78.68**	**21**	P	**P**	**10 26 30.7**	**+1.5**
	baz=232,SNR=12						
BRSE	**Bradley Lake S**	**78.92**	**26**	P	**P**	**10 26 31.9**	**+1.3**
	baz=238						
SPCR	**Spurr Chakacha**	**79.09**	**24**	P	**P**	**10 26 33.2**	**+1.7**
	baz=237						
M20K	**Styx River**	**79.10**	**23**	P	**P**	**10 26 32.3**	**+0.7**
	baz=236						
L20K	**Farewell, AK**	**79.14**	**23**	P	**P**	**10 26 32.4**	**+0.6**
	baz=235						
H18K	**Honhosa River**	**79.17**	**19**	P	**P**	**10 26 32.9**	**+1.1**
	baz=230						
C16K	**Lisburne Hills**	**79.27**	**15**	P	**P**	**10 26 33.7**	**+1.4**
	baz=223						
E17K	**Hotham Inlet**	**79.38**	**17**	P	**P**	**10 26 34.2**	**+1.3**
	baz=227						
J19K	**Poorman**	**79.39**	**21**	P	**P**	**10 26 34.3**	**+1.3**
	baz=233						
GCSA	**Galena City Sc**	**79.41**	**20**	P	**P**	**10 26 34.6**	**+1.6**
	baz=232,SNR=7.0						
D17K	**Noatak River**	**79.46**	**16**	P	**P**	**10 26 34.9**	**+1.6**
	baz=226						
G18K	**Tagagawik**	**79.55**	**18**	IAmb	IAmb	10 26 37.3	
	comp=Z,4.6nm,0.6s						
G18K	**Tagagawik**	**79.55**	**18**	P	**P**	**10 26 35.2**	**+1.3**
	baz=230,SNR=7.5						
K20K	**Telida**	**79.58**	**22**	P	**P**	**10 26 35.5**	**+1.4**
	baz=235						
SEW	**Seward**	**79.67**	**26**	P	**P**	**10 26 36.2**	**+1.6**
	baz=240						
F18K	**Selawik**	**79.70**	**18**	P	**P**	**10 26 36.3**	**+1.7**
	baz=229						
RDOG	**Red Dog Mine**	**79.76**	**16**	P	**P**	**10 26 36.6**	**+1.6**
	baz=226						
SKT	**Skwentna**	**79.78**	**24**	P	**P**	**10 26 35.8**	**+0.6**
	baz=237						
E18K	**Tukpahlearik C**	**79.97**	**17**	IAmb	IAmb	10 26 39.7	
	comp=Z,4.2nm,0.6s						
E18K	**Tukpahlearik C**	**79.97**	**17**	P	**P**	**10 26 37.0**	**+0.9**
	baz=228,SNR=8.5						
C17K	**DeLong Mountai**	**79.98**	**15**	P	**P**	**10 26 36.4**	**+0.3**
	baz=225,SNR=5.6						
J20K	**Nowinta River**	**80.02**	**21**		**P**	**10 26 33.9**	**-2.6**
J20K				IAmb	IAmb	10 26 40.6	
	comp=Z,6.8nm,0.7s						
J20K	**Nowinta River**	**80.02**	**21**	P	**P**	**10 26 37.5**	**+1.0**
	baz=235,SNR=9.9						
PPLA	**Purkeypile**	**80.02**	**23**	P	**P**	**10 26 37.4**	**+0.8**
	baz=237						
H19K	**Roundabout Mou**	**80.03**	**19**	P	**P**	**10 26 37.8**	**+1.3**
	baz=232,SNR=7.6						
MKAR	**Makanchi Array**	**80.17**	**319**		**P**	**10 26 35.8**	**-1.9**
MKAR	**Makanchi Array**	**80.17**	**319**	P	**P**	**10 26 35.7**	**-2.0**
	comp=Z,2.9nm,0.8s,baz=114,slow=5.9,SNR=14						
MKAR				pP	**pP**	**10 26 53.8**	**+2.6**
	comp=Z,0.4nm,0.5s,baz=76,slow=6.4,SNR=2.0						
	comp=Z,2.9nm,0.8s						
G19K	**Purcell Mounta**	**80.21**	**19**	P	**P**	**10 26 38.9**	**+1.5**
	baz=232,SNR=6.0						
I20K	**Naaghedeneel**	**80.26**	**20**	P	**P**	**10 26 39.1**	**+1.4**
	baz=234						
CAST	**Castle Rocks**	**80.35**	**22**	P	**P**	**10 26 39.1**	**+0.8**
	baz=237,SNR=7.9						
MAKZ	**Makanchi**	**80.38**	**319**		**P**	**10 26 37.6**	**-1.2**
F19K	**Shaleruckik Mo**	**80.42**	**18**	IAmb	IAmb	10 26 41.8	
	comp=Z,6.0nm,0.7s						
F19K	**Shaleruckik Mo**	**80.42**	**18**	P	**P**	**10 26 39.5**	**+1.0**
	baz=231						
P23K	**Montague Islan**	**80.51**	**26**	P	**P**	**10 26 40.0**	**+0.8**
	baz=242						
CHUM	**Lake Minchumin**	**80.52**	**22**	P	**P**	**10 26 40.1**	**+1.0**
	baz=236,SNR=6.1						
PWL	**Port Wells**	**80.53**	**25**	P	**P**	**10 26 39.7**	**+0.5**
	baz=240						
H20K	**Anotleneega Mo**	**80.54**	**20**	P	**P**	**10 26 40.1**	**+0.9**
	baz=234						
PMR	**Palmer**	**80.56**	**25**	P	**P**	**10 26 40.7**	**+1.4**
	baz=240						
C18K	**Utukok River**	**80.63**	**16**	P	**P**	**10 26 40.3**	**+0.6**
	baz=227						
KNK	**Knik Glacier**	**80.75**	**25**	P	**P**	**10 26 41.4**	**+0.9**
	baz=240						
KTH	**Kantishna Hill**	**80.86**	**22**	IAmb	IAmb	10 26 43.5	
	comp=Z,4.5nm,0.6s						
B18K	**Kokolik River**	**80.96**	**15**	P	**P**	**10 26 42.7**	**+1.3**
	baz=227						
E19K	**Redstone River**	**80.98**	**18**	P	**P**	**10 26 43.1**	**+1.6**
	baz=231,SNR=22						
SML	**Sawmill**	**80.99**	**25**	P	**P**	**10 26 42.7**	**+0.9**
	baz=240						
TRF	**Thorofare Moun**	**81.05**	**23**	P	**P**	**10 26 43.4**	**+1.2**
	baz=238						
GLI	**Glacier Island**	**81.07**	**26**	P	**P**	**10 26 42.9**	**+0.8**
	baz=242						
BPAW	**Bear Paw Mtn.**	**81.13**	**22**	P	**P**	**10 26 44.3**	**+1.9**
	baz=238						
ZAA0	**Zalesovo Array**	**81.13**	**327**		**P**	**10 26 40.9**	**-1.7**
ZAA0				IAmb	IAmb	10 26 43.3	
	comp=Z,4.8nm,0.7s						
ZALV	**Zalesovo Beam**	**81.13**	**327**	P	**P**	**10 26 41.4**	**-1.2**
	comp=Z,5.9nm,0.7s,baz=104,slow=3.8,SNR=14						
	comp=Z,5.9nm,0.7s						
F20K	**Avaraart Lake**	**81.19**	**18**	P	**P**	**10 26 44.1**	**+1.4**
	baz=233						
IMAR	**Indian Mountai**	**81.20**	**20**	P	**P**	**10 26 42.5**	**-0.3**
H21K	**Melozitna Rive**	**81.34**	**20**	P	**P**	**10 26 44.9**	**+1.4**
	baz=236						
C19K	**Lookout Ridge**	**81.37**	**16**	P	**P**	**10 26 43.2**	**-0.4**
C19K				IAmb	IAmb	10 26 47.3	
	comp=Z,6.6nm,0.6s						
C19K	**Lookout Ridge**	**81.37**	**16**	P	**P**	**10 26 44.5**	**+0.8**
	baz=229,SNR=10						
D19K	**Kuna River**	**81.38**	**17**	IAmb	IAmb	10 26 46.9	
	comp=Z,5.0nm,0.6s						
D19K	**Kuna River**	**81.38**	**17**	P	**P**	**10 26 45.0**	**+1.3**
	baz=230,SNR=9.7						
SCM	**Sheep Creek Mo**	**81.42**	**25**	P	**P**	**10 26 46.2**	**+2.1**
	baz=241						
EYAK	**Cordova Ski Ar**	**81.50**	**26**	P	**P**	**10 26 45.4**	**+1.1**
	baz=243						
RND	**Reindeer**	**81.58**	**23**	IAmb	IAmb	10 26 47.5	
	comp=Z,7.2nm,0.7s						
G21K	**Allakaket**	**81.59**	**19**	P	**P**	**10 26 46.5**	**+1.7**
	baz=235						
WAT6	**Susitna Watana**	**81.61**	**24**	P	**P**	**10 26 46.3**	**+1.1**
	baz=241						
MCK	**McKinley**	**81.72**	**23**	IAmb	IAmb	10 26 48.2	
	comp=Z,8.4nm,0.7s						
MCK	**McKinley**	**81.72**	**23**	P	**P**	**10 26 47.0**	**+1.4**
	baz=240						
A19K	**Wainwright**	**81.72**	**15**	P	**P**	**10 26 47.8**	**+2.5**
	baz=227						
MLY	**Manley**	**81.72**	**21**	P	**P**	**10 26 47.1**	**+1.6**
	baz=238,SNR=19						
E20K	**Nigu River**	**81.79**	**17**	P	**P**	**10 26 47.2**	**+1.3**
	baz=232,SNR=13						
KAIM	**Kayak Island**	**81.82**	**27**	P	**P**	**10 26 47.2**	**+1.1**
	baz=244						
KLU	**Klutina**	**81.86**	**25**	P	**P**	**10 26 48.0**	**+1.6**
	baz=243						
D20K	**Etivluk River**	**81.95**	**17**	P	**P**	**10 26 48.3**	**+1.6**
	baz=232						
H22K	**Ishtalitna Cre**	**81.96**	**20**	P	**P**	**10 26 48.6**	**+1.9**
	baz=237						
DHY	**Denali Highway**	**82.00**	**24**	P	**P**	**10 26 47.1**	**-0.1**
DHY	**Denali Highway**	**82.00**	**24**	P	**P**	**10 26 48.5**	**+1.3**
	baz=241						
F21K	**Alatna River**	**82.00**	**19**	P	**P**	**10 26 47.6**	**+0.6**
F21K	**Alatna River**	**82.00**	**19**	P	**P**	**10 26 48.4**	**+1.4**
	baz=235						
M24K	**Tolsona, Glenn**	**82.03**	**25**	P	**P**	**10 26 48.6**	**+1.3**
	baz=242						
NEA2	**Nenana**	**82.10**	**22**	IAmb	IAmb	10 26 50.0	
	comp=Z,5.2nm,0.6s						
NEA2	**Nenana**	**82.10**	**22**	P	**P**	**10 26 49.0**	**+1.5**
	baz=239,SNR=9.4						
BMRM	**Bremner River**	**82.19**	**26**	P	**P**	**10 26 49.7**	**+1.6**
	baz=244						
I23K	**Minto, Yukon-K**	**82.28**	**21**	P	**P**	**10 26 49.7**	**+1.3**
	baz=239,SNR=6.0						
KDJ	**Kajisay**	**82.36**	**314**		**P**	**10 26 49.0**	**-0.6**
KDJ				IAmb	IAmb	10 26 51.9	
	comp=Z,8.1nm,0.8s						
N25K	**Chitina, Valde**	**82.47**	**26**	P	**P**	**10 26 51.2**	**+1.6**
	baz=244						
G22K	**Bettles**	**82.48**	**19**	P	**P**	**10 26 51.0**	**+1.6**
	baz=237						
E21K	**Killik River**	**82.56**	**18**	P	**P**	**10 26 49.6**	**-0.2**
E21K				IAmb	IAmb	10 26 53.3	
	comp=Z,4.3nm,0.7s						
E21K	**Killik River**	**82.56**	**18**	P	**P**	**10 26 51.5**	**+1.6**
	baz=234						
H23K	**Yukon River**	**82.56**	**21**	P	**P**	**10 26 51.6**	**+1.7**
	baz=239						
F22K	**John River**	**82.58**	**19**	P	**P**	**10 26 51.4**	**+1.5**
	baz=236						
HARP	**HAARP**	**82.59**	**25**	P	**P**	**10 26 51.2**	**+1.1**
	baz=243						
CCB	**Clear Creek Bu**	**82.60**	**22**	P	**P**	**10 26 49.6**	**-0.5**
CCB				IAmb	IAmb	10 26 52.3	
	comp=Z,4.6nm,0.6s						
B20K	**Meade River**	**82.61**	**16**	P	**P**	**10 26 51.7**	**+1.7**
	baz=231						
COLA	**College**	**82.69**	**22**	P	**P**	**10 26 52.1**	**+1.5**
	baz=240						
PAX	**Paxson**	**82.72**	**24**	P	**P**	**10 26 49.5**	**-1.4**
PAX	**Paxson**	**82.72**	**24**	P	**P**	**10 26 52.0**	**+1.1**
	baz=243						
C21K	**Knifeblade Rid**	**82.74**	**17**	P	**P**	**10 26 52.5**	**+1.7**
	baz=233						
HDA	**Harding Lake**	**82.81**	**23**	IAmb	IAmb	10 26 54.1	
	comp=Z,3.5nm,0.6s						
HDA	**Harding Lake**	**82.81**	**23**	P	**P**	**10 26 53.1**	**+1.9**
	baz=241,SNR=5.7						
G23K	**Bananza Creek**	**82.86**	**20**	P	**P**	**10 26 51.4**	**-0.1**
G23K				IAmb	IAmb	10 26 55.2	
	comp=Z,5.3nm,0.8s						
G23K	**Bananza Creek**	**82.86**	**20**	P	**P**	**10 26 52.5**	**+1.0**
	baz=238,SNR=8.9						
K24K	**Donnelly Dome**	**82.98**	**23**	P	**P**	**10 26 52.9**	**+0.8**
	baz=242						
IL31		**83.01**	**22**	IAmb	IAmb	10 26 54.2	
	comp=Z,5.4nm,0.7s						
ILAR	**Eielson Array**	**83.01**	**22**		**P**	**10 26 51.6**	**-0.6**
ILAR	**Eielson Array**	**83.01**	**22**	P	**P**	**10 26 51.1**	**-1.1**
	comp=Z,4.9nm,0.7s,baz=246,slow=4.9,SNR=70						
	comp=Z,4.9nm,0.7s						
E22K	**Anaktuvuk Pass**	**83.05**	**18**	P	**P**	**10 26 53.7**	**+1.3**
	baz=236,SNR=5.1						
B21K	**Ikpikpuk River**	**83.07**	**16**	P	**P**	**10 26 53.5**	**+1.1**
	baz=234						
COLD	**Coldfoot**	**83.07**	**19**	P	**P**	**10 26 53.6**	**+1.1**
	baz=238						
H24K	**Noodor Dome**	**83.16**	**21**	P	**P**	**10 26 54.8**	**+1.7**
	baz=240,SNR=6.3						
D22K	**Ayikyak River**	**83.20**	**17**		**P**	**10 26 52.0**	**-1.2**
D22K				IAmb	IAmb	10 26 56.8	
	comp=Z,3.3nm,0.6s						
D22K	**Ayikyak River**	**83.20**	**17**	P	**P**	**10 26 55.5**	**+2.3**
	baz=236						
RIDG	**Independent Ri**	**83.32**	**24**	P	**P**	**10 26 55.9**	**+2.0**
	baz=243						
M26K	**Nabesna, AK**	**83.50**	**25**	P	**P**	**10 26 57.1**	**+2.2**
	baz=245						

J25K	Salcha River,	83.51	23	P	P	10 26 56.7	+1.8
	baz=243,SNR=25						
NIL	Nilore	83.57	305	P	P	10 26 54.9	-1.0
NIL				IAmb	IAmb	10 26 55.8	
	comp=Z,7.0nm,0.9s						
DOT	Dot Lake	83.59	24	IAmb	IAmb	10 26 58.7	
	comp=Z,4.2nm,0.7s						
L26K	Log Cabin Wild	83.61	25	P	P	10 26 56.9	+1.5
	baz=245						
CTG	Chitna Glacier	83.64	27	P	P	10 26 56.7	+1.0
	baz=247						
KURK	Kurchatov	83.67	322	P	P	10 26 54.8	-1.1
KURK				IAmb	IAmb	10 26 57.4	
	comp=Z,6.6nm,0.9s						
KURBB	Kurchatov Arra	83.70	322	P	P	10 26 53.9	-2.1
	comp=Z,3.4nm,0.8s,baz=113,slow=4.4,SNR=16						
	comp=Z,3.4nm,0.8s						
E23K	Chandalar	83.70	19	P	P	10 26 57.4	+1.5
	baz=238,SNR=6.9						
G24K	Hadweenzic Riv	83.73	20	P	P	10 26 57.2	+1.3
	baz=241,SNR=5.9						
SCRK	Sand Creek	83.77	24		P	10 26 55.9	-0.5
SCRK	Sand Creek	83.77	24	P	P	10 26 57.3	+1.0
	baz=244,SNR=5.1						
A22K	Sinclair Lake	83.80	15	P	P	10 26 57.9	+1.8
	baz=233						
PINM	Pinnacle	83.80	28	P	P	10 26 57.0	+0.5
	baz=248						
B22K	Teshekpuk Lake	83.82	16	P	P	10 26 58.0	+1.8
	baz=235						
D23K	Nanushuk River	83.85	18	P	P	10 26 58.0	+1.5
	baz=237,SNR=9.6						
PRP	Porcupine Dome	83.87	22	P	P	10 26 58.1	+1.3
	baz=243						
M27K	Edge Creek, AK	83.96	25	IAmb	IAmb	10 27 01.7	
	comp=Z,4.4nm,0.7s						
M27K	Edge Creek, AK	83.96	25	P	P	10 26 58.5	+1.2
	baz=246,SNR=5.3						
F24K	Squaw Lake	83.99	20	IAmb	IAmb	10 27 01.3	
	comp=Z,6.4nm,0.7s						
F24K	Squaw Lake	83.99	20	P	P	10 26 58.5	+1.2
	baz=240,SNR=14						
TOLK	Toolik Lake Re	84.02	18	P	P	10 26 58.8	+1.3
	baz=238						
PNL	Peninsula	84.05	28	P	P	10 26 59.3	+1.6
	baz=249						
E24K	Your Creek	84.07	19	P	P	10 26 59.2	+1.5
	baz=240						
O28M	Mount Upton	84.08	27	P	P	10 26 58.0	-0.2
	baz=248						
H25L	Birch Creek	84.11	21	P	P	10 27 00.3	+2.5
	baz=242						
J26L	Joseph Creek	84.16	23	P	P	10 26 59.4	+1.1
	baz=244						
G25K	Bearman Lake	84.24	21	P	P	10 26 59.8	+1.4
	baz=242						
L27K	Beaver Creek,	84.26	25	P	P	10 27 00.2	+1.5
	baz=246						
C23K	Itkillik River	84.34	17	P	P	10 27 00.0	+1.1
	baz=237						
YUK3	Moose Creek	84.34	26	P	P	10 27 00.6	+1.2
	baz=248						
BVCY	Beaver Creek	84.42	26	P	P	10 27 01.2	+1.7
	baz=247						
AAK	Ala-Archa	84.42	314		P	10 26 59.5	-0.6
AAK				IAmb	IAmb	10 27 01.9	
	comp=Z,3.8nm,0.7s						
AAK	Ala-Archa	84.42	314	P	P	10 26 58.3	-1.9
	comp=Z,3.6nm,0.7s,baz=164,slow=4.4,SNR=7.3						
	comp=Z,3.6nm,0.7s						
YUK8	Steele Glacier	84.47	27	P	P	10 27 00.9	+0.8
	baz=248						
D24K	Happy Valley	84.52	18	P	P	10 27 01.5	+1.6
	baz=239						
K27K	Chicken	84.55	24	P	P	10 27 02.4	+2.2
	baz=246						
QSPA	South Pole Qui	84.60	180	P	P	10 26 59.5	-1.0
	comp=Z,3.9nm,0.7s,baz=289,slow=0.8,SNR=22						
	comp=Z,3.9nm,0.7s						
O29M	Mount Kennedy	84.66	28	P	P	10 27 02.0	+1.1
	baz=249						
I26K	Coal Creek Min	84.66	22	P	P	10 27 02.6	+1.9
	baz=245						
F25K	Christian Rive	84.78	20	P	P	10 27 03.4	+2.1
	baz=242						
P29M	Windy Craggy	84.82	29	P	P	10 27 04.1	+2.5
	baz=250						
C24K	Franklin Bluff	84.85	18	P	P	10 27 03.7	+2.2
	baz=239						
YUK6	Outpost Mounta	84.98	27	P	P	10 27 04.3	+1.6
	baz=250						
YUK4	Talbot Arm	84.99	27	P	P	10 27 04.9	+2.2
	baz=249						
E25K	Arctic Village	85.06	19	P	P	10 27 04.9	+2.3
	baz=242						
G26K	Porcupine Rive	85.14	21	P	P	10 27 05.3	+2.3
	baz=244,SNR=8.8						
HYT	Haines Junctio	85.33	28	IAmb	IAmb	10 27 09.8	
	comp=Z,5.1nm,0.7s						
HYT	Haines Junctio	85.33	28	P	P	10 27 06.0	+1.7
	baz=250,SNR=7.1						
F26K	Sheenjek River	85.34	20	P	P	10 27 06.7	+2.6
	baz=244						
P30M	Million Dollar	85.36	28	P	P	10 27 06.0	+1.7
	baz=251						
D25K	Kavik River	85.36	18	P	P	10 27 06.6	+2.4
	baz=241,SNR=6.6						
I27K	Kandik River	85.37	22	P	P	10 27 06.6	+2.3
	baz=246,SNR=6.2						
M29M	Somme Creek	85.46	26	P	P	10 27 04.1	-0.7
M29M				IAmb	IAmb	10 27 19.7	
	comp=Z,4.0nm,1.0s						
M29M	Somme Creek	85.46	26	P	P	10 27 06.6	+1.8
	baz=249						
DAWY	Dawson	85.66	24	P	P	10 27 07.1	+1.4
	baz=248						
H27K	Steamboat Moun	85.66	22		P	10 27 05.1	-0.6
H27K				IAmb	IAmb	10 27 09.4	
	comp=Z,4.6nm,0.8s						
H27K	Steamboat Moun	85.66	22	P	P	10 27 07.8	+2.1
	baz=246,SNR=8.5						
N30M	Aishikik Lake	85.74	27	P	P	10 27 07.6	+1.4
	baz=251						
L29M	L29M	85.84	25		P	10 27 05.5	-1.1
L29M				IAmb	IAmb	10 27 11.8	
	comp=Z,3.4nm,0.5s						
L29M	L29M	85.84	25	P	P	10 27 08.5	+1.9
	baz=250						
G27K	Doyon Strip	85.84	21	P	P	10 27 08.3	+1.8
	baz=246						
I28M	Miner Creek	85.95	23	P	P	10 27 06.1	-1.1
I28M				IAmb	IAmb	10 27 10.9	
	comp=Z,3.1nm,0.6s						
I28M	Miner Creek	85.95	23	P	P	10 27 07.7	+0.5
	baz=248,SNR=6.8						
C26K	Camden Bay	86.09	18	P	P	10 27 09.5	+1.8
	baz=243						
C27K	Jago River	86.34	18	P	P	10 27 10.1	+1.2
	baz=244,SNR=5.0						
N31M	Braeburn, Yuko	86.34	27	P	P	10 27 08.9	-0.3
N31M				IAmb	IAmb	10 27 22.5	
	comp=Z,6.1nm,1.1s						
N31M	Braeburn, Yuko	86.34	27	P	P	10 27 10.3	+1.2
	baz=252						
K29M	Barlow Dome	86.35	25	IAmb	IAmb	10 27 37.9	
	comp=Z,5.9nm,0.9s						
K29M	Barlow Dome	86.35	25	P	P	10 27 10.6	+1.3
	baz=250,SNR=8.4						
E27K	Coleen River	86.42	20	P	P	10 27 10.1	+0.6
	baz=246,SNR=7.9						
WHY	Whitehorse	86.50	28	P	P	10 27 11.1	+1.1
	baz=253						
I29M	Ogilvie Camp,	86.56	23	IAmb	IAmb	10 27 13.8	
	comp=Z,3.5nm,0.7s						
I29M	Ogilvie Camp,	86.56	23	P	P	10 27 12.3	+2.2
	baz=249,SNR=6.6						
F28M	Old Crow	86.80	21	P	P	10 27 13.5	+2.2
	baz=248,SNR=7.1						
H29M	Whitestone	86.84	22	P	P	10 27 13.2	+1.8
	baz=249						
MAYO	Mayo, Yukon	86.95	25	P	P	10 27 13.6	+1.5
	baz=252						
D27M	Malcolm River	87.06	19	P	P	10 27 14.7	+2.1
	baz=247,SNR=6.0						
J30M	Hart River	87.08	24	P	P	10 27 14.7	+1.9
	baz=251,SNR=9.2						
M31M	Drury Creek, Y	87.19	27	P	P	10 27 15.0	+1.8
	baz=253						
G29M	Pine Creek	87.21	22	P	P	10 27 15.1	+1.8
	baz=249						
I30M	Mount Dempster	87.27	24	P	P	10 27 15.2	+1.4
	baz=251						
E28M	Babbage River	87.29	20	IAmb	IAmb	10 27 17.5	
	comp=Z,3.1nm,0.6s						
E28M	Babbage River	87.29	20	P	P	10 27 15.9	+2.3
	baz=248,SNR=5.8						
P33M	Teslin, Yukon	87.36	29	P	P	10 27 14.8	+0.6
	baz=254						
KK31	Karatay Array	87.38	314	P	P	10 27 14.1	-0.6
KK31				IAmb	IAmb	10 27 15.9	
	comp=Z,9.5nm,1.5s						
KKAR	Karatay Array	87.38	314		P	10 27 14.2	-0.4
N32M	Quiet Lake	87.49	28	P	P	10 27 15.1	+0.3
	baz=254						
EPYK	Eagle Plains	87.52	22	P	P	10 27 14.6	-0.1
EPYK	Eagle Plains	87.52	22	P	P	10 27 16.2	+1.4
	baz=251,SNR=6.2						
S34M	Telegraph Cree	87.62	31	P	P	10 27 16.9	+1.5
	baz=256						
FARO	Faro, Yukon	87.66	27	P	P	10 27 13.5	-2.1
FARO				IAmb	IAmb	10 27 20.2	
	comp=Z,3.1nm,0.7s						
FARO	Faro, Yukon	87.66	27	P	P	10 27 16.6	+1.1
	baz=254						
E29M	Blow River	87.78	20	P	P	10 27 17.6	+1.7
	baz=250						
G30M	tAoh Zraii Nji	87.90	22	P	P	10 27 17.9	+1.3
	baz=251						
R33M	Jennings River	88.06	30	P	P	10 27 18.8	+1.1
	baz=256						
BBB	Bella Bella	88.07	37	LR	LR	11 02 27.4	
	comp=Z,715nm,18.7s,baz=38,slow=33						
H31M	Peel River	88.26	23	IAmb	IAmb	10 27 21.9	
	comp=Z,4.5nm,0.7s						
H31M	Peel River	88.26	23	P	P	10 27 19.3	+1.0
	baz=253						
F30M	Barrier River	88.27	21	P	P	10 27 19.2	+0.9
	baz=252,SNR=8.5						
G31M	Satah River	88.62	22	IAmb	IAmb	10 27 23.1	
	comp=Z,3.8nm,0.8s						
G31M	Satah River	88.62	22	P	P	10 27 20.5	+0.6
	baz=253						
MMPY	Sheldon Lake,	88.70	27	P	P	10 27 20.8	+0.3
	baz=256						
F31M	Tsiigehtchic	88.96	22	P	P	10 27 22.4	+0.9
	baz=253						
BVAR	Borovoye Array	89.16	323	P	P	10 27 21.1	-1.7
	comp=Z,6.9nm,0.8s,baz=222,slow=2.0,SNR=28						
	comp=Z,6.9nm,0.8s						
BRVK	Borovoye	89.23	323		P	10 27 22.6	-0.5
INK	Inuvik	89.29	21	P	P	10 27 24.4	+1.4
	baz=254						
TOAD	Toad River Com	90.85	31	P	P	10 27 31.5	+0.9
	baz=261						
J05D	Fort Rock, OR	91.34	47		P	10 27 32.2	-1.2
PINE	Pine Mountain	91.61	46		P	10 27 32.8	-1.9
BEKR	Beckworth	91.65	50	P	P	10 27 33.4	-1.5
NVAR	Mina Array Bea	93.12	52	P	P	10 27 40.2	-1.6
NVAR	Mina Array Bea	93.12	52	P	P	10 27 41.4	-0.5
	comp=Z,2.4nm,0.8s,baz=256,slow=6.2,SNR=14						
	comp=Z,2.4nm,0.8s						
G08A	Pilot Rock	93.15	45	P	P	10 27 39.2	-2.5
G08A				IAmb	IAmb	10 27 44.5	
	comp=Z,2.9nm,1.1s						
ABKAR	Akbulak array	95.32	319	P	P	10 27 49.8	-1.5
YKA	Yellowknife Ar	96.33	28	P	P	10 27 56.7	+1.1
	comp=Z,0.6nm,0.6s,baz=276,slow=5.0,SNR=7.6						
	comp=Z,0.6nm,0.6s						
PDAR	Pinedale Array	99.87	48	P	Pdif	10 28 11.2	-1.1
	comp=Z,1.1nm,0.9s,baz=279,slow=3.8,SNR=6.3						
	comp=Z,1.1nm,0.9s						
MODS	Modra-Piesok	122.39	326	*e*PP	PP	10 34 57.1	-1.4
CLL	Collm	122.91	331	*e*PKPdf	PKiKP	10 33 24.0	+0.5
GERES	GERESS Array B	124.07	328	PKP	PKPdf	10 33 24.3	-1.5
	comp=Z,1.0nm,0.7s,baz=57,slow=4.9,SNR=6.3						
EKA	Eskdalemuir Ar	126.31	343	PKP	PKPdf	10 33 28.5	-1.2
	comp=Z,0.5nm,0.4s,baz=9.9,slow=2.3,SNR=5.7						

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*IDC **21** 10:22:27.7±4.0, 53°.55N×89°.60E, h0^{km}, mbtmp3.3/3, ML2.8/3, Error ellipse: s-maj=41.6km s-min=22.7km az=45.0*

ASRS 21 10:22:19.0±1.3**, 53°.76N×90°.10E, h0^{km}, M2.8, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	3.13	276	I	I	10 41 15.0	
	0.2nm,1.2s,baz=92,slow=315,SNR=8.1						
ZALV	Zalesovo Beam	3.13	276	Pn	Pb	10 23 15.9	+0.3
	2.4nm,0.3s,baz=96,slow=10,SNR=31						
ZALV				Lg	Lg	10 23 56.8	
	2.5nm,0.3s,baz=96,slow=26,SNR=8.7						
	8.1nm,0.4s						
KURBB	Kurchatov Arra	7.77	251	Pn	Pn	10 24 17.9	+4.6
	0.2nm,0.3s,baz=65,slow=14,SNR=12						
KURBB				Lg	Lg	10 26 24.2	
	baz=76,slow=34						
	1.8nm,0.4s						
MKAR	Makanchi Array	8.58	219	Pn	Pn	10 24 28.6	+4.3
	0.3nm,0.3s,baz=33,slow=14,SNR=12						
	0.3nm,0.3s						

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*IDC **21** 10:25:48.4±2.6, 22°.37S×179°.56W, h592^{km}±22^{km}, mb3.5/9, mbtmp4.5/11, Error ellipse: s-maj=48.1km s-min=15.0km az=144.0*

*NEIC **21** 10:25:50.5±1.2, 22°.2S±0°.2×179°.75W±0°.08, h595^{km}±9^{km}, mb4.5/24, Error ellipse: s-maj=30.6km s-min=9.4km az=170.0*

ISC 21 10:25:47.0±0.7**, 22°.6S**±0°.1×**179°.5W**±0°.1**, h579^{km}, n47, σ1^{s}15**/46**, mb4.5**/20**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.40	334	P	P	10 27 21.9	-0.2
	25nm,0.3s,baz=289,slow=24,SNR=101						
MSVF				S	S	10 28 38.4	-1.2
	9.2nm,1.1s,baz=126,slow=19,SNR=1.0						
DZM	Mont Dzumac	13.06	270	P	P	10 28 37.9	+1.2
DZM	Mont Dzumac	13.06	270	P	P	10 28 38.4	+1.8
	6.7nm,0.5s,baz=120,slow=12,SNR=25						
SANVU	Saraoutou	14.48	297	P	P	10 28 50.6	-0.4
URZ	Urewera	15.86	190	S	S	10 31 39.9	-4.5
	11nm,0.9s,baz=204,slow=20,SNR=2.0						
EIDS	Eidsvold	27.03	258	P	P	10 30 45.2	+1.0
EIDS				IAmb	IAmb	10 30 45.5	
	comp=Z,8.3nm,0.7s						
CAN	Canberra	30.22	238	P	P	10 31 14.1	+2.3
CTAO	Charters Tower	31.99	268	P	P	10 31 27.4	+0.3
CTAO				IAmb	IAmb	10 31 27.9	
	comp=Z,13nm,0.8s						
TOO	Toolangi	33.57	236	P	P	10 31 42.0	+1.9
PMG	Port Moresby	34.57	287	P	P	10 31 47.2	-1.6
STKA	Stephens Creek	35.67	247		P	10 31 59.0	+1.3
STKA	Stephens Creek	35.67	247	P	P	10 31 58.4	+0.7
	comp=Z,8.2nm,0.4s,baz=83,slow=9.6,SNR=16						
	comp=Z,8.2nm,0.4s						
COEN	Coen	36.43	277	P	P	10 32 04.1	0.0
COEN				IAmb	IAmb	10 32 36.3	
	comp=Z,10.0nm,1.0s						
BBOO	Buckleboo	40.41	246	P	P	10 32 36.6	+0.5
BBOO				IAmb	IAmb	10 32 36.7	
	comp=Z,8.6nm,0.4s						
AS31	Alice Springs	42.75	259		P	10 32 54.6	0.0
AS31				IAmb	IAmb	10 32 55.5	
	comp=Z,7.9nm,0.3s						
ASAR	Alice Springs	42.75	259	P	P	10 32 54.6	-0.1
	comp=Z,10nm,0.4s,baz=97,slow=7.3,SNR=216						
	comp=Z,10nm,0.4s						
WR8	Warramunga Arr	42.85	265		P	10 32 54.8	-0.7
WB0	Warramunga Arr	42.99	265		P	10 32 56.0	-0.6
WB2	Warramunga Arr	42.99	265	P	P	10 32 55.9	-0.7
WB2				IAmb	IAmb	10 32 56.5	
	comp=Z,16nm,0.8s						
WRAB	Tennant Creek	43.00	265	P	P	10 32 55.8	-0.8
WRAB				IAmb	IAmb	10 32 56.4	
	comp=Z,13nm,0.9s						
WRA	Warramunga Arr	43.00	265	P	P	10 32 56.0	-0.7
WRA	Warramunga Arr	43.00	265	P	P	10 32 55.8	-0.9
	comp=Z,9.8nm,0.5s,baz=97,slow=8.3,SNR=347						
	comp=Z,9.8nm,0.5s						
KNRA	Kununurra	49.20	268	P	P	10 33 43.3	-0.3
KNRA				IAmb	IAmb	10 33 44.8	
	comp=Z,14nm,0.5s						
FITZ	Fitzroy Crossi	51.43	264	P	P	10 34 00.1	+0.3
FITZ	Fitzroy Crossi	51.43	264	P	P	10 34 00.1	+0.3
	comp=Z,4.8nm,0.3s,baz=126,slow=5.9,SNR=8.6						
	comp=Z,4.8nm,0.3s						
TOLI2	Tolitoli	62.75	284	P	P	10 35 15.9	-1.0
TOLI2				IAmb	IAmb	10 35 18.2	
	comp=Z,11nm,0.6s						
UGM	Wanagama	68.59	270	P	P	10 35 52.9	-0.5
PEA0B	Petropavlovsk-	77.98	346	P	P	10 36 45.6	-0.3
PEA0B				IAmb	IAmb	10 37 25.9	
	comp=Z,18nm,1.4s						
PETK	Petropavlovsk-	77.98	346	P	P	10 36 45.7	-0.2
PETK	Petropavlovsk-	77.98	346	P	P	10 36 45.0	-0.9
	comp=Z,0.6nm,0.3s,baz=188,slow=7.0,SNR=4.0						
	comp=Z,0.6nm,0.3s						
P08K	Saint George I	79.36	6	P	P	10 36 53.1	0.0
BEKR	Beckworth	83.05	42	P	P	10 37 13.8	+1.1
NVAR	Mina Array Bea	83.49	44	P	P	10 37 13.9	-1.1
	comp=Z,0.7nm,0.8s,baz=256,slow=5.6,SNR=4.5						
	comp=Z,0.7nm,0.8s						
N15K	Kwethluk River	84.00	10	P	P	10 37 17.5	+0.8
TXAR	Lajitas Array	89.34	58	P	P	10 37 43.6	+0.7
	comp=Z,0.8nm,0.9s,baz=235,slow=4.1,SNR=7.3						
	comp=Z,0.8nm,0.9s						
BSUT	Blindstream Ca	89.53	45	P	P	10 37 45.3	+1.4
BSUT				IAmb	IAmb	10 37 45.4	
	comp=Z,3.3nm,0.9s						
CMAR	Chiang Mai Arr	89.55	290	P	P	10 37 44.5	+0.5
	comp=Z,1.2nm,0.3s,baz=142,slow=2.8,SNR=6.7						
	comp=Z,1.2nm,0.3s						
F20K	Avaraart Lake	91.15	9	P	P	10 37 50.2	+0.1
PDAR	Pinedale Array	91.43	44	P	P	10 37 51.8	-0.6
	comp=Z,0.1nm,0.4s,baz=267,slow=5.9,SNR=2.2						
	comp=Z,0.1nm,0.4s						
HFS	Hagfors	141.39	349	PKhKP	PKPpre	10 44 05.8	
	comp=Z,0.7nm,0.3s,baz=102,slow=2.1,SNR=6.8						
AKASG	Malin Array Be	144.16	329	PKP	PKPbc	10 44 15.5	-1.5
	comp=Z,0.9nm,0.4s,baz=46,slow=4.2,SNR=8.8						
BRTR	Keskin Array B	147.18	309	PKPbc	PKPdf	10 44 24.4	+1.4
	comp=Z,0.9nm,0.6s,baz=139,slow=6.6,SNR=4.1						
MMAI	Mount Meron Ar	147.61	296	PKPbc	PKPbc	10 44 26.5	-0.9
	comp=Z,1.4nm,0.4s,baz=98,slow=5.1,SNR=4.5						
GHAJ	Ghor Haditha	147.71	293	PKPbc	PKPbc	10 44 28.0	+0.4
ANTO	Ankara	147.73	310	PKPdf	PKPdf	10 44 24.2	+0.4
TIRR	Tirgusor	148.41	320	PKPbc	PKiKP	10 44 30.0	-0.1
MORC	Moravsky Berou	149.77	338	PKPbc	PKPbc	10 44 31.6	-0.6

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*DJA **21** 10:27:26.4±0.2, 8°S±2°×10°9E±°, h54^{km}±3^{km}, M5.2/46, mb5.1/46, mB5.7/18, MLv5.1/31, Mw(mB)5.2/18*

*NEIC **21** 10:27:29.5±1.6, 8°.16S±0°.08×108°.84E±0°.06, h94^{km}±2^{km}, mb4.6/41, Error ellipse: s-maj=12.5km s-min=6.7km az=210.0*

*IDC **21** 10:27:30.9±0.9, 8°.00S×108°.88E, h107^{km}±8^{km}, mb4.1/25, mbtmp4.5/27, Error ellipse: s-maj=14.7km s-min=8.3km az=57.0*

ISC 21 10:27:27.1±0.7**, 8°.33S**±0°.04×**108°.70E**±0°.04**, h76^{km}**±6^{km}**, n210, σ1^{s}72**/205**, mb4.6**/60**, 5D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CMJI	Cimerak	0.59	336	P	Pn	10 27 41.2	-0.2
CMJI				S	Sn	10 27 50.8	-1.1
BBJI	Bungbulang	1.35	310	P	Pn	10 27 50.8	+0.4
YOGI	Yogyakarta	1.66	72	P	Pn	10 27 54.0	-0.4
LEM	Lembang	1.83	324	P	Pn	10 27 58.9	+2.0
	2μm,0.6s,baz=74,slow=8.4,SNR=180						
LEM				S	Sn	10 28 23.3	+3.9
	4μm,0.6s,baz=352,slow=19,SNR=10						
LEM				LR	LR	10 28 55.6	
	comp=Z,1μm,21.2s,baz=157,slow=50						
LEM	Lembang	1.83	324	P	Pn	10 27 58.6	+1.7
CNJI	Cibinong	1.85	303	P	Pn	10 27 57.5	+0.5
UGM	Wanagama	1.85	77		Pn	10 27 56.9	-0.2
UGM				Sn	Sn	10 28 18.9	-0.9
UGM	Wanagama	1.85	77	P	Pn	10 27 57.0	0.0
UGM	Wanagama	1.85	77	S	Sn	10 28 19.0	-0.8
UGM	Wanagama	1.85	77	P	Pn	10 27 56.8	-0.2
SMRI	Semarang	2.15	54		Pn	10 28 02.5	+1.6
SMRI				Sn	Sn	10 28 29.6	+2.9
SMRI	Semarang	2.15	54	P	Pn	10 28 02.8	+1.9
SMRI	Semarang	2.15	54	S	Sn	10 28 29.1	+2.4
SMRI	Semarang	2.15	54	P	Pn	10 28 02.3	+1.4
WOJI	Wonogiri, Jawa	2.26	78	P	Pn	10 28 01.3	-1.1
PCJI	Pacitan	2.46	87	P	Pn	10 28 05.3	+0.2
SKJI	Sukabumi	2.50	302	P	Pn	10 28 06.4	+0.8
DBJI	Dramaga	2.61	312	P	Pn	10 28 09.3	+2.1
NGJI	Ngawi	2.90	71	P	Pn	10 28 12.7	+1.6
TNG	Tangerang	2.95	316	P	Pn	10 28 10.2	-1.6
TNG				P		10 28 12.5	
SBJI	Serang	3.36	311	P	Pn	10 28 19.0	+1.7
CGJI	Cibinong	3.43	300	P	Pn	10 28 18.9	+0.6
TBJI	Tambak Boyo	3.47	65	P	Pn	10 28 19.2	+0.4
XMI	Christmas Isla	3.64	234	P	Pn	10 28 20.3	-0.9
XMIS	Christmas Isla	3.69	234		Pn	10 28 20.4	-1.4
XMIS	Christmas Isla	3.69	234	P	Pn	10 28 20.6	-1.2
GRJI	Gresik	4.00	70	P	Pn	10 28 26.1	0.0
BLSI	Bandar Lampung	4.51	310	P	Pn	10 28 35.1	+2.0
BWJI	Bawean	4.64	58	P	Pn	10 28 34.9	+0.1
GMJI	Gumukmas	4.70	90	P	Pn	10 28 35.3	-0.3
KMMI	Kalianget	5.38	77	P	Pn	10 28 44.2	-0.6
	0.6nm3μm174nm,0.7s						
JAGI	Jajag, Banyuwa	5.40	92		Pn	10 28 45.8	+0.6
JAGI	Jajag, Banyuwa	5.40	92	P	Pn	10 28 45.1	-0.1
JAGI	Jajag, Banyuwa	5.40	92	S	Sn	10 29 45.4	-0.6
JAGI	Jajag, Banyuwa	5.40	92	P	Pn	10 28 45.2	0.0
TPI	Tanjungpandan	5.63	349	P	Pn	10 28 50.1	+1.8
	0.9nm95nm,0.7s						
LWLI	Liwa	5.66	305	P	Pn	10 28 50.9	+2.1
	2.5nm18μm463nm,0.7s						
MDSI	Maura Dua	5.89	310	P	Pn	10 28 53.1	+1.2
	1.1nm4μm336nm,1.6s						
DNP	Denpasar	6.45	94	P	Pn	10 28 59.5	0.0
SRBI	Singaraja	6.46	88	P	Pn	10 29 00.1	+0.5
PPBI	Pangkal Pinang	6.63	337	P	Pn	10 29 03.3	+1.3
MNAI	Manna	6.93	304		Pn	10 29 07.3	+1.2
MNAI	Manna	6.93	304	P	Pn	10 29 07.7	+1.6
MNAI	Manna	6.93	304	P	Pn	10 29 05.9	-0.2
KSI	Kapahiang	7.64	307	P	Pn	10 29 17.0	+1.1
TWSI	Taliwang, Sumb	8.11	93	P	Pn	10 29 21.8	-0.4
	7μm240nm,0.8s						
STKI	Sintang	8.79	19	P	Pn	10 29 33.7	+2.2
PLAI	Plampang	8.99	94	P	Pn	10 29 34.2	-0.1
PLAI	Plampang	8.99	94	P	Pn	10 29 33.4	-0.9
WBSI	Waikabubak, Su	10.64	98	P	Pn	10 29 51.8	-5.1
	128nm,0.8s						
KAPI	Kappang	11.46	74	P	Pn	10 30 09.5	+1.5
	11nm,0.4s,baz=193,slow=4.7,SNR=6.3						
SISI	Saibi	11.83	306	P	Pn	10 30 09.4	-3.6
	115nm,1.1s						
BASI	Baing, Sumba	11.88	100	P	Pn	10 30 10.4	-3.2
	184nm,0.9s						
BSSI	Bau Bau, Buton	11.90	80	P	Pn	10 30 13.8	-0.1
	196nm,0.9s						
BNSI	Bone	11.99	72	P	Pn	10 30 14.9	-0.3
	59nm,2.2s						
TTSI	Tana Toraja	12.25	65	P	Pn	10 30 22.2	+3.5
	31nm,0.9s						
EDFI	Ende, Flores	12.86	93	P	Pn	10 30 22.3	-4.8
	2μm129nm,1.0s						
MMRI	Maumere	13.40	92		Pn	10 30 30.4	-3.7
MMRI	Maumere	13.40	92	P	Pn	10 30 30.0	-4.2
	105nm,0.9s						
MPSI	Mapaga	14.10	53	P	P	10 30 46.3	-2.4
GSI	Gunungsitoli	14.64	310		Pn	10 30 45.2	-5.3
PSI	Prapat	14.74	318	P	Pn	10 30 45.4	-6.4
	6.1nm,0.5s,baz=124,slow=10,SNR=5.7						
IPM	Ipoh	14.85	329	Pn	Pn	10 30 52.8	-0.3
APSI	Ampana	14.86	61	P	P	10 30 55.5	-1.6
	53nm,0.8s						
BATI	Baumata	14.89	98	P	Pn	10 30 50.4	-3.3
	58nm,0.6s,baz=320,slow=3.2,SNR=6.3						
BATI				S	Sn	10 33 28.0	-10
	31nm,0.4s,baz=184,slow=16,SNR=2.9						
BATI	Baumata	14.89	98	P	Pn	10 30 50.7	-3.0
	132nm,0.7s						
GIRL	Giralia	15.20	160	P	Pn	10 30 54.6	-2.9
	comp=Z,174nm,0.5s						
GIRL	Giralia	15.20	160	P	Pn	10 30 54.0	-3.5
TOLI2	Tolitoli	15.27	53	Pn	Pn	10 30 55.7	-2.8
TOLI2	Tolitoli	15.27	53	P	Pn	10 30 59.2	+0.7
SOEI	Soe	15.44	96		Pn	10 30 57.7	-3.2

SOEI	**Soe**	15.44	96	P	Pn	10 30 57.1	-3.7
	comp=Z,2µmcomp=Z,216nm,0.9s						
KULM	**Kulim**	15.73	329	Pn	Pn	10 31 02.8	-1.6
MRSI	**Marisa**	15.84	57	P	P	10 31 08.1	+0.1
	comp=Z,49nm,1.0s						
MBWA	**Marble Bar**	16.62	141		Pn	10 31 13.4	-1.9
MBWA				IAmb	IAmb	10 31 18.0	
	comp=Z,22nm,0.8s						
MBWA	**Marble Bar**	16.62	141	P	Pn	10 31 13.9	-1.5
	comp=Z,32nm,1.0s						
MBWA	**Marble Bar**	16.62	141	P	Pn	10 31 13.2	-2.2
PSAD1	**Pilbara Seismi**	16.90	142	P	Pn	10 31 17.6	-1.3
	comp=Z,20nm,1.5s						
PSAC1	**Pilbara Seismi**	16.95	142	P	Pn	10 31 17.9	-1.5
PSAA2	**Pilbara Seismi**	16.99	142	P	Pn	10 31 18.8	-1.2
	comp=Z,22nm,1.8s						
PSAB2	**Pilbara Seismi**	16.99	142	P	Pn	10 31 18.6	-1.4
	comp=Z,25nm,1.0s						
PSA00	**Pilbara Seismi**	17.00	142		Pn	10 31 18.2	-1.8
PSA00	**Pilbara Seismi**	17.00	142	P	Pn	10 31 19.3	-0.8
	comp=Z,28nm,1.6s						
PSA00	**Pilbara Seismi**	17.00	142	P	Pn	10 31 19.2	-0.8
NLAI	**Namlea**	18.99	76	P	Pn	10 31 44.6	+0.3
	comp=Z,63nm,0.9s						
SRIT	**Nakonsritamara**	19.10	331		P	10 31 44.0	0.0
SRIT				IAmb	IAmb	10 31 45.4	
	comp=Z,21nm,0.9s						
FITZ	**Fitzroy Crossi**	19.12	122		Pn	10 31 46.4	+0.5
FITZ	**Fitzroy Crossi**	19.12	122	P	Pn	10 31 45.2	-0.7
FITZ	**Fitzroy Crossi**	19.12	122	P	Pn	10 31 45.8	0.0
	comp=Z,12nm,0.6s,baz=316,slow=8.8,SNR=35						
FITZ				S	S	10 35 05.5	-12
	comp=Z,4.2nm,0.5s,baz=90,slow=20,SNR=2.2						
AAI	**Ambon**	19.93	78	P	P	10 31 53.6	+0.6
	comp=Z,3µmcomp=Z,261nm,0.9s						
DLV	**Lat**	20.14	359	P	P	10 31 55.8	+0.3
DLV				IAmb	IAmb	10 32 02.9	
	comp=Z,29nm,0.9s						
MEEK	**Meekatharra**	20.50	154	P	P	10 32 00.9	+1.7
	comp=Z,24nm,0.9s						
MEEK	**Meekatharra**	20.50	154	P	P	10 31 59.9	+0.8
TNTI	**Ternate**	20.69	65	P	Pn	10 32 02.5	-1.8
KNRA	**Kununurra**	20.93	112		P	10 32 05.2	+1.4
KNRA	**Kununurra**	20.93	112	P	P	10 32 05.0	+1.2
	comp=Z,121nm,1.1s						
MORW	**Morawa**	21.76	162	P	P	10 32 14.4	+1.8
MORW	**Morawa**	21.76	162	P	P	10 32 13.7	+1.1
	comp=Z,18nm,0.9s						
MORW	**Morawa**	21.76	162	P	P	10 32 14.3	+1.8
MTN	**Manton Dam**	22.50	103		P	10 32 22.3	+1.6
MTN	**Manton Dam**	22.50	103	P	P	10 32 21.1	+0.3
	comp=Z,78nm,1.1s						
MTN	**Manton Dam**	22.50	103	P	P	10 32 21.0	+0.3
BLDU	**Ballidu**	23.41	162	P	P	10 32 30.3	+0.8
KDU	**Kakadu**	23.77	103	P	P	10 32 33.2	+0.2
	comp=Z,39nm,1.1s						
KDU	**Kakadu**	23.77	103	P	P	10 32 33.4	+0.5
KLBR	**Kellerberrin**	24.64	161	P	P	10 32 41.9	+1.3
WRKA	**Warakurna**	25.01	134	P	P	10 32 45.3	+1.1
	comp=Z,5.0nm,0.8s						
WB0	**Warramunga Arr**	27.35	117	P	P	10 33 05.8	+0.4
WB0				IAmb	IAmb	10 33 30.0	
	comp=Z,13nm,0.9s						
WRA	**Warramunga Arr**	27.37	118	P	P	10 33 06.9	+1.4
WRA	**Warramunga Arr**	27.37	118	P	P	10 33 06.3	+0.8
	comp=Z,5.1nm,0.8s,baz=290,slow=11,SNR=11						
WRA				PcP	PcP	10 36 23.5	+0.4
	comp=Z,1.8nm,0.5s,baz=295,slow=2.9,SNR=5.4						
	comp=Z,5.1nm,0.8s						
WRAB	**Tennant Creek**	27.38	118	P	P	10 33 06.6	+1.1
WRAB				IAmb	IAmb	10 33 34.6	
	comp=Z,9.2nm,0.7s						
WR8	**Warramunga Arr**	27.51	118	P	P	10 33 06.2	-0.6
WR8				IAmb	IAmb	10 33 35.4	
	comp=Z,11nm,0.8s						
CMAR	**Chiang Mai Arr**	28.30	340	P	P	10 33 12.2	-1.5
CMAR	**Chiang Mai Arr**	28.30	340	P	P	10 33 11.7	-2.0
	comp=Z,2.1nm,0.6s,baz=178,slow=7.9,SNR=14						
CMAR				PcP	PcP	10 36 24.5	-0.8
	comp=Z,1.0nm,0.3s,baz=152,slow=2.4,SNR=5.2						
	comp=Z,2.1nm,0.6s						
ASAR	**Alice Springs**	28.55	125	P	P	10 33 16.8	+0.7
	comp=Z,4.7nm,0.6s,baz=298,slow=9.3,SNR=12						
ASAR				PcP	PcP	10 36 26.4	+0.4
	comp=Z,2.8nm,0.6s,baz=308,slow=1.6,SNR=9.9						
	comp=Z,4.7nm,0.6s						
CHTO	**Chiang Mai**	28.63	340	P	P	10 33 15.0	-1.6
FORT	**Forrest**	28.74	144	P	P	10 33 19.6	+2.0
QIS	**Mount Isa**	32.23	116	P	P	10 33 48.6	0.0
	comp=Z,13nm,1.0s						
QIS	**Mount Isa**	32.23	116	P	P	10 33 50.0	+1.4
COEN	**Coen**	34.26	103	P	P	10 34 06.4	+0.1
COEN				IAmb	IAmb	10 34 10.4	
	comp=Z,11nm,0.7s						
COEN	**Coen**	34.26	103	P	P	10 34 07.0	+0.7
BBOO	**Buckleboo**	35.14	138	P	P	10 34 14.4	+0.7
BBOO	**Buckleboo**	35.14	138	P	P	10 34 13.6	-0.1
	comp=Z,21nm,1.0s						
BBOO	**Buckleboo**	35.14	138	P	P	10 34 14.6	+1.0
H08S2	**Diego Garcia H**	35.85	268	T	T	11 12 26.9	
	baz=93,slow=76						
H08S3	**Diego Garcia H**	35.86	268	T	T	11 12 32.6	
	baz=93,slow=76						
H08S1	**Diego Carcia H**	35.87	268	T	T	11 12 31.5	
	baz=93,slow=76						
MTSU	**Mount Surprise**	35.95	109	P	P	10 34 23.0	+2.2
	comp=Z,10nm,0.6s						
HTT	**Hallett**	37.45	136	P	P	10 34 35.6	+2.3
CTAO	**Charters Tower**	38.14	112	P	P	10 34 41.2	+1.9
CTAO				IAmb	IAmb	10 35 00.7	
	comp=Z,19nm,1.2s						
QLP	**Quilpie**	38.27	123	P	P	10 34 40.9	+0.6
	comp=Z,38nm,0.9s						
STKA	**Stephens Creek**	38.51	132		P	10 34 44.0	+1.7
STKA	**Stephens Creek**	38.51	132	P	P	10 34 43.4	+1.2
	comp=Z,171nm,0.8s						
STKA	**Stephens Creek**	38.51	132	P	P	10 34 43.5	+1.3
	comp=Z,20nm,0.7s,baz=307,slow=8.6,SNR=43						
STKA				PcP	PcP	10 36 53.9	0.0
	comp=Z,3.2nm,0.6s,baz=295,slow=8.1,SNR=2.5						
	comp=Z,20nm,0.7s						
STKA	**Stephens Creek**	38.51	132	P	P	10 34 43.9	+1.7
NJ2	**Nanjing**	41.31	13	*e*P	P	10 35 08.3	+3.0
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CMSA	**Cobar Meteorol**	41.43	129	P	P	10 35 07.1	+0.6
	comp=Z,38nm,0.9s						
CMSA	**Cobar Meteorol**	41.43	129	P	P	10 35 08.4	+1.9
EVN	**Everest**	41.82	330	P	P	10 35 08.3	-2.0
EVN				IAmb	IAmb	10 35 22.7	
	comp=Z,8.9nm,1.3s						
YNG	**Young**	44.68	131	P	P	10 35 31.3	-1.4
	comp=Z,26nm,1.0s						
CAN	**Canberra**	45.58	132	P	P	10 35 42.2	+2.4
BTO	**Baotou**	48.70	1	*e*P	P	10 36 08.4	+4.4
BTO				PP	PP	10 38 06.5	+8.7
BTO				S	S	10 43 09.8	+8.8
BTO				pmax	pmax		
	comp=Z,26nm,0.5s						
BTO				pmax	pmax		
	comp=Z,230nm,6.9s						
BTO				LR	LR		
	comp=N,2µm,15.6s						
BTO				LR	LR		
	comp=E,1µm,16.5s						
BTO				LR	LR		
	comp=Z,2µm,17.1s						
HHC	**Hu-ho-hao-te**	49.00	3	*e*P	P	10 36 08.9	+2.6
HHC				pmax	pmax		
	comp=Z,12nm,0.5s						
HHC				pmax	pmax		
	comp=Z,220nm,6.0s						
MJAR	**Matsushiro Arr**	52.54	30	P	P	10 36 29.5	-3.3
	comp=Z,1.3nm,0.7s,baz=211,slow=8.0,SNR=4.0						
	comp=Z,1.3nm,0.7s						
NIL	**Nilore**	53.62	323	P	P	10 36 38.9	-2.0
NIL				IAmb	IAmb	10 36 45.2	
	comp=Z,6.6nm,0.8s						
JSD	**Sado**	53.74	29	P	P	10 36 40.6	-1.0
JSD				IAmb	IAmb	10 36 41.6	
	comp=Z,7.7nm,1.0s						
WMQ	**Urumqi**	55.29	342	*e*P	P	10 36 55.1	+2.3
WMQ				LR	LR		
	comp=N,790nm,13.7s						
WMQ				LR	LR		
	comp=E,540nm,14.9s						
WMQ				LR	LR		
	comp=Z,420nm,14.9s						
SONM	**Songino Array**	55.95	358	P	P	10 36 56.9	-0.7
SONM				PcP	PcP	10 37 54.9	-0.4
SONM	**Songino Array**	55.95	358	P	P	10 36 56.1	-1.5
	comp=Z,2.0nm,0.5s,baz=178,slow=7.8,SNR=6.9						
SONM				PcP	PcP	10 37 54.8	-0.5
	comp=Z,1.5nm,0.6s,baz=180,slow=4.3,SNR=3.8						
	comp=Z,2.0nm,0.5s						
USRK	**Ussuriysk Ar.**	56.37	20	P	P	10 36 57.1	-3.4
	comp=Z,1.0nm,0.6s,baz=184,slow=4.4,SNR=5.0						
	comp=Z,1.0nm,0.6s						
BNX	**BinXian**	56.38	16	⇓P	P	10 37 03.8	+3.3
BNX				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KSH	**Kashi**	56.44	330	P	P	10 37 02.6	+1.4
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DZM	**Mont Dzumac**	57.07	111	P	P	10 37 07.3	+1.3
	comp=Z,4.8nm,0.8s,baz=265,slow=4.2,SNR=4.2						
	comp=Z,4.8nm,0.8s						
CASY	**Casey**	57.88	179		P	10 37 12.6	+1.8
CASY				IAmb	IAmb	10 37 14.1	
	comp=Z,8.0nm,0.8s						
MKAR	**Makanchi Array**	59.71	339		P	10 37 22.1	-1.7
MKAR	**Makanchi Array**	59.71	339	P	P	10 37 21.8	-2.0
	comp=Z,1.8nm,0.4s,baz=154,slow=8.0,SNR=28						
	comp=Z,1.8nm,0.4s						
HEH	**HeiHe**	60.57	14	*e*P	P	10 37 28.3	-1.3
HEH				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KLR	**Kul'dur**	60.77	17	P	P	10 37 29.2	-1.8
	comp=Z,2.1nm,0.7s,baz=173,slow=2.0,SNR=7.4						
	comp=Z,2.1nm,0.7s						
H04N2	**CROZET ISLANDS**	61.37	222	T	T	11 44 43.8	
	baz=71,slow=75						
H04N1	**CROZET ISLANDS**	61.39	222	T	T	11 44 40.9	
	baz=71,slow=75						
H04N3	**CROZET ISLANDS**	61.39	222	T	T	11 44 42.6	
	baz=71,slow=75						
H04S1	**CROZET ISLANDS**	61.53	221	T	T	11 44 46.3	
	baz=80,slow=75						
H04S3	**CROZET ISLANDS**	61.54	221	T	T	11 44 53.8	
	baz=80,slow=75						
H04S2	**CROZET ISLANDS**	61.54	221	T	T	11 44 55.6	
	baz=80,slow=75						
KURBB	**Kurchatov Arra**	64.28	339	P	P	10 37 52.6	-1.6
	comp=Z,1.4nm,0.4s,baz=152,slow=6.2,SNR=8.4						
	comp=Z,1.4nm,0.4s						
KURK	**Kurchatov**	64.32	339	P	P	10 37 53.8	-0.8
KURK				IAmb	IAmb	10 37 54.3	
	comp=Z,2.8nm,0.5s						
ZAA0	**Zalesovo Array**	65.24	345	P	P	10 37 58.4	-2.0
ZALV	**Zalesovo Beam**	65.24	345		P	10 37 58.4	-2.1
ZALV	**Zalesovo Beam**	65.24	345	P	P	10 37 58.2	-2.2
	comp=Z,2.0nm,0.4s,baz=145,slow=7.3,SNR=10						
	comp=Z,2.0nm,0.4s						
MAW	**Mawson**	66.60	197	P	P	10 38 11.3	+2.2
	comp=Z,23nm,0.7s,baz=64,slow=6.4,SNR=20						
	comp=Z,23nm,0.7s						
BVAR	**Borovoye Array**	69.24	336	P	P	10 38 24.2	-1.7
	comp=Z,2.0nm,0.5s,baz=137,slow=8.6,SNR=8.7						
	comp=Z,2.0nm,0.5s						
AB31	**Akbulak array**	71.41	329		P	10 38 38.1	-1.1
AB31				IAmb	IAmb	10 38 39.5	
	comp=Z,7.4nm,0.7s						
ABKAR	**Akbulak array**	71.41	329		P	10 38 37.9	-1.2
PETK	**Petropavlovsk-**	73.94	28	P	P	10 38 52.4	-1.7
PETK	**Petropavlovsk-**	73.94	28	P	P	10 38 51.8	-2.3
	comp=Z,0.7nm,0.5s,baz=344,slow=0.9,SNR=4.6						
	comp=Z,0.7nm,0.5s						
VNDA	**Vanda**	74.36	170		P	10 38 57.0	+0.8
VNDA				IAmb	IAmb	10 38 58.6	
	comp=Z,5.5nm,0.8s						
VNDA	**Vanda**	74.36	170	P	P	10 38 57.6	+1.4
	comp=Z,5.8nm,0.8s,baz=315,slow=4.5,SNR=20						
	comp=Z,5.8nm,0.8s						
SBA	**Scott Base**	75.43	169		P	10 39 04.2	+1.9
SBA				IAmb	IAmb	10 39 06.3	
	comp=Z,8.1nm,1.0s						
ARTI	**Arti**	76.59	334	P	P	10 39 08.6	-0.7
ARTI				IAmb	IAmb	10 39 12.2	
	comp=Z,7.8nm,0.5s						
SEY	**Seymchan**	78.50	19	P	P	10 39 19.2	-0.4
	comp=Z,1.4nm,0.5s,baz=223,slow=3.6,SNR=8.5						
	comp=Z,1.4nm,0.5s						
KBZ	**Khabaz**	78.76	318	P	P	10 39 22.0	+0.5
	comp=Z,4.6nm,0.8s,baz=114,slow=8.1,SNR=9.4						
	comp=Z,4.6nm,0.8s						
MMAI	**Mount Meron Ar**	80.74	305	P	P	10 39 34.2	+1.6
	comp=Z,0.5nm,0.3s,baz=90,slow=4.3,SNR=2.2						
	comp=Z,0.5nm,0.3s						
TIXI	**Tiksi**	80.92	6		P	10 39 31.4	-1.2
QSPA	**South Pole Qui**	81.67	180	P	P	10 39 38.6	+1.6
QSPA	**South Pole Qui**	81.67	180	P	P	10 39 38.8	+1.8
	comp=Z,15nm,0.6s,baz=274,slow=0.4,SNR=94						
	comp=Z,15nm,0.6s						
BR131	**Keskin Array S**	83.96	311		P	10 39 48.5	-0.9
BR131				IAmb	IAmb	10 39 52.9	
	comp=Z,7.2nm,1.1s						
BRTR	**Keskin Array B**	83.96	311		P	10 39 48.7	-0.6
BRTR	**Keskin Array B**	83.96	311	P	P	10 39 48.9	-0.5
	comp=Z,2.4nm,0.8s,baz=136,slow=7.0,SNR=10						
	comp=Z,2.4nm,0.8s						
ATKA	**Atka Island**	88.71	37	P	P	10 40 11.4	-0.7
ATKA				IAmb	IAmb	10 40 17.5	
	comp=Z,3.0nm,0.6s						
SNAA	**Sanae**	88.76	197	⇓P	P	10 40 14.4	+2.2
	comp=Z,174nm,0.6s						
SNAA	**Sanae**	88.76	197		P	10 40 14.7	+2.5
SNAA	**Sanae**	88.76	197	P	P	10 40 14.4	+2.2
	comp=Z,7.4nm,0.6s,baz=149,slow=4.3,SNR=58						
	comp=Z,7.4nm,0.6s						
AKASG	**Malin Array Be**	89.78	321	P	P	10 40 16.5	-0.7
	comp=Z,0.3nm,0.3s,baz=88,slow=4.6,SNR=4.5						
	comp=Z,0.3nm,0.3s						
VNA2	**Neumayer--Watz**	90.41	197	⇓P	P	10 40 22.7	+2.8
	comp=Z,13nm,0.7s,baz=104,slow=4.0						
VNA1	**Neumayer--Stat**	90.80	197	⇓P	P	10 40 24.7	+3.1
	comp=Z,11nm,0.9s						
VNA3	**Neumayer Olymp**	90.91	197	⇓P	P	10 40 24.6	+2.5
	comp=Z,6.3nm,0.8s						
BELA	**Belgrano 2**	91.56	187	P	P	10 40 26.9	+1.8
BURAR	**Bucovina Array**	91.72	318	P	P	10 40 25.7	-0.8
BURAR				IAmb	IAmb	10 40 29.6	
	comp=Z,1.5nm,0.7s						
BUR08	**Bucovina Ar. S**	91.73	318	P	P	10 40 26.1	-0.4
BUR08				IAmb	IAmb	10 40 48.2	
	comp=Z,2.5nm,0.8s						
LVZ	**Lovozero**	91.73	339	P	P	10 40 25.5	-0.4
FINES	**FINESS Array B**	93.73	331	P	P	10 40 34.8	-0.4
	comp=Z,1.3nm,0.8s,baz=96,slow=3.8,SNR=7.9						
	comp=Z,1.3nm,0.8s						
ARCES	**ARCESS Array B**	95.36	339	P	P	10 40 41.5	-1.1
	comp=Z,2.9nm,1.0s,baz=120,slow=4.3,SNR=4.1						
	comp=Z,2.9nm,1.0s						
YKA	**Yellowknife Ar**	117.50	21	PKP	PKPdf	10 46 03.7	-0.2
	comp=Z,0.5nm,0.7s,baz=328,slow=2.3,SNR=4.8						
NVAR	**Mina Array Bea**	128.25	47	PKP	PKiKP	10 46 26.5	+0.3
	comp=Z,0.8nm,0.7s,baz=323,slow=2.9,SNR=6.4						
PDAR	**Pinedale Array**	132.04	38	PKP	PKiKP	10 46 33.2	-0.5
	comp=Z,0.3nm,0.5s,baz=75,slow=1.7,SNR=4.6						
PDAR				SKPbc	SKPbc	10 49 48.1	-4.2
	comp=Z,0.8nm,0.9s,baz=311,slow=9.0,SNR=3.9						
ULM	**Lac du Bonnet**	133.48	22	SKP		10 49 59.2	
	comp=Z,3.5nm,0.9s,baz=276,slow=4.1,SNR=5.5						
CPUP	**Villa Florida**	142.97	201	PKP		10 46 50.7	
	comp=Z,1.2nm,0.7s,baz=338,slow=3.1,SNR=11						
TXAR	**Lajitas Array**	143.13	51	PKP	PKPbc	10 46 49.9	-0.4
	comp=Z,0.8nm,0.6s,baz=264,slow=1.9,SNR=8.7						
TXAR				SKPbc	SKPbc	10 50 20.2	-4.8
	comp=Z,0.7nm,0.9s,baz=335,slow=2.7,SNR=4.0						
BDFB	**Brasilia**	146.84	224	PKPbc	PKPbc	10 47 02.3	+0.4
	comp=Z,13nm,0.7s,baz=141,slow=1.5,SNR=16						
LPAZ	**La Paz**	155.34	187	PKPab	PKPab	10 47 40.5	+1.6
	comp=Z,5.1nm,0.6s,baz=178,slow=12,SNR=3.6						

VIE 21 10:43:26.1±0.9, 47°.36N×11°.18E, h10^{km}, ml-0.1/2, Error ellipse: s-maj=11.0km s-min=2.8km az=51.0 3 km N of Seefeld, Austria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOTA	**Moosalm**	0.06	255	*e*Pg	Pg	10 43 28.6	+0.3
	0.3nm,0.1s						
MOTA				*i* Sg	Sg	10 43 30.4	+0.5
	1.4nm,0.1s						
SQTA	**Sankt Quirin**	0.14	173	*i* Pg	Pg	10 43 29.4	+0.1
	0.4nm,0.1s						
SQTA				*i* Sg	Sg	10 43 32.0	+0.4
	2.9nm,0.2s						

VIE 21 10:43:58.6±0.4, 47°.34N×11°.18E, h11^{km}±3^{km}, mb0.0/3, ml1.2/7, Error ellipse: s-maj=1.9km s-min=1.3km az=27.0 1 km NW of Seefeld, Austria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOTA	**Moosalm**	0.05	280	*i* Pg	Pg	10 44 01.0	0.0
	28nm,0.1s						
MOTA				*i* Sg	Sg	10 44 02.8	+0.2
	22nm,0.1s						
SQTA	**Sankt Quirin**	0.12	170	*i* Pg	Pg	10 44 01.8	+0.2
	4.9nm,0.1s						
SQTA				*i* Sg	Sg	10 44 04.3	+0.5
	128nm,0.3s						
WATA	**Walderalm**	0.27	90	*i* Pg	Pg	10 44 03.8	-0.4
	0.6nm,0.1s						
WATA				*e*Sg	Sg	10 44 08.9	+1.0
	2.2nm,0.1s						
WTTA	**Wattenberg**	0.32	103	*i* Pg	Pg	10 44 05.1	0.0
	0.7nm,0.1s						
WTTA				*e*Sg	Sg	10 44 10.2	+0.7
	2.9nm,0.2s						
RETA	**Reutte**	0.32	298	*e*Pg	Pg	10 44 05.4	+0.3
	2.1nm,0.3s						
RETA				*i* Sg	Sg	10 44 10.0	+0.6
	1.7nm,0.1s						
FETA	**Feichten**	0.44	224	*i* Pg	Pg	10 44 07.5	+0.2
	0.2nm,0.0s						
FETA				*e*Sg	Sg	10 44 13.3	+0.2
	0.6nm,0.1s						

NEIC 21 10:49:07.6±2.0, 39°.28N±0°.03×99°.38W±0°.03, h5^{km}±1^{km}, mb_Lg2.5/15, Error ellipse: s-maj=5.7km s-min=3.3km az=321.0, Kansas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBKS	**Cedar Bluff**	0.54	211	Pg	Pg	10 49 17.7	-0.4
CBKS				Sg	Sg	10 49 25.1	-0.1
R32A	**Long Quarter,**	1.00	149		Pg	10 49 26.1	-0.7
R32A				Sg	Sg	10 49 39.0	-0.8
BGNE	**Belgrade**	2.32	23	Pn	Pn	10 49 46.6	0.0
KAN08	**Anthony NE Sta**	2.33	151	IAmb_Lg		10 50 21.3	
	comp=Z,21nm,0.8s						
KSCO	**Kaye Shedlock'**	2.54	265	Pn	Pn	10 49 47.7	-2.0
KAN09	**Caldwell North**	2.55	147	Pn	Pn	10 49 47.9	-1.7
KAN14	**Manchester OK**	2.57	154	Pn	Pn	10 49 48.5	-1.5
KAN14				IAmb_Lg		10 50 33.2	
	comp=Z,14nm,0.9s						
OGNE	**Ogallala**	2.63	310	Pn	Pn	10 49 49.6	-1.3
OGNE				IAmb_Lg		10 50 33.2	
	comp=Z,27nm,0.7s						
GC02	**Grant County #**	2.70	153	Pn	Pn	10 49 51.9	+0.2
KAN13	**South Haven SW**	2.71	146	Pn	Pn	10 49 52.4	+0.5
OK038	**West end E0370**	2.84	170	Pn	Pn	10 49 52.8	-0.9
CROK	**Carrier**	2.98	158	Pn	Pn	10 49 56.6	+1.1
CROK				IAmb_Lg		10 50 39.9	
	comp=Z,22nm,1.0s						
ELIS	**Ellis County**	3.21	181	Pn	Pn	10 49 58.6	-0.2
ELIS				IAmb_Lg		10 50 50.4	
	comp=Z,12nm,1.2s						
T35A	**Sooner Cattle**	3.27	135		Pb	10 50 06.6	+0.5
N35A	**Tabor**	3.27	60	Pn	Pn	10 50 02.7	+3.1
N35A				IAmb_Lg		10 50 55.0	
	comp=Z,24nm,0.7s						
K30B	**Basset**	3.40	357	Pn	Pn	10 50 02.0	+0.6
OK051	**E0350 and S346**	3.42	143		Pb	10 50 09.8	+1.1
OK048	**Pawnee Station**	3.45	145		Pb	10 50 10.4	+1.3
CSTR	**Hydro, Custer**	3.67	171		Pb	10 50 14.8	+1.8
QUOK	**Quay**	3.75	145		Pb	10 50 15.3	+0.8
OK029	**Liberty Lake**	3.80	156	IAmb_Lg		10 51 17.2	
	comp=Z,7.4nm,0.8s						
RTBA	**Rita Blanca**	3.89	224	IAmb_Lg		10 51 13.7	
	comp=Z,12nm,0.8s						
DEOK	**Depew**	4.12	145	Pn	Pn	10 50 09.1	-2.1
SMWD	**Samnorwood**	4.22	190	Pn	Pn	10 50 11.9	-0.9
T25A	**Trinidad**	4.50	243	Pn	Pn	10 50 16.6	-0.1
P38A	**Dawn**	4.54	84	Pn	Pn	10 50 16.6	-0.4
WMOK	**Wichita Mounta**	4.56	174	Pn	Pn	10 50 17.4	+0.1
U38A	**Gravette**	4.86	124	Pn	Pn	10 50 19.1	-2.3
ECSD	**EROS Data Cent**	4.91	24	Pn	Pn	10 50 19.8	-2.3
SDCO	**Great Sand Dun**	5.04	254	Pn	Pn	10 50 22.3	-1.9
R40A	**Maddies Statio**	5.64	98	Pn	Pn	10 50 30.2	-1.9
RSSD	**Black Hills**	5.96	326	Pn	Pn	10 50 33.5	-3.3

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*NEIC **21** 10:52:20.2±1.0, 5°.6S±0°.1×128°.22E±0°.09, h355^{km}±21^{km}, mb4.1/6, Error ellipse: s-maj=15.4km s-min=12.7km az=161.0*

*IDC **21** 10:52:22.7±3.2, 5°.79S×127°.89E, h394^{km}±33^{km}, mb3.0/1, mbtmp4.1/5, Error ellipse: s-maj=47.8km s-min=15.5km az=68.0*

*DJA **21** 10:52:22.1±0.6, 5°S±5°×12°8E±°, h324^{km}±5^{km}, M4.1/9, mb4.4/1, MLv4.0/9*

ISC 21 10:52:18.6±0.7, 5°.53S±0°.05×128°.18E±0°.06, h350^{km}, n30, σ1^{s}.52/41, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	1.83	0	P	Pn	10 53 08.9	0.0
AAI				S	S	10 53 47.1	-2.0
BNDI	**Bandanaira**	1.99	60	P	Pn	10 53 10.5	+0.6
BNDI				S	S	10 53 49.1	-1.9
MSAI	**Masohi**	2.29	19	P	Pn	10 53 11.7	-0.5
MSAI				S	S	10 53 53.2	-1.9
NLAI	**Namlea**	2.52	335	P	Pn	10 53 15.3	+1.4
NLAI				S	S	10 53 57.3	-1.0
SAUI	**Saumlaki**	3.94	128	Pn	Pn	10 53 29.2	+2.1
SAUI				Sn	S	10 54 22.8	+0.5
SAUI	**Saumlaki**	3.94	128	P	Pn	10 53 29.4	+2.3
SAUI				S	S	10 54 23.5	+1.2
SANI	**Sanana**	4.09	328	P	Pn	10 53 29.9	+1.3
FAKI	**Fak Fak**	4.81	58	Pn	Pn	10 53 37.5	+1.2
FAKI	**Fak Fak**	4.81	58	P	Pn	10 53 36.9	+0.6
FAKI				S	S	10 54 38.6	-0.4
SWI	**Sorong**	5.56	34	P	Pn	10 53 45.5	+1.0
SOEI	**Soe**	5.72	222		Pn	10 53 48.3	+1.8
SOEI	**Soe**	5.72	222	P	Pn	10 53 48.1	+1.7
KMPI	**Kaimana, Papua**	5.81	72	P	Pn	10 53 48.0	+0.7
BATI	**Baumata**	6.45	224	P	Pn	10 53 56.0	+1.2
	40nm,0.4s,baz=107,slow=0.9,SNR=9.0						
BATI				S	S	10 55 11.2	-1.5
	25nm,0.5s,baz=162,slow=20,SNR=1.6						
BATI	**Baumata**	6.45	224	P	Pn	10 53 55.3	+0.6
EDFI	**Ende, Flores**	7.19	243	P	Pn	10 54 04.8	+1.4
MTN	**Manton Dam**	7.83	158	Pn	Pn	10 54 11.8	+0.9
TOLI2	**Tolitoli**	9.90	312		P	10 54 37.3	+0.2
KNRA	**Kununurra**	10.10	177		P	10 54 38.8	-0.4
FITZ	**Fitzroy Crossi**	12.74	191	P	P	10 55 08.8	+0.3
FITZ	**Fitzroy Crossi**	12.74	191	P	P	10 55 08.2	-0.3
	1.3nm,0.6s,baz=17,slow=7.2,SNR=6.7						
FITZ				S	S	10 57 25.7	-3.4
	4.4nm,1.0s,baz=90,slow=19,SNR=2.4						
WB0	**Warramunga Arr**	15.39	157	P	P	10 55 37.6	0.0
WRAB	**Tennant Creek**	15.53	158	P	P	10 55 39.7	+0.6
WRAB				IAmb	IAmb	10 55 43.4	
	comp=Z,9.6nm,0.7s						
WRA	**Warramunga Arr**	15.53	158	P	P	10 55 38.2	-0.9
WRA	**Warramunga Arr**	15.53	158	P	P	10 55 39.6	+0.4
	comp=Z,6.3nm,0.6s,baz=332,slow=12,SNR=64						
WRA				S	S	10 58 21.8	-3.6
	comp=Z,1.4nm,0.6s,baz=335,slow=20,SNR=5.5						
KKM	**Kota Kinabalu**	16.58	314	P	P	10 55 52.2	+1.6
KKM				IAmb	IAmb	10 56 20.1	
	comp=Z,14nm,1.1s						
COEN	**Coen**	16.98	121	P	P	10 55 55.1	+0.3
COEN				IAmb	IAmb	10 56 30.9	
	comp=Z,22nm,1.5s						
AS31	**Alice Springs**	18.86	164		P	10 56 15.4	+0.6
AS31				IAmb	IAmb	10 56 16.2	
	comp=Z,2.2nm,1.1s						
ASAR	**Alice Springs**	18.86	164	P	P	10 56 15.4	+0.6
	comp=Z,1.6nm,0.4s,baz=345,slow=11,SNR=55						
ASAR				S	S	10 59 26.8	-3.8
	comp=Z,0.5nm,0.5s,baz=349,slow=23,SNR=6.1						
MKAR	**Makanchi Array**	66.01	327	P	P	11 02 28.7	+0.1
	comp=Z,0.3nm,0.3s,baz=132,slow=6.4,SNR=5.2						

comp=Z,0.3nm,0.3s

IDC 21 11:00:02.5±16.0,17°.54S×177°.68W,h580km±27km, mb3.0/3,mbtmp3.9/5,Error ellipse: s-maj=284.9km s-min=119.3km az=86.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.08**	**267**	P	P	11 01 27.2	+0.1
	6.4nm,0.7s,baz=278,slow=20,SNR=5.3						
DZM	**Mont Dzumac**	**15.61**	**251**	P	P	11 03 16.6	-0.6
	1.5nm,0.5s,baz=126,slow=19,SNR=1.7						
STKA	**Stephens Creek**	**39.42**	**241**	P	P	11 06 43.3	-0.3
	1.4nm,0.6s,baz=78,slow=10,SNR=4.5						
	1.4nm,0.6s						
WRA	**Warramunga Arr**	**45.38**	**259**	P	P	11 07 30.0	-0.4
	0.3nm,0.4s,baz=94,slow=6.9,SNR=13						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**45.56**	**254**	P	P	11 07 31.9	+0.2
	3.6nm,0.4s,baz=89,slow=8.2,SNR=103						
	3.6nm,0.4s						

IDC ***21*** *11:08:43.9±1.6,30°.92S×177°.67W,h0km,mb3.9/3, mbtmp3.9/3,Error ellipse: s-maj=43.0km s-min=23.9km az=91.0*

NEIC ***21*** *11:08:44.4±0.9,30°.79S±0°.08×177°.3W±0°.2,h10km±2km, mb4.4/8,Error ellipse: s-maj=36.4km s-min=5.4km az=68.0*

ISC 21 11:08:47.2±1.5,30°.87S±0°.09×177°.6W±0°.2,h27km,n15, σ0^{s}.65/17,mb4.2/6,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.65**	**349**	Pn	**Pn**	**11 09 12.8**	**-1.6**
RAO	**Raoul Island**	**1.65**	**349**	Pn	**Pn**	**11 09 14.0**	**-0.4**
	34nm,0.3s,baz=108,slow=20,SNR=2.2						
RAO				Sn	**Sb**	**11 09 38.3**	**+1.0**
	125nm,0.3s,baz=75,slow=20,SNR=2.8						
CTAO	**Charters Tower**	**34.26**	**280**	P	**P**	**11 15 31.6**	**+0.5**
RABL	**Rabaul**	**38.97**	**307**	P	**P**	**11 16 11.1**	**-0.2**
BBOO	**Buckleboo**	**39.22**	**255**	P	**P**	**11 16 12.7**	**-0.6**
BBOO				IAmb	IAmb	11 16 23.1	
	comp=Z,23nm,1.4s						
AS31	**Alice Springs**	**43.48**	**267**	P	**P**	**11 16 48.4**	**+0.1**
ASAR	**Alice Springs**	**43.48**	**267**	P	**P**	**11 16 48.3**	**-0.1**
ASAR	**Alice Springs**	**43.48**	**267**	P	**P**	**11 16 48.1**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=104,slow=7.5,SNR=22						
ASAR				PcP	**PcP**	**11 18 36.3**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=121,slow=4.0,SNR=2.0						
	comp=Z,0.9nm,0.6s						
WR8	**Warramunga Arr**	**44.36**	**272**	P	**P**	**11 16 54.9**	**-0.5**
WR8				IAmb	IAmb	11 17 20.2	
	comp=Z,6.3nm,1.1s						
WRA	**Warramunga Arr**	**44.51**	**272**	P	**P**	**11 16 57.2**	**+0.6**
WRA	**Warramunga Arr**	**44.51**	**272**	P	**P**	**11 16 56.4**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=112,slow=8.0,SNR=25						
	comp=Z,1.3nm,0.5s						
WB0	**Warramunga Arr**	**44.53**	**273**	P	**P**	**11 16 57.3**	**+0.5**
WB0				IAmb	IAmb	11 17 08.5	
	comp=Z,6.2nm,1.1s						
QSPA	**South Pole Qui**	**59.24**	**180**	P	**P**	**11 18 46.4**	**+0.4**
QSPA				IAmb	IAmb	11 18 51.9	
	comp=Z,3.6nm,1.2s						
QSPA	**South Pole Qui**	**59.24**	**180**	P	**P**	**11 18 46.0**	**+0.1**
	comp=Z,1.2nm,1.1s,baz=22,slow=2.7,SNR=3.2						
	comp=Z,1.2nm,1.1s						
FINES	**FINESS Array B**	**145.72**	**340**	PKPbc	**PKPab**	**11 28 23.8**	**+0.6**
	comp=Z,1.5nm,0.6s,baz=42,slow=2.3,SNR=12						

TAP 21 11:10:36.7,24°.13N×121°.58E,h19km,ML3.0,12C-8D,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NACB	**Ninganchiao**	**0.04**	**22**	P	Pg	11 10 40.0	-0.2
NACB	**Ninganchiao**	**0.04**	**22**	⇑*i*P	Pg	11 10 40.2	0.0
NACB				S	Sg	11 10 42.6	+0.1
ETL	**Fush Village**	**0.05**	**58**	⇑*i*P	Pg	11 10 40.3	+0.1
ETL				S	Sg	11 10 42.7	+0.1
TWD	**Chiawan**	**0.06**	**162**	⇑*i*P	Pg	11 10 40.4	+0.2
TWD				*i* S	Sg	11 10 42.9	+0.4
ETLH	**Xiulin Townshi**	**0.11**	**310**	⇑*i*P	Pg	11 10 41.0	+0.1
ETLH				S	Sg	11 10 43.5	0.0
HWA	**Hwalien**	**0.16**	**171**	⇑*i*P	Pg	11 10 41.7	+0.5
HWA				*e*S	Sg	11 10 45.4	+1.2
ETM	**Tongmen**	**0.18**	**205**	⇑*i*P	Pg	11 10 41.5	-0.1
ETM				S	Sg	11 10 44.6	-0.2
EHP	**Heping Village**	**0.23**	**40**	*e*P	Pg	11 10 42.7	+0.4
EHP				*e*S	Sg	11 10 46.6	+0.5
EAHA	**Aohua**	**0.24**	**37**	*e*P	Pg	11 10 42.5	0.0
EAHA				*e*S	Sg	11 10 47.0	+0.5
TEYL	**Yanliau Villag**	**0.27**	**176**	*e*P	Pb	11 10 42.6	-0.2
TEYL				*e*S	Sg	11 10 48.1	+1.3
WHF	**Hehuan Shan**	**0.28**	**272**	⇑*i*P	Pg	11 10 43.5	+0.1
WHF				*e*S	Sg	11 10 48.0	+0.1
FUSS	**Fushou**	**0.33**	**291**	⇓*i*P	Pb	11 10 44.4	+0.3
FUSS				*i* S	Sb	11 10 49.4	+0.6
ENA	**Nanau**	**0.33**	**27**	P	Pg	11 10 43.9	0.0
ENA				S	Sg	11 10 48.6	-0.2
NNSB	**Datong**	**0.34**	**329**	⇓*i*P	Pb	11 10 44.4	0.0
NNSB				*i* S	Sb	11 10 49.6	+0.1
ESL	**Shilin**	**0.34**	**203**	⇑P	Pg	11 10 43.8	-0.3
ESL				*e*S	Sg	11 10 49.1	0.0
SHUL	**Shoufeng**	**0.34**	**182**	P	Pb	11 10 44.5	+0.2
SHUL				*e*S	Sb	11 10 50.5	+1.1
NNS	**Nan Shan**	**0.36**	**329**	⇓*i*P	Pb	11 10 44.7	0.0
NNS				*e*S	Sb	11 10 50.0	0.0
EWUT	**Wuta**	**0.36**	**31**	⇑P	Pg	11 10 44.4	0.0
EWUT				*e*S	Sg	11 10 49.3	-0.3
TWT	**Tachien**	**0.39**	**288**	⇓P	Pb	11 10 45.6	+0.4
TWT				*i* S	Sb	11 10 51.2	+0.4
TDCB	**Techi**	**0.40**	**287**	⇓*i*P	Pb	11 10 45.6	+0.2
TDCB				*e*S	Sg	11 10 51.0	+0.1
LATG	**Datong**	**0.40**	**353**	⇓*i*P	Pg	11 10 45.2	0.0
LATG				S	Sg	11 10 50.8	-0.2
OWD	**Renai**	**0.41**	**244**	⇑P	Pg	11 10 45.4	+0.1
OWD				S	Sb	11 10 51.3	-0.1
TEGC	**Jichi Village**	**0.42**	**185**	*e*P	Pb	11 10 45.8	+0.1
WUSB	**Renai**	**0.44**	**252**	⇑*i*P	Pb	11 10 46.2	+0.1
WUSB				S	Sg	11 10 51.9	-0.2
WARBT	**Fenglin Townsh**	**0.45**	**203**	P	Pg	11 10 45.3	-0.7
WARBT				S	Sg	11 10 52.0	-0.2
EGFH	**Guangfu**	**0.48**	**197**	P	Pg	11 10 46.3	-0.2
EGFH				*e*S	Sg	11 10 53.2	+0.1
ESAO	**Su ao**	**0.50**	**29**	*e*P	Pg	11 10 46.8	-0.1
ESAO				S	Sg	11 10 53.4	-0.4
ENTT	**Nioudou**	**0.51**	**359**	⇓*i*P	Pg	11 10 47.0	0.0
ENTT				*e*S	Sb	11 10 54.3	+0.3
NDS	**Dongshan**	**0.51**	**14**	*e*P	Pb	11 10 46.3	-0.9
TWC	**Suao**	**0.54**	**28**	P	Pg	11 10 47.6	+0.1
TWC				*e*S	Sg	11 10 54.8	0.0
VWDT	**VWDT**	**0.55**	**227**	⇑P	Pg	11 10 47.8	0.0
VWDT				S	Sg	11 10 56.0	+0.8
YHNB	**Yeheng**	**0.56**	**341**	P	Pg	11 10 48.2	+0.1
YHNB	**Yeheng**	**0.56**	**341**	⇓*i*P	Pg	11 10 48.1	0.0
YHNB				*e*S	Sb	11 10 55.7	+0.1
NSK	**Sanguang**	**0.58**	**340**	P	Pb	11 10 48.2	0.0
NSK				*i* S	Sb	11 10 55.9	-0.1
TWE	**Neicheng**	**0.59**	**8**	P	Pg	11 10 48.6	0.0
TWE				S	Sg	11 10 56.5	0.0
WHP	**Taichung City**	**0.59**	**284**	*e*P	Pg	11 10 49.0	+0.4
WHP				*e*S	Sg	11 10 57.7	+1.1
WCS	**Beigang Elemen**	**0.61**	**263**	*i* P	Pg	11 10 49.2	+0.3
WCS				*e*S	Sg	11 10 57.4	+0.2
FUSB	**Fushanzhiwuyua**	**0.62**	**1**	*e*P	Pg	11 10 49.1	-0.1
FUSB				*e*S	Sb	11 10 57.0	-0.3
NFF	**Wufeng Townshi**	**0.65**	**320**	*e*P	Pg	11 10 49.7	0.0
NFF				*e*S	Sg	11 10 58.6	+0.2
HGSD	**Ruisui**	**0.65**	**192**	*e*P	Pg	11 10 49.8	+0.1
EOS2	**EOS2**	**0.66**	**64**	*e*P	Pn	11 10 51.3	+0.3
EHY	**Hungye**	**0.67**	**201**	*e*P	Pb	11 10 49.2	-0.5
EHY				*e*S	Sb	11 10 58.6	+0.1
SSLB	**Suanglung**	**0.67**	**239**	P	Pg	11 10 50.0	+0.1
SSLB	**Suanglung**	**0.67**	**239**	*e*P	Pb	11 10 49.8	+0.1
SSLB				*e*S	Sb	11 10 58.4	-0.1
SMLT	**Sun Moon Lake**	**0.67**	**248**	*e*P	Pg	11 10 50.2	+0.2
SMLT				S	Sg	11 10 59.0	0.0
EHYH	**Wanrong**	**0.67**	**199**	*e*P	Pb	11 10 49.5	-0.2
EHYH				*e*S	Sb	11 10 57.9	-0.7
EOS4	**EOS4**	**0.68**	**91**	*e*P	Pg	11 10 50.2	+0.2
EOS3	**EOS3**	**0.69**	**77**	*e*P	Pn	11 10 51.2	-0.2
TYC	**Yuchr**	**0.70**	**251**	*e*P	Pg	11 10 50.6	+0.1
TYC				*e*S	Sg	11 10 59.8	0.0
NSTT	**Nanjuang**	**0.72**	**313**	*e*P	Pg	11 10 51.3	+0.3
NSTT				*e*S	Sg	11 11 00.7	+0.1
LIOB	**Emei**	**0.72**	**315**	*e*P	Pn	11 10 51.5	-0.4
KSHI	**Guanxi Townshi**	**0.74**	**330**	*e*P	Pn	11 10 51.9	-0.2
KSHI				*e*S	Sn	11 11 02.3	-0.5
TWQ1	**Liyutan**	**0.77**	**286**	*e*P	Pn	11 10 53.3	+0.8
TWQ1				*e*S	Sn	11 11 03.1	-0.4
EGS		**0.78**	**24**	*e*P	Pg	11 10 52.0	0.0
YULB	**Yu-li**	**0.78**	**199**	P	Pb	11 10 51.5	-0.2
YULB	**Yu-li**	**0.78**	**199**	*e*P	Pb	11 10 50.3	-1.4
YULB				*e*S	Sb	11 11 00.8	-1.1
WHYT	**Xinyi Township**	**0.79**	**237**	*e*P	Pg	11 10 52.5	+0.2
WHYT				*e*S	Sg	11 11 03.0	+0.2
NSY	**Sanyi**	**0.80**	**291**	*e*P	Pn	11 10 53.3	+0.4
NSY				*e*S	Sn	11 11 05.6	+1.3
TWF1	**Yuli**	**0.82**	**198**	*e*P	Pb	11 10 52.0	-0.3
NMLH	**Miaoli**	**0.82**	**299**	*e*P	Pn	11 10 53.8	+0.5
NMLH				*e*S	Sn	11 11 05.0	0.0
TCU	**Taichung**	**0.82**	**271**	*e*P	Pn	11 10 54.4	+1.1
TCU				*e*S	Sn	11 11 05.9	+0.9
WJS	**Zhushan**	**0.84**	**248**	*e*P	Pn	11 10 53.8	+0.3
WJS				*e*S	Sn	11 11 06.0	+0.7
TATO	**Taipei**	**0.84**	**354**	P	Pn	11 10 54.2	+0.6
TATO	**Taipei**	**0.84**	**354**	S	Sn	11 11 05.0	-0.4
WNT	**Mingjian**	**0.85**	**253**	*e*P	Pn	11 10 54.6	+0.9
WNT				*e*S	Sn	11 11 06.8	+1.1
TIPB	**Shuangxi**	**0.86**	**15**	*e*P	Pg	11 10 53.5	-0.1
TIPB				S	Sb	11 11 04.3	0.0
HSN	**Hsinchu**	**0.87**	**320**	*e*P	Pn	11 10 54.9	+1.0
NCUH	**Zhongli**	**0.91**	**337**	*e*P	Pn	11 10 55.3	+0.9
NCUH				*i* S	Sn	11 11 08.6	+1.7
ALS	**Alishan**	**0.94**	**229**	*e*P	Pn	11 10 55.2	0.0
TWB1	**Santiao Chiao**	**0.95**	**23**	*e*P	Pn	11 10 55.1	+0.1
CHKH	**Chenggong**	**0.95**	**190**	*e*P	Pb	11 10 53.8	-0.8
CHKH				*e*S	Sb	11 11 06.2	-0.6
FULB	**Fuli**	**0.97**	**196**	*e*P	Pb	11 10 54.7	-0.1
TWS1	**Kuangyinshan**	**0.97**	**351**	*e*P	Pg	11 10 56.4	+0.7
TWS1				*e*S	Sn	11 11 09.9	+1.2
CHN5	**Tsauling**	**0.98**	**237**	*e*P	Pg	11 10 56.5	+0.7
CHN5				S	Sn	11 11 10.1	+1.2
SXI1	**Grass Mountain**	**0.99**	**16**	*e*P	Pb	11 10 55.2	-0.2
SXI1				S	Sn	11 11 09.7	+0.4
ZUZH	**Zhuzihu**	**1.02**	**358**	P	Pg	11 10 56.9	+0.2
ZUZH				*e*S	Sn	11 11 09.9	-0.1
NTST	**Danshui**	**1.03**	**354**	*e*P	Pg	11 10 57.0	+0.2
NTST				*e*S	Sg	11 11 11.6	+1.2
CHKT	**Chengkung**	**1.05**	**191**	*e*P	Pg	11 10 56.8	-0.3
WDLH	**Douliu**	**1.05**	**245**	*e*P	Pg	11 10 58.1	+1.0
WDLH				*i* S	Sg	11 11 12.6	+1.7
YM08	**YM08**	**1.05**	**1**	*e*P	Pg	11 10 56.8	-0.3
YM08				S	Sn	11 11 10.8	+0.2
ELDTW	**Lidau**	**1.07**	**209**	*e*P	Pb	11 10 56.2	-0.5
WCKO	**Fanlu**	**1.13**	**232**	*e*P	Pg	11 10 59.2	+0.6
WCKO				*e*S	Sg	11 11 14.3	+0.9
TWY	**Chenhua**	**1.14**	**1**	*e*P	Pg	11 10 59.5	+0.7
WTK	**Tuku**	**1.17**	**248**	*e*P	Pg	11 11 00.3	+0.8
WTK				S	Sg	11 11 16.1	+1.2
EDH	**Donghe**	**1.18**	**192**	*e*P	Pn	11 10 57.6	-0.7
TPUB	**Ta-pu**	**1.20**	**227**	P	Pg	11 11 00.0	0.0
TPUB	**Ta-pu**	**1.20**	**227**	*e*P	Pg	11 10 59.5	-0.5
STYH	**Taoyuan**	**1.21**	**218**	*e*P	Pb	11 10 59.3	+0.3
WTP	**Ta-pu**	**1.25**	**225**	*e*P	Pg	11 11 01.2	+0.3
TWK	**Hsinying**	**1.32**	**229**	*e*P	Pb	11 11 01.4	+0.5
TWK				*e*S	Sg	11 11 21.2	+1.7
SNST	**Tainan City**	**1.34**	**228**	*e*P	Pb	11 11 01.3	0.0
CHN1	**Nanshi**	**1.35**	**226**	*e*P	Pg	11 11 02.7	-0.1
CHN1				*e*S	Sg	11 11 20.9	+0.5
YOJ	**Yonaguni jima**	**1.35**	**76**	P	Pn	11 11 00.7	+0.2
YOJ	**Yonaguni jima**	**1.35**	**76**	*e*P	Pn	11 11 00.2	-0.4
WSL	**Shuilin Townsh**	**1.38**	**244**	*e*P	Pg	11 11 02.8	-0.5
WSL				S	Sg	11 11 22.3	+0.9
TWGBT	**Beinan**	**1.39**	**199**	P	Pg	11 11 02.8	-0.7
ICHU	**Yijhu**	**1.42**	**237**	*e*P	Pb	11 11 02.8	+0.3
ICHU				*e*S	Sg	11 11 23.7	+1.2

JMA 21 11:10:58.0±0.4,24°.2N±0°.6×12°4E±°,h21km±2km,MV1.0/5, NEAR ISHIGAKIJIMA ISLAND,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.13**	**136**	*e*P	Pb	11 11 02.1	-2.0
IRIF	**Iriomote-Funau**	**0.19**	**6**	*e*P	Pb	11 11 03.0	-0.8
IRIF				*e*S	Sb	11 11 06.3	-1.6
JKRS	**Kuro-shima**	**0.29**	**72**	*e*P	Pb	11 11 04.6	0.0
JKRS				*e*S	Sb	11 11 09.1	+0.1
JIJ	**Ishigaki jima**	**0.45**	**62**	*e*P	Pb	11 11 07.0	-0.3
JIJ				*e*S	Sb	11 11 12.8	-0.6
JISG	**Ishigakijimahi**	**0.70**	**51**	*e*P	Pb	11 11 11.4	-0.2

IDC ***21*** *11:21:59.5±1.1,30°.83S×177°.50W,h0km,mb4.2/5, mbtmp4.2/6,ML3.9/1,MS4.1/2,Error ellipse: s-maj=32.9km s-min=19.8km az=91.0*

NEIC ***21*** *11:22:02.8±0.6,30°.72S±0°.09×177°.6W±0°.2,h10km±1km, mb4.6/14,Error ellipse: s-maj=26.5km s-min=10.9km az=64.0*

ISC 21 11:22:04.4±0.7,30°.84S±0°.07×177°.7W±0°.1,h27km,n34, σ1^{s}.36/35,mb4.5/12,2C,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.59**	**354**	Pn	**Pn**	**11 22 29.4**	**-1.4**
	182nm,0.3s,baz=13,slow=16,SNR=11						
RAO				Sn	**Sb**	**11 22 50.4**	**-2.4**
	551nm,0.3s,baz=160,slow=20,SNR=10.0						
URZ	**Urewera**	**8.54**	**209**	Pn	Pn	11 24 03.0	-3.3
	0.6nm,0.3s,baz=265,slow=4.1,SNR=9.6						
URZ				Sn	**Sn**	**11 25 36.8**	**-4.9**
	3.3nm,0.3s,baz=4.2,slow=24,SNR=9.6						
RPZ	**Rata Peaks**	**15.64**	**212**	Pn	**Pn**	**11 25 42.0**	**-0.8**
	0.4nm,0.3s,baz=45,slow=1.4,SNR=1.4						
	6.4nm,0.7s						
ONTNC	**Ouen Toro**	**16.50**	**297**	Pn	**Pn**	**11 25 54.6**	**+0.6**
ONTNC				IAmb	IAmb	11 26 20.9	
	comp=Z,36nm,1.2s						
DZM	**Mont Dzumac**	**16.64**	**298**	Pn	**Pn**	**11 25 56.6**	**+0.7**
DZM				IAmb	IAmb	11 26 10.9	
	comp=Z,13nm,0.9s						
DZM	**Mont Dzumac**	**16.64**	**298**	LR	LR	11 31 05.6	
	comp=Z,319nm,18.3s,baz=242,slow=32						
CTAO	**Charters Tower**	**34.11**	**280**	P	**P**	**11 28 48.2**	**+1.2**
CTAO				IAmb	IAmb	11 29 06.9	
	comp=Z,8.4nm,0.8s						
STKA	**Stephens Creek**	**34.62**	**257**	P	**P**	**11 28 52.1**	**+0.8**
STKA	**Stephens Creek**	**34.62**	**257**	P	**P**	**11 28 52.8**	**+1.5**
	comp=Z,4.9nm,0.7s,baz=90,slow=10,SNR=6.7						
	comp=Z,4.9nm,0.7s						
BBOO	**Buckleboo**	**39.09**	**255**	P	**P**	**11 29 30.5**	**+1.2**
BBOO				IAmb	IAmb	11 29 37.2	
	comp=Z,23nm,1.3s						
AS31	**Alice Springs**	**43.33**	**267**	P	**P**	**11 30 05.3**	**+0.9**
ASAR	**Alice Springs**	**43.33**	**267**	P	**P**	**11 30 05.2**	**+0.9**
ASAR	**Alice Springs**	**43.33**	**267**	P	**P**	**11 30 04.9**	**+0.5**
	comp=Z,1.7nm,0.6s,baz=106,slow=7.6,SNR=32						
ASAR				PcP	**PcP**	**11 31 52.9**	**0.0**
	comp=Z,1.0nm,0.8s,baz=109,slow=4.1,SNR=3.7						
ASAR				ScP	**ScP**	**11 35 44.8**	**+2.4**
	comp=Z,0.1nm,0.3s,baz=98,slow=3.5,SNR=4.1						
	comp=Z,1.7nm,0.6s						
WR8	**Warramunga Arr**	**44.22**	**273**	P	**P**	**11 30 12.5**	**+1.0**
WR8				IAmb	IAmb	11 30 27.5	
	comp=Z,22nm,1.4s						
WRAB	**Tennant Creek**	**44.36**	**272**	P	**P**	**11 30 13.0**	**+0.4**
WRAB				IAmb	IAmb	11 30 41.0	
	comp=Z,19nm,1.4s						
WRA	**Warramunga Arr**	**44.36**	**272**	P	**P**	**11 30 13.4**	**+0.8**
WRA	**Warramunga Arr**	**44.36**	**272**	P	**P**	**11 30 12.6**	**0.0**
	comp=Z,4.7nm,0.8s,baz=111,slow=8.0,SNR=27						
	comp=Z,4.7nm,0.8s						
WB0	**Warramunga Arr**	**44.39**	**273**	P	**P**	**11 30 13.9**	**+1.0**
WB0				IAmb	IAmb	11 30 14.3	
	comp=Z,8.8nm,1.0s						
KNRA	**Kununurra**	**50.98**	**275**	P	**P**	**11 31 05.1**	**+1.0**
FITZ	**Fitzroy Crossi**	**52.61**	**270**	P	**P**	**11 31 16.8**	**+0.7**
QSPA	**South Pole Qui**	**59.27**	**180**	P	**P**	**11 32 05.2**	**+1.8**
QSPA				IAmb	IAmb	11 32 21.2	
	comp=Z,12nm,1.1s						
QSPA	**South Pole Qui**	**59.27**	**180**	P	**P**	**11 32 02.6**	**-0.8**
	comp=Z,1.6nm,1.0s,baz=90,slow=2.0,SNR=9.4						
	comp=Z,1.6nm,1.0s						
ESPZ	**Base Esperanza**	**75.07**	**156**	P	**P**	**11 33 44.6**	**+1.3**
JOW	**Kunigami**	**77.14**	**312**	LR	LR	12 02 15.0	
	comp=Z,243nm,21.3s,baz=260,slow=31						
VNA3	**Neumayer Olymp**	**77.85**	**176**	⇑P	**P**	**11 33 58.7**	**-0.4**
	comp=Z,6.2nm,0.8s						
VNA2	**Neumayer--Watz**	**78.29**	**177**	⇑P	**P**	**11 34 01.5**	**0.0**
	comp=Z,3.0nm,0.8s,baz=172,slow=3.9						
PETK	**Petropavlovsk-**	**86.30**	**345**	P	**P**	**11 34 43.9**	**+0.6**
	comp=Z,1.2nm,0.8s,baz=160,slow=5.4,SNR=2.4						
	comp=Z,1.2nm,0.8s						
KBZ	**Khabaz**	**145.56**	**303**	PKPbc	**PKPdf**	**11 41 39.1**	**-0.8**
	comp=Z,1.3nm,0.4s,baz=115,slow=3.6,SNR=3.9						
FIA1	**FINESS Array S**	**145.64**	**340**	PKPdf	**PKPab**	**11 41 39.7**	**-0.4**
FINES	**FINESS Array B**	**145.64**	**340**	PKPbc	**PKPbc**	**11 41 39.1**	**-0.6**
	comp=Z,2.1nm,0.3s,baz=49,slow=4.8,SNR=46						
NC303	**NORSAR Array S**	**149.02**	**351**	PKPbc	**PKiKP**	**11 41 50.4**	**-0.1**
AKASG	**Malin Array Be**	**151.80**	**322**	PKPbc	**PKPbc**	**11 41 55.0**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=53,slow=2.7,SNR=5.3						
MMAI	**Mount Meron Ar**	**151.87**	**283**	PKPbc	**PKiKP**	**11 41 57.4**	**0.0**
	comp=Z,8.2nm,0.9s,baz=84,slow=5.1,SNR=5.7						
BRTR	**Keskin Array B**	**153.02**	**298**	PKPbc	**PKPbc**	**11 41 58.8**	**-0.7**
	comp=Z,1.2nm,0.9s,baz=88,slow=4.0,SNR=5.2						

IDC ***21*** *11:33:24.9±1.1,30°.61S×177°.43W,h0km,mb4.1/5, mbtmp4.1/5,Error ellipse: s-maj=29.3km s-min=21.5km az=93.0*

NEIC ***21*** *11:33:27.9±1.2,30°.6S±0°.1×177°.4W±0°.2,h10km±1km, mb4.7/10,Error ellipse: s-maj=29.2km s-min=18.1km az=62.0*

ISC 21 11:33:30.0±0.9,30°.72S±0°.07×177°.5W±0°.1,h33km,n24, σ1^{s}.55/27,mb4.5/10,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.50**	**347**		**Pn**	**11 33 53.5**	**-1.1**
RAO	**Raoul Island**	**1.50**	**347**	Pn	**Pn**	**11 33 52.9**	**-1.7**
	653nm,0.3s,baz=102,slow=8.8,SNR=29						
RAO				Sn	**Sn**	**11 34 11.2**	**-1.7**
	689nm,0.3s,baz=101,slow=22,SNR=10.0						
URZ	**Urewera**	**8.72**	**209**	Pn	**Pn**	**11 35 31.6**	**-2.3**
	0.8nm,0.3s,baz=248,slow=3.2,SNR=6.6						
URZ				Sn	**Sn**	**11 37 07.7**	**-3.3**
	2.3nm,0.3s,baz=104,slow=20,SNR=8.0						
DZM	**Mont Dzumac**	**16.72**	**297**	Pn	**P**	**11 37 23.0**	**-1.0**
CTAO	**Charters Tower**	**34.24**	**279**	P	**P**	**11 40 15.3**	**+2.3**
CTAO				IAmb	IAmb	11 40 49.7	
	comp=Z,16nm,1.4s						
STKA	**Stephens Creek**	**34.79**	**257**	P	**P**	**11 40 20.3**	**+2.6**
STKA	**Stephens Creek**	**34.79**	**257**	P	**P**	**11 40 19.6**	**+1.9**
	comp=Z,4.9nm,0.9s,baz=94,slow=10,SNR=6.9						
	comp=Z,4.9nm,0.9s						
BBOO	**Buckleboo**	**39.27**	**254**	P	**P**	**11 40 57.1**	**+1.5**
BBOO				IAmb	IAmb	11 41 10.4	
	comp=Z,22nm,1.5s						
AS31	**Alice Springs**	**43.49**	**267**	P	**P**	**11 41 32.0**	**+1.5**
ASAR	**Alice Springs**	**43.49**	**267**	P	**P**	**11 41 30.8**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=108,slow=7.3,SNR=11						
ASAR				PcP	**PcP**	**11 43 17.8**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=107,slow=3.4,SNR=2.0						
	comp=Z,0.7nm,0.6s						
WR8	**Warramunga Arr**	**44.36**	**272**	P	**P**	**11 41 38.5**	**+1.0**
WR8				IAmb	IAmb	11 41 46.9	
	comp=Z,12nm,1.4s						
WRAB	**Tennant Creek**	**44.50**	**272**	P	**P**	**11 41 39.2**	**+0.6**
WRAB				IAmb	IAmb	11 41 47.9	
	comp=Z,8.2nm,0.6s						
WRA	**Warramunga Arr**	**44.51**	**272**	P	**P**	**11 41 38.3**	**-0.3**
	comp=Z,2.3nm,0.5s,baz=112,slow=7.9,SNR=22						
	comp=Z,2.3nm,0.5s						
WB0	**Warramunga Arr**	**44.53**	**272**	P	**P**	**11 41 39.6**	**+0.8**
WB0				IAmb	IAmb	11 41 40.9	
	comp=Z,16nm,1.4s						
KNRA	**Kununurra**	**51.12**	**274**	P	**P**	**11 42 31.3**	**+1.4**
QSPA	**South Pole Qui**	**59.40**	**180**	P	**P**	**11 43 31.3**	**+2.3**
QSPA				IAmb	IAmb	11 43 57.8	
	comp=Z,4.6nm,0.9s						
QSPA	**South Pole Qui**	**59.40**	**180**	P	**P**	**11 43 29.8**	**+0.8**
	comp=Z,1.8nm,1.0s,baz=347,slow=1.7,SNR=2.6						
	comp=Z,1.8nm,1.0s						
NVAR	**Mina Array Bea**	**88.20**	**42**	P	**P**	**11 46 17.8**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=258,slow=4.5,SNR=3.9						
	comp=Z,0.8nm,0.8s						
FIA1	**FINESS Array S**	**145.58**	**340**		**PKPab**	**11 53 04.2**	**-0.4**
FINES	**FINESS Array B**	**145.58**	**340**	PKPbc	**PKPdf**	**11 53 03.5**	**-0.6**
	comp=Z,3.5nm,0.6s,baz=28,slow=3.0,SNR=23						
NC303	**NORSAR Array S**	**148.92**	**352**	PKPdf	**PKPdf**	**11 53 10.9**	**+1.2**
NC204	**NORSAR Array S**	**148.95**	**352**	PKPdf	**PKPdf**	**11 53 10.3**	**+0.4**
HFS	**Hagfors**	**149.63**	**349**	PKPbc	**PKPbc**	**11 53 15.2**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=22,slow=1.6,SNR=1.6						
AKASG	**Malin Array Be**	**151.79**	**323**	PKPbc	**PKPbc**	**11 53 20.0**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=47,slow=3.8,SNR=4.0						

SOME ***21*** *11:53:03.8,43°.77N×69°.50E*

NNC ***21*** *11:53:07.6±1.9,43°.68N×69°.93E,h0km,mb3.8,mpv3.0, Error ellipse: s-maj=10.5km s-min=7.8km az=119.0, Suspected Mining explosion.*

KRNET ***21*** *11:53:07.1±0.1,43°.54N×69°.68E,mb2.9*

ISC 21 11:53:07.0±2.3,43°.59N±0°.08×69°.6E±0°.1,h0km,n12, σ1^{s}.35/21,14C-3D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**0.82**	**126**	⇓P	**Pg**	**11 53 21.2**	**-1.4**
	0.7nm,0.2s,baz=330,slow=14,SNR=14						
KK31				S	**Sg**	**11 53 31.7**	**-1.5**
	27nm,0.6s,baz=324,slow=26,SNR=76						
KKAR	**Karatay Array**	**0.82**	**126**	⇑*i*P	**Pg**	**11 53 21.6**	**-1.0**
KKAR				⇑*i*S	**Sg**	**11 53 32.2**	**-1.0**
TRKS	**Terek-Say**	**2.35**	**151**	⇑*e*P	**Pb**	**11 53 49.3**	**-0.9**
TRKS				⇑*e*S	**Sb**	**11 54 19.7**	**-0.1**
MNAS	**Manas**	**2.39**	**116**	⇑*i*P	**Pn**	**11 53 48.7**	**+1.2**
MNAS				⇑*i*S	**Sn**	**11 54 19.2**	**+1.6**
ARK	**Arkit**	**2.49**	**135**	⇑*i*P	**Pn**	**11 53 50.1**	**+1.2**
ARK				⇑*i*S	**Sn**	**11 54 21.9**	**+1.8**
EKS2	**Erkin-Say**	**3.19**	**105**	⇑*e*P	**Pn**	**11 54 00.2**	**+1.7**
EKS2				⇑*i*S	**Sn**	**11 54 39.1**	**+1.8**
AML	**Almayashu**	**3.34**	**114**	⇑*i*P	**Pn**	**11 54 02.2**	**+1.4**
AML				⇑*i*S	**Sn**	**11 54 42.3**	**+1.0**
ARSB	**Arslanbob**	**3.37**	**131**	⇑*e*P	**Pn**	**11 54 02.1**	**+1.1**
ARSB				⇑*e*S	**Sn**	**11 54 42.4**	**+0.7**
BTLS	**Baital**	**3.50**	**64**	Pg	**Pb**	**11 54 07.9**	**-1.9**
	8.4nm,0.5s						
BTLS				Lg	Lg	11 54 54.3	
	4.7nm,0.6s						
BTK	**Batken**	**3.64**	**165**	⇓*e*P	**Pn**	**11 54 06.0**	**+1.3**
BTK				⇓*e*S	**Sn**	**11 54 48.9**	**+0.5**
KRBS	**Karabastau**	**4.40**	**87**	Pg	**Pb**	**11 54 24.7**	**-0.5**
	2.5nm,0.5s						
KRBS				Lg	Lg	11 55 24.4	
	2.9nm,0.5s						
KTBS	**Karatobe**	**5.13**	**86**	Pg	**Pb**	**11 54 38.0**	**+0.3**
	2.5nm,0.6s						
KTBS				Lg	Lg	11 55 45.5	
	4.2nm,0.7s						

IDC 21 11:57:36.7±2.3,30°.30S×178°.18W,h0km,mb3.3/3, mbtmp3.3/3,MS4.0/1,Error ellipse: s-maj=66.6km s-min=44.4km az=44.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**38.43**	**295**	LR	LR	12 17 55.5	
	comp=Z,225nm,20.4s,baz=174,slow=32						
ASAR	**Alice Springs**	**42.96**	**267**	P	P	12 05 36.9	-0.9
	0.2nm,0.6s,baz=108,slow=8.0,SNR=1.3						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**43.94**	**272**	P	P	12 05 46.8	+1.1
	0.2nm,0.4s,baz=112,slow=8.3,SNR=1.5						
	0.2nm,0.4s						
QSPA	**South Pole Qui**	**59.81**	**180**	P	P	12 07 43.7	0.0
	0.5nm,0.9s,baz=314,slow=9.2,SNR=1.8						
	0.5nm,0.9s						
FINES	**FINESS Array B**	**145.00**	**340**	PKPbc	PKPbc	12 17 13.1	-1.4
	1.0nm,0.8s,baz=47,slow=5.3,SNR=3.9						

IDC ***21*** *11:59:00.7±0.8,23°.90N×125°.96E,h0km,mb3.9/17, mbtmp3.9/20,ML3.9/3,MS3.6/9,Error ellipse: s-maj=20.1km s-min=15.6km az=92.0*

JMA ***21*** *11:59:02.4±0.2, 23°.8N±0°.8×126°.1E±0°.7, h74^{km}, MD4.7/21, MV4.1/21, NEAR MIYAKOJIMA ISLAND*

NEIC ***21*** *11:59:03.5±1.8, 23°.80N±0°.10×125°.87E±0°.07, h10^{km}±1^{km}, mb4.5/48, Error ellipse: s-maj=16.5km s-min=11.4km az=173.0*

MOS ***21*** *11:59:06.9±1.6, 24°.30N×125°.26E, h13^{km}, mb4.5/13, Error ellipse: s-maj=16.6km s-min=9.1km az=102.4*

ISC 21 11:59:01.7±1.9**, 23°.82N**±0°.05×**125°.98E**±0°.04**, h1**^{km}±11^{km}**, n162, σ1^{s}46**/144**, mb4.4**/52**, MS3.6**/7**, 14C, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	Gusukube	1.07	331	P	Pg	11 59 22.8	+0.6
JOGS				S	Sb	11 59 37.9	+0.5
JOGS	Gusukube	1.07	331	A	A	11 59 22.8	
	comp=N,37nm,2.4s,comp=E,56nm,1.2s						
JMJ2	Miyako jima3	1.09	327	P	Pg	11 59 23.1	+0.5
JMJ2				eS	Sb	11 59 38.3	+0.3
JMJ2	Miyako jima3	1.09	327	A	A	11 59 23.1	
	comp=N,42nm,5.0s,comp=E,38nm,2.4s						
JMJ	Miyako jima 2	1.17	328	P	Pb	11 59 22.8	-1.8
JMJ	Miyako jima 2	1.17	328	S	Sn	11 59 42.5	+0.8
JIRB	Irabujima	1.24	324	P	Pn	11 59 24.8	-1.3
JIRB				eS	Sg	11 59 42.4	+0.8
JIRB	Irabujima	1.24	324	A	A	11 59 24.8	
	comp=N,23nm,1.0s,comp=E,25nm,2.6s						
JIKM	Ikemajima	1.28	329	eP	Pn	11 59 25.6	-1.1
JIKM	Ikemajima	1.28	329	A	A	11 59 25.6	
	comp=N,33nm,2.3s,comp=E,37nm,2.0s						
JTJ	Tarama	1.42	305	eP	Pn	11 59 28.1	-0.5
JTJ				eS	Sg	11 59 47.5	+0.2
JTJ	Tarama	1.42	305	A	A	11 59 28.1	
	comp=N,36nm,3.2s,comp=E,21nm,2.0s						
JISG	Ishigakijimahi	1.70	297	P	Pn	11 59 31.6	-0.9
JISG	Ishigakijimahi	1.70	297	A	A	11 59 31.6	
	comp=N,10.0nm,4.4s,comp=E,8.0nm,5.9s						
JIJ	Ishigaki jima	1.76	288	P	Pn	11 59 32.6	-0.6
JIJ	Ishigaki jima	1.76	288	A	A	11 59 32.6	
	comp=N,10.0nm,3.8s,comp=E,5.0nm,2.9s						
JKRS	Kuro-shima	1.85	283	P	Pn	11 59 34.5	+0.1
JKRS				eS	Sb	11 59 58.1	-1.6
HATJ	Hateruma jima	2.00	277	eP	Pn	11 59 36.3	-0.2
HATJ				eS	Sn	12 00 00.6	-1.6
HATJ	Hateruma jima	2.00	277	A	A	11 59 36.3	
	comp=N,12nm,3.2s,comp=E,12nm,2.3s						
IRIF	Iriomote-Funau	2.12	284	P	Pn	11 59 37.8	-0.3
JKE	Kume jima 2	2.60	16	eP	Pn	11 59 42.1	-2.7
YOJ	Yonaguni jima	2.78	284		Pn	11 59 46.0	-1.3
YOJ	Yonaguni jima	2.78	284	P	Pn	11 59 47.1	-0.2
YOJ	Yonaguni jima	2.78	284	eP	Pn	11 59 47.3	0.0
JJT3	Tamagusuku3	2.83	35	P	Pn	11 59 45.6	-2.4
JJT3	Tamagusuku3	2.83	35	A	A	11 59 45.6	
	comp=N,13nm,3.7s,comp=E,15nm,2.9s						
JYNG	Yonagunijimaku	2.84	283	eP	Pn	11 59 47.9	-0.2
JAGN	Aguni-jima	2.98	22	P	Pn	11 59 47.8	-2.3
JAGN	Aguni-jima	2.98	22	A	A	11 59 47.8	
	comp=N,7.0nm,1.8s,comp=E,7.0nm,1.8s						
JNTH	Nagotoyohara	3.26	34	P	Pn	11 59 51.3	-2.6
JOW	Kunigami	3.65	34	Pn	Pn	11 59 56.6	-2.6
	comp=E,35nm,0.3s,baz=134,slow=21,SNR=25						
JOW				Sn	Sn	12 00 41.0	-1.9
	comp=E,14nm,0.3s,baz=131,slow=18,SNR=3.6						
	comp=E,105nm,0.4s						
JOW	Kunigami	3.65	34	P	Pn	11 59 56.6	-2.6
JOW	Kunigami	3.65	34	eP	Pn	11 59 57.0	-2.3
JIH	Iheya	3.67	29	P	Pn	11 59 57.1	-2.5
JYRO	Yoronjima	3.90	35	P	Pn	11 59 59.9	-2.7
NACB	Ninganchiao	4.02	276		Pn	12 00 03.1	-1.3
NACB	Ninganchiao	4.02	276	P	Pn	12 00 03.1	-1.3
TATO	Taipei	4.25	287	Pn	Pn	12 00 06.3	-1.2
TATO	Taipei	4.25	287	P	Pn	12 00 07.6	+0.1
YHNB	Yeheng	4.28	282	Pn	Pn	12 00 08.6	+0.5
YHNB	Yeheng	4.28	282	P	Pn	12 00 08.3	+0.2
YULB	Yu-li	4.31	265		Pn	12 00 07.0	-1.5
YULB	Yu-li	4.31	265	P	Pn	12 00 06.7	-1.7
SSLB	Suanglung	4.60	271		Pn	12 00 10.9	-1.4
SSLB	Suanglung	4.60	271	P	Pn	12 00 12.5	+0.1
TWGBT	Beinan	4.61	258	P	Pn	12 00 10.8	-1.7
TWG	Pinlang	4.62	259		Pn	12 00 10.7	-1.8
TPUB	Ta-pu	4.93	265		Pn	12 00 16.2	-0.7
TPUB	Ta-pu	4.93	265	P	Pn	12 00 17.1	+0.1
JMZ	Minamidaito 2	5.17	66	Pn	Pn	12 00 21.6	+1.5
JMZ	Minamidaito 2	5.17	66	P	Pn	12 00 17.8	-2.3
KNMB	Chin-men Tao	6.96	277	Pn	Pn	12 00 44.4	-0.4
JNU	Nakatsue	10.22	24	Pn	Pn	12 01 26.1	-3.4
	comp=E,1.0nm,0.3s,baz=336,slow=6.4,SNR=9.1						
	comp=E,3.2nm,0.4s						
JNU	Nakatsue	10.22	24	P	Pn	12 01 27.8	-1.7
TGY	Tagaytay City	10.78	207	LR	LR	12 06 12.7	
	comp=E,101nm,18.3s,baz=256,slow=40						
JMN	Monobe	12.05	33	P	Pn	12 01 52.8	-1.8
TJN	Taejon	12.57	5⇑	eP	Pn	12 02 02.3	+0.7
KSRS	Korea Array	13.69	7	Pn	Pn	12 02 12.3	-4.6
	comp=E,0.1nm,0.3s,baz=185,slow=14,SNR=7.6						
KSRS	Korea Array	13.69	7	eP	Pn	12 02 17.5	+0.6
MAJO	Matsushiro	16.49	37		P	12 02 57.7	+0.7
MJAR	Matsushiro Arr	16.49	37		P	12 02 57.4	+0.4
MJAR	Matsushiro Arr	16.49	37	Pn	Pn	12 02 53.5	-0.8
	comp=E,0.2nm,0.3s,baz=227,slow=9.2,SNR=10						
	comp=E,0.6nm,0.5s						
MJB9	Matsu-Tunnel	16.49	37		Pn	12 02 56.9	+2.6
DAV	Davao City (W)	16.66	181	LR	LR	12 09 42.7	
	comp=E,96nm,19.8s,baz=5.5,slow=38						
JSD	Sado	17.63	34	P	Pn	12 03 10.0	+1.4
JMM	Marumori	18.88	39	P	P	12 03 23.5	+0.1
USRK	Ussuriysk Ar.	20.92	12	P	P	12 03 44.9	-0.7
	comp=E,1.2nm,0.6s,baz=190,slow=13,SNR=1.8						
	comp=E,1.2nm,0.6s						
ERM	Erimo	23.10	34	P	P	12 04 10.7	+1.8
ERM				IAmb	IAmb	12 04 36.3	
	comp=Z,16nm,0.9s						
MPSI	Mapaga	24.08	195	P	P	12 04 21.9	+3.2
	comp=Z,9.7nm,1.0s						
JKA	Kamikawa-asahi	24.40	30	P	P	12 04 21.0	-0.6
CMAR	Chiang Mai Arr	25.75	263	P	P	12 04 33.4	-0.7
	comp=Z,0.4nm,0.4s,baz=78,slow=9.1,SNR=5.5						
CMAR				LR	LR	12 14 29.9	
	comp=Z,83nm,19.1s,baz=60,slow=36						
	comp=Z,0.4nm,0.4s						
CMAR	Chiang Mai Arr	25.75	263	eP	P	12 04 35.6	+1.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KLR	Kul'dur	25.76	9	LR	LR	12 14 34.7	
	comp=Z,151nm,18.4s,baz=123,slow=36						
KLR	Kul'dur	25.76	9⇑	eP	P	12 04 38.2	+4.4
KLR				pmax	pmax		
	comp=Z,11nm,1.6s						
YSS	Yuzhno-Sakhali	26.72	26		P	12 04 43.3	+0.9
YSS	Yuzhno-Sakhali	26.72	26	ceP	P	12 04 47.7	+5.3
YSS				pmax	pmax		
	comp=Z,29nm,1.3s						
ULN	Ulaanbaatar	28.33	333	ceP	P	12 04 55.6	-1.5
ULN				pmax	pmax		
	comp=Z,3.0nm,1.7s						
SONM	Songino Array	28.58	332	P	P	12 04 59.8	+0.5
	comp=Z,0.4nm,0.4s,baz=141,slow=9.3,SNR=1.3						
SONM				LR	LR	12 16 44.5	
	comp=Z,120nm,18.0s,baz=96,slow=37						
	comp=Z,0.4nm,0.4s						
KAPI	Kappang	29.30	193	LR	LR	12 15 52.7	
	comp=Z,113nm,21.0s,baz=124,slow=34						
TYV	Tymovskoe	29.93	21	eP	P	12 05 17.6	+6.5
TYV				pmax	pmax		
	comp=Z,5.0nm,1.3s						
TYV				pmax	pmax		
	comp=Z,100nm,3.3s						
IPM	Ipoh	30.80	235	P	P	12 05 18.3	-0.8
PSI	Prapat	33.47	235	LR	LR	12 18 15.9	
	comp=Z,139nm,19.3s,baz=24,slow=34						
RPSI	Rantau Prapat	33.54	235	P	P	12 05 43.4	+0.2
EVN	Everest	35.37	285		P	12 05 57.0	-2.7
EVN				IAmb	IAmb	12 06 29.8	
	comp=Z,7.7nm,1.0s						
GSI	Gunungsitoli	35.47	235	P	P	12 05 58.7	-1.2
PETK	Petropavlovsk-	37.81	31	P	P	12 06 18.3	-1.1
	comp=Z,0.4nm,0.5s,baz=225,slow=10,SNR=4.3						
PETK				LR	LR	12 22 00.3	
	comp=Z,140nm,19.9s,baz=178,slow=36						
	comp=Z,0.4nm,0.5s						
H11N1	WAKE ISLAND Hy	38.12	88	T	T	12 46 46.9	
	baz=283,slow=75						
H11N2	WAKE ISLAND Hy	38.13	88	T	T	12 46 48.2	
	baz=283,slow=75						
H11N3	WAKE ISLAND Hy	38.14	88	T	T	12 46 47.3	
	baz=283,slow=75						
H11S3	WAKE ISLAND Hy	38.24	90	T	T	12 46 57.6	
	baz=284,slow=74						
H11S1	WAKE ISLAND Hy	38.25	90	T	T	12 47 01.1	
	baz=284,slow=74						
H11S2	WAKE ISLAND Hy	38.26	90	T	T	12 47 02.9	
	baz=284						
KNRA	Kununurra	39.35	176	P	P	12 06 31.6	-1.1
KNRA				IAmb	IAmb	12 06 47.6	
	comp=Z,16nm,1.3s						
COEN	Coen	41.14	154	P	P	12 06 47.3	-0.3
COEN				IAmb	IAmb	12 06 55.6	
	comp=Z,16nm,1.1s						
FITZ	Fitzroy Crossi	41.67	180	P	P	12 06 50.8	-1.0
MK31	Makanchi Array	41.68	314	ceP	P	12 06 51.9	0.0
MKAR	Makanchi Array	41.68	314	P	P	12 06 51.0	-0.9
	comp=Z,2.6nm,0.9s,baz=97,slow=10,SNR=16						
	comp=Z,2.6nm,0.9s						
MKAR	Makanchi Array	41.68	314	eP	P	12 06 51.5	-0.4
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MAKZ	Makanchi	41.89	314		P	12 06 53.5	-0.1
SEY	Seymchan	42.91	17	ceP	P	12 07 04.5	+2.9
SEY				pmax	pmax		
	comp=Z,7.0nm,2.5s						
ZALV	Zalesovo Beam	42.99	325	P	P	12 06 59.8	-2.5
	comp=Z,1.0nm,0.4s,baz=126,slow=9.7,SNR=5.8						
	comp=Z,1.0nm,0.4s						
TARG	Taragay, Kyrgy	43.66	306	P	P	12 07 06.5	-2.0
WB0	Warramunga Arr	44.09	169	P	P	12 07 11.2	-0.4
KDJ	Kajisay	44.18	307	P	P	12 07 10.6	-1.8
WRA	Warramunga Arr	44.26	169	P	P	12 07 12.1	-0.8
	comp=Z,4.2nm,0.6s,baz=346,slow=8.0,SNR=25						
	comp=Z,4.2nm,0.6s						
WR8	Warramunga Arr	44.30	168	P	P	12 07 12.7	-0.5
NRN	Naryn	44.96	305	P	P	12 07 18.9	+0.2
NRN				IAmb	IAmb	12 07 28.0	
	comp=Z,7.3nm,1.1s						
KURK	Kurchatov	45.22	319	P	P	12 07 19.8	-0.5
KURK	Kurchatov	45.22	319	ceP	P	12 07 20.1	-0.2
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURBB	Kurchatov Arra	45.24	319	P	P	12 07 18.3	-2.2
	comp=Z,1.6nm,0.7s,baz=108,slow=8.1,SNR=10						
	comp=Z,1.6nm,0.7s						
AAK	Ala-Archa	46.22	307	ceP	P	12 07 29.6	+1.1
AAK				pmax	pmax		
	comp=Z,4.0nm,1.7s						
AS31	Alice Springs	47.83	170	P	P	12 07 41.1	+0.1
ASAR	Alice Springs	47.83	170	P	P	12 07 41.0	0.0
	comp=Z,0.8nm,0.5s,baz=356,slow=13,SNR=37						
	comp=Z,0.8nm,0.5s						
TIXI	Tiksi	47.88	1	LR	LR	12 29 05.7	
	comp=Z,148nm,18.7s,baz=189,slow=38						
KBL	Kabul	50.27	296	P	P	12 08 00.2	+0.2
KBL				IAmb	IAmb	12 08 00.9	
	comp=Z,5.6nm,0.8s						
BILL	Bilibino	50.59	18⇑	eP	P	12 08 05.0	+3.4
BILL				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BVAR	Borovoye Array	50.75	320	P	P	12 08 00.8	-2.3
	comp=Z,0.8nm,0.5s,baz=108,slow=9.5,SNR=6.2						
	comp=Z,0.8nm,0.5s						
BRVK	Borovoye	50.82	320		P	12 08 03.0	-0.7
BRVK				IAmb	IAmb	12 08 05.4	
	comp=Z,6.9nm,1.2s						
BRVK	Borovoye	50.82	320	ceP	P	12 08 03.5	-0.1
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
ABKAR	Akbulak array	56.83	314	P	P	12 08 48.1	+0.5
ABKAR				IAmb	IAmb	12 08 48.7	
	comp=Z,5.5nm,0.9s						
D19K	Kuna River	62.90	24	P	P	12 09 29.1	0.0
D19K				IAmb	IAmb	12 09 42.7	
	comp=Z,6.3nm,1.2s						
KIRV	Kirov	63.02	325	ceP	P	12 09 30.7	+0.7
E19K	Redstone River	63.18	25	P	P	12 09 32.4	+1.4
E19K				IAmb	IAmb	12 09 57.3	
	comp=Z,2.3nm,0.8s						
B20K	Meade River	63.34	22	P	P	12 09 33.6	+1.6
B20K				IAmb	IAmb	12 09 57.0	
	comp=Z,2.8nm,0.9s						
H19K	Roundabout Mou	63.44	27	P	P	12 09 34.7	+2.0
H19K				IAmb	IAmb	12 10 03.5	
	comp=Z,3.5nm,1.0s						
D20K	Etivluk River	63.46	23		P	12 09 33.8	+0.9
D20K				IAmb	IAmb	12 09 55.6	
	comp=Z,2.6nm,0.8s						
B21K	Ikpikpuk River	64.21	22	P	P	12 09 40.1	+2.4
B21K				IAmb	IAmb	12 10 01.1	
	comp=Z,4.4nm,0.9s						
E21K	Killik River	64.43	24	P	P	12 09 39.9	+0.6
E21K				IAmb	IAmb	12 09 54.9	
	comp=Z,4.1nm,1.1s						
J20K	Nowinta River	64.43	29	P	P	12 09 40.1	+0.8
J20K				IAmb	IAmb	12 10 16.9	
	comp=Z,3.1nm,1.1s						
B22K	Teshekpuk Lake	64.63	22	P	P	12 09 40.7	+0.3
D22K	Ayikyak River	64.89	23	P	P	12 09 42.9	+0.6
H21K	Melozitna Rive	64.95	27	P	P	12 09 42.8	+0.1
H21K				IAmb	IAmb	12 10 07.1	
	comp=Z,2.6nm,0.9s						
M20K	Styx River	65.02	31	P	P	12 09 44.5	+1.2
M20K				IAmb	IAmb	12 10 20.0	
	comp=Z,5.1nm,1.1s						
E22K	Anaktuvuk Pass	65.24	24	P	P	12 09 44.5	-0.1
PPLA	Purkeypile	65.38	30	P	P	12 09 47.4	+1.7
CAST	Castle Rocks	65.39	29	P	P	12 09 46.3	+0.7
CAST				IAmb	IAmb	12 09 51.9	
	comp=Z,2.8nm,1.0s						
C23K	Itkillik River	65.60	22	P	P	12 09 47.6	+0.8
C23K				IAmb	IAmb	12 09 58.4	
	comp=Z,6.1nm,1.2s						
BPAW	Bear Paw Mtn.	65.82	29	P	P	12 09 49.2	+0.8
BPAW				IAmb	IAmb	12 10 15.1	
	comp=Z,6.3nm,1.3s						
E24K	Your Creek	66.48	24	P	P	12 09 54.6	+2.0
E24K				IAmb	IAmb	12 10 10.2	
	comp=Z,2.9nm,0.9s						
ILAR	Eielson Array	67.51	28	P	P	12 09 59.1	-0.1
	comp=Z,0.2nm,0.7s,baz=280,slow=7.3,SNR=2.3						
	comp=Z,0.2nm,0.7s						
KLMR	Klimovskoe	67.80	328	eP	P	12 09 59.1	-1.8
KLMR				S	S	12 18 48.0	-12
KLMR				pmax	pmax		
	comp=Z,12nm,1.2s						
KBZ	Khabaz	69.11	310	P	P	12 10 08.7	-0.7
	comp=Z,3.8nm,0.9s,baz=27,slow=6.8,SNR=6.4						
	comp=Z,3.8nm,0.9s						
KBZ	Khabaz	69.11	310	ceP	P	12 10 10.5	+1.1
KIV	Kislovodsk	69.20	310	eP	P	12 10 09.9	-0.3
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
L29M	L29M	71.64	28	P	P	12 10 26.5	+1.8
L29M				IAmb	IAmb	12 10 43.8	
	comp=Z,3.7nm,1.1s						
F31M	Tsiigehtchic	72.09	24	P	P	12 10 26.4	-0.8
FIA1	FINESS Array S	73.94	330	P	P	12 10 38.4	+0.1
FINES	FINESS Array B	73.94	330	P	P	12 10 37.4	-0.9
	comp=Z,1.2nm,0.4s,baz=48,slow=5.9,SNR=17						
	comp=Z,1.2nm,0.4s						
FINES	FINESS Array B	73.94	330	eP	P	12 10 38.0	-0.3
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FARO	Faro, Yukon	74.02	29	P	P	12 10 39.7	+0.9
FARO				IAmb	IAmb	12 10 58.0	
	comp=Z,4.7nm,1.2s						
VSU	Vasula	74.67	327	ceP	P	12 10 42.3	-0.3
VSU				pmax	pmax		
	comp=Z,17nm,1.3s						
AKASG	Malin Array Be	76.03	319	P	P	12 10 49.2	-1.3
	comp=Z,0.3nm,0.4s,baz=62,slow=5.8,SNR=4.6						
	comp=Z,0.3nm,0.4s						
AKASG	Malin Array Be	76.03	319	i P	P	12 10 49.5	-1.1
AKBB	Malin Array Si	76.03	319	ceP	P	12 10 50.4	-0.2
BRTR	Keskin Array B	76.89	308	P	P	12 10 55.3	-0.6
	comp=Z,1.3nm,0.9s,baz=133,slow=6.9,SNR=5.5						
	comp=Z,1.3nm,0.9s						
BRTR	Keskin Array B	76.89	308	eP	P	12 10 54.5	-1.4
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
HFS	Hagfors	79.98	332	P	P	12 11 12.1	-0.3
	comp=Z,1.3nm,0.7s,baz=354,slow=7.2,SNR=2.3						
	comp=Z,1.3nm,0.7s						
NB2	NORSAR Subarra	80.55	333	P	P	12 11 13.7	-1.8
	comp=Z,1.9nm,0.8s,baz=58,slow=5.6						
NOA	NORSAR Array B	80.55	333	P	P	12 11 14.2	-1.3
	comp=Z,2.1nm,1.0s,baz=58,slow=5.5,SNR=4.2						
	comp=Z,2.1nm,1.0s						
NOA	NORSAR Array B	80.55	333	eP	P	12 11 14.9	-0.6
NOA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KECS	Kecovo	82.12	320	eP	P	12 11 24.8	+0.8
KECS	Kecovo	82.12	320	eP	P	12 11 24.8	+0.8

IDC ***21*** *12:03:56.4±1.4, 23°.97N×125°.97E, h0^{km}, mb3.6/3, mbtmp3.6/4, ML3.3/1, MS3.4/1, Error ellipse: s-maj=49.2km s-min=26.7km az=83.0*

JMA ***21*** *12:03:59.5±0.2, 24°N±2°×12°6E±°, h86^{km}±4^{km}, MV3.0/21, NEAR MIYAKOJIMA ISLAND*

ISC 21 12:04:00.8±2.9**, 23°.91N**±0°.08×**126°.07E**±0°.05**, h31**^{km}±21^{km}**, n26, σ0^{s}73**/27**, mb3.4**/3**, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	Gusukube	1.04	325	eP	Pn	12 04 19.2	0.0
JOGS				eS	Sb	12 04 34.0	+0.5
JMJ2	Miyako jima3	1.07	321	eP	Pn	12 04 19.3	-0.3
JMJ2				eS	Sn	12 04 34.3	+1.0
JIRB	Irabujima	1.22	318	eP	Pn	12 04 21.2	-0.5
JIRB				eS	Sn	12 04 37.9	+0.6
JIKM	Ikemajima	1.25	324	eP	Pn	12 04 21.5	-0.6
JTJ	Tarama	1.44	301	eP	Pn	12 04 23.9	-0.8
JTJ				eS	Sn	12 04 42.2	-0.4
JISG	Ishigakijimahi	1.74	293	eP	Pn	12 04 28.3	-0.5
JIJ	Ishigaki jima	1.81	285	eP	Pn	12 04 29.5	-0.3
JKRS	Kuro-shima	1.91	280	eP	Pn	12 04 30.8	-0.3
HATJ	Hateruma jima	2.07	274	eP	Pn	12 04 32.7	-0.8
HATJ				eS	Sn	12 04 57.6	-0.6
IRIF	Iriomote-Funau	2.18	282	eP	Pn	12 04 34.1	-0.7
JKE	Kume jima 2	2.49	15	eP	Pn	12 04 38.4	-0.8
JJT3	Tamagusuku3	2.71	35	eP	Pn	12 04 41.9	-0.4
YOJ	Yonaguni jima	2.84	282	eP	Pn	12 04 43.6	-0.4
JAGN	Aguni-jima	2.87	22	eP	Pn	12 04 43.8	-0.6
JYNG	Yonagunijimaku	2.90	281	eP	Pn	12 04 44.5	-0.3
JNTH	Nagotoyohara	3.14	34	eP	Pn	12 04 47.7	-0.4
JOW	Kunigami	3.53	34	Pn	Pn	12 04 52.2	-1.2
	4.9nm,0.3s,baz=142,slow=18,SNR=10						
	18nm,0.5s						
JOW	Kunigami	3.53	34	eP	Pn	12 04 53.0	-0.4
JYRO	Yoronjima	3.77	34	eP	Pn	12 04 56.2	-0.6
JNU	Nakatsue	10.10	24	LR	LR	12 10 01.5	
	comp=Z,185nm,18.9s,baz=129,slow=36						
H11N1	WAKE ISLAND Hy	38.04	88	T	T	12 51 41.0	
	baz=287						
H11N2	WAKE ISLAND Hy	38.04	88	T	T	12 51 46.4	
	baz=287						
H11N3	WAKE ISLAND Hy	38.05	88	T	T	12 51 40.9	
	baz=287						
MKAR	Makanchi Array	41.68	314	P	P	12 11 45.9	-0.6
	0.4nm,0.8s,baz=99,slow=7.6,SNR=2.9						
	0.4nm,0.8s						
WRA	Warramunga Arr	44.33	169	P	P	12 12 08.0	-0.1
	2.3nm,0.8s,baz=349,slow=8.8,SNR=9.1						
	2.3nm,0.8s						
ASAR	Alice Springs	47.90	170	P	P	12 12 38.0	+1.8
	0.3nm,0.7s,baz=354,slow=14,SNR=4.3						
	0.3nm,0.7s						

IDC ***21*** *12:07:09.7±1.8, 33°.77S×179°.84E, h0^{km}, mb4.2/4, mbtmp4.2/5, ML3.9/1, MS3.4/1, Error ellipse: s-maj=44.7km s-min=29.0km az=66.0*

WEL ***21*** *12:07:12.8±1.1, 34°S±6°×18°0E±°, h12^{km}, M4.5/13, mB5.0/3, ML4.6/15, MLv4.6/13, Mw(mB)4.3/3, Error ellipse: s-maj=11.2km s-min=7.4km az=74.7, confirmed*

ISC 21 12:07:15.3±1.4**, 33°.81S**±0°.08×**179°.6E**±0°.1**, h35**^{km}**, n32, σ1^{s}48**/35**, mb4.2**/4**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	4.12	194	P	Pn	12 08 15.5	-0.2
WMGZ				S	Sn	12 09 04.0	+1.3
HAZ	Te Kaha	4.22	200	P	Pn	12 08 15.8	-1.2
PKGZ	Pakihiroa	4.24	197	P	Pn	12 08 16.2	-1.2
PKGZ				S	Sn	12 09 06.5	+0.8
PUZ	Puketiti	4.40	194	P	Pn	12 08 18.7	-0.9
PUZ				S	Sn	12 09 10.2	+0.7
RUGZ	Raukumara Rang	4.44	200	P	Pn	12 08 20.9	+0.7
TWGZ	Tauwhareparae	4.56	197	P	Pn	12 08 21.6	-0.2
OPRZ	Ohinepanea	4.74	211	P	Pn	12 08 24.9	+0.7
TGRZ	Tauranga	4.78	214	P	Pn	12 08 23.4	-1.3
CNGZ	Carnagh Statio	4.81	193	P	Pn	12 08 24.2	-0.9
CNGZ				S	Sn	12 09 21.4	+1.8
MWZ	Matawai	4.83	200	P	Pn	12 08 25.1	-0.3
MWZ				S	Sn	12 09 22.3	+2.1
WCZ	Waipu Caves	4.84	242	P	Pn	12 08 25.1	-0.5
TKGZ	Te Karaka	4.84	197	P	Pn	12 08 24.4	-1.2
TKGZ				S	Sn	12 09 19.8	-0.6
URZ	Urewera	4.89	204	Pn	Pn	12 08 25.3	-0.9
	4.9nm,0.3s,baz=265,slow=2.9,SNR=7.1						
URZ				Sn	Sn	12 09 17.1	-4.5
	baz=174,slow=15						
	20nm,0.4s						
URZ	Urewera	4.89	204	P	Pn	12 08 25.3	-0.9
RAGZ	Rawiri	5.01	200	P	Pn	12 08 27.8	-0.2
RIGZ	Rimuhau	5.12	197	P	Pn	12 08 29.1	-0.3
RIGZ				S	Sn	12 09 26.5	-0.7
OUZ	Omahuta	5.18	253	P	Pn	12 08 29.2	-1.0
OUZ				S	Sn	12 09 28.2	-0.6
MUGZ	Murupara	5.20	206	P	Pn	12 08 29.9	-0.6
MUGZ				S	Sn	12 09 32.2	+2.9
PRGZ	Paritu Road	5.29	195	P	Pn	12 08 30.0	-1.9
SNGZ	Shannon Statio	5.30	200	S	Sn	12 09 31.6	-0.1
MHGZ	Mahia Peninsul	5.51	194	P	Pn	12 08 31.4	-3.4
RPZ	Rata Peaks	11.94	212	LR	LR	12 14 50.8	
	comp=Z,192nm,19.7s,baz=128,slow=38						
ASAR	Alice Springs	41.06	272	P	P	12 14 56.6	+1.0
	6.0nm,0.9s,baz=111,slow=7.9,SNR=43						
	6.0nm,0.9s						
WRA	Warramunga Arr	42.37	277	P	P	12 15 07.2	+0.8
	3.6nm,0.8s,baz=118,slow=7.7,SNR=21						
	3.6nm,0.8s						
QSPA	South Pole Qui	56.31	180	P	P	12 16 52.4	+0.1
	2.3nm,0.9s,baz=6.3,slow=9.2,SNR=18						
	2.3nm,0.9s						
H03S2	Juan Fernandez	80.24	124	T	T	13 47 32.5	
	baz=234,slow=74,SNR=4.5						
H03S1	Juan Fernandez	80.25	124	T	T	13 47 36.6	
	baz=234,slow=74,SNR=4.3						
H03S3	Juan Fernandez	80.26	124	T	T	13 47 41.0	
	baz=234,slow=74,SNR=4.8						
H03N3	Juan Fernandez	80.46	124	T	T	13 47 49.2	
	baz=238,slow=72,SNR=37						
H03N2	Juan Fernandez	80.46	124	T	T	13 47 45.8	
	baz=238,slow=72,SNR=26						
H03N1	Juan Fernandez	80.47	124	T	T	13 47 43.3	
	baz=238,slow=72,SNR=49						
PETK	Petropavlovsk-	88.64	347	P	P	12 20 04.0	-0.2
	0.5nm,0.5s,baz=193,slow=7.3,SNR=5.3						
	0.5nm,0.5s						

ISN ***21*** *12:08:31.1±0.4, 33°.68N×45°.72E, h8^{km}±2^{km}, ML2.6*

TEH ***21*** *12:08:32.2, 33°.68N×45°.76E, h8^{km}±43^{km}*

ISC 21 12:08:32.3±0.9**, 33°.67N**±0°.03×**45°.77E**±0°.04**, h10**^{km}**, n11, σ0^{s}80**/15**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILBA	Ilam Banvizeh	0.36	96	Pg	Pg	12 08 39.8	+0.2
GLG1	Gilan-e-Gharb	0.46	14	Pg	Pg	12 08 41.2	-0.2
IBDR	Badra	0.57	167	ePg	Pg	12 08 43.0	-0.4
IBDR				eSg	Sg	12 08 51.0	+0.1
IGHG	Ghaleghazi	0.94	45	Pg	Pb	12 08 50.6	-0.2
IDHR	Dehrash	1.15	26	Pg	Pn	12 08 54.5	-0.3
KCHF	Cheshme Sefid,	1.22	60	Pg	Pg	12 08 55.7	-0.1
BHD	Baghdad	1.23	252	ePn	Pg	12 08 56.0	0.0
BHD				eSn	Sn	12 09 14.0	+1.8
ILIN	Lien	1.59	38	Pg	Pg	12 09 02.8	-0.1
SNQR	Sonqor, Kerman	1.94	52	Pn	Pb	12 09 08.3	+0.3
RAFI	Al-Rafai	1.96	171	ePn	Pb	12 09 07.0	-1.1
RAFI				eSn	Sb	12 09 33.0	+0.4
IKRK	Kirkuk	2.10	326	ePn	Pn	12 09 08.0	+0.5
IKRK				eSn	Sb	12 09 35.0	-1.6
IKRK				AML	AML	12 09 42.8	
	comp=E,60nm,0.5s						

IKRK				AML	AML	12 09 47.0	
	comp=N,50nm,0.4s						

BEO 21 12:09:20.2±0.4**,42°.54N**×**24°.11E,h0**^{km}**,ML1.4**/7**,Mining explosion.,Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLD	**Plovdiv**	**0.62**	**130**	*e*Pg	Pg	12 09 31.0	-1.0
PLD				*e*Sg	Sg	12 09 40.2	+0.2
VTS	**Vitosha**	**0.65**	**277**	*e*Pg	Pg	12 09 32.1	-0.5
VTS				*e*Sg	Sg	12 09 41.5	+0.5
BOSS	**Bosilegrad**	**1.21**	**268**	*e*Pg	Pg	12 09 42.2	-1.1
BOSS				*e*Sg	Sg	12 09 58.4	-0.5
ZAPS	**Zavoj**	**1.31**	**304**	*e*Pg	Pg	12 09 43.7	-1.5
ZAPS				*e*Sg	Sg	12 10 02.4	+0.2
BLKB	**Belogradchik**	**1.50**	**316**	*e*Pg	Pn	12 09 47.4	-1.1
BLKB				*e*Sg	Sg	12 10 07.0	-1.6
BARS	**Barje**	**1.71**	**280**	*e*Pg	Pn	12 09 51.0	-0.3
BARS				*e*Sg	Sn	12 10 13.7	-0.2
SELS	**Selova**	**2.30**	**288**	*e*Pn	Pn	12 09 58.3	-1.1
SELS				*e*Sn	Sn	12 10 29.7	+1.3

IDC 21 12:09:29.6±1.6**,30°.89S**×**178°.12W,h0**^{km}**,mb3.7**/3**, mbtmp3.7**/3**,Error ellipse: s-maj=39.1km s-min=23.5km az=106.0,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.64**	**6**	Pn	Pn	12 10 00.1	+0.3
	36nm,0.3s,baz=182,slow=23,SNR=1.2						
RAO				Sn	Sg	12 10 24.3	+1.9
	100nm,0.3s,baz=253,slow=19,SNR=2.1						
ASAR	**Alice Springs**	**42.98**	**268**	P	P	12 17 30.4	-0.4
	1.3nm,0.8s,baz=108,slow=7.7,SNR=6.1						
	1.3nm,0.8s						
WRA	**Warramunga Arr**	**44.01**	**273**	P	P	12 17 39.2	+0.1
	0.9nm,0.5s,baz=112,slow=8.0,SNR=6.4						
	0.9nm,0.5s						
QSPA	**South Pole Qui**	**59.22**	**180**	P	P	12 19 33.3	+0.9
	0.5nm,0.9s,baz=191,slow=2.7,SNR=1.1						
	0.5nm,0.9s						
FINES	**FINESS Array B**	**145.57**	**340**	PKPbc	PKPdf	12 29 06.7	-2.3
	1.3nm,0.9s,baz=57,slow=5.9,SNR=2.0						

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*ISN **21** 12:09:47.1±0.4,33°.68N×45°.72E,h8^{km}±2^{km},ML2.6*
*TEH **21** 12:09:48.2,33°.70N×45°.78E,h8^{km}±34^{km}*
ISC 21 12:09:48.4±0.9**,33°.69N**±0°.03×**45°.78E**±0°.04**,h10**^{km}**,n11, σ0**^{s}**.73**/15**,Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILBA	**Ilam Banvizeh**	**0.36**	**101**	Pg	**Pg**	**12 09 55.5**	**0.0**
GLG1	**Gilan-e-Gharb**	**0.43**	**14**	Pg	**Pg**	**12 09 56.8**	**-0.1**
IBDR	**Badra**	**0.59**	**168**	*e*Pg	**Pg**	**12 09 59.0**	**-0.9**
IBDR				*e*Sg	**Sg**	**12 10 07.0**	**-0.7**
IGHG	**Ghaleghazi**	**0.91**	**46**	Pg	**Pg**	**12 10 06.0**	**0.0**
IDHR	**Dehrash**	**1.12**	**26**	Pg	**Pn**	**12 10 10.1**	**-0.3**
KCHF	**Cheshme Sefid,**	**1.20**	**61**	Pg	**Pg**	**12 10 11.5**	**+0.1**
BHD	**Baghdad**	**1.25**	**251**	*e*Pn	**Pg**	**12 10 12.0**	**-0.3**
BHD				*e*Sn	**Sn**	**12 10 30.0**	**+1.3**
ILIN	**Lien**	**1.56**	**38**	Pg	**Pg**	**12 10 17.9**	**-0.5**
SNQR	**Sonqor, Kerman**	**1.92**	**52**	Pn	**Pb**	**12 10 23.8**	**+0.1**
RAFI	**Al-Rafai**	**1.98**	**172**	*e*Pn	**Pn**	**12 10 23.0**	**+1.0**
RAFI				*e*Sn	**Sb**	**12 10 49.0**	**-0.3**
IKRK	**Kirkuk**	**2.08**	**325**	*e*Pn	**Pn**	**12 10 24.0**	**+0.6**
IKRK				*e*Sn	**Sb**	**12 10 51.0**	**-1.1**
IKRK				AML	AML	12 10 59.0	
	comp=E,69nm,1.0s						
IKRK				AML	AML	12 11 04.5	
	comp=N,55nm,0.8s						

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*IDC **21** 12:17:47.4±1.2,29°.88N×143°.27E,h0^{km},mb3.8/11, mbtmp3.8/14,ML2.9/2,MS4.0/3,Error ellipse: s-maj=33.7km s-min=18.1km az=81.0*
*JMA **21** 12:17:49.6±0.2,30°.1N±0°.6×14 °3E± °,h27^{km},MV4.0/29, FAR E OFF IZU ISLANDS*
*NEIC **21** 12:18:01.5±1.6,31°.30N±0°.08×142°.6E±0°.1,h10^{km}±2^{km}, mb4.2/23,Error ellipse: s-maj=19.6km s-min=12.4km az=68.0*
ISC 21 12:17:54.0±0.7**,29°.92N**±0°.05×**142°.8E**±0°.1**,h30**^{km}**,n62, σ2**^{s}**.32**/61**,mb4.1**/24**,MS4.3**/3**,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.87**	**191**	*e*P	**Pn**	**12 18 37.6**	**-0.2**
CBIJ				*e*S	**Sn**	**12 19 09.4**	**-1.9**
JCJ	**Chichijima**	**2.87**	**191**		**Sn**	**12 19 05.5**	**-5.8**
JCJ	**Chichijima**	**2.87**	**191**	Pn	**Pn**	**12 18 35.2**	**-2.5**
	22nm,0.4s,baz=180,slow=0.0						
JCJ				Sn	**Sn**	**12 19 07.5**	**-3.8**
	baz=180,slow=0.0						
JHH2	**Haha-jima-NKT2**	**3.33**	**190**	*e*P	**Pn**	**12 18 45.0**	**+0.9**
JHJ2	**Mitsune**	**4.08**	**322**	Pn	Pn	12 18 48.0	-6.5
JHJ2	**Mitsune**	**4.08**	**322**	*e*P	**Pn**	**12 18 52.5**	**-1.9**
JHJ2				*e*S	**Sn**	**12 19 39.3**	**-1.9**
JMKN	**Mikurajimanish**	**4.82**	**326**	*e*S	**Sn**	**12 19 56.1**	**-3.2**
BSO1	**Boso 1**	**4.97**	**342**	*e*P	**Pn**	**12 19 03.8**	**-2.3**
BSO1				*e*S	**Sn**	**12 20 00.5**	**-1.8**
BSO3	**Boso 3**	**5.24**	**339**	*e*P	**Pn**	**12 19 07.2**	**-2.9**
BSO3				*e*S	**Sn**	**12 20 06.9**	**-2.5**
BSO4	**Boso 4**	**5.47**	**338**	*e*S	**Sn**	**12 20 15.4**	**+0.2**
JOD2	**Odawara 2**	**6.19**	**330**	*e*P	**Pn**	**12 19 21.5**	**-1.8**
JOD2				*e*S	**Sn**	**12 20 32.0**	**-1.0**
JYT	**Yasato**	**6.66**	**341**	*e*P	**Pn**	**12 19 27.8**	**-2.0**
JYT				*e*S	**Sn**	**12 20 42.5**	**-2.2**
JRY	**Ryogami san**	**6.91**	**333**	*e*P	**Pn**	**12 19 31.9**	**-1.4**
JRY				*e*S	**Sn**	**12 20 49.2**	**-1.8**
JHO	**Hitachi**	**6.93**	**345**	*e*P	**Pn**	**12 19 30.1**	**-3.4**
JHO				*e*S	**Sn**	**12 20 45.8**	**-5.6**
JAG	**Ashikaga**	**7.07**	**337**	*e*P	**Pn**	**12 19 33.8**	**-1.6**
JAG				*e*S	**Sn**	**12 20 50.7**	**-4.1**
INU	**Inuyama**	**7.29**	**319**	Pn	Pn	12 19 33.4	-5.2
JGF	**Kuroka**	**7.29**	**322**	Pn	Pn	12 19 32.3	-6.3
JFK	**Kawauchi**	**7.60**	**348**	*e*P	**Pn**	**12 19 40.4**	**-2.4**
JFK				*e*S	Sn	12 20 57.8	-10
MJAR	**Matsushiro Arr**	**7.65**	**331**	Pn	Pn	12 19 34.5	-8.9
MJAR	**Matsushiro Arr**	**7.65**	**331**	Pn	**Pn**	**12 19 41.6**	**-1.8**
	0.1nm,0.3s,baz=150,slow=9.9,SNR=12						
MJAR				Sn	**Sn**	**12 21 08.9**	**-0.2**
	0.1nm,0.3s,baz=158,slow=17,SNR=4.4						
	4.0nm,0.9s						
MAJO	**Matsushiro**	**7.65**	**331**		Pn	12 19 34.4	-9.0
MJB9	**Matsu-Tunnel**	**7.65**	**331**	Pn	Pn	12 19 35.2	-8.3
JMM	**Marumori**	**8.10**	**349**	Pn	Pn	12 19 39.2	-10
JMK	**Ichinoseki**	**9.10**	**352**	*e*P	**Pn**	**12 19 59.9**	**-3.4**
JNU	**Nakatsue**	**10.68**	**290**	Pn	**Pn**	**12 20 27.5**	**+2.5**
KSRS	**Korea Array**	**14.49**	**305**	Pn	**Pn**	**12 21 17.9**	**+1.0**
	0.1nm,0.3s,baz=110,slow=13,SNR=4.4						
	1.3nm,0.8s						
SONM	**Songino Array**	**33.13**	**313**	P	**P**	**12 24 28.0**	**+0.4**
	0.8nm,0.6s,baz=104,slow=6.3,SNR=5.3						
	0.8nm,0.6s						
CMAR	**Chiang Mai Arr**	**41.40**	**264**	P	**P**	**12 25 36.8**	**-1.1**
	0.4nm,0.3s,baz=321,slow=13,SNR=4.3						
CMAR				LR	LR	12 45 05.0	
	comp=Z,27nm,18.3s,baz=140,slow=39						
	0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**47.76**	**317**	P	**P**	**12 26 29.6**	**+1.4**
	0.4nm,0.3s,baz=133,slow=13,SNR=1.5						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**49.15**	**308**	P	**P**	**12 26 39.6**	**+0.5**
	2.0nm,1.0s,baz=88,slow=10,SNR=9.0						
	2.0nm,1.0s						
MAKZ	**Makanchi**	**49.37**	**308**	P	**P**	**12 26 43.1**	**+2.4**
N17K	**Nushagak Hills**	**49.75**	**34**	P	P	12 26 46.2	+2.8
C18K	**Utukok River**	**50.23**	**23**	P	**P**	**12 26 49.1**	**+2.1**
C18K				IAmb	IAmb	12 26 55.1	
	comp=Z,3.2nm,1.2s						
WRA	**Warramunga Arr**	**50.25**	**190**	P	**P**	**12 26 46.5**	**-1.1**
	comp=Z,1.3nm,1.0s,baz=8.9,slow=8.0,SNR=8.2						
	comp=Z,1.3nm,1.0s						
G18K	**Tagagawik**	**50.30**	**27**	P	**P**	**12 26 49.6**	**+2.1**
G18K				IAmb	IAmb	12 27 33.5	
	comp=Z,4.1nm,1.3s						
C19K	**Lookout Ridge**	**50.93**	**23**	P	**P**	**12 26 53.5**	**+1.2**
C19K				IAmb	IAmb	12 26 53.8	
	comp=Z,2.5nm,1.0s						
H19K	**Roundabout Mou**	**51.09**	**28**	P	P	12 26 55.9	+2.4
H19K				IAmb	IAmb	12 27 26.8	
	comp=Z,5.5nm,1.5s						
E19K	**Redstone River**	**51.27**	**25**	P	**P**	**12 26 56.4**	**+1.5**
E19K				IAmb	IAmb	12 26 58.0	
	comp=Z,3.0nm,1.1s						
KURK	**Kurchatov**	**51.44**	**313**	P	**P**	**12 26 58.0**	**+1.7**
KURK				IAmb	IAmb	12 27 01.3	
	comp=Z,4.2nm,1.1s						
KURBB	**Kurchatov Arra**	**51.50**	**313**	P	**P**	**12 26 57.2**	**+0.5**
	comp=Z,1.9nm,1.0s,baz=90,slow=7.0,SNR=9.3						
	comp=Z,1.9nm,1.0s						
K20K	**Telida**	**51.68**	**31**	P	**P**	**12 26 59.0**	**+1.1**
K20K				IAmb	IAmb	12 27 03.2	
	comp=Z,5.8nm,1.4s						
D20K	**Etivluk River**	**51.84**	**24**	P	**P**	**12 27 00.5**	**+1.4**
D20K				IAmb	IAmb	12 27 01.6	
	comp=Z,3.1nm,0.9s						
TARG	**Taragay, Kyrgy**	**52.87**	**302**	P	**P**	**12 27 11.6**	**+4.0**
E22K	**Anaktuvuk Pass**	**53.44**	**25**	P	**P**	**12 27 11.9**	**+1.1**
E22K				IAmb	IAmb	12 27 14.2	
	comp=Z,4.0nm,1.1s						
G23K	**Bananza Creek**	**53.88**	**27**	P	**P**	**12 27 15.6**	**+1.4**
ASAR	**Alice Springs**	**53.97**	**190**	P	**P**	**12 27 12.6**	**-2.6**
	comp=Z,0.5nm,1.0s,baz=15,slow=8.4,SNR=3.3						
	comp=Z,0.5nm,1.0s						
C23K	**Itkillik River**	**54.18**	**23**	P	**P**	**12 27 16.7**	**+0.5**
E23K	**Chandalar**	**54.23**	**25**	P	**P**	**12 27 18.3**	**+1.5**
ILAR	**Eielson Array**	**54.98**	**30**	P	**P**	**12 27 17.9**	**-4.2**
	comp=Z,0.4nm,0.8s,baz=249,slow=6.0,SNR=5.4						
	comp=Z,0.4nm,0.8s						
F25K	**Christian Rive**	**55.68**	**26**	P	**P**	**12 27 28.6**	**+1.4**
E25K	**Arctic Village**	**55.75**	**25**	P	**P**	**12 27 29.6**	**+2.0**
E25K				IAmb	IAmb	12 27 31.7	
	comp=Z,2.6nm,1.1s						
F26K	**Sheenjek River**	**56.26**	**26**	P	**P**	**12 27 32.1**	**+0.8**
F26K				IAmb	IAmb	12 27 42.8	
	comp=Z,3.4nm,1.4s						
BVAR	**Borovoye Array**	**56.37**	**316**	P	**P**	**12 27 32.8**	**+0.5**
	comp=Z,0.5nm,0.4s,baz=79,slow=7.7,SNR=4.6						
	comp=Z,0.5nm,0.4s						
C27K	**Jago River**	**56.54**	**24**	P	**P**	**12 27 35.5**	**+2.3**
H27K	**Steamboat Moun**	**57.25**	**28**	P	**P**	**12 27 40.2**	**+1.8**
L29M	**L29M**	**58.87**	**31**	P	P	12 27 52.9	+3.2
L29M				IAmb	IAmb	12 27 53.0	
	comp=Z,2.4nm,0.9s						
EPYK	**Eagle Plains**	**59.19**	**28**	P	**P**	**12 27 53.3**	**+1.4**
EPYK				IAmb	IAmb	12 27 54.8	
	comp=Z,3.5nm,1.1s						
ABKAR	**Akbulak array**	**63.55**	**313**	P	**P**	**12 28 24.9**	**+3.3**
KVAR	**Kislovodsk Arr**	**76.52**	**313**	LR	LR	13 06 45.7	
	comp=Z,165nm,20.9s,slow=38						
AKASG	**Malin Array Be**	**80.67**	**324**	P	**P**	**12 30 03.6**	**-0.4**
	comp=Z,0.2nm,0.2s,baz=46,slow=7.9,SNR=1.4						
	comp=Z,0.2nm,0.2s						
SFJD	**Kangerlussuaq**	**82.85**	**5**	LR	LR	13 08 06.8	
	comp=Z,225nm,19.3s,baz=286,slow=36						
BRTR	**Keskin Array B**	**84.49**	**313**	P	**P**	**12 30 24.7**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=76,slow=6.1,SNR=3.6						
	comp=Z,0.6nm,0.7s						

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*IDC **21** 12:21:58.5±0.6,19°.46N×66°.27W,h0^{km},mb3.9/14, mbtmp4.0/16,ML3.6/2,MS3.6/9,Error ellipse: s-maj=18.8km s-min=14.3km az=76.0*
*NEIC **21** 12:22:00.3±1.9,19°.43N±0°.04×66°.26W±0°.04,h10^{km}±1^{km}, mb4.4/102,ML4.2/40,ML4.0/12(RSPR),Error ellipse: s-maj=7.0km s-min=6.3km az=77.0*
*RSPR **21** 12:22:01.8,19°.56N×66°.19W,h15^{km}±4^{km},MD3.7/12*
*OSPL **21** 12:22:02.4±1.9,19°.56N×66°.06W,h47^{km}±42^{km},ML4.2*
ISC 21 12:21:59.0±1.4**,19°.44N**±0°.03×**66°.29W**±0°.03**,h5**^{km}±9^{km}**, n220,**σ**1**^{s}**.40**/232**,mb4.4**/54**,MS3.7**/6**,9C-12D,Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMPR	**Esperanza - Ma**	**0.99**	**194**	Pg	**Pn**	**12 22 19.4**	**0.0**
EMPR				Sg	**Sb**	**12 22 31.3**	**-0.6**
EMPR				IAML		12 22 36.5	
	comp=N,4µm,0.7s						
EMPR				IAML		12 22 43.9	
	comp=E,5µm,0.6s						
EMPR	**Esperanza - Ma**	**0.99**	**194**	⇓*e*P	**Pn**	**12 22 19.6**	**+0.1**
EMPR	**Esperanza - Ma**	**0.99**	**194**	*e*S	**Sn**	**12 22 33.9**	**+0.1**
ECPR	**Experimental S**	**1.12**	**184**	⇑*e*P	**Pb**	**12 22 21.2**	**+0.4**
ECPR	**Experimental S**	**1.12**	**184**	*e*S	**Sn**	**12 22 36.4**	**-0.7**
GCPR	**Guaynabo City**	**1.14**	**170**		**Pg**	**12 22 21.3**	**+0.3**
GCPR				Sg	**Sb**	**12 22 36.1**	**-0.3**
GCPR				IAML		12 22 37.6	
	comp=E,4µm,0.7s						
GCPR				IAML		12 22 40.0	
	comp=N,3µm,0.5s						
GCPR	**Guaynabo City**	**1.14**	**170**	⇓*e*P	**Pb**	**12 22 21.4**	**+0.2**
GCPR	**Guaynabo City**	**1.14**	**170**	*e*S	**Sb**	**12 22 36.8**	**+0.4**
AOPR	**Arecibo Observ**	**1.18**	**202**		**Pb**	**12 22 22.2**	**+0.3**
AOPR	**Arecibo Observ**	**1.18**	**202**		**Sn**	**12 22 38.9**	**+0.3**
AOPR	**Arecibo Observ**	**1.18**	**202**	IAML		12 22 44.0	
	comp=E,12µm,0.4s						
AOPR				IAML		12 22 48.2	
	comp=N,8µm,0.4s						
AOPR	**Arecibo Observ**	**1.18**	**202**	⇓*e*P	**Pb**	**12 22 22.2**	**+0.3**
AOPR	**Arecibo Observ**	**1.18**	**202**	*e*S	**Sn**	**12 22 38.9**	**+0.3**
UUPR	**Utuado, UPR, P**	**1.25**	**199**		**Pg**	**12 22 23.0**	**0.0**
UUPR					**Sn**	**12 22 41.4**	**+1.0**
UUPR	**Utuado, UPR, P**	**1.25**	**199**	⇑*e*P	**Pn**	**12 22 23.4**	**+0.2**
UUPR	**Utuado, UPR, P**	**1.25**	**199**	*e*S	**Sn**	**12 22 41.5**	**+1.1**
SJG	**San Juan**	**1.33**	**174**		**Pn**	**12 22 24.1**	**-0.1**
SJG				IAML		12 22 43.1	
	comp=N,3µm,1.0s						
SJG	**San Juan**	**1.33**	**174**	Pn	**Pn**	**12 22 24.1**	**-0.1**
	comp=N,115nm,0.3s,baz=360,slow=7.9,SNR=114						
SJG				Sn	**Sb**	**12 22 41.2**	**-0.6**
	comp=N,326nm,0.3s,baz=72,slow=22,SNR=12						
SJG				LR	LR	12 23 12.8	
	comp=N,566nm,20.8s,baz=16,slow=55						
SJG	**San Juan**	**1.33**	**174**	⇑*e*P	**Pg**	**12 22 24.7**	**+0.2**
SJG	**San Juan**	**1.33**	**174**	*e*S	**Sn**	**12 22 42.4**	**+0.1**
SJG	**San Juan**	**1.33**	**174**	*i* P	**Pn**	**12 22 24.4**	**+0.2**
SJG				*e*S	**Sn**	**12 22 41.9**	**-0.3**
SJG				IAML		12 22 54.3	
	comp=Z,1µm,0.5s						
HUMP	**Col San Antoni**	**1.36**	**162**		**Pn**	**12 22 24.4**	**-0.2**
HUMP					**Sb**	**12 22 42.5**	**-0.1**
HUMP				IAML		12 22 43.8	
	comp=E,3µm,0.6s						
HUMP	**Col San Antoni**	**1.36**	**162**	⇓*e*P	**Pb**	**12 22 25.1**	**+0.1**
HUMP	**Col San Antoni**	**1.36**	**162**	*e*S	**Sb**	**12 22 42.4**	**-0.1**
CELP	**Cerrillos**	**1.39**	**192**		**Pn**	**12 22 25.1**	**0.0**
CELP					**Sn**	**12 22 43.9**	**+0.1**
CELP	**Cerrillos**	**1.39**	**192**	⇓*e*P	**Pn**	**12 22 25.2**	**+0.2**
CELP	**Cerrillos**	**1.39**	**192**	*e*S	**Sn**	**12 22 44.2**	**+0.5**
OBIP	**Obispado Ponce**	**1.42**	**192**		**Pn**	**12 22 25.8**	**+0.3**
OBIP					**Sg**	**12 22 45.5**	**+0.7**
OBIP	**Obispado Ponce**	**1.42**	**192**	⇑*e*P	**Pb**	**12 22 26.1**	**+0.1**
OBIP	**Obispado Ponce**	**1.42**	**192**	*e*S	**Sg**	**12 22 45.5**	**+0.7**
PDPR	**Patillas Dam,**	**1.44**	**170**		**Pn**	**12 22 25.8**	**+0.2**
PDPR				IAML		12 22 47.9	
	comp=E,2µm,0.8s						
PDPR				IAML		12 22 51.7	
	comp=N,2µm,0.7s						
PDPR	**Patillas Dam,**	**1.44**	**170**	⇓*e*P	**Pn**	**12 22 25.9**	**+0.2**
PDPR	**Patillas Dam,**	**1.44**	**170**	*e*S	**Sn**	**12 22 44.9**	**0.0**
PRSN	**Puerto Rico Se**	**1.46**	**214**	Pn	**Pn**	**12 22 26.4**	**+0.3**
PRSN				IAML		12 22 51.8	
	comp=E,3µm,0.3s						
PRSN				IAML		12 22 53.9	
	comp=N,5µm,0.3s						
LSP	**Las Mesas**	**1.47**	**211**		**Pb**	**12 22 27.0**	**+0.1**
LSP					**Sg**	**12 22 46.7**	**+0.4**
LSP	**Las Mesas**	**1.47**	**211**	⇓*e*P	**Pb**	**12 22 27.0**	**+0.1**
LSP	**Las Mesas**	**1.47**	**211**	*e*S	**Sg**	**12 22 46.7**	**+0.4**
IGPR	**InterUniversit**	**1.48**	**173**		**Pn**	**12 22 26.4**	**+0.1**
IGPR					**Sb**	**12 22 45.9**	**-0.1**
IGPR				IAML		12 22 50.8	
	comp=N,4µm,0.5s						
IGPR				IAML		12 22 51.4	
	comp=E,3µm,0.3s						
IGPR	**InterUniversit**	**1.48**	**173**	⇑*e*P	**Pb**	**12 22 26.8**	**-0.1**
IGPR	**InterUniversit**	**1.48**	**173**	*e*S	**Sg**	**12 22 46.5**	**0.0**
IDE	**Isla Desecheo**	**1.54**	**227**		**Pn**	**12 22 27.8**	**+0.7**
IDE					**Sn**	**12 22 47.7**	**+0.2**
IDE	**Isla Desecheo**	**1.54**	**227**	⇓*e*P	**Pn**	**12 22 27.8**	**+0.7**
IDE	**Isla Desecheo**	**1.54**	**227**	*e*S	**Sn**	**12 22 47.7**	**+0.2**
GBPR	**Guanica, Bosqu**	**1.56**	**201**		**Pb**	**12 22 28.6**	**+0.2**
GBPR	**Guanica, Bosqu**	**1.56**	**201**	⇓*e*P	**Pb**	**12 22 28.6**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.63**	**209**		**Pb**	**12 22 29.5**	**0.0**
CRPR				Sn	**Sn**	**12 22 49.9**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.63**	**209**	⇑*e*P	**Pb**	**12 22 29.5**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.63**	**209**	*e*S	**Sb**	**12 22 50.8**	**+0.5**
CRPR	**Cabo Rojo, PR**	**1.63**	**209**	*i* P	**Pb**	**12 22 29.5**	**0.0**
CRPR				*e*S	**Sg**	**12 22 52.5**	**+1.2**
CRPR				IAML		12 23 03.4	
	comp=Z,2µm,0.6s						
MLPR	**Magueyes Islan**	**1.63**	**206**	⇓*e*P	**Pn**	**12 22 29.2**	**+0.8**
MLPR	**Magueyes Islan**	**1.63**	**206**	*e*S	**Sg**	**12 22 51.1**	**-0.4**
HIDR	**Higuey Centro**	**2.45**	**250**	⇑*e*P	**Pn**	**12 22 40.8**	**+1.1**
HIDR	**Higuey Centro**	**2.45**	**250**	*e*S	**Sn**	**12 23 10.1**	**+0.1**
SMDR	**Samana, DR**	**2.74**	**267**	⇑*e*P	**Pn**	**12 22 44.1**	**+0.4**
SMDR	**Samana, DR**	**2.74**	**267**	*e*S	**Sn**	**12 23 17.9**	**+0.6**
DR12	**Loma Pena Alta**	**3.00**	**258**		**Pn**	**12 22 47.9**	**+0.6**
SMRT	**St. Maarten**	**3.34**	**114**		**Pn**	**12 22 52.1**	**+0.1**
SMRT				IAML		12 23 53.5	
	comp=E,602nm,0.8s						
SMRT				IAML		12 23 59.3	
	comp=N,485nm,0.8s						
SABA	**Saba**	**3.41**	**122**		**Pn**	**12 22 52.7**	**-0.1**
SABA				IAML		12 24 18.8	
	comp=N,662nm,0.6s						
SDD	**Santo Domingo**	**3.57**	**255**	Pn	**Pn**	**12 22 56.4**	**+1.4**
SEUS	**St. Eustatius**	**3.69**	**121**	Pn	**Pn**	**12 22 55.9**	**-0.8**
SEUS				IAML		12 24 24.5	
	comp=E,621nm,0.1s						
BANI	**BANI**	**3.99**	**256**		**Pn**	**12 23 00.3**	**-0.7**
SC01	**Santiago de lo**	**4.19**	**271**	Pn	**Pn**	**12 23 03.3**	**-0.3**
SDDR	**Presa de Saban**	**4.75**	**265**		**Pn**	**12 23 13.2**	**+1.8**
SDDR				IAML		12 24 45.6	
	comp=E,297nm,0.9s						
SDDR	**Presa de Saban**	**4.75**	**265**	*e*P	**Pn**	**12 23 13.3**	**+2.0**
SDDR	**Presa de Saban**	**4.75**	**265**	⇓*e*P	**Pn**	**12 23 13.9**	**+2.6**
SDDR	**Presa de Saban**	**4.75**	**265**	*e*S	**Sn**	**12 24 07.5**	**+0.7**
SDDR	**Presa de Saban**	**4.75**	**265**	*i* P	**Pn**	**12 23 13.4**	**+2.1**
SDDR				*e*S	**Sn**	**12 24 05.2**	**-1.6**
SDDR				IAML		12 24 12.0	
	comp=Z,139nm,0.5s						
GRTK	**Grand Turk**	**4.99**	**295**	Pn	**Pn**	**12 23 14.2**	**-0.4**
GRTK				IAML		12 24 13.6	
	comp=Z,209nm,0.7s						
GRTK				IAML		12 24 13.9	
	comp=Z,240nm,0.4s						
GRTK	**Grand Turk**	**4.99**	**295**	*e*P	**Pn**	**12 23 14.8**	**+0.2**
GRTK				*e*S	**Sn**	**12 24 05.9**	**-6.7**
GRTK	**Grand Turk**	**4.99**	**295**	*i* P	**Pn**	**12 23 15.1**	**+0.6**
GRTK				*e*S	**Sn**	**12 24 08.3**	**-4.4**
GRTK				IAML		12 24 18.9	
	comp=Z,144nm,1.4s						
LODU1	**El Espartillar**	**5.03**	**258**	*i* P	**Pn**	**12 23 17.9**	**+2.7**
LOBH	**Bahia de las A**	**5.31**	**254**	*i* P	**Pn**	**12 23 21.1**	**+2.1**
LOBH				*e*S	**Sn**	**12 24 17.6**	**-3.0**
GDHS	**Morne Mazeau,**	**5.33**	**125**	Pn	**Pn**	**12 23 18.5**	**-1.0**
ABD	**La Joyeuse, An**	**5.44**	**122**	⇓*e*P	**Pn**	**12 23 19.2**	**-1.5**
ABD	**La Joyeuse, An**	**5.44**	**122**	*e*S	**Sn**	**12 24 20.2**	**-3.5**
CBE	**Ff, Capester**	**5.58**	**126**	Pn	**Pn**	**12 23 22.1**	**-0.6**
CBE	**Ff, Capester**	**5.58**	**126**	⇑*e*P	**Pn**	**12 23 22.9**	**+0.2**
CBE	**Ff, Capester**	**5.58**	**126**	*e*S	**Sn**	**12 24 25.3**	**-2.0**
TDBA	**Terre de Bas,**	**5.69**	**128**	Pn	**Pn**	**12 23 23.2**	**-1.1**
GDSD	**La Dsirade Is**	**5.86**	**121**	Pn	**Pn**	**12 23 26.1**	**-0.6**
H05N1	**Guadeloupe/Mar**	**5.87**	**121**	Pn	**Pn**	**12 23 29.7**	**+3.0**
H05N1				Sn	**Sn**	**12 24 31.8**	**-2.6**
MAGL	**Barre de l'ile**	**5.90**	**125**	Pn	**Pn**	**12 23 26.0**	**-1.1**
MPOM	**Morne Pois Mar**	**7.19**	**133**	Pn	**Pn**	**12 23 44.5**	**-0.3**
H05S1	**Guadeloupe/Mar**	**7.22**	**133**	Pn	**Pn**	**12 23 49.4**	**+4.2**
MASC	**Masc**	**7.51**	**277**	*e*P	**Pn**	**12 23 47.8**	**-1.5**
QMBU	**Quimbuelo**	**8.06**	**277**	*e*P	**Pn**	**12 23 54.3**	**-2.6**
MOAC	**Moa**	**8.24**	**280**	*e*P	**Pn**	**12 23 56.0**	**-3.3**
NMDO	**Nuevo Mundo**	**8.25**	**279**	Pn	**Pn**	**12 23 57.2**	**-2.3**
NMDO	**Nuevo Mundo**	**8.25**	**279**	*e*P	**Pn**	**12 23 56.5**	**-3.0**
GTBY	**Guantanamo Bay**	**8.33**	**275**	*e*P	**Pn**	**12 23 57.3**	**-3.1**
PINC	**Pinares de May**	**9.00**	**278**	*e*P	Pn	12 24 05.5	-4.2
PCRV	**Puerto La Cruz**	**9.35**	**170**	Pn	**Pn**	**12 24 17.0**	**+2.5**
	comp=Z,1.3nm,0.3s,baz=77,slow=9.5,SNR=2.6						
PCRV				Sn	**Sn**	**12 25 58.3**	**-1.9**
	comp=Z,1.2nm,0.3s,baz=3.1,slow=21,SNR=2.6						
PCRV				LR	LR	12 27 11.3	
	comp=Z,134nm,20.6s,slow=33						
	comp=Z,5.6nm,0.5s						
CHIV	**Chivirico**	**9.56**	**275**	Pn	**Pn**	**12 24 15.7**	**-1.7**
BAUV	**El Baul**	**10.57**	**189**	Pn	**Pn**	**12 24 29.1**	**-2.2**
MTDJ	**Mount Denham**	**10.72**	**265**	Pn	**Pn**	**12 24 31.4**	**-1.9**
SDV	**Santo Domingo**	**11.31**	**202**	LR	LR	12 29 02.2	
	comp=Z,163nm,20.2s,baz=70,slow=37						
BBSR	**BB Station**	**12.96**	**6**	Pn	**Pn**	**12 25 03.0**	**-0.8**
061Z	**Ochoppi**	**14.93**	**298**	Pn	**Pn**	**12 25 29.5**	**-1.3**
RUSC	**La Rusia**	**15.01**	**207**		Pn	12 25 26.6	-5.7
SOR	**Soroa**	**15.95**	**285**	Pn	**Pn**	**12 25 42.4**	**-2.0**
ROSC	**El Rosal**	**16.49**	**209**	Pn	**P**	**12 25 53.7**	**-0.7**
	comp=Z,2.4nm,0.3s,baz=122,slow=15,SNR=8.3						
ROSC				LR	LR	12 33 59.9	
	comp=Z,167nm,18.4s,baz=89,slow=44						
	comp=Z,24nm,0.7s						
656A	**Willston**	**17.78**	**307**	P	**P**	**12 26 09.1**	**+0.9**
BOAV	**Boa Vista**	**17.86**	**161**	Pn	**Pn**	**12 26 06.8**	**-1.5**
V61A	**Roper**	**18.64**	**333**	P	**Pn**	**12 26 19.9**	**+2.1**
LCR2	**La Lucha 2**	**19.66**	**243**	P	**Pn**	**12 26 30.3**	**-0.2**
LCR2				IAmb	IAmb	12 26 32.1	
	comp=Z,12nm,0.7s						
W57A	**Gilead**	**19.80**	**325**	P	**Pn**	**12 26 32.1**	**+0.4**
W57A				IAmb	IAmb	12 26 47.7	
	comp=Z,37nm,1.3s						
V58A	**Windy Hill, Pi**	**19.83**	**328**	P	**P**	**12 26 30.3**	**-0.3**
BOAB	**BOACO BROADBAN**	**19.88**	**252**	P	**P**	**12 26 30.1**	**-1.2**
JSC	**Jenkinsville**	**19.89**	**321**	P	**P**	**12 26 31.7**	**+0.4**
FLOC	**Florencia**	**19.98**	**208**	P	**P**	**12 26 32.1**	**-0.3**
FLOC				IAmb	IAmb	12 27 06.9	
	comp=Z,20nm,0.9s						
T59A	**Double "B" Far**	**20.06**	**333**	P	**P**	**12 26 32.8**	**-0.4**
T59A				IAmb	IAmb	12 26 53.7	
	comp=Z,9.9nm,0.6s						
JTS	**Las Juntas de**	**20.19**	**246**	P	**P**	**12 26 34.1**	**-0.6**
JTS				IAmb	IAmb	12 27 02.8	
	comp=Z,13nm,0.9s						
JTS	**Las Juntas de**	**20.19**	**246**	P	**P**	**12 26 34.5**	**-0.3**
	comp=Z,4.3nm,0.4s,baz=103,slow=8.3,SNR=3.7						
JTS				LR	LR	12 34 32.2	
	comp=Z,134nm,20.0s,baz=82,slow=37						
	comp=Z,4.3nm,0.4s						
GOGA	**Godfrey**	**20.70**	**316**	P	**P**	**12 26 40.0**	**-0.1**
GOGA				IAmb	IAmb	12 27 00.8	
	comp=Z,20nm,1.2s						
TEIG	**Tepich**	**20.70**	**276**	P	**P**	**12 26 40.0**	**-0.3**
T57A	**Hurt**	**20.85**	**330**	P	**P**	**12 26 41.8**	**0.0**
T57A				IAmb	IAmb	12 27 17.3	
	comp=Z,14nm,1.0s						
U56A	**King**	**20.91**	**327**	P	**P**	**12 26 42.1**	**-0.3**
V55A	**Taylorsville**	**20.98**	**324**	P	**P**	**12 26 44.7**	**+1.5**
V55A				IAmb	IAmb	12 27 15.2	
	comp=Z,13nm,0.8s						
R58B	**Mineral**	**21.04**	**334**	P	**P**	**12 26 45.6**	**+1.9**
S57A	**Dark Hollow, R**	**21.33**	**331**	P	**P**	**12 26 50.3**	**+3.4**
V53A	**Saluda**	**21.77**	**321**	P	**P**	**12 26 53.3**	**+1.7**
U54A	**Nelsons Funny**	**21.80**	**324**	P	**P**	**12 26 53.4**	**+1.3**
MVL	**Millersville**	**22.24**	**339**	P	**P**	**12 26 59.8**	**+3.2**
MVL				IAmb	IAmb	12 27 22.8	
	comp=Z,13nm,1.0s						
OTAV	**Otavalo**	**22.50**	**213**	P	**P**	**12 26 58.6**	**-1.5**
OTAV				IAmb	IAmb	12 27 20.7	
	comp=Z,18nm,1.0s						
T50A	**Nancy**	**23.88**	**321**	P	**P**	**12 27 15.6**	**+2.1**
T50A				IAmb	IAmb	12 27 38.5	
	comp=Z,8.7nm,0.6s						
U49A	**Red Boiling Sp**	**24.12**	**319**	P	**P**	**12 27 17.6**	**+1.8**
U49A				IAmb	IAmb	12 27 47.4	
	comp=Z,8.5nm,1.0s						
R50A	**Paris**	**24.46**	**324**	P	**P**	**12 27 21.7**	**+2.8**
R50A				IAmb	IAmb	12 27 43.7	
	comp=Z,11nm,1.1s						
WVT	**Waverly**	**25.20**	**316**	P	**P**	**12 27 26.8**	**+1.2**
COHC	**Cochancay**	**25.23**	**212**	P	**P**	**12 27 25.4**	**-0.6**
J57A	**Williamstown**	**25.25**	**343**	P	**P**	**12 27 28.9**	**+2.8**
J57A				IAmb	IAmb	12 28 06.3	
	comp=Z,15nm,1.2s						
LMN	**Caledonia Moun**	**26.37**	**2**	P	**P**	**12 27 38.2**	**+2.1**
LMN				IAmb	IAmb	12 27 46.5	
	comp=Z,8.8nm,1.1s						
DELO	**Deloro Mine**	**26.73**	**342**	P	**P**	**12 27 41.5**	**+2.1**
DELO				IAmb	IAmb	12 28 23.1	
	comp=Z,5.0nm,0.8s						
Q44A	**Meyer Farm, Va**	**27.62**	**319**	P	**P**	**12 27 49.6**	**+2.2**
FVM	**French Village**	**27.96**	**316**	P	**P**	**12 27 53.2**	**+2.7**

FVM				IAmb	IAmb	12 28 30.9	
	comp=Z,3.9nm,0.7s						
P43A	**Skaggs, Pawnee**	**28.38**	**320**	P	**P**	**12 27 56.3**	**+2.0**
ATAH	**Atahualpa**	**28.98**	**205**	LR	LR	12 42 05.2	
	comp=Z,132nm,18.6s,baz=355,slow=42						
BRDY	**Brady**	**31.71**	**298**	P	**P**	**12 28 24.4**	**+0.6**
BRDY				IAmb	IAmb	12 28 40.9	
	comp=Z,5.5nm,1.0s						
JCT	**Junction City**	**32.20**	**297**	P	**P**	**12 28 29.0**	**+0.8**
ZAIG	**Zacatecas**	**33.96**	**282**		**P**	**12 28 43.0**	**-0.9**
ZAIG				IAmb	IAmb	12 28 47.8	
	comp=Z,6.3nm,0.9s						
L34A	**Svendsen Farm,**	**33.97**	**318**	P	**P**	**12 28 43.4**	**-0.1**
SAND	**Sanderson**	**34.08**	**295**	P	**P**	**12 28 43.9**	**-0.7**
ECSD	**EROS Data Cent**	**35.08**	**320**		**P**	**12 28 53.6**	**+0.5**
TXAR	**Lajitas Array**	**35.31**	**293**	P	**P**	**12 28 56.2**	**+0.8**
	comp=Z,1.7nm,0.6s,baz=111,slow=9.3,SNR=28						
TXAR				PcP	**PcP**	**12 31 26.4**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=74,slow=4.2,SNR=1.9						
	comp=Z,1.7nm,0.6s						
ALPN	**Alpine**	**35.44**	**295**		**P**	**12 28 56.8**	**+0.3**
ALPN				IAmb	IAmb	12 28 57.8	
	comp=Z,5.1nm,0.9s						
LPAZ	**La Paz**	**35.55**	**183**	P	**P**	**12 28 58.7**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=27,slow=6.6,SNR=2.4						
	comp=Z,0.5nm,0.4s						
SIV	**San Ignacio**	**35.58**	**171**	LR	LR	12 43 29.8	
	comp=Z,78nm,19.2s,baz=304,slow=36						
PECS	**Pecos**	**35.80**	**297**	P	**P**	**12 29 00.1**	**+0.6**
PECS				IAmb	IAmb	12 29 17.3	
	comp=Z,4.2nm,0.8s						
K30B	**Basset**	**36.40**	**317**	P	**P**	**12 29 04.5**	**0.0**
VHRN	**Van Horn**	**36.65**	**296**		**P**	**12 29 07.6**	**+0.7**
VHRN				IAmb	IAmb	12 29 09.9	
	comp=Z,5.9nm,0.9s						
HPIG		**36.84**	**289**	P	**P**	**12 29 09.9**	**+1.3**
HPIG				IAmb	IAmb	12 29 11.0	
	comp=Z,5.6nm,1.0s						
MNTX	**Cornudas Mount**	**37.13**	**297**		**P**	**12 29 11.4**	**+0.6**
PB16	**IPOC Station P**	**37.67**	**185**	P	**P**	**12 29 14.8**	**-1.3**
BNM	**Barren Site**	**38.61**	**301**	P	**P**	**12 29 24.5**	**+0.9**
SDCO	**Great Sand Dun**	**38.62**	**307**	P	**P**	**12 29 23.4**	**-0.3**
ANMO	**Albuquerque**	**38.65**	**302**	P	**P**	**12 29 21.3**	**-2.5**
ANMO	**Albuquerque**	**38.65**	**302**	P	**P**	**12 29 21.3**	**-2.5**
ANMO	**Albuquerque**	**38.65**	**302**	P	**P**	**12 29 21.1**	**-2.7**
ANMO				IAmb	IAmb	12 29 25.5	
	comp=Z,2.4nm,1.1s						
ANMO	**Albuquerque**	**38.65**	**302**	LR	LR	12 48 12.4	
	comp=Z,231nm,19.3s,baz=294,slow=41						
ULM	**Lac du Bonnet**	**38.69**	**330**	P	**P**	**12 29 22.5**	**-1.3**
	comp=Z,1.0nm,0.5s,baz=160,slow=4.9,SNR=1.9						
	comp=Z,1.0nm,0.5s						
GO01	**Chusmiza**	**38.97**	**184**	P	**P**	**12 29 24.2**	**-2.7**
GO01				IAmb	IAmb	12 29 52.3	
	comp=Z,7.8nm,1.1s						
PB11	**IPOC Station P**	**39.10**	**185**	P	**P**	**12 29 25.7**	**-1.9**
PB11				IAmb	IAmb	12 29 41.6	
	comp=Z,8.8nm,0.9s						
ISCO	**Idaho Springs**	**39.35**	**310**		**P**	**12 29 28.6**	**-1.2**
HMBC	**Humberstone**	**39.63**	**185**	P	**P**	**12 29 29.9**	**-2.1**
HMBC				IAmb	IAmb	12 29 54.5	
	comp=Z,7.5nm,0.7s						
PB01	**IPOC Station P**	**40.36**	**185**	P	**P**	**12 29 36.7**	**-1.3**
PB01				IAmb	IAmb	12 29 57.6	
	comp=Z,12nm,1.1s						
319A	**Douglas**	**40.38**	**296**	P	**P**	**12 29 37.2**	**-1.0**
PV07	**Paradox Valley**	**41.20**	**307**	P	**P**	**12 29 46.4**	**+1.4**
PV13	**Radium Mtn., P**	**41.26**	**306**	P	**P**	**12 29 45.3**	**-0.3**
PV13				IAmb	IAmb	12 29 48.2	
	comp=Z,5.2nm,0.9s						
PV22	**Blue Mesa, Par**	**41.33**	**307**	P	**P**	**12 29 47.0**	**+0.9**
PV11	**David Mesa, Pa**	**41.33**	**306**	P	**P**	**12 29 46.7**	**+0.6**
PV11				IAmb	IAmb	12 29 49.0	
	comp=Z,4.4nm,0.7s						
PDAR	**Pinedale Array**	**43.13**	**312**	P	**P**	**12 30 00.9**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=120,slow=8.9,SNR=8.2						
	comp=Z,1.1nm,0.8s						
BSUT	**Blindstream Ca**	**43.33**	**309**		**P**	**12 30 02.5**	**0.0**
BSUT				IAmb	IAmb	12 30 04.3	
	comp=Z,7.3nm,1.2s						
TMUT	**Trail Mountain**	**43.35**	**307**	P	**P**	**12 30 01.4**	**-1.2**
MPU	**Maple Canyon**	**43.84**	**308**	P	**P**	**12 30 06.3**	**-0.2**
CTU	**Camp Tracy**	**44.10**	**309**	P	**P**	**12 30 09.1**	**+0.6**
CTU				IAmb	IAmb	12 30 10.7	
	comp=Z,5.9nm,1.1s						
YNE	**Yellowstone No**	**44.19**	**315**	P	**P**	**12 30 08.1**	**-1.2**
HWUT	**Hardware Ranch**	**44.21**	**310**	P	**P**	**12 30 08.0**	**-1.3**
HWUT				IAmb	IAmb	12 30 11.4	
	comp=Z,3.2nm,0.8s						
TPAW	**Teton Pass**	**44.33**	**313**		**P**	**12 30 10.4**	**0.0**
TPAW				IAmb	IAmb	12 30 12.9	
	comp=Z,3.5nm,0.8s						
YHL	**Hebgen Lake**	**44.92**	**315**		**P**	**12 30 19.1**	**+3.9**
YHL				IAmb	IAmb	12 30 19.2	
	comp=Z,3.6nm,0.8s						
PSUT	**Pine Spring**	**45.20**	**305**		**P**	**12 30 19.3**	**+1.9**
CPUP	**Villa Florida**	**46.32**	**169**	P	**P**	**12 30 25.6**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=179,slow=10,SNR=2.9						
	comp=Z,0.4nm,0.6s						
HLID	**Hailey**	**46.76**	**312**		**P**	**12 30 31.2**	**+1.7**
HLID				IAmb	IAmb	12 30 32.5	
	comp=Z,3.5nm,0.8s						
MFID	**Camas Ranch**	**47.72**	**311**		**P**	**12 30 37.2**	**+0.3**
PLID	**Pearl Lake**	**48.26**	**314**		**P**	**12 30 41.6**	**+0.3**
PLID				IAmb	IAmb	12 30 43.2	
	comp=Z,2.9nm,0.8s						
NV11	**Mina Array Sit**	**48.51**	**304**	P	**P**	**12 30 44.3**	**+1.0**
NV11				IAmb	IAmb	12 30 45.8	
	comp=Z,3.0nm,0.8s						
NVAR	**Mina Array Bea**	**48.63**	**304**	P	**P**	**12 30 45.4**	**+1.2**
	comp=Z,1.4nm,0.6s,baz=84,slow=7.7,SNR=13						
	comp=Z,1.4nm,0.6s						
BMO	**Blue Mountains**	**49.10**	**313**	P	**P**	**12 30 47.9**	**+0.4**
J08A	**Circle Bar Ran**	**49.59**	**311**		**P**	**12 30 52.1**	**+0.7**
NEW	**Newport**	**49.88**	**317**		**P**	**12 30 54.2**	**+0.7**
I07A	**Izee**	**50.46**	**312**		**P**	**12 30 60.0**	**+2.0**
I07A				IAmb	IAmb	12 31 00.5	
	comp=Z,8.2nm,1.4s						
YKA	**Yellowknife Ar**	**54.24**	**335**	P	**P**	**12 31 25.8**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=115,slow=6.4,SNR=4.9						
	comp=Z,0.6nm,0.6s						
ESDC	**Sonseca Array**	**56.72**	**55**	P	**P**	**12 31 43.8**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=268,slow=5.8,SNR=8.1						
	comp=Z,0.8nm,0.7s						
DBIC	**Dimbokro**	**60.89**	**93**	P	**P**	**12 32 14.2**	**+0.9**
	comp=Z,5.2nm,0.8s,baz=322,slow=4.6,SNR=3.5						
	comp=Z,5.2nm,0.8s						
SCRK	**Sand Creek**	**67.32**	**332**		**P**	**12 32 56.1**	**+1.3**
SCRK				IAmb	IAmb	12 32 57.5	
	comp=Z,2.6nm,0.7s						
PRP	**Porcupine Dome**	**68.03**	**334**		**P**	**12 32 60.0**	**+0.7**
PRP				IAmb	IAmb	12 33 14.3	
	comp=Z,3.2nm,0.9s						
K24K	**Donnelly Dome**	**68.11**	**332**	P	**P**	**12 32 59.4**	**-0.3**
IL31		**68.59**	**333**	P	**P**	**12 33 03.2**	**+0.6**
IL31				IAmb	IAmb	12 33 04.2	
	comp=Z,1.9nm,0.6s						
ILAR	**Eielson Array**	**68.59**	**333**	P	**P**	**12 33 02.9**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=106,slow=4.5,SNR=22						
	comp=Z,1.0nm,0.6s						
CCB	**Clear Creek Bu**	**68.99**	**333**	P	**P**	**12 33 05.7**	**+0.6**
F24K	**Squaw Lake**	**69.00**	**336**	P	**P**	**12 33 06.6**	**+1.4**
H24K	**Noodor Dome**	**69.00**	**334**	P	**P**	**12 33 06.6**	**+1.3**
C24K	**Franklin Bluff**	**69.30**	**338**	P	**P**	**12 33 07.8**	**+0.9**
NEA2	**Nenana**	**69.53**	**333**	P	**P**	**12 33 09.3**	**+0.8**
NEA2				IAmb	IAmb	12 33 42.0	
	comp=Z,3.6nm,1.1s						
I23K	**Minto, Yukon-K**	**69.64**	**333**	P	**P**	**12 33 09.8**	**+0.7**
I23K				IAmb	IAmb	12 33 13.2	
	comp=Z,2.1nm,0.7s						
C23K	**Itkillik River**	**69.96**	**338**	P	**P**	**12 33 11.0**	**0.0**
C23K				IAmb	IAmb	12 33 42.4	
	comp=Z,6.5nm,1.4s						
TRF	**Thorofare Moun**	**70.13**	**332**	P	**P**	**12 33 13.0**	**+0.6**
BPAW	**Bear Paw Mtn.**	**70.40**	**332**	P	**P**	**12 33 14.2**	**+0.3**
BPAW				IAmb	IAmb	12 33 15.4	
	comp=Z,2.3nm,0.6s						
E22K	**Anaktuvuk Pass**	**70.47**	**337**	P	**P**	**12 33 14.9**	**+0.7**
VAE	**Valguarnera**	**71.23**	**56**	LR	LR	12 59 37.4	
	comp=Z,64nm,21.5s,baz=327,slow=32						
B21K	**Ikpikpuk River**	**71.36**	**338**	P	**P**	**12 33 20.4**	**+0.9**
B21K				IAmb	IAmb	12 33 33.9	
	comp=Z,2.9nm,1.0s						
M20K	**Styx River**	**71.58**	**330**	P	**P**	**12 33 21.7**	**+0.5**
M20K				IAmb	IAmb	12 33 51.5	
	comp=Z,2.5nm,0.8s						
J20K	**Nowinta River**	**71.77**	**333**		**P**	**12 33 22.4**	**+0.2**
J20K				IAmb	IAmb	12 33 23.3	
	comp=Z,2.1nm,0.6s						
D20K	**Etivluk River**	**72.18**	**337**	P	**P**	**12 33 24.4**	**-0.2**
ARCES	**ARCESS Array B**	**72.58**	**22**	P	**P**	**12 33 26.9**	**0.0**
	comp=Z,2.2nm,0.9s,baz=270,slow=3.6,SNR=3.6						
	comp=Z,2.2nm,0.9s						
FINES	**FINESS Array B**	**74.25**	**30**	P	**P**	**12 33 37.7**	**+0.8**
	comp=Z,0.9nm,0.8s,baz=334,slow=9.3,SNR=1.9						
FINES				LR	LR	13 02 41.2	
	comp=Z,47nm,20.5s,baz=63,slow=33						
	comp=Z,0.9nm,0.8s						
L16K	**Owhat River**	**74.58**	**330**		**P**	**12 33 38.6**	**-0.2**
L16K				IAmb	IAmb	12 33 51.8	
	comp=Z,5.7nm,1.2s						
BRTR	**Keskin Array B**	**85.11**	**50**	P	**P**	**12 34 36.4**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=274,slow=4.2,SNR=3.0						
	comp=Z,0.8nm,0.7s						
PZH	**PanZhiHua**	**132.87**	**15**	PKP	**PKPdf**	**12 41 15.5**	**-0.7**
STKA	**Stephens Creek**	**152.07**	**238**	PKPbc	**PKPbc**	**12 41 56.4**	**+0.4**
	comp=Z,1.7nm,0.7s,baz=128,slow=4.4,SNR=3.8						
WRA	**Warramunga Arr**	**160.57**	**265**	PKPab	**PKPab**	**12 42 42.7**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=94,slow=3.9,SNR=1.4						
ASAR	**Alice Springs**	**160.76**	**254**	PKPab	**PKPab**	**12 42 41.9**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=100,slow=3.7,SNR=7.2						

IDC 21 12:29:15.6±3.2, 3°.43S×133°.45E, h0^{km}, mb3.7/2, mbtmp3.7/4, ML3.5/2, Error ellipse: s-maj=132.3km s-min=30.3km az=80.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.44**	**177**	Pn	Pn	12 33 08.3	+0.5
	0.2nm,0.3s,baz=360,slow=12,SNR=12						
	0.5nm,0.5s						
FITZ	**Fitzroy Crossi**	**16.47**	**207**	Pn	Pn	12 33 07.1	-1.1
	0.2nm,0.3s,baz=31,slow=12,SNR=8.0						
FITZ				Sn	Sn	12 36 00.9	-11
	0.1nm,0.3s,baz=299,slow=14,SNR=1.4						
	1.0nm,0.3s						
ASAR	**Alice Springs**	**20.13**	**179**	P	P	12 33 51.5	+0.2
	4.4nm,0.7s,baz=6.8,slow=13,SNR=63						
	4.4nm,0.7s						
MKAR	**Makanchi Array**	**67.23**	**325**	P	P	12 40 11.9	0.0
	0.3nm,0.5s,baz=124,slow=7.7,SNR=2.5						
	0.3nm,0.5s						

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*SNET **21** 12:40:08.3±0.5, 13°.07N×89°.47W, h51^{km}±7^{km}, ML2.5*
*CATAC **21** 12:40:08.4±0.7, 13°N±4°×8°9W±°, h24^{km}±4^{km}, M2.9/11, MLv2.9/11, Error ellipse: s-maj=9.2km s-min=5.5km az=23.7, confirmed*
ISC 21 12:40:08.7±2.7, 13°.1N±0°.1×89°.52W±0°.09, h43^{km}, n29, σ0^{s}.43/33, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAYA	**Jayaque - finc**	**0.61**	**7**	*e*P	**Pn**	**12 40 20.8**	**-0.3**
JAYA				*e*S	**Sn**	**12 40 30.0**	**+0.1**
JAYA	**Jayaque - finc**	**0.61**	**7**	P	**Pn**	**12 40 20.9**	**-0.3**
PANCS	**Alcalda de**	**0.65**	**31**	S	**Sn**	**12 40 30.7**	**-0.2**
PANCS	**Alcalda de**	**0.65**	**31**	P	**Pn**	**12 40 21.0**	**-0.6**
LOMA	**Loma Larga**	**0.68**	**30**	*e*P	**Pn**	**12 40 21.7**	**-0.4**
LOMA	**Loma Larga**	**0.68**	**30**	S	**Sn**	**12 40 31.7**	**-0.1**
LOMA	**Loma Larga**	**0.68**	**30**	P	**Pn**	**12 40 21.3**	**-0.8**
PMON	**Piamonte**	**0.69**	**17**	S	**Sn**	**12 40 32.3**	**+0.4**
PMON	**Piamonte**	**0.69**	**17**	P	**Pn**	**12 40 21.8**	**-0.3**
BOQS	**Boqueron**	**0.72**	**19**	*e*P	**Pn**	**12 40 22.6**	**-0.1**
LFRS	**El Faro**	**0.73**	**38**	*e*P	**Pn**	**12 40 22.4**	**-0.2**
LFRS				*e*S	**Sn**	**12 40 33.0**	**+0.3**
CEVE	**Cerro Verde**	**0.78**	**353**	*e*P	**Pn**	**12 40 23.4**	**-0.1**
CEVE				IAML		12 40 39.6	
	comp=Z,144nm,0.2s						
CEVE	**Cerro Verde**	**0.78**	**353**	P	**Pn**	**12 40 23.2**	**-0.3**
CEVE	**Cerro Verde**	**0.78**	**353**	S	**Sn**	**12 40 34.3**	**+0.1**
PAVA	**Las Pavas**	**0.87**	**41**	S	**Sn**	**12 40 36.7**	**+0.5**
PAVA	**Las Pavas**	**0.87**	**41**	P	**Pn**	**12 40 24.4**	**-0.2**
NUBE	**Las Nubes**	**0.88**	**344**	*e*P	**Pn**	**12 40 24.6**	**-0.2**
NUBE				*e*S	**Sn**	**12 40 36.9**	**+0.3**
NUBE	**Las Nubes**	**0.88**	**344**	P	**Pn**	**12 40 24.4**	**-0.4**
UESV	**Universidad de**	**0.92**	**51**	S	**Sn**	**12 40 36.6**	**-0.8**
UESV	**Universidad de**	**0.92**	**51**	P	**Pn**	**12 40 25.4**	**+0.1**
PQSS	**Presa 15 de Se**	**1.10**	**58**	P	**Pn**	**12 40 27.9**	**+0.3**
PQSS	**Presa 15 de Se**	**1.10**	**58**	S	**Sn**	**12 40 41.4**	**-0.2**
PACA	**Pacayal**	**1.24**	**70**	*e*P	**Pn**	**12 40 29.0**	**-0.7**
PACA	**Pacayal**	**1.24**	**70**	P	**Pn**	**12 40 30.0**	**+0.4**
PACA	**Pacayal**	**1.24**	**70**	S	**Sn**	**12 40 45.3**	**0.0**
MTO3	**Montecristo**	**1.35**	**7**	*i* P	**Pn**	**12 40 31.3**	**0.0**
MTO3				*e*S	**Sn**	**12 40 49.2**	**+1.1**
MTO3	**Montecristo**	**1.35**	**7**	P	**Pn**	**12 40 31.5**	**+0.2**
CNCH	**Conchagua**	**1.66**	**82**	S	**Sn**	**12 40 56.3**	**+0.7**
CNCH	**Conchagua**	**1.66**	**82**	P	**Pn**	**12 40 35.3**	**-0.1**

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*IDC **21** 12:41:41.6±2.5, 7°.69S×115°.48E, h0^{km}, mb3.1/3, mbtmp3.3/4, ML3.0/1, Error ellipse: s-maj=158.7km s-min=27.2km az=51.0*
*DJA **21** 12:41:59.2±0.5, 8°S±6°×11°7E±°, h15^{km}±4^{km}, M3.7/10, mb4.3/1, MLv3.4/10*
ISC 21 12:42:01.1±1.1, 8°.35S±0°.09×116°.56E±0°.04, h35^{km}, n14, σ1^{s}.20/18, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWSI	**Taliwang, Sumb**	**0.50**	**140**	P	**Pn**	**12 42 10.2**	**-1.6**
TWSI				S	**Sn**	**12 42 18.5**	**-0.7**
PLAI	**Plampang**	**1.29**	**111**	P	**Pn**	**12 42 23.0**	**+0.3**
PLAI				S	**Sn**	**12 42 41.2**	**+2.3**
SRBI	**Singaraja**	**1.36**	**281**	P	**Pn**	**12 42 23.6**	**0.0**
SRBI				S	**Sn**	**12 42 39.6**	**-0.8**
DNP	**Denpasar**	**1.37**	**256**	P	**Pn**	**12 42 23.8**	**0.0**
JAGI	**Jajag, Banyuwa**	**2.38**	**267**	P	**Pn**	**12 42 37.4**	**-0.3**
JAGI				S	**Sn**	**12 43 06.4**	**+0.7**
KMMI	**Kalianget**	**2.88**	**297**	P	**Pn**	**12 42 44.9**	**+0.4**
WBSI	**Waikabubak, Su**	**3.08**	**115**	P	**Pn**	**12 42 47.7**	**+0.4**
GMJI	**Gumukmas**	**3.08**	**271**	P	**Pn**	**12 42 47.8**	**+0.5**
BSSI	**Bau Bau, Buton**	**4.48**	**61**	P	**Pn**	**12 43 05.0**	**-1.6**
MMRI	**Maumere**	**5.63**	**93**	P	**Pn**	**12 43 23.3**	**+0.9**
FITZ	**Fitzroy Crossi**	**13.11**	**139**	Pn	**Pn**	**12 45 06.2**	**+1.2**
	0.1nm,0.3s,baz=322,slow=14,SNR=1.8						
FITZ				Sn	**Sn**	**12 47 30.1**	**+0.6**
	0.1nm,0.3s,baz=323,slow=20,SNR=1.5						
	2.9nm,0.9s						
WRA	**Warramunga Arr**	**20.71**	**126**	P	**P**	**12 46 37.2**	**-1.4**
	0.6nm,1.0s,baz=299,slow=12,SNR=4.6						
	0.6nm,1.0s						
ASAR	**Alice Springs**	**22.54**	**135**	P	**P**	**12 46 56.2**	**-2.1**
	0.2nm,0.5s,baz=312,slow=9.5,SNR=6.5						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**62.81**	**334**	P	P	12 52 01.7	-22
	0.2nm,0.7s,baz=142,slow=8.2,SNR=2.2						
	0.2nm,0.7s						

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*IDC **21** 12:52:03.4±1.4, 30°.75S×177°.40W, h0^{km}, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=36.9km s-min=21.5km az=82.0*
*NEIC **21** 12:52:05.4±1.5, 30°.7S±0°.1×177°.4W±0°.2, h10^{km}±1^{km}, mb4.5/8, Error ellipse: s-maj=37.4km s-min=12.7km az=64.0*
ISC 21 12:52:08.3±1.0, 30°.73S±0°.10×177°.4W±0°.2, h33^{km}, n18, σ0^{s}.90/19, mb4.3/8, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.54**	**342**	Pn	**Pn**	**12 52 33.0**	**-0.4**
	98nm,0.3s,baz=113,slow=15,SNR=7.7						
RAO				Sn	**Sn**	**12 52 52.7**	**+0.3**
	257nm,0.3s,baz=96,slow=18,SNR=4.1						
URZ	**Urewera**	**8.78**	**210**	Pn	Pn	12 54 07.9	-5.0
	0.2nm,0.3s,baz=351,slow=10,SNR=1.3						
URZ				Sn	Sn	12 55 28.3	-22
	1.8nm,0.3s,baz=138,slow=22,SNR=6.9						
DZM	**Mont Dzumac**	**16.84**	**297**	Pn	**P**	**12 56 05.7**	**+2.1**
	baz=92,slow=18,SNR=1.4						
STKA	**Stephens Creek**	**34.92**	**257**	P	**P**	**12 58 55.8**	**-1.3**
	1.5nm,0.6s,baz=41,slow=7.9,SNR=2.9						
	1.5nm,0.6s						
BBOO	**Buckleboo**	**39.39**	**254**	P	**P**	**12 59 33.9**	**-1.1**
BBOO				IAmb	IAmb	12 59 55.2	
	comp=Z,25nm,1.5s						
ASAR	**Alice Springs**	**43.62**	**267**	P	**P**	**13 00 09.6**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=106,slow=7.7,SNR=13						
ASAR				PcP	**PcP**	**13 01 58.1**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=111,slow=3.6,SNR=1.6						
	comp=Z,0.6nm,0.6s						
WRA	**Warramunga Arr**	**44.64**	**272**	P	**P**	**13 00 18.1**	**+0.2**
	comp=Z,1.5nm,0.9s,baz=111,slow=8.0,SNR=7.6						
	comp=Z,1.5nm,0.9s						
WB0	**Warramunga Arr**	**44.66**	**272**	P	**P**	**13 00 18.4**	**+0.2**
WB0				IAmb	IAmb	13 00 26.3	
	comp=Z,6.2nm,1.1s						
FITZ	**Fitzroy Crossi**	**52.89**	**270**	P	**P**	**13 01 20.9**	**-0.4**
QSPA	**South Pole Qui**	**59.38**	**180**	P	**P**	**13 02 08.5**	**+1.2**
QSPA	**South Pole Qui**	**59.38**	**180**	P	**P**	**13 02 07.1**	**-0.1**
	comp=Z,1.9nm,0.9s,baz=90,slow=3.0,SNR=8.0						
	comp=Z,1.9nm,0.9s						
SNAA	**Sanae**	**77.81**	**178**	P	**P**	**13 04 02.1**	**+0.1**
MAJO	**Matsushiro**	**78.81**	**325**	P	**P**	**13 04 06.7**	**-1.1**
MAJO				IAmb	IAmb	13 04 10.5	
	comp=Z,6.8nm,1.3s						
MJB9	**Matsu-Tunnel**	**78.82**	**325**	P	**P**	**13 04 07.7**	**-0.2**
MJB9				IAmb	IAmb	13 04 11.5	
	comp=Z,6.6nm,1.3s						
JMN	**Monobe**	**78.91**	**320**	P	**P**	**13 04 08.1**	**-0.3**
FIA1	**FINESS Array S**	**145.63**	**340**	PKPdf	**PKPab**	**13 11 43.6**	**+0.5**
FINES	**FINESS Array B**	**145.63**	**340**	PKPbc	**PKPdf**	**13 11 42.2**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=62,slow=3.8,SNR=11						
NOA	**NORSAR Array B**	**149.15**	**352**	PKPbc	**PKPbc**	**13 11 52.0**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=14,slow=2.5,SNR=3.4						

CATAC 21 12:52:38.4±0.5, 11°N±2°×8°7W±°, h20^{km}, M2.9/15, MLv2.9/15, Error ellipse: s-maj=7.2km s-min=3.7km az=59.6, confirmed, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SABN	**Sabanita**	**1.06**	**25**	P	Pn	12 52 58.4	+0.2
NANN	**Nandasmo**	**1.06**	**28**	P	Pn	12 52 58.9	+0.6
NANN	**Nandasmo**	**1.06**	**28**	S	Sn	12 53 13.6	+1.0
JAPN	**Al SSO del Vol**	**1.07**	**60**	P	Pn	12 52 58.8	+0.4
CARN	**Rivas**	**1.10**	**80**	P	Pb	12 52 59.5	+0.6
CARN				S	Sn	12 53 14.7	+1.3
MORN	**Al O del Volca**	**1.11**	**60**	P	Pn	12 52 58.8	-0.1
MORN				S	Sn	12 53 13.7	+0.1
UNAN	**Cigeo UNAN**	**1.17**	**17**	P	Pn	12 52 59.7	0.0
UNAN				S	Sb	12 53 14.8	+0.1
COPN	**Copaltepe**	**1.18**	**2**	P	Pb	12 53 00.1	-0.1
SAPS	**Ciudad Sandino**	**1.19**	**11**	P	Pn	12 53 00.0	0.0
SAPS	**Ciudad Sandino**	**1.19**	**11**	S	Sn	12 53 16.1	+0.5
TISN	**Laguna Tiscapa**	**1.20**	**17**	P	Pb	12 53 00.6	+0.2
WILN	**Americas 2**	**1.24**	**20**	P	Pb	12 53 00.9	-0.3
WILN				S	Sn	12 53 17.1	+0.3
APQ3	**Volcan Apoyequ**	**1.30**	**11**	P	Pn	12 53 01.5	0.0
APQ3				S	Sb	12 53 18.4	-0.1
MOMN	**Momotombo**	**1.41**	**3**	P	Pn	12 53 03.2	+0.1
MOMN				S	Sn	12 53 20.4	-0.7
MOM2	**El Cardon**	**1.44**	**6**	P	Pn	12 53 03.7	+0.2
MOM2				S	Sn	12 53 21.7	-0.2
CNGA	**Al SSO del Vol**	**1.50**	**357**	P	Pn	12 53 04.3	0.0
CNGA				S	Sn	12 53 23.2	-0.1
CNGN	**Cerro Negro**	**1.50**	**357**	S	Sn	12 53 23.3	-0.1
CNGN	**Cerro Negro**	**1.50**	**357**	P	Pn	12 53 04.6	+0.3
INDI	**Punta indio, G**	**1.57**	**135**	P	Pn	12 53 05.7	+0.5
INDI	**Punta indio, G**	**1.57**	**135**	S	Sn	12 53 23.2	-1.8
POLN	**Al Sur del Vol**	**1.66**	**354**	P	Pn	12 53 06.9	+0.4
POLN				S	Sn	12 53 26.5	-0.7
BOAB	**BOACO BROADBAN**	**1.73**	**33**	P	Pn	12 53 07.3	-0.1
BOAB	**BOACO BROADBAN**	**1.73**	**33**	S	Sn	12 53 28.9	0.0
RCPN	**Sur Rio San Ju**	**2.57**	**12**	P	Pn	12 53 19.0	-0.1

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*MEX **21** 12:59:29.3±0.4, 14°.10N×93°.26W, h15^{km}±894^{km}, MD3.8*
*GCG **21** 12:59:30.5±1.5, 14°.13N×93°.07W, h35^{km}±999^{km}, MD4.1, ML3.1*
ISC 21 12:59:27.0±3.7, 14°.2N±0°.1×93°.1W±0°.1, h13^{km}±27^{km}, n10, σ1^{s}.03/18, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PATR	**El Naranjo**	**1.28**	**42**	*e*P	**Pn**	**12 59 51.3**	**+0.5**
PATR				*e*S	**Sn**	**13 00 08.0**	**0.0**
PAVE	**Pavencul**	**1.38**	**41**	*e*P	**Pn**	**12 59 52.7**	**+0.6**
PAVE				*e*S	**Sn**	**13 00 10.8**	**+0.5**
RTAL	**Retalhuleu**	**1.43**	**75**	*e*P	**Pb**	**12 59 54.2**	**+0.7**
RTAL				*e*S	**Sn**	**13 00 11.8**	**+0.5**
PCIG		**1.54**	**356**	*e*P	**Pn**	**12 59 53.2**	**-0.9**
PCIG				*e*S	**Sn**	**13 00 12.8**	**-1.3**
STG8	**El Palmar, Qui**	**1.74**	**80**	*i* P	**Pn**	**12 59 56.4**	**-0.7**
STG8				IAML		13 00 23.6	
	comp=N,217nm,0.2s						
STG0	**El Palmar, Qui**	**1.74**	**81**	*e*P	**Pn**	**12 59 56.3**	**-0.8**
STG0				IAML		13 00 27.6	
	comp=E,363nm,0.4s						
CCIG	**Comitan**	**2.31**	**24**	*e*P	**Pb**	**13 00 08.3**	**-0.4**
CCIG				*e*S	**Sb**	**13 00 37.5**	**+0.2**
CCIG	**Comitan**	**2.31**	**24**	*i* P	**Pb**	**13 00 08.3**	**-0.4**
CCIG				*i* S	**Sb**	**13 00 36.0**	**-1.4**
CCIG				IAML		13 00 46.1	
	comp=N,102nm,0.4s						
TGIG		**2.61**	**360**	*e*P	**Pn**	**13 00 10.1**	**+1.2**
TGIG				*e*S	**Sn**	**13 00 39.6**	**-0.8**
TGIG		**2.61**	**360**	*i* P	**Pn**	**13 00 10.6**	**+1.7**
TGIG				*i* S	**Sn**	**13 00 41.9**	**+1.5**
TGIG				IAML		13 00 51.2	
	comp=E,52nm,0.3s						

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*KRNET **21** 13:01:13.2±0.1, 42°.24N×76°.85E, h19^{km}, mb3.5*
*SOME **21** 13:01:13.2, 42°.27N×76°.83E, h10^{km}*
*KNET **21** 13:01:14.6±0.3, 42°.34N×76°.75E, h11^{km}±2^{km}, ml2.8, Error ellipse: s-maj=2.9km s-min=2.0km az=29.0*
*NNC **21** 13:01:14.4±0.5, 42°.34N×76°.82E, h0^{km}, mb3.7, mpv3.6, Error ellipse: s-maj=3.1km s-min=1.7km az=161.0*
ISC 21 13:01:12.9±1.0, 42°.31N±0°.02×76°.87E±0°.02, h10^{km}±9^{km}, n59, σ0^{s}.99/108, 52C-18D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**0.29**	**128**	⇑*i*P	**Pg**	**13 01 19.2**	**+0.3**
KDJ				⇑*e*S	**Sg**	**13 01 23.2**	**+0.3**
ULHL	**Ulahol**	**0.47**	**262**	⇑P	**Pg**	**13 01 22.3**	**+0.2**
	147nm,0.1s						
ULHL				⇑S	**Sg**	**13 01 28.8**	**+0.5**
	507nm,0.2s						
ULHL	**Ulahol**	**0.47**	**262**	⇑*e*P	**Pg**	**13 01 22.2**	**+0.2**
ULHL				⇑*e*S	**Sg**	**13 01 28.6**	**+0.3**
BOOM	**Boomskoye usch**	**0.71**	**285**	⇓*e*P	**Pg**	**13 01 26.7**	**+0.1**
BOOM				⇓*e*S	**Sb**	**13 01 36.7**	**-0.6**
MDOK	**Medeo**	**0.86**	**9**	⇓P	**Pb**	**13 01 30.0**	**0.0**
	23nm,0.2s						
MDOK				Pg	**Pn**	**13 01 30.4**	**-0.9**
	104nm,0.2s						
MDOK				⇑S	**Sb**	**13 01 41.8**	**+0.1**
	75nm,0.5s						
MDOK				Lg	Lg	13 01 42.0	
	116nm,0.5s						
MTBS	**Maitube**	**0.88**	**339**	P	**Pb**	**13 01 30.3**	**0.0**
	18nm,0.3s						
MTBS				S	**Sb**	**13 01 42.4**	**+0.2**
	246nm,0.2s						
MTBS	**Maitube**	**0.88**	**339**	*e*P	**Pb**	**13 01 30.3**	**0.0**
	18nm,0.3s						
MTBS				*e*S	**Sb**	**13 01 42.4**	**+0.2**
	246nm,0.2s						
AAA	**Alma-Ata**	**0.90**	**2**	P	**Pn**	**13 01 31.1**	**-0.6**
	87nm,0.2s						
AAA				S	**Sn**	**13 01 44.4**	**-0.3**
	320nm,0.4s						
AAA	**Alma-Ata**	**0.90**	**2**	*e*P	**Pn**	**13 01 31.1**	**-0.6**
	87nm,0.2s						
AAA				*e*S	**Sn**	**13 01 44.4**	**-0.3**
	320nm,0.4s						
KNDC	**Almaty**	**0.91**	**5**	⇑P	**Pn**	**13 01 31.5**	**-0.3**
	62nm,0.3s						
KNDC				⇓S	**Sn**	**13 01 44.3**	**-0.7**
	568nm,0.6s						
TARG	**Taragay, Kyrgy**	**0.91**	**129**	⇑*e*P	**Pg**	**13 01 29.7**	**-0.7**
TARG				⇑*i*S	**Sg**	**13 01 41.5**	**-0.8**
KST	**Kastek**	**0.99**	**318**	P	**Pb**	**13 01 32.3**	**+0.1**
	9.3nm,0.2s						
KST				S	**Sb**	**13 01 45.9**	**+0.5**
	113nm,0.6s						
KST	**Kastek**	**0.99**	**318**	*e*P	**Pb**	**13 01 32.3**	**+0.1**
	9.3nm,0.2s						

KST				eS	Sb	13 01 45.9	+0.5
	113nm,0.6s						
NRN	Naryn	1.09	217	⇑eP	Pg	13 01 32.7	-1.1
NRN				⇑eS	Sg	13 01 47.1	-0.9
TKM2	Tokmak 2	1.12	303	⇑P	Pn	13 01 34.6	-0.2
	42nm,0.2s,SNR=54						
TKM2				⇑S	Sn	13 01 50.0	-0.5
	160nm,0.1s						
TKM2	Tokmak 2	1.12	303	⇓P	Pn	13 01 34.5	-0.2
	13nm,0.5s						
TKM2				⇑S	Sn	13 01 50.1	-0.3
	22nm,0.2s						
TKM2	Tokmak 2	1.12	303	⇑eP	Pb	13 01 34.4	0.0
TKM2				⇑eS	Sn	13 01 49.9	-0.5
PRZ	Przheval'sk	1.15	81	⇑eP	Pn	13 01 35.1	-0.1
PRZ				⇑eS	Sn	13 01 50.9	-0.2
SATY	Saty	1.36	56	P	Pg	13 01 39.2	+0.3
	53nm,0.3s						
SATY				S	Sg	13 01 58.7	+2.1
	280nm,0.2s						
KTBS	Karatobe	1.41	355	P	Pg	13 01 40.3	+0.4
	34nm,0.4s						
KTBS				S	Sg	13 01 59.5	+1.3
	155nm,0.2s						
KBK	Karagaybulak	1.46	284	⇑P	Pg	13 01 40.7	-0.2
	20nm,0.1s,SNR=16						
KBK				⇓S	Sg	13 02 00.5	+0.6
	119nm,0.2s						
KBK	Karagaybulak	1.46	284	⇑eP	Pb	13 01 40.2	-0.1
KBK				⇑eS	Sg	13 01 59.8	-0.1
KUU	Kurty	1.63	346	P	Pg	13 01 44.0	-0.1
	12nm,0.3s						
KUU				S	Sg	13 02 05.4	+0.2
	76nm,0.5s						
KUU	Kurty	1.63	346	eP	Pg	13 01 44.0	-0.1
	13nm,0.3s						
KUU				eS	Sg	13 02 06.3	+1.0
	108nm,0.3s						
CHMS	Chumysh	1.71	294	⇓P	Pb	13 01 44.3	0.0
	18nm,0.2s,SNR=10.0						
CHMS				⇑S	Sg	13 02 07.4	-0.3
	53nm,0.2s						
CHMS	Chumysh	1.71	294	⇑P	Pb	13 01 44.4	0.0
	6.1nm,0.3s						
CHMS				⇑S	Sg	13 02 06.9	-0.8
	62nm,0.7s						
CHMS	Chumysh	1.71	294	⇑eP	Pb	13 01 44.6	+0.3
CHMS				⇑eS	Sg	13 02 07.4	-0.3
FRU1	Bishkek	1.73	288	⇑eP	Pb	13 01 45.1	+0.4
FRU1				⇑eS	Sg	13 02 08.4	0.0
UCH	Uchtor	1.75	268	⇓eP	Pb	13 01 45.0	-0.3
UCH				⇓eS	Sb	13 02 08.2	+0.7
KPKS	Kokpek	1.77	49	P	Pg	13 01 46.5	-0.2
	6.2nm,0.3s						
KPKS				S	Sg	13 02 10.8	+1.2
	291nm,0.3s						
AAK	Ala-Archa	1.79	281	⇑P	Pb	13 01 45.9	+0.1
	20nm,0.2s,SNR=16						
AAK				⇑S	Sg	13 02 10.3	+0.1
	139nm,0.3s						
AAK	Ala-Archa	1.79	281	⇑P	Pb	13 01 46.3	+0.5
	3.9nm,0.4s						
AAK				S	Sg	13 02 10.0	-0.3
	11nm,0.3s						
AAK	Ala-Archa	1.79	281	⇓iP	Pb	13 01 45.9	+0.1
AAK				⇓eS	Sg	13 02 09.5	-0.8
UZB	Uzynbulak	1.79	62	P	Pg	13 01 46.7	-0.6
	74nm,0.2s						
UZB				S	Sg	13 02 10.4	-0.1
	97nm,0.3s						
UZB	Uzynbulak	1.79	62	eP	Pg	13 01 46.6	-0.6
UZB				eS	Sg	13 02 10.4	-0.1
ARLS	Aral	1.95	258	⇑eP	Pb	13 01 47.9	-0.6
ARLS				⇑eS	Sb	13 02 12.8	-0.1
USP	Ospenovka	1.99	300	⇓P	Pb	13 01 49.6	+0.4
	38nm,0.2s,SNR=73						
USP				⇑S	Sg	13 02 16.6	-0.1
	182nm,0.3s						
USP	Ospenovka	1.99	300	⇑eP	Pb	13 01 48.8	-0.4
USP				⇑eS	Sg	13 02 15.2	-1.5
SGDS	Sogindy	2.00	306	Pg	Pb	13 01 50.0	+0.6
	20nm,0.2s						
SGDS				Lg	Lg	13 02 17.1	
	93nm,0.4s						
ARXS	Arharly	2.03	20	Pg	Pg	13 01 51.3	-0.5
	55nm,0.1s						
ARXS				Lg	Lg	13 02 19.2	
	138nm,0.3s						
PDGK	Podgornoye	2.18	61	⇑Pn	Pb	13 01 52.8	+0.3
	69nm,0.7s						
PDGK				⇑Sn	Sg	13 02 22.4	-0.6
	147nm,0.6s						
EKS2	Erkin-Say	2.31	280	⇓P	Pb	13 01 54.7	0.0
	21nm,0.2s,SNR=6.8						
EKS2	Erkin-Say	2.31	280	⇑eP	Pb	13 01 53.5	-1.2
EKS2				⇑eS	Sb	13 02 22.8	-0.6
AML	Almayashu	2.36	267	⇑P	Pb	13 01 55.7	0.0
	24nm,0.2s,SNR=34						
AML	Almayashu	2.36	267	⇑eP	Pb	13 01 53.8	-2.0
AML				⇑eS	Sb	13 02 23.6	-1.5
SALK	Salom-Alik	2.69	239	⇑eP	Pn	13 01 57.8	+1.4
SALK				⇑eS	Sn	13 02 30.0	+0.8
MRKS	Merke	2.73	280	Pg	Pb	13 02 02.7	+0.9
	11nm,0.2s						
MRKS				Lg	Lg	13 02 38.9	
	147nm,0.6s						
MRKS	Merke	2.73	280	eP	Pb	13 02 02.7	+0.9
	11nm,0.2s						
MRKS				eS	Sg	13 02 38.2	-2.3
	340nm,0.4s						
KTMS	Ketmen	2.80	65	Pg	Pb	13 02 03.5	+0.4
	4.6nm,0.2s						
KTMS				Lg	Lg	13 02 40.3	
	92nm,0.4s						
KTMS	Ketmen	2.80	65	eP	Pb	13 02 04.3	+1.2
	3.7nm,0.2s						
KTMS				eS	Sg	13 02 41.0	-1.9
	114nm,0.5s						
DJR	Jarkent	2.94	46	Pg	Pb	13 02 06.1	+0.7
	19nm,0.4s						
DJR				Lg	Lg	13 02 45.4	
	104nm,0.3s						
DJR	Jarkent	2.94	46	eP	Pg	13 02 08.1	-1.1
	20nm,0.3s						
DJR				eS	Sg	13 02 47.3	+0.1
	113nm,0.4s						
ARSB	Arslanbob	3.07	253	⇓eP	Pn	13 02 03.2	+1.7
ARSB				⇓eS	Sn	13 02 39.6	+1.3
MNAS	Manas	3.24	275	⇑eP	Pn	13 02 05.9	+2.0
MNAS				⇑eS	Sn	13 02 44.6	+2.1
SFK	Sufi-Kurgan	3.42	229	⇓eP	Pn	13 02 07.8	+1.3
SFK				⇓eS	Sn	13 02 47.3	0.0
KK31	Karatay Array	4.75	282	Pg	Pg	13 02 40.7	-3.1
	3.3nm,0.4s,baz=93,slow=16,SNR=27						
KK31				Lg	Lg	13 03 41.0	
	6.9nm,0.4s,baz=94,slow=29,SNR=8.1						
MAKZ	Makanchi	5.79	37	⇓Pn	Pn	13 02 43.8	+5.0
	0.5nm,0.3s						
MAKZ				⇑Pg	Pg	13 03 01.0	-2.7
	2.7nm,0.6s						
MAKZ				⇑Lg	Lg	13 04 17.4	
	4.3nm,0.5s						
MK31	Makanchi Array	5.92	39	Pn	Pn	13 02 44.6	+3.9
	0.4nm,0.3s,baz=220,slow=12,SNR=21						
MK31				⇑Pg	Pg	13 03 03.8	-2.5
	1.3nm,0.4s,baz=224,slow=16,SNR=12						
MK31				⇑Lg	Lg	13 04 23.5	
	2.4nm,0.4s,baz=220,slow=28,SNR=4.1						
KURK	Kurchatov	8.49	8	Lg	Lg	13 05 40.7	
	17nm,0.7s						

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*FCIAR **21** 13:11:02.0, 80°.10N×20°.66E, h10^{km}, station ZFI2 has station magnitude of 3.30 station OMEGA has station magnitude of 3.20*

*BER **21** 13:11:05.5±3.9, 79°.95N×20°.81E, h22^{km}±18^{km}, ML2.1, ML3.0(NAO), Confirmed Earthquake*

*NAO **21** 13:11:05.1±0.0, 79°.94N×19°.55E, h10^{km}, ML3.0*

ISC 21 13:11:03.8±1.2**, 79°.96N**±0°.06×**20°.37E**±0°.05**, h10^{km}, n16, σ1^{s}.42**/34**, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	Kingsbay	1.87	240	Pn	Pn	13 11 34.4	-1.2
KBS				Sg	Sn	13 11 59.5	+0.3
KBS	Kingsbay	1.87	240	eP	Pn	13 11 34.2	-1.5
KBS				ePg	Pb	13 11 37.7	-0.2
KBS				eS	Sn	13 11 58.7	-0.5
KBS				IAML		13 12 04.4	
	comp=Z,92nm,0.5s						
SPA0	Spitsbergen Ar	1.94	205	Pn	Pn	13 11 35.9	-0.9
	baz=23,slow=16						
SPA0				Pg	Pb	13 11 38.9	-0.3
	baz=21,slow=18						
SPA0				Sn	Sn	13 11 58.6	-2.6
	baz=47,slow=37						
SPA0				Sg	Sb	13 12 03.4	-0.1
	baz=21,slow=37						
SPA0	Spitsbergen Ar	1.94	205	eP	Pn	13 11 37.7	+0.9
SPA0				eS	Sn	13 12 02.9	+1.6
SPA0	Spitsbergen Ar	1.94	205	Pn	Pn	13 11 35.9	-0.9
	baz=23,slow=16						
SPA0				Pg	Pb	13 11 38.9	-0.3
	baz=21,slow=18						
SPA0				Sn	Sn	13 11 58.6	-2.6
	baz=47,slow=37						
SPA0				Sg	Sb	13 12 03.4	-0.1
	baz=21,slow=37						
BRBA	Barentsburg A	2.24	215	eP	Pn	13 11 41.9	+1.0
HSPB	Hornsund (broa	3.12	200	Pn	Pn	13 11 54.0	+1.1
HSPB				Sg	Sb	13 12 40.4	+3.0
HSPB	Hornsund (broa	3.12	200	eP	Pb	13 11 59.0	-0.3
HSPB				eS	Sb	13 12 37.5	+0.2
HSPB	Hornsund (broa	3.12	200	eP	Pn	13 11 54.2	+1.3
HSPB				eSg	Sb	13 12 41.0	+3.6
HSPB				IAML		13 12 43.6	
	comp=Z,26nm,0.5s						
HOPEN	Hopen	3.59	162	Pn	Pn	13 11 59.0	-0.4
HOPEN				Sn	Sn	13 12 40.5	-1.3
HOPEN				Sg	Sg	13 12 58.9	-0.1
HOPEN	Hopen	3.59	162	eP	Pn	13 11 58.6	-0.8
HOPEN				eS	Sn	13 12 40.9	-0.9
HOPEN	Hopen	3.59	162	eP	Pn	13 11 59.0	-0.4
ZFI2	Zemlya Franca-	4.62	66	eP	Pn	13 12 14.7	+1.2
ZFI2				eS	Sn	13 13 05.5	-1.6
	comp=Z,26nm,0.9s						
OMEGA	Omega	4.64	66	eP	Pn	13 12 14.7	+1.0
OMEGA				eS	Sn	13 13 05.5	-1.9
	comp=Z,19nm,1.3s						
ARA0	ARCESS Array S	10.56	170	Pn	Pn	13 13 35.2	+0.3
	baz=356,slow=10						
ARA0				Sn	Sn	13 15 21.7	-11
	baz=10,slow=22						
ARA0	ARCESS Array S	10.56	170	Pn	Pn	13 13 35.2	+0.3
	baz=356,slow=10						
ARA0				Sn	Sn	13 15 21.7	-11
	baz=10,slow=22						

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*IDC **21** 13:16:28.6±1.5, 9°.80S×115°.20E, h0^{km}, mb3.5/5, mbtmp3.7/7, ML3.7/2, Error ellipse: s-maj=58.4km s-min=21.1km az=46.0*

*DJA **21** 13:16:39.8±0.4, 10°S±8°×11°6E±°, h74^{km}±14^{km}, M4.0/12, mb3.9/5, MLv4.0/12*

ISC 21 13:16:36.8±1.0**, 9°.76S**±0°.08×**115°.76E**±0°.04**, h66^{km}**±14^{km}**, n20, σ1^{s}.78**/26**, mb3.8**/4**, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DNP	Denpasar	1.21	333	P	Pn	13 16 57.9	+0.1
DNP				S	Sn	13 17 13.2	-0.3
TWSI	Taliwang, Sumb	1.50	47	P	Pn	13 17 02.8	+1.1
TWSI				S	Sn	13 17 19.8	-0.6
SRBI	Singaraja	1.75	342	P	Pn	13 17 06.1	+1.0
SRBI				S	Sn	13 17 24.6	-1.9
JAGI	Jajag, Banyuwa	2.05	309	P	Pn	13 17 09.9	+0.9
JAGI				S	Sn	13 17 32.2	-1.4
PLAI	Plampang	2.19	65	P	Pn	13 17 13.3	+2.3
PLAI				S	Sn	13 17 37.9	+0.8
GMJI	Gumukmas	2.73	303	P	Pn	13 17 19.7	+1.4
GMJI				S	Sn	13 17 49.7	-0.5
KMMI	Kalianget	3.23	326	P	Pn	13 17 27.8	+2.6
WBSI	Waikabubak, Su	3.58	88	P	Pn	13 17 29.9	-0.1
PCJI	Pacitan	4.79	289	P	Pn	13 17 49.1	+2.6
UGM	Wanagama	5.50	289	P	Pn	13 17 55.6	-0.6
BSSI	Bau Bau, Buton	5.90	53	P	Pn	13 18 01.6	-0.1
EDFI	Ende, Flores	5.94	81	P	Pn	13 18 03.6	+1.3
	0.1nm12nm,0.7s						
KAPI	Kappang	6.16	40	Pn	Pn	13 18 06.4	+1.2
	1.8nm,0.3s,baz=190,slow=21,SNR=2.3						
KAPI				Sn	Sn	13 19 12.7	-1.5
	3.2nm,0.3s,baz=44,slow=22,SNR=9.5						
	4.1nm,0.3s						
PCI	Palu	9.69	25	P	Pn	13 18 41.3	-12
FITZ	Fitzroy Crossi	12.66	132	Pn	Pn	13 19 34.7	+0.5
	0.2nm,0.3s,baz=314,slow=12,SNR=2.4						
FITZ				Sn	Sn	13 21 49.1	-4.5
	0.1nm,0.3s,baz=102,slow=22,SNR=1.4						
	5.2nm,1.1s						
WRA	Warramunga Arr	20.59	122	P	Pn	13 21 14.2	+0.7
	0.8nm,0.9s,baz=301,slow=11,SNR=3.6						
	0.8nm,0.9s						
ASAR	Alice Springs	22.16	131	P	P	13 21 31.0	+3.4
	0.3nm,0.7s,baz=306,slow=9.1,SNR=4.2						
	0.3nm,0.7s						
MKAR	Makanchi Array	63.74	335	P	P	13 27 00.9	-0.7
	0.6nm,0.4s,baz=149,slow=7.1,SNR=9.0						
	0.6nm,0.4s						
KURBB	Kurchatov Arra	68.28	335	P	P	13 27 30.2	-0.5
	0.4nm,0.5s,baz=147,slow=5.7,SNR=4.7						
	0.4nm,0.5s						
BVAR	Borovoye Array	73.50	333	P	P	13 28 01.6	-0.8
	0.9nm,0.6s,baz=124,slow=7.7,SNR=4.7						
	0.9nm,0.6s						

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*IDC **21** 13:35:37.9±1.6, 30°.92S×177°.67W, h0^{km}, mb3.6/3, mbtmp3.8/4, ML3.3/1, Error ellipse: s-maj=41.7km s-min=21.9km az=94.0*

ISC 21 13:35:43.0±1.4**, 30°.99S**±0°.09×**177°.9W**±0°.3**, h35^{km}, n6, σ1^{s}.82**/9**, mb3.7**/3**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.74	359	Pn	Pn	13 36 09.1	-1.5
	44nm,0.3s,baz=177,slow=16,SNR=1.9						
RAO				Sn	Sn	13 36 31.6	+0.1
	83nm,0.3s,baz=253,slow=21,SNR=2.4						
URZ	Urewera	8.34	208	Pn	Pn	13 37 42.0	+0.7
	0.4nm,0.3s,baz=54,slow=18,SNR=2.0						
URZ				Sn	Sn	13 39 11.1	-3.2
	0.3nm,0.3s,baz=144,slow=15,SNR=1.6						
	29nm,1.2s						
ASAR	Alice Springs	43.19	268	P	P	13 43 42.3	+1.6
	0.2nm,0.4s,baz=107,slow=7.5,SNR=7.3						
ASAR				PcP	PcP	13 45 29.7	-0.1
	0.3nm,0.9s,baz=121,slow=4.3,SNR=2.0						
	0.2nm,0.4s						
WRA	Warramunga Arr	44.23	273	P	P	13 43 50.5	+1.5
	0.6nm,0.4s,baz=112,slow=7.9,SNR=13						
	0.6nm,0.4s						
QSPA	South Pole Qui	59.12	180	P	P	13 45 40.8	+1.0
	0.6nm,0.9s,baz=9.5,slow=6.1,SNR=1.3						
	0.6nm,0.9s						
FINES	FINESS Array B	145.74	340	PKPbc	PKPab	13 55 16.9	-1.0
	1.4nm,0.8s,baz=20,slow=4.4,SNR=11						

IDC 21 13:36:42.2±3.6**, 1°.70S**×**100°.68E, h0^{km}, mb3.5**/4**, mbtmp3.5**/4**, Error ellipse: s-maj=176.7km s-min=26.9km az=60.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S2	Diego Garcia H	28.69	257	T	T	14 11 12.3	
	baz=80,slow=75,SNR=8.9						
H08S3	Diego Garcia H	28.69	257	T	T	14 11 11.3	
	baz=80,slow=75,SNR=11						
H08S1	Diego Carcia H	28.71	257	T	T	14 11 09.9	
	baz=80,slow=75,SNR=7.6						
ASAR	Alice Springs	38.88	127	P	P	13 44 10.1	+0.3
	0.2nm,0.8s,baz=310,slow=7.2,SNR=1.7						
	0.2nm,0.8s						
STKA	Stephens Creek	48.84	132	P	P	13 45 29.5	-0.3
	0.6nm,0.6s,baz=319,slow=9.9,SNR=1.1						
	0.6nm,0.6s						
SONM	Songino Array	49.59	5	P	P	13 45 35.3	-0.1
	0.5nm,0.5s,baz=182,slow=7.4,SNR=3.6						
	0.5nm,0.5s						
MKAR	Makanchi Array	50.93	344	P	P	13 45 45.6	+0.2
	0.4nm,0.6s,baz=166,slow=7.4,SNR=5.0						
	0.4nm,0.6s						
H04N2	CROZET ISLANDS	61.43	217	T	T	14 52 16.9	
	baz=59,slow=75,SNR=64						
H04N1	CROZET ISLANDS	61.45	217	T	T	14 52 17.2	
	baz=59,slow=75,SNR=86						
H04N3	CROZET ISLANDS	61.45	217	T	T	14 52 16.0	
	baz=59,slow=75,SNR=65						
H04S1	CROZET ISLANDS	61.72	216	T	T	14 52 36.0	
	baz=57,slow=76,SNR=7.9						
H04S3	CROZET ISLANDS	61.73	216	T	T	14 52 35.6	
	baz=57,slow=76,SNR=6.5						
H04S2	CROZET ISLANDS	61.74	216	T	T	14 52 36.9	
	baz=57,slow=76,SNR=4.7						
TXAR	Lajitas Array	144.06	38	PKP	PKPbc	13 56 18.7	0.0
	0.1nm,0.4s,baz=326,slow=3.7,SNR=2.8						

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*IDC **21** 13:59:12.2±0.8, 30°.71S×177°.51W, h0^{km}, mb3.9/7, mbtmp4.0/9, ML3.2/2, MS3.4/4, Error ellipse: s-maj=26.3km s-min=18.0km az=88.0*

ISC 21 13:59:17.8±0.7**, 30°.80S**±0°.07×**177°.8W**±0°.2**, h35^{km}, n22, σ1^{s}.66**/22**, mb3.9**/7**, MS3.5**/3**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.55	355	Pn	Pn	13 59 41.2	-1.7
	212nm,0.3s,baz=87,slow=9.1,SNR=26						
RAO				Sn	Sn	14 00 00.9	-0.8
	528nm,0.3s,baz=106,slow=23,SNR=12						
URZ	Urewera	8.55	208	Pn	Pn	14 01 13.6	-5.4
	0.7nm,0.3s,baz=272,slow=4.4,SNR=9.8						
URZ				Sn	Sn	14 02 48.9	-5.3
	2.2nm,0.3s,baz=125,slow=14,SNR=13						
RPZ	Rata Peaks	15.64	211	Pn	Pn	14 02 56.5	+1.0
	0.4nm,0.3s,baz=262,slow=22,SNR=0.9						
	6.8nm,0.8s						
DZM	Mont Dzumac	16.58	298	Pn	P	14 03 09.6	-0.3
	baz=127,slow=24,SNR=1.5						
DZM				LR	LR	14 08 38.9	
	comp=Z,154nm,18.3s,baz=144,slow=34						
	2.6nm,0.9s						
STKA	Stephens Creek	34.58	257	P	P	14 06 06.4	+3.1
	1.0nm,0.4s,baz=111,slow=8.6,SNR=5.0						
	1.0nm,0.4s						
ASAR	Alice Springs	43.28	267	P	P	14 07 17.7	+1.4
	1.1nm,0.6s,baz=103,slow=7.3,SNR=18						
ASAR				PcP	PcP	14 09 04.8	-0.1
	0.3nm,0.6s,baz=105,slow=4.0,SNR=2.0						
	1.1nm,0.6s						
WRA	Warramunga Arr	44.31	272	P	P	14 07 24.9	+0.4
	1.0nm,0.5s,baz=111,slow=8.1,SNR=7.8						
	1.0nm,0.5s						
FITZ	Fitzroy Crossi	52.55	270	LR	LR	14 29 16.6	
	comp=Z,98nm,21.8s,baz=254,slow=34						
QSPA	South Pole Qui	59.31	180	P	P	14 09 16.5	+0.5
	2.1nm,1.1s,baz=150,slow=3.8,SNR=2.7						
	2.1nm,1.1s						
SNAA	Sanae	77.75	178	P	P	14 11 11.7	+0.9
	0.9nm,0.9s,baz=320,slow=6.2,SNR=2.1						
	0.9nm,0.9s						
PLCA	Paso Flores	82.09	133	LR	LR	14 37 26.3	
	comp=Z,11nm,21.8s,baz=188,slow=28						
PETK	Petropavlovsk-	86.25	345	P	P	14 11 55.3	0.0
	0.9nm,0.9s,baz=154,slow=5.0,SNR=6.8						
	0.9nm,0.9s						
NVAR	Mina Array Bea	88.40	43	P	P	14 12 06.2	-0.2
	0.4nm,0.7s,baz=253,slow=4.4,SNR=2.4						
	0.4nm,0.7s						
TEIG	Tepich	99.67	72	LR	LR	14 47 03.8	
	comp=Z,16nm,20.2s,baz=300,slow=29						
ARCES	ARCESS Array B	139.02	348	PKP	PKPdf	14 18 39.8	0.0
	1.7nm,0.9s,baz=15,slow=2.4,SNR=1.2						
FINES	FINESS Array B	145.59	340	PKPbc	PKPdf	14 18 51.0	-0.6
	1.7nm,0.3s,baz=46,slow=4.3,SNR=32						
NB2	NORSAR Subarra	149.18	351	PKP	PKPdf	14 18 59.4	+1.8
	comp=Z,2.8nm,1.2s,baz=13,slow=4.3						
NOA	NORSAR Array B	149.18	351	PKPbc	PKPbc	14 19 00.7	-1.2
	comp=Z,1.0nm,1.0s,baz=14,slow=2.6,SNR=2.0						
HFS	Hagfors	149.67	349	PKPbc	PKPbc	14 19 02.5	-0.6
	comp=Z,0.9nm,0.6s,baz=24,slow=4.9,SNR=1.7						
AKASG	Malin Array Be	151.74	322	PKPbc	PKPbc	14 19 08.1	-0.1
	comp=Z,1.3nm,0.6s,baz=56,slow=2.3,SNR=5.1						
AKASG				PKPab	PKPab	14 19 16.1	-1.1
	comp=Z,0.3nm,0.3s,baz=53,slow=2.7,SNR=3.0						
MMAI	Mount Meron Ar	151.81	283	PKPbc	PKiKP	14 19 09.1	-0.3
	comp=Z,1.2nm,0.5s,baz=57,slow=5.3,SNR=2.0						
TORD	Torodi Ar. Bea	162.43	178	PKPab	PKPab	14 20 04.0	+0.1
	comp=Z,118nm,0.3s,baz=209,slow=1.5,SNR=1.3						

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*IDC **21** 14:00:46.9±1.2, 30°.78N×49°.68E, h0^{km}, mb3.7/15, mbtmp3.7/19, ML3.5/4, Error ellipse: s-maj=26.1km s-min=15.6km az=170.0*

*TEH **21** 14:00:52.4, 31°.02N×49°.86E, h16^{km}±25^{km}*

*THR **21** 14:00:52.3±0.0, 31°.12N×49°.85E, h10^{km}±8^{km}, ML4.0*

ISC 21 14:00:51.3±0.6**, 30°.68N**±0°.07×**49°.68E**±0°.04**, h35^{km}, n70, σ1^{s}.63**/66**, mb3.6**/14**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABEH	Behbahan	0.50	99	Pg	Pn	14 01 02.7	+0.7
AHWZ	Ahwaz	1.10	306	Pg	Pn	14 01 12.9	+2.7
AHWZ				Sg	Sn	14 01 29.3	+5.1
KLNJ	Kolanjah	1.68	78	Pg	Pn	14 01 20.1	+1.6
KLNJ	Kolanjah	1.68	78	ePgA		14 01 20.0	
KLNJ				IAML		14 01 54.0	
	comp=Z,480nm,1.0s						
ZNGN	Zangian	1.75	35	Pg	Pn	14 01 18.5	-1.1
JHBN	Jahan bin	1.76	28	Pg	Pn	14 01 18.2	-1.5
IBRJ	Brojen	1.83	47	Pg	Pn	14 01 19.8	-0.7
GTMR	Gotvand	1.85	345	ePgA		14 01 20.0	
GTMR				IAML		14 01 49.7	
	comp=Z,2μm,1.0s						
KAZ2	Kazeron-Fars-I	2.02	121	Pn	Pn	14 01 29.3	+6.3
IPIR	Pirpir	2.25	27	Pn	Pn	14 01 26.8	+0.4
IRAM	Ramesheh	2.58	63	Pn	Pn	14 01 32.5	+1.8
IGAR	Gharneh	2.65	49	Pn	Pn	14 01 32.6	+0.8
DSBU	Dashti - Bushe	2.69	149	Pn	Pn	14 01 39.5	+7.4
KHMZ	Khomeyn	3.06	4	ePn	Pn	14 01 38.2	+0.7
IZEF	Zefreh	3.16	45	Pn	Pn	14 01 39.9	+1.1
IKFM	Kafar-mosalman	3.24	332	Pn	Pn	14 01 40.9	+1.3
IDOB	Doab	3.35	338	Pn	Pn	14 01 42.6	+1.2
QAMS	Qamsar	3.38	25	Pn	Pn	14 01 42.0	+0.2
HSAM	Samen	3.64	346	Pn	Pn	14 01 45.9	+0.5
ASAO	Ashtian	3.87	4	ePn	Pn	14 01 50.0	+1.4
KRSH	Karshahi	3.89	32	Pn	Pn	14 01 49.1	+0.3
GHVR	GHOM	4.03	19	ePn	Pn	14 01 51.6	+1.0
IBZA	Bozab	4.08	338	Pn	Pn	14 01 52.3	+0.8
HAGD	Aghdareh	4.16	354	Pn	Pn	14 01 53.1	+0.5
ILBA	Ilam Banvizeh	4.16	316	ePn	Pn	14 01 54.3	+1.9
ISFB	Sefidab	4.25	30	Pn	Pn	14 01 53.5	-0.2
ANAR	Anarak	4.26	53	Pn	Pn	14 01 54.6	+0.8
IMEH	Mehriz	4.29	79	Pn	Pn	14 01 56.5	+2.1
IQOM	Qom	4.32	15	Pn	Pn	14 01 54.3	-0.4
ICHK	Chekchek	4.33	68	Pn	Pn	14 01 56.2	+1.3
IGHG	Ghaleghazi	4.49	325	Pn	Pn	14 01 59.0	+1.9
SNQR	Sonqor, Kerman	4.51	338	Pn	Pn	14 01 58.2	+0.8
YZKH	Yazd	4.53	67	ePnA		14 01 59.8	
YZKH				IAML		14 02 54.7	
	comp=Z,55nm,1.0s						
IVRN	Varamin	4.64	21	Pn	Pn	14 01 59.0	+0.1
ILIN	Lien	4.81	332	Pn	Pn	14 02 02.4	+0.9
SNGE	Sanandaj	4.82	337	ePnA		14 02 02.1	
SNGE				IAML		14 03 19.7	
	comp=Z,57nm,1.0s						
QABG	Abgarm-Qazvin	5.02	359	Pn	Pn	14 02 04.5	+0.2
IDMV	Damavand	5.27	21	Pn	Pn	14 02 07.4	-0.4
DAMV	Damavand	5.30	21	ePn	Pn	14 02 07.7	-0.5
DAMV				IAML		14 03 59.5	
	comp=Z,53nm,1.0s						
CHTH	Charan	5.36	13	ePn	Pn	14 02 08.6	-0.4
CHTH				IAML		14 03 39.5	
	comp=Z,41nm,1.0s						
ILAS	Lasjerd	5.44	30	Pn	Pn	14 02 10.2	0.0
KLST	Kelardasht - M	5.94	11	Pn	Pn	14 02 17.0	0.0
MZPU	Pul - Mazandar	5.96	15	Pn	Pn	14 02 17.2	-0.1
IPRN	Peran	5.98	21	Pn	Pn	14 02 18.0	+0.5
TPRV	Parvadeh(Tabas	6.41	67	Pn	Pn	14 02 24.8	+1.5
SRSL	SARDASHT	6.56	328	ePn	Pn	14 02 26.5	+1.0
SRSL				IAML		14 02 41.4	
	comp=Z,40nm,1.0s						
TABS	Tabas	6.97	63	ePn	Pn	14 02 31.1	+0.1
SHRO	Shahrood	7.49	43	ePnA		14 02 39.2	
SHRO				IAML		14 02 45.3	
	comp=Z,16nm,1.0s						

BJRD	**Bojnurd**	**9.49**	**40**	*e*Pn	**Pn**	**14 03 07.8**	**+2.2**
WSAR	**Wadi Sarin**	**10.89**	**131**	Pn	**Pn**	**14 03 26.3**	**+1.6**
	baz=323,slow=20,SNR=5.6						
WSAR				Sn	**Sn**	**14 05 22.9**	**-2.5**
	baz=307,slow=20,SNR=1.9						
ASF	**Jabal al Asfar**	**11.02**	**281**	Pn	**Pn**	**14 03 25.8**	**-0.8**
	comp=Z,1.3nm,0.3s,baz=97,slow=4.4,SNR=9.9						
ASF				Sn	**Sn**	**14 05 20.3**	**-8.3**
	comp=Z,0.4nm,0.3s,baz=144,slow=6.0,SNR=3.2						
ASF				Lg	Lg	14 06 37.0	
	comp=Z,0.3nm,0.3s,baz=113,slow=23,SNR=1.6						
	comp=Z,2.4nm,0.3s						
MMAI	**Mount Meron Ar**	**12.36**	**285**	Pn	**Pn**	**14 03 45.4**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=104,slow=18,SNR=1.5						
	comp=Z,0.2nm,0.3s						
EIL	**Elat**	**12.78**	**269**	Pn	**Pn**	**14 03 49.0**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=91,slow=21,SNR=1.2						
	comp=Z,2.0nm,0.7s						
BRTR	**Keskin Array B**	**15.90**	**309**	Pn	**Pn**	**14 04 32.9**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=142,slow=14,SNR=4.9						
	comp=Z,0.2nm,0.3s						
AKTO	**Aktyubinsk**	**20.70**	**15**	P	**P**	**14 05 28.8**	**+0.4**
	comp=Z,1.8nm,0.6s,baz=190,slow=7.9,SNR=5.5						
	comp=Z,1.8nm,0.6s						
IDI	**Anoyia**	**21.28**	**289**	P	**P**	**14 05 36.1**	**+1.3**
	comp=Z,1.7nm,0.6s,baz=84,slow=3.1,SNR=6.8						
	comp=Z,1.7nm,0.6s						
AKASG	**Malin Array Be**	**25.16**	**328**	P	**P**	**14 06 13.3**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=138,slow=9.5,SNR=2.1						
	comp=Z,0.4nm,0.3s						
BVAR	**Borovoye Array**	**26.95**	**28**	P	**P**	**14 06 29.6**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=223,slow=8.1,SNR=4.7						
	comp=Z,0.7nm,0.6s						
MKAR	**Makanchi Array**	**29.83**	**48**	P	**P**	**14 06 56.1**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=243,slow=8.0,SNR=4.7						
	comp=Z,0.4nm,0.5s						
FINES	**FINESS Array B**	**34.45**	**340**	P	**P**	**14 07 34.7**	**-0.7**
	comp=Z,1.8nm,0.7s,baz=140,slow=9.9,SNR=22						
	comp=Z,1.8nm,0.7s						
HFS	**Hagfors**	**37.96**	**331**	P	**P**	**14 08 04.7**	**-0.7**
	comp=Z,1.1nm,0.5s,baz=120,slow=8.8,SNR=7.0						
	comp=Z,1.1nm,0.5s						
NOA	**NORSAR Array B**	**39.48**	**332**	P	**P**	**14 08 18.0**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=121,slow=7.8,SNR=1.3						
	comp=Z,0.4nm,0.6s						
ARCES	**ARCESS Array B**	**41.26**	**347**	P	**P**	**14 08 32.4**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=143,slow=9.3,SNR=1.2						
	comp=Z,1.0nm,0.8s						
EKA	**Eskdalemuir Ar**	**44.44**	**319**	P	**P**	**14 08 59.0**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=86,slow=7.3,SNR=2.6						
	comp=Z,0.5nm,0.6s						
SONM	**Songino Array**	**46.08**	**51**	P	**P**	**14 09 10.4**	**-1.6**
	comp=Z,0.5nm,0.5s,baz=260,slow=8.6,SNR=1.3						
	comp=Z,0.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**47.43**	**259**	P	**P**	**14 09 23.8**	**+1.0**
	comp=Z,169nm,0.5s,baz=57,slow=8.6,SNR=1.5						
SPITS	**Spitsbergen Ar**	**49.82**	**351**	P	**P**	**14 09 39.7**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=106,slow=9.1,SNR=4.7						
	comp=Z,0.5nm,0.4s						
DBIC	**Dimbokro**	**56.28**	**257**	P	**P**	**14 10 28.8**	**0.0**
	comp=Z,2.2nm,0.7s,baz=356,slow=3.9,SNR=1.0						
	comp=Z,2.2nm,0.7s						
SEY	**Seymchan**	**68.61**	**29**	P	**P**	**14 11 51.1**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=347,slow=3.7,SNR=5.1						
	comp=Z,0.8nm,0.6s						
ILAR	**Eielson Array**	**83.99**	**7**	P	**P**	**14 13 17.6**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=308,slow=1.5,SNR=5.3						
	comp=Z,0.3nm,0.6s						

SCB ***21*** *14:16:32.8±1.0, 20°.73S×67°.46W, h179^{km}±12^{km}, ML3.6/2, MW3.2, Error ellipse: s-maj=5.1km s-min=3.2km az=0.0*

ISC 21 14:16:32.0±2.1**, 20°.74S**±0°.05×**67°.48W**±0°.05**, h193**^{km}±18^{km}**, n26, σ0^{s}.86**/37**, 3C, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**1.68**	**291**	⇑*e*P	**Pn**	**14 17 07.8**	**+0.6**
PB08				*e*S	**Sn**	**14 17 35.7**	**+1.3**
PB08				IAML		14 17 37.7	
	comp=E,212nm,0.1s						
PB08	**IPOC Station P**	**1.68**	**291**	Pg	**Pn**	**14 17 08.0**	**+0.8**
MOCB	**Mochara**	**1.79**	**107**	Pg	**Pn**	**14 17 08.2**	**-0.2**
MOCB				Sg	**Sn**	**14 17 35.5**	**-1.0**
MOCB				IAML		14 17 40.0	
	comp=E,321nm,0.6s						
PB01	**IPOC Station P**	**1.90**	**261**	*e*P	**Pn**	**14 17 09.3**	**+0.2**
PB01				*e*S	**Sn**	**14 17 37.6**	**-0.2**
PB01				IAML		14 17 39.4	
	comp=N,311nm,0.2s						
PB01	**IPOC Station P**	**1.90**	**261**	Pg	**Pn**	**14 17 09.4**	**+0.3**
GO01	**Chusmiza**	**1.93**	**303**	⇑*e*P	**Pn**	**14 17 10.0**	**+0.2**
GO01	**Chusmiza**	**1.93**	**303**	Pg	**Pn**	**14 17 10.2**	**+0.4**
PB09	**IPOC Station P**	**1.95**	**237**	*e*P	**Pn**	**14 17 10.8**	**+1.1**
PB09				*e*S	**Sn**	**14 17 40.1**	**+1.1**
PB09	**IPOC Station P**	**1.95**	**237**	Pg	**Pn**	**14 17 10.9**	**+1.2**
SOEO	**Opoqueri**	**2.20**	**350**	Pg	**Pn**	**14 17 13.2**	**+0.5**
PB11	**IPOC Station P**	**2.26**	**295**	⇑*e*P	**Pn**	**14 17 12.8**	**-0.2**
PB11				*e*S	**Sn**	**14 17 43.8**	**-1.0**
PB11	**IPOC Station P**	**2.26**	**295**	Pg	**Pn**	**14 17 12.9**	**-0.2**
PB11				Sg	**Sn**	**14 17 44.0**	**-0.9**
PB11				IAML		14 17 47.2	
	comp=N,258nm,0.7s						
HMBC	**Humberstone**	**2.30**	**281**	*e*P	**Pn**	**14 17 12.9**	**-0.5**
HMBC				*e*S	**Sn**	**14 17 44.9**	**-0.7**
YJA	**Yavi**	**2.32**	**128**	Pg	**Pn**	**14 17 14.2**	**+0.3**
PB03	**IPOC Station P**	**2.49**	**238**	*e*P	**Pn**	**14 17 15.9**	**+0.5**
PB03				IAML		14 17 49.7	
	comp=E,173nm,0.3s						
PATCX	**Punta Patache**	**2.50**	**268**	*e*P	**Pn**	**14 17 15.5**	**-0.1**
PATCX				*e*S	**Sn**	**14 17 48.4**	**-1.1**
TA01	**Diego Aracena**	**2.54**	**273**	*e*P	**Pn**	**14 17 15.5**	**-0.4**
TA01				*e*S	**Sn**	**14 17 47.9**	**-2.1**
TA01				IAML		14 17 48.7	
	comp=E,173nm,0.2s						
PB06	**IPOC Station P**	**2.76**	**224**	*e*P	**Pn**	**14 17 19.6**	**+1.0**
PB06				*e*S	**Sn**	**14 17 55.2**	**+0.2**
PB06				IAML		14 17 57.1	
	comp=E,75nm,0.2s						
PB16	**IPOC Station P**	**3.06**	**321**	*e*P	**Pn**	**14 17 23.5**	**+0.8**
PB16				IAML		14 18 05.2	
	comp=E,41nm,0.5s						
PB16	**IPOC Station P**	**3.06**	**321**	Pg	**Pn**	**14 17 23.5**	**+0.8**
PB05	**IPOC Station P**	**3.29**	**230**	*e*P	**Pn**	**14 17 25.3**	**+0.4**
PB05				*e*S	**Sn**	**14 18 04.8**	**-1.5**
BBOJ	**La Paz, Jacaqu**	**3.81**	**350**	Pg	**Pn**	**14 17 32.6**	**+0.9**
SOEJ	**Jacaque**	**3.81**	**350**	Pg	**Pn**	**14 17 32.4**	**+0.7**
BBOE	**La Paz, Chanca**	**3.94**	**353**	Pg	**Pn**	**14 17 34.2**	**+0.8**
BBOD	**La Paz, Gloria**	**4.22**	**345**	Pg	**Pn**	**14 17 37.8**	**+0.9**
BBOB	**La Paz, Bander**	**4.62**	**352**	Pg	**Pn**	**14 17 42.0**	**+0.1**

IDC ***21*** *14:16:49.6±1.8, 55°.15N×164°.41E, h0^{km}, mb3.4/5, mbtmp3.3/6, ML2.4/1, MS2.6/3, Error ellipse: s-maj=55.8km s-min=22.7km az=165.0*

KRSC ***21*** *14:16:50.8±1.4, 55°.19N×164°.43E, h48^{km}±28^{km}, Ml3.9*

ISC 21 14:16:51.5±2.0**, 55°.26N**±0°.05×**164°.48E**±0°.08**, h13**^{km}±16^{km}**, n51, σ1^{s}.68**/61**, mb3.5**/5**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	**Bering**	**0.86**	**93**	*e*P	**Pg**	**14 17 07.5**	**-0.5**
BKI				*e*S	**Sg**	**14 17 19.0**	**-0.3**
KBTR	**Krutoberegovo**	**1.34**	**316**	*e*P	**Pn**	**14 17 13.9**	**-1.9**
KBTR				*e*S	**Sn**	**14 17 29.3**	**-4.1**
KBG	**Krutoberegovo**	**1.42**	**316**	*e*S	**Sn**	**14 17 32.1**	**-3.2**
MKZ	**Mys Kozlova**	**1.73**	**247**	*e*P	**Pn**	**14 17 20.3**	**-0.9**
MKZ				*e*S	**Sn**	**14 17 40.6**	**-2.6**
SMKR	**Semkarok**	**2.15**	**309**	*e*P	**Pn**	**14 17 27.8**	**+0.8**
SMKR				*e*S	**Sn**	**14 17 55.0**	**+1.4**
BZGR	**Bezymyannyi-Gr**	**2.25**	**289**	*e*P	**Pn**	**14 17 29.1**	**+0.6**
TUMD	**Tumrok D**	**2.34**	**270**	*e*P	**Pn**	**14 17 29.5**	**0.0**
TUMD				*e*S	**Sn**	**14 17 57.6**	**-0.4**
BZMR	**Bezymyannaya**	**2.36**	**288**	*e*P	**Pn**	**14 17 30.9**	**+0.9**
BZWR	**Bezymyannyi-We**	**2.37**	**289**	*e*P	**Pn**	**14 17 31.3**	**+1.2**
KLY	**Klyuchi**	**2.41**	**298**	*e*P	**Pn**	**14 17 30.4**	**0.0**
KRSR	**Krestovskiy**	**2.41**	**295**	*e*P	**Pn**	**14 17 31.2**	**+0.5**
KIRR	**Kirishev**	**2.45**	**288**	*e*P	**Pn**	**14 17 32.4**	**+1.2**
KMNR	**Kamenistaya**	**2.46**	**283**	*e*P	**Pn**	**14 17 32.5**	**+1.1**
KPT	**Kopyto**	**2.52**	**288**	*e*P	**Pn**	**14 17 33.5**	**+1.4**
KOZ	**Kozyrevsk**	**2.73**	**289**	*e*P	**Pn**	**14 17 36.5**	**+1.6**
KII	**Karymskiy**	**3.17**	**249**	*e*P	**Pn**	**14 17 41.9**	**+0.9**
ESO	**Esso**	**3.35**	**284**	*e*P	**Pn**	**14 17 44.8**	**+1.4**
SPN	**Mys Shipunski**	**3.40**	**232**	*e*P	**Pn**	**14 17 43.9**	**-0.2**
SPN				*e*S	**Sn**	**14 18 19.7**	**-4.4**
NLC	**Nalytchevo**	**3.67**	**237**	*e*S	**Sn**	**14 18 28.7**	**-2.0**
SDLR	**Sedlovina**	**3.83**	**241**	*e*P	**Pn**	**14 17 51.1**	**+0.9**
SDLR				*e*S	**Sn**	**14 18 33.1**	**-2.0**
SMAR	**Somma**	**3.88**	**241**	*e*P	**Pn**	**14 17 51.8**	**+0.9**
SMAR				*e*S	**Sn**	**14 18 33.9**	**-2.5**
KRER	**Koryakskii**	**3.89**	**242**	*e*P	**Pn**	**14 17 52.1**	**+1.1**
KRER				*e*S	**Sn**	**14 18 35.0**	**-1.6**
UGLR	**Uglovaya**	**3.90**	**241**	*e*P	**Pn**	**14 17 52.2**	**+1.1**
UGLR				*e*S	**Sn**	**14 18 34.9**	**-1.9**
KRX	**Arik**	**3.91**	**243**	*e*P	**Pn**	**14 17 52.3**	**+1.0**
KRX				*e*S	**Sn**	**14 18 36.0**	**-1.0**
AVH	**Avacha**	**3.91**	**242**	*e*P	**Pn**	**14 17 52.5**	**+1.3**
AVH				*e*S	**Sn**	**14 18 36.5**	**-0.5**
KOK	**Koryaka**	**3.95**	**242**	*e*P	**Pn**	**14 17 52.8**	**+1.0**
KOK				*e*S	**Sn**	**14 18 36.5**	**-1.5**
DALK	**Dalny**	**4.04**	**239**	*e*P	**Pn**	**14 17 53.5**	**+0.6**
DALK				*e*S	**Sn**	**14 18 37.5**	**-2.4**
OSSR	**Ossora**	**4.08**	**350**	*e*P	**Pn**	**14 17 52.9**	**-0.5**
INSR	**Institute**	**4.09**	**240**	*e*S	**Sn**	**14 18 39.0**	**-2.3**
PET	**Petropavlovsk**	**4.09**	**239**	*e*P	**Pn**	**14 17 54.4**	**+0.8**
PET				*e*S	**Sn**	**14 18 38.3**	**-3.0**
KRMR	**Karymshinskiy**	**4.46**	**240**	*e*S	**Sn**	**14 18 47.6**	**-2.8**
RUS	**Russkaya**	**4.53**	**234**	*e*P	**Pn**	**14 17 59.8**	**+0.3**
PETK	**Petropavlovsk-**	**4.53**	**244**	Pn	**Pn**	**14 17 59.6**	**0.0**
	0.9nm,0.3s,baz=66,slow=18,SNR=26						
PETK				Sn	**Sn**	**14 18 50.6**	**-1.4**
	0.3nm,0.3s,baz=67,slow=20,SNR=4.6						
	2.3nm,0.5s						
MTVR	**Mutnovka**	**4.65**	**236**	*e*P	**Pn**	**14 18 02.4**	**+1.0**
MTVR				*e*S	**Sn**	**14 18 52.6**	**-2.6**
GRL	**Gorelyy**	**4.66**	**237**	*e*P	**Pn**	**14 18 03.1**	**+1.6**
GRL				*e*S	**Sn**	**14 18 55.3**	**-0.1**
ASAK	**Asacha**	**4.84**	**236**	*e*P	**Pn**	**14 18 05.6**	**+1.5**
ASAK				*e*S	**Sn**	**14 18 58.9**	**-1.1**
APC	**Apacha**	**4.90**	**245**	*e*P	**Pn**	**14 18 05.8**	**+1.1**
SHEM	**Shemya Is, Ala**	**6.21**	**110**	LR	LR	14 20 53.5	
	comp=Z,64nm,19.3s,baz=306,slow=39						
MA2	**Magadan**	**8.57**	**306**	LR	LR	14 22 15.1	
	comp=Z,30nm,19.2s,baz=12,slow=38						
SEY	**Seymchan**	**9.88**	**326**	LR	LR	14 22 50.4	
	comp=Z,37nm,20.2s,baz=9.5,slow=36						
ILAR	**Eielson Array**	**25.45**	**48**	P	**P**	**14 22 20.7**	**+2.0**
	0.2nm,0.8s,baz=271,slow=9.5,SNR=2.6						
	0.2nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**35.52**	**176**	T	T	15 01 44.0	
	baz=358,slow=76,SNR=119						
H11N3	**WAKE ISLAND Hy**	**35.53**	**176**	T	T	15 01 44.9	
	baz=358,slow=76,SNR=96						
H11N1	**WAKE ISLAND Hy**	**35.53**	**176**	T	T	15 01 45.3	
	baz=358,slow=76,SNR=118						
H11S1	**WAKE ISLAND Hy**	**36.72**	**176**	T	T	15 03 17.1	
	baz=358,slow=74						
H11S3	**WAKE ISLAND Hy**	**36.74**	**176**	T	T	15 03 17.1	
	baz=358						
H11S2	**WAKE ISLAND Hy**	**36.74**	**176**	T	T	15 03 16.3	
	baz=358,slow=74						
KURBB	**Kurchatov Arra**	**48.86**	**302**	P	**P**	**14 25 35.3**	**-1.0**
	0.5nm,0.2s,baz=59,slow=7.1,SNR=1.5						
	0.5nm,0.2s						
MKAR	**Makanchi Array**	**49.52**	**296**	P	**P**	**14 25 43.6**	**+2.2**
	0.1nm,0.3s,baz=66,slow=8.1,SNR=1.7						
	0.1nm,0.3s						
BVAR	**Borovoye Array**	**51.04**	**309**	P	**P**	**14 25 52.1**	**-0.7**
	0.4nm,0.6s,baz=59,slow=5.6,SNR=1.4						
	0.4nm,0.6s						
TXAR	**Lajitas Array**	**67.45**	**71**	P	**P**	**14 27 47.1**	**+0.3**
	0.2nm,0.5s,baz=325,slow=7.0,SNR=3.0						
	0.2nm,0.5s						

SNET ***21*** *14:51:00.3±0.9, 12°.96N×87°.44W, h169^{km}±7^{km}, ML3.5*

CATAC ***21*** *14:51:01.7±0.5, 13°N±4°×8°8W±°, h151^{km}±3^{km}, M3.6/19, MLv3.6/19, Error ellipse: s-maj=10.5km s-min=4.5km az=40.5, confirmed*

IDC ***21*** *14:51:02.9±1.6, 13°.03N×87°.14W, h175^{km}±21^{km}, mb3.3/7, mbtmp3.8/8, Error ellipse: s-maj=43.4km s-min=16.9km az=51.0*

NEIC ***21*** *14:51:03.5±1.6, 12°.96N±0°.07×87°.49W±0°.10, h149^{km}±5^{km}, mb4.3/34, Error ellipse: s-maj=15.4km s-min=6.7km az=59.0*

GCG ***21*** *14:51:04.4±0.3, 13°.09N×87°.71W, h160^{km}±101^{km}, MD4.2*

ISC 21 14:51:02.3±0.6**, 12°.95N**±0°.06×**87°.52W**±0°.05**, h157**^{km}±5^{km}**, n104, σ1^{s}.13**/120**, mb4.2**/22**, 11C-3D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
POTN	**Potosi Cosigui**	**0.05**	**14**	⇑P	**Pn**	**14 51 23.2**	**0.0**
POTN				S	**Sn**	**14 51 38.6**	**-0.7**
CNCH	**Conchagua**	**0.45**	**316**	*e*P	**Pn**	**14 51 24.3**	**-0.1**
CNCH				*e*P		14 51 28.7	
CNCH				*e*S	**Sn**	**14 51 43.6**	**+2.4**
CNCH	**Conchagua**	**0.45**	**316**	S	**Sn**	**14 51 40.1**	**-1.1**
CNCH	**Conchagua**	**0.45**	**316**	⇑P	**Pn**	**14 51 24.0**	**-0.3**
LCND	**La Caada**	**0.51**	**314**	*e*P	**Pn**	**14 51 24.3**	**-0.2**
LCND				IAML		14 51 51.4	
	comp=Z,552nm,0.2s						
LCND	**La Caada**	**0.51**	**314**	⇑P	**Pn**	**14 51 24.2**	**-0.2**
CRIN	**San Cristobal**	**0.52**	**119**		**Pn**	**14 51 24.9**	**+0.3**
CRIN	**San Cristobal**	**0.52**	**119**	S	**Sn**	**14 51 42.4**	**+0.8**
CRIN	**San Cristobal**	**0.52**	**119**	⇑P	**Pn**	**14 51 24.9**	**+0.3**
PKGN	**Cerro Pekin**	**0.60**	**118**	⇑P	**Pn**	**14 51 24.9**	**0.0**
PKGN				S	**Sn**	**14 51 43.3**	**+1.1**
POLN	**Al Sur del Vol**	**0.75**	**114**	⇑P	**Pn**	**14 51 25.8**	**-0.2**
POLN				S	**Sn**	**14 51 44.5**	**+0.6**
HERN	**Volcan Telica**	**0.75**	**117**		**Pn**	**14 51 25.7**	**-0.3**
HERN				Sn	**Sn**	**14 51 44.1**	**+0.1**
ALEN	**Leon**	**0.80**	**128**	P	**Pn**	**14 51 25.6**	**-0.7**
ALEN	**Leon**	**0.80**	**128**	S	**Sn**	**14 51 44.5**	**0.0**
PLRN	**Geotermica Pol**	**0.82**	**116**	P	**Pn**	**14 51 25.9**	**-0.5**
PLRN				S	**Sn**	**14 51 46.3**	**+1.5**
PACN	**Al O del Volca**	**0.84**	**122**	P	**Pn**	**14 51 26.8**	**+0.3**
PACN				S	**Sn**	**14 51 46.1**	**+1.1**
BLLM	**Bellamira**	**0.85**	**305**	*e*P	**Pn**	**14 51 25.9**	**-0.8**
CNGN	**Cerro Negro**	**0.92**	**119**		**Pn**	**14 51 26.9**	**-0.2**
CNGN				Sn	**Sn**	**14 51 46.0**	**-0.1**
CNGN	**Cerro Negro**	**0.92**	**119**	⇑P	**Pn**	**14 51 27.0**	**-0.2**
CNGN	**Cerro Negro**	**0.92**	**119**	S	**Sn**	**14 51 46.8**	**+0.6**
CNGA	**Al SSO del Vol**	**0.92**	**120**	⇑P	**Pn**	**14 51 27.0**	**-0.1**
PACA	**Pacayal**	**0.94**	**303**	P	**Pn**	**14 51 25.6**	**-1.8**
PACA	**Pacayal**	**0.94**	**303**	S	**Sn**	**14 51 44.3**	**-2.3**
CAHU	**Cacacuatique**	**1.06**	**320**	*e*P	**Pn**	**14 51 28.7**	**+0.2**
MOMN	**Momotombo**	**1.10**	**119**	⇑P	**Pn**	**14 51 28.5**	**-0.1**
MOMN				S	**Sn**	**14 51 50.3**	**+1.6**
TECA	**Tecapa**	**1.10**	**299**	*e*P	**Pn**	**14 51 29.0**	**+0.2**
TECA				*e*P		14 51 29.4	
TGUH	**Tegucigalpa,Un**	**1.12**	**12**		**Pn**	**14 51 29.3**	**+0.3**
TGUH				Sn	**Sn**	**14 51 49.5**	**0.0**
TGUH	**Tegucigalpa,Un**	**1.12**	**12**	⇓P	**Pn**	**14 51 29.3**	**+0.3**
TGUH				S	**Sn**	**14 51 49.4**	**0.0**
MOM2	**El Cardon**	**1.13**	**117**	⇑P	**Pn**	**14 51 29.0**	**+0.2**
MOM2				S	**Sn**	**14 51 49.9**	**+0.7**
BC86	**Nagarote**	**1.16**	**126**	S	**Sn**	**14 51 51.2**	**+1.6**
COPN	**Copaltepe**	**1.19**	**130**	⇑P	**Pn**	**14 51 29.3**	**-0.1**
AMTN	**Mateare**	**1.28**	**124**	S	**Sn**	**14 51 53.5**	**+1.9**
APQ3	**Volcan Apoyequ**	**1.31**	**121**	P	**Pn**	**14 51 30.7**	**+0.1**
APQ3				S	**Sn**	**14 51 52.0**	**-0.1**
SAPS	**Ciudad Sandino**	**1.34**	**125**	P	**Pn**	**14 51 31.0**	**+0.2**
SAPS	**Ciudad Sandino**	**1.34**	**125**	S	**Sn**	**14 51 53.7**	**+1.1**
MGAN	**Managua**	**1.48**	**123**	S	**Sn**	**14 51 56.0**	**+1.0**
MGAN				S		14 51 56.3	
UNAN	**Cigeo UNAN**	**1.48**	**124**	P	**Pn**	**14 51 32.5**	**+0.3**
UNAN				S	**Sn**	**14 51 55.9**	**+0.8**
MAFN	**Magfor**	**1.51**	**124**	S	**Sn**	**14 51 57.0**	**+1.2**
WILN	**Americas 2**	**1.52**	**121**	P	**Pn**	**14 51 32.8**	**+0.2**
WILN				S	**Sn**	**14 51 57.6**	**+1.8**
MATN	**Matagalpa**	**1.55**	**91**	⇓P	**Pn**	**14 51 32.4**	**-0.7**
MATN	**Matagalpa**	**1.55**	**91**	S	**Sn**	**14 51 56.0**	**-0.6**
PAVA	**Las Pavas**	**1.57**	**299**	IAML		14 52 09.1	
	comp=Z,304nm,0.4s						
LFRS	**El Faro**	**1.64**	**294**	*e*P	**Pn**	**14 51 34.7**	**+0.6**
BOAB	**BOACO BROADBAN**	**1.88**	**105**		**Pn**	**14 51 37.2**	**+0.7**
BOQS	**Boqueron**	**1.88**	**295**	*e*S	**Sn**	**14 52 05.9**	**+2.7**
JAYA	**Jayaque - finc**	**2.00**	**291**	*e*P	**Pn**	**14 51 38.3**	**+0.2**
JAYA	**Jayaque - finc**	**2.00**	**291**	*i* P	**Pn**	**14 51 38.1**	**0.0**
JAYA				*i* S	**Sn**	**14 52 04.4**	**-1.2**
CEVE	**Cerro Verde**	**2.23**	**293**	*e*P	**Pn**	**14 51 41.4**	**+0.7**
SBLS	**San Blas**	**2.23**	**294**	*e*P	**Pn**	**14 51 41.2**	**+0.4**
MTO3	**Montecristo**	**2.30**	**309**	*i* P	**Pn**	**14 51 42.3**	**+0.7**
MTO3	**Montecristo**	**2.30**	**309**	*i* P	**Pn**	**14 51 42.2**	**+0.7**
ESQI	**Esquipulas**	**2.39**	**312**		**Pn**	**14 51 44.0**	**+1.5**
NUBE	**Las Nubes**	**2.40**	**293**	*e*P	**Pn**	**14 51 43.0**	**+0.4**
NUBE	**Las Nubes**	**2.40**	**293**	*i* P	**Pn**	**14 51 43.2**	**+0.5**
ACON	**Acoyapa**	**2.49**	**113**		**Pn**	**14 51 44.7**	**+1.0**
SIUN	**Universidad Ur**	**2.78**	**74**	⇓P	**Pn**	**14 51 47.5**	**+0.3**
ESPN	**Las Esperanzas**	**3.23**	**103**		**Pn**	**14 51 54.0**	**+1.1**
JTS	**Las Juntas de**	**3.65**	**136**		**Pn**	**14 51 59.3**	**+1.0**
JTS	**Las Juntas de**	**3.65**	**136**	P	**Pn**	**14 51 59.0**	**+0.7**
	comp=Z,11nm,0.3s,baz=296,slow=23,SNR=11						
JTS				S	**Sn**	**14 52 39.2**	**-2.6**
	comp=Z,53nm,0.4s,baz=263,slow=21,SNR=14						
LCR2	**La Lucha 2**	**4.70**	**132**	Pn	**Pn**	**14 52 13.2**	**+1.1**
GOGA	**Godfrey**	**20.70**	**10**	P	**P**	**14 55 32.4**	**+2.2**
GOGA				IAmb	IAmb	14 56 13.3	
	comp=Z,15nm,1.4s						
Y49A	**Blount Mountai**	**20.84**	**3**	P	**P**	**14 55 33.0**	**+1.3**
Y49A				IAmb	IAmb	14 56 03.3	
	comp=Z,9.8nm,1.2s						
WHTX	**Lake Whitney,**	**21.03**	**336**	P	**P**	**14 55 35.2**	**+1.4**
WHTX				IAmb	IAmb	14 56 16.4	
	comp=Z,11nm,0.7s						
BRDY	**Brady**	**21.09**	**332**	P	**P**	**14 55 35.1**	**+0.6**
PLPT	**Palo Pinto**	**22.10**	**335**	P	**P**	**14 55 46.8**	**+1.7**
PLPT				IAmb	IAmb	14 55 47.4	
	comp=Z,10nm,0.8s						
TXAR	**Lajitas Array**	**22.15**	**320**	P	**P**	**14 55 45.4**	**-0.2**
	comp=Z,1.2nm,0.5s,baz=142,slow=9.0,SNR=15						
	comp=Z,1.2nm,0.5s						
TX31	**Lajitas Ar. Si**	**22.15**	**320**	P	**P**	**14 55 46.1**	**+0.5**
BG3	**Lake Jocassee**	**22.33**	**10**	P	**P**	**14 55 48.8**	**+1.5**
BG3				IAmb	IAmb	14 55 49.5	
	comp=Z,7.1nm,0.6s						
MNHN	**Monahans**	**23.06**	**325**	P	**P**	**14 55 55.3**	**+1.2**
MNHN				IAmb	IAmb	14 55 55.8	
	comp=Z,6.1nm,0.7s						
W57A	**Gilead**	**23.13**	**16**	P	**P**	**14 55 55.7**	**+1.1**
W57A				IAmb	IAmb	14 56 31.1	
	comp=Z,19nm,1.2s						
LCAR	**Lake Charles**	**23.25**	**353**	P	**P**	**14 55 55.5**	**-0.2**
LCAR				IAmb	IAmb	14 55 55.5	
	comp=Z,3.7nm,0.5s						
TZTN	**Tazewell**	**23.76**	**8**	P	**P**	**14 56 01.8**	**+1.3**
V58A	**Windy Hill, Pi**	**23.97**	**17**	P	**P**	**14 56 03.7**	**+1.4**
WMOK	**Wichita Mounta**	**23.97**	**337**	P	**P**	**14 56 03.9**	**+1.5**
TUL3	**Leonard**	**24.05**	**343**	P	**P**	**14 56 04.5**	**+1.5**
RLO	**Rose Lookout**	**24.08**	**345**	P	**P**	**14 56 05.2**	**+1.9**
SMWD	**Samnorwood**	**24.88**	**335**	P	**P**	**14 56 11.9**	**+1.3**
SMWD				IAmb	IAmb	14 56 12.2	
	comp=Z,9.4nm,0.7s						
Q54A	**Coxs Mills**	**26.60**	**12**	P	**P**	**14 56 27.1**	**+1.1**
PV18	**Skein Mesa, Pa**	**31.57**	**327**	P	**P**	**14 57 12.0**	**+1.7**
PV18				IAmb	IAmb	14 57 12.1	
	comp=Z,4.5nm,0.6s						
RSSD	**Black Hills**	**34.14**	**339**	P	**P**	**14 57 33.6**	**+1.1**
RSSD				IAmb	IAmb	14 57 35.0	
	comp=Z,2.1nm,0.6s						
LPAZ	**La Paz**	**34.81**	**146**	P	**P**	**14 57 36.5**	**-2.6**
	comp=Z,1.0nm,0.6s,baz=19,slow=4.9,SNR=3.9						
	comp=Z,1.0nm,0.6s						
PDAR	**Pinedale Array**	**35.30**	**331**	P	**P**	**14 57 43.2**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=129,slow=11,SNR=7.1						
	comp=Z,0.6nm,0.5s						
EPLO	**Experimental L**	**36.97**	**353**	P	**P**	**14 57 55.2**	**-1.2**
EPLO				IAmb	IAmb	14 57 55.4	
	comp=Z,3.5nm,0.5s						
YNE	**Yellowstone No**	**37.26**	**333**	P	**P**	**14 57 59.5**	**+0.4**
NVAR	**Mina Array Bea**	**37.28**	**318**	P	**P**	**14 58 00.2**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=105,slow=4.6,SNR=2.0						
	comp=Z,0.4nm,0.6s						
ULM	**Lac du Bonnet**	**37.82**	**351**	P	**P**	**14 58 02.0**	**-1.4**
ULM	**Lac du Bonnet**	**37.82**	**351**	P	**P**	**14 58 01.4**	**-2.0**
	comp=Z,1.6nm,0.3s,baz=174,slow=9.8,SNR=6.8						
	comp=Z,1.6nm,0.3s						
MCMT	**McKenzie Canyo**	**38.42**	**331**	P	**P**	**14 58 08.9**	**0.0**
PB03	**IPOC Station P**	**38.91**	**153**	P	**P**	**14 58 14.0**	**+1.0**
BPMT	**Black Pine Rid**	**39.90**	**332**	P	**P**	**14 58 22.1**	**+0.9**
GDXM	**Geysers**	**40.46**	**316**	P	**P**	**14 58 28.5**	**+2.7**
FFC	**Flin Flon**	**43.20**	**348**	P	**P**	**14 58 47.7**	**+0.1**
SCHQ	**Schefferville**	**44.82**	**17**	P	**P**	**14 58 58.2**	**-2.3**
	comp=Z,1.5nm,0.4s,baz=249,slow=14,SNR=3.8						
	comp=Z,1.5nm,0.4s						
FCC	**Fort Churchill**	**45.99**	**355**	P	**P**	**14 59 09.1**	**-0.5**
FCC				IAmb	IAmb	14 59 22.4	
	comp=Z,12nm,1.4s						
BLKN	**Baker Lake**	**51.64**	**355**	P	**P**	**14 59 52.6**	**+0.1**
BLKN				IAmb	IAmb	15 00 02.3	
	comp=Z,4.9nm,1.4s						
ILON	**Igloolik, Nuna**	**56.49**	**2**	P	**P**	**15 00 26.8**	**-0.8**
POIN	**Pond Inlet**	**59.99**	**3**	P	**P**	**15 00 52.5**	**+0.7**
POIN				IAmb	IAmb	15 00 58.0	
	comp=Z,7.6nm,1.4s						
RES	**Resolute Bay**	**61.86**	**358**	P	**P**	**15 01 04.4**	**0.0**
RES				IAmb	IAmb	15 01 32.3	
	comp=Z,5.3nm,1.1s						
H27K	**Steamboat Moun**	**64.16**	**339**	P	**P**	**15 01 19.9**	**0.0**
F28M	**Old Crow**	**64.29**	**340**	P	**P**	**15 01 20.8**	**+0.1**
D27M	**Malcolm River**	**65.48**	**342**	P	**P**	**15 01 28.1**	**-0.2**
D27M				IAmb	IAmb	15 01 46.8	
	comp=Z,5.8nm,1.4s						
ILAR	**Eielson Array**	**65.54**	**336**	P	**P**	**15 01 27.7**	**-1.0**
	comp=Z,0.2nm,0.6s,baz=164,slow=5.1,SNR=6.1						
	comp=Z,0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**86.37**	**77**	P	**P**	**15 03 24.1**	**-3.5**
	comp=Z,124nm,0.4s,baz=232,slow=3.5,SNR=2.3						
ASAR	**Alice Springs**	**139.39**	**249**	PKP	**PKPdf**	**15 10 12.1**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=105,slow=2.1,SNR=6.1						

IDC ***21*** *15:04:42.5±0.7, 9°.11S×158°.19E, h0^{km}, mb4.0/14, mbtmp3.9/15, ML4.1/1, MS3.5/5, Error ellipse: s-maj=23.0km s-min=18.0km az=151.0*

ISC 21 15:04:46.7±0.6**, 9°.02S**±0°.10×**158°.08E**±0°.08**, h23**^{km}**, n30, σ1^{s}.21**/23**, mb3.9**/14**, MS3.6**/4**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAVO	**Savo Central**	**1.72**	**95**	P	**Pn**	**15 05 14.3**	**-1.0**
TATA	**Tatamba Isabel**	**1.82**	**70**	P	**Pn**	**15 05 17.4**	**+0.8**
HNR	**Honiara**	**1.89**	**103**	Pn	**Pn**	**15 05 15.5**	**-2.1**
	46nm,0.3s,baz=237,slow=8.0,SNR=23						
HNR				Sn	**Sn**	**15 05 42.0**	**+1.2**
	301nm,0.3s,baz=146,slow=19,SNR=17						
HNR				LR	LR	15 05 47.0	
	comp=Z,192nm,19.7s,baz=329,slow=36						
HNR	**Honiara**	**1.89**	**103**	P	**Pn**	**15 05 19.6**	**+2.0**
ALEG	**Aligegeo Malai**	**2.60**	**84**	P	**Pn**	**15 05 28.8**	**+1.4**
NGOA	**Tingoa Renbel**	**3.19**	**142**	P	**Pn**	**15 05 37.0**	**+1.5**
HURO	**Huro Makira**	**4.04**	**111**	P	**Pn**	**15 05 48.2**	**+1.1**
JAY	**Jayapura**	**18.44**	**289**	P	**Pn**	**15 09 02.5**	**+1.4**
	0.6nm,0.3s,baz=45,slow=3.2,SNR=5.2						
JAY				LR	LR	15 16 38.8	
	comp=Z,68nm,19.0s,baz=12,slow=38						
	4.9nm,0.7s						
WRA	**Warramunga Arr**	**25.39**	**242**	P	**P**	**15 10 12.5**	**-0.1**
	3.2nm,0.8s,baz=63,slow=9.8,SNR=13						
	3.2nm,0.8s						
ASAR	**Alice Springs**	**27.32**	**235**	P	**P**	**15 10 29.6**	**-0.6**
	1.1nm,1.0s,baz=61,slow=9.0,SNR=5.3						
ASAR				LR	LR	15 21 03.7	
	comp=Z,105nm,18.7s,baz=58,slow=36						
	1.1nm,1.0s						
STKA	**Stephens Creek**	**27.42**	**212**	P	**P**	**15 10 29.1**	**-1.6**
	2.2nm,1.0s,baz=49,slow=14,SNR=6.3						
STKA				LR	LR	15 20 45.3	
	comp=Z,97nm,18.8s,baz=24,slow=35						
	2.2nm,1.0s						
H11S3	**WAKE ISLAND Hy**	**28.63**	**17**	T	T	15 39 19.7	
	baz=199,slow=75,SNR=29						
H11S2	**WAKE ISLAND Hy**	**28.63**	**17**	T	T	15 39 27.6	
	baz=199,slow=75,SNR=52						
H11S1	**WAKE ISLAND Hy**	**28.64**	**17**	T	T	15 39 28.0	
	baz=199,slow=75,SNR=15						
H11N1	**WAKE ISLAND Hy**	**29.84**	**17**	T	T	15 41 00.1	
	baz=196,slow=76,SNR=6.3						
H11N3	**WAKE ISLAND Hy**	**29.85**	**17**	T	T	15 41 00.8	
	baz=196,slow=76,SNR=6.8						
H11N2	**WAKE ISLAND Hy**	**29.86**	**17**	T	T	15 41 05.3	
	baz=196,slow=76,SNR=7.3						
RAR	**Rarotonga**	**42.32**	**112**	LR	LR	15 27 55.2	
	comp=Z,126nm,18.3s,baz=275,slow=33						
PETK	**Petropavlovsk-**	**61.88**	**360**	P	**P**	**15 15 03.6**	**-0.5**
	1.2nm,0.8s,baz=178,slow=8.7,SNR=4.0						
	1.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**64.40**	**295**	P	**P**	**15 15 22.7**	**+1.1**
	0.3nm,0.3s,baz=108,slow=5.9,SNR=4.1						
	0.3nm,0.3s						

SONM	Songino Array	72.69	326	P	P	15 16 13.6	+0.7
	0.5nm,0.7s,baz=99,slow=4.1,SNR=3.7						
	0.5nm,0.7s						
QSPA	South Pole Qui	80.97	180	P	P	15 16 58.5	-0.9
	1.4nm,1.2s,baz=328,slow=10,SNR=1.9						
	1.4nm,1.2s						
ILAR	Eielson Array	84.15	21	P	P	15 17 14.1	-1.5
	0.6nm,1.0s,baz=260,slow=4.2,SNR=5.4						
	0.6nm,1.0s						
MKAR	Makanchi Array	86.93	318	P	P	15 17 30.0	0.0
	0.4nm,0.6s,baz=105,slow=5.7,SNR=4.7						
	0.4nm,0.6s						
ZALV	Zalesovo Beam	87.56	325	P	P	15 17 33.7	+0.9
	0.3nm,0.4s,baz=104,slow=6.1,SNR=1.4						
	0.3nm,0.4s						
NVAR	Mina Array Bea	90.58	51	P	P	15 17 47.6	-0.1
	1.6nm,0.8s,baz=256,slow=7.6,SNR=6.5						
	1.6nm,0.8s						
NEW	Newport	93.21	42	LR	LR	15 52 31.0	
	comp=Z,29nm,21.2s,baz=296,slow=31						
ELK	Elko	93.31	49	P	P	15 17 59.5	-0.8
	0.5nm,0.5s,baz=225,slow=4.9,SNR=2.1						
	0.5nm,0.5s						
BVAR	Borovoye Array	95.74	323	P	P	15 18 10.6	-0.3
	0.5nm,0.7s,baz=92,slow=4.3,SNR=1.5						
	0.5nm,0.7s						
PDAR	Pinedale Array	97.78	48	P	P	15 18 20.2	-0.4
	0.1nm,0.4s,baz=243,slow=4.1,SNR=2.2						
	0.1nm,0.4s						

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*IDC **21** 15:08:00.4±0.6, 31°.41S×177°.54W, h0^{km}, mb4.4/10, mbtmp4.3/13, ML4.6/2, MS3.5/4, Error ellipse: s-maj=21.1km s-min=17.6km az=96.0*

*NEIC **21** 15:08:03.1±2.1, 31°.46S±0°.09×177°.8W±0°.1, h10^{km}±1^{km}, mb4.5/13, Error ellipse: s-maj=23.6km s-min=9.8km az=120.0*

ISC 21 15:08:04.2±0.6, **31°.47S**±0°.06×**177°.8W**±0°.1, **h26**^{km}**, n54,** σ1^{s}**16**/52, **mb4.5**/19, **4C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.22	356		Pn	15 08 39.7	+0.4
RAO	Raoul Island	2.22	356	Pn	Pn	15 08 37.6	-1.7
	77nm,0.3s,baz=37,slow=17,SNR=6.6						
RAO				Sn	Sn	15 09 05.8	0.0
	69nm,0.3s,baz=307,slow=16,SNR=3.9						
	203nm,0.3s						
MXZ	Matakaoa Point	6.89	207	Pn	Pn	15 09 38.9	-4.6
URZ	Urewera	7.98	211	Pn	Pn	15 09 54.2	-4.2
	0.9nm,0.3s,baz=248,slow=5.3,SNR=8.1						
URZ				Sn	Sn	15 11 23.6	-4.2
	2.0nm,0.3s,baz=173,slow=23,SNR=6.6						
RTZ	Ruatahuna	8.33	210		Pn	15 09 59.0	-4.4
MRZ	Mangatainoka R	10.64	209	Pn	Pn	15 10 29.4	-5.5
THZ	Tophouse	12.71	214	Pn	Pn	15 11 03.3	0.0
KHZ	Kahutara	12.95	210	Pn	Pn	15 10 59.4	-7.0
MSVF	Nonsavu	14.20	343	Pn	Pn	15 11 22.9	-0.9
	0.2nm,0.3s,baz=87,slow=17,SNR=3.7						
MSVF				LR	LR	15 16 21.0	
	comp=Z,198nm,18.2s,baz=157,slow=35						
	7.5nm,0.9s						
DZM	Mont Dzumac	16.92	300	P	Pn	15 12 00.3	+1.0
	1.6nm,0.7s,baz=193,slow=18,SNR=12						
DZM				LR	LR	15 17 39.0	
	comp=Z,193nm,18.8s,baz=97,slow=34						
ARMA	Armidale	26.25	264	P	P	15 13 37.5	+0.1
ARMA				IAmb	IAmb	15 13 57.9	
	comp=Z,5.7nm,0.9s						
PPT	Papeete	29.03	68	LR	LR	15 24 58.0	
	comp=Z,31nm,18.7s,baz=18,slow=35						
TOO	Toolangi	30.76	248	P	P	15 14 19.3	+1.9
CTAO	Charters Tower	34.20	281	P	P	15 14 48.0	+0.4
CTAO				IAmb	IAmb	15 14 53.8	
	comp=Z,9.6nm,0.9s						
STKA	Stephens Creek	34.46	258	P	P	15 14 48.4	-1.5
STKA	Stephens Creek	34.46	258	P	P	15 14 50.8	+0.9
	comp=Z,3.5nm,0.8s,baz=88,slow=13,SNR=6.3						
	comp=Z,3.5nm,0.8s						
BBOO	Buckleboo	38.90	255	P	P	15 15 28.2	+0.5
BBOO				IAmb	IAmb	15 15 29.6	
	comp=Z,8.0nm,0.8s						
COEN	Coen	39.78	287	P	P	15 15 34.0	-1.1
COEN				IAmb	IAmb	15 15 34.5	
	comp=Z,7.7nm,1.0s						
AS31	Alice Springs	43.28	268	P	P	15 16 05.6	+1.8
ASAR	Alice Springs	43.28	268	P	P	15 16 05.1	+1.2
	comp=Z,4.4nm,0.7s,baz=104,slow=7.4,SNR=64						
ASAR				PcP	PcP	15 17 53.2	+0.5
	comp=Z,0.5nm,0.7s,baz=105,slow=4.5,SNR=1.3						
	comp=Z,4.4nm,0.7s						
WR8	Warramunga Arr	44.22	273	P	P	15 16 10.7	-0.8
WR8				IAmb	IAmb	15 16 14.5	
	comp=Z,10nm,0.8s						
WRA	Warramunga Arr	44.36	273	P	P	15 16 14.3	+1.8
	comp=Z,11nm,0.8s,baz=115,slow=7.5,SNR=42						
WRA				PcP	PP	15 17 57.8	+1.6
	comp=Z,0.4nm,0.6s,baz=116,slow=7.7,SNR=0.5						
	comp=Z,11nm,0.8s						
WB0	Warramunga Arr	44.39	273	P	P	15 16 13.3	+0.5
KNRA	Kununurra	51.01	275	P	P	15 17 02.2	-1.9
KNRA				IAmb	IAmb	15 17 27.1	
	comp=Z,7.6nm,0.8s						
FITZ	Fitzroy Crossi	52.58	271	P	P	15 17 14.6	-1.3
CASY	Casey	54.30	208	P	P	15 17 28.5	+0.7
QSPA	South Pole Qui	58.64	180	P	P	15 18 00.6	+1.7
	comp=Z,4.0nm,0.8s,baz=58,slow=1.8,SNR=9.2						
	comp=Z,4.0nm,0.8s						
SNAA	Sanae	77.08	178	⇑P	P	15 19 55.3	+0.5
	comp=Z,66nm,0.8s						
SNAA	Sanae	77.08	178	P	P	15 19 53.5	-1.3
SNAA				IAmb	IAmb	15 19 56.5	
	comp=Z,4.6nm,1.0s						
SNAA	Sanae	77.08	178	P	P	15 19 54.5	-0.2
	comp=Z,4.1nm,1.0s,baz=185,slow=3.9,SNR=7.8						
	comp=Z,4.1nm,1.0s						
VNA3	Neumayer Olymp	77.22	176	⇑P	P	15 19 55.8	+0.3
	comp=Z,15nm,0.8s						
VNA2	Neumayer--Watz	77.66	177	⇑P	P	15 19 58.6	+0.7
	comp=Z,10.0nm,0.8s,baz=177,slow=5.5						
VNA1	Neumayer--Stat	77.89	176	⇑P	P	15 20 00.2	+1.0
	comp=Z,12nm,0.9s						
LPIG	La Paz	84.92	58	LR	LR	15 52 29.6	
	comp=Z,42nm,18.2s,baz=210,slow=32						
PETK	Petropavlovsk-	86.90	345	P	P	15 20 46.8	+0.6
	comp=Z,3.6nm,0.8s,baz=152,slow=6.7,SNR=12						
	comp=Z,3.6nm,0.8s						
NVAR	Mina Array Bea	88.88	43	P	P	15 20 55.7	-0.6
	comp=Z,2.3nm,0.9s,baz=219,slow=7.3,SNR=7.4						
	comp=Z,2.3nm,0.9s						
ELK	Elko	92.19	42	P	P	15 21 11.9	+0.2
	comp=Z,1.2nm,0.8s,baz=211,slow=2.8,SNR=5.3						
	comp=Z,1.2nm,0.8s						
TXAR	Lajitas Array	92.78	57	P	P	15 21 14.1	-0.5
	comp=Z,0.7nm,1.0s,baz=230,slow=4.6,SNR=3.7						
	comp=Z,0.7nm,1.0s						
PDAR	Pinedale Array	96.76	44	P	P	15 21 31.2	-1.4
	comp=Z,0.6nm,0.8s,baz=293,slow=8.4,SNR=4.0						
	comp=Z,0.6nm,0.8s						
KURBB	Kurchatov Arra	121.98	313	PKP	PKiKP	15 26 56.3	+0.4
	comp=Z,0.4nm,0.7s,baz=100,slow=2.0,SNR=8.5						
BVAR	Borovoye Array	127.32	315	PKP	PKiKP	15 27 06.7	+0.2
	comp=Z,0.9nm,0.7s,baz=103,slow=4.6,SNR=5.4						
KBZ	Khabaz	145.88	303	PKPbc	PKPab	15 27 41.6	+0.1
	comp=Z,4.2nm,1.0s,baz=213,slow=2.1,SNR=5.8						
FIA1	FINESS Array S	146.22	340	PKPdf	PKPab	15 27 42.0	-0.3
FINES	FINESS Array B	146.22	340	PKPbc	PKPab	15 27 42.0	-0.3
	comp=Z,7.8nm,0.8s,baz=64,slow=4.4,SNR=24						
NOA	NORSAR Array B	149.84	351	PKPbc	PKPbc	15 27 51.3	+0.1
	comp=Z,0.9nm,0.7s,baz=14,slow=2.9,SNR=3.9						
HFS	Hagfors	150.34	348	PKPbc	PKPbc	15 27 52.4	0.0
	comp=Z,4.0nm,0.9s,baz=134,slow=6.4,SNR=4.6						
MMAI	Mount Meron Ar	151.98	282	PKPbc	PKiKP	15 27 58.9	+1.4
	comp=Z,1.8nm,0.6s,baz=54,slow=4.4,SNR=5.7						
AKASG	Malin Array Be	152.28	322	PKPbc	PKiKP	15 27 57.7	+0.2
	comp=Z,0.6nm,0.6s,baz=86,slow=1.4,SNR=7.1						
AKASG				PKPab	PKPab	15 28 07.5	+0.4
	comp=Z,1.7nm,0.6s,baz=50,slow=3.9,SNR=14						
AKBB	Malin Array Si	152.28	322	PKP	PKPdf	15 27 49.0	-1.4
AK01	Malin Array Si	152.29	322	PKP	PKPdf	15 27 49.0	-1.4
AK09	Malin Array Si	152.29	321	PKP	PKPdf	15 27 49.0	-1.4
BRTR	Keskin Array B	153.29	297	PKPbc	PKiKP	15 28 00.6	+0.5
	comp=Z,0.9nm,0.8s,baz=163,slow=1.3,SNR=5.4						
GERES	GERESS Array B	160.61	337	PKPab	PKPab	15 28 42.6	-0.5
	comp=Z,0.4nm,0.6s,baz=38,slow=6.2,SNR=4.6						
TORD	Torodi Ar. Bea	161.75	178	PKPab	PKPab	15 28 48.8	+0.1
	comp=Z,63nm,0.3s,baz=177,slow=4.1,SNR=1.4						

IDC 21 15:18:41.9±6.3, **31°.03S**×**177°.87W, h0**^{km}**, mb3.9**/2, **mbtmp3.9**/2, **Error ellipse: s-maj=253.8km s-min=58.4km az=156.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.19	268	P	P	15 26 44.6	-0.1
	0.7nm,0.6s,baz=103,slow=7.4,SNR=16						
	0.7nm,0.6s						
WRA	Warramunga Arr	44.24	273	P	P	15 26 53.1	-0.2
	1.1nm,0.5s,baz=114,slow=7.5,SNR=10						
	1.1nm,0.5s						
FINES	FINESS Array B	145.78	340	PKPbc	PKPdf	15 38 21.3	-0.4
	1.9nm,0.8s,baz=46,slow=6.0,SNR=4.7						

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*IDC **21** 15:20:05.0±1.4, 59°.90N×153°.06W, h82^{km}±18^{km}, mb3.5/8, mbtmp3.6/12, MS1.9/1, Error ellipse: s-maj=21.1km s-min=10.3km az=106.0*

*NEIC **21** 15:20:07.1±0.7, 59°.85N±0°.04×152°.97W±0°.08, h101^{km}±4^{km}, Error ellipse: s-maj=6.4km s-min=4.7km az=126.0*

*AEIC **21** 15:20:08.2±1.0, 59°.84N±0°.02×152°.97W±0°.07, h96^{km}±4^{km}, ML3.1, ML3.3/180(NEIC), Error ellipse: s-maj=5.5km s-min=1.8km az=76.0*

ISC 21 15:20:06.6±0.7, **59°.84N**±0°.03×**152°.93W**±0°.03, **h104**^{km}±5^{km}**, n185,** σ**0**^{s}**83**/163, **mb3.9**/8, **Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILS	Iliamna Low So	0.14	330		Pn	15 20 21.3	0.0
ILS					Sn	15 20 32.1	-0.2
ILSW	Iliamna Southw	0.18	324		Pn	15 20 21.2	-0.2
ILSW				IAML		15 20 33.6	
	comp=N,2µm,0.8s						
ILSW				IAML		15 20 34.2	
	comp=E,2µm,0.8s						
ILSW	Iliamna Southw	0.18	324		Sn	15 20 32.1	-0.5
OPT	Oil Point	0.24	219		Pn	15 20 21.6	+0.1
P19K	Oil Pt	0.24	219	Pn	Pn	15 20 21.7	+0.1
P19K	Oil Pt	0.24	219		Sn	15 20 32.7	0.0
O20K	Slope Mountain	0.29	33		Pn	15 20 21.9	+0.2
O20K					Sn	15 20 33.2	+0.1
AU22	Augustine Moun	0.52	205		Pn	15 20 23.1	+0.1
AU22					Sn	15 20 35.2	0.0
AUCH	Augustine Cone	0.55	209		Pn	15 20 23.4	+0.1
RED	Redoubt Volcan	0.58	8		Sn	15 20 36.0	-0.3
RED	Redoubt Volcan	0.58	8		Pn	15 20 23.7	+0.1
RED				IAML		15 20 36.6	
	comp=E,921nm,0.5s						
RED				IAML		15 20 38.3	
	comp=N,531nm,0.5s						
RDSO	Redoubt South	0.62	9		Pn	15 20 24.1	+0.2
RDWB	Redoubt West	0.65	4		Sn	15 20 37.2	-0.2
HOM	Homer	0.68	105		Pn	15 20 24.8	+0.6
HOM	Homer	0.68	105		Sn	15 20 38.5	+1.1
NCT	North Crescent	0.72	0		Sn	15 20 38.4	0.0
O19K	Port Alsworth	0.78	298		Pn	15 20 25.2	+0.1
O19K	Port Alsworth	0.78	298		Sn	15 20 38.5	-0.5
RDT	Redoubt	0.78	20		Sn	15 20 39.1	-0.1
CNPM	China Poot	0.92	109		Pn	15 20 26.9	+0.4
CNPM	China Poot	0.92	109		Sn	15 20 41.6	+0.1
Q19K	Cape Douglas,	0.98	202		Sn	15 20 42.2	-0.5
Q19K	Cape Douglas,	0.98	202		Pn	15 20 26.9	-0.3
Q19K				IAML		15 20 45.2	
	comp=N,896nm,0.6s						
Q19K				IAML		15 20 49.4	
	comp=E,661nm,0.8s						
BRLK	Bradley Lake	1.04	93		Pn	15 20 28.0	+0.2
O18K	Koktuh Hills	1.15	272		Pn	15 20 28.8	-0.2
O18K				IAML		15 20 45.6	
	comp=E,246nm,0.3s						
O18K				IAML		15 20 45.7	
	comp=N,519nm,0.8s						
O18K	Koktuh Hills	1.15	272		Sn	15 20 45.0	-0.8
N19K	Bonanza Creek	1.24	322		Sn	15 20 47.4	-0.5
N19K	Bonanza Creek	1.24	322		Pn	15 20 30.3	+0.1
N19K				IAML		15 20 48.3	
	comp=E,387nm,0.9s						
N19K				IAML		15 20 48.5	
	comp=N,303nm,0.7s						
P18K	Big Mountain,	1.25	250		Pn	15 20 29.8	-0.4
SYI	Shuyak Island	1.27	167		Sn	15 20 48.3	+0.1
SYI	Shuyak Island	1.27	167		Pn	15 20 30.6	+0.4
SYI				IAML		15 20 49.4	
	comp=N,590nm,0.6s						
SYI				IAML		15 20 49.9	
	comp=E,618nm,0.5s						
SPCR	Spurr Chakacha	1.41	14		Sn	15 20 51.4	+0.1
SPCR	Spurr Chakacha	1.41	14		Pn	15 20 32.5	+0.5
SLKM	Skilak Lake	1.51	63		Pn	15 20 33.9	+0.6
KAHC	Katmai Hardscr	1.60	223		Sn	15 20 54.4	-1.2
N18K	Kilae Creek	1.70	301		Sn	15 20 56.3	-1.2
N18K	Kilae Creek	1.70	301		Pn	15 20 35.5	0.0
N18K				IAML		15 20 57.2	
	comp=N,191nm,0.8s						
N18K				IAML		15 20 58.2	
	comp=E,168nm,1.0s						
STLK	Strandline Lak	1.75	18		Pn	15 20 36.8	+0.6
SEW	Seward	1.77	80		Pn	15 20 36.5	+0.2
SEW				IAML		15 20 59.6	
	comp=N,326nm,0.5s						
SEW				IAML		15 21 06.0	
	comp=E,312nm,0.3s						
FIS	Fire Island	1.88	45	Pn	Pn	15 20 40.0	+2.4
FIS				IAML		15 21 15.1	
	comp=E,280nm,0.4s						
FIS				IAML		15 21 23.7	
	comp=N,399nm,0.7s						
P17K	Kvichak River	1.90	252		Pn	15 20 38.4	+0.4
SUA	Susitna One	1.95	33		Pn	15 20 39.5	+0.7
SUA				IAML		15 21 06.8	
	comp=E,337nm,0.6s						
SUA				IAML		15 21 08.5	
	comp=N,225nm,0.5s						
RC01	Rabbit Creek A	2.02	50		Pn	15 20 40.3	+0.7
M20K	Styx River	2.05	357		Pn	15 20 40.7	+0.7
ACHA	Angle Creek He	2.05	218		Pn	15 20 40.5	+0.5
KDAK	Kodiak Island	2.07	175		Pn	15 20 39.5	-0.7
KDAK				IAML		15 21 06.8	
	comp=N,338nm,0.3s						
KDAK	Kodiak Island	2.07	175	P	Pn	15 20 39.5	-0.7
	comp=N,133nm,0.5s,baz=354,slow=11,SNR=168						
KDAK				S	Sn	15 21 04.8	-1.1
	comp=N,109nm,0.3s,baz=192,slow=19,SNR=35						
KDAK				LR	LR	15 21 35.7	
	comp=N,31nm,21.8s,baz=263,slow=42						
ANCK	Angle Creek	2.11	220		Pn	15 20 41.3	+0.4
CAHL	Cahill	2.17	215		Pn	15 20 42.2	+0.6
M19K	Big River Lodg	2.19	342	IAML		15 21 09.4	
	comp=E,96nm,0.8s						
CNTC	Contact Creek	2.20	225		Pn	15 20 42.2	+0.3
N17K	Nushagak Hills	2.23	290		Pn	15 20 42.4	+0.1
N17K				IAML		15 21 10.1	
	comp=E,86nm,0.7s						
N17K				IAML		15 21 24.1	
	comp=N,74nm,0.7s						
SKT	Skwentna	2.25	17		Pn	15 20 43.1	+0.5
SKT				IAML		15 21 13.2	
	comp=E,104nm,0.3s						
R18K	Karluk	2.42	200		Pn	15 20 44.2	-0.4
L19K	White Mountain	2.53	339	IAML		15 21 18.3	
	comp=E,70nm,0.8s						
L19K				IAML		15 21 18.8	
	comp=N,61nm,1.0s						
PMR	Palmer	2.56	45		Pn	15 20 46.7	+0.1
PMR				IAML		15 21 17.8	
	comp=N,105nm,0.3s						
PMR				IAML		15 21 18.4	
	comp=E,146nm,0.3s						
O16K	Kokwok River B	2.63	267		Pn	15 20 47.7	+0.2
OHAK	Old Harbor	2.63	184		Pn	15 20 46.6	-0.9
OHAK				IAML		15 21 18.5	
	comp=N,159nm,0.2s						
OHAK				IAML		15 21 19.0	
	comp=E,201nm,0.3s						
KNK	Knik Glacier	2.71	53		Pn	15 20 48.4	-0.2
M17K	Holitna River	2.72	307		Pn	15 20 48.7	+0.1
M17K				IAML		15 21 35.2	
	comp=N,82nm,0.9s						
M17K				IAML		15 21 39.0	
	comp=E,106nm,0.8s						
GHO	Glory Hole Cre	2.76	44	IAML		15 21 23.4	
	comp=N,163nm,0.3s						
GHO				IAML		15 21 24.0	
	comp=E,215nm,0.6s						
CUT	Chulitna	2.88	26		Pn	15 20 51.0	+0.3
CUT	Chulitna	2.88	26	IAML		15 21 32.2	
	comp=N,114nm,0.2s						
SML	Sawmill	3.00	47		Pn	15 20 52.2	-0.2
SML	Sawmill	3.00	47	IAML		15 21 28.8	
	comp=N,87nm,0.5s						
SML				IAML		15 21 55.4	
	comp=E,82nm,0.9s						
GLI	Glacier Island	3.08	68		Pn	15 20 52.7	-0.8
PPLA	Purkeypile	3.09	6		Pn	15 20 55.1	+1.5
HIN	Hinchinbrook I	3.27	77		Pn	15 20 55.6	-0.3
HIN				IAML		15 21 34.6	
	comp=N,142nm,0.5s						
HIN				IAML		15 21 35.3	
	comp=E,112nm,0.6s						
FID	Port Fidalgo	3.34	71		Pn	15 20 55.6	-1.3
Q23K	Middleton Isla	3.37	94		Pn	15 20 57.3	+0.1
Q23K	Middleton Isla	3.37	94	IAML		15 21 37.6	
	comp=E,106nm,0.4s						
SCM	Sheep Creek Mo	3.39	52		Pn	15 20 57.8	+0.1
SCM	Sheep Creek Mo	3.39	52	IAML		15 21 41.6	
	comp=E,94nm,0.6s						
SCM				IAML		15 21 43.6	
	comp=N,76nm,0.7s						
K20K	Telida	3.57	352	Pn	Pn	15 21 00.6	+0.6
O15K	Ungalikthiuk R	3.58	262		Pn	15 21 01.0	+1.0
N15K	Kwethluk River	3.61	278		Pn	15 21 01.6	+1.1
N15K				IAML		15 22 07.7	
	comp=N,25nm,0.8s						
N15K				IAML		15 22 11.5	
	comp=E,23nm,0.7s						
CAST	Castle Rocks	3.61	6		Pn	15 21 01.4	+0.8
EYAK	Cordova Ski Ar	3.66	76		Pn	15 21 00.4	-0.7
EYAK	Cordova Ski Ar	3.66	76	IAML		15 21 43.6	
	comp=E,53nm,0.3s						
EYAK				IAML		15 21 46.1	
	comp=N,63nm,0.5s						
WAT1	Susitna Watana	3.67	33		Pn	15 21 01.7	+0.4
L16K	Owhat River	3.71	303		Pn	15 21 02.0	+0.1
DIV	Divide	3.77	67		Pn	15 21 02.4	-0.4
DIV	Divide	3.77	67	IAML		15 21 46.7	
	comp=E,61nm,0.4s						
KLU	Klutina	3.83	61		Pn	15 21 03.0	-0.5
TRF	Thorofare Moun	3.83	18		Pn	15 21 03.8	+0.1
TRF	Thorofare Moun	3.83	18	IAML		15 21 51.8	
	comp=N,37nm,0.4s						
TRF				IAML		15 21 52.7	
	comp=E,28nm,0.6s						
KTH	Kantishna Hill	3.85	14		Pn	15 21 04.0	+0.2
KTH	Kantishna Hill	3.85	14	IAML		15 21 53.0	
	comp=E,20nm,0.5s						
KTH				IAML		15 22 31.6	
	comp=N,20nm,0.8s						
K17K	Iditarod	3.88	320	IAML		15 21 50.5	
	comp=N,32nm,1.1s						
K17K				IAML		15 22 06.3	
	comp=E,38nm,0.8s						
M15K	Kasigluk River	3.96	286		Pn	15 21 05.5	+0.3
M24K	Tolsona, Glenn	4.00	52		Pn	15 21 06.2	+0.4
M24K	Tolsona, Glenn	4.00	52	IAML		15 21 54.9	
	comp=N,60nm,0.9s						
M24K				IAML		15 22 13.9	
	comp=E,76nm,1.0s						
RND	Reindeer	4.07	27		Pn	15 21 07.5	+0.7
RND				IAML		15 21 56.8	
	comp=N,17nm,0.4s						
RND				IAML		15 22 00.3	
	comp=E,18nm,0.3s						
GOAT	Goat Mountain	4.16	76		Pn	15 21 07.5	-0.5
DHY	Denali Highway	4.20	37		Pn	15 21 08.8	+0.2
DHY				IAML		15 21 59.0	
	comp=E,46nm,0.8s						
DHY				IAML		15 21 59.1	
	comp=N,32nm,0.4s						
O14K	Tigyukauivet M	4.28	266		Pn	15 21 10.7	+1.2
BMRM	Bremner River	4.28	71		Pn	15 21 08.9	-0.7
BMRM	Bremner River	4.28	71	IAML		15 22 06.2	
	comp=N,55nm,0.5s						
BMRM				IAML		15 22 18.2	
	comp=E,47nm,0.5s						
KAIM	Kayak Island	4.29	85		Pn	15 21 10.1	+0.4
KAIM				IAML		15 22 00.7	
	comp=N,55nm,0.4s						
KAIM				IAML		15 22 03.0	
	comp=E,63nm,0.3s						
J19K	Poorman	4.36	344		Pn	15 21 10.6	+0.1
BPAW	Bear Paw Mtn.	4.37	11		Pn	15 21 10.7	-0.1
BPAW	Bear Paw Mtn.	4.37	11	IAML		15 22 00.5	
	comp=N,13nm,0.5s						
HMT	Hamilton	4.37	80		Pn	15 21 10.7	-0.1
J20K	Nowinta River	4.39	353	IAML		15 22 06.9	
	comp=N,12nm,1.0s						
N14K	Kuskokwak Cree	4.41	275		Pn	15 21 12.6	+1.3
N14K				IAML		15 22 33.5	
	comp=N,27nm,1.2s						
N14K				IAML		15 22 37.9	
	comp=E,22nm,1.1s						
N25K	Chitina, Valde	4.46	63	IAML		15 22 03.7	
	comp=E,29nm,0.6s						
N25K				IAML		15 22 04.2	
	comp=N,48nm,0.5s						
NICHA	Nichawak Mount	4.51	81		Pn	15 21 12.8	+0.1
L15K	Ungalak Mounta	4.58	297		Pn	15 21 13.7	+0.2
M14K	Bethel	4.58	285	Pn	Pn	15 21 14.3	+0.8
SUCK	Suckling Hills	4.61	83	Pn	Pn	15 21 14.3	+0.3
SUCK				IAML		15 22 06.8	
	comp=N,27nm,0.5s						
SUCK				IAML		15 22 10.5	
	comp=E,29nm,0.4s						
J17K	VABM Dome	4.62	323		Pn	15 21 13.8	-0.3
J17K				IAML		15 22 37.8	
	comp=N,11nm,0.9s						
BERG	Berg Lake	4.65	79		Pn	15 21 14.6	+0.1
WACK	Wrangell Chich	4.72	59		Pn	15 21 15.6	-0.1
PAX	Paxson	4.76	46		Pn	15 21 16.4	+0.3
PAX	Paxson	4.76	46	IAML		15 22 16.0	
	comp=E,16nm,0.7s						
PAX				IAML		15 22 29.8	
	comp=N,19nm,0.7s						
GLB	Gilahina Butte	4.77	66		Pn	15 21 15.8	-0.4
GLB	Gilahina Butte	4.77	66	IAML		15 22 10.8	
	comp=N,44nm,0.4s						
GLB				IAML		15 22 11.4	
	comp=E,35nm,0.4s						
GRIN	Grindle Hills	4.84	81		Pn	15 21 17.4	+0.3
K15K	Wolf Creek Mou	4.84	304	IAML		15 22 47.5	
	comp=E,8.9nm,0.8s						
KHIT	Khitrov Hills	4.88	79		Pn	15 21 17.2	-0.5
VRDI	Verde Repeater	4.88	69		Pn	15 21 17.7	-0.2
VRDI	Verde Repeater	4.88	69	IAML		15 22 13.2	
	comp=E,10.0nm,0.3s						
VRDI				IAML		15 22 14.7	
	comp=N,25nm,0.3s						
I20K	Naaghedeneel	5.03	352	IAML		15 22 59.8	
	comp=N,26nm,0.6s						
I20K				IAML		15 23 17.0	
	comp=E,28nm,1.1s						
J16K	Anvik River	5.04	317	IAML		15 22 46.1	
	comp=N,8.3nm,1.1s						
L14K	Kuka Creek	5.04	292		Pn	15 21 20.7	+1.0
L14K	Kuka Creek	5.04	292	IAML		15 22 45.4	
	comp=N,14nm,1.1s						
L14K				IAML		15 23 03.8	
	comp=E,11nm,1.1s						
WAX	Waxell Ridge	5.08	79		Pn	15 21 20.3	0.0
NEA2	Nenana	5.10	19	Pn	Pn	15 21 20.8	+0.2
MCARA	McCarthy VSAT	5.12	68	IAML		15 22 24.6	
	comp=E,32nm,0.5s						
WRH	Wood River Hil	5.17	24	IAML		15 22 19.3	
	comp=E,8.0nm,0.4s						
K24K	Donnelly Dome	5.22	37		Pn	15 21 24.6	+2.3
BARK	Barkley Ridge	5.25	79		Pn	15 21 23.4	+0.7
PTPK	Patty Peak	5.35	71		Pn	15 21 25.2	+1.1
KIAG	Kiagna River	5.36	74		Pn	15 21 25.0	+0.8
HDA	Harding Lake	5.37	29		Pn	15 21 24.5	+0.2
HDA	Harding Lake	5.37	29	IAML		15 22 25.6	
	comp=E,30nm,0.4s						
HDA				IAML		15 22 26.4	
	comp=N,24nm,0.5s						
CCB	Clear Creek Bu	5.38	24	IAML		15 22 26.2	
	comp=E,8.8nm,0.5s						
BAGL	Bagley Icefiel	5.46	78		Pn	15 21 26.5	+1.1

RIDG	Independent Ri	5.48	41		Pn	15 21 26.7	+1.0
MESA	MESA	5.52	82		Pn	15 21 27.0	+0.5
COLA	College	5.58	23		Pn	15 21 26.2	-0.7
YAH	Yahtse	5.62	80		Pn	15 21 28.9	+1.0
IL31		5.69	27		Pn	15 21 28.4	-0.2
ILAR	Eielson Array	5.69	27	P	Pn	15 21 27.8	-0.8
	comp=E,1.7nm,0.5s,baz=212,slow=14,SNR=35						
ILAR				S	Sn	15 22 28.8	-3.8
	comp=E,1.4nm,0.4s,baz=212,slow=16,SNR=6.0						
BARN	Barnard Glacie	5.71	73		Pn	15 21 30.1	+1.1
RKAV	Rock Avalanche	5.82	80		Pn	15 21 31.2	+0.6
H21K	Melozitna Rive	5.84	1		Pn	15 21 31.1	+0.5
CTGM	Chitina Glacie	5.86	74		Pn	15 21 32.3	+1.2
POKR	Poker Plat Res	5.88	23		Pn	15 21 31.4	+0.4
H18K	Honhosa River	5.89	337		Pn	15 21 31.4	+0.1
TABL	Table Mountain	5.92	79		Pn	15 21 32.5	+0.6
M27K	Edge Creek, AK	5.92	60	Pn	Pn	15 21 32.7	+0.8
H19K	Roundabout Mou	5.93	346		Pn	15 21 31.9	+0.2
CHX	Chaix Hills	5.94	83		Pn	15 21 33.6	+1.6
J25K	Salcha River,	5.95	33		Pn	15 21 32.1	0.0
LOGN	Logan Glacier	6.01	75		Pn	15 21 33.9	+0.8
H17K	Granite Mounta	6.05	331		Pn	15 21 33.7	+0.2
SAMH	Samovar Hills	6.11	82		Pn	15 21 35.5	+1.2
H22K	Ishtalitna Cre	6.12	6		Pn	15 21 34.8	+0.5
H23K	Yukon River	6.20	13		Pn	15 21 35.5	0.0
PCA	Pinnacle	6.37	82		Pn	15 21 39.1	+1.2
J26L	Joseph Creek	6.41	39		Pn	15 21 38.9	+0.5
H24K	Noodor Dome	6.45	19		Pn	15 21 39.0	+0.1
PRP	Porcupine Dome	6.63	28		Pn	15 21 41.6	+0.1
I26K	Coal Creek Min	7.10	35		Pn	15 21 47.8	+0.1
O29M	Mount Kennedy	7.20	80		Pn	15 21 50.7	+1.5
F20K	Avaraart Lake	7.34	351		Pn	15 21 51.8	+0.9
F21K	Alatna River	7.41	358		Pn	15 21 52.6	+0.7
M29M	Somme Creek	7.47	63		Pn	15 21 53.8	+1.0
P29M	Windy Craggy	7.68	85		Pn	15 21 56.7	+1.1
N30M	Aishikik Lake	7.95	71		Pn	15 21 59.6	+0.2
I28M	Miner Creek	8.20	41		Pn	15 22 03.5	+0.7
H27K	Steamboat Moun	8.23	34		Pn	15 22 03.5	+0.5
U33K	Whale Pass	11.15	101		Pn	15 22 42.1	-0.4
DLBC	Dease Lake	11.83	87	P	Pn	15 22 52.8	+1.0
	comp=E,0.1nm,0.3s,baz=307,slow=12,SNR=2.0						
DLBC				S	Sn	15 24 57.2	-4.5
	comp=E,0.1nm,0.3s,baz=228,slow=24,SNR=1.5						
YKA	Yellowknife Ar	18.49	65	P	Pn	15 24 15.2	-0.3
	comp=E,0.4nm,0.6s,baz=262,slow=14,SNR=1.8						
PETK	Petropavlovsk-	27.52	278	P	P	15 25 43.5	+0.6
	comp=E,0.1nm,0.4s,baz=69,slow=14,SNR=8.5						
	comp=E,0.1nm,0.4s						
PDAR	Pinedale Array	31.32	103	P	P	15 26 19.3	+2.4
	comp=E,0.1nm,0.5s,baz=314,slow=8.9,SNR=1.8						
	comp=E,0.1nm,0.5s						
SPITS	Spitsbergen Ar	42.07	3	P	P	15 27 47.0	-0.3
	comp=E,3.7nm,1.0s,baz=302,slow=8.3,SNR=4.3						
	comp=E,3.7nm,1.0s						
ARCES	ARCESS Array B	50.91	1	P	P	15 28 56.9	+0.5
	comp=E,3.3nm,1.1s,baz=18,slow=9.5,SNR=1.4						
	comp=E,3.3nm,1.1s						
KSRS	Korea Array	53.25	283	P	P	15 29 15.0	+1.0
	comp=E,0.7nm,0.8s,baz=68,slow=19,SNR=2.8						
	comp=E,0.7nm,0.8s						
ZALV	Zalesovo Beam	57.52	324	P	P	15 29 44.7	+0.3
	comp=E,1.6nm,0.5s,baz=31,slow=6.6,SNR=5.9						
	comp=E,1.6nm,0.5s						
BVAR	Borovoye Array	62.22	332	P	P	15 30 16.4	-0.2
	comp=E,1.1nm,0.6s,baz=28,slow=6.7,SNR=6.4						
	comp=E,1.1nm,0.6s						
KURBB	Kurchatov Arra	62.29	326	P	P	15 30 16.9	-0.2
	comp=E,0.4nm,0.6s,baz=25,slow=6.2,SNR=4.5						
	comp=E,0.4nm,0.6s						
QSPA	South Pole Qui	149.64	180	PKPbc	PKPbc	15 39 41.3	-0.9
	comp=E,0.3nm,0.5s,baz=140,slow=9.2,SNR=1.2						

TAP ***21*** *15:41:20.5, 25°.25N×122°.86E, h184km, ML2.9, D*
JMA ***21*** *15:41:22.3±0.3, 25°N±3°×122°.7E±0°.8, h175km, MV2.3/10, NW OFF ISHIGAKIJIMA IS*
ISC 21 15:41:22.7±2.6**, 25°.1N**±0°.1×**122°.72E**±0°.04**, h179**km±14km**,**
n54, σ**0s.62**/97**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao	0.67	262	eP	Pn	15 41 47.8	-0.4
TWB1				eS	Sn	15 42 07.8	+0.1
JYNG	Yonagunijimaku	0.68	163	eP	Pn	15 41 48.3	0.0
YOJ	Yonaguni jima	0.69	158	P	Pn	15 41 47.9	-0.4
YOJ				S	Sn	15 42 07.0	-1.1
SXI1	Grass Mountain	0.77	269	eP	Pn	15 41 48.1	-0.7
EOS2	EOS2	0.82	213	P	Pn	15 41 49.2	+0.3
EOS2				eS	Sn	15 42 09.1	0.0
TIPB	Shuangxi	0.82	261	P	Pn	15 41 48.8	-0.4
TIPB				eS	Sn	15 42 09.6	+0.2
EOS3	EOS3	0.90	204	eP	Pn	15 41 49.9	+0.4
EOS3				eS	Sn	15 42 10.4	+0.4
NDS	Dongshan	1.03	243	eP	Pn	15 41 49.8	-0.8
NDS				eS	Sn	15 42 13.0	+1.0
EWUT	Wuta	1.08	233	P	Pn	15 41 50.5	-0.5
EWUT				eS	Sn	15 42 13.1	+0.4
FUSB	Fushanzhiwuyua	1.09	252	P	Pn	15 41 50.6	-0.5
FUSB				eS	Sn	15 42 13.6	+0.7
ENA	Nanau	1.12	233	i P	Pn	15 41 51.2	0.0
ENA				S	Sn	15 42 13.7	+0.4
ENTT	Nioudou	1.15	246	eP	Pn	15 41 51.9	+0.4
ENTT				eS	Sn	15 42 15.2	+1.5
IRIF	Iriomote-Funau	1.20	130	eP	Pn	15 41 51.8	-0.1
IRIF				eS	Sn	15 42 14.5	+0.2
LATG	Datong	1.23	243	eP	Pn	15 41 52.3	0.0
LATG				eS	Sn	15 42 16.2	+1.2
YHNB	Yeheng	1.30	251	eP	Pn	15 41 52.0	-0.8
YHNB				eS	Sn	15 42 16.6	+0.5
NSK	Sanguang	1.31	251	eP	Pn	15 41 52.0	-1.0
NSK				eS	Sn	15 42 16.3	+0.1
ETL	Fush Village	1.37	227	eP	Pn	15 41 53.3	-0.2
ETL				eS	Sn	15 42 17.6	+0.4
NACB	Ninganchiao	1.38	228	eP	Pn	15 41 52.9	-0.7
NACB				eS	Sn	15 42 17.5	+0.2
NNSB	Datong	1.39	241	eP	Pn	15 41 53.7	0.0
NNSB				eS	Sn	15 42 18.6	+0.9
NNS	Nan Shan	1.39	242	eP	Pn	15 41 53.8	0.0
HATJ	Hateruma jima	1.44	136	eP	Pn	15 41 54.8	+0.8
ETLH	Xiulin Townshi	1.44	232	eP	Pn	15 41 54.0	-0.2
ETLH				eS	Sn	15 42 18.2	-0.2
TWD	Chiawan	1.45	225	eP	Pn	15 41 53.9	-0.2
TWD				eS	Sn	15 42 18.6	+0.3
JKRS	Kuro-shima	1.46	126	eP	Pn	15 41 54.5	+0.3
JKRS				eS	Sn	15 42 19.1	+0.7
JIJ	Ishigaki jima	1.49	119	eP	Pn	15 41 54.5	0.0
JIJ				eS	Sn	15 42 18.7	-0.4
NFF	Wufeng Townshi	1.53	252	eP	Pn	15 41 53.9	-1.1
JISG	Ishigakijimahi	1.53	109	eP	Pn	15 41 54.8	-0.1
JISG				eS	Sn	15 42 19.7	-0.1
FUSS	Fushou	1.59	238	eP	Pn	15 41 55.8	-0.1
FUSS				eS	Sn	15 42 21.8	+0.5
ETM	Tongmen	1.59	225	eP	Pn	15 41 54.9	-0.7
ETM				eS	Sn	15 42 19.7	-1.2
TEYL	Yanliau Villag	1.60	220	eP	Pn	15 41 54.5	-1.1
TEYL				eS	Sn	15 42 20.4	-0.6
LXIB	Xiulin Townshi	1.61	228	eP	Pn	15 41 55.2	-0.7
LXIB				eS	Sn	15 42 21.8	+0.3
LIOB	Emei	1.62	254	eP	Pn	15 41 55.2	-0.6
WHF	Hehuan Shan	1.64	235	eP	Pn	15 41 56.7	+0.3
WHF				eS	Sn	15 42 23.0	+0.6
SHUL	Shoufeng	1.69	219	eP	Pn	15 41 56.1	-0.3
SHUL				eS	Sn	15 42 23.5	+1.0
ESL	Shilin	1.74	223	eP	Pn	15 41 56.5	-0.6
ESL				eS	Sn	15 42 22.6	-1.0
WHP	Taichung City	1.81	243	eP	Pn	15 41 57.8	-0.1
WHP				eS	Sn	15 42 24.6	-0.4
OWD	Renai	1.81	231	eP	Pn	15 41 58.3	+0.3
OWD				eS	Sn	15 42 26.3	+1.1
WUSB	Renai	1.83	233	eP	Pn	15 41 58.8	+0.6
WUSB				eS	Sn	15 42 26.3	+0.8
WARBT	Fenglin Townsh	1.84	222	eP	Pn	15 41 57.2	-0.9
WARBT				eS	Sn	15 42 24.6	-0.9
EGFH	Guangfu	1.85	220	eP	Pn	15 41 57.9	-0.3
EGFH				eS	Sn	15 42 25.4	-0.2
JTJ	Tarama	1.86	104	eS	Sn	15 42 25.5	-0.1
WCS	Beigang Elemen	1.95	238	eP	Pn	15 41 59.4	+0.2
WCS				eS	Sn	15 42 27.1	-0.3
VWDT	VWDT	1.97	227	eP	Pn	15 41 59.9	+0.5
VWDT				eS	Sn	15 42 28.4	+0.6
HGSD	Ruisui	2.00	217	eP	Pn	15 41 59.4	-0.3
HGSD				eS	Sn	15 42 29.1	+0.7
EHYH	Wanrong	2.04	218	eP	Pn	15 42 00.1	0.0
EHYH				eS	Sn	15 42 27.3	-1.9
EHY	Hungye	2.04	219	eP	Pn	15 42 00.2	0.0
SSLB	Suanglung	2.08	231	eP	Pn	15 42 00.3	-0.3
SSLB				eS	Sn	15 42 30.3	+0.3
YULB	Yu-li	2.15	218	eP	Pn	15 42 00.9	-0.5
YULB				eS	Sn	15 42 30.6	-0.7
WHYT	Xinyi Township	2.21	231	eP	Pn	15 42 03.0	+0.9
WHYT				eS	Sn	15 42 33.2	+0.6
CHKH	Chenggong	2.26	213	eP	Pn	15 42 02.1	-0.5
ALS	Alishan	2.36	228	eP	Pn	15 42 04.4	+0.3
ALS				eS	Sn	15 42 36.2	0.0
EHD	Haiduan	2.39	216	eP	Pn	15 42 05.1	+0.9
CHN5	Tsauling	2.39	232	eP	Pn	15 42 04.5	+0.3
CHN5				eS	Sn	15 42 36.4	-0.1
EDH	Donghe	2.49	212	eP	Pn	15 42 04.5	-0.7

INMG ***21*** *15:49:05.6±1.5, 38°.14N×26°.52W, h5km, ML3.7, Error ellipse: s-maj=6.1km s-min=1.5km az=34.0, #DIST_RANGE: LOCAL #IPMA_REGION: Fossa de Hirondelle*
SVSA ***21*** *15:49:05.6±1.5, 38°.14N×26°.52W, h5km, ML3.7(INMG), Error ellipse: s-maj=6.1km s-min=1.5km az=34.0, #DIST_RANGE: LOCAL #IPMA_REGION: Fossa de Hirondelle*
ISC 21 15:49:01.1±0.7**, 38°.08N**±0°.07×**26°.57W**±0°.05**, h10**km**, n65,**
σ**1s.34**/121**, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSET	Sete Cidades	0.72	110	eP	Pg	15 49 17.2	+2.3
PSET				eS	Sg	15 49 26.3	+1.9
PSET				i IAML		15 49 30.0	
PSET				i IAML		15 49 32.5	
PSET				i IAML		15 49 33.4	
PSET	Sete Cidades	0.72	110	eP	Pg	15 49 17.2	+2.3
PSET				eS	Sg	15 49 26.3	+1.9
PSET				i IAML		15 49 30.0	
PSET				i IAML		15 49 32.5	
PSET				i IAML		15 49 33.4	
PSET	Sete Cidades	0.72	110	eP	Pg	15 49 17.2	+2.3
PSET				eS	Sg	15 49 26.3	+1.9
PSET				i AML	AML	15 49 30.0	
PSET				i AML	AML	15 49 32.5	
PSET				i AML	AML	15 49 33.4	
PSCM	Serra do Cume	0.76	326	eP	Pg	15 49 17.2	+1.5
PSCM				eS	Sg	15 49 26.9	+1.4
PSCM				i IAML		15 49 30.4	
PSCM				i IAML		15 49 30.4	
PSCM				i IAML		15 49 30.6	
PSCM	Serra do Cume	0.76	326	eP	Pg	15 49 17.2	+1.5
PSCM				eS	Sg	15 49 26.9	+1.4
PSCM				i IAML		15 49 30.4	
PSCM				i IAML		15 49 30.4	
PSCM				i IAML		15 49 30.6	
PSCM	Serra do Cume	0.76	326	eP	Pg	15 49 17.2	+1.5
PSCM				eS	Sg	15 49 26.9	+1.4
PSCM				i AML	AML	15 49 30.4	
PSCM				i AML	AML	15 49 30.4	
PSCM				i AML	AML	15 49 30.6	
ADH	Angra Heroismo	0.78	318	eP	Pg	15 49 17.6	+1.5
ADH				eS	Sg	15 49 27.4	+1.3
ADH				i IAML		15 49 28.4	
ADH				i IAML		15 49 28.8	
ADH				i IAML		15 49 29.0	
ADH	Angra Heroismo	0.78	318	eP	Pg	15 49 17.6	+1.5
ADH				eS	Sg	15 49 27.4	+1.3
ADH				i IAML		15 49 28.4	
ADH				i IAML		15 49 28.8	
ADH				i IAML		15 49 29.0	
ADH	Angra Heroismo	0.78	318	eP	Pg	15 49 17.6	+1.5
ADH				eS	Sg	15 49 27.4	+1.3
ADH				i AML	AML	15 49 28.4	
ADH				i AML	AML	15 49 28.8	
ADH				i AML	AML	15 49 29.0	
PAGU	Agualva, Azore	0.84	325	eP	Pg	15 49 18.5	+1.3
PAGU				eS	Sg	15 49 29.0	+0.8
PAGU				i IAML		15 49 30.0	
PAGU				i IAML		15 49 30.0	
PAGU				i IAML		15 49 30.3	
PAGU	Agualva, Azore	0.84	325	eP	Pg	15 49 18.5	+1.3
PAGU				eS	Sg	15 49 29.0	+0.8
PAGU				i IAML		15 49 30.0	
PAGU				i IAML		15 49 30.0	
PAGU				i IAML		15 49 30.3	
PAGU	Agualva, Azore	0.84	325	eP	Pg	15 49 18.5	+1.3
PAGU				eS	Sg	15 49 29.0	+0.8
PAGU				i AML	AML	15 49 30.0	
PAGU				i AML	AML	15 49 30.0	
PAGU				i AML	AML	15 49 30.3	
CMLA	Cha da Macela	0.89	110	eP	Pg	15 49 19.4	+1.3
CMLA				eS	Sg	15 49 30.1	+0.4
CMLA				i IAML		15 49 32.5	
CMLA				i IAML		15 49 35.9	
CMLA				i IAML		15 49 36.6	
CMLA	Cha da Macela	0.89	110	eP	Pg	15 49 19.4	+1.3
CMLA				eS	Sg	15 49 30.1	+0.4
CMLA				i IAML		15 49 32.5	
CMLA				i IAML		15 49 35.9	
CMLA				i IAML		15 49 36.6	
CMLA	Cha da Macela	0.89	110	eP	Pg	15 49 19.4	+1.3
CMLA				eS	Sg	15 49 30.1	+0.4
CMLA				i AML	AML	15 49 32.5	
CMLA				i AML	AML	15 49 35.9	
CMLA				i AML	AML	15 49 36.6	
PCALD	Caldeiras da R	0.90	108	eP	Pg	15 49 19.6	+1.2
PCALD				eS	Sg	15 49 30.5	+0.3
PCALD	Caldeiras da R	0.90	108	eP	Pg	15 49 19.6	+1.2
PCALD				eS	Sg	15 49 30.5	+0.3
PSBA	Serra de Santa	0.91	320	eP	Pg	15 49 19.5	+0.9
PSBA				eS	Sg	15 49 31.0	+0.6
PSBA				i IAML		15 49 32.4	
PSBA				i IAML		15 49 33.0	
PSBA				i IAML		15 49 33.6	
PSBA	Serra de Santa	0.91	320	eP	Pg	15 49 19.5	+0.9
PSBA				eS	Sg	15 49 31.0	+0.6
PSBA				i IAML		15 49 32.4	
PSBA				i IAML		15 49 33.0	
PSBA				i IAML		15 49 33.6	
PSBA	Serra de Santa	0.91	320	eP	Pg	15 49 19.5	+0.9
PSBA				eS	Sg	15 49 31.0	+0.6
PSBA				i AML	AML	15 49 32.4	
PSBA				i AML	AML	15 49 33.0	
PSBA				i AML	AML	15 49 33.6	
PGRON	Lagoa das Cont	1.00	107	eP	Pg	15 49 20.8	+0.6
PGRON				eS	Sg	15 49 33.2	0.0
PGRON				i IAML		15 49 35.5	
PGRON				i IAML		15 49 36.3	
PGRON				i IAML		15 49 40.5	
PGRON	Lagoa das Cont	1.00	107	eP	Pg	15 49 20.8	+0.6
PGRON				eS	Sg	15 49 33.2	0.0
PGRON				i IAML		15 49 35.5	
PGRON				i IAML		15 49 36.3	
PGRON				i IAML		15 49 40.5	
PGRON	Lagoa das Cont	1.00	107	eP	Pg	15 49 20.8	+0.6
PGRON				eS	Sg	15 49 33.2	0.0
PGRON				i AML	AML	15 49 35.5	
PGRON				i AML	AML	15 49 36.3	
PGRON				i AML	AML	15 49 40.5	
BART	Pico Bartolome	1.15	105	eP	Pb	15 49 22.9	-0.2
BART				eS	Sg	15 49 36.8	-1.3
BART				i IAML		15 49 38.4	
BART				i IAML		15 49 40.6	
BART				i IAML		15 49 41.1	
BART	Pico Bartolome	1.15	105	eP	Pb	15 49 22.9	-0.2
BART				eS	Sg	15 49 36.8	-1.3
BART				i IAML		15 49 38.4	
BART				i IAML		15 49 40.6	
BART				i IAML		15 49 41.1	
BART	Pico Bartolome	1.15	105	eP	Pb	15 49 22.9	-0.2
BART				eS	Sg	15 49 36.8	-1.3
BART				i AML	AML	15 49 38.4	
BART				i AML	AML	15 49 40.6	
BART				i AML	AML	15 49 41.1	
PID	Ribeirinha	1.27	287	eP	Pn	15 49 25.9	+1.0
PID				i IAML		15 49 37.7	
PID				eS	Sb	15 49 40.8	-0.7
PID				i IAML		15 49 46.4	
PID				i IAML		15 49 46.5	
PID	Ribeirinha	1.27	287	eP	Pn	15 49 25.9	+1.0
PID				i IAML		15 49 37.7	
PID				eS	Sb	15 49 40.8	-0.7
PID				i IAML		15 49 46.4	
PID				i IAML		15 49 46.5	
PID	Ribeirinha	1.27	287	eP	Pn	15 49 25.9	+1.0
PID				i AML	AML	15 49 37.7	
PID				eS	Sb	15 49 40.8	-0.7
PID				i AML	AML	15 49 46.4	
PID				i AML	AML	15 49 46.5	
PMAN	Manadas	1.31	295	eP	Pn	15 49 26.0	+0.5
PMAN				eS	Sb	15 49 41.2	-1.5
PMAN				i IAML		15 49 41.8	
PMAN				i IAML		15 49 42.6	
PMAN				i IAML		15 49 51.7	
PMAN	Manadas	1.31	295	eP	Pn	15 49 26.0	+0.5
PMAN				eS	Sb	15 49 41.2	-1.5
PMAN				i IAML		15 49 41.8	
PMAN				i IAML		15 49 42.6	
PMAN				i IAML		15 49 51.7	
PMAN	Manadas	1.31	295	eP	Pn	15 49 26.0	+0.5
PMAN				eS	Sb	15 49 41.2	-1.5
PMAN				i AML	AML	15 49 41.8	
PMAN				i AML	AML	15 49 42.6	
PMAN				i AML	AML	15 49 51.7	
PPNO	Prainha do Nor	1.39	287	eP	Pn	15 49 27.2	+0.7
PPNO				eS	Sn	15 49 43.1	-1.8
PPNO				i IAML		15 49 45.8	
PPNO				i IAML		15 49 50.3	
PPNO	Prainha do Nor	1.39	287	eP	Pn	15 49 27.2	+0.7
PPNO				eS	Sn	15 49 43.1	-1.8
PPNO				i IAML		15 49 45.8	
PPNO				i IAML		15 49 50.3	
PPNO	Prainha do Nor	1.39	287	eP	Pn	15 49 27.2	+0.7
PPNO				eS	Sn	15 49 43.1	-1.8
PPNO				i AML	AML	15 49 45.8	
PPNO				i AML	AML	15 49 50.3	
PGRA	Graciosa	1.46	311	eP	Pg	15 49 40.1	+11
PGRA				eS	Sg	15 49 57.8	+10
PGRA				i IAML		15 50 08.2	
PGRA				i IAML		15 50 08.3	
PGRA				i IAML		15 50 08.6	
PGRA	Graciosa	1.46	311	eP	Pg	15 49 40.1	+11
PGRA				eS	Sg	15 49 57.8	+10
PGRA				i IAML		15 50 08.2	
PGRA				i IAML		15 50 08.3	
PGRA				i IAML		15 50 08.6	
PGRA	Graciosa	1.46	311	eP	Pg	15 49 40.1	+11
PGRA				eS	Sg	15 49 57.8	+10
PGRA				i AML	AML	15 50 08.2	
PGRA				i AML	AML	15 50 08.3	
PGRA				i AML	AML	15 50 08.6	
ROSA	Rosais	1.46	297	eP	Pn	15 49 27.6	+0.2
ROSA				eS	Sn	15 49 45.1	-1.5
ROSA				i IAML		15 49 46.3	
ROSA				i IAML		15 49 46.3	
ROSA				i IAML		15 49 49.5	
ROSA	Rosais	1.46	297	eP	Pn	15 49 27.6	+0.2
ROSA				eS	Sn	15 49 45.1	-1.5
ROSA				i IAML		15 49 46.3	
ROSA				i IAML		15 49 46.3	
ROSA				i IAML		15 49 49.5	
ROSA	Rosais	1.46	297	eP	Pn	15 49 27.6	+0.2
ROSA				eS	Sn	15 49 45.1	-1.5
ROSA				i AML	AML	15 49 46.3	
ROSA				i AML	AML	15 49 46.3	
ROSA				i AML	AML	15 49 49.5	
SRBC	Serra Branca	1.50	310	eP	Pn	15 49 26.6	-1.4
SRBC				eS	Sn	15 49 44.0	-3.6
SRBC				i IAML		15 49 45.7	
SRBC				i IAML		15 49 49.5	
SRBC				i IAML		15 49 52.1	
SRBC	Serra Branca	1.50	310	eP	Pn	15 49 26.6	-1.4
SRBC				eS	Sn	15 49 44.0	-3.6
SRBC				i IAML		15 49 45.7	
SRBC				i IAML		15 49 49.5	
SRBC				i IAML		15 49 52.1	
SRBC	Serra Branca	1.50	310	eP	Pn	15 49 26.6	-1.4
SRBC				eS	Sn	15 49 44.0	-3.6
SRBC				i AML	AML	15 49 45.7	
SRBC				i AML	AML	15 49 49.5	
SRBC				i AML	AML	15 49 52.1	
PICO	Pico	1.52	287	eP	Pn	15 49 28.9	+0.6
PICO				eS	Sn	15 49 46.6	-1.5
PICO				i IAML		15 49 47.8	
PICO				i IAML		15 49 48.7	
PICO				i IAML		15 49 49.8	
PICO	Pico	1.52	287	eP	Pn	15 49 28.9	+0.6
PICO				eS	Sn	15 49 46.6	-1.5
PICO				i IAML		15 49 47.8	
PICO				i IAML		15 49 48.7	
PICO				i IAML		15 49 49.8	
PICO	Pico	1.52	287	eP	Pn	15 49 28.9	+0.6
PICO				eS	Sn	15 49 46.6	-1.5
PICO				i AML	AML	15 49 47.8	
PICO				i AML	AML	15 49 48.7	
PICO				i AML	AML	15 49 49.8	
PCAN	Candelaria	1.55	285	eP	Pn	15 49 29.8	+1.0
PCAN				eS	Sn	15 49 48.5	-0.5
PCAN				i IAML		15 49 52.5	
PCAN				i IAML		15 49 55.2	
PCAN				i IAML		15 49 58.1	
PCAN	Candelaria	1.55	285	eP	Pn	15 49 29.8	+1.0
PCAN				eS	Sn	15 49 48.5	-0.5
PCAN				i IAML		15 49 52.5	
PCAN				i IAML		15 49 55.2	
PCAN				i IAML		15 49 58.1	
PCAN	Candelaria	1.55	285	eP	Pn	15 49 29.8	+1.0
PCAN				eS	Sn	15 49 48.5	-0.5
PCAN				i AML	AML	15 49 52.5	
PCAN				i AML	AML	15 49 55.2	
PCAN				i AML	AML	15 49 58.1	
PSMA	Santa Maria	1.58	133	eP	Pn	15 49 29.8	+0.7
PSMA				eS	Sn	15 49 48.0	-1.5
PSMA				i IAML		15 49 48.9	
PSMA				i IAML		15 49 49.7	
PSMA				i IAML		15 49 49.8	
PSMA	Santa Maria	1.58	133	eP	Pn	15 49 29.8	+0.7
PSMA				eS	Sn	15 49 48.0	-1.5
PSMA				i IAML		15 49 48.9	
PSMA				i IAML		15 49 49.7	
PSMA				i IAML		15 49 49.8	
PSMA	Santa Maria	1.58	133	eP	Pn	15 49 29.8	+0.7
PSMA				eS	Sn	15 49 48.0	-1.5
PSMA				i AML	AML	15 49 48.9	
PSMA				i AML	AML	15 49 49.7	
PSMA				i AML	AML	15 49 49.8	
PSMN	Pico do Norte,	1.61	131	eP	Pn	15 49 29.9	+0.4
PSMN				eS	Sn	15 49 47.9	-2.4
PSMN				i IAML		15 49 49.4	
PSMN				i IAML		15 49 51.2	
PSMN				i IAML		15 49 51.5	
PSMN	Pico do Norte,	1.61	131	eP	Pn	15 49 29.9	+0.4
PSMN				eS	Sn	15 49 47.9	-2.4
PSMN				i IAML		15 49 49.4	
PSMN				i IAML		15 49 51.2	
PSMN				i IAML		15 49 51.5	
PSMN	Pico do Norte,	1.61	131	eP	Pn	15 49 29.9	+0.4
PSMN				eS	Sn	15 49 47.9	-2.4
PSMN				i AML	AML	15 49 49.4	
PSMN				i AML	AML	15 49 51.2	
PSMN				i AML	AML	15 49 51.5	
HOR	Horta	1.68	286	eP	Pn	15 49 30.7	+0.2
HOR				eS	Sn	15 49 50.4	-1.6
HOR				i IAML		15 49 52.7	
HOR				i IAML		15 49 52.8	
HOR				i IAML		15 49 53.9	
HOR	Horta	1.68	286	eP	Pn	15 49 30.7	+0.2
HOR				eS	Sn	15 49 50.4	-1.6
HOR				i IAML		15 49 52.7	
HOR				i IAML		15 49 52.8	
HOR				i IAML		15 49 53.9	
HOR	Horta	1.68	286	eP	Pn	15 49 30.7	+0.2
HOR				eS	Sn	15 49 50.4	-1.6
HOR				i AML	AML	15 49 52.7	
HOR				i AML	AML	15 49 52.8	
HOR				i AML	AML	15 49 53.9	
CALA	Caldeira	1.75	287	eP	Pn	15 49 32.1	+0.6

CALA				*e*S	Sn	15 49 52.6	-1.2
CALA				*i* IAML		15 49 58.6	
CALA				*i* IAML		15 49 58.7	
CALA				*i* IAML		15 49 58.9	
CALA	Caldeira	1.75	287	*e*P	Pn	15 49 32.1	+0.6
CALA				*e*S	Sn	15 49 52.6	-1.2
CALA				*i* IAML		15 49 58.6	
CALA				*i* IAML		15 49 58.7	
CALA				*i* IAML		15 49 58.9	
CALA	Caldeira	1.75	287	*e*P	Pn	15 49 32.1	+0.6
CALA				*e*S	Sn	15 49 52.6	-1.2
CALA				*i* AML	AML	15 49 58.6	
CALA				*i* AML	AML	15 49 58.7	
CALA				*i* AML	AML	15 49 58.9	
PCED	Cedros	1.76	289	*e*P	Pn	15 49 31.8	+0.2
PCED				*e*S	Sn	15 49 52.1	-2.0
PCED				*i* IAML		15 49 52.5	
PCED				*i* IAML		15 49 53.3	
PCED				*i* IAML		15 49 55.8	
PCED	Cedros	1.76	289	*e*P	Pn	15 49 31.8	+0.2
PCED				*e*S	Sn	15 49 52.1	-2.0
PCED				*i* IAML		15 49 52.5	
PCED				*i* IAML		15 49 53.3	
PCED				*i* IAML		15 49 55.8	
PCED	Cedros	1.76	289	*e*P	Pn	15 49 31.8	+0.2
PCED				*e*S	Sn	15 49 52.1	-2.0
PCED				*i* AML	AML	15 49 52.5	
PCED				*i* AML	AML	15 49 53.3	
PCED				*i* AML	AML	15 49 55.8	

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*IDC **21** 15:53:10.0±1.8, 50°.76N×175°.47E, h0^{km}, mb3.4/6, mbtmp3.5/8, ML3.0/2, MS2.0/1, Error ellipse: s-maj=40.9km s-min=22.5km az=10.0*

*NEIC **21** 15:53:11.0±1.3, 50°.6N±0°.1×175°.3E±0°.1, h18^{km}±7^{km}, mb3.8/31, ML3.5/6, ML3.6(AEIC), Error ellipse: s-maj=16.6km s-min=8.0km az=200.0*

*AEIC **21** 15:53:11.2±2.1, 50°.44N±0°.10×175°.32E±0°.10, h22^{km}±7^{km}, Error ellipse: s-maj=14.9km s-min=8.5km az=197.0*

ISC 21 15:53:09.8±0.9**, 50°.6N**±0°.1×**175°.38E**±0°.05**, h10**^{km}**, n65, σ**$1^{s}.44$/66**, mb3.8**/17**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHEM	Shemya Is, Ala	2.31	340	Pn	Pn	15 53 47.5	-0.3
SHEM				IAML		15 54 16.6	
	comp=E,187nm,0.2s						
SHEM	Shemya Is, Ala	2.31	340	Pn	Pn	15 53 47.5	-0.3
	comp=E,9.9nm,0.3s,baz=167,slow=6.1,SNR=7.9						
SHEM				Sn	Sn	15 54 15.6	-0.7
	comp=E,58nm,0.3s,baz=270,slow=20,SNR=6.8						
SHEM				LR	LR	15 54 35.2	
	comp=E,32nm,19.5s,baz=285,slow=40						
	comp=E,24nm,0.3s						
SMY	Shemya	2.31	340		Pn	15 53 47.6	-0.2
SMY				Sn	Sn	15 54 15.0	-1.2
SMY				IAML		15 54 16.4	
	comp=E,271nm,0.4s						
SMY				IAML		15 54 20.9	
	comp=N,247nm,0.4s						
LSNW	Little Sitkin	2.42	53		Pn	15 53 49.5	+0.1
LSSE	Little Sitkin	2.43	54		Pn	15 53 49.6	+0.2
LSPA	Little Sitkin	2.44	54		Pn	15 53 50.0	+0.3
AMKA	Amchitka	2.61	70		Pn	15 53 50.9	-1.0
AMKA				Sn	Sn	15 54 18.9	-4.8
CETU	Semis' Tuman	2.94	60		Pn	15 53 57.4	+0.9
CERB	Semis' Cerberu	3.00	61		Pn	15 53 58.6	+1.3
CERB					Sn	15 54 31.9	-1.4
CEAP	Semis' Anvil P	3.00	60		Pn	15 53 58.1	+0.7
CEPE	Semis' Perret	3.02	61		Pn	15 53 58.3	+0.6
GASW	Gareloi Southw	3.83	69		Sn	15 54 50.9	-2.8
GANO	Gareloi North	3.87	69		Pn	15 54 09.6	+0.3
GANE	Gareloi Northe	3.88	69		Pn	15 54 10.0	+0.5
GANE					Sn	15 54 53.2	-1.9
TASE	Tanaga Southea	4.33	70		Pn	15 54 16.1	+0.4
KICM	Kanaga Island	4.86	71		Pn	15 54 23.7	+0.9
KIWB	Kanaga Island	4.87	72		Pn	15 54 23.4	+0.4
KIRH	Kanaga Island	4.91	71		Pn	15 54 24.3	+0.7
ADK	Adak	5.16	72		Pn	15 54 27.2	+0.3
ADK				IAML		15 57 48.0	
	comp=N,40nm,0.4s						
ADAG	Mount Adagdak	5.23	71		Pn	15 54 28.4	+0.5
GSCK	Great Sitkin C	5.50	71		Pn	15 54 32.0	+0.3
ATKA	Atka Island	6.73	72		Pn	15 54 48.4	-0.1
PETK	Petropavlovsk-	11.23	290	Pn	Pn	15 55 51.6	+1.4
	comp=N,0.3nm,0.3s,baz=94,slow=19,SNR=2.8						
PETK				Sn	Sn	15 57 49.9	-5.9
	comp=N,0.2nm,0.3s,baz=98,slow=16,SNR=4.4						
	comp=N,1.2nm,0.6s						
MAPS	Pakushin South	11.32	67		Pn	15 55 51.9	+0.5
UNV	Unalaska Valle	11.58	67	Pn	Pn	15 55 55.5	+0.5
LVA	Lava Point	11.91	65	Pn	Pn	15 56 00.3	+0.8
K13K	Kusilvak Mount	15.81	36	P	P	15 56 55.8	-0.2
K13K				IAmb	IAmb	15 57 17.1	
	comp=Z,12nm,1.2s						
N14K	Kuskokwak Cree	16.00	45	P	P	15 56 57.9	-0.3
M14K	Bethel	16.26	43	P	P	15 57 02.6	+1.5
O15K	Ungalikthiuk R	16.58	49	P	Pn	15 57 04.5	+2.4
N15K	Kwethluk River	16.83	46	P	P	15 57 08.7	+1.3
N15K				IAmb	IAmb	15 57 10.1	
	comp=Z,14nm,1.4s						
K15K	Wolf Creek Mou	17.23	38	P	P	15 57 13.2	+1.4
K15K				IAmb	IAmb	15 57 14.8	
	comp=Z,6.3nm,0.8s						
M16K	Timber Creek	17.70	44	P	Pn	15 57 17.5	+1.4
M16K				IAmb	IAmb	15 57 57.0	
	comp=Z,10nm,1.4s						
L16K	Owhat River	17.77	42	P	Pn	15 57 18.0	+1.0
N17K	Nushagak Hills	18.30	46	P	P	15 57 25.1	+1.5
M17K	Holitna River	18.52	44	P	P	15 57 27.1	+1.1
M17K				IAmb	IAmb	15 58 00.1	
	comp=Z,7.6nm,1.2s						
K17K	Iditarod	18.73	40	P	P	15 57 25.9	-2.4
K17K				IAmb	IAmb	15 57 39.3	
	comp=Z,7.0nm,1.3s						
O18K	Koktuh Hills	19.03	49	P	P	15 57 30.0	-1.7
L18K	Granite Mounta	19.18	42	P	P	15 57 33.1	-0.2
H17K	Granite Mounta	19.32	33	P	P	15 57 34.0	-0.8
CNPM	China Poot	20.91	52	P	P	15 57 52.0	-0.2
J20K	Nowinta River	21.06	38	P	P	15 57 54.2	+0.6
SUA	Susitna One	21.58	47	P	P	15 58 00.2	+0.8
CAST	Castle Rocks	21.60	41	P	P	15 57 59.6	+0.2
CAST				IAmb	IAmb	15 58 01.5	
	comp=Z,3.5nm,0.8s						
RND	Reindeer	22.97	42	P	P	15 58 12.9	-1.2
I23K	Minto, Yukon-K	23.34	38	P	P	15 58 17.4	-0.4
I23K				IAmb	IAmb	15 58 21.1	
	comp=Z,3.8nm,1.3s						
E22K	Anaktuvuk Pass	23.80	30	P	P	15 58 22.1	-0.2
E22K				IAmb	IAmb	15 58 25.4	
	comp=Z,1.7nm,0.6s						
ILAR	Eielson Array	24.20	40	P	P	15 58 25.1	-1.1
	comp=Z,0.3nm,0.5s,baz=248,slow=8.4,SNR=6.1						
	comp=Z,0.3nm,0.5s						
PAX	Paxson	24.34	44	P	P	15 58 26.1	-1.4
PAX				IAmb	IAmb	15 58 30.5	
	comp=Z,2.4nm,0.9s						
TOLK	Toolik Lake Re	24.77	30	IAmb	IAmb	15 58 34.9	
	comp=Z,2.3nm,0.6s						
SCRK	Sand Creek	25.21	42	P	P	15 58 35.2	-0.2
SCRK				IAmb	IAmb	15 58 37.9	
	comp=Z,1.9nm,0.8s						
J26L	Joseph Creek	25.51	41	P	P	15 58 36.6	-1.4
J26L				IAmb	IAmb	15 58 39.8	
	comp=Z,1.4nm,0.6s						
K27K	Chicken	26.04	43	IAmb	IAmb	15 59 22.1	
	comp=Z,3.4nm,1.4s						
I28M	Miner Creek	27.22	40	P	P	15 58 51.5	-2.0
I28M				IAmb	IAmb	15 58 54.8	
	comp=Z,2.2nm,0.9s						
H31M	Peel River	29.57	40	P	P	15 59 13.1	-1.2
H31M				IAmb	IAmb	15 59 22.1	
	comp=Z,2.2nm,1.1s						
MMPY	Sheldon Lake,	30.80	46	P	P	15 59 24.4	-0.8
MMPY				IAmb	IAmb	15 59 59.7	
	comp=Z,2.7nm,1.3s						
JHJ2	Mitsune	31.33	250	P	P	15 59 29.4	-0.8
H11N2	WAKE ISLAND Hy	31.50	195	T	T	16 32 43.0	
	baz=10						
H11N3	WAKE ISLAND Hy	31.51	195	T	T	16 32 46.3	
	baz=10						
H11N1	WAKE ISLAND Hy	31.52	195	T	T	16 32 44.6	
	baz=10						
YKA	Yellowknife Ar	38.43	45	P	P	16 00 31.7	+0.7
	comp=Z,1.4nm,0.9s,baz=292,slow=9.5,SNR=4.6						
	comp=Z,1.4nm,0.9s						
KURBB	Kurchatov Arra	56.95	311	P	P	16 02 56.1	+1.2
	comp=Z,0.6nm,0.6s,baz=47,slow=6.7,SNR=7.2						
	comp=Z,0.6nm,0.6s						
MKAR	Makanchi Array	57.59	306	P	P	16 03 00.5	+1.1
	comp=Z,0.2nm,0.6s,baz=36,slow=7.6,SNR=2.1						
	comp=Z,0.2nm,0.6s						
BVAR	Borovoye Array	59.05	317	P	P	16 03 10.6	+0.9
	comp=Z,0.3nm,0.4s,baz=42,slow=6.7,SNR=2.4						
	comp=Z,0.3nm,0.4s						
TXAR	Lajitas Array	62.42	77	P	P	16 03 34.4	+1.4
	comp=Z,0.1nm,0.6s,baz=329,slow=7.8,SNR=2.1						
	comp=Z,0.1nm,0.6s						

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*IDC **21** 15:53:55.3±1.1, 30°.89S×177°.81W, h0^{km}, mb4.0/4, mbtmp4.1/5, ML3.0/1, MS3.2/1, Error ellipse: s-maj=32.2km s-min=20.8km az=103.0*

*NEIC **21** 15:54:00.1±0.7, 30°.72S±0°.06×178°.2W±0°.2, h35^{km}±2^{km}, mb4.4/10, Error ellipse: s-maj=23.7km s-min=9.5km az=258.0*

ISC 21 15:54:00.7±0.8**, 30°.69S**±0°.07×**178°.1W**±0°.1**, h46**^{km}**, n31, σ**$1^{s}.77$/27**, mb4.3**/9**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.44	7		Pn	15 54 25.9	+1.5
RAO				Sn	Sn	15 54 42.6	+0.4
RAO	Raoul Island	1.44	7	Pn	Pn	15 54 26.3	+1.9
	214nm,0.3s,baz=64,slow=16,SNR=14						
RAO				Sn	Sn	15 54 40.8	-1.3
	907nm,0.3s,baz=211,slow=21,SNR=11						
URZ	Urewera	8.52	206	Pn	Pn	15 55 59.0	-2.4
	0.2nm,0.3s,baz=333,slow=7.7,SNR=2.0						
URZ				Sn	Sn	15 57 36.1	-0.1
	1.6nm,0.3s,baz=148,slow=15,SNR=6.7						
	16nm,1.2s						
NIUE	Niue	13.73	35	Pn	Pn	15 57 10.4	-2.5
DZM	Mont Dzumac	16.27	298	LR	LR	16 01 47.3	
	comp=Z,82nm,19.7s,baz=191,slow=28						
SANVU	Saraoutou	20.28	315	P	P	15 58 28.8	-3.8
TOO	Toolangi	30.76	247	P	P	16 00 12.0	+0.2
TOO				IAmb	IAmb	16 00 23.0	
	comp=Z,9.8nm,1.5s						
CTAO	Charters Tower	33.75	280	P	P	16 00 38.3	+0.1
CTAO				IAmb	IAmb	16 01 03.6	
	comp=Z,8.3nm,1.1s						
STKA	Stephens Creek	34.32	257	P	P	16 00 42.9	-0.1
STKA	Stephens Creek	34.32	257	P	P	16 00 46.9	+3.9
	comp=Z,7.3nm,0.9s,baz=100,slow=12,SNR=11						
	comp=Z,7.3nm,0.9s						
BBOO	Buckleboo	38.80	255	P	P	16 01 19.9	-1.2
BBOO				IAmb	IAmb	16 01 25.9	
	comp=Z,7.0nm,0.8s						
AS31	Alice Springs	43.00	267	P	P	16 01 54.5	-1.4
ASAR	Alice Springs	43.00	267	P	P	16 01 58.1	+2.3
	comp=Z,0.6nm,0.6s,baz=23,slow=33,SNR=4.1						
	comp=Z,0.6nm,0.6s						
WR8	Warramunga Arr	43.87	273	P	P	16 02 02.7	-0.2
WRA	Warramunga Arr	44.01	273	P	P	16 02 06.1	+2.1
	comp=Z,1.5nm,0.4s,baz=111,slow=8.0,SNR=21						
	comp=Z,1.5nm,0.4s						
WB0	Warramunga Arr	44.04	273	P	P	16 02 02.8	-1.4
WB0				IAmb	IAmb	16 02 16.2	
	comp=Z,2.0nm,0.8s						
KNRA	Kununurra	50.63	275	P	P	16 02 54.1	-1.4
KNRA				IAmb	IAmb	16 02 57.1	
	comp=Z,5.9nm,0.9s						
QSPA	South Pole Qui	59.42	180	P	P	16 03 58.8	+0.3
QSPA				IAmb	IAmb	16 04 10.0	
	comp=Z,2.8nm,0.9s						
QSPA	South Pole Qui	59.42	180	P	P	16 03 58.4	0.0
	comp=Z,0.6nm,0.7s,baz=235,slow=2.1,SNR=5.7						
	comp=Z,0.6nm,0.7s						
H03S2	Juan Fernandez	80.39	124	T	T	17 35 12.0	
	baz=238,slow=74,SNR=5.0						
H03S1	Juan Fernandez	80.40	124	T	T	17 35 14.8	
	baz=238,slow=74,SNR=4.1						
H03S3	Juan Fernandez	80.40	124	T	T	17 35 26.6	
	baz=238,slow=74,SNR=4.0						
H03N3	Juan Fernandez	80.58	123	T	T	17 35 36.2	
	baz=240,slow=78						
H03N2	Juan Fernandez	80.58	123	T	T	17 35 28.4	
	baz=240,slow=78						
H03N1	Juan Fernandez	80.59	123	T	T	17 35 35.0	
	baz=240,slow=78						
BVAR	Borovoye Array	126.54	316	PKP	PKiKP	16 13 00.6	+1.8
	comp=Z,0.7nm,0.4s,baz=256,slow=41,SNR=1.9						
FINES	FINESS Array B	145.38	340	PKPbc	PKPab	16 13 33.9	+0.9
	comp=Z,1.4nm,0.4s,baz=66,slow=3.1,SNR=23						
HFS	Hagfors	149.51	348	PKPbc	PKiKP	16 13 46.0	+0.7
	comp=Z,1.3nm,0.8s,baz=46,slow=8.4,SNR=1.6						
AKASG	Malin Array Be	151.47	322	PKPbc	PKiKP	16 13 51.4	+1.8
	comp=Z,0.6nm,0.6s,baz=52,slow=2.1,SNR=4.7						
BRTR	Keskin Array B	152.65	298	PKPbc	PKiKP	16 13 53.5	+0.9
	comp=Z,0.5nm,0.6s,baz=41,slow=4.6,SNR=2.2						
TORD	Torodi Ar. Bea	162.54	179	PKPab	PKPab	16 14 46.7	+0.7
	comp=Z,51nm,0.3s,baz=192,slow=2.8,SNR=1.5						

IDC 21 16:05:44.8±3.2**, 29°.72S**×**177°.99W, h0**^{km}**, mb3.5**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=91.3km s-min=39.8km az=39.0, Kermadec Islands**

IDC 21 15:58:29.1±3.8**, 2°.40S**×**139°.06E, h0**^{km}**, mb3.2**/3**, mbtmp3.3**/4**, ML2.8**/1**, MS3.9**/1**, Error ellipse: s-maj=125.2km s-min=30.7km az=90.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.04	194	P	P	16 02 42.5	+0.6
	baz=17,slow=12,SNR=2.8						
	0.5nm,0.6s						
FITZ	Fitzroy Crossi	20.41	219	P	P	16 03 07.0	-1.1
	2.1nm,0.9s,baz=59,slow=12,SNR=1.3						
	2.1nm,0.9s						
ASAR	Alice Springs	21.72	193	P	P	16 03 21.9	-0.3
	0.3nm,0.5s,baz=20,slow=10,SNR=8.0						
	0.3nm,0.5s						
PSI	Prapat	40.46	277	LR	LR	16 24 53.2	
	comp=Z,175nm,19.7s,baz=172,slow=39						
MKAR	Makanchi Array	69.76	322	P	P	16 09 41.6	+0.4
	0.2nm,0.7s,baz=126,slow=5.9,SNR=2.6						
	0.2nm,0.7s						

IDC 21 16:05:44.8±3.2**, 29°.72S**×**177°.99W, h0**^{km}**, mb3.5**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=91.3km s-min=39.8km az=39.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.16	266	P	P	16 13 46.5	-0.9
	0.4nm,0.8s,baz=106,slow=7.2,SNR=5.8						
	0.4nm,0.8s						
WRA	Warramunga Arr	44.08	271	P	P	16 13 55.8	+0.9
	0.2nm,0.3s,baz=112,slow=7.7,SNR=2.1						
	0.2nm,0.3s						
QSPA	South Pole Qui	60.39	180	P	P	16 15 55.7	+0.1
	0.6nm,0.7s,baz=0.0,slow=3.0,SNR=6.1						
	0.6nm,0.7s						
FINES	FINESS Array B	144.51	340	PKP	PKPbc	16 25 21.6	+0.5
	1.5nm,0.9s,baz=31,slow=3.2,SNR=4.5						

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*IDC **21** 16:06:23.3±1.1, 29°.37S×177°.95W, h0^{km}, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=18.3km s-min=14.6km az=174.0*

ISC 21 16:06:22.7±2.3**, 29°.1S**±0°.4×**177°.7W**±0°.3**, h10**^{km}**, n6, σ**$0^{s}.43$/5**, mb3.8**/4**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.25	236	Pn	Pg	16 06 32.3	+4.6
	70nm,0.3s,baz=197,slow=19,SNR=1.8						
STKA	Stephens Creek	35.05	255	P	P	16 13 15.6	-0.3
	1.8nm,0.8s,baz=111,slow=14,SNR=2.2						
	1.8nm,0.8s						
ASAR	Alice Springs	43.47	265	P	P	16 14 26.4	0.0
	0.4nm,0.6s,baz=106,slow=7.2,SNR=5.7						
	0.4nm,0.6s						
WRA	Warramunga Arr	44.34	271	P	P	16 14 33.8	+0.5
	0.3nm,0.3s,baz=113,slow=8.1,SNR=2.5						
	0.3nm,0.3s						
QSPA	South Pole Qui	60.99	180	P	P	16 16 36.2	+0.1
	1.0nm,0.6s,baz=24,slow=4.2,SNR=7.5						
	1.0nm,0.6s						
FINES	FINESS Array B	144.03	341	PKP	PKiKP	16 26 01.2	-0.2
	2.6nm,1.0s,baz=54,slow=2.4,SNR=1.6						

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*IDC **21** 16:27:16.3±1.1, 48°.92S×124°.06E, h0^{km}, mb3.9/6, mbtmp4.0/7, ML2.7/1, MS3.7/19, Error ellipse: s-maj=49.0km s-min=19.3km az=102.0*

ISC 21 16:27:17.8±1.0**, 48°.9S**±0°.1×**124°.1E**±0°.3**, h10**^{km}**, n27, σ**$0^{s}.51$/7**, mb3.9**/6**, MS3.7**/18**, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W1	Cape Leeuwin H	15.82	329	T	T	16 47 08.1	
	baz=155,slow=75,SNR=59						
H01W2	Cape Leeuwin H	15.82	329	T	T	16 47 07.0	
	baz=155,slow=75,SNR=69						
H01W3	Cape Leeuwin H	15.84	329	T	T	16 47 13.2	
	baz=155,slow=75,SNR=69						
NWAO	Narrogin (SRO)	16.79	340	Pn	Pn	16 31 13.1	+0.1
	1.2nm,0.3s,baz=156,slow=13,SNR=11						
NWAO				LR	LR	16 36 18.4	
	comp=Z,317nm,20.2s,baz=102,slow=32						
	27nm,0.9s						
STKA	Stephens Creek	21.57	44	P	P	16 32 07.9	+0.5
	2.4nm,0.9s,baz=207,slow=11,SNR=3.7						
STKA				LR	LR	16 38 48.6	
	comp=Z,55nm,20.7s,baz=210,slow=32						
	2.4nm,0.9s						
ASAR	Alice Springs	26.39	21	P	P	16 32 53.8	-0.6
	2.2nm,0.8s,baz=200,slow=8.8,SNR=17						
	2.2nm,0.8s						
WRA	Warramunga Arr	30.08	20	P	P	16 33 26.8	-0.5
	0.4nm,0.8s,baz=196,slow=7.9,SNR=1.5						
	0.4nm,0.8s						
FITZ	Fitzroy Crossi	30.78	3	LR	LR	16 44 41.7	
	comp=Z,178nm,20.9s,baz=186,slow=34						
VNDA	Vanda	32.10	165	LR	LR	16 45 38.5	
	comp=Z,266nm,20.1s,baz=325,slow=34						
RPZ	Rata Peaks	32.46	99	LR	LR	16 42 37.7	
	comp=Z,101nm,21.2s,baz=150,slow=28						
BATI	Baumata	38.60	359	LR	LR	16 51 21.3	
	comp=Z,163nm,18.0s,baz=204,slow=37						
QSPA	South Pole Qui	41.19	180	P	P	16 35 02.4	+0.1
	3.3nm,1.0s,baz=340,slow=7.8,SNR=5.9						
QSPA				LR	LR	16 51 36.3	
	comp=Z,197nm,18.3s,baz=332,slow=35						
	3.3nm,1.0s						
KAPI	Kappang	43.91	354	LR	LR	16 52 00.6	
	comp=Z,45nm,21.1s,baz=168,slow=34						
HNR	Honiara	49.50	50	LR	LR	16 54 49.1	
	comp=Z,50nm,20.0s,baz=235,slow=33						
SNAA	Sanae	53.99	198	P	P	16 36 41.3	-0.1
	3.7nm,0.9s,baz=140,slow=10,SNR=6.0						
SNAA				LR	LR	16 58 41.4	
	comp=Z,60nm,19.0s,baz=85,slow=35						
	3.7nm,0.9s						
DAV	Davao City (W)	55.78	2	LR	LR	17 01 29.3	
	comp=Z,34nm,19.5s,baz=154,slow=37						
H08S2	Diego Garcia H	59.62	296	T	T	17 41 42.6	
	baz=144,slow=76,SNR=8.7						
H08S1	Diego Carcia H	59.63	296	T	T	17 41 43.3	
	baz=144,slow=76,SNR=8.6						
H08S3	Diego Garcia H	59.64	296	T	T	17 41 44.0	
	baz=144,slow=76,SNR=9.4						
PMSA	Palmer Station	66.46	176	LR	LR	17 05 42.9	
	comp=Z,43nm,21.6s,baz=206,slow=35						
PALK	Pallekele	67.59	313	LR	LR	17 01 18.5	
	comp=Z,63nm,19.7s,baz=136,slow=30						
CMAR	Chiang Mai Arr	70.72	335	P	P	16 38 34.1	+0.2
	0.8nm,0.8s,baz=181,slow=5.9,SNR=5.7						
CMAR				LR	LR	17 08 00.4	
	comp=Z,44nm,20.3s,baz=180,slow=35						
	0.8nm,0.8s						
LBTB	Lobatse	76.81	247	LR	LR	17 05 06.6	
	comp=Z,74nm,18.8s,baz=133,slow=30						
BRDH	Bariadhala	76.94	329	LR	LR	17 10 47.7	
	comp=Z,73nm,20.6s,baz=134,slow=34						
MJAR	Matsushiro Arr	86.03	11	LR	LR	17 14 34.6	
	comp=Z,23nm,21.9s,baz=202,slow=33						
TSUM	Tsumeb	86.03	245	LR	LR	17 10 45.0	
	comp=Z,24nm,20.5s,baz=113,slow=30						
PLCA	Paso Flores	89.79	169	LR	LR	17 17 54.2	
	comp=Z,36nm,19.9s,baz=224,slow=34						

IDC 21 16:35:11.8±1.5**, 30°.69S**×**177°.77W, h0**^{km}**, mb3.7**/3**, mbtmp3.7**/3**, Error ellipse: s-maj=40.9km s-min=21.2km az=89.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.43	355	Pn	Pg	16 35 39.1	-0.1
	51nm,0.3s,baz=104,slow=22,SNR=1.9						
RAO				Sn	Sn	16 36 00.7	+2.2
	140nm,0.3s,baz=326,slow=23,SNR=5.7						
ASAR	Alice Springs	43.29	267	P	P	16 43 15.4	-0.1
	0.3nm,0.6s,baz=103,slow=6.9,SNR=16						
	0.3nm,0.6s						
WRA	Warramunga Arr	44.31	272	P	P	16 43 23.4	-0.3
	0.8nm,0.6s,baz=113,slow=7.5,SNR=7.8						
	0.8nm,0.6s						
QSPA	South Pole Qui	59.43	180	P	P	16 45 16.3	+0.3
	1.0nm,0.8s,baz=73,slow=2.5,SNR=10						
	1.0nm,0.8s						
FINES	FINESS Array B	145.48	340	PKPbc	PKPdf	16 54 49.7	-1.4
	0.7nm,0.5s,baz=60,slow=4.7,SNR=10						

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*NDI **21** 16:42:22.7±1.7, 25°.81N×95°.97E, h130^{km}, ML4.2, MW4.1, mb4.2(NEIC)*

*BJI **21** 16:42:23.4, 25°.94N×95°.89E, h115^{km}, mB4.5/7, mb4.4/26*

*IDC **21** 16:42:24.4±1.6, 25°.72N×95°.87E, h130^{km}±15^{km}, mb3.6/22, mbtmp4.0/24, Error ellipse: s-maj=14.8km s-min=10.6km az=56.0*

*NEIC **21** 16:42:25.1±2.0, 25°.81N±0°.10×95°.9E±0°.1, h133^{km}±10^{km}, mb4.2/13, Error ellipse: s-maj=17.2km s-min=11.6km az=51.0*

ISC 21 16:42:24.5±0.5**, 25°.79N**±0°.05×**95°.80E**±0°.04**, h133**^{km}**, n54, σ**$1^{s}.49$/68**, mb4.1**/31**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMP	Imphal	1.93	241	*e*P	Pn	16 42 58.0	+0.1
IMP				*e*S	Sn	16 43 22.4	-0.9
IMP				IAML		16 43 27.1	
	comp=N,814nm,0.6s						
IMP				IAML		16 43 27.3	
	comp=E,431nm,0.4s						
ZIRO	ZIRO	2.46	315	*e*P	Pn	16 43 03.7	-0.8
ZIRO				*e*S	Sn	16 43 32.0	-3.2
ZIRO				IAML		16 43 33.6	
	comp=E,7µm,0.4s						
TNCH	TengChong	2.57	106	P	Pn	16 43 04.9	-1.0
TNCH				S	Sn	16 43 33.5	-4.3
TNCH				smax	smax		
	comp=E,220nm,1.1s						
TNCH				smax	smax		
	comp=E,170nm,1.4s						
AZL	Aizawl	3.48	235	*e*P	Pn	16 43 16.8	-0.8
AZL				*e*S	Sn	16 43 57.4	-1.3
AZL				IAML		16 43 59.0	
	comp=N,517nm,0.3s						
AZL				IAML		16 44 03.7	
	comp=E,636nm,0.4s						
TAWA	Tawang	3.95	298	*e*P	Pn	16 43 24.6	+0.6
TAWA				*e*S	Sn	16 44 07.5	-2.6
TAWA				IAML		16 44 12.0	
	comp=N,2µm,0.1s						
BRDH	Bariadhala	4.90	232	P	Pn	16 43 36.9	+0.7
	comp=N,79nm,0.3s,baz=80,slow=19,SNR=1.0						
BRDH				S	Sn	16 44 30.9	-1.2
	comp=N,185nm,0.3s,baz=200,slow=21,SNR=7.3						
PZH	PanZhiHua	5.39	81	P	Pn	16 43 43.3	+0.4
PZH				S	Sn	16 44 47.4	+3.3
PZH				smax	smax		
	comp=N,10.0nm,0.8s						
PZH				smax	smax		
	comp=N,10.0nm,1.5s						
LSA	Lhasa	5.67	314		Pn	16 43 48.2	+1.2
LSA	Lhasa	5.67	314	P	Pn	16 43 48.8	+1.8
LSA				smax	smax		
	comp=N,160nm,0.7s						
GTK	Tadong	6.62	285	*e*P	Pn	16 43 58.1	-1.4
GTK				*e*S	Sn	16 45 10.1	-3.8
GTK				IAML		16 45 12.8	
	comp=E,255nm,0.5s						

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GTK                                  IAML               16 45 15.4
      comp=N,496nm,0.5s
CHTO  Chiang Mai         7.52 157          Pn           16 44 11.8 +0.2
CMAR  Chiang Mai Arr     7.85 158  P       Pn           16 44 16.6 +0.6
      comp=N,7.1nm,0.6s,baz=332,slow=13,SNR=70
EVN   Everest            8.31 287          Pn           16 44 22.7 +0.1
GOMU  GeErMu            10.41 356  P       Pn           16 44 47.6 -3.0
GOMU                               pP                   16 44 53.0
GOMU                               pmax    pmax
      comp=N,4.0nm,1.0s
GTA   Gaotai            14.00  13  eP      Pn           16 45 35.8 -1.3
GTA                                pmax    pmax
      comp=N,3.0nm,0.8s
WMQ   Urumqi            19.17 342  eP      Pn           16 46 42.3 +2.4
WMQ                                pmax    pmax
      comp=N,25nm,0.7s
HHC   Hu-ho-hao-te      19.93  37  eP      Pn           16 46 47.5 -1.5
HHC                                pmax    pmax
      comp=N,12nm,0.7s
HHC                                pmax    pmax
      comp=N,59nm,4.4s
KSH   Kashi             21.53 314  P       P            16 47 04.3 +1.2
KSH                                pP      pP           16 47 32.3 +4.9
KSH                                pmax    pmax
      comp=N,10.0nm,0.9s
TARG  Taragay, Kyrgy    21.76 321  P       P            16 47 04.2 -1.8
TARG                               IAmb    IAmb         16 47 17.4
      comp=Z,8.7nm,0.9s
BOOM  Boomskoye usch    23.31 321  P       P            16 47 22.7 +1.9
BOOM                               IAmb    IAmb         16 47 23.6
      comp=Z,15nm,1.0s
SONM  Songino Array     23.54  18  P       P            16 47 22.7 -0.1
      comp=Z,1.1nm,0.7s,baz=206,slow=9.9,SNR=4.2
      comp=Z,1.1nm,0.7s
MKAR  Makanchi Array    23.56 336  P       P            16 47 24.6 +1.9
      comp=Z,5.7nm,0.6s,baz=144,slow=8.5,SNR=76
MKAR                               PcP     PcP          16 51 04.1 -0.1
      comp=Z,0.2nm,0.5s,baz=191,slow=3.6,SNR=2.3
MKAR                               ScP     ScP          16 54 30.7 +0.6
      comp=Z,0.3nm,0.7s,baz=146,slow=0.4,SNR=3.1
      comp=Z,5.7nm,0.6s
MAKZ  Makanchi          23.68 336          P            16 47 24.8 +0.9
XLT   XiLinHaoTe        24.46  37  eP      P            16 47 30.8 -0.2
XLT                                PP      PnPn         16 48 12.6 +1.8
XLT                                pmax    pmax
      comp=Z,5.0nm,0.9s
KURBB Kurchatov Arra    28.13 336  P       P            16 48 05.2 +1.4
      comp=Z,2.7nm,0.6s,baz=148,slow=8.9,SNR=23
KURBB                              PcP     PcP          16 51 14.0 -0.6
      comp=Z,0.3nm,0.3s,baz=164,slow=2.5,SNR=4.4
KURBB                              ScP     ScP          16 54 43.1 -0.1
      comp=Z,0.7nm,0.8s,baz=141,slow=2.8,SNR=5.1
      comp=Z,2.7nm,0.6s
KURK  Kurchatov         28.17 337          P            16 48 04.5 +0.4
KURK                               IAmb    IAmb         16 48 07.1
      comp=Z,3.3nm,0.8s
ZAA0  Zalesovo Array    29.29 347  P       P            16 48 13.5 -0.5
ZAA0                               IAmb    IAmb         16 48 17.1
      comp=Z,2.7nm,0.8s
ZALV  Zalesovo Beam     29.29 347  P       P            16 48 15.6 +1.5
      comp=Z,1.2nm,0.3s,baz=165,slow=7.1,SNR=8.8
      comp=Z,1.2nm,0.3s
BVAR  Borovoye Array    33.21 332  P       P            16 48 50.0 +1.5
      comp=Z,3.7nm,0.6s,baz=138,slow=10,SNR=18
      comp=Z,3.7nm,0.6s
BRVK  Borovoye          33.28 332          P            16 48 49.2 +0.2
BRVK                               IAmb    IAmb         16 48 52.9
      comp=Z,4.0nm,0.8s
USRK  Ussuriysk Ar.     34.52  49  P       P            16 48 58.7 -1.2
      comp=Z,1.0nm,0.7s,baz=215,slow=7.5,SNR=3.0
      comp=Z,1.0nm,0.7s
ABKAR Akbulak array     36.33 320  P       P            16 49 16.9 +1.5
AKTO  Aktyubinsk        37.98 320  P       P            16 49 29.1 -0.1
      comp=Z,3.0nm,0.7s,baz=99,slow=3.0,SNR=7.7
      comp=Z,3.0nm,0.7s
ARTI  Arti              40.73 329          P            16 49 52.5 +0.6
ARTI  Arti              40.73 329  P       P            16 49 53.3 +1.3
      comp=Z,3.0nm,0.2s,baz=114,slow=7.5,SNR=8.4
      comp=Z,3.0nm,0.2s
ASAJ  Asahikawa         41.87  52  P       P            16 50 01.9 +0.5
      comp=Z,4.1nm,0.8s,baz=263,slow=14,SNR=1.9
      comp=Z,4.1nm,0.8s
SOEI  Soe               44.89 138  P       P            16 50 23.3 -2.8
TIXI  Tiksi             49.48  13  P       P            16 51 00.9 +0.1
SEY   Seymchan          52.28  29  P       P            16 51 21.3 -0.6
      comp=Z,0.5nm,0.5s,baz=233,slow=10,SNR=2.4
      comp=Z,0.5nm,0.5s
BRTR  Keskin Array B    53.12 302  P       P            16 51 30.1 +1.5
      comp=Z,0.5nm,0.6s,baz=126,slow=7.8,SNR=5.0
      comp=Z,0.5nm,0.6s
AKASG Malin Array Be    55.82 315  P       P            16 51 47.9 +0.1
      comp=Z,0.3nm,0.4s,baz=77,slow=6.9,SNR=5.2
      comp=Z,0.3nm,0.4s
FINES FINESS Array B    58.02 328  P       P            16 52 04.2 +1.2
      comp=Z,1.0nm,0.6s,baz=106,slow=6.9,SNR=4.9
      comp=Z,1.0nm,0.6s
WRA   Warramunga Arr    58.89 137  P       P            16 52 09.4 -0.3
      comp=Z,1.7nm,0.7s,baz=325,slow=7.5,SNR=14
WRA                                PcP     sP           16 52 57.1 +1.1
      comp=Z,0.5nm,0.7s,baz=322,slow=6.7,SNR=1.7
      comp=Z,1.7nm,0.7s
ARCES ARCESS Array B    59.21 337  P       P            16 52 12.6 +1.4
      comp=Z,1.5nm,0.8s,baz=84,slow=8.5,SNR=6.4
      comp=Z,1.5nm,0.8s
ASAR  Alice Springs     61.46 140  P       P            16 52 27.2 +0.1
      comp=Z,0.9nm,0.7s,baz=322,slow=6.4,SNR=16
      comp=Z,0.9nm,0.7s
SPITS Spitsbergen Ar    62.78 347  P       P            16 52 35.0 -0.2
      comp=Z,0.6nm,0.5s,baz=93,slow=7.2,SNR=1.1
      comp=Z,0.6nm,0.5s
SHEM  Shemya Is, Ala    62.96  42  P       P            16 52 35.5 -1.2
      comp=Z,8.0nm,0.7s,baz=286,slow=12,SNR=1.2
      comp=Z,8.0nm,0.7s
HFS   Hagfors           64.12 327  P       P            16 52 45.5 +1.3
      comp=Z,1.4nm,0.8s,baz=84,slow=7.4,SNR=1.7
      comp=Z,1.4nm,0.8s
GERES GERESS Array B    66.00 314  P       P            16 52 57.1 +0.4
      comp=Z,0.4nm,0.3s,baz=64,slow=6.1,SNR=7.4
      comp=Z,0.4nm,0.3s
C19K  Lookout Ridge     71.20  22  P       P            16 53 29.1 +0.5
C19K                               IAmb    IAmb         16 53 30.0
      comp=Z,2.5nm,0.8s
C23K  Itkillik River    73.70  19  P       P            16 53 44.1 +0.8
C23K                               IAmb    IAmb         16 53 44.7
      comp=Z,4.0nm,0.7s
EKA   Eskdalemuir Ar    74.05 324  P       P            16 53 46.6 +1.0
      comp=Z,0.2nm,0.3s,baz=71,slow=5.7,SNR=1.8
      comp=Z,0.2nm,0.3s
ILAR  Eielson Array     77.67  23  P       P            16 54 05.8 -0.1
      comp=Z,0.4nm,0.6s,baz=300,slow=5.1,SNR=4.8
      comp=Z,0.4nm,0.6s
I28M  Miner Creek       79.57  21          P            16 54 15.4 -1.1
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GCG ***21*** *16:52:21.6±1.8, 15°.13N×92°.76W, h97km±20km, MD3.9, ML3.3*
MEX ***21*** *16:52:22.9±0.5, 15°.18N×92°.63W, h108km±7km, MD3.9*
ISC 21 16:52:15.4±2.8**, 15°.01N**±0°.09×**92°.56W**±0°.09**, h148**km±16km**, n12, σ2ˢ.54**/22**, Mexico-Guatemala border region**

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Code  Station Name       Δ°   AZ°    Phase ID           Time      Res
                                   Op      ISC        h  m  s     ISC
THIG                     0.31 110  eP      Pn           16 52 37.9 +2.3
THIG                               eS      Sn           16 52 49.2 -1.8
THIG                     0.31 110  i S     Sn           16 52 50.0 -1.0
THIG                               IAML                 16 52 51.0
      comp=N,3µm,0.4s
PATR  El Naranjo         0.34  72  eP      Pn           16 52 37.5 +1.4
PATR                               i S     Sn           16 52 49.0 -2.7
PAVE  Pavencul           0.41  64  eP      Pn           16 52 38.3 +2.0
PAVE                               eS      Sn           16 52 50.5 -1.8
PCIG                     0.93 317  eP      Pn           16 52 40.3 +1.0
PCIG                               eS      Sn           16 52 54.3 -3.4
STG8  El Palmar, Qui     1.30 115  i P     Pn           16 52 44.6 +1.6
STG8                               IAML                 16 53 07.5
      comp=E,375nm,0.2s
STG0  El Palmar, Qui     1.32 116  i P     Pn           16 52 44.9 +1.8
STG0                               i S     Sn           16 53 02.6 -1.7
STG0                               IAML                 16 53 07.7
      comp=E,628nm,0.2s
CCIG  Comitan            1.33  18  eP      Pn           16 52 46.9 +3.7
CCIG                               i S     Sn           16 53 02.8 -1.7
CCIG  Comitan            1.33  18  i P     Pn           16 52 47.2 +4.0
CCIG                               eS      Sn           16 53 05.3 +0.8
CCIG                               IAML                 16 53 08.3
      comp=N,212nm,0.4s
TGIG                     1.83 343  eP      Pn           16 52 50.5 +2.0
TGIG                               eS      Sn           16 53 11.2 -2.8
TGIG                     1.83 343  i P     Pn           16 52 50.7 +2.2
TGIG                               i S     Sn           16 53 11.2 -2.8
TGIG                               IAML                 16 53 12.0
      comp=E,80nm,0.2s
PETF  Flores             3.21  54  eP      Pn           16 53 05.3  0.0
PETF                               eS      Sn           16 53 40.7 -3.4
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IDC ***21*** *16:59:52.5±0.7, 27°.99N×139°.68E, h478km±10km, mb2.8/9, mbtmp3.6/12, Error ellipse: s-maj=20.5km s-min=13.9km az=84.0*
ISC 21 16:59:53.2±0.8**, 27°.9N**±0°.1×**139°.8E**±0°.1**, h500**km**, n12, σ1ˢ.37**/13**, mb3.0**/9**, Bonin Islands region**

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Code  Station Name       Δ°   AZ°    Phase ID           Time      Res
                                   Op      ISC        h  m  s     ISC
JCJ   Chichijima         2.26 111  P       P            17 00 58.6 -1.0
      23nm,0.3s
JCJ                                S       S            17 01 50.9 -2.7
MJAR  Matsushiro Arr     8.68 351  P       P            17 01 55.5 -1.0
      0.2nm,0.3s,baz=187,slow=11,SNR=1.4
KSRS  Korea Array       13.78 316  P       P            17 02 48.9 -1.5
      0.4nm,0.5s,baz=129,slow=11,SNR=1.7
PETK  Petropavlovsk-    28.41  23  P       P            17 05 08.2 +1.8
      0.2nm,0.4s,baz=208,slow=4.0,SNR=4.1
      0.2nm,0.4s
CMAR  Chiang Mai Arr    38.59 265  P       P            17 06 33.0 +0.1
      0.3nm,0.6s,baz=73,slow=4.7,SNR=4.8
      0.3nm,0.6s
WRA   Warramunga Arr    47.90 187  P       P            17 07 46.6 +1.1
      0.3nm,0.3s,baz=1.9,slow=7.7,SNR=5.8
      0.3nm,0.3s
MKAR  Makanchi Array    48.32 309  P       P            17 07 47.8 -0.6
      0.3nm,0.5s,baz=90,slow=8.5,SNR=5.7
      0.3nm,0.5s
KURBB Kurchatov Arra    50.95 314  P       P            17 08 07.5 -0.2
      1.6nm,0.7s,baz=90,slow=8.4,SNR=18
      1.6nm,0.7s
ASAR  Alice Springs     51.63 187  P       P            17 08 14.2 +1.3
      0.2nm,0.5s,baz=22,slow=11,SNR=6.5
      0.2nm,0.5s
BVAR  Borovoye Array    56.00 317  P       P            17 08 43.9 +0.3
      1.2nm,0.5s,baz=86,slow=5.6,SNR=11
      1.2nm,0.5s
ILAR  Eielson Array     57.98  29  P       P            17 08 57.9 +0.9
      0.3nm,0.6s,baz=247,slow=5.8,SNR=7.3
      0.3nm,0.6s
FINES FINESS Array B    76.25 333  P       P            17 10 49.6 +0.1
      1.8nm,1.0s,baz=71,slow=6.4,SNR=4.0
      1.8nm,1.0s
```

NEIC ***21*** *17:04:06.8±1.2, 33°.96S±0°.10×179°.9W±0°.2, h10km±2km, mb4.7/8, Error ellipse: s-maj=30.7km s-min=12.6km az=110.0*
IDC ***21*** *17:04:08.4±1.2, 33°.89S×179°.78E, h0km, mb4.4/4, mbtmp4.3/7, ML4.3/3, MS3.4/11, Error ellipse: s-maj=34.4km s-min=22.5km az=82.0*
WEL ***21*** *17:04:11.3±0.7, 34°S±5°×18°0E±°, h33km, M4.6/18, mB5.1/7, ML4.7/20, MLv4.7/18, Mw(mB)4.5/7, Error ellipse: s-maj=9.4km s-min=6.1km az=99.8, confirmed*
ISC 21 17:04:12.6±0.8**, 33°.77S**±0°.06×**179°.65E**±0°.09**, h35**km**, n67, σ1ˢ.87**/60**, mb4.5**/8**, MS3.5**/10**, South of Kermadec Islands**

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Code  Station Name       Δ°   AZ°    Phase ID           Time      Res
                                   Op      ISC        h  m  s     ISC
MXZ   Matakaoa Point     3.94 196  Pn      Pn           17 05 06.3 -4.3
MXZ                                Sn      Sn           17 05 50.5 -5.1
MXZ   Matakaoa Point     3.94 196  P       Pn           17 05 10.9 +0.3
WMGZ  Waiomatatini S     4.17 194  P       Pn           17 05 13.9 +0.2
GRZ   Great Barrier      4.24 233  P       Pn           17 05 14.5 -0.2
HAZ   Te Kaha            4.26 200  P       Pn           17 05 14.2 -0.8
PKGZ  Pakihiroa          4.28 197  P       Pn           17 05 14.2 -1.2
PKGZ                               S       Sn           17 06 05.1 +0.9
KUZ   Kuaotunu           4.38 226  P       Pn           17 05 16.8 +0.2
PUZ   Puketiti           4.44 194  P       Pn           17 05 16.9 -0.6
RUGZ  Raukumara Rang     4.48 200  P       Pn           17 05 18.4 +0.2
TWGZ  Tauwhareparae      4.60 197  P       Pn           17 05 20.1 +0.4
TWGZ                               S       Sn           17 06 15.0 +3.0
OPRZ  Ohinepanea         4.78 211  P       Pn           17 05 22.9 +0.8
MWZ   Matawai            4.87 200  P       Pn           17 05 21.1 -2.4
WCZ   Waipu Caves        4.87 242  P       Pn           17 05 23.7 +0.3
TKGZ  Te Karaka          4.88 197  P       Pn           17 05 22.9 -0.6
TKGZ                               S       Sn           17 06 20.0 +1.2
URZ   Urewera            4.93 204  Pn      Pn           17 05 23.6 -0.6
      4.3nm,0.3s,baz=5.2,slow=11,SNR=23
URZ                                Sn      Sn           17 06 18.7 -1.3
      baz=28,slow=10.0
      15nm,0.3s
URZ   Urewera            4.93 204  P       Pn           17 05 23.9 -0.4
GLKZ  Green Lake         4.95  25  P       Pn           17 05 23.7 -0.8
RAO   Raoul Island       4.96  25  Pn      Pn           17 05 21.5 -3.1
RAGZ  Rawiri             5.05 200  P       Pn           17 05 25.9 -0.1
RIGZ  Rimuhau            5.16 197  P       Pn           17 05 27.0 -0.4
RIGZ                               S       Sn           17 06 26.7 +1.0
TOZ   Tahuroa Road       5.20 219          Pn           17 05 26.3 -1.6
OUZ   Omahuta            5.21 252  P       Pn           17 05 27.4 -0.5
OUZ                                S       Sn           17 06 23.5 -3.3
RTZ   Ruatahuna          5.30 203          Pn           17 05 26.2 -3.2
RTZ   Ruatahuna          5.30 203  P       Pn           17 05 26.5 -2.8
RTZ                                S       Sn           17 06 31.1 +1.9
PRGZ  Paritu Road        5.34 195  P       Pn           17 05 28.3 -1.5
PRGZ                               S       Sn           17 06 31.3 +1.2
SNGZ  Shannon Statio     5.34 200  P       Pn           17 05 29.7 -0.1
KNZ   Kokohu             5.48 196  P       Pn           17 05 30.2 -1.5
RAHZ  Arahi              5.54 201  P       Pn           17 05 31.5 -1.0
MHGZ  Mahia Peninsul     5.55 194  P       Pn           17 05 30.7 -2.1
WHHZ  Waihua             5.64 199  P       Pn           17 05 33.8 -0.3
NMHZ  Naumai             5.79 202  P       Pn           17 05 33.8 -2.3
BKZ   Black Stump Fm     5.96 204          Pn           17 05 35.2 -3.2
HIZ   Hauiti             6.12 218          Pn           17 05 37.5 -3.1
KHZ   Kahutara           9.88 207  Pn      Pn           17 06 28.1 -4.0
RPZ   Rata Peaks        11.98 211  Pn      Pn           17 07 00.5 -0.3
      0.5nm,0.3s,baz=30,slow=20,SNR=1.1
      4.1nm,0.4s
MSVF  Nonsavu           16.03 354  Pn      P            17 07 58.4 -0.3
      0.2nm,0.3s,baz=180,slow=7.1,SNR=2.7
      5.8nm,0.8s
DZM   Mont Dzumac       16.47 312  LR      LR           17 13 15.4
      comp=Z,299nm,18.2s,baz=184,slow=33
HNR   Honiara           30.25 319  LR      LR           17 20 38.1
      comp=Z,47nm,18.1s,baz=159,slow=32
CTAO  Charters Tower    32.59 286  P       P            17 10 40.5 -0.4
CTAO                               IAmb    IAmb         17 11 22.3
      comp=Z,15nm,1.3s
BBOO  Buckleboo         36.25 259  P       P            17 11 12.5  0.0
BBOO                               IAmb    IAmb         17 11 15.0
      comp=Z,15nm,1.0s
AS31  Alice Springs     41.08 272  P       P            17 11 53.3 +0.2
ASAR  Alice Springs     41.08 272  P       P            17 11 54.8 +1.6
      comp=Z,8.6nm,0.9s,baz=112,slow=7.5,SNR=52
      comp=Z,8.6nm,0.9s
WR8   Warramunga Arr    42.24 277  P       P            17 12 03.5 +0.8
WR8                                IAmb    IAmb         17 12 05.8
      comp=Z,12nm,1.1s
WRA   Warramunga Arr    42.38 277  P       P            17 12 05.2 +1.4
      comp=Z,5.3nm,0.8s,baz=118,slow=7.5,SNR=25
      comp=Z,5.3nm,0.8s
WB0   Warramunga Arr    42.42 277  P       P            17 12 04.8 +0.7
WB0                                IAmb    IAmb         17 12 07.3
      comp=Z,19nm,1.2s
VNDA  Vanda             44.56 185  LR      LR           17 27 45.5
      comp=Z,51nm,20.2s,baz=36,slow=32
KNRA  Kununurra         49.10 279  P       P            17 12 58.1 +1.3
FITZ  Fitzroy Crossi    50.48 274          P            17 13 07.4 +0.1
QSPA  South Pole Qui    56.35 180  P       P            17 13 50.4 +0.4
QSPA  South Pole Qui    56.35 180  P       P            17 13 51.1 +1.1
      comp=Z,4.2nm,0.8s,baz=38,slow=6.0,SNR=43
QSPA                               LR      LR           17 35 17.3
      comp=Z,66nm,18.8s,baz=291,slow=33
      comp=Z,4.2nm,0.8s
GUMO  Guam              57.58 319  LR      LR           17 35 01.5
      comp=Z,19nm,21.2s,baz=146,slow=32
DAV   Davao City (W)    65.32 298  LR      LR           17 42 07.7
      comp=Z,38nm,19.6s,baz=140,slow=35
SNAA  Sanae             74.84 179  P       P            17 15 47.9 -1.2
      comp=Z,1.8nm,1.1s,baz=181,slow=9.6,SNR=4.3
      comp=Z,1.8nm,1.1s
H03S2 Juan Fernandez    80.25 124  T       T            18 44 29.3
      baz=234,slow=74,SNR=3.7
H03S1 Juan Fernandez    80.26 124  T       T            18 44 29.1
      baz=234,slow=74,SNR=3.9
H03S3 Juan Fernandez    80.27 124  T       T            18 44 29.1
      baz=234,slow=74,SNR=4.1
H03N3 Juan Fernandez    80.47 124  T       T            18 44 40.8
      baz=239,slow=72,SNR=115
H03N2 Juan Fernandez    80.47 124  T       T            18 44 39.4
      baz=239,slow=72,SNR=50
H03N1 Juan Fernandez    80.48 124  T       T            18 44 39.8
      baz=239,slow=72,SNR=100
PLCA  Paso Flores       81.65 134  LR      LR           17 44 02.1
      comp=Z,9.5nm,21.8s,baz=225,slow=29
ASAJ  Asahikawa         84.55 334  LR      LR           17 47 40.0
      comp=Z,31nm,20.0s,baz=158,slow=31
ELK   Elko              95.36  44  LR      LR           17 55 24.2
      comp=Z,20nm,18.7s,baz=289,slow=32
MA2   Magadan           96.03 346  LR      LR           17 54 56.4
      comp=Z,24nm,21.1s,baz=182,slow=32
CPUP  Villa Florida     99.40 130  LR      LR           17 54 13.3
      comp=Z,11nm,22.0s,baz=60,slow=30
FINES FINESS Array B   147.53 337  PKPbc   PKPbc        17 23 51.0 -1.2
      comp=Z,0.8nm,0.6s,baz=74,slow=4.5,SNR=5.8
BRTR  Keskin Array B   152.23 292  PKPbc   PKiKP        17 24 08.8 +3.8
      comp=Z,0.4nm,0.8s,baz=107,slow=1.5,SNR=1.3
AKASG Malin Array Be   152.59 317  PKPbc   PKiKP        17 24 07.9 +2.8
      comp=Z,0.2nm,0.3s,baz=92,slow=1.4,SNR=1.1
```

NEIC ***21*** *17:08:28.1±1.2, 31°.7S±0°.1×178°.3W±0°.2, h10km±1km, mb4.9/20, Error ellipse: s-maj=27.3km s-min=17.8km az=91.0*
WEL ***21*** *17:08:28.8±0.9, 32°S±4°×17°8W±1°7, h33km, mB5.2/10, ML5.1/17, MLv5.1/15, Mw(mB)4.6/10, Error ellipse: s-maj=22.3km s-min=3.6km az=101.8, confirmed*
IDC ***21*** *17:08:33.9±1.6, 31°.61S×178°.45W, h54km±13km, mb4.2/8, mbtmp4.5/10, MS2.9/2, Error ellipse: s-maj=22.6km s-min=11.2km az=104.0*
ISC 21 17:08:31.0±0.5**, 31°.77S**±0°.05×**178°.16W**±0°.10**, h35**km**, n90, σ1ˢ.78**/97**, mb4.8**/18**, 4C-1D, Kermadec Islands region**

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Code  Station Name       Δ°   AZ°    Phase ID           Time      Res
                                   Op      ISC        h  m  s     ISC
GLKZ  Green Lake         2.51   5  P       Pn           17 09 10.3 +1.1
GLKZ                               S       Sn           17 09 37.2 -1.5
RAO   Raoul Island       2.52   5  Pn      Pn           17 09 08.4 -1.1
RAO   Raoul Island       2.52   5  P       Pn           17 09 10.7 +1.3
      326nm,0.3s,baz=139,slow=18,SNR=8.0
RAO                                S       Sn           17 09 39.4 +0.5
      723nm,0.3s,baz=124,slow=19,SNR=6.8
RAO                                LR      LR           17 09 45.6
      comp=Z,80nm,19.8s,baz=5.0,slow=30
RIZ   Raoul Island       2.53   5  P       Pn           17 09 10.6 +1.1
RIZ                                S       Sn           17 09 39.0  0.0
MXZ   Matakaoa Point     6.47 206  P       Pn           17 10 02.6 -1.0
MXZ                                S       Sn           17 11 16.0 -0.3
WMGZ  Waiomatatini S     6.66 204  P       Pn           17 10 05.7 -0.6
WMGZ                               S       Sn           17 11 21.5 +0.6
PKGZ  Pakihiroa          6.82 206  P       Pn           17 10 08.4 -0.2
PKGZ                               S       Sn           17 11 24.4 -0.6
HAZ   Te Kaha            6.84 208  P       Pn           17 10 09.1 +0.3
HAZ                                S       Sn           17 11 26.2 +0.8
PUZ   Puketiti           6.94 204  P       Pn           17 10 09.8 -0.4
PUZ                                S       Sn           17 11 27.7 -0.2
RUGZ  Raukumara Rang     7.06 208  P       Pn           17 10 11.9 -0.1
TWGZ  Tauwhareparae      7.13 205  P       Pn           17 10 12.3 -0.6
CNGZ  Carnagh Statio     7.33 203  P       Pn           17 10 14.6 -0.9
TKGZ  Te Karaka          7.41 205  P       Pn           17 10 14.6 -2.0
MWZ   Matawai            7.44 207  P       Pn           17 10 15.5 -1.6
OPRZ  Ohinepanea         7.46 214  P       Pn           17 10 18.3 +1.1
WCZ   Waipu Caves        7.49 234  P       Pn           17 10 22.3 +4.6
TGRZ  Tauranga           7.51 216  P       Pn           17 10 21.5 +3.5
MARZ  Manawahe           7.51 213  P       Pn           17 10 20.2 +2.1
URZ   Urewera            7.55 210  P       Pn           17 10 19.7 +1.2
      25nm,0.4s,baz=329,slow=19,SNR=19
URZ                                S       Sn           17 11 40.7 -2.0
      28nm,0.3s,baz=59,slow=18,SNR=11
URZ   Urewera            7.55 210  P       Pn           17 10 17.8 -0.7
RAGZ  Rawiri             7.62 207  P       Pn           17 10 20.3 +0.7
RIGZ  Rimuhau            7.68 205  P       Pn           17 10 19.6 -0.7
OUZ   Omahuta            7.70 241  P       Pn           17 10 24.7 +4.2
PRGZ  Paritu Road        7.83 203  P       Pn           17 10 24.4 +2.0
RTZ   Ruatahuna          7.90 209          Pn           17 10 22.3 -1.1
RTZ   Ruatahuna          7.90 209  P       Pn           17 10 22.1 -1.4
SNGZ  Shannon Statio     7.90 207  P       Pn           17 10 22.1 -1.3
TOZ   Tahuroa Road       7.91 220  Pn      Pn           17 10 21.9 -1.5
KNZ   Kokohu             7.99 204  P       Pn           17 10 22.1 -2.5
MHGZ  Mahia Peninsul     8.03 202  P       Pn           17 10 23.3 -1.8
RAHZ  Arahi              8.12 207  P       Pn           17 10 24.9 -1.4
TLZ   Tolley Road        8.34 217  P       Pn           17 10 32.6 +3.3
BKZ   Black Stump Fm     8.57 209          Pn           17 10 30.5 -2.1
BKZ   Black Stump Fm     8.57 209  P       Pn           17 10 29.7 -2.8
BKZ                                S       Sn           17 12 05.1 -2.9
HIZ   Hauiti             8.83 218  P       Pn           17 10 39.0 +2.9
NGZ   Ngauruhoe          8.97 213  P       Pn           17 10 39.4 +1.2
NGZ                                S       Sn           17 12 15.2 -2.7
ARMA  Armidale          25.87 265  P       P            17 13 58.6 -1.0
ARMA                               IAmb    IAmb         17 14 18.6
      comp=Z,45nm,1.6s
EIDS  Eidsvold          27.70 275  P       P            17 14 15.4 -0.6
TOO   Toolangi          30.32 249  P       P            17 14 39.6 +0.4
CTAO  Charters Tower    33.91 281  P       P            17 15 10.5 -0.3
CTAO                               IAmb    IAmb         17 15 12.8
      comp=Z,17nm,0.7s
STKA  Stephens Creek    34.06 259  P       P            17 15 10.9 -1.1
STKA                               IAmb    IAmb         17 15 13.4
      comp=Z,24nm,1.1s
STKA  Stephens Creek    34.06 259  P       P            17 15 12.7 +0.7
      comp=Z,2.7nm,0.4s,baz=96,slow=11,SNR=13
      comp=Z,2.7nm,0.4s
BBOO  Buckleboo         38.48 256  P       P            17 15 48.2 -1.6
BBOO                               IAmb    IAmb         17 15 54.5
      comp=Z,30nm,1.6s
COEN  Coen              39.54 288  P       P            17 15 57.7 -1.0
COEN                               IAmb    IAmb         17 16 00.9
      comp=Z,18nm,1.1s
AS31  Alice Springs     42.92 268  P       P            17 16 25.0 -1.6
ASAR  Alice Springs     42.92 268  P       P            17 16 25.3 -1.2
      comp=Z,10.0nm,0.5s,baz=107,slow=7.1,SNR=271
ASAR                               PcP     PcP          17 18 15.3 -1.6
      comp=Z,0.3nm,0.5s,baz=96,slow=3.6,SNR=2.0
ASAR                               ScP     ScP          17 22 02.5 -2.8
      comp=Z,0.6nm,1.2s,baz=125,slow=4.1,SNR=1.5
      comp=Z,10.0nm,0.5s
WR8   Warramunga Arr    43.89 274  P       P            17 16 32.7 -1.6
WR8                                IAmb    IAmb         17 16 34.0
      comp=Z,16nm,1.0s
WRA   Warramunga Arr    44.03 274  P       P            17 16 33.9 -1.6
      comp=Z,20nm,0.4s,baz=114,slow=7.9,SNR=224
WRA                                ScP     ScP          17 22 05.4 -4.4
      comp=Z,0.4nm,0.8s,baz=128,slow=4.5,SNR=1.7
      comp=Z,20nm,0.4s
WB0   Warramunga Arr    44.06 274  P       P            17 16 34.3 -1.4
VNDA  Vanda             46.72 186  P       P            17 16 56.6 +0.6
VNDA  Vanda             46.72 186  P       P            17 16 56.5 +0.6
      comp=Z,0.9nm,0.3s,baz=56,slow=4.0,SNR=12
      comp=Z,0.9nm,0.3s
MTN   Manton Dam        50.08 280  P       P            17 17 20.8 -1.9
KNRA  Kununurra         50.69 276  P       P            17 17 25.8 -1.5
KNRA                               IAmb    IAmb         17 17 27.2
      comp=Z,12nm,0.9s
FITZ  Fitzroy Crossi    52.23 271  P       P            17 17 37.3 -1.6
CASY  Casey             53.87 208  P       P            17 17 49.8 -0.4
PSA00 Pilbara Seismi    55.68 264  P       P            17 18 01.4 -2.6
PSA00                              IAmb    IAmb         17 18 03.2
      comp=Z,33nm,1.8s
MBWA  Marble Bar        55.95 265  P       P            17 18 03.2 -2.7
QSPA  South Pole Qui    58.34 180  P       P            17 18 25.4 +3.1
QSPA                               IAmb    IAmb         17 18 34.7
      comp=Z,7.3nm,0.9s
QSPA  South Pole Qui    58.34 180  P       P            17 18 25.5 +3.1
      comp=Z,2.9nm,0.7s,baz=106,slow=1.2,SNR=16
      comp=Z,2.9nm,0.7s
BELA  Belgrano 2        68.45 172  P       P            17 19 31.3 +2.5
SYO   Syowa Base        75.75 193⇓eP     P            17 20 13.3 +0.7
SYO   Syowa Base        75.75 193⇑esP    P            17 20 17.4 +4.8
SNAA  Sanae             76.79 178          P            17 20 20.3 +1.7
SNAA                               IAmb    IAmb         17 20 29.2
      comp=Z,8.5nm,1.3s
SNAA  Sanae             76.79 178  P       P            17 20 20.6 +2.0
      comp=Z,1.6nm,0.4s,baz=202,slow=11,SNR=18
      comp=Z,1.6nm,0.4s
VNA3  Neumayer Olymp    76.95 176 ⇑P       P            17 20 21.2 +1.8
      comp=Z,8.6nm,0.8s
VNA2  Neumayer--Watz    77.38 177 ⇑P       P            17 20 23.8 +2.0
      comp=Z,3.6nm,0.4s,baz=301,slow=35
VNA1  Neumayer--Stat    77.61 177 ⇑P       P            17 20 21.3 -1.8
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	comp=Z,0.9nm,0.4s						
H03S2	Juan Fernandez	79.82	123	T	T	18 49 25.2	
	baz=237,slow=74,SNR=33						
H03S1	Juan Fernandez	79.83	123	T	T	18 49 33.4	
	baz=237,slow=74,SNR=30						
H03S3	Juan Fernandez	79.84	123	T	T	18 49 27.9	
	baz=237,slow=74,SNR=35						
H03N3	Juan Fernandez	80.02	123	T	T	18 49 38.0	
	baz=241,slow=72,SNR=84						
H03N2	Juan Fernandez	80.03	123	T	T	18 49 33.0	
	baz=241,slow=72,SNR=42						
H03N1	Juan Fernandez	80.04	123	T	T	18 49 35.5	
	baz=241,slow=72,SNR=162						
PETK	Petropavlovsk-	87.10	346	P	P	17 21 12.2	-0.5
	comp=Z,1.1nm,0.6s,baz=111,slow=6.9,SNR=6.0						
	comp=Z,1.1nm,0.6s						
NVAR	Mina Array Bea	89.33	43	P	P	17 21 25.2	+1.3
	comp=Z,0.4nm,0.5s,baz=245,slow=4.0,SNR=2.1						
	comp=Z,0.4nm,0.5s						
NEW	Newport	96.56	36	LR	LR	17 57 38.3	
	comp=Z,18nm,20.1s,baz=294,slow=30						
KURBB	Kurchatov Arra	121.93	313	PKP	PKPdf	17 27 20.0	-1.1
	comp=Z,0.3nm,0.4s,baz=103,slow=2.9,SNR=4.8						
BVAR	Borovoye Array	127.28	315	PKP	PKPdf	17 27 30.7	-0.6
	comp=Z,0.4nm,0.3s,baz=156,slow=1.4,SNR=4.8						
SPITS	Spitsbergen Ar	133.06	356	PKP	PKPdf	17 27 41.9	+0.3
	comp=Z,1.5nm,0.7s,baz=46,slow=6.2,SNR=1.2						
ARCES	ARCESS Array B	139.90	347	PKP	PKPdf	17 27 54.5	0.0
	comp=Z,3.2nm,1.0s,baz=63,slow=1.7,SNR=6.4						
KBZ	Khabaz	145.74	302	PKPbc	PKPdf	17 28 05.3	-0.2
	comp=Z,0.7nm,0.5s,baz=45,slow=1.4,SNR=3.6						
FIA1	FINESS Array S	146.38	339	PKPdf	PKPdf	17 28 05.4	-0.7
FINES	FINESS Array B	146.38	339	PKPbc	PKPdf	17 28 06.3	+0.2
	comp=Z,3.1nm,0.4s,baz=50,slow=4.2,SNR=60						
NC303	NORSAR Array S	149.88	351	PKPbc	PKPbc	17 28 15.9	-0.8
NB2	NORSAR Subarra	150.08	351	PKP	PKPbc	17 28 16.8	-0.5
	comp=Z,0.5nm,0.4s,baz=14,slow=2.6						
NOA	NORSAR Array B	150.08	351	PKPbc	PKPbc	17 28 17.0	-0.3
	comp=Z,0.5nm,0.4s,baz=16,slow=4.1,SNR=5.2						
HFS	Hagfors	150.56	348	PKPbc	PKPbc	17 28 17.7	-0.7
	comp=Z,1.4nm,0.4s,baz=29,slow=3.6,SNR=18						
MMAI	Mount Meron Ar	151.70	282	PKPbc	PKPbc	17 28 22.2	+0.2
	comp=Z,1.3nm,0.4s,baz=84,slow=7.6,SNR=8.7						
AKASG	Malin Array Be	152.29	321	PKPbc	PKPbc	17 28 22.8	+0.1
	comp=Z,0.1nm,0.3s,baz=78,slow=1.7,SNR=4.9						
BRTR	Keskin Array B	153.11	296	PKPbc	PKPbc	17 28 24.7	-0.3
	comp=Z,0.6nm,0.4s,baz=75,slow=1.6,SNR=4.5						

NEIC ***21*** *17:09:41.9±1.5, 55°.70N±0°.08×149°.2W±0°.1, h8^{km}±6^{km}, ML3.7/60, ML3.5(AEIC), Error ellipse: s-maj=12.2km s-min=8.2km az=166.0*

IDC ***21*** *17:09:41.8±1.1, 55°.63N×149°.22W, h0^{km}, mb3.9/15, mbtmp3.8/20, ML3.3/5, MS2.7/2, Error ellipse: s-maj=24.9km s-min=19.0km az=160.0*

AEIC ***21*** *17:09:47.6±1.4, 55°.72N±0°.08×149°.3W±0°.1, h12^{km}±6^{km}, Error ellipse: s-maj=12.8km s-min=8.7km az=158.0*

ISC 21 17:09:43.6±0.8**, 55°.81N**±0°.08×**149°.27W**±0°.06**, h10**^{km}**,**
n194, σ1^{s}.**08**/191**, mb4.1**/15**, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHAK	Old Harbor	2.64	304		Pn	17 10 25.6	-0.6
OHAK	Old Harbor	2.64	304		Sn	17 10 56.1	-2.1
KDAK	Kodiak Island	2.69	319		Pn	17 10 27.0	+0.1
KDAK	Kodiak Island	2.69	319		Sn	17 10 57.6	-1.8
KDAK	Kodiak Island	2.69	319	Pn	Pn	17 10 26.9	+0.1
	9.7nm,0.3s,baz=148,slow=9.5,SNR=270						
KDAK				Sn	Sn	17 10 58.4	-1.0
	4.6nm,0.3s,baz=54,slow=21,SNR=6.0						
KDAK				LR	LR	17 11 36.2	
	comp=Z,83nm,21.1s,baz=154,slow=40						
	22nm,0.3s						
SII	Sitkinak Islan	2.85	287		Pn	17 10 28.2	-0.9
SII				IAML		17 11 07.1	
	comp=E,394nm,0.4s						
SII				IAML		17 11 10.2	
	comp=N,346nm,0.6s						
SII	Sitkinak Islan	2.85	287		Sn	17 11 01.1	-2.3
SYI	Shuyak Island	3.28	330	Pn	Pn	17 10 35.2	+0.3
R18K	Karluk	3.36	304		Pn	17 10 36.3	+0.3
R18K					Sn	17 11 14.6	-1.3
R18K	Karluk	3.36	304	IAML		17 11 15.4	
	comp=N,191nm,0.5s						
R18K				IAML		17 11 16.9	
	comp=E,154nm,0.4s						
CHIR	Chirikof Islan	3.59	273	Pn	Pn	17 10 37.5	-1.7
CHIR				IAML		17 11 20.2	
	comp=E,100nm,1.4s						
CHIR				IAML		17 11 26.3	
	comp=N,88nm,1.4s						
CHIR	Chirikof Islan	3.59	273		Sn	17 11 17.9	-3.7
CNPM	China Poot	3.87	345		Pn	17 10 43.1	0.0
CNPM				IAML		17 11 36.0	
	comp=N,50nm,0.6s						
CNPM	China Poot	3.87	345		Sn	17 11 28.6	+0.1
Q19K	Cape Douglas,	3.92	325		Pn	17 10 44.6	+0.8
Q19K				IAML		17 11 41.2	
	comp=N,121nm,0.7s						
KAHG	Katmai Hook Gl	3.94	315		Pn	17 10 45.2	+1.1
Q23K	Middleton Isla	3.95	22	Pn	Pn	17 10 44.0	-0.2
Q23K				IAML		17 11 27.1	
	comp=N,62nm,1.1s						
Q23K				IAML		17 11 33.4	
	comp=E,86nm,1.2s						
BRSE	Bradley Lake S	4.02	349		Pn	17 10 44.9	-0.3
BRSE					Sn	17 11 31.0	-1.3
BRLK	Bradley Lake	4.05	348	Pn	Pn	17 10 45.4	-0.3
BRLK				IAML		17 11 35.5	
	comp=E,89nm,0.2s						
ACHA	Angle Creek He	4.09	308		Pn	17 10 47.1	+0.9
SEW	Seward	4.30	359		Pn	17 10 48.4	-0.6
P23K	Montague Islan	4.31	13		Pn	17 10 49.1	-0.1
P23K				IAML		17 11 38.4	
	comp=E,111nm,0.8s						
P23K				IAML		17 11 49.2	
	comp=N,88nm,0.5s						
P19K	Oil Pt	4.40	333		Pn	17 10 51.0	+0.6
P19K				IAML		17 11 46.4	
	comp=E,69nm,0.3s						
P19K				IAML		17 11 46.4	
	comp=N,83nm,0.5s						
PLBL	Peulik Blue Cr	4.57	298		Pn	17 10 53.3	+0.6
O20K	Slope Mountain	4.64	339		Pn	17 10 53.8	+0.1
ILSW	Iliamna Southw	4.66	335		Pn	17 10 54.2	+0.1
ILSW				IAML		17 11 58.1	
	comp=N,33nm,0.4s						
ILSW				IAML		17 13 19.5	
	comp=E,39nm,0.5s						
SLKM	Skilak Lake	4.74	354		Pn	17 10 54.8	-0.2
P18K	Big Mountain,	4.81	321		Pn	17 10 56.1	0.0
HIN	Hinchinbrook I	4.82	17		Pn	17 10 56.2	0.0
KAIM	Kayak Island	4.87	30		Pn	17 10 56.6	-0.1
KAIM				IAML		17 11 55.6	
	comp=E,82nm,1.0s						
RED	Redoubt Volcan	4.98	340	Pn	Pn	17 10 57.6	-0.7
RED				IAML		17 11 59.5	
	comp=N,29nm,0.5s						
RED				IAML		17 12 02.8	
	comp=E,36nm,0.6s						
CAPN	Captain Cook N	5.07	349	Pn	Pn	17 11 00.0	+0.5
PWL	Port Wells	5.08	5		Pn	17 10 59.6	-0.1
PWL				IAML		17 11 58.0	
	comp=E,49nm,0.4s						
PWL				IAML		17 12 05.1	
	comp=N,42nm,0.6s						
EYAK	Cordova Ski Ar	5.10	20		Pn	17 10 59.8	-0.2
EYAK				IAML		17 11 58.9	
	comp=N,68nm,0.5s						
EYAK				IAML		17 12 03.5	
	comp=E,49nm,0.9s						
ANPB	Aniakchak Plen	5.12	285		Pn	17 11 00.2	0.0
O18K	Koktuh Hills	5.15	324		Pn	17 11 00.6	0.0
O18K				IAML		17 12 10.1	
	comp=N,20nm,0.8s						
O19K	Port Alsworth	5.15	331		Pn	17 11 00.3	-0.3
FID	Port Fidalgo	5.16	15		Pn	17 11 00.2	-0.6
FID				IAML		17 11 57.2	
	comp=E,61nm,0.7s						
FID				IAML		17 12 01.5	
	comp=N,49nm,0.5s						
SUCK	Suckling Hills	5.17	32		Pn	17 11 00.8	-0.3
SUCK				IAML		17 12 02.9	
	comp=E,58nm,0.9s						
RAGM	Ragged Mountai	5.19	26		Pn	17 11 01.2	0.0
GLI	Glacier Island	5.21	12		Pn	17 11 01.7	+0.3
GLI				IAML		17 12 00.6	
	comp=N,36nm,0.5s						
GLI				IAML		17 12 01.0	
	comp=E,64nm,0.6s						
HMT	Hamilton	5.25	28		Pn	17 11 02.0	-0.1
RC01	Rabbit Creek A	5.30	358		Pn	17 11 02.1	-0.6
BERG	Berg Lake	5.46	30		Pn	17 11 04.2	-0.7
VNHG	Veniaminof 1	5.57	278		Pn	17 11 06.5	0.0
SPU	Mount Spurr	5.58	346	Pn	Pn	17 11 05.8	-0.8
KNK	Knik Glacier	5.63	4	Pn	Pn	17 11 06.6	-0.7
DIV	Divide	5.64	18		Pn	17 11 07.1	-0.3
P16K	Nushagak River	5.71	308		Pn	17 11 09.1	+0.8
N19K	Bonanza Creek	5.72	333		Pn	17 11 07.9	-0.6
SUA	Susitna One	5.72	353		Pn	17 11 07.8	-0.8
BMRM	Bremner River	5.72	23		Pn	17 11 08.4	-0.1
WAX	Waxell Ridge	5.76	34		Pn	17 11 08.7	-0.3
VNFG	Fog Glacier, M	5.79	279		Pn	17 11 08.6	-0.9
BARK	Barkley Ridge	5.84	35		Pn	17 11 10.0	-0.1
MESA	MESA	5.85	39		Pn	17 11 10.9	+0.4
STLK	Strandline Lak	5.86	348		Pn	17 11 10.0	-0.5
CRQM	Cirque	5.92	31		Pn	17 11 11.2	-0.1
KLU	Klutina	5.96	16		Pn	17 11 12.0	+0.2
CNBA	Chernabura Isl	5.98	265	Pn	Pn	17 11 09.5	-2.5
GHO	Glory Hole Cre	5.98	2		Pn	17 11 12.8	+0.7
N18K	Kilae Creek	6.00	327		Pn	17 11 12.3	0.0
TGL	Tana Glacier	6.00	32		Pn	17 11 13.1	+0.6
SML	Sawmill	6.03	4		Pn	17 11 10.9	-1.9
ISLE	Juniper Island	6.04	34	Pn	Pn	17 11 10.8	-2.2
YAH	Yahtse	6.06	38		Pn	17 11 12.9	-0.4
O16K	Kokwok River B	6.06	312		Pn	17 11 13.2	+0.1
SCM	Sheep Creek Mo	6.12	9		Pn	17 11 14.4	+0.3
RKAV	Rock Avalanche	6.15	40		Pn	17 11 14.7	+0.1
VRDI	Verde Repeater	6.22	27		Pn	17 11 14.7	-0.9
SKT	Skwentna	6.29	350		Pn	17 11 16.8	+0.4
N25K	Chitina, Valde	6.30	21		Pn	17 11 16.6	+0.1
N17K	Nushagak Hills	6.31	322		Pn	17 11 15.8	-0.8
GLB	Gilahina Butte	6.32	25		Pn	17 11 16.8	+0.1
GRNC	Granite Creek	6.32	36		Pn	17 11 16.5	-0.4
TABL	Table Mountain	6.33	39		Pn	17 11 16.8	-0.2
SDPT	Sand Point	6.38	270	Pn	Pn	17 11 15.9	-1.5
M20K	Styx River	6.41	343		Pn	17 11 16.5	-1.5
PCA	Pinnacle	6.43	44		Pn	17 11 17.1	-1.2
MCARA	McCarthy VSAT	6.47	28		Pn	17 11 17.6	-1.2
M24K	Tolsona, Glenn	6.51	13		Pn	17 11 18.6	-0.8
BCPM	Bancas Point	6.60	47	Pn	Pn	17 11 20.3	-0.3
BARN	Barnard Glacie	6.60	34		Pn	17 11 20.6	-0.2
O15K	Ungalikthiuk R	6.61	305		Pn	17 11 21.0	+0.3
CTGM	Chitina Glacie	6.64	36	Pn	Pn	17 11 21.0	-0.2
LOGN	Logan Glacier	6.64	37		Pn	17 11 20.6	-0.7
M19K	Big River Lodg	6.66	339	Pn	Pn	17 11 21.0	-0.4
WACK	Wrangell Chich	6.70	20		Pn	17 11 23.1	+1.0
WAT6	Susitna Watana	6.83	6		Pn	17 11 24.3	+0.4
O28M	Mount Upton	6.89	40		Pn	17 11 24.4	-0.5
L19K	White Mountain	7.01	338		Pn	17 11 25.4	-0.7
M17K	Holitna River	7.04	326		Pn	17 11 26.5	-0.1
N15K	Kwethluk River	7.22	312		Pn	17 11 29.6	+0.6
S12K	Black Hills	7.22	274	Pn	Pn	17 11 28.2	-0.9
O29M	Mount Kennedy	7.24	47		Pn	17 11 29.5	+0.1
PPLA	Purkeypile	7.26	349	Pn	Pn	17 11 30.9	+1.2
P29M	Windy Craggy	7.26	53		Pn	17 11 29.1	-0.6
M16K	Timber Creek	7.29	320		Pn	17 11 29.6	-0.3
O14K	Tigyukauivet M	7.32	303	Pn	Pn	17 11 30.9	+0.5
DHY	Denali Highway	7.35	7		Pn	17 11 31.4	+0.4
YUK2	White River	7.41	33		Pn	17 11 32.7	+0.9
PAX	Paxson	7.43	14		Pn	17 11 33.1	+1.0
S31K	Pelican	7.46	68		Pn	17 11 29.1	-3.2
L18K	Granite Mounta	7.47	332		Pn	17 11 32.1	-0.4
M27K	Edge Creek, AK	7.58	27		Pn	17 11 33.4	-0.8
RND	Reindeer	7.62	1		Pn	17 11 33.6	-1.0
TRF	Thorofare Moun	7.68	357		Pn	17 11 35.2	-0.3
M15K	Kasigluk River	7.76	314		Pn	17 11 37.3	+0.9
CAST	Castle Rocks	7.76	351		Pn	17 11 37.5	+1.0
N14K	Kuskokwak Cree	7.79	307		Pn	17 11 37.1	+0.2
KTH	Kantishna Hill	7.81	355		Pn	17 11 37.3	+0.1
L16K	Owhat River	7.94	322		Pn	17 11 39.0	+0.1
MCK	McKinley	7.95	1	Pn	Pn	17 11 38.6	-0.4
K20K	Telida	7.95	344		Pn	17 11 37.9	-1.2
HYT	Haines Junctio	7.97	46		Pn	17 11 39.8	+0.4
L27K	Beaver Creek,	8.19	24		Pn	17 11 42.3	-0.1
K24K	Donnelly Dome	8.21	11		Pn	17 11 41.7	-0.9
RIDG	Independent Ri	8.26	14		Pn	17 11 43.1	-0.2
S32K	Killisnoo	8.27	72		Pn	17 11 40.0	-3.3
DOT	Dot Lake	8.28	16		Pn	17 11 43.2	-0.5
M14K	Bethel	8.31	312		Pn	17 11 43.0	-1.0
K17K	Iditarod	8.32	330		Pn	17 11 43.4	-0.7
SKAG	Skagway	8.32	58	Pn	Pn	17 11 41.7	-2.4
BPAW	Bear Paw Mtn.	8.36	355		Pn	17 11 44.1	-0.5
R32K	Eaglecrest	8.41	67	Pn	Pn	17 11 43.2	-2.2
N30M	Aishikik Lake	8.50	43		Pn	17 11 46.4	-0.3
O30N	Mendenhall	8.53	49		Pn	17 11 45.4	-1.6
J18K	Innoko River	8.54	337	Pn	Pn	17 11 46.7	-0.5
SCRK	Sand Creek	8.61	16	Pn	Pn	17 11 49.1	+1.0
M29M	Somme Creek	8.65	35		Pn	17 11 49.4	+0.6
HDA	Harding Lake	8.70	7		Pn	17 11 50.4	+1.1
WRH	Wood River Hil	8.71	3		Pn	17 11 49.9	+0.5
J20K	Nowinta River	8.74	346		Pn	17 11 49.0	-0.8
J19K	Poorman	8.80	341	Pn	Pn	17 11 49.7	-1.0
NEA2	Nenana	8.81	1	Pn	Pn	17 11 50.9	+0.1
CCB	Clear Creek Bu	8.89	4		Pn	17 11 52.0	+0.1
L14K	Kuka Creek	8.92	314		Pn	17 11 52.6	+0.2
K27K	Chicken	8.99	21	Pn	Pn	17 11 52.8	-0.5
WHY	Whitehorse	9.00	51		Pn	17 11 53.0	-0.5
N31M	Braeburn, Yuko	9.03	45		Pn	17 11 53.9	-0.1
J25K	Salcha River,	9.04	11	Pn	Pn	17 11 53.6	-0.4
K15K	Wolf Creek Mou	9.05	321	Pn	Pn	17 11 53.8	-0.3
U33K	Whale Pass	9.06	81	Pn	Pn	17 11 50.0	-4.2
IL31		9.06	6	Pn	Pn	17 11 54.3	+0.1
ILAR	Eielson Array	9.06	6	Pn	Pn	17 11 55.2	+0.9
	comp=E,0.3nm,0.3s,baz=189,slow=13,SNR=11						
ILAR				Sn	Sn	17 13 33.9	-2.4
	comp=E,0.4nm,0.3s,baz=185,slow=22,SNR=8.8						
	comp=E,0.9nm,0.4s						
J17K	VABM Dome	9.07	331	Pn	Pn	17 11 53.0	-1.5
CRAG	Craig	9.14	85	Pn	Pn	17 11 51.5	-3.8
P32M	Atlin	9.14	59		Pn	17 11 53.7	-1.7
J26L	Joseph Creek	9.16	16		Pn	17 11 54.8	-1.0
L29M	L29M	9.24	33		Pn	17 11 55.8	-1.0
MLY	Manley	9.28	356		Pn	17 11 56.3	-0.9
I23K	Minto, Yukon-K	9.37	360		Pn	17 11 57.7	-0.7
J16K	Anvik River	9.43	327	Pn	Pn	17 11 58.7	-0.7
P33M	Teslin, Yukon	9.77	56		Pn	17 12 02.7	-1.3
K29M	Barlow Dome	9.97	31		Pn	17 12 06.2	-0.7
M31M	Drury Creek, Y	9.98	44		Pn	17 12 06.2	-0.6
N32M	Quiet Lake	10.01	51		Pn	17 12 05.8	-1.5
H21K	Melozitna Rive	10.03	352		Pn	17 12 07.8	+0.3
H23K	Yukon River	10.05	359		Pn	17 12 07.0	-0.8
H24K	Noodor Dome	10.08	3		Pn	17 12 08.0	-0.3
FARO	Faro, Yukon	10.40	45		Pn	17 12 12.6	-0.1
R33M	Jennings River	10.45	62		Pn	17 12 12.2	-1.1
DLBC	Dease Lake	10.78	68	Pn	Pn	17 12 17.6	-0.2
	comp=E,0.1nm,0.3s,baz=258,slow=19,SNR=3.1						
	comp=E,0.2nm,0.5s						
J30M	Hart River	10.87	31		Pn	17 12 18.3	-0.8
G21K	Allakaket	10.93	351		Pn	17 12 19.6	-0.2
G23K	Bananza Creek	10.94	358		Pn	17 12 19.7	-0.3
MMPY	Sheldon Lake,	11.44	46		Pn	17 12 25.2	-1.7
F21K	Alatna River	11.62	352		Pn	17 12 29.0	-0.2
F24K	Squaw Lake	11.77	3		Pn	17 12 32.6	+1.3
E21K	Killik River	12.86	352		Pn	17 12 47.4	+1.3
INK	Inuvik	14.47	24	Pn	P	17 13 11.3	-3.6
	comp=E,0.2nm,0.3s,baz=218,slow=14,SNR=3.1						
	comp=E,1.5nm,0.5s						
YKA	Yellowknife Ar	18.80	55	P	Pn	17 14 05.1	+1.8
	comp=E,0.1nm,0.3s,baz=267,slow=10,SNR=2.0						
YKA				LR	LR	17 20 01.5	
	comp=E,40nm,20.2s,baz=288,slow=33						
	comp=E,0.9nm,0.8s						
PETK	Petropavlovsk-	30.32	287	P	P	17 15 56.0	+1.1
	comp=E,0.5nm,0.5s,baz=69,slow=14,SNR=4.6						
	comp=E,0.5nm,0.5s						
KLR	Kul'dur	46.05	297	P	P	17 18 08.2	+1.2
	comp=E,1.4nm,0.5s,baz=29,slow=5.8,SNR=5.3						
	comp=E,1.4nm,0.5s						
H11N2	WAKE ISLAND Hy	48.66	240	T	T	18 11 18.8	
	baz=28,slow=74						
H11N3	WAKE ISLAND Hy	48.66	240	T	T	18 11 50.8	
	baz=28,slow=74						
H11N1	WAKE ISLAND Hy	48.67	240	T	T	18 11 51.6	
	baz=28						
H11S1	WAKE ISLAND Hy	49.79	240	T	T	18 13 17.3	
	baz=27						
H11S2	WAKE ISLAND Hy	49.81	240	T	T	18 13 24.6	
	baz=27						
H11S3	WAKE ISLAND Hy	49.81	240	T	T	18 13 12.3	
	baz=27						
ARCES	ARCESS Array B	54.90	2	P	P	17 19 14.0	+0.4
	comp=E,2.8nm,0.7s,baz=1.9,slow=7.3,SNR=6.9						
	comp=E,2.8nm,0.7s						
SONM	Songino Array	58.95	310	P	P	17 19 43.9	+1.1
	comp=E,0.6nm,0.5s,baz=42,slow=9.0,SNR=4.0						
	comp=E,0.6nm,0.5s						
ZALV	Zalesovo Beam	61.96	327	P	P	17 20 04.1	+1.0
	comp=E,1.0nm,0.5s,baz=45,slow=4.6,SNR=5.9						
	comp=E,1.0nm,0.5s						
FINES	FINESS Array B	63.03	3	P	P	17 20 11.1	+1.0
	comp=E,1.3nm,0.5s,baz=358,slow=8.8,SNR=17						
	comp=E,1.3nm,0.5s						
HFS	Hagfors	63.61	9	P	P	17 20 14.5	+0.5
	comp=E,0.9nm,0.6s,baz=357,slow=2.9,SNR=1.5						
	comp=E,0.9nm,0.6s						
BVAR	Borovoye Array	66.71	335	P	P	17 20 35.1	+0.8
	comp=E,1.3nm,0.7s,baz=29,slow=7.6,SNR=6.5						
	comp=E,1.3nm,0.7s						
KURBB	Kurchatov Arra	66.75	329	P	P	17 20 35.3	+0.8
	comp=E,0.7nm,0.7s,baz=30,slow=6.3,SNR=4.2						
	comp=E,0.7nm,0.7s						
MKAR	Makanchi Array	68.98	325	P	P	17 20 49.4	+0.7
	comp=E,0.8nm,0.5s,baz=27,slow=6.5,SNR=12						
	comp=E,0.8nm,0.5s						
AKASG	Malin Array Be	73.85	1	P	P	17 21 18.0	+0.1
	comp=E,0.4nm,0.3s,baz=2.0,slow=5.7,SNR=7.9						
	comp=E,0.4nm,0.3s						
GERES	GERESS Array B	74.74	12	P	P	17 21 24.5	+1.2
	comp=E,0.6nm,0.6s,baz=328,slow=4.7,SNR=5.3						
	comp=E,0.6nm,0.6s						
ESDC	Sonseca Array	80.40	26	P	P	17 21 55.9	+0.8
	comp=E,0.6nm,0.8s,baz=329,slow=5.9,SNR=4.1						
	comp=E,0.6nm,0.8s						
BRTR	Keskin Array B	84.80	358	P	P	17 22 18.7	+0.6
	comp=E,0.3nm,0.5s,baz=354,slow=3.7,SNR=2.0						
	comp=E,0.3nm,0.5s						
CMAR	Chiang Mai Arr	86.51	298	P	P	17 22 26.9	+0.2
	comp=E,0.8nm,0.6s,baz=13,slow=5.0,SNR=7.8						
	comp=E,0.8nm,0.6s						
QSPA	South Pole Qui	145.60	180	PKPbc	PKPab	17 29 19.6	-1.5
	comp=E,2.4nm,1.0s,baz=59,slow=2.0,SNR=4.5						

MEX ***21*** *17:17:11.7±0.7, 14°.47N×92°.65W, h49^{km}±14^{km}, MD4.2*

GCG ***21*** *17:17:11.7±1.7, 14°.46N×92°.47W, h54^{km}±13^{km}, MD4.3, ML4.4*

CATAC ***21*** *17:17:12.2±0.8, 14°N±4°×9°2W±°, h15^{km}±4^{km}, M4.4/9, MLv4.4/9, Error ellipse: s-maj=9.7km s-min=9.3km az=97.8, confirmed*

SNET ***21*** *17:17:13.5±1.5, 14°.69N×92°.27W, h111^{km}±66^{km}, ML4.3*

ISC 21 17:17:09.1±1.4**, 14°.43N**±0°.05×**92°.68W**±0°.03**, h30**^{km}±10^{km}**,**
n63, σ**2**^{s}.**27**/96**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.62	40	*e*P	Pb	17 17 21.9	+0.4
THIG				*e*S	Sn	17 17 30.9	+0.1
THIG		0.62	40	*i* P	Pn	17 17 22.3	+0.4
THIG				*i* S	Sn	17 17 31.8	+1.1
SMCA	Catarina	0.72	54	*e*P	Pb	17 17 23.3	+0.1
SMCA				*i* S	Sn	17 17 33.4	+0.1
SMCA				IAML		17 17 34.6	
	comp=E,13µm,0.1s						
PATR	El Naranjo	0.80	32	*e*P	Pb	17 17 24.4	-0.3
PATR				*e*S	Sb	17 17 34.7	-0.7
PAVE	Pavencul	0.90	33	*e*P	Pn	17 17 25.8	-0.1
PAVE				*e*S	Sb	17 17 37.1	-1.0
RTAL	Retalhuleu	0.96	84	*e*P	Pn	17 17 26.9	+0.3
RTAL				*e*S	Sn	17 17 38.9	-0.2
RTAL	Retalhuleu	0.96	84	P	Pn	17 17 26.8	+0.3
STG8	El Palmar, Qui	1.29	89	*i* P	Pn	17 17 28.2	-3.1
STG8				*i* S	Sn	17 17 41.8	-5.9
STG8				IAML		17 17 44.2	
	comp=E,25µm,0.1s						
SOKI	Kika Raxquin	1.29	73	*e*P	Pn	17 17 32.2	+0.7
SOKI				*e*S	Sn	17 17 47.9	-0.1
SOKI				IAML		17 17 52.0	
	comp=N,5µm,0.6s						
STG0	El Palmar, Qui	1.30	90	*i* P	Pn	17 17 28.4	-3.0
STG0				*i* S	Sn	17 17 41.3	-6.5
STG0				IAML		17 17 43.1	
	comp=E,25µm,0.1s						
PCIG		1.37	338	*e*P	Pn	17 17 32.9	+0.8
PCIG				*e*S	Sn	17 17 49.2	0.0
HUEH	Huehuetenango	1.44	52	*e*P	Pn	17 17 33.4	0.0
HUEH				*e*S	Sn	17 17 50.5	-0.8
HUEH	Huehuetenango	1.44	52	*e*P	Pn	17 17 34.5	+1.2
HUEH				*e*S	Sb	17 17 53.2	-0.3
HUEH	Huehuetenango	1.44	52	*i* P	Pn	17 17 34.5	+1.2
HUEH				*i* S	Sb	17 17 52.9	-0.6
HUEH				IAML		17 17 56.4	
	comp=N,7µm,0.6s						
HUEH	Huehuetenango	1.44	52	P	Pn	17 17 34.7	+1.3
ESSG	Sabana Grande	1.79	91	*i* P	Pn	17 17 38.0	-0.1
ESSG				*i* S	Sn	17 17 58.0	-1.9
ESSG				IAML		17 18 00.3	
	comp=N,3µm,0.2s						
CCIG	Comitan	1.91	16	*e*P	Pn	17 17 42.4	+2.6
CCIG				*e*S	Sn	17 18 01.6	-1.3
CCIG	Comitan	1.91	16	*i* P	Pb	17 17 42.6	-0.8
CCIG				*i* S	Sb	17 18 05.3	-1.7
CCIG				IAML		17 18 08.6	
	comp=N,1µm,0.4s						
FG8	Yepocapa, Chim	2.06	95	*i* P	Pn	17 17 36.8	-5.0
FG8				*i* S	Sn	17 17 55.9	-11
FG16	Alotenango, Sa	2.11	94	*i* P	Pn	17 17 37.9	-4.7
FG16				*i* S	Sn	17 17 57.8	-10
FG16				IAML		17 18 02.8	
	comp=N,19µm,0.2s						
TGIG		2.37	350	*e*P	Pn	17 17 46.6	+0.6
TGIG				*e*S	Sn	17 18 12.9	-1.2
TGIG		2.37	350	*i* P	Pn	17 17 47.2	+1.2
TGIG				IAML		17 18 29.5	
	comp=E,412nm,0.4s						
NUBE	Las Nubes	2.86	100	*e*P	Pn	17 17 53.9	+1.0
NUBE				*e*S	Sn	17 18 24.9	-1.6
NUBE	Las Nubes	2.86	100	*i* P	Pn	17 17 53.8	+1.0
NUBE				*i* S	Sn	17 18 24.8	-1.6
NUBE	Las Nubes	2.86	100	P	Pn	17 17 53.9	+1.0
NUBE	Las Nubes	2.86	100	S	Sn	17 18 25.3	-1.1
CEVE	Cerro Verde	3.02	101	*e*P	Pn	17 17 56.2	+1.0
CEVE				*e*S	Sn	17 18 31.2	+0.6
CEVE				IAML		17 18 42.8	
	comp=Z,1µm,0.4s						
CEVE	Cerro Verde	3.02	101	P	Pn	17 17 56.7	+1.5
CEVE	Cerro Verde	3.02	101	S	Sn	17 18 30.2	-0.4
MTO3	Montecristo	3.22	90	*e*P	Pn	17 17 58.3	+0.5
MTO3	Montecristo	3.22	90	P	Pn	17 17 58.3	+0.5
JAYA	Jayaque - finc	3.23	103	*e*P	Pn	17 17 59.9	+1.9
JAYA				*e*S	Sn	17 18 33.8	-1.7
JAYA				IAML		17 18 42.3	
	comp=Z,830nm,0.3s						
JAYA	Jayaque - finc	3.23	103	*e*P	Pn	17 17 58.4	+0.4
JAYA				*i* S	Sn	17 18 33.6	-1.9
JAYA	Jayaque - finc	3.23	103	P	Pn	17 17 58.4	+0.4
PMON	Piamonte	3.34	102	P	Pn	17 18 00.9	+1.4
PMON	Piamonte	3.34	102	S	Sn	17 18 38.6	+0.4
BOQS	Boqueron	3.37	101	*e*P	Pn	17 18 02.1	+2.1
LOMA	Loma Larga	3.49	103	P	Pn	17 18 02.8	+1.2
LOMA	Loma Larga	3.49	103	S	Sn	17 18 41.6	-0.4
HUIG	Huatulco	3.57	292	*e*P	Pn	17 18 02.9	+0.5
HUIG				*e*S	Sn	17 18 39.5	-4.1
LFRS	El Faro	3.60	102	*e*P	Pn	17 18 04.8	+1.7
PETF	Flores	3.67	47	*e*P	Pn	17 18 03.7	0.0
PETF				*e*S	Sn	17 18 42.2	-3.8
PETF	Flores	3.67	47	IAML		17 19 13.4	
	comp=E,542nm,0.6s						
PEIG	Puerto Escondi	4.58	290	*e*P	Pn	17 18 17.3	+0.9
PEIG				*e*S	Sn	17 19 04.2	-4.6
VHO	Vista Hermosa	4.70	304	*e*P	Pn	17 18 19.0	+0.8
VHO				*e*S	Sn	17 19 11.2	-0.7
YOIG	Yosondua	5.27	298	*e*P	Pn	17 18 30.0	+3.9
YOIG				*e*S	Sn	17 19 20.6	-5.5
TOIG	Toxpalan	5.57	311	*e*P	Pn	17 18 30.2	+0.2
TOIG				*e*S	Sn	17 19 32.0	-1.1
PNIG	Pinotepa	5.60	291	*e*P	Pn	17 18 32.8	+2.4
PNIG				*e*S	Sn	17 19 28.6	-5.3
TXIG	Tlaxiaco	5.64	300	*e*P	Pn	17 18 34.8	+3.5
TXIG				*e*S	Sn	17 19 31.0	-4.2

HLIG	Huajuapan de L	5.97	305	*e*P	Pn	17 18 39.1	+3.4
HLIG				*e*S	Sn	17 19 43.5	+0.3
FTIG	Fresnillo de T	6.28	304	*e*P	Pn	17 18 44.4	+4.6
FTIG				*e*S	Sn	17 19 47.3	-3.3
JAUV	Jalcomulco	6.29	322	*e*P	Pn	17 18 39.7	-0.3
JAUV				*e*S	Sn	17 19 49.1	-1.9
TLIG	Tlapa	6.46	300	*e*P	Pn	17 18 43.8	+1.5
TLIG				*e*S	Sn	17 19 54.7	-0.4
PBCV	Popocatepetl	7.22	310	*e*P	Pn	17 18 59.8	+6.8
PBCV				*e*S	Sn	17 20 17.5	+3.3
PBPN	Popocatepetl	7.31	310	*e*P	Pn	17 18 59.8	+5.4
PBPN				*e*P		17 19 00.1	
PBPN				*e*S	Sn	17 20 21.4	+4.7
PBXN	Popocatepetl	7.31	309	*e*P	Pn	17 18 59.9	+5.5
PBXN				*e*S	Sn	17 20 20.1	+3.5
PPM	Popocatepetl	7.33	310	*e*P	Pn	17 18 57.8	+3.2
PPM				*e*S	Sn	17 20 16.9	-0.1
CXUV	Coxquihui	7.39	321	*e*P	Pn	17 18 53.7	-1.2
CXUV				*e*S	Sn	17 20 15.6	-2.2
MEIG	Mezcala	7.52	298	*e*P	Pn	17 19 01.3	+4.4
YAIG	Yautepec	7.54	307	*e*P	Pn	17 18 57.2	0.0
PLIG	Platanillo	7.64	302	*e*P	Pn	17 19 03.4	+4.9
CAIG	El Cayaco	7.75	291	*e*P	Pn	17 19 03.2	+3.2
ARIG	Puente Sto Nin	8.29	298	*e*P	Pn	17 19 09.5	+2.1
ARIG				*e*S	Sn	17 20 37.7	-2.4

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*IDC **21** 17:19:16.8±1.2, 27°.27N×130°.40E, h0^{km}, mb3.5/7, mbtmp3.5/8, ML3.5/1, MS3.9/2, Error ellipse: s-maj=34.4km s-min=19.5km az=81.0*

*JMA **21** 17:19:19.1±0.1, 27°.2N±0°.5×130°.3E±0°.7, h82^{km}, MV3.1/20, NEAR AMAMI-OSHIMA ISLAND*

ISC 21 17:19:20.8±2.3**, 27°.23N**±0°.04×**130°.34E**±0°.04**, h31**^{km}±18^{km}**, n26,** σ1^{s}.**07**/37**, mb3.5**/7**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JZK	Kikaishima	1.13	343	P	Pn	17 19 40.7	+0.1
JZK				S	Sb	17 19 57.2	+1.0
JAM	Amami Oshima	1.35	331	P	Pn	17 19 42.7	-0.8
JAM				*e*S	Sn	17 19 59.0	-1.4
JTK	Tokunoshima	1.36	295	P	Pn	17 19 42.6	-1.0
JTK				*e*S	Sn	17 19 59.9	-0.6
JAMN	Amaminishikomi	1.45	315	P	Pn	17 19 44.0	-0.9
JKDJ	Kitadaitoujima	1.53	146	P	Pn	17 19 45.2	-0.7
JKDJ				*e*S	Sn	17 20 04.9	+0.1
JOKE	Okinoerabujima	1.58	275	P	Pn	17 19 45.7	-1.0
JOKE				S	Sn	17 20 05.7	-0.4
JMZ	Minamidaito 2	1.61	150	P	Pn	17 19 45.8	-1.3
JMZ				*e*S	Sn	17 20 05.4	-1.3
JYRO	Yoronjima	1.70	264	*e*P	Pn	17 19 47.3	-1.0
JYRO				*e*S	Sn	17 20 09.4	+0.5
JOW	Kunigami	1.89	258	Pn	Pn	17 19 50.2	-0.7
	76nm,0.3s,baz=84,slow=19,SNR=148						
JOW				Sn	Sn	17 20 12.4	-1.2
	47nm,0.3s,baz=151,slow=19,SNR=14						
JOW	Kunigami	1.89	258	*e*P	Pn	17 19 50.0	-0.9
JIH	Iheya	2.12	265	P	Pn	17 19 53.3	-0.8
JTAJ	Takarajima	2.17	333	P	Pn	17 19 53.8	-0.9
JNTH	Nagotoyohara	2.19	252	P	Pn	17 19 53.9	-1.1
JJT3	Tamagusuku3	2.53	245	*e*P	Pn	17 19 58.7	-1.0
JJT3				*e*S	Sn	17 20 28.4	-1.1
JAGN	Aguni-jima	2.84	258	*e*P	Pn	17 20 03.0	-1.0
JAGN				S	Sn	17 20 36.5	-0.6
JYAK	Yakushimahirau	3.00	3	P	Pn	17 20 05.8	-0.4
JYAK				S	Sn	17 20 40.3	-0.9
JTN	Tanegashima 3	3.46	9	*e*P	Pn	17 20 11.7	-0.9
JNU	Nakatsue	5.89	4	Pn	Pn	17 20 45.8	-0.3
	1.4nm,0.3s,baz=187,slow=16,SNR=16						
JNU				Sn	Sn	17 21 50.0	-2.5
	baz=225,slow=20						
	4.4nm,0.4s						
KLR	Kul'dur	22.00	2	P	P	17 24 10.7	-1.5
	1.1nm,0.6s,baz=218,slow=12,SNR=4.3						
	1.1nm,0.6s						
MKAR	Makanchi Array	42.30	311	P	P	17 27 13.3	+1.6
	0.3nm,0.6s,baz=92,slow=10,SNR=4.0						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	45.45	315	P	P	17 27 37.9	+1.1
	0.3nm,0.4s,baz=104,slow=3.9,SNR=1.4						
	0.3nm,0.4s						
WRA	Warramunga Arr	47.05	175	P	P	17 27 50.1	+0.5
	0.3nm,0.6s,baz=354,slow=8.4,SNR=1.7						
	0.3nm,0.6s						
ASAR	Alice Springs	50.71	176	P	P	17 28 18.9	+1.3
	0.2nm,0.7s,baz=3.5,slow=6.1,SNR=9.2						
ASAR				LR	LR	17 49 38.2	
	comp=Z,50nm,20.1s,baz=333,slow=36						
	0.2nm,0.7s						
BVAR	Borovoye Array	50.80	318	P	P	17 28 19.1	+0.9
	0.7nm,0.6s,baz=100,slow=8.1,SNR=4.0						
	0.7nm,0.6s						
FINES	FINESS Array B	72.92	331	P	P	17 30 46.8	+0.1
	1.4nm,1.0s,baz=45,slow=4.1,SNR=1.3						
	1.4nm,1.0s						
URZ	Urewera	78.49	144	LR	LR	18 01 39.5	
	comp=Z,164nm,21.6s,baz=28,slow=32						

IDC 21 17:29:50.4±7.4**, 30°.39S**×**177°.84W, h0**^{km}**, mb3.2**/2**, mbtmp3.2**/2**, Error ellipse: s-maj=307.3km s-min=62.6km az=155.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.25	267	P	P	17 37 53.6	-0.1
	0.2nm,0.6s,baz=106,slow=7.5,SNR=2.2						
	0.2nm,0.6s						
WRA	Warramunga Arr	44.23	272	P	P	17 38 01.5	-0.2
	0.2nm,0.3s,baz=113,slow=8.0,SNR=1.8						
	0.2nm,0.3s						
FINES	FINESS Array B	145.18	340	PKPbc	PKPbc	17 49 27.9	-0.8
	2.0nm,0.9s,baz=44,slow=4.4,SNR=4.7						

IDC 21 17:37:36.4±8.9**, 30°.36S**×**177°.92W, h0**^{km}**, mb3.6**/2**, mbtmp3.6**/2**, Error ellipse: s-maj=378.1km s-min=61.8km az=155.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.18	267	P	P	17 45 39.0	-0.3
	0.5nm,0.7s,baz=102,slow=7.3,SNR=8.9						
	0.5nm,0.7s						
WRA	Warramunga Arr	44.17	272	P	P	17 45 47.2	0.0
	0.9nm,0.8s,baz=112,slow=7.6,SNR=3.8						
	0.9nm,0.8s						
FINES	FINESS Array B	145.13	340	PKPbc	PKPbc	17 57 14.0	-0.7
	1.5nm,1.0s,baz=29,slow=4.4,SNR=3.8						

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*IDC **21** 17:43:45.8±1.4, 31°.62S×178°.62W, h0^{km}, mb4.0/3, mbtmp4.0/5, ML3.7/2, Error ellipse: s-maj=36.6km s-min=22.4km az=105.0*

ISC 21 17:43:49.8±1.9**, 31°.7S**±0°.2×**178°.5W**±0°.4**, h35**^{km}**, n9,** σ1^{s}.**25**/7**, mb4.0**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.53	11	Pn	Pn	17 44 28.7	+0.4
	21nm,0.3s,baz=122,slow=19,SNR=1.9						
RAO				Sn	Sn	17 44 58.2	+0.3
	45nm,0.3s,baz=162,slow=20,SNR=1.3						
	129nm,0.3s						
URZ	Urewera	7.44	208	Pn	Pn	17 45 36.7	+0.9
	0.8nm,0.3s,baz=90,slow=3.0,SNR=8.2						
URZ				Sn	Sn	17 46 58.5	-0.5
	0.6nm,0.3s,baz=94,slow=19,SNR=1.5						
	3.7nm,0.4s						
ASAR	Alice Springs	42.65	269	P	P	17 51 43.4	+0.2
	0.8nm,0.5s,baz=107,slow=7.1,SNR=41						
	0.8nm,0.5s						
WRA	Warramunga Arr	43.76	274	P	P	17 51 52.1	0.0
	1.8nm,0.5s,baz=114,slow=7.9,SNR=28						
	1.8nm,0.5s						
QSPA	South Pole Qui	58.37	180	P	P	17 53 43.7	+2.4
	1.4nm,1.1s,baz=8.4,slow=7.7,SNR=7.9						
	1.4nm,1.1s						
H03N3	Juan Fernandez	80.26	123	T	T	19 24 57.5	
	baz=240						
H03N2	Juan Fernandez	80.27	123	T	T	19 24 56.8	
	baz=240						
H03N1	Juan Fernandez	80.28	123	T	T	19 24 47.9	
	baz=240						
FINES	FINESS Array B	146.25	339	PKPbc	PKPab	18 03 24.4	-2.2
	1.9nm,1.0s,baz=35,slow=3.4,SNR=4.9						

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*IDC **21** 17:57:11.9±2.1, 33°.64S×179°.98W, h0^{km}, mb4.2/4, mbtmp4.3/5, ML4.0/1, MS3.6/1, Error ellipse: s-maj=51.3km s-min=29.2km az=55.0*

*WEL **21** 17:57:20.9±1.0, 34°S±5°×17°9E±°, h33^{km}, M4.4/9, mB5.0/1, ML4.5/17, MLv4.4/9, Mw(mB)4.3/1, Error ellipse: s-maj=10.2km s-min=6.6km az=83.1, confirmed*

ISC 21 17:57:19.2±1.4**, 33°.86S**±0°.08×**179°.6E**±0°.1**, h35**^{km}**, n36,** σ2^{s}.**41**/43**, mb4.2**/4**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	3.83	195	P	Pn	17 58 15.6	-0.1
WMGZ	Waiomatatini S	4.06	193	P	Pn	17 58 19.1	+0.3
WMGZ				S	Sn	17 59 09.4	+4.3
HAZ	Te Kaha	4.15	200	S	Pn	17 58 22.3	+2.3
HAZ				S	Sn	17 59 13.3	+6.0
PKGZ	Pakihiroa	4.18	196	S	Pn	17 58 20.8	+0.4
PKGZ				S	Sn	17 59 09.8	+1.8
PUZ	Puketiti	4.34	194	P	Pn	17 58 22.1	-0.6
RUGZ	Raukumara Rang	4.37	200	P	Pn	17 58 21.7	-1.6
TWGZ	Tauwhareparae	4.50	196	S	Sn	17 59 16.6	+0.6
OPRZ	Ohinepanea	4.67	211	P	Pn	17 58 30.5	+3.4
CNGZ	Carnagh Statio	4.75	193	P	Pn	17 58 27.5	-0.7
CNGZ				S	Sn	17 59 23.4	+1.4
WCZ	Waipu Caves	4.76	243	P	Pn	17 58 28.6	+0.1
TKGZ	Te Karaka	4.78	196	P	Pn	17 58 28.3	-0.4
TKGZ				S	Sn	17 59 24.7	+1.9
URZ	Urewera	4.82	204	Pn	Pn	17 58 29.1	-0.2
	5.2nm,0.3s,baz=13,slow=12,SNR=9.4						
URZ				Sn	Sn	17 59 22.1	-1.7
	baz=73,slow=19						
	23nm,0.4s						
URZ	Urewera	4.82	204	P	Pn	17 58 28.7	-0.5
URZ				S	Sn	17 59 22.9	-1.0
RAGZ	Rawiri	4.94	200	P	Pn	17 58 31.6	+0.6
RAGZ				S	Sn	17 59 30.7	+3.7
TOZ	Tahuroa Road	5.08	219	P	Pn	17 58 35.5	+2.6
OUZ	Omahuta	5.11	253	P	Pn	17 58 32.4	-0.8
OUZ				S	Sn	17 59 29.2	-1.7
SNGZ	Shannon Statio	5.23	199	P	Pn	17 58 34.9	0.0
SNGZ				S	Sn	17 59 35.8	+1.7
KNZ	Kokohu	5.37	196	P	Pn	17 58 32.2	-4.6
KNZ				S	Sn	17 59 36.4	-1.1
TLZ	Tolley Road	5.52	215	P	Pn	17 58 46.3	+7.3
BKZ	Black Stump Fm	5.84	204	P	Pn	17 58 44.1	+0.6
BKZ				S	Sn	17 59 51.9	+2.6
PXZ	Pawanui	6.53	199	P	Pn	17 58 48.4	-4.3
PXZ				S	Sn	18 00 03.1	-2.8
TSZ	Takapari Road	6.83	204	P	Pn	17 59 06.9	+10
TSZ				S	Sn	18 00 12.7	-0.7
MRZ	Mangatainoka R	7.50	204	P	Pn	17 59 03.6	-2.4
MRZ				S	Sn	18 00 27.3	-2.5
KHZ	Kahutara	9.77	207	P	Pn	17 59 35.1	-2.0
KHZ				S	Sn	18 01 19.1	-6.5
DZM	Mont Dzumac	16.48	312	LR	LR	18 05 59.5	
	comp=Z,203nm,18.5s,slow=32						
ASAR	Alice Springs	41.01	272	P	P	18 05 00.0	+0.9
	3.4nm,0.9s,baz=115,slow=8.2,SNR=14						
	3.4nm,0.9s						
WRA	Warramunga Arr	42.31	277	P	P	18 05 10.6	+0.7
	2.1nm,0.6s,baz=118,slow=7.8,SNR=13						
	2.1nm,0.6s						
FITZ	Fitzroy Crossi	50.41	274	P	P	18 06 14.1	+0.7
	3.1nm,0.6s,baz=121,slow=7.9,SNR=7.2						
	3.1nm,0.6s						
QSPA	South Pole Qui	56.26	180	P	P	18 06 55.8	-0.1
	2.1nm,0.6s,baz=20,slow=13,SNR=16						
	2.1nm,0.6s						
H03S2	Juan Fernandez	80.26	124	T	T	19 37 27.5	
	baz=234,slow=74,SNR=4.6						
H03S1	Juan Fernandez	80.28	124	T	T	19 37 34.3	
	baz=234,slow=74,SNR=4.1						
H03S3	Juan Fernandez	80.28	124	T	T	19 37 28.9	
	baz=234,slow=74,SNR=3.8						
H03N3	Juan Fernandez	80.48	124	T	T	19 37 47.7	
	baz=239,slow=72,SNR=73						
H03N2	Juan Fernandez	80.48	124	T	T	19 37 44.3	
	baz=239,slow=72,SNR=30						
H03N1	Juan Fernandez	80.50	124	T	T	19 37 42.8	
	baz=239,slow=72,SNR=58						
FINES	FINESS Array B	147.58	336	PKPbc	PKPdf	18 16 55.6	-0.6
	0.6nm,0.7s,baz=48,slow=2.1,SNR=3.3						

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*IDC **21** 18:14:31.8±1.7, 21°.56N×143°.35E, h292^{km}±16^{km}, mb3.5/16, mbtmp4.2/19, Error ellipse: s-maj=17.7km s-min=9.8km az=82.0*

*NEIC **21** 18:14:33.4±1.0, 21°.59N±0°.08×143°.2E±0°.2, h301^{km}±8^{km}, mb4.0/31, Error ellipse: s-maj=21.4km s-min=11.1km az=85.0*

ISC 21 18:14:32.8±0.5**, 21°.58N**±0°.06×**143°.2E**±0°.1**, h300**^{km}**, n63,** σ0^{s}.**83**/67**, mb3.9**/32**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	5.57	351	Pn	Pn	18 15 57.2	+0.3
JCJ				Sn	S	18 17 02.4	-2.3
JCJ	Chichijima	5.57	351	P	Pn	18 15 57.0	0.0
	36nm,0.3s,baz=180,slow=0.0						
JCJ				S	S	18 17 03.4	-1.3
	baz=0.0,slow=0.0						
GUMO	Guam	8.10	168		Pn	18 16 28.6	+0.8
GUMO	Guam	8.10	168	P	Pn	18 16 29.5	+1.8
	38nm,0.8s,baz=118,slow=2.6,SNR=7.0						
JHJ2	Mitsune	11.87	346		Pn	18 17 14.3	+0.6
JMN	Monobe	14.64	328		Pn	18 17 49.0	+2.1
INU	Inuyama	14.75	340		P	18 17 46.3	-0.7
JGF	Kuroka	14.88	341		P	18 17 48.7	+0.2
MJAR	Matsushiro Arr	15.53	345	P	P	18 17 55.3	-0.3
MJAR				IAmb	IAmb	18 17 57.6	
	comp=Z,9.1nm,0.8s						
MJAR	Matsushiro Arr	15.53	345	P	Pn	18 17 56.6	-0.8
	comp=Z,6.6nm,0.6s,baz=162,slow=8.7,SNR=26						
MAJO	Matsushiro	15.53	345		P	18 17 56.2	+0.6
JNU	Nakatsue	15.86	319	P	Pn	18 18 00.5	-0.7
	comp=Z,12nm,1.1s,baz=280,slow=1.0,SNR=4.7						
JSD	Sado	16.95	347		P	18 18 10.9	-0.1
JTM	Tenmabayashi	19.23	355	P	P	18 18 36.2	+0.7
JTM				IAmb	IAmb	18 19 01.0	
	comp=Z,20nm,1.1s						
ERM	Erimo	20.38	360	P	P	18 18 49.6	+2.2
ERM				IAmb	IAmb	18 18 58.1	
	comp=Z,12nm,0.9s						
KSRS	Korea Array	20.62	323	P	P	18 18 50.8	+1.0
	comp=Z,2.9nm,0.7s,baz=149,slow=8.7,SNR=15						
	comp=Z,2.9nm,0.7s						
USRK	Ussuriysk Ar.	24.40	340	P	P	18 19 25.1	+0.8
	comp=Z,1.5nm,0.7s,baz=127,slow=10,SNR=4.3						
	comp=Z,1.5nm,0.7s						
MYLDM	Lahad Datu	28.95	239	P	P	18 20 05.5	+0.2
TOLI2	Tolitoli	29.85	230	P	P	18 20 12.6	-0.6
TOLI2				IAmb	IAmb	18 20 17.0	
	comp=Z,9.1nm,1.1s						
KKM	Kota Kinabalu	30.32	243	P	P	18 20 17.0	-0.5
HEH	HeiHe	31.20	340	*e*P	P	18 20 24.8	+0.2
HEH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
XLT	XiLinHaoTe	31.62	321	*e*P	P	18 20 28.3	-0.1
XLT				sP	sP	18 21 56.0	-4.8
XLT				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC	Hu-ho-hao-te	32.92	313	*e*P	P	18 20 41.8	+2.1
HHC				pmax	pmax		
	comp=Z,16nm,0.6s						
HHC				pmax	pmax		
	comp=Z,43nm,4.0s						
PZH	PanZhiHua	38.05	286	P	P	18 21 22.9	-0.5
KNRA	Kununurra	39.64	202	P	P	18 21 35.6	-0.6
KNRA				IAmb	IAmb	18 21 36.7	
	comp=Z,8.0nm,0.9s						
CMAR	Chiang Mai Arr	41.59	274	P	P	18 21 53.2	+1.0
	comp=Z,0.5nm,0.7s,baz=74,slow=6.9,SNR=6.1						
	comp=Z,0.5nm,0.7s						
WB0	Warramunga Arr	41.98	192	P	P	18 21 55.1	-0.2
WB0				IAmb	IAmb	18 21 56.0	
	comp=Z,5.0nm,0.8s						
WR8	Warramunga Arr	42.15	192	P	P	18 21 56.3	-0.3
WR8				IAmb	IAmb	18 21 57.3	
	comp=Z,7.5nm,1.0s						
WRA	Warramunga Arr	42.16	192	P	P	18 21 56.4	-0.4
	comp=Z,3.2nm,0.2s,baz=12,slow=8.2,SNR=104						
	comp=Z,3.2nm,0.2s						
FITZ	Fitzroy Crossi	43.02	205	P	P	18 22 03.2	-0.3
KULM	Kulim	44.24	255	P	P	18 22 12.8	-0.7
KULM				IAmb	IAmb	18 22 37.7	
	comp=Z,7.4nm,1.0s						
ASAR	Alice Springs	45.87	192	P	P	18 22 25.4	-0.6
	comp=Z,0.8nm,0.3s,baz=14,slow=7.0,SNR=26						
	comp=Z,0.8nm,0.3s						
STKA	Stephens Creek	53.17	182	P	P	18 23 20.1	-0.5
STKA	Stephens Creek	53.17	182	P	P	18 23 20.3	-0.3
	comp=Z,4.2nm,0.6s,baz=345,slow=7.0,SNR=11						
	comp=Z,4.2nm,0.6s						
ZALV	Zalesovo Beam	54.31	322	P	P	18 23 28.6	0.0
	comp=Z,1.3nm,0.8s,baz=91,slow=8.2,SNR=4.8						
ZALV				PcP	PcP	18 24 28.1	-0.3
	comp=Z,0.8nm,0.5s,baz=107,slow=3.9,SNR=4.0						
	comp=Z,1.3nm,0.8s						
MKAR	Makanchi Array	54.78	313	P	P	18 23 33.0	+0.8
	comp=Z,0.7nm,0.6s,baz=92,slow=8.2,SNR=9.8						
MKAR				PcP	PcP	18 24 30.4	-0.1
	comp=Z,0.5nm,0.5s,baz=80,slow=6.6,SNR=6.5						
	comp=Z,0.7nm,0.6s						
O15K	Ungalikthiuk R	54.93	32	P	P	18 23 33.7	+0.8
O15K				IAmb	IAmb	18 23 58.9	
	comp=Z,7.9nm,1.1s						
MAKZ	Makanchi	55.00	313	P	P	18 23 33.5	-0.2
K17K	Iditarod	56.73	28	P	P	18 23 46.1	+0.5
K17K				IAmb	IAmb	18 23 49.4	
	comp=Z,4.9nm,1.1s						
MORW	Morawa	56.75	209	P	P	18 23 45.0	-1.2
MORW				IAmb	IAmb	18 23 46.5	
	comp=Z,4.6nm,0.8s						
H17K	Granite Mounta	56.81	25	P	P	18 23 46.0	-0.1
O18K	Koktuh Hills	57.38	32	P	P	18 23 50.8	+0.7
O18K				IAmb	IAmb	18 23 51.3	
	comp=Z,6.4nm,1.1s						
KURK	Kurchatov	57.57	317		P	18 23 51.1	-0.5
KURBB	Kurchatov Arra	57.62	317	P	P	18 23 52.2	+0.3
	comp=Z,2.0nm,0.6s,baz=94,slow=7.5,SNR=37						
	comp=Z,2.0nm,0.6s						
J19K	Poorman	58.27	27	P	P	18 23 56.7	+0.5
D20K	Etivluk River	59.38	22	P	P	18 24 04.1	+0.4
E24K	Your Creek	62.10	23	P	P	18 24 22.5	+0.5
ILAR	Eielson Array	62.14	27	P	P	18 24 21.2	-1.1
	comp=Z,0.9nm,0.8s,baz=256,slow=5.6,SNR=9.2						
	comp=Z,0.9nm,0.8s						
KLU	Klutina	62.16	31	P	P	18 24 21.9	-0.7
KLU				IAmb	IAmb	18 24 41.1	
	comp=Z,6.2nm,1.2s						
BVAR	Borovoye Array	62.77	320	P	P	18 24 27.1	+0.5
	comp=Z,3.8nm,0.7s,baz=91,slow=7.8,SNR=21						
	comp=Z,3.8nm,0.7s						
D25K	Kavik River	63.09	22	P	P	18 24 29.2	+0.6
D25K				IAmb	IAmb	18 24 30.4	
	comp=Z,2.1nm,0.7s						
F26K	Sheenjek River	63.65	24	P	P	18 24 33.1	+0.9
F26K				IAmb	IAmb	18 24 34.6	
	comp=Z,2.4nm,0.8s						
I28M	Miner Creek	65.13	27	P	P	18 24 42.7	+0.9
I28M				IAmb	IAmb	18 24 43.3	
	comp=Z,2.6nm,0.9s						
NNZ	Nelson	68.47	156	P	P	18 25 02.1	-0.7
MRZ	Mangatainoka R	68.86	154	P	P	18 25 05.3	0.0
ABKAR	Akbulak array	69.64	316	P	P	18 25 10.0	-0.1
ABKAR				IAmb	IAmb	18 25 10.9	
	comp=Z,2.5nm,0.7s						
YKA	Yellowknife Ar	76.56	28	P	P	18 25 50.0	0.0
	comp=Z,1.1nm,0.7s,baz=300,slow=5.1,SNR=3.7						
	comp=Z,1.1nm,0.7s						
ARCES	ARCESS Array B	79.04	342	P	P	18 26 04.0	+0.5
	comp=Z,1.7nm,0.5s,baz=72,slow=7.8,SNR=8.1						
	comp=Z,1.7nm,0.5s						
KBZ	Khabaz	82.46	314	P	P	18 26 23.0	+1.0
	comp=Z,2.6nm,0.8s,baz=80,slow=3.9,SNR=6.7						
	comp=Z,2.6nm,0.8s						
NVAR	Mina Array Bea	83.21	51	P	P	18 26 26.3	-0.1
	comp=Z,1.4nm,0.8s,baz=298,slow=5.7,SNR=4.7						
	comp=Z,1.4nm,0.8s						
FINES	FINESS Array B	83.29	334	P	P	18 26 25.0	-0.9
	comp=Z,1.0nm,0.5s,baz=62,slow=4.4,SNR=11						
	comp=Z,1.0nm,0.5s						
PLCA	Paso Flores	145.67	132	PKPbc	PKPdf	18 33 35.2	-0.6
	comp=Z,1.7nm,0.6s,baz=278,slow=2.9,SNR=5.4						
LPAZ	La Paz	149.94	85	PKPbc	PKPbc	18 33 49.0	-0.4
	comp=Z,1.8nm,0.7s,baz=287,slow=0.9,SNR=8.1						

WEL 21 18:52:24.9±1.4**, 34°S**±28°×**17°8W**±3°5**, h147**^{km}±86^{km}**, M4.0**/5**, mB4.9**/2**, MLv4.0**/5**, Mw(mB)4.2**/2**, Error ellipse: s-maj=53.7km s-min=23.6km az=125.2, confirmed, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	4.56	213	P	Pn	18 53 30.8	-1.5
WMGZ				S	Sn	18 54 26.0	+1.1
PKGZ	Pakihiroa	4.75	215	P	Pn	18 53 34.9	0.0
PKGZ				S	Sn	18 54 30.3	+0.8
HAZ	Te Kaha	4.81	218	P	Pn	18 53 36.1	+0.4
HAZ				S	Sn	18 54 32.0	+1.1
PUZ	Puketiti	4.84	212	P	Pn	18 53 35.4	-0.6
PUZ				S	Sn	18 54 31.2	-0.4
RUGZ	Raukumara Rang	5.03	217	P	Pn	18 53 38.6	0.0
RUGZ				S	Sn	18 54 36.9	+0.7
CNGZ	Carnagh Statio	5.20	210	P	Pn	18 53 41.3	+0.4
TKGZ	Te Karaka	5.32	213	P	Pn	18 53 43.4	+1.0
TKGZ				S	Sn	18 54 42.7	-0.3
WHRZ	Whale Island	5.32	223	P	Pn	18 53 42.9	+0.5
MWZ	Matawai	5.39	216	P	Pn	18 53 43.2	-0.1
MWZ				S	Sn	18 54 45.3	+0.7
URZ	Urewera	5.54	219	P	Pn	18 53 44.2	-1.1
URZ				S	Sn	18 54 47.0	-1.1
RAGZ	Rawiri	5.57	215	P	Pn	18 53 46.3	+0.5
RIGZ	Rimuhau	5.58	212	P	Pn	18 53 45.6	-0.3
RIGZ				S	Sn	18 54 49.5	+0.3
PRGZ	Paritu Road	5.71	210	P	Pn	18 53 47.5	-0.1
SNGZ	Shannon Statio	5.83	214	P	Pn	18 53 49.5	+0.2
SNGZ				S	Sn	18 54 56.6	+1.3

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*NEIC **21** 19:02:44.2±1.8, 75°.27N±0°.08×7°.6E±0°.3, h10^{km}±1^{km}, mb4.6/37, Error ellipse: s-maj=13.2km s-min=11.9km az=196.0*

*IDC **21** 19:02:45.6±0.5, 75°.47N×7°.68E, h0^{km}, mb3.9/23, mbtmp4.0/28, ML2.8/3, MS3.6/49, Error ellipse: s-maj=12.0km s-min=9.0km az=77.0*

*NAO **21** 19:02:46.9±1.3, 75°.60N×8°.01E, h4^{km}±11^{km}, ML4.4*

*DNK **21** 19:02:47.6±3.6, 75°.46N×7°.55E, h36^{km}±41^{km}, ML2.2*

*BER **21** 19:02:47.1±3.6, 75°.56N×7°.24E, h10^{km}, Mw4.5, ML4.4(NAO), Confirmed Earthquake*

*GCMT **21** 19:02:49.2±0.3, 75°.51N±0°.04×7°.3E±0°.1, h17^{km}±1^{km}, MW4.7/76, Moment Tensor Solution. s8,c10; s76,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.95±.10; $M_{\theta\theta}$0.03±.06; $M_{\phi\phi}$0.91±.07; $M_{r\theta}$0.29±.20; $M_{\theta\phi}$0.56±.04; $M_{\phi r}$-0.46±.16; Best double couple: $M_0$1.21700×10^{16} NP1:ϕ_s229.00000°, δ43.00000°, λ-52.00000°. NP2: ϕ_s3.00000°, δ58.00000°, λ-120.00000°. Principal axes: T 1.2290, Plg8.0000°, Azm113.0000°; N -0.0250, Plg25.0000°, Azm19.0000°; P -1.2040, Plg64.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*FCIAR **21** 19:02:50.0, 75°.61N×8°.39E, h10^{km}*

*KOLA **21** 19:02:51.2, 75°.46N×9°.19E, h0^{km}, ML2.9, Error ellipse: s-maj=56.9km s-min=26.4km az=20.0, Greenland sea, Knipovich ridge, south*

ISC 21 19:02:46.8±0.4**, 75°.57N**±0°.04×**8°.37E**±0°.05**, h10**^{km}**, n401,** σ**2**^{s}.**65**/385**, mb4.5**/53**, MS3.6**/47**, 3C-2D, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HSPB	Hornsund (broa	2.23	46	*e*P	Pn	19 03 23.9	+0.2
HSPB	Hornsund (broa	2.23	46	Pn	Pn	19 03 24.3	+0.5
HSPB				Sn	Sn	19 03 49.2	-2.0
HSPB	Hornsund (broa	2.23	46	P	Pn	19 03 23.7	0.0
HSPB				S	Sn	19 03 47.8	-3.5
HSPB	Hornsund (broa	2.23	46	*e*P	Pn	19 03 22.6	-1.1
HSPB				*e*S	Sn	19 03 49.2	-2.0
HSPB	Hornsund (broa	2.23	46	⇑*i*P	Pn	19 03 24.0	+0.3
HSPB				*e*S	Sn	19 03 49.4	-1.9
HSPB				IAML		19 03 57.6	
	comp=Z,84nm,0.4s						

BRBA	Barentsburg A	2.84	25	Pn	Pn	19 03 32.6	+0.6
BRBA	Barentsburg A	2.84	25	eP	Pn	19 03 32.8	+0.8
BRBB	Barentsburg B	2.86	25	Pn	Pn	19 03 33.2	+0.8
BRBB	Barentsburg B	2.86	25	S	Sn	19 04 07.1	+0.2
BRBB	Barentsburg B	2.86	25	eP	Pn	19 03 33.1	+0.6
SPB2	Spitsbergen Ar	3.19	31	Pn	Pn	19 03 38.1	+1.2
SPA0	Spitsbergen Ar	3.19	31	Pn	Pn	19 03 38.5	+1.6
	baz=217,slow=16						
SPA0				Sn	Sn	19 04 15.2	+0.3
	baz=205,slow=28						
SPA0	Spitsbergen Ar	3.19	31	eP	Pn	19 03 36.8	-0.1
SPA0				eS	Sn	19 04 13.9	-1.0
SPA0	Spitsbergen Ar	3.19	31	Pn	Pn	19 03 38.5	+1.6
	baz=217,slow=16						
SPA0				Sn	Sn	19 04 15.2	+0.3
	baz=205,slow=28						
SPITS	Spitsbergen Ar	3.19	31	Pn	Pn	19 03 38.2	+1.2
	comp=Z,52nm,0.3s,baz=208,slow=16,SNR=708						
SPITS				Sn	Sn	19 04 16.9	+1.9
	baz=246,slow=19						
SPITS	Spitsbergen Ar	3.19	31	P	Pn	19 03 38.0	+1.1
SPITS				S	Sn	19 04 11.7	-3.3
KBS	Kingsbay	3.46	12	Pn	Pn	19 03 40.1	-0.4
KBS	Kingsbay	3.46	12	Pn	Pn	19 03 40.2	-0.4
KBS	Kingsbay	3.46	12	P	Pn	19 03 39.9	-0.8
KBS				S	Sn	19 04 18.4	-3.2
KBS	Kingsbay	3.46	12	eP	Pn	19 03 40.3	-0.4
KBS				eS	Sn	19 04 17.8	-3.8
KBS	Kingsbay	3.46	12	i P	Pn	19 03 40.3	-0.4
KBS				i S	Sn	19 04 17.7	-4.0
HOPEN	Hopen	4.13	69	Pn	Pn	19 03 50.8	+0.9
HOPEN				Sn	Sn	19 04 37.0	-1.1
HOPEN	Hopen	4.13	69	eP	Pn	19 03 48.7	-1.1
HOPEN				eS	Sn	19 04 35.3	-2.8
HOPEN	Hopen	4.13	69	eP	Pn	19 03 50.6	+0.8
HOPEN				eS	Sn	19 04 35.9	-2.2
HOPEN				IAML		19 04 41.3	
	comp=Z,93nm,0.4s						
DAG	Danmarks Havn	6.55	293	i P	Pn	19 04 17.6	-5.4
DAG				i S	Sn	19 05 23.1	-14
DAG				IAML		19 05 26.5	
	comp=Z,29nm,0.2s						
DAG	Danmarks Havn	6.55	293	i P	Pn	19 04 17.6	-5.4
DAG				i S	Sn	19 05 23.1	-14
DAG				IAML		19 05 26.5	
	comp=Z,29nm,0.2s						
JNW	Jan Mayen West	6.62	235	eP	Pn	19 04 18.8	-5.2
JNW				eS	Sn	19 05 23.4	-16
JNW				IAML		19 05 27.9	
	comp=Z,13nm,0.2s						
JNE	Jan Mayen East	6.63	235	eP	Pn	19 04 19.1	-4.9
JNE				eS	Sn	19 05 24.2	-15
JNE				IAML		19 05 31.1	
	comp=Z,15nm,0.4s						
HAMF	Hammerfest	6.64	130	eP	Pn	19 04 22.2	-2.0
JMIC	Jan Mayen	6.67	235	Pn	Pn	19 04 19.6	-5.1
	comp=Z,30nm,0.3s,baz=48,slow=2.6,SNR=56						
JMIC				Sn	Sn	19 05 27.0	-14
	baz=178,slow=23						
JMIC	Jan Mayen	6.67	235	eP	Pn	19 04 19.6	-5.2
TRO	Tromso	6.74	147	eP	Pn	19 04 26.3	+0.7
JMI	Jan Mayen	6.77	235	eP	Pn	19 04 20.9	-5.0
JMI				eS	Sn	19 05 27.3	-16
JMI				IAML		19 05 28.1	
	comp=Z,12nm,0.4s						
JETT	Jettan, Norway	7.03	143	Pn	Pn	19 04 31.1	+1.5
JETT	Jettan, Norway	7.03	143	Pn	Pn	19 04 31.1	+1.5
DBG	Daneborg	7.50	274	i P	Pn	19 04 28.8	-7.3
DBG				i S	Sn	19 05 44.8	-16
DBG				IAML		19 05 50.4	
	comp=Z,12nm,0.3s						
DBG	Daneborg	7.50	274	i P	Pn	19 04 28.8	-7.3
DBG				i S	Sn	19 05 44.8	-16
DBG				IAML		19 05 50.4	
	comp=Z,12nm,0.3s						
KIF	Kilpisjarvi	7.59	144	Pn	Pn	19 04 38.1	+0.9
KIF	Kilpisjarvi	7.59	144	eP	Pn	19 04 38.0	+0.8
LOF	Lofoten	7.65	165	Pn	Pn	19 04 37.1	-0.9
LOF	Lofoten	7.65	165	eP	Pn	19 04 37.0	-1.1
NOR	Nord	7.72	332	Pn	Pn	19 04 36.5	-2.5
NOR				Sn	Sn	19 05 58.1	-8.2
NOR	Nord	7.72	332⇑	iP	Pn	19 04 35.6	-3.4
NOR				i S	Sn	19 05 57.9	-8.4
NOR				IAML		19 06 02.1	
	comp=Z,1.4nm,0.2s						
NOR	Nord	7.72	332⇑	iP	Pn	19 04 35.6	-3.4
NOR				i S	Sn	19 05 57.9	-8.4
NOR				IAML		19 06 02.1	
	comp=Z,1.4nm,0.2s						
ARA0	ARCESS Array S	7.91	131	Pn	Pn	19 04 40.8	-1.0
	baz=320,slow=12						
ARA0	ARCESS Array S	7.91	131	eP	Pn	19 04 41.7	0.0
ARCES	ARCESS Array B	7.91	131	Pn	Pn	19 04 40.3	-1.4
	comp=Z,14nm,0.5s,baz=325,slow=9.2,SNR=70						
ARCES				Sn	Sn	19 06 04.3	-6.9
	comp=Z,0.3nm,0.3s,baz=334,slow=22,SNR=1.4						
ARCES				LR	LR	19 07 54.6	
	comp=Z,303nm,20.7s,baz=321,slow=39						
ARCES	ARCESS Array B	7.91	131	P	Pn	19 04 41.4	-0.3
ARCES				S	Sn	19 06 04.0	-7.2
STEI	Steigen	7.97	161	Pn	Pn	19 04 43.1	+0.6
STEI	Steigen	7.97	161	eP	Pn	19 04 42.6	+0.2
KEV	Kevo	8.02	127		Pn	19 04 39.4	-3.7
KEV	Kevo	8.02	127	Pn	Pn	19 04 43.5	+0.4
KEV	Kevo	8.02	127	eP	Pn	19 04 42.3	-0.9
VADS	Vadso	8.22	121	P	Pn	19 04 44.8	-1.1
VADS				S	Sn	19 06 11.6	-7.0
VADS	Vadso	8.22	121	eP	Pn	19 04 44.5	-1.3
VADS				eS	Sn	19 06 11.9	-6.6
FAUS	Fauske	8.51	162	P	Pn	19 04 50.4	+0.5
HEF	Hetta	8.57	139	Pn	Pn	19 04 51.2	+0.4
HEF	Hetta	8.57	139	eP	Pn	19 04 51.1	+0.3
SALU	Saltoluokta	8.82	154	eP	Pn	19 04 57.4	+3.2
VAGH	Vaagaholmen	9.02	167	eP	Pn	19 04 56.1	-0.7
KONS	Konsvik	9.25	168	eP	Pn	19 05 00.1	+0.2
ZFI2	Zemlya Franca-	9.37	39	eP	Pn	19 05 01.7	+0.2
ZFI2				eS	Sn	19 06 40.5	-6.2
OMEGA	Omega	9.37	39	eP	Pn	19 05 01.7	+0.1
OMEGA				eS	Sn	19 06 40.5	-6.4
STOK	Stokkvaagen	9.41	168	Pn	Pn	19 05 02.7	+0.6
MOR8	Moi Rana	9.65	165	Pn	Pn	19 05 04.7	-0.8
SCO	Scoresbysund	10.11	255		Pn	19 05 04.3	-7.3
SCO	Scoresbysund	10.11	255	i P	Pn	19 05 05.0	-6.7
SCO				i S	Sn	19 06 44.3	-21
SCO				IAML		19 06 54.7	
	comp=Z,5.8nm,0.3s						
SCO	Scoresbysund	10.11	255	i P	Pn	19 05 05.0	-6.7
SCO				i S	Sn	19 06 44.3	-21
SCO				IAML		19 06 54.7	
	comp=Z,5.8nm,0.3s						
TERR	Teriberka	10.21	115	P	Pn	19 05 11.2	-1.9
TERR				S	Sn	19 06 58.4	-8.9
APA0	Apatity Array	11.04	123	Pn	Pn	19 05 23.4	-1.0
	baz=339,slow=14						
APA0	Apatity Array	11.04	123	P	Pn	19 05 24.2	-0.2
APA0				S	Sn	19 07 17.9	-10
APA0	Apatity Array	11.04	123	Pn	Pn	19 05 23.4	-1.0
	baz=339,slow=14						
LVZ	Lovozero	11.15	120		Pn	19 05 21.4	-4.5
LVZ	Lovozero	11.15	120	S	Sn	19 07 24.3	-6.2
KVDA	Kovda	11.79	126	P	Pn	19 05 34.5	-0.3
SUMG	Summit	12.90	280		Pn	19 05 44.6	-5.6
BORG	Borgarnes	14.56	238	LR	LR	19 10 03.6	
	comp=Z,254nm,20.8s,baz=33,slow=30						
NOA	NORSAR Array B	14.64	175	Pn	Pn	19 06 12.7	-1.0
	baz=354,slow=11,SNR=2.4						
NOA				LR	LR	19 11 32.5	
	comp=Z,95nm,18.3s,baz=355,slow=36						
	comp=Z,0.4nm,0.8s						
FIA0	FINESS Array S	15.47	147	P	Pn	19 06 22.9	-1.8
	baz=345,slow=28						
FIA0	FINESS Array S	15.47	147	P	Pn	19 06 22.9	-1.8
	baz=345,slow=28						
FINES	FINESS Array B	15.47	147	Pn	Pn	19 06 22.8	-2.0
	comp=Z,0.3nm,0.3s,baz=352,slow=12,SNR=14						
FINES				LR	LR	19 12 31.6	
	comp=Z,175nm,21.3s,baz=342,slow=38						
	comp=Z,5.9nm,0.9s						
HFS	Hagfors	15.63	170	Pn	Pn	19 06 27.8	+1.0
	comp=Z,0.3nm,0.3s,baz=14,slow=9.5,SNR=9.4						
HFS				LR	LR	19 11 46.6	
	comp=Z,115nm,21.2s,baz=352,slow=35						
	comp=Z,6.5nm,0.8s						
LSH	Leshukonskoye	16.16	111	eP	Pn	19 06 30.3	-3.3
ILULI	Ilulissat	18.24	281	P	Pn	19 06 56.3	-3.3
KLMR	Klimovskoe	18.35	126	eP	Pn	19 06 59.3	-1.6
SFJD	Kangerlussuaq	19.79	276	LR	LR	19 13 57.6	
	comp=Z,229nm,18.6s,baz=38,slow=34						
EKA	Eskdalemuir Ar	20.80	199	P	P	19 07 26.8	-1.0
	comp=Z,4.2nm,0.9s,baz=5.7,slow=9.2,SNR=9.8						
	comp=Z,4.2nm,0.9s						
PABE	Paberze	21.01	155		P	19 07 25.2	-4.8
PABE				IAmb	IAmb	19 07 34.5	
	comp=Z,47nm,1.0s						
POIN	Pond Inlet	21.80	306	P	P	19 07 36.3	-2.0
POIN				IAmb	IAmb	19 07 52.7	
	comp=Z,14nm,0.9s						
NACGM	Naroch	21.93	151	eP	P	19 07 41.0	+1.1
	comp=Z,25nm,0.9s,baz=347						
SUW	Suwalki	22.40	157	P	P	19 07 38.3	-6.7
MNK	Minsk	22.45	149	i P	P	19 07 46.6	+1.0
	comp=E,28nm,1.2s						
MNK				i P	P	19 07 46.6	+1.0
	comp=N,17nm,1.2s						
MNK				i P	P	19 07 46.6	+1.0
	comp=Z,29nm,1.3s,baz=347						
MNK				i PP	PnPn	19 08 08.1	-0.3
MNK				i PPP	PPP	19 08 17.0	
MNK				i S	S	19 11 55.1	+3.5
MNK				i SS	SnSn	19 12 26.9	+7.4
MNK				i LQ	LQ	19 13 55.9	
MNK				i LR	LR	19 15 22.4	
MNK				i LRM	MLR	19 17 11.4	
	comp=E,87nm,18.3s						
MNK				i LRM	MLR	19 17 13.6	
	comp=Z,67nm,15.3s						
MNK				i LRM	MLR	19 17 36.1	
	comp=N,40nm,15.4s						
KIRV	Kirov	22.53	116	P	P	19 07 47.6	+1.3
	comp=N,24nm,0.6s,baz=337,slow=14,SNR=9.7						
KIRV				LR	LR	19 16 48.5	
	comp=N,195nm,20.9s,baz=337,slow=37						
	comp=N,24nm,0.6s						
OBN	Obninsk	23.18	136	P	P	19 07 49.4	-3.7
OBN	Obninsk	23.18	136	P	P	19 07 53.8	+0.8
	comp=N,5.6nm,0.4s,baz=303,slow=1.8,SNR=5.4						
	comp=N,5.6nm,0.4s						
RES	Resolute Bay	23.37	319	P	P	19 07 53.6	-1.3
RES	Resolute Bay	23.37	319	LR	LR	19 17 20.4	
	comp=N,92nm,18.3s,baz=72,slow=38						
CLL	Collm	24.43	173	eP	P	19 08 05.0	-0.2
CLL				i x	x	19 08 15.9	
	comp=Z,12nm,1.6s						
CLL				i x	x	19 08 31.0	
CLL				i PPP	PPP	19 08 40.7	
CLL				eS	S	19 12 27.0	+2.4
CLL				ex	x	19 12 51.0	
CLL				AMS	AMS	19 18 00.0	
	comp=Z,100nm,19.0s						
MEM	Membach	25.08	184	dP	P	19 08 05.6	-5.4
BGES	Gesves	25.32	185	dP	P	19 08 08.2	-5.0
OJC	Ojcow	25.87	163		P	19 08 11.7	-6.5
AKASG	Malin Array Be	26.35	149	P	P	19 08 22.3	-0.2
	comp=Z,0.5nm,0.3s,baz=345,slow=9.9,SNR=14						
	comp=Z,0.5nm,0.3s						
KIEV	Kiev	26.35	149	P	P	19 08 18.9	-3.7
KIEV				IAmb	IAmb	19 08 25.7	
	comp=Z,8.1nm,0.9s						
VRAC	Vranov	26.58	168	P	P	19 08 25.7	+1.1
	comp=Z,3.2nm,0.3s,baz=343,slow=11,SNR=4.5						
VRAC				LR	LR	19 19 04.4	
	comp=Z,67nm,18.5s,baz=350,slow=37						
	comp=Z,3.2nm,0.3s						
ARTI	Arti	26.60	108		P	19 08 24.9	+0.2
ARTI	Arti	26.60	108	P	P	19 08 26.5	+1.7
	comp=Z,19nm,0.8s,baz=317,slow=6.0,SNR=31						
ARTI				LR	LR	19 19 30.6	
	comp=Z,148nm,21.4s,baz=332,slow=38						
STHS	Stebnicka Huta	26.78	161	eP	P	19 08 26.9	+0.4
FRB	Frobisher Bay	26.84	286	LR	LR	19 18 28.3	
	comp=Z,210nm,21.7s,baz=56,slow=35						
LANS	Liptovska Anna	26.91	164	eP	P	19 08 32.2	+4.5
GERES	GERESS Array B	26.92	172	P	P	19 08 26.0	-1.8
	comp=Z,0.1nm,0.4s,baz=0.6,slow=9.9,SNR=4.1						
	comp=Z,0.1nm,0.4s						
KOLS	Kolonicke sedl	27.35	160	eP	P	19 08 36.5	+5.0
MODS	Modra-Piesok	27.55	167	eP	P	19 08 35.0	+1.6
BELG	Belogornoye	27.88	124	P	P	19 08 37.5	+1.4
	comp=Z,19nm,0.9s,baz=220,slow=6.0,SNR=4.5						
BELG				LR	LR	19 19 51.6	
	comp=Z,162nm,21.1s,baz=1.9,slow=37						
TIXI	Tiksi	28.61	35		P	19 08 44.7	+2.1
DAVOX	Davos/Dischmat	28.90	178	LR	LR	19 20 03.8	
	comp=Z,40nm,20.0s,baz=85,slow=36						
A36M	Sachs Harbour	29.98	333	P	P	19 08 56.2	+1.5
	baz=22						
MLR	Muntele Rosu	31.11	156	LR	LR	19 22 56.5	
	comp=Z,108nm,19.1s,baz=2.5,slow=39						
AKTO	Aktyubinsk	32.00	113	LR	LR	19 22 40.2	
	comp=Z,160nm,20.6s,baz=306,slow=37						
C36M	Paulatuk	32.32	331	P	P	19 09 16.9	+1.6
	baz=21						
BRVK	Borovoye	32.53	98	P	P	19 09 16.7	-0.7
BVAR	Borovoye Array	32.59	98	P	P	19 09 20.5	+2.6
	comp=Z,2.7nm,0.7s,baz=335,slow=9.7,SNR=19						
BVAR				LR	LR	19 24 41.4	
	comp=Z,131nm,20.0s,baz=340,slow=40						
	comp=Z,2.7nm,0.7s						
A22K	Sinclair Lake	33.28	350	P	P	19 09 26.9	+3.3
	baz=8.1,SNR=6.7						
ABKAR	Akbulak array	33.55	112	P	P	19 09 19.9	-6.3
ABKAR				IAmb	IAmb	19 09 29.3	
	comp=Z,7.0nm,0.9s						
C26K	Camden Bay	33.79	344	P	P	19 09 30.7	+2.6
	baz=12						
B22K	Teshekpuk Lake	33.87	349		P	19 09 29.7	+0.9
B22K	Teshekpuk Lake	33.87	349	P	P	19 09 32.0	+3.2
	baz=8.7						
C27K	Jago River	33.99	343	P	P	19 09 32.4	+2.5
	baz=13						
D27M	Malcolm River	34.15	341	P	P	19 09 33.0	+1.6
	baz=14						
C23K	Itkillik River	34.22	347	P	P	19 09 31.7	-0.2
C23K	Itkillik River	34.22	347	P	P	19 09 35.0	+3.1
	baz=9.8						
C24K	Franklin Bluff	34.23	346	P	P	19 09 32.3	+0.4
C24K				IAmb	IAmb	19 09 43.0	
	comp=Z,12nm,0.9s						
C24K	Franklin Bluff	34.23	346	P	P	19 09 34.4	+2.4
	baz=11						
SCHQ	Schefferville	34.24	276	LR	LR	19 22 20.8	
	comp=Z,137nm,19.1s,baz=22,slow=34						
A19K	Wainwright	34.29	354	P	P	19 09 36.6	+4.2
	baz=5.2						
B20K	Meade River	34.36	351	P	P	19 09 36.9	+3.9
	baz=6.9						
INK	Inuvik	34.38	336	LR	LR	19 25 51.5	
	comp=Z,36nm,18.3s,baz=61,slow=40						
D25K	Kavik River	34.47	344	P	P	19 09 33.4	-0.8
D25K				IAmb	IAmb	19 09 45.3	
	comp=Z,7.3nm,1.2s						
D25K	Kavik River	34.47	344	P	P	19 09 37.1	+3.0
	baz=12						
B21K	Ikpikpuk River	34.64	350	P	P	19 09 36.0	+0.5
B21K	Ikpikpuk River	34.64	350	P	P	19 09 39.1	+3.7
	baz=8.0,SNR=6.0						
E28M	Babbage River	34.65	340	P	P	19 09 37.9	+2.2
	baz=14						
E29M	Blow River	34.72	339	P	P	19 09 39.0	+2.7
	baz=15,SNR=6.1						
D24K	Happy Valley	34.80	346	P	P	19 09 39.7	+2.9
	baz=10						
D23K	Nanushuk River	35.09	347	P	P	19 09 38.7	-0.7
D23K				IAmb	IAmb	19 09 51.3	
	comp=Z,6.5nm,0.9s						
D23K	Nanushuk River	35.09	347	P	P	19 09 42.3	+2.9
	baz=9.6						
C21K	Knifeblade Rid	35.11	350	P	P	19 09 42.8	+3.2
	baz=7.8						
B18K	Kokolik River	35.15	354	P	P	19 09 43.6	+3.6
	baz=4.8						
E27K	Coleen River	35.24	341	P	P	19 09 43.0	+2.3
	baz=13						
KBZ	Khabaz	35.26	135	LR	LR	19 24 39.4	
	comp=Z,119nm,20.8s,baz=349,slow=37						
F30M	Barrier River	35.28	337	P	P	19 09 43.1	+2.0
	baz=16						
D22K	Ayikyak River	35.28	348	P	P	19 09 44.1	+3.0
	baz=8.7						
C19K	Lookout Ridge	35.35	353	P	P	19 09 44.7	+3.0
	baz=5.7						
TOLK	Toolik Lake Re	35.35	346	P	P	19 09 44.7	+2.9
	baz=10.0						
ZALV	Zalesovo Beam	35.36	83	P	P	19 09 43.4	+1.6
	comp=Z,2.6nm,0.8s,baz=329,slow=11,SNR=8.4						
ZALV				LR	LR	19 27 54.6	
	comp=Z,159nm,18.8s,baz=332,slow=42						
	comp=Z,2.6nm,0.8s						
E25K	Arctic Village	35.60	344	P	P	19 09 43.0	-0.9
E25K				IAmb	IAmb	19 09 54.8	
	comp=Z,7.3nm,1.1s						
E25K	Arctic Village	35.60	344	P	P	19 09 46.5	+2.6
	baz=12,SNR=5.0						
D20K	Etivluk River	35.63	351	P	P	19 09 46.2	+2.1
	baz=7.0						
F28M	Old Crow	35.65	340	P	P	19 09 46.4	+2.1
	baz=14						
E21K	Killik River	35.78	349	P	P	19 09 46.5	+1.1
E21K				IAmb	IAmb	19 09 55.9	
	comp=Z,6.8nm,0.9s						
E21K	Killik River	35.78	349	P	P	19 09 48.0	+2.6
	baz=8.0						
G31M	Satah River	35.80	336	P	P	19 09 46.7	+1.3
	baz=16						
E24K	Your Creek	35.84	345	P	P	19 09 48.1	+2.2
	baz=10						
C18K	Utukok River	35.85	353	P	P	19 09 48.7	+2.6
	baz=5.0,SNR=7.1						
D19K	Kuna River	35.91	352	P	P	19 09 47.8	+1.3
D19K	Kuna River	35.91	352	P	P	19 09 48.8	+2.3
	baz=6.3						
F26K	Sheenjek River	35.92	343	P	P	19 09 48.6	+2.0
	baz=12						
E23K	Chandalar	35.93	346	P	P	19 09 49.0	+2.2
	baz=9.8						
G30M	tAoh Zraii Nji	35.93	337	P	P	19 09 48.2	+1.4
	baz=15						
BILL	Bilibino	35.94	14		P	19 09 47.5	+0.7
E22K	Anaktuvuk Pass	35.98	348	P	P	19 09 49.7	+2.6
	baz=8.9,SNR=5.3						
E20K	Nigu River	36.07	350	P	P	19 09 50.4	+2.5
	baz=7.1						
C17K	DeLong Mountai	36.08	355	P	P	19 09 50.8	+2.8
	baz=4.1,SNR=5.0						
F25K	Christian Rive	36.13	343	P	P	19 09 51.0	+2.5
	baz=11						
G29M	Pine Creek	36.17	338	P	P	19 09 50.8	+2.0
	baz=14,SNR=5.4						
C16K	Lisburne Hills	36.32	356	P	P	19 09 52.5	+2.5
	baz=3.1						
F24K	Squaw Lake	36.36	345	P	P	19 09 52.5	+2.1
	baz=10						
ESDC	Sonseca Array	36.43	196	P	P	19 09 50.7	-0.5
	comp=Z,1.2nm,1.0s,baz=3.8,slow=7.8,SNR=7.1						
	comp=Z,1.2nm,1.0s						
RDOG	Red Dog Mine	36.49	354	P	P	19 09 53.8	+2.4
	baz=4.1						
EPYK	Eagle Plains	36.58	337	P	P	19 09 53.5	+1.2
	baz=15						
G27K	Doyon Strip	36.59	341	P	P	19 09 54.6	+2.2
	baz=13						
F22K	John River	36.62	348	P	P	19 09 55.5	+2.9
	baz=8.6						
G26K	Porcupine Rive	36.62	342	P	P	19 09 55.0	+2.4
	baz=12						
KURK	Kurchatov	36.76	91		P	19 09 54.1	+0.2
COLD	Coldfoot	36.79	346	P	P	19 09 56.7	+2.7
	baz=9.4						
KURBB	Kurchatov Arra	36.83	92	P	P	19 09 56.1	+1.7
	comp=Z,3.2nm,0.8s,baz=332,slow=7.5,SNR=30						
KURBB				PcP	PcP	19 12 17.1	+1.1
	comp=Z,0.5nm,0.8s,baz=326,slow=3.7,SNR=2.8						
	comp=Z,3.2nm,0.8s						
D17K	Noatak River	36.86	355	P	P	19 09 57.5	+2.9
	baz=4.0,SNR=5.9						
H29M	Whitestone	36.88	338	P	P	19 09 56.6	+1.8
	baz=14						
H31M	Peel River	36.89	335	P	P	19 09 56.7	+1.8
	baz=15						
E19K	Redstone River	36.91	351	P	P	19 09 57.2	+2.2
	baz=6.5						
F21K	Alatna River	36.98	348	P	P	19 09 58.4	+2.8
	baz=8.0						
G25K	Bearman Lake	36.98	343	P	P	19 09 58.4	+2.8
	baz=11						
E18K	Tukpahlearik C	37.07	353	P	P	19 09 59.2	+2.8
	baz=5.1,SNR=5.4						
G24K	Hadweenzic Riv	37.14	344	P	P	19 09 59.7	+2.7
	baz=10						
H27K	Steamboat Moun	37.15	340	P	P	19 09 59.5	+2.4
	baz=13						
G22K	Bettles	37.17	347	P	P	19 09 59.4	+2.2
	baz=8.8						
F20K	Avaraart Lake	37.26	350	P	P	19 10 00.7	+2.8
	baz=7.1,SNR=6.7						
G23K	Bananza Creek	37.29	346	P	P	19 10 00.3	+2.0
	baz=9.4						
YKA	Yellowknife Ar	37.44	320	P	P	19 09 58.8	-0.7
	comp=Z,0.7nm,0.8s,baz=34,slow=10,SNR=2.9						
YKA				LR	LR	19 24 06.4	
	comp=Z,45nm,20.5s,baz=288,slow=34						
	comp=Z,0.7nm,0.8s						
E17K	Hotham Inlet	37.44	354	P	P	19 10 02.5	+3.0
	baz=4.5						
H25L	Birch Creek	37.45	343	P	P	19 10 02.2	+2.7
	baz=11						
F19K	Shaleruckik Mo	37.56	351	P	P	19 10 02.7	+2.3
	baz=6.2						
YAK	Yakutsk	37.60	41	P	P	19 10 02.2	+1.4
YAK				IAmb	IAmb	19 10 12.7	
	comp=Z,4.7nm,0.6s						
YAK	Yakutsk	37.60	41	LR	LR	19 27 06.4	
	comp=Z,75nm,18.8s,baz=330,slow=39						
I30M	Mount Dempster	37.66	337		P	19 10 01.6	0.0
I30M	Mount Dempster	37.66	337	P	P	19 10 02.9	+1.3
	baz=14,SNR=5.6						
G21K	Allakaket	37.68	348	P	P	19 10 03.2	+1.7
	baz=7.9						
BRTR	Keskin Array B	37.71	147	P	P	19 10 03.6	+1.3
	comp=Z,1.1nm,0.9s,baz=358,slow=6.8,SNR=4.3						
	comp=Z,1.1nm,0.9s						
I29M	Ogilvie Camp,	37.72	338	P	P	19 10 02.9	+1.0
	baz=14						
I27K	Kandik River	37.77	340	P	P	19 10 04.0	+1.6
	baz=12						
I28M	Miner Creek	37.78	339	P	P	19 10 04.2	+1.7
	baz=13						
F18K	Selawik	37.86	352	P	P	19 10 05.1	+2.1
	baz=5.4						
H24K	Noodor Dome	38.02	344	P	P	19 10 06.5	+2.1
	baz=10.0						
F17K	Baldwin Pennin	38.07	353	P	P	19 10 07.0	+2.3
	baz=4.7						
H23K	Yukon River	38.14	345	P	P	19 10 08.9	+3.4
	baz=9.4						
PRP	Porcupine Dome	38.17	343	P	P	19 10 08.9	+3.0
	baz=11						
H22K	Ishtalitna Cre	38.18	347	P	P	19 10 08.9	+3.1
	baz=8.6,SNR=6.1						
I26K	Coal Creek Min	38.19	341	P	P	19 10 08.9	+3.0
	baz=12						
G19K	Purcell Mounta	38.22	350	P	P	19 10 09.7	+3.6
	baz=6.4						
J30M	Hart River	38.29	336		P	19 10 05.4	-1.5
J30M	Hart River	38.29	336	P	P	19 10 09.1	+2.2
	baz=14						
H21K	Melozitna Rive	38.50	348	P	P	19 10 11.8	+3.4
	baz=8.0						
G18K	Tagagawik	38.53	351	P	P	19 10 11.9	+3.3
	baz=5.7						
H20K	Anotleneega Mo	38.77	349	P	P	19 10 13.9	+3.2
	baz=7.2						
I23K	Minto, Yukon-K	38.80	345	P	P	19 10 13.9	+2.9
	baz=9.3						
H19K	Roundabout Mou	38.81	350	P	P	19 10 14.2	+3.2
	baz=6.5,SNR=5.6						
F15K	North Star Dit	38.89	355	P	P	19 10 15.7	+4.0
	baz=3.2						
G17K	Kiwalik Mounta	38.99	353	P	P	19 10 16.1	+3.5
	baz=4.8,SNR=6.1						
MLY	Manley	39.00	346	P	P	19 10 15.5	+2.7
	baz=8.7						
ILAR	Eielson Array	39.01	343	P	P	19 10 13.7	+0.9
	comp=Z,1.3nm,0.9s,baz=0.9,slow=7.1,SNR=12						
	comp=Z,1.3nm,0.9s						
J26L	Joseph Creek	39.02	341	P	P	19 10 15.5	+2.5
	baz=11						
J25K	Salcha River,	39.05	342	P	P	19 10 16.1	+2.9

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        baz=11
GNI     Garni            39.06 134  LR     LR      19 27 08.1
        comp=Z,81nm,21.7s,baz=348,slow=37
TNA     Tin City         39.09 358  P      P       19 10 14.8 +1.5
        baz=1.9
DAWY    Dawson           39.09 338  P      P       19 10 15.4 +2.0
        baz=13
K29M    Barlow Dome      39.12 337  P      P       19 10 16.1 +2.2
        baz=14
G16K    Koyuk River      39.15 354  P      P       19 10 16.4 +2.5
        baz=4.1
F14K    Arctic Creek     39.15 356  P      P       19 10 16.5 +2.6
        baz=2.5
H18K    Honhosa River    39.26 351  P      P       19 10 17.4 +2.6
        baz=5.7
NEA2    Nenana           39.33 345  P      P       19 10 17.4 +1.9
        baz=9.3
K27K    Chicken          39.36 340  P      P       19 10 17.8 +2.1
        baz=12
HDA     Harding Lake     39.37 343  P      P       19 10 18.1 +2.3
        baz=10
H17K    Granite Mounta   39.53 352  P      P       19 10 20.5 +3.4
        baz=5.1,SNR=5.6
SCRK    Sand Creek       39.57 341  P      P       19 10 20.2 +2.6
        baz=11
G15K    Niukluk          39.59 355  P      P       19 10 21.1 +3.6
        baz=3.4
GCSA    Galena City Sc   39.60 350  P      P       19 10 21.6 +4.0
        baz=6.2
MMPY    Sheldon Lake,    39.64 332  P      P       19 10 20.3 +2.2
        baz=16
SEY     Seymchan         39.82  25  P      P       19 10 21.2 +1.7
        comp=Z,2.8nm,1.0s,baz=24,slow=7.2,SNR=5.8
        comp=Z,2.8nm,1.0s
RIDG    Independent Ri   39.88 342  P      P       19 10 22.5 +2.5
        baz=11
K24K    Donnelly Dome    39.88 342  P      P       19 10 22.3 +2.2
        baz=10
H16K    Elim             39.90 354  P      P       19 10 24.1 +4.0
        baz=4.1
L29M    L29M             39.90 337  P      P       19 10 22.2 +2.0
        baz=13
KEST    Kesra            39.93 179  LR     LR      19 27 17.1
        comp=Z,40nm,19.2s,baz=287,slow=37
BPAW    Bear Paw Mtn.    39.95 346  P      P       19 10 23.9 +3.4
        baz=8.5
J20K    Nowinta River    40.05 348  P      P       19 10 25.0 +3.6
        baz=7.2
ANM     Nome             40.05 356  P      P       19 10 25.3 +3.9
        baz=2.9
CHUM    Lake Minchumin   40.24 347  P      P       19 10 25.8 +2.8
        baz=7.9
FARO    Faro, Yukon      40.26 333  P      P       19 10 25.5 +2.3
        baz=15
L27K    Beaver Creek,    40.29 340  P      P       19 10 26.1 +2.6
        baz=12,SNR=5.7
J19K    Poorman          40.30 349  P      P       19 10 26.5 +3.0
        baz=6.7
TRF     Thorofare Moun   40.55 345  P      P       19 10 28.9 +3.2
        baz=8.6
M29M    Somme Creek      40.59 337  P      P       19 10 27.9 +1.9
        baz=13
PAX     Paxson           40.69 342  P      P       19 10 29.2 +2.5
        baz=10
CAST    Castle Rocks     40.69 347  P      P       19 10 25.2  -1.5
CAST                                IAmb   IAmb    19 10 38.2
        comp=Z,20nm,1.3s
CAST    Castle Rocks     40.69 347  P      P       19 10 30.2 +3.5
        baz=7.9
DHY     Denali Highway   40.72 343  P      P       19 10 29.6 +2.4
        baz=9.7
K20K    Telida           40.86 348  P      P       19 10 30.6 +2.5
        baz=7.2
J18K    Innoko River     40.88 350  P      P       19 10 31.1 +2.8
        baz=6.2
GAMB    Gambell          40.90   0  P      P       19 10 31.8 +3.5
        baz=0.3
M27K    Edge Creek, AK   40.99 339  P      P       19 10 31.8 +2.4
        baz=12
J17K    VABM Dome        41.04 351  P      P       19 10 32.9 +3.3
        baz=5.2,SNR=5.7
M26K    Nabesna, AK      41.05 340  P      P       19 10 32.3 +2.6
        baz=11
WAT1    Susitna Watana   41.05 344  P      P       19 10 32.1 +2.4
        baz=9.2
J16K    Anvik River      41.21 352  P      P       19 10 34.9 +4.0
        baz=4.6
PPLA    Purkeypile       41.21 347  P      P       19 10 34.5 +3.3
        baz=7.8
MAKZ    Makanchi         41.22  90  P      P       19 10 30.8  -0.6
HARP    HAARP            41.23 342  P      P       19 10 34.0 +2.9
        baz=10
N31M    Braeburn, Yuko   41.25 335  P      P       19 10 33.6 +2.2
        baz=14
MKAR    Makanchi Array   41.31  90  P      P       19 10 34.2 +2.2
        comp=Z,2.3nm,0.9s,baz=352,slow=7.4,SNR=21
        comp=Z,2.3nm,0.9s
N30M    Aishikik Lake    41.42 336  P      P       19 10 35.0 +2.2
        baz=13
YUK3    Moose Creek      41.44 338  P      P       19 10 35.4 +2.3
        baz=12
M24K    Tolsona, Glenn   41.59 342  P      P       19 10 36.9 +2.7
        baz=9.9
YUK4    Talbot Arm       41.69 337  P      P       19 10 36.5 +1.4
        baz=13
K17K    Iditarod         41.69 351  P      P       19 10 38.1 +3.1
        baz=5.5
L20K    Farewell, AK     41.72 348  P      P       19 10 37.8 +2.5
        baz=7.1,SNR=5.4
J14K    Nanvaranak Lak   41.83 354  P      P       19 10 38.9 +2.9
        baz=3.5
SCM     Sheep Creek Mo   41.95 343  P      P       19 10 39.4 +2.2
        baz=9.4
WHY     Whitehorse       41.96 334  P      P       19 10 39.1 +1.8
        baz=14
O30N    Mendenhall       41.99 335  P      P       19 10 39.1 +1.7
        baz=13
SML     Sawmill          42.05 344  P      P       19 10 39.2 +1.2
        baz=9.1
YUK6    Outpost Mounta   42.05 336  P      P       19 10 39.9 +1.7
        baz=12
L19K    White Mountain   42.07 348  P      P       19 10 40.7 +2.6
        baz=6.7
HYT     Haines Junctio   42.08 336  P      P       19 10 39.9 +1.6
        baz=13
SKT     Skwentna         42.09 346  P      P       19 10 39.9 +1.7
        baz=7.9
L18K    Granite Mounta   42.12 350         P       19 10 37.9  -0.5
L18K                                IAmb   IAmb    19 10 50.7
        comp=Z,20nm,1.4s
L18K    Granite Mounta   42.12 350  P      P       19 10 41.0 +2.5
        baz=6.0
P33M    Teslin, Yukon    42.17 332  P      P       19 10 40.1 +1.2
        baz=14
KLU     Klutina          42.18 342  P      P       19 10 40.6 +1.5
        baz=9.9
K15K    Wolf Creek Mou   42.23 353  P      P       19 10 43.4 +4.1
        baz=4.2
L17K    Donlin           42.27 351  P      P       19 10 43.5 +3.8
        baz=5.4
M20K    Styx River       42.28 347  P      P       19 10 42.5 +2.6
        baz=7.3
CTG     Chitna Glacier   42.32 339  P      P       19 10 42.2 +2.0
        baz=11
O28M    Mount Upton      42.40 338  P      P       19 10 41.4 +0.4
        baz=12
TOAD    Toad River Com   42.52 326  P      P       19 10 42.6 +0.8
        baz=16
SUA     Susitna One      42.55 345  P      P       19 10 45.0 +2.9
        baz=8.1
BMRM    Bremner River    42.60 341  P      P       19 10 43.9 +1.5
        baz=10
K13K    Kusilvak Mount   42.67 355  P      P       19 10 46.2 +3.3
        baz=3.0
O29M    Mount Kennedy    42.70 336  P      P       19 10 45.2 +1.9
        baz=12
P30M    Million Dollar   42.71 335  P      P       19 10 44.5 +1.1
        baz=13
R33M    Jennings River   42.74 331  P      P       19 10 44.7 +1.0
        baz=15
L16K    Owhat River      42.74 352  P      P       19 10 46.6 +3.1
        baz=4.9
M18K    Stony River      42.81 349  P      P       19 10 47.1 +3.1
        baz=6.3
L15K    Ungalak Mounta   42.85 353  P      P       19 10 48.0 +3.7
        baz=4.2
RC01    Rabbit Creek A   42.86 345  P      P       19 10 47.5 +3.1
        baz=8.4
P32M    Atlin            42.88 333  P      P       19 10 46.0 +1.3
        baz=14
GLI     Glacier Island   42.88 343  P      P       19 10 47.5 +2.9
        baz=9.4
MA2     Magadan          42.93  27  LR     LR      19 30 27.2
        comp=Z,31nm,18.7s,baz=314,slow=39
M17K    Holitna River    42.97 350  P      P       19 10 48.1 +2.7
        baz=5.7
PWL     Port Wells       42.99 344  P      P       19 10 48.3 +2.7
        baz=8.9
PINM    Pinnacle         43.07 338  P      P       19 10 48.4 +2.1
        baz=12
MESA    MESA             43.15 339  P      P       19 10 48.6 +1.5
        baz=11
L14K    Kuka Creek       43.22 354  P      P       19 10 49.4 +2.1
        baz=3.7
AAK     Ala-Archa        43.26 100  LR     LR      19 30 26.0
        comp=Z,95nm,19.6s,baz=336,slow=38
PLBC    Pleasant Camp    43.30 335  P      P       19 10 48.3 +0.3
        baz=13
Q32M    Nakina River     43.32 331  P      P       19 10 49.6 +1.2
        baz=14
PNL     Peninsula        43.41 337  P      P       19 10 51.2 +2.3
        baz=12
M16K    Timber Creek     43.41 351  P      P       19 10 53.0 +4.0
        baz=5.0
N19K    Bonanza Creek    43.42 348  P      P       19 10 52.0 +2.9
        baz=6.7
KAIM    Kayak Island     43.61 340  P      P       19 10 53.9 +3.3
        baz=10
N18K    Kilae Creek      43.62 349  P      P       19 10 54.3 +3.6
        baz=6.1
P23K    Montague Islan   43.78 343  P      P       19 10 54.9 +3.1
        baz=9.1
M14K    Bethel           43.79 353  P      P       19 10 56.0 +4.1
        baz=3.9
M15K    Kasigluk River   43.80 352  P      P       19 10 55.8 +3.8
        baz=4.4
N17K    Nushagak Hills   43.84 350  P      P       19 10 52.3   0.0
N17K                                IAmb   IAmb    19 11 04.9
        comp=Z,23nm,1.4s
N17K    Nushagak Hills   43.84 350  P      P       19 10 56.2 +3.9
        baz=5.7,SNR=5.9
O20K    Slope Mountain   44.04 346  P      P       19 10 57.0 +2.9
        baz=7.2
M13K    Dall Lake        44.17 354  P      P       19 10 59.0 +4.0
        baz=3.4
M11K    Mekoryuk         44.26 356  P      P       19 10 59.7 +4.1
        baz=2.3
R32K    Eaglecrest       44.26 333  P      P       19 10 57.4 +1.7
        baz=13
Q23K    Middleton Isla   44.26 342  P      P       19 10 57.7 +2.0
        baz=9.4
BRSE    Bradley Lake S   44.27 345  P      P       19 10 58.2 +2.4
        baz=7.9
O18K    Koktuh Hills     44.41 348  P      P       19 11 00.3 +3.3
        baz=6.3
MMAI    Mount Meron Ar   44.55 147  LR     LR      19 29 22.9
        comp=Z,39nm,19.3s,baz=346,slow=36
O17K    Koliganek Bris   44.58 350  P      P       19 11 00.9 +2.6
        baz=5.6
N14K    Kuskokwak Cree   44.61 353  P      P       19 11 01.0 +2.6
        baz=4.0
S31K    Pelican          44.76 334  P      P       19 11 01.0 +1.4
        baz=12
O16K    Kokwok River B   44.81 350  P      P       19 11 03.0 +2.9
        baz=5.2
P18K    Big Mountain,    44.88 348  P      P       19 11 03.4 +2.7
        baz=6.2
S32K    Killisnoo        45.05 333  P      P       19 11 03.4 +1.4
        baz=13
P17K    Kvichak River    45.13 349  P      P       19 11 05.4 +2.7
        baz=5.8
ULM     Lac du Bonnet    45.36 299  LR     LR      19 30 45.2
        comp=Z,176nm,18.0s,baz=269,slow=37
P16K    Nushagak River   45.37 350  P      P       19 11 06.7 +2.2
        baz=5.2
WMQ     Urumqi           45.45  87 eP      P       19 11 06.9 +1.4
WMQ                                 LR     LR
        comp=N,240nm,14.3s
WMQ                                 LR     LR
        comp=Z,140nm,19.5s
Q20K    Shuyak Island    45.50 346  P      P       19 11 07.2 +1.6
        baz=7.2
SIT     Sitka            45.54 333  P      P       19 11 06.7 +0.8
        baz=13
ASF     Jabal al Asfar   45.59 145  LR     LR      19 32 27.7
        comp=Z,39nm,18.2s,baz=58,slow=39
U33K    Whale Pass       46.21 331  P      P       19 11 13.9 +2.7
        baz=13
SONM    Songino Array    46.23  67  P      P       19 11 13.7 +2.0
        comp=Z,1.1nm,0.8s,baz=333,slow=8.5,SNR=5.8
SONM                                LR     LR      19 34 13.5
        comp=Z,56nm,18.8s,baz=192,slow=41
        comp=Z,1.1nm,0.8s
KDAK    Kodiak Island    46.33 346  LR     LR      19 32 51.5
        comp=Z,27nm,19.3s,baz=51,slow=39
KDAK    Kodiak Island    46.33 346  P      P       19 11 15.7 +3.5
        baz=7.0
KSH     Kashi            46.58 100  P      P       19 11 19.8 +5.3
KSH                                 sP     pwP     19 11 25.9 +5.8
KSH                                 pmax   pmax
        comp=Z,2.0nm,0.7s
SADO    Sadowa           46.59 282  LR     LR      19 31 32.1
        comp=Z,52nm,19.0s,baz=318,slow=37
CRAG    Craig            46.84 331  P      P       19 11 17.9 +1.8
        baz=13
EIL     Elat             47.79 148  LR     LR      19 32 36.4
        comp=Z,47nm,19.7s,baz=276,slow=38
HEH     HeiHe            48.38  49 eP      P       19 11 31.3 +3.1
HEH                                 pmax   pmax
        comp=Z,6.0nm,0.9s
BBB     Bella Bella      49.39 326  LR     LR      19 31 31.3
        comp=Z,65nm,20.7s,baz=124,slow=35
PETK    Petropavlovsk-   50.03  24  P      P       19 11 42.8 +1.9
        comp=Z,0.7nm,0.8s,baz=22,slow=10,SNR=3.9
        comp=Z,0.7nm,0.8s
KLR     Kul'dur          50.16  45  LR     LR      19 34 57.1
        comp=Z,53nm,18.3s,baz=332,slow=38
NEW     Newport          51.47 316  LR     LR      19 33 07.9
        comp=Z,103nm,20.2s,baz=8.5,slow=35
OVMT    Ovando           51.88 312  P      P       19 11 52.5  -2.5
MSO     Missoula         52.28 313         P       19 11 55.7  -2.2
MSO                                 IAmb   IAmb    19 12 06.4
        comp=Z,7.7nm,0.9s
GTA     Gaotai           52.61  77 eP      P       19 12 02.6 +2.1
GTA                                 sP     pwP     19 12 10.4 +4.2
GTA                                 pmax   pmax
        comp=Z,5.0nm,1.0s
YHL     Hebgen Lake      53.67 310  P      P       19 12 05.8  -2.6
YHL                                 IAmb   IAmb    19 12 17.1
        comp=Z,8.9nm,1.1s
MCMT    McKenzie Canyo   54.01 311  P      P       19 12 08.6  -2.2
HHC     Hu-ho-hao-te     54.03  66 eP      P       19 12 08.3  -2.6
HHC                                 pmax   pmax
        comp=Z,10.0nm,0.7s
HHC                                 pmax   pmax
        comp=Z,53nm,4.3s
CN2     Changchun        54.19  53 eP      P       19 12 13.4 +1.5
CN2                                eS      S       19 19 40.1  -8.3
CN2                                 pmax   pmax
        comp=Z,10.0nm,0.5s
CN2                                 pmax   pmax
        comp=Z,100nm,3.0s
CN2                                 LR     LR
        comp=N,200nm,11.0s
CN2                                 LR     LR
        comp=E,300nm,11.0s
CN2                                 LR     LR
        comp=Z,200nm,11.0s
FXWY    Fox Creek        54.80 309  P      P       19 12 14.3  -2.3
FXWY                                IAmb   IAmb    19 12 25.7
        comp=Z,4.1nm,1.1s
USRK    Ussuriysk Ar.    55.06  47  P      P       19 12 19.9 +1.7
        comp=Z,1.9nm,0.7s,baz=316,slow=4.0,SNR=3.4
        comp=Z,1.9nm,0.7s
PDAR    Pinedale Array   55.36 308  P      P       19 12 19.9  -0.7
        comp=Z,0.8nm,0.8s,baz=22,slow=5.3,SNR=7.5
PDAR                                LR     LR      19 36 15.0
        comp=Z,81nm,19.6s,baz=358,slow=36
        comp=Z,0.8nm,0.8s
TKL     Tuckaleechee C   56.34 282  LR     LR      19 35 36.4
        comp=Z,40nm,19.8s,baz=38,slow=35
LZH     Lanzhou          56.75  75 eP      P       19 12 33.8 +3.2
LZH                                 pmax   pmax
        comp=Z,19nm,1.3s
ASAJ    Asahikawa        56.94  38  LR     LR      19 39 20.6
        comp=Z,33nm,18.5s,baz=354,slow=38
O20A    White River Ci   57.63 306  P      P       19 12 33.7  -3.0
ELK     Elko             58.40 312  LR     LR      19 38 22.9
        comp=Z,102nm,18.7s,baz=14,slow=37
LSA     Lhasa            59.69  89  P      P       19 12 50.6  -1.0
LSA                                 IAmb   IAmb    19 12 56.1
        comp=Z,3.4nm,0.7s
MVCO    Mesa Verde       60.50 305         P       19 12 54.6  -2.1
NVAR    Mina Array Bea   61.21 314  P      P       19 13 01.0  -0.5
        comp=Z,0.2nm,0.3s,baz=20,slow=6.4,SNR=1.7
NVAR                                LR     LR      19 40 04.7
        comp=Z,60nm,18.4s,baz=96,slow=37
        comp=Z,0.2nm,0.3s
ANMO    Albuquerque      62.26 303  LR     LR      19 41 05.8
        comp=Z,154nm,18.9s,baz=102,slow=37
TORD    Torodi Ar. Bea   62.52 187  P      P       19 13 09.8  -0.5
        comp=Z,53nm,0.3s,baz=3.0,slow=8.2,SNR=1.5
MJAR    Matsushiro Arr   63.61  44  P      P       19 13 19.0 +1.7
        comp=Z,1.8nm,0.9s,baz=351,slow=6.4,SNR=5.7
MJAR                                LR     LR      19 41 24.7
        comp=Z,51nm,21.0s,baz=308,slow=36
        comp=Z,1.8nm,0.9s
NJ2     Nanjing          64.10  62 eP      P       19 13 18.8  -1.8
NJ2                                 pmax   pmax
        comp=Z,10.0nm,1.4s
MNHN    Monahans         64.93 298  P      P       19 13 23.4  -2.8
MNHN                                IAmb   IAmb    19 13 34.0
        comp=Z,7.4nm,1.0s
PZH     PanZhiHua        65.39  80  P      P       19 13 30.3 +1.1
PZH                                 pmax   pmax
        comp=Z,10.0nm,0.5s
PFO     Pinyon Flats O   65.55 311  LR     LR      19 41 21.6
        comp=Z,58nm,19.1s,baz=182,slow=35
VHRN    Van Horn         65.95 300         P       19 13 30.4  -2.4
VHRN                                IAmb   IAmb    19 13 41.0
        comp=Z,6.7nm,0.9s
TXAR    Lajitas Array    67.06 298  P      P       19 13 39.5  -0.4
        comp=Z,2.3nm,0.7s,baz=56,slow=5.1,SNR=22
TXAR                                LR     LR      19 44 05.7
        comp=Z,107nm,18.0s,baz=5.0,slow=37
        comp=Z,2.3nm,0.7s
CMAR    Chiang Mai Arr   72.41  85  P      P       19 14 14.1 +1.2
        comp=Z,0.5nm,0.8s,baz=321,slow=7.6,SNR=4.3
CMAR                                LR     LR      19 53 26.5
        comp=Z,32nm,18.7s,baz=325,slow=42
        comp=Z,0.5nm,0.8s
LPIG    La Paz           73.55 303  LR     LR      19 47 02.3
        comp=Z,62nm,19.3s,baz=38,slow=36
CMIG    Matias Romero    76.83 287  LR     LR      19 53 48.0
        comp=Z,57nm,18.3s,baz=10,slow=40
JTS     Las Juntas de    80.94 276  LR     LR      19 53 27.5
        comp=Z,56nm,18.3s,baz=28,slow=38
ASAR    Alice Springs   121.33  61  PKP    PKPdf   19 21 39.2  -0.2
        comp=Z,0.3nm,0.7s,baz=4.7,slow=2.1,SNR=6.0
SNAA    Sanae           147.19 187  PKPbc  PKPbc   19 22 28.3 +0.2
        comp=Z,3.9nm,1.1s,baz=41,slow=0.5,SNR=8.7
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IDC ***21*** *19:04:02.2±1.1, 36°.22N×30°.87E, h48*^{km}*±14*^{km}*, mb3.7/10, mbtmp3.8/16, ML3.3/6, MS3.8/2, Error ellipse: s-maj=11.9km s-min=9.9km az=14.0*

ISK ***21*** *19:04:03.7, 36°.26N×30°.95E, h56*^{km}*±1*^{km}*, ML3.7/62*

HLW ***21*** *19:04:03.5, 36°.24N×30°.88E, h23*^{km}*±2*^{km}*, Md4.1, Ml4.0*

AFAD ***21*** *19:04:03.1, 36°.34N×31°.00E, h7*^{km}*±4*^{km}*, MW3.7*

NIC ***21*** *19:04:04.3, 36°.19N×30°.95E, h66*^{km}*±14*^{km}*, Ml3.5/10*

GII ***21*** *19:04:05.0±0.0, 36°.00N±0°.02×30°.816E±0°.007, h40*^{km}*, Mws3.5, confirmed*

ISC 21 19:04:03.9±0.8**, 36°.24N**±0°.03×**30°.96E**±0°.02**, h61**^{km}±8^{km}**, n181, σ1**^{s}**60**/215**, mb3.7**/9**, 5C, Turkey**

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Code    Station Name        Δ°   AZ°    Phase ID          Time      Res
                                      Op      ISC       h  m  s     ISC
KEMT    Kemer-ANTALYA     0.49 318    Pg      Pn      19 04 15.1  -0.8
AKUM    Antalya-Kumluc    0.51 280    P       Pn      19 04 16.7 +0.6
AKUM                                  S       Sn      19 04 28.2 +3.4
MNVG    Manavgat-Antal    0.66  33    Pg      Pn      19 04 17.5  -0.3
ANTB    Antalya           0.70 340    Pg      Pn      19 04 18.4 +0.1
ANTB                                  Sg      Sn      19 04 28.5  -0.3
DEMR    Demre-Antalya     0.85 270    Pg      Pn      19 04 20.2 +0.1
KORT    Korkueli          0.90 327    Pg      Pn      19 04 20.9  -0.1
KORT                                  Sg      Sn      19 04 33.3  -0.2
KORT    Korkueli          0.90 327    P       Pn      19 04 21.9 +1.0
KORT                                  S       Sn      19 04 34.8 +1.4
ELL     Elmali            0.99 301    Pg      Pn      19 04 22.4 +0.4
ELL     Elmali            0.99 301    P       Pn      19 04 22.4 +0.4
ELL                                   S       Sn      19 04 38.2 +2.8
AKAS    Kas               1.09 270    Pn      Pn      19 04 24.1 +0.7
AKAS    Kas               1.09 270    P       Pn      19 04 24.1 +0.7
AKAS                                i IAML            19 04 53.0
        comp=E,937nm,0.4s
AKAS                                i IAML            19 04 55.0
        comp=N,1µm,0.5s
GAZI    Gazipasa          1.10  90    Pn      Pn      19 04 23.6 +0.3
GAZI                                  Sn      Sn      19 04 37.8 +0.1
GAZI    Gazipasa          1.10  90    P       Pn      19 04 23.5 +0.3
GAZI                                  S       Sn      19 04 34.9  -2.8
GAZI                                i IAML            19 04 40.0
        comp=N,1µm,0.5s
GAZI                                i IAML            19 04 40.0
        comp=E,2µm,0.5s
KSL     Kastellorizon     1.12 266    P       Pn      19 04 23.9 +0.4
BUCA    Burdur, Bucak-    1.13 344    P       Pn      19 04 23.2  -0.6
BUCA                                  S       Sn      19 04 35.0  -3.7
BUCA                                i IAML            19 04 43.0
        comp=N,257nm,0.5s
BUCA                                i IAML            19 04 51.0
        comp=E,358nm,0.6s
BCK     Bucak             1.25 346    Pn      Pn      19 04 25.3  -0.2
KNIK    Mula-Seydike      1.27 299    P       Pn      19 04 27.7 +2.0
KNIK                                  S       Sn      19 04 45.9 +3.9
KNIK                                i IAML            19 04 46.0
        comp=N,729nm,0.4s
KNIK                                i IAML            19 04 51.0
        comp=E,279nm,0.7s
SEYD    Seydisehir-KON    1.36  31    Pn      Pn      19 04 27.4 +0.5
SEYD                                  Sn      Sn      19 04 44.6 +0.5
SEDI    Konya, Seydise    1.37  28    P       Pn      19 04 27.6 +0.6
SEDI                                  S       Sn      19 04 44.8 +0.5
SEDI                                i IAML            19 04 50.0
        comp=N,666nm,0.6s
SEDI                                i IAML            19 04 50.0
        comp=E,595nm,0.4s
IZZE    Mula-Seydike      1.41 278    P       Pn      19 04 29.2 +1.7
IZZE                                i IAML            19 04 51.0
        comp=N,744nm,0.4s
IZZE                                i IAML            19 04 57.0
        comp=E,455nm,0.4s
HDMB    Hadim             1.43  59    Pn      Pn      19 04 28.5 +0.6
GOLH    Golhisar          1.50 312    P       Pn      19 04 31.2 +2.5
GOLH                                  S       Sn      19 04 52.0 +4.5
GOLH                                i IAML            19 05 06.0
        comp=E,518nm,0.5s
GOLH                                i IAML            19 05 09.0
        comp=N,379nm,0.5s
CAME    Cameli-Denizli    1.51 298    Pn      Pn      19 04 29.5 +0.6
FETY    Fethiye           1.56 285    Pn      Pn      19 04 30.1 +0.6
FETY    Fethiye           1.56 285    P       Pn      19 04 32.8 +3.3
CAEL    Denizli, Camel    1.59 304    P       Pn      19 04 31.9 +1.9
CAEL                                i IAML            19 05 03.0
        comp=N,499nm,0.5s
CAEL                                i IAML            19 05 18.0
        comp=E,468nm,0.7s
ISP     Isparta           1.62 348    Pn      Pn      19 04 30.6 +0.2
ISP     Isparta           1.62 348    P       Pn      19 04 33.8 +3.5
BRDR    BURDUR-Merkez     1.62 334    P       Pn      19 04 32.6 +2.2
BRDR                                  S       Sn      19 04 53.6 +3.3
BRDR                                i IAML            19 04 57.0
        comp=E,147nm,0.7s
BRDR                                i IAML            19 05 04.0
        comp=N,123nm,0.4s
BOZY    Bozyazi-Mersin    1.64  94    Pn      Pn      19 04 31.2 +0.7
AKMS    Akamas            1.66 137    P       Pn      19 04 32.5 +1.8
AKMS                                  S       Sn      19 04 54.1 +3.0
AKMS                                  AML     AML     19 05 02.1
        1.7nm,0.5s
AKMS                                  AML     AML     19 05 06.1
        2.0nm,0.5s
SABU    Mula-Dalaman      1.71 291    P       Pn      19 04 32.8 +1.3
ALFC    Alefka            1.72 129⇑ iP      Pn      19 04 32.2 +0.6
ALFC                                  S       Sn      19 04 52.9 +0.4
ALFC                                  AML     AML     19 05 00.1
        1.6nm,0.2s
ALFC                                  AML     AML     19 05 02.3
        1.9nm,0.3s
APMY    Acipayam-Deniz    1.81 313    Pn      Pn      19 04 33.8 +0.9
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BASM	Basmaki-Afyon	1.83	337	Pn	Pn	19 04 33.6	+0.4
BERE	Bereket-Mersin	1.83	86	Pn	Pn	19 04 34.2	+0.9
INCE	Denizli-Bozkur	1.84	323	P	Pn	19 04 35.6	+2.3
INCE				*i* IAML		19 05 02.0	
	comp=N,144nm,0.4s						
INCE				*i* IAML		19 05 03.0	
	comp=E,133nm,0.5s						
DNZT	Denizli-Tavas-	1.87	304	P	Pn	19 04 35.5	+1.8
DNZT				S	Sn	19 04 58.2	+1.9
AKDN	Akdeniz- Kıbrı	1.88	119	Pn	Pn	19 04 34.9	+1.1
DALY	Dalyan (Mula)	1.94	288	Pn	Pn	19 04 35.4	+0.8
NATA	Nata	1.96	138	P	Pn	19 04 36.2	+1.3
NATA				S	Sn	19 05 04.5	+6.1
NATA				AML	AML	19 05 15.7	
	3.3nm,0.6s						
NATA				AML	AML	19 05 18.6	
	4.2nm,0.9s						
YORU	Yoruktepe-Mers	1.98	92	Pn	Pn	19 04 36.3	+1.1
TEVE	Tevekalti-Mers	2.01	84	Pn	Pn	19 04 36.9	+1.2
TROD	Troodos	2.02	129	⇑*i*P	Pn	19 04 36.6	+0.7
TROD				S	Sn	19 05 00.2	+0.1
TROD				AML	AML	19 05 13.3	
	0.8nm,0.4s						
TROD				AML	AML	19 05 18.3	
	0.8nm,0.5s						
OREN	Orenkoy-Mersin	2.02	90	Pn	Pn	19 04 36.8	+1.1
KONT	Konya--Tatoy	2.04	33	Pn	Pn	19 04 36.5	+0.5
TAVA	DENIZLI_Tavas	2.05	307	P	Pn	19 04 37.6	+1.4
KRMN	Karaman	2.07	63	Pn	Pn	19 04 37.3	+0.8
AKK1	Akkuyu-Mersin	2.09	92	Pn	Pn	19 04 38.0	+1.4
TEPK	Tepekoy-MERSIN	2.09	90	Pn	Pn	19 04 37.8	+1.1
XYLS	Xyliatos	2.10	125	⇑*i*P	Pn	19 04 37.3	+0.5
XYLS				S	Sn	19 05 00.3	-1.5
XYLS				AML	AML	19 05 07.1	
	1.0nm,0.4s						
XYLS				AML	AML	19 05 08.2	
	1.1nm,0.3s						
YESI	Yesilovacik-Me	2.17	90	Pn	Pn	19 04 38.8	+1.1
TISA	Tisan-Mersin	2.20	91	Pn	Pn	19 04 39.3	+1.2
IKL	Isikli	2.20	89	Pn	Pn	19 04 39.6	+1.4
APOL	The Sanctuary	2.21	135	P	Pn	19 04 41.3	+3.1
KARG	Kargicak-Mersi	2.22	90	Pn	Pn	19 04 39.8	+1.4
KEBE	Keben-Mersin	2.23	84	Pn	Pn	19 04 41.0	+2.4
TURN	Turunc	2.25	285	Pn	Pn	19 04 39.8	+1.0
LADK	Ladik-KONYA	2.25	29	Pn	Pn	19 04 39.8	+0.8
ATHAL	Athalassa	2.27	118	P	Pn	19 04 40.3	+1.3
ATHAL				S	Sn	19 05 06.2	+0.3
ATHAL				AML	AML	19 05 21.9	
	1.3nm,0.4s						
ATHAL				AML	AML	19 05 27.6	
	1.3nm,0.9s						
ARG	Arkhangelos	2.29	270	Pn	Pn	19 04 39.8	+0.4
ARG	Arkhangelos	2.29	270	P	Pn	19 04 40.1	+0.7
ARG				S	Sn	19 05 07.0	+0.5
LFK	Lefkose	2.30	114	Pn	Pn	19 04 40.7	+1.1
CSS	Mathiatis	2.31	123	Pn	Pn	19 04 39.8	+0.1
CSS	Mathiatis	2.31	123	P	Pn	19 04 40.2	+0.4
CSS				S	Sn	19 05 08.4	+1.3
CSS	Mathiatis	2.31	123	P	Pn	19 04 39.9	+0.2
CSS				S	Sn	19 05 06.7	-0.3
CSS				AML	AML	19 05 22.8	
	0.5nm,0.6s						
CSS				AML	AML	19 05 24.0	
	0.4nm,0.5s						
SHUT	Suhut-Afyon	2.33	352	Pn	Pn	19 04 40.7	+0.7
ASGA	Asgata	2.36	127	⇑*i*P	Pn	19 04 42.7	+2.3
ASGA				S	Sn	19 05 10.4	+2.1
ASGA				AML	AML	19 05 23.4	
	0.7nm,0.6s						
ASGA				AML	AML	19 05 24.3	
	0.8nm,0.6s						
AKIN	Akıncılar- Kıb	2.38	120	Pn	Pn	19 04 41.5	+0.9
SILI	Silifke-Mersin	2.40	86	Pn	Pn	19 04 42.2	+1.4
SLFK	Silifke-Mersin	2.42	86	Pn	Pn	19 04 42.4	+1.3
MVOU	Mavrovouni	2.50	119	⇑*e*P	Pn	19 04 42.2	+0.1
MVOU				S	Sn	19 05 11.6	+0.1
MVOU				AML	AML	19 05 21.5	
	0.5nm,0.5s						
MVOU				AML	AML	19 05 26.1	
	0.6nm,0.7s						
KIZK	Mersin	2.58	84	Pn	Pn	19 04 44.6	+1.3
EREN	Erenkoy	2.70	104	Pn	Pn	19 04 46.6	+1.7
YESY	Yesilyurt	2.71	55	Pn	Pn	19 04 46.3	+1.1
NAZL	Nazilli-Aydin	2.74	310	Pn	Pn	19 04 46.0	+0.5
MLSB	Milas	2.77	293	Pn	Pn	19 04 46.9	+1.0
DAT	Datca	2.77	281	Pn	Pn	19 04 47.1	+1.1
CHBY	Cihanbeyli	2.80	33	Pn	Pn	19 04 47.2	+0.8
PARAL	Paralimni	2.80	115	P	Pn	19 04 51.6	+5.3
PARAL				S	Sn	19 05 26.4	+7.5
PARAL				AML	AML	19 05 34.6	
	0.7nm,0.5s						
PARAL				AML	AML	19 05 37.1	
	0.9nm,0.6s						
SULT	Sultanhani-AKS	2.83	45	Pn	Pn	19 04 47.9	+1.2
KULA	Kula-Manisa	2.92	322	Pn	Pn	19 04 48.8	+0.8
AYDB	Zeytinkoy-Aydi	2.99	306	Pn	Pn	19 04 49.3	+0.3
BODT	Bodrum	3.05	287	Pn	Pn	19 04 50.4	+0.7
GEDZ	Gediz	3.06	337	Pn	Pn	19 04 51.1	+1.2
ODEM	Odemis-Izmir	3.07	312	Pn	Pn	19 04 51.4	+1.3
YKAV	Yalikavak-Bodr	3.09	288	Pn	Pn	19 04 51.0	+0.8
CIFT	Cifteler, Eski	3.12	1	Pn	Pn	19 04 51.1	+0.4
KARP	Karpathos	3.16	258	Pn	Pn	19 04 52.5	+1.2
KARP	Karpathos	3.16	258	P	Pn	19 04 52.6	+1.3
KARP				S	Sn	19 05 28.6	+0.8
SVRH	Sivrihisar-ESK	3.23	8	Pn	Pn	19 04 52.5	+0.2
KULU	Kulu	3.23	29	Pn	Pn	19 04 52.9	+0.6
SIMA	Simav-Kutahya	3.24	332	Pn	Pn	19 04 53.3	+0.8
GCAM	G?zelcaml?	3.32	297	Pn	Pn	19 04 53.9	+0.5
TVSB	Tavsanli	3.42	340	Pn	Pn	19 04 55.9	+1.1
GORD	Gordes-Manisa	3.46	321	Pn	Pn	19 04 56.5	+1.1
BRTR	Keskin Array B	4.07	31	P	Pn	19 05 03.8	-0.1
	2.2nm,0.3s,baz=206,slow=16,SNR=55						
BRTR				S	Sn	19 05 49.8	-0.5
	13nm,0.4s,baz=200,slow=25,SNR=19						
	5.9nm,0.5s						
APE	Apeiranthos	4.44	282	P	Pn	19 05 09.7	+0.9
APE	Apeiranthos	4.44	282	S	Sn	19 05 59.1	-0.2
BHL	Bhannes	4.50	120	*e*P	Pn	19 05 10.8	+1.1
HWQ	Hawqa	4.53	114	*e*P	Pn	19 05 13.0	+3.0
DQRL	Deir Qamar	4.55	122	*e*P	Pn	19 05 11.8	+1.4
BEIL	Beino	4.59	110	*e*P	Pn	19 05 13.6	+2.7
ZAHL	Zahle	4.69	119	*e*P	Pn	19 05 13.4	+1.1
HNTI	Hanita	4.69	131	P	Pn	19 05 12.6	+0.4
HNTI	Hanita	4.69	131	S	Sn	19 06 05.3	+0.1
RCY	Rachaya	4.85	123	*e*P	Pn	19 05 16.2	+1.6
MMA0B	Mount Meron ar	4.88	130	P	Pn	19 05 15.9	+1.1
MMA0B	Mount Meron ar	4.88	130	S	Sn	19 06 09.9	0.0
MMAI	Mount Meron Ar	4.88	130	P	Pn	19 05 15.5	+0.8
	6.7nm,0.3s,baz=311,slow=13,SNR=40						
MMAI				S	Sn	19 06 08.7	-1.2
	10.0nm,0.3s,baz=303,slow=25,SNR=14						
	4.9nm,0.4s						
SHBL	Chebaa	4.88	125	*e*P	Pn	19 05 16.5	+1.5
FKH	Fakeheh	4.88	112	*e*P	Pn	19 05 18.0	+3.1
GEM	Giv'at Ha'Em	4.91	127	P	Pn	19 05 15.7	+0.5
GEM	Giv'at Ha'Em	4.91	127	S	Sn	19 06 10.9	+0.2
NATI	Neve Ativ	4.93	126	P	Pn	19 05 16.5	+1.1
NATI	Neve Ativ	4.93	126	S	Sn	19 06 11.6	+0.5
BLGI	Bet Lehem HaGe	4.94	134	P	Pn	19 05 16.5	+0.8
BLGI	Bet Lehem HaGe	4.94	134	S	Sn	19 06 11.4	-0.1
IDI	Anoyia	5.03	261	P	Pn	19 05 15.8	-1.1
	7.6nm,0.3s,baz=70,slow=11,SNR=47						
IDI				S	Sn	19 06 09.6	-4.0
	33nm,0.3s,baz=346,slow=9.9,SNR=11						
	18nm,0.4s						
SLTI	Sal'it	5.23	139	P	Pn	19 05 20.0	+0.4
SLTI	Sal'it	5.23	139	S	Sn	19 06 17.4	-1.1
MMLI	Mount Malkishu	5.29	134	P	Pn	19 05 21.1	+0.7
MMLI	Mount Malkishu	5.29	134	S	Sn	19 06 19.7	-0.4
HMDT	Nahal Hemdat	5.49	135	P	Pn	19 05 23.9	+0.8
HMDT	Nahal Hemdat	5.49	135	S	Sn	19 06 24.7	-0.1
DB3	El Dabaa	5.56	202	P	Pn	19 05 25.2	+1.1
DB3				S	Sn	19 06 23.9	-2.9
UJAP	Al Uja	5.68	138	P	Pn	19 05 25.9	+0.2
UJAP	Al Uja	5.68	138	S	Sn	19 06 28.7	-0.8
AMAZ	Amatzia	5.73	144	P	Pn	19 05 26.5	0.0
AMAZ	Amatzia	5.73	144	S	Sn	19 06 29.9	-1.0
MATC	Matruh	5.79	214	P	Pn	19 05 27.6	+0.4
DSI	Dead Sea	5.93	140	P	Pn	19 05 29.7	+0.5
DSI	Dead Sea	5.93	140	S	Sn	19 06 35.1	-0.7
YTIR	Yattir	5.97	143	P	Pn	19 05 29.7	-0.1
YTIR	Yattir	5.97	143	S	Sn	19 06 36.0	-0.8
KZIT	Kziot	6.04	151	P	Pn	19 05 31.0	+0.3
KZIT	Kziot	6.04	151	S	Sn	19 06 37.0	-1.5
MSBI	Mazada	6.13	142	P	Pn	19 05 32.0	+0.2
MSBI	Mazada	6.13	142	S	Sn	19 06 39.5	-1.0
GHAJ	Ghor Haditha	6.24	141	P	Pn	19 05 34.0	+0.6
GHAJ	Ghor Haditha	6.24	141	S	Sn	19 06 42.9	-0.5
KOT	Kottamia	6.34	173	P	Pn	19 05 36.7	+1.9
KOT				S	Sn	19 06 43.3	-2.5
ASF	Jabal al Asfar	6.38	128	P	Pn	19 05 35.7	+0.4
	0.7nm,0.3s,baz=323,slow=8.5,SNR=6.7						
ASF				S	Sn	19 06 46.4	-0.4
	3.4nm,0.3s,baz=350,slow=6.1,SNR=2.2						
	0.6nm,0.5s						
HMYD	Mayadein	6.43	181	P	Pn	19 05 37.9	+1.9
HNAT	Natroun	6.59	183	S	Sn	19 06 49.6	-2.5
ZFRI	Zfri	6.68	147	P	Pn	19 05 39.3	-0.1
ZFRI	Zfri	6.68	147	S	Sn	19 06 52.7	-1.4
SLUM	Salum	6.73	227	P	Pn	19 05 40.8	+0.7
PRNI	Paran	6.78	149	P	Pn	19 05 40.8	-0.1
PRNI	Paran	6.78	149	S	Sn	19 06 55.8	-0.8
KRMI	Paran Flat	6.87	152	P	Pn	19 05 42.1	0.0
KRMI	Paran Flat	6.87	152	S	Sn	19 06 57.4	-1.5
HRFI	Mount Harif	7.07	150	P	Pn	19 05 44.5	-0.3
HRFI	Mount Harif	7.07	150	S	Sn	19 07 02.2	-1.5
RYAN	Fayoum	7.16	185	P	Pn	19 05 47.6	+1.6
RYAN				S	Sn	19 07 03.2	-2.8
MBRI	Mt Berech	7.23	152	P	Pn	19 05 47.0	-0.1
MBRI	Mt Berech	7.23	152	S	Sn	19 07 06.6	-1.2
EIL	Elat	7.36	152	P	Pn	19 05 49.9	+1.2
	5.6nm,0.6s,baz=350,slow=3.3,SNR=16						
EIL				S	Sn	19 07 06.8	-4.0
	8.9nm,0.5s,baz=315,slow=17,SNR=8.4						
EIL	Elat	7.36	152	P	Pn	19 05 48.6	-0.1
EIL	Elat	7.36	152	S	Sn	19 07 08.7	-2.1
NBNS	Bani Suef	7.60	178	P	Pn	19 05 53.1	+1.1
NBNS				S	Sn	19 07 13.3	-3.4
HKAT	Jabal Katrina	8.11	161	P	Pn	19 06 00.7	+1.5
SWA2		8.38	215	P	Pn	19 06 03.5	+0.9
TAMRE	El Minia	8.53	180	P	Pn	19 06 05.8	+1.0
HFRF	Wahat Farafira	9.34	195	P	Pn	19 06 16.7	+0.9
HFRF				S	Sn	19 07 54.1	-5.3
HDK1	Dakhla	10.75	188	P	Pn	19 06 36.7	+1.6
AKASG	Malin Array Be	14.51	356	P	Pn	19 07 26.7	+0.9
	0.8nm,0.3s,baz=178,slow=9.1,SNR=7.2						
	0.2nm,0.2s						
GERES	GERESS Array B	17.85	320	P	P	19 08 07.3	-0.6
	baz=122,slow=12,SNR=8.1						
	0.4nm,0.7s						
BRG	Berggiesshubel	19.06	325	*e*P	P	19 08 20.4	-0.7
BRG				Amp		19 08 23.6	
	comp=Z,1.7nm,0.7s						
OBN	Obninsk	19.27	10	LR	LR	19 17 06.7	
	comp=Z,165nm,19.2s,baz=256,slow=41						
BELG	Belogornoye	19.99	31	P	P	19 08 31.2	0.0
	comp=Z,16nm,1.0s,baz=146,slow=7.3,SNR=2.8						
	comp=Z,16nm,1.0s						
FINES	FINESS Array B	25.41	355	P	P	19 09 24.1	-1.3
	comp=Z,2.1nm,0.9s,baz=180,slow=8.7,SNR=7.5						
	comp=Z,2.1nm,0.9s						
HFS	Hagfors	26.37	340	P	P	19 09 34.3	+0.2
	comp=Z,1.2nm,0.8s,baz=152,slow=9.6,SNR=1.4						
	comp=Z,1.2nm,0.8s						
EKA	Eskdalemuir Ar	30.07	320	P	P	19 10 05.8	-1.3
	comp=Z,0.4nm,0.5s,baz=124,slow=9.8,SNR=3.5						
	comp=Z,0.4nm,0.5s						
BVAR	Borovoye Array	32.19	46	P	P	19 10 26.9	+1.1
	comp=Z,0.6nm,0.3s,baz=252,slow=5.4,SNR=7.1						
	comp=Z,0.6nm,0.3s						
ARCES	ARCESS Array B	33.49	357	P	P	19 10 36.2	-0.8
	comp=Z,2.4nm,1.0s,baz=175,slow=9.5,SNR=5.7						
	comp=Z,2.4nm,1.0s						
KURBB	Kurchatov Arra	36.76	52	P	P	19 11 05.7	+0.4
	comp=Z,1.0nm,0.7s,baz=276,slow=9.3,SNR=11						
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	39.22	58	P	P	19 11 26.4	+0.2
	comp=Z,0.5nm,0.6s,baz=266,slow=9.7,SNR=4.5						
	comp=Z,0.5nm,0.6s						
ZALV	Zalesovo Beam	40.84	47	P	P	19 11 38.7	-0.6
	comp=Z,2.6nm,0.4s,baz=269,slow=9.7,SNR=9.7						
	comp=Z,2.6nm,0.4s						
SONM	Songino Array	55.12	53	P	P	19 13 29.9	0.0
	comp=Z,0.3nm,0.4s,baz=303,slow=8.2,SNR=2.1						
	comp=Z,0.3nm,0.4s						
TGY	Tagaytay City	81.79	79	LR	LR	19 56 22.1	
	comp=Z,98nm,20.5s,baz=148,slow=38						

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*IDC **21** 19:12:18.6±1.2, 1°.26N×91°.78E, h0^{km}, mb3.7/7, mbtmp3.7/10, ML3.8/3, MS3.3/2, Error ellipse: s-maj=38.8km s-min=19.7km az=48.0*

*NEIC **21** 19:12:21.4±1.3, 1°.22N±0°.09×91°.9E±0°.1, h10^{km}±2^{km}, mb4.7/8, Error ellipse: s-maj=21.9km s-min=12.8km az=246.0*

ISC 21 19:12:19.7±0.9**, 1°.2N**±0°.1×**91°.8E**±0°.1**, h10^{km}, n36,** σ**0^{s}.89**/26**, mb3.9**/11**, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	5.78	89		Pn	19 13 45.9	+0.2
LHMI	Lhok Sumawe	6.51	52	Pn	Pn	19 13 56.7	+1.0
RPSI	Rantau Prapat	7.28	78		Pn	19 14 04.8	-1.4
RPSI	Rantau Prapat	7.28	78	Pn	Pn	19 14 05.8	-0.4
PSI	Prapat	7.30	77	Pn	Pn	19 14 04.8	-1.8
	4.5nm,0.3s,baz=308,slow=9.8,SNR=6.5						
	8.2nm,0.3s						
KULM	Kulim	9.72	65	Pn	Pn	19 14 40.0	+0.1
IPM	Ipoh	9.77	70	Pn	Pn	19 14 40.2	-0.3
SRIT	Nakonsritamara	10.69	46		Pn	19 14 51.9	-1.2
PALK	Pallekele	12.59	299	Pn	Pn	19 15 18.2	-0.9
	0.3nm,0.3s,baz=177,slow=2.1,SNR=1.6						
PALK				Sn	Sn	19 17 26.4	-13
	0.4nm,0.3s,baz=202,slow=5.5,SNR=2.0						
	6.7nm,0.8s						
CMAR	Chiang Mai Arr	18.52	22	P	P	19 16 36.6	+0.2
	0.1nm,0.3s,baz=198,slow=12,SNR=4.2						
	0.5nm,0.7s						
H08S2	Diego Garcia H	21.17	245	T	T	19 38 52.1	
	baz=65,slow=75,SNR=85						
H08S3	Diego Garcia H	21.17	245	T	T	19 38 47.4	
	baz=65,slow=75,SNR=158						
H08S1	Diego Carcia H	21.18	245	T	T	19 38 53.9	
	baz=65,slow=75,SNR=156						
DAV	Davao City (W)	34.18	79	LR	LR	19 34 08.1	
	comp=Z,32nm,19.4s,baz=184,slow=38						
H01W3	Cape Leeuwin H	41.56	152	T	T	20 04 24.9	
	baz=326,slow=76,SNR=7.1						
H01W2	Cape Leeuwin H	41.57	152	T	T	20 04 25.9	
	baz=326,slow=76,SNR=14						
H01W1	Cape Leeuwin H	41.58	152	T	T	20 04 24.5	
	baz=326,slow=76,SNR=7.4						
MKAR	Makanchi Array	46.15	351	P	P	19 20 44.8	+0.3
	0.5nm,0.5s,baz=174,slow=8.2,SNR=7.5						
	0.5nm,0.5s						
WB0	Warramunga Arr	46.68	119	P	P	19 20 49.2	+0.1
WB0				IAmb	IAmb	19 21 30.3	
	comp=Z,10nm,1.4s						
WRA	Warramunga Arr	46.70	119	P	P	19 20 49.8	+0.6
	comp=Z,0.6nm,0.6s,baz=297,slow=8.6,SNR=9.5						
	comp=Z,0.6nm,0.6s						
WB2	Warramunga Arr	46.71	119	P	P	19 20 49.8	+0.4
WB2				IAmb	IAmb	19 21 09.6	
	comp=Z,12nm,1.4s						
WR8	Warramunga Arr	46.85	119	P	P	19 20 51.1	+0.7
WR8				IAmb	IAmb	19 20 56.6	
	comp=Z,5.8nm,1.0s						
ASAR	Alice Springs	47.81	124	P	P	19 20 58.4	+0.5
	comp=Z,0.5nm,1.0s,baz=300,slow=8.1,SNR=3.0						
ASAR				PcP	PcP	19 22 27.7	+0.9
	comp=Z,0.2nm,0.5s,baz=297,slow=3.5,SNR=1.7						
	comp=Z,0.5nm,1.0s						
SONM	Songino Array	48.13	13	P	P	19 21 00.9	+0.8
	comp=Z,1.7nm,0.6s,baz=191,slow=8.1,SNR=8.7						
	comp=Z,1.7nm,0.6s						
KURBB	Kurchatov Arra	50.50	349	P	P	19 21 17.0	-1.0
	comp=Z,0.4nm,0.2s,baz=180,slow=4.4,SNR=3.1						
	comp=Z,0.4nm,0.2s						
BVAR	Borovoye Array	54.62	344	P	P	19 21 47.7	-0.8
	comp=Z,0.3nm,0.7s,baz=154,slow=7.2,SNR=2.4						
	comp=Z,0.3nm,0.7s						
H04N2	CROZET ISLANDS	58.85	211	T	T	20 26 04.7	
	baz=48,slow=75,SNR=20						
H04N1	CROZET ISLANDS	58.86	211	T	T	20 26 04.9	
	baz=48,slow=75,SNR=21						
H04N3	CROZET ISLANDS	58.87	211	T	T	20 26 03.6	
	baz=48,slow=75,SNR=20						
EIDS	Eidsvold	63.06	119	P	P	19 22 46.6	-1.2
YSS	Yuzhno-Sakhali	63.47	36	P	P	19 22 50.4	+0.4
TIXI	Tiksi	74.18	11	P	P	19 23 55.8	-0.4
SEY	Seymchan	75.92	24	LR	LR	20 00 36.6	
	comp=Z,31nm,18.9s,baz=230,slow=38						
GERES	GERESS Array B	81.25	319	P	P	19 24 36.7	+0.4
	comp=Z,0.4nm,0.5s,baz=106,slow=4.7,SNR=6.4						
	comp=Z,0.4nm,0.5s						
OSSC	Osservatorio P	82.31	314	P	P	19 24 43.7	+1.8
OSSC				IAmb	IAmb	19 24 48.6	
	comp=Z,3.9nm,0.6s						
TXAR	Lajitas Array	146.22	25	PKPbc	PKPbc	19 32 01.5	+0.1
	comp=Z,0.4nm,0.5s,baz=347,slow=2.4,SNR=4.7						

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*ASRS **21** 19:20:31.8±0.1, 50°.6N±0°.8×8°7E±°, h1^{km}, MLh4.0/15, Error ellipse: s-maj=2.6km s-min=1.5km az=67.2, confirmed*

*NNC **21** 19:20:37.1±2.5, 50°.60N×87°.06E, h0^{km}, mb4.4, mpv4.0, Error ellipse: s-maj=19.1km s-min=11.7km az=77.0*

ISC 21 19:20:32.6±0.7**, 50°.58N**±0°.02×**87°.53E**±0°.03**, h10^{km}, n33,** σ**2^{s}.41**/69**, 9C-9D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKAR	Aktash	0.27	167	⇑P	Pg	19 20 37.7	-0.3
AKAR				Sg	Sg	19 20 41.2	-0.5
CHBI	Chibit, Altay	0.27	183	⇓P	Pg	19 20 37.3	-0.8
CHBI				Sg	Sg	19 20 40.6	-1.2
ULGR	Ulagan, Altay	0.28	81	⇑P	Pb	19 20 38.7	-1.0
ULGR				Sg	Sb	19 20 43.4	-1.1
CUR	Chagan-Uzun	0.71	132	⇑P	Pb	19 20 46.5	-0.7
CUR				Sg	Sb	19 20 56.7	-0.4
DGZ	Jazzator, Alta	0.89	184	⇓P	Pg	19 20 48.4	-1.2
DGZ				Sg	Sg	19 20 59.1	-2.0
ELDR	Elanda	1.11	305	P	Pb	19 20 52.9	-0.9
ELDR				Sg	Sg	19 21 07.0	-1.3
YALR	Yailyu, Altay	1.19	2	⇓P	Pg	19 20 55.7	+0.2
YALR				Sg	Sg	19 21 11.1	+0.2
ARTR	Artybash	1.23	353	⇓P	Pg	19 20 56.3	+0.1
ARTR				Sg	Sn	19 21 13.3	+0.8
GALT	Gorno-Altaysk,	1.70	325	P	Pb	19 21 03.9	0.0
TEL	Teeli	1.75	74	⇑P	Pg	19 21 07.6	+1.4
TEL				Sg	Sg	19 21 32.0	+3.1
TASR	Tashtagol	2.19	6	⇑P	Pg	19 21 15.4	+0.8
TASR				Sg	Sg	19 21 45.2	+2.2
ELT	Eltsovka	2.80	344	⇓P	Pb	19 21 21.1	-1.5
ELT				Sg	Sb	19 21 59.4	+2.4
DJO	Djoy, Khakassi	3.18	45	P	Pb	19 21 28.1	-1.1
DJO				Pg	Pg	19 21 33.9	+0.4
DJO				Sg	Sg	19 22 13.5	-1.2
VEH	Verkhnyaya Baz	3.18	32	Pn	Pb	19 21 28.0	-1.2
VEH				Pg	Pg	19 21 31.7	-1.8
VEH				Sg	Sg	19 22 13.1	-1.6
LUZB	Luzhba, Kemero	3.20	15	P	Pb	19 21 27.7	-1.7
LUZB				Pg	Pg	19 21 31.3	-2.5
LUZB				Sg	Sg	19 22 14.0	-1.2
CERR	Cheremushki	3.32	45	Pn	Pb	19 21 29.4	-2.1
CERR				Pg	Pg	19 21 36.8	+0.7
CERR				Sg	Sg	19 22 17.3	-1.8
ERU	Erunakovo, Kuz	3.56	359	Pg	Pb	19 21 33.9	-1.8
ERU				Sg	Sg	19 22 25.7	-1.3
KOTO	Kotino, Kuzbas	3.63	354	Pg	Pb	19 21 37.3	+0.5
KOTO				Sg	Sg	19 22 29.9	+0.8
BJR3	Bachatsky-3 (S	3.75	348	Pg	Pb	19 21 34.7	-4.0
BJR3				Sg	Sg	19 22 30.0	-2.7
BJR1	Bachatsky 1, K	3.77	347	Pg	Pb	19 21 35.3	-3.9
BJR1				Sg	Sg	19 22 31.8	-1.9
BJR2	Bachatsky-2, K	3.80	348	Pn	Pb	19 21 35.6	-4.1
BJR2				Pg	Pg	19 21 42.0	-3.3
BJR2				Sg	Sb	19 22 23.5	-2.3
SALR	Pechorkino, Sa	4.00	345	Pg	Pb	19 21 38.4	-4.7
SALR				Sg	Sg	19 22 37.1	-3.8
NVSII	Novosibirsk	5.00	330	Pn	Pn	19 21 49.4	+1.8
NVSII				Pg	Pg	19 22 07.9	-0.3
NVSII				Sg	Sg	19 23 10.6	-2.3
BRCR	Berchikul'	5.09	5	Pn	Pn	19 21 52.6	+3.8
BRCR				Pg	Pb	19 22 03.9	+2.2
BRCR				Sg	Sg	19 23 15.1	-0.7
MK31	Makanchi Array	5.14	224	⇓Pn	Pn	19 21 53.0	+3.5
	32nm,0.8s,baz=45,slow=13,SNR=327						
MK31				⇓Sn	Sn	19 22 52.4	+3.6
	19nm,0.5s,baz=47,slow=26,SNR=4.1						
MK31				⇓Lg	Lg	19 23 10.8	
	21nm,0.5s,baz=44,slow=32,SNR=6.6						
MKAR	Makanchi Array	5.14	224	Pn	Pn	19 21 53.5	+3.9
MKAR				Sg	Sg	19 23 14.3	-3.1
MAKZ	Makanchi	5.27	226	⇑Pn	Pn	19 21 54.3	+3.0
	13nm,0.6s						
MAKZ				⇓Sn	Sn	19 22 55.0	+2.9
	75nm,1.1s						
MAKZ				Lg	Lg	19 23 14.8	
	34nm,0.5s						
MAKZ	Makanchi	5.27	226	Pg	Pn	19 21 54.9	+3.6
MAKZ				Sg	Sg	19 23 17.2	-4.4
KURK	Kurchatov	5.67	275	Pn	Pn	19 21 57.9	+1.1
	1.7nm,0.3s						
KURK				Lg	Lg	19 23 27.7	
	68nm,0.7s						
KURBB	Kurchatov Arra	5.73	274	⇑Pn	Pn	19 21 59.3	+1.7
	18nm,0.4s						
KURBB				⇑Sn	Sn	19 23 03.1	-0.3
	53nm,0.7s						
KURBB				⇑Lg	Lg	19 23 34.0	
	150nm,0.8s						
KNGR	Kungurtug, Tuv	6.36	86	Pg	Pg	19 22 29.7	-4.6
KNGR				Sg	Sg	19 23 56.4	-0.3
GZLN	Zheleznogorsk	6.90	30	Sg	Sg	19 24 13.6	-0.1
MOY	Mondy	8.54	78	Sg	Sg	19 24 59.9	-6.6

WEL 21 19:35:19.3±1.4**, 34°S**±14°×**18°0E**±3°9**, h33^{km}, M4.0**/6**, mB4.5**/1**, ML4.2**/9**, MLv4.0**/6**, Mw(mB)3.6**/1**, Error ellipse: s-maj=52.9km s-min=10.5km az=106.8, confirmed, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.07	195	P	Pn	19 36 19.3	+0.2
WMGZ	Waiomatatini S	4.29	193	P	Pn	19 36 22.5	+0.2
WMGZ				S	Sn	19 37 13.0	+1.8
HAZ	Te Kaha	4.38	199	P	Pn	19 36 22.8	-0.7
HAZ				S	Sn	19 37 17.0	+3.8
PKGZ	Pakihiroa	4.41	196	P	Pn	19 36 22.8	-1.1
PKGZ				S	Sn	19 37 14.6	+0.6
PUZ	Puketiti	4.57	193	P	Pn	19 36 25.5	-0.6
PUZ				S	Sn	19 37 16.5	-1.5
RUGZ	Raukumara Rang	4.60	199	P	Pn	19 36 27.3	+0.6
TWGZ	Tauwhareparae	4.73	196	P	Pn	19 36 28.7	+0.4
TWGZ				S	Sn	19 37 22.6	+0.6
MWZ	Matawai	4.99	199	P	Pn	19 36 32.1	+0.2
MWZ				S	Sn	19 37 30.0	+1.6
URZ	Urewera	5.04	203	P	Pn	19 36 32.3	-0.3
URZ				S	Sn	19 37 28.3	-1.4
RAGZ	Rawiri	5.17	199	P	Pn	19 36 35.3	+0.9
RIGZ	Rimuhau	5.28	196	P	Pn	19 36 36.4	+0.4
RTZ	Ruatahuna	5.41	202	P	Pn	19 36 38.3	+0.5
SNGZ	Shannon Statio	5.46	199	P	Pn	19 36 38.3	-0.1
PRGZ	Paritu Road	5.46	194	P	Pn	19 36 36.8	-1.6
KNZ	Kokohu	5.60	196	P	Pn	19 36 39.5	-0.7
RAHZ	Arahi	5.66	200	P	Pn	19 36 42.0	+1.0
MTHZ	Maungataniwha	5.67	202	P	Pn	19 36 42.4	+1.2
NMHZ	Naumai	5.91	202	P	Pn	19 36 45.3	+0.8
BKZ	Black Stump Fm	6.07	203	P	Pn	19 36 46.7	0.0
OTVZ	Oturere	6.37	209	P	Pn	19 36 51.9	+0.9
KAHZ	Kahuranaki	6.53	199	P	Pn	19 36 51.8	-1.3

IDC 21 19:39:04.1±348.0**, 48°.69N**×**152°.92E, h0^{km}, Error ellipse: s-maj=168.5km s-min=124.1km az=27.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I44RU	PETROPAVLOVSK-	5.36	33	I	I	20 12 50.0	
	baz=212,slow=317,SNR=5.3						
I45RU	USSURIYSK INFR	15.10	261	I	I	21 05 40.0	
	baz=64,slow=310,SNR=2.9						
I30JP	ISUMI INFRASON	16.30	219	I	I	21 18 46.9	
	baz=26,slow=336,SNR=1.7						

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*IDC **21** 19:53:32.8±0.8, 14°.99N×45°.14W, h0^{km}, mb3.8/9, mbtmp3.9/10, ML4.1/1, MS3.4/39, Error ellipse:*

s-maj=26.0km s-min=20.8km az=146.0

*NEIC **21** 19:53:33.7±0.9, 14°.7N±0°.1×45°.1W±0°.1, h10^{km}±1^{km}, mb4.6/32, Error ellipse: s-maj=27.0km s-min=7.1km az=139.0*

ISC 21 19:53:34.4±0.6**, 14°.78N**±0°.09×**45°.2W**±0°.1**, h14^{km}, n83, σ1^{s}.23**/45**, mb4.5**/24**, MS3.4**/38**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDP	Montagnes des	12.11	218	Pn	Pn	19 56 29.9	+3.2
	1.2nm,0.3s,baz=26,slow=15,SNR=18						
MDP				Sn	Sn	19 58 36.2	-5.4
	0.3nm,0.3s,baz=162,slow=9.2,SNR=1.6						
MDP				LR	LR	20 00 23.6	
	comp=Z,136nm,19.7s,baz=83,slow=33						
	11nm,0.7s						
MAL2	Monte Alegre,	18.93	209	P	P	19 57 53.2	-1.9
MAL2				IAmb	IAmb	19 58 04.3	
	comp=Z,21nm,0.6s						
BOAV	Boa Vista	19.52	232	P	P	19 58 00.9	-0.7
SJG	San Juan	20.39	282	LR	LR	20 05 06.7	
	comp=Z,80nm,21.0s,baz=112,slow=34						
RCBR	Riachuelo	22.45	155	LR	LR	20 05 06.0	
	comp=Z,53nm,21.5s,baz=48,slow=31						
BAUV	El Baul	23.11	258		P	19 58 40.3	+0.1
MACA	Manacapuru-AM	23.54	222	P	P	19 58 43.9	-0.5
SDDR	Presa de Saban	25.33	283	P	P	19 59 01.3	+0.2
SDV	Santo Domingo	25.59	260	LR	LR	20 09 10.1	
	comp=Z,34nm,21.4s,baz=64,slow=36						
BBTS	Babate	27.69	87	LR	LR	20 07 03.1	
	comp=Z,90nm,21.0s,baz=145,slow=29						
SIV	San Ignacio	34.38	208	LR	LR	20 14 15.0	
	comp=Z,77nm,19.7s,baz=111,slow=36						
H10N3	ASCENSION HYDR	37.82	124	T	T	20 40 37.5	
	baz=307,slow=75,SNR=37						
H10N2	ASCENSION HYDR	37.82	124	T	T	20 40 39.3	
	baz=307,slow=75,SNR=32						
H10N1	ASCENSION HYDR	37.84	124	T	T	20 40 48.2	
	baz=307,slow=75,SNR=42						
LPAZ	La Paz	38.31	217	P	P	20 00 57.0	+1.5
	comp=Z,1.0nm,0.8s,baz=1.0,slow=5.8,SNR=4.9						
LPAZ				LR	LR	20 16 53.2	
	comp=Z,55nm,18.0s,baz=68,slow=36						
	comp=Z,1.0nm,0.8s						
H10S3	ASCENSION HYDR	38.35	126	T	T	20 41 25.8	
	baz=304,slow=74,SNR=29						
H10S2	ASCENSION HYDR	38.37	126	T	T	20 41 34.7	
	baz=276,slow=74,SNR=34						
TKL	Tuckaleechee C	40.29	308	LR	LR	20 15 55.8	
	comp=Z,72nm,18.7s,baz=121,slow=33						
DBIC	Dimbokro	40.37	97	LR	LR	20 14 23.7	
	comp=Z,57nm,21.8s,baz=324,slow=31						
MDT	Midelt	40.92	57	LR	LR	20 13 32.6	
	comp=Z,21nm,21.4s,baz=234,slow=29						
SADO	Sadowa	41.46	323	LR	LR	20 14 46.0	
	comp=Z,57nm,20.7s,baz=151,slow=31						
CPUP	Villa Florida	42.55	196	LR	LR	20 19 26.5	
	comp=Z,6.7nm,18.9s,baz=6.5,slow=36						
SCHQ	Schefferville	43.37	342	P	P	20 01 35.5	-0.7
	comp=Z,6.1nm,1.0s,baz=142,slow=9.1,SNR=4.7						
SCHQ				LR	LR	20 17 27.2	
	comp=Z,81nm,18.7s,baz=81,slow=33						
	comp=Z,6.1nm,1.0s						
ESDC	Sonseca Array	43.70	47	P	P	20 01 38.6	-0.6
	comp=Z,0.7nm,1.0s,baz=247,slow=5.9,SNR=4.7						
ESDC				LR	LR	20 15 47.0	
	comp=Z,30nm,18.6s,baz=228,slow=31						
	comp=Z,0.7nm,1.0s						
TORD	Torodi Ar. Bea	45.45	86	P	P	20 01 52.3	-1.1
	comp=Z,65nm,0.3s,baz=291,slow=7.2,SNR=1.6						
FRB	Frobisher Bay	51.54	347	LR	LR	20 21 53.8	
	comp=Z,20nm,19.0s,baz=114,slow=33						
BRDY	Brady	51.70	298		P	20 02 41.1	-0.3
BRDY				IAmb	IAmb	20 02 42.9	
	comp=Z,9.3nm,1.1s						
SFJD	Kangerlussuaq	52.29	357	LR	LR	20 21 08.2	
	comp=Z,31nm,19.9s,baz=200,slow=32						
BORG	Borgarnes	52.51	13	LR	LR	20 20 32.3	
	comp=Z,21nm,18.4s,baz=229,slow=31						
APMT	Aspermont	52.86	301	P	P	20 02 49.8	-0.2
APMT				IAmb	IAmb	20 02 51.1	
	comp=Z,6.8nm,0.8s						
ULM	Lac du Bonnet	54.01	322	LR	LR	20 23 22.2	
	comp=Z,53nm,20.0s,baz=215,slow=33						
SAND	Sanderson	54.28	296		P	20 03 00.5	0.0
DAVOX	Davos/Dischmat	55.59	43	LR	LR	20 25 21.8	
	comp=Z,24nm,18.4s,baz=268,slow=34						
TXAR	Lajitas Array	55.60	296	P	P	20 03 10.0	-0.2
	comp=Z,0.8nm,0.8s,baz=101,slow=6.5,SNR=5.8						
	comp=Z,0.8nm,0.8s						
VHRN	Van Horn	56.79	297		P	20 03 18.5	-0.2
MNTX	Cornudas Mount	57.17	298		P	20 03 21.0	-0.1
PRED	Cave del Predi	57.97	44		P	20 03 25.4	-1.2
PRED				IAmb	IAmb	20 03 33.9	
	comp=Z,6.2nm,1.2s						
ISCO	Idaho Springs	58.04	308		P	20 03 27.5	-0.1
ISCO				IAmb	IAmb	20 03 30.0	
	comp=Z,6.3nm,1.1s						
FFC	Flin Flon	59.09	326	P	P	20 03 33.9	-0.2
FFC				IAmb	IAmb	20 03 34.2	
	comp=Z,8.5nm,1.4s						
PV13	Radium Mtn., P	60.37	306	P	P	20 03 43.6	0.0
PV13				IAmb	IAmb	20 03 45.9	
	comp=Z,4.6nm,0.9s						
PV18	Skein Mesa, Pa	60.44	306	P	P	20 03 43.5	-0.6
VRAC	Vranov	60.58	41	LR	LR	20 29 38.1	
	comp=Z,13nm,18.0s,baz=227,slow=36						
NOA	NORSAR Array B	61.17	28	LR	LR	20 26 13.7	
	comp=Z,11nm,18.3s,baz=90,slow=32						
PDAR	Pinedale Array	61.35	311	P	P	20 03 49.5	-0.7
	comp=Z,0.7nm,0.8s,baz=97,slow=7.2,SNR=4.7						
	comp=Z,0.7nm,0.8s						
LPIG	La Paz	61.67	290	LR	LR	20 30 59.5	
	comp=Z,25nm,19.7s,baz=86,slow=36						
HFS	Hagfors	61.97	29	LR	LR	20 25 12.0	
	comp=Z,23nm,21.2s,baz=197,slow=31						
FXWY	Fox Creek	62.51	312	P	P	20 03 57.5	-0.5
HWUT	Hardware Ranch	62.73	309		P	20 03 59.2	-0.2
YHL	Hebgen Lake	62.75	313	P	P	20 03 59.7	+0.1
YHL				IAmb	IAmb	20 04 01.6	
	comp=Z,4.5nm,1.0s						
BGU	Big Grassy Mou	63.79	309	P	P	20 04 06.1	-0.3
ELK	Elko	65.46	308		P	20 04 17.8	+0.4
ELK				IAmb	IAmb	20 04 18.9	
	comp=Z,3.0nm,0.9s						
ELK	Elko	65.46	308	LR	LR	20 32 22.7	
	comp=Z,70nm,18.7s,baz=112,slow=36						
RES	Resolute Bay	65.76	347	LR	LR	20 28 54.3	
	comp=Z,48nm,21.5s,baz=162,slow=32						
MLR	Muntele Rosu	66.39	47	LR	LR	20 31 15.6	
	comp=Z,23nm,19.9s,baz=259,slow=34						
PFO	Pinyon Flats O	66.51	300	LR	LR	20 31 20.6	
	comp=Z,37nm,20.0s,baz=220,slow=34						
QSM	Queen of Sheba	66.75	303		P	20 04 27.1	+1.6
QSM				IAmb	IAmb	20 04 28.7	
	comp=Z,5.9nm,1.2s						
NEW	Newport	67.11	316		P	20 04 27.2	-0.5
NEW				IAmb	IAmb	20 04 28.9	
	comp=Z,4.3nm,1.1s						
NEW	Newport	67.11	316	LR	LR	20 32 19.8	
	comp=Z,49nm,19.3s,baz=117,slow=35						
YKA	Yellowknife Ar	67.52	332	LR	LR	20 31 43.7	
	comp=Z,70nm,20.2s,baz=124,slow=34						
AKASG	Malin Array Be	68.83	41	P	P	20 04 38.1	-0.2
	comp=Z,0.1nm,0.2s,baz=275,slow=4.6,SNR=4.1						
	comp=Z,0.1nm,0.2s						
KBS	Kingsbay	69.49	10	P	P	20 04 43.0	+1.1
ARCES	ARCESS Array B	69.52	21	LR	LR	20 30 57.1	
	comp=Z,26nm,18.7s,baz=130,slow=32						
BRTR	Keskin Array B	72.17	53	P	P	20 04 58.9	-0.3
	comp=Z,0.3nm,0.6s,baz=322,slow=9.1,SNR=3.9						
	comp=Z,0.3nm,0.6s						
BBB	Bella Bella	74.16	321	LR	LR	20 33 58.3	
	comp=Z,48nm,21.9s,baz=164,slow=33						
INK	Inuvik	75.78	337	LR	LR	20 37 40.3	
	comp=Z,58nm,19.2s,baz=205,slow=35						
LSZ	Lusaka	78.41	109	LR	LR	20 33 42.1	
	comp=Z,46nm,20.9s,baz=166,slow=31						
E27K	Coleen River	78.77	338		P	20 05 36.5	+0.1
E27K				IAmb	IAmb	20 05 37.3	
	comp=Z,4.6nm,1.0s						
C27K	Jago River	79.21	339	P	P	20 05 38.8	+0.1
LBTB	Lobatse	79.49	119	LR	LR	20 33 28.8	
	comp=Z,77nm,21.0s,baz=246,slow=30						
G26K	Porcupine Rive	79.86	337		P	20 05 42.5	+0.2
KIRV	Kirov	79.89	32	LR	LR	20 38 24.1	
	comp=Z,22nm,18.4s,baz=126,slow=34						
D25K	Kavik River	80.20	339	P	P	20 05 44.5	+0.3
E24K	Your Creek	81.30	338	P	P	20 05 50.6	+0.5
ILAR	Eielson Array	81.67	335	P	P	20 05 52.0	0.0
	comp=Z,2.0nm,0.9s,baz=75,slow=4.4,SNR=14						
ILAR				LR	LR	20 42 14.2	
	comp=Z,24nm,18.2s,baz=306,slow=36						
	comp=Z,2.0nm,0.9s						
B22K	Teshekpuk Lake	82.18	341		P	20 05 55.2	+0.7
B22K				IAmb	IAmb	20 05 56.5	
	comp=Z,5.0nm,1.1s						
B20K	Meade River	83.48	341		P	20 06 02.5	+1.1
B20K				IAmb	IAmb	20 06 03.2	
	comp=Z,3.7nm,0.9s						
G21K	Allakaket	83.66	337	P	P	20 06 02.7	+0.3
G21K				IAmb	IAmb	20 06 04.0	
	comp=Z,5.1nm,1.2s						
ARTI	Arti	85.14	33	LR	LR	20 40 59.1	
	comp=Z,32nm,19.4s,baz=146,slow=34						
KDAK	Kodiak Island	86.61	329	LR	LR	20 43 20.0	
	comp=Z,47nm,20.4s,baz=87,slow=35						
ABKAR	Akbulak array	88.49	39	P	P	20 06 26.1	-0.4
ABKAR				IAmb	IAmb	20 06 34.7	
	comp=Z,2.0nm,0.8s						
SNAA	Sanae	90.82	168	P	P	20 06 39.1	+2.2
	comp=Z,1.8nm,1.0s,baz=221,slow=18,SNR=2.9						
	comp=Z,1.8nm,1.0s						
BVAR	Borovoye Array	92.86	33	LR	LR	20 45 16.6	
	comp=Z,33nm,20.1s,baz=233,slow=34						
CMAR	Chiang Mai Arr	131.61	48	PKhKP	PKPpre	20 12 44.3	
	comp=Z,0.2nm,0.3s,baz=295,slow=32,SNR=1.5						
CMAR				PKP	PKiKP	20 12 49.6	+0.8
	comp=Z,0.7nm,0.8s,baz=302,slow=2.3,SNR=4.7						

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*DJA **21** 20:15:51.6±0.2, 3°S±4°×10°2E±°, h178^{km}±4^{km}, M4.3/17, mB5.1/2, mb4.1/13, MLv4.4/17, Mw(mB)4.4/2*

*NEIC **21** 20:15:52.0±2.4, 2°.68S±0°.09×102°.2E±0°.1, h169^{km}±8^{km}, mb4.2/16, Error ellipse: s-maj=17.6km s-min=8.5km az=53.0*

*IDC **21** 20:15:53.4±3.3, 2°.73S×102°.28E, h180^{km}±29^{km}, mb3.6/16, mbtmp4.1/17, Error ellipse: s-maj=29.9km s-min=11.2km az=53.0*

ISC 21 20:15:53.3±0.5**, 2°.73S**±0°.06×**102°.27E**±0°.07**, h187^{km}, n63, σ1^{s}.96**/71**, mb3.9**/24**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSI	Kapahiang	0.97	161	P	Pn	20 16 19.7	-2.0
KSI				S	Sn	20 16 40.1	-3.6
MNAI	Manna	1.76	157		Pn	20 16 26.7	-1.8
MNAI				Sn	Sn	20 16 52.2	-3.7
MNAI	Manna	1.76	157	P	Pn	20 16 26.7	-1.8
MNAI				S	Sn	20 16 52.1	-3.7
PMBI	Palembang	2.50	95	Pn	Pn	20 16 33.4	-3.1
PMBI	Palembang	2.50	95	P	Pn	20 16 32.8	-3.7
MDSI	Maura Dua	2.58	133	P	Pn	20 16 35.7	-1.7
LWLI	Liwa	2.89	142	P	Pn	20 16 40.0	-1.2
PPI	Padang Panjang	2.93	320	P	Pn	20 16 40.4	-1.1
PPI				S	Sn	20 17 16.3	-2.8
BKNI	Bangkinang	3.27	338	Pn	Pn	20 16 44.6	-1.0
BKNI	Bangkinang	3.27	338	P	Pn	20 16 43.9	-1.8
SISI	Saibi	3.47	294	P	Pn	20 16 47.1	-1.0
SISI				S	Sn	20 17 27.8	-3.1
MNSI	Mandailing Nat	4.41	322	P	Pn	20 16 59.3	-0.7
CGJI	Cibinong	5.15	139	P	Pn	20 17 05.8	-3.6
	0.3nm1μm28nm,1.1s						
TPI	Tanjungpandan	5.38	90	P	Pn	20 17 11.1	-1.2
	0.3nm80nm,0.9s						
SKJI	Sukabumi	6.02	135	P	Pn	20 17 20.1	-0.7
GSI	Gunungsitoli	6.17	310		Pn	20 17 21.4	-1.3
GSI				Sn	Sn	20 18 27.8	-5.5
GSI	Gunungsitoli	6.17	310	P	Pn	20 17 22.0	-0.7
CNJI	Cibinong	6.64	133	P	Pn	20 17 24.8	-4.1
	0.1nm20nm,1.3s						
LEM	Lembang	6.71	128	P	Pn	20 17 28.4	-1.5
	0.1nm9.4nm,0.4s						
CMJI	Cimerak	7.94	130	P	Pn	20 17 42.0	-3.9
	0.2nm28nm,0.8s						
KULM	Kulim	8.12	348	Pn	Pn	20 17 47.0	-1.4
XMIS	Christmas Isla	8.40	157	Pn	Pn	20 17 44.8	-7.2
MLSI	Meulaboh, Aceh	9.09	320	P	Pn	20 17 59.5	-1.5
	64nm,1.6s						
UGM	Wanagama	9.70	122	Pn	Pn	20 18 05.9	-3.0
PCJI	Pacitan	10.39	122	P	Pn	20 18 14.4	-3.6
	22nm,1.0s						
GMJI	Gumukmas	12.41	117	P	Pn	20 18 42.5	-1.4
	16nm,1.1s						
JAGI	Jajag, Banyuwa	13.12	116	Pn	Pn	20 18 51.7	-1.2
JAGI	Jajag, Banyuwa	13.12	116	P	Pn	20 18 51.4	-1.6
KAPI	Kappang	17.59	98	P	P	20 19 45.4	-0.3
KAPI				IAmb	IAmb	20 19 50.8	
	comp=Z,12nm,0.7s						
KAPI	Kappang	17.59	98	P	Pn	20 19 47.2	-0.1
	comp=Z,12nm,0.6s,baz=7.0,slow=2.0,SNR=9.0						
TOLI2	Tolitoli	18.89	79	P	P	20 19 59.2	-0.7
TOLI2				IAmb	IAmb	20 20 05.4	
	comp=Z,7.9nm,0.8s						
CMAR	Chiang Mai Arr	21.30	351	P	P	20 20 25.7	+0.1
	comp=Z,0.7nm,0.6s,baz=185,slow=8.7,SNR=9.4						
	comp=Z,0.7nm,0.6s						
FITZ	Fitzroy Crossi	27.54	125	P	P	20 21 24.7	+1.8
KNRA	Kununurra	29.09	118	P	P	20 21 36.2	-0.4
NWAO	Narrogin (SRO)	33.16	157	P	P	20 22 14.3	+2.1
WB0	Warramunga Arr	35.65	121	P	P	20 22 34.0	+0.2
WB0				IAmb	IAmb	20 22 38.4	
	comp=Z,14nm,1.4s						
WRA	Warramunga Arr	35.67	121	P	P	20 22 34.3	+0.3
	comp=Z,0.8nm,0.6s,baz=301,slow=10,SNR=11						
WRA				PcP	PcP	20 24 59.5	+1.2
	comp=Z,0.5nm,0.5s,baz=308,slow=2.3,SNR=2.3						
	comp=Z,0.8nm,0.6s						
WR8	Warramunga Arr	35.82	121	P	P	20 22 35.1	-0.1
WR8				IAmb	IAmb	20 22 46.6	
	comp=Z,12nm,1.2s						
ASAR	Alice Springs	37.00	127	P	P	20 22 45.6	+0.4
	comp=Z,1.2nm,0.4s,baz=301,slow=7.7,SNR=32						
ASAR				PcP	PcP	20 25 03.8	+1.6
	comp=Z,0.5nm,0.4s,baz=316,slow=3.1,SNR=4.5						
ASAR				ScP	ScP	20 28 32.4	+0.8
	comp=Z,0.3nm,0.7s,baz=297,slow=3.5,SNR=4.2						
	comp=Z,1.2nm,0.4s						
BBOO	Buckleboo	43.56	137	P	P	20 23 40.8	+1.8
XLT	XiLinHaoTe	48.04	13	*e*P	P	20 24 16.1	+2.3
XLT				pP	pP	20 24 57.6	+2.4
XLT				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KSH	Kashi	48.49	333	P	P	20 24 18.6	+1.2
KSH				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KDJ	Kajisay	50.11	336	P	P	20 24 30.0	+0.3
SONM	Songino Array	50.48	4	P	P	20 24 34.0	+1.7
	comp=Z,2.1nm,0.6s,baz=183,slow=9.5,SNR=9.3						
	comp=Z,2.1nm,0.6s						
MJAR	Matsushiro Arr	51.44	37	P	P	20 24 40.2	+0.6
	comp=Z,0.7nm,0.7s,baz=211,slow=7.4,SNR=2.4						
	comp=Z,0.7nm,0.7s						
EIDS	Eidsvold	52.03	120	P	P	20 24 44.2	+0.1
MKAR	Makanchi Array	52.36	343	P	P	20 24 47.1	+1.0
	comp=Z,0.7nm,0.4s,baz=157,slow=8.9,SNR=16						
	comp=Z,0.7nm,0.4s						
MAKZ	Makanchi	52.47	343	P	P	20 24 45.5	-1.5
KURBB	Kurchatov Arra	56.91	342	P	P	20 25 19.6	+0.9
	comp=Z,0.6nm,0.7s,baz=158,slow=6.8,SNR=6.1						
	comp=Z,0.6nm,0.7s						
ZAA0	Zalesovo Array	58.32	348	P	P	20 25 27.8	-0.7
ZAA0				IAmb	IAmb	20 26 12.3	
	comp=Z,3.0nm,1.2s						
ZALV	Zalesovo Beam	58.32	348	P	P	20 25 29.0	+0.5
	comp=Z,1.1nm,0.3s,baz=157,slow=7.4,SNR=8.9						
	comp=Z,1.1nm,0.3s						
BVAR	Borovoye Array	61.66	339	P	P	20 25 51.7	+0.4
	comp=Z,0.5nm,0.3s,baz=132,slow=8.7,SNR=6.0						
	comp=Z,0.5nm,0.3s						
AB31	Akbulak array	63.37	330	P	P	20 26 02.1	-0.6
AB31				IAmb	IAmb	20 26 04.2	
	comp=Z,1.5nm,0.5s						
ABKAR	Akbulak array	63.37	330	P	P	20 26 02.4	-0.3
ABKAR				IAmb	IAmb	20 26 04.2	
	comp=Z,1.5nm,0.5s						
KBZ	Khabaz	70.34	319	P	P	20 26 48.2	+1.5
	comp=Z,1.6nm,0.7s,baz=109,slow=4.9,SNR=4.7						
	comp=Z,1.6nm,0.7s						
PEA0B	Petropavlovsk-	72.30	31	P	P	20 26 56.6	-1.7
PEA0B				IAmb	IAmb	20 27 13.4	
	comp=Z,12nm,1.4s						
PETK	Petropavlovsk-	72.30	31	P	P	20 26 59.2	+0.8
	comp=Z,0.5nm,0.6s,baz=231,slow=5.9,SNR=5.4						
	comp=Z,0.5nm,0.6s						
BRTR	Keskin Array B	75.49	312	P	P	20 27 18.5	+1.1
	comp=Z,1.2nm,0.5s,baz=121,slow=6.6,SNR=9.0						
	comp=Z,1.2nm,0.5s						
FINES	FINESS Array B	85.81	332	P	P	20 28 12.7	+1.3
	comp=Z,1.6nm,0.9s,baz=116,slow=5.6,SNR=3.4						
	comp=Z,1.6nm,0.9s						
QSPA	South Pole Qui	87.24	180	P	P	20 28 19.1	+0.6
	comp=Z,2.1nm,1.1s,baz=284,slow=17,SNR=3.1						
	comp=Z,2.1nm,1.1s						
ARCES	ARCESS Array B	87.92	340	P	P	20 28 22.7	+1.1
	comp=Z,2.0nm,0.8s,baz=107,slow=5.1,SNR=1.7						
	comp=Z,2.0nm,0.8s						
SPITS	Spitsbergen Ar	91.80	348	P	P	20 28 38.6	-0.9
	comp=Z,6.0nm,1.1s,baz=108,slow=9.3,SNR=1.9						
	comp=Z,6.0nm,1.1s						
TXAR	Lajitas Array	143.84	40	PKP	PKPdf	20 35 05.9	-1.2
	comp=Z,0.2nm,0.5s,baz=38,slow=2.2,SNR=4.3						

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*NEIC **21** 20:22:13.8±2.1, 43°.71N±0°.06×105°.3W±0°.1, h0^{km}±1^{km}, ML3.3/44, Error ellipse: s-maj=14.5km s-min=8.4km az=60.0*

*IDC **21** 20:22:14.2±2.2, 43°.69N×105°.46W, h0^{km}, mbtmp3.4/2, ML3.4/2, Error ellipse: s-maj=58.6km s-min=9.7km az=150.0*

ISC 21 20:22:12.8±1.0**, 43°.66N**±0°.05×**105°.28W**±0°.05**, h0^{km}, n40, σ1^{s}.83**/39**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	1.01	63	Pg	Pg	20 22 33.2	+0.9
K22A	Casper	1.36	222		Pg	20 22 39.2	+0.4
LAO	LASA Array	3.10	348	Pn	Pn	20 23 05.6	+2.6
RLMT	Red Lodge	3.21	298		Pn	20 23 06.4	+1.7
RLMT				IAML		20 24 08.5	
	55nm,0.9s						
PD31	Pinedale Array	3.25	256	Pn	Pn	20 23 08.7	+3.4
PDAR	Pinedale Array	3.25	256	Pn	Pn	20 23 07.5	+2.2
	3.3nm,0.3s,baz=76,slow=16,SNR=17						
PDAR				Lg	Lg	20 23 53.6	
	2.1nm,0.3s,baz=74,slow=29,SNR=3.9						
	1.6nm,0.3s						
BW06	Boulder Array	3.25	256		Pn	20 23 07.2	+1.9
OGNE	Ogallala	3.63	137		Pb	20 23 14.4	-3.5
YNE	Yellowstone No	3.65	293		Pn	20 23 11.5	+0.7
YNE				IAML		20 24 16.1	
	comp=N,62nm,0.7s						
YNE				IAML		20 24 44.5	
	comp=E,66nm,1.5s						
YMP	Mirror Lake Pl	3.67	289		Pn	20 23 13.4	+2.3
YMP				IAML		20 24 26.1	
	comp=N,85nm,0.7s						
YMP				IAML		20 24 27.2	
	comp=E,72nm,0.8s						
LOHW	Long Hollow	3.86	271		Pn	20 23 15.9	+2.2
ISCO	Idaho Springs	3.87	184	Pn	Pn	20 23 17.3	+3.5
ISCO				IAML		20 24 22.1	
	comp=E,37nm,0.8s						
ISCO				IAML		20 25 22.3	
	comp=E,35nm,4.1s						
H17A	Grant Village	3.89	283	Pn	Pn	20 23 17.4	+3.3
SNOW	Snow King Moun	3.98	269		Pn	20 23 17.6	+2.2
SNOW				IAML		20 24 46.7	
	comp=E,46nm,1.6s						
TPAW	Teton Pass	4.12	270		Pn	20 23 20.8	+3.4
TPAW				IAML		20 24 50.5	
	comp=E,46nm,1.1s						
TPAW				IAML		20 24 54.1	
	comp=E,26nm,1.7s						
O20A	White River Ci	4.16	213		Pn	20 23 19.0	+1.2
O20A				IAML		20 24 40.4	
	comp=E,50nm,1.6s						
O20A				IAML		20 25 16.1	
	comp=E,48nm,2.3s						
YHH	Holmes Hill	4.16	288		Pn	20 23 17.6	-0.2
FXWY	Fox Creek	4.17	272		Pn	20 23 16.8	-1.2
AHID	Auburn Hatcher	4.35	260		Pn	20 23 20.4	+0.1
AHID				IAML		20 24 52.1	
	comp=E,32nm,0.9s						
AHID				IAML		20 25 01.8	
	comp=E,29nm,0.8s						
YHL	Hebgen Lake	4.40	288		Pn	20 23 22.3	+1.1
YHL				IAML		20 24 54.4	
	comp=N,22nm,0.8s						
YHL				IAML		20 25 09.0	
	comp=E,34nm,1.2s						
DGMT	Dagmar	4.87	9		Pn	20 23 26.1	-1.3
BOZ	Bozeman (W)	4.93	295		Pn	20 23 28.1	-0.2
BOZ				IAML		20 24 55.6	
	comp=E,16nm,2.4s						
BOZ				IAML		20 25 06.8	
	comp=E,14nm,1.1s						
KSCO	Kaye Shedlock’	5.06	156		Pn	20 23 32.0	+2.0
JLU	Jordanelle	5.51	238		Pn	20 23 38.6	+2.2
LRM	Limekiln Ridge	5.54	295		Pn	20 23 37.1	+0.3
PV22	Blue Mesa, Par	5.76	209		Pn	20 23 39.6	-0.2
MDND	Maddock	5.77	42		Pn	20 23 41.1	+1.4
PV15	Paradox Valley	5.84	206		Pn	20 23 40.5	-0.3
PV23	Carpenter Ridg	5.92	210		Pn	20 23 41.5	-0.4
PV20	West Nyswonger	6.00	209		Pn	20 23 44.4	+1.3
SRU	San Rafael Swe	6.02	223		Pn	20 23 43.4	+0.2
PV19	Morning Glory	6.03	209		Pn	20 23 43.8	+0.2
PV03	Paradox Valley	6.04	208		Pn	20 23 45.1	+1.6
PV02	Paradox Valley	6.04	207		Pn	20 23 45.0	+1.3
PV17	East Wray Mesa	6.05	209		Pn	20 23 44.6	+0.8
PV13	Radium Mtn., P	6.11	207		Pn	20 23 44.8	+0.1
PV05	Paradox Valley	6.28	209		Pn	20 23 45.6	-1.4
BPMT	Black Pine Rid	6.41	298		Pn	20 23 47.3	-1.5
ULM	Lac du Bonnet	9.21	41	Pn	Pn	20 24 27.3	+0.5
	comp=E,0.9nm,0.3s,baz=235,slow=9.3,SNR=7.5						
ULM				Lg	Lg	20 26 58.0	
	comp=E,0.3nm,0.3s,baz=28,slow=7.1,SNR=2.3						
	comp=E,2.0nm,0.4s						
I56US	NEWPORT INFRAS	9.44	303	I	I	21 13 25.0	
	comp=E,0.1nm,1.0s,baz=116,slow=316,SNR=15						

IDC 21 20:31:52.8±349.0**, 48°.32N**×**152°.07E, h0^{km}, Error ellipse: s-maj=157.6km s-min=138.4km az=21.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I44RU	PETROPAVLOVSK-	5.98	35	I	I	21 08 30.0	
	0.1nm,2.8s,baz=215,slow=314,SNR=13						
I45RU	USSURIYSK INFR	14.49	261	I	I	21 56 40.0	
	0.1nm,1.7s,baz=63,slow=315,SNR=4.6						
I30JP	ISUMI INFRASON	15.66	218	I	I	22 05 41.5	
	baz=28,slow=327,SNR=2.1						

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*IDC **21** 20:48:50.2±0.6, 30°.62S×177°.89W, h0^{km}, mb4.5/7, mbtmp4.5/8, ML4.5/1, MS3.5/10, Error ellipse: s-maj=25.3km s-min=21.5km az=111.0*

*NEIC **21** 20:48:56.3±1.1, 30°.84S±0°.08×178°.0W±0°.2, h34^{km}±5^{km}, mb4.9/15, Error ellipse: s-maj=26.1km s-min=11.8km az=95.0*

ISC 21 20:48:56.6±0.5**, 30°.90S**±0°.05×**178°.0W**±0°.1**, h46^{km}, n100, σ2^{s}.02**/97**, mb4.9**/16**, MS3.7**/7**, 5C-2D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	1.63	3	P	Pn	20 49 22.5	-0.4
GLKZ				S	Sn	20 49 39.8	-2.9
RAO	Raoul Island	1.65	3		Pn	20 49 22.5	-0.6
RAO				Sn	Sn	20 49 41.0	-2.1
RAO	Raoul Island	1.65	3	LR	LR	20 49 10.7	
	comp=Z,127nm,21.2s,baz=174,slow=15						
RAO				Pn	Pn	20 49 23.0	-0.1
	391nm,0.3s,baz=56,slow=6.8,SNR=22						
RAO				Sn	Sn	20 49 40.4	-2.6
	2μm,0.3s,baz=113,slow=20,SNR=13						
RAO	Raoul Island	1.65	3	P	Pn	20 49 23.0	-0.1
RIZ	Raoul Island	1.65	2	P	Pn	20 49 22.8	-0.3
RIZ				S	Sn	20 49 40.8	-2.4
MXZ	Matakaoa Point	7.31	204	P	Pn	20 50 38.6	-2.2
MXZ				S	Sn	20 52 02.4	-0.1
WMGZ	Waiomatatini S	7.51	202	P	Pn	20 50 42.6	-0.9
WMGZ				S	Sn	20 52 06.7	-0.6
PKGZ	Pakihiroa	7.66	204	P	Pn	20 50 44.2	-1.4
PKGZ				S	Sn	20 52 09.0	-2.1

HAZ	Te Kaha	7.67	206	P	Pn	20 50 44.5	-1.2
HAZ				S	Sn	20 52 12.8	+1.5
PUZ	Puketiti	7.79	202	P	Pn	20 50 45.1	-2.3
PUZ				S	Sn	20 52 11.6	-2.7
RUGZ	Raukumara Rang	7.90	206	P	Pn	20 50 46.9	-2.1
TWGZ	Tauwhareparae	7.98	203	P	Pn	20 50 48.2	-1.8
TWGZ				S	Sn	20 52 18.0	-0.9
WCZ	Waipu Caves	8.13	230	P	Pn	20 50 58.7	+6.7
OUZ	Omahuta	8.26	236	P	Pn	20 50 59.9	+6.1
TKGZ	Te Karaka	8.26	203	P	Pn	20 50 52.0	-1.8
TKGZ				S	Sn	20 52 23.3	-2.3
URZ	Urewera	8.37	207	Pn	Pn	20 50 53.5	-1.8
	2.5nm,0.3s,baz=249,slow=3.9,SNR=7.7						
URZ				Sn	Sn	20 52 23.6	-4.8
	7.7nm,0.3s,baz=200,slow=17,SNR=18						
URZ	Urewera	8.37	207	P	Pn	20 50 53.5	-1.8
URZ				S	Sn	20 52 25.2	-3.3
RAGZ	Rawiri	8.46	205	P	Pn	20 50 54.8	-1.9
RIGZ	Rimuhau	8.53	203	P	Pn	20 50 55.4	-2.1
OMRZ	Omania	8.55	211	P	Pn	20 50 57.0	-0.9
MUGZ	Murupara	8.69	208	P	Pn	20 50 58.2	-1.5
KNZ	Kokohu	8.84	202	P	Pn	20 50 59.2	-2.6
RAHZ	Arahi	8.95	205	P	Pn	20 51 01.1	-2.3
MTHZ	Maungataniwha	8.99	207	P	Pn	20 51 02.6	-1.2
NMHZ	Naumai	9.21	206	P	Pn	20 51 04.6	-2.4
BKZ	Black Stump Fm	9.39	207	P	Pn	20 51 06.9	-2.5
MCHZ	McNeill Hill	9.56	205	P	Pn	20 51 10.2	-1.5
CKHZ	Cape Kidnapper	9.61	203	P	Pn	20 51 09.5	-2.9
NTVZ	North Tongarir	9.68	211	P	Pn	20 51 14.6	+1.3
KAHZ	Kahuranaki	9.80	204	P	Pn	20 51 10.8	-4.2
BFZ	Birch Farm	10.81	204	Pn	Pn	20 51 21.8	-7.0
MSVF	Nonsavu	13.59	344	LR	LR	20 56 30.4	
	comp=Z,177nm,20.2s,baz=178,slow=34						
RPZ	Rata Peaks	15.45	211	Pn	P	20 52 32.7	-2.5
	1.9nm,0.3s,baz=90,slow=4.1,SNR=7.4						
RPZ				Sn	Sn	20 55 05.4	-16
	1.3nm,0.3s,baz=18,slow=19,SNR=5.8						
	3.8nm,0.3s						
DZM	Mont Dzumac	16.45	299	Pn	P	20 52 47.0	+0.5
	0.2nm,0.3s,baz=96,slow=18,SNR=3.6						
DZM				LR	LR	20 57 50.4	
	comp=Z,298nm,18.3s,baz=158,slow=33						
RAR	Rarotonga	18.99	64	LR	LR	20 58 04.0	
	comp=Z,105nm,20.9s,baz=284,slow=30						
ARMA	Armidale	26.09	263	P	P	20 54 28.2	+2.0
ARMA				IAmb	IAmb	20 54 31.5	
	comp=Z,75nm,1.9s						
PPT	Papeete	29.03	69	LR	LR	21 03 21.0	
	comp=Z,34nm,21.0s,baz=256,slow=30						
HNR	Honiara	29.62	311	LR	LR	21 05 11.5	
	comp=Z,102nm,18.8s,baz=153,slow=33						
CTAO	Charters Tower	33.87	280	P	P	20 55 35.6	+0.5
CTAO				IAmb	IAmb	20 55 37.8	
	comp=Z,16nm,0.8s						
CTAO	Charters Tower	33.87	280	P	P	20 55 36.6	+1.5
STKA	Stephens Creek	34.36	258	P	P	20 55 40.6	+1.4
STKA	Stephens Creek	34.36	258	P	P	20 55 41.3	+2.1
	comp=Z,15nm,0.6s,baz=100,slow=11,SNR=40						
STKA				LR	LR	21 08 17.5	
	comp=Z,136nm,18.2s,baz=38,slow=34						
	comp=Z,15nm,0.6s						
BBOO	Buckleboo	38.83	255	P	P	20 56 17.2	0.0
COEN	Coen	39.40	287	P	P	20 56 23.0	+0.8
COEN				IAmb	IAmb	20 56 25.6	
	comp=Z,19nm,1.1s						
AS31	Alice Springs	43.08	267	P	P	20 56 52.3	-0.1
ASAR	Alice Springs	43.08	267	P	P	20 56 52.4	0.0
	comp=Z,5.3nm,0.6s,baz=106,slow=7.2,SNR=95						
ASAR				ScP	ScP	21 02 36.5	+7.3
	comp=Z,0.3nm,0.6s,baz=94,slow=3.6,SNR=4.7						
	comp=Z,5.3nm,0.6s						
DRV	Dumont d'Urvil	43.68	203	P	P	20 56 57.2	+0.7
WR8	Warramunga Arr	43.97	273	P	P	20 56 59.4	-0.1
WRA	Warramunga Arr	44.11	273	P	P	20 57 00.7	0.0
	comp=Z,4.9nm,0.3s,baz=111,slow=8.1,SNR=94						
WRA				ScP	ScP	21 02 41.5	+8.1
	comp=Z,0.4nm,0.8s,baz=107,slow=4.1,SNR=2.1						
WRA				LR	LR	21 14 24.9	
	comp=Z,88nm,18.4s,baz=5.0,slow=35						
	comp=Z,4.9nm,0.3s						
WB0	Warramunga Arr	44.13	273	P	P	20 57 00.7	-0.2
WB0				IAmb	IAmb	20 57 01.6	
	comp=Z,8.5nm,0.7s						
MTN	Manton Dam	50.05	279	P	P	20 57 46.7	-0.3
KNRA	Kununurra	50.74	275	P	P	20 57 51.6	-0.5
FITZ	Fitzroy Crossi	52.35	270	P	P	20 58 04.1	-0.1
CCD	Concordia, Ant	52.47	196	P	P	20 58 06.2	+1.4
NWAO	Narrogin (SRO)	54.21	250	P	P	20 58 19.1	+1.3
CASY	Casey	54.70	208	P	P	20 58 16.4	-4.4
MORW	Morawa	56.38	254	P	P	20 58 32.3	-1.1
MORW				IAmb	IAmb	20 59 46.0	
	comp=Z,34nm,1.4s						
QSPA	South Pole Qui	59.21	180	P	P	20 58 55.1	+2.3
QSPA				IAmb	IAmb	20 59 02.0	
	comp=Z,16nm,0.9s						
QSPA	South Pole Qui	59.21	180	P	P	20 58 55.2	+2.3
	comp=Z,6.2nm,1.0s,baz=340,slow=4.4,SNR=23						
	comp=Z,6.2nm,1.0s						
BELA	Belgrano 2	69.29	172	P	P	21 00 00.1	+1.6
BELA				IAmb	IAmb	21 02 16.2	
	comp=Z,19nm,1.9s						
SYO	Syowa Base	76.63	193	⇓*e*P	P	21 00 43.0	+1.0
SYO	Syowa Base	76.63	193	⇓*e*pP	pP	21 00 52.8	-1.5
TROLL	Troll, Antarti	77.37	180	⇑P	P	21 00 47.9	+1.5
	comp=Z,218nm,0.5s						
SNAA	Sanae	77.66	178	⇑P	P	21 00 49.4	+1.5
	comp=Z,181nm,0.9s						
SNAA	Sanae	77.66	178		P	21 00 48.7	+0.8
SNAA				IAmb	IAmb	21 00 55.8	
	comp=Z,8.8nm,0.9s						
SNAA	Sanae	77.66	178	P	P	21 00 49.3	+1.4
	comp=Z,1.8nm,0.8s,baz=214,slow=11,SNR=23						
	comp=Z,1.8nm,0.8s						
VNA3	Neumayer Olymp	77.81	176	⇑P	P	21 00 50.2	+1.5
	comp=Z,30nm,0.7s						
VNA2	Neumayer--Watz	78.24	177	⇑P	P	21 00 52.9	+1.9
	comp=Z,16nm,0.7s,baz=170,slow=9.0						
VNA1	Neumayer--Stat	78.47	177	⇑P	P	21 00 54.1	+1.8
	comp=Z,15nm,0.9s						
JNU	Nakatsue	79.92	318	LR	LR	21 33 06.5	
	comp=Z,36nm,21.3s,baz=277,slow=33						
H03S2	Juan Fernandez	80.20	123	T	T	22 30 12.6	
	baz=238,slow=74,SNR=42						
H03S1	Juan Fernandez	80.21	123	T	T	22 30 11.6	
	baz=238,slow=74,SNR=41						
H03S3	Juan Fernandez	80.21	123	T	T	22 30 12.4	
	baz=238,slow=74,SNR=37						
H03N3	Juan Fernandez	80.39	123	T	T	22 30 21.0	
	baz=242,slow=72,SNR=29						
H03N2	Juan Fernandez	80.39	123	T	T	22 30 21.5	
	baz=242,slow=72,SNR=27						
H03N1	Juan Fernandez	80.41	123	T	T	22 30 20.9	
	baz=242,slow=72,SNR=51						
ASAJ	Asahikawa	82.88	333	LR	LR	21 35 14.0	
	comp=Z,20nm,18.1s,baz=185,slow=34						
SHEM	Shemya Is, Ala	83.56	355	LR	LR	21 33 47.6	
	comp=Z,39nm,19.5s,baz=65,slow=32						
PETK	Petropavlovsk-	86.29	346	P	P	21 01 32.6	-0.5
	comp=Z,3.3nm,0.8s,baz=125,slow=6.6,SNR=10.0						
	comp=Z,3.3nm,0.8s						
NVAR	Mina Array Bea	88.61	43	P	P	21 01 44.1	-0.8
	comp=Z,1.2nm,0.9s,baz=223,slow=5.3,SNR=3.7						
	comp=Z,1.2nm,0.9s						
MKAR	Makanchi Array	118.09	310	PKP	PKPdf	21 07 37.3	-0.9
	comp=Z,0.4nm,0.6s,baz=88,slow=1.3,SNR=7.9						
KURBB	Kurchatov Arra	121.42	313	PKP	PKPdf	21 07 43.7	-0.7
	comp=Z,1.7nm,0.2s,baz=115,slow=1.6,SNR=5.4						
MATP	Matopo	122.97	210	PKP	PKiKP	21 07 49.4	+0.5
	comp=Z,1.1nm,0.9s,baz=180,slow=8.1,SNR=2.6						
BVAR	Borovoye Array	126.75	315	PKP	PKiKP	21 07 54.6	-0.5
	comp=Z,1.1nm,0.4s,baz=84,slow=2.9,SNR=11						
LSZ	Lusaka	127.63	213	PKP	PKiKP	21 07 59.5	+1.3
	comp=Z,2.1nm,0.7s,baz=348,slow=5.0,SNR=5.8						
ARCES	ARCESS Array B	139.07	348	PKhKP	PKPpre	21 08 10.2	
	comp=Z,3.9nm,1.1s,baz=48,slow=3.6,SNR=3.7						
KBZ	Khabaz	145.38	303	PKPbc	PKPbc	21 08 28.8	-0.4
	comp=Z,1.2nm,0.5s,baz=172,slow=6.2,SNR=4.3						
FINES	FINESS Array B	145.61	340	PKPbc	PKPdf	21 08 28.8	-0.3
	comp=Z,18nm,0.7s,baz=53,slow=3.8,SNR=77						
GEVA	Gevas	145.62	294		PKPdf	21 08 29.6	-0.5
GURO	Guroymak-BITLI	146.42	294		PKPdf	21 08 30.5	-1.0
NB2	NORSAR Subarra	149.24	351	PKP	PKPbc	21 08 39.1	-0.4
	comp=Z,3.6nm,0.7s,baz=15,slow=4.3						
NOA	NORSAR Array B	149.24	351	PKPbc	PKPbc	21 08 39.6	0.0
	comp=Z,1.9nm,0.6s,baz=15,slow=4.1,SNR=10						
HFS	Hagfors	149.73	348	PKPbc	PKPbc	21 08 40.3	-0.4
	comp=Z,4.6nm,0.8s,baz=74,slow=2.1,SNR=13						
NACGM	Naroch	150.21	331	*e*PKiKP	PKPbc	21 08 41.9	-0.1
	comp=Z,9.0nm,1.0s,baz=45						
MMAI	Mount Meron Ar	151.64	283	PKPbc	PKiKP	21 08 47.0	+0.4
	comp=Z,3.6nm,0.7s,baz=75,slow=3.6,SNR=8.7						
AKASG	Malin Array Be	151.69	322	PKPbc	PKPbc	21 08 45.2	-0.4
	comp=Z,2.9nm,0.6s,baz=52,slow=2.7,SNR=29						
KIEV	Kiev	151.70	322		PKPbc	21 08 44.6	-1.1
BRTR	Keskin Array B	152.83	298	PKPbc	PKPbc	21 08 47.9	-0.9
	comp=Z,0.9nm,0.5s,baz=84,slow=2.9,SNR=5.5						
EKA	Eskdalemuir Ar	155.31	7	PKPab	PKPab	21 09 08.8	-0.8
	comp=Z,1.4nm,0.8s,baz=0.2,slow=2.9,SNR=4.6						
CLL	Collm	158.03	341	*i* PKPab	PKPab	21 09 21.1	-0.4

NEIC 21 20:59:27.9±0.2**, 37°.66N**±0°.02×**105°.49W**±0°.05**, h6**^{km}±3^{km}**,**
ML1.8/20**, Error ellipse: s-maj=5.6km s-min=2.2km**
az=95.0, Colorado

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDCO	Great Sand Dun	0.08	352		Pg	20 59 30.5	+0.4
SDCO				Sg	Sg	20 59 32.2	+0.6
SDCO				IAML		20 59 32.4	
	963nm,0.1s						
SDCO				IAML		20 59 32.5	
	623nm,0.1s						
T25A	Trinidad	1.00	121	Pg	Pg	20 59 46.9	-0.3
T25A				Sg	Sg	20 59 59.9	-0.3
T25A				IAML		21 00 00.7	
	comp=N,36nm,0.5s						
T25A				IAML		21 00 00.8	
	comp=E,24nm,0.2s						
Q24A	Divide	1.32	11	Pg	Pn	20 59 52.7	-0.5
Q24A					Sg	21 00 10.1	-0.5
ISCO	Idaho Springs	2.13	357		Pn	21 00 05.2	+0.8
MVCO	Mesa Verde	2.44	260	Pn	Pn	21 00 08.8	+0.3
PV15	Paradox Valley	2.46	287	Pn	Pn	21 00 08.8	0.0
PV01	Paradox Valley	2.48	282	Pn	Pn	21 00 09.2	+0.1
ANMO	Albuquerque	2.82	196	Pn	Pn	21 00 12.3	-1.4
ANMO	Albuquerque	2.82	196	Pn	Pn	21 00 12.2	-1.6
ANMO				IAML		21 00 57.1	
	comp=E,1.6nm,0.3s						
ANMO				IAML		21 00 57.3	
	comp=E,2.2nm,0.8s						

SJA ***21*** *20:59:44.5±0.7, 29°.65S×71°.38W, h22^{km}±2^{km}, ML3.3, MW3.5*
GUC ***21*** *20:59:46.2±0.7, 29°.69S×71°.30W, h51^{km}±1^{km}, ML3.7*
ISC 21 20:59:43.1±0.9**, 29°.67S**±0°.02×**71°.43W**±0°.04**, h10**^{km}**, n43,**
σ**2^s.06**/72**, 1C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.30	147	*i* P	Pn	20 59 54.6	+1.0
CO05				*i* S	Sb	21 00 00.6	+4.9
GO04	Tololo Observa	0.75	133	*i* P	Pn	20 59 59.5	-0.4
GO04				*i* S	Sb	21 00 09.3	+0.7
GO04	Tololo Observa	0.75	133	*e*P	Pn	20 59 59.8	-0.2
GO04				*e*S	Sn	21 00 09.9	-1.5
LCO	Las Campanas	0.91	45	*i* P	Pn	21 00 02.3	+0.1
LCO				*i* S	Sn	21 00 14.5	-1.0
LCO				IAML		21 00 15.3	
	8μm,0.2s						
LCO	Las Campanas	0.91	45	*e*P	Pn	21 00 01.6	-0.6
LCO				*e*S	Sn	21 00 14.5	-1.0
LCO				IAML		21 00 16.8	
	comp=Z,2μm,0.1s						
CO06	Fray Jorge	1.02	190	⇑*i*P	Pn	21 00 04.4	+0.9
CO06				*i* S	Sn	21 00 18.7	+0.8
CO01	Juntas del Tor	1.20	105	⇓*i*P	Pn	21 00 06.6	+0.4
CO01				*i* S	Sg	21 00 20.8	-1.1
CO01	Juntas del Tor	1.20	105	*e*P	Pn	21 00 06.7	+0.4
CO01				IAML		21 00 25.1	
	comp=Z,459nm,0.1s						
CO03	El Pedregal	1.33	151	⇓*i*P	Pb	21 00 07.9	-0.4
CO03				*i* S	Sb	21 00 23.9	-1.6
CO03				IAML		21 00 24.9	
	comp=N,989nm,0.4s						
CO03	El Pedregal	1.33	151	*e*P	Pb	21 00 08.1	-0.2
CO03				*e*S	Sb	21 00 24.8	-0.7
CO03				IAML		21 00 25.2	
	comp=Z,391nm,0.1s						
AC04	Llanos de Chal	1.49	12	*e*P	Pg	21 00 11.8	+0.2
AC04	Llanos de Chal	1.49	12	*e*P	Pg	21 00 11.8	+0.2
AC04				*e*S	Sg	21 00 32.5	+1.5
AC04				IAML		21 00 34.9	
	comp=Z,332nm,0.2s						
CO02	Combarbal	1.58	166	*i* P	Pn	21 00 11.5	+0.3
CO02				*i* S	Sn	21 00 30.3	-1.5
CO02				IAML		21 00 37.0	
	comp=N,1μm,0.2s						
CO02	Combarbal	1.58	166	*e*P	Pn	21 00 11.6	+0.3
CO02				IAML		21 00 34.2	
	comp=Z,350nm,0.2s						
AROD	Rodeo	1.77	107	*e*P	Pg	21 00 16.4	-0.7
ACDV	Cuesta del Vie	2.07	105	*e*P	Pb	21 00 20.4	-0.4
ACDV				*e*S	Sn	21 00 42.4	-1.6
ACDV				IAML		21 00 48.3	
	comp=Z,201nm,0.7s						
ACCO	Cerro Coronel	2.25	115	*e*P	Pb	21 00 23.3	-0.7
ACCO				*e*S	Sn	21 00 49.6	+1.0
GO03	Copiapo	2.32	27	*e*P	Pn	21 00 22.9	+1.5
GO03	Copiapo	2.32	27	*e*P	Pb	21 00 23.1	-1.9
GO03				*e*S	Sn	21 00 37.0	-13
AC06	Mina Casimiro	2.49	23	*i* S	Sn	21 00 54.5	+0.4
AGUA	GUANDACOL	2.57	87	*e*P	Pb	21 00 28.5	-0.8
AGUA				IAML		21 01 13.0	
	comp=Z,162nm,0.3s						
RTLS	Leoncito	2.81	140	*e*P	Pb	21 00 31.5	-2.1
RTLS				IAML		21 01 17.4	
	comp=Z,342nm,0.3s						
VA06	Catapilco	2.89	178	*e*P	Pn	21 00 30.1	+0.9
VA06				IAML		21 01 15.4	
	comp=E,374nm,0.4s						
VCA	Vinchina	2.97	73	*e*P	Pn	21 00 29.7	-0.7
VCA				*e*S	Sn	21 01 08.1	+1.9
VCA				IAML		21 01 20.2	
	comp=Z,281nm,0.3s						
ZON	Zonda	3.02	129	*e*P	Pn	21 00 33.1	+2.0
ZON				*e*S	Sb	21 01 11.1	-2.9
ZON				IAML		21 01 30.8	
	comp=Z,43nm,0.4s						
RTLL	Cerro Villicun	3.04	124	*e*P	Pn	21 00 33.8	+2.4
RTLL				*e*S	Sn	21 01 10.1	+2.2
VA03	San Esteban	3.18	167	*e*P	Pn	21 00 35.3	+2.0
VA03				IAML		21 01 27.8	
	comp=E,237nm,0.5s						
VA03	San Esteban	3.18	167	*e*P	Pn	21 00 35.9	+2.6
VA03				*e*S	Sb	21 01 15.4	-3.2
VA03				IAML		21 01 24.8	
	comp=Z,82nm,0.5s						
ROCH	El Roble	3.32	174	*e*P	Pn	21 00 36.3	+1.0
ROCH				IAML		21 01 28.8	
	comp=N,212nm,0.7s						
ROC1	El Roble	3.32	174	*e*P	Pn	21 00 36.4	+1.0
ROC1				*e*S	Sn	21 01 15.1	+0.1
CFA	Coronel Fontan	3.36	126	*e*P	Pn	21 00 38.2	+2.4
CFA				*e*S	Sn	21 01 18.1	+2.3
AC02	Maricunga	3.47	36	*e*S	Sn	21 01 20.7	+1.6
AC02				IAML		21 01 37.9	
	comp=Z,74nm,0.3s						
PEL	Peldehue	3.53	170	*e*P	Pn	21 00 40.8	+2.8
PEL				*e*S	Sn	21 01 20.9	+1.1
AC01	Pan de Azucar	3.58	12	*e*P	Pn	21 00 38.2	-0.5
AC01				*e*S	Sn	21 01 25.5	+4.4
AC01				IAML		21 01 47.2	
	comp=Z,48nm,0.5s						
AVFE	Valle Fertil	3.58	107	*e*P	Pn	21 00 40.6	+1.8
AVFE				*e*S	Sn	21 01 23.7	+2.5
AVFE				IAML		21 01 31.1	
	comp=Z,49nm,0.3s						
MT02	Curacav	3.59	176	*e*P	Pn	21 00 39.4	+0.6
MT02				*e*S	Sn	21 01 20.6	-0.7
ASAL	Salagasta	3.67	143	*e*P	Pn	21 00 43.6	+3.7
ASAL				*e*S	Sb	21 01 29.9	-2.8
MT04	Ro Olivares	3.89	164	*e*P	Pn	21 00 46.5	+3.4
MT04				*i* S	Sn	21 01 27.6	-1.4
MT04	Ro Olivares	3.89	164	*e*P	Pn	21 00 46.8	+3.7
MT04				*e*S	Sn	21 01 32.8	+3.8
MT04				IAML		21 01 46.6	
	comp=Z,47nm,0.7s						
MT08	Bocatoma Ro	3.96	163	*e*P	Pn	21 00 45.2	+1.1
MT08				*e*S	Sn	21 01 34.0	+3.3
MT08				IAML		21 01 49.1	
	comp=Z,43nm,0.7s						
MT09	Talagante	4.12	175	*e*P	Pn	21 00 47.2	+1.0
BO01	Tunca	4.72	177	*e*P	Pn	21 00 57.9	+3.5
BO01				*e*S	Sb	21 01 56.6	-6.2
BO01				IAML		21 02 12.2	
	comp=Z,28nm,0.8s						
CYA	Choya	5.08	77	*e*P	Pn	21 01 00.8	+1.5
CYA				*e*S	Sn	21 01 59.6	+1.6
CYA				IAML		21 02 07.0	
	comp=Z,23nm,0.9s						

IDC 21 21:07:10.3±350.0**, 48°.40N**×**152°.49E, h0**^{km}**, Error ellipse:**
s-maj=166.3km s-min=122.3km az=28.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I44RU	PETROPAVLOVSK-	5.76	33	I	I	21 42 55.0	
	0.1nm,1.5s,baz=215,slow=319,SNR=16						
I45RU	USSURIYSK INFR	14.78	261	I	I	22 33 30.0	
	baz=62,slow=313,SNR=3.4						
I30JP	ISUMI INFRASON	15.89	219	I	I	22 42 14.2	
	0.1nm,3.1s,baz=29,slow=304,SNR=4.0						

ANF ***21*** *21:15:58.0±1.1, 64°.98N×173°.73W, h6^{km}±9^{km}, ML3.9/14,*
Error ellipse: s-maj=5.4km s-min=2.4km az=81.0
NERS ***21*** *21:16:00.3, 64°.87N×172°.96W, h0^{km}*
ISC 21 21:16:00.9±0.9**, 64°.94N**±0°.04×**173°.19W**±0°.03**, h10**^{km}**, n72,**
σ**2^s.84**/98**, 1C, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVDR	Provideniya	0.52	181	⇑*i*Pg	Pg	21 16 07.7	-3.2
PVDR				*e*Sg	Sg	21 16 15.8	-1.9
PVDR				Sgmax		21 16 18.4	
	6μm,0.4s						
GAMB	Gambell	1.34	150	P	Pg	21 16 25.7	-0.9
	baz=325,SNR=62						
GAMB				S	Sg	21 16 44.3	+0.5
	baz=325						
TNA	Tin City	2.30	72	P	Pn	21 16 38.1	-0.7
	baz=259,SNR=8.2						
TNA				S	Sb	21 17 11.2	+0.4
	baz=259						
F14K	Arctic Creek	2.94	76	P	Pn	21 16 46.9	-0.7
	baz=264						
F14K				S	Sb	21 17 30.2	+0.9
	baz=264						
ANM	Nome	3.37	93	P	Pn	21 16 53.8	+0.3
	baz=280,SNR=14						
ANM				Sb	Sb	21 17 44.3	+2.7
	baz=280						
F15K	North Star Dit	3.66	74	P	Pn	21 16 57.2	-0.3
	baz=263,SNR=17						
F15K				Sb	Sb	21 17 52.9	+2.9
	baz=263						
G15K	Niukluk	3.89	85	P	Pn	21 17 00.4	-0.3
	baz=274						
G15K				Sb	Sb	21 18 00.9	+4.4
	baz=274						
ANDR	Anadyr'	3.98	271	*e*Pg	Pg	21 17 17.3	+0.1
ANDR				*e*Sg	Sg	21 18 08.6	-0.1
ANDR				Sgmax		21 18 17.0	
	550nm,0.7s						
C16K	Lisburne Hills	4.58	40	P	Pn	21 17 08.9	-1.2
	baz=229						
G16K	Koyuk River	4.59	79	P	Pn	21 17 09.6	-0.6
	baz=270						
H16K	Elim	4.69	89	P	Pn	21 17 11.3	-0.3
	baz=279						
J14K	Nanvaranak Lak	4.80	113	P	Pn	21 17 12.9	-0.2
	baz=301						
J14K				Sb	Sg	21 18 31.4	-3.4
	baz=301						
K13K	Kusilvak Mount	4.88	124	P	Pn	21 17 13.9	-0.3
	baz=311						
K13K				Sb	Sg	21 18 32.7	-4.5
	baz=311						
D17K	Noatak River	4.92	51	P	Pn	21 17 13.9	-0.9
	baz=242,SNR=11						
D17K				Sb	Sb	21 18 33.1	+6.9
	baz=242						
E17K	Hotham Inlet	5.11	60	P	Pn	21 17 16.7	-0.7
	baz=252						
E17K				Sb	Sb	21 18 38.4	+6.8
	baz=252						
F17K	Baldwin Pennin	5.16	68	Sb	Sg	21 18 42.6	-3.6
	baz=260						
G17K	Kiwalik Mounta	5.30	78	P	Pn	21 17 19.5	-0.5
	baz=270,SNR=6.1						
G17K				Sb	Sg	21 18 45.2	-5.7
	baz=270						
C17K	DeLong Mountai	5.32	44	P	Pn	21 17 19.0	-1.3
	baz=235						
C17K				Sb	Sb	21 18 44.4	+6.7
	baz=235						
I17K	Unalakleet	5.52	95	P	Pn	21 17 23.0	+0.1
	baz=287						
I17K				Sb	Sg	21 18 52.0	-5.8
	baz=287						
M11K	Mekoryuk	5.59	142	P	Pn	21 17 24.3	+0.3
	baz=326						
H17K	Granite Mounta	5.64	84	P	Pn	21 17 24.6	-0.1
	baz=277						
H17K				Sb	Sb	21 18 54.9	+7.9
	baz=277						
E18K	Tukpahlearik C	5.67	58	P	Pn	21 17 24.2	-0.9
	baz=251,SNR=6.4						
E18K				Sb	Sb	21 18 54.6	+6.9
	baz=251						
J16K	Anvik River	5.76	101	P	Pn	21 17 26.4	0.0
	baz=292						
J16K				Sb	Sb	21 18 58.7	+8.4
	baz=292						
F18K	Selawik	5.81	67	P	Pn	21 17 27.1	0.0
	baz=261						
F18K				Sb	Sb	21 19 00.6	+8.7
	baz=261						
K15K	Wolf Creek Mou	5.84	112	P	Pn	21 17 27.6	+0.3
	baz=302						
K15K				Sb	Sg	21 19 03.4	-4.6
	baz=302						
L14K	Kuka Creek	5.97	122	P	Pn	21 17 29.5	+0.2
	baz=311						
L14K				S	Sn	21 18 38.5	+0.9
	baz=311						
C18K	Utukok River	6.02	47	P	Pn	21 17 29.2	-0.7
	baz=239						
C18K				Sb	Sb	21 19 04.5	+6.7
	baz=239						
G18K	Tagagawik	6.14	75	P	Pn	21 17 30.5	-1.1
	baz=269						
G18K				Sb	Sg	21 19 11.2	-6.5
	baz=269						
L15K	Ungalak Mounta	6.20	116	P	Pn	21 17 32.9	+0.5
	baz=306						
L15K				S	Sn	21 18 44.4	+1.1
	baz=306						
B18K	Kokolik River	6.27	40	P	Pn	21 17 32.6	-0.6
	baz=232						
H18K	Honhosa River	6.28	81	P	Pn	21 17 33.4	0.0
	baz=275						
H18K				Sb	Sg	21 19 14.8	-7.3
	baz=275						
J17K	VABM Dome	6.36	98	P	Pn	21 17 35.7	+1.2
	baz=290,SNR=7.7						
J17K				S	Sn	21 18 48.9	+1.8
	baz=290						
F19K	Shaleruckik Mo	6.59	66	P	Pn	21 17 37.6	-0.1
	baz=262						
M14K	Bethel	6.63	124	P	Pn	21 17 38.8	+0.5
	baz=313						
C19K	Lookout Ridge	6.76	46	P	Pn	21 17 39.4	-0.6
	baz=240						
E19K	Redstone River	6.93	62	P	Pn	21 17 42.7	+0.3
	baz=257,SNR=19						
D19K	Kuna River	6.95	52	P	Pn	21 17 42.2	-0.5
	baz=248						
L16K	Owhat River	6.97	111	P	Pn	21 17 43.2	+0.4
	baz=303						
H19K	Roundabout Mou	7.05	78	P	Pn	21 17 44.1	+0.1
	baz=274						
J18K	Innoko River	7.34	94	P	Pn	21 17 48.9	+1.0
	baz=289						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
F20K	Avaraart Lake baz=263	7.42	66	P	Pn	21 17 49.2	+0.2
E20K	Nigu River baz=253	7.53	56	P	Pn	21 17 50.7	0.0
D20K	Etivluk River baz=249	7.54	53	P	Pn	21 17 50.8	0.0
J19K	Poorman baz=285	7.65	89	P	Pn	21 17 53.2	+1.0
H20K	Anotleneega Mo baz=275	7.71	78	P	Pn	21 17 53.2	+0.2
B20K	Meade River baz=240,SNR=6.8	7.96	43	P	Pn	21 17 55.0	-1.4
J20K	Nowinta River baz=284	8.23	87	P	Pn	21 18 00.9	+0.7
C21K	Knifeblade Rid baz=250	8.32	51	P	Pn	21 18 01.2	-0.2
E21K	Killik River baz=255	8.37	57	P	Pn	21 18 01.8	-0.3
K20K	Telida baz=290	8.50	92	P	Pn	21 18 03.8	-0.1
H21K	Melozitna Rive baz=275	8.56	76	P	Pn	21 18 04.8	+0.1
B21K	Ikpikpuk River baz=247	8.56	49	P	Pn	21 18 03.6	-1.0
M18K	Stony River baz=301	8.56	106	P	Pn	21 18 05.7	+0.9
L19K	White Mountain baz=297	8.63	100	P	Pn	21 18 06.6	+1.0
BILL	Bilibino	8.76	300	*e*Sg	Sg	21 20 38.6	-2.9
BILL	10.0nm,0.1s			Sgmax		21 20 59.5	
A21K	Barrow baz=233	8.87	37	P	Pn	21 18 07.7	-1.1
L20K	Farewell, AK baz=295	8.91	97	P	Pn	21 18 10.8	+1.3
D22K	Ayikyak River baz=255	8.95	55	P	Pn	21 18 10.2	+0.2
E22K	Anaktuvuk Pass baz=260	9.08	60	P	Pn	21 18 12.3	+0.4
A22K	Sinclair Lake baz=238	9.12	40	P	Pn	21 18 11.0	-1.2
B22K	Teshekpuk Lake baz=245,SNR=7.0	9.24	45	P	Pn	21 18 13.0	-0.9
CAST	Castle Rocks baz=289	9.32	90	P	Pn	21 18 15.7	+0.5
PPLA	Purkeypile baz=292	9.46	93	P	Pn	21 18 18.0	+0.8
M20K	Styx River baz=298	9.48	100	P	Pn	21 18 17.8	+0.3
MLY	Manley baz=280	9.49	79	P	Pn	21 18 17.6	+0.1
BPAW	Bear Paw Mtn. baz=285	9.59	85	P	Pn	21 18 19.5	+0.7
D23K	Nanushuk River baz=257	9.67	55	P	Pn	21 18 19.1	-0.7
H23K	Yukon River baz=276	9.88	74	P	Pn	21 18 23.2	+0.3
C23K	Itkillik River baz=252	9.93	50	P	Pn	21 18 22.4	-1.1
TOLK	Toolik Lake Re baz=260	9.99	58	P	Pn	21 18 24.0	-0.4
TRF	Thorofare Moun baz=289	10.08	88	P	Pn	21 18 26.5	+0.9
E24K	Your Creek baz=265,SNR=5.8	10.31	61	P	Pn	21 18 29.8	+1.1

IDC 21 21:18:53.9±2.9**, 29°.85S×177°.76W, h0^{km}, mb3.7**/3**, mbtmp3.7**/3**, Error ellipse: s-maj=83.4km s-min=39.0km az=39.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs 0.3nm,0.6s,baz=100,slow=7.2,SNR=6.2 0.3nm,0.6s	43.35	266	P	P	21 26 58.0	-0.2
WRA	Warramunga Arr 0.8nm,0.6s,baz=111,slow=8.0,SNR=5.2 0.8nm,0.6s	44.29	271	P	P	21 27 05.7	0.0
QSPA	South Pole Qui 1.3nm,0.9s,baz=34,slow=7.3,SNR=5.8 1.3nm,0.9s	60.26	180	P	P	21 29 03.8	-0.2
FINES	FINESS Array B 3.1nm,1.0s,baz=49,slow=2.1,SNR=7.0	144.70	340	PKP	PKPdf	21 38 31.5	-0.4

IDC 21 21:53:45.9±349.0**, 48°.61N×152°.31E, h0^{km}, Error ellipse: s-maj=167.3km s-min=127.1km az=31.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I44RU	PETROPAVLOVSK- 0.1nm,4.6s,baz=217,slow=318,SNR=7.7	5.65	35	I	I	22 28 50.0	
I45RU	USSURIYSK INFR 0.1nm,1.9s,baz=62,slow=313,SNR=23	14.69	260	I	I	23 19 15.0	
I30JP	ISUMI INFRASON baz=29,slow=306,SNR=3.4	15.98	218	I	I	23 30 10.0	

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*SDD **21** 21:55:02.3±0.6, 18°.83N×65°.13W, h31^{km}±53^{km}, MD3.5, ML2.2, MW2.5*

*RSPR **21** 21:55:05.0, 18°.70N×65°.14W, h69^{km}±3^{km}, MD2.4/11*

NEIC 21 21:55:04.5±0.8**, 18°.72N**±0°.06×**65°.09W**±0°.09**, h35**^{km}±2^{km}**, ML2.4**/22**, Md2.4**/11(RSPR)**, 18C-4D, Error ellipse: s-maj=14.2km s-min=10.4km az=97.0, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUMP	Col San Antoni	0.92	232		Sn	21 55 33.5	+0.5
HUMP	Col San Antoni	0.92	232		Pn	21 55 20.9	0.0
HUMP	comp=E,84nm,0.2s			IAML		21 55 34.8	
HUMP	Col San Antoni	0.92	232	⇑*e*P	Pn	21 55 20.9	0.0
HUMP	Col San Antoni	0.92	232	*e*S	Sn	21 55 33.5	+0.5
GCPR	Guaynabo City	1.03	247		Pn	21 55 22.3	-0.1
GCPR					Sn	21 55 36.3	+0.8
GCPR	Guaynabo City	1.03	247	⇑*e*P	Pn	21 55 22.2	-0.2
GCPR	Guaynabo City	1.03	247	*e*S	Sn	21 55 36.3	+0.7
PDPR	Patillas Dam,	1.13	232	Pn	Pn	21 55 23.9	+0.2
PDPR					Sn	21 55 38.1	+0.1
PDPR	comp=N,48nm,0.1s			IAML		21 55 40.2	
PDPR	Patillas Dam,	1.13	232	⇑*e*P	Pn	21 55 23.7	0.0
PDPR	Patillas Dam,	1.13	232	*e*S	Sn	21 55 38.5	+0.5
SJG	San Juan	1.17	239	*e*S	Sn	21 55 39.6	+0.4
IGPR	InterUniversit	1.22	233		Pn	21 55 25.0	-0.1
IGPR	InterUniversit	1.22	233		Sn	21 55 38.0	-2.3
IGPR	comp=E,123nm,0.2s			IAML		21 55 44.0	
IGPR	comp=N,102nm,0.2s			IAML		21 55 44.6	
IGPR	InterUniversit	1.22	233	⇓*e*P	Pn	21 55 25.0	-0.1
IGPR	InterUniversit	1.22	233	*e*S	Sn	21 55 40.4	0.0
ECPR	Experimental S	1.27	252	⇓*e*P	Pn	21 55 25.6	-0.2
ECPR	Experimental S	1.27	252	*e*S	Sn	21 55 41.9	+0.3
EMPR	Esperanza - Ma	1.39	260		Pn	21 55 27.5	+0.2
EMPR	comp=E,115nm,1.4s			IAML		21 56 05.5	
EMPR	Esperanza - Ma	1.39	260		Sn	21 55 45.4	+0.9
EMPR	Esperanza - Ma	1.39	260	⇑*e*P	Pn	21 55 27.5	+0.1
EMPR	Esperanza - Ma	1.39	260	*e*S	Sn	21 55 45.4	+0.9
CELP	Cerrillos	1.55	246		Pn	21 55 29.5	-0.2
CELP					Sn	21 55 48.2	-0.4
CELP	comp=N,27nm,0.7s			IAML		21 55 51.9	
CELP	Cerrillos	1.55	246	⇑*e*P	Pn	21 55 29.2	-0.4
CELP	Cerrillos	1.55	246	*e*S	Sn	21 55 48.1	-0.5
CELP	Cerrillos	1.55	246	⇑*e*Pg	Pn	21 55 28.8	-0.8
CELP				⇑*e*Sg	Sn	21 55 48.0	-0.6
CELP	comp=N,26nm,0.7s			IAML		21 55 51.7	
OBIP	Obispado Ponce	1.59	245		Pn	21 55 30.2	+0.1
OBIP	Obispado Ponce	1.59	245		Sn	21 55 49.2	-0.2
OBIP	comp=N,24nm,0.6s			IAML		21 55 51.5	
OBIP	comp=E,27nm,2.3s			IAML		21 55 54.9	
OBIP	Obispado Ponce	1.59	245	⇑*e*P	Pn	21 55 30.2	+0.1
OBIP	Obispado Ponce	1.59	245	*e*S	Sn	21 55 48.3	-1.1
UUPR	Utuado, UPR, P	1.62	254		Pn	21 55 30.2	-0.3
UUPR	Utuado, UPR, P	1.62	254		Sn	21 55 49.5	-0.7
UUPR	Utuado, UPR, P	1.62	254	⇑*e*P	Pn	21 55 30.1	-0.4
UUPR	Utuado, UPR, P	1.62	254	*e*S	Sn	21 55 49.5	-0.7
AOPR	Arecibo Observ	1.62	257		Pn	21 55 29.9	-0.7
AOPR					Sn	21 55 49.7	-0.6
AOPR	Arecibo Observ comp=N,53nm,0.3s	1.62	257	IAML		21 55 55.2	
AOPR	comp=E,83nm,0.3s			IAML		21 55 57.8	
AOPR	Arecibo Observ	1.62	257	⇑*e*P	Pn	21 55 29.9	-0.7
AOPR	Arecibo Observ	1.62	257	*e*S	Sn	21 55 49.7	-0.6
AOPR	Arecibo Observ	1.62	257	⇑*e*Pg	Pn	21 55 29.6	-1.1
AOPR				⇑*e*Sg	Sn	21 55 49.4	-1.0
AOPR	comp=N,47nm,0.2s			IAML		21 55 54.7	
AGPR	Aguadilla, PR	1.94	263		Pn	21 55 34.1	-0.8
AGPR	Aguadilla, PR	1.94	263	⇓*e*P	Pn	21 55 34.1	-0.8
LSP	Las Mesas	1.97	255		Pn	21 55 34.9	-0.6
LSP					Sn	21 55 58.4	-0.5
LSP	Las Mesas	1.97	255	⇓*e*P	Pn	21 55 34.9	-0.6
LSP	Las Mesas	1.97	255	*e*S	Sn	21 55 58.4	-0.5
MLPR	Magueyes Islan	2.00	249	⇑*e*P	Pn	21 55 35.6	-0.2
MLPR	Magueyes Islan	2.00	249	*e*S	Sn	21 55 59.2	-0.4
MLPR	Magueyes Islan	2.00	249	⇑*e*Pg	Pn	21 55 35.6	-0.2
MLPR				⇑*e*Sg	Sn	21 55 59.9	+0.3
MLPR	comp=N,8.1nm,1.8s			IAML		21 56 13.2	
CRPR	Cabo Rojo, PR	2.05	250		Pn	21 55 35.8	-0.6
CRPR	comp=E,29nm,2.4s			IAML		21 56 08.1	
CRPR	comp=N,29nm,1.6s			IAML		21 56 25.0	
CRPR	Cabo Rojo, PR	2.05	250		Sn	21 55 59.4	-1.3
CRPR	Cabo Rojo, PR	2.05	250	⇑*e*P	Pn	21 55 36.1	-0.3
CRPR	Cabo Rojo, PR	2.05	250	*e*S	Sn	21 55 59.4	-1.3
CRPR	Cabo Rojo, PR	2.05	250	⇑*e*Pg	Pn	21 55 35.5	-0.9
CRPR				⇑*e*Sg	Sn	21 56 01.0	+0.3
CRPR	comp=N,31nm,1.3s			IAML		21 56 24.6	

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*IDC **21** 22:03:11.7±1.1, 44°.03N×128°.44W, h0^{km}, mb3.7/13, mbtmp3.6/20, ML3.4/7, MS3.4/23, Error ellipse: s-maj=26.9km s-min=11.4km az=36.0*

*NEIC **21** 22:03:18.8±2.1, 43°.8N±0°.1×127°.84W±0°.03, h10^{km}±2^{km}, ML3.2/62, Error ellipse: s-maj=17.1km s-min=3.8km az=188.0*

ISC 21 22:03:15.1±1.0**, 43°.81N**±0°.08×**128°.07W**±0°.09**, h10**^{km}**, n232,** σ1^{s}**79**/139**, mb3.7**/12**, MS3.4**/17**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEBM	Edson Butte	2.88	108	Pn	Pn	22 04 01.6	+0.5
KEBM				Sg	Sb	22 04 39.9	-1.9
KEBM	comp=N,82nm,0.7s			IAML		22 04 43.7	
KEBM	comp=E,89nm,1.0s			IAML		22 04 44.0	
I02E	Swisshome, OR	3.06	83	Pn	Pn	22 04 04.7	+1.3
J01E	Myrtle Point	3.08	101		Pn	22 04 05.1	+1.4
J01E	comp=E,55nm,2.2s			IAML		22 05 01.4	
HEBO	Mount Hebo	3.39	64		Pn	22 04 09.0	+0.9
I03D	Drain, OR	3.42	90		Pn	22 04 10.4	+2.0
COR	Corvallis	3.51	76	Pn	Pn	22 04 12.6	+3.0
COR	comp=E,54nm,1.9s			IAML		22 05 01.8	
COR	comp=E,59nm,3.2s			IAML		22 05 04.1	
KSXB	Camp Six Broad	3.66	121	Pn	Pn	22 04 12.9	+1.1
BUCK	Buck Mountain	3.69	82	Pn	Pn	22 04 15.0	+2.8
BUCK	comp=N,43nm,3.4s			IAML		22 05 05.5	
BUCK	comp=E,47nm,3.3s			IAML		22 05 37.5	
L02F	Cave Junction	3.71	116	Pn	Pn	22 04 15.1	+2.7
G03D	McMinnville, O	3.71	66		Pn	22 04 13.9	+1.6
G03D	comp=N,59nm,1.2s			IAML		22 05 06.5	
G03D	comp=E,47nm,3.0s			IAML		22 05 30.8	
F03A	Seaside	3.84	55		Pn	22 04 15.7	+1.4
H04D	Lebanon	3.90	78		Pn	22 04 17.3	+2.3
H04D	comp=E,37nm,1.1s			IAML		22 05 12.3	
H04D	comp=N,36nm,3.1s			IAML		22 05 30.9	
RADR	Rader Ridge	3.99	48	Pn	Pn	22 04 20.5	+4.2
BBOR	Butler Butte	4.04	101		Pn	22 04 19.4	+2.3
BBOR	comp=E,26nm,0.7s			IAML		22 05 18.8	
E03A	Lebam	4.20	48	Pn	Pn	22 04 21.0	+2.0
E03A	comp=N,47nm,2.9s			IAML		22 05 23.9	
E03A	comp=E,45nm,3.6s			IAML		22 06 59.3	
G04A	Mulino	4.23	69		Pn	22 04 21.9	+2.3
G04A	comp=E,56nm,1.6s			IAML		22 04 54.7	
G04A	comp=N,54nm,1.7s			IAML		22 05 00.1	
H04A	Detroit Lake	4.31	76		Pn	22 04 23.0	+2.3
H04A	comp=N,21nm,0.5s			IAML		22 04 52.7	
H04A	comp=E,20nm,1.6s			IAML		22 04 55.1	
J04A	Umpqua Nationa	4.37	95		Pn	22 04 24.7	+3.1
YBH	Yreka Blue Hor	4.46	116	Pn	Pn	22 04 23.9	+1.1
YBH	Yreka Blue Hor baz=328,slow=8.2,SNR=2.3	4.46	116	Pn	Pn	22 04 25.0	+2.2
YBH	baz=2.3,slow=12,SNR=1.2			Sn	Sb	22 05 20.7	-6.5
YBH	comp=E,9.6nm,18.9s,baz=325,slow=31			LR	LR	22 05 40.0	
WISH	Wishkah	4.48	41	Pn	Pn	22 04 24.9	+2.0
L04D	Klamath Falls	4.51	109		Pn	22 04 26.9	+3.3
L04D	comp=N,25nm,3.6s			IAML		22 04 59.5	
L04D	comp=E,29nm,1.9s			IAML		22 05 25.6	
J05D	Fort Rock, OR comp=E,21nm,3.6s	4.99	94	IAML		22 06 00.3	
J05D	comp=N,20nm,3.8s			IAML		22 06 22.5	
PINE	Pine Mountain comp=N,18nm,4.3s	5.16	88	IAML		22 05 40.0	
PINE	comp=E,21nm,4.7s			IAML		22 07 16.4	
GNW	Green Mountain comp=N,14nm,4.1s	5.25	43	IAML		22 06 59.0	
BBB	Bella Bella comp=N,0.5nm,0.3s,baz=126,slow=19,SNR=1.0 comp=N,6.1nm,0.7s	8.38	360	Pn	Pn	22 05 11.1	-5.4
NEW	Newport comp=N,0.2nm,0.3s,baz=202,slow=12,SNR=2.2	8.82	56	Pn	Pn	22 05 22.6	+0.1
NEW	comp=N,142nm,21.3s,baz=260,slow=38 comp=N,1.2nm,0.5s			LR	LR	22 08 49.0	
NVAR	Mina Array Bea comp=N,0.1nm,0.3s,baz=290,slow=15,SNR=4.0	9.12	123	Pn	Pn	22 05 32.4	+5.5
NVAR	comp=N,246nm,20.2s,baz=259,slow=37 comp=N,0.2nm,0.3s			LR	LR	22 09 09.0	
ELK	Elko comp=N,0.1nm,0.3s,baz=297,slow=18,SNR=5.0	9.99	103	Pn	Pn	22 05 41.8	+3.0
ELK	comp=N,251nm,18.8s,baz=318,slow=38 comp=N,0.9nm,0.7s			LR	LR	22 09 47.0	
V35K	Ketchikan baz=166	11.76	350	P	Pn	22 06 00.1	-2.6
PDAR	Pinedale Array comp=N,0.1nm,0.3s,baz=290,slow=16,SNR=6.5	13.53	88	Pn	Pn	22 06 32.3	+5.2
PDAR	comp=N,144nm,18.7s,baz=272,slow=38 comp=N,0.3nm,0.8s			LR	LR	22 12 02.9	
PFO	Pinyon Flats O comp=N,90nm,21.0s,baz=86,slow=35	13.62	135	LR	LR	22 11 24.0	
S32K	Killisnoo baz=160	14.28	346	P	Pn	22 06 37.3	+0.2
DLBC	Dease Lake baz=209,slow=23,SNR=2.0	14.70	356	Pn	Pn	22 06 38.1	-4.8
DLBC	comp=N,4.6nm,18.4s,baz=189,slow=33 comp=N,0.1nm,0.3s			LR	LR	22 11 03.2	
R33M	Jennings River baz=172	15.71	355	P	Pn	22 06 57.0	+0.6
P32M	Atlin baz=165	16.18	350	P	Pn	22 07 02.6	+0.2
PLBC	Pleasant Camp baz=158	16.47	345	P	Pn	22 07 07.7	+1.7
BEAVL	Fort Liard baz=187	16.50	5	P	Pn	22 07 06.0	-0.3
P33M	Teslin, Yukon baz=167	16.68	352	P	Pn	22 07 08.8	+0.1
P29M	Windy Craggy baz=155	16.91	343	P	Pn	22 07 12.0	+0.4
WHY	Whitehorse baz=163	17.37	349	P	Pn	22 07 18.2	+0.8
PINM	Pinnacle baz=150	17.90	340	P	Pn	22 07 25.1	+1.1
HYT	Haines Junctio baz=157	17.96	345	P	Pn	22 07 24.7	-0.1
YUK6	Outpost Mounta baz=155	18.23	344	P	Pn	22 07 28.1	-0.2
N31M	Braeburn, Yuko baz=162	18.29	348	P	Pn	22 07 29.2	+0.5
N30M	Aishikik Lake baz=158	18.47	346	P	P	22 07 30.2	-0.7
O28M	Mount Upton baz=151	18.48	341	P	P	22 07 28.8	-2.4
YUK4	Talbot Arm baz=155	18.66	344	P	P	22 07 34.4	+1.3
M31M	Drury Creek, Y baz=165	18.80	351	P	P	22 07 33.7	-0.7
ANMO	Albuquerque comp=N,0.1nm,0.3s,baz=327,slow=11,SNR=3.6	18.86	111	P	Pn	22 07 39.0	+3.0
ANMO	comp=N,297nm,19.3s,baz=53,slow=38 comp=N,2.0nm,0.8s			LR	LR	22 15 28.0	
MMPY	Sheldon Lake, baz=172	18.94	355	P	P	22 07 35.9	-0.1
KAIM	Kayak Island baz=141	18.95	334	P	P	22 07 34.5	-1.5
CRQE	Cirque baz=145	19.21	337	P	P	22 07 38.6	-0.5
YUK3	Moose Creek baz=152	19.43	342	P	P	22 07 43.5	+2.0
M29M	Somme Creek baz=157	19.63	346	P	P	22 07 43.8	+0.1
MCARA	McCarthy VSAT baz=146	19.72	338	P	P	22 07 43.2	-1.2
BMRM	Bremner River baz=142	19.82	336	P	P	22 07 46.1	+0.4
EYAK	Cordova Ski Ar baz=139	19.85	334	P	P	22 07 46.0	+0.1
P23K	Montague Islan baz=135	20.00	331	P	P	22 07 46.4	-1.1
L29M	L29M baz=158	20.19	347	P	P	22 07 49.0	-0.7
M27K	Edge Creek, AK baz=150	20.26	341	P	P	22 07 49.5	-1.1
YKA	Yellowknife Ar comp=N,2.6nm,0.8s,baz=215,slow=11,SNR=7.5	20.30	18	P	P	22 07 48.9	-1.8
YKA	comp=N,28nm,19.2s,baz=312,slow=36 comp=N,2.6nm,0.8s			LR	LR	22 15 13.9	
N25K	Chitina, Valde baz=143	20.34	337	P	P	22 07 50.5	-0.8
GLI	Glacier Island baz=137	20.54	333	P	P	22 07 50.6	-2.7
KLU	Klutina baz=141	20.63	335	P	P	22 07 53.1	-1.4
KDAK	Kodiak Island comp=N,128nm,19.3s,baz=122,slow=32	20.71	321	LR	LR	22 13 52.9	
KDAK	Kodiak Island baz=122	20.71	321	P	P	22 07 56.3	+1.0
OHAK	Old Harbor baz=119	20.75	319	P	P	22 07 58.2	+2.5
K29M	Barlow Dome baz=160	20.79	348	P	P	22 07 57.3	+1.1
L27K	Beaver Creek, baz=151	20.87	342	P	P	22 07 57.2	+0.2
SII	Sitkinak Islan baz=116	20.88	317	P	P	22 07 59.1	+2.1
Q20K	Shuyak Island baz=124	21.08	323	P	P	22 07 59.1	-0.1
L26K	Log Cabin Wild baz=148	21.19	341	P	P	22 08 01.3	+0.9
M24K	Tolsona, Glenn baz=141	21.19	336	P	P	22 08 01.8	+1.3
DAWY	Dawson baz=156	21.30	346	P	P	22 08 00.9	-0.7
J30M	Hart River baz=163	21.32	350	P	P	22 08 00.4	-1.6
SCM	Sheep Creek Mo baz=139	21.33	335	P	P	22 08 02.6	+0.6
M23K	Glacier View baz=138	21.42	334	P	P	22 08 02.0	-0.9
SML	Sawmill baz=137	21.62	333	P	P	22 08 04.2	-1.0
PAX	Paxson baz=144	21.68	338	P	P	22 08 04.9	-0.9
K27K	Chicken baz=151	21.77	343	P	P	22 08 05.6	-1.1
Q19K	Cape Douglas, baz=122	21.80	323	P	P	22 08 06.6	-0.4
CAPN	Captain Cook N baz=130	21.89	329	P	P	22 08 07.1	-0.8
I30M	Mount Dempster baz=163	21.95	351	P	P	22 08 07.7	-1.0
WAT6	Susitna Watana baz=139	22.02	335	P	P	22 08 07.2	-2.3
P19K	Oil Pt baz=124	22.03	325	P	P	22 08 08.2	-1.2
O20K	Slope Mountain baz=126	22.03	326	P	P	22 08 07.1	-2.4
SCRK	Sand Creek baz=148	22.15	341	P	P	22 08 08.2	-2.6
RIDG	Independent Ri baz=146	22.16	340	P	P	22 08 09.5	-1.4
SUA	Susitna One baz=132	22.20	331	P	P	22 08 08.2	-3.2
Q18K	Katmai Hardscr baz=120	22.26	321	P	P	22 08 10.8	-1.2
DHY	Denali Highway baz=140	22.29	337	P	P	22 08 11.2	-1.2
H31M	Peel River baz=168	22.32	353	P	P	22 08 10.2	-2.3
I29M	Ogilvie Camp, baz=160	22.34	349	P	P	22 08 12.5	-0.2
Q17K	Contact Creek baz=118	22.48	320	P	P	22 08 14.0	-0.4
J26L	Joseph Creek baz=149	22.50	342	P	P	22 08 13.9	-0.7
N20K	Mount Spurr baz=129	22.56	329	P	P	22 08 15.8	+0.6
SPCR	Spurr Chakacha baz=129	22.56	329	P	P	22 08 15.8	+0.6
I28M	Miner Creek baz=157	22.67	347	P	P	22 08 13.6	-2.7
P18K	Big Mountain, baz=121	22.74	323	P	P	22 08 15.7	-1.4
ULM	Lac du Bonnet comp=N,2.6nm,0.8s,baz=273,slow=8.1,SNR=4.6 comp=N,2.6nm,0.8s	22.74	62	P	P	22 08 17.6	+0.5
O19K	Port Alsworth baz=124	22.79	325	P	P	22 08 16.4	-1.1
SKT	Skwentna baz=132	22.83	331	P	P	22 08 16.7	-1.2
O18K	Koktuh Hills baz=122	22.97	324	P	P	22 08 16.6	-2.9
J25K	Salcha River, baz=146	23.01	341	P	P	22 08 18.7	-1.2
I27K	Kandik River baz=154	23.09	346	P	P	22 08 18.3	-2.4
EPYK	Eagle Plains baz=164	23.10	351	P	P	22 08 18.6	-2.2
I26K	Coal Creek Min baz=151	23.12	344	P	P	22 08 19.0	-2.0
H29M	Whitestone baz=160	23.16	349	P	P	22 08 19.2	-2.1
N19K	Bonanza Creek baz=125	23.21	326	P	P	22 08 21.3	-0.6
HDA	Harding Lake baz=143	23.24	339	P	P	22 08 20.3	-1.8
MCK	McKinley baz=139	23.25	336	P	P	22 08 21.3	-1.0
M20K	Styx River baz=129	23.34	330	P	P	22 08 18.9	-4.4
G31M	Satah River baz=168	23.41	354	P	P	22 08 21.7	-2.1
TRF	Thorofare Moun baz=136	23.45	335	P	P	22 08 22.2	-2.2
ILAR	Eielson Array comp=N,0.5nm,0.7s,baz=161,slow=9.5,SNR=6.4	23.51	340	P	P	22 08 19.5	-5.4
ILAR	comp=N,70nm,19.2s,baz=101,slow=33 comp=N,0.5nm,0.7s			LR	LR	22 16 07.0	

G30M	tAoh Zraii Nji	23.64	352	P	P	22 08 23.8	-2.3
	baz=165						
H27K	Steamboat Moun	23.65	346	P	P	22 08 24.3	-2.0
	baz=155						
PPLA	Purkeypile	23.67	332	P	P	22 08 24.5	-2.1
	baz=132						
N18K	Kilae Creek	23.70	325	P	P	22 08 22.8	-4.0
	baz=122						
SDPT	Sand Point	23.75	311	P	P	22 08 24.7	-2.5
	baz=105						
O17K	Koliganek Bris	23.75	322	P	P	22 08 25.4	-1.8
	baz=119						
G29M	Pine Creek	23.77	350	P	P	22 08 26.7	-0.7
	baz=162						
P16K	Nushagak River	23.81	320	P	P	22 08 27.1	-0.7
	baz=116						
M19K	Big River Lodg	23.82	329	P	P	22 08 23.8	-4.1
	baz=127						
NEA2	Nenana	23.95	338	P	P	22 08 26.6	-2.4
	baz=140						
L20K	Farewell, AK	23.99	330	P	P	22 08 25.7	-3.8
	baz=129						
CAST	Castle Rocks	24.00	333	P	P	22 08 25.5	-4.1
	baz=133						
O16K	Kokwok River B	24.11	321	P	P	22 08 29.2	-1.4
	baz=117						
M18K	Stony River	24.13	327	P	P	22 08 27.0	-3.8
	baz=124						
BPAW	Bear Paw Mtn.	24.13	335	P	P	22 08 27.0	-3.9
	baz=136						
L19K	White Mountain	24.16	329	P	P	22 08 27.0	-4.2
	baz=127						
N17K	Nushagak Hills	24.17	324	P	P	22 08 28.5	-2.6
	baz=120						
G27K	Doyon Strip	24.20	347	P	P	22 08 26.0	-5.4
	baz=155						
F30M	Barrier River	24.21	353	P	P	22 08 27.9	-3.6
	baz=166						
TXAR	Lajitas Array	24.23	118	P	P	22 08 34.5	+2.4
	comp=N,2.4nm,1.3s,baz=297,slow=8.3,SNR=6.3						
TXAR				LR	LR	22 19 03.5	
	comp=N,38nm,18.2s,baz=289,slow=39						
	comp=N,2.4nm,1.3s						
I23K	Minto, Yukon-K	24.46	338	P	P	22 08 31.4	-2.3
	baz=140						
LPIG	La Paz	24.47	138	LR	LR	22 17 53.8	
	comp=N,68nm,19.6s,baz=9.5,slow=36						
H25L	Birch Creek	24.51	343	P	P	22 08 29.9	-4.4
	baz=148						
K20K	Telida	24.62	332	P	P	22 08 32.8	-2.4
	baz=130						
H24K	Noodor Dome	24.62	340	P	P	22 08 33.6	-1.7
	baz=144						
G26K	Porcupine Rive	24.70	345	P	P	22 08 33.6	-2.3
	baz=152						
S12K	Black Hills	24.71	311	P	P	22 08 34.0	-2.2
	baz=104						
M17K	Holitna River	24.73	326	P	P	22 08 33.1	-3.2
	baz=122						
MLY	Manley	24.75	337	P	P	22 08 33.9	-2.5
	baz=138,SNR=5.8						
N16K	Nishlik Lake	24.82	323	P	P	22 08 35.0	-2.2
	baz=118						
L18K	Granite Mounta	24.88	328	P	P	22 08 34.4	-3.2
	baz=124,SNR=6.2						
G25K	Bearman Lake	25.00	343	P	P	22 08 35.5	-3.1
	baz=148						
H23K	Yukon River	25.03	339	P	P	22 08 37.2	-1.8
	baz=141						
M16K	Timber Creek	25.17	324	P	P	22 08 37.3	-3.0
	baz=119						
J20K	Nowinta River	25.18	333	P	P	22 08 36.9	-3.4
	baz=131						
G24K	Hadweenzic Riv	25.24	342	P	P	22 08 37.8	-3.0
	baz=145						
N15K	Kwethluk River	25.27	322	P	P	22 08 39.1	-2.1
	baz=116						
E27K	Coleen River	25.45	348	P	P	22 08 40.9	-1.9
	baz=156						
L17K	Donlin	25.46	327	P	P	22 08 41.4	-1.5
	baz=122						
J19K	Poorman	25.56	332	P	P	22 08 40.0	-3.8
	baz=129,SNR=6.2						
E28M	Babbage River	25.57	350	P	P	22 08 40.3	-3.5
	baz=160						
H22K	Ishtalitna Cre	25.57	338	P	P	22 08 42.0	-1.9
	baz=138,SNR=7.7						
F25K	Christian Rive	25.61	344	P	P	22 08 41.1	-3.2
	baz=149						
J18K	Innoko River	25.62	330	P	P	22 08 40.9	-3.4
	baz=126,SNR=7.4						
C36M	Paulatuk	25.68	3	P	P	22 08 36.8	-8.0
	baz=186						
I20K	Naaghedeneel	25.70	334	P	P	22 08 42.3	-2.7
	baz=132						
L16K	Owhat River	25.73	325	P	P	22 08 42.4	-2.9
	baz=119,SNR=6.1						
M15K	Kasigluk River	25.77	322	P	P	22 08 43.8	-1.8
	baz=116						
K17K	Iditarod	25.78	328	P	P	22 08 43.7	-2.1
	baz=123						
H21K	Melozitna Rive	25.80	337	P	P	22 08 43.3	-2.6
	baz=136,SNR=5.2						
G23K	Bananza Creek	25.85	340	P	P	22 08 44.5	-2.0
	baz=141						
F24K	Squaw Lake	26.01	343	P	P	22 08 45.9	-2.0
	baz=146						
COLD	Coldfoot	26.30	341	P	P	22 08 49.1	-1.3
	baz=142						
H20K	Anotleneega Mo	26.30	335	P	P	22 08 47.5	-3.0
	baz=132,SNR=10						
M14K	Bethel	26.36	322	P	P	22 08 48.5	-2.5
	baz=114						
G22K	Bettles	26.39	339	P	P	22 08 49.3	-1.9
	baz=139						
J17K	VABM Dome	26.45	329	P	P	22 08 48.4	-3.4
	baz=123						
L15K	Ungalak Mounta	26.55	324	P	P	22 08 52.3	-0.5
	baz=117						
E24K	Your Creek	26.60	343	P	P	22 08 50.4	-2.9
	baz=145						
G21K	Allakaket	26.62	337	P	P	22 08 51.1	-2.2
	baz=136						
H19K	Roundabout Mou	26.82	334	P	P	22 08 51.6	-3.4
	baz=130,SNR=6.5						
E23K	Chandalar	26.83	342	P	P	22 08 52.9	-2.5
	baz=144						
M13K	Dall Lake	26.85	321	P	P	22 08 47.5	-7.9
	baz=112						
K15K	Wolf Creek Mou	26.86	325	P	P	22 08 49.6	-5.9
	baz=118						
L14K	Kuka Creek	26.92	323	P	P	22 08 48.8	-7.3
	baz=114						
J16K	Anvik River	26.97	328	P	P	22 08 50.7	-5.9
	baz=121						
F21K	Alatna River	27.13	338	P	P	22 08 51.9	-6.0
	baz=137						
H18K	Honhosa River	27.21	332	P	P	22 08 52.3	-6.4
	baz=127						
D25K	Kavik River	27.25	346	P	P	22 08 56.0	-3.0
	baz=150						
TOLK	Toolik Lake Re	27.30	343	P	P	22 08 53.9	-5.6
	baz=144						
E22K	Anaktuvuk Pass	27.40	341	P	P	22 08 55.1	-5.3
	baz=140						
G18K	Tagagawik	27.76	333	P	P	22 09 00.1	-3.5
	baz=128						
D23K	Nanushuk River	27.80	343	P	P	22 08 59.0	-4.9
	baz=143						
F19K	Shaleruckik Mo	28.07	335	P	P	22 09 01.2	-5.2
	baz=130						
E21K	Killik River	28.15	340	P	P	22 09 04.7	-2.4
	baz=138						
G17K	Kiwalik Mounta	28.19	332	P	P	22 09 05.6	-1.9
	baz=124						
NIKH	Nikolski High	28.25	303	P	P	22 09 04.8	-3.2
	baz=92						
E19K	Redstone River	28.33	337	P	P	22 09 05.9	-2.8
	baz=132						
C23K	Itkillik River	28.49	344	P	P	22 09 08.0	-2.0
	baz=144						
F18K	Selawik	28.51	334	P	P	22 09 10.8	+0.6
	baz=127						
E20K	Nigu River	28.59	338	P	P	22 09 09.4	-1.6
	baz=134						
F17K	Baldwin Pennin	28.93	333	P	P	22 09 17.0	+3.1
	baz=125						
D20K	Etivluk River	29.02	339	P	P	22 09 14.9	0.0
	baz=134						
D19K	Kuna River	29.27	338	P	P	22 09 15.9	-1.2
	baz=132						
E18K	Tukpahlearik C	29.31	335	P	P	22 09 17.0	-0.3
	baz=127						
B22K	Teshekpuk Lake	29.48	343	P	P	22 09 18.0	-0.8
	baz=141						
F15K	North Star Dit	29.71	330	P	P	22 09 20.7	-0.3
	baz=119						
B20K	Meade River	30.08	341	P	P	22 09 24.5	+0.4
	baz=135						
A22K	Sinclair Lake	30.32	343	P	P	22 09 25.0	-1.2
	baz=139						
RES	Resolute Bay	34.30	15	LR	LR	22 25 01.4	
	comp=N,24nm,20.1s,baz=313,slow=38						
SADO	Sadowa	34.61	71	LR	LR	22 24 36.4	
	comp=N,75nm,19.4s,baz=324,slow=37						
TKL	Tuckaleechee C	34.68	88	LR	LR	22 25 09.9	
	comp=N,139nm,18.3s,baz=308,slow=38						
SHEM	Shemya Is, Ala	38.56	304	LR	LR	22 23 38.7	
	comp=N,30nm,21.8s,baz=315,slow=32						
PETK	Petropavlovsk-	48.01	309	P	P	22 11 49.4	-4.6
	comp=N,1.6nm,0.8s,baz=63,slow=11,SNR=5.4						
	comp=N,1.6nm,0.8s						
MA2	Magadan	49.43	319	LR	LR	22 30 19.2	
	comp=N,35nm,20.7s,baz=104,slow=33						
TIXI	Tiksi	52.95	337	LR	LR	22 36 58.0	
	comp=N,29nm,18.9s,baz=185,slow=38						
YAK	Yakutsk	57.59	327	LR	LR	22 36 44.3	
	comp=N,29nm,19.9s,baz=192,slow=35						
H11N3	WAKE ISLAND Hy	58.71	268	T	T	23 16 17.0	
	baz=49,slow=75,SNR=127						
H11N2	WAKE ISLAND Hy	58.71	268	T	T	23 16 16.8	
	baz=49,slow=75,SNR=117						
H11N1	WAKE ISLAND Hy	58.73	268	T	T	23 16 20.7	
	baz=49,slow=75,SNR=104						
H11S1	WAKE ISLAND Hy	59.64	267	T	T	23 17 29.6	
	baz=50,slow=75,SNR=54						
H11S2	WAKE ISLAND Hy	59.65	267	T	T	23 17 26.2	
	baz=50,slow=75,SNR=28						
H11S3	WAKE ISLAND Hy	59.66	267	T	T	23 17 29.1	
	baz=50,slow=75,SNR=32						
ASAJ	Asahikawa	61.02	305	LR	LR	22 36 24.1	
	comp=N,39nm,20.0s,baz=79,slow=33						
PCRV	Puerto La Cruz	63.90	101	LR	LR	22 44 54.4	
	comp=N,38nm,18.3s,slow=39						
KLR	Kul'dur	64.08	314	LR	LR	22 39 43.0	
	comp=N,65nm,18.7s,baz=214,slow=34						
MJAR	Matsushiro Arr	68.22	300	LR	LR	22 43 31.0	
	comp=N,19nm,18.4s,baz=113,slow=36						
EKA	Eskdalemuir Ar	70.77	30	P	P	22 14 29.4	-1.8
	comp=N,0.5nm,0.7s,baz=306,slow=7.0,SNR=4.5						
	comp=N,0.5nm,0.7s						
FINES	FINESS Array B	73.03	13	P	P	22 14 41.5	-3.1
	comp=N,1.0nm,0.9s,baz=0.0,slow=4.2,SNR=3.5						
	comp=N,1.0nm,0.9s						
SONM	Songino Array	76.92	326	P	P	22 15 03.7	-3.9
	comp=N,1.9nm,0.9s,baz=48,slow=4.4,SNR=8.5						
	comp=N,1.9nm,0.9s						
BVAR	Borovoye Array	82.24	349	P	P	22 15 33.8	-2.5
	comp=N,0.3nm,0.6s,baz=22,slow=4.7,SNR=4.2						
	comp=N,0.3nm,0.6s						
ESDC	Sonseca Array	82.80	40	P	P	22 15 38.4	-1.1
	comp=N,0.5nm,0.8s,baz=292,slow=3.7,SNR=3.5						
	comp=N,0.5nm,0.8s						
KURBB	Kurchatov Arra	83.14	343	P	P	22 15 37.6	-3.3
	comp=N,0.8nm,0.8s,baz=18,slow=5.1,SNR=7.2						
	comp=N,0.8nm,0.8s						
AKASG	Malin Array Be	83.82	14	P	P	22 15 41.5	-2.8
	comp=N,0.3nm,0.5s,baz=353,slow=6.6,SNR=4.7						
	comp=N,0.3nm,0.5s						
MKAR	Makanchi Array	85.87	340	P	P	22 15 50.7	-4.2
	comp=N,0.2nm,0.7s,baz=26,slow=6.9,SNR=1.9						
	comp=N,0.2nm,0.7s						
BDFB	Brasilia	93.69	108	LR	LR	23 02 32.0	
	comp=N,20nm,19.4s,baz=322,slow=38						

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*IDC **21** 22:19:19.9±2.0, 37°.54S×177°.11E, h0^{km}, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=51.0km s-min=10.5km az=78.0*

*NOU **21** 22:19:19.4, 37°.52S×177°.12E, h9^{km}, MLv3.7/7, Off E. Coast of N. Island, N.Z.*

*WEL **21** 22:19:19.7, 37°.53S×177°.15E, h5^{km}, ML4.0, Mw3.9, Moment Tensor Solution. s10 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.76; M$_{\theta\theta}$-0.27; M$_{\phi\phi}$1.03; M$_{r\theta}$-0.15; M$_{\theta\phi}$0.64; M$_{\phi r}$-0.12; Fault plane solution: M$_0$1.06000×10^{15} NP1: φ$_s$39.00000°, δ52.00000°, λ-67.00000°. NP2: φ$_s$183.00000°, δ43.00000°, λ-117.00000°. Principal axes: T 1.3047, Plg5.0000°, Azm112.0000°; N -0.4939, Plg18.0000°, Azm203.0000°; P -0.8108, Plg71.0000°, Azm8.0000°; Stations used: OPRZ URZ MWZ PUZ RTZ TOZ TLZ MKAZ HIZ WCZ NORMAL FAULTING*

*WEL **21** 22:19:20.5±0.4, 38°S±3°×17°7E±°, h5^{km}, M4.2/11, ML4.5/11, MLv4.2/11 Error ellipse: s-maj=4.2km s-min=2.6km az=171.6, confirmed*

ISC 21 22:19:19.8±0.8**, 37°.54S**±0°.04×**177°.12E**±0°.03**, h10**^{km}±5^{km}**, n36, σ0^{s}.76**/43**, mb3.7**/3**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSRZ	White Island S	0.05	69	P	Pg	22 19 21.9	0.0
WIZ	White Island	0.05	81	P	Pg	22 19 21.8	0.0
WIZ				S	Sg	22 19 23.4	+0.1
WHRZ	Whale Island	0.34	200	P	Pb	22 19 27.8	-0.2
OPRZ	Ohinepanea	0.55	235	P	Pb	22 19 31.2	-0.3
OPRZ				S	Sb	22 19 38.9	-0.6
HAZ	Te Kaha	0.57	113	P	Pb	22 19 31.2	-0.7
HAZ				S	Sb	22 19 39.6	-0.4
MARZ	Manawahe	0.57	218	P	Pb	22 19 31.8	-0.2
MARZ				S	Sb	22 19 40.3	0.0
RUGZ	Raukumara Rang	0.61	135	P	Pg	22 19 31.8	0.0
RUGZ				S	Sb	22 19 41.6	+0.1
EDRZ	Edgecumbe	0.65	208	P	Pb	22 19 33.4	+0.1
TGRZ	Tauranga	0.71	254	P	Pb	22 19 34.6	+0.3
TGRZ				S	Sn	22 19 45.9	-1.1
URZ	Urewera	0.72	181	Pg	Pb	22 19 34.2	-0.4
	156nm,0.3s,baz=350,slow=12,SNR=337						
URZ				Lg	Lg	22 19 43.8	
	253nm,0.3s,baz=47,slow=13,SNR=17						
URZ	Urewera	0.72	181	P	Pb	22 19 34.0	-0.5
URZ	Urewera	0.72	181	S	Sb	22 19 44.4	-0.1
MYRZ	Mayor Island	0.75	290	P	Pn	22 19 35.2	-1.2
MYRZ				S	Sn	22 19 47.0	-0.9
LIRZ	Lichensteins R	0.75	231	P	Pn	22 19 35.6	-0.9
TBCS	Tauranga Boys	0.79	257	S	Sb	22 19 46.8	+0.5
MWZ	Matawai	0.86	158	P	Pb	22 19 36.3	-0.6
MXZ	Matakaoa Point	0.94	92	P	Pg	22 19 37.6	-0.3
MXZ	Matakaoa Point	0.94	92	P	Pn	22 19 37.9	-1.2
PUZ	Puketiti	1.04	121	P	Pn	22 19 40.7	+0.1
RTZ	Ruatahuna	1.08	186	P	Pb	22 19 40.4	-0.4
TOZ	Tahuroa Road	1.30	261	P	Pn	22 19 43.2	-0.9
KUZ	Kuaotunu	1.37	305	P	Pn	22 19 43.6	-1.4
KUZ	Kuaotunu	1.37	305	P	Pn	22 19 43.3	-1.8
TLZ	Tolley Road	1.48	237	P	Pg	22 19 47.8	-0.5
KNZ	Kokohu	1.55	164	P	Pg	22 19 48.7	-0.8
MKAZ	Moumakai	1.62	285	P	Pn	22 19 47.7	-0.8
BKZ	Black Stump Fm	1.70	197	P	Pn	22 19 48.9	-0.8
BKZ	Black Stump Fm	1.70	197	P	Pn	22 19 49.1	-0.6
GRZ	Great Barrier	1.85	313	P	Pn	22 19 50.9	-0.7
HIZ	Hauiti	2.04	241	P	Pn	22 19 54.1	-0.2
BFZ	Birch Farm	3.22	192	P	Pn	22 20 10.1	-0.3
OUZ	Omahuta	3.67	308	P	Pn	22 20 16.4	-0.2
ASAR	Alice Springs	39.35	278	P	P	22 26 51.0	+1.5
	1.1nm,0.8s,baz=123,slow=8.4,SNR=9.9						
	1.1nm,0.8s						
WRA	Warramunga Arr	41.01	283	P	P	22 27 04.4	+1.1
	1.9nm,0.9s,baz=123,slow=7.7,SNR=5.4						
	1.9nm,0.9s						
QSPA	South Pole Qui	52.59	180	P	P	22 28 34.1	+0.6
	0.8nm,0.8s,baz=45,slow=1.4,SNR=5.9						
	0.8nm,0.8s						
FINES	FINESS Array B	150.03	332	PKPbc	PKiKP	22 39 11.7	+1.2
	2.1nm,1.1s,baz=36,slow=12,SNR=1.4						

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*TAP **21** 22:27:26.7, 24°.61N×122°.59E, h96^{km}, ML3.0, C*

*JMA **21** 22:27:27.2±0.2, 24°N±2°×122°.6E±0°.5, h92^{km}±1^{km}, MV1.8/10, NW OFF ISHIGAKIJIMA IS*

ISC 21 22:27:27.3±1.5**, 24°.53N**±0°.04×**122°.60E**±0°.03**, h93**^{km}±8^{km}**, n67, σ0^{s}.74**/125**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.33	104	P	Pn	22 27 41.2	0.0
JYNG				S	Sn	22 27 51.6	+0.1
EOS2	EOS2	0.35	251	P	Pn	22 27 41.5	+0.4
EOS2				*e*S	Sn	22 27 52.6	+1.1
EOS3	EOS3	0.35	226	P	Pn	22 27 41.7	+0.6
EOS3				*e*S	Sn	22 27 53.5	+2.0
YOJ	Yonaguni jima	0.39	101	*e*P	Pn	22 27 41.5	0.0
YOJ				*e*S	Sn	22 27 52.0	-0.1
YOJ	Yonaguni jima	0.39	101	P	Pn	22 27 41.5	0.0
YOJ				S	Sn	22 27 52.4	+0.2
EOS4	EOS4	0.48	212	*e*P	Pn	22 27 41.8	+0.1
EOS4				*e*S	Sn	22 27 54.0	+1.4
TWC	Suao	0.68	276	P	Pn	22 27 43.4	-0.5
TWC				S	Sn	22 27 55.1	-1.2
ESAO	Su ao	0.69	274	*e*P	Pn	22 27 43.5	-0.4
ESAO				*e*S	Sn	22 27 55.4	-0.9
EWUT	Wuta	0.75	263	*e*P	Pn	22 27 44.6	+0.1
EWUT				*e*S	Sn	22 27 57.6	+0.1
ENA	Nanau	0.79	262	*e*P	Pn	22 27 44.8	-0.1
ENA				*e*S	Sn	22 27 58.2	+0.2
EAHA	Aohua	0.81	256	*e*P	Pn	22 27 45.2	+0.1
EAHA				*e*S	Sn	22 27 59.0	+0.5
NDS	Dongshan	0.81	277	*e*P	Pn	22 27 44.1	-1.0
TIPB	Shuangxi	0.82	302	*e*P	Pn	22 27 45.0	-0.3
TIPB				*e*S	Sn	22 27 57.8	-1.1
SXI1	Grass Mountain	0.86	311	*e*P	Pn	22 27 45.9	+0.1
SXI1				*e*S	Sn	22 27 59.3	-0.3
TWE	Neicheng	0.86	283	P	Pn	22 27 45.5	-0.2
TWE				*e*S	Sn	22 27 58.6	-1.0
ENTT	Nioudou	0.94	277	P	Pn	22 27 46.5	-0.1
ENTT				*e*S	Sn	22 28 00.7	-0.4
FUSB	Fushanzhiwuyua	0.94	284	P	Pn	22 27 46.4	-0.3
FUSB				S	Sn	22 28 00.3	-0.9
ETL	Fush Village	0.96	247	*e*P	Pn	22 27 46.5	-0.3
LATG	Datong	0.97	270	P	Pn	22 27 47.0	0.0
LATG				*i* S	Sn	22 28 02.0	+0.2
NACB	Ninganchiao	0.98	249	*i* P	Pn	22 27 46.7	-0.3
NACB				S	Sn	22 28 01.4	-0.3
TWD	Chiawan	1.02	244	*e*P	Pn	22 27 46.3	-1.1
TWD				S	Sn	22 28 02.0	-0.4
NWLT	Wulai	1.02	284	*e*P	Pn	22 27 47.1	-0.4
IRIF	Iriomote-Funau	1.05	101	*e*P	Pn	22 27 48.2	+0.5
IRIF				*e*S	Sn	22 28 03.1	-0.1
ETLH	Xiulin Townshi	1.07	252	*e*P	Pn	22 27 47.7	-0.3
ETLH				*e*S	Sn	22 28 03.1	-0.5
NNSB	Datong	1.11	265	P	Pn	22 27 48.4	-0.2
NNSB				*e*S	Sn	22 28 03.8	-0.8
YM01	YM01	1.11	303	*e*P	Pn	22 27 48.3	-0.2
YM01				*e*S	Sn	22 28 03.8	-0.8
NNS	Nan Shan	1.12	265	*e*P	Pn	22 27 48.8	+0.2
YHNB	Yeheng	1.12	277	*e*P	Pn	22 27 49.0	+0.4
YHNB				S	Sn	22 28 04.1	-0.6
TEYL	Yanliau Villag	1.13	234	*e*P	Pn	22 27 48.4	-0.3
TEYL				*e*S	Sn	22 28 04.1	-0.6
NSK	Sanguang	1.14	277	*i* P	Pn	22 27 49.0	+0.2
NSK				S	Sn	22 28 04.6	-0.4
ETM	Tongmen	1.16	241	*e*P	Pn	22 27 48.6	-0.4
ETM				*e*S	Sn	22 28 04.9	-0.4
LXIB	Xiulin Townshi	1.19	245	*i* P	Pn	22 27 49.2	-0.4
LXIB				*i* S	Sn	22 28 05.2	-1.2
SHUL	Shoufeng	1.20	232	*e*P	Pn	22 27 49.3	-0.2
SHUL				*e*S	Sn	22 28 06.3	+0.1
WHF	Hehuan Shan	1.27	253	P	Pn	22 27 50.9	0.0
WHF				S	Sn	22 28 07.8	-0.7
ESL	Shilin	1.28	236	*e*P	Pn	22 27 50.1	-0.4
ESL				*e*S	Sn	22 28 07.0	-1.0
KSHI	Guanxi Townshi	1.31	281	*e*S	Sn	22 28 09.4	+0.7
JKRS	Kuro-shima	1.32	103	*e*P	Pn	22 27 51.5	+0.6
JKRS				*e*S	Sn	22 28 09.3	+0.5
TWT	Tachien	1.32	258	*e*S	Sn	22 28 09.6	+0.3
TDCB	Techi	1.34	258	*e*P	Pn	22 27 52.0	+0.7
TDCB				S	Sn	22 28 09.2	-0.3
NFF	Wufeng Townshi	1.35	274	*e*P	Pn	22 27 51.8	+0.5
NFF				S	Sn	22 28 09.4	-0.1
WARBT	Fenglin Townsh	1.37	234	*e*P	Pn	22 27 51.1	-0.5
WARBT				S	Sn	22 28 08.4	-1.6
OWD	Renai	1.42	246	P	Pn	22 27 52.1	-0.2
OWD				*e*S	Sn	22 28 10.2	-1.0
JIJ	Ishigaki jima	1.42	97	*e*P	Pn	22 27 51.9	-0.3
JIJ				*e*S	Sn	22 28 10.1	-0.9
LIOB	Emei	1.44	275	P	Pn	22 27 52.6	+0.2
LIOB				*e*S	Sn	22 28 11.5	0.0
WUSB	Renai	1.45	249	P	Pn	22 27 52.9	+0.1
WUSB				*e*S	Sn	22 28 11.6	-0.4
NSTT	Nanjuang	1.46	274	*e*S	Sn	22 28 11.5	-0.3
HGSD	Ruisui	1.49	226	P	Pn	22 27 52.7	-0.4
HGSD				S	Sn	22 28 12.3	-0.3
WHP	Taichung City	1.52	261	P	Pn	22 27 54.6	+1.1
WHP				S	Sn	22 28 14.4	+0.9
VWDT	VWDT	1.54	240	*i* P	Pn	22 27 53.9	+0.2
VWDT				S	Sn	22 28 13.2	-0.4
EHYH	Wanrong	1.54	228	*e*P	Pn	22 27 53.4	-0.3
EHYH				*e*S	Sn	22 28 13.3	-0.5
EHY	Hungye	1.55	229	*e*P	Pn	22 27 53.1	-0.7
JISG	Ishigakijimahi	1.56	88	*e*P	Pn	22 27 54.0	+0.1
JISG				*e*S	Sn	22 28 13.4	-0.8
ECBN	Changbin	1.60	221	*e*P	Pn	22 27 54.3	-0.2
ECBN				*e*S	Sn	22 28 14.5	-0.6
YULB	Yu-li	1.64	227	P	Pn	22 27 54.3	-0.7
YULB				*e*S	Sn	22 28 14.1	-1.9
TWF1	Yuli	1.67	226	*e*P	Pn	22 27 54.7	-0.7
TWF1				*e*S	Sn	22 28 15.9	-0.8
SSLB	Suanglung	1.67	244	*e*P	Pn	22 27 56.5	+1.1
SSLB				*e*S	Sn	22 28 17.1	+0.3
SMLT	Sun Moon Lake	1.68	248	*e*P	Pn	22 27 56.5	+1.0
SMLT				*e*S	Sn	22 28 17.7	+0.7
TYC	Yuchr	1.71	249	*e*P	Pn	22 27 57.2	+1.4
TYC				*e*S	Sn	22 28 18.8	+1.4
FULB	Fuli	1.79	222	*e*P	Pn	22 27 57.1	+0.3
FULB				*e*S	Sn	22 28 18.9	-0.4
WHYT	Xinyi Township	1.80	243	*e*P	Pn	22 27 57.5	+0.5
WHYT				*e*S	Sn	22 28 20.9	+1.3
CHKT	Chengkung	1.82	219	*e*S	Sn	22 28 18.2	-1.8
EHD	Haiduan	1.88	223	*e*P	Pn	22 27 57.5	-0.5
EHD				*e*S	Sn	22 28 20.0	-1.4
ALS	Alishan	1.93	238	*e*P	Pn	22 27 59.2	+0.3
ALS				*e*S	Sn	22 28 23.4	+0.4
EDH	Donghe	1.95	218	*e*P	Pn	22 27 58.6	-0.4
EDH				S	Sn	22 28 21.6	-1.6
CHN5	Tsauling	1.98	242	*e*P	Pn	22 28 01.1	+1.7
CHN5				*e*S	Sn	22 28 25.5	+1.4
STYH	Taoyuan	2.15	231	*e*P	Pn	22 28 02.7	+1.1
STYH				*e*S	Sn	22 28 28.5	+0.8
TPUB	Ta-pu	2.18	236	*e*P	Pn	22 28 03.2	+1.2
TPUB				*e*S	Sn	22 28 29.7	+1.3

IDC 21 22:30:24.5±286.0**, 48°.30N**×**152°.00E, h0**^{km}**, Error ellipse: s-maj=132.0km s-min=114.4km az=11.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I44RU	PETROPAVLOVSK-	6.03	35	I	I	23 06 15.3	
	0.1nm,2.2s,baz=217,slow=311,SNR=9.6						
I45RU	USSURIYSK INFR	14.44	261	I	I	23 54 15.0	
	0.2nm,1.6s,baz=63,slow=314,SNR=19						
I30JP	ISUMI INFRASON	15.61	218	I	I	00 05 20.0	
	0.1nm,1.5s,baz=29,slow=316,SNR=4.9						
I34MN	SONGINO INFRAS	30.14	286	I	I	01 34 20.0	
	0.1nm,3.6s,baz=73,slow=318,SNR=10						
I46RU	ZALESOVO INFRA	41.11	304	I	I	02 42 00.0	
	baz=70,slow=327,SNR=5.4						
I18DK	QAANAAQ INFRAS	51.91	11	I	I	03 49 30.0	
	baz=323,slow=319,SNR=6.9						

IDC 21 22:47:47.8±2.0**, 31°.96S**×**178°.31W, h0**^{km}**, mb3.7**/3**, mbtmp3.7**/4**, ML3.2**/1**, Error ellipse: s-maj=49.9km s-min=38.4km az=69.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	7.32	210	Pn	Pn	22 49 33.8	-2.1
	0.4nm,0.3s,baz=51,slow=20,SNR=1.8						
URZ				Sn	Sn	22 50 54.4	-5.3
	0.9nm,0.3s,baz=16,slow=18,SNR=6.4						
	5.4nm,0.8s						
ASAR	Alice Springs	42.78	269	P	P	22 55 47.9	+0.5
	0.4nm,0.6s,baz=109,slow=7.5,SNR=4.6						
	0.4nm,0.6s						
WRA	Warramunga Arr	43.91	274	P	P	22 55 56.3	-0.3
	0.4nm,0.4s,baz=114,slow=7.6,SNR=5.4						
	0.4nm,0.4s						

QSPA	South Pole Qui	58.16	180	P	P	22 57 43.9	+0.7
	2.2nm,1.2s,baz=12,slow=1.7,SNR=2.4						
	2.2nm,1.2s						
FINES	FINESS Array B	146.50	339	PKPbc	PKPdf	23 07 28.8	0.0
	2.0nm,0.9s,baz=54,slow=3.9,SNR=7.4						

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*BJI **21** 22:49:22.3, 30.°32S×176.°75W, h9^{km}, mB5.5/17, mb5.3/27, Ms4.9/19, Ms7 4.6/20*

*IDC **21** 22:49:22.9±0.4, 30.°70S×177.°45W, h0^{km}, mb4.6/16, mbtmp4.6/18, ML5.1/1, MS4.7/16, Error ellipse: s-maj=17.6km s-min=13.9km az=85.0*

*MOS **21** 22:49:23.8±1.0, 30.°71S×177.°47W, h12^{km}, mb5.2/32, Error ellipse: s-maj=11.7km s-min=8.7km az=100.6*

*NEIC **21** 22:49:25.0±1.2, 30.°75S±0.°07×177.°4W±0.°1, h10^{km}±1^{km}, mb5.1/152, Error ellipse: s-maj=19.0km s-min=10.6km az=77.0*

*GCMT **21** 22:49:28.0±0.2, 30.°71S±0.°02×177.°11W±0.°02, h19^{km}, MW5.1/102, Moment Tensor Solution. s67,c87; s102,c144; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.76±.17; M$_{\theta\theta}$-0.36±.11; M$_{\phi\phi}$-3.40±.11; M$_{r\theta}$1.84±.27; M$_{\theta\phi}$-0.74±.07; M$_{\phi r}$3.81±.27; Best double couple: M$_0$5.59500×10^{16} NP1:φ$_s$185.00000°, δ21.00000°, λ74.00000°. NP2:φ$_s$22.00000°, δ70.00000°, λ96.00000°. Principal axes: T 5.7370, Plg65.0000°, Azm303.0000°; N -0.2830, Plg6.0000°, Azm200.0000°; P -5.4520, Plg24.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 22:49:24.3±0.3**, 30.°84S**±0.°04×**177.°42W**±0.°05**, h10**^{km}**, n460,** σ1.^{s}**30**/454**, mb5.1**/126**, MS4.7**/22**, 49C-39D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	1.63	344	P	Pn	22 49 51.6	-1.4
GLKZ				S	Sn	22 50 11.4	-2.7
RAO	Raoul Island	1.64	345		Pn	22 49 51.7	-1.5
RAO				Sn	Sn	22 50 12.1	-2.2
RAO	Raoul Island	1.64	345	Pn	Pn	22 49 51.8	-1.3
	2µm,0.3s,baz=204,slow=4.4,SNR=43						
RAO				Sn	Sn	22 50 12.6	-1.7
	6µm,0.3s,baz=106,slow=22,SNR=11						
RIZ	Raoul Island	1.65	344	P	Pn	22 49 51.8	-1.5
RIZ				S	Sn	22 50 12.8	-1.7
MXZ	Matakaoa Point	7.58	207	S	Sn	22 52 37.9	-2.9
WMGZ	Waiomatatini S	7.77	205	P	Pn	22 51 19.5	+2.1
WMGZ				S	Sn	22 52 43.6	-1.7
PKGZ	Pakihiroa	7.93	207	P	Pn	22 51 16.9	-2.7
PKGZ				S	Sn	22 52 46.7	-2.8
HAZ	Te Kaha	7.96	209	P	Pn	22 51 18.3	-1.6
HAZ				S	Sn	22 52 49.7	-0.3
PUZ	Puketiti	8.05	205	P	Pn	22 51 17.9	-3.4
RUGZ	Raukumara Rang	8.18	208	P	Pn	22 51 20.5	-2.6
KUZ	Kuaotunu	8.20	222	P	Pn	22 51 28.3	+5.0
TKGZ	Te Karaka	8.52	206	P	Pn	22 51 26.3	-1.4
MWZ	Matawai	8.56	208	P	Pn	22 51 26.6	-1.7
WCZ	Waipu Caves	8.56	231	P	Pn	22 51 35.0	+6.8
URZ	Urewera	8.67	210	Pn	Pn	22 51 27.0	-2.6
	4.5nm,0.3s,baz=29,slow=10,SNR=12						
URZ				Sn	Sn	22 53 03.8	-3.6
	9.6nm,0.3s,baz=52,slow=23,SNR=9.8						
URZ	Urewera	8.67	210	P	Pn	22 51 28.5	-1.2
OUZ	Omahuta	8.71	238	P	Pn	22 51 37.1	+6.8
MKAZ	Moumakai	8.77	223	P	Pn	22 51 34.5	+3.4
SNGZ	Shannon Statio	9.02	207	P	Pn	22 51 33.9	-0.6
TOZ	Tahuroa Road	9.03	219	P	Pn	22 51 36.0	+1.4
KNZ	Kokohu	9.10	205	S	Sn	22 53 13.6	-4.6
BKZ	Black Stump Fm	9.69	209	P	Pn	22 51 42.1	-1.6
BKZ				S	Sn	22 53 27.9	-4.8
TMVZ	Te Maari	10.00	212	P	Pn	22 51 48.2	+0.1
CTZ	Chatham Island	12.89	177	P	Pn	22 52 24.5	-2.9
MSVF	Nonsavu	13.68	341	Pn	Pn	22 52 37.2	-1.3
	0.4nm,0.3s,baz=250,slow=22,SNR=2.8						
MSVF				LR	LR	22 57 09.5	
	comp=Z,4µm,18.2s,baz=170,slow=34						
	6.6nm,0.9s						
LTZ	Lake Taylor	14.48	212		Pn	22 52 50.2	+0.9
RPZ	Rata Peaks	15.77	212	Pn	Pn	22 53 07.3	+0.9
RPZ	Rata Peaks	15.77	212	Pn	Pn	22 53 03.3	-3.1
	2.1nm,0.3s,baz=67,slow=2.3,SNR=8.1						
RPZ				Sn	Sn	22 55 45.1	-16
	1.2nm,0.3s,baz=102,slow=13,SNR=2.6						
PINNC	Pines Island,	15.80	298		Pn	22 53 06.5	-0.4
PINNC				IAmb	IAmb	22 53 15.5	
	comp=Z,126nm,1.1s						
ONTNC	Ouen Toro	16.73	297		Pn	22 53 20.1	+1.3
ONTNC				IAmb	IAmb	22 53 32.6	
	comp=Z,188nm,1.4s						
DZM	Mont Dzumac	16.87	297	P	P	22 53 22.5	-0.2
DZM				IAmb	IAmb	22 53 28.6	
	comp=Z,150nm,1.3s						
DZM	Mont Dzumac	16.87	297	*e*Pn	P	22 53 23.6	+0.9
	comp=Z,274nm,1.4s						
DZM				*e*LR	LR	22 57 11.0	
	comp=Z,6µm,23.3s						
DZM	Mont Dzumac	16.87	297	Pn	P	22 53 24.6	+1.9
	comp=Z,0.8nm,0.3s,baz=118,slow=13,SNR=24						
DZM				LR	LR	22 58 49.4	
	comp=Z,6µm,18.2s,baz=170,slow=34						
ODZ	Otahua Downs	16.99	210	Pn	Pn	22 53 21.9	-0.1
RAR	Rarotonga	18.51	63	P	P	22 53 40.3	-0.4
	comp=Z,54nm,0.9s,baz=214,slow=7.3,SNR=5.2						
RAR				LR	LR	23 00 23.7	
	comp=Z,602nm,18.6s,baz=247,slow=36						
LHI	Lord Howe Isla	20.13	262	P	Pn	22 54 01.4	+1.1
	comp=Z,110nm,1.1s						
TBI	Tubuai	25.94	80	*e*S	S	22 59 29.2	+2.0
	comp=Z,3µm,23.2s						
TBI				*e*LR	LR	23 01 05.5	
	comp=Z,8µm,28.8s						
TBI				*e*LR	LR	23 01 24.0	
	comp=Z,2µm,25.2s						
ARMA	Armidale	26.60	263	P	P	22 55 04.3	+1.3
ARMA	Armidale	26.60	263	P	P	22 55 05.8	+2.9
	comp=Z,37nm,1.2s						
EIDS	Eidsvold	28.26	273	P	P	22 55 18.4	+0.6
EIDS	Eidsvold	28.26	273	P	P	22 55 18.6	+0.9
	comp=Z,26nm,1.2s						
PPT2	Papeete2	28.52	69	*e*P	P	22 55 18.5	-1.7
	comp=Z,58nm,24.0s						
PPT2				*e*S	S	23 00 04.7	-3.5
	comp=Z,790nm,24.0s						
PPT2				*e*LR	LR	23 02 11.0	
	comp=Z,1µm,28.2s						
PPT2				*e*LR	LR	23 02 21.3	
	comp=Z,905nm,27.2s						
HNR	Honiara	29.97	311	LR	LR	23 05 38.1	
	comp=Z,811nm,20.9s,baz=165,slow=33						
CMSA	Cobar Meteorol	31.47	259	P	P	22 55 47.9	+1.8
	comp=Z,28nm,0.8s						
QLP	Quilpie	33.79	267	P	P	22 56 07.2	+0.7
	comp=Z,33nm,0.9s						
ARPS	Mount Arapiles	34.18	249	P	P	22 56 11.3	+1.6
	comp=Z,25nm,1.1s						
CTAO	Charters Tower	34.36	279	P	P	22 56 12.8	+1.2
CTAO				IAmb	IAmb	22 56 32.1	
	comp=Z,27nm,0.8s						
CTAO	Charters Tower	34.36	279	P	P	22 56 12.8	+1.2
CTAO				pmax	pmax		
	comp=Z,27nm,0.8s						
STKA	Stephens Creek	34.87	257	P	P	22 56 17.3	+1.5
	comp=Z,306nm,0.9s						
STKA	Stephens Creek	34.87	257	P	P	22 56 17.1	+1.3
	comp=Z,61nm,0.9s,baz=92,slow=9.7,SNR=65						
STKA				LR	LR	23 09 40.0	
	comp=Z,2µm,18.4s,baz=89,slow=35						
	comp=Z,61nm,0.9s						
HTT	Hallett	36.86	254	P	P	22 56 33.5	+0.6
	comp=Z,9.0nm,1.1s						
MTSU	Mount Surprise	36.87	281	P	P	22 56 34.1	+0.9
	comp=Z,16nm,0.9s						
BBOO	Buckleboo	39.33	255	P	P	22 56 53.4	-0.4
BBOO	Buckleboo	39.33	255	P	P	22 56 53.7	0.0
	comp=Z,27nm,1.3s						
QIS	Mount Isa	39.84	274	P	P	22 56 58.2	+0.1
	comp=Z,14nm,1.0s						
TAOE	Nuku Hiva Isla	41.02	66	*e*S	S	23 03 20.8	+0.1
	comp=Z,657nm,26.9s						
TAOE				*e*LR	LR	23 08 13.6	
	comp=Z,845nm,27.4s						
AS31	Alice Springs	43.59	267	P	P	22 57 28.4	-0.4
	comp=Z,6.2nm,0.7s						
ASAR	Alice Springs	43.59	267	P	P	22 57 28.3	-0.5
	comp=Z,7.9nm,0.6s,baz=103,slow=7.0,SNR=41						
ASAR				PcP	PcP	22 59 16.1	-0.3
	comp=Z,2.5nm,0.7s,baz=120,slow=4.2,SNR=4.1						
ASAR				ScP	ScP	23 03 08.4	+0.4
	comp=Z,3.3nm,0.8s,baz=116,slow=4.2,SNR=11						
ASAR				LR	LR	23 15 25.6	
	comp=Z,2µm,18.1s,baz=112,slow=36						
	comp=Z,7.9nm,0.6s						
WRAB	Tennant Creek	44.61	272	P	P	22 57 36.4	-0.6
WRAB				IAmb	IAmb	22 57 38.6	
	comp=Z,38nm,1.0s						
WRAB	Tennant Creek	44.61	272	*d i*P	P	22 57 37.3	+0.3
WRAB				pmax	pmax		
	comp=Z,37nm,1.0s						
WRA	Warramunga Arr	44.61	272	P	P	22 57 36.2	-0.8
	comp=Z,32nm,0.9s,baz=112,slow=7.8,SNR=56						
WRA				PcP	PcP	22 59 19.8	-0.1
	comp=Z,3.9nm,0.9s,baz=114,slow=3.1,SNR=5.2						
WRA				ScP	ScP	23 03 13.1	+0.9
	comp=Z,3.5nm,0.9s,baz=112,slow=4.3,SNR=8.8						
WRA				S	S	23 04 08.9	-4.4
	comp=Z,1.4nm,0.9s,baz=107,slow=14,SNR=3.8						
WRA				LR	LR	23 15 37.0	
	comp=Z,2µm,18.1s,baz=114,slow=35						
	comp=Z,32nm,0.9s						
FORT	Forrest	46.42	255	P	P	22 57 50.3	-0.9
FORT	Forrest	46.42	255	P	P	22 57 50.5	-0.7
	comp=Z,57nm,1.1s						
SBA	Scott Base	47.64	184	P	P	22 57 58.5	-1.6
SBA				IAmb	IAmb	22 58 25.2	
	comp=Z,22nm,1.3s						
SBA	Scott Base	47.64	184	P	P	22 57 58.5	-1.6
SBA				pmax	pmax		
	comp=Z,22nm,1.3s						
VNDA	Vanda	47.71	186	P	P	22 58 02.8	+2.1
	comp=Z,1.9nm,0.8s,baz=11,slow=8.3,SNR=4.0						
VNDA				LR	LR	23 14 41.1	
	comp=Z,397nm,20.5s,baz=27,slow=32						
	comp=Z,1.9nm,0.8s						
WRKA	Warakurna	47.92	263	P	P	22 58 01.4	-1.7
JAY	Jayapura	48.54	297	LR	LR	23 16 03.8	
	comp=Z,438nm,22.0s,baz=170,slow=33						
JAY	Jayapura	48.54	297	P	P	22 58 07.7	-0.2
	comp=Z,12nm,1.0s						
FITZ	Fitzroy Crossi	52.86	270	LR	LR	23 20 38.0	
	comp=Z,1µm,18.6s,baz=108,slow=36						
NWAO	Narrogin (SRO)	54.71	249	LR	LR	23 20 10.1	
	comp=Z,466nm,20.6s,baz=88,slow=34						
BATI	Baumata	58.20	277	LR	LR	23 25 11.5	
	comp=Z,3µm,18.0s,baz=130,slow=37						
QSPA	South Pole Qui	59.27	180	P	P	22 59 27.2	+1.3
QSPA	South Pole Qui	59.27	180	P	P	22 59 28.2	+2.4
	comp=Z,5.6nm,0.8s,baz=34,slow=1.7,SNR=19						
QSPA				LR	LR	23 22 39.1	
	comp=Z,557nm,19.2s,baz=45,slow=34						
	comp=Z,5.6nm,0.8s						
JAGI	Jajag, Banyuwa	67.20	274	P	P	23 00 17.0	-2.1
SMAI	San Martin Ant	68.83	158	P	P	23 00 29.5	+1.1
SMAI				IAmb	IAmb	23 00 32.3	
	comp=Z,20nm,1.1s						
BELA	Belgrano 2	69.28	172		P	23 00 31.1	-0.1
ESPZ	Base Esperanza	74.97	156	P	P	23 01 06.1	+0.8
GO09	Cerro Castillo	75.15	141	P	P	23 01 07.5	+0.9
SYO	Syowa Base	76.80	193	⇑*e*pP	pP	23 01 19.0	+1.8
SYO	Syowa Base	76.80	193	⇑*e*PcP	PcP	23 01 28.3	+1.4
TROLL	Troll, Antarti	77.44	180	⇑P	P	23 01 20.8	+1.4
	comp=Z,536nm,0.8s						
SNAA	Sanae	77.70	178	⇑P	P	23 01 21.8	+1.0
	comp=Z,225nm,1.0s						
SNAA	Sanae	77.70	178	P	P	23 01 21.0	+0.1
	comp=Z,2.9nm,0.7s,baz=124,slow=8.6,SNR=12						
	comp=Z,2.9nm,0.7s						
SNAA	Sanae	77.70	178	⇑*e*P	P	23 01 21.6	+0.8
SNAA				pmax	pmax		
	comp=Z,17nm,1.4s						
VNA3	Neumayer Olymp	77.83	176	⇑P	P	23 01 22.3	+0.8
	comp=Z,17nm,0.7s						
VNA2	Neumayer--Watz	78.27	177	⇑P	P	23 01 21.8	-2.1
	comp=Z,9.8nm,0.7s,baz=162,slow=5.0						
VNA1	Neumayer--Stat	78.50	176	⇑P	P	23 01 23.4	-1.8
	comp=Z,14nm,0.8s						
MJAR	Matsushiro Arr	78.89	325	P	P	23 01 26.1	-1.6
	comp=Z,6.4nm,1.0s,baz=160,slow=5.7,SNR=10.0						
	comp=Z,6.4nm,1.0s						
MAJO	Matsushiro	78.89	325	*i* P	P	23 01 26.3	-1.4
MAJO				pmax	pmax		
	comp=Z,10.0nm,1.1s						
LL02	Futaleuf	79.69	134		P	23 01 33.1	+0.9
LL02				IAmb	IAmb	23 01 34.4	
	comp=Z,33nm,1.4s						
H03S2	Juan Fernandez	79.81	123	T	T	00 31 09.5	
	baz=238,slow=74,SNR=5.1						
H03S1	Juan Fernandez	79.82	123	T	T	00 31 12.1	
	baz=238,slow=74,SNR=6.5						
H03S3	Juan Fernandez	79.82	123	T	T	00 31 09.4	
	baz=238,slow=74,SNR=7.2						
H03N3	Juan Fernandez	80.00	123	T	T	00 31 17.9	
	baz=242,slow=72,SNR=6.7						
H03N2	Juan Fernandez	80.00	123	T	T	00 31 08.1	
	baz=242,slow=72,SNR=4.7						
H03N1	Juan Fernandez	80.01	123	T	T	00 31 16.6	
	baz=242,slow=72,SNR=8.5						
PLCA	Paso Flores	81.84	133	P	P	23 01 44.5	+0.6
	comp=Z,7.8nm,1.1s,baz=222,slow=7.4,SNR=5.1						
	comp=Z,7.8nm,1.1s						
ATKA	Atka Island	82.73	2		P	23 01 47.4	-0.4
JKA	Kamikawa-asahi	83.06	332	P	P	23 01 50.2	+0.5
ASAJ	Asahikawa	83.06	332	P	P	23 01 50.2	+0.5
ASAJ				pmax	pmax		
	comp=Z,48nm,1.3s						
SHEM	Shemya Is, Ala	83.54	355	P	P	23 01 51.7	-0.2
SMY	Shemya	83.54	355	P	P	23 01 51.9	-0.1
SMY	Shemya	83.54	355	P	P	23 01 51.9	-0.1
SMY				pmax	pmax		
	comp=Z,35nm,0.9s						
BI02	San Fabin de	83.63	129	P	P	23 01 52.8	-0.5
BI02				IAmb	IAmb	23 02 09.1	
	comp=Z,15nm,1.4s						
NIKH	Nikolski High	83.79	5	P	P	23 01 53.5	+0.2
TJN	Taejon	84.56	318	⇑*e*P	P	23 01 58.4	+0.8
BO02	Sierra Bellavi	85.00	128		P	23 01 59.2	-1.1
BO02				IAmb	IAmb	23 02 02.6	
	comp=Z,22nm,1.2s						
KSRS	Korea Array	85.01	319	P	P	23 01 59.6	-0.2
	comp=Z,4.0nm,1.0s,baz=144,slow=6.0,SNR=9.2						
	comp=Z,4.0nm,1.0s						
MT01	Popeta	85.20	127		P	23 02 01.3	+0.1
BCW	Bitter Crk WRg	85.21	44	P	P	23 02 00.9	-0.2
TKX	Tecate	85.36	48	P	P	23 01 59.8	-2.0
YSS	Yuzhno-Sakhali	85.36	334	P	P	23 02 01.4	0.0
YSS	Yuzhno-Sakhali	85.36	334	*de*P	P	23 02 02.6	+1.3
YSS				pmax	pmax		
	comp=Z,35nm,1.0s						
VA01	Torpederas	85.40	126	P	P	23 02 02.9	+0.8
MT09	Talagante	85.43	127	P	P	23 02 03.6	+1.1
MT09				IAmb	IAmb	23 02 05.0	
	comp=Z,19nm,1.1s						
PASC	Pasadena Art C	85.44	46	P	P	23 02 02.0	-0.1
PASC				IAmb	IAmb	23 02 04.3	
	comp=Z,9.4nm,0.6s						
ELS	Elsinore Mount	85.56	46	P	P	23 02 02.6	-0.2
MT05	Renca	85.82	127	P	P	23 02 05.1	+0.7
YUH	Yuha Desert	85.85	48		P	23 02 02.1	-2.1
YUH				IAmb	IAmb	23 02 06.7	
	comp=Z,15nm,1.3s						
VA06	Catapilco	85.90	126	P	P	23 02 05.2	+0.6
RPSI	Rantau Prapat	85.92	276	P	P	23 02 04.1	-0.9
RPSI				IAmb	IAmb	23 02 05.2	
	comp=Z,17nm,1.1s						
LMEL	Las Melosas	85.93	127	P	P	23 02 05.6	+0.6
LMEL				IAmb	IAmb	23 02 09.0	
	comp=Z,16nm,1.2s						
PSI	Prapat	85.98	276	LR	LR	23 41 06.5	
	comp=Z,483nm,20.6s,baz=128,slow=36						
PSI	Prapat	85.98	276	P	P	23 02 04.1	-1.3
PSI				pmax	pmax		
	comp=Z,17nm,1.1s						
PEL	Peldehue	86.00	126	P	P	23 02 05.3	+0.1
PEL				IAmb	IAmb	23 02 08.2	
	comp=Z,15nm,1.0s						
PEL	Peldehue	86.00	126	P	P	23 02 05.3	+0.1
PEL				pmax	pmax		
	comp=Z,15nm,1.0s						
PET	Petropavlovsk	86.08	346	*i* P	P	23 02 03.6	-1.1
PET				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PFO	Pinyon Flats O	86.14	47		P	23 02 06.6	+0.8
PFO	Pinyon Flats O	86.14	47	*de*P	P	23 02 07.5	+1.8
PFO				pmax	pmax		
	comp=Z,14nm,1.2s						
CCAC	Calif City Air	86.19	45	P	P	23 02 06.4	+0.5
ISA	Isabella, Lake	86.26	44		P	23 02 06.1	-0.1
ISA				IAmb	IAmb	23 02 09.6	
	comp=Z,19nm,1.1s						
ISA	Isabella, Lake	86.26	44	P	P	23 02 06.1	-0.1
ISA				pmax	pmax		
	comp=Z,19nm,1.2s						
MT08	Bocatoma Ro	86.29	127	P	P	23 02 07.3	+0.4
MT08				IAmb	IAmb	23 02 13.3	
	comp=Z,16nm,1.4s						
PEA0B	Petropavlovsk-	86.36	345	P	P	23 02 06.5	+0.3
PEA0B	Petropavlovsk-	86.36	345	P	P	23 02 06.5	+0.3
PEA0B				pmax	pmax		
	comp=Z,27nm,1.0s						
PETK	Petropavlovsk-	86.36	345	P	P	23 02 05.7	-0.5
	comp=Z,3.4nm,0.6s,baz=115,slow=6.3,SNR=11						
	comp=Z,3.4nm,0.6s						
KMPM	Mount Pierce	86.39	38	P	P	23 02 07.2	+0.5
CMB	Columbia Colle	86.75	42		P	23 02 08.6	0.0
CMB				IAmb	IAmb	23 02 24.6	
	comp=Z,14nm,1.3s						
CMB	Columbia Colle	86.75	42	P	P	23 02 08.6	0.0
CMB				pmax	pmax		
	comp=Z,14nm,1.3s						
GLA	Glamis	86.81	48	P	P	23 02 10.4	+1.4
GLA				IAmb	IAmb	23 02 12.8	
	comp=Z,17nm,0.9s						
GLA	Glamis	86.81	48	P	P	23 02 10.4	+1.4
GLA				pmax	pmax		
	comp=Z,17nm,1.0s						
CO02	Combarbal	86.87	125	P	P	23 02 09.4	-0.3
CO02				IAmb	IAmb	23 02 15.1	
	comp=Z,20nm,1.1s						
NJ2	Nanjing	86.91	310	*e*P	P	23 02 10.9	+1.5
NJ2				pmax	pmax		
	comp=Z,12nm,1.1s						
O02D	Mt. Diablo Mer	86.92	39		P	23 02 09.7	+0.3
MSHR	Mys Shultsa	87.00	325	⇑*e*P	P	23 02 10.7	+1.1
MSHR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GSC	Goldstone, Bar	87.03	46	P	P	23 02 10.1	+0.1
GSC				IAmb	IAmb	23 02 12.7	
	comp=Z,22nm,1.3s						
GSC	Goldstone, Bar	87.03	46	P	P	23 02 10.1	+0.1
GSC				pmax	pmax		
	comp=Z,22nm,1.3s						
AFDM	Forest Hills D	87.06	41		P	23 02 10.4	+0.4
AFDM				IAmb	IAmb	23 02 12.0	
	comp=Z,13nm,1.3s						
ORV	Oroville	87.19	40	P	P	23 02 11.3	+0.7
ORV	Oroville	87.19	40	P	P	23 02 11.3	+0.7
ORV				pmax	pmax		
	comp=Z,11nm,1.5s						
PSTR	Posyet	87.23	325	⇑*e*P	P	23 02 11.4	+0.7
113A	Mohawk Valley,	87.32	49	P	P	23 02 11.5	+0.2
QSM	Queen of Sheba	87.43	45		P	23 02 11.9	+0.1
QSM				IAmb	IAmb	23 02 15.0	
	comp=Z,16nm,1.2s						
BLYC	Blythe	87.45	48	P	P	23 02 11.3	-0.7
BLYC				IAmb	IAmb	23 02 18.7	
	comp=Z,17nm,1.3s						
KSXB	Camp Six Broad	87.53	37	P	P	23 02 12.4	0.0
GO04	Tololo Observa	87.59	124	P	P	23 02 13.7	+0.4
WAKR	Walker	87.62	42		P	23 02 13.2	+0.3
WAKR				IAmb	IAmb	23 02 16.2	
	comp=Z,16nm,1.2s						
GWY	Greenwater Val	87.70	45		P	23 02 12.5	-0.8
DSP	Deep Springs	87.71	43		P	23 02 13.4	+0.3
DSP				IAmb	IAmb	23 02 16.4	
	comp=Z,9.7nm,1.2s						
USA0B	Ussuriysk Arra	87.80	326	P	P	23 02 13.2	-0.2
USA0B				IAmb	IAmb	23 02 14.9	
	comp=Z,16nm,0.9s						
USA0B	Ussuriysk Arra	87.80	326	*ce*P	P	23 02 13.5	+0.1
USRK	Ussuriysk Ar.	87.80	326	P	P	23 02 13.8	+0.4
	comp=Z,12nm,0.9s,baz=134,slow=3.6,SNR=19						
USRK				LR	LR	23 35 18.4	
	comp=Z,173nm,22.0s,baz=158,slow=31						
	comp=Z,12nm,0.9s						
GRAC	Grapevine Rang	87.82	44	P	P	23 02 14.5	+0.8
MPK	Martis Peak	87.83	41	P	P	23 02 12.9	-1.1
PNTR	Pine Nut	87.93	41	P	P	23 02 14.0	-0.4
PNTR				IAmb	IAmb	23 02 16.1	
	comp=Z,11nm,1.0s						
LHV	Little Huntoon	87.99	42	P	P	23 02 14.1	-0.3
LHV				IAmb	IAmb	23 02 31.6	
	comp=Z,9.1nm,1.0s						
GMN	Gold Mountain	88.08	44	P	P	23 02 15.3	+0.1
GMN				IAmb	IAmb	23 02 18.2	
	comp=Z,9.9nm,1.1s						
NVAR	Mina Array Bea	88.22	42	P	P	23 02 16.9	+1.0
	comp=Z,3.5nm,0.8s,baz=223,slow=8.3,SNR=13						
NVAR				LR	LR	23 37 16.4	
	comp=Z,415nm,18.3s,baz=252,slow=33						
	comp=Z,3.5nm,0.8s						
RYN	Ryan	88.23	42	P	P	23 02 16.5	+0.7
RYN				IAmb	IAmb	23 02 32.5	
	comp=Z,15nm,1.4s						
MZP	Montezuma Peak	88.27	43	P	P	23 02 16.2	+0.1
NV11	Mina Array Sit	88.31	42	P	P	23 02 16.9	+0.7
NV11				IAmb	IAmb	23 02 17.8	
	comp=Z,10nm,1.3s						
TPNV	Topopah Spring	88.45	45		P	23 02 17.6	+0.6
TPNV				IAmb	IAmb	23 02 19.0	
	comp=Z,7.0nm,0.9s						
TPNV	Topopah Spring	88.45	45	P	P	23 02 17.6	+0.6
TPNV				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PAHR	Pah Rah Range	88.47	41		P	23 02 17.2	+0.3
PAHR				IAmb	IAmb	23 02 19.6	
	comp=Z,12nm,1.3s						
V12A	Nelson	88.52	46	P	P	23 02 17.9	+0.7
V12A				IAmb	IAmb	23 02 20.2	
	comp=Z,11nm,1.3s						
Y14A	Wickenburg	88.55	49		P	23 02 17.7	+0.4
Y14A				IAmb	IAmb	23 02 20.8	
	comp=Z,18nm,1.4s						
TPH	Tonopah	88.62	43	P	P	23 02 17.7	0.0
TPH	Tonopah	88.62	43	P	P	23 02 17.7	0.0
TPH				pmax	pmax		
	comp=Z,88nm,1.3s						
TYV	Tymovskoe	88.66	336	*e*P	P	23 02 18.5	+1.2
TYV				pmax	pmax		
	comp=Z,24nm,0.9s						
TYV				pmax	pmax		
	comp=Z,100nm,3.4s						
W13A	Hualapai Mount	88.72	47		P	23 02 18.5	+0.2
W13A				IAmb	IAmb	23 02 21.9	
	comp=Z,13nm,1.3s						
SHPR	Sheep Range	88.83	46		P	23 02 19.2	+0.5
TUC	Tucson	89.00	51		P	23 02 20.3	+0.8
TUC				IAmb	IAmb	23 02 22.9	
	comp=Z,12nm,1.2s						
TUC	Tucson	89.00	51	P	P	23 02 20.3	+0.8
TUC				pmax	pmax		
	comp=Z,12nm,1.2s						
K04D	Chiloquin, OR	89.20	38	P	P	23 02 20.9	+0.6
S11A	Rachel	89.21	44	P	P	23 02 20.1	-0.4
S11A				IAmb	IAmb	23 02 23.0	
	comp=Z,13nm,1.2s						
MDJ	Mudanjiang	89.27	325	P	P	23 02 20.9	+0.6
MDJ				S	S	23 13 13.5	+3.8
MDJ				pmax	pmax		
	comp=Z,16nm,1.1s						
MDJ				LR	LR		
	comp=Z,190nm,20.6s						
MDJ				LR	LR		
	comp=Z,130nm,19.2s						
MDJ				LR	LR		
	comp=Z,260nm,18.5s						
ZAIG	Zacatecas	89.36	63	P	P	23 02 20.3	-1.3
HPIG		89.39	58	P	P	23 02 21.3	-0.3
319A	Douglas	89.45	53	P	P	23 02 21.2	-0.5
319A				IAmb	IAmb	23 02 44.1	
	comp=Z,7.5nm,0.9s						
J04A	Umpqua Nationa	89.45	37	P	P	23 02 21.2	-0.4
PRN	Pahroc Range	89.48	45	P	P	23 02 22.0	+0.3
PRN				IAmb	IAmb	23 02 25.6	
	comp=Z,23nm,1.3s						

TLIG	Tlapa	89.68	69	P	P	23 02 23.4	+0.3
TLIG				IAmb	IAmb	23 02 27.1	
	comp=Z,14nm,1.3s						
R11B	Troy Canyon, C	89.77	44	P	P	23 02 22.6	-0.4
X16A	Lo Mia Camp, P	89.86	49		P	23 02 23.7	+0.1
X16A				IAmb	IAmb	23 02 26.8	
	comp=Z,20nm,1.3s						
J05D	Fort Rock, OR	89.94	37		P	23 02 23.3	-0.4
J05D				IAmb	IAmb	23 02 26.8	
	comp=Z,19nm,1.4s						
H04D	Lebanon	90.04	36	P	P	23 02 24.1	+0.1
H04D				IAmb	IAmb	23 02 43.1	
	comp=Z,22nm,1.2s						
DUN6	Lazy B Ranch	90.28	52	P	P	23 02 25.9	+0.4
LCMT	Little Creek M	90.33	46	P	P	23 02 26.3	+0.6
H04A	Detroit Lake	90.44	36	P	P	23 02 26.2	+0.3
H04A				IAmb	IAmb	23 02 39.6	
	comp=Z,7.7nm,0.9s						
PINE	Pine Mountain	90.45	37		P	23 02 25.9	-0.2
PINE				IAmb	IAmb	23 02 29.3	
	comp=Z,21nm,1.4s						
U15A	North Rim	90.56	47		P	23 02 27.8	+0.8
U15A				IAmb	IAmb	23 02 30.8	
	comp=Z,17nm,1.2s						
WUAZ	Wupatki	90.58	48	P	P	23 02 26.9	0.0
WUAZ				IAmb	IAmb	23 02 41.6	
	comp=Z,14nm,1.0s						
I05D	Terrebonne, OR	90.62	37	P	P	23 02 27.6	+0.9
I05D				IAmb	IAmb	23 02 35.1	
	comp=Z,18nm,1.1s						
TIA	Tai'an	90.64	313	P	P	23 02 27.6	+0.7
TIA				pmax	pmax		
	comp=Z,20nm,0.8s						
TIA				pmax	pmax		
	comp=Z,120nm,4.5s						
F03A	Seaside	90.65	34	P	P	23 02 26.6	-0.2
WVOR	Wild Horse Val	90.74	39	P	P	23 02 27.1	-0.3
WVOR				IAmb	IAmb	23 02 36.6	
	comp=Z,16nm,1.4s						
WVOR	Wild Horse Val	90.74	39	P	P	23 02 27.2	-0.3
WVOR				pmax	pmax		
	comp=Z,16nm,1.5s						
CN2	Changchun	90.79	323	*e*P	P	23 02 27.8	+0.3
CN2				*e*S	S	23 13 23.8	-0.1
CN2				pmax	pmax		
	comp=Z,30nm,1.0s						
CN2				pmax	pmax		
	comp=Z,100nm,5.0s						
CN2				LR	LR		
	comp=Z,100nm,16.0s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
CN2				LR	LR		
	comp=Z,200nm,18.6s						
X18A	Snowflake	90.90	50	P	P	23 02 29.4	+0.9
GRNR	Gornyy	90.90	333	*e*P	P	23 02 28.4	+0.6
PSUT	Pine Spring	90.93	45		P	23 02 29.1	+0.5
SPR3	Spring Creek 3	90.94	44		P	23 02 28.2	-0.5
P16K	Nushagak River	90.98	10	P	P	23 02 28.2	+0.3
BNX	BinXian	91.15	325	⇓P	P	23 02 28.8	-0.3
BNX				pmax	pmax		
	comp=Z,19nm,0.9s						
HOOD	Mount Hood Mea	91.15	36	P	P	23 02 29.6	+0.3
HOOD				IAmb	IAmb	23 02 32.2	
	comp=Z,18nm,1.3s						
I07A	Izee	91.40	38		P	23 02 30.9	+0.5
W18A	Petrified Fore	91.40	49	P	P	23 02 31.1	+0.3
W18A				IAmb	IAmb	23 02 34.2	
	comp=Z,13nm,0.9s						
J08A	Circle Bar Ran	91.45	39		P	23 02 30.8	0.0
J08A				IAmb	IAmb	23 02 47.4	
	comp=Z,14nm,1.5s						
ELK	Elko	91.53	42		P	23 02 31.4	+0.1
ELK	Elko	91.53	42	P	P	23 02 31.4	+0.1
ELK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
Q19K	Cape Douglas,	91.60	12	P	P	23 02 31.7	+0.8
G06A	Carlson Farm,	91.61	36	P	P	23 02 32.2	+0.9
G06A				IAmb	IAmb	23 02 47.9	
	comp=Z,9.9nm,1.1s						
KLR	Kul'dur	91.67	329	*d* *i*P	P	23 02 32.1	+0.7
KLR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TX31	Lajitas Ar. Si	92.20	57	P	P	23 02 33.0	-1.5
TXAR	Lajitas Array	92.21	57	P	P	23 02 34.6	+0.1
	comp=Z,1.5nm,1.0s,baz=224,slow=3.5,SNR=9.7						
	comp=Z,1.5nm,1.0s						
ENH	Enshi	92.26	304	P	P	23 02 34.7	0.0
ENH				IAmb	IAmb	23 02 35.8	
	comp=Z,11nm,0.8s						
MNTX	Cornudas Mount	92.33	54	P	P	23 02 35.1	+0.2
HMU	Henry Mountain	92.47	47	P	P	23 02 34.9	-0.9
G08A	Pilot Rock	92.50	37		P	23 02 35.0	-0.5
G08A				IAmb	IAmb	23 02 57.0	
	comp=Z,8.2nm,1.1s						
DUG	Dugway, Tooele	92.60	44	P	P	23 02 35.8	-0.4
DUG	Dugway, Tooele	92.60	44	P	P	23 02 35.8	-0.4
DUG				pmax	pmax		
	comp=Z,3.0nm,1.1s						
LENM	Lemitar	92.66	51	P	P	23 02 36.7	0.0
LYN	LuoYang	92.66	309	P	P	23 02 37.6	+1.2
LYN				pmax	pmax		
	comp=Z,25nm,0.8s						
LYN				LR	LR		
	comp=Z,240nm,15.5s						
LYN				LR	LR		
	comp=Z,160nm,14.4s						
LYN				LR	LR		
	comp=Z,330nm,19.9s						
MXC	Moxie City	92.71	35	P	P	23 02 36.7	+0.4
MXC				IAmb	IAmb	23 02 46.2	
	comp=Z,12nm,1.4s						
Q16A	Castle Valley	92.80	46	P	P	23 02 36.3	-0.9
ALPN	Alpine	92.81	56	P	P	23 02 37.1	-0.3
BNM	Barren Site	92.89	52	P	P	23 02 37.9	+0.1
HNS	HongShan	92.89	312	⇓P	P	23 02 38.1	+0.8
HNS				SKS	SKSac	23 13 08.3	-2.9
HNS				S	S	23 13 42.8	-0.3
HNS				pmax	pmax		
	comp=Z,11nm,1.1s						
HNS				LR	LR		
	comp=Z,180nm,19.1s						
HNS				LR	LR		
	comp=Z,180nm,18.6s						
HNS				LR	LR		
	comp=Z,250nm,19.1s						
E07A	Sunnyside	92.92	36	P	P	23 02 37.4	+0.1
E07A				IAmb	IAmb	23 02 40.4	
	comp=Z,15nm,1.3s						
MFID	Camas Ranch	92.93	40		P	23 02 37.7	+0.2
MFID				IAmb	IAmb	23 02 39.4	
	comp=Z,8.1nm,1.2s						
HAWA	Hanford	92.96	36		P	23 02 37.7	+0.3
HAWA				IAmb	IAmb	23 02 39.6	
	comp=Z,4.9nm,0.8s						
TMUT	Trail Mountain	93.01	45	P	P	23 02 38.6	+0.3
TMUT				IAmb	IAmb	23 02 46.5	
	comp=Z,7.6nm,0.9s						
BMO	Blue Mountains	93.08	38	P	P	23 02 38.3	+0.1
BMO	Blue Mountains	93.08	38	P	P	23 02 38.3	+0.1
BMO				pmax	pmax		
	comp=Z,7.0nm,1.5s						
RED	Redoubt Volcan	93.15	12	P	P	23 02 39.4	+1.3
RED				IAmb	IAmb	23 02 41.5	
	comp=Z,5.7nm,0.9s						
WAH2	Wahluke Slope	93.19	36	P	P	23 02 39.4	+0.9
WAH2				IAmb	IAmb	23 03 02.3	
	comp=Z,9.3nm,1.1s						
L16K	Owhat River	93.36	8	P	P	23 02 39.5	+0.6
ANMO	Albuquerque	93.46	51		P	23 02 40.2	-0.1
ANMO	Albuquerque	93.46	51		P	23 02 40.2	-0.1
ANMO	Albuquerque	93.46	51	P	P	23 02 40.3	-0.1
ANMO				IAmb	IAmb	23 02 41.8	
	comp=Z,2.2nm,1.0s						
ANMO	Albuquerque	93.46	51	⇑*e*P	P	23 02 40.9	+0.6
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
HVU	Hansel Valley	93.62	43		P	23 02 41.4	+0.6
HVU				IAmb	IAmb	23 02 42.9	
	comp=Z,13nm,1.4s						
HVU	Hansel Valley	93.62	43	P	P	23 02 41.4	+0.6
HVU				pmax	pmax		
	comp=Z,13nm,1.4s						
K15K	Wolf Creek Mou	93.69	7		P	23 02 41.6	+1.2
K15K				IAmb	IAmb	23 02 43.6	
	comp=Z,17nm,1.2s						
PV17	East Wray Mesa	93.79	47	P	P	23 02 40.7	-1.1
PV17				IAmb	IAmb	23 02 47.8	
	comp=Z,9.1nm,1.2s						
HLID	Hailey	93.81	40		P	23 02 41.3	-0.4
MA2	Magadan	93.85	344	⇑*e*P	P	23 02 41.6	+0.4
MA2				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HMBC	Humberstone	93.87	116	P	P	23 02 41.9	-0.7
PLID	Pearl Lake	93.93	39		P	23 02 42.2	-0.1
PLID				IAmb	IAmb	23 02 45.3	
	comp=Z,7.3nm,1.1s						
TCUT	Toone Canyon	94.01	44	P	P	23 02 41.9	-0.9
TCUT				IAmb	IAmb	23 03 08.0	
	comp=Z,9.6nm,1.1s						
CMAR	Chiang Mai Arr	94.02	289	P	P	23 02 44.1	+1.1
	comp=Z,0.6nm,0.4s,baz=143,slow=3.7,SNR=5.5						
	comp=Z,0.6nm,0.4s						
BSUT	Blindstream Ca	94.04	45	P	P	23 02 42.7	-0.3
HEH	HeiHe	94.34	328	*e*P	P	23 02 43.3	-0.4
MCMT	McKenzie Canyo	95.48	40	P	P	23 02 49.0	-0.5
PZH	PanZhiHua	95.95	297	P	P	23 02 54.0	+2.2
XLT	XiLinHaoTe	96.00	318	*e*P	P	23 02 50.9	-0.7
XLT				sP	pwP	23 02 58.4	-1.4
XLT				PP	PP	23 06 50.6	+6.0
XLT				SKS	SKSac	23 13 24.6	-3.4
XLT				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,100nm,6.8s						
XLT				LR	LR		
	comp=Z,190nm,23.4s						
XLT				LR	LR		
	comp=Z,220nm,20.4s						
T25A	Trinidad	96.07	50	IAmb	IAmb	23 03 04.3	
	comp=Z,7.4nm,0.8s						
PDAR	Pinedale Array	96.11	43	P	P	23 02 52.6	+0.3
	comp=Z,0.3nm,0.7s,baz=260,slow=6.7,SNR=1.7						
	comp=Z,0.3nm,0.7s						
SEY	Seymchan	96.52	347	⇑*e*P	P	23 02 52.0	-1.3
SEY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CD2	Chengdu	96.74	302	*e*P	P	23 02 56.0	+0.8
HHC	Hu-ho-hao-te	96.90	314	*e*P	P	23 02 56.9	+1.1
HHC				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,100nm,4.8s						
HHC				LR	LR		
	comp=Z,120nm,15.2s						
HHC				LR	LR		
	comp=Z,120nm,15.5s						
HHC				LR	LR		
	comp=Z,160nm,17.5s						
BTO	Baotou	97.73	313	*e*P	Pdif	23 03 02.0	+2.4
BTO				PP	PP	23 07 02.5	+4.5
BTO				S	S	23 14 27.8	+2.6
BTO				pmax	pmax		
	comp=Z,15nm,0.7s						
BTO				pmax	pmax		
	comp=Z,100nm,6.3s						
BTO				LR	LR		
	comp=Z,100nm,7.0s						
BTO				LR	LR		
	comp=Z,230nm,14.0s						
BTO				LR	LR		
	comp=Z,140nm,5.9s						
ILAR	Eielson Array	98.24	13	P	P	23 02 59.4	-1.7
	comp=Z,0.5nm,0.9s,baz=222,slow=1.9,SNR=4.2						
	comp=Z,0.5nm,0.9s						
J26L	Joseph Creek	98.67	14	P	P	23 03 03.1	0.0
LZH	Lanzhou	99.39	306	*e*P	Pdif	23 03 10.1	+3.0
LZH				sP	pwP	23 03 16.0	+0.7
LZH				SKS	SKSac	23 13 47.3	+1.5
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH				LR	LR		
	comp=Z,190nm,14.9s						
LZH				LR	LR		
	comp=Z,210nm,15.8s						
LZH				LR	LR		
	comp=Z,230nm,15.8s						
WMQ	Urumqi	113.89	308	*e*PKP	PKiKP	23 08 04.1	+0.8
WMQ				LR	LR		
	comp=Z,120nm,21.3s						
BOSA	Boshof	117.05	202	PKP	PKPdf	23 08 08.6	-1.5
	comp=Z,5.6nm,1.1s,baz=141,slow=14,SNR=2.3						
MK31	Makanchi Array	118.44	310	⇑*i*PKIKP	PKPdf	23 08 10.2	-1.7
MKAR	Makanchi Array	118.44	310	PKP	PKPdf	23 08 10.2	-1.6
	comp=Z,0.4nm,0.5s,baz=240,slow=2.1,SNR=6.2						
ZALV	Zalesovo Beam	118.69	318	PKP	PKPdf	23 08 12.4	+0.4
	comp=Z,0.3nm,0.3s,baz=107,slow=5.0,SNR=1.6						
KSH	Kashi	120.89	300	PKP	PKiKP	23 08 19.3	+2.2
BOOM	Boomskoye usch	121.70	304		PKPdf	23 08 18.4	-0.1
BOOM	Boomskoye usch	121.70	304	PKIKP	PKPdf	23 08 18.4	-0.1
KURK	Kurchatov	121.71	314		PKPdf	23 08 17.3	-0.7
KURK	Kurchatov	121.71	314	PKIKP	PKPdf	23 08 17.3	-0.7
KURBB	Kurchatov Arra	121.75	313	PKP	PKPdf	23 08 17.0	-1.1
	comp=Z,1.4nm,0.6s,baz=109,slow=1.9,SNR=16						
AAK	Ala-Archa	122.77	303		PKPdf	23 08 20.9	+0.4
AAK	Ala-Archa	122.77	303	PKIKP	PKPdf	23 08 20.9	+0.4
SCHQ	Schefferville	126.23	42	PKP	PKPdf	23 08 26.2	-0.4
	comp=Z,3.7nm,1.1s,baz=212,slow=16,SNR=2.3						
BVAR	Borovoye Array	127.07	315	PKP	PKPdf	23 08 27.9	-0.3
	comp=Z,1.6nm,0.6s,baz=104,slow=3.1,SNR=11						
BRVK	Borovoye	127.13	316	⇑*i*PKIKP	PKPdf	23 08 28.4	+0.1
BRVK				pmax	pmax		
	comp=Z,7.0nm,2.5s						
SPITS	Spitsbergen Ar	132.17	356	PKP	PKPdf	23 08 37.4	+0.1
	comp=Z,2.0nm,0.7s,baz=84,slow=11,SNR=2.5						
H10N3	ASCENSION HYDR	138.20	154	T	T	01 44 52.1	
	baz=203,slow=75,SNR=5.3						
H10N1	ASCENSION HYDR	138.20	154	T	T	01 44 48.8	
	baz=203,slow=75,SNR=5.0						
H10N2	ASCENSION HYDR	138.22	154	T	T	01 44 52.7	
	baz=203,slow=75,SNR=6.5						
ARCES	ARCESS Array B	139.12	348	PKhKP	PKPpre	23 08 37.7	
	comp=Z,3.2nm,0.8s,baz=2.9,slow=2.4,SNR=6.8						
VRH	Novokhopyorsk	144.71	317	*e*PKIKP	PKPab	23 08 58.6	-1.0
VRH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GNI	Garni	144.72	297		PKPab	23 08 59.7	-0.6
GNI	Garni	144.72	297	PKIKP	PKPab	23 08 59.7	-0.6
MOS	Moscow	144.98	326	*i* PKIKP	PKPab	23 08 59.7	-0.8
MOS				*e*		23 12 21.4	
MOS				pmax	pmax		
	comp=Z,47nm,1.1s						
GOF	Gofitskoye	145.45	306	*ce*PKIKP	PKPbc	23 09 02.3	-0.1
PUL	Pulkovo	145.60	335	⇓*e*PKIKP	PKPdf	23 09 02.1	0.0
FINES	FINESS Array B	145.73	340	PKPbc	PKPdf	23 09 01.9	-0.4
	comp=Z,34nm,0.6s,baz=62,slow=4.5,SNR=90						
LPSR	Galich'ya Gora	145.77	320	*e*PKP2	PKPdf	23 09 00.2	-2.4
LPSR				pmax	pmax		
	comp=Z,80nm,0.9s						
KBZ	Khabaz	145.77	304	PKPbc	PKPdf	23 09 03.4	+0.5
	comp=Z,16nm,0.9s,baz=123,slow=1.1,SNR=16						
OBN	Obninsk	145.82	325		PKPdf	23 09 01.7	-0.9
OBN	Obninsk	145.82	325	⇓P	PKPdf	23 09 03.1	+0.5
OBN	Obninsk	145.82	325	*c* *i*PKP2	PKPdf	23 09 02.6	0.0
OBN				pmax	pmax		
	comp=Z,73nm,1.0s						
OBN	Obninsk	145.82	325	PKP	PKPdf	23 09 02.1	-0.5
KIV	Kislovodsk	145.89	304		PKPdf	23 09 03.2	-0.1
KIV	Kislovodsk	145.89	304	⇑P	PKPbc	23 09 04.4	+0.5
KIV	Kislovodsk	145.89	304	⇑PKP2	PKPbc	23 09 04.4	+0.5
KIV	Kislovodsk	145.89	304	PKP	PKPdf	23 09 02.7	-0.6
KARS	Kars	145.96	298		PKPbc	23 09 04.9	+0.6
KARS	Kars	145.96	298	PKP2	PKPbc	23 09 04.9	+0.6
VORR	Voronezh	145.99	318	*e*PKP2	PKPdf	23 09 02.5	-0.5
VORR				pmax	pmax		
	comp=Z,60nm,0.9s						
VSR	Storozhevoye	146.20	318	*e*PKIKP	PKPdf	23 09 01.7	-1.7
VSR				pmax	pmax		
	comp=Z,50nm,0.9s						
VORD	Divnogorie	146.22	317	*e*PKP2	PKPdf	23 09 03.1	-0.3
VORD				pmax	pmax		
	comp=Z,40nm,0.9s						
GURO	Guroymak-BITLI	146.86	294		PKPdf	23 09 06.3	+1.2
ERBR	Yeremizino-Bor	147.08	308	*i* PKP2	PKPdf	23 09 06.0	+0.9
ERBR				pmax	pmax		
	comp=Z,67nm,0.9s						
LABN	Labinsk	147.15	306	*i* PKP2	PKPbc	23 09 07.8	+0.3
LABN				pmax	pmax		
	comp=Z,19nm,0.8s						
VSU	Vasula	147.83	336	*ce*PKIKP	PKPdf	23 09 06.7	+0.8
KOPT	Kop Dagi	147.97	297		PKPbc	23 09 11.3	+1.0
SOC	Sochi	148.07	304	*e*PKHKP	PKPpre	23 09 00.7	
SOC				*e*PPP	PPP	23 15 53.4	
SOC				*e*SSS	SSS	23 37 17.5	
KHAM	Kharkiv	148.39	317	PKP	PKPdf	23 09 06.6	-0.6
NB2	NORSAR Subarra	149.26	352	PKP	PKPbc	23 09 12.3	-0.2
	comp=Z,9.3nm,0.9s,baz=14,slow=3.0						
NOA	NORSAR Array B	149.26	352	PKPbc	PKPbc	23 09 11.7	-0.9
	comp=Z,5.5nm,0.8s,baz=14,slow=4.3,SNR=16						
ANN	Anapa	149.40	307	*i* PKP2	PKPbc	23 09 13.2	-0.1
ANN				pmax	pmax		
	comp=Z,56nm,0.9s						
HFS	Hagfors	149.77	349	PKPbc	PKPbc	23 09 13.0	-0.8
	comp=Z,7.6nm,0.7s,baz=83,slow=4.6,SNR=13						
HFS	Hagfors	149.77	349	PKP2	PKPbc	23 09 13.0	-0.8
MNK	Minsk	150.21	330	*i* PKiKP	PKiKP	23 09 16.4	+0.6
	comp=E,12nm,1.0s						
MNK				*i* PKiKP	PKiKP	23 09 16.4	+0.6
	comp=N,4.0nm,0.9s						
MNK				*i* PKiKP	PKiKP	23 09 16.4	+0.6
	comp=Z,26nm,0.9s,baz=48						
MNK				*i* PP	PP	23 12 50.4	+0.4
MNK				*i* PPP	PPP	23 16 12.2	
MNK				*i* SKS	SKSdf	23 16 18.3	+0.7
MNK				*i* SS	SS	23 32 01.3	-6.2
MNK				*i* SSS	SSS	23 37 37.0	
MNK				*i* LQ	LQ	00 09 04.2	
MNK				*i* LR	LR	00 19 23.4	
MNK	Minsk	150.21	330	*i* PKIKP	PKiKP	23 09 16.4	+0.6
MNK				*i*		23 12 50.3	
MNK				*i* PPP	PPP	23 16 12.2	
MNK				*i*		23 16 18.2	
MNK				*i* SS	SS	23 32 01.2	-6.3
MNK				pmax	pmax		
	comp=E,12nm,1.0s						
MNK				pmax	pmax		
	comp=N,4.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,26nm,0.9s						
NACGM	Naroch	150.40	331	LQ	LQ	00 09 07.2	
GAZ	Gaziantep	150.72	292		PKPbc	23 09 17.7	+0.8
KONO	Kongsberg	150.80	353		PKPbc	23 09 16.6	+0.4
KONO	Kongsberg	150.80	353	PKIKP	PKPbc	23 09 16.6	+0.4
PABE	Paberze	151.06	335		PKPbc	23 09 16.5	-0.4
BEIL	Beino	151.55	286	*e*P	PKPbc	23 09 19.1	+0.3
SIM	Simferopol'	151.61	309	*e*PKIKP	PKPbc	23 09 17.6	-1.0
SIM				pmax	pmax		
	comp=Z,21nm,1.2s						
HWQ	Hawqa	151.74	286	*e*P	PKPbc	23 09 18.7	-0.7
SHBL	Chebaa	151.86	284	*e*P	PKPbc	23 09 20.5	+0.7
AK03	Malin Array Si	151.94	323	PKP	PKPdf	23 09 12.1	-0.5
AKASG	Malin Array Be	151.95	323	PKPbc	PKPbc	23 09 18.6	-0.5
	comp=Z,5.1nm,0.6s,baz=49,slow=2.5,SNR=16						
AKBB	Malin Array Si	151.95	323	PKP	PKPdf	23 09 12.1	-0.6
KIEV	Kiev	151.96	323		PKPbc	23 09 18.9	-0.3
KIEV	Kiev	151.96	323	⇓P	PKPbc	23 09 18.9	-0.3
KIEV	Kiev	151.96	323	⇓PKIKP	PKPbc	23 09 18.9	-0.3
KIEV	Kiev	151.96	323	PKP	PKPdf	23 09 12.1	-0.6
BHL	Bhannes	151.97	285	*e*P	PKPbc	23 09 20.3	+0.4
MMAI	Mount Meron Ar	152.12	283	PKPbc	PKiKP	23 09 21.4	+0.8
	comp=Z,18nm,0.9s,baz=87,slow=4.5,SNR=24						
SUW	Suwalki	152.49	333	*e*PKPbc	PKPbc	23 09 19.9	-0.3
BLEU	Blekinge	152.90	344	*i* P	PKPdf	23 09 01.3	-13
OVD	Ostervraa, Den	153.00	351	*i* P	PKPdf	23 09 01.3	-13
OVD				IAmb	IAmb	23 09 02.3	
	comp=Z,72nm,0.6s						
KIRS	Kirsehir-Merke	153.13	297	⇓P	PKPbc	23 09 22.3	0.0
BRTR	Keskin Array B	153.25	298	PKPbc	PKPbc	23 09 22.4	-0.3
	comp=Z,5.0nm,1.0s,baz=133,slow=2.9,SNR=18						
PURM	Purcari	153.73	314	⇓P	PKPab	23 09 34.0	-2.0
SORM	Soroca	153.84	319	⇓P	PKPab	23 09 34.1	-2.4
ANTO	Ankara	153.86	298	⇓P	PKPbc	23 09 24.3	+0.4
ANTO	Ankara	153.86	298	⇓PKIKP	PKPbc	23 09 24.3	+0.4
TLCR		154.99	312	⇓P	PKPab	23 09 37.2	-4.3
VLDR	Vladesti	155.15	314	⇑P	PKPab	23 09 42.7	+0.5
EKA	Eskdalemuir Ar	155.18	8	PKPab	PKPab	23 09 40.9	-1.0
	comp=Z,2.5nm,0.8s,baz=331,slow=3.1,SNR=5.2						
SCTR	Scanteiesti	155.29	314	⇓P	PKPab	23 09 37.6	-5.2
TPGR	Topolog	155.39	312	⇓P	PKPab	23 09 42.4	-0.9
CFR	Carcaliu	155.43	313	⇑P	PKPab	23 09 35.2	-8.2
TIRR	Tirgusor	155.56	311	⇑P	PKPab	23 09 44.5	+0.5
TIRR	Tirgusor	155.56	311	⇑PKP2	PKPab	23 09 44.5	+0.5
TESR	Tescani	155.68	317	⇓P	PKPab	23 09 44.2	-0.3
TLBR	Topalu	155.76	311	⇑P	PKPab	23 09 38.3	-6.5
ODBI	Odobesti	155.82	315	⇓P	PKPab	23 09 35.3	-10
BURAR	Bucovina Array	155.89	320	⇑P	PKPab	23 09 45.8	+0.4
BURAR	Bucovina Array	155.89	320	⇑PKP2	PKPab	23 09 45.8	+0.4
ONER	Baraj Valea Uz	155.93	317	⇑P	PKPab	23 09 34.6	-11
VRI	Vrincioaia	155.97	315	⇑P	PKPab	23 09 47.3	+1.6
VRI	Vrincioaia	155.97	315	⇑PKP2	PKPab	23 09 47.3	+1.6
PLOR	Plostina	156.02	315	⇑P	PKPab	23 09 46.2	+0.2
PLOR	Plostina	156.02	315	⇑PKP2	PKPab	23 09 46.2	+0.2
GRER		156.06	314	⇑P	PKPab	23 09 45.3	-0.7
BISRR	Bisoca	156.14	315	⇓P	PKPab	23 09 46.6	+0.1
PGOR	Pogoanele	156.28	313	⇓P	PKPab	23 09 47.3	+0.3
TURR	Turia	156.30	316	⇑P	PKPab	23 09 47.9	+0.8
OZUR		156.41	317	⇑P	PKPab	23 09 47.5	-0.1
KOLS	Kolonicke sedl	156.56	326	*e*PKP2	PKPab	23 09 48.1	0.0
KOLS	Kolonicke sedl	156.56	326	*e*PKP	PKPab	23 09 48.1	0.0
MLR	Muntele Rosu	156.63	315	⇑P	PKPab	23 09 40.7	-8.0
MLR	Muntele Rosu	156.63	315	⇑PKP2	PKPab	23 09 40.7	-8.0
ARCR	ARCALIA	156.67	320	⇓P	PKPab	23 09 49.6	+0.9
STHS	Stebnicka Huta	156.71	328	*e*PKP2	PKPab	23 09 48.2	-0.5
STHS	Stebnicka Huta	156.71	328	*e*PKP	PKPab	23 09 48.2	-0.5
OJC	Ojcow	156.74	331	*e*PKPab	PKPab	23 09 49.3	+0.5
SULR		156.84	313	⇑P	PKPab	23 09 49.5	+0.1
NIE	Niedzica	157.13	329	*e*PKPab	PKPab	23 09 50.6	+0.1
VOIR		157.20	316	⇓P	PKPab	23 09 51.5	+0.4
VOIR		157.20	316	⇓PKP2	PKPab	23 09 51.5	+0.4
PHSR	Pinarhisar	157.26	305	⇓P	PKPab	23 09 51.5	+0.1
ARR	Arges	157.48	316	⇑P	PKPab	23 09 53.2	+0.9
TNR	Turnu Rosu	157.54	317	⇑P	PKPab	23 09 53.6	+1.1
TNR	Turnu Rosu	157.54	317	⇑PKP2	PKPab	23 09 53.6	+1.1
KSP	Ksiaz	157.56	337	*e*PKPab	PKPab	23 09 51.0	-1.3
MARR	Marisel-Cluj	157.59	321	⇑P	PKPab	23 09 52.8	+0.1
HUMR	Humele	157.71	314	⇑P	PKPab	23 09 53.1	-0.1
DRGR		157.74	321	⇓P	PKPab	23 09 53.1	-0.3
DRGR		157.74	321	⇓PKP2	PKPab	23 09 53.1	-0.3
STEB	Steborice	157.77	333	*e*PKPAB	PKPab	23 09 52.6	-0.7
STEB				*e*x	x	23 10 02.1	
LOT	Lotru	157.95	317	⇓P	PKPab	23 09 53.3	-1.1
DPC	Dobruska-Polom	157.96	336	*e*PKPAB	PKPab	23 09 54.4	+0.3
DPC				*e*x	x	23 10 06.6	
DPC	Dobruska-Polom	157.96	336	*e*PKP2	PKPab	23 09 54.4	+0.3
MORC	Moravsky Berou	157.99	333	*e*PKP	PKPab	23 09 53.9	-0.4
KRLC	Kraliky	158.03	335	*e*PKPAB	PKPab	23 09 53.8	-0.6
KRLC				*e*x	x	23 10 06.1	
KRLC	Kraliky	158.03	335	*e*PKP2	PKPab	23 09 53.8	-0.6
CLL	Collm	158.14	342		pPKPab	23 10 04.8	+8.3
CLL	Collm	158.14	342	*i* PKP2	PKPab	23 09 46.6	-8.2
DEV	Deva	158.19	319	⇓P	PKPdf	23 09 36.5	+15
BRG	Berggiesshubel	158.27	340	*e*PKP	PKPab	23 09 51.8	-3.6
BRG				Amp		23 09 55.8	
	comp=Z,4.1nm,1.1s						
BRG	Berggiesshubel	158.27	340	P	PKPab	23 10 05.5	+10
BRG				Amp		23 10 08.3	
	comp=Z,8.0nm,0.9s						
PSZ	Piszkesteto	158.40	327	⇑P	PKPab	23 09 56.0	-0.2
PSZ	Piszkesteto	158.40	327	⇑PKP2	PKPab	23 09 56.0	-0.2
VYHS	Vyhne	158.46	330	*e*PKP2	PKPab	23 09 56.5	+0.2
VYHS	Vyhne	158.46	330	*e*PKP	PKPab	23 09 56.5	+0.2
JAVC	Velka Javorina	158.67	332	*e*PKP	PKPab	23 09 58.2	+0.9
SURR	Surduc	158.71	320	⇓P	PKPab	23 09 57.4	-0.1
VRAC	Vranov	158.73	334	*e*PKP	PKPab	23 09 57.1	-0.3
VRAC	Vranov	158.73	334	⇑P	PKPab	23 09 57.7	+0.3
VRAC	Vranov	158.73	334	⇑PKP2	PKPab	23 09 57.7	+0.3
KRUC	Moravsky	159.00	334	*e*PKP	PKPab	23 09 57.8	-0.8
BZS	Buzias	159.07	320	⇓P	PKPab	23 09 58.3	-0.8
BZS	Buzias	159.07	320	⇓PKP2	PKPab	23 09 58.3	-0.8
MODS	Modra-Piesok	159.21	332	*e*PKP2	PKPab	23 09 59.6	0.0
MODS	Modra-Piesok	159.21	332	*e*PKP	PKPab	23 09 59.6	0.0
MDVR	Moldovita	159.52	318	⇓P	PKPab	23 10 00.3	-0.8
KHC	Kasperske Hory	159.92	339	*e*PKPAB	PKPab	23 10 02.5	-0.1
KHC				*e*x	x	23 10 13.1	
KHC	Kasperske Hory	159.92	339	*e*PKP2	PKPab	23 10 02.5	-0.1
CKRC	Cesky Krumlov	159.95	337	*e*PKP	PKPab	23 10 02.9	+0.1
CKRC	Cesky Krumlov	159.95	337	*e*PKP2	PKPab	23 10 02.9	+0.1
GRF	Grafenberg Arr	160.07	343	*e*PKP	PKPab	23 10 03.2	-0.1
	baz=22,slow=4.0						
GRF				*e*pPKP	sPKPab	23 10 13.7	+8.1
GERES	GERESS Array B	160.13	338	PKPab	PKPab	23 10 03.6	0.0

	comp=Z,1.4nm,0.8s,baz=35,slow=4.9,SNR=11						
CONA	Conrad Observa	160.13	333	*i* PKP	PKPab	23 10 03.9	+0.2
	comp=Z,6.5nm,1.0s						
RONA	Rosalia, Austr	160.15	332	*i* PKP	PKPab	23 10 04.0	+0.3
	comp=Z,9.5nm,1.0s,SNR=5.1						
BHOU	Houvegnez	160.34	353	*d*PKP	PKPab	23 10 04.1	-0.2
BGES	Gesves	160.38	355	*d*PKPdf	PKPdf	23 09 24.5	+0.8
BGES				*d*PKP	PKPab	23 10 04.0	-0.6
DOU	Dourbes	160.71	356	*d*PKP	PKPab	23 10 05.5	-0.5
MOA	Molln	160.80	335	*i* PKP	PKPab	23 10 06.4	-0.1
	comp=Z,1.2nm,0.6s						
WLF	Walferdange	161.00	353	*d*PKP	PKPab	23 10 07.2	-0.1
BIOA	Bad Ischl, Aus	161.15	336	*i* PKP	PKPab	23 10 08.3	+0.2
	comp=Z,4.0nm,0.8s,SNR=6.1						
SOKA	Soboth	161.48	332	*i* PKP	PKPab	23 10 09.5	-0.1
	comp=Z,6.1nm,1.1s						
LESA	Schwarzleotal	161.71	338	*e*PKP	PKPab	23 10 10.5	-0.1
	comp=Z,16nm,2.0s,SNR=5.5						
OBKA	Obir	161.81	333	*i* PKP	PKPab	23 10 11.1	0.0
	comp=Z,3.4nm,1.0s						
MYKA	Terra Mystica	162.06	335	*i* PKP	PKPab	23 10 11.5	-0.6
	comp=Z,1.7nm,0.5s						
WATA	Walderalm	162.13	340	*i* PKP	PKPab	23 10 12.6	+0.2
	comp=Z,6.5nm,1.1s						
WTTA	Wattenberg	162.18	339	*e*PKP	PKPab	23 10 12.8	0.0
	comp=Z,9.0nm,1.1s						
RETA	Reutte	162.22	342	*i* PKP	PKPab	23 10 12.2	-0.6
	comp=Z,4.6nm,1.3s						
MOTA	Moosalm	162.26	341	*i* PKP	PKPab	23 10 13.0	0.0
	comp=Z,14nm,1.3s,SNR=6.2						
SQTA	Sankt Quirin	162.34	340	*i* PKP	PKPab	23 10 13.5	+0.1
	comp=Z,10.0nm,1.1s						
ABTA	Abfaltersbach	162.35	337	*i* PKP	PKPab	23 10 13.0	-0.4
	comp=Z,8.5nm,1.1s						
TORD	Torodi Ar. Bea	162.37	177	PKPab	PKPab	23 10 14.2	+0.1
	comp=Z,76nm,0.3s,baz=162,slow=2.6,SNR=2.1						
DAVA	Damuels	162.64	343	*i* PKP	PKPab	23 10 14.1	-0.6
	comp=Z,4.0nm,1.0s						
FETA	Feichten	162.66	341	*i* PKP	PKPab	23 10 14.7	-0.1
	comp=Z,7.8nm,1.3s						
TIP	Timpagrande	165.72	309		PKPab	23 10 28.7	+0.2
ESDC	Sonseca Array	169.69	29	PKP	PKPdf	23 09 32.1	0.0
	comp=Z,0.6nm,1.0s,baz=350,slow=1.6,SNR=3.2						
ESDC				PKPab	PKPab	23 10 45.5	-0.4
	comp=Z,1.2nm,1.1s,baz=315,slow=4.8,SNR=4.4						

NOU ***21*** *23:00:20.9, 31°.20S×175°.96W, h34^{km}, ML5.0/30,*
Kermadec Islands Region

BJI ***21*** *23:00:22.8, 30°.96S×177°.69W, h7^{km}, mB5.4/11, mb5.0/18,*
Ms4.9/12, Ms7 4.6/14

IDC ***21*** *23:00:25.1±0.4, 30°.61S×177°.57W, h0^{km}, mb4.6/16,*
mbtmp4.6/17, ML3.3/1, MS4.4/17, Error ellipse:
s-maj=17.3km s-min=14.2km az=86.0

MOS ***21*** *23:00:26.1±1.0, 30°.71S×177°.61W, h11^{km}, mb5.3/30,*
MS4.7/5, Error ellipse: s-maj=10.8km s-min=8.8km
az=81.2

NEIC ***21*** *23:00:28.0±1.7, 30°.64S±0°.06×177°.5W±0°.1, h10^{km}±1^{km},*
mb5.1/120, Error ellipse: s-maj=18.3km s-min=9.5km
az=87.0

GCMT ***21*** *23:00:33.0±0.4, 30°.63S±0°.03×177°.15W±0°.03, h36^{km}±1^{km}, MW5.0/72, Moment Tensor Solution. s31,c34; s72,c87; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.87±.28; $M_{\theta\theta}$-0.76±.18; $M_{\phi\phi}$-3.12±.16; $M_{r\theta}$1.56±.19; $M_{\theta\phi}$-0.09±.12; $M_{\phi r}$2.67±.13; Best double couple: $M_0$4.63200×10^{16} NP1:ϕ_s175.00000°, δ26.00000°, λ68.00000°. NP2: ϕ_s19.00000°, δ66.00000°, λ101.00000°. Principal axes: T 5.1320, Plg68.0000°, Azm309.0000°; N -1.0060, Plg10.0000°, Azm195.0000°; P -4.1310, Plg20.0000°, Azm101.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 23:00:27.0±0.3**, 30°.77S**±0°.04×**177°.56W**±0°.06**, h10^{km},**
n459, σ**1^s.97**/411**, mb5.1**/103**, MS4.6**/30**, 14C-6D, Kermadec**
Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.53	348	P	Pn	23 00 51.8	-2.6
GLKZ				S	Sn	23 01 09.9	-4.4
RAO	Raoul Island	1.54	348		Pn	23 00 52.5	-2.0
RAO				Sn	Sn	23 01 11.5	-3.1
RAO	Raoul Island	1.54	348	Pn	Pn	23 00 52.2	-2.4
	1μm,0.3s,baz=162,slow=9.6,SNR=33						
RAO				Sn	Sn	23 01 11.0	-3.6
	8μm,0.3s,baz=90,slow=22,SNR=10						
RAO	Raoul Island	1.54	348	P	Pn	23 00 52.5	-2.0
RAO						23 01 11.5	
RIZ	Raoul Island	1.55	348	P	Pn	23 00 52.2	-2.5
RIZ				S	Sn	23 01 11.1	-3.7
MXZ	Matakaoa Point	7.60	206	P	Pn	23 02 14.1	-3.6
MXZ				S	Sn	23 03 42.0	-1.9
WMGZ	Waiomatatini S	7.79	204	P	Pn	23 02 18.4	-2.0
WMGZ				S	Sn	23 03 47.7	-0.9
PKGZ	Pakihiroa	7.95	206	P	Pn	23 02 19.8	-2.8
PKGZ				S	Sn	23 03 50.3	-2.3
HAZ	Te Kaha	7.97	208	S	Sn	23 03 53.4	+0.4
PUZ	Puketiti	8.07	204	P	Pn	23 02 20.9	-3.4
PUZ				S	Sn	23 03 52.1	-3.4
KUZ	Kuaotunu	8.18	221	P	Pn	23 02 27.1	+1.4
KUZ	Kuaotunu	8.18	221	P	Pn	23 02 27.7	+2.0
RUGZ	Raukumara Rang	8.19	207	P	Pn	23 02 23.3	-2.8
CNGZ	Carnagh Statio	8.45	203	P	Pn	23 02 26.0	-3.5
CNGZ				S	Sn	23 04 03.0	-2.0
WCZ	Waipu Caves	8.51	231	P	Pn	23 02 34.4	+4.1
TKGZ	Te Karaka	8.54	205	P	Pn	23 02 26.6	-4.1
MWZ	Matawai	8.57	207	P	Pn	23 02 28.1	-3.1
OPRZ	Ohinepanea	8.58	213	P	Pn	23 02 29.9	-1.3
OUZ	Omahuta	8.66	237	P	Pn	23 02 37.9	+5.6
OUZ	Omahuta	8.66	237	P	Pn	23 02 37.6	+5.3
URZ	Urewera	8.67	209	Pn	Pn	23 02 28.8	-3.7
	5.3nm,0.3s,baz=57,slow=16,SNR=14						
URZ				Sn	Sn	23 04 05.6	-4.7
	14nm,0.3s,baz=8.7,slow=23,SNR=3.1						
URZ	Urewera	8.67	209	P	Pn	23 02 29.7	-2.9
MKAZ	Moumakai	8.75	222	P	Pn	23 02 36.2	+2.6
RAGZ	Rawiri	8.75	207	P	Pn	23 02 30.5	-3.2
RIGZ	Rimuhau	8.81	205	P	Pn	23 02 30.1	-4.3
PRGZ	Paritu Road	8.96	203	P	Pn	23 02 31.8	-4.7
TOZ	Tahuroa Road	9.01	218	Pn	Pn	23 02 37.7	+0.5
TOZ	Tahuroa Road	9.01	218	P	Pn	23 02 39.0	+1.8
SNGZ	Shannon Statio	9.03	206	P	Pn	23 02 34.2	-3.2
KNZ	Kokohu	9.12	204	P	Pn	23 02 33.7	-5.0
RAHZ	Arahi	9.24	207	P	Pn	23 02 36.7	-3.7
MTHZ	Maungataniwha	9.29	208	P	Pn	23 02 38.0	-3.0
WHHZ	Waihua	9.33	206	P	Pn	23 02 38.2	-3.4
MRHZ	Matea Rd	9.45	210	P	Pn	23 02 43.7	+0.5
BKZ	Black Stump Fm	9.70	209	P	Pn	23 02 42.3	-4.3
BKZ	Black Stump Fm	9.70	209	P	Pn	23 02 42.0	-4.6
RITZ	Rihia Road	9.81	212	P	Pn	23 02 45.4	-2.9
KATZ	Kakaramea	9.89	212	P	Pn	23 02 48.5	-0.8
HIZ	Hauiti	9.94	217	P	Pn	23 02 50.2	+0.3
TMVZ	Te Maari	10.00	212	P	Pn	23 02 48.1	-2.7
KRVZ	Karewarewa	10.01	212	P	Pn	23 02 50.7	-0.2
TWVZ	Taurewa	10.08	213	P	Pn	23 02 50.0	-1.9
FWVZ	Far West T-bar	10.18	212	P	Pn	23 02 50.3	-3.1
MOVZ	Moawhango	10.21	211	P	Pn	23 02 49.9	-3.8
TRVZ	Turoa	10.21	212	P	Pn	23 02 51.2	-2.7
WNVZ	Wahianoa	10.22	211	P	Pn	23 02 50.5	-3.4
PNHZ	Pukenui	10.45	207	P	Pn	23 02 50.4	-6.6
PRHZ	Porangahau	10.59	205	P	Pn	23 02 53.0	-5.8
TSZ	Takapari Road	10.67	208	P	Pn	23 02 55.0	-5.0
DVHZ	Dannevirke	10.79	207	P	Pn	23 02 56.3	-5.3
ANWZ	Angora Road	10.82	205	P	Pn	23 02 59.3	-2.6
BFZ	Birch Farm	11.10	205	P	Pn	23 02 59.1	-6.6
SNZO	South Karori	12.24	209	P	Pn	23 03 17.3	-4.0
NFK	Norfolk Island	12.70	274	P	Pn	23 03 35.2	+7.5
QRZ	Quartz Range	12.86	216	P	Pn	23 03 28.9	-0.9
MSVF	Nonsavu	13.58	342		Pn	23 03 39.6	-0.2
MSVF	Nonsavu	13.58	342	LR	LR	23 08 10.1	
	comp=Z,2μm,20.4s,baz=179,slow=35						
MSVF	Nonsavu	13.58	342	P	P	23 03 44.2	-4.7
MSVF	Nonsavu	13.58	342	P	Pn	23 03 39.6	-0.2
RPZ	Rata Peaks	15.77	212	Pn	Pn	23 04 03.9	-5.3
	2.9nm,0.3s,baz=45,slow=4.3,SNR=7.4						
RPZ				Sn	Sn	23 06 48.5	-15
	2.8nm,0.3s,baz=348,slow=19,SNR=5.9						
RPZ	Rata Peaks	15.77	212	P	Pn	23 04 05.6	-3.6
OUENC	Ouen Island, N	16.23	297	P	P	23 04 24.0	+5.7
ONTNC	Ouen Toro	16.59	297	P	Pn	23 04 20.9	+1.1
DZM	Mont Dzumac	16.73	297		Pn	23 04 23.0	+1.3
DZM	Mont Dzumac	16.73	297	*e*Pn	P	23 04 26.1	+2.2
	323nm,1.4s						
DZM				*e*LR	LR	23 08 15.2	
	5μm,23.9s						
DZM	Mont Dzumac	16.73	297	Pn	P	23 04 26.1	+2.2
	0.1nm,0.3s,baz=116,slow=15,SNR=3.6						
DZM				LR	LR	23 09 48.2	
	comp=Z,4μm,18.1s,baz=160,slow=34						
DZM	Mont Dzumac	16.73	297	P	P	23 04 28.8	+4.8
ODZ	Otahua Downs	17.00	210		Pn	23 04 27.3	+2.5
ODZ	Otahua Downs	17.00	210	P	Pn	23 04 19.2	-5.6
JCZ	Jackson Bay	17.12	215	P	Pn	23 04 22.6	-3.8
RAR	Rarotonga	18.58	63	P	P	23 04 43.5	-0.8
	1.0nm,0.3s,baz=222,slow=12,SNR=3.0						
RAR				LR	LR	23 12 47.9	
	comp=Z,520nm,18.1s,baz=250,slow=40						
	18nm,0.7s						
SYZ	Scrubby Hill	18.82	209	P	P	23 04 41.1	-5.7
LHI	Lord Howe Isla	20.02	262	P	Pn	23 05 02.9	+1.1
LHI				IAmb	IAmb	23 05 09.2	
	comp=Z,94nm,0.9s						
TBI	Tubuai	26.04	80	*e*S	S	23 10 11.3	-20
	comp=Z,2μm,23.5s						
TBI				*e*LR	LR	23 12 06.7	
	comp=Z,2μm,24.0s						
TBI				*e*LR	LR	23 12 13.9	
	comp=Z,8μm,27.0s						
ARMA	Armidale	26.49	263	P	P	23 06 07.4	+2.7
ARMA	Armidale	26.49	263	P	P	23 06 06.5	+1.8
	comp=Z,37nm,0.9s						
ARMA	Armidale	26.49	263	P	P	23 06 06.8	+2.1
MGCD	Mangrove Creek	26.64	256	P	P	23 06 07.9	+2.0
CNB	Canberra Magne	28.02	252	P	P	23 06 19.7	+1.3
EIDS	Eidsvold	28.14	273	P	P	23 06 20.0	+0.5
EIDS	Eidsvold	28.14	273	P	P	23 06 19.5	+0.1
	comp=Z,27nm,0.8s						
EIDS	Eidsvold	28.14	273	P	P	23 06 21.7	+2.3
CAN	Canberra	28.32	252	P	P	23 06 22.3	+1.2
CAN	Canberra	28.32	252	P	P	23 06 21.3	+0.3
	comp=Z,41nm,1.0s						
CAN	Canberra	28.32	252	P	P	23 06 22.5	+1.5
CAN	Canberra	28.32	252	P	P	23 06 22.3	+1.2
CAN				pmax	pmax		
	comp=Z,108nm,1.7s						
PPT2	Papeete2	28.61	69	*e*S	S	23 10 56.4	-16
	comp=Z,414nm,23.5s						
PPT2				*e*LR	LR	23 13 12.7	
	comp=Z,1μm,29.0s						
PPT2				*e*LR	LR	23 13 19.8	
	comp=Z,1μm,27.0s						
PPT	Papeete	28.62	69	LR	LR	23 17 12.2	
	comp=Z,352nm,18.6s,baz=227,slow=35						
GLAD	Gladstone	29.54	240	P	P	23 06 31.3	-0.4
HNR	Honiara	29.83	311	LR	LR	23 16 15.2	
	comp=Z,730nm,21.1s,baz=170,slow=32						
TAU	Tasmania Unive	30.40	237	P	P	23 06 39.5	+0.2
TAU	Tasmania Unive	30.40	237	P	P	23 06 39.0	-0.3
TAU	Tasmania Unive	30.40	237	P	P	23 06 39.5	+0.2
TAU				pmax	pmax		
	comp=Z,71nm,1.4s						
TOO	Toolangi	31.17	247	P	P	23 06 47.4	+1.1
TOO	Toolangi	31.17	247	P	P	23 06 47.4	+1.1
TOO				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CMSA	Cobar Meteorol	31.37	259	P	P	23 06 49.6	+1.5
	comp=Z,78nm,0.9s						
CMSA	Cobar Meteorol	31.37	259	P	P	23 06 50.7	+2.7
QLP	Quilpie	33.67	267	P	P	23 07 08.2	-0.1
	comp=Z,51nm,0.7s						
QLP	Quilpie	33.67	267	P	P	23 07 10.3	+2.0
ARPS	Mount Arapiles	34.09	249	P	P	23 07 12.0	+0.2
	comp=Z,30nm,0.8s						
CTAO	Charters Tower	34.24	279	P	P	23 07 14.4	+1.2
CTAO	Charters Tower	34.24	279	P	P	23 07 15.0	+1.8
CTAO	Charters Tower	34.24	279	P	P	23 07 14.4	+1.2
CTAO				pmax	pmax		
	comp=Z,39nm,0.8s						
STKA	Stephens Creek	34.77	257	P	P	23 07 19.2	+1.5
STKA	Stephens Creek	34.77	257	P	P	23 07 17.6	-0.1
	comp=Z,400nm,0.7s						
STKA	Stephens Creek	34.77	257	P	P	23 07 18.7	+1.0
	comp=Z,77nm,0.7s,baz=104,slow=10,SNR=44						
STKA				LR	LR	23 20 30.0	
	comp=Z,907nm,18.5s,baz=87,slow=35						
STKA	Stephens Creek	34.77	257	P	P	23 07 20.0	+2.3
STKA	Stephens Creek	34.77	257	P	P	23 07 19.2	+1.5
STKA				pmax	pmax		
	comp=Z,305nm,0.8s						
MTSU	Mount Surprise	36.74	281	P	P	23 07 34.3	-0.5
	comp=Z,32nm,0.7s						
HTT	Hallett	36.77	254	P	P	23 07 34.2	-0.7
	comp=Z,20nm,0.8s						
HTT	Hallett	36.77	254	P	P	23 07 36.2	+1.3
WHYH	Whyalla	37.95	255	P	P	23 07 45.6	+0.8
PMG	Port Moresby	39.11	295	LR	LR	23 21 08.2	
	comp=Z,757nm,20.9s,baz=212,slow=32						
BBOO	Buckleboo	39.24	255	P	P	23 07 55.5	-0.2
BBOO	Buckleboo	39.24	255	P	P	23 07 55.0	-0.7
	comp=Z,110nm,0.6s						
BBOO	Buckleboo	39.24	255	P	P	23 07 56.2	+0.5
QIS	Mount Isa	39.72	274	P	P	23 07 59.5	-0.4
	comp=Z,0.0nmcomp=Z,16nm,0.7s						
QIS	Mount Isa	39.72	274	P	P	23 08 00.3	+0.4
COEN	Coen	39.74	286	P	P	23 08 01.1	+1.0
COEN	Coen	39.74	286	P	P	23 08 01.1	+1.0
	comp=Z,0.0nmcomp=Z,34nm,1.0s						
COEN	Coen	39.74	286	P	P	23 08 02.6	+2.5
TAOE	Nuku Hiva Isla	41.10	66	*e*LR	LR	23 19 05.0	
	comp=Z,915nm,26.6s						
AS01	Alice Springs	43.43	267	P	P	23 08 30.6	+0.3
AS31	Alice Springs	43.47	267	P	P	23 08 30.5	-0.2
AS31	Alice Springs	43.47	267	P	P	23 08 29.2	-1.4
	comp=Z,7.8nm,0.5s						
ASAR	Alice Springs	43.47	267	P	P	23 08 29.9	-0.8
	comp=Z,10nm,0.6s,baz=105,slow=7.4,SNR=91						
ASAR				PcP	PcP	23 10 17.9	-0.9
	comp=Z,3.0nm,0.7s,baz=107,slow=3.4,SNR=1.7						
ASAR				ScP	ScP	23 14 09.7	-0.7
	comp=Z,9.3nm,0.9s,baz=116,slow=4.0,SNR=20						
ASAR				S	S	23 14 55.5	-3.9
	comp=Z,2.3nm,0.8s,baz=110,slow=14,SNR=6.8						
ASAR				LR	LR	23 26 15.3	
	comp=Z,1μm,18.0s,baz=108,slow=36						
	comp=Z,10nm,0.6s						
WR8	Warramunga Arr	44.35	272	P	P	23 08 37.6	-0.1
WR8				IAmb	IAmb	23 08 42.3	
	comp=Z,30nm,0.8s						
WRAB	Tennant Creek	44.49	272	P	P	23 08 38.6	-0.2
WRAB				IAmb	IAmb	23 08 51.3	
	comp=Z,29nm,0.7s						
WRAB	Tennant Creek	44.49	272	P	P	23 08 38.6	-0.2
WRAB				pmax	pmax		
	comp=Z,29nm,0.7s						
WRA	Warramunga Arr	44.49	272	P	P	23 08 37.8	-1.1
	comp=Z,18nm,0.5s,baz=112,slow=7.7,SNR=90						
WRA				ScP	ScP	23 14 13.4	-1.1
	comp=Z,5.4nm,1.0s,baz=112,slow=4.2,SNR=10						
WRA				S	S	23 15 07.8	-6.5
	comp=Z,3.3nm,0.9s,baz=110,slow=15,SNR=4.6						
WRA				LR	LR	23 25 58.3	
	comp=Z,1μm,19.2s,baz=130,slow=34						
	comp=Z,18nm,0.5s						
WB0	Warramunga Arr	44.52	273	P	P	23 08 38.5	-0.6
FORT	Forrest	46.32	255	P	P	23 08 52.3	-1.0
FORT	Forrest	46.32	255	P	P	23 08 50.9	-2.3
FORT	Forrest	46.32	255	P	P	23 08 53.2	0.0
SBA	Scott Base	47.70	184	P	P	23 09 03.5	+0.1
SBA				IAmb	IAmb	23 09 08.0	
	comp=Z,18nm,1.1s						
SBA	Scott Base	47.70	184	P	P	23 09 03.5	+0.1
SBA				pmax	pmax		
	comp=Z,18nm,1.1s						
VNDA	Vanda	47.77	186	P	P	23 09 03.6	-0.3
VNDA	Vanda	47.77	186	LR	LR	23 25 44.0	
	comp=Z,246nm,21.0s,baz=22,slow=32						
VNDA	Vanda	47.77	186	P	P	23 09 03.6	-0.3
VNDA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WRKA	Warakurna	47.81	263	P	P	23 09 02.1	-2.9
JAY	Jayapura	48.41	297	P	P	23 09 08.2	-1.4
	comp=Z,14nm,0.8s						
MTN	Manton Dam	50.42	279	P	P	23 09 23.6	-1.3
KNRA	Kununurra	51.12	274	P	P	23 09 29.4	-0.9
KNRA				IAmb	IAmb	23 09 47.8	
	comp=Z,17nm,0.8s						
FITZ	Fitzroy Crossi	52.74	270	P	P	23 09 42.0	-0.4
FITZ	Fitzroy Crossi	52.74	270	P	P	23 09 39.9	-2.4
KLBR	Kellerberrin	54.59	251	P	P	23 09 52.2	-3.6
NWAO	Narrogin (SRO)	54.63	249	LR	LR	23 31 10.3	
	comp=Z,397nm,19.2s,baz=85,slow=34						
MEEK	Meekatharra	55.48	257	P	P	23 09 60.0	-2.3
GUMO	Guam	57.01	315	LR	LR	23 32 22.7	
	comp=Z,269nm,19.2s,baz=111,slow=34						
QSPA	South Pole Qui	59.35	180		P	23 10 30.2	+1.1
QSPA	South Pole Qui	59.35	180	P	P	23 10 30.6	+1.5
	comp=Z,17nm,0.9s,baz=40,slow=1.8,SNR=34						
QSPA				LR	LR	23 33 42.6	
	comp=Z,496nm,19.2s,baz=41,slow=34						
	comp=Z,17nm,0.9s						
DAV	Davao City (W)	66.13	295	LR	LR	23 39 16.4	
	comp=Z,70nm,19.9s,baz=146,slow=35						
JAGI	Jajag, Banyuwa	67.08	274	P	P	23 11 21.3	+0.3
SMAI	San Martin Ant	68.95	158		P	23 11 32.3	+0.5
BELA	Belgrano 2	69.37	172		P	23 11 33.9	-0.5
BELA				IAmb	IAmb	23 11 49.4	
	comp=Z,14nm,0.9s						
PMSA	Palmer Station	71.77	156	LR	LR	23 36 51.0	
	comp=Z,203nm,18.5s,baz=243,slow=30						
MAW	Mawson	72.10	201	P	P	23 11 52.0	+0.9
	comp=Z,5.6nm,0.8s,baz=122,slow=9.0,SNR=3.8						
	comp=Z,5.6nm,0.8s						
ESPZ	Base Esperanza	75.08	156	P	P	23 12 09.1	+0.4
GO09	Cerro Castillo	75.28	141	P	P	23 12 10.0	-0.2
SYO	Syowa Base	76.84	193	⇑*i*P	P	23 12 19.1	+0.4
SYO	Syowa Base	76.84	193	⇓*i*pP	P	23 12 21.0	+2.3
SYO	Syowa Base	76.84	193	⇓*i*sP	sP	23 12 25.4	+4.4
TROLL	Troll, Antarti	77.51	180	⇑P	P	23 12 23.4	+0.8
	comp=Z,970nm,0.8s						
SNAA	Sanae	77.78	178	⇑P	P	23 12 24.4	+0.4
	comp=Z,169nm,0.6s						
SNAA	Sanae	77.78	178		P	23 12 24.2	+0.3
SNAA				IAmb	IAmb	23 12 52.6	
	comp=Z,17nm,0.8s						
SNAA	Sanae	77.78	178	P	P	23 12 24.0	0.0
	comp=Z,9.2nm,0.8s,baz=194,slow=3.8,SNR=24						
	comp=Z,9.2nm,0.8s						
SNAA	Sanae	77.78	178	P	P	23 12 24.3	+0.3
SNAA				pmax	pmax		
	comp=Z,17nm,0.8s						
VNA3	Neumayer Olymp	77.92	176	⇑P	P	23 12 24.4	-0.3
	comp=Z,64nm,0.7s						
VNA2	Neumayer--Watz	78.35	177	⇑P	P	23 12 27.2	0.0
	comp=Z,44nm,0.9s,baz=175,slow=4.1						
COYC	Coyhaique	78.41	136		P	23 12 28.3	+0.5
INU	Inuyama	78.42	324		P	23 12 28.6	+0.8
INU				IAmb	IAmb	23 12 35.0	
	comp=Z,16nm,0.9s						
JGF	Kuroka	78.45	324		P	23 12 28.4	+0.3
JGF				IAmb	IAmb	23 12 34.8	
	comp=Z,11nm,0.7s						
VNA1	Neumayer--Stat	78.58	176	⇑P	P	23 12 29.1	+0.8
	comp=Z,38nm,0.8s						
MJAR	Matsushiro Arr	78.76	325	P	P	23 12 28.8	-1.0
	comp=Z,1.0nm,0.3s,baz=147,slow=6.9,SNR=4.2						
	comp=Z,1.0nm,0.3s						
H03S2	Juan Fernandez	79.94	123	T	T	00 42 09.0	
	baz=238,slow=74,SNR=11						
H03S1	Juan Fernandez	79.95	123	T	T	00 42 13.6	
	baz=238,slow=74,SNR=12						
H03S3	Juan Fernandez	79.96	123	T	T	00 42 00.4	
	baz=238,slow=74,SNR=11						
H03N3	Juan Fernandez	80.14	123	T	T	00 42 14.5	
	baz=242,slow=73,SNR=13						
H03N2	Juan Fernandez	80.14	123	T	T	00 42 11.8	
	baz=242,slow=73,SNR=15						
H03N1	Juan Fernandez	80.15	123	T	T	00 42 18.3	
	baz=242,slow=73,SNR=20						
PLCA	Paso Flores	81.98	133	P	P	23 12 48.1	+0.8
	comp=Z,5.7nm,1.0s,baz=210,slow=4.7,SNR=5.6						
	comp=Z,5.7nm,1.0s						
ATKA	Atka Island	82.67	2		P	23 12 50.5	+0.3
JKA	Kamikawa-asahi	82.94	332	P	P	23 12 53.1	+1.2
JKA				IAmb	IAmb	23 13 07.9	
	comp=Z,21nm,0.9s						
ASAJ	Asahikawa	82.94	332	P	P	23 12 53.1	+1.2
ASAJ				pmax	pmax		
	comp=Z,21nm,0.9s						
NIKH	Nikolski High	83.73	5		P	23 12 55.7	0.0
BI02	San Fabin de	83.77	129	P	P	23 12 56.9	+0.2
BI02				IAmb	IAmb	23 12 58.1	
	comp=Z,8.6nm,0.8s						
KSRS	Korea Array	84.87	319	P	P	23 13 01.0	-0.9
	comp=Z,0.9nm,0.6s,baz=139,slow=4.8,SNR=5.8						
	comp=Z,0.9nm,0.6s						
BO02	Sierra Bellavi	85.14	128		P	23 13 04.3	+0.6
BO02				IAmb	IAmb	23 13 07.8	
	comp=Z,14nm,1.1s						
YSS	Yuzhno-Sakhali	85.24	334	*de*P	P	23 13 01.1	-2.4
YSS				pmax	pmax		
	comp=Z,17nm,0.9s						
QIZ	Qiongzhong	85.50	295	P	P	23 13 04.9	-0.6
QIZ				S	S	23 23 39.3	+2.0
QIZ				LR	LR		
	comp=Z,190nm,10.3s						
QIZ				LR	LR		
	comp=Z,170nm,17.9s						
ELS	Elsinore Mount	85.59	47		P	23 13 06.2	+0.5
ELS				IAmb	IAmb	23 13 07.6	
	comp=Z,12nm,0.9s						
YUH	Yuha Desert	85.89	48		P	23 13 07.7	+0.5
YUH				IAmb	IAmb	23 13 09.1	
	comp=Z,13nm,1.1s						
MT05	Renca	85.96	127	P	P	23 13 08.3	+0.5
PET	Petropavlovsk	85.98	346	P	P	23 13 09.4	+2.4
PET	Petropavlovsk	85.98	346	*e*P	P	23 13 14.3	+7.3
PET				*e*S	S	23 23 46.4	+5.9
PET				pmax	pmax		
	comp=Z,32nm,0.6s						
LMEL	Las Melosas	86.07	127	P	P	23 13 09.2	+0.7
PEL	Peldehue	86.14	126	P	P	23 13 09.2	+0.5
PEL	Peldehue	86.14	126	P	P	23 13 09.2	+0.5
PEL				pmax	pmax		
	comp=Z,22nm,0.9s						
PFO	Pinyon Flats O	86.17	47		P	23 13 08.8	+0.1
PFO				IAmb	IAmb	23 13 10.7	
	comp=Z,12nm,1.0s						
PFO	Pinyon Flats O	86.17	47	P	P	23 13 08.8	+0.1
PFO				pmax	pmax		
	comp=Z,12nm,1.0s						
PEA0B	Petropavlovsk-	86.26	345	P	P	23 13 09.7	+1.2
PEA0B	Petropavlovsk-	86.26	345	P	P	23 13 09.7	+1.2
PETK	Petropavlovsk-	86.26	345	P	P	23 13 08.2	-0.3
	comp=Z,3.1nm,0.6s,baz=107,slow=7.9,SNR=12						
	comp=Z,3.1nm,0.6s						
ISA	Isabella, Lake	86.29	44		P	23 13 10.1	+1.0
ISA				IAmb	IAmb	23 13 11.2	
	comp=Z,12nm,0.9s						
ISA	Isabella, Lake	86.29	44	P	P	23 13 10.1	+1.0
ISA				pmax	pmax		
	comp=Z,13nm,0.9s						
NJ2	Nanjing	86.77	310	*e*P	P	23 13 10.0	-1.5
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CMB	Columbia Colle	86.78	42		P	23 13 11.0	-0.4
CMB				IAmb	IAmb	23 13 12.9	
	comp=Z,11nm,1.2s						
CMB	Columbia Colle	86.78	42	P	P	23 13 11.0	-0.4
CMB				pmax	pmax		
	comp=Z,11nm,1.2s						
GLA	Glamis	86.85	48	P	P	23 13 13.2	+1.3
GLA				IAmb	IAmb	23 13 21.6	
	comp=Z,18nm,0.8s						
GLA	Glamis	86.85	48	P	P	23 13 13.2	+1.3
GLA				pmax	pmax		
	comp=Z,17nm,0.9s						
VLA	Vladivostok	86.92	326	⇓*e*P	P	23 13 08.5	-3.4
VLA				pmax	pmax		
	comp=Z,15nm,0.7s						
HSIG		86.92	54	P	P	23 13 11.7	-0.6
HSIG				IAmb	IAmb	23 13 14.3	
	comp=Z,8.6nm,0.8s						
O02D	Mt. Diablo Mer	86.94	39		P	23 13 13.2	+1.0
CO02	Combarbal	87.00	125		P	23 13 12.7	-0.4
CO02				IAmb	IAmb	23 13 14.6	
	comp=Z,16nm,0.9s						
GSC	Goldstone, Bar	87.06	46	P	P	23 13 12.9	-0.1
GSC				IAmb	IAmb	23 13 15.0	
	comp=Z,16nm,1.1s						
GSC	Goldstone, Bar	87.06	46	P	P	23 13 12.9	-0.1
GSC				pmax	pmax		
	comp=Z,17nm,1.1s						

AFDM	Forest Hills D	87.08	41	P	P	23 13 13.5	+0.6
AFDM				IAmb	IAmb	23 13 27.2	
	comp=Z,16nm,1.5s						
ORV	Oroville	87.20	40	P	P	23 13 13.7	+0.2
ORV	Oroville	87.20	40	P	P	23 13 13.7	+0.2
ORV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
113A	Mohawk Valley,	87.36	49	P	P	23 13 14.3	0.0
CO03	El Pedregal	87.43	125	P	P	23 13 14.7	-0.4
CO03				IAmb	IAmb	23 13 31.0	
	comp=Z,9.4nm,1.0s						
QSM	Queen of Sheba	87.46	45		P	23 13 14.6	-0.2
QSM				IAmb	IAmb	23 13 16.6	
	comp=Z,11nm,1.0s						
214A	Organ Pipe Nat	87.47	50	P	P	23 13 14.5	-0.4
BLYC	Blythe	87.49	48	P	P	23 13 15.9	+1.0
BLYC				IAmb	IAmb	23 13 17.4	
	comp=Z,13nm,1.0s						
WAKR	Walker	87.64	42		P	23 13 16.4	+0.6
USA0B	Ussuriysk Arra	87.68	326	P	P	23 13 16.1	+0.5
USA0B				IAmb	IAmb	23 13 22.9	
	comp=Z,17nm,1.2s						
USA0B	Ussuriysk Arra	87.68	326	P	P	23 13 16.1	+0.5
USA0B				pmax	pmax		
	comp=Z,17nm,1.2s						
USRK	Ussuriysk Ar.	87.68	326	P	P	23 13 16.3	+0.7
	comp=Z,4.1nm,0.8s,baz=132,slow=2.8,SNR=8.5						
	comp=Z,4.1nm,0.8s						
GWY	Greenwater Val	87.73	45		P	23 13 16.3	+0.1
GWY				IAmb	IAmb	23 13 17.9	
	comp=Z,8.3nm,1.0s						
DSP	Deep Springs	87.73	43		P	23 13 16.7	+0.8
DSP				IAmb	IAmb	23 13 30.0	
	comp=Z,16nm,1.4s						
GRAC	Grapevine Rang	87.84	44	P	P	23 13 17.3	+0.7
PNTR	Pine Nut	87.95	41	P	P	23 13 17.2	-0.1
PNTR				IAmb	IAmb	23 13 37.0	
	comp=Z,9.2nm,0.8s						
LHV	Little Huntoon	88.01	43	P	P	23 13 17.9	+0.6
LHV				IAmb	IAmb	23 13 19.2	
	comp=Z,8.7nm,0.9s						
YBH	Yreka Blue Hor	88.08	38	P	P	23 13 18.7	+1.0
YBH				IAmb	IAmb	23 14 52.9	
	comp=Z,22nm,1.6s						
YBH	Yreka Blue Hor	88.08	38	LR	LR	23 44 55.2	
	comp=Z,14nm,21.1s,baz=245,slow=30						
YBH	Yreka Blue Hor	88.08	38	P	P	23 13 18.7	+1.0
YBH				pmax	pmax		
	comp=Z,23nm,1.6s						
GMN	Gold Mountain	88.11	44	P	P	23 13 16.1	-2.1
GMN				IAmb	IAmb	23 16 38.3	
	comp=Z,5.5nm,0.8s						
NVAR	Mina Array Bea	88.25	42	P	P	23 13 19.2	+0.5
	comp=Z,3.6nm,0.8s,baz=222,slow=7.8,SNR=13						
	comp=Z,3.6nm,0.8s						
MZP	Montezuma Peak	88.30	44		P	23 13 19.3	+0.2
NV11	Mina Array Sit	88.33	43	P	P	23 13 19.4	+0.4
NV11				IAmb	IAmb	23 13 32.6	
	comp=Z,13nm,1.4s						
ZON	Zonda	88.44	126	P	P	23 13 19.8	-0.1
ZON				IAmb	IAmb	23 13 44.6	
	comp=Z,24nm,1.7s						
ZON	Zonda	88.44	126	P	P	23 13 19.8	-0.1
ZON				pmax	pmax		
	comp=Z,24nm,1.7s						
J01E	Myrtle Point	88.47	36	P	P	23 13 19.8	+0.4
TPNV	Topopah Spring	88.48	45		P	23 13 20.4	+0.6
TPNV				IAmb	IAmb	23 13 21.9	
	comp=Z,9.1nm,1.1s						
TPNV	Topopah Spring	88.48	45	P	P	23 13 20.5	+0.6
TPNV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
PAHR	Pah Rah Range	88.49	41	P	P	23 13 20.2	+0.4
PAHR				IAmb	IAmb	23 13 23.6	
	comp=Z,18nm,1.5s						
TYV	Tymovskoe	88.54	336	eP	P	23 13 26.8	+7.3
TYV				pmax	pmax		
	comp=Z,100nm,4.7s						
TYV				pmax	pmax		
	comp=Z,18nm,0.9s						
V12A	Nelson	88.55	46		P	23 13 21.1	+1.0
V12A				IAmb	IAmb	23 13 22.4	
	comp=Z,9.3nm,1.1s						
Y14A	Wickenburg	88.59	49		P	23 13 20.7	+0.4
Y14A				IAmb	IAmb	23 13 22.4	
	comp=Z,13nm,1.0s						
TPH	Tonopah	88.64	43	P	P	23 13 20.8	+0.2
TPH	Tonopah	88.64	43	P	P	23 13 20.8	+0.2
TPH				pmax	pmax		
	comp=Z,68nm,1.3s						
W13A	Hualapai Mount	88.76	47		P	23 13 22.3	+1.1
W13A				IAmb	IAmb	23 13 23.4	
	comp=Z,12nm,1.0s						
SHPR	Sheep Range	88.86	46		P	23 13 21.8	+0.2
TUC	Tucson	89.04	51		P	23 13 23.4	+0.9
TUC				IAmb	IAmb	23 13 25.1	
	comp=Z,14nm,1.1s						
TUC	Tucson	89.04	51	P	P	23 13 23.4	+0.9
TUC				pmax	pmax		
	comp=Z,14nm,1.1s						
MDJ	Mudanjiang	89.14	325	P	P	23 13 21.8	-0.7
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.3s						
PRN	Pahroc Range	89.51	45	P	P	23 13 24.8	+0.2
PRN				IAmb	IAmb	23 13 27.7	
	comp=Z,16nm,1.2s						
R11B	Troy Canyon, C	89.80	44		P	23 13 26.0	0.0
X16A	Lo Mia Camp, P	89.90	49		P	23 13 27.6	+1.0
X16A				IAmb	IAmb	23 13 29.2	
	comp=Z,16nm,1.0s						
DUN6	Lazy B Ranch	90.33	52		P	23 13 29.3	+0.8
LCMT	Little Creek M	90.37	46	P	P	23 13 29.3	+0.7
PINE	Pine Mountain	90.46	37	P	P	23 13 29.6	+0.7
PINE				IAmb	IAmb	23 13 42.7	
	comp=Z,25nm,1.4s						
TIA	Tai'an	90.50	313	P	P	23 13 29.8	+0.7
TIA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
U15A	North Rim	90.60	47		P	23 13 30.5	+0.6
U15A				IAmb	IAmb	23 13 44.3	
	comp=Z,13nm,1.0s						
WUAZ	Wupatki	90.62	48		P	23 13 30.6	+0.7
WUAZ				IAmb	IAmb	23 13 32.2	
	comp=Z,16nm,1.1s						
CN2	Changchun	90.66	323	eP	P	23 13 28.8	-0.8
CN2				esP	pwP	23 13 35.9	-1.2
CN2				eS	S	23 24 28.8	+3.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,100nm,16.0s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
CN2				LR	LR		
	comp=Z,200nm,15.0s						
X18A	Snowflake	90.94	50	P	P	23 13 32.1	+0.7
X18A				IAmb	IAmb	23 13 33.8	
	comp=Z,12nm,1.1s						
PSUT	Pine Spring	90.96	45	P	P	23 13 31.1	-0.3
SPR3	Spring Creek 3	90.97	44	P	P	23 13 32.0	+0.5
BNX	BinXian	91.03	325 ⇑	P	P	23 13 31.3	0.0
BNX				pmax	pmax		
	comp=Z,9.0nm,1.0s						
I07A	Izee	91.41	38	P	P	23 13 32.5	-0.8
J08A	Circle Bar Ran	91.47	39		P	23 13 34.0	+0.5
KLR	Kul'dur	91.54	330⇑	eP	P	23 13 32.2	-1.4
KLR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ELK	Elko	91.55	42		P	23 13 34.3	+0.1
ELK	Elko	91.55	42	P	P	23 13 34.3	+0.1
ELK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
O18K	Koktuh Hills	92.15	11	P	P	23 13 36.5	+0.4
TX31	Lajitas Ar. Si	92.26	57	P	P	23 13 37.3	-0.3
TX31				IAmb	IAmb	23 13 48.1	
	comp=Z,14nm,1.9s						
TXAR	Lajitas Array	92.26	57	P	P	23 13 37.9	+0.3
	comp=Z,2.3nm,1.0s,baz=212,slow=6.9,SNR=14						
	comp=Z,2.3nm,1.0s						
MNTX	Cornudas Mount	92.38	54	P	P	23 13 37.4	-0.6
G08A	Pilot Rock	92.52	37	P	P	23 13 38.3	-0.1
G08A				IAmb	IAmb	23 13 39.7	
	comp=Z,7.0nm,1.1s						
DUG	Dugway, Tooele	92.63	44	P	P	23 13 39.2	+0.1
DUG	Dugway, Tooele	92.63	44	P	P	23 13 39.2	+0.1
DUG				pmax	pmax		
	comp=Z,3.0nm,1.2s						
PGC	Sidney	92.65	33	P	P	23 13 39.5	+0.8
NNA	Nana	92.95	106	LR	LR	23 45 51.4	
	comp=Z,181nm,21.6s,baz=238,slow=29						
ANMO	Albuquerque	93.51	51		P	23 13 42.8	-0.5
ANMO	Albuquerque	93.51	51		P	23 13 43.4	+0.1
ANMO				IAmb	IAmb	23 13 44.7	
	comp=Z,4.0nm,1.0s						
ANMO	Albuquerque	93.51	51	P	P	23 13 42.8	-0.5
ANMO	Albuquerque	93.51	51	P	P	23 13 43.4	+0.1
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PV05	Paradox Valley	93.62	47	P	P	23 13 44.4	+0.6
K15K	Wolf Creek Mou	93.63	7	P	P	23 13 44.4	+1.5
K15K				IAmb	IAmb	23 13 56.1	
	comp=Z,7.7nm,0.8s						
HVU	Hansel Valley	93.64	43		P	23 13 43.8	+0.1
HVU				IAmb	IAmb	23 13 45.1	
	comp=Z,8.7nm,1.2s						
HVU	Hansel Valley	93.64	43	P	P	23 13 43.8	+0.1
HVU				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MA2	Magadan	93.75	344		P	23 13 44.3	+0.8
MA2				IAmb	IAmb	23 13 52.4	
	comp=Z,9.1nm,0.9s						
MA2	Magadan	93.75	344	P	P	23 13 44.3	+0.8
MA2				pmax	pmax		
	comp=Z,9.0nm,0.9s						
E09A	Wood Farm, Sta	93.76	37	P	P	23 13 44.0	+0.1
CMAR	Chiang Mai Arr	93.88	289	P	P	23 13 45.0	-0.2
	comp=Z,0.5nm,0.3s,baz=138,slow=2.7,SNR=4.6						
	comp=Z,0.5nm,0.3s						
CMAR	Chiang Mai Arr	93.88	289	P	P	23 13 45.0	-0.2
PLID	Pearl Lake	93.95	39		P	23 13 44.7	-0.4
ATAH	Atahualpa	94.20	101	LR	LR	23 46 33.2	
	comp=Z,150nm,21.5s,baz=227,slow=29						
PZH	PanZhiHua	95.81	297	P	P	23 13 53.6	-0.4
PDAR	Pinedale Array	96.14	43	P	P	23 13 53.7	-1.5
	comp=Z,0.4nm,0.7s,baz=163,slow=5.7,SNR=4.2						
PDAR				PKKPbc	PKKPbc	23 30 43.9	+0.8
	comp=Z,0.9nm,0.8s,baz=90,slow=4.9,SNR=5.3						
	comp=Z,0.4nm,0.7s						
SEY	Seymchan	96.42	347⇑	eP	P	23 13 52.2	-3.4
SEY				pmax	pmax		
	comp=Z,1.0nm,1.4s						
HHC	Hu-ho-hao-te	96.76	314	eP	P	23 13 56.6	-1.3
HHC				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,81nm,4.2s						
HHC				LR	LR		
	comp=Z,89nm,18.6s						
HHC				LR	LR		
	comp=Z,120nm,18.0s						
HHC				LR	LR		
	comp=Z,210nm,17.5s						
LPAZ	La Paz	97.65	114	P	P	23 14 02.3	-0.9
	comp=Z,0.6nm,0.6s,baz=215,slow=7.7,SNR=3.8						
	comp=Z,0.6nm,0.6s						
ILAR	Eielson Array	98.20	13	P	P	23 14 01.3	-2.3
	comp=Z,0.3nm,0.7s,baz=198,slow=4.7,SNR=2.6						
	comp=Z,0.3nm,0.7s						
J26L	Joseph Creek	98.62	14		P	23 14 05.5	-0.2
J26L				IAmb	IAmb	23 14 21.3	
	comp=Z,4.8nm,1.1s						
BILL	Bilibino	99.25	354⇑	eP	Pdif	23 14 02.7	-5.6
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	Songino Array	103.67	318	Pdiff	Pdif	23 14 26.0	-2.6
	comp=Z,0.4nm,0.4s,baz=108,slow=3.2,SNR=2.1						
WMQ	Urumqi	113.75	308	ePKP	PKiKP	23 19 01.9	-3.9
WMQ				LR	LR		
	comp=Z,120nm,22.5s						
BOSA	Boshof	117.07	203	PKP	PKiKP	23 19 14.2	+1.3
	comp=Z,3.3nm,0.8s,baz=207,slow=2.3,SNR=6.4						
MK31	Makanchi Array	118.30	310c	iPKIKP	PKPdf	23 19 12.9	-1.5
MKAR	Makanchi Array	118.30	310	PKP	PKPdf	23 19 13.1	-1.3
	comp=Z,0.7nm,0.6s,baz=64,slow=2.8,SNR=8.2						
MKAR				PKKPbc	PKKPbc	23 29 32.3	-0.7
	comp=Z,0.6nm,0.8s,baz=283,slow=6.1,SNR=4.7						
MAKZ	Makanchi	118.51	310		PKPdf	23 19 13.6	-1.2
MAKZ	Makanchi	118.51	310	PKIKP	PKPdf	23 19 13.6	-1.2
ZALV	Zalesovo Beam	118.56	318	PKP	PKPdf	23 19 12.9	-1.7
	comp=Z,3.4nm,0.7s,baz=90,slow=1.5,SNR=7.0						
KSH	Kashi	120.75	300	PKP	PKPdf	23 19 19.9	+0.4
KURK	Kurchatov	121.58	314		PKPdf	23 19 19.4	-1.1
KURK	Kurchatov	121.58	314	PKIKP	PKPdf	23 19 19.4	-1.1
KURBB	Kurchatov Arra	121.62	313	PKP	PKPdf	23 19 19.1	-1.5
	comp=Z,1.5nm,0.8s,baz=102,slow=2.1,SNR=12						
AAK	Ala-Archa	122.63	304		PKPdf	23 19 22.8	-0.2
AAK	Ala-Archa	122.63	304	PKIKP	PKPdf	23 19 22.8	-0.2
KOOLE	Kule	123.90	200		PKPdf	23 19 26.7	+0.5
SIMJ	Simiganj	125.78	298		PKPdf	23 19 29.6	+0.5
SCHQ	Schefferville	126.25	42	PKP	PKPdf	23 19 27.9	-1.5
	comp=Z,3.7nm,0.9s,baz=276,slow=1.9,SNR=5.6						
BVAR	Borovoye Array	126.93	316	PKP	PKPdf	23 19 29.8	-0.9
	comp=Z,3.8nm,0.7s,baz=90,slow=1.5,SNR=13						
BRVK	Borovoye	127.00	316		PKPdf	23 19 30.5	-0.3
BRVK	Borovoye	127.00	316	PKIKP	PKPdf	23 19 30.5	-0.3
KBS	Kingsbay	131.57	358d	iPKIKP	PKPdf	23 19 36.3	-2.5
SPITS	Spitsbergen Ar	132.09	356	PKP	PKPdf	23 19 39.4	-0.5
	comp=Z,4.2nm,0.9s,baz=23,slow=11,SNR=3.7						
SVE	Sverdlovsk	132.42	321	ePKIKP	PKiKP	23 19 50.2	+8.1
SVE				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ARTI	Arti	133.72	320		PKPdf	23 19 43.5	0.0
ARTI	Arti	133.72	320	PKIKP	PKPdf	23 19 43.5	0.0
ARCES	ARCESS Array B	139.03	348	PKhKP	PKPpre	23 19 45.2	
	comp=Z,2.3nm,0.5s,baz=64,slow=2.8,SNR=7.0						
ARCES				PKP	PKPdf	23 19 52.6	-0.3
	comp=Z,2.3nm,0.5s,baz=54,slow=2.4,SNR=3.3						
KLMR	Klimovskoe	141.26	332	ePKHKP	PKPpre	23 19 51.8	
KLMR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
VRH	Novokhopyorsk	144.57	317	ePKIKP	PKPab	23 20 00.5	-1.4
VRH				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MOS	Moscow	144.85	326	i PKIKP	PKPab	23 20 00.9	-1.9
MOS				pmax	pmax		
	comp=Z,46nm,1.3s						
GOF	Gofitskoye	145.31	306c	ePKIKP	PKPbc	23 20 04.4	-0.3
FINES	FINESS Array B	145.62	340	PKPbc	PKPdf	23 20 03.8	-1.1
	comp=Z,23nm,0.4s,baz=54,slow=4.1,SNR=220						
KBZ	Khabaz	145.63	304	PKPbc	PKPdf	23 20 05.5	+0.1
	comp=Z,6.8nm,0.7s,baz=79,slow=2.3,SNR=11						
LPSR	Galich'ya Gora	145.64	320	ePKP2	PKPdf	23 20 02.9	-2.3
LPSR				pmax	pmax		
	comp=Z,40nm,1.0s						
OBN	Obninsk	145.69	325		PKPdf	23 20 04.5	-0.6
OBN	Obninsk	145.69	325c	iPKIKP	PKPdf	23 20 04.5	-0.6
OBN				i		23 20 09.4	
OBN				pmax	pmax		
	comp=Z,49nm,0.9s						
OBN				MLR	MLR		
	comp=Z,111nm,20.0s						
NSS	Namsos	145.69	353	e	PKPdf	23 20 04.2	-0.7
NSS				i		23 20 13.6	
KIV	Kislovodsk	145.75	304	i PKP2	PKPdf	23 20 06.0	+0.2
KIV				pmax	pmax		
	comp=Z,16nm,1.0s						
KARS	Kars	145.82	298		PKPab	23 20 08.0	+0.9
KARS	Kars	145.82	298	PKP2	PKPab	23 20 08.0	+0.9
VORR	Voronezh	145.86	318	ePKP2	PKPdf	23 20 04.6	-1.0
VORR				pmax	pmax		
	comp=Z,30nm,0.9s						
GEVA	Gevas	145.92	294		PKPdf	23 20 07.3	+0.9
VSR	Storozhevoye	146.06	318	ePKIKP	PKPdf	23 20 04.3	-1.6
VSR				pmax	pmax		
	comp=Z,30nm,1.1s						
VORD	Divnogorie	146.09	317	ePKIKP	PKPdf	23 20 04.8	-1.2
VORD				pmax	pmax		
	comp=Z,40nm,0.9s						
GURO	Guroymak-BITLI	146.72	294		PKPdf	23 20 08.8	+1.1
ERBR	Yeremizino-Bor	146.95	308	i PKP2	PKPdf	23 20 07.8	+0.2
ERBR				pmax	pmax		
	comp=Z,84nm,0.9s						
LABN	Labinsk	147.01	306	i PKP2	PKPdf	23 20 08.8	+1.0
LABN				pmax	pmax		
	comp=Z,20nm,0.7s						
VSU	Vasula	147.71	336c	iPKP2	PKPdf	23 20 09.4	+0.9
DOMB	Dombas	148.42	354	eP	PKPab	23 20 21.5	+5.1
FOO	Floro	149.11	358	eP	PKPab	23 20 23.9	+4.8
NB2	NORSAR Subarra	149.17	352	PKP	PKPbc	23 20 13.9	-1.2
	comp=Z,22nm,0.6s,baz=16,slow=4.4						
NB2	NORSAR Subarra	149.17	352	PKP	PKPbc	23 20 13.9	-1.2
	baz=16,slow=4.4						
NOA	NORSAR Array B	149.17	352	PKPbc	PKPbc	23 20 13.8	-1.3
	comp=Z,22nm,0.6s,baz=14,slow=4.3,SNR=23						
ANN	Anapa	149.26	307	i PKP2	PKPab	23 20 21.0	+0.7
ANN				pmax	pmax		
	comp=Z,67nm,1.0s						
HYA	Hoyanger	149.49	356	eP	PKPab	23 20 25.0	+4.4
SUE	Sulen	149.66	358	eP	PKPab	23 20 25.7	+4.3
HFS	Hagfors	149.68	349	PKPbc	PKPbc	23 20 14.9	-1.4
	comp=Z,6.7nm,0.8s,baz=78,slow=3.5,SNR=20						
SKAR	Skarslia	149.83	354	eP	PKPab	23 20 25.3	+3.1
MNK	Minsk	150.09	330	i PKiKP	PKPbc	23 20 17.4	-0.1
	comp=E,26nm,1.1s						
MNK				i PKiKP	PKPbc	23 20 17.4	-0.1
	comp=N,11nm,0.8s						
MNK				i PKiKP	PKPbc	23 20 17.4	-0.1
	comp=Z,82nm,0.7s,baz=48						
MNK				i PP	PP	23 23 52.0	0.0
MNK				i PPP	PPP	23 27 13.5	
MNK				i SKS	SKSdf	23 27 20.3	+0.1
MNK				i SS	SS	23 43 11.8	+3.0
MNK				i SSS	SSS	23 48 53.2	
MNK	Minsk	150.09	330	i PKIKP	PKPbc	23 20 17.3	-0.1
MNK				i		23 23 52.0	
MNK				i PPP	PPP	23 27 13.5	
MNK				i		23 27 20.2	
MNK				i SS	SS	23 43 11.8	+2.9
MNK				i SSS	SSS	23 48 53.2	
MNK				pmax	pmax		
	comp=N,11nm,0.8s						
MNK				pmax	pmax		
	comp=E,26nm,1.1s						
MNK				pmax	pmax		
	comp=Z,82nm,0.7s						
ASK	Askoy	150.22	357	eP	PKPab	23 20 26.9	+3.2
NACGM	Naroch	150.28	331	LQ	LQ	00 19 18.5	
OSL	Oslo	150.30	352	eP	PKPab	23 20 25.9	+1.9
BER	Bergen	150.32	357	eP	PKPab	23 20 26.4	+2.4
KONO	Kongsberg	150.72	353		PKPbc	23 20 19.3	+0.5
KONO	Kongsberg	150.72	353	PKIKP	PKPbc	23 20 19.3	+0.5
KONO	Kongsberg	150.72	353	eP	PKPab	23 20 27.1	+1.4
ODD1	Odda	150.72	356	eP	PKPab	23 20 27.1	+1.3
STRU	Stroemstad	151.11	351	i P	PKPbc	23 20 19.5	-0.2
BLS5	Blasjo	151.21	356	eP	PKPab	23 20 29.1	+1.2
BEIL	Beino	151.42	287	eP	PKPbc	23 20 21.2	-0.1
SIM	Simferopol'	151.47	309	ePKIKP	PKPbc	23 20 20.7	-0.4
SIM				pmax	pmax		
	comp=Z,49nm,0.9s						
KMY	Karmoy	151.49	357	eP	PKPab	23 20 29.8	+0.9
HWQ	Hawqa	151.61	286	eP	PKPbc	23 20 21.1	-0.8
GHAJ	Ghor Haditha	151.67	280		PKPbc	23 20 22.1	+0.2
SHBL	Chebaa	151.73	284	eP	PKPbc	23 20 22.4	+0.2
AKASG	Malin Array Be	151.82	323	PKPbc	PKPbc	23 20 20.2	-1.4
	comp=Z,10nm,0.7s,baz=50,slow=2.5,SNR=22						
AKBB	Malin Array Si	151.82	323d	iPKIKP	PKPbc	23 20 20.4	-1.2
BHL	Bhannes	151.83	285	eP	PKPbc	23 20 21.8	-0.6
KIEV	Kiev	151.84	323		PKPbc	23 20 20.8	-0.9
KIEV	Kiev	151.84	323	PKIKP	PKPbc	23 20 20.8	-0.9
DQRL	Deir Qamar	151.89	285	eP	PKPbc	23 20 22.6	+0.1
MMAI	Mount Meron Ar	151.99	283	PKPbc	PKPbc	23 20 23.4	+0.7
	comp=Z,9.2nm,0.4s,baz=90,slow=6.7,SNR=148						
HOMB	Homborsund	152.19	353	eP	PKPab	23 20 31.1	-0.8
HOMB	Homborsund	152.19	353	i P	PKPbc	23 20 22.6	+0.4
BORU	Boraas	152.20	348	i P	PKPbc	23 20 22.6	+0.3
SNART	Snartemo	152.24	355	eP	PKPab	23 20 32.1	0.0
SNART	Snartemo	152.24	355	i P	PKiKP	23 20 24.3	+1.7
SUW	Suwalki	152.38	333	ePKP	PKPbc	23 20 22.6	-0.2
ONAU	Onsala	152.57	349	i P	PKPbc	23 20 23.7	+0.6
BLEU	Blekinge	152.79	344	i P	PKPbc	23 20 22.4	-1.2
BRTR	Keskin Array B	153.11	298	PKPbc	PKPbc	23 20 23.8	-1.4
	comp=Z,3.0nm,0.4s,baz=144,slow=5.0,SNR=32						
BEL	Belsk	154.97	333	ePKP	PKPab	23 20 37.6	-6.3
GKP	Gorka Klasztor	155.07	339	ePKP		23 20 36.1	
EKA	Eskdalemuir Ar	155.12	8	PKP	PKPdf	23 20 19.0	-0.8
	comp=Z,0.5nm,0.7s,baz=343,slow=1.5,SNR=1.1						
KOLS	Kolonicke sedl	156.44	326	ePKP	PKPab	23 20 40.5	-10
KOLS				e		23 20 50.3	
STHS	Stebnicka Huta	156.58	328	ePKP2	PKPab	23 20 51.1	+0.1
STHS	Stebnicka Huta	156.58	328	ePKP	PKPab	23 20 51.0	+0.1
OJC	Ojcow	156.62	331	ePKP	PKPdf	23 20 34.8	+13
KSP	Ksiaz	157.44	337	ePKP	PKPab	23 20 42.4	-12
LANS	Liptovska Anna	157.57	330	ePKP2	PKPab	23 20 45.5	-10
LANS	Liptovska Anna	157.57	330	e	PKPab	23 20 45.5	-10
LANS	Liptovska Anna	157.57	330	ePKP	PKPab	23 20 55.3	+0.1
STEB	Steborice	157.65	333	ePKPAB	PKPab	23 20 41.8	-14
OSTC	Ostas	157.71	336	ePKPAB	PKPab	23 21 03.3	+7.5
OSTC				AMS	AMS	00 22 20.0	
	comp=Z,200nm,22.1s						
UPC	Upice	157.82	337	AMS	AMS	00 22 30.0	
	comp=Z,300nm,21.1s						
DPC	Dobruska-Polom	157.85	336	ePKPAB	PKPab	23 20 51.1	-5.3
DPC				AMS	AMS	00 30 30.0	
	comp=Z,200nm,22.1s						
DPC	Dobruska-Polom	157.85	336	ePKP2	PKPab	23 20 51.1	-5.3
DPC				MLR	MLR		
	comp=Z,200nm,22.1s						
MORC	Moravsky Berou	157.87	333	ePKP	PKPab	23 20 56.5	0.0
KRLC	Kraliky	157.91	335	AMS	AMS	00 31 10.0	
	comp=Z,300nm,22.1s						
CLL	Collm	158.03	342	ePKIKP	PKPdf	23 20 25.0	+1.3
CLL				e		23 20 57.0	
CLL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CLL				pmax	pmax		
	comp=Z,10.0nm,1.3s						
CLL	Collm	158.03	342	ePKPdf	PKPdf	23 20 25.0	+1.3
CLL				ex	x	23 20 43.0	
	comp=Z,4.0nm,0.9s						
CLL				ePKPab	PKPab	23 20 57.0	-0.1
	comp=Z,10.0nm,1.3s						
CLL				i x	x	23 21 01.3	
	comp=Z,21nm,0.7s						
BRG	Berggiesshubel	158.16	340	P	PKPab	23 20 56.8	-0.9
BRG				Amp		23 20 59.0	
	comp=Z,4.2nm,0.9s						
BRG				PKPab	sPKPab	23 21 04.7	+4.4
BRG				Amp		23 21 05.8	
	comp=Z,11nm,0.7s						
PVCC	Panska Ves	158.27	339	epPKP	PKPab	23 21 04.8	+6.6
PVCC	Panska Ves	158.27	339	ePKP2	PKPab	23 21 04.8	+6.6
VYHS	Vyhne	158.34	329	ePKP2	PKPab	23 20 58.9	+0.4
VYHS	Vyhne	158.34	329	ePKP	PKPab	23 20 58.8	+0.3
JAVC	Velka Javorina	158.55	332	ePKP	PKPab	23 21 00.2	+0.7
VRAC	Vranov	158.61	334	ePKP	PKPab	23 20 59.4	-0.3
PRA	Prague	158.72	338	epPKP	PKPab	23 21 07.1	+7.0
PRA				AMS	AMS	00 26 40.0	
	comp=Z,200nm,21.9s						
PRA	Prague	158.72	338	ePKP2	PKPab	23 21 07.1	+7.0
PRA				MLR	MLR		
	comp=Z,200nm,21.9s						
GOPC	GO Pecny, Ondr	158.74	338	AMS	AMS	00 38 30.0	
	comp=Z,100nm,17.4s						
PRU	Pruhonice	158.75	338	epPKP	PKPab	23 21 07.4	+7.2
PRU				AMS	AMS	00 26 30.0	
	comp=Z,200nm,20.8s						
PRU	Pruhonice	158.75	338	ePKP2	PKPab	23 21 07.4	+7.2
PRU				MLR	MLR		
	comp=Z,200nm,20.8s						
KRUC	Moravsky	158.89	334	ePKP	PKPab	23 21 00.3	-0.6
MODS	Modra-Piesok	159.09	331	ePKP2	PKPab	23 21 01.7	-0.1
MODS	Modra-Piesok	159.09	331	ePKP	PKPab	23 21 01.7	-0.1
ZVC	Zvikov	159.34	338	AMS	AMS	00 33 00.0	
	comp=Z,200nm,18.6s						
KHC	Kasperske Hory	159.81	338	ePKPDF	PKPdf	23 20 21.5	-4.5
KHC				ePKPAB	PKPab	23 21 07.3	+2.4
KHC				AMS	AMS	00 31 00.0	
	comp=Z,300nm,22.6s						
KHC	Kasperske Hory	159.81	338	ePKP2	PKPab	23 21 07.3	+2.4
KHC				MLR	MLR		
	comp=Z,300nm,22.6s						
CKRC	Cesky Krumlov	159.84	337	AMS	AMS	00 34 50.0	
	comp=Z,200nm,14.8s						
GRF	Grafenberg Arr	159.97	343	ePKP	PKPab	23 21 05.0	-0.5
	baz=23,slow=3.8						
GRF				epPKP	sPKPab	23 21 12.4	+4.2
CONA	Conrad Observa	160.02	333	ePKP	PKPab	23 20 56.0	-10
	comp=Z,0.1nm,0.1s						
GERES	GERESS Array B	160.02	338	PKP	PKPdf	23 20 25.4	-0.9
	comp=Z,0.1nm,0.3s,baz=18,slow=3.7,SNR=1.5						
GERES				PKPab	PKPab	23 21 04.3	-1.6
	comp=Z,1.3nm,0.7s,baz=21,slow=4.4,SNR=5.6						

RONA	**Rosalia, Austr**	**160.03**	**332**	*e*PKP	**PKPab**	**23 20 59.1**	**-6.8**
	comp=Z,1.5nm,0.7s						
MOA	**Molln**	**160.68**	**335**	*i* PKP	PKPab	23 20 59.8	-9.0
	comp=Z,0.2nm,0.2s						
BIOA	**Bad Ischl, Aus**	**161.04**	**336**	*e*pPKP	**PKPab**	**23 21 08.5**	**-1.8**
	comp=Z,1.9nm,0.8s						
SOKA	**Soboth**	**161.36**	**332**	*e*PKP	**PKPab**	**23 21 09.7**	**-2.1**
	comp=Z,3.5nm,0.8s						
LESA	**Schwarzleotal**	**161.59**	**338**	*e*PKP	**PKPab**	**23 21 10.5**	**-2.4**
	comp=Z,1.7nm,0.8s						
OBKA	**Obir**	**161.69**	**333**	*e*pPKP	**PKPab**	**23 21 12.7**	**-0.6**
	comp=Z,2.8nm,0.7s						
BFO	**Black Forest**	**161.89**	**347**		**PKPab**	**23 21 20.3**	**+6.3**
BFO	**Black Forest**	**161.89**	**347**	PKP2	**PKPab**	**23 21 20.3**	**+6.3**
MYKA	**Terra Mystica**	**161.94**	**334**	*i* PKP	**PKPab**	**23 21 11.5**	**-2.8**
	comp=Z,1.5nm,0.6s						
WATA	**Walderalm**	**162.02**	**340**	*e*pPKP	**PKPab**	**23 21 14.2**	**-0.6**
	comp=Z,5.1nm,0.7s						
WTTA	**Wattenberg**	**162.07**	**339**	*e*pPKP	**PKPab**	**23 21 15.4**	**+0.4**
	comp=Z,2.1nm,0.7s						
RETA	**Reutte**	**162.12**	**341**	*e*pPKP	**PKPab**	**23 21 15.0**	**-0.1**
	comp=Z,10nm,0.7s						
MOTA	**Moosalm**	**162.15**	**340**	*e*pPKP	**PKPab**	**23 21 15.6**	**+0.3**
	comp=Z,10nm,0.8s						
SQTA	**Sankt Quirin**	**162.23**	**340**	*e*pPKP	**PKPdf**	**23 20 27.7**	**-1.0**
	comp=Z,1.1nm,0.8s						
SQTA				*i* pPKP	**PKPab**	**23 21 14.8**	**-0.8**
	comp=Z,7.5nm,0.9s						
ABTA	**Abfaltersbach**	**162.24**	**337**	*i* PKP	**PKPab**	**23 21 11.5**	**-4.2**
	comp=Z,0.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**162.45**	**178**	PKP	**PKPdf**	**23 20 28.4**	**-1.4**
	comp=Z,95nm,0.4s,baz=224,slow=1.9,SNR=2.3						
TORD				PKPab	**PKPab**	**23 21 17.4**	**+0.3**
	comp=Z,45nm,0.3s,baz=170,slow=2.4,SNR=1.6						
DAVA	**Damuels**	**162.53**	**343**	*i* pPKP	**PKPab**	**23 21 14.6**	**-2.4**
	comp=Z,18nm,0.7s						
FETA	**Feichten**	**162.55**	**341**	*e*pPKP	**PKPab**	**23 21 15.3**	**-1.8**
	comp=Z,5.8nm,0.8s						
ESDC	**Sonseca Array**	**169.69**	**29**	PKP	**PKPdf**	**23 20 34.3**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=347,slow=2.1,SNR=3.0						
ESDC				PKPab	**PKPab**	**23 21 47.0**	**-1.7**
	comp=Z,1.1nm,0.9s,baz=315,slow=3.8,SNR=5.6						

*VIE **21** 23:07:02.2±0.2, 46°.32N×12°.67E, h8km±3km, mb1.6/11, ml2.0/16, Error ellipse: s-maj=1.9km s-min=1.1km az=177.0   15 km SW of Ampezzo*

ROM 21 23:07:01.3±0.0**, 46°.297N**±0°.004×**12°.669E**±0°.003**, h10**km**, ML1.9**/61**, 11C-5D, Error ellipse: s-maj=0.4km s-min=0.1km az=190.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
STAL	**STALIGIAL**	**0.05**	**142**	⇑*i*P	Pg	23 07 03.9	+0.6
STAL				S	Sg	23 07 05.3	+0.6
STAL				AML	AML		
	comp=E,5810µm,0.3s						
STAL				AML	AML		
	comp=N,6255µm,0.6s						
STAL				AML	AML		
	comp=E,5810µm,0.4s						
STAL				AML	AML		
	comp=N,6255µm,0.6s						
STAL				AML	AML		
	comp=E,3820µm,1.3s						
STAL				AML	AML		
	comp=N,4680µm,0.6s						
STAL				AML	AML		
	comp=E,3481µm,0.1s						
STAL				AML	AML		
	comp=N,3811µm,0.1s						
STAL				AML	AML		
	comp=E,4984µm,0.1s						
STAL				AML	AML		
	comp=N,5725µm,0.1s						
MLNI	**Malnisio**	**0.15**	**196**	⇑*e*Pg	Pg	23 07 05.4	+0.7
MLNI				*e*Sg	Sg	23 07 08.1	+1.0
CIMO	**Cimolais**	**0.16**	**275**	⇓*e*Pg	Pg	23 07 05.3	+0.5
CIMO				*e*Sg	Sg	23 07 07.8	+0.6
CIMO	**Cimolais**	**0.16**	**275**	P	Pg	23 07 05.3	+0.5
CIMO				S	Sg	23 07 07.9	+0.6
CIMO				AML	AML		
	comp=E,462µm,0.3s						
CIMO				AML	AML		
	comp=N,796µm,0.1s						
CIMO				AML	AML		
	comp=E,447µm,0.3s						
CIMO				AML	AML		
	comp=N,775µm,0.1s						
CIMO				AML	AML		
	comp=N,796µm,0.1s						
CIMO				AML	AML		
	comp=N,775µm,0.1s						
CIMO				AML	AML		
	comp=E,421µm,0.1s						
CIMO				AML	AML		
	comp=E,414µm,0.1s						
FDS	**Forni di Sopra**	**0.17**	**335**	P	Pg	23 07 05.7	+0.6
FDS				S	Sg	23 07 08.7	+0.9
DST2	**Trieste**	**0.18**	**106**	⇑*i*P	Pg	23 07 05.8	+0.6
DST2				S	Sg	23 07 09.1	+1.2
DST2				AML	AML		
	comp=N,872µm,1.6s						
DST2				AML	AML		
	comp=E,644µm,0.2s						
DST2				AML	AML		
	comp=N,872µm,1.6s						
DST2				AML	AML		
	comp=E,644µm,0.2s						
DST2				AML	AML		
	comp=N,820µm,0.1s						
CSMI	**Casera Mimoias**	**0.22**	**357**	⇓*e*Pg	Pg	23 07 06.5	+0.6
CSMI				*e*Sg	Sg	23 07 09.9	+0.9
CLUD	**Cludinico**	**0.22**	**43**	⇓*e*Pg	Pg	23 07 06.3	+0.5
CLUD				*e*Sg	Sg	23 07 09.8	+0.9
CLUD	**Cludinico**	**0.22**	**43**	P	Pg	23 07 06.4	+0.5
CLUD				S	Sg	23 07 09.8	+0.9
CLUD				AML	AML		
	comp=E,204µm,0.5s						
CLUD				AML	AML		
	comp=N,194µm,0.5s						
CLUD				AML	AML		
	comp=E,203µm,0.5s						
CLUD				AML	AML		
	comp=N,141µm,0.3s						
CLUD				AML	AML		
	comp=N,157µm,0.4s						
CLUD				AML	AML		
	comp=E,127µm,0.3s						
MPRI	**Monte Prat**	**0.23**	**104**	⇓*e*Pg	Pg	23 07 06.7	+0.7
MPRI				*e*Sg	Sg	23 07 10.1	+0.9
MPRI	**Monte Prat**	**0.23**	**104**	P	Pg	23 07 06.7	+0.6
MPRI				S	Sg	23 07 10.5	+1.3
MPRI				AML	AML		
	comp=N,308µm,1.2s						
MPRI				AML	AML		
	comp=N,401µm,1.2s						
MPRI				AML	AML		
	comp=N,307µm,1.2s						
MPRI				AML	AML		
	comp=E,322µm,0.6s						
MPRI				AML	AML		
	comp=E,257µm,0.6s						
MPRI				AML	AML		
	comp=N,308µm,1.2s						
MPRI				AML	AML		
	comp=E,188µm,0.3s						
MPRI				AML	AML		
	comp=N,289µm,0.2s						
MPRI				AML	AML		
	comp=E,244µm,0.1s						
MPRI				AML	AML		
	comp=N,388µm,0.4s						
CSO	**Casso**	**0.24**	**265**	⇑*e*Pg	Pg	23 07 06.8	+0.5
CSO				*e*Sg	Sg	23 07 10.5	+0.9
APGO	**Alpago**	**0.26**	**236**	⇓*e*Pg	Pg	23 07 07.3	+0.7
APGO				*e*Sg	Sb	23 07 11.4	-1.2
FUSE	**Fusea**	**0.26**	**63**	⇑*e*Pg	Pg	23 07 07.0	+0.5
FUSE				*e*Sg	Sg	23 07 11.1	+1.0
PNAL	**Ponte nelle Va**	**0.28**	**244**	P	Pg	23 07 07.7	+0.6
PNAL				S	Sg	23 07 11.8	+0.9
DANT	**Danta di Cador**	**0.29**	**339**	P	Pb	23 07 08.2	-0.6
DANT				S	Sb	23 07 13.0	-0.8
BOO	**Bordano**	**0.30**	**85**	⇑*e*Pg	Pg	23 07 07.5	+0.2
BOO				*e*Sg	Sg	23 07 12.2	+0.8
BUA	**Buia**	**0.33**	**104**	*e*Pg	Pb	23 07 08.5	-0.7
BUA				*e*Sg	Sb	23 07 13.4	-1.1
GEPF	**Gemona**	**0.33**	**94**	P	Pg	23 07 08.4	+0.6
GEPF				S	Sb	23 07 13.8	-0.7
GEPF				AML	AML		
	comp=E,674µm,0.2s						
GEPF				AML	AML		
	comp=N,486µm,0.3s						
GEPF				AML	AML		
	comp=E,675µm,0.2s						
GEPF				AML	AML		
	comp=N,486µm,0.3s						
CAE	**Caneva**	**0.33**	**209**	⇑*e*Pg	Pg	23 07 08.6	+0.6
CAE				*e*Sg	Sb	23 07 13.8	-1.1
ZOU	**Zoufplan**	**0.34**	**39**	⇑*e*Pg	Pg	23 07 08.6	+0.5
ZOU				*e*Sg	Sg	23 07 13.4	+0.8
ZOU	**Zoufplan**	**0.34**	**39**	P	Pg	23 07 08.6	+0.6
ZOU				S	Sb	23 07 13.9	-1.2
FRE8	**Fregona**	**0.36**	**218**	P	Pb	23 07 09.3	-0.5
BAD	**Bernadia**	**0.40**	**98**	⇑*e*Pg	Pg	23 07 09.7	+0.4
BAD				*e*Sg	Sb	23 07 15.9	-0.9
AFL	**Alpe Faloria**	**0.41**	**305**	*e*Pg	Pb	23 07 10.3	-0.6
AFL				*e*Sg	Sb	23 07 16.2	-1.1
PLRO	**Paularo**	**0.42**	**52**	⇑*e*Pg	Pg	23 07 10.2	+0.6
PLRO				*e*Sg	Sb	23 07 16.3	-1.0
VINO	**Villanova**	**0.43**	**95**	⇑*e*Pg	Pg	23 07 10.0	+0.3
VINO				*e*Sg	Sb	23 07 16.6	-0.9
VINO	**Villanova**	**0.43**	**95**	P	Pg	23 07 10.0	+0.3
VINO				S	Sb	23 07 17.0	-0.6
VINO				AML	AML		
	comp=E,171µm,0.2s						
VINO				AML	AML		
	comp=N,157µm,0.9s						
VINO				AML	AML		
	comp=E,171µm,0.2s						
VINO				AML	AML		
	comp=N,137µm,0.2s						
ABTA	**Abfaltersbach**	**0.46**	**347**	*e*Pg	Pb	23 07 11.2	-0.5
	comp=N,4.3nm,0.2s,SNR=38						
ABTA				*i* Sg	Sb	23 07 17.8	-0.9
	comp=N,9.4nm,0.2s						
FAU	**Forcella Aurin**	**0.48**	**262**	*e*Pg	Pb	23 07 11.5	-0.5
FAU				*e*Sg	Sb	23 07 18.8	-0.4
PTCC	**Patocco-Chiusa**	**0.49**	**77**	P	Pg	23 07 10.9	+0.1
PTCC				S	Sb	23 07 18.4	-0.9
PTCC				AML	AML		
	comp=E,38µm,0.2s						
PTCC				AML	AML		
	comp=N,41µm,0.8s						
PTCC				AML	AML		
	comp=E,38µm,0.2s						
PTCC				AML	AML		
	comp=N,37µm,0.1s						
VARN	**Col Varnada, M**	**0.50**	**232**	*e*Pg	Pb	23 07 11.9	-0.3
VARN	**Col Varnada, M**	**0.50**	**232**	P	Pg	23 07 10.9	-0.1
COLI	**Coloredo**	**0.52**	**108**	*e*Pg	Pb	23 07 12.0	-0.5
ED06	**Collalto TV**	**0.54**	**216**	*e*Pg	Pb	23 07 12.7	-0.2
ROBS	**Robic**	**0.59**	**95**	*i* Pg	Pg	23 07 12.4	-0.3
ROBS				*i* Sg	Sb	23 07 21.9	-0.2
ROBS				IAML		23 07 24.3	
	comp=Z,3.3nm,0.1s						
LSR	**Lussari**	**0.62**	**73**	*e*Pg	Pb	23 07 14.0	-0.4
MTLO	**Montello**	**0.63**	**220**	*e*Pg	Pb	23 07 14.2	-0.1
ACOM	**Acomizza, Ital**	**0.64**	**66**	*e*Pg	Pb	23 07 14.3	-0.3
ACOM	**Acomizza, Ital**	**0.64**	**66**	P	Pb	23 07 14.5	-0.2
ACOM				S	Sb	23 07 23.8	+0.1
ACOM				AML	AML		
	comp=N,79µm,1.5s						
ACOM				AML	AML		
	comp=E,70µm,0.2s						
ACOM				AML	AML		
	comp=E,70µm,0.2s						
ACOM				AML	AML		
	comp=N,71µm,0.2s						
ACOM				AML	AML		
	comp=N,71µm,0.2s						
ACOM				AML	AML		
	comp=E,87µm,0.4s						
PRED	**Cave del Predi**	**0.64**	**76**	*e*Pg	Pb	23 07 14.4	-0.2
DRE	**Drenchia**	**0.69**	**100**	*e*Pg	Pb	23 07 15.2	-0.3
SABO	**M.te Sabotino**	**0.72**	**116**	*e*Pg	Pb	23 07 16.7	+0.7
CGRP	**Cima Grappa**	**0.73**	**236**	*e*Pg	Pb	23 07 16.6	+0.3
CADS	**Cadrg**	**0.74**	**95**	*i* Pg	Pg	23 07 15.4	-0.3
CADS				*i* Sg	Sb	23 07 27.2	+0.5
CADS				IAML		23 07 29.5	
	comp=Z,3.9nm,0.1s						
MYKA	**Terra Mystica**	**0.75**	**63**	*e*Pg	Pb	23 07 16.9	+0.3
	comp=Z,0.5nm,0.2s						
MYKA				*e*Sg	Sb	23 07 27.3	+0.4
	comp=Z,2.4nm,0.2s						
VOJS	**Vojsko**	**0.89**	**107**	*i* Pg	Pg	23 07 17.9	-0.4
VOJS				*i* Sg	Sn	23 07 32.6	-0.3
VOJS				IAML		23 07 36.3	
	comp=Z,8.9nm,0.1s						
GORS	**Gorjuse**	**0.92**	**88**	*i* Pg	Pg	23 07 18.6	-0.5
GORS				*i* Sg	Sn	23 07 34.0	+0.2
GORS				IAML		23 07 40.4	
	comp=Z,3.5nm,0.1s						
JAVS	**Javornik**	**1.05**	**112**	*i* Pg	Pn	23 07 22.5	+0.3
JAVS				*i* Sg	Sn	23 07 38.2	+1.1
JAVS				IAML		23 07 40.1	
	comp=Z,4.0nm,0.1s						
CRNS	**Crni Vrh**	**1.13**	**100**	*i* Pg	Pn	23 07 23.9	+0.7
CRNS				IAML		23 07 43.7	
	comp=Z,5.6nm,0.1s						
LESA	**Schwarzleotal**	**1.13**	**0**	*e*Sg	Sn	23 07 38.9	0.0
	comp=Z,5.4nm,0.2s						
WTTA	**Wattenberg**	**1.20**	**324**	*e*Pg	Pg	23 07 25.2	+0.9
	comp=Z,1.8nm,0.2s,SNR=9.0						
WTTA				*e*Sg	Sn	23 07 41.0	+0.2
	comp=Z,0.7nm,0.1s						
SKDS	**Skadanscina**	**1.20**	**128**	*i* Pg	Pb	23 07 23.1	-1.2
SKDS				*i* Pn	Pg	23 07 24.9	+0.4
SKDS				*i* Sg	Sn	23 07 41.8	+1.1
MOZS	**Mozjanca**	**1.23**	**89**	*i* Pg	Pg	23 07 26.2	+1.3
MOZS				*i* Sg	Sn	23 07 44.3	+2.9
MOZS				IAML		23 07 47.1	
	comp=Z,3.4nm,0.1s						
WATA	**Walderalm**	**1.28**	**325**	*e*Pg	Pg	23 07 26.4	+0.4
	comp=Z,1.2nm,0.2s						
WATA				*e*Sg	Sb	23 07 42.4	+0.1
	comp=Z,2.6nm,0.2s						
OBKA	**Obir**	**1.32**	**80**	*e*Pg	Pg	23 07 26.6	0.0
	comp=Z,0.7nm,0.2s						
OBKA				Sg	Sg	23 07 45.6	+1.9
	comp=Z,5.7nm,0.3s,SNR=8.3						
CEY	**Cerknica**	**1.35**	**114**	*i* Pg	Pg	23 07 27.4	+0.2
CEY				*e*Sg	Sg	23 07 46.6	+2.0
CEY				IAML		23 07 50.8	
	comp=Z,3.4nm,0.1s						
SQTA	**Sankt Quirin**	**1.36**	**313**	*e*Pg	Pg	23 07 28.5	+1.0
	comp=Z,0.1nm,0.1s						
SQTA				*e*Sg	Sg	23 07 47.3	+2.1
	comp=Z,3.1nm,0.4s						
MOTA	**Moosalm**	**1.50**	**315**	*e*Pg	Pg	23 07 31.5	+1.4
	comp=Z,1.1nm,0.2s						
MOTA				*e*Sg	Sg	23 07 50.9	+1.3
	comp=Z,2.7nm,0.2s						
FETA	**Feichten**	**1.52**	**299**	*e*Pg	Pg	23 07 30.9	+0.4
	comp=Z,0.3nm,0.1s,SNR=5.1						
FETA				*e*Sg	Sg	23 07 50.5	+0.2
	comp=Z,1.7nm,0.4s						
BIOA	**Bad Ischl, Aus**	**1.54**	**25**	*e*Pg	Pg	23 07 31.9	+1.0
	comp=Z,1.8nm,0.2s						
BIOA				*e*Sg	Sg	23 07 53.1	+2.1
	comp=Z,1.1nm,0.2s						
VISS	**Visnje**	**1.59**	**107**	*i* Pg	Pg	23 07 31.4	-0.4
VISS				*i* Sg	Sg	23 07 53.2	+0.7
VISS				IAML		23 07 54.1	
	comp=Z,8.1nm,0.3s						
PDKS	**Podkum**	**1.64**	**97**	*i* Pg	Pb	23 07 32.0	+0.4
PDKS				*e*Sg	Sg	23 07 53.4	-0.5
PDKS				IAML		23 07 56.4	
	comp=Z,1.9nm,0.1s						
SOKA	**Soboth**	**1.68**	**76**	*e*Pn	Pb	23 07 31.8	-0.6
	comp=Z,0.4nm,0.3s						
SOKA				*e*Sn	Sg	23 07 55.0	-0.2
	comp=Z,1.0nm,0.3s						
GBRS	**Gornja Briga**	**1.68**	**116**	*i* Pg	Pb	23 07 32.6	+0.3
GBRS				*i* Sg	Sg	23 07 56.4	+1.1
GBRS				IAML		23 07 58.6	
	comp=Z,1.9nm,0.1s						
RETA	**Reutte**	**1.77**	**313**	*e*Pg	Pg	23 07 36.3	+1.1
	comp=Z,0.8nm,0.2s						
RETA				*e*Sg	Sg	23 08 01.4	+3.3
	comp=Z,1.8nm,0.2s						
MOA	**Molln**	**1.90**	**35**	*e*Pn	Pn	23 07 34.7	+0.8
	comp=Z,0.2nm,0.1s						
MOA				*e*Sg	Sg	23 08 02.5	+0.2
	comp=Z,8.5nm,0.0s						
DAVA	**Damuels**	**2.16**	**298**	*e*Pg	Pg	23 07 42.8	+0.1
	comp=Z,0.3nm,0.1s						
DAVA				*e*Sg	Sg	23 08 12.6	+2.0
	comp=Z,3.9nm,0.3s						

*IDC **21** 23:08:36.4±0.7, 30°.54S×177°.66W, h0km, mb4.3/5, mbtmp4.3/5, Error ellipse: s-maj=26.4km s-min=17.1km az=88.0*

*NEIC **21** 23:08:38.8±2.5, 30°.53S±0°.02×177°.7W±0°.2, h10km±1km, mb4.7/17, Error ellipse: s-maj=26.2km s-min=4.1km az=88.0*

ISC 21 23:08:41.1±0.6**, 30°.70S**±0°.05×**177°.7W**±0°.1**, h33**km**, n67, σ1^{s}.91**/71**, mb4.6**/15**, 4C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.45**	**354**	P	**Pn**	**23 09 02.8**	**-2.2**
GLKZ				S	**Sn**	**23 09 22.9**	**+0.2**
RAO	**Raoul Island**	**1.46**	**354**		**Pn**	**23 09 02.1**	**-3.0**
RAO	**Raoul Island**	**1.46**	**354**	Pn	**Pn**	**23 09 02.9**	**-2.1**
	243nm,0.3s,baz=198,slow=6.4,SNR=8.0						
RAO				Sn	**Sn**	**23 09 21.9**	**-1.1**
	624nm,0.3s,baz=203,slow=24,SNR=7.3						
RIZ	**Raoul Island**	**1.46**	**353**	P	**Pn**	**23 09 02.9**	**-2.3**
RIZ				S	**Sn**	**23 09 21.5**	**-1.7**
WMGZ	**Waiomatatini S**	**7.78**	**203**	S	**Sn**	**23 11 57.2**	**-1.7**
PKGZ	**Pakihiroa**	**7.94**	**205**	P	**Pn**	**23 10 30.7**	**-3.5**
PKGZ				S	**Sn**	**23 12 01.8**	**-1.1**
HAZ	**Te Kaha**	**7.95**	**207**	P	**Pn**	**23 10 33.5**	**-0.8**
HAZ				S	**Sn**	**23 12 05.2**	**+2.1**
PUZ	**Puketiti**	**8.06**	**203**	P	**Pn**	**23 10 31.7**	**-4.1**
PUZ				S	**Sn**	**23 12 03.3**	**-2.6**
RUGZ	**Raukumara Rang**	**8.18**	**206**	P	**Pn**	**23 10 35.6**	**-1.9**
RUGZ				S	**Sn**	**23 12 08.7**	**-0.1**
TWGZ	**Tauwhareparae**	**8.25**	**204**	P	**Pn**	**23 10 35.1**	**-3.4**
TWGZ				S	**Sn**	**23 12 09.3**	**-1.3**
WCZ	**Waipu Caves**	**8.44**	**230**	P	Pn	23 10 48.8	+7.9
OUZ	**Omahuta**	**8.56**	**236**	P	Pn	23 10 49.1	+6.4
URZ	**Urewera**	**8.65**	**208**	Pn	**Pn**	**23 10 39.2**	**-4.7**
	1.3nm,0.3s,baz=22,slow=19,SNR=1.9						
URZ				Sn	**Sn**	**23 12 18.1**	**-2.2**
	12nm,0.3s,baz=71,slow=23,SNR=8.3						
URZ	**Urewera**	**8.65**	**208**	P	**Pn**	**23 10 40.3**	**-3.6**
RAGZ	**Rawiri**	**8.74**	**206**	P	**Pn**	**23 10 41.1**	**-4.1**
RAGZ				S	**Sn**	**23 12 21.3**	**-1.3**
SNGZ	**Shannon Statio**	**9.02**	**205**	P	**Pn**	**23 10 48.9**	**-0.1**
RPZ	**Rata Peaks**	**15.74**	**211**	Pn	Pn	23 12 12.3	-8.0
	0.8nm,0.3s,baz=78,slow=21,SNR=1.1						
RPZ				Sn	Sn	23 14 56.2	-17
	1.5nm,0.3s,baz=18,slow=18,SNR=2.1						
DZM	**Mont Dzumac**	**16.57**	**297**	P	**P**	**23 12 32.8**	**-0.5**
DZM	**Mont Dzumac**	**16.57**	**297**	Pn	**P**	**23 12 33.1**	**-0.2**
	0.2nm,0.3s,baz=94,slow=16,SNR=3.8						
ODZ	**Otahua Downs**	**16.98**	**209**	Pn	**Pn**	**23 12 35.0**	**-0.9**
ARMA	**Armidale**	**26.34**	**263**	P	**P**	**23 14 17.6**	**+3.3**
ARMA				IAmb	IAmb	23 14 23.1	
	comp=Z,10nm,0.9s						
EIDS	**Eidsvold**	**27.98**	**273**	P	**P**	**23 14 30.4**	**+1.6**
EIDS				IAmb	IAmb	23 14 46.1	
	comp=Z,12nm,1.1s						
TOO	**Toolangi**	**31.05**	**247**	P	**P**	**23 14 55.9**	**-0.2**
TOO				IAmb	IAmb	23 14 57.4	
	comp=Z,6.1nm,1.2s						
CTAO	**Charters Tower**	**34.07**	**279**	P	**P**	**23 15 24.6**	**+1.9**
STKA	**Stephens Creek**	**34.63**	**257**	P	**P**	**23 15 29.1**	**+1.8**
STKA	**Stephens Creek**	**34.63**	**257**	P	**P**	**23 15 29.3**	**+1.9**
	comp=Z,11nm,0.7s,baz=82,slow=9.5,SNR=16						
	comp=Z,11nm,0.7s						
BBOO	**Buckleboo**	**39.11**	**255**		**P**	**23 16 06.5**	**+1.1**
BBOO				IAmb	IAmb	23 16 11.6	
	comp=Z,30nm,1.1s						
COEN	**Coen**	**39.57**	**286**	P	**P**	**23 16 09.0**	**-0.5**
COEN				IAmb	IAmb	23 16 12.3	
	comp=Z,23nm,1.4s						
AS31	**Alice Springs**	**43.32**	**267**	P	**P**	**23 16 40.4**	**+0.2**
ASAR	**Alice Springs**	**43.32**	**267**	P	**P**	**23 16 40.6**	**+0.4**
	comp=Z,3.6nm,0.7s,baz=104,slow=7.5,SNR=27						
ASAR				PcP	**PcP**	**23 18 31.1**	**+2.4**
	comp=Z,0.3nm,0.4s,baz=107,slow=4.4,SNR=1.0						
ASAR				ScP	**ScP**	**23 22 21.0**	**+3.4**
	comp=Z,1.5nm,1.0s,baz=79,slow=2.8,SNR=5.5						
	comp=Z,3.6nm,0.7s						
WR8	**Warramunga Arr**	**44.19**	**272**	P	**P**	**23 16 46.9**	**-0.3**
WR8				IAmb	IAmb	23 17 05.1	
	comp=Z,20nm,1.5s						
WRA	**Warramunga Arr**	**44.34**	**272**	P	**P**	**23 16 48.3**	**-0.1**
	comp=Z,5.5nm,0.7s,baz=112,slow=7.7,SNR=22						
	comp=Z,5.5nm,0.7s						
WB0	**Warramunga Arr**	**44.36**	**273**	P	**P**	**23 16 48.8**	**+0.3**
WB0				IAmb	IAmb	23 16 53.9	
	comp=Z,5.9nm,0.6s						
KNRA	**Kununurra**	**50.96**	**274**	P	**P**	**23 17 38.8**	**-1.0**
KNRA				IAmb	IAmb	23 17 43.9	
	comp=Z,23nm,1.2s						
FITZ	**Fitzroy Crossi**	**52.59**	**270**	P	**P**	**23 17 52.3**	**+0.4**
NWAO	**Narrogin (SRO)**	**54.50**	**249**	P	**P**	**23 18 08.4**	**+2.6**
QSPA	**South Pole Qui**	**59.41**	**180**	P	**P**	**23 18 42.2**	**+2.0**
QSPA				IAmb	IAmb	23 18 51.6	
	comp=Z,9.1nm,0.8s						
QSPA	**South Pole Qui**	**59.41**	**180**	P	**P**	**23 18 41.5**	**+1.3**
	comp=Z,1.2nm,0.9s,baz=36,slow=2.5,SNR=17						
	comp=Z,1.2nm,0.9s						
TROLL	**Troll, Antarti**	**77.57**	**180**	⇑P	**P**	**23 20 31.2**	**-2.3**
	comp=Z,140nm,0.8s						
SNAA	**Sanae**	**77.85**	**178**	⇑P	**P**	**23 20 33.2**	**-1.7**
	comp=Z,49nm,0.7s						
SNAA	**Sanae**	**77.85**	**178**	P	**P**	**23 20 38.2**	**+3.2**
	comp=Z,0.8nm,0.7s,baz=187,slow=13,SNR=6.0						
	comp=Z,0.8nm,0.7s						
VNA3	**Neumayer Olymp**	**77.99**	**176**	⇑P	**P**	**23 20 35.5**	**-0.2**
	comp=Z,12nm,0.6s						
VNA2	**Neumayer--Watz**	**78.42**	**177**	⇑P	**P**	**23 20 41.3**	**+3.2**
	comp=Z,5.9nm,0.6s,baz=185,slow=4.4						
H03S2	**Juan Fernandez**	**80.11**	**123**	T	T	00 50 03.0	
	baz=238,slow=74						
H03S1	**Juan Fernandez**	**80.12**	**123**	T	T	00 50 01.6	
	baz=238,slow=74						
H03S3	**Juan Fernandez**	**80.12**	**123**	T	T	00 50 00.8	
	baz=238,slow=74						
H03N3	**Juan Fernandez**	**80.30**	**123**	T	T	00 50 24.2	
	baz=241,slow=72						
H03N2	**Juan Fernandez**	**80.30**	**123**	T	T	00 50 16.8	
	baz=241,slow=72						
H03N1	**Juan Fernandez**	**80.32**	**123**	T	T	00 50 16.3	
	baz=241,slow=72						
PCA	**Pinnacle**	**95.58**	**18**	P	**P**	**23 22 04.8**	**+2.3**
MKAR	**Makanchi Array**	**118.14**	**310**	PKP	**PKPdf**	**23 27 23.9**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=80,slow=2.8,SNR=5.1						
KURBB	**Kurchatov Arra**	**121.46**	**313**	PKP	**PKPdf**	**23 27 30.4**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=99,slow=1.8,SNR=5.1						
BVAR	**Borovoye Array**	**126.78**	**316**	PKP	**PKiKP**	**23 27 41.9**	**+0.6**
	comp=Z,2.5nm,0.8s,baz=119,slow=1.9,SNR=12						
ARCES	**ARCESS Array B**	**138.93**	**348**	PKP	**PKPdf**	**23 28 02.1**	**-1.1**
	comp=Z,2.5nm,0.9s,baz=10,slow=7.5,SNR=2.1						
KBZ	**Khabaz**	**145.47**	**304**	PKPbc	**PKPab**	**23 28 16.2**	**+0.3**
	comp=Z,2.0nm,0.8s,baz=72,slow=3.2,SNR=4.6						
FINES	**FINESS Array B**	**145.51**	**340**	PKPbc	**PKPdf**	**23 28 14.5**	**-0.5**
	comp=Z,2.6nm,0.4s,baz=52,slow=4.2,SNR=58						
NB2	**NORSAR Subarra**	**149.08**	**352**	PKP	**PKiKP**	**23 28 26.0**	**-0.5**
	comp=Z,3.3nm,0.8s,baz=15,slow=4.4						
NOA	**NORSAR Array B**	**149.08**	**352**	PKPbc	**PKPbc**	**23 28 25.3**	**0.0**
	comp=Z,3.3nm,0.7s,baz=16,slow=3.0,SNR=12						
HFS	**Hagfors**	**149.59**	**349**	PKPbc	**PKPbc**	**23 28 26.1**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=60,slow=5.7,SNR=2.2						
AKASG	**Malin Array Be**	**151.68**	**323**	PKPbc	**PKPbc**	**23 28 30.8**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=55,slow=1.9,SNR=2.0						
EIL	**Elat**	**151.78**	**276**	PKPbc	**PKiKP**	**23 28 32.5**	**-0.5**
	comp=Z,4.9nm,0.8s,baz=1.0,slow=2.9,SNR=5.3						
MMAI	**Mount Meron Ar**	**151.82**	**283**	PKPbc	**PKiKP**	**23 28 33.8**	**+0.7**
	comp=Z,2.4nm,0.6s,baz=68,slow=6.6,SNR=5.2						
BRTR	**Keskin Array B**	**152.94**	**298**	PKP	**PKPdf**	**23 28 28.2**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=44,slow=4.4,SNR=1.3						
BRTR				PKPbc	**PKPbc**	**23 28 34.5**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=84,slow=3.8,SNR=5.8						
CLL	**Collm**	**157.92**	**342**	*e*PKPab	**PKPab**	**23 29 06.0**	**-1.1**
CLL				*i* x	x	23 29 13.9	
	comp=Z,4.0nm,0.9s						
GERES	**GERESS Array B**	**159.90**	**338**	PKPab	**PKPab**	**23 29 15.5**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=34,slow=5.0,SNR=4.7						
TORD	**Torodi Ar. Bea**	**162.52**	**178**	PKPab	**PKPab**	**23 29 28.0**	**+0.1**
	comp=Z,47nm,0.3s,baz=191,slow=3.8,SNR=1.4						

ESDC	Sonseca Array	169.71	28	PKPab	PKPab	23 29 58.6	-0.6
	comp=Z,0.9nm,1.1s,baz=321,slow=1.6,SNR=3.5						

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*IDC **21** 23:14:01.0±1.6, 30°.63S×177°.47W, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=40.6km s-min=22.4km az=87.0*

ISC 21 23:14:06.0±1.5**, 30°.59S**±0°.10×**177°.5W**±0°.3**, h33**km**, n7,** σ**1s.06**/8**, mb3.9**/4**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.40	344	Pn	Pn	23 14 29.4	+0.3
	194nm,0.3s,baz=100,slow=18,SNR=5.6						
RAO				Sn	Sb	23 14 49.5	+0.5
	317nm,0.3s,baz=103,slow=22,SNR=7.1						
STKA	Stephens Creek	34.88	257	P	P	23 20 55.0	+0.6
	0.8nm,0.4s,baz=149,slow=18,SNR=2.0						
	0.8nm,0.4s						
ASAR	Alice Springs	43.56	267	P	P	23 22 06.7	-0.3
	0.6nm,0.6s,baz=108,slow=7.4,SNR=4.9						
	0.6nm,0.6s						
WRA	Warramunga Arr	44.56	272	P	P	23 22 14.1	-0.9
	0.9nm,0.5s,baz=112,slow=7.9,SNR=7.1						
	0.9nm,0.5s						
QSPA	South Pole Qui	59.52	180	P	P	23 24 06.9	+1.1
	2.1nm,1.2s,baz=18,slow=3.2,SNR=1.4						
	2.1nm,1.2s						
FINES	FINESS Array B	145.49	340	PKPbc	PKPbc	23 33 39.2	-0.8
	1.2nm,0.5s,baz=62,slow=4.2,SNR=25						
AKASG	Malin Array Be	151.73	323	PKPbc	PKPbc	23 33 55.2	-1.5
	0.3nm,0.5s,baz=59,slow=2.1,SNR=2.1						

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*JMA **21** 23:18:41.0±0.6, 45°N±3°×15°0E±°, h30km, MV4.3/12, KURILE ISLANDS REGION*

*SKHL **21** 23:18:42.2±0.6, 45°.30N×150°.10E, h119km±9km, mb4.9/3, msha5.5/4*

ISC 21 23:18:38.9±4.3**, 45°.2N**±0°.1×**150°.5E**±0°.2**, h100**km**, n17,** σ**2s.68**/28**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	1.88	273	eP	Pn	23 19 09.9	0.0
KUR				AMB	AMB	23 19 12.0	
	120nm,0.5s						
KUR				eS	Sn	23 19 30.2	-3.4
KUR				A	A	23 19 33.0	
	920nm,0.3s						
KUR				A	A	23 19 33.0	
	450nm,0.3s						
SHO	Shikotan	2.94	245	eP	Pn	23 19 25.2	+1.3
SHO				AMB	AMB	23 19 28.1	
	50nm,0.3s						
SHO				eS	Sn	23 19 58.5	0.0
SHO				A	A	23 20 00.4	
	150nm,0.4s						
SHO				A	A	23 20 00.4	
	110nm,0.4s						
YUK	Yuzh-Kuril'sk	3.52	253	eP	Pn	23 19 32.7	+1.1
YUK				AMB	AMB	23 19 34.7	
	250nm,0.2s						
YUK				eS	Sn	23 20 11.0	-1.3
YUK				A	A	23 20 16.7	
	170nm,0.4s						
YUK				A	A	23 20 16.7	
	290nm,0.4s						
GLVR	Golovnino	3.86	250	eP	Pn	23 19 38.4	+2.3
GLVR				eS	Sn	23 20 19.6	-0.9
GLVR				A	A	23 20 26.6	
	160nm,0.2s						
GLVR				A	A	23 20 26.6	
	200nm,0.2s						
NEM2	Nemuro 2	3.88	244	eP	Pn	23 19 37.0	+0.6
NEM2				eS	Sn	23 20 18.8	-2.2
NMR	Nemuro--Hokkai	3.89	244	eP	Pn	23 19 37.4	+0.9
NMR				eS	Sn	23 20 19.4	-1.8
JRA	Rausu	4.05	254	eP	Pn	23 19 42.1	+3.3
JRA				eS	Sn	23 20 28.1	+3.0
JNK	Nakash	4.45	251	eP	Pn	23 19 46.5	+2.3
JNK				eS	Sn	23 20 35.3	+0.4
AKK	Akkeshi	4.62	244	eP	Pn	23 19 47.6	+1.1
JAK	Akkeshi	4.73	245	eP	Pn	23 19 48.6	+0.7
JAK				eS	Sn	23 20 39.0	-2.5
JTKR	Abashiri--Toko	4.88	258	eP	Pn	23 19 53.4	+3.5
JAR	Ashorobuto	5.20	251	eP	Pn	23 19 57.3	+2.9
JAR				eS	Sn	23 20 54.4	+1.3
JOB	Onbets	5.33	247	eP	Pn	23 19 58.0	+2.0
JOB				eS	Sn	23 20 55.7	-0.4
YSS	Yuzhno-Sakhali	5.70	291	eP	Pn	23 20 00.0	-1.0
JKK2	Kamakawa 2	5.71	260	eP	Pn	23 20 05.6	+4.4
JNBK	Urakawa-nobuka	6.33	246	eP	Pn	23 20 10.8	+1.2
JANG	Nango	8.18	237	eS	Sn	23 21 57.2	-8.2

ROM 21 23:19:37.0±0.0**, 42°.888N**±0°.002×**13°.048E**±0°.004**, h11**km**, ML0.8**/6**, Error ellipse: s-maj=0.3km s-min=0.2km az=80.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FEMA	Monte Fema	0.07	1	P	Pg	23 19 39.9	+0.4
FEMA				S	Sg	23 19 41.5	+0.2
NRCA	Norcia	0.07	138	P	Pg	23 19 39.8	+0.4
NRCA				S	Sg	23 19 41.4	+0.2
NRCA				AML	AML		
	comp=E,99µm,0.1s						
NRCA				AML	AML		
	comp=N,176µm,0.1s						
MC2	Monte Cornacci	0.11	77	P	Pg	23 19 40.4	+0.5
MC2				S	Sg	23 19 42.6	+0.5
MTCL	Monte Cavallo	0.11	342	P	Pg	23 19 40.3	+0.5
MTCL				S	Sg	23 19 42.4	+0.5
FDMO	Fiordimonte	0.15	11	P	Pg	23 19 41.1	+0.6
FDMO				S	Sg	23 19 43.7	+0.8
FDMO				AML	AML		
	comp=E,44µm,0.2s						
FDMO				AML	AML		
	comp=N,44µm,0.3s						
CESI	CESI - Serrava	0.16	318	P	Pg	23 19 41.2	+0.7
CESI				S	Sg	23 19 44.1	+1.0
CESI				AML	AML		
	comp=N,36µm,0.2s						
CESI				AML	AML		
	comp=E,31µm,0.5s						
MMO1	Montemonaco	0.21	87	P	Pg	23 19 41.9	+0.5
MMO1				S	Sg	23 19 45.4	+1.0
GAVE	Gavelli	0.23	210	P	Pg	23 19 42.3	+0.6
GAVE				S	Sg	23 19 46.1	+1.1
CSP1	Cessapalombo	0.23	30	P	Pg	23 19 42.5	+0.6
CSP1				S	Sg	23 19 46.5	+1.2
LNSS	Leonessa	0.28	181	P	Pg	23 19 43.4	+0.5
LNSS				S	Sb	23 19 48.0	-1.0

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*IDC **21** 23:21:15.0±2.6, 8°.57S×118°.46E, h156km±20km, mb3.4/5, mbtmp3.9/9, Error ellipse: s-maj=34.5km s-min=9.6km az=57.0*

ISC 21 23:21:13.7±0.7**, 8°.71S**±0°.06×**118°.32E**±0°.06**, h152**km**, n18,** σ**1s.91**/23**, mb3.8**/5**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	Plampang	0.55	257	P	Pn	23 21 34.1	-1.4
PLAI	Plampang	0.55	257	S	Sn	23 21 49.0	-3.1
KAPI	Kappang	3.94	21	P	Pn	23 22 12.5	-0.7
	14nm,0.6s,baz=184,slow=5.1,SNR=6.8						
KAPI				S	Sn	23 22 57.1	-2.4
	4.6nm,0.4s,baz=190,slow=22,SNR=1.3						
JAGI	Jajag, Banyuwa	4.12	273	P	Pn	23 22 16.1	+0.4
JAGI	Jajag, Banyuwa	4.12	273	S	Sn	23 23 03.3	-0.5
BATI	Baumata	5.48	106	P	Pn	23 22 33.5	0.0
	48nm,0.4s,baz=343,slow=2.4,SNR=6.2						
BATI				S	Sn	23 23 35.0	-1.0
	22nm,0.3s,baz=259,slow=5.1,SNR=1.8						
SOEI	Soe	5.97	101	P	Pn	23 22 40.1	0.0
FITZ	Fitzroy Crossi	11.74	143	P	Pn	23 23 56.8	+0.3
	5.0nm,0.8s,baz=344,slow=13,SNR=7.8						
FITZ				S	Sn	23 26 02.0	-4.4
	4.3nm,0.4s,baz=315,slow=20,SNR=16						
MBWA	Marble Bar	12.45	174	P	P	23 24 11.6	+0.1
MTN	Manton Dam	13.24	109	P	Pn	23 24 14.9	-1.1
WRA	Warramunga Arr	19.10	127	P	Pn	23 25 26.6	-0.9
	0.9nm,0.5s,baz=301,slow=13,SNR=10.0						
WRA				S	S	23 28 53.5	-0.2
	0.4nm,0.5s,baz=302,slow=27,SNR=1.5						
ASAR	Alice Springs	21.07	137	P	P	23 25 48.6	+2.6
	1.4nm,0.5s,baz=309,slow=9.1,SNR=25						
ASAR				S	S	23 29 33.1	+1.0
	0.2nm,0.4s,baz=237,slow=21,SNR=1.3						
	1.4nm,0.5s						
AS01	Alice Springs	21.10	137	P	P	23 25 49.5	+3.1
QIS	Mount Isa	23.69	122	P	P	23 26 15.0	+3.2
SONM	Songino Array	57.28	350	P	P	23 30 46.1	+0.7
	0.6nm,0.4s,baz=165,slow=6.0,SNR=2.4						
	0.6nm,0.4s						
MKAR	Makanchi Array	63.89	333	P	P	23 31 30.2	0.0
	0.2nm,0.3s,baz=152,slow=5.6,SNR=4.7						
	0.2nm,0.3s						
ZALV	Zalesovo Beam	68.53	339	P	P	23 31 58.0	-1.5
	0.8nm,0.4s,baz=129,slow=8.3,SNR=2.9						
	0.8nm,0.4s						
PETK	Petropavlovsk-	70.08	24	P	P	23 32 10.7	+1.5
	0.9nm,0.6s,baz=211,slow=7.5,SNR=2.6						
	0.9nm,0.6s						

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*IDC **21** 23:34:39.6±0.4, 21°.46S×174°.08W, h0km, mb4.6/26, mbtmp4.6/28, ML4.2/2, MS4.1/42, Error ellipse: s-maj=16.8km s-min=14.2km az=125.0*

*MOS **21** 23:34:40.3±1.1, 21°.37S×174°.15W, h10km, mb5.1/25, Error ellipse: s-maj=11.5km s-min=10.0km az=88.7*

*BJI **21** 23:34:42.0, 20°.82S×173°.83W, h11km, mB5.3/9, mb5.1/32, Ms4.8/6, Ms7 4.6/7*

*NEIC **21** 23:34:42.8±1.5, 21°.19S±0°.10×174°.0W±0°.1, h10km±1km, mb5.0/237, Error ellipse: s-maj=17.2km s-min=15.3km az=143.0*

*NOU **21** 23:34:45.4, 21°.06S×173°.44W, h94km, mb4.9/13, Tonga Islands*

*GCMT **21** 23:34:45.4±0.3, 21°.49S±0°.03×173°.70W±0°.02, h18km, MW4.9/104, Moment Tensor Solution. s35,c40; s104,c133; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.73±.15; $M_{\theta\theta}$-0.81±.10; $M_{\phi\phi}$-1.92±.10; $M_{r\theta}$1.20±.24; $M_{\theta\phi}$-1.07±.05; $M_{\phi r}$1.04±.22; Best double couple: $M_0$3.08700×10^{16} NP1:ϕ_s204.00000°,δ31.00000°, λ76.00000°. NP2:ϕ_s40.00000°,δ60.00000°,λ98.00000°. Principal axes: T 3.1970, Plg73.0000°, Azm330.0000°; N -0.2180, Plg7.0000°, Azm216.0000°; P -2.9760, Plg15.0000°, Azm124.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 23:34:41.5±0.3**, 21°.34S**±0°.07×**173°.83W**±0°.06**, h10**km**, n708,** σ**1s.28**/632**, mb5.0**/168**, MS4.2**/43**, 56C-28D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	4.30	59		Pn	23 35 42.8	-4.3
NIUE	Niue	4.30	59	P	Pn	23 35 42.9	-4.2
NIUE	Niue	4.30	59	S	Sn	23 36 26.6	-11
NIUE	Niue	4.30	59	P	Pn	23 35 42.6	-4.5
LKBA	Tubou, Lakemba	5.62	303	P	Pn	23 36 08.2	+3.1
TAVE	Taveuni	7.36	308	P	Pn	23 36 32.6	+3.5
AFI	Afiamalu	7.65	15		Pn	23 36 29.5	-3.6
AFI	Afiamalu	7.65	15	P	Pn	23 36 29.5	-3.6
DGTI	Dogotuki	7.89	308	P	Pn	23 36 39.7	+3.4
MSVF	Nonsavu	8.45	294	Pn	Pn	23 36 47.5	+3.3
	2.8nm,0.3s,baz=127,slow=14,SNR=72						
MSVF				LR	LR	23 39 40.8	
	comp=Z,3µm,19.2s,baz=123,slow=36						
MSVF	Nonsavu	8.45	294	P	Pn	23 36 47.9	+3.7
GLKZ	Green Lake	8.71	204	P	Pn	23 36 45.0	-2.6
GLKZ				S	Sn	23 38 18.1	-7.8
RAR	Rarotonga	13.11	92	Pn	Pn	23 37 42.7	-5.1
	12nm,0.3s,baz=233,slow=5.8,SNR=15						
RAR				Sn	Sn	23 39 56.8	-17
	3.5nm,0.3s,baz=257,slow=21,SNR=2.2						
RAR				LR	LR	23 43 31.7	
	comp=Z,368nm,18.7s,baz=272,slow=40						
RAR	Rarotonga	13.11	92	P	Pn	23 37 43.3	-4.6
OUZ	Omahuta	17.69	216	P	P	23 38 51.3	+2.4
YATNC	Mamie plateau,	17.93	264	P	Pn	23 38 51.5	+0.4
OUENC	Ouen Island, N	17.97	263	P	P	23 38 52.5	+0.4
ONTNC	Ouen Toro	18.33	263	P	Pn	23 38 55.0	-1.0
ONTNC	Ouen Toro	18.33	263	P	P	23 38 58.1	+2.0
DZM	Mont Dzumac	18.34	264		Pn	23 38 56.3	+0.1
DZM	Mont Dzumac	18.34	264	eP	Pn	23 38 54.4	-1.9
	93nm,0.9s						
DZM				eLR	LR	23 43 12.6	
	1µm,22.9s						
DZM	Mont Dzumac	18.34	264	P	Pn	23 38 54.2	-2.1
	0.7nm,0.3s,baz=84,slow=17,SNR=38						
DZM				LR	LR	23 45 04.0	
	comp=Z,940nm,19.1s,baz=122,slow=34						
	34nm,0.8s						
DZM	Mont Dzumac	18.34	264	P	P	23 38 56.6	+0.3
VLAKA	Lakatoro	18.50	283	P	P	23 38 57.8	-0.1
MWZ	Matawai	18.50	202	P	P	23 38 59.9	+2.0
URZ	Urewera	18.58	203	P	P	23 38 57.0	-1.7
	0.9nm,0.3s,baz=38,slow=4.1,SNR=8.7						
URZ				S	Sn	23 42 07.8	-19
	14nm,1.1s,baz=11,slow=16,SNR=2.5						
	6.5nm,0.6s						
URZ	Urewera	18.58	203	P	P	23 38 58.7	-0.1
SANVU	Saraoutou	18.92	285		P	23 39 01.8	-0.8
SANVU				IAmb	IAmb	23 39 07.5	
	comp=Z,58nm,0.8s						
SANVU	Saraoutou	18.92	285	P	P	23 39 02.0	-0.6
BKZ	Black Stump Fm	19.61	203	P	P	23 39 13.0	+2.9
PXZ	Pawanui	20.25	201	P	P	23 39 17.6	+0.6
TSZ	Takapari Road	20.59	203	P	P	23 39 21.1	+0.4
BFZ	Birch Farm	21.04	201	P	P	23 39 26.0	+0.4
MRZ	Mangatainoka R	21.26	203	P	P	23 39 28.4	+0.5
QRZ	Quartz Range	22.61	208	P	P	23 39 45.6	+3.2
TBI	Tubuai	22.62	100	eP	P	23 39 42.9	+0.2
	comp=Z,358nm,26.5s						
TBI				eS	S	23 43 46.7	-4.0
	comp=Z,2µm,29.8s						
TBI				eLR	LR	23 44 59.7	
	comp=Z,903nm,27.2s						
TBI				eLR	LR	23 45 03.3	
	comp=Z,2µm,24.8s						
PPT2	Papeete2	23.16	85	eP	P	23 39 49.0	+0.5
	comp=Z,90nm,29.5s						
PPT2				eS	S	23 43 55.6	-4.7
	comp=Z,878nm,26.8s						
PPT2				eLR	LR	23 45 07.9	
	comp=Z,581nm,25.5s						
PPT2				eLR	LR	23 45 14.1	
	comp=Z,545nm,22.5s						
PPT	Papeete	23.17	85	P	P	23 39 51.4	+3.0
	comp=Z,44nm,0.9s,baz=310,slow=16,SNR=2.9						
PPT				LR	LR	23 47 19.6	
	comp=Z,655nm,18.9s,baz=274,slow=32						
	comp=Z,44nm,0.9s						
THZ	Tophouse	23.23	206	P	P	23 39 53.4	+4.5
KHZ	Kahutara	23.54	204	P	P	23 39 50.6	-1.3
DSZ	Denniston Nort	23.68	208	P	P	23 39 56.3	+3.0
LTZ	Lake Taylor	24.34	205	P	P	23 40 02.9	+3.3
LTZ				IAmb	IAmb	23 40 08.5	
	comp=Z,33nm,0.7s						
LTZ	Lake Taylor	24.34	205	P	P	23 40 03.9	+4.3
RPZ	Rata Peaks	25.61	206	LR	LR	23 50 50.8	
	comp=Z,374nm,18.0s,baz=40,slow=38						
FOZ	Fox Glacier	25.98	208	P	P	23 40 16.3	+1.9
JCZ	Jackson Bay	26.87	208	P	P	23 40 25.7	+3.2
HNR	Honiara	27.86	291	LR	LR	23 51 04.2	
	comp=Z,373nm,18.6s,baz=85,slow=36						
MLZ	Mavora Lakes	28.18	208	P	P	23 40 38.5	+4.3
MLZ				IAmb	IAmb	23 40 40.4	
	comp=Z,25nm,0.9s						
MLZ	Mavora Lakes	28.18	208	P	P	23 40 37.3	+3.2
WHZ	Wether Hill Ro	28.67	207	P	P	23 40 42.7	+4.2
WHZ				IAmb	IAmb	23 40 45.5	
	comp=Z,20nm,0.8s						
DCZ	Deep Cove	28.68	209	P	P	23 40 41.5	+3.0
ARMA	Armidale	32.26	247	P	P	23 41 09.3	-1.3
ARMA				IAmb	IAmb	23 41 10.9	
	comp=Z,19nm,1.0s						
TAOE	Nuku Hiva Isla	34.72	74	eLR	LR	23 50 30.9	
	comp=Z,572nm,29.0s						
PMG	Port Moresby	39.33	281	⇑eP	P	23 42 08.3	-2.9
PMG				pmax	pmax		
	comp=Z,23nm,0.8s						
STKA	Stephens Creek	40.96	246	P	P	23 42 21.6	-3.0
	comp=Z,8.8nm,0.8s,baz=83,slow=9.9,SNR=17						
STKA				LR	LR	23 58 33.4	
	comp=Z,306nm,18.8s,baz=59,slow=35						
	comp=Z,8.8nm,0.8s						
STKA	Stephens Creek	40.96	246	⇑eP	P	23 42 21.8	-2.8
COEN	Coen	41.52	273	P	P	23 42 27.8	-1.6
KIP	Kipapa	45.22	21	⇑eP	P	23 42 58.5	-0.5
KIP				pmax	pmax		
	comp=Z,25nm,1.1s						
BBOO	Buckleboo	45.69	245	P	P	23 43 00.6	-2.2
BBOO				IAmb	IAmb	23 43 00.7	
	comp=Z,16nm,0.9s						
JAY	Jayapura	48.01	287	LR	LR	00 02 27.0	
	comp=Z,127nm,21.7s,baz=303,slow=35						
ASAR	Alice Springs	48.12	257	P	P	23 43 19.1	-2.9
	comp=Z,31nm,0.8s,baz=89,slow=8.3,SNR=168						
ASAR				PcP	PcP	23 44 49.4	-0.2
	comp=Z,2.3nm,0.8s,baz=90,slow=4.6,SNR=1.5						
ASAR				LR	LR	00 03 00.2	
	comp=Z,386nm,18.5s,baz=96,slow=36						
	comp=Z,31nm,0.8s						
WRAB	Tennant Creek	48.33	262	⇓eP	P	23 43 20.5	-3.1
WRAB				pmax	pmax		
	comp=Z,23nm,0.9s						
WRA	Warramunga Arr	48.34	262	P	P	23 43 20.2	-3.5
	comp=Z,15nm,0.9s,baz=98,slow=7.3,SNR=54						
WRA				PcP	PcP	23 44 49.3	-1.1
	comp=Z,2.6nm,0.8s,baz=103,slow=3.1,SNR=2.1						
	comp=Z,15nm,0.9s						
FORT	Forrest	52.55	247	P	P	23 43 53.7	-1.7
GUMO	Guam	53.38	307	LR	LR	00 03 55.2	
	comp=Z,101nm,20.4s,baz=107,slow=33						
KNRA	Kununurra	54.48	266	P	P	23 44 07.5	-2.3
KNRA				IAmb	IAmb	23 44 09.3	
	comp=Z,12nm,0.9s						
SBA	Scott Base	57.33	185	P	P	23 44 30.9	+1.7
SBA	Scott Base	57.33	185	P	P	23 44 30.9	+1.7
SBA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
VNDA	Vanda	57.46	186	P	P	23 44 30.0	-0.1
	comp=Z,1.4nm,0.8s,baz=352,slow=8.3,SNR=3.8						
VNDA				LR	LR	00 05 27.2	
	comp=Z,140nm,19.3s,baz=14,slow=32						
	comp=Z,1.4nm,0.8s						
SOEI	Soe	60.41	271	P	P	23 44 51.0	-0.8
PSA00	Pilbara Seismi	61.27	256	P	P	23 44 55.9	-1.5
MBWA	Marble Bar	61.47	257	P	P	23 44 57.0	-1.8
NWAO	Narrogin (SRO)	61.47	243	LR	LR	00 10 31.6	
	comp=Z,257nm,18.6s,baz=76,slow=35						
DAV	Davao City (W)	65.79	289	LR	LR	00 13 33.3	
	comp=Z,74nm,18.0s,baz=128,slow=36						
KAPI	Kappang	66.23	274	LR	LR	00 14 03.2	
	comp=Z,97nm,20.4s,baz=110,slow=36						
QSPA	South Pole Qui	68.73	180	P	P	23 45 46.3	+0.9
QSPA	South Pole Qui	68.73	180	P	P	23 45 43.9	-1.5
	comp=Z,4.2nm,0.9s,baz=351,slow=0.9,SNR=9.7						
QSPA				LR	LR	00 11 39.4	
	comp=Z,118nm,20.2s,baz=38,slow=32						
	comp=Z,4.2nm,0.9s						
MJAR	Matsushiro Arr	73.25	321	P	P	23 46 11.9	-1.1
	comp=Z,6.2nm,0.9s,baz=154,slow=5.3,SNR=12						
MJAR				LR	LR	00 14 22.3	
	comp=Z,88nm,20.3s,baz=104,slow=33						
	comp=Z,6.2nm,0.9s						
MAJO	Matsushiro	73.25	321	deP	P	23 46 12.4	-0.6
MAJO				pmax	pmax		
	comp=Z,9.0nm,1.2s						
JMN	Monobe	74.02	317	P	P	23 46 17.1	-0.6
NIKH	Nikolski High	74.12	3	P	P	23 46 16.6	-1.1
	baz=185						
SHEM	Shemya Is, Ala	74.50	352	P	P	23 46 20.4	+0.5
	comp=Z,27nm,0.8s,baz=190,slow=6.1,SNR=2.1						
SHEM				LR	LR	00 15 22.3	
	comp=Z,164nm,19.8s,baz=178,slow=33						
	comp=Z,27nm,0.8s						
UNV	Unalaska Valle	75.14	4	P	P	23 46 23.0	-0.6
	baz=187						
JNU	Nakatsue	75.60	315	P	P	23 46 24.3	-2.5
	comp=Z,11nm,0.9s,baz=131,slow=4.0,SNR=6.1						
JNU				LR	LR	00 12 34.2	
	comp=Z,40nm,21.1s,baz=106,slow=30						
	comp=Z,11nm,0.9s						
ASAJ	Asahikawa	76.38	329	P	P	23 46 30.6	-0.3
	comp=Z,5.0nm,0.6s,baz=126,slow=11,SNR=4.2						
ASAJ				LR	LR	00 12 50.3	
	comp=Z,117nm,21.5s,baz=140,slow=30						
	comp=Z,5.0nm,0.6s						
FALS	False Pass	76.41	6	P	P	23 46 30.2	-0.6
	baz=190						
SMAI	San Martin Ant	76.41	158		P	23 46 31.9	+1.1
SMAI				IAmb	IAmb	23 46 33.8	
	comp=Z,14nm,1.0s						
LPIG	La Paz	76.53	57	LR	LR	00 13 18.4	
	comp=Z,274nm,19.0s,baz=232,slow=30						
CHNA	Chernabura Isl	76.84	8	P	P	23 46 33.1	-0.1
	baz=194						
SDPT	Sand Point	77.23	8	P	P	23 46 34.6	-0.8
	baz=193						
PFO	Pinyon Flats O	77.28	46	LR	LR	00 14 22.2	
	comp=Z,70nm,18.9s,baz=206,slow=31						
PFO	Pinyon Flats O	77.28	46	⇑eP	P	23 46 35.9	-0.6
PFO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KSM	Kuching	77.38	277	P	P	23 46 35.6	-1.7
S12K	Black Hills	77.39	7	P	P	23 46 35.2	-1.1
	baz=191						
NACB	Ninganchiao	77.39	302	P	P	23 46 34.7	-2.4
O02D	Mt. Diablo Mer	77.49	38		P	23 46 38.4	+1.0
O02D				IAmb	IAmb	23 46 52.3	
	comp=Z,14nm,0.9s						
CMB	Columbia Colle	77.50	41		P	23 46 37.9	+0.4
CMB				IAmb	IAmb	23 46 51.5	
	comp=Z,9.3nm,0.9s						
CMB	Columbia Colle	77.50	41	P	P	23 46 37.9	+0.4
CMB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
P08K	Saint George I	77.72	2	P	P	23 46 37.4	-0.7
	baz=184						
TPUB	Ta-pu	77.72	301		P	23 46 36.5	-2.6
AFDM	Forest Hills D	77.74	40		P	23 46 39.8	+1.0
AFDM				IAmb	IAmb	23 46 52.7	
	comp=Z,9.4nm,1.0s						
PET	Petropavlovsk	77.81	343	⇑eP	P	23 46 38.6	-0.1
PET				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PEA0B	Petropavlovsk-	78.14	343	deP	P	23 46 40.7	+0.1
PETK	Petropavlovsk-	78.14	343	P	P	23 46 40.1	-0.6
	comp=Z,5.2nm,0.8s,baz=131,slow=7.5,SNR=16						
PETK				LR	LR	00 16 30.4	
	comp=Z,127nm,20.4s,baz=173,slow=32						
	comp=Z,5.2nm,0.8s						
BELA	Belgrano 2	78.20	172	P	P	23 46 41.3	+0.5
S14K	Fog Glacier	78.26	8	P	P	23 46 40.4	-0.9
	baz=194						
SPIA	Saint Paul Isl	78.27	2	P	P	23 46 40.6	-0.5
	baz=184						
WAKR	Walker	78.37	41		P	23 46 43.4	+0.9
WAKR				IAmb	IAmb	23 46 57.0	
	comp=Z,17nm,1.0s						
CHIR	Chirikof Islan	78.40	10	P	P	23 46 41.1	-0.8
	baz=197						
YSS	Yuzhno-Sakhali	78.44	331	deP	P	23 46 43.0	+0.6
YSS				pmax	pmax		
	comp=Z,21nm,0.9s						
DSP	Deep Springs	78.57	42		P	23 46 43.6	+0.3
YBH	Yreka Blue Hor	78.58	36		P	23 46 43.9	+0.5
YBH	Yreka Blue Hor	78.58	36	LR	LR	00 14 47.6	
	comp=Z,11nm,20.1s,baz=247,slow=31						
YBH	Yreka Blue Hor	78.58	36	P	P	23 46 43.9	+0.5
YBH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PNTR	Pine Nut	78.65	40		P	23 46 45.8	+1.7
HATC	Hat Creek Radi	78.67	38	P	P	23 46 45.8	+1.8
GWY	Greenwater Val	78.68	44	P	P	23 46 44.0	-0.2
BEKR	Beckworth	78.69	39	P	P	23 46 44.5	+0.3
BEKR				IAmb	IAmb	23 46 57.8	
	comp=Z,10nm,1.0s						
LHV	Little Huntoon	78.79	41	P	P	23 46 45.2	+0.7
LHV				IAmb	IAmb	23 47 02.8	
	comp=Z,15nm,1.1s						
PMSA	Palmer Station	78.95	156	LR	LR	00 18 13.8	
	comp=Z,112nm,18.0s,baz=242,slow=33						
GMN	Gold Mountain	78.98	43	P	P	23 46 47.7	+1.8
RYN	Ryan	79.01	41	P	P	23 46 46.7	+0.7
NVAR	Mina Array Bea	79.02	41	P	P	23 46 46.9	+0.8
	comp=Z,6.3nm,1.0s,baz=225,slow=8.1,SNR=14						
	comp=Z,6.3nm,1.0s						
MZP	Montezuma Peak	79.14	42	P	P	23 46 46.8	0.0

PAHR	Pah Rah Range	79.17	40		P	23 46 46.1	-0.7
PAHR				IAmb	IAmb	23 47 00.5	
	comp=Z,11nm,0.9s						
SII	Sitkinak Islan	79.35	11	P	P	23 46 46.7	-0.5
	baz=199						
BBOR	Butler Butte	79.37	36	P	P	23 46 48.7	+0.9
TPNV	Topopah Spring	79.41	43		P	23 46 49.2	+1.0
TPNV	Topopah Spring	79.41	43	P	P	23 46 49.2	+1.0
TPNV				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TPH	Tonopah	79.47	42	P	P	23 46 49.5	+0.9
TPH	Tonopah	79.47	42	P	P	23 46 49.5	+0.9
TPH				pmax	pmax		
	comp=Z,34nm,1.0s						
SHPR	Sheep Range	79.85	44		P	23 46 51.3	+0.7
W13A	Hualapai Mount	79.88	46	P	P	23 46 50.0	-0.8
J04A	Umpqua Nationa	79.92	36	P	P	23 46 50.9	0.0
KSRS	Korea Array	80.13	317	P	P	23 46 51.4	-0.5
	comp=Z,2.5nm,0.7s,baz=134,slow=6.1,SNR=8.9						
KSRS				LR	LR	00 18 35.3	
	comp=Z,20µm,20.0s,baz=105,slow=33						
	comp=Z,2.5nm,0.7s						
OHAK	Old Harbor	80.14	11	P	P	23 46 51.8	+0.4
	baz=200						
R18K	Karluk	80.26	10	P	P	23 46 52.4	+0.4
	baz=198						
J05D	Fort Rock, OR	80.42	36		P	23 46 53.9	+0.3
J05D				IAmb	IAmb	23 47 08.3	
	comp=Z,23nm,1.0s						
PRN	Pahroc Range	80.45	44	P	P	23 46 53.1	-0.7
R11B	Troy Canyon, C	80.67	43		P	23 46 55.5	+0.5
Q17K	Contact Creek	80.70	9	P	P	23 46 54.6	+0.1
	baz=197						
KDAK	Kodiak Island	80.80	11	P	P	23 46 55.3	+0.4
	baz=200						
PINE	Pine Mountain	80.92	36		P	23 46 55.9	-0.4
O14K	Tigyukauivet M	80.96	6	P	P	23 46 56.6	+0.8
	baz=192						
Q16K	King Salmon	80.98	9	P	P	23 46 56.2	+0.4
	baz=196						
O15K	Ungalikthiuk R	81.05	7	P	P	23 46 56.6	+0.3
	baz=193						
P16K	Nushagak River	81.14	8	P	P	23 46 56.9	+0.2
	baz=195						
Q18K	Katmai Hardscr	81.20	10	P	P	23 46 57.9	+0.6
	baz=198						
USHA	Ushuaia	81.27	146	LR	LR	00 20 12.1	
	comp=Z,112nm,18.8s,baz=166,slow=34						
MSHR	Mys Shultsa	81.32	322	⇑eP	P	23 46 57.6	-0.5
MSHR				pmax	pmax		
	comp=Z,34nm,1.7s						
P17K	Kvichak River	81.51	9	P	P	23 46 59.0	+0.3
	baz=196						
PSTR	Posyet	81.57	322	⇑eP	P	23 47 00.4	+1.0
N14K	Kuskokwak Cree	81.58	6	P	P	23 46 59.5	+0.5
	baz=192						
Q20K	Shuyak Island	81.61	11	P	P	23 46 59.6	+0.3
	baz=200						
M11K	Mekoryuk	81.67	4	P	P	23 46 59.8	+0.3
	baz=187						
O16K	Kokwok River B	81.67	8		P	23 46 58.7	-0.8
O16K	Kokwok River B	81.67	8	P	P	23 46 59.6	+0.1
	baz=195						
Q19K	Cape Douglas,	81.69	10	P	P	23 47 00.1	+0.4
	baz=199						
SPR3	Spring Creek 3	81.84	43	P	P	23 47 01.0	-0.4
P18K	Big Mountain,	81.88	9		P	23 47 00.3	-0.5
P18K				IAmb	IAmb	23 47 02.7	
	comp=Z,14nm,0.8s						
P18K	Big Mountain,	81.88	9	P	P	23 47 00.9	+0.1
	baz=198						
USA0B	Ussuriysk Arra	81.89	324	P	P	23 47 00.8	-0.3
USA0B	Ussuriysk Arra	81.89	324	P	P	23 47 00.8	-0.3
USA0B				pmax	pmax		
	comp=Z,6.0nm,0.9s						
USRK	Ussuriysk Ar.	81.89	324	P	P	23 47 01.2	+0.2
	comp=Z,2.4nm,0.6s,baz=90,slow=10,SNR=5.0						
USRK				LR	LR	00 19 01.6	
	comp=Z,247nm,20.5s,baz=139,slow=32						
	comp=Z,2.4nm,0.6s						
I07A	Izee	81.90	36		P	23 47 00.1	-1.2
M13K	Dall Lake	81.91	5	P	P	23 47 01.5	+0.8
	baz=190						
O17K	Koliganek Bris	81.97	8	P	P	23 47 01.5	+0.3
	baz=196						
N15K	Kwethluk River	81.98	7		P	23 46 59.7	-1.5
N15K	Kwethluk River	81.98	7	P	P	23 47 01.2	-0.1
	baz=193						
J08A	Circle Bar Ran	82.01	37		P	23 47 02.5	+0.6
G06A	Carlson Farm,	82.03	35		P	23 47 03.1	+1.2
G06A				IAmb	IAmb	23 47 15.8	
	comp=Z,10.0nm,1.0s						
ESPZ	Base Esperanza	82.32	156	P	P	23 47 03.1	0.0
ESPZ				IAmb	IAmb	23 47 16.1	
	comp=Z,18nm,1.1s						
O18K	Koktuh Hills	82.32	9		P	23 47 02.9	-0.2
O18K				IAmb	IAmb	23 47 17.4	
	comp=Z,15nm,0.9s						
O18K	Koktuh Hills	82.32	9	P	P	23 47 03.6	+0.6
	baz=198						
M14K	Bethel	82.36	6		P	23 47 04.0	+0.8
M14K				IAmb	IAmb	23 47 08.9	
	comp=Z,18nm,1.0s						
M14K	Bethel	82.36	6	P	P	23 47 03.8	+0.7
	baz=191						
M15K	Kasigluk River	82.44	6	P	P	23 47 04.0	+0.4
	baz=192,SNR=7.5						
N16K	Nishlik Lake	82.44	7	P	P	23 47 04.0	+0.3
	baz=194						
P19K	Oil Pt	82.45	10	P	P	23 47 04.8	+1.1
P19K				IAmb	IAmb	23 47 05.5	
	comp=Z,13nm,0.8s						
P19K	Oil Pt	82.45	10	P	P	23 47 04.2	+0.5
	baz=199						
GNW	Green Mountain	82.47	32	P	P	23 47 05.5	+1.5
GNW				IAmb	IAmb	23 47 18.6	
	comp=Z,9.3nm,0.9s						
D05A	Enumclaw	82.63	33		P	23 47 06.4	+1.5
N17K	Nushagak Hills	82.69	8	P	P	23 47 05.3	+0.4
	baz=196						
HOM	Homer	82.73	11	P	P	23 47 05.3	+0.2
	baz=201						
L14K	Kuka Creek	82.88	5	P	P	23 47 07.6	+1.8
	baz=191						
M16K	Timber Creek	82.95	7	P	P	23 47 07.7	+1.5
	baz=194,SNR=7.0						
O20K	Slope Mountain	82.96	11	P	P	23 47 07.4	+1.0
	baz=200						
G08A	Pilot Rock	82.97	36		P	23 47 08.3	+1.4
G08A				IAmb	IAmb	23 47 20.9	
	comp=Z,15nm,1.0s						
BRSE	Bradley Lake S	82.97	12	P	P	23 47 07.8	+1.4
	baz=202						
N18K	Kilae Creek	83.02	9	P	P	23 47 07.4	+0.8
	baz=197						
RED	Redoubt Volcan	83.25	10	P	P	23 47 08.2	+0.3
RED				IAmb	IAmb	23 47 09.8	
	comp=Z,15nm,1.0s						
K13K	Kusilvak Mount	83.31	4	P	P	23 47 09.2	+1.1
K13K				IAmb	IAmb	23 47 13.2	
	comp=Z,9.5nm,1.1s						
K13K	Kusilvak Mount	83.31	4	P	P	23 47 09.1	+1.1
	baz=189						
E07A	Sunnyside	83.31	34		P	23 47 10.3	+1.8
A04D	Lummi Island	83.32	31	P	P	23 47 09.9	+1.5
L15K	Ungalak Mounta	83.32	6	P	P	23 47 09.2	+1.1
	baz=192,SNR=13						
N19K	Bonanza Creek	83.35	9		P	23 47 09.1	+0.6
N19K				IAmb	IAmb	23 47 25.3	
	comp=Z,16nm,1.1s						
N19K	Bonanza Creek	83.35	9	P	P	23 47 09.3	+0.8
	baz=198						
HAWA	Hanford	83.37	34	IAmb	IAmb	23 47 22.9	
	comp=Z,17nm,1.1s						
NJ2	Nanjing	83.44	308	eP	P	23 47 10.0	+0.6
NJ2				pmax	pmax		
	comp=Z,13nm,1.0s						
MDJ	Mudanjiang	83.48	323	P	P	23 47 10.3	+0.9
MDJ				pmax	pmax		
	comp=Z,16nm,1.0s						
M17K	Holitna River	83.50	8	P	P	23 47 10.5	+1.4
M17K	Holitna River	83.50	8	P	P	23 47 10.8	+1.7
	baz=196						
SEW	Seward	83.56	12	P	P	23 47 10.2	+0.9
	baz=203						
MFID	Camas Ranch	83.56	38	IAmb	IAmb	23 47 23.9	
	comp=Z,10nm,0.9s						
L16K	Owhat River	83.56	7	IAmb	IAmb	23 47 24.1	
	comp=Z,9.9nm,1.0s						
L16K	Owhat River	83.56	7	P	P	23 47 10.3	+0.9
	baz=194,SNR=7.0						
Q23K	Middleton Isla	83.58	14	P	P	23 47 10.4	+0.9
	baz=206						
BMO	Blue Mountains	83.60	37	IAmb	IAmb	23 47 23.2	
	comp=Z,7.1nm,0.8s						
SLKM	Skilak Lake	83.78	11	P	P	23 47 11.5	+0.9
M18K	Stony River	83.80	9	P	P	23 47 11.5	+0.9
	baz=197						
P23K	Montague Islan	83.87	13	P	P	23 47 12.0	+1.0
	baz=205						
K15K	Wolf Creek Mou	83.92	6		P	23 47 12.2	+1.0
K15K	Wolf Creek Mou	83.92	6	P	P	23 47 12.5	+1.2
	baz=192,SNR=26						
CRAG	Craig	83.97	22	P	P	23 47 12.9	+1.4
	baz=218						
TMUT	Trail Mountain	84.01	44	P	P	23 47 12.3	-0.3
TMUT				IAmb	IAmb	23 47 26.8	
	comp=Z,7.1nm,0.8s						
N20K	Mount Spurr	84.08	10	P	P	23 47 13.5	+1.4
	baz=200						
SPCR	Spurr Chakacha	84.08	10	P	P	23 47 13.5	+1.4
	baz=200						
SPU	Mount Spurr	84.09	10	P	P	23 47 13.0	+0.8
SPU				IAmb	IAmb	23 47 30.4	
	comp=Z,9.9nm,1.1s						
L17K	Donlin	84.11	7	P	P	23 47 13.8	+1.6
	baz=195,SNR=7.0						
D08A	Wollman Farm,	84.12	34		P	23 47 13.5	+0.9
E09A	Wood Farm, Sta	84.19	35		P	23 47 14.0	+1.0
E09A				IAmb	IAmb	23 47 26.5	
	comp=Z,11nm,1.1s						
J14K	Nanvaranak Lak	84.20	5	P	P	23 47 12.9	+0.3
J14K				IAmb	IAmb	23 47 15.7	
	comp=Z,8.8nm,0.9s						
J14K	Nanvaranak Lak	84.20	5	P	P	23 47 13.8	+1.3
	baz=190						
TXAR	Lajitas Array	84.27	56	P	P	23 47 15.3	+1.4
	comp=Z,1.9nm,1.0s,baz=212,slow=6.9,SNR=6.5						
TXAR				LR	LR	00 18 23.7	
	comp=Z,82nm,19.6s,baz=256,slow=31						
	comp=Z,1.9nm,1.0s						
SRU	San Rafael Swe	84.35	44	P	P	23 47 15.4	+1.2
SRU	San Rafael Swe	84.35	44	P	P	23 47 15.4	+1.2
SRU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
L18K	Granite Mounta	84.39	8		P	23 47 14.2	+0.6
L18K				IAmb	IAmb	23 47 28.7	
	comp=Z,10nm,1.0s						
L18K	Granite Mounta	84.39	8	P	P	23 47 14.6	+1.0
	baz=196,SNR=6.3						
V35K	Ketchikan	84.40	23	P	P	23 47 14.9	+1.1
	baz=219						
M19K	Big River Lodg	84.41	9	P	P	23 47 14.4	+0.6
	baz=198						
RC01	Rabbit Creek A	84.41	11	P	P	23 47 13.5	-0.3
RC01				IAmb	IAmb	23 47 26.4	
	comp=Z,10nm,0.8s						
RC01	Rabbit Creek A	84.41	11	P	P	23 47 14.9	+1.1
	baz=203						
STLK	Strandline Lak	84.42	10	P	P	23 47 12.8	-1.1
STLK				IAmb	IAmb	23 47 26.5	
	comp=Z,13nm,1.1s						
KAIM	Kayak Island	84.47	14	P	P	23 47 15.7	+1.7
KAIM	Kayak Island	84.47	14	P	P	23 47 15.1	+1.0
	baz=208						
PWL	Port Wells	84.47	12	P	P	23 47 15.1	+1.0
	baz=204						
HLID	Hailey	84.47	39	IAmb	IAmb	23 47 28.3	
	comp=Z,7.2nm,0.9s						
PLID	Pearl Lake	84.48	37	IAmb	IAmb	23 47 28.2	
	comp=Z,8.9nm,1.1s						
U33K	Whale Pass	84.49	22	P	P	23 47 15.3	+1.1
	baz=218						
SIT	Sitka	84.52	20	P	P	23 47 15.4	+1.1
	baz=216						
M20K	Styx River	84.58	10	P	P	23 47 15.8	+1.1
	baz=200						
SUA	Susitna One	84.58	11	P	P	23 47 16.0	+1.3
	baz=202						
L19K	White Mountain	84.60	9	P	P	23 47 15.9	+1.2
	baz=198						
K17K	Iditarod	84.67	7	P	P	23 47 16.2	+1.2
	baz=195						
EYAK	Cordova Ski Ar	84.72	14	P	P	23 47 16.4	+1.2
	baz=206						
GLI	Glacier Island	84.74	13	P	P	23 47 16.1	+0.7
	baz=205						
B08A	Colville Reser	84.75	33	IAmb	IAmb	23 47 28.6	
	comp=Z,7.3nm,0.9s						
GAMB	Gambell	84.85	1	P	P	23 47 17.1	+1.2
	baz=182						
BGLC	Bering Glacier	84.91	15	P	P	23 47 17.1	+0.9
	baz=208						
SKT	Skwentna	84.93	10		P	23 47 16.0	-0.4
SKT				IAmb	IAmb	23 47 28.9	
	comp=Z,10nm,1.0s						
SKT	Skwentna	84.93	10	P	P	23 47 16.6	+0.3
	baz=201						
ANMO	Albuquerque	84.93	50	P	P	23 47 17.8	+0.5
ANMO	Albuquerque	84.93	50		P	23 47 17.5	+0.2
ANMO				IAmb	IAmb	23 47 20.6	
	comp=Z,7.9nm,1.1s						
ANMO	Albuquerque	84.93	50		P	23 47 17.1	-0.2
ANMO				IAmb	IAmb	23 47 20.6	
	comp=Z,8.0nm,1.1s						
ANMO	Albuquerque	84.93	50	LR	LR	00 18 45.6	
	comp=Z,136nm,19.5s,baz=356,slow=31						
ANMO	Albuquerque	84.93	50	deP	P	23 47 18.7	+1.4
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KNK	Knik Glacier	84.95	12	IAmb	IAmb	23 47 30.1	
	comp=Z,14nm,1.0s						
KNK	Knik Glacier	84.95	12	P	P	23 47 17.1	+0.6
	baz=204						
S31K	Pelican	84.97	19	P	P	23 47 17.6	+1.0
	baz=215						
BSUT	Blindstream Ca	84.98	43		P	23 47 18.1	+0.5
J16K	Anvik River	84.98	6	P	P	23 47 17.6	+1.1
J16K				IAmb	IAmb	23 47 31.8	
	comp=Z,12nm,0.9s						
J16K	Anvik River	84.98	6	P	P	23 47 17.8	+1.2
	baz=192,SNR=8.4						
PMR	Palmer	84.99	12	P	P	23 47 17.8	+1.2
	baz=203						
WRAK	Wrangell Islan	84.99	22	P	P	23 47 17.8	+1.1
	baz=218						
LLLB	Lillooet	85.00	30	P	P	23 47 18.0	+1.0
LLLB				IAmb	IAmb	23 47 30.7	
	comp=Z,12nm,1.0s						
L20K	Farewell, AK	85.03	9	P	P	23 47 17.5	+0.7
	baz=199,SNR=5.1						
S32K	Killisnoo	85.09	20	P	P	23 47 18.1	+0.9
	baz=216						
GHO	Glory Hole Cre	85.20	12	P	P	23 47 18.5	+0.7
DIV	Divide	85.24	13	P	P	23 47 18.4	+0.4
J17K	VABM Dome	85.25	7		P	23 47 18.4	+0.5
J17K	VABM Dome	85.25	7	P	P	23 47 19.2	+1.3
	baz=194						
KLR	Kul'dur	85.27	328	P	P	23 47 18.6	+0.2
	comp=Z,0.6nm,0.3s,baz=180,slow=6.2,SNR=3.8						
KLR				LR	LR	00 20 46.4	
	comp=Z,138nm,20.2s,baz=148,slow=32						
	comp=Z,0.6nm,0.3s						
KLR	Kul'dur	85.27	328	deP	P	23 47 19.0	+0.6
KLR				pmax	pmax		
	comp=Z,8.0nm,2.5s						
MESA	MESA	85.28	15	P	P	23 47 19.4	+1.0
MESA	MESA	85.28	15	P	P	23 47 19.2	+0.8
	baz=210						
WAX	Waxell Ridge	85.30	15	P	P	23 47 19.1	+0.8
SML	Sawmill	85.34	12	P	P	23 47 19.1	+0.6
SML				IAmb	IAmb	23 47 23.5	
	comp=Z,13nm,1.2s						
SML	Sawmill	85.34	12	P	P	23 47 19.5	+1.0
	baz=204						
BMRM	Bremner River	85.35	14	P	P	23 47 20.1	+1.6
BMRM	Bremner River	85.35	14	P	P	23 47 19.1	+0.6
	baz=207						
CN2	Changchun	85.38	321	eP	P	23 47 19.0	0.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BNX	BinXian	85.39	323	⇓P	P	23 47 19.3	+0.3
BNX				pmax	pmax		
	comp=Z,14nm,1.0s						
M23K	Glacier View	85.45	12	P	P	23 47 19.9	+0.9
	baz=204						
YAH	Yahtse	85.49	15	P	P	23 47 20.2	+0.8
PNL	Peninsula	85.50	17	P	P	23 47 20.2	+0.9
	baz=212						
CRQM	Cirque	85.50	15	P	P	23 47 19.9	+0.4
CRQM				IAmb	IAmb	23 47 33.0	
	comp=Z,15nm,1.0s						
CRQE	Cirque	85.51	15	P	P	23 47 20.0	+0.6
	baz=209						
KLU	Klutina	85.54	13	P	P	23 47 20.3	+0.8
KLU				IAmb	IAmb	23 47 32.9	
	comp=Z,11nm,1.1s						
KLU	Klutina	85.54	13	P	P	23 47 20.4	+0.8
	baz=206						
SCM	Sheep Creek Mo	85.56	12	P	P	23 47 20.2	+0.6
	baz=205						
I17K	Unalakleet	85.56	6	P	P	23 47 20.4	+1.0
	baz=192						
J18K	Innoko River	85.59	8	IAmb	IAmb	23 47 22.6	
	comp=Z,11nm,0.9s						
J18K	Innoko River	85.59	8	P	P	23 47 20.5	+0.8
	baz=196,SNR=16						
PINM	Pinnacle	85.64	16	P	P	23 47 20.7	+0.6
	baz=211						
MA2	Magadan	85.68	343	P	P	23 47 19.5	-0.7
	comp=Z,3.0nm,0.4s,baz=159,slow=8.2,SNR=4.0						
MA2				LR	LR	00 21 27.0	
	comp=Z,182nm,20.5s,baz=122,slow=33						
	comp=Z,3.0nm,0.4s						
MA2	Magadan	85.68	343	deP	P	23 47 19.7	-0.4
MA2				pmax	pmax		
	comp=Z,21nm,1.7s						
PPLA	Purkeypile	85.68	10	P	P	23 47 21.4	+1.1
	baz=200						
R32K	Eaglecrest	85.76	20	P	P	23 47 21.6	+1.1
	baz=216						
GRNC	Granite Creek	85.81	15	IAmb	IAmb	23 47 35.1	
	comp=Z,14nm,1.0s						
NEW	Newport	85.83	34	LR	LR	00 20 08.5	
	comp=Z,260nm,19.3s,baz=204,slow=32						
K20K	Telida	85.84	9	P	P	23 47 22.0	+1.2
	baz=199						
VRDI	Verde Repeater	85.84	14	IAmb	IAmb	23 47 34.6	
	comp=Z,17nm,1.1s						
PLCA	Paso Flores	85.85	132	P	P	23 47 20.8	-1.0
	comp=Z,7.9nm,1.2s,baz=228,slow=5.2,SNR=3.3						
PLCA				LR	LR	00 17 47.7	
	comp=Z,118nm,20.8s,baz=244,slow=30						
	comp=Z,7.9nm,1.2s						
ANM	Nome	85.88	4	P	P	23 47 21.9	+0.9
	baz=188						
P29M	Windy Craggy	85.92	17		P	23 47 22.7	+1.4
P29M				IAmb	IAmb	23 47 35.0	
	comp=Z,10nm,0.9s						
P29M	Windy Craggy	85.92	17	P	P	23 47 22.5	+1.1
	baz=214						
N25K	Chitina, Valde	85.92	14	IAmb	IAmb	23 47 34.9	
	comp=Z,13nm,0.9s						
N25K	Chitina, Valde	85.92	14	P	P	23 47 22.8	+1.3
	baz=207,SNR=6.9						
GLB	Gilahina Butte	85.95	14		P	23 47 21.5	0.0
GLB				IAmb	IAmb	23 47 37.0	
	comp=Z,13nm,1.2s						
M24K	Tolsona, Glenn	86.04	13		P	23 47 23.3	+1.3
M24K	Tolsona, Glenn	86.04	13	P	P	23 47 23.3	+1.3
	baz=206						
LOGN	Logan Glacier	86.08	15	P	P	23 47 23.0	+0.7
MCARA	McCarthy VSAT	86.08	14	P	P	23 47 22.8	+0.7
MCARA				IAmb	IAmb	23 47 35.2	
	comp=Z,14nm,1.1s						
MCARA	McCarthy VSAT	86.08	14	P	P	23 47 23.2	+1.1
	baz=209						
CTG	Chitna Glacier	86.11	15	P	P	23 47 23.2	+0.8
	baz=210						
CTGM	Chitina Glacie	86.11	15	P	P	23 47 23.5	+1.0
CTGM				IAmb	IAmb	23 47 36.0	
	comp=Z,15nm,1.0s						
MCMT	McKenzie Canyo	86.12	39	P	P	23 47 23.9	+0.8
T35M	Bob Quinn	86.16	22	P	P	23 47 23.7	+1.1
	baz=220						
WAT6	Susitna Watana	86.16	12	P	P	23 47 23.6	+0.9
	baz=204,SNR=7.0						
PLBC	Pleasant Camp	86.17	18	P	P	23 47 23.8	+1.3
	baz=215						
H16K	Elim	86.17	5	P	P	23 47 23.3	+0.9
	baz=191						
CAST	Castle Rocks	86.19	10	IAmb	IAmb	23 47 23.8	
	comp=Z,8.0nm,0.7s						
CAST	Castle Rocks	86.19	10	P	P	23 47 22.5	-0.1
	baz=200,SNR=12						
O28M	Mount Upton	86.23	16	IAmb	IAmb	23 47 36.9	
	comp=Z,10nm,0.9s						
O28M	Mount Upton	86.23	16	P	P	23 47 23.7	+0.5
	baz=211						
J19K	Poorman	86.23	8	IAmb	IAmb	23 47 39.9	
	comp=Z,8.6nm,1.1s						
J19K	Poorman	86.23	8	P	P	23 47 23.2	+0.4
	baz=197,SNR=7.5						
WAT1	Susitna Watana	86.24	11	P	P	23 47 23.8	+0.9
	baz=204						
O29M	Mount Kennedy	86.26	17	IAmb	IAmb	23 47 37.2	
	comp=Z,10nm,1.1s						
O29M	Mount Kennedy	86.26	17	P	P	23 47 23.2	+0.1
	baz=213						
CMIG	Matias Romero	86.26	70	LR	LR	00 17 44.4	
	comp=Z,164nm,19.3s,baz=180,slow=30						
G15K	Niukluk	86.39	4	P	P	23 47 23.9	+0.4
	baz=189						
SKAG	Skagway	86.47	19	P	P	23 47 24.9	+0.9
	baz=216						
KTH	Kantishna Hill	86.50	10	IAmb	IAmb	23 47 36.5	
	comp=Z,10.0nm,0.9s						
TRF	Thorofare Moun	86.51	10	P	P	23 47 24.5	+0.1
	baz=202,SNR=23						
HARP	HAARP	86.51	13	P	P	23 47 24.6	+0.3
	baz=207						
P30M	Million Dollar	86.55	18	P	P	23 47 25.1	+0.6
	baz=214						
S34M	Telegraph Cree	86.57	21	P	P	23 47 25.4	+0.8
S34M				IAmb	IAmb	23 47 39.0	
	comp=Z,15nm,1.1s						
S34M	Telegraph Cree	86.57	21	P	P	23 47 25.3	+0.7
	baz=219						
CHUM	Lake Minchumin	86.59	9	P	P	23 47 25.2	+0.6
	baz=200						
J20K	Nowinta River	86.61	8	IAmb	IAmb	23 47 27.4	
	comp=Z,11nm,0.9s						
J20K	Nowinta River	86.61	8	P	P	23 47 25.8	+1.2
	baz=198,SNR=11						
H17K	Granite Mounta	86.67	6		P	23 47 25.6	+0.6
H17K	Granite Mounta	86.67	6	P	P	23 47 25.4	+0.5
	baz=193						
DRIO	Del Rio	86.67	57	P	P	23 47 26.2	+0.5
DHY	Denali Highway	86.69	12	P	P	23 47 26.0	+0.8
DHY				IAmb	IAmb	23 47 42.8	
	comp=Z,12nm,1.2s						
DHY	Denali Highway	86.69	12	P	P	23 47 25.9	+0.6
	baz=205						
SYO	Syowa Base	86.72	191	⇑eP	P	23 47 26.0	+0.7
F14K	Arctic Creek	86.73	3	P	P	23 47 25.6	+0.5
	baz=187						
TNA	Tin City	86.74	2	P	P	23 47 26.6	+1.4
TNA	Tin City	86.74	2	P	P	23 47 25.9	+0.7
	baz=186						
YUK8	Steele Glacier	86.78	16	P	P	23 47 26.4	+0.5
	baz=212						
GCSA	Galena City Sc	86.81	7	P	P	23 47 26.4	+0.9
	baz=196						
YUK6	Outpost Mounta	86.85	16	P	P	23 47 26.4	+0.2
	baz=213						
TROLL	Troll, Antarti	86.86	179	⇑P	P	23 47 26.8	+0.6
	comp=Z,186nm,0.8s						
G16K	Koyuk River	86.91	5	P	P	23 47 26.4	+0.4
	baz=191						
PDAR	Pinedale Array	86.95	42	P	P	23 47 27.1	0.0
	comp=Z,0.6nm,0.7s,baz=219,slow=3.8,SNR=6.0						
PDAR				LR	LR	00 21 31.9	
	comp=Z,65nm,18.6s,baz=272,slow=32						
	comp=Z,0.6nm,0.7s						
PAX	Paxson	86.96	13	P	P	23 47 26.6	+0.1
PAX	Paxson	86.96	13	P	P	23 47 26.6	+0.1
PAX				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PAX	Paxson	86.96	13	P	P	23 47 27.3	+0.8
	baz=206,SNR=5.8						
M26K	Nabesna, AK	86.98	14	P	P	23 47 27.3	+0.7

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      baz=209
HYT   Haines Junctio   86.98  17   P      P      23 47 27.2 +0.5
HYT                                IAmb   IAmb   23 47 40.8
      comp=Z,7.6nm,1.0s
HYT   Haines Junctio   86.98  17   P      P      23 47 27.7 +1.0
      baz=214
BPAW  Bear Paw Mtn.    87.00  10   P      P      23 47 26.9 +0.3
BPAW  Bear Paw Mtn.    87.00  10   P      P      23 47 28.3 +1.7
      baz=201
MCK   McKinley         87.00  11   P      P      23 47 27.5 +0.9
      baz=203,SNR=9.0
VNA3  Neumayer Olymp   87.01 175 ⇑P      P      23 47 26.8  0.0
      comp=Z,5.3nm,0.7s
Q32M  Nakina River     87.02  20          P      23 47 27.6 +0.6
Q32M                               IAmb   IAmb   23 47 40.7
      comp=Z,9.5nm,1.0s
Q32M  Nakina River     87.02  20   P      P      23 47 27.7 +0.7
      baz=218
SNAA  Sanae            87.03 177 ⇑P      P      23 47 26.7 -0.2
      comp=Z,63nm,0.9s
SNAA  Sanae            87.03 177          P      23 47 27.7 +0.8
SNAA  Sanae            87.03 177   P      P      23 47 25.3 -1.6
      comp=Z,3.1nm,1.0s,baz=206,slow=3.7,SNR=7.6
      comp=Z,3.1nm,1.0s
SNAA  Sanae            87.03 177⇑eP      P      23 47 28.0 +1.1
SNAA                               pmax   pmax
      comp=Z,15nm,1.7s
YUK3  Moose Creek      87.03  15   P      P      23 47 27.9 +0.9
      baz=211
H18K  Honhosa River    87.03   6   P      P      23 47 27.6 +0.9
      baz=195
F15K  North Star Dit   87.06   4   P      P      23 47 27.9 +1.1
      baz=189
P32M  Atlin            87.07  19   P      P      23 47 28.0 +1.0
P32M                               IAmb   IAmb   23 47 40.5
      comp=Z,7.4nm,1.0s
P32M  Atlin            87.07  19   P      P      23 47 27.7 +0.7
      baz=217
YHL   Hebgen Lake      87.11  39   P      P      23 47 29.3 +1.4
YUK4  Talbot Arm       87.12  16   P      P      23 47 28.4 +0.9
      baz=213
I20K  Naaghedeneel     87.15   8   P      P      23 47 28.4 +1.2
I20K  Naaghedeneel     87.15   8   P      P      23 47 28.1 +0.9
      baz=198
G17K  Kiwalik Mounta   87.15   5   P      P      23 47 28.3 +1.0
      baz=192
M27K  Edge Creek, AK   87.20  14   P      P      23 47 28.1 +0.4
      baz=210,SNR=13
BOZ   Bozeman (W)      87.27  38   P      P      23 47 30.1 +1.6
BOZ   Bozeman (W)      87.27  38   P      P      23 47 30.1 +1.6
BOZ                                pmax   pmax
      comp=Z,3.0nm,0.9s
MENT  Mentasta         87.30  13   P      P      23 47 29.3 +1.2
MENT                               IAmb   IAmb   23 47 41.3
      comp=Z,6.6nm,0.8s
O30N  Mendenhall       87.33  18   IAmb   IAmb   23 47 42.4
      comp=Z,12nm,1.1s
O30N  Mendenhall       87.33  18   P      P      23 47 29.4 +1.2
      baz=215,SNR=5.2
DLBC  Dease Lake       87.35  21   P      P      23 47 28.7 +0.2
      comp=Z,0.2nm,0.8s,baz=198,slow=5.7,SNR=4.0
L26K  Log Cabin Wild   87.46  13   P      P      23 47 29.3 +0.5
L26K                               IAmb   IAmb   23 47 43.2
      comp=Z,7.8nm,1.0s
L26K  Log Cabin Wild   87.46  13   P      P      23 47 29.5 +0.6
      baz=208,SNR=6.9
BVCY  Beaver Creek     87.48  15   P      P      23 47 29.8 +0.8
      baz=211,SNR=6.5
WHY   Whitehorse       87.58  18          P      23 47 30.9 +1.3
WHY                                IAmb   IAmb   23 47 43.1
      comp=Z,9.9nm,0.9s
WHY   Whitehorse       87.58  18   P      P      23 47 30.5 +0.9
      baz=216
H19K  Roundabout Mou   87.61   7          P      23 47 30.0 +0.6
H19K                               IAmb   IAmb   23 47 44.4
      comp=Z,12nm,1.1s
H19K  Roundabout Mou   87.61   7   P      P      23 47 30.4 +0.9
      baz=196,SNR=9.1
N30M  Aishikik Lake    87.62  17   P      P      23 47 30.6 +0.9
      baz=214,SNR=5.1
K24K  Donnelly Dome    87.65  12   P      P      23 47 31.4 +1.6
      baz=206
G18K  Tagagawik        87.73   6   IAmb   IAmb   23 47 43.8
      comp=Z,8.2nm,1.1s
G18K  Tagagawik        87.73   6   P      P      23 47 30.9 +0.8
      baz=194,SNR=9.0
KULM  Kulim            87.74 277   P      P      23 47 31.0 -0.3
H20K  Anotleneega Mo   87.77   8   P      P      23 47 31.1 +0.9
      baz=198,SNR=9.3
NEA2  Nenana           87.78  10   P      P      23 47 31.7 +1.4
NEA2  Nenana           87.78  10   P      P      23 47 30.9 +0.7
      baz=203
R33M  Jennings River   87.78  20          P      23 47 32.1 +1.6
R33M                               IAmb   IAmb   23 47 44.4
      comp=Z,5.7nm,0.9s
R33M  Jennings River   87.78  20   P      P      23 47 31.5 +0.9
      baz=220
RIDG  Independent Ri   87.78  12   IAmb   IAmb   23 47 43.3
      comp=Z,8.8nm,1.0s
RIDG  Independent Ri   87.78  12   P      P      23 47 31.5 +1.1
      baz=207
L27K  Beaver Creek,    87.82  14   P      P      23 47 31.1 +0.5
L27K                               IAmb   IAmb   23 47 44.4
      comp=Z,7.5nm,1.1s
L27K  Beaver Creek,    87.82  14   P      P      23 47 32.1 +1.5
      baz=210,SNR=8.6
P33M  Teslin, Yukon    87.84  19   P      P      23 47 32.2 +1.4
      baz=218
DOT   Dot Lake         87.86  13   P      P      23 47 31.0 +0.3
DOT                                IAmb   IAmb   23 47 44.2
      comp=Z,10nm,0.9s
MLY   Manley           87.91  10   P      P      23 47 31.9 +0.9
      baz=202
HDA   Harding Lake     87.98  11   IAmb   IAmb   23 47 44.8
      comp=Z,11nm,1.0s
HDA   Harding Lake     87.98  11   P      P      23 47 32.2 +0.9
      baz=205,SNR=5.5
N31M  Braeburn, Yuko   88.00  17   IAmb   IAmb   23 47 46.0
      comp=Z,10.0nm,0.9s
N31M  Braeburn, Yuko   88.00  17   P      P      23 47 32.8 +1.4
      baz=215
F17K  Baldwin Pennin   88.03   5   P      P      23 47 32.9 +1.5
      baz=192
CCB   Clear Creek Bu   88.04  11   IAmb   IAmb   23 47 33.8
      comp=Z,12nm,1.1s
M29M  Somme Creek      88.09  16   IAmb   IAmb   23 47 45.8
      comp=Z,8.9nm,0.9s
M29M  Somme Creek      88.09  16   P      P      23 47 32.9 +0.9
      baz=213,SNR=9.5
HEH   HeiHe            88.11 327  eP      P      23 47 32.5 +0.3
HEH                                pmax   pmax
      comp=Z,8.0nm,1.0s
SEY   Seymchan         88.12 345   P      P      23 47 31.9 -0.1
      comp=Z,8.5nm,0.7s,baz=138,slow=5.8,SNR=26
SEY                                LR     LR     00 23 17.0
      comp=Z,102nm,20.4s,baz=176,slow=33
      comp=Z,8.5nm,0.7s
SEY   Seymchan         88.12 345⇓eP      P      23 47 32.4 +0.5
SEY                                pmax   pmax
      comp=Z,11nm,0.9s
G19K  Purcell Mounta   88.13   7   IAmb   IAmb   23 47 46.8
      comp=Z,12nm,1.1s
G19K  Purcell Mounta   88.13   7   P      P      23 47 33.3 +1.3
      baz=196,SNR=8.9
SCRK  Sand Creek       88.17  13   IAmb   IAmb   23 47 45.4
      comp=Z,6.6nm,0.9s
SCRK  Sand Creek       88.17  13   P      P      23 47 33.6 +1.3
      baz=208,SNR=7.7
H21K  Melozitna Rive   88.20   9   P      P      23 47 33.0 +0.7
      baz=200,SNR=6.3
I23K  Minto, Yukon-K   88.24  10   IAmb   IAmb   23 47 46.7
      comp=Z,5.8nm,1.1s
I23K  Minto, Yukon-K   88.24  10   P      P      23 47 33.5 +1.0
      baz=203
COLA  College          88.24  11   P      P      23 47 33.3 +0.8
COLA  College          88.24  11   P      P      23 47 33.3 +0.8
COLA                               pmax   pmax
      comp=Z,24nm,1.1s
COLA  College          88.24  11   P      P      23 47 33.5 +1.0
      baz=204
F18K  Selawik          88.32   6   P      P      23 47 33.3 +0.6
      baz=193
ILAR  Eielson Array    88.32  11   P      P      23 47 33.3 +0.4
      comp=Z,2.2nm,0.8s,baz=229,slow=4.3,SNR=24
      comp=Z,2.2nm,0.8s
PSI   Prapat           88.44 274   LR     LR     00 30 51.5
      comp=Z,168nm,18.3s,baz=236,slow=38
J25K  Salcha River,    88.46  12   IAmb   IAmb   23 47 47.1
      comp=Z,8.4nm,0.9s
J25K  Salcha River,    88.46  12   P      P      23 47 34.9 +1.3
      baz=206,SNR=8.2
N32M  Quiet Lake       88.50  18   P      P      23 47 34.9 +1.0
      baz=218
POKR  Poker Plat Res   88.54  11   P      P      23 47 34.5 +0.6
      baz=205
E17K  Hotham Inlet     88.61   5   P      P      23 47 34.2 +0.1
      baz=191
K27K  Chicken          88.61  13   P      P      23 47 34.7 +0.4
      baz=210
H22K  Ishtalitna Cre   88.62   9   P      P      23 47 35.2 +0.9
      baz=201,SNR=6.0
J26L  Joseph Creek     88.72  13   P      P      23 47 35.6 +0.7
      baz=208,SNR=23
F19K  Shaleruckik Mo   88.73   6   P      P      23 47 36.1 +1.3
      baz=195
L29M  L29M             88.74  15   P      P      23 47 35.4 +0.4
      baz=213,SNR=12
H23K  Yukon River      88.84  10   P      P      23 47 36.2 +0.8
      baz=203
G21K  Allakaket        88.92   8   P      P      23 47 36.4 +0.7
      baz=199,SNR=7.8
M31M  Drury Creek, Y   88.97  17   P      P      23 47 36.6 +0.6
M31M  Drury Creek, Y   88.97  17   P      P      23 47 36.0  0.0
      baz=216
HNS   HongShan         89.01 311 ⇑P      P      23 47 39.0 +2.3
E18K  Tukpahlearik C   89.04   5          P      23 47 36.7 +0.5
E18K                               IAmb   IAmb   23 47 50.8
      comp=Z,6.8nm,1.0s
E18K  Tukpahlearik C   89.04   5   P      P      23 47 36.7 +0.5
      baz=192
H24K  Noodor Dome      89.12  10   P      P      23 47 37.5 +0.8
      baz=204
D17K  Noatak River     89.13   4   P      P      23 47 37.9 +1.3
      baz=190
F20K  Avaraart Lake    89.16   7   P      P      23 47 38.0 +1.2
      baz=197
PRP   Porcupine Dome   89.25  11   IAmb   IAmb   23 47 51.4
      comp=Z,12nm,0.9s
PRP   Porcupine Dome   89.25  11   P      P      23 47 38.4 +1.0
      baz=206,SNR=7.8
DAWY  Dawson           89.25  14          P      23 47 37.7 +0.4
DAWY                               IAmb   IAmb   23 47 51.2
      comp=Z,9.3nm,1.0s
DAWY  Dawson           89.25  14   P      P      23 47 38.7 +1.3
      baz=212,SNR=5.9
BJI   Beijing          89.25 314   P      P      23 47 39.5 +1.7
BJI                                pmax   pmax
      comp=Z,5.0nm,0.8s
BJI                                pmax   pmax
      comp=Z,83nm,4.0s
FARO  Faro, Yukon      89.29  18   P      P      23 47 38.6 +1.1
      baz=217
TOAD  Toad River Com   89.35  23   P      P      23 47 39.3 +1.5
      baz=224,SNR=12
E19K  Redstone River   89.39   6   IAmb   IAmb   23 47 51.4
      comp=Z,8.8nm,0.9s
E19K  Redstone River   89.39   6   P      P      23 47 39.3 +1.4
      baz=196,SNR=12
RDOG  Red Dog Mine     89.50   4   P      P      23 47 39.8 +1.5
      baz=190
K29M  Barlow Dome      89.50  15   IAmb   IAmb   23 47 52.3
      comp=Z,14nm,1.1s
K29M  Barlow Dome      89.50  15   P      P      23 47 40.5 +1.9
      baz=214,SNR=12
I26K  Coal Creek Min   89.51  12   IAmb   IAmb   23 47 51.8
      comp=Z,5.4nm,0.8s
I26K  Coal Creek Min   89.51  12   P      P      23 47 40.1 +1.7
      baz=208,SNR=6.5
C16K  Lisburne Hills   89.57   3   P      P      23 47 39.7 +1.1
      baz=188
G22K  Bettles          89.57   9   P      P      23 47 40.9 +2.2
      baz=201
G23K  Bananza Creek    89.59   9   P      P      23 47 40.8 +1.9
      baz=202
F21K  Alatna River     89.59   8   P      P      23 47 40.5 +1.7
      baz=199
H25L  Birch Creek      89.87  11   P      P      23 47 42.1 +2.0
      baz=206
C17K  DeLong Mountai   89.89   4   P      P      23 47 41.1 +0.9
      baz=190
G24K  Hadweenzic Riv   89.98  10   P      P      23 47 42.4 +1.7
      baz=205
F22K  John River       90.03   8   P      P      23 47 42.9 +2.1
      baz=200
COLD  Coldfoot         90.04   9   P      P      23 47 42.8 +1.9
      baz=202
I27K  Kandik River     90.09  13   P      P      23 47 42.3 +1.1
      baz=210
MMPY  Sheldon Lake,    90.19  18          P      23 47 42.9 +1.1
MMPY                               IAmb   IAmb   23 47 55.5
      comp=Z,6.8nm,1.0s
MMPY  Sheldon Lake,    90.19  18   P      P      23 47 42.7 +1.0
      baz=219,SNR=7.1
C18K  Utukok River     90.20   5   P      P      23 47 42.9 +1.2
      baz=192
G25K  Bearman Lake     90.27  11   P      P      23 47 43.1 +1.2
      baz=206
E20K  Nigu River       90.27   6   P      P      23 47 42.8 +0.7
      baz=197
TGTN  Hyland Airport   90.27  20   P      P      23 47 43.2 +1.1
      baz=222
ZEA   Zeya             90.29 329  eP      P      23 47 42.9 +0.5
I28M  Miner Creek      90.31  13          P      23 47 42.7 +0.4
I28M                               IAmb   IAmb   23 47 55.3
      comp=Z,5.7nm,0.8s
I28M  Miner Creek      90.31  13   P      P      23 47 43.6 +1.3
      baz=212,SNR=8.5
D19K  Kuna River       90.31   6   IAmb   IAmb   23 47 56.5
      comp=Z,8.6nm,1.1s
D19K  Kuna River       90.31   6   P      P      23 47 43.1 +0.9
      baz=195
BILL  Bilibino         90.31 353          P      23 47 42.6 +0.5
BILL                               IAmb   IAmb   23 47 46.3
      comp=Z,6.3nm,0.9s
BILL  Bilibino         90.31 353⇓eP      P      23 47 42.6 +0.5
BILL                               pmax   pmax
      comp=Z,5.0nm,0.9s
BEAVL Fort Liard       90.36  22   P      P      23 47 43.5 +1.0
      baz=225
J30M  Hart River       90.41  15   IAmb   IAmb   23 47 56.2
      comp=Z,6.9nm,0.9s
J30M  Hart River       90.41  15   P      P      23 47 44.3 +1.4
      baz=215,SNR=6.3
GYA   Guiyang          90.46 298 ⇓P      P      23 47 45.0 +1.0
GYA                                pmax   pmax
      comp=Z,15nm,1.4s
I29M  Ogilvie Camp,    90.60  14   P      P      23 47 45.0 +1.5
I29M                               IAmb   IAmb   23 47 57.0
      comp=Z,8.1nm,1.1s
H27K  Steamboat Moun   90.65  13   IAmb   IAmb   23 47 58.0
      comp=Z,8.5nm,1.0s
H27K  Steamboat Moun   90.65  13   P      P      23 47 44.8 +1.0
      baz=210,SNR=6.0
F24K  Squaw Lake       90.66  10   P      P      23 47 44.5 +0.6
      baz=204
D20K  Etivluk River    90.67   6   IAmb   IAmb   23 47 46.6
      comp=Z,5.4nm,0.9s
D20K  Etivluk River    90.67   6   P      P      23 47 45.3 +1.5
      baz=196
E22K  Anaktuvuk Pass   90.67   8   IAmb   IAmb   23 47 57.9
      comp=Z,5.9nm,0.9s
E22K  Anaktuvuk Pass   90.67   8   P      P      23 47 45.4 +1.5
      baz=201,SNR=7.2
E21K  Killik River     90.69   7   P      P      23 47 45.1 +1.1
      baz=199
C19K  Lookout Ridge    90.78   5   P      P      23 47 45.9 +1.6
C19K                               IAmb   IAmb   23 47 58.6
      comp=Z,11nm,1.0s
C19K  Lookout Ridge    90.78   5   P      P      23 47 45.9 +1.6
      baz=193
SLVN  Son La           90.79 292   P      P      23 47 45.6 +0.1
SLVN                               IAmb   IAmb   23 47 48.7
      comp=Z,5.8nm,1.0s
G26K  Porcupine Rive   90.85  11          P      23 47 45.6 +1.0
G26K                               IAmb   IAmb   23 47 58.9
      comp=Z,8.4nm,1.0s
G26K  Porcupine Rive   90.85  11   P      P      23 47 46.7 +2.1
      baz=208
B18K  Kokolik River    90.86   4   P      P      23 47 46.6 +2.0
      baz=191
E23K  Chandalar        90.90   9          P      23 47 46.2 +1.2
E23K  Chandalar        90.90   9   P      P      23 47 47.0 +1.9
      baz=203
I30M  Mount Dempster   90.93  15   P      P      23 47 46.6 +1.3
      baz=215,SNR=12
E24K  Your Creek       91.08   9   P      P      23 47 46.1 +0.3
      baz=204
F25K  Christian Rive   91.10  10          P      23 47 46.9 +1.1
F25K  Christian Rive   91.10  10   P      P      23 47 46.2 +0.3
      baz=206
G27K  Doyon Strip      91.13  12   P      P      23 47 46.4 +0.3
G27K  Doyon Strip      91.13  12   P      P      23 47 47.9 +1.9
      baz=210
D22K  Ayikyak River    91.27   8          P      23 47 48.0 +1.4
D22K                               IAmb   IAmb   23 48 01.6
      comp=Z,5.7nm,0.8s
D22K  Ayikyak River    91.27   8   P      P      23 47 48.5 +1.9
      baz=200
C21K  Knifeblade Rid   91.29   7   P      P      23 47 48.7 +2.0
      baz=198
H29M  Whitestone       91.31  14   P      P      23 47 48.7 +1.9
      baz=213
F26K  Sheenjek River   91.45  11   P      P      23 47 49.9 +2.5
      baz=208,SNR=6.0
TOLK  Toolik Lake Re   91.45   9   P      P      23 47 48.9 +1.4
      baz=203
E25K  Arctic Village   91.58  10   IAmb   IAmb   23 48 03.3
      comp=Z,6.1nm,0.9s
E25K  Arctic Village   91.58  10   P      P      23 47 49.8 +1.7
      baz=206
D23K  Nanushuk River   91.60   8   P      P      23 47 49.6 +1.5
      baz=202
A19K  Wainwright       91.74   4   P      P      23 47 50.0 +1.3
      baz=192
B21K  Ikpikpuk River   91.75   7   P      P      23 47 50.4 +1.6
      baz=198
XAN   Xi'an            91.76 306 ⇓P      P      23 47 50.4 +0.7
XAN                                pP     pwP    23 48 00.0 +1.4
XAN                                pmax   pmax
      comp=Z,15nm,1.1s
EPYK  Eagle Plains     91.80  14   P      P      23 47 49.6 +0.5
EPYK                               IAmb   IAmb   23 48 02.2
      comp=Z,8.5nm,1.0s
EPYK  Eagle Plains     91.80  14   P      P      23 47 50.6 +1.4
      baz=214
B20K  Meade River      91.87   6   P      P      23 47 50.9 +1.6
      baz=196
H31M  Peel River       91.90  15   IAmb   IAmb   23 48 14.2
      comp=Z,6.1nm,1.1s
H31M  Peel River       91.90  15   P      P      23 47 50.8 +1.2
      baz=216
G29M  Pine Creek       91.97  13   IAmb   IAmb   23 48 09.6
      comp=Z,6.6nm,0.9s
G29M  Pine Creek       91.97  13   P      P      23 47 51.0 +1.1
      baz=213
NNA   Nana             92.08 104   LR     LR     00 20 08.0
      comp=Z,94nm,20.5s,baz=250,slow=30
F28M  Old Crow         92.18  12          P      23 47 51.0 +0.2
F28M                               IAmb   IAmb   23 48 04.2
      comp=Z,4.4nm,0.9s
F28M  Old Crow         92.18  12   P      P      23 47 52.5 +1.7
      baz=212
E27K  Coleen River     92.34  12   IAmb   IAmb   23 48 05.3
      comp=Z,6.0nm,0.9s
E27K  Coleen River     92.34  12   P      P      23 47 53.0 +1.4
      baz=210
G30M  tAoh Zraii Nji   92.42  14   P      P      23 47 53.2 +1.2
      baz=215,SNR=8.2
C23K  Itkillik River   92.42   8   IAmb   IAmb   23 48 14.0
      comp=Z,4.7nm,0.9s
C23K  Itkillik River   92.42   8   P      P      23 47 53.0 +1.1
      baz=202
ATAH  Atahualpa        92.47  99   LR     LR     00 21 59.7
      comp=Z,120nm,18.2s,baz=261,slow=31
D25K  Kavik River      92.54   9   P      P      23 47 53.5 +0.9
      baz=206
B22K  Teshekpuk Lake   92.56   7   P      P      23 47 53.9 +1.4
      baz=199
C24K  Franklin Bluff   92.57   9   P      P      23 47 53.8 +1.3
      baz=204
JTS   Las Juntas de    92.65  80   LR     LR     00 20 28.3
      comp=Z,100nm,19.9s,baz=272,slow=30
HHC   Hu-ho-hao-te     92.75 313  eP      P      23 47 54.6 +0.4
HHC                                pmax   pmax
      comp=Z,5.0nm,0.6s
HHC                                pmax   pmax
      comp=Z,83nm,4.2s
G31M  Satah River      92.82  15   P      P      23 47 55.0 +1.2
      baz=217,SNR=7.9
A22K  Sinclair Lake    93.03   6   P      P      23 47 55.7 +1.0
      baz=198
F30M  Barrier River    93.03  14   P      P      23 47 56.4 +1.7
      baz=215
E28M  Babbage River    93.09  12   IAmb   IAmb   23 48 08.8
      comp=Z,5.8nm,0.9s
E28M  Babbage River    93.09  12   P      P      23 47 56.5 +1.4
      baz=212,SNR=6.6
KMI   Kunming          93.21 296 ⇑P      P      23 47 57.6 +0.7
KMI                                pmax   pmax
      comp=Z,16nm,0.9s
E29M  Blow River       93.23  13   IAmb   IAmb   23 48 09.0
      comp=Z,5.1nm,1.1s
E29M  Blow River       93.23  13   P      P      23 47 56.9 +1.2
      baz=213
C27K  Jago River       93.24  10   P      P      23 47 57.0 +1.3
      baz=208
C26K  Camden Bay       93.31  10   P      P      23 47 57.1 +1.1
      baz=207
F31M  Tsiigehtchic     93.36  14   P      P      23 47 57.2 +1.0
      baz=217
D27M  Malcolm River    93.38  11   P      P      23 47 56.0 -0.4
D27M                               IAmb   IAmb   23 47 59.9
      comp=Z,5.3nm,1.1s
D27M  Malcolm River    93.38  11   P      P      23 47 57.6 +1.2
      baz=211
D28M  Stokes Point     93.86  12   P      P      23 48 00.1 +1.6
      baz=213
CMAR  Chiang Mai Arr   94.07 288   P      P      23 48 01.1 +0.4
      comp=Z,5.0nm,0.8s,baz=125,slow=2.8,SNR=34
CMAR                               LR     LR     00 29 36.6
      comp=Z,16nm,18.8s,baz=120,slow=35
      comp=Z,5.0nm,0.8s
CMAR  Chiang Mai Arr   94.07 288 i P      P      23 48 02.0 +1.3
CMAR                               pmax   pmax
      comp=Z,6.0nm,0.9s
INK   Inuvik           94.10  14   P      P      23 48 00.6 +1.0
      comp=Z,1.5nm,0.4s,baz=198,slow=3.2,SNR=4.1
      comp=Z,1.5nm,0.4s
INK   Inuvik           94.10  14   P      P      23 48 01.5 +1.9
      baz=217
CHTO  Chiang Mai       94.20 288          P      23 48 01.4 +0.1
CHTO  Chiang Mai       94.20 288   P      P      23 48 01.4 +0.1
CHTO                               pmax   pmax
      comp=Z,9.0nm,0.9s
YAK   Yakutsk          94.38 337   LR     LR     00 25 46.9
      comp=Z,59nm,20.0s,baz=128,slow=32
YAK   Yakutsk          94.38 337⇓eP      P      23 48 00.5 -0.5
YAK                                pmax   pmax
      comp=Z,11nm,0.6s
PZH   PanZhiHua        94.56 297   P      P      23 48 04.4 +1.5
YKA   Yellowknife Ar   95.68  24   P      P      23 48 07.5 +0.5
      comp=Z,0.7nm,0.8s,baz=235,slow=4.5,SNR=2.4
YKA                                LR     LR     00 24 42.7
      comp=Z,42nm,21.4s,baz=302,slow=31
      comp=Z,0.7nm,0.8s
C36M  Paulatuk         97.16  16   P      Pdif   23 48 15.2 +1.6
      baz=226
LPAZ  La Paz           98.13 111   LR     LR     00 24 22.4
      comp=Z,174nm,19.6s,baz=252,slow=30
A36M  Sachs Harbour    98.74  14   P      Pdif   23 48 21.6 +1.0
      baz=225
SONM  Songino Array    98.97 318   P      Pdif   23 48 23.2 +0.8
      comp=Z,0.5nm,0.6s,baz=90,slow=4.4,SNR=4.1
      comp=Z,0.5nm,0.6s
WMQ   Urumqi          110.43 310  ePKP    PKiKP  23 53 14.3 +0.1
WMQ                                LR     LR
      comp=Z,120nm,22.7s
ZALV  Zalesovo Beam   113.59 321   PKiKP  PKiKP  23 53 17.4 -2.3
      comp=Z,1.1nm,0.7s,baz=132,slow=2.2,SNR=4.7
KURK  Kurchatov       117.26 317          PKPdf  23 53 26.7 -0.2
KURK  Kurchatov       117.26 317   PKIKP  PKPdf  23 53 26.7 -0.2
KURBB Kurchatov Arra  117.31 317   PKP    PKPdf  23 53 26.4 -0.7
      comp=Z,0.8nm,0.7s,baz=93,slow=1.9,SNR=10
BVAR  Borovoye Array  122.22 320   PKP    PKPdf  23 53 36.0 -0.5
      comp=Z,1.8nm,0.6s,baz=85,slow=1.3,SNR=17
BVAR  Borovoye Array  122.22 320   PKIKP  PKPdf  23 53 36.0 -0.5
BRVK  Borovoye        122.28 320          PKPdf  23 53 36.7 +0.2
BRVK  Borovoye        122.28 320   PKIKP  PKPdf  23 53 36.7 +0.2
SPITS Spitsbergen Ar  122.90 358   PKP    PKPdf  23 53 37.0 -0.1
      comp=Z,2.0nm,0.8s,baz=89,slow=16,SNR=2.0
FINES FINESS Array B  137.60 346   PKhKP  PKPpre 23 54 01.7
      comp=Z,1.4nm,0.8s,baz=95,slow=7.0,SNR=1.5
```

HFS	**Hagfors**	**140.88**	**354**	PKhKP	PKPpre	23 54 05.1	
	comp=Z,3.6nm,1.0s,baz=2.6,slow=6.3,SNR=1.9						
ERBR	**Yeremizino-Bor**	**142.90**	**319**	*i* PKHKP	PKPpre	23 54 09.1	
ERBR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NACGM	**Naroch**	**143.06**	**340**	*e*PKiKP	**PKiKP**	**23 54 25.4**	**+6.8**
	comp=Z,4.0nm,0.8s,baz=33						
RAYN	**Ar Rayn**	**143.65**	**281**	⇑PKIKP	PKPab	23 54 14.6	+0.5
SUW	**Suwalki**	**144.91**	**343**	*e*PKP	**PKPab**	**23 54 18.1**	**+0.4**
ANN	**Anapa**	**145.22**	**320**	*i* PKHKP	PKPpre	23 54 11.9	
ANN				pmax	pmax		
	comp=Z,49nm,1.2s						
EKA	**Eskdalemuir Ar**	**145.34**	**9**	PKPbc	**PKPbc**	**23 54 18.9**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=328,slow=2.8,SNR=7.4						
AKASG	**Malin Array Be**	**145.56**	**334**	PKPbc	**PKPbc**	**23 54 19.7**	**-0.3**
	comp=Z,4.6nm,0.7s,baz=40,slow=4.3,SNR=24						
AKBB	**Malin Array Si**	**145.56**	**334**	*ce*PKIKP	**PKPbc**	**23 54 19.1**	**-0.9**
KIEV	**Kiev**	**145.57**	**334**		**PKPbc**	**23 54 19.7**	**-0.3**
KIEV	**Kiev**	**145.57**	**334**	⇑P	**PKPbc**	**23 54 20.1**	**+0.1**
KIEV	**Kiev**	**145.57**	**334**	⇑PKIKP	**PKPbc**	**23 54 20.1**	**+0.1**
SORM	**Soroca**	**147.88**	**332**	⇑P	**PKPbc**	**23 54 26.5**	**-0.3**
SORM	**Soroca**	**147.88**	**332**	⇑PKP2	**PKPbc**	**23 54 26.5**	**-0.3**
BNN	**Bunyan**	**149.15**	**311**		**PKPbc**	**23 54 31.2**	**+0.6**
KSP	**Ksiaz**	**149.50**	**347**	*e*PKP	**PKPbc**	**23 54 30.1**	**-0.8**
STHS	**Stebnicka Huta**	**149.53**	**340**	*e*PKP2	**PKPab**	**23 54 35.8**	**-0.1**
STHS	**Stebnicka Huta**	**149.53**	**340**	*e*PKP	**PKPab**	**23 54 35.8**	**-0.1**
BURAR	**Bucovina Array**	**149.61**	**334**	⇓P	**PKPab**	**23 54 37.7**	**+1.2**
BURAR	**Bucovina Array**	**149.61**	**334**	⇓PKP2	**PKPab**	**23 54 37.7**	**+1.2**
KOLS	**Kolonicke sedl**	**149.61**	**339**	*e*PKP2	**PKPab**	**23 54 37.1**	**+0.8**
KOLS	**Kolonicke sedl**	**149.61**	**339**	*e*PKP	**PKPab**	**23 54 37.1**	**+0.8**
CLL	**Collm**	**149.62**	**352**	*e*PKHKP	PKPpre	23 54 29.0	
CLL				*i*		23 54 31.8	
CLL				pmax	pmax		
	comp=Z,18nm,1.6s						
CLL				pmax	pmax		
	comp=Z,39nm,2.0s						
CLL	**Collm**	**149.62**	**352**	*e*PKPdf	**PKPdf**	**23 54 29.0**	**+2.4**
CLL				*i* PKPbc	**PKPbc**	**23 54 31.8**	**+0.6**
	comp=Z,18nm,1.6s						
CLL				*i* PKPab	**PKPab**	**23 54 36.3**	**+0.1**
	comp=Z,39nm,2.0s						
CLL				*i* x	x	23 54 43.5	
CLL				AMS	AMS	01 01 00.0	
	comp=Z,100nm,18.9s						
VARL	**Varlezi**	**149.76**	**329**	⇓P	**PKPbc**	**23 54 32.8**	**+1.1**
OSTC	**Ostas**	**149.79**	**347**	⇑*e*PKP	**PKPbc**	**23 54 33.0**	**+1.3**
OSTC	**Ostas**	**149.79**	**347**	*e*PKP2	**PKPbc**	**23 54 33.0**	**+1.3**
NIE	**Niedzica**	**149.81**	**342**	*e*PKP	**PKPbc**	**23 54 31.9**	**+0.1**
SCTR	**Scanteiesti**	**149.85**	**329**	⇑P	**PKPbc**	**23 54 31.7**	**-0.3**
TESR	**Tescani**	**149.86**	**331**	⇑P	**PKPab**	**23 54 36.8**	**-0.6**
BRG	**Berggiesshubel**	**149.90**	**350**	*e*PKP	**PKiKP**	**23 54 33.7**	**+0.9**
BRG				Amp		23 54 34.7	
	comp=Z,3.0nm,0.8s						
BRG	**Berggiesshubel**	**149.90**	**350**	P	**PKPab**	**23 54 39.3**	**+1.9**
BRG				Amp		23 54 41.7	
	comp=Z,8.0nm,1.0s						
DPC	**Dobruska-Polom**	**149.96**	**347**	⇑*e*PKP	**PKiKP**	**23 54 33.8**	**+0.8**
DPC	**Dobruska-Polom**	**149.96**	**347**	*e*PKP2	**PKiKP**	**23 54 33.8**	**+0.8**
STEB	**Steborice**	**150.02**	**345**	⇑*e*PKP	**PKPbc**	**23 54 32.6**	**+0.4**
KRLC	**Kraliky**	**150.12**	**346**	⇑*e*PKP	**PKPbc**	**23 54 33.6**	**+1.1**
KRLC	**Kraliky**	**150.12**	**346**	*e*PKIKP	**PKPbc**	**23 54 33.6**	**+1.1**
CFR	**Carcaliu**	**150.14**	**328**	⇑P	**PKPbc**	**23 54 32.6**	**0.0**
CFR	**Carcaliu**	**150.14**	**328**	⇑PKP2	**PKPbc**	**23 54 32.6**	**0.0**
MORC	**Moravsky Berou**	**150.22**	**345**	*e*PKP	**PKPbc**	**23 54 32.6**	**-0.2**
MORC	**Moravsky Berou**	**150.22**	**345**	⇑P	**PKPbc**	**23 54 33.2**	**+0.4**
MORC	**Moravsky Berou**	**150.22**	**345**	⇑PKIKP	**PKPbc**	**23 54 33.2**	**+0.4**
TPGR	**Topolog**	**150.23**	**327**	⇑P	**PKPbc**	**23 54 33.9**	**+1.0**
BRTR	**Keskin Array B**	**150.25**	**314**	PKPbc	**PKPbc**	**23 54 33.2**	**-0.1**
	comp=Z,2.8nm,0.7s,baz=144,slow=3.2,SNR=20						
LANS	**Liptovska Anna**	**150.29**	**342**	*e*PKIKP	**PKiKP**	**23 54 34.8**	**+1.0**
LANS	**Liptovska Anna**	**150.29**	**342**	*e*PKP	**PKiKP**	**23 54 34.8**	**+1.0**
VRI	**Vrincioaia**	**150.31**	**330**	⇓P	**PKPbc**	**23 54 33.5**	**+0.4**
VRI	**Vrincioaia**	**150.31**	**330**	⇓PKIKP	**PKPbc**	**23 54 33.5**	**+0.4**
KIRS	**Kirsehir-Merke**	**150.35**	**313**	⇑P	**PKPbc**	**23 54 34.2**	**+0.8**
PLOR	**Plostina**	**150.36**	**330**	⇓P	**PKPab**	**23 54 40.1**	**+0.6**
ARCR	**ARCALIA**	**150.39**	**334**	⇑P	**PKPab**	**23 54 41.0**	**+1.5**
TURR	**Turia**	**150.49**	**331**	⇑P	**PKPab**	**23 54 38.5**	**-1.5**
MAUC	**Maruska**	**150.53**	**344**	⇑*e*PKP	**PKPbc**	**23 54 34.6**	**+1.1**
HARR	**Harsova**	**150.59**	**327**	⇑P	**PKiKP**	**23 54 35.0**	**+0.6**
HARR	**Harsova**	**150.59**	**327**	⇑PKIKP	**PKiKP**	**23 54 35.0**	**+0.6**
ANTO	**Ankara**	**150.74**	**315**	⇑P	**PKPbc**	**23 54 35.0**	**+0.6**
ANTO	**Ankara**	**150.74**	**315**	⇑PKIKP	**PKPbc**	**23 54 35.0**	**+0.6**
DOPR	**Dopca**	**150.84**	**332**	⇓P	**PKPdf**	**23 54 32.3**	**+3.6**
VRAC	**Vranov**	**150.88**	**346**	*e*PKP	**PKPbc**	**23 54 34.9**	**+0.6**
VRAC	**Vranov**	**150.88**	**346**	⇑P	**PKiKP**	**23 54 35.7**	**+0.8**
VRAC	**Vranov**	**150.88**	**346**	⇑PKIKP	**PKiKP**	**23 54 35.7**	**+0.8**
MLR	**Muntele Rosu**	**150.96**	**331**	⇑P	**PKPbc**	**23 54 35.4**	**+0.7**
MLR	**Muntele Rosu**	**150.96**	**331**	⇑PKIKP	**PKPbc**	**23 54 35.4**	**+0.7**
BCLA	**Clavier**	**150.97**	**1**	*d*PKP	**PKPab**	**23 54 42.4**	**+0.6**
BGES	**Gesves**	**151.00**	**1**	*d*PKPdf	**PKPdf**	**23 54 29.6**	**+0.8**
BGES				*d*PKP	**PKPbc**	**23 54 34.5**	**-0.1**
JAVC	**Velka Javorina**	**151.04**	**344**	*e*PKP	**PKPbc**	**23 54 35.6**	**+0.8**
VYHS	**Vyhne**	**151.07**	**342**	*e*PKIKP	**PKPbc**	**23 54 35.8**	**+1.0**
VYHS	**Vyhne**	**151.07**	**342**	*e*PKP	**PKPbc**	**23 54 35.8**	**+1.0**
KRUC	**Moravsky**	**151.16**	**346**	*e*PKP	**PKPbc**	**23 54 35.5**	**+0.6**
MARR	**Marisel-Cluj**	**151.21**	**335**	⇓P	**PKPbc**	**23 54 36.1**	**+0.8**
PSZ	**Piszkesteto**	**151.27**	**341**	⇓P	**PKPab**	**23 54 44.2**	**+0.9**
DRGR		**151.27**	**336**	⇑P	**PKPbc**	**23 54 35.9**	**+0.5**
DRGR		**151.27**	**336**	⇑PKIKP	**PKPbc**	**23 54 35.9**	**+0.5**
DOU	**Dourbes**	**151.28**	**2**	*d*PKP	**PKPbc**	**23 54 35.7**	**+0.5**
VOIR		**151.40**	**332**	⇑P	**PKPbc**	**23 54 36.1**	**+0.4**
VOIR		**151.40**	**332**	⇑PKIKP	**PKPbc**	**23 54 36.1**	**+0.4**
GRF	**Grafenberg Arr**	**151.43**	**353**	*e*PKP	**PKPab**	**23 54 43.8**	**0.0**
	baz=10,slow=3.7						
MODS	**Modra-Piesok**	**151.59**	**344**	*e*PKIKP	**PKPbc**	**23 54 36.9**	**+0.9**
MODS	**Modra-Piesok**	**151.59**	**344**	*e*PKP	**PKPbc**	**23 54 36.9**	**+0.9**
MMAI	**Mount Meron Ar**	**151.61**	**300**	PKPbc	**PKPbc**	**23 54 36.9**	**+0.3**
	comp=Z,2.7nm,0.7s,baz=52,slow=1.4,SNR=8.1						
ARR	**Arges**	**151.64**	**332**	⇓P	**PKiKP**	**23 54 38.0**	**+1.3**
KHC	**Kasperske Hory**	**151.65**	**350**	⇑*e*PKP	**PKPbc**	**23 54 37.0**	**+0.9**
KHC				*e*x	x	23 54 50.3	
KHC	**Kasperske Hory**	**151.65**	**350**	*e*PKIKP	**PKPbc**	**23 54 37.0**	**+0.9**
CKRC	**Cesky Krumlov**	**151.82**	**349**	⇑*e*PKP	**PKPbc**	**23 54 37.1**	**+0.6**
CKRC	**Cesky Krumlov**	**151.82**	**349**	*e*PKIKP	**PKPbc**	**23 54 37.1**	**+0.6**
GERES	**GERESS Array B**	**151.90**	**349**	PKPbc	**PKPbc**	**23 54 36.9**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=20,slow=2.0,SNR=12						
SIRR	**Siria**	**152.10**	**337**	⇑P	**PKPbc**	**23 54 37.2**	**0.0**
CONA	**Conrad Observa**	**152.35**	**346**	*e*PKiKP	**PKPbc**	**23 54 38.6**	**+0.8**
	comp=Z,7.0nm,1.3s						
SURR	**Surduc**	**152.36**	**335**	⇓P	**PKPbc**	**23 54 38.2**	**+0.4**
GZR	**Gura Zlata**	**152.40**	**334**	⇑P	**PKPbc**	**23 54 35.7**	**-2.3**
GZR	**Gura Zlata**	**152.40**	**334**	⇑PKIKP	**PKPbc**	**23 54 35.7**	**-2.3**
RONA	**Rosalia, Austr**	**152.46**	**345**	*e*pPKP	**PKPab**	**23 54 49.8**	**+1.7**
	comp=Z,0.8nm,0.5s						
BZS	**Buzias**	**152.67**	**336**	⇑P	**PKPbc**	**23 54 38.9**	**+0.4**
BZS	**Buzias**	**152.67**	**336**	⇑PKIKP	**PKPbc**	**23 54 38.9**	**+0.4**
MOA	**Molln**	**152.76**	**348**	*e*PKiKP	**PKiKP**	**23 54 40.1**	**+1.3**
	comp=Z,7.1nm,1.4s						
BFO	**Black Forest**	**153.02**	**357**		**PKPab**	**23 54 50.6**	**+0.2**
BIOA	**Bad Ischl, Aus**	**153.03**	**349**	*e*PKP	**PKPab**	**23 54 49.9**	**-0.6**
	comp=Z,8.7nm,1.4s						
ARSA	**Arzberg**	**153.06**	**346**	*e*PKiKP	**PKiKP**	**23 54 40.8**	**+1.3**
	comp=Z,7.0nm,1.4s						
MORH	**Mrgy, Hungar**	**153.18**	**341**	⇑P	**PKPbc**	**23 54 39.8**	**+0.3**
MDVR	**Moldovita**	**153.33**	**335**	⇑P	**PKPab**	**23 54 52.4**	**+0.4**
LESA	**Schwarzleotal**	**153.45**	**350**	*e*PKP	**PKPab**	**23 54 51.7**	**-0.7**
	comp=Z,5.4nm,1.1s						
RETA	**Reutte**	**153.65**	**353**	*i* PKP	**PKPbc**	**23 54 41.2**	**+0.5**
	comp=Z,5.5nm,1.0s						
WATA	**Walderalm**	**153.70**	**352**	*i* PKP	**PKPab**	**23 54 52.4**	**-1.2**
	comp=Z,0.4nm,0.4s						
SOKA	**Soboth**	**153.71**	**346**	*e*PKiKP	**PKiKP**	**23 54 42.2**	**+1.2**
	comp=Z,1.4nm,0.8s						
MOTA	**Moosalm**	**153.75**	**352**	*i* PKiKP	**PKPbc**	**23 54 41.9**	**+0.9**
	comp=Z,6.0nm,1.1s						
WTTA	**Wattenberg**	**153.76**	**352**	*e*PKiKP	**PKPbc**	**23 54 41.4**	**+0.4**
	comp=Z,1.5nm,0.9s						
DAVA	**Damuels**	**153.94**	**354**	*e*pPKP	**PKiKP**	**23 54 43.6**	**+2.1**
	comp=Z,5.3nm,0.9s						
OBKA	**Obir**	**153.98**	**347**	*e*pPKP	**PKiKP**	**23 54 44.1**	**+2.5**
	comp=Z,1.4nm,0.9s						
MYKA	**Terra Mystica**	**154.05**	**348**	*i* PKiKP	**PKiKP**	**23 54 43.2**	**+1.5**
	comp=Z,5.9nm,1.1s						
FETA	**Feichten**	**154.12**	**353**	*i* PKP	**PKPab**	**23 54 53.2**	**-2.1**
	comp=Z,5.5nm,1.2s						
ABTA	**Abfaltersbach**	**154.13**	**350**	*i* PKP	**PKPbc**	**23 54 41.8**	**+0.1**
	comp=Z,3.3nm,1.0s						
ESDC	**Sonseca Array**	**159.78**	**23**	PKPab	**PKPab**	**23 55 19.6**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=317,slow=4.2,SNR=7.1						
TORD	**Torodi Ar. Bea**	**170.80**	**152**	PKPab	**PKPab**	**23 56 07.5**	**-1.3**
	comp=Z,51nm,0.3s,baz=170,slow=0.3,SNR=1.6						

HVO ***21*** *23:36:10.7±1.1, 19°.455N±0°.003×155°.603W±0°.008, h-2km±5km, ML3.1/45, ML3.3/27(NEIC), Error ellipse: s-maj=1.1km s-min=0.4km az=93.0*

NEIC 21 23:36:11.2±1.0, 19°.444N±0°.006×155°.604W±0°.005, h5km±1km, Error ellipse: s-maj=2.2km s-min=1.2km az=188.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MWH	**Mokuaweoweo**	**0.04**	**9**		Pg	23 36 12.0	-0.9
MWH					Sg	23 36 13.0	-1.1
ALEP	**Alea Permanent**	**0.10**	**338**		Pg	23 36 13.6	0.0
ALEP					Sg	23 36 15.7	+0.5
AIN	**Ainahou**	**0.15**	**118**		Pg	23 36 14.9	+0.6
AIN					Sg	23 36 17.7	+1.2
AIN	**Ainahou**	**0.15**	**118**	IAML		23 36 19.2	
	comp=E,19µm,0.7s						
AIN				IAML		23 36 19.2	
	comp=N,16µm,0.3s						
HMH	**Humu‘ula Sheep**	**0.19**	**36**		Pg	23 36 15.2	+0.1
HMH	**Humu‘ula Sheep**	**0.19**	**36**		Sg	23 36 18.1	+0.4
HMH				IAML		23 36 20.0	
	comp=E,3µm,0.6s						
HMH				IAML		23 36 20.4	
	comp=N,4µm,0.5s						
KHU	**Kahuku**	**0.20**	**183**	Pg	Pg	23 36 15.3	+0.2
MLH	**Mauna Loa**	**0.21**	**76**	Pg	Pg	23 36 16.1	+0.7
MLH				Sg	Sg	23 36 18.0	-0.2
MLH				IAML		23 36 21.2	
	comp=N,10µm,0.5s						
HTC	**Hot Caves**	**0.28**	**137**		Pg	23 36 16.9	+0.2
WRMHI	**West Rim**	**0.29**	**97**		Pg	23 36 17.0	+0.2
WRMHI					Sg	23 36 21.5	+0.8
UWE	**Uwekahuna**	**0.29**	**94**	Pg	Pg	23 36 16.9	-0.1
UWE				IAML		23 36 26.4	
	comp=N,6µm,0.7s						
SDHHI	**Sand Hill**	**0.30**	**100**		Pg	23 36 17.1	+0.1
SDHHI					Sg	23 36 21.8	+0.9
CPH	**Captain Cook**	**0.30**	**278**		Pg	23 36 17.6	+0.6
OBL	**Observatory Le**	**0.30**	**95**		Pg	23 36 17.2	+0.1
OBL					Sg	23 36 21.9	+0.8
RSD	**Rainshed**	**0.31**	**86**		Sg	23 36 21.8	+0.5
RSD	**Rainshed**	**0.31**	**86**	Pg	Pg	23 36 12.7	-4.5
UWB	**Uwekahuna Bluf**	**0.31**	**94**		Pg	23 36 17.3	+0.1
UWB					Sg	23 36 21.9	+0.6
RIM	**Rim**	**0.32**	**99**		Pg	23 36 17.1	-0.3
RIM					Sg	23 36 22.3	+0.8
HLP	**Hilina Pali**	**0.32**	**118**	Pg	Pg	23 36 16.6	-0.7
HLP				IAML		23 36 26.3	
	comp=N,4µm,0.8s						
HLP				IAML		23 36 28.1	
	comp=E,6µm,1.0s						
HLP	**Hilina Pali**	**0.32**	**118**		Sg	23 36 22.5	+1.0
SBLHI	**Steaming Bluff**	**0.32**	**93**		Pg	23 36 17.4	0.0
SBLHI					Sg	23 36 22.3	+0.7
POHA	**Pohakuloa**	**0.32**	**12**		Sg	23 36 20.3	-1.4
POHA	**Pohakuloa**	**0.32**	**12**	Pg	Pg	23 36 17.3	-0.2
POHA				IAML		23 36 24.9	
	comp=E,2µm,0.6s						
POHA				IAML		23 36 26.6	
	comp=E,3µm,0.5s						
KKO	**Keanakako'i**	**0.32**	**98**		Pg	23 36 17.6	+0.1
KKO					Sg	23 36 22.5	+0.7
HATHI	**Halema‘uma‘u T**	**0.32**	**94**	Pg	Pg	23 36 18.1	+0.6
HATHI				IAML		23 36 23.9	
	comp=E,5µm,0.3s						
HATHI				IAML		23 36 24.2	
	comp=N,5µm,0.3s						
HUH	**Hualalai**	**0.32**	**318**		Pg	23 36 18.4	+0.9
BYL	**Byron's Ledge**	**0.33**	**96**	Pg	Pg	23 36 17.3	-0.2
BYL				IAML		23 36 27.8	
	comp=N,4µm,0.6s						
BYL				IAML		23 36 27.9	
	comp=E,4µm,0.5s						
HPO	**Honuapo**	**0.36**	**172**		Pg	23 36 18.0	-0.1
HPO					Sg	23 36 18.1	-4.6
PUH	**Pauahi**	**0.37**	**101**	Pg	Pg	23 36 18.2	-0.2
PUH					Sg	23 36 19.4	-3.9
KNHH	**Kane Nui o Ham**	**0.41**	**99**	Pg	Pg	23 36 19.5	+0.2
KKH	**Kailua Kona**	**0.45**	**298**		Pg	23 36 19.8	+0.1
KKH					Sg	23 36 25.6	0.0
STCH	**Steam Cracks**	**0.46**	**97**		Sg	23 36 26.0	0.0
STCH	**Steam Cracks**	**0.46**	**97**	Pg	Pg	23 36 20.4	+0.4
NPOC	**North of Pu‘u**	**0.47**	**96**		Pg	23 36 19.8	-0.5
NPOC					Sg	23 36 27.2	+0.8
JCUZ	**Jacuzzi**	**0.48**	**97**		Pg	23 36 19.9	-0.5
JCUZ					Sg	23 36 27.0	+0.4
JOKA	**Jonika Flow**	**0.57**	**91**	Pg	Pg	23 36 20.9	-1.2
JOKA	**Jonika Flow**	**0.57**	**91**		Sg	23 36 29.6	+0.1
MHA	**Mahukona**	**0.79**	**339**		Pg	23 36 26.7	+0.3

IDC 21 23:36:48.0±307.0, 48°.05N×151°.75E, h0km, Error ellipse: s-maj=132.5km s-min=121.8km az=10.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I44RU	**PETROPAVLOVSK-**	**6.33**	**35**	I	I	00 13 40.4	
	0.3nm,2.1s,baz=217,slow=311,SNR=13						
I45RU	**USSURIYSK INFR**	**14.23**	**262**	I	I	01 04 40.0	
	baz=63,slow=320,SNR=1.9						
I30JP	**ISUMI INFRASON**	**15.31**	**218**	I	I	01 06 04.4	
	0.3nm,1.5s,baz=29,slow=310,SNR=4.4						
I46RU	**ZALESOVO INFRA**	**41.11**	**304**	I	I	03 45 20.0	
	baz=71,slow=304,SNR=7.1						
I18DK	**QAANAAQ INFRAS**	**52.18**	**10**	I	I	05 00 20.0	
	0.1nm,4.8s,baz=324,slow=335,SNR=18						

ROM 21 23:52:24.9±0.1, 38°.939N±0°.004×16°.09E±0°.01, h4km±1km, ML1.4/16, Error ellipse: s-maj=0.8km s-min=0.3km az=106.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRI	**Girifalco**	**0.28**	**114**	P	Pb	23 52 31.7	-0.9
GRI				S	Sg	23 52 35.6	+1.5
GRI				AML	AML		
	comp=N,109µm,0.6s						
GRI				AML	AML		
	comp=N,109µm,1.4s						
GRI				AML	AML		
	comp=E,95µm,0.2s						
CAR1	**CAROLEI**	**0.33**	**17**	P	Pb	23 52 32.5	-0.9
CAR1				S	Sg	23 52 37.3	+1.7
CAR1				AML	AML		
	comp=N,131µm,0.4s						
CAR1				AML	AML		
	comp=E,180µm,0.7s						
CAR1				AML	AML		
	comp=N,131µm,1.6s						
JOPP	**Joppolo**	**0.37**	**206**	P	Pb	23 52 33.2	-0.9
JOPP				S	Sg	23 52 38.5	+1.7
JOPP				AML	AML		
	comp=E,122µm,0.1s						
JOPP				AML	AML		
	comp=N,157µm,0.2s						
SPS2	**Spezzano della**	**0.40**	**29**	P	Pb	23 52 34.0	-0.8
SPS2				S	Sb	23 52 40.0	-1.3
SPS2				AML	AML		
	comp=E,21µm,1.5s						
SPS2				AML	AML		
	comp=N,21µm,1.6s						
SPS2				AML	AML		
	comp=E,21µm,0.5s						
PLAC	**Placanica**	**0.56**	**151**	P	Pb	23 52 36.8	-0.5
PLAC				S	Sb	23 52 45.2	-0.5
CELI	**Celico**	**0.57**	**35**	P	Pb	23 52 36.7	-0.8
CELI				S	Sb	23 52 45.8	-0.3
CELI				AML	AML		
	comp=E,32µm,0.9s						
CELI				AML	AML		
	comp=N,56µm,0.3s						
CELI				AML	AML		
	comp=E,32µm,0.9s						
TIP	**Timpagrande**	**0.57**	**65**	P	Pb	23 52 37.2	-0.4
TIP				S	Sb	23 52 45.8	-0.4
CET2	**Cetraro**	**0.60**	**350**	P	Pb	23 52 37.3	-0.7
CET2				AML	AML		
	comp=N,82µm,0.3s						
CET2				AML	AML		
	comp=E,48µm,0.2s						
CEL	**Celeste**	**0.70**	**193**	P	Pb	23 52 39.6	-0.1
CEL				AML	AML		
	comp=E,22µm,0.5s						
CEL				AML	AML		
	comp=N,23µm,0.7s						
TDS	**Terranova Siba**	**0.74**	**15**	P	Pb	23 52 39.9	-0.6
PIPA	**Pietrapaola**	**0.79**	**46**	P	Pb	23 52 41.6	+0.4
MSRU	**Castanea**	**0.81**	**214**	P	Pb	23 52 41.6	-0.1
MSRU				AML	AML		
	comp=N,39µm,1.1s						
MSRU				AML	AML		
	comp=E,52µm,1.0s						
MSRU				AML	AML		
	comp=E,52µm,1.0s						
SALB	**San Lorenzo Be**	**0.96**	**12**	P	Pg	23 52 43.7	+0.4

STR ***22*** *00:09:52.4±1.3, 47°N±7°×1°0E±°, h2km, MLv2.0/6, Error ellipse: s-maj=0.0km s-min=0.0km az=55.6, preliminary*

BUG ***22*** *00:09:52.6±0.8, 47°.03N×10°.03E, h0km, MD3.0/8, ML2.1/8*

ZUR ***22*** *00:09:52.7, 47°.14N×10°.01E, h5km±2km, MLh1.7/26, Error ellipse: s-maj=5468.6km s-min=971.1km az=121.0*

VIE ***22*** *00:09:52.8±0.1, 47°.14N×10°.02E, h2km±5km, mb1.4/5, ml1.8/9, Error ellipse: s-maj=1.2km s-min=0.8km az=3.0   8 km W of Langen am Arlberg*

BGR ***22*** *00:09:53.7±0.6, 47°.11N×10°.04E, h5km, ML1.6/14, Error ellipse: s-maj=7.8km s-min=3.3km az=166.0*

PRU ***22*** *00:09:54.7, 47°.33N×9°.91E, h10km*

LDG ***22*** *00:09:54.1±0.3, 47°.10N×10°.11E, h5km, Ml2.2/3, Error ellipse: s-maj=6.7km s-min=4.4km az=38.0*

ISC 22 00:09:53.0±1.0, 47°.14N±0°.02×10°.03E±0°.01, h4km±9km, n63, σ0s.75/94, 3C-1D, Austria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAVA	**Damuels**	**0.18**	**325**	Pg	**Pg**	**00 09 55.8**	**-0.7**
DAVA				Sg	**Sg**	**00 09 58.8**	**-0.2**
DAVA	**Damuels**	**0.18**	**325**	*i* Pg	**Pg**	**00 09 55.9**	**-0.7**
	6.8nm,0.1s						
DAVA				*i* Sg	**Sg**	**00 09 58.6**	**-0.4**
	72nm,0.2s						
DAVA	**Damuels**	**0.18**	**325**	*e*Pg	**Pg**	**00 09 56.0**	**-0.6**
DAVA				*e*Sg	**Sg**	**00 09 58.8**	**-0.2**
A105A	**Obersdorf, Sch**	**0.32**	**34**	Pg	**Pg**	**00 09 59.3**	**+0.1**
A105A				Sg	**Sg**	**00 10 04.3**	**+0.9**
OBER	**Oberstdorf**	**0.32**	**34**	*e*Pg	**Pg**	**00 09 58.9**	**-0.3**
OBER				*e*Sg	**Sg**	**00 10 04.4**	**+0.9**
STRW	**Triesenberg, W**	**0.33**	**266**	⇑Pg	**Pg**	**00 09 59.1**	**-0.4**
DAVOX	**Davos/Dischmat**	**0.38**	**196**	⇑Pg	**Pg**	**00 10 00.3**	**0.0**
DAVOX				Sg	**Sg**	**00 10 05.8**	**+0.5**
SBUA2	**Buchs, Altendo**	**0.38**	**273**	Pg	**Pg**	**00 09 59.9**	**-0.5**
LIENZ	**Kamor/St.Gall**	**0.40**	**293**	Pg	**Pg**	**00 10 00.8**	**0.0**
PLONS	**Plons/SG**	**0.46**	**259**	Pg	**Pg**	**00 10 01.4**	**-0.3**
PLONS				Sg	**Sg**	**00 10 08.0**	**+0.3**
PLONS	**Plons/SG**	**0.46**	**259**	*e*Sg	**Sg**	**00 10 07.9**	**+0.2**
FETA	**Feichten**	**0.49**	**104**	⇓Pg	**Pg**	**00 10 02.4**	**0.0**
FETA				Sg	**Sg**	**00 10 09.3**	**+0.5**
FETA	**Feichten**	**0.49**	**104**	*i* Pg	**Pg**	**00 10 02.4**	**0.0**
	0.8nm,0.1s						
FETA				*e*Sg	**Sg**	**00 10 09.0**	**+0.2**
	6.5nm,0.3s						
UBR	**Ueberruh**	**0.54**	**5**	Pg	**Pg**	**00 10 04.1**	**+0.7**
UBR	**Ueberruh**	**0.54**	**5**	*e*Pg	**Pg**	**00 10 04.2**	**+0.7**
UBR				*e*Sg	**Sb**	**00 10 13.2**	**-0.2**
FUORN	**Ofenpass-Fuorn**	**0.54**	**163**	⇑Pg	**Pg**	**00 10 03.4**	**0.0**
RETA	**Reutte**	**0.60**	**55**	*i* Pg	**Pg**	**00 10 04.5**	**-0.1**
	0.2nm,0.1s						
RETA				*i* Sg	**Sg**	**00 10 14.1**	**+1.6**
	1.7nm,0.2s						
MOTA	**Moosalm**	**0.76**	**74**	*e*Pg	**Pg**	**00 10 07.2**	**-0.3**
	0.2nm,0.1s						
MOTA				*e*Sg	**Sb**	**00 10 18.6**	**-1.1**
	3.8nm,0.3s						
WILA	**Wila**	**0.81**	**290**	*e*Pg	**Pg**	**00 10 08.9**	**+0.3**
WILA				*e*Sg	**Sb**	**00 10 21.1**	**-0.1**
A107C	**Memmingen - Ei**	**0.89**	**7**	Pg	**Pb**	**00 10 11.4**	**+0.4**
A107C				Sg	**Sn**	**00 10 26.9**	**+1.2**
ZUR	**Degenried**	**1.01**	**284**	Sg	**Sb**	**00 10 27.2**	**+0.3**
ZUR	**Degenried**	**1.01**	**284**	Pg	**Pb**	**00 10 12.8**	**-0.4**
WATA	**Walderalm**	**1.07**	**79**	*e*Pg	**Pb**	**00 10 14.1**	**-0.1**
	0.7nm,0.2s						
WATA				*e*Sg	**Sn**	**00 10 30.2**	**-0.1**
	10nm,0.3s						
WTTA	**Wattenberg**	**1.10**	**83**	*i* Pg	**Pg**	**00 10 14.1**	**0.0**
	1.0nm,0.1s						
WTTA				*e*Sg	**Sn**	**00 10 31.1**	**0.0**
	10nm,0.4s						
EMING	**Emmingen-Lipti**	**1.10**	**313**	*e*Pg	**Pn**	**00 10 15.0**	**-0.4**
EMING				*e*Sg	**Sn**	**00 10 30.7**	**-0.4**
BE1	**Monatshausen**	**1.11**	**46**	*e*Sg	**Sn**	**00 10 30.9**	**-0.4**
GUT	**Gutenstein**	**1.12**	**327**	Pg	**Pb**	**00 10 15.2**	**+0.2**
GUT	**Gutenstein**	**1.12**	**327**	Sg	**Sn**	**00 10 30.9**	**-0.5**
A102A	**Sigmaringen, J**	**1.15**	**331**	Pg	**Pb**	**00 10 15.7**	**+0.2**
A102A				Sg	**Sn**	**00 10 32.1**	**-0.1**
SLE	**Schleitheim**	**1.22**	**301**	Pg	**Pn**	**00 10 17.0**	**+0.1**
SLE	**Schleitheim**	**1.22**	**301**	*e*Pg	**Pn**	**00 10 16.8**	**-0.1**
SLE				*e*Sg	**Sn**	**00 10 33.5**	**-0.4**
FUR	**Furstenfeldbru**	**1.33**	**39**	Pg	**Pg**	**00 10 19.2**	**+0.8**
METMA	**Mettma DE**	**1.34**	**296**	*e*Sg	**Sn**	**00 10 37.2**	**+0.4**
A109A	**Bad Urach, See**	**1.36**	**344**	Pg	**Pg**	**00 10 19.5**	**+0.4**
A109A				Sg	**Sn**	**00 10 38.5**	**+1.1**
SULZ	**Cheisacher**	**1.36**	**287**	Sn	**Sn**	**00 10 38.1**	**+0.6**
SULZ	**Cheisacher**	**1.36**	**287**	Pn	**Pg**	**00 10 19.1**	**0.0**
SULZ	**Cheisacher**	**1.36**	**287**	*e*Sg	**Sn**	**00 10 38.7**	**+1.2**
A101B	**Rottweil, Deis**	**1.40**	**315**	Pg	**Pg**	**00 10 19.9**	**0.0**
A101B				Sg	**Sn**	**00 10 38.8**	**+0.4**
BERGE	**Lenzkirch (DE)**	**1.46**	**301**	*e*Sg	**Sg**	**00 10 40.5**	**+0.7**
A100A	**Rottenburg, We**	**1.51**	**331**	Sg	**Sg**	**00 10 41.9**	**+0.4**
FELD	**Feldberg im Sc**	**1.56**	**299**	Pn	**Pb**	**00 10 22.2**	**-0.4**
FELD	**Feldberg im Sc**	**1.56**	**299**	Sn	**Sg**	**00 10 43.8**	**+0.7**
BALST	**Balsthal**	**1.60**	**278**	Sn	**Sg**	**00 10 45.1**	**+0.5**
BALST	**Balsthal**	**1.60**	**278**	Pn	**Pb**	**00 10 23.0**	**-0.3**
BALST	**Balsthal**	**1.60**	**278**	*e*Sg	**Sg**	**00 10 45.1**	**+0.5**
NORI	**Noerdlinger Ri**	**1.63**	**14**	*e*Sg	**Sg**	**00 10 46.2**	**+0.8**
KIZ	**Kirchzarten**	**1.65**	**300**	Sn	**Sg**	**00 10 46.4**	**+0.4**
KIZ	**Kirchzarten**	**1.65**	**300**	Pn	**Pb**	**00 10 23.8**	**-0.2**
BFO	**Black Forest**	**1.66**	**317**	Pg	**Pg**	**00 10 24.7**	**0.0**
BFO				*e*Sg	**Sg**	**00 10 45.9**	**-0.2**
ENDD	**Endenburg**	**1.66**	**291**	Pn	**Pb**	**00 10 23.9**	**-0.3**
ENDD	**Endenburg**	**1.66**	**291**	Sn	**Sg**	**00 10 46.4**	**0.0**
ABTA	**Abfaltersbach**	**1.74**	**102**	*e*Pn	**Pn**	**00 10 24.1**	**-0.1**
	0.3nm,0.1s						
ABTA				*e*Sg	**Sg**	**00 10 50.8**	**+1.8**
	1.2nm,0.3s						
LESA	**Schwarzleotal**	**1.82**	**80**	*i* Sg	**Sg**	**00 10 53.4**	**+1.8**
	0.6nm,0.1s						
OPP	**Oppenau**	**1.84**	**318**	Pn	**Pb**	**00 10 26.4**	**-0.9**
OPP	**Oppenau**	**1.84**	**318**	Sn	**Sb**	**00 10 50.9**	**+0.2**
BOURR	**Bourrignon**	**1.93**	**279**	Pn	**Pn**	**00 10 26.8**	**+0.1**
BOURR	**Bourrignon**	**1.93**	**279**	Sn	**Sb**	**00 10 52.5**	**-0.7**
RJOB	**Jochberg**	**1.97**	**71**	*e*Sg	**Sg**	**00 10 57.0**	**+0.8**
CDF	**Champ du Feu**	**2.25**	**305**	*e*Pn	**Pn**	**00 10 30.4**	**-0.8**
CDF	**Champ du Feu**	**2.25**	**305**	*e*Pg	**Pg**	**00 10 37.4**	**+1.2**
CDF				*e*Sn	**Sn**	**00 10 58.3**	**-1.2**
CDF				*e*Sg	**Sg**	**00 11 06.6**	**+1.2**
	3.6nm,0.4s						
HINF	**Hinteralfeld**	**2.26**	**289**	*e*Pg	**Pg**	**00 10 37.4**	**+1.1**
HINF				*e*Sn	**Sn**	**00 10 58.5**	**-1.1**
HINF				*e*Sg	**Sg**	**00 11 06.5**	**+0.9**
	2.7nm,0.4s						
HAU	**Haudompre**	**2.64**	**290**	*e*Pn	**Pn**	**00 10 37.5**	**+1.1**
HAU				*e*Sn	**Sn**	**00 11 07.9**	**-1.0**
	4.0nm,0.3s						
HAU				*e*Sg	**Sg**	**00 11 19.3**	**+1.5**
KHC	**Kasperske Hory**	**3.10**	**49**	*e*PG	**Pg**	**00 10 50.7**	**-1.7**
KHC				*e*SN	**Sn**	**00 11 19.0**	**-1.3**
KHC				*e*SG	**Sg**	**00 11 30.2**	**-2.3**

IDC ***22*** *00:19:33.6±0.7, 45°.48N×26°.16E, h134km±3km, mb3.0/6, mbtmp3.6/16, Error ellipse: s-maj=19.2km s-min=11.4km az=179.0*

SOF ***22*** *00:19:33.5, 45°.51N±0°.01×26°.27E±0°.01, h137km±3km, MD3.8/4*

NAO ***22*** *00:19:34.8, 45°.50N×26°.32E, h130km, mb3.1*

BUC ***22*** *00:19:34.1±0.2, 45°.49N×26°.31E, h131km±1km, ml4.2/76, Error ellipse: s-maj=1.4km s-min=1.1km az=10.0*

SIGU ***22*** *00:19:34.0, 45°.50N×26°.29E, h132km*

CFUSG ***22*** *00:19:36.1, 45°.39N×26°.56E, h113km, mb3.3/7, Romania Magtype MSH 3.7 from 6 stations*

BEO ***22*** *00:19:41.4±0.4, 45°.32N×25°.20E, h0km, ML3.3/23*

PRU 22 00:20:00.8,46°.76N×24°.12E,h112^{km},M3.8

ISC 22 00:19:33.7±0.6,**45°.49N**±0°.03×**26°.24E**±0°.02,**h140**^{km}±5^{km},
n219,σ**2^{s}.16**/311,**mb3.5**/7,**75C-62D,Romania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEHR	Nehoiu	0.08	147	⇓P	Pn	00 19 52.9	+0.2
NEHR				⇑S	Sn	00 20 06.6	-0.4
MLR	Muntele Rosu	0.20	270	⇑P	Pn	00 19 53.2	+0.2
MLR				⇓S	Sn	00 20 06.9	-0.6
MLR	Muntele Rosu	0.20	270	P	Pn	00 19 53.1	+0.2
	1µm,0.6s,baz=126,slow=4.8,SNR=2477						
MLR				S	Sn	00 20 06.9	-0.6
	946nm,0.4s,baz=70,slow=22,SNR=16						
MLR	Muntele Rosu	0.20	270	*e*Pg	Pn	00 19 52.8	-0.2
ISR	Istrita	0.43	150	⇓P	Pn	00 19 53.9	+0.2
ISR				⇑S	Sn	00 20 07.9	-0.8
PLOR	Plostina	0.46	39	⇑P	Pn	00 19 53.4	-0.4
PLOR				⇓S	Sn	00 20 07.6	-1.5
VRI	Vrincioaia	0.51	43	⇑P	Pn	00 19 53.8	-0.2
VRI				⇓S	Sn	00 20 08.5	-0.9
TURR	Turia	0.58	345	⇑P	Pn	00 19 54.4	-0.1
TURR				⇓S	Sn	00 20 09.3	-1.0
OZUR		0.68	333	⇑P	Pn	00 19 54.8	-0.2
OZUR				⇓S	Sn	00 20 10.0	-1.3
BOSR	Bodos	0.71	326	⇑P	Pn	00 19 55.2	-0.1
BOSR				⇑S	Sn	00 20 10.7	-1.0
PANC	Panciu	0.74	59	⇑P	Pn	00 19 55.6	+0.1
PANC				⇓S	Sn	00 20 10.8	-1.2
DOPR	Dopca	0.76	309	⇑P	Pn	00 19 55.6	0.0
DOPR				⇑S	Sn	00 20 11.5	-0.8
VOIR		0.84	267	⇓P	Pn	00 19 56.4	+0.2
VOIR				⇑S	Sn	00 20 12.7	-0.7
COSR	Cosmesti PH	0.84	64	⇑P	Pn	00 19 55.8	-0.3
COSR				⇓S	Sn	00 20 11.8	-1.4
ONER	Baraj Valea Uz	0.85	7	⇑P	Pn	00 19 56.1	-0.1
ONER				⇑S	Sn	00 20 13.4	-0.1
TUDR		1.01	84	⇑P	Pn	00 19 56.9	-0.7
TUDR				⇑S	Sn	00 20 14.0	-1.8
INCR	INCERC-Sediu C	1.05	183	⇓P	Pn	00 19 58.4	+0.4
INCR				⇑S	Sn	00 20 16.2	-0.2
TESR	Tescani	1.06	16	⇑P	Pn	00 19 57.6	-0.4
TESR				⇑S	Sn	00 20 14.8	-1.9
CIOR	Ciorogarla	1.07	194	⇑P	Pn	00 19 58.6	+0.4
CIOR				⇓S	Sn	00 20 17.0	+0.1
IZVR	Izvoarele	1.08	87	⇑P	Pn	00 19 57.3	-0.9
IZVR				⇑S	Sn	00 20 14.5	-2.4
STFAR	Stefanesti-Arg	1.10	235	⇑P	Pn	00 19 59.4	+0.9
STFAR				⇑S	Sn	00 20 17.5	+0.2
LEHL	Lehliu	1.10	158	⇑P	Pn	00 19 58.8	+0.4
LEHL				⇑S	Sn	00 20 17.3	0.0
SCHL	Schela	1.12	89	⇑P	Pn	00 19 57.9	-0.7
SCHL				⇓S	Sn	00 20 15.2	-2.4
SCHLR	Schela	1.12	91	⇑P	Pn	00 19 57.8	-0.8
SCHLR				⇑S	Sn	00 20 15.4	-2.2
ARR	Arges	1.13	264	⇓P	Pn	00 19 59.5	+0.6
ARR				⇑S	Sn	00 20 18.6	+0.7
BUC1	Bucharest	1.15	187	⇑P	Pn	00 19 59.4	+0.5
BUC1				⇑S	Sn	00 20 18.0	-0.2
NEGRR	Negrea	1.16	87	⇑P	Pn	00 19 58.5	-0.5
NEGRR				⇓S	Sn	00 20 16.2	-2.0
AMRR	Amara	1.18	138	⇓S	Sn	00 20 17.9	-0.6
VARL	Varlezi	1.20	70	⇑P	Pn	00 19 59.1	-0.3
VARL				⇓S	Sn	00 20 17.3	-1.7
BIR	Birlad	1.24	51	⇑P	Pn	00 19 59.6	-0.2
BIR				⇓S	Sn	00 20 17.5	-2.3
SCTR	Scanteiesti	1.25	81	⇑P	Pn	00 19 59.7	-0.1
SCTR				⇓S	Sn	00 20 18.5	-1.3
TATR	Tatarca	1.28	85	⇑P	Pn	00 20 00.0	-0.1
TATR				⇑S	Sn	00 20 18.9	-1.5
GISR	Galati	1.28	92	⇓P	Pn	00 20 00.0	-0.1
GISR				⇓S	Sn	00 20 18.9	-1.4
SGRR	Singureni	1.28	188	⇑P	Pn	00 20 00.7	+0.4
SGRR				⇑S	Sn	00 20 19.8	-0.6
HUMR	Humele	1.31	223	⇓P	Pn	00 20 01.1	+0.5
HUMR				⇓S	Sn	00 20 21.3	+0.3
JOSR	Joseni	1.31	338	⇑P	Pn	00 20 00.3	-0.2
VLDR	Vladesti	1.34	74	⇑S	Sn	00 20 19.6	-1.9
CFR	Carcaliu	1.38	103	⇑P	Pn	00 20 00.4	-0.7
CFR				⇑S	Sn	00 20 19.8	-2.3
TNR	Turnu Rosu	1.39	277	⇓P	Pn	00 20 01.7	+0.4
TNR				⇑S	Sn	00 20 21.9	-0.5
GIUM	Giurgiulesti	1.39	90	P	Pn	00 20 01.3	0.0
CICN	Ciocanesti	1.41	156	⇑P	Pn	00 20 01.7	+0.1
CICN				⇑S	Sn	00 20 22.5	-0.3
HARR	Harsova	1.45	123	⇑P	Pn	00 20 01.6	-0.3
BIZ	Bicaz	1.45	356	⇑S	Sn	00 20 22.9	-0.7
MDB	Medias	1.45	297	⇑P	Pn	00 20 03.1	+1.2
COPA	Copaceanca	1.54	208	⇓P	Pn	00 20 03.5	+0.5
COPA				⇑S	Sn	00 20 24.4	-0.8
VASR	Vaslui	1.58	43	⇑P	Pn	00 20 02.9	-0.4
VASR				⇑S	Sn	00 20 23.8	-2.2
TLBR	Topalu	1.60	126	⇓P	Pn	00 20 03.4	-0.2
TLBR				⇓S	Sn	00 20 24.1	-2.3
TPGR	Topolog	1.67	112	⇓P	Pn	00 20 03.7	-0.7
TPGR				⇑S	Sn	00 20 25.4	-2.5
CVDA	Cernavoda	1.73	132	⇓P	Pn	00 20 05.0	0.0
CVDA				⇓S	Sn	00 20 27.2	-1.8
LOT	Lotru	1.73	269	⇓P	Pn	00 20 05.5	+0.2
LOT				⇓S	Sn	00 20 30.3	+0.9
ICOR	Ion Corvin	1.77	140	⇓P	Pn	00 20 05.7	+0.2
ICOR				⇑S	Sn	00 20 28.5	-1.3
TLCR		1.85	99	⇓P	Pn	00 20 05.8	-0.6
TLCR				⇑S	Sn	00 20 29.6	-1.8
TIRR	Tirgusor	1.86	123	⇓P	Pn	00 20 06.3	-0.3
TIRR				⇑S	Sn	00 20 29.1	-2.5
IASR	Iasi	1.92	28	⇓P	Pn	00 20 06.7	-0.5
ZIMR		1.94	199	⇓P	Pn	00 20 08.0	+0.5
ZIMR				⇑S	Sn	00 20 32.8	-0.5
VLAD	Vladila	1.98	222	⇓P	Pn	00 20 08.4	+0.4
VLAD				⇑S	Sn	00 20 33.8	-0.5
MFTR	Murfatlar	2.04	129	⇓P	Pn	00 20 08.3	-0.3
MFTR				⇓S	Sn	00 20 33.7	-1.8
TSCT	Constanta Port	2.18	127	⇑P	Pn	00 20 10.2	-0.1
TSCT				⇑S	Sn	00 20 36.6	-1.9
EFOR	EFORIE	2.22	129	⇓P	Pn	00 20 10.8	0.0
EFOR				⇑S	Sn	00 20 37.3	-1.9
SZH	Strazhitsa	2.23	185	P	Pn	00 20 11.6	+0.5
SZH				S	Sn	00 20 38.8	-1.0
BURAR	Bucovina Array	2.24	342	⇓P	Pn	00 20 12.2	+1.1
BURAR				⇓S	Sn	00 20 40.8	+0.8
MILM	Milestii Mici	2.29	51	⇑P	Pn	00 20 10.8	-0.8
MILM	Milestii Mici	2.29	51	⇑*i*P	Pn	00 20 10.8	-0.8
	310nm,0.2s						
MILM				*e*S	Sn	00 20 37.2	-3.7
	1µm,0.2s						
MILM	Milestii Mici	2.29	51	P	Pn	00 20 10.8	-0.8
PSN	Preselentsi	2.30	143	P	Pn	00 20 12.2	+0.4
PSN				S	Sn	00 20 40.3	-0.8
SRE	Strehaia	2.30	250	⇓P	Pn	00 20 12.4	+0.5
SRE				⇑S	Sn	00 20 41.3	+0.2
KIS	Kishinev	2.34	49	⇑P	Pn	00 20 11.8	-0.5
KIS	Kishinev	2.34	49	⇑*e*P	Pn	00 20 11.7	-0.5
	190nm,0.1s						
KIS				*i* S	Sn	00 20 38.8	-3.2
	990nm,0.4s						
KIS	Kishinev	2.34	49	P	Pn	00 20 11.8	-0.5
NEF	NEVSHA	2.35	161	P	Pn	00 20 12.9	+0.4
DEV	Deva	2.37	281	⇓P	Pn	00 20 13.7	+1.0
DEV				⇑S	Sn	00 20 44.0	+1.4
MANR	Mangalia	2.37	134	⇓P	Pn	00 20 12.7	-0.1
MANR				⇑S	Sn	00 20 41.1	-1.6
TSMN	Mangalia Port-	2.39	134	⇑P	Pn	00 20 12.9	0.0
TSMN				⇓S	Sn	00 20 41.4	-1.6
GZR	Gura Zlata	2.44	269	⇓P	Pn	00 20 14.2	+0.6
GZR				⇑S	Sn	00 20 45.6	+1.3
GZR	Gura Zlata	2.44	269	*e*Pn	Pn	00 20 14.0	+0.4
GZR				*e*Sn	Sn	00 20 35.1	-9.2
MARR	Marisel-Cluj	2.47	300	⇓P	Pn	00 20 14.4	+0.4
PRD	Provadia	2.48	160	P	Pn	00 20 14.5	+0.4
PRD				S	Sn	00 20 45.2	+0.1
PVL	Pavlikeni	2.49	198	P	Pn	00 20 14.7	+0.5
PVL				S	Sn	00 20 44.0	-1.3
ROIA	ROIAK	2.54	161	P	Pn	00 20 15.4	+0.6
AVR	AVREN	2.59	156	P	Pn	00 20 16.0	+0.6
PUNG	Punghina	2.64	244	⇓P	Pn	00 20 15.9	-0.2
PUNG	Punghina	2.64	244	*e*Pn	Pn	00 20 15.7	-0.4
PUNG				*e*Sn	Sn	00 20 40.6	-8.1
RMGR	Halanga-Turnu	2.64	253	⇓P	Pn	00 20 16.3	+0.2
VALD	Valchedram	2.69	229	P	Pn	00 20 17.3	+0.6
PURM	Purcari	2.74	66	⇓P	Pn	00 20 16.7	-0.6
HERR	Herculane	2.77	259	⇓P	Pn	00 20 17.6	-0.1
DRGR		2.77	299	⇓P	Pn	00 20 18.1	+0.2
DRGR		2.77	299	*e*Pn	Pn	00 20 18.0	+0.2
MPEP	Malo Peshtene	2.79	221	P	Pn	00 20 18.6	+0.7
MESR	Meseseni	2.82	307	⇓P	Pn	00 20 18.5	+0.2
SURR	Surduc	2.90	277	⇓P	Pn	00 20 20.0	+0.7
RAKU	Rahkiv	2.91	331	*e*Pn	Pn	00 20 20.0	+0.6
KSV	Kosov	2.94	345	*e*Pn	Pn	00 20 20.7	+0.9
NSLU	Nyzhne Selyshc	2.97	336	*e*Pn	Pn	00 20 25.5	+5.3
JMB	Yambol	3.01	176	P	Pn	00 20 21.3	+0.5
SORM	Soroca	3.02	28	⇑P	Pn	00 20 19.8	-1.0
SORM	Soroca	3.02	28	P	Pn	00 20 19.7	-1.0
BZS	Buzias	3.25	274	⇓P	Pn	00 20 23.9	+0.1
BZS	Buzias	3.25	274	*e*Pn	Pn	00 20 23.8	0.0
MDVR	Moldovita	3.28	259	⇓P	Pn	00 20 24.2	-0.1
MDVR	Moldovita	3.28	259	*e*Pn	Pn	00 20 24.2	-0.1
MDVR				*e*Sn	Sn	00 20 56.0	-7.4
SIRR	Siria	3.29	285	⇓P	Pn	00 20 25.1	+0.8
SIRR	Siria	3.29	285	*e*Pn	Pn	00 20 24.8	+0.4
BORS2	Bor- Borsko je	3.31	246	*e*Pn	Pn	00 20 22.9	-1.8
BORS2				*e*Sn	Sn	00 20 57.1	-7.0
ZAGS	Zajecar	3.31	241	*e*Pn	Pn	00 20 24.2	-0.5
ZAGS				*e*Sn	Sn	00 20 57.0	-7.1
ZAPS	Zavoj	3.40	231	*e*Pn	Pn	00 20 25.5	-0.4
ZAPS				*e*Sn	Sn	00 21 00.6	-5.7
KORU	Korolevo	3.41	323	*e*Pn	Pn	00 20 26.7	+0.8
KUBS	Kucevo	3.41	253	*e*Pn	Pn	00 20 24.4	-1.6
KUBS				*e*Sn	Sn	00 20 57.9	-8.5
STNU	Starunia	3.43	340	*e*Pn	Pn	00 20 27.3	+1.1
TRSU	Trosnyk	3.44	320	*e*Pn	Pn	00 20 27.5	+1.2
VRSS	Vrsac	3.48	266	*e*Pn	Pn	00 20 26.8	-0.1
MEZ	Mezhgor'ye	3.55	329	*e*Pn	Pn	00 20 29.0	+1.3
BANR	Banloc	3.59	270	⇓P	Pn	00 20 29.0	+0.8
BANR	Banloc	3.59	270	*e*Pn	Pn	00 20 29.1	+0.8
BRIU	Brid	3.60	323	*e*Pn	Pn	00 20 29.2	+0.9
PLNA	Plana	3.63	215	P	Pn	00 20 30.8	+1.8
BERU	Beregovo	3.68	319	*e*Pn	Pn	00 20 30.0	+0.5
TRAN	Tran	3.70	225	P	Pn	00 20 31.0	+1.2
BOVS	Bovan	3.73	242	⇓P	Pn	00 20 30.5	+0.3
BOVS	Bovan	3.73	242	*e*Pn	Pn	00 20 30.3	+0.2
BOVS				*e*Sn	Sn	00 21 05.7	-8.2
SVIS	Svilajnac	3.77	253	*e*Pn	Pn	00 20 31.3	+0.6
SVIS				*e*Sn	Sn	00 21 08.3	-6.5
MUKU	Mukachevo	3.83	322	*e*Pn	Pn	00 20 32.1	+0.7
KDZ	Kurdzhali	3.92	190	P	Pn	00 20 33.1	+0.5
RZN	Rozhen	3.95	196	P	Pn	00 20 34.2	+1.0
HOLU	Holmets	4.02	320	*e*Pn	Pn	00 20 34.5	+0.7
BOSS	Bosilegrad	4.04	223	*e*Pn	Pn	00 20 34.9	+0.7
BOSS				*e*Sn	Sn	00 21 16.6	-4.6
AVAS	Avala Beograd	4.13	261	*e*Pn	Pn	00 20 35.2	-0.2
AVAS				*e*Sn	Sn	00 21 17.1	-6.1
UZH	Uzhgorod	4.14	321	*e*Pn	Pn	00 20 36.1	+0.7
BARS	Barje	4.16	231	*e*Pn	Pn	00 20 36.4	+0.7
BARS				*e*Sn	Sn	00 21 18.4	-5.5
GRUS	Gruza	4.25	250	*e*Pn	Pn	00 20 37.1	+0.2
GRUS				*e*Sn	Sn	00 21 18.6	-7.5
CTYL	Yalikoy Yolu	4.29	159	⇓P	Pn	00 20 37.5	+0.1
KKB	Krupnik	4.29	213	P	Pn	00 20 39.1	+1.6
GOCS	Kraljevo Serbi	4.29	245	*e*Pn	Pn	00 20 37.6	0.0
GOCS				*e*Sn	Sn	00 21 18.9	-8.3
STZU	Stuzhytsa	4.30	326	*e*Pn	Pn	00 20 39.2	+1.7
SELS	Selova	4.32	240	*e*Pn	Pn	00 20 38.4	+0.5
SELS				*e*Sn	Sn	00 21 21.8	-5.9
TRUS	Trudelj	4.33	255	*e*Pn	Pn	00 20 38.1	0.0
TRUS				*e*Sn	Sn	00 21 20.1	-8.0
MMB	Musomishta	4.34	205	P	Pn	00 20 39.2	+1.0
KOLS	Kolonicke sedl	4.37	323	*e*P	Pn	00 20 39.7	+1.1
TARU	Tarkhankut	4.43	89	Pm		00 20 39.5	
	comp=Z,34nm,0.3s						
TARU				*e*S	Sn	00 21 28.0	-2.4
TARU				Sm		00 21 32.9	
	comp=N,13nm,0.3s						
TARU				Sm		00 21 32.9	
	comp=E,26nm,0.3s						
FRGS	Fruska Gora	4.54	268	*e*Pn	Pn	00 20 39.8	-1.0
FRGS	Fruska Gora	4.54	268	*e*Pn	Pn	00 20 40.4	-0.4
FRGS				*e*Sn	Sn	00 21 25.2	-7.9
IVAS	Ivanjica	4.75	248	*e*Pn	Pn	00 20 43.3	-0.4
IVAS				*e*Sn	Sn	00 21 31.2	-6.9
TEKS	Tekeris	4.85	261	*e*Pn	Pn	00 20 44.6	-0.3
TEKS	Tekeris	4.85	261	*e*Pn	Pn	00 20 44.4	-0.5
TEKS				*e*Sn	Sn	00 21 31.9	-8.4
DNZ2	Donuzlav2	4.92	89	x	x	00 20 44.8	
DNZ2				Pm		00 20 45.4	
	comp=Z,42nm,0.3s						
DNZ2				*i* S	Sn	00 21 38.3	-3.5
DNZ2				Sm		00 21 39.1	
	comp=N,54nm,0.5s						
DNZ2				Sm		00 21 39.1	
	comp=E,39nm,0.4s						
SJES	Sjenica	5.01	246	*e*Pn	Pn	00 20 47.4	+0.3
SJES	Sjenica	5.01	246	*e*Pn	Pn	00 20 47.5	+0.3
SJES				*e*Sn	Sn	00 21 38.0	-6.4
BBLS	Lazi&#263i	5.13	254	*e*Pn	Pn	00 20 49.2	+0.4
BBLS	Lazi&#263i	5.13	254	*e*Pn	Pn	00 20 49.1	+0.3
BBLS				*e*Sn	Sn	00 21 39.0	-8.2
STHS	Stebnicka Huta	5.18	321	*e*P	Pn	00 20 49.3	0.0
RUDO	Rudo	5.25	252	*e*Pn	Pn	00 20 49.2	-1.1
SEV	Sevastopol'	5.36	98	P	Pn	00 20 50.5	-1.1
SEV				Pm		00 20 51.3	
SEV				S	Sn	00 21 49.0	-3.3
SEV				Sm		00 21 52.4	
SEV	Sevastopol'	5.36	98	*e*P	Pn	00 20 50.5	-1.1
SEV				Pm		00 20 51.3	
	comp=Z,14nm,0.4s						
SEV				*i* S	Sn	00 21 49.0	-3.3
SEV				Sm		00 21 52.4	
	comp=N,4.0nm,0.3s						
SEV				Sm		00 21 52.4	
	comp=E,18nm,0.3s						
AKASG	Malin Array Be	5.58	20	P	Pn	00 20 53.4	-1.2
	comp=E,2.5nm,0.5s,baz=204,slow=12,SNR=9.6						
AKASG				S	Sn	00 21 52.0	-5.7
	comp=E,4.0nm,0.4s,baz=206,slow=21,SNR=10						
SIM	Simferopol'	5.59	93	P	Pn	00 20 54.1	-0.7
SIM				Pm		00 20 57.9	
SIM				S	Sn	00 21 54.4	-3.7
SIM				Sm		00 21 55.2	
SIM	Simferopol'	5.59	93	*e*P	Pn	00 20 54.1	-0.7
SIM				Pm		00 20 57.9	
	comp=Z,37nm,0.4s						
SIM				*e*S	Sn	00 21 54.4	-3.7
SIM				Sm		00 21 55.2	
	comp=N,30nm,0.7s						
SIM				Sm		00 21 55.2	
	comp=E,39nm,0.7s						
YAL	Yalta	5.71	97	P	Pn	00 20 55.7	-0.6
YAL				Pm		00 20 56.0	
YAL				S	Sn	00 21 58.1	-2.7
YAL				Sm		00 22 03.3	
YAL	Yalta	5.71	97	*e*P	Pn	00 20 55.7	-0.6
YAL				Pm		00 20 56.0	
	comp=Z,5.0nm,0.2s						
YAL				*e*S	Sn	00 21 58.1	-2.7
YAL				Sm		00 22 03.3	
	comp=N,7.0nm,0.3s						
YAL				Sm		00 22 03.3	
	comp=E,3.0nm,0.4s						
ALU	Alushta	5.84	95	P	Pn	00 20 56.9	-1.2
ALU	Alushta	5.84	95	*e*P	Pn	00 20 56.4	-1.7
ALU				Pm		00 20 56.9	
	comp=Z,6.0nm,0.4s						
LANS	Liptovska Anna	5.88	311	*e*P	Pn	00 20 59.9	+1.3
VYHS	Vyhne	5.88	303	*e*P	Pn	00 20 59.4	+0.7
SRO	Srobarova	5.93	296	*e*P	Pn	00 21 00.8	+1.6
DRME	Dracevica, Mon	6.08	240	*e*Pn	Pn	00 21 03.8	+2.5
BRY	Bratogost	6.11	248	*e*Pn	Pn	00 21 01.5	-0.3
SUDU	Sudak	6.22	92	P	Pn	00 21 02.1	-1.1
SUDU				Pm		00 21 04.3	
SUDU				S	Sn	00 22 10.1	-3.1
SUDU				Sm		00 22 12.4	
SUDU	Sudak	6.22	92	x	x	00 21 02.1	
SUDU				Pm		00 21 04.3	
	comp=Z,9.0nm,0.3s						
SUDU				*i* S	Sn	00 22 10.1	-3.1
SUDU				Sm		00 22 12.4	
	comp=N,24nm,0.5s						
SUDU				Sm		00 22 12.4	
	comp=E,35nm,0.5s						
TREB	Trebinje	6.32	247	*e*Pn	Pn	00 21 05.7	+1.2
HCY	Herceg Novi	6.36	244	*e*Pn	Pn	00 21 07.3	+2.2
BLY	Banja Luka	6.45	267	*e*Pn	Pn	00 21 07.1	+0.9
A051A	Mrakovica	6.60	269	*e*Pn	Pn	00 21 08.9	+0.5
STON	Ston	6.67	250	*e*Pn	Pn	00 21 11.0	+1.8
JAVC	Velka Javorina	6.74	303	*e*P	Pn	00 21 11.3	+1.2
MODS	Modra-Piesok	6.78	298	*e*P	Pn	00 21 10.4	-0.2
MAUC	Maruska	6.89	307	*e*P	Pn	00 21 13.1	+0.9
A050A	Klekovaca	6.96	265	*e*Pn	Pn	00 21 15.2	+2.1
KOGS	Kog	7.02	281	*e*Pn	Pn	00 21 15.4	+1.4
RONA	Rosalia, Austr	7.19	291	*i* Pn	Pn	00 21 17.4	+1.2
	comp=E,4.2nm,0.4s,SNR=6.0						
STEB	Steborice	7.23	311	*e*P	Pn	00 21 16.4	-0.3
MORC	Moravsky Berou	7.27	309	*e*P	Pn	00 21 17.3	+0.1
CONA	Conrad Observa	7.54	293	*i* Pn	Pn	00 21 22.1	+1.2
	comp=E,1.8nm,0.5s						
GROS	Grobnik	7.54	281	*e*Pn	Pn	00 21 21.9	+1.0
CRES	Cresnjevec Ost	7.56	276	*e*Pn	Pn	00 21 22.8	+1.7
VRAC	Vranov	7.57	304	P	Pn	00 21 20.8	-0.5
	comp=E,10nm,0.9s,baz=107,slow=12,SNR=20						
VRAC	Vranov	7.57	304	*e*P	Pn	00 21 21.8	+0.5
KRUC	Moravsky	7.58	302	*e*P	Pn	00 21 21.9	+0.5
DIKM	Dikmen	7.59	117	⇑P	Pn	00 21 20.2	-1.4
ARSA	Arzberg	7.62	287	*i* Pn	Pn	00 21 23.7	+1.8
	comp=E,2.8nm,0.5s						
KRLC	Kraliky	7.84	309	*e*P	Pn	00 21 25.6	+0.7
SOKA	Soboth	7.88	283	*e*Pn	Pn	00 21 27.2	+1.7
	comp=E,8.9nm,0.7s,SNR=18						
BRTR	Keskin Array B	7.94	134	P	Pn	00 21 26.3	-0.1
	comp=E,3.0nm,0.7s,baz=321,slow=11,SNR=20						
GBRS	Gornja Briga	8.03	274	*e*Pn	Pn	00 21 29.2	+1.8
OBKA	Obir	8.20	281	*e*Pn	Pn	00 21 28.9	-0.9
CRNS	Crni Vrh	8.39	278	*e*Pn	Pn	00 21 34.3	+2.0
CHVC	Chvalec	8.51	310	*e*P	Pn	00 21 34.2	+0.3
CKRC	Cesky Krumlov	8.78	297	*e*P	Pn	00 21 38.6	+1.1
ZVC	Zvikov	9.06	300	*e*P	Pn	00 21 41.9	+0.7
MNK	Minsk	9.08	6	*i* P	Pn	00 21 40.7	-0.7
	comp=E,4.0nm,0.7s						
MNK				*i* P	Pn	00 21 40.7	-0.7
	comp=N,7.0nm,0.7s						
MNK				*i* P	Pn	00 21 40.7	-0.7
	comp=Z,9.0nm,0.6s,baz=187						
MNK				*i* S	Sn	00 23 19.5	-2.4
GERES	GERESS Array B	9.17	296	P	Pn	00 21 43.7	+0.9
	comp=Z,2.2nm,0.7s,baz=107,slow=13,SNR=27						
KHC	Kasperske Hory	9.34	297	*e*P	Pn	00 21 46.8	+1.9
NACGM	Naroch	9.43	2	*e*P	Pn	00 21 45.3	-0.7
	comp=Z,3.0nm,0.7s,baz=182						
LESA	Schwarzleotal	9.56	287	*i* Pn	Pn	00 21 51.5	+3.6
	comp=Z,1.2nm,0.5s						
FETA	Feichten	10.85	284	*i* Pn	Pn	00 22 09.8	+4.7
	comp=Z,1.5nm,0.5s						
OBN	Obninsk	11.66	31	S	Sn	00 24 14.9	-9.3
	comp=Z,10.0nm,0.5s,baz=52,slow=8.8,SNR=4.6						
KBZ	Khabaz	12.01	93	P	Pn	00 22 22.1	+1.9
	comp=Z,0.5nm,0.3s,baz=278,slow=8.4,SNR=3.7						
BELG	Belogornoye	15.62	56	P	P	00 23 07.5	+0.3
	comp=Z,9.8nm,0.5s,baz=270,slow=0.5,SNR=11						
FINES	FINESS Array B	15.98	360	P	P	00 23 12.7	+1.6
	comp=Z,1.4nm,0.9s,baz=170,slow=14,SNR=4.2						
KEST	Kesra	16.08	239	P	Pn	00 23 12.4	+0.5
	comp=Z,2.4nm,0.6s,baz=281,slow=4.4,SNR=4.8						
HFS	Hagfors	16.46	337	P	Pn	00 23 16.6	+0.4
	comp=Z,3.0nm,0.9s,baz=151,slow=10,SNR=6.8						
NB2	NORSAR Subarra	17.90	336	P	P	00 23 33.5	+1.2
	comp=Z,1.2nm,0.7s,baz=143,slow=11						
NOA	NORSAR Array B	17.90	336	P	P	00 23 31.8	-0.5
	comp=Z,0.5nm,0.6s,baz=142,slow=10,SNR=3.4						
EKA	Eskdalemuir Ar	21.01	309	P	P	00 24 06.2	+0.4
	comp=Z,0.2nm,0.4s,baz=107,slow=9.9,SNR=6.2						
	comp=Z,0.2nm,0.4s						
ESDC	Sonseca Array	22.90	266	P	P	00 24 25.2	-0.1
	comp=Z,1.2nm,0.6s,baz=63,slow=9.6,SNR=25						
	comp=Z,1.2nm,0.6s						
ARCES	ARCESS Array B	24.11	359	P	P	00 24 35.8	-0.2
	comp=Z,1.0nm,0.7s,baz=178,slow=9.7,SNR=5.8						
	comp=Z,1.0nm,0.7s						
BVAR	Borovoye Array	29.39	59	pP	pP	00 25 54.0	+0.7
	comp=Z,0.7nm,0.6s,baz=271,slow=7.3,SNR=4.4						
KURBB	Kurchatov Arra	34.72	62	P	P	00 26 10.8	+0.9
	comp=Z,0.1nm,0.4s,baz=287,slow=9.5,SNR=2.6						
KURBB				pP	pP	00 26 39.5	-0.7
	comp=Z,0.2nm,0.6s,baz=293,slow=9.7,SNR=1.8						
	comp=Z,0.1nm,0.4s						
ZALV	Zalesovo Beam	37.81	55	P	P	00 26 37.0	+0.9
	comp=Z,0.4nm,0.4s,baz=270,slow=4.3,SNR=2.1						
ZALV				pP	pP	00 27 07.3	+0.5
	comp=Z,3.0nm,0.8s,baz=292,slow=7.8,SNR=6.9						
	comp=Z,0.4nm,0.4s						
MKAR	Makanchi Array	38.16	67	P	P	00 26 40.0	+0.8
	comp=Z,0.1nm,0.4s,baz=277,slow=6.9,SNR=2.3						
MKAR				pP	pP	00 27 09.8	-0.1
	comp=Z,0.2nm,0.5s,baz=287,slow=5.9,SNR=2.6						
	comp=Z,0.1nm,0.4s						
ASAR	Alice Springs	118.65	95	PKP	PKPdf	00 38 04.0	-1.1
	comp=Z,0.3nm,0.8s,baz=341,slow=0.6,SNR=4.1						

IDC 22 00:32:03.6±1.9,**31°.14S**×**177°.57W**,**h0**^{km},**mb3.8**/3,
mbtmp3.8/3,**Error ellipse: s-maj=55.6km s-min=38.1km**
az=44.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.44	268	P	P	00 40 08.7	+0.1
	1.1nm,0.7s,baz=104,slow=7.3,SNR=12						
	1.1nm,0.7s						
WRA	Warramunga Arr	44.50	273	P	P	00 40 16.6	-0.5
	0.6nm,0.5s,baz=113,slow=7.8,SNR=5.5						
	0.6nm,0.5s						
QSPA	South Pole Qui	58.97	180	P	P	00 42 04.5	-0.2
	1.8nm,1.1s,baz=346,slow=0.7,SNR=5.7						
	1.8nm,1.1s						
FINES	FINESS Array B	145.97	340	PKPbc	PKPdf	00 51 43.9	+0.1
	1.0nm,0.5s,baz=67,slow=3.6,SNR=15						

IDC 22 00:33:41.1±287.0,**49°.20N**×**152°.92E**,**h0**^{km},**Error ellipse:**
s-maj=136.4km s-min=100.7km az=25.0,Northwest of
Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I44RU	PETROPAVLOVSK-	4.94	36	I	I	01 06 34.9	
	0.4nm,1.6s,baz=218,slow=309,SNR=20						
I45RU	USSURIYSK INFR	15.20	259	I	I	02 05 40.0	
	0.1nm,1.3s,baz=62,slow=310,SNR=0.9						
I30JP	ISUMI INFRASON	16.69	218	I	I	02 10 00.0	
	0.1nm,1.8s,baz=30,slow=314,SNR=1.9						
I59US	HAWAII INFRASO	50.27	107	I	I	05 43 56.7	
	baz=321,slow=301,SNR=6.7						
I56US	NEWPORT INFRAS	55.81	54	I	I	06 10 10.9	
	baz=312,slow=285,SNR=4.3						

IDC 22 00:40:38.9±6.7,**48°.27N**×**153°.03E**,**h0**^{km},**mb3.2**/3,
mbtmp3.2/4,**ML2.1**/1,**MS2.9**/4,**Error ellipse:**
s-maj=163.9km s-min=32.7km az=160.0,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	Petropavlovsk-	5.68	30	Pn	Pn	00 42 04.6	+0.1
	0.3nm,0.3s,baz=200,slow=12,SNR=6.2						
PETK				LR	LR	00 44 31.1	
	comp=Z,132nm,18.5s,baz=163,slow=41						
	1.4nm,0.6s						
ASAJ	Asahikawa	8.34	244	LR	LR	00 45 16.0	
	comp=Z,52nm,21.5s,baz=140,slow=33						
KLR	Kul'dur	14.07	282	LR	LR	00 49 07.0	
	comp=Z,78nm,18.4s,baz=154,slow=36						
JNU	Nakatsue	22.49	236	LR	LR	00 55 26.6	
	comp=Z,20nm,20.5s,baz=48,slow=40						
ILAR	Eielson Array	35.41	40	P	P	00 47 36.0	-0.1
	0.2nm,0.8s,baz=272,slow=10,SNR=2.0						
	0.2nm,0.8s						
MKAR	Makanchi Array	46.21	296	P	P	00 49 05.5	+0.1
	0.2nm,0.6s,baz=60,slow=7.2,SNR=3.8						
	0.2nm,0.6s						
KURBB	Kurchatov Arra	46.58	302	P	P	00 49 07.9	-0.4
	0.3nm,0.6s,baz=68,slow=7.9,SNR=2.5						
	0.3nm,0.6s						

WEL 22 00:45:01.2±0.9,**31°S**±6°×**17°8E**±1°5,**h33**^{km},**M4.4**/15,
mB4.7/6,**ML4.9**/15,**MLv4.7**/15,**Mw(mB)4.0**/6,**Error**
ellipse: s-maj=20.2km s-min=6.1km az=101.7,
confirmed,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.95	63	P	Pn	00 45 59.2	-0.3
GLKZ				S	Sn	00 46 49.4	+4.6
HAZ	Te Kaha	6.62	182	P	Pn	00 46 37.6	+1.5
HAZ				S	Sn	00 47 53.8	+3.4
WMGZ	Waiomatatini S	6.68	178	P	Pn	00 46 38.8	+1.8
WMGZ				S	Sn	00 47 53.2	+1.3
PKGZ	Pakihiroa	6.72	180	P	Pn	00 46 39.1	+1.5
PKGZ				S	Sn	00 47 52.7	-0.3
RUGZ	Raukumara Rang	6.83	182	P	Pn	00 46 38.5	-0.7
RUGZ				S	Sn	00 47 58.9	+3.2
PUZ	Puketiti	6.93	179	P	Pn	00 46 41.9	+1.5
PUZ				S	Sn	00 47 58.0	-0.1
TWGZ	Tauwhareparae	7.03	180	P	Pn	00 46 41.4	-0.5
TWGZ				S	Sn	00 48 01.2	+0.5
URZ	Urewera	7.16	186	P	Pn	00 46 45.3	+1.8
URZ				S	Sn	00 48 06.5	+2.9
URZ	Urewera	7.16	186	P	Pn	00 46 45.5	+2.0
MWZ	Matawai	7.20	183	P	Pn	00 46 44.9	+0.7
MWZ				S	Sn	00 48 05.9	+1.1
TKGZ	Te Karaka	7.29	181	P	Pn	00 46 45.3	-0.2
TKGZ				S	Sn	00 48 07.0	-0.1
RAGZ	Rawiri	7.37	184	P	Pn	00 46 47.8	+1.2
RIGZ	Rimuhau	7.56	182	P	Pn	00 46 49.4	+0.3
RIGZ				S	Sn	00 48 13.3	-0.5
SNGZ	Shannon Statio	7.66	184	P	Pn	00 46 51.2	+0.7
SNGZ				S	Sn	00 48 16.5	+0.4
MTHZ	Maungataniwha	7.77	187	P	Pn	00 46 52.4	+0.5
KNZ	Kokohu	7.88	182	P	Pn	00 46 52.0	-1.5
KNZ				S	Sn	00 48 19.1	-2.4
NMHZ	Naumai	8.02	187	P	Pn	00 46 55.6	+0.2
BKZ	Black Stump Fm	8.12	189	P	Pn	00 46 55.8	-1.0
OTVZ	Oturere	8.25	193	P	Pn	00 46 59.3	+0.6
CKHZ	Cape Kidnapper	8.55	185	P	Pn	00 46 59.9	-2.8
KRHZ	Kereru	8.61	189	P	Pn	00 47 01.0	-2.5
PNHZ	Pukenui	8.89	189	P	Pn	00 47 03.6	-3.9

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*ASIES **22** 00:53:39.1, 24°.48N×122°.64E, h67^{km}, ML3.9, Mw3.7, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M$_{rr}$0.58; M$_{\theta\theta}$2.09; M$_{\phi\phi}$-2.67; M$_{r\theta}$-1.91; M$_{\theta\phi}$-0.85; M$_{\phi r}$2.17; Fault plane solution: M$_0$3.87147×10^{21} NP1: φ$_s$230.34000°, δ41.64000°, λ170.81000°. NP2: φ$_s$327.24000°, δ83.91000°, λ48.72000°. Principal axes: T Plg37.1200°, Azm201.4330°; N Plg40.9890°, Azm332.5550°; P Plg26.9630°, Azm88.7890°;*

*JMA **22** 00:53:39.3±0.2, 24°N±2°×122°.6E±0°.6, h65^{km}±1^{km}, MV2.7/14, NW OFF ISHIGAKIJIMA IS*

*TAP **22** 00:53:39.1, 24°.48N×122°.64E, h67^{km}, ML3.9, C*

ISC 22 00:53:39.5±1.2**, 24°.45N**±0°.03×**122°.65E**±0°.02**, h66**^{km}±6^{km}**, n136, σ1^s.07**/243**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.27	90	*i* P	Pn	00 53 50.0	0.0
JYNG				S	Sn	00 53 57.8	+0.1
YOJ	Yonaguni jima	0.33	88	P	Pn	00 53 49.9	-0.5
YOJ	Yonaguni jima	0.33	88	*e*P	Pn	00 53 50.1	-0.3
YOJ				S	Sn	00 53 58.4	0.0
YOJ	Yonaguni jima	0.33	88	P	Pn	00 53 50.1	-0.3
YOJ				S	Sn	00 53 58.5	0.0
EOS3	EOS3	0.34	241	P	Pn	00 53 50.9	+0.6
EOS3				*e*S	Sn	00 53 59.6	+1.3
EOS2	EOS2	0.38	265	*i* P	Pn	00 53 51.0	+0.3
EOS2				*e*S	Sn	00 53 59.9	+1.1
EOS4	EOS4	0.45	222	P	Pn	00 53 51.6	+0.6
EOS4				*e*S	Sn	00 54 00.7	+1.3
ESAO	Su ao	0.74	280	*e*P	Pn	00 53 54.3	-0.3
ESAO				*e*S	Sn	00 54 05.1	-0.6
TWC	Suao	0.74	282	P	Pn	00 53 54.1	-0.5
TWC				S	Sn	00 54 04.3	-1.4
EGS		0.76	301	*e*P	Pn	00 53 54.4	-0.4
EGS				*e*S	Sn	00 54 04.9	-1.1
EWUT	Wuta	0.79	270	*e*P	Pn	00 53 54.9	-0.2
EWUT				*e*S	Sn	00 54 06.4	-0.3
TWB1	Santiao Chiao	0.82	313	*e*P	Pn	00 53 54.8	-0.6
TWB1				*e*S	Sn	00 54 06.5	-0.7
ENA	Nanau	0.83	269	*e*P	Pn	00 53 55.5	-0.1
ENA				*e*S	Sn	00 54 08.2	+0.7
EAHA	Aohua	0.84	262	*e*P	Pn	00 53 56.0	+0.3
EAHA				S	Sn	00 54 09.1	+1.3
NTC	Toucheng	0.84	298	*e*S	Sn	00 54 07.4	-0.4
NDS	Dongshan	0.87	282	*e*P	Pn	00 53 54.9	-1.2
ILA	Ilan	0.88	291	*e*P	Pn	00 53 56.6	+0.4
TIPB	Shuangxi	0.91	305	*i* P	Pn	00 53 56.2	-0.4
TIPB				*e*S	Sn	00 54 08.4	-1.0
TWE	Neicheng	0.93	287	*i* P	Pn	00 53 56.8	-0.1
TWE				*e*S	Sn	00 54 09.4	-0.4
SXI1	Grass Mountain	0.95	313	P	Pn	00 53 56.9	-0.3
SXI1				*e*S	Sn	00 54 09.9	-0.4
ETL	Fush Village	0.98	253	P	Pn	00 53 57.2	-0.4
ETL				S	Sn	00 54 10.5	-0.4
IRIF	Iriomote-Funau	0.99	97	*i* P	Pn	00 53 57.5	-0.2
IRIF				S	Sn	00 54 10.9	-0.2
NACB	Ninganchiao	1.00	254	P	Pn	00 53 57.3	-0.4
NACB	Ninganchiao	1.00	254	*i* P	Pn	00 53 57.3	-0.4
NACB				S	Sn	00 54 10.7	-0.6
NWF	Wu-fen Shan	1.00	308	*e*P	Pn	00 53 57.8	0.0
NWF				S	Sn	00 54 11.4	-0.1
WFSB	Wu-fen Shan	1.00	308	*e*P	Pn	00 53 57.9	+0.1
WFSB				*e*S	Sn	00 54 11.4	0.0
ENTT	Nioudou	1.00	281	P	Pn	00 53 58.4	+0.6
FUSB	Fushanzhiwuyua	1.01	288	P	Pn	00 53 58.1	+0.1
FUSB				*e*S	Sn	00 54 11.3	-0.5
LATG	Datong	1.02	275	P	Pn	00 53 58.7	+0.5
LATG				S	Sn	00 54 12.6	+0.5
TWD	Chiawan	1.03	249	*e*P	Pn	00 53 57.7	-0.4
TWD				S	Sn	00 54 11.1	-0.8
TNOU	National Taiwa	1.06	311	P	Pn	00 53 58.1	-0.4
TNOU				*e*S	Sn	00 54 12.0	-0.6
HWA	Hwalien	1.06	244	*e*P	Pn	00 53 58.4	-0.2
HWA				*e*S	Sn	00 54 12.0	-0.7
ETLH	Xiulin Townshi	1.09	257	P	Pn	00 53 58.8	-0.2
ETLH				S	Sn	00 54 13.0	-0.6
NWLT	Wulai	1.09	288	*e*P	Pn	00 53 59.0	+0.1
NWLT				*e*S	Sn	00 54 12.3	-1.1
TWA	Mucha	1.10	299	*e*P	Pn	00 53 58.9	-0.2
TWA				*e*S	Sn	00 54 13.7	+0.1
TEYL	Yanliau Villag	1.12	239	P	Pn	00 53 58.5	-0.8
TEYL				S	Sn	00 54 13.3	-0.8
HATJ	Hateruma jima	1.13	110	*e*P	Pn	00 54 00.4	+1.0
HATJ				*e*S	Sn	00 54 15.7	+1.5
NHDH	Xindian Distri	1.14	297	*e*P	Pn	00 53 59.7	+0.1
NHDH				*e*S	Sn	00 54 14.4	-0.1
NNSB	Datong	1.15	269	P	Pn	00 53 59.9	+0.1
NNSB				*e*S	Sn	00 54 15.0	-0.1
ETM	Tongmen	1.16	246	*e*P	Pn	00 53 59.3	-0.5
ETM				*e*S	Sn	00 54 14.3	-0.7
NNS	Nan Shan	1.16	270	*e*P	Pn	00 54 00.0	0.0
NNS				*e*S	Sn	00 54 15.1	-0.2
TATO	Taipei	1.18	297	P	Pn	00 54 00.3	+0.3
TATO	Taipei	1.18	297	S	Sn	00 54 14.8	-0.6
YHNB	Yeheng	1.18	281	P	Pn	00 54 00.7	+0.5
YHNB	Yeheng	1.18	281	S	Sn	00 54 16.5	+0.9
YHNB	Yeheng	1.18	281	P	Pn	00 54 00.6	+0.5
YHNB				*e*S	Sn	00 54 15.6	+0.1
SHUL	Shoufeng	1.19	237	*e*P	Pn	00 54 00.0	-0.2
SHUL				*e*S	Sn	00 54 15.5	-0.2
NSK	Sanguang	1.20	281	P	Pn	00 54 00.8	+0.5
NSK				*e*S	Sn	00 54 16.0	0.0
YM01	YM01	1.20	305	P	Pn	00 54 00.3	-0.1
YM01				*e*S	Sn	00 54 15.0	-0.9
LXIB	Xiulin Townshi	1.21	249	*i* P	Pn	00 54 00.1	-0.5
LXIB				S	Sn	00 54 15.6	-0.8
YM08	YM08	1.21	308	*e*P	Pn	00 54 00.4	-0.1
YM08				*e*S	Sn	00 54 15.3	-0.9
ZUZH	Zhuzihu	1.23	305	P	Pn	00 54 00.6	-0.1
ZUZH				*e*S	Sn	00 54 15.9	-0.7
TEGC	Jichi Village	1.25	234	*e*P	Pn	00 53 59.5	-1.5
TEGC				S	Sn	00 54 16.5	-0.7
TWY	Chenhua	1.26	311	*e*P	Pn	00 54 01.2	+0.1
TWY				*e*S	Sn	00 54 17.5	+0.2
JKRS	Kuro-shima	1.26	99	P	Pn	00 54 01.4	+0.3
JKRS				S	Sn	00 54 18.3	+1.0
ESL	Shilin	1.28	240	*e*P	Pn	00 54 01.0	-0.4
ESL				*e*S	Sn	00 54 16.4	-1.4
TWS1	Kuangyinshan	1.29	300	*e*P	Pn	00 54 01.5	-0.1
TWS1				*e*S	Sn	00 54 18.3	+0.3
FUSS	Fushou	1.30	261	*e*P	Pn	00 54 02.1	+0.3
FUSS				*e*S	Sn	00 54 18.7	+0.1
WHF	Hehuan Shan	1.30	257	*e*P	Pn	00 54 01.9	-0.2
WHF				*e*S	Sn	00 54 18.2	-0.7
NTST	Danshui	1.30	303	*e*S	Sn	00 54 18.6	+0.3
TWT	Tachien	1.36	262	P	Pn	00 54 03.1	+0.5
TWT				*e*S	Sn	00 54 19.8	-0.1
EGFH	Guangfu	1.36	235	*e*P	Pn	00 54 02.1	-0.4
EGFH				*e*S	Sn	00 54 18.8	-0.9
WARBT	Fenglin Townsh	1.36	238	*e*P	Pn	00 54 02.0	-0.6
WARBT				*e*S	Sn	00 54 19.1	-0.8
JIJ	Ishigaki jima	1.37	93	P	Pn	00 54 02.4	-0.1
JIJ				S	Sn	00 54 19.2	-0.6
TDCB	Techi	1.37	262	*e*P	Pn	00 54 03.5	+0.7
TDCB				*e*S	Sn	00 54 20.2	0.0
KSHI	Guanxi Townshi	1.38	284	*e*P	Pn	00 54 03.4	+0.7
KSHI				*e*S	Sn	00 54 20.7	+0.5
NFF	Wufeng Townshi	1.41	278	P	Pn	00 54 03.6	+0.5
NFF				*e*S	Sn	00 54 21.3	+0.4
NCUH	Zhongli	1.43	291	*e*S	Sn	00 54 21.8	+0.5
OWD	Renai	1.43	250	P	Pn	00 54 03.3	-0.3
OWD				S	Sn	00 54 20.3	-1.3
WUSB	Renai	1.47	252	P	Pn	00 54 04.1	+0.1
WUSB				*e*S	Sn	00 54 22.2	-0.3
HGSD	Ruisui	1.47	230	*e*P	Pn	00 54 04.1	+0.1
HGSD				*e*S	Sn	00 54 21.6	-0.8
LIOB	Emei	1.50	278	P	Pn	00 54 04.7	+0.4
LIOB				*e*S	Sn	00 54 24.1	+1.1
NSTT	Nanjuang	1.51	277	*e*P	Pn	00 54 05.3	+0.8
NSTT				*e*S	Sn	00 54 23.9	+0.6
JISG	Ishigakijimahi	1.52	85	P	Pn	00 54 04.3	-0.3
JISG				*e*S	Sn	00 54 23.3	-0.2
EHYH	Wanrong	1.53	232	*e*P	Pn	00 54 04.2	-0.4
EHYH				*e*S	Sn	00 54 23.0	-0.6
EHY	Hungye	1.54	232	*e*P	Pn	00 54 04.1	-0.7
EHY				*e*S	Sn	00 54 22.4	-1.5
VWDT	VWDT	1.54	244	P	Pn	00 54 04.9	0.0
VWDT				*e*S	Sn	00 54 23.6	-0.5
WHP	Taichung City	1.56	264	P	Pn	00 54 06.2	+1.0
WHP				*e*S	Sn	00 54 25.5	+0.8
ECBN	Changbin	1.57	224	*e*S	Sn	00 54 23.4	-1.4
YULB	Yu-li	1.62	230	P	Pn	00 54 05.6	-0.4
YULB	Yu-li	1.62	230	*e*P	Pn	00 54 05.0	-1.0
YULB				*e*S	Sn	00 54 24.4	-1.7
WCS	Beigang Elemen	1.63	256	*e*P	Pn	00 54 06.8	+0.7
WCS				*e*S	Sn	00 54 27.1	+0.9
TWF1	Yuli	1.65	229	P	Pn	00 54 05.9	-0.4
TWF1				*e*S	Sn	00 54 25.7	-1.0
SSLB	Suanglung	1.68	247	P	Pn	00 54 07.1	+0.3
SSLB	Suanglung	1.68	247	S	Sn	00 54 27.2	-0.3
SSLB	Suanglung	1.68	247	P	Pn	00 54 06.8	0.0
SSLB				S	Sn	00 54 26.5	-1.0
SMLT	Sun Moon Lake	1.69	251	P	Pn	00 54 07.5	+0.5
SMLT				S	Sn	00 54 27.8	0.0
CHKH	Chenggong	1.70	223	*e*P	Pn	00 54 06.0	-1.0
CHKH				*e*S	Sn	00 54 25.0	-2.7
TWQ1	Liyutan	1.71	267	*e*P	Pn	00 54 08.1	+1.0
TWQ1				*e*S	Sn	00 54 29.7	+1.6
FULB	Fuli	1.76	225	*e*P	Pn	00 54 07.5	-0.3
FULB				*e*S	Sn	00 54 28.2	-1.0
CHKT	Chengkung	1.79	221	*e*P	Pn	00 54 07.5	-0.7
CHKT				*e*S	Sn	00 54 26.8	-3.1
WHYT	Xinyi Township	1.80	246	P	Pn	00 54 09.2	+0.8
WHYT				*e*S	Sn	00 54 30.8	+0.4
EHD	Haiduan	1.85	226	*e*P	Pn	00 54 08.7	-0.4
EHD				*e*S	Sn	00 54 30.1	-1.4
WJS	Zhushan	1.86	251	*e*P	Pn	00 54 10.9	+1.7
WJS				*e*S	Sn	00 54 34.3	+2.6
ECS	Chishang	1.88	224	*e*S	Sn	00 54 32.1	-0.1
JTJ	Tarama	1.88	84	*e*P	Pn	00 54 09.9	+0.5
JTJ				*e*S	Sn	00 54 32.2	0.0
WNT	Mingjian	1.88	253	*e*P	Pn	00 54 10.9	+1.5
WNT				*e*S	Sn	00 54 34.2	+2.0
EDH	Donghe	1.92	220	*e*P	Pn	00 54 09.2	-0.7
EDH				*e*S	Sn	00 54 30.9	-2.2
ALS	Alishan	1.93	241	P	Pn	00 54 11.0	+0.7
ALS				*e*S	Sn	00 54 34.0	+0.2
WCHH	Zhanghua	1.94	259	*e*P	Pn	00 54 11.2	+0.9
WCHH				*e*S	Sn	00 54 34.9	+1.2
ELDTW	Lidau	1.95	230	*e*P	Pn	00 54 10.5	0.0
ELDTW				*e*S	Sn	00 54 32.6	-1.5
CHN5	Tsauling	1.99	245	P	Pn	00 54 12.0	+1.0
CHN5				*e*S	Sn	00 54 36.2	+1.2
WGK	Gukeng	2.05	249	*e*P	Pn	00 54 13.8	+2.1
WGK				*e*S	Sn	00 54 39.0	+2.7
WDLH	Douliu	2.07	249	*e*P	Pn	00 54 13.9	+1.9
WDLH				*e*S	Sn	00 54 39.2	+2.3
LONT	Longtian	2.07	222	*e*P	Pn	00 54 11.9	-0.2
LONT				*e*S	Sn	00 54 35.7	-1.2
WCKO	Fanlu	2.12	242	*e*P	Pn	00 54 14.9	+2.1
WCKO				S	Sn	00 54 39.8	+1.7
STYH	Taoyuan	2.14	234	P	Pn	00 54 14.1	+1.2
STYH				S	Sn	00 54 38.9	+0.5
TWGBT	Beinan	2.17	222	S	Sn	00 54 38.0	-1.2
TWGBT	Beinan	2.17	222	*e*P	Pn	00 54 13.2	-0.2
TWGBT				*e*S	Sn	00 54 37.3	-1.9
TWG	Pinlang	2.17	222	*e*P	Pn	00 54 13.3	-0.1
TWG				*e*S	Sn	00 54 37.7	-1.6
TPUB	Ta-pu	2.17	239	P	Pn	00 54 15.2	+1.8
TPUB	Ta-pu	2.17	239	*e*P	Pn	00 54 15.3	+1.8
TPUB				*i* S	Sn	00 54 41.4	+2.1
WTK	Tuku	2.20	250	*e*P	Pn	00 54 14.7	+0.9
WTK				*e*S	Sn	00 54 41.8	+1.8
WTP	Ta-pu	2.21	238	*e*P	Pn	00 54 15.7	+1.7
WTP				*e*S	Sn	00 54 41.7	+1.3
CHY	Chiayi	2.25	245	*e*P	Pn	00 54 16.5	+2.2
CHY				*e*S	Sn	00 54 42.8	+1.8
TWK	Hsinying	2.30	240	*e*P	Pn	00 54 16.5	+1.3
TWK				*e*S	Sn	00 54 44.6	+2.1
CHN1	Nanshi	2.31	237	*e*P	Pn	00 54 17.0	+1.6
CHN1				*e*S	Sn	00 54 44.6	+1.8
SNST	Tainan City	2.32	239	*e*S	Sn	00 54 44.8	+1.9
WSF	Szhu	2.36	250	*e*S	Sn	00 54 45.9	+2.1
WSL	Shuilin Townsh	2.40	248	*e*P	Pn	00 54 17.8	+1.4
WSL				*e*S	Sn	00 54 46.2	+1.5
ECL	Taimali	2.41	220	*e*S	Sn	00 54 43.2	-1.9
ICHU	Yijhu	2.42	244	*e*P	Pn	00 54 18.0	+1.2
ICHU				*e*S	Sn	00 54 46.8	+1.5
SSD	Sandimen	2.51	228	*e*S	Sn	00 54 49.5	+2.0
SCST	Cishan	2.52	232	*e*S	Sn	00 54 51.8	+4.2
MASBT	Mashibuluo	2.60	226	*e*P	Pn	00 54 20.1	+0.9
MASBT				*e*S	Sn	00 54 49.6	-0.1
TAWH	Dawu Township	2.65	218	*e*P	Pn	00 54 19.9	0.0
TAWH				*e*S	Sn	00 54 49.1	-1.8
SCZT	Fangliau	2.79	222	*e*P	Pn	00 54 23.6	+1.9
SCZT				*e*S	Sn	00 54 55.4	+1.2
SLIU	Shizi	2.80	218	*e*P	Pn	00 54 22.5	+0.6
SLIU				*e*S	Sn	00 54 52.6	-2.0
VWUC	VWUC	2.96	281	*e*P	Pn	00 54 23.6	-0.4
PHUB	P'eng-hu	2.96	252	*e*P	Pn	00 54 23.3	-0.8
PHUB				*e*S	Sn	00 54 56.5	-2.1
MATB	Ma-tsu	2.97	305	*e*P	Pn	00 54 24.1	-0.1
WDGT	Dungji	2.98	247	*e*P	Pn	00 54 24.4	+0.1
WDGT				*e*S	Sn	00 54 58.0	-0.9
TSEB	Hengchuen, Pin	3.01	213	*e*S	Sn	00 54 59.9	+0.3
TWKBT	Hengchun	3.02	214	*e*S	Sn	00 54 59.1	-0.8
PTMZ	Houxiangcun	3.26	281	*e*P	Pn	00 54 27.7	-0.5
AXDP	Jialang	4.28	277	*e*P	Pn	00 54 41.8	-0.3
AXDP				*e*S	Sn	00 55 26.8	-3.9

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*IDC **22** 00:55:41.7±0.8, 2°.45S×138°.68E, h0^{km}, mb3.9/6, mbtmp3.8/8, ML3.6/2, MS3.7/1, Error ellipse: s-maj=22.1km s-min=15.4km az=12.0*

ISC 22 00:55:46.1±0.9**, 2°.5S**±0°.2×**138°.7E**±0°.2**, h32**^{km}**, n11, σ0^s.57**/10**, mb3.9**/6**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	2.01	89	Pn	Pn	00 56 17.9	+0.1
	6.2nm,0.3s,baz=246,slow=13,SNR=16						
JAY				Lg	Lg	00 56 45.0	
	4.2nm,0.3s,baz=155,slow=15,SNR=5.9						
	23nm,0.5s						
WRA	Warramunga Arr	17.81	194	P	P	00 59 51.8	-0.4
	0.3nm,0.3s,baz=14,slow=12,SNR=9.0						
	0.4nm,0.3s						
ASAR	Alice Springs	21.51	192	P	P	01 00 32.1	-0.3
	0.9nm,0.6s,baz=21,slow=11,SNR=13						
	0.9nm,0.6s						
KLR	Kul'dur	51.91	354	LR	LR	01 25 49.5	
	comp=Z,79nm,19.0s,baz=92,slow=35						
MKAR	Makanchi Array	69.65	322	P	P	01 06 52.2	-0.2
	0.5nm,0.7s,baz=108,slow=7.9,SNR=5.3						
	0.5nm,0.7s						
KURBB	Kurchatov Arra	73.58	325	P	P	01 07 16.2	+0.1
	0.4nm,0.3s,baz=116,slow=5.5,SNR=8.4						
	0.4nm,0.3s						
BVAR	Borovoye Array	79.17	325	P	P	01 07 48.0	+0.3
	2.3nm,0.7s,baz=106,slow=7.9,SNR=8.3						
	2.3nm,0.7s						
ILAR	Eielson Array	85.69	24	P	P	01 08 21.2	-0.3
	0.7nm,0.8s,baz=257,slow=4.8,SNR=6.8						
	0.7nm,0.8s						
QSPA	South Pole Qui	87.40	180	P	P	01 08 31.1	+1.1
	0.8nm,0.5s,baz=260,slow=1.3,SNR=7.4						
	0.8nm,0.5s						
CPUP	Villa Florida	147.38	153	PKPbc	PKPab	01 15 28.8	-0.5
	0.5nm,0.9s,baz=318,slow=2.2,SNR=4.0						
LPAZ	La Paz	147.56	126	PKPbc	PKPab	01 15 30.4	-0.6
	1.3nm,0.8s,baz=235,slow=0.7,SNR=6.0						

DJA 22 01:04:10.0±0.5**, 9°S**±3°×**12°4E**±°**, h14**^{km}±5^{km}**, M3.7**/6**, mb3.9**/3**, MLv3.5**/6**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	Soe	0.65	179	P	Pb	01 04 23.1	-0.2
SOEI				S	Sg	01 04 30.6	-0.8
BATI	Baumata	1.25	208	P	Pg	01 04 34.6	+0.5
BATI				S	Sg	01 04 53.7	+3.4
MMRI	Maumere	2.05	283	P	Pn	01 04 43.8	-0.3
MMRI				S	Sn	01 05 04.8	-4.7
EDFI	Ende, Flores	2.56	278	P	Pn	01 04 48.6	-2.6
BBSI	Bau Bau	3.96	335	P	Pn	01 05 10.4	0.0
PLAI	Plampang	6.41	272	P	Pn	01 05 42.6	-1.5
	0.1nm19nm,1.2s						

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*IDC **22** 01:08:23.8±6.2, 37°.76S×177°.59E, h0^{km}, mb4.0/3, mbtmp4.0/3, MS3.5/8, Error ellipse: s-maj=110.1km s-min=21.2km az=99.0*

*NOU **22** 01:08:25.8, 37°.53S×177°.14E, h9^{km}, MLv3.9/9, Off E. Coast of N. Island, N.Z.*

*WEL **22** 01:08:25.9, 37°.52S×177°.15E, h5^{km}, ML3.9, Mw4.2, Moment Tensor Solution. s14 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.61; M$_{\theta\theta}$-1.31; M$_{\phi\phi}$2.92; M$_{r\theta}$0.18; M$_{\theta\phi}$1.92; M$_{\phi r}$-0.23; Fault plane solution: M$_0$2.92000×10^{15} NP1: φ$_s$339.00000°, δ74.00000°, λ-161.00000°. NP2: φ$_s$244.00000°, δ72.00000°, λ-17.00000°. Principal axes: T 3.6645, Plg1.0000°, Azm111.0000°; N -2.1678, Plg66.0000°, Azm18.0000°; P -1.4967, Plg24.0000°, Azm202.0000°; Stations used: HAZ OPRZ URZ MWZ PUZ RTZ TOZ KUZ MKAZ RATZ HIZ WHVZ VRZ WCZ STRIKE-SLIP FAULTING*

*WEL **22** 01:08:26.7±0.5, 38°S±4°×17°7E±°, h5^{km}, M4.3/11, ML4.6/11, MLv4.3/11 Error ellipse: s-maj=5.1km s-min=2.8km az=158.5, confirmed*

ISC 22 01:08:26.6±0.9**, 37°.52S**±0°.03×**177°.13E**±0°.02**, h6**^{km}±6^{km}**, n91, σ1^s.09**/94**, mb3.8**/3**, MS3.5**/6**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSRZ	White Island S	0.04	86	P	Pg	01 08 28.2	+0.2
WIZ	White Island	0.05	97	P	Pg	01 08 28.1	+0.1
WIZ				S	Sg	01 08 29.3	+0.3
WHRZ	Whale Island	0.36	200	P	Pb	01 08 34.2	-1.1
OPRZ	Ohinepanea	0.56	235	P	Pb	01 08 37.5	-1.3
OPRZ				S	Sb	01 08 45.2	-1.7
HAZ	Te Kaha	0.57	115	P	Pb	01 08 37.4	-1.5
MARZ	Manawahe	0.59	218	P	Pb	01 08 38.1	-1.2
MARZ				S	Sb	01 08 46.9	-0.9
RUGZ	Raukumara Rang	0.62	136	P	Pg	01 08 38.0	-0.6
RUGZ				S	Sb	01 08 48.1	-0.8
EDRZ	Edgecumbe	0.66	208	P	Pb	01 08 39.8	-0.7
TGRZ	Tauranga	0.72	253	P	Pb	01 08 41.1	-0.4
TGRZ				S	Sb	01 08 51.9	+0.3
URZ	Urewera	0.74	181	Pn	Pg	01 08 40.2	-0.5
	201nm,0.3s,baz=278,slow=3.7,SNR=481						
URZ				Sn	Sb	01 08 50.8	-1.3
	255nm,0.3s,baz=209,slow=20,SNR=11						
URZ	Urewera	0.74	181	P	Pg	01 08 40.3	-0.5
URZ	Urewera	0.74	181	P	Pg	01 08 40.2	-0.5
URZ				S	Sb	01 08 50.6	-1.5
MYRZ	Mayor Island	0.75	289	P	Pb	01 08 41.8	-0.2
LIRZ	Lichensteins R	0.76	231	P	Pb	01 08 42.0	-0.2
LIRZ				S	Sb	01 08 52.0	-0.9
MKRZ	Makatiti	0.81	220	P	Pb	01 08 43.1	0.0
PKGZ	Pakihiroa	0.83	115	P	Pb	01 08 42.5	-0.9
OMRZ	Omania	0.84	226	P	Pb	01 08 43.3	-0.3
KARZ	Kaharoa	0.86	234	P	Pb	01 08 43.7	-0.2
KARZ				S	Sb	01 08 55.4	-0.3
TARZ	Mount Tarawera	0.87	214	P	Pb	01 08 44.0	-0.1
MWZ	Matawai	0.87	159	P	Pb	01 08 42.8	-1.4
MWZ				S	Sb	01 08 55.5	-0.5
MXZ	Matakaoa Point	0.94	93	P	Pb	01 08 44.0	-1.2
MXZ	Matakaoa Point	0.94	93	P	Pb	01 08 43.9	-1.3
TWGZ	Tauwhareparae	0.94	134	P	Pb	01 08 44.7	-0.6
NGRZ	Ngongotaha	0.94	232	P	Pn	01 08 45.4	-1.0
RRRZ	Republican Roa	0.95	211	P	Pb	01 08 45.0	-0.4
HLRZ	Highlands Stat	0.95	220	P	Pn	01 08 46.2	-0.3
UTU	Utuhina	0.99	228	P	Pn	01 08 46.6	-0.4
KMRZ	Kaimai	1.00	251	P	Pg	01 08 45.2	-0.5
MUGZ	Murupara	1.00	196	P	Pb	01 08 45.3	-1.0
RAGZ	Rawiri	1.00	167	P	Pb	01 08 45.4	-1.0
PUZ	Puketiti	1.05	122	P	Pn	01 08 47.0	-0.8
HSRZ	Hossack Road	1.05	221	P	Pn	01 08 47.6	-0.2
WMGZ	Waiomatatini S	1.06	107	P	Pn	01 08 48.0	0.0
TKGZ	Te Karaka	1.08	148	P	Pn	01 08 47.2	-1.0
HRRZ	Handcock Road	1.09	217	P	Pn	01 08 48.0	-0.5
RTZ	Ruatahuna	1.10	186	P	Pb	01 08 47.1	-1.0
PRRZ	Plateau Road	1.14	211	P	Pn	01 08 48.5	-0.5
GRRZ	Galatos Road	1.16	224	P	Pn	01 08 48.9	-0.4
ALRZ	Allen Road	1.21	211	P	Pn	01 08 49.7	-0.4
WPRZ	Whakapapatarin	1.26	217	P	Pn	01 08 52.3	+1.7
TBAS	Tolaga Bay Are	1.26	133	P	Pn	01 08 52.2	+1.6
SNGZ	Shannon Statio	1.27	173	P	Pb	01 08 49.8	-1.1
CNGZ	Carnagh Statio	1.28	139	P	Pn	01 08 52.0	+1.0
RIGZ	Rimuhau	1.28	157	P	Pn	01 08 51.0	-0.1
TOZ	Tahuroa Road	1.31	260	P	Pn	01 08 49.2	-2.1
MTHZ	Maungataniwha	1.35	190	P	Pn	01 08 50.9	-1.1
KUZ	Kuaotunu	1.37	304	P	Pn	01 08 49.6	-2.5
KUZ	Kuaotunu	1.37	304	S	Sb	01 09 09.9	-0.3
KUZ	Kuaotunu	1.37	304	P	Pn	01 08 49.7	-2.4
RAHZ	Arahi	1.39	181	P	Pb	01 08 51.9	-1.1
KUTZ	Kaahu Road	1.41	226	P	Pg	01 08 52.9	-0.8
TLZ	Tolley Road	1.50	237	P	Pg	01 08 54.6	-0.6
WHHZ	Waihua	1.56	177	P	Pg	01 08 55.8	-0.6
KNZ	Kokohu	1.56	164	P	Pb	01 08 54.9	-0.8
NMHZ	Naumai	1.59	189	P	Pn	01 08 55.0	-0.4
WATZ	Wairara	1.62	222	P	Pg	01 08 58.6	+1.0
MKAZ	Moumakai	1.62	284	P	Pn	01 08 53.8	-1.9
BKZ	Black Stump Fm	1.72	197	P	Pn	01 08 55.2	-1.8
BKZ	Black Stump Fm	1.72	197	P	Pn	01 08 55.6	-1.4
MHGZ	Mahia Peninsul	1.74	160	P	Pb	01 08 57.5	-1.4
ARHZ	Aropaoanui	1.74	183	P	Pb	01 08 58.0	-0.9
WIAZ	Waiheke Island	1.75	294	P	Pn	01 08 55.9	-1.6
GRZ	Great Barrier	1.84	313	P	Pn	01 08 56.8	-1.9
ETAZ	East Tamaki Re	1.85	287	P	Pn	01 08 57.6	-1.1
MBAZ	Motutapu North	1.93	292	P	Pn	01 08 58.7	-1.3
NTVZ	North Tongarir	1.95	216	P	Pg	01 09 02.8	-1.1
TMVZ	Te Maari	1.95	215	P	Pb	01 09 02.2	-0.3
MCHZ	McNeill Hill	1.95	190	P	Pb	01 09 01.8	-0.7
KWHZ	Kaweka Forest	1.98	196	P	Pn	01 09 00.1	-0.5
OTVZ	Oturere	2.00	215	P	Pn	01 09 00.9	-0.2
EPAZ	Eden Park BICE	2.01	288	P	Pn	01 09 00.1	-0.9
HBAZ	Herne Bay Bore	2.03	289	P	Pn	01 09 00.5	-0.7
AWAZ	Awhitu Peninsu	2.03	282	P	Pn	01 09 00.3	-1.0
HIZ	Hauiti	2.05	240	P	Pn	01 09 00.8	-0.8
HIZ	Hauiti	2.05	240	P	Pn	01 09 00.7	-0.9
ABAZ	Army Bay	2.05	296	P	Pn	01 09 00.5	-1.1
WTAZ	Waiatarua	2.12	285	P	Pn	01 09 02.5	0.0
FWVZ	Far West T-bar	2.13	215	P	Pb	01 09 05.6	0.0
BFZ	Birch Farm	3.23	192	P	Pn	01 09 16.4	-1.4
OUZ	Omahuta	3.66	308	P	Pn	01 09 22.3	-1.4
SNZO	South Karori	4.22	206	P	Pn	01 09 30.6	-0.8
RPZ	Rata Peaks	7.72	215	LR	LR	01 13 29.7	

	comp=Z,279nm,21.5s,baz=46,slow=40						
RAO	Raoul Island	9.23	28	LR	LR	01 13 48.3	
	comp=Z,223nm,20.1s,baz=318,slow=35						
RAR	Rarotonga	25.77	57	LR	LR	01 22 49.3	
	comp=Z,96nm,19.4s,baz=242,slow=34						
STKA	Stephens Creek	29.63	270	P	P	01 14 35.9	+3.2
	1.1nm,0.7s,baz=120,slow=14,SNR=2.1						
STKA				LR	LR	01 24 23.0	
	comp=Z,144nm,21.9s,baz=78,slow=32						
	1.1nm,0.7s						
PPT	Papeete	35.32	65	LR	LR	01 25 25.9	
	comp=Z,38nm,20.2s,baz=16,slow=29						
ASAR	Alice Springs	39.35	278	P	P	01 15 58.2	+1.4
	1.9nm,0.9s,baz=123,slow=8.2,SNR=17						
	1.9nm,0.9s						
WRA	Warramunga Arr	41.01	283	P	P	01 16 11.2	+0.6
	2.0nm,0.8s,baz=122,slow=7.6,SNR=9.0						
	2.0nm,0.8s						
USRK	Ussuriysk Ar.	91.03	329	LR	LR	01 57 52.0	
	comp=Z,72nm,21.1s,baz=62,slow=32						
ATAH	Atahualpa	97.03	105	LR	LR	01 56 13.6	
	comp=Z,38nm,20.1s,baz=267,slow=30						
CPUP	Villa Florida	98.47	132	LR	LR	02 00 33.8	
	comp=Z,9.7nm,18.5s,baz=64,slow=32						

IDC ***22*** *01:17:55.3±0.8, 2°.27S×138°.54E, h0^{km}, mb3.9/6, mbtmp3.8/8, ML3.6/2, Error ellipse: s-maj=21.7km s-min=15.6km az=26.0*

DJA ***22*** *01:17:56.4±0.4, 2°S±4°×13°8E±°, h10^{km}, M3.7/6, MLv3.7/6*

ISC 22 01:17:57.0±0.7**, 2°.24S**±0°.08×**138°.45E**±0°.05**, h10^{km}, n15, σ0^{s}.76**/16**, mb3.8**/6**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.36	45	P	Pg	01 18 03.6	-0.6
SMPI				S	Sg	01 18 09.2	+0.3
GENI	Genyem	1.75	101	P	Pn	01 18 27.7	+0.3
SRPI	Serui, Papua	2.24	279	P	Pn	01 18 33.5	-0.8
JAY	Jayapura	2.27	97	Pn	Pn	01 18 34.3	-0.3
	6.8nm,0.3s,baz=248,slow=8.3,SNR=27						
JAY				Lg	Lg	01 19 04.7	
	7.7nm,0.3s,baz=128,slow=22,SNR=4.5						
	21nm,0.3s						
JAY	Jayapura	2.27	97	P	Pn	01 18 33.9	-0.7
BAKI	Biak	2.57	294	P	Pn	01 18 38.7	0.0
WRA	Warramunga Arr	18.04	193	P	Pn	01 22 07.0	-1.1
	0.4nm,0.3s,baz=16,slow=12,SNR=8.5						
	0.6nm,0.4s						
ASAR	Alice Springs	21.75	191	P	P	01 22 48.9	0.0
	2.3nm,0.8s,baz=19,slow=11,SNR=15						
	2.3nm,0.8s						
STKA	Stephens Creek	29.62	175	P	P	01 24 03.4	+0.7
	1.1nm,0.5s,baz=346,slow=7.7,SNR=4.2						
	1.1nm,0.5s						
MKAR	Makanchi Array	69.27	322	P	P	01 29 05.8	+1.3
	1.6nm,0.9s,baz=116,slow=8.2,SNR=9.8						
	1.6nm,0.9s						
KURBB	Kurchatov Arra	73.20	325	P	P	01 29 28.5	+0.3
	0.4nm,0.6s,baz=118,slow=5.8,SNR=7.5						
	0.4nm,0.6s						
BVAR	Borovoye Array	78.79	325	P	P	01 30 00.6	+0.6
	1.9nm,0.7s,baz=114,slow=8.4,SNR=8.5						
	1.9nm,0.7s						
ILAR	Eielson Array	85.52	24	P	P	01 30 33.7	-1.3
	0.3nm,0.7s,baz=266,slow=3.6,SNR=3.0						
	0.3nm,0.7s						
CPUP	Villa Florida	147.76	153	PKPbc	PKPdf	01 37 40.1	0.0
	0.3nm,0.8s,baz=66,slow=3.3,SNR=1.9						
LPAZ	La Paz	147.92	126	PKPbc	PKPdf	01 37 42.0	+0.6
	1.5nm,0.8s,baz=221,slow=1.1,SNR=4.6						

NOU ***22*** *01:19:15.4, 42°.35S×172°.32E, h1^{km}, MLv3.8/11, South Island, New Zealand*

WEL ***22*** *01:19:16.3±0.4, 42°S±2°×17°2E±°, h5^{km}, M3.2/25, ML3.3/7, MLv3.2/25, Error ellipse: s-maj=3.9km s-min=2.9km az=89.8, confirmed*

ISC 22 01:19:14.1±1.2**, 42°.32S**±0°.02×**172°.51E**±0°.03**, h1^{km}**±11^{km}**, n54, σ1^{s}.35**/64**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJFS	Springs Juncti	0.24	267	P	Pg	01 19 19.8	+1.1
SJFS				S	Sg	01 19 22.4	+0.6
HSES	Hanmer Springs	0.31	130	P	Pn	01 19 24.4	-1.5
LTZ	Lake Taylor	0.49	201	P	Pb	01 19 26.0	+0.5
INGS	Inangahua Fire	0.62	318	P	Pb	01 19 26.7	-1.0
THZ	Tophouse	0.63	28	P	Pb	01 19 27.9	0.0
THZ				S	Sn	01 19 39.6	-1.4
GVZ	Greta Valley S	0.75	149	P	Pn	01 19 32.7	+0.9
GVZ				S	Sn	01 19 44.7	+0.8
KHZ	Kahutara	0.77	97	P	Pn	01 19 33.1	+1.1
KHZ	Kahutara	0.77	97	P	Pn	01 19 33.2	+1.1
DSZ	Denniston Nort	0.78	318	P	Pb	01 19 29.8	-0.7
DSZ				S	Sg	01 19 39.5	+0.4
AMCZ	Amberley	0.86	173	P	Pn	01 19 34.2	+0.9
AMCZ				S	Sn	01 19 47.8	+1.3
INZ	Inchbonnie	0.88	243	P	Pg	01 19 31.0	0.0
MRNZ	Matariki Terra	0.94	12	P	Pn	01 19 33.3	-1.1
MRNZ				S	Sn	01 19 48.5	0.0
OXZ	Oxford	1.06	199	P	Pn	01 19 35.9	-0.2
OXZ				S	Sn	01 19 51.5	0.0
BSWZ	Blackbirch Sta	1.19	60	P	Pn	01 19 39.2	+1.4
NNZ	Nelson	1.28	31	P	Pn	01 19 39.4	+0.3
NNZ				S	Sn	01 19 59.3	+2.4
TKNZ	Takaka Hill	1.33	15	P	Pb	01 19 39.8	0.0
TKNZ				S	Sn	01 19 59.6	+1.5
MQZ	McQueen's Vall	1.39	176	P	Pn	01 19 40.1	-0.5
MHCZ	Mount Hutt	1.39	209	P	Pn	01 19 40.4	-0.3
MHCZ				S	Sg	01 19 58.9	+0.1
CMWZ	Cape Campbell	1.40	66	P	Pg	01 19 44.2	+3.3
TUWZ	Tuamarina	1.40	51	P	Pg	01 19 41.9	+1.1
RACZ	Rakaia	1.43	191	P	Pn	01 19 40.8	-0.3
OKCZ	Okains Bay	1.46	164	P	Pg	01 19 42.0	0.0
QRZ	Quartz Range	1.50	1	P	Pg	01 19 42.3	-0.5
QRZ	Quartz Range	1.50	1	S	Sg	01 20 03.3	+1.2
QRZ	Quartz Range	1.50	1	P	Pg	01 19 42.5	-0.3
WVZ	Waitaha Valley	1.50	239	P	Pn	01 19 42.1	0.0
AKCZ	Akaroa Harbour	1.58	169	P	Pb	01 19 43.3	-0.8
WACZ	Wakanui South	1.69	197	P	Pn	01 19 44.3	-0.5
TCW	Tory Channel	1.73	51	P	Pg	01 19 46.8	-0.4
RPZ	Rata Peaks	1.75	217	P	Pn	01 19 45.1	-0.5
RPZ	Rata Peaks	1.75	217	P	Pn	01 19 45.1	-0.5
DUWZ	D'Urville Isla	1.85	35	P	Pg	01 19 49.2	-0.4
GCSZ	Gaunt Creek Bo	1.89	237	P	Pn	01 19 47.6	+0.2
ARCZ	Arundel	1.89	210	P	Pn	01 19 47.1	-0.5
BHW	Baring Head	1.99	63	P	Pg	01 19 51.1	-1.1
PLWZ	Palliser	2.19	71	P	Pb	01 19 52.6	-1.8
MSWZ	Moikau Station	2.24	67	P	Pb	01 19 53.3	-2.1
CAW	Cannon Point	2.27	59	P	Pb	01 19 54.1	-1.8
FOZ	Fox Glacier	2.32	238	P	Pn	01 19 53.4	+0.1
KIW	Kapiti Island	2.32	52	P	Pb	01 19 55.8	-1.0
TMZ	Timaru	2.33	207	P	Pn	01 19 53.0	-0.5
PAWZ	Paruwai Farm	2.38	68	P	Pb	01 19 56.0	-1.7
OGWZ	Otaki Gorge	2.50	54	P	Pb	01 19 57.8	-2.0
MTW	Mount Morrison	2.53	64	P	Pb	01 19 57.4	-2.8
LBZ	Lake Benmore	2.67	219	P	Pn	01 19 58.0	-0.2
MRZ	Mangatainoka R	2.84	55	P	Pn	01 20 02.0	+1.4
ODZ	Otahua Downs	3.04	206	P	Pn	01 20 02.8	-0.4
ODZ	Otahua Downs	3.04	206	P	Pn	01 20 02.7	-0.5
JCZ	Jackson Bay	3.23	236	P	Pn	01 20 06.3	+0.3
KHEZ	Kahui Hut	3.23	21	P	Pb	01 20 09.1	-3.2
BFZ	Birch Farm	3.25	61	P	Pb	01 20 08.9	-3.7
HIZ	Hauiti	4.21	26	P	Pn	01 20 21.6	+2.3
BKZ	Black Stump Fm	4.37	45	P	Pn	01 20 24.4	+2.8
SYZ	Scrubby Hill	4.85	209	P	Pn	01 20 27.7	-0.5

ISK ***22*** *01:24:21.1, 35°.93N×32°.06E, h25^{km}, ML2.8/25*

GII ***22*** *01:24:21.7±0.0, 35°.906N±0°.002×32°.137E±0°.001, h40^{km}, Mws2.7, confirmed*

NIC ***22*** *01:24:23.4, 36°.08N×32°.34E, h32^{km}±42^{km}, Ml2.2/10*

ISC 22 01:24:21.7±1.1**, 35°.95N**±0°.02×**32°.09E**±0°.04**, h32^{km}**±11^{km}**, n79, σ1^{s}.19**/97**, 4C, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOZY	Bozyazi-Mersin	0.74	77	Pg	Pn	01 24 36.9	+1.0
BOZY				Sg	Sn	01 24 47.9	+1.9
TEKE	Tekeli-Mersin	0.86	76	Pg	Pn	01 24 38.9	+1.4
TEKE				Sg	Sn	01 24 51.3	+2.4
ALFC	Alefka	0.89	152	⇑*i*P	Pn	01 24 40.2	+2.2
ALFC				S	Sn	01 24 53.8	+3.9
ALFC				AML	AML	01 24 55.7	
	0.3nm,0.2s						
ALFC				AML	AML	01 24 58.8	
	0.4nm,0.2s						
AKMS	Akamas	0.95	168	⇑*i*P	Pn	01 24 41.7	+3.0
AKMS				S	Sn	01 24 55.6	+4.4
AKMS				AML	AML	01 24 58.2	
	0.2nm,0.2s						
AKMS				AML	AML	01 24 59.5	
	0.4nm,0.2s						
AKDN	Akdeniz- Kıbrı	0.97	132	Pg	Pb	01 24 39.7	-0.3
MNVG	Manavgat-Antal	1.00	328	Pg	Pb	01 24 40.3	-0.3
BERE	Bereket-Mersin	1.00	66	Pg	Pb	01 24 40.5	-0.2
BERE				Sg	Sn	01 24 54.4	+1.6
HDMB	Hadim	1.07	18	Pn	Pb	01 24 41.3	-0.5
HDMB				Sn	Sn	01 24 56.3	+1.9
YORU	Yoruktepe-Mers	1.09	79	Pn	Pb	01 24 41.5	-0.5
YORU				Sn	Sb	01 24 56.3	+0.3
TROD	Troodos	1.18	147	⇑*i*P	Pb	01 24 43.8	+0.1
TROD				S	Sb	01 24 59.9	+1.1
TROD				AML	AML	01 25 07.2	
	0.1nm,0.4s						
TROD				AML	AML	01 25 10.5	
	0.1nm,0.6s						
AKK1	Akkuyu-Mersin	1.20	80	Pn	Pn	01 24 42.9	+0.8
AKK1				Sn	Sb	01 24 58.9	0.0
TEVE	Tevekalti-Mers	1.20	66	Pn	Pn	01 24 42.9	+0.6
TEVE				Sn	Sn	01 24 58.8	+1.2
TEPK	Tepekoy-MERSIN	1.22	76	Pn	Pn	01 24 43.3	+0.9
TEPK				Sn	Sb	01 24 59.1	-0.4
XYLS	Xyliatos	1.22	139	⇑*i*P	Pb	01 24 43.4	-0.8
XYLS				S	Sb	01 24 59.3	-0.3
XYLS				AML	AML	01 25 04.4	
	0.2nm,0.2s						
XYLS				AML	AML	01 25 05.0	
	0.2nm,0.2s						
NATA	Nata	1.23	161	P	Pb	01 24 45.6	+1.2
NATA				S	Sb	01 25 01.9	+2.0
NATA				AML	AML	01 25 12.6	
	0.3nm,0.6s						
NATA				AML	AML	01 25 13.0	
	0.3nm,0.4s						
TISA	Tisan-Mersin	1.31	80	Pn	Pn	01 24 44.4	+0.7
IKL	Isikli	1.33	77	Pn	Pn	01 24 44.7	+0.7
ATHAL	Athalassa	1.34	127	P	Pb	01 24 45.1	-1.0
ATHAL				S	Sb	01 25 02.2	-0.8
ATHAL				AML	AML	01 25 08.1	
	0.2nm,0.3s						
ATHAL				AML	AML	01 25 12.0	
	0.2nm,0.7s						
KARG	Kargicak-Mersi	1.34	78	Pn	Pn	01 24 45.1	+1.0
LFK	Lefkose	1.35	119	Pn	Pn	01 24 45.0	+0.6
KEBE	Keben-Mersin	1.41	69	Pn	Pn	01 24 46.1	+1.0
CSS	Mathiatis	1.41	134	Pn	Pn	01 24 46.0	+0.9
CSS	Mathiatis	1.41	134	P	Pn	01 24 45.3	+0.1
CSS	Mathiatis	1.41	134	S	Sn	01 25 01.6	-1.0
CSS	Mathiatis	1.41	134	P	Pn	01 24 46.0	+0.9
CSS				S	Sn	01 25 03.6	+0.9
CSS				AML	AML	01 25 13.4	
	0.1nm,0.4s						
CSS				AML	AML	01 25 15.2	
	0.1nm,0.2s						
APOL	The Sanctuary	1.42	153	P	Pb	01 24 47.8	+0.1
APOL				S	Sb	01 25 07.1	+1.7
APOL				AML	AML	01 25 15.4	
	0.1nm,0.3s						
APOL				AML	AML	01 25 16.1	
	0.1nm,0.1s						
SEYD	Seydisehir-KON	1.47	352	Pn	Pn	01 24 46.8	+0.8
ANTB	Antalya	1.50	310	Pn	Pb	01 24 47.3	-1.6
ASGA	Asgata	1.50	140	P	Pb	01 24 48.7	-0.2
ASGA				S	Sb	01 25 07.6	+0.1
ASGA				AML	AML	01 25 15.0	
	0.1nm,0.3s						
ASGA				AML	AML	01 25 17.1	
	0.1nm,0.3s						
KRMN	Karaman	1.55	37	Pn	Pn	01 24 47.3	+0.2
MVOU	Mavrovouni	1.57	126	P	Pn	01 24 47.4	+0.2
MVOU				S	Sn	01 25 06.4	0.0
MVOU				AML	AML	01 25 14.5	
	0.1nm,0.4s						
MVOU				AML	AML	01 25 14.8	
	0.1nm,0.4s						
EREN	Erenkoy	1.75	103	Pn	Pn	01 24 50.7	+1.0
KONT	Konya--Tatoy	2.01	6	Pn	Pn	01 24 53.2	-0.2
ISP	Isparta	2.25	327	P	Pn	01 24 57.1	+0.3
LADK	Ladik-KONYA	2.26	6	Pn	Pn	01 24 56.2	-0.7
YESY	Yesilyurt	2.26	35	Pn	Pn	01 24 58.4	+1.4
BASM	Basmaki-Afyon	2.56	321	Pn	Pn	01 25 01.6	+0.7
SHUT	Suhut-Afyon	2.88	335	Pn	Pn	01 25 06.4	+1.0
HNTI	Hanita	3.83	137	P	Pn	01 25 17.9	-0.5
HNTI	Hanita	3.83	137	S	Sn	01 26 01.1	-1.2
MMC7	Mount Meron ar	4.00	136	P	Pn	01 25 20.1	-0.6
MMA0B	Mount Meron ar	4.01	136	P	Pn	01 25 20.4	-0.5
MMA0B	Mount Meron ar	4.01	136	S	Sn	01 26 06.0	-0.7
GEM	Giv'at Ha'Em	4.02	132	P	Pn	01 25 20.2	-0.8
GEM	Giv'at Ha'Em	4.02	132	S	Sn	01 26 05.4	-1.6
NATI	Neve Ativ	4.03	131	P	Pn	01 25 20.6	-0.5
NATI	Neve Ativ	4.03	131	S	Sn	01 26 05.3	-1.9
SLTI	Sal'it	4.43	146	P	Pn	01 25 25.9	-0.8
SLTI	Sal'it	4.43	146	S	Sn	01 26 16.1	-1.1
MMLI	Mount Malkishu	4.46	141	P	Pn	01 25 26.7	-0.4
MMLI	Mount Malkishu	4.46	141	S	Sn	01 26 16.9	-1.0
HMDT	Nahal Hemdat	4.66	141	P	Pn	01 25 29.0	-0.8
HMDT	Nahal Hemdat	4.66	141	S	Sn	01 26 21.6	-1.1
UJAP	Al Uja	4.87	144	P	Pn	01 25 32.1	-0.6
UJAP	Al Uja	4.87	144	S	Sn	01 26 27.1	-0.9
AMAZ	Amatzia	4.99	151	P	Pn	01 25 33.9	-0.5
AMAZ	Amatzia	4.99	151	S	Sn	01 26 30.3	-0.7
DSI	Dead Sea	5.16	147	P	Pn	01 25 35.9	-0.7
DSI	Dead Sea	5.16	147	S	Sn	01 26 33.5	-1.5
YTIR	Yattir	5.22	150	P	Pn	01 25 37.3	-0.4
YTIR	Yattir	5.22	150	S	Sn	01 26 36.0	-0.8
MSBI	Mazada	5.37	149	P	Pn	01 25 38.8	-0.7
MSBI	Mazada	5.37	149	S	Sn	01 26 39.1	-1.1
KZIT	Kziot	5.38	158	P	Pn	01 25 39.2	-0.6
KZIT	Kziot	5.38	158	S	Sn	01 26 39.4	-1.2
GHAJ	Ghor Haditha	5.46	147	P	Pn	01 25 40.4	-0.5
GHAJ	Ghor Haditha	5.46	147	S	Sn	01 26 41.4	-1.2
ZFRI	Zfri	5.97	153	P	Pn	01 25 47.3	-0.4
ZFRI	Zfri	5.97	153	S	Sn	01 26 53.6	-1.4
PRNI	Paran	6.09	155	P	Pn	01 25 49.0	-0.5
PRNI	Paran	6.09	155	S	Sn	01 26 56.5	-1.6
KRMI	Paran Flat	6.22	158	P	Pn	01 25 50.7	-0.6
KRMI	Paran Flat	6.22	158	S	Sn	01 27 00.2	-1.1
HRFI	Mount Harif	6.39	156	P	Pn	01 25 53.4	-0.3
HRFI	Mount Harif	6.39	156	S	Sn	01 27 04.6	-0.9
MBRI	Mt Berech	6.58	158	P	Pn	01 25 56.0	-0.3
MBRI	Mt Berech	6.58	158	S	Sn	01 27 09.1	-1.1
EIL	Elat	6.71	158	P	Pn	01 25 57.5	-0.4
EIL	Elat	6.71	158	S	Sn	01 27 12.6	-0.6

IDC ***22*** *01:28:04.6±1.1, 28°.47N×105°.16E, h0^{km}, mb3.7/5, mbtmp3.7/7, ML4.2/2, MS3.4/2, Error ellipse: s-maj=50.3km s-min=19.6km az=66.0*

ISC 22 01:28:07.4±1.1**, 28°.5N**±0°.1×**105°.2E**±0°.2**, h19^{km}, n9, σ0^{s}.69**/7**, mb3.6**/5**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.51	211	Pn	Pn	01 30 50.9	0.0
	1.0nm,0.3s,baz=30,slow=11,SNR=4.5						
	1.2nm,0.3s						
SONM	Songino Array	19.33	2	P	Pn	01 32 33.3	+0.5
	0.3nm,0.3s,baz=180,slow=10,SNR=3.6						
	0.6nm,0.5s						
MKAR	Makanchi Array	25.58	322	P	P	01 33 35.3	0.0
	0.7nm,0.7s,baz=133,slow=10,SNR=8.2						
	0.7nm,0.7s						
ZALV	Zalesovo Beam	29.47	335	P	P	01 34 09.1	-1.0
	0.8nm,0.2s,baz=131,slow=7.9,SNR=1.3						
	0.8nm,0.2s						
KURBB	Kurchatov Arra	29.89	325	P	P	01 34 14.1	+0.3
	0.3nm,0.3s,baz=132,slow=9.7,SNR=1.7						
	0.3nm,0.3s						
BVAR	Borovoye Array	35.43	324	LR	LR	01 52 00.4	
	comp=Z,42nm,19.4s,baz=88,slow=40						
MA2	Magadan	43.78	32	LR	LR	01 53 50.8	
	comp=Z,63nm,19.2s,baz=235,slow=35						
WRA	Warramunga Arr	55.79	146	P	P	01 37 43.0	-0.5
	0.6nm,0.7s,baz=337,slow=8.2,SNR=6.6						
	0.6nm,0.7s						
ASAR	Alice Springs	58.78	149	P	P	01 38 05.1	+0.6
	0.3nm,0.5s,baz=338,slow=7.9,SNR=2.2						
	0.3nm,0.5s						

IDC ***22*** *01:29:00.7±0.5, 9°.32S×158°.12E, h0^{km}, mb4.5/17, mbtmp4.5/19, ML3.9/2, MS3.7/15, Error ellipse: s-maj=17.6km s-min=15.0km az=89.0*

BJI ***22*** *01:29:01.4, 9°.01S×158°.32E, h9^{km}, mB5.0/10, mb4.9/38, Ms4.7/16, Ms7 4.4/17*

NEIC ***22*** *01:29:02.3±2.1, 9°.43S±0°.09×158°.28E±0°.05, h10^{km}±1^{km}, mb4.8/103, Error ellipse: s-maj=16.5km s-min=5.5km az=159.0*

ISC 22 01:29:02.0±0.3**, 9°.48S**±0°.06×**158°.23E**±0°.05**, h10^{km}, n421, σ0^{s}.90**/371**, mb4.8**/86**, MS3.9**/21**, 6D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.69	89	Pn	Pn	01 29 31.3	-0.3
HNR					Sn	01 29 52.9	-0.6
HNR	Honiara	1.69	89	Pn	Pn	01 29 31.7	+0.1
	503nm,0.3s,baz=224,slow=6.3,SNR=53						
HNR				Sn	Sn	01 29 53.0	-0.5
	2µm,0.3s,baz=342,slow=22,SNR=15						
SANVU	Saraoutou	10.58	125	Pn	Pn	01 31 33.4	-0.4
DZM	Mont Dzumac	14.80	149	Pn	Pn	01 32 32.0	+0.4
DZM	Mont Dzumac	14.80	149	*e*P	Pn	01 32 24.8	-6.8
	31nm,1.1s						
DZM				*e*LR	LR	01 35 51.6	
	419nm,25.9s						
DZM	Mont Dzumac	14.80	149	Pn	P	01 32 34.7	-2.8
	0.3nm,0.3s,baz=19,slow=10,SNR=6.2						
	3.4nm,0.9s						
COEN	Coen	15.40	252		P	01 32 44.4	+0.2
CTAO	Charters Tower	15.65	226	Pn	Pn	01 32 42.6	-0.2
EIDS	Eidsvold	17.20	202		P	01 33 05.2	+1.0
JAY	Jayapura	18.74	291	P	P	01 33 19.9	-1.3
	0.6nm,0.3s,baz=138,slow=8.9,SNR=10.0						
	20nm,0.7s						
JAY	Jayapura	18.74	291	P	P	01 33 19.7	-1.6
GENI	Genyem	19.21	290	P	Pn	01 33 27.3	0.0
	55nm,0.8s						
SMPI	Sarmi	20.79	290	P	P	01 33 42.4	-1.2
	59nm,0.8s						
ARMA	Armidale	21.73	196	P	P	01 33 52.9	-0.8
WRAB	Tennant Creek	25.29	243	P	P	01 34 28.7	-0.3
WRAB				IAmb	IAmb	01 34 32.7	
	comp=Z,30nm,1.0s						
WRA	Warramunga Arr	25.30	243	P	P	01 34 29.1	0.0
	comp=Z,19nm,0.8s,baz=69,slow=9.5,SNR=57						
WRA				LR	LR	01 44 06.8	
	comp=Z,97nm,20.3s,baz=48,slow=36						
	comp=Z,19nm,0.8s						
GUMO	Guam	26.48	330	LR	LR	01 46 02.3	
	comp=Z,30nm,18.2s,baz=108,slow=39						
STKA	Stephens Creek	27.11	212	P	P	01 34 46.1	+0.9
	comp=Z,6.7nm,0.6s,baz=8.7,slow=8.2,SNR=15						
STKA				LR	LR	01 44 59.7	
	comp=Z,269nm,19.4s,baz=28,slow=35						
	comp=Z,6.7nm,0.6s						
ASAR	Alice Springs	27.19	236	P	P	01 34 45.7	-0.4
	comp=Z,9.8nm,0.9s,baz=63,slow=9.3,SNR=45						
ASAR				LR	LR	01 45 06.4	
	comp=Z,155nm,20.2s,baz=80,slow=36						
	comp=Z,9.8nm,0.9s						
KNRA	Kununurra	29.39	255	P	P	01 35 06.0	+0.2
BBOO	Buckleboo	30.95	218	P	P	01 35 19.8	+0.4
BBOO				IAmb	IAmb	01 35 29.1	
	comp=Z,18nm,0.9s						
FITZ	Fitzroy Crossi	32.74	251	LR	LR	01 48 37.3	
	comp=Z,173nm,20.1s,baz=86,slow=36						
BATI	Baumata	34.06	266	LR	LR	01 52 17.0	
	comp=Z,257nm,18.3s,baz=128,slow=41						
TUWZ	Tuamarina	34.72	159	P	P	01 35 52.6	+0.4
MMRI	Maumere	35.54	268	P	P	01 35 58.8	-0.9
MMRI	Maumere	35.54	268	P	P	01 35 59.2	-0.5
EDFI	Ende, Flores	36.08	268	P	P	01 36 03.3	-1.1
	comp=Z,26nm,1.2s						
LUWI	Luwuk	36.26	281	P	P	01 36 05.7	-0.1
	comp=Z,2µmcomp=Z,48nm,1.2s						
BNSI	Bone	38.16	275	P	P	01 36 22.5	+0.5
	comp=Z,44nm,1.1s						
KAPI	Kappang	38.41	274		P	01 36 23.6	-0.5
KAPI	Kappang	38.41	274	LR	LR	01 54 29.2	
	comp=Z,90nm,18.8s,baz=66,slow=40						
SPSI	Sidrap Palu	38.57	276	P	P	01 36 24.6	-0.8
	comp=Z,1µmcomp=Z,30nm,1.1s						
TTSI	Tana Toraja	38.69	277	P	P	01 36 27.2	+0.8
TOLI2	Tolitoli	38.75	284		P	01 36 24.6	-2.3
TOLI2				IAmb	IAmb	01 36 26.4	
	comp=Z,27nm,0.9s						
PCI	Palu	39.13	280	P	P	01 36 31.4	+1.2
MPSI	Mapaga	39.39	282	P	P	01 36 31.4	-0.9
	comp=Z,26nm,1.0s						
JAGI	Jajag, Banyuwa	43.53	268		P	01 37 04.0	-2.4
JAGI	Jajag, Banyuwa	43.53	268	P	P	01 37 04.4	-1.9
MORW	Morawa	44.03	238		P	01 37 09.9	-0.3
MORW				IAmb	IAmb	01 37 12.6	
	comp=Z,26nm,1.2s						
NWAO	Narrogin (SRO)	44.38	232	LR	LR	01 55 42.8	
	comp=Z,148nm,18.7s,baz=87,slow=36						
KKM	Kota Kinabalu	44.62	289	P	P	01 37 14.7	-0.4
JGF	Kuroka	48.98	337	P	P	01 37 48.2	-0.7
MJAR	Matsushiro Arr	49.50	339	P	P	01 37 50.6	-2.2
	comp=Z,1.1nm,0.2s,baz=167,slow=7.1,SNR=7.0						
	comp=Z,1.1nm,0.2s						
JNU	Nakatsue	49.73	330	P	P	01 37 55.1	+0.4
PPT2	Papeete2	51.25	105	*e*LR	LR	01 52 47.9	
	comp=Z,95nm,23.2s						
TBI	Tubuai	51.77	112	*e*LR	LR	01 52 56.9	
	comp=Z,460nm,28.5s						
KSRS	Korea Array	54.64	330	P	P	01 38 29.9	-1.2
	comp=Z,1.0nm,0.5s,baz=148,slow=7.3,SNR=5.3						
	comp=Z,1.0nm,0.5s						
NJ2	Nanjing	55.87	319	*e*P	P	01 38 41.3	+1.3
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
USRK	Ussuriysk Ar.	58.48	338	P	P	01 38 57.1	-1.2
	comp=Z,8.7nm,0.9s,baz=152,slow=7.2,SNR=13						
	comp=Z,8.7nm,0.9s						
MDJ	Mudanjiang	59.75	337	P	P	01 39 07.0	-0.1
MDJ				pmax	pmax		
	comp=Z,14nm,0.9s						
CN2	Changchun	60.81	333	*e*P	P	01 39 12.9	-1.5
CN2				*e*S	S	01 47 27.1	-4.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,200nm,11.0s						
CN2				LR	LR		
	comp=Z,100nm,11.0s						
CN2				LR	LR		
	comp=Z,200nm,10.0s						
BNX	BinXian	61.54	336	⇓P	P	01 39 18.8	-0.5
BNX				pmax	pmax		
	comp=Z,19nm,1.4s						
HNS	HongShan	61.92	322	⇓P	P	01 39 21.6	-0.4
HNS				LR	LR		
	comp=Z,170nm,17.3s						
HNS				LR	LR		
	comp=Z,180nm,18.3s						
PETK	Petropavlovsk-	62.34	360	P	P	01 39 24.4	-0.1
	comp=Z,5.8nm,0.9s,baz=175,slow=8.6,SNR=8.0						
	comp=Z,5.8nm,0.9s						
CMAR	Chiang Mai Arr	64.74	296	P	P	01 39 40.5	-0.6
	comp=Z,1.5nm,0.3s,baz=111,slow=5.0,SNR=14						
	comp=Z,1.5nm,0.3s						
HEH	HeiHe	65.27	339	*e*P	P	01 39 43.3	-0.6
HEH				pmax	pmax		
	comp=Z,27nm,0.9s						
HEH				LR	LR		
	comp=Z,220nm,15.1s						
HEH				LR	LR		
	comp=Z,130nm,14.4s						
HEH				LR	LR		
	comp=Z,200nm,14.1s						
XLT	XiLinHaoTe	65.44	328	*e*P	P	01 39 45.9	+0.6
XLT				sP	pwP	01 39 53.0	+0.5
XLT				pmax	pmax		
	comp=Z,14nm,0.8s						
XLT				pmax	pmax		
	comp=Z,100nm,4.0s						

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XLT                                 LR      LR
      comp=Z,16nm,11.0s
XLT                                 LR      LR
      comp=Z,140nm,12.4s
XLT                                 LR      LR
      comp=Z,220nm,17.2s
PZH   PanZhiHua          65.45 305  P       P         01 39 48.3 +2.6
PZH                                 pmax    pmax
      comp=Z,10.0nm,0.7s
PZH                                 pmax    pmax
      comp=Z,100nm,4.7s
HHC   Hu-ho-hao-te       65.99 323 eP       P         01 39 51.9 +3.0
HHC                                 pmax    pmax
      comp=Z,15nm,0.6s
HHC                                 pmax    pmax
      comp=Z,97nm,4.8s
HHC                                 LR      LR
      comp=Z,120nm,13.7s
HHC                                 LR      LR
      comp=Z,84nm,13.3s
HHC                                 LR      LR
      comp=Z,150nm,15.1s
BTO   Baotou             66.77 322 eP       P         01 39 54.3 +0.4
BTO                                 PP      PP        01 42 25.8 +4.6
BTO                                 S       S         01 48 47.8 +1.5
BTO                                 pmax    pmax
      comp=Z,27nm,0.5s
BTO                                 pmax    pmax
      comp=Z,110nm,4.8s
BTO                                 LR      LR
      comp=Z,240nm,14.4s
BTO                                 LR      LR
      comp=Z,230nm,13.7s
BTO                                 LR      LR
      comp=Z,340nm,17.6s
VNDA  Vanda              68.05 179  P       P         01 40 02.9 +1.6
      comp=Z,1.2nm,0.9s,baz=339,slow=6.2,SNR=3.8
VNDA                                LR      LR        02 05 34.2
      comp=Z,58nm,18.8s,baz=348,slow=32
      comp=Z,1.2nm,0.9s
UNV   Unalaska Valle     69.79  21  P       P         01 40 12.2 -0.1
      baz=217
P08K  Saint George I     71.02  18  P       P         01 40 20.0 +0.2
      baz=214
GTA   Gaotai             72.73 316 eP       P         01 40 31.5 +0.8
GTA                                 pP      pwP       01 40 37.4 -0.6
GTA                                 pmax    pmax
      comp=Z,8.0nm,1.0s
ULN   Ulaanbaatar        72.81 327  P       P         01 40 31.7 +0.7
ULN                                 IAmb    IAmb      01 40 32.5
      comp=Z,9.0nm,0.8s
S12K  Black Hills        72.86  22  P       P         01 40 30.7 -0.3
      baz=221
SONM  Songino Array      73.15 326  P       P         01 40 33.5 +0.4
      comp=Z,11nm,0.9s,baz=136,slow=5.7,SNR=44
      comp=Z,11nm,0.9s
CHNA  Chernabura Isl     73.17  24  P       P         01 40 32.6 -0.2
      baz=224
SDPT  Sand Point         73.20  23  P       P         01 40 32.7 -0.2
      baz=223
S14K  Fog Glacier        74.24  23  P       P         01 40 38.8 -0.4
      baz=224
YAK   Yakutsk            74.68 346  P       P         01 40 40.9 -0.5
M11K  Mekoryuk           75.14  17  P       P         01 40 44.6 +0.5
      baz=216
CHIR  Chirikof Islan     75.48  25  P       P         01 40 46.2  0.0
      baz=227
O14K  Tigyukauivet M     75.82  20  P       P         01 40 47.3 -0.8
      baz=221
R16K  Pilot Point        75.92  23  P       P         01 40 48.3 -0.4
      baz=225
M13K  Dall Lake          76.03  19  P       P         01 40 48.7 -0.5
      baz=219
N14K  Kuskokwak Cree     76.18  20  P       P         01 40 49.7 -0.4
      baz=221
O15K  Ungalikthiuk R     76.26  21  P       P         01 40 50.5 -0.1
      baz=223
GAMB  Gambell            76.54  13  P       P         01 40 51.8 -0.3
      baz=210
SII   Sitkinak Islan     76.58  25  P       P         01 40 51.9 -0.6
      baz=228
M14K  Bethel             76.72  19  P       P         01 40 53.7 +0.5
      baz=220
K13K  Kusilvak Mount     76.83  17  P       P         01 40 53.1 -0.6
      baz=218
N15K  Kwethluk River     76.90  20  P       P         01 40 53.4 -0.8
      baz=222
L14K  Kuka Creek         76.95  18  P       P         01 40 54.2 -0.3
      baz=220
M15K  Kasigluk River     77.09  19  P       P         01 40 54.9 -0.3
      baz=222
R18K  Karluk             77.14  24  P       P         01 40 54.4 -1.2
      baz=228
O16K  Kokwok River B     77.17  21  P       P         01 40 55.8 +0.1
      baz=224
OHAK  Old Harbor         77.39  25  P       P         01 40 56.4 -0.6
      baz=229
P17K  Kvichak River      77.49  22  P       P         01 40 56.2 -1.3
      baz=226
N16K  Nishlik Lake       77.57  20  P       P         01 40 57.2 -0.8
      baz=224
L15K  Ungalak Mounta     77.58  18  P       P         01 40 57.5 -0.4
      baz=221
Q18K  Katmai Hardscr     77.65  23  P       P         01 40 57.8 -0.8
      baz=227
O17K  Koliganek Bris     77.66  21  P       P         01 40 57.9 -0.5
      baz=225
J14K  Nanvaranak Lak     77.79  17  P       P         01 40 58.9 -0.2
      baz=219
M16K  Timber Creek       77.91  20  P       P         01 40 59.1 -0.7
      baz=223
K15K  Wolf Creek Mou     78.03  18  P       P         01 41 00.3 -0.2
      baz=221
KDAK  Kodiak Island      78.04  24  LR      LR        02 09 20.4
      comp=Z,35nm,21.4s,baz=212,slow=31
KDAK  Kodiak Island      78.04  24  P       P         01 40 59.8 -0.8
      baz=230
P18K  Big Mountain,      78.08  22  P       P         01 41 01.8 +1.0
      baz=227
N17K  Nushagak Hills     78.16  21  P       P         01 41 02.0 +0.7
      baz=225
L16K  Owhat River        78.24  19  P       P         01 41 02.2 +0.5
      baz=223
EVN   Everest            78.36 301  IAmb    IAmb      01 41 04.8
      comp=Z,11nm,1.3s
Q19K  Cape Douglas,      78.37  23  P       P         01 41 02.6 +0.1
      baz=228
O18K  Koktuh Hills       78.40  22  P       P         01 41 03.3 +0.6
      baz=227
Q20K  Shuyak Island      78.65  24  P       P         01 41 04.0  0.0
      baz=230
M17K  Holitna River      78.69  20  P       P         01 41 04.6 +0.4
      baz=225
N18K  Kilae Creek        78.72  21  P       P         01 41 04.9 +0.5
      baz=226
ANM   Nome               78.73  15  P       P         01 41 05.4 +1.1
      baz=217
TNA   Tin City           78.93  14  P       P         01 41 06.5 +1.1
      baz=214
L17K  Donlin             78.93  19  P       P         01 41 06.1 +0.6
      baz=224
P19K  Oil Pt             79.00  23  P       P         01 41 06.7 +0.7
      baz=229
J16K  Anvik River        79.06  18  P       P         01 41 07.4 +1.2
      baz=221
F14K  Arctic Creek       79.23  14  P       P         01 41 08.4 +1.3
      baz=216
M18K  Stony River        79.31  21  P       P         01 41 08.1 +0.6
      baz=226
N19K  Bonanza Creek      79.32  22  P       P         01 41 08.4 +0.6
      baz=228
K17K  Iditarod           79.36  19  P       P         01 41 08.6 +0.8
      baz=224
G15K  Niukluk            79.42  15  P       P         01 41 09.3 +1.2
      baz=218
I17K  Unalakleet         79.49  17  P       P         01 41 09.1 +0.6
      baz=221
O20K  Slope Mountain     79.52  23  P       P         01 41 09.4 +0.5
      baz=229
L18K  Granite Mounta     79.52  20          P         01 41 10.4 +1.7
L18K                                IAmb    IAmb      01 41 17.7
      comp=Z,15nm,1.2s
L18K  Granite Mounta     79.52  20  P       P         01 41 09.7 +0.9
      baz=225
J17K  VABM Dome          79.61  18  P       P         01 41 10.5 +1.3
      baz=223
HOM   Homer              79.62  23  P       P         01 41 10.3 +1.0
      baz=230
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H16K  Elim               79.63  16  P       P         01 41 10.3 +1.0
      baz=220
F15K  North Star Dit     79.84  15  P       P         01 41 10.7 +0.3
      baz=217
BRSE  Bradley Lake S     80.03  24  P       P         01 41 11.8 +0.2
      baz=231
M19K  Big River Lodg     80.09  21  IAmb    IAmb      01 41 20.7
      comp=Z,8.6nm,0.9s
M19K  Big River Lodg     80.09  21  P       P         01 41 12.3 +0.5
      baz=227
L19K  White Mountain     80.12  20  IAmb    IAmb      01 41 24.9
      comp=Z,10nm,1.1s
L19K  White Mountain     80.12  20  P       P         01 41 12.6 +0.6
      baz=227
G16K  Koyuk River        80.18  16  IAmb    IAmb      01 41 21.1
      comp=Z,7.0nm,0.8s
G16K  Koyuk River        80.18  16  P       P         01 41 13.1 +0.9
      baz=219
J18K  Innoko River       80.40  19  P       P         01 41 14.1 +0.6
J18K                                IAmb    IAmb      01 41 22.1
      comp=Z,16nm,1.8s
J18K  Innoko River       80.40  19  P       P         01 41 14.8 +1.4
      baz=225
H17K  Granite Mounta     80.51  17  P       P         01 41 15.1 +1.1
      baz=222
QSPA  South Pole Qui     80.51 180  P       P         01 41 15.5 +1.2
      comp=Z,3.1nm,1.0s,baz=148,slow=0.3,SNR=8.7
      comp=Z,3.1nm,1.0s
M20K  Styx River         80.52  21  P       P         01 41 13.8 -0.4
      baz=229
L20K  Farewell, AK       80.65  20  P       P         01 41 15.3 +0.4
      baz=228
G17K  Kiwalik Mounta     80.72  16  P       P         01 41 15.8 +0.6
      baz=221
SEW   Seward             80.77  24  P       P         01 41 15.7 +0.3
      baz=232
H18K  Honhosa River      81.11  17  P       P         01 41 18.4 +1.1
      baz=223
SUA   Susitna One        81.11  22  P       P         01 41 18.5 +1.0
      baz=231
J19K  Poorman            81.12  19  P       P         01 41 18.1 +0.8
      baz=226
SKT   Skwentna           81.16  22  P       P         01 41 17.0 -0.6
      baz=230
K20K  Telida             81.18  20  P       P         01 41 17.9 +0.3
      baz=228
GCSA  Galena City Sc     81.26  18  P       P         01 41 19.0 +1.1
      baz=225
RC01  Rabbit Creek A     81.26  23  P       P         01 41 18.1  0.0
      baz=232
F17K  Baldwin Pennin     81.28  15  P       P         01 41 19.3 +1.2
      baz=220
PPLA  Purkeypile         81.52  21  P       P         01 41 19.7 +0.1
      baz=229
P23K  Montague Islan     81.53  24  P       P         01 41 19.7 +0.2
      baz=234
G18K  Tagagawik          81.57  16  P       P         01 41 20.4 +0.7
      baz=223
E17K  Hotham Inlet       81.62  15  P       P         01 41 20.7 +0.8
      baz=220
Q23K  Middleton Isla     81.63  25  P       P         01 41 20.4 +0.3
      baz=235
PWL   Port Wells         81.67  23  P       P         01 41 20.9 +0.6
      baz=233
J20K  Nowinta River      81.71  19  P       P         01 41 21.2 +0.8
      baz=227
C16K  Lisburne Hills     81.74  13  P       P         01 41 21.6 +1.2
      baz=216
D17K  Noatak River       81.80  14  P       P         01 41 21.2 +0.4
      baz=218
PMR   Palmer             81.80  23  P       P         01 41 22.0 +1.1
      baz=232
F18K  Selawik            81.82  16  P       P         01 41 21.9 +1.0
      baz=222
CAST  Castle Rocks       81.89  20  IAmb    IAmb      01 41 29.3
      comp=Z,4.8nm,0.7s
CAST  Castle Rocks       81.89  20  P       P         01 41 21.1 -0.3
      baz=229
H19K  Roundabout Mou     81.94  17  P       P         01 41 21.1 -0.4
      baz=225
KNK   Knik Glacier       81.95  23  P       P         01 41 22.1 +0.3
      baz=233
I20K  Naaghedeneel       82.03  19  P       P         01 41 21.9 -0.1
      baz=227
RDOG  Red Dog Mine       82.12  14  P       P         01 41 22.9 +0.4
      baz=219
CHUM  Lake Minchumin     82.12  20  P       P         01 41 23.0 +0.4
      baz=229
GLI   Glacier Island     82.17  24  P       P         01 41 23.1 +0.2
      baz=234
E18K  Tukpahlearik C     82.19  15  P       P         01 41 23.0 +0.2
      baz=221
G19K  Purcell Mounta     82.19  17  IAmb    IAmb      01 41 31.3
      comp=Z,5.3nm,0.8s
G19K  Purcell Mounta     82.19  17  P       P         01 41 23.4 +0.5
      baz=224
SML   Sawmill            82.24  23  P       P         01 41 24.0 +0.7
      baz=233
KTH   Kantishna Hill     82.38  21  IAmb    IAmb      01 41 32.1
      comp=Z,7.6nm,0.9s
H20K  Anotleneega Mo     82.39  18  P       P         01 41 24.3 +0.3
      baz=227
C17K  DeLong Mountai     82.39  13  P       P         01 41 24.6 +0.7
      baz=218
M23K  Glacier View       82.46  23  P       P         01 41 25.5 +1.1
      baz=234
F19K  Shaleruckik Mo     82.50  16  P       P         01 41 25.1 +0.6
      baz=224
EYAK  Cordova Ski Ar     82.52  24  P       P         01 41 24.7  0.0
      baz=236
TRF   Thorofare Moun     82.53  21  P       P         01 41 25.5 +0.5
      baz=231
SCM   Sheep Creek Mo     82.64  23  P       P         01 41 26.2 +0.8
      baz=234
BPAW  Bear Paw Mtn.      82.71  20  P       P         01 41 25.3 -0.4
      baz=230
KAIM  Kayak Island       82.72  25  P       P         01 41 26.3 +0.5
      baz=237
WAT1  Susitna Watana     82.77  22  P       P         01 41 26.9 +0.8
      baz=233
WMQ   Urumqi             82.82 317 eP       P         01 41 27.6 +0.8
WMQ                                 pmax    pmax
      comp=Z,15nm,0.7s
WAT6  Susitna Watana     82.92  22  P       P         01 41 27.3 +0.3
      baz=234
C18K  Utukok River       82.98  14  P       P         01 41 27.6 +0.5
      baz=220
KLU   Klutina            82.98  24  P       P         01 41 27.0 -0.3
      baz=235
RND   Reindeer           83.02  21  IAmb    IAmb      01 41 34.8
      comp=Z,8.8nm,1.0s
E19K  Redstone River     83.10  16  P       P         01 41 28.2 +0.5
      baz=224
H21K  Melozitna Rive     83.13  18  P       P         01 41 27.8 -0.1
      baz=228
MCK   McKinley           83.19  21  P       P         01 41 28.0 -0.2
      baz=232
BMRM  Bremner River      83.22  24  P       P         01 41 28.4 -0.1
      baz=236
F20K  Avaraart Lake      83.22  17  P       P         01 41 28.5 +0.2
      baz=226
M24K  Tolsona, Glenn     83.24  23  P       P         01 41 28.4 -0.2
      baz=235
DHY   Denali Highway     83.35  22  P       P         01 41 30.8 +1.6
DHY                                 IAmb    IAmb      01 41 42.9
      comp=Z,5.6nm,0.8s
DHY   Denali Highway     83.35  22  P       P         01 41 28.7 -0.5
      baz=234
MLY   Manley             83.39  19  IAmb    IAmb      01 41 32.2
      comp=Z,14nm,1.6s
MLY   Manley             83.39  19  P       P         01 41 29.1 -0.1
      baz=230
B18K  Kokolik River      83.39  13  P       P         01 41 28.9 -0.2
      baz=220
G21K  Allakaket          83.50  18  P       P         01 41 29.9 +0.2
      baz=228
N25K  Chitina, Valde     83.57  24  P       P         01 41 29.9 -0.4
      baz=236
D19K  Kuna River         83.62  15  IAmb    IAmb      01 41 40.0
      comp=Z,6.5nm,1.1s
D19K  Kuna River         83.62  15  P       P         01 41 30.6 +0.3
      baz=223
NEA2  Nenana             83.67  20  P       P         01 41 30.6  0.0
      baz=232
C19K  Lookout Ridge      83.71  14  P       P         01 41 31.2 +0.4
      baz=222
CRQE  Cirque             83.72  25  P       P         01 41 31.0 -0.2
      baz=238
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H22K  Ishtalitna Cre     83.73  19  P       P         01 41 30.8 -0.1
      baz=230
HARP  HAARP              83.80  23  P       P         01 41 31.4 +0.1
      baz=236
GLB   Gilahina Butte     83.80  24  IAmb    IAmb      01 41 40.0
      comp=Z,5.2nm,0.7s
MESA  MESA               83.91  26  P       P         01 41 31.4 -0.8
      baz=239
I23K  Minto, Yukon-K     83.91  20  IAmb    IAmb      01 42 10.1
      comp=Z,11nm,1.7s
I23K  Minto, Yukon-K     83.91  20  P       P         01 41 31.7 -0.1
      baz=232
WRH   Wood River Hil     83.93  21  IAmb    IAmb      01 41 39.6
      comp=Z,7.7nm,0.9s
E20K  Nigu River         83.95  16  P       P         01 41 31.8 -0.2
      baz=225
F21K  Alatna River       83.98  17  P       P         01 41 31.5 -0.7
      baz=228
PAX   Paxson             84.00  22  P       P         01 41 31.7 -0.8
      baz=236
MCARA McCarthy VSAT      84.09  24  P       P         01 41 32.3 -0.5
      baz=238
CCB   Clear Creek Bu     84.14  20  IAmb    IAmb      01 41 40.4
      comp=Z,5.4nm,0.8s
D20K  Etivluk River      84.16  15  P       P         01 41 32.2 -0.9
      baz=225
A19K  Wainwright         84.20  13  P       P         01 41 32.7 -0.5
      baz=220
COLA  College            84.25  20  P       P         01 41 33.1 -0.5
      baz=233
H23K  Yukon River        84.28  19  IAmb    IAmb      01 41 42.0
      comp=Z,7.2nm,0.9s
H23K  Yukon River        84.28  19  P       P         01 41 33.1 -0.6
      baz=232
HDA   Harding Lake       84.29  21  IAmb    IAmb      01 41 43.2
      comp=Z,4.5nm,0.8s
HDA   Harding Lake       84.29  21  P       P         01 41 33.6 -0.2
      baz=234
K24K  Donnelly Dome      84.36  22  P       P         01 41 34.0 -0.2
      baz=235
G22K  Bettles            84.36  18  P       P         01 41 34.0 -0.1
      baz=230
ILAR  Eielson Array      84.53  21  P       P         01 41 34.3 -0.7
      comp=Z,2.0nm,1.0s,baz=267,slow=4.8,SNR=15
      comp=Z,2.0nm,1.0s
POKR  Poker Plat Res     84.54  20  P       P         01 41 34.3 -0.7
      baz=234
F22K  John River         84.55  17  P       P         01 41 35.4 +0.3
      baz=229
CTG   Chitna Glacier     84.57  25  P       P         01 41 35.8 +0.3
      baz=240
PINM  Pinnacle           84.60  26  P       P         01 41 35.8 +0.3
      baz=240
M26K  Nabesna, AK        84.64  24  P       P         01 41 36.3 +0.6
      baz=238
RIDG  Independent Ri     84.67  22  IAmb    IAmb      01 41 43.9
      comp=Z,5.8nm,0.8s
RIDG  Independent Ri     84.67  22  P       P         01 41 36.1 +0.3
      baz=236
E21K  Killik River       84.67  16  P       P         01 41 36.2 +0.6
      baz=227
G23K  Bananza Creek      84.68  18  IAmb    IAmb      01 41 44.6
      comp=Z,3.7nm,0.8s
G23K  Bananza Creek      84.68  18  P       P         01 41 36.4 +0.6
      baz=231
PNL   Peninsula          84.77  27  P       P         01 41 36.3  0.0
      baz=241
H24K  Noodor Dome        84.83  20  P       P         01 41 37.1 +0.6
      baz=233
L26K  Log Cabin Wild     84.84  23  IAmb    IAmb      01 41 45.5
      comp=Z,4.1nm,0.8s
L26K  Log Cabin Wild     84.84  23  P       P         01 41 37.5 +0.9
      baz=238
C21K  Knifeblade Rid     84.95  15  P       P         01 41 37.4 +0.4
      baz=226
COLD  Coldfoot           84.95  18  P       P         01 41 38.1 +1.0
      baz=231
B20K  Meade River        84.96  14  P       P         01 41 37.8 +0.8
      baz=224
O28M  Mount Upton        84.96  26  P       P         01 41 37.6  0.0
      baz=240
J25K  Salcha River,      84.97  21  IAmb    IAmb      01 41 45.3
      comp=Z,5.6nm,0.9s
J25K  Salcha River,      84.97  21  P       P         01 41 38.2 +0.8
      baz=236
M27K  Edge Creek, AK     85.06  24  IAmb    IAmb      01 41 46.8
      comp=Z,5.5nm,0.8s
M27K  Edge Creek, AK     85.06  24  P       P         01 41 38.4 +0.5
      baz=239
E22K  Anaktuvuk Pass     85.06  17  P       P         01 41 38.2 +0.5
      baz=229
SCRK  Sand Creek         85.11  22  IAmb    IAmb      01 41 46.8
      comp=Z,4.8nm,0.8s
SCRK  Sand Creek         85.11  22  P       P         01 41 38.3 +0.2
      baz=237
B21K  Ikpikpuk River     85.31  15  P       P         01 41 39.6 +0.8
      baz=226
D22K  Ayikyak River      85.32  16  IAmb    IAmb      01 41 40.8
      comp=Z,4.6nm,0.8s
D22K  Ayikyak River      85.32  16  P       P         01 41 39.7 +0.8
      baz=228
YUK3  Moose Creek        85.34  25  P       P         01 41 39.9 +0.4
      baz=240
YUK8  Steele Glacier     85.39  25  P       P         01 41 40.6 +0.8
      baz=241
PRP   Porcupine Dome     85.43  20  P       P         01 41 40.6 +0.9
      baz=235
O29M  Mount Kennedy      85.43  26  P       P         01 41 40.2 +0.4
      baz=242
L27K  Beaver Creek,      85.45  23  P       P         01 41 40.6 +0.9
      baz=239
S31K  Pelican            85.45  29  P       P         01 41 40.8 +1.1
      baz=244
G24K  Hadweenzic Riv     85.47  19  IAmb    IAmb      01 41 48.6
      comp=Z,4.8nm,0.9s
G24K  Hadweenzic Riv     85.47  19  P       P         01 41 40.2 +0.5
      baz=233
P29M  Windy Craggy       85.49  27  P       P         01 41 40.4 +0.4
      baz=243
BVCY  Beaver Creek       85.50  24  P       P         01 41 40.6 +0.7
      baz=240
SIT   Sitka              85.51  30  P       P         01 41 40.2 +0.2
      baz=245
J26L  Joseph Creek       85.56  22  P       P         01 41 41.2 +0.9
      baz=237
E23K  Chandalar          85.65  17  IAmb    IAmb      01 42 06.6
      comp=Z,9.0nm,1.5s
E23K  Chandalar          85.65  17  P       P         01 41 40.6  0.0
      baz=231
H25L  Birch Creek        85.76  20  P       P         01 41 41.9 +0.8
      baz=235
YUK6  Outpost Mounta     85.83  26  P       P         01 41 42.0 +0.1
      baz=242
F24K  Squaw Lake         85.84  18  P       P         01 41 42.2 +0.7
      baz=233
K27K  Chicken            85.86  22  P       P         01 41 42.5 +0.9
      baz=239
YUK4  Talbot Arm         85.89  26  P       P         01 41 43.3 +1.2
      baz=242
D23K  Nanushuk River     85.92  16          P         01 41 42.7 +0.8
D23K                                IAmb    IAmb      01 41 44.1
      comp=Z,5.7nm,0.9s
D23K  Nanushuk River     85.92  16  P       P         01 41 42.5 +0.6
      baz=230,SNR=6.3
G25K  Bearman Lake       85.95  19  P       P         01 41 42.7 +0.7
      baz=235
CRAG  Craig              85.98  32  P       P         01 41 43.4 +1.0
      baz=247
E24K  Your Creek         85.99  18  P       P         01 41 42.9 +0.6
      baz=232
TOLK  Toolik Lake Re     86.03  17  P       P         01 41 43.2 +0.7
      baz=231
PLBC  Pleasant Camp      86.04  28  P       P         01 41 43.5 +0.9
      baz=244
S32K  Killisnoo          86.05  30  P       P         01 41 42.7 +0.1
      baz=246
P30M  Million Dollar     86.07  27  P       P         01 41 44.3 +1.5
      baz=243
B22K  Teshekpuk Lake     86.11  15  P       P         01 41 44.4 +1.7
      baz=228
I26K  Coal Creek Min     86.14  21  IAmb    IAmb      01 41 44.7
      comp=Z,9.3nm,1.5s
I26K  Coal Creek Min     86.14  21  P       P         01 41 43.9 +0.9
      baz=238
HYT   Haines Junctio     86.14  26  IAmb    IAmb      01 41 52.3
      comp=Z,7.6nm,0.9s
HYT   Haines Junctio     86.14  26  P       P         01 41 43.9 +0.6
      baz=243,SNR=6.2
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A22K	Sinclair Lake	86.18	14	P	P	01 41 44.0	+0.9
	baz=226						
U33K	Whale Pass	86.24	32	P	P	01 41 44.0	+0.3
	baz=247						
M29M	Somme Creek	86.49	25	P	P	01 41 45.8	+0.9
	baz=242						
C23K	Itkillik River	86.50	16	IAmb	IAmb	01 41 48.8	
	comp=Z,12nm,1.4s						
C23K	Itkillik River	86.50	16	P	P	01 41 45.9	+1.3
	baz=230						
SKAG	Skagway	86.52	28	P	P	01 41 46.5	+1.6
	baz=245						
D24K	Happy Valley	86.56	17	P	P	01 41 46.6	+1.6
	baz=232						
F25K	Christian Rive	86.58	19	P	P	01 41 45.8	+0.5
	baz=235						
N30M	Aishikik Lake	86.61	26	IAmb	IAmb	01 41 49.0	
	comp=Z,7.1nm,1.4s						
N30M	Aishikik Lake	86.61	26	P	P	01 41 46.0	+0.5
	baz=243						
V35K	Ketchikan	86.73	33	P	P	01 41 46.9	+0.9
	baz=248						
O30N	Mendenhall	86.74	27	IAmb	IAmb	01 41 54.9	
	comp=Z,5.3nm,0.8s						
O30N	Mendenhall	86.74	27	P	P	01 41 46.7	+0.6
	baz=244						
G26K	Porcupine Rive	86.82	20	P	P	01 41 46.4	+0.2
	baz=237,SNR=10						
I27K	Kandik River	86.84	21	P	P	01 41 46.5	0.0
	baz=239,SNR=5.8						
DAWY	Dawson	86.89	23	P	P	01 41 47.9	+1.1
	baz=241						
E25K	Arctic Village	86.91	18	P	P	01 41 47.9	+1.1
	baz=235						
L29M	L29M	86.94	24	P	P	01 41 47.8	+0.7
	baz=242						
C24K	Franklin Bluff	86.94	16	P	P	01 41 48.3	+1.5
	baz=232						
F26K	Sheenjek River	87.11	19	P	P	01 41 48.8	+1.0
	baz=236						
N31M	Braeburn, Yuko	87.19	26	P	P	01 41 49.0	+0.7
	baz=244,SNR=7.0						
H27K	Steamboat Moun	87.20	21	IAmb	IAmb	01 41 52.6	
	comp=Z,9.8nm,1.4s						
H27K	Steamboat Moun	87.20	21	P	P	01 41 48.6	+0.4
	baz=239,SNR=8.3						
WHY	Whitehorse	87.23	27	P	P	01 41 49.3	+0.7
	baz=245						
P32M	Atlin	87.32	28	P	P	01 41 49.3	+0.3
	baz=246						
D25K	Kavik River	87.36	17	P	P	01 41 49.6	+0.7
	baz=234						
I28M	Miner Creek	87.37	22	P	P	01 41 49.7	+0.5
	baz=240						
MKAR	Makanchi Array	87.38	318	P	P	01 41 48.8	-0.7
	comp=Z,4.1nm,0.7s,baz=102,slow=5.9,SNR=39						
	comp=Z,4.1nm,0.7s						
G27K	Doyon Strip	87.45	20	P	P	01 41 51.1	+1.6
	baz=239,SNR=6.0						
K29M	Barlow Dome	87.52	24	IAmb	IAmb	01 41 59.1	
	comp=Z,5.6nm,0.9s						
K29M	Barlow Dome	87.52	24	P	P	01 41 50.6	+0.6
	baz=243,SNR=8.0						
J29N	Klondike Camp	87.53	23	P	P	01 41 51.2	+1.3
	baz=242						
MAKZ	Makanchi	87.59	318		P	01 41 49.1	-1.4
MAKZ				IAmb	IAmb	01 41 50.9	
	comp=Z,5.3nm,0.9s						
Q32M	Nakina River	87.76	29	P	P	01 41 52.0	+0.7
	baz=248						
I29M	Ogilvie Camp,	87.92	22	P	P	01 41 53.3	+1.6
	baz=242						
S34M	Telegraph Cree	87.92	30	P	P	01 41 53.3	+1.4
	baz=249						
P33M	Teslin, Yukon	87.99	28	P	P	01 41 53.1	+0.9
	baz=247						
ZALV	Zalesovo Beam	88.02	325	P	P	01 41 50.8	-1.6
	comp=Z,1.6nm,0.6s,baz=111,slow=3.2,SNR=5.6						
	comp=Z,1.6nm,0.6s						
T35M	Bob Quinn	88.04	31	P	P	01 41 53.7	+1.2
	baz=249						
MAYO	Mayo, Yukon	88.06	24	P	P	01 41 54.3	+1.9
	baz=244						
M31M	Drury Creek, Y	88.09	26	P	P	01 41 53.3	+0.7
	baz=246						
C26K	Camden Bay	88.12	17	P	P	01 41 53.6	+1.1
	baz=236						
E27K	Coleen River	88.19	19	P	P	01 41 53.8	+0.9
	baz=239,SNR=9.0						
N32M	Quiet Lake	88.23	27	P	P	01 41 54.5	+1.2
	baz=247						
H29M	Whitestone	88.31	21	P	P	01 41 54.9	+1.4
	baz=242						
C27K	Jago River	88.31	17	IAmb	IAmb	01 42 03.9	
	comp=Z,4.4nm,0.8s						
C27K	Jago River	88.31	17	P	P	01 41 54.8	+1.3
	baz=237						
J30M	Hart River	88.31	23	IAmb	IAmb	01 42 06.6	
	comp=Z,3.4nm,0.8s						
J30M	Hart River	88.31	23	P	P	01 41 54.8	+1.0
	baz=244						
F28M	Old Crow	88.46	20	IAmb	IAmb	01 42 03.6	
	comp=Z,4.7nm,1.0s						
F28M	Old Crow	88.46	20	P	P	01 41 55.5	+1.3
	baz=240						
R33M	Jennings River	88.55	29	P	P	01 41 55.6	+0.7
	baz=249						
I30M	Mount Dempster	88.58	23	IAmb	IAmb	01 41 56.7	
	comp=Z,3.4nm,0.8s						
I30M	Mount Dempster	88.58	23	P	P	01 41 54.9	-0.1
	baz=244,SNR=6.0						
G29M	Pine Creek	88.75	21	IAmb	IAmb	01 42 04.8	
	comp=Z,6.3nm,0.9s						
G29M	Pine Creek	88.75	21	P	P	01 41 56.2	+0.6
	baz=242,SNR=6.8						
D27M	Malcolm River	88.93	18	P	P	01 41 57.9	+1.5
	baz=239						
EPYK	Eagle Plains	88.97	21	IAmb	IAmb	01 42 05.4	
	comp=Z,6.9nm,0.8s						
EPYK	Eagle Plains	88.97	21	P	P	01 41 57.8	+1.1
	baz=243						
E28M	Babbage River	89.06	19	IAmb	IAmb	01 42 00.9	
	comp=Z,4.7nm,1.1s						
E28M	Babbage River	89.06	19	P	P	01 41 58.1	+1.1
	baz=241						
TARG	Taragay, Kyrgy	89.18	312	IAmb	IAmb	01 42 00.8	
	comp=Z,13nm,1.8s						
G30M	tAoh Zraii Nji	89.42	21	P	P	01 41 59.6	+0.8
	baz=244						
E29M	Blow River	89.49	19	P	P	01 41 59.9	+0.9
	baz=242						
MMPY	Sheldon Lake,	89.59	26	P	P	01 42 00.5	+0.8
	baz=248						
H31M	Peel River	89.60	22	P	P	01 42 00.0	+0.4
	baz=246						
D28M	Stokes Point	89.66	18	P	P	01 42 01.3	+1.6
	baz=242						
KDJ	Kajisay	89.72	313		P	01 42 01.0	0.0
KDJ				IAmb	IAmb	01 42 01.9	
	comp=Z,6.6nm,0.9s						
F30M	Barrier River	89.85	20	IAmb	IAmb	01 42 10.6	
	comp=Z,5.2nm,0.8s						
F30M	Barrier River	89.85	20	P	P	01 42 01.4	+0.7
	baz=244						
G31M	Satah River	90.09	21	P	P	01 42 01.9	+0.1
	baz=246						
F31M	Tsiigehtchic	90.49	21	P	P	01 42 04.2	+0.6
	baz=246						
LHV	Little Huntoon	90.56	51	P	P	01 41 59.2	-5.5
BOOM	Boomskoye usch	90.70	313		P	01 42 02.7	-2.8
NVAR	Mina Array Bea	90.75	51	P	P	01 42 06.9	+1.0
	comp=Z,3.1nm,1.0s,baz=245,slow=6.4,SNR=7.9						
	comp=Z,3.1nm,1.0s						
KURK	Kurchatov	90.76	321	P	P	01 42 03.9	-1.4
KURK				IAmb	IAmb	01 42 05.1	
	comp=Z,11nm,1.7s						
KURBB	Kurchatov Arra	90.79	321	P	P	01 42 04.0	-1.4
	comp=Z,0.5nm,0.7s,baz=104,slow=3.8,SNR=7.2						
	comp=Z,0.5nm,0.7s						
INK	Inuvik	90.91	20	LR	LR	02 16 37.0	
	comp=Z,32nm,21.9s,baz=231,slow=32						
INK	Inuvik	90.91	20	P	P	01 42 06.2	+0.6
	baz=246						
SYO	Syowa Base	91.02	198	⇓*e*P	P	01 42 06.6	+0.4
PFO	Pinyon Flats O	91.31	56	LR	LR	02 14 52.1	
	comp=Z,73nm,21.0s,baz=236,slow=30						
BEAVL	Fort Liard	91.62	29	P	P	01 42 10.0	+0.8
	baz=254						
KOTAN	Kotaneelee Air	92.10	29	P	P	01 42 12.4	+1.1
	baz=255						
NEW	Newport	93.45	42	LR	LR	02 22 29.6	
	comp=Z,39nm,18.4s,baz=280,slow=34						
C36M	Paulatuk	94.50	20	P	P	01 42 23.2	+1.0
	baz=255						
LPIG	La Paz	95.13	67	LR	LR	02 17 25.5	
	comp=Z,32nm,20.3s,baz=202,slow=30						
BVAR	Borovoye Array	96.20	323	P	P	01 42 28.6	-1.7
	comp=Z,2.0nm,0.9s,baz=75,slow=6.3,SNR=8.4						
	comp=Z,2.0nm,0.9s						
PV07	Paradox Valley	98.25	52	P	Pdif	01 42 40.9	+0.6
ANMO	Albuquerque	99.69	56	LR	LR	02 21 00.9	
	comp=Z,60nm,20.6s,baz=10,slow=31						
AKASG	Malin Array Be	121.41	325	PKP	PKPdf	01 47 55.0	-0.7
	comp=Z,0.6nm,0.4s,baz=65,slow=2.0,SNR=7.3						
BRTR	Keskin Array B	122.42	311	PKP	PKPdf	01 47 57.4	-0.8
	comp=Z,0.2nm,0.5s,baz=38,slow=6.3,SNR=3.7						
LPAZ	La Paz	127.46	119	PKP	PKiKP	01 48 10.4	+0.8
	comp=Z,2.8nm,0.8s,baz=215,slow=0.7,SNR=12						
MORC	Moravsky Berou	128.27	328	*e*PKP	PKiKP	01 48 09.6	0.0
MORC				*e*		01 48 18.2	
JAVC	Velka Javorina	128.76	327	*e*PKP	PKiKP	01 48 11.6	+1.0
VRAC	Vranov	129.05	328	*e*PKP	PKPdf	01 48 10.4	0.0
KRUC	Moravsky	129.30	328	*e*PKP	PKiKP	01 48 11.3	-0.3
KRUC				*e*		01 48 20.1	
BRG	Berggiesshubel	129.35	331	*e*PKP	PKiKP	01 48 12.0	+0.4
BRG				Amp		01 48 12.8	
	comp=Z,6.0nm,1.1s						
CLL	Collm	129.50	332	*e*PKPdf	PKPdf	01 48 10.0	-1.1
CLL				*e*SKPdf	SKPdf	01 51 46.0	-0.7
RONA	Rosalia, Austr	130.19	327	*i* PKiKP	PKiKP	01 48 13.7	+0.3
	comp=Z,4.8nm,1.1s						
CONA	Conrad Observa	130.28	327	*i* PKiKP	PKiKP	01 48 13.9	+0.3
	comp=Z,2.5nm,0.9s						
CPUP	Villa Florida	130.39	137	PKP	PKiKP	01 48 14.2	-0.3
	comp=Z,0.3nm,0.8s,baz=322,slow=1.4,SNR=4.1						
GERES	GERESS Array B	130.81	330	PKP	PKPdf	01 48 13.6	-0.2
	comp=Z,1.1nm,0.8s,baz=53,slow=0.7,SNR=7.9						
ARSA	Arzberg	130.88	327	*i* PKiKP	PKiKP	01 48 14.9	+0.1
	comp=Z,3.2nm,0.9s						
MOA	Molln	131.17	328	*i* PKiKP	PKiKP	01 48 15.1	-0.3
	comp=Z,2.4nm,1.2s						
SOKA	Soboth	131.49	327	*i* PKiKP	PKiKP	01 48 16.0	-0.2
	comp=Z,4.0nm,1.2s						
LESA	Schwarzleotal	132.26	329	*i* PKiKP	PKiKP	01 48 17.3	-0.4
	comp=Z,3.4nm,1.1s						
ABTA	Abfaltersbach	132.79	328	*i* PKP	PKPdf	01 48 17.5	-0.2
	comp=Z,3.5nm,1.3s						
WATA	Walderalm	132.88	329	*i* PKiKP	PKiKP	01 48 18.7	-0.3
	comp=Z,7.1nm,1.9s						
WTTA	Wattenberg	132.90	329	*i* PKiKP	PKiKP	01 48 19.2	+0.1
	comp=Z,2.4nm,0.7s						
MEM	Membach	133.02	336	*d*PKPdf	PKPdf	01 48 17.8	0.0
MEM				*d*PKiKP	PKiKP	01 48 19.1	+0.1
MOTA	Moosalm	133.11	330	*i* PKiKP	PKiKP	01 48 19.3	-0.2
	comp=Z,4.1nm,1.1s						
SQTA	Sankt Quirin	133.14	329	*e*PKiKP	PKiKP	01 48 19.2	-0.4
	comp=Z,1.7nm,0.4s						
RETA	Reutte	133.18	330	*i* PKiKP	PKPdf	01 48 18.8	+0.4
	comp=Z,2.1nm,1.1s						
FETA	Feichten	133.52	330	*i* PKiKP	PKiKP	01 48 19.7	-0.6
	comp=Z,2.7nm,0.9s						
BMRD	Maredsous	133.75	337	*d*PKPdf	PKPdf	01 48 18.7	-0.5
DAVA	Damuels	133.75	330	*i* PKiKP	PKiKP	01 48 20.9	0.0
	comp=Z,3.2nm,0.9s						
BDFB	Brasilia	143.96	134	PKP	PKPdf	01 48 38.3	-0.7
	comp=Z,5.6nm,0.8s,baz=282,slow=0.2,SNR=11						
PBRG	Braganca	145.19	340	*e*PKP	PKPab	01 48 40.0	0.0
PGAV	Gavieira, Arco	145.53	342	*e*PKP	PKPbc	01 48 40.9	-0.1
PCAB	Cabril	145.69	342	*e*PKP	PKPdf	01 48 41.2	0.0
MVO	Moncorvo	145.85	340	*e*PKP	PKPab	01 48 42.3	-0.1
POLO	Lamas de Olo	145.92	341	*e*PKP	PKPbc	01 48 42.4	+0.2
PVRL	Vila Real	145.98	341	*e*PKP	PKPab	01 48 43.1	+0.2
ESDC	Sonseca Array	145.99	335	PKPbc	PKPbc	01 48 42.6	+0.1
	comp=Z,3.2nm,1.0s,baz=9.5,slow=3.5,SNR=18						
PVIS	Viseu	146.54	341	*e*PKP	PKPbc	01 48 44.1	0.0
MTE	Manteigas	146.71	340		PKPab	01 48 45.8	0.0
MTE	Manteigas	146.71	340	*e*PKP	PKPbc	01 48 44.5	-0.1
PCBR	Castelo Branco	147.19	339	*e*PKP	PKPbc	01 48 46.6	+0.7
PCAS	Casmilo, Conde	147.34	341	*e*PKP	PKPbc	01 48 46.7	+0.3
PMRV	Marv??o	147.53	339	*e*PKP	PKPbc	01 48 46.9	+0.1
PSARD	Sardoal	147.64	340	*e*PKP	PKPbc	01 48 47.6	+0.4
PMTG	Montargil	148.14	340	*e*PKP	PKPbc	01 48 48.7	+0.2
EVO	Evora	148.54	339	*e*PKP	PKPbc	01 48 50.3	+0.7

IDC 22 01:29:24.7±1.2**,28°.48N×105°.25E,h0^{km},mb3.7**/4**,
mbtmp3.6**/5**,ML3.7**/1**,Error ellipse: s-maj=87.0km
s-min=21.6km az=60.0,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	19.34	2	P	Pn	01 33 53.5	+0.8
	0.2nm,0.3s,baz=180,slow=10,SNR=2.5						
	0.7nm,0.5s						
MKAR	Makanchi Array	25.63	322	P	P	01 34 55.6	-0.2
	0.9nm,0.6s,baz=127,slow=9.9,SNR=5.1						
	0.9nm,0.6s						
KURBB	Kurchatov Arra	29.94	325	P	P	01 35 33.5	-0.9
	0.3nm,0.4s,baz=132,slow=9.8,SNR=2.5						
	0.3nm,0.4s						
WRA	Warramunga Arr	55.75	146	P	P	01 39 03.0	-0.5
	0.5nm,0.4s,baz=338,slow=8.1,SNR=6.8						
	0.5nm,0.4s						
ASAR	Alice Springs	58.74	149	P	P	01 39 25.0	+0.4
	0.5nm,0.6s,baz=334,slow=7.2,SNR=4.3						
	0.5nm,0.6s						

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*IDC **22** 01:34:48.4±1.9,29°.39N×51°.05E,h0^{km},mb3.7/11,
mbtmp3.7/13,ML3.8/2,MS3.6/2,Error ellipse:
s-maj=38.6km s-min=19.8km az=6.0*
*TEH **22** 01:34:50.4,29°.59N×51°.29E,h9^{km}±21^{km}*
*DSN **22** 01:34:55.1±2.0,29°.24N×51°.37E,h15^{km},ML3.5/10,Error
ellipse: s-maj=26.8km s-min=10.4km az=3.0*
*OMAN **22** 01:34:57.7±0.3,29°.26N×51°.65E,h15^{km},mb4.2/15,
ml4.0/2,Error ellipse: s-maj=4.5km s-min=2.7km az=318.0*
ISC 22 01:34:50.6±0.5**,29°.54N**±0°.05×**51°.34E**±0°.04**,h10^{km},n107,**
σ**1**^{s}**74**/139**,mb3.9**/19**,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAZ2	Kazeron-Fars-I	0.29	75	Pg	Pg	01 34 56.9	+0.4
KAZ2				Sg	Sg	01 35 01.9	+1.4
SHI	Shiraz	1.03	84	Pg	Pg	01 35 11.4	+1.0
DSBU	Dashti - Bushe	1.17	183	Pg	Pn	01 35 14.0	+0.8
ABEH	Behbahan	1.42	319	Pg	Pn	01 35 17.0	+0.5
KLNJ	Kolanjah	1.48	8	Pg	Pn	01 35 17.9	+0.2
QIR1	Qir	1.83	125	Pn	Pb	01 35 24.8	+0.6
JHRM	Jahrom	2.21	117	Pn	Pb	01 35 30.4	-0.4
IBRJ	Brojen	2.36	358	Pn	Pn	01 35 31.1	+1.3
IRAM	Ramesheh	2.44	21	Pn	Pn	01 35 32.1	+1.4
ZNGN	Zangian	2.60	351	Pn	Pn	01 35 34.8	+1.7
JHBN	Jahan bin	2.75	348	Pn	Pn	01 35 36.2	+1.2
IGAR	Gharneh	2.92	12	Pn	Pn	01 35 38.7	+1.3
ISAD	Sadrabad	3.11	40	Pn	Pn	01 35 41.9	+1.8
IPIR	Pirpir	3.16	353	Pn	Pn	01 35 41.9	+1.2
IMEH	Mehriz	3.38	56	Pn	Pn	01 35 45.8	+2.1
IZEF	Zefreh	3.45	14	Pn	Pn	01 35 46.5	+1.7
SHMA	Al-Shehemyia	3.68	185	P	Pn	01 35 49.4	+1.8
	SNR=17						
SHMA				S	Sn	01 36 32.9	+1.8
ICHK	Chekchek	3.77	44	Pn	Pn	01 35 50.6	+1.5
IKLH	Kolahrood	3.77	3	Pn	Pn	01 35 50.2	+1.0
ANAR	Anarak	4.17	29	Pn	Pn	01 35 55.9	+1.3
QAMS	Qamsar	4.19	1	Pn	Pn	01 35 56.3	+1.5
KRSH	Karshahi	4.47	9	Pn	Pn	01 35 60.0	+1.4
KHGB	Koh Gabri	4.54	78	Pn	Pn	01 36 02.5	+2.9
NGRK	Negar Kerman	4.70	87	Pn	Pn	01 36 04.5	+2.6
ZRDN	Zarand Kerman	4.72	71	Pn	Pn	01 36 05.1	+3.0
KRBR	Kerman	4.74	83	Pn	Pn	01 36 04.1	+1.7
BNDS	Bandar-Abbas	4.76	115	Pn	Pn	01 36 04.5	+1.9
TRNA	Turayna	4.79	181	P	Pn	01 36 06.0	+3.2
	SNR=14						
TRNA				S	Sn	01 37 00.6	+2.3
SMRA	Abu-Samra	4.80	186	P	Pn	01 36 04.6	+1.7
	SNR=8.5						
SMRA				S	Sn	01 37 00.1	+1.5
ISFB	Sefidab	4.86	9	Pn	Pn	01 36 05.0	+1.1
IKFM	Kafar-mosalman	4.97	324	Pn	Pn	01 36 06.4	+1.1
HSAM	Samen	5.21	334	Pn	Pn	01 36 09.9	+1.1
IQOM	Qom	5.29	358	Pn	Pn	01 36 11.2	+1.1
CHMN	Cheshme madani	5.40	85	Pn	Pn	01 36 14.2	+2.5
IVRN	Varamin	5.45	3	Pn	Pn	01 36 13.2	+1.2
SLWR	Sila	5.46	177	P	Pn	01 36 15.1	+3.1
SLWR				S	Sn	01 37 15.8	+0.9
SHME	Shamm	5.49	128	P	Pn	01 36 14.5	+1.9
SHME				S	Sn	01 37 15.6	-0.2
SHME	Shamm	5.49	128	P	Pn	01 36 13.6	+1.1
HAGD	Aghdareh	5.59	341	Pn	Pn	01 36 14.4	+0.4
GHWR	Ruwais	5.72	166	P	Pn	01 36 19.2	+3.5
GHWR				S	Sn	01 37 21.6	+0.2
IBZA	Bozab	5.74	330	Pn	Pn	01 36 16.8	+0.7
TPRV	Parvadeh(Tabas	5.75	51	Pn	Pn	01 36 18.3	+2.1
AJN	Ajban	5.93	146	P	Pn	01 36 21.5	+3.0
AJN				S	Sn	01 37 27.3	+0.8
NAZ	Nazwa, Dubai	5.94	139	P	Pn	01 36 20.3	+1.6
	SNR=10						
NAZ				S	Sn	01 37 25.8	-1.1
NAZ	Nazwa, Dubai	5.94	139	P	Pn	01 36 18.8	+0.1
MASF	Masafi	5.96	133	P	Pn	01 36 20.3	+1.3
MASF				S	Sn	01 37 24.6	-2.8
MSFE	Esma-Masafi	5.97	133	P	Pn	01 36 19.9	+0.8
ILBA	Ilam Banvizeh	5.98	314	Pn	Pn	01 36 19.6	+0.3
ASUD	Al Ashush, Dub	6.05	143	P	Pn	01 36 23.1	+2.9
	SNR=8.5						
ASUD				S	Sn	01 37 29.9	+0.4
ASUD	Al Ashush, Dub	6.05	143	P	Pn	01 36 22.0	+1.9
IDMV	Damavand	6.05	5	Pn	Pn	01 36 22.0	+1.5
MDH	Madha	6.10	133	P	Pn	01 36 21.9	+1.0
MDH				S	Sn	01 37 27.7	-3.2
MDH	Madha	6.10	133	P	Pn	01 36 21.3	+0.4
SNQR	Sonqor, Kerman	6.17	330	Pn	Pn	01 36 23.3	+1.2
IGHG	Ghaleghazi	6.26	321	Pn	Pn	01 36 24.0	+0.7
TNSJ	Nastanj	6.29	44	Pn	Pn	01 36 25.2	+1.6
UOSS	Minazif	6.30	135	P	Pn	01 36 24.9	+1.3
UOSS				S	Sn	01 37 32.5	-3.2
HATD	Hatta, Dubai	6.34	137	P	Pn	01 36 26.1	+1.8
HATD				S	Sn	01 37 34.5	-2.3
HATD	Hatta, Dubai	6.34	137	P	Pn	01 36 25.6	+1.3
HATD				S	Sn	01 37 34.3	-2.5
ASHO	Ashiyiah	6.41	138	P	Pn	01 36 26.1	+0.9
	SNR=24						
ASHO				S	Sn	01 37 36.1	-2.3
ASHO	Ashiyiah	6.41	138	P	Pn	01 36 26.0	+0.9
GLG1	Gilan-e-Gharb	6.49	316	Pn	Pn	01 36 26.5	+0.2
ILIN	Lien	6.52	326	Pn	Pn	01 36 27.6	+0.8
IDHR	Dehrash	6.64	322	Pn	Pn	01 36 29.4	+0.9
IALA	Alasht	6.64	10	Pn	Pn	01 36 30.2	+1.6
ALNE	Al Ain	6.73	143	P	Pn	01 36 31.4	+1.7
ALNE				S	Sn	01 37 44.8	-1.6
MZR	Muzera	6.79	163	P	Pn	01 36 33.3	+2.9
MZR				S	Sn	01 37 47.3	-0.4
MZR	Muzera	6.79	163	P	Pn	01 36 32.3	+2.0
SOHO	SOHO	7.11	138	P	Pn	01 36 35.1	+0.4
SOHO				S	Sn	01 37 53.3	-2.2
SOHO	SOHO	7.11	138	P	Pn	01 36 34.8	+0.1
IGLO	Ghaloghah	7.25	16	Pn	Pn	01 36 39.1	+2.2
UMZA	Um Al Zommool	7.61	152	P	Pn	01 36 43.2	+1.6
UMZA				S	Sn	01 38 06.2	-1.8
ARQ	Araqi	7.73	142	P	Pn	01 36 44.0	+0.7
	SNR=28						
ARQ				S	Sn	01 38 06.8	-4.1
RAYN	Ar Rayn	7.95	222	P	Pn	01 36 45.8	-0.5
HOQ	Hoqain	7.98	137	P	Pn	01 36 47.5	+0.7
HOQ				S	Sn	01 38 14.4	-2.8
BSY	Bisya	8.57	141	P	Pn	01 36 56.2	+1.3
BSY				S	Sn	01 38 28.5	-3.1
SMDO	Samad	8.82	135	P	Pn	01 36 58.8	+0.4
	SNR=9.5						
WSAR	Wadi Sarin	9.06	132	Pn	Pn	01 37 01.6	0.0
	baz=310,slow=23,SNR=9.7						
WSAR				Sn	Sn	01 38 41.4	-2.2
	baz=180,slow=24,SNR=3.7						
WSAR	Wadi Sarin	9.06	132	P	Pn	01 37 01.5	0.0
	SNR=6.5						
WSAR				S	Sn	01 38 38.5	-5.2
JMDO	Jabal Madar	9.38	138	P	Pn	01 37 06.1	+0.2
MHTO	MHTO	10.41	143	P	Pn	01 37 21.1	+1.0
	SNR=8.1						
MHTO				S	Sn	01 39 11.9	-5.0
DOK	Doka	11.16	166	P	Pn	01 37 30.4	+0.1
WHFO	Wadi Hawf	11.78	169	P	Pn	01 37 39.0	+0.1
	SNR=20						
DMTO	DMTO	12.22	164	P	Pn	01 37 45.0	+0.1
	SNR=12						
ASF	Jabal al Asfar	12.68	286	Pn	Pn	01 37 47.6	-3.5
	0.6nm,0.3s,baz=70,slow=2.9,SNR=5.5						
	1.0nm,0.5s						
MMAI	Mount Meron Ar	14.06	288	Pn	Pn	01 38 06.8	-3.2
	0.5nm,0.3s,baz=105,slow=16,SNR=5.4						
	0.2nm,0.3s						
EIL	Elat	14.26	275	LR	LR	01 44 44.6	
	comp=Z,49nm,18.4s,baz=68,slow=42						
AKTO	Aktyubinsk	21.47	12	P	P	01 39 39.7	+0.5
	1.5nm,0.7s,baz=215,slow=8.6,SNR=4.8						
	1.5nm,0.7s						
MLR	Muntele Rosu	25.52	316	P	P	01 40 19.0	-0.5
	1.3nm,0.6s,baz=315,slow=11,SNR=5.1						
	1.3nm,0.6s						
AKASG	Malin Array Be	26.88	328	P	P	01 40 30.1	-1.4
	0.2nm,0.3s,baz=138,slow=9.2,SNR=5.8						
	0.2nm,0.3s						
BVAR	Borovoye Array	27.32	25	P	P	01 40 37.2	+1.8
	0.4nm,0.4s,baz=220,slow=7.4,SNR=7.0						
	0.4nm,0.4s						
KURBB	Kurchatov Arra	29.32	36	P	P	01 40 56.4	+3.1
	0.6nm,0.7s,baz=238,slow=9.3,SNR=4.7						
	0.6nm,0.7s						
MKAR	Makanchi Array	29.56	46	P	P	01 40 56.5	+1.0
	0.2nm,0.5s,baz=238,slow=7.5,SNR=2.6						
	0.2nm,0.5s						
ZALV	Zalesovo Beam	34.38	35	P	P	01 41 38.9	+1.2
	0.6nm,0.3s,baz=261,slow=7.4,SNR=3.8						
	0.6nm,0.3s						
GERES	GERESS Array B	34.50	315	P	P	01 41 37.3	-1.7
	0.1nm,0.3s,baz=108,slow=8.8,SNR=4.5						
	0.1nm,0.3s						
LESA	Schwarzleotal	34.70	312	*e*P	P	01 41 40.4	-0.3
	2.1nm,0.6s						
LESA				*i* pP	pP	01 41 44.5	+0.7
	1.9nm,0.5s						
WTTA	Wattenberg	35.34	311	*i* P	P	01 41 46.1	-0.2
	2.7nm,0.5s						
WTTA				*i* pP	pP	01 41 50.1	+0.7
	2.7nm,0.5s						
WATA	Walderalm	35.39	311	*i* P	P	01 41 46.5	-0.3
	2.2nm,0.5s						
WATA				*i* pP	pP	01 41 50.2	+0.3
	2.3nm,0.6s						
SQTA	Sankt Quirin	35.60	311	*e*P	P	01 41 48.6	+0.1
	5.1nm,0.5s						
SQTA				*i* pP	pP	01 41 52.2	+0.5
	5.1nm,0.5s						
MOTA	Moosalm	35.71	311	*e*P	P	01 41 49.2	-0.2
	1.9nm,0.6s						
MOTA				*i* pP	pP	01 41 52.8	+0.2
	1.9nm,0.6s						
FETA	Feichten	35.87	311	*e*P	P	01 41 50.3	-0.6
	2.2nm,0.6s						
FETA				*i* pP	pP	01 41 54.4	+0.3
	2.2nm,0.6s						
RETA	Reutte	35.97	311	*e*P	P	01 41 51.2	-0.4
	1.9nm,0.5s						
RETA				*i* pP	pP	01 41 54.8	0.0
	1.9nm,0.5s						
FINES	FINESS Array B	36.02	340	P	P	01 41 51.5	-0.1
	1.7nm,1.0s,baz=147,slow=11,SNR=3.9						
	1.7nm,1.0s						
DAVA	Damuels	36.50	311	*i* P	P	01 41 55.8	-0.4
	7.4nm,0.5s						
DAVA				*i* pP	pP	01 41 59.4	0.0
	7.4nm,0.5s						
HFS	Hagfors	39.65	331	P	P	01 42 20.7	-1.6
	1.6nm,0.6s,baz=139,slow=8.7,SNR=13						
	1.6nm,0.6s						
EKA	Eskdalemuir Ar	46.23	320	P	P	01 43 15.1	-0.8
	0.5nm,0.4s,baz=109,slow=8.6,SNR=7.8						
	0.5nm,0.4s						
PSI	Prapat	52.35	111	LR	LR	02 10 31.2	
	comp=Z,257nm,18.0s,baz=180,slow=41						

IDC 22 01:35:31.8±374.0**,48°.51N×152°.22E,h0^{km},Error ellipse:
s-maj=167.8km s-min=134.8km az=30.0,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I44RU	PETROPAVLOVSK-	5.77	35	I	I	02 10 50.4	

	0.4nm,1.5s,baz=219,slow=308,SNR=10						
I30JP	ISUMI INFRASON	15.87	218	I	I	03 10 10.0	
	0.1nm,1.5s,baz=29,slow=307,SNR=3.3						
I53US	FAIRBANKS INFR	35.15	40	I	I	05 10 00.0	
	baz=274,slow=299,SNR=2.7						

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*AUST **22** 01:43:06.6±0.3,26°S±3°×12°7E±°,h10^{km},mb3.9/6, ML2.8/3,Error ellipse: s-maj=7.3km s-min=5.6km az=151.6*

*IDC **22** 01:43:07.5±2.9,25°.42S×127°.00E,h0^{km},mb3.4/1, mbtmp3.3/4,ML3.2/3,MS3.5/1,Error ellipse: s-maj=42.8km s-min=22.3km az=177.0*

ISC 22 01:43:06.4±0.8**,25°.72S**±0°.07×**126°.95E**±0°.06**,h10**^{km}**,n21, σ1^{s}27**/23**,Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRKA	Warakurna	1.39	61	P	Pg	01 43 33.9	+0.7
WRKA				S	Sb	01 43 51.6	+1.2
FORT	Forrest	5.13	169	P	Pn	01 44 25.1	+1.8
FORT	Forrest	5.13	169	S	Sn	01 45 23.1	+0.5
ASAR	Alice Springs	6.64	74	Pn	Pn	01 44 45.5	+1.4
	0.4nm,0.3s,baz=251,slow=12,SNR=12						
ASAR				Sn	Sn	01 45 59.8	-0.2
	1.4nm,0.3s,baz=257,slow=22,SNR=7.2						
ASAR				Lg	Lg	01 46 35.4	
	1.4nm,0.3s,baz=260,slow=26,SNR=4.2						
	0.8nm,0.4s						
AS15	Alice Springs	6.66	73	P	Pn	01 44 46.0	+1.6
	comp=Z,0.0nmcomp=Z,5.1nm,1.3s						
MEEK	Meekatharra	7.55	261	P	Pn	01 44 56.6	+0.1
	comp=Z,15nm,2.8s,comp=Z,0.1nm						
FITZ	Fitzroy Crossi	7.69	351	P	Pn	01 44 59.4	+1.0
FITZ	Fitzroy Crossi	7.69	351	Pn	Pn	01 44 58.1	-0.3
	comp=Z,0.7nm,0.3s,baz=170,slow=11,SNR=13						
	comp=Z,2.6nm,0.3s						
PSAB3	Pilbara Seismi	7.70	301	P	Pn	01 44 58.6	+0.1
MULG	Mulgathing	7.75	127	P	Pn	01 44 58.9	-0.3
	comp=Z,11nm,2.2s,comp=Z,0.1nm						
MBWA	Marble Bar	8.04	303	P	Pn	01 45 03.4	+0.2
	comp=Z,16nm,1.4s,comp=Z,0.1nm						
WC4	Warramunga Arr	8.90	51	P	Pn	01 45 14.9	-0.2
WRA	Warramunga Arr	8.91	51	Pn	Pn	01 45 15.9	+0.6
	comp=Z,0.2nm,0.3s,baz=230,slow=13,SNR=5.9						
WRA				Sn	Sn	01 46 52.4	-3.5
	comp=Z,0.6nm,0.3s,baz=230,slow=22,SNR=6.8						
WRA				Lg	Lg	01 47 43.4	
	comp=Z,0.7nm,0.3s,baz=225,slow=28,SNR=4.9						
	comp=Z,0.4nm,0.8s						
MORW	Morawa	10.25	249	P	Pn	01 45 31.7	-1.9
	comp=Z,22nm,2.5s,comp=Z,0.1nm						
BLDU	Ballidu	10.27	239	P	Pn	01 45 32.5	-1.3
	comp=Z,20nm,1.8s,comp=Z,0.1nm						
BBOO	Buckleboo	10.63	134	P	Pn	01 45 38.3	-0.5
LCRK	Leigh Creek	11.00	118	P	Pn	01 45 43.9	0.0
MUN	Mundaring	11.29	234	P	Pn	01 45 46.4	-1.4
YAPP	Yappala Statio	11.69	124	P	Pn	01 45 52.7	-0.5
LEM	Lembang	26.34	312	LR	LR	02 01 13.0	
	comp=Z,109nm,19.0s,baz=168,slow=42						
MKAR	Makanchi Array	82.69	331	P	P	01 55 30.8	+0.7
	comp=Z,0.2nm,0.6s,baz=130,slow=4.5,SNR=2.0						
	comp=Z,0.2nm,0.6s						

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*IDC **22** 01:45:25.3±3.6,48°.85N×152°.77E,h43^{km}±37^{km},mb3.2/4, mbtmp3.5/7,ML2.6/2,MS3.5/6,Error ellipse: s-maj=40.0km s-min=24.2km az=139.0*

ISC 22 01:45:24.5±1.2**,48°.8N**±0°.2×**152°.8E**±0°.2**,h35**^{km}**,n12, σ1^{s}13**/7**,mb3.5**/4**,MS3.6**/5**,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	5.30	34	P	Pn	01 46 41.7	+0.6
	0.5nm,0.3s,baz=202,slow=11,SNR=12						
	2.3nm,0.5s						
USRK	Ussuriysk Ar.	15.04	260	P	Pn	01 48 55.8	+1.5
	baz=81,slow=14,SNR=4.8						
	1.7nm,0.7s						
MJAR	Matsushiro Arr	16.26	226	P	Pn	01 49 09.2	-0.9
	0.6nm,0.2s,baz=26,slow=13,SNR=4.9						
YAK	Yakutsk	18.50	324	LR	LR	01 57 26.2	
	comp=Z,64nm,18.2s,baz=122,slow=39						
SONM	Songino Array	30.50	286	LR	LR	02 06 19.0	
	comp=Z,139nm,18.4s,baz=82,slow=41						
ILAR	Eielson Array	35.09	40	P	P	01 52 13.4	-0.5
	0.2nm,0.5s,baz=272,slow=8.3,SNR=4.9						
	0.2nm,0.5s						
ZALV	Zalesovo Beam	41.26	304	LR	LR	02 11 56.3	
	comp=Z,65nm,18.2s,baz=59,slow=39						
MKAR	Makanchi Array	45.84	295	P	P	01 53 41.8	-1.1
	0.4nm,0.7s,baz=55,slow=10,SNR=3.6						
MKAR				LR	LR	02 16 05.2	
	comp=Z,74nm,18.1s,baz=74,slow=40						
	0.4nm,0.7s						
BVAR	Borovoye Array	49.41	308	P	P	01 54 10.5	+0.1
	0.4nm,0.5s,baz=52,slow=8.0,SNR=2.7						
	0.4nm,0.5s						
CMAR	Chiang Mai Arr	52.68	255	LR	LR	02 17 54.5	
	comp=Z,56nm,20.4s,baz=215,slow=37						
AAK	Ala-Archa	52.75	295	LR	LR	02 20 06.8	
	comp=Z,42nm,18.0s,baz=85,slow=40						
ASAR	Alice Springs	74.10	198	P	P	01 56 57.4	+0.5
	0.5nm,0.8s,baz=12,slow=6.1,SNR=3.1						
	0.5nm,0.8s						

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*IDC **22** 01:54:11.0±2.7,34°.58N×22°.91E,h0^{km},mb3.7/3, mbtmp3.4/8,ML3.1/5,Error ellipse: s-maj=47.3km s-min=20.2km az=20.0*

*ATH **22** 01:54:14.7,34°.72N×23°.00E,h12^{km}±5^{km},ML3.3/7, Manual Solution by M.Kolligri First location: 2019/06/22 01:55:28, This location: 2019/06/22 06:43:10 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*

*THE **22** 01:54:19.1,35°N±20°×2°3E±1°3,h15^{km}±13^{km},M2.8/7, MLh2.8/7*

ISC 22 01:54:13.2±2.4**,34°.67N**±0°.09×**22°.95E**±0°.07**,h10**^{km}±13^{km}**, n25,**σ**0^{s}89**/30**,mb3.6**/3**,Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNDR	Palaiochora Ch	0.83	47	P	Pg	01 54 29.0	-0.1
KNDR	Palaiochora Ch	0.83	47	P	Pg	01 54 28.8	-0.3
KNDR				S	Sg	01 54 38.6	-1.3
GVD	Gavdhos	0.95	79	P	Pn	01 54 32.9	+0.2
GVD	Gavdhos	0.95	79	P	Pb	01 54 32.3	+0.5
GVD				S	Sg	01 54 44.1	+0.3
IMMV	Iera Moni Meta	1.16	47	P	Pb	01 54 35.5	+0.2
CHNB	Souda	1.23	48	P	Pn	01 54 36.9	+0.5
CHNB				S	Sb	01 54 51.9	-0.4
ANKY	Antikythira Is	1.23	13	P	Pg	01 54 37.6	+0.8
ANKY	Antikythira Is	1.23	13	P	Pg	01 54 37.3	+0.5
CHAN	Chania	1.23	46	P	Pn	01 54 37.0	+0.5
CHAN	Chania	1.23	46	P	Pb	01 54 36.9	+0.3
CHAN				S	Sb	01 54 52.3	-0.3
PRNS	Prines Rethymn	1.45	61	P	Pn	01 54 39.2	-0.3
PRNS	Prines Rethymn	1.45	61	P	Pn	01 54 38.8	-0.6
IDI	Anoyia	1.71	68	P	Pn	01 54 44.0	+0.9
IDI	Anoyia	1.71	68	Pn	Pn	01 54 44.0	+0.9
	6.9nm,0.3s,baz=252,slow=11,SNR=62						
IDI				Sn	Sb	01 55 06.6	+0.3
	7.8nm,0.3s,baz=297,slow=17,SNR=5.6						
IDI	Anoyia	1.71	68	P	Pn	01 54 43.8	+0.7
VLI	Veliai	2.04	360	P	Pb	01 54 50.2	-0.2
VLI	Veliai	2.04	360	P	Pb	01 54 49.8	-0.6
BRTR	Keskin Array B	9.90	56	Pn	Pn	01 56 39.0	+3.3
	0.1nm,0.3s,baz=235,slow=13,SNR=6.4						
	0.2nm,0.4s						
MMAI	Mount Meron Ar	10.49	96	Pn	Pn	01 56 44.0	+0.3
	0.5nm,0.3s,baz=295,slow=13,SNR=5.0						
	0.4nm,0.4s						
EIL	Elat	11.32	113	Pn	Pn	01 56 54.2	-0.8
	0.1nm,0.3s,baz=334,slow=3.5,SNR=7.8						
	1.4nm,0.7s						
GERES	GERESS Array B	15.74	337	Pn	Pn	01 57 55.1	+0.1
	baz=143,slow=12,SNR=3.9						
	0.1nm,0.5s						
AKASG	Malin Array Be	16.66	14	Pn	Pn	01 58 07.2	+0.6
	0.5nm,0.3s,baz=210,slow=9.6,SNR=4.5						
	0.1nm,0.3s						
HFS	Hagfors	26.18	349	P	P	01 59 47.6	-0.1
	0.6nm,0.4s,baz=144,slow=10,SNR=5.6						
	0.6nm,0.4s						
EKA	Eskdalemuir Ar	27.43	327	P	P	01 59 59.5	+0.6
	0.5nm,0.7s,baz=126,slow=8.4,SNR=4.4						
	0.5nm,0.7s						
MKAR	Makanchi Array	45.55	56	P	P	02 02 31.9	-1.3
	0.3nm,0.3s,baz=269,slow=7.9,SNR=7.1						
	0.3nm,0.3s						

IDC 22 01:54:28.9±4.7**,18°.80S**×**174°.40W,h0**^{km}**,mb3.7**/3**, mbtmp3.7**/3**,Error ellipse: s-maj=242.8km s-min=35.9km az=145.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	48.22	260	P	P	02 03 12.7	+0.9
	0.7nm,0.8s,baz=96,slow=7.9,SNR=3.0						
	0.7nm,0.8s						
ASAR	Alice Springs	48.23	255	P	P	02 03 11.7	-0.1
	0.9nm,0.5s,baz=91,slow=7.8,SNR=14						
	0.9nm,0.5s						
ILAR	Eielson Array	85.95	11	P	P	02 07 11.2	+0.8
	0.5nm,1.1s,baz=191,slow=3.7,SNR=5.3						
	0.5nm,1.1s						
ARCES	ARCESS Array B	127.81	351	PKP	PKiKP	02 13 36.5	+0.1
	1.7nm,0.8s,baz=64,slow=5.5,SNR=3.7						
BRTR	Keskin Array B	148.08	317	PKPbc	PKPdf	02 14 14.4	+0.5
	0.3nm,0.5s,baz=109,slow=4.2,SNR=1.6						
MMAI	Mount Meron Ar	149.81	304	PKPbc	PKPbc	02 14 20.0	-1.5
	0.5nm,0.5s,baz=67,slow=3.7,SNR=4.3						

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*ISU **22** 02:43:50,41°.34N×69°.05E,h11^{km}*

*KRNET **22** 02:43:50.8±0.1,41°.43N×69°.03E,mb3.0*

*SOME **22** 02:43:50.8,41°.33N×68°.95E,h20^{km}*

*NNC **22** 02:43:51.1±3.6,41°.47N×68°.88E,h0^{km},mb3.7,mpv3.3, Error ellipse: s-maj=22.9km s-min=17.3km az=32.0*

ISC 22 02:43:46.6±1.7**,41°.43N**±0°.03×**68°.90E**±0°.07**,h3**^{km}±11^{km}**, n17,**σ**1^{s}48**/31**,11C-6D,Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NZBK	Nazarbek	0.27	143	P	Pg	02 43 52.9	+1.2
NZBK				S	Sg	02 43 54.2	-0.9
CHMG	Chimgan	0.84	82	P	Pn	02 44 05.2	-0.2
CHMG				S	Sb	02 44 15.2	-0.4
IUG	Iuzhnay	1.10	49	P	Pn	02 44 11.4	+2.3
	37nm,0.1s						
IUG				S	Sn	02 44 26.3	+1.4
	147nm,0.2s						
TRKS	Terek-Say	1.68	86	⇓eP	Pg	02 44 20.2	+1.4
TRKS				⇓eS	Sg	02 44 41.7	+1.1
BRLS	Borolday	1.74	23	P	Pb	02 44 18.7	-0.4
	13nm,0.2s						
BRLS				S	Sn	02 44 39.0	-1.5
	116nm,0.2s						
BRLS	Borolday	1.74	23	eP	Pb	02 44 18.7	-0.4
	13nm,0.2s						
BRLS				eS	Sn	02 44 39.0	-1.5
	116nm,0.2s						
BTK	Batken	2.00	133	⇑eP	Pg	02 44 25.4	+0.5
BTK				⇑eS	Sg	02 44 50.5	-0.3
KK31	Karatay Array	2.05	35	⇑Pn	Pg	02 44 26.3	+0.4
	0.7nm,0.1s,baz=220,slow=16,SNR=29						
KK31				Lg	Lg	02 44 55.2	
	9.7nm,0.3s,baz=220,slow=31,SNR=20						
KKAR	Karatay Array	2.05	35	⇑eP	Pg	02 44 26.2	+0.3
KKAR				⇑eS	Sg	02 44 52.5	0.0
ARK	Arkit	2.32	80	⇓eP	Pb	02 44 29.8	+0.6
ARK				⇓eS	Sb	02 44 57.7	-0.6
GAR	Garm	2.66	156	⇓eP	Pb	02 44 34.8	-0.1
GAR				⇓eS	Sb	02 45 07.1	-0.9
MNAS	Manas	2.88	67	⇑eP	Pb	02 44 37.5	-1.2
MNAS				⇑eS	Sn	02 45 10.8	+2.0
DRK	Karamyk	2.95	130	⇑eP	Pb	02 44 39.0	-0.9
DRK				⇑eS	Sb	02 45 13.6	-2.9
MRKS	Merke	3.47	66	Pg	Pg	02 44 52.5	-0.6
	2.7nm,0.2s						
MRKS				Lg	Lg	02 45 36.9	
	6.3nm,0.4s						
MRKS	Merke	3.47	66	eP	Pg	02 44 52.5	-0.6
	2.7nm,0.2s						
MRKS				eS	Sg	02 45 36.9	-1.2
	6.3nm,0.4s						
AML	Almayashu	3.65	77	⇑eP	Pb	02 44 48.2	-3.7
AML				⇑eS	Sn	02 45 30.5	+2.4
KRBS	Karabastau	5.49	63	Pg	Pg	02 45 33.4	+1.7
	0.4nm,0.4s						
KRBS				Lg	Lg	02 46 46.9	
	1.0nm,0.3s						

MEX 22 02:48:12.3±0.8**,16°.45N**×**98°.15W,h12**^{km}±18^{km}**,MD3.3,1D, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.06	158	⇓eP	Pg	02 48 13.2	-1.5
	baz=338,slow=7.9						
PNIG				*i* S	Sg	02 48 15.9	-0.7
YOIG	Yosondua	0.71	55	eP	Pg	02 48 24.0	-2.1
TXIG	Tlaxiaco	0.88	25	eP	Pg	02 48 27.2	-2.2
TXIG				eS	Sg	02 48 39.1	-1.8

WEL 22 03:06:54.1±1.2**,34°S**±7°×**17°9E**±°**,h12**^{km}**,M4.3**/12**, mB4.7**/4**,ML4.4**/14**,MLv4.4**/12**,Mw(mB)4.0**/4**,Error ellipse: s-maj=12.1km s-min=8.7km az=59.5,confirmed, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.93	192	P	Pn	03 07 53.4	-0.9
WMGZ	Waiomatatini S	4.16	191	P	Pn	03 07 57.1	-0.4
HAZ	Te Kaha	4.23	197	P	Pn	03 07 59.7	+1.4
PKGZ	Pakihiroa	4.27	194	P	Pn	03 07 59.0	+0.1
PKGZ				S	Sn	03 08 50.3	+1.6
PUZ	Puketiti	4.43	191	P	Pn	03 08 00.3	-0.9
PUZ				S	Sn	03 08 53.8	+1.0
RUGZ	Raukumara Rang	4.45	198	P	Pn	03 08 01.0	-0.5
RUGZ				S	Sn	03 08 55.2	+1.8
TWGZ	Tauwhareparae	4.59	194	P	Pn	03 08 01.6	-1.7
TWGZ				S	Sn	03 08 58.7	+2.2
WCZ	Waipu Caves	4.69	240	P	Pn	03 08 06.0	+1.2
MWZ	Matawai	4.84	197	P	Pn	03 08 07.3	+0.5
CNGZ	Carnagh Statio	4.84	191	P	Pn	03 08 06.7	-0.1
TKGZ	Te Karaka	4.87	194	P	Pn	03 08 07.3	+0.2
URZ	Urewera	4.89	201	P	Pn	03 08 06.5	-0.9
URZ				S	Sn	03 09 02.2	-1.6
OUZ	Omahuta	5.00	251	P	Pn	03 08 09.6	+0.6
OUZ				S	Sn	03 09 06.9	+0.2
RAGZ	Rawiri	5.02	198	P	Pn	03 08 09.7	+0.4
TOZ	Tahuroa Road	5.09	217	P	Pb	03 08 17.1	-6.0
SNGZ	Shannon Statio	5.31	197	P	Pn	03 08 13.0	-0.3
RAHZ	Arahi	5.50	199	P	Pn	03 08 15.8	-0.1
MTHZ	Maungataniwha	5.51	201	P	Pn	03 08 16.1	0.0
OTVZ	Oturere	6.20	208	P	Pn	03 08 25.9	+0.3

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*IDC **22** 03:34:15.8±2.8,34°.71N×25°.95E,h0^{km},mb3.4/4, mbtmp3.3/7,ML2.3/2,Error ellipse: s-maj=57.9km s-min=24.6km az=180.0*

*ISK **22** 03:34:20.7,35°.44N×25°.88E,h8^{km},ML3.2/26*

*ATH **22** 03:34:22.1,35°.33N×25°.89E,h24^{km}±3^{km},ML3.3/11, Manual Solution by P.Lantzourakis First location: 2019/06/22 03:35:30, This location: 2021/06/08 21:12:59 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

*AFAD **22** 03:34:23.4,35°.53N×26°.15E,h7^{km}±3^{km},ML2.7*

*THE **22** 03:34:25.1,35°N±3°×2°6E±°,h17^{km}±6^{km},M3.4/6, MLh3.4/6*

ISC 22 03:34:21.8±1.1**,35°.44N**±0°.03×**25°.88E**±0°.02**,h7**^{km}±8^{km}**, n79,**σ**1^{s}04**/107**,mb3.4**/4**,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	Zakros	0.43	139	Pg	Pg	03 34 29.8	-0.3
ZKR				Sg	Sg	03 34 35.4	-0.3
ZKR	Zakros	0.43	139	P	Pn	03 34 35.2	+0.9
ZKR	Zakros	0.43	139	P	Pg	03 34 29.8	-0.3
ZKR				S	Sg	03 34 35.1	-0.6
IACM	Heraklion	0.67	259	P	Pb	03 34 35.7	0.0
IACM				S	Sg	03 34 44.8	+1.4
IACM	Heraklion	0.67	259	P	Pb	03 34 35.7	0.0
IACM				S	Sg	03 34 44.0	+0.6
IDI	Anoyia	0.82	260	Pg	Pg	03 34 37.6	+0.1
IDI				Sg	Sg	03 34 48.5	+0.3
IDI	Anoyia	0.82	260	P	Pg	03 34 38.1	+0.6
IDI				S	Sg	03 34 48.5	+0.3
IDI	Anoyia	0.82	260	P	Pg	03 34 37.1	-0.4
IDI				S	Sg	03 34 48.3	+0.1
TMBK	Timbaki Herakl	0.98	248	P	Pg	03 34 40.9	+0.4
TMBK				S	Sg	03 34 53.7	+0.4
TMBK	Timbaki Herakl	0.98	248	P	Pg	03 34 40.5	-0.1
TMBK				S	Sg	03 34 52.8	-0.4
THERA	Ancient Thera,	0.98	341	P	Pn	03 34 42.6	+0.6
THERA				S	Sn	03 34 56.4	+0.3
THR6	Thira Island,	0.99	337	P	Pn	03 34 42.6	+0.5
THRA	Thira	1.04	340	P	Pn	03 34 42.8	+0.1
THRA				S	Sn	03 34 57.8	+0.3
KARP	Karpathos	1.05	84	Pg	Pg	03 34 41.4	-0.6
KARP				Sg	Sg	03 34 56.0	+0.2
KARP	Karpathos	1.05	84	P	Pg	03 34 41.5	-0.6
KARP				S	Sg	03 34 55.9	+0.2
SAP3	Santorini-Thir	1.08	337	P	Pn	03 34 44.1	+0.8
SAP3				S	Sn	03 34 59.3	+0.7
SAP3	Santorini-Thir	1.08	337	P	Pg	03 34 42.4	-0.1
SAP3				S	Sn	03 34 59.4	+0.7
CMBO	Columbo, Santo	1.10	340	P	Pn	03 34 44.2	+0.7
CMBO	Columbo, Santo	1.10	340	P	Pb	03 34 43.6	+0.6
CMBO				S	Sn	03 34 59.3	+0.4
PRNS	Prines Rethymn	1.12	267	P	Pn	03 34 44.4	+0.5
PRNS				S	Sn	03 34 59.6	0.0
PRNS	Prines Rethymn	1.12	267	P	Pg	03 34 43.2	-0.1
PRNS				S	Sg	03 34 58.6	+0.7
ASTA	Astypalaia	1.17	19	P	Pb	03 34 43.8	-0.5
AMGA	Amorgos Island	1.39	1	P	Pn	03 34 46.0	-1.6
CHAN	Chania	1.50	274	P	Pn	03 34 48.8	-0.2
IMMV	Iera Moni Meta	1.55	271	Pn	Pn	03 34 49.3	-0.4
GVD	Gavdhos	1.58	248	Pn	Pn	03 34 50.5	+0.3
GVD	Gavdhos	1.58	248	P	Pn	03 34 49.5	-0.7
APE	Apeiranthos	1.65	350	Pn	Pn	03 34 50.7	-0.5
APE	Apeiranthos	1.65	350	P	Pn	03 34 50.3	-0.9
KLNA	Kalymnos	1.76	30	P	Pn	03 34 53.4	+0.9
KNDR	Palaiochora Ch	1.80	264	Pn	Pn	03 34 53.7	+0.5
KNDR	Palaiochora Ch	1.80	264	P	Pn	03 34 53.1	-0.1
DAT	Datca	1.89	46	Pn	Pn	03 34 54.2	-0.3
DATC	Datca-Mugla	1.96	47	Pn	Pn	03 34 55.1	-0.2
ARG	Arkhangelos	1.99	66	Pn	Pn	03 34 54.9	-0.9
ARG	Arkhangelos	1.99	66	P	Pn	03 34 55.0	-0.7
BODT	Bodrum	1.99	35	Pn	Pn	03 34 55.8	-0.1
ANKY	Antikythira Is	2.14	282	P	Pn	03 34 56.0	-1.9
TURN	Turunc	2.34	55	P	Pn	03 35 00.2	-0.3
TURN				S	Sn	03 35 29.0	-0.4
SMG	Samos	2.39	19	P	Pn	03 35 00.5	-0.9
MLSB	Milas	2.41	39	Pn	Pn	03 35 01.5	-0.1
KTHA	Kythira Island	2.43	290	Pn	Pn	03 35 00.7	-1.1
DALY	Dalyan (Mula)	2.64	58	Pn	Pn	03 35 04.7	0.0
MULA	Mugla, Merkez-	2.68	47	P	Pn	03 35 06.8	+1.4
MULA				S	Sn	03 35 39.1	+1.0
MULA				*i* IAML		03 35 42.0	
	comp=E,47nm,0.6s						
VLI	Veliai	2.70	299	P	Pn	03 35 04.4	-1.1
KARY	Karystos	2.83	336	P	Pn	03 35 07.8	+0.4
SABU	Mula-Dalaman	2.86	60	P	Pn	03 35 08.7	+0.9
SABU				S	Sn	03 35 42.8	+0.4
SABU				*i* IAML		03 35 48.0	
	comp=N,59nm,0.4s						
SABU				*i* IAML		03 35 55.0	
	comp=E,36nm,0.8s						
FETY	Fethiye	2.86	64	Pn	Pn	03 35 08.0	+0.2
IZZE	Mula-Seydike	2.90	69	P	Pn	03 35 08.7	+0.4
IZZE				*i* IAML		03 36 00.0	
	comp=E,75nm,0.4s						
CHOS	Chios island	2.94	3	Pn	Pn	03 35 09.2	+0.2
CHOS	Chios island	2.94	3	P	Pn	03 35 08.1	-0.9
MET4	Agioi Theodoro	2.95	318	P	Pn	03 35 10.6	+1.5
MET5	Makryloggos,Me	2.98	318	P	Pn	03 35 10.9	+1.5
AYDB	Zeytinkoy-Aydi	2.98	32	Pn	Pn	03 35 09.9	+0.3
BLCB	Balcova	3.08	17	Pn	Pn	03 35 10.3	-0.6
AKAS	Kas	3.13	74	P	Pn	03 35 11.8	+0.1
AKAS				*i* IAML		03 36 11.0	
	comp=E,33nm,0.4s						
AKAS				*i* IAML		03 36 14.0	
	comp=N,60nm,0.9s						
DNZT	Denizli-Tavas-	3.14	53	P	Pn	03 35 13.1	+1.4
DNZT				S	Sn	03 35 52.1	+2.7
DNZT				*i* IAML		03 35 53.0	
	comp=E,49nm,0.8s						
DNZT				*i* IAML		03 35 54.0	
	comp=N,62nm,0.6s						
CAME	Cameli-Denizli	3.15	61	Pn	Pn	03 35 12.2	+0.3
TAVA	DENIZLI_Tavas	3.18	50	P	Pn	03 35 14.2	+2.0
TAVA				S	Sn	03 35 52.7	+2.3
TAVA				*i* IAML		03 35 54.0	
	comp=N,22nm,0.2s						
TAVA				*i* IAML		03 36 02.0	
	comp=E,22nm,0.4s						
KNIK	Mula-Seydike	3.31	64	P	Pn	03 35 14.6	+0.6
KNIK				S	Sn	03 35 54.0	+0.4
KNIK				*i* IAML		03 35 57.0	
	comp=E,30nm,0.6s						
ODEM	Odemis-Izmir	3.34	31	Pn	Pn	03 35 14.8	+0.4
DNIZ	Denizli-Tavas-	3.35	48	P	Pn	03 35 16.4	+1.7
DNIZ				*i* IAML		03 36 15.0	
	comp=N,46nm,0.4s						
APMY	Acipayam-Deniz	3.43	53	Pn	Pn	03 35 15.9	+0.3
GOLH	Golhisar	3.48	58	P	Pn	03 35 17.8	+1.5
GOLH				S	Sn	03 36 01.4	+3.6
GOLH				*i* IAML		03 36 03.0	
	comp=N,46nm,0.5s						
GOLH				*i* IAML		03 36 29.0	
	comp=E,50nm,0.7s						
ELL	Elmali	3.52	67	Pn	Pn	03 35 17.4	+0.5
ITM	Ithomi	3.63	300	Pn	Pn	03 35 19.2	+0.8
AKUM	Antalya-Kumluc	3.73	75	P	Pn	03 35 20.8	+1.0
AKUM				S	Sn	03 36 05.1	+1.1
AKUM				*i* IAML		03 36 07.0	
	comp=N,13nm,0.6s						
AKUM				*i* IAML		03 36 12.0	
	comp=E,16nm,0.3s						
INCE	Denizli-Bozkur	3.74	52	P	Pn	03 35 21.6	+1.6
INCE				S	Sn	03 36 04.9	+0.5
INCE				*i* IAML		03 36 08.0	
	comp=E,19nm,0.7s						
INCE				*i* IAML		03 36 17.0	
	comp=N,17nm,0.4s						
SIGR	SIGRI	3.77	360	Pn	Pn	03 35 19.6	-0.6
KULA	Kula-Manisa	3.79	35	Pn	Pn	03 35 21.4	+0.7
GORD	Gordes-Manisa	3.92	27	Pn	Pn	03 35 23.1	+0.7
KORT	Korkueli	3.94	65	P	Pn	03 35 24.9	+2.2
KORT				S	Sn	03 36 11.6	+2.3
KORT				*i* IAML		03 36 21.0	
	comp=E,27nm,0.5s						
KORT				*i* IAML		03 36 41.0	
	comp=N,21nm,0.5s						
BRTR	Keskin Array B	7.50	53	Pn	Pn	03 36 13.3	+1.6
	0.1nm,0.3s,baz=236,slow=17,SNR=5.7						
	0.6nm,0.6s						
AKASG	Malin Array Be	15.45	8	Pn	P	03 38 03.0	-1.5
	0.2nm,0.3s,baz=200,slow=11,SNR=3.8						
GERES	GERESS Array B	16.12	330	Pn	P	03 38 15.0	+2.8
	baz=149,slow=16,SNR=3.9						
	0.4nm,0.7s						
ESDC	Sonseca Array	23.97	289	P	P	03 39 34.7	-2.1
	0.2nm,0.6s,baz=82,slow=10.0,SNR=4.3						
	0.2nm,0.6s						
EKA	Eskdalemuir Ar	28.15	324	P	P	03 40 14.4	+0.1
	0.3nm,0.5s,baz=116,slow=9.2,SNR=5.2						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	40.49	51	P	P	03 42 00.1	-0.9
	0.3nm,0.4s,baz=275,slow=8.4,SNR=2.0						
	0.3nm,0.4s						
MKAR	Makanchi Array	43.13	57	P	P	03 42 20.6	-2.1
	0.4nm,0.4s,baz=269,slow=8.4,SNR=8.0						
	0.4nm,0.4s						

IDC 22 03:37:14.6±332.0**,48°.49N**×**152°.47E,h0**^{km}**,Error ellipse: s-maj=188.2km s-min=120.4km az=24.0,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I44RU	PETROPAVLOVSK-	5.69	34	I	I	04 11 30.0	
	0.2nm,1.5s,baz=218,slow=310,SNR=7.1						
I30JP	ISUMI INFRASON	15.95	219	I	I	05 12 50.0	
	0.1nm,1.4s,baz=29,slow=307,SNR=5.0						

I34MN	SONGINO INFRAS	30.38	286	I	I	06 43 10.0	
	baz=73,slow=317,SNR=2.2						

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*IDC **22** 03:44:04.5±1.1, 1°.74N×126°.32E, h0^{km}, mb4.2/8, mbtmp4.1/9, ML3.9/1, MS3.2/2, Error ellipse: s-maj=83.3km s-min=15.2km az=65.0*

*DJA **22** 03:44:09.8±1.4, 2°N±3°×12°7E±°, h25^{km}±13^{km}, M4.2/11, mB4.5/1, mb4.4/1, MLv4.1/11, Mw(mB)3.7/1*

ISC 22 03:44:10.5±0.8**, 1°.80N**±0°.06×**126°.63E**±0°.08**, h47**^{km}**, n17, σ1**^{s}**.06**/18**, mb4.2**/8**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.25	144	P	Pn	03 44 31.4	-0.2
SGSI	Sangihe	2.18	330	P	Pn	03 44 44.0	-0.3
SGSI				S	Sn	03 45 10.7	+0.6
KMSI	Cibinong	2.91	245	P	Pn	03 44 53.8	-0.6
KMSI				S	Sn	03 45 27.3	-0.9
SANI	Sanana	3.87	190	P	Pn	03 45 07.1	-0.5
LUWI	Luwuk	4.78	234	P	Pn	03 45 20.8	+0.8
MRSI	Marisa	4.87	254	P	Pn	03 45 29.5	+8.3
MPSI	Mapaga	6.88	258	P	Pn	03 45 50.2	+1.3
FITZ	Fitzroy Crossi	19.79	183	P	P	03 48 37.0	-0.1
	0.3nm,0.3s,baz=22,slow=8.6,SNR=5.8						
	2.6nm,0.6s						
WRA	Warramunga Arr	22.89	161	P	P	03 49 08.8	-1.5
	3.1nm,0.4s,baz=339,slow=11,SNR=14						
	3.1nm,0.4s						
ASAR	Alice Springs	26.28	165	P	P	03 49 42.6	+0.9
	1.5nm,0.6s,baz=348,slow=13,SNR=19						
ASAR				PcP	PcP	03 53 08.4	+1.0
	0.1nm,0.3s,baz=343,slow=2.8,SNR=4.8						
	1.5nm,0.6s						
CMAR	Chiang Mai Arr	31.80	303	P	P	03 50 28.4	-2.5
	1.5nm,0.3s,baz=106,slow=6.6,SNR=4.0						
	1.5nm,0.3s						
MJAR	Matsushiro Arr	36.20	16	LR	LR	04 05 20.5	
	comp=Z,30nm,21.3s,baz=96,slow=35						
STKA	Stephens Creek	36.37	158	P	P	03 51 11.2	+0.9
	0.7nm,0.3s,baz=336,slow=7.1,SNR=6.0						
	0.7nm,0.3s						
MKAR	Makanchi Array	59.09	326	P	P	03 54 05.8	-0.3
	0.9nm,0.4s,baz=120,slow=8.0,SNR=18						
MKAR				LR	LR	04 21 32.4	
	comp=Z,22nm,18.1s,baz=154,slow=38						
	0.9nm,0.4s						
KURBB	Kurchatov Arra	63.31	328	P	P	03 54 34.5	-0.1
	1.5nm,0.5s,baz=130,slow=6.3,SNR=12						
	1.5nm,0.5s						
BVAR	Borovoye Array	68.88	327	P	P	03 55 10.2	-0.1
	0.8nm,0.5s,baz=141,slow=5.7,SNR=3.5						
	0.8nm,0.5s						
FINES	FINESS Array B	93.48	332	P	P	03 57 22.1	+1.2
	1.5nm,0.9s,baz=150,slow=4.2,SNR=5.2						
	1.5nm,0.9s						

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*OSPL **22** 03:56:03.8±5.6, 19°.65N×67°.84W, h0^{km}±53^{km}, ML3.7*

*IDC **22** 03:56:03.7±1.6, 19°.35N×68°.09W, h0^{km}, mb3.4/3, mbtmp3.5/4, ML4.3/1, Error ellipse: s-maj=57.7km s-min=21.5km az=29.0*

*NEIC **22** 03:56:04.8±1.6, 19°.41N±0°.06×68°.00W±0°.04, h10^{km}±1^{km}, mb4.1/9, ML3.9/32, Md3.2/21(RSPR), Error ellipse: s-maj=11.2km s-min=4.7km az=31.0*

*SDD **22** 03:56:06.5±3.6, 19°.33N×68°.10W, h23^{km}±90^{km}, MD3.7, ML3.8*

*RSPR **22** 03:56:06.0, 19°.50N×68°.08W, h8^{km}±6^{km}, MD3.2/21*

ISC 22 03:56:04.2±1.3**, 19°.43N**±0°.04×**68°.06W**±0°.02**, h11**^{km}±9^{km}**, n124, σ1**^{s}**.75**/157**, mb4.0**/8**, 15C-8D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
PCDR	Punta Cana, DR	0.96	198	*e*Pg	Pb	03 56 20.1	-2.7
PCDR				*e*Sg	Sb	03 56 33.5	-2.0
MIDR	Miches	1.03	245	*e*Pg	Pb	03 56 22.9	-1.2
MIDR				*e*Sg	Sb	03 56 36.6	-1.0
MIDR				IAML		03 56 38.0	
	comp=N,1μm,0.3s						
HIDR	Higuey Centro	1.04	217	⇓*e*P	Pb	03 56 21.3	-2.8
HIDR	Higuey Centro	1.04	217	⇑*e*Pg	Pb	03 56 21.4	-2.8
HIDR				*e*Sg	Sb	03 56 34.2	-3.6
HIDR				IAML		03 56 35.3	
	comp=N,2μm,0.2s						
SMDR	Samana, DR	1.07	263	⇑*e*P	Pb	03 56 23.9	-0.8
SMDR	Samana, DR	1.07	263	*e*S	Sb	03 56 37.5	-1.2
SMDR	Samana, DR	1.07	263	*e*Pg	Pb	03 56 23.6	-1.1
SMDR				*e*Sg	Sn	03 56 39.5	-0.6
SMDR				IAML		03 56 41.1	
	comp=N,2μm,0.6s						
IDE	Isla Desecheo	1.18	152		Pn	03 56 23.9	-2.7
IDE					Sb	03 56 40.2	-1.5
IDE	Isla Desecheo	1.18	152	⇓*e*P	Pn	03 56 23.9	-2.7
IDE	Isla Desecheo	1.18	152	*e*S	Sb	03 56 40.2	-1.5
AGPR	Aguadilla, PR	1.31	137		Sb	03 56 44.1	-1.5
AGPR	Aguadilla, PR	1.31	137		Pn	03 56 26.6	-1.9
AGPR				IAML		03 56 48.2	
	comp=N,1μm,0.7s						
AGPR				IAML		03 56 53.5	
	comp=E,2μm,0.5s						
AGPR	Aguadilla, PR	1.31	137	⇑*e*P	Pn	03 56 27.0	-1.4
AGPR	Aguadilla, PR	1.31	137	*e*S	Sb	03 56 44.1	-1.5
AGPR	Aguadilla, PR	1.31	137	*e*Pg	Pn	03 56 28.2	-0.3
AGPR				*e*Sg	Sg	03 56 46.1	-0.3
AGPR				IAML		03 56 49.1	
	comp=N,2μm,0.3s						
AGPR	Aguadilla, PR	1.31	137	*i* P	Pn	03 56 27.4	-1.1
AGPR				*e*S	Sn	03 56 45.7	-0.2
AGPR				IAML		03 56 51.1	
	comp=Z,948nm,0.2s						
DR12	Loma Pena Alta	1.40	243		Pn	03 56 28.2	-1.6
HATOM	Hato Mayor del	1.40	243	⇑*e*Pg	Pn	03 56 28.9	-0.8
HATOM				*e*Sg	Sn	03 56 47.5	-0.7
HATOM				IAML		03 56 47.7	
	comp=N,2μm,0.5s						
PRSN	Puerto Rico Se	1.48	144		Pn	03 56 29.9	-0.9
PRSN					Sn	03 56 49.0	-1.2
PRSN	Puerto Rico Se	1.48	144	⇑*e*P	Pn	03 56 29.9	-0.9
PRSN	Puerto Rico Se	1.48	144	*e*S	Sn	03 56 49.0	-1.2
PRSN	Puerto Rico Se	1.48	144	*e*Pg	Pg	03 56 32.4	-0.3
PRSN				*e*Sg	Sg	03 56 51.4	-0.6
PRSN				IAML		03 57 01.0	
	comp=N,3μm,0.3s						
LSP	Las Mesas	1.55	143		Pn	03 56 30.2	-1.6
LSP					Sb	03 56 52.3	-0.3
LSP	Las Mesas	1.55	143	⇑*e*P	Pn	03 56 30.2	-1.6
LSP	Las Mesas	1.55	143	*e*S	Sb	03 56 52.3	-0.3
AOPR	Arecibo Observ	1.64	131		Pn	03 56 32.7	-0.3
AOPR					Sb	03 56 54.5	-0.7
AOPR	Arecibo Observ	1.64	131	IAML		03 57 02.1	
	comp=N,2μm,0.4s						
AOPR	Arecibo Observ	1.64	131	⇓*e*P	Pn	03 56 32.7	-0.3
AOPR	Arecibo Observ	1.64	131	*e*S	Sb	03 56 54.5	-0.7
AOPR	Arecibo Observ	1.64	131	*e*P	Pn	03 56 32.2	-0.7
AOPR	Arecibo Observ	1.64	131	*e*Pg	Pn	03 56 33.1	+0.1
AOPR				*e*Sg	Sg	03 56 56.7	-0.3
AOPR				IAML		03 57 01.9	
	comp=N,1μm,0.5s						
CRPR	Cabo Rojo, PR	1.68	147		Pn	03 56 32.0	-1.5
CRPR					Sb	03 56 56.2	0.0
CRPR	Cabo Rojo, PR	1.68	147	⇑*e*P	Pn	03 56 32.0	-1.5
CRPR	Cabo Rojo, PR	1.68	147	*e*S	Sb	03 56 56.2	0.0
CRPR	Cabo Rojo, PR	1.68	147	*e*Pg	Pn	03 56 33.8	+0.4
CRPR				*e*Sg	Sb	03 56 56.4	+0.2
CRPR				IAML		03 57 07.3	
	comp=N,702nm,0.6s						
CRPR	Cabo Rojo, PR	1.68	147	*i* P	Pn	03 56 34.0	+0.5
CRPR				*e*S	Sn	03 56 55.0	+0.1
CRPR				IAML		03 57 03.4	
	comp=Z,2μm,0.5s						
NADR	Nagua	1.69	268	*e*Pg	Pn	03 56 34.2	+0.5
NADR				*e*Sg	Sg	03 57 00.2	+1.5
NADR				IAML		03 57 11.7	
	comp=N,4μm,0.4s						
UUPR	Utuado, UPR, P	1.73	132		Pn	03 56 33.9	-0.3
UUPR					Sn	03 56 56.4	+0.2
UUPR	Utuado, UPR, P	1.73	132	⇓*e*P	Pn	03 56 33.9	-0.3
UUPR	Utuado, UPR, P	1.73	132	*e*S	Sn	03 56 56.4	+0.2
EMPR	Esperanza - Ma	1.73	123		Pn	03 56 34.6	+0.4
EMPR					Sn	03 56 55.5	-0.8
EMPR	Esperanza - Ma	1.73	123	IAML		03 57 02.3	
	comp=N,2μm,0.7s						
EMPR	Esperanza - Ma	1.73	123	⇑*e*P	Pn	03 56 34.6	+0.4
EMPR	Esperanza - Ma	1.73	123	*e*S	Sn	03 56 55.5	-0.8
MLPR	Magueyes Islan	1.74	146	⇑*e*P	Pn	03 56 34.0	-0.4
MLPR	Magueyes Islan	1.74	146	*e*S	Sn	03 56 56.0	-0.5
MLPR	Magueyes Islan	1.74	146	*e*Pg	Pb	03 56 35.2	-0.9
MLPR				*e*Sg	Sb	03 56 57.8	-0.3
MLPR				IAML		03 57 02.9	
	comp=N,232nm,0.6s						
CADR	Cabrera	1.79	278	*e*Pg	Pb	03 56 36.6	-0.3
CADR				*e*Sg	Sg	03 57 02.4	+0.7
CADR				IAML		03 57 10.4	
	comp=N,1μm,0.7s						
GBPR	Guanica, Bosqu	1.83	142		Pb	03 56 36.4	-1.2
GBPR	Guanica, Bosqu	1.83	142	⇓*e*P	Pb	03 56 36.4	-1.2
DR08	Loma La Naviza	1.91	256	*e*Pg	Pn	03 56 37.3	+0.6
DR08				*e*Sg	Sb	03 57 02.4	-0.6
DR08				IAML		03 57 05.8	
	comp=N,8μm,0.2s						
CELP	Cerrillos	1.94	134		Pn	03 56 37.4	+0.2
CELP					Sn	03 57 01.3	-0.3
CELP	Cerrillos	1.94	134	IAML		03 57 08.4	
	comp=E,1μm,0.7s						
CELP	Cerrillos	1.94	134	⇑*e*P	Pn	03 56 37.4	+0.2
CELP	Cerrillos	1.94	134	*e*S	Sn	03 57 01.3	-0.3
CELP	Cerrillos	1.94	134	*e*Pg	Pn	03 56 37.7	+0.5
CELP				*e*Sg	Sb	03 57 03.8	-0.2
CELP				IAML		03 57 07.7	
	comp=N,1μm,0.5s						
OBIP	Obispado Ponce	1.95	135		Pn	03 56 37.4	+0.2
OBIP					Sn	03 57 02.2	+0.5
OBIP	Obispado Ponce	1.95	135	IAML		03 57 05.8	
	comp=N,990nm,0.6s						
OBIP				IAML		03 57 05.9	
	comp=E,1μm,0.6s						
OBIP	Obispado Ponce	1.95	135	⇓*e*P	Pn	03 56 37.4	+0.2
OBIP	Obispado Ponce	1.95	135	*e*S	Sn	03 57 02.2	+0.5
ECPR	Experimental S	1.95	124	⇓*e*P	Pn	03 56 36.9	-0.4
ECPR	Experimental S	1.95	124	*e*S	Sn	03 57 01.7	0.0
SDD	Santo Domingo	2.00	241		Pn	03 56 38.7	+0.8
SDD					Sn	03 57 01.8	-1.2
SDD	Santo Domingo	2.00	241	IAML		03 57 04.5	
	comp=N,535nm,0.9s						
SDD	Santo Domingo	2.00	241	⇑*i*P	Pn	03 56 38.7	+0.8
SDD	Santo Domingo	2.00	241	*e*S	Sn	03 57 01.8	-1.2
SDD	Santo Domingo	2.00	241	*e*Pg	Pn	03 56 38.4	+0.5
SDD				*e*Sg	Sb	03 57 03.8	-1.7
SDD				IAML		03 57 04.0	
	comp=N,182nm,0.9s						
SDD	Santo Domingo	2.00	241	*i* P	Pn	03 56 38.8	+0.8
SDD				*e*S	Sn	03 57 03.4	+0.5
GCPR	Guaynabo City	2.18	120		Pn	03 56 40.0	-0.4
GCPR					Sn	03 57 05.2	-2.2
GCPR	Guaynabo City	2.18	120	⇑*e*P	Pn	03 56 40.0	-0.4
GCPR	Guaynabo City	2.18	120	*e*S	Sn	03 57 05.2	-2.2
LOSC1	San Cristbal	2.19	243	*i* P	Pg	03 56 56.2	+10
LOSC1				*e*S	Sg	03 57 22.8	+8.2
SJG	San Juan	2.23	126		Pn	03 56 41.1	0.0
SJG	San Juan	2.23	126	IAML		03 57 18.3	
	comp=N,652nm,0.5s						
SJG				IAML		03 57 19.1	
	comp=N,637nm,0.6s						
SJG	San Juan	2.23	126	Pn	Pn	03 56 41.4	+0.3
	comp=N,80nm,0.3s,baz=307,slow=13,SNR=43						
SJG				Sn	Sb	03 57 11.7	-0.5
	comp=N,31nm,0.3s,baz=216,slow=5.5,SNR=6.7						
	comp=N,190nm,0.4s						
SJG	San Juan	2.23	126	⇑*e*P	Pn	03 56 41.1	0.0
SJG	San Juan	2.23	126	*e*S	Sn	03 57 09.9	+1.2
SJG	San Juan	2.23	126	*e*P	Pn	03 56 40.9	-0.2
SJG	San Juan	2.23	126	*i* P	Pn	03 56 41.5	+0.3
SJG				*e*S	Sn	03 57 07.2	-1.5
SJG				IAML		03 57 19.0	
	comp=Z,343nm,0.6s						
IGPR	InterUniversit	2.36	128		Pn	03 56 42.6	-0.2
IGPR					Sb	03 57 13.4	-2.3
IGPR	InterUniversit	2.36	128	IAML		03 57 17.6	
	comp=E,726nm,0.3s						
IGPR				IAML		03 57 19.4	
	comp=N,630nm,0.3s						
IGPR	InterUniversit	2.36	128	⇓*e*P	Pn	03 56 42.6	-0.2
IGPR	InterUniversit	2.36	128	*e*S	Sb	03 57 13.4	-2.3
PDPR	Patillas Dam,	2.39	126		Pn	03 56 42.9	-0.4
PDPR	Patillas Dam,	2.39	126	⇑*e*P	Pn	03 56 43.4	+0.1
PDPR	Patillas Dam,	2.39	126	*e*S	Sn	03 57 12.4	-0.1
BANI	BANI	2.41	245		Pn	03 56 44.2	+0.6
BANI	BANI	2.41	245	*e*Pg	Pb	03 56 45.8	-1.8
BANI				*e*Sg	Sn	03 57 14.7	+1.5
BANI				IAML		03 57 20.1	
	comp=N,636nm,0.4s						
HUMP	Col San Antoni	2.46	121		Pn	03 56 43.9	-0.2
HUMP					Sn	03 57 14.7	+0.6
HUMP	Col San Antoni	2.46	121	IAML		03 57 25.3	
	comp=E,366nm,0.3s						
HUMP	Col San Antoni	2.46	121	⇑*e*P	Pn	03 56 43.9	-0.2
HUMP	Col San Antoni	2.46	121	*e*S	Sn	03 57 14.7	+0.6
ABDR	Alto Bandera	2.50	256	*e*Pg	Pb	03 56 47.2	-2.1
ABDR				*e*Sg	Sb	03 57 19.6	-0.7
ABDR				IAML		03 57 26.8	
	comp=N,613nm,0.3s						
SC01	Santiago de lo	2.52	270		Pb	03 56 48.7	-0.7
SC01				IAML		03 57 37.8	
	comp=E,800nm,0.7s						
SDDR	Presa de Saban	3.08	262		Pn	03 56 54.2	+1.4
SDDR				IAML		03 57 48.0	
	comp=E,404nm,1.1s						
SDDR				IAML		03 57 54.0	
	comp=E,317nm,0.8s						
SDDR	Presa de Saban	3.08	262	⇑*e*P	Pn	03 56 54.2	+1.4
SDDR				*e*S	Sb	03 57 36.6	-0.1
SDDR				IAML		03 57 45.0	
	comp=E,212nm,0.5s						
SDDR				IAML		03 57 45.9	
	comp=E,181nm,0.7s						
SDDR	Presa de Saban	3.08	262	*i* P	Pn	03 56 54.6	+1.8
SDDR				*e*S	Sb	03 57 35.5	-1.2
SDDR				IAML		03 57 55.0	
	comp=Z,190nm,0.6s						
PODR	Polo	3.30	248	*i* P	Pn	03 56 57.9	+2.0
PODR				*e*S	Sb	03 57 44.8	+1.7
LODU1	El Espartillar	3.40	252	*i* P	Pn	03 56 59.6	+2.4
GRTK	Grand Turk	3.55	306	*i* P	Pn	03 56 58.8	-0.4
LOBH	Bahia de las A	3.73	246	*i* P	Pn	03 57 03.6	+1.8
MASC	Masc	5.86	278	*e*P	Pn	03 57 26.9	-4.1
MASC				*e*S	Sn	03 58 33.0	-5.2
ANWB	Willy Bob	6.21	105	*e*P	Pn	03 57 34.1	-1.7
QMBU	Quimbuelo	6.40	278	*e*P	Pn	03 57 35.0	-3.5
QMBU				*e*S	Sn	03 58 45.2	-6.4
QMBU				IAML		03 58 50.5	
	comp=E,12nm,0.4s						
QMBU				IAML		03 58 50.6	
	comp=N,8.8nm,0.2s						
ANBD	Bethesda, Anti	6.43	111	*e*P	Pn	03 57 37.6	-1.3
MOAC	Moa	6.60	282	*e*P	Pn	03 57 37.5	-3.7
NMDO	Nuevo Mundo	6.61	281	*e*P	Pn	03 57 37.2	-4.0
NMDO				*e*S	Sn	03 58 50.6	-5.9
GTBY	Guantanamo Bay	6.66	275	*e*P	Pn	03 57 38.8	-3.2
RCC	Rio Carpintero	7.21	276	*e*P	Pn	03 57 46.4	-3.2
PINC	Pinares de May	7.35	280	*e*P	Pn	03 57 47.1	-4.3
BAUV	El Baul	10.42	180		Pn	03 58 33.6	-0.1
BBSR	BB Station	13.24	13	Pn	Pn	03 59 12.6	+0.5
BOAV	Boa Vista	18.46	156	P	Pn	04 00 19.8	-0.4
Y49A	Blount Mountai	21.76	315	P	P	04 00 55.8	-0.1
Y49A				IAmb	IAmb	04 01 26.0	
	comp=Z,9.3nm,1.2s						
WVT	Waverly	24.06	318	P	P	04 01 20.2	+0.7
WVT				IAmb	IAmb	04 01 22.6	
	comp=Z,4.4nm,1.1s						
TXAR	Lajitas Array	33.78	294	P	P	04 02 47.4	+1.0
	comp=Z,0.4nm,0.6s,baz=113,slow=9.3,SNR=8.8						
	comp=Z,0.4nm,0.6s						
TX31	Lajitas Ar. Si	33.78	294	P	P	04 02 46.8	+0.4
ECSD	EROS Data Cent	34.04	322	P	P	04 02 49.2	+0.9
VHRN	Van Horn	35.15	296	P	P	04 02 59.5	+1.3
VHRN				IAmb	IAmb	04 03 42.3	
	comp=Z,3.5nm,1.4s						
SDCO	Great Sand Dun	37.29	307	P	P	04 03 18.0	+1.4
SDCO				IAmb	IAmb	04 03 18.8	
	comp=Z,2.0nm,0.6s						
PV12	Saucer Basin,	39.95	307	P	P	04 03 40.0	+1.1
PV12				IAmb	IAmb	04 04 20.1	
	comp=Z,5.1nm,0.8s						
PV18	Skein Mesa, Pa	40.01	307	P	P	04 03 41.5	+2.1
ESDC	Sonseca Array	58.10	55	P	P	04 05 59.4	+1.5
	comp=Z,0.6nm,0.8s,baz=288,slow=7.4,SNR=5.1						
	comp=Z,0.6nm,0.8s						
ILAR	Eielson Array	67.84	333	P	P	04 07 04.3	+2.1
	comp=Z,0.2nm,0.7s,baz=82,slow=8.3,SNR=2.5						
	comp=Z,0.2nm,0.7s						

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*SOME **22** 04:11:06.0, 41°.48N×83°.32E, h5^{km}*

*NNC **22** 04:11:08.4±1.1, 41°.52N×83°.21E, h21^{km}±6^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=7.8km s-min=6.2km az=154.0*

ISC 22 04:11:05.7±2.4**, 41°.5N**±0°.1×**83°.27E**±0°.08**, h10**^{km}**, n32, σ2**^{s}**.41**/43**, 8C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	2.91	313	Pg	Pg	04 12 01.6	0.0
	8.3nm,0.7s						
KTMS				Lg	Lg	04 12 41.5	
	26nm,0.4s						
KTMS	Ketmen	2.91	313	*e*P	Pg	04 12 01.6	0.0
	8.3nm,0.7s						
KTMS				*e*S	Sg	04 12 41.5	+2.2
	26nm,0.4s						
SHLS	Shalkode	3.28	302	Pg	Pb	04 12 02.1	-2.0
	32nm,0.4s						
SHLS				Lg	Lg	04 12 42.3	
	240nm,0.5s						
SHLS	Shalkode	3.28	302	*e*P	Pb	04 12 02.1	-2.0
	32nm,0.4s						
SHLS				*e*S	Sb	04 12 42.3	-1.8
	240nm,0.5s						
PDGK	Podgornoye	3.35	305	⇑Pn	Pn	04 11 59.3	+1.0
	2.2nm,0.6s						
PDGK				⇑Pg	Pg	04 12 09.9	0.0
	20nm,0.8s						
PDGK				⇑Lg	Lg	04 12 54.9	
	171nm,0.8s						
UZB	Uzynbulak	3.56	299	Pg	Pb	04 12 10.8	+1.9
	9.3nm,0.3s						
UZB				Lg	Lg	04 12 57.4	
	50nm,0.5s						
DJR	Jarkent	3.82	319	Pg	Pg	04 12 17.4	-1.6
	11nm,0.7s						
DJR				Lg	Lg	04 13 08.7	
	29nm,0.7s						
DJR	Jarkent	3.82	319	*e*P	Pg	04 12 17.4	-1.6
	11nm,0.7s						
DJR				*e*S	Sg	04 13 08.7	+0.2
	29nm,0.7s						
SATY	Saty	3.94	295	Pg	Pb	04 12 18.9	+3.6
	8.5nm,0.7s						
SATY				Lg	Lg	04 13 11.2	
	79nm,0.5s						
KNOS	Konyrlen	4.16	315	Pg	Pg	04 12 23.4	-2.0
	11nm,0.7s						
KNOS				Lg	Lg	04 13 19.1	
	12nm,0.2s						
BLB	Baldybastay	4.39	308	Pg	Pb	04 12 26.8	+3.8
	36nm,0.5s						
BLB				Lg	Lg	04 13 24.7	
	42nm,0.7s						
KAPS	Kapalarasan	4.75	324	Pg	Pg	04 12 34.7	-1.9
	11nm,0.3s						
KAPS				Lg	Lg	04 13 38.3	
	23nm,0.5s						
ARXS	Arharly	4.84	306	Pg	Pg	04 12 36.1	-2.3
	5.3nm,0.7s						
ARXS				Lg	Lg	04 13 40.7	
	19nm,0.6s						
KOTS	Kotyrbulak	4.88	293	Pg	Pb	04 12 35.6	+4.1
	12nm,0.7s						
KOTS				Lg	Lg	04 13 39.9	
	58nm,0.6s						
KOTS	Kotyrbulak	4.88	293	*e*P	Pb	04 12 35.6	+4.1
	12nm,0.7s						
KOTS				*e*S	Sg	04 13 39.9	-2.6
	58nm,0.6s						
MDOK	Medeo	4.91	292	Pg	Pb	04 12 36.0	+4.2
	4.9nm,0.3s						
MDOK				Lg	Lg	04 13 40.8	
	14nm,0.8s						
MTBS	Maitube	5.33	290	Pg	Pg	04 12 45.1	-2.7
	4.1nm,0.2s						
MTBS				Lg	Lg	04 13 56.2	
	20nm,0.4s						
MTBS	Maitube	5.33	290	*e*P	Pg	04 12 45.1	-2.7
	4.1nm,0.2s						
MTBS				*e*S	Sg	04 13 56.2	-0.7
	20nm,0.4s						
KTBS	Karatobe	5.35	297	Pg	Pg	04 12 45.7	-2.4
	5.1nm,0.7s						
KTBS				Lg	Lg	04 13 57.3	
	48nm,0.8s						
MK31	Makanchi Array	5.35	353	⇑Pn	Pn	04 12 25.5	-0.2
	baz=157,slow=13,SNR=13						
MK31				⇑Pg	Pg	04 12 45.0	-3.3
	1.6nm,0.4s,baz=168,slow=14,SNR=13						
MK31				⇑Sn	Sn	04 13 28.5	+1.2
	0.4nm,0.2s,baz=0.0,slow=0.1,SNR=6.0						
MK31				⇓Lg	Lg	04 13 58.1	
	7.3nm,0.7s,baz=176,slow=22,SNR=4.4						
MAKZ	Makanchi	5.40	351	⇓Pn	Pn	04 12 27.0	+0.7
	1.1nm,0.9s						
MAKZ				⇓Pg	Pg	04 12 46.4	-2.8
	2.8nm,0.6s						
MAKZ				⇓Lg	Lg	04 14 00.1	
	26nm,1.1s						
KST	Kastek	5.64	288	Pg	Pg	04 12 50.9	-2.9
	5.9nm,0.9s						
KST				Lg	Lg	04 14 06.1	
	32nm,0.8s						
KST	Kastek	5.64	288	*e*P	Pg	04 12 50.9	-2.9
	5.9nm,0.9s						
KST				*e*S	Sg	04 14 06.2	-0.6
	32nm,0.8s						
KUU	Kurty	5.64	298	Pg	Pg	04 12 51.7	-2.2
	3.0nm,0.1s						
KUU				Lg	Lg	04 14 07.6	
	35nm,0.6s						
KUU	Kurty	5.64	298	*e*P	Pg	04 12 51.7	-2.2
	3.0nm,0.1s						
KUU				*e*S	Sg	04 14 07.6	+0.6
	35nm,0.6s						
TKM2	Tokmak 2	5.88	287	⇑Pn	Pn	04 12 34.2	+1.1
	1.1nm,0.5s						
TKM2				⇓Pg	Pg	04 12 55.2	-3.1
	3.4nm,0.7s						
TKM2				⇑Lg	Lg	04 14 14.9	
	36nm,0.9s						
KRBS	Karabastau	6.02	294	Pg	Pg	04 12 58.5	-2.6
	2.1nm,0.6s						
KRBS				Lg	Lg	04 14 19.5	
	6.0nm,0.6s						
MRKS	Merke	7.57	283	Pg	Pg	04 13 26.3	-4.4
	2.3nm,0.2s						
MRKS				Lg	Lg	04 15 07.1	
	7.8nm,0.6s						
MRKS	Merke	7.57	283	*e*P	Pg	04 13 26.3	-4.4
	2.3nm,0.2s						
MRKS				*e*S	Sg	04 15 07.0	-1.7
	7.8nm,0.6s						
BTLS	Baital	7.61	301	Pg	Pg	04 13 28.2	-3.2
	2.2nm,0.6s						
BTLS				Lg	Lg	04 15 10.4	
	2.4nm,0.5s						
BTLS	Baital	7.61	301	*e*P	Pg	04 13 28.2	-3.2
	2.2nm,0.6s						
BTLS				*e*S	Sg	04 15 10.4	+0.5
	2.4nm,0.5s						
KK31	Karatay Array	9.59	284	⇓Lg	Lg	04 16 12.3	
	1.7nm,0.6s,baz=347,slow=41,SNR=4.4						

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*CATAC **22** 04:54:47.5±0.9, 13°N±4°×8°8W±°, h28^{km}±6^{km}, M3.0/15, MLv3.0/15, Error ellipse: s-maj=9.9km s-min=3.2km az=28.0, confirmed*

*GCG **22** 04:54:48.6±0.3, 12°.62N×88°.40W, h66^{km}±29^{km}, MD3.8*

*SNET **22** 04:54:48.9±1.1, 12°.66N×88°.36W, h33^{km}±6^{km}, ML2.5*

ISC 22 04:54:46.9±1.7**, 12°.54N**±0°.07×**88°.38W**±0°.04**, h27**^{km}±14^{km}**, n44, σ0**^{s}**.65**/56**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
LCY	Lacayo	0.88	5	*e*P	Pn	04 55 03.7	+0.1
RANC	El Ranchito	0.90	5	P	Pn	04 55 04.0	+0.2
LCND	La Caada	0.90	32	*e*P	Pn	04 55 03.5	-0.3
LCND				IAML		04 55 16.4	
	comp=Z,138nm,0.3s						

LCND	La Caada	0.90	32	P	Pn	04 55 03.4	-0.3
CNCH	Conchagua	0.91	36	eP	Pn	04 55 03.8	-0.1
CNCH	Conchagua	0.91	36	P	Pn	04 55 03.1	-0.8
CNCH	Conchagua	0.91	36	S	Sb	04 55 16.3	+0.5
PACA	Pacayal	0.93	3	eP	Pn	04 55 04.6	+0.3
PACA				eS	Sb	04 55 16.8	+0.3
PACA	Pacayal	0.93	3	S	Sb	04 55 17.8	+1.4
PACA	Pacayal	0.93	3	P	Pb	04 55 04.8	+0.3
TECA	Tecapa	0.96	353	eP	Pn	04 55 04.7	0.0
TECA				eP	Pn	04 55 04.8	0.0
POTN	Potosi Cosigui	0.96	61	P	Pn	04 55 04.4	-0.2
POTN				S	Sb	04 55 17.8	+0.5
PQSS	Presa 15 de Se	1.10	351	eP	Pn	04 55 06.8	+0.4
PQSS				eS	Sn	04 55 20.2	-0.6
PQSS	Presa 15 de Se	1.10	351	P	Pn	04 55 06.9	+0.5
UESV	Universidad de	1.17	340	S	Sb	04 55 22.8	-0.4
UESV	Universidad de	1.17	340	P	Pn	04 55 07.9	+0.5
LFRS	El Faro	1.27	328	eP	Pn	04 55 09.1	+0.1
LFRS				eS	Sn	04 55 24.9	-0.3
PAVA	Las Pavas	1.29	335	eP	Pn	04 55 09.9	+0.7
PAVA				eS	Sn	04 55 25.6	-0.1
PAVA	Las Pavas	1.29	335	P	Pn	04 55 10.0	+0.7
PAVA	Las Pavas	1.29	335	S	Sb	04 55 27.3	+0.5
CRIN	San Cristobal	1.30	83	P	Pn	04 55 09.5	+0.2
LOMA	Loma Larga	1.35	325	eP	Pn	04 55 10.4	+0.3
PKGN	Cerro Pekin	1.37	84	P	Pn	04 55 10.4	+0.2
PKGN				S	Sn	04 55 27.6	+0.1
LFU	La Fuente	1.40	329	eP	Pn	04 55 11.4	+0.7
BOQS	Boqueron	1.48	324	eP	Pn	04 55 12.7	+0.7
PMON	Piamonte	1.48	322	eP	Pn	04 55 12.4	+0.6
PMON				eS	Sb	04 55 31.7	-0.7
PMON	Piamonte	1.48	322	P	Pn	04 55 12.6	+0.7
JAYA	Jayaque - finc	1.53	317	eP	Pn	04 55 12.6	+0.1
JAYA				eS	Sn	04 55 30.3	-1.2
JAYA				IAML		04 55 36.4	
	comp=Z,114nm,0.2s						
JAYA	Jayaque - finc	1.53	317	i P	Pn	04 55 12.7	+0.2
JAYA				i S	Sn	04 55 31.6	0.0
JAYA	Jayaque - finc	1.53	317	P	Pn	04 55 13.3	+0.8
CNGA	Al SSO del Vol	1.63	91	P	Pn	04 55 14.1	+0.2
CNGN	Cerro Negro	1.64	91	S	Sn	04 55 34.4	+0.2
CNGN	Cerro Negro	1.64	91	P	Pn	04 55 13.8	-0.2
SBLS	San Blas	1.78	317	eP	Pn	04 55 17.0	+1.0
SBLS				eP	Pb	04 55 17.2	-1.8
SNJE	San Jose	1.79	318	eP	Pn	04 55 17.2	+1.1
RTR	El Retiro	1.83	318	eP	Pn	04 55 18.0	+1.2
NUBE	Las Nubes	1.93	315	eP	Pn	04 55 18.8	+0.8
NUBE				IAML		04 55 43.5	
	comp=Z,34nm,0.3s						
NUBE	Las Nubes	1.93	315	i P	Pn	04 55 18.8	+0.8
NUBE				i S	Sn	04 55 42.4	+0.9
NUBE	Las Nubes	1.93	315	P	Pn	04 55 19.0	+1.0
SAPS	Ciudad Sandino	1.96	101	S	Sn	04 55 42.5	+0.5
SAPS	Ciudad Sandino	1.96	101	P	Pn	04 55 18.1	-0.2
MTO3	Montecristo	2.08	333	i P	Pn	04 55 21.1	+0.8
MTO3	Montecristo	2.08	333	P	Pn	04 55 20.8	+0.5
BOAB	BOACO BROADBAN	2.65	92	P	Pn	04 55 28.4	+0.6

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*IDC **22** 05:04:06.5±1.2, 55°.58S×27°.54W, h0^{km}, mb4.2/3, mbtmp4.1/4, ML3.5/1, MS3.2/1, Error ellipse: s-maj=66.5km s-min=22.1km az=58.0*

*NEIC **22** 05:04:09.4±1.3, 55°.68S±0°.09×27°.7W±0°.2, h20^{km}±6^{km}, mb4.5/14, Error ellipse: s-maj=23.3km s-min=4.5km az=59.0*

ISC 22 05:04:07.8±0.7**, 55°.6S**±0°.1×**27°.6W**±0°.1**, h10**^{km}**, n30, σ0^{s}.62**/29**, mb4.4**/9**, 4C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.27	281	Pn	Pn	05 05 27.2	+0.7
VNA1	Neumayer--Stat	17.29	158	⇑P	P	05 08 11.0	+0.7
	comp=Z,1.1nm,0.3s						
VNA3	Neumayer Olymp	17.48	161	⇑P	P	05 08 12.9	+0.4
	comp=Z,0.8nm,0.2s						
VNA2	Neumayer--Watz	17.68	158	⇑P	P	05 08 14.9	+0.2
	comp=Z,0.4nm,0.2s,baz=315,slow=13						
SNAA	Sanae	19.23	156	⇑P	P	05 08 32.2	+0.3
	comp=Z,14nm,0.2s						
SNAA	Sanae	19.23	156	P	P	05 08 31.3	-0.6
SNAA	Sanae	19.23	156	P	Pn	05 08 32.4	-0.4
	comp=Z,0.2nm,0.3s,baz=320,slow=12,SNR=11						
	comp=Z,1.6nm,0.6s						
PMSA	Palmer Station	19.99	228	LR	LR	05 14 35.8	
	comp=Z,69nm,18.1s,baz=82,slow=31						
BELA	Belgrano 2	22.48	184	P	P	05 09 06.2	-0.7
TRQA	Tornquist	28.92	293	P	P	05 10 07.0	+0.2
TRQA				IAmb	IAmb	05 10 08.7	
	comp=Z,5.1nm,0.8s						
QSPA	South Pole Qui	34.62	180	P	P	05 10 57.1	+0.2
QSPA	South Pole Qui	34.62	180	P	P	05 10 56.8	0.0
	comp=Z,1.6nm,0.7s,baz=186,slow=2.9,SNR=13						
	comp=Z,1.6nm,0.7s						
MT09	Talagante	36.94	288	P	P	05 11 15.9	-1.0
MT09				IAmb	IAmb	05 11 35.0	
	comp=Z,12nm,1.2s						
MT02	Curacav	37.41	288	P	P	05 11 20.2	-0.6
ZON	Zonda	37.43	293	P	P	05 11 20.8	-0.3
ZON				IAmb	IAmb	05 11 21.6	
	comp=Z,7.5nm,0.7s						
CO01	Juntas del Tor	39.42	293	P	P	05 11 36.9	-1.1
CO01				IAmb	IAmb	05 11 40.4	
	comp=Z,5.6nm,0.8s						
LCO	Las Campanas	40.50	293	P	P	05 11 46.5	-0.6
LCO				IAmb	IAmb	05 12 12.1	
	comp=Z,18nm,1.4s						
MAW	Mawson	40.64	144	P	P	05 11 48.4	+0.9
	comp=Z,3.4nm,0.7s,baz=225,slow=7.1,SNR=2.5						
	comp=Z,3.4nm,0.7s						
GO01	Chusmiza	47.50	302	P	P	05 12 44.2	+0.7
PB16	IPOC Station P	48.80	303	P	P	05 12 53.8	+0.1
PB16				IAmb	IAmb	05 13 07.3	
	comp=Z,6.7nm,1.4s						
LPAZ	La Paz	49.92	305	P	P	05 13 03.0	+0.6
LPAZ				IAmb	IAmb	05 13 03.7	
	comp=Z,2.8nm,0.6s						
LPAZ	La Paz	49.92	305	P	P	05 13 03.3	+1.0
	comp=Z,2.8nm,0.6s,baz=142,slow=5.3,SNR=25						
	comp=Z,2.8nm,0.6s						
DBIC	Dimbokro	64.89	25	P	P	05 14 47.4	+0.3
FINES	FINESS Array B	124.13	28	PKP	PKPdf	05 23 04.3	-0.7
	comp=Z,2.2nm,0.9s,baz=242,slow=4.1,SNR=4.6						
H31M	Peel River	144.84	317		PKPab	05 23 42.2	-0.4
G31M	Satah River	145.17	319		PKPbc	05 23 43.1	-0.4
L29M	L29M	145.47	311		PKPdf	05 23 44.5	-0.1
G29M	Pine Creek	146.59	318		PKPbc	05 23 47.4	-0.6
H27K	Steamboat Moun	147.78	316		PKPbc	05 23 50.7	-0.7
ILAR	Eielson Array	149.64	312	PKPbc	PKPbc	05 23 55.5	-0.6
	comp=Z,1.4nm,0.7s,baz=129,slow=1.9,SNR=17						

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*NIED **22** 05:15:01.8, 40°.30N×142°.30E, h38^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.59; $M_{\theta\theta}$-0.04; $M_{\phi\phi}$-1.56; $M_{r\theta}$1.32; $M_{\theta\phi}$-0.50; $M_{\phi r}$1.08; Fault plane solution: $M_0$2.37000×10^{14} NP1: ϕ_s178.00000°, δ27.00000°, λ52.00000°. NP2: ϕ_s39.00000°, δ69.00000°, λ108.00000°.*

JMA 22 05:15:01.8±0.1**, 40°.3N**±0°.2×**142°.3E**±0°.6**, h38**^{km}**, MV3.6**/40**, 14D, NE OFF IWATE PREF, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKEN	Kujiedanarisaw	0.46	259	⇓iP	Pn	05 15 11.6	-0.1
JKEN				⇓S	Sn	05 15 18.7	-0.1
JTH	Tanohata	0.49	223	⇓iP	Pn	05 15 12.2	+0.1
JTH				⇓S	Sn	05 15 19.8	+0.3
JANG	Nango	0.60	278	⇓iP	Pn	05 15 13.8	-0.2
JANG				⇓S	Sn	05 15 22.4	-0.1
JKZ	Kuzumaki	0.80	248	⇓iP	Pn	05 15 16.8	+0.2
JKZ				⇓S	Sn	05 15 27.5	+0.1
JARK	Aomorirokkasho	1.00	315	⇓iP	Pn	05 15 19.3	0.0
JARK				⇓S	Sn	05 15 32.0	-0.1
JTM	Tenmabayashi	1.06	298	⇓iP	Pn	05 15 20.1	0.0
JOM	Ohasama	1.13	224	⇓P	Pn	05 15 21.5	+0.5
JAH	Hinai	1.27	266	⇓P	Pn	05 15 23.5	+0.5
JAH				⇓S	Sn	05 15 38.6	-0.2
JOT	Ohata	1.44	319	P	Pn	05 15 25.3	0.0
JRG	Rokugo	1.56	235	P	Pn	05 15 28.1	+1.1
JMK	Ichinoseki	1.58	212	P	Pn	05 15 28.0	+0.8

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*BUT **22** 05:17:39.0±1.9, 46°.92N±0°.03×112°.52W±0°.04, h12^{km}±7^{km}, Error ellipse: s-maj=5.6km s-min=2.0km az=49.0*

NEIC 22 05:17:37.7±2.2**, 46°.977N**±0°.009×**112°.45W**±0°.03**, h10**^{km}±2^{km}**, ML2.9**/44**, ML3.2**/24(BUT)**, Error ellipse: s-maj=3.8km s-min=3.0km az=261.0, Montana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LYMT	Lyon Mountain	0.11	93		Pg	05 17 43.1	+2.5
BEMT	Mount Belmont	0.24	160		Pg	05 17 43.5	+0.8
OVMT	Ovando	0.39	283		Pb	05 17 46.1	-0.6
HRY	Holter Researc	0.50	122		Pb	05 17 48.8	+0.2
CHMT	Chamberlain Mo	0.56	264		Pg	05 17 48.9	+0.4
SLMT	Seeley Lake	0.76	291		Pb	05 17 53.0	-0.2
BPMT	Black Pine Rid	0.87	232	Pg	Pg	05 17 53.9	-0.6
BUT	Butte	0.97	185		Pg	05 17 56.0	-0.2
MSO	Missoula	1.03	262		Pg	05 17 57.3	-0.2
MSO					Sg	05 18 10.3	-0.7
MSO				IAML		05 18 14.5	
	271nm,0.2s						
MSO				IAML		05 18 14.8	
	353nm,0.5s						
PCMT	Pistol Creek	1.11	283		Pn	05 17 59.7	+0.3
LRM	Limekiln Ridge	1.16	180	Pg	Pb	05 17 59.6	-0.2
SWMT	Swartz Lake	1.18	297		Pb	05 18 00.2	-0.1
HBMT	Mount Humbug	1.19	185		Pb	05 18 00.1	-0.4
SXM	Sixmile	1.19	134		Pn	05 18 01.4	+0.8
VCMT	Victor	1.31	247		Pn	05 18 01.9	-0.3
NQMA	Gallatin River	1.32	144		Pg	05 18 03.7	+0.6
ALMT	Alberton, Mont	1.37	273		Pb	05 18 03.4	-0.1
YBMT	Yellow Bay	1.38	310		Pg	05 18 04.3	+0.1
FBMT	Ferry Basin	1.41	288		Pb	05 18 03.9	-0.3
JTMT	Jette	1.47	302		Pb	05 18 05.4	+0.3
BOZ	Bozeman (W)	1.49	157	Pn	Pn	05 18 04.8	+0.1
BOZ					Sn	05 18 24.0	-0.3
BOZ				IAML		05 18 29.1	
	101nm,0.3s						
DLMT	Dillon	1.62	184		Pn	05 18 06.5	+0.1
DLMT				IAML		05 18 28.7	
	112nm,0.7s						
DLMT				IAML		05 18 29.8	
	118nm,0.5s						
NDMT	Ninemile Divid	1.63	281		Pb	05 18 08.0	0.0
BLMT	Blacktail Moun	1.66	309		Pg	05 18 09.1	-0.5
BZMT	Bozeman Pass	1.75	139		Pb	05 18 09.4	-0.6
BGMT	Barton Gulch	1.77	171		Pn	05 18 08.8	+0.2
BSMT	Bassoo Peak	1.81	300		Pb	05 18 11.5	+0.4
MKMT	Mink Peak	1.83	275		Pn	05 18 09.9	+0.5
BHMT	Big Hole Peak	1.86	290		Pb	05 18 12.2	+0.2
MSMT	Mission Creek	1.98	132		Pb	05 18 13.3	-0.6
EGMT	Eagleton	2.10	59		Pb	05 18 15.6	-0.4
MCMT	McKenzie Canyo	2.17	188		Pn	05 18 13.8	-0.3
CRMT	Chrome Mountai	2.21	133		Pb	05 18 17.1	-0.8
GCMT	Greycliff	2.26	121	Pn	Pb	05 18 17.2	-1.5
YHL	Hebgen Lake	2.30	157		Pn	05 18 16.9	+1.0
YHL	Hebgen Lake	2.30	157	IAML		05 18 52.0	
	comp=E,64nm,0.6s						
YHL				IAML		05 18 53.4	
	comp=N,76nm,0.5s						
MOMT	Monida	2.38	179		Pn	05 18 17.7	+0.6
YHB	Horse Butte	2.39	158		Pn	05 18 18.0	+0.9
YHB				IAML		05 18 55.4	
	comp=N,73nm,0.3s						
YHB				IAML		05 18 56.0	
	comp=E,45nm,0.3s						
YPDC	Denny Creek	2.42	159		Pn	05 18 18.8	+1.3
LDM	Libby Dam	2.44	308		Pb	05 18 20.1	-1.5
YHH	Holmes Hill	2.46	152		Pn	05 18 19.4	+1.3
HSPGA	Hill Springs,	2.52	342		Pb	05 18 23.6	+0.6
CMI	Centennial Mou	2.52	166		Pn	05 18 19.8	+0.9
YPWB	West Boundary	2.55	158		Pg	05 18 25.8	-0.8
YPM	Purple Mountai	2.57	154		Pg	05 18 26.1	-0.8
YNE	Yellowstone No	2.60	138	Pn	Pn	05 18 21.2	+1.2
YNE				IAML		05 19 04.2	
	comp=N,53nm,0.3s						
YNE				IAML		05 19 06.1	
	comp=E,47nm,0.3s						
YPSB	Soda Butte	2.64	142		Pg	05 18 27.3	-0.9
YMP	Mirror Lake Pl	2.75	144	Pn	Pn	05 18 22.9	+0.8
YMP				IAML		05 19 09.0	
	comp=E,41nm,0.6s						
YMP				IAML		05 19 09.3	
	comp=N,37nm,0.5s						
YFT	Old Faithful	2.77	155	Pn	Pn	05 18 21.2	-1.1
RLMT	Red Lodge	2.89	129	Pn	Pn	05 18 24.1	+0.2
RLMT				IAML		05 19 12.8	
	comp=N,34nm,0.3s						
RLMT				IAML		05 19 13.4	
	comp=N,41nm,0.5s						
MCID	Moose Creek	2.92	162		Pg	05 18 32.2	-1.5
PLID	Pearl Lake	3.11	234		Pn	05 18 26.6	-0.4
NEW	Newport	3.41	294		Pn	05 18 32.1	+1.1
NEW				IAML		05 19 30.0	
	comp=N,29nm,0.4s						
NEW				IAML		05 19 32.5	
	comp=N,33nm,0.3s						
FXWY	Fox Creek	3.49	163		Pn	05 18 32.6	+0.5
TPAW	Teton Pass	3.64	163	Pn	Pn	05 18 35.0	+0.6
HLID	Hailey	3.69	203		Pn	05 18 34.5	-0.4
BMO	Blue Mountains	4.00	240		Pn	05 18 38.9	-0.2
LNOR	Lincton Mounta	4.18	257		Pn	05 18 42.5	+0.9
LNOR				IAML		05 19 55.0	
	comp=N,13nm,0.9s						
LNOR				IAML		05 19 59.6	
	comp=E,13nm,1.9s						
LAO	LASA Array	4.28	92	Pn	Pn	05 18 43.0	+0.1
MFID	Camas Ranch	4.29	215	Pn	Pn	05 18 43.0	-0.1
G08A	Pilot Rock	4.83	252	Pn	Pn	05 18 48.4	-2.1
G08A				IAML		05 20 16.2	
	comp=N,5.7nm,1.6s						
G08A				IAML		05 20 22.0	
	comp=E,7.1nm,4.1s						
HAWA	Hanford	4.91	266	Pn	Pn	05 18 50.8	-0.7
J08A	Circle Bar Ran	5.59	232	Pn	Pn	05 18 58.9	-2.0
G05A	Wamic	6.41	258	Pn	Pn	05 19 12.4	+0.3

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*NEIC **22** 05:31:19.3±1.0, 18°.7S±0°.1×179°.5E±0°.2, h580^{km}±8^{km}, mb4.2/13, Error ellipse: s-maj=23.6km s-min=16.2km az=109.0*

*IDC **22** 05:31:20.8±1.7, 18°.31S×179°.18E, h577^{km}±14^{km}, mb3.1/6, mbtmp4.1/7, Error ellipse: s-maj=68.5km s-min=17.8km az=148.0*

ISC 22 05:31:19.6±0.7**, 18°.7S**±0°.1×**179°.4E**±0°.1**, h580**^{km}**, n28, σ0^{s}.72**/27**, mb4.1**/13**, Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	1.62	306	P	P	05 32 30.3	-0.5
	70nm,0.5s,baz=170,slow=6.1,SNR=42						
PINNC	Pines Island,	11.87	249	P	P	05 33 56.7	-0.3
SANVU	Saraoutou	12.12	284	P	P	05 33 60.0	+0.3
DZM	Mont Dzumac	12.62	252	P	P	05 34 03.5	-1.3
DZM	Mont Dzumac	12.62	252	P	P	05 34 05.3	+0.5
	1.9nm,0.5s,baz=84,slow=22,SNR=6.3						
CTAO	Charters Tower	31.29	262	P	P	05 36 54.1	+0.4
STKA	Stephens Creek	36.45	241	P	P	05 37 37.5	+0.9
STKA	Stephens Creek	36.45	241	P	P	05 37 37.7	+1.1
	0.9nm,0.4s,baz=84,slow=10,SNR=3.7						
	0.9nm,0.4s						
BBOO	Buckleboo	41.22	241	P	P	05 38 14.6	-0.5
BBOO				IAmb	IAmb	05 38 36.4	
	comp=Z,22nm,1.4s						
WR8	Warramunga Arr	42.31	261	P	P	05 38 22.7	-1.2
WR8				IAmb	IAmb	05 38 47.5	
	comp=Z,7.8nm,1.2s						
WB0	Warramunga Arr	42.44	261	P	P	05 38 25.0	+0.2
WB0				IAmb	IAmb	05 38 50.5	
	comp=Z,14nm,1.5s						
WRA	Warramunga Arr	42.47	261	P	P	05 38 24.6	-0.5
	comp=Z,0.5nm,0.4s,baz=91,slow=8.4,SNR=14						
	comp=Z,0.5nm,0.4s						
AS31	Alice Springs	42.59	255	P	P	05 38 26.0	-0.1
ASAR	Alice Springs	42.60	255	P	P	05 38 26.4	+0.3
	comp=Z,4.5nm,0.4s,baz=90,slow=8.3,SNR=83						
	comp=Z,4.5nm,0.4s						
QSPA	South Pole Qui	71.36	180	P	P	05 41 42.0	+0.4
P18K	Big Mountain,	80.53	13	P	P	05 42 31.0	-0.9
P18K				IAmb	IAmb	05 42 49.5	
	comp=Z,5.7nm,1.2s						
J01E	Myrtle Point	80.55	38	P	P	05 42 31.6	-0.7
O18K	Koktuh Hills	80.95	13	P	P	05 42 33.6	-0.4
O18K				IAmb	IAmb	05 42 38.2	
	comp=Z,14nm,1.4s						
M16K	Timber Creek	81.33	10	P	P	05 42 35.4	-0.5
M16K				IAmb	IAmb	05 43 15.7	
	comp=Z,12nm,1.4s						
BELA	Belgrano 2	81.64	173	P	P	05 42 36.7	-0.7
K15K	Wolf Creek Mou	82.12	9	P	P	05 42 40.2	+0.4
K15K				IAmb	IAmb	05 43 11.8	
	comp=Z,7.6nm,1.2s						
SEY	Seymchan	84.10	348	P	P	05 42 49.5	-0.2
	comp=Z,0.9nm,0.3s,baz=69,slow=8.7,SNR=4.3						
	comp=Z,0.9nm,0.3s						
ILAR	Eielson Array	87.13	14	P	P	05 43 03.4	-0.8
	comp=Z,0.6nm,0.8s,baz=239,slow=4.8,SNR=6.6						
	comp=Z,0.6nm,0.8s						
TXAR	Lajitas Array	88.16	58	P	P	05 43 11.6	+1.6
	comp=Z,0.6nm,0.8s,baz=223,slow=5.0,SNR=7.7						
	comp=Z,0.6nm,0.8s						
EKA	Eskdalemuir Ar	143.38	2	PKP	PKPbc	05 49 46.5	-0.5
	comp=Z,0.8nm,0.4s,baz=340,slow=2.5,SNR=12						
MMAI	Mount Meron Ar	144.81	301	PKP	PKPab	05 49 53.3	+0.1
	comp=Z,2.1nm,0.6s,baz=183,slow=5.8,SNR=4.2						
CLL	Collm	145.73	345	i PKPbc	PKPbc	05 49 54.8	+0.5
GERES	GERESS Array B	147.78	342	PKPbc	PKPbc	05 50 00.3	+0.3
	comp=Z,0.7nm,0.5s,baz=5.7,slow=2.7,SNR=6.0						

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*CATAC **22** 05:59:39.6±0.5, 12°N±4°×8°7W±°, h32^{km}±4^{km}, M3.7/24, MLv3.7/24, Error ellipse: s-maj=9.6km s-min=3.5km az=33.3, confirmed*

*SNET **22** 05:59:43.4±1.0, 12°.31N×87°.65W, h16^{km}±17^{km}, ML3.0*

ISC 22 05:59:37.9±1.4**, 12°.09N**±0°.07×**87°.28W**±0°.04**, h31**^{km}±13^{km}**, n42, σ1^{s}.02**/50**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALEN	Leon	0.54	47	P	Pn	05 59 50.0	+0.4
CRIN	San Cristobal	0.65	20	P	Pn	05 59 52.2	+1.1
CRIN	San Cristobal	0.65	20	S	Sn	06 00 01.1	+0.7
PKGN	Cerro Pekin	0.65	27	P	Pn	05 59 51.9	+0.9
PKGN				S	Sn	06 00 01.0	+0.8
COPN	Copaltepe	0.68	82	P	Pn	05 59 52.1	+0.8
CNGA	Al SSO del Vol	0.69	54	P	Pn	05 59 52.6	+0.9
CNGN	Cerro Negro	0.70	54	P	Pn	05 59 52.4	+0.7
PLRN	Geotermica Pol	0.70	45	P	Pn	05 59 51.6	-0.2
POLN	Al Sur del Vol	0.72	39	P	Pn	05 59 52.5	+0.5
POLN				S	Sn	06 00 02.1	0.0
MOMN	Momotombo	0.79	66	P	Pn	05 59 53.3	+0.4
AMTN	Mateare	0.84	80	P	Pn	05 59 54.4	+0.8
MOM2	El Cardon	0.85	66	P	Pb	05 59 53.6	-0.5
SAPS	Ciudad Sandino	0.86	84	P	Pn	05 59 54.9	+1.0
APQ3	Volcan Apoyequ	0.91	78	P	Pn	05 59 55.1	+0.6
POTN	Potosi Cosigui	0.93	346	P	Pb	05 59 55.8	+0.2
APQ2	Apoyeque	0.94	83	P	Pb	05 59 55.6	-0.1
ABCN	Banco Central	0.95	88	P	Pb	05 59 56.0	+0.2
UNAN	Cigeo UNAN	0.98	89	P	Pn	05 59 56.3	+0.7
TISN	Laguna Tiscapa	0.99	87	P	Pn	05 59 56.2	+0.5
MGAN	Managua	1.01	87	P	Pn	05 59 56.6	+0.6
WILN	Americas 2	1.07	86	P	Pn	05 59 57.3	+0.5
WILN				S	Sb	06 00 11.5	0.0
MAS3	Al N del Volca	1.08	93	P	Pn	05 59 57.5	+0.5
SABN	Sabanita	1.10	97	P	Pn	05 59 58.2	+1.0
NANN	Nandasmo	1.14	97	S	Sb	06 00 13.2	-0.4
NANN	Nandasmo	1.14	97	P	Pb	05 59 59.6	+0.5
CNCH	Conchagua	1.30	335	eP	Pn	06 00 00.7	+0.6
CNCH				eS	Sn	06 00 15.8	-0.7
CNCH				IAML		06 00 22.6	
	comp=Z,2µm,0.4s						
CNCH	Conchagua	1.30	335	P	Pn	06 00 01.0	+0.9
CNCH	Conchagua	1.30	335	S	Sb	06 00 17.4	-0.9
LCND	La Caada	1.35	334	eP	Pn	06 00 01.4	+0.7
LCND				eS	Sn	06 00 16.2	-1.5
LCND				IAML		06 00 20.4	
	comp=Z,649nm,0.3s						
LCND	La Caada	1.35	334	P	Pn	06 00 01.4	+0.7
MATN	Matagalpa	1.56	57	P	Pn	06 00 02.9	-0.8
BOAB	BOACO BROADBAN	1.61	77	P	Pn	06 00 04.2	-0.1
BOAB	BOACO BROADBAN	1.61	77	S	Sn	06 00 23.3	-0.8
PACA	Pacayal	1.71	323	eP	Pn	06 00 07.0	+1.3
PACA	Pacayal	1.71	323	P	Pn	06 00 07.4	+1.6
PACA	Pacayal	1.71	323	S	Sn	06 00 28.2	+1.6
RCVN	Varillal2	1.82	35	P	Pn	06 00 08.1	+0.7
PQSS	Presa 15 de Se	1.98	321	eP	Pn	06 00 10.6	+1.3
PQSS				IAML		06 00 36.1	
	comp=Z,37nm,0.1s						
LOMA	Loma Larga	2.41	310	eP	Pn	06 00 16.5	+1.1
LOMA				eS	Sn	06 00 42.0	-1.9
JAYA	Jayaque - finc	2.63	307	eP	Pn	06 00 19.6	+1.2
JAYA				eS	Sn	06 00 47.0	-2.4
JAYA				IAML		06 00 51.8	
	comp=Z,70nm,0.2s						
NUBE	Las Nubes	3.03	307	eP	Pn	06 00 25.3	+1.3
NUBE				eS	Sn	06 00 56.8	-2.6
NUBE	Las Nubes	3.03	307	P	Pn	06 00 25.1	+1.1

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*IDC **22** 07:11:36.3±0.9, 17°.39N×147°.66E, h0^{km}, mb3.8/13, mbtmp3.9/14, ML4.7/1, MS3.2/5, Error ellipse: s-maj=26.3km s-min=18.0km az=92.0*

*NEIC **22** 07:11:43.5±2.0, 17°.45N±0°.08×147°.3E±0°.2, h51^{km}±9^{km}, mb4.6/28, Error ellipse: s-maj=21.7km s-min=11.9km az=98.0*

ISC 22 07:11:40.3±0.7**, 17°.34N**±0°.09×**147°.6E**±0°.1**, h26**^{km}**, n48, σ1^{s}.25**/44**, mb4.3**/26**, MS3.1**/5**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	4.54	215	Pn	Pn	07 12 48.9	+1.5
GUMO	Guam	4.54	215	Pn	Pn	07 12 48.5	+1.1
	32nm,0.3s,baz=9.0,slow=0.8,SNR=22						
GUMO				Sn	Sn	07 13 38.3	-1.0
	52nm,0.3s,baz=207,slow=22,SNR=9.5						
	70nm,0.3s						
JGF	Kuroka	20.32	335	Pn	P	07 16 15.2	+0.6
MJAR	Matsushiro Arr	20.84	338	P	P	07 16 20.1	0.0
	1.7nm,0.6s,baz=171,slow=11,SNR=5.9						
	1.7nm,0.6s						
MAJO	Matsushiro	20.84	338	P	P	07 16 16.0	-4.1
MJB9	Matsu-Tunnel	20.84	338	P	P	07 16 17.1	-3.0
JAY	Jayapura	20.85	200	LR	LR	07 25 08.9	
	comp=Z,38nm,19.4s,baz=317,slow=39						
JSD	Sado	22.17	340	P	P	07 16 32.3	-2.1
DAV	Davao City (W)	23.75	247	LR	LR	07 24 35.0	
	comp=Z,66nm,21.6s,baz=54,slow=33						
FAKI	Fak Fak	25.16	218	P	P	07 17 01.4	-2.3
FAKI				IAmb	IAmb	07 17 24.6	
	comp=Z,111nm,1.5s						
KSRS	Korea Array	26.45	323	P	P	07 17 14.9	-0.3
	comp=Z,0.9nm,0.4s,baz=154,slow=8.9,SNR=5.3						
	comp=Z,0.9nm,0.4s						
HNR	Honiara	29.29	154	LR	LR	07 30 07.9	
	comp=Z,54nm,18.4s,baz=350,slow=38						
MTN	Manton Dam	34.09	209	P	P	07 18 21.4	-1.6
SOEI	Soe	35.42	222	P	P	07 18 32.7	-1.9
PETK	Petropavlovsk-	36.57	10	LR	LR	07 34 44.2	
	comp=Z,17nm,18.2s,baz=234,slow=38						
WR8	Warramunga Arr	39.22	200	P	P	07 19 05.8	-0.9
WR8				IAmb	IAmb	07 19 12.9	
	comp=Z,14nm,1.4s						
WRA	Warramunga Arr	39.26	200	P	P	07 19 06.6	-0.4
	comp=Z,1.5nm,0.7s,baz=23,slow=9.3,SNR=7.0						
	comp=Z,1.5nm,0.7s						
SHEM	Shemya Is, Ala	40.99	24	P	P	07 19 21.8	+0.8
SMY	Shemya	40.99	24	P	P	07 19 21.4	+0.4
AS31	Alice Springs	42.88	199	P	P	07 19 37.3	+0.5
ASAR	Alice Springs	42.88	199	P	P	07 19 36.6	-0.2
	comp=Z,0.1nm,0.4s,baz=18,slow=9.1,SNR=4.1						
ASAR				LR	LR	07 40 47.7	
	comp=Z,74nm,18.0s,baz=280,slow=41						
	comp=Z,0.1nm,0.4s						
SONM	Songino Array	45.30	321	P	P	07 19 56.1	0.0
	comp=Z,0.8nm,0.6s,baz=131,slow=10,SNR=3.5						
	comp=Z,0.8nm,0.6s						
CMAR	Chiang Mai Arr	46.16	279	P	P	07 20 05.2	+2.0
	comp=Z,1.0nm,0.4s,baz=62,slow=6.2,SNR=6.9						
	comp=Z,1.0nm,0.4s						
K13K	Kusilvak Mount	55.63	25	P	P	07 21 14.9	+1.1
K13K				IAmb	IAmb	07 21 15.8	
	comp=Z,4.6nm,0.8s						
O15K	Ungalikthiuk R	56.46	29	P	P	07 21 19.3	-0.5
O15K				IAmb	IAmb	07 21 25.5	
	comp=Z,6.6nm,0.9s						
N15K	Kwethluk River	56.76	28	P	P	07 21 22.5	+0.6
N15K				IAmb	IAmb	07 21 43.1	

	comp=Z,12nm,1.4s						
M16K	**Timber Creek**	**57.62**	**28**	P	**P**	**07 21 28.1**	**+0.1**
M16K				IAmb	IAmb	07 21 53.8	
	comp=Z,5.7nm,1.2s						
L16K	**Owhat River**	**57.69**	**27**	P	**P**	**07 21 28.3**	**-0.1**
L16K				IAmb	IAmb	07 21 47.0	
	comp=Z,3.9nm,1.2s						
N17K	**Nushagak Hills**	**58.22**	**29**	P	**P**	**07 21 32.7**	**+0.5**
N17K				IAmb	IAmb	07 21 34.1	
	comp=Z,3.5nm,0.9s						
ACHA	**Angle Creek He**	**58.28**	**32**	P	**P**	**07 21 31.6**	**-1.2**
ACHA				IAmb	IAmb	07 21 31.7	
	comp=Z,3.7nm,1.2s						
J17K	**VABM Dome**	**58.60**	**25**	P	**P**	**07 21 36.0**	**+1.3**
J17K				IAmb	IAmb	07 21 37.0	
	comp=Z,4.0nm,1.0s						
O18K	**Koktuh Hills**	**58.90**	**30**	P	**P**	**07 21 37.5**	**+0.6**
O18K				IAmb	IAmb	07 21 58.1	
	comp=Z,11nm,1.4s						
N19K	**Bonanza Creek**	**59.57**	**29**	P	**P**	**07 21 42.2**	**+0.6**
N19K				IAmb	IAmb	07 22 00.2	
	comp=Z,3.7nm,1.1s						
SYI	**Shuyak Island**	**59.87**	**32**	P	**P**	**07 21 43.2**	**-0.5**
ZALV	**Zalesovo Beam**	**60.16**	**323**	P	**P**	**07 21 45.3**	**-0.4**
	comp=Z,1.4nm,0.6s,baz=108,slow=9.5,SNR=5.0						
	comp=Z,1.4nm,0.6s						
MKAR	**Makanchi Array**	**60.67**	**314**	P	**P**	**07 21 49.5**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=88,slow=7.6,SNR=6.0						
	comp=Z,0.4nm,0.5s						
CNPM	**China Poot**	**60.71**	**31**	P	**P**	**07 21 48.5**	**-0.9**
CAST	**Castle Rocks**	**61.51**	**26**	P	**P**	**07 21 54.5**	**-0.2**
HIN	**Hinchinbrook I**	**63.23**	**31**	P	**P**	**07 22 05.8**	**-0.5**
D22K	**Ayikyak River**	**63.23**	**21**	P	**P**	**07 22 05.3**	**-0.9**
D22K				IAmb	IAmb	07 22 09.6	
	comp=Z,8.0nm,1.5s						
KURK	**Kurchatov**	**63.45**	**318**	P	**P**	**07 22 06.7**	**-1.2**
KURK				IAmb	IAmb	07 22 09.6	
	comp=Z,3.0nm,1.1s						
KURBB	**Kurchatov Arra**	**63.50**	**318**	P	**P**	**07 22 08.2**	**0.0**
	comp=Z,1.8nm,0.6s,baz=97,slow=6.7,SNR=21						
	comp=Z,1.8nm,0.6s						
ILAR	**Eielson Array**	**64.09**	**26**	P	**P**	**07 22 10.8**	**-1.1**
	comp=Z,0.6nm,0.9s,baz=248,slow=5.9,SNR=8.5						
	comp=Z,0.6nm,0.9s						
BVAR	**Borovoye Array**	**68.64**	**321**	P	**P**	**07 22 41.5**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=79,slow=7.7,SNR=8.9						
	comp=Z,1.7nm,0.7s						
ABKAR	**Akbulak array**	**75.53**	**317**	P	**P**	**07 23 23.6**	**+1.0**
NVAR	**Mina Array Bea**	**82.58**	**52**	P	**P**	**07 24 01.7**	**0.0**
	comp=Z,0.5nm,0.7s,baz=289,slow=4.5,SNR=3.6						
	comp=Z,0.5nm,0.7s						
FINES	**FINESS Array B**	**88.84**	**336**	P	**P**	**07 24 31.4**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=336,slow=4.2,SNR=3.4						
	comp=Z,0.7nm,0.7s						
LPAZ	**La Paz**	**145.86**	**94**	PKPbc	**PKPdf**	**07 31 19.9**	**+1.5**
	comp=Z,0.3nm,0.5s,baz=177,slow=1.0,SNR=4.5						

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*NEIC **22** 07:19:29.8±1.3, 12°.83N±0°.03×124°.63E±0°.09, h65km±8km, mb4.5/26, Error ellipse: s-maj=13.2km s-min=4.4km az=97.0*

*IDC **22** 07:19:30.2±0.9, 12°.87N×124°.58E, h77km±8km, mb3.8/17, mbtmp4.2/18, MS3.2/11, Error ellipse: s-maj=22.1km s-min=11.0km az=72.0*

ISC 22 07:19:27.5±0.4**, 12°.86N**±0°.06×**124°.74E**±0°.09**, h50**km**, n65, σ0ˢ.95**/57**, mb4.4**/30**, MS3.3**/11**, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**3.90**	**289**	P	**Pn**	**07 20 26.1**	**+1.1**
	798nm,0.8s,baz=298,slow=1.7,SNR=11						
TGY				S	**Sn**	**07 21 10.9**	**+1.3**
	208nm,0.3s,baz=204,slow=21,SNR=3.0						
DAV	**Davao City (W)**	**5.81**	**172**	Pn	**Pn**	**07 20 52.4**	**+1.2**
TWG	**Pinlang**	**10.51**	**341**	Pn	**Pn**	**07 21 57.2**	**+1.6**
YULB	**Yu-li**	**10.98**	**343**		**Pn**	**07 22 02.2**	**+0.2**
SSLB	**Suanglung**	**11.45**	**342**		**Pn**	**07 22 10.5**	**+2.1**
NACB	**Ninganchiao**	**11.64**	**346**	Pn	**Pn**	**07 22 10.6**	**-0.5**
KAPI	**Kappang**	**18.43**	**196**	P	**Pn**	**07 23 40.2**	**+0.7**
	12nm,0.7s,baz=260,slow=2.2,SNR=4.6						
JNU	**Nakatsue**	**20.94**	**15**	P	**P**	**07 24 06.8**	**+0.6**
JNU				IAmb	IAmb	07 24 31.6	
	comp=Z,19nm,1.2s						
JNU	**Nakatsue**	**20.94**	**15**	LR	LR	07 31 13.0	
	comp=Z,32nm,19.6s,baz=215,slow=34						
JAY	**Jayapura**	**22.01**	**133**	LR	LR	07 33 55.9	
	comp=Z,46nm,18.1s,baz=12,slow=39						
JMN	**Monobe**	**22.38**	**20**	P	**P**	**07 24 21.9**	**+0.2**
INU	**Inuyama**	**24.99**	**24**		**P**	**07 24 47.6**	**+0.9**
INU				IAmb	IAmb	07 24 50.1	
	comp=Z,25nm,1.1s						
CMAR	**Chiang Mai Arr**	**25.44**	**286**	P	**P**	**07 24 49.5**	**-1.4**
	comp=Z,0.7nm,0.3s,baz=90,slow=7.6,SNR=4.1						
	comp=Z,0.7nm,0.3s						
MJAR	**Matsushiro Arr**	**26.51**	**25**	LR	LR	07 34 30.4	
	comp=Z,27nm,19.4s,baz=227,slow=34						
USA0B	**Ussuriysk Arra**	**31.85**	**10**	P	**P**	**07 25 47.4**	**-0.3**
USA0B				IAmb	IAmb	07 25 49.2	
	comp=Z,4.9nm,0.7s						
USRK	**Ussuriysk Ar.**	**31.85**	**10**	P	**P**	**07 25 47.6**	**-0.1**
	comp=Z,5.7nm,0.6s,baz=190,slow=7.5,SNR=10						
	comp=Z,5.7nm,0.6s						
COEN	**Coen**	**32.30**	**145**	P	**P**	**07 25 51.8**	**-0.2**
COEN				IAmb	IAmb	07 26 24.4	
	comp=Z,12nm,1.1s						
WRA	**Warramunga Arr**	**33.94**	**164**	P	**P**	**07 26 05.7**	**-0.5**
	comp=Z,2.3nm,0.7s,baz=346,slow=9.2,SNR=20						
WRA				PcP	**PcP**	**07 28 43.0**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=336,slow=2.9,SNR=4.7						
	comp=Z,2.3nm,0.7s						
WR8	**Warramunga Arr**	**33.99**	**163**	P	**P**	**07 26 05.5**	**-1.1**
WR8				IAmb	IAmb	07 26 13.9	
	comp=Z,9.7nm,1.2s						
ASAJ	**Asahikawa**	**34.72**	**23**	LR	LR	07 40 12.9	
	comp=Z,20nm,19.1s,baz=172,slow=36						
KLR	**Kul'dur**	**36.73**	**8**	LR	LR	07 43 28.4	
	comp=Z,41nm,18.9s,baz=210,slow=39						
AS31	**Alice Springs**	**37.39**	**166**	P	**P**	**07 26 35.2**	**-0.5**
AS31				IAmb	IAmb	07 26 38.0	
	comp=Z,3.4nm,0.4s						
ASAR	**Alice Springs**	**37.39**	**166**	P	**P**	**07 26 36.4**	**+0.6**
	comp=Z,3.5nm,0.5s,baz=359,slow=8.7,SNR=79						
ASAR				PcP	**PcP**	**07 28 52.3**	**-1.7**
	comp=Z,0.7nm,0.5s,baz=340,slow=3.1,SNR=4.4						
	comp=Z,3.5nm,0.5s						
SONM	**Songino Array**	**38.09**	**340**	P	**P**	**07 26 41.3**	**-0.3**
	comp=Z,1.2nm,0.9s,baz=155,slow=8.2,SNR=5.5						
SONM				pP	**sP**	**07 26 59.2**	**-0.2**
	comp=Z,1.8nm,0.9s,baz=154,slow=11,SNR=4.1						
	comp=Z,1.2nm,0.9s						
H11N1	**WAKE ISLAND Hy**	**40.95**	**75**	T	T	08 11 31.0	
	baz=267,slow=75,SNR=177						
H11N2	**WAKE ISLAND Hy**	**40.95**	**75**	T	T	08 11 16.4	
	baz=267,slow=75,SNR=98						
H11N3	**WAKE ISLAND Hy**	**40.97**	**75**	T	T	08 11 32.5	
	baz=267,slow=75,SNR=147						
EIDS	**Eidsvold**	**45.86**	**146**	P	**P**	**07 27 45.5**	**+0.5**
STKA	**Stephens Creek**	**47.32**	**160**	P	**P**	**07 27 57.0**	**+0.6**
STKA	**Stephens Creek**	**47.32**	**160**	P	**P**	**07 27 57.1**	**+0.7**
	comp=Z,3.5nm,0.5s,baz=338,slow=9.4,SNR=14						
	comp=Z,3.5nm,0.5s						
PETK	**Petropavlovsk-**	**47.95**	**26**	P	**P**	**07 28 02.5**	**+1.5**
	comp=Z,3.4nm,0.7s,baz=190,slow=4.5,SNR=12						
	comp=Z,3.4nm,0.7s						
MKAR	**Makanchi Array**	**49.08**	**322**	P	**P**	**07 28 09.7**	**-0.2**
	comp=Z,1.3nm,0.9s,baz=132,slow=8.5,SNR=7.4						
MKAR				pP	**sP**	**07 28 27.8**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=121,slow=10,SNR=5.4						
	comp=Z,1.3nm,0.9s						
ZALV	**Zalesovo Beam**	**51.65**	**331**	P	**P**	**07 28 27.8**	**-1.3**
	comp=Z,0.9nm,0.5s,baz=111,slow=8.1,SNR=4.0						
	comp=Z,0.9nm,0.5s						
AAK	**Ala-Archa**	**52.45**	**314**	LR	LR	07 54 41.1	
	comp=Z,32nm,19.1s,baz=132,slow=40						
KURK	**Kurchatov**	**53.10**	**325**	P	**P**	**07 28 39.0**	**-0.9**
KURK				IAmb	IAmb	07 28 60.0	
	comp=Z,6.6nm,0.9s						
KURBB	**Kurchatov Arra**	**53.11**	**325**	P	**P**	**07 28 39.4**	**-0.6**
	comp=Z,2.1nm,0.7s,baz=123,slow=7.3,SNR=9.8						
KURBB				pP	**sP**	**07 28 58.4**	**+0.3**
	comp=Z,2.6nm,0.8s,baz=126,slow=7.3,SNR=4.3						
	comp=Z,2.1nm,0.7s						
CAN	**Canberra**	**53.14**	**155**	P	**P**	**07 28 41.4**	**+0.9**
DZM	**Mont Dzumac**	**53.64**	**130**	P	**P**	**07 28 45.1**	**+0.6**
DZM	**Mont Dzumac**	**53.64**	**130**	P	**P**	**07 28 44.8**	**+0.3**
	comp=Z,2.6nm,0.8s,baz=180,slow=15,SNR=2.9						
	comp=Z,2.6nm,0.8s						
TOO	**Toolangi**	**53.81**	**160**	P	**P**	**07 28 45.4**	**+0.1**
TOO				IAmb	IAmb	07 29 01.4	
	comp=Z,5.5nm,1.4s						
BVAR	**Borovoye Array**	**58.70**	**325**	P	**P**	**07 29 19.3**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=128,slow=9.6,SNR=5.4						
	comp=Z,1.4nm,0.6s						
TIXI	**Tiksi**	**58.81**	**2**	LR	LR	07 56 55.8	
	comp=Z,23nm,18.2s,baz=161,slow=38						
ABKAR	**Akbulak array**	**63.95**	**319**	P	**P**	**07 29 55.3**	**-0.3**
AKTO	**Aktyubinsk**	**65.39**	**320**	LR	LR	08 00 12.0	
	comp=Z,31nm,18.4s,baz=176,slow=37						
NNZ	**Nelson**	**70.06**	**143**	P	**P**	**07 30 33.5**	**-0.8**
H17K	**Granite Mounta**	**72.23**	**26**	P	**P**	**07 30 48.6**	**+1.4**
H17K				IAmb	IAmb	07 30 49.3	
	comp=Z,3.7nm,0.8s						
K17K	**Iditarod**	**72.68**	**28**	P	**P**	**07 30 51.7**	**+1.8**
K17K				IAmb	IAmb	07 31 06.2	
	comp=Z,4.9nm,1.1s						
M17K	**Holitna River**	**72.97**	**29**	P	**P**	**07 30 52.3**	**+0.7**
M17K				IAmb	IAmb	07 30 54.2	
	comp=Z,9.3nm,1.1s						
E19K	**Redstone River**	**73.62**	**23**	P	**P**	**07 30 55.9**	**+0.5**
H19K	**Roundabout Mou**	**73.75**	**25**		**P**	**07 30 56.8**	**+0.7**
H19K				IAmb	IAmb	07 30 58.4	
	comp=Z,6.0nm,1.0s						
D20K	**Etivluk River**	**73.98**	**22**	P	**P**	**07 30 58.6**	**+1.1**
D20K				IAmb	IAmb	07 31 28.7	
	comp=Z,7.6nm,1.2s						
J20K	**Nowinta River**	**74.65**	**27**		**P**	**07 31 02.3**	**+0.9**
CAST	**Castle Rocks**	**75.55**	**27**	P	**P**	**07 31 07.4**	**+0.7**
BPAW	**Bear Paw Mtn.**	**76.03**	**27**		**P**	**07 31 09.8**	**+0.4**
BPAW				IAmb	IAmb	07 31 11.0	
	comp=Z,5.6nm,0.8s						
MLY	**Manley**	**76.13**	**26**	P	**P**	**07 31 10.8**	**+0.8**
D25K	**Kavik River**	**77.68**	**21**	P	**P**	**07 31 19.4**	**+0.8**
ILAR	**Eielson Array**	**77.78**	**26**	P	**P**	**07 31 19.2**	**0.0**
	comp=Z,0.4nm,0.7s,baz=244,slow=6.3,SNR=7.0						
	comp=Z,0.4nm,0.7s						
SPITS	**Spitsbergen Ar**	**81.20**	**349**	P	**P**	**07 31 36.1**	**-1.5**
	comp=Z,3.2nm,0.9s,baz=93,slow=8.4,SNR=4.9						
	comp=Z,3.2nm,0.9s						
ARCES	**ARCESS Array B**	**81.26**	**339**	P	**P**	**07 31 36.6**	**-1.4**
	comp=Z,1.5nm,0.6s,baz=75,slow=6.5,SNR=9.7						
	comp=Z,1.5nm,0.6s						
INK	**Inuvik**	**82.44**	**22**	P	**P**	**07 31 43.4**	**-0.8**
	comp=Z,2.6nm,1.0s,baz=261,slow=4.2,SNR=5.9						
	comp=Z,2.6nm,1.0s						
FINES	**FINESS Array B**	**82.92**	**331**	P	**P**	**07 31 45.1**	**-1.7**
	comp=Z,1.1nm,0.7s,baz=138,slow=8.2,SNR=3.8						
	comp=Z,1.1nm,0.7s						
HFS	**Hagfors**	**89.08**	**332**	LR	LR	08 17 41.7	
	comp=Z,24nm,18.3s,baz=36,slow=39						
NOA	**NORSAR Array B**	**89.79**	**333**	LR	LR	08 15 17.7	
	comp=Z,12nm,19.4s,baz=230,slow=37						
GERES	**GERESS Array B**	**93.74**	**322**	LR	LR	08 16 08.5	
	comp=Z,20nm,20.4s,baz=56,slow=36						
PLCA	**Paso Flores**	**149.16**	**157**	PKPbc	**PKPbc**	**07 39 11.0**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=238,slow=6.2,SNR=3.1						

IDC 22 07:30:56.1±1.8**, 1°.42N**×**126°.74E, h0**km**, mb3.5**/4**, mbtmp3.6**/4**, Error ellipse: s-maj=168.1km s-min=21.6km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.50**	**161**	P	P	07 35 57.4	-0.1
	1.2nm,0.5s,baz=339,slow=10,SNR=15						
	1.2nm,0.5s						
ASAR	**Alice Springs**	**25.89**	**165**	P	P	07 36 29.9	-0.1
	0.4nm,0.5s,baz=346,slow=7.6,SNR=9.5						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**59.46**	**326**	P	P	07 41 02.3	+1.4
	0.3nm,0.5s,baz=108,slow=7.7,SNR=4.2						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**63.69**	**328**	P	P	07 41 28.2	-1.1
	0.5nm,0.6s,baz=128,slow=6.1,SNR=6.0						
	0.5nm,0.6s						

TAP 22 07:47:21.4, 24°.15N×121°.58E, h18km**, ML1.7, A, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.03**	**37**	P	Pg	07 47 24.3	-0.3
NACB				*i* S	Sg	07 47 26.8	0.0
ETL	**Fush Village**	**0.04**	**81**	*i* P	Pg	07 47 24.4	-0.3
ETL				*i* S	Sg	07 47 26.8	-0.2
TWD	**Chiawan**	**0.07**	**166**	*i* P	Pg	07 47 24.6	-0.2
TWD				*i* S	Sg	07 47 27.2	0.0
ETLH	**Xiulin Townshi**	**0.10**	**302**	*i* P	Pg	07 47 24.9	-0.3
ETLH				*i* S	Sg	07 47 27.7	-0.1
HWA	**Hwalien**	**0.18**	**172**	*i* P	Pg	07 47 26.0	0.0
HWA				S	Sg	07 47 29.8	+0.7
ETM	**Tongmen**	**0.20**	**203**	P	Pb	07 47 25.8	-0.2
ETM				S	Sg	07 47 29.7	-0.1
EHP	**Heping Village**	**0.22**	**44**	*i* P	Pg	07 47 26.6	-0.1
EHP				S	Sg	07 47 30.8	+0.5
EAHA	**Aohua**	**0.23**	**40**	*e*P	Pb	07 47 26.3	-0.4
EAHA				S	Sg	07 47 31.1	+0.5
WHF	**Hehuan Shan**	**0.28**	**269**	P	Pg	07 47 27.9	-0.1
WHF				*e*S	Sg	07 47 32.1	-0.4
ENA	**Nanau**	**0.31**	**29**	P	Pg	07 47 28.2	0.0
ENA				S	Sg	07 47 32.5	-0.3
FUSS	**Fushou**	**0.32**	**287**	P	Pg	07 47 28.3	-0.1
FUSS				S	Sb	07 47 33.4	0.0
NNSB	**Datong**	**0.33**	**327**	P	Pg	07 47 28.4	-0.1
NNSB				*i* S	Sg	07 47 33.3	-0.1
NNSH	**Datong**	**0.33**	**327**	*i* P	Pg	07 47 28.3	-0.2
NNSH				*i* S	Sg	07 47 33.3	0.0
NNS	**Nan Shan**	**0.34**	**327**	*i* P	Pg	07 47 28.5	-0.3
NNS				S	Sg	07 47 33.9	+0.2
EWUT	**Wuta**	**0.34**	**32**	P	Pg	07 47 28.6	-0.1
EWUT				S	Sg	07 47 33.0	-0.7
ESL	**Shilin**	**0.36**	**201**	*e*P	Pg	07 47 27.4	-1.6
SHUL	**Shoufeng**	**0.36**	**182**	P	Pg	07 47 29.0	-0.1
SHUL				S	Sb	07 47 34.9	+0.2
LATG	**Datong**	**0.38**	**353**	*e*P	Pg	07 47 29.3	-0.2
LATG				*i* S	Sg	07 47 34.6	-0.3
OWD	**Renai**	**0.42**	**242**	P	Pg	07 47 30.1	0.0
OWD				S	Sg	07 47 35.3	-0.6
WUSB	**Renai**	**0.45**	**249**	*i* P	Pg	07 47 30.2	-0.4
WUSB				S	Sg	07 47 36.6	-0.3
WARBT	**Fenglin Townsh**	**0.47**	**202**	*i* P	Pg	07 47 30.6	-0.3
WARBT				*e*S	Sg	07 47 36.3	-1.0
VWDT	**VWDT**	**0.56**	**225**	*i* P	Pb	07 47 32.1	-0.5
VWDT				*i* S	Sg	07 47 40.0	-0.1
YULB	**Yu-li**	**0.80**	**199**	P	Pb	07 47 36.3	-0.4
YULB				*e*S	Sg	07 47 48.0	+0.4
TWB1	**Santiao Chiao**	**0.93**	**24**	*e*S	Sn	07 47 54.3	+2.0

TAP 22 07:47:33.4, 24°.68N×122°.00E, h60km±1km**, ML2.1, C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	**Suao**	**0.15**	**243**	*i* P	Pn	07 47 42.9	+0.2
TWC				S	Sn	07 47 49.6	+0.3
EGS		**0.18**	**341**	*i* P	Pn	07 47 43.1	+0.3
EGS				S	Sn	07 47 49.8	+0.3
TWE	**Neicheng**	**0.30**	**278**	P	Pn	07 47 44.4	+0.8
TWE				*e*S	Sn	07 47 52.5	+1.6
EWUT	**Wuta**	**0.30**	**220**	P	Pn	07 47 43.8	+0.2
EWUT				S	Sn	07 47 51.5	+0.6
TWB1	**Santiao Chiao**	**0.33**	**359**	P	Pn	07 47 44.0	+0.2
TWB1				S	Sn	07 47 51.8	+0.5
TIPB	**Shuangxi**	**0.33**	**332**	*e*P	Pn	07 47 44.3	+0.4
TIPB				*e*S	Sn	07 47 52.0	+0.6
TIPB	**Shuangxi**	**0.33**	**332**	*i* P	Pn	07 47 44.1	+0.3
TIPB				S	Sn	07 47 52.0	+0.5
EOS2	**EOS2**	**0.34**	**140**	*e*P	Pn	07 47 43.4	-0.3
EOS2				*e*S	Sn	07 47 53.0	+1.8
ENA	**Nanau**	**0.34**	**223**	*e*P	Pn	07 47 45.0	+1.1
ENA				*i* S	Sn	07 47 52.2	+0.8
FUSB	**Fushanzhiwuyua**	**0.38**	**282**	P	Pn	07 47 44.7	+0.4
FUSB				*e*S	Sn	07 47 53.4	+1.2
ENTT	**Nioudou**	**0.39**	**265**	P	Pn	07 47 44.9	+0.5
ENTT				S	Sn	07 47 53.1	+0.9
SXI1	**Grass Mountain**	**0.43**	**345**	*i* P	Pn	07 47 45.1	+0.3
SXI1				*i* S	Sn	07 47 53.7	+0.7
LATG	**Datong**	**0.45**	**252**	P	Pn	07 47 45.4	+0.4
LATG				S	Sn	07 47 53.9	+0.5
YHNB	**Yeheng**	**0.56**	**269**	P	Pn	07 47 46.4	+0.3
YHNB				*e*S	Sn	07 47 55.4	-0.1
NSK	**Sanguang**	**0.58**	**270**	*i* P	Pn	07 47 46.6	+0.3
NSK				S	Sn	07 47 56.0	+0.3
YM01	**YM01**	**0.60**	**320**	*e*P	Pn	07 47 47.7	+1.1
YM01				*e*S	Sn	07 47 56.5	+0.3
NNSB	**Datong**	**0.61**	**246**	P	Pn	07 47 46.9	+0.2
NNSB				*e*S	Sn	07 47 56.2	-0.3
YM08	**YM08**	**0.63**	**324**	P	Pn	07 47 47.1	+0.3
YM08				*e*S	Sn	07 47 58.1	+1.5
ZUZH	**Zhuzihu**	**0.63**	**320**	P	Pn	07 47 47.2	+0.3
ZUZH				S	Sn	07 47 57.9	+1.1

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*KRSC **22** 07:51:09.0±0.8, 54°.73N×164°.46E, h44km±19km, Ml3.6*

*IDC **22** 07:51:08.0±1.8, 54°.91N×164°.44E, h0km, mb3.4/3, mbtmp3.3/4, ML2.0/1, MS2.9/1, Error ellipse: s-maj=68.5km s-min=24.0km az=162.0*

ISC 22 07:51:11.0±0.9**, 54°.90N**±0°.07×**164°.36E**±0°.04**, h27**km**, n33, σ1ˢ.96**/38**, mb3.5**/3**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	**Bering**	**0.98**	**71**	*e*P	**Pb**	**07 51 27.6**	**-1.6**
BKI				*e*S	**Sn**	**07 51 39.7**	**-2.1**
MKZ	**Mys Kozlova**	**1.56**	**258**	*e*P	**Pb**	**07 51 37.1**	**-2.1**
MKZ				*e*S	**Sn**	**07 51 55.5**	**-0.8**
KBTR	**Krutoberegovo**	**1.58**	**327**	*e*P	**Pb**	**07 51 38.0**	**-1.5**
KBG	**Krutoberegovo**	**1.66**	**326**	*e*P	**Pb**	**07 51 39.5**	**-1.3**
TUMD	**Tumrok D**	**2.30**	**279**	*e*P	**Pb**	**07 51 48.6**	**-3.1**
TUMD				*e*S	**Sn**	**07 52 16.5**	**+2.0**
ZLN	**Zelenaya**	**2.32**	**300**	*e*P	**Pb**	**07 51 50.3**	**-1.8**
BZGR	**Bezymyannyi-Gr**	**2.34**	**298**	*e*P	**Pb**	**07 51 49.9**	**-2.5**
BZGR				*e*S	**Sb**	**07 52 18.4**	**-2.5**
SMKR	**Semkarok**	**2.35**	**317**	*e*P	**Pb**	**07 51 50.6**	**-2.1**
BZWR	**Bezymyannyi-We**	**2.45**	**297**	*e*P	**Pb**	**07 51 52.0**	**-2.4**
KMNR	**Kamenistaya**	**2.51**	**292**	*e*P	**Pb**	**07 51 52.2**	**-3.1**
KMNR				*e*S	**Sn**	**07 52 22.4**	**+2.7**
KIRR	**Kirishev**	**2.52**	**296**	*e*P	**Pb**	**07 51 53.5**	**-2.1**
KPT	**Kopyto**	**2.59**	**296**	*e*P	**Pb**	**07 51 54.0**	**-2.7**
KII	**Karymskiy**	**2.99**	**255**	*e*P	**Pn**	**07 51 57.9**	**+1.2**
SRDR	**Sredinnyy**	**3.00**	**300**	*e*P	**Pb**	**07 51 59.9**	**-3.7**
SPN	**Mys Shipunski**	**3.13**	**237**	*e*P	**Pn**	**07 51 57.1**	**-1.4**
ESO	**Esso**	**3.39**	**290**	*e*P	**Pn**	**07 52 03.6**	**+1.5**
SDLR	**Sedlovina**	**3.61**	**246**	*e*P	**Pn**	**07 52 06.2**	**+0.9**
SMAR	**Somma**	**3.66**	**246**	*e*P	**Pn**	**07 52 07.0**	**+1.0**
KRER	**Koryakskii**	**3.67**	**247**	*e*P	**Pn**	**07 52 07.2**	**+1.1**
UGLR	**Uglovaya**	**3.68**	**245**	*e*P	**Pn**	**07 52 07.3**	**+1.2**
AVH	**Avacha**	**3.69**	**246**	*e*P	**Pn**	**07 52 07.3**	**+1.0**
KRX	**Arik**	**3.70**	**248**	*e*P	**Pn**	**07 52 07.5**	**+1.0**
KOK	**Koryaka**	**3.73**	**247**	*e*P	**Pn**	**07 52 08.0**	**+1.1**
DALK	**Dalny**	**3.80**	**243**	*e*S	**Sn**	**07 52 51.0**	**-0.5**
GNL	**Ganaly**	**3.95**	**255**	*e*P	**Pn**	**07 52 11.0**	**+1.1**
RUS	**Russkaya**	**4.26**	**237**	*e*P	**Pn**	**07 52 16.7**	**+2.6**
PETK	**Petropavlovsk-**	**4.32**	**248**	Pn	**Pn**	**07 52 15.4**	**+0.5**
	0.4nm,0.3s,baz=69,slow=17,SNR=3.9						
PETK				Sn	**Sn**	**07 53 06.7**	**+2.4**
	0.2nm,0.3s,baz=62,slow=17,SNR=1.3						
	0.7nm,0.4s						
MTVR	**Mutnovka**	**4.40**	**239**	*e*P	**Pn**	**07 52 16.3**	**+0.2**
GRL	**Gorelyy**	**4.41**	**240**	*e*P	**Pn**	**07 52 17.7**	**+1.4**
TIXI	**Tiksi**	**22.60**	**331**	LR	LR	08 05 51.4	
	comp=Z,30nm,18.2s,baz=18,slow=39						
ILAR	**Eielson Array**	**25.74**	**48**	P	**P**	**07 56 38.4**	**-0.4**
	0.3nm,0.6s,baz=264,slow=8.9,SNR=4.6						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**49.00**	**303**	P	**P**	**07 59 56.5**	**+1.6**
	0.2nm,0.4s,baz=56,slow=7.6,SNR=1.5						
	0.2nm,0.4s						
TXAR	**Lajitas Array**	**67.63**	**71**	P	**P**	**08 02 07.0**	**+1.6**
	0.3nm,0.5s,baz=295,slow=4.3,SNR=5.0						
	0.3nm,0.5s						

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*IDC **22** 07:52:43.2±10.0, 14°.26N×120°.89E, h206km±111km, mb3.3/8, mbtmp3.8/8, Error ellipse: s-maj=104.7km s-min=15.3km az=67.0*

ISC 22 07:52:42.4±1.2**, 14°.2N**±0°.4×**120°.9E**±0°.8**, h200**km**, n8, σ0ˢ.35**/8**, mb3.6**/8**, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	**35.58**	**343**	P	**P**	**07 59 20.8**	**0.0**
	1.8nm,0.6s,baz=161,slow=11,SNR=10						
	1.8nm,0.6s						
WRA	**Warramunga Arr**	**36.47**	**158**	P	**P**	**07 59 28.1**	**-0.4**
	0.3nm,0.5s,baz=331,slow=9.6,SNR=2.1						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**39.78**	**161**	P	**P**	**07 59 56.5**	**+0.4**
	0.2nm,0.3s,baz=334,slow=7.5,SNR=6.9						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**45.69**	**323**	P	**P**	**08 00 43.2**	**-0.1**
	0.2nm,0.4s,baz=129,slow=8.8,SNR=3.2						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**49.83**	**326**	P	**P**	**08 01 14.9**	**-0.1**
	0.4nm,0.3s,baz=130,slow=8.0,SNR=7.3						
	0.4nm,0.3s						
BVAR	**Borovoye Array**	**55.41**	**326**	P	**P**	**08 01 56.2**	**+0.2**
	1.3nm,0.5s,baz=116,slow=9.4,SNR=8.8						
	1.3nm,0.5s						
ARCES	**ARCESS Array B**	**78.64**	**339**	P	**P**	**08 04 22.1**	**+0.3**
	2.3nm,0.9s,baz=99,slow=6.9,SNR=1.9						
	2.3nm,0.9s						
FINES	**FINESS Array B**	**79.89**	**331**	P	**P**	**08 04 28.4**	**-0.3**
	3.2nm,1.0s,baz=20,slow=4.4,SNR=4.1						
	3.2nm,1.0s						

IDC 22 08:03:16.4±1.6**, 21°.02S**×**174°.50W, h0**km**, mb3.9**/3**, mbtmp4.0**/4**, ML3.9**/1**, MS3.4**/3**, Error ellipse: s-maj=63.4km s-min=28.9km az=143.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.76**	**294**	LR	LR	08 08 08.7	
	comp=Z,148nm,19.5s,baz=111,slow=38						
URZ	**Urewera**	**18.64**	**201**	P	Pn	08 07 36.0	+0.1
	0.3nm,0.3s,baz=305,slow=19,SNR=1.8						
	3.9nm,0.6s						
ASAR	**Alice Springs**	**47.59**	**257**	P	P	08 11 54.4	0.0
	2.2nm,0.8s,baz=93,slow=8.2,SNR=18						
	2.2nm,0.8s						
WRA	**Warramunga Arr**	**47.77**	**262**	P	P	08 11 55.1	-0.7
	0.8nm,0.5s,baz=96,slow=8.0,SNR=15						
	0.8nm,0.5s						
ASAJ	**Asahikawa**	**75.79**	**330**	LR	LR	08 47 11.5	
	comp=Z,18nm,18.9s,baz=172,slow=35						
NVAR	**Mina Array Bea**	**79.19**	**42**	P	P	08 15 23.4	-0.2
	0.7nm,0.7s,baz=224,slow=8.5,SNR=4.9						
	0.7nm,0.7s						
KLR	**Kul'dur**	**84.68**	**328**	LR	LR	08 51 32.2	
	comp=Z,34nm,18.7s,baz=198,slow=34						
AKASG	**Malin Array Be**	**145.00**	**334**	PKPbc	PKPab	08 22 54.7	0.0
	0.6nm,0.4s,baz=43,slow=3.9,SNR=6.2						

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*SLM **22** 08:35:02.5±0.5, 36°.263N±0°.007×89°.46W±0°.01, h7km±1km, Error ellipse: s-maj=1.2km s-min=1.0km az=79.0*

NEIC 22 08:35:02.9±0.5**, 36°.260N**±0°.005×**89°.457W**±0°.009**, h8**km±2km**, mb_Lg2.2**/10**, ML2.2**/26**, Md2.5**/31(SLM)**, Error ellipse: s-maj=1.2km s-min=0.6km az=54.0, New Madrid region, Missouri**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WYBT	**Wynnburg**	**0.09**	**339**		Pg	08 35 04.9	-0.2
WYBT					Sg	08 35 07.0	+0.4
MIST	**Miston**	**0.10**	**202**		Pg	08 35 05.0	-0.2
MIST					Sg	08 35 07.1	+0.4
GLAT	**Glass**	**0.14**	**86**		Pg	08 35 05.7	-0.1
GLAT				Sg	Sg	08 35 08.4	+0.6
GLAT				IAML		08 35 09.6	
	comp=E,1μm,0.2s						
GLST	**Glass**	**0.14**	**86**		Pg	08 35 08.6	+2.8
LNXT	**Lenox**	**0.16**	**190**		Pg	08 35 06.1	-0.1
LNXT				Sg	Sg	08 35 08.4	-0.1
LNXT				IAML		08 35 10.0	
	comp=N,779nm,0.3s						
PPLM	**Point Pleasant**	**0.17**	**325**		Pg	08 35 06.4	-0.1
PPLM					Sg	08 35 09.6	+0.6
FLPT	**Flippin**	**0.18**	**36**		Pg	08 35 06.6	-0.1
POBM	**Portage Bay**	**0.22**	**312**		Pg	08 35 07.1	-0.2
PENMO	**Penman**	**0.23**	**324**		Pg	08 35 07.3	-0.2
PENMO					Sg	08 35 11.5	+0.7
PVMO	**Portageville**	**0.25**	**308**		Pg	08 35 07.4	-0.5

PVMO	Portageville	0.25	308	IAML		08 35 12.1	
	comp=N,358nm,0.3s						
PVMO				IAML		08 35 13.7	
	comp=E,325nm,0.2s						
CWPT	Cottonwood Poi	0.29	209		Sg	08 35 13.0	+0.7
WALK	Watson Lake	0.29	346		Pg	08 35 08.6	0.0
WADM	Wardell	0.29	291		Pg	08 35 08.4	-0.3
PGVM	Portageville	0.30	312		Pg	08 35 08.4	-0.3
MARMO	Marston	0.32	328		Pg	08 35 08.8	-0.3
BRGM	Braggadocio	0.33	260		Pg	08 35 09.1	-0.3
HICK	Hickman	0.34	33		Pg	08 35 09.1	-0.4
HICK				Sg	Sg	08 35 13.8	-0.1
HICK				IAML		08 35 15.2	
	comp=N,352nm,0.2s						
HICK				IAML		08 35 16.6	
	comp=E,446nm,0.2s						
PEBM	Pemiscott Bayo	0.36	246		Pg	08 35 09.6	-0.3
PEBM				IAML		08 35 18.3	
	comp=N,222nm,0.5s						
HALT	Halls	0.36	165		Pg	08 35 09.9	-0.1
HALT	Halls	0.36	165	IAML		08 35 16.1	
	comp=E,222nm,0.8s						
HALT				IAML		08 35 20.0	
	comp=N,204nm,0.4s						
SJMO	Saint John's B	0.37	358		Pg	08 35 09.8	-0.3
HENM	Henderson Moun	0.46	359		Pg	08 35 11.2	-0.5
HENM					Sg	08 35 17.9	+0.2
PARMO	Parma	0.47	329		Pg	08 35 11.5	-0.5
PARMO	Parma	0.47	329	IAML		08 35 18.6	
	comp=N,206nm,0.2s						
PARMO				IAML		08 35 18.6	
	comp=E,279nm,0.3s						
COKM	Charter Oak	0.50	334		Pg	08 35 12.1	-0.4
MLDM	Malden	0.52	314		Pg	08 35 12.4	-0.5
GNAR	Gosnell	0.54	237		Pg	08 35 13.2	-0.1
PBMO	Poplar Bluff	0.94	304		Pg	08 35 19.6	-1.3
PBMO				IAML		08 35 38.6	
	comp=E,91nm,0.2s						
PBMO				IAML		08 35 39.1	
	comp=N,90nm,0.2s						
T45A	Paducah	1.00	41	Pg	Pg	08 35 21.1	-1.0
T45A				IAML		08 35 38.8	
	comp=N,105nm,0.3s						
CGM3	Cape Girardeau	1.05	351		Pg	08 35 21.9	-1.1
EBZ	Ebenezer Churc	1.12	176		Pg	08 35 24.0	-0.4
HBAR	Harrisburg	1.20	235		Pb	08 35 24.9	-1.0
WVT	Waverly	1.32	95		Pn	08 35 26.2	-1.4
LCAR	Lake Charles	1.39	263		Pn	08 35 27.4	-1.2
S44A	Carbondale	1.44	6		Pn	08 35 28.3	-1.1
SIUC	Southern Illin	1.46	7		Pn	08 35 28.6	-1.0
T42A	Van Buren	1.52	301		Pn	08 35 29.2	-1.2
PLAL	Pickwick Lake	1.70	138		Pn	08 35 32.2	-0.7
PWLA	Pickwick Lake	1.71	138		Pn	08 35 32.3	-0.7
OXF	Oxford	1.75	179		Pn	08 35 33.1	-0.4
OXF				IAmb_Lg		08 36 01.9	
	comp=Z,14nm,0.8s						
FVM	French Village	1.89	336		Pn	08 35 35.2	-0.2
X48A	Hartselle	2.67	132	Pn	Pn	08 35 44.9	-1.3
X48A				IAmb_Lg		08 36 30.7	
	comp=Z,6.3nm,1.1s						
P43A	Skaggs, Pawnee	3.38	359	IAmb_Lg		08 36 49.7	
	comp=Z,7.4nm,1.1s						
Y49A	Blount Mountai	3.46	133	IAmb_Lg		08 36 55.1	
	comp=Z,7.3nm,1.0s						
R50A	Paris	4.56	62	IAmb_Lg		08 37 28.7	
	comp=Z,4.0nm,1.0s						
P38A	Dawn	4.65	317	IAmb_Lg		08 37 28.1	
	comp=Z,3.8nm,0.8s						

MOS **22** *08:50:23.0±1.3, 39°.11N×99°.36W, h12^{km}, mb4.9/19, MS4.2/4, Error ellipse: s-maj=6.2km s-min=5.7km az=142.2*

IDC **22** *08:50:23.1±0.5, 39°.32N×99°.48W, h0^{km}, mb4.6/20, mbtmp4.6/29, ML3.7/7, MS3.9/64, Error ellipse: s-maj=11.5km s-min=8.5km az=157.0*

NEIC **22** *08:50:25.0±1.1, 39°.22N±0°.03×99°.43W±0°.04, h3^{km}±2^{km}, mb4.5/71, mb_Lg5.0/168, Mwr4.5/46, Mww4.6/36, Error ellipse: s-maj=5.6km s-min=4.9km az=15.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.59; M$_{\theta\theta}$6.75; M$_{\phi\phi}$-5.17; M$_{r\theta}$-3.15; M$_{\theta\phi}$-3.26; M$_{\phi r}$3.53; Fault plane solution: M$_0$8.39000×10^{15} NP1: ϕ_s239.33000°, δ53.86000°, λ-174.06000°. NP2: ϕ_s145.82000°, δ85.20000°, λ-36.29000°. Principal axes: T 9.0975, Plg21.0000°, Azm198.0000°; N -1.6507, Plg53.0000°, Azm319.0000°; P -7.4468, Plg28.0000°, Azm96.0000°;*

NEIC **22** *08:50:24.9, 39°.32N×99°.43W, h12^{km}, Moment Tensor Solution. Duration: 1^{s}1 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.22; M$_{\theta\theta}$7.73; M$_{\phi\phi}$-6.50; M$_{r\theta}$-1.42; M$_{\theta\phi}$-3.90; M$_{\phi r}$-2.30; Fault plane solution: M$_0$8.62000×10^{15} NP1: ϕ_s327.77000°, δ72.66000°, λ-10.89000°. NP2: ϕ_s61.05000°, δ79.61000°, λ-162.36000°. Principal axes: T 8.7939, Plg5.0000°, Azm194.0000°; N -0.3646, Plg70.0000°, Azm91.0000°; P -8.4293, Plg20.0000°, Azm285.0000°;*

GCMT **22** *08:50:24.9±0.3, 39°.33N±0°.02×99°.42W±0°.02, h12^{km}±2^{km}, MW4.6/71, Moment Tensor Solution. s8,c11; s71,c100; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.31±.05; M$_{\theta\theta}$1.08±.06; M$_{\phi\phi}$-0.76±.04; M$_{r\theta}$-0.00±.11; M$_{\theta\phi}$-0.32±.03; M$_{\phi r}$0.10±.10; Best double couple: M$_0$0.98800×10^{16} NP1: ϕ_s235.00000°, δ82.00000°, λ-173.00000°. NP2: ϕ_s144.00000°, δ83.00000°, λ-8.00000°. Principal axes: T 1.1350, Plg1.0000°, Azm190.0000°; N -0.2950, Plg79.0000°, Azm283.0000°; P -0.8420, Plg11.0000°, Azm100.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC **22** *08:50:24.7, 39°.23N×99°.40W, h1^{km}*

NEIC **22** *08:50:24.9, 39°.22N×99°.43W, h12^{km}*

ISC 22 08:50:24.1±0.3**, 39°.11N**±0°.04×**99°.33W**±0°.03**, h10^{km}, n665, σ1^{s}29**/615**, mb4.7**/77**, MS4.0**/64**, 7C-8D, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBKS	Cedar Bluff	0.43	227		Pb	08 50 33.3	-0.6
CBKS				Sg	Sb	08 50 39.8	-0.6
CBKS	Cedar Bluff	0.43	227	P	Pb	08 50 33.3	-0.6
CBKS						08 50 39.8	
R32A	Long Quarter,	0.84	144		Pn	08 50 42.4	+0.4
R32A				Sg	Sn	08 50 55.4	+1.0
KAN12	Harper NE Stat	2.09	149		Pg	08 51 03.3	-0.9
KSU1	Kansas State U	2.12	89		Pn	08 51 00.9	+1.3
KSU1					Sg	08 51 31.5	-0.7
KAN08	Anthony NE Sta	2.16	150		Pb	08 51 03.3	-0.1
KAN05	Bluff City Nor	2.30	150		Pb	08 51 05.6	-0.2
KAN01	Argonia South	2.31	147		Pb	08 51 05.7	-0.2
KAN09	Caldwell North	2.39	145		Pb	08 51 06.9	-0.3
KAN17	Caldwell West	2.40	148		Pb	08 51 07.2	-0.2
KAN14	Manchester OK	2.40	153		Pb	08 51 06.5	-1.0
KAN14				IAmb_Lg		08 51 51.5	
	comp=Z,6μm,1.0s						
BGNE	Belgrade	2.47	21		Pn	08 51 04.0	-0.5
GC02	Grant County #	2.54	152		Pb	08 51 09.3	-0.4
KAN13	South Haven SW	2.55	144		Pb	08 51 09.0	-1.0
KSCO	Kaye Shedlock'	2.57	269		Pn	08 51 06.1	+0.2
KSCO				IAmb_Lg		08 51 47.2	
	comp=Z,6μm,0.7s						
OK038	West end E0370	2.67	170		Pb	08 51 10.2	-1.8
OK038	West end E0370	2.67	170	IAmb_Lg		08 51 56.6	
	comp=Z,4μm,0.8s						
OGNE	Ogallala	2.77	312		Pn	08 51 08.1	-0.6
CROK	Carrier	2.81	157		Pb	08 51 12.4	-2.0
CROK				IAmb_Lg		08 52 04.7	
	comp=Z,3μm,0.8s						
ELIS	Ellis County	3.04	181		Pn	08 51 15.2	+2.9
T35A	Sooner Cattle	3.12	134		Pn	08 51 15.6	+2.2
T35A				IAmb_Lg		08 52 15.1	
	comp=Z,5μm,1.0s						
OK051	E0350 and S346	3.26	142		Pn	08 51 18.0	+2.6
OK051				IAmb_Lg		08 52 17.8	
	comp=Z,4μm,1.0s						
OK048	Pawnee Station	3.29	144		Pn	08 51 18.7	+3.0
N35A	Tabor	3.33	57		Pn	08 51 16.5	+0.2
N35A				IAmb_Lg		08 52 12.6	
	comp=Z,4μm,0.8s						
CSTR	Hydro, Custer	3.49	171		Pn	08 51 21.4	+2.9
K30B	Basset	3.57	357		Pn	08 51 19.4	-0.2
K30B				IAmb_Lg		08 52 18.5	
	comp=Z,3μm,0.8s						
QUOK	Quay	3.60	144		Pn	08 51 22.7	+2.7
OK029	Liberty Lake	3.63	155		Pn	08 51 22.5	+2.1
L34A	Svendsen Farm,	3.64	37		Pn	08 51 19.9	-0.6
L34A				IAmb_Lg		08 52 16.4	
	comp=Z,3μm,0.8s						
OK052	Battle Ridge R	3.70	146		Pn	08 51 23.5	+2.1
OK052				IAmb_Lg		08 52 29.1	
	comp=Z,3μm,0.8s						
RTBA	Rita Blanca	3.79	226	P	Pn	08 51 23.9	+1.2
DEOK	Depew	3.96	144		Pn	08 51 27.1	+2.1
DEOK				IAmb_Lg		08 52 38.2	
	comp=Z,3μm,1.0s						
OKCSW	OKLAHOMA CITY	3.99	157		Pn	08 51 28.1	+2.7
OKCSW				IAmb_Lg		08 52 38.4	
	comp=Z,3μm,0.8s						
SMWD	Samnorwood	4.06	191		Pn	08 51 28.2	+1.8
SMWD	Samnorwood	4.06	191	P	Pn	08 51 28.8	+2.4
FNO	Franklin	4.14	158		Pn	08 51 30.0	+2.5
TUL3	Leonard	4.25	137		Pn	08 51 31.6	+2.6
WMOK	Wichita Mounta	4.38	174		Pn	08 51 33.3	+2.5
WMOK	Wichita Mounta	4.38	174	P	Pn	08 51 33.3	+2.5
WMOK				pmax	pmax		
	comp=Z,2μm,0.8s						
T25A	Trinidad	4.46	245		Pn	08 51 32.6	+0.6
RLO	Rose Lookout	4.51	129	IAmb_Lg		08 52 54.5	
	comp=Z,3μm,0.9s						
P38A	Dawn	4.53	82		Pn	08 51 33.9	+1.1
Q24A	Divide	4.53	270		Pn	08 51 32.8	-0.3
Q24A				IAmb_Lg		08 52 45.4	
	comp=Z,4μm,0.8s						
AMTX	Amarillo	4.62	205		Pn	08 51 36.3	+2.2
ISCO	Idaho Springs	4.91	280		Pn	08 51 37.9	-0.4
ISCO				IAmb_Lg		08 52 57.6	
	comp=Z,3μm,0.9s						
ISCO	Idaho Springs	4.91	280	P	Pn	08 51 37.9	-0.4
ISCO				pmax	pmax		
	comp=Z,3μm,0.9s						
N38A	Joes South For	4.98	68		Pn	08 51 39.2	+0.2
N38A				IAmb_Lg		08 53 01.2	
	comp=Z,2μm,0.8s						
SDCO	Great Sand Dun	5.03	256		Pn	08 51 40.3	+0.4
SDCO				IAmb_Lg		08 52 59.5	
	comp=Z,3μm,0.7s						
ECSD	EROS Data Cent	5.05	23		Pn	08 51 39.8	-0.1
ECSD				IAmb_Lg		08 52 59.0	
	comp=Z,2μm,1.1s						
HHAR	Hobbs	5.12	122		Pn	08 51 42.8	+1.9
WTFS	Witchita Falls	5.38	172		Pn	08 51 46.7	+2.3
SCIA	State Center	5.44	57		Pn	08 51 44.9	-0.4
SCIA				IAmb_Lg		08 53 25.7	
	comp=Z,2μm,1.1s						
DKNS	Dickens	5.58	194	IAmb_Lg		08 53 32.2	
	comp=Z,3μm,1.2s						
R40A	Maddies Statio	5.59	96	IAmb_Lg		08 53 27.0	
	comp=Z,2μm,1.1s						
P40A	Paris	5.67	83		Pn	08 51 48.8	+0.4
APMT	Aspermont	5.80	187	IAmb_Lg		08 53 41.2	
	comp=Z,2μm,1.1s						
MSTX	Muleshoe	5.83	209		Pn	08 51 51.4	+0.7
Z35A	Perchaven, San	6.00	163		Pn	08 51 54.9	+1.9
Z35A				IAmb_Lg		08 53 46.4	
	comp=Z,1μm,0.9s						
RSSD	Black Hills	6.12	326		Pn	08 51 54.2	-0.7
RSSD				IAmb_Lg		08 53 42.2	
	comp=Z,2μm,0.9s						
RSSD	Black Hills	6.12	326	P	Pn	08 51 54.2	-0.7
RSSD				pmax	pmax		
	comp=Z,2μm,0.9s						
SN07	Snyder 07	6.13	192		Pn	08 51 56.1	+1.2
SN07				IAmb_Lg		08 53 45.1	
	comp=Z,2μm,0.8s						
FW03	Perrin-Whitt E	6.14	170	IAmb_Lg		08 53 57.5	
	comp=Z,2μm,1.1s						
POST	Post	6.28	197	IAmb_Lg		08 53 56.5	
	comp=Z,2μm,0.7s						
PLPT	Palo Pinto	6.33	172	IAmb_Lg		08 53 57.9	
	comp=Z,2μm,1.2s						
SN05	Snyder 5	6.34	192		Pn	08 51 58.7	+1.0
SN05				IAmb_Lg		08 53 55.5	
	comp=Z,2μm,0.9s						
CCM	Cathedral Cave	6.42	97		Pn	08 51 59.8	+1.0
CCM	Cathedral Cave	6.42	97	P	Pn	08 51 59.8	+1.0
CCM				pmax	pmax		
	comp=Z,869nm,0.7s						
ABTX	Abilene, Hawle	6.47	182		Pn	08 52 01.1	+1.5
ABTX				IAmb_Lg		08 53 58.2	
	comp=Z,2μm,1.1s						
MIAR	Mount Ida	6.48	133		Pn	08 52 01.6	+2.0
MIAR	Mount Ida	6.48	133	P	Pn	08 52 01.6	+2.0
MIAR				pmax	pmax		
	comp=Z,3μm,1.0s						
K22A	Casper	6.50	305		Pn	08 51 59.0	-1.0
FW07	Weatherford	6.51	168		Pn	08 52 01.9	+1.9
FW07				IAmb_Lg		08 54 07.3	
	comp=Z,1μm,0.9s						
FCAR	Ozark Folk Cen	6.57	117		Pn	08 52 03.0	+2.3
FCAR				IAmb_Lg		08 53 55.9	
	comp=Z,2μm,1.1s						
I37A	Lemond, Waseca	6.62	40		Pn	08 51 58.9	-2.6
N41A	Harden Midland	6.71	74		Pn	08 52 02.5	-0.3
WHAR	Wooly Hollow	6.79	122		Pn	08 52 05.1	+1.3
Z38A	Mt. Pleasant	6.81	148		Pn	08 52 06.2	+2.1
T42A	Van Buren	6.82	105		Pn	08 52 05.2	+0.9
L40A	Anamosa	6.84	62		Pn	08 52 02.8	-1.8
L40A				IAmb_Lg		08 54 15.2	
	comp=Z,2μm,1.2s						
TREL	Terrell	6.88	157		Pn	08 52 06.0	+0.9
TREL				IAmb_Lg		08 54 16.4	
	comp=Z,2μm,0.9s						
FW16	Waxahatchie	6.90	163		Pn	08 52 07.5	+2.1
FW16				IAmb_Lg		08 54 14.5	
	comp=Z,2μm,0.9s						
FW13	Cleburne	6.92	167	IAmb_Lg		08 54 24.6	
	comp=Z,2μm,1.1s						
FW14	Alvarado	6.92	165		Pn	08 52 07.4	+1.9
FW14				IAmb_Lg		08 54 27.4	
	comp=Z,2μm,1.1s						
O20A	White River Ci	6.95	281		Pn	08 52 07.2	+1.0
O20A				IAmb_Lg		08 54 15.0	
	comp=Z,1μm,1.1s						
X40A	Basin Creek Fa	6.96	129		Pn	08 52 07.0	+0.8
X40A				IAmb_Lg		08 54 21.4	
	comp=Z,2μm,1.0s						
ANMO	Albuquerque	7.05	236		Pn	08 52 08.4	+0.8
ANMO				IAmb_Lg		08 54 07.9	
	comp=Z,2μm,1.0s						
ANMO	Albuquerque	7.05	236	Pn	Pn	08 52 08.4	+0.8
	comp=Z,2.7nm,0.3s,baz=150,slow=11,SNR=138						
ANMO				Pg	Pb	08 52 32.8	+6.1
	comp=Z,20nm,0.3s,baz=160,slow=16,SNR=20						
ANMO				Lg	Lg	08 54 02.1	
	comp=Z,287nm,0.3s,baz=240,slow=22,SNR=15						
ANMO				LR	LR	08 55 13.1	
	comp=Z,482nm,20.7s,baz=139,slow=41						
	comp=Z,32nm,0.7s						
FVM	French Village	7.07	96		Pn	08 52 08.6	+0.9
FVM	French Village	7.07	96	P	Pn	08 52 08.6	+0.9
FVM				pmax	pmax		
	comp=Z,986nm,1.1s						
UALR	University of	7.07	126		Pn	08 52 08.9	+1.3
CPRX	Cap Rock	7.09	213		Pn	08 52 08.9	+0.9
F33A	5 Mile Ranch,	7.09	17		Pn	08 52 06.0	-2.0
F33A				IAmb_Lg		08 54 13.6	
	comp=Z,1μm,1.0s						
SLM	Saint Louis	7.11	91		Pn	08 52 10.1	+1.8
SLM				IAmb_Lg		08 54 17.0	
	comp=Z,1μm,1.1s						
SLM	Saint Louis	7.11	91	P	Pn	08 52 10.1	+1.8
SLM				pmax	pmax		
	comp=Z,1μm,1.1s						
LCAR	Lake Charles	7.17	112		Pn	08 52 10.0	+1.1
PV15	Paradox Valley	7.19	267		Pn	08 52 09.8	+0.2
PV15				IAmb_Lg		08 54 14.4	
	comp=Z,1μm,0.8s						
WHTX	Lake Whitney,	7.26	167		Pn	08 52 11.5	+1.1
PV01	Paradox Valley	7.30	265		Pn	08 52 11.5	+0.5
SGCY	Sterling City	7.32	192		Pn	08 52 11.8	+0.5
SGCY				IAmb_Lg		08 54 39.7	
	comp=Z,2μm,0.9s						
WLAR	White Oak Lake	7.38	135	P	Pn	08 52 14.2	+2.4
WLAR				S	Sn	08 53 38.1	+2.6
PV22	Blue Mesa, Par	7.40	269		Pn	08 52 12.7	+0.2
PBMO	Poplar Bluff	7.41	106	IAmb_Lg		08 54 30.0	
	comp=Z,1μm,0.8s						
PV02	Paradox Valley	7.41	266		Pn	08 52 12.8	+0.2
PV12	Saucer Basin,	7.45	267		Pn	08 52 13.0	0.0
PV12				IAmb_Lg		08 54 26.4	
	comp=Z,2μm,1.0s						
MVCO	Mesa Verde	7.46	258		Pn	08 52 13.6	+0.2
MVCO				IAmb_Lg		08 54 28.9	
	comp=Z,1μm,0.9s						
PV13	Radium Mtn., P	7.49	266		Pn	08 52 13.9	+0.3
PV13				IAmb_Lg		08 54 31.9	
	comp=Z,2μm,1.1s						
PV03	Paradox Valley	7.49	266		Pn	08 52 13.9	+0.3
PV11	David Mesa, Pa	7.50	267		Pn	08 52 14.1	+0.3
PV04	Paradox Valley	7.51	268		Pn	08 52 13.9	0.0
PV04				IAmb_Lg		08 54 25.6	
	comp=Z,1μm,1.0s						
E28A	Huff	7.53	353		Pn	08 52 11.8	-2.2
E28A				IAmb_Lg		08 54 27.1	
	comp=Z,1μm,0.9s						
PV18	Skein Mesa, Pa	7.54	266	IAmb_Lg		08 54 40.6	
	comp=Z,1μm,0.8s						
PV21	Cone Mtn., Par	7.55	269	IAmb_Lg		08 54 37.5	
	comp=Z,1μm,1.1s						
PV20	West Nyswonger	7.57	267	IAmb_Lg		08 54 26.8	
	comp=Z,1μm,0.7s						
PV17	East Wray Mesa	7.57	267	IAmb_Lg		08 54 25.6	
	comp=Z,1μm,1.2s						
PV19	Morning Glory	7.59	267	IAmb_Lg		08 54 33.2	
	comp=Z,2μm,1.3s						
PV23	Carpenter Ridg	7.59	268	IAmb_Lg		08 54 28.6	
	comp=Z,2μm,1.0s						
PV10	Paradox Valley	7.62	268	IAmb_Lg		08 54 31.0	
	comp=Z,1μm,0.8s						
237A	Washetta, Mont	7.65	157		Pn	08 52 16.3	+0.7
237A				IAmb_Lg		08 54 36.8	
	comp=Z,1μm,0.8s						
HBAR	Harrisburg	7.77	114		Pn	08 52 18.2	+1.0
SPMN	Marine on St.	7.80	36		Pn	08 52 15.5	-2.1
BRDY	Brady	7.81	178		Pn	08 52 18.3	+0.4
BRDY				IAmb_Lg		08 54 55.4	
	comp=Z,2μm,1.0s						
HDIL	Hopedale	7.86	76		Pn	08 52 17.5	-1.0
Z41A	Richland Creek	7.87	136	IAmb_Lg		08 54 45.0	
	comp=Z,2μm,1.1s						
LENM	Lemitar	7.87	234		Pn	08 52 19.6	+0.7
Y22D	IRIS PASSCAL I	7.90	233		Pn	08 52 21.1	+1.9
L42A	Oliver, Polo	7.91	65	IAmb_Lg		08 54 37.4	
	comp=Z,1μm,1.0s						
CRHG	Carthage	7.97	147	P	Pn	08 52 22.1	+2.1
CRHG				S	Sn	08 53 47.5	-2.7
CCAR	Cane Creek	7.99	128		Pn	08 52 22.0	+1.7
CCAR				IAmb_Lg		08 54 54.0	
	comp=Z,2μm,1.0s						
Q44A	Meyer Farm, Va	8.04	88		Pn	08 52 21.4	+0.5
S44A	Carbondale	8.04	97		Pn	08 52 23.1	+2.2
SIUC	Southern Illin	8.06	97		Pn	08 52 22.9	+1.6
PEBM	Pemiscott Bayo	8.09	109		Pn	08 52 24.9	+3.3
NATX	Nacogdoches	8.26	151		Pn	08 52 25.1	+1.1
NATX				IAmb_Lg		08 55 06.8	
	comp=Z,2μm,1.1s						
NATX	Nacogdoches	8.26	151	P	Pn	08 52 25.4	+1.4
NATX				S	Sn	08 53 54.7	-2.7
OZNA	Ozona	8.30	191		Pn	08 52 24.6	0.0
TPB07	Mentone	8.30	207	P	Pn	08 52 26.3	+1.6
435B	Jarrell	8.43	170		Pn	08 52 28.0	+1.7
435B				IAmb_Lg		08 55 07.2	
	comp=Z,2μm,0.8s						
GLAT	Glass	8.45	106		Pn	08 52 29.4	+2.8
PDAR	Pinedale Array	8.56	299	Pn	Pn	08 52 26.0	-2.3
	comp=Z,47nm,0.6s,baz=118,slow=12,SNR=164						
PDAR				Pg	Pg	08 52 55.0	-13
	comp=Z,21nm,0.3s,baz=102,slow=14,SNR=15						
PDAR				Lg	Lg	08 54 46.0	
	comp=Z,69nm,0.3s,baz=95,slow=33,SNR=3.8						
PDAR				LR	LR	08 56 06.3	
	comp=Z,622nm,19.8s,baz=84,slow=41						
PECS	Pecos	8.56	207		Pn	08 52 28.9	+0.7
PECS	Pecos	8.56	207	P	Pn	08 52 29.0	+0.8
PECS				Sg	Sg	08 54 57.6	-1.2
JCT	Junction City	8.62	183		Pn	08 52 29.4	+0.5
JCT	Junction City	8.62	183	P	Pn	08 52 29.4	+0.5
JCT				pmax	pmax		
	comp=Z,3μm,1.1s						
SNAG	San Augustine	8.66	149	P	Pn	08 52 30.8	+1.3
SNAG				S	Sn	08 54 03.4	-3.9
T45A	Paducah	8.69	101		Pn	08 52 30.3	+0.5
SRU	San Rafael Swe	8.70	274		Pn	08 52 30.4	+0.2
SRU	San Rafael Swe	8.70	274	P	Pn	08 52 30.4	+0.2
MDND	Maddock	8.74	359		Pn	08 52 26.9	-3.7
MDND				IAmb_Lg		08 55 09.0	
	comp=Z,1μm,1.1s						
MNTX	Cornudas Mount	8.89	216		Pn	08 52 32.4	-0.2
MNTX				IAmb_Lg		08 55 14.9	
	comp=Z,1μm,0.8s						
HNVL	Huntsville, TX	8.91	158		Pn	08 52 34.3	+1.3
HNVL	Huntsville, TX	8.91	158	P	Pn	08 52 35.2	+2.3
HNVL				S	Sn	08 54 09.8	-3.6
143A	Socs Landing,	9.06	132		Pn	08 52 36.5	+1.5
143A				IAmb_Lg		08 55 33.9	
	comp=Z,1μm,1.0s						
LAO	LASA Array	9.11	329	IAmb_Lg		08 55 17.5	
	comp=Z,1μm,0.9s						
EPT	El Paso	9.37	221	IAmb_Lg		08 55 37.0	
	comp=Z,983nm,1.0s						
ALPN	Alpine	9.40	203	P	Pn	08 52 40.2	+0.4
Y45A	Yeager Farm, C	9.46	121	IAmb_Lg		08 55 48.0	
	comp=Z,1μm,1.0s						
VHRN	Van Horn	9.51	211	P	Pn	08 52 41.7	+0.5
RLMT	Red Lodge	9.52	312		Pn	08 52 39.0	-2.4
RLMT				IAmb_Lg		08 55 33.7	
	comp=Z,1μm,1.2s						
HKT	Hockley	9.58	161		Pn	08 52 44.0	+2.1
HKT	Hockley	9.58	161	P	Pn	08 52 44.1	+2.1
HKT				pmax	pmax		
	comp=Z,245nm,0.9s						
WVT	Waverly	9.60	104		Pn	08 52 43.2	+0.9
WVT	Waverly	9.60	104	P	Pn	08 52 43.3	+0.9
441A	DeRidder	9.74	147	IAmb_Lg		08 56 03.9	
	comp=Z,732nm,1.2s						
TPAW	Teton Pass	9.78	300		Pn	08 52 43.3	-1.7
T47A	Sharon Grove	9.88	99		Pn	08 52 46.6	+0.5
PLAL	Pickwick Lake	9.89	111		Pn	08 52 46.7	+0.3
BLO	Bloomington	9.96	86		Pn	08 52 47.1	-0.1
BLO	Bloomington	9.96	86	P	Pn	08 52 47.1	-0.1
DGMT	Dagmar	10.00	341	IAmb_Lg		08 55 37.9	
	comp=Z,1μm,0.9s						
WCI	Wyandotte Cave	10.24	91		Pn	08 52 51.2	+0.1
WCI	Wyandotte Cave	10.24	91	P	Pn	08 52 51.2	+0.1
735A	Kenedy	10.30	172		Pn	08 52 53.4	+1.4
TXAR	Lajitas Array	10.38	201	Pn	Pn	08 52 53.8	+0.5
	comp=Z,24nm,0.3s,baz=30,slow=10,SNR=1048						
TXAR				Lg	Lg	08 55 53.9	
	comp=Z,25nm,0.3s,baz=25,slow=27,SNR=14						
TXAR				LR	LR	08 57 21.3	
	comp=Z,972nm,20.3s,baz=17,slow=40						
EYMN	Ely	10.50	30		Pn	08 52 52.2	-2.5
833A	Chaparral WMA,	10.76	180		Pn	08 52 57.2	-1.0
X16A	Lo Mia Camp, P	10.78	248		Pn	08 52 59.3	+0.7
KNB	Kanab	10.84	263		Pn	08 52 59.7	+0.2
KNB	Kanab	10.84	263	P	Pn	08 52 59.7	+0.2
R49A	Shelbyville	11.10	90		Pn	08 53 02.1	-0.8
EPLO	Experimental L	11.30	19		Pn	08 53 01.9	-3.6
PSUT	Pine Spring	11.35	272		Pn	08 53 06.1	-0.4
ULM	Lac du Bonnet	11.41	11	Pn	Pn	08 53 02.3	-4.8
	comp=Z,12nm,0.3s,baz=189,slow=12,SNR=79						
ULM				Lg	Lg	08 56 13.4	
	comp=Z,6.5nm,0.3s,baz=109,slow=18,SNR=5.5						
ULM				LR	LR	08 57 43.1	
	comp=Z,697nm,20.3s,baz=214,slow=39						
	comp=Z,63nm,0.5s						
ULM	Lac du Bonnet	11.41	11	*i* P	Pn	08 53 02.8	-4.3
TUC	Tucson	11.51	237		Pn	08 53 09.6	+1.0
TUC	Tucson	11.51	237	P	Pn	08 53 09.6	+1.0
MCMT	McKenzie Canyo	11.57	304		Pn	08 53 09.1	-0.4
HRY	Holter Researc	11.89	314		Pn	08 53 11.3	-2.6
TBO	Thunder Bay	11.91	34		Pn	08 53 10.3	-3.7
ELK	Elko	12.32	283		Pn	08 53 19.4	-0.4
ELK	Elko	12.32	283	Pn	Pn	08 53 20.0	+0.1
	comp=Z,0.2nm,0.3s,baz=92,slow=8.9,SNR=18						
ELK				LR	LR	08 58 14.0	
	comp=Z,874nm,20.1s,baz=66,slow=39						
	comp=Z,5.1nm,0.9s						
ELK	Elko	12.32	283	P	Pn	08 53 20.0	+0.1
GLMI	Grayling	12.35	58		Pn	08 53 16.3	-3.6
S51A	Beattyville	12.44	92		Pn	08 53 20.1	-1.2

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X51A  Calhoun           12.45 107          Pn    08 53 21.5 +0.2
PRN   Pahroc Range      12.47 267          Pn    08 53 22.2 +0.4
M50A  Fremont           12.66  74          Pn    08 53 21.1 -3.1
BPMT  Black Pine Rid    12.68 310          Pn    08 53 23.6 -1.1
TZTN  Tazewell          12.74  97          Pn    08 53 25.4  0.0
BRAL  Brewton           12.79 125          Pn    08 53 27.9 +1.9
TKL   Tuckaleechee C    12.85 101   Pn     Pn    08 53 26.8  0.0
      comp=Z,3.7nm,0.3s,baz=252,slow=5.7,SNR=77
TKL                                 Lg     Lg    08 57 07.7
      comp=Z,11nm,0.3s,baz=182,slow=22,SNR=9.8
TKL                                 LR     LR    08 58 30.2
      comp=Z,816nm,21.8s,baz=271,slow=38
      comp=Z,46nm,0.7s
W52A  Murphy            12.93 103          Pn    08 53 27.6 -0.4
MSO   Missoula          13.18 311          Pn    08 53 28.6 -2.8
HPIG                    13.24 205          Pn    08 53 32.1 -0.3
P52A  Corning           13.32  82          Pn    08 53 31.4 -1.9
152A  Waverly Hall      13.47 114          Pn    08 53 34.6 -0.8
TPNV  Topopah Spring    13.51 266          Pn    08 53 36.4 +0.4
TPNV  Topopah Spring    13.51 266   P      Pn    08 53 36.4 +0.4
V53A  Saluda            13.58  99          Pn    08 53 35.4 -1.4
BG3   Lake Jocassee     13.73 102          Pn    08 53 38.3 -0.5
PLID  Pearl Lake        13.73 301          Pn    08 53 37.7 -1.4
JTMT  Jette             13.86 313          Pn    08 53 39.5 -1.2
O53A  New Philadelph    14.01  80          Pn    08 53 39.3 -3.3
TPH   Tonopah           14.03 271          Pn    08 53 41.2 -2.0
TPH   Tonopah           14.03 271   P      Pn    08 53 41.2 -2.0
GWY   Greenwater Val    14.04 263          Pn    08 53 43.7 +0.5
NVAR  Mina Array Bea    14.82 273   Pn     Pn    08 53 54.2 +0.3
      comp=Z,0.2nm,0.3s,baz=78,slow=10,SNR=16
NVAR                                LR     LR    09 00 02.0
      comp=Z,451nm,19.4s,baz=79,slow=40
      comp=Z,1.5nm,0.7s
PFO   Pinyon Flats O    14.84 254   Pn     Pn    08 53 56.0 +1.8
      comp=Z,0.1nm,0.3s,baz=77,slow=9.3,SNR=5.6
PFO                                 Lg     Lg    08 58 11.1
      comp=Z,0.3nm,0.3s,baz=13,slow=3.4,SNR=4.9
      comp=Z,3.3nm,0.8s
PFO   Pinyon Flats O    14.84 254 i P      Pn    08 53 56.7 +2.5
NEW   Newport           15.76 311   Pn     Pn    08 54 03.6 -2.5
      comp=Z,0.1nm,0.3s,baz=106,slow=14,SNR=6.2
NEW                                 LR     LR    09 00 45.4
      comp=Z,123nm,21.4s,baz=117,slow=40
SADO  Sadowa            16.04  63   Pn     Pn    08 54 09.3 -0.4
      comp=Z,0.5nm,0.3s,baz=276,slow=10,SNR=11
SADO                                Lg     Lg    08 58 41.5
      comp=Z,1.8nm,0.3s,baz=352,slow=22,SNR=12
SADO                                LR     LR    09 00 12.0
      comp=Z,235nm,19.6s,baz=269,slow=37
MEDO  Medina            16.24  69          Pn    08 54 12.3 +0.1
BEKR  Beckworth         16.25 279          Pn    08 54 12.0 -0.6
D08A  Wollman Farm,     16.34 305          Pn    08 54 12.5 -1.0
F07A  Phinny Hill Vi    16.61 301          Pn    08 54 16.7 -0.3
WAH2  Wahluke Slope     16.64 304   Pn     Pn    08 54 16.1 -1.3
WAH2                                IAmb   IAmb  08 54 21.8
      comp=Z,22nm,0.9s
E07A  Sunnyside         16.77 303   Pn     Pn    08 54 18.2 -0.8
G06A  Carlson Farm,     16.92 298          Pn    08 54 19.7 -1.2
G06A                                IAmb   IAmb  08 54 27.4
      comp=Z,23nm,1.0s
MXC   Moxie City        17.06 303   P      Pn    08 54 22.6 -0.1
B08A  Colville Reser    17.12 309          Pn    08 54 22.2 -1.2
ORV   Oroville          17.16 279          Pn    08 54 24.2 +0.3
ORV   Oroville          17.16 279   P      Pn    08 54 24.2 +0.3
ORV                                 pmax   pmax
      comp=Z,14nm,1.3s
CBN   Corbin Frederi    17.18  86   P      P     08 54 25.9 +0.1
CBN                                 IAmb   IAmb  08 55 09.7
      comp=Z,27nm,0.6s
SAO   San Andreas Ge    17.60 269   P      P     08 54 31.2 +0.8
SAO                                 IAmb   IAmb  08 54 34.0
      comp=Z,19nm,0.8s
SAO   San Andreas Ge    17.60 269   P      P     08 54 31.3 +0.8
SAO                                 pmax   pmax
      comp=Z,19nm,0.8s
LPIG  La Paz            17.62 215   P      P     08 54 31.0 +0.3
      comp=Z,38nm,1.0s,baz=207,slow=24,SNR=3.9
LPIG                                LR     LR    09 01 32.8
      comp=Z,588nm,18.8s,baz=31,slow=38
J04A  Umpqua Nationa    17.62 291   P      P     08 54 31.1 +0.1
YBH   Yreka Blue Hor    17.98 286   P      Pn    08 54 32.9 -1.4
      baz=99,slow=2.0,SNR=19
YBH                                 LR     LR    09 01 49.2
      comp=Z,23nm,21.6s,baz=76,slow=38
      comp=Z,2.8nm,1.0s
O02D  Mt. Diablo Mer    18.09 281          Pn    08 54 35.1 -0.5
O02D                                IAmb   IAmb  08 54 39.0
      comp=Z,22nm,0.9s
G04A  Mulino            18.18 297   P      Pn    08 54 36.5 -0.1
G04A                                IAmb   IAmb  08 54 41.2
      comp=Z,51nm,1.0s
I03D  Drain, OR         18.57 292   P      P     08 54 40.5 -0.6
I03D                                IAmb   IAmb  08 54 54.6
      comp=Z,55nm,1.4s
L59A  Walton            18.67  73   P      P     08 54 38.4 -3.9
L59A                                IAmb   IAmb  08 54 50.0
      comp=Z,32nm,0.9s
K02D  Willamette Mer    18.72 289   P      P     08 54 41.7 -1.2
G03D  McMinnville, O    18.73 297   P      P     08 54 41.5 -1.3
G03D                                IAmb   IAmb  08 55 06.7
      comp=Z,50nm,1.3s
WBO   Williamsburg      18.78  64   P      P     08 54 43.1 -0.2
WBO                                 IAmb   IAmb  08 54 45.6
      comp=Z,15nm,0.6s
KMRM  Mail Ridge        18.79 281          P     08 54 43.0 -0.6
GNW   Green Mountain    19.01 304          P     08 54 45.0 -0.9
BRNJ  Basking Ridge     19.06  77          P     08 54 44.8 -1.7
BRNJ                                IAmb   IAmb  08 55 24.5
      comp=Z,28nm,0.9s
KMPM  Mount Pierce      19.09 282          P     08 54 46.3 -0.6
J59A  Piesco            19.14  69   P      P     08 54 47.5 +0.1
E03A  Lebam             19.22 301          P     08 54 47.9 -0.3
E03A                                IAmb   IAmb  08 55 00.7
      comp=Z,50nm,1.4s
TRQ   Mont Tremblant    19.51  61          Pn    08 54 52.2 -0.5
TRQ                                 IAmb   IAmb  08 55 27.7
      comp=Z,16nm,0.9s
NLWA  Neilton Lookou    19.64 303   P      P     08 54 51.1 -1.7
NLWA                                IAmb   IAmb  08 54 56.4
      comp=Z,18nm,1.1s
KSCT  Kent School, K    19.83  74   P      P     08 54 55.0  0.0
L61B  Northampton       20.43  72          P     08 55 01.6 +0.2
VT1   Waterbury         20.47  67   P      P     08 55 02.0 +0.1
J61A  Chester           20.55  69   P      P     08 55 02.2 -0.5
J61A                                IAmb   IAmb  08 55 04.9
      comp=Z,20nm,0.9s
TEIG  Tepich            21.09 150   P      P     08 55 10.3 +1.6
TEIG                                IAmb   IAmb  08 55 31.2
      comp=Z,37nm,1.2s
HRV   Adam Dziewonsk    21.26  72   P      P     08 55 10.9 +0.5
HRV                                 IAmb   IAmb  08 55 15.1
      comp=Z,31nm,1.1s
HRV   Adam Dziewonsk    21.26  72   P      P     08 55 10.9 +0.5
HRV                                 pmax   pmax
      comp=Z,31nm,1.1s
WES   Weston            21.43  72   P      P     08 55 12.7 +0.4
WES                                 IAmb   IAmb  08 55 13.9
      comp=Z,26nm,1.0s
WES   Weston            21.43  72   P      P     08 55 12.7 +0.4
WES                                 pmax   pmax
      comp=Z,26nm,1.0s
H62A  Milan             21.63  66   P      P     08 55 14.5 +0.1
H62A                                IAmb   IAmb  08 55 17.4
      comp=Z,26nm,0.9s
LDAQ  Lac Daran         22.11  57   P      P     08 55 17.7 -1.8
LDAQ                                IAmb   IAmb  08 55 24.8
      comp=Z,30nm,1.1s
CMIG  Matias Romero     22.28 169   LR     LR    09 06 39.5
      comp=Z,116nm,21.8s,baz=2.5,slow=43
LMQ   La Malbaie        22.62  59          P     08 55 23.8 -1.2
LMQ                                 IAmb   IAmb  08 55 39.1
      comp=Z,20nm,1.1s
E62A  Clayton Lake      23.01  61   P      P     08 55 28.8 -0.3
E62A                                IAmb   IAmb  08 55 31.4
      comp=Z,21nm,1.0s
CCIG  Comitan           23.60 163   P      P     08 55 37.7 +2.4
BBB   Bella Bella       23.81 313   LR     LR    09 05 31.9
      comp=Z,85nm,18.9s,baz=122,slow=38
G65A  Princeton         24.23  65   P      P     08 55 41.8 +0.8
ICQ   Pointe Anglais    25.02  55          P     08 55 47.7 -0.4
YKA   Yellowknife Ar    25.19 343   P      P     08 55 48.6 -0.9
      comp=Z,17nm,0.9s,baz=147,slow=9.0,SNR=32
YKA                                 LR     LR    09 04 54.7
      comp=Z,168nm,20.0s,baz=149,slow=35
      comp=Z,17nm,0.9s
BATG  Bathurst New B    25.44  60   P      P     08 55 51.3 -0.7
TOAD  Toad River Com    25.78 329   P      P     08 55 56.5 +1.6
      baz=129
KOTAN Kotaneelee Air    26.15 332   P      P     08 55 59.9 +1.6
      baz=132
U35K  Hyder             26.38 320   P      P     08 56 01.8 +1.5
      baz=117
LIRD  Liard River Hi    26.48 329   P      P     08 56 02.6 +1.4
      baz=128
BEAVL Fort Liard        26.57 331   P      P     08 56 03.5 +1.5
      baz=131
SCHQ  Schefferville     26.87  43   P      P     08 56 04.6 -0.2
      comp=Z,20nm,0.8s,baz=238,slow=11
SCHQ                                LR     LR    09 06 40.5
      comp=Z,399nm,19.1s,baz=250,slow=36
      comp=Z,20nm,0.8s
V35K  Ketchikan         26.95 318   P      P     08 56 06.3 +0.8
      baz=114
T35M  Bob Quinn         26.98 322   P      P     08 56 06.9 +1.1
      baz=118
S34M  Telegraph Cree    27.85 323   P      P     08 56 14.8 +1.2
      baz=119
WTLY  Watson Lake, Y    27.99 328   P      P     08 56 15.4 +0.5
      baz=125
WRGLY Wrigley           28.16 337   P      P     08 56 17.0 +0.8
WRGLY                               IAmb   IAmb  08 56 55.3
      comp=Z,8.5nm,1.0s
Q32M  Nakina River      28.88 324   P      P     08 56 24.0 +1.1
      baz=119
S32K  Killisnoo         29.31 320   P      P     08 56 27.0 +0.4
      baz=114
SIT   Sitka             29.53 319   P      P     08 56 28.5 +0.1
      baz=112
P33M  Teslin, Yukon     29.74 326   P      P     08 56 30.6 +0.2
      baz=120
P32M  Atlin             29.83 325   P      P     08 56 31.3 +0.1
      baz=118
MMPY  Sheldon Lake,     30.42 331   P      P     08 56 36.6 +0.2
MMPY  Sheldon Lake,     30.42 331   P      P     08 56 37.9 +1.5
      baz=126
SKAG  Skagway           30.50 324   P      P     08 56 37.6 +0.5
      baz=116
FRB   Frobisher Bay     30.69  26   LR     LR    09 08 52.6
      comp=Z,780nm,19.2s,baz=238,slow=36
WHY   Whitehorse        30.85 326   P      P     08 56 41.3 +1.0
      baz=118
FARO  Faro, Yukon       31.01 329   P      P     08 56 42.5 +0.9
      baz=122
M31M  Drury Creek, Y    31.41 329   P      P     08 56 46.0 +0.9
      baz=121
O30N  Mendenhall        31.43 326   P      P     08 56 45.9 +0.6
      baz=117
JTS   Las Juntas de     31.44 152   LR     LR    09 13 52.5
      comp=Z,66nm,18.2s,baz=350,slow=44
P30M  Million Dollar    31.53 324   P      P     08 56 47.2 +0.9
      baz=115
N31M  Braeburn, Yuko    31.63 327   P      P     08 56 48.6 +1.5
      baz=118
ILON  Igloolik, Nuna    31.75  12   P      P     08 56 48.2 +0.3
HYT   Haines Junctio    32.08 325   P      P     08 56 52.4 +1.3
      baz=115
N30M  Aishikik Lake     32.17 326   P      P     08 56 52.9 +1.0
      baz=116
O29M  Mount Kennedy     32.34 324   P      P     08 56 54.5 +1.0
      baz=113
PNL   Peninsula         32.49 323   P      P     08 56 55.7 +1.1
      baz=111
YUK6  Outpost Mounta    32.51 325   P      P     08 56 55.8 +0.8
      baz=114
YUK4  Talbot Arm        32.80 326   P      P     08 56 58.2 +0.7
      baz=115
PINM  Pinnacle          33.04 323   P      P     08 57 00.6 +1.1
      baz=111
C36M  Paulatuk          33.06 344   P      P     08 57 00.1 +0.7
      baz=143
M29M  Somme Creek       33.19 328   P      P     08 57 00.5 -0.4
M29M  Somme Creek       33.19 328   P      P     08 57 01.7 +0.8
      baz=116
O28M  Mount Upton       33.26 324   P      P     08 57 01.0 -0.7
      baz=112
L29M  L29M              33.36 329   P      P     08 57 02.8 +0.6
      baz=118
H31M  Peel River        33.38 335   P      P     08 57 02.9 +0.5
      baz=126
J30M  Hart River        33.39 332   P      P     08 57 02.5 -0.1
      baz=122,SNR=6.4
K29M  Barlow Dome       33.47 330          P     08 57 03.1 -0.1
K29M                                IAmb   IAmb  08 57 06.4
      comp=Z,7.4nm,0.9s
K29M  Barlow Dome       33.47 330   P      P     08 57 03.4 +0.1
      baz=119,SNR=11
I30M  Mount Dempster    33.76 333          P     08 57 05.5 -0.2
I30M                                IAmb   IAmb  08 57 08.5
      comp=Z,5.0nm,0.8s
I30M  Mount Dempster    33.76 333   P      P     08 57 06.3 +0.6
      baz=122,SNR=8.0
YUK3  Moose Creek       33.77 326   P      P     08 57 06.4 +0.4
      baz=113
CTG   Chitna Glacier    33.86 324   P      P     08 57 06.5 -0.2
      baz=111
MESA  MESA              33.87 323   P      P     08 57 06.6 -0.2
      baz=109
G31M  Satah River       34.03 336   P      P     08 57 07.7 -0.2
G31M                                IAmb   IAmb  08 57 39.0
      comp=Z,4.8nm,1.1s
G31M  Satah River       34.03 336   P      P     08 57 09.3 +1.5
      baz=127
F31M  Tsiigehtchic      34.18 337   P      P     08 57 10.1 +0.9
      baz=128
DAWY  Dawson            34.30 330          P     08 57 10.1 -0.3
DAWY                                IAmb   IAmb  08 57 12.8
      comp=Z,3.7nm,0.9s
DAWY  Dawson            34.30 330   P      P     08 57 10.9 +0.5
      baz=117
BGLC  Bering Glacier    34.49 322   P      P     08 57 13.0 +1.0
      baz=108
EPYK  Eagle Plains      34.50 334   P      P     08 57 12.9 +0.8
      baz=124
I29M  Ogilvie Camp,     34.52 332   P      P     08 57 12.0 -0.2
I29M                                IAmb   IAmb  08 57 14.3
      comp=Z,3.6nm,0.8s
I29M  Ogilvie Camp,     34.52 332   P      P     08 57 12.8 +0.6
      baz=120,SNR=6.2
CRQE  Cirque            34.59 323   P      P     08 57 13.3 +0.3
      baz=108
M27K  Edge Creek, AK    34.61 326   P      P     08 57 13.4 +0.3
      baz=112
INK   Inuvik            34.67 338   P      P     08 57 13.5 +0.1
      baz=130,SNR=11
G30M  tAoh Zraii Nji    34.68 335   P      P     08 57 14.4 +0.8
      baz=125
L27K  Beaver Creek,     34.86 327   P      P     08 57 15.2  0.0
L27K                                IAmb   IAmb  08 57 18.4
      comp=Z,3.6nm,0.8s
L27K  Beaver Creek,     34.86 327   P      P     08 57 15.5 +0.3
      baz=113,SNR=7.9
F30M  Barrier River     34.91 337   P      P     08 57 15.7 +0.2
      baz=126,SNR=5.5
KAIM  Kayak Island      34.98 322   P      P     08 57 16.1  0.0
      baz=106
H29M  Whitestone        34.98 334   P      P     08 57 16.9 +0.7
      baz=121
M26K  Nabesna, AK       35.11 326   P      P     08 57 18.3 +0.9
      baz=111
I28M  Miner Creek       35.16 332   P      P     08 57 19.8 +1.9
      baz=118
G29M  Pine Creek        35.23 335   P      P     08 57 19.3 +0.9
      baz=122
POIN  Pond Inlet        35.29  11          P     08 57 18.6 -0.1
POIN                                IAmb   IAmb  08 57 20.6
      comp=Z,9.7nm,0.9s
K27K  Chicken           35.35 329   P      P     08 57 20.7 +1.3
      baz=114
BMRM  Bremner River     35.36 323   P      P     08 57 20.8 +1.2
      baz=107
L26K  Log Cabin Wild    35.49 327   P      P     08 57 21.8 +1.2
      baz=111
N25K  Chitina, Valde    35.55 324   P      P     08 57 21.2 -0.1
      baz=108
SJG   San Juan          35.57 117   LR     LR    09 13 08.4
      comp=Z,90nm,20.2s,baz=256,slow=38
RES   Resolute Bay      35.73   2   LR     LR    09 12 20.0
      comp=Z,437nm,18.7s,baz=214,slow=37
EYAK  Cordova Ski Ar    35.78 322   P      P     08 57 23.5 +0.4
      baz=105
Q23K  Middleton Isla    35.80 320   P      P     08 57 24.1 +0.8
      baz=103
I27K  Kandik River      35.85 332   P      P     08 57 24.1 +0.4
      baz=117
E29M  Blow River        36.01 337   P      P     08 57 25.5 +0.5
      baz=124,SNR=5.3
HARP  HAARP             36.05 325   P      P     08 57 26.3 +0.8
      baz=108
H27K  Steamboat Moun    36.10 332          P     08 57 26.2 +0.3
H27K                                IAmb   IAmb  08 57 28.0
      comp=Z,4.3nm,0.9s
H27K  Steamboat Moun    36.10 332   P      P     08 57 26.6 +0.7
      baz=118,SNR=6.9
SCRK  Sand Creek        36.10 328   P      P     08 57 26.8 +0.8
      baz=112
KLU   Klutina           36.13 324   P      P     08 57 26.8 +0.6
      baz=106
J26L  Joseph Creek      36.13 329   P      P     08 57 27.3 +1.1
      baz=113,SNR=9.2
F28M  Old Crow          36.22 335   P      P     08 57 27.9 +1.1
      baz=121,SNR=7.1
I26K  Coal Creek Min    36.30 331   P      P     08 57 28.5 +1.0
      baz=114
RIDG  Independent Ri    36.37 328   P      P     08 57 29.1 +0.9
      baz=111
PAX   Paxson            36.38 326   P      P     08 57 29.1 +0.8
      baz=109
M24K  Tolsona, Glenn    36.42 325   P      P     08 57 29.6 +1.0
      baz=107
G27K  Doyon Strip       36.42 333   P      P     08 57 29.4 +0.8
      baz=118
GLI   Glacier Island    36.51 323   P      P     08 57 30.3 +0.9
      baz=104
E28M  Babbage River     36.64 337   P      P     08 57 31.6 +1.3
      baz=123,SNR=5.7
K24K  Donnelly Dome     36.78 328   P      P     08 57 33.3 +1.6
      baz=110
D28M  Stokes Point      36.80 338   P      P     08 57 32.5 +0.8
      baz=124
J25K  Salcha River,     36.90 329   P      P     08 57 33.3 +0.6
      baz=111
E27K  Coleen River      37.07 335   P      P     08 57 34.9 +0.8
      baz=120,SNR=12
PWL   Port Wells        37.09 322   P      P     08 57 35.4 +1.1
      baz=103
G26K  Porcupine Rive    37.23 333          P     08 57 34.4 -1.1
G26K  Porcupine Rive    37.23 333   P      P     08 57 36.1 +0.7
      baz=116
DHY   Denali Highway    37.24 326   P      P     08 57 36.2 +0.5
      baz=107
WAT6  Susitna Watana    37.26 325   P      P     08 57 36.0 +0.1
      baz=106
KNK   Knik Glacier      37.28 323   P      P     08 57 35.9  0.0
      baz=104
PRP   Porcupine Dome    37.30 330   P      P     08 57 37.1 +1.0
      baz=112
SML   Sawmill           37.32 324   P      P     08 57 36.8 +0.5
      baz=104
D27M  Malcolm River     37.41 337   P      P     08 57 37.6 +0.6
      baz=122
HDA   Harding Lake      37.47 328   P      P     08 57 38.3 +0.8
      baz=109
SEW   Seward            37.48 321   P      P     08 57 37.9 +0.4
      baz=101
ILAR  Eielson Array     37.57 329   P      P     08 57 38.3  0.0
      comp=Z,6.3nm,0.8s,baz=108,slow=7.1,SNR=73
ILAR                                LR     LR    09 14 10.9
      comp=Z,119nm,20.4s,baz=113,slow=38
      comp=Z,6.3nm,0.8s
PMR   Palmer            37.64 323   P      P     08 57 40.0 +1.2
      baz=103
O22K  Cooper Landing    37.68 321   P      P     08 57 40.2 +0.9
      baz=101
WAT1  Susitna Watana    37.68 325   P      P     08 57 40.3 +1.0
      baz=105
F26K  Sheenjek River    37.69 334   P      P     08 57 40.7 +1.4
      baz=116
H25L  Birch Creek       37.69 331   P      P     08 57 40.5 +1.2
      baz=113,SNR=5.8
RC01  Rabbit Creek A    37.81 322   P      P     08 57 41.4 +1.0
      baz=102
POKR  Poker Plat Res    37.90 329   P      P     08 57 41.8 +0.7
      baz=110
COLA  College           37.99 329 i P      P     08 57 42.4 +0.6
COLA                                pmax   pmax
      comp=Z,7.0nm,0.9s
G25K  Bearman Lake      37.99 332   P      P     08 57 42.1 +0.3
      baz=113,SNR=5.6
BRSE  Bradley Lake S    38.05 320   P      P     08 57 43.4 +1.0
      baz=99
F25K  Christian Rive    38.16 333          P     08 57 43.2 -0.2
F25K                                IAmb   IAmb  08 57 47.0
      comp=Z,9.1nm,1.2s
F25K  Christian Rive    38.16 333   P      P     08 57 44.8 +1.4
      baz=114,SNR=8.7
H24K  Noodor Dome       38.32 330   P      P     08 57 45.4 +0.7
      baz=110
E25K  Arctic Village    38.36 334   P      P     08 57 45.0  0.0
      baz=115,SNR=9.2
SUA   Susitna One       38.37 323   P      P     08 57 45.6 +0.4
      baz=102
C27K  Jago River        38.45 337   P      P     08 57 46.6 +1.0
      baz=119
G24K  Hadweenzic Riv    38.47 332   P      P     08 57 46.5 +0.6
      baz=111
TRF   Thorofare Moun    38.61 326   P      P     08 57 48.3 +1.0
      baz=104
I23K  Minto, Yukon-K    38.69 329   P      P     08 57 48.9 +1.3
      baz=107
Q20K  Shuyak Island     38.74 318   P      P     08 57 48.6 +0.4
      baz=96
KDAK  Kodiak Island     38.75 317   LR     LR    09 12 39.1
      comp=Z,212nm,18.2s,baz=53,slow=35
KDAK  Kodiak Island     38.75 317   P      P     08 57 48.7 +0.4
      baz=95
SFJD  Kangerlussuaq     38.79  28   LR     LR    09 13 34.7
      comp=Z,331nm,18.7s,baz=248,slow=36
SKT   Skwentna          38.84 323   P      P     08 57 49.3 +0.3
      baz=101
F24K  Squaw Lake        38.93 333          P     08 57 50.8 +1.1
F24K  Squaw Lake        38.93 333   P      P     08 57 50.4 +0.6
      baz=112
C26K  Camden Bay        38.95 337   P      P     08 57 50.5 +0.6
      baz=118,SNR=7.3
H23K  Yukon River       38.97 330   P      P     08 57 50.2 +0.1
H23K  Yukon River       38.97 330   P      P     08 57 50.7 +0.6
      baz=108,SNR=6.9
BPAW  Bear Paw Mtn.     39.07 327   P      P     08 57 51.9 +0.9
      baz=104,SNR=7.3
OHAK  Old Harbor        39.09 316   P      P     08 57 51.3 +0.2
      baz=94
D25K  Kavik River       39.14 336   P      P     08 57 52.2 +0.7
D25K  Kavik River       39.14 336   P      P     08 57 51.4 -0.2
      baz=116
MLY   Manley            39.21 328   P      P     08 57 52.9 +0.7
      baz=106,SNR=14
P19K  Oil Pt            39.29 320   P      P     08 57 52.6 -0.2
      baz=97
PPLA  Purkeypile        39.32 325   P      P     08 57 54.1 +0.9
      baz=102
E24K  Your Creek        39.34 333   P      P     08 57 53.9 +0.6
      baz=112
CAST  Castle Rocks      39.38 326   P      P     08 57 54.1 +0.5
      baz=102
Q19K  Cape Douglas,     39.42 318   P      P     08 57 54.9 +0.9
      baz=96
G23K  Bananza Creek     39.43 331   P      P     08 57 54.6 +0.6
      baz=109
SII   Sitkinak Islan    39.54 315   P      P     08 57 55.9 +0.9
      baz=92
M20K  Styx River        39.56 323   P      P     08 57 55.6 +0.4
      baz=100
SDV   Santo Domingo     39.58 132   LR     LR    09 16 03.3
      comp=Z,65nm,19.5s,baz=350,slow=39
CHUM  Lake Minchumin    39.59 326   P      P     08 57 56.0 +0.8
      baz=103
COLD  Coldfoot          39.66 332   P      P     08 57 56.6 +0.8
      baz=109
H22K  Ishtalitna Cre    39.71 330   P      P     08 57 56.6 +0.4
      baz=106
E23K  Chandalar         39.73 333   P      P     08 57 57.1 +0.6
      baz=111
R18K  Karluk            39.74 316   P      P     08 57 57.3 +0.8
      baz=93
D24K  Happy Valley      39.87 335   P      P     08 57 58.6 +1.0
      baz=113
TOLK  Toolik Lake Re    39.93 334   P      P     08 57 58.2 +0.1
TOLK  Toolik Lake Re    39.93 334   P      P     08 57 58.9 +0.8
      baz=111,SNR=7.6
L20K  Farewell, AK      40.01 324   P      P     08 57 59.5 +0.7
      baz=100
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N19K	Bonanza Creek	40.05	321	P	P	08 57 59.6	+0.4
	baz=97						
C24K	Franklin Bluff	40.05	336	P	P	08 57 59.9	+0.8
	baz=113						
G22K	Bettles	40.05	331	P	P	08 58 00.3	+1.2
	baz=107						
Q18K	Katmai Hardscr	40.10	318	P	P	08 57 60.0	+0.2
	baz=94						
M19K	Big River Lodg	40.15	323	P	P	08 58 00.5	+0.5
	baz=98						
H21K	Melozitna Rive	40.21	329	P	P	08 58 00.3	-0.1
H21K				IAmb	IAmb	08 58 03.3	
	comp=Z,7.1nm,0.9s						
H21K	Melozitna Rive	40.21	329	P	P	08 58 00.8	+0.4
	baz=104,SNR=13						
K20K	Telida	40.25	325	P	P	08 58 01.5	+0.7
	baz=100						
P18K	Big Mountain,	40.27	319	P	P	08 58 01.3	+0.2
	baz=95						
O18K	Koktuh Hills	40.30	320	P	P	08 58 01.9	+0.7
	baz=95						
L19K	White Mountain	40.41	323	P	P	08 58 03.0	+0.9
	baz=98,SNR=6.4						
D23K	Nanushuk River	40.42	334	P	P	08 58 03.4	+1.2
	baz=110						
J20K	Nowinta River	40.44	327		P	08 58 01.7	-0.6
J20K				IAmb	IAmb	08 58 05.2	
	comp=Z,4.6nm,0.6s						
J20K	Nowinta River	40.44	327	P	P	08 58 03.3	+1.0
	baz=101,SNR=6.6						
F22K	John River	40.48	332	P	P	08 58 03.5	+0.8
	baz=107						
E22K	Anaktuvuk Pass	40.54	333	P	P	08 58 04.0	+0.8
	baz=108,SNR=5.4						
Q17K	Contact Creek	40.54	317	P	P	08 58 03.9	+0.6
	baz=93						
I20K	Naaghedeneel	40.70	327	P	P	08 58 05.3	+0.9
	baz=102						
G21K	Allakaket	40.70	330	P	P	08 58 05.0	+0.5
	baz=105						
C23K	Itkillik River	40.71	335	P	P	08 58 05.5	+1.0
	baz=112						
N18K	Kilae Creek	40.72	321	P	P	08 58 05.4	+0.7
	baz=96						
M18K	Stony River	40.78	322	P	P	08 58 05.9	+0.8
	baz=97						
P17K	Kvichak River	40.88	319	P	P	08 58 07.3	+1.3
	baz=93						
F21K	Alatna River	40.88	331	P	P	08 58 06.7	+0.7
F21K	Alatna River	40.88	331	P	P	08 58 07.2	+1.3
	baz=106						
Q16K	King Salmon	40.96	318	P	P	08 58 07.5	+0.8
	baz=92						
H20K	Anotleneega Mo	41.01	328	P	P	08 58 08.0	+1.0
	baz=102,SNR=8.9						
J19K	Poorman	41.04	326	P	P	08 58 08.0	+0.7
	baz=100,SNR=7.6						
D22K	Ayikyak River	41.08	334	P	P	08 58 08.5	+1.0
	baz=108						
O17K	Koliganek Bris	41.25	320	P	P	08 58 10.1	+1.0
	baz=93						
L18K	Granite Mounta	41.27	323	P	P	08 58 10.2	+1.0
	baz=97						
N17K	Nushagak Hills	41.34	321	P	P	08 58 10.8	+1.0
	baz=94						
E21K	Killik River	41.40	333	P	P	08 58 11.0	+0.8
	baz=106						
J18K	Innoko River	41.44	325		P	08 58 11.3	+0.7
J18K	Innoko River	41.44	325	P	P	08 58 11.9	+1.4
	baz=98,SNR=15						
M17K	Holitna River	41.54	322	P	P	08 58 12.7	+1.2
	baz=95						
H19K	Roundabout Mou	41.66	328	P	P	08 58 13.1	+0.7
	baz=101						
P16K	Nushagak River	41.67	318	P	P	08 58 13.5	+1.0
	baz=92						
F20K	Avaraart Lake	41.69	331	P	P	08 58 13.6	+1.1
	baz=103						
GCSA	Galena City Sc	41.70	327	P	P	08 58 13.2	+0.5
	baz=99						
O16K	Kokwok River B	41.74	319	P	P	08 58 13.9	+0.8
	baz=92						
B22K	Teshekpuk Lake	41.79	336	P	P	08 58 14.2	+0.9
	baz=109						
C21K	Knifeblade Rid	41.88	334	P	P	08 58 15.1	+1.0
	baz=106						
B21K	Ikpikpuk River	41.96	334	P	P	08 58 15.4	+0.7
	baz=107						
L17K	Donlin	42.01	323	P	P	08 58 15.5	+0.2
	baz=95,SNR=5.7						
G19K	Purcell Mounta	42.03	329	P	P	08 58 15.9	+0.5
	baz=101,SNR=7.5						
K17K	Iditarod	42.07	324	P	P	08 58 16.0	+0.3
	baz=96						
N16K	Nishlik Lake	42.12	321	P	P	08 58 16.9	+0.6
	baz=93						
E20K	Nigu River	42.14	332	P	P	08 58 17.3	+1.0
	baz=104						
M16K	Timber Creek	42.24	321	P	P	08 58 17.9	+0.7
	baz=93						
E19K	Redstone River	42.35	331	P	P	08 58 18.7	+0.7
	baz=102						
H18K	Honhosa River	42.39	327	P	P	08 58 19.0	+0.7
	baz=98						
D20K	Etivluk River	42.40	333	P	P	08 58 19.2	+0.8
	baz=104						
F19K	Shaleruckik Mo	42.43	330	P	P	08 58 19.2	+0.6
	baz=101						
J17K	VABM Dome	42.49	325	P	P	08 58 19.9	+0.8
	baz=96						
S14K	Fog Glacier	42.53	314	P	P	08 58 19.2	-0.5
	baz=87						
L16K	Owhat River	42.53	322	P	P	08 58 20.5	+1.0
	baz=94						
O15K	Ungalikthiuk R	42.62	319	P	P	08 58 20.3	+0.1
	baz=90						
G18K	Tagagawik	42.62	329	P	P	08 58 20.5	+0.3
	baz=99						
CHNA	Chernabura Isl	42.63	312	P	P	08 58 20.5	+0.1
	baz=86						
N15K	Kwethluk River	42.77	320	P	P	08 58 22.1	+0.6
	baz=91						
D19K	Kuna River	42.89	332	P	P	08 58 23.4	+1.0
	baz=102						
B20K	Meade River	42.91	335	P	P	08 58 23.6	+1.1
	baz=105						
H17K	Granite Mounta	43.02	327	P	P	08 58 24.4	+1.0
	baz=96,SNR=6.2						
F18K	Selawik	43.13	329	P	P	08 58 25.1	+0.8
	baz=99						
J16K	Anvik River	43.16	325	P	P	08 58 25.4	+0.8
	baz=94						
I17K	Unalakleet	43.25	325	P	P	08 58 25.3	0.0
	baz=95						
ICESG	Greenland Ices	43.34	27	*i* P	P	08 58 28.4	+2.1
ICESG				IAmb	IAmb	08 58 29.3	
	comp=Z,9.8nm,0.7s						
O14K	Tigyukauivet M	43.36	319	P	P	08 58 27.5	+1.2
	baz=89						
G17K	Kiwalik Mounta	43.39	328	P	P	08 58 27.1	+0.7
	baz=96						
NEEM	North Greenlan	43.42	14	*i* P	P	08 58 26.4	-0.5
NEEM				IAmb	IAmb	08 58 28.6	
	comp=Z,14nm,1.1s						
L15K	Ungalak Mounta	43.49	322	P	P	08 58 27.7	+0.4
	baz=92						
K15K	Wolf Creek Mou	43.53	323	P	P	08 58 28.4	+0.8
	baz=92						
E18K	Tukpahlearik C	43.62	331	P	P	08 58 28.8	+0.6
	baz=98						
M14K	Bethel	43.70	321	P	P	08 58 29.4	+0.5
	baz=90						
S12K	Black Hills	43.97	314	P	P	08 58 31.3	0.0
	baz=85						
C18K	Utukok River	44.03	332	P	P	08 58 31.7	0.0
	baz=99						
E17K	Hotham Inlet	44.05	330	P	P	08 58 32.5	+0.8
	baz=97						
L14K	Kuka Creek	44.06	322	P	P	08 58 32.7	+0.9
	baz=90						
G16K	Koyuk River	44.09	328	P	P	08 58 32.2	+0.2
	baz=95						
M13K	Dall Lake	44.39	320	P	P	08 58 34.1	-0.4
	baz=89						
J14K	Nanvaranak Lak	44.48	324	P	P	08 58 35.7	+0.6
	baz=91						
SUMG	Summit	44.51	22	*i* P	P	08 58 37.0	+1.2
SUMG				IAmb	IAmb	08 58 39.8	
	comp=Z,9.7nm,1.1s						
RDOG	Red Dog Mine	44.58	331	P	P	08 58 36.6	+0.6
	baz=97						
D17K	Noatak River	44.60	331	P	P	08 58 36.9	+0.8
	baz=96						
K13K	Kusilvak Mount	45.00	323	P	P	08 58 39.9	+0.6
	baz=89						
F15K	North Star Dit	45.06	328	P	P	08 58 39.7	-0.1
	baz=93						
F14K	Arctic Creek	45.75	328	P	P	08 58 45.1	-0.2
	baz=91						
TNA	Tin City	46.41	328	P	P	08 58 49.6	-0.8
	baz=90						
ATAH	Atahualpa	49.94	152	LR	LR	09 21 06.2	
	comp=Z,26nm,21.1s,baz=354,slow=37						
DAG	Danmarks Havn	50.18	17	*i* P	P	08 59 17.0	-2.4
DAG				IAmb	IAmb	08 59 20.3	
	comp=Z,11nm,0.7s						
BORG	Borgarnes	50.44	33	LR	LR	09 19 04.5	
	comp=Z,156nm,18.5s,baz=281,slow=34						
NOR	Nord	50.50	11	*i* P	P	08 59 19.3	-2.5
NOR				IAmb	IAmb	08 59 22.9	
	comp=Z,6.5nm,0.8s						
MDP	Montagnes des	54.05	116	LR	LR	09 23 43.9	
	comp=Z,61nm,21.2s,baz=302,slow=37						
KBS	Kingsbay	55.82	13	*ce*P	P	09 00 03.9	+2.9
KBS				pmax	pmax		
	comp=Z,14nm,1.3s						
BILL	Bilibino	55.97	333	*ce*P	P	09 00 03.6	+1.4
BILL				pmax	pmax		
	comp=Z,12nm,1.0s						
SPITS	Spitsbergen Ar	56.97	13	P	P	09 00 08.3	-0.8
	comp=Z,3.7nm,0.7s,baz=54,slow=6.3,SNR=6.4						
SPITS				LR	LR	09 24 55.8	
	comp=Z,271nm,18.0s,baz=275,slow=36						
	comp=Z,3.7nm,0.7s						
EKA	Eskdalemuir Ar	62.11	40	P	P	09 00 43.1	-1.8
	comp=Z,6.6nm,0.8s,baz=296,slow=6.2,SNR=22						
	comp=Z,6.6nm,0.8s						
LPAZ	La Paz	62.35	146	LR	LR	09 34 21.4	
	comp=Z,33nm,18.0s,baz=326,slow=42						
SEY	Seymchan	63.45	331	LR	LR	09 32 21.4	
	comp=Z,96nm,18.3s,baz=58,slow=40						
ARCES	ARCESS Array B	64.42	19	P	P	09 00 59.0	-1.1
	comp=Z,8.4nm,0.6s,baz=321,slow=5.1,SNR=53						
ARCES				LR	LR	09 28 40.6	
	comp=Z,93nm,20.6s,baz=318,slow=36						
	comp=Z,8.4nm,0.6s						
ARCES	ARCESS Array B	64.42	19	P	P	09 00 59.0	-1.1
TIXI	Tiksi	64.43	345	LR	LR	09 31 36.1	
	comp=Z,99nm,18.6s,baz=24,slow=38						
TIXI	Tiksi	64.43	345	*i* P	P	09 01 00.3	+0.3
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PMOZ	Porto Moniz, M	64.63	67	*e*LR	LR	09 25 44.5	
PMOZ				*i* AMs_20		09 26 42.1	
	comp=Z,85nm,18.0s						
NB2	NORSAR Subarra	65.42	30	P	P	09 01 06.1	-0.7
	comp=Z,7.4nm,1.0s,baz=312,slow=6.2						
NOA	NORSAR Array B	65.42	30	P	P	09 01 05.8	-1.0
	comp=Z,3.6nm,0.8s,baz=304,slow=6.5,SNR=8.8						
NOA				LR	LR	09 28 31.8	
	comp=Z,52nm,18.6s,baz=325,slow=35						
	comp=Z,3.6nm,0.8s						
SIV	San Ignacio	65.44	139	LR	LR	09 30 55.5	
	comp=Z,46nm,21.6s,baz=348,slow=37						
PGAV	Gavieira, Arco	65.94	55	*e*P	P	09 01 11.7	+1.3
PGAV				*i* Amb		09 01 22.7	
	comp=Z,22nm,1.9s						
PGAV				*e*LR	LR	09 23 38.8	
PGAV				*i* AMs_20		09 28 17.1	
	comp=Z,68nm,16.0s						
MA2	Magadan	66.05	328	LR	LR	09 32 30.4	
	comp=Z,65nm,18.8s,baz=58,slow=38						
POLO	Lamas de Olo	66.55	55	*e*P	P	09 01 16.8	+2.4
POLO				*i* Amb		09 01 43.6	
	comp=Z,11nm,1.7s						
PETK	Petropavlovsk-	66.67	320	P	P	09 01 14.2	-0.7
	comp=Z,2.2nm,0.8s,baz=65,slow=11,SNR=7.9						
PETK				LR	LR	09 29 56.4	
	comp=Z,43nm,20.9s,baz=38,slow=36						
	comp=Z,2.2nm,0.8s						
COI	Coimbra	66.77	56	*e*P	P	09 01 17.0	+1.3
COI				*i* Amb		09 01 30.8	
	comp=Z,29nm,2.3s						
PCAS	Casmilo, Conde	66.80	57	*e*P	P	09 01 17.6	+1.7
PCAS				*i* Amb		09 01 20.2	
	comp=Z,35nm,1.7s						
PVIS	Viseu	66.84	56	*e*P	P	09 01 15.7	-0.5
HFS	Hagfors	66.95	30	P	P	09 01 16.0	-0.5
	comp=Z,9.8nm,0.9s,baz=238,slow=2.8,SNR=8.1						
HFS				LR	LR	09 29 27.7	
	comp=Z,66nm,21.2s,baz=310,slow=35						
	comp=Z,9.8nm,0.9s						
HFS	Hagfors	66.95	30	P	P	09 01 16.0	-0.5
MVO	Moncorvo	67.15	55	*e*P	P	09 01 18.2	0.0
MVO				*i* Amb		09 01 20.3	
	comp=Z,27nm,1.0s						
MTE	Manteigas	67.23	56	*e*P	P	09 01 20.3	+1.6
MTE				*e*LR	LR	09 24 08.5	
MTE				*i* AMs_20		09 29 48.7	
	comp=Z,49nm,20.0s						
PSARD	Sardoal	67.26	57	*e*P	P	09 01 18.7	-0.1
PSARD				*i* Amb		09 01 21.2	
	comp=Z,20nm,0.9s						
PCBR	Castelo Branco	67.58	56	*e*P	P	09 01 21.9	+1.1
PCBR				*i* Amb		09 01 36.0	
	comp=Z,13nm,1.8s						
PMRV	Marv??o	67.85	57	*e*P	P	09 01 23.9	+1.3
PMRV				*i* Amb		09 01 28.4	
	comp=Z,20nm,1.8s						
PMRV				*e*LR	LR	09 24 44.2	
PMRV				*i* AMs_20		09 28 42.0	
	comp=Z,128nm,18.0s						
PTEO	Sao Teotonio	68.00	59	*e*P	P	09 01 24.1	+0.6
PESTR	Estremoz	68.03	57	*e*P	P	09 01 25.1	+1.3
PESTR				*i* Amb		09 01 26.0	
	comp=Z,16nm,1.2s						
PFVI	Vila Bisbo	68.15	59	*e*P	P	09 01 26.2	+1.7
MORF	Marmelete	68.18	59	P	P	09 01 24.7	0.0
MORF	Marmelete	68.18	59	*e*P	P	09 01 25.2	+0.6
MORF	Marmelete	68.18	59	P	P	09 01 24.7	0.0
MORF				pmax	pmax		
	comp=Z,22nm,0.9s						
PCVE	Castro Verde	68.41	59	*e*P	P	09 01 27.1	+1.0
PBDV	Barranco-do-Ve	68.69	59	*e*P	P	09 01 28.0	+0.1
PBAR	Barrancos	68.77	58	*e*P	P	09 01 29.9	+1.6
BMRD	Maredsous	68.87	42	*d*P	P	09 01 29.5	+0.7
	comp=Z,4.5nm,0.8s						
BMRD				*d*PcP	PcP	09 01 54.1	+1.0
DOU	Dourbes	68.90	42	*d*P	P	09 01 29.7	+0.8
BGES	Gesves	68.99	42	*d*P	P	09 01 30.7	+1.2
BCLA	Clavier	69.08	42	*d*P	P	09 01 30.4	+0.4
MEM	Membach	69.33	41	*d*P	P	09 01 33.1	+1.5
	comp=Z,7.1nm,0.7s						
BTNL	Ternell	69.40	41	*d*P	P	09 01 33.1	+1.0
ESDC	Sonseca Array	69.92	55	P	P	09 01 35.2	-0.3
	comp=Z,2.7nm,1.0s,baz=302,slow=6.0,SNR=12						
	comp=Z,2.7nm,1.0s						
WLF	Walferdange	69.97	42	*d*P	P	09 01 36.8	+1.2
	comp=Z,7.6nm,0.8s						
FINES	FINESS Array B	70.47	25	P	P	09 01 37.8	-0.6
	comp=Z,10nm,0.8s,baz=341,slow=4.0,SNR=17						
FINES				LR	LR	09 31 39.0	
	comp=Z,163nm,18.4s,baz=270,slow=35						
	comp=Z,10nm,0.8s						
YAK	Yakutsk	71.73	338	LR	LR	09 37 08.2	
	comp=Z,56nm,18.4s,baz=28,slow=39						
CLL	Collm	72.34	38	*e*P	P	09 01 50.0	+0.2
CLL				*e*S	S	09 11 12.0	-1.0
CLL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CLL	Collm	72.34	38	*e*P	P	09 01 50.0	+0.2
	comp=Z,6.0nm,1.1s						
CLL				*e*Sx	Sx	09 11 12.0	
CLL				AMS	AMS	09 31 00.0	
	comp=Z,100nm,21.3s						
GRF	Grafenberg Arr	72.52	40	*e*P	P	09 01 53.0	+2.0
	comp=Z,5.8nm,0.9s,baz=310,slow=5.8						
BDFB	Brasilia	72.53	128	LR	LR	09 35 40.2	
	comp=Z,62nm,19.7s,baz=307,slow=37						
BRG	Berggiesshubel	73.07	37	*e*P	P	09 01 54.5	+0.3
BRG				Amp		09 01 56.7	
	comp=Z,6.0nm,0.8s						
PPT	Papeete	73.37	230	LR	LR	09 27 00.8	
	comp=Z,49nm,21.5s,baz=51,slow=30						
DAVA	Damuels	73.39	42	*i* pP	P	09 01 57.7	+1.3
	comp=Z,6.2nm,1.0s						
MDT	Midelt	73.45	61	LR	LR	09 31 56.3	
	comp=Z,34nm,18.0s,baz=274,slow=34						
DAVOX	Davos/Dischmat	73.72	43	LR	LR	09 32 05.2	
	comp=Z,115nm,18.3s,baz=290,slow=34						
MOTA	Moosalm	73.99	42	*i* pP	P	09 02 02.0	+2.0
	comp=Z,7.3nm,1.0s						
FETA	Feichten	74.00	42	*i* pP	P	09 02 02.4	+2.4
	comp=Z,5.5nm,1.0s						
FUORN	Ofenpass-Fuorn	74.02	42		P	09 02 01.0	+0.8
KHC	Kasperske Hory	74.05	39	*e*P	P	09 02 02.1	+2.0
KHC				AMS	AMS	09 33 00.0	
	comp=Z,100nm,14.9s						
KHC	Kasperske Hory	74.05	39	*e*P	P	09 02 02.1	+2.0
KHC				MLR	MLR		
	comp=Z,100nm,14.9s						
SQTA	Sankt Quirin	74.12	42	*i* pP	P	09 02 03.0	+2.3
	comp=Z,2.5nm,0.4s						
CHVC	Chvalec	74.25	37	*e*P	P	09 02 02.2	+1.0
CHVC	Chvalec	74.25	37	*e*P	P	09 02 02.2	+1.0
UPC	Upice	74.29	37	AMS	AMS	09 32 30.0	
	comp=Z,100nm,19.8s						
GERES	GERESS Array B	74.31	39	P	P	09 02 01.9	+0.2
	comp=Z,3.0nm,0.7s,baz=311,slow=5.1,SNR=19						
GERES				LR	LR	09 34 32.2	
	comp=Z,74nm,19.1s,baz=7.5,slow=36						
	comp=Z,3.0nm,0.7s						
OSTC	Ostas	74.35	37	*e*P	P	09 02 03.1	+1.3
OSTC				AMS	AMS	09 33 40.0	
	comp=Z,100nm,13.0s						
OSTC	Ostas	74.35	37	*e*P	P	09 02 03.1	+1.3
OSTC				MLR	MLR		
	comp=Z,100nm,13.0s						
DPC	Dobruska-Polom	74.54	37	*e*P	P	09 02 03.8	+0.9
DPC				AMS	AMS	09 35 50.0	
	comp=Z,100nm,13.5s						
DPC	Dobruska-Polom	74.54	37	*e*P	P	09 02 03.8	+0.9
DPC				MLR	MLR		
	comp=Z,100nm,13.5s						
CKRC	Cesky Krumlov	74.62	39	*e*P	P	09 02 04.8	+1.4
CKRC	Cesky Krumlov	74.62	39	*e*P	P	09 02 04.8	+1.4
KLMR	Klimovskoe	74.87	19	*e*P	P	09 02 04.5	-0.1
KLMR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KRLC	Kraliky	74.94	37	AMS	AMS	09 36 10.0	
	comp=Z,100nm,18.4s						
ABTA	Abfaltersbach	75.11	41	*i* pP	P	09 02 08.2	+1.8
	comp=Z,7.4nm,0.8s						
VRAC	Vranov	75.39	37	LR	LR	09 34 26.5	
	comp=Z,82nm,19.1s,baz=308,slow=35						
VRAC	Vranov	75.39	37	*e*P	P	09 02 08.3	+0.5
KRUC	Moravsky	75.46	38	*e*P	P	09 02 08.1	-0.1
STEB	Steborice	75.50	36	*e*P	P	09 02 10.6	+2.2
MORC	Moravsky Berou	75.50	37		P	09 02 09.0	+0.5
MORC				IAmb	IAmb	09 02 11.7	
	comp=Z,5.0nm,0.9s						
MORC	Moravsky Berou	75.50	37	*e*P	P	09 02 09.1	+0.5
MORC	Moravsky Berou	75.50	37	P	P	09 02 09.0	+0.5
MORC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NACGM	Naroch	75.64	29	*e*P	P	09 02 11.0	+1.9
	comp=Z,12nm,0.8s,baz=320						
CONA	Conrad Observa	75.99	39	*e*pP	P	09 02 13.4	+2.0
	comp=Z,7.0nm,0.7s						
ARSA	Arzberg	76.29	40	*i* P	P	09 02 13.2	+0.3
	comp=Z,5.6nm,0.9s						
OBKA	Obir	76.31	41	*e*pP	P	09 02 14.7	+1.5
	comp=Z,21nm,0.8s						
RONA	Rosalia, Austr	76.36	39	*i* pP	P	09 02 15.0	+1.5
	comp=Z,8.2nm,0.9s						
MNK	Minsk	76.36	29	*i* P	P	09 02 11.7	-1.6
	comp=Z,11nm,0.8s,baz=319						
MNK				*i* PP	PP	09 04 57.5	-6.5
MNK				*i* PPP	PPP	09 06 44.6	
MNK				*i* S	S	09 11 59.0	+1.0
MNK				*i* SS	SS	09 16 34.7	-16
MNK				*i* SSS	SSS	09 20 26.3	
MNK				*i* LR	LR	09 36 36.7	
MNK	Minsk	76.36	29	*i* P	P	09 02 11.6	-1.6
MNK				*i* S	S	09 11 59.0	+1.0
MNK				pmax	pmax		
	comp=Z,11nm,0.8s						
MODS	Modra-Piesok	76.36	38	*e*P	P	09 02 15.0	+1.6
MODS				pmax	pmax		
	comp=Z,15nm,1.3s						
MODS	Modra-Piesok	76.36	38	*e*P	P	09 02 15.0	+1.6
SOKA	Soboth	76.43	40	*i* pP	P	09 02 15.5	+1.5
	comp=Z,7.7nm,0.7s						
LANS	Liptovska Anna	76.84	36	*e*P	P	09 02 18.9	+2.8
LANS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
LANS	Liptovska Anna	76.84	36	*e*P	P	09 02 18.9	+2.8
VYHS	Vyhne	77.01	37	*e*P	P	09 02 17.5	+0.4
VYHS	Vyhne	77.01	37	*e*P	P	09 02 17.5	+0.4
SRO	Srobarova	77.25	38	*e*P	P	09 02 20.9	+2.6
SRO				pmax	pmax		
	comp=Z,11nm,0.9s						
SRO	Srobarova	77.25	38	*e*P	P	09 02 20.9	+2.6
STHS	Stebnicka Huta	77.45	35	*e*P	P	09 02 21.4	+1.9
STHS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
STHS	Stebnicka Huta	77.45	35	*e*P	P	09 02 21.4	+1.9
KOLS	Kolonicke sedl	78.27	35	*e*P	P	09 02 26.7	+2.7
KOLS				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KOLS	Kolonicke sedl	78.27	35	*e*P	P	09 02 26.7	+2.7
OBN	Obninsk	78.86	24⇑	*e*P	P	09 02 27.5	+0.4
OBN				*e**PP	pP	09 02 30.8	+0.2
OBN				*e**SP	sP	09 02 32.6	+0.7
OBN				*e*		09 02 34.7	
OBN				*i* S	S	09 12 34.4	+9.4
OBN				SS	SS	09 17 30.0	+1.5
OBN				pmax	pmax		
	comp=Z,12nm,0.8s						
OBN				MLR	MLR		
	comp=Z,71nm,19.0s						
KIRV	Kirov	79.24	16	LR	LR	09 37 32.7	
	comp=Z,94nm,21.2s,baz=349,slow=36						
KIRV	Kirov	79.24	16	*ce*P	P	09 02 30.5	+1.4
AKASG	Malin Array Be	79.84	30	P	P	09 02 32.0	-0.5
	comp=Z,4.5nm,0.7s,baz=315,slow=4.8,SNR=26						
AKASG				LR	LR	09 36 48.2	
	comp=Z,106nm,20.6s,baz=328,slow=35						
	comp=Z,4.5nm,0.7s						
AKBB	Malin Array Si	79.84	30	*ce*P	P	09 02 32.7	+0.1
AKBB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ASAJ	Asahikawa	80.09	320	LR	LR	09 38 10.6	
	comp=Z,36nm,19.9s,baz=9.0,slow=36						
KEST	Kesra	80.65	51	P	P	09 02 37.5	+0.2
	comp=Z,10nm,0.8s,baz=323,slow=1.7,SNR=10						
	comp=Z,10nm,0.8s						
KLR	Kul'dur	81.14	329	LR	LR	09 39 26.8	
	comp=Z,49nm,18.4s,baz=50,slow=36						
RAR	Rarotonga	82.41	235	LR	LR	09 35 58.7	
	comp=Z,59nm,18.0s,baz=129,slow=33						
VAE	Valguarnera	82.45	47	LR	LR	09 37 40.4	
	comp=Z,72nm,18.2s,baz=326,slow=34						
MLR	Muntele Rosu	82.50	35	LR	LR	09 41 08.5	
	comp=Z,75nm,18.6s,baz=350,slow=37						
ARTI	Arti	83.01	12	LR	LR	09 41 07.8	
	comp=Z,70nm,21.2s,baz=338,slow=37						
BELG	Belogornoye	84.45	20	LR	LR	09 41 06.9	
	comp=Z,75nm,19.4s,baz=306,slow=36						
ZALV	Zalesovo Beam	87.25	358	P	P	09 03 09.9	-0.7
	comp=Z,1.2nm,0.6s,baz=355,slow=6.4,SNR=5.0						
	comp=Z,1.2nm,0.6s						
BRVK	Borovoye	87.77	6	*ce*P	P	09 03 13.6	+0.5
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BVAR	Borovoye Array	87.81	6	P	P	09 03 13.7	+0.3
	comp=Z,4.4nm,0.8s,baz=1.9,slow=4.5,SNR=18						
BVAR				LR	LR	09 45 58.4	
	comp=Z,128nm,19.7s,baz=347,slow=38						
	comp=Z,4.4nm,0.8s						
MJAR	Matsushiro Arr	87.93	317	LR	LR	09 42 29.8	
	comp=Z,33nm,20.9s,baz=36,slow=36						
AKTO	Aktyubinsk	88.64	14	LR	LR	09 46 48.6	
	comp=Z,141nm,18.0s,baz=17,slow=38						
DBIC	Dimbokro	89.30	82	P	P	09 03 22.9	+1.9
	comp=Z,7.8nm,1.0s,baz=321,slow=6.1,SNR=3.0						
DBIC				LR	LR	09 37 54.8	
	comp=Z,73nm,21.7s,baz=310,slow=32						
	comp=Z,7.8nm,1.0s						
SONM	Songino Array	90.46	343	LR	LR	09 47 49.0	
	comp=Z,70nm,19.1s,baz=262,slow=38						

KURK	Kurchatov	90.54	1	P	P	09 03 27.6	+1.4
KURBB	Kurchatov Arra	90.63	1	P	P	09 03 27.6	+1.0
	comp=Z,0.3nm,0.5s,baz=353,slow=6.3,SNR=4.4						
KURBB				LR	LR	09 46 14.1	
	comp=Z,87nm,21.9s,baz=173,slow=37						
	comp=Z,0.3nm,0.5s						
KBZ	Khabaz	90.75	26	P	P	09 03 29.1	+1.8
	comp=Z,1.2nm,0.7s,baz=336,slow=4.9,SNR=3.6						
KBZ				LR	LR	09 44 26.1	
	comp=Z,111nm,18.9s,baz=340,slow=36						
	comp=Z,1.2nm,0.7s						
KSRS	Korea Array	92.28	324	LR	LR	09 50 24.9	
	comp=Z,18µm,18.4s,baz=290,slow=39						
JNU	Nakatsue	94.37	320	LR	LR	09 48 34.5	
	comp=Z,55nm,18.1s,baz=355,slow=37						
MK31	Makanchi Array	94.47	359	*ce*P	P	09 03 45.7	+1.2
MKAR	Makanchi Array	94.47	359	P	P	09 03 44.6	+0.1
	comp=Z,1.3nm,0.9s,baz=5.4,slow=3.9,SNR=7.6						
MKAR				LR	LR	09 49 55.3	
	comp=Z,85nm,19.3s,baz=285,slow=38						
	comp=Z,1.3nm,0.9s						
GNI	Garni	94.56	27	LR	LR	09 46 32.4	
	comp=Z,65nm,19.1s,baz=340,slow=36						
HHC	Hu-ho-hao-te	95.58	337	*e*P	P	09 03 47.3	-2.4
HHC				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,56nm,4.3s						
HHC				LR	LR		
	comp=N,81nm,12.5s						
HHC				LR	LR		
	comp=E,71nm,11.3s						
HHC				LR	LR		
	comp=Z,190nm,15.9s						
WMQ	Urumqi	97.21	355	*e*P	Pdif	09 03 59.8	+2.7
WMQ				LR	LR		
	comp=Z,120nm,20.1s						
ASF	Jabal al Asfar	98.25	36	LR	LR	09 51 25.4	
	comp=Z,29nm,18.5s,baz=30,slow=37						
AAK	Ala-Archa	98.44	5	LR	LR	09 52 01.9	
	comp=Z,67nm,19.1s,baz=308,slow=38						
NJ2	Nanjing	100.81	328	*e*P	Pdif	09 04 13.1	-0.1
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
PZH	PanZhiHua	111.82	340	PKP	PKiKP	09 08 59.5	-0.2

GCG 22 08:55:29.8±1.4**,13°.82N**×**91°.33W,h86**km±418km**,MD3.8, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG8	El Palmar, Qui	0.63	358	*e*P	Pn	08 55 49.5	+4.0
STG8				*i* S	Sn	08 56 04.5	+7.3
NUBE	Las Nubes	1.51	87	*e*P	Pn	08 55 55.8	+0.2
JAYA	Jayaque - finc	1.84	95	*i* P	Pn	08 56 00.7	+0.8
JAYA				*e*S	Sn	08 56 22.2	-0.5

IDC 22 09:00:52.5±4.2**,18°.25S**×**175°.76W,h0**km**,mb3.9**/3**, mbtmp3.9**/3**,Error ellipse: s-maj=294.5km s-min=30.7km az=153.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	47.05	259	P	P	09 09 26.8	+0.6
	0.6nm,0.4s,baz=95,slow=7.9,SNR=14						
	0.6nm,0.4s						
ASAR	Alice Springs	47.12	254	P	P	09 09 26.0	-0.8
	2.7nm,0.9s,baz=92,slow=8.4,SNR=17						
	2.7nm,0.9s						
NVAR	Mina Array Bea	77.94	43	P	P	09 12 52.8	0.0
	1.3nm,1.1s,baz=238,slow=8.5,SNR=4.9						
	1.3nm,1.1s						

NOU ***22*** *09:11:36.5,36°.18S×179°.36W,h84km,MLv4.3/5,East of North Island, N.Z.*

WEL ***22*** *09:12:12.6±0.6,38°S±5°×17°7E±°,h5km±4km,M3.2/31, ML3.5/18,MLv3.2/31,Error ellipse: s-maj=5.9km s-min=3.4km az=178.1,confirmed*

ISC 22 09:12:12.1±0.9**,37°.50S**±0°.03×**177°.16E**±0°.02**,h10**km**,n77,** σ**0ˢ.70**/79**,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSRZ	White Island S	0.02	133	P	Pg	09 12 13.6	-0.3
WIZ	White Island	0.04	133	P	Pg	09 12 13.8	-0.2
WHRZ	Whale Island	0.38	202	P	Pg	09 12 20.2	+0.5
HAZ	Te Kaha	0.56	117	P	Pg	09 12 23.0	0.0
HAZ				S	Sb	09 12 31.7	-0.3
OPRZ	Ohinepanea	0.59	234	P	Pg	09 12 23.5	0.0
OPRZ				S	Sg	09 12 31.1	-0.1
MARZ	Manawahe	0.61	218	P	Pg	09 12 24.0	-0.1
RUGZ	Raukumara Rang	0.62	138	P	Pg	09 12 23.9	-0.3
RUGZ				S	Sb	09 12 34.1	+0.2
EDRZ	Edgecumbe	0.69	209	P	Pg	09 12 25.8	+0.3
TGRZ	Tauranga	0.75	252	P	Pb	09 12 27.2	0.0
URZ	Urewera	0.76	183	P	Pg	09 12 26.3	-0.4
MYRZ	Mayor Island	0.76	287	P	Pb	09 12 27.8	+0.3
LIRZ	Lichensteins R	0.79	231	P	Pb	09 12 28.2	+0.2
PKGZ	Pakihiroa	0.82	117	P	Pb	09 12 28.1	-0.3
MKRZ	Makatiti	0.84	221	P	Pn	09 12 29.7	-0.4
OMRZ	Omania	0.87	226	P	Pb	09 12 29.1	-0.2
MWZ	Matawai	0.88	161	P	Pg	09 12 28.5	-0.6
MWZ				S	Sb	09 12 41.2	-0.2
KARZ	Kaharoa	0.89	234	P	Pg	09 12 29.5	+0.2
TARZ	Mount Tarawera	0.90	215	P	Pb	09 12 30.1	+0.3
MXZ	Matakaoa Point	0.92	94	P	Pn	09 12 32.8	+1.8
TWGZ	Tauwhareparae	0.94	136	P	Pb	09 12 30.4	-0.1
NGRZ	Ngongotaha	0.97	232	P	Pb	09 12 31.5	+0.4
RRRZ	Republican Roa	0.98	211	P	Pg	09 12 30.9	0.0
HLRZ	Highlands Stat	0.98	220	P	Pn	09 12 31.7	-0.3
RAGZ	Rawiri	1.01	168	P	Pg	09 12 31.4	-0.2
UTU	Utuhina	1.02	228	P	Pn	09 12 33.8	+1.3
MUGZ	Murupara	1.02	197	P	Pb	09 12 31.9	0.0
KMRZ	Kaimai	1.02	250	P	Pb	09 12 32.4	+0.4
PUZ	Puketiti	1.04	123	P	Pg	09 12 31.9	-0.2
HSRZ	Hossack Road	1.08	222	P	Pn	09 12 34.2	+0.8
TKGZ	Te Karaka	1.08	150	P	Pn	09 12 33.6	+0.2
RTZ	Ruatahuna	1.12	187	P	Pg	09 12 33.0	-0.6
HRRZ	Handcock Road	1.12	218	P	Pn	09 12 34.8	+0.9
PRRZ	Plateau Road	1.16	211	P	Pn	09 12 34.5	0.0
CNGZ	Carnagh Statio	1.28	140	P	Pg	09 12 37.8	+1.0
SNGZ	Shannon Statio	1.28	174	P	Pb	09 12 36.3	-0.2
RIGZ	Rimuhau	1.29	159	P	Pg	09 12 37.3	+0.4
TOZ	Tahuroa Road	1.33	260	P	Pn	09 12 37.2	+0.4
MTHZ	Maungataniwha	1.37	190	P	Pb	09 12 37.8	-0.1
KUZ	Kuaotunu	1.37	303	P	Pn	09 12 35.5	-1.8
KUZ	Kuaotunu	1.37	303	P	Pn	09 12 35.6	-1.8
RAHZ	Arahi	1.41	182	P	Pb	09 12 38.3	-0.3
TLZ	Tolley Road	1.52	237	P	Pg	09 12 41.6	+0.3
PRGZ	Paritu Road	1.53	158	P	Pg	09 12 42.1	+0.6
KNZ	Kokohu	1.57	165	P	Pb	09 12 41.3	+0.1
WHHZ	Waihua	1.57	178	P	Pg	09 12 41.8	-0.5
NMHZ	Naumai	1.62	190	P	Pg	09 12 43.2	+0.1
MKAZ	Moumakai	1.64	283	P	Pn	09 12 39.8	-1.2
BKZ	Black Stump Fm	1.74	197	P	Pn	09 12 41.1	-1.4
BKZ	Black Stump Fm	1.74	197	P	Pn	09 12 42.6	+0.1
MHGZ	Mahia Peninsul	1.75	161	P	Pb	09 12 43.3	-1.0
ARHZ	Aropaoanui	1.76	184	P	Pb	09 12 44.4	-0.2
WIAZ	Waiheke Island	1.77	293	P	Pn	09 12 43.2	+0.5
GRZ	Great Barrier	1.85	312	P	Pn	09 12 43.3	-0.6
ETAZ	East Tamaki Re	1.86	286	P	Pn	09 12 43.4	-0.6
MBAZ	Motutapu North	1.95	291	P	Pn	09 12 45.5	+0.3
NTVZ	North Tongarir	1.97	216	P	Pg	09 12 50.3	+0.3
TMVZ	Te Maari	1.98	215	P	Pg	09 12 49.5	-0.5
KWHZ	Kaweka Forest	2.00	196	P	Pb	09 12 47.5	-1.2
NNVZ	North Ngauruho	2.03	216	P	Pg	09 12 51.8	+0.7
OTVZ	Oturere	2.03	215	P	Pg	09 12 50.7	-0.4
AWAZ	Awhitu Peninsu	2.05	282	P	Pg	09 12 52.6	+1.2
ABAZ	Army Bay	2.07	295	P	Pn	09 12 48.4	+1.6
HIZ	Hauiti	2.08	240	P	Pg	09 12 51.2	-0.8
HIZ	Hauiti	2.08	240	P	Pn	09 12 47.9	+0.9
TUVZ	Tukino	2.12	213	P	Pg	09 12 52.2	-0.6
WTAZ	Waiatarua	2.14	285	P	Pn	09 12 49.0	+1.1
FWVZ	Far West T-bar	2.16	215	P	Pg	09 12 53.3	-0.2
TRVZ	Turoa	2.19	215	P	Pg	09 12 53.8	-0.4
WNVZ	Wahianoa	2.19	213	P	Pb	09 12 51.4	-0.6
MOVZ	Moawhango	2.20	210	P	Pb	09 12 52.1	+0.1
KRHZ	Kereru	2.23	196	P	Pn	09 12 50.4	+1.3
KAHZ	Kahuranaki	2.30	185	P	Pn	09 12 51.1	+1.0
PNHZ	Pukenui	2.52	197	P	Pn	09 12 54.0	+0.8
PXZ	Pawanui	2.54	185	P	Pn	09 12 52.9	-0.4
WCZ	Waipu Caves	2.75	304	P	Pn	09 12 55.4	-0.8
BFZ	Birch Farm	3.25	192	P	Pn	09 12 58.1	-5.1
OUZ	Omahuta	3.67	307	P	Pn	09 12 59.9	-9.0

IDC 22 09:13:49.1±3.3**,2°.87N**×**128°.88E,h0**km**,mb3.4**/4**, mbtmp3.4**/4**,Error ellipse: s-maj=285.0km s-min=23.4km az=69.0,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.29	167	P	P	09 18 58.9	+0.2
	0.6nm,0.7s,baz=343,slow=8.9,SNR=6.6						
	0.6nm,0.7s						
ASAR	Alice Springs	26.82	170	P	P	09 19 30.1	-1.2
	0.3nm,0.7s,baz=348,slow=8.8,SNR=7.1						
	0.3nm,0.7s						
MKAR	Makanchi Array	59.49	325	P	P	09 23 55.3	+1.2
	0.2nm,0.6s,baz=130,slow=7.6,SNR=2.2						
	0.2nm,0.6s						
KURBB	Kurchatov Arra	63.63	327	P	P	09 24 21.7	-0.2
	0.3nm,0.3s,baz=125,slow=5.8,SNR=2.5						
	0.3nm,0.3s						

NEIC ***22*** *09:23:53.3±0.5,20°.7S±0°.3×174°.92W±0°.06,h139km±11km, mb4.3/14,Error ellipse: s-maj=37.5km s-min=4.6km az=169.0*

IDC ***22*** *09:24:03.6±4.4,20°.88S×175°.74W,h198km±40km,mb3.4/4, mbtmp4.1/6,Error ellipse: s-maj=58.8km s-min=33.5km az=26.0*

ISC 22 09:23:53.7±0.8**,20°.6S**±0°.2×**174°.92W**±0°.08**,h150**km**,n23,** σ**1ˢ.07**/24**,mb4.1**/10**,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	4.94	73	Pn	Pn	09 25 06.0	-0.3
NIUE				Sn	Sn	09 26 02.4	-0.5
MSVF	Nonsavu	7.24	292	Pn	Pn	09 25 36.5	-0.5
MSVF	Nonsavu	7.24	292	P	Pn	09 25 39.0	+2.0
	34nm,0.8s,baz=134,slow=12,SNR=17						
PINNC	Pines Island,	16.52	260	P	P	09 27 36.2	-0.5
PINNC				IAmb	IAmb	09 28 04.8	
	comp=Z,20nm,1.0s						
DZM	Mont Dzumac	17.43	262	P	P	09 27 46.9	0.0
DZM	Mont Dzumac	17.43	262	P	P	09 27 46.7	-0.2
	comp=Z,4.7nm,0.6s,baz=73,slow=20,SNR=12						
ARMA	Armidale	31.63	245	P	P	09 30 02.5	-0.3
CAN	Canberra	34.87	237	P	P	09 30 30.0	-0.8
STKA	Stephens Creek	40.35	245	P	P	09 31 16.4	-0.4
STKA				IAmb	IAmb	09 31 40.2	
	comp=Z,13nm,1.1s						
STKA	Stephens Creek	40.35	245	P	P	09 31 15.8	-1.0
	comp=Z,2.0nm,0.4s,baz=89,slow=12,SNR=10.0						
	comp=Z,2.0nm,0.4s						
COEN	Coen	40.48	272	P	P	09 31 18.1	+0.1
COEN				IAmb	IAmb	09 31 33.3	
	comp=Z,10nm,1.1s						
BBOO	Buckleboo	45.09	244	P	P	09 31 54.4	-0.6
BBOO				IAmb	IAmb	09 32 15.4	
	comp=Z,7.0nm,1.1s						
WR0	Warramunga Arr	47.26	261	P	P	09 32 10.7	-1.4
WR0				IAmb	IAmb	09 32 22.2	
	comp=Z,7.6nm,1.3s						
WR8	Warramunga Arr	47.30	261	P	P	09 32 11.9	-0.4
WR8				IAmb	IAmb	09 32 13.9	
	comp=Z,5.1nm,1.1s						
AS31	Alice Springs	47.30	256	P	P	09 32 12.3	-0.1
ASAR	Alice Springs	47.31	256	P	P	09 32 10.7	-1.8
	comp=Z,1.3nm,0.8s,baz=98,slow=8.1,SNR=12						
	comp=Z,1.3nm,0.8s						
WB0	Warramunga Arr	47.43	262	P	P	09 32 12.6	-0.8
WB0				IAmb	IAmb	09 32 19.0	
	comp=Z,3.9nm,0.9s						
WB2	Warramunga Arr	47.44	261	P	P	09 32 13.1	-0.4
WB2				IAmb	IAmb	09 32 33.8	
	comp=Z,14nm,1.4s						
WRA	Warramunga Arr	47.45	261	P	P	09 32 12.2	-1.3
	comp=Z,0.5nm,0.5s,baz=96,slow=7.8,SNR=16						
	comp=Z,0.5nm,0.5s						
KNRA	Kununurra	53.53	265	P	P	09 32 59.0	-0.2
QSPA	South Pole Qui	69.46	180	P	P	09 34 45.5	-0.1
QSPA	South Pole Qui	69.46	180	P	P	09 34 48.4	+2.8
	comp=Z,1.2nm,0.7s,baz=25,slow=2.8,SNR=7.7						
	comp=Z,1.2nm,0.7s						
AKASG	Malin Array Be	144.46	333	PKP	PKiKP	09 43 16.7	+1.1
	comp=Z,0.5nm,0.3s,baz=41,slow=3.9,SNR=5.1						

GCG ***22*** *09:43:42.1±1.6,13°.81N×90°.14W,h128km±17km,MD3.8, ML3.7*

CATAC ***22*** *09:43:42.2±0.6,14°N±13°×9°0W±°,h108km±5km,M3.2/16, MLv3.2/16,Error ellipse: s-maj=28.1km s-min=4.9km az=17.5,confirmed*

SNET ***22*** *09:43:44.0±0.8,14°.09N×89°.92W,h119km±5km,ML3.0*

ISC 22 09:43:46.6±3.3**,13°.8N**±0°.2×**90°.0W**±0°.1**,h107**km±17km**,n46,** σ**1ˢ.37**/50**,Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NUBE	Las Nubes	0.26	74	*e*P	Pn	09 44 00.6	-1.5
NUBE				*e*S	Sn	09 44 14.0	+0.4
NUBE	Las Nubes	0.26	74	*i* P	Pn	09 44 00.6	-1.5
NUBE	Las Nubes	0.26	74	P	Pn	09 44 00.9	-1.1
LOAL	Lomas de Alarc	0.30	56	*e*P	Pn	09 44 00.9	-1.3
LOAL				*e*S	Sn	09 44 13.1	-0.6
LOAL	Lomas de Alarc	0.30	56	P	Pn	09 44 01.1	-1.0
LOAL	Lomas de Alarc	0.30	56	S	Sn	09 44 14.9	+1.2
RTR	El Retiro	0.39	80	*e*P	Pn	09 44 01.6	-1.1
CEVE	Cerro Verde	0.40	90	*e*P	Pn	09 44 01.8	-1.0
CEVE				*e*S	Sn	09 44 15.8	+0.8
CEVE	Cerro Verde	0.40	90	P	Pn	09 44 01.9	-1.0
CEVE	Cerro Verde	0.40	90	S	Sn	09 44 16.7	+1.6
SBLS	San Blas	0.41	89	*e*P	Pn	09 44 01.6	-1.2
SNJE	San Jose	0.42	85	*e*P	Pn	09 44 01.8	-1.1
UNIC	Universidad Ca	0.50	72	*e*P	Pn	09 44 01.7	-1.5
UNIC	Universidad Ca	0.50	72	P	Pn	09 44 01.8	-1.4
JAYA	Jayaque - finc	0.60	107	*e*P	Pn	09 44 02.8	-1.3
JAYA				*e*S	Sn	09 44 17.2	+0.1
JAYA				IAML		09 44 22.4	
	comp=Z,618nm,0.2s						
JAYA	Jayaque - finc	0.60	107	*i* P	Pn	09 44 02.9	-1.3
JAYA				*e*S	Sn	09 44 17.3	+0.1
JAYA	Jayaque - finc	0.60	107	P	Pn	09 44 02.8	-1.3
JAYA	Jayaque - finc	0.60	107	S	Sn	09 44 18.6	+1.4
FG16	Alotenango, Sa	0.63	314	*i* P	Pn	09 44 04.8	+0.4
FG16				IAML		09 44 30.6	
	comp=E,3µm,0.3s						
PMON	Piamonte	0.71	99	*e*P	Pn	09 44 03.7	-1.2
PMON				*e*S	Sn	09 44 19.2	+0.5
PMON	Piamonte	0.71	99	P	Pn	09 44 03.8	-1.2
PMON	Piamonte	0.71	99	S	Sn	09 44 20.2	+1.5
BOQS	Boqueron	0.74	97	*e*P	Pn	09 44 04.1	-1.2
ITCA	Escuela Especi	0.76	102	S	Sn	09 44 20.7	+1.3
ITCA	Escuela Especi	0.76	102	P	Pn	09 44 04.0	-1.3
PIC2	El Picacho	0.77	96	*e*P	Pn	09 44 04.3	-1.2
UEES	Universidad Ev	0.79	98	*e*P	Pn	09 44 04.2	-1.3
UEES				IAML		09 44 05.3	
	comp=Z,135nm,0.3s						
UEES	Universidad Ev	0.79	98	P	Pn	09 44 04.4	-1.1
UEES	Universidad Ev	0.79	98	S	Sn	09 44 21.6	+1.8
UTEC	Universidad Te	0.82	99	P	Pn	09 44 04.7	-1.2
UTEC	Universidad Te	0.82	99	S	Sn	09 44 22.2	+1.8
IGN	Direccin Gen	0.85	98	S	Sn	09 44 22.9	+2.0
IGN	Direccin Gen	0.85	98	P	Pn	09 44 05.1	-1.1
LOMA	Loma Larga	0.86	102	*e*P	Pn	09 44 04.9	-1.4
LOMA	Loma Larga	0.86	102	P	Pn	09 44 05.3	-1.0
LOMA	Loma Larga	0.86	102	S	Sn	09 44 23.2	+2.0
PANCS	Alcalda de	0.86	104	P	Pn	09 44 04.9	-1.4
PANCS	Alcalda de	0.86	104	S	Sn	09 44 22.7	+1.6
UDBS	Universidad Do	0.87	97	P	Pn	09 44 05.0	-1.3
UDBS	Universidad Do	0.87	97	S	Sn	09 44 23.1	+2.0
ESQI	Esquipulas	0.99	43	P	Pn	09 44 06.2	-1.4
PAVA	Las Pavas	1.08	96	P	Pn	09 44 07.6	-0.9
PAVA	Las Pavas	1.08	96	S	Sn	09 44 27.7	+2.7
PQSS	Presa 15 de Se	1.45	98	P	Pn	09 44 11.4	-1.3
RTAL	Retalhuleu	1.75	293	S	Sn	09 44 29.3	-10
RTAL	Retalhuleu	1.75	293	P	Pn	09 44 09.1	-7.2

IDC ***22*** *09:53:51.2±3.2,30°.79S×177°.65W,h0km,mb3.7/3, mbtmp3.7/3,Error ellipse: s-maj=67.2km s-min=25.8km az=111.0*

ISC 22 09:53:50.6±2.7**,30°.99S**±0°.10×**177°.0W**±0°.4**,h35**km**,n6,** σ**1ˢ.88**/7**,mb3.8**/3**,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.92	334	Pn	Pn	09 54 19.3	-1.5
	88nm,0.3s,baz=51,slow=18,SNR=2.0						
RAO				Sn	Sn	09 54 43.7	-0.1
	191nm,0.3s,baz=152,slow=24,SNR=4.0						
URZ	Urewera	8.73	212	Pn	Pn	09 55 52.4	-2.0
	baz=319,slow=20						
STKA	Stephens Creek	35.21	258	P	P	10 00 44.0	+2.4
	0.6nm,0.3s,baz=116,slow=7.3,SNR=6.9						
	0.6nm,0.3s						
ASAR	Alice Springs	43.96	267	P	P	10 01 55.5	+0.9
	0.2nm,0.3s,baz=109,slow=7.0,SNR=5.2						
	0.2nm,0.3s						
WRA	Warramunga Arr	45.01	272	P	P	10 02 02.7	-0.3
	0.4nm,0.3s,baz=112,slow=8.0,SNR=11						
	0.4nm,0.3s						
FINES	FINESS Array B	146.00	340	PKPbc	PKiKP	10 13 30.4	+1.2
	0.5nm,0.3s,baz=58,slow=4.7,SNR=8.3						

IDC ***22*** *09:53:55.6±2.2,37°.65N×77°.85E,h0km,mb3.9/5, mbtmp3.8/10,ML3.5/5,MS3.1/2,Error ellipse: s-maj=36.2km s-min=27.4km az=26.0*

NNC ***22*** *09:54:04.2±1.3,38°.02N×78°.14E,h0km,mb4.3,mpv3.9, Error ellipse: s-maj=9.1km s-min=7.8km az=132.0*

ISC 22 09:53:59.3±1.9**,38°.0N**±0°.1×**77°.98E**±0°.08**,h10**km**,n32,** σ**1ˢ.92**/31**,mb3.9**/5**,7C-2D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATY	Saty	5.12	4	Pg	Pg	09 55 35.5	-1.7
	28nm,1.1s						
SATY				Lg	Lg	09 56 45.1	
	86nm,0.9s						
UZB	Uzynbulak	5.25	8	Pg	Pg	09 55 38.3	-1.6
	9.5nm,0.4s						
UZB				Lg	Lg	09 56 49.8	
	30nm,0.8s						
MDOK	Medeo	5.26	353	Pg	Pg	09 55 38.1	-1.9
	16nm,0.5s						
MDOK				⇓Pg	Pb	09 55 39.5	+8.2
	11nm,0.5s						
MDOK				⇑Lg	Lg	09 56 48.5	
	38nm,0.8s						
MDOK				Lg	Lg	09 56 49.5	
	24nm,0.6s						
TKM2	Tokmak 2	5.29	341	⇑Pg	Pg	09 55 42.2	+1.6
	6.3nm,0.5s						
TKM2				⇓Lg	Lg	09 56 51.5	
	18nm,0.7s						
MTBS	Maitube	5.31	348	Pg	Pg	09 55 39.2	-1.8
	6.8nm,0.4s						
MTBS				Lg	Lg	09 56 51.1	
	14nm,0.4s						
KST	Kastek	5.32	344	Pg	Pg	09 55 39.9	-1.3
	7.0nm,0.7s						
KST				Lg	Lg	09 56 52.6	
	26nm,0.7s						
SHLS	Shalkode	5.32	12	Pg	Pg	09 55 41.1	-0.1
	22nm,0.4s						
SHLS				Lg	Lg	09 56 54.7	
	39nm,0.6s						
AAK	Ala-Archa	5.39	331	Pn	Pn	09 55 23.7	+3.8
	0.9nm,0.3s,baz=180,slow=5.1,SNR=3.1						
AAK				Pg	Pg	09 55 39.0	-3.5
	3.2nm,0.3s,baz=133,slow=7.0,SNR=7.8						
AAK				Lg	Lg	09 56 52.1	
	2.4nm,0.3s,baz=336,slow=24,SNR=4.0						
	3.2nm,0.5s						
AAK	Ala-Archa	5.39	331	Pg	Pg	09 55 43.7	+1.2
AAK				⇑Lg	Lg	09 56 56.6	
PDGK	Podgornoye	5.50	12	⇑Pg	Pg	09 55 42.6	-2.0
	5.3nm,0.4s						
PDGK				⇑Lg	Lg	09 56 52.6	
	49nm,0.8s						
KPKS	Kokpek	5.54	5	Pg	Pg	09 55 43.1	-2.3
	3.5nm,0.6s						
KPKS				Lg	Lg	09 56 57.9	
	26nm,0.6s						
KTMS	Ketmen	5.78	17	Pg	Pg	09 55 48.5	-1.5
	3.3nm,0.5s						
KTMS				Lg	Lg	09 57 07.1	
	9.1nm,0.3s						
KTBS	Karatobe	5.84	351	Pg	Pg	09 55 48.9	-2.2
	7.8nm,0.5s						
KTBS				Lg	Lg	09 57 08.2	
	20nm,0.7s						
KRBS	Karabastau	6.00	344	Pg	Pg	09 55 52.2	-2.0
	6.3nm,0.5s						
KRBS				Lg	Lg	09 57 13.8	
	19nm,0.7s						
MRKS	Merke	6.01	324	Pg	Pg	09 55 52.5	-1.9
	6.9nm,0.6s						
MRKS				Lg	Lg	09 57 14.2	
	11nm,0.6s						
KUU	Kurty	6.07	349	Pg	Pg	09 55 53.8	-1.6
	3.9nm,0.1s						
KUU				Lg	Lg	09 57 16.4	
	24nm,0.7s						
ARXS	Arharly	6.26	359	Pg	Pg	09 55 57.0	-2.2
	10nm,0.6s						
ARXS				Lg	Lg	09 57 22.0	
	19nm,0.8s						
DJR	Jarkent	6.52	12	Pg	Pg	09 56 02.0	-2.2
	5.4nm,0.5s						
DJR				Lg	Lg	09 57 30.6	
	12nm,0.6s						
KK31	Karatay Array	7.67	314	⇑Pn	Pn	09 55 59.4	+8.3
	0.4nm,0.3s,baz=123,slow=12,SNR=5.5						
KK31				⇑Lg	Lg	09 58 11.7	
	4.0nm,0.8s,baz=131,slow=12,SNR=5.6						
BTLS	Baital	7.67	339	Pg	Pg	09 56 23.4	-2.8
	3.9nm,1.0s						
MKAR	Makanchi Array	9.39	18	Pn	Pn	09 56 17.0	+2.3
	1.9nm,0.3s,baz=205,slow=13,SNR=34						
MKAR				Sn	Sn	09 58 02.2	+1.8
	0.6nm,0.3s,baz=198,slow=23,SNR=5.5						
	2.9nm,0.3s						
BVAR	Borovoye Array	15.97	343	Pn	Pn	09 57 44.1	+0.1
	0.1nm,0.3s,baz=128,slow=9.6,SNR=13						
	0.4nm,0.3s						
ZALV	Zalesovo Beam	16.68	14	Pn	P	09 57 54.7	-0.6
	0.4nm,0.3s,baz=210,slow=8.6,SNR=4.8						
	1.2nm,0.5s						
AKTO	Aktyubinsk	18.92	318	P	P	09 58 19.3	-0.8
	0.2nm,0.3s,baz=82,slow=4.3,SNR=3.7						
	1.1nm,0.5s						
SONM	Songino Array	22.93	55	P	P	09 59 04.1	+0.5
	1.2nm,0.7s,baz=243,slow=10.0,SNR=2.3						
	1.2nm,0.7s						
BELG	Belogornoye	25.58	314	LR	LR	10 11 17.2	
	comp=Z,22nm,18.6s,baz=85,slow=40						
FINES	FINESS Array B	39.52	324	P	P	10 01 28.4	-1.4
	2.1nm,0.7s,baz=116,slow=8.7,SNR=7.6						
	2.1nm,0.7s						
ARCES	ARCESS Array B	42.05	335	P	P	10 01 50.2	-0.4
	1.3nm,0.8s,baz=77,slow=6.5,SNR=3.6						
	1.3nm,0.8s						
HFS	Hagfors	45.42	321	P	P	10 02 17.1	-0.9
	1.4nm,0.6s,baz=90,slow=7.4,SNR=8.6						
	1.4nm,0.6s						
NB2	NORSAR Subarra	46.63	322	P	P	10 02 26.5	-1.0
	comp=Z,0.7nm,0.5s,baz=89,slow=7.9						
NOA	NORSAR Array B	46.63	322	P	P	10 02 26.5	-1.0
	comp=Z,1.1nm,0.7s,baz=90,slow=7.6,SNR=3.6						
	comp=Z,1.1nm,0.7s						
SEY	Seymchan	50.07	35	LR	LR	10 26 08.2	
	comp=Z,43nm,19.2s,baz=348,slow=38						

TIR ***22*** *09:54:32.0,40°.74N×20°.74E,h16km,Md3.0/2,Ml1.7/3*

ISC 22 09:54:33.7±1.2**,40°.69N**±0°.04×**20°.83E**±0°.09**,h10**km±8km**, n6,** σ**0ˢ.91**/9**,Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	Korca	0.07	205	Pg	Pg	09 54 35.9	-0.1
KBN				Sg	Sg	09 54 37.8	+0.1
KBN				AML	AML	09 54 38.5	
	3.7nm,0.3s						
NEST	Nestorio	0.32	148	Pg	Pg	09 54 40.4	+0.2
NEST				Sg	Sb	09 54 46.9	+0.1

NEST				AML	AML	09 54 52.0	
	0.4nm,0.3s						
NEST				AMd		09 55 37.4	
OHR	**Ohrid**	**0.42**	**357**	*i* Pg	**Pg**	**09 54 42.4**	**+0.4**
OHR				*i* Sg	**Sb**	**09 54 49.7**	**-0.1**
TIR	**Tirane**	**0.98**	**313**	AML	AML	09 54 57.1	
	0.1nm,0.1s						
SRN	**Sarande**	**1.02**	**218**	Pg	**Pb**	**09 54 52.4**	**-1.0**
SRN				Sg	**Sg**	**09 55 08.1**	**+1.4**
SRN				AMd		09 55 58.0	
IGT	**Igoumenitsa**	**1.22**	**198**	Sn	**Sg**	**09 55 13.6**	**+0.9**

RSNC 22 10:00:21.5±0.0, 7°N±1°×7°3W±°, h147km±2km, M3.0, mB4.5, mb3.7, ML2.9, Mw(mB)3.7, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.26**	**194**	P	Pn	10 00 41.7	-0.2
BARC				S	Sn	10 00 56.8	-0.6
BRJC	**Barrancabermej**	**0.63**	**281**	P	Pn	10 00 43.3	+0.1
BRJC				S	Sn	10 01 00.3	+0.6
PAMC	**Pamplona, Colo**	**0.64**	**41**	P	Pn	10 00 44.3	+0.4
PAMC				S	Sn	10 01 01.5	+0.6
RUSC	**La Rusia**	**0.95**	**178**	P	Pn	10 00 45.5	-0.7
RUSC				S	Sn	10 01 03.8	-1.1
PTBC	**PUERTO BERRIO,**	**1.36**	**257**	P	Pn	10 00 48.1	-1.3
PTBC				S	Sn	10 01 09.4	-1.3
TAMC	**Tame, Arauca**	**1.38**	**107**	P	Pn	10 00 49.8	+0.1
TAMC				S	Sn	10 01 10.2	-1.0
OCAC	**Ocana**	**1.39**	**352**	P	Pn	10 00 49.7	-0.2
OCAC				S	Sn	10 01 11.4	-0.3
SPBC	**San Pablo de B**	**1.52**	**219**	P	Pn	10 00 50.6	-0.6
SPBC				S	Sn	10 01 13.2	-0.7
ZARC	**Zaragoza, Cauc**	**1.84**	**290**	P	Pn	10 00 54.2	-0.4
ZARC				S	Sn	10 01 19.5	-0.5
NORC	**Norcasia**	**2.16**	**234**	P	Pn	10 00 57.5	-0.9
NORC				S	Sn	10 01 25.6	-1.1
CHIC	**Chingaza**	**2.29**	**195**	P	Pn	10 01 00.0	-0.3
CHIC				S	Sn	10 01 31.1	+0.9
ROSC	**El Rosal**	**2.33**	**211**	P	Pn	10 01 01.4	+0.6
ROSC				S	Sn	10 01 33.0	+2.1
HELC	**Santa Helena**	**2.48**	**255**	P	Pn	10 01 02.5	-0.1
HELC				S	Sn	10 01 34.2	0.0
CVER	**Cruz Verde, Cu**	**2.50**	**202**	P	Pn	10 01 03.0	0.0
CVER				S	Sn	10 01 35.3	+0.4
UREC	**San Jos de Ur**	**2.56**	**291**	P	Pn	10 01 01.7	-1.5
UREC				S	Sn	10 01 32.6	-2.7
GUY2C	**Guyana, Caldas**	**2.76**	**234**	P	Pn	10 01 06.1	0.0
GUY2C				S	Sn	10 01 39.6	-0.9
VILC	**Villavicencio,**	**2.78**	**192**	P	Pn	10 01 05.1	-1.0
VILC				S	Sn	10 01 39.0	-1.6
NIZA	**Niza - Manizal**	**2.94**	**233**	P	Pn	10 01 09.0	+0.7
NIZA				S	Sn	10 01 43.1	-1.3
CBOC	**Ciudad Bolivar**	**3.04**	**251**	P	Pn	10 01 09.4	0.0
CBOC				S	Sn	10 01 42.3	-4.1
DBBC	**Dabeiba**	**3.07**	**273**	P	Pn	10 01 09.2	-0.6
DBBC				S	Sn	10 01 42.7	-4.3
SDV	**Santo Domingo**	**3.19**	**50**	P	Pn	10 01 11.0	-0.4
SDV				S	Sn	10 01 48.6	-1.3
ARGC	**Ariguani, Magd**	**3.19**	**340**	P	Pn	10 01 12.3	+1.1
ARGC				S	Sn	10 01 50.1	+0.4
ANIL	**Santa Ana**	**3.26**	**224**	P	Pn	10 01 13.0	+0.6
ANIL				S	Sn	10 01 55.0	+3.2
PRAC	**Prado**	**3.58**	**210**	P	Pn	10 01 14.8	-1.5
PRAC				S	Sn	10 01 57.7	-1.0
APAC	**Apartado, Choc**	**3.59**	**287**	P	Pn	10 01 15.2	-1.1
APAC				S	Sn	10 01 58.5	-0.3
PLMC	**San Jos del P**	**3.69**	**239**	P	Pn	10 01 17.4	-0.4
PLMC				S	Sn	10 02 00.3	-1.1
CRJC	**Cerrejon, Guaj**	**4.15**	**3**	P	Pn	10 01 21.8	-2.0
CRJC				S	Sn	10 02 08.5	-3.7
YOTC	**Yotoco, Valle**	**4.29**	**229**	P	Pn	10 01 24.1	-1.6
MACC	**Macarena, Meta**	**4.73**	**189**	P	Pn	10 01 28.3	-3.1
MACC				S	Sn	10 02 23.4	-2.4
URIC	**Uribia, Colomb**	**4.95**	**13**	P	Pn	10 01 31.2	-3.0
URIC				S	Sn	10 02 28.5	-2.4
MALC	**Bahia Malaga**	**5.05**	**236**	P	Pn	10 01 36.1	+0.5
POPC	**Popayan, Colom**	**5.56**	**220**	P	Pn	10 01 40.9	-1.7
	4.9nm,1.0s						

IDC 22 10:09:10.9±4.2, 20°.09S×178°.50W, h466km±35km, mb2.8/5, mbtmp3.7/7, Error ellipse: s-maj=95.3km s-min=23.3km az=147.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.02**	**305**	P	P	10 10 27.3	-0.2
	11nm,0.7s,baz=139,slow=16,SNR=6.8						
DZM	**Mont Dzumac**	**14.19**	**259**	P	P	10 12 13.5	+0.2
	5.0nm,1.0s,baz=61,slow=19,SNR=3.5						
STKA	**Stephens Creek**	**37.54**	**244**	P	P	10 15 43.6	-0.6
	0.9nm,0.7s,baz=100,slow=11,SNR=1.6						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**44.16**	**256**	P	P	10 16 35.7	-1.6
	0.4nm,0.5s,baz=90,slow=7.3,SNR=12						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**44.19**	**262**	P	P	10 16 39.0	+1.4
	0.8nm,0.4s,baz=96,slow=8.3,SNR=29						
	0.8nm,0.4s						
TXAR	**Lajitas Array**	**87.23**	**58**	P	P	10 21 07.5	+0.2
	0.4nm,0.9s,baz=249,slow=5.1,SNR=3.9						
	0.4nm,0.9s						
ILAR	**Eielson Array**	**88.02**	**13**	P	P	10 21 09.5	-0.5
	0.3nm,1.0s,baz=209,slow=4.8,SNR=2.5						
	0.3nm,1.0s						

IDC ***22*** *10:21:51.2±4.1, 12°.85S×166°.06E, h43km±31km, mb3.7/5, mbtmp4.0/7, ML4.1/2, MS3.4/6, Error ellipse: s-maj=43.8km s-min=17.8km az=59.0*

ISC 22 10:21:48.1±1.5, 12°.8S±0°.1×166°.2E±0°.2, h20km, n12, σ1s.19/10, mb3.9/5, MS3.7/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.95**	**298**	P	**Pn**	**10 23 30.9**	**+2.0**
	9.7nm,0.3s,baz=107,slow=17,SNR=3.8						
HNR				S	**Sn**	**10 24 45.9**	**-1.4**
	43nm,0.6s,baz=218,slow=19,SNR=1.4						
HNR				LR	LR	10 26 21.4	
	comp=Z,107nm,20.9s,baz=143,slow=39						
	50nm,0.4s						
DZM	**Mont Dzumac**	**9.24**	**178**	P	**Pn**	**10 24 01.4**	**+1.0**
	0.6nm,0.3s,baz=49,slow=20,SNR=9.1						
DZM				S	**Sn**	**10 25 43.4**	**-0.4**
	1.5nm,0.4s,baz=131,slow=20,SNR=1.4						
	1.2nm,0.7s						
STKA	**Stephens Creek**	**29.49**	**226**	P	**P**	**10 27 51.5**	**+0.4**
	0.8nm,0.5s,baz=78,slow=14,SNR=3.4						
	0.8nm,0.5s						
WRA	**Warramunga Arr**	**31.31**	**253**	P	**P**	**10 28 06.3**	**-1.0**
	0.2nm,0.3s,baz=82,slow=8.4,SNR=2.2						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**32.41**	**246**	P	**P**	**10 28 16.4**	**-0.6**
	1.5nm,0.8s,baz=72,slow=9.6,SNR=15						
ASAR				LR	LR	10 40 39.9	
	comp=Z,52nm,18.2s,baz=187,slow=35						
	1.5nm,0.8s						
GUMO	**Guam**	**33.65**	**320**	LR	LR	10 41 05.5	
	comp=Z,35nm,21.2s,baz=110,slow=34						
SEY	**Seymchan**	**76.24**	**354**	LR	LR	11 04 04.5	
	comp=Z,37nm,18.3s,baz=192,slow=33						
QSPA	**South Pole Qui**	**77.23**	**180**	P	**P**	**10 33 39.8**	**-0.9**
	3.0nm,0.8s,baz=7.8,slow=3.0,SNR=14						
	3.0nm,0.8s						
PFO	**Pinyon Flats O**	**86.75**	**55**	LR	LR	11 08 26.9	
	comp=Z,44nm,18.0s,baz=252,slow=32						
NVAR	**Mina Array Bea**	**86.84**	**50**	LR	LR	11 09 16.1	
	comp=Z,30nm,18.1s,baz=340,slow=33						
MKAR	**Makanchi Array**	**95.06**	**317**	P	**P**	**10 35 09.5**	**-0.2**
	0.2nm,0.5s,baz=102,slow=6.1,SNR=3.1						
	0.2nm,0.5s						
KEST	**Kesra**	**149.03**	**321**	PKPbc	**PKPbc**	**10 41 35.0**	**-0.4**
	3.6nm,0.7s,baz=355,slow=7.8,SNR=4.7						

RSNC 22 10:28:55.2±0.0, 7°N±1°×7°3W±°, h150km±2km, M3.1, mb3.7, ML2.9, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.26**	**191**	P	Pn	10 29 15.3	-0.7
BARC				S	Sn	10 29 30.4	-1.4
BRJC	**Barrancabermej**	**0.62**	**281**	P	Pn	10 29 16.9	-0.3
BRJC				S	Sn	10 29 34.2	+0.3
PAMC	**Pamplona, Colo**	**0.65**	**41**	P	Pn	10 29 17.9	-0.1
PAMC				S	Sn	10 29 35.1	-0.2
RUSC	**La Rusia**	**0.95**	**177**	P	Pn	10 29 19.2	-1.0
RUSC				S	Sn	10 29 37.7	-1.5
PTBC	**PUERTO BERRIO,**	**1.35**	**257**	P	Pn	10 29 21.9	-1.4
PTBC				S	Sn	10 29 42.9	-1.8
TAMC	**Tame, Arauca**	**1.39**	**107**	P	Pn	10 29 23.5	-0.2
TAMC				S	Sn	10 29 44.9	-0.6
OCAC	**Ocana**	**1.39**	**352**	P	Pn	10 29 23.4	-0.5
OCAC				S	Sn	10 29 45.2	-0.6
SPBC	**San Pablo de B**	**1.51**	**218**	P	Pn	10 29 24.1	-0.9
SPBC				S	Sn	10 29 46.2	-1.7
ZARC	**Zaragoza, Cauc**	**1.83**	**291**	P	Pn	10 29 27.7	-0.7
ZARC				S	Sn	10 29 53.4	-0.4
NORC	**Norcasia**	**2.15**	**234**	P	Pn	10 29 31.1	-1.1
NORC				S	Sn	10 29 59.2	-1.4
CHIC	**Chingaza**	**2.29**	**195**	P	Pn	10 29 33.7	-0.5
CHIC				S	Sn	10 30 02.9	-1.2
ROSC	**El Rosal**	**2.32**	**211**	P	Pn	10 29 35.0	+0.4
ROSC				S	Sn	10 30 04.4	-0.4
HELC	**Santa Helena**	**2.47**	**255**	P	Pn	10 29 36.3	0.0
HELC				S	Sn	10 30 06.8	-1.2
CVER	**Cruz Verde, Cu**	**2.50**	**202**	P	Pn	10 29 36.7	-0.1
CVER				S	Sn	10 30 10.0	+1.2
GUY2C	**Guyana, Caldas**	**2.75**	**234**	P	Pn	10 29 40.0	+0.1
GUY2C				S	Sn	10 30 15.2	+0.9
VILC	**Villavicencio,**	**2.78**	**192**	P	Pn	10 29 38.7	-1.2
VILC				S	Sn	10 30 13.5	-1.0
NIZA	**Niza - Manizal**	**2.93**	**233**	P	Pn	10 29 44.0	+2.0
NIZA				S	Sn	10 30 18.5	+0.4
CBOC	**Ciudad Bolivar**	**3.03**	**251**	P	Pn	10 29 43.0	-0.1
CBOC				S	Sn	10 30 19.8	-0.3
DBBC	**Dabeiba**	**3.06**	**273**	P	Pn	10 29 43.0	-0.5
DBBC				S	Sn	10 30 19.0	-1.7
ARGC	**Ariguani, Magd**	**3.19**	**340**	P	Pn	10 29 45.7	+0.7
ARGC				S	Sn	10 30 23.7	+0.2
SDV	**Santo Domingo**	**3.19**	**51**	P	Pn	10 29 43.0	-2.3
SDV				S	Sn	10 30 21.7	-2.3
ANIL	**Santa Ana**	**3.26**	**224**	P	Pn	10 29 46.0	-0.2
ANIL				S	Sn	10 30 25.0	-0.6
PRAC	**Prado**	**3.57**	**209**	P	Pn	10 29 48.5	-1.5
PRAC				S	Sn	10 30 32.1	-0.4
APAC	**Apartado, Choc**	**3.58**	**287**	P	Pn	10 29 49.3	-0.7
APAC				S	Sn	10 30 32.4	-0.1
ORTC	**Ortega, Tolima**	**3.60**	**216**	P	Pn	10 29 49.5	-0.9
ORTC				S	Sn	10 30 33.2	0.0
SJCC	**San Jacinto, C**	**3.64**	**326**	P	Pn	10 29 49.1	-1.8
SJCC				S	Sn	10 30 30.7	-3.4
PLMC	**San Jos del P**	**3.68**	**239**	P	Pn	10 29 51.0	-0.4
PLMC				S	Sn	10 30 33.6	-1.5
CRJC	**Cerrejon, Guaj**	**4.15**	**3**	P	Pn	10 29 55.5	-2.1
CRJC				S	Sn	10 30 42.5	-3.6
YOTC	**Yotoco, Valle**	**4.28**	**229**	P	Pn	10 29 57.4	-1.9
YOTC				S	Sn	10 30 50.0	+0.8
URIC	**Uribia, Colomb**	**4.95**	**13**	P	Pn	10 30 04.6	-3.4
URIC				S	Sn	10 31 02.7	-2.1
MALC	**Bahia Malaga**	**5.05**	**236**	P	Pn	10 30 10.4	+1.1
MALC				S	Sn	10 31 06.9	-0.2
FLOC	**Florencia**	**5.81**	**206**	P	Pn	10 30 17.6	-1.8

PLV ***22*** *10:42:30.1±1.4, 21°.35N×103°.22E, h17km±6km, ML3.7*

IDC ***22*** *10:42:31.0±1.8, 21°.31N×103°.48E, h0km, mb3.7/2, mbtmp3.5/3, ML3.3/1, Error ellipse: s-maj=27.5km s-min=24.2km az=136.0*

ISC 22 10:42:32.7±1.0, 21°.4N±0°.1×103°.46E±0°.06, h10km, n6, σ0s.78/8, Vietnam

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLVB	**It Ong**	**0.55**	**77**	*e*Pg	**Pg**	**10 42 43.4**	**0.0**
MLVB				*e*Sg	**Sb**	**10 42 53.2**	**+0.7**
MLVB				IAML		10 42 55.2	
	comp=N,4μm,0.6s						
MLVB				IAML		10 42 55.3	
	comp=E,6μm,0.6s						
MCVV	**Moc Chau**	**1.26**	**117**	*e*Pn	**Pn**	**10 42 55.8**	**-0.7**
HBVN	**Hoa-Binh**	**1.86**	**107**	*e*Pg	**Pg**	**10 43 08.3**	**-0.1**
CMAR	**Chiang Mai Arr**	**5.15**	**236**	Pn	**Pn**	**10 43 49.0**	**-0.9**
	comp=E,0.3nm,0.3s,baz=51,slow=12,SNR=5.4						
CMAR				Pg	**Pb**	**10 44 04.0**	**+1.1**
	comp=E,1.3nm,0.3s,baz=50,slow=17,SNR=31						
CMAR				Lg	Lg	10 45 14.6	
	comp=E,0.5nm,0.3s,baz=58,slow=32,SNR=5.7						
	comp=E,0.6nm,0.3s						
MKAR	**Makanchi Array**	**30.62**	**331**	P	**P**	**10 48 46.9**	**-0.2**
	comp=E,1.1nm,0.9s,baz=133,slow=8.7,SNR=6.5						
	comp=E,1.1nm,0.9s						
WRA	**Warramunga Arr**	**50.98**	**142**	P	**P**	**10 51 34.9**	**-0.1**
	comp=E,0.8nm,0.9s,baz=324,slow=7.5,SNR=3.3						
	comp=E,0.8nm,0.9s						

IDC ***22*** *10:50:16.4±1.3, 7°.27S×125°.43E, h524km±21km, mb3.0/6, mbtmp3.9/11, Error ellipse: s-maj=41.7km s-min=13.9km az=54.0*

ISC 22 10:50:17.5±0.8, 7°.4S±0°.1×125°.2E±0°.2, h550km, n11, σ1s.41/14, mb3.5/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.17**	**209**	P	**P**	**10 51 32.7**	**-0.9**
	61nm,0.5s,baz=303,slow=2.3,SNR=3.8						
BATI				S	**S**	**10 52 33.5**	**-2.1**
	56nm,0.4s,baz=147,slow=10,SNR=4.9						
KAPI	**Kappang**	**5.93**	**293**	P	**P**	**10 51 56.3**	**+0.7**
	6.2nm,0.3s,baz=218,slow=20,SNR=5.0						
FITZ	**Fitzroy Crossi**	**10.63**	**178**	P	**P**	**10 52 42.4**	**+0.5**
	0.7nm,0.3s,baz=359,slow=12,SNR=1.5						
FITZ				S	**S**	**10 54 40.8**	**+0.3**
	2.3nm,0.8s,baz=152,slow=13,SNR=1.9						
WRA	**Warramunga Arr**	**15.28**	**146**	P	**P**	**10 53 27.0**	**-2.8**
	1.5nm,0.4s,baz=334,slow=9.0,SNR=47						
ASAR	**Alice Springs**	**18.19**	**154**	P	**P**	**10 53 57.7**	**+0.5**
	0.8nm,0.3s,baz=331,slow=9.1,SNR=28						
ASAR				PcP	**PcP**	**10 58 02.5**	**+1.6**
	0.2nm,0.6s,baz=22,slow=2.6,SNR=2.1						
STKA	**Stephens Creek**	**28.73**	**150**	P	**P**	**10 55 31.6**	**+0.6**
	2.6nm,1.0s,baz=340,slow=12,SNR=2.5						
	2.6nm,1.0s						
DZM	**Mont Dzumac**	**42.29**	**115**	P	**P**	**10 57 23.9**	**+0.3**
	2.1nm,0.8s,baz=299,slow=16,SNR=7.0						
	2.1nm,0.8s						
MKAR	**Makanchi Array**	**66.06**	**329**	P	**P**	**11 00 11.3**	**+1.1**
	0.3nm,0.4s,baz=130,slow=5.8,SNR=4.1						
	0.3nm,0.4s						
PETK	**Petropavlovsk-**	**66.29**	**21**	P	**P**	**11 00 10.0**	**-1.5**
	0.3nm,0.6s,baz=233,slow=7.0,SNR=1.6						
	0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**69.94**	**336**	P	**P**	**11 00 33.9**	**+0.4**
	1.6nm,0.4s,baz=142,slow=5.4,SNR=5.9						
	1.6nm,0.4s						
KURBB	**Kurchatov Arra**	**70.45**	**331**	P	**P**	**11 00 37.5**	**+0.8**
	0.5nm,0.5s,baz=138,slow=5.5,SNR=3.2						
	0.5nm,0.5s						

WEL 22 10:50:50.9±1.0, 34°S±5°×17°9E±°, h12km, M4.0/12, mB4.4/2, ML4.2/14, MLv4.0/12, Mw(mB)3.6/2, Error ellipse: s-maj=10.8km s-min=7.0km az=78.9, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**4.00**	**190**	P	Pn	10 51 51.1	-0.8
WMGZ				S	Sn	10 52 39.6	+1.0
HAZ	**Te Kaha**	**4.06**	**198**	P	Pn	10 51 53.1	+0.4
HAZ				S	Sn	10 52 40.9	+0.6
PKGZ	**Pakihiroa**	**4.10**	**194**	P	Pn	10 51 53.9	+0.6
PKGZ				S	Sn	10 52 41.8	+0.5
PUZ	**Puketiti**	**4.27**	**191**	P	Pn	10 51 54.3	-1.4
PUZ				S	Sn	10 52 44.4	-0.9
RUGZ	**Raukumara Rang**	**4.29**	**198**	P	Pn	10 51 56.3	+0.3
RUGZ				S	Sn	10 52 46.7	+0.8
TWGZ	**Tauwhareparae**	**4.42**	**194**	P	Pn	10 51 57.1	-0.6
WCZ	**Waipu Caves**	**4.58**	**242**	P	Pn	10 52 00.8	+0.9
MWZ	**Matawai**	**4.67**	**198**	P	Pn	10 52 01.0	-0.3
MWZ				S	Sn	10 52 57.7	+2.3
TKGZ	**Te Karaka**	**4.70**	**194**	P	Pn	10 52 02.2	+0.6
TKGZ				S	Sn	10 52 57.1	+1.2
URZ	**Urewera**	**4.72**	**202**	P	Pn	10 52 02.3	+0.5
URZ				S	Sn	10 52 56.1	-0.3
RAGZ	**Rawiri**	**4.85**	**198**	P	Pn	10 52 03.9	+0.1
RAGZ				S	Sn	10 53 01.2	+1.3
OUZ	**Omahuta**	**4.91**	**253**	P	Pn	10 52 04.5	0.0
OUZ				S	Sn	10 53 01.1	-0.1
TOZ	**Tahuroa Road**	**4.94**	**218**	P	Pn	10 52 08.4	+3.6
RIGZ	**Rimuhau**	**4.97**	**194**	P	Pn	10 52 05.5	+0.1
RIGZ				S	Sn	10 53 03.5	+0.7
RTZ	**Ruatahuna**	**5.09**	**201**	P	Pn	10 52 06.8	-0.1
SNGZ	**Shannon Statio**	**5.14**	**198**	P	Pn	10 52 07.9	+0.2
SNGZ				S	Sn	10 53 08.6	+1.6
KNZ	**Kokohu**	**5.30**	**194**	P	Pn	10 52 06.9	-2.8
RAHZ	**Arahi**	**5.33**	**199**	P	Pn	10 52 11.9	+1.5
BKZ	**Black Stump Fm**	**5.74**	**203**	P	Pn	10 52 16.3	+0.4
BKZ				S	Sn	10 53 23.9	+2.1

IDC 22 11:02:42.1±2.6, 30°.68S×177°.37W, h0km, mb3.6/2, mbtmp3.6/2, Error ellipse: s-maj=58.6km s-min=29.5km az=95.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.50**	**341**	Pn	Pg	11 03 11.2	+0.4
	133nm,0.3s,baz=79,slow=18,SNR=2.9						
RAO				Sn	Sg	11 03 30.1	-0.3
	128nm,0.3s,baz=84,slow=22,SNR=2.0						
ASAR	**Alice Springs**	**43.63**	**267**	P	P	11 10 48.8	+0.2
	0.4nm,0.7s,baz=104,slow=6.9,SNR=5.5						
ASAR				PcP	PcP	11 12 35.8	-0.2
	0.4nm,0.9s,baz=105,slow=3.9,SNR=2.3						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**44.65**	**272**	P	P	11 10 56.3	-0.4
	1.1nm,0.7s,baz=114,slow=8.0,SNR=9.5						
	1.1nm,0.7s						
FINES	**FINESS Array B**	**145.59**	**340**	PKPbc	PKPdf	11 22 20.6	-1.0
	1.5nm,0.8s,baz=55,slow=5.3,SNR=7.4						

IDC 22 11:12:27.0±1.7, 2°.76S×138°.79E, h0km, mb3.1/2, mbtmp3.2/3, ML3.2/1, Error ellipse: s-maj=33.8km s-min=25.0km az=155.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.93**	**83**	Pn	Pn	11 13 01.0	-0.1
	1.3nm,0.3s,baz=238,slow=5.8,SNR=13						
JAY				Sn	Sb	11 13 27.4	-0.3
	1.0nm,0.3s,baz=177,slow=23,SNR=5.6						
WRA	**Warramunga Arr**	**17.62**	**194**	P	Pn	11 16 34.0	-0.1
	0.1nm,0.3s,baz=17,slow=13,SNR=5.8						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**21.31**	**192**	P	P	11 17 15.5	-0.1
	0.3nm,0.7s,baz=14,slow=10,SNR=4.3						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**69.88**	**322**	P	P	11 23 39.9	+0.1
	0.2nm,0.5s,baz=111,slow=8.0,SNR=2.3						
	0.2nm,0.5s						

WEL 22 11:12:29.0±1.1, 34°S±7°×17°9E±°, h12km, M4.0/12, mB4.5/1, ML4.1/15, MLv4.0/12, Mw(mB)3.6/1, Error ellipse: s-maj=11.0km s-min=8.1km az=70.9, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.87**	**193**	P	Pn	11 13 29.3	+1.0
MXZ				T	T	11 16 34.5	
WMGZ	**Waiomatatini S**	**4.10**	**191**	P	Pn	11 13 32.0	+0.5
HAZ	**Te Kaha**	**4.17**	**198**	P	Pn	11 13 33.6	+1.2
HAZ				S	Sn	11 14 23.3	+2.2
PKGZ	**Pakihiroa**	**4.20**	**194**	P	Pn	11 13 34.7	+1.8
PUZ	**Puketiti**	**4.37**	**192**	P	Pn	11 13 34.9	-0.3
PUZ				S	Sn	11 14 28.5	+2.5
RUGZ	**Raukumara Rang**	**4.39**	**198**	P	Pn	11 13 36.0	+0.3
RUGZ				S	Sn	11 14 26.8	0.0
TWGZ	**Tauwhareparae**	**4.52**	**194**	P	Pn	11 13 36.0	-1.3
WCZ	**Waipu Caves**	**4.68**	**241**	P	Pn	11 13 39.9	+0.5
CNGZ	**Carnagh Statio**	**4.78**	**191**	P	Pn	11 13 40.1	-0.7
MWZ	**Matawai**	**4.78**	**198**	P	Pn	11 13 41.7	+0.9
MWZ				S	Sn	11 14 35.6	-0.6
TKGZ	**Te Karaka**	**4.80**	**195**	P	Pn	11 13 40.9	-0.2
URZ	**Urewera**	**4.83**	**202**	P	Pn	11 13 40.9	-0.6
URZ				S	Sn	11 14 36.8	-0.5
RAGZ	**Rawiri**	**4.96**	**198**	P	Pn	11 13 44.0	+0.6
OUZ	**Omahuta**	**5.00**	**252**	P	Pn	11 13 44.3	+0.4
OUZ				S	Sn	11 14 42.5	+0.9
TOZ	**Tahuroa Road**	**5.05**	**218**	P	Pn	11 13 48.2	+3.6
RTZ	**Ruatahuna**	**5.20**	**201**	P	Pn	11 13 46.6	0.0
SNGZ	**Shannon Statio**	**5.25**	**198**	P	Pn	11 13 47.6	+0.3
SNGZ				S	Sn	11 14 48.6	+0.8
PRGZ	**Paritu Road**	**5.26**	**193**	P	Pn	11 13 46.8	-0.8
PRGZ				S	Sn	11 14 50.2	+2.1
MHGZ	**Mahia Peninsul**	**5.48**	**192**	P	Pn	11 13 47.1	-3.4
BKZ	**Black Stump Fm**	**5.85**	**203**	P	Pn	11 13 54.5	-1.1

STR 22 11:19:10.8±0.7, 45°N±4°×°±°, h5km, MLv1.1/7, Error ellipse: s-maj=0.0km s-min=0.0km az=135.2, preliminary, France

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ORIF	**Oris-en-Rattie**	**0.16**	**146**	Pg	Pg	11 19 14.2	+0.2
ORIF				Sg	Sg	11 19 16.6	+0.4

IDC 22 11:33:14.3±3.0, 30°.72S×177°.30W, h0km, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=62.2km s-min=29.8km az=97.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.56**	**340**	Pn	Pb	11 33 44.2	0.0
	174nm,0.3s,baz=55,slow=18,SNR=5.9						
RAO				Sn	Sn	11 34 04.1	-0.2
	199nm,0.3s,baz=334,slow=24,SNR=2.6						
URZ	**Urewera**	**8.81**	**210**	Pn	Pn	11 35 20.2	-2.8
	0.2nm,0.3s,baz=130,slow=1.2,SNR=1.9						
URZ				Sn	Sn	11 36 54.2	-8.8
	1.2nm,0.3s,baz=241,slow=23,SNR=6.2						
ASAR	**Alice Springs**	**43.69**	**267**	P	P	11 41 21.6	+0.3
	0.1nm,0.3s,baz=108,slow=8.4,SNR=5.8						
	0.1nm,0.3s						
WRA	**Warramunga Arr**	**44.71**	**272**	P	P	11 41 28.9	-0.6
	0.9nm,0.9s,baz=111,slow=8.0,SNR=17						
	0.9nm,0.9s						
FINES	**FINESS Array B**	**145.65**	**340**	PKPbc	PKPdf	11 52 53.2	-0.8
	1.2nm,0.7s,baz=66,slow=3.5,SNR=6.4						

IDC ***22*** *11:45:36.7±3.3, 36°.41N×140°.71E, h41km±28km, mb3.5/6, mbtmp3.6/8, ML3.3/2, MS3.0/3, Error ellipse: s-maj=31.1km s-min=24.6km az=142.0*

NIED ***22*** *11:45:37.8, 36°.43N×140°.69E, h52km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.83; $M_{\theta\theta}$0.02; $M_{\phi\phi}$-3.85; $M_{r\theta}$1.41; $M_{\theta\phi}$-0.21; $M_{\phi r}$2.40; Fault plane solution: $M_0$4.75000×10^{14} NP1: ϕ_s170.00000°, δ30.00000°, λ65.00000°. NP2: ϕ_s18.00000°, δ63.00000°, λ104.00000°.*

JMA ***22*** *11:45:37.8±0.1, 36°.4N±0°.2×140°.7E±0°.6, h52km, MD3.7/38, MV3.6/38, NORTHERN IBARAKI PREF*

JMA Felt II J1 at NORTHERN IBARAKI PREF .

ISC 22 11:45:37.3±0.9, 36°.48N±0°.05×140°.76E±0°.07, h53km±7km, n32, σ1s.20/27, mb3.7/6, MS2.9/3, 8D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.20**	**226**	*i* P	**Pn**	**11 45 46.0**	**+0.1**
JHYU				S	**Sn**	**11 45 51.7**	**-0.4**
JHYU	**Hitachinakayam**	**0.20**	**226**	A	A	11 45 46.0	
	comp=N,27nm,0.3s,comp=E,29nm,0.7s						
JHO	**Hitachi**	**0.20**	**311**	*i* P	**Pn**	**11 45 46.4**	**+0.4**
JHO				S	**Sn**	**11 45 52.2**	**-0.1**
JHO	**Hitachi**	**0.20**	**311**	A	A	11 45 46.4	
	comp=N,6.0nm,0.3s,comp=E,15nm,0.4s						
JYT	**Yasato**	**0.52**	**242**	⇓ *i*P	**Pn**	**11 45 48.7**	**-0.3**
JYT				⇓S	**Sn**	**11 45 56.1**	**-1.3**
JYT	**Yasato**	**0.52**	**242**	A	A	11 45 48.7	
	comp=N,28nm,0.3s,comp=E,25nm,0.4s						
JIHU	**Itakohorinouch**	**0.54**	**201**	P	**Pn**	**11 45 49.4**	**+0.2**

JIHU				S	Sn	11 45 58.2	+0.3
ONAJ	Iwakimizuishiy	0.62	3	⇓iP	Pn	11 45 50.7	+0.4
ONAJ				⇓S	Sn	11 46 00.1	+0.4
ONAJ	Iwakimizuishiy	0.62	3	A	A	11 45 50.7	
	comp=N,4.0nm,0.3s,comp=E,6.0nm,0.3s						
JAG	Ashikaga	1.06	268	⇓iP	Pn	11 45 55.8	-0.1
JAG				⇓S	Sn	11 46 08.6	-1.0
JOTO	OTAMA OYAMA	1.13	343	i P	Pn	11 45 58.0	+1.0
JKT	Katashina	1.25	284	i P	Pn	11 45 59.0	+0.4
JKT				S	Sn	11 46 15.0	+0.6
JFY	Yanaizu	1.26	318	⇓iP	Pn	11 45 59.4	+0.8
JMM	Marumori	1.39	1	⇓iP	Pn	11 46 01.3	+1.0
MJAR	Matsushiro Arr	2.06	273	P	Pn	11 46 08.7	-0.8
	comp=E,34nm,0.3s,baz=95,slow=9.0,SNR=276						
MJAR				S	Sn	11 46 24.2	-10
	comp=E,46nm,0.4s,baz=87,slow=17,SNR=13						
ASAJ	Asahikawa	7.76	10	P	Pn	11 47 26.6	-0.9
	comp=E,0.7nm,0.3s,baz=201,slow=11,SNR=8.0						
ASAJ				S	Sn	11 48 49.5	-4.4
	comp=E,2.6nm,0.5s,baz=116,slow=8.0,SNR=1.6						
	comp=E,1.6nm,0.3s						
KSRS	Korea Array	10.32	279	P	Pn	11 48 01.8	-0.8
	comp=E,0.1nm,0.3s,baz=90,slow=14,SNR=4.3						
	comp=E,0.3nm,0.5s						
YAK	Yakutsk	26.50	348	LR	LR	12 01 40.2	
	comp=E,29nm,19.0s,baz=219,slow=36						
SONM	Songino Array	27.67	305	P	P	11 51 20.0	-0.2
	comp=E,0.5nm,0.4s,baz=109,slow=9.2,SNR=2.9						
	comp=E,0.5nm,0.4s						
H11N2	WAKE ISLAND Hy	28.32	119	T	T	12 21 30.2	
	baz=312,slow=75,SNR=33						
H11N1	WAKE ISLAND Hy	28.33	119	T	T	12 21 30.4	
	baz=312,slow=75,SNR=38						
H11N3	WAKE ISLAND Hy	28.34	119	T	T	12 21 31.3	
	baz=312,slow=75,SNR=33						
H11S1	WAKE ISLAND Hy	29.01	121	T	T	12 22 20.5	
	baz=314,slow=76,SNR=60						
H11S3	WAKE ISLAND Hy	29.01	121	T	T	12 22 20.2	
	baz=314,slow=76,SNR=33						
H11S2	WAKE ISLAND Hy	29.02	121	T	T	12 22 18.4	
	baz=314,slow=76,SNR=26						
CMAR	Chiang Mai Arr	40.85	255	LR	LR	12 11 30.5	
	comp=E,19nm,21.1s,baz=170,slow=38						
ZALV	Zalesovo Beam	41.91	313	P	P	11 53 22.8	+0.5
	comp=E,0.8nm,0.5s,baz=79,slow=7.5,SNR=3.6						
	comp=E,0.8nm,0.5s						
MKAR	Makanchi Array	43.97	302	P	P	11 53 40.4	+1.2
	comp=E,0.6nm,0.7s,baz=90,slow=9.3,SNR=6.5						
	comp=E,0.6nm,0.7s						
KURBB	Kurchatov Arra	45.93	308	P	P	11 53 54.5	-0.1
	comp=E,0.7nm,0.4s,baz=82,slow=7.7,SNR=9.4						
	comp=E,0.7nm,0.4s						
ILAR	Eielson Array	50.24	32	P	P	11 54 29.4	+1.7
	comp=E,0.6nm,0.7s,baz=270,slow=6.2,SNR=10						
	comp=E,0.6nm,0.7s						
INK	Inuvik	55.12	27	LR	LR	12 19 28.1	
	comp=E,21nm,19.2s,baz=44,slow=37						
WRA	Warramunga Arr	56.44	187	P	P	11 55 13.1	-0.5
	comp=E,0.5nm,0.8s,baz=15,slow=7.1,SNR=2.5						
	comp=E,0.5nm,0.8s						

IDC 22 11:50:14.8±6.9**, 30°.49S**×**178°.02W, h0^{km}, mb3.4**/2**,**
mbtmp3.4/2**, Error ellipse: s-maj=277.6km**
s-min=61.0km az=155.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.09	267	P	P	11 58 16.6	-0.3
	0.3nm,0.6s,baz=107,slow=7.8,SNR=5.0						
	0.3nm,0.6s						
WRA	Warramunga Arr	44.08	272	P	P	11 58 25.0	+0.1
	0.5nm,0.7s,baz=113,slow=7.7,SNR=6.0						
	0.5nm,0.7s						
FINES	FINESS Array B	145.23	340	PKPbc	PKPbc	12 09 52.5	-0.9
	2.6nm,0.9s,baz=60,slow=3.4,SNR=4.3						

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*NEIC **22** 12:05:13.5±2.1, 33°.196N±0°.006×115°.556W±0°.009,*
h5^{km}±1^{km}, Error ellipse: s-maj=1.9km s-min=1.2km
az=254.0

PAS 22 12:05:14.0±1.9**, 33°.199N**±0°.007×**115°.578W**±0°.010**,**
h5^{km}±1^{km}**, ML3.0**/91**, ML3.0**/26(NEIC)**, Error ellipse:**
s-maj=1.2km s-min=1.0km az=66.0, Southern California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CLI2	Calipatria 2	0.08	181		Pg	12 05 16.1	+0.3
CLI2					Sg	12 05 18.8	+1.9
WEMD	Westmorland, C	0.16	181		Pg	12 05 17.9	+0.7
WEMD					Sg	12 05 21.7	+2.4
5271	Bombay Beach	0.20	320		Pg	12 05 18.6	+0.6
BOMB	Bombay Beach	0.21	323		Pg	12 05 18.6	+0.5
FRK	Frink	0.21	346		Pg	12 05 18.4	+0.3
FRK					Sg	12 05 21.9	+1.0
ERRC	Elmore Ranch	0.22	248		Pg	12 05 23.5	+5.1
SLVP	Salvation Pass	0.23	80		Pg	12 05 18.6	0.0
SLVP					Sg	12 05 21.8	+0.1
IMPE	Imperial	0.30	177		Pg	12 05 20.4	+0.6
IMPE					Sg	12 05 24.9	+1.2
SWSC	Sam W. Stewart	0.31	216		Pn	12 05 24.4	-0.9
SUP	Superstition M	0.32	220		Pg	12 05 20.5	+0.2
SUP					Sg	12 05 24.8	+0.4
SALN	Salton City	0.35	283		Pg	12 05 21.6	+0.8
SALN					Sb	12 05 27.6	-1.1
SNR	Schaffner Ranc	0.36	161		Pg	12 05 21.4	+0.4
SNR					Sb	12 05 27.5	-1.2
DREC	Desert Rsrch C	0.41	164		Pg	12 05 22.5	+0.7
DREC					Sb	12 05 30.0	-0.2
CRR	Carrizo Plain	0.45	227		Pg	12 05 22.9	+0.2
CRR					Sb	12 05 30.1	-1.4
WESC	Westside Schoo	0.46	196		Pg	12 05 23.2	+0.4
WESC					Sb	12 05 30.8	-0.9
BC3	Big Chuckawall	0.47	13		Pg	12 05 23.3	+0.2
BC3					Sg	12 05 30.2	+1.0
COA	Coachella	0.51	131		Pg	12 05 24.1	+0.3
COA					Sb	12 05 32.3	-0.8
HAY	Hayfield	0.52	350		Pg	12 05 24.2	+0.2
HAY					Sb	12 05 33.2	-0.2
5053	Calexico	0.53	172		Pg	12 05 24.6	+0.4
5053					Sb	12 05 33.7	-0.1
CTW	Cottonwood Mou	0.54	333		Pg	12 05 24.6	+0.2
CTW					Sg	12 05 32.6	+1.2
5054	Holtville Bond	0.54	158		Pg	12 05 24.7	+0.3
5054					Sb	12 05 34.2	0.0
RUN	Ruthven	0.55	114		Pg	12 05 24.5	-0.2
RUN					Sg	12 05 32.9	+1.1
SGL	Mount Signal	0.56	193		Pg	12 05 24.5	-0.3
SGL					Sg	12 05 32.5	+0.4
SLH	Sleepy Hollow	0.57	270		Pg	12 05 25.1	+0.2
SLH					Sg	12 05 33.1	+0.8
CTCC	Cactus City	0.57	323		Pg	12 05 25.1	+0.1
CTCC					Sb	12 05 34.5	-0.5
UABX	UABC, Campus M	0.58	168		Pg	12 05 25.3	+0.2
UABX					Sb	12 05 34.8	-0.3
YUH	Yuha Desert	0.62	208		Pg	12 05 25.6	-0.4
YUH	Yuha Desert	0.62	208		Sg	12 05 34.4	+0.4
GLA	Glamis	0.65	103		Sg	12 05 36.0	+1.1
GLA	Glamis	0.65	103		Pg	12 05 26.1	-0.4
GLA				IAML		12 05 36.8	
	comp=N,1µm,0.5s						
GLA				IAML		12 05 38.5	
	comp=E,1µm,0.2s						
EMSC	East Mesa	0.68	132		Pg	12 05 26.9	-0.2
EMSC					Sb	12 05 37.4	-0.6
BORC	Borrego Spring	0.71	276		Pg	12 05 27.3	-0.3
BORC					Sg	12 05 37.5	+0.7
IKP	In-Ko-Pah, Jac	0.71	219		Pg	12 05 27.1	-0.5
IKP					Sg	12 05 36.8	0.0
RMX	La Rumorosa	0.73	215		Sg	12 05 38.1	+0.6
MONP2	Monument Peak	0.77	247		Pg	12 05 28.4	-0.5
MONP2					Sg	12 05 39.1	+0.2
PMD	Palm Desert	0.81	304		Pg	12 05 28.5	-1.0
PMD					Sg	12 05 40.3	+0.4
CPBX	Cerro Prieto	0.81	163		Pg	12 05 28.4	-1.2
XPFO	Pinon Flat	0.84	299		Pg	12 05 29.5	-0.7
XPFO					Sg	12 05 41.7	+0.6
PFO	Pinyon Flats O	0.84	299		Pg	12 05 29.4	-0.8
PFO					Sg	12 05 41.5	+0.3
PFO	Pinyon Flats O	0.84	299		Pg	12 05 29.5	-0.7
PFO				IAML		12 05 43.2	
	comp=E,280nm,0.7s						
PFO				IAML		12 05 43.5	
	comp=E,147nm,0.6s						
JUEM	Julian Eagle M	0.86	262		Pg	12 05 29.9	-0.7
JUEM					Sg	12 05 41.5	-0.4
MATG	Mataguay Scout	0.90	270		Pg	12 05 30.4	-0.8
MATG					Sg	12 05 43.0	+0.1
FRD	Ford Ranch, An	0.91	289		Pg	12 05 30.7	-0.7
FRD					Sg	12 05 43.8	+0.6
FRD	Ford Ranch, An	0.91	289		Pg	12 05 30.7	-0.7
FRD					Sg	12 05 43.9	+0.6
SNDA	J Saunders Pla	0.94	292		Pg	12 05 31.3	-0.7
SNDA					Sg	12 05 44.7	+0.5
BZNA	Buzz No.'s Pla	0.96	288		Pg	12 05 31.6	-0.8
BZNA					Sg	12 05 45.2	+0.4
TPC	Twentynine Pal	0.99	337		Pg	12 05 32.0	-1.0
GUVIX	Guadalupe Vict	0.99	155		Sg	12 05 44.9	-0.9
EW2	E Wide Canyon	1.01	317		Pg	12 05 31.9	-1.6
EW2					Sg	12 05 46.4	-0.2
IRM	Iron Mountain	1.02	21		Pg	12 05 33.2	-0.4
IRM					Sb	12 05 48.0	0.0
CRY	Cary Ranch	1.04	291		Pg	12 05 32.6	-1.3
CRY					Sg	12 05 46.9	-0.5
BLYC	Blythe	1.04	58		Pg	12 05 33.8	-0.2
BLYC	Blythe	1.04	58		Sg	12 05 47.6	+0.2
SLRCX	San Luis Rio C	1.04	135		Pg	12 05 32.5	-1.6
SLRCX					Sb	12 05 48.4	-0.1
BAR	Barrett	1.05	241		Pg	12 05 32.6	-1.7
BAR					Sg	12 05 46.3	-1.6
TKX	Tecate	1.07	234	Pg	Pg	12 05 33.2	-1.3
TKX				IAML		12 05 38.3	
	comp=E,355nm,0.2s						
TKX				IAML		12 05 49.0	
	comp=N,315nm,0.2s						
PLM	Palomar	1.09	279		Pg	12 05 33.4	-1.5
BLAC	Blackrock camp	1.10	322		Pg	12 05 33.4	-1.8
EML	El Monte Cty P	1.11	254		Pg	12 05 33.4	-1.9
EML					Sg	12 05 48.0	-1.6
DEVC	Devers	1.11	312		Pg	12 05 33.6	-1.7
DPP	Dos Picos Cty	1.16	260		Pg	12 05 34.3	-2.0
DPP					Sg	12 05 49.7	-1.7
DUZA	Dulzura	1.17	240		Pg	12 05 34.5	-1.9
DUZA					Sg	12 05 49.9	-1.7
POB	Polly Butte	1.23	294		Pg	12 05 35.2	-2.3
ESJX	Sierra Juarez	1.23	195		Sg	12 05 53.5	-0.2
ESJX	Sierra Juarez	1.23	195		Pg	12 05 35.2	-2.4
ESJX				IAML		12 05 53.7	
	comp=E,155nm,0.3s						
SDRC	San Diego Road	1.24	248		Pg	12 05 36.4	-1.4
SDRC					Sg	12 05 51.6	-2.2
CBX	Cerro Bola	1.27	226		Pg	12 05 36.5	-1.9
CBX				IAML		12 05 58.5	
	comp=N,356nm,0.4s						
CBX				IAML		12 06 10.8	
	comp=E,480nm,0.8s						
DGR	Domenigoni Val	1.28	291		Pg	12 05 35.9	-2.6
BACC	Bachelor Mtn.	1.29	289		Pn	12 05 36.1	-2.7
HMTC	Hemet	1.30	294		Pn	12 05 36.2	-2.7
HMTC					Sg	12 05 54.2	-1.5
CPE	Camp Elliot	1.32	257		Pn	12 05 36.7	-2.4
CPE					Sg	12 05 53.8	-2.6
CPE	Camp Elliot	1.32	257	IAML		12 05 56.0	
	comp=N,399nm,0.2s						
CPE				IAML		12 05 56.3	
	comp=E,305nm,0.3s						
GORC	Green Oak Ranc	1.39	269		Pn	12 05 37.7	-2.4
GORC					Sb	12 05 55.6	-2.8
TJX	Tijuana	1.42	241		Pn	12 05 39.1	-1.4
DANC	Danby, Needles	1.44	6		Pn	12 05 41.1	+0.2
SVD	Seven Oaks Dam	1.56	306		Pn	12 05 40.8	-1.7
GMRC	Granite Mounta	1.58	358		Pb	12 05 44.1	+0.2
ELS	Elsinore Mount	1.61	287		Pn	12 05 40.8	-2.4
ELS				IAML		12 06 05.3	
	comp=N,86nm,0.4s						
VTX	Valle De La Tr	1.81	186	Pn	Pn	12 05 43.9	-2.0
SSK	Sunset Peak	2.03	300		Pn	12 05 47.5	-1.6
Y14A	Wickenburg	2.27	70		Pn	12 05 51.5	-0.8
W13A	Hualapai Mount	2.36	36		Pn	12 05 52.7	-1.0
214A	Organ Pipe Nat	2.64	117	Pn	Pn	12 05 54.4	-3.0
SHPR	Sheep Range	3.32	6	Pn	Pn	12 06 06.2	-0.6
X16A	Lo Mia Camp, P	3.65	69		Pn	12 06 10.4	-1.0
GRAC	Grapevine Rang	4.06	339		Pn	12 06 16.1	-0.8
GRAC				IAML		12 06 48.3	
	comp=N,17nm,0.8s						
GRAC				IAML		12 07 41.5	
	comp=E,22nm,0.9s						
TUC	Tucson	4.13	101	Pn	Pn	12 06 15.9	-2.0
TUC	Tucson	4.13	101	IAML		12 07 34.6	
	comp=E,12nm,0.8s						
LCMT	Little Creek M	4.26	26		Pn	12 06 19.3	-0.4
KNB	Kanab	4.43	30		Pn	12 06 22.2	+0.1
DSP	Deep Springs	4.60	336	Pn	Pn	12 06 22.9	-1.3
X18A	Snowflake	4.87	73	Pn	Pn	12 06 27.7	-0.4
319A	Douglas	5.63	107	Pn	Pn	12 06 36.2	-2.4

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*IDC **22** 12:30:25.1±0.9, 28°.39N×104°.89E, h0^{km}, mb3.7/10,*
mbtmp3.7/12, ML3.8/2, MS2.8/1, Error ellipse:
s-maj=24.7km s-min=16.6km az=66.0

ISC 22 12:30:28.1±0.8**, 28°.4N**±0°.1×**104°.9E**±0°.2**, h19**^{km}**, n12,**
σ**0^{s}72**/12**, mb3.7**/10**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	11.31	210	Pn	Pn	12 33 08.8	0.0
	0.1nm,0.3s,baz=30,slow=12,SNR=10						
CMAR				LR	LR	12 37 55.5	
	comp=Z,49nm,19.5s,baz=195,slow=40						
	0.5nm,0.4s						
SONM	Songino Array	19.43	3	P	Pn	12 34 53.6	-0.9
	0.6nm,0.3s,baz=185,slow=11,SNR=6.8						
	0.9nm,0.4s						
KSRS	Korea Array	21.30	59	P	P	12 35 13.3	-0.2
	0.8nm,0.5s,baz=241,slow=10,SNR=6.1						
	0.8nm,0.5s						
MKAR	Makanchi Array	25.48	322	P	P	12 35 55.2	+0.2
	0.8nm,0.5s,baz=126,slow=11,SNR=8.6						
	0.8nm,0.5s						
USRK	Ussuriysk Ar.	26.77	47	P	P	12 36 06.1	-0.5
	1.7nm,0.6s,baz=245,slow=4.7,SNR=5.9						
	1.7nm,0.6s						
ZALV	Zalesovo Beam	29.43	336	P	P	12 36 30.0	-0.3
	0.5nm,0.4s,baz=134,slow=6.2,SNR=2.1						
	0.5nm,0.4s						
KURBB	Kurchatov Arra	29.81	325	P	P	12 36 34.0	+0.4
	0.8nm,0.6s,baz=128,slow=10,SNR=8.1						
	0.8nm,0.6s						
BVAR	Borovoye Array	35.33	324	P	P	12 37 22.3	+0.3
	0.4nm,0.3s,baz=125,slow=9.1,SNR=2.6						
	0.4nm,0.3s						
PETK	Petropavlovsk-	45.68	42	P	P	12 38 49.2	+1.6
	0.4nm,0.8s,baz=248,slow=7.0,SNR=1.8						
	0.4nm,0.8s						
WRA	Warramunga Arr	55.87	146	P	P	12 40 04.2	-0.5
	0.6nm,0.5s,baz=335,slow=7.4,SNR=22						
	0.6nm,0.5s						
ASAR	Alice Springs	58.85	149	P	P	12 40 25.6	-0.1
	0.5nm,0.6s,baz=332,slow=6.9,SNR=14						
	0.5nm,0.6s						
ILAR	Eielson Array	71.97	25	P	P	12 41 49.5	-0.5
	0.3nm,0.6s,baz=307,slow=5.4,SNR=3.0						
	0.3nm,0.6s						

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*BGR **22** 12:43:40.7, 42°.85N×130°.25W, h10^{km}, mb4.9*
*IDC **22** 12:43:40.9±0.6, 43°.86N×128°.60W, h0^{km}, mb4.2/34,*
mbtmp4.2/41, ML3.5/7, MS4.2/2, Error ellipse:
s-maj=17.1km s-min=8.3km az=32.0
*NEIC **22** 12:43:42.5, 43°.85N×128°.48W, h12^{km}*
*NEIC **22** 12:43:42.5±1.9, 43°.85N±0°.04×128°.5W±0°.2, h10^{km}±1^{km},*
mb5.0/312, ML3.7/68, Mww4.9/58, Error ellipse:
s-maj=19.9km s-min=2.9km az=252.0
*NEIC **22** 12:43:42.5, 43°.85N×128°.89W, h12^{km}, Moment Tensor*
Solution. Duration: 1^{s}5 Moment tensor: Scale 10^{16}Nm;
M_{rr}-3.00; $M_{\theta\theta}$0.28; $M_{\phi\phi}$2.72; $M_{r\theta}$-0.20; $M_{\theta\phi}$0.59; $M_{\phi r}$-0.08;
Fault plane solution: $M_0$2.94000×10^{16} NP1:
ϕ_s189.77000°, δ43.89000°, λ-94.50000°. NP2:ϕ_s15.99000°,
δ46.28000°, λ-85.69000°. Principal axes: T 2.8557,
Plg1.0000°, Azm103.0000°; N 0.1564, Plg3.0000°,
Azm193.0000°; P -3.0121, Plg87.0000°, Azm352.0000°;
*GCMT **22** 12:43:45.5±0.2, 43°.83N±0°.02×128°.67W±0°.02, h12^{km},*
MW4.9/113, Moment Tensor Solution. s45,c54;
s113,c163; Duration: 0 Moment tensor: Scale 10^{16}Nm;
M_{rr}-3.05±.15; $M_{\theta\theta}$0.22±.11; $M_{\phi\phi}$2.82±.10; $M_{r\theta}$0.06±.32;
$M_{\theta\phi}$0.64±.07; $M_{\phi r}$-1.14±.26; Best double couple:
$M_0$3.21800×10^{16} NP1:ϕ_s198.00000°, δ35.00000°,
λ-81.00000°. NP2:ϕ_s8.00000°, δ55.00000°, λ-96.00000°.
Principal axes: T 3.1620, Plg10.0000°, Azm102.0000°; N
0.1030, Plg5.0000°, Azm11.0000°; P -3.2730, Plg79.0000°,
Azm255.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s. Triangular
moment-rate function

ISC 22 12:43:43.1±0.5**, 43°.87N**±0°.07×**128°.59W**±0°.06**, h13**^{km}**,**
n598, σ**1^{s}35**/447**, mb5.0**/181**, MS4.8**/5**, 2D, Off coast of**
Oregon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEBM	Edson Butte	3.26	106		Pn	12 44 30.2	-3.7
KEBM				IAML		12 45 19.1	
	comp=N,191nm,1.3s						
I02E	Swisshome, OR	3.43	84		Pn	12 44 33.6	-2.6
J01E	Myrtle Point	3.46	100		Pn	12 44 34.2	-2.4
J01E				IAML		12 45 20.1	
	comp=E,244nm,1.9s						
HEBO	Mount Hebo	3.71	67		Pn	12 44 37.8	-2.3
K02D	Willamette Mer	3.78	106		Pn	12 44 38.0	-3.1
I03D	Drain, OR	3.80	91		Pn	12 44 40.2	-1.1
COR	Corvallis	3.87	78		Pn	12 44 40.9	-1.3
COR				IAML		12 45 08.3	
	comp=E,121nm,1.5s						
COR				IAML		12 45 41.6	
	comp=E,115nm,2.1s						
G03D	McMinnville, O	4.03	69		Pn	12 44 42.9	-1.7
G03D				IAML		12 45 35.2	
	comp=E,116nm,1.7s						
G03D				IAML		12 45 52.1	
	comp=N,113nm,1.8s						
BUCK	Buck Mountain	4.05	83		Pn	12 44 43.6	-1.3
BUCK				IAML		12 45 38.9	
	comp=N,113nm,2.5s						
BUCK				IAML		12 46 09.1	
	comp=E,121nm,1.9s						
L02F	Cave Junction	4.07	114		Pn	12 44 43.3	-1.8
F03A	Seaside	4.12	58		Pn	12 44 44.5	-1.2
KRMB	Red Mountain	4.17	123	Pn	Pn	12 44 46.2	-0.3
RADR	Rader Ridge	4.24	51		Pn	12 44 45.7	-1.6
RADR				IAML		12 45 41.9	
	comp=N,95nm,1.6s						
RADR				IAML		12 46 05.7	
	comp=E,100nm,1.7s						
H04D	Lebanon	4.26	79		Pn	12 44 46.5	-1.0
H04D				IAML		12 45 30.9	
	comp=N,119nm,1.4s						
H04D				IAML		12 45 47.5	
	comp=E,132nm,1.6s						
BBOR	Butler Butte	4.42	101		Pn	12 44 48.4	-1.6
BBOR				IAML		12 45 43.6	
	comp=N,71nm,2.2s						
BBOR				IAML		12 45 44.9	
	comp=E,80nm,1.6s						
E03A	Lebam	4.44	51		Pn	12 44 48.1	-2.0
E03A				IAML		12 45 46.5	
	comp=N,79nm,1.9s						
E03A				IAML		12 46 02.4	
	comp=E,91nm,1.5s						
G04A	Mulino	4.57	71		Pn	12 44 51.3	-0.6
H04A	Detroit Lake	4.67	78		Pn	12 44 51.9	-1.4
H04A				IAML		12 45 26.1	
	comp=N,53nm,1.6s						
H04A				IAML		12 45 28.0	
	comp=E,53nm,1.3s						
WISH	Wishkah	4.69	45		Pn	12 44 51.3	-2.2
WISH				IAML		12 46 07.8	
	comp=N,98nm,1.9s						
WISH				IAML		12 47 29.2	
	comp=E,96nm,3.4s						
J04A	Umpqua Nationa	4.75	95		Pn	12 44 54.9	+0.3
YBH	Yreka Blue Hor	4.82	114		Pn	12 44 54.6	-0.9
YBH	Yreka Blue Hor	4.82	114	Pn	Pn	12 44 54.9	-0.6
	baz=286,slow=7.1,SNR=7.3						
YBH				Sn	Sn	12 45 51.2	0.0
	baz=180,slow=19,SNR=3.0						
YBH				LR	LR	12 46 09.3	
	comp=E,82nm,18.2s,baz=322,slow=31						
NLWA	Neilton Lookou	4.83	42		Pn	12 44 55.8	+0.3
L04D	Klamath Falls	4.89	108		Pn	12 44 56.6	+0.2
L04D				IAML		12 47 28.8	
	comp=N,80nm,5.0s						
K04D	Chiloquin, OR	5.14	102		Pn	12 45 00.6	+0.7
HOOD	Mount Hood Mea	5.16	71		Pn	12 44 59.7	-0.4
I05D	Terrebonne, OR	5.24	82		Pn	12 44 58.9	-2.3
I05D				IAML		12 47 23.2	
	comp=N,58nm,3.8s						
G05A	Wamic	5.37	73		Pn	12 45 03.2	+0.2
J05D	Fort Rock, OR	5.37	94		Pn	12 45 02.0	-1.0
J05D				IAML		12 45 52.2	
	comp=N,49nm,2.2s						
J05D				IAML		12 46 39.5	
	comp=E,61nm,2.4s						
GNW	Green Mountain	5.47	46		Pn	12 45 04.3	+0.1
OZB	Mount Ozzard	5.52	22		Pn	12 45 04.5	-0.5
PINE	Pine Mountain	5.53	88		Pn	12 45 05.1	-0.2
D05A	Enumclaw	5.70	52		Pn	12 45 07.8	+0.4
CLRS	Cowichan Lake	5.83	30		Pn	12 45 08.6	-0.6
G06A	Carlson Farm,	5.84	74		Pn	12 45 09.7	+0.2
PGC	Sidney	5.96	35		Pn	12 45 09.9	-1.0
MXC	Moxie City	6.45	62		Pn	12 45 17.9	+0.2
F07A	Phinny Hill Vi	6.48	69		Pn	12 45 18.3	+0.2
CBB	Campbell River	6.55	19		Pn	12 45 19.2	+0.2
I07A	Izee	6.56	85		Pn	12 45 18.6	-0.7
E07A	Sunnyside	6.73	63		Pn	12 45 22.3	+0.8
HOLB	Holberg	6.78	2		Pn	12 45 24.5	+2.3
ORV	Oroville	6.83	127		Pn	12 45 25.1	+2.1
HAWA	Hanford	6.88	65		Pn	12 45 23.1	-0.6
WAH2	Wahluke Slope	6.98	62		Pn	12 45 25.6	+0.5
G08A	Pilot Rock	7.02	75		Pn	12 45 24.7	-0.9
E08A	Dider Farm, El	7.22	65		Pn	12 45 28.0	-0.3
BBB	Bella Bella	8.32	2	Pn	Pn	12 45 44.1	+0.8
	comp=E,0.6nm,0.3s,baz=210,slow=3.2,SNR=9.0						
	comp=E,36nm,1.1s						
NEW	Newport	9.10	57	Pn	Pn	12 45 53.6	-0.5
	comp=E,0.6nm,0.3s,baz=230,slow=9.5,SNR=8.5						
	comp=E,5.8nm,1.0s						
NVAR	Mina Array Bea	9.47	122	Pn	Pn	12 46 00.6	+1.3
	comp=E,0.1nm,0.3s,baz=300,slow=12,SNR=9.9						
	comp=E,2.8nm,0.9s						
ELK	Elko	10.37	103	Pn	Pn	12 46 13.9	+2.3
	comp=E,0.1nm,0.3s,baz=293,slow=15,SNR=12						
ELK				LR	LR	12 50 17.5	
	comp=E,2µm,19.5s,baz=322,slow=38						
	comp=E,5.4nm,1.2s						
V35K	Ketchikan	11.63	351	P	Pn	12 46 26.4	-2.2
	baz=169						
CRAG	Craig	11.97	347	P	Pn	12 46 31.1	-2.2
	baz=164,SNR=5.3						
U33K	Whale Pass	12.59	348	P	Pn	12 46 39.5	-2.2
	baz=164						
WRAK	Wrangell Islan	12.79	351	P	Pn	12 46 41.6	-2.8
	baz=167						
T35M	Bob Quinn	13.17	356	P	Pn	12 46 47.1	-2.5
	baz=174						
T33K	Petersburg	13.25	349	P	Pn	12 46 48.9	-1.8
	baz=166						
SIT	Sitka	13.87	344	P	Pn	12 46 55.9	-3.2
	baz=159						
PDAR	Pinedale Array	13.90	88	Pn	Pn	12 47 02.2	+2.2
	baz=270,slow=16,SNR=5.3						
	comp=E,0.2nm,0.4s						
PFO	Pinyon Flats O	13.93	133	Pn	Pn	12 47 02.1	+1.8
	comp=E,0.1nm,0.3s,baz=309,slow=15,SNR=4.2						
PFO				LR	LR	12 51 54.1	
	comp=E,834nm,20.8s,baz=322,slow=35						
	comp=E,1.6nm,0.7s						
S32K	Killisnoo	14.12	347	P	Pn	12 46 59.7	-2.9
	baz=162						
S34M	Telegraph Cree	14.15	354	P	Pn	12 47 00.3	-2.7
	baz=172,SNR=11						
DLBC	Dease Lake	14.61	357	Pn	Pn	12 47 10.1	+0.7
	baz=158,slow=14						
R32K	Eaglecrest	14.89	348	P	Pn	12 47 11.3	-1.8
	baz=163						
S31K	Pelican	14.89	344	P	Pn	12 47 10.3	-2.8
	baz=158						
TOAD	Toad River Com	15.14	7	P	Pn	12 47 14.1	-2.4
	baz=189,SNR=6.3						
CCX	Cicese	15.22	138		Pn	12 47 17.4	-0.2
R31K	City Hall, Gus	15.22	346	P	Pn	12 47 15.8	-1.7
	baz=160						

GLA	Glamis	15.24	131		Pn	12 47 18.0	0.0
Q32M	Nakina River	15.28	353	P	Pn	12 47 16.5	-2.0
	baz=170						
ESJX	Sierra Juarez	15.46	136		Pn	12 47 21.0	-0.1
R33M	Jennings River	15.61	355	P	Pn	12 47 21.8	-1.0
	baz=173,SNR=16						
LIRD	Liard River Hi	15.64	5	P	Pn	12 47 22.3	-0.7
	baz=186						
P32M	Atlin	16.05	351	P	Pn	12 47 27.4	-0.9
	baz=166						
SKAG	Skagway	16.15	348	P	Pn	12 47 29.3	-0.2
	baz=162						
PLBC	Pleasant Camp	16.32	346	P	Pn	12 47 31.5	-0.1
	baz=159,SNR=12						
BEAVL	Fort Liard	16.47	6	P	Pn	12 47 33.0	-0.7
	baz=189						
KOTAN	Kotaneelee Air	16.51	8	P	Pn	12 47 33.3	-0.9
	baz=191						
P33M	Teslin, Yukon	16.57	353	P	Pn	12 47 32.5	-2.5
	baz=169						
P29M	Windy Craggy	16.74	344	P	Pn	12 47 35.5	-1.7
	baz=156						
P30M	Million Dollar	17.05	346	P	Pn	12 47 40.1	-0.9
	baz=159						
PNL	Peninsula	17.14	341	P	Pn	12 47 40.4	-1.6
	baz=152						
WHY	Whitehorse	17.24	350	P	Pn	12 47 42.6	-0.8
	baz=164,SNR=8.2						
DGMT	Dagmar	17.48	66	IAmb	IAmb	12 47 53.6	
	comp=Z,110nm,1.4s						
N32M	Quiet Lake	17.52	353	P	Pn	12 47 46.3	-0.5
	baz=169						
O30N	Mendenhall	17.52	348	P	Pn	12 47 46.2	-0.6
	baz=162						
O29M	Mount Kennedy	17.53	343	P	Pn	12 47 46.9	-0.2
	baz=155						
TGTN	Hyland Airport	17.69	0	P	Pn	12 47 48.3	-0.7
	baz=180						
PINM	Pinnacle	17.72	341	P	Pn	12 47 49.3	-0.1
	baz=151						
PCA	Pinnacle	17.72	341	IAmb	IAmb	12 48 00.4	
	comp=Z,157nm,1.4s						
HYT	Haines Junctio	17.80	346	P	Pn	12 47 49.2	-1.2
	baz=158						
YUK6	Outpost Mounta	18.07	345	P	Pn	12 47 52.7	-1.2
	baz=156						
N31M	Braeburn, Yuko	18.15	349	P	Pn	12 47 53.6	-1.1
	baz=163						
MESA	MESA	18.22	338	P	Pn	12 47 55.2	-0.5
	baz=148						
Q24A	Divide	18.23	98	IAmb	IAmb	12 48 04.5	
	comp=Z,202nm,1.8s						
O28M	Mount Upton	18.30	342	P	Pn	12 47 56.5	-0.2
	baz=152						
YAH	Yahtse	18.32	339	IAmb	IAmb	12 48 07.4	
	comp=Z,145nm,1.6s						
N30M	Aishikik Lake	18.33	347	P	P	12 47 57.2	+0.3
	baz=160,SNR=14						
SDCO	Great Sand Dun	18.49	101	IAmb	IAmb	12 48 09.0	
	comp=Z,120nm,1.5s						
YUK4	Talbot Arm	18.50	345	P	Pn	12 47 59.2	+0.2
	baz=157						
BGLC	Bering Glacier	18.54	336	P	P	12 47 59.2	0.0
	baz=145						
FARO	Faro, Yukon	18.60	353	P	Pn	12 48 00.3	+0.1
	baz=169,SNR=11						
GRNC	Granite Creek	18.64	340	IAmb	IAmb	12 48 10.7	
	comp=Z,82nm,1.2s						
YUK8	Steele Glacier	18.67	343	P	Pn	12 48 02.0	+0.8
	baz=154,SNR=5.2						
M31M	Drury Creek, Y	18.68	351	P	Pn	12 48 01.1	+0.1
	baz=167						
WAX	Waxell Ridge	18.69	338	IAmb	IAmb	12 48 11.5	
	comp=Z,248nm,1.6s						
KAIM	Kayak Island	18.73	335	P	Pn	12 48 01.6	-0.1
	baz=142						
CTGM	Chitina Glacie	18.74	340	IAmb	IAmb	12 48 12.0	
	comp=Z,122nm,1.3s						
CTG	Chitna Glacier	18.74	340	P	P	12 48 01.6	0.0
	baz=150,SNR=6.2						
MMPY	Sheldon Lake,	18.85	356	P	P	12 48 02.4	-0.1
	baz=174,SNR=21						
BERG	Berg Lake	18.89	336	IAmb	IAmb	12 48 13.5	
	comp=Z,88nm,1.2s						
BARN	Barnard Glacie	18.90	340	IAmb	IAmb	12 48 13.7	
	comp=Z,91nm,1.2s						
TGL	Tana Glacier	18.94	338	IAmb	IAmb	12 48 15.5	
	comp=Z,226nm,1.9s						
Q23K	Middleton Isla	18.98	331	P	P	12 48 03.4	-0.6
	baz=137						
DUN6	Lazy B Ranch	18.99	120	IAmb	IAmb	12 48 12.2	
	comp=Z,160nm,1.7s						
CRQE	Cirque	19.01	338	P	Pn	12 48 05.3	+0.1
	baz=146,SNR=21						
ANMO	Albuquerque	19.24	110	IAmb	IAmb	12 48 14.0	
	comp=Z,29nm,1.4s						
ANMO	Albuquerque	19.24	110	IAmb	IAmb	12 48 15.1	
	comp=Z,85nm,2.0s						
ANMO	Albuquerque	19.24	110	P	Pn	12 48 08.8	+0.6
	comp=Z,0.1nm,0.3s,baz=47,slow=10.0,SNR=20						
	comp=Z,5.3nm,0.9s						
YUK3	Moose Creek	19.26	343	P	Pn	12 48 08.1	-0.2
	baz=153						
Y22D	IRIS PASSCAL I	19.43	113	P	P	12 48 08.4	-0.9
	baz=307						
M29M	Somme Creek	19.48	346	P	P	12 48 09.4	-0.2
	baz=158						
MCARA	McCarthy VSAT	19.52	339	IAmb	IAmb	12 48 25.1	
	comp=Z,79nm,1.4s						
MCARA	McCarthy VSAT	19.52	339	P	Pn	12 48 10.7	-0.5
	baz=147						
T25A	Trinidad	19.54	102	IAmb	IAmb	12 48 21.7	
	comp=Z,117nm,1.2s						
BMRM	Bremner River	19.61	336	P	P	12 48 10.7	-0.3
	baz=143						
WRGLY	Wrigley	19.62	7	P	P	12 48 11.3	+0.4
	baz=191,SNR=23						
EYAK	Cordova Ski Ar	19.63	334	P	P	12 48 11.5	+0.5
	baz=140						
P23K	Montague Islan	19.76	331	P	P	12 48 12.7	+0.2
	baz=136						
BVCY	Beaver Creek	19.91	343	P	P	12 48 14.3	+0.1
	baz=153						
FID	Port Fidalgo	20.02	334	P	Pn	12 48 19.1	+2.0
FID				IAmb	IAmb	12 48 29.8	
	comp=Z,79nm,1.2s						
L29M	L29M	20.05	347	P	P	12 48 16.2	+0.5
	baz=159,SNR=9.9						
M27K	Edge Creek, AK	20.09	342	P	Pn	12 48 18.8	+0.8
M27K				IAmb	IAmb	12 48 28.3	
	comp=Z,83nm,1.3s						
M27K	Edge Creek, AK	20.09	342	P	Pn	12 48 17.3	-0.7
	baz=151,SNR=26						
DIV	Divide	20.09	335	P	Pn	12 48 19.9	+1.9
N25K	Chitina, Valde	20.13	337		Pn	12 48 20.7	+2.2
N25K				IAmb	IAmb	12 48 29.9	
	comp=Z,106nm,1.4s						
N25K	Chitina, Valde	20.13	337	P	P	12 48 16.8	+0.2
	baz=144,SNR=19						
MAYO	Mayo, Yukon	20.20	351	P	Pn	12 48 20.6	+1.3
MAYO	Mayo, Yukon	20.20	351	P	P	12 48 16.4	-1.0
	baz=164						
GLI	Glacier Island	20.31	333	P	Pn	12 48 22.1	+1.6
GLI				IAmb	IAmb	12 48 30.4	
	comp=Z,64nm,1.3s						
GLI	Glacier Island	20.31	333	P	P	12 48 17.4	-1.1
	baz=138						
FFC	Flin Flon	20.34	48	IAmb	IAmb	12 48 29.6	
	comp=Z,90nm,0.9s						
YKA	Yellowknife Ar	20.36	19	P	P	12 48 19.4	+0.3
	comp=Z,11nm,0.8s,baz=212,slow=11,SNR=20						
	comp=Z,11nm,0.8s						
M26K	Nabesna, AK	20.39	341	P	Pn	12 48 21.8	+0.3
M26K	Nabesna, AK	20.39	341	P	P	12 48 17.9	-1.5
	baz=149						
KLU	Klutina	20.42	336	P	Pn	12 48 23.1	+1.2
KLU				IAmb	IAmb	12 48 33.9	
	comp=Z,62nm,1.1s						
KLU	Klutina	20.42	336	P	P	12 48 19.3	-0.5
	baz=142,SNR=22						
KDAK	Kodiak Island	20.43	321		Pn	12 48 23.9	+2.0
KDAK	Kodiak Island	20.43	321	P	P	12 48 20.2	+0.4
	comp=Z,14nm,1.0s,baz=97,slow=6.7,SNR=4.1						
	comp=Z,14nm,1.0s						
KDAK	Kodiak Island	20.43	321	P	P	12 48 18.4	-1.4
	baz=122						
OHAK	Old Harbor	20.46	319		Pn	12 48 24.9	+2.6
OHAK				IAmb	IAmb	12 48 33.4	
	comp=Z,62nm,1.2s						
OHAK	Old Harbor	20.46	319	P	P	12 48 19.7	-0.5
	baz=120						
MDND	Maddock	20.52	69	P	P	12 48 19.9	-1.0
MDND				IAmb	IAmb	12 48 34.5	
	comp=Z,140nm,1.3s						
SEW	Seward	20.57	329	P	Pn	12 48 26.5	+3.0
SEW				IAmb	IAmb	12 48 33.6	
	comp=Z,136nm,1.4s						
SEW	Seward	20.57	329	P	P	12 48 20.7	-0.6
	baz=133,SNR=6.8						
SII	Sitkinak Islan	20.57	317	P	P	12 48 20.8	-0.6
	baz=117						
K29M	Barlow Dome	20.65	349	P	P	12 48 21.2	-1.1
	baz=161,SNR=6.2						
L27K	Beaver Creek,	20.70	343	IAmb	IAmb	12 48 37.6	
	comp=Z,93nm,1.7s						
L27K	Beaver Creek,	20.70	343	P	P	12 48 22.0	-0.7
	baz=152,SNR=27						
PWL	Port Wells	20.71	332	P	P	12 48 22.3	-0.6
	baz=136						
Q20K	Shuyak Island	20.80	323	P	P	12 48 23.3	-0.6
	baz=125,SNR=10						
BRSE	Bradley Lake S	20.82	327	P	P	12 48 23.9	-0.1
	baz=130						
BRLK	Bradley Lake	20.89	327	IAmb	IAmb	12 48 35.5	
	comp=Z,114nm,1.3s						
O22K	Cooper Landing	20.93	330	P	Pn	12 48 29.1	+1.4
O22K				IAmb	IAmb	12 48 39.7	
	comp=Z,70nm,1.1s						
O22K	Cooper Landing	20.93	330	P	P	12 48 25.0	-0.1
	baz=133						
HARP	HAARP	20.93	338	P	P	12 48 25.3	0.0
	baz=145						
M24K	Tolsona, Glenn	20.98	337	P	P	12 48 26.5	+0.6
	baz=142						
CHIR	Chirikof Islan	20.98	314	P	P	12 48 26.3	+0.5
	baz=113						
L26K	Log Cabin Wild	21.00	341	P	P	12 48 28.4	+2.4
L26K	Log Cabin Wild	21.00	341	P	P	12 48 25.8	-0.3
	baz=149,SNR=22						
RTBA	Rita Blanca	21.05	102	IAmb	IAmb	12 48 37.3	
	comp=Z,152nm,1.4s						
K30B	Basset	21.09	83	P	P	12 48 25.5	-1.6
SCM	Sheep Creek Mo	21.11	335	IAmb	IAmb	12 48 41.9	
	comp=Z,151nm,1.4s						
SCM	Sheep Creek Mo	21.11	335	P	P	12 48 26.6	-0.6
	baz=140,SNR=6.9						
HOM	Homer	21.12	327	P	P	12 48 27.6	+0.3
	baz=128						
SLKM	Skilak Lake	21.12	330	IAmb	IAmb	12 48 41.4	
	comp=Z,112nm,1.3s						
EPT	El Paso	21.14	117	P	P	12 48 28.3	+0.4
DAWY	Dawson	21.15	347	P	P	12 48 26.3	-1.3
	baz=158,SNR=7.6						
KNK	Knik Glacier	21.15	333	IAmb	IAmb	12 48 38.0	
	comp=Z,110nm,1.4s						
KNK	Knik Glacier	21.15	333	P	P	12 48 27.4	-0.2
	baz=137						
R18K	Karluk	21.18	319	P	P	12 48 28.4	+0.5
	baz=119,SNR=7.3						
M23K	Glacier View	21.20	334	P	P	12 48 28.0	-0.1
	baz=139,SNR=9.3						
J30M	Hart River	21.20	351	P	P	12 48 28.4	+0.1
	baz=164,SNR=15						
SUSD	Miller	21.22	78	P	P	12 48 27.5	-1.0
J29N	Klondike Camp	21.33	348	P	P	12 48 30.0	+0.4
	baz=160						
RC01	Rabbit Creek A	21.35	331	IAmb	IAmb	12 48 39.6	
	comp=Z,97nm,1.4s						
RC01	Rabbit Creek A	21.35	331	P	P	12 48 30.6	+0.8
	baz=134,SNR=6.1						
SML	Sawmill	21.40	334	IAmb	IAmb	12 48 40.5	
	comp=Z,100nm,1.5s						
SML	Sawmill	21.40	334	P	P	12 48 30.3	0.0
	baz=138						
PAX	Paxson	21.48	339	IAmb	IAmb	12 48 46.2	
	comp=Z,94nm,1.8s						
PAX	Paxson	21.48	339	P	P	12 48 31.6	+0.4
	baz=145						
PMR	Palmer	21.50	333	IAmb	IAmb	12 48 41.4	
	comp=Z,76nm,1.2s						
PMR	Palmer	21.50	333	P	P	12 48 32.0	+0.6
	baz=136,SNR=19						
Q19K	Cape Douglas,	21.52	323	P	P	12 48 31.3	-0.3
	baz=123						
GHO	Glory Hole Cre	21.57	333	IAmb	IAmb	12 48 46.7	
	comp=Z,114nm,1.4s						
K27K	Chicken	21.61	344	IAmb	IAmb	12 48 47.7	
	comp=Z,76nm,1.4s						
K27K	Chicken	21.61	344	P	P	12 48 32.5	0.0
	baz=153						
CAPN	Captain Cook N	21.64	329	P	P	12 48 32.8	0.0
	baz=131						
DOT	Dot Lake	21.71	341	IAmb	IAmb	12 48 44.6	
	comp=Z,136nm,1.8s						
P19K	Oil Pt	21.76	325	P	P	12 48 34.3	+0.1
	baz=126						
O20K	Slope Mountain	21.77	327	P	P	12 48 34.7	+0.4
	baz=127						
WAT6	Susitna Watana	21.81	336	P	P	12 48 35.2	+0.4
	baz=140,SNR=15						
I30M	Mount Dempster	21.83	351	P	P	12 48 35.4	+0.3
	baz=165,SNR=28						
ACHA	Angle Creek He	21.90	320	P	P	12 48 40.3	+4.6
ACHA				IAmb	IAmb	12 48 47.6	
	comp=Z,59nm,1.2s						
M22K	Willow	21.95	332	P	P	12 48 36.6	+0.5
	baz=135						
SUA	Susitna One	21.96	331	IAmb	IAmb	12 48 46.1	
	comp=Z,55nm,1.0s						
SUA	Susitna One	21.96	331	P	P	12 48 36.2	-0.2
	baz=133,SNR=5.2						
RIDG	Independent Ri	21.97	341	IAmb	IAmb	12 48 46.6	
	comp=Z,104nm,1.2s						
RIDG	Independent Ri	21.97	341	P	P	12 48 36.8	+0.4
	baz=147,SNR=16						
SCRK	Sand Creek	21.97	342	IAmb	IAmb	12 48 47.4	
	comp=Z,102nm,1.7s						
SCRK	Sand Creek	21.97	342	P	P	12 48 36.2	-0.3
	baz=149,SNR=14						
Q18K	Katmai Hardscr	21.98	322	P	P	12 48 36.8	+0.2
	baz=121,SNR=30						
DHY	Denali Highway	22.09	337	IAmb	IAmb	12 48 49.3	
	comp=Z,110nm,1.2s						
DHY	Denali Highway	22.09	337	P	P	12 48 38.2	+0.4
	baz=142,SNR=32						
Q17K	Contact Creek	22.19	320	P	P	12 48 40.0	+1.1
	baz=118,SNR=13						
I29M	Ogilvie Camp,	22.20	349	P	P	12 48 39.5	+0.6
	baz=161						
H31M	Peel River	22.21	354	IAmb	IAmb	12 48 54.7	
	comp=Z,58nm,1.1s						
H31M	Peel River	22.21	354	P	P	12 48 38.8	-0.2
	baz=169,SNR=23						
WAT1	Susitna Watana	22.24	336	P	P	12 48 40.0	+0.7
	baz=139						
K24K	Donnelly Dome	22.25	340	IAmb	IAmb	12 48 49.9	
	comp=Z,109nm,1.4s						
K24K	Donnelly Dome	22.25	340	P	P	12 48 39.8	+0.4
	baz=146,SNR=16						
N20K	Mount Spurr	22.31	329	P	P	12 48 40.2	0.0
	baz=130						
SPCR	Spurr Chakacha	22.31	329	P	P	12 48 40.3	+0.1
	baz=130						
J26L	Joseph Creek	22.33	343	IAmb	IAmb	12 48 55.3	
	comp=Z,56nm,1.4s						
J26L	Joseph Creek	22.33	343	P	P	12 48 40.4	+0.1
	baz=150,SNR=9.9						
STLK	Strandline Lak	22.37	330	IAmb	IAmb	12 48 51.4	
	comp=Z,57nm,1.2s						
P18K	Big Mountain,	22.46	323	P	P	12 48 41.5	-0.2
	baz=122,SNR=22						
CUT	Chulitna	22.46	333	P	P	12 48 42.0	+0.3
	baz=136						
BGNE	Belgrade	22.47	86	IAmb	IAmb	12 48 53.2	
	comp=Z,36nm,0.9s						
O19K	Port Alsworth	22.52	326	P	P	12 48 42.8	+0.6
	baz=125,SNR=15						
I28M	Miner Creek	22.52	348	P	P	12 48 41.1	-1.3
	baz=158,SNR=11						
AMTX	Amarillo	22.57	104	IAmb	IAmb	12 48 52.2	
	comp=Z,100nm,1.2s						
SKT	Skwentna	22.59	331	IAmb	IAmb	12 48 55.9	
	comp=Z,124nm,1.6s						
SKT	Skwentna	22.59	331	P	P	12 48 43.2	+0.2
	baz=133,SNR=32						
R16K	Pilot Point	22.68	317	P	P	12 48 44.2	+0.2
	baz=115						
O18K	Koktuh Hills	22.70	324	P	P	12 48 44.6	+0.4
	baz=123,SNR=17						
Q16K	King Salmon	22.74	321	P	P	12 48 45.2	+0.6
	baz=118,SNR=22						
RND	Reindeer	22.77	336	IAmb	IAmb	12 48 56.4	
	comp=Z,80nm,1.4s						
CHNA	Chernabura Isl	22.79	310	P	P	12 48 45.0	-0.1
	baz=106						
J25K	Salcha River,	22.83	341	P	P	12 48 45.5	-0.2
	baz=147,SNR=12						
P17K	Kvichak River	22.89	322	P	P	12 48 46.3	+0.1
	baz=120,SNR=8.3						
I27K	Kandik River	22.94	346	P	P	12 48 47.6	+0.9
	baz=155,SNR=11						
N19K	Bonanza Creek	22.95	327	P	P	12 48 47.4	+0.5
	baz=126,SNR=12						
I26K	Coal Creek Min	22.96	344	IAmb	IAmb	12 48 58.1	
	comp=Z,92nm,1.6s						
I26K	Coal Creek Min	22.96	344	P	P	12 48 46.8	-0.1
	baz=152,SNR=15						
EPYK	Eagle Plains	22.98	352	IAmb	IAmb	12 48 57.1	
	comp=Z,52nm,1.2s						
EPYK	Eagle Plains	22.98	352	P	P	12 48 47.9	+0.7
	baz=165,SNR=14						
ECSD	EROS Data Cent	23.00	79	IAmb	IAmb	12 48 55.7	
	comp=Z,69nm,1.1s						
AGMN	Agassiz Nation	23.02	67	IAmb	IAmb	12 48 56.2	
	comp=Z,47nm,1.2s						
H29M	Whitestone	23.03	350	IAmb	IAmb	12 48 57.7	
	comp=Z,47nm,1.1s						
H29M	Whitestone	23.03	350	P	P	12 48 48.6	+1.0
	baz=162,SNR=18						
MCK	McKinley	23.04	337	IAmb	IAmb	12 48 57.9	
	comp=Z,59nm,1.3s						
MCK	McKinley	23.04	337	P	P	12 48 48.8	+1.0
	baz=140,SNR=13						
HDA	Harding Lake	23.05	340	P	P	12 48 47.7	0.0
	baz=144						
ULM	Lac du Bonnet	23.05	62	P	P	12 48 48.6	+0.7
	comp=Z,25nm,1.1s,baz=272,slow=10,SNR=13						
	comp=Z,25nm,1.1s						
M20K	Styx River	23.09	330	IAmb	IAmb	12 48 59.7	
	comp=Z,67nm,1.2s						
M20K	Styx River	23.09	330	P	P	12 48 49.0	+0.6
	baz=130,SNR=18						
PECS	Pecos	23.12	114	IAmb	IAmb	12 49 00.0	
	comp=Z,89nm,1.6s						
S14K	Fog Glacier	23.21	313	P	P	12 48 49.4	-0.2
	baz=109						
TRF	Thorofare Moun	23.23	335	P	P	12 48 50.7	+0.9
	baz=137,SNR=11						
G31M	Satah River	23.31	354	IAmb	IAmb	12 48 59.4	
	comp=Z,49nm,1.3s						
G31M	Satah River	23.31	354	P	P	12 48 51.4	+1.0
	baz=169,SNR=17						
ILAR	Eielson Array	23.33	340	P	P	12 48 51.7	+1.1
	comp=Z,1.2nm,0.8s,baz=156,slow=8.9,SNR=16						
ILAR				PcP	PcP	12 52 37.2	0.0
	comp=Z,1.0nm,0.9s,baz=173,slow=2.3,SNR=7.4						
	comp=Z,1.2nm,0.8s						
WRH	Wood River Hil	23.39	339	IAmb	IAmb	12 49 00.8	
	comp=Z,119nm,1.6s						
SDPT	Sand Point	23.42	311		P	12 48 59.0	+7.4
SDPT	Sand Point	23.42	311	P	P	12 48 51.6	0.0
	baz=106						
N18K	Kilae Creek	23.44	325	P	P	12 48 53.3	+1.5
	baz=123,SNR=15						
PPLA	Purkeypile	23.44	333	P	P	12 48 52.7	+0.8
	baz=133,SNR=15						
CCB	Clear Creek Bu	23.46	339	IAmb	IAmb	12 49 01.3	
	comp=Z,101nm,1.8s						
O17K	Koliganek Bris	23.47	323	P	P	12 48 53.5	+1.4
	baz=120,SNR=8.4						
KTH	Kantishna Hill	23.50	335	IAmb	IAmb	12 49 06.1	
	comp=Z,125nm,1.9s						
H27K	Steamboat Moun	23.50	347	IAmb	IAmb	12 49 03.3	
	comp=Z,71nm,1.6s						
H27K	Steamboat Moun	23.50	347	P	P	12 48 53.7	+1.3
	baz=156,SNR=6.1						
P16K	Nushagak River	23.52	320	P	P	12 48 56.3	+3.7
P16K	Nushagak River	23.52	320	P	P	12 48 53.7	+1.1
	baz=117						
G30M	tAoh Zraii Nji	23.53	352	IAmb	IAmb	12 49 01.3	
	comp=Z,56nm,1.8s						
G30M	tAoh Zraii Nji	23.53	352	P	P	12 48 53.1	+0.5
	baz=166						
ODSA	Odessa	23.53	111	IAmb	IAmb	12 49 01.8	
	comp=Z,87nm,1.4s						
M19K	Big River Lodg	23.57	329	P	P	12 48 54.6	+1.5
	baz=128						
PRP	Porcupine Dome	23.64	342		P	12 48 55.7	+1.9
PRP				IAmb	IAmb	12 49 05.8	
	comp=Z,71nm,1.7s						
PRP	Porcupine Dome	23.64	342	P	P	12 48 55.0	+1.2
	baz=148,SNR=6.6						
G29M	Pine Creek	23.65	351	IAmb	IAmb	12 49 04.5	
	comp=Z,98nm,1.4s						
G29M	Pine Creek	23.65	351	P	P	12 48 54.7	+0.8
	baz=163,SNR=13						
COLA	College	23.65	339	P	P	12 48 57.7	+3.9
COLA				IAmb	IAmb	12 49 04.2	
	comp=Z,64nm,1.4s						
COLA	College	23.65	339	P	P	12 48 54.9	+1.1
	baz=143						
POKR	Poker Plat Res	23.75	340	P	P	12 48 56.2	+1.4
	baz=144						
L20K	Farewell, AK	23.75	330	P	P	12 48 55.4	+0.6
	baz=130,SNR=13						
NEA2	Nenana	23.75	338	P	P	12 48 55.6	+0.9
	baz=141,SNR=11						
CAST	Castle Rocks	23.77	334	P	P	12 48 56.2	+1.2
	baz=134,SNR=10						
F31M	Tsiigehtchic	23.79	355	P	P	12 48 56.1	+1.1
F31M	Tsiigehtchic	23.79	355	P	P	12 48 55.6	+0.6
	baz=171						
O16K	Kokwok River B	23.83	322	P	P	12 48 56.5	+1.0
	baz=118,SNR=10						
M18K	Stony River	23.87	327	P	P	12 48 56.2	+0.3
	baz=125,SNR=6.6						
N17K	Nushagak Hills	23.90	324	P	P	12 48 57.2	+0.9
	baz=121,SNR=34						
ALPN	Alpine	23.91	116	IAmb	IAmb	12 49 09.4	
	comp=Z,129nm,2.0s						
L19K	White Mountain	23.91	329	P	P	12 48 57.9	+1.5
	baz=128,SNR=37						
BPAW	Bear Paw Mtn.	23.92	336	IAmb	IAmb	12 49 04.5	
	comp=Z,33nm,1.1s						
BPAW	Bear Paw Mtn.	23.92	336	P	P	12 48 57.6	+1.1
	baz=137,SNR=11						
KAN12	Harper NE Stat	24.05	95	P	P	12 48 59.4	+1.4
G27K	Doyon Strip	24.05	347	IAmb	IAmb	12 49 08.7	
	comp=Z,75nm,1.8s						
G27K	Doyon Strip	24.05	347	P	P	12 48 58.7	+1.0
	baz=156,SNR=16						
SN07	Snyder 07	24.10	107	P	P	12 48 59.6	+1.2
SN07				IAmb	IAmb	12 49 09.5	
	comp=Z,91nm,1.7s						
KAN08	Anthony NE Sta	24.10	95	P	P	12 48 57.5	-0.9
F30M	Barrier River	24.10	353	P	P	12 48 57.7	-0.4
	baz=167						
CHUM	Lake Minchumin	24.17	334	P	P	12 49 00.3	+1.6
	baz=135,SNR=7.7						
I23K	Minto, Yukon-K	24.26	339	IAmb	IAmb	12 49 11.8	
	comp=Z,56nm,1.1s						
I23K	Minto, Yukon-K	24.26	339	P	P	12 49 00.9	+1.3
	baz=141,SNR=16						
KAN17	Caldwell West	24.33	96	P	P	12 49 01.1	+0.6
H25L	Birch Creek	24.34	343	P	P	12 49 01.6	+1.3
	baz=149,SNR=11						
K20K	Telida	24.39	332	P	P	12 49 01.3	+0.6
	baz=131						
EPLO	Experimental L	24.42	64	IAmb	IAmb	12 49 10.2	
	comp=Z,53nm,1.1s						
O15K	Ungalikthiuk R	24.43	320	P	P	12 49 01.9	+0.7
	baz=115,SNR=6.4						
H24K	Noodor Dome	24.44	341	IAmb	IAmb	12 49 11.8	
	comp=Z,48nm,1.4s						
H24K	Noodor Dome	24.44	341	P	P	12 49 02.2	+0.9
	baz=145,SNR=14						
M17K	Holitna River	24.46	326	IAmb	IAmb	12 49 11.9	
	comp=Z,63nm,1.1s						
M17K	Holitna River	24.46	326	P	P	12 49 02.5	+1.1
	baz=122,SNR=17						
FYU	Fort Yukon	24.48	344	IAmb	IAmb	12 49 11.5	
	comp=Z,75nm,1.5s						
G26K	Porcupine Rive	24.54	346	P	P	12 49 02.9	+0.8
	baz=153						

MLY	Manley	24.54	337	IAmb	IAmb	12 49 11.6	
	comp=Z,32nm,1.0s						
MLY	Manley	24.54	337	P	P	12 49 02.5	+0.3
	baz=139,SNR=46						
F28M	Old Crow	24.55	350	P	P	12 49 02.6	+0.4
	baz=160						
N16K	Nishlik Lake	24.55	323	P	P	12 49 03.5	+1.3
	baz=119,SNR=18						
TXAR	Lajitas Array	24.59	118	P	P	12 49 04.3	+1.4
	comp=Z,3.8nm,1.0s,baz=295,slow=6.8,SNR=14						
TXAR				PcP	PcP	12 52 39.8	-0.8
	comp=Z,0.5nm,0.7s,baz=326,slow=3.7,SNR=4.0						
	comp=Z,3.8nm,1.0s						
L18K	Granite Mounta	24.63	328	P	P	12 49 03.8	+0.9
	baz=125,SNR=13						
INK	Inuvik	24.63	356	P	P	12 49 03.0	+0.2
	comp=Z,5.9nm,1.0s,baz=184,slow=12,SNR=8.9						
	comp=Z,5.9nm,1.0s						
INK	Inuvik	24.63	356	P	P	12 49 02.9	0.0
	baz=171,SNR=12						
G25K	Bearman Lake	24.83	343	P	P	12 49 05.8	+1.1
	baz=149,SNR=9.3						
H23K	Yukon River	24.84	339	IAmb	IAmb	12 49 18.9	
	comp=Z,44nm,1.4s						
H23K	Yukon River	24.84	339	P	P	12 49 05.6	+0.7
	baz=142,SNR=14						
M16K	Timber Creek	24.90	324	P	P	12 49 06.1	+0.7
	baz=120,SNR=17						
FALS	False Pass	24.94	308	P	P	12 49 06.1	+0.3
	baz=102						
J20K	Nowinta River	24.96	333	IAmb	IAmb	12 49 15.2	
	comp=Z,76nm,1.4s						
J20K	Nowinta River	24.96	333	P	P	12 49 06.4	+0.5
	baz=132,SNR=21						
N15K	Kwethluk River	24.99	322	P	P	12 49 07.1	+0.8
	baz=116,SNR=6.5						
E29M	Blow River	25.06	352	IAmb	IAmb	12 49 17.5	
	comp=Z,30nm,1.2s						
E29M	Blow River	25.06	352	P	P	12 49 08.0	+1.3
	baz=164,SNR=7.8						
G24K	Hadweenzic Riv	25.07	342	IAmb	IAmb	12 49 16.7	
	comp=Z,28nm,1.1s						
G24K	Hadweenzic Riv	25.07	342	P	P	12 49 08.9	+2.1
	baz=146,SNR=9.5						
O14K	Tigyukauivet M	25.14	319	P	P	12 49 08.8	+1.2
	baz=113						
SAND	Sanderson	25.18	115	IAmb	IAmb	12 49 23.8	
	comp=Z,50nm,1.3s						
L17K	Donlin	25.21	327	P	P	12 49 09.8	+1.7
	baz=123,SNR=14						
F26K	Sheenjek River	25.27	346	P	P	12 49 09.0	+0.2
	baz=153						
E27K	Coleen River	25.32	349	IAmb	IAmb	12 49 19.2	
	comp=Z,36nm,1.2s						
E27K	Coleen River	25.32	349	P	P	12 49 10.8	+1.7
	baz=158,SNR=14						
J19K	Poorman	25.33	332	P	P	12 49 10.7	+1.4
	baz=130,SNR=21						
H22K	Ishtalitna Cre	25.37	338	P	P	12 49 11.4	+1.7
	baz=139,SNR=24						
J18K	Innoko River	25.38	330	IAmb	IAmb	12 49 19.1	
	comp=Z,47nm,0.9s						
J18K	Innoko River	25.38	330	P	P	12 49 11.0	+1.3
	baz=127,SNR=21						
E28M	Babbage River	25.45	351	P	P	12 49 11.6	+1.4
	baz=161,SNR=8.4						
F25K	Christian Rive	25.45	345	IAmb	IAmb	12 49 25.9	
	comp=Z,46nm,1.4s						
F25K	Christian Rive	25.45	345	P	P	12 49 12.6	+2.1
	baz=150,SNR=12						
L16K	Owhat River	25.46	325	P	P	12 49 12.3	+1.9
	baz=120,SNR=109						
I20K	Naaghedeneel	25.48	334	P	P	12 49 12.3	+1.7
	baz=133,SNR=12						
M15K	Kasigluk River	25.49	323	P	P	12 49 12.2	+1.5
	baz=117,SNR=21						
K17K	Iditarod	25.53	328	P	P	12 49 12.3	+1.2
	baz=124,SNR=17						
H21K	Melozitna Rive	25.59	337	IAmb	IAmb	12 49 25.6	
	comp=Z,65nm,1.4s						
H21K	Melozitna Rive	25.59	337	P	P	12 49 12.9	+1.3
	baz=136,SNR=47						
N14K	Kuskokwak Cree	25.61	320	P	P	12 49 12.7	+0.9
	baz=114,SNR=6.9						
C36M	Paulatuk	25.65	4	P	P	12 49 12.3	+0.3
	baz=187						
G23K	Bananza Creek	25.66	340	IAmb	IAmb	12 49 26.2	
	comp=Z,54nm,1.2s						
G23K	Bananza Creek	25.66	340	P	P	12 49 13.6	+1.2
	baz=142,SNR=21						
FCC	Fort Churchill	25.84	43	IAmb	IAmb	12 49 29.0	
	comp=Z,46nm,1.3s						
F24K	Squaw Lake	25.84	343	P	P	12 49 15.1	+1.2
	baz=147						
E25K	Arctic Village	25.90	345	IAmb	IAmb	12 49 28.0	
	comp=Z,52nm,2.0s						
E25K	Arctic Village	25.90	345	P	P	12 49 15.9	+1.4
	baz=151						
EYMN	Ely	25.96	68	IAmb	IAmb	12 49 23.6	
	comp=Z,29nm,1.1s						
M14K	Bethel	26.08	322	P	P	12 49 17.3	+1.3
	baz=115,SNR=9.5						
H20K	Anotleneega Mo	26.09	335	P	P	12 49 17.4	+1.3
	baz=133,SNR=52						
COLD	Coldfoot	26.12	341	IAmb	IAmb	12 49 37.1	
	comp=Z,76nm,1.8s						
COLD	Coldfoot	26.12	341	P	P	12 49 17.7	+1.3
	baz=143						
G22K	Bettles	26.20	340	P	P	12 49 17.6	+0.5
	baz=140						
J17K	VABM Dome	26.20	329	IAmb	IAmb	12 49 26.4	
	comp=Z,60nm,1.4s						
J17K	VABM Dome	26.20	329	P	P	12 49 18.1	+1.0
	baz=124,SNR=6.9						
D27M	Malcolm River	26.22	350	IAmb	IAmb	12 49 29.6	
	comp=Z,54nm,1.9s						
D27M	Malcolm River	26.22	350	P	P	12 49 16.8	-0.6
	baz=159						
GCSA	Galena City Sc	26.23	333	P	P	12 49 18.8	+1.4
	baz=129,SNR=7.8						
L15K	Ungalak Mounta	26.28	324	P	P	12 49 18.9	+1.0
	baz=117,SNR=6.3						
P38A	Dawn	26.37	87	IAmb	IAmb	12 49 27.4	
	comp=Z,40nm,1.0s						
G21K	Allakaket	26.42	338	IAmb	IAmb	12 49 31.3	
	comp=Z,75nm,1.4s						
G21K	Allakaket	26.42	338	P	P	12 49 20.1	+1.0
	baz=137,SNR=20						
E24K	Your Creek	26.43	343	P	P	12 49 19.0	-0.3
	baz=146						
BRDY	Brady	26.45	108	IAmb	IAmb	12 49 29.9	
	comp=Z,77nm,1.9s						
M13K	Dall Lake	26.57	321	P	P	12 49 21.2	+0.7
	baz=113,SNR=8.8						
UNV	Unalaska Valle	26.57	306	P	P	12 49 20.4	-0.1
	baz=96,SNR=10						
K15K	Wolf Creek Mou	26.59	325	IAmb	IAmb	12 49 30.3	
	comp=Z,62nm,1.4s						
K15K	Wolf Creek Mou	26.59	325	P	P	12 49 22.3	+1.6
	baz=118,SNR=6.7						
H19K	Roundabout Mou	26.59	334	P	P	12 49 22.0	+1.3
	baz=131,SNR=22						
L14K	Kuka Creek	26.65	323	P	P	12 49 21.8	+0.6
	baz=115,SNR=18						
E23K	Chandalar	26.66	343	IAmb	IAmb	12 49 31.5	
	comp=Z,30nm,1.1s						
E23K	Chandalar	26.66	343	P	P	12 49 22.0	+0.7
	baz=145,SNR=19						
J16K	Anvik River	26.72	328	IAmb	IAmb	12 49 31.3	
	comp=Z,66nm,1.2s						
J16K	Anvik River	26.72	328	P	P	12 49 21.7	-0.1
	baz=121,SNR=7.5						
F22K	John River	26.82	340	P	P	12 49 22.1	-0.6
	baz=140						
F21K	Alatna River	26.93	339	IAmb	IAmb	12 49 37.0	
	comp=Z,86nm,1.9s						
F21K	Alatna River	26.93	339	P	P	12 49 23.4	-0.4
	baz=138						
C27K	Jago River	26.95	348	IAmb	IAmb	12 49 48.6	
	comp=Z,52nm,1.9s						
C27K	Jago River	26.95	348	P	P	12 49 23.5	-0.4
	baz=155						
H18K	Honhosa River	26.98	332	IAmb	IAmb	12 49 36.9	
	comp=Z,50nm,1.2s						
H18K	Honhosa River	26.98	332	P	P	12 49 24.6	+0.4
	baz=128,SNR=9.0						
I17K	Unalakleet	27.07	329	P	P	12 49 24.6	-0.4
	baz=122						
D25K	Kavik River	27.10	346	IAmb	IAmb	12 49 39.9	
	comp=Z,45nm,1.6s						
D25K	Kavik River	27.10	346	P	P	12 49 25.2	-0.1
	baz=151,SNR=9.2						
TOLK	Toolik Lake Re	27.13	343	IAmb	IAmb	12 49 35.9	
	comp=Z,49nm,1.3s						
TOLK	Toolik Lake Re	27.13	343	P	P	12 49 25.7	+0.1
	baz=145,SNR=11						
G19K	Purcell Mounta	27.20	335	P	P	12 49 25.9	-0.2
	baz=131,SNR=13						
G40A	Rib Lake	27.21	74	IAmb	IAmb	12 49 50.8	
	comp=Z,29nm,1.4s						
E22K	Anaktuvuk Pass	27.22	341		P	12 49 28.3	+1.9
E22K	Anaktuvuk Pass	27.22	341	P	P	12 49 26.0	-0.3
	baz=141						
H17K	Granite Mounta	27.38	331	P	P	12 49 27.2	-0.6
	baz=125,SNR=6.1						
C26K	Camden Bay	27.40	348	P	P	12 49 27.4	-0.5
	baz=154						
D24K	Happy Valley	27.41	344	P	P	12 49 26.4	-1.5
	baz=147						
F20K	Avaraart Lake	27.41	337	P	P	12 49 32.2	+4.2
F20K				IAmb	IAmb	12 49 41.4	
	comp=Z,29nm,1.2s						
F20K	Avaraart Lake	27.41	337	P	P	12 49 27.7	-0.3
	baz=134,SNR=6.6						
HHAR	Hobbs	27.42	94	IAmb	IAmb	12 49 44.5	
	comp=Z,46nm,1.5s						
BLKN	Baker Lake	27.48	31		P	12 49 28.9	+0.2
G18K	Tagagawik	27.53	334	IAmb	IAmb	12 49 42.2	
	comp=Z,32nm,1.2s						
G18K	Tagagawik	27.53	334	P	P	12 49 28.5	-0.6
	baz=128						
D23K	Nanushuk River	27.63	343	IAmb	IAmb	12 49 40.6	
	comp=Z,40nm,1.4s						
D23K	Nanushuk River	27.63	343	P	P	12 49 28.8	-1.2
	baz=144,SNR=7.6						
J14K	Nanvaranak Lak	27.64	325	P	P	12 49 29.1	-0.9
	baz=117						
K13K	Kusilvak Mount	27.75	323	P	P	12 49 30.4	-0.7
	baz=114						
R40A	Maddies Statio	27.78	89	P	P	12 49 31.3	-0.3
R40A				IAmb	IAmb	12 49 39.6	
	comp=Z,28nm,1.1s						
COWI	Conover	27.80	71	P	P	12 49 31.2	-0.6
COWI				IAmb	IAmb	12 49 40.3	
	comp=Z,32nm,1.2s						
F19K	Shaleruckik Mo	27.86	336	IAmb	IAmb	12 49 41.0	
	comp=Z,27nm,1.4s						
F19K	Shaleruckik Mo	27.86	336	P	P	12 49 31.5	-0.6
	baz=131						
C24K	Franklin Bluff	27.86	345	IAmb	IAmb	12 49 46.1	
	comp=Z,31nm,1.4s						
C24K	Franklin Bluff	27.86	345	P	P	12 49 30.4	-1.6
	baz=148						
M11K	Mekoryuk	27.88	320	P	P	12 49 31.1	-1.1
	baz=109						
NIKH	Nikolski High	27.90	303		P	12 49 38.5	+5.9
NIKH				IAmb	IAmb	12 49 40.3	
	comp=Z,42nm,1.0s						
NIKH	Nikolski High	27.90	303	P	P	12 49 32.1	-0.4
	baz=93						
N41A	Harden Midland	27.93	83	P	P	12 49 32.1	-0.9
G17K	Kiwalik Mounta	27.96	332	P	P	12 49 32.5	-0.5
	baz=125						
E21K	Killik River	27.97	340	P	P	12 49 31.9	-1.1
	baz=138						
D22K	Ayikyak River	28.00	342	P	P	12 49 32.4	-0.9
	baz=141						
H16K	Elim	28.05	329	P	P	12 49 33.7	0.0
	baz=122						
E19K	Redstone River	28.12	337	IAmb	IAmb	12 49 49.7	
	comp=Z,24nm,1.2s						
E19K	Redstone River	28.12	337	P	P	12 49 32.4	-2.0
	baz=133						
A36M	Sachs Harbour	28.24	2	P	P	12 49 33.6	-1.8
	baz=185						
MGMO	Mountain Grove	28.25	91	P	P	12 49 34.7	-1.1
MGMO				IAmb	IAmb	12 49 44.1	
	comp=Z,26nm,1.4s						
F18K	Selawik	28.29	334	P	P	12 49 34.2	-1.6
	baz=128						
C23K	Itkillik River	28.33	344	IAmb	IAmb	12 49 47.3	
	comp=Z,70nm,1.8s						
C23K	Itkillik River	28.33	344	P	P	12 49 34.0	-2.2
	baz=145						
L42A	Oliver, Polo	28.38	80	P	P	12 49 36.1	-0.9
E20K	Nigu River	28.39	339	P	P	12 49 36.0	-0.9
	baz=135,SNR=8.3						
I42A	Draeger Farm,	28.41	76		P	12 49 36.6	-0.6
I42A				IAmb	IAmb	12 49 45.8	
	comp=Z,51nm,1.4s						
G16K	Koyuk River	28.49	331	P	P	12 49 35.9	-1.7
	baz=122						
CCM	Cathedral Cave	28.62	89	P	P	12 49 39.6	+0.5
C21K	Knifeblade Rid	28.70	341	P	P	12 49 38.9	-0.6
	baz=138						
F17K	Baldwin Pennin	28.71	333	P	P	12 49 38.8	-0.7
	baz=126						
D20K	Etivluk River	28.83	339	IAmb	IAmb	12 49 50.1	
	comp=Z,45nm,1.5s						
D20K	Etivluk River	28.83	339	P	P	12 49 38.7	-2.0
	baz=135						
G15K	Niukluk	28.89	329	P	P	12 49 39.2	-2.0
	baz=120						
FCAR	Ozark Folk Cen	28.91	93	P	P	12 49 42.0	+0.3
FCAR				IAmb	IAmb	12 49 59.9	
	comp=Z,71nm,1.7s						
B21K	Ikpikpuk River	29.01	342	P	P	12 49 40.4	-1.8
	baz=139						
D19K	Kuna River	29.07	338	IAmb	IAmb	12 49 56.6	
	comp=Z,46nm,1.4s						
D19K	Kuna River	29.07	338	P	P	12 49 40.3	-2.6
	baz=133						
E18K	Tukpahlearik C	29.09	335	P	P	12 49 40.9	-2.1
	baz=128						
HDIL	Hopedale	29.10	83		P	12 49 43.6	+0.2
HDIL				IAmb	IAmb	12 49 51.8	
	comp=Z,57nm,1.2s						
SPIA	Saint Paul Isl	29.14	312	P	P	12 49 41.3	-2.1
	baz=99						
ANM	Nome	29.19	328	P	P	12 49 40.7	-3.1
	baz=117						
FVM	French Village	29.24	88	P	P	12 49 44.3	-0.3
FVM				IAmb	IAmb	12 49 52.2	
	comp=Z,37nm,1.4s						
E17K	Hotham Inlet	29.27	334	P	P	12 49 42.0	-2.5
	baz=126						
WLAR	White Oak Lake	29.27	98	P	P	12 49 44.7	-0.2
B22K	Teshekpuk Lake	29.31	343	P	P	12 49 42.1	-2.8
	baz=142						
F15K	North Star Dit	29.47	330	P	P	12 49 43.8	-2.6
	baz=120						
LCAR	Lake Charles	29.53	92	IAmb	IAmb	12 50 05.8	
	comp=Z,65nm,1.7s						
PBMO	Poplar Bluff	29.74	91	P	P	12 49 48.0	-1.1
C19K	Lookout Ridge	29.88	338	P	P	12 49 47.4	-2.7
	baz=132						
B20K	Meade River	29.90	341	P	P	12 49 44.2	-5.8
	baz=136						
F14K	Arctic Creek	29.97	329	P	P	12 49 47.1	-3.7
	baz=118						
D17K	Noatak River	30.02	334	P	P	12 49 49.4	-1.8
	baz=125						
C18K	Utukok River	30.03	337	P	P	12 49 49.4	-2.0
	baz=129						
A22K	Sinclair Lake	30.15	343	P	P	12 49 49.0	-3.3
	baz=140						
RDOG	Red Dog Mine	30.18	335	P	P	12 49 50.4	-2.2
	baz=126						
C17K	DeLong Mountai	30.50	336	P	P	12 49 53.8	-1.7
	baz=126						
TNA	Tin City	30.60	329	P	P	12 49 53.6	-2.7
	baz=116						
A21K	Barrow	30.74	343	P	P	12 49 55.0	-2.5
	baz=138						
P46A	Rosedale	30.93	83	IAmb	IAmb	12 50 07.7	
	comp=Z,32nm,1.0s						
A19K	Wainwright	31.00	339	P	P	12 49 57.1	-2.7
	baz=131						
C16K	Lisburne Hills	31.05	334	P	P	12 49 56.8	-3.5
	baz=123						
GAMB	Gambell	31.43	324	P	P	12 50 00.2	-3.4
	baz=108						
WVT	Waverly	31.91	90		P	12 50 07.8	-0.4
WVT				IAmb	IAmb	12 50 16.1	
	comp=Z,20nm,1.1s						
PLAL	Pickwick Lake	32.26	92	IAmb	IAmb	12 50 19.3	
	comp=Z,26nm,1.1s						
V48A	Smith Brothers	32.81	90	IAmb	IAmb	12 50 24.1	
	comp=Z,27nm,1.3s						
X48A	Hartselle	33.26	92	IAmb	IAmb	12 50 27.7	
	comp=Z,31nm,1.3s						
SWET	Sewanee	33.70	90	IAmb	IAmb	12 50 31.8	
	comp=Z,24nm,1.2s						
ACSO	Alum Creek Sta	33.73	80	IAmb	IAmb	12 50 32.2	
	comp=Z,33nm,1.1s						
LRAL	Lakeview Retre	34.00	94	IAmb	IAmb	12 50 42.8	
	comp=Z,30nm,1.4s						
FPAL	Fort Paine	34.25	91	IAmb	IAmb	12 50 36.7	
	comp=Z,22nm,1.0s						
RES	Resolute Bay	34.34	15	IAmb	IAmb	12 50 37.5	
	comp=Z,16nm,1.1s						
RES	Resolute Bay	34.34	15	P	P	12 50 29.0	+0.1
	comp=Z,4.8nm,0.9s,baz=218,slow=12,SNR=6.3						
	comp=Z,4.8nm,0.9s						
BUKO	Buck Lake	34.59	70	IAmb	IAmb	12 50 39.5	
	comp=Z,32nm,1.1s						
SADO	Sadowa	34.95	71	IAmb	IAmb	12 50 43.0	
	comp=Z,38nm,1.1s						
N53A	Lisbon	35.04	78	IAmb	IAmb	12 50 43.7	
	comp=Z,36nm,1.1s						
250A	Grady	35.07	95	P	P	12 50 37.2	+1.4
250A				IAmb	IAmb	12 50 53.2	
	comp=Z,47nm,1.3s						
VLDQ	Val d'Or	35.24	65	IAmb	IAmb	12 50 43.0	
	comp=Z,20nm,1.1s						
Y52A	Lilburn	35.70	91	IAmb	IAmb	12 50 49.4	
	comp=Z,30nm,1.0s						
POIN	Pond Inlet	37.23	22	P	P	12 50 55.0	+1.2
POIN				IAmb	IAmb	12 51 02.4	
	comp=Z,22nm,1.2s						
M57A	Sunshine Farm,	37.46	76	P	P	12 50 56.0	-0.2
M57A				IAmb	IAmb	12 51 04.4	
	comp=Z,46nm,1.1s						
J57A	Williamstown	37.52	72	IAmb	IAmb	12 51 04.4	
	comp=Z,36nm,1.2s						
TRQ	Mont Tremblant	37.63	67	IAmb	IAmb	12 51 05.4	
	comp=Z,28nm,1.0s						
N58A	Sunbury	37.94	76	P	P	12 51 00.7	+0.5
N58A				IAmb	IAmb	12 51 08.3	
	comp=Z,58nm,1.3s						
LONY	Lake Ozonia	38.10	69	P	P	12 51 01.6	+0.2
J59A	Piesco	38.53	71	IAmb	IAmb	12 51 13.1	
	comp=Z,37nm,1.2s						
LMQ	La Malbaie	40.03	64	IAmb	IAmb	12 51 25.4	
	comp=Z,37nm,1.1s						
SCHQ	Schefferville	40.42	52	P	P	12 51 20.4	-0.4
	comp=Z,2.9nm,0.9s,baz=226,slow=4.8,SNR=3.8						
	comp=Z,2.9nm,0.9s						
BILL	Bilibino	41.04	329	P	P	12 51 24.5	-1.1
BILL				IAmb	IAmb	12 51 34.4	
	comp=Z,60nm,1.4s						
PET	Petropavlovsk	47.17	308	P	P	12 52 15.3	+0.3
SEY	Seymchan	47.38	322	P	P	12 52 15.8	-0.8
	comp=Z,5.5nm,1.0s,baz=82,slow=7.4,SNR=13						
	comp=Z,5.5nm,1.0s						
PETK	Petropavlovsk-	47.68	308	P	P	12 52 18.9	-0.1
	comp=Z,3.0nm,0.9s,baz=82,slow=11,SNR=10						
	comp=Z,3.0nm,0.9s						
SUMG	Summit	48.85	24	P	P	12 52 27.5	-0.7
SUMG				IAmb	IAmb	12 52 37.0	
	comp=Z,27nm,1.2s						
MA2	Magadan	49.13	318	P	P	12 52 29.9	-0.2
MA2	Magadan	49.13	318	P	P	12 52 30.8	+0.8
	comp=Z,4.7nm,0.9s,baz=68,slow=9.6,SNR=3.7						
	comp=Z,4.7nm,0.9s						
TIXI	Tiksi	52.75	337	P	P	12 52 56.9	-0.2
TIXI				IAmb	IAmb	12 53 09.2	
	comp=Z,26nm,1.4s						
TIXI	Tiksi	52.75	337	P	P	12 52 56.7	-0.4
	comp=Z,2.9nm,0.3s,baz=56,slow=3.6,SNR=4.4						
	comp=Z,2.9nm,0.3s						
TAOE	Nuku Hiva Isla	53.52	194	*e*LR	LR	13 08 22.7	
	comp=Z,201nm,29.2s						
SPITS	Spitsbergen Ar	56.38	8	P	P	12 53 23.5	+0.1
	comp=Z,2.2nm,0.8s,baz=345,slow=10,SNR=4.7						
	comp=Z,2.2nm,0.8s						
YAK	Yakutsk	57.34	327	P	P	12 53 29.9	-0.4
	comp=Z,10nm,0.7s,baz=50,slow=3.4,SNR=11						
	comp=Z,10nm,0.7s						
H11N3	WAKE ISLAND Hy	58.34	267	T	T	13 56 55.3	
	baz=49,slow=75						
H11N2	WAKE ISLAND Hy	58.34	267	T	T	13 56 44.5	
	baz=49,slow=75						
H11N1	WAKE ISLAND Hy	58.35	267	T	T	13 56 53.3	
	baz=49,slow=75						
H11S1	WAKE ISLAND Hy	59.27	267	T	T	13 57 53.8	
	baz=49,slow=75						
H11S2	WAKE ISLAND Hy	59.27	267	T	T	13 57 58.0	
	baz=49,slow=75						
H11S3	WAKE ISLAND Hy	59.28	267	T	T	13 57 55.8	
	baz=49,slow=75						
ASAJ	Asahikawa	60.67	304	P	P	12 53 53.6	-0.2
	comp=Z,7.8nm,0.8s,baz=325,slow=6.0,SNR=5.8						
	comp=Z,7.8nm,0.8s						
ROSC	El Rosal	61.40	113	P	P	12 53 59.7	+0.2
	comp=Z,9.4nm,0.4s,baz=140,slow=12,SNR=3.5						
	comp=Z,9.4nm,0.4s						
KLR	Kul'dur	63.77	314	P	P	12 54 14.6	+0.1
	comp=Z,1.6nm,0.6s,baz=12,slow=7.9,SNR=5.6						
	comp=Z,1.6nm,0.6s						
PPT2	Papeete2	64.11	202	*e*LR	LR	13 13 24.3	
	comp=Z,102nm,28.0s						
ARCES	ARCESS Array B	65.31	10	P	P	12 54 24.7	+0.4
	comp=Z,5.7nm,1.1s,baz=345,slow=7.9,SNR=2.5						
	comp=Z,5.7nm,1.1s						
HEH	HeiHe	65.34	317	*e*P	P	12 54 23.8	-0.9
HEH				pmax	pmax		
	comp=Z,31nm,0.9s						
HEH				LR	LR		
	comp=N,250nm,20.1s						
HEH				LR	LR		
	comp=E,450nm,21.2s						
HEH				LR	LR		
	comp=Z,790nm,23.4s						
USRK	Ussuriysk Ar.	66.76	309	P	P	12 54 33.3	-0.6
	comp=Z,3.0nm,0.8s,baz=64,slow=6.6,SNR=7.1						
	comp=Z,3.0nm,0.8s						
MJAR	Matsushiro Arr	67.86	300	P	P	12 54 39.8	-1.3
	comp=Z,1.6nm,0.8s,baz=50,slow=4.6,SNR=5.6						
	comp=Z,1.6nm,0.8s						
BNX	BinXian	68.26	313	⇓P	P	12 54 43.1	-0.3
BNX				pmax	pmax		
	comp=Z,20nm,1.0s						
TBI	Tubuai	69.58	200	*e*LR	LR	13 15 52.8	
	comp=Z,303nm,24.0s						
NOA	NORSAR Array B	70.46	19	P	P	12 54 56.8	0.0
	comp=Z,2.2nm,1.0s,baz=330,slow=6.1,SNR=3.3						
	comp=Z,2.2nm,1.0s						
CN2	Changchun	70.59	312	*e*P	P	12 55 03.6	+5.8
CN2				*e*S	S	13 04 00.8	-10
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,100nm,6.5s						
CN2				LR	LR		
	comp=N,200nm,20.0s						
CN2				LR	LR		
	comp=E,300nm,20.0s						
CN2				LR	LR		
	comp=Z,400nm,21.0s						
EKA	Eskdalemuir Ar	70.90	30	P	P	12 54 59.0	-0.5
	comp=Z,0.5nm,0.7s,baz=313,slow=7.4,SNR=4.0						
	comp=Z,0.5nm,0.7s						
HFS	Hagfors	71.85	19	P	P	12 55 05.1	0.0
	comp=Z,2.7nm,0.9s,baz=349,slow=15,SNR=4.2						
	comp=Z,2.7nm,0.9s						
FINES	FINESS Array B	73.05	12	P	P	12 55 12.0	-0.2
	comp=Z,5.4nm,0.9s,baz=317,slow=10.0,SNR=5.3						
	comp=Z,5.4nm,0.9s						
KSRS	Korea Array	73.50	306	P	P	12 55 15.4	0.0
	comp=Z,1.2nm,0.7s,baz=50,slow=6.5,SNR=6.7						
	comp=Z,1.2nm,0.7s						
XLT	XiLinHaoTe	75.31	318	*e*P	P	12 55 27.8	+1.8
XLT				pP	pwP	12 55 33.0	-0.2
XLT				sP	PcP	12 55 37.6	-1.6
XLT				pmax	pmax		
	comp=Z,20nm,1.3s						
XLT				pmax	pmax		
	comp=Z,110nm,4.9s						
SONM	Songino Array	76.66	325	P	P	12 55 34.2	+0.5
	comp=Z,4.9nm,0.9s,baz=36,slow=3.9,SNR=24						
	comp=Z,4.9nm,0.9s						
ZALV	Zalesovo Beam	78.45	341	P	P	12 55 43.2	-0.1
	comp=Z,1.4nm,0.7s,baz=29,slow=3.7,SNR=6.5						
	comp=Z,1.4nm,0.7s						
CLL	Collm	79.52	23	*e*P	P	12 55 50.0	+0.8

CLL				*i* x	x	12 55 56.4	
	comp=Z,9.0nm,1.1s						
CLL				*i* x	x	12 56 01.0	
	comp=Z,9.0nm,1.2s						
CLL				*e*SS	SS	13 11 12.0	+16
POLO	**Lamas de Olo**	**79.86**	**41**	*e*P	**P**	**12 55 53.9**	**+2.5**
POLO				*i* Amb		12 56 08.1	
	comp=Z,14nm,1.8s						
PBRG	**Braganca**	**80.02**	**40**	*e*P	**P**	**12 55 53.2**	**+1.0**
BRG	**Berggiesshubel**	**80.17**	**23**	*e*P	**P**	**12 55 53.6**	**+0.8**
BRG				Amp		12 55 55.6	
	comp=Z,4.9nm,1.1s						
BRG	**Berggiesshubel**	**80.17**	**23**	P	P	12 56 00.9	+8.1
BRG				Amp		12 56 02.0	
	comp=Z,14nm,1.3s						
PVIS	**Viseu**	**80.32**	**42**	*e*P	**P**	**12 55 52.4**	**-1.5**
GRF	**Grafenberg Arr**	**80.42**	**25**	*e*P	**P**	**12 55 55.2**	**+1.0**
	comp=Z,12nm,1.3s,baz=339,slow=4.7						
TIA	**Tai'an**	**80.47**	**312**	P	P	12 56 01.1	+6.5
TIA				pmax	pmax		
	comp=Z,14nm,1.3s						
PCAS	**Casmilo, Conde**	**80.54**	**42**	*e*P	**P**	**12 55 53.5**	**-1.5**
PCAS				*i* Amb		12 56 03.9	
	comp=Z,33nm,1.6s						
BFO	**Black Forest**	**80.69**	**28**	P	**P**	**12 55 55.7**	**+0.1**
BFO				IAmb	IAmb	12 56 04.1	
	comp=Z,17nm,1.4s						
MTE	**Manteigas**	**80.73**	**42**	*e*P	**P**	**12 55 56.4**	**+0.3**
MTE				*i* Amb		12 56 09.0	
	comp=Z,25nm,1.9s						
HNS	**HongShan**	**80.86**	**314**	⇓P	**P**	**12 55 59.5**	**+2.8**
HNS	**HongShan**	**80.86**	**314**	S	**S**	**13 06 09.9**	**+5.2**
PSARD	**Sardoal**	**81.05**	**42**	*e*P	**P**	**12 55 56.1**	**-1.6**
PSARD				*i* Amb		12 56 12.6	
	comp=Z,23nm,1.5s						
PCBR	**Castelo Branco**	**81.20**	**42**	*e*P	**P**	**12 55 59.0**	**+0.5**
PCBR				*i* Amb		12 56 06.4	
	comp=Z,21nm,1.6s						
LPAZ	**La Paz**	**81.38**	**122**	P	**P**	**12 55 60.0**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=5.6,slow=9.3,SNR=4.6						
	comp=Z,1.2nm,0.7s						
PMRV	**Marv??o**	**81.56**	**42**	*e*P	**P**	**12 56 00.5**	**+0.1**
PMRV				*i* Amb		12 56 14.1	
	comp=Z,16nm,1.6s						
GERES	**GERESS Array B**	**81.92**	**24**	P	**P**	**12 56 00.6**	**-1.7**
	comp=Z,0.3nm,0.4s,baz=5.7,slow=2.0,SNR=3.6						
	comp=Z,0.3nm,0.4s						
BVAR	**Borovoye Array**	**82.11**	**349**	P	**P**	**12 56 03.1**	**0.0**
	comp=Z,1.7nm,0.8s,baz=85,slow=3.0,SNR=13						
	comp=Z,1.7nm,0.8s						
MORC	**Moravsky Berou**	**82.15**	**21**	*e*	P	12 56 10.3	+6.9
VRAC	**Vranov**	**82.33**	**22**	*e*P	**P**	**12 56 05.0**	**+0.7**
VRAC				*e*		12 56 11.4	
MESJ	**Messejana**	**82.39**	**44**	*e*P	**P**	**12 56 03.8**	**-1.0**
MOTA	**Moosalm**	**82.45**	**26**	pP	**P**	**12 56 05.8**	**+0.7**
	comp=Z,6.7nm,1.1s						
KRUC	**Moravsky**	**82.50**	**22**	*e*P	**P**	**12 56 05.3**	**+0.2**
KRUC				*e*		12 56 12.1	
NJ2	**Nanjing**	**82.58**	**308**	*e*P	**P**	**12 56 04.4**	**-1.5**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WATA	**Walderalm**	**82.61**	**26**	*e*pP	**P**	**12 56 06.2**	**+0.3**
	comp=Z,17nm,1.4s						
FETA	**Feichten**	**82.62**	**27**	*i* pP	**P**	**12 56 05.7**	**-0.3**
	comp=Z,6.2nm,1.5s						
WTTA	**Wattenberg**	**82.70**	**26**	*e*pP	**P**	**12 56 06.4**	**0.0**
	comp=Z,9.5nm,1.3s						
PBAR	**Barrancos**	**82.71**	**43**	*e*P	**P**	**12 56 08.6**	**+2.1**
KURK	**Kurchatov**	**82.86**	**343**	P	**P**	**12 56 07.0**	**0.0**
KURK				IAmb	IAmb	12 56 14.8	
	comp=Z,16nm,1.2s						
KURBB	**Kurchatov Arra**	**82.97**	**343**	P	**P**	**12 56 07.5**	**0.0**
	comp=Z,2.5nm,0.9s,baz=18,slow=4.9,SNR=13						
	comp=Z,2.5nm,0.9s						
PVAQ	**Vaqueiros**	**82.98**	**44**	*e*P	**P**	**12 56 04.6**	**-3.3**
PVAQ				*i* Amb		12 56 27.8	
	comp=Z,20nm,1.4s						
MOA	**Molln**	**82.98**	**24**	*e*pP	**P**	**12 56 09.7**	**+2.0**
	comp=Z,5.7nm,1.3s						
ESDC	**Sonseca Array**	**82.99**	**40**	P	**P**	**12 56 08.3**	**+0.3**
	comp=Z,1.4nm,1.0s,baz=325,slow=5.9,SNR=6.0						
	comp=Z,1.4nm,1.0s						
LANS	**Liptovska Anna**	**83.22**	**20**	*e*P	**P**	**12 56 10.5**	**+1.5**
MODS	**Modra-Piesok**	**83.36**	**22**	*e*P	**P**	**12 56 10.3**	**+0.6**
CONA	**Conrad Observa**	**83.38**	**23**	*i* pP	**P**	**12 56 11.1**	**+1.2**
	comp=Z,7.0nm,1.3s						
STHS	**Stebnicka Huta**	**83.42**	**19**	*e*P	**P**	**12 56 14.1**	**+4.2**
VYHS	**Vyhne**	**83.67**	**21**	*e*P	**P**	**12 56 14.7**	**+3.5**
RONA	**Rosalia, Austr**	**83.70**	**23**	*i* P	**P**	**12 56 11.1**	**-0.4**
	comp=Z,5.5nm,1.3s						
AKASG	**Malin Array Be**	**83.85**	**14**	P	**P**	**12 56 11.4**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=337,slow=4.3,SNR=7.7						
	comp=Z,0.2nm,0.3s						
MYKA	**Terra Mystica**	**83.89**	**25**	*e*pP	**P**	**12 56 12.7**	**+0.3**
	comp=Z,5.8nm,1.2s						
ARSA	**Arzberg**	**83.89**	**24**	*i* pP	**P**	**12 56 13.6**	**+1.2**
	comp=Z,6.5nm,1.1s						
SRO	**Srobarova**	**84.16**	**22**	*e*P	**P**	**12 56 17.1**	**+3.4**
LYN	**LuoYang**	**84.20**	**313**	P	P	12 56 19.8	+5.6
LYN				pmax	pmax		
	comp=Z,27nm,0.9s						
SOKA	**Soboth**	**84.27**	**24**	*e*pP	**P**	**12 56 14.9**	**+0.5**
	comp=Z,10nm,1.3s						
MKAR	**Makanchi Array**	**85.68**	**339**	P	**P**	**12 56 20.7**	**-0.7**
	comp=Z,0.7nm,0.8s,baz=37,slow=5.2,SNR=6.6						
	comp=Z,0.7nm,0.8s						
MAKZ	**Makanchi**	**85.75**	**339**	P	**P**	**12 56 21.1**	**-0.7**
MAKZ				IAmb	IAmb	12 56 29.0	
	comp=Z,13nm,1.1s						
GTA	**Gaotai**	**86.29**	**325**	*e*P	**P**	**12 56 24.4**	**-0.3**
GTA				pP	pwP	12 56 31.0	-1.1
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GTA				LR	LR		
	comp=N,540nm,21.4s						
GTA				LR	LR		
	comp=E,700nm,23.6s						
GTA				LR	LR		
	comp=Z,1μm,22.2s						
WMQ	**Urumqi**	**86.87**	**335**	*e*P	**P**	**12 56 28.3**	**+0.9**
WMQ				LR	LR		
	comp=N,400nm,18.1s						
WMQ				LR	LR		
	comp=E,570nm,17.1s						
WMQ				LR	LR		
	comp=Z,340nm,19.1s						
ABKAR	**Akbulak array**	**86.95**	**354**	P	**P**	**12 56 28.0**	**+0.4**
ABKAR				IAmb	IAmb	12 56 35.8	
	comp=Z,16nm,1.4s						
LZH	**Lanzhou**	**87.26**	**320**	*e*P	**P**	**12 56 31.3**	**+1.7**
LZH				sP	pwP	12 56 37.0	+0.1
LZH				pmax	pmax		
	comp=Z,22nm,1.0s						
LZH				LR	LR		
	comp=N,200nm,16.8s						
LZH				LR	LR		
	comp=E,270nm,17.5s						
LZH				LR	LR		
	comp=Z,280nm,16.1s						
DZM	**Mont Dzumac**	**88.52**	**237**	*e*LR	LR	13 24 36.3	
	comp=Z,249nm,26.3s						
KSH	**Kashi**	**94.08**	**341**	P	P	12 57 10.3	+9.0
KSH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PZH	**PanZhiHua**	**96.15**	**316**	P	**P**	**12 57 10.6**	**-0.4**
PZH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,100nm,4.8s						

IDC ***22*** *12:45:04.0±0.9, 43°.83N×128°.73W, h0^{km}, mb4.0/14, mbtmp4.0/19, ML3.3/5, Error ellipse: s-maj=27.4km s-min=11.4km az=31.0*

NEIC ***22*** *12:45:04.9±1.3, 43°.6N±0°.1×128°.3W±0°.2, h10^{km}±2^{km}, ML3.6/40, Error ellipse: s-maj=23.3km s-min=14.8km az=239.0*

ISC 22 12:45:05.7±0.7**, 43°.79N**±0°.09×**128°.61W**±0°.08**, h13**^{km}**, n43, σ1^{s}.77**/37**, mb4.2**/13**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**3.25**	**105**	Pn	**Pn**	**12 45 53.2**	**-3.2**
KEBM				IAML		12 46 38.2	
	comp=N,135nm,1.6s						
KEBM				IAML		12 47 09.3	
	comp=E,205nm,3.9s						
J01E	**Myrtle Point**	**3.46**	**99**	Pn	**Pn**	**12 45 57.4**	**-1.8**
J01E				IAML		12 46 50.8	
	comp=E,120nm,3.8s						
HEBO	**Mount Hebo**	**3.75**	**66**	Pn	**Pn**	**12 46 01.4**	**-1.9**
HEBO				IAML		12 46 36.6	
	comp=N,145nm,1.9s						
HEBO				IAML		12 46 54.4	
	comp=E,137nm,1.8s						
K02D	**Willamette Mer**	**3.77**	**105**	Pn	**Pn**	**12 45 59.6**	**-3.9**
I03D	**Drain, OR**	**3.81**	**90**	Pn	**Pn**	**12 46 00.1**	**-3.9**
I03D				IAML		12 48 18.1	
	comp=E,79nm,4.9s						
G03D	**McMinnville, O**	**4.08**	**68**	Pn	**Pn**	**12 46 06.4**	**-1.3**
G03D				IAML		12 46 49.3	
	comp=N,75nm,2.2s						
G03D				IAML		12 47 07.9	
	comp=E,74nm,2.8s						
F03A	**Seaside**	**4.18**	**57**	Pn	**Pn**	**12 46 07.1**	**-1.9**
KRPM	**Rodgers**	**4.29**	**126**	Pn	Pn	12 46 04.5	-6.2
E03A	**Lebam**	**4.51**	**51**	Pn	**Pn**	**12 46 12.0**	**-1.5**
E03A				IAML		12 48 04.5	
	comp=N,60nm,3.8s						
E03A				IAML		12 48 48.7	
	comp=E,86nm,4.4s						
H04A	**Detroit Lake**	**4.70**	**77**	Pn	**Pn**	**12 46 13.4**	**-2.9**
H04A				IAML		12 48 25.4	
	comp=E,41nm,4.9s						
WISH	**Wishkah**	**4.76**	**44**	Pn	**Pn**	**12 46 16.2**	**-0.8**
YBH	**Yreka Blue Hor**	**4.80**	**113**	Pn	**Pn**	**12 46 18.6**	**+0.8**
	baz=270,slow=5.1,SNR=1.5						
YBH				Sn	**Sn**	**12 47 15.1**	**+1.8**
	baz=160,slow=15,SNR=1.3						
NLWA	**Neilton Lookou**	**4.90**	**41**	Pn	**Pn**	**12 46 19.4**	**+0.3**
NLWA				IAML		12 49 09.9	
	comp=E,33nm,4.3s						
K04D	**Chiloquin, OR**	**5.14**	**101**	Pn	Pn	12 46 17.0	-5.4
PINE	**Pine Mountain**	**5.55**	**87**	Pn	**Pn**	**12 46 25.1**	**-3.0**
PINE				IAML		12 49 10.1	
	comp=N,47nm,4.6s						
D05A	**Enumclaw**	**5.76**	**52**	Pn	**Pn**	**12 46 29.4**	**-1.4**
HOLB	**Holberg**	**6.86**	**3**		**Pn**	**12 46 47.8**	**+1.8**
D08A	**Wollman Farm,**	**7.56**	**61**	Pn	**Pn**	**12 46 53.7**	**-1.7**
BBB	**Bella Bella**	**8.41**	**2**	Pn	**Pn**	**12 47 06.0**	**-1.0**
	comp=N,0.2nm,0.3s,baz=179,slow=17,SNR=1.3						
	comp=N,9.1nm,1.0s						
NVAR	**Mina Array Bea**	**9.44**	**121**	Pn	Pn	12 47 25.6	+4.1
	comp=N,0.1nm,0.3s,baz=312,slow=14,SNR=1.8						
	comp=N,1.8nm,0.8s						
ELK	**Elko**	**10.37**	**102**	Pn	**Pn**	**12 47 37.3**	**+3.1**
	comp=N,0.1nm,0.3s,baz=285,slow=14,SNR=4.3						
	comp=N,3.5nm,0.9s						
PDAR	**Pinedale Array**	**13.92**	**88**	Pn	**P**	**12 48 29.3**	**-1.7**
	comp=N,0.1nm,0.3s,baz=291,slow=17,SNR=1.3						
	comp=N,1.3nm,1.0s						
ANMO	**Albuquerque**	**19.22**	**110**	P	**Pn**	**12 49 31.9**	**+1.3**
	baz=0.0,slow=9.1,SNR=2.1						
	comp=N,5.1nm,1.0s						
YKA	**Yellowknife Ar**	**20.44**	**19**	P	**P**	**12 49 42.7**	**+0.2**
	comp=N,5.4nm,0.8s,baz=215,slow=11,SNR=4.5						
	comp=N,5.4nm,0.8s						
ILAR	**Eielson Array**	**23.40**	**340**	P	**P**	**12 50 14.7**	**+0.8**
	comp=N,0.9nm,0.7s,baz=157,slow=7.9,SNR=4.4						
ILAR				PcP	**PcP**	**12 54 00.4**	**+0.5**
	comp=N,0.7nm,0.8s,baz=172,slow=2.7,SNR=4.5						
	comp=N,0.9nm,0.7s						
TXAR	**Lajitas Array**	**24.57**	**118**	P	**P**	**12 50 26.6**	**+1.2**
	comp=N,1.2nm,0.8s,baz=315,slow=7.6,SNR=1.8						
TXAR				PcP	**PcP**	**12 54 03.7**	**+0.5**
	comp=N,0.2nm,0.6s,baz=331,slow=2.7,SNR=2.5						
	comp=N,1.2nm,0.8s						
RES	**Resolute Bay**	**34.42**	**15**	P	**P**	**12 51 52.0**	**-0.2**
	comp=N,3.4nm,1.0s,baz=203,slow=14,SNR=2.0						
	comp=N,3.4nm,1.0s						
SCHQ	**Schefferville**	**40.48**	**52**	P	**P**	**12 52 44.9**	**+1.1**
	comp=N,2.3nm,0.9s,baz=281,slow=16,SNR=1.5						
	comp=N,2.3nm,0.9s						
SEY	**Seymchan**	**47.44**	**322**	P	**P**	**12 53 39.4**	**-0.2**
	comp=N,4.3nm,1.0s,baz=79,slow=11,SNR=2.7						
	comp=N,4.3nm,1.0s						
PETK	**Petropavlovsk-**	**47.72**	**309**	P	**P**	**12 53 42.0**	**+0.1**
	comp=N,2.8nm,0.8s,baz=76,slow=8.2,SNR=4.8						
	comp=N,2.8nm,0.8s						
H11N3	**WAKE ISLAND Hy**	**58.32**	**268**	T	T	13 58 05.3	
	baz=49						
H11N2	**WAKE ISLAND Hy**	**58.32**	**268**	T	T	13 58 12.4	
	baz=49						
H11N1	**WAKE ISLAND Hy**	**58.34**	**268**	T	T	13 58 10.0	
	baz=49						
H11S1	**WAKE ISLAND Hy**	**59.25**	**267**	T	T	13 59 18.5	
	baz=49						
H11S2	**WAKE ISLAND Hy**	**59.25**	**267**	T	T	13 59 19.4	
	baz=49						
H11S3	**WAKE ISLAND Hy**	**59.27**	**267**	T	T	13 59 20.2	
	baz=49						
USRK	**Ussuriysk Ar.**	**66.80**	**309**	P	**P**	**12 55 55.9**	**-0.8**
	comp=N,2.7nm,0.8s,baz=54,slow=7.3,SNR=2.8						
	comp=N,2.7nm,0.8s						
MJAR	**Matsushiro Arr**	**67.89**	**300**	P	**P**	**12 56 03.3**	**-0.5**
	comp=N,1.8nm,0.9s,baz=31,slow=7.0,SNR=3.0						
	comp=N,1.8nm,0.9s						
EKA	**Eskdalemuir Ar**	**70.98**	**29**	P	**P**	**12 56 22.2**	**-0.4**
	comp=N,0.7nm,0.7s,baz=347,slow=6.7,SNR=3.4						
	comp=N,0.7nm,0.7s						
KSRS	**Korea Array**	**73.54**	**306**	P	**P**	**12 56 38.6**	**+0.4**
	comp=N,0.8nm,0.7s,baz=46,slow=7.2,SNR=3.0						
	comp=N,0.8nm,0.7s						
SONM	**Songino Array**	**76.72**	**325**	P	**P**	**12 56 56.8**	**+0.3**
	comp=N,3.2nm,0.9s,baz=69,slow=4.8,SNR=3.9						
	comp=N,3.2nm,0.9s						
KURBB	**Kurchatov Arra**	**83.05**	**343**	P	**P**	**12 57 30.2**	**-0.4**
	comp=N,1.8nm,0.9s,baz=12,slow=4.7,SNR=2.8						
	comp=N,1.8nm,0.9s						
MKAR	**Makanchi Array**	**85.75**	**339**	P	**P**	**12 57 43.8**	**-0.6**
	comp=N,0.6nm,0.9s,baz=42,slow=7.7,SNR=1.8						
	comp=N,0.6nm,0.9s						

IDC ***22*** *12:51:32.1±1.6, 44°.28N×128°.19W, h0^{km}, mb3.4/3, mbtmp3.4/5, ML2.1/3, Error ellipse: s-maj=105.6km s-min=17.4km az=33.0*

ISC 22 12:51:33.6±1.3**, 44°.2N**±0°.4×**128°.4W**±0°.3**, h10**^{km}**, n12, σ1^{s}.28**/6**, mb3.8**/3**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YBH	**Yreka Blue Hor**	**4.83**	**118**	Pn	**Pn**	**12 52 45.0**	**-1.4**
	baz=303,slow=8.1,SNR=1.7						
NVAR	**Mina Array Bea**	**9.51**	**123**	Pn	**Pn**	**12 53 51.9**	**+1.1**
	baz=302,slow=17,SNR=3.7						
	0.7nm,0.8s						
ELK	**Elko**	**10.31**	**105**	Pn	**Pn**	**12 54 02.1**	**+0.3**
	0.1nm,0.3s,baz=291,slow=12,SNR=4.2						
	0.9nm,0.7s						
TXAR	**Lajitas Array**	**24.61**	**119**	P	**P**	**12 56 54.0**	**-0.1**
	0.2nm,0.7s,baz=323,slow=6.1,SNR=4.9						
	0.2nm,0.7s						
PETK	**Petropavlovsk-**	**47.61**	**308**	P	**P**	**13 00 08.6**	**-0.8**
	0.7nm,0.8s,baz=76,slow=9.6,SNR=3.8						
	0.7nm,0.8s						
H11N3	**WAKE ISLAND Hy**	**58.48**	**267**	T	T	14 03 08.7	
	baz=50						
H11N2	**WAKE ISLAND Hy**	**58.48**	**267**	T	T	14 03 10.5	
	baz=50						
H11N1	**WAKE ISLAND Hy**	**58.50**	**267**	T	T	14 03 05.8	
	baz=50						
H11S1	**WAKE ISLAND Hy**	**59.41**	**267**	T	T	14 04 23.0	
	baz=49						
H11S2	**WAKE ISLAND Hy**	**59.42**	**266**	T	T	14 04 20.1	
	baz=49						
H11S3	**WAKE ISLAND Hy**	**59.43**	**267**	T	T	14 04 20.6	
	baz=49						
SONM	**Songino Array**	**76.50**	**326**	P	**P**	**13 03 24.6**	**+0.9**
	0.6nm,0.7s,baz=53,slow=5.6,SNR=3.8						
	0.6nm,0.7s						

NEIC ***22*** *12:51:59.1, 43°.87N×128°.55W, h12^{km}*

NEIC ***22*** *12:51:59.1, 43°.97N×128°.69W, h12^{km}, Moment Tensor Solution. Duration: 2^{s}.4 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.09; M$_{\theta\theta}$0.04; M$_{\phi\phi}$1.05; M$_{r\theta}$0.41; M$_{\theta\phi}$0.24; M$_{\phi r}$-0.52; Fault plane solution: M$_0$1.29000×10^{17} NP1: φ$_s$211.07000°, δ37.72000°, λ-56.97000°. NP2: φ$_s$351.66000°, δ59.14000°, λ-112.86000°. Principal axes: T 1.1928, Plg11.0000°, Azm98.0000°; N 0.1716, Plg19.0000°, Azm4.0000°; P -1.3643, Plg67.0000°, Azm216.0000°;*

IDC ***22*** *12:51:59.7±0.5, 43°.87N×128°.55W, h0^{km}, mb4.4/33, mbtmp4.4/40, ML3.7/7, MS4.5/13 Error ellipse: s-maj=16.2km s-min=8.1km az=31.0*

MOS ***22*** *12:52:00.4±1.3, 43°.89N×128°.51W, h12^{km}, mb5.1/33, Error ellipse: s-maj=9.0km s-min=6.0km az=107.7*

NEIC ***22*** *12:52:01.9±1.9, 43°.77N±0°.06×128°.4W±0°.1, h10^{km}±1^{km}, mb4.9/88, ML4.0/72, Mww5.3/97, Error ellipse: s-maj=16.0km s-min=4.5km az=236.0*

BGR ***22*** *12:52:02.3, 43°.30N×130°.27W, h10^{km}, mb4.8*

GCMT ***22*** *12:52:03.0±0.1, 43°.88N±0°.01×128°.70W±0°.01, h12^{km}, MW5.3/144, Moment Tensor Solution. s90,c139; s144,c282; Duration: 1^{s}.1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-1.03±.02; M$_{\theta\theta}$-0.07±.02; M$_{\phi\phi}$1.10±.01; M$_{r\theta}$0.24±.05; M$_{\theta\phi}$0.24±.01; M$_{\phi r}$-0.43±.04; Best double couple: M$_0$1.19900×10^{17} NP1:φ$_s$208.00000°, δ38.00000°, λ-63.00000°. NP2:φ$_s$355.00000°, δ57.00000°, λ-109.00000°. Principal axes: T 1.2120, Plg10.0000°, Azm99.0000°; N -0.0270, Plg16.0000°, Azm6.0000°; P -1.1860, Plg71.0000°, Azm219.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 12:52:02.4±0.8**, 43°.79N**±0°.05×**128°.59W**±0°.05**, h17**^{km}±4^{km}**, n567, σ1^{s}.41**/532**, mb4.8**/89**, MS4.8**/30**, 14C-11D, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**3.24**	**105**		**Pn**	**12 52 49.8**	**-2.8**
KEBM				IAML		12 53 32.9	
	comp=N,496nm,1.1s						
KEBM				IAML		12 53 37.9	
	comp=E,416nm,3.0s						
I02E	**Swisshome, OR**	**3.44**	**83**		**Pn**	**12 52 53.3**	**-1.9**
I02E				IAML		12 53 41.0	
	comp=E,250nm,2.5s						
J01E	**Myrtle Point**	**3.45**	**99**		**Pn**	**12 52 53.4**	**-2.0**
J01E				IAML		12 53 46.0	
	comp=E,452nm,1.9s						
HEBO	**Mount Hebo**	**3.74**	**66**		**Pn**	**12 52 57.6**	**-1.9**
HEBO				IAML		12 53 46.9	
	comp=E,371nm,1.6s						
HEBO				IAML		12 54 22.4	
	comp=N,364nm,1.7s						
K02D	**Willamette Mer**	**3.76**	**105**		**Pn**	**12 52 57.4**	**-2.3**
K02D				IAML		12 53 46.9	
	comp=E,229nm,1.0s						
I03D	**Drain, OR**	**3.80**	**90**		**Pn**	**12 52 58.4**	**-1.8**
I03D				IAML		12 53 49.3	
	comp=N,187nm,1.8s						
COR	**Corvallis**	**3.89**	**76**		**Pn**	**12 52 59.8**	**-1.5**
COR				IAML		12 53 53.7	
	comp=N,224nm,1.9s						
COR				IAML		12 54 01.0	
	comp=N,333nm,2.2s						
COR	**Corvallis**	**3.89**	**76**	P	**Pn**	**12 52 59.8**	**-1.5**
KSXB	**Camp Six Broad**	**3.98**	**118**	Pn	**Pn**	**12 53 01.1**	**-1.7**
L02F	**Cave Junction**	**4.05**	**113**		**Pn**	**12 53 02.6**	**-1.0**
BUCK	**Buck Mountain**	**4.07**	**82**		**Pn**	**12 53 02.3**	**-1.6**
BUCK				IAML		12 53 58.2	
	comp=N,216nm,3.0s						
BUCK				IAML		12 54 15.9	
	comp=E,330nm,2.2s						
G03D	**McMinnville, O**	**4.07**	**68**		**Pn**	**12 53 01.6**	**-2.2**
G03D				IAML		12 53 57.6	
	comp=E,289nm,2.1s						
KRMB	**Red Mountain**	**4.13**	**122**	Pn	**Pn**	**12 53 02.8**	**-2.1**
F03A	**Seaside**	**4.17**	**57**		**Pn**	**12 53 03.9**	**-1.3**
H04D	**Lebanon**	**4.28**	**78**		**Pn**	**12 53 05.2**	**-1.6**
H04D				IAML		12 54 12.5	
	comp=N,214nm,2.4s						
RADR	**Rader Ridge**	**4.29**	**51**		**Pn**	**12 53 06.4**	**-0.6**
RADR				IAML		12 55 26.2	
	comp=N,279nm,2.2s						
BBOR	**Butler Butte**	**4.41**	**100**		**Pn**	**12 53 07.3**	**-1.4**
BBOR				IAML		12 54 07.7	
	comp=E,123nm,1.4s						
BBOR				IAML		12 54 21.2	
	comp=N,147nm,2.6s						
E03A	**Lebam**	**4.50**	**51**		**Pn**	**12 53 08.9**	**-0.8**
E03A				IAML		12 54 38.0	
	comp=E,213nm,2.0s						
JCC	**Jacoby Creek,**	**4.50**	**130**	Pn	**Pn**	**12 53 10.1**	**+0.2**
JCC				IAML		12 55 55.8	
	comp=E,113nm,4.8s						
G04A	**Mulino**	**4.60**	**70**		**Pn**	**12 53 09.9**	**-1.2**
KHMM	**Horse Mountain**	**4.63**	**127**		**Pn**	**12 53 11.0**	**-0.8**
H04A	**Detroit Lake**	**4.69**	**77**		**Pn**	**12 53 11.0**	**-1.4**
H04A				IAML		12 54 14.0	
	comp=N,108nm,1.3s						
YBH	**Yreka Blue Hor**	**4.79**	**113**	Pn	**Pn**	**12 53 13.1**	**-0.9**
	comp=N,0.2nm,0.3s,baz=332,slow=8.5,SNR=31						
YBH				Sn	**Sn**	**12 54 08.8**	**-0.3**
	baz=115,slow=5.5,SNR=1.6						
L04D	**Klamath Falls**	**4.87**	**107**		**Pn**	**12 53 14.8**	**-0.3**
L04D				IAML		12 54 50.1	
	comp=N,140nm,4.9s						
NLWA	**Neilton Lookou**	**4.89**	**41**		**Pn**	**12 53 14.4**	**-0.8**
NLWA				IAML		12 54 12.4	
	comp=N,93nm,3.0s						
NLWA				IAML		12 54 23.3	
	comp=N,99nm,1.5s						
C03A	**Quillayute Air**	**5.02**	**33**		**Pn**	**12 53 16.3**	**-0.5**
C03A				IAML		12 55 25.6	
	comp=E,156nm,2.9s						
KMRM	**Mail Ridge**	**5.10**	**133**		**Pn**	**12 53 18.1**	**+0.1**
KMRM				IAML		12 54 15.4	
	comp=E,79nm,4.2s						
KMRM				IAML		12 56 06.3	
	comp=N,82nm,4.3s						
HOOD	**Mount Hood Mea**	**5.19**	**70**		**Pn**	**12 53 18.0**	**-1.4**
I05D	**Terrebonne, OR**	**5.25**	**82**		**Pn**	**12 53 18.5**	**-1.7**
J05D	**Fort Rock, OR**	**5.37**	**93**		**Pn**	**12 53 20.0**	**-1.9**
J05D				IAML		12 55 09.6	
	comp=E,100nm,4.5s						
J05D				IAML		12 55 54.3	
	comp=N,86nm,4.3s						
G05A	**Wamic**	**5.40**	**72**		**Pn**	**12 53 20.4**	**-1.8**
GNW	**Green Mountain**	**5.53**	**45**		**Pn**	**12 53 23.3**	**-0.6**
OZB	**Mount Ozzard**	**5.60**	**21**		**Pn**	**12 53 23.9**	**-0.9**
O02D	**Mt. Diablo Mer**	**5.63**	**128**		**Pn**	**12 53 24.4**	**-1.1**
CLRS	**Cowichan Lake**	**5.90**	**30**		**Pn**	**12 53 29.2**	**+0.2**
PGC	**Sidney**	**6.03**	**34**		**Pn**	**12 53 30.2**	**-0.5**
F07A	**Phinny Hill Vi**	**6.51**	**68**		**Pn**	**12 53 36.1**	**-1.3**
G08A	**Pilot Rock**	**7.04**	**74**		**Pn**	**12 53 43.4**	**-1.5**
WVOR	**Wild Horse Val**	**7.41**	**97**		**Pn**	**12 53 48.3**	**-1.6**
WVOR	**Wild Horse Val**	**7.41**	**97**	P	**Pn**	**12 53 48.3**	**-1.6**
D08A	**Wollman Farm,**	**7.55**	**61**		**Pn**	**12 53 49.6**	**-2.0**
BBB	**Bella Bella**	**8.40**	**2**		**Pn**	**12 54 04.7**	**+1.4**
BBB	**Bella Bella**	**8.40**	**2**	Pn	**Pn**	**12 54 02.2**	**-1.1**
	comp=N,0.8nm,0.3s,baz=173,slow=3.0,SNR=12						
BBB				Sn	**Sn**	**12 55 34.7**	**-3.0**
	comp=N,0.4nm,0.3s,baz=173,slow=13,SNR=0.7						
	comp=N,38nm,1.0s						
HG4B	**Hotspring**	**8.68**	**349**		**Pn**	**12 54 08.7**	**+1.5**
NEW	**Newport**	**9.14**	**57**	Pn	**Pn**	**12 54 11.5**	**-2.0**
	comp=N,0.7nm,0.3s,baz=241,slow=11,SNR=9.3						
	comp=N,4.5nm,0.6s						
NVAR	**Mina Array Bea**	**9.43**	**121**	Pn	**Pn**	**12 54 20.4**	**+2.7**
	comp=N,0.3nm,0.3s,baz=292,slow=14,SNR=23						
	comp=N,8.3nm,0.8s						
MOBC	**Moresby Island**	**9.62**	**348**		**Pn**	**12 54 24.6**	**+4.5**
ELK	**Elko**	**10.36**	**103**	Pn	**Pn**	**12 54 32.5**	**+2.1**
	comp=N,0.3nm,0.3s,baz=299,slow=10,SNR=47						
	comp=N,14nm,0.8s						
MSO	**Missoula**	**10.76**	**69**		**Pn**	**12 54 34.1**	**-1.6**
MCMT	**McKenzie Canyo**	**11.33**	**79**		**Pn**	**12 54 40.9**	**-2.8**
DLMT	**Dillon**	**11.52**	**77**		**Pn**	**12 54 45.2**	**-0.9**
V35K	**Ketchikan**	**11.71**	**351**	P	**Pn**	**12 54 48.8**	**+0.3**
	baz=168,SNR=6.2						
CRAG	**Craig**	**12.05**	**348**	P	**Pn**	**12 54 53.2**	**+0.1**
	baz=163						
U35K	**Hyder**	**12.17**	**356**	P	**Pn**	**12 54 54.5**	**-0.3**
	baz=174						
U33K	**Whale Pass**	**12.67**	**348**	P	**Pn**	**12 55 01.5**	**-0.2**
	baz=164						
WRAK	**Wrangell Islan**	**12.87**	**351**	P	**Pn**	**12 55 04.0**	**-0.3**
	baz=167						
T35M	**Bob Quinn**	**13.25**	**356**	P	**Pn**	**12 55 09.1**	**-0.5**
	baz=174						
T33K	**Petersburg**	**13.33**	**350**	P	**Pn**	**12 55 10.9**	**+0.3**
	baz=165						
PFO	**Pinyon Flats O**	**13.88**	**133**	Pn	**Pn**	**12 55 21.1**	**+2.7**
	comp=N,0.1nm,0.3s,baz=304,slow=8.2,SNR=10						

	comp=N,6.4nm,0.9s						
PDAR	Pinedale Array	13.91	88	Pn	Pn	12 55 20.9	+2.0
	comp=N,0.1nm,0.3s,baz=276,slow=13,SNR=14						
	comp=N,3.6nm,1.0s						
SIT	Sitka	13.94	345	P	Pn	12 55 19.2	+0.1
	baz=159						
S32K	Killisnoo	14.20	347	P	Pn	12 55 22.7	+0.1
	baz=161						
S34M	Telegraph Cree	14.23	354	Pn	Pn	12 55 23.3	+0.4
S34M	Telegraph Cree	14.23	354	P	Pn	12 55 23.5	+0.6
	baz=172,SNR=7.4						
W13A	Hualapai Mount	14.28	122	P	P	12 55 29.8	-1.4
DLBC	Dease Lake	14.69	357	Pn	Pn	12 55 31.1	+1.8
	baz=150,slow=10,SNR=10						
BLYC	Blythe	14.84	128		Pn	12 55 30.6	-0.9
R32K	Eaglecrest	14.96	348	P	Pn	12 55 34.1	+1.2
	baz=162,SNR=6.4						
S31K	Pelican	14.97	344	P	Pn	12 55 33.7	+0.7
	baz=158						
CCX	Cicese	15.16	138	IAmb	IAmb	12 55 51.9	
	comp=Z,76nm,1.4s						
GLA	Glamis	15.19	130	P	Pn	12 55 36.4	+0.2
GLA				IAmb	IAmb	12 55 49.1	
	comp=Z,87nm,1.4s						
GLA	Glamis	15.19	130	P	Pn	12 55 36.4	+0.2
GLA				pmax	pmax		
	comp=Z,87nm,1.5s						
TOAD	Toad River Com	15.22	7	P	Pn	12 55 37.3	+0.9
	baz=189,SNR=12						
R31K	City Hall, Gus	15.30	346	P	Pn	12 55 37.9	+0.5
	baz=159						
Q32M	Nakina River	15.36	353	P	Pn	12 55 38.3	-0.1
	baz=169,SNR=9.7						
ESJX	Sierra Juarez	15.41	136	P	P	12 55 42.4	-1.3
ESJX				IAmb	IAmb	12 55 53.4	
	comp=Z,102nm,1.4s						
Y14A	Wickenburg	15.60	124	P	P	12 55 45.7	-0.1
WUAZ	Wupatki	15.61	116		Pn	12 55 40.9	-0.8
WUAZ				IAmb	IAmb	12 55 59.3	
	comp=Z,125nm,1.3s						
PV21	Cone Mtn., Par	15.66	103	IAmb	IAmb	12 55 57.8	
	comp=Z,166nm,1.4s						
PV23	Carpenter Ridg	15.68	103	IAmb	IAmb	12 55 46.6	
	comp=Z,91nm,1.0s						
R33M	Jennings River	15.69	356	P	P	12 55 45.0	-1.6
	baz=173,SNR=20						
PV10	Paradox Valley	15.70	103	IAmb	IAmb	12 55 58.2	
	comp=Z,108nm,1.3s						
PV14	Lion Creek, Pa	15.71	103	IAmb	IAmb	12 55 58.2	
	comp=Z,78nm,1.5s						
LIRD	Liard River Hi	15.71	5	P	Pn	12 55 43.7	+0.9
	baz=186,SNR=7.3						
PV20	West Nyswonger	15.76	104	IAmb	IAmb	12 56 08.2	
	comp=Z,179nm,1.5s						
PV19	Morning Glory	15.76	104	IAmb	IAmb	12 55 47.5	
	comp=Z,58nm,1.2s						
PV16	Nyswonger Mesa	15.81	104	IAmb	IAmb	12 55 49.4	
	comp=Z,55nm,1.2s						
PV18	Skein Mesa, Pa	15.84	104	IAmb	IAmb	12 55 48.4	
	comp=Z,59nm,1.1s						
PV11	David Mesa, Pa	15.85	104	IAmb	IAmb	12 56 07.0	
	comp=Z,70nm,1.1s						
PV07	Paradox Valley	15.94	103	IAmb	IAmb	12 56 00.6	
	comp=Z,96nm,1.4s						
PV02	Paradox Valley	15.98	104	IAmb	IAmb	12 55 51.5	
	comp=Z,127nm,1.5s						
P32M	Atlin	16.13	351		P	12 55 50.1	-1.3
P32M	Atlin	16.13	351	P	Pn	12 55 49.8	+1.6
	baz=166,SNR=6.9						
PV01	Paradox Valley	16.13	104	IAmb	IAmb	12 56 02.9	
	comp=Z,102nm,1.3s						
SKAG	Skagway	16.22	348	P	P	12 55 52.3	-0.1
SKAG	Skagway	16.22	348	P	Pn	12 55 50.3	+1.0
	baz=162						
PLBC	Pleasant Camp	16.39	346	P	P	12 55 53.3	-0.9
	baz=159,SNR=7.8						
BEAVL	Fort Liard	16.55	6	P	Pn	12 55 54.2	+0.7
	baz=188,SNR=7.7						
KOTAN	Kotaneelee Air	16.59	8	P	Pn	12 55 54.3	+0.3
	baz=191,SNR=12						
MVCO	Mesa Verde	16.62	106		Pn	12 55 52.8	-2.0
MVCO				IAmb	IAmb	12 56 09.4	
	comp=Z,133nm,1.4s						
P33M	Teslin, Yukon	16.64	353	P	P	12 55 56.6	-0.5
	baz=169,SNR=9.4						
P29M	Windy Craggy	16.81	344	P	P	12 55 58.3	-0.7
	baz=156,SNR=10.0						
P30M	Million Dollar	17.12	346	P	P	12 56 02.0	-0.4
	baz=158						
214A	Organ Pipe Nat	17.14	128	P	Pn	12 56 00.1	-1.0
PNL	Peninsula	17.21	341	P	P	12 56 03.2	-0.1
	baz=152,SNR=6.2						
WHY	Whitehorse	17.31	350	P	P	12 56 04.5	0.0
	baz=164						
O30N	Mendenhall	17.59	348	P	P	12 56 08.5	+0.9
	baz=161,SNR=14						
N32M	Quiet Lake	17.59	353	P	Pn	12 56 05.6	-1.0
N32M	Quiet Lake	17.59	353	P	P	12 56 08.1	+0.6
	baz=169						
O29M	Mount Kennedy	17.60	343	P	P	12 56 09.3	+1.6
O29M	Mount Kennedy	17.60	343	P	P	12 56 08.4	+0.7
	baz=155,SNR=8.6						
RSSD	Black Hills	17.67	80		Pn	12 56 06.4	-1.5
RSSD				IAmb	IAmb	12 56 26.1	
	comp=Z,105nm,1.4s						
RSSD	Black Hills	17.67	80	P	Pn	12 56 06.4	-1.5
RSSD				pmax	pmax		
	comp=Z,105nm,1.4s						
TGTN	Hyland Airport	17.77	1	P	P	12 56 11.1	+1.6
	baz=180,SNR=10						
PINM	Pinnacle	17.79	341	P	P	12 56 10.4	+0.6
	baz=151,SNR=9.5						
PCA	Pinnacle	17.79	341	P	P	12 56 10.8	+1.0
PCA				IAmb	IAmb	12 56 20.3	
	comp=Z,104nm,1.2s						
HYT	Haines Junctio	17.88	346		P	12 56 12.4	+1.6
HYT	Haines Junctio	17.88	346	P	P	12 56 11.4	+0.6
	baz=158,SNR=8.8						
YUK6	Outpost Mounta	18.15	345	P	P	12 56 15.3	+1.4
	baz=156,SNR=16						
N31M	Braeburn, Yuko	18.23	349	P	P	12 56 16.4	+1.8
	baz=163,SNR=11						
MESA	MESA	18.29	338	P	P	12 56 17.3	+1.9
	baz=147						
O28M	Mount Upton	18.38	342	P	Pn	12 56 17.9	+1.4
	baz=152						
N30M	Aishikik Lake	18.40	347	P	Pn	12 56 18.6	+2.0
	baz=160,SNR=13						
YUK4	Talbot Arm	18.57	345	P	Pn	12 56 21.2	+2.4
	baz=156						
BGLC	Bering Glacier	18.61	337	P	Pn	12 56 20.4	+1.4
	baz=144						
FARO	Faro, Yukon	18.68	353	P	Pn	12 56 22.0	+2.1
	baz=169,SNR=12						
YUK8	Steele Glacier	18.74	343	P	Pn	12 56 22.2	+1.3
	baz=154,SNR=9.3						
M31M	Drury Creek, Y	18.75	352	P	Pn	12 56 21.8	+1.0
	baz=166						
KAIM	Kayak Island	18.80	335	P	Pn	12 56 21.9	+0.6
	baz=142						
CTG	Chitna Glacier	18.82	341	P	Pn	12 56 23.3	+1.6
	baz=150,SNR=14						
MMPY	Sheldon Lake,	18.93	356	P	Pn	12 56 24.7	+1.8
	baz=174,SNR=43						
Q23K	Middleton Isla	19.05	331	P	Pn	12 56 25.9	+1.6
	baz=137						
CRQE	Cirque	19.08	338	P	Pn	12 56 26.7	+1.9
	baz=146,SNR=12						
ANMO	Albuquerque	19.21	110	P	Pn	12 56 26.7	0.0
	comp=Z,0.1nm,0.3s,baz=34,slow=12,SNR=23						
	comp=Z,10nm,0.9s						
ANMO	Albuquerque	19.21	110	*i* P	Pn	12 56 28.1	+1.4
ANMO				pmax	pmax		
	comp=Z,127nm,2.0s						
YUK3	Moose Creek	19.33	343	P	Pn	12 56 29.0	+1.0
	baz=153,SNR=7.0						
Y22D	IRIS PASSCAL I	19.40	113	P	Pn	12 56 29.3	+0.4
	baz=307						
M29M	Somme Creek	19.56	346	P	Pn	12 56 31.2	+0.7
	baz=158,SNR=9.5						
VRDI	Verde Repeater	19.58	338	P	Pn	12 56 31.6	+0.7
MCARA	McCarthy VSAT	19.60	339	P	Pn	12 56 31.6	+0.7
	baz=147						
BMRM	Bremner River	19.69	336	P	Pn	12 56 33.0	+1.0
	baz=143,SNR=8.4						
WRGLY	Wrigley	19.70	7	P	Pn	12 56 32.1	+0.1
WRGLY	Wrigley	19.70	7	P	Pn	12 56 32.3	+0.3
	baz=190,SNR=30						
EYAK	Cordova Ski Ar	19.70	334	P	Pn	12 56 33.0	+0.9
	baz=140						
P23K	Montague Islan	19.83	331	P	Pn	12 56 33.9	+0.2
	baz=136						
GLB	Gilahina Butte	19.85	338	P	Pn	12 56 34.6	+0.6
GLB				IAmb	IAmb	12 56 45.0	
	comp=Z,71nm,1.4s						
BVCY	Beaver Creek	19.99	343	P	Pn	12 56 35.5	0.0
	baz=153,SNR=5.9						
L29M	L29M	20.12	347	P	Pn	12 56 37.8	+0.6
L29M	L29M	20.12	347	P	Pn	12 56 36.9	-0.3
	baz=159,SNR=7.4						
M27K	Edge Creek, AK	20.16	342	P	Pn	12 56 38.0	+0.3
	baz=151,SNR=25						
N25K	Chitina, Valde	20.20	338	P	Pn	12 56 38.8	+0.7
	baz=144,SNR=5.2						
GLI	Glacier Island	20.38	334	P	Pn	12 56 40.6	+0.5
	baz=138,SNR=5.3						
FFC	Flin Flon	20.40	48	P	P	12 56 38.3	0.0
FFC				IAmb	IAmb	12 56 45.1	
	comp=Z,103nm,1.1s						
FFC	Flin Flon	20.40	48	P	P	12 56 38.3	0.0
FFC				pmax	pmax		
	comp=Z,103nm,1.2s						
YKA	Yellowknife Ar	20.44	19	P	P	12 56 38.6	0.0
	comp=Z,19nm,0.9s,baz=212,slow=10,SNR=23						
	comp=Z,19nm,0.9s						
M26K	Nabesna, AK	20.46	341	P	Pn	12 56 40.7	-0.4
	baz=148,SNR=10						
KDAK	Kodiak Island	20.49	322	P	Pn	12 56 41.8	+0.4
KDAK				IAmb	IAmb	12 56 49.2	
	comp=Z,72nm,1.2s						
KDAK	Kodiak Island	20.49	322	P	P	12 56 40.1	+0.9
	comp=Z,21nm,1.1s,baz=119,slow=6.0,SNR=5.0						
	comp=Z,21nm,1.1s						
KDAK	Kodiak Island	20.49	322	P	Pn	12 56 41.5	+0.1
	baz=122						
KLU	Klutina	20.49	336	P	Pn	12 56 41.4	-0.1
	baz=142,SNR=8.9						
OHAK	Old Harbor	20.52	320	P	Pn	12 56 42.8	+1.0
OHAK				IAmb	IAmb	12 56 49.2	
	comp=Z,89nm,1.3s						
OHAK	Old Harbor	20.52	320	P	Pn	12 56 41.7	0.0
	baz=120						
SII	Sitkinak Islan	20.63	317	P	Pn	12 56 43.4	+0.3
	baz=117						
SEW	Seward	20.64	330	P	Pn	12 56 43.2	+0.2
SEW				IAmb	IAmb	12 56 53.5	
	comp=Z,96nm,1.3s						
SEW	Seward	20.64	330	P	Pn	12 56 42.2	-0.9
	baz=133						
K29M	Barlow Dome	20.73	349	P	P	12 56 42.6	+0.7
	baz=161,SNR=16						
L27K	Beaver Creek,	20.77	343	P	Pn	12 56 43.7	-1.1
	baz=152,SNR=22						
PWL	Port Wells	20.77	332	P	Pn	12 56 44.0	-0.8
	baz=136						
Q20K	Shuyak Island	20.87	324	P	Pn	12 56 45.3	-0.5
	baz=124						
BRSE	Bradley Lake S	20.88	328	P	P	12 56 44.0	+0.5
	baz=130						
O22K	Cooper Landing	20.99	330	P	Pn	12 56 46.6	-0.7
	baz=133						
HARP	HAARP	21.00	338	P	P	12 56 46.4	+1.6
	baz=144						
CHIR	Chirikof Islan	21.04	314	P	P	12 56 47.4	+2.2
	baz=113						
M24K	Tolsona, Glenn	21.05	337	P	P	12 56 48.1	+2.7
	baz=142,SNR=6.9						
L26K	Log Cabin Wild	21.08	341	P	P	12 56 47.3	+1.6
	baz=149,SNR=34						
SCM	Sheep Creek Mo	21.18	335	P	P	12 56 49.3	+2.5
	baz=140,SNR=9.7						
HOM	Homer	21.18	327	P	P	12 56 48.6	+2.0
	baz=128						
SLKM	Skilak Lake	21.19	330	P	P	12 56 48.3	+1.5
SLKM				IAmb	IAmb	12 56 57.0	
	comp=Z,45nm,1.1s						
KNK	Knik Glacier	21.22	333	P	P	12 56 49.0	+1.8
	baz=137,SNR=7.2						
DAWY	Dawson	21.22	347	P	P	12 56 49.0	+1.8
DAWY	Dawson	21.22	347	P	P	12 56 48.5	+1.4
	baz=158,SNR=12						
R18K	Karluk	21.24	320	P	P	12 56 48.7	+1.4
	baz=119						
M23K	Glacier View	21.27	335	P	P	12 56 49.6	+1.9
	baz=139,SNR=10						
J30M	Hart River	21.28	351	P	P	12 56 49.7	+1.8
	baz=164,SNR=19						
J29N	Klondike Camp	21.41	349	P	P	12 56 50.7	+1.5
	baz=160						
RC01	Rabbit Creek A	21.42	331	P	P	12 56 50.6	+1.4
	baz=134,SNR=9.9						
SML	Sawmill	21.47	334	P	P	12 56 51.7	+1.8
	baz=138						
PAX	Paxson	21.56	339	P	P	12 56 52.1	+1.3
	baz=145						
PMR	Palmer	21.57	333	P	P	12 56 52.0	+1.1
	baz=136,SNR=19						
Q19K	Cape Douglas,	21.58	323	P	P	12 56 53.2	+2.1
Q19K	Cape Douglas,	21.58	323	P	P	12 56 52.8	+1.7
	baz=123						
K27K	Chicken	21.68	344	P	P	12 56 53.0	+0.9
	baz=152						
CAPN	Captain Cook N	21.71	329	P	P	12 56 53.9	+1.7
	baz=131						
P19K	Oil Pt	21.82	325	P	P	12 56 54.5	+0.8
	baz=125						
O20K	Slope Mountain	21.83	327	P	P	12 56 54.7	+0.9
	baz=127						
WAT6	Susitna Watana	21.88	336	P	P	12 56 55.3	+0.9
	baz=140,SNR=20						
I30M	Mount Dempster	21.91	351	P	P	12 56 55.6	+1.0
	baz=164,SNR=20						
M22K	Willow	22.02	332	P	P	12 56 56.0	+0.4
	baz=134						
SUA	Susitna One	22.03	331	P	P	12 56 56.8	+0.8
	baz=133,SNR=11						
Q18K	Katmai Hardscr	22.04	322	P	P	12 56 57.2	+1.1
	baz=120,SNR=20						
RIDG	Independent Ri	22.04	341	P	P	12 56 57.4	+1.4
	baz=147,SNR=21						
SCRK	Sand Creek	22.05	342	P	P	12 56 57.3	+1.3
	baz=149,SNR=18						
DHY	Denali Highway	22.16	337	P	P	12 56 58.5	+1.1
	baz=141,SNR=36						
Q17K	Contact Creek	22.25	320	P	P	12 56 59.7	+1.5
	baz=118,SNR=18						
I29M	Ogilvie Camp,	22.28	349	P	P	12 56 59.6	+1.1
	baz=161						
H31M	Peel River	22.29	354	P	P	12 56 59.3	+0.8
	baz=168,SNR=32						
WAT1	Susitna Watana	22.31	336	P	P	12 57 00.1	+1.2
	baz=139						
K24K	Donnelly Dome	22.32	340	P	P	12 57 01.1	+2.1
	baz=145,SNR=12						
N20K	Mount Spurr	22.38	329	P	P	12 57 01.2	+1.6
	baz=130						
SPCR	Spurr Chakacha	22.38	329	P	P	12 57 01.3	+1.7
	baz=130						
J26L	Joseph Creek	22.41	343	P	P	12 57 01.5	+1.6
	baz=150,SNR=20						
P18K	Big Mountain,	22.52	323	P	P	12 57 03.0	+1.8
	baz=122,SNR=28						
CUT	Chulitna	22.53	333	P	P	12 57 02.8	+1.7
	baz=135,SNR=6.9						
O19K	Port Alsworth	22.59	326	P	P	12 57 03.5	+1.7
	baz=125,SNR=13						
I28M	Miner Creek	22.60	348	P	P	12 57 03.2	+1.2
	baz=158,SNR=14						
SKT	Skwentna	22.66	331	P	P	12 57 04.3	+1.8
	baz=132,SNR=10						
O18K	Koktuh Hills	22.76	324	P	P	12 57 05.3	+1.6
	baz=123,SNR=14						
Q16K	King Salmon	22.80	321	P	P	12 57 05.9	+2.0
	baz=118,SNR=14						
CHNA	Chernabura Isl	22.83	310	P	P	12 57 06.0	+1.7
	baz=106						
J25K	Salcha River,	22.91	341	P	P	12 57 05.9	+0.7
	baz=147,SNR=12						
P17K	Kvichak River	22.95	322	P	P	12 57 07.1	+1.5
	baz=120						
N19K	Bonanza Creek	23.01	327	P	P	12 57 07.7	+1.4
	baz=126,SNR=24						
I27K	Kandik River	23.02	346	P	P	12 57 07.5	+1.2
	baz=155,SNR=14						
I26K	Coal Creek Min	23.04	344	P	P	12 57 07.7	+1.3
	baz=152,SNR=13						
AGMN	Agassiz Nation	23.05	67	P	P	12 57 06.3	-0.5
AGMN				IAmb	IAmb	12 57 15.2	
	comp=Z,64nm,1.2s						
EPYK	Eagle Plains	23.06	352	P	P	12 57 07.5	+0.7
	baz=164,SNR=23						
ULM	Lac du Bonnet	23.09	62	P	P	12 57 06.2	-0.9
ULM	Lac du Bonnet	23.09	62	P	P	12 57 06.4	-0.7
	comp=Z,25nm,0.8s,baz=272,slow=9.8,SNR=18						
	comp=Z,25nm,0.8s						
ULM	Lac du Bonnet	23.09	62	P	P	12 57 06.2	-0.9
ULM				pmax	pmax		
	comp=Z,144nm,1.4s						
H29M	Whitestone	23.11	350	P	P	12 57 08.2	+1.1
	baz=161,SNR=12						
MCK	McKinley	23.11	337	P	P	12 57 08.4	+1.2
	baz=140,SNR=9.0						
HDA	Harding Lake	23.12	340	P	P	12 57 08.2	+0.9
	baz=144						
M20K	Styx River	23.16	330	P	P	12 57 08.6	+0.8
	baz=130,SNR=15						
S14K	Fog Glacier	23.26	313	P	P	12 57 10.1	+1.2
	baz=109						
TRF	Thorofare Moun	23.30	335	P	P	12 57 10.8	+1.4
	baz=137,SNR=14						
G31M	Satah River	23.39	354	P	P	12 57 10.3	+0.4
	baz=169,SNR=16						
ILAR	Eielson Array	23.40	340	P	P	12 57 10.8	+0.7
	comp=Z,2.3nm,0.8s,baz=157,slow=7.1,SNR=22						
ILAR				PcP	PcP	13 00 55.6	-0.4
	comp=Z,1.5nm,0.7s,baz=177,slow=1.7,SNR=12						
	comp=Z,2.3nm,0.8s						
SDPT	Sand Point	23.47	311	P	P	12 57 12.8	+2.0
	baz=106						
N18K	Kilae Creek	23.50	326	P	P	12 57 12.6	+1.5
	baz=123,SNR=18						
PPLA	Purkeypile	23.51	333	P	P	12 57 12.7	+1.3
	baz=133,SNR=18						
O17K	Koliganek Bris	23.53	323	P	P	12 57 13.2	+1.8
	baz=120,SNR=8.5						
H27K	Steamboat Moun	23.58	347	P	P	12 57 13.1	+1.2
	baz=156,SNR=11						
P16K	Nushagak River	23.58	321	P	P	12 57 13.7	+1.8
	baz=117						
G30M	tAoh Zraii Nji	23.61	353	P	P	12 57 12.9	+0.7
	baz=166,SNR=6.6						
M19K	Big River Lodg	23.64	329	P	P	12 57 14.1	+1.7
	baz=128						
PRP	Porcupine Dome	23.71	342	P	P	12 57 14.3	+1.0
	baz=148,SNR=9.5						
COLA	College	23.72	340	P	P	12 57 14.9	+1.7
COLA	College	23.72	340	*i* P	P	12 57 14.1	+0.9
COLA				pmax	pmax		
	comp=Z,47nm,2.3s						
COLA	College	23.72	340	P	P	12 57 13.8	+0.6
	baz=143						
G29M	Pine Creek	23.73	351	P	P	12 57 13.6	+0.3
	baz=162,SNR=16						
L20K	Farewell, AK	23.81	331	P	P	12 57 15.5	+1.3
	baz=130,SNR=16						
POKR	Poker Plat Res	23.82	340	P	P	12 57 14.3	+0.1
	baz=144						
NEA2	Nenana	23.82	338	P	P	12 57 15.3	+1.1
	baz=141,SNR=18						
CAST	Castle Rocks	23.84	334	P	P	12 57 14.9	+0.5
	baz=134,SNR=10						
F31M	Tsiigehtchic	23.86	355	P	P	12 57 14.9	+0.4
	baz=170,SNR=5.8						
O16K	Kokwok River B	23.89	322	P	P	12 57 16.2	+1.4
	baz=118,SNR=25						
M18K	Stony River	23.94	327	P	P	12 57 15.9	+0.6
	baz=125,SNR=12						
N17K	Nushagak Hills	23.96	324	P	P	12 57 17.1	+1.5
	baz=121,SNR=24						
L19K	White Mountain	23.98	329	P	P	12 57 17.5	+1.8
	baz=128,SNR=21						
BPAW	Bear Paw Mtn.	23.99	336	IAmb	IAmb	12 57 25.1	
	comp=Z,33nm,1.2s						
BPAW	Bear Paw Mtn.	23.99	336	P	P	12 57 16.2	+0.4
	baz=137,SNR=13						
G27K	Doyon Strip	24.13	347	P	P	12 57 18.6	+1.4
	baz=156,SNR=15						
F30M	Barrier River	24.18	353	P	P	12 57 17.9	+0.3
	baz=167						
CHUM	Lake Minchumin	24.24	334	P	P	12 57 18.7	+0.6
	baz=134,SNR=8.1						
I23K	Minto, Yukon-K	24.33	339	P	P	12 57 20.0	+1.1
	baz=141,SNR=14						
H25L	Birch Creek	24.42	343	P	P	12 57 20.8	+1.1
	baz=148,SNR=15						
K20K	Telida	24.45	332	P	P	12 57 20.8	+0.7
	baz=131						
EPLO	Experimental L	24.46	64	P	P	12 57 19.5	-0.8
O15K	Ungalikthiuk R	24.49	320	P	P	12 57 21.1	+0.6
O15K	Ungalikthiuk R	24.49	320	P	P	12 57 21.6	+1.2
	baz=115,SNR=8.6						
H24K	Noodor Dome	24.52	341	P	P	12 57 22.0	+1.3
	baz=144,SNR=18						
M17K	Holitna River	24.53	326	P	P	12 57 22.3	+1.5
	baz=122,SNR=9.4						
TXAR	Lajitas Array	24.56	118	P	P	12 57 22.6	+1.1
	comp=Z,2.3nm,0.8s,baz=297,slow=8.2,SNR=20						
TXAR				PcP	PcP	13 00 58.8	-0.5
	comp=Z,0.4nm,0.6s,baz=209,slow=0.5,SNR=3.6						
	comp=Z,2.3nm,0.8s						
N16K	Nishlik Lake	24.61	323	P	P	12 57 22.3	+0.8
	baz=119,SNR=17						
MLY	Manley	24.61	337	P	P	12 57 22.6	+1.0
MLY				IAmb	IAmb	12 57 31.5	
	comp=Z,33nm,1.1s						
MLY	Manley	24.61	337	P	P	12 57 22.7	+1.0
	baz=139,SNR=26						
G26K	Porcupine Rive	24.62	346	P	P	12 57 22.8	+1.3
	baz=152,SNR=5.7						
F28M	Old Crow	24.62	350	P	P	12 57 23.0	+1.4
	baz=160,SNR=5.9						
L18K	Granite Mounta	24.69	328	P	P	12 57 24.0	+1.7
	baz=125,SNR=16						
INK	Inuvik	24.71	356	P	P	12 57 22.2	-0.1
	comp=Z,27nm,1.3s,baz=172,slow=12,SNR=16						
	comp=Z,27nm,1.3s						
INK	Inuvik	24.71	356	P	P	12 57 22.8	+0.5
	baz=171,SNR=15						
G25K	Bearman Lake	24.90	344	P	P	12 57 25.6	+1.5
	baz=148,SNR=12						
H23K	Yukon River	24.91	340	P	P	12 57 25.6	+1.4
	baz=142,SNR=21						
M16K	Timber Creek	24.96	324	P	P	12 57 26.4	+1.7
	baz=120,SNR=18						
FALS	False Pass	24.99	309	P	P	12 57 25.3	+0.3
	baz=102						
J20K	Nowinta River	25.03	333	P	P	12 57 26.3	+1.1
J20K				IAmb	IAmb	12 57 28.4	
	comp=Z,60nm,1.4s						
J20K	Nowinta River	25.03	333	P	P	12 57 25.8	+0.5
	baz=132,SNR=23						
N15K	Kwethluk River	25.05	322	P	P	12 57 26.9	+1.4
	baz=116,SNR=13						
E29M	Blow River	25.14	352	P	P	12 57 27.1	+0.9
	baz=164,SNR=15						
G24K	Hadweenzic Riv	25.14	342	P	P	12 57 27.2	+0.9
	baz=146,SNR=20						
O14K	Tigyukauivet M	25.20	319	P	P	12 57 28.1	+1.4
O14K				IAmb	IAmb	12 57 37.7	
	comp=Z,53nm,1.2s						
O14K	Tigyukauivet M	25.20	319	P	P	12 57 27.9	+1.1
	baz=113						
L17K	Donlin	25.27	327	P	P	12 57 28.9	+1.4
	baz=122,SNR=29						
F26K	Sheenjek River	25.35	346	P	P	12 57 29.1	+0.9
	baz=153,SNR=8.0						
J19K	Poorman	25.39	332	P	P	12 57 29.8	+1.2
J19K	Poorman	25.39	332	P	P	12 57 30.3	+1.7
	baz=130,SNR=22						
E27K	Coleen River	25.40	349	P	P	12 57 29.8	+1.2
	baz=157,SNR=22						
J18K	Innoko River	25.44	330	P	P	12 57 30.8	+1.7
	baz=127,SNR=22						
H22K	Ishtalitna Cre	25.45	338	P	P	12 57 30.0	+1.0
	baz=139,SNR=35						
L16K	Owhat River	25.52	325	P	P	12 57 31.1	+1.4
	baz=120,SNR=55						
E28M	Babbage River	25.52	351	P	P	12 57 30.4	+0.7
	baz=161,SNR=12						
F25K	Christian Rive	25.53	345	P	P	12 57 30.9	+1.0
	baz=150,SNR=17						
M15K	Kasigluk River	25.55	323	P	P	12 57 31.3	+1.3
	baz=117,SNR=10						

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I20K  Naaghedeneel       25.55 334   P       P       12 57 31.0 +1.0
      baz=132,SNR=17
K17K  Iditarod           25.59 328   P       P       12 57 30.9 +0.5
      baz=124,SNR=23
H21K  Melozitna Rive     25.66 337   P       P       12 57 32.1 +1.1
      baz=136,SNR=25
N14K  Kuskokwak Cree     25.66 321   P       P       12 57 32.5 +1.5
N14K  Kuskokwak Cree     25.66 321   P       P       12 57 32.0 +1.0
      baz=114
C36M  Paulatuk           25.73   4   P       P       12 57 31.4  0.0
      baz=187
G23K  Bananza Creek      25.74 340   P       P       12 57 32.9 +1.2
      baz=142,SNR=21
F24K  Squaw Lake         25.91 343   P       P       12 57 33.6 +0.3
      baz=146
E25K  Arctic Village     25.98 346   P       P       12 57 34.9 +1.0
      baz=151,SNR=5.8
EYMN  Ely                25.99  68   P       P       12 57 33.9 -0.3
D28M  Stokes Point       26.13 352   P       P       12 57 35.5 +0.4
      baz=163
M14K  Bethel             26.14 322   P       P       12 57 36.0 +0.7
      baz=115,SNR=11
H20K  Anotleneega Mo     26.16 335   P       P       12 57 35.9 +0.4
      baz=133,SNR=23
COLD  Coldfoot           26.19 341   P       P       12 57 37.0 +1.3
      baz=142,SNR=10
J17K  VABM Dome          26.27 329   P       P       12 57 36.9 +0.5
      baz=124
G22K  Bettles            26.27 340   P       P       12 57 37.2 +0.7
      baz=140
GCSA  Galena City Sc     26.30 333   P       P       12 57 37.0 +0.3
      baz=129,SNR=14
D27M  Malcolm River      26.30 350   P       P       12 57 36.7 -0.2
      baz=159
L15K  Ungalak Mounta     26.34 324   P       P       12 57 38.8 +1.6
      baz=117,SNR=9.6
G21K  Allakaket          26.49 338   P       P       12 57 39.1 +0.6
      baz=136
E24K  Your Creek         26.51 343   P       P       12 57 39.8 +1.1
      baz=146,SNR=14
UNV   Unalaska Valle     26.61 306   P       P       12 57 39.6  0.0
      baz=96
M13K  Dall Lake          26.62 321   P       P       12 57 40.9 +1.2
      baz=113,SNR=7.4
K15K  Wolf Creek Mou     26.66 325   P       P       12 57 40.9 +0.9
      baz=118
H19K  Roundabout Mou     26.66 334   P       P       12 57 41.1 +1.1
      baz=131,SNR=21
L14K  Kuka Creek         26.71 323   P       P       12 57 40.8 +0.3
      baz=115,SNR=9.5
E23K  Chandalar          26.73 343   P       P       12 57 40.0 -0.7
      baz=144,SNR=16
J16K  Anvik River        26.78 328   P       P       12 57 42.7 +1.5
J16K                                 IAmb    IAmb    12 57 51.3
      comp=Z,36nm,1.1s
J16K  Anvik River        26.78 328   P       P       12 57 41.7 +0.6
      baz=121,SNR=6.9
F22K  John River         26.89 340   P       P       12 57 43.0 +0.9
      baz=140
F21K  Alatna River       27.00 339   P       P       12 57 44.4 +1.2
      baz=138,SNR=7.7
C27K  Jago River         27.03 348   P       P       12 57 44.8 +1.5
      baz=155,SNR=7.7
H18K  Honhosa River      27.05 333   P       P       12 57 44.8 +1.3
      baz=127
I17K  Unalakleet         27.14 329   P       P       12 57 45.6 +1.3
      baz=122
D25K  Kavik River        27.18 346   P       P       12 57 46.0 +1.3
      baz=151,SNR=7.3
TOLK  Toolik Lake Re     27.20 343   P       P       12 57 46.4 +1.5
      baz=145,SNR=13
G19K  Purcell Mounta     27.27 335   P       P       12 57 46.6 +1.1
      baz=131,SNR=17
E22K  Anaktuvuk Pass     27.29 341   P       P       12 57 46.3 +0.6
      baz=141,SNR=12
H17K  Granite Mounta     27.45 331   P       P       12 57 47.0 -0.1
      baz=125
C26K  Camden Bay         27.47 348   P       P       12 57 48.0 +0.8
      baz=154,SNR=7.6
D24K  Happy Valley       27.48 344   P       P       12 57 48.3 +0.9
      baz=147
F20K  Avaraart Lake      27.48 337   P       P       12 57 47.9 +0.5
      baz=134
BLKN  Baker Lake         27.55  30   P       P       12 57 48.6 +0.6
BLKN                                 IAmb    IAmb    12 57 57.5
      comp=Z,40nm,1.3s
G18K  Tagagawik          27.60 334   P       P       12 57 48.6 +0.1
      baz=128
J14K  Nanvaranak Lak     27.70 325   P       P       12 57 49.4 +0.1
      baz=116
D23K  Nanushuk River     27.70 343   P       P       12 57 49.8 +0.5
      baz=144,SNR=12
K13K  Kusilvak Mount     27.81 323   P       P       12 57 50.2 -0.2
      baz=114
F19K  Shaleruckik Mo     27.93 336   P       P       12 57 51.5 +0.1
      baz=131
M11K  Mekoryuk           27.93 320   P       P       12 57 51.6 +0.1
      baz=109
C24K  Franklin Bluff     27.94 345   P       P       12 57 51.4  0.0
      baz=148
NIKH  Nikolski High      27.94 303   P       P       12 57 52.6 +1.0
NIKH                                 IAmb    IAmb    12 58 01.5
      comp=Z,38nm,1.1s
NIKH  Nikolski High      27.94 303   P       P       12 57 52.6 +1.0
      baz=93
G17K  Kiwalik Mounta     28.03 332   P       P       12 57 53.0 +0.7
      baz=125,SNR=5.2
E21K  Killik River       28.04 340   P       P       12 57 53.0 +0.6
      baz=138
D22K  Ayikyak River      28.07 342   P       P       12 57 53.7 +1.0
      baz=141
H16K  Elim               28.11 330   P       P       12 57 53.9 +0.9
      baz=121
E19K  Redstone River     28.19 337   P       P       12 57 54.0 +0.2
      baz=132
A36M  Sachs Harbour      28.32   2   P       P       12 57 54.7 -0.1
      baz=185
F18K  Selawik            28.36 334   P       P       12 57 55.8 +0.7
      baz=128
L42A  Oliver, Polo       28.40  80   P       P       12 57 54.9 -0.9
C23K  Itkillik River     28.40 344   P       P       12 57 55.8 +0.2
      baz=145,SNR=9.2
E20K  Nigu River         28.47 339   P       P       12 57 56.8 +0.6
      baz=135
G16K  Koyuk River        28.56 331   P       P       12 57 57.1 +0.1
      baz=122
CCM   Cathedral Cave     28.62  89   P       P       12 57 57.6 -0.3
CCM   Cathedral Cave     28.62  89   P       P       12 57 57.6 -0.3
CCM                                  pmax    pmax
      comp=Z,101nm,1.5s
P08K  Saint George I     28.71 311   P       P       12 57 58.9 +0.4
      baz=99
F17K  Baldwin Pennin     28.77 333   P       P       12 57 59.0 +0.1
      baz=125
C21K  Knifeblade Rid     28.77 341   P       P       12 57 59.2 +0.3
      baz=138,SNR=7.8
D20K  Etivluk River      28.90 339   P       P       12 58 00.2 +0.2
      baz=135
G15K  Niukluk            28.96 329   P       P       12 58 00.4 -0.1
      baz=120
B21K  Ikpikpuk River     29.09 342   P       P       12 58 01.6 -0.1
      baz=139
D19K  Kuna River         29.15 338   P       P       12 58 02.5 +0.3
      baz=133
E18K  Tukpahlearik C     29.16 335   P       P       12 58 02.6 +0.3
      baz=128
SPIA  Saint Paul Isl     29.18 312   P       P       12 58 02.8 +0.2
      baz=99
ANM   Nome               29.25 328   P       P       12 58 03.1 -0.1
      baz=117
E17K  Hotham Inlet       29.34 334   P       P       12 58 04.0 +0.2
      baz=126
B22K  Teshekpuk Lake     29.38 343   P       P       12 58 03.9 -0.3
      baz=141
HKT   Hockley            29.41 107 i P       P       12 58 09.1 +4.3
HKT                                  pmax    pmax
      comp=Z,65nm,1.8s
F15K  North Star Dit     29.54 330   P       P       12 58 05.9 +0.2
      baz=120
C19K  Lookout Ridge      29.95 338   P       P       12 58 08.8 -0.6
      baz=131
B20K  Meade River        29.97 341   P       P       12 58 09.0 -0.4
      baz=136
F14K  Arctic Creek       30.03 329   P       P       12 58 09.6 -0.5
      baz=117
C18K  Utukok River       30.10 337   P       P       12 58 10.8 +0.1
      baz=129
A22K  Sinclair Lake      30.23 343   P       P       12 58 11.4 -0.2
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      baz=140
RDOG  Red Dog Mine       30.25 335   P       P       12 58 11.7 -0.2
      baz=126
C17K  DeLong Mountai     30.57 336   P       P       12 58 14.3 -0.5
      baz=126
TNA   Tin City           30.67 329   P       P       12 58 15.6  0.0
      baz=116
B18K  Kokolik River      30.73 338   P       P       12 58 16.1 -0.1
      baz=129
A19K  Wainwright         31.07 339   P       P       12 58 18.5 -0.6
      baz=131
C16K  Lisburne Hills     31.12 334   P       P       12 58 18.9 -0.7
      baz=123
GAMB  Gambell            31.49 324   P       P       12 58 22.3 -0.6
      baz=108
WVT   Waverly            31.91  90   P       P       12 58 26.5 -0.4
WVT   Waverly            31.91  90   P       P       12 58 26.5 -0.4
WVT                                  pmax    pmax
      comp=Z,47nm,1.3s
RES   Resolute Bay       34.42  15   P       P       12 58 49.1 +0.7
RES                                  IAmb    IAmb    12 59 01.6
      comp=Z,23nm,1.2s
RES   Resolute Bay       34.42  15   P       P       12 58 48.9 +0.5
      comp=Z,6.4nm,0.9s,baz=245,slow=13,SNR=6.7
      comp=Z,6.4nm,0.9s
RES   Resolute Bay       34.42  15   P       P       12 58 49.1 +0.7
RES                                  pmax    pmax
      comp=Z,23nm,1.3s
POIN  Pond Inlet         37.30  22   P       P       12 59 14.2 +1.2
SHEM  Shemya Is, Ala     38.25 304   LR      LR      13 11 57.6
      comp=Z,714nm,20.0s,baz=90,slow=31
CMIG  Matias Romero      38.96 122   LR      LR      13 16 11.7
      comp=Z,578nm,18.3s,baz=314,slow=37
SCHQ  Schefferville      40.47  52   P       P       12 59 41.2 +1.3
      comp=Z,13nm,1.0s,baz=273,slow=4.6,SNR=5.8
D62A  Allapoint, All     41.03  64   P       P       12 59 44.8 +0.2
D62A                                 IAmb    IAmb    12 59 53.2
      comp=Z,42nm,1.1s
BILL  Bilibino           41.10 329   P       P       12 59 42.7 -2.2
BILL                                 IAmb    IAmb    12 59 54.3
      comp=Z,44nm,1.4s
BILL  Bilibino           41.10 329 ceP       P       12 59 45.7 +0.8
BILL                                 pmax    pmax
      comp=Z,34nm,1.4s
PET   Petropavlovsk      47.21 308   P       P       13 00 34.1 +0.1
PET   Petropavlovsk      47.21 308  eP       P       13 00 32.0 -2.0
PET                                 eS       S       13 07 23.8 -2.1
PET                                  pmax    pmax
      comp=Z,200nm,5.2s
SEY   Seymchan           47.44 322   P       P       13 00 35.6 -0.1
      comp=Z,12nm,1.2s,baz=86,slow=9.7,SNR=14
      comp=Z,12nm,1.2s
SEY   Seymchan           47.44 322 ceP       P       13 00 36.3 +0.6
SEY                                  pmax    pmax
      comp=Z,45nm,1.3s
PEA0B Petropavlovsk-     47.73 309   P       P       13 00 38.0 -0.1
PEA0B Petropavlovsk-     47.73 309 i P       P       13 00 38.3 +0.3
PETK  Petropavlovsk-     47.73 309   P       P       13 00 37.6 -0.4
      comp=Z,7.1nm,1.0s,baz=75,slow=13,SNR=14
PETK                                 PcP     PcP     13 02 06.6 -0.4
      comp=Z,1.3nm,0.8s,baz=87,slow=8.1,SNR=2.3
PETK                                 LR      LR      13 17 47.7
      comp=Z,946nm,20.7s,baz=82,slow=32
      comp=Z,7.1nm,1.0s
SUMG  Summit             48.92  24   P       P       13 00 48.0 +0.5
SUMG  Summit             48.92  24   P       P       13 00 48.0 +0.5
SUMG                                 pmax    pmax
      comp=Z,33nm,1.2s
MA2   Magadan            49.19 318   P       P       13 00 49.9 +0.7
MA2   Magadan            49.19 318   P       P       13 00 49.7 +0.5
      comp=Z,5.3nm,0.9s,baz=67,slow=13,SNR=4.0
      comp=Z,5.3nm,0.9s
MA2   Magadan            49.19 318 ceP       P       13 00 51.5 +2.3
MA2                                  pmax    pmax
      comp=Z,27nm,1.7s
TIXI  Tiksi              52.82 337   P       P       13 01 14.2 -2.1
TIXI                                 IAmb    IAmb    13 01 24.7
      comp=Z,21nm,1.5s
TIXI                                 PcP     PcP     13 02 24.8 -0.6
TIXI  Tiksi              52.82 337   P       P       13 01 14.2 -2.1
TIXI                                                 13 02 24.8
TIXI                                 pmax    pmax
      comp=Z,21nm,1.5s
TAOE  Nuku Hiva Isla     53.44 194  eLR      LR      13 16 41.0
      comp=Z,386nm,28.5s
KBS   Kingsbay           55.35   9 ceP       P       13 01 37.8 +3.1
KBS                                  pmax    pmax
      comp=Z,9.0nm,1.7s
SPITS Spitsbergen Ar     56.46   8   P       P       13 01 42.3 -0.4
      comp=Z,6.1nm,1.0s,baz=39,slow=9.3,SNR=4.6
      comp=Z,6.1nm,1.0s
YAK   Yakutsk            57.40 327   P       P       13 01 48.8 -0.7
      comp=Z,9.5nm,0.4s,baz=74,slow=3.6,SNR=6.6
      comp=Z,9.5nm,0.4s
YAK   Yakutsk            57.40 327 ceP       P       13 01 49.3 -0.2
YAK                                  pmax    pmax
      comp=Z,36nm,1.3s
H11N3 WAKE ISLAND Hy     58.33 268   T       T       14 05 11.1
      baz=49,slow=75,SNR=327
H11N2 WAKE ISLAND Hy     58.33 268   T       T       14 05 11.2
      baz=49,slow=75,SNR=302
H11N1 WAKE ISLAND Hy     58.35 268   T       T       14 05 10.9
      baz=49,slow=75,SNR=239
YSS   Yuzhno-Sakhali     59.06 307   P       P       13 02 00.5 -0.9
YSS   Yuzhno-Sakhali     59.06 307  eP       P       13 02 02.3 +0.9
YSS                                 e                13 04 11.5
YSS                                 eS       S       13 10 03.2 -4.2
YSS                                 eSS      SS      13 13 58.5 -2.3
YSS                                  pmax    pmax
      comp=Z,20nm,1.3s
YSS                                  MLR     MLR
      comp=Z,400nm,16.0s
H11S1 WAKE ISLAND Hy     59.26 267   T       T       14 06 19.9
      baz=50,slow=75,SNR=78
H11S2 WAKE ISLAND Hy     59.27 267   T       T       14 06 18.6
      baz=50,slow=75,SNR=69
H11S3 WAKE ISLAND Hy     59.27 267   T       T       14 06 20.6
      baz=50,slow=75,SNR=67
GRNR  Gornyy             60.48 313 ⇓iP       P       13 02 10.4 -0.7
GRNR                                 pmax    pmax
      comp=Z,9.0nm,0.8s
ASAJ  Asahikawa          60.71 304   P       P       13 02 12.5 -0.2
      comp=Z,7.0nm,0.7s,baz=12,slow=1.6,SNR=8.7
      comp=Z,7.0nm,0.7s
ROSC  El Rosal           61.37 113   LR      LR      13 31 36.7
      comp=Z,389nm,21.3s,baz=284,slow=39
ZEA   Zeya               63.29 320  eP       P       13 02 29.8 -0.1
ZEA                                  pmax    pmax
      comp=Z,10.0nm,1.1s
KLR   Kul'dur            63.82 314   P       P       13 02 33.0 -0.5
      comp=Z,2.0nm,0.8s,baz=91,slow=6.4,SNR=5.5
KLR                                  LR      LR      13 28 34.4
      comp=Z,313nm,20.1s,baz=46,slow=34
      comp=Z,2.0nm,0.8s
KLR   Kul'dur            63.82 314 ceP       P       13 02 34.5 +1.0
KLR                                  pmax    pmax
      comp=Z,14nm,1.7s
PPT2  Papeete2           64.04 202  eS       S       13 11 08.9 -2.0
      comp=Z,93nm,25.5s
PPT2                                eLQ      LQ      13 18 43.4
      comp=Z,894nm,38.2s
PPT2                                eLR      LR      13 21 30.9
      comp=Z,263nm,30.2s
PPT2                                eLR      LR      13 21 42.5
      comp=Z,367nm,27.0s
HEH   HeiHe              65.39 317  eP       P       13 02 43.1 -0.6
HEH                                  sP      sP      13 02 49.9  0.0
HEH                                  S       S       13 11 31.9 +4.8
HEH                                  pmax    pmax
      comp=Z,31nm,1.3s
HEH                                  pmax    pmax
      comp=Z,240nm,5.0s
HEH                                  LR      LR
      comp=N,470nm,21.0s
HEH                                  LR      LR
      comp=E,410nm,21.3s
HEH                                  LR      LR
      comp=Z,790nm,24.6s
USA0B Ussuriysk Arra     66.80 309 i P       P       13 02 53.2 +0.3
USRK  Ussuriysk Ar.      66.80 309   P       P       13 02 52.7 -0.2
      comp=Z,6.0nm,1.1s,baz=48,slow=5.7,SNR=8.6
USRK                                 LR      LR      13 31 28.9
      comp=Z,354nm,18.3s,baz=37,slow=36
      comp=Z,6.0nm,1.1s
MDJ   Mudanjiang         67.86 311   P       P       13 02 59.9 +0.3
MDJ                                  S       S       13 11 54.6 -2.5
MDJ   Mudanjiang         67.86 311   ScS     SKiKP   13 13 08.8  +14
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MDJ                                  pmax    pmax
      comp=Z,9.0nm,2.1s
MDJ                                  LR      LR
      comp=N,100nm,10.6s
MDJ                                  LR      LR
      comp=E,840nm,16.5s
MDJ                                  LR      LR
      comp=Z,850nm,19.1s
MJAR  Matsushiro Arr     67.90 300   P       P       13 02 59.2 -0.8
      comp=Z,2.2nm,0.7s,baz=42,slow=4.5,SNR=8.1
MJAR                                 LR      LR      13 30 19.9
      comp=Z,302nm,19.4s,baz=61,slow=34
      comp=Z,2.2nm,0.7s
BNX   BinXian            68.31 313  ⇓P       P       13 03 02.5 +0.1
BNX                                  pmax    pmax
      comp=Z,16nm,1.2s
BNX                                  pmax    pmax
      comp=Z,220nm,4.3s
TBI   Tubuai             69.50 200  eS       S       13 12 17.1 +0.4
      comp=Z,177nm,24.2s
TBI                                 eLQ      LQ      13 21 01.1
      comp=Z,1µm,23.8s
TBI                                 eLR      LR      13 24 02.2
      comp=Z,1µm,31.2s
TBI                                 eLR      LR      13 24 15.0
      comp=Z,894nm,30.0s
NB2   NORSAR Subarra     70.54  19   P       P       13 03 16.4 +0.4
      comp=Z,42nm,1.7s,baz=330,slow=6.2
NB2   NORSAR Subarra     70.54  19   P       P       13 03 16.4 +0.4
      baz=330,slow=6.2
NOA   NORSAR Array B     70.54  19   P       P       13 03 15.2 -0.8
      comp=Z,6.9nm,1.2s,baz=332,slow=6.0,SNR=4.7
      comp=Z,6.9nm,1.2s
CN2   Changchun          70.64 312  eP       P       13 03 15.9 -0.9
CN2                                 esP      pwP     13 03 24.8 -0.6
CN2                                 eS       S       13 12 30.9 +1.0
CN2                                  pmax    pmax
      comp=Z,10.0nm,0.9s
CN2                                  pmax    pmax
      comp=Z,100nm,5.0s
CN2                                  LR      LR
      comp=N,500nm,19.0s
CN2                                  LR      LR
      comp=E,400nm,19.0s
CN2                                  LR      LR
      comp=Z,300nm,19.0s
EKA   Eskdalemuir Ar     70.97  30   P       P       13 03 16.6 -2.0
      comp=Z,1.5nm,0.9s,baz=310,slow=5.5,SNR=4.8
      comp=Z,1.5nm,0.9s
HFS   Hagfors            71.92  19   P       P       13 03 24.3  0.0
      comp=Z,2.6nm,0.8s,baz=331,slow=11,SNR=2.0
      comp=Z,2.6nm,0.8s
FINES FINESS Array B     73.12  12   P       P       13 03 31.2 -0.2
      comp=Z,4.6nm,0.9s,baz=331,slow=11,SNR=2.8
      comp=Z,4.6nm,0.9s
KSRS  Korea Array        73.55 306   P       P       13 03 34.1 -0.2
      comp=Z,1.6nm,0.7s,baz=50,slow=5.8,SNR=7.8
      comp=Z,1.6nm,0.7s
JNU   Nakatsue           74.69 301   P       P       13 03 40.5 -0.6
      comp=Z,14nm,1.1s,baz=85,slow=11,SNR=4.1
      comp=Z,14nm,1.1s
KLMR  Klimovskoe         75.26   6  eP       P       13 03 42.1 -1.8
KLMR                                e                13 03 55.0
KLMR                                 pmax    pmax
      comp=Z,39nm,1.5s
XLT   XiLinHaoTe         75.37 318  eP       P       13 03 46.0 +1.0
XLT                                  sP      pwP     13 03 53.1 -0.5
XLT                                  S       S       13 13 24.5 +0.6
XLT   XiLinHaoTe         75.37 318   SS      SS      13 18 18.3 +5.2
XLT                                  pmax    pmax
      comp=Z,11nm,1.1s
XLT                                  pmax    pmax
      comp=Z,160nm,5.6s
XLT                                  LR      LR
      comp=N,31nm,17.7s
XLT                                  LR      LR
      comp=E,560nm,18.3s
XLT                                  LR      LR
      comp=Z,560nm,23.8s
MOY   Mondy              75.69 331  eP       P       13 03 47.4 +0.7
MOY                                  pmax    pmax
      comp=Z,40nm,2.7s
ZAK   Zakamensk          75.91 329  eP       P       13 03 46.8 -1.1
ZAK                                  pmax    pmax
      comp=Z,8.0nm,1.7s
VSU   Vasula             76.07  13 ceP       P       13 03 50.4 +1.9
VSU                                  pmax    pmax
      comp=Z,22nm,1.7s
ULN   Ulaanbaatar        76.43 325 ceP       P       13 03 51.9 +0.9
ULN                                  pmax    pmax
      comp=Z,18nm,1.7s
SONM  Songino Array      76.72 325   P       P       13 03 52.7 +0.1
      comp=Z,5.6nm,0.9s,baz=46,slow=3.7,SNR=21
SONM                                 PP      PP      13 06 39.7 -4.8
      comp=Z,0.9nm,1.0s,baz=20,slow=5.1,SNR=3.5
      comp=Z,5.6nm,0.9s
BMRD  Maredsous          77.86  28  dP       P       13 04 00.5 +1.8
BGES  Gesves             77.90  28  dP       P       13 04 00.5 +1.5
      comp=Z,5.9nm,1.2s
BCLA  Clavier            77.94  28  dP       P       13 03 59.0 -0.3
      comp=Z,5.6nm,1.4s
KIRV  Kirov              77.97   1 i P       P       13 03 59.3 +0.1
DOU   Dourbes            77.97  29  dP       P       13 04 00.4 +1.0
      comp=Z,5.0nm,1.5s
MEM   Membach            78.02  28  dP       P       13 04 02.1 +2.5
BHOU  Houvegnez          78.24  28  dP       P       13 04 00.8 -0.1
ZALV  Zalesovo Beam      78.53 341   P       P       13 04 02.2 -0.2
      comp=Z,1.3nm,0.8s,baz=32,slow=3.9,SNR=6.1
ZALV                                 LR      LR      13 42 45.3
      comp=Z,386nm,18.3s,baz=23,slow=39
      comp=Z,1.3nm,0.8s
WLF   Walferdange        78.88  28  dP       P       13 04 05.2 +0.7
PGAV  Gavieira, Arco     79.24  41  eP       P       13 04 14.8 +8.1
PGAV                               i Amb             13 04 27.9
      comp=Z,42nm,1.9s
SVE   Sverdlovsk         79.45 355  eP       P       13 04 07.7 +0.3
SVE                                  pmax    pmax
      comp=Z,28nm,1.6s
CLL   Collm              79.59  23 i P       P       13 04 09.0 +0.7
CLL                                i                 13 04 15.6
CLL                                  pmax    pmax
      comp=Z,32nm,1.9s
CLL   Collm              79.59  23 i P       P       13 04 09.0 +0.7
      comp=Z,32nm,1.9s
CLL                                i x       x       13 04 15.6
      comp=Z,15nm,1.3s
CLL                                  AMS     AMS     13 47 00.0
      comp=Z,300nm,20.4s
HHC   Hu-ho-hao-te       79.87 318  eP       P       13 04 13.3 +3.2
HHC                                  pP      PcP     13 04 18.1 +0.4
HHC                                  S       S       13 14 12.4 -0.3
HHC   Hu-ho-hao-te       79.87 318   ScS     S       13 14 33.9  +21
HHC   Hu-ho-hao-te       79.87 318   SS      SS      13 19 30.6  +10
HHC                                  pmax    pmax
      comp=Z,9.0nm,0.6s
HHC                                  pmax    pmax
      comp=Z,160nm,4.5s
HHC                                  LR      LR
      comp=N,280nm,16.2s
HHC                                  LR      LR
      comp=E,240nm,17.7s
HHC                                  LR      LR
      comp=Z,580nm,18.2s
POLO  Lamas de Olo       79.92  41  eP       P       13 04 14.9 +4.5
ARTI  Arti               80.02 356   P       P       13 04 07.9 -2.6
ARTI                                 IAmb    IAmb    13 04 12.0
      comp=Z,6.7nm,0.7s
ARTI  Arti               80.02 356   P       P       13 04 10.6 +0.1
      comp=Z,1.7nm,0.4s,baz=23,slow=4.2,SNR=2.4
ARTI                                 LR      LR      13 41 29.0
      comp=Z,76nm,19.9s,baz=10,slow=37
      comp=Z,1.7nm,0.4s
MNK   Minsk              80.04  14 i P       P       13 04 10.7  0.0
      comp=E,24nm,1.0s
MNK                                i P       P       13 04 10.7  0.0
      comp=N,32nm,1.4s
MNK                                i P       P       13 04 10.7  0.0
      comp=Z,7.0nm,0.5s,baz=343
MNK                                i PP      PP      13 07 11.9 +0.1
MNK                                i PPP     PPP     13 09 00.9
MNK                                i S       S       13 14 14.4 +0.6
MNK                                i SS      SS      13 19 25.3 +2.8
MNK                                i SSS     SSS     13 23 03.2
MNK                                i LQ      LQ      13 34 45.5
MNK                                i LR      LR      13 40 25.7
MNK   Minsk              80.04  14 i P       P       13 04 10.6  0.0
MNK                                i                 13 07 11.9
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MNK				*i* PPP	PPP	13 09 00.9	
MNK				*i* S	**S**	**13 14 14.4**	**+0.6**
MNK				*i* SS	**SS**	**13 19 25.2**	**+2.8**
MNK				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MNK				pmax	pmax		
	comp=E,24nm,1.0s						
MNK				pmax	pmax		
	comp=N,32nm,1.4s						
PBRG	**Braganca**	**80.08**	**40**	*e*P	P	13 04 16.7	+5.5
BRG	**Berggiesshubel**	**80.25**	**23**	*e*P	**P**	**13 04 13.3**	**+1.5**
BRG				Amp		13 04 16.0	
	comp=Z,15nm,1.4s						
PVIS	**Viseu**	**80.38**	**42**	*e*P	P	13 04 24.1	+11
GRF	**Grafenberg Arr**	**80.50**	**25**	*e*P	**P**	**13 04 14.7**	**+1.5**
	comp=Z,12nm,1.4s,baz=342,slow=4.7						
TIA	**Tai'an**	**80.52**	**312**	P	**P**	**13 04 15.0**	**+1.4**
TIA				PcP	**PcP**	**13 04 21.4**	**+0.9**
TIA	**Tai'an**	**80.52**	**312**	S	**S**	**13 14 22.1**	**+2.6**
TIA				pmax	pmax		
	comp=Z,8.0nm,1.4s						
TIA				LR	LR		
	comp=N,200nm,14.7s						
TIA				LR	LR		
	comp=E,730nm,20.5s						
TIA				LR	LR		
	comp=Z,1μm,23.0s						
COI	**Coimbra**	**80.52**	**42**	*e*P	**P**	**13 04 15.3**	**+1.8**
PCAS	**Casmilo, Conde**	**80.60**	**42**	*e*P	**P**	**13 04 17.8**	**+3.8**
OBN	**Obninsk**	**80.66**	**9**	⇓*e*P	**P**	**13 04 15.2**	**+1.2**
OBN				*i* *PP	**pP**	**13 04 17.6**	**-0.8**
OBN				*i* *SP	**PcP**	**13 04 20.8**	**+0.1**
OBN				*e*S	**S**	**13 14 20.9**	**+0.7**
OBN				PPS	PPS	13 15 23.0	
OBN				pmax	pmax		
	comp=Z,33nm,1.3s						
OBN				MLR	MLR		
	comp=Z,145nm,20.0s						
BFO	**Black Forest**	**80.76**	**28**	P	**P**	**13 04 11.6**	**-3.1**
BFO				IAmb	IAmb	13 04 23.8	
	comp=Z,16nm,1.3s						
BFO	**Black Forest**	**80.76**	**28**	P	**P**	**13 04 11.6**	**-3.1**
BFO				pmax	pmax		
	comp=Z,16nm,1.3s						
MTE	**Manteigas**	**80.79**	**42**	*e*P	**P**	**13 04 18.8**	**+3.7**
MTE				*i* Amb		13 04 22.3	
	comp=Z,21nm,1.6s						
PSBE	**So Bento**	**80.87**	**43**	*e*P	P	13 04 25.6	+10
HNS	**HongShan**	**80.91**	**314**	⇑P	**P**	**13 04 17.0**	**+1.4**
HNS	**HongShan**	**80.91**	**314**	S	**SKSac**	**13 14 32.8**	**-0.8**
HNS				pmax	pmax		
	comp=Z,10.0nm,1.7s						
HNS				LR	LR		
	comp=N,300nm,22.3s						
HNS				LR	LR		
	comp=E,670nm,19.6s						
HNS				LR	LR		
	comp=Z,810nm,18.0s						
PSARD	**Sardoal**	**81.11**	**42**	*e*P	**P**	**13 04 18.6**	**+1.9**
LPAZ	**La Paz**	**81.34**	**122**	P	**P**	**13 04 15.5**	**-3.3**
LPAZ	**La Paz**	**81.34**	**122**	P	**P**	**13 04 19.4**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=328,slow=4.3,SNR=7.2						
	comp=Z,1.0nm,0.3s						
PMOZ	**Porto Moniz, M**	**81.40**	**52**	*e*P	P	13 04 23.9	+5.4
PMOZ				*i* Amb		13 04 26.6	
	comp=Z,66nm,1.3s						
PMTG	**Montargil**	**81.50**	**43**	*e*P	P	13 04 29.1	+10
PMRV	**Marv??o**	**81.62**	**42**	*e*P	P	13 04 27.4	+7.9
PESTR	**Estremoz**	**81.96**	**43**	*e*P	P	13 04 28.4	+7.2
GERES	**GERESS Array B**	**82.00**	**24**	P	**P**	**13 04 19.3**	**-2.0**
	comp=Z,0.6nm,0.8s,baz=315,slow=8.9,SNR=2.3						
	comp=Z,0.6nm,0.8s						
EVO	**Evora**	**82.02**	**43**	*e*P	**P**	**13 04 23.4**	**+1.9**
BRVK	**Borovoye**	**82.17**	**349**	P	**P**	**13 04 20.0**	**-2.0**
BRVK				IAmb	IAmb	13 04 31.0	
	comp=Z,7.5nm,0.8s						
BRVK	**Borovoye**	**82.17**	**349**	P	**P**	**13 04 20.0**	**-2.0**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BVAR	**Borovoye Array**	**82.19**	**349**	P	**P**	**13 04 22.4**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=29,slow=3.4,SNR=4.9						
	comp=Z,1.3nm,0.6s						
VRAC	**Vranov**	**82.40**	**22**	*e*P	**P**	**13 04 24.2**	**+0.9**
VRAC				*e*		13 04 32.2	
PTEO	**Sao Teotonio**	**82.42**	**44**	*e*P	P	13 04 34.6	+11
MESJ	**Messejana**	**82.45**	**44**	*e*P	P	13 04 31.0	+7.2
KRUC	**Moravsky**	**82.57**	**22**	*e*P	**P**	**13 04 25.1**	**+0.9**
NJ2	**Nanjing**	**82.62**	**308**	*e*P	**P**	**13 04 28.4**	**+3.6**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				LR	LR		
	comp=N,470nm,9.5s						
NJ2				LR	LR		
	comp=E,410nm,9.2s						
NJ2				LR	LR		
	comp=Z,680nm,20.8s						
MORF	**Marmelete**	**82.65**	**44**	*e*P	**P**	**13 04 28.1**	**+3.2**
PCVE	**Castro Verde**	**82.70**	**44**	*e*P	**P**	**13 04 27.3**	**+2.2**
PBAR	**Barrancos**	**82.77**	**43**	*e*P	**P**	**13 04 25.3**	**-0.2**
FUORN	**Ofenpass-Fuorn**	**82.89**	**27**	P	**P**	**13 04 25.0**	**-1.2**
KURK	**Kurchatov**	**82.94**	**343**	P	**P**	**13 04 25.5**	**-0.6**
KURK				IAmb	IAmb	13 04 27.1	
	comp=Z,8.4nm,1.1s						
KURK	**Kurchatov**	**82.94**	**343**	*ce*P	**P**	**13 04 26.9**	**+0.8**
KURK				pmax	pmax		
	comp=Z,21nm,1.7s						
PVAQ	**Vaqueiros**	**83.04**	**44**	*e*P	**P**	**13 04 29.1**	**+2.3**
PVAQ				*i* Amb		13 04 38.2	
	comp=Z,21nm,1.8s						
KURBB	**Kurchatov Arra**	**83.05**	**343**	P	**P**	**13 04 25.8**	**-0.8**
	comp=Z,2.8nm,0.9s,baz=20,slow=4.6,SNR=18						
	comp=Z,2.8nm,0.9s						
ESDC	**Sonseca Array**	**83.06**	**40**	P	**P**	**13 04 26.2**	**-0.8**
	comp=Z,2.0nm,1.1s,baz=308,slow=4.8,SNR=8.8						
	comp=Z,2.0nm,1.1s						
PBDV	**Barranco-do-Ve**	**83.06**	**44**	*e*P	**P**	**13 04 29.4**	**+2.4**
PB11	**IPOC Station P**	**83.10**	**126**	P	**P**	**13 04 28.3**	**+0.9**
MODS	**Modra-Piesok**	**83.44**	**22**	*e*P	**P**	**13 04 31.1**	**+2.3**
MODS	**Modra-Piesok**	**83.44**	**22**	*e*P	**P**	**13 04 31.1**	**+2.3**
VYHS	**Vyhne**	**83.74**	**21**	*e*P	**P**	**13 04 31.6**	**+1.3**
VYHS	**Vyhne**	**83.74**	**21**	*e*P	**P**	**13 04 31.6**	**+1.3**
AKASG	**Malin Array Be**	**83.93**	**14**	P	**P**	**13 04 29.8**	**-1.4**
	comp=Z,0.3nm,0.4s,baz=338,slow=4.5,SNR=13						
	comp=Z,0.3nm,0.4s						
AKASG	**Malin Array Be**	**83.93**	**14**	*ce*P	**P**	**13 04 31.2**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKBB	**Malin Array Si**	**83.93**	**14**	*ce*P	**P**	**13 04 30.1**	**-1.0**
AKBB				pmax	pmax		
	comp=Z,11nm,1.1s						
BELG	**Belogornoye**	**84.14**	**2**	*i* P	**P**	**13 04 34.3**	**+2.1**
BELG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KOLS	**Kolonicke sedl**	**84.19**	**19**	*e*P	**P**	**13 04 33.7**	**+1.1**
KOLS	**Kolonicke sedl**	**84.19**	**19**	*e*P	**P**	**13 04 33.7**	**+1.1**
PSZ	**Piszkesteto**	**84.55**	**21**	P	**P**	**13 04 32.1**	**-2.4**
PSZ				IAmb	IAmb	13 04 44.8	
	comp=Z,9.2nm,1.0s						
PSZ	**Piszkesteto**	**84.55**	**21**	P	**P**	**13 04 32.1**	**-2.4**
PSZ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SIV	**San Ignacio**	**85.56**	**117**	LR	LR	13 48 02.0	
	comp=Z,313nm,18.8s,baz=337,slow=39						
MK31	**Makanchi Array**	**85.75**	**339**	*ce*P	**P**	**13 04 41.5**	**+1.0**
MKAR	**Makanchi Array**	**85.75**	**339**	P	**P**	**13 04 38.9**	**-1.6**
	comp=Z,1.3nm,0.9s,baz=42,slow=4.5,SNR=8.5						
MKAR				LR	LR	13 45 19.7	
	comp=Z,762nm,19.8s,baz=18,slow=37						
	comp=Z,1.3nm,0.9s						
AKTO	**Aktyubinsk**	**85.98**	**356**	P	**P**	**13 04 40.8**	**-0.7**
	comp=Z,0.8nm,0.4s,baz=14,slow=3.9,SNR=7.2						
	comp=Z,0.8nm,0.4s						
GTA	**Gaotai**	**86.35**	**325**	*e*P	**P**	**13 04 43.5**	**-0.2**
GTA				sP	sP	13 04 51.0	+1.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				LR	LR		
	comp=N,600nm,20.7s						
GTA				LR	LR		
	comp=E,700nm,23.6s						
GTA				LR	LR		
	comp=Z,1μm,21.4s						
WMQ	**Urumqi**	**86.94**	**335**	*e*P	**P**	**13 04 48.5**	**+2.0**
WMQ				pmax	pmax		
	comp=Z,180nm,4.1s						
WMQ				LR	LR		
	comp=N,400nm,18.5s						
WMQ				LR	LR		
	comp=E,610nm,18.5s						
WMQ				LR	LR		
	comp=Z,340nm,18.5s						
AB31	**Akbulak array**	**87.03**	**354**	P	**P**	**13 04 44.9**	**-1.7**
AB31				IAmb	IAmb	13 04 49.7	
	comp=Z,7.2nm,1.1s						
ABKAR	**Akbulak array**	**87.03**	**354**	P	**P**	**13 04 45.1**	**-1.5**
ABKAR				IAmb	IAmb	13 04 49.7	
	comp=Z,7.2nm,1.1s						
LZH	**Lanzhou**	**87.32**	**320**	*e*P	**P**	**13 04 49.5**	**+1.0**
LZH				sP	pwP	13 04 56.8	-0.5
LZH				PP	**PP**	**13 08 10.3**	**-1.7**
LZH	**Lanzhou**	**87.32**	**320**	S	**S**	**13 15 22.4**	**-5.8**
LZH				pmax	pmax		
	comp=Z,32nm,1.0s						
LZH				LR	LR		
	comp=N,850nm,14.1s						
LZH				LR	LR		
	comp=E,760nm,14.9s						
LZH				LR	LR		
	comp=Z,1μm,19.1s						
DZM	**Mont Dzumac**	**88.47**	**237**	*e*LR	LR	13 32 52.2	
	comp=Z,626nm,25.4s						
AAK	**Ala-Archa**	**91.50**	**343**	LR	LR	13 50 00.9	
	comp=Z,293nm,18.2s,baz=31,slow=38						
AAK	**Ala-Archa**	**91.50**	**343**	*i* P	**P**	**13 05 09.1**	**+1.0**
AAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
KIV	**Kislovodsk**	**92.29**	**6**	*e*P	**P**	**13 05 12.9**	**+1.3**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SOC	**Sochi**	**92.38**	**8**	*e*P	**P**	**13 05 11.8**	**-0.1**
SOC				*e*		13 08 51.7	
SOC				*e*PPP	PPP	13 10 50.6	
SOC				*e*S	**SKSac**	**13 15 44.8**	**+0.3**
SOC				*e*SS	**SS**	**13 22 21.6**	**-1.8**
SOC				*e*SSS	SSS	13 26 04.3	
KBZ	**Khabaz**	**92.53**	**6**	LR	LR	13 48 38.2	
	comp=Z,108nm,19.4s,baz=5.5,slow=37						
GYA	**Guiyang**	**93.69**	**312**	⇑P	**P**	**13 05 22.3**	**+3.9**
GYA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KSH	**Kashi**	**94.15**	**341**	P	P	13 05 10.8	-10
KSH				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KSH				LR	LR		
	comp=N,920nm,20.6s						
KSH				LR	LR		
	comp=E,600nm,19.6s						
KSH				LR	LR		
	comp=Z,400nm,19.6s						
PZH	**PanZhiHua**	**96.21**	**316**	P	**P**	**13 05 34.0**	**+4.1**
PZH	**PanZhiHua**	**96.21**	**316**	S	S	13 16 38.3	-11
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,90nm,4.7s						
PZH				LR	LR		
	comp=N,300nm,18.6s						
PZH				LR	LR		
	comp=E,430nm,12.6s						
PZH				LR	LR		
	comp=Z,550nm,14.7s						
QIZ	**Qiongzhong**	**97.76**	**306**	P	Pdif	13 05 38.6	+1.6
QIZ	**Qiongzhong**	**97.76**	**306**	S	**S**	**13 17 05.1**	**+2.9**
QIZ	**Qiongzhong**	**97.76**	**306**	SS	SS	13 23 50.3	+8.6
QIZ				pmax	pmax		
	comp=Z,240nm,11.8s						
QIZ				LR	LR		
	comp=E,360nm,17.1s						
QIZ				LR	LR		
	comp=Z,400nm,18.8s						
QSPA	**South Pole Qui**	**133.60**	**180**	PKP	**PKPdf**	**13 11 16.3**	**-0.5**
	comp=Z,1.4nm,0.8s,baz=19,slow=1.7,SNR=4.6						
SNAA	**Sanae**	**142.01**	**155**	PKP	**PKPdf**	**13 11 31.4**	**-0.8**
	comp=Z,2.0nm,1.0s,baz=224,slow=1.7,SNR=3.9						
SYO	**Syowa Base**	**153.99**	**170**	⇓*e*pPKPbc	pPKPbc	13 12 03.2	-1.1

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*NIED **22** 12:56:17.8, 30°.54N×131°.32E, $h36^{km}$, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.59; $M_{\theta\theta}$0.40; $M_{\phi\phi}$1.20; $M_{r\theta}$-0.11; $M_{\theta\phi}$0.62; $M_{\phi r}$0.64; Fault plane solution: $M_0$1.69000×10^{15} NP1:ϕ_s40.00000°, δ37.00000°, λ-70.00000°. NP2:ϕ_s196.00000°, δ55.00000°, λ-104.00000°.*

*JMA **22** 12:56:17.8±0.1, 30°.5N±0°.4×131°.3E±0°.8, $h36^{km}$, MV3.8/39, NEAR TANEGASHIMA ISLAND*

JMA Felt I J1 at NEAR TANEGASHIMA ISLAND .

*IDC **22** 12:56:18.6±1.4, 30°.55N×131°.09E, $h43^{km}$±12^{km}, mb3.7/21, mbtmp3.9/26, ML3.3/5, MS3.0/2, Error ellipse: s-maj=18.1km s-min=8.3km az=98.0*

ISC 22 12:56:17.6±0.7**, 30°.52N**±0°.04×**131°.30E**±0°.06**, $h36^{km}$**±1^{km}**, n40, $\sigma 0^{s}.94$**/50**, mb4.0**/21**, 5D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTN	**Tanegashima 3**	**0.30**	**297**	P	**Pn**	**12 56 25.4**	**-0.3**
JTN				*e*S	**Sn**	**12 56 31.6**	**-1.0**
JMTN	**Minamitane**	**0.36**	**251**	*i* P	**Pn**	**12 56 26.7**	**+0.6**
JMTN				*e*S	**Sn**	**12 56 33.6**	**+0.9**
JTSR	**Tashiro 2**	**0.72**	**334**	P	**Pn**	**12 56 31.4**	**0.0**
JTSR				*e*S	**Sn**	**12 56 41.2**	**0.0**
JYAK	**Yakushimahirau**	**0.73**	**248**	*i* P	**Pn**	**12 56 31.8**	**+0.4**
JYAK				*e*S	**Sn**	**12 56 42.3**	**+1.0**
JKC	**Kuchinoerabu**	**0.95**	**267**	P	**Pn**	**12 56 35.0**	**+0.6**
JKC				*e*S	**Sn**	**12 56 48.0**	**+1.3**
JNAR	**Kushima--Naru**	**1.01**	**359**	⇓P	**Pn**	**12 56 35.8**	**+0.6**
JNAR				⇓*e*S	**Sn**	**12 56 48.3**	**+0.2**
JNKG	**Nichinankitago**	**1.14**	**3**	⇓P	**Pn**	**12 56 37.9**	**+0.8**
JNKG				⇓*e*S	**Sn**	**12 56 51.8**	**+0.3**
JSU	**Suzuyama**	**1.22**	**324**	P	**Pn**	**12 56 38.6**	**+0.4**
JTZ	**Takazaki**	**1.39**	**353**	⇓P	**Pn**	**12 56 41.5**	**+1.0**
JNN	**Nakanoshima**	**1.40**	**242**	P	**Pn**	**12 56 41.4**	**+0.8**
JNN				*e*S	**Sn**	**12 56 59.2**	**+1.4**
JZO	**Okuchi**	**1.73**	**340**	P	**Pn**	**12 56 45.7**	**+0.7**
JTSN	**Tsuno**	**1.73**	**6**	P	**Pn**	**12 56 44.9**	**-0.3**
JTSN				*e*S	**Sn**	**12 57 06.7**	**+0.7**
JNU	**Nakatsue**	**2.62**	**352**	P	**Pn**	**12 56 58.5**	**+1.0**
	18nm,0.3s,baz=188,slow=9.6,SNR=105						
JNU				S	**Sn**	**12 57 28.7**	**+0.7**
	140nm,0.7s,baz=132,slow=21,SNR=9.3						
	39nm,0.3s						
JOW	**Kunigami**	**4.53**	**217**	P	**Pn**	**12 57 23.6**	**0.0**
	1.4nm,0.3s,baz=98,slow=24,SNR=11						
JOW				S	**Sn**	**12 58 13.3**	**-1.7**
	10.0nm,0.3s,baz=96,slow=20,SNR=3.8						
JOW				LR	LR	12 59 15.0	
	comp=Z,105nm,21.7s,baz=113,slow=40						
	4.1nm,0.3s						
KSRS	**Korea Array**	**7.46**	**339**	P	**Pn**	**12 58 03.2**	**-0.6**
	0.5nm,0.3s,baz=154,slow=14,SNR=5.7						
	0.5nm,0.3s						
MJAR	**Matsushiro Arr**	**8.33**	**42**	P	**Pn**	**12 58 17.2**	**+1.4**
	0.2nm,0.3s,baz=246,slow=14,SNR=15						
MJAR				LR	LR	13 01 39.3	
	comp=Z,107nm,21.0s,baz=220,slow=38						
	0.9nm,0.3s						
USRK	**Ussuriysk Ar.**	**13.67**	**2**	LR	LR	13 04 36.5	
	comp=Z,68nm,20.4s,baz=169,slow=36						
KLR	**Kul'dur**	**18.70**	**1**	P	**P**	**13 00 32.9**	**+0.3**
	0.3nm,0.3s,baz=187,slow=8.5,SNR=7.6						
	2.5nm,0.7s						
SONM	**Songino Array**	**25.75**	**319**	P	**P**	**13 01 43.8**	**-1.0**
	0.5nm,0.4s,baz=151,slow=9.9,SNR=3.1						
	0.5nm,0.4s						
PETK	**Petropavlovsk-**	**29.64**	**33**	P	**P**	**13 02 20.9**	**+1.4**
	1.6nm,0.8s,baz=212,slow=13,SNR=4.1						
	1.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**31.68**	**255**	P	**P**	**13 02 38.3**	**+0.5**
	0.2nm,0.3s,baz=53,slow=7.3,SNR=4.5						
	0.2nm,0.3s						
SEY	**Seymchan**	**35.15**	**17**	P	**P**	**13 03 06.4**	**-1.1**
	2.0nm,0.8s,baz=203,slow=13,SNR=3.1						
	2.0nm,0.8s						
MKAR	**Makanchi Array**	**40.88**	**308**	P	**P**	**13 03 55.2**	**-0.8**
	0.3nm,0.5s,baz=96,slow=11,SNR=4.4						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**43.77**	**313**	P	**P**	**13 04 17.7**	**-1.8**
	0.5nm,0.5s,baz=95,slow=8.6,SNR=4.5						
	0.5nm,0.5s						
BVAR	**Borovoye Array**	**48.99**	**316**	P	**P**	**13 05 00.2**	**-0.3**
	0.9nm,0.3s,baz=96,slow=8.8,SNR=5.1						
	0.9nm,0.3s						
WRA	**Warramunga Arr**	**50.25**	**176**	P	**P**	**13 05 11.1**	**+0.8**
	2.6nm,0.7s,baz=354,slow=8.3,SNR=20						
	2.6nm,0.7s						
ASAR	**Alice Springs**	**53.93**	**177**	P	**P**	**13 05 38.6**	**+0.9**
	1.4nm,0.6s,baz=358,slow=8.9,SNR=37						
	1.4nm,0.6s						
STKA	**Stephens Creek**	**62.82**	**170**	P	**P**	**13 06 40.7**	**+1.2**
	4.2nm,0.6s,baz=341,slow=7.2,SNR=9.6						
	4.2nm,0.6s						
STKA	**Stephens Creek**	**62.82**	**170**	P	**P**	**13 06 40.7**	**+1.2**
SPITS	**Spitsbergen Ar**	**65.20**	**348**	P	**P**	**13 06 54.7**	**0.0**
	0.7nm,0.5s,baz=46,slow=12,SNR=6.6						
	0.7nm,0.5s						
ARCES	**ARCESS Array B**	**67.02**	**338**	P	**P**	**13 07 07.0**	**+0.5**
	3.8nm,1.0s,baz=64,slow=7.4,SNR=1.9						
	3.8nm,1.0s						
FINES	**FINESS Array B**	**70.47**	**331**	P	**P**	**13 07 26.7**	**-1.3**
	1.0nm,0.4s,baz=72,slow=5.6,SNR=13						
	1.0nm,0.4s						
AKASG	**Malin Array Be**	**74.03**	**320**	P	**P**	**13 07 48.8**	**-0.7**
	0.5nm,0.4s,baz=53,slow=6.7,SNR=5.5						
	0.5nm,0.4s						
HFS	**Hagfors**	**76.27**	**333**	P	**P**	**13 08 02.3**	**+0.1**
	1.8nm,0.9s,baz=109,slow=8.0,SNR=4.3						
	1.8nm,0.9s						
BRTR	**Keskin Array B**	**76.53**	**308**	P	**P**	**13 08 03.6**	**-0.7**
	1.5nm,0.9s,baz=111,slow=5.4,SNR=5.3						
	1.5nm,0.9s						
NOA	**NORSAR Array B**	**76.65**	**334**	P	**P**	**13 08 03.6**	**-0.9**
	1.2nm,1.0s,baz=50,slow=5.5,SNR=2.1						
	1.2nm,1.0s						
GERES	**GERESS Array B**	**83.38**	**324**	P	**P**	**13 08 41.8**	**+0.7**
	0.3nm,0.6s,baz=39,slow=10,SNR=1.5						
	0.3nm,0.6s						
NVAR	**Mina Array Bea**	**85.61**	**48**	P	**P**	**13 08 52.9**	**+0.1**
	1.2nm,0.8s,baz=294,slow=4.8,SNR=5.7						
	1.2nm,0.8s						
EKA	**Eskdalemuir Ar**	**86.03**	**336**	P	**P**	**13 08 52.2**	**-2.0**
	0.2nm,0.4s,baz=54,slow=4.1,SNR=4.7						
	0.2nm,0.4s						
PDAR	**Pinedale Array**	**88.15**	**40**	P	**P**	**13 09 06.4**	**+1.4**
	0.6nm,0.8s,baz=232,slow=4.0,SNR=3.4						
	0.6nm,0.8s						

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*IDC **22** 12:58:39.7±1.2, 44°.03N×128°.27W, $h0^{km}$, mb3.6/7, mbtmp3.5/12, ML3.4/5, Error ellipse: s-maj=29.1km s-min=13.4km az=34.0*

*NEIC **22** 12:58:46.5±1.8, 43°.86N±0°.05×128°.2W±0°.2, $h10^{km}$±2^{km}, mb4.1/12, ML3.9/40, Error ellipse: s-maj=21.1km s-min=5.0km az=250.0*

ISC 22 12:58:41.1±0.8**, 43°.67N**±0°.08×**128°.63W**±0°.10**, $h10^{km}$, n60, $\sigma 2^{s}.13$**/52**, mb4.0**/9**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**3.23**	**103**	Pn	**Pn**	**12 59 33.6**	**+1.6**
KEBM				IAML		13 01 26.1	
	comp=E,388nm,1.7s						
J01E	**Myrtle Point**	**3.46**	**97**	Pn	**Pn**	**12 59 36.1**	**+1.1**
J01E				IAML		13 01 47.3	
	comp=E,314nm,4.3s						
I02E	**Swisshome, OR**	**3.48**	**81**	Pn	**Pn**	**12 59 35.6**	**+0.3**
K02D	**Willamette Mer**	**3.76**	**103**	Pn	**Pn**	**12 59 41.3**	**+2.2**
K02D				IAML		13 01 56.8	
	comp=E,183nm,1.0s						
K02D				IAML		13 02 00.2	
	comp=N,154nm,1.9s						
HEBO	**Mount Hebo**	**3.81**	**65**	Pn	**Pn**	**12 59 41.0**	**+1.1**
HEBO				IAML		13 01 28.1	
	comp=E,217nm,0.9s						
I03D	**Drain, OR**	**3.83**	**88**	Pn	**Pn**	**12 59 41.9**	**+1.9**
I03D				IAML		13 01 20.4	
	comp=E,204nm,0.7s						
I03D				IAML		13 02 01.0	
	comp=N,153nm,0.8s						
L02F	**Cave Junction**	**4.03**	**111**	Pn	**Pn**	**12 59 46.0**	**+3.2**
BUCK	**Buck Mountain**	**4.11**	**81**	Pn	**Pn**	**12 59 45.7**	**+1.7**
BUCK				IAML		13 02 11.8	
	comp=E,224nm,4.5s						
BUCK				IAML		13 02 17.0	
	comp=N,163nm,1.6s						
G03D	**McMinnville, O**	**4.13**	**66**		**Pn**	**12 59 44.9**	**+0.6**
H04D	**Lebanon**	**4.33**	**77**		**Pn**	**12 59 47.6**	**+0.7**
RADR	**Rader Ridge**	**4.39**	**50**	Pn	**Pn**	**12 59 50.3**	**+2.5**
RADR				IAML		13 01 47.4	
	comp=E,158nm,4.8s						
BBOR	**Butler Butte**	**4.41**	**98**	Pn	**Pn**	**12 59 51.4**	**+3.2**
G04A	**Mulino**	**4.66**	**69**	Pn	**Pn**	**12 59 53.4**	**+1.9**
H04A	**Detroit Lake**	**4.74**	**75**		**Pn**	**12 59 55.1**	**+2.5**
H04A				IAML		13 01 42.9	
	comp=E,138nm,0.8s						
H04A				IAML		13 01 44.8	
	comp=N,139nm,1.6s						
YBH	**Yreka Blue Hor**	**4.77**	**112**	Pn	**Pn**	**12 59 52.4**	**-0.7**
	baz=215,slow=14,SNR=1.6						
L04D	**Klamath Falls**	**4.86**	**105**	Pn	**Pn**	**12 59 57.8**	**+3.4**
HOOD	**Mount Hood Mea**	**5.25**	**69**	Pn	**Pn**	**13 00 02.2**	**+2.4**
J05D	**Fort Rock, OR**	**5.39**	**92**		**Pn**	**13 00 03.1**	**+1.4**
GNW	**Green Mountain**	**5.63**	**44**		**Pn**	**13 00 05.6**	**+0.8**
D05A	**Enumclaw**	**5.84**	**51**		**Pn**	**13 00 07.7**	**-0.1**
CLRS	**Cowichan Lake**	**6.02**	**30**	Pn	**Pn**	**13 00 11.3**	**+1.2**
G08A	**Pilot Rock**	**7.10**	**74**		**Pn**	**13 00 25.6**	**+0.5**
E08A	**Dider Farm, El**	**7.33**	**64**		**Pn**	**13 00 27.5**	**-0.7**
C09A	**Chrisman Ranch**	**8.33**	**57**		**Pn**	**13 00 43.0**	**+1.1**
BBB	**Bella Bella**	**8.52**	**2**	Pn	Pn	13 00 39.7	-4.7
	comp=N,0.3nm,0.3s,baz=207,slow=20,SNR=1.9						
	comp=N,2.4nm,0.6s						
NEW	**Newport**	**9.23**	**56**	Pn	**Pn**	**13 00 53.7**	**-0.5**
NEW	**Newport**	**9.23**	**56**	Pn	Pn	13 00 49.6	-4.6
	comp=N,0.2nm,0.3s,baz=176,slow=8.2,SNR=2.0						
	comp=N,0.9nm,0.4s						
NVAR	**Mina Array Bea**	**9.39**	**120**	Pn	**Pn**	**13 00 56.7**	**+0.1**
	baz=312,slow=16,SNR=2.2						
	comp=N,0.4nm,0.6s						
ELK	**Elko**	**10.35**	**102**	Pn	**Pn**	**13 01 10.9**	**+1.1**
	comp=N,0.1nm,0.3s,baz=262,slow=8.6,SNR=3.7						
	comp=N,0.7nm,0.8s						
PDAR	**Pinedale Array**	**13.94**	**87**	Pn	**Pn**	**13 01 59.6**	**+0.8**
	comp=N,0.1nm,0.3s,baz=280,slow=13,SNR=2.3						
	comp=N,0.1nm,0.4s						
P18A	**Preston Nutter**	**14.32**	**100**	Pn	**Pn**	**13 02 05.4**	**+1.3**
SRU	**San Rafael Swe**	**14.33**	**102**	Pn	**Pn**	**13 02 06.7**	**+2.6**
O20A	**White River Ci**	**15.58**	**96**	Pn	**P**	**13 02 24.2**	**-1.0**
O20A				IAmb	IAmb	13 02 39.4	
	comp=Z,11nm,1.1s						
PV21	**Cone Mtn., Par**	**15.66**	**102**	Pn	**Pn**	**13 02 23.9**	**+1.9**
PV21				IAmb	IAmb	13 02 37.6	
	comp=Z,16nm,1.5s						
PV12	**Saucer Basin,**	**15.88**	**103**	Pn	**P**	**13 02 27.8**	**-0.9**
W18A	**Petrified Fore**	**16.89**	**114**	Pn	**Pn**	**13 02 37.0**	**-0.7**
Q24A	**Divide**	**18.23**	**97**		**P**	**13 02 56.0**	**+1.3**
SDCO	**Great Sand Dun**	**18.48**	**101**	P	**Pn**	**13 02 58.4**	**+0.9**
CTGM	**Chitina Glacie**	**18.92**	**341**	P	**Pn**	**13 03 05.9**	**+3.5**
CTGM				IAmb	IAmb	13 03 08.7	
	comp=Z,15nm,1.4s						
TGL	**Tana Glacier**	**19.12**	**338**	P	**Pn**	**13 03 08.2**	**+3.4**
TGL				IAmb	IAmb	13 03 18.2	
	comp=Z,14nm,1.3s						
CRQM	**Cirque**	**19.20**	**338**	P	**Pn**	**13 03 09.2**	**+3.3**
BNM	**Barren Site**	**19.53**	**112**	P	**Pn**	**13 03 11.3**	**+1.1**
WRGLY	**Wrigley**	**19.82**	**7**	P	**Pn**	**13 03 13.8**	**+0.8**
YKA	**Yellowknife Ar**	**20.56**	**19**	P	**P**	**13 03 15.0**	**-4.6**
	comp=Z,0.8nm,0.8s,baz=212,slow=11,SNR=4.0						
	comp=Z,0.8nm,0.8s						
K27K	**Chicken**	**21.79**	**344**	P	**P**	**13 03 36.0**	**+3.1**
K27K				IAmb	IAmb	13 03 48.9	
	comp=Z,12nm,1.4s						
H31M	**Peel River**	**22.40**	**354**	P	**P**	**13 03 42.0**	**+2.6**
H31M				IAmb	IAmb	13 03 54.0	
	comp=Z,7.8nm,1.1s						
ILAR	**Eielson Array**	**23.50**	**340**	P	**P**	**13 03 47.6**	**-3.2**
	comp=Z,0.2nm,0.6s,baz=159,slow=10,SNR=5.1						
	comp=Z,0.2nm,0.6s						
TXAR	**Lajitas Array**	**24.52**	**117**	P	**P**	**13 03 56.4**	**-4.4**
	comp=Z,0.5nm,0.9s,baz=330,slow=12,SNR=2.8						
INK	**Inuvik**	**24.83**	**356**	P	**P**	**13 03 58.6**	**-4.4**
	comp=Z,1.3nm,1.1s,baz=162,slow=7.7,SNR=3.4						
	comp=Z,1.3nm,1.1s						
SEY	**Seymchan**	**47.52**	**322**	P	**P**	**13 07 16.2**	**+0.2**
	comp=Z,1.8nm,1.0s,baz=64,slow=0.6,SNR=4.0						
	comp=Z,1.8nm,1.0s						
PETK	**Petropavlovsk-**	**47.78**	**309**	P	**P**	**13 07 18.5**	**+0.2**
	comp=Z,0.8nm,0.9s,baz=76,slow=12,SNR=2.7						
	comp=Z,0.8nm,0.9s						
H11N3	**WAKE ISLAND Hy**	**58.30**	**268**	T	T	14 11 47.5	

	baz=49						
H11N2	WAKE ISLAND Hy	58.30	268	T	T	14 11 48.6	
	baz=49						
H11N1	WAKE ISLAND Hy	58.32	268	T	T	14 11 50.4	
	baz=49						
H11S1	WAKE ISLAND Hy	59.23	267	T	T	14 12 56.4	
	baz=49						
H11S2	WAKE ISLAND Hy	59.23	267	T	T	14 12 56.1	
	baz=49						
H11S3	WAKE ISLAND Hy	59.24	267	T	T	14 13 00.7	
	baz=49						
SONM	Songino Array	76.81	325	P	P	13 10 31.8	-1.1
	comp=Z,1.2nm,0.8s,baz=49,slow=4.4,SNR=5.6						
	comp=Z,1.2nm,0.8s						
KURBB	Kurchatov Arra	83.15	343	P	P	13 11 06.4	-0.6
	comp=Z,0.4nm,0.3s,baz=24,slow=4.8,SNR=4.1						
	comp=Z,0.4nm,0.3s						
QSPA	South Pole Qui	133.48	180	PKP	PKPdf	13 17 57.0	+0.6
	comp=Z,1.7nm,1.1s,baz=12,slow=3.1,SNR=3.0						

DJA 22 12:58:53.5±1.6**,12°S**±16°×**11°8E**±°**,h10^{km},M3.9**/7**,**
mb4.1/2**,MLv3.7**/7**,South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WBSI	Waikabubak, Su	2.43	37	P	Pn	12 59 33.7	+0.3
PLAI	Plampang	2.77	357	P	Pn	12 59 37.4	-0.6
TWSI	Taliwang, Sumb	3.03	340	P	Pn	12 59 41.0	-0.6
SRBI	Singaraja	4.40	322	P	Pn	13 00 01.5	+1.1
EDFI	Ende, Flores	4.67	53	P	Pn	13 00 04.1	-0.2
JAGI	Jajag, Banyuwa	4.85	310	P	Pn	13 00 05.3	-1.3
GMJI	Gumukmas	5.52	307	P	Pn	13 00 15.3	-0.5
	0.2nm26nm,2.4s						
PCJI	Pacitan	7.46	296	P	Pn	13 00 42.9	+0.4

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*BGR **22** 13:00:10.7, 42°.64N×130°.96W, h10^{km}, mb4.7*

*IDC **22** 13:00:12.7±0.5, 43°.83N×128°.65W, h0^{km}, mb4.5/38, mbtmp4.4/45, ML3.8/7, MS4.7/21, Error ellipse: s-maj=15.6km s-min=8.2km az=32.0*

*BJI **22** 13:00:13.0, 43°.90N×128°.60W, h10^{km}, mB5.4/29, mb4.9/44, Ms5.2/36, Ms7 4.9/35*

*MOS **22** 13:00:13.5±1.1, 43°.91N×128°.60W, h10^{km}, mb5.1/29, Error ellipse: s-maj=8.4km s-min=5.9km az=104.7*

*NEIC **22** 13:00:14.3±1.7, 43°.79N±0°.07×128°.52W±0°.03, h10^{km}±1^{km}, mb5.1/434, ML4.1/72, Mww5.3/94, Error ellipse: s-maj=12.5km s-min=4.3km az=166.0*

*NEIC **22** 13:00:15.7, 43°.90N×128°.46W, h12^{km}*

*NEIC **22** 13:00:15.7, 43°.80N×129°.02W, h12^{km}, Moment Tensor Solution. Duration: 2^{s}4 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.03; $M_{\theta\theta}$0.06; $M_{\phi\phi}$0.97; $M_{r\theta}$-0.13; $M_{\theta\phi}$0.11; $M_{\phi r}$-0.03; Fault plane solution: $M_0$1.01000×10^{17} NP1: ϕ_s180.10000°, δ43.99000°, λ-99.42000°. NP2: ϕ_s13.09000°, δ46.76000°, λ-81.02000°. Principal axes: T 0.9789, Plg1.0000°, Azm97.0000°; N 0.0616, Plg7.0000°, Azm187.0000°; P -1.0406, Plg83.0000°, Azm355.0000°;*

*GCMT **22** 13:00:17.3±0.1, 43°.83N±0°.01×128°.73W±0°.01, h12^{km}, MW5.3/148, Moment Tensor Solution. s59,c80; s148,c280; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.01±.01; $M_{\theta\theta}$0.09±.01; $M_{\phi\phi}$0.92±.01; $M_{r\theta}$0.12±.05; $M_{\theta\phi}$0.09±.01; $M_{\phi r}$-0.30±.04; Best double couple: $M_0$1.02500×10^{17} NP1: ϕ_s194.00000°, δ37.00000°, λ-78.00000°. NP2: ϕ_s358.00000°, δ54.00000°, λ-99.00000°. Principal axes: T 0.9770, Plg8.0000°, Azm95.0000°; N 0.0990, Plg7.0000°, Azm4.0000°; P -1.0720, Plg79.0000°, Azm232.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 13:00:15.4±0.6**,43°.77N**±0°.06×**128°.53W**±0°.05**,h15**^{km}±3^{km}**,**
h15^{km}**:pP-P,n737,**σ**1**^{s}**31**/558**,mb5.1**/255**,MS4.7**/30**,**
13C-8D,Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEBM	Edson Butte	3.19	105		Pn	13 01 02.8	-2.2
KEBM				IAML		13 01 46.7	
	comp=N,603nm,0.6s						
KEBM				IAML		13 01 51.5	
	comp=E,513nm,2.3s						
I02E	Swisshome, OR	3.40	83		Pn	13 01 06.7	-1.1
I02E				IAML		13 02 16.8	
	comp=N,347nm,4.9s						
J01E	Myrtle Point	3.40	99		Pn	13 01 06.1	-1.8
J01E				IAML		13 02 03.8	
	comp=E,466nm,2.1s						
J01E				IAML		13 02 48.6	
	comp=N,342nm,4.7s						
HEBO	Mount Hebo	3.70	65		Pn	13 01 10.9	-1.2
HEBO				IAML		13 02 00.2	
	comp=N,384nm,2.4s						
HEBO				IAML		13 03 09.4	
	comp=E,288nm,4.5s						
K02D	Willamette Mer	3.71	105		Pn	13 01 10.7	-1.5
I03D	Drain, OR	3.75	89		Pn	13 01 10.8	-1.9
I03D				IAML		13 02 20.2	
	comp=E,236nm,2.3s						
COR	Corvallis	3.84	76		Pn	13 01 13.4	-0.6
COR	Corvallis	3.84	76	P	Pn	13 01 13.4	-0.6
L02F	Cave Junction	3.99	113		Pn	13 01 15.8	-0.2
BUCK	Buck Mountain	4.02	82		Pn	13 01 15.3	-1.1
BUCK				IAML		13 02 48.6	
	comp=N,267nm,4.8s						
BUCK				IAML		13 03 14.1	
	comp=E,263nm,4.7s						
G03D	McMinnville, O	4.03	67		Pn	13 01 15.1	-1.4
G03D				IAML		13 02 10.2	
	comp=N,285nm,1.1s						
G03D				IAML		13 02 12.5	
	comp=E,190nm,1.4s						
F03A	Seaside	4.14	57		Pn	13 01 16.5	-1.5
H04D	Lebanon	4.23	78		Pn	13 01 19.0	-0.3
H04D				IAML		13 02 18.2	
	comp=N,188nm,3.1s						
H04D				IAML		13 02 36.7	
	comp=E,260nm,2.4s						
RADR	Rader Ridge	4.27	50		Pn	13 01 19.0	-0.8
RADR				IAML		13 02 35.9	
	comp=N,260nm,5.0s						
RADR				IAML		13 03 55.3	
	comp=E,229nm,4.2s						
BBOR	Butler Butte	4.36	100		Pn	13 01 20.3	-0.9
BBOR				IAML		13 02 14.8	
	comp=N,211nm,2.0s						
BBOR				IAML		13 02 27.4	
	comp=E,151nm,3.4s						
E03A	Lebam	4.47	50		Pn	13 01 21.0	-1.6
E03A				IAML		13 02 21.9	
	comp=N,152nm,2.0s						
F04D	Rainier, OR	4.54	58		Pn	13 01 22.8	-0.8
G04A	Mulino	4.56	70		Pn	13 01 23.5	-0.3
KHMM	Horse Mountain	4.58	128		Pn	13 01 25.5	+1.2
KHMM				IAML		13 03 12.5	
	comp=E,170nm,4.8s						
KHMM				IAML		13 03 15.7	
	comp=N,168nm,4.6s						
H04A	Detroit Lake	4.64	77		Pn	13 01 24.5	-0.6
KMPM	Mount Pierce	4.69	134		Pn	13 01 26.8	+1.1
KMPM				IAML		13 02 41.6	
	comp=N,130nm,4.7s						
KMPM				IAML		13 03 34.1	
	comp=E,161nm,4.9s						
J04A	Umpqua Nationa	4.70	94		Pn	13 01 27.6	+1.7
YBH	Yreka Blue Hor	4.74	113		Pn	13 01 26.9	+0.5
YBH	Yreka Blue Hor	4.74	113	Pn	Pn	13 01 26.4	0.0
	comp=E,0.1nm,0.3s,baz=315,slow=6.4,SNR=14						
YBH				Sn	Sn	13 02 18.9	-2.3
	baz=354,slow=15,SNR=1.2						
YBH				LR	LR	13 02 33.3	
	comp=E,228nm,18.4s,baz=307,slow=29						
YBH	Yreka Blue Hor	4.74	113	P	Pn	13 01 26.9	+0.5
L04D	Klamath Falls	4.82	107		Pn	13 01 29.6	+2.0
NLWA	Neilton Lookou	4.87	40		Pn	13 01 27.5	-0.7
C03A	Quillayute Air	5.01	32		Pn	13 01 30.4	+0.4
C03A				IAML		13 04 04.6	
	comp=N,151nm,4.5s						
C03A				IAML		13 04 24.3	
	comp=E,151nm,4.9s						
HOOD	Mount Hood Mea	5.15	70		Pn	13 01 31.9	-0.2
HOOD				IAML		13 02 34.1	
	comp=N,152nm,1.3s						
I05D	Terrebonne, OR	5.21	81		Pn	13 01 32.8	-0.1
J05D	Fort Rock, OR	5.32	93		Pn	13 01 35.7	+1.3
J05D				IAML		13 03 07.2	
	comp=N,142nm,3.0s						
J05D				IAML		13 03 34.8	
	comp=E,132nm,4.2s						
PINE	Pine Mountain	5.49	87		Pn	13 01 37.6	+0.8
GNW	Green Mountain	5.50	45		Pn	13 01 36.6	-0.2
O02D	Mt. Diablo Mer	5.58	128		Pn	13 01 40.6	+2.6
OZB	Mount Ozzard	5.59	21		Pn	13 01 37.3	-0.8
LON	Longmire	5.60	56	Pn	Pn	13 01 37.7	-0.4
LON	Longmire	5.60	56	P	Pn	13 01 37.7	-0.4
CLRS	Cowichan Lake	5.89	30		Pn	13 01 41.0	-1.2
PGC	Sidney	6.01	34		Pn	13 01 43.0	-0.7
HOLB	Holberg	6.88	2		Pn	13 01 56.3	+0.7
BBB	Bella Bella	8.42	2		Pn	13 02 18.5	+1.7
BBB	Bella Bella	8.42	2	Pn	Pn	13 02 14.3	-2.4
	comp=E,1.3nm,0.3s,baz=194,slow=13,SNR=11						
	comp=E,30nm,0.9s						
PLID	Pearl Lake	9.06	77		Pn	13 02 26.0	+0.2
NEW	Newport	9.11	57	Pn	Pn	13 02 25.8	-0.5
	comp=E,1.4nm,0.3s,baz=248,slow=12,SNR=12						
NEW				LR	LR	13 06 01.2	
	comp=E,6µm,18.1s,baz=244,slow=38						
	comp=E,6.5nm,0.6s						
NVAR	Mina Array Bea	9.38	121	Pn	Pn	13 02 32.7	+2.5
	comp=E,0.3nm,0.3s,baz=296,slow=13,SNR=18						
	comp=E,8.8nm,0.9s						
ELK	Elko	10.30	103	Pn	Pn	13 02 47.0	+4.2
	comp=E,0.2nm,0.3s,baz=293,slow=13,SNR=12						
	comp=E,7.8nm,1.1s						
MSO	Missoula	10.72	68		Pn	13 02 48.5	+0.1
BPMT	Black Pine Rid	10.99	71		Pn	13 02 53.0	+0.8
DLMT	Dillon	11.48	77		Pn	13 02 59.2	+0.4
V35K	Ketchikan	11.74	351	P	Pn	13 03 02.2	+0.1
	baz=168						
CRAG	Craig	12.08	347	P	Pn	13 03 07.5	+0.7
	baz=163						
BOZ	Bozeman (W)	12.16	76		Pn	13 03 09.2	+1.0
BOZ	Bozeman (W)	12.16	76	P	Pn	13 03 09.3	+1.0
U33K	Whale Pass	12.70	348	P	Pn	13 03 15.1	-0.2
	baz=164						
WRAK	Wrangell Islan	12.89	350	P	Pn	13 03 18.8	+0.9
	baz=167						
T35M	Bob Quinn	13.27	356	P	Pn	13 03 24.3	+1.2
	baz=174,SNR=5.6						
T33K	Petersburg	13.35	349	P	Pn	13 03 25.2	+1.0
	baz=166						
KNB	Kanab	13.73	114		P	13 03 34.4	-3.9
KNB	Kanab	13.73	114	P	P	13 03 34.4	-3.9
PFO	Pinyon Flats O	13.83	133	Pn	Pn	13 03 35.2	+4.2
	comp=E,0.1nm,0.3s,baz=310,slow=13,SNR=9.2						
	comp=E,5.8nm,1.0s						
PDAR	Pinedale Array	13.86	88	Pn	Pn	13 03 35.1	+3.6
	comp=E,0.1nm,0.3s,baz=277,slow=12,SNR=13						
	comp=E,3.2nm,1.0s						
SIT	Sitka	13.98	344	P	Pn	13 03 33.7	+1.0
	baz=159						
S32K	Killisnoo	14.23	347	P	Pn	13 03 36.9	+0.7
	baz=161						
S34M	Telegraph Cree	14.25	354	P	Pn	13 03 36.8	+0.4
	baz=172,SNR=7.5						
DLBC	Dease Lake	14.71	357	Pn	Pn	13 03 42.1	-0.8
	baz=139,slow=13,SNR=9.1						
R32K	Eaglecrest	14.99	348	P	Pn	13 03 47.1	+0.5
	baz=163						
S31K	Pelican	15.00	344	P	Pn	13 03 47.0	+0.4
	baz=158						
CCX	Cicese	15.12	138	IAmb	IAmb	13 03 54.2	
	comp=Z,146nm,1.9s						
GLA	Glamis	15.14	130	IAmb	IAmb	13 03 55.1	
	comp=Z,134nm,1.8s						
TOAD	Toad River Com	15.23	7	P	Pn	13 03 50.0	+0.2
	baz=189,SNR=9.2						
R31K	City Hall, Gus	15.33	346	P	Pn	13 03 51.9	+0.9
	baz=159						
ESJX	Sierra Juarez	15.36	136	IAmb	IAmb	13 03 58.5	
	comp=Z,117nm,1.6s						
Q32M	Nakina River	15.38	353	P	Pn	13 03 52.4	+0.5
	baz=169,SNR=6.0						
PV23	Carpenter Ridg	15.63	103	IAmb	IAmb	13 04 01.8	
	comp=Z,97nm,1.2s						
R33M	Jennings River	15.71	355	IAmb	IAmb	13 04 02.0	
	comp=Z,191nm,2.0s						
R33M	Jennings River	15.71	355	P	Pn	13 03 56.0	-0.1
	baz=173,SNR=18						
LIRD	Liard River Hi	15.73	5	P	Pn	13 03 56.8	+0.6
	baz=186						
PV04	Paradox Valley	15.73	103	IAmb	IAmb	13 04 03.9	
	comp=Z,200nm,2.0s						
PV12	Saucer Basin,	15.84	103	IAmb	IAmb	13 04 05.2	
	comp=Z,200nm,1.7s						
P32M	Atlin	16.15	350	P	Pn	13 04 02.3	+0.5
	baz=166						
SKAG	Skagway	16.25	348	P	Pn	13 04 04.0	+1.1
	baz=162						
PLBC	Pleasant Camp	16.42	346	P	Pn	13 04 06.0	+0.9
	baz=159,SNR=5.9						
BEAVL	Fort Liard	16.56	6	P	Pn	13 04 07.9	+1.0
	baz=189,SNR=7.1						
KOTAN	Kotaneelee Air	16.60	8	P	Pn	13 04 07.0	-0.4
	baz=191						
P33M	Teslin, Yukon	16.67	353	P	Pn	13 04 08.8	+0.5
	baz=169,SNR=5.5						
P29M	Windy Craggy	16.85	344	P	Pn	13 04 10.9	+0.4
	baz=156,SNR=6.6						
W18A	Petrified Fore	16.86	114	IAmb	IAmb	13 04 18.4	
	comp=Z,231nm,1.9s						
P30M	Million Dollar	17.15	346	P	Pn	13 04 15.5	+1.1
	baz=158						
PNL	Peninsula	17.24	341	P	Pn	13 04 16.3	+0.8
	baz=152						
WHY	Whitehorse	17.34	349	P	Pn	13 04 17.6	+0.9
	baz=164						
DGMT	Dagmar	17.48	66	IAmb	IAmb	13 04 22.1	
	comp=Z,168nm,1.8s						
N32M	Quiet Lake	17.62	353	P	Pn	13 04 21.1	+1.0
	baz=169						
O30N	Mendenhall	17.62	348	IAmb	IAmb	13 04 26.0	
	comp=Z,167nm,1.9s						
O30N	Mendenhall	17.62	348	P	Pn	13 04 20.9	+0.8
	baz=161,SNR=11						
RSSD	Black Hills	17.63	80		P	13 04 21.8	+0.3
RSSD				IAmb	IAmb	13 04 27.8	
	comp=Z,171nm,1.6s						
RSSD	Black Hills	17.63	80	P	P	13 04 21.8	+0.3
RSSD				pmax	pmax		
	comp=Z,171nm,1.7s						
O29M	Mount Kennedy	17.63	343	P	Pn	13 04 20.2	-0.3
	baz=155,SNR=5.3						
TGTN	Hyland Airport	17.78	0	P	Pn	13 04 22.7	+0.5
	baz=180,SNR=9.2						
PINM	Pinnacle	17.82	341	P	Pn	13 04 23.2	+0.4
	baz=151						
HYT	Haines Junctio	17.91	346	P	Pn	13 04 24.9	+1.1
	baz=158,SNR=9.5						
TUC	Tucson	18.02	123		Pn	13 04 23.7	-1.7
TUC	Tucson	18.02	123	P	Pn	13 04 23.7	-1.7
TUC				pmax	pmax		
	comp=Z,104nm,1.6s						
Q24A	Divide	18.17	97	IAmb	IAmb	13 04 36.5	
	comp=Z,259nm,1.9s						
YUK6	Outpost Mounta	18.18	344	P	Pn	13 04 27.8	+0.5
	baz=156						
N31M	Braeburn, Yuko	18.26	349	P	P	13 04 29.2	+1.0
	baz=163,SNR=5.3						
MESA	MESA	18.33	338	P	Pn	13 04 29.2	+0.1
	baz=147						
O28M	Mount Upton	18.41	342	P	P	13 04 29.1	-1.0
	baz=152,SNR=7.7						
SDCO	Great Sand Dun	18.43	101	IAmb	IAmb	13 04 38.4	
	comp=Z,193nm,1.7s						
YAH	Yahtse	18.43	339	IAmb	IAmb	13 04 39.6	
	comp=Z,203nm,2.0s						
N30M	Aishikik Lake	18.43	347	P	P	13 04 30.7	+0.6
	baz=160,SNR=9.0						
YUK4	Talbot Arm	18.60	345	P	Pn	13 04 33.9	+1.6
	baz=156						
BGLC	Bering Glacier	18.65	336	P	P	13 04 33.8	+1.5
	baz=144						
FARO	Faro, Yukon	18.70	353	P	Pn	13 04 34.4	+1.0
	baz=169,SNR=8.6						
YUK8	Steele Glacier	18.77	343	P	P	13 04 35.4	+1.3
	baz=154,SNR=6.4						
M31M	Drury Creek, Y	18.78	351	P	Pn	13 04 35.2	+0.8
	baz=166,SNR=5.9						
KAIM	Kayak Island	18.83	335	P	Pn	13 04 36.3	+1.4
	baz=142						
CTG	Chitna Glacier	18.85	340	P	Pn	13 04 36.4	+1.1
	baz=150,SNR=8.8						
DUN6	Lazy B Ranch	18.90	120	IAmb	IAmb	13 04 46.0	
	comp=Z,156nm,1.3s						
MMPY	Sheldon Lake,	18.95	356	P	Pn	13 04 37.5	+1.1
	baz=174,SNR=23						
BERG	Berg Lake	18.99	336	IAmb	IAmb	13 04 45.8	
	comp=Z,171nm,1.9s						
Q23K	Middleton Isla	19.09	331	P	P	13 04 38.9	+1.8
	baz=137						
CRQE	Cirque	19.12	338	P	Pn	13 04 39.7	+1.2
	baz=146,SNR=9.3						
CRQM	Cirque	19.14	338	IAmb	IAmb	13 04 48.6	
	comp=Z,263nm,1.6s						
ANMO	Albuquerque	19.16	110	P	Pn	13 04 40.8	+1.4
ANMO	Albuquerque	19.16	110	IAmb	IAmb	13 04 46.1	
	comp=Z,60nm,1.6s						
ANMO	Albuquerque	19.16	110	P	Pn	13 04 40.8	+1.4
	comp=Z,0.1nm,0.3s,baz=38,slow=10,SNR=16						
	comp=Z,13nm,1.1s						
ANMO	Albuquerque	19.16	110	*ce*P	Pn	13 04 42.4	+3.1
ANMO				pmax	pmax		
	comp=Z,65nm,2.5s						
Y22D	IRIS PASSCAL I	19.35	113	P	Pn	13 04 43.0	+1.5
	baz=307						
YUK3	Moose Creek	19.36	343	P	P	13 04 41.4	+0.9
	baz=153						
T25A	Trinidad	19.47	102	IAmb	IAmb	13 04 48.4	
	comp=Z,139nm,1.3s						
BNM	Barren Site	19.50	112		Pn	13 04 45.7	+2.3
319A	Douglas	19.59	123	IAmb	IAmb	13 04 53.8	
	comp=Z,186nm,1.9s						
M29M	Somme Creek	19.59	346	P	P	13 04 43.4	+0.6
	baz=158						
MCARA	McCarthy VSAT	19.63	339	P	P	13 04 45.0	+1.8
MCARA	McCarthy VSAT	19.63	339	P	P	13 04 44.9	+1.8
	baz=147						
WRGLY	Wrigley	19.71	7	P	Pn	13 04 45.3	-0.1
WRGLY	Wrigley	19.71	7	P	Pn	13 04 45.5	+0.1
	baz=191,SNR=19						
BMRM	Bremner River	19.72	336	P	P	13 04 45.7	+1.5
	baz=143						
EYAK	Cordova Ski Ar	19.74	334	P	P	13 04 45.6	+1.4
	baz=140						
OGNE	Ogallala	19.75	89	IAmb	IAmb	13 04 51.2	
	comp=Z,112nm,1.4s						
HIN	Hinchinbrook I	19.86	333	IAmb	IAmb	13 04 52.9	
	comp=Z,209nm,2.0s						
P23K	Montague Islan	19.87	331	P	P	13 04 47.6	+1.9
	baz=136						
KSCO	Kaye Shedlock'	19.97	95	IAmb	IAmb	13 04 57.4	
	comp=Z,132nm,1.2s						
BVCY	Beaver Creek	20.02	343	P	P	13 04 48.3	+0.9
	baz=153						
FID	Port Fidalgo	20.12	334	IAmb	IAmb	13 05 02.7	
	comp=Z,214nm,2.0s						
L29M	L29M	20.15	347	P	P	13 04 50.1	+1.2
	baz=159,SNR=5.7						
M27K	Edge Creek, AK	20.19	342	P	P	13 04 50.3	+0.9
	baz=151,SNR=11						
N25K	Chitina, Valde	20.24	338	P	P	13 04 51.5	+1.6
	baz=144,SNR=10						
MAYO	Mayo, Yukon	20.31	350	P	P	13 04 52.0	+1.6
	baz=164						
HSIG		20.36	131	P	P	13 04 52.8	+1.5
FFC	Flin Flon	20.37	48	P	P	13 04 51.3	+0.1
FFC				IAmb	IAmb	13 05 06.6	
	comp=Z,75nm,1.1s						
FFC	Flin Flon	20.37	48	P	P	13 04 51.3	+0.1
FFC				pmax	pmax		
	comp=Z,75nm,1.1s						
GLI	Glacier Island	20.42	333	P	P	13 04 53.1	+1.3
	baz=138						
YKA	Yellowknife Ar	20.44	19	P	P	13 04 52.2	+0.3
	comp=Z,20nm,0.8s,baz=212,slow=11,SNR=30						
YKA				LR	LR	13 12 29.0	
	comp=Z,863nm,19.0s,baz=208,slow=36						
	comp=Z,20nm,0.8s						
M26K	Nabesna, AK	20.49	341	P	P	13 04 54.3	+1.8
	baz=148,SNR=13						
MDND	Maddock	20.51	68	IAmb	IAmb	13 05 01.0	
	comp=Z,106nm,1.4s						
KLU	Klutina	20.53	336	P	P	13 04 54.2	+1.2
	baz=142,SNR=7.5						
KDAK	Kodiak Island	20.53	321	P	P	13 04 50.7	-2.3
KDAK	Kodiak Island	20.53	321	P	P	13 04 51.8	-1.2
	comp=Z,10nm,0.8s,baz=140,slow=7.0,SNR=6.0						
	comp=Z,10nm,0.8s						
KDAK	Kodiak Island	20.53	321	*i* P	P	13 04 54.1	+1.2
KDAK				pmax	pmax		
	comp=Z,50nm,1.5s						
KDAK	Kodiak Island	20.53	321	P	P	13 04 55.2	+2.2
	baz=122						
OHAK	Old Harbor	20.56	320	P	P	13 04 52.8	-0.5
OHAK				IAmb	IAmb	13 05 05.5	
	comp=Z,62nm,1.2s						
OHAK	Old Harbor	20.56	320	P	P	13 04 53.7	+0.4
	baz=120						
SII	Sitkinak Islan	20.68	317	P	P	13 04 56.7	+2.1
	baz=117						
SEW	Seward	20.68	330	P	P	13 04 55.8	+1.4
	baz=132						
K29M	Barlow Dome	20.76	349	P	P	13 04 57.1	+1.6
	baz=161,SNR=9.7						
L27K	Beaver Creek,	20.80	343	P	P	13 04 57.2	+1.3
	baz=152,SNR=17						
PWL	Port Wells	20.81	332	P	P	13 04 57.6	+1.6
	baz=136						
SYI	Shuyak Island	20.91	324	IAmb	IAmb	13 05 07.0	
	comp=Z,61nm,1.0s						
Q20K	Shuyak Island	20.91	324	P	P	13 04 58.8	+1.8
	baz=124						
BRSE	Bradley Lake S	20.92	328	P	P	13 04 58.4	+1.2
	baz=130						
O22K	Cooper Landing	21.03	330	P	P	13 04 60.0	+1.7
	baz=133						
HARP	HAARP	21.04	338	P	P	13 04 59.5	+1.1
	baz=144						
EPT	El Paso	21.06	117	IAmb	IAmb	13 05 12.6	
	comp=Z,97nm,1.1s						
CHIR	Chirikof Islan	21.08	314	P	P	13 05 01.4	+2.5
	baz=113						
M24K	Tolsona, Glenn	21.09	337	P	P	13 04 57.7	-1.3
M24K	Tolsona, Glenn	21.09	337	P	P	13 05 00.2	+1.2
	baz=142,SNR=5.6						
L26K	Log Cabin Wild	21.11	341	IAmb	IAmb	13 05 05.4	
	comp=Z,115nm,1.7s						
L26K	Log Cabin Wild	21.11	341	P	P	13 05 00.7	+1.5
	baz=149,SNR=16						
SCM	Sheep Creek Mo	21.22	335	IAmb	IAmb	13 05 14.4	
	comp=Z,84nm,1.2s						
SCM	Sheep Creek Mo	21.22	335	P	P	13 05 02.0	+1.6
	baz=139,SNR=12						
HOM	Homer	21.23	327	P	P	13 05 01.5	+1.1
	baz=128						
DAWY	Dawson	21.25	347	P	P	13 05 01.5	+0.8
	baz=158,SNR=12						
KNK	Knik Glacier	21.26	333	IAmb	IAmb	13 05 11.2	
	comp=Z,64nm,1.1s						
KNK	Knik Glacier	21.26	333	P	P	13 05 01.7	+0.9
	baz=137,SNR=8.0						
R18K	Karluk	21.28	320	P	P	13 05 02.6	+1.6
	baz=119						
J30M	Hart River	21.30	351	P	P	13 05 02.4	+1.0
	baz=164,SNR=20						
M23K	Glacier View	21.31	335	P	P	13 05 02.4	+1.1
	baz=139,SNR=17						
J29N	Klondike Camp	21.43	348	P	P	13 05 03.9	+1.2
	baz=160						
RC01	Rabbit Creek A	21.46	331	IAmb	IAmb	13 05 14.2	
	comp=Z,185nm,1.9s						
RC01	Rabbit Creek A	21.46	331	P	P	13 05 04.7	+1.7
	baz=134,SNR=8.0						
SML	Sawmill	21.51	334	IAmb	IAmb	13 05 16.3	
	comp=Z,52nm,1.1s						
SML	Sawmill	21.51	334	P	P	13 05 04.8	+1.3
	baz=138,SNR=11						
PAX	Paxson	21.59	339	IAmb	IAmb	13 05 18.5	
	comp=Z,119nm,2.0s						
PAX	Paxson	21.59	339	P	P	13 05 05.5	+1.0
	baz=145,SNR=5.9						
PMR	Palmer	21.61	333	IAmb	IAmb	13 05 14.7	
	comp=Z,181nm,1.8s						
PMR	Palmer	21.61	333	P	P	13 05 05.9	+1.4
	baz=136,SNR=11						
Q19K	Cape Douglas,	21.63	323	IAmb	IAmb	13 05 18.9	
	comp=Z,136nm,1.1s						

Q19K	**Cape Douglas,**	**21.63**	**323**	P	**P**	**13 05 06.0 +1.2**
	baz=123					
GHO	**Glory Hole Cre**	**21.67**	**333**	IAmb	IAmb	13 05 18.0
	comp=Z,66nm,1.1s					
K27K	**Chicken**	**21.71**	**344**	IAmb	IAmb	13 05 08.9
	comp=Z,93nm,1.9s					
K27K	**Chicken**	**21.71**	**344**	P	**P**	**13 05 06.9 +1.3**
	baz=152					
CAPN	**Captain Cook N**	**21.75**	**329**	P	**P**	**13 05 07.2 +1.2**
	baz=131					
P19K	**Oil Pt**	**21.87**	**325**	IAmb	IAmb	13 05 20.1
	comp=Z,108nm,1.2s					
P19K	**Oil Pt**	**21.87**	**325**	P	**P**	**13 05 08.6 +1.2**
	baz=125					
O20K	**Slope Mountain**	**21.88**	**327**	P	**P**	**13 05 08.8 +1.3**
	baz=127					
WAT6	**Susitna Watana**	**21.92**	**336**	P	**P**	**13 05 08.8 +0.8**
	baz=140,SNR=16					
I30M	**Mount Dempster**	**21.94**	**351**	P	**P**	**13 05 09.4 +1.2**
	baz=164,SNR=15					
ILSW	**Iliamna Southw**	**22.02**	**326**	IAmb	IAmb	13 05 20.8
	comp=Z,95nm,1.2s					
M22K	**Willow**	**22.06**	**332**	IAmb	IAmb	13 05 13.5
	comp=Z,66nm,1.1s					
M22K	**Willow**	**22.06**	**332**	P	**P**	**13 05 10.3 +1.1**
	baz=134					
SUA	**Susitna One**	**22.07**	**331**	IAmb	IAmb	13 05 13.5
	comp=Z,158nm,1.7s					
SUA	**Susitna One**	**22.07**	**331**	P	**P**	**13 05 10.6 +1.0**
	baz=133,SNR=6.5					
RIDG	**Independent Ri**	**22.08**	**341**	IAmb	IAmb	13 05 12.6
	comp=Z,58nm,1.0s					
RIDG	**Independent Ri**	**22.08**	**341**	P	**P**	**13 05 10.7 +1.1**
	baz=147,SNR=25					
SCRK	**Sand Creek**	**22.08**	**342**	P	**P**	**13 05 10.7 +1.0**
	baz=149,SNR=16					
Q18K	**Katmai Hardscr**	**22.08**	**322**	P	**P**	**13 05 10.7 +1.0**
	baz=120,SNR=14					
RED	**Redoubt Volcan**	**22.14**	**327**	IAmb	IAmb	13 05 20.9
	comp=Z,112nm,1.4s					
DHY	**Denali Highway**	**22.20**	**337**	IAmb	IAmb	13 05 15.4
	comp=Z,69nm,1.0s					
DHY	**Denali Highway**	**22.20**	**337**	P	**P**	**13 05 12.1 +1.1**
	baz=141,SNR=28					
MSTX	**Muleshoe**	**22.23**	**107**	IAmb	IAmb	13 05 24.6
	comp=Z,152nm,1.8s					
Q17K	**Contact Creek**	**22.29**	**320**	P	**P**	**13 05 12.1 +0.1**
	baz=118					
I29M	**Ogilvie Camp,**	**22.31**	**349**	P	**P**	**13 05 12.7 +0.6**
	baz=161,SNR=15					
H31M	**Peel River**	**22.31**	**354**	IAmb	IAmb	13 05 15.9
	comp=Z,40nm,1.0s					
H31M	**Peel River**	**22.31**	**354**	P	**P**	**13 05 13.2 +1.1**
	baz=169,SNR=28					
WAT1	**Susitna Watana**	**22.35**	**336**	P	**P**	**13 05 13.7 +1.2**
	baz=139					
K24K	**Donnelly Dome**	**22.36**	**340**	IAmb	IAmb	13 05 22.1
	comp=Z,107nm,1.6s					
K24K	**Donnelly Dome**	**22.36**	**340**	P	**P**	**13 05 14.0 +1.3**
	baz=145,SNR=10					
N20K	**Mount Spurr**	**22.42**	**329**	P	**P**	**13 05 14.1 +0.7**
	baz=130					
SPCR	**Spurr Chakacha**	**22.42**	**329**	P	**P**	**13 05 14.4 +1.1**
	baz=130					
J26L	**Joseph Creek**	**22.44**	**343**	P	**P**	**13 05 14.8 +1.2**
	baz=150,SNR=17					
STLK	**Strandline Lak**	**22.48**	**330**	IAmb	IAmb	13 05 25.1
	comp=Z,106nm,1.8s					
AMTX	**Amarillo**	**22.50**	**104**	IAmb	IAmb	13 05 27.3
	comp=Z,63nm,0.9s					
P18K	**Big Mountain,**	**22.57**	**323**	IAmb	IAmb	13 05 23.6
	comp=Z,114nm,1.3s					
P18K	**Big Mountain,**	**22.57**	**323**	P	**P**	**13 05 15.1 +0.2**
	baz=122,SNR=11					
CUT	**Chulitna**	**22.57**	**333**	P	**P**	**13 05 15.8 +1.0**
	baz=135					
O19K	**Port Alsworth**	**22.63**	**326**	P	**P**	**13 05 16.3 +0.9**
	baz=125,SNR=11					
I28M	**Miner Creek**	**22.63**	**348**	P	**P**	**13 05 16.4 +0.9**
	baz=158,SNR=8.7					
VHRN	**Van Horn**	**22.69**	**117**	IAmb	IAmb	13 05 23.8
	comp=Z,126nm,1.9s					
SKT	**Skwentna**	**22.70**	**331**	IAmb	IAmb	13 05 26.9
	comp=Z,104nm,1.6s					
SKT	**Skwentna**	**22.70**	**331**	P	**P**	**13 05 16.8 +0.6**
	baz=132,SNR=13					
R16K	**Pilot Point**	**22.78**	**317**	P	**P**	**13 05 17.8 +0.8**
	baz=114					
O18K	**Koktuh Hills**	**22.81**	**324**	IAmb	IAmb	13 05 26.9
	comp=Z,63nm,1.1s					
O18K	**Koktuh Hills**	**22.81**	**324**	P	**P**	**13 05 18.6 +1.2**
	baz=122,SNR=13					
Q16K	**King Salmon**	**22.84**	**321**	P	**P**	**13 05 19.1 +1.4**
	baz=118,SNR=9.7					
RND	**Reindeer**	**22.88**	**336**	IAmb	IAmb	13 05 28.8
	comp=Z,157nm,1.9s					
CHNA	**Chernabura Isl**	**22.88**	**310**	P	**P**	**13 05 18.8 +0.6**
	baz=106					
J25K	**Salcha River,**	**22.94**	**341**	IAmb	IAmb	13 05 23.3
	comp=Z,80nm,1.9s					
J25K	**Salcha River,**	**22.94**	**341**	P	**P**	**13 05 20.0 +1.2**
	baz=147,SNR=9.5					
ECSD	**EROS Data Cent**	**22.98**	**79**	P	**P**	**13 05 20.1 +0.8**
ECSD				IAmb	IAmb	13 05 23.2
	comp=Z,100nm,1.1s					
P17K	**Kvichak River**	**23.00**	**322**	P	**P**	**13 05 20.1 +0.8**
	baz=119					
R32A	**Long Quarter,**	**23.02**	**93**	IAmb	IAmb	13 05 32.2
	comp=Z,112nm,1.3s					
PECS	**Pecos**	**23.04**	**114**	IAmb	IAmb	13 05 27.3
	comp=Z,106nm,1.5s					
I27K	**Kandik River**	**23.05**	**346**	P	**P**	**13 05 20.2 +0.3**
	baz=155,SNR=9.4					
N19K	**Bonanza Creek**	**23.05**	**327**	P	**P**	**13 05 20.4 +0.4**
N19K				IAmb	IAmb	13 05 23.6
	comp=Z,56nm,1.1s					
N19K	**Bonanza Creek**	**23.05**	**327**	P	**P**	**13 05 20.9 +0.9**
	baz=126,SNR=19					
ULM	**Lac du Bonnet**	**23.05**	**62**	P	**P**	**13 05 20.3 +0.3**
	comp=Z,25nm,0.9s,baz=273,slow=9.6,SNR=17					
ULM				LR	LR	13 14 36.5
	comp=Z,3µm,18.0s,baz=266,slow=37					
	comp=Z,25nm,0.9s					
ULM	**Lac du Bonnet**	**23.05**	**62**	*i* P	**P**	**13 05 20.6 +0.6**
I26K	**Coal Creek Min**	**23.07**	**344**	P	**P**	**13 05 21.2 +1.2**
	baz=152,SNR=12					
EPYK	**Eagle Plains**	**23.09**	**352**	P	**P**	**13 05 20.7 +0.5**
	baz=164,SNR=18					
H29M	**Whitestone**	**23.13**	**350**	IAmb	IAmb	13 05 23.8
	comp=Z,32nm,0.9s					
H29M	**Whitestone**	**23.13**	**350**	P	**P**	**13 05 22.1 +1.5**
	baz=161,SNR=19					
MCK	**McKinley**	**23.15**	**337**	IAmb	IAmb	13 05 23.9
	comp=Z,88nm,1.5s					
MCK	**McKinley**	**23.15**	**337**	P	**P**	**13 05 21.7 +0.8**
	baz=140,SNR=10					
HDA	**Harding Lake**	**23.15**	**340**	IAmb	IAmb	13 05 26.1
	comp=Z,76nm,1.9s					
HDA	**Harding Lake**	**23.15**	**340**	P	**P**	**13 05 21.9 +1.0**
	baz=144,SNR=8.4					
M20K	**Styx River**	**23.20**	**330**	P	**P**	**13 05 22.3 +0.8**
	baz=130,SNR=20					
S14K	**Fog Glacier**	**23.31**	**313**	P	**P**	**13 05 23.4 +0.7**
	baz=109					
TRF	**Thorofare Moun**	**23.34**	**335**	IAmb	IAmb	13 05 31.8
	comp=Z,128nm,1.4s					
TRF	**Thorofare Moun**	**23.34**	**335**	P	**P**	**13 05 23.4 +0.4**
	baz=137,SNR=15					
G31M	**Satah River**	**23.41**	**354**	IAmb	IAmb	13 05 25.6
	comp=Z,111nm,1.6s					
G31M	**Satah River**	**23.41**	**354**	P	**P**	**13 05 23.5 +0.1**
	baz=169,SNR=13					
ILAR	**Eielson Array**	**23.43**	**340**	P	**P**	**13 05 24.2 +0.5**
	comp=Z,3.5nm,0.7s,baz=155,slow=8.7,SNR=35					
ILAR				PcP	**PcP**	**13 09 09.3 -0.1**
	comp=Z,1.8nm,0.7s,baz=186,slow=1.7,SNR=13					
	comp=Z,3.5nm,0.7s					
WRH	**Wood River Hil**	**23.50**	**339**	IAmb	IAmb	13 05 44.0
	comp=Z,129nm,2.0s					
SDPT	**Sand Point**	**23.52**	**311**	P	**P**	**13 05 25.0 +0.4**
	baz=106					
N18K	**Kilae Creek**	**23.55**	**326**	P	**P**	**13 05 25.2 +0.4**
N18K	**Kilae Creek**	**23.55**	**326**	P	**P**	**13 05 25.5 +0.7**
	baz=123,SNR=17					
PPLA	**Purkeypile**	**23.55**	**333**	P	**P**	**13 05 25.6 +0.6**
	baz=133,SNR=19					
CCB	**Clear Creek Bu**	**23.56**	**339**	IAmb	IAmb	13 05 34.5
	comp=Z,122nm,1.9s					
O17K	**Koliganek Bris**	**23.58**	**323**	P	**P**	**13 05 25.7 +0.6**
	baz=120,SNR=9.6					
H27K	**Steamboat Moun**	**23.61**	**347**	P	**P**	**13 05 26.2 +0.7**
	baz=156,SNR=18					
KTH	**Kantishna Hill**	**23.61**	**335**	IAmb	IAmb	13 05 35.4
	comp=Z,161nm,2.0s					
POST	**Post**	**23.62**	**108**	IAmb	IAmb	13 05 43.0
	comp=Z,33nm,1.0s					
P16K	**Nushagak River**	**23.62**	**321**	P	**P**	**13 05 26.7 +1.1**
	baz=117					
G30M	**tAoh Zraii Nji**	**23.63**	**352**	P	**P**	**13 05 26.1 +0.4**
	baz=166,SNR=7.2					
M19K	**Big River Lodg**	**23.68**	**329**	P	**P**	**13 05 27.7 +1.6**
	baz=128					
PRP	**Porcupine Dome**	**23.74**	**342**	P	**P**	**13 05 28.0 +1.1**
	baz=148,SNR=13					
G29M	**Pine Creek**	**23.75**	**351**	P	**P**	**13 05 27.7 +0.8**
G29M				IAmb	IAmb	13 05 28.6
	comp=Z,163nm,2.0s					
G29M	**Pine Creek**	**23.75**	**351**	P	**P**	**13 05 27.6 +0.8**
	baz=162,SNR=20					
COLA	**College**	**23.76**	**339**	*i* P	**P**	**13 05 27.1 +0.3**
COLA				pmax	pmax	
	comp=Z,71nm,2.5s					
COLA	**College**	**23.76**	**339**	P	**P**	**13 05 27.8 +0.9**
	baz=143					
POKR	**Poker Plat Res**	**23.85**	**340**	P	**P**	**13 05 28.6 +0.8**
	baz=144,SNR=5.8					
L20K	**Farewell, AK**	**23.85**	**331**	P	**P**	**13 05 28.7 +0.8**
	baz=130,SNR=24					
NEA2	**Nenana**	**23.86**	**338**	IAmb	IAmb	13 05 35.6
	comp=Z,36nm,1.0s					
NEA2	**Nenana**	**23.86**	**338**	P	**P**	**13 05 28.4 +0.6**
	baz=141,SNR=32					
CAST	**Castle Rocks**	**23.88**	**334**	P	**P**	**13 05 28.6 +0.5**
	baz=134,SNR=16					
F31M	**Tsiigehtchic**	**23.89**	**355**	P	**P**	**13 05 26.4 -1.6**
F31M	**Tsiigehtchic**	**23.89**	**355**	P	**P**	**13 05 28.4 +0.4**
	baz=170,SNR=7.5					
O16K	**Kokwok River B**	**23.93**	**322**	IAmb	IAmb	13 05 38.3
	comp=Z,68nm,1.0s					
O16K	**Kokwok River B**	**23.93**	**322**	P	**P**	**13 05 29.5 +0.9**
	baz=118,SNR=16					
M18K	**Stony River**	**23.98**	**327**	P	**P**	**13 05 29.6 +0.7**
	baz=125,SNR=14					
N17K	**Nushagak Hills**	**24.00**	**324**	IAmb	IAmb	13 05 40.8
	comp=Z,80nm,1.2s					
N17K	**Nushagak Hills**	**24.00**	**324**	P	**P**	**13 05 30.3 +1.0**
	baz=121,SNR=21					
L19K	**White Mountain**	**24.02**	**329**	P	**P**	**13 05 30.4 +1.0**
	baz=128,SNR=31					
SN07	**Snyder 07**	**24.03**	**107**	IAmb	IAmb	13 05 36.8
	comp=Z,114nm,1.7s					
BPAW	**Bear Paw Mtn.**	**24.03**	**336**	IAmb	IAmb	13 05 37.8
	comp=Z,31nm,1.0s					
BPAW	**Bear Paw Mtn.**	**24.03**	**336**	P	**P**	**13 05 29.7 +0.2**
	baz=137,SNR=34					
G27K	**Doyon Strip**	**24.16**	**347**	IAmb	IAmb	13 05 50.9
	comp=Z,96nm,2.0s					
G27K	**Doyon Strip**	**24.16**	**347**	P	**P**	**13 05 31.8 +1.2**
	baz=156,SNR=18					
F30M	**Barrier River**	**24.21**	**353**	P	**P**	**13 05 32.0 +1.0**
	baz=167					
CHUM	**Lake Minchumin**	**24.28**	**334**	P	**P**	**13 05 32.4 +0.7**
	baz=134,SNR=16					
I23K	**Minto, Yukon-K**	**24.37**	**339**	IAmb	IAmb	13 05 41.9
	comp=Z,37nm,1.0s					
I23K	**Minto, Yukon-K**	**24.37**	**339**	P	**P**	**13 05 34.1 +1.6**
	baz=141,SNR=32					
H25L	**Birch Creek**	**24.45**	**343**	P	**P**	**13 05 34.7 +1.5**
	baz=148,SNR=12					
K20K	**Telida**	**24.49**	**332**	P	**P**	**13 05 34.7 +0.9**
	baz=131					
TXAR	**Lajitas Array**	**24.50**	**118**	P	**P**	**13 05 35.2 +1.0**
	comp=Z,5.8nm,1.0s,baz=295,slow=7.7,SNR=22					
TXAR				PcP	**PcP**	**13 09 12.3 -0.1**
	comp=Z,0.8nm,0.6s,baz=319,slow=2.4,SNR=5.8					
	comp=Z,5.8nm,1.0s					
O15K	**Ungalikthiuk R**	**24.54**	**320**	IAmb	IAmb	13 05 43.4
	comp=Z,64nm,1.3s					
O15K	**Ungalikthiuk R**	**24.54**	**320**	P	**P**	**13 05 35.0 +0.9**
	baz=115					
H24K	**Noodor Dome**	**24.55**	**341**	IAmb	IAmb	13 05 45.1
	comp=Z,93nm,1.6s					
H24K	**Noodor Dome**	**24.55**	**341**	P	**P**	**13 05 35.6 +1.3**
	baz=144,SNR=15					
M17K	**Holitna River**	**24.57**	**326**	IAmb	IAmb	13 05 42.4
	comp=Z,28nm,0.9s					
M17K	**Holitna River**	**24.57**	**326**	P	**P**	**13 05 35.6 +1.2**
	baz=122,SNR=9.6					
G26K	**Porcupine Rive**	**24.65**	**346**	P	**P**	**13 05 36.2 +1.1**
	baz=152,SNR=8.4					
F28M	**Old Crow**	**24.65**	**350**	IAmb	IAmb	13 05 48.4
	comp=Z,77nm,2.0s					
F28M	**Old Crow**	**24.65**	**350**	P	**P**	**13 05 36.0 +0.9**
	baz=160,SNR=6.6					
MLY	**Manley**	**24.65**	**337**	IAmb	IAmb	13 05 43.0
	comp=Z,36nm,1.0s					
MLY	**Manley**	**24.65**	**337**	P	**P**	**13 05 35.9 +0.7**
	baz=139,SNR=32					
N16K	**Nishlik Lake**	**24.65**	**323**	P	**P**	**13 05 37.0 +1.8**
	baz=119,SNR=16					
INK	**Inuvik**	**24.73**	**356**	IAmb	IAmb	13 05 39.4
	comp=Z,49nm,1.7s					
INK	**Inuvik**	**24.73**	**356**	P	**P**	**13 05 35.2 -0.5**
	comp=Z,5.2nm,0.9s,baz=178,slow=11,SNR=10					
INK				LR	LR	13 14 42.4
	comp=Z,541nm,18.9s,baz=184,slow=35					
	comp=Z,5.2nm,0.9s					
INK	**Inuvik**	**24.73**	**356**	P	**P**	**13 05 36.4 +0.6**
	baz=171,SNR=10					
L18K	**Granite Mounta**	**24.73**	**328**	IAmb	IAmb	13 05 44.0
	comp=Z,41nm,0.9s					
L18K	**Granite Mounta**	**24.73**	**328**	P	**P**	**13 05 36.9 +1.0**
	baz=125,SNR=23					
G25K	**Bearman Lake**	**24.93**	**343**	P	**P**	**13 05 39.4 +1.8**
	baz=148,SNR=12					
H23K	**Yukon River**	**24.95**	**340**	IAmb	IAmb	13 05 43.0
	comp=Z,125nm,1.9s					
H23K	**Yukon River**	**24.95**	**340**	P	**P**	**13 05 39.2 +1.3**
	baz=142,SNR=16					
M16K	**Timber Creek**	**25.00**	**324**	IAmb	IAmb	13 05 48.4
	comp=Z,55nm,1.1s					
M16K	**Timber Creek**	**25.00**	**324**	P	**P**	**13 05 40.2 +1.8**
	baz=119,SNR=12					
J20K	**Nowinta River**	**25.07**	**333**	IAmb	IAmb	13 05 40.5
	comp=Z,20nm,0.7s					
J20K	**Nowinta River**	**25.07**	**333**	P	**P**	**13 05 39.5 +0.7**
	baz=132,SNR=25					
N15K	**Kwethluk River**	**25.09**	**322**	P	**P**	**13 05 40.4 +1.3**
	baz=116,SNR=6.8					
SAND	**Sanderson**	**25.10**	**115**	IAmb	IAmb	13 05 46.3
	comp=Z,89nm,1.6s					
ABTX	**Abilene, Hawle**	**25.16**	**106**	IAmb	IAmb	13 05 53.0
	comp=Z,87nm,1.4s					
E29M	**Blow River**	**25.16**	**352**	IAmb	IAmb	13 05 43.5
	comp=Z,42nm,1.5s					
E29M	**Blow River**	**25.16**	**352**	P	**P**	**13 05 40.5 +0.8**
	baz=164,SNR=12					
G24K	**Hadweenzic Riv**	**25.17**	**342**	IAmb	IAmb	13 05 42.7
	comp=Z,25nm,1.1s					
G24K	**Hadweenzic Riv**	**25.17**	**342**	P	**P**	**13 05 41.1 +1.3**
	baz=146,SNR=7.8					
I37A	**Lemond, Waseca**	**25.20**	**77**	IAmb	IAmb	13 05 54.9
	comp=Z,42nm,1.0s					
O14K	**Tigyukauivet M**	**25.24**	**319**	P	**P**	**13 05 42.1 +1.6**
	baz=113					
L17K	**Donlin**	**25.31**	**327**	P	**P**	**13 05 42.1 +1.0**
	baz=122,SNR=22					
F26K	**Sheenjek River**	**25.38**	**346**	IAmb	IAmb	13 05 45.2
	comp=Z,41nm,1.8s					
F26K	**Sheenjek River**	**25.38**	**346**	P	**P**	**13 05 43.6 +1.9**
	baz=153,SNR=8.9					
E27K	**Coleen River**	**25.42**	**349**	IAmb	IAmb	13 05 45.3
	comp=Z,46nm,1.4s					
E27K	**Coleen River**	**25.42**	**349**	P	**P**	**13 05 43.6 +1.5**
	baz=157,SNR=17					
J19K	**Poorman**	**25.43**	**332**	IAmb	IAmb	13 05 44.6
	comp=Z,40nm,0.8s					
J19K	**Poorman**	**25.43**	**332**	P	**P**	**13 05 43.0 +0.7**
	baz=130,SNR=33					
H22K	**Ishtalitna Cre**	**25.48**	**338**	P	**P**	**13 05 44.1 +1.4**
	baz=139,SNR=38					
J18K	**Innoko River**	**25.48**	**330**	IAmb	IAmb	13 05 45.0
	comp=Z,38nm,0.8s					
J18K	**Innoko River**	**25.48**	**330**	P	**P**	**13 05 43.3 +0.7**
	baz=127,SNR=33					
E28M	**Babbage River**	**25.55**	**351**	P	**P**	**13 05 44.0 +0.8**
	baz=161,SNR=13					
F25K	**Christian Rive**	**25.56**	**345**	IAmb	IAmb	13 06 10.5
	comp=Z,86nm,2.0s					
F25K	**Christian Rive**	**25.56**	**345**	P	**P**	**13 05 44.8 +1.4**
	baz=150,SNR=12					
L16K	**Owhat River**	**25.57**	**325**	P	**P**	**13 05 44.8 +1.4**
	baz=120,SNR=36					
I20K	**Naaghedeneel**	**25.59**	**334**	P	**P**	**13 05 45.1 +1.5**
	baz=132,SNR=18					
M15K	**Kasigluk River**	**25.59**	**323**	P	**P**	**13 05 44.4 +0.7**
	baz=116,SNR=9.5					
K17K	**Iditarod**	**25.63**	**328**	P	**P**	**13 05 45.3 +1.2**
	baz=123,SNR=26					
H21K	**Melozitna Rive**	**25.70**	**337**	IAmb	IAmb	13 05 47.2
	comp=Z,41nm,1.2s					
H21K	**Melozitna Rive**	**25.70**	**337**	P	**P**	**13 05 45.5 +0.8**
	baz=136,SNR=31					
N14K	**Kuskokwak Cree**	**25.71**	**321**	IAmb	IAmb	13 05 52.7
	comp=Z,65nm,1.0s					
N14K	**Kuskokwak Cree**	**25.71**	**321**	P	**P**	**13 05 45.3 +0.6**
	baz=114,SNR=5.8					
C36M	**Paulatuk**	**25.74**	**4**	P	**P**	**13 05 44.9 0.0**
	baz=187					
G23K	**Bananza Creek**	**25.77**	**340**	IAmb	IAmb	13 05 57.6
	comp=Z,54nm,1.4s					
G23K	**Bananza Creek**	**25.77**	**340**	P	**P**	**13 05 47.0 +1.7**
	baz=142,SNR=21					
FCC	**Fort Churchill**	**25.88**	**42**	IAmb	IAmb	13 05 56.8
	comp=Z,52nm,1.4s					
F24K	**Squaw Lake**	**25.95**	**343**	P	**P**	**13 05 47.7 +0.9**
	baz=146,SNR=9.1					
EYMN	**Ely**	**25.96**	**68**	IAmb	IAmb	13 05 51.2
	comp=Z,46nm,1.2s					
E25K	**Arctic Village**	**26.01**	**345**	IAmb	IAmb	13 05 54.1
	comp=Z,56nm,2.0s					
E25K	**Arctic Village**	**26.01**	**345**	P	**P**	**13 05 48.6 +1.2**
	baz=151					
N38A	**Joes South For**	**26.16**	**84**	IAmb	IAmb	13 06 04.7
	comp=Z,57nm,1.2s					
M14K	**Bethel**	**26.18**	**322**	IAmb	IAmb	13 05 58.5
	comp=Z,74nm,1.1s					
M14K	**Bethel**	**26.18**	**322**	P	**P**	**13 05 50.7 +1.7**
	baz=115,SNR=11					
H20K	**Anotleneega Mo**	**26.19**	**335**	P	**P**	**13 05 50.1 +1.0**
	baz=133,SNR=34					
COLD	**Coldfoot**	**26.23**	**341**	IAmb	IAmb	13 06 02.3
	comp=Z,71nm,1.8s					
COLD	**Coldfoot**	**26.23**	**341**	P	**P**	**13 05 50.4 +1.1**
	baz=142,SNR=7.9					
G22K	**Bettles**	**26.30**	**340**	P	**P**	**13 05 50.7 +0.6**
	baz=140					
J17K	**VABM Dome**	**26.31**	**329**	IAmb	IAmb	13 06 12.5
	comp=Z,32nm,1.1s					
J17K	**VABM Dome**	**26.31**	**329**	P	**P**	**13 05 51.0 +0.9**
	baz=124,SNR=6.2					
D27M	**Malcolm River**	**26.33**	**350**	IAmb	IAmb	13 06 00.8
	comp=Z,64nm,1.9s					
D27M	**Malcolm River**	**26.33**	**350**	P	**P**	**13 05 51.5 +1.2**
	baz=159					
GCSA	**Galena City Sc**	**26.34**	**333**	P	**P**	**13 05 51.6 +1.3**
	baz=129,SNR=11					
BRDY	**Brady**	**26.38**	**108**	IAmb	IAmb	13 06 01.6
	comp=Z,22nm,0.9s					
L15K	**Ungalak Mounta**	**26.39**	**324**	P	**P**	**13 05 51.9 +1.0**
	baz=117,SNR=6.7					
G21K	**Allakaket**	**26.52**	**338**	IAmb	IAmb	13 05 55.0
	comp=Z,85nm,1.6s					
G21K	**Allakaket**	**26.52**	**338**	P	**P**	**13 05 53.4 +1.3**
	baz=136					
E24K	**Your Creek**	**26.54**	**343**	IAmb	IAmb	13 06 01.6
	comp=Z,70nm,1.9s					
E24K	**Your Creek**	**26.54**	**343**	P	**P**	**13 05 53.3 +1.1**
	baz=146,SNR=12					
UNV	**Unalaska Valle**	**26.66**	**306**	P	**P**	**13 05 54.1 +0.7**
	baz=96,SNR=5.9					
M13K	**Dall Lake**	**26.67**	**321**	P	**P**	**13 05 54.5 +1.1**
	baz=112					
K15K	**Wolf Creek Mou**	**26.70**	**325**	IAmb	IAmb	13 05 56.3
	comp=Z,77nm,1.9s					
K15K	**Wolf Creek Mou**	**26.70**	**325**	P	**P**	**13 05 54.8 +1.2**
	baz=118					
H19K	**Roundabout Mou**	**26.70**	**334**	IAmb	IAmb	13 06 03.3
	comp=Z,87nm,1.4s					
H19K	**Roundabout Mou**	**26.70**	**334**	P	**P**	**13 05 54.4 +0.7**
	baz=131,SNR=21					
L14K	**Kuka Creek**	**26.75**	**323**	P	**P**	**13 05 54.5 +0.4**
	baz=115,SNR=9.8					
E23K	**Chandalar**	**26.77**	**343**	P	**P**	**13 05 55.8 +1.5**
	baz=144,SNR=12					
J16K	**Anvik River**	**26.83**	**328**	P	**P**	**13 05 56.1 +1.3**
	baz=121,SNR=7.4					
F22K	**John River**	**26.92**	**340**	P	**P**	**13 05 57.1 +1.5**
	baz=140					
U38A	**Gravette**	**26.98**	**94**	IAmb	IAmb	13 06 08.7
	comp=Z,56nm,1.1s					
F21K	**Alatna River**	**27.04**	**339**	P	**P**	**13 05 57.8 +1.0**
	baz=138,SNR=9.1					
C27K	**Jago River**	**27.06**	**348**	P	**P**	**13 05 58.2 +1.4**
	baz=155,SNR=8.0					
H18K	**Honhosa River**	**27.09**	**333**	IAmb	IAmb	13 06 02.8
	comp=Z,30nm,1.1s					
H18K	**Honhosa River**	**27.09**	**333**	P	**P**	**13 05 57.8 +0.7**
	baz=127					
I17K	**Unalakleet**	**27.18**	**329**	P	**P**	**13 05 59.3 +1.4**
	baz=122					
I40A	**Norwalk**	**27.19**	**76**	IAmb	IAmb	13 06 02.8
	comp=Z,39nm,1.2s					
G40A	**Rib Lake**	**27.20**	**73**	IAmb	IAmb	13 06 02.6
	comp=Z,38nm,1.5s					
D25K	**Kavik River**	**27.21**	**346**	IAmb	IAmb	13 06 13.2
	comp=Z,60nm,1.9s					
D25K	**Kavik River**	**27.21**	**346**	P	**P**	**13 05 59.5 +1.2**
	baz=151,SNR=10					
TOLK	**Toolik Lake Re**	**27.23**	**343**	IAmb	IAmb	13 06 01.9
	comp=Z,35nm,1.2s					
TOLK	**Toolik Lake Re**	**27.23**	**343**	P	**P**	**13 06 00.2 +1.7**
	baz=145,SNR=16					
G19K	**Purcell Mounta**	**27.31**	**335**	IAmb	IAmb	13 06 13.1
	comp=Z,78nm,1.5s					
G19K	**Purcell Mounta**	**27.31**	**335**	P	**P**	**13 06 00.2 +1.1**
	baz=131,SNR=14					
E22K	**Anaktuvuk Pass**	**27.32**	**341**	IAmb	IAmb	13 06 02.2
	comp=Z,31nm,1.4s					
E22K	**Anaktuvuk Pass**	**27.32**	**341**	P	**P**	**13 06 00.3 +1.0**
	baz=141,SNR=9.2					
HHAR	**Hobbs**	**27.37**	**94**	IAmb	IAmb	13 06 21.6
	comp=Z,60nm,1.5s					
H17K	**Granite Mounta**	**27.49**	**331**	P	**P**	**13 06 01.8 +1.1**
	baz=125					
C26K	**Camden Bay**	**27.50**	**348**	P	**P**	**13 06 03.0 +2.2**
	baz=154,SNR=7.1					
D24K	**Happy Valley**	**27.51**	**344**	P	**P**	**13 06 02.5 +1.6**
	baz=147					
F20K	**Avaraart Lake**	**27.52**	**337**	P	**P**	**13 06 02.2 +1.2**
	baz=134,SNR=8.6					
BLKN	**Baker Lake**	**27.55**	**30**	IAmb	IAmb	13 06 10.1
	comp=Z,45nm,1.5s					
G18K	**Tagagawik**	**27.64**	**334**	P	**P**	**13 06 03.8 +1.7**
	baz=128					
D23K	**Nanushuk River**	**27.73**	**343**	IAmb	IAmb	13 06 13.8
	comp=Z,63nm,1.6s					
D23K	**Nanushuk River**	**27.73**	**343**	P	**P**	**13 06 04.7 +1.8**
	baz=144,SNR=9.6					
R40A	**Maddies Statio**	**27.74**	**89**	IAmb	IAmb	13 06 16.5
	comp=Z,54nm,1.2s					
J14K	**Nanvaranak Lak**	**27.74**	**325**	P	**P**	**13 06 04.1 +1.1**
	baz=116					
K13K	**Kusilvak Mount**	**27.86**	**323**	P	**P**	**13 06 05.0 +1.0**
	baz=114					
C24K	**Franklin Bluff**	**27.97**	**345**	IAmb	IAmb	13 06 07.9
	comp=Z,67nm,1.8s					
C24K	**Franklin Bluff**	**27.97**	**345**	P	**P**	**13 06 05.6 +0.7**
	baz=148					
F19K	**Shaleruckik Mo**	**27.97**	**336**	P	**P**	**13 06 05.8 +0.8**
	baz=131					
M11K	**Mekoryuk**	**27.98**	**320**	P	**P**	**13 06 06.6 +1.4**
	baz=109					
NIKH	**Nikolski High**	**27.99**	**303**	P	**P**	**13 06 06.9 +1.5**
	baz=92					
G17K	**Kiwalik Mounta**	**28.07**	**332**	P	**P**	**13 06 06.5 +0.6**
	baz=125					
E21K	**Killik River**	**28.07**	**340**	IAmb	IAmb	13 06 14.4
	comp=Z,50nm,2.0s					
E21K	**Killik River**	**28.07**	**340**	P	**P**	**13 06 06.9 +0.9**
	baz=138					
D22K	**Ayikyak River**	**28.11**	**342**	P	**P**	**13 06 07.1 +0.9**
	baz=141					
H16K	**Elim**	**28.15**	**330**	P	**P**	**13 06 08.1 +1.4**
	baz=121					

E19K	**Redstone River**	**28.23**	**337**	P	**P**	**13 06 08.5**	**+1.2**
	baz=132						
A36M	**Sachs Harbour**	**28.34**	**2**	P	**P**	**13 06 08.6**	**+0.4**
	baz=185						
I42A	**Draeger Farm,**	**28.39**	**76**	IAmb	IAmb	13 06 13.3	
	comp=Z,50nm,1.4s						
F18K	**Selawik**	**28.40**	**334**	P	**P**	**13 06 09.8**	**+1.1**
	baz=128						
C23K	**Itkillik River**	**28.43**	**344**	IAmb	IAmb	13 06 12.3	
	comp=Z,94nm,2.0s						
C23K	**Itkillik River**	**28.43**	**344**	P	**P**	**13 06 10.3**	**+1.2**
	baz=145,SNR=6.3						
E20K	**Nigu River**	**28.50**	**339**	P	**P**	**13 06 10.7**	**+0.9**
	baz=135						
G16K	**Koyuk River**	**28.60**	**331**	P	**P**	**13 06 11.8**	**+1.2**
	baz=122						
P08K	**Saint George I**	**28.76**	**311**	P	**P**	**13 06 13.5**	**+1.3**
	baz=98						
C21K	**Knifeblade Rid**	**28.81**	**341**	P	**P**	**13 06 13.9**	**+1.5**
	baz=138,SNR=5.8						
F17K	**Baldwin Pennin**	**28.81**	**333**	P	**P**	**13 06 13.2**	**+0.7**
	baz=125						
FCAR	**Ozark Folk Cen**	**28.86**	**93**	IAmb	IAmb	13 06 25.6	
	comp=Z,58nm,1.7s						
D20K	**Etivluk River**	**28.94**	**339**	IAmb	IAmb	13 06 23.4	
	comp=Z,48nm,1.6s						
D20K	**Etivluk River**	**28.94**	**339**	P	**P**	**13 06 14.3**	**+0.7**
	baz=135						
G15K	**Niukluk**	**29.00**	**329**	P	**P**	**13 06 15.1**	**+1.0**
	baz=120						
T42A	**Van Buren**	**29.11**	**90**	IAmb	IAmb	13 06 30.4	
	comp=Z,52nm,1.3s						
B21K	**Ikpikpuk River**	**29.12**	**342**	P	**P**	**13 06 16.0**	**+0.8**
	baz=139						
D19K	**Kuna River**	**29.18**	**338**	P	**P**	**13 06 16.5**	**+0.7**
	baz=132						
FVM	**French Village**	**29.20**	**88**	IAmb	IAmb	13 06 33.7	
	comp=Z,70nm,1.5s						
E18K	**Tukpahlearik C**	**29.20**	**335**	P	**P**	**13 06 17.0**	**+1.1**
	baz=128						
P43A	**Skaggs, Pawnee**	**29.22**	**85**	IAmb	IAmb	13 06 20.4	
	comp=Z,49nm,1.1s						
SPIA	**Saint Paul Isl**	**29.23**	**312**	P	**P**	**13 06 17.5**	**+1.2**
	baz=99						
ANM	**Nome**	**29.29**	**328**	P	**P**	**13 06 17.7**	**+0.9**
	baz=117						
HKT	**Hockley**	**29.36**	**107**	*i* P	**P**	**13 06 20.8**	**+3.2**
HKT				pmax	pmax		
	comp=Z,58nm,1.6s						
E17K	**Hotham Inlet**	**29.37**	**334**	P	**P**	**13 06 18.0**	**+0.6**
	baz=126						
B22K	**Teshekpuk Lake**	**29.41**	**343**	P	**P**	**13 06 18.3**	**+0.6**
	baz=141						
F15K	**North Star Dit**	**29.58**	**330**	IAmb	IAmb	13 06 29.8	
	comp=Z,67nm,1.6s						
F15K	**North Star Dit**	**29.58**	**330**	P	**P**	**13 06 20.3**	**+1.0**
	baz=120						
PBMO	**Poplar Bluff**	**29.69**	**90**	IAmb	IAmb	13 06 39.0	
	comp=Z,58nm,1.4s						
Q44A	**Meyer Farm, Va**	**29.86**	**86**	IAmb	IAmb	13 06 25.6	
	comp=Z,27nm,1.1s						
C19K	**Lookout Ridge**	**29.99**	**338**	P	**P**	**13 06 24.0**	**+1.0**
	baz=131						
B20K	**Meade River**	**30.00**	**341**	P	**P**	**13 06 24.1**	**+1.1**
	baz=136						
F14K	**Arctic Creek**	**30.07**	**329**	P	**P**	**13 06 24.6**	**+0.9**
	baz=117						
D17K	**Noatak River**	**30.13**	**334**	P	**P**	**13 06 24.5**	**+0.3**
	baz=125						
C18K	**Utukok River**	**30.14**	**337**	P	**P**	**13 06 24.5**	**+0.2**
	baz=129						
S44A	**Carbondale**	**30.16**	**88**	IAmb	IAmb	13 06 28.1	
	comp=Z,54nm,1.3s						
A22K	**Sinclair Lake**	**30.26**	**343**	P	**P**	**13 06 26.0**	**+0.8**
	baz=140						
RDOG	**Red Dog Mine**	**30.28**	**335**	P	**P**	**13 06 25.6**	**0.0**
	baz=126						
C17K	**DeLong Mountai**	**30.61**	**336**	P	**P**	**13 06 28.6**	**+0.1**
	baz=126						
SFIN	**Lafayette**	**30.71**	**82**	IAmb	IAmb	13 06 33.9	
	comp=Z,49nm,1.2s						
TNA	**Tin City**	**30.71**	**329**	P	**P**	**13 06 29.9**	**+0.6**
	baz=116						
B18K	**Kokolik River**	**30.76**	**338**	P	**P**	**13 06 30.2**	**+0.5**
	baz=129						
A21K	**Barrow**	**30.85**	**343**	P	**P**	**13 06 31.1**	**+0.6**
	baz=138						
P46A	**Rosedale**	**30.90**	**83**	IAmb	IAmb	13 06 45.9	
	comp=Z,32nm,1.0s						
E46A	**Sault Ste Mari**	**31.03**	**70**	IAmb	IAmb	13 06 36.5	
	comp=Z,31nm,1.0s						
A19K	**Wainwright**	**31.11**	**339**	P	**P**	**13 06 32.6**	**-0.1**
	baz=131						
C16K	**Lisburne Hills**	**31.16**	**334**	P	**P**	**13 06 33.3**	**0.0**
	baz=123						
ATKA	**Atka Island**	**31.25**	**302**	IAmb	IAmb	13 06 40.5	
	comp=Z,46nm,1.2s						
GAMB	**Gambell**	**31.54**	**324**	IAmb	IAmb	13 06 46.4	
	comp=Z,18nm,1.0s						
GAMB	**Gambell**	**31.54**	**324**	P	**P**	**13 06 37.4**	**+0.8**
	baz=108						
WVT	**Waverly**	**31.86**	**90**	IAmb	IAmb	13 06 43.5	
	comp=Z,44nm,1.4s						
T47A	**Sharon Grove**	**32.01**	**88**	IAmb	IAmb	13 06 44.9	
	comp=Z,41nm,1.3s						
WCI	**Wyandotte Cave**	**32.09**	**85**	IAmb	IAmb	13 07 07.1	
	comp=Z,51nm,1.4s						
O48B	**Farmland**	**32.14**	**81**	IAmb	IAmb	13 06 45.7	
	comp=Z,40nm,1.1s						
PLAL	**Pickwick Lake**	**32.21**	**92**	IAmb	IAmb	13 06 46.8	
	comp=Z,54nm,1.4s						
P48A	**Milroy**	**32.24**	**83**	IAmb	IAmb	13 06 55.9	
	comp=Z,46nm,1.2s						
O49A	**Covington**	**32.75**	**81**	IAmb	IAmb	13 07 13.2	
	comp=Z,38nm,1.4s						
V48A	**Smith Brothers**	**32.77**	**90**	IAmb	IAmb	13 06 52.4	
	comp=Z,53nm,1.6s						
CLTN	**Cedars of Leba**	**32.96**	**89**	IAmb	IAmb	13 06 53.6	
	comp=Z,16nm,1.2s						
R50A	**Paris**	**33.48**	**84**	IAmb	IAmb	13 07 19.4	
	comp=Z,61nm,1.8s						
ACSO	**Alum Creek Sta**	**33.70**	**80**	IAmb	IAmb	13 06 59.8	
	comp=Z,32nm,1.1s						
LRAL	**Lakeview Retre**	**33.94**	**94**	IAmb	IAmb	13 07 09.0	
	comp=Z,17nm,0.9s						
Y49A	**Blount Mountai**	**33.95**	**92**	IAmb	IAmb	13 07 01.7	
	comp=Z,31nm,1.2s						
SSFO	**Shawnee State**	**34.13**	**83**	IAmb	IAmb	13 07 09.9	
	comp=Z,42nm,1.2s						
FPAL	**Fort Paine**	**34.20**	**91**	IAmb	IAmb	13 07 04.0	
	comp=Z,28nm,1.1s						
S51A	**Beattyville**	**34.27**	**85**	IAmb	IAmb	13 07 13.1	
	comp=Z,46nm,1.7s						
RES	**Resolute Bay**	**34.42**	**15**	IAmb	IAmb	13 07 03.5	
	comp=Z,12nm,0.8s						
RES	**Resolute Bay**	**34.42**	**15**	P	**P**	**13 07 01.5**	**-0.2**
	comp=Z,9.8nm,0.7s,baz=232,slow=10,SNR=17						
	comp=Z,9.8nm,0.7s						
O52A	**Adamsville**	**34.56**	**80**	IAmb	IAmb	13 07 06.9	
	comp=Z,42nm,1.3s						
CPCT	**Cooper Cave**	**34.56**	**89**	IAmb	IAmb	13 07 07.3	
	comp=Z,39nm,1.4s						
BUKO	**Buck Lake**	**34.58**	**70**	IAmb	IAmb	13 07 16.1	
	comp=Z,64nm,1.7s						
TZTN	**Tazewell**	**34.78**	**86**	IAmb	IAmb	13 07 10.1	
	comp=Z,44nm,1.4s						
SADO	**Sadowa**	**34.94**	**71**	IAmb	IAmb	13 07 18.6	
	comp=Z,29nm,1.0s						
SADO	**Sadowa**	**34.94**	**71**	LR	LR	13 21 39.5	
	comp=Z,3µm,19.4s,baz=306,slow=37						
O53A	**New Philadelph**	**34.96**	**79**	IAmb	IAmb	13 07 10.6	
	comp=Z,45nm,1.2s						
TKL	**Tuckaleechee C**	**35.01**	**88**	LR	LR	13 22 03.6	
	comp=Z,6µm,18.9s,baz=289,slow=37						
N53A	**Lisbon**	**35.02**	**78**	IAmb	IAmb	13 07 11.1	
	comp=Z,44nm,1.3s						
VLDQ	**Val d'Or**	**35.24**	**65**	IAmb	IAmb	13 07 10.6	
	comp=Z,19nm,1.0s						
Y52A	**Lilburn**	**35.65**	**91**	IAmb	IAmb	13 07 31.7	
	comp=Z,37nm,1.1s						
V53A	**Saluda**	**35.70**	**87**	IAmb	IAmb	13 07 26.6	
	comp=Z,56nm,1.6s						
152A	**Waverly Hall**	**35.78**	**93**	IAmb	IAmb	13 07 32.4	
	comp=Z,27nm,1.2s						
S54A	**Dingess, Beckl**	**35.85**	**83**	IAmb	IAmb	13 07 24.9	
	comp=Z,44nm,1.3s						
U54A	**Nelsons Funny**	**36.04**	**85**	IAmb	IAmb	13 07 35.0	
	comp=Z,56nm,1.4s						
GOGA	**Godfrey**	**36.31**	**91**	P	**P**	**13 07 17.1**	**-1.3**
GOGA				IAmb	IAmb	13 07 37.0	
	comp=Z,70nm,1.6s						
GOGA	**Godfrey**	**36.31**	**91**	P	**P**	**13 07 17.1**	**-1.3**
GOGA				pmax	pmax		
	comp=Z,70nm,1.6s						
R55A	**Marlinton**	**36.51**	**82**	IAmb	IAmb	13 07 30.9	
	comp=Z,47nm,1.2s						
BLA	**Blacksburg**	**36.74**	**83**	IAmb	IAmb	13 07 33.0	
	comp=Z,34nm,1.1s						
V55A	**Taylorsville**	**36.77**	**86**	IAmb	IAmb	13 07 26.4	
	comp=Z,52nm,1.6s						
HODGE	**Hodges**	**36.78**	**89**	IAmb	IAmb	13 07 30.5	
	comp=Z,49nm,1.6s						
PAULI	**Pauline**	**36.82**	**88**	IAmb	IAmb	13 07 33.0	
	comp=Z,34nm,1.1s						
KMSC	**Kings Mountain**	**37.02**	**87**	IAmb	IAmb	13 07 36.5	
	comp=Z,66nm,1.7s						
U56A	**King**	**37.15**	**85**	IAmb	IAmb	13 07 39.0	
	comp=Z,28nm,1.2s						
JSC	**Jenkinsville**	**37.48**	**88**	IAmb	IAmb	13 07 44.2	
	comp=Z,33nm,1.1s						
P57A	**Homestead Farm**	**37.52**	**79**	IAmb	IAmb	13 07 33.2	
	comp=Z,67nm,1.5s						
N58A	**Sunbury**	**37.92**	**76**	IAmb	IAmb	13 07 43.9	
	comp=Z,28nm,1.0s						
W57A	**Gilead**	**37.98**	**86**	IAmb	IAmb	13 07 48.4	
	comp=Z,24nm,1.2s						
R58B	**Mineral**	**38.24**	**81**	IAmb	IAmb	13 07 40.4	
	comp=Z,106nm,2.0s						
SHEM	**Shemya Is, Ala**	**38.30**	**304**	LR	LR	13 21 22.8	
	comp=Z,593nm,18.6s,baz=110,slow=33						
J59A	**Piesco**	**38.52**	**71**	P	**P**	**13 07 35.1**	**-2.0**
SCHQ	**Schefferville**	**40.44**	**52**	P	**P**	**13 07 52.6**	**-0.3**
	comp=Z,4.7nm,0.8s,baz=294,slow=6.3,SNR=3.9						
SCHQ				LR	LR	13 24 22.4	
	comp=Z,879nm,21.6s,baz=285,slow=36						
	comp=Z,4.7nm,0.8s						
E62A	**Clayton Lake**	**40.83**	**65**	P	**P**	**13 07 53.8**	**-2.4**
E62A				IAmb	IAmb	13 08 00.5	
	comp=Z,47nm,1.4s						
TEIG	**Tepich**	**40.87**	**112**	P	**P**	**13 07 55.7**	**-1.2**
TEIG				IAmb	IAmb	13 08 18.7	
	comp=Z,43nm,1.2s						
D62A	**Allapoint, All**	**41.00**	**64**	P	**P**	**13 07 57.7**	**+0.1**
D62A				IAmb	IAmb	13 08 32.5	
	comp=Z,42nm,1.5s						
BILL	**Bilibino**	**41.15**	**329**	P	**P**	**13 07 57.8**	**-0.8**
BILL				IAmb	IAmb	13 08 07.5	
	comp=Z,39nm,1.4s						
BILL	**Bilibino**	**41.15**	**329**	*i* P	**P**	**13 07 58.1**	**-0.4**
BILL				pmax	pmax		
	comp=Z,51nm,2.2s						
F64A	**Sherman**	**41.85**	**65**	P	**P**	**13 08 03.5**	**-1.1**
F64A				IAmb	IAmb	13 08 30.6	
	comp=Z,81nm,1.9s						
KULLO	**Kullorsuaq**	**43.42**	**22**	*i* P	**P**	**13 08 18.4**	**+1.5**
KULLO				IAmb	IAmb	13 08 19.0	
	comp=Z,10nm,0.8s						
NEEM	**North Greenlan**	**45.00**	**18**	*i* P	**P**	**13 08 31.2**	**+1.2**
NEEM				IAmb	IAmb	13 08 32.0	
	comp=Z,22nm,1.0s						
SFJD	**Kangerlussuaq**	**46.09**	**32**	*i* P	**P**	**13 08 40.7**	**+2.4**
SFJD				IAmb	IAmb	13 08 43.0	
	comp=Z,18nm,1.1s						
NUUK	**Nuuk**	**46.19**	**36**	*i* P	**P**	**13 08 41.3**	**+2.2**
NUUK				IAmb	IAmb	13 08 42.1	
	comp=Z,6.8nm,0.7s						
PET	**Petropavlovsk**	**47.26**	**308**	P	**P**	**13 08 47.0**	**-0.6**
PET				IAmb	IAmb	13 08 54.6	
	comp=Z,20nm,1.1s						
PET	**Petropavlovsk**	**47.26**	**308**	*i* P	**P**	**13 08 47.8**	**+0.1**
PET				pmax	pmax		
	comp=Z,22nm,1.1s						
SEY	**Seymchan**	**47.49**	**322**	P	**P**	**13 08 48.1**	**-1.2**
	comp=Z,7.6nm,0.9s,baz=82,slow=7.8,SNR=17						
	comp=Z,7.6nm,0.9s						
PEA0B	**Petropavlovsk-**	**47.78**	**309**	*i* P	**P**	**13 08 51.8**	**+0.1**
PETK	**Petropavlovsk-**	**47.78**	**309**	P	**P**	**13 08 50.2**	**-1.5**
	comp=Z,3.8nm,0.8s,baz=78,slow=12,SNR=16						
PETK				LR	LR	13 26 10.9	
	comp=Z,961nm,20.9s,baz=66,slow=33						
	comp=Z,3.8nm,0.8s						
SUMG	**Summit**	**48.92**	**24**	P	**P**	**13 09 01.0**	**+0.2**
SUMG				IAmb	IAmb	13 09 11.9	
	comp=Z,29nm,1.1s						
SUMG	**Summit**	**48.92**	**24**	P	**P**	**13 09 01.0**	**+0.2**
SUMG				pmax	pmax		
	comp=Z,29nm,1.1s						
SUMG	**Summit**	**48.92**	**24**	*i* P	**P**	**13 09 01.5**	**+0.7**
SUMG				IAmb	IAmb	13 09 02.7	
	comp=Z,18nm,0.8s						
MA2	**Magadan**	**49.23**	**318**	P	**P**	**13 09 02.6**	**-0.3**
MA2				IAmb	IAmb	13 09 11.5	
	comp=Z,38nm,1.4s						
MA2	**Magadan**	**49.23**	**318**	P	**P**	**13 09 02.6**	**-0.3**
	comp=Z,4.3nm,0.8s,baz=78,slow=12,SNR=3.8						
MA2				LR	LR	13 29 30.6	
	comp=Z,759nm,18.7s,baz=68,slow=36						
	comp=Z,4.3nm,0.8s						
MA2	**Magadan**	**49.23**	**318**	*i* P	**P**	**13 09 03.0**	**+0.2**
MA2				pmax	pmax		
	comp=Z,32nm,1.8s						
ESPN	**Las Esperanzas**	**49.29**	**116**	P	**P**	**13 09 03.7**	**-0.1**
ICESG	**Greenland Ices**	**49.57**	**28**	*i* P	**P**	**13 09 07.5**	**+1.8**
ICESG				IAmb	IAmb	13 09 09.1	
	comp=Z,13nm,0.8s						
NOR	**Nord**	**50.04**	**10**	*i* P	**P**	**13 09 09.8**	**+1.1**
NOR				IAmb	IAmb	13 09 11.3	
	comp=Z,8.7nm,1.2s						
ISOG	**Isortoq, Green**	**51.01**	**32**	*i* P	**P**	**13 09 17.4**	**+1.3**
ISOG				IAmb	IAmb	13 09 19.9	
	comp=Z,12nm,1.1s						
DAG	**Danmarks Havn**	**52.11**	**16**	*i* P	**P**	**13 09 24.3**	**+0.1**
DAG				IAmb	IAmb	13 09 26.1	
	comp=Z,9.5nm,0.9s						
SOEG	**Soedalen**	**52.71**	**28**	*i* P	**P**	**13 09 30.4**	**+1.6**
SOEG				IAmb	IAmb	13 09 32.0	
	comp=Z,4.5nm,0.7s						
DBG	**Daneborg**	**53.03**	**19**	*i* P	**P**	**13 09 31.4**	**+0.3**
DBG				IAmb	IAmb	13 09 33.1	
	comp=Z,28nm,1.0s						
TAOE	**Nuku Hiva Isla**	**53.43**	**194**	*e*LR	LR	13 24 51.8	
	comp=Z,339nm,24.5s						
SCO	**Scoresbysund**	**54.56**	**23**	*i* P	**P**	**13 09 43.4**	**+1.1**
SCO				IAmb	IAmb	13 09 45.0	
	comp=Z,7.4nm,0.8s						
KBS	**Kingsbay**	**55.36**	**9**	*ce*P	**P**	**13 09 50.4**	**+2.3**
KBS				pmax	pmax		
	comp=Z,16nm,2.5s						
KBS	**Kingsbay**	**55.36**	**9**	*i* P	**P**	**13 09 49.1**	**+1.1**
SPITS	**Spitsbergen Ar**	**56.47**	**8**	P	**P**	**13 09 56.1**	**+0.1**
	comp=Z,4.6nm,0.8s,baz=351,slow=2.6,SNR=5.6						
	comp=Z,4.6nm,0.8s						
YAK	**Yakutsk**	**57.44**	**327**	P	**P**	**13 10 02.8**	**-0.2**
	comp=Z,14nm,0.5s,baz=52,slow=18,SNR=7.5						
	comp=Z,14nm,0.5s						
YAK	**Yakutsk**	**57.44**	**327**	*e*P	**P**	**13 10 01.4**	**-1.7**
YAK				*e**PP	**pP**	**13 10 04.7**	**-2.3**
YAK				*e*S	**S**	**13 17 58.1**	**-1.1**
YAK				*e*S	**S**	**13 17 58.1**	**-1.1**
YAK				*e**SS	**pS**	**13 18 06.4**	**+2.5**
YAK				pmax	pmax		
	comp=Z,15nm,0.9s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.5s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.4s						
YAK				smax	smax		
	comp=N,37nm,2.5s						
YAK				smax	smax		
	comp=E,25nm,2.3s						
H11N3	**WAKE ISLAND Hy**	**58.38**	**268**	T	T	14 13 19.3	
	baz=50,slow=75,SNR=69						
H11N2	**WAKE ISLAND Hy**	**58.38**	**268**	T	T	14 13 19.4	
	baz=50,slow=75,SNR=106						
H11N1	**WAKE ISLAND Hy**	**58.40**	**268**	T	T	14 13 21.5	
	baz=50,slow=75,SNR=97						
YSS	**Yuzhno-Sakhali**	**59.12**	**307**	*e*P	**P**	**13 10 14.8**	**-0.2**
YSS				*e*		13 12 28.1	
YSS				*e*S	**S**	**13 18 16.6**	**-4.9**
YSS				*e*SS	**SS**	**13 22 12.7**	**-2.3**
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
YSS				pmax	pmax		
	comp=Z,300nm,7.8s						
YSS				MLR	MLR		
	comp=Z,300nm,20.0s						
H11S1	**WAKE ISLAND Hy**	**59.30**	**267**	T	T	14 14 30.3	
	baz=50,slow=75,SNR=22						
H11S2	**WAKE ISLAND Hy**	**59.31**	**267**	T	T	14 14 38.6	
	baz=50,slow=75,SNR=80						
H11S3	**WAKE ISLAND Hy**	**59.32**	**267**	T	T	14 14 32.7	
	baz=50,slow=75,SNR=24						
ASAJ	**Asahikawa**	**60.76**	**304**	P	**P**	**13 10 25.1**	**-1.3**
	comp=Z,9.5nm,0.8s,baz=180,slow=4.1,SNR=6.8						
ASAJ				LR	LR	13 31 58.9	
	comp=Z,440nm,21.9s,baz=60,slow=31						
	comp=Z,9.5nm,0.8s						
ROSC	**El Rosal**	**61.32**	**113**	P	**P**	**13 10 31.8**	**+0.8**
	comp=Z,6.6nm,0.3s,baz=340,slow=12,SNR=3.9						
	comp=Z,6.6nm,0.3s						
RUSC	**La Rusia**	**61.38**	**111**	P	**P**	**13 10 31.3**	**-0.2**
OTAV	**Otavalo**	**62.11**	**120**	P	**P**	**13 10 36.3**	**-0.1**
OTAV	**Otavalo**	**62.11**	**120**	P	**P**	**13 10 36.3**	**-0.1**
OTAV				pmax	pmax		
	comp=Z,49nm,1.6s						
BAUV	**El Baul**	**62.67**	**105**	P	**P**	**13 10 38.6**	**-1.0**
ZEA	**Zeya**	**63.33**	**320**	*e*P	**P**	**13 10 43.3**	**-0.2**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
COHC	**Cochancay**	**63.72**	**122**	P	**P**	**13 10 45.0**	**-1.5**
KLR	**Kul'dur**	**63.87**	**314**	P	**P**	**13 10 46.2**	**-0.9**
	comp=Z,2.5nm,0.8s,baz=43,slow=9.0,SNR=8.1						
	comp=Z,2.5nm,0.8s						
KLR	**Kul'dur**	**63.87**	**314**	*ce*P	**P**	**13 10 47.8**	**+0.7**
KLR				pmax	pmax		
	comp=Z,20nm,2.5s						
PPT2	**Papeete2**	**64.04**	**202**	*e*LR	LR	13 29 50.0	
	comp=Z,297nm,24.8s						
PPT2				*e*LR	LR	13 29 56.8	
	comp=Z,316nm,23.2s						
ARCES	**ARCESS Array B**	**65.40**	**10**	P	**P**	**13 10 56.2**	**-0.6**
	comp=Z,1.6nm,0.7s,baz=338,slow=6.9,SNR=1.9						
	comp=Z,1.6nm,0.7s						
HEH	**HeiHe**	**65.44**	**317**	*e*P	**P**	**13 10 55.6**	**-1.7**
HEH				S	**S**	**13 19 39.3**	**-1.8**
HEH				SS	**SS**	**13 23 58.6**	**+4.9**
HEH				pmax	pmax		
	comp=Z,23nm,0.7s						
HEH				pmax	pmax		
	comp=Z,230nm,4.6s						
HEH				LR	LR		
	comp=Z,240nm,21.6s						
HEH				LR	LR		
	comp=Z,410nm,21.4s						
HEH				LR	LR		
	comp=Z,770nm,22.0s						
USA0B	**Ussuriysk Arra**	**66.85**	**310**	*i* P	**P**	**13 11 07.0**	**+0.5**
USRK	**Ussuriysk Ar.**	**66.85**	**310**	P	**P**	**13 11 04.9**	**-1.6**
	comp=Z,3.9nm,0.7s,baz=61,slow=5.5,SNR=9.5						
	comp=Z,3.9nm,0.7s						
LVZ	**Lovozero**	**67.93**	**7**	P	**P**	**13 11 12.6**	**-0.4**
LVZ	**Lovozero**	**67.93**	**7**	P	**P**	**13 11 12.6**	**-0.4**
LVZ				pmax	pmax		
	comp=Z,33nm,1.1s						
MJAR	**Matsushiro Arr**	**67.95**	**300**	P	**P**	**13 11 11.9**	**-1.7**
	comp=Z,2.0nm,0.8s,baz=42,slow=6.0,SNR=6.7						
MJAR				LR	LR	13 38 41.8	
	comp=Z,325nm,19.6s,baz=62,slow=34						
	comp=Z,2.0nm,0.8s						
MJB9	**Matsu-Tunnel**	**67.95**	**300**	P	**P**	**13 11 12.3**	**-1.3**
MJB9				IAmb	IAmb	13 11 22.4	
	comp=Z,14nm,1.1s						
BNX	**BinXian**	**68.36**	**313**	⇑P	**P**	**13 11 15.8**	**-0.2**
BNX				pP	**pP**	**13 11 19.0**	**-1.0**
BNX				sP	**sP**	**13 11 20.3**	**-1.2**
BNX				S	**S**	**13 20 14.0**	**-2.5**
BNX				pmax	pmax		
	comp=Z,14nm,1.2s						
BNX				pmax	pmax		
	comp=Z,270nm,4.6s						
BNX				LR	LR		
	comp=Z,200nm,14.6s						
BNX				LR	LR		
	comp=Z,310nm,22.2s						
BNX				LR	LR		
	comp=Z,410nm,17.3s						
TBI	**Tubuai**	**69.50**	**201**	*e*LR	LR	13 32 21.7	
	comp=Z,2µm,29.8s						
NB2	**NORSAR Subarra**	**70.54**	**19**	P	**P**	**13 11 29.6**	**+0.4**
	comp=Z,70nm,2.0s,baz=330,slow=6.2						
NB2	**NORSAR Subarra**	**70.54**	**19**	P	**P**	**13 11 29.6**	**+0.4**
	baz=330,slow=6.2						
NOA	**NORSAR Array B**	**70.54**	**19**	P	**P**	**13 11 29.7**	**+0.4**
	comp=Z,2.7nm,0.9s,baz=332,slow=5.7,SNR=4.1						
	comp=Z,2.7nm,0.9s						
CIT	**Chita**	**70.59**	**325**	*e*P	**P**	**13 11 30.2**	**+0.5**
CIT				*e*		13 11 47.6	
CIT				*e*		13 14 06.8	
CIT				pmax	pmax		
	comp=Z,107nm,2.0s						
CN2	**Changchun**	**70.69**	**312**	*e*P	**P**	**13 11 29.6**	**-0.8**
CN2				*e*sP	pP	13 11 36.5	+2.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,300nm,18.0s						
CN2				LR	LR		
	comp=Z,300nm,18.0s						
CN2				LR	LR		
	comp=Z,400nm,21.0s						
EKA	**Eskdalemuir Ar**	**70.96**	**30**	P	**P**	**13 11 31.7**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=316,slow=5.5,SNR=8.4						
	comp=Z,1.0nm,0.6s						
HFS	**Hagfors**	**71.92**	**19**	P	**P**	**13 11 37.2**	**-0.4**
	comp=Z,3.5nm,1.0s,baz=341,slow=7.8,SNR=1.3						
	comp=Z,3.5nm,1.0s						
BOAV	**Boa Vista**	**72.56**	**104**	P	**P**	**13 11 41.5**	**-0.6**
BOAV				IAmb	IAmb	13 11 50.2	
	comp=Z,27nm,1.3s						
FINES	**FINESS Array B**	**73.13**	**12**	P	**P**	**13 11 43.9**	**-0.9**
	comp=Z,4.8nm,0.7s,baz=325,slow=2.3,SNR=8.8						
	comp=Z,4.8nm,0.7s						
KSRS	**Korea Array**	**73.60**	**306**	P	**P**	**13 11 46.8**	**-1.1**
	comp=Z,1.8nm,0.7s,baz=54,slow=5.0,SNR=9.3						
	comp=Z,1.8nm,0.7s						
KLMR	**Klimovskoe**	**75.27**	**6**	*e*P	**P**	**13 11 55.1**	**-2.1**
KLMR				*e*		13 12 09.3	
KLMR				pmax	pmax		
	comp=Z,29nm,1.3s						
XLT	**XiLinHaoTe**	**75.42**	**318**	*e*P	**P**	**13 11 59.3**	**+0.8**
XLT				sP	pP	13 12 05.3	+2.7
XLT				PcP	**PcP**	**13 12 13.8**	**+2.1**
XLT				S	**S**	**13 21 34.4**	**-3.5**
XLT				pmax	pmax		
	comp=Z,13nm,1.7s						
XLT				pmax	pmax		
	comp=Z,200nm,8.1s						
XLT				LR	LR		
	comp=Z,420nm,18.4s						
XLT				LR	LR		
	comp=Z,590nm,22.3s						
MOY	**Mondy**	**75.73**	**331**	*e*P	**P**	**13 12 01.1**	**+0.9**
MOY				pmax	pmax		
	comp=Z,47nm,3.3s						
ZAK	**Zakamensk**	**75.95**	**329**	*e*P	**P**	**13 12 01.2**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,13nm,2.0s						
DL2	**Dalian**	**76.15**	**311**	P	**P**	**13 12 03.3**	**+0.6**
DL2				S	**S**	**13 21 47.8**	**+1.8**
DL2				pmax	pmax		
	comp=Z,19nm,0.9s						
DL2				pmax	pmax		
	comp=Z,420nm,7.3s						
DL2				LR	LR		
	comp=Z,400nm,19.9s						
DL2				LR	LR		
	comp=Z,690nm,18.0s						
DL2				LR	LR		
	comp=Z,1µm,17.7s						
ULN	**Ulaanbaatar**	**76.47**	**325**	P	**P**	**13 12 04.0**	**-0.5**
ULN				IAmb	IAmb	13 12 13.2	
	comp=Z,30nm,1.4s						
ULN	**Ulaanbaatar**	**76.47**	**325**	*ce*P	**P**	**13 12 05.5**	**+0.9**
ULN				pmax	pmax		
	comp=Z,24nm,2.5s						
SONM	**Songino Array**	**76.77**	**326**	P	**P**	**13 12 05.5**	**-0.7**
	comp=Z,8.4nm,0.9s,baz=43,slow=4.0,SNR=33						
	comp=Z,8.4nm,0.9s						
BMRD	**Maredsous**	**77.85**	**29**	*d*P	**P**	**13 12 13.9**	**+1.8**

BMRD				dPcP	PcP	13 12 22.8	+0.9
BGES	Gesves	77.89	28	dP	P	13 12 12.9	+0.7
	comp=Z,7.8nm,1.1s						
BCLA	Clavier	77.94	28	dP	P	13 12 13.6	+1.1
	comp=Z,5.5nm,1.2s						
DOU	Dourbes	77.97	29	dP	P	13 12 13.7	+1.0
KIRV	Kirov	77.99	1	P	P	13 12 12.2	-0.4
	comp=Z,7.9nm,0.4s,baz=44,slow=10,SNR=4.6						
	comp=Z,7.9nm,0.4s						
KIRV	Kirov	77.99	1	ceP	P	13 12 13.2	+0.6
MSVF	Nonsavu	78.31	231	LR	LR	13 41 36.5	
	comp=Z,404nm,18.6s,baz=30,slow=32						
GUMO	Guam	78.31	278	LR	LR	13 39 08.3	
	comp=Z,742nm,21.5s,baz=54,slow=30						
ZAA0	Zalesovo Array	78.56	341	P	P	13 12 13.7	-2.2
ZAA0				IAmb	IAmb	13 12 24.4	
	comp=Z,23nm,1.4s						
ZALV	Zalesovo Beam	78.56	341	P	P	13 12 15.2	-0.7
	comp=Z,3.3nm,0.7s,baz=17,slow=6.2,SNR=12						
	comp=Z,3.3nm,0.7s						
WLF	Walferdange	78.87	28	dP	P	13 12 18.7	+1.0
PGAV	Gavieira, Arco	79.22	41	eP	P	13 12 23.7	+3.9
PGAV				i Amb		13 12 41.0	
	comp=Z,42nm,1.7s						
SVE	Sverdlovsk	79.47	355	eP	P	13 12 21.3	+0.5
SVE				pmax	pmax		
	comp=Z,23nm,1.6s						
CLL	Collm	79.59	23	P	P	13 12 19.2	-2.4
CLL	Collm	79.59	23	i P	P	13 12 22.3	+0.7
CLL				i		13 12 28.4	
CLL	Collm	79.59	23	i P	P	13 12 22.3	+0.7
CLL				i x	x	13 12 28.4	
CLL				i x	x	13 12 39.6	
POLO	Lamas de Olo	79.90	41	eP	P	13 12 23.4	-0.2
HHC	Hu-ho-hao-te	79.91	318	eP	P	13 12 25.3	+1.6
HHC				pmax	pmax		
	comp=Z,20nm,0.5s						
HHC				pmax	pmax		
	comp=Z,190nm,4.7s						
ARTI	Arti	80.04	356	P	P	13 12 21.6	-2.3
ARTI				IAmb	IAmb	13 12 31.8	
	comp=Z,30nm,1.4s						
ARTI	Arti	80.04	356	P	P	13 12 23.2	-0.8
	comp=Z,3.2nm,0.5s,baz=29,slow=4.5,SNR=8.8						
	comp=Z,3.2nm,0.5s						
PBRG	Braganca	80.06	40	eP	P	13 12 27.4	+3.0
MOS	Moscow	80.17	8	eP	P	13 12 26.4	+1.8
BRG	Berggiesshubel	80.25	23	eP	P	13 12 26.3	+1.2
BRG				Amp		13 12 27.2	
	comp=Z,5.3nm,1.0s						
BRG	Berggiesshubel	80.25	23	P	P	13 12 32.4	+7.3
BRG				Amp		13 12 35.7	
	comp=Z,6.7nm,1.1s						
PVIS	Viseu	80.36	42	eP	P	13 12 29.5	+3.4
MVO	Moncorvo	80.43	41	eP	P	13 12 27.3	+0.9
MVO				i Amb		13 12 36.5	
	comp=Z,24nm,1.5s						
GRF	Grafenberg Arr	80.49	25	eP	P	13 12 27.3	+0.8
	comp=Z,6.9nm,1.2s,baz=340,slow=4.7						
COI	Coimbra	80.50	42	P	P	13 12 23.6	-3.1
COI	Coimbra	80.50	42	P	P	13 12 23.6	-3.1
COI				pmax	pmax		
	comp=Z,85nm,1.8s						
TIA	Tai'an	80.56	312	P	P	13 12 26.8	-0.4
TIA				sP	pP	13 12 32.9	+1.7
TIA				S	S	13 22 33.5	0.0
TIA				pmax	pmax		
	comp=Z,13nm,2.4s						
TIA				LR	LR		
	comp=Z,570nm,14.5s						
TIA				LR	LR		
	comp=Z,490nm,14.8s						
TIA				LR	LR		
	comp=Z,880nm,22.6s						
PCAS	Casmilo, Conde	80.58	42	eP	P	13 12 28.0	+0.8
OBN	Obninsk	80.67	9	⇓eP	P	13 12 27.1	-0.2
OBN				e*PP	pP	13 12 30.1	-1.3
OBN				*SP	PcP	13 12 31.0	-3.1
OBN				S	S	13 22 36.0	+2.2
OBN				PS	PnS	13 23 21.0	+1.5
OBN				pmax	pmax		
	comp=Z,40nm,1.7s						
BFO	Black Forest	80.75	28	P	P	13 12 28.7	+0.8
BFO				IAmb	IAmb	13 12 38.3	
	comp=Z,23nm,1.5s						
BFO	Black Forest	80.75	28	P	P	13 12 28.7	+0.8
BFO				pmax	pmax		
	comp=Z,23nm,1.5s						
MTE	Manteigas	80.78	42	eP	P	13 12 28.1	-0.2
MTE				i Amb		13 12 31.9	
	comp=Z,30nm,1.6s						
PSBE	So Bento	80.85	43	eP	P	13 12 29.0	+0.3
KSP	Ksiaz	80.92	22	eP	P	13 12 29.1	+0.3
HNS	HongShan	80.96	314	⇑P	P	13 12 29.6	+0.4
HNS				LR	LR		
	comp=Z,540nm,19.6s						
HNS				LR	LR		
	comp=Z,480nm,18.6s						
HNS				LR	LR		
	comp=Z,650nm,17.2s						
PCBR	Castelo Branco	81.24	42	eP	P	13 12 31.3	+0.6
LPAZ	La Paz	81.28	122	P	P	13 12 30.8	-1.1
LPAZ				IAmb	IAmb	13 12 39.3	
	comp=Z,17nm,1.6s						
LPAZ	La Paz	81.28	122	P	P	13 12 31.7	-0.1
	comp=Z,0.9nm,0.4s,baz=358,slow=7.5,SNR=7.9						
	comp=Z,0.9nm,0.4s						
PMTG	Montargil	81.47	43	eP	P	13 12 32.1	+0.1
PMAR	Madeira	81.60	52	eP	P	13 12 34.7	+1.7
PMRV	Marv??o	81.60	42	eP	P	13 12 34.5	+1.8
PMRV				i Amb		13 12 36.9	
	comp=Z,21nm,1.6s						
KHC	Kasperske Hory	81.70	24	eP	P	13 12 32.5	-0.5
KHC	Kasperske Hory	81.70	24	i P	P	13 12 34.2	+1.2
KHC				pmax	pmax		
	comp=Z,20nm,2.7s						
PESTR	Estremoz	81.94	43	eP	P	13 12 36.1	+1.7
GERES	GERESS Array B	81.99	24	P	P	13 12 34.2	-0.4
	comp=Z,1.3nm,0.7s,baz=343,slow=4.2,SNR=7.8						
	comp=Z,1.3nm,0.7s						
EVO	Evora	82.00	43	eP	P	13 12 36.6	+1.9
SSE	Sheshan	82.02	306	P	P	13 12 33.3	-1.6
SSE				S	S	13 22 50.3	+1.6
SSE				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SSE				pmax	pmax		
	comp=Z,210nm,3.2s						
SSE				LR	LR		
	comp=Z,270nm,17.8s						
SSE				LR	LR		
	comp=Z,250nm,16.8s						
BRVK	Borovoye	82.20	349	P	P	13 12 35.7	+0.2
BRVK				IAmb	IAmb	13 12 44.2	
	comp=Z,18nm,1.1s						
BRVK	Borovoye	82.20	349	ceP	P	13 12 36.6	+1.1
BRVK				pmax	pmax		
	comp=Z,35nm,2.5s						
BVAR	Borovoye Array	82.21	349	P	P	13 12 35.3	-0.3
	comp=Z,3.8nm,0.8s,baz=349,slow=4.8,SNR=12						
	comp=Z,3.8nm,0.8s						
MORC	Moravsky Berou	82.23	21	eP	P	13 12 36.4	+0.6
OJC	Ojcow	82.40	20	eP	P	13 12 36.5	-0.1
VRAC	Vranov	82.40	22	eP	P	13 12 37.2	+0.6
PTEO	Sao Teotonio	82.40	44	eP	P	13 12 37.5	+0.7
MESJ	Messejana	82.43	44	eP	P	13 12 38.2	+1.2
MESJ				IAmb	IAmb	13 12 45.4	
	comp=Z,40nm,1.7s						
MESJ	Messejana	82.43	44	eP	P	13 12 39.1	+2.1
MESJ	Messejana	82.43	44	eP	P	13 12 38.2	+1.2
KRUC	Moravsky	82.57	22	eP	P	13 12 37.7	+0.2
MORF	Marmelete	82.63	44	eP	P	13 12 39.2	+1.1
MORF				IAmb	IAmb	13 12 40.5	
	comp=Z,32nm,1.3s						
MORF	Marmelete	82.63	44	P	P	13 12 36.0	-2.1
MORF	Marmelete	82.63	44	eP	P	13 12 38.5	+0.4
MORF	Marmelete	82.63	44	eP	P	13 12 39.2	+1.1
NJ2	Nanjing	82.68	308	eP	P	13 12 39.0	+0.7
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
PCVE	Castro Verde	82.68	44	eP	P	13 12 40.2	+1.9
TUE	Stuetta	82.71	28	P	P	13 12 38.9	+0.4
TUE				IAmb	IAmb	13 12 58.8	
	comp=Z,17nm,1.4s						
PBAR	Barrancos	82.75	43	eP	P	13 12 39.2	+0.5
FUORN	Ofenpass-Fuorn	82.89	27	P	P	13 12 38.5	-1.0
FUORN				IAmb	IAmb	13 12 48.9	
	comp=Z,31nm,1.4s						
KURK	Kurchatov	82.97	343	P	P	13 12 37.6	-1.9
KURK				IAmb	IAmb	13 12 40.7	
	comp=Z,33nm,1.6s						
KURK	Kurchatov	82.97	343	ceP	P	13 12 39.9	+0.4
KURK				pmax	pmax		
	comp=Z,37nm,2.5s						
PBDV	Barranco-do-Ve	83.04	44	eP	P	13 12 42.1	+2.0
ESDC	Sonseca Array	83.04	40	P	P	13 12 39.3	-0.9
	comp=Z,2.0nm,0.9s,baz=314,slow=4.4,SNR=11						
ESDC				LR	LR	13 47 19.0	
	comp=Z,252nm,18.4s,baz=298,slow=34						
	comp=Z,2.0nm,0.9s						
KURBB	Kurchatov Arra	83.08	343	P	P	13 12 39.7	-0.4
	comp=Z,4.8nm,0.7s,baz=18,slow=4.9,SNR=25						
	comp=Z,4.8nm,0.7s						
JAVC	Velka Javorina	83.10	22	eP	P	13 12 41.4	+1.1
NIE	Niedzica	83.26	20	eP	P	13 12 41.6	+0.5
MODS	Modra-Piesok	83.44	22	eP	P	13 12 42.8	+0.8
MODS	Modra-Piesok	83.44	22	eP	P	13 12 42.8	+0.8
HNR	Honiara	83.44	250	LR	LR	13 42 07.1	
	comp=Z,580nm,21.1s,baz=48,slow=30						
VYHS	Vyhne	83.74	21	eP	P	13 12 47.1	+3.5
VYHS	Vyhne	83.74	21	eP	P	13 12 47.1	+3.5
AKASG	Malin Array Be	83.93	14	P	P	13 12 43.3	-1.2
	comp=Z,2.4nm,0.7s,baz=347,slow=4.7,SNR=18						
	comp=Z,2.4nm,0.7s						
AKBB	Malin Array Si	83.93	14	ceP	P	13 12 44.1	-0.4
AKBB				pmax	pmax		
	comp=Z,14nm,1.3s						
KIEV	Kiev	83.94	14	P	P	13 12 43.3	-1.2
KIEV				IAmb	IAmb	13 12 45.1	
	comp=Z,11nm,1.1s						
KIEV	Kiev	83.94	14	P	P	13 12 43.3	-1.2
KIEV				pmax	pmax		
	comp=Z,11nm,1.2s						
BELG	Belogornoye	84.15	2	P	P	13 12 45.6	+0.1
	comp=Z,5.1nm,0.4s,baz=61,slow=2.8,SNR=3.9						
	comp=Z,5.1nm,0.4s						
PSZ	Piszkesteto	84.55	21	P	P	13 12 43.6	-4.2
PSZ				IAmb	IAmb	13 12 57.5	
	comp=Z,21nm,1.4s						
PSZ	Piszkesteto	84.55	21	P	P	13 12 43.6	-4.2
PSZ				pmax	pmax		
	comp=Z,21nm,1.4s						
MK31	Makanchi Array	85.79	339	ceP	P	13 12 53.9	-0.1
MKAR	Makanchi Array	85.79	339	P	P	13 12 52.6	-1.4
	comp=Z,1.2nm,0.8s,baz=9.1,slow=3.1,SNR=9.7						
	comp=Z,1.2nm,0.8s						
MKAR	Makanchi Array	85.79	339	i P	P	13 12 53.5	-0.5
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MAKZ	Makanchi	85.85	340	P	P	13 12 52.5	-1.7
MAKZ				IAmb	IAmb	13 12 54.9	
	comp=Z,13nm,1.1s						
MAKZ	Makanchi	85.85	340	P	P	13 12 52.6	-1.7
MAKZ				pmax	pmax		
	comp=Z,13nm,1.1s						
AKTO	Aktyubinsk	86.00	356	P	P	13 12 53.3	-1.6
	comp=Z,1.7nm,0.6s,baz=27,slow=3.1,SNR=6.3						
	comp=Z,1.7nm,0.6s						
XAN	Xi'an	86.53	315	⇑P	P	13 12 57.4	-0.5
XAN				pP	pP	13 13 03.5	+1.5
XAN				pmax	pmax		
	comp=Z,16nm,2.1s						
WMQ	Urumqi	86.98	335	eP	P	13 13 00.8	+0.9
WMQ				pP	sP	13 13 08.0	+2.5
WMQ				pmax	pmax		
	comp=Z,20nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,250nm,3.9s						
WMQ				LR	LR		
	comp=Z,410nm,14.9s						
WMQ				LR	LR		
	comp=Z,460nm,19.7s						
WMQ				LR	LR		
	comp=Z,340nm,16.9s						
LZH	Lanzhou	87.36	320	eP	P	13 13 02.8	+0.7
LZH				sP	pP	13 13 09.4	+3.2
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,310nm,4.8s						
MDT	Midelt	88.20	44	LR	LR	13 49 38.0	
	comp=Z,142nm,21.7s,baz=336,slow=34						
MLR	Muntele Rosu	88.27	18	LR	LR	13 52 33.8	
	comp=Z,215nm,20.6s,baz=339,slow=36						
DZM	Mont Dzumac	88.50	237	eLR	LR	13 40 58.3	
	comp=Z,734nm,22.8s						
AAK	Ala-Archa	91.53	343	P	P	13 13 21.7	+0.2
	comp=Z,1.2nm,0.3s,baz=7.2,slow=4.3,SNR=4.2						
	comp=Z,1.2nm,0.3s						
AAK	Ala-Archa	91.53	343	ceP	P	13 13 22.4	+0.9
AAK				pmax	pmax		
	comp=Z,9.0nm,2.5s						
JAY	Jayapura	92.28	269	LR	LR	13 50 22.1	
	comp=Z,379nm,18.4s,baz=16,slow=33						
URZ	Urewera	95.33	220	LR	LR	13 48 44.0	
	comp=Z,261nm,21.0s,baz=34,slow=30						
GNI	Garni	96.24	5	LR	LR	14 00 26.5	
	comp=Z,139nm,19.5s,baz=16,slow=38						
PZH	PanZhiHua	96.25	316	P	P	13 13 45.6	+2.2
VNDA	Vanda	128.17	195	PKP	PKPdf	13 19 19.4	-0.1
	comp=Z,1.2nm,0.9s,baz=347,slow=3.1,SNR=5.0						
QSPA	South Pole Qui	133.58	180	PKP	PKPdf	13 19 29.0	-1.0
	comp=Z,2.1nm,0.9s,baz=248,slow=1.9,SNR=7.9						
SNAA	Sanae	141.97	155	PKP	PKPdf	13 19 44.2	-1.2
	comp=Z,0.7nm,0.7s,baz=3.5,slow=13,SNR=1.3						
SYO	Syowa Base	153.96	170	⇓epPKPdf	PKPdf	13 20 08.2	+3.3
BOSA	Boshof	154.13	63	PKPab	PKPab	13 20 27.6	-0.9
	comp=Z,9.5nm,1.1s,baz=214,slow=7.1,SNR=3.9						

IDC ***22*** *13:12:53.3±1.4, 31.°43N×49.°72E, h0^{km}, mb3.8/8, mbtmp3.8/10, ML3.8/2, Error ellipse: s-maj=31.9km s-min=21.0km az=10.0*

TEH ***22*** *13:12:57.4, 31.°48N×49.°50E, h16^{km}±20^{km}*

THR ***22*** *13:12:57.5±0.0, 31.°62N×49.°42E, h0^{km}±15^{km}, ML3.8*

OMAN ***22*** *13:13:03.1±0.1, 31.°06N×49.°73E, h15^{km}±1^{km}, Error ellipse: s-maj=3.1km s-min=1.0km az=353.0*

ISC 22 13:12:55.8±0.6, **31.°38N**±0.°04×**49.°53E**±0.°04, **h10^{km}, n88, σ2^{s}.08**/93, **mb3.9**/6, **Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AHWZ	Ahwaz	0.76	266	Pg	Pb	13 13 12.1	+1.0
ABEH	Behbahan	1.00	141	Pg	Pn	13 13 18.5	+2.6
GTMR	Gotvand	1.14	342	ePgA		13 13 15.8	
GTMR				IAML		13 13 41.7	
	comp=Z,1µm,1.0s						
JHBN	Jahan bin	1.28	49	Pg	Pn	13 13 20.9	+0.7
ZNGN	Zangian	1.34	57	Pg	Pn	13 13 22.1	+1.1
IBRJ	Brojen	1.56	70	Pg	Pn	13 13 25.9	+1.9
IPIR	Pirpir	1.74	41	Pg	Pn	13 13 28.3	+1.9
KLNJ	Kolanjah	1.81	101	Pn	Pb	13 13 30.7	+1.5
KLNJ	Kolanjah	1.81	101	IAML		13 14 06.5	
	comp=Z,530nm,1.0s						
IGAR	Gharneh	2.37	64	Pn	Pn	13 13 37.9	+3.0
KHMZ	Khomeyn	2.38	9	ePnA		13 13 37.5	
KHMZ				IAML		13 14 20.4	
	comp=Z,260nm,1.0s						
IRAM	Ramesheh	2.47	79	Pn	Pn	13 13 39.5	+3.1
IKFM	Kafar-mosalman	2.56	327	Pn	Pn	13 13 38.8	+1.4
IKLH	Kolahrood	2.59	41	Pn	Pn	13 13 39.7	+1.5
IDOB	Doab	2.66	335	Pn	Pn	13 13 40.5	+1.6
KBD	Kabd	2.71	216	P	Pb	13 13 44.4	-0.1
KBD				S	Sb	13 14 19.0	+1.2
IZEF	Zefreh	2.81	57	Pn	Pn	13 13 43.4	+2.2
QAMS	Qamsar	2.83	33	Pn	Pn	13 13 43.4	+2.1
HSAM	Samen	2.93	345	Pn	Pn	13 13 44.5	+1.8
ASAO	Ashtian	3.18	7	ePnA		13 13 49.3	
ASAO				IAML		13 14 50.8	
	comp=Z,110nm,1.0s						
DSBU	Dashti - Bushe	3.37	153	Pn	Pn	13 13 52.4	+3.9
KRSH	Karshahi	3.39	40	Pn	Pn	13 13 51.6	+2.7
HAGD	Aghdareh	3.44	355	Pn	Pn	13 13 51.2	+1.4
ISAD	Sadrabad	3.58	80	Pn	Pn	13 13 54.6	+2.8
ILBA	Ilam Banvizeh	3.59	309	Pn	Pn	13 13 52.3	+0.7
ILBA	Ilam Banvizeh	3.59	309	ePnA		13 13 52.5	
ILBA				IAML		13 15 09.7	
	comp=Z,76nm,1.0s						
IQOM	Qom	3.68	20	Pn	Pn	13 13 55.2	+2.1
ISFB	Sefidab	3.74	37	Pn	Pn	13 13 55.5	+1.9
SNQR	Sonqor, Kerman	3.81	336	Pn	Pn	13 13 56.9	+2.0
IGHG	Ghaleghazi	3.85	320	Pn	Pn	13 13 56.6	+1.2
TAFT	Taft - Yazd	3.98	84	Pn	Pn	13 14 00.2	+3.1
ANAR	Anarak	3.98	62	Pn	Pn	13 13 59.8	+2.7
IVRN	Varamin	4.04	26	Pn	Pn	13 13 59.5	+1.6
GLG1	Gilan-e-Gharb	4.09	313	Pn	Pn	13 13 59.9	+1.4
ILIN	Lien	4.13	329	Pn	Pn	13 13 59.9	+0.6
QABG	Abgarm-Qazvin	4.31	1	Pn	Pn	13 14 03.7	+2.0
IMEH	Mehriz	4.35	89	Pn	Pn	13 14 04.9	+2.7
YZKH	Yazd	4.42	76	IAML		13 15 27.7	
	comp=Z,28nm,1.0s						
IDMV	Damavand	4.67	26	Pn	Pn	13 14 08.7	+1.9
ILAS	Lasjerd	4.91	35	Pn	Pn	13 14 11.8	+1.8
IFIR	Firoozkooh	5.03	32	Pn	Pn	13 14 13.5	+1.9
IBAF	Bafgh	5.16	86	Pn	Pn	13 14 15.8	+2.5
KLST	Kelardasht - M	5.28	14	Pn	Pn	13 14 16.9	+1.9
MZPU	Pul - Mazandar	5.32	18	Pn	Pn	13 14 17.9	+2.4
IPRN	Peran	5.38	25	Pn	Pn	13 14 18.8	+2.5
SAKB	Bahrain	5.46	170	P	Pn	13 14 20.2	+3.0
IGLO	Ghaloghah	6.23	34	Pn	Pn	13 14 30.6	+2.6
TNSJ	Nastanj	6.50	65	Pn	Pn	13 14 34.2	+2.6
TRNA	Turayna	6.79	167	P	Pn	13 14 37.6	+2.1
TRNA				S	Sn	13 15 54.6	+1.7
TABS	Tabas	6.79	69	ePnA		13 14 40.0	
TABS				IAML		13 14 44.6	
	comp=Z,19nm,1.0s						
JRN	Qarnain Island	7.05	155	P	Pn	13 14 41.2	+2.0
SHRO	Shahrood	7.09	48	ePnA		13 14 42.3	
SHRO				IAML		13 14 43.0	
	comp=Z,19nm,1.0s						
SHME	Shamm	7.87	131	P	Pn	13 14 53.6	+3.2
SHME				S	Sn	13 16 18.5	-1.0
BANOM	Banah	8.06	131	P	Pn	13 14 54.9	+1.9
BANOM				S	Sn	13 16 22.4	-1.9
MASF	Masafi	8.36	134	P	Pn	13 15 00.6	+3.4
MASF				S	Sn	13 16 30.2	-1.6
SBZV	Sabzevar	8.37	51	IAML		13 14 59.8	
	comp=Z,11nm,1.0s						
SBZV				ePnA		13 15 02.7	
ASUD	Al Ashush, Dub	8.46	141	P	Pn	13 15 00.6	+2.1
ASUD				S	Sn	13 16 33.3	-0.8
MDH	Madha	8.50	134	P	Pn	13 15 01.0	+2.0
MDH				S	Sn	13 16 34.0	-1.1
RAYN	Ar Rayn	8.61	206	P	Pn	13 15 00.9	+0.4
RAYN				S	Sn	13 16 37.4	-0.4
UOSS	Minazif	8.71	136	P	Pn	13 15 04.7	+2.9
UOSS				S	Sn	13 16 38.8	-1.4
ASHO	Ashiyiah	8.82	138	P	Pn	13 15 05.7	+2.2
ASHO				S	Sn	13 16 41.2	-1.7
BJRD	Bojnurd	9.05	44	ePnA		13 15 11.2	
BJRD				IAML		13 15 16.4	
	comp=Z,5.9nm,1.0s						
MZR	Muzera	9.06	156	P	Pn	13 15 07.9	+1.2
MZR				S	Sn	13 16 48.9	+0.1
SOHO	SOHO	9.52	138	P	Pn	13 15 15.3	+2.3
SOHO				S	Sn	13 16 59.3	-0.7
ARQ	Araqi	10.14	141	P	Pn	13 15 23.5	+2.0
	SNR=6.4						
ARQ				S	Sn	13 17 13.1	-2.3
HOQ	Hoqain	10.39	136	P	Pn	13 15 28.0	+3.0
ASF	Jabal al Asfar	10.78	277	Pn	Pn	13 15 29.6	-0.8
	comp=Z,0.6nm,0.3s,baz=68,slow=1.4,SNR=2.9						
ASF				Sn	Sn	13 17 22.6	-8.6
	comp=Z,0.2nm,0.3s,baz=284,slow=15,SNR=1.6						
	comp=Z,1.3nm,0.4s						
BSY	Bisya	10.98	140	P	Pn	13 15 34.6	+1.5
BSY				S	Sn	13 17 30.6	-5.5
SMDO	Samad	11.23	136	P	Pn	13 15 38.2	+1.7
WSAR	Wadi Sarin	11.45	133	Pn	Pn	13 15 37.5	-2.1
	baz=334,slow=24,SNR=8.9						
WSAR				Sn	Sn	13 17 38.6	-9.0
	baz=81,slow=24,SNR=1.7						
WSAR	Wadi Sarin	11.45	133	P	Pn	13 15 40.9	+1.3
JMDO	Jabal Madar	11.79	138	P	Pn	13 15 46.1	+2.0
JLN	Jalan Bani Buh	12.74	134	P	Pn	13 15 57.8	+0.7
MHTO	MHTO	12.82	142	P	Pn	13 15 58.9	+0.7
MHTO				S	Sn	13 18 16.0	-5.1
DOK	Doka	13.37	161	P	Pn	13 16 06.6	+0.8
	SNR=7.0						
WHFO	Wadi Hawf	13.95	163	P	Pn	13 16 13.7	+0.1
	SNR=7.6						
ABTO	Aybut	14.38	165	P	Pn	13 16 19.1	-0.5
DMTO	DMTO	14.47	159	P	Pn	13 16 20.2	-0.6
	SNR=9.5						
BR131	Keskin Array S	15.37	307	P	P	13 16 38.8	+1.2
	SNR=6.2						
BRTR	Keskin Array B	15.37	307	Pn	Pn	13 16 35.9	+3.0
	comp=Z,0.5nm,0.3s,baz=136,slow=12,SNR=13						
	comp=Z,1.8nm,0.6s						
IDI	Anoyia	20.94	287	P	P	13 17 39.8	+0.9
	comp=Z,11nm,1.1s,baz=356,slow=16,SNR=2.1						
	comp=Z,11nm,1.1s						
AKASG	Malin Array Be	24.49	328	P	P	13 18 13.8	-1.2
	comp=Z,0.2nm,0.3s,baz=133,slow=7.2,SNR=2.9						
	comp=Z,0.2nm,0.3s						
MKAR	Makanchi Array	29.46	49	P	P	13 18 57.7	-2.1
	comp=Z,0.2nm,0.6s,baz=248,slow=7.6,SNR=1.7						
	comp=Z,0.2nm,0.6s						
FINES	FINESS Array B	33.75	340	P	P	13 19 36.2	-1.1
	comp=Z,1.9nm,0.5s,baz=142,slow=10.0,SNR=13						
	comp=Z,1.9nm,0.5s						
HFS	Hagfors	37.28	331	P	P	13 20 06.6	-1.1
	comp=Z,0.6nm,0.4s,baz=128,slow=9.3,SNR=10						
	comp=Z,0.6nm,0.4s						
TORD	Torodi Ar. Bea	47.44	259	P	P	13 21 31.4	+0.5
	comp=Z,0.8nm,0.5s,baz=59,slow=8.2,SNR=1.7						
	comp=Z,0.8nm,0.5s						
SPITS	Spitsbergen Ar	49.10	351	P	P	13 21 42.7	-0.3
	comp=Z,0.7nm,0.4s,baz=123,slow=5.3,SNR=14						
	comp=Z,0.7nm,0.4s						
KSRS	Korea Array	63.21	61	P	P	13 23 21.4	-2.9
	comp=Z,0.8nm,0.6s,baz=284,slow=7.3,SNR=4.7						
	comp=Z,0.8nm,0.6s						

NEIC ***22*** *13:16:09.8±1.1, 43.°61N±0.°07×128.°7W±0.°2, h10^{km}±2^{km}, mb4.2/8, ML3.5/34, Error ellipse: s-maj=21.2km s-min=11.6km az=262.0*

IDC ***22*** *13:16:12.2±1.2, 44.°10N×128.°29W, h0^{km}, mb3.5/9, mbtmp3.4/12, ML3.0/3, MS3.7/3, Error ellipse: s-maj=33.6km s-min=13.3km az=39.0*

ISC 22 13:16:11.9±0.8, **43.°9N**±0.°1×**128.°48W**±0.°09, **h13^{km}, n52, σ1^{s}.75**/44, **mb4.0**/15, **Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEBM	Edson Butte	3.20	108	Pn	Pn	13 17 01.2	-0.7
KEBM				IAML		13 17 42.3	
	comp=N,85nm,2.8s						
KEBM				IAML		13 18 10.1	
	comp=E,135nm,4.9s						
I02E	Swisshome, OR	3.35	85	Pn	Pn	13 17 04.6	+0.8
I02E				IAML		13 18 37.7	
	comp=E,67nm,4.7s						
J01E	Myrtle Point	3.39	101	Pn	Pn	13 17 04.0	-0.5
J01E				IAML		13 18 20.4	
	comp=E,62nm,4.9s						
HEBO	Mount Hebo	3.61	68	Pn	Pn	13 17 07.9	+0.3
I03D	Drain, OR	3.72	92	Pn	Pn	13 17 09.5	+0.5
K02D	Willamette Mer	3.72	108	Pn	Pn	13 17 09.1	-0.1
G03D	McMinnville, O	3.94	69	Pn	Pn	13 17 14.2	+2.2
G03D				IAML		13 18 08.0	
	comp=N,73nm,4.7s						
G03D				IAML		13 18 39.0	
	comp=E,55nm,3.3s						
F03A	Seaside	4.03	58	Pn	Pn	13 17 15.6	+2.4
BBOR	Butler Butte	4.35	102	Pn	Pn	13 17 19.6	+1.7
BBOR				IAML		13 18 26.9	
	comp=E,32nm,3.0s						
BBOR				IAML		13 18 47.1	
	comp=N,37nm,4.9s						
G04A	Mulino	4.47	71	Pn	Pn	13 17 21.1	+1.8
H04A	Detroit Lake	4.58	78		Pn	13 17 22.3	+1.5
H04A				IAML		13 18 28.6	
	comp=E,27nm,4.8s						
H04A				IAML		13 20 01.5	
	comp=N,28nm,4.9s						
J04A	Umpqua Nationa	4.68	96	Pn	Pn	13 17 22.7	+0.3
NLWA	Neilton Lookou	4.74	41		Pn	13 17 26.2	+3.2
NLWA				IAML		13 18 28.5	
	comp=N,30nm,4.0s						
NLWA				IAML		13 19 58.4	
	comp=N,32nm,5.0s						
YBH	Yreka Blue Hor	4.78	115	Pn	Pn	13 17 25.3	+1.7
	baz=313,slow=6.8,SNR=1.7						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YBH				Sn	Sn	13 18 18.9	+0.1
	baz=166,slow=1.6,SNR=1.9						
HOOD	Mount Hood Mea	5.07	72		Pn	13 17 29.6	+1.9
HOOD				IAML		13 18 40.6	
	comp=N,22nm,3.4s						
HOOD				IAML		13 19 04.2	
	comp=E,28nm,3.9s						
G05A	Wamic	5.28	73	Pn	Pn	13 17 32.5	+2.0
GNW	Green Mountain	5.37	45		Pn	13 17 34.1	+2.4
OZB	Mount Ozzard	5.44	21	Pn	Pn	13 17 30.3	-2.3
D05A	Enumclaw	5.60	52	Pn	Pn	13 17 36.8	+2.0
G06A	Carlson Farm,	5.75	74	Pn	Pn	13 17 36.5	-0.5
MXC	Moxie City	6.36	63	Pn	Pn	13 17 45.2	0.0
BBB	Bella Bella	8.27	2	Pn	Pn	13 18 10.2	-1.2
	baz=344,slow=19,SNR=1.8						
	comp=E,7.6nm,1.1s						
NVAR	Mina Array Bea	9.43	122	Pn	Pn	13 18 31.7	+4.1
	comp=E,0.1nm,0.3s,baz=288,slow=14,SNR=4.7						
	comp=E,0.2nm,0.5s						
PDAR	Pinedale Array	13.82	88	Pn	P	13 19 33.1	-3.0
	baz=301,slow=14,SNR=1.2						
PDAR				LR	LR	13 25 05.6	
	comp=E,142nm,19.7s,baz=158,slow=39						
	comp=E,0.1nm,0.5s						
ANMO	Albuquerque	19.18	110	LR	LR	13 28 29.4	
	comp=E,366nm,19.3s,baz=227,slow=39						
YKA	Yellowknife Ar	20.29	19	P	P	13 20 46.2	-0.8
	comp=E,0.7nm,0.7s,baz=208,slow=10,SNR=5.9						
	comp=E,0.7nm,0.7s						
ULM	Lac du Bonnet	22.95	62	P	P	13 21 16.6	+0.9
	comp=E,2.6nm,0.7s,baz=318,slow=12,SNR=3.5						
	comp=E,2.6nm,0.7s						
ILAR	Eielson Array	23.30	340	P	P	13 21 19.7	+0.5
	comp=E,0.3nm,0.9s,baz=137,slow=7.6,SNR=4.1						
	comp=E,0.3nm,0.9s						
L19K	White Mountain	23.91	329	P	P	13 21 24.3	-0.8
L19K				IAmb	IAmb	13 22 02.5	
	comp=Z,11nm,1.5s						
M17K	Holitna River	24.46	326	P	P	13 21 30.6	+0.3
M17K				IAmb	IAmb	13 21 34.7	
	comp=Z,11nm,1.2s						
MLY	Manley	24.52	337	P	P	13 21 32.6	+1.8
TXAR	Lajitas Array	24.55	118	P	P	13 21 32.4	+1.0
	comp=Z,0.3nm,0.7s,baz=290,slow=7.9,SNR=4.5						
	comp=Z,0.3nm,0.7s						
LPIG	La Paz	24.76	137	LR	LR	13 30 03.5	
	comp=Z,185nm,19.1s,baz=57,slow=34						
J19K	Poorman	25.32	332	P	P	13 21 39.2	+1.3
J19K				IAmb	IAmb	13 21 42.5	
	comp=Z,5.5nm,1.0s						
J18K	Innoko River	25.37	330	P	P	13 21 37.9	-0.5
J18K				IAmb	IAmb	13 21 43.0	
	comp=Z,4.0nm,0.9s						
E28M	Babbage River	25.40	351	P	P	13 21 38.4	-0.2
EYMN	Ely	25.87	68	P	P	13 21 40.6	-2.5
PETK	Petropavlovsk-	47.71	308	P	P	13 24 49.9	+1.9
	comp=Z,0.8nm,1.0s,baz=74,slow=6.2,SNR=2.0						
	comp=Z,0.8nm,1.0s						
JMIC	Jan Mayen	57.67	20	P	P	13 26 02.3	+0.9
	comp=Z,17nm,0.4s,baz=185,slow=12,SNR=1.4						
H11N3	WAKE ISLAND Hy	58.42	268	T	T	14 29 16.7	
	baz=49,slow=74						
H11N2	WAKE ISLAND Hy	58.42	268	T	T	14 29 12.0	
	baz=49,slow=74						
H11N1	WAKE ISLAND Hy	58.43	268	T	T	14 29 18.0	
	baz=49						
H11S1	WAKE ISLAND Hy	59.35	267	T	T	14 30 27.3	
	baz=49,slow=75,SNR=7.5						
H11S2	WAKE ISLAND Hy	59.35	267	T	T	14 30 19.9	
	baz=49,slow=75,SNR=6.0						
H11S3	WAKE ISLAND Hy	59.37	267	T	T	14 30 24.1	
	baz=49,slow=75,SNR=7.0						
SONM	Songino Array	76.66	326	P	P	13 28 05.6	+3.2
	comp=Z,1.1nm,0.9s,baz=50,slow=4.6,SNR=5.9						
	comp=Z,1.1nm,0.9s						
HHC	Hu-ho-hao-te	79.82	318	*e*P	P	13 28 18.0	-2.0
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,92nm,5.1s						
BVAR	Borovoye Array	82.07	349	P	P	13 28 32.7	+1.1
	comp=Z,0.7nm,0.6s,baz=0.4,slow=5.8,SNR=2.3						
	comp=Z,0.7nm,0.6s						
KURBB	Kurchatov Arra	82.94	343	P	P	13 28 38.3	+2.1
	comp=Z,0.7nm,0.8s,baz=19,slow=4.9,SNR=4.6						
	comp=Z,0.7nm,0.8s						
MKAR	Makanchi Array	85.66	339	P	P	13 28 52.1	+2.0
	comp=Z,0.2nm,0.7s,baz=70,slow=4.7,SNR=2.7						
	comp=Z,0.2nm,0.7s						
KSH	Kashi	94.05	341	P	P	13 29 26.3	-3.7
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH	PanZhiHua	96.17	316	P	P	13 29 38.8	-1.0

WEL 22 13:22:14.3±1.2**, 34°S**±27°×**17°9W**±3°3**, h172**^{km}±41^{km}**,** **M3.7**/7**, mB4.1**/1**, ML4.0**/9**, MLv3.7**/7**, Mw(mB)3.2**/1**, Error ellipse: s-maj=54.2km s-min=15.3km az=128.4, confirmed, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	4.45	211	P	Pn	13 23 20.7	-0.1
WMGZ				S	Sn	13 24 13.8	+0.7
PKGZ	Pakihiroa	4.63	213	P	Pn	13 23 23.5	+0.2
PKGZ				S	Sn	13 24 17.0	-0.4
HAZ	Te Kaha	4.69	216	P	Pn	13 23 24.3	+0.4
HAZ				S	Sn	13 24 20.7	+2.2
PUZ	Puketiti	4.73	210	P	Pn	13 23 23.6	-0.9
PUZ				S	Sn	13 24 19.3	-0.3
RUGZ	Raukumara Rang	4.90	215	P	Pn	13 23 26.3	-0.6
TWGZ	Tauwhareparae	4.93	212	P	Pn	13 23 27.6	+0.3
TWGZ				S	Sn	13 24 25.2	+0.7
MWZ	Matawai	5.27	214	P	Pn	13 23 31.6	+0.1
MWZ				S	Sn	13 24 30.7	-1.5
URZ	Urewera	5.41	217	P	Pn	13 23 33.0	-0.4
URZ				S	Sn	13 24 35.3	-0.2
SNGZ	Shannon Statio	5.72	213	P	Pn	13 23 37.4	-0.1
SNGZ				S	Sn	13 24 44.0	+1.2
RAHZ	Arahi	5.94	213	P	Pn	13 23 40.1	-0.3
RAHZ				S	Sn	13 24 49.6	+1.4
MTHZ	Maungataniwha	6.00	215	P	Pn	13 23 42.0	+0.8
MTHZ				S	Sn	13 24 50.1	+0.5
NMHZ	Naumai	6.21	214	P	Pn	13 23 44.8	+0.8
NMHZ				S	Sn	13 24 55.5	+0.8
BKZ	Black Stump Fm	6.42	215	P	Pn	13 23 46.1	-0.6
BKZ				S	Sn	13 24 58.5	-0.9

NOU 22 13:27:11.3, 10°52S×162°68E, h55^{km}**, MLv4.0**/10**, Solomon Islands, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HURO	Huro Makira	0.77	274	P	Pn	13 27 26.8	+0.7
HURO	Huro Makira	0.77	274	P	Sn	13 27 38.9	+1.9
ALEG	Aligegeo Malai	2.63	312	P	Pn	13 27 51.7	+0.4
ALEG	Aligegeo Malai	2.63	312	S	Sn	13 28 23.1	+1.1
HNR	Honiara	2.90	292	P	Pn	13 27 55.2	+0.2
HNR	Honiara	2.90	292	S	Sn	13 28 29.6	+0.9
SAVO	Savo Central	3.14	296	P	Pn	13 27 58.2	-0.1
SAVO	Savo Central	3.14	296	S	Sn	13 28 35.1	+0.5
TATA	Tatamba Isabel	3.54	307	P	Pn	13 28 03.5	-0.3
TATA	Tatamba Isabel	3.54	307	S	Sn	13 28 44.2	-0.3

NEIC ***22*** *13:29:22.7±1.0, 36°87N±0°02×121°61W±0°03, h10^{km}±1^{km}, Error ellipse: s-maj=4.5km s-min=2.6km az=231.0*

NCEDC 22 13:29:23.1±1.1**, 36°88N**±0°01×**121°62W**±0°02**, h8**^{km}±4^{km}**, ML3.0**/64**, ML2.8**/50(NEIC)**, Error ellipse: s-maj=2.5km s-min=1.5km az=65.0, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HTUM	Tustin Road	0.05	203		Pg	13 29 25.0	+0.2
HTUM					Sg	13 29 26.5	+0.4
HCBM	Chamberlain	0.07	326		Pg	13 29 25.0	0.0
HCOM	Corn Cob Canyo	0.07	278		Pg	13 29 25.4	+0.3
HERM	Elkhorn Road	0.11	224		Pg	13 29 26.1	+0.5
FRP	Fremont Peak	0.16	140		Pg	13 29 26.5	0.0
HLPM	Lions Peak	0.16	356		Pg	13 29 26.9	+0.3
HLPM					Sg	13 29 29.8	+0.8
JELB	Ellicott, Sant	0.18	287		Pg	13 29 27.2	+0.4
SAO	San Andreas Ge	0.18	130	Pg	Pg	13 29 26.9	+0.1
HCAM	Canada Road	0.18	36		Pg	13 29 27.4	+0.5
HCAM					Sg	13 29 30.7	+1.2
HFEM	San Felipe	0.20	58		Pg	13 29 27.9	+0.6
BSRM	Salinas Radio	0.23	159		Pg	13 29 27.7	0.0
BSRM					Sg	13 29 31.1	+0.4
GHS	Gilroy Hot Spr	0.26	32		Pg	13 29 28.8	+0.5
CADM	Anderson Res.	0.29	359		Pg	13 29 29.2	+0.4
JLAB	Laurel Hill	0.29	341		Pg	13 29 29.3	+0.4
PACP	Pacheco Peak	0.29	64		Pg	13 29 29.7	+0.7
PACP					Sb	13 29 34.4	-1.4
PACP	Pacheco Peak	0.29	64	IAML		13 29 34.6	
	comp=N,5µm,0.5s						
PACP				IAML		13 29 34.7	
	comp=E,5µm,0.4s						
HPCM	Pacheco Lake	0.33	56		Pg	13 29 30.2	+0.6
SCZ	Santa Cruz	0.33	148		Pg	13 29 29.4	-0.2
SCZ	Santa Cruz	0.33	148	IAML		13 29 34.2	
	comp=N,586nm,0.3s						
SCZ				IAML		13 29 34.2	
	comp=E,1µm,0.5s						
BJOM	Mount Johnson	0.35	135		Pg	13 29 30.0	0.0
HMOM	Monterey	0.37	221		Pg	13 29 30.5	+0.2
HMOM					Sg	13 29 35.8	+0.7
SLD	San Luis Dam	0.37	58		Pg	13 29 31.0	+0.6
SLD					Sg	13 29 36.6	+1.2
BJCM	Johnson Can.	0.38	151		Pg	13 29 30.3	-0.1
C072	Blauer Lane Sa	0.42	345		Pb	13 29 32.2	-0.6
C054	Valleyhaven Wa	0.43	337		Pg	13 29 31.5	+0.1
JJOM	Saint Joseph's	0.44	319		Pg	13 29 31.3	-0.4
SCCB	Santa Clara Co	0.46	334		Pg	13 29 32.4	+0.5
MHC	Mount Hamilton	0.46	357		Pg	13 29 32.9	+0.7
BEMM	Emmet	0.47	117		Pb	13 29 33.3	-0.3
ARN	Arnold Ranch	0.48	8		Pg	13 29 32.9	+0.5
BPRM	Ponciano Ridge	0.48	191		Pg	13 29 32.4	0.0
C059	Quail Canyon R	0.48	345		Pb	13 29 33.2	-0.7
BSMM	Soledad Missio	0.52	163		Pg	13 29 33.1	0.0
C046	N 16th Street	0.52	336		Pg	13 29 33.7	+0.5
C041	El Campo Drive	0.53	341		Pb	13 29 34.3	-0.3
BPIM	Pinnacles	0.53	137		Pg	13 29 32.9	-0.4
SCKWR	San Luis Creek	0.53	55		Pb	13 29 34.6	-0.1
CMPM	Mikes Peak	0.54	26		Pg	13 29 34.1	+0.6
BSGM	Shirttail Gulc	0.55	148		Pg	13 29 33.2	-0.4
BBGB	Big Mountain B	0.55	123		Pg	13 29 34.4	+0.6
C016	Longford Drive	0.56	339		Pb	13 29 34.6	-0.5
CALM	Calaveras Res.	0.59	346		Pg	13 29 35.0	+0.4
JSJM	St Joseph	0.59	320		Pg	13 29 34.6	0.0
CMLM	Mount Lewis	0.60	357		Pb	13 29 35.4	-0.5
JBMM	Black Mountain	0.61	316		Pg	13 29 34.3	-0.7
C039	Semillon Drive	0.63	338		Pg	13 29 35.9	+0.5
LRV	Little Rabbit	0.66	133		Pg	13 29 35.8	-0.1
JFP	Foothills Park	0.67	317		Pg	13 29 35.5	-0.5
JPSM		0.67	299		Pg	13 29 35.4	-0.5
MTOS	Mt Oso, Westle	0.67	20		Pg	13 29 36.5	+0.5
C017	S Grimmer Bl F	0.68	339		Pb	13 29 36.8	-0.4
JSFB	Stanford Teles	0.69	320		Pg	13 29 36.1	-0.3
C001	Firth Court Fr	0.69	339		Pb	13 29 37.0	-0.4
C050	Festivo Court	0.69	339		Pg	13 29 36.8	+0.4
BMSM	Mercy Hot Spri	0.70	108		Pg	13 29 37.0	+0.5
JRSC	Jasper Ridge	0.72	317		Pg	13 29 36.4	-0.7
BGH	Bear Gulch	0.74	309		Pg	13 29 36.9	-0.5
C015	Bright Common	0.74	336		Pg	13 29 37.1	-0.3
WENL	Wente Vineyard	0.75	351		Pb	13 29 38.4	0.0
C048	Posada Way Fre	0.76	337		Pg	13 29 37.9	+0.2
CSTL	Corral Hollow	0.77	7		Pb	13 29 38.8	+0.1
CSTL	Corral Hollow	0.77	7		Pb	13 29 39.0	+0.3
CVLM	Vallecito	0.77	347		Pb	13 29 38.6	-0.1
CNIC	Niles Canyon	0.78	339		Pg	13 29 38.1	0.0
CYD1	Coyote D'meter	0.78	331		Pg	13 29 37.8	-0.4
CBZL	Buffer Zone	0.82	354		Pb	13 29 39.7	+0.2
PCCM	Crazy Canyon	0.87	155		Pg	13 29 39.5	-0.3
C055	Cottonwood Ave	0.87	333	Pg	Pg	13 29 39.3	-0.6
JCHM	Cahill Ridge	0.88	317		Pg	13 29 39.3	-0.7
JCPM	Coyote Point	0.91	322		Pg	13 29 39.9	-0.7
HULI	Fort Hunter Li	0.91	160		Pg	13 29 40.1	-0.4
PMPB	Monarch Peak	0.93	135		Pg	13 29 40.5	-0.5
CBSNC	Byron Hot Spri	0.94	359		Pg	13 29 41.3	+0.1
CMOB	Morgan Territo	0.94	351		Pg	13 29 40.9	-0.3
SAC	San Andreas	0.95	318		Pg	13 29 40.6	-0.8
BGC	Bolinger Road	1.00	339		Pg	13 29 41.5	-0.8
JSBM	San Bruno Moun	1.01	322		Pg	13 29 41.0	-1.6
JMGM	Milagra Ridge	1.02	318		Pg	13 29 41.2	-1.6
PSAM	San Ardo	1.03	145		Pg	13 29 41.9	-1.1
PPTM	Peach Tree Val	1.05	136		Pg	13 29 42.3	-1.0
MYLM	Yosemite Lake	1.08	62		Pg	13 29 42.4	-1.4
BKS	Berkeley--Byer	1.11	334		Pg	13 29 42.6	-1.8
VAK	Adit at Lawren	1.12	333		Pg	13 29 42.8	-1.8
PSMM	Smith Mountain	1.15	134		Pg	13 29 44.0	-1.2
CPIM	Pinole Ridge	1.21	337		Pb	13 29 44.5	-1.8
PHPM	Hope Ranch	1.21	137		Pb	13 29 44.4	-1.9
LEGD	La Grand CA	1.22	74		Pb	13 29 44.4	-2.1
PANM	San Antonio Re	1.24	152		Pn	13 29 44.8	-1.9
CPMM	Point Molate	1.24	330		Pn	13 29 44.0	-2.7
PKD	Bear Valley Ra	1.27	137		Pn	13 29 45.0	-2.2
PINL	Point Pinole R	1.28	332		Pn	13 29 45.9	-1.4
PPO	Portuguese Can	1.29	141		Pn	13 29 46.1	-1.4
PSTM	Stockdale Moun	1.30	136		Pn	13 29 45.6	-2.0
NLHM	Lake Herman	1.31	341		Pn	13 29 45.8	-1.9
WSRE	Westside REC,	1.32	114		Pn	13 29 46.8	-0.9
FARB	Farallon Islan	1.38	307		Pn	13 29 46.4	-2.2
FARB	Farallon Islan	1.38	307	IAML		13 30 07.5	
	comp=N,102nm,1.0s						
PHFM	Heflinger Ranc	1.40	135		Pn	13 29 47.5	-1.4
MHDM	Hidden Dam	1.40	80		Pn	13 29 47.0	-1.9
BUCR	Buckhorn Ranch	1.41	55		Pn	13 29 47.5	-1.7
BUCR	Buckhorn Ranch	1.41	55	IAML		13 30 09.3	
	comp=N,126nm,0.7s						
BUCR				IAML		13 30 09.4	
	comp=E,90nm,0.7s						
LCUV	Le Cuvier	1.42	149		Pn	13 29 47.2	-1.9
PCBM	Cambria	1.43	161		Pn	13 29 47.5	-1.8
BLDC	Black Mountain	1.46	157		Pn	13 29 48.4	-1.4
PKLM	Kerr Lake	1.51	137		Pn	13 29 49.1	-1.3
CMB	Columbia Colle	1.51	40		Pn	13 29 49.1	-1.4
TCHL	Shandon	1.54	140		Pn	13 29 49.5	-1.3
PAGB	Antelope Grade	1.59	136		Pn	13 29 50.2	-1.4
MMIM	Miami Mountain	1.59	70		Pn	13 29 50.6	-1.1
CVS	Carmenet Viney	1.61	336		Pn	13 29 49.4	-2.4
CVS	Carmenet Viney	1.61	336	IAML		13 30 17.5	
	comp=E,104nm,0.5s						
CVS				IAML		13 30 20.6	
	comp=N,70nm,0.5s						
MCCM	Marconi Confer	1.61	322		Pn	13 29 49.4	-2.4
MCCM	Marconi Confer	1.61	322		Pn	13 29 49.6	-2.2
MCCM				IAML		13 30 21.7	
	comp=N,114nm,0.7s						
MCCM				IAML		13 30 27.6	
	comp=E,146nm,1.1s						
QRDG	Quail Ridge Na	1.65	346		Pn	13 29 50.8	-1.6
OAKV	Oakville Exper	1.67	338		Pn	13 29 50.8	-1.9
TSCN	Private Proper	1.68	142		Pn	13 29 51.6	-1.2
WELL	Weller Preserv	1.71	24		Pn	13 29 51.9	-1.4
WELL	Weller Preserv	1.71	24	IAML		13 30 19.1	
	comp=E,126nm,0.5s						
WELL				IAML		13 30 19.8	
	comp=N,67nm,0.2s						
DPD	Davis Peak	1.77	157		Pn	13 29 52.4	-1.7
PBPM	Bitterwater Pu	1.80	136		Pn	13 29 53.3	-1.1
SMMC	Simmler	2.04	139		Pn	13 29 56.4	-1.3
AFDM	Forest Hills D	2.13	14		Pn	13 29 58.1	-0.9
MINS	Minaret Summit	2.18	68		Pn	13 30 00.2	+0.2
MMPM	Mammoth Pass	2.19	70		Pn	13 30 00.3	+0.2
MDCM	Deadman Creek	2.21	67		Pn	13 30 00.7	+0.3
MDYM	Dry Creek	2.22	69		Pn	13 30 00.9	+0.5
CRGC	Crocker Grade	2.24	136		Pn	13 29 59.6	-0.9
WAKR	Walker	2.37	46		Pn	13 30 03.6	+1.1
WAKR				IAML		13 30 41.2	
	comp=N,52nm,0.7s						
WAKR				IAML		13 30 43.3	
	comp=E,61nm,0.8s						
HOPS	Hopland Field	2.41	332	Pn	Pn	13 30 00.6	-2.2
HOPS				IAML		13 30 18.2	
	comp=N,37nm,2.5s						
HOPS				IAML		13 31 06.5	
	comp=E,40nm,3.1s						
BCW	Bitter Crk WRg	2.63	137		Pn	13 30 04.0	-2.0
BCW				IAML		13 30 31.1	
	comp=E,52nm,4.9s						
BCW				IAML		13 31 06.3	
	comp=N,49nm,3.2s						
ORV	Oroville	2.67	2		Pn	13 30 05.0	-1.5
ISA	Isabella, Lake	2.81	115		Pn	13 30 07.9	-0.5
DSP	Deep Springs	2.96	79	Pn	Pn	13 30 10.2	-0.1
DSP				IAML		13 31 06.7	
	comp=E,19nm,0.9s						
RYN	Ryan	3.01	54		Pn	13 30 09.6	-1.6
RYN				IAML		13 31 03.0	
	comp=N,18nm,1.5s						
RYN				IAML		13 31 05.8	
	comp=E,19nm,0.7s						
BEKR	Beckworth	3.14	18		Pn	13 30 10.6	-2.4
BEKR				IAML		13 31 04.9	
	comp=E,17nm,0.9s						
CCAC	Calif City Air	3.39	119		Pn	13 30 16.9	+0.6
CCAC				IAML		13 31 24.2	
	comp=N,24nm,1.7s						
CCAC				IAML		13 31 28.7	
	comp=E,24nm,1.3s						
O02D	Mt. Diablo Mer	3.42	345	Pn	Pn	13 30 14.4	-2.4
O02D				IAML		13 31 14.3	
	comp=N,13nm,4.0s						
TPNV	Topopah Spring	4.30	87		Pn	13 30 26.4	-2.6
TPNV				IAML		13 32 09.5	
	comp=N,9.0nm,3.6s						
KRMB	Red Mountain	4.97	340	Pn	Pn	13 30 37.9	-0.2

NEIC ***22*** *13:32:06.8±1.6, 43°63N±0°09×128°6W±0°1, h10^{km}±2^{km}, mb4.1/9, ML3.2/36, Error ellipse: s-maj=19.1km s-min=12.6km az=235.0*

IDC ***22*** *13:32:07.5±2.8, 43°75N×128°87W, h0^{km}, mb3.5/4, mbtmp3.4/5, Error ellipse: s-maj=63.3km s-min=25.1km az=44.0*

ISC 22 13:32:06.7±1.4**, 43°6N**±0°1×**128°6W**±0°1**, h10**^{km}**, n40,** σ**1^{s}32**/31**, mb3.9**/7**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEBM	Edson Butte	3.23	102	Pn	Pn	13 32 57.0	-0.5
KEBM				IAML		13 33 50.6	
	comp=E,76nm,3.1s						
KEBM				IAML		13 35 00.3	
	comp=N,64nm,3.0s						
J01E	Myrtle Point	3.46	96	Pn	Pn	13 33 00.4	-0.2
I02E	Swisshome, OR	3.50	80	Pn	Pn	13 33 00.3	-0.9
I02E				IAML		13 34 14.5	
	comp=E,43nm,3.1s						
K02D	Willamette Mer	3.75	102	Pn	Pn	13 33 04.0	-0.7
COR	Corvallis	3.97	74	Pn	Pn	13 33 07.1	-0.4
COR				IAML		13 33 40.5	
	comp=E,32nm,3.4s						
COR				IAML		13 33 56.5	
	comp=E,30nm,2.4s						
BUCK	Buck Mountain	4.13	80	Pn	Pn	13 33 08.9	-0.9
BUCK				IAML		13 34 23.6	
	comp=N,37nm,4.4s						
G03D	McMinnville, O	4.17	66	Pn	Pn	13 33 09.0	-1.4
G03D				IAML		13 34 43.6	
	comp=N,36nm,2.5s						
F03A	Seaside	4.30	56	Pn	Pn	13 33 11.3	-0.8
H04D	Lebanon	4.35	76	Pn	Pn	13 33 12.0	-0.8
H04D				IAML		13 33 52.7	
	comp=N,30nm,3.6s						
H04D				IAML		13 35 04.4	
	comp=E,31nm,2.3s						
BBOR	Butler Butte	4.42	97	Pn	Pn	13 33 12.5	-1.4
H04A	Detroit Lake	4.77	75		Pn	13 33 17.4	-1.2
H04A				IAML		13 35 07.7	
	comp=E,15nm,4.6s						
WISH	Wishkah	4.91	43	Pn	Pn	13 33 20.0	-0.4
NLWA	Neilton Lookou	5.06	40	Pn	Pn	13 33 20.8	-1.8
NLWA				IAML		13 34 42.1	
	comp=E,19nm,4.0s						
NLWA				IAML		13 35 55.5	
	comp=E,16nm,3.2s						
HOOD	Mount Hood Mea	5.29	69		Pn	13 33 27.2	+1.3
HOOD				IAML		13 34 25.8	
	comp=N,16nm,1.2s						
GNW	Green Mountain	5.69	44	Pn	Pn	13 33 29.4	-1.7
HOPS	Hopland Field	6.23	136	Pn	Pn	13 33 37.2	-1.4
MXC	Moxie City	6.62	60	Pn	Pn	13 33 42.0	-2.0
LTY	Liberty	6.69	54	Pn	Pn	13 33 43.9	-1.2
HOLB	Holberg	7.05	3	Pn	Pn	13 33 50.2	+0.3
NVAR	Mina Array Bea	9.37	120	Pn	Pn	13 34 28.9	+7.0
	comp=N,0.3nm,0.7s,baz=314,slow=15,SNR=1.7						
GMN	Gold Mountain	10.71	122		Pn	13 34 40.2	-0.1
SDCO	Great Sand Dun	18.48	101	P	Pn	13 36 24.6	+1.6
WRGLY	Wrigley	19.89	7	P	P	13 36 35.3	-2.6
FFC	Flin Flon	20.55	48	P	Pn	13 36 45.1	-2.2
FFC				IAmb	IAmb	13 37 29.2	
	comp=Z,13nm,1.4s						
YKA	Yellowknife Ar	20.63	19	P	Pn	13 36 47.6	-0.6
	comp=Z,1.5nm,0.8s,baz=210,slow=9.5,SNR=4.1						
	comp=Z,1.5nm,0.8s						
L26K	Log Cabin Wild	21.24	341	P	P	13 36 51.7	-0.9
MENT	Mentasta	21.26	341	P	P	13 36 50.6	-2.1
MENT				IAmb	IAmb	13 36 59.2	
	comp=Z,8.8nm,1.3s						
RIDG	Independent Ri	22.21	341	P	P	13 37 02.6	-0.3
RIDG				IAmb	IAmb	13 37 40.0	
	comp=Z,7.5nm,1.1s						
SCRK	Sand Creek	22.21	342	P	P	13 37 02.9	-0.2
DHY	Denali Highway	22.32	337	P	P	13 37 05.7	+1.4
DHY				IAmb	IAmb	13 37 43.0	
	comp=Z,12nm,1.2s						
ULM	Lac du Bonnet	23.21	62	P	P	13 37 15.8	+2.2
	comp=Z,3.0nm,0.8s,baz=246,slow=10.0,SNR=3.1						
	comp=Z,3.0nm,0.8s						
ILAR	Eielson Array	23.56	340	P	P	13 37 18.3	+1.3
	comp=Z,0.5nm,0.8s,baz=159,slow=10,SNR=6.3						
	comp=Z,0.5nm,0.8s						
NEA2	Nenana	23.98	338	P	P	13 37 20.8	-0.2
NEA2				IAmb	IAmb	13 37 58.5	
	comp=Z,4.1nm,1.1s						
H11N3	WAKE ISLAND Hy	58.28	268	T	T	14 45 47.4	
	baz=49,slow=75,SNR=35						
H11N2	WAKE ISLAND Hy	58.29	268	T	T	14 45 59.9	
	baz=49,slow=75,SNR=29						
H11N1	WAKE ISLAND Hy	58.30	268	T	T	14 45 49.1	
	baz=49,slow=75,SNR=26						
H11S1	WAKE ISLAND Hy	59.21	267	T	T	14 46 59.2	
	baz=49,slow=75,SNR=11						
H11S2	WAKE ISLAND Hy	59.22	267	T	T	14 47 01.4	
	baz=49,slow=75,SNR=6.5						
H11S3	WAKE ISLAND Hy	59.23	267	T	T	14 47 01.9	
	baz=49,slow=75,SNR=7.5						
KURBB	Kurchatov Arra	83.21	343	P	P	13 44 33.6	+0.7
	comp=Z,0.5nm,0.9s,baz=22,slow=5.4,SNR=2.8						
	comp=Z,0.5nm,0.9s						

IDC ***22*** *13:36:07.0±0.8, 6°38S×28°90E, h0^{km}, mb3.8/10, mbtmp3.9/14, ML2.6/2, MS3.1/1, Error ellipse: s-maj=29.1km s-min=14.1km az=90.0*

ISC 22 13:36:08.5±0.7**, 6°39S**±0°06×**28°7E**±0°1**, h10**^{km}**, n14,** σ**1^{s}53**/17**, mb3.9**/9**, Lake Tanganyika region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSZ	Lusaka	8.85	183	Pn	Pn	13 38 17.7	+1.1
	18nm,0.4s,baz=9.3,slow=12,SNR=28						
LSZ				Sn	Sn	13 39 58.8	+2.2
	1.7nm,0.3s,baz=126,slow=19,SNR=11						
LSZ				Lg	Lg	13 40 56.7	
	2.2nm,0.3s,baz=75,slow=11,SNR=3.9						
LSZ				LR	LR	13 42 05.5	
	comp=Z,125nm,20.3s,baz=148,slow=40						
MATP	Matopo	13.95	181	Pn	Pn	13 39 26.3	-0.2
	0.2nm,0.3s,baz=2.7,slow=13,SNR=8.7						
MATP				Sn	Sn	13 42 01.9	+0.2
	0.2nm,0.3s,baz=276,slow=19,SNR=1.8						
MATP				Lg	Lg	13 43 32.8	
	0.4nm,0.3s,baz=285,slow=18,SNR=3.9						
	1.4nm,0.8s						
TSUM	Tsumeb	16.73	219	Pn	P	13 40 05.6	+0.1
	0.4nm,0.3s,baz=42,slow=11,SNR=3.5						
TSUM				Sn	Sn	13 43 05.4	-3.9
	0.3nm,0.3s,baz=8.9,slow=20,SNR=1.3						
TSUM				Lg	Lg	13 45 08.2	
	0.2nm,0.3s,baz=344,slow=13,SNR=1.8						
	1.4nm,0.4s						
LBTB	Lobatse	18.76	189	Pn	Pn	13 40 29.7	+1.4
	4.3nm,0.8s,baz=21,slow=19,SNR=4.1						
OPO	Ambohidratompo	21.68	126	P	P	13 40 57.8	-2.0
	5.9nm,1.0s,baz=134,slow=13,SNR=2.1						
	5.9nm,1.0s						
BOSA	Boshof	22.35	188	P	P	13 41 07.1	+0.2
	6.1nm,1.0s,baz=3.4,slow=10,SNR=3.7						
	6.1nm,1.0s						

TORD Torodi Ar. Bea 33.14 306 P P 13 42 44.6 -0.6
1.1nm,0.3s,baz=119,slow=8.3,SNR=3.3
1.1nm,0.3s
BRTR Keskin Array B 46.11 5 P P 13 44 32.8 -0.3
0.7nm,0.7s,baz=181,slow=7.4,SNR=4.5
0.7nm,0.7s
KBZ Khabaz 51.51 13 P P 13 45 13.8 -0.5
1.1nm,0.7s,baz=209,slow=7.5,SNR=3.7
1.1nm,0.7s
ESDC Sonseca Array 54.89 329 P P 13 45 41.1 +1.7
0.6nm,0.7s,baz=139,slow=7.9,SNR=7.0
0.6nm,0.7s
GERES GERESS Array B 56.56 348 P P 13 45 52.2 +0.9
0.3nm,0.2s,baz=179,slow=4.9,SNR=4.2
0.3nm,0.2s
MKAR Makanchi Array 71.02 36 P P 13 47 25.8 -0.8
1.0nm,1.1s,baz=234,slow=4.8,SNR=4.4
1.0nm,1.1s
KURBB Kurchatov Arra 71.13 31 P P 13 47 27.0 -0.2
0.6nm,0.7s,baz=232,slow=4.6,SNR=2.2
0.6nm,0.7s
QSPA South Pole Qui 83.68 180 P P 13 48 36.9 -0.6
0.6nm,0.7s,baz=90,slow=22,SNR=1.6
0.6nm,0.7s

IDC ***22*** *13:37:30.4±1.2, 43°.77N×128°.56W, h0km, mb3.6/8, mbtmp3.5/14, ML3.4/6, Error ellipse: s-maj=28.5km s-min=12.3km az=35.0*

NEIC ***22*** *13:37:31.0±1.5, 43°.76N±0°.10×128°.6W±0°.1, h10km±2km, mb4.2/50, ML3.4/48, Error ellipse: s-maj=19.6km s-min=13.1km az=228.0*

ISC 22 13:37:32.7±0.8**, 43°.87N**±0°.09×**128°.59W**±0°.08**, h13km, n105, σ1s.91**/80**, mb4.1**/18**, Off coast of Oregon**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEBM Edson Butte 3.26 106 Pn Pn 13 38 20.2 -3.4
KEBM IAML 13 39 15.6
comp=N,71nm,3.1s
KEBM IAML 13 40 02.8
comp=E,101nm,2.4s
I02E Swisshome, OR 3.43 84 Pn Pn 13 38 23.8 -2.0
I02E IAML 13 40 38.3
comp=N,98nm,0.1s
J01E Myrtle Point 3.46 100 Pn Pn 13 38 23.7 -2.6
J01E IAML 13 39 13.6
comp=E,79nm,2.0s
HEBO Mount Hebo 3.71 67 Pn Pn 13 38 28.0 -1.7
HEBO IAML 13 38 54.9
comp=N,85nm,2.8s
K02D Willamette Mer 3.78 106 Pn Pn 13 38 28.9 -1.9
I03D Drain, OR 3.80 91 Pn Pn 13 38 29.0 -1.9
COR Corvallis 3.86 78 Pn Pn 13 38 30.4 -1.3
COR IAML 13 39 19.2
comp=N,39nm,1.3s
KSXB Camp Six Broad 4.02 119 Pn Pn 13 38 31.5 -2.6
G03D McMinnville, O 4.03 69 Pn Pn 13 38 32.0 -2.1
G03D IAML 13 39 22.4
comp=E,54nm,3.9s
G03D IAML 13 39 41.5
comp=N,44nm,2.9s
BUCK Buck Mountain 4.05 83 Pn Pn 13 38 33.3 -1.2
BUCK IAML 13 39 03.0
comp=E,41nm,3.2s
BUCK IAML 13 39 14.6
comp=N,42nm,3.9s
F03A Seaside 4.12 58 Pn Pn 13 38 34.5 -0.9
H04D Lebanon 4.25 79 Pn Pn 13 38 36.4 -0.7
H04D IAML 13 39 37.9
comp=E,49nm,2.2s
H04D IAML 13 40 01.5
comp=N,33nm,2.8s
BBOR Butler Butte 4.42 101 Pn Pn 13 38 37.9 -1.6
BBOR IAML 13 39 59.3
comp=N,28nm,2.0s
BBOR IAML 13 41 31.6
comp=E,35nm,2.0s
G04A Mulino 4.56 71 Pn Pn 13 38 41.6 +0.2
H04A Detroit Lake 4.67 78 Pn Pn 13 38 41.6 -1.2
H04A IAML 13 41 37.5
comp=E,48nm,0.7s
H04A IAML 13 41 38.2
comp=N,37nm,1.1s
J04A Umpqua Nationa 4.75 95 Pn 13 38 41.6 -2.5
YBH Yreka Blue Hor 4.82 114 Pn Pn 13 38 44.5 -0.5
baz=341,slow=13,SNR=1.7
YBH Sn Sn 13 39 38.4 -2.5
baz=322,slow=6.7,SNR=1.6
L04D Klamath Falls 4.89 108 IAML 13 41 59.2
comp=E,44nm,2.8s
L04D IAML 13 42 01.3
comp=N,32nm,3.4s
HOOD Mount Hood Mea 5.16 71 Pn Pn 13 38 47.7 -2.0
J05D Fort Rock, OR 5.37 94 Pn 13 38 52.9 +0.2
J05D IAML 13 42 19.0
comp=N,28nm,2.0s
GNW Green Mountain 5.47 46 Pn Pn 13 38 54.2 +0.4
PINE Pine Mountain 5.53 88 Pn 13 38 55.6 +0.7
D05A Enumclaw 5.70 52 Pn Pn 13 38 56.7 -0.3
LTY Liberty 6.50 56 Pn Pn 13 39 06.4 -1.7
CBB Campbell River 6.54 19 Pn 13 39 11.2 +2.7
HAWA Hanford 6.88 65 Pn Pn 13 39 11.4 -1.8
J08A Circle Bar Ran 7.36 91 Pn Pn 13 39 25.8 +6.0
WVOR Wild Horse Val 7.42 98 Pn Pn 13 39 24.4 +3.7
AFDM Forest Hills D 7.55 128 Pn Pn 13 39 22.8 +0.4
PAHR Pah Rah Range 8.04 118 Pn Pn 13 39 32.9 +3.7
BMO Blue Mountains 8.14 79 Pn Pn 13 39 36.4 +5.7
PNTR Pine Nut 8.27 122 Pn Pn 13 39 37.5 +5.1
BBB Bella Bella 8.32 2 Pn Pn 13 39 34.2 +1.3
comp=N,0.4nm,0.3s,baz=289,slow=6.4,SNR=4.9
comp=N,3.8nm,0.8s
CMB Columbia Colle 8.51 130 Pn Pn 13 39 37.3 +1.7
NEW Newport 9.10 57 Pn Pn 13 39 44.2 +0.6
comp=N,0.2nm,0.3s,baz=246,slow=12,SNR=1.9
comp=N,0.9nm,0.4s
NVAR Mina Array Bea 9.47 122 Pn Pn 13 39 50.2 +1.2
comp=N,0.1nm,0.3s,baz=300,slow=12,SNR=6.9
comp=N,0.3nm,0.6s
MOBC Moresby Island 9.54 348 Pn Pn 13 39 49.2 -0.5
HLID Hailey 10.27 87 Pn Pn 13 40 03.9 +4.1
ELK Elko 10.37 103 Pn 13 40 01.5 +0.2
ELK Elko 10.37 103 Pn Pn 13 40 02.6 +1.3
baz=165,slow=1.0,SNR=4.1
comp=N,1.2nm,0.7s
TPNV Topopah Spring 11.67 122 Pn 13 40 24.4 +5.4
SPR3 Spring Creek 3 11.75 110 Pn 13 40 23.6 +3.4
GWY Greenwater Val 11.92 126 Pn 13 40 26.8 +4.3
BOZ Bozeman (W) 12.18 76 Pn 13 40 30.9 +4.9
PSUT Pine Spring 12.31 111 Pn 13 40 31.2 +3.4
YHL Hebgen Lake 12.50 79 Pn 13 40 33.3 +2.9
HWUT Hardware Ranch 12.72 94 Pn 13 40 36.6 +3.2
YHH Holmes Hill 12.73 80 Pn 13 40 38.8 +5.2
PDAR Pinedale Array 13.90 88 Pn Pn 13 40 51.7 +2.2
comp=N,0.1nm,0.3s,baz=285,slow=12,SNR=6.0
comp=N,0.3nm,0.8s
U15A North Rim 14.50 115 P 13 41 08.4 +3.9
O20A White River Ci 15.57 97 P P 13 41 14.9 -1.4
WUAZ Wupatki 15.64 116 Pn 13 41 10.7 -2.1
WUAZ IAmb IAmb 13 41 27.8
comp=Z,27nm,1.3s
PV23 Carpenter Ridg 15.70 103 P Pn 13 41 15.9 +2.1
PV10 Paradox Valley 15.71 104 IAmb IAmb 13 41 30.6
comp=Z,36nm,1.5s
PV20 West Nyswonger 15.78 104 P 13 41 20.9 +2.4
PV04 Paradox Valley 15.79 104 IAmb IAmb 13 41 29.5
comp=Z,16nm,1.3s
PV17 East Wray Mesa 15.81 104 IAmb IAmb 13 41 31.2
comp=Z,23nm,1.4s
PV22 Blue Mesa, Par 15.82 103 IAmb IAmb 13 41 24.9
comp=Z,23nm,1.3s
PV16 Nyswonger Mesa 15.82 104 IAmb IAmb 13 41 31.3
comp=Z,17nm,1.4s
PV18 Skein Mesa, Pa 15.86 104 IAmb IAmb 13 41 25.2
comp=Z,23nm,1.2s
PV12 Saucer Basin, 15.90 104 IAmb IAmb 13 41 37.5
comp=Z,30nm,1.3s
PV07 Paradox Valley 15.96 103 IAmb IAmb 13 41 27.4
comp=Z,25nm,1.5s
PV02 Paradox Valley 16.00 104 IAmb IAmb 13 41 37.7
comp=Z,25nm,1.3s
MVCO Mesa Verde 16.64 107 IAmb IAmb 13 41 58.0
comp=Z,18nm,1.2s
TUC Tucson 18.11 124 P 13 41 47.5 +3.2
SDCO Great Sand Dun 18.49 101 P Pn 13 41 49.8 +1.0
SDCO IAmb IAmb 13 41 59.2
comp=Z,34nm,1.4s
ANMO Albuquerque 19.24 110 P Pn 13 41 59.4 +1.6
ANMO Albuquerque 19.24 110 P Pn 13 41 59.8 +2.0
ANMO IAmb IAmb 13 42 13.5
comp=Z,14nm,1.4s
ANMO Albuquerque 19.24 110 Pn 13 41 59.6 +1.8
ANMO IAmb IAmb 13 42 13.5
comp=Z,14nm,1.4s
ANMO Albuquerque 19.24 110 P P 13 41 55.6 -1.3
comp=Z,0.1nm,0.3s,baz=360,slow=6.0,SNR=3.6
comp=Z,0.5nm,0.4s
LENM Lemitar 19.34 113 P Pn 13 42 00.2 +1.2
T25A Trinidad 19.54 102 P P 13 42 01.2 +1.1
T25A IAmb IAmb 13 42 11.0
comp=Z,21nm,1.1s
BNM Barren Site 19.58 112 Pn 13 42 04.2 +2.2
WRGLY Wrigley 19.62 7 P P 13 41 59.8 -0.7
WRGLY IAmb IAmb 13 42 08.9
comp=Z,13nm,1.0s
FFC Flin Flon 20.34 48 P 13 42 07.9 -0.6
FFC IAmb IAmb 13 42 17.2
comp=Z,7.7nm,0.8s
YKA Yellowknife Ar 20.36 19 P P 13 42 09.1 +0.5
comp=Z,2.3nm,0.9s,baz=209,slow=10.0,SNR=7.6
comp=Z,2.3nm,0.9s
RTBA Rita Blanca 21.05 102 P 13 42 18.1 +1.6
RTBA IAmb IAmb 13 42 33.4
comp=Z,16nm,1.2s
MNTX Cornudas Mount 21.92 116 P 13 42 26.4 +0.7
RIDG Independent Ri 21.97 341 P 13 42 25.4 -0.6
RIDG IAmb IAmb 13 42 30.2
comp=Z,7.1nm,1.0s
DHY Denali Highway 22.09 337 P P 13 42 27.1 -0.3
DHY IAmb IAmb 13 42 32.4
comp=Z,17nm,1.3s
AMTX Amarillo 22.57 104 P 13 42 32.8 0.0
F33A 5 Mile Ranch, 22.90 74 P 13 42 37.1 +1.2
N19K Bonanza Creek 22.95 327 P 13 42 36.1 -0.3
N19K IAmb IAmb 13 42 41.8
comp=Z,8.5nm,1.1s
ECSD EROS Data Cent 23.00 79 P 13 42 37.0 -0.2
ECSD IAmb IAmb 13 42 44.9
comp=Z,12nm,1.1s
AGMN Agassiz Nation 23.02 67 P P 13 42 34.8 -2.4
AGMN IAmb IAmb 13 42 51.6
comp=Z,11nm,1.4s
ULM Lac du Bonnet 23.05 62 P P 13 42 38.2 +0.7
comp=Z,2.6nm,0.6s,baz=240,slow=5.4,SNR=3.3
comp=Z,2.6nm,0.6s
ILAR Eielson Array 23.32 340 P P 13 42 41.6 +1.4
comp=Z,0.3nm,0.8s,baz=162,slow=6.0,SNR=4.4
comp=Z,0.3nm,0.8s
NEA2 Nenana 23.75 338 P P 13 42 44.1 -0.2
NEA2 IAmb IAmb 13 43 08.8
comp=Z,8.0nm,1.3s
L19K White Mountain 23.91 329 IAmb IAmb 13 42 56.1
comp=Z,7.3nm,1.2s
TXAR Lajitas Array 24.59 118 P P 13 42 51.3 -1.3
comp=Z,1.5nm,1.2s,baz=311,slow=11,SNR=7.0
comp=Z,1.5nm,1.2s
L18K Granite Mounta 24.63 328 IAmb IAmb 13 42 57.2
comp=Z,11nm,1.2s
G23K Bananza Creek 25.66 340 IAmb IAmb 13 43 07.3
comp=Z,12nm,1.5s
NIKH Nikolski High 27.90 303 P 13 43 23.2 +1.0
PETK Petropavlovsk- 47.68 308 P P 13 46 07.9 -0.7
comp=Z,1.1nm,1.0s,baz=80,slow=9.1,SNR=4.1
comp=Z,1.1nm,1.0s
H11N3 WAKE ISLAND Hy 58.34 267 T T 14 50 34.3
baz=49,slow=75,SNR=105
H11N2 WAKE ISLAND Hy 58.34 267 T T 14 50 36.9
baz=49,slow=75,SNR=63
H11N1 WAKE ISLAND Hy 58.35 267 T T 14 50 38.5
baz=49,slow=75,SNR=60
H11S1 WAKE ISLAND Hy 59.27 267 T T 14 51 45.9
baz=50,slow=75,SNR=24
H11S2 WAKE ISLAND Hy 59.27 267 T T 14 51 45.3
baz=50,slow=75,SNR=21
H11S3 WAKE ISLAND Hy 59.28 267 T T 14 51 47.3
baz=50,slow=75,SNR=16
SONM Songino Array 76.66 325 P P 13 49 23.8 +0.6
comp=Z,1.4nm,0.9s,baz=56,slow=5.4,SNR=8.9
comp=Z,1.4nm,0.9s
HHC Hu-ho-hao-te 79.81 318 *e*P P 13 49 39.6 -1.1
HHC pmax pmax
comp=Z,5.0nm,0.6s
HHC pmax pmax
comp=Z,64nm,6.1s
KURBB Kurchatov Arra 82.97 343 P P 13 49 57.0 -0.2
comp=Z,0.7nm,1.0s,baz=25,slow=4.5,SNR=4.0
comp=Z,0.7nm,1.0s
AKASG Malin Array Be 83.85 14 P P 13 50 02.0 +0.4
comp=Z,0.1nm,0.3s,baz=354,slow=5.8,SNR=4.1
comp=Z,0.1nm,0.3s
PZH PanZhiHua 96.15 316 P P 13 50 59.5 -1.1

IDC ***22*** *13:40:11.4±0.6, 43°.78N×128°.58W, h0km, mb4.2/20, mbtmp4.1/27, ML3.1/7, MS3.8/27, Error ellipse: s-maj=18.8km s-min=9.4km az=35.0*

NEIC ***22*** *13:40:13.8, 43°.79N×128°.51W, h12km*

NEIC ***22*** *13:40:13.8, 43°.79N×128°.93W, h12km, Moment Tensor Solution. Duration: 1s.3 Moment tensor: Scale 10^16Nm; Mrr-1.67; Mθθ0.11; Mφφ1.56; Mrθ-0.19; Mθφ0.13; Mφr-0.26; Fault plane solution: M0 1.66000×10^16 NP1: φs180.13000°, δ40.38000°, λ-97.82000°. NP2: φs10.35000°, δ50.07000°, λ-83.40000°. Principal axes: T 1.5944, Plg5.0000°, Azm96.0000°; N 0.1159, Plg5.0000°, Azm186.0000°; P -1.7103, Plg83.0000°, Azm322.0000°;*

NEIC ***22*** *13:40:13.7±1.4, 43°.78N±0°.09×128°.5W±0°.1, h10km±1km, mb4.7/294, ML3.7/64, Mww4.7/52 Error ellipse: s-maj=16.6km s-min=9.5km az=216.0*

GCMT ***22*** *13:40:19.7±0.3, 43°.82N±0°.03×128°.68W±0°.02, h13km±1km, MW4.8/92, Moment Tensor Solution. s24,c27; s92,c131; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-1.86±.13; Mθθ0.08±.08; Mφφ1.78±.09; Mrθ0.38±.23; Mθφ0.14±.04; Mφr-1.04±.20; Best double couple: M0 2.13200×10^16 NP1: φs195.00000°, δ31.00000°, λ-71.00000°. NP2: φs353.00000°, δ60.00000°, λ-101.00000°. Principal axes: T 2.0570, Plg15.0000°, Azm91.0000°; N 0.1540, Plg10.0000°, Azm359.0000°; P -2.2060, Plg72.0000°, Azm236.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 13:40:13.8±0.5**, 43°.76N**±0°.07×**128°.60W**±0°.07**, h13km, n540, σ1s.00**/394**, mb4.6**/148**, MS3.8**/21**, 1C, Off coast of Oregon**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEBM Edson Butte 3.24 104 Pn Pn 13 41 01.3 -3.0
KEBM IAML 13 41 43.5
comp=E,178nm,0.8s
KEBM IAML 13 41 44.8
comp=N,238nm,0.7s
J01E Myrtle Point 3.45 98 Pn Pn 13 41 04.5 -2.7
J01E IAML 13 41 53.8
comp=E,138nm,1.9s
HEBO Mount Hebo 3.76 66 Pn 13 41 10.8 -0.8
HEBO Mount Hebo 3.76 66 IAML 13 42 39.0
comp=N,115nm,1.6s
K02D Willamette Mer 3.76 105 Pn 13 41 09.4 -2.2
I03D Drain, OR 3.81 89 Pn 13 41 11.1 -0.9
I03D IAML 13 41 59.0
comp=N,90nm,0.7s
COR Corvallis 3.90 76 Pn 13 41 12.8 -0.5
COR IAML 13 42 14.7
comp=N,116nm,1.8s
COR IAML 13 42 39.3
comp=N,106nm,2.0s
B022 Seaside 3.98 55 Pn 13 41 12.8 -1.6
L02F Cave Junction 4.04 112 Pn Pn 13 41 14.5 -0.8
BUCK Buck Mountain 4.08 82 Pn 13 41 14.8 -1.0
BUCK IAML 13 43 27.0
comp=N,69nm,4.4s
G03D McMinnville, O 4.08 67 Pn 13 41 14.8 -1.1
G03D IAML 13 42 08.7
comp=N,124nm,1.2s
G03D IAML 13 42 09.6
comp=E,87nm,1.7s
KRMB Red Mountain 4.12 121 Pn Pn 13 41 17.9 +1.4
F03A Seaside 4.19 57 Pn 13 41 16.7 -0.6
H04D Lebanon 4.29 78 Pn 13 41 19.0 +0.3
H04D IAML 13 42 20.6
comp=E,80nm,2.5s
H04D IAML 13 42 27.9
comp=N,85nm,2.3s
RADR Rader Ridge 4.32 50 Pn 13 41 18.2 -1.0
RADR IAML 13 42 38.2
comp=E,89nm,1.8s
RADR IAML 13 43 02.8
comp=N,90nm,1.7s
BBOR Butler Butte 4.41 99 Pn 13 41 19.9 -0.6
BBOR IAML 13 42 16.1
comp=E,52nm,1.1s
BBOR IAML 13 42 32.9
comp=N,59nm,1.8s
E03A Lebam 4.52 50 Pn 13 41 20.9 -1.0
E03A IAML 13 42 30.4
comp=E,73nm,2.0s
E03A IAML 13 42 55.6
comp=N,46nm,2.7s
F04D Rainier, OR 4.60 58 Pn 13 41 22.9 -0.1
G04A Mulino 4.61 70 Pn 13 41 23.2 0.0
H04A Detroit Lake 4.70 76 Pn 13 41 24.7 +0.3
H04A IAML 13 42 52.2
comp=E,40nm,2.0s
J04A Umpqua Nationa 4.75 94 Pn 13 41 25.7 +0.4
WISH Wishkah 4.78 44 Pn 13 41 24.9 -0.5
WISH IAML 13 42 24.1
comp=E,49nm,2.1s
WISH IAML 13 42 57.7
comp=N,62nm,1.7s
YBH Yreka Blue Hor 4.79 113 Pn 13 41 26.2 +0.5
YBH Yreka Blue Hor 4.79 113 Pn Pn 13 41 25.9 +0.3
baz=333,slow=7.8,SNR=9.2
YBH Sn Sn 13 42 21.3 +0.3
baz=360,slow=23,SNR=1.8
L04D Klamath Falls 4.87 106 Pn 13 41 28.3 +1.5
L04D IAML 13 42 32.1
comp=N,54nm,2.1s
NLWA Neilton Lookou 4.92 41 Pn 13 41 26.9 -0.5
SEPW September Lobe 5.16 60 Pn 13 41 31.4 +0.5
HOOD Mount Hood Mea 5.21 70 Pn 13 41 31.2 -0.2
I05D Terrebonne, OR 5.26 81 Pn 13 41 33.1 +0.9
J05D Fort Rock, OR 5.38 93 Pn 13 41 33.4 -0.4
J05D IAML 13 42 59.5
comp=N,41nm,3.9s
J05D IAML 13 43 05.6
comp=E,45nm,2.2s
AWST Adams West 5.40 61 Pn 13 41 34.5 +0.4
PINE Pine Mountain 5.54 87 Pn 13 41 36.0 -0.2
GNW Green Mountain 5.55 45 Pn 13 41 35.6 -0.5
D05A Enumclaw 5.78 51 Pn 13 41 39.2 +0.1
G06A Carlson Farm, 5.88 73 Pn 13 41 40.5 -0.2
CLRS Cowichan Lake 5.93 30 Pn 13 41 40.8 -0.5
MXC Moxie City 6.51 61 Pn 13 41 49.1 -0.2
I07A Izee 6.58 84 Pn 13 41 50.7 +0.5
CBB Campbell River 6.66 18 Pn 13 41 50.7 -0.5
ORV Oroville 6.77 126 Pn 13 41 55.4 +2.5
HOLB Holberg 6.89 2 Pn 13 41 54.3 -0.2
HAWA Hanford 6.94 65 Pn 13 41 55.7 +0.6
J08A Circle Bar Ran 7.37 90 Pn 13 41 59.9 -1.2
WVOR Wild Horse Val 7.41 97 Pn 13 42 00.5 -1.2
D08A Wollman Farm, 7.57 61 Pn 13 42 03.2 -0.5
BBB Bella Bella 8.44 2 Pn 13 42 16.5 +0.9
BBB Bella Bella 8.44 2 Pn Pn 13 42 13.3 -2.3
comp=E,0.3nm,0.3s,baz=196,slow=4.0,SNR=5.9
comp=E,19nm,1.1s
CMB Columbia Colle 8.45 130 Pn 13 42 17.4 +1.5
NEW Newport 9.17 57 Pn 13 42 27.2 +1.5
NEW Newport 9.17 57 Pn Pn 13 42 24.9 -0.8
comp=E,0.4nm,0.3s,baz=232,slow=9.0,SNR=4.0
NEW LR LR 13 45 52.1
comp=E,608nm,20.2s,baz=254,slow=37
comp=E,1.1nm,0.4s
LHV Little Huntoon 9.40 122 Pn 13 42 31.2 +2.3
NVAR Mina Array Bea 9.42 121 Pn Pn 13 42 28.9 -0.5
comp=E,0.2nm,0.3s,baz=297,slow=13,SNR=9.4
NVAR LR LR 13 46 10.0
comp=E,472nm,18.4s,baz=288,slow=38
comp=E,1.8nm,0.8s
ELK Elko 10.35 102 Pn Pn 13 42 43.6 +1.5
comp=E,0.1nm,0.3s,baz=302,slow=6.5,SNR=5.9
ELK LR LR 13 46 49.7
comp=E,482nm,20.5s,baz=294,slow=38
comp=E,1.0nm,0.7s
V35K Ketchikan 11.74 352 P Pn 13 43 01.8 +1.0
baz=169
CRAG Craig 12.08 348 P Pn 13 43 06.2 +0.8
baz=164
U35K Hyder 12.20 356 P Pn 13 43 07.6 +0.4
baz=175
U33K Whale Pass 12.70 348 P Pn 13 43 14.2 +0.2
baz=165
WRAK Wrangell Islan 12.90 351 P Pn 13 43 16.9 +0.3
baz=167
T35M Bob Quinn 13.28 356 Pn 13 43 20.6 -1.3
T35M Bob Quinn 13.28 356 P Pn 13 43 21.9 0.0
baz=174
PFO Pinyon Flats O 13.86 133 Pn Pn 13 43 31.8 +1.8
comp=E,0.1nm,0.3s,baz=270,slow=5.6,SNR=5.1
PFO LR LR 13 47 45.9
comp=E,302nm,18.8s,baz=13,slow=33
comp=E,1.3nm,0.8s
PDAR Pinedale Array 13.91 88 Pn Pn 13 43 33.5 +2.7
comp=E,0.5nm,0.7s,baz=278,slow=10,SNR=7.8
PDAR LR LR 13 48 56.1
comp=E,444nm,20.5s,baz=266,slow=38
SIT Sitka 13.98 345 P Pn 13 43 31.5 +0.2
baz=159
S32K Killisnoo 14.23 347 P Pn 13 43 36.2 +1.4
baz=162
S34M Telegraph Cree 14.26 355 P Pn 13 43 35.9 +0.7
baz=172
DLBC Dease Lake 14.72 357 Pn Pn 13 43 41.7 +0.1
baz=150,slow=14,SNR=6.1
R32K Eaglecrest 14.99 348 P Pn 13 43 45.8 +0.6
baz=163
S31K Pelican 15.00 344 P Pn 13 43 45.8 +0.6
baz=158
GLA Glamis 15.17 130 IAmb IAmb 13 43 56.7
comp=Z,39nm,1.3s
TOAD Toad River Com 15.26 7 P Pn 13 43 49.4 +0.7
baz=189
ESJX Sierra Juarez 15.39 135 IAmb IAmb 13 44 02.6
comp=Z,65nm,1.5s
Q32M Nakina River 15.39 353 P Pn 13 43 51.0 +0.3
baz=170
O20A White River Ci 15.57 96 IAmb IAmb 13 44 08.7
comp=Z,51nm,1.4s
WUAZ Wupatki 15.60 116 IAmb IAmb 13 44 09.8
comp=Z,59nm,1.3s
PV21 Cone Mtn., Par 15.65 103 IAmb IAmb 13 44 04.1
comp=Z,44nm,1.4s
PV23 Carpenter Ridg 15.68 103 IAmb IAmb 13 44 09.9
comp=Z,112nm,1.5s
PV10 Paradox Valley 15.69 103 IAmb IAmb 13 44 27.0
comp=Z,43nm,1.3s
R33M Jennings River 15.73 356 Pn 13 43 56.3 +1.3
R33M IAmb IAmb 13 44 14.8
comp=Z,42nm,1.4s
R33M Jennings River 15.73 356 P Pn 13 43 55.8 +0.8
baz=173,SNR=12
LIRD Liard River Hi 15.75 5 P Pn 13 43 55.4 +0.3
baz=186
PV20 West Nyswonger 15.76 103 IAmb IAmb 13 44 13.0
comp=Z,92nm,1.4s
PV22 Blue Mesa, Par 15.80 103 IAmb IAmb 13 44 11.1
comp=Z,52nm,1.5s
PV18 Skein Mesa, Pa 15.84 104 IAmb IAmb 13 44 16.4
comp=Z,60nm,1.4s
PV12 Saucer Basin, 15.88 103 IAmb IAmb 13 44 14.5
comp=Z,69nm,1.3s
PV02 Paradox Valley 15.98 104 IAmb IAmb 13 44 13.2
comp=Z,91nm,1.5s
P32M Atlin 16.16 351 P Pn 13 44 01.0 +0.5
baz=166
SKAG Skagway 16.25 348 P Pn 13 44 02.4 +0.9
baz=162
PLBC Pleasant Camp 16.42 346 P P 13 44 05.2 -1.3
baz=160
BEAVL Fort Liard 16.59 6 P Pn 13 44 06.7 +0.9
baz=189
KOTAN Kotaneelee Air 16.63 8 P P 13 44 08.0 -0.8
baz=191
P33M Teslin, Yukon 16.68 353 P Pn 13 44 08.2 +1.1
baz=169

P29M	Windy Craggy baz=156,SNR=5.2	16.85	344	P	Pn	13 44 09.7	+0.6
P30M	Million Dollar baz=159	17.15	346	P	P	13 44 14.3	-0.4
PNL	Peninsula baz=152	17.24	341	P	P	13 44 14.9	-0.6
WHY	Whitehorse baz=164	17.34	350	P	P	13 44 17.4	+0.6
O30N	Mendenhall baz=162,SNR=9.7	17.62	348	P	P	13 44 20.6	+0.8
N32M	Quiet Lake baz=169	17.63	353	P	P	13 44 20.5	+0.6
O29M	Mount Kennedy baz=155	17.63	343	P	P	13 44 20.2	+0.2
RSSD	Black Hills comp=Z,52nm,1.5s	17.68	80	IAmb	IAmb	13 44 31.3	
TGTN	Hyland Airport baz=180	17.80	1	P	P	13 44 23.0	+1.2
PINM	Pinnacle baz=151	17.82	341	P	P	13 44 23.3	+1.2
HYT	Haines Junctio baz=158	17.91	346	P	P	13 44 24.2	+1.1
YUK6	Outpost Mounta baz=157	18.18	345	P	P	13 44 27.2	+1.0
N31M	Braeburn, Yuko baz=163	18.26	349	P	P	13 44 28.3	+1.5
MESA	MESA baz=148	18.32	338	P	P	13 44 28.2	+0.5
TABL	Table Mountain	18.34	340	P	Pn	13 44 25.7	-2.1
O28M	Mount Upton	18.41	342	P	Pn	13 44 27.3	-1.4
O28M	Mount Upton baz=152	18.41	342	P	P	13 44 29.3	+0.6
N30M	Aishikik Lake baz=160,SNR=5.1	18.43	347	P	Pn	13 44 29.5	+0.6
SDCO	Great Sand Dun	18.47	101	P	P	13 44 27.5	-2.2
YUK4	Talbot Arm baz=157	18.60	345	P	Pn	13 44 32.9	+1.9
LOGN	Logan Glacier	18.64	341	P	P	13 44 28.6	-2.6
FARO	Faro, Yukon baz=169	18.71	353	P	Pn	13 44 33.9	+1.7
YUK8	Steele Glacier baz=154	18.77	343	P	Pn	13 44 33.7	+0.5
M31M	Drury Creek, Y	18.79	352	P	P	13 44 32.4	-0.2
M31M	Drury Creek, Y baz=167	18.79	352	P	P	13 44 32.8	+0.2
WAX	Waxell Ridge	18.80	338	P	P	13 44 31.9	-0.9
WAX	comp=Z,59nm,1.4s			IAmb	IAmb	13 44 48.6	
KAIM	Kayak Island baz=142	18.82	335	P	Pn	13 44 33.9	+0.3
CTGM	Chitina Glacie comp=Z,45nm,1.4s	18.84	341	IAmb	IAmb	13 44 48.0	
CTG	Chitna Glacier baz=150,SNR=7.5	18.84	341	P	Pn	13 44 34.6	+0.7
DUN6	Lazy B Ranch	18.94	120		P	13 44 32.5	-2.0
MMPY	Sheldon Lake,	18.96	356		P	13 44 33.2	-1.3
MMPY	Sheldon Lake, baz=174,SNR=8.8	18.96	356	P	Pn	13 44 35.9	+0.7
BARN	Barnard Glacie comp=Z,52nm,1.5s	19.00	340	IAmb	IAmb	13 44 53.6	
Q23K	Middleton Isla baz=137	19.08	332	P	Pn	13 44 37.3	+0.8
CRQE	Cirque baz=146,SNR=7.6	19.11	338	P	Pn	13 44 38.2	+1.1
ANMO	Albuquerque comp=Z,0.1nm,0.3s,baz=47,slow=9.5,SNR=5.8	19.21	110	P	Pn	13 44 38.8	+0.3
ANMO	comp=Z,642nm,21.0s,baz=46,slow=38 comp=Z,2.9nm,0.9s			LR	LR	13 52 20.5	
YUK3	Moose Creek baz=153	19.36	343	P	Pn	13 44 40.0	-0.2
Y22D	IRIS PASSCAL I baz=307	19.39	113	P	P	13 44 40.2	+0.6
T25A	Trinidad comp=Z,50nm,1.3s	19.52	102	IAmb	IAmb	13 44 57.4	
M29M	Somme Creek baz=158	19.59	346	P	Pn	13 44 42.9	+0.1
319A	Douglas comp=Z,31nm,1.1s	19.62	123	IAmb	IAmb	13 44 55.2	
MCARA	McCarthy VSAT baz=147	19.63	339	P	Pn	13 44 43.4	+0.2
BMRM	Bremner River baz=144	19.71	337	P	Pn	13 44 44.3	+0.1
EYAK	Cordova Ski Ar baz=141	19.73	334	P	Pn	13 44 44.0	-0.3
WRGLY	Wrigley baz=191,SNR=18	19.73	7	P	Pn	13 44 44.1	-0.3
P23K	Montague Islan baz=136	19.86	332	P	P	13 44 45.0	+0.8
BVCY	Beaver Creek baz=153	20.02	343	P	Pn	13 44 47.2	-0.6
KSCO	Kaye Shedlock' comp=Z,84nm,1.4s	20.02	95	IAmb	IAmb	13 45 01.8	
L29M	L29M baz=159	20.16	347	P	Pn	13 44 48.7	-0.8
M27K	Edge Creek, AK baz=151,SNR=9.0	20.19	342	P	Pn	13 44 49.2	-0.7
N25K	Chitina, Valde baz=145	20.23	338	P	Pn	13 44 50.1	-0.3
GLI	Glacier Island baz=139	20.41	334	P	Pn	13 44 51.5	-0.8
FFC	Flin Flon comp=Z,42nm,1.1s	20.42	48	IAmb	IAmb	13 45 01.3	
YKA	Yellowknife Ar comp=Z,11nm,0.9s,baz=212,slow=10,SNR=18	20.47	19	P	P	13 44 50.8	-0.1
YKA	comp=Z,163nm,18.1s,baz=159,slow=36 comp=Z,11nm,0.9s			LR	LR	13 52 31.6	
M26K	Nabesna, AK baz=149,SNR=5.7	20.49	341	P	Pn	13 44 52.7	-0.7
KDAK	Kodiak Island comp=Z,374nm,19.0s,baz=129,slow=31	20.51	322	LR	LR	13 50 45.0	
KDAK	Kodiak Island baz=123	20.51	322	P	Pn	13 44 53.1	-0.5
KLU	Klutina baz=142	20.52	336	P	Pn	13 44 53.1	-0.7
OHAK	Old Harbor baz=120	20.54	320	P	Pn	13 44 53.6	-0.3
SII	Sitkinak Islan baz=117	20.65	317	P	Pn	13 44 54.8	-0.4
SEW	Seward baz=133	20.66	330	P	Pn	13 44 54.7	-0.6
K29M	Barlow Dome baz=161,SNR=6.7	20.76	349	P	Pn	13 44 55.4	-1.2
L27K	Beaver Creek, baz=152,SNR=11	20.80	343	P	P	13 44 55.3	+0.7
PWL	Port Wells baz=136	20.80	332	P	P	13 44 55.8	+1.2
Q20K	Shuyak Island baz=125	20.89	324	P	P	13 44 56.4	+0.9
BRSE	Bradley Lake S baz=130	20.91	328	P	P	13 44 56.1	+0.4
O22K	Cooper Landing baz=133	21.02	330	P	P	13 44 57.8	+1.0
HARP	HAARP baz=145	21.04	338	P	P	13 44 58.3	+1.2
RTBA	Rita Blanca comp=Z,37nm,1.1s	21.04	102	IAmb	IAmb	13 45 07.5	
CHIR	Chirikof Islan baz=114	21.06	314	P	P	13 44 58.6	+1.3
M24K	Tolsona, Glenn comp=Z,63nm,1.4s	21.08	337	IAmb	IAmb	13 45 31.1	
M24K	Tolsona, Glenn baz=142	21.08	337	P	P	13 44 57.9	+0.3
L26K	Log Cabin Wild comp=Z,39nm,1.4s	21.11	341	IAmb	IAmb	13 45 04.5	
L26K	Log Cabin Wild baz=149,SNR=12	21.11	341	P	P	13 44 58.7	+0.8
MENT	Mentasta comp=Z,29nm,1.1s	21.12	341	IAmb	IAmb	13 45 04.8	
SCM	Sheep Creek Mo comp=Z,62nm,1.3s	21.21	335	IAmb	IAmb	13 45 15.6	
SCM	Sheep Creek Mo baz=140,SNR=10	21.21	335	P	P	13 45 00.2	+1.3
HOM	Homer baz=128	21.21	327	P	P	13 44 59.9	+1.0
SLKM	Skilak Lake comp=Z,26nm,1.0s	21.22	330	IAmb	IAmb	13 45 11.1	
KNK	Knik Glacier comp=Z,30nm,1.2s	21.25	333	IAmb	IAmb	13 45 03.0	
KNK	Knik Glacier baz=137	21.25	333	P	P	13 44 59.9	+0.6
DAWY	Dawson baz=158,SNR=11	21.26	347	P	P	13 45 00.1	+0.7
R18K	Karluk baz=119	21.26	320	P	P	13 44 59.8	+0.4
M23K	Glacier View baz=139,SNR=9.1	21.30	335	P	P	13 45 00.8	+0.9
J30M	Hart River baz=164,SNR=11	21.31	351	P	P	13 45 00.1	0.0
J29N	Klondike Camp baz=160	21.44	349	P	P	13 45 01.9	+0.5
RC01	Rabbit Creek A comp=Z,41nm,1.3s	21.45	331	IAmb	IAmb	13 45 15.7	
RC01	Rabbit Creek A baz=134	21.45	331	P	P	13 45 02.3	+0.8
SML	Sawmill comp=Z,23nm,1.1s	21.50	334	IAmb	IAmb	13 45 07.6	
SML	Sawmill baz=138	21.50	334	P	P	13 45 02.4	+0.3
PAX	Paxson baz=145	21.59	339	P	P	13 45 03.7	+0.7
PMR	Palmer comp=Z,33nm,1.4s	21.60	333	IAmb	IAmb	13 45 06.5	
PMR	Palmer baz=136,SNR=6.1	21.60	333	P	P	13 45 03.9	+0.9
Q19K	Cape Douglas, baz=124	21.61	323	P	P	13 45 04.1	+0.8
GHO	Glory Hole Cre	21.66	333	P	P	13 45 03.2	-0.7
GHO	comp=Z,19nm,1.0s			IAmb	IAmb	13 45 16.4	
K27K	Chicken baz=153	21.71	344	P	P	13 45 04.5	+0.2
P19K	Oil Pt baz=126	21.85	325	P	P	13 45 06.5	+0.7
O20K	Slope Mountain baz=128	21.86	327	P	P	13 45 06.8	+0.9
MNTX	Cornudas Mount comp=Z,36nm,1.5s	21.88	116	IAmb	IAmb	13 45 16.8	
WAT6	Susitna Watana baz=140,SNR=10	21.91	336	P	P	13 45 07.1	+0.5
I30M	Mount Dempster baz=165,SNR=11	21.94	351	P	P	13 45 07.5	+0.6
M22K	Willow comp=Z,44nm,1.2s	22.05	332	IAmb	IAmb	13 45 10.8	
M22K	Willow baz=135	22.05	332	P	P	13 45 08.4	+0.6
SUA	Susitna One comp=Z,21nm,1.0s	22.06	331	IAmb	IAmb	13 45 11.2	
SUA	Susitna One baz=133	22.06	331	P	P	13 45 08.7	+0.5
Q18K	Katmai Hardscr baz=121,SNR=10	22.06	322	P	P	13 45 09.0	+0.8
RIDG	Independent Ri comp=Z,40nm,1.1s	22.07	341	IAmb	IAmb	13 45 11.7	
RIDG	Independent Ri baz=147,SNR=22	22.07	341	P	P	13 45 09.0	+0.8
SCRK	Sand Creek comp=Z,32nm,1.4s	22.08	342	IAmb	IAmb	13 45 11.6	
SCRK	Sand Creek baz=149,SNR=17	22.08	342	P	P	13 45 08.9	+0.6
RED	Redoubt Volcan comp=Z,36nm,1.2s	22.12	327	IAmb	IAmb	13 45 19.7	
DHY	Denali Highway comp=Z,52nm,1.2s	22.19	337	IAmb	IAmb	13 45 14.4	
DHY	Denali Highway baz=142,SNR=29	22.19	337	P	P	13 45 09.9	+0.3
Q17K	Contact Creek baz=119	22.27	320	P	P	13 45 10.9	+0.5
MSTX	Muleshoe comp=Z,30nm,1.3s	22.28	107	IAmb	IAmb	13 45 21.6	
I29M	Ogilvie Camp, baz=161,SNR=8.2	22.31	349	P	P	13 45 11.3	+0.5
H31M	Peel River comp=Z,41nm,1.2s	22.32	354	IAmb	IAmb	13 45 15.0	
H31M	Peel River baz=169,SNR=24	22.32	354	P	P	13 45 10.9	+0.1
WAT1	Susitna Watana baz=139	22.34	336	P	P	13 45 11.9	+0.8
K24K	Donnelly Dome comp=Z,43nm,1.4s	22.36	340	IAmb	IAmb	13 45 15.6	
K24K	Donnelly Dome baz=146,SNR=7.6	22.36	340	P	P	13 45 12.4	+1.1
N20K	Mount Spurr baz=130	22.41	329	P	P	13 45 13.2	+1.4
SPCR	Spurr Chakacha baz=130	22.41	329	P	P	13 45 12.6	+0.8
J26L	Joseph Creek baz=150,SNR=16	22.44	343	P	P	13 45 13.2	+1.0
P18K	Big Mountain, comp=Z,35nm,1.4s	22.55	323	IAmb	IAmb	13 45 17.1	
P18K	Big Mountain, baz=122,SNR=6.9	22.55	323	P	P	13 45 13.9	+0.6
CUT	Chulitna baz=136	22.56	333	P	P	13 45 14.6	+1.2
O19K	Port Alsworth baz=125,SNR=7.1	22.61	326	P	P	13 45 14.7	+0.8
I28M	Miner Creek baz=158,SNR=9.8	22.63	348	P	P	13 45 14.8	+0.5
SKT	Skwentna comp=Z,17nm,1.0s	22.68	332	IAmb	IAmb	13 45 18.8	
SKT	Skwentna baz=133,SNR=9.0	22.68	332	P	P	13 45 15.9	+1.2
VHRN	Van Horn comp=Z,23nm,1.5s	22.73	117	IAmb	IAmb	13 45 52.0	
R16K	Pilot Point baz=115	22.76	318	P	P	13 45 16.2	+0.7
O18K	Koktuh Hills comp=Z,30nm,1.3s	22.79	324	IAmb	IAmb	13 45 31.5	
O18K	Koktuh Hills baz=123,SNR=6.8	22.79	324	P	P	13 45 16.4	+0.5
Q16K	King Salmon baz=118	22.82	321	P	P	13 45 16.7	+0.6
CHNA	Chernabura Isl baz=106	22.85	310	P	P	13 45 17.1	+0.6
RND	Reindeer comp=Z,41nm,1.3s	22.87	336	IAmb	IAmb	13 45 21.5	
J25K	Salcha River, comp=Z,24nm,1.5s	22.94	341	IAmb	IAmb	13 45 22.1	
J25K	Salcha River, baz=147,SNR=10.0	22.94	341	P	P	13 45 17.9	+0.5
F33A	5 Mile Ranch, comp=Z,54nm,1.3s	22.94	73	IAmb	IAmb	13 45 29.0	
P17K	Kvichak River baz=120	22.98	322	P	P	13 45 18.4	+0.6
ECSD	EROS Data Cent comp=Z,39nm,1.2s	23.04	79	IAmb	IAmb	13 45 32.9	
N19K	Bonanza Creek baz=126,SNR=16	23.04	327	P	P	13 45 19.2	+0.7
I27K	Kandik River baz=155,SNR=8.8	23.05	346	P	P	13 45 18.7	+0.2
I26K	Coal Creek Min comp=Z,19nm,1.2s	23.07	344	IAmb	IAmb	13 45 37.1	
I26K	Coal Creek Min baz=152,SNR=13	23.07	344	P	P	13 45 19.7	+1.1
AGMN	Agassiz Nation comp=Z,31nm,1.5s	23.07	67	IAmb	IAmb	13 45 35.4	
PECS	Pecos comp=Z,16nm,1.2s	23.08	114	IAmb	IAmb	13 45 31.5	
EPYK	Eagle Plains comp=Z,41nm,1.4s	23.09	352	IAmb	IAmb	13 45 22.3	
EPYK	Eagle Plains baz=165,SNR=14	23.09	352	P	P	13 45 20.4	+1.4
ULM	Lac du Bonnet comp=Z,24nm,1.1s,baz=277,slow=9.1,SNR=14	23.11	62	P	P	13 45 19.6	+0.4
ULM	comp=Z,320nm,18.0s,baz=274,slow=35 comp=Z,24nm,1.1s			LR	LR	13 53 43.4	
H29M	Whitestone comp=Z,24nm,1.1s	23.14	350	IAmb	IAmb	13 45 22.9	
H29M	Whitestone baz=162,SNR=12	23.14	350	P	P	13 45 20.3	+0.9
MCK	McKinley comp=Z,44nm,1.5s	23.14	337	IAmb	IAmb	13 45 22.9	
MCK	McKinley baz=140,SNR=7.2	23.14	337	P	P	13 45 21.0	+1.5
HDA	Harding Lake baz=144,SNR=6.1	23.15	340	P	P	13 45 20.5	+1.0
M20K	Styx River comp=Z,22nm,1.2s	23.19	330	IAmb	IAmb	13 45 23.6	
M20K	Styx River baz=130,SNR=7.4	23.19	330	P	P	13 45 21.3	+1.3
S14K	Fog Glacier baz=109	23.28	313	P	P	13 45 21.7	+0.7
TRF	Thorofare Moun comp=Z,46nm,1.5s	23.33	335	IAmb	IAmb	13 45 29.2	
TRF	Thorofare Moun baz=137,SNR=8.7	23.33	335	P	P	13 45 23.0	+1.4
G31M	Satah River comp=Z,28nm,1.3s	23.42	354	IAmb	IAmb	13 45 24.7	
G31M	Satah River baz=169,SNR=9.2	23.42	354	P	P	13 45 23.3	+1.1
ILAR	Eielson Array comp=Z,2.6nm,0.9s,baz=158,slow=7.4,SNR=22	23.43	340	P	P	13 45 22.2	-0.2
ILAR	comp=Z,173nm,19.5s,baz=100,slow=32 comp=Z,2.6nm,0.9s			LR	LR	13 52 50.5	
SMWD	Samnorwood comp=Z,29nm,1.1s	23.46	102	IAmb	IAmb	13 45 25.8	
SDPT	Sand Point baz=106	23.49	311	P	P	13 45 23.7	+0.7
WRH	Wood River Hil comp=Z,28nm,1.4s	23.49	339	IAmb	IAmb	13 45 30.6	
N18K	Kilae Creek baz=124,SNR=10	23.53	326	P	P	13 45 23.8	+0.4
PPLA	Purkeypile baz=133	23.54	333	P	P	13 45 24.1	+0.5
O17K	Koliganek Bris baz=120,SNR=5.7	23.56	323	P	P	13 45 24.8	+1.2
CCB	Clear Creek Bu comp=Z,17nm,1.3s	23.56	339	IAmb	IAmb	13 45 36.4	
KTH	Kantishna Hill comp=Z,16nm,1.2s	23.60	335	IAmb	IAmb	13 45 52.2	
P16K	Nushagak River baz=117	23.60	321	P	P	13 45 25.5	+1.4
H27K	Steamboat Moun baz=156,SNR=10	23.61	347	P	P	13 45 25.1	+1.0
G30M	tAoh Zraii Nji baz=166	23.64	353	P	P	13 45 25.1	+0.7
M19K	Big River Lodg comp=Z,31nm,1.4s	23.66	329	IAmb	IAmb	13 45 34.8	
M19K	Big River Lodg baz=128,SNR=8.4	23.66	329	P	P	13 45 26.0	+1.3
PRP	Porcupine Dome baz=148,SNR=6.7	23.74	342	P	P	13 45 26.8	+1.3
COLA	College comp=Z,17nm,1.2s	23.75	340	IAmb	IAmb	13 45 39.1	
COLA	College baz=143	23.75	340	P	P	13 45 26.5	+1.1
G29M	Pine Creek comp=Z,17nm,1.1s	23.76	351	IAmb	IAmb	13 45 34.3	
G29M	Pine Creek baz=163,SNR=12	23.76	351	P	P	13 45 26.6	+1.0
L20K	Farewell, AK baz=130,SNR=9.2	23.84	331	P	P	13 45 27.5	+1.1
POKR	Poker Plat Res baz=144	23.85	340	P	P	13 45 27.7	+1.3
NEA2	Nenana comp=Z,34nm,1.3s	23.85	338	IAmb	IAmb	13 45 28.7	
NEA2	Nenana baz=141,SNR=20	23.85	338	P	P	13 45 27.5	+1.1
CAST	Castle Rocks comp=Z,22nm,1.4s	23.87	334	IAmb	IAmb	13 45 39.9	
CAST	Castle Rocks baz=134,SNR=8.4	23.87	334	P	P	13 45 27.5	+0.8
ALPN	Alpine comp=Z,14nm,1.1s	23.87	116	IAmb	IAmb	13 45 37.7	
F31M	Tsiigehtchic	23.90	355	P	P	13 45 26.7	-0.1
F31M	comp=Z,15nm,1.1s			IAmb	IAmb	13 45 35.0	
F31M	Tsiigehtchic baz=171	23.90	355	P	P	13 45 27.7	+0.9
O16K	Kokwok River B	23.91	322		P	13 45 27.6	+0.6
O16K	comp=Z,24nm,1.1s			IAmb	IAmb	13 45 36.7	
O16K	Kokwok River B baz=118	23.91	322	P	P	13 45 28.5	+1.5
M18K	Stony River baz=125	23.96	327	P	P	13 45 28.6	+1.1
N17K	Nushagak Hills	23.98	324		P	13 45 27.4	-0.3
N17K	Nushagak Hills baz=121,SNR=12	23.98	324	P	P	13 45 28.5	+0.8
L19K	White Mountain	24.01	329		P	13 45 28.4	+0.5
L19K	comp=Z,41nm,1.3s			IAmb	IAmb	13 45 30.6	
L19K	White Mountain baz=128,SNR=21	24.01	329	P	P	13 45 29.0	+1.0
BPAW	Bear Paw Mtn.	24.02	336		P	13 45 27.7	-0.4
BPAW	comp=Z,11nm,0.9s			IAmb	IAmb	13 45 30.2	
BPAW	Bear Paw Mtn. baz=137,SNR=13	24.02	336	P	P	13 45 28.6	+0.6
G27K	Doyon Strip	24.16	347	P	P	13 45 28.9	-0.5
G27K	comp=Z,21nm,1.4s			IAmb	IAmb	13 45 45.5	
G27K	Doyon Strip baz=156,SNR=13	24.16	347	P	P	13 45 30.1	+0.7
F30M	Barrier River baz=167	24.21	353	P	P	13 45 30.0	+0.2
CHUM	Lake Minchumin baz=135,SNR=7.8	24.27	334	P	P	13 45 31.2	+0.9
I23K	Minto, Yukon-K	24.36	339	P	P	13 45 31.8	+0.6
I23K	comp=Z,17nm,1.1s			IAmb	IAmb	13 45 46.6	
I23K	Minto, Yukon-K baz=141,SNR=12	24.36	339	P	P	13 45 32.3	+1.1
H25L	Birch Creek baz=149,SNR=9.0	24.45	343	P	P	13 45 33.4	+1.4
APMT	Aspermont comp=Z,23nm,1.4s	24.48	106	IAmb	IAmb	13 45 41.7	
K20K	Telida comp=Z,18nm,1.2s	24.48	332	IAmb	IAmb	13 45 43.7	
K20K	Telida baz=131	24.48	332	P	P	13 45 33.6	+1.3
O15K	Ungalikthiuk R baz=115	24.51	320	P	P	13 45 34.1	+1.5
TXAR	Lajitas Array comp=Z,2.5nm,0.9s,baz=298,slow=7.4,SNR=20	24.55	118	P	P	13 45 32.7	-0.5
TXAR	comp=Z,0.3nm,0.6s,baz=344,slow=3.1,SNR=3.4			PcP	PcP	13 49 11.1	-0.2
TXAR	comp=Z,147nm,19.2s,baz=302,slow=36 comp=Z,2.5nm,0.9s			LR	LR	13 55 02.8	
H24K	Noodor Dome comp=Z,15nm,1.4s	24.55	341	IAmb	IAmb	13 45 54.3	
H24K	Noodor Dome baz=145,SNR=12	24.55	341	P	P	13 45 34.2	+1.2
M17K	Holitna River comp=Z,38nm,1.4s	24.55	326	IAmb	IAmb	13 45 39.4	
M17K	Holitna River baz=123	24.55	326	P	P	13 45 33.4	+0.5
FYU	Fort Yukon comp=Z,29nm,1.3s	24.59	344	IAmb	IAmb	13 45 36.6	
N16K	Nishlik Lake baz=119,SNR=9.0	24.63	323	P	P	13 45 34.5	+0.8
MLY	Manley comp=Z,20nm,1.0s	24.64	337	IAmb	IAmb	13 45 36.6	
MLY	Manley baz=139,SNR=23	24.64	337	P	P	13 45 34.6	+0.8
G26K	Porcupine Rive baz=153	24.65	346	P	P	13 45 34.8	+1.1
F28M	Old Crow baz=160	24.66	350	P	P	13 45 34.3	+0.4
L18K	Granite Mounta comp=Z,23nm,1.1s	24.72	328	IAmb	IAmb	13 45 42.8	
L18K	Granite Mounta baz=125,SNR=15	24.72	328	P	P	13 45 35.4	+0.9
INK	Inuvik	24.74	356		P	13 45 34.5	0.0
INK	comp=Z,22nm,1.5s			IAmb	IAmb	13 45 37.6	
INK	Inuvik comp=Z,2.0nm,0.6s,baz=177,slow=11,SNR=10	24.74	356	P	P	13 45 32.9	-1.7
INK	comp=Z,95nm,20.3s,baz=155,slow=35 comp=Z,2.0nm,0.6s			LR	LR	13 54 34.9	
INK	Inuvik baz=171	24.74	356	P	P	13 45 35.0	+0.5
G25K	Bearman Lake baz=149,SNR=12	24.93	344	P	P	13 45 37.3	+1.0
H23K	Yukon River comp=Z,22nm,1.2s	24.94	340	IAmb	IAmb	13 45 41.0	
H23K	Yukon River baz=142,SNR=17	24.94	340	P	P	13 45 37.2	+0.7
M16K	Timber Creek baz=120,SNR=8.7	24.99	324	P	P	13 45 37.6	+0.7
FALS	False Pass baz=102	25.01	309	P	P	13 45 38.1	+1.0
J20K	Nowinta River comp=Z,32nm,1.4s	25.06	334	IAmb	IAmb	13 45 40.2	
J20K	Nowinta River baz=132,SNR=15	25.06	334	P	P	13 45 38.6	+1.2
N15K	Kwethluk River baz=117,SNR=7.3	25.07	322	P	P	13 45 38.5	+0.8
SAND	Sanderson comp=Z,30nm,1.2s	25.14	114	IAmb	IAmb	13 45 49.9	
E29M	Blow River comp=Z,23nm,1.4s	25.17	352	IAmb	IAmb	13 45 42.7	
E29M	Blow River baz=164,SNR=7.6	25.17	352	P	P	13 45 38.9	+0.5
G24K	Hadweenzic Riv comp=Z,20nm,1.1s	25.17	342	IAmb	IAmb	13 45 41.8	
G24K	Hadweenzic Riv baz=146,SNR=14	25.17	342	P	P	13 45 39.2	+0.8
O14K	Tigyukauivet M baz=113	25.22	319	P	P	13 45 40.2	+1.2

L17K	**Donlin**	**25.30**	**327**	P	**P**	**13 45 40.7**	**+1.1**
	baz=123,SNR=13						
F26K	**Sheenjek River**	**25.38**	**346**	IAmb	IAmb	13 45 44.2	
	comp=Z,15nm,1.4s						
F26K	**Sheenjek River**	**25.38**	**346**	P	**P**	**13 45 41.1**	**+0.7**
	baz=153,SNR=9.5						
J19K	**Poorman**	**25.42**	**332**	IAmb	IAmb	13 45 43.7	
	comp=Z,26nm,1.0s						
J19K	**Poorman**	**25.42**	**332**	P	**P**	**13 45 42.5**	**+1.7**
	baz=130,SNR=20						
E27K	**Coleen River**	**25.43**	**349**	IAmb	IAmb	13 45 44.4	
	comp=Z,31nm,1.2s						
E27K	**Coleen River**	**25.43**	**349**	P	**P**	**13 45 42.0**	**+1.1**
	baz=158,SNR=17						
J18K	**Innoko River**	**25.47**	**331**	P	**P**	**13 45 43.0**	**+1.7**
	baz=127,SNR=17						
H22K	**Ishtalitna Cre**	**25.48**	**338**	P	**P**	**13 45 42.4**	**+1.1**
	baz=139,SNR=34						
L16K	**Owhat River**	**25.55**	**325**	P	**P**	**13 45 43.2**	**+1.3**
	baz=120,SNR=22						
E28M	**Babbage River**	**25.55**	**351**	IAmb	IAmb	13 45 45.9	
	comp=Z,15nm,1.3s						
E28M	**Babbage River**	**25.55**	**351**	P	**P**	**13 45 43.4**	**+1.5**
	baz=161,SNR=5.9						
F25K	**Christian Rive**	**25.56**	**345**	IAmb	IAmb	13 45 57.5	
	comp=Z,16nm,1.4s						
F25K	**Christian Rive**	**25.56**	**345**	P	**P**	**13 45 43.5**	**+1.5**
	baz=150,SNR=9.5						
M15K	**Kasigluk River**	**25.57**	**323**	P	**P**	**13 45 44.0**	**+1.9**
	baz=117						
I20K	**Naaghedeneel**	**25.58**	**334**	P	**P**	**13 45 44.0**	**+1.9**
	baz=133,SNR=15						
K17K	**Iditarod**	**25.62**	**328**	P	**P**	**13 45 44.0**	**+1.4**
	baz=124,SNR=16						
N14K	**Kuskokwak Cree**	**25.69**	**321**	P	**P**	**13 45 43.8**	**+0.7**
	baz=114						
H21K	**Melozitna Rive**	**25.69**	**337**	IAmb	IAmb	13 45 46.2	
	comp=Z,26nm,1.2s						
H21K	**Melozitna Rive**	**25.69**	**337**	P	**P**	**13 45 44.0**	**+0.8**
	baz=137,SNR=17						
C36M	**Paulatuk**	**25.76**	**4**	P	**P**	**13 45 44.8**	**+1.1**
	baz=187						
G23K	**Bananza Creek**	**25.77**	**340**	IAmb	IAmb	13 45 47.4	
	comp=Z,22nm,1.2s						
G23K	**Bananza Creek**	**25.77**	**340**	P	**P**	**13 45 45.4**	**+1.5**
	baz=142,SNR=13						
F24K	**Squaw Lake**	**25.95**	**343**	P	**P**	**13 45 46.6**	**+1.0**
	baz=147						
E25K	**Arctic Village**	**26.01**	**346**	P	**P**	**13 45 47.1**	**+1.0**
	baz=151,SNR=5.2						
M14K	**Bethel**	**26.16**	**322**	IAmb	IAmb	13 45 50.2	
	comp=Z,35nm,1.2s						
M14K	**Bethel**	**26.16**	**322**	P	**P**	**13 45 48.8**	**+1.3**
	baz=115,SNR=5.5						
H20K	**Anotleneega Mo**	**26.18**	**335**	P	**P**	**13 45 49.0**	**+1.3**
	baz=133,SNR=23						
COLD	**Coldfoot**	**26.22**	**341**	P	**P**	**13 45 49.3**	**+1.3**
	baz=143,SNR=6.4						
J17K	**VABM Dome**	**26.29**	**329**	IAmb	IAmb	13 46 06.0	
	comp=Z,21nm,1.2s						
J17K	**VABM Dome**	**26.29**	**329**	P	**P**	**13 45 49.7**	**+1.0**
	baz=124						
G22K	**Bettles**	**26.30**	**340**	P	**P**	**13 45 49.2**	**+0.5**
	baz=140						
GCSA	**Galena City Sc**	**26.32**	**333**	P	**P**	**13 45 50.5**	**+1.6**
	baz=129,SNR=8.2						
D27M	**Malcolm River**	**26.33**	**350**	IAmb	IAmb	13 45 52.9	
	comp=Z,16nm,1.5s						
D27M	**Malcolm River**	**26.33**	**350**	P	**P**	**13 45 50.5**	**+1.4**
	baz=159						
JCT	**Junction City**	**26.36**	**111**	IAmb	IAmb	13 45 59.2	
	comp=Z,15nm,1.0s						
L15K	**Ungalak Mounta**	**26.37**	**324**	P	**P**	**13 45 50.7**	**+1.4**
	baz=118,SNR=5.4						
P38A	**Dawn**	**26.39**	**87**	IAmb	IAmb	13 46 04.9	
	comp=Z,32nm,1.2s						
DRIO	**Del Rio**	**26.48**	**113**	IAmb	IAmb	13 46 00.2	
	comp=Z,19nm,1.2s						
G21K	**Allakaket**	**26.52**	**338**	IAmb	IAmb	13 45 54.0	
	comp=Z,38nm,1.4s						
G21K	**Allakaket**	**26.52**	**338**	P	**P**	**13 45 51.5**	**+0.8**
	baz=137						
E24K	**Your Creek**	**26.54**	**343**	P	**P**	**13 45 51.3**	**+0.4**
	baz=146,SNR=8.9						
UNV	**Unalaska Valle**	**26.63**	**306**	P	**P**	**13 45 52.8**	**+1.1**
	baz=97						
M13K	**Dall Lake**	**26.65**	**321**	P	**P**	**13 45 52.7**	**+0.8**
	baz=113						
K15K	**Wolf Creek Mou**	**26.68**	**326**	P	**P**	**13 45 53.6**	**+1.5**
	baz=119						
H19K	**Roundabout Mou**	**26.69**	**334**	P	**P**	**13 45 53.6**	**+1.4**
	baz=131,SNR=16						
L14K	**Kuka Creek**	**26.73**	**323**	IAmb	IAmb	13 45 55.1	
	comp=Z,38nm,1.4s						
L14K	**Kuka Creek**	**26.73**	**323**	P	**P**	**13 45 53.8**	**+1.2**
	baz=115,SNR=6.7						
E23K	**Chandalar**	**26.76**	**343**	IAmb	IAmb	13 46 01.8	
	comp=Z,16nm,1.1s						
E23K	**Chandalar**	**26.76**	**343**	P	**P**	**13 45 54.4**	**+1.4**
	baz=145,SNR=8.8						
J16K	**Anvik River**	**26.81**	**328**	P	**P**	**13 45 54.5**	**+1.1**
	baz=122						
F22K	**John River**	**26.92**	**340**	P	**P**	**13 45 54.8**	**+0.5**
	baz=140						
F21K	**Alatna River**	**27.03**	**339**	IAmb	IAmb	13 45 59.0	
	comp=Z,19nm,1.5s						
F21K	**Alatna River**	**27.03**	**339**	P	**P**	**13 45 56.9**	**+1.6**
	baz=138,SNR=5.5						
C27K	**Jago River**	**27.06**	**348**	IAmb	IAmb	13 46 24.9	
	comp=Z,15nm,1.5s						
C27K	**Jago River**	**27.06**	**348**	P	**P**	**13 45 57.2**	**+1.7**
	baz=155						
H18K	**Honhosa River**	**27.07**	**333**	P	**P**	**13 45 56.4**	**+0.7**
	baz=128						
I17K	**Unalakleet**	**27.17**	**329**	P	**P**	**13 45 57.2**	**+0.7**
	baz=122						
D25K	**Kavik River**	**27.21**	**346**	IAmb	IAmb	13 46 13.2	
	comp=Z,15nm,1.4s						
D25K	**Kavik River**	**27.21**	**346**	P	**P**	**13 45 58.0**	**+1.1**
	baz=151,SNR=7.0						
TOLK	**Toolik Lake Re**	**27.23**	**343**	IAmb	IAmb	13 46 01.0	
	comp=Z,24nm,1.2s						
TOLK	**Toolik Lake Re**	**27.23**	**343**	P	**P**	**13 45 57.9**	**+0.7**
	baz=145,SNR=13						
G19K	**Purcell Mounta**	**27.30**	**335**	IAmb	IAmb	13 46 04.2	
	comp=Z,27nm,1.2s						
G19K	**Purcell Mounta**	**27.30**	**335**	P	**P**	**13 45 59.1**	**+1.4**
	baz=131,SNR=6.2						
E22K	**Anaktuvuk Pass**	**27.32**	**341**	IAmb	IAmb	13 46 01.2	
	comp=Z,20nm,1.4s						
E22K	**Anaktuvuk Pass**	**27.32**	**341**	P	**P**	**13 45 58.5**	**+0.5**
	baz=141,SNR=7.5						
H17K	**Granite Mounta**	**27.47**	**331**	P	**P**	**13 45 59.7**	**+0.4**
	baz=125						
C26K	**Camden Bay**	**27.50**	**348**	P	**P**	**13 46 00.2**	**+0.7**
	baz=154,SNR=8.0						
D24K	**Happy Valley**	**27.51**	**344**	IAmb	IAmb	13 46 03.2	
	comp=Z,18nm,1.4s						
D24K	**Happy Valley**	**27.51**	**344**	P	**P**	**13 46 01.1**	**+1.5**
	baz=147						
F20K	**Avaraart Lake**	**27.52**	**337**	P	**P**	**13 45 59.9**	**+0.3**
F20K				IAmb	IAmb	13 46 11.2	
	comp=Z,12nm,1.4s						
F20K	**Avaraart Lake**	**27.52**	**337**	P	**P**	**13 46 00.7**	**+1.1**
	baz=134						
BLKN	**Baker Lake**	**27.59**	**30**	P	**P**	**13 45 60.0**	**-0.3**
BLKN				IAmb	IAmb	13 46 13.8	
	comp=Z,15nm,1.3s						
G18K	**Tagagawik**	**27.63**	**334**	P	**P**	**13 46 00.2**	**-0.5**
G18K				IAmb	IAmb	13 46 07.2	
	comp=Z,11nm,1.2s						
G18K	**Tagagawik**	**27.63**	**334**	P	**P**	**13 46 01.6**	**+0.9**
	baz=128						
J14K	**Nanvaranak Lak**	**27.72**	**325**	P	**P**	**13 46 02.4**	**+0.9**
	baz=117						
D23K	**Nanushuk River**	**27.73**	**343**	P	**P**	**13 46 03.1**	**+1.6**
D23K				IAmb	IAmb	13 46 05.7	
	comp=Z,25nm,1.2s						
D23K	**Nanushuk River**	**27.73**	**343**	P	**P**	**13 46 02.7**	**+1.1**
	baz=144,SNR=12						
R40A	**Maddies Statio**	**27.79**	**89**	P	**P**	**13 45 59.6**	**-2.8**
R40A				IAmb	IAmb	13 46 10.7	
	comp=Z,20nm,1.3s						
K13K	**Kusilvak Mount**	**27.84**	**323**	P	**P**	**13 46 03.6**	**+1.1**
	baz=114						
COWI	**Conover**	**27.84**	**71**	P	**P**	**13 46 02.2**	**-0.6**
COWI				IAmb	IAmb	13 46 11.7	
	comp=Z,16nm,1.4s						
N41A	**Harden Midland**	**27.95**	**83**	P	**P**	**13 46 03.6**	**-0.2**
M11K	**Mekoryuk**	**27.96**	**320**	P	**P**	**13 46 04.5**	**+0.9**
	baz=109						
NIKH	**Nikolski High**	**27.96**	**304**	P	**P**	**13 46 03.7**	**0.0**
	baz=93						
F19K	**Shaleruckik Mo**	**27.96**	**336**	P	**P**	**13 46 04.2**	**+0.6**
	baz=131						
C24K	**Franklin Bluff**	**27.97**	**345**	IAmb	IAmb	13 46 07.0	
	comp=Z,27nm,1.4s						
C24K	**Franklin Bluff**	**27.97**	**345**	P	**P**	**13 46 04.9**	**+1.3**
	baz=148						
G17K	**Kiwalik Mounta**	**28.05**	**332**	P	**P**	**13 46 05.6**	**+1.2**
	baz=125						
E21K	**Killik River**	**28.07**	**340**	P	**P**	**13 46 06.1**	**+1.4**
	baz=139						
D22K	**Ayikyak River**	**28.10**	**342**	IAmb	IAmb	13 46 10.2	
	comp=Z,12nm,1.4s						
D22K	**Ayikyak River**	**28.10**	**342**	P	**P**	**13 46 05.8**	**+0.9**
	baz=141						
H16K	**Elim**	**28.14**	**330**	P	**P**	**13 46 05.2**	**-0.1**
	baz=122						
E19K	**Redstone River**	**28.22**	**337**	IAmb	IAmb	13 46 08.4	
	comp=Z,11nm,1.3s						
E19K	**Redstone River**	**28.22**	**337**	P	**P**	**13 46 06.9**	**+0.9**
	baz=133						
MGMO	**Mountain Grove**	**28.25**	**91**	P	**P**	**13 46 05.4**	**-1.2**
MGMO				IAmb	IAmb	13 46 17.4	
	comp=Z,28nm,1.4s						
A36M	**Sachs Harbour**	**28.35**	**2**	P	**P**	**13 46 07.7**	**+0.7**
	baz=185						
F18K	**Selawik**	**28.39**	**334**	P	**P**	**13 46 08.2**	**+0.9**
	baz=128						
L42A	**Oliver, Polo**	**28.41**	**80**	P	**P**	**13 46 05.6**	**-2.2**
C23K	**Itkillik River**	**28.43**	**344**		**P**	**13 46 08.0**	**+0.2**
C23K				IAmb	IAmb	13 46 15.9	
	comp=Z,25nm,1.4s						
C23K	**Itkillik River**	**28.43**	**344**	P	**P**	**13 46 09.4**	**+1.6**
	baz=145						
E20K	**Nigu River**	**28.50**	**339**	P	**P**	**13 46 09.6**	**+1.2**
	baz=135						
G16K	**Koyuk River**	**28.59**	**331**	P	**P**	**13 46 10.4**	**+1.2**
	baz=123						
CCM	**Cathedral Cave**	**28.63**	**89**	P	**P**	**13 46 09.0**	**-0.9**
CCM				IAmb	IAmb	13 46 18.1	
	comp=Z,28nm,1.4s						
P08K	**Saint George I**	**28.73**	**311**	P	**P**	**13 46 11.4**	**+0.8**
	baz=99						
F17K	**Baldwin Pennin**	**28.80**	**333**	P	**P**	**13 46 11.7**	**+0.6**
	baz=126						
C21K	**Knifeblade Rid**	**28.80**	**341**	P	**P**	**13 46 12.5**	**+1.3**
	baz=138						
D20K	**Etivluk River**	**28.93**	**339**	P	**P**	**13 46 13.0**	**+0.8**
	baz=135						
G15K	**Niukluk**	**28.98**	**329**	P	**P**	**13 46 13.6**	**+0.8**
	baz=120						
B21K	**Ikpikpuk River**	**29.12**	**342**	P	**P**	**13 46 14.3**	**+0.5**
	baz=139						
D19K	**Kuna River**	**29.18**	**338**	IAmb	IAmb	13 46 17.2	
	comp=Z,27nm,1.4s						
D19K	**Kuna River**	**29.18**	**338**	P	**P**	**13 46 15.2**	**+0.7**
	baz=133						
E18K	**Tukpahlearik C**	**29.19**	**335**	P	**P**	**13 46 14.7**	**+0.1**
	baz=128						
SPIA	**Saint Paul Isl**	**29.20**	**312**	P	**P**	**13 46 15.3**	**+0.5**
	baz=99						
FVM	**French Village**	**29.25**	**88**	IAmb	IAmb	13 46 24.1	
	comp=Z,20nm,1.3s						
ANM	**Nome**	**29.28**	**328**	P	**P**	**13 46 15.5**	**+0.1**
	baz=117						
E17K	**Hotham Inlet**	**29.36**	**334**	P	**P**	**13 46 17.3**	**+1.3**
	baz=126						
B22K	**Teshekpuk Lake**	**29.41**	**343**	P	**P**	**13 46 17.2**	**+0.8**
	baz=142						
LCAR	**Lake Charles**	**29.53**	**92**	IAmb	IAmb	13 46 31.5	
	comp=Z,11nm,1.2s						
F15K	**North Star Dit**	**29.56**	**330**	P	**P**	**13 46 18.4**	**+0.6**
	baz=120						
PBMO	**Poplar Bluff**	**29.75**	**90**	IAmb	IAmb	13 46 28.7	
	comp=Z,19nm,1.2s						
C19K	**Lookout Ridge**	**29.98**	**338**	P	**P**	**13 46 22.2**	**+0.6**
	baz=132						
B20K	**Meade River**	**30.00**	**341**	P	**P**	**13 46 22.6**	**+0.9**
	baz=136						
F14K	**Arctic Creek**	**30.06**	**329**	P	**P**	**13 46 22.9**	**+0.7**
	baz=118						
D17K	**Noatak River**	**30.12**	**334**	P	**P**	**13 46 23.4**	**+0.7**
	baz=125						
C18K	**Utukok River**	**30.13**	**337**	P	**P**	**13 46 23.4**	**+0.5**
	baz=129						
A22K	**Sinclair Lake**	**30.26**	**343**	P	**P**	**13 46 24.5**	**+0.5**
	baz=140						
C17K	**DeLong Mountai**	**30.60**	**336**	P	**P**	**13 46 26.2**	**-0.9**
	baz=126						
B18K	**Kokolik River**	**30.75**	**338**	P	**P**	**13 46 28.5**	**+0.2**
	baz=129						
A21K	**Barrow**	**30.85**	**343**	P	**P**	**13 46 29.5**	**+0.4**
	baz=138						
A19K	**Wainwright**	**31.11**	**339**	P	**P**	**13 46 31.8**	**+0.4**
	baz=131						
C16K	**Lisburne Hills**	**31.15**	**334**	P	**P**	**13 46 32.1**	**+0.3**
	baz=123						
GAMB	**Gambell**	**31.52**	**324**	P	**P**	**13 46 35.3**	**+0.2**
	baz=109						
WVT	**Waverly**	**31.91**	**90**		**P**	**13 46 40.5**	**+1.6**
V48A	**Smith Brothers**	**32.82**	**90**	IAmb	IAmb	13 47 00.4	
	comp=Z,14nm,1.1s						
U49A	**Red Boiling Sp**	**33.23**	**88**	IAmb	IAmb	13 47 00.2	
	comp=Z,19nm,1.3s						
LRAL	**Lakeview Retre**	**34.00**	**94**	IAmb	IAmb	13 47 06.2	
	comp=Z,22nm,1.4s						
Y49A	**Blount Mountai**	**34.01**	**92**	IAmb	IAmb	13 46 59.0	
	comp=Z,14nm,1.1s						
FPAL	**Fort Paine**	**34.26**	**91**	P	**P**	**13 46 58.4**	**-1.0**
FPAL				IAmb	IAmb	13 47 08.0	
	comp=Z,12nm,1.0s						
RES	**Resolute Bay**	**34.45**	**15**		**P**	**13 47 01.3**	**+0.7**
RES				IAmb	IAmb	13 47 02.6	
	comp=Z,12nm,1.1s						
O52A	**Adamsville**	**34.62**	**80**	P	**P**	**13 47 02.0**	**-0.4**
X51A	**Calhoun**	**34.79**	**90**	P	**P**	**13 47 03.2**	**-0.8**
SADO	**Sadowa**	**34.99**	**71**	P	**P**	**13 47 06.0**	**+0.3**
SADO				IAmb	IAmb	13 47 14.0	
	comp=Z,16nm,1.1s						
SADO	**Sadowa**	**34.99**	**71**	LR	LR	14 01 30.6	
	comp=Z,289nm,20.9s,baz=336,slow=37						
TKL	**Tuckaleechee C**	**35.07**	**88**	LR	LR	14 02 03.4	
	comp=Z,433nm,18.0s,baz=306,slow=37						
250A	**Grady**	**35.07**	**95**	P	**P**	**13 47 05.7**	**-0.8**
O54A	**Avella**	**35.63**	**79**	P	**P**	**13 47 10.2**	**-1.0**
O54A				IAmb	IAmb	13 47 18.0	
	comp=Z,23nm,1.4s						
Y52A	**Lilburn**	**35.71**	**91**	P	**P**	**13 47 10.9**	**-1.1**
GOGA	**Godfrey**	**36.36**	**91**	P	**P**	**13 47 17.6**	**+0.1**
GOGA				IAmb	IAmb	13 47 26.1	
	comp=Z,16nm,1.1s						
POIN	**Pond Inlet**	**37.33**	**22**	P	**P**	**13 47 25.2**	**-0.1**
POIN				IAmb	IAmb	13 47 27.6	
	comp=Z,10nm,1.0s						
BIRD	**Birdtown, Kers**	**37.94**	**87**	P	**P**	**13 47 31.2**	**+0.3**
BIRD				IAmb	IAmb	13 47 54.2	
	comp=Z,18nm,1.2s						
SHEM	**Shemya Is, Ala**	**38.27**	**304**	LR	LR	13 59 21.8	
	comp=Z,104nm,20.3s,baz=336,slow=30						
FRB	**Frobisher Bay**	**38.91**	**38**	LR	LR	14 03 20.6	
	comp=Z,98nm,19.2s,baz=240,slow=36						
EUNU	**Eureka**	**39.46**	**11**		**P**	**13 47 43.1**	**-0.1**
SCHQ	**Schefferville**	**40.49**	**52**	LR	LR	14 02 54.5	
	comp=Z,181nm,18.4s,baz=332,slow=34						
SFJD	**Kangerlussuaq**	**46.13**	**32**	LR	LR	14 06 25.7	
	comp=Z,64nm,20.1s,baz=306,slow=34						
PETK	**Petropavlovsk-**	**47.74**	**309**	P	**P**	**13 48 48.2**	**-1.9**
	comp=Z,3.8nm,1.0s,baz=74,slow=16,SNR=7.9						
	comp=Z,3.8nm,1.0s						
SUMG	**Summit**	**48.96**	**24**	P	**P**	**13 48 59.7**	**0.0**
MA2	**Magadan**	**49.21**	**318**	LR	LR	14 09 20.0	
	comp=Z,85nm,18.8s,baz=88,slow=36						
JTS	**Las Juntas de**	**50.33**	**118**	LR	LR	14 15 06.3	
	comp=Z,42nm,19.6s,baz=309,slow=42						
TIXI	**Tiksi**	**52.85**	**337**	P	**P**	**13 49 29.3**	**+0.8**
TIXI				IAmb	IAmb	13 49 41.6	
	comp=Z,7.1nm,1.2s						
YAK	**Yakutsk**	**57.42**	**327**	LR	LR	14 13 57.7	
	comp=Z,119nm,20.2s,baz=147,slow=35						
SJG	**San Juan**	**57.88**	**95**	LR	LR	14 16 07.2	
	comp=Z,43nm,19.2s,baz=328,slow=37						
H11N3	**WAKE ISLAND Hy**	**58.32**	**268**	T	T	14 53 20.2	
	baz=49,slow=75,SNR=52						
H11N2	**WAKE ISLAND Hy**	**58.33**	**268**	T	T	14 53 16.2	
	baz=49,slow=75,SNR=65						
H11N1	**WAKE ISLAND Hy**	**58.34**	**268**	T	T	14 53 23.0	
	baz=49,slow=75,SNR=21						
H11S1	**WAKE ISLAND Hy**	**59.25**	**267**	T	T	14 54 38.8	
	baz=50,slow=75,SNR=25						
H11S2	**WAKE ISLAND Hy**	**59.26**	**267**	T	T	14 54 21.6	
	baz=50,slow=75,SNR=23						
H11S3	**WAKE ISLAND Hy**	**59.27**	**267**	T	T	14 54 42.2	
	baz=50,slow=75,SNR=25						
SDV	**Santo Domingo**	**60.95**	**107**	LR	LR	14 17 52.9	
	comp=Z,48nm,21.5s,baz=75,slow=37						
KLR	**Kul'dur**	**63.84**	**314**	LR	LR	14 17 40.2	
	comp=Z,95nm,19.3s,baz=163,slow=35						
PCRV	**Puerto La Cruz**	**64.27**	**101**	LR	LR	14 19 48.7	
	comp=Z,82nm,21.6s,slow=37						
HEH	**HeiHe**	**65.42**	**317**	*e*P	**P**	**13 50 54.4**	**-1.5**
HEH				pmax	pmax		
	comp=Z,10.0nm,1.4s						
USRK	**Ussuriysk Ar.**	**66.82**	**309**	P	**P**	**13 51 05.1**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=46,slow=5.5,SNR=7.6						
	comp=Z,2.1nm,0.8s						
MJAR	**Matsushiro Arr**	**67.91**	**300**	P	**P**	**13 51 12.6**	**+0.5**
	comp=Z,1.7nm,1.0s,baz=47,slow=6.4,SNR=3.2						
	comp=Z,1.7nm,1.0s						
BNX	**BinXian**	**68.33**	**313**	⇑P	**P**	**13 51 14.8**	**+0.3**
BNX				pmax	pmax		
	comp=Z,8.0nm,1.1s						
NOA	**NORSAR Array B**	**70.57**	**19**	P	**P**	**13 51 27.0**	**-1.2**
	comp=Z,2.0nm,0.9s,baz=330,slow=5.7,SNR=3.4						
	comp=Z,2.0nm,0.9s						
RAR	**Rarotonga**	**70.70**	**211**	LR	LR	14 16 45.5	
	comp=Z,109nm,19.9s,baz=304,slow=31						
FINES	**FINESS Array B**	**73.16**	**12**	P	**P**	**13 51 43.6**	**0.0**
	comp=Z,4.4nm,1.0s,baz=327,slow=9.9,SNR=5.0						
	comp=Z,4.4nm,1.0s						
KSRS	**Korea Array**	**73.56**	**306**	P	**P**	**13 51 45.4**	**-1.1**
	comp=Z,1.2nm,0.9s,baz=56,slow=6.8,SNR=4.4						
	comp=Z,1.2nm,0.9s						
XLT	**XiLinHaoTe**	**75.39**	**318**	*e*P	**P**	**13 51 58.0**	**+0.9**
XLT				pmax	pmax		
	comp=Z,12nm,0.8s						
MDP	**Montagnes des**	**76.35**	**96**	LR	LR	14 29 12.8	
	comp=Z,45nm,18.7s,baz=221,slow=38						
ULN	**Ulaanbaatar**	**76.45**	**325**	P	**P**	**13 52 04.0**	**+0.8**
ULN				IAmb	IAmb	13 52 05.0	
	comp=Z,9.6nm,1.2s						
SONM	**Songino Array**	**76.75**	**325**	P	**P**	**13 52 05.6**	**+0.8**
	comp=Z,5.0nm,1.0s,baz=55,slow=4.7,SNR=25						
	comp=Z,5.0nm,1.0s						
ZALV	**Zalesovo Beam**	**78.56**	**341**	P	**P**	**13 52 13.6**	**-1.0**
	comp=Z,0.6nm,0.4s,baz=39,slow=5.7,SNR=5.7						
	comp=Z,0.6nm,0.4s						
CLL	**Collm**	**79.63**	**23**	*e*P	**P**	**13 52 21.0**	**+0.5**
	comp=Z,9.0nm,1.3s						
HHC	**Hu-ho-hao-te**	**79.89**	**318**	*e*P	**P**	**13 52 21.1**	**-1.2**
HHC				pmax	pmax		
	comp=Z,14nm,0.6s						
HHC				pmax	pmax		
	comp=Z,86nm,3.5s						
BRG	**Berggiesshubel**	**80.28**	**23**	*e*P	**P**	**13 52 25.2**	**+1.1**
BRG				Amp		13 52 26.2	
	comp=Z,5.9nm,1.1s						
LPAZ	**La Paz**	**81.32**	**122**	P	**P**	**13 52 30.6**	**-0.2**
	comp=Z,2.0nm,0.9s,baz=336,slow=3.0,SNR=5.0						
	comp=Z,2.0nm,0.9s						
GERES	**GERESS Array B**	**82.03**	**24**	P	**P**	**13 52 34.3**	**+0.8**
	comp=Z,0.3nm,0.2s,baz=44,slow=4.1,SNR=5.3						
	comp=Z,0.3nm,0.2s						
BVAR	**Borovoye Array**	**82.22**	**349**	P	**P**	**13 52 34.4**	**+0.1**
	comp=Z,3.9nm,1.0s,baz=66,slow=3.6,SNR=8.9						
	comp=Z,3.9nm,1.0s						
NJ2	**Nanjing**	**82.64**	**308**	*e*P	**P**	**13 52 36.1**	**-0.8**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
FUORN	**Ofenpass-Fuorn**	**82.92**	**27**		**P**	**13 52 41.3**	**+2.9**
FUORN				IAmb	IAmb	13 52 41.7	
	comp=Z,11nm,1.4s						
KURK	**Kurchatov**	**82.97**	**343**		**P**	**13 52 38.9**	**+0.6**
KURK				IAmb	IAmb	13 52 39.6	
	comp=Z,12nm,1.4s						
KURBB	**Kurchatov Arra**	**83.08**	**343**	P	**P**	**13 52 39.0**	**+0.2**
	comp=Z,4.8nm,1.1s,baz=18,slow=5.0,SNR=16						
	comp=Z,4.8nm,1.1s						
PB11	**IPOC Station P**	**83.08**	**126**	P	**P**	**13 52 39.8**	**+0.5**
ESDC	**Sonseca Array**	**83.08**	**40**	P	**P**	**13 52 39.7**	**+0.5**
	comp=Z,1.7nm,1.1s,baz=334,slow=5.0,SNR=9.1						
	comp=Z,1.7nm,1.1s						
MODS	**Modra-Piesok**	**83.47**	**22**	*e*P	**P**	**13 52 41.6**	**+0.7**
VYHS	**Vyhne**	**83.78**	**21**	*e*P	**P**	**13 52 43.6**	**+1.1**
AKASG	**Malin Array Be**	**83.96**	**14**	P	**P**	**13 52 42.6**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=355,slow=5.2,SNR=10						
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**85.78**	**339**	P	**P**	**13 52 51.9**	**-0.8**
	comp=Z,3.0nm,1.2s,baz=30,slow=4.0,SNR=8.8						
	comp=Z,3.0nm,1.2s						
MAKZ	**Makanchi**	**85.85**	**339**		**P**	**13 52 53.1**	**+0.1**
MAKZ				IAmb	IAmb	13 52 53.8	
	comp=Z,8.2nm,1.1s						
GTA	**Gaotai**	**86.38**	**325**	*e*P	**P**	**13 52 56.1**	**+0.2**
GTA				pP	sP	13 53 01.3	+1.0
GTA				pmax	pmax		
	comp=Z,5.0nm,2.0s						
ABKAR	**Akbulak array**	**87.07**	**354**	IAmb	IAmb	13 53 00.6	
	comp=Z,9.8nm,1.2s						
PZH	**PanZhiHua**	**96.23**	**316**	P	**P**	**13 53 41.8**	**-0.2**
VNDA	**Vanda**	**128.14**	**195**	PKP	**PKPdf**	**13 59 17.9**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=46,slow=12,SNR=2.3						
QSPA	**South Pole Qui**	**133.56**	**180**	PKP	**PKPdf**	**13 59 27.4**	**-1.3**
	comp=Z,1.7nm,0.9s,baz=231,slow=6.2,SNR=3.2						
BOSA	**Boshof**	**154.19**	**63**	PKPbc	**PKPbc**	**14 00 13.7**	**+0.1**
	comp=Z,6.9nm,1.2s,baz=188,slow=11,SNR=2.2						

IDC 22 14:08:09.5±6.4, 6°.12S×148°.08E, h154^{km}±71^{km}, mb3.0/1, mbtmp3.8/3, Error ellipse: s-maj=177.9km s-min=51.2km az=121.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.39**	**196**	P	Pn	14 09 02.6	+0.6
	13nm,0.3s,baz=352,slow=7.1						
PMG				S	Sn	14 09 43.0	+0.2
	25nm,0.3s,baz=222,slow=23,SNR=11						
WRA	**Warramunga Arr**	**19.16**	**223**	P	P	14 12 21.0	-0.3
	3.9nm,0.6s,baz=42,slow=11,SNR=36						
ASAR	**Alice Springs**	**22.15**	**217**	P	P	14 12 53.7	+0.7
	0.5nm,0.3s,baz=52,slow=8.9,SNR=30						
	0.5nm,0.3s						
TORD	**Torodi Ar. Bea**	**146.16**	**284**	PKPbc	PKPdf	14 27 31.3	-0.2
	0.7nm,0.3s,baz=90,slow=2.1,SNR=2.5						

NOU 22 14:10:27.9, 15°.24S×166°.88E, h18^{km}, MLv4.0/10, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.37**	**123**	P	Pb	14 10 37.2	+1.1
SANVU	**Saraoutou**	**0.37**	**123**	S	Sb	14 10 43.3	+1.7
VLAKA	**Lakatoro**	**1.01**	**149**	P	Pb	14 10 46.5	-0.3
DVP	**Devils Point**	**2.77**	**153**	P	Pn	14 11 12.8	+1.4
YATNC	**Mamie plateau,**	**6.78**	**180**	P	Pn	14 12 05.7	-0.9
DZM	**Mont Dzumac**	**6.81**	**183**	P	Pn	14 12 06.8	-0.2
OUENC	**Ouen Island, N**	**7.14**	**180**	P	Pn	14 12 11.5	0.0

*IDC **22** 14:14:01.4±1.6, 43°.41N×129°.01W, h0^{km}, mb3.5/7, mbtmp3.4/12, ML3.1/5, MS3.1/2, Error ellipse: s-maj=36.8km s-min=15.8km az=42.0*

*NEIC **22** 14:14:05.2±0.9, 43°.79N±0°.06×128°.5W±0°.2, h10^{km}±2^{km}, ML3.3/50, Error ellipse: s-maj=24.6km s-min=3.1km az=244.0*

ISC 22 14:14:04.2±1.2, 43°.7N±0°.1×128°.6W±0°.1, h10^{km}, n52, σ1^{s}.06/45, mb3.7/6, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**3.23**	**104**	Pn	**Pn**	**14 14 54.3**	**-0.7**
KEBM				IAML		14 15 53.5	
	comp=N,80nm,1.8s						
KEBM				IAML		14 15 56.6	
	comp=E,75nm,1.6s						
J01E	**Myrtle Point**	**3.45**	**98**	Pn	**Pn**	**14 14 58.0**	**0.0**
J01E				IAML		14 15 46.9	
	comp=E,40nm,1.7s						
J01E				IAML		14 15 53.3	

	comp=N,43nm,2.9s						
I02E	**Swisshome, OR**	**3.46**	**82**	Pn	**Pn**	**14 14 57.5**	**-0.6**
K02D	**Willamette Mer**	**3.75**	**104**	Pn	**Pn**	**14 15 02.4**	**+0.2**
HEBO	**Mount Hebo**	**3.78**	**65**	Pn	**Pn**	**14 15 02.1**	**-0.5**
HEBO				IAML		14 15 42.7	
	comp=N,65nm,2.1s						
I03D	**Drain, OR**	**3.81**	**89**		**Pn**	**14 15 02.6**	**-0.3**
BUCK	**Buck Mountain**	**4.08**	**81**	Pn	**Pn**	**14 15 04.9**	**-1.9**
BUCK				IAML		14 16 34.4	
	comp=N,30nm,3.0s						
BUCK				IAML		14 16 35.9	
	comp=E,52nm,3.5s						
G03D	**McMinnville, O**	**4.10**	**67**		**Pn**	**14 15 06.3**	**-0.6**
G03D				IAML		14 15 37.7	
	comp=N,44nm,3.4s						
G03D				IAML		14 16 02.1	
	comp=E,36nm,3.0s						
F03A	**Seaside**	**4.21**	**57**	Pn	**Pn**	**14 15 07.5**	**-1.0**
H04D	**Lebanon**	**4.30**	**77**		**Pn**	**14 15 08.5**	**-1.2**
H04D				IAML		14 16 12.7	
	comp=E,26nm,1.9s						
H04D				IAML		14 17 47.9	
	comp=N,24nm,2.9s						
RADR	**Rader Ridge**	**4.34**	**50**	Pn	**Pn**	**14 15 09.2**	**-1.1**
RADR				IAML		14 15 59.8	
	comp=E,50nm,3.2s						
RADR				IAML		14 17 49.8	
	comp=N,45nm,2.0s						
BBOR	**Butler Butte**	**4.40**	**99**		**Pn**	**14 15 11.0**	**-0.2**
H04A	**Detroit Lake**	**4.71**	**76**		**Pn**	**14 15 15.6**	**+0.2**
J04A	**Umpqua Nationa**	**4.75**	**94**	Pn	**Pn**	**14 15 16.7**	**+0.6**
YBH	**Yreka Blue Hor**	**4.77**	**113**	Pn	**Pn**	**14 15 18.4**	**+2.1**
	baz=228,slow=2.9,SNR=1.9						
YBH				Sn	**Sn**	**14 16 11.4**	**-0.3**
	baz=166,slow=12,SNR=1.2						
WISH	**Wishkah**	**4.81**	**43**	Pn	**Pn**	**14 15 16.8**	**+0.2**
WISH				IAML		14 17 20.5	
	comp=N,39nm,3.3s						
NLWA	**Neilton Lookou**	**4.95**	**41**		**Pn**	**14 15 18.2**	**-0.5**
NLWA				IAML		14 16 56.0	
	comp=N,16nm,3.1s						
NLWA				IAML		14 17 21.8	
	comp=N,14nm,3.1s						
C03A	**Quillayute Air**	**5.08**	**32**	Pn	**Pn**	**14 15 20.4**	**0.0**
HOOD	**Mount Hood Mea**	**5.22**	**70**	Pn	**Pn**	**14 15 21.6**	**-0.9**
HOOD				IAML		14 16 20.6	
	comp=N,15nm,2.5s						
HOOD				IAML		14 17 02.9	
	comp=E,25nm,1.9s						
J05D	**Fort Rock, OR**	**5.38**	**92**	Pn	**Pn**	**14 15 25.6**	**+0.9**
J05D				IAML		14 16 21.6	
	comp=N,17nm,4.0s						
J05D				IAML		14 17 06.3	
	comp=E,18nm,3.3s						
G05A	**Wamic**	**5.43**	**71**		**Pn**	**14 15 25.7**	**+0.5**
PINE	**Pine Mountain**	**5.55**	**87**	Pn	**Pn**	**14 15 27.6**	**+0.5**
GNW	**Green Mountain**	**5.58**	**44**		**Pn**	**14 15 26.9**	**-0.4**
OZB	**Mount Ozzard**	**5.67**	**21**	Pn	**Pn**	**14 15 27.9**	**-0.6**
LON	**Longmire**	**5.67**	**55**	Pn	**Pn**	**14 15 28.2**	**-0.4**
CLRS	**Cowichan Lake**	**5.97**	**30**	Pn	**Pn**	**14 15 31.6**	**-1.0**
MXC	**Moxie City**	**6.53**	**61**		**Pn**	**14 15 39.9**	**-0.5**
I07A	**Izee**	**6.58**	**84**	Pn	**Pn**	**14 15 41.1**	**-0.1**
CBB	**Campbell River**	**6.69**	**18**		**Pn**	**14 15 43.3**	**+0.8**
HOLB	**Holberg**	**6.93**	**2**	Pn	**Pn**	**14 15 47.5**	**+1.7**
HAWA	**Hanford**	**6.96**	**64**		**Pn**	**14 15 45.8**	**-0.4**
G08A	**Pilot Rock**	**7.07**	**74**	Pn	**Pn**	**14 15 48.1**	**+0.2**
WVOR	**Wild Horse Val**	**7.41**	**97**	Pn	**Pn**	**14 15 52.2**	**-0.3**
BBB	**Bella Bella**	**8.48**	**2**	Pn	**Pn**	**14 16 09.8**	**+2.9**
	comp=E,0.2nm,0.3s,baz=156,slow=4.3,SNR=5.6						
BBB				LR	LR	14 18 40.4	
	comp=E,98nm,18.4s,baz=212,slow=32						
	comp=E,12nm,1.1s						
NVAR	**Mina Array Bea**	**9.40**	**121**	Pn	**Pn**	**14 16 20.8**	**+0.9**
	comp=E,0.2nm,0.3s,baz=304,slow=15,SNR=1.8						
	comp=E,0.3nm,0.6s						
ELK	**Elko**	**10.35**	**102**	LR	LR	14 20 47.5	
	comp=E,105nm,18.9s,baz=292,slow=38						
PDAR	**Pinedale Array**	**13.92**	**87**	Pn	**P**	**14 17 28.9**	**-1.0**
	baz=278,slow=13,SNR=1.7						
	comp=E,0.1nm,0.4s						
DLBC	**Dease Lake**	**14.76**	**357**	Pn	**P**	**14 17 37.1**	**-1.9**
	baz=142,slow=24,SNR=1.8						
	comp=E,0.1nm,0.6s						
ANMO	**Albuquerque**	**19.20**	**110**	P	**Pn**	**14 18 30.2**	**+0.9**
	comp=E,0.2nm,0.3s,baz=56,slow=8.5,SNR=3.0						
	comp=E,0.3nm,0.4s						
YKA	**Yellowknife Ar**	**20.51**	**19**	P	Pn	14 18 44.7	+0.3
	comp=E,2.2nm,0.8s,baz=208,slow=10,SNR=5.4						
	comp=E,2.2nm,0.8s						
ULM	**Lac du Bonnet**	**23.13**	**62**	P	**P**	**14 19 11.1**	**+0.8**
	comp=E,4.2nm,0.9s,baz=261,slow=10,SNR=3.4						
	comp=E,4.2nm,0.9s						
ILAR	**Eielson Array**	**23.47**	**340**	P	**P**	**14 19 14.0**	**+0.4**
	comp=E,0.2nm,0.8s,baz=154,slow=10,SNR=4.6						
	comp=E,0.2nm,0.8s						
TXAR	**Lajitas Array**	**24.53**	**118**	P	**P**	**14 19 23.3**	**-0.7**
	comp=E,0.1nm,0.4s,baz=317,slow=7.7,SNR=4.6						
	comp=E,0.1nm,0.4s						
SCHQ	**Schefferville**	**40.52**	**52**	P	**P**	**14 21 46.1**	**+2.9**
	comp=E,2.3nm,0.8s,baz=51,slow=12,SNR=1.5						
	comp=E,2.3nm,0.8s						
H11N3	**WAKE ISLAND Hy**	**58.32**	**268**	T	T	15 27 07.1	
	baz=49,slow=75,SNR=62						
H11N2	**WAKE ISLAND Hy**	**58.32**	**268**	T	T	15 27 06.8	
	baz=49,slow=75,SNR=68						
H11N1	**WAKE ISLAND Hy**	**58.34**	**268**	T	T	15 27 06.2	
	baz=49,slow=75,SNR=57						
H11S1	**WAKE ISLAND Hy**	**59.25**	**267**	T	T	15 28 18.1	
	baz=50,slow=75,SNR=18						
H11S2	**WAKE ISLAND Hy**	**59.25**	**267**	T	T	15 28 13.3	
	baz=50,slow=75,SNR=24						
H11S3	**WAKE ISLAND Hy**	**59.26**	**267**	T	T	15 28 20.0	
	baz=50,slow=75,SNR=19						
SONM	**Songino Array**	**76.78**	**325**	P	**P**	**14 25 55.1**	**-0.8**
	comp=E,0.7nm,0.7s,baz=72,slow=4.7,SNR=6.1						
	comp=E,0.7nm,0.7s						
KURBB	**Kurchatov Arra**	**83.11**	**343**	P	**P**	**14 26 30.0**	**0.0**
	comp=E,0.2nm,0.5s,baz=31,slow=5.5,SNR=2.4						
	comp=E,0.2nm,0.5s						

*IDC **22** 14:22:56.3±0.8, 29°.94N×142°.92E, h0^{km}, mb4.0/17, mbtmp4.0/20, ML3.3/2, MS4.4/1, Error ellipse: s-maj=26.0km s-min=15.0km az=84.0*

*NEIC **22** 14:23:00.7±1.6, 30°.10N±0°.07×142°.7E±0°.1, h20^{km}±6^{km}, mb4.7/7, Error ellipse: s-maj=16.8km s-min=10.0km az=89.0*

ISC 22 14:23:00.5±0.6**, 29°.98N**±0°.06×**142°.8E**±0°.1**, h30**^{km}**, n38,** σ**2^{s}.06**/39**, mb4.1**/16**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.92**	**191**	Pn	**Pn**	**14 23 45.6**	**+0.6**
JCJ	**Chichijima**	**2.92**	**191**	Pn	**Pn**	**14 23 42.5**	**-2.5**
	45nm,0.5s,baz=0.0,slow=0.0						
JCJ				Sn	**Sn**	**14 24 14.8**	**-4.3**
	baz=0.0,slow=0.0						
JHJ2	**Mitsune**	**4.04**	**321**	Pn	**Pn**	**14 23 59.6**	**-0.8**
JGF	**Kuroka**	**7.25**	**322**	Pn	**Pn**	**14 24 43.9**	**-0.6**
MJAR	**Matsushiro Arr**	**7.60**	**331**	Pn	**Pn**	**14 24 46.1**	**-3.1**
MJAR	**Matsushiro Arr**	**7.60**	**331**	Pn	**Pn**	**14 24 49.0**	**-0.3**
	0.4nm,0.3s,baz=159,slow=11,SNR=42						
MJAR				Sn	**Sn**	**14 26 10.6**	**-3.9**
	0.1nm,0.3s,baz=350,slow=19,SNR=4.9						
	6.0nm,0.7s						
MAJO	**Matsushiro**	**7.60**	**331**		**Pn**	**14 24 46.4**	**-2.9**
MJB9	**Matsu-Tunnel**	**7.61**	**331**	Pn	**Pn**	**14 24 46.5**	**-2.8**
JMM	**Marumori**	**8.05**	**348**		**Pn**	**14 24 52.4**	**-2.9**
JNU	**Nakatsue**	**10.66**	**290**	Pn	**Pn**	**14 25 34.7**	**+3.4**
	0.2nm,0.3s,baz=145,slow=8.6,SNR=1.9						
JKA	**Kamikawa-asahi**	**14.12**	**359**	Pn	**Pn**	**14 26 14.0**	**-4.3**
ASAJ	**Asahikawa**	**14.12**	**359**	Pn	**Pn**	**14 26 13.9**	**-4.4**
	0.4nm,0.3s,baz=263,slow=12,SNR=5.9						
ASAJ				Sn	Sn	14 28 42.0	-12
	0.2nm,0.3s,baz=356,slow=18,SNR=2.4						
KSRS	**Korea Array**	**14.46**	**305**	Pn	**Pn**	**14 26 25.2**	**+2.2**
	0.2nm,0.3s,baz=112,slow=13,SNR=16						
	2.6nm,0.6s						
NACB	**Ninganchiao**	**19.76**	**258**		**Pn**	**14 27 29.7**	**0.0**
NACB				IAmb	IAmb	14 27 58.4	
	comp=Z,67nm,1.5s						
YHNB	**Yeheng**	**19.77**	**260**		**Pn**	**14 27 29.9**	**0.0**
YHNB				IAmb	IAmb	14 27 59.5	
	comp=Z,21nm,1.1s						
YULB	**Yu-li**	**20.31**	**256**	P	Pn	14 27 35.5	-0.7
YULB				IAmb	IAmb	14 27 39.9	
	comp=Z,34nm,1.3s						
SSLB	**Suanglung**	**20.44**	**258**	P	**P**	**14 27 35.7**	**+0.1**
SSLB				IAmb	IAmb	14 27 42.6	
	comp=Z,20nm,0.6s						
KLR	**Kul'dur**	**21.00**	**339**	P	**P**	**14 27 41.8**	**+0.5**
	comp=Z,2.2nm,0.5s,baz=160,slow=8.8,SNR=7.7						
	comp=Z,2.2nm,0.5s						
BJT	**Baijiatuau**	**23.95**	**302**	P	**P**	**14 28 10.1**	**-1.9**
SONM	**Songino Array**	**33.10**	**313**	P	**P**	**14 29 35.5**	**+1.7**
	comp=Z,1.4nm,0.6s,baz=112,slow=8.0,SNR=8.6						
SONM				LR	LR	14 42 52.1	
	comp=Z,752nm,21.4s,baz=184,slow=36						
	comp=Z,1.4nm,0.6s						
SEY	**Seymchan**	**33.54**	**8**	P	**P**	**14 29 38.0**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=216,slow=14,SNR=3.0						
	comp=Z,0.8nm,0.6s						
CMAR	**Chiang Mai Arr**	**41.40**	**264**	P	**P**	**14 30 44.5**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=54,slow=7.6,SNR=8.8						
	comp=Z,0.7nm,0.5s						
CHGN	**Chignik**	**48.43**	**40**	P	**P**	**14 31 41.6**	**+1.8**
MKAR	**Makanchi Array**	**49.12**	**308**	P	**P**	**14 31 47.3**	**+1.9**
	comp=Z,1.3nm,0.6s,baz=88,slow=9.5,SNR=12						
	comp=Z,1.3nm,0.6s						
WRA	**Warramunga Arr**	**50.30**	**190**	P	**P**	**14 31 54.9**	**+0.5**
	comp=Z,1.4nm,0.5s,baz=8.3,slow=8.0,SNR=19						
	comp=Z,1.4nm,0.5s						
KURBB	**Kurchatov Arra**	**51.47**	**313**	P	**P**	**14 32 03.5**	**+0.5**
	comp=Z,2.4nm,0.6s,baz=90,slow=7.3,SNR=22						
	comp=Z,2.4nm,0.6s						
ASAR	**Alice Springs**	**54.02**	**190**	P	**P**	**14 32 22.7**	**+0.6**
	comp=Z,0.2nm,0.4s,baz=4.1,slow=6.1,SNR=8.7						
	comp=Z,0.2nm,0.4s						
ILAR	**Eielson Array**	**54.93**	**30**	P	**P**	**14 32 28.2**	**0.0**
	comp=Z,0.3nm,0.7s,baz=264,slow=7.7,SNR=5.8						
	comp=Z,0.3nm,0.7s						
BVAR	**Borovoye Array**	**56.33**	**316**	P	**P**	**14 32 40.1**	**+1.6**
	comp=Z,2.4nm,0.6s,baz=94,slow=9.5,SNR=6.6						
	comp=Z,2.4nm,0.6s						
SPITS	**Spitsbergen Ar**	**67.66**	**350**	P	**P**	**14 33 55.1**	**+0.9**
	comp=Z,1.9nm,0.8s,baz=71,slow=6.2,SNR=2.2						
	comp=Z,1.9nm,0.8s						
FINES	**FINESS Array B**	**75.62**	**334**	P	**P**	**14 34 43.0**	**+0.7**
	comp=Z,3.9nm,1.1s,baz=68,slow=5.1,SNR=7.7						
	comp=Z,3.9nm,1.1s						
KBZ	**Khabaz**	**76.47**	**313**	P	**P**	**14 34 47.7**	**+0.3**
	comp=Z,2.0nm,0.8s,baz=52,slow=3.9,SNR=5.7						
	comp=Z,2.0nm,0.8s						
AKASG	**Malin Array Be**	**80.63**	**324**	P	**P**	**14 35 09.7**	**-0.6**
	comp=Z,0.9nm,0.6s,baz=57,slow=5.0,SNR=6.9						
	comp=Z,0.9nm,0.6s						
HFS	**Hagfors**	**81.01**	**337**	P	**P**	**14 35 13.2**	**+1.1**
	comp=Z,1.4nm,0.7s,baz=90,slow=8.9,SNR=4.1						
	comp=Z,1.4nm,0.7s						
NOA	**NORSAR Array B**	**81.15**	**338**	P	**P**	**14 35 13.6**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=51,slow=7.9,SNR=1.5						
	comp=Z,0.7nm,0.7s						
BRTR	**Keskin Array B**	**84.46**	**313**	P	**P**	**14 35 31.6**	**+0.9**
	comp=Z,1.0nm,0.6s,baz=84,slow=3.4,SNR=6.4						
	comp=Z,1.0nm,0.6s						
QSPA	**South Pole Qui**	**119.74**	**180**	PKP	**PKiKP**	**14 41 46.9**	**0.0**
	comp=Z,0.4nm,0.6s,baz=147,slow=6.9,SNR=1.1						
LPAZ	**La Paz**	**148.56**	**71**	PKPbc	**PKPbc**	**14 42 46.5**	**+0.6**
	comp=Z,0.9nm,0.8s,baz=242,slow=2.8,SNR=3.8						

*NEIC **22** 14:26:13.9±1.9, 10°.1S±0°.2×162°.9E±0°.1, h10^{km}±2^{km}, mb4.4/12, Error ellipse: s-maj=31.2km s-min=9.3km az=31.0*

*IDC **22** 14:26:19.6±7.0, 10°.66S×162°.15E, h0^{km}, mb4.1/3, mbtmp4.2/5, ML3.9/2, Error ellipse: s-maj=124.7km s-min=32.1km az=53.0*

ISC 22 14:26:08.9±1.0**, 9°.5S**±0°.1×**162°.91E**±0°.06**, h10**^{km}**, n38,** σ**1^{s}.32**/32**, mb4.2**/6**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HURO	**Huro Makira**	**1.40**	**225**	P	**Pn**	**14 26 34.8**	**+0.3**
HURO	**Huro Makira**	**1.40**	**225**	S	**Sn**	**14 26 50.6**	**-2.4**
ALEG	**Aligegeo Malai**	**2.31**	**288**	P	**Pg**	**14 26 52.5**	**-0.6**
ALEG	**Aligegeo Malai**	**2.31**	**288**	P	**Pg**	**14 26 52.6**	**-0.6**
HNR	**Honiara**	**2.93**	**271**	Pn	**Pb**	**14 27 01.6**	**+0.4**
HNR	**Honiara**	**2.93**	**271**	Pn	**Pb**	**14 27 02.0**	**+0.8**
	52nm,0.3s,baz=148,slow=12,SNR=23						
HNR				Sn	**Sb**	**14 27 36.8**	**-0.2**
	247nm,0.3s,baz=158,slow=20,SNR=12						
	225nm,0.5s						
HNR	**Honiara**	**2.93**	**271**	P	**Pb**	**14 27 03.3**	**+2.1**
HNR	**Honiara**	**2.93**	**271**	P	**Pb**	**14 27 01.7**	**+0.5**
SAVO	**Savo Central**	**3.08**	**276**	P	**Pb**	**14 27 04.5**	**+0.7**
SAVO	**Savo Central**	**3.08**	**276**	P	**Pb**	**14 27 04.4**	**+0.7**
LUES	**Luesalemba Tem**	**3.18**	**112**	P	**Pn**	**14 26 58.7**	**-0.3**
TATA	**Tatamba Isabel**	**3.26**	**289**	P	**Pb**	**14 27 06.3**	**-0.5**
TATA	**Tatamba Isabel**	**3.26**	**289**	P	**Pb**	**14 27 06.4**	**-0.4**
SANVU	**Saraoutou**	**7.26**	**145**		**Pn**	**14 27 53.9**	**-1.3**
SANVU	**Saraoutou**	**7.26**	**145**	P	**Pn**	**14 27 54.4**	**-0.8**
RABL	**Rabaul**	**11.89**	**295**	Pn	Pn	14 29 09.4	+11
DZM	**Mont Dzumac**	**12.97**	**165**	Pn	**Pn**	**14 29 13.4**	**-0.2**
	0.4nm,0.3s,baz=359,slow=9.8,SNR=16						
	7.7nm,1.0s						
CTAO	**Charters Tower**	**19.24**	**235**		**P**	**14 30 34.0**	**+0.5**
CTAO				IAmb	IAmb	14 30 38.5	
	comp=Z,21nm,0.8s						
EIDS	**Eidsvold**	**19.40**	**214**		**P**	**14 30 34.6**	**-0.6**
EIDS				IAmb	IAmb	14 30 37.6	
	comp=Z,28nm,1.5s						
COEN	**Coen**	**19.83**	**255**	P	**P**	**14 30 37.9**	**-2.1**
COEN				IAmb	IAmb	14 30 48.8	
	comp=Z,10nm,0.7s						
ARMA	**Armidale**	**23.35**	**205**	P	**P**	**14 31 16.2**	**-1.5**
H11S2	**WAKE ISLAND Hy**	**28.04**	**8**	T	T	15 01 43.8	
	baz=188,slow=76,SNR=113						
H11S3	**WAKE ISLAND Hy**	**28.04**	**8**	T	T	15 01 44.2	
	baz=188,slow=76,SNR=101						
H11S1	**WAKE ISLAND Hy**	**28.06**	**8**	T	T	15 01 45.3	
	baz=188,slow=76,SNR=58						
H11N1	**WAKE ISLAND Hy**	**29.27**	**8**	T	T	15 03 15.2	
	baz=188,slow=76,SNR=29						
H11N3	**WAKE ISLAND Hy**	**29.28**	**8**	T	T	15 03 10.3	
	baz=188,slow=76,SNR=51						
H11N2	**WAKE ISLAND Hy**	**29.29**	**8**	T	T	15 03 13.4	
	baz=188,slow=76,SNR=61						
WRA	**Warramunga Arr**	**29.48**	**246**	P	**P**	**14 32 15.1**	**+1.6**
	comp=Z,1.6nm,0.5s,baz=74,slow=8.6,SNR=14						
	comp=Z,1.6nm,0.5s						
STKA	**Stephens Creek**	**29.79**	**219**	P	**P**	**14 32 16.2**	**+0.2**
	comp=Z,1.3nm,0.5s,baz=44,slow=19,SNR=3.8						
	comp=Z,1.3nm,0.5s						
AS31	**Alice Springs**	**31.09**	**239**	P	**P**	**14 32 24.1**	**-3.5**
ASAR	**Alice Springs**	**31.09**	**239**	P	**P**	**14 32 28.6**	**+0.9**
	comp=Z,1.4nm,0.9s,baz=74,slow=8.7,SNR=9.1						
	comp=Z,1.4nm,0.9s						
TOO	**Toolangi**	**32.09**	**207**		**P**	**14 32 36.9**	**+0.6**
TOO				IAmb	IAmb	14 32 39.0	
	comp=Z,4.7nm,0.7s						
KNRA	**Kununurra**	**33.87**	**256**	P	**P**	**14 32 53.0**	**+1.0**
BBOO	**Buckleboo**	**33.96**	**223**	P	**P**	**14 32 52.5**	**-0.2**
FITZ	**Fitzroy Crossi**	**37.14**	**253**	P	**P**	**14 33 21.9**	**+1.8**
PSA00	**Pilbara Seismi**	**43.06**	**249**	P	**P**	**14 34 10.6**	**+1.2**
MBWA	**Marble Bar**	**43.10**	**249**	P	**P**	**14 34 11.4**	**+1.7**
MBWA				IAmb	IAmb	14 34 41.9	
	comp=Z,14nm,1.1s						
QSPA	**South Pole Qui**	**80.52**	**180**	P	**P**	**14 38 22.8**	**+1.6**
QSPA				IAmb	IAmb	14 38 59.6	
	comp=Z,4.0nm,1.2s						

*IDC **22** 14:26:41.2±1.2, 43°.59N×128°.67W, h0^{km}, mb3.8/8, mbtmp3.7/15, ML3.5/7, MS3.7/19, Error ellipse: s-maj=26.0km s-min=12.6km az=47.0*

*NEIC **22** 14:26:42.5±1.6, 43°.68N±0°.06×128°.5W±0°.2, h10^{km}±2^{km}, mb4.6/186, ML3.4/54, Mww4.6/24, Error ellipse: s-maj=19.6km s-min=8.8km az=252.0*

*NEIC **22** 14:26:44.4, 43°.91N×128°.61W, h12^{km}, Moment Tensor Solution. Duration: 0 Moment tensor: Scale 10^{15}Nm; M_{rr}-6.55; $M_{\theta\theta}$1.11; $M_{\phi\phi}$5.43; $M_{r\theta}$1.12; $M_{\theta\phi}$0.24; $M_{\phi r}$-6.52; Fault plane solution: $M_0$8.98000×10^{15} NP1: ϕ_s188.00000°, δ21.60000°, λ-76.98000°. NP2: ϕ_s354.03000°, δ68.98000°, λ-95.10000°. Principal axes: T 8.3017, Plg24.0000°, Azm88.0000°; N 1.2251, Plg5.0000°, Azm356.0000°; P -9.5268, Plg66.0000°, Azm255.0000°;*

*NEIC **22** 14:26:44.4, 43°.81N×128°.33W, h12^{km}*

ISC 22 14:26:43.2±0.6**, 43°.77N**±0°.07×**128°.44W**±0°.07**, h10**^{km}**, n447,** σ**1^{s}.11**/367**, mb4.6**/93**, MS3.6**/13**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**3.12**	**105**	Pn	**Pn**	**14 27 30.1**	**-2.5**
KEBM				IAML		14 28 19.7	
	comp=E,103nm,1.5s						
KEBM				IAML		14 29 21.9	
	comp=N,86nm,1.8s						
I02E	**Swisshome, OR**	**3.33**	**83**	Pn	**Pn**	**14 27 34.9**	**-0.5**
I02E				IAML		14 28 24.7	
	comp=E,79nm,2.2s						
J01E	**Myrtle Point**	**3.33**	**99**		**Pn**	**14 27 33.6**	**-1.8**
J01E				IAML		14 29 03.9	
	comp=E,86nm,3.3s						
K02D	**Willamette Mer**	**3.65**	**105**		**Pn**	**14 27 38.6**	**-1.2**
HEBO	**Mount Hebo**	**3.65**	**65**	Pn	**Pn**	**14 27 39.4**	**-0.4**
HEBO				IAML		14 29 09.9	
	comp=N,95nm,1.9s						
I03D	**Drain, OR**	**3.69**	**89**		**Pn**	**14 27 40.4**	**+0.1**
I03D				IAML		14 28 08.9	
	comp=E,49nm,1.1s						
KSXB	**Camp Six Broad**	**3.87**	**118**	Pn	**Pn**	**14 27 42.9**	**0.0**
KSXB				IAML		14 29 47.8	
	comp=E,43nm,4.5s						
BUCK	**Buck Mountain**	**3.96**	**82**		**Pn**	**14 27 43.4**	**-0.7**
BUCK				IAML		14 29 34.5	
	comp=N,58nm,2.3s						
G03D	**McMinnville, O**	**3.97**	**67**		**Pn**	**14 27 44.7**	**+0.5**
G03D				IAML		14 29 36.6	
	comp=E,62nm,1.7s						
F03A	**Seaside**	**4.09**	**56**	Pn	**Pn**	**14 27 46.1**	**+0.3**
H04D	**Lebanon**	**4.17**	**78**		**Pn**	**14 27 48.1**	**+1.2**
H04D				IAML		14 28 54.5	
	comp=N,59nm,2.2s						
H04D				IAML		14 29 04.5	
	comp=E,56nm,1.6s						
BBOR	**Butler Butte**	**4.29**	**100**		**Pn**	**14 27 50.0**	**+1.3**
BBOR				IAML		14 28 44.0	
	comp=N,33nm,2.6s						
E03A	**Lebam**	**4.42**	**49**		**Pn**	**14 27 48.9**	**-1.5**
E03A				IAML		14 29 25.7	
	comp=E,42nm,1.8s						
E03A				IAML		14 30 33.9	
	comp=N,39nm,3.6s						
G04A	**Mulino**	**4.50**	**69**		**Pn**	**14 27 51.8**	**+0.4**
H04A	**Detroit Lake**	**4.58**	**76**		**Pn**	**14 27 53.3**	**+0.7**
H04A				IAML		14 29 21.9	
	comp=E,29nm,2.1s						
J04A	**Umpqua Nationa**	**4.63**	**94**	Pn	**Pn**	**14 27 54.4**	**+1.0**
YBH	**Yreka Blue Hor**	**4.68**	**114**	Pn	**Pn**	**14 27 53.6**	**-0.4**
YBH	**Yreka Blue Hor**	**4.68**	**114**	Pn	**Pn**	**14 27 55.5**	**+1.5**
	baz=322,slow=8.8,SNR=13						
YBH				Sn	**Sn**	**14 28 49.8**	**+1.4**
	baz=357,slow=20,SNR=1.6						
YBH				LR	LR	14 29 01.3	
	comp=E,16nm,18.0s,baz=312,slow=29						
L04D	**Klamath Falls**	**4.76**	**107**		**Pn**	**14 27 55.5**	**+0.4**
L04D				IAML		14 29 15.8	
	comp=E,44nm,2.2s						
L04D				IAML		14 29 45.8	
	comp=N,37nm,3.8s						
NLWA	**Neilton Lookou**	**4.84**	**40**		**Pn**	**14 27 56.0**	**-0.1**
NLWA				IAML		14 29 26.5	
	comp=N,21nm,3.3s						
C03A	**Quillayute Air**	**4.98**	**32**	Pn	**Pn**	**14 27 57.7**	**-0.2**
J05D	**Fort Rock, OR**	**5.26**	**93**	IAML		14 28 45.6	
	comp=N,26nm,2.9s						
J05D				IAML		14 29 37.5	
	comp=E,29nm,2.3s						
GNW	**Green Mountain**	**5.46**	**44**		**Pn**	**14 28 05.2**	**+0.5**
LON	**Longmire**	**5.54**	**55**	Pn	**Pn**	**14 28 05.6**	**-0.3**
OZB	**Mount Ozzard**	**5.58**	**20**	Pn	**Pn**	**14 28 06.5**	**+0.3**
CLRS	**Cowichan Lake**	**5.87**	**29**		**Pn**	**14 28 10.6**	**+0.4**
PGC	**Sidney**	**5.98**	**34**	Pn	**Pn**	**14 28 13.7**	**+1.9**
CBB	**Campbell River**	**6.61**	**17**		**Pn**	**14 28 21.9**	**+1.5**
HOLB	**Holberg**	**6.88**	**2**		**Pn**	**14 28 26.6**	**+2.5**
WVOR	**Wild Horse Val**	**7.29**	**97**	Pn	**Pn**	**14 28 29.0**	**-1.0**
PNTR	**Pine Nut**	**8.12**	**122**		**Pn**	**14 28 45.8**	**+4.5**
BBB	**Bella Bella**	**8.43**	**1**	Pn	**Pn**	**14 28 46.7**	**+1.4**
	comp=E,0.4nm,0.3s,baz=190,slow=9.0,SNR=3.5						
	comp=E,3.9nm,0.7s						
NEW	**Newport**	**9.06**	**56**	Pn	**Pn**	**14 28 57.9**	**+3.8**
	comp=E,0.3nm,0.3s,baz=299,slow=9.7,SNR=3.1						
NEW				LR	LR	14 32 29.9	
	comp=E,515nm,18.5s,baz=246,slow=38						
	comp=E,1.4nm,0.6s						
NVAR	**Mina Array Bea**	**9.32**	**121**	Pn	**Pn**	**14 28 59.1**	**+1.3**
	comp=E,0.3nm,0.3s,baz=304,slow=14,SNR=14						
NVAR				LR	LR	14 32 38.9	
	comp=E,439nm,20.2s,baz=308,slow=38						
	comp=E,0.9nm,0.7s						
ELK	**Elko**	**10.24**	**103**	Pn	**Pn**	**14 29 14.1**	**+3.7**
	comp=E,0.1nm,0.3s,baz=295,slow=10,SNR=5.1						
ELK				LR	LR	14 33 18.4	
	comp=E,451nm,19.7s,baz=301,slow=38						
	comp=E,0.3nm,0.2s						
V35K	**Ketchikan**	**11.75**	**351**	P	**Pn**	**14 29 30.8**	**0.0**
	baz=168						
CRAG	**Craig**	**12.10**	**347**	P	**Pn**	**14 29 35.0**	**-0.5**
	baz=163						
U33K	**Whale Pass**	**12.72**	**348**	P	**Pn**	**14 29 43.6**	**-0.4**
	baz=164						
WRAK	**Wrangell Islan**	**12.91**	**350**	P	**Pn**	**14 29 46.3**	**-0.3**
	baz=167						
V12A	**Nelson**	**13.17**	**123**	Pn	**Pn**	**14 29 53.0**	**+2.6**
ELS	**Elsinore Mount**	**13.25**	**136**	Pn	**Pn**	**14 29 50.8**	**-0.7**
T35M	**Bob Quinn**	**13.28**	**356**	Pn	**Pn**	**14 29 50.6**	**-1.1**
T35M	**Bob Quinn**	**13.28**	**356**	P	**Pn**	**14 29 50.8**	**-0.9**
	baz=174						
KNB	**Kanab**	**13.67**	**114**	Pn	**Pn**	**14 29 57.2**	**0.0**
PFO	**Pinyon Flats O**	**13.78**	**133**	Pn	**Pn**	**14 29 57.3**	**-1.4**
PFO	**Pinyon Flats O**	**13.78**	**133**	Pn	**Pn**	**14 30 00.4**	**+1.6**
	comp=E,0.2nm,0.3s,baz=288,slow=6.6,SNR=1.6						
PFO				LR	LR	14 34 54.4	
	comp=E,139nm,20.2s,baz=56,slow=36						
	comp=E,0.6nm,0.3s						
PDAR	**Pinedale Array**	**13.79**	**88**	Pn	**P**	**14 30 03.6**	**-4.0**
	baz=282,slow=10,SNR=9.1						
PDAR				LR	LR	14 35 34.0	
	comp=E,394nm,18.3s,baz=270,slow=38						
	comp=E,0.3nm,0.6s						
SIT	**Sitka**	**14.00**	**344**	P	**Pn**	**14 30 00.6**	**-0.8**
	baz=158						
W13A	**Hualapai Mount**	**14.17**	**123**	P	**P**	**14 30 10.8**	**-1.0**
SRU	**San Rafael Swe**	**14.21**	**103**		**P**	**14 30 10.0**	**-2.2**
S32K	**Killisnoo**	**14.25**	**346**	P	**Pn**	**14 30 03.9**	**-1.0**
	baz=161						
S34M	**Telegraph Cree**	**14.26**	**354**	Pn	**Pn**	**14 30 04.0**	**-1.1**
S34M	**Telegraph Cree**	**14.26**	**354**	P	**Pn**	**14 30 04.1**	**-1.0**
	baz=172						
DLBC	**Dease Lake**	**14.72**	**357**	Pn	**Pn**	**14 30 13.1**	**+1.7**
	baz=171,slow=16,SNR=1.9						
BLYC	**Blythe**	**14.74**	**128**	P	**P**	**14 30 17.5**	**-0.3**
YUH	**Yuha Desert**	**14.81**	**134**	Pn	**Pn**	**14 30 12.8**	**0.0**
R32K	**Eaglecrest**	**15.01**	**348**	P	**Pn**	**14 30 14.5**	**-0.7**
	baz=162						
S31K	**Pelican**	**15.02**	**344**	P	**Pn**	**14 30 14.6**	**-0.8**
	baz=157						
Q32M	**Nakina River**	**15.40**	**352**	Pn	**Pn**	**14 30 18.8**	**-1.7**
Q32M	**Nakina River**	**15.40**	**352**	P	**Pn**	**14 30 20.1**	**-0.4**
	baz=169						
O20A	**White River Ci**	**15.45**	**97**	Pn	**Pn**	**14 30 19.1**	**-2.3**
O20A				IAmb	IAmb	14 30 37.0	
	comp=Z,37nm,1.2s						
WUAZ	**Wupatki**	**15.49**	**116**	P	**P**	**14 30 28.3**	**+1.9**
WUAZ				IAmb	IAmb	14 30 38.1	
	comp=Z,45nm,1.4s						
PV21	**Cone Mtn., Par**	**15.54**	**103**	P	**P**	**14 30 28.5**	**+1.5**
PV21				IAmb	IAmb	14 30 38.7	
	comp=Z,50nm,1.4s						
R33M	**Jennings River**	**15.73**	**355**	P	**Pn**	**14 30 24.2**	**-0.5**
	baz=173,SNR=9.0						
113A	**Mohawk Valley,**	**15.89**	**129**		**Pn**	**14 30 27.2**	**+0.3**
K22A	**Casper**	**16.01**	**86**	Pn	**Pn**	**14 30 28.4**	**-0.2**
P32M	**Atlin**	**16.17**	**350**	P	**Pn**	**14 30 30.2**	**-0.2**
	baz=166						
SKAG	**Skagway**	**16.27**	**347**	P	**Pn**	**14 30 31.6**	**-0.1**
	baz=162						
PLBC	**Pleasant Camp**	**16.44**	**346**	P	**Pn**	**14 30 33.9**	**0.0**
	baz=159						
BEAVL	**Fort Liard**	**16.56**	**6**	P	**Pn**	**14 30 35.2**	**-0.2**
	baz=188						
KOTAN	**Kotaneelee Air**	**16.60**	**8**	P	**Pn**	**14 30 35.2**	**-0.7**
	baz=191						
P33M	**Teslin, Yukon**	**16.68**	**352**	P	**Pn**	**14 30 36.8**	**-0.2**
	baz=168						

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P29M  Windy Craggy     16.87 344  Pn    Pn    14 30 38.5 -0.8
P29M  Windy Craggy     16.87 344  P     Pn    14 30 39.3  0.0
      baz=156
P30M  Million Dollar   17.18 345  P     Pn    14 30 43.3 +0.2
      baz=158
PNL   Peninsula        17.27 341  P     Pn    14 30 44.4 +0.1
      baz=152
WHY   Whitehorse       17.36 349  P     Pn    14 30 45.8 +0.3
      baz=164
ISCO  Idaho Springs    17.46  95        Pn    14 30 47.3 +0.2
N32M  Quiet Lake       17.63 353  P     Pn    14 30 48.5 -0.3
      baz=168
O30N  Mendenhall       17.64 348  P     Pn    14 30 48.0 -0.9
      baz=161,SNR=6.3
O29M  Mount Kennedy    17.66 343  P     Pn    14 30 48.5 -0.7
      baz=155
TGTN  Hyland Airport   17.79   0  P     Pn    14 30 50.1 -0.7
      baz=180
PINM  Pinnacle         17.85 340  P     Pn    14 30 50.9 -0.6
      baz=151
HYT   Haines Junctio   17.93 345  P     Pn    14 30 52.1 -0.5
      baz=158
YUK6  Outpost Mounta   18.20 344  P     Pn    14 30 55.7 -0.3
      baz=156
N31M  Braeburn, Yuko   18.28 349  P     Pn    14 30 56.1 -0.6
      baz=162
MESA  MESA             18.36 338  P     Pn    14 30 57.2 -0.7
      baz=147
SDCO  Great Sand Dun   18.36 101        Pn    14 30 57.0 -1.1
O28M  Mount Upton      18.43 342  P     P     14 30 58.5 -0.4
      baz=152
N30M  Aishikik Lake    18.45 347  P     P     14 30 58.6 -0.2
      baz=160
YUK4  Talbot Arm       18.63 344  P     Pn    14 31 01.7 +0.6
      baz=156
FARO  Faro, Yukon      18.72 353  P     P     14 31 00.3 -1.5
FARO  Faro, Yukon      18.72 353  P     P     14 31 01.8  0.0
      baz=168
M31M  Drury Creek, Y   18.80 351  P     P     14 31 02.8 +0.2
      baz=166
YUK8  Steele Glacier   18.80 343  P     P     14 31 02.7 -0.1
      baz=153
DUN6  Lazy B Ranch     18.84 120  P     Pn    14 31 04.3 +0.4
DUN6                              IAmb  IAmb  14 31 18.2
      comp=Z,86nm,1.4s
KAIM  Kayak Island     18.87 335  P     Pn    14 31 04.1 +0.2
      baz=142
CTGM  Chitina Glacie   18.88 340  P     P     14 31 03.5 -0.1
CTGM                              IAmb  IAmb  14 31 23.2
      comp=Z,30nm,1.3s
CTG   Chitna Glacier   18.88 340  P     P     14 31 03.4 -0.2
      baz=150
MMPY  Sheldon Lake,    18.96 356  P     P     14 31 04.2 -0.1
MMPY  Sheldon Lake,    18.96 356  P     P     14 31 04.0 -0.4
      baz=173,SNR=8.1
BARN  Barnard Glacie   19.04 340  P     Pn    14 31 06.9 +0.8
ANMO  Albuquerque      19.10 110  P     Pn    14 31 07.4 +0.3
      comp=Z,0.1nm,0.3s,baz=37,slow=13,SNR=6.1
ANMO                              LR    LR    14 38 58.1
      comp=Z,684nm,18.5s,baz=47,slow=38
      comp=Z,0.9nm,0.6s
Q23K  Middleton Isla   19.12 331  P     P     14 31 06.2 +0.1
      baz=137
CRQE  Cirque           19.15 338  P     P     14 31 06.7 +0.1
      baz=146
CRQM  Cirque           19.17 338  P     Pn    14 31 08.2 +0.5
CRQM                              IAmb  IAmb  14 31 16.2
      comp=Z,59nm,1.3s
Y22D  IRIS PASSCAL I   19.29 113  P     P     14 31 07.8 -0.6
      baz=307
YUK3  Moose Creek      19.39 343  P     P     14 31 09.4 +0.1
      baz=153
T25A  Trinidad         19.41 102  P     Pn    14 31 10.6 -0.2
T25A                              IAmb  IAmb  14 31 21.6
      comp=Z,75nm,1.4s
M29M  Somme Creek      19.61 346  P     Pn    14 31 13.1 +0.2
M29M  Somme Creek      19.61 346  P     P     14 31 11.4 -0.2
      baz=158
VRDI  Verde Repeater   19.64 338  P     P     14 31 11.5 -0.5
MCARA McCarthy VSAT    19.66 339  P     P     14 31 12.0  0.0
      baz=147
WRGLY Wrigley          19.71   7  P     P     14 31 12.0 -0.5
      baz=190,SNR=8.9
BMRM  Bremner River    19.75 336  P     P     14 31 12.7 -0.4
      baz=143
EYAK  Cordova Ski Ar   19.77 334  P     P     14 31 13.0 -0.1
      baz=140
P23K  Montague Islan   19.91 331  P     P     14 31 14.1 -0.6
      baz=136
GLB   Gilahina Butte   19.92 338  P     P     14 31 15.3 +0.4
BVCY  Beaver Creek     20.05 343  P     P     14 31 15.6 -0.6
      baz=153
L29M  L29M             20.17 347  P     P     14 31 17.1 -0.6
      baz=159
M27K  Edge Creek, AK   20.22 342  P     P     14 31 17.3 -0.9
      baz=150,SNR=9.2
N25K  Chitina, Valde   20.27 337  P     Pn    14 31 20.3 -0.4
N25K  Chitina, Valde   20.27 337  P     P     14 31 18.1 -0.7
      baz=144
FFC   Flin Flon        20.33  48  P     P     14 31 17.1 -2.2
FFC                               IAmb  IAmb  14 31 29.6
      comp=Z,23nm,0.9s
YKA   Yellowknife Ar   20.43  19  P     Pn    14 31 23.5 +1.1
      comp=Z,10nm,1.1s,baz=211,slow=9.8,SNR=11
YKA                               LR    LR    14 39 08.4
      comp=Z,66nm,19.5s,baz=242,slow=36
      comp=Z,10nm,1.1s
YKAW1 Yellowknife Wh   20.44  19  P     P     14 31 21.4 +0.9
YKAW1                             IAmb  IAmb  14 31 32.7
      comp=Z,36nm,1.1s
GLI   Glacier Island   20.45 333  P     P     14 31 20.2 -0.4
      baz=138
M26K  Nabesna, AK      20.52 340  P     P     14 31 20.8 -0.6
      baz=148
KLU   Klutina          20.56 336  P     P     14 31 21.7 -0.2
      baz=141
KDAK  Kodiak Island    20.58 321  LR    LR    14 37 22.9
      comp=Z,261nm,18.3s,baz=135,slow=31
KDAK  Kodiak Island    20.58 321  P     P     14 31 21.6 -0.4
      baz=122
OHAK  Old Harbor       20.61 320  P     P     14 31 22.3  0.0
      baz=120
SEW   Seward           20.71 329  P     P     14 31 22.9 -0.5
      baz=132
SII   Sitkinak Islan   20.72 317  P     P     14 31 23.6 -0.1
      baz=117
K29M  Barlow Dome      20.78 349  P     P     14 31 24.1 -0.2
K29M  Barlow Dome      20.78 349  P     P     14 31 23.7 -0.6
      baz=161
L27K  Beaver Creek,    20.83 343  P     P     14 31 24.5 -0.3
      baz=152,SNR=7.0
PWL   Port Wells       20.85 332  P     P     14 31 25.6 +0.7
PWL   Port Wells       20.85 332  P     P     14 31 24.4 -0.6
      baz=136
Q20K  Shuyak Island    20.95 324  P     P     14 31 26.6 +0.6
      baz=124
BRSE  Bradley Lake S   20.96 328  P     P     14 31 25.9 -0.2
      baz=130
BRLK  Bradley Lake     21.03 327  IAmb  IAmb  14 31 41.1
      comp=Z,36nm,1.4s
HARP  HAARP            21.07 338  P     P     14 31 27.5 +0.2
      baz=144
O22K  Cooper Landing   21.07 330  P     P     14 31 27.5 +0.2
      baz=133
M24K  Tolsona, Glenn   21.12 337  IAmb  IAmb  14 31 44.5
      comp=Z,56nm,1.4s
M24K  Tolsona, Glenn   21.12 337  P     P     14 31 27.9  0.0
      baz=142
CHIR  Chirikof Islan   21.14 314  P     P     14 31 28.5 +0.5
      baz=113
L26K  Log Cabin Wild   21.14 341  IAmb  IAmb  14 31 39.7
      comp=Z,25nm,1.4s
MENT  Mentasta         21.15 340  IAmb  IAmb  14 31 40.0
      comp=Z,18nm,1.0s
SCM   Sheep Creek Mo   21.25 335  IAmb  IAmb  14 31 55.7
      comp=Z,28nm,1.1s
SCM   Sheep Creek Mo   21.25 335  P     P     14 31 29.3  0.0
      baz=139
HOM   Homer            21.27 327  P     P     14 31 29.6 +0.2
      baz=128
DAWY  Dawson           21.27 347  P     P     14 31 29.8 +0.2
      baz=157
KNK   Knik Glacier     21.29 333  P     P     14 31 30.3 +0.6
      baz=137
J30M  Hart River       21.32 351  P     P     14 31 29.6 -0.5
      baz=164
R18K  Karluk           21.33 319  P     P     14 31 30.4 +0.3
      baz=119
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M23K  Glacier View     21.34 334  P     P     14 31 30.4 +0.1
      baz=139
J29N  Klondike Camp    21.45 348  P     P     14 31 31.9 +0.4
      baz=160
RC01  Rabbit Creek A   21.50 331  IAmb  IAmb  14 31 45.5
      comp=Z,30nm,1.3s
RC01  Rabbit Creek A   21.50 331  P     P     14 31 32.5 +0.6
      baz=134
SML   Sawmill          21.54 334  IAmb  IAmb  14 31 38.1
      comp=Z,22nm,1.2s
SML   Sawmill          21.54 334  P     P     14 31 33.1 +0.6
      baz=138
PAX   Paxson           21.62 339  P     P     14 31 33.5 +0.2
      baz=144
PMR   Palmer           21.65 333  IAmb  IAmb  14 31 36.3
      comp=Z,21nm,1.3s
PMR   Palmer           21.65 333  P     P     14 31 33.4  0.0
      baz=136
Q19K  Cape Douglas,    21.67 323  P     P     14 31 33.7 -0.1
      baz=123
GHO   Glory Hole Cre   21.71 333  IAmb  IAmb  14 31 46.3
      comp=Z,16nm,1.0s
K27K  Chicken          21.74 344  P     P     14 31 34.6 +0.1
      baz=152
MNTX  Cornudas Mount   21.77 116  IAmb  IAmb  14 31 46.5
      comp=Z,26nm,1.5s
DOT   Dot Lake         21.84 341  IAmb  IAmb  14 31 52.7
      comp=Z,21nm,1.4s
P19K  Oil Pt           21.91 325  P     P     14 31 36.9 +0.6
      baz=125
O20K  Slope Mountain   21.92 327  P     P     14 31 37.1 +0.6
      baz=127
WAT6  Susitna Watana   21.95 336  P     P     14 31 36.6 -0.3
      baz=140,SNR=8.8
I30M  Mount Dempster   21.95 351  P     P     14 31 37.6 +0.7
      baz=164,SNR=8.1
ILSW  Iliamna Southw   22.07 326  IAmb  IAmb  14 31 47.9
      comp=Z,44nm,1.3s
M22K  Willow           22.09 332  P     P     14 31 39.1 +0.9
      baz=134
RIDG  Independent Ri   22.11 340  IAmb  IAmb  14 31 46.9
      comp=Z,29nm,1.1s
RIDG  Independent Ri   22.11 340  P     P     14 31 38.7 +0.3
      baz=147,SNR=20
SCRK  Sand Creek       22.11 342  IAmb  IAmb  14 31 46.9
      comp=Z,22nm,1.4s
SCRK  Sand Creek       22.11 342  P     P     14 31 39.3 +0.8
      baz=149,SNR=12
SUA   Susitna One      22.11 331  IAmb  IAmb  14 31 48.4
      comp=Z,30nm,1.2s
SUA   Susitna One      22.11 331  P     P     14 31 39.2 +0.6
      baz=133
Q18K  Katmai Hardscr   22.13 322  P     P     14 31 39.4 +0.6
      baz=120
DHY   Denali Highway   22.23 337  IAmb  IAmb  14 31 49.7
      comp=Z,28nm,1.0s
DHY   Denali Highway   22.23 337  P     P     14 31 40.4 +0.6
      baz=141,SNR=19
H31M  Peel River       22.33 354  IAmb  IAmb  14 31 44.9
      comp=Z,25nm,1.2s
H31M  Peel River       22.33 354  P     P     14 31 40.9 +0.1
      baz=168,SNR=14
I29M  Ogilvie Camp,    22.33 349  P     P     14 31 41.2 +0.4
      baz=161,SNR=7.7
Q17K  Contact Creek    22.34 320  P     P     14 31 41.9 +0.8
      baz=118
WAT1  Susitna Watana   22.38 336  P     P     14 31 42.1 +0.7
      baz=139
K24K  Donnelly Dome    22.39 340  IAmb  IAmb  14 31 55.1
      comp=Z,13nm,0.9s
K24K  Donnelly Dome    22.39 340  P     P     14 31 42.2 +0.7
      baz=145
SPU   Mount Spurr      22.39 329  IAmb  IAmb  14 31 49.5
      comp=Z,24nm,1.2s
AMTX  Amarillo         22.44 104  IAmb  IAmb  14 31 51.9
      comp=Z,16nm,0.9s
N20K  Mount Spurr      22.46 329  P     P     14 31 43.0 +0.7
      baz=130
SPCR  Spurr Chakacha   22.46 329  P     P     14 31 42.9 +0.6
      baz=130
J26L  Joseph Creek     22.47 343  P     P     14 31 43.2 +0.8
      baz=150,SNR=11
CUT   Chulitna         22.61 333  P     P     14 31 44.4 +0.7
      baz=135
P18K  Big Mountain,    22.61 323  IAmb  IAmb  14 31 51.8
      comp=Z,30nm,1.3s
P18K  Big Mountain,    22.61 323  P     P     14 31 44.2 +0.3
      baz=122,SNR=8.1
I28M  Miner Creek      22.65 348  P     P     14 31 44.5 +0.2
      baz=158,SNR=6.3
O19K  Port Alsworth    22.67 326  P     P     14 31 45.7 +1.2
      baz=125
SKT   Skwentna         22.73 331  IAmb  IAmb  14 31 48.6
      comp=Z,17nm,1.2s
SKT   Skwentna         22.73 331  P     P     14 31 46.4 +1.2
      baz=132,SNR=7.8
O18K  Koktuh Hills     22.85 324  IAmb  IAmb  14 32 05.0
      comp=Z,29nm,1.2s
O18K  Koktuh Hills     22.85 324  P     P     14 31 47.0 +0.6
      baz=122
RND   Reindeer         22.91 336  IAmb  IAmb  14 31 56.7
      comp=Z,27nm,1.3s
ECSD  EROS Data Cent   22.92  79  IAmb  IAmb  14 31 56.0
      comp=Z,18nm,0.9s
CHNA  Chernabura Isl   22.94 310  P     P     14 31 48.1 +0.8
      baz=106
AGMN  Agassiz Nation   22.96  67  IAmb  IAmb  14 32 03.9
      comp=Z,19nm,1.3s
J25K  Salcha River,    22.97 341  P     P     14 31 47.5 -0.1
      baz=147,SNR=5.9
PECS  Pecos            22.98 114  IAmb  IAmb  14 31 59.6
      comp=Z,23nm,1.3s
ULM   Lac du Bonnet    23.00  62  P     P     14 31 50.0 +2.0
      comp=Z,5.9nm,0.9s,baz=275,slow=11,SNR=7.5
ULM                               LR    LR    14 40 56.0
      comp=Z,227nm,18.5s,baz=245,slow=37
      comp=Z,5.9nm,0.9s
P17K  Kvichak River    23.04 322  P     P     14 31 50.0 +1.7
      baz=119
I27K  Kandik River     23.07 346  P     P     14 31 49.5 +0.9
      baz=155,SNR=6.7
I26K  Coal Creek Min   23.09 344  IAmb  IAmb  14 31 58.6
      comp=Z,22nm,1.4s
I26K  Coal Creek Min   23.09 344  P     P     14 31 50.3 +1.6
      baz=152,SNR=9.3
N19K  Bonanza Creek    23.09 327  P     P     14 31 50.7 +1.7
      baz=126,SNR=11
EPYK  Eagle Plains     23.10 351  IAmb  IAmb  14 31 52.1
      comp=Z,23nm,1.4s
EPYK  Eagle Plains     23.10 351  P     P     14 31 50.5 +1.5
      baz=164,SNR=7.3
H29M  Whitestone       23.15 350  IAmb  IAmb  14 31 58.2
      comp=Z,12nm,1.1s
H29M  Whitestone       23.15 350  P     P     14 31 51.0 +1.6
      baz=161,SNR=7.1
HDA   Harding Lake     23.18 339  IAmb  IAmb  14 31 59.1
      comp=Z,20nm,1.5s
HDA   Harding Lake     23.18 339  P     P     14 31 50.1 +0.4
      baz=144
MCK   McKinley         23.18 337  IAmb  IAmb  14 32 05.1
      comp=Z,24nm,1.4s
MCK   McKinley         23.18 337  P     P     14 31 50.4 +0.6
      baz=140
M20K  Styx River       23.24 330  IAmb  IAmb  14 31 58.9
      comp=Z,15nm,1.1s
M20K  Styx River       23.24 330  P     P     14 31 50.9 +0.5
      baz=130,SNR=7.0
S14K  Fog Glacier      23.36 313  P     P     14 31 52.4 +0.7
      baz=109
TRF   Thorofare Moun   23.37 335  IAmb  IAmb  14 32 02.1
      comp=Z,23nm,1.4s
TRF   Thorofare Moun   23.37 335  P     P     14 31 52.1 +0.2
      baz=137,SNR=9.6
G31M  Satah River      23.42 354  IAmb  IAmb  14 31 54.5
      comp=Z,29nm,1.5s
G31M  Satah River      23.42 354  P     P     14 31 52.6 +0.5
      baz=169,SNR=6.1
ILAR  Eielson Array    23.46 340  P     P     14 31 52.1 -0.5
      comp=Z,1.6nm,0.9s,baz=155,slow=7.8,SNR=19
ILAR                              PcP   PcP   14 35 38.5 +0.4
      comp=Z,0.8nm,0.9s,baz=157,slow=2.9,SNR=4.1
ILAR                              LR    LR    14 39 38.4
      comp=Z,100nm,19.1s,baz=240,slow=33
      comp=Z,1.6nm,0.9s
WRH   Wood River Hil   23.53 339  IAmb  IAmb  14 32 00.4
      comp=Z,28nm,1.5s
SDPT  Sand Point       23.57 311  P     P     14 31 54.7 +1.0
      baz=106
PPLA  Purkeypile       23.59 333  P     P     14 31 55.1 +1.1
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      baz=133,SNR=10
N18K  Kilae Creek      23.59 325  IAmb  IAmb  14 32 02.8
      comp=Z,46nm,1.4s
N18K  Kilae Creek      23.59 325  P     P     14 31 55.1 +1.2
      baz=123,SNR=7.6
N18K  Kilae Creek      23.59 325        P     14 31 55.4 +1.6
O17K  Koliganek Bris   23.62 323  P     P     14 31 54.5 +0.3
      baz=120
H27K  Steamboat Moun   23.63 347  P     P     14 31 55.3 +1.0
      baz=156,SNR=8.3
KTH   Kantishna Hill   23.64 335  IAmb  IAmb  14 32 21.1
      comp=Z,13nm,1.2s
G30M  tAoh Zraii Nji   23.64 352  P     P     14 31 54.2 -0.2
      baz=166
P16K  Nushagak River   23.67 321  P     P     14 31 55.1 +0.5
      baz=117
M19K  Big River Lodg   23.72 329  P     P     14 31 56.0 +0.9
      baz=128
PRP   Porcupine Dome   23.77 342  P     P     14 31 56.6 +0.9
      baz=148
G29M  Pine Creek       23.77 351  IAmb  IAmb  14 31 59.4
      comp=Z,19nm,1.3s
G29M  Pine Creek       23.77 351  P     P     14 31 56.6 +1.1
      baz=162,SNR=6.1
COLA  College          23.79 339  P     P     14 31 56.8 +1.1
      baz=143
POKR  Poker Plat Res   23.88 340  P     P     14 31 57.2 +0.6
      baz=144
NEA2  Nenana           23.89 338  IAmb  IAmb  14 31 59.2
      comp=Z,24nm,1.2s
NEA2  Nenana           23.89 338  P     P     14 31 57.4 +0.7
      baz=141,SNR=15
L20K  Farewell, AK     23.89 330  P     P     14 31 57.8 +1.0
      baz=130,SNR=7.5
F31M  Tsiigehtchic     23.90 355  P     P     14 31 57.3 +0.6
      baz=170
CAST  Castle Rocks     23.91 334  P     P     14 31 57.8 +0.9
      baz=134,SNR=6.7
O16K  Kokwok River B   23.98 322  IAmb  IAmb  14 32 06.6
      comp=Z,24nm,1.1s
O16K  Kokwok River B   23.98 322  P     P     14 31 58.5 +0.9
      baz=118
M18K  Stony River      24.02 327  P     P     14 31 58.3 +0.4
      baz=125
N17K  Nushagak Hills   24.05 324  IAmb  IAmb  14 32 07.0
      comp=Z,22nm,0.9s
N17K  Nushagak Hills   24.05 324  P     P     14 31 60.0 +1.8
      baz=121,SNR=8.2
L19K  White Mountain   24.06 329  P     P     14 31 59.5 +1.1
      baz=128,SNR=12
BPAW  Bear Paw Mtn.    24.06 336  IAmb  IAmb  14 32 05.4
      comp=Z,9.9nm,0.8s
BPAW  Bear Paw Mtn.    24.06 336  P     P     14 31 59.4 +1.0
      baz=137,SNR=11
G27K  Doyon Strip      24.18 347  IAmb  IAmb  14 32 15.3
      comp=Z,13nm,1.4s
G27K  Doyon Strip      24.18 347  P     P     14 32 00.4 +0.9
      baz=156,SNR=8.6
F30M  Barrier River    24.22 353  P     P     14 32 00.2 +0.4
      baz=167
CHUM  Lake Minchumin   24.31 334  P     P     14 32 01.1 +0.5
      baz=134
EPLO  Experimental L   24.36  64  IAmb  IAmb  14 32 11.6
      comp=Z,23nm,1.1s
I23K  Minto, Yukon-K   24.40 339  P     P     14 32 02.5 +1.1
      baz=141,SNR=7.5
TXAR  Lajitas Array    24.44 118  P     P     14 32 03.4 +1.1
      comp=Z,1.1nm,0.8s,baz=294,slow=7.2,SNR=14
TXAR                              LR    LR    14 42 17.6
      comp=Z,108nm,19.0s,baz=310,slow=38
      comp=Z,1.1nm,0.8s
H25L  Birch Creek      24.47 343  P     P     14 32 03.4 +1.3
      baz=148,SNR=6.1
K20K  Telida           24.53 332  IAmb  IAmb  14 32 14.1
      comp=Z,18nm,1.4s
K20K  Telida           24.53 332  P     P     14 32 03.5 +0.8
      baz=131,SNR=5.9
H24K  Noodor Dome      24.58 341  IAmb  IAmb  14 32 28.7
      comp=Z,15nm,1.5s
H24K  Noodor Dome      24.58 341  P     P     14 32 04.9 +1.8
      baz=144,SNR=8.2
O15K  Ungalikthiuk R   24.58 320  P     P     14 32 04.5 +1.3
      baz=115
FYU   Fort Yukon       24.61 344  IAmb  IAmb  14 32 06.5
      comp=Z,19nm,1.4s
M17K  Holitna River    24.61 326  IAmb  IAmb  14 32 11.1
      comp=Z,17nm,1.0s
M17K  Holitna River    24.61 326  P     P     14 32 04.3 +0.9
      baz=122
LPIG  La Paz           24.62 137  LR    LR    14 41 22.8
      comp=Z,82nm,18.6s,baz=340,slow=36
F28M  Old Crow         24.67 350  P     P     14 32 04.6 +0.7
      baz=160
G26K  Porcupine Rive   24.67 346  P     P     14 32 04.7 +0.8
      baz=152
MLY   Manley           24.68 337  IAmb  IAmb  14 32 11.8
      comp=Z,13nm,0.9s
MLY   Manley           24.68 337  P     P     14 32 05.0 +1.0
      baz=139,SNR=18
N16K  Nishlik Lake     24.70 323  P     P     14 32 05.0 +0.8
      baz=119
INK   Inuvik           24.74 355  P     P     14 32 05.0 +0.5
      baz=171
L18K  Granite Mounta   24.77 328  IAmb  IAmb  14 32 13.8
      comp=Z,20nm,1.0s
L18K  Granite Mounta   24.77 328  P     P     14 32 05.1 +0.2
      baz=125,SNR=12
G25K  Bearman Lake     24.96 343  P     P     14 32 07.4 +1.0
      baz=148,SNR=8.1
H23K  Yukon River      24.98 339  IAmb  IAmb  14 32 10.9
      comp=Z,12nm,1.1s
H23K  Yukon River      24.98 339  P     P     14 32 07.7 +1.0
      baz=142,SNR=9.7
SAND  Sanderson        25.04 115  IAmb  IAmb  14 32 26.6
      comp=Z,21nm,1.5s
M16K  Timber Creek     25.05 324  P     P     14 32 07.7 +0.4
      baz=119
OZNA  Ozona            25.09 112  IAmb  IAmb  14 32 17.3
      comp=Z,19nm,1.2s
J20K  Nowinta River    25.10 333  P     P     14 32 08.9 +1.1
      baz=132,SNR=13
N15K  Kwethluk River   25.14 322  P     P     14 32 09.3 +1.1
      baz=116
E29M  Blow River       25.18 352  IAmb  IAmb  14 32 17.9
      comp=Z,17nm,1.3s
E29M  Blow River       25.18 352  P     P     14 32 08.9 +0.5
      baz=164
G24K  Hadweenzic Riv   25.20 342  IAmb  IAmb  14 32 17.0
      comp=Z,14nm,1.1s
G24K  Hadweenzic Riv   25.20 342  P     P     14 32 09.6 +1.0
      baz=146,SNR=11
O14K  Tigyukauivet M   25.29 319  P     P     14 32 10.5 +0.9
      baz=113
L17K  Donlin           25.35 327  P     P     14 32 11.1 +1.0
      baz=122,SNR=15
F26K  Sheenjek River   25.40 346  P     P     14 32 11.4 +0.9
      baz=152
E27K  Coleen River     25.44 349  IAmb  IAmb  14 32 14.2
      comp=Z,20nm,1.4s
E27K  Coleen River     25.44 349  P     P     14 32 11.6 +0.7
      baz=157,SNR=12
J19K  Poorman          25.47 332  P     P     14 32 12.3 +1.2
      baz=129,SNR=14
H22K  Ishtalitna Cre   25.51 338  P     P     14 32 13.1 +1.6
      baz=139,SNR=20
J18K  Innoko River     25.52 330  P     P     14 32 12.5 +0.9
      baz=127,SNR=15
E28M  Babbage River    25.57 351  P     P     14 32 12.8 +0.8
      baz=161
F25K  Christian Rive   25.58 345  P     P     14 32 13.7 +1.5
      baz=150,SNR=7.7
L16K  Owhat River      25.61 325  P     P     14 32 13.6 +1.2
      baz=120,SNR=20
I20K  Naaghedeneel     25.63 334  P     P     14 32 13.6 +1.1
      baz=132,SNR=11
M15K  Kasigluk River   25.64 323  P     P     14 32 13.0 +0.3
      baz=116
K17K  Iditarod         25.67 328  P     P     14 32 13.7 +0.7
      baz=123,SNR=12
H21K  Melozitna Rive   25.73 337  IAmb  IAmb  14 32 21.5
      comp=Z,15nm,1.1s
H21K  Melozitna Rive   25.73 337  P     P     14 32 14.2 +0.7
      baz=136,SNR=12
C36M  Paulatuk         25.74   4  P     P     14 32 13.5  0.0
      baz=187
N14K  Kuskokwak Cree   25.76 321  P     P     14 32 14.0 +0.2
      baz=114
G23K  Bananza Creek    25.80 340  IAmb  IAmb  14 32 43.6
      comp=Z,24nm,1.5s
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G23K	Bananza Creek	25.80	340	P	P	14 32 14.4	+0.2
	baz=142,SNR=11						
F24K	Squaw Lake	25.97	343	P	P	14 32 16.1	+0.4
	baz=146						
E25K	Arctic Village	26.03	345	P	P	14 32 17.2	+1.0
	baz=151						
M14K	Bethel	26.23	322	P	P	14 32 18.4	+0.4
	baz=115						
H20K	Anotleneega Mo	26.23	335	P	P	14 32 18.8	+0.8
	baz=133,SNR=16						
COLD	Coldfoot	26.25	341	P	P	14 32 18.6	+0.4
	baz=142						
G22K	Bettles	26.33	340	P	P	14 32 20.1	+1.2
	baz=140						
D27M	Malcolm River	26.34	350	P	P	14 32 19.8	+0.7
	baz=159						
J17K	VABM Dome	26.35	329	IAmb	IAmb	14 32 41.2	
	comp=Z,17nm,1.2s						
J17K	VABM Dome	26.35	329	P	P	14 32 19.4	+0.3
	baz=124						
GCSA	Galena City Sc	26.37	333	P	P	14 32 19.8	+0.5
	baz=129						
DRIO	Del Rio	26.37	114	IAmb	IAmb	14 32 28.3	
	comp=Z,9.2nm,1.1s						
L15K	Ungalak Mounta	26.43	324	P	P	14 32 20.6	+0.7
	baz=117						
G21K	Allakaket	26.55	338	P	P	14 32 21.4	+0.5
	baz=136						
E24K	Your Creek	26.56	343	P	P	14 32 21.7	+0.6
	baz=146,SNR=6.6						
M13K	Dall Lake	26.72	321	P	P	14 32 23.0	+0.7
	baz=112						
UNV	Unalaska Valle	26.72	306		P	14 32 22.0	-0.5
UNV	Unalaska Valle	26.72	306	P	P	14 32 23.0	+0.5
	baz=96						
H19K	Roundabout Mou	26.74	334	IAmb	IAmb	14 32 25.0	
	comp=Z,23nm,1.1s						
H19K	Roundabout Mou	26.74	334	P	P	14 32 23.0	+0.5
	baz=131,SNR=11						
K15K	Wolf Creek Mou	26.74	325	P	P	14 32 22.9	+0.2
	baz=118						
E23K	Chandalar	26.79	342		P	14 32 24.2	+1.1
E23K				IAmb	IAmb	14 32 31.8	
	comp=Z,13nm,1.1s						
E23K	Chandalar	26.79	342	P	P	14 32 23.4	+0.2
	baz=144,SNR=12						
L14K	Kuka Creek	26.80	323	IAmb	IAmb	14 32 34.6	
	comp=Z,18nm,1.2s						
L14K	Kuka Creek	26.80	323	P	P	14 32 22.8	-0.3
	baz=115						
J16K	Anvik River	26.87	328	P	P	14 32 24.3	+0.5
	baz=121						
F22K	John River	26.95	340	P	P	14 32 24.9	+0.3
	baz=140						
F21K	Alatna River	27.07	339	P	P	14 32 25.6	0.0
	baz=137						
C27K	Jago River	27.07	348	P	P	14 32 22.2	-3.4
C27K	Jago River	27.07	348	P	P	14 32 26.1	+0.5
	baz=155						
H18K	Honhosa River	27.12	332	P	P	14 32 26.1	0.0
H18K				IAmb	IAmb	14 32 37.2	
	comp=Z,13nm,1.1s						
H18K	Honhosa River	27.12	332	P	P	14 32 26.6	+0.6
	baz=127						
L40A	Anamosa	27.16	81	P	P	14 32 24.1	-2.6
L40A				IAmb	IAmb	14 32 56.7	
	comp=Z,14nm,1.0s						
I17K	Unalakleet	27.22	329	P	P	14 32 27.6	+0.7
	baz=122						
D25K	Kavik River	27.23	346	P	P	14 32 26.2	-0.8
D25K	Kavik River	27.23	346	P	P	14 32 27.3	+0.2
	baz=151						
TOLK	Toolik Lake Re	27.26	343	P	P	14 32 26.3	-1.1
TOLK				IAmb	IAmb	14 32 36.1	
	comp=Z,21nm,1.2s						
TOLK	Toolik Lake Re	27.26	343	P	P	14 32 27.2	-0.1
	baz=145,SNR=11						
G19K	Purcell Mounta	27.34	335	P	P	14 32 28.5	+0.5
	baz=131						
E22K	Anaktuvuk Pass	27.35	341		P	14 32 27.9	-0.2
E22K				IAmb	IAmb	14 32 36.5	
	comp=Z,12nm,1.3s						
E22K	Anaktuvuk Pass	27.35	341	P	P	14 32 28.3	+0.2
	baz=141						
P40A	Paris	27.37	86	P	P	14 32 27.3	-1.3
P40A				IAmb	IAmb	14 32 33.2	
	comp=Z,10nm,1.4s						
BLKN	Baker Lake	27.52	30		P	14 32 29.5	-0.1
BLKN				IAmb	IAmb	14 32 37.3	
	comp=Z,15nm,1.5s						
C26K	Camden Bay	27.52	348	P	P	14 32 29.6	+0.1
	baz=153,SNR=6.8						
H17K	Granite Mounta	27.52	331	P	P	14 32 29.1	-0.6
	baz=125						
TREL	Terrell	27.52	103	P	P	14 32 28.3	-1.7
D24K	Happy Valley	27.54	344	P	P	14 32 28.2	-1.5
	baz=147						
F20K	Avaraart Lake	27.55	337	P	P	14 32 29.2	-0.7
	baz=134						
G18K	Tagagawik	27.68	334	P	P	14 32 30.0	-1.1
	baz=128						
R40A	Maddies Statio	27.68	89	IAmb	IAmb	14 32 43.5	
	comp=Z,23nm,1.4s						
D23K	Nanushuk River	27.76	343		P	14 32 31.0	-0.8
D23K				IAmb	IAmb	14 32 43.5	
	comp=Z,18nm,1.4s						
D23K	Nanushuk River	27.76	343	P	P	14 32 31.3	-0.5
	baz=144						
J14K	Nanvaranak Lak	27.78	325	P	P	14 32 30.5	-1.5
	baz=116						
K13K	Kusilvak Mount	27.90	323	P	P	14 32 32.8	-0.2
	baz=114						
C24K	Franklin Bluff	27.99	345	P	P	14 32 32.7	-1.0
	baz=147						
F19K	Shaleruckik Mo	28.00	336	P	P	14 32 33.3	-0.6
	baz=131						
M11K	Mekoryuk	28.03	320	P	P	14 32 34.1	-0.1
	baz=109						
NIKH	Nikolski High	28.05	304	P	P	14 32 34.5	0.0
	baz=92						
G17K	Kiwalik Mounta	28.10	332	P	P	14 32 34.6	-0.2
	baz=125						
E21K	Killik River	28.10	340	P	P	14 32 34.0	-0.8
	baz=138						
D22K	Ayikyak River	28.13	342	P	P	14 32 34.3	-0.8
	baz=141						
MGMO	Mountain Grove	28.14	91	P	P	14 32 34.3	-1.2
MGMO				IAmb	IAmb	14 32 49.1	
	comp=Z,12nm,1.2s						
H16K	Elim	28.19	330	P	P	14 32 35.2	-0.4
	baz=121						
E19K	Redstone River	28.26	337	P	P	14 32 36.5	+0.3
E19K	Redstone River	28.26	337	P	P	14 32 35.6	-0.7
	baz=132						
A36M	Sachs Harbour	28.34	2	P	P	14 32 34.9	-2.0
	baz=185						
MIAR	Mount Ida	28.38	97	P	P	14 32 37.1	-0.5
MIAR				IAmb	IAmb	14 32 56.7	
	comp=Z,14nm,1.1s						
F18K	Selawik	28.43	334	P	P	14 32 36.3	-1.4
	baz=128						
C23K	Itkillik River	28.46	344	IAmb	IAmb	14 32 46.5	
	comp=Z,13nm,1.2s						
C23K	Itkillik River	28.46	344	P	P	14 32 36.5	-1.4
	baz=145						
E20K	Nigu River	28.53	339	P	P	14 32 37.0	-1.7
	baz=135						
G16K	Koyuk River	28.64	331	P	P	14 32 37.7	-1.8
	baz=122						
FCAR	Ozark Folk Cen	28.79	93	P	P	14 32 39.7	-1.6
FCAR				IAmb	IAmb	14 33 02.5	
	comp=Z,17nm,1.5s						
C21K	Knifeblade Rid	28.84	341	P	P	14 32 39.9	-1.4
	baz=138						
F17K	Baldwin Pennin	28.85	333	P	P	14 32 39.9	-1.5
	baz=125						
D20K	Etivluk River	28.97	339	P	P	14 32 41.0	-1.5
	baz=135						
HDIL	Hopedale	29.01	83	P	P	14 32 42.1	-1.0
G15K	Niukluk	29.04	329	P	P	14 32 41.3	-1.8
	baz=119						
B21K	Ikpikpuk River	29.15	342	P	P	14 32 41.4	-2.6
	baz=139						
D19K	Kuna River	29.21	338	P	P	14 32 44.1	-0.6
D19K				IAmb	IAmb	14 32 47.0	
	comp=Z,14nm,1.2s						
D19K	Kuna River	29.21	338	P	P	14 32 42.1	-2.6
	baz=132						
E18K	Tukpahlearik C	29.23	335	P	P	14 32 42.0	-2.8
	baz=128						
E17K	Hotham Inlet	29.41	334	P	P	14 32 43.6	-2.8
	baz=126						
B22K	Teshekpuk Lake	29.44	343	P	P	14 32 43.4	-3.2
	baz=141						
F15K	North Star Dit	29.61	330	P	P	14 32 45.7	-2.6
	baz=120						
C19K	Lookout Ridge	30.02	338	P	P	14 32 49.4	-2.5
	baz=131						
B20K	Meade River	30.03	341	P	P	14 32 49.8	-2.1
	baz=136						
F14K	Arctic Creek	30.11	329	P	P	14 32 50.6	-2.1
	baz=117						
D17K	Noatak River	30.16	334	P	P	14 32 50.8	-2.2
	baz=125						
C18K	Utukok River	30.17	337	P	P	14 32 50.8	-2.4
	baz=128						
A22K	Sinclair Lake	30.28	343	P	P	14 32 51.4	-2.7
	baz=140						
C17K	DeLong Mountai	30.64	336	P	P	14 32 54.7	-2.7
	baz=126						
TNA	Tin City	30.75	329	P	P	14 32 55.7	-2.5
	baz=116						
E46A	Sault Ste Mari	30.98	70	P	P	14 33 00.5	0.0
OXF	Oxford	31.40	94	P	P	14 33 03.2	-1.2
WVT	Waverly	31.80	90	P	P	14 33 06.4	-1.4
WVT				IAmb	IAmb	14 33 22.8	
	comp=Z,8.8nm,0.9s						
T47A	Sharon Grove	31.95	88	P	P	14 33 08.0	-1.1
T47A				IAmb	IAmb	14 33 23.7	
	comp=Z,6.6nm,0.9s						
P48A	Milroy	32.17	83	P	P	14 33 10.9	-0.2
V48A	Smith Brothers	32.70	90	P	P	14 33 17.1	+1.3
V48A				IAmb	IAmb	14 33 30.3	
	comp=Z,11nm,1.1s						
SWET	Sewanee	33.59	90	P	P	14 33 23.5	-0.1
SWET				IAmb	IAmb	14 33 26.4	
	comp=Z,9.4nm,1.1s						
W50A	Signal Mountai	34.04	90	P	P	14 33 27.0	-0.5
FPAL	Fort Paine	34.14	91	P	P	14 33 28.7	+0.4
FPAL				IAmb	IAmb	14 33 36.7	
	comp=Z,12nm,1.0s						
X51A	Calhoun	34.67	90	P	P	14 33 31.8	-1.1
SADO	Sadowa	34.88	71	LR	LR	14 48 08.8	
	comp=Z,219nm,20.6s,baz=338,slow=37						
TKL	Tuckaleechee C	34.95	88	LR	LR	14 48 32.2	
	comp=Z,393nm,19.7s,baz=316,slow=37						
152A	Waverly Hall	35.71	93	P	P	14 33 40.0	-1.9
152A				IAmb	IAmb	14 33 57.0	
	comp=Z,16nm,1.1s						
FRB	Frobisher Bay	38.83	38	LR	LR	14 50 46.9	
	comp=Z,93nm,18.1s,baz=334,slow=37						
BILL	Bilibino	41.19	329		P	14 34 27.9	+0.4
BILL				IAmb	IAmb	14 34 34.6	
	comp=Z,21nm,1.5s						
SFJD	Kangerlussuaq	46.06	32	LR	LR	14 54 29.1	
	comp=Z,75nm,19.6s,baz=282,slow=36						
SUMG	Summit	48.90	24		P	14 35 30.6	+1.4
H11N3	WAKE ISLAND Hy	58.44	268	T	T	15 39 51.8	
	baz=49,slow=75,SNR=53						
H11N2	WAKE ISLAND Hy	58.45	268	T	T	15 40 00.1	
	baz=49,slow=75,SNR=43						
H11N1	WAKE ISLAND Hy	58.46	268	T	T	15 40 00.0	
	baz=49,slow=75,SNR=48						
H11S1	WAKE ISLAND Hy	59.37	267	T	T	15 41 02.5	
	baz=50,slow=75,SNR=38						
H11S2	WAKE ISLAND Hy	59.38	267	T	T	15 40 59.3	
	baz=50,slow=75,SNR=28						
H11S3	WAKE ISLAND Hy	59.39	267	T	T	15 41 02.6	
	baz=50,slow=75,SNR=26						
SDV	Santo Domingo	60.84	107	LR	LR	15 05 30.8	
	comp=Z,41nm,18.1s,baz=48,slow=38						
PCRV	Puerto La Cruz	64.16	101	LR	LR	15 06 36.7	
	comp=Z,84nm,20.9s,slow=37						
CLL	Collm	79.57	23	*e*P	P	14 38 50.0	-0.1
HHC	Hu-ho-hao-te	79.96	318	*e*P	P	14 38 52.3	-0.3
HHC				pmax	pmax		
	comp=Z,57nm,0.6s						
HHC				pmax	pmax		
	comp=Z,5µm,6.3s						
LPAZ	La Paz	81.23	122	P	P	14 38 58.5	-1.7
	comp=Z,1.1nm,0.7s,baz=262,slow=0.3,SNR=4.9						
LPAZ				LR	LR	15 15 07.6	
	comp=Z,54nm,20.1s,baz=44,slow=36						
	comp=Z,1.1nm,0.7s						
GERES	GERESS Array B	81.97	24	P	P	14 39 04.6	+1.4
	comp=Z,0.1nm,0.3s,baz=336,slow=2.2,SNR=3.8						
	comp=Z,0.1nm,0.3s						
NJ2	Nanjing	82.73	308	*e*P	P	14 39 07.3	0.0
NJ2				pmax	pmax		
	comp=Z,19nm,0.5s						
ESDC	Sonseca Array	83.00	40	P	P	14 39 08.8	+0.1
	comp=Z,1.0nm,1.1s,baz=330,slow=4.9,SNR=4.4						
	comp=Z,1.0nm,1.1s						
AKASG	Malin Array Be	83.92	14	P	P	14 39 14.0	+0.9
	comp=Z,0.5nm,0.6s,baz=3.8,slow=6.0,SNR=7.5						
	comp=Z,0.5nm,0.6s						
PZH	PanZhiHua	96.30	316	P	P	14 40 12.8	+0.5
PZH				pmax	pmax		
	comp=Z,100nm,4.8s						
QSPA	South Pole Qui	133.57	180	PKP	PKPdf	14 45 58.0	-0.8
	comp=Z,1.1nm,1.0s,baz=60,slow=0.5,SNR=3.0						

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*MOS **22** 14:29:54.5±0.9, 28°.43N×104°.85E, h12^{km}, mb5.6/71, MS4.9/28, Error ellipse: s-maj=5.4km s-min=3.5km az=120.4*

*BJI **22** 14:29:56.2, 28°.40N×104°.94E, h10^{km}, mB5.3/39, mb5.2/62, ML5.7/23, Ms5.6/81, Ms7 5.3/80*

*NEIC **22** 14:29:56.2, 28°.44N×104°.87E, h12^{km}*

*NEIC **22** 14:29:56.2, 28°.24N×104°.87E, h12^{km}, Moment Tensor Solution. Duration: 2^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}0.73; $M_{\theta\theta}$0.03; $M_{\phi\phi}$-0.77; $M_{r\theta}$0.56; $M_{\theta\phi}$0.01; $M_{\phi r}$-0.66; Fault plane solution: $M_0$1.14000×10^{17} NP1:ϕ_s18.18000°, δ26.93000°, λ132.43000°. NP2:ϕ_s152.46000°, δ70.47000°, λ71.08000°. Principal axes: T 1.2118, Plg60.0000°, Azm35.0000°; N -0.1531, Plg18.0000°, Azm159.0000°; P -1.0587, Plg23.0000°, Azm257.0000°;*

*NEIC **22** 14:29:56.1±1.8, 28°.40N±0°.07×104°.81E±0°.05, h10^{km}±1^{km}, mb5.6/374, Mww5.3/42 Error ellipse: s-maj=13.0km s-min=6.2km az=27.0*

*IDC **22** 14:29:56.5±2.3, 28°.42N×104°.80E, h12^{km}±14^{km}, mb5.1/45, mbtmp5.1/47, ML4.9/1, MS4.6/56, Error ellipse: s-maj=9.6km s-min=8.4km az=20.0*

*GCMT **22** 14:29:58.2±0.1, 28°.42N±0°.01×104°.89E±0°.01, h12^{km}, MW5.2/140, Moment Tensor Solution. s93,c125; s140,c269; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.79±.01; $M_{\theta\theta}$0.06±.01; $M_{\phi\phi}$-0.85±.01; $M_{r\theta}$-0.18±.04; $M_{\theta\phi}$0.06±.01; $M_{\phi r}$-0.06±.03; Best double couple: $M_0$0.84800×10^{17} NP1:ϕ_s343.00000°, δ45.00000°, λ71.00000°. NP2:ϕ_s190.00000°, δ48.00000°, λ108.00000°. Principal axes: T 0.8380, Plg76.0000°, Azm170.0000°; N 0.0190, Plg14.0000°, Azm357.0000°; P -0.8580, Plg2.0000°, Azm267.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **22** 14:30:00.7, 28°.09N×104°.52E, h26^{km}, mb5.4, Ms4.8*

ISC 22 14:29:56.8±0.4, **28°.45N**±0°.02×**104°.88E**±0°.03, **h13**^{km}±2^{km}, **h12**^{km}**:pP-P, n1281, σ1^{s}16**/1252, **mb5.5**/383, **MS4.8**/96, **63C-33D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GYA	Guiyang	2.54	141	⇑Pn	Pn	14 30 40.1	+2.2
GYA				Sn	Sn	14 31 10.6	+1.9
GYA				smax	smax		
	comp=N,20µm,1.3s						
GYA				smax	smax		
	comp=E,20µm,1.2s						
CD2	Chengdu	2.64	339	⇑Pn	Pn	14 30 40.8	+1.6
CD2				Sn	Sn	14 31 12.1	+0.9
CD2				Sg	Sg	14 31 20.3	-1.4
CD2				smax	smax		
	comp=N,44µm,0.8s						
CD2				smax	smax		
	comp=E,91µm,0.6s						
PZH	PanZhiHua	3.39	236	Pn	Pn	14 30 52.0	+2.4
PZH				Sn	Sn	14 31 28.9	-0.8
PZH				Sg	Sg	14 31 43.0	-2.7
PZH				smax	smax		
	comp=N,5µm,1.1s						
PZH				smax	smax		
	comp=E,3µm,1.1s						
PZH				LR	LR		
	comp=N,58µm,12.7s						
PZH				LR	LR		
	comp=E,47µm,8.9s						
PZH				LR	LR		
	comp=Z,50µm,8.2s						
KMI	Kunming	3.82	210	⇑Pn	Pn	14 30 57.6	+2.0
KMI				Sn	Sn	14 31 41.9	+1.4
KMI				Sg	Sg	14 31 58.9	-0.6
KMI				smax	smax		
	comp=N,2µm,1.1s						
KMI				smax	smax		
	comp=E,2µm,1.1s						
KMI				LR	LR		
	comp=N,36µm,8.1s						
KMI				LR	LR		
	comp=E,74µm,8.2s						
KMI				LR	LR		
	comp=Z,29µm,5.8s						
ENH	Enshi	4.42	65		Pn	14 31 06.1	+2.5
ENH	Enshi	4.42	65	P	Pn	14 31 07.0	+3.4
GULI	GuiLin	5.82	121	Pn	Pn	14 31 23.9	+1.0
GULI				Sn	Sn	14 32 29.8	+0.2
GULI				LR	LR		
	comp=N,68µm,7.7s						
GULI				LR	LR		
	comp=E,48µm,7.1s						
GULI				LR	LR		
	comp=Z,20µm,5.4s						
XAN	Xi'an	6.56	31	Pn	Pn	14 31 33.8	+0.7
XAN				Sg	Sg	14 33 22.4	-5.1
XAN				smax	smax		
	comp=N,29µm,1.2s						
XAN				smax	smax		
	comp=E,15µm,1.0s						
XAN				LR	LR		
	comp=N,88µm,8.4s						
XAN				LR	LR		
	comp=E,83µm,10.5s						
XAN				LR	LR		
	comp=Z,65µm,7.2s						
TNCH	TengChong	6.62	241	Pn	Pn	14 31 35.8	+1.7
TNCH				Sg	Sg	14 33 24.5	-4.9
TNCH				smax	smax		
	comp=N,3µm,1.7s						
TNCH				smax	smax		
	comp=E,3µm,2.1s						
TNCH				LR	LR		
	comp=N,43µm,5.0s						
TNCH				LR	LR		
	comp=E,29µm,4.8s						
TNCH				LR	LR		
	comp=Z,25µm,10.2s						
CNSH	ChangSha	7.11	90	Pn	Pn	14 31 42.1	+1.6
CNSH				Sn	Sn	14 32 59.8	-1.4
CNSH				smax	smax		
	comp=N,4µm,1.1s						
CNSH				smax	smax		
	comp=E,3µm,1.1s						
SLVN	Son La	7.13	187		Pn	14 31 41.8	+0.8
SLVN	Son La	7.13	187	P	Pn	14 31 43.2	+2.2
LZH	Lanzhou	7.67	354	Pn	Pn	14 31 49.8	+1.4
LZH				Sn	Sn	14 33 15.3	0.0
LZH				Sg	Sg	14 33 59.0	-3.9
LZH				smax	smax		
	comp=N,2µm,1.1s						
LZH				smax	smax		
	comp=E,4µm,1.2s						
LZH				LR	LR		
	comp=N,23µm,6.4s						
LZH				LR	LR		
	comp=E,21µm,6.0s						
LZH				LR	LR		
	comp=Z,17µm,6.2s						
WHN	Wuhan	8.52	73	P	Pn	14 32 01.6	+1.7
WHN				LR	LR		
	comp=Z,94µm,13.2s						
LYN	LuoYang	8.89	45	⇓P	Pn	14 32 05.6	+0.6
LYN				S	Sn	14 33 44.4	-0.7
GZH	Guangzhou	9.31	123	P	Pn	14 32 10.1	-0.7
GZH				S	Sn	14 33 55.4	-0.1
GZH				smax	smax		
	comp=N,3µm,1.3s						
GZH				smax	smax		
	comp=E,2µm,0.9s						
HKPS	Hong Kong Po S	10.39	124		Pn	14 32 23.0	-2.5
QIZ	Qiongzhong	10.42	153	P	Pn	14 32 26.3	+0.3
QIZ				S	Sn	14 34 21.9	-0.8
QIZ				pmax	pmax		
	comp=Z,25nm,0.9s						
QIZ				pmax	pmax		
	comp=Z,190nm,2.6s						
QIZ				LR	LR		
	comp=E,20µm,12.0s						
QIZ				LR	LR		
	comp=Z,11µm,7.7s						
CHTO	Chiang Mai	11.02	211		Pn	14 32 37.0	+2.8
CHTO	Chiang Mai	11.02	211	P	Pn	14 32 37.5	+3.3
CHTO	Chiang Mai	11.02	211	P	Pn	14 32 37.7	+3.5
CHTO	Chiang Mai	11.02	211	P	Pn	14 32 37.0	+2.8
TIY	Taiyuan	11.20	32	*e*P	Pn	14 32 36.3	-0.4
TIY				pmax	pmax		
	comp=Z,89nm,0.9s						
TIY				LR	LR		
	comp=N,22µm,9.8s						
TIY				LR	LR		
	comp=E,20µm,8.8s						
TIY				LR	LR		
	comp=Z,11µm,11.9s						
CM31	Chiang Mai Arr	11.33	210	P	Pn	14 32 42.1	+3.6
	SNR=37						
CMAR	Chiang Mai Arr	11.33	210	Pn	Pn	14 32 41.9	+3.3
	0.6nm,0.3s,baz=25,slow=13,SNR=106						
CMAR				Lg	Lg	14 35 52.1	
	baz=28,slow=21						
CMAR				LR	LR	14 37 34.0	
	comp=Z,5µm,19.4s,baz=30,slow=41						
CMAR				PcP	PcP	14 38 34.0	+1.1
	3.6nm,0.8s,baz=24,slow=0.7,SNR=5.7						
GOMU	GeErMu	11.49	315	P	Pn	14 32 42.8	+1.8
GOMU				pP		14 32 48.8	
GOMU				sP		14 32 54.4	
GOMU				S	Sn	14 34 49.6	+0.2
GOMU				sS		14 35 04.8	
GOMU				pmax	pmax		
	comp=Z,18nm,1.0s						
GOMU				LR	LR		
	comp=N,13µm,8.9s						
GOMU				LR	LR		
	comp=E,13µm,9.6s						
GOMU				LR	LR		
	comp=Z,20µm,9.4s						
GTA	Gaotai	11.71	340	⇑P	Pn	14 32 46.3	+2.5
GTA				sP		14 32 52.4	
GTA				pmax	pmax		
	comp=Z,85nm,1.2s						
GTA				pmax	pmax		
	comp=Z,500nm,5.1s						
GTA				LR	LR		
	comp=N,8µm,15.3s						
GTA				LR	LR		
	comp=E,16µm,14.9s						
GTA				LR	LR		
	comp=Z,8µm,13.8s						
LSA	Lhasa	12.07	279	P	Pn	14 32 50.3	+1.3
LSA				LR	LR		
	comp=N,3µm,8.8s						
LSA				LR	LR		
	comp=Z,18µm,10.6s						
LSA	Lhasa	12.07	279	P	Pn	14 32 50.7	+1.6
HNS	HongShan	12.16	40	P	Pn	14 32 50.9	+1.2
HNS				S	Sn	14 35 04.8	-0.3
HNS				LR	LR		
	comp=N,16µm,9.2s						
HNS				LR	LR		
	comp=E,6µm,9.2s						
HNS				LR	LR		
	comp=Z,11µm,6.1s						
NJ2	Nanjing	12.61	70	⇑P	Pn	14 32 58.3	+2.4
NJ2				sP	P	14 33 07.6	+0.2
NJ2				S	Sn	14 35 15.8	-0.4
NJ2				pmax	pmax		

	comp=Z,46nm,1.2s						
NJ2				LR	LR		
	comp=N,10µm,8.8s						
NJ2				LR	LR		
	comp=E,29µm,7.8s						
NJ2				LR	LR		
	comp=Z,31µm,8.4s						
QZH	**Quanzhou**	**12.75**	**103**	P	**Pn**	**14 32 59.5**	**+1.6**
QZH				S	**Sn**	**14 35 17.3**	**-2.4**
QZH				LR	LR		
	comp=E,12µm,6.7s						
QZH				LR	LR		
	comp=Z,13µm,5.2s						
BTO	**Baotou**	**12.85**	**18**	*e*P	**Pn**	**14 32 59.5**	**+0.2**
BTO				PP	**P**	**14 33 10.8**	**+0.6**
BTO				S	**Sn**	**14 35 23.8**	**+1.6**
BTO				pmax	pmax		
	comp=Z,280nm,1.4s						
BTO				LR	LR		
	comp=E,38µm,7.0s						
BTO				LR	LR		
	comp=Z,11µm,7.9s						
TIA	**Tai'an**	**12.93**	**50**	P	**Pn**	**14 33 00.0**	**-0.2**
TIA				pmax	pmax		
	comp=Z,83nm,0.9s						
TIA				pmax	pmax		
	comp=Z,700nm,5.2s						
TIA				LR	LR		
	comp=N,16µm,8.4s						
TIA				LR	LR		
	comp=E,12µm,8.6s						
TIA				LR	LR		
	comp=Z,15µm,9.0s						
BRDH	**Bariadhala**	**13.25**	**247**	Pn	**Pn**	**14 33 03.8**	**-0.9**
	151nm,0.3s,baz=266,slow=23,SNR=0.7						
BRDH				LR	LR	14 37 53.5	
	comp=Z,2µm,21.7s,baz=63,slow=36						
HHC	**Hu-ho-hao-te**	**13.54**	**22**	*e*P	**Pn**	**14 33 08.4**	**-0.3**
HHC				pP	P	14 33 12.0	-5.8
HHC				sP		14 33 15.3	
HHC				PP	**PnPn**	**14 33 20.0**	**+3.3**
HHC				S	**Sn**	**14 35 41.3**	**+2.2**
HHC				sS	S	14 35 45.8	-17
HHC				SS	**SnSn**	**14 35 56.6**	**+5.0**
HHC				pmax	pmax		
	comp=Z,78nm,0.8s						
HHC				pmax	pmax		
	comp=Z,260nm,4.3s						
HHC				LR	LR		
	comp=N,7µm,6.6s						
HHC				LR	LR		
	comp=E,18µm,6.1s						
HHC				LR	LR		
	comp=Z,2µm,6.3s						
SSE	**Sheshan**	**14.41**	**75**	P	**Pn**	**14 33 20.3**	**-0.3**
SSE				pmax	pmax		
	comp=Z,32nm,0.7s						
SSE				pmax	pmax		
	comp=Z,110nm,3.3s						
SSE				LR	LR		
	comp=N,7µm,7.2s						
SSE				LR	LR		
	comp=E,1µm,7.5s						
BJT	**Baijiatuau**	**14.83**	**36**		**Pn**	**14 33 24.0**	**-2.3**
BJT	**Baijiatuau**	**14.83**	**36**	P	**Pn**	**14 33 27.7**	**+1.4**
BJT	**Baijiatuau**	**14.83**	**36**	P	**Pn**	**14 33 24.0**	**-2.3**
BJI	**Beijing**	**14.85**	**36**	P	**Pn**	**14 33 26.4**	**-0.1**
BJI				pmax	pmax		
	comp=Z,30nm,1.2s						
BJI				pmax	pmax		
	comp=Z,340nm,3.5s						
TPUB	**Ta-pu**	**15.07**	**106**	P	**Pn**	**14 33 32.2**	**+2.6**
SSLB	**Suanglung**	**15.17**	**104**		**Pn**	**14 33 33.0**	**+2.1**
SSLB	**Suanglung**	**15.17**	**104**	P	**P**	**14 33 33.7**	**-2.2**
YHNB	**Yeheng**	**15.24**	**100**	P	**Pn**	**14 33 33.9**	**+2.1**
NACB	**Ninganchiao**	**15.58**	**102**	P	**P**	**14 33 39.3**	**-1.2**
YULB	**Yu-li**	**15.61**	**105**		**Pn**	**14 33 34.1**	**-2.5**
YULB	**Yu-li**	**15.61**	**105**	P	**P**	**14 33 39.3**	**-1.5**
TWG	**Pinlang**	**15.64**	**107**		**Pn**	**14 33 34.6**	**-2.4**
TWGBT	**Beinan**	**15.65**	**107**	P	**P**	**14 33 39.8**	**-1.5**
EVN	**Everest**	**15.93**	**273**		**Pn**	**14 33 39.5**	**-1.9**
DLV	**Lat**	**16.76**	**168**		**P**	**14 33 53.8**	**0.0**
DLV	**Lat**	**16.76**	**168**	P	**P**	**14 33 54.2**	**+0.4**
DL2	**Dalian**	**17.39**	**49**	P	**P**	**14 34 00.8**	**+0.4**
DL2				pmax	pmax		
	comp=Z,150nm,0.8s						
DL2				pmax	pmax		
	comp=Z,1µm,6.9s						
DL2				LR	LR		
	comp=N,8µm,18.0s						
DL2				LR	LR		
	comp=E,5µm,14.3s						
DL2				LR	LR		
	comp=Z,7µm,13.3s						
XLT	**XiLinHaoTe**	**17.85**	**27**	*e*P	**Pn**	**14 34 05.1**	**+0.1**
XLT				pP	pP	14 34 07.8	-1.5
XLT				PP	**PnPn**	**14 34 20.3**	**+4.5**
XLT				S	**Sn**	**14 37 22.1**	**-1.8**
XLT				pmax	pmax		
	comp=Z,170nm,0.9s						
XLT				pmax	pmax		
	comp=Z,750nm,9.6s						
XLT				LR	LR		
	comp=E,13µm,11.5s						
XLT				LR	LR		
	comp=Z,3µm,6.8s						
SONM	**Songino Array**	**19.39**	**3**	P	**Pn**	**14 34 23.6**	**-0.2**
	3.6nm,0.3s,baz=185,slow=12,SNR=133						
	41nm,0.7s						
ULN	**Ulaanbaatar**	**19.46**	**4**	P	**Pn**	**14 34 24.2**	**-0.5**
ULN	**Ulaanbaatar**	**19.46**	**4**	P	**Pn**	**14 34 24.3**	**-0.3**
ULN	**Ulaanbaatar**	**19.46**	**4**	P	**Pn**	**14 34 24.8**	**+0.2**
HJU	**Haeju**	**19.86**	**56**	P	**Pn**	**14 34 29.0**	**-0.2**
HJU				AmB			
	comp=Z,3µm,3.6s						
HJU				AMS	AMS		
	comp=Z,9µm,7.7s						
SUJ	**Sinuiju**	**19.91**	**49**	P	**Pn**	**14 34 29.1**	**-0.6**
SUJ				S	**Sn**	**14 38 13.1**	**-0.2**
SUJ				AmB			
	comp=Z,1µm,2.5s						
SUJ				AMS	AMS		
	comp=Z,2µm,5.2s						
PBA	**Port Blair**	**20.19**	**217**	P	**P**	**14 34 32.2**	**+0.9**
SNY	**Shenyang**	**20.25**	**44**	⇑P	**P**	**14 34 32.6**	**+0.8**
SNY				S	**S**	**14 38 15.3**	**-3.3**
SNY				pmax	pmax		
	comp=Z,150nm,1.1s						
SNY				pmax	pmax		
	comp=Z,770nm,4.0s						
SNY				LR	LR		
	comp=Z,4µm,11.8s						
SNY				LR	LR		
	comp=Z,4µm,16.5s						
SNY				LR	LR		
	comp=Z,5µm,17.5s						
PYAG	**Pyongyang**	**20.29**	**53**	P	Pn	14 34 33.4	-0.9
PYAG				S	**S**	**14 38 20.8**	**+1.2**
PYAG				AmB			
	comp=Z,1µm,2.3s						
PYAG				AMS	AMS		
	comp=Z,5µm,10.1s						
INCN	**Inchon**	**20.32**	**58**		**P**	**14 34 32.3**	**-0.4**
INCN				IAmb	IAmb	14 34 37.8	
	comp=Z,202nm,0.9s						
INCN	**Inchon**	**20.32**	**58**	P	Pn	14 34 33.9	-0.8
INCN				S	Sn	14 38 25.2	+1.6
INCN	**Inchon**	**20.32**	**58**	P	Pn	14 34 34.0	-0.8
INCN	**Inchon**	**20.32**	**58**	P	**P**	**14 34 32.3**	**-0.4**
INCN				pmax	pmax		
	comp=Z,202nm,1.0s						
SRIT	**Nakonsritamara**	**20.36**	**195**	P	Pn	14 34 35.3	0.0
TJN	**Taejon**	**20.54**	**62**	P	**P**	**14 34 34.0**	**-1.0**
TJN	**Taejon**	**20.54**	**62**	P	Pn	14 34 36.2	-1.0
TJN	**Taejon**	**20.54**	**62**	*i* P	**P**	**14 34 35.8**	**+0.8**
WMQ	**Urumqi**	**20.62**	**323**	*e*P	**P**	**14 34 35.8**	**-0.2**
WMQ				S	**S**	**14 38 24.8**	**-1.5**
WMQ				pmax	pmax		
	comp=Z,55nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,360nm,4.9s						
WMQ				LR	LR		
	comp=Z,6µm,9.7s						
WMQ				LR	LR		
	comp=Z,4µm,9.7s						
WMQ				LR	LR		
	comp=Z,2µm,13.1s						
TGY	**Tagaytay City**	**20.64**	**130**	LR	LR	14 41 52.4	
	comp=Z,2µm,20.4s,baz=320,slow=35						
JOW	**Kunigami**	**20.79**	**89**	Pn	Pn	14 34 40.3	+0.1
JOW	**Kunigami**	**20.79**	**89**	P	**P**	**14 34 38.5**	**+0.7**
	comp=Z,73nm,0.6s,baz=154,slow=8.6,SNR=41						
JOW				LR	LR	14 43 17.5	
	comp=Z,4µm,20.4s,baz=293,slow=38						
	comp=Z,73nm,0.6s						
JOW	**Kunigami**	**20.79**	**89**	P	Pn	14 34 39.5	-0.8
KS19	**Wonju Array Si**	**21.26**	**59**	P	**P**	**14 34 43.5**	**+0.7**
KS19				IAmb	IAmb	14 34 44.9	
	comp=Z,165nm,0.8s						
KSRS	**Korea Array**	**21.29**	**59**	P	**P**	**14 34 43.6**	**+0.6**
	comp=Z,125nm,0.8s,baz=242,slow=10,SNR=408						
KSRS				S	**S**	**14 38 40.9**	**+1.6**
	comp=Z,17nm,1.1s,baz=243,slow=16,SNR=6.8						
KSRS				LR	LR	14 43 58.0	
	comp=Z,2358µm,19.7s,baz=250,slow=40						
	comp=Z,125nm,0.8s						
JTU	**Tsushima**	**21.75**	**68**	P	**P**	**14 34 49.5**	**+1.4**
HHU	**Hamhung**	**21.90**	**53**	P	**P**	**14 34 50.7**	**+1.1**
HHU				AmB			
	comp=Z,2µm,2.6s						
CN2	**Changchun**	**22.52**	**42**	*e*P	**P**	**14 34 56.8**	**+0.6**
CN2				*e*S	**S**	**14 38 58.3**	**-4.6**
CN2				pmax	pmax		
	comp=Z,100nm,1.0s						
CN2				pmax	pmax		
	comp=Z,1µm,3.0s						
CN2				LR	LR		
	comp=Z,4µm,14.0s						
CN2				LR	LR		
	comp=Z,3µm,14.0s						
CN2				LR	LR		
	comp=Z,4µm,13.1s						
JNU	**Nakatsue**	**22.80**	**72**	P	**P**	**14 34 58.5**	**-0.9**
JNU	**Nakatsue**	**22.80**	**72**	P	**P**	**14 35 00.1**	**+0.7**
	comp=Z,111nm,0.9s,baz=77,slow=2.4,SNR=35						
JNU				LR	LR	14 44 35.7	
	comp=Z,3µm,21.3s,baz=270,slow=38						
	comp=Z,111nm,0.9s						
JNU	**Nakatsue**	**22.80**	**72**	P	**P**	**14 35 00.6**	**+1.2**
KULM	**Kulim**	**23.38**	**191**	P	**P**	**14 35 04.4**	**-0.9**
KULM				IAmb	IAmb	14 35 07.0	
	comp=Z,189nm,1.4s						
KULM	**Kulim**	**23.38**	**191**	P	**P**	**14 35 06.2**	**+0.9**
MOY	**Mondy**	**23.38**	**354**	*e*P	**P**	**14 35 05.3**	**+0.1**
MOY				pmax	pmax		
	comp=Z,220nm,2.8s						
HIA	**Hailar**	**23.71**	**25**	P	**P**	**14 35 09.4**	**+0.9**
HIA				IAmb	IAmb	14 35 12.7	
	comp=Z,331nm,1.5s						
HIA	**Hailar**	**23.71**	**25**	P	**P**	**14 35 09.1**	**+0.6**
HIA	**Hailar**	**23.71**	**25**	P	**P**	**14 35 09.4**	**+0.9**
HIA				pmax	pmax		
	comp=Z,331nm,1.5s						
IPM	**Ipoh**	**24.11**	**189**	P	**P**	**14 35 11.4**	**-1.1**
IPM				IAmb	IAmb	14 35 14.0	
	comp=Z,279nm,1.7s						
IPM	**Ipoh**	**24.11**	**189**	P	**P**	**14 35 12.7**	**+0.2**
CIT	**Chita**	**24.43**	**13**	*e*P	**P**	**14 35 16.0**	**+0.9**
CIT				*e*		14 35 45.2	
CIT				*e*		14 35 55.8	
CIT				*e*		14 38 55.6	
CIT				*e*		14 40 21.4	
CIT				*e*		14 40 38.2	
CIT				pmax	pmax		
	comp=Z,429nm,2.3s						
ZSN	**Zaisan**	**24.55**	**326**	*e*P	**P**	**14 35 16.1**	**-0.1**
ZSN				*e*S	**S**	**14 39 38.1**	**+1.4**
ZSN	**Zaisan**	**24.55**	**326**	*e*P	**P**	**14 35 16.2**	**-0.1**
ZSN				*e*S	**S**	**14 39 38.1**	**+1.4**
KKM	**Kota Kinabalu**	**24.74**	**152**	P	**P**	**14 35 17.0**	**-1.2**
KKM				IAmb	IAmb	14 35 19.8	
	comp=Z,95nm,1.0s						
KKM	**Kota Kinabalu**	**24.74**	**152**	P	**P**	**14 35 19.0**	**+0.7**
BNX	**BinXian**	**24.79**	**40**	⇑P	**P**	**14 35 18.8**	**+0.4**
BNX				pP	**pP**	**14 35 21.9**	**-0.4**
BNX				S	**S**	**14 39 40.0**	**-0.4**
BNX				sS	**pS**	**14 39 45.3**	**+0.9**
BNX				pmax	pmax		
	comp=Z,190nm,0.9s						
BNX				pmax	pmax		
	comp=Z,900nm,3.5s						
BNX				LR	LR		
	comp=Z,6µm,11.9s						
BNX				LR	LR		
	comp=Z,5µm,13.6s						
BNX				LR	LR		
	comp=Z,4µm,13.0s						
SHLS	**Shalkode**	**25.18**	**312**	*e*P	**P**	**14 35 19.6**	**-2.5**
SHLS				pmax	pmax		
	comp=Z,165nm,2.0s						
SHLS	**Shalkode**	**25.18**	**312**	*e*P	**P**	**14 35 19.6**	**-2.5**
	comp=Z,165nm,2.0s						
PSTR	**Posyet**	**25.29**	**49**	*i* P	**P**	**14 35 22.6**	**-0.3**
JMN	**Monobe**	**25.35**	**71**	P	**P**	**14 35 22.0**	**-1.6**
JMN	**Monobe**	**25.35**	**71**	P	**P**	**14 35 24.3**	**+0.7**
MDJ	**Mudanjiang**	**25.45**	**44**	P	**P**	**14 35 24.3**	**-0.1**
MDJ				pmax	pmax		
	comp=Z,19nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,710nm,6.2s						
MDJ				LR	LR		
	comp=Z,3µm,16.6s						
MDJ				LR	LR		
	comp=Z,4µm,15.5s						
MDJ				LR	LR		
	comp=Z,6µm,14.3s						
MK31	**Makanchi Array**	**25.45**	**322**	P	**P**	**14 35 24.5**	**+0.1**
MK31				IAmb	IAmb	14 35 29.2	
	comp=Z,75nm,0.8s						
MK31	**Makanchi Array**	**25.45**	**322**	*ce*P	**P**	**14 35 24.5**	**+0.1**
MKAR	**Makanchi Array**	**25.45**	**322**	P	**P**	**14 35 24.3**	**-0.2**
	comp=Z,62nm,0.7s,baz=128,slow=9.5,SNR=158						
MKAR				ScP	**ScP**	**14 42 34.5**	**-0.8**
	comp=Z,4.9nm,1.0s,baz=104,slow=5.1,SNR=6.0						
MKAR				P3KPbc		15 08 23.4	
	comp=Z,0.9nm,0.8s,baz=354,slow=2.9,SNR=8.1						
	comp=Z,62nm,0.7s						
UZB	**Uzynbulak**	**25.46**	**312**	*e*P	**P**	**14 35 24.8**	**+0.1**
UZB				pmax	pmax		
	comp=Z,78nm,1.5s						
UZB	**Uzynbulak**	**25.46**	**312**	*e*P	**P**	**14 35 24.9**	**+0.1**
	comp=Z,78nm,1.5s						
MSHR	**Mys Shultsa**	**25.50**	**49**	*ce*P	**P**	**14 35 25.3**	**+0.5**
MSHR				pmax	pmax		
	comp=Z,72nm,1.0s						
TSI	**Tuntungan**	**25.52**	**195**	P	**P**	**14 35 26.2**	**+0.9**
MAKZ	**Makanchi**	**25.63**	**322**	P	**P**	**14 35 26.0**	**-0.1**
MAKZ				IAmb	IAmb	14 35 29.0	
	comp=Z,90nm,0.8s						
MAKZ	**Makanchi**	**25.63**	**322**	P	**P**	**14 35 26.0**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,90nm,0.8s						
TARG	**Taragay, Kyrgy**	**25.69**	**308**	P	**P**	**14 35 26.6**	**-0.5**
TARG	**Taragay, Kyrgy**	**25.69**	**308**	P	**P**	**14 35 26.6**	**-0.5**
TARG				pmax	pmax		
	comp=Z,62nm,0.9s						
KPKS	**Kokpek**	**25.82**	**312**	*e*P	**P**	**14 35 28.0**	**+0.1**
KPKS				*e*S	**S**	**14 39 58.4**	**+1.2**
KPKS	**Kokpek**	**25.82**	**312**	*e*P	**P**	**14 35 28.0**	**+0.1**
KPKS				*e*S	**S**	**14 39 58.5**	**+1.2**
SATY	**Saty**	**25.82**	**311**	*e*P	**P**	**14 35 28.1**	**+0.1**
SATY				pmax	pmax		
	comp=Z,47nm,1.0s						
SATY	**Saty**	**25.82**	**311**	*e*P	**P**	**14 35 28.2**	**+0.1**
	comp=Z,47nm,1.0s						
PSI	**Prapat**	**26.12**	**194**	LR	LR	14 47 11.6	
	comp=Z,1µm,18.1s,baz=348,slow=40						
PSI	**Prapat**	**26.12**	**194**	P	**P**	**14 35 31.6**	**+0.7**
PSI	**Prapat**	**26.12**	**194**	P	**P**	**14 35 30.1**	**-0.8**
PSI				pmax	pmax		
	comp=Z,98nm,1.2s						
VLA	**Vladivostok**	**26.21**	**49**	*i* P	**P**	**14 35 31.9**	**+0.6**
VLA				pmax	pmax		
	comp=Z,86nm,0.9s						
RPSI	**Rantau Prapat**	**26.23**	**194**	P	**P**	**14 35 30.1**	**-1.6**
RPSI				IAmb	IAmb	14 35 32.4	
	comp=Z,98nm,1.2s						
KSH	**Kashi**	**26.28**	**302**	P	**P**	**14 35 34.8**	**+2.6**
KSH				sP	sP	14 35 41.3	+3.6
KSH				S	**S**	**14 40 08.4**	**+3.8**
KSH				pmax	pmax		
	comp=Z,50nm,1.5s						
KSH				LR	LR		
	comp=Z,4µm,15.5s						
KSH				LR	LR		
	comp=Z,3µm,15.1s						
KSH				LR	LR		
	comp=Z,3µm,15.1s						
HYB	**Hyderabad**	**26.55**	**251**	*e*P	**P**	**14 35 33.6**	**-1.0**
HYB				*e*sP	**pP**	**14 35 38.0**	**-0.7**
TDK	**Taldyqorghan**	**26.72**	**315**	*e*P	**P**	**14 35 36.0**	**+0.1**
TDK				pmax	pmax		
	comp=Z,51nm,0.6s						
TDK	**Taldyqorghan**	**26.72**	**315**	*e*P	**P**	**14 35 36.0**	**+0.1**
	comp=Z,52nm,0.6s						
USA0B	**Ussuriysk Arra**	**26.75**	**47**	P	**P**	**14 35 35.0**	**-1.2**
USA0B				IAmb	IAmb	14 35 37.5	
	comp=Z,148nm,0.8s						
USA0B	**Ussuriysk Arra**	**26.75**	**47**	*i* P	**P**	**14 35 35.8**	**-0.4**
USRK	**Ussuriysk Ar.**	**26.75**	**47**	P	**P**	**14 35 36.4**	**+0.3**
	comp=Z,145nm,0.7s,baz=249,slow=8.8,SNR=232						
USRK				LR	LR	14 46 01.3	
	comp=Z,2µm,18.9s,baz=244,slow=36						
	comp=Z,145nm,0.7s						
MDOK	**Medeo**	**26.77**	**311**	*e*P	**P**	**14 35 36.4**	**-0.1**
MDOK				*e*S	**S**	**14 40 13.2**	**+0.9**
MDOK	**Medeo**	**26.77**	**311**	*e*P	**P**	**14 35 36.5**	**-0.1**
MDOK				*e*S	**S**	**14 40 13.3**	**+0.9**
AAA	**Alma-Ata**	**26.88**	**311**	*e*P	**P**	**14 35 37.6**	**+0.2**
AAA	**Alma-Ata**	**26.88**	**311**	*e*P	**P**	**14 35 37.6**	**+0.2**
BOOM	**Boomskoye usch**	**27.26**	**309**	P	**P**	**14 35 41.8**	**+0.8**
BOOM	**Boomskoye usch**	**27.26**	**309**	P	**P**	**14 35 41.8**	**+0.8**
BOOM				pmax	pmax		
	comp=Z,77nm,1.1s						
KSM	**Kuching**	**27.32**	**168**	P	**P**	**14 35 42.7**	**+1.2**
KUU	**Kurty**	**27.54**	**312**	*e*P	**P**	**14 35 43.5**	**+0.2**
KUU				pmax	pmax		
	comp=Z,112nm,1.6s						
KUU	**Kurty**	**27.54**	**312**	*e*P	**P**	**14 35 43.5**	**+0.2**
	comp=Z,112nm,1.6s						
HEH	**HeiHe**	**27.69**	**32**	*e*P	**P**	**14 35 44.8**	**+0.2**
HEH				PcP	**PcP**	**14 39 01.1**	**-0.2**
HEH				S	**S**	**14 40 25.3**	**-1.1**
HEH				ScP	**ScP**	**14 42 42.0**	**+0.2**
HEH				pmax	pmax		
	comp=Z,83nm,0.9s						
HEH				pmax	pmax		
	comp=Z,370nm,3.6s						
HEH				LR	LR		
	comp=Z,3µm,13.0s						
HEH				LR	LR		
	comp=Z,2µm,12.4s						
HEH				LR	LR		
	comp=Z,4µm,14.5s						
INU	**Inuyama**	**28.06**	**68**	P	**P**	**14 35 46.1**	**-1.9**
INU	**Inuyama**	**28.06**	**68**	P	**P**	**14 35 49.4**	**+1.4**
BKNI	**Bangkinang**	**28.20**	**188**	P	**P**	**14 35 51.0**	**+1.6**
AAK	**Ala-Archa**	**28.31**	**308**	LR	LR	14 48 11.4	
	comp=Z,2µm,18.3s,baz=81,slow=39						
AAK	**Ala-Archa**	**28.31**	**308**	P	**P**	**14 35 51.3**	**+0.8**
AAK				P	**P**	**14 35 51.3**	**+0.8**
AAK				S	**S**	**14 40 39.1**	**+2.4**
AAK				S	**S**	**14 40 39.1**	**+2.4**
AAK	**Ala-Archa**	**28.31**	**308**	*ce*P	**P**	**14 35 50.8**	**+0.4**
AAK				pmax	pmax		
	comp=Z,38nm,1.7s						
AAK	**Ala-Archa**	**28.31**	**308**	*i* P	**P**	**14 35 51.5**	**+1.1**
	SNR=9.3						
JGF	**Kuroka**	**28.36**	**67**	P	**P**	**14 35 49.9**	**-0.9**
JGF				IAmb	IAmb	14 35 57.1	
	comp=Z,82nm,0.9s						
JGF	**Kuroka**	**28.36**	**67**	P	**P**	**14 35 52.1**	**+1.3**
SGDS	**Sogindy**	**28.51**	**310**	*e*P	**P**	**14 35 52.2**	**+0.2**
DAV	**Davao City (W)**	**28.90**	**133**	LR	LR	14 47 51.7	
	comp=Z,1µm,18.7s,baz=5.5,slow=37						
STKI	**Sintang**	**28.92**	**166**	P	**P**	**14 35 57.7**	**+1.9**
MAJO	**Matsushiro**	**29.14**	**65**	*i* P	**P**	**14 35 57.2**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,44nm,2.3s						
MJAR	**Matsushiro Arr**	**29.14**	**65**	P	**P**	**14 35 57.4**	**-0.3**
	comp=Z,4.7nm,0.8s,baz=265,slow=9.8,SNR=5.2						
MJAR				PcP	**PcP**	**14 39 05.3**	**+0.1**
	comp=Z,5.9nm,0.8s,baz=244,slow=1.3,SNR=6.1						
MJAR				LR	LR	14 48 35.8	
	comp=Z,2µm,20.0s,baz=264,slow=38						
	comp=Z,4.7nm,0.8s						
KLR	**Kul'dur**	**29.22**	**37**	P	**P**	**14 35 58.3**	**+0.1**
	comp=Z,23nm,0.9s,baz=260,slow=8.8,SNR=28						
KLR				PcP	**PcP**	**14 39 05.7**	**+0.5**
	comp=Z,12nm,0.7s,baz=246,slow=3.7,SNR=5.1						
KLR				LR	LR	14 48 15.7	
	comp=Z,2µm,18.8s,baz=236,slow=38						
	comp=Z,23nm,0.9s						
JSD	**Sado**	**29.38**	**62**	P	**P**	**14 35 59.8**	**0.0**
ZAA0	**Zalesovo Array**	**29.41**	**336**	P	**P**	**14 36 00.2**	**+0.5**
ZAA0				IAmb	IAmb	14 36 02.2	
	comp=Z,220nm,1.9s						
ZALV	**Zalesovo Beam**	**29.41**	**336**	P	**P**	**14 35 59.6**	**-0.2**
	comp=Z,26nm,0.7s,baz=136,slow=7.8,SNR=69						
ZALV				LR	LR	14 49 29.0	
	comp=Z,404nm,18.4s,baz=178,slow=40						
ZALV				P3KPbc		15 08 05.1	
	comp=Z,1.2nm,0.8s,baz=316,slow=6.0,SNR=4.9						
	comp=Z,26nm,0.7s						
BTLS	**Baital**	**29.51**	**312**	*e*P	**P**	**14 36 00.5**	**-0.3**
BTLS	**Baital**	**29.51**	**312**	*e*P	**P**	**14 36 00.6**	**-0.3**
KURBB	**Kurchatov Arra**	**29.78**	**325**	P	**P**	**14 36 02.8**	**-0.3**
	comp=Z,24nm,0.7s,baz=133,slow=9.3,SNR=150						
KURBB				ScP	**ScP**	**14 42 46.9**	**-1.5**
	comp=Z,1.6nm,0.9s,baz=127,slow=2.5,SNR=3.3						
KURBB				LR	LR	14 49 27.0	
	comp=Z,2µm,18.7s,baz=131,slow=39						
KURBB				P3KPbc		15 08 03.9	
	comp=Z,0.9nm,0.8s,baz=302,slow=4.8,SNR=9.2						
	comp=Z,24nm,0.7s						
KURBB	**Kurchatov Arra**	**29.78**	**325**	P	**P**	**14 36 01.8**	**-1.3**
KURK	**Kurchatov**	**29.79**	**326**	P	**P**	**14 36 03.1**	**-0.1**
KURK	**Kurchatov**	**29.79**	**326**	P	**P**	**14 36 02.6**	**-0.6**
KURK	**Kurchatov**	**29.79**	**326**	P	**P**	**14 36 02.8**	**-0.4**
KURK						14 42 46.9	
BOD	**Bodaibo**	**30.05**	**10**	*e*P	**P**	**14 36 05.9**	**+0.5**
BOD				pmax	pmax		
	comp=Z,92nm,1.7s						
TEY	**Ternei**	**30.09**	**48**	⇑*e*P	**P**	**14 36 04.8**	**-1.1**
TEY				pmax	pmax		
	comp=E,10.0nm,1.1s						
TEY				pmax	pmax		
	comp=Z,30nm,0.8s						
ZEA	**Zeya**	**30.13**	**27**	*e*P	**P**	**14 36 07.2**	**+1.0**
ZEA				*e*S	**S**	**14 41 01.8**	**-2.8**
ZEA				pmax	pmax		
	comp=Z,70nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,100nm,4.3s						
ZEA				smax	smax		
	comp=N,200nm,10.7s						
ZEA				smax	smax		
	comp=E,200nm,11.2s						
ZEA				MLR	MLR		
	comp=E,2µm,7.0s						
ZEA				MLR	MLR		
	comp=N,2µm,13.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,10.0s						
DZA	**Taraz**	**30.60**	**307**	*e*P	**P**	**14 36 10.5**	**0.0**
DZA	**Taraz**	**30.60**	**307**	*e*P	**P**	**14 36 10.5**	**0.0**
KBL	**Kabul**	**31.04**	**290**	P	**P**	**14 36 13.4**	**-1.4**
KBL				P	**P**	**14 36 13.4**	**-1.4**
KBL				S	**S**	**14 41 18.9**	**-0.9**
KBL				S	**S**	**14 41 18.9**	**-0.9**
PALK	**Pallekele**	**31.06**	**232**	P	**P**	**14 36 12.9**	**-1.9**
PALK				IAmb	IAmb	14 36 16.9	
	comp=Z,78nm,1.4s						
PALK	**Pallekele**	**31.06**	**232**	P	**P**	**14 36 16.4**	**+1.6**
PALK				P	**P**	**14 36 16.4**	**+1.6**
PALK	**Pallekele**	**31.06**	**232**	P	**P**	**14 36 12.9**	**-1.9**
PALK				pmax	pmax		
	comp=Z,78nm,1.4s						
TOLI2	**Tolitoli**	**31.14**	**148**	P	**P**	**14 36 13.2**	**-2.3**
TOLI2	**Tolitoli**	**31.14**	**148**	P	**P**	**14 36 16.2**	**+0.7**
KK31	**Karatay Array**	**31.24**	**307**	P	**P**	**14 36 15.6**	**-0.5**
KK31	**Karatay Array**	**31.24**	**307**	*i* P	**P**	**14 36 15.6**	**-0.5**
KKAR	**Karatay Array**	**31.24**	**307**	P	**P**	**14 36 15.6**	**-0.6**
KKAR	**Karatay Array**	**31.24**	**307**	P	**P**	**14 36 15.6**	**-0.6**
KKAR				pmax	pmax		

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             comp=Z,73nm,1.7s
IUG    Iuzhnay            31.32 305  eP     P        14 36 16.8 -0.2
IUG                                   pmax  pmax
             comp=Z,39nm,1.3s
IUG    Iuzhnay            31.32 305  eP     P        14 36 16.8 -0.2
             comp=Z,39nm,1.3s
SIMJ   Simiganj           31.41 298   P     P        14 36 17.1 -0.8
MPSI   Mapaga             31.43 150   P     P        14 36 20.1 +2.1
CHM    Chimkent           31.67 305  eP     P        14 36 19.8 -0.2
CHM    Chimkent           31.67 305  eP     P        14 36 19.9 -0.2
BRLS   Borolday           31.69 307  eP     P        14 36 20.4 +0.3
BRLS   Borolday           31.69 307  eP     P        14 36 20.4 +0.3
MRSI   Marisa             32.25 147   P     P        14 36 27.0 +1.8
             comp=Z,1µmcomp=Z,83nm,0.8s
PCI    Palu               32.52 151   P     P        14 36 30.0 +2.4
             comp=Z,2µmcomp=Z,41nm,1.5s
BRZS   Berezniki          32.55 320  eP     P        14 36 27.7 +0.2
BRZS   Berezniki          32.55 320  eP     P        14 36 27.8 +0.2
GRNR   Gornyy             32.59  38⇑iP     P        14 36 27.9  0.0
GRNR                                 e               14 37 40.3
GRNR                                  pmax  pmax
             comp=Z,10.0nm,1.1s
GRNR                                  MLR   MLR
             comp=E,1µm,18.0s
GRNR                                  MLR   MLR
             comp=Z,2µm,14.0s
MDSI   Maura Dua          32.75 181   P     P        14 36 30.2 +0.7
             comp=Z,29nm,0.8s
JCJ    Chichijima         32.96  83   P     P        14 36 28.4 -3.0
             baz=0.0,slow=0.0
KMSI   Cibinong           33.20 143   P     P        14 36 36.9 +3.4
APSI   Ampana             33.33 148   P     P        14 36 36.4 +1.8
             comp=Z,1µmcomp=Z,93nm,1.1s
ERM    Erimo              33.79  56ceP     P        14 36 39.8 +1.4
ERM                                   pmax  pmax
             comp=Z,58nm,0.9s
ASAJ   Asahikawa          33.86  52   P     P        14 36 39.2 +0.2
             comp=Z,34nm,0.9s,baz=210,slow=11,SNR=6.2
ASAJ                                  LR    LR       14 49 12.4
             comp=Z,968nm,21.5s,baz=256,slow=34
             comp=Z,34nm,0.9s
JKA    Kamikawa-asahi     33.86  52   P     P        14 36 38.3 -0.8
LUWI   Luwuk              33.97 147   P     P        14 36 41.2 +0.9
LUWI   Luwuk              33.97 147   P     P        14 36 40.6 +0.3
             comp=Z,2µmcomp=Z,135nm,1.2s
TTSI   Tana Toraja        34.45 153   P     P        14 36 45.4 +1.0
             comp=Z,1µmcomp=Z,62nm,1.4s
YSS    Yuzhno-Sakhali     34.78  48   P     P        14 36 45.5 -1.5
YSS                                   PcP   PcP      14 39 20.6 +0.4
YSS    Yuzhno-Sakhali     34.78  48   P     P        14 36 48.0 +1.0
YSS    Yuzhno-Sakhali     34.78  48  eP     P        14 36 47.2 +0.2
YSS                                  e               14 38 05.3
YSS                                  eS     S        14 42 14.3 -2.8
YSS                                   pmax  pmax
             comp=Z,50nm,1.0s
YSS                                   pmax  pmax
             comp=Z,200nm,5.7s
YSS                                   MLR   MLR
             comp=Z,4µm,14.0s
DBJI   Dramaga            34.84 177   P     P        14 36 49.7 +1.9
             comp=Z,90nm,1.0s
TNTI   Ternate            34.93 138   P     P        14 36 47.0 -1.6
UGL    Uglegorsk          35.09  44  eP     P        14 36 43.1 -6.5
UGL                                   pmax  pmax
             comp=Z,200nm,0.8s
UGL                                   MLR   MLR
             comp=E,3µm,10.0s
UGL                                   MLR   MLR
             comp=N,2µm,9.0s
UGL                                   MLR   MLR
             comp=Z,3µm,10.0s
SPSI   Sidrap Palu        35.27 154   P     P        14 36 52.4 +1.0
             comp=Z,1µmcomp=Z,59nm,1.6s
BVA0   Borovoye Array     35.31 324  i P    P        14 36 50.9 -0.6
BVAR   Borovoye Array     35.31 324   P     P        14 36 51.4 -0.1
             comp=Z,8.7nm,0.7s,baz=119,slow=9.3,SNR=32
BVAR                                  PcP   PcP      14 39 20.5 -1.2
             comp=Z,9.7nm,0.7s,baz=134,slow=4.2,SNR=6.4
BVAR                                  ScP   ScP      14 43 07.5 +0.2
             comp=Z,4.9nm,0.9s,baz=132,slow=4.2,SNR=4.1
BVAR                                  LR    LR       14 50 35.8
             comp=Z,803nm,21.0s,baz=118,slow=35
             comp=Z,8.7nm,0.7s
BRVK   Borovoye           35.38 324   P     P        14 36 51.6 -0.4
BRVK   Borovoye           35.38 324   P     P        14 36 52.0 -0.1
BRVK                                  P     P        14 36 52.0 -0.1
BRVK                                  S     S        14 42 27.7 +1.5
BRVK                                  S     S        14 42 27.7 +1.5
BRVK   Borovoye           35.38 324ceP     P        14 36 52.4 +0.3
BRVK                                  pmax  pmax
             comp=Z,34nm,1.0s
BBJI   Bungbulang         35.80 175   P     P        14 36 57.9 +1.8
BNSI   Bone               35.80 153   P     P        14 36 57.0 +1.0
             comp=Z,50nm,2.1s
NKL    Nikolayevsk        36.06  37  eP     P        14 36 55.7 -2.2
NKL                                  eS     S        14 42 38.7 +2.1
NKL                                   pmax  pmax
             comp=E,24nm,1.1s
NKL                                   pmax  pmax
             comp=N,5µm,8.7s
NKL                                   pmax  pmax
             comp=Z,171nm,0.9s
NKL                                   smax  smax
             comp=E,92nm,2.0s
NKL                                   smax  smax
             comp=N,140nm,1.9s
NKL                                   MLR   MLR
             comp=E,6µm,13.0s
NKL                                   MLR   MLR
             comp=N,5µm,9.0s
NKL                                   MLR   MLR
             comp=Z,8µm,10.0s
YUK    Yuzh-Kuril'sk      36.13  53  i P    P        14 36 58.2 -0.4
TYV    Tymovskoe          36.14  41  eP     P        14 36 59.7 +1.1
TYV                                  eS     S        14 42 37.7 -0.2
TYV                                   pmax  pmax
             comp=Z,200nm,2.4s
TYV                                   pmax  pmax
             comp=Z,58nm,1.1s
TYV                                   smax  smax
             comp=N,6.0nm,1.5s
TYV                                   smax  smax
             comp=E,8.0nm,1.5s
TYV                                   smax  smax
             comp=N,300nm,4.2s
TYV                                   smax  smax
             comp=E,300nm,4.2s
TYV                                   MLR   MLR
             comp=Z,2µm,16.0s
KAPI   Kappang            36.22 154   P     P        14 36 59.9 +0.2
             comp=Z,37nm,1.0s,baz=9.4,slow=4.9,SNR=8.4
             comp=Z,37nm,1.0s
KAPI   Kappang            36.22 154   P     P        14 36 58.1 -1.6
KAPI                                  S     S        14 42 42.2 +2.4
KAPI   Kappang            36.22 154   P     P        14 37 00.6 +1.0
YAK    Yakutsk            37.37  19   P     P        14 37 08.0 -1.0
YAK    Yakutsk            37.37  19   P     P        14 37 08.9 -0.1
             comp=Z,176nm,0.7s,baz=128,slow=0.2,SNR=44
YAK                                   LR    LR       14 53 47.2
             comp=Z,3µm,18.1s,baz=212,slow=38
             comp=Z,176nm,0.7s
YAK    Yakutsk            37.37  19c iP     P        14 37 08.8 -0.1
YAK                                  e*PP   pP       14 37 12.3 -0.7
YAK                                  e               14 39 27.3
YAK                                  eS     S        14 42 55.0 -1.4
YAK                                  e*SS   pS       14 43 02.0 +1.3
YAK                                  eSS    SnSn     14 45 29.5 -3.3
YAK                                  eSSS   SSS      14 46 05.0
YAK                                  e               14 47 19.3
YAK                                   pmax  pmax
             comp=Z,126nm,0.8s
YAK                                   pmax  pmax
             comp=E,18nm,1.0s
YAK                                   pmax  pmax
             comp=N,5.0nm,0.4s
YAK                                   smax  smax
             comp=N,199nm,2.8s
YAK                                   smax  smax
             comp=E,103nm,2.5s
YAK                                   MLR   MLR
             comp=Z,3µm,19.0s
YAK                                   MLR   MLR
             comp=N,1µm,13.0s
JAGI   Jajag, Banyuwa     37.78 165   P     P        14 37 13.7 +0.8
JAGI   Jajag, Banyuwa     37.78 165   P     P        14 37 14.4 +1.5
             comp=N,68nm,1.4s
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NLAI   Namlea             38.06 142   P     P        14 37 18.1 +2.8
             comp=N,1µmcomp=N,81nm,0.8s
MSAI   Masohi             39.17 140   P     P        14 37 26.4 +1.8
             comp=N,2µmcomp=N,118nm,0.8s
GUMO   Guam               39.95 103   P     P        14 37 30.9 -0.3
             comp=N,70nm,0.8s,baz=181,slow=11,SNR=5.2
GUMO                                  LR    LR       14 54 38.4
             comp=N,819nm,19.7s,baz=268,slow=37
             comp=N,70nm,0.8s
AB31   Akbulak array      39.97 314   P     P        14 37 31.3 +0.4
AB31   Akbulak array      39.97 314  i P    P        14 37 30.6 -0.3
ABKAR  Akbulak array      39.97 314   P     P        14 37 31.6 +0.7
WBSI   Waikabubak, Su     40.38 158   P     P        14 37 33.4 -1.3
EDFI   Ende, Flores       40.39 154   P     P        14 37 35.5 +0.6
             comp=N,586nmcomp=N,22nm,1.0s
MMRI   Maumere            40.50 153   P     P        14 37 35.8 +0.1
MMRI   Maumere            40.50 153   P     P        14 37 35.7 +0.1
             comp=N,3µmcomp=N,161nm,1.5s
KAAM   Kaadhehdhoo        41.25 233   P     P        14 37 42.7 +0.8
JLN    Jalan Bani Buh     41.39 272   P     P        14 37 43.0 -0.1
JLN                                   P     P        14 37 43.0 -0.1
AKTO   Aktyubinsk         41.46 315   LR    LR       14 56 35.9
             comp=N,1µm,20.4s,baz=88,slow=39
AKTO   Aktyubinsk         41.46 315   P     P        14 37 42.4 -0.9
WBK    Wadi Bani Khal     41.64 273   P     P        14 37 45.9 +0.8
WSAR   Wadi Sarin         41.75 274   P     P        14 37 46.1 +0.1
             SNR=5.4
BAKI   Biak               42.01 129   P     P        14 37 49.9 +1.8
             comp=N,1µmcomp=N,51nm,1.0s
SVE    Sverdlovsk         42.04 325deP     P        14 37 48.3 +0.4
SVE                                  eS     S        14 44 11.6 +5.0
SVE                                   pmax  pmax
             comp=Z,86nm,1.7s
SVE                                   MLR   MLR
             comp=Z,794nm,14.0s
BIDO   Bidbid             42.11 274   P     P        14 37 49.3 +0.4
             SNR=5.4
SMDO   Samad              42.31 274   P     P        14 37 50.5 -0.2
             SNR=9.2
SMDO                                  P     P        14 37 50.5 -0.2
             SNR=9.2
SOEI   Soe                42.35 151   P     P        14 37 48.7 -2.3
SOEI   Soe                42.35 151   P     P        14 37 52.4 +1.4
JMDO   Jabal Madar        42.47 273   P     P        14 37 52.0 +0.1
JMDO                                  P     P        14 37 52.0 +0.1
BATI   Baumata            42.50 152   P     P        14 37 51.2 -0.9
             comp=Z,53nm,0.8s,baz=200,slow=2.2,SNR=6.2
BATI                                  LR    LR       14 57 26.0
             comp=Z,494nm,19.1s,baz=333,slow=39
             comp=Z,53nm,0.8s
BATI   Baumata            42.50 152   P     P        14 37 51.9 -0.2
             comp=Z,89nm,1.0s
HOQ    Hoqain             42.80 275   P     P        14 37 54.6  0.0
             SNR=5.6
HOQ                                   P     P        14 37 54.6  0.0
             SNR=5.6
ARTI   Arti               43.03 324   LR    LR       14 56 27.6
             comp=Z,870nm,18.3s,baz=112,slow=37
MHTO   MHTO               43.04 271   P     P        14 37 56.1 -0.4
             SNR=5.7
MHTO                                  P     P        14 37 56.1 -0.4
             SNR=5.7
BSY    Bisya              43.15 274   P     P        14 37 57.6 +0.1
             SNR=11
BSY                                   P     P        14 37 57.6 +0.1
             SNR=11
SHME   Shamm              43.16 279   P     P        14 37 59.4 +2.0
MDH    Madha              43.22 278   P     P        14 37 58.6 +0.7
SOHO   SOHO               43.33 276   P     P        14 37 59.5 +0.6
SOHO                                  P     P        14 37 59.5 +0.6
SOHO   SOHO               43.33 276   P     P        14 37 57.3 -1.6
HATD   Hatta, Dubai       43.49 277   P     P        14 38 01.5 +1.4
ARQ    Araqi              43.57 275   P     P        14 38 00.8  0.0
ASHO   Ashiyiah           43.59 277   P     P        14 38 01.0  0.0
ASHO                                  P     P        14 38 01.0  0.0
ASHO   Ashiyiah           43.59 277   P     P        14 38 01.2 +0.2
DQM    DQM                43.78 270   P     P        14 38 02.7 +0.3
DQM                                   P     P        14 38 02.7 +0.3
MA2    Magadan            43.96  32   P     P        14 37 59.9 -3.5
MA2    Magadan            43.96  32   P     P        14 38 02.8 -0.6
             comp=Z,21nm,0.7s,baz=246,slow=8.3,SNR=20
MA2                                   PcP   PcP      14 39 49.6 +0.5
             comp=Z,15nm,0.9s,baz=168,slow=6.2,SNR=4.4
MA2                                   LR    LR       14 56 22.0
             comp=Z,454nm,20.5s,baz=246,slow=36
             comp=Z,21nm,0.7s
MA2    Magadan            43.96  32   P     P        14 38 03.7 +0.3
ALNE   Al Ain             44.04 276   P     P        14 38 04.6  0.0
ALNE   Al Ain             44.04 276  i P    P        14 38 04.2 -0.3
             SNR=9.5
ASUD   Al Ashush, Dub     44.24 277   P     P        14 38 06.2  0.0
ASUD                                  P     P        14 38 06.2  0.0
SMPI   Sarmi              44.38 127   P     P        14 38 08.7 +1.4
             comp=Z,2µmcomp=Z,140nm,1.1s
UMZA   Um Al Zommool      44.95 274   P     P        14 38 11.4 -0.5
UMZA                                  P     P        14 38 11.4 -0.5
TIXI   Tiksi              45.23  10   P     P        14 38 12.8 -0.6
TIXI   Tiksi              45.23  10   P     P        14 38 12.8 -0.6
TIXI                                  pmax  pmax
             comp=Z,91nm,0.8s
PEA0B  Petropavlovsk-     45.66  42  i P    P        14 38 16.7 -0.4
PETK   Petropavlovsk-     45.66  42   P     P        14 38 16.3 -0.8
             comp=Z,20nm,1.1s,baz=218,slow=7.0,SNR=21
PETK                                  LR    LR       14 59 13.0
             comp=Z,1µm,18.1s,baz=254,slow=38
             comp=Z,20nm,1.1s
GENI   Genyem             45.83 126   P     P        14 38 19.7 +0.8
GENI   Genyem             45.83 126   P     P        14 38 20.5 +1.6
SEY    Seymchan           46.09  28   P     P        14 38 20.6 +0.2
             comp=Z,24nm,0.6s,baz=245,slow=7.1,SNR=60
SEY                                   PcP   PcP      14 39 56.9 +0.5
             comp=Z,33nm,0.9s,baz=244,slow=4.4,SNR=10
SEY                                   PP    PP       14 40 09.5 +1.2
             comp=Z,13nm,0.9s,baz=255,slow=10.0,SNR=4.8
SEY                                   LR    LR       14 57 01.8
             comp=Z,660nm,19.8s,baz=242,slow=35
             comp=Z,24nm,0.6s
JAY    Jayapura           46.16 126   P     P        14 38 22.0 +0.5
             comp=Z,16nm,0.7s,baz=296,slow=7.1,SNR=12
             comp=Z,16nm,0.7s
JAY    Jayapura           46.16 126   P     P        14 38 22.7 +1.2
             comp=Z,35nm,0.8s
PET    Petropavlovsk      46.22  42   P     P        14 38 20.4 -1.1
PET                                   IAmb  IAmb     14 38 22.7
             comp=Z,67nm,1.1s
PET    Petropavlovsk      46.22  42   P     P        14 38 22.0 +0.6
PET    Petropavlovsk      46.22  42  eP     P        14 38 21.2 -0.2
PET                                  e               14 40 05.5
PET                                  eS     S        14 45 05.4 -2.0
PET                                   pmax  pmax
             comp=Z,65nm,1.0s
PET                                   MLR   MLR
             comp=Z,2µm,12.0s
PET                                   MLR   MLR
             comp=Z,2µm,12.0s
JRN    Qarnain Island     46.32 278   P     P        14 38 21.9 -0.8
MZR    Muzera             46.34 276   P     P        14 38 21.9 -0.9
DOK    Doka               47.25 270   P     P        14 38 29.4 -0.6
RBK    Rabkut             47.60 268   P     P        14 38 32.9 +0.1
SHMA   Al-Shehemyia       47.71 280   P     P        14 38 32.9 -0.6
TRNA   Turayna            47.80 279   P     P        14 38 32.6 -1.6
AKT    Akhty              47.81 302c iP     P        14 38 34.2  0.0
AKT                                  eS     S        14 45 30.0 -0.8
AKT                                   pmax  pmax
             comp=Z,88nm,1.4s
AKT                                   MLR   MLR
             comp=Z,860nm,17.0s
WHFO   Wadi Hawf          47.83 269   P     P        14 38 35.4 +0.9
MAK    Makhachkala        47.91 304d iP     P        14 38 28.9 -5.9
MAK                                  e               14 40 22.1
MAK                                  ePPP   PPP      14 41 08.9
MAK                                  eS     S        14 45 22.8 -9.1
MAK                                  eSS    SS       14 48 57.6 -2.8
MAK                                  eSSS   SSS      14 50 03.3
MAK                                   pmax  pmax
             comp=Z,117nm,1.3s
MAK                                   MLR   MLR
             comp=Z,1µm,16.0s
SAKB   Bahrain            48.05 280   P     P        14 38 35.9 -0.2
SMRA   Abu-Samra          48.14 279   P     P        14 38 35.4 -1.4
BELG   Belogornoye        48.21 316  i P    P        14 38 36.9 -0.1
BELG                                  pmax  pmax
             comp=Z,19nm,0.9s
MTN    Manton Dam         48.27 145   P     P        14 38 37.0 -0.8
MTN                                   IAmb  IAmb     14 40 05.9
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             comp=Z,170nm,1.9s
MTN    Manton Dam         48.27 145   P     P        14 38 35.9 -1.9
KIRV   Kirov              48.30 325  i P    P        14 38 37.2 -0.4
KDU    Kakadu             48.84 143   P     P        14 38 40.7 -1.5
             comp=Z,53nm,1.0s
KDU    Kakadu             48.84 143   P     P        14 38 41.8 -0.4
KNRA   Kununurra          49.58 149   P     P        14 38 46.2 -1.7
KNRA                                  IAmb  IAmb     14 38 48.6
             comp=Z,56nm,0.9s
KNRA   Kununurra          49.58 149   P     P        14 38 47.2 -0.7
             comp=Z,71nm,0.9s
KBD    Kabd               49.67 285   P     P        14 38 48.2 -0.4
GNI    Garni              50.17 300   P     P        14 38 52.8 +0.4
GNI                                   IAmb  IAmb     14 39 11.2
             comp=Z,119nm,1.3s
GNI    Garni              50.17 300   LR    LR       15 03 13.7
             comp=Z,489nm,20.4s,baz=96,slow=40
GNI    Garni              50.17 300   P     P        14 38 53.5 +1.0
GNI    Garni              50.17 300  i P    P        14 38 53.1 +0.6
GNI                                   pmax  pmax
             comp=Z,77nm,1.2s
FITZ   Fitzroy Crossi     50.44 154   P     P        14 38 53.8 -0.5
FITZ   Fitzroy Crossi     50.44 154   P     P        14 38 53.6 -0.8
             comp=Z,6.6nm,1.4s
FITZ   Fitzroy Crossi     50.44 154   P     P        14 38 54.5 +0.1
GOF    Gofitskoye         51.03 307ceP     P        14 38 58.9 +0.3
KBZ    Khabaz             51.22 305   P     P        14 39 00.1 +0.1
             comp=Z,5.6nm,0.8s,baz=78,slow=9.4,SNR=26
KBZ                                   LR    LR       15 04 55.8
             comp=Z,859nm,18.2s,baz=80,slow=41
             comp=Z,5.6nm,0.8s
KIV    Kislovodsk         51.36 305   P     P        14 39 01.5 +0.3
KIV                                   P     P        14 39 01.5 +0.3
KIV    Kislovodsk         51.36 305 ⇑P     P        14 39 02.0 +0.8
KIV    Kislovodsk         51.36 305  eP     P        14 39 01.6 +0.4
KIV                                  eS     S        14 46 21.8 +1.4
KIV                                  eSS    SS       14 49 59.0 +3.1
KIV                                   pmax  pmax
             comp=Z,49nm,3.7s
KIV                                   pmax  pmax
             comp=Z,129nm,1.0s
KIV                                   MLR   MLR
             comp=Z,645nm,17.0s
KIV    Kislovodsk         51.36 305  i P    P        14 39 01.5 +0.3
             SNR=36
MBWA   Marble Bar         51.36 162   P     P        14 38 59.7 -1.5
MBWA   Marble Bar         51.36 162   P     P        14 39 00.3 -1.0
             comp=Z,72nm,1.3s
MBWA   Marble Bar         51.36 162   P     P        14 39 00.6 -0.6
MBWA   Marble Bar         51.36 162   P     P        14 39 02.4 +1.2
SHA1   Shidzhatmaz        51.39 305  i P    P        14 39 02.0 +0.3
GEVA   Gevas              51.70 298   P     P        14 39 02.4 -1.6
GEVA                                  IAmb  IAmb     14 39 06.0
             comp=Z,94nm,1.7s
PSA00  Pilbara Seismi     51.78 162   P     P        14 39 04.0 -0.4
PSA00                                 IAmb  IAmb     14 39 05.5
             comp=Z,168nm,1.8s
PSA00  Pilbara Seismi     51.78 162   P     P        14 39 03.5 -0.9
             comp=Z,34nm,1.0s
PSA00  Pilbara Seismi     51.78 162   P     P        14 39 04.8 +0.4
VRH    Novokhopyorsk      51.79 314  eP     P        14 39 03.8 -0.4
VRH                                   pmax  pmax
             comp=Z,35nm,0.9s
GURO   Guroymak-BITLI     52.47 298   P     P        14 39 10.0 +0.3
GURO                                  IAmb  IAmb     14 39 12.0
             comp=Z,162nm,1.8s
LABN   Labinsk            52.71 306  eP     P        14 39 10.0 -1.1
LABN                                 eS     S        14 46 39.5 +0.8
LABN                                  pmax  pmax
             comp=Z,24nm,0.7s
ERBR   Yeremizino-Bor     52.79 308  eP     P        14 39 09.6 -2.1
ERBR                                 eS     S        14 46 39.2 -0.6
ERBR                                  pmax  pmax
             comp=Z,105nm,1.3s
RAYN   Ar Rayn            53.14 279   P     P        14 39 13.2 -1.5
RAYN   Ar Rayn            53.14 279   P     P        14 39 13.5 -1.2
RAYN   Ar Rayn            53.14 279   P     P        14 39 14.0 -0.8
RAYN   Ar Rayn            53.14 279  i P    P        14 39 13.9 -0.8
             SNR=8.8
BILL   Bilibino           53.30  24   P     P        14 39 14.7 -0.5
BILL                                  IAmb  IAmb     14 39 16.0
             comp=Z,163nm,1.7s
BILL   Bilibino           53.30  24  i P    P        14 39 14.2 -0.9
BILL                                  pmax  pmax
             comp=Z,99nm,1.7s
VSLR   Vesyoloye          53.32 305  i P    P        14 39 16.2 +0.5
VSLR                                  pmax  pmax
             comp=Z,77nm,1.1s
VORR   Voronezh           53.37 315   P     P        14 39 15.4 -0.5
VORR                                  pmax  pmax
             comp=Z,46nm,1.2s
VSR    Storozhevoye       53.40 314  eP     P        14 39 13.4 -2.7
VSR                                   pmax  pmax
             comp=Z,20nm,0.9s
LPSR   Galich'ya Gora     53.53 316  eP     P        14 39 16.8 -0.2
LPSR                                  pmax  pmax
             comp=Z,49nm,0.9s
SOC    Sochi              53.53 305  eP     P        14 39 15.1 -2.1
SOC                                  e               14 41 16.4
SOC                                  eS     S        14 46 49.3 -0.7
SOC                                  eSS    SS       14 50 27.1 -2.9
SOC                                  eSSS   SSS      14 52 22.2
SOC                                   pmax  pmax
             comp=Z,50nm,1.2s
SOC                                   MLR   MLR
             comp=Z,459nm,16.0s
KLMR   Klimovskoe         53.63 326  eP     P        14 39 14.9 -2.8
KLMR                                  S     S        14 46 50.3 -0.5
KLMR                                                 14 49 06.9
KLMR                                  SS    SS       14 50 31.1 +0.2
KLMR                                  pmax  pmax
             comp=Z,149nm,1.4s
KLMR                                  MLR   MLR
             comp=Z,675nm,13.0s
MOS    Moscow             54.31 320  eP     P        14 39 20.8 -1.9
MOS                                  e               14 40 23.4
MOS                                  e               14 41 25.2
MOS                                  eS     S        14 46 58.4 -1.7
MOS                                   pmax  pmax
             comp=Z,300nm,1.5s
MOS                                   pmax  pmax
             comp=Z,124nm,1.0s
MOS                                   MLR   MLR
             comp=Z,600nm,16.0s
PATS   Pohnpei            54.77 102   P     P        14 39 27.4 +0.8
             comp=Z,262nm,1.2s
PATS   Pohnpei            54.77 102   P     P        14 39 27.4 +0.8
OBN    Obninsk            54.91 319   P     P        14 39 25.8 -1.2
OBN    Obninsk            54.91 319 ⇓P     P        14 39 27.5 +0.5
OBN    Obninsk            54.91 319c iP     P        14 39 27.1 +0.1
OBN                                  e*PP   pP       14 39 30.2 -1.0
OBN                                  i *SP  sP       14 39 33.2 +0.4
OBN                                  e               14 40 23.4
OBN                                  i S    S        14 47 09.0 +0.8
OBN                                  e               14 49 10.8
OBN                                   SSS   SSS      14 52 55.0
OBN                                   pmax  pmax
             comp=Z,124nm,1.7s
OBN                                   MLR   MLR
             comp=Z,640nm,18.0s
ANN    Anapa              55.02 307  eP     P        14 39 26.9 -1.1
ANN                                  eS     S        14 47 07.9 -2.1
ANN                                   pmax  pmax
             comp=Z,30nm,0.8s
ANN                                   MLR   MLR
             comp=Z,625nm,15.0s
SHEM   Shemya Is, Ala     55.52  44   P     P        14 39 32.7 +1.2
             comp=Z,62nm,0.7s,baz=336,slow=9.7,SNR=2.3
SHEM                                  LR    LR       15 02 52.4
             comp=Z,544nm,21.5s,baz=283,slow=36
             comp=Z,62nm,0.7s
PMG    Port Moresby       55.53 126   P     P        14 39 31.6 -0.5
PMG    Port Moresby       55.53 126   P     P        14 39 33.4 +1.3
PMG    Port Moresby       55.53 126   P     P        14 39 33.0 +0.9
PMG    Port Moresby       55.53 126   P     P        14 39 31.6 -0.5
PMG                                   pmax  pmax
             comp=Z,135nm,0.9s
WRAB   Tennant Creek      55.90 146   P     P        14 39 33.4 -1.2
WRAB                                  IAmb  IAmb     14 39 35.6
             comp=Z,67nm,0.8s
WRAB   Tennant Creek      55.90 146  i P    P        14 39 34.3 -0.3
WRAB                                  pmax  pmax
             comp=Z,79nm,0.9s
WRA    Warramunga Arr     55.90 146   P     P        14 39 34.3 -0.3
             comp=Z,44nm,0.8s,baz=336,slow=8.1,SNR=171
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WRA				LR	LR	15 06 06.2	
	comp=Z,216nm,20.3s,baz=338,slow=39						
WRA				PKPPKP	P'P'df	15 09 33.1	+3.3
	comp=Z,0.9nm,0.8s,baz=136,slow=2.0,SNR=5.0						
	comp=Z,44nm,0.8s						
COEN	Coen	56.13	134	P	P	14 39 34.8	-1.5
COEN				IAmb	IAmb	14 39 37.8	
	comp=Z,53nm,0.9s						
COEN	Coen	56.13	134	P	P	14 39 35.8	-0.5
	comp=Z,78nm,1.0s						
COEN	Coen	56.13	134	P	P	14 39 37.0	+0.7
LVZ	Lovozero	56.54	335	P	P	14 39 38.7	+0.1
APA	Apatity	56.98	334	⇓*i*P	P	14 39 39.9	-1.8
APA				*i*		14 40 35.0	
APA				*i* S	S	14 47 31.0	-4.4
APA				*i* PS	PnS	14 47 40.0	-5.9
APA				*i*		14 49 21.0	
APA				*i* SS	SS	14 51 29.0	+5.6
APA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
APA				MLR	MLR		
	comp=Z,2μm,13.0s						
BNN	Bunyan	57.17	300	P	P	14 39 42.4	-1.3
SIM	Simferopol'	57.34	307	*e*P	P	14 39 44.1	-0.5
SIM				*e*S	S	14 47 41.8	+1.0
SIM				pmax	pmax		
	comp=Z,49nm,0.8s						
SIM				smax	smax		
	comp=E,47nm,13.2s						
WRKA	Warakurna	57.75	155	P	P	14 39 46.9	-0.8
	comp=Z,26nm,1.2s						
ASF	Jabal al Asfar	57.92	292	LR	LR	15 10 08.5	
	comp=Z,741nm,18.2s,baz=98,slow=42						
KIRS	Kirsehir-Merke	58.58	301	⇑P	P	14 39 53.3	-0.2
VADS	Vadso	58.63	337	*e*P	P	14 39 53.2	0.0
BR131	Keskin Array S	58.66	301	P	P	14 39 53.5	-0.7
	SNR=6.2						
BR131				P	P	14 39 53.5	-0.7
	SNR=6.2						
BR131	Keskin Array S	58.66	301	*i* P	P	14 39 53.2	-1.0
BRTR	Keskin Array B	58.66	301	P	P	14 39 53.5	-0.7
	comp=Z,6.2nm,0.8s,baz=109,slow=6.2,SNR=29						
BRTR				LR	LR	15 09 35.5	
	comp=Z,227nm,21.1s,baz=77,slow=41						
	comp=Z,6.2nm,0.8s						
ASAR	Alice Springs	58.88	149	P	P	14 39 55.6	0.0
	comp=Z,29nm,0.8s,baz=329,slow=6.9,SNR=290						
ASAR				LR	LR	15 07 23.8	
	comp=Z,195nm,21.0s,baz=308,slow=38						
ASAR				PKPPKP	P'P'df	15 09 28.2	+3.1
	comp=Z,0.6nm,0.7s,baz=96,slow=1.7,SNR=4.4						
	comp=Z,29nm,0.8s						
AS01	Alice Springs	58.90	149	P	P	14 39 56.3	+0.6
MMAI	Mount Meron Ar	58.91	293	P	P	14 39 55.4	-0.5
	comp=Z,4.5nm,0.7s,baz=92,slow=2.8,SNR=13						
MMAI				PcP	PcP	14 40 46.5	+1.4
	comp=Z,1.7nm,0.5s,baz=87,slow=4.9,SNR=1.3						
MMAI				LR	LR	15 08 46.0	
	comp=Z,834nm,18.3s,baz=74,slow=40						
	comp=Z,4.5nm,0.7s						
QIS	Mount Isa	59.15	142	P	P	14 39 56.7	-0.8
	comp=Z,42nm,1.3s						
QIS	Mount Isa	59.15	142	P	P	14 39 58.2	+0.7
GHAJ	Ghor Haditha	59.25	291	P	P	14 39 58.0	-0.2
GHAJ				IAmb	IAmb	14 39 59.6	
	comp=Z,77nm,1.4s						
ANTO	Ankara	59.27	302	P	P	14 39 57.6	-0.7
ANTO	Ankara	59.27	302	P	P	14 39 58.0	-0.3
ANTO				P	P	14 39 58.0	-0.3
ANTO	Ankara	59.27	302	⇓P	P	14 39 58.3	-0.1
ANTO	Ankara	59.27	302	P	P	14 39 58.2	-0.1
KEV	Kevo	59.43	337	P	P	14 39 57.9	-0.9
KEV				IAmb	IAmb	14 39 59.8	
	comp=Z,44nm,0.9s						
KEV	Kevo	59.43	337	P	P	14 39 57.9	-0.9
KEV				pmax	pmax		
	comp=Z,44nm,0.9s						
AKASG	Malin Array Be	59.70	314	P	P	14 40 00.3	-0.7
	comp=Z,9.6nm,0.7s,baz=74,slow=6.4,SNR=57						
	comp=Z,9.6nm,0.7s						
AKBB	Malin Array Si	59.70	314	*i* P	P	14 39 59.6	-1.4
AKBB				pmax	pmax		
	comp=Z,73nm,1.6s						
KIEV	Kiev	59.71	314	P	P	14 39 59.9	-1.2
KIEV				IAmb	IAmb	14 40 01.8	
	comp=Z,113nm,1.6s						
KIEV	Kiev	59.71	314	⇓P	P	14 40 00.5	-0.6
KIEV	Kiev	59.71	314	P	P	14 40 00.5	-0.6
KIEV	Kiev	59.71	314	*i* P	P	14 40 00.1	-0.9
	SNR=5.1						
ARA0	ARCESS Array S	59.95	336	*e*P	P	14 40 02.6	+0.1
ARCES	ARCESS Array B	59.95	336	P	P	14 40 02.2	-0.3
	comp=Z,14nm,0.8s,baz=89,slow=8.0,SNR=20						
ARCES				LR	LR	15 09 16.6	
	comp=Z,424nm,18.2s,baz=94,slow=39						
	comp=Z,14nm,0.8s						
MNK	Minsk	59.97	319	*i* P	P	14 40 02.3	-0.5
	comp=E,12nm,0.9s						
MNK				*i* P	P	14 40 02.3	-0.5
	comp=N,35nm,1.1s						
MNK				*i* P	P	14 40 02.3	-0.5
	comp=Z,31nm,0.9s,baz=82						
MNK				*i* PP	PP	14 42 14.6	-0.2
MNK				*i* PPP	PPP	14 43 36.5	
MNK				*i* S	S	14 48 13.7	-1.0
MNK				*i* SS	SS	14 52 09.7	-1.0
MNK				*i* SSS	SSS	14 54 59.8	
MNK				*i* LQ	LQ	15 01 41.9	
MNK				*i* LR	LR	15 05 25.1	
MNK				*i* LRM	MLR	15 07 07.8	
	comp=E,320nm,17.0s						
MNK				*i* LRM	MLR	15 07 19.5	
	comp=N,501nm,20.6s						
MNK				*i* LRM	MLR	15 07 19.5	
	comp=Z,533nm,14.7s						
MNK	Minsk	59.97	319	*i* P	P	14 40 02.2	-0.5
MNK				*i*		14 42 14.6	
MNK				*i* PPP	PPP	14 43 36.4	
MNK				*i* S	S	14 48 13.6	-1.0
MNK				*i* SS	SS	14 52 09.7	-1.0
MNK				pmax	pmax		
	comp=E,12nm,0.9s						
MNK				pmax	pmax		
	comp=Z,31nm,0.9s						
MNK				pmax	pmax		
	comp=N,35nm,1.1s						
MNK				MLR	MLR		
	comp=E,320nm,17.0s						
MNK				MLR	MLR		
	comp=N,501nm,21.0s						
MNK				MLR	MLR		
	comp=Z,533nm,15.0s						
MTSU	Mount Surprise	59.99	136	P	P	14 40 04.2	+0.8
ATD	Arta Tunnel	60.07	267	LR	LR	15 05 28.4	
	comp=Z,17nm,21.0s,baz=44,slow=36						
ATD	Arta Tunnel	60.07	267	P	P	14 40 04.8	+0.6
	SNR=7.5						
VSU	Vasula	60.12	324	*i* P	P	14 40 02.8	-0.9
VSU				pmax	pmax		
	comp=Z,59nm,0.9s						
FINES	FINESS Array B	60.15	327	P	P	14 40 03.2	-0.7
	comp=Z,15nm,0.8s,baz=88,slow=7.1,SNR=22						
	comp=Z,15nm,0.8s						
FINES	FINESS Array B	60.15	327	*i* P	P	14 40 03.9	0.0
FINES				pmax	pmax		
	comp=Z,15nm,0.8s						
HOPEN	Hopen	60.20	345	*e*P	P	14 40 04.7	+0.7
EIL	Elat	60.23	290	LR	LR	15 09 15.2	
	comp=Z,1μm,21.8s,baz=68,slow=39						
MDUB	Mudurnu	60.32	303	P	P	14 40 04.2	-1.4
NACGM	Naroch	60.54	320	⇑*i*P	P	14 40 06.8	+0.2
	comp=Z,41nm,1.0s,baz=82						
HAMF	Hammerfest	60.55	338	*e*P	P	14 40 06.8	+0.3
KIS	Kishinev	60.61	310	*e*PP	PP	14 42 20.0	-0.7
KIS				*e*L	L	15 07 24.0	
KIS				LRM	MLR	15 08 23.0	
	comp=Z,200nm,17.5s						
KIS	Kishinev	60.61	310	*e*P	P	14 40 06.0	-1.3
KIS				*e*		14 42 20.0	
KIS				pmax	pmax		
	comp=Z,100nm,2.8s						
KIS				MLR	MLR		
	comp=Z,200nm,17.5s						
MILM	Milestii Mici	60.63	310	⇑*i*P	P	14 40 06.0	-1.4
	comp=Z,200nm,2.2s						
MILM	Milestii Mici	60.63	310	*e*PP	PP	14 42 17.0	-3.8
MILM				*e*S	S	14 48 28.0	+4.5
MILM				*e*L	L	15 04 30.0	
MILM				LRM	MLR	15 08 23.0	
	comp=Z,600nm,17.0s						
MILM	Milestii Mici	60.63	310	⇑P	P	14 40 07.0	-0.5
MILM	Milestii Mici	60.63	310	*c i*P	P	14 40 06.0	-1.4
MILM				*e*		14 42 17.0	
MILM				*e*S	S	14 48 28.0	+4.5
MILM				pmax	pmax		
	comp=Z,200nm,2.2s						
MILM				MLR	MLR		
	comp=Z,600nm,17.0s						
SORM	Soroca	60.71	312	⇑P	P	14 40 07.9	0.0
SORM	Soroca	60.71	312	P	P	14 40 07.9	0.0
TLCR		60.98	308	⇓P	P	14 40 09.8	-0.1
TLCR		60.98	308	P	P	14 40 09.7	-0.1
BORA	Eskisehir	61.01	302	P	P	14 40 07.7	-2.6
TPGR	Topolog	61.33	308	⇑P	P	14 40 11.9	-0.3
TIRR	Tirgusor	61.42	308	⇓P	P	14 40 12.8	0.0
TIRR	Tirgusor	61.42	308	P	P	14 40 12.8	0.0
CFR	Carcaliu	61.45	308	⇓P	P	14 40 12.7	-0.4
CFR	Carcaliu	61.45	308	P	P	14 40 12.6	-0.4
ISP	Isparta	61.48	300	P	P	14 40 11.4	-2.0
ISP				IAmb	IAmb	14 40 21.1	
	comp=Z,39nm,0.8s						
ISP	Isparta	61.48	300	P	P	14 40 11.5	-2.0
ISP				pmax	pmax		
	comp=Z,39nm,0.8s						
JETT	Jettan, Norway	61.74	337	*e*P	P	14 40 15.0	+0.3
PSN	Preselentsi	61.80	307	*e*P	P	14 40 16.2	+0.8
GAMB	Gambell	62.01	30	P	P	14 40 14.8	-1.6
GAMB				IAmb	IAmb	14 40 17.9	
	comp=Z,38nm,0.9s						
GAMB	Gambell	62.01	30	P	P	14 40 16.6	+0.2
	baz=278,SNR=7.7						
PABE	Paberze	62.04	321	P	P	14 40 15.6	-1.2
SPA0	Spitsbergen Ar	62.07	347	*e*P	P	14 40 16.7	0.0
SPITS	Spitsbergen Ar	62.07	347	P	P	14 40 16.0	-0.7
	comp=Z,25nm,1.0s,baz=97,slow=10,SNR=20						
SPITS				LR	LR	15 10 49.5	
	comp=Z,644nm,19.0s,baz=58,slow=40						
	comp=Z,25nm,1.0s						
NWAO	Narrogin (SRO)	62.15	168	LR	LR	15 07 51.1	
	comp=Z,348nm,21.6s,baz=283,slow=37						
TESR	Tescani	62.17	310	⇓P	P	14 40 17.6	-0.3
TRO	Tromso	62.25	337	*e*P	P	14 40 17.9	-0.1
VRI	Vrincioaia	62.27	309	⇓P	P	14 40 19.4	+0.8
VRI	Vrincioaia	62.27	309	P	P	14 40 19.3	+0.8
PLOR	Plostina	62.32	309	⇑P	P	14 40 19.7	+0.7
PLOR	Plostina	62.32	309	P	P	14 40 19.7	+0.7
BISRR	Bisoca	62.35	309	⇑P	P	14 40 19.6	+0.4
HSPB	Hornsund (broa	62.37	345	*e*P	P	14 40 18.4	-0.2
ONER	Baraj Valea Uz	62.39	310	⇑P	P	14 40 19.6	+0.2
PRD	Provadia	62.43	306	*e*P	P	14 40 20.3	+0.6
NEF	NEVSHA	62.50	306	*e*P	P	14 40 20.6	+0.4
ISR	Istrita	62.57	309	⇑P	P	14 40 21.0	+0.4
ISR	Istrita	62.57	309	P	P	14 40 21.0	+0.4
BAND	Balkesir-Ban	62.64	303	⇓P	P	14 40 20.9	-0.3
CTAO	Charters Tower	62.66	136	P	P	14 40 20.0	-1.4
CTAO	Charters Tower	62.66	136	P	P	14 40 22.1	+0.7
CTAO	Charters Tower	62.66	136	P	P	14 40 20.0	-1.4
CTAO				pmax	pmax		
	comp=Z,90nm,1.3s						
NEHR	Nehoiu	62.66	309	⇑P	P	14 40 22.0	+0.8
SUW	Suwalki	62.77	319	*e*P	P	14 40 21.2	-0.5
SUW	Suwalki	62.77	319	P	P	14 40 19.7	-2.0
SUW	Suwalki	62.77	319	P	P	14 40 19.7	-2.0
MANT	Manisa	62.80	301	P	P	14 40 19.5	-2.9
MANT				IAmb	IAmb	14 40 22.7	
	comp=Z,62nm,1.8s						
OZUR		62.85	310	⇑P	P	14 40 23.1	+0.7
KBS	Kingsbay	62.86	347	P	P	14 40 21.2	-0.7
KBS	Kingsbay	62.86	347	P	P	14 40 21.2	-0.7
KBS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KBS	Kingsbay	62.86	347	*e*P	P	14 40 21.6	-0.3
BURAR	Bucovina Array	62.88	312	⇓P	P	14 40 22.8	+0.1
BURAR	Bucovina Array	62.88	312	P	P	14 40 22.8	+0.1
MLR	Muntele Rosu	62.89	309	P	P	14 40 22.6	-0.2
MLR				IAmb	IAmb	14 40 24.6	
	comp=Z,38nm,1.0s						
MLR	Muntele Rosu	62.89	309	⇑P	P	14 40 23.4	+0.5
MLR	Muntele Rosu	62.89	309	P	P	14 40 23.4	+0.5
DOPR	Dopca	63.15	310	⇓P	P	14 40 25.0	+0.6
JMB	Yambol	63.23	306	*e*P	P	14 40 25.4	+0.4
TNA	Tin City	63.34	28	P	P	14 40 25.4	+0.2
	baz=280						
SZH	Strazhitsa	63.42	307	*e*P	P	14 40 26.5	+0.2
VOIR		63.51	309	⇓P	P	14 40 26.8	-0.2
VOIR		63.51	309	P	P	14 40 26.7	-0.2
ARCR	ARCALIA	63.57	311	⇑P	P	14 40 27.1	-0.1
C16K	Lisburne Hills	63.83	25	P	P	14 40 28.8	+0.3
	baz=281,SNR=8.5						
STEI	Steigen	63.84	335	*e*P	P	14 40 27.9	-0.7
SPIA	Saint Paul Isl	63.88	37	P	P	14 40 29.3	+0.3
	baz=282						
FAUS	Fauske	63.93	334	*e*P	P	14 40 28.6	-0.6
BMR	Baia Mare	63.99	312	⇑P	P	14 40 30.8	+0.8
BMR	Baia Mare	63.99	312	P	P	14 40 30.7	+0.8
ALN	Alexandroupoli	64.00	304	P	P	14 40 29.3	-0.8
ALN				IAmb	IAmb	14 40 31.1	
	comp=Z,110nm,1.8s						
ALN	Alexandroupoli	64.00	304	P	P	14 40 29.3	-0.8
ALN				pmax	pmax		
	comp=Z,110nm,1.8s						
F14K	Arctic Creek	64.00	28	P	P	14 40 30.2	+0.5
	baz=282,SNR=15						
PVL	Pavlikeni	64.02	307	*e*P	P	14 40 30.6	+0.4
KDZ	Kurdzhali	64.31	305	*e*P	P	14 40 32.4	+0.2
P08K	Saint George I	64.38	38	P	P	14 40 32.8	+0.5
	baz=283						
TATA	Tatamba Isabel	64.41	116	P	P	14 40 34.1	+1.0
LOF	Lofoten	64.43	335	*e*P	P	14 40 31.5	-0.9
KOLS	Kolonicke sedl	64.47	314	*e*P	P	14 40 33.1	0.0
KOLS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KOLS	Kolonicke sedl	64.47	314	*e*P	P	14 40 33.0	0.0
MARR	Marisel-Cluj	64.50	311	⇑P	P	14 40 33.8	+0.4
MOR8	Moi Rana	64.52	333	*e*P	P	14 40 31.5	-1.6
C17K	DeLong Mountai	64.57	24	P	P	14 40 33.6	+0.2
	baz=283,SNR=22						
PLD	Plovdiv	64.59	306	*e*P	P	14 40 34.9	+0.9
ANM	Nome	64.59	29	P	P	14 40 34.2	+0.6
	baz=283						
F15K	North Star Dit	64.64	27	IAmb	IAmb	14 40 35.6	
	comp=Z,51nm,0.9s						
F15K	North Star Dit	64.64	27	P	P	14 40 34.4	+0.5
	baz=283,SNR=14						
BEL	Belsk	64.67	317	*e*P	P	14 40 34.0	-0.3
RZN	Rozhen	64.72	305	*e*P	P	14 40 35.7	+0.6
RDOG	Red Dog Mine	64.77	25	P	P	14 40 34.7	0.0
	baz=283						
D17K	Noatak River	64.79	25	P	P	14 40 35.5	+0.7
	baz=283,SNR=22						
DEV	Deva	64.85	310	⇑P	P	14 40 36.4	+0.8
DEV	Deva	64.85	310	P	P	14 40 36.4	+0.8
B18K	Kokolik River	64.85	23	P	P	14 40 36.3	+1.1
	baz=284,SNR=19						
A19K	Wainwright	64.89	22	P	P	14 40 36.3	+0.9
	baz=284						
PGB	Panagyurishte	64.90	306	*e*P	P	14 40 37.2	+1.2
MPEP	Malo Peshtene	64.97	307	*e*P	P	14 40 37.2	+0.8
STHS	Stebnicka Huta	65.00	314	*e*P	P	14 40 35.8	-0.7
STHS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
STHS	Stebnicka Huta	65.00	314	*e*P	P	14 40 35.8	-0.7
STOK	Stokkvaagen	65.04	334	*e*P	P	14 40 35.4	-1.0
G15K	Niukluk	65.05	28	P	P	14 40 37.0	+0.4
	baz=284,SNR=12						
LEIR	Leirfjorden	65.05	333	*e*P	P	14 40 35.8	-0.7
GZR	Gura Zlata	65.07	310	⇑P	P	14 40 37.6	+0.4
GZR	Gura Zlata	65.07	310	P	P	14 40 37.5	+0.4
HNR	Honiara	65.14	117	LR	LR	15 06 36.5	
	comp=Z,384nm,21.8s,baz=280,slow=34						
M11K	Mekoryuk	65.20	33	P	P	14 40 37.9	+0.3
	baz=284						
C18K	Utukok River	65.24	24	P	P	14 40 38.2	+0.4
	baz=285,SNR=15						
ALEG	Aligegeo Malai	65.33	116	P	P	14 40 40.9	+1.8
E17K	Hotham Inlet	65.41	25	P	P	14 40 39.5	+0.7
	baz=285,SNR=25						
SURR	Surduc	65.41	310	⇑P	P	14 40 39.4	+0.2
HERR	Herculane	65.46	309	⇓P	P	14 40 40.0	+0.5
MMB	Musomishta	65.48	305	*e*P	P	14 40 40.3	+0.5
VTS	Vitosha	65.53	307	*e*P	P	14 40 40.8	+0.5
K13K	Kusilvak Mount	65.54	31	P	P	14 40 40.6	+0.9
	baz=285,SNR=48						
SIRR	Siria	65.58	311	⇑P	P	14 40 40.8	+0.5
NIE	Niedzica	65.59	314	*e*P	P	14 40 41.0	+0.5
G16K	Koyuk River	65.64	27	IAmb	IAmb	14 40 42.0	
	comp=Z,47nm,0.8s						
G16K	Koyuk River	65.64	27	P	P	14 40 40.8	+0.5
	baz=285						
NIKH	Nikolski High	65.67	41	P	P	14 40 39.1	-1.6
NIKH				IAmb	IAmb	14 40 41.6	
	comp=Z,28nm,0.8s						
NIKH	Nikolski High	65.67	41	P	P	14 40 41.7	+0.9
NIKH	Nikolski High	65.67	41	P	P	14 40 39.5	-1.3
	baz=285,SNR=5.7						
C19K	Lookout Ridge	65.68	23	P	P	14 40 41.5	+0.8
	baz=286,SNR=24						
OJC	Ojcow	65.69	315	*e*P	P	14 40 40.9	-0.1
OJC	Ojcow	65.69	315	P	P	14 40 39.7	-1.3
OJC	Ojcow	65.69	315	P	P	14 40 39.7	-1.3
E18K	Tukpahlearik C	65.78	25	IAmb	IAmb	14 40 42.7	
	comp=Z,50nm,0.8s						
E18K	Tukpahlearik C	65.78	25	P	P	14 40 41.8	+0.5
	baz=286						
BZS	Buzias	65.79	310	⇑P	P	14 40 41.3	-0.4
BZS	Buzias	65.79	310	P	P	14 40 41.3	-0.4
F17K	Baldwin Pennin	65.80	26	P	P	14 40 42.0	+0.7
	baz=286						
J14K	Nanvaranak Lak	65.82	30	IAmb	IAmb	14 40 43.5	
	comp=Z,58nm,0.9s						
J14K	Nanvaranak Lak	65.82	30	P	P	14 40 42.5	+0.9
	baz=285,SNR=19						
KKB	Krupnik	65.83	306	*e*P	P	14 40 42.1	0.0
H16K	Elim	65.89	28	P	P	14 40 42.3	+0.3
	baz=286						
MDVR	Moldovita	65.96	309	⇓P	P	14 40 43.1	+0.2
A21K	Barrow	66.01	20	P	P	14 40 43.0	+0.4
	baz=288						
PEHC	Pehcevo	66.02	306	*i* P	P	14 40 49.4	+6.1
LANS	Liptovska Anna	66.19	314	*e*P	P	14 40 45.0	+0.7
LANS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
LANS	Liptovska Anna	66.19	314	*e*P	P	14 40 45.0	+0.7
B20K	Meade River	66.24	22	P	P	14 40 44.9	+0.7
	baz=288,SNR=51						
PSZ	Piszkesteto	66.27	313	IAmb	IAmb	14 40 46.4	
	comp=Z,74nm,1.7s						
PSZ	Piszkesteto	66.27	313	⇓P	P	14 40 44.1	-0.7
PSZ	Piszkesteto	66.27	313	P	P	14 40 44.1	-0.7
G17K	Kiwalik Mounta	66.30	27	P	P	14 40 45.1	+0.5
	baz=286,SNR=8.3						
BOVS	Bovan	66.31	308	⇑P	P	14 40 45.2	+0.1
BLEU	Blekinge	66.33	323	*i* P	P	14 40 43.7	-1.2
HFS	Hagfors	66.35	327	P	P	14 40 44.7	-0.4
	comp=Z,16nm,0.8s,baz=56,slow=5.6,SNR=19						
	comp=Z,16nm,0.8s						
NOR	Nord	66.36	352	*i* P	P	14 40 44.1	-0.7
F18K	Selawik	66.37	26	P	P	14 40 45.5	+0.5
	baz=287						
D19K	Kuna River	66.37	24	P	P	14 40 45.5	+0.4
	baz=287						
GKP	Gorka Klasztor	66.38	319	*e*P	P	14 40 45.0	-0.4
QLP	Quilpie	66.50	142	P	P	14 40 47.1	+0.8
M13K	Dall Lake	66.56	33	P	P	14 40 48.1	+1.8
	baz=286,SNR=21						
L14K	Kuka Creek	66.61	32	P	P	14 40 48.0	+1.4
	baz=287,SNR=88						
A22K	Sinclair Lake	66.62	21	P	P	14 40 47.3	+0.8
	baz=289						
I17K	Unalakleet	66.75	29	P	P	14 40 48.4	+0.9
	baz=287,SNR=8.5						
H17K	Granite Mounta	66.76	27	P	P	14 40 48.5	+0.9
	baz=287,SNR=27						
VYHS	Vyhne	66.78	314	*e*P	P	14 40 48.2	+0.2
VYHS				pmax	pmax		
	comp=Z,88nm,1.9s						
VYHS	Vyhne	66.78	314	*e*P	P	14 40 48.2	+0.2
UNV	Unalaska Valle	66.78	40	P	P	14 40 46.8	-1.1
	baz=287						
D20K	Etivluk River	66.83	23		P	14 40 48.3	+0.3
D20K	Etivluk River	66.83	23	P	P	14 40 48.3	+0.3
	baz=289						
K15K	Wolf Creek Mou	66.85	30	P	P	14 40 49.5	+1.3
	baz=287,SNR=32						
J16K	Anvik River	66.97	29	IAmb	IAmb	14 40 51.0	
	comp=Z,53nm,0.8s						
J16K	Anvik River	66.97	29	P	P	14 40 49.9	+1.0
	baz=288,SNR=18						
G18K	Tagagawik	66.97	26	P	P	14 40 48.8	-0.1
	baz=288,SNR=7.7						
SKO	Skopje	67.00	306	*i* P	P	14 40 49.5	-0.1
F19K	Shaleruckik Mo	67.01	25	P	P	14 40 49.1	0.0
	baz=288						
E19K	Redstone River	67.01	25	IAmb	IAmb	14 40 50.5	
	comp=Z,46nm,0.8s						
E19K	Redstone River	67.01	25	P	P	14 40 49.6	+0.4
	baz=289						
STEB	Steborice	67.02	315	*e*P	P	14 40 49.7	+0.2
STEB				*e*x	x	14 40 56.7	
L15K	Ungalak Mounta	67.06	31	P	P	14 40 50.5	+1.0
	baz=287,SNR=18						
M14K	Bethel	67.11	32	P	P	14 40 51.1	+1.3
	baz=287,SNR=48						
E20K	Nigu River	67.12	24	P	P	14 40 50.4	+0.5
	baz=289						
FRGS	Fruska Gora	67.14	310	⇑*i*P	P	14 40 49.9	-0.5
MAUC	Maruska	67.16	315	*e*P	P	14 40 51.0	+0.6
B21K	Ikpikpuk River	67.20	22	P	P	14 40 50.9	+0.6
	baz=290,SNR=38						
NC602	NORSAR Array S	67.20	328	*e*P	P	14 40 49.7	-0.7
MORC	Moravsky Berou	67.21	315	*e*P	P	14 40 50.9	+0.2
MORC	Moravsky Berou	67.21	315	⇓P	P	14 40 51.0	+0.2
MORC	Moravsky Berou	67.21	315	P	P	14 40 51.0	+0.2
NB2	NORSAR Subarra	67.26	328	P	P	14 40 49.7	-1.2
	comp=Z,129nm,1.7s,baz=72,slow=6.5						
NB2	NORSAR Subarra	67.26	328	P	P	14 40 49.7	-1.2
	baz=72,slow=6.5						
NOA	NORSAR Array B	67.26	328	P	P	14 40 49.8	-1.2
	comp=Z,8.4nm,0.8s,baz=77,slow=6.1,SNR=25						
	comp=Z,8.4nm,0.8s						
C21K	Knifeblade Rid	67.30	22	P	P	14 40 51.7	+0.7
	baz=290,SNR=43						
H18K	Honhosa River	67.32	27	IAmb	IAmb	14 40 51.9	
	comp=Z,25nm,0.7s						
H18K	Honhosa River	67.32	27	P	P	14 40 51.3	+0.2
	baz=289						
SRO	Srobarova	67.32	313	*e*P	P	14 40 52.3	+0.9
SRO				pmax	pmax		
	comp=Z,73nm,1.9s						
SRO	Srobarova	67.32	313	*e*P	P	14 40 52.3	+0.9
DEL	Delary	67.32	323	*i* P	P	14 40 51.6	+0.4
DEL				IAmb	IAmb	14 40 53.1	
	comp=Z,4.1nm,0.9s						
B22K	Teshekpuk Lake	67.33	21	P	P	14 40 51.5	+0.4
	baz=291						
JAVC	Velka Javorina	67.41	314	*e*P	P	14 40 53.3	+1.2
G19K	Purcell Mounta	67.49	26	P	P	14 40 52.4	+0.2
	baz=289,SNR=12						
N14K	Kuskokwak Cree	67.50	33	P	P	14 40 53.5	+1.3
	baz=288,SNR=15						
TEKS	Tekeris	67.52	310	*e*P	P	14 40 52.2	-0.6
BORU	Boraas	67.54	324	*i* P	P	14 40 51.7	-0.9
J17K	VABM Dome	67.58	29	IAmb	IAmb	14 40 54.8	
	comp=Z,38nm,0.8s						
J17K	VABM Dome	67.58	29	P	P	14 40 53.7	+0.9
	baz=289,SNR=24						
KRLC	Kraliky	67.59	316	*e*P	P	14 40 53.3	+0.1
KRLC				AMS	AMS	15 11 30.0	
	comp=Z,900nm,16.0s						
KRLC	Kraliky	67.59	316	*e*P	P	14 40 53.3	+0.1
KRLC				MLR	MLR		
	comp=Z,900nm,16.0s						
MORH	Mrgy, Hungar	67.59	311	⇑P	P	14 40 53.3	+0.2
SJES	Sjenica	67.62	308	⇑*i*P	P	14 40 53.9	+0.3
KSP	Ksiaz	67.65	317	*e*P	P	14 40 53.8	+0.3
SMOL	Smolenice	67.67	314	*e*P	P	14 40 53.9	+0.3
SMOL				pmax	pmax		
	comp=Z,32nm,1.8s						
F20K	Avaraart Lake	67.70	25	IAmb	IAmb	14 40 54.8	
	comp=Z,33nm,0.8s						
F20K	Avaraart Lake	67.70	25	P	P	14 40 53.7	+0.2
	baz=290,SNR=47						
OHR	Ohrid	67.72	306	*i* P	P	14 40 53.7	-0.5
M15K	Kasigluk River	67.73	32	P	P	14 40 54.6	+0.9
	baz=288,SNR=18						

FABU	Falkenberg	67.76	324	i P	P	14 40 54.1	+0.1
DPC	Dobruska-Polom	67.78	316	eP	P	14 40 55.1	+0.7
DPC				AMS	AMS	15 11 40.0	
	comp=Z,1µm,19.5s						
DPC	Dobruska-Polom	67.78	316	eP	P	14 40 55.1	+0.7
DPC				MLR	MLR		
	comp=Z,1µm,19.5s						
OSTC	Ostas	67.79	316	eP	P	14 40 54.8	+0.4
OSTC				AMS	AMS	15 11 40.0	
	comp=Z,1µm,17.3s						
OSTC	Ostas	67.79	316	eP	P	14 40 54.8	+0.4
OSTC				MLR	MLR		
	comp=Z,1µm,17.3s						
LUNU	Lund	67.80	322	i P	P	14 40 53.9	-0.4
MODS	Modra-Piesok	67.81	314	eP	P	14 40 54.0	-0.5
MODS				pmax	pmax		
	comp=Z,132nm,2.0s						
MODS	Modra-Piesok	67.81	314	eP	P	14 40 54.0	-0.5
BBLS	Lazi&#263i	67.82	309	⇑iP	P	14 40 54.1	-0.7
E21K	Killik River	67.83	23	P	P	14 40 54.7	+0.3
	baz=291						
OSL	Oslo	67.83	327	eP	P	14 40 54.4	0.0
CHVC	Chvalec	67.87	317	eP	P	14 40 55.6	+0.7
CHVC				AMS	AMS	15 11 50.0	
	comp=Z,1µm,17.9s						
CHVC	Chvalec	67.87	317	eP	P	14 40 55.6	+0.7
CHVC				MLR	MLR		
	comp=Z,1µm,17.9s						
BJUU	Bjuv	67.89	323	i P	P	14 40 54.4	-0.5
STRU	Stroemstad	67.90	326	i P	P	14 40 54.2	-0.6
O14K	Tigyukauivet M	67.91	34	IAmb	IAmb	14 40 58.3	
	comp=Z,90nm,1.5s						
O14K	Tigyukauivet M	67.91	34	P	P	14 40 55.9	+1.0
	baz=288						
DOMB	Dombas	67.92	330	eP	P	14 40 54.5	-0.5
RUDO	Rudo	67.92	309	⇑iP	P	14 40 54.5	-0.9
UPC	Upice	67.92	316	eP	P	14 40 56.1	+0.9
UPC				AMS	AMS	15 11 40.0	
	comp=Z,1µm,17.5s						
UPC	Upice	67.92	316	eP	P	14 40 56.1	+0.9
UPC				MLR	MLR		
	comp=Z,1µm,17.5s						
VRAC	Vranov	67.94	315	eP	P	14 40 55.7	+0.3
VRAC	Vranov	67.94	315	⇓P	P	14 40 55.8	+0.3
VRAC	Vranov	67.94	315	P	P	14 40 55.7	+0.3
H19K	Roundabout Mou	67.95	26	P	P	14 40 55.7	+0.7
	baz=290,SNR=65						
L16K	Owhat River	67.96	31	IAmb	IAmb	14 40 57.3	
	comp=Z,33nm,0.8s						
L16K	Owhat River	67.96	31	P	P	14 40 56.2	+1.0
	baz=289,SNR=33						
GCSA	Galena City Sc	68.05	27	P	P	14 40 56.4	+0.7
	baz=290,SNR=25						
D22K	Ayikyak River	68.11	22	P	P	14 40 56.9	+0.8
	baz=292,SNR=50						
K17K	Iditarod	68.14	30	P	P	14 40 57.6	+1.2
	baz=290,SNR=57						
KRUC	Moravsky	68.14	315	eP	P	14 40 56.5	-0.1
N15K	Kwethluk River	68.18	32	P	P	14 40 57.9	+1.3
	baz=289,SNR=31						
ITM	Ithomi	68.19	301	IAmb	IAmb	14 41 43.6	
	comp=Z,28nm,1.0s						
RGN	Rugen	68.21	321	eP	P	14 40 57.3	+0.5
	comp=Z,67nm,1.2s,baz=69,slow=6.1						
L17K	Donlin	68.34	30	P	P	14 40 58.8	+1.2
	baz=290,SNR=37						
UPM	Unac-Piva	68.38	308	eP	P	14 40 57.8	-0.6
MOL	Molde	68.41	330	eP	P	14 40 58.2	+0.2
C23K	Itkillik River	68.41	21	P	P	14 40 58.6	+0.7
	baz=294,SNR=72						
M16K	Timber Creek	68.42	31	P	P	14 40 59.5	+1.4
	baz=290,SNR=48						
F21K	Alatna River	68.45	24	IAmb	IAmb	14 40 59.7	
	comp=Z,42nm,1.0s						
F21K	Alatna River	68.45	24	P	P	14 40 58.5	+0.3
	baz=292,SNR=34						
KONO	Kongsberg	68.47	327	P	P	14 40 58.2	-0.2
KONO	Kongsberg	68.47	327	eP	P	14 40 57.9	-0.6
DRME	Dracevica, Mon	68.52	307	⇑iP	P	14 40 58.5	-0.6
J18K	Innoko River	68.56	29	P	P	14 40 59.4	+0.4
	baz=291,SNR=98						
H20K	Anotleneega Mo	68.57	26	P	P	14 40 59.5	+0.4
	baz=291,SNR=51						
RUE	Ruedersdorf	68.62	319	eP	P	14 40 59.6	+0.1
	comp=Z,114nm,1.5s,baz=69,slow=6.1						
TREC	Trest	68.63	315	eP	P	14 41 00.0	+0.3
TREC	Trest	68.63	315	eP	P	14 41 00.0	+0.3
O15K	Ungalikthiuk R	68.64	33	P	P	14 41 00.5	+1.0
	baz=290,SNR=20						
RONA	Rosalia, Austr	68.64	314	i P	P	14 40 59.8	-0.1
	comp=Z,16nm,0.9s,SNR=10						
E22K	Anaktuvuk Pass	68.69	23	P	P	14 41 00.2	+0.4
	baz=293,SNR=65						
N16K	Nishlik Lake	68.69	32	P	P	14 41 01.4	+1.5
	baz=290,SNR=56						
G21K	Allakaket	68.71	25	IAmb	IAmb	14 41 01.2	
	comp=Z,56nm,0.8s						
G21K	Allakaket	68.71	25	P	P	14 41 00.3	+0.4
	baz=292						
SKAR	Skarslia	68.72	328	eP	P	14 41 00.3	+0.2
BRY	Bratogost	68.73	308	eP	P	14 40 59.6	-1.0
D23K	Nanushuk River	68.74	22	P	P	14 41 00.8	+0.8
	baz=294,SNR=71						
F22K	John River	68.81	24	P	P	14 41 01.3	+0.9
	baz=293						
J19K	Poorman	68.83	28	IAmb	IAmb	14 41 02.5	
	comp=Z,56nm,0.9s						
J19K	Poorman	68.83	28	P	P	14 41 01.4	+0.8
	baz=291,SNR=58						
CONA	Conrad Observa	68.85	314	i pP	P	14 41 01.3	+0.1
	comp=Z,18nm,0.9s,SNR=17						
GOPC	GO Pecny, Ondr	68.86	316	AMS	AMS	15 12 20.0	
	comp=Z,1µm,18.3s						
HCY	Herceg Novi	68.91	308	eP	P	14 41 00.5	-1.1
TREB	Trebinje	68.92	308	⇑iP	P	14 41 01.1	-0.5
M17K	Holitna River	68.98	31	P	P	14 41 03.3	+1.7
	baz=291,SNR=74						
PRU	Pruhonice	68.98	316	AMS	AMS	15 12 20.0	
	comp=Z,1µm,17.0s						
I20K	Naaghedeneel	68.99	27	IAmb	IAmb	14 41 03.7	
	comp=Z,78nm,1.2s						
I20K	Naaghedeneel	68.99	27	P	P	14 41 02.7	+1.1
	baz=292,SNR=9.6						
L18K	Granite Mounta	69.02	30	IAmb	IAmb	14 41 04.1	
	comp=Z,74nm,1.5s						
L18K	Granite Mounta	69.02	30	P	P	14 41 02.9	+1.0
	baz=291,SNR=16						
PRA	Prague	69.02	316	AMS	AMS	15 12 30.0	
	comp=Z,1µm,16.6s						
BLY	Banja Luka	69.04	310	⇑iP	P	14 41 02.1	-0.2
BRG	Berggiesshubel	69.05	317	eP	P	14 41 02.2	0.0
	comp=Z,17nm,0.9s,baz=69,slow=6.1						
BRG				epP	sP	14 41 09.6	+1.6
BRG	Berggiesshubel	69.05	317	i P	P	14 41 02.2	0.0
BRG				Amp		14 41 03.8	
	comp=Z,17nm,0.9s						
BRG	Berggiesshubel	69.05	317	P	P	14 41 09.8	+7.6
BRG				Amp		14 41 10.5	
	comp=Z,14nm,0.8s						
BRG				PP	PP	14 43 37.9	+3.5
BRG				Amp		14 43 38.9	
	comp=Z,6.7nm,1.1s						
BRG	Berggiesshubel	69.05	317	S	S	14 50 14.0	+7.0
BRG	Berggiesshubel	69.05	317	S	SKSac	14 51 10.0	+8.2
C24K	Franklin Bluff	69.07	21	P	P	14 41 02.3	+0.3
	baz=295,SNR=34						
A051A	Mrakovica	69.14	311	⇑iP	P	14 41 02.0	-1.0
TOLK	Toolik Lake Re	69.24	22	IAmb	IAmb	14 41 04.7	
	comp=Z,51nm,0.8s						
TOLK	Toolik Lake Re	69.24	22	P	P	14 41 03.6	+0.4
	baz=295,SNR=57						
D24K	Happy Valley	69.27	22	P	P	14 41 03.7	+0.4
	baz=295,SNR=38						
G22K	Bettles	69.28	24	P	P	14 41 03.5	+0.1
	baz=294						
ARSA	Arzberg	69.29	313	i P	P	14 41 03.6	-0.2
	comp=Z,12nm,1.0s,SNR=5.1						
H21K	Melozitna Rive	69.31	26	P	P	14 41 04.2	+0.5
	baz=293,SNR=51						
STON	Ston	69.32	308	⇑iP	P	14 41 02.7	-1.3
O16K	Kokwok River B	69.32	33	P	P	14 41 05.1	+1.4
	baz=291,SNR=35						
J20K	Nowinta River	69.36	27	IAmb	IAmb	14 41 06.0	
	comp=Z,49nm,0.8s						
J20K	Nowinta River	69.36	27	P	P	14 41 04.9	+1.0
	baz=292,SNR=42						
ZVC	Zvikov	69.38	316	eP	P	14 41 04.5	+0.2
ZVC				AMS	AMS	15 12 40.0	
	comp=Z,1µm,16.9s						
N17K	Nushagak Hills	69.41	32	IAmb	IAmb	14 41 06.9	
	comp=Z,53nm,0.9s						
N17K	Nushagak Hills	69.41	32	P	P	14 41 05.8	+1.5
	baz=291,SNR=35						
STKA	Stephens Creek	69.42	147	P	P	14 41 04.5	-0.2
	comp=Z,16nm,0.7s,baz=330,slow=7.1,SNR=32						
	comp=Z,16nm,0.7s						
STKA	Stephens Creek	69.42	147	P	P	14 41 06.0	+1.4
CLL	Collm	69.46	318	IAmb	IAmb	14 41 05.9	
	comp=Z,47nm,1.4s						
CLL	Collm	69.46	318	i P	P	14 41 04.2	-0.6
CLL				pmax	pmax		
	comp=Z,48nm,1.4s						
CLL				MLR	MLR		
	comp=Z,700nm,21.6s						
CLL	Collm	69.46	318	eP	P	14 41 04.5	-0.3
	comp=Z,23nm,1.1s,baz=69,slow=6.1						
CLL	Collm	69.46	318	i P	P	14 41 04.2	-0.6
	comp=Z,48nm,1.4s						
CLL				i PP	PP	14 43 38.1	+0.1
CLL				eSSS	SSS	14 58 04.0	
CLL				AMS	AMS	15 12 00.0	
	comp=Z,700nm,21.6s						
E23K	Chandalar	69.47	23	P	P	14 41 05.3	+0.6
	baz=295,SNR=48						
HTT	Hallett	69.49	150	P	P	14 41 06.3	+1.2
CKRC	Cesky Krumlov	69.52	315	eP	P	14 41 06.0	+0.8
CKRC				ex	x	14 41 13.4	
CKRC				eS	S	14 50 14.1	+1.4
CKRC				AMS	AMS	15 12 40.0	
	comp=Z,500nm,19.1s						
CKRC	Cesky Krumlov	69.52	315	eP	P	14 41 06.0	+0.8
CKRC				e		14 41 13.4	
CKRC				eS	S	14 50 14.1	+1.4
CKRC				MLR	MLR		
	comp=Z,500nm,19.1s						
EIDS	Eidsvold	69.55	136	IAmb	IAmb	14 41 07.3	
	comp=Z,43nm,1.0s						
EIDS	Eidsvold	69.55	136	P	P	14 41 06.3	+0.7
A050A	Klekovaca	69.57	310	⇑iP	P	14 41 05.3	-0.4
DAG	Danmarks Havn	69.57	348	i P	P	14 41 03.4	-1.6
DAG				IAmb	IAmb	14 41 06.6	
	comp=Z,7.5nm,0.9s						
GROS	Grobnik	69.57	312	eP	P	14 41 05.1	-0.5
P16K	Nushagak River	69.57	33	P	P	14 41 06.5	+1.2
	baz=291,SNR=7.7						
COLD	Coldfoot	69.62	24	IAmb	IAmb	14 41 07.2	
	comp=Z,35nm,0.8s						
COLD	Coldfoot	69.62	24	P	P	14 41 06.0	+0.5
	baz=295,SNR=37						
M18K	Stony River	69.67	30	P	P	14 41 07.1	+1.3
	baz=292,SNR=22						
K20K	Telida	69.71	28	IAmb	IAmb	14 41 08.4	
	comp=Z,56nm,1.1s						
K20K	Telida	69.71	28	P	P	14 41 07.2	+1.1
	baz=293,SNR=28						
O17K	Koliganek Bris	69.73	32	P	P	14 41 07.4	+1.1
	baz=292,SNR=19						
SCTE	Santa Cesarea	69.75	305	IAmb	IAmb	14 41 13.8	
	comp=Z,45nm,0.8s						
H22K	Ishtalitna Cre	69.75	25	P	P	14 41 07.2	+0.8
	baz=294,SNR=47						
ODD1	Odda	69.78	328	eP	P	14 41 06.5	-0.1
S14K	Fog Glacier	69.78	36	P	P	14 41 06.5	-0.3
	baz=291						
SOKA	Soboth	69.80	313	i P	P	14 41 06.9	-0.2
	comp=Z,16nm,0.8s,SNR=13						
CRES	Cresnjevec Ost	69.82	312	eP	P	14 41 07.2	+0.1
L19K	White Mountain	69.83	29	IAmb	IAmb	14 41 09.2	
	comp=Z,65nm,1.0s						
L19K	White Mountain	69.83	29	P	P	14 41 08.1	+1.2
	baz=293,SNR=45						
E24K	Your Creek	69.85	23	P	P	14 41 07.5	+0.6
	baz=296,SNR=91						
GORT1	Trebel	69.86	320	eP	P	14 41 07.7	+0.6
	comp=Z,116nm,1.4s,baz=69,slow=6.1						
KHC	Kasperske Hory	69.87	316	eP	P	14 41 07.6	+0.2
KHC				ex	x	14 41 15.2	
KHC				eS	S	14 50 17.2	+0.4
KHC				AMS	AMS	15 12 50.0	
	comp=Z,1µm,17.9s						
KHC	Kasperske Hory	69.87	316	eP	P	14 41 07.6	+0.2
KHC				e		14 41 15.2	
KHC				eS	S	14 50 17.2	+0.4
KHC				MLR	MLR		
	comp=Z,1µm,17.9s						
MOA	Molln	69.88	314	i pP	P	14 41 07.7	+0.2
	comp=Z,28nm,1.7s,SNR=9.4						
GEC2	GERESS Array S	69.89	315	eP	P	14 41 07.6	0.0
	comp=Z,16nm,1.0s,baz=69,slow=6.1						
GEC2				epP	sP	14 41 15.1	+1.6
GERES	GERESS Array B	69.89	315	P	P	14 41 07.5	0.0
	comp=Z,7.7nm,0.8s,baz=74,slow=4.7,SNR=49						
	comp=Z,7.7nm,0.8s						
G23K	Bananza Creek	69.91	24	IAmb	IAmb	14 41 08.9	
	comp=Z,97nm,1.5s						
G23K	Bananza Creek	69.91	24	P	P	14 41 07.7	+0.4
	baz=295,SNR=38						
N18K	Kilae Creek	69.95	31	IAmb	IAmb	14 41 10.0	
	comp=Z,44nm,0.9s						
N18K	Kilae Creek	69.95	31	P	P	14 41 08.9	+1.3
	baz=292,SNR=24						
D25K	Kavik River	69.98	21	IAmb	IAmb	14 41 09.2	
	comp=Z,52nm,1.0s						
D25K	Kavik River	69.98	21	P	P	14 41 08.0	+0.3
	baz=297,SNR=58						
BSEG	Bad Segeberg	70.08	321	eP	P	14 41 09.1	+0.6
	comp=Z,93nm,1.3s,baz=69,slow=6.1						
BSEG				epP	sP	14 41 16.6	+2.3
SNART	Snartemo	70.09	326	i P	P	14 41 08.4	-0.1
TANN	Tannenbergstha	70.09	317	eP	P	14 41 08.7	0.0
	comp=Z,45nm,1.6s,baz=69,slow=6.1						
FLTG	Flechtingen	70.13	319	eP	P	14 41 08.4	-0.5
	comp=Z,61nm,1.5s,baz=69,slow=6.1						
L20K	Farewell, AK	70.13	29	P	P	14 41 09.9	+1.2
	baz=293,SNR=25						
M19K	Big River Lodg	70.14	30	IAmb	IAmb	14 41 10.8	
	comp=Z,33nm,0.9s						
M19K	Big River Lodg	70.14	30	P	P	14 41 10.2	+1.4
	baz=293						
C26K	Camden Bay	70.15	20	P	P	14 41 09.6	+0.9
	baz=298,SNR=37						
OBKA	Obir	70.17	313	⇑iP	P	14 41 08.6	-0.8
OBKA	Obir	70.17	313	i P	P	14 41 09.1	-0.3
	comp=Z,7.3nm,0.7s						
CHUM	Lake Minchumin	70.22	27	P	P	14 41 10.2	+1.0
	baz=294,SNR=23						
NEUB	Neuenburg	70.22	318	eP	P	14 41 09.4	0.0
	comp=Z,100nm,1.4s,baz=69,slow=6.1						
P17K	Kvichak River	70.25	33	P	P	14 41 10.8	+1.3
	baz=292,SNR=18						
CHNA	Chernabura Isl	70.29	38	P	P	14 41 10.2	+0.5
CHNA	Chernabura Isl	70.29	38	P	P	14 41 09.8	0.0
	baz=291,SNR=6.6						
WET	Wettzell	70.29	316	eP	P	14 41 10.2	+0.3
	comp=Z,51nm,1.6s,baz=69,slow=6.1						
WET				epP	sP	14 41 17.6	+1.8
F24K	Squaw Lake	70.30	23	IAmb	IAmb	14 41 11.5	
	comp=Z,63nm,1.4s						
F24K	Squaw Lake	70.30	23	P	P	14 41 10.1	+0.4
	baz=297,SNR=38						
BIOA	Bad Ischl, Aus	70.33	314	i pP	P	14 41 10.4	+0.1
	comp=Z,12nm,0.8s,SNR=9.9						
GBRS	Gornja Briga	70.35	312	eP	P	14 41 10.6	+0.2
Q16K	King Salmon	70.35	33	P	P	14 41 10.9	+0.8
	baz=292,SNR=9.0						
MLY	Manley	70.36	26	IAmb	IAmb	14 41 11.9	
	comp=Z,54nm,0.9s						
MLY	Manley	70.36	26	P	P	14 41 10.8	+0.7
	baz=295,SNR=66						
LODK	Lodwar	70.38	263	IAmb	IAmb	14 41 12.2	
	comp=Z,84nm,1.7s						
LODK	Lodwar	70.38	263	P	P	14 41 11.0	-0.1
	SNR=6.5						
MANZ	Manzenberg	70.46	317	eP	P	14 41 11.3	+0.4
	comp=Z,8.9nm,1.4s,baz=69,slow=6.1						
H23K	Yukon River	70.47	25	P	P	14 41 11.8	+1.1
	baz=296,SNR=65						
ROTZ	Rotzenmuhle	70.48	317	eP	P	14 41 11.5	+0.4
	comp=Z,15nm,1.4s,baz=69,slow=6.1						
CAST	Castle Rocks	70.50	28	P	P	14 41 11.7	+0.7
	baz=294,SNR=26						
MOX	Moxa	70.52	318	eP	P	14 41 11.3	0.0
	comp=Z,47nm,1.6s,baz=69,slow=6.1						
MOX				eL	L	15 13 53.4	
	comp=Z,517nm,18.8s						
CEY	Cerknica	70.52	312	⇑iP	P	14 41 08.8	-2.7
ASSE	Asse, Remlinge	70.53	319	eP	P	14 41 11.2	0.0
	comp=Z,24nm,1.3s,baz=69,slow=6.1						
N19K	Bonanza Creek	70.53	31	P	P	14 41 12.6	+1.2
	baz=293,SNR=42						
O18K	Koktuh Hills	70.58	32	P	P	14 41 12.8	+1.3
	baz=293,SNR=32						
C27K	Jago River	70.66	20	P	P	14 41 12.7	+0.8
	baz=300,SNR=111						
BPAW	Bear Paw Mtn.	70.66	27	IAmb	IAmb	14 41 13.6	
	comp=Z,69nm,1.0s						
BPAW	Bear Paw Mtn.	70.66	27	P	P	14 41 12.4	+0.5
	baz=295,SNR=66						
PPLA	Purkeypile	70.67	28	P	P	14 41 13.1	+0.9
	baz=295,SNR=50						
M20K	Styx River	70.69	29	IAmb	IAmb	14 41 14.6	
	comp=Z,70nm,0.9s						
M20K	Styx River	70.69	29	P	P	14 41 13.6	+1.3
	baz=294,SNR=33						
MYKA	Terra Mystica	70.71	313	i P	P	14 41 12.0	-0.7
	comp=Z,6.2nm,0.8s						
NRDL	Niedersach Rie	70.72	320	eP	P	14 41 13.0	+0.7
	comp=Z,84nm,1.4s,baz=69,slow=6.1						
P18K	Big Mountain,	70.75	32	IAmb	IAmb	14 41 14.6	
	comp=Z,62nm,0.8s						
P18K	Big Mountain,	70.75	32	P	P	14 41 13.5	+0.9
	baz=293,SNR=32						
MATE	Matera	70.80	306	⇑P	P	14 41 12.2	-0.9
E25K	Arctic Village	70.80	22	P	P	14 41 12.9	+0.2
	baz=298,SNR=16						
CLZ	Clausthal	70.81	319	eP	P	14 41 13.3	+0.3
	comp=Z,86nm,1.4s,baz=69,slow=6.1						
CLZ				epP	sP	14 41 21.1	+2.2
G24K	Hadweenzic Riv	70.82	24	IAmb	IAmb	14 41 14.7	
	comp=Z,52nm,0.9s						
G24K	Hadweenzic Riv	70.82	24	P	P	14 41 13.5	+0.6
	baz=297,SNR=53						
I23K	Minto, Yukon-K	70.83	26	IAmb	IAmb	14 41 14.7	
	comp=Z,32nm,0.9s						
I23K	Minto, Yukon-K	70.83	26	P	P	14 41 13.6	+0.7
	baz=296,SNR=40						
RJOB	Jochberg	70.85	314	eP	P	14 41 13.6	+0.2
	comp=Z,22nm,1.2s,baz=69,slow=6.1						
O19K	Port Alsworth	70.85	31	IAmb	IAmb	14 41 16.4	
	comp=Z,115nm,1.6s						
O19K	Port Alsworth	70.85	31	P	P	14 41 14.1	+0.9
	baz=294,SNR=5.3						
Q17K	Contact Creek	70.88	34	P	P	14 41 13.4	-0.1
	baz=293						
KIBK	Kibwezi	70.91	256	P	P	14 41 14.0	-0.4
	SNR=6.5						
KTH	Kantishna Hill	70.92	27	IAmb	IAmb	14 41 17.3	
	comp=Z,73nm,1.4s						
SABO	M.te Sabotino	70.98	312	IAmb	IAmb	14 41 14.8	
	comp=Z,49nm,1.2s						
KMBO	Kilima Mbogo	70.98	258	P	P	14 41 14.5	-0.4
KMBO				IAmb	IAmb	14 41 16.3	
	comp=Z,122nm,1.7s						
KMBO	Kilima Mbogo	70.98	258	P	P	14 41 14.5	-0.4
KMBO				pmax	pmax		
	comp=Z,121nm,1.7s						
KMBO	Kilima Mbogo	70.98	258	i P	P	14 41 15.0	+0.1
	SNR=17						
F25K	Christian Rive	71.03	22	IAmb	IAmb	14 41 16.4	
	comp=Z,37nm,0.9s						
F25K	Christian Rive	71.03	22	P	P	14 41 15.1	+0.9
	baz=299,SNR=51						
LESA	Schwarzleotal	71.04	314	i P	P	14 41 14.5	-0.2
	comp=Z,55nm,1.6s,SNR=25						
RETH	Rethem/Aller,	71.05	320	eP	P	14 41 14.8	+0.4
	comp=Z,70nm,1.7s,baz=69,slow=6.1						
H24K	Noodor Dome	71.07	25	IAmb	IAmb	14 41 16.3	
	comp=Z,32nm,0.8s						
H24K	Noodor Dome	71.07	25	P	P	14 41 15.2	+0.7
	baz=297,SNR=38						
GRA1	Grafenberg Arr	71.10	317	IAmb	IAmb	14 41 16.8	
	comp=Z,92nm,1.5s						
GRF	Grafenberg Arr	71.10	317	eP	P	14 41 15.3	+0.5
	comp=Z,32nm,1.1s,baz=69,slow=6.1						
GRF				eL	L	15 14 01.8	
	comp=Z,558nm,19.5s						
GRFO	Grafenberg	71.10	317	P	P	14 41 15.2	+0.3
GRFO				IAmb	IAmb	14 41 16.7	
	comp=Z,84nm,1.5s						
GRFO	Grafenberg	71.10	317	P	P	14 41 15.2	+0.3
GRFO				pmax	pmax		
	comp=Z,84nm,1.5s						
Q18K	Katmai Hardscr	71.15	33	P	P	14 41 14.9	-0.3
	baz=294,SNR=13						
GTTG	Gottingen	71.15	319	eP	P	14 41 15.3	+0.2
	comp=Z,53nm,1.3s,baz=69,slow=6.1						
CMSA	Cobar Meteorol	71.19	144	P	P	14 41 16.6	+1.1
NEA2	Nenana	71.19	26	P	P	14 41 15.5	+0.3
	baz=297,SNR=94						
TRF	Thorofare Moun	71.22	27	P	P	14 41 15.4	-0.1
	baz=296,SNR=14						
G25K	Bearman Lake	71.27	23	P	P	14 41 16.6	+1.1
	baz=298,SNR=64						
TIP	Timpagrande	71.30	305	IAmb	IAmb	14 41 16.9	
	comp=Z,102nm,1.8s						
TIP	Timpagrande	71.30	305	⇑P	P	14 41 15.8	-0.5
SKT	Skwentna	71.34	29	P	P	14 41 16.1	0.0
	baz=295,SNR=34						
N20K	Mount Spurr	71.38	30	P	P	14 41 16.8	+0.3
	baz=295						
SPCR	Spurr Chakacha	71.38	30	P	P	14 41 16.9	+0.5
	baz=295						
ABTA	Abfaltersbach	71.39	314	i P	P	14 41 15.6	-1.2
	comp=Z,10nm,0.8s,SNR=5.8						
UBBA	Unterbreizbach	71.41	318	eP	P	14 41 16.7	+0.2
	comp=Z,53nm,1.8s,baz=69,slow=6.1						
STLK	Strandline Lak	71.42	30	IAmb	IAmb	14 41 17.8	
	comp=Z,24nm,0.8s						
DBG	Daneborg	71.45	346	i P	P	14 41 15.6	-0.9
RED	Redoubt Volcan	71.46	31	IAmb	IAmb	14 41 18.3	
	comp=Z,47nm,1.1s						
ILSW	Iliamna Southw	71.48	31	IAmb	IAmb	14 41 19.6	
	comp=Z,46nm,1.1s						
F26K	Sheenjek River	71.48	22	P	P	14 41 17.5	+0.6
	baz=300,SNR=42						
COLA	College	71.53	25	P	P	14 41 17.4	+0.3
COLA	College	71.53	25	P	P	14 41 17.9	+0.8
COLA	College	71.53	25	P	P	14 41 17.4	+0.3
COLA				pmax	pmax		
	comp=Z,74nm,0.8s						
COLA	College	71.53	25	P	P	14 41 17.4	+0.3
	baz=298						
POKR	Poker Plat Res	71.57	25	P	P	14 41 18.0	+0.6
	baz=298,SNR=35						
P19K	Oil Pt	71.58	32	P	P	14 41 17.7	+0.1
	baz=295,SNR=6.9						
CIMO	Cimolais	71.60	313	IAmb	IAmb	14 41 18.4	
	comp=Z,79nm,1.7s						
H25L	Birch Creek	71.61	24	P	P	14 41 18.6	+0.9
	baz=299,SNR=26						
MCK	McKinley	71.63	27	IAmb	IAmb	14 41 19.3	
	comp=Z,102nm,1.8s						
MCK	McKinley	71.63	27	P	P	14 41 17.6	-0.3
	baz=297,SNR=12						
FUR	Furstenfeldbru	71.64	315	eP	P	14 41 18.6	+0.5
	comp=Z,59nm,1.0s,baz=69,slow=6.1						
FUR				epP	sP	14 41 26.3	+2.3
FYU	Fort Yukon	71.67	23	IAmb	IAmb	14 41 20.1	
	comp=Z,63nm,1.1s						
O20K	Slope Mountain	71.67	31	P	P	14 41 18.1	-0.1
	baz=295						
D27M	Malcolm River	71.69	20	P	P	14 41 18.8	+0.6
	baz=302,SNR=30						
Q19K	Cape Douglas,	71.69	32	IAmb	IAmb	14 41 18.8	
	comp=Z,48nm,0.7s						
Q19K	Cape Douglas,	71.69	32	P	P	14 41 17.7	-0.6
	baz=295						
CUT	Chulitna	71.69	28	P	P	14 41 18.0	-0.2
	baz=296						
WTTA	Wattenberg	71.76	314	i P	P	14 41 18.6	-0.5
	comp=Z,22nm,0.8s,SNR=15						
WATA	Walderalm	71.77	314	i P	P	14 41 18.4	-0.7
	comp=Z,16nm,1.1s,SNR=12						
R18K	Karluk	71.86	34	P	P	14 41 18.6	-0.7
	baz=294						
SUA	Susitna One	71.90	29	P	P	14 41 19.7	+0.1
	baz=296,SNR=41						
ILAR	Eielson Array	71.94	25	P	P	14 41 19.1	-0.6
	comp=Z,9.2nm,0.9s,baz=283,slow=3.7,SNR=50						
ILAR				PP	PP	14 43 59.4	+0.4
	comp=Z,1.8nm,0.7s,baz=309,slow=7.7,SNR=2.8						

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ILAR                                 LR      LR      15 15 01.5
       comp=Z,392nm,18.9s,baz=281,slow=38
       comp=Z,9.2nm,0.9s
G26K   Porcupine Rive     71.98  23  IAmb    IAmb    14 41 21.9
       comp=Z,49nm,0.8s
G26K   Porcupine Rive     71.98  23  P       P       14 41 20.6 +0.8
       baz=300,SNR=72
CHIR   Chirikof Islan     71.99  36  P       P       14 41 19.9 -0.1
       baz=294
CAPN   Captain Cook N     72.03  30  P       P       14 41 20.0 -0.2
       baz=296
M22K   Willow             72.04  29  P       P       14 41 19.9 -0.3
       baz=297,SNR=19
SQTA   Sankt Quirin       72.04 314 i P      P       14 41 20.1 -0.6
       comp=Z,25nm,0.7s,SNR=12
E27K   Coleen River       72.06  21  P       P       14 41 20.8 +0.4
       baz=302,SNR=29
MOTA   Moosalm            72.06 314 i P      P       14 41 20.1 -0.8
       comp=Z,23nm,0.9s,SNR=13
PRP    Porcupine Dome     72.08  24  P       P       14 41 21.1 +0.4
       baz=299,SNR=87
HDA    Harding Lake       72.09  26  P       P       14 41 19.5 -1.1
       baz=298,SNR=16
IBBN   Ibbenburen         72.12 320 eP       P       14 41 21.1 +0.2
       comp=Z,53nm,1.3s,baz=69,slow=6.1
KASTN  Kahler Asten       72.18 319 eP       P       14 41 21.6 +0.2
       comp=Z,31nm,1.5s,baz=69,slow=6.1
WAT1   Susitna Watana     72.20  28  P       P       14 41 20.6 -0.7
       baz=298
RETA   Reutte             72.22 315 i P      P       14 41 21.3 -0.5
       comp=Z,12nm,0.8s
INTR   Introdacqua        72.25 309  IAmb    IAmb    14 42 21.7
       comp=Z,38nm,1.2s
CEL    Celeste            72.27 304  IAmb    IAmb    14 41 30.3
       comp=Z,36nm,0.9s
D28M   Stokes Point       72.30  20  P       P       14 41 22.3 +0.6
       baz=304
Q20K   Shuyak Island      72.41  32  P       P       14 41 22.2 -0.4
       baz=296
FDMO   Fiordimonte        72.42 310  IAmb    IAmb    14 41 24.2
       comp=Z,125nm,1.8s
SII    Sitkinak Islan     72.42  35  P       P       14 41 22.5 -0.2
       baz=295
FETA   Feichten           72.42 314 i P      P       14 41 22.5 -0.6
       comp=Z,25nm,0.9s,SNR=15
TEOL   Teolo              72.46 312  IAmb    IAmb    14 41 31.0
       comp=Z,42nm,0.8s
E28M   Babbage River      72.47  20  IAmb    IAmb    14 41 24.5
       comp=Z,50nm,1.1s
E28M   Babbage River      72.47  20  P       P       14 41 23.2 +0.5
       baz=304,SNR=32
NRCA   Norcia             72.48 310  IAmb    IAmb    14 41 24.9
       comp=Z,104nm,1.7s
RC01   Rabbit Creek A     72.51  29  IAmb    IAmb    14 41 25.4
       comp=Z,67nm,1.3s
RC01   Rabbit Creek A     72.51  29  P       P       14 41 22.9 -0.2
       baz=297,SNR=15
PMR    Palmer             72.54  29  P       P       14 41 23.5 +0.3
PMR    Palmer             72.54  29  P       P       14 41 23.2  0.0
       baz=298,SNR=39
GHO    Glory Hole Cre     72.54  29  IAmb    IAmb    14 41 25.7
       comp=Z,32nm,0.9s
CNPM   China Poot         72.55  31  IAmb    IAmb    14 41 25.6
       comp=Z,32nm,1.0s
TNS    Taunus Mts         72.55 318 eP       P       14 41 23.6  0.0
       comp=Z,20nm,1.1s,baz=69,slow=6.1
UBR    Ueberruh           72.55 315 eP       P       14 41 23.3 -0.4
       comp=Z,17nm,1.0s,baz=69,slow=6.1
UBR                                 epP      sP      14 41 30.8 +1.3
DHY    Denali Highway     72.56  27  P       P       14 41 23.2 -0.3
       baz=298,SNR=18
OHAK   Old Harbor         72.58  34  IAmb    IAmb    14 41 25.0
       comp=Z,46nm,0.7s
OHAK   Old Harbor         72.58  34  P       P       14 41 25.0 +1.4
OHAK   Old Harbor         72.58  34  P       P       14 41 24.0 +0.4
       baz=295,SNR=15
J25K   Salcha River,      72.59  25  IAmb    IAmb    14 41 23.5
       comp=Z,64nm,1.7s
J25K   Salcha River,      72.59  25  P       P       14 41 22.4 -1.2
       baz=300,SNR=21
BRLK   Bradley Lake       72.60  31  IAmb    IAmb    14 41 24.2
       comp=Z,40nm,0.8s
WAT6   Susitna Watana     72.65  28  P       P       14 41 24.0 -0.2
       baz=298,SNR=19
BRSE   Bradley Lake S     72.67  31  P       P       14 41 23.8 -0.4
       baz=297,SNR=7.8
KDAK   Kodiak Island      72.68  33  P       P       14 41 24.2 +0.1
KDAK   Kodiak Island      72.68  33  P       P       14 41 24.4 +0.3
       comp=Z,37nm,0.6s,baz=305,slow=2.5,SNR=80
KDAK                                 LR      LR      15 14 16.7
       comp=Z,558nm,21.5s,baz=270,slow=37
       comp=Z,37nm,0.6s
KDAK   Kodiak Island      72.68  33  P       P       14 41 24.4 +0.3
       baz=296
STU    Stuttgart          72.68 316 eP       P       14 41 24.3  0.0
       comp=Z,64nm,1.0s,baz=69,slow=6.1
STU                                 epP      sP      14 41 32.0 +1.8
BUG    Bochum--Univer     72.75 319 eP       P       14 41 24.8 +0.2
       comp=Z,24nm,1.1s,baz=69,slow=6.1
OPO    Ambohidratompo     72.75 237  LR      LR      15 12 12.6
       comp=Z,377nm,20.9s,baz=181,slow=35
G27K   Doyon Strip        72.77  22  IAmb    IAmb    14 41 26.4
       comp=Z,42nm,0.8s
G27K   Doyon Strip        72.77  22  P       P       14 41 25.3 +0.7
       baz=302,SNR=72
SML    Sawmill            72.77  28  P       P       14 41 25.1 +0.4
       baz=298,SNR=47
O22K   Cooper Landing     72.79  30  IAmb    IAmb    14 41 44.1
       comp=Z,51nm,0.7s
O22K   Cooper Landing     72.79  30  P       P       14 41 24.5 -0.2
       baz=297
K24K   Donnelly Dome      72.83  26  P       P       14 41 24.6 -0.5
       baz=300,SNR=55
DAVA   Damuels            72.85 315 i P      P       14 41 25.0 -0.6
       comp=Z,17nm,1.4s,SNR=8.3
FUORN  Ofenpass-Fuorn     72.87 314  IAmb    IAmb    14 41 27.0
       comp=Z,71nm,1.6s
KNK    Knik Glacier       72.91  29  IAmb    IAmb    14 41 26.9
       comp=Z,56nm,0.9s
KNK    Knik Glacier       72.91  29  P       P       14 41 25.8 +0.3
       baz=298,SNR=16
F28M   Old Crow           72.92  21  P       P       14 41 25.9 +0.4
       baz=304,SNR=23
CESX   Cesi               72.93 309  IAmb    IAmb    14 41 26.7
       comp=Z,85nm,1.9s
M23K   Glacier View       73.03  28  P       P       14 41 26.5 +0.3
       baz=299,SNR=19
I26K   Coal Creek Min     73.05  24  IAmb    IAmb    14 41 27.5
       comp=Z,47nm,0.9s
I26K   Coal Creek Min     73.05  24  P       P       14 41 26.3 +0.1
       baz=301,SNR=49
SEW    Seward             73.09  30  IAmb    IAmb    14 41 27.3
       comp=Z,41nm,0.9s
SEW    Seward             73.09  30  P       P       14 41 26.2 -0.4
       baz=298,SNR=6.5
E29M   Blow River         73.09  20  IAmb    IAmb    14 41 28.1
       comp=Z,63nm,1.0s
E29M   Blow River         73.09  20  P       P       14 41 26.9 +0.4
       baz=305,SNR=42
H27K   Steamboat Moun     73.12  23  IAmb    IAmb    14 41 28.8
       comp=Z,75nm,0.9s
H27K   Steamboat Moun     73.12  23  P       P       14 41 27.7 +0.9
       baz=302,SNR=81
SCM    Sheep Creek Mo     73.18  28  P       P       14 41 27.6 +0.5
       baz=299,SNR=13
PWL    Port Wells         73.22  29  IAmb    IAmb    14 41 28.5
       comp=Z,50nm,0.9s
PWL    Port Wells         73.22  29  P       P       14 41 27.5 +0.1
       baz=298,SNR=21
RIDG   Independent Ri     73.23  26  IAmb    IAmb    14 41 27.9
       comp=Z,66nm,1.0s
RIDG   Independent Ri     73.23  26  P       P       14 41 26.9 -0.5
       baz=300,SNR=40
J26L   Joseph Creek       73.32  25  P       P       14 41 27.6 -0.3
       baz=301,SNR=151
NEEM   North Greenlan     73.36 355 i P      P       14 41 28.2  0.0
NEEM                                 IAmb    IAmb    14 41 30.4
       comp=Z,52nm,0.8s
PAX    Paxson             73.37  27  P       P       14 41 28.2 -0.1
       baz=300,SNR=22
BFO    Black Forest       73.39 316  P       P       14 41 27.6 -1.0
BFO    Black Forest       73.39 316  P       P       14 41 27.6 -1.0
BFO                                  pmax    pmax
       comp=Z,42nm,1.3s
BFO    Black Forest       73.39 316 eP       P       14 41 28.3 -0.3
       comp=Z,28nm,1.1s,baz=69,slow=6.1
BFO                                 epP      sP      14 41 35.8 +1.4
SCRK   Sand Creek         73.43  25  IAmb    IAmb    14 41 30.6
       comp=Z,41nm,1.0s
SCRK   Sand Creek         73.43  25  P       P       14 41 28.3 -0.3
       baz=301,SNR=58
I27K   Kandik River       73.43  23  P       P       14 41 29.4 +0.9
       baz=303,SNR=54
TUE    Stuetta            73.51 314  IAmb    IAmb    14 41 30.7
       comp=Z,102nm,1.9s
M24K   Tolsona, Glenn     73.52  28  P       P       14 41 30.3 +1.2
       baz=300,SNR=39
ARPS   Mount Arapiles     73.59 150  P       P       14 41 30.4 +0.7
GLI    Glacier Island     73.74  29  P       P       14 41 30.5 +0.1
       baz=299
BTNL   Ternell            73.75 319 dP       P       14 41 30.4 -0.3
       comp=Z,7.2nm,1.1s
HARP   HAARP              73.78  27  P       P       14 41 31.4 +0.8
       baz=300,SNR=9.1
MEM    Membach            73.81 319 dP       P       14 41 30.5 -0.5
       comp=Z,9.2nm,0.9s
G29M   Pine Creek         73.91  21  IAmb    IAmb    14 41 33.9
       comp=Z,50nm,1.1s
G29M   Pine Creek         73.91  21  P       P       14 41 31.5 +0.2
       baz=305,SNR=36
BHOU   Houvegnez          73.93 319 dP       P       14 41 31.0 -0.7
BEBN   Eben Emael         73.93 319 dP       P       14 41 31.6 -0.1
KLU    Klutina            73.93  28  P       P       14 41 32.2 +0.6
       baz=300,SNR=42
P23K   Montague Islan     74.04  30  IAmb    IAmb    14 41 33.6
       comp=Z,48nm,0.9s
P23K   Montague Islan     74.04  30  P       P       14 41 32.6 +0.5
       baz=299,SNR=6.8
A36M   Sachs Harbour      74.06  14  P       P       14 41 32.5 +0.5
       baz=315,SNR=51
FID    Port Fidalgo       74.07  29  IAmb    IAmb    14 41 33.3
       comp=Z,44nm,0.8s
MENT   Mentasta           74.08  26  P       P       14 41 32.8 +0.4
BSTI   Sart Tilman        74.08 319 dP       P       14 41 31.6 -1.0
I28M   Miner Creek        74.10  23  IAmb    IAmb    14 41 34.1
       comp=Z,43nm,1.0s
I28M   Miner Creek        74.10  23  P       P       14 41 33.0 +0.4
       baz=304,SNR=47
K27K   Chicken            74.12  25  IAmb    IAmb    14 41 34.4
       comp=Z,57nm,1.0s
K27K   Chicken            74.12  25  P       P       14 41 33.1 +0.6
       baz=303
WLF    Walferdange        74.13 318  IAmb    IAmb    14 41 34.9
       comp=Z,101nm,1.3s
WLF    Walferdange        74.13 318 dP       P       14 41 33.1 +0.2
       comp=Z,30nm,1.2s
WLF    Walferdange        74.13 318 eP       P       14 41 33.5 +0.7
       comp=Z,50nm,1.1s,baz=69,slow=6.1
WLF                                 epP      sP      14 41 40.9 +2.1
L26K   Log Cabin Wild     74.17  26  P       P       14 41 33.1 +0.2
       baz=302
DIV    Divide             74.18  28  IAmb    IAmb    14 41 34.6
       comp=Z,48nm,1.0s
F30M   Barrier River      74.19  20  IAmb    IAmb    14 41 35.9
       comp=Z,92nm,1.1s
F30M   Barrier River      74.19  20  P       P       14 41 33.5 +0.5
       baz=307,SNR=41
H29M   Whitestone         74.19  22  P       P       14 41 32.9 -0.1
       baz=305,SNR=20
HIN    Hinchinbrook I     74.23  29  IAmb    IAmb    14 41 35.1
       comp=Z,124nm,1.4s
BCLA   Clavier            74.30 319 dP       P       14 41 33.2 -0.7
       comp=Z,9.8nm,1.2s
SANVU  Saraoutou          74.40 118  P       P       14 41 33.9 -1.0
SANVU  Saraoutou          74.40 118  P       P       14 41 36.0 +1.2
SCO    Scoresbysund       74.40 344 i P      P       14 41 34.5 +0.5
N25K   Chitina, Valde     74.42  28  IAmb    IAmb    14 41 36.0
       comp=Z,44nm,0.8s
N25K   Chitina, Valde     74.42  28  P       P       14 41 35.4 +1.0
       baz=301,SNR=39
INK    Inuvik             74.44  19  IAmb    IAmb    14 41 35.4
       comp=Z,58nm,0.8s
INK    Inuvik             74.44  19  P       P       14 41 34.4  0.0
       comp=Z,55nm,0.9s,baz=325,slow=6.9,SNR=66
INK                                  LR      LR      15 18 34.8
       comp=Z,424nm,18.1s,baz=264,slow=39
       comp=Z,55nm,0.9s
INK    Inuvik             74.44  19  P       P       14 41 34.3  0.0
       baz=309,SNR=48
G30M   tAoh Zraii Nji     74.44  21  IAmb    IAmb    14 41 35.2
       comp=Z,82nm,0.9s
G30M   tAoh Zraii Nji     74.44  21  P       P       14 41 34.1 -0.4
       baz=307,SNR=81
BGES   Gesves             74.44 319 dP       P       14 41 34.0 -0.7
       comp=Z,7.4nm,1.3s
EYAK   Cordova Ski Ar     74.48  29  IAmb    IAmb    14 41 36.6
       comp=Z,78nm,1.0s
EYAK   Cordova Ski Ar     74.48  29  P       P       14 41 36.0 +1.3
EYAK   Cordova Ski Ar     74.48  29  P       P       14 41 35.6 +1.0
       baz=300,SNR=24
M26K   Nabesna, AK        74.64  27  IAmb    IAmb    14 41 37.7
       comp=Z,44nm,0.9s
M26K   Nabesna, AK        74.64  27  P       P       14 41 36.5 +0.7
       baz=302,SNR=51
EPYK   Eagle Plains       74.65  22  IAmb    IAmb    14 41 36.1
       comp=Z,45nm,1.0s
EPYK   Eagle Plains       74.65  22  P       P       14 41 35.1 -0.5
       baz=307,SNR=28
BMRD   Maredsous          74.66 319 dP       P       14 41 34.6 -1.3
UCC    Uccle              74.68 320 dP       P       14 41 35.6 -0.4
I29M   Ogilvie Camp,      74.71  23  P       P       14 41 35.6 -0.5
       baz=306,SNR=17
L27K   Beaver Creek,      74.74  26  IAmb    IAmb    14 41 38.4
       comp=Z,37nm,0.8s
L27K   Beaver Creek,      74.74  26  P       P       14 41 37.2 +1.0
       baz=303,SNR=58
BMRM   Bremner River      74.75  28  P       P       14 41 36.8 +0.5
       baz=301,SNR=37
Q23K   Middleton Isla     74.79  30  P       P       14 41 36.9 +0.5
       baz=300
GLB    Gilahina Butte     74.83  28  IAmb    IAmb    14 41 38.5
       comp=Z,53nm,0.8s
DOU    Dourbes            74.85 319 dP       P       14 41 36.9 -0.2
       comp=Z,8.1nm,1.2s
F31M   Tsiigehtchic       74.92  20  IAmb    IAmb    14 41 37.9
       comp=Z,47nm,0.8s
F31M   Tsiigehtchic       74.92  20  P       P       14 41 36.9 -0.2
       baz=309,SNR=45
VLAKA  Lakatoro           74.95 118  P       P       14 41 39.0 +1.0
RAGM   Ragged Mountai     75.02  29  IAmb    IAmb    14 41 40.0
       comp=Z,145nm,1.9s
DAWY   Dawson             75.08  24  IAmb    IAmb    14 41 39.2
       comp=Z,41nm,1.0s
DAWY   Dawson             75.08  24  P       P       14 41 38.2  0.0
       baz=305,SNR=41
G31M   Satah River        75.08  21  IAmb    IAmb    14 41 39.9
       comp=Z,37nm,0.9s
G31M   Satah River        75.08  21  P       P       14 41 37.5 -0.6
       baz=308,SNR=31
VRDI   Verde Repeater     75.09  28  IAmb    IAmb    14 41 40.0
       comp=Z,36nm,0.8s
M27K   Edge Creek, AK     75.11  26  IAmb    IAmb    14 41 41.9
       comp=Z,57nm,0.9s
M27K   Edge Creek, AK     75.11  26  P       P       14 41 39.5 +1.0
       baz=303,SNR=75
VOI    Vohitsoka          75.13 235  P       P       14 41 37.3 -1.9
VOI                                  IAmb    IAmb    14 43 11.1
       comp=Z,64nm,1.4s
VOI    Vohitsoka          75.13 235  P       P       14 41 37.6 -1.6
MCARA  McCarthy VSAT      75.18  27  IAmb    IAmb    14 41 40.7
       comp=Z,64nm,0.8s
MCARA  McCarthy VSAT      75.18  27  P       P       14 41 39.5 +0.8
       baz=302,SNR=24
J29N   Klondike Camp      75.28  24  IAmb    IAmb    14 41 41.1
       comp=Z,36nm,0.7s
J29N   Klondike Camp      75.28  24  P       P       14 41 40.0 +0.6
       baz=306
KAIM   Kayak Island       75.37  29  IAmb    IAmb    14 41 41.9
       comp=Z,52nm,0.9s
KAIM   Kayak Island       75.37  29  P       P       14 41 40.8 +0.9
       baz=302
DRUM   Mains of Drumt     75.40 327 eP       P       14 41 39.4 -0.7
DRUM                                 IAmb    IAmb    14 41 40.6
       comp=Z,220nm,1.9s
MCD    Coleburn Disti     75.43 328 eP       P       14 41 39.5 -0.7
MCD                                  IAmb    IAmb    14 41 42.2
       comp=Z,33nm,1.0s
I30M   Mount Dempster     75.45  22  IAmb    IAmb    14 41 41.1
       comp=Z,30nm,0.8s
I30M   Mount Dempster     75.45  22  P       P       14 41 40.0 -0.4
       baz=307,SNR=42
BVCY   Beaver Creek       75.47  26  P       P       14 41 41.7 +1.2
       baz=304,SNR=37
CRQE   Cirque             75.49  28  P       P       14 41 41.2 +0.5
       baz=303,SNR=7.8
TGL    Tana Glacier       75.60  28  IAmb    IAmb    14 41 42.9
       comp=Z,56nm,0.9s
WAX    Waxell Ridge       75.75  28  IAmb    IAmb    14 41 44.1
       comp=Z,34nm,0.8s
H31M   Peel River         75.76  21  IAmb    IAmb    14 41 42.7
       comp=Z,41nm,0.8s
H31M   Peel River         75.76  21  P       P       14 41 41.6 -0.5
       baz=309,SNR=36
J30M   Hart River         75.86  23  P       P       14 41 42.9 +0.2
       baz=307,SNR=31
CAN    Canberra           75.86 144  P       P       14 41 42.6 -0.4
CAN    Canberra           75.86 144  P       P       14 41 42.6 -0.4
CAN                                  pmax    pmax
       comp=Z,244nm,2.0s
K29M   Barlow Dome        75.88  24  IAmb    IAmb    14 41 44.5
       comp=Z,60nm,0.8s
K29M   Barlow Dome        75.88  24  P       P       14 41 43.4 +0.5
       baz=306,SNR=95
ISLE   Juniper Island     75.88  28  IAmb    IAmb    14 41 44.5
       comp=Z,31nm,0.8s
BARN   Barnard Glacie     75.91  27  IAmb    IAmb    14 41 45.2
       comp=Z,35nm,0.7s
YUK3   Moose Creek        75.99  26  P       P       14 41 44.4 +0.7
       baz=304,SNR=30
CNB    Canberra Magne     76.05 144  P       P       14 41 45.5 +1.4
GRNC   Granite Creek      76.05  28  IAmb    IAmb    14 41 46.0
       comp=Z,43nm,0.9s
CTG    Chitna Glacier     76.09  27  P       P       14 41 45.2 +1.0
       baz=304,SNR=20
CTGM   Chitina Glacie     76.09  27  IAmb    IAmb    14 41 46.2
       comp=Z,45nm,0.7s
L29M   L29M               76.10  25  P       P       14 41 44.9 +0.8
       baz=306,SNR=90
SUMG   Summit             76.17 349 i P      P       14 41 44.6 -0.2
SUMG                                 IAmb    IAmb    14 41 46.7
       comp=Z,37nm,1.0s
EDMD   Edmundbyers        76.18 325 eP       P       14 41 43.7 -0.9
EDMD                                 IAmb    IAmb    14 41 44.3
       comp=Z,39nm,1.1s
EDI    Edinburgh          76.23 327 eP       P       14 41 44.4 -0.4
C36M   Paulatuk           76.24  16  P       P       14 41 44.5 -0.1
       baz=317,SNR=27
YAH    Yahtse             76.26  28  IAmb    IAmb    14 41 47.5
       comp=Z,40nm,0.8s
MESA   MESA               76.28  28  IAmb    IAmb    14 41 47.5
       comp=Z,48nm,0.7s
MESA   MESA               76.28  28  P       P       14 41 46.5 +1.2
       baz=304,SNR=11
LOGN   Logan Glacier      76.31  27  IAmb    IAmb    14 41 47.8
       comp=Z,109nm,1.7s
RES    Resolute Bay       76.31   5  IAmb    IAmb    14 41 46.7
       comp=Z,36nm,1.0s
RES    Resolute Bay       76.31   5  P       P       14 41 45.2 +0.3
       comp=Z,21nm,0.8s,baz=360,slow=6.1,SNR=21
RES                                  LR      LR      15 17 26.4
       comp=Z,218nm,20.6s,baz=334,slow=37
       comp=Z,21nm,0.8s
MBAR   Mbarara            76.36 262  P       P       14 41 45.0 -1.5
MBAR                                 IAmb    IAmb    14 41 48.0
       comp=Z,62nm,1.4s
MBAR   Mbarara            76.36 262  P       P       14 41 46.7 +0.2
MBAR                                 P       P       14 41 46.7 +0.2
MBAR   Mbarara            76.36 262  P       P       14 41 45.0 -1.5
MBAR                                 pmax    pmax
       comp=Z,63nm,1.5s
M29M   Somme Creek        76.37  25  P       P       14 41 46.6 +0.9
       baz=306,SNR=41
TABL   Table Mountain     76.47  28  IAmb    IAmb    14 41 49.5
       comp=Z,42nm,1.0s
EKA    Eskdalemuir Ar     76.52 326  P       P       14 41 45.8 -0.7
       comp=Z,8.6nm,0.8s,baz=50,slow=5.5,SNR=31
       comp=Z,8.6nm,0.8s
YUK8   Steele Glacier     76.54  27  P       P       14 41 47.6 +0.8
       baz=305,SNR=12
KULLO  Kullorsuaq         76.56 355 i P      P       14 41 46.4  0.0
MAYO   Mayo, Yukon        76.61  24  P       P       14 41 47.1 +0.2
       baz=308
O28M   Mount Upton        76.67  27  P       P       14 41 48.4 +0.8
       baz=305
LBWR   Ladybower, Pea     76.77 324 eP       P       14 41 47.4 -0.6
YUK4   Talbot Arm         76.94  26  P       P       14 41 49.4 +0.4
       baz=306,SNR=14
PCA    Pinnacle           77.03  28  IAmb    IAmb    14 41 51.5
       comp=Z,48nm,0.8s
PINM   Pinnacle           77.03  28  P       P       14 41 50.4 +1.0
       baz=305,SNR=9.4
NEWG   New Galloway       77.16 326 eP       P       14 41 49.8 -0.3
NEWG                                 IAmb    IAmb    14 41 50.6
       comp=Z,42nm,1.4s
YUK6   Outpost Mounta     77.29  27  P       P       14 41 51.9 +0.8
       baz=306,SNR=12
BCPM   Bancas Point       77.36  28  IAmb    IAmb    14 43 55.8
       comp=Z,76nm,0.9s
N30M   Aishikik Lake      77.48  26  IAmb    IAmb    14 41 53.9
       comp=Z,33nm,0.8s
N30M   Aishikik Lake      77.48  26  P       P       14 41 52.9 +1.0
       baz=307,SNR=30
O29M   Mount Kennedy      77.59  27  P       P       14 41 53.5 +0.9
       baz=306,SNR=11
PNL    Peninsula          77.63  28  P       P       14 41 54.0 +1.3
PNL    Peninsula          77.63  28  P       P       14 41 53.8 +1.1
       baz=306,SNR=9.0
HYT    Haines Junctio     77.70  26  IAmb    IAmb    14 41 55.1
       comp=Z,59nm,1.3s
HYT    Haines Junctio     77.70  26  P       P       14 41 54.0 +0.8
       baz=307,SNR=25
DZM    Mont Dzumac        77.77 123  P       P       14 41 54.3 +0.2
DZM                                  IAmb    IAmb    14 41 56.6
       comp=Z,55nm,1.1s
DZM    Mont Dzumac        77.77 123 eS       S       14 51 36.7  -10
       comp=Z,184nm,29.8s
DZM                                 eSS      SS      14 56 42.5 -4.9
       comp=Z,131nm,23.1s
DZM                                 eLQ      LQ      15 02 35.7
       comp=Z,623nm,31.0s
DZM                                 eLR      LR      15 05 51.3
       comp=Z,518nm,23.4s
DZM    Mont Dzumac        77.77 123  P       P       14 41 55.1 +1.0
IOMK   Kirk Michael       77.77 326 eP       P       14 41 53.6  0.0
FOEL   Foel Wylfa         77.80 324 eP       P       14 41 53.3 -0.4
FOEL                                 IAmb    IAmb    14 41 54.4
       comp=Z,38nm,1.1s
HLM1   Long Mynd          77.82 323 eP       P       14 41 53.6 -0.3
HLM1                                 IAmb    IAmb    14 41 55.3
       comp=Z,41nm,1.5s
N31M   Braeburn, Yuko     77.96  25  IAmb    IAmb    14 41 56.2
       comp=Z,60nm,0.8s
N31M   Braeburn, Yuko     77.96  25  P       P       14 41 55.2 +0.7
       baz=308,SNR=26
M31M   Drury Creek, Y     78.02  24  P       P       14 41 54.8 -0.1
       baz=309,SNR=14
KEST   Kesra              78.08 304  P       P       14 41 55.1 -0.7
KEST   Kesra              78.08 304  P       P       14 41 55.1 -0.7
       comp=Z,7.8nm,1.0s,baz=56,slow=7.5,SNR=6.2
       comp=Z,7.8nm,1.0s
KEST   Kesra              78.08 304  P       P       14 41 55.2 -0.5
KEST                                 P       P       14 41 55.2 -0.5
YATNC  Mamie plateau,     78.09 123  P       P       14 41 57.5 +1.7
MCH1   Michaelchurch      78.15 323 eP       P       14 41 55.2 -0.5
MCH1                                 IAmb    IAmb    14 41 56.5
       comp=Z,23nm,1.0s
WLF1   Llynfaes           78.20 325 eP       P       14 41 55.7 -0.3
WLF1                                 IAmb    IAmb    14 41 57.0
       comp=Z,63nm,1.0s
UPNV   Upernavik          78.21 354 i P      P       14 41 55.7  0.0
OUENC  Ouen Island, N     78.27 123  P       P       14 41 57.6 +0.9
O30N   Mendenhall         78.28  26  IAmb    IAmb    14 41 58.2
       comp=Z,106nm,1.6s
O30N   Mendenhall         78.28  26  P       P       14 41 57.1 +0.8
       baz=308,SNR=27
P29M   Windy Craggy       78.33  27  P       P       14 41 57.5 +0.9
       baz=307,SNR=10
P30M   Million Dollar     78.34  27  P       P       14 41 57.5 +0.7
       baz=308
SOEG   Soedalen           78.35 345 i P      P       14 41 55.7 -0.8
FARO   Faro, Yukon        78.38  24  P       P       14 41 57.0 +0.2
FARO   Faro, Yukon        78.38  24  P       P       14 41 57.1 +0.2
       baz=310,SNR=5.6
IDGL   Inch Island, C     78.77 327 eP       P       14 41 59.2 +0.2
WHY    Whitehorse         78.82  26  IAmb    IAmb    14 42 00.7
       comp=Z,152nm,2.0s
WHY    Whitehorse         78.82  26  P       P       14 41 59.6 +0.2
       baz=309,SNR=9.9
MMPY   Sheldon Lake,      78.86  23  P       P       14 42 00.0 +0.5
       baz=312,SNR=37
PLBC   Pleasant Camp      78.99  27  P       P       14 42 00.8 +0.6
       baz=308,SNR=7.2
POIN   Pond Inlet         79.11   1  IAmb    IAmb    14 42 02.4
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	comp=Z,38nm,0.8s						
NUUG	Nuugaatsiaq	79.11	353	*i* P	P	14 42 00.9	+0.3
N32M	Quiet Lake	79.18	25	IAmb	IAmb	14 42 02.5	
	comp=Z,65nm,0.9s						
N32M	Quiet Lake	79.18	25	P	P	14 42 01.3	0.0
	baz=311,SNR=11						
ICESG	Greenland Ices	79.35	348	*i* P	P	14 42 02.0	-0.4
ICESG				IAmb	IAmb	14 42 03.6	
	comp=Z,37nm,1.0s						
SKAG	Skagway	79.40	27	IAmb	IAmb	14 42 04.7	
	comp=Z,52nm,0.9s						
SKAG	Skagway	79.40	27	P	P	14 42 03.5	+1.1
SKAG	Skagway	79.40	27	P	P	14 42 03.5	+1.1
	baz=309,SNR=13						
HTL	Hartland	79.47	323	*e*P	P	14 42 02.7	-0.2
HTL				IAmb	IAmb	14 42 04.9	
	comp=Z,28nm,1.0s						
P33M	Teslin, Yukon	79.89	25	P	P	14 42 05.5	+0.3
	baz=311,SNR=16						
R31K	City Hall, Gus	79.89	28	P	P	14 42 05.7	+0.6
	baz=309						
P32M	Atlin	79.95	26	P	P	14 42 06.2	+0.6
	baz=310,SNR=12						
S31K	Pelican	79.97	28	P	P	14 42 06.7	+1.1
	baz=308						
CEST	Esterri de Car	80.42	313	IAmb	IAmb	14 42 09.5	
	comp=Z,65nm,1.5s						
R32K	Eaglecrest	80.48	27	P	P	14 42 09.3	+1.0
	baz=310						
JIS	Juneau Island	80.53	27	P	P	14 42 09.8	+1.2
TGTN	Hyland Airport	80.63	23	P	P	14 42 10.0	+0.8
	baz=314,SNR=9.6						
SIT	Sitka	80.92	29	IAmb	IAmb	14 42 13.3	
	comp=Z,57nm,1.0s						
SIT	Sitka	80.92	29	P	P	14 42 12.5	+1.8
SIT	Sitka	80.92	29	P	P	14 42 12.0	+1.3
	baz=309,SNR=6.5						
Q32M	Nakina River	80.93	26	P	P	14 42 11.8	+0.8
	baz=312,SNR=9.3						
WRGLY	Wrigley	80.95	20	IAmb	IAmb	14 42 12.3	
	comp=Z,37nm,0.9s						
WRGLY	Wrigley	80.95	20	P	P	14 42 11.2	+0.5
	baz=318,SNR=14						
S32K	Killisnoo	80.97	28	P	P	14 42 11.6	+0.7
	baz=310						
ILULI	Ilulissat	81.06	352	*i* P	P	14 42 10.9	-0.3
R33M	Jennings River	81.13	25	P	P	14 42 13.1	+1.1
	baz=312,SNR=28						
WTLY	Watson Lake, Y	81.44	24	P	P	14 42 13.8	+0.3
	baz=314,SNR=6.8						
ANGG	Ammassalik, Gr	81.89	345	*i* P	P	14 42 14.2	-1.4
S34M	Telegraph Cree	82.07	27	P	P	14 42 18.1	+1.3
	baz=313,SNR=14						
T33K	Petersburg	82.07	28	P	P	14 42 18.1	+1.3
	baz=311						
DLBC	Dease Lake	82.14	26	P	P	14 42 17.9	+0.6
	comp=Z,1.1nm,1.0s,baz=325,slow=4.9,SNR=20						
ISOG	Isortoq, Green	82.25	346	*i* P	P	14 42 15.7	-1.8
ILON	Igloolik, Nuna	82.35	2	IAmb	IAmb	14 42 18.7	
	comp=Z,37nm,0.9s						
U33K	Whale Pass	82.47	29	P	P	14 42 20.0	+1.1
	baz=311						
WRAK	Wrangell Islan	82.59	28	P	P	14 42 20.5	+1.1
	baz=312,SNR=18						
BEAVL	Fort Liard	82.69	23	P	P	14 42 20.7	+0.7
	baz=317						
CRAG	Craig	82.89	29	IAmb	IAmb	14 42 23.3	
	comp=Z,26nm,0.8s						
CRAG	Craig	82.89	29	P	P	14 42 22.2	+1.2
CRAG	Craig	82.89	29	P	P	14 42 22.2	+1.2
	baz=311						
LIRD	Liard River Hi	82.90	24	P	P	14 42 21.8	+0.7
	baz=316,SNR=7.0						
T35M	Bob Quinn	83.06	27	P	P	14 42 23.5	+1.5
	baz=313,SNR=16						
SFJD	Kangerlussuaq	83.06	351	P	P	14 42 21.7	0.0
SFJD	Kangerlussuaq	83.06	351	LR	LR	15 22 42.9	
	comp=Z,332nm,19.1s,baz=22,slow=38						
SFJD	Kangerlussuaq	83.06	351	P	P	14 42 21.7	0.0
SFJD				pmax	pmax		
	comp=Z,77nm,0.8s						
SFJD	Kangerlussuaq	83.06	351	*i* P	P	14 42 20.9	-0.8
SFJD				IAmb	IAmb	14 42 22.9	
	comp=Z,66nm,0.8s						
KOTAN	Kotaneelee Air	83.07	22	P	P	14 42 22.5	+0.6
	baz=318						
TOAD	Toad River Com	83.61	24	P	P	14 42 25.1	+0.3
	baz=317,SNR=39						
V35K	Ketchikan	83.63	29	P	P	14 42 25.2	+0.4
	baz=312						
U35K	Hyder	83.89	28	P	P	14 42 26.9	+0.7
	baz=314						
YKA	Yellowknife Ar	84.03	17	P	P	14 42 26.9	+0.1
	comp=Z,20nm,0.8s,baz=329,slow=5.3,SNR=51						
YKA				LR	LR	15 24 23.1	
	comp=Z,321nm,19.4s,baz=298,slow=39						
	comp=Z,20nm,0.8s						
YKAW1	Yellowknife Wh	84.07	17	P	P	14 42 26.9	0.0
YKAW1				IAmb	IAmb	14 42 28.4	
	comp=Z,35nm,0.9s						
MSVF	Nonsavu	84.29	114	LR	LR	15 15 34.2	
	comp=Z,418nm,21.8s,baz=307,slow=32						
MSVF	Nonsavu	84.29	114	P	P	14 42 30.4	+1.5
DIB	Dawson Inlet,	84.68	31	IAmb	IAmb	14 42 32.0	
	comp=Z,42nm,1.1s						
RUBB	Prince Rupert	84.89	29	IAmb	IAmb	14 42 32.6	
	comp=Z,24nm,0.9s						
ESDC	Sonseca Array	85.31	313	P	P	14 42 33.6	-0.2
	comp=Z,4.3nm,1.1s,baz=42,slow=4.9,SNR=17						
ESDC				PP	PP	14 45 51.5	+0.4
	comp=Z,2.8nm,1.0s,baz=58,slow=8.0,SNR=5.7						
ESDC				LR	LR	15 23 45.0	
	comp=Z,294nm,19.8s,baz=50,slow=38						
	comp=Z,4.3nm,1.1s						
NUUK	Nuuk	85.87	350	*i* P	P	14 42 35.7	-0.2
LSZ	Lusaka	85.89	250	P	P	14 42 36.1	-1.0
LSZ	Lusaka	85.89	250	LR	LR	15 20 44.3	
	comp=Z,320nm,19.7s,baz=58,slow=36						
LSZ	Lusaka	85.89	250	P	P	14 42 36.4	-0.6
LSZ				P	P	14 42 36.4	-0.6
LSZ	Lusaka	85.89	250	P	P	14 42 36.1	-1.0
LSZ				pmax	pmax		
	comp=Z,146nm,1.6s						
MVO	Moncorvo	86.41	315	*e*P	P	14 42 39.6	+0.4
MVO				*i* Amb		14 42 44.8	
	comp=Z,22nm,2.5s						
MVO				*e*S	S	14 53 16.0	+0.9
MVO				*e*LR	LR	15 17 10.0	
MVO				*i* AMs_20		15 29 32.3	
	comp=Z,192nm,20.0s						
PGAV	Gavieira, Arco	86.70	317	*e*P	P	14 42 41.2	+0.5
PGAV				*i* Amb		14 42 45.5	
	comp=Z,43nm,2.0s						
PGAV				*e*S	S	14 53 32.9	+15
PGAV				*e*LR	LR	15 16 19.6	
PGAV				*i* AMs_20		15 22 44.1	
	comp=Z,223nm,20.0s						
PCAB	Cabril	86.70	316	*e*P	P	14 42 41.3	+0.6
PCAB				*i* Amb		14 42 44.0	
	comp=Z,59nm,1.9s						
POLO	Lamas de Olo	86.76	316	*e*P	P	14 42 41.8	+0.8
POLO				*i* Amb		14 42 49.0	
	comp=Z,18nm,1.9s						
PVRL	Vila Real	86.77	316	*e*P	P	14 42 41.6	+0.7
MTE	Manteigas	87.17	315	*e*P	P	14 42 43.8	+0.8
MTE				*i* Amb		14 42 46.8	
	comp=Z,36nm,1.9s						
MTE				*e*S	S	14 53 26.6	+4.1
MTE				*e*LR	LR	15 17 11.8	
MTE				*i* AMs_20		15 28 22.4	
	comp=Z,180nm,18.0s						
PVIS	Viseu	87.20	315	*e*P	P	14 42 44.1	+1.0
BBB	Bella Bella	87.31	29	P	P	14 42 43.5	+0.2
	comp=Z,11nm,1.0s,baz=252,slow=12,SNR=3.3						
BBB				LR	LR	15 25 28.9	
	comp=Z,196nm,18.2s,baz=312,slow=38						
	comp=Z,11nm,1.0s						
PTO	Porto	87.39	316	*e*P	P	14 42 43.5	-0.4
PCBR	Castelo Branco	87.45	315	*e*P	P	14 42 44.5	+0.2
PCBR				*i* Amb		14 43 12.2	
	comp=Z,23nm,1.8s						
NRS	Narsarsuaq	87.50	346	IAmb	IAmb	14 42 52.8	
	comp=Z,25nm,0.8s						
NRS	Narsarsuaq	87.50	346	*i* P	P	14 42 42.0	-2.0
PMRV	Marv??o	87.63	314	*e*P	P	14 42 45.3	+0.1
PMRV				*i* Amb		14 42 47.6	
	comp=Z,33nm,1.8s						
PMRV				*e*S	S	14 53 39.4	+12
PMRV				*e*LR	LR	15 18 22.7	
PMRV				*i* AMs_20		15 25 37.2	
	comp=Z,255nm,18.0s						
PSARD	Sardoal	88.02	315	*e*P	P	14 42 47.6	+0.6
PSARD				*i* Amb		14 42 50.6	
	comp=Z,52nm,1.8s						
IVI	Ivigtut	88.02	347	*i* P	P	14 42 45.8	-0.7
PESTR	Estremoz	88.08	314	IAmb	IAmb	14 42 49.9	
	comp=Z,50nm,1.8s						
PESTR	Estremoz	88.08	314	*e*P	P	14 42 47.7	+0.4
PESTR				*i* Amb		14 42 50.5	
	comp=Z,26nm,1.8s						
PBAR	Barrancos	88.13	313	*e*P	P	14 42 46.7	-0.8
PBAR				*i* Amb		14 42 50.8	
	comp=Z,33nm,1.7s						
MATP	Matopo	88.27	246	LR	LR	15 20 12.8	
	comp=Z,176nm,21.3s,baz=62,slow=34						
PMTG	Montargil	88.37	314	*e*P	P	14 42 48.8	+0.1
PMTG				*i* Amb		14 42 51.6	
	comp=Z,22nm,1.7s						
EVO	Evora	88.55	314	*e*P	P	14 42 50.1	+0.6
EVO				*i* Amb		14 42 52.9	
	comp=Z,33nm,1.7s						
PBEJ	Beja	88.75	313	*e*P	P	14 42 51.2	+0.8
PBEJ				*i* Amb		14 42 53.9	
	comp=Z,21nm,1.7s						
PVAQ	Vaqueiros	89.01	313	*e*P	P	14 42 52.2	+0.5
PVAQ				*i* Amb		14 42 57.3	
	comp=Z,26nm,2.0s						
PVAQ				*e*LR	LR	15 20 22.6	
PVAQ				*i* AMs_20		15 25 59.3	
	comp=Z,260nm,22.0s						
MESJ	Messejana	89.08	313	*e*P	P	14 42 51.4	-0.7
MESJ				IAmb	IAmb	14 42 52.8	
	comp=Z,14nm,1.0s						
MESJ	Messejana	89.08	313	*e*P	P	14 42 52.6	+0.5
MESJ				*i* Amb		14 43 15.6	
	comp=Z,21nm,1.1s						
MESJ	Messejana	89.08	313	*e*P	P	14 42 51.4	-0.7
PCVE	Castro Verde	89.09	313	*e*P	P	14 42 52.9	+0.8
PCVE				*i* Amb		14 42 55.4	
	comp=Z,37nm,2.0s						
PBDV	Barranco-do-Ve	89.25	313	*e*P	P	14 42 53.0	+0.2
PBDV				*i* Amb		14 42 56.6	
	comp=Z,37nm,2.0s						
KSANE	Kasane	89.67	250	IAmb	IAmb	14 42 56.3	
	comp=Z,71nm,1.8s						
PFVI	Vila Bisbo	89.89	313	*e*P	P	14 42 55.8	0.0
LLLB	Lillooet	91.10	28	IAmb	IAmb	14 43 05.6	
	comp=Z,33nm,1.1s						
FCC	Fort Churchill	91.70	10	IAmb	IAmb	14 43 05.0	
	comp=Z,39nm,1.1s						
LBTB	Lobatse	92.90	243	LR	LR	15 22 50.0	
	comp=Z,189nm,22.0s,baz=58,slow=34						
GNW	Green Mountain	93.02	30	IAmb	IAmb	14 43 12.3	
	comp=Z,21nm,1.3s						
D05A	Enumclaw	93.68	30	IAmb	IAmb	14 43 16.1	
	comp=Z,49nm,1.6s						
RPZ	Rata Peaks	93.92	138	LR	LR	15 28 43.0	
	comp=Z,127nm,18.1s,baz=308,slow=38						
FFC	Flin Flon	94.00	15	P	P	14 43 13.9	-0.6
FFC				IAmb	IAmb	14 43 15.5	
	comp=Z,77nm,1.9s						
FFC	Flin Flon	94.00	15	P	P	14 43 13.9	-0.6
FFC				pmax	pmax		
	comp=Z,77nm,2.0s						
URZ	Urewera	94.63	131	LR	LR	15 29 53.5	
	comp=Z,74nm,18.0s,baz=296,slow=38						
C09A	Chrisman Ranch	94.77	28	IAmb	IAmb	14 43 20.5	
	comp=Z,34nm,1.4s						
NEW	Newport	94.86	27	LR	LR	15 28 32.4	
	comp=Z,450nm,20.8s,baz=320,slow=37						
MXC	Moxie City	94.89	29	IAmb	IAmb	14 43 23.2	
	comp=Z,38nm,1.9s						
BOSA	Boshof	94.95	240	P	P	14 43 17.9	-1.5
	comp=Z,3.1nm,0.5s,baz=73,slow=4.2,SNR=9.8						
BOSA				LR	LR	15 25 14.7	
	comp=Z,326nm,20.4s,baz=68,slow=35						
	comp=Z,3.1nm,0.5s						
G04A	Mulino	94.97	31	IAmb	IAmb	14 43 23.4	
	comp=Z,24nm,0.8s						
TORD	Torodi Ar. Bea	95.08	288	P	P	14 43 19.3	-0.9
	comp=Z,1.1nm,0.3s,baz=67,slow=3.5,SNR=5.9						
TORD				PP	PP	14 47 08.2	-1.4
	comp=Z,0.7nm,0.3s,baz=94,slow=4.6,SNR=3.9						
TORD				LR	LR	15 31 14.8	
	comp=Z,412nm,18.9s,baz=60,slow=39						
	comp=Z,1.1nm,0.3s						
LNOR	Lincton Mounta	96.30	29	IAmb	IAmb	14 44 15.1	
	comp=Z,24nm,1.9s						
TSUM	Tsumeb	96.64	252	LR	LR	15 26 53.3	
	comp=Z,149nm,19.4s,baz=38,slow=35						
SCHQ	Schefferville	96.76	355	P	P	14 43 27.0	-0.1
	comp=Z,10nm,0.7s,baz=15,slow=3.7,SNR=9.4						
	comp=Z,10nm,0.7s						
ULM	Lac du Bonnet	99.52	13	PP	PP	14 47 42.9	+0.8
	comp=Z,2.7nm,0.8s,baz=10.0,slow=3.1,SNR=3.1						
ULM				LR	LR	15 32 51.4	
	comp=Z,236nm,20.6s,baz=314,slow=38						
NVAR	Mina Array Bea	102.18	33	P	Pdif	14 43 51.9	-0.1
	comp=Z,0.1nm,0.5s,baz=308,slow=7.1,SNR=0.8						
NVAR				PP	PP	14 48 02.8	-0.2
	comp=Z,1.1nm,0.8s,baz=302,slow=6.8,SNR=3.9						
NVAR				PKKPbc	PKKPbc	14 59 53.7	-1.2
	comp=Z,0.7nm,0.7s,baz=136,slow=5.1,SNR=4.3						
PDAR	Pinedale Array	102.37	25	P	Pdif	14 43 52.9	+0.1
	comp=Z,0.1nm,0.3s,baz=317,slow=6.6,SNR=2.3						
PDAR				PP	PP	14 48 04.7	+0.4
	comp=Z,0.9nm,0.8s,baz=336,slow=3.3,SNR=4.2						
PDAR				PKKPbc	PKKPbc	14 59 53.5	-0.9
	comp=Z,0.3nm,0.5s,baz=134,slow=4.3,SNR=3.9						
SYO	Syowa Base	108.02	200	⇓ *e*Pdiff	Pdif	14 44 17.5	+0.9
SYO	Syowa Base	108.02	200	⇑ *e*pPdiff	pPdif	14 44 20.3	-0.7
M65A	Busby, Falmout	110.22	356	P	PKiKP	14 48 29.6	+1.0
	baz=4.2						
Y22D	IRIS PASSCAL I	110.92	28	P	PKiKP	14 48 30.9	+0.5
	baz=330						
PPT2	Papeete2	111.56	99	*e*LR	LR	15 21 23.1	
	comp=Z,550nm,35.8s						
PPT2				*e*LR	LR	15 21 35.1	
	comp=Z,937nm,33.8s						
TBI	Tubuai	113.91	105	*e*LR	LR	15 22 35.1	
	comp=Z,2µm,30.0s						
TBI				*e*LR	LR	15 22 42.0	
	comp=Z,914nm,31.5s						
TAOE	Nuku Hiva Isla	116.10	86	*e*LR	LR	15 23 34.4	
	comp=Z,507nm,22.7s						
TXAR	Lajitas Array	116.39	28	PKP	PKiKP	14 48 41.1	+0.2
	comp=Z,3.3nm,0.9s,baz=218,slow=1.6,SNR=25						
TXAR				PP	PP	14 49 46.6	+0.7
	comp=Z,0.9nm,0.7s,baz=354,slow=3.9,SNR=3.8						
TXAR				PKKPbc	PKKPbc	14 59 08.8	-0.5
	comp=Z,1.5nm,0.8s,baz=149,slow=6.3,SNR=15						
QSPA	South Pole Qui	118.23	180	PKPdf	PKPdf	14 48 42.0	-1.1
QSPA	South Pole Qui	118.23	180	PKP	PKPdf	14 48 42.2	-0.9
	comp=Z,7.8nm,0.8s,baz=279,slow=1.2,SNR=38						
QSPA				PKKPbc	PKKPab	14 59 02.5	0.0
	comp=Z,4.3nm,0.9s,baz=167,slow=1.0,SNR=11						
TROLL	Troll, Antarti	120.59	201	⇑P	PKPdf	14 48 47.4	-0.2
	comp=Z,822nm,0.8s						
SNAA	Sanae	122.29	201	⇑P	PKPdf	14 48 49.9	-0.9
	comp=Z,132nm,0.7s						
SNAA	Sanae	122.29	201	PKP	PKPdf	14 48 50.3	-0.4
	comp=Z,3.9nm,0.6s,baz=161,slow=5.1,SNR=26						
SNAA				PKKPbc	PKKPab	14 58 46.3	+1.4
	comp=Z,1.3nm,0.7s,baz=314,slow=7.1,SNR=4.8						
VNA2	Neumayer--Watz	123.86	201	⇑P	PKPdf	14 48 53.1	-0.6
	comp=Z,31nm,0.6s,baz=113,slow=1.5						
VNA1	Neumayer--Stat	124.20	202	⇑P	PKPdf	14 48 54.2	-0.1
	comp=Z,21nm,0.8s						
VNA3	Neumayer Olymp	124.52	201	⇑P	PKPdf	14 48 54.2	-0.8
	comp=Z,25nm,0.7s						
SDV	Santo Domingo	142.64	353		PKPdf	14 49 27.1	-3.8
ESPZ	Base Esperanza	143.12	193		PKPbc	14 49 26.5	-0.2
GUA01	Guaratinga, BA	145.43	282	*e*P	PKPab	14 49 35.4	0.0
BOAV	Boa Vista	146.28	333	*e*P	PKPdf	14 49 36.4	-0.5
ROSC	El Rosal	146.90	359	PKPbc	PKPbc	14 49 40.1	-0.2
	comp=Z,173nm,0.8s,baz=91,slow=2.8,SNR=36						
ROSC	El Rosal	146.90	359	PKP2	PKPbc	14 49 40.1	-0.2
ROSC						14 50 52.4	
RIB01	Linhares ES	147.06	278	*e*P	PKPdf	14 49 37.7	-0.3
BSFB	Barra de Sao F	147.27	279	*e*P	PKPdf	14 49 38.3	-0.1
PRPB	Parauapebas	147.37	308	*e*P	PKPdf	14 49 38.0	-0.7
SJMB	Sao Joao De Ma	147.51	280	*e*P	PKPdf	14 49 38.1	-0.7
SMTB	Santa Maria do	147.58	302	*e*P	PKPdf	14 49 38.2	-0.9
SDBA	SAO DESIDERIO	147.62	293	*e*P	PKPdf	14 49 38.7	-0.5
JANB	Januaria	148.54	289	*e*P	PKPdf	14 49 40.5	-0.1
ITTB	Itaituba	149.78	319	*e*P	PKPdf	14 49 42.1	-0.5
OTAV	Otavalo	151.30	7	*e*P	PKPdf	14 49 44.2	-1.5
MACA	Manacapuru-AM	151.34	329		PKPdf	14 49 45.8	+0.7
MACA	Manacapuru-AM	151.34	329	*e*P	PKPdf	14 49 44.4	-0.7
MAN01	Angra dos Reis	151.41	274	*e*P	PKPdf	14 49 44.9	-0.1
BSCB	Bom Sucesso	151.50	278	*e*P	PKPdf	14 49 45.1	-0.1
NPGB	Novo Progresso	151.68	315	*e*P	PKPdf	14 49 44.8	-0.8
BDFB	Brasilia	151.90	291	PKPbc	PKPbc	14 49 50.0	-2.4
	comp=Z,5.5nm,0.7s,baz=204,slow=6.6,SNR=5.4						
BDFB	Brasilia	151.90	291	PKHKP	PKPpre	14 49 50.0	
PMNB	Patos De Minas	151.97	284	*e*P	PKPdf	14 49 45.5	-0.4
SNDB	Serra Nova Dou	152.36	302	*e*P	PKPdf	14 49 46.2	-0.4
PARB	Paraibuna	153.01	274	*e*P	PKPdf	14 49 47.3	-0.1
IPMB	Ipameri, GO	153.22	287	*e*P	PKPdf	14 49 47.5	-0.3
TEFE	Tefe	153.26	336	*e*P	PKPdf	14 49 47.2	-0.7
SPB	Sao Paulo	154.68	275	*e*P	PKPdf	14 49 49.3	-0.3
PET01	Itanhaem-SP	154.73	273	*e*P	PKPdf	14 49 49.1	-0.6
CLDB	Colider	154.83	310	*e*P	PKPdf	14 49 49.4	-0.8
FRTB	Fartura	156.47	277	*e*P	PKPdf	14 49 51.8	-0.3
ATAH	Atahualpa	158.58	9	PKP	PKPdf	14 49 55.0	-0.5
	comp=Z,5.5nm,0.8s,baz=76,slow=3.8,SNR=6.9						
ATAH				PKPab	PKPab	14 50 30.2	0.0
	comp=Z,10nm,0.9s,baz=345,slow=4.8,SNR=5.4						
PTLB	Pontes e Lacer	160.35	308	*e*P	PKPdf	14 49 56.7	-0.2
BDQN	Bodoquena, MS	161.49	291	*e*P	PKPdf	14 49 57.9	-0.1
SIV	San Ignacio	162.05	311	PKP	PKPdf	14 49 58.7	-0.1
	comp=Z,3.1nm,0.8s,baz=90,slow=2.4,SNR=11						
SIV				PKPab	PKPab	14 50 44.3	-0.7
	comp=Z,2.5nm,0.8s,baz=63,slow=4.3,SNR=6.6						
BBSD	Serra de San D	162.57	307	*e*P	PKPdf	14 49 58.6	-0.6
ITQB	Itaqui	163.77	261	*e*P	PKPdf	14 50 00.2	+0.2
CPUP	Villa Florida	164.05	273	PKP	PKPdf	14 50 00.1	-0.3
	comp=Z,1.9nm,1.1s,baz=267,slow=3.8,SNR=7.3						
CPUP				PKPab	PKPab	14 50 52.4	-1.3
	comp=Z,0.5nm,0.8s,baz=338,slow=2.7,SNR=3.1						
CPUP	Villa Florida	164.05	273	PKIKP	PKPdf	14 50 00.1	-0.3
LPAZ	La Paz	166.29	330	PKP	PKPdf	14 50 03.1	-0.2
	comp=Z,7.6nm,1.0s,baz=24,slow=4.2,SNR=20						
LPAZ	La Paz	166.29	330	PKIKP	PKPdf	14 50 03.1	-0.2
LPAZ						14 51 05.4	
PLCA	Paso Flores	167.18	196	PKP	PKPdf	14 50 03.0	+0.4
	comp=Z,1.8nm,0.6s,baz=189,slow=1.6,SNR=5.9						
PLCA				PKPab	PKPab	14 51 05.4	-1.5
	comp=Z,3.2nm,0.8s,baz=124,slow=4.0,SNR=5.6						
CFA	Coronel Fontan	173.25	241	PKP	PKPdf	14 50 06.1	-0.2
	comp=Z,4.0nm,0.9s,baz=143,slow=1.6,SNR=7.8						
CFA				PKPab	PKPab	14 51 33.0	-1.3
	comp=Z,1.0nm,0.4s,baz=92,slow=3.0,SNR=2.1						

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*MOS **22** 14:30:20.6±1.4, 44.°59N×148.°89E, h97^{km}, mb4.9/4, Error ellipse: s-maj=7.5km s-min=6.1km az=68.9*

*NIED **22** 14:30:22.2, 44.°70N×148.°75E, h30^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.73; $M_{\theta\theta}$1.50; $M_{\phi\phi}$-3.23; $M_{r\theta}$3.83; $M_{\theta\phi}$-1.42; $M_{\phi r}$1.01; Fault plane solution: $M_0$4.99000×10^{15} NP1: ϕ_s163.00000°, δ38.00000°, λ21.00000°. NP2: ϕ_s56.00000°, δ77.00000°, λ126.00000°.*

*SKHL **22** 14:30:22.0±0.6, 44.°60N×148.°90E, h93^{km}±7^{km}, mb5.6/9, msha6.9/4*

*JMA **22** 14:30:22.2±0.6, 45°N±2°×14°9E±°, h30^{km}, MV5.2/16, SE OFF ETOROFU*

*NEIC **22** 14:30:26.4±2.7, 44.°7N±0.°1×148.°8E±0.°1, h125^{km}±9^{km}, mb4.6/164, Error ellipse: s-maj=15.7km s-min=13.1km az=156.0*

*IDC **22** 14:30:26.2±1.9, 45.°02N×148.°62E, h113^{km}±16^{km}, mb4.3/23, mbtmp4.7/28, MS2.7/2, Error ellipse: s-maj=25.3km s-min=10.5km az=167.0*

ISC 22 14:30:20.5±0.9**, 44.°54N**±0.°05×**148.°91E**±0.°06**, h82**^{km}±8^{km}**,**
n473, σ1^{s}**30**/428**, mb4.7**/111**, 8C-6D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.01	313	*d i*PN	Pn	14 30 40.2	+0.4
KUR				*i* S	Sn	14 30 54.1	-0.2
KUR				pmax	pmax		
	comp=Z,7µm,0.3s						
KUR				pmax	pmax		
	comp=N,3µm,0.1s						
KUR				pmax	pmax		
	comp=E,1µm,0.3s						
KUR				smax	smax		
	comp=E,12µm,0.6s						
KUR				smax	smax		
	comp=N,11µm,0.4s						
KUR	Kuril'sk	1.01	313	*i* P	Pn	14 30 40.9	+1.1
KUR				AMB	AMB	14 30 41.8	
	comp=N,6µm,0.3s						
KUR				*i* S	Sn	14 30 55.5	+1.2
KUR				A	A	14 30 56.7	
	comp=N,12µm,0.3s						
KUR				A	A	14 30 56.7	
	comp=N,10µm,0.3s						
SHO	Shikotan	1.64	247	*c i*PN	Pn	14 30 49.7	+2.0
SHO				*i* S	Sn	14 31 08.2	-0.1
SHO				pmax	pmax		
	comp=N,357nm,0.3s						
SHO				pmax	pmax		
	comp=Z,1µm,0.3s						
SHO				smax	smax		
	comp=N,6µm,0.4s						
SHO				smax	smax		
	comp=E,16µm,0.4s						
SHO	Shikotan	1.64	247	*i* P	Pn	14 30 49.7	+2.0
SHO				AMB	AMB	14 30 50.1	
	comp=E,1µm,0.4s						
SHO				*i* S	Sn	14 31 08.8	+0.5
SHO				A	A	14 31 09.2	
	comp=E,7µm,0.3s						
SHO				A	A	14 31 09.2	
	comp=E,19µm,0.3s						
YUK	Yuzh-Kuril'sk	2.25	258	*d i*PN	Pn	14 30 57.2	+1.5
YUK				*i* S	Sn	14 31 22.6	0.0
YUK				pmax	pmax		
	comp=Z,966nm,0.3s						
YUK				pmax	pmax		
	comp=N,203nm,0.1s						
YUK				pmax	pmax		
	comp=E,163nm,0.1s						
YUK				smax	smax		
	comp=N,5µm,0.4s						
YUK				smax	smax		
	comp=E,16µm,0.4s						
YUK	Yuzh-Kuril'sk	2.25	258	*i* P	Pn	14 30 57.2	+1.5
YUK				AMB	AMB	14 30 59.0	
	comp=E,740nm,0.2s						
YUK				*i* S	Sn	14 31 22.9	+0.3
YUK				A	A	14 31 25.9	
	comp=E,12µm,0.4s						
YUK				A	A	14 31 25.9	
	comp=E,17µm,0.4s						
GLVR	Golovnino	2.57	253	⇑ *i*PN	Pn	14 31 01.8	+1.8
GLVR				*e*S	Sn	14 31 30.6	+0.2
GLVR				pmax	pmax		
	comp=N,74nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,344nm,0.1s						
GLVR				smax	smax		
	comp=N,11µm,0.3s						
GLVR				smax	smax		
	comp=E,6µm,0.3s						
GLVR	Golovnino	2.57	253	*i* P	Pn	14 31 01.8	+1.8
GLVR				AMB	AMB	14 31 04.4	
	comp=E,340nm,0.2s						
GLVR				*e*S	Sn	14 31 30.6	+0.2
GLVR				A	A	14 31 34.4	
	comp=E,11µm,0.3s						
GLVR				A	A	14 31 34.4	
	comp=E,6µm,0.3s						
NEM2	Nemuro 2	2.57	244	P	Pn	14 31 00.8	+0.8
NEM2				S	Sn	14 31 28.9	-1.5
NMR	Nemuro--Hokkai	2.58	244	⇑ *i*PN	Pn	14 31 00.8	+0.6
NMR				*i* S	Sn	14 31 29.1	-1.5
NMR	Nemuro--Hokkai	2.58	244	*i* P	Pn	14 31 00.8	+0.6
NMR				*i* S	Sn	14 31 29.4	-1.2
RUSJ	Misakicho	2.66	262	⇓ *i*PN	Pn	14 31 03.9	+2.6
RUSJ				*i* S	Sn	14 31 35.6	+2.9
JRA	Rausu	2.79	259	P	Pn	14 31 05.2	+2.2
JRA				*e*S	Sn	14 31 37.2	+1.6
JNSB	Nemuroshibetsu	2.91	256	A	A	14 31 04.6	
	comp=N,8.0nm,2.2s,comp=E,5.0nm,1.2s						

JNK	Nakash	3.17	254	P	Pn	14 31 09.9	+1.8
JNK				eS	Sn	14 31 44.9	0.0
AKK	Akkeshi	3.32	244	eP	Pn	14 31 10.9	+0.8
JAK	Akkeshi	3.42	245	P	Pn	14 31 12.4	+0.8
JAK				eS	Sn	14 31 49.4	-1.6
JTKR	Abashiri--Toko	3.64	263	P	Pn	14 31 16.7	+2.3
JAR	Ashorobuto	3.92	253	P	Pn	14 31 20.7	+2.4
JOB	Onbets	4.03	248	P	Pn	14 31 21.4	+1.7
JOB				eS	Sn	14 32 04.5	-1.2
JCH	Churui	4.47	246	P	Pn	14 31 27.0	+1.2
JCH				eS	Sn	14 32 15.3	-1.2
JKK2	Kamakawa 2	4.48	264	P	Pn	14 31 28.6	+2.6
JKA	Kamikawa-asahi	4.55	267		Pn	14 31 29.5	+2.6
ASAJ	Asahikawa	4.55	267	P	Pn	14 31 29.7	+2.8
	comp=E,31nm,0.4s,baz=76,slow=20,SNR=183						
ASAJ				S	Sn	14 32 23.8	+5.3
	comp=E,42nm,0.5s,baz=82,slow=16,SNR=4.1						
ASAJ				LR	LR	14 33 28.5	
	comp=E,125nm,21.2s,baz=158,slow=41						
ERM	Erimo	4.90	241		Pn	14 31 34.3	+2.7
ERM	Erimo	4.90	241	cePN	Pn	14 31 34.1	+2.4
ERM				pmax	pmax		
	comp=Z,25nm,0.5s						
JAB	Ashibetsu	4.93	260	eP	Pn	14 31 35.9	+3.8
YSS	Yuzhno-Sakhali	4.94	301		Pn	14 31 33.3	+1.2
YSS	Yuzhno-Sakhali	4.94	301	κePN	Pn	14 31 34.0	+1.9
YSS				eS	Sn	14 32 27.5	-0.4
YSS				pmax	pmax		
	comp=Z,240nm,0.8s						
YSS				pmax	pmax		
	comp=N,200nm,0.6s						
YSS				pmax	pmax		
	comp=E,170nm,0.4s						
YSS				pmax	pmax		
	comp=Z,300nm,3.0s						
YSS				pmax	pmax		
	comp=N,200nm,2.5s						
YSS				pmax	pmax		
	comp=E,200nm,2.6s						
YSS				smax	smax		
	comp=N,100nm,3.2s						
YSS				smax	smax		
	comp=E,200nm,2.3s						
YSS				smax	smax		
	comp=N,70nm,0.7s						
YSS				smax	smax		
	comp=E,100nm,0.7s						
YSS				MLR	MLR		
	comp=Z,200nm,9.4s						
YSS	Yuzhno-Sakhali	4.94	301	eP	Pn	14 31 34.1	+1.9
YSS				AMB	AMB	14 31 34.8	
	comp=Z,510nm,0.5s						
YSS				eS	Sn	14 32 27.7	-0.2
JNBK	Urakawa-nobuka	5.02	245	P	Pn	14 31 34.1	+0.8
JWK2	Keihoku	5.04	281	P	Pn	14 31 37.3	+3.8
UGL	Uglegorsk	6.53	316	ePN	Pn	14 31 48.8	-5.0
UGL				pmax	pmax		
	comp=Z,100nm,1.0s						
UGL	Uglegorsk	6.53	316	eP	Pn	14 31 55.4	+1.6
UGL				AMB	AMB	14 32 01.8	
	comp=Z,130nm,0.6s						
UGL				eS	Sn	14 33 04.8	-1.9
JANG	Nango	6.87	235	eS	Sn	14 33 09.3	-6.0
JTM	Tenmabayashi	6.89	240	Pn	Pn	14 31 58.9	+0.1
TYV	Tymovskoe	7.60	329	ePN	Pn	14 32 11.3	+2.9
TYV				eS	Sn	14 33 35.5	+2.6
TYV				pmax	pmax		
	comp=Z,100nm,2.3s						
TYV				pmax	pmax		
	comp=Z,20nm,0.7s						
TYV				smax	smax		
	comp=N,100nm,2.2s						
TYV				smax	smax		
	comp=E,100nm,2.2s						
TYV				smax	smax		
	comp=N,10.0nm,1.3s						
TYV				smax	smax		
	comp=E,11nm,1.3s						
TYV	Tymovskoe	7.60	329	eP	Pn	14 32 10.7	+2.3
TYV				AMB	AMB	14 32 12.2	
	comp=E,20nm,0.7s						
SKR	Severo-Kuril's	7.84	36	ePN	Pn	14 32 11.9	+0.2
SKR				pmax	pmax		
	comp=Z,120nm,0.6s						
SKR				MLR	MLR		
	comp=Z,200nm,10.0s						
SKR	Severo-Kuril's	7.84	36	eP	Pn	14 32 12.2	+0.5
SKR				AMB	AMB	14 32 14.6	
	comp=Z,150nm,0.5s						
SKR				eS	Sn	14 33 36.6	-2.1
SKR				A	A	14 33 42.1	
	comp=Z,40nm,0.3s						
SKR				A	A	14 33 42.1	
	comp=Z,50nm,0.3s						
PAU	Pauzhetka	8.72	35	eP	Pn	14 32 24.0	+0.3
PAU				AMB	AMB	14 32 24.7	
	comp=Z,90nm,0.5s						
PAU				eS	Sn	14 33 57.4	-2.8
JMM	Marumori	9.04	225	Pn	Pn	14 32 26.7	-1.5
NKL	Nikolayevsk	10.17	331	eP	Pn	14 32 44.3	+0.8
PEA0B	Petropavlovsk-	10.34	31	i PN	Pn	14 32 45.2	-0.6
PETK	Petropavlovsk-	10.34	31	P	Pn	14 32 45.7	0.0
	comp=Z,25nm,0.6s,baz=200,slow=10,SNR=224						
PETK				LR	LR	14 37 16.8	
	comp=Z,36nm,19.3s,baz=214,slow=41						
GRNR	Gornyy	10.47	311	⇓iPN	Pn	14 32 49.5	+1.9
GRNR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PET	Petropavlovsk	10.64	34		Pn	14 32 49.0	-0.8
PET	Petropavlovsk	10.64	34	ePN	Pn	14 32 50.0	+0.2
PET				pmax	pmax		
	comp=Z,9.0nm,0.6s						
PET	Petropavlovsk	10.64	34	eP	Pn	14 32 48.9	-0.9
MJA0	Matsu Arr-Jizo	11.38	229	ePN	Pn	14 33 00.0	-0.1
MJA0				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MAJO	Matsushiro	11.40	229	Pn	Pn	14 32 58.7	-1.6
MAJO	Matsushiro	11.40	229	PN	Pn	14 32 58.7	-1.6
MJAR	Matsushiro Arr	11.40	229	P	Pn	14 33 00.0	-0.3
	comp=Z,3.1nm,0.6s,baz=27,slow=14,SNR=19						
MJAR				S	Sn	14 35 11.9	+6.1
	comp=Z,0.9nm,0.4s,baz=58,slow=27,SNR=1.7						
USA0B	Ussuriysk Arra	12.12	274	i PN	Pn	14 33 10.5	+0.5
USRK	Ussuriysk Ar.	12.12	274	P	Pn	14 33 10.7	+0.7
	comp=Z,10nm,0.7s,baz=91,slow=13,SNR=16						
KLR	Kul'dur	12.63	298	P	Pn	14 33 15.8	-1.1
	comp=Z,3.7nm,0.9s,baz=110,slow=15,SNR=4.1						
KLR	Kul'dur	12.63	298	cePN	Pn	14 33 18.9	+2.0
KLR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KLR	Kul'dur	12.63	298	eP	Pn	14 33 16.8	-0.1
MSHR	Mys Shultsa	13.03	268	i PN	Pn	14 33 22.6	+0.4
MA2	Magadan	15.10	4	P	Pn	14 33 48.5	-0.5
	comp=Z,12nm,0.7s,baz=192,slow=8.4,SNR=12						
MA2	Magadan	15.10	4	ceP	Pn	14 33 48.4	-0.6
MA2				pmax	pmax		
	comp=Z,24nm,1.4s						
MA2	Magadan	15.10	4	eP	Pn	14 33 48.4	-0.6
BNX	BinXian	15.22	282	⇑P	P	14 33 52.3	-1.5
BNX				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HEH	HeiHe	15.61	299	eP	Pn	14 33 55.8	+0.2
HEH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HEH				pmax	pmax		
	comp=Z,130nm,5.7s						
ZEA	Zeya	16.84	311	eP	P	14 34 13.1	+1.5
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA	Zeya	16.84	311	eP	Pn	14 34 09.6	-1.2
KSRS	Korea Array	17.33	253	P	Pn	14 34 16.6	-0.3
	comp=Z,1.0nm,0.7s,baz=61,slow=12,SNR=5.3						
SEY	Seymchan	18.54	5	P	P	14 34 29.3	-0.9
	comp=Z,30nm,0.7s,baz=184,slow=8.3,SNR=69						
SEY				PcP	PcP	14 38 52.1	-4.0
	comp=Z,11nm,0.7s,baz=175,slow=8.2,SNR=3.8						
YAK	Yakutsk	20.80	334		P	14 34 52.5	-2.3
YAK	Yakutsk	20.80	334	P	P	14 34 52.9	-2.0
	comp=Z,49nm,0.3s,baz=125,slow=3.3,SNR=21						
	comp=Z,49nm,0.3s						
YAK	Yakutsk	20.80	334	eP	P	14 34 52.8	-2.0
YAK				pmax	pmax		
	comp=Z,46nm,0.9s						
YAK				pmax	pmax		
	comp=N,11nm,1.0s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.3s						
BILL	Bilibino	25.26	15		P	14 35 37.3	-1.2
BILL	Bilibino	25.26	15	ceP	P	14 35 37.8	-0.7
BILL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BILL	Bilibino	25.26	15	eP	P	14 35 37.8	-0.7
NJ2	Nanjing	26.52	252	eP	P	14 35 51.6	+1.3
NJ2				pmax	pmax		
	comp=Z,88nm,0.7s						
HHC	Hu-ho-hao-te	27.54	276	eP	P	14 35 58.9	-0.6
HHC				pmax	pmax		
	comp=Z,61nm,0.8s						
HHC				pmax	pmax		
	comp=Z,690nm,4.6s						
SPIA	Saint Paul Isl	28.25	49	P	P	14 36 06.9	+1.4
	baz=262						
NIKH	Nikolski High	28.73	58	P	P	14 36 11.4	+1.5
	baz=271						
H11N2	WAKE ISLAND Hy	28.92	143	T	T	15 07 13.2	
	baz=333,slow=76,SNR=100						
H11N1	WAKE ISLAND Hy	28.93	143	T	T	15 07 15.4	
	baz=333,slow=76,SNR=90						
H11N3	WAKE ISLAND Hy	28.94	143	T	T	15 07 15.7	
	baz=333,slow=76,SNR=102						
GAMB	Gambell	29.33	35	P	P	14 36 16.6	+1.6
	baz=248						
SONM	Songino Array	29.34	292	P	P	14 36 14.5	-1.0
	comp=Z,11nm,1.0s,baz=93,slow=7.8,SNR=1.4						
	comp=Z,11nm,1.0s						
H11S1	WAKE ISLAND Hy	29.93	144	T	T	15 08 30.7	
	baz=334,slow=76,SNR=922						
H11S3	WAKE ISLAND Hy	29.93	144	T	T	15 08 33.0	
	baz=334,slow=76,SNR=496						
H11S2	WAKE ISLAND Hy	29.94	144	T	T	15 08 31.9	
	baz=334,slow=76,SNR=460						
UNV	Unalaska Valle	30.13	56	P	P	14 36 23.8	+1.6
	baz=271						
M11K	Mekoryuk	30.87	43	P	P	14 36 29.3	+0.7
	baz=260						
TNA	Tin City	31.50	33	P	P	14 36 34.7	+0.6
TNA				IAmb	IAmb	14 36 38.4	
	comp=Z,13nm,0.9s						
TNA	Tin City	31.50	33	P	P	14 36 34.4	+0.3
	baz=250						
K13K	Kusilvak Mount	31.90	40	P	P	14 36 39.0	+1.3
	baz=259						
FALS	False Pass	31.93	54	P	P	14 36 39.4	+1.5
	baz=272						
F14K	Arctic Creek	32.10	34	P	P	14 36 40.0	+0.6
	baz=252						
ANM	Nome	32.21	35	P	P	14 36 41.0	+0.7
	baz=254						
M13K	Dall Lake	32.27	43	P	P	14 36 41.8	+0.9
	baz=263						
J14K	Nanvaranak Lak	32.56	39	P	P	14 36 44.0	+0.6
	baz=259						
L14K	Kuka Creek	32.73	42		P	14 36 46.9	+2.1
L14K				IAmb	IAmb	14 36 47.8	
	comp=Z,12nm,0.9s						
L14K	Kuka Creek	32.73	42	P	P	14 36 46.0	+1.1
	baz=262,SNR=5.2						
F15K	North Star Dit	32.83	34	P	P	14 36 46.1	+0.3
	baz=253						
G15K	Niukluk	32.88	35	P	P	14 36 46.5	+0.3
	baz=255						
M14K	Bethel	32.99	43		P	14 36 48.9	+1.7
M14K	Bethel	32.99	43	P	P	14 36 48.2	+1.0
	baz=264,SNR=5.8						
N14K	Kuskokwak Cree	33.04	45	P	P	14 36 47.8	+0.2
	baz=265						
O14K	Tigyukauivet M	33.20	46	P	P	14 36 49.7	+0.6
	baz=267						
L15K	Ungalak Mounta	33.34	41	P	P	14 36 50.9	+0.7
	baz=263						
K15K	Wolf Creek Mou	33.41	40	P	P	14 36 51.6	+0.7
	baz=262						
C16K	Lisburne Hills	33.43	29	P	P	14 36 50.8	-0.2
	baz=249						
H16K	Elim	33.54	36	P	P	14 36 52.2	+0.3
	baz=258						
SDPT	Sand Point	33.60	53	P	P	14 36 53.0	+0.5
	baz=273						
M15K	Kasigluk River	33.61	43	P	P	14 36 53.4	+0.8
	baz=265,SNR=7.7						
G16K	Koyuk River	33.67	35	P	P	14 36 53.7	+0.7
	baz=256						
N15K	Kwethluk River	33.86	44	P	P	14 36 56.9	+2.1
N15K				IAmb	IAmb	14 36 58.1	
	comp=Z,12nm,0.9s						
N15K	Kwethluk River	33.86	44	P	P	14 36 55.3	+0.5
	baz=266						
O15K	Ungalikthiuk R	33.94	46	P	P	14 36 56.3	+0.8
	baz=268						
J16K	Anvik River	33.98	39	P	P	14 36 57.0	+1.2
J16K	Anvik River	33.98	39	P	P	14 36 56.3	+0.4
	baz=261						
D17K	Noatak River	34.03	30	P	P	14 36 56.0	-0.2
	baz=252						
I17K	Unalakleet	34.05	38	P	P	14 36 56.6	+0.3
	baz=260						
CHNA	Chernabura Isl	34.14	54	P	P	14 36 58.7	+1.5
	baz=275						
RDOG	Red Dog Mine	34.21	30	P	P	14 36 58.2	+0.4
	baz=252						
C17K	DeLong Mountai	34.25	29	P	P	14 36 58.8	+0.6
	baz=251						
L16K	Owhat River	34.30	42		P	14 36 59.8	+1.3
L16K				IAmb	IAmb	14 37 00.9	
	comp=Z,9.8nm,0.8s						
L16K	Owhat River	34.30	42	P	P	14 36 59.3	+0.7
	baz=265,SNR=6.8						
E17K	Hotham Inlet	34.32	32	P	P	14 36 59.2	+0.5
	baz=254						
F17K	Baldwin Pennin	34.37	33	P	P	14 36 59.4	+0.4
	baz=256						
G17K	Kiwalik Mounta	34.38	35	P	P	14 36 59.6	+0.4
	baz=258						
M16K	Timber Creek	34.48	43	P	P	14 37 01.7	+1.6
M16K				IAmb	IAmb	14 37 02.8	
	comp=Z,13nm,0.9s						
M16K	Timber Creek	34.48	43	P	P	14 37 00.6	+0.4
	baz=266,SNR=9.1						
N16K	Nishlik Lake	34.54	44	P	P	14 37 01.0	+0.3
	baz=267,SNR=12						
H17K	Granite Mounta	34.57	36	P	P	14 37 01.6	+0.7
	baz=260						
J17K	VABM Dome	34.68	39	P	P	14 37 03.1	+1.2
J17K				IAmb	IAmb	14 37 04.3	
	comp=Z,7.7nm,0.7s						
J17K	VABM Dome	34.68	39	P	P	14 37 02.0	+0.1
	baz=263						
O16K	Kokwok River B	34.84	45	P	P	14 37 03.5	+0.3
	baz=269						
E18K	Tukpahlearik C	34.87	31	P	P	14 37 03.0	-0.4
	baz=255						
P16K	Nushagak River	34.88	46	P	P	14 37 03.7	+0.1
	baz=270						
L17K	Donlin	34.89	41	P	P	14 37 04.6	+0.9
	baz=265,SNR=9.0						
K17K	Iditarod	34.95	40	P	P	14 37 05.8	+1.6
K17K				IAmb	IAmb	14 37 07.1	
	comp=Z,13nm,0.9s						
K17K	Iditarod	34.95	40	P	P	14 37 04.0	-0.2
	baz=264						
C18K	Utukok River	35.00	29	P	P	14 37 05.2	+0.6
C18K				IAmb	IAmb	14 37 08.8	
	comp=Z,9.3nm,0.7s						
C18K	Utukok River	35.00	29	P	P	14 37 04.5	-0.1
	baz=253						
B18K	Kokolik River	35.02	28	P	P	14 37 04.7	0.0
	baz=251						
F18K	Selawik	35.03	33	P	P	14 37 04.7	0.0
	baz=257						
R16K	Pilot Point	35.12	49	P	P	14 37 06.4	+0.7
	baz=272						
M17K	Holitna River	35.24	42	P	P	14 37 07.4	+0.7
	baz=267,SNR=11						
H18K	Honhosa River	35.26	36	P	P	14 37 06.7	-0.1
	baz=261						
G18K	Tagagawik	35.27	34	P	P	14 37 07.2	+0.3
	baz=259,SNR=22						
N17K	Nushagak Hills	35.32	44	P	P	14 37 08.6	+1.2
	baz=268						
O17K	Koliganek Bris	35.35	45	P	P	14 37 08.9	+1.2
	baz=270,SNR=5.1						
A19K	Wainwright	35.54	27	P	P	14 37 09.9	+0.8
	baz=251						
L18K	Granite Mounta	35.65	41	IAmb	IAmb	14 37 13.4	
	comp=Z,15nm,1.1s						
L18K	Granite Mounta	35.65	41	P	P	14 37 11.0	+0.8
	baz=266,SNR=8.0						
P17K	Kvichak River	35.68	46	P	P	14 37 11.2	+0.7
	baz=271						
C19K	Lookout Ridge	35.69	29	IAmb	IAmb	14 37 14.4	
	comp=Z,8.9nm,0.8s						
C19K	Lookout Ridge	35.69	29	P	P	14 37 10.6	0.0
	baz=254						
J18K	Innoko River	35.74	39	P	P	14 37 12.4	+1.4
J18K				IAmb	IAmb	14 37 13.0	
	comp=Z,7.0nm,0.6s						
J18K	Innoko River	35.74	39	P	P	14 37 11.4	+0.4
	baz=265,SNR=8.7						
F19K	Shaleruckik Mo	35.81	33	P	P	14 37 11.8	+0.4
	baz=259						
GCSA	Galena City Sc	35.82	36	P	P	14 37 12.3	+0.7
	baz=263						
G19K	Purcell Mounta	35.95	34	IAmb	IAmb	14 37 14.7	
	comp=Z,11nm,1.0s						
G19K	Purcell Mounta	35.95	34	P	P	14 37 13.3	+0.6
	baz=261,SNR=8.5						
N18K	Kilae Creek	35.97	43	IAmb	IAmb	14 37 16.2	
	comp=Z,11nm,0.8s						
N18K	Kilae Creek	35.97	43	P	P	14 37 13.3	+0.4
	baz=269,SNR=7.3						
Q17K	Contact Creek	35.99	48	P	P	14 37 14.3	+1.0
	baz=273						
M18K	Stony River	36.02	42	P	P	14 37 14.1	+0.7
	baz=268						
D19K	Kuna River	36.05	30	P	P	14 37 14.2	+0.6
	baz=256						
H19K	Roundabout Mou	36.11	35	P	P	14 37 14.8	+0.8
	baz=262,SNR=34						
E19K	Redstone River	36.14	32	P	P	14 37 15.0	+0.7
	baz=259						
J19K	Poorman	36.28	38	P	P	14 37 16.3	+0.8
	baz=265,SNR=12						
P18K	Big Mountain,	36.30	46	IAmb	IAmb	14 37 18.4	
	comp=Z,15nm,1.1s						
P18K	Big Mountain,	36.30	46	P	P	14 37 16.8	+1.0
	baz=272,SNR=7.7						
O18K	Koktuh Hills	36.30	45	P	P	14 37 16.4	+0.6
	baz=271						
CHIR	Chirikof Islan	36.31	52	P	P	14 37 17.0	+1.2
	baz=276						
Q18K	Katmai Hardscr	36.44	47	P	P	14 37 17.6	+0.5
	baz=273						
L19K	White Mountain	36.51	41	P	P	14 37 18.4	+0.8
	baz=268						
D20K	Etivluk River	36.63	30	P	P	14 37 19.0	+0.5
	baz=258						
F20K	Avaraart Lake	36.64	33	IAmb	IAmb	14 37 20.7	
	comp=Z,8.4nm,1.1s						
F20K	Avaraart Lake	36.64	33	P	P	14 37 19.3	+0.8
	baz=261,SNR=7.6						
N19K	Bonanza Creek	36.66	43	IAmb	IAmb	14 37 22.0	
	comp=Z,7.4nm,0.8s						
N19K	Bonanza Creek	36.66	43	P	P	14 37 19.5	+0.6
	baz=270						
E20K	Nigu River	36.69	31	P	P	14 37 19.3	+0.2
	baz=259						
M19K	Big River Lodg	36.72	41	P	P	14 37 19.8	+0.5
	baz=269						
O19K	Port Alsworth	36.74	44	P	P	14 37 20.4	+0.9
	baz=271						
H20K	Anotleneega Mo	36.76	35	P	P	14 37 20.0	+0.4
	baz=264,SNR=15						
B20K	Meade River	36.76	28	P	P	14 37 20.0	+0.5
	baz=255,SNR=10						
R18K	Karluk	36.80	49	P	P	14 37 21.1	+1.2
	baz=275						
I20K	Naaghedeneel	36.85	37	P	P	14 37 21.2	+0.9
	baz=265						
K20K	Telida	36.92	39	P	P	14 37 21.9	+0.9
	baz=267						
J20K	Nowinta River	36.94	38	IAmb	IAmb	14 37 23.9	
	comp=Z,11nm,0.8s						
J20K	Nowinta River	36.94	38	P	P	14 37 22.4	+1.2
	baz=266,SNR=12						
L20K	Farewell, AK	36.97	40	P	P	14 37 22.2	+0.7
	baz=269,SNR=5.3						
SII	Sitkinak Islan	37.03	50	P	P	14 37 22.9	+0.8
	baz=276						
Q19K	Cape Douglas,	37.13	46	P	P	14 37 24.1	+1.2
	baz=274						
P19K	Oil Pt	37.31	45	P	P	14 37 25.2	+0.8
	baz=273						
M20K	Styx River	37.31	41	IAmb	IAmb	14 37 27.7	
	comp=Z,8.2nm,0.8s						
M20K	Styx River	37.31	41	P	P	14 37 25.2	+0.7
	baz=270,SNR=6.0						
C21K	Knifeblade Rid	37.37	29	P	P	14 37 25.0	+0.2
	baz=259,SNR=7.2						
G21K	Allakaket	37.43	34	P	P	14 37 25.8	+0.5
	baz=264						
OHAK	Old Harbor	37.46	49	P	P	14 37 26.9	+1.4
	baz=276						
B21K	Ikpikpuk River	37.53	29	P	P	14 37 26.3	+0.3
	baz=259,SNR=8.8						
F21K	Alatna River	37.53	33	IAmb	IAmb	14 37 28.8	
	comp=Z,11nm,0.8s						
F21K	Alatna River	37.53	33	P	P	14 37 26.7	+0.5
	baz=263,SNR=11						
E21K	Killik River	37.53	31	P	P	14 37 26.3	+0.1
	baz=261						
O20K	Slope Mountain	37.60	44	P	P	14 37 27.7	+0.9
	baz=273						
H21K	Melozitna Rive	37.63	35	IAmb	IAmb	14 37 29.5	
	comp=Z,13nm,1.0s						
H21K	Melozitna Rive	37.63	35	P	P	14 37 27.6	+0.6
	baz=266,SNR=17						
A22K	Sinclair Lake	37.72	26	P	P	14 37 28.0	+0.4
	baz=256						
CHUM	Lake Minchumin	37.73	38	P	P	14 37 28.9	+1.1
	baz=268						
N20K	Mount Spurr	37.76	43	P	P	14 37 29.2	+1.0
	baz=272						
PPLA	Purkeypile	37.76	40	IAmb	IAmb	14 37 31.1	
	comp=Z,6.6nm,0.9s						
PPLA	Purkeypile	37.76	40	P	P	14 37 29.2	+0.9
	baz=270						
SPCR	Spurr Chakacha	37.76	43	P	P	14 37 29.2	+1.0
	baz=272						
KDAK	Kodiak Island	37.78	48	P	P	14 37 29.0	+0.7
	comp=Z,13nm,0.7s,baz=311,slow=1.3,SNR=15						
	comp=Z,13nm,0.7s						
KDAK	Kodiak Island	37.78	48	P	P	14 37 29.1	+0.9
	baz=276						
Q20K	Shuyak Island	37.81	47	P	P	14 37 29.3	+0.8
	baz=275						
CAST	Castle Rocks	37.82	39	IAmb	IAmb	14 37 31.6	
	comp=Z,7.7nm,0.8s						
CAST	Castle Rocks	37.82	39	P	P	14 37 29.2	+0.6
	baz=269,SNR=9.5						
F22K	John River	38.07	32	P	P	14 37 30.7	0.0
	baz=264						
D22K	Ayikyak River	38.07	30	P	P	14 37 31.0	+0.3
	baz=262,SNR=12						
SKT	Skwentna	38.07	41	P	P	14 37 31.5	+0.8
	baz=271						
B22K	Teshekpuk Lake	38.08	28	P	P	14 37 30.5	-0.1
	baz=259						
HOM	Homer	38.11	45	P	P	14 37 31.5	+0.5
	baz=274						
H22K	Ishtalitna Cre	38.24	35	P	P	14 37 32.3	+0.2
	baz=267,SNR=12						
G22K	Bettles	38.27	33	P	P	14 37 32.5	+0.2
	baz=265						
E22K	Anaktuvuk Pass	38.28	31	P	P	14 37 32.5	+0.1
	baz=263,SNR=20						
CAPN	Captain Cook N	38.29	43	P	P	14 37 32.0	-0.6
	baz=273						
BPAW	Bear Paw Mtn.	38.32	38	P	P	14 37 33.9	+1.1
	baz=269,SNR=6.6						
KTH	Kantishna Hill	38.34	39	IAmb	IAmb	14 37 36.1	
	comp=Z,15nm,1.0s						
MLY	Manley	38.46	36	IAmb	IAmb	14 37 36.3	
	comp=Z,5.2nm,0.6s						
MLY	Manley	38.46	36	P	P	14 37 34.7	+0.8
	baz=268,SNR=8.9						
SUA	Susitna One	38.46	42	P	P	14 37 34.8	+0.7
	baz=273						
BRSE	Bradley Lake S	38.56	45	P	P	14 37 35.7	+0.8
	baz=275						
TRF	Thorofare Moun	38.63	39	P	P	14 37 35.8	+0.3
	baz=271						

CUT	Chulitna	38.65	41	P	P	14 37 36.4	+0.8
	baz=272						
M22K	Willow	38.74	42	P	P	14 37 36.7	+0.4
	baz=273						
D23K	Nanushuk River	38.80	30	IAmb	IAmb	14 37 42.8	
	comp=Z,7.4nm,1.0s						
D23K	Nanushuk River	38.80	30	P	P	14 37 37.1	+0.4
	baz=263,SNR=5.9						
COLD	Coldfoot	38.80	33	IAmb	IAmb	14 37 39.0	
	comp=Z,11nm,0.7s						
COLD	Coldfoot	38.80	33	P	P	14 37 37.6	+0.8
	baz=266,SNR=18						
G23K	Bananza Creek	38.84	34	IAmb	IAmb	14 37 39.3	
	comp=Z,11nm,0.8s						
G23K	Bananza Creek	38.84	34	P	P	14 37 37.6	+0.5
	baz=267,SNR=18						
C23K	Itkillik River	38.94	29	P	P	14 37 38.0	+0.2
	baz=262,SNR=11						
RC01	Rabbit Creek A	38.97	43	IAmb	IAmb	14 37 40.1	
	comp=Z,8.9nm,0.8s						
RC01	Rabbit Creek A	38.97	43	P	P	14 37 39.2	+1.0
	baz=274						
H23K	Yukon River	38.99	35	IAmb	IAmb	14 37 41.4	
	comp=Z,15nm,0.8s						
H23K	Yukon River	38.99	35	P	P	14 37 38.8	+0.4
	baz=268,SNR=23						
O22K	Cooper Landing	39.01	44	P	P	14 37 38.2	-0.4
	baz=275						
I23K	Minto, Yukon-K	39.04	36	P	P	14 37 39.4	+0.6
	baz=269,SNR=9.0						
E23K	Chandalar	39.09	32	IAmb	IAmb	14 37 41.8	
	comp=Z,13nm,0.8s						
E23K	Chandalar	39.09	32	P	P	14 37 39.4	+0.1
	baz=266,SNR=21						
NEA2	Nenana	39.16	37	P	P	14 37 40.1	+0.3
	baz=270,SNR=20						
TOLK	Toolik Lake Re	39.16	31	P	P	14 37 39.4	-0.4
	baz=265,SNR=13						
SEW	Seward	39.18	44	P	P	14 37 40.5	+0.5
	baz=276						
PMR	Palmer	39.23	42	P	P	14 37 40.6	+0.2
	baz=274						
MCK	McKinley	39.23	38	IAmb	IAmb	14 37 42.5	
	comp=Z,10nm,1.2s						
MCK	McKinley	39.23	38	P	P	14 37 40.7	+0.3
	baz=272						
GHO	Glory Hole Cre	39.31	42	IAmb	IAmb	14 37 52.7	
	comp=Z,7.6nm,0.8s						
WAT1	Susitna Watana	39.43	40	P	P	14 37 41.9	-0.2
	baz=273						
D24K	Happy Valley	39.48	30	P	P	14 37 42.8	+0.4
	baz=265,SNR=22						
E24K	Your Creek	39.52	32	P	P	14 37 43.4	+0.6
	baz=267,SNR=35						
KNK	Knik Glacier	39.56	42	P	P	14 37 44.5	+1.3
	baz=275						
C24K	Franklin Bluff	39.58	29	P	P	14 37 43.5	+0.3
	baz=264,SNR=20						
WRH	Wood River Hil	39.59	37	IAmb	IAmb	14 37 52.5	
	comp=Z,6.6nm,0.6s						
SML	Sawmill	39.59	41	P	P	14 37 44.1	+0.7
	baz=274,SNR=6.5						
PWL	Port Wells	39.66	43	P	P	14 37 44.7	+0.6
	baz=276						
H24K	Noodor Dome	39.67	35	P	P	14 37 45.9	+1.8
H24K				IAmb	IAmb	14 37 47.1	
	comp=Z,11nm,1.0s						
H24K	Noodor Dome	39.67	35	P	P	14 37 45.2	+1.1
	baz=270,SNR=12						
COLA	College	39.68	37	*i* P	P	14 37 45.6	+1.5
COLA				pmax	pmax		
	comp=Z,18nm,0.9s						
COLA	College	39.68	37	P	P	14 37 44.6	+0.5
	baz=271						
CCB	Clear Creek Bu	39.71	37	IAmb	IAmb	14 37 52.6	
	comp=Z,3.8nm,0.5s						
F24K	Squaw Lake	39.71	32	P	P	14 37 45.5	+1.1
F24K				IAmb	IAmb	14 37 46.9	
	comp=Z,8.0nm,0.7s						
F24K	Squaw Lake	39.71	32	P	P	14 37 44.8	+0.4
	baz=268,SNR=16						
WAT6	Susitna Watana	39.82	40	P	P	14 37 46.2	+0.7
	baz=274						
G24K	Hadweenzic Riv	39.85	34	P	P	14 37 46.3	+0.8
	baz=269,SNR=29						
POKR	Poker Plat Res	39.86	36	P	P	14 37 47.0	+1.4
	baz=271,SNR=10						
M23K	Glacier View	39.88	41	P	P	14 37 47.0	+1.1
	baz=275						
DHY	Denali Highway	39.95	39	P	P	14 37 47.3	+0.7
	baz=274,SNR=7.1						
SCM	Sheep Creek Mo	40.06	41	P	P	14 37 47.9	+0.5
	baz=275						
HDA	Harding Lake	40.08	37	IAmb	IAmb	14 37 49.1	
	comp=Z,8.0nm,0.8s						
HDA	Harding Lake	40.08	37	P	P	14 37 48.3	+0.8
	baz=272,SNR=12						
ILAR	Eielson Array	40.10	37	P	P	14 37 48.3	+0.7
	comp=Z,2.9nm,0.5s,baz=264,slow=7.6,SNR=58						
ILAR				PcP	PcP	14 39 50.3	-0.1
	comp=Z,0.4nm,0.6s,baz=275,slow=2.9,SNR=2.4						
	comp=Z,2.9nm,0.5s						
P23K	Montague Islan	40.21	44	P	P	14 37 49.4	+0.8
	baz=277						
GLI	Glacier Island	40.27	43	P	P	14 37 49.7	+0.7
	baz=276						
D25K	Kavik River	40.37	30	P	P	14 37 50.7	+1.0
D25K	Kavik River	40.37	30	P	P	14 37 50.8	+1.0
	baz=267,SNR=43						
G25K	Bearman Lake	40.39	34	P	P	14 37 50.4	+0.5
	baz=270,SNR=12						
H25L	Birch Creek	40.51	34	P	P	14 37 51.6	+0.7
	baz=271,SNR=11						
F25K	Christian Rive	40.58	32	P	P	14 37 53.2	+1.6
F25K				IAmb	IAmb	14 37 54.0	
	comp=Z,7.1nm,0.6s						
F25K	Christian Rive	40.58	32	P	P	14 37 52.3	+0.8
	baz=270,SNR=19						
E25K	Arctic Village	40.61	32	P	P	14 37 53.6	+1.7
E25K				IAmb	IAmb	14 37 54.7	
	comp=Z,10.0nm,0.9s						
E25K	Arctic Village	40.61	32	P	P	14 37 52.8	+1.0
	baz=269,SNR=13						
K24K	Donnelly Dome	40.63	38	IAmb	IAmb	14 37 53.7	
	comp=Z,13nm,0.8s						
K24K	Donnelly Dome	40.63	38	P	P	14 37 52.9	+0.9
	baz=274,SNR=6.7						
PRP	Porcupine Dome	40.65	36	IAmb	IAmb	14 37 54.9	
	comp=Z,14nm,1.0s						
PRP	Porcupine Dome	40.65	36	P	P	14 37 53.2	+0.9
	baz=272,SNR=11						
J25K	Salcha River,	40.76	37	P	P	14 37 53.3	+0.2
	baz=274,SNR=8.1						
KLU	Klutina	40.76	42	IAmb	IAmb	14 37 55.8	
	comp=Z,15nm,1.2s						
KLU	Klutina	40.76	42	P	P	14 37 53.4	+0.2
	baz=277,SNR=5.9						
Q23K	Middleton Isla	40.82	45	P	P	14 37 54.6	+1.1
	baz=279						
PAX	Paxson	40.83	40	P	P	14 37 54.3	+0.6
	baz=275						
C26K	Camden Bay	40.91	29	P	P	14 37 55.1	+1.0
	baz=268,SNR=8.8						
EYAK	Cordova Ski Ar	40.96	43	P	P	14 37 55.6	+0.9
	baz=278						
HARP	HAARP	41.03	40	P	P	14 37 56.1	+0.8
	baz=276						
RIDG	Independent Ri	41.05	38	P	P	14 37 56.2	+0.8
	baz=275,SNR=7.5						
F26K	Sheenjek River	41.15	32	IAmb	IAmb	14 37 59.4	
	comp=Z,12nm,0.8s						
F26K	Sheenjek River	41.15	32	P	P	14 37 57.4	+1.2
	baz=271,SNR=17						
G26K	Porcupine Rive	41.31	33	IAmb	IAmb	14 38 00.7	
	comp=Z,20nm,0.9s						
G26K	Porcupine Rive	41.31	33	P	P	14 37 58.3	+0.9
	baz=272,SNR=27						
C27K	Jago River	41.32	29	P	P	14 37 58.5	+0.9
	baz=269,SNR=42						
N25K	Chitina, Valde	41.38	42	P	P	14 37 58.8	+0.5
	baz=278						
SCRK	Sand Creek	41.40	38	IAmb	IAmb	14 38 06.9	
	comp=Z,8.7nm,0.7s						
SCRK	Sand Creek	41.40	38	P	P	14 37 59.5	+1.0
	baz=276,SNR=12						
BMRM	Bremner River	41.46	42	IAmb	IAmb	14 38 01.5	
	comp=Z,7.9nm,0.7s						
BMRM	Bremner River	41.46	42	P	P	14 37 59.7	+0.8
	baz=278						
ZALV	Zalesovo Beam	41.54	307	PcP	PcP	14 39 55.8	+0.5
	comp=Z,4.9nm,0.7s,baz=116,slow=3.4,SNR=1.8						
J26L	Joseph Creek	41.54	37	P	P	14 38 00.1	+0.6
	baz=275						
MENT	Mentasta	41.63	39	IAmb	IAmb	14 38 03.4	
	comp=Z,4.1nm,0.5s						
I26K	Coal Creek Min	41.65	36	P	P	14 38 00.9	+0.6
	baz=275						
KAIM	Kayak Island	41.71	44	P	P	14 38 01.9	+1.0
	baz=280						
PZH	PanZhiHua	41.76	261	P	P	14 38 02.6	+0.8
PZH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,110nm,4.5s						
M26K	Nabesna, AK	42.03	40	IAmb	IAmb	14 38 07.6	
	comp=Z,7.3nm,0.8s						
M26K	Nabesna, AK	42.03	40	P	P	14 38 05.2	+1.7
	baz=278,SNR=10.0						
E27K	Coleen River	42.10	31	P	P	14 38 05.5	+1.5
	baz=273,SNR=7.8						
G27K	Doyon Strip	42.15	34	P	P	14 38 06.0	+1.5
	baz=274,SNR=8.3						
MCARA	McCarthy VSAT	42.16	42	P	P	14 38 06.0	+1.5
	baz=279						
CRQE	Cirque	42.23	43	P	P	14 38 06.8	+1.6
	baz=280,SNR=6.2						
K27K	Chicken	42.24	38	P	P	14 38 06.6	+1.5
	baz=277						
BGLC	Bering Glacier	42.24	44	P	P	14 38 06.8	+1.7
	baz=280						
H27K	Steamboat Moun	42.25	34	P	P	14 38 07.5	+2.2
H27K				IAmb	IAmb	14 38 08.2	
	comp=Z,9.5nm,0.8s						
H27K	Steamboat Moun	42.25	34	P	P	14 38 07.3	+2.1
	baz=275,SNR=23						
I27K	Kandik River	42.27	35	P	P	14 38 06.7	+1.3
	baz=276						
D27M	Malcolm River	42.29	30	P	P	14 38 06.9	+1.4
	baz=272						
L27K	Beaver Creek,	42.47	39	P	P	14 38 09.3	+2.2
L27K				IAmb	IAmb	14 38 18.1	
	comp=Z,9.2nm,0.6s						
L27K	Beaver Creek,	42.47	39	P	P	14 38 08.9	+1.8
	baz=278,SNR=21						
M27K	Edge Creek, AK	42.55	40	IAmb	IAmb	14 38 19.4	
	comp=Z,11nm,0.7s						
M27K	Edge Creek, AK	42.55	40	P	P	14 38 10.0	+2.2
	baz=279,SNR=6.3						
F28M	Old Crow	42.79	32	IAmb	IAmb	14 38 12.6	
	comp=Z,14nm,0.7s						
F28M	Old Crow	42.79	32	P	P	14 38 10.9	+1.4
	baz=275,SNR=16						
E28M	Babbage River	42.84	31	IAmb	IAmb	14 38 16.1	
	comp=Z,8.0nm,0.7s						
E28M	Babbage River	42.84	31	P	P	14 38 11.5	+1.6
	baz=274,SNR=12						
BARN	Barnard Glacie	42.86	42	IAmb	IAmb	14 38 22.9	
	comp=Z,8.9nm,0.6s						
GRNC	Granite Creek	42.88	43	P	P	14 38 11.7	+1.1
GRNC				IAmb	IAmb	14 38 13.4	
	comp=Z,11nm,0.7s						
MESA	MESA	42.88	43	P	P	14 38 12.3	+1.6
	baz=281						
YAH	Yahtse	42.95	43	IAmb	IAmb	14 38 14.3	
	comp=Z,11nm,0.8s						
I28M	Miner Creek	42.98	35	P	P	14 38 12.4	+1.1
	baz=277,SNR=35						
WMQ	Urumqi	42.98	291	*e*P	P	14 38 13.3	+1.8
WMQ				pmax	pmax		
	comp=Z,32nm,1.3s						
BVCY	Beaver Creek	43.01	40	P	P	14 38 13.6	+2.1
	baz=280,SNR=6.0						
CTG	Chitna Glacier	43.03	42	P	P	14 38 12.9	+1.2
	baz=281						
CTGM	Chitina Glacie	43.04	42	IAmb	IAmb	14 38 24.2	
	comp=Z,11nm,0.7s						
D28M	Stokes Point	43.08	30	P	P	14 38 13.2	+1.5
	baz=274						
LOGN	Logan Glacier	43.22	42	P	P	14 38 14.5	+1.2
YUK3	Moose Creek	43.30	41	P	P	14 38 15.3	+1.3
	baz=281						
DAWY	Dawson	43.40	37	P	P	14 38 15.6	+1.0
	baz=279						
E29M	Blow River	43.46	31	P	P	14 38 16.5	+1.6
	baz=276,SNR=18						
H29M	Whitestone	43.52	34	IAmb	IAmb	14 38 18.6	
	comp=Z,16nm,1.0s						
H29M	Whitestone	43.52	34	P	P	14 38 16.9	+1.4
	baz=278,SNR=14						
G29M	Pine Creek	43.57	33	P	P	14 38 17.3	+1.5
	baz=277,SNR=23						
O28M	Mount Upton	43.62	42	P	P	14 38 17.7	+1.0
	baz=282						
I29M	Ogilvie Camp,	43.67	35	P	P	14 38 18.1	+1.4
	baz=279,SNR=26						
PINM	Pinnacle	43.73	43	P	P	14 38 17.9	+0.6
	baz=283						
J29N	Klondike Camp	43.85	37	P	P	14 38 19.0	+0.8
	baz=280						
M29M	Somme Creek	44.10	40	P	P	14 38 21.1	+0.9
	baz=282						
L29M	L29M	44.12	39	IAmb	IAmb	14 38 31.6	
	comp=Z,12nm,0.8s						
L29M	L29M	44.12	39	P	P	14 38 22.2	+1.8
	baz=281,SNR=11						
EPYK	Eagle Plains	44.16	34	P	P	14 38 22.1	+1.4
	baz=279,SNR=23						
YUK4	Talbot Arm	44.24	41	P	P	14 38 22.4	+0.9
	baz=283						
PNL	Peninsula	44.25	44	P	P	14 38 22.7	+1.3
	baz=284						
K29M	Barlow Dome	44.25	38	IAmb	IAmb	14 38 24.6	
	comp=Z,8.6nm,1.1s						
K29M	Barlow Dome	44.25	38	P	P	14 38 23.0	+1.6
	baz=281,SNR=9.6						
G30M	tAoh Zraii Nji	44.27	33	P	P	14 38 22.8	+1.4
	baz=279,SNR=34						
F30M	Barrier River	44.34	32	P	P	14 38 23.9	+1.9
	baz=279,SNR=39						
YUK6	Outpost Mounta	44.46	42	P	P	14 38 24.4	+1.1
	baz=283						
I30M	Mount Dempster	44.49	35	P	P	14 38 24.7	+1.4
	baz=281,SNR=50						
O29M	Mount Kennedy	44.51	43	P	P	14 38 24.8	+1.3
	baz=284						
J30M	Hart River	44.63	36	P	P	14 38 26.2	+1.7
	baz=281,SNR=12						
HYT	Haines Junctio	44.90	42	IAmb	IAmb	14 38 39.6	
	comp=Z,15nm,0.8s						
HYT	Haines Junctio	44.90	42	P	P	14 38 28.9	+2.2
	baz=284,SNR=16						
N30M	Aishikik Lake	44.95	41	P	P	14 38 28.2	+1.2
	baz=284						
G31M	Satah River	45.03	33	IAmb	IAmb	14 38 29.9	
	comp=Z,13nm,0.8s						
G31M	Satah River	45.03	33	P	P	14 38 28.3	+0.9
	baz=281,SNR=16						
INK	Inuvik	45.08	31	IAmb	IAmb	14 38 30.2	
	comp=Z,15nm,0.9s						
INK	Inuvik	45.08	31	P	P	14 38 29.2	+1.4
	comp=Z,10nm,0.6s,baz=294,slow=6.8,SNR=12						
	comp=Z,10nm,0.6s						
INK	Inuvik	45.08	31	P	P	14 38 28.5	+0.7
	baz=280,SNR=11						
P29M	Windy Craggy	45.08	43	P	P	14 38 29.9	+1.9
	baz=285,SNR=7.3						
F31M	Tsiigehtchic	45.14	32	P	P	14 38 29.1	+0.8
	baz=281,SNR=24						
H31M	Peel River	45.21	34	P	P	14 38 29.8	+0.8
	baz=282,SNR=22						
P30M	Million Dollar	45.33	43	P	P	14 38 31.6	+1.6
	baz=285						
MK31	Makanchi Array	45.34	298	*i* P	P	14 38 30.6	+0.4
MKAR	Makanchi Array	45.34	298	P	P	14 38 29.5	-0.8
	comp=Z,6.2nm,0.8s,baz=65,slow=6.4,SNR=2.3						
MKAR				PcP	PcP	14 40 09.0	+0.6
	comp=Z,2.6nm,0.7s,baz=74,slow=4.2,SNR=1.9						
	comp=Z,6.2nm,0.8s						
N31M	Braeburn, Yuko	45.55	41	P	P	14 38 33.3	+1.6
	baz=285						
O30N	Mendenhall	45.58	42	P	P	14 38 33.6	+1.6
	baz=285						
PLBC	Pleasant Camp	45.80	43	P	P	14 38 35.2	+1.6
	baz=286						
M31M	Drury Creek, Y	46.01	39	P	P	14 38 36.7	+1.4
	baz=285,SNR=11						
KURK	Kurchatov	46.14	304	P	P	14 38 35.6	-0.8
KURK						14 40 12.1	
WHY	Whitehorse	46.19	42	IAmb	IAmb	14 38 49.3	
	comp=Z,9.7nm,0.8s						
WHY	Whitehorse	46.19	42	P	P	14 38 37.8	+1.0
	baz=286						
KURBB	Kurchatov Arra	46.23	304	P	P	14 38 35.6	-1.5
	comp=Z,2.6nm,0.5s,baz=74,slow=8.1,SNR=9.4						
KURBB				PcP	PcP	14 40 12.1	+0.7
	comp=Z,1.2nm,0.5s,baz=77,slow=3.0,SNR=1.5						
	comp=Z,2.6nm,0.5s						
FARO	Faro, Yukon	46.47	39	P	P	14 38 40.0	+1.0
	baz=286						
N32M	Quiet Lake	46.89	41	P	P	14 38 43.2	+0.9
	baz=287						
SIT	Sitka	47.04	46	P	P	14 38 44.7	+1.4
	baz=289						
P32M	Atlin	47.05	43	P	P	14 38 44.7	+1.2
	baz=288						
R32K	Eaglecrest	47.06	45	P	P	14 38 44.5	+1.0
	baz=289						
A36M	Sachs Harbour	47.12	25	IAmb	IAmb	14 38 48.0	
	comp=Z,13nm,0.8s						
A36M	Sachs Harbour	47.12	25	P	P	14 38 44.6	+0.8
	baz=284						
S32K	Killisnoo	47.29	46	P	P	14 38 46.5	+1.2
	baz=289						
P33M	Teslin, Yukon	47.30	42	P	P	14 38 47.4	+1.9
	baz=288,SNR=5.5						
MMPY	Sheldon Lake,	47.30	38	P	P	14 38 46.4	+1.1
	baz=287,SNR=7.5						
Q32M	Nakina River	47.96	43	P	P	14 38 51.5	+0.8
	baz=290						
C36M	Paulatuk	48.18	28	IAmb	IAmb	14 38 53.9	
	comp=Z,14nm,0.8s						
C36M	Paulatuk	48.18	28	P	P	14 38 52.9	+0.9
	baz=287,SNR=6.6						
R33M	Jennings River	48.44	42	P	P	14 38 56.4	+2.0
R33M	Jennings River	48.44	42	P	P	14 38 55.0	+0.6
	baz=290						
U33K	Whale Pass	48.50	47	P	P	14 38 55.6	+1.0
	baz=291						
CRAG	Craig	48.74	48	P	P	14 38 57.5	+1.1
	baz=292						
WRAK	Wrangell Islan	48.80	46	P	P	14 38 58.1	+1.2
	baz=292						
S34M	Telegraph Cree	48.88	44	P	P	14 38 59.0	+1.5
	baz=291						
WTLY	Watson Lake, Y	49.23	41	P	P	14 39 01.8	+1.6
	baz=291						
DLBC	Dease Lake	49.24	43	P	P	14 39 01.6	+1.2
	comp=Z,0.2nm,0.8s,baz=268,slow=12,SNR=4.9						
V35K	Ketchikan	49.59	48	P	P	14 39 04.3	+1.4
	baz=293						
T35M	Bob Quinn	49.66	45	P	P	14 39 05.8	+2.3
	baz=293						
BVAR	Borovoye Array	49.98	309	P	P	14 39 03.5	-2.4
	comp=Z,1.6nm,0.4s,baz=69,slow=9.7,SNR=1.1						
BVAR				PcP	PcP	14 40 24.7	-0.1
	comp=Z,3.2nm,0.6s,baz=112,slow=2.4,SNR=1.7						
	comp=Z,1.6nm,0.4s						
WRGLY	Wrigley	50.46	36	P	P	14 39 10.6	+1.2
	baz=292						
TOAD	Toad River Com	51.39	42	P	P	14 39 18.5	+1.9
	baz=294						
SPITS	Spitsbergen Ar	54.25	349	P	P	14 39 34.8	-2.4
	comp=Z,2.4nm,0.8s,baz=41,slow=9.0,SNR=9.1						
	comp=Z,2.4nm,0.8s						
YKA	Yellowknife Ar	54.44	35	P	P	14 39 39.4	+0.5
	comp=Z,7.6nm,0.9s,baz=303,slow=7.4,SNR=14						
	comp=Z,7.6nm,0.9s						
YKA	Yellowknife Ar	54.44	35	*e*P	P	14 39 40.0	+1.2
YKA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
B08A	Colville Reser	59.59	51	IAmb	IAmb	14 40 17.9	
	comp=Z,4.8nm,0.8s						
BLKN	Baker Lake	60.20	27	P	P	14 40 20.0	+0.8
PINE	Pine Mountain	61.27	56	IAmb	IAmb	14 40 30.6	
	comp=Z,8.6nm,0.7s						
PLID	Pearl Lake	63.36	52	P	P	14 40 42.4	+1.3
PLID				IAmb	IAmb	14 40 44.2	
	comp=Z,6.3nm,1.0s						
MSO	Missoula	63.44	50	P	P	14 40 41.5	-0.1
MSO				IAmb	IAmb	14 40 44.1	
	comp=Z,11nm,0.8s						
LRM	Limekiln Ridge	64.88	50	P	P	14 40 51.0	-0.1
BOZ	Bozeman (W)	65.47	50	IAmb	IAmb	14 40 57.5	
	comp=Z,9.6nm,1.0s						
LHV	Little Huntoon	66.07	59	IAmb	IAmb	14 41 02.2	
	comp=Z,8.9nm,1.0s						
NVAR	Mina Array Bea	66.08	59	P	P	14 41 00.6	+1.6
	comp=Z,3.2nm,0.7s,baz=290,slow=6.5,SNR=18						
	comp=Z,3.2nm,0.7s						
YHL	Hebgen Lake	66.18	50	IAmb	IAmb	14 41 03.0	
	comp=Z,6.5nm,1.1s						
H17A	Grant Village	66.81	50	IAmb	IAmb	14 41 08.6	
	comp=Z,10nm,1.1s						
TPAW	Teton Pass	67.19	51	IAmb	IAmb	14 41 09.5	
	comp=Z,5.7nm,0.9s						
PDAR	Pinedale Array	68.43	51	P	P	14 41 15.2	+1.5
	comp=Z,1.6nm,0.6s,baz=299,slow=2.3,SNR=12						
	comp=Z,1.6nm,0.6s						
NOA	NORSAR Array B	69.31	340	P	P	14 41 17.2	-1.4
	comp=Z,3.3nm,0.5s,baz=31,slow=6.7,SNR=10						
	comp=Z,3.3nm,0.5s						
NOA	NORSAR Array B	69.31	340	*e*P	P	14 41 18.0	-0.6
NOA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
HFS	Hagfors	69.44	338	P	P	14 41 18.4	-1.0
	comp=Z,5.2nm,0.5s,baz=54,slow=7.4,SNR=4.8						
	comp=Z,5.2nm,0.5s						
ULM	Lac du Bonnet	70.10	38	P	P	14 41 24.2	+0.6
	comp=Z,8.0nm,0.5s,baz=311,slow=6.6,SNR=18						
	comp=Z,8.0nm,0.5s						
KBZ	Khabaz	70.21	312	P	P	14 41 24.5	+0.1
	comp=Z,8.6nm,0.8s,baz=56,slow=3.6,SNR=2.7						
	comp=Z,8.6nm,0.8s						
HMU	Henry Mountain	70.95	55	P	P	14 41 30.4	+1.1
EPLO	Experimental L	71.47	37	P	P	14 41 30.5	-1.4
EPLO				IAmb	IAmb	14 41 33.3	
	comp=Z,15nm,0.9s						
PV10	Paradox Valley	71.65	54	IAmb	IAmb	14 41 36.4	
	comp=Z,13nm,0.8s						
AKASG	Malin Array Be	71.68	324	P	P	14 41 32.8	-0.4
	comp=Z,8.8nm,0.7s,baz=38,slow=5.9,SNR=9.0						
	comp=Z,8.8nm,0.7s						
AKASG	Malin Array Be	71.68	324	*i* P	P	14 41 33.2	+0.1
AKASG				pmax	pmax		
	comp=Z,9.0nm,0.6s						
PV19	Morning Glory	71.73	54	IAmb	IAmb	14 41 36.4	
	comp=Z,12nm,0.9s						
PV17	East Wray Mesa	71.76	54	IAmb	IAmb	14 41 36.6	
	comp=Z,8.4nm,0.7s						
PV18	Skein Mesa, Pa	71.81	54	IAmb	IAmb	14 41 36.9	
	comp=Z,8.7nm,0.8s						
F33A	5 Mile Ranch,	73.13	42	IAmb	IAmb	14 41 43.6	
	comp=Z,9.6nm,0.9s						
ECSD	EROS Data Cent	74.53	43	IAmb	IAmb	14 41 51.8	
	comp=Z,7.5nm,0.9s						
ANMO	Albuquerque	75.51	55	P	P	14 41 57.7	+1.6
	comp=Z,1.3nm,0.5s,baz=69,slow=9.9,SNR=3.8						
	comp=Z,1.3nm,0.5s						
KOLS	Kolonicke sedl	75.87	327	*e*P	P	14 41 58.8	+1.1
KOLS	Kolonicke sedl	75.87	327	*e*P	P	14 41 58.8	+1.1
STHS	Stebnicka Huta	75.88	328	*e*P	P	14 41 58.3	+0.6
STHS	Stebnicka Huta	75.88	328	*e*P	P	14 41 58.3	+0.6
SCHQ	Schefferville	76.45	20	P	P	14 42 01.4	+0.5
	comp=Z,5.1nm,0.8s,baz=288,slow=5.9,SNR=3.7						
	comp=Z,5.1nm,0.8s						
LANS	Liptovska Anna	76.76	329	*e*P	P	14 42 04.1	+1.3
LANS	Liptovska Anna	76.76	329	*e*P	P	14 42 04.1	+1.3
CLL	Collm	77.19	333	*i* P	P	14 42 05.1	+0.1
CLL				pmax	pmax		
	comp=Z,16nm,0.6s						
CLL	Collm	77.19	333	*i* P	P	14 42 05.1	+0.1
	comp=Z,16nm,0.6s						
EKA	Eskdalemuir Ar	77.72	344	P	P	14 42 08.1	+0.2
	comp=Z,4.3nm,0.7s,baz=28,slow=5.8,SNR=5.3						
	comp=Z,4.3nm,0.7s						
MODS	Modra-Piesok	78.22	329	*e*P	P	14 42 08.9	-2.0
GERES	GERESS Array B	79.07	332	P	P	14 42 15.1	-0.6
	comp=Z,3.7nm,0.4s,baz=38,slow=6.0,SNR=13						
	comp=Z,3.7nm,0.4s						
GERES	GERESS Array B	79.07	332	*e*P	P	14 42 16.0	+0.3
GERES				pmax	pmax		
	comp=Z,4.0nm,0.4s						
TXAR	Lajitas Array	81.16	57	P	P	14 42 28.7	+1.5
	comp=Z,3.0nm,0.5s,baz=298,slow=3.9,SNR=48						

	comp=Z,3.0nm,0.5s						
MMAI	**Mount Meron Ar**	**81.98**	**309**	P	**P**	**14 42 31.4**	**-0.1**
	comp=Z,6.2nm,0.8s,baz=42,slow=7.8,SNR=4.6						
	comp=Z,6.2nm,0.8s						
H03N2	**Juan Fernandez**	**141.70**	**90**	T	T	17 28 37.6	
	baz=304,slow=77,SNR=14						
H03N3	**Juan Fernandez**	**141.71**	**90**	T	T	17 28 48.7	
	baz=304,slow=77,SNR=18						
H03N1	**Juan Fernandez**	**141.71**	**90**	T	T	17 28 39.3	
	baz=304,slow=77,SNR=16						
NVL	**N'lazarevskaya**	**146.41**	**204**	*e*PKHKP	PKPpre	14 49 38.9	
NVL				pmax	pmax		
	comp=Z,11nm,0.8s						

IDC 22 14:36:07.3±2.9, 11°.94N×125°.85E, h148^{km}±35^{km}, mb3.6/12, mbtmp4.1/13, Error ellipse: s-maj=30.0km s-min=21.0km az=120.0

ISC 22 14:35:54.1±0.8, 11°.94N±0°.07×125°.8E±0°.2, h28^{km}, n15, σ1^{s}.87/16, mb4.1/13, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**4.85**	**183**	P	**Pb**	**14 37 19.6**	**+1.1**
	78nm,0.4s,baz=93,slow=1.9,SNR=3.7						
DAV				S	**Sb**	**14 38 14.7**	**-1.7**
	123nm,0.4s,baz=338,slow=17,SNR=3.5						
BATI	**Baumata**	**22.11**	**186**	P	**P**	**14 40 50.8**	**+3.3**
	39nm,0.5s,baz=67,slow=5.1,SNR=4.5						
KSRS	**Korea Array**	**25.47**	**4**	P	**P**	**14 41 20.2**	**+0.4**
	1.0nm,0.7s,baz=188,slow=8.3,SNR=2.0						
	1.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**26.73**	**287**	P	**P**	**14 41 31.9**	**+0.4**
	3.0nm,0.9s,baz=89,slow=6.6,SNR=7.7						
	3.0nm,0.9s						
MJAR	**Matsushiro Arr**	**26.91**	**22**	P	**P**	**14 41 34.9**	**+1.9**
	0.8nm,0.9s,baz=203,slow=9.1,SNR=1.8						
	0.8nm,0.9s						
ASAR	**Alice Springs**	**36.26**	**167**	PcP	**PcP**	**14 45 15.9**	**-4.2**
	0.5nm,0.6s,baz=344,slow=3.7,SNR=1.4						
PETK	**Petropavlovsk-**	**48.31**	**25**	P	**P**	**14 44 33.0**	**0.0**
	0.7nm,0.6s,baz=218,slow=3.8,SNR=6.6						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**50.45**	**322**	P	**P**	**14 44 51.6**	**+2.1**
	1.2nm,0.6s,baz=112,slow=7.9,SNR=9.6						
	1.2nm,0.6s						
KURBB	**Kurchatov Arra**	**54.46**	**325**	P	**P**	**14 45 19.6**	**+0.5**
	3.1nm,0.9s,baz=126,slow=7.2,SNR=11						
	3.1nm,0.9s						
BVAR	**Borovoye Array**	**60.06**	**325**	P	**P**	**14 45 58.6**	**0.0**
	2.0nm,0.9s,baz=99,slow=6.3,SNR=3.1						
	2.0nm,0.9s						
KBZ	**Khabaz**	**76.77**	**312**	P	**P**	**14 47 43.3**	**+0.1**
	0.8nm,0.5s,baz=205,slow=6.2,SNR=2.2						
	0.8nm,0.5s						
ARCES	**ARCESS Array B**	**82.48**	**340**	P	**P**	**14 48 13.3**	**-0.5**
	5.0nm,1.2s,baz=76,slow=5.8,SNR=1.3						
	5.0nm,1.2s						
BRTR	**Keskin Array B**	**84.15**	**309**	P	**P**	**14 48 22.2**	**-1.0**
	0.9nm,0.7s,baz=104,slow=2.6,SNR=5.2						
	0.9nm,0.7s						
FINES	**FINESS Array B**	**84.22**	**332**	P	**P**	**14 48 22.3**	**-0.6**
	5.3nm,1.1s,baz=116,slow=4.4,SNR=3.4						
	5.3nm,1.1s						
AKASG	**Malin Array Be**	**85.01**	**321**	P	**P**	**14 48 25.7**	**-1.4**
	0.3nm,0.5s,baz=59,slow=6.5,SNR=6.5						
	0.3nm,0.5s						

IDC 22 14:46:11.8±1.9, 31°.33S×177°.53W, h0^{km}, mb3.6/3, mbtmp3.7/4, ML3.9/1, Error ellipse: s-maj=48.9km s-min=26.0km az=87.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.10**	**351**	Pn	Pn	14 46 47.3	-0.9
	42nm,0.3s,baz=99,slow=23,SNR=1.7						
RAO				Sn	Sn	14 47 16.3	+1.2
	85nm,0.3s,baz=74,slow=20,SNR=1.6						
	426nm,0.7s						
ASAR	**Alice Springs**	**43.47**	**268**	P	P	14 54 16.6	-0.3
	0.6nm,0.9s,baz=108,slow=7.6,SNR=6.8						
	0.6nm,0.9s						
WRA	**Warramunga Arr**	**44.54**	**273**	P	P	14 54 25.7	+0.1
	0.4nm,0.3s,baz=114,slow=8.1,SNR=1.4						
	0.4nm,0.3s						
QSPA	**South Pole Qui**	**58.78**	**180**	P	P	14 56 11.1	-0.4
	1.0nm,1.0s,baz=349,slow=3.7,SNR=1.9						
	1.0nm,1.0s						
FINES	**FINESS Array B**	**146.16**	**340**	PKPbc	PKPbc	15 05 53.1	-0.1
	1.4nm,0.7s,baz=43,slow=2.7,SNR=5.2						

IDC 22 14:55:42.0±5.8, 9°.95S×110°.76E, h0^{km}, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=306.6km s-min=23.7km az=48.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.82**	**116**	P	P	15 01 06.5	+0.3
	0.4nm,0.4s,baz=291,slow=9.8,SNR=4.8						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**25.96**	**125**	P	P	15 01 16.2	-0.3
	0.3nm,0.7s,baz=302,slow=8.7,SNR=4.2						
	0.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**30.54**	**338**	P	P	15 01 57.1	-0.3
	0.4nm,0.7s,baz=173,slow=7.7,SNR=4.9						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**61.95**	**338**	P	P	15 06 03.9	+0.2
	0.3nm,0.5s,baz=156,slow=8.6,SNR=4.9						
	0.3nm,0.5s						

THE 22 15:04:51.6, 41°N±3°×2°1E±°, h1^{km}±2^{km}, M2.6/8, MLh2.6/8
TIR 22 15:04:52.1, 40°.50N×20°.85E, h0^{km}±1^{km}, Ml2.7/5
PDG 22 15:04:53.1±0.4, 40°.55N×20°.92E, h8^{km}±1^{km}, ML2.8/9, Error ellipse: s-maj=0.9km s-min=1.3km az=0.0
ATH 22 15:04:53.5, 40°.60N×20°.88E, h6^{km}±1^{km}, ML2.6/19, Manual Solution by A.Papageorgiou First location: 2019/06/22 15:05:52, This location: 2021/06/09 12:47:31 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km
BEO 22 15:04:53.5±0.5, 40°.54N×20°.87E, h5^{km}±5^{km}, ML2.4/7
SKO 22 15:04:53.8, 40°.54N×20°.89E, h12^{km}, ML2.6

ISC 22 15:04:53.2±1.1, 40°.53N±0°.02×20°.88E±0°.02, h2^{km}±9^{km}, n82, σ0^{s}.92/130, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	**Korca**	**0.12**	**325**	Pg	**Pg**	**15 04 54.4**	**-1.2**
KBN				Sg	**Sg**	**15 04 56.7**	**-0.5**
KBN				AML	AML	15 04 57.5	
	23nm,0.1s						
NEST	**Nestorio**	**0.17**	**130**	Pg	**Pg**	**15 04 56.8**	**+0.2**
NEST				Sg	**Sg**	**15 04 59.8**	**+1.0**
NEST				AML	AML	15 05 02.4	
	7.7nm,0.2s						
NEST	**Nestorio**	**0.17**	**130**	P	**Pg**	**15 04 57.2**	**+0.7**
NEST				S	**Sg**	**15 05 00.5**	**+1.7**
PENT	**Pentalofos**	**0.39**	**149**	P	**Pg**	**15 05 00.2**	**-0.4**
PENT				S	**Sb**	**15 05 08.0**	**-1.2**
OHR	**Ohrid**	**0.59**	**354**	*i* Pg	**Pg**	**15 05 04.4**	**-0.1**
OHR				*i* Sg	**Sg**	**15 05 13.4**	**+1.3**
OHR				*e*Lg	Lg	15 05 14.8	
	comp=N,153nm,0.5s						
OHR				*e*Lg	Lg	15 05 16.5	
	comp=E,251nm,0.4s						
KPRO	**Kipourio**	**0.68**	**147**	P	**Pg**	**15 05 05.1**	**-1.2**
KPRO				S	**Sb**	**15 05 17.1**	**-0.6**
KPRO	**Kipourio**	**0.68**	**147**	P	**Pb**	**15 05 07.5**	**-0.3**
KPRO				S	**Sb**	**15 05 17.5**	**-0.2**
KZN	**Kozani**	**0.72**	**107**	P	**Pg**	**15 05 06.8**	**-0.1**
KZN				S	**Sb**	**15 05 17.8**	**-1.0**
KZN	**Kozani**	**0.72**	**107**	P	**Pg**	**15 05 07.0**	**+0.1**
KZN				S	**Sb**	**15 05 18.5**	**-0.3**
JAN	**Janina**	**0.87**	**181**	P	**Pn**	**15 05 11.9**	**-0.5**
NASA	**Naoussa**	**0.91**	**83**	P	**Pg**	**15 05 11.0**	**+0.3**
NASA				S	**Sb**	**15 05 23.1**	**-1.3**
SRN	**Sarande**	**0.93**	**226**	Pg	**Pg**	**15 05 09.9**	**-1.1**
SRN				Sg	**Sg**	**15 05 24.0**	**+0.9**
SRN				AML	AML	15 05 31.7	
	comp=E,0.7nm,0.6s						
VLO	**Vlora**	**1.05**	**267**	Pg	**Pg**	**15 05 13.4**	**0.0**
VLO				Sg	**Sb**	**15 05 28.3**	**-0.1**
IGT	**Igoumenitsa**	**1.08**	**203**	Pg	**Pg**	**15 05 12.5**	**-1.3**
IGT				Sg	**Sb**	**15 05 29.5**	**+0.5**
IGT	**Igoumenitsa**	**1.08**	**203**	P	**Pg**	**15 05 12.2**	**-1.6**
IGT				S	**Sg**	**15 05 27.8**	**+0.1**
IGT	**Igoumenitsa**	**1.08**	**203**	*i* Pg	**Pg**	**15 05 12.2**	**-1.6**
IGT				*i* Sg	**Sb**	**15 05 29.8**	**+0.7**
IGT	**Igoumenitsa**	**1.08**	**203**	*e*Pg	**Pg**	**15 05 11.9**	**-1.9**
IGT				*e*Sg	**Sb**	**15 05 29.4**	**+0.4**
IGT	**Igoumenitsa**	**1.08**	**203**	P	**Pn**	**15 05 15.8**	**+0.5**
IGT				S	**Sn**	**15 05 31.5**	**+0.7**
TIR	**Tirane**	**1.12**	**317**	P	**Pn**	**15 05 16.2**	**+0.2**
TIR				Sn	**Sn**	**15 05 32.6**	**+0.6**
TIR				AML	AML	15 05 38.4	
	comp=E,0.4nm,0.3s						
TIR	**Tirane**	**1.12**	**317**	*i* Pg	**Pg**	**15 05 14.9**	**+0.2**
TIR	**Tirane**	**1.12**	**317**	*e*Pg	**Pg**	**15 05 13.5**	**-1.3**
TIR				*e*Sg	**Sg**	**15 05 29.5**	**+0.2**
KEK	**Kerkira**	**1.16**	**226**	P	**Pg**	**15 05 13.9**	**-1.5**
KEK	**Kerkira**	**1.16**	**226**	P	**Pb**	**15 05 16.0**	**+0.1**
KEK				S	**Sn**	**15 05 33.1**	**+0.3**
TETR	**Tetrakomo, Epi**	**1.22**	**165**	P	**Pn**	**15 05 18.1**	**+0.8**
TETR				S	**Sn**	**15 05 35.9**	**+1.4**
THL	**Klokotos Trika**	**1.30**	**137**	P	**Pn**	**15 05 16.6**	**-1.8**
THL				S	**Sn**	**15 05 37.0**	**+0.8**
THL	**Klokotos Trika**	**1.30**	**137**	P	**Pb**	**15 05 18.6**	**+0.3**
THL				S	**Sn**	**15 05 36.7**	**+0.4**
LIT	**Litokhoron**	**1.30**	**108**	P	**Pg**	**15 05 17.3**	**-0.9**
LIT				S	**Sn**	**15 05 36.5**	**+0.1**
LIT	**Litokhoron**	**1.30**	**108**	*i* Pg	**Pg**	**15 05 17.4**	**-0.9**
LIT				*i* Sg	**Sn**	**15 05 38.8**	**+2.3**
LIT	**Litokhoron**	**1.30**	**108**	P	**Pg**	**15 05 17.2**	**-1.0**
LIT				S	**Sn**	**15 05 36.2**	**-0.2**
TYRN	**Tyrnavos**	**1.32**	**128**	P	**Pg**	**15 05 18.5**	**0.0**
TYRN				S	**Sn**	**15 05 37.1**	**+0.3**
SKO	**Skopje**	**1.51**	**16**	*i* Pg	**Pb**	**15 05 21.3**	**-0.6**
THE	**Thessaloniki**	**1.59**	**85**	*i* Pn	**Pn**	**15 05 22.3**	**-0.1**
THE	**Thessaloniki**	**1.59**	**85**	P	**Pn**	**15 05 22.4**	**-0.1**
THE				S	**Sb**	**15 05 43.5**	**-0.5**
KNT	**Kendrikon**	**1.66**	**67**	*i* Pn	**Pn**	**15 05 22.8**	**-0.5**
KNT				*i* Sn	**Sg**	**15 05 48.3**	**+1.7**
KNT	**Kendrikon**	**1.66**	**67**	P	**Pn**	**15 05 22.6**	**-0.8**
KNT				S	**Sn**	**15 05 44.1**	**-1.2**
PUK	**Puka**	**1.69**	**334**	Pn	**Pb**	**15 05 25.2**	**+0.2**
PUK				Sn	**Sg**	**15 05 49.5**	**+2.1**
PUK				AML	AML	15 05 52.1	
	comp=E,0.3nm,0.8s						
HORT	**Hortiatis**	**1.69**	**87**	P	**Pn**	**15 05 22.8**	**-1.1**
TSLK	**Tsoukalades, L**	**1.71**	**186**	P	**Pg**	**15 05 25.7**	**-0.2**
LKD2	**Lefkada island**	**1.74**	**186**	P	**Pb**	**15 05 25.6**	**-0.3**
EVR	**Evrytania**	**1.76**	**156**	P	**Pg**	**15 05 26.7**	**-0.2**
MAKR	**Makrakomi, Fth**	**1.79**	**147**	P	**Pn**	**15 05 25.5**	**+0.3**
NYDR	**Nydri-Lefkada**	**1.81**	**184**	P	**Pb**	**15 05 26.4**	**-0.7**
AGG	**Agios Georgios**	**1.87**	**143**	P	**Pb**	**15 05 27.8**	**-0.4**
ULC	**Ulcinj**	**1.89**	**320**	*i* Pn	**Pn**	**15 05 25.4**	**-1.2**
ULC	**Ulcinj**	**1.89**	**320**	*e*Pn	**Pn**	**15 05 26.6**	**0.0**
ULC				*i* Sn	**Sb**	**15 05 53.1**	**+0.5**
SCTE	**Santa Cesarea**	**1.90**	**257**	P	**Pn**	**15 05 26.7**	**+0.1**
SOH	**Sokhos**	**1.91**	**80**	*i* Pn	**Pn**	**15 05 27.0**	**+0.2**
SOH				*i* Sn	**Sb**	**15 05 52.9**	**-0.1**
SOH	**Sokhos**	**1.91**	**80**	P	**Pn**	**15 05 26.4**	**-0.4**
EVGI	**Lefkada island**	**1.91**	**185**	P	**Pb**	**15 05 27.7**	**-1.0**
BCI	**Bajram Curri**	**1.94**	**342**	Pn	**Pb**	**15 05 29.5**	**+0.2**
BCI				Sn	**Sg**	**15 05 57.8**	**+2.3**
PLG	**Polygyros**	**1.97**	**94**	P	**Pn**	**15 05 27.3**	**-0.3**
PVO	**Paravola**	**1.97**	**165**	P	**Pb**	**15 05 29.6**	**-0.1**
FSK	**Fiskardo**	**2.08**	**187**	P	**Pn**	**15 05 29.8**	**+0.7**
ANX	**Ano Chora**	**2.09**	**157**	P	**Pb**	**15 05 31.3**	**-0.6**
DRME	**Dracevica, Mon**	**2.09**	**323**	*e*Pn	**Pn**	**15 05 29.1**	**-0.2**
DRME	**Dracevica, Mon**	**2.09**	**323**	*e*Pn	**Pn**	**15 05 29.5**	**+0.2**
DRME				*i* Sn	**Sb**	**15 05 57.9**	**-0.4**
SRS	**Serrai**	**2.14**	**73**	*i* Pn	**Pn**	**15 05 30.0**	**0.0**
SRS				*i* Sn	**Sn**	**15 05 57.6**	**+0.4**
SRS	**Serrai**	**2.14**	**73**	*e*Pn	**Pn**	**15 05 29.6**	**-0.4**
SRS				*e*Sn	**Sn**	**15 05 57.7**	**+0.5**
SRS	**Serrai**	**2.14**	**73**	P	**Pn**	**15 05 29.7**	**-0.3**
BOSS	**Bosilegrad**	**2.31**	**31**	*e*Pn	**Pn**	**15 05 30.8**	**-1.5**
BUM	**Brajici-Budva**	**2.32**	**321**	*e*Pn	**Pn**	**15 05 32.6**	**+0.2**
BUM				*i* Sn	**Sb**	**15 06 03.6**	**-1.3**
BARS	**Barje**	**2.40**	**17**	*i* Pn	**Pn**	**15 05 32.7**	**-0.8**
BARS	**Barje**	**2.40**	**17**	*e*Pn	**Pn**	**15 05 32.5**	**-1.0**
BARS				*e*Sn	**Sn**	**15 06 02.8**	**-0.6**
MMB	**Musomishta**	**2.40**	**64**	*i* Pn	**Pn**	**15 05 34.7**	**+1.1**
MMB				*i* Sn	**Sb**	**15 06 04.8**	**-2.4**
IVA	**Berane**	**2.46**	**343**	*e*Pn	**Pn**	**15 05 34.3**	**-0.1**
IVA				*i* Sn	**Sn**	**15 06 06.4**	**+1.4**
CEME	**Cevo**	**2.50**	**325**	*e*Pn	**Pn**	**15 05 34.4**	**-0.5**
CEME				*i* Sn	**Sn**	**15 06 07.7**	**+1.7**
KOME	**Kolasin**	**2.54**	**337**	*e*Pn	**Pn**	**15 05 36.1**	**+0.6**
KOME	**Kolasin**	**2.54**	**337**	*e*Pn	**Pn**	**15 05 35.5**	**0.0**
KOME				*i* Sn	**Sn**	**15 06 08.4**	**+1.4**
HCY	**Herceg Novi**	**2.63**	**318**	*e*Pn	**Pn**	**15 05 36.8**	**+0.2**
HCY				*i* Sn	**Sn**	**15 06 11.0**	**+1.9**
SELS	**Selova**	**2.70**	**4**	*e*Pn	**Pn**	**15 05 37.6**	**0.0**
VTS	**Vitosha**	**2.74**	**39**	*e*Pn	**Pn**	**15 05 37.6**	**-0.7**
VTS				*e*Sn	**Sn**	**15 06 11.8**	**-0.3**
SJES	**Sjenica**	**2.82**	**346**	*e*Pn	**Pn**	**15 05 39.9**	**+0.6**
BRY	**Bratogost**	**2.95**	**324**	*e*Pn	**Pn**	**15 05 41.3**	**+0.1**
BRY				*i* Sn	**Sn**	**15 06 18.6**	**+1.3**
PLE	**Pljevlja**	**3.02**	**339**	*e*Pn	**Pn**	**15 05 42.0**	**-0.1**
PLE				*i* Sn	**Sn**	**15 06 19.8**	**+1.0**
GOCS	**Kraljevo Serbi**	**3.04**	**360**	*e*Pn	**Pn**	**15 05 41.5**	**-0.8**
ZAPS	**Zavoj**	**3.04**	**25**	*e*Pn	**Pn**	**15 05 41.8**	**-0.6**
IVAS	**Ivanjica**	**3.10**	**350**	*e*Pn	**Pn**	**15 05 43.4**	**+0.3**
BOVS	**Bovan**	**3.17**	**11**	*e*Pn	**Pn**	**15 05 42.7**	**-1.4**
STON	**Ston**	**3.34**	**316**	*e*Pn	**Pn**	**15 05 45.1**	**-1.3**
STON				*e*Sn	**Sn**	**15 06 24.9**	**-1.7**
GRUS	**Gruza**	**3.36**	**358**	*e*Pn	**Pn**	**15 05 46.1**	**-0.6**
BLKB	**Belogradchik**	**3.37**	**23**	*e*Pn	**Pn**	**15 05 47.3**	**+0.4**
ZAGS	**Zajecar**	**3.44**	**17**	*e*Pn	**Pn**	**15 05 46.9**	**-0.8**

IDC 22 15:05:29.2±1.7, 31°.13S×178°.06W, h0^{km}, mb3.6/3, mbtmp3.6/3, MS3.9/2, Error ellipse: s-maj=43.8km s-min=24.7km az=102.0

ISC 22 15:05:33.7±1.3, 31°.1S±0°.1×178°.4W±0°.3, h35^{km}, n7, σ1^{s}.36/6, mb3.5/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.93**	**12**	Pn	**Pn**	**15 06 03.1**	**-0.9**
	85nm,0.3s,baz=213,slow=17,SNR=2.0						
RAO				Sn	**Sn**	**15 06 26.9**	**-0.1**
	106nm,0.3s,baz=258,slow=23,SNR=1.7						
URZ	**Urewera**	**8.01**	**206**	Sn	**Sn**	**15 08 55.1**	**-1.7**
	0.4nm,0.3s,baz=325,slow=20,SNR=2.0						
ASAR	**Alice Springs**	**42.75**	**268**	P	**P**	**15 13 28.8**	**+0.9**
	0.2nm,0.3s,baz=105,slow=7.1,SNR=5.4						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**43.81**	**273**	P	P	15 13 40.7	+4.2
	0.3nm,0.3s,baz=111,slow=8.1,SNR=12						
	0.3nm,0.3s						
QSPA	**South Pole Qui**	**58.97**	**180**	P	**P**	**15 15 30.4**	**+1.0**
	1.5nm,1.1s,baz=27,slow=9.0,SNR=2.6						
QSPA				LR	LR	15 37 08.3	
	comp=Z,145nm,20.3s,baz=311,slow=32						
	1.5nm,1.1s						
KDAK	**Kodiak Island**	**91.21**	**13**	LR	LR	15 53 12.8	
	comp=Z,33nm,18.8s,baz=24,slow=31						
FINES	**FINESS Array B**	**145.73**	**339**	PKPbc	**PKPab**	**15 25 08.7**	**+0.1**
	2.6nm,0.9s,baz=26,slow=4.9,SNR=4.3						

IDC 22 15:17:21.4±2.1, 30°.91S×178°.77W, h0^{km}, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=62.5km s-min=44.0km az=46.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.42**	**268**	P	P	15 25 17.1	-1.0
	0.2nm,0.7s,baz=109,slow=8.4,SNR=1.5						
	0.2nm,0.7s						
WRA	**Warramunga Arr**	**43.46**	**273**	P	P	15 25 27.3	+0.8
	0.2nm,0.5s,baz=112,slow=8.1,SNR=1.6						
	0.2nm,0.5s						
QSPA	**South Pole Qui**	**59.20**	**180**	P	P	15 27 24.2	0.0
	0.4nm,0.9s,baz=36,slow=19,SNR=1.3						
	0.4nm,0.9s						
FINES	**FINESS Array B**	**145.39**	**339**	PKPbc	PKPbc	15 36 59.6	-0.9
	4.2nm,0.9s,baz=24,slow=4.9,SNR=7.4						

IDC 22 15:17:44.7±2.2, 30°.24S×177°.91W, h0^{km}, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=64.6km s-min=44.5km az=45.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.19**	**267**	P	P	15 25 47.7	0.0
	0.3nm,0.7s,baz=113,slow=7.7,SNR=1.9						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**44.17**	**272**	P	P	15 25 55.3	-0.2
	0.3nm,0.4s,baz=112,slow=7.8,SNR=1.5						
	0.3nm,0.4s						
QSPA	**South Pole Qui**	**59.87**	**180**	P	P	15 27 52.0	-0.1
	1.9nm,1.2s,baz=12,slow=5.4,SNR=2.2						
	1.9nm,1.2s						
FINES	**FINESS Array B**	**145.02**	**340**	PKPbc	PKPbc	15 37 21.8	-0.8
	3.1nm,1.1s,baz=64,slow=4.8,SNR=4.8						

IDC 22 15:25:34.0±0.9, 28°.29N×104°.80E, h0^{km}, mb3.5/8, mbtmp3.4/10, ML3.7/1, Error ellipse: s-maj=31.3km s-min=17.5km az=61.0

ISC 22 15:25:36.6±0.9, 28°.3N±0°.1×104°.8E±0°.2, h19^{km}, n10, σ0^{s}.93/10, mb3.5/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**11.16**	**210**	Pn	**Pn**	**15 28 14.4**	**-0.8**
	0.2nm,0.7s,baz=16,slow=10,SNR=5.9						
SONM	**Songino Array**	**19.58**	**3**	P	**Pn**	**15 30 05.3**	**+0.3**
	0.2nm,0.3s,baz=202,slow=7.3,SNR=2.2						
	0.4nm,0.5s						
KSRS	**Korea Array**	**21.41**	**59**	P	**P**	**15 30 22.6**	**-0.6**
	1.2nm,0.7s,baz=247,slow=12,SNR=5.2						
	1.2nm,0.7s						
MKAR	**Makanchi Array**	**25.58**	**322**	P	**P**	**15 31 04.3**	**-0.2**
	0.6nm,0.7s,baz=142,slow=9.7,SNR=5.7						
	0.6nm,0.7s						
ZALV	**Zalesovo Beam**	**29.56**	**336**	P	**P**	**15 31 38.5**	**-1.6**
	1.0nm,0.8s,baz=152,slow=6.5,SNR=2.0						
	1.0nm,0.8s						
KURBB	**Kurchatov Arra**	**29.91**	**326**	P	**P**	**15 31 42.4**	**-0.8**
	0.3nm,0.6s,baz=130,slow=9.9,SNR=2.6						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**35.44**	**324**	P	**P**	**15 32 32.0**	**+0.5**
	0.3nm,0.4s,baz=115,slow=14,SNR=2.3						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**55.76**	**146**	P	**P**	**15 35 12.9**	**+0.4**
	0.3nm,0.7s,baz=338,slow=8.2,SNR=6.7						
	0.3nm,0.7s						
BRTR	**Keskin Array B**	**58.73**	**301**	P	**P**	**15 35 34.0**	**+0.5**
	0.3nm,0.5s,baz=64,slow=3.4,SNR=1.9						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**58.74**	**149**	P	**P**	**15 35 34.4**	**+1.0**
	0.2nm,0.4s,baz=332,slow=7.0,SNR=10						
	0.2nm,0.4s						

IDC 22 15:26:49.7±34.0, 31°.76N×138°.42E, h381^{km}±144^{km}, mb2.4/1, mbtmp3.1/3, Error ellipse: s-maj=552.7km s-min=87.6km az=169.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**4.77**	**358**	P	Pn	15 28 08.1	-0.1
	1.0nm,0.5s,baz=180,slow=11,SNR=7.7						
KSRS	**Korea Array**	**10.34**	**306**	P	P	15 29 11.4	-0.1
	0.4nm,0.4s,baz=118,slow=12,SNR=2.3						
MKAR	**Makanchi Array**	**45.03**	**306**	P	P	15 34 28.8	-0.2
	0.1nm,0.5s,baz=80,slow=7.9,SNR=2.0						
	0.1nm,0.5s						

IDC 22 15:38:35.3±3.3, 33°.93S×178°.85W, h0^{km}, mb3.8/3, mbtmp3.8/4, ML3.8/1, Error ellipse: s-maj=74.4km s-min=37.2km az=117.0
WEL 22 15:38:39.2±0.9, 34°S±9°×17°9W±1°6, h33^{km}, M3.9/12, mB4.5/7, ML4.3/18, MLv4.0/12, Mw(mB)3.7/7, Error ellipse: s-maj=23.3km s-min=7.0km az=115.9, confirmed

ISC 22 15:38:40.6±1.6, 33°.87S±0°.10×178°.9W±0°.2, h35^{km}, n28, σ1^{s}.33/46, mb3.5/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**4.49**	**208**	P	**Pn**	**15 39 46.0**	**-0.2**
WMGZ				S	**Sn**	**15 40 39.1**	**+2.0**
PKGZ	**Pakihiroa**	**4.67**	**210**	P	**Pn**	**15 39 46.5**	**-2.1**
PKGZ				S	**Sn**	**15 40 43.6**	**+2.1**
HAZ	**Te Kaha**	**4.71**	**214**	P	**Pn**	**15 39 49.1**	**0.0**
PUZ	**Puketiti**	**4.77**	**208**	P	**Pn**	**15 39 48.9**	**-1.2**
PUZ				S	**Sn**	**15 40 45.9**	**+1.8**
TWGZ	**Tauwhareparae**	**4.97**	**209**	P	**Pn**	**15 39 51.7**	**-1.1**
TWGZ				S	**Sn**	**15 40 51.7**	**+2.5**
CNGZ	**Carnagh Statio**	**5.15**	**206**	P	**Pn**	**15 39 55.9**	**+0.6**
TKGZ	**Te Karaka**	**5.25**	**209**	P	**Pn**	**15 39 55.1**	**-1.5**
TKGZ				S	**Sn**	**15 40 56.7**	**+0.8**
URZ	**Urewera**	**5.42**	**215**	Pn	**Pn**	**15 39 58.1**	**-0.9**
	3.3nm,0.3s,baz=245,slow=2.2,SNR=13						
URZ				Sn	**Sn**	**15 40 59.8**	**-0.4**
	2.4nm,0.3s,baz=80,slow=21,SNR=6.6						
	6.7nm,0.3s						
URZ	**Urewera**	**5.42**	**215**	P	**Pn**	**15 39 59.0**	**0.0**
RAGZ	**Rawiri**	**5.48**	**211**	P	**Pn**	**15 39 59.1**	**-0.7**
RIGZ	**Rimuhau**	**5.51**	**208**	P	**Pn**	**15 39 59.5**	**-0.8**
RIGZ				S	**Sn**	**15 41 02.6**	**+0.2**
PRGZ	**Paritu Road**	**5.66**	**206**	P	**Pn**	**15 40 01.3**	**-0.9**
PRGZ				S	**Sn**	**15 41 05.6**	**-0.4**
SNGZ	**Shannon Statio**	**5.75**	**210**	P	**Pn**	**15 40 03.7**	**+0.2**
SNGZ				S	**Sn**	**15 41 08.6**	**+0.3**
MUGZ	**Murupara**	**5.76**	**216**	P	**Pn**	**15 40 04.3**	**+0.7**
MUGZ				S	**Sn**	**15 41 08.6**	**+0.1**
MBAZ	**Motutapu North**	**5.81**	**238**	P	**Pn**	**15 40 00.1**	**-4.2**
MHGZ	**Mahia Peninsul**	**5.85**	**205**	P	**Pn**	**15 40 03.7**	**-1.2**
MHGZ				S	**Sn**	**15 41 10.4**	**-0.4**
RAHZ	**Arahi**	**5.97**	**211**	P	**Pn**	**15 40 06.4**	**-0.2**
RAHZ				S	**Sn**	**15 41 15.2**	**+1.5**
MTHZ	**Maungataniwha**	**6.03**	**213**	P	**Pn**	**15 40 06.4**	**-0.9**
MTHZ				S	**Sn**	**15 41 15.9**	**+0.8**
NMHZ	**Naumai**	**6.24**	**212**	P	**Pn**	**15 40 09.4**	**-0.9**
NMHZ				S	**Sn**	**15 41 21.8**	**+1.3**
BKZ	**Black Stump Fm**	**6.44**	**213**	P	**Pn**	**15 40 12.2**	**-0.8**
BKZ				S	**Sn**	**15 41 24.9**	**-0.3**
TMVZ	**Te Maari**	**6.78**	**218**	P	**Pn**	**15 40 17.3**	**-0.5**
TMVZ				S	**Sn**	**15 41 33.2**	**-0.7**
KAHZ	**Kahuranaki**	**6.80**	**208**	P	**Pn**	**15 40 16.1**	**-1.9**
KAHZ				S	**Sn**	**15 41 33.1**	**-1.1**
OTVZ	**Oturere**	**6.84**	**218**	P	**Pn**	**15 40 18.9**	**+0.3**
OTVZ				S	**Sn**	**15 41 33.8**	**-1.5**
CTZ	**Chatham Island**	**10.02**	**170**	P	**Pn**	**15 40 58.9**	**-3.1**
ASAR	**Alice Springs**	**42.25**	**271**	P	**P**	**15 46 30.9**	**+0.1**
	0.8nm,0.8s,baz=112,slow=7.3,SNR=7.9						
	0.8nm,0.8s						
WRA	**Warramunga Arr**	**43.55**	**276**	P	**P**	**15 46 41.4**	**+0.1**
	0.5nm,0.6s,baz=119,slow=7.2,SNR=6.2						
	0.5nm,0.6s						
FITZ	**Fitzroy Crossi**	**51.65**	**273**	P	**P**	**15 47 45.0**	**+0.9**
	1.9nm,0.8s,baz=135,slow=10.0,SNR=1.6						
	1.9nm,0.8s						
FINES	**FINESS Array B**	**148.08**	**337**	PKPbc	**PKPbc**	**15 58 21.5**	**-0.2**
	1.9nm,0.8s,baz=27,slow=5.8,SNR=3.6						

DNK 22 15:40:19.0±1.3, 51°.25N×16°.03E, h46^{km}±16^{km}, ML2.2
IPEC 22 15:40:21.1±0.2, 51°.59N×16°.17E, h1^{km}, ML2.7/5, Error ellipse: s-maj=1.7km s-min=1.4km az=63.0
IDC 22 15:40:22.1±0.8, 51°.55N×16°.02E, h0^{km}, mbtmp3.4/5, ML2.7/5, Error ellipse: s-maj=11.3km s-min=6.7km az=119.0
PRU 22 15:40:23.5, 51°.50N×16°.13E, h0^{km}
VIE 22 15:40:23.5±0.6, 51°.40N×16°.04E, h0^{km}, mb2.7/8, ml2.8/7, Error ellipse: s-maj=6.3km s-min=3.2km az=52.0 75 km WNW of Wroclaw Suspected Mining induced.

ISC 22 15:40:19.4±0.7, 51°.64N±0°.03×16°.14E±0°.02, h0^{km}, n50, σ1^{s}.15/99, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.80**	**173**	*e*Pg	**Pg**	**15 40 35.7**	**+0.9**
KSP				*e*Sg	**Sg**	**15 40 45.3**	**+0.2**
CHVC	**Chvalec**	**1.05**	**183**	*e*PG	**Pb**	**15 40 40.5**	**0.0**
CHVC				*e*SG	**Sg**	**15 40 53.6**	**+0.4**
	comp=Z,74nm,0.4s						
OSTC	**Ostas**	**1.08**	**178**	*e*PG	**Pb**	**15 40 41.2**	**+0.2**
OSTC				*e*SG	**Sg**	**15 40 54.4**	**+0.2**
	comp=Z,112nm,0.9s						
UPC	**Upice**	**1.13**	**184**	*e*PG	**Pg**	**15 40 41.7**	**+0.6**
UPC				*e*SG	**Sg**	**15 40 55.5**	**-0.3**

DPC	Dobruska-Polom	1.29	175	*e*PG	Pg	15 40 44.5	+0.3
DPC				*e*SG	Sg	15 41 00.0	-0.9
	comp=Z,72nm,0.8s						
PIVO	Bartosovice	1.48	170	*e*Pg	Pn	15 40 47.6	+0.3
	baz=350						
PIVO				*e*Sg	Sg	15 41 05.7	-1.1
	98nm,0.4s,baz=350						
PVCC	Panska Ves	1.49	222	*e*PG	Pb	15 40 49.0	+1.1
PVCC				*e*SG	Sn	15 41 08.4	+0.8
BRG	Berggiesshubel	1.58	242	Pg	Pg	15 40 50.5	+0.9
BRG				Sg	Sg	15 41 11.2	+1.0
BRG				Amp		15 41 15.0	
	comp=Z,77nm,0.4s						
KRLC	Kraliky	1.61	165	*e*PG	Pn	15 40 49.9	+0.7
KRLC				*e*SG	Sn	15 41 10.1	-0.6
	comp=Z,56nm,0.4s						
PRA	Prague	1.91	215	*e*PN	Pn	15 40 53.9	+0.7
GOPC	GO Pecny, Ondr	1.93	207	*e*PN	Pn	15 40 53.9	+0.4
PRU	Pruhonice	1.94	212	*e*PN	Pn	15 40 53.8	+0.2
PRU				*e*PG	Pb	15 40 56.0	+0.4
PRU				*e*SG	Sb	15 41 20.8	+0.5
	comp=Z,34nm,0.6s						
CLL	Collm	1.99	262	*i* Pn	Pn	15 40 54.9	+0.6
CLL				*e*Pg	Pg	15 40 58.0	+0.4
CLL				*i* x	x	15 41 01.7	
CLL				*e*Sg	Sg	15 41 25.0	+1.6
	comp=Z,52nm,0.4s						
STEB	Steborice	1.99	148	*e*PN	Pn	15 40 54.8	+0.4
STEB				*e*PG	Pb	15 40 57.3	+0.8
STEB				*e*SG	Sb	15 41 22.3	+0.4
MORC	Moravsky Berou	2.06	154	*e*Pn	Pn	15 40 55.7	+0.4
	baz=335						
MORC				*e*Sg	Sb	15 41 23.9	0.0
	comp=Z,47nm,0.6s,baz=335						
MORC	Moravsky Berou	2.06	154	*e*PN	Pn	15 40 55.8	+0.4
MORC				*e*SG	Sb	15 41 24.0	0.0
VRAC	Vranov	2.35	173	Pn	Pn	15 41 00.6	+1.4
	comp=Z,2.3nm,0.3s,baz=347,slow=15,SNR=22						
VRAC				Sn	Sn	15 41 29.1	+0.3
	comp=Z,7.1nm,0.3s,baz=256,slow=19,SNR=8.6						
VRAC				Lg	Lg	15 41 33.9	
	comp=Z,7.1nm,0.3s,baz=259,slow=19,SNR=5.8						
	comp=Z,10nm,0.3s						
VRAC	Vranov	2.35	173	*e*Pn	Pn	15 40 59.9	+0.7
	baz=353						
VRAC				*e*Sg	Sb	15 41 33.1	+1.0
	comp=Z,37nm,0.5s,baz=353						
VRAC	Vranov	2.35	173	*e*PN	Pn	15 41 00.0	+0.7
VRAC				*e*SG	Sb	15 41 33.2	+1.1
MAUC	Maruska	2.52	154	*e*PG	Pg	15 41 07.2	-0.4
KRUC	Moravsky	2.58	176	*e*Pn	Pn	15 41 03.3	+0.8
	baz=357						
KRUC	Moravsky	2.58	176	*e*Pg	Pb	15 41 07.5	+0.9
	baz=357						
KRUC				*e*Sg	Sb	15 41 40.2	+1.3
	comp=Z,23nm,0.5s,baz=357						
OJC	Ojcow	2.71	120	*e*Pn	Pn	15 41 03.8	-0.5
OJC				*e*Pg	Pg	15 41 12.1	+0.7
OJC				*e*Sg	Sg	15 41 47.7	+1.2
JAVC	Velka Javorina	2.95	160	*e*Pn	Pn	15 41 08.3	+0.8
	baz=341						
KHC	Kasperske Hory	3.00	214	*e*PN	Pn	15 41 08.8	+0.6
KHC				*e*PG	Pb	15 41 15.3	+1.6
KHC				*e*SG	Sg	15 41 54.6	-1.1
	comp=Z,19nm,0.4s						
CKRC	Cesky Krumlov	3.06	203	*e*PN	Pn	15 41 10.3	+1.3
CKRC				*e*PG	Pb	15 41 16.1	+1.4
CKRC				*e*SG	Sg	15 41 55.7	-1.9
	comp=Z,19nm,0.5s						
GERES	GERESS Array B	3.21	210	Pn	Pn	15 41 12.4	+1.3
	comp=Z,0.3nm,0.3s,baz=28,slow=13,SNR=49						
GERES				Pg	Pb	15 41 18.2	+1.0
	comp=Z,0.7nm,0.3s,baz=32,slow=17,SNR=28						
GERES				Sn	Sn	15 41 49.9	-0.2
	comp=Z,0.3nm,0.3s,baz=28,slow=26,SNR=5.9						
GERES				Lg	Lg	15 41 59.1	
	comp=Z,0.8nm,0.3s,baz=32,slow=24,SNR=14						
	comp=Z,4.1nm,0.3s						
LANS	Liptovska Anna	3.27	138	*e*PN	Pn	15 41 13.3	+1.3
LANS				*e*PG	Pg	15 41 21.7	-0.4
LANS				*e*SG	Sg	15 42 03.7	-0.8
MODS	Modra-Piesok	3.35	167	*e*PG	Pg	15 41 23.2	-0.3
MODS				*e*SG	Sg	15 42 05.7	-1.2
NIE	Niedzica	3.46	128	*e*Pg	Pg	15 41 27.5	+1.8
NIE				*e*Sg	Sg	15 42 11.3	+0.8
VYHS	Vyhne	3.59	150	*e*PN	Pn	15 41 16.7	+0.3
VYHS				*e*PG	Pg	15 41 29.8	+1.6
VYHS				*e*SG	Sg	15 42 13.4	-1.4
CONA	Conrad Observa	3.72	183	*i* Pn	Pn	15 41 19.4	+1.2
	comp=Z,1.2nm,0.2s,SNR=9.5						
CONA				*i* Sn	Sn	15 42 02.1	-0.5
	comp=Z,3.6nm,0.3s						
CONA				*e*Sg	Sg	15 42 17.3	-1.5
	comp=Z,14nm,0.4s						
STHS	Stebnicka Huta	3.94	122	*e*PN	Pn	15 41 22.7	+1.6
STHS				*e*PG	Pg	15 41 36.3	+1.4
STHS				*e*SG	Sg	15 42 27.8	+1.9
RONA	Rosalia, Austr	3.94	179	*i* Sg	Sg	15 42 22.6	-3.4
	comp=Z,2.7nm,0.2s						
MOA	Molln	3.98	199	*i* Pn	Pn	15 41 22.8	+1.0
	comp=Z,4.2nm,0.2s,SNR=30						
MOA				*e*Sg	Sg	15 42 26.2	-1.1
	comp=Z,17nm,0.5s						
KECS	Kecovo	4.22	137	*e*PN	Pn	15 41 24.6	-0.3
KECS				*e*PG	Pg	15 41 41.7	+1.5
BIOA	Bad Ischl, Aus	4.27	203	*i* Pn	Pn	15 41 26.7	+1.0
	comp=Z,4.6nm,0.3s,SNR=5.4						
LUNU	Lund	4.31	339	*i* P	Pn	15 41 27.5	+1.3
LUNU				*i* S	Sn	15 42 17.3	+0.2
ARSA	Arzberg	4.41	186	*i* Pn	Pn	15 41 28.2	+0.6
	comp=Z,2.4nm,0.2s						
ARSA				*e*Sg	Sg	15 42 37.8	-3.2
	comp=Z,12nm,0.6s						
BLEU	Blekinge	4.68	358	*i* P	Pn	15 41 32.8	+1.6
BLEU				*i* S	Sn	15 42 25.5	-0.7
KOLS	Kolonicke sedl	4.77	122	*e*PN	Pn	15 41 33.9	+1.4
LESA	Schwarzleotal	4.78	210	*i* Pn	Pn	15 41 33.1	+0.3
	comp=Z,0.6nm,0.2s						
LESA				*e*Sg	Sg	15 42 52.5	-0.5
	comp=Z,4.6nm,0.3s						
BJUU	Bjuv	4.81	339	*i* P	Pn	15 41 33.0	-0.1
BJUU				*i* S	Sn	15 42 27.0	-2.5
DEL	Delary	5.02	345	*i* P	Pn	15 41 36.0	0.0
DEL				*e*S	Sn	15 42 33.0	-1.6
DEL				IAML		15 42 40.3	
	comp=Z,0.9nm,0.3s						
WATA	Walderalm	5.23	216	*i* Pn	Pn	15 41 38.9	-0.2
	comp=Z,0.6nm,0.2s						
WATA				*i* Sn	Sn	15 42 39.8	-0.3
	comp=Z,2.3nm,0.3s						
WATA				*e*Sg	Sg	15 43 08.9	+1.4
	comp=Z,2.2nm,0.2s						
DAVOX	Davos/Dischmat	6.36	223	Pg	Pb	15 42 16.1	+5.1
	comp=Z,0.3nm,0.3s,baz=348,slow=19,SNR=1.7						
DAVOX				Lg	Lg	15 43 37.4	
	comp=Z,0.2nm,0.3s,baz=17,slow=23,SNR=1.3						
AKASG	Malin Array Be	8.28	91	Pn	Pn	15 42 20.8	+0.2
	comp=Z,0.8nm,0.3s,baz=282,slow=12,SNR=5.0						
AKASG				Sn	Sn	15 43 51.5	-3.2
	comp=Z,0.2nm,0.3s,baz=274,slow=1.1,SNR=0.7						
AKASG				Lg	Lg	15 44 50.3	
	comp=Z,0.4nm,0.3s,baz=253,slow=23,SNR=1.8						
	comp=Z,0.4nm,0.5s						
HFS	Hagfors	8.63	352	Pn	Pn	15 42 26.4	+1.0
	comp=Z,0.1nm,0.3s,baz=166,slow=13,SNR=1.9						
	comp=Z,1.5nm,0.8s						
FINES	FINESS Array B	11.24	25	Pn	Pn	15 43 01.3	+0.2
	comp=Z,0.2nm,0.3s,baz=214,slow=11,SNR=7.7						
FINES				Sn	Sn	15 44 59.9	-7.4
	comp=Z,0.1nm,0.3s,baz=195,slow=19,SNR=1.4						
	comp=Z,4.8nm,0.9s						
EKA	Eskdalemuir Ar	12.07	295	Pn	Pn	15 43 09.9	-2.6
	baz=106,slow=12						

DJA ***22*** *15:43:54.7±0.4, 5°N±3°×12°8E±°, h95^{km}±10^{km}, M4.5/13, mb4.7/12, mB5.0/9, MLv4.8/13, Mw(mB)4.3/9*

IDC ***22*** *15:43:54.3±0.6, 4°.56N×127°.78E, h116^{km}±5^{km}, mb4.0/23, mbtmp4.3/25, Error ellipse: s-maj=19.1km s-min=8.7km az=74.0*

NEIC ***22*** *15:43:55.8±1.6, 4°.51N±0°.08×127°.6E±0°.1, h126^{km}±7^{km}, mb4.5/34, Error ellipse: s-maj=18.3km s-min=9.7km az=70.0*

ISC 22 15:43:53.5±0.3, **4°.55N**±0°.04×**127°.68E**±0°.06, **h104**^{km}, **n312**, σ$0^{s}99$/327, **mb4.4**/42, **1C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	2.31	248	P	Pn	15 44 30.2	0.0
SGSI				S	Sn	15 44 57.8	-0.5
DAV	Davao City (W)	3.26	320	Pn	Pn	15 44 45.6	+2.8
DAV	Davao City (W)	3.26	320	P	Pn	15 44 46.0	+3.2
	113nm,0.4s,baz=335,slow=10.0,SNR=3.5						
DAV				S	Sn	15 45 21.8	+0.9
	137nm,0.3s,baz=78,slow=23,SNR=3.5						
TNTI	Ternate	3.76	185		Pn	15 44 51.4	+1.8
TNTI	Ternate	3.76	185	P	Pn	15 44 51.9	+2.3
TNTI				S	Sn	15 45 35.2	+2.2
KMSI	Cibinong	5.40	223	P	Pn	15 45 13.4	+1.6
KMSI				S	Sn	15 46 13.8	+1.1
SWI	Sorong	6.46	146	P	Pn	15 45 28.0	+1.9
SANI	Sanana	6.77	194	P	Pn	15 45 30.1	-0.2
	0.3nm2µm48nm,0.5s						
MRSI	Marisa	7.01	235	P	Pn	15 45 35.0	+1.4
LUWI	Luwuk	7.41	222	Pn	Pn	15 45 41.4	+2.4
LUWI	Luwuk	7.41	222	P	Pn	15 45 41.1	+2.2
	0.5nm1µm70nm,0.8s						
TOLI2	Tolitoli	7.68	244		Pn	15 45 42.5	-0.3
NLAI	Namlea	7.76	184	P	Pn	15 45 43.6	-0.1
	0.2nm1µm33nm,0.4s						
APSI	Ampana	8.10	228	P	Pn	15 45 50.2	+1.8
	707nm51nm,0.8s						
FAKI	Fak Fak	8.71	148	P	Pn	15 45 56.8	+0.1
	38nm,1.0s						
MPSI	Mapaga	8.82	242	P	Pn	15 45 58.2	0.0
	32nm,1.1s						
RKPI	Ransiki, Papua	8.86	133	P	Pn	15 45 59.4	+0.7
	3µm44nm,0.8s						
PCI	Palu	9.52	236	P	Pn	15 46 09.1	+1.3
BATI	Baumata	15.19	195	P	P	15 47 23.8	-1.4
	13nm,0.3s,baz=245,slow=8.8,SNR=2.4						
MTN	Manton Dam	17.62	169	P	P	15 47 50.5	-1.4
MTN				IAmb	IAmb	15 48 07.0	
	comp=Z,54nm,1.5s						
YULB	Yu-li	19.72	342	P	P	15 48 14.9	0.0
YULB				IAmb	IAmb	15 48 41.5	
	comp=Z,40nm,1.5s						
TPUB	Ta-pu	19.85	341	P	P	15 48 14.9	-1.4
TPUB				IAmb	IAmb	15 48 17.0	
	comp=Z,21nm,1.0s						
KNRA	Kununurra	20.12	177		P	15 48 18.8	-0.6
KNRA				IAmb	IAmb	15 48 25.3	
	comp=Z,23nm,0.6s						
FITZ	Fitzroy Crossi	22.59	185		P	15 48 45.4	-0.2
FITZ	Fitzroy Crossi	22.59	185	P	P	15 48 45.1	-0.4
	comp=Z,6.8nm,0.5s,baz=19,slow=7.5,SNR=41						
	comp=Z,6.8nm,0.5s						
WB0	Warramunga Arr	25.05	165		P	15 49 08.2	-0.1
WB0				IAmb	IAmb	15 49 10.3	
	comp=Z,12nm,0.7s						
WRAB	Tennant Creek	25.20	165	P	P	15 49 08.6	-1.0
WRAB				IAmb	IAmb	15 49 25.1	
	comp=Z,13nm,1.1s						
WRA	Warramunga Arr	25.20	165		P	15 49 07.7	-1.9
WRA	Warramunga Arr	25.20	165	P	P	15 49 09.3	-0.3
	comp=Z,5.3nm,0.7s,baz=344,slow=10,SNR=48						
WRA				pP	pP	15 49 35.2	+3.0
	comp=Z,1.7nm,0.5s,baz=339,slow=11,SNR=1.9						
	comp=Z,5.3nm,0.7s						
WR8	Warramunga Arr	25.26	165		P	15 49 10.0	-0.2
WR8				IAmb	IAmb	15 49 12.9	
	comp=Z,16nm,1.1s						
RABL	Rabaul	25.96	109	P	P	15 49 17.7	+1.1
NJ2	Nanjing	28.59	344	*e*P	P	15 49 42.5	+2.7
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
AS31	Alice Springs	28.69	168	P	P	15 49 41.5	+0.5
ASAR	Alice Springs	28.69	168	P	P	15 49 41.0	0.0
ASAR	Alice Springs	28.69	168	P	P	15 49 40.9	-0.1
	comp=Z,1.6nm,0.5s,baz=353,slow=7.5,SNR=47						
ASAR				PcP	PcP	15 52 48.6	-0.6
	comp=Z,0.9nm,0.4s,baz=344,slow=2.2,SNR=9.7						
	comp=Z,1.6nm,0.5s						
CMAR	Chiang Mai Arr	31.29	299	P	P	15 50 05.0	+1.0
	comp=Z,0.8nm,0.7s,baz=104,slow=7.0,SNR=10						
CMAR				pP	pP	15 50 31.8	+4.7
	comp=Z,1.3nm,0.8s,baz=119,slow=7.4,SNR=4.7						
	comp=Z,0.8nm,0.7s						
CHTO	Chiang Mai	31.43	299	P	P	15 50 04.8	-0.4
CHTO				IAmb	IAmb	15 50 06.5	
	comp=Z,3.3nm,0.5s						
KSRS	Korea Array	32.75	0	P	P	15 50 16.7	+0.2
	comp=Z,3.6nm,0.7s,baz=178,slow=9.8,SNR=21						
	comp=Z,3.6nm,0.7s						
PZH	PanZhiHua	33.04	314	P	P	15 50 20.8	+1.5
PZH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.1s						
MJAR	Matsushiro Arr	33.28	16	P	P	15 50 20.0	-1.1
	comp=Z,0.6nm,0.5s,baz=187,slow=9.1,SNR=7.3						
MJAR				PcP	PcP	15 53 00.1	-1.1
	comp=Z,1.3nm,0.7s,baz=168,slow=3.0,SNR=5.5						
	comp=Z,0.6nm,0.5s						
HNS	HongShan	34.78	342	⇑P	P	15 50 35.6	+1.5
HNS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
FORT	Forrest	35.13	179	P	P	15 50 35.7	-1.4
BBOO	Buckleboo	38.00	168	P	P	15 51 00.4	-1.1
STKA	Stephens Creek	38.57	161	P	P	15 51 05.1	-1.2
	comp=Z,3.4nm,0.3s,baz=349,slow=7.5,SNR=9.5						
STKA				pP	pP	15 51 32.0	+2.3
	comp=Z,2.6nm,0.6s,baz=351,slow=12,SNR=1.1						
	comp=Z,3.4nm,0.3s						
HHC	Hu-ho-hao-te	38.94	340	*e*P	P	15 51 12.6	+3.2
HHC				pmax	pmax		
	comp=Z,17nm,0.6s						
HHC				pmax	pmax		
	comp=Z,65nm,4.5s						
USRK	Ussuriysk Ar.	39.67	5	P	P	15 51 15.2	-0.1
	comp=Z,2.1nm,0.7s,baz=181,slow=7.8,SNR=4.7						
	comp=Z,2.1nm,0.7s						
GTA	Gaotai	42.90	328	*e*P	P	15 51 43.4	+1.4
GTA				sP	pP	15 51 49.9	-15
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
EVN	Everest	45.27	305	P	P	15 52 01.9	+0.2
EVN				IAmb	IAmb	15 52 03.1	
	comp=Z,11nm,0.6s						
DZM	Mont Dzumac	46.25	126	P	P	15 52 07.8	-1.0
DZM				IAmb	IAmb	15 52 09.2	
	comp=Z,6.8nm,0.7s						
DZM	Mont Dzumac	46.25	126	P	P	15 52 08.5	-0.3
	comp=Z,5.6nm,0.7s,baz=71,slow=22,SNR=3.8						
	comp=Z,5.6nm,0.7s						
SONM	Songino Array	46.84	340	P	P	15 52 12.9	-0.2
	comp=Z,1.3nm,0.7s,baz=158,slow=10,SNR=5.5						
SONM				PcP	PcP	15 53 44.5	0.0
	comp=Z,0.7nm,0.5s,baz=151,slow=3.3,SNR=2.6						
	comp=Z,1.3nm,0.7s						
PEA0B	Petropavlovsk-	54.32	22	P	P	15 53 09.5	+0.4
PEA0B				IAmb	IAmb	15 53 11.3	
	comp=Z,6.1nm,0.7s						
PETK	Petropavlovsk-	54.32	22	P	P	15 53 09.1	0.0
PETK	Petropavlovsk-	54.32	22	P	P	15 53 08.7	-0.5
	comp=Z,3.3nm,0.5s,baz=188,slow=5.6,SNR=38						
PETK				pP	pP	15 53 36.6	+4.8
	comp=Z,1.7nm,0.7s,baz=150,slow=2.9,SNR=4.0						
	comp=Z,3.3nm,0.5s						
MKAR	Makanchi Array	57.43	325	P	P	15 53 32.0	+0.5
MKAR	Makanchi Array	57.43	325	P	P	15 53 32.0	+0.5
	comp=Z,3.7nm,0.6s,baz=112,slow=7.9,SNR=51						
MKAR				pP	pwP	15 53 58.5	-3.2
	comp=Z,1.7nm,0.5s,baz=125,slow=8.2,SNR=4.2						
MKAR				PcP	PcP	15 54 23.2	-0.9
	comp=Z,0.5nm,0.4s,baz=120,slow=4.6,SNR=3.7						
	comp=Z,3.7nm,0.6s						
MAKZ	Makanchi	57.62	324	P	P	15 53 31.4	-1.4
MAKZ				IAmb	IAmb	15 53 34.2	
	comp=Z,6.4nm,0.9s						
TARG	Taragay, Kyrgy	57.78	317	P	P	15 53 35.2	+0.8
KSH	Kashi	58.14	314	P	P	15 53 38.6	+1.9
KSH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KDJ	Kajisay	58.37	318	P	P	15 53 38.5	+0.2
KDJ				IAmb	IAmb	15 53 40.1	
	comp=Z,7.5nm,0.7s						
BOOM	Boomskoye usch	59.36	318	P	P	15 53 45.3	+0.2
BOOM				IAmb	IAmb	15 54 16.7	
	comp=Z,4.1nm,1.0s						
ZALV	Zalesovo Beam	60.30	332	P	P	15 53 50.0	-1.1
	comp=Z,1.4nm,0.6s,baz=122,slow=5.6,SNR=5.1						
	comp=Z,1.4nm,0.6s						
KURK	Kurchatov	61.57	327	P	P	15 53 58.5	-1.3
KURBB	Kurchatov Arra	61.57	327	P	P	15 53 59.9	+0.1
	comp=Z,5.8nm,0.7s,baz=125,slow=6.1,SNR=50						
KURBB				pP	pwP	15 54 27.1	-3.0
	comp=Z,3.0nm,0.6s,baz=125,slow=6.0,SNR=4.3						
	comp=Z,5.8nm,0.7s						
LBZ	Lake Benmore	61.84	147	P	P	15 54 01.4	-0.2
RPZ	Rata Peaks	61.89	146	P	P	15 54 00.9	-1.2
KKAR	Karatay Array	63.29	316	P	P	15 54 11.0	-0.4
KKAR	Karatay Array	63.29	316	P	P	15 54 10.0	-1.4
KKAR				IAmb	IAmb	15 54 12.6	
	comp=Z,6.0nm,0.8s						
TIXI	Tiksi	67.02	0	P	P	15 54 34.0	-0.9
TIXI				IAmb	IAmb	15 54 35.1	
	comp=Z,4.7nm,0.8s						
BVAR	Borovoye Array	67.16	327	P	P	15 54 35.8	-0.4
	comp=Z,3.5nm,0.6s,baz=120,slow=8.8,SNR=18						
BVAR				pP	PcP	15 55 02.9	-0.6
	comp=Z,3.0nm,0.8s,baz=112,slow=6.7,SNR=4.0						
	comp=Z,3.5nm,0.6s						
BRVK	Borovoye	67.23	327	P	P	15 54 35.0	-1.6
BRVK				IAmb	IAmb	15 54 37.5	
	comp=Z,5.1nm,0.9s						
ATKA	Atka Island	67.29	35	P	P	15 54 35.1	-1.9
SPIA	Saint Paul Isl	71.32	31	P	P	15 55 02.0	+0.3
	baz=248						
ABKAR	Akbulak array	72.12	320	P	P	15 55 06.2	-0.6
ABKAR	Akbulak array	72.12	320	P	P	15 55 06.1	-0.6
UNV	Unalaska Valle	72.22	35	P	P	15 55 07.9	+0.7
	baz=253						
LVA	Lava Point	72.58	34	P	P	15 55 09.1	-0.2
AKUT	Akutan	72.72	34	P	P	15 55 09.7	-0.4
GAMB	Gambell	73.27	24	P	P	15 55 14.0	+0.8
	baz=245						
M11K	Mekoryuk	74.41	28	P	P	15 55 20.3	+0.4
	baz=251						
TNA	Tin City	75.47	23	P	P	15 55 26.9	+0.9
	baz=248						
K13K	Kusilvak Mount	75.61	27	P	P	15 55 27.2	+0.4
	baz=252						
L14K	Kuka Creek	76.34	28	P	P	15 55 31.3	+0.4
	baz=254						
J14K	Nanvaranak Lak	76.34	26	P	P	15 55 31.7	+0.7
	baz=253						
CHNA	Chernabura Isl	76.38	35	P	P	15 55 32.0	+0.7
	baz=258						
N14K	Kuskokwak Cree	76.44	29	P	P	15 55 32.3	+0.8
	baz=255						
O14K	Tigyukauivet M	76.48	30	P	P	15 55 32.5	+0.8
	baz=256						
M14K	Bethel	76.52	28	P	P	15 55 32.9	+0.9
	baz=255						
S14K	Fog Glacier	76.70	33	P	P	15 55 33.4	+0.2
	baz=258						
F15K	North Star Dit	76.80	23	P	P	15 55 33.6	+0.1
	baz=251						
L15K	Ungalak Mounta	76.98	28	P	P	15 55 35.3	+0.8
	baz=255						
M15K	Kasigluk River	77.11	29	P	P	15 55 35.6	+0.3
	baz=256						
K15K	Wolf Creek Mou	77.12	27	P	P	15 55 36.0	+0.6
	baz=255						
N15K	Kwethluk River	77.27	29	P	P	15 55 37.1	+0.8
	baz=257						
J16K	Anvik River	77.79	26	P	P	15 55 40.1	+1.1
	baz=256						
I17K	Unalakleet	77.90	25	P	P	15 55 40.5	+0.9
	baz=255						
L16K	Owhat River	77.92	28	P	P	15 55 40.6	+0.8
	baz=257						
N16K	Nishlik Lake	77.98	29	P	P	15 55 41.4	+1.2
	baz=258						
M16K	Timber Creek	78.01	28	P	P	15 55 41.5	+1.1
	baz=258						
D17K	Noatak River	78.02	21	P	P	15 55 41.4	+1.2
	baz=252						
P16K	Nushagak River	78.08	31	P	P	15 55 41.7	+1.0
	baz=259						
O16K	Kokwok River B	78.14	30	P	P	15 55 41.8	+0.8
	baz=259						
RDOG	Red Dog Mine	78.19	21	P	P	15 55 41.5	+0.3
	baz=252						
C17K	DeLong Mountai	78.22	21	P	P	15 55 41.4	0.0
	baz=252						
E17K	Hotham Inlet	78.30	22	P	P	15 55 42.4	+0.6
	baz=254						
G17K	Kiwalik Mounta	78.33	24	P	P	15 55 43.2	+1.2
	baz=255						
J17K	VABM Dome	78.48	26	P	P	15 55 43.9	+1.0
	baz=257						
H17K	Granite Mounta	78.49	24	P	P	15 55 43.4	+0.5
	baz=256						
L17K	Donlin	78.56	27	P	P	15 55 44.6	+1.2
	baz=258						
O17K	Koliganek Bris	78.67	30	P	P	15 55 45.2	+1.2
	baz=260						
K17K	Iditarod	78.68	27	P	P	15 55 44.8	+0.8
	baz=258						
N17K	Nushagak Hills	78.76	29	P	P	15 55 45.1	+0.6
	baz=259						
CHIR	Chirikof Islan	78.79	34	P	P	15 55 45.3	+0.6
	baz=262						
M17K	Holitna River	78.81	28	P	P	15 55 45.4	+0.6
	baz=259						
E18K	Tukpahlearik C	78.85	22	P	P	15 55 45.4	+0.5
	baz=255						
P17K	Kvichak River	78.89	31	P	P	15 55 45.9	+0.8
	baz=260						
B18K	Kokolik River	78.96	20	P	P	15 55 45.7	+0.3
	baz=253						
C18K	Utukok River	78.97	21	P	P	15 55 45.9	+0.3
	baz=254						
Q17K	Contact Creek	79.02	32	P	P	15 55 45.7	-0.3
	baz=261						
H18K	Honhosa River	79.18	24	P	P	15 55 46.7	0.0
	baz=257						
L18K	Granite Mounta	79.31	28	P	P	15 55 48.2	+0.8
	baz=259						
N18K	Kilae Creek	79.42	29	P	P	15 55 48.7	+0.6
	baz=260						
A19K	Wainwright	79.44	19	P	P	15 55 49.0	+1.0
	baz=254						
J18K	Innoko River	79.53	26	P	P	15 55 49.4	+0.7
	baz=259						
P18K	Big Mountain,	79.54	30	P	P	15 55 49.4	+0.6
	baz=261						
Q18K	Katmai Hardscr	79.54	31	P	P	15 55 48.7	-0.2
	baz=262						
M18K	Stony River	79.59	28	P	P	15 55 49.9	+1.0
	baz=260						
O18K	Koktuh Hills	79.62	30	P	P	15 55 50.3	+1.1
	baz=261						
C19K	Lookout Ridge	79.65	20	P	P	15 55 50.3	+1.1
	baz=256						
R18K	Karluk	79.68	32	P	P	15 55 50.4	+0.9
	baz=262						
F19K	Shaleruckik Mo	79.78	23	P	P	15 55 50.6	+0.7
	baz=258						
G19K	Purcell Mounta	79.91	24	P	P	15 55 51.5	+0.9
	baz=258						
D19K	Kuna River	80.02	21	P	P	15 55 51.9	+0.6
	baz=257						
H19K	Roundabout Mou	80.04	24	P	P	15 55 52.4	+1.2
	baz=259						
J19K	Poorman	80.11	26	P	P	15 55 52.5	+0.7
	baz=260						
O19K	Port Alsworth	80.11	30	P	P	15 55 52.5	+0.7
	baz=262						
N19K	Bonanza Creek	80.12	29	P	P	15 55 52.7	+0.7
	baz=262						
E19K	Redstone River	80.12	22	P	P	15 55 52.5	+0.8
	baz=258						
L19K	White Mountain	80.15	28	P	P	15 55 52.4	+0.3
	baz=261						
OHAK	Old Harbor	80.26	33	P	P	15 55 53.3	+0.7
	baz=263						
Q19K	Cape Douglas,	80.28	31	P	P	15 55 53.4	+0.6
	baz=263						
M19K	Big River Lodg	80.33	28	P	P	15 55 53.7	+0.8
	baz=262						
P19K	Oil Pt	80.58	30	P	P	15 55 55.0	+0.6
	baz=263						
D20K	Etivluk River	80.61	21	P	P	15 55 55.4	+1.1
	baz=258						
F20K	Avaraart Lake	80.62	23	P	P	15 55 54.9	+0.6
	baz=259						

L20K	Farewell, AK baz=262	80.65	27	P	P	15 55 55.7	+1.0
E20K	Nigu River baz=259	80.67	22	P	P	15 55 55.3	+0.6
H20K	Anotleneega Mo baz=260	80.68	24	P	P	15 55 55.9	+1.2
K20K	Telida baz=262	80.69	27	P	P	15 55 56.0	+1.1
B20K	Meade River baz=258	80.69	20	P	P	15 55 55.8	+1.1
KDAK	Kodiak Island baz=264	80.70	32	P	P	15 55 55.0	+0.1
I20K	Naaghedeneel baz=261	80.73	25	P	P	15 55 55.4	+0.4
J20K	Nowinta River baz=261	80.78	26	P	P	15 55 55.9	+0.6
Q20K	Shuyak Island baz=264	80.89	31	P	P	15 55 56.6	+0.6
M20K	Styx River baz=263	80.91	28	P	P	15 55 56.9	+0.7
SPCR	Spurr Chakacha baz=264	81.27	29	P	P	15 55 58.4	+0.3
C21K	Knifeblade Rid baz=260	81.34	21	P	P	15 55 59.1	+0.9
G21K	Allakaket baz=262	81.39	23	P	P	15 55 59.4	+0.8
PPLA	Purkeypile baz=263	81.47	27	P	P	15 55 59.4	+0.2
B21K	Ikpikpuk River baz=260	81.48	20	P	P	15 55 59.2	+0.3
F21K	Alatna River baz=262	81.51	23	P	P	15 55 59.9	+0.8
E21K	Killik River baz=261	81.51	21	P	P	15 55 60.0	+0.8
CHUM	Lake Minchumin baz=263	81.54	26	P	P	15 56 00.1	+0.8
H21K	Melozitna Rive baz=262	81.56	24	P	P	15 55 60.0	+0.6
CAST	Castle Rocks baz=263,SNR=6.6	81.58	27	P	P	15 56 00.2	+0.5
SKT	Skwentna baz=264	81.68	28	P	P	15 56 00.7	+0.6
BRSE	Bradley Lake S baz=265	81.85	30	P	P	15 56 01.3	+0.2
SUA	Susitna One baz=265	82.00	29	P	P	15 56 01.6	-0.3
B22K	Teshekpuk Lake baz=261	82.01	20	P	P	15 56 02.5	+0.9
D22K	Ayikyak River baz=262	82.05	21	P	P	15 56 02.7	+0.8
F22K	John River baz=263	82.05	23	P	P	15 56 02.1	+0.1
BPAW	Bear Paw Mtn. baz=264	82.14	26	P	P	15 56 03.5	+0.9
H22K	Ishtalitna Cre baz=264,SNR=5.2	82.17	24	P	P	15 56 04.0	+1.4
G22K	Bettles baz=263	82.24	23	P	P	15 56 03.8	+0.9
E22K	Anaktuvuk Pass baz=263,SNR=5.1	82.27	22	P	P	15 56 03.8	+0.6
CUT	Chulitna baz=265	82.31	28	P	P	15 56 04.2	+0.9
M22K	Willow baz=265	82.32	28	P	P	15 56 04.2	+0.8
MLY	Manley baz=264,SNR=8.0	82.34	25	P	P	15 56 03.9	+0.3
TRF	Thorofare Moun baz=265	82.39	27	P	P	15 56 04.2	+0.2
O22K	Cooper Landing baz=266	82.42	30	P	P	15 56 04.3	+0.4
RC01	Rabbit Creek A baz=266	82.45	29	P	P	15 56 04.5	+0.3
SEW	Seward baz=266	82.52	30	P	P	15 56 04.9	+0.4
D23K	Nanushuk River baz=264	82.78	21	P	P	15 56 06.7	+1.0
COLD	Coldfoot baz=265,SNR=5.1	82.78	23	P	P	15 56 06.5	+0.8
G23K	Bananza Creek baz=265	82.80	23	P	P	15 56 07.0	+1.0
C23K	Itkillik River baz=264	82.89	20	P	P	15 56 07.3	+1.0
H23K	Yukon River baz=265,SNR=5.3	82.91	24	P	P	15 56 07.8	+1.3
I23K	Minto, Yukon-K baz=266,SNR=7.5	82.94	25	P	P	15 56 07.5	+0.9
MCK	McKinley baz=266	83.02	26	P	P	15 56 07.3	+0.2
NEA2	Nenana baz=266	83.02	26	P	P	15 56 07.6	+0.6
E23K	Chandalar baz=265,SNR=8.0	83.08	22	P	P	15 56 08.3	+0.9
KNK	Knik Glacier baz=267	83.09	29	P	P	15 56 08.4	+0.8
KBZ	Khabaz comp=Z,0.5nm,0.3s,baz=146,slow=19,SNR=2.0 comp=Z,0.5nm,0.3s	83.11	313	P	P	15 56 07.8	-0.1
PWL	Port Wells baz=267	83.12	29	P	P	15 56 08.5	+0.8
WAT1	Susitna Watana baz=267	83.13	27	P	P	15 56 07.8	+0.1
TOLK	Toolik Lake Re baz=265	83.14	21	P	P	15 56 08.8	+1.1
SML	Sawmill baz=267,SNR=5.1	83.17	28	P	P	15 56 08.4	+0.4
D24K	Happy Valley baz=266	83.46	21	P	P	15 56 10.2	+1.0
M23K	Glacier View baz=267	83.46	28	P	P	15 56 09.9	+0.5
WAT6	Susitna Watana baz=267,SNR=5.8	83.49	28	P	P	15 56 09.6	-0.1
E24K	Your Creek baz=266	83.50	22	P	P	15 56 10.0	+0.4
P23K	Montague Islan baz=268	83.54	30	P	P	15 56 10.7	+0.9
C24K	Franklin Bluff baz=266	83.55	20	P	P	15 56 10.5	+0.9
COLA	College baz=267	83.56	25	P	P	15 56 10.6	+0.8
H24K	Noodor Dome baz=267,SNR=5.6	83.60	24	P	P	15 56 10.7	+0.6
SCM	Sheep Creek Mo baz=268	83.65	28	P	P	15 56 10.9	+0.4
DHY	Denali Highway baz=268	83.68	27	P	P	15 56 11.1	+0.4
F24K	Squaw Lake baz=267,SNR=5.8	83.69	23	P	P	15 56 11.2	+0.7
GLI	Glacier Island baz=268	83.73	29	P	P	15 56 10.9	+0.2
POKR	Poker Plat Res baz=267	83.75	25	P	P	15 56 11.2	+0.4
G24K	Hadweenzic Riv baz=267,SNR=9.1	83.81	23	P	P	15 56 11.2	+0.1
HDA	Harding Lake baz=268	83.92	26	P	P	15 56 11.7	0.0
ILAR	Eielson Array comp=Z,1.1nm,0.8s,baz=239,slow=6.4,SNR=13 comp=Z,1.1nm,0.8s	83.97	25	P	P	15 56 10.2	-1.7
VNDA	Vanda	84.11	173	P	P	15 56 10.5	-1.9
VNDA	Vanda comp=Z,0.9nm,0.6s,baz=304,slow=6.0,SNR=5.7 comp=Z,0.9nm,0.6s	84.11	173	P	P	15 56 12.1	-0.2
M24K	Tolsona, Glenn baz=269	84.20	28	P	P	15 56 14.2	+1.0
KLU	Klutina baz=269	84.31	29	P	P	15 56 14.4	+0.6
D25K	Kavik River baz=268	84.34	21	P	P	15 56 14.4	+0.6
G25K	Bearman Lake baz=268	84.36	23	P	P	15 56 14.5	+0.7
EYAK	Cordova Ski Ar baz=269	84.38	30	P	P	15 56 14.5	+0.5
K24K	Donnelly Dome baz=269	84.42	26	P	P	15 56 15.2	+0.9
H25L	Birch Creek baz=269	84.46	24	P	P	15 56 14.9	+0.6
PAX	Paxson	84.55	27	P	P	15 56 14.5	-0.5
PAX	Paxson baz=269	84.55	27	P	P	15 56 15.2	+0.3
F25K	Christian Rive baz=269	84.56	23	P	P	15 56 15.6	+0.7
PRP	Porcupine Dome baz=269	84.56	25	P	P	15 56 15.6	+0.6
E25K	Arctic Village baz=269	84.60	22	P	P	15 56 15.6	+0.5
HARP	HAARP baz=270	84.69	28	P	P	15 56 15.5	-0.1
RIDG	Independent Ri baz=270	84.83	27	P	P	15 56 16.3	0.0
C26K	Camden Bay baz=269	84.87	20	P	P	15 56 16.9	+0.6
BMRM	Bremner River baz=270	84.95	29	P	P	15 56 17.3	+0.4
N25K	Chitina, Valde	84.95	29	P	P	15 56 17.3	+0.3
N25K	comp=Z,9.8nm,1.4s			IAmb	IAmb	15 56 18.4	
N25K	Chitina, Valde baz=270	84.95	29	P	P	15 56 17.8	+0.8
BMAR	Burnt Mountain	84.96	23	P	P	15 56 17.3	+0.4
KAIM	Kayak Island baz=270	85.04	30	P	P	15 56 17.6	+0.2
F26K	Sheenjek River baz=270	85.13	23	P	P	15 56 18.6	+0.8
SCRK	Sand Creek baz=271	85.21	26	P	P	15 56 19.0	+0.6
G26K	Porcupine Rive baz=270	85.27	23	P	P	15 56 19.4	+1.0
C27K	Jago River baz=270	85.28	21	P	P	15 56 19.4	+1.0
J26L	Joseph Creek baz=271	85.39	26	P	P	15 56 19.8	+0.6
L26K	Log Cabin Wild baz=271	85.51	27	P	P	15 56 20.4	+0.6
I26K	Coal Creek Min baz=271	85.55	25	P	P	15 56 20.0	+0.1
CRQE	Cirque baz=272	85.69	30	P	P	15 56 20.3	-0.4
M26K	Nabesna, AK baz=272	85.69	28	P	P	15 56 20.3	-0.3
MCARA	McCarthy VSAT baz=272	85.70	29	P	P	15 56 21.2	+0.5
K27K	Chicken baz=272	86.05	26	P	P	15 56 22.7	+0.3
E27K	Coleen River baz=272	86.08	22	P	P	15 56 22.4	0.0
G27K	Doyon Strip baz=272	86.12	23	P	P	15 56 22.6	0.0
I27K	Kandik River baz=273	86.19	25	P	P	15 56 23.1	0.0
H27K	Steamboat Moun baz=273	86.19	24	P	P	15 56 23.2	+0.2
L27K	Beaver Creek, baz=273	86.21	27	P	P	15 56 23.3	+0.1
M27K	Edge Creek, AK baz=273	86.21	28	P	P	15 56 22.8	-0.6
D27M	Malcolm River baz=273	86.26	21	P	P	15 56 23.2	-0.2
MESA	MESA baz=273	86.28	30	P	P	15 56 24.4	+0.7
CTG	Chitna Glacier baz=273	86.54	29	P	P	15 56 25.0	+0.1
F28M	Old Crow baz=274	86.77	23	P	P	15 56 26.2	+0.4
E28M	Babbage River baz=274	86.82	22	P	P	15 56 26.8	+0.8
I28M	Miner Creek baz=274	86.89	25	P	P	15 56 27.1	+0.5
YUK3	Moose Creek baz=274	86.91	28	P	P	15 56 27.2	+0.3
D28M	Stokes Point baz=275	87.05	21	P	P	15 56 27.8	+0.7
O28M	Mount Upton baz=274	87.11	29	P	P	15 56 28.0	+0.1
PINM	Pinnacle baz=274	87.13	30	P	P	15 56 28.1	+0.3
DAWY	Dawson baz=275	87.23	26	P	P	15 56 27.9	-0.3
E29M	Blow River baz=276	87.44	22	P	P	15 56 29.0	0.0
H29M	Whitestone baz=276	87.47	24	P	P	15 56 29.5	+0.2
G29M	Pine Creek baz=276	87.54	23	P	P	15 56 29.8	+0.2
I29M	Ogilvie Camp, baz=276	87.58	25	P	P	15 56 30.3	+0.6
PNL	Peninsula baz=275	87.59	30	P	P	15 56 30.4	+0.5
M29M	Somme Creek baz=276	87.79	28	P	P	15 56 31.2	+0.3
YUK4	Talbot Arm baz=276	87.81	29	P	P	15 56 31.5	+0.3
L29M	L29M baz=276	87.88	27	P	P	15 56 31.6	+0.4
YUK6	Outpost Mounta baz=276	87.99	29	P	P	15 56 32.1	+0.1
K29M	Barlow Dome baz=276	88.08	26	P	P	15 56 32.6	+0.4
EPYK	Eagle Plains baz=277	88.12	24	P	P	15 56 32.8	+0.5
G30M	tAoh Zraii Nji baz=277	88.24	23	P	P	15 56 33.0	+0.2
F30M	Barrier River baz=278	88.32	22	P	P	15 56 33.0	-0.2
I30M	Mount Dempster baz=277	88.40	25	P	P	15 56 33.9	+0.2
HYT	Haines Junctio baz=276	88.42	29	P	P	15 56 34.0	+0.1
P29M	Windy Craggy baz=276	88.43	30	P	P	15 56 34.0	+0.1
J30M	Hart River baz=277	88.50	25	P	P	15 56 34.5	+0.3
N30M	Aishikik Lake baz=277	88.55	29	P	P	15 56 34.2	-0.3
P30M	Million Dollar baz=277	88.77	30	P	P	15 56 35.1	-0.4
MAYO	Mayo, Yukon baz=278	88.83	26	P	P	15 56 35.4	-0.3
G31M	Satah River baz=279	89.01	23	P	P	15 56 36.3	-0.1
INK	Inuvik baz=280	89.06	22	P	P	15 56 36.8	+0.2
O30N	Mendenhall baz=278	89.11	29	P	P	15 56 37.4	+0.3
F31M	Tsiigehtchic baz=280	89.13	22	P	P	15 56 37.1	+0.1
PLBC	Pleasant Camp baz=278	89.15	31	P	P	15 56 37.2	0.0
H31M	Peel River baz=279	89.16	24	P	P	15 56 37.2	0.0
N31M	Braeburn, Yuko baz=278	89.17	28	P	P	15 56 37.2	-0.1
S31K	Pelican baz=278	89.41	32	P	P	15 56 38.4	-0.1
SKAG	Skagway baz=278	89.67	30	P	P	15 56 40.0	+0.4
M31M	Drury Creek, Y baz=279	89.71	28	P	P	15 56 40.2	+0.3
WHY	Whitehorse baz=279	89.72	29	P	P	15 56 40.2	+0.2
ARCES	ARCESS Array B comp=Z,6.3nm,1.1s,baz=78,slow=6.0,SNR=9.6 comp=Z,6.3nm,1.1s	90.01	340	P	P	15 56 39.6	-1.5
SIT	Sitka baz=278	90.02	33	P	P	15 56 41.9	+0.5
FARO	Faro, Yukon baz=280	90.19	28	P	P	15 56 42.2	+0.2
S32K	Killisnoo baz=279	90.36	32	P	P	15 56 43.4	+0.5
P33M	Teslin, Yukon baz=281	90.80	30	P	P	15 56 44.4	-0.6
A36M	Sachs Harbour baz=288	90.93	17	P	P	15 56 45.5	+0.2
MMPY	Sheldon Lake, baz=282	91.07	27	P	P	15 56 46.6	+0.4
U33K	Whale Pass baz=280	91.38	34	P	P	15 56 48.0	+0.4
CRAG	Craig baz=280	91.49	34	P	P	15 56 47.6	-0.6
FINES	FINESS Array B comp=Z,3.1nm,0.8s,baz=104,slow=3.9,SNR=6.1 comp=Z,3.1nm,0.8s	91.56	332	P	P	15 56 46.7	-1.7
WRAK	Wrangell Islan baz=281	91.75	33	P	P	15 56 49.6	+0.2
AKASG	Malin Array Be comp=Z,0.7nm,0.6s,baz=66,slow=5.0,SNR=4.3 comp=Z,0.7nm,0.6s	91.86	321	P	P	15 56 48.2	-1.8
R33M	Jennings River baz=282	91.88	30	P	P	15 56 50.4	+0.3
C36M	Paulatuk baz=289	92.13	20	P	P	15 56 50.2	-0.6
QSPA	South Pole Qui comp=Z,1.1nm,1.0s,baz=208,slow=1.5,SNR=12 comp=Z,1.1nm,1.0s	94.45	180	P	P	15 57 00.9	-0.8
TOAD	Toad River Com baz=287	94.88	30	P	P	15 57 03.1	-0.7
HFS	Hagfors comp=Z,0.9nm,0.6s,baz=69,slow=7.9,SNR=5.3 comp=Z,0.9nm,0.6s	97.73	333	P	P	15 57 14.7	-2.0
TXAR	Lajitas Array comp=Z,0.2nm,0.6s,baz=341,slow=4.1,SNR=2.5	120.36	52	PKP	PKPdf	16 02 32.5	-1.0

IDC 22 16:12:49.2±7.2**, 28°.11N**×**104°.93E, h0^{km}, mb3.7**/3**, mbtmp3.6**/4**, ML3.5**/1**, MS3.2**/1**, Error ellipse: s-maj=140.5km s-min=33.3km az=7.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr baz=26,slow=11	11.07	211	Pn	Pn	16 15 36.8	+7.9
SONM	Songino Array 0.2nm,0.3s,baz=187,slow=11,SNR=2.8 0.4nm,0.5s	19.73	3	P	P	16 17 20.5	+0.1
TGY	Tagaytay City comp=Z,62nm,18.5s,baz=200,slow=36	20.39	130	LR	LR	16 25 00.3	
KSRS	Korea Array 1.1nm,0.5s,baz=244,slow=9.9,SNR=7.9 1.1nm,0.5s	21.42	58	P	P	16 17 39.0	+0.4
MKAR	Makanchi Array 0.8nm,0.6s,baz=130,slow=11,SNR=11 0.8nm,0.6s	25.75	322	P	P	16 18 21.6	+0.1
USRK	Ussuriysk Ar. 1.4nm,0.6s,baz=258,slow=8.3,SNR=8.7 1.4nm,0.6s	26.95	46	P	P	16 18 31.7	-0.5

IDC ***22*** *16:17:17.8±4.2, 7°.59S×128°.51E, h134^{km}±42^{km}, mb3.4/3, mbtmp3.9/7, Error ellipse: s-maj=36.3km s-min=23.3km az=49.0*

ISC 22 16:17:19.3±1.1**, 7°.77S**±0°.08×**128°.6E**±0°.1**, h150^{km}, n7, σ1^{s}.87**/11**, mb3.6**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata 12nm,0.4s,baz=66,slow=20,SNR=9.4	5.41	243	P	Pn	16 18 38.4	+0.1
BATI	30nm,0.5s,baz=84,slow=19,SNR=11			S	Sn	16 19 39.1	-0.8
FITZ	Fitzroy Crossi 3.2nm,0.3s,baz=21,slow=10,SNR=53	10.66	195	P	Pn	16 19 47.4	-0.7
FITZ	3.4nm,0.3s,baz=330,slow=23,SNR=2.2			S	Sn	16 21 45.5	-0.5
WRA	Warramunga Arr 1.1nm,0.3s,baz=335,slow=13,SNR=50	13.34	156	P	Pn	16 20 23.6	+0.7
WRA	1.1nm,0.4s,baz=330,slow=23,SNR=6.6			S	Sn	16 22 47.0	-3.7
ASAR	Alice Springs 1.4nm,0.7s,baz=337,slow=11,SNR=37	16.62	163	P	Pn	16 21 06.2	+2.5
ASAR	0.5nm,0.6s,baz=348,slow=27,SNR=4.3			S	S	16 24 10.0	+1.4
PETK	Petropavlovsk- 0.8nm,0.6s,baz=216,slow=7.3,SNR=3.5 0.8nm,0.6s	65.50	19	P	P	16 27 46.0	-0.3
MKAR	Makanchi Array 0.3nm,0.4s,baz=113,slow=7.2,SNR=6.0 0.3nm,0.4s	68.09	328	P	P	16 28 01.7	-1.2
QSPA	South Pole Qui 0.8nm,0.7s,baz=270,slow=3.0,SNR=1.8 0.8nm,0.7s	82.22	180	P	P	16 29 25.3	+1.7

NEIC 22 16:17:33.1±1.6**, 43°.89N**±0°.07×**128°.3W**±0°.2**, h10^{km}**±2^{km}**, ML2.8**/28**, Error ellipse: s-maj=24.3km s-min=3.7km az=240.0, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEBM	Edson Butte	3.06	108	Pn	Pn	16 18 19.8	-1.7
J01E	Myrtle Point	3.25	101	Pn	Pn	16 18 23.3	-0.8
J01E	comp=N,23nm,0.7s			IAML		16 19 04.5	
J01E	comp=E,33nm,0.3s			IAML		16 19 04.9	
HEBO	Mount Hebo	3.50	66	Pn	Pn	16 18 26.4	-1.2
I03D	Drain, OR	3.58	91		Pn	16 18 28.3	-0.3
G03D	McMinnville, O	3.83	68		Pn	16 18 31.9	-0.1
G03D	comp=E,19nm,0.6s			IAML		16 19 23.7	
BUCK	Buck Mountain	3.84	84	Pn	Pn	16 18 33.6	+1.4
F03A	Seaside	3.93	57	Pn	Pn	16 18 32.9	-0.6
H04D	Lebanon	4.04	79		Pn	16 18 35.3	+0.4
H04D	comp=E,14nm,0.9s			IAML		16 19 27.2	
H04D	comp=N,14nm,0.9s			IAML		16 19 28.1	
BBOR	Butler Butte	4.21	102		Pn	16 18 37.8	+0.4
BBOR	comp=E,7.6nm,0.7s			IAML		16 19 30.2	
BBOR	comp=N,7.6nm,1.1s			IAML		16 19 32.0	
H04A	Detroit Lake	4.45	78		Pn	16 18 41.7	+1.0
H04A	Detroit Lake comp=E,8.1nm,0.5s	4.45	78	IAML		16 19 38.9	
H04A	comp=N,13nm,1.0s			IAML		16 19 40.8	
L04D	Klamath Falls	4.69	109	Pn	Pn	16 18 45.5	+1.4
L04D	comp=N,5.5nm,1.1s			IAML		16 19 28.4	
L04D	comp=E,5.7nm,0.9s			IAML		16 19 43.0	
B203	Quarry, Mount	4.80	60		Pn	16 18 45.8	+0.4
FL2	Flat Top 2	4.80	59		Pn	16 18 46.3	+0.8
ERK	Elk Rock	4.86	58		Pn	16 18 46.5	+0.2
SWF2	Southwest Flan	4.88	60		Pn	16 18 47.3	+0.8
TDL	Tradedollar La	4.95	58		Pn	16 18 48.1	+0.5
B202	Windy Ridge, M	4.95	59		Pn	16 18 48.2	+0.6
SHRK	Shell Rock	5.07	70		Pn	16 18 50.3	+1.0
OBSR	Observation Ro	5.46	54		Pn	16 18 56.2	+1.5
CLRS	Cowichan Lake	5.71	29	Pn	Pn	16 18 57.4	-0.4
HOLB	Holberg	6.75	1	Pn	Pn	16 19 12.7	+0.5

IDC ***22*** *16:20:52.0±0.8, 10°.22S×152°.21E, h0^{km}, mb4.0/10, mbtmp4.1/13, ML3.8/2, MS3.7/20, Error ellipse: s-maj=24.2km s-min=17.8km az=104.0*

NEIC ***22*** *16:20:56.5±1.9, 10°.56S±0°.06×151°.6E±0°.1, h10^{km}±1^{km}, mb4.4/9, Error ellipse: s-maj=23.0km s-min=9.6km az=100.0*

GCMT ***22*** *16:20:56.5±0.3, 10°.21S±0°.02×152°.13E±0°.03, h18^{km}±1^{km}, MW4.8/73, Moment Tensor Solution. s18,c21; s73,c97; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.70±.14; $M_{\theta\theta}$1.66±.09; $M_{\phi\phi}$0.03±.08; $M_{r\theta}$0.14±.16; $M_{\theta\phi}$-0.21±.05; $M_{\phi r}$-0.77±.23; Best double couple: $M_0$1.84800×10^{16} NP1:ϕ_s79.00000°,δ44.00000°,λ-120.00000°. NP2: ϕ_s297.00000°,δ53.00000°,λ-64.00000°. Principal axes: T 1.7040, Plg4.0000°, Azm9.0000°; N 0.2880, Plg20.0000°, Azm101.0000°; P -1.9930, Plg69.0000°, Azm267.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 16:20:53.3±0.6**, 10°.49S**±0°.09×**152°.11E**±0°.07**, h10^{km}, n42, σ2^{s}.48**/30**, mb4.2**/11**, MS3.8**/17**, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.00	282	Pn	Pn	16 22 07.0	-1.4
PMG	Port Moresby 13nm,0.8s,baz=245,slow=18,SNR=3.0	5.00	282	Pn	Pn	16 22 09.0	+0.7
PMG	1.8nm,0.3s,baz=320,slow=21,SNR=1.3			Sn	Sb	16 23 23.3	+2.3
HNR	Honiara 2.4nm,0.3s,baz=235,slow=5.1,SNR=1.9	7.79	83	Pn	Pn	16 22 44.9	-1.9
HNR	comp=Z,89nm,20.0s,baz=231,slow=30 23nm,0.7s			LR	LR	16 24 41.1	
COEN	Coen	9.39	248	Pn	Pn	16 23 06.4	-2.3
CTAO	Charters Tower	11.09	210	Pn	Pn	16 23 30.8	-1.3
EIDS	Eidsvold	14.84	184	P	P	16 24 28.8	-0.3
DZM	Mont Dzumac comp=Z,576nm,21.0s,baz=336,slow=34	17.93	132	LR	LR	16 30 56.5	
WR8	Warramunga Arr	19.41	239		P	16 25 17.7	-2.1
WR8	comp=Z,14nm,0.9s			IAmb	IAmb	16 25 26.2	
WB0	Warramunga Arr	19.42	240		P	16 25 16.4	-3.5
WB0	comp=Z,25nm,1.3s			IAmb	IAmb	16 25 25.6	
WRA	Warramunga Arr	19.54	239	P	P	16 25 18.4	-2.8
WRA	Warramunga Arr comp=Z,0.2nm,0.3s,baz=62,slow=11,SNR=13	19.54	239	P	Pn	16 25 23.2	+0.7
WRA	comp=Z,269nm,20.7s,baz=60,slow=36			LR	LR	16 32 34.4	

	comp=Z,8.4nm,0.9s						
MTN	Manton Dam	20.68	261	P	P	16 25 30.2	-3.4
MTN				IAmb	IAmb	16 25 44.1	
	comp=Z,24nm,1.1s						
AS31	Alice Springs	21.75	231	P	P	16 25 41.1	-4.1
ASAR	Alice Springs	21.75	231	P	P	16 25 41.7	-3.5
ASAR	Alice Springs	21.75	231	P	P	16 25 48.6	+3.4
	comp=Z,3.4nm,0.7s,baz=62,slow=9.6,SNR=24						
ASAR				LR	LR	16 33 18.9	
	comp=Z,240nm,20.0s,baz=62,slow=34						
	comp=Z,3.4nm,0.7s						
KNRA	Kununurra	23.31	255	P	P	16 25 57.1	-4.5
KNRA				IAmb	IAmb	16 26 34.6	
	comp=Z,24nm,1.2s						
STKA	Stephens Creek	23.41	203	P	P	16 26 04.1	+1.6
STKA	Stephens Creek	23.41	203	P	P	16 26 06.0	+3.5
	comp=Z,7.4nm,1.0s,baz=24,slow=11,SNR=6.8						
STKA				LR	LR	16 35 25.1	
	comp=Z,236nm,18.9s,baz=21,slow=37						
	comp=Z,7.4nm,1.0s						
GUMO	Guam	24.97	343	LR	LR	16 34 01.9	
	comp=Z,89nm,21.1s,baz=167,slow=32						
FITZ	Fitzroy Crossi	26.72	251	LR	LR	16 35 35.0	
	comp=Z,110nm,21.7s,baz=81,slow=33						
URZ	Urewera	35.59	145	LR	LR	16 40 14.6	
	comp=Z,192nm,20.6s,baz=318,slow=32						
NWAO	Narrogin (SRO)	39.07	230	LR	LR	16 43 48.1	
	comp=Z,137nm,20.0s,baz=43,slow=35						
LEM	Lembang	44.11	271	LR	LR	16 49 00.8	
	comp=Z,177nm,18.3s,baz=168,slow=38						
JNU	Nakatsue	47.85	336	LR	LR	16 48 06.6	
	comp=Z,42nm,18.7s,baz=166,slow=34						
PSI	Prapat	54.56	281	LR	LR	16 56 30.9	
	comp=Z,235nm,18.2s,baz=258,slow=39						
PPT	Papeete	56.83	104	LR	LR	16 50 05.7	
	comp=Z,35nm,21.3s,baz=94,slow=31						
CMAR	Chiang Mai Arr	59.82	298	P	P	16 30 59.4	+0.1
	comp=Z,0.9nm,0.3s,baz=116,slow=7.3,SNR=6.7						
	comp=Z,0.9nm,0.3s						
KLR	Kul'dur	62.10	345	LR	LR	16 55 51.9	
	comp=Z,44nm,18.5s,baz=187,slow=34						
PETK	Petropavlovsk-	63.52	4	P	P	16 31 27.4	+3.8
PETK	Petropavlovsk-	63.52	4	P	P	16 31 22.3	-1.3
	comp=Z,0.6nm,0.6s,baz=183,slow=6.4,SNR=12						
PETK				LR	LR	16 53 09.9	
	comp=Z,39nm,22.0s,baz=155,slow=31						
	comp=Z,0.6nm,0.6s						
VNDA	Vanda	67.21	178	P	P	16 31 49.1	+1.9
	comp=Z,1.5nm,0.9s,baz=356,slow=6.0,SNR=6.3						
	comp=Z,1.5nm,0.9s						
SONM	Songino Array	70.79	329	P	P	16 32 11.3	+1.2
SONM				IAmb	IAmb	16 32 21.2	
	comp=Z,5.5nm,1.2s						
SONM	Songino Array	70.79	329	P	P	16 32 09.2	-0.9
	comp=Z,0.6nm,0.4s,baz=149,slow=6.4,SNR=4.9						
SONM				LR	LR	17 03 04.5	
	comp=Z,50nm,20.9s,baz=128,slow=36						
	comp=Z,0.6nm,0.4s						
QSPA	South Pole Qui	79.51	180	P	P	16 33 03.0	+2.9
QSPA	South Pole Qui	79.51	180	P	P	16 33 02.1	+2.0
	comp=Z,7.6nm,1.1s,baz=272,slow=1.1,SNR=12						
	comp=Z,7.6nm,1.1s						
MAW	Mawson	80.10	203	LR	LR	17 04 50.8	
	comp=Z,132nm,21.4s,baz=76,slow=33						
MKAR	Makanchi Array	84.16	320	P	P	16 33 24.3	-0.5
	comp=Z,0.6nm,0.7s,baz=102,slow=5.8,SNR=5.7						
	comp=Z,0.6nm,0.7s						
ZALV	Zalesovo Beam	85.49	327	P	P	16 33 31.6	+0.3
	comp=Z,0.6nm,0.5s,baz=115,slow=6.5,SNR=2.1						
	comp=Z,0.6nm,0.5s						
ILAR	Eielson Array	87.65	22	P	P	16 33 40.9	-0.7
	comp=Z,0.8nm,0.6s,baz=243,slow=4.9,SNR=8.4						
ILAR				LR	LR	17 06 20.6	
	comp=Z,63nm,21.3s,baz=229,slow=31						
	comp=Z,0.8nm,0.6s						
BBB	Bella Bella	92.00	37	LR	LR	17 08 31.2	
	comp=Z,57nm,20.7s,baz=245,slow=31						
NEW	Newport	98.24	42	LR	LR	17 11 47.1	
	comp=Z,66nm,20.8s,baz=284,slow=31						
TORD	Torodi Ar. Bea	150.93	278	PKPbc	PKPbc	16 40 46.8	-0.5
	comp=Z,2.5nm,0.6s,baz=52,slow=2.9,SNR=5.7						

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*GUC **22** 16:22:37.8±0.7, 21°.19S×68°.04W, h181^{km}±5^{km}, ML3.4*
*SCB **22** 16:22:38.6±1.4, 21°.19S×67°.84W, h146^{km}±19^{km}, ML3.3/3, MW3.0, Error ellipse: s-maj=8.4km s-min=7.5km az=0.0*
ISC 22 16:22:37.5±1.8**, 21°.22S**±0°.05×**67°.90W**±0°.05**, h165**^{km}±15^{km}**, n28, σ0^{s}.80**/38**, 3C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	1.37	245	eP	Pn	16 23 08.1	+1.0
PB09				eS	Sn	16 23 30.8	+0.8
PB09				IAML		16 23 33.9	
	comp=E,170nm,0.2s						
PB09	IPOC Station P	1.37	245	Pg	Pn	16 23 08.2	+1.0
PB09				Sg	Sn	16 23 31.0	+1.0
PB09				IAML		16 23 33.0	
	comp=E,159nm,0.2s						
PB01	IPOC Station P	1.49	277	eP	Pn	16 23 08.1	-0.2
PB01				eS	Sn	16 23 31.4	-0.5
PB01				IAML		16 23 34.0	
	comp=N,873nm,0.2s						
PB01	IPOC Station P	1.49	277	Pg	Pn	16 23 08.4	+0.1
PB01				Sg	Sn	16 23 32.2	+0.3
PB01				IAML		16 23 33.3	
	comp=N,732nm,0.2s						
PB08	IPOC Station P	1.59	312⇑	eP	Pn	16 23 10.1	+0.5
PB08				i S	Sn	16 23 34.4	+0.1
PB08				IAML		16 23 35.1	
	comp=N,275nm,0.5s						
PB08	IPOC Station P	1.59	312	Pg	Pn	16 23 10.1	+0.5
PB03	IPOC Station P	1.91	244	eP	Pn	16 23 13.1	+0.4
PB03				eS	Sn	16 23 39.6	-0.3
PB03				IAML		16 23 40.6	
	comp=N,276nm,0.2s						
GO01	Chusmiza	1.96	322	eP	Pn	16 23 13.5	-0.2
GO01				IAML		16 23 46.4	
	comp=N,577nm,0.1s						
GO01	Chusmiza	1.96	322	Pg	Pn	16 23 14.1	+0.4
MOCB	Mochara	2.11	91	Pg	Pn	16 23 15.1	-0.2
MOCB				Sg	Sn	16 23 43.1	-1.3
MOCB				IAML		16 23 46.7	
	comp=N,77nm,0.4s						
PATCX	Punta Patache	2.14	280	eP	Pn	16 23 15.2	0.0
PB06	IPOC Station P	2.14	226	eP	Pn	16 23 15.8	+0.5
PB06				eS	Sn	16 23 44.8	+0.2
PB06				IAML		16 23 46.4	
	comp=E,244nm,0.1s						
PB11	IPOC Station P	2.20	311⇑	eP	Pn	16 23 15.6	-0.4
PB11				eS	Sn	16 23 44.7	-1.0
TA01	Diego Aracena	2.23	287	eP	Pn	16 23 15.6	-0.7
TA01				eS	Sn	16 23 44.2	-1.8
TA01				IAML		16 23 46.8	
	comp=E,417nm,0.2s						
TA02	Huaiquique	2.29	294	eP	Pn	16 23 16.0	-0.9
YJA	Yavi	2.41	114	Pg	Pn	16 23 19.1	+0.3
SOEO	Opoqueri	2.65	0	Pg	Pn	16 23 21.3	-0.4
PB05	IPOC Station P	2.68	232	eP	Pn	16 23 21.7	0.0
PB05				eS	Sn	16 23 54.9	-1.1
PB05				IAML		16 23 56.3	
	comp=N,80nm,0.1s						
PB16	IPOC Station P	3.25	332⇑	eP	Pn	16 23 29.5	+0.3
PB16				IAML		16 24 12.9	
	comp=N,21nm,0.1s						
PB16	IPOC Station P	3.25	332	Pg	Pn	16 23 29.8	+0.6
PB10	IPOC Station P	3.35	227	IAML		16 24 12.2	
	comp=E,21nm,0.3s						
PB14	IPOC Station P	4.10	214	eP	Pn	16 23 39.9	+0.1
BBOJ	La Paz, Jacaqu	4.23	356	Pg	Pn	16 23 43.4	+1.6
SOEJ	Jacaque	4.23	356	Pg	Pn	16 23 42.7	+0.9
BBOE	La Paz, Chanca	4.39	359	Pg	Pn	16 23 45.3	+1.5
BBOD	La Paz, Gloria	4.61	352	Pg	Pn	16 23 47.7	+1.0
LPAZ	La Paz	4.91	357	Pg	Pn	16 23 51.3	+0.6
BBOB	La Paz, Bander	5.06	357	Pg	Pn	16 23 52.9	+0.4

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*ANF **22** 16:26:22.8±0.3, 59°.82N×140°.93W, h6^{km}±2^{km}, ML3.1/45, Error ellipse: s-maj=2.6km s-min=1.4km az=3.0*
*NEIC **22** 16:26:23.4±2.0, 59°.76N±0°.04×140°.95W±0°.05, h17^{km}±4^{km}, Error ellipse: s-maj=6.3km s-min=3.7km az=194.0*
*AEIC **22** 16:26:23.5±1.1, 59°.81N±0°.07×140°.94W±0°.07, h13^{km}±6^{km}, ML2.8, ML3.0/76(NEIC), Error ellipse: s-maj=10.9km s-min=3.0km az=202.0*
ISC 22 16:26:23.1±1.1**, 59°.80N**±0°.03×**140°.95W**±0°.01**, h7**^{km}±9^{km}**, n107, σ1^{s}.12**/143**, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHX	Chaix Hills	0.28	342		Pg	16 26 29.1	+0.5
CHX					Sb	16 26 35.3	0.0
SAMH	Samovar Hills	0.34	14		Sb	16 26 36.5	-0.8
PCA	Pinnacle	0.46	49		Sb	16 26 39.7	-0.9
PCA	Pinnacle	0.46	49		Pg	16 26 32.6	+0.7
PCA				IAML		16 26 47.8	
	comp=N,2µm,0.8s						
PCA				IAML		16 26 47.8	
	comp=E,2µm,0.8s						
PINM	Pinnacle	0.46	50	P	Pg	16 26 32.6	+0.6
	baz=228,SNR=186						
PINM				S	Sg	16 26 38.5	+0.5
	baz=228						
RKAV	Rock Avalanche	0.54	339		Sb	16 26 42.2	-0.7
MESA	MESA	0.63	307		Pg	16 26 35.9	+0.6
MESA	MESA	0.63	307	P	Pg	16 26 35.8	+0.6
	baz=129,SNR=284						
MESA				S	Sb	16 26 45.2	-0.4
	baz=129						
TABL	Table Mountain	0.65	352		Sb	16 26 46.3	+0.1
TABL	Table Mountain	0.65	352	Pg	Pg	16 26 36.0	+0.4
TABL				IAML		16 26 49.7	
	comp=E,825nm,0.9s						
BCPM	Bancas Point	0.68	76		Sb	16 26 46.6	-0.2
BCPM	Bancas Point	0.68	76		Pg	16 26 36.2	+0.1
BCPM				IAML		16 26 47.1	
	comp=E,521nm,0.7s						
BCPM				IAML		16 26 47.5	
	comp=N,416nm,0.2s						
YAH	Yahtse	0.69	325		Sb	16 26 47.8	+0.4
YAH	Yahtse	0.69	325		Pg	16 26 36.9	+0.5
YAH				IAML		16 26 56.0	
	comp=E,556nm,0.7s						
YAH				IAML		16 26 58.6	
	comp=N,655nm,0.9s						
PNL	Peninsula	0.80	99		Pg	16 26 38.3	-0.1
PNL					Sb	16 26 49.8	-0.5
PNL	Peninsula	0.80	99	P	Pg	16 26 38.3	-0.1
	baz=278,SNR=141						
PNL				S	Sb	16 26 49.6	-0.7
	baz=278						
CYK	Cape Yakataga	0.82	291		Pg	16 26 38.3	-0.5
BARK	Barkley Ridge	0.98	309		Sg	16 26 55.8	+1.1
GRNC	Granite Creek	1.02	337		Pb	16 26 42.0	-1.2
GRNC				IAML		16 27 03.2	
	comp=N,422nm,0.8s						
GRNC				IAML		16 27 05.6	
	comp=E,378nm,0.8s						
LOGN	Logan Glacier	1.03	359		Pb	16 26 41.4	-1.9
LOGN				IAML		16 27 04.7	
	comp=E,433nm,0.9s						
LOGN				IAML		16 27 05.4	
	comp=N,248nm,0.7s						
O28M	Mount Upton	1.04	21		Pb	16 26 41.8	-1.9
O28M	Mount Upton	1.04	21	P	Pb	16 26 41.8	-1.9
	baz=201,SNR=65						
O28M				S	Sb	16 26 55.9	-1.8
	baz=201						
ISLE	Juniper Island	1.06	320		Pb	16 26 42.5	-1.4
ISLE				IAML		16 27 04.8	
	comp=N,392nm,0.8s						
ISLE				IAML		16 27 06.8	
	comp=E,337nm,1.2s						
WAX	Waxell Ridge	1.15	305		Pb	16 26 44.4	-1.0
CTGM	Chitina Glacie	1.18	351		Pb	16 26 44.2	-1.8
CTGM				IAML		16 27 03.9	
	comp=N,374nm,0.6s						
CTGM				IAML		16 27 05.8	
	comp=E,191nm,0.6s						
CTG	Chitna Glacier	1.18	351	P	Pb	16 26 44.2	-1.7
	baz=171,SNR=95						
CTG				S	Sb	16 27 00.4	-1.1
	baz=171						
BGLC	Bering Glacier	1.22	286	P	Pn	16 26 45.9	-0.5
	baz=106						
BGLC				S	Sg	16 27 03.4	+1.2
	baz=106						
O29M	Mount Kennedy	1.29	66		Pn	16 26 46.2	-1.5
O29M	Mount Kennedy	1.29	66	P	Pn	16 26 46.2	-1.5
	baz=247,SNR=128						
O29M				S	Sg	16 27 04.7	+0.1
	baz=247						
BARN	Barnard Glacie	1.31	345		Pn	16 26 46.4	-1.6
BARN				IAML		16 27 10.0	
	comp=N,179nm,0.9s						
BARN				IAML		16 27 13.6	
	comp=E,150nm,0.6s						
TGL	Tana Glacier	1.34	316		Pn	16 26 47.1	-1.2
TGL				IAML		16 27 07.3	
	comp=N,186nm,0.8s						
TGL				IAML		16 27 07.3	
	comp=E,215nm,0.6s						
CRQE	Cirque	1.43	313	P	Pn	16 26 48.7	-0.9
	baz=132						
CRQE				S	Sb	16 27 08.3	-0.4
	baz=132						
SUCK	Suckling Hills	1.45	282		Pb	16 26 50.0	-0.3
SUCK				IAML		16 27 13.5	
	comp=N,243nm,0.6s						
CRQM	Cirque	1.45	312		Pn	16 26 49.0	-1.0
BERG	Berg Lake	1.50	294		Pn	16 26 50.3	-0.1
YUK8	Steele Glacier	1.60	21	P	Pn	16 26 51.5	-0.5
	baz=202,SNR=35						
YUK8				S	Sg	16 27 14.0	-0.5
	baz=202						
P29M	Windy Craggy	1.64	95		Pn	16 26 51.3	-1.0
P29M				IAML		16 27 14.8	
	comp=E,140nm,0.6s						
P29M				IAML		16 27 22.1	
	comp=N,196nm,1.0s						
P29M	Windy Craggy	1.64	95	P	Pn	16 26 51.3	-1.0
	baz=276,SNR=12						
P29M				S	Sn	16 27 12.7	-0.9
	baz=276						
YUK6	Outpost Mounta	1.72	47	P	Pb	16 26 54.2	-1.0
	baz=229,SNR=135						
YUK6				S	Sb	16 27 16.9	-0.2
	baz=229						
HMT	Hamilton	1.75	289		Pn	16 26 53.5	-0.3
KAIM	Kayak Island	1.75	276	P	Pn	16 26 53.4	-0.5
	baz=94						
KAIM				S	Sb	16 27 17.6	-0.1
	baz=94						
MCARA	McCarthy VSAT	1.89	328		Pn	16 26 55.9	+0.2
MCARA				IAML		16 27 29.7	
	comp=N,179nm,0.9s						
MCARA	McCarthy VSAT	1.89	328	P	Pn	16 26 55.7	0.0
	baz=147,SNR=20						
MCARA				S	Sb	16 27 20.6	-1.1
	baz=147						
VRDI	Verde Repeater	1.89	320		Pn	16 26 55.2	-0.8
VRDI				IAML		16 27 33.0	
	comp=N,96nm,0.9s						
YUK4	Talbot Arm	1.92	35	P	Pb	16 26 58.4	-0.1
	baz=216,SNR=66						
YUK4				S	Sg	16 27 25.7	+0.9
	baz=216						
RAGM	Ragged Mountai	1.96	289		Pn	16 26 56.9	+0.1
YUK3	Moose Creek	2.00	7	P	Pn	16 26 57.9	+0.5
	baz=187,SNR=78						
YUK3				S	Sb	16 27 24.2	-0.7
	baz=187						
HYT	Haines Junctio	2.00	58		Pn	16 26 57.0	-0.4
HYT	Haines Junctio	2.00	58	P	Pn	16 26 57.1	-0.2
	baz=240,SNR=28						
HYT				S	Sb	16 27 24.1	-0.9
	baz=240						
P30M	Million Dollar	2.03	79	P	Pn	16 26 57.8	0.0
	baz=262						
P30M				S	Sb	16 27 25.1	-0.8
	baz=262						
BMRM	Bremner River	2.16	304		Pn	16 26 59.4	-0.1
BMRM	Bremner River	2.16	304	P	Pn	16 26 59.5	-0.1
	baz=122						
BMRM				S	Sb	16 27 27.6	-1.9
	baz=122						
GLB	Gilahina Butte	2.17	321		Pn	16 26 59.4	-0.2
GLB				IAML		16 27 29.9	
	comp=E,72nm,0.5s						
GLB				IAML		16 27 36.6	
	comp=N,87nm,1.1s						
PLBC	Pleasant Camp	2.35	96	P	Pn	16 27 02.5	+0.4
	baz=280						
EYAK	Cordova Ski Ar	2.51	289	P	Pn	16 27 04.7	+0.4
	baz=106						
EYAK				S	Sn	16 27 34.2	-1.0
	baz=106						
N30M	Aishikik Lake	2.53	47		Pn	16 27 04.6	0.0
N30M	Aishikik Lake	2.53	47	P	Pn	16 27 04.7	+0.1
	baz=230,SNR=23						
N30M				S	Sn	16 27 35.9	+0.3
	baz=230						
N25K	Chitina, Valde	2.55	317	IAML		16 27 39.4	
	comp=N,46nm,0.7s						
N25K				IAML		16 27 43.3	
	comp=E,47nm,0.5s						
N25K	Chitina, Valde	2.55	317	P	Pn	16 27 04.8	-0.1
	baz=134						
N25K				S	Sn	16 27 37.5	+1.3
	baz=134						
M27K	Edge Creek, AK	2.60	350	IAML		16 27 45.8	
	comp=E,64nm,0.9s						
M27K				IAML		16 27 53.6	
	comp=N,69nm,1.0s						
M27K	Edge Creek, AK	2.60	350	Pb	Pb	16 27 08.7	-1.4
	baz=170						
M27K				Sb	Sb	16 27 43.9	+1.5
	baz=170						
O30N	Mendenhall	2.61	66	P	Pn	16 27 05.3	-0.4
	baz=250,SNR=22						
O30N				S	Sn	16 27 38.6	+1.0
	baz=250						
BVCY	Beaver Creek	2.62	1	Pb	Pb	16 27 09.4	-1.0
	baz=181						
BVCY				Sb	Sg	16 27 45.8	-1.5
	baz=181						
M26K	Nabesna, AK	2.79	340	Pb	Pb	16 27 12.1	-1.2
	baz=159						
M26K				Sb	Sg	16 27 50.1	-2.6
	baz=159						
HIN	Hinchinbrook I	2.84	285		Pn	16 27 09.3	+0.4
HIN				IAML		16 28 03.3	
	comp=N,64nm,1.1s						
HIN				IAML		16 28 03.4	
	comp=E,73nm,1.0s						
SKAG	Skagway	2.88	94	S	Sn	16 27 44.9	+0.8
	baz=279						
M29M	Somme Creek	2.91	23		Pn	16 27 10.8	+0.9
M29M	Somme Creek	2.91	23	P	Pn	16 27 10.1	+0.2
	baz=205,SNR=8.8						
M29M				S	Sn	16 27 46.2	+1.0
	baz=205						
KLU	Klutina	2.98	307	P	Pn	16 27 11.0	+0.2
	baz=123						
KLU				S	Sn	16 27 46.8	0.0
	baz=123						
N31M	Braeburn, Yuko	3.06	54		Pn	16 27 11.6	-0.2
N31M				IAML		16 28 07.5	
	comp=N,28nm,1.1s						
N31M				IAML		16 28 12.5	
	comp=E,48nm,1.0s						
WHY	Whitehorse	3.15	72		Pn	16 27 13.1	-0.1
WHY	Whitehorse	3.15	72	P	Pn	16 27 12.9	-0.2
	baz=256,SNR=9.2						
WHY				S	Sn	16 27 51.7	+0.8
	baz=256						
GLI	Glacier Island	3.24	292	S	Sn	16 27 53.6	+0.5
	baz=107						
P23K	Montague Islan	3.26	276	Pn	Pn	16 27 12.8	-1.7
P23K	Montague Islan	3.26	276	P	Pn	16 27 14.0	-0.5
	baz=91						
P23K				S	Sn	16 27 52.1	-1.4
	baz=91						
L27K	Beaver Creek,	3.30	353	P	Pn	16 27 13.5	-1.7
	baz=172						
L27K				Sb	Sb	16 28 04.7	+2.4
	baz=172						
BCAR	Beaver Creek A	3.30	353		Pn	16 27 15.1	-0.1
HARP	HAARP	3.31	324	Sb	Sb	16 28 05.4	+2.8
	baz=140						
M24K	Tolsona, Glenn	3.44	314	P	Pn	16 27 17.6	+0.5
	baz=130						
M24K				Sb	Sb	16 28 09.1	+2.8
	baz=130						
L29M	L29M	3.58	21		Pn	16 27 19.4	+0.3
L29M				IAML		16 28 24.2	
	comp=E,29nm,0.8s						
L29M				IAML		16 28 26.5	
	comp=N,24nm,1.1s						
L29M	L29M	3.58	21	P	Pn	16 27 20.1	+1.0
	baz=203,SNR=14						
L29M				S	Sn	16 28 02.8	+1.1
	baz=203						
R32K	Eaglecrest	3.66	112	Sb	Sb	16 28 15.4	+2.9
	baz=297						
P32M	Atlin	3.67	90	Sb	Sb	16 28 14.2	+1.2
	baz=276						
SCM	Sheep Creek Mo	3.73	306	S	Sn	16 28 05.6	+0.3
	baz=121						
PWL	Port Wells	3.82	289	Pn	Pn	16 27 22.2	-0.1
PWL	Port Wells	3.82	289	S	Sn	16 28 06.5	-1.0
	baz=103						
PAX	Paxson	3.85	328	Sb	Sb	16 28 19.7	+1.6
	baz=144						
KNK	Knik Glacier	4.04	297	Sb	Sb	16 28 26.0	+2.6
	baz=111						
S32K	Killisnoo	4.07	122	P	Pn	16 27 25.5	-0.1
	baz=307						
P33M	Teslin, Yukon	4.10	81	Sb	Sb	16 28 29.2	+3.8
	baz=267						
SML	Sawmill	4.14	302	P	Pn	16 27 26.4	-0.3
	baz=116						
SML				S	Sn	16 28 15.8	+0.5
	baz=116						
K27K	Chicken	4.28	353	P	Pn	16 27 27.8	-0.7
	baz=172						
SEW	Seward	4.29	278	S	Sn	16 28 15.9	-2.9
	baz=91						
WAT6	Susitna Watana	4.31	313	P	Pn	16 27 28.4	-0.8
	baz=128						
WAT6				S	Sn	16 28 19.6	0.0
	baz=128						
DAWY	Dawson	4.34	9		Pn	16 27 30.1	+0.7
DAWY	Dawson	4.34	9	P	Pn	16 27 30.2	+0.7
	baz=190						
DAWY				S	Sn	16 28 21.2	+0.9
	baz=190						
K29M	Barlow Dome	4.37	20	P	Pn	16 27 30.8	+0.9
	baz=203,SNR=5.7						
K29M				S	Sn	16 28 22.0	+0.9
	baz=203						
SCRK	Sand Creek	4.43	342	P	Pn	16 27 31.7	+1.0
	baz=160						
O22K	Cooper Landing	4.44	283	P	Pn	16 27 31.2	+0.4
	baz=96						
DHY	Denali Highway	4.50	320	Pb	Pb	16 27 42.3	-0.3
	baz=134						
DHY				Sb	Sb	16 28 38.4	+1.4
	baz=134						
RC01	Rabbit Creek A	4.54	290	S	Sn	16 28 26.4	+1.2
	baz=103						
K24K	Donnelly Dome	4.62	332	IAML		16 29 05.5	
	comp=N,16nm,0.9s						
K24K				IAML		16 29 15.4	
	comp=E,14nm,1.1s						
J26L	Joseph Creek	4.87	347		Pn	16 27 37.7	+0.9
BRSE	Bradley Lake S	4.95	274		Pn	16 27 38.3	+0.5
CNPM	China Poot	5.22	271		Pn	16 27 41.9	+0.4
J30M	Hart River	5.26	22		Pn	16 27 43.6	+1.5
TRF	Thorofare Moun	5.76	313		Pn	16 27 51.3	+2.2

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*NEIC **22** 16:36:20.9±2.0, 21°.89S±0°.08×179°.39W±0°.08, h588^{km}±5^{km}, mb4.7/66, Error ellipse: s-maj=13.8km s-min=6.9km az=222.0*
*IDC **22** 16:36:22.3±0.9, 21°.87S×179°.48W, h601^{km}±9^{km}, mb3.8/18, mbtmp4.8/20, Error ellipse: s-maj=11.9km s-min=10.2km az=104.0*
ISC 22 16:36:20.9±0.3**, 22°.06S**±0°.05×**179°.46W**±0°.06**, h592**^{km}**, n247, σ1^{s}.91**/276**, mb4.6**/63**, 18C-27D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.90	331	P	P	16 37 54.2	+1.5
	40nm,0.3s,baz=258,slow=23,SNR=44						
MSVF				S	S	16 39 08.2	+0.8
	53nm,1.1s,baz=316,slow=23,SNR=2.0						
RAO	Raoul Island	7.29	169	P	P	16 38 15.9	+2.8

	306nm,0.3s,baz=277,slow=21,SNR=1.7						
RAO				S	S	16 39 43.5	-1.6
	236nm,0.3s,baz=251,slow=23,SNR=1.7						
GLKZ	Green Lake	7.30	169	P	P	16 38 13.7	+0.5
GLKZ				S	S	16 39 48.2	+2.9
NIUE	Niue	9.41	73	P	P	16 38 33.3	-0.4
NIUE	Niue	9.41	73	P	P	16 38 33.8	+0.1
AFI	Afiamalu	10.91	43	P	P	16 38 43.8	-5.1
AFI	Afiamalu	10.91	43	P	P	16 38 46.4	-2.5
MARNC	Mare, Loyalty	11.64	271	P	P	16 38 56.4	+0.5
PINNC	Pines Island,	12.13	265	P	P	16 39 01.4	+0.5
PINNC	Pines Island,	12.13	265	P	P	16 39 04.5	+3.6
YATNC	Mamie plateau,	12.65	267	P	P	16 39 08.2	+1.9
OUENC	Ouen Island, N	12.69	266	P	P	16 39 09.8	+3.2
DZM	Mont Dzumac	13.07	267	P	P	16 39 11.2	+0.6
	22nm,0.7s,baz=304,slow=22,SNR=18						
DZM				S	S	16 41 28.7	-1.4
	2.5nm,0.6s,baz=324,slow=18,SNR=1.2						
DZM	Mont Dzumac	13.07	267	P	P	16 39 12.7	+2.1
OUZ	Omahuta	14.45	203	P	P	16 39 29.2	+5.2
OUZ	Omahuta	14.45	203	P	P	16 39 26.0	+2.1
GRZ	Great Barrier	14.81	196	P	P	16 39 28.8	+1.5
WCZ	Waipu Caves	14.84	200	P	P	16 39 30.7	+3.0
KUZ	Kuaotunu	15.22	195	P	P	16 39 33.7	+2.5
MXZ	Matakaoa Point	15.57	187	P	P	16 39 35.4	+1.0
MXZ				S	S	16 42 07.6	-4.7
HAZ	Te Kaha	15.82	188	P	P	16 39 38.2	+1.5
PUZ	Puketiti	16.08	187	P	P	16 39 39.8	+0.7
TOZ	Tahuroa Road	16.21	194		P	16 39 43.3	+3.0
TOZ				IAmb	IAmb	16 39 45.3	
	comp=Z,24nm,0.7s						
TOZ	Tahuroa Road	16.21	194	P	P	16 39 43.0	+2.7
URZ	Urewera	16.41	190	P	P	16 39 41.4	-0.7
	comp=Z,15nm,0.3s,baz=64,slow=8.0,SNR=1.6						
URZ				S	S	16 42 20.0	-6.0
	comp=Z,19nm,0.6s,baz=158,slow=23,SNR=13						
URZ	Urewera	16.41	190	P	P	16 39 41.7	-0.4
URZ				S	S	16 42 19.2	-6.8
MWZ	Matawai	16.42	188	P	P	16 39 42.7	+0.4
HSRZ	Hossack Road	16.61	192	P	P	16 39 46.5	+2.5
PRRZ	Plateau Road	16.77	191	P	P	16 39 46.5	+1.1
RTZ	Ruatahuna	16.78	190	P	P	16 39 45.3	-0.3
KNZ	Kokohu	17.08	188	P	P	16 39 48.2	0.0
HIZ	Hauiti	17.11	195	P	P	16 39 51.5	+3.0
NMHZ	Naumai	17.28	190	P	P	16 39 49.9	-0.2
NMHZ				S	S	16 42 33.3	-7.0
BKZ	Black Stump Fm	17.40	191	P	P	16 39 50.7	-0.5
BKZ				IAmb	IAmb	16 39 58.9	
	comp=Z,35nm,1.4s						
BKZ	Black Stump Fm	17.40	191	P	P	16 39 51.5	+0.3
BKZ	Black Stump Fm	17.40	191	P	P	16 39 50.4	-0.8
BKZ				S	S	16 42 34.2	-8.0
ETVZ	East Tongariro	17.51	193	P	P	16 39 53.9	+1.6
ETVZ				S	S	16 42 42.1	-2.2
OTVZ	Oturere	17.55	193	P	P	16 39 55.0	+2.3
OTVZ				S	S	16 42 39.9	-5.0
SNVZ	South Ngauruho	17.57	193	P	P	16 39 54.2	+1.2
MCHZ	McNeill Hill	17.63	190	P	P	16 39 54.4	+1.1
MCHZ				S	S	16 42 41.2	-4.8
KWHZ	Kaweka Forest	17.66	191	S	S	16 42 40.3	-6.2
WHVZ	Whangaehu Hut	17.68	193	P	P	16 39 55.2	+1.2
PKVZ	Pokaka	17.74	193	P	P	16 39 56.5	+2.2
MOVZ	Moawhango	17.77	192	P	P	16 39 55.6	+1.0
KRHZ	Kereru	17.88	191	P	P	16 39 55.9	+0.3
KRHZ				S	S	16 42 44.3	-5.8
KAHZ	Kahuranaki	17.95	189	P	P	16 39 57.1	+0.9
KAHZ				S	S	16 42 49.6	-1.6
PNHZ	Pukenui	18.17	191	P	P	16 39 58.6	+0.3
PNHZ				S	S	16 42 48.7	-6.1
PXZ	Pawanui	18.18	189	P	P	16 39 58.9	+0.6
PXZ				S	S	16 42 50.0	-4.8
TSZ	Takapari Road	18.36	191	P	P	16 40 01.1	+1.2
TSZ				S	S	16 42 51.3	-6.4
PRHZ	Porangahau	18.45	189	P	P	16 40 01.5	+0.8
DVHZ	Dannevirke	18.55	191	P	P	16 40 01.5	-0.2
DVHZ				S	S	16 42 54.0	-6.9
ANWZ	Angora Road	18.66	190	P	P	16 40 03.3	+0.7
ANWZ				S	S	16 42 58.4	-4.2
BFZ	Birch Farm	18.91	190	P	P	16 40 03.4	-1.5
BFZ	Birch Farm	18.91	190	P	P	16 40 05.2	+0.3
BFZ				S	S	16 43 02.3	-4.3
QRZ	Quartz Range	19.90	198	P	P	16 40 15.4	+1.5
NNZ	Nelson	20.03	196	P	P	16 40 15.6	+0.6
THZ	Tophouse	20.66	196	P	P	16 40 21.1	+0.3
DSZ	Denniston Nort	20.95	199	P	P	16 40 24.4	+1.0
KHZ	Kahutara	21.12	194	P	P	16 40 26.2	+1.4
LTZ	Lake Taylor	21.78	197	P	P	16 40 29.7	-1.1
LTZ				IAmb	IAmb	16 40 33.3	
	comp=Z,18nm,0.7s						
RPZ	Rata Peaks	22.98	198	P	P	16 40 44.8	+3.4
JCZ	Jackson Bay	24.01	201	P	P	16 40 55.1	+4.5
ODZ	Otahua Downs	24.32	197	P	P	16 40 54.8	+1.6
WHZ	Wether Hill Ro	25.90	200		P	16 41 08.2	+1.1
SYZ	Scrubby Hill	26.11	198	P	P	16 41 11.7	+2.7
EIDS	Eidsvold	27.14	257	P	P	16 41 19.8	+1.4
EIDS				IAmb	IAmb	16 41 20.5	
	comp=Z,16nm,0.5s						
ARMA	Armidale	27.17	246		P	16 41 21.0	+2.3
PPT	Papeete	28.44	86	P	P	16 41 30.7	+0.9
	comp=Z,33nm,0.9s,baz=57,slow=20,SNR=2.4						
	comp=Z,33nm,0.9s						
CAN	Canberra	30.52	237	P	P	16 41 48.8	+1.4
CAN				IAmb	IAmb	16 41 50.6	
	comp=Z,21nm,0.9s						
CTAO	Charters Tower	32.01	267	P	P	16 42 01.4	+1.0
TOO	Toolangi	33.88	235		P	16 42 17.6	+1.7
TOO				IAmb	IAmb	16 42 18.5	
	comp=Z,9.3nm,0.7s						
PMG	Port Moresby	34.41	286	P	P	16 42 19.4	-1.2
STKA	Stephens Creek	35.89	246		P	16 42 33.9	+1.3
STKA	Stephens Creek	35.89	246	P	P	16 42 34.3	+1.7
	comp=Z,23nm,0.5s,baz=93,slow=11,SNR=64						
STKA				ScP	ScP	16 47 32.9	-0.8
	comp=Z,1.7nm,0.7s,baz=356,slow=8.9,SNR=3.4						
	comp=Z,23nm,0.5s						
COEN	Coen	36.36	276	P	P	16 42 37.7	+1.0
COEN				IAmb	IAmb	16 42 38.8	
	comp=Z,24nm,0.8s						
BBOO	Buckleboo	40.64	245		P	16 43 11.8	+0.9
AS31	Alice Springs	42.85	259		P	16 43 29.1	+0.6
AS31				IAmb	IAmb	16 43 29.9	
	comp=Z,12nm,0.7s						
ASAR	Alice Springs	42.85	259	P	P	16 43 29.3	+0.8
ASAR					PcP	16 45 06.5	+0.7
ASAR	Alice Springs	42.85	259	P	P	16 43 29.1	+0.7
	comp=Z,52nm,0.8s,baz=97,slow=8.5,SNR=680						
ASAR				PcP	PcP	16 45 06.2	+0.4
	comp=Z,6.5nm,0.6s,baz=107,slow=3.5,SNR=7.9						
ASAR				ScP	ScP	16 48 01.6	+0.6
	comp=Z,1.3nm,0.8s,baz=97,slow=4.1,SNR=4.6						
ASAR				S	S	16 49 09.8	-1.6
	comp=Z,5.2nm,0.9s,baz=98,slow=15,SNR=16						
	comp=Z,52nm,0.8s						
WR8	Warramunga Arr	42.91	264		P	16 43 28.9	0.0
WR8				IAmb	IAmb	16 43 29.8	
	comp=Z,60nm,1.4s						
WB0	Warramunga Arr	43.04	264		P	16 43 29.9	0.0
WRAB	Tennant Creek	43.05	264	P	P	16 43 29.5	-0.5
WRAB				IAmb	IAmb	16 43 30.9	
	comp=Z,41nm,0.9s						
WRA	Warramunga Arr	43.06	264	P	P	16 43 30.3	+0.2
WRA	Warramunga Arr	43.06	264	P	P	16 43 30.1	-0.1
	comp=Z,38nm,0.8s,baz=102,slow=8.4,SNR=129						
WRA				PcP	PcP	16 45 06.5	0.0
	comp=Z,3.6nm,0.8s,baz=94,slow=3.9,SNR=4.8						
WRA				ScP	ScP	16 48 02.1	+0.2
	comp=Z,3.6nm,0.9s,baz=92,slow=4.4,SNR=7.7						
WRA				S	S	16 49 10.4	-3.9
	comp=Z,1.3nm,0.9s,baz=97,slow=14,SNR=4.7						
	comp=Z,38nm,0.8s						
MTN	Manton Dam	47.84	272	P	P	16 44 06.1	-0.4
FITZ	Fitzroy Crossi	51.49	264	P	P	16 44 33.8	+0.6
	comp=Z,16nm,0.5s,baz=88,slow=5.8,SNR=82						
	comp=Z,16nm,0.5s						
PSA00	Pilbara Seismi	56.00	258	P	P	16 45 04.9	0.0
PSA00				IAmb	IAmb	16 45 05.9	
	comp=Z,22nm,1.1s						
MBWA	Marble Bar	56.20	259	P	P	16 45 06.1	-0.1
MBWA				IAmb	IAmb	16 45 07.1	
	comp=Z,51nm,0.8s						
VNDA	Vanda	56.24	185	P	P	16 45 07.0	+1.5
VNDA	Vanda	56.24	185	P	P	16 45 08.5	+3.0
	comp=Z,4.4nm,0.7s,baz=356,slow=8.0,SNR=40						
	comp=Z,4.4nm,0.7s						
NWAO	Narrogin (SRO)	56.46	244	P	P	16 45 08.0	+0.2
NWAO				IAmb	IAmb	16 45 10.8	
	comp=Z,66nm,1.4s						
MMRI	Maumere	57.47	274	IAmb	IAmb	16 45 15.7	
	comp=Z,95nm,1.2s						
MORW	Morawa	57.98	249	P	P	16 45 18.6	+0.4
MORW				IAmb	IAmb	16 45 19.2	
	comp=Z,22nm,0.7s						
GIRL	Giralia	60.83	256	P	P	16 45 38.5	+1.2
CASY	Casey	61.97	206	P	P	16 45 45.0	+1.1
CASY				IAmb	IAmb	16 45 46.2	
	comp=Z,32nm,1.1s						
TOLI2	Tolitoli	62.62	283	P	P	16 45 48.5	-0.4
TOLI2				IAmb	IAmb	16 45 51.1	
	comp=Z,19nm,0.6s						
PCI	Palu	62.63	281	P	P	16 45 49.4	+0.3
	comp=Z,2µmcomp=Z,67nm,1.0s						
MPSI	Mapaga	63.09	282	P	P	16 45 51.8	-0.2
	comp=Z,441nmcomp=Z,41nm,0.8s						
JAGI	Jajag, Banyuwa	65.02	271	P	P	16 46 02.9	-1.4
JAGI				IAmb	IAmb	16 46 04.3	
	comp=Z,39nm,0.9s						
JAGI	Jajag, Banyuwa	65.02	271	P	P	16 46 00.5	-3.8
	comp=Z,49nm,1.0s						
PCJI	Pacitan	67.88	270	P	P	16 46 21.3	-0.6
QSPA	South Pole Qui	68.01	180	P	P	16 46 24.0	+2.1
QSPA				IAmb	IAmb	16 46 24.9	
	comp=Z,23nm,0.9s						
QSPA	South Pole Qui	68.01	180	P	P	16 46 23.9	+2.1
	comp=Z,20nm,0.8s,baz=224,slow=1.2,SNR=132						
	comp=Z,20nm,0.8s						
UGM	Wanagama	68.58	270	P	P	16 46 26.1	-0.1
JGF	Kuroka	70.44	324	P	P	16 46 35.4	-1.4
JGF				IAmb	IAmb	16 47 10.9	
	comp=Z,23nm,1.4s						
MJAR	Matsushiro Arr	70.68	325	P	P	16 46 37.7	-0.4
	comp=Z,5.9nm,0.8s,baz=155,slow=5.6,SNR=19						
	comp=Z,5.9nm,0.8s						
MAJO	Matsushiro	70.68	325	P	P	16 46 37.1	-0.9
JMN	Monobe	71.08	320	P	P	16 46 38.5	-2.0
JMN				IAmb	IAmb	16 46 54.9	
	comp=Z,16nm,1.1s						
YULB	Yu-li	73.23	304	P	P	16 46 52.0	-1.1
YULB				IAmb	IAmb	16 46 55.1	
	comp=Z,11nm,0.8s						
NACB	Ninganchiao	73.44	305	P	P	16 46 53.2	-1.1
NACB				IAmb	IAmb	16 46 54.7	
	comp=Z,25nm,0.9s						
TPUB	Ta-pu	73.70	304	P	P	16 46 54.0	-1.8
SSLB	Suanglung	73.71	305	P	P	16 46 53.6	-2.2
SSLB				IAmb	IAmb	16 46 57.6	
	comp=Z,21nm,1.0s						
KSRS	Korea Array	77.17	320	P	P	16 47 14.8	+0.2
	comp=Z,2.2nm,1.0s,baz=145,slow=4.6,SNR=7.8						
	comp=Z,2.2nm,1.0s						
PEA0B	Petropavlovsk-	77.44	346	P	P	16 47 14.3	-1.4
PETK	Petropavlovsk-	77.44	346	P	P	16 47 14.8	-0.9
PETK	Petropavlovsk-	77.44	346	P	P	16 47 14.7	-1.1
	comp=Z,5.5nm,0.7s,baz=131,slow=6.5,SNR=32						
	comp=Z,5.5nm,0.7s						
BELA	Belgrano 2	78.19	173	P	P	16 47 19.7	+0.2
BELA				IAmb	IAmb	16 47 21.3	
	comp=Z,15nm,1.0s						
USRK	Ussuriysk Ar.	79.50	327	P	P	16 47 27.3	+0.4
	comp=Z,6.1nm,1.0s,baz=129,slow=3.8,SNR=13						
	comp=Z,6.1nm,1.0s						
MAW	Mawson	79.64	200	P	P	16 47 28.8	+1.5
	comp=Z,6.3nm,0.6s,baz=150,slow=6.5,SNR=8.2						
	comp=Z,6.3nm,0.6s						
NJ2	Nanjing	79.84	311	*e*P	P	16 47 29.9	+0.9
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KULM	Kulim	82.65	279	P	P	16 47 41.9	-1.9
KULM				IAmb	IAmb	16 47 47.1	
	comp=Z,26nm,1.3s						
CN2	Changchun	82.72	323	*e*P	P	16 47 43.8	+0.4
CN2				*e*S	SKSac	16 57 10.0	+1.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=N,100nm,10.0s						
CN2				LR	LR		
	comp=E,200nm,10.0s						
CN2				LR	LR		
	comp=Z,200nm,11.0s						
BNX	BinXian	82.92	326	⇑P	P	16 47 44.6	+0.2
BNX				pmax	pmax		
	comp=Z,13nm,0.7s						
NVAR	Mina Array Bea	83.09	44	P	P	16 47 44.6	-1.1
NVAR	Mina Array Bea	83.09	44	P	P	16 47 46.5	+0.7
	comp=Z,3.3nm,0.9s,baz=224,slow=8.6,SNR=11						
	comp=Z,3.3nm,0.9s						
TIA	Tai'an	83.33	313	P	P	16 47 47.8	+1.1
TIA				pmax	pmax		
	comp=Z,16nm,1.0s						
N15K	Kwethluk River	83.45	10	P	P	16 47 45.2	-1.4
W13A	Hualapai Mount	84.22	49		P	16 47 52.7	+1.3
HNS	HongShan	85.61	313	⇓P	P	16 47 58.8	+1.1
319A	Douglas	85.67	54	IAmb	IAmb	16 48 01.1	
	comp=Z,10nm,1.0s						
ENH	Enshi	85.80	305	IAmb	IAmb	16 48 00.7	
	comp=Z,17nm,0.9s						
HEH	HeiHe	85.93	329	*e*P	P	16 47 59.0	+0.1
HEH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
U15A	North Rim	86.02	48	P	P	16 47 59.4	-0.7
U15A				IAmb	IAmb	16 48 02.2	
	comp=Z,5.5nm,0.8s						
TROLL	Troll, Antarti	86.17	181	⇓P	P	16 48 00.4	+0.3
	comp=Z,463nm,0.5s						
SNAA	Sanae	86.49	179	⇓P	P	16 48 01.3	-0.1
	comp=Z,44nm,0.4s						
SNAA	Sanae	86.49	179	P	P	16 48 01.5	+0.1
	comp=Z,1.8nm,0.5s,baz=194,slow=8.3,SNR=12						
	comp=Z,1.8nm,0.5s						
VNA3	Neumayer Olymp	86.67	177	⇓P	P	16 48 02.3	0.0
	comp=Z,14nm,0.7s						
G08A	Pilot Rock	86.68	38		P	16 48 01.6	-1.2
VNA2	Neumayer--Watz	87.10	177	⇓P	P	16 48 04.5	+0.2
	comp=Z,9.2nm,0.6s,baz=183,slow=4.7						
VNA1	Neumayer--Stat	87.33	177	⇓P	P	16 48 06.3	+1.0
	comp=Z,9.3nm,0.8s						
D08A	Wollman Farm,	87.74	37	IAmb	IAmb	16 48 09.4	
	comp=Z,5.9nm,0.9s						
XAN	Xi'an	88.00	308	⇓P	P	16 48 10.1	+0.9
XAN				pP	PcP	16 48 18.1	+7.8
XAN				pmax	pmax		
	comp=Z,18nm,0.9s						
TMUT	Trail Mountain	88.22	46	IAmb	IAmb	16 48 12.6	
	comp=Z,5.3nm,0.9s						
PLID	Pearl Lake	88.28	39	P	P	16 48 09.1	-1.3
SRU	San Rafael Swe	88.58	47	IAmb	IAmb	16 48 13.5	
	comp=Z,5.0nm,0.9s						
TXAR	Lajitas Array	89.04	58	P	P	16 48 15.3	+1.2
	comp=Z,2.7nm,0.9s,baz=217,slow=6.2,SNR=20						
	comp=Z,2.7nm,0.9s						
BSUT	Blindstream Ca	89.14	45	IAmb	IAmb	16 48 16.5	
	comp=Z,6.0nm,0.9s						
CMAR	Chiang Mai Arr	89.36	290	P	P	16 48 17.3	+1.5
	comp=Z,9.8nm,0.8s,baz=134,slow=3.3,SNR=70						
CMAR				PP	PP	16 51 59.0	+0.9
	comp=Z,0.6nm,0.8s,baz=127,slow=6.1,SNR=5.2						
	comp=Z,9.8nm,0.8s						
HHC	Hu-ho-hao-te	89.47	315	*e*P	P	16 48 15.1	-0.8
HHC				pmax	pmax		
	comp=Z,14nm,0.6s						
HHC				pmax	pmax		
	comp=Z,56nm,4.5s						
CHTO	Chiang Mai	89.50	290		P	16 48 17.6	+1.2
CHTO				IAmb	IAmb	16 48 18.9	
	comp=Z,16nm,0.8s						
ILAR	Eielson Array	90.14	13	P	P	16 48 17.9	-0.4
	comp=Z,0.2nm,0.5s,baz=226,slow=5.3,SNR=3.4						
	comp=Z,0.2nm,0.5s						
PZH	PanZhiHua	90.24	298	P	P	16 48 19.6	-0.2
PZH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,100nm,4.2s						
PDAR	Pinedale Array	91.03	44	P	P	16 48 22.6	-0.6
	comp=Z,1.2nm,0.8s,baz=228,slow=3.8,SNR=9.8						
	comp=Z,1.2nm,0.8s						
LZH	Lanzhou	92.64	308	*e*P	P	16 48 34.5	+3.8
LZH				sP	sP	16 51 47.0	+11
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
ZALV	Zalesovo Beam	110.85	321	PKiKP	PKiKP	16 53 45.6	-1.5
	comp=Z,1.0nm,0.4s,baz=212,slow=1.9,SNR=5.8						
ZALV				PP	PP	16 54 38.1	+1.0
	comp=Z,0.5nm,0.3s,baz=100,slow=6.3,SNR=1.7						
MKAR	Makanchi Array	111.27	313	Pdiff	Pdif	16 49 54.4	+1.0
	comp=Z,0.2nm,0.6s,baz=76,slow=6.1,SNR=1.8						
MKAR				PKiKP	PKiKP	16 53 47.1	-1.1
	comp=Z,0.6nm,0.5s,baz=164,slow=1.2,SNR=11						
KURBB	Kurchatov Arra	114.26	317	PKP	PKPdf	16 53 52.2	-1.5
	comp=Z,1.2nm,0.2s,baz=118,slow=1.6,SNR=4.8						
KSH	Kashi	114.65	305	PKP	PKPdf	16 53 54.0	-1.1
KKAR	Karatay Array	119.14	308		PKPdf	16 54 02.9	-0.6
BVAR	Borovoye Array	119.38	319	PKP	PKPdf	16 54 02.8	-0.8
SPITS	Spitsbergen Ar	123.33	356	PKP	PKPdf	16 54 09.8	-0.7
	comp=Z,3.1nm,0.6s,baz=80,slow=4.7,SNR=11						
BOSA	Boshof	124.26	206	PKP	PKiKP	16 54 14.5	+0.2
	comp=Z,2.5nm,0.7s,baz=97,slow=4.9,SNR=3.6						
ARCES	ARCESS Array B	130.19	349	PKP	PKPdf	16 54 22.5	-1.3
	comp=Z,3.5nm,0.8s,baz=85,slow=0.9,SNR=16						
FINES	FINESS Array B	136.86	342	PKhKP	PKPpre	16 54 23.5	
	comp=Z,4.1nm,0.9s,baz=79,slow=10,SNR=6.6						
FINES				PKP	PKPdf	16 54 36.2	-0.2
	comp=Z,2.7nm,0.9s,baz=67,slow=3.6,SNR=3.9						
FINES				SKPbc	SKPbc	16 57 13.8	-0.5
	comp=Z,2.3nm,0.7s,baz=38,slow=7.2,SNR=5.6						
NB2	NORSAR Subarra	140.35	352	PKP	PKPdf	16 54 35.8	-7.1
	comp=Z,1.4nm,0.8s,baz=17,slow=2.6						
NOA	NORSAR Array B	140.35	352	PKhKP	PKPpre	16 54 35.9	
	comp=Z,1.0nm,0.7s,baz=15,slow=3.4,SNR=3.8						
NOA				PKP	PKPdf	16 54 43.5	+0.7
	comp=Z,0.9nm,0.8s,baz=31,slow=1.9,SNR=3.7						
HFS	Hagfors	140.84	350	PKhKP	PKPpre	16 54 37.5	
	comp=Z,2.0nm,0.5s,baz=85,slow=3.4,SNR=17						
MBAR	Mbarara	142.92	237		PKPdf	16 54 48.8	-0.3
AKASG	Malin Array Be	143.68	329	PKP	PKPbc	16 54 47.1	-1.0
	comp=Z,5.2nm,0.4s,baz=44,slow=4.3,SNR=70						
AKBB	Malin Array Si	143.68	329		PKPbc	16 54 47.0	-1.1
KIEV	Kiev	143.69	329		PKPbc	16 54 47.1	-1.1
KIEV	Kiev	143.69	329	⇑P	PKPbc	16 54 47.0	-1.2
SORM	Soroca	145.78	326	⇑P	PKPbc	16 54 54.0	-0.5
BEL	Belsk	146.40	337	*e*PKPbc	PKPbc	16 54 56.6	+0.5
EKA	Eskdalemuir Ar	146.66	4	PKPbc	PKPbc	16 54 55.9	-0.8
	comp=Z,2.6nm,0.7s,baz=338,slow=2.5,SNR=14						
BRTR	Keskin Array B	146.83	310		PKPbc	16 54 57.6	-0.3
BRTR	Keskin Array B	146.83	310	PKPbc	PKPbc	16 54 57.5	-0.4
	comp=Z,5.8nm,0.7s,baz=73,slow=3.0,SNR=31						
KIRS	Kirsehir-Merke	146.85	309	⇓P	PKPbc	16 54 57.7	-0.2
MMAI	Mount Meron Ar	147.35	297	PKPbc	PKPbc	16 55 00.0	+0.6
	comp=Z,9.9nm,0.6s,baz=69,slow=4.6,SNR=28						
NEGRR	Negrea	147.65	323	⇓P	PKPbc	16 54 59.7	+0.1
TESR	Tescani	147.71	325	⇑P	PKPbc	16 54 59.5	-0.3
CFR	Carcaliu	147.72	322	⇓P	PKPbc	16 54 59.6	-0.2
TPGR	Topolog	147.75	321	⇑P	PKPbc	16 55 00.3	+0.3
OJC	Ojcow	148.08	336	*e*PKPbc	PKPbc	16 55 00.4	-0.2
VRI	Vrincioaia	148.08	324	⇓P	PKPbc	16 55 00.2	-0.6
KOLS	Kolonicke sedl	148.10	332	*e*PKP	PKiKP	16 55 01.4	-0.5
STHS	Stebnicka Huta	148.16	334	*e*PKP	PKPbc	16 55 00.6	-0.2
SAHE	Sakarya_HENDEK	148.30	313	⇓P	PKPbc	16 55 01.1	-0.3
NIE	Niedzica	148.53	335	*e*PKPbc	PKiKP	16 55 02.3	-0.5
KSP	Ksiaz	148.74	341	*e*PKPbc	PKPbc	16 55 02.5	+0.4
MLR	Muntele Rosu	148.74	324	⇓P	PKPbc	16 55 01.9	-0.6
OSTC	Ostas	149.02	340	⇑*e*PKP	PKiKP	16 55 03.7	-0.1
STEB	Steborice	149.04	338	⇑*e*PKP	PKPbc	16 55 03.2	+0.3
LANS	Liptovska Anna	149.07	336	*e*PKP	PKiKP	16 55 04.4	+0.4
UPC	Upice	149.12	341	⇑*e*PKP	PKPbc	16 55 03.4	+0.3
DPC	Dobruska-Polom	149.16	340	⇑*e*PKP	PKiKP	16 55 03.9	-0.2
CLL	Collm	149.24	345	⇓*i*PKPbc	PKPbc	16 55 03.2	-0.1
	comp=Z,23nm,0.9s						
CLL				*i* PKPab	PKPab	16 55 09.5	-0.9
	comp=Z,6.0nm,0.9s						
MORC	Moravsky Berou	149.25	338	*e*PKP	PKPbc	16 55 03.7	+0.2
MORC	Moravsky Berou	149.25	338	⇓P	PKPbc	16 55 03.6	+0.2
VOIR		149.26	325	⇓P	PKPbc	16 55 03.1	-0.6
BRG	Berggiesshubel	149.39	343	P	PKPab	16 55 11.4	+0.3
BRG				Amp		16 55 11.7	
	comp=Z,5.5nm,0.8s						
BRG	Berggiesshubel	149.39	343	P	PKPab	16 55 14.1	+3.0
BRG				Amp		16 55 14.6	
	comp=Z,2.4nm,0.7s						
BRG				pPKP	pPKPab	16 57 26.5	+5.6
BRG				Amp		16 57 29.1	
	comp=Z,4.4nm,1.1s						
MAUC	Maruska	149.50	337	⇑*e*PKP	PKiKP	16 55 04.7	-0.1
PVCC	Panska Ves	149.53	342	⇑*e*PKP	PKiKP	16 55 04.7	-0.1
VYHS	Vyhne	149.85	335	*e*PKP	PKPbc	16 55 05.2	+0.3
VYHS				*e*		16 55 13.5	
VRAC	Vranov	149.98	339	*e*PKP	PKiKP	16 55 05.5	-0.3
VRAC				*e*		16 55 14.0	
VRAC	Vranov	149.98	339	⇑P	PKiKP	16 55 05.6	-0.3
JAVC	Velka Javorina	149.98	337	*e*PKP	PKiKP	16 55 06.3	+0.4
GOPC	GO Pecny, Ondr	150.02	341	⇑*e*PKP	PKiKP	16 55 05.6	-0.3
PRU	Pruhonice	150.02	342	⇑*e*PKP	PKPbc	16 55 05.4	+0.2
KRUC	Moravsky	150.25	339	*e*PKP	PKPbc	16 55 05.8	0.0
KRUC				*e*		16 55 14.8	
TREC	Trest	150.35	340	⇑*e*PKP	PKPbc	16 55 06.0	-0.1
SIRR	Siria	150.37	330	⇓P	PKPbc	16 55 06.3	+0.1
SURR	Surduc	150.53	328	⇓P	PKPbc	16 55 06.4	-0.2
MODS	Modra-Piesok	150.53	337	*e*PKP	PKPbc	16 55 06.5	0.0
SRE	Strehaia	150.75	326	⇓P	PKiKP	16 55 07.5	0.0
BZS	Buzias	150.87	329	⇑P	PKPbc	16 55 07.0	-0.4
HERR	Herculane	151.00	327	⇓P	PKPbc	16 55 07.3	-0.4
KHC	Kasperske Hory	151.07	342	⇑*e*PKP	PKPbc	16 55 07.7	0.0
KHC				*e*PKPAB	PKPab	16 55 18.5	+0.3
AKAS	Kas	151.08	306		PKPbc	16 55 07.7	-0.6
CKRC	Cesky Krumlov	151.13	341	⇑*e*PKP	PKPbc	16 55 07.8	-0.1
GRF	Grafenberg Arr	151.16	346	*e*PKP	PKiKP	16 55 08.1	-0.1
	baz=21,slow=1.7						
UCC	Uccle	151.16	355	*d*PKiKP	PKPbc	16 55 07.5	-0.3
MEM	Membach	151.19	353	*d*PKiKP	PKPbc	16 55 07.3	-0.6
BTNL	Ternell	151.20	353	*d*PKiKP	PKPbc	16 55 07.5	-0.4
GERES	GERESS Array B	151.29	342	PKPbc	PKPbc	16 55 08.1	-0.3
	comp=Z,3.7nm,0.7s,baz=33,slow=2.1,SNR=24						
CONA	Conrad Observa	151.41	338	*i* PKiKP	PKPbc	16 55 08.6	0.0
	comp=Z,6.0nm,0.7s						
CONA				*i* PKP	PKPab	16 55 20.5	+0.8
	comp=Z,3.3nm,0.7s						
MDVR	Moldovita	151.43	327	⇓P	PKPbc	16 55 08.3	-0.4
RONA	Rosalia, Austr	151.46	337	*i* PKiKP	PKPbc	16 55 08.7	0.0
	comp=Z,9.6nm,0.5s						
MORH	Mrgy, Hungar	151.76	333	⇓P	PKPbc	16 55 08.9	-0.4
DOU	Dourbes	151.84	354	*d*PKiKP	PKPbc	16 55 08.8	-0.5
MOA	Molln	152.01	340	*i* PKiKP	PKPbc	16 55 09.4	-0.4
	comp=Z,1.4nm,0.5s						
MOA				*e*PKP	PKPab	16 55 22.7	+0.5
	comp=Z,3.0nm,1.1s						
WLF	Walferdange	152.10	352	*d*PKiKP	PKiKP	16 55 10.5	+0.4
ARSA	Arzberg	152.11	338	*i* PKP	PKPbc	16 55 08.7	-1.4
	comp=Z,1.5nm,0.6s						
ARSA				*i* PKP	PKPab	16 55 22.4	-0.2
	comp=Z,2.3nm,0.7s						
BIOA	Bad Ischl, Aus	152.34	341	*i* PKP	PKPab	16 55 24.2	+0.5
	comp=Z,5.0nm,0.9s						
LESA	Schwarzleotal	152.87	342	*i* PKP	PKPab	16 55 27.4	+1.4
	comp=Z,4.0nm,0.9s						
WATA	Walderalm	153.26	343	*i* PKiKP	PKPbc	16 55 12.0	-0.7
	comp=Z,2.2nm,0.5s						
WATA				*i* PKP	PKPab	16 55 27.9	+0.2
	comp=Z,3.6nm,0.9s						
MYKA	Terra Mystica	153.28	340	*i* PKP	PKPbc	16 55 11.7	-1.0
	comp=Z,2.7nm,0.4s						
MYKA				*i* PKP	PKPab	16 55 27.7	0.0
	comp=Z,3.1nm,0.5s						
WTTA	Wattenberg	153.31	343	*i* PKiKP	PKPbc	16 55 12.4	-0.5
	comp=Z,2.2nm,0.4s						
WTTA				*i* PKP	PKPab	16 55 28.2	+0.3
	comp=Z,4.7nm,0.6s						
RETA	Reutte	153.33	344	*i* PKiKP	PKiKP	16 55 13.0	+0.2
	comp=Z,2.7nm,0.7s						
MOTA	Moosalm	153.38	344	*i* PKP	PKPab	16 55 28.1	-0.1
	comp=Z,4.7nm,0.9s						
SQTA	Sankt Quirin	153.46	344	*i* PKiKP	PKPbc	16 55 12.9	-0.3
	comp=Z,1.7nm,0.4s						
SQTA				*i* PKP	PKPab	16 55 28.1	-0.4
	comp=Z,5.5nm,1.0s						
ABTA	Abfaltersbach	153.53	341	*i* PKP	PKPbc	16 55 12.1	-1.2
	comp=Z,4.4nm,0.6s						
ABTA				*i* PKP	PKPab	16 55 28.3	-0.5
	comp=Z,9.2nm,1.2s						
FETA	Feichten	153.77	344	*e*PKP	PKPab	16 55 29.8	-0.1
	comp=Z,3.5nm,0.9s						
FUORN	Ofenpass-Fuorn	154.26	344		PKPab	16 55 32.6	+0.5
DBIC	Dimbokro	163.83	160	PKP	PKPdf	16 55 17.4	-0.4
	comp=Z,1.5nm,0.7s,baz=255,slow=4.8,SNR=3.8						

TORD	Torodi Ar. Bea	171.06	187	PKP	PKPdf	16 55 22.1	-0.8
	comp=Z,0.9nm,0.4s,baz=61,slow=0.2,SNR=4.0						
TORD				PKPab	PKPab	16 56 46.0	-0.2
	comp=Z,1.4nm,0.7s,baz=171,slow=2.7,SNR=4.0						

*IDC **22** 16:47:05.3±1.4, 10°.21S×152°.13E, h0^{km}, mb3.7/5, mbtmp3.6/6, Error ellipse: s-maj=49.5km s-min=28.5km az=113.0*

ISC 22 16:47:10.9±1.3, **10°.2S**±0°.2×**152°.0E**±0°.3, **h35**^{km}**, n6,** σ**0^{s}89**/6, **mb3.7**/5, **D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	19.56	238	P	Pn	16 51 36.9	-0.5
	1.4nm,0.9s,baz=63,slow=11,SNR=3.2						
ASAR	Alice Springs	21.81	230	P	P	16 52 00.1	-0.2
	0.4nm,0.6s,baz=63,slow=9.1,SNR=5.0						
	0.4nm,0.6s						
SONM	Songino Array	70.52	329	P	P	16 58 23.2	+0.9
	0.3nm,0.4s,baz=132,slow=5.4,SNR=2.3						
	0.3nm,0.4s						
QSPA	South Pole Qui	79.75	180	P	P	16 59 15.8	+0.6
	1.7nm,0.9s,baz=359,slow=1.9,SNR=5.2						
	1.7nm,0.9s						
MKAR	Makanchi Array	83.90	320	P	P	16 59 37.2	0.0
	0.4nm,0.8s,baz=118,slow=4.8,SNR=3.9						
	0.4nm,0.8s						
ILAR	Eielson Array	87.47	22	P	P	16 59 53.5	-1.0
	0.5nm,0.6s,baz=251,slow=5.2,SNR=5.8						
	0.5nm,0.6s						

*IDC **22** 16:47:25.0±7.9, 30°.13S×177°.62W, h0^{km}, mb3.3/2, mbtmp3.3/2, MS3.4/1, Error ellipse: s-maj=329.4km s-min=62.3km az=155.0*

*WEL **22** 16:47:56.7±0.9, 38°S±3°×17°7E±°, h3^{km}±3^{km}, M1.9/4, ML2.1/7, MLv1.9/4, Error ellipse: s-maj=5.4km s-min=3.8km az=131.9, confirmed*

ISC 22 16:47:56.5±1.1, **37°.53S**±0°.06×**177°.18E**±0°.04, **h10**^{km}**, n13,** σ**1^{s}63**/16, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSRZ	White Island S	0.01	11	P	Pg	16 47 58.2	-0.1
WIZ	White Island	0.01	92	P	Pg	16 47 57.3	-0.9
WIZ				S	Sg	16 47 58.5	-1.0
HAZ	Te Kaha	0.53	116	P	Pg	16 48 07.5	+0.6
HAZ				S	Sb	16 48 15.5	-0.2
OPRZ	Ohinepanea	0.59	237	P	Pg	16 48 08.0	+0.1
OPRZ				S	Sg	16 48 15.7	+0.1
RUGZ	Raukumara Rang	0.59	138	P	Pg	16 48 08.1	0.0
URZ	Urewera	0.73	184	P	Pg	16 48 10.1	-0.6
URZ				S	Sg	16 48 19.8	-0.6
PKGZ	Pakihiroa	0.79	116	P	Pb	16 48 12.5	+0.1
MWZ	Matawai	0.85	161	P	Pg	16 48 12.7	-0.3
MWZ				S	Sg	16 48 23.9	-0.3
RAGZ	Rawiri	0.99	169	P	Pg	16 48 15.3	-0.2
RPZ	Rata Peaks	7.74	215	LR	LR	16 57 16.5	
	comp=Z,116nm,19.1s,baz=207,slow=36						
ASAR	Alice Springs	39.39	278	P	P	16 55 31.0	+4.5
	0.2nm,0.5s,baz=108,slow=8.2,SNR=1.6						
	0.2nm,0.5s						
WRA	Warramunga Arr	41.05	283	P	P	16 55 37.0	-3.3
	0.3nm,0.4s,baz=111,slow=8.3,SNR=1.9						
	0.3nm,0.4s						
FINES	FINESS Array B	150.04	332	PKPbc	PKPdf	17 07 01.8	-40
	2.9nm,0.9s,baz=46,slow=6.0,SNR=5.0						

*IDC **22** 16:52:35.7±0.7, 10°.22S×152°.10E, h0^{km}, mb4.0/14, mbtmp4.0/16, ML3.8/2, MS3.8/30, Error ellipse: s-maj=23.9km s-min=16.5km az=99.0*

*NEIC **22** 16:52:38.4±1.0, 10°.21S±0°.04×151°.86E±0°.07, h10^{km}±1^{km}, mb4.5/20, Error ellipse: s-maj=13.5km s-min=3.2km az=60.0*

*GCMT **22** 16:52:40.0±0.3, 10°.21S±0°.02×152°.03E±0°.04, h18^{km}±1^{km}, MW4.8/80, Moment Tensor Solution. s19,c20; s80,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.00±.15; $M_{\theta\theta}$1.86±.09; $M_{\phi\phi}$0.13±.08; $M_{r\theta}$0.21±.15; $M_{\theta\phi}$-0.24±.06; $M_{\phi r}$-0.35±.28; Best double couple: $M_0$1.98600×10^{16} NP1:ϕ_s90.00000°,δ42.00000°,λ-102.00000°. NP2: ϕ_s286.00000°,δ49.00000°,λ-79.00000°. Principal axes: T 1.9090, Plg4.0000°, Azm8.0000°; N 0.1520, Plg8.0000°, Azm99.0000°; P -2.0620, Plg81.0000°, Azm253.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 22 16:52:37.5±0.5, **10°.21S**±0°.07×**151°.90E**±0°.07, **h10**^{km}**, n74,** σ**0^{s}96**/50, **mb4.2**/19, **MS3.7**/27, **D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	5.99	3	Pn	Pn	16 54 06.7	+0.4
HNR	Honiara	7.97	85		Pn	16 54 34.9	+1.3
HNR	Honiara	7.97	85	Pn	Pn	16 54 31.0	-2.5
	2.6nm,0.3s,baz=87,slow=13,SNR=5.1						
	67nm,1.1s						
MANU	Manus Island	9.28	331	Pn	Pn	16 54 52.8	+1.3
COEN	Coen	9.31	246	Pn	Pn	16 54 51.2	-0.7
CTAO	Charters Tower	11.23	208		Pn	16 55 17.6	-0.6
JAY	Jayapura	13.49	304	LR	LR	17 01 47.7	
	comp=Z,311nm,18.4s,baz=134,slow=40						
EIDS	Eidsvold	15.10	183	Pn	Pn	16 56 12.2	+1.2
EIDS				IAmb	IAmb	16 56 28.4	
	comp=Z,35nm,1.4s						
SANVU	Saraoutou	15.80	111	Pn	Pn	16 56 21.2	+0.9
SANVU				IAmb	IAmb	16 56 39.4	
	comp=Z,28nm,1.0s						
DZM	Mont Dzumac	18.26	132	LR	LR	17 03 00.1	
	comp=Z,541nm,18.1s,baz=328,slow=34						
WR8	Warramunga Arr	19.37	238	P	P	16 57 03.5	-0.2
WB0	Warramunga Arr	19.38	239	P	P	16 57 03.1	-0.6
WB0				IAmb	IAmb	16 57 22.0	
	comp=Z,18nm,1.3s						
WRA	Warramunga Arr	19.50	238	P	Pn	16 57 07.1	+0.8
	comp=Z,0.3nm,0.3s,baz=63,slow=10,SNR=14						
WRA				LR	LR	17 04 17.4	
	comp=Z,303nm,18.2s,baz=334,slow=36						
	comp=Z,4.4nm,0.8s						
ARMA	Armidale	20.11	181	P	P	16 57 12.2	+0.5
ARMA				IAmb	IAmb	16 57 24.4	
	comp=Z,17nm,1.1s						
INKA	Innaminka	20.35	210	P	P	16 57 14.5	+0.3
MTN	Manton Dam	20.51	261	P	P	16 57 14.8	-1.3
MTN				IAmb	IAmb	16 57 19.8	
	comp=Z,25nm,0.9s						
AS31	Alice Springs	21.76	230		P	16 57 28.8	-0.8
ASAR	Alice Springs	21.77	230		P	16 57 29.0	-0.6
ASAR	Alice Springs	21.77	230	P	P	16 57 31.1	+1.5
	comp=Z,2.4nm,0.6s,baz=61,slow=8.7,SNR=42						
ASAR				LR	LR	17 05 47.1	
	comp=Z,159nm,19.1s,baz=60,slow=36						
	comp=Z,2.4nm,0.6s						
KNRA	Kununurra	23.18	254	P	P	16 57 44.4	-0.2
KNRA				IAmb	IAmb	16 58 06.0	
	comp=Z,16nm,1.1s						
STKA	Stephens Creek	23.58	202		P	16 57 48.6	+0.2
STKA	Stephens Creek	23.58	202	P	P	16 57 48.6	+0.2
	comp=Z,2.9nm,0.6s,baz=340,slow=9.8,SNR=5.2						
STKA				LR	LR	17 06 59.8	
	comp=Z,245nm,19.0s,baz=22,slow=36						
	comp=Z,2.9nm,0.6s						
GUMO	Guam	24.65	343	LR	LR	17 08 02.7	
	comp=Z,79nm,18.1s,baz=158,slow=38						
MSVF	Nonsavu	26.43	109	LR	LR	17 07 11.2	
	comp=Z,175nm,19.0s,baz=360,slow=33						
FITZ	Fitzroy Crossi	26.61	250	P	P	16 58 16.8	+0.4
FITZ	Fitzroy Crossi	26.61	250	LR	LR	17 09 21.6	
	comp=Z,155nm,18.4s,baz=78,slow=38						
URZ	Urewera	35.93	145	LR	LR	17 13 13.3	
	comp=Z,354nm,18.1s,baz=310,slow=35						
RPZ	Rata Peaks	37.30	157	LR	LR	17 13 44.1	
	comp=Z,363nm,19.8s,baz=326,slow=34						
NWAO	Narrogin (SRO)	39.09	229	LR	LR	17 15 08.8	
	comp=Z,161nm,19.9s,baz=92,slow=34						
JOW	Kunigami	43.38	329	LR	LR	17 16 34.2	
	comp=Z,80nm,18.3s,baz=152,slow=33						
JNU	Nakatsue	47.52	336	LR	LR	17 17 21.2	
	comp=Z,33nm,22.0s,baz=128,slow=31						
RAR	Rarotonga	47.62	109	LR	LR	17 17 25.7	
	comp=Z,39nm,20.5s,baz=251,slow=31						
MJAR	Matsushiro Arr	48.26	345	P	P	17 01 18.2	-0.6
	comp=Z,0.8nm,0.8s,baz=170,slow=8.5,SNR=1.5						
	comp=Z,0.8nm,0.8s						
KSRS	Korea Array	52.47	336	P	P	17 01 51.2	+0.6
	comp=Z,0.5nm,0.9s,baz=150,slow=7.7,SNR=5.2						
	comp=Z,0.5nm,0.9s						
KSAR	Wonju Array Be	52.48	336		P	17 01 51.1	+0.4
USRK	Ussuriysk Ar.	57.09	343	P	P	17 02 22.7	-1.3
CM31	Chiang Mai Arr	59.50	298	P	P	17 02 40.8	-0.6
CM31				IAmb	IAmb	17 02 43.5	
	comp=Z,8.5nm,1.4s						
CMAR	Chiang Mai Arr	59.50	298		P	17 02 40.3	-1.2
CMAR	Chiang Mai Arr	59.50	298	P	P	17 02 42.4	+1.0
	comp=Z,0.8nm,0.8s,baz=125,slow=5.5,SNR=7.4						
	comp=Z,0.8nm,0.8s						
CHTO	Chiang Mai	59.65	299		P	17 02 41.4	-1.1
CHTO				IAmb	IAmb	17 02 47.8	
	comp=Z,2.2nm,0.8s						
BJT	Baijiatuau	59.94	329	P	P	17 02 44.5	+0.4
BJT				IAmb	IAmb	17 02 50.1	
	comp=Z,12nm,1.3s						
KLR	Kul'dur	61.78	345	LR	LR	17 26 03.2	
	comp=Z,52nm,21.9s,baz=154,slow=32						
PEA0B	Petropavlovsk-	63.26	4	P	P	17 03 06.0	-0.2
PETK	Petropavlovsk-	63.26	4		P	17 03 06.5	+0.3
PETK	Petropavlovsk-	63.26	4	P	P	17 03 06.3	+0.1
	comp=Z,1.7nm,0.8s,baz=180,slow=1.5,SNR=6.1						
PETK				LR	LR	17 26 09.3	
	comp=Z,35nm,19.8s,baz=161,slow=32						
	comp=Z,1.7nm,0.8s						
SHEM	Shemya Is, Ala	65.52	15	LR	LR	17 28 07.5	
	comp=Z,111nm,20.1s,baz=55,slow=33						
VNDA	Vanda	67.49	178	P	P	17 03 33.5	+0.1
	comp=Z,1.3nm,1.0s,baz=316,slow=3.9,SNR=4.1						
	comp=Z,1.3nm,1.0s						
MA2	Magadan	69.56	359	LR	LR	17 32 43.6	
	comp=Z,30nm,19.7s,baz=157,slow=35						
ULN	Ulaanbaatar	70.14	330	P	P	17 03 51.0	+0.6
ULN				IAmb	IAmb	17 03 53.4	
	comp=Z,5.1nm,1.2s						
SONM	Songino Array	70.45	329		P	17 03 52.6	+0.3
SONM	Songino Array	70.45	329	P	P	17 03 54.3	+2.0
	comp=Z,1.7nm,0.8s,baz=131,slow=6.1,SNR=7.6						
	comp=Z,1.7nm,0.8s						
SEY	Seymchan	72.92	0	LR	LR	17 30 20.1	
	comp=Z,34nm,20.9s,baz=200,slow=31						
LVA	Lava Point	73.30	24	P	P	17 04 10.2	+1.1
QSPA	South Pole Qui	79.78	180	P	P	17 04 46.0	+0.1
QSPA				IAmb	IAmb	17 05 00.1	
	comp=Z,16nm,1.4s						
QSPA	South Pole Qui	79.78	180	P	P	17 04 45.3	-0.6
	comp=Z,5.2nm,0.8s,baz=323,slow=1.1,SNR=31						
	comp=Z,5.2nm,0.8s						
MAW	Mawson	80.27	203	LR	LR	17 37 39.0	
	comp=Z,156nm,19.2s,baz=82,slow=34						
KDAK	Kodiak Island	81.38	27	LR	LR	17 34 42.8	
	comp=Z,61nm,21.2s,baz=235,slow=31						
TIXI	Tiksi	83.11	353	LR	LR	17 41 10.8	
	comp=Z,30nm,19.8s,baz=198,slow=35						
MKAR	Makanchi Array	83.82	320		P	17 05 06.5	-0.8
MKAR	Makanchi Array	83.82	320	P	P	17 05 07.8	+0.5
	comp=Z,2.2nm,0.9s,baz=108,slow=6.3,SNR=11						
	comp=Z,2.2nm,0.9s						
ZALV	Zalesovo Beam	85.15	327	P	P	17 05 13.4	-0.5
	comp=Z,0.6nm,0.5s,baz=128,slow=2.4,SNR=4.1						
ZALV				LR	LR	17 43 39.8	
	comp=Z,47nm,19.7s,baz=92,slow=36						
	comp=Z,0.6nm,0.5s						
D19K	Kuna River	86.00	16	P	P	17 05 19.0	+1.1
C19K	Lookout Ridge	86.01	16	P	P	17 05 19.6	+1.7
ILAR	Eielson Array	87.48	22	P	P	17 05 24.3	-0.8
	comp=Z,1.2nm,0.7s,baz=258,slow=4.6,SNR=14						
ILAR				LR	LR	17 42 11.1	
	comp=Z,49nm,19.6s,baz=230,slow=34						
	comp=Z,1.2nm,0.7s						
KURBB	Kurchatov Arra	87.50	322	P	P	17 05 24.2	-1.3
	comp=Z,0.2nm,0.3s,baz=109,slow=5.5,SNR=1.2						
	comp=Z,0.2nm,0.3s						
BBB	Bella Bella	91.92	37	LR	LR	17 40 14.7	
	comp=Z,46nm,21.2s,baz=244,slow=31						
BVAR	Borovoye Array	93.01	323	LR	LR	17 50 00.1	
	comp=Z,25nm,18.3s,baz=123,slow=37						
INK	Inuvik	93.79	21	LR	LR	17 42 01.1	
	comp=Z,41nm,20.2s,baz=228,slow=32						
NVAR	Mina Array Bea	96.10	52	P	P	17 06 04.8	-1.2
	comp=Z,0.3nm,0.6s,baz=260,slow=5.0,SNR=3.6						
	comp=Z,0.3nm,0.6s						
SNAA	Sanae	96.58	188	LR	LR	17 49 14.9	
	comp=Z,108nm,18.3s,baz=188,slow=35						
PFO	Pinyon Flats O	96.93	57	LR	LR	17 44 07.4	
	comp=Z,43nm,18.9s,baz=64,slow=32						
NEW	Newport	98.18	42	LR	LR	17 42 58.1	
	comp=Z,68nm,21.2s,baz=288,slow=31						
LPAZ	La Paz	132.44	123	PKP	PKPdf	17 11 54.2	+0.2
	comp=Z,1.2nm,0.7s,baz=144,slow=6.2,SNR=5.6						
TORD	Torodi Ar. Bea	150.68	279	PKPbc	PKPbc	17 12 29.5	-1.5
	comp=Z,1.5nm,0.6s,baz=65,slow=3.3,SNR=4.3						

*IDC **22** 17:01:34.4±0.9, 52°.10N×170°.49W, h0^{km}, mb4.1/22, mbtmp4.1/24, ML4.0/2, MS3.0/4, Error ellipse: s-maj=25.2km s-min=15.3km az=167.0*

*AEIC **22** 17:01:38.4±1.1, 52°.0N±0°.2×170°.5W±0°.2, h20^{km}±7^{km}, Error ellipse: s-maj=26.9km s-min=17.0km az=157.0*

*NEIC **22** 17:01:39.5±2.1, 52°.0N±0°.1×170°.51W±0°.05, h40^{km}±8^{km}, mb3.9/110, ML3.9/18, ML3.8(AEIC), Error ellipse: s-maj=15.7km s-min=1.7km az=163.0*

ISC 22 17:01:38.6±0.7, **52°.0N**±0°.1×**170°.53W**±0°.04, **h31**^{km}**, n244,** σ**1^{s}23**/240, **mb4.1**/44, **MS2.8**/3, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	Nikolski High	1.44	45	Pn	Pn	17 02 01.1	-1.4
NIKH				Sn	Sn	17 02 19.9	-0.5
NIKH				IAML		17 02 29.7	
	comp=E,2μm,0.6s						
NIKH				IAML		17 02 30.7	
	comp=N,2μm,0.6s						
NIKH	Nikolski High	1.44	45	P	Pn	17 02 01.3	-1.2
OKSP	Okmok Steeple	1.88	46		Pn	17 02 07.8	-0.8
OKCE	Okmok Cone E	2.05	44		Pn	17 02 11.2	+0.2
OKTU	Okmok Mt. Tuli	2.08	46		Pn	17 02 11.2	-0.1
OKNC	Okmok New Cone	2.09	43		Pn	17 02 12.0	+0.5
OKFG	Magazine Ridge	2.15	47		Pn	17 02 12.5	+0.1
OKFG					Sn	17 02 39.4	+1.4
ATKA	Atka Island	2.27	277		Pn	17 02 14.3	+0.3
ATKA					Sn	17 02 40.6	-0.4
ATKA	Atka Island	2.27	277	P	Pn	17 02 15.0	+1.0
ATKA	Atka Island	2.27	277	S	Sb	17 02 44.2	-2.4
MAPS	Pakushin South	2.85	48		Pn	17 02 22.2	+0.3
MAPS					Sn	17 02 55.3	0.0
MGOD	Makushin Gods	2.88	49		Pn	17 02 23.2	+0.8
MREP	Makushin Rep't	2.94	50		Pn	17 02 24.6	+1.3
MTBL	Makushin Table	3.07	48		Pn	17 02 25.7	+0.6
UNV	Unalaska Valle	3.08	51		Pn	17 02 25.1	0.0
UNV					Sn	17 03 01.2	+0.4
UNV				IAML		17 03 12.7	
	comp=N,429nm,1.0s						
UNV				IAML		17 03 19.5	
	comp=E,248nm,0.7s						
AKRB	Akutan Reef Bi	3.46	49		Pn	17 02 31.2	+0.9
GSCK	Great Sitkin C	3.48	273		Pn	17 02 31.9	+1.2
LVA	Lava Point	3.49	49		Pn	17 02 32.1	+1.3
AKGG	Akutan Green G	3.53	49		Pn	17 02 32.9	+1.6
AKUT	Akutan	3.60	51		Pn	17 02 32.3	+0.1
AKUT				IAML		17 03 40.4	
	comp=E,158nm,0.8s						
AKUT	Akutan	3.60	51	P	Pn	17 02 34.0	+1.8
ADK	Adak	3.81	271		Pn	17 02 36.0	+0.9
ADK				IAML		17 03 41.8	
	comp=E,290nm,0.9s						
ADK				IAML		17 03 45.7	
	comp=E,165nm,0.9s						
ADK	Adak	3.81	271		Sn	17 03 19.3	+0.5
ADK	Adak	3.81	271	P	Pn	17 02 36.3	+1.2
KIWB	Kanaga Island	4.10	271		Pn	17 02 40.2	+1.0
WEBT	Westdahl Beart	4.35	51		Pn	17 02 43.5	+0.9
P08K	Saint George I	4.68	7		Pn	17 02 48.5	+1.5
P08K				IAML		17 04 03.9	
	comp=N,70nm,1.3s						
GANE	Gareloi Northe	5.11	272		Pn	17 02 54.4	+1.4
FALS	False Pass	5.15	53		Pn	17 02 53.8	+0.4
SPIA	Saint Paul Isl	5.22	2		Pn	17 02 56.4	+1.9
SPIA				IAML		17 04 02.9	
	comp=E,102nm,0.9s						
SPIA				IAML		17 04 08.6	
	comp=N,63nm,1.2s						
SDPT	Sand Point	6.87	56	Pn	Pn	17 03 18.2	+1.1
SDPT	Sand Point	6.87	56	P	Pn	17 03 19.6	+2.5
CNBA	Chernabura Isl	7.14	62	Pn	Pn	17 03 21.3	+0.5
CHNA	Chernabura Isl	7.14	62	P	Pn	17 03 22.3	+1.5
M11K	Mekoryuk	8.78	14	Pn	Pn	17 03 44.5	+1.3
O14K	Tigyukauivet M	8.98	32	Pn	Pn	17 03 47.2	+1.1
M13K	Dall Lake	9.36	22		Pn	17 03 52.3	+1.2
N14K	Kuskokwak Cree	9.38	28		Pn	17 03 53.5	+2.0
O15K	Ungalikthiuk R	9.42	36	Pn	Pn	17 03 53.6	+1.5
CHIR	Chirikof Islan	9.61	60	Pn	Pn	17 03 54.5	-0.1
M14K	Bethel	10.00	25		Pn	17 04 00.8	+0.9
P16K	Nushagak River	10.02	40	Pn	Pn	17 04 00.6	+0.3
N15K	Kwethluk River	10.07	31		Pn	17 04 03.1	+2.1
L14K	Kuka Creek	10.33	22		Pn	17 04 05.9	+1.3
O16K	Kokwok River B	10.35	38		Pn	17 04 05.7	+0.9
K13K	Kusilvak Mount	10.49	15		Pn	17 04 08.2	+1.5
SII	Sitkinak Islan	10.60	58	Pn	Pn	17 04 08.0	-0.2
SII	Sitkinak Islan	10.60	58	P	Pn	17 04 09.4	+1.1
ACHA	Angle Creek He	10.71	48	Pn	Pn	17 04 11.0	+1.2
N16K	Nishlik Lake	10.73	33		Pn	17 04 13.2	+3.1
O17K	Koliganek Bris	10.85	39		Pn	17 04 14.9	+3.3
M16K	Timber Creek	11.08	31		Pn	17 04 14.6	-0.2
OHAK	Old Harbor	11.29	55	Pn	Pn	17 04 15.7	-1.9
N17K	Nushagak Hills	11.32	36		Pn	17 04 19.0	+0.9
P18K	Big Mountain,	11.38	43		Pn	17 04 18.7	-0.2
K15K	Wolf Creek Mou	11.44	22		Pn	17 04 23.6	+4.1
J14K	Nanvaranak Lak	11.44	16	Pn	Pn	17 04 21.1	+1.5
L16K	Owhat River	11.47	27		Pn	17 04 20.2	+0.2
O18K	Koktuh Hills	11.65	41		Pn	17 04 22.3	-0.3
Q19K	Cape Douglas,	11.83	47	Pn	Pn	17 04 24.5	-0.6
KDAK	Kodiak Island	11.85	54	Pn	Pn	17 04 24.3	-0.9
KDAK	Kodiak Island	11.85	54	Pn	Pn	17 04 23.5	-1.7
	comp=N,0.5nm,0.3s,baz=225,slow=4.6,SNR=12						
M17K	Holitna River	11.86	32	Pn	Pn	17 04 25.3	-0.1
GAMB	Gambell	11.86	357	Pn	Pn	17 04 25.6	+0.3
N18K	Kilae Creek	11.90	37	Pn	Pn	17 04 24.9	-1.1
L17K	Donlin	12.15	28		Pn	17 04 33.5	+4.1
M18K	Stony River	12.47	34		Pn	17 04 37.2	+3.5
J16K	Anvik River	12.51	21	Pn	Pn	17 04 34.1	-0.1
N19K	Bonanza Creek	12.52	39		Pn	17 04 33.7	-0.8
K17K	Iditarod	12.61	27		Pn	17 04 34.2	-1.4
L18K	Granite Mounta	12.70	31		Pn	17 04 35.7	-1.2
J17K	VABM Dome	12.96	23	Pn	Pn	17 04 39.2	-1.3
CNPM	China Poot	13.21	47	Pn	Pn	17 04 41.1	-2.7
M19K	Big River Lodg	13.25	35		Pn	17 04 42.5	-1.9
L19K	White Mountain	13.28	33		Pn	17 04 42.6	-2.2
J18K	Innoko River	13.64	27		Pn	17 04 53.6	+3.8
TNA	Tin City	13.70	5	Pn	Pn	17 04 52.2	+1.7
F15K	North Star Dit	14.10	10	Pn	Pn	17 04 58.7	+2.7
SLKM	Skilak Lake	14.11	45	Pn	Pn	17 04 56.4	+0.3
SKT	Skwentna	14.36	38		Pn	17 05 00.8	+1.3
K20K	Telida	14.36	31		Pn	17 05 00.1	+0.6
J19K	Poorman	14.36	27		Pn	17 05 00.7	+1.2
SUA	Susitna One	14.38	41		Pn	17 05 00.1	+0.3
PPLA	Purkeypile	14.68	35	Pn	Pn	17 05 04.3	+0.3
J20K	Nowinta River	14.93	29		Pn	17 05 07.5	+0.3
CAST	Castle Rocks	15.05	33		Pn	17 05 09.5	+0.6
CAST				IAmb	IAmb	17 05 21.4	
	comp=Z,5.1nm,0.6s						
PWL	Port Wells	15.10	45	Pn	Pn	17 05 07.6	-1.9
PWL				IAmb	IAmb	17 05 27.2	
	comp=Z,8.2nm,0.9s						
P23K	Montague Islan	15.17	49	Pn	Pn	17 05 07.8	-2.6
G18K	Tagagawik	15.21	19	Pn	Pn	17 05 10.2	-0.7
G18K				IAmb	IAmb	17 05 21.0	
	comp=Z,5.0nm,1.0s						
GHO	Glory Hole Cre	15.28	42		Pn	17 05 11.0	-1.0
GHO				IAmb	IAmb	17 05 24.8	
	comp=Z,7.2nm,1.1s						
KTH	Kantishna Hill	15.54	34		Pn	17 05 15.1	-0.2
KTH				IAmb	IAmb	17 05 53.2	
	comp=Z,9.1nm,1.2s						
SML	Sawmill	15.54	42		Pn	17 05 14.5	-0.8
SML				IAmb	IAmb	17 05 40.8	
	comp=Z,11nm,1.1s						
GLI	Glacier Island	15.66	46	Pn	Pn	17 05 16.0	-0.7
TRF	Thorofare Moun	15.70	35	Pn	Pn	17 05 16.5	-1.0
HIN	Hinchinbrook I	15.74	48	Pn	Pn	17 05 16.2	-1.5
BPAW	Bear Paw Mtn.	15.87	32		Pn	17 05 20.8	+1.2
BPAW				IAmb	IAmb	17 05 35.9	
	comp=Z,6.0nm,0.8s						
FID	Port Fidalgo	15.88	47	Pn	Pn	17 05 18.1	-1.5
FID				IAmb	IAmb	17 05 20.5	
	comp=Z,16nm,1.3s						
SCM	Sheep Creek Mo	15.97	43	P	Pn	17 05 19.2	-1.7
RND	Reindeer	16.19	37	Pn	Pn	17 05 23.2	-0.5
MLY	Manley	16.57	30		Pn	17 05 27.8	-0.7
RAGM	Ragged Mountai	16.58	49	Pn	Pn	17 05 26.8	-1.8
M24K	Tolsona, Glenn	16.59	43	Pn	Pn	17 05 27.6	-1.1
HMT	Hamilton	16.76	50	Pn	Pn	17 05 29.2	-1.6
HMT				IAmb	IAmb	17 05 47.0	
	comp=Z,6.9nm,0.8s						
F20K	Avaraart Lake	16.81	20	Pn	Pn	17 05 31.2	-0.1
BMRM	Bremner River	16.81	47	Pn	Pn	17 05 30.7	-0.8
BMRM				IAmb	IAmb	17 06 08.1	
	comp=Z,7.6nm,1.0s						
BERG	Berg Lake	17.04	50	Pn	Pn	17 05 33.2	-1.2
BERG				IAmb	IAmb	17 06 02.0	
	comp=Z,13nm,1.0s						
N25K	Chitina, Valde	17.05	45	Pn	Pn	17 05 32.9	-1.6
N25K				IAmb	IAmb	17 05 51.1	
	comp=Z,8.6nm,1.3s						
I23K	Minto, Yukon-K	17.09	31		Pn	17 05 33.8	-1.1
PAX	Paxson	17.27	41	Pn	Pn	17 05 35.8	-1.5
CCB	Clear Creek Bu	17.30	34	Pn	Pn	17 05 35.6	-1.8
C18K	Utukok River	17.32	12		Pn	17 05 37.7	-0.2
C18K				IAmb	IAmb	17 05 58.1	
	comp=Z,15nm,1.2s						
GLB	Gilahina Butte	17.34	46	Pn	Pn	17 05 36.5	-1.7
GLB				IAmb	IAmb	17 05 45.4	
	comp=Z,5.3nm,0.7s						
CRQM	Cirque	17.42	49	Pn	Pn	17 05 38.3	-0.9
CRQM				IAmb	IAmb	17 05 48.8	
	comp=Z,8.9nm,0.7s						
VRDI	Verde Repeater	17.43	47	Pn	Pn	17 05 37.5	-1.8
HDA	Harding Lake	17.46	35	P	Pn	17 05 39.5	+0.1
WAX	Waxell Ridge	17.46	50	Pn	Pn	17 05 38.4	-1.2
WAX				IAmb	IAmb	17 05 49.2	
	comp=Z,12nm,1.0s						
H23K	Yukon River	17.48	29	P	Pn	17 05 39.6	-0.2
D19K	Kuna River	17.62	15		Pn	17 05 40.8	-0.7
D19K				IAmb	IAmb	17 05 47.4	
	comp=Z,11nm,1.4s						
ILAR	Eielson Array	17.69	34	P	Pn	17 05 41.3	-1.0
	comp=Z,0.2nm,0.3s,baz=241,slow=10,SNR=6.2						
	comp=Z,0.4nm,0.5s						
G23K	Bananza Creek	17.96	27		Pn	17 05 46.1	+0.4
C19K	Lookout Ridge	17.96	13		P	17 05 46.2	+0.2
C19K				IAmb	IAmb	17 06 01.8	
	comp=Z,16nm,1.4s						
H24K	Noodor Dome	18.01	31	P	Pn	17 05 46.3	0.0
M26K	Nabesna, AK	18.06	44	P	Pn	17 05 46.9	0.0
GRNC	Granite Creek	18.06	50	P	Pn	17 05 46.4	-0.8
GRNC				IAmb	IAmb	17 05 55.9	
	comp=Z,5.2nm,0.8s						
D20K	Etivluk River	18.07	16	P	P	17 05 49.0	+1.8
BARN	Barnard Glacie	18.20	49	P	Pn	17 05 49.6	+0.7
BARN				IAmb	IAmb	17 05 55.5	
	comp=Z,22nm,1.5s						
TABL	Table Mountain	18.28	51	P	P	17 05 49.6	-0.1
TABL				IAmb	IAmb	17 06 01.5	
	comp=Z,9.5nm,0.8s						
CTGM	Chitina Glacie	18.33	49	P	P	17 05 48.5	-1.7
CTGM				IAmb	IAmb	17 05 56.9	
	comp=Z,9.0nm,1.0s						
SCRK	Sand Creek	18.34	39	P	P	17 05 48.6	-1.6
M27K	Edge Creek, AK	18.53	45	P	P	17 05 51.6	-0.8
M27K				IAmb	IAmb	17 06 05.3	
	comp=Z,5.3nm,0.9s						
E22K	Anaktuvuk Pass	18.57	22		P	17 05 53.0	+0.3
PRP	Porcupine Dome	18.59	34	P	P	17 05 53.1	0.0
G24K	Hadweenzic Riv	18.69	29		P	17 05 53.2	-0.8
G24K				IAmb	IAmb	17 05 58.5	
	comp=Z,5.7nm,0.9s						
PET	Petropavlovsk	18.73	285	P	P	17 05 54.1	-0.4
J26L	Joseph Creek	18.75	38		P	17 05 53.4	-1.4
J26L				IAmb	IAmb	17 06 03.8	
	comp=Z,4.2nm,0.8s						
BCAR	Beaver Creek A	18.83	43	P	P	17 05 54.4	-1.3
D22K	Ayikyak River	18.98	20	P	P	17 05 56.4	-0.7

D22K				IAmb	IAmb	17 06 12.7	
	comp=Z,12nm,1.4s						
E23K	Chandalar	19.05	24	P	P	17 05 57.8	-0.2
F24K	Squaw Lake	19.12	27		P	17 05 58.5	-0.3
F24K				IAmb	IAmb	17 06 07.9	
	comp=Z,4.3nm,0.8s						
B20K	Meade River	19.14	14	P	Pn	17 05 59.8	-0.1
B21K	Ikpikpuk River	19.22	17	P	P	17 06 00.2	+0.5
B21K				IAmb	IAmb	17 06 17.0	
	comp=Z,3.8nm,0.7s						
PEA0B	Petropavlovsk-	19.28	286		P	17 06 00.5	-0.1
PETK	Petropavlovsk-	19.28	286	P	Pn	17 06 00.9	-0.8
	comp=Z,6.6nm,0.3s,baz=83,slow=14,SNR=29						
PETK				LR	LR	17 13 48.4	
	comp=Z,28nm,20.0s,baz=96,slow=38						
	comp=Z,15nm,0.4s						
I26K	Coal Creek Min	19.31	36		P	17 05 59.5	-1.3
I26K				IAmb	IAmb	17 06 05.3	
	comp=Z,4.6nm,0.6s						
E24K	Your Creek	19.35	25	P	P	17 06 01.5	+0.2
D23K	Nanushuk River	19.48	22	P	P	17 06 03.3	+0.7
O29M	Mount Kennedy	19.49	52	P	P	17 06 03.1	+0.2
TOLK	Toolik Lake Re	19.49	23	P	P	17 06 03.1	+0.3
TOLK				IAmb	IAmb	17 06 24.7	
	comp=Z,11nm,1.4s						
F25K	Christian Rive	19.82	28		P	17 06 06.2	-0.2
F25K				IAmb	IAmb	17 06 14.0	
	comp=Z,4.0nm,0.9s						
G26K	Porcupine Rive	20.00	31	P	P	17 06 08.4	+0.2
G26K				IAmb	IAmb	17 06 27.1	
	comp=Z,5.1nm,0.9s						
BMAR	Burnt Mountain	20.03	30	P	P	17 06 09.5	+0.8
M29M	Somme Creek	20.06	46	P	P	17 06 09.1	0.0
M29M				IAmb	IAmb	17 06 15.1	
	comp=Z,4.4nm,0.7s						
HYT	Haines Junctio	20.11	51		P	17 06 09.0	-0.7
C23K	Itkillik River	20.18	20	P	P	17 06 11.3	+1.1
C23K				IAmb	IAmb	17 06 16.5	
	comp=Z,5.9nm,0.9s						
E25K	Arctic Village	20.18	27	P	P	17 06 10.9	+0.5
DAWY	Dawson	20.21	41	P	P	17 06 10.2	-0.4
F26K	Sheenjek River	20.33	29	P	P	17 06 12.0	+0.1
H27K	Steamboat Moun	20.36	34		P	17 06 12.0	-0.2
H27K				IAmb	IAmb	17 06 19.8	
	comp=Z,4.7nm,1.1s						
L29M	L29M	20.41	44		P	17 06 12.9	+0.1
L29M				IAmb	IAmb	17 06 19.6	
	comp=Z,5.3nm,0.9s						
N30M	Aishikik Lake	20.44	49	P	P	17 06 13.3	+0.1
C24K	Franklin Bluff	20.52	22	P	P	17 06 13.6	-0.2
C24K				IAmb	IAmb	17 06 52.9	
	comp=Z,5.2nm,1.1s						
I28M	Miner Creek	20.56	37		P	17 06 13.4	-1.1
I28M				IAmb	IAmb	17 06 18.5	
	comp=Z,3.7nm,0.7s						
G27K	Doyon Strip	20.62	33	P	P	17 06 14.9	-0.1
O30N	Mendenhall	20.78	51	P	P	17 06 17.2	+0.3
O30N				IAmb	IAmb	17 06 45.4	
	comp=Z,4.0nm,0.8s						
D25K	Kavik River	20.79	24	P	P	17 06 18.0	+1.2
SIT	Sitka	20.90	62	P	P	17 06 18.7	+0.6
K29M	Barlow Dome	20.90	43		P	17 06 18.4	+0.2
K29M				IAmb	IAmb	17 06 24.4	
	comp=Z,4.3nm,0.7s						
SKAG	Skagway	20.99	55	P	P	17 06 19.3	+0.3
N31M	Braeburn, Yuko	21.06	50	P	P	17 06 21.3	+1.4
I29M	Ogilvie Camp,	21.14	38	P	P	17 06 19.0	-1.7
E27K	Coleen River	21.40	30	P	P	17 06 22.8	-0.6
H29M	Whitestone	21.48	36		P	17 06 23.2	-1.1
H29M				IAmb	IAmb	17 06 33.1	
	comp=Z,6.4nm,0.8s						
F28M	Old Crow	21.63	32	P	P	17 06 23.6	-2.3
J30M	Hart River	21.63	41		P	17 06 23.8	-2.3
J30M				IAmb	IAmb	17 06 30.7	
	comp=Z,2.9nm,0.6s						
C27K	Jago River	21.68	25	P	P	17 06 26.7	+0.3
C27K				IAmb	IAmb	17 07 01.0	
	comp=Z,2.8nm,0.8s						
P32M	Atlin	21.82	55		P	17 06 27.4	-0.6
P32M				IAmb	IAmb	17 06 33.2	
	comp=Z,7.0nm,0.8s						
I30M	Mount Dempster	21.84	39		P	17 06 26.2	-2.1
I30M				IAmb	IAmb	17 06 31.4	
	comp=Z,3.8nm,0.8s						
M31M	Drury Creek, Y	21.85	48	P	P	17 06 27.6	-0.7
M31M				IAmb	IAmb	17 06 36.7	
	comp=Z,3.4nm,0.6s						
G29M	Pine Creek	21.92	35	P	P	17 06 27.7	-1.3
EPYK	Eagle Plains	22.15	37	P	P	17 06 30.0	-1.5
D27M	Malcolm River	22.20	28		P	17 06 32.6	+0.6
D27M				IAmb	IAmb	17 06 36.9	
	comp=Z,3.4nm,0.7s						
E28M	Babbage River	22.27	30	P	P	17 06 34.1	+1.4
E28M				IAmb	IAmb	17 06 36.6	
	comp=Z,2.6nm,0.7s						
P33M	Teslin, Yukon	22.32	54		P	17 06 32.9	-0.5
P33M				IAmb	IAmb	17 06 41.7	
	comp=Z,4.1nm,0.8s						
SEY	Seymchan	22.42	314	LR	LR	17 15 23.4	
	comp=Z,88nm,19.5s,baz=106,slow=37						
Q32M	Nakina River	22.53	57		P	17 06 35.4	-0.4
E29M	Blow River	22.67	31	P	P	17 06 34.9	-2.1
E29M				IAmb	IAmb	17 06 40.2	
	comp=Z,2.7nm,0.7s						
MA2	Magadan	22.78	305	P	P	17 06 37.7	-0.5
MA2				IAmb	IAmb	17 06 40.2	
	comp=Z,5.4nm,0.8s						
MA2	Magadan	22.78	305	LR	LR	17 15 40.4	
	comp=Z,38nm,19.9s,baz=82,slow=37						
H31M	Peel River	22.84	39	P	P	17 06 36.0	-2.8
H31M				IAmb	IAmb	17 06 57.0	
	comp=Z,8.3nm,1.4s						
F30M	Barrier River	23.01	34	P	P	17 06 40.7	+0.2
F30M				IAmb	IAmb	17 06 43.4	
	comp=Z,3.4nm,0.9s						
R33M	Jennings River	23.21	56		P	17 06 45.1	+2.3
G31M	Satah River	23.27	36	P	P	17 06 42.5	-0.5
G31M				IAmb	IAmb	17 07 15.8	
	comp=Z,3.4nm,0.9s						
MMPY	Sheldon Lake,	23.35	48		P	17 06 43.9	-0.2
F31M	Tsiigehtchic	23.66	35	P	P	17 06 46.0	-0.8
F31M				IAmb	IAmb	17 06 54.0	
	comp=Z,4.7nm,1.1s						
PGC	Sidney	29.84	77	P	P	17 07 42.1	-0.6
YKAW3	Yellowknife Wh	31.04	48	P	P	17 07 54.1	+1.0
YKAW3				IAmb	IAmb	17 08 32.4	
	comp=Z,3.5nm,1.0s						
YKA	Yellowknife Ar	31.05	48	P	P	17 07 55.0	+1.7
YKAW1	Yellowknife Wh	31.10	48	P	P	17 07 54.2	+0.4
YKAW1				IAmb	IAmb	17 08 30.3	
	comp=Z,4.7nm,1.0s						
ASAJ	Asahikawa	31.83	275	LR	LR	17 21 53.4	
	comp=Z,19nm,19.8s,baz=172,slow=38						
H11N2	WAKE ISLAND Hy	36.70	217	T	T	17 48 02.6	
	baz=28,slow=76,SNR=19						
H11N3	WAKE ISLAND Hy	36.70	217	T	T	17 48 04.4	
	baz=28,slow=76,SNR=16						
H11N1	WAKE ISLAND Hy	36.71	217	T	T	17 47 59.8	
	baz=28,slow=76,SNR=22						
H11S1	WAKE ISLAND Hy	37.89	217	T	T	17 49 33.1	
	baz=22,slow=76,SNR=59						
H11S2	WAKE ISLAND Hy	37.90	217	T	T	17 49 31.1	
	baz=22,slow=76,SNR=58						
H11S3	WAKE ISLAND Hy	37.90	217	T	T	17 49 32.2	
	baz=22,slow=76,SNR=57						
MJAR	Matsushiro Arr	38.96	267	P	P	17 09 03.1	+1.3
	comp=Z,0.6nm,0.5s,baz=311,slow=25,SNR=8.7						
	comp=Z,0.6nm,0.5s						
PDAR	Pinedale Array	41.19	78	P	P	17 09 20.0	-0.4
	comp=Z,0.9nm,0.7s,baz=310,slow=9.0,SNR=9.9						
	comp=Z,0.9nm,0.7s						
KSRS	Korea Array	44.74	276	P	P	17 09 49.7	+0.9
	comp=Z,0.7nm,0.6s,baz=59,slow=7.4,SNR=4.7						
	comp=Z,0.7nm,0.6s						
SPITS	Spitsbergen Ar	50.05	358	P	P	17 10 28.7	-1.0
	comp=Z,0.9nm,0.4s,baz=45,slow=5.0,SNR=9.6						
	comp=Z,0.9nm,0.4s						
SONM	Songino Array	50.89	300	P	P	17 10 37.0	+0.4
	comp=Z,1.4nm,0.5s,baz=56,slow=6.3,SNR=7.0						
	comp=Z,1.4nm,0.5s						
TXAR	Lajitas Array	53.47	88	P	P	17 10 56.3	+0.4
	comp=Z,0.4nm,0.6s,baz=292,slow=4.6,SNR=5.3						
	comp=Z,0.4nm,0.6s						
SCHQ	Schefferville	56.22	43	P	P	17 11 14.8	-0.5
	comp=Z,5.4nm,0.9s,baz=305,slow=7.4,SNR=4.1						
	comp=Z,5.4nm,0.9s						
ZALV	Zalesovo Beam	57.23	317	P	P	17 11 21.2	-1.3
	comp=Z,0.5nm,0.4s,baz=20,slow=4.6,SNR=1.8						
ZALV				PcP	PcP	17 12 17.0	+0.3
	comp=Z,0.8nm,0.4s,baz=32,slow=3.8,SNR=2.7						
	comp=Z,0.5nm,0.4s						
ARCES	ARCESS Array B	58.24	353	P	P	17 11 28.7	-0.7
	comp=Z,1.7nm,0.5s,baz=7.8,slow=9.8,SNR=9.5						
	comp=Z,1.7nm,0.5s						
KURK	Kurchatov	62.20	318		P	17 11 56.1	-0.6
KURBB	Kurchatov Arra	62.30	318	P	P	17 11 57.3	-0.1
	comp=Z,1.6nm,0.7s,baz=45,slow=7.1,SNR=14						
	comp=Z,1.6nm,0.7s						
MKAR	Makanchi Array	63.56	313	P	P	17 12 04.7	-1.2
MKAR	Makanchi Array	63.56	313	P	P	17 12 05.5	-0.4
	comp=Z,0.6nm,0.4s,baz=51,slow=6.6,SNR=20						
	comp=Z,0.6nm,0.4s						
BVAR	Borovoye Array	63.61	324	P	P	17 12 06.3	+0.2
	comp=Z,3.4nm,0.4s						
	comp=Z,3.4nm,0.4s						
BRVK	Borovoye	63.62	324	P	P	17 12 05.3	-0.8
ARTI	Arti	64.73	332		P	17 12 12.0	-1.4
FINES	FINESS Array B	66.16	351	P	P	17 12 22.1	-0.4
	comp=Z,1.7nm,0.4s,baz=18,slow=5.5,SNR=16						
	comp=Z,1.7nm,0.4s						
NB2	NORSAR Subarra	67.34	359	P	P	17 12 30.5	+0.4
	comp=Z,0.7nm,0.5s,baz=2.1,slow=6.5						
NOA	NORSAR Array B	67.34	359	P	P	17 12 30.5	+0.4
	comp=Z,0.8nm,0.5s,baz=2.0,slow=6.3,SNR=5.9						
	comp=Z,0.8nm,0.5s						
HFS	Hagfors	68.20	358	P	P	17 12 35.6	+0.1
	comp=Z,3.7nm,0.3s,baz=29,slow=3.4,SNR=37						
	comp=Z,3.7nm,0.3s						
EKA	Eskdalemuir Ar	72.56	8	P	P	17 13 02.2	0.0
	comp=Z,0.4nm,0.5s,baz=343,slow=4.5,SNR=6.7						
	comp=Z,0.4nm,0.5s						
CMAR	Chiang Mai Arr	76.00	282	P	P	17 13 23.4	+0.6
	comp=Z,1.6nm,0.7s,baz=26,slow=6.6,SNR=17						
	comp=Z,1.6nm,0.7s						
AKASG	Malin Array Be	76.35	347	P	P	17 13 23.3	-0.9
	comp=Z,1.1nm,0.5s,baz=18,slow=5.9,SNR=9.2						
	comp=Z,1.1nm,0.5s						
MORC	Moravsky Berou	78.40	355	*e*P	P	17 13 34.7	-1.1
VRAC	Vranov	78.92	355	*e*P	P	17 13 39.0	+0.3
KRUC	Moravsky	79.18	355	*e*P	P	17 13 39.9	-0.1
GERES	GERESS Array B	79.50	357	P	P	17 13 42.6	+0.7
	comp=Z,1.2nm,0.6s,baz=15,slow=5.5,SNR=9.3						
	comp=Z,1.2nm,0.6s						
CONA	Conrad Observa	80.33	356	*i* P	P	17 13 47.7	+1.2
	comp=Z,1.8nm,0.6s						
RONA	Rosalia, Austr	80.54	355	*i* PcP	P	17 13 49.2	+1.6
	comp=Z,1.0nm,0.5s						
WTTA	Wattenberg	81.13	359	*i* PcP	P	17 13 52.0	+1.2
	comp=Z,3.5nm,0.7s						
SQTA	Sankt Quirin	81.18	359	*i* PcP	P	17 13 52.4	+1.4
	comp=Z,3.8nm,0.8s						
MYKA	Terra Mystica	81.72	357	*i* PcP	P	17 13 55.0	+1.2
	comp=Z,4.4nm,1.1s						
OBKA	Obir	81.81	356	*i* PcP	P	17 13 55.8	+1.5
	comp=Z,8.4nm,1.1s						
RDO	Rodhopi	86.22	348	P	P	17 14 16.8	0.0
BRTR	Keskin Array B	86.29	342	P	P	17 14 17.8	+0.5
	comp=Z,0.7nm,0.8s,baz=86,slow=1.3,SNR=5.2						
	comp=Z,0.7nm,0.8s						
ESDC	Sonseca Array	87.99	10	P	P	17 14 26.3	+0.8
	comp=Z,0.8nm,0.7s,baz=323,slow=7.3,SNR=5.2						
	comp=Z,0.8nm,0.7s						
ASAR	Alice Springs	89.59	229	P	P	17 14 33.4	+0.4
	comp=Z,1.2nm,0.9s,baz=24,slow=4.8,SNR=9.8						
	comp=Z,1.2nm,0.9s						
QSPA	South Pole Qui	141.73	180	PKhKP	PKPpre	17 20 59.6	
	comp=Z,1.3nm,1.0s,baz=317,slow=1.9,SNR=10.0						
BOSA	Boshof	153.86	327	PKPbc	PKiKP	17 21 35.3	+0.7
	comp=Z,3.0nm,1.0s,baz=121,slow=0.9,SNR=6.6						

IDC 22 17:27:51.7±2.2, 31°.37S×177°.33W, h0^{km}, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=63.9km s-min=43.7km az=43.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.64	268	P	P	17 35 58.9	+0.7
	0.3nm,0.9s,baz=112,slow=8.4,SNR=4.7						
	0.3nm,0.9s						
WRA	Warramunga Arr	44.71	273	P	P	17 36 05.6	-1.2
	0.3nm,0.5s,baz=113,slow=8.0,SNR=2.0						
	0.3nm,0.5s						
QSPA	South Pole Qui	58.74	180	P	P	17 37 50.9	-0.3
	0.6nm,1.0s,baz=120,slow=8.0,SNR=1.2						
	0.6nm,1.0s						
FINES	FINESS Array B	146.25	340	PKPbc	PKPbc	17 47 32.9	-0.5
	2.0nm,0.8s,baz=48,slow=2.1,SNR=5.0						

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*UPP **22** 17:56:21.8±0.1, 67°.19N×20°.65E, h0^{km}, ML2.7, Confirmed Induced event*

*IDC **22** 17:56:22.8±0.9, 67°.13N×20°.90E, h0^{km}, mbtmp3.0/4, ML2.2/4, Error ellipse: s-maj=14.8km s-min=6.4km az=115.0*

*DNK **22** 17:56:22.2±0.5, 67°.18N×20°.65E, h0^{km}, ML2.7(UPP), Suspected explosion*

*HEL **22** 17:56:22.5±0.1, 67°.18N×20°.63E, h1^{km}, ML2.1, ML2.7(UPP), Confirmed Induced event*

ISC 22 17:56:20.5±0.7, 67°.19N±0°.02×20°.75E±0°.02, h0^{km}, n41, σ0ˢ.94/71, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.10	228	P	Pg	17 56 23.5	+1.2
DUNU				S	Sg	17 56 24.6	+1.1
DUNU	Dundret	0.10	228	P	Pg	17 56 23.5	+1.2
DUNU				S	Sg	17 56 24.6	+1.1
DUNU	Dundret	0.10	228	*i* P	Pg	17 56 23.5	+1.2
DUNU				*i* S	Sg	17 56 24.6	+1.1
MASU	Masugnsbyn	0.55	60	P	Pb	17 56 33.2	+0.2
MASU				S	Sb	17 56 41.3	-0.2
MASU	Masugnsbyn	0.55	60	P	Pb	17 56 33.2	+0.2
MASU				S	Sb	17 56 41.3	-0.2
MASU	Masugnsbyn	0.55	60	*i* P	Pb	17 56 33.2	+0.2
MASU				*i* S	Sb	17 56 41.3	-0.2
RATU	Laukkuluspa	0.78	326	P	Pg	17 56 36.0	+0.6
RATU				S	Sg	17 56 46.3	+0.8
RATU	Laukkuluspa	0.78	326	P	Pg	17 56 36.0	+0.6
RATU				S	Sg	17 56 46.3	+0.8
RATU	Laukkuluspa	0.78	326	*i* P	Pg	17 56 36.0	+0.6
RATU				*i* S	Sg	17 56 46.3	+0.8
ERTU	Ertsjaerv	0.85	138	P	Pb	17 56 38.0	-0.1
ERTU				S	Sb	17 56 49.8	-0.3
ERTU	Ertsjaerv	0.85	138	P	Pb	17 56 38.0	-0.1
ERTU				S	Sb	17 56 49.8	-0.3
ERTU	Ertsjaerv	0.85	138	*e*P	Pb	17 56 38.0	-0.1
ERTU				*e*S	Sb	17 56 49.7	-0.3
SALU	Saltoluokta	0.89	284	P	Pg	17 56 37.8	+0.3
SALU				S	Sg	17 56 49.4	+0.3
SALU	Saltoluokta	0.89	284	*e*P	Pg	17 56 37.9	+0.3
SALU	Saltoluokta	0.89	284	P	Pg	17 56 37.8	+0.3
SALU				S	Sg	17 56 49.4	+0.3
SALU	Saltoluokta	0.89	284	*i* P	Pg	17 56 37.8	+0.3
SALU				*i* S	Sg	17 56 49.4	+0.3
PAJU	Pajala	0.94	99	P	Pb	17 56 39.9	+0.3
PAJU				S	Sb	17 56 53.2	+0.7
PAJU	Pajala	0.94	99	P	Pb	17 56 39.9	+0.3
PAJU				S	Sb	17 56 53.2	+0.7
PAJU	Pajala	0.94	99	*e*P	Pb	17 56 39.9	+0.3
PAJU				*e*S	Sb	17 56 53.1	+0.5
LANU	Lannavaara	0.99	28	*e*P	Pb	17 56 41.0	+0.6
LANU				*e*S	Sb	17 56 54.9	+0.9
HARU	Harads	1.03	175	P	Pg	17 56 40.7	+0.5
HARU	Harads	1.03	175	P	Pg	17 56 40.7	+0.5
HARU	Harads	1.03	175	*e*P	Pg	17 56 40.7	+0.5
KLF	Kolari	1.25	86	*e*P	Pn	17 56 45.5	+0.4
KLF				*e*S	Sn	17 57 02.7	+0.1
KLF				MSG		17 57 06.5	
	comp=Z,11nm,0.2s						
HEF	Hetta	1.65	41	*e*P	Pb	17 56 52.1	+0.4
HEF	Hetta	1.65	41	*e*P	Pb	17 56 52.0	+0.2
HEF				*e*S	Sg	17 57 14.0	+0.6
HEF				MSG		17 57 17.2	
	comp=Z,8.9nm,0.2s						
KALU	Kalix	1.69	141	P	Pg	17 56 52.8	0.0
KALU	Kalix	1.69	141	P	Pg	17 56 52.8	0.0
KALU	Kalix	1.69	141	*e*P	Pg	17 56 52.8	0.0
KALU				*e*S	Sg	17 57 15.4	+0.7
SJUU	Sjulsmark	1.72	168	P	Pb	17 56 53.0	+0.1
SJUU	Sjulsmark	1.72	168	P	Pb	17 56 53.0	+0.1
SJUU	Sjulsmark	1.72	168	*e*P	Pb	17 56 53.0	+0.1
TOF	Tornio	1.81	126	*e*P	Pg	17 56 55.0	0.0
TOF				*e*S	Sg	17 57 19.1	+0.7
TOF				MSG		17 57 20.9	
	comp=Z,13nm,0.2s						
KIF	Kilpisjarvi	1.83	1	*e*P	Pb	17 56 55.2	+0.5
KIF				*e*S	Sg	17 57 19.9	+0.9
RNF	Rovaniemi	2.15	103	*e*P	Pb	17 57 00.4	+0.1
RNF				*e*SG	Sg	17 57 29.5	-0.1
RNF				MSG		17 57 30.5	
	comp=Z,21nm,0.2s						
TRO	Tromso	2.55	345	*e*PB	Pb	17 57 06.9	-0.1
TRO				*e*S	Sb	17 57 37.5	-1.2
ARCES	ARCESS Array B	2.94	35	Pn	Pn	17 57 10.8	+2.4
	comp=Z,0.6nm,0.3s,baz=215,slow=13,SNR=32						
ARCES				Sn	Sn	17 57 47.0	+2.5
	comp=Z,1.3nm,0.3s,baz=216,slow=22,SNR=10						
ARCES				Lg	Lg	17 57 57.3	
	comp=Z,1.3nm,0.3s,baz=222,slow=28,SNR=7.3						
	comp=Z,1.8nm,0.3s						
FINES	FINESS Array B	6.21	156	Pn	Pn	17 57 55.5	+2.2
	comp=Z,0.2nm,0.3s,baz=343,slow=14,SNR=12						
FINES				Sn	Sn	17 59 04.5	-0.4
	comp=Z,0.5nm,0.3s,baz=347,slow=22,SNR=6.3						
FINES				Lg	Lg	17 59 34.8	
	comp=Z,0.9nm,0.3s,baz=345,slow=26,SNR=7.6						
	comp=Z,1.1nm,0.5s						
NOA	NORSAR Array B	7.44	219	Pn	Pn	17 58 10.0	-0.2
	baz=14,slow=16,SNR=3.4						
NOA				Sn	Sn	17 59 35.0	-0.2
	baz=336,slow=19,SNR=1.5						
	comp=Z,0.7nm,0.9s						
HFS	Hagfors	7.74	207	Pn	Pn	17 58 14.4	+0.2
	comp=Z,0.2nm,0.3s,baz=22,slow=13,SNR=7.1						
HFS				Sn	Sn	17 59 39.9	-2.5
	comp=Z,0.3nm,0.3s,baz=32,slow=23,SNR=5.7						
HFS				Lg	Lg	18 00 24.1	
	comp=Z,0.3nm,0.3s,baz=25,slow=29,SNR=2.5						
	comp=Z,1.5nm,0.8s						
SPITS	Spitsbergen Ar	11.12	355	Pn	Pn	17 58 56.2	-4.2
	baz=181,slow=12						

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*IDC **22** 17:57:15.1±1.0, 10°.20S×152°.08E, h0^{km}, mb3.8/8, mbtmp3.8/10, ML3.4/1, Error ellipse: s-maj=32.6km s-min=20.5km az=109.0*

ISC 22 17:57:21.1±0.9, 10°.2S±0°.1×151°.8E±0°.1, h35^{km}, n10, σ1ˢ.23/11, mb3.8/8, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.61	279	Pn	Pn	17 58 29.1	+0.7
	15nm,1.0s,baz=213,slow=11,SNR=2.1						
PMG				Sn	Sn	17 59 18.6	-2.2
	1.4nm,0.3s,baz=273,slow=6.5,SNR=2.3						
WRA	Warramunga Arr	19.42	238	P	Pn	18 01 45.8	-0.2
	0.1nm,0.3s,baz=63,slow=11,SNR=6.5						
	2.4nm,1.0s						
ASAR	Alice Springs	21.70	230	P	P	18 02 10.4	+1.1
	0.6nm,0.6s,baz=61,slow=9.0,SNR=15						
	0.6nm,0.6s						
STKA	Stephens Creek	23.57	202	P	P	18 02 28.3	-0.3
	1.3nm,0.5s,baz=4.2,slow=10,SNR=3.0						
	1.3nm,0.5s						
CMAR	Chiang Mai Arr	59.38	298	P	P	18 07 21.6	+1.2
	0.5nm,0.8s,baz=135,slow=6.2,SNR=4.6						
	0.5nm,0.8s						
PETK	Petropavlovsk-	63.23	4	P	P	18 07 45.3	-0.6
	0.9nm,0.7s,baz=189,slow=7.1,SNR=5.4						
	0.9nm,0.7s						
SONM	Songino Array	70.35	329	P	P	18 08 32.4	+1.0
	0.5nm,0.5s,baz=146,slow=2.8,SNR=4.1						
	0.5nm,0.5s						
QSPA	South Pole Qui	79.83	180	P	P	18 09 25.1	-0.8
	3.3nm,0.9s,baz=353,slow=1.7,SNR=12						
	3.3nm,0.9s						
MKAR	Makanchi Array	83.71	320	P	P	18 09 47.1	+0.6
	0.6nm,0.8s,baz=112,slow=6.4,SNR=5.7						
	0.6nm,0.8s						
ILAR	Eielson Array	87.48	22	P	P	18 10 03.5	-1.4
	1.2nm,0.8s,baz=255,slow=5.4,SNR=9.3						
	1.2nm,0.8s						

IDC 22 18:11:46.1±1.9, 7°.44S×122°.82E, h0^{km}, mb3.3/1, mbtmp3.5/3, ML3.6/2, Error ellipse: s-maj=249.1km s-min=29.6km az=57.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.71	139	Pn	P	18 15 43.2	-1.0
	0.2nm,0.3s,baz=315,slow=12,SNR=5.7						
WRA				Sn	Sn	18 18 41.9	-6.3
	0.1nm,0.3s,baz=326,slow=22,SNR=5.1						
	0.5nm,0.5s						
ASAR	Alice Springs	19.32	148	P	P	18 16 12.7	-0.5
	0.3nm,0.3s,baz=324,slow=11,SNR=44						
ASAR				S	Sn	18 19 44.9	-6.7
	0.7nm,1.0s,baz=310,slow=20,SNR=2.2						
	2.6nm,0.8s						
MKAR	Makanchi Array	64.89	330	P	P	18 22 27.3	0.0
	0.2nm,0.5s,baz=134,slow=8.8,SNR=4.2						
	0.2nm,0.5s						

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*NOU **22** 18:20:12.9, 38°.33S×176°.60E, h133^{km}, MLv3.7/17, North Island, New Zealand*

*WEL **22** 18:20:16.0±1.2, 38°S±6°×17°7E±°, h93^{km}±10^{km}, M3.2/78, ML2.8/20, MLv3.2/78, Error ellipse: s-maj=8.5km s-min=6.2km az=38.7, confirmed*

ISC 22 18:20:12.9±1.5, 38°.24S±0°.04×176°.56E±0°.04, h128^{km}±8^{km}, n145, σ1ˢ.26/155, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARZ	Mount Tarawera	0.05	279	P	Pn	18 20 30.7	+0.3
RRRZ	Republican Roa	0.10	202	P	Pn	18 20 30.5	+0.1
HLRZ	Highlands Stat	0.17	267	P	Pn	18 20 31.0	+0.6
EDRZ	Edgecumbe	0.19	46	P	Pn	18 20 30.4	-0.2
OMRZ	Omania	0.20	312	P	Pn	18 20 30.6	0.0
HSRZ	Hossack Road	0.26	255	P	Pn	18 20 31.0	+0.3
HRRZ	Handcock Road	0.27	236	P	Pn	18 20 31.2	+0.5
MARZ	Manawahe	0.27	19	P	Pn	18 20 30.8	0.0
MUGZ	Murupara	0.28	145	P	Pn	18 20 31.0	+0.2
PRRZ	Plateau Road	0.29	208	P	Pn	18 20 31.2	+0.4
UTU	Utuhina	0.30	283	P	Pn	18 20 31.2	+0.4
NGRZ	Ngongotaha	0.33	295	P	Pn	18 20 31.1	+0.1
KARZ	Kaharoa	0.34	311	P	Pn	18 20 30.9	-0.1
OPRZ	Ohinepanea	0.40	359	P	Pn	18 20 30.9	-0.4
WPRZ	Whakapapatarin	0.42	229	P	Pn	18 20 32.0	+0.6
URZ	Urewera	0.43	92	P	Pn	18 20 31.3	-0.1
URZ	Urewera	0.43	92	P	Pn	18 20 31.3	-0.1
URZ				S	Sn	18 20 43.5	-1.8
RTZ	Ruatahuna	0.50	139	P	Pn	18 20 32.4	+0.6
RTZ				S	Sn	18 20 45.6	-0.6
TGRZ	Tauranga	0.57	335	P	Pn	18 20 32.1	-0.1
TGRZ				S	Sn	18 20 44.8	-1.9
MRHZ	Matea Rd	0.60	191	P	Pn	18 20 33.3	+0.9
MRHZ				S	Sn	18 20 46.4	-0.9
KMRZ	Kaimai	0.63	309	P	Pn	18 20 32.7	+0.1
KUTZ	Kaahu Road	0.63	247	P	Pn	18 20 33.4	+0.8
MTHZ	Maungataniwha	0.65	160	P	Pn	18 20 33.8	+1.0
MTHZ				S	Sn	18 20 48.1	+0.3
RAGZ	Rawiri	0.72	111	P	Pn	18 20 34.4	+1.1
RAGZ				S	Sn	18 20 49.0	+0.3
MWZ	Matawai	0.76	97	P	Pn	18 20 34.3	+0.7
MWZ				S	Sn	18 20 48.7	-0.6
RAHZ	Arahi	0.79	149	P	Pn	18 20 35.3	+1.5
RAHZ				S	Sn	18 20 50.6	+0.9
WATZ	Wairara	0.80	234	P	Pn	18 20 34.9	+1.0
TLZ	Tolley Road	0.81	264	P	Pn	18 20 34.7	+0.7
SNGZ	Shannon Statio	0.81	132	P	Pn	18 20 35.5	+1.5
SNGZ				S	Sn	18 20 50.4	+0.4
WIZ	White Island	0.87	35	P	Pn	18 20 34.3	-0.2
NMHZ	Naumai	0.87	167	P	Pn	18 20 36.7	+2.1
RATZ	Rangitukua	0.88	225	P	Pn	18 20 35.8	+1.2
RITZ	Rihia Road	0.92	217	P	Pn	18 20 36.5	+1.6
RUGZ	Raukumara Rang	0.92	73	P	Pn	18 20 34.9	-0.1
BKZ	Black Stump Fm	0.92	183	P	Pn	18 20 36.0	+1.0
BKZ	Black Stump Fm	0.92	183	S	Sn	18 20 51.9	+0.1
BKZ	Black Stump Fm	0.92	183	P	Pn	18 20 36.1	+1.0
TOZ	Tahuroa Road	0.98	301	P	Pn	18 20 35.9	+0.5
MYRZ	Mayor Island	0.99	345	P	Pn	18 20 36.1	+0.5
TKGZ	Te Karaka	1.03	101	P	Pn	18 20 37.4	+1.5
TKGZ				P	Pn	18 20 37.4	+1.5

RIGZ	Rimuhau	1.05	117	P	Pn	18 20 37.7	+1.6
ARHZ	Aropaoanui	1.07	162	P	Pn	18 20 38.1	+1.7
HAZ	Te Kaha	1.08	64	P	Pn	18 20 36.6	+0.3
NTVZ	North Tongarir	1.10	219	P	Pn	18 20 38.4	+1.6
TMVZ	Te Maari	1.10	217	P	Pn	18 20 38.2	+1.5
ETVZ	East Tongariro	1.11	217	P	Pn	18 20 38.4	+1.5
TWGZ	Tauwhareparae	1.12	87	P	Pn	18 20 38.4	+1.6
NNVZ	North Ngauruho	1.16	220	P	Pn	18 20 39.0	+1.7
OTVZ	Oturere	1.16	217	P	Pn	18 20 39.0	+1.7
WTVZ	West Tongariro	1.16	221	P	Pn	18 20 38.8	+1.5
KNZ	Kokohu	1.17	132	P	Pn	18 20 38.7	+1.5
KWHZ	Kaweka Forest	1.18	185	P	Pn	18 20 39.2	+1.7
SNVZ	South Ngauruho	1.19	217	P	Pn	18 20 39.4	+1.7
NGZ	Ngauruhoe	1.20	219	P	Pn	18 20 39.5	+1.7
MCHZ	McNeill Hill	1.20	175	P	Pn	18 20 39.6	+1.9
TWVZ	Taurewa	1.21	226	P	Pn	18 20 39.4	+1.6
PRGZ	Paritu Road	1.24	124	P	Pn	18 20 39.3	+1.3
COVZ	Chateau Observ	1.25	220	P	Pn	18 20 40.0	+1.8
TUVZ	Tukino	1.25	215	P	Pn	18 20 39.9	+1.6
PKGZ	Pakihiroa	1.25	73	P	Pn	18 20 39.2	+1.0
FWVZ	Far West T-bar	1.28	218	P	Pn	18 20 40.3	+1.5
WHVZ	Whangaehu Hut	1.29	216	P	Pn	18 20 40.3	+1.6
MAVZ	Matarangi	1.29	217	P	Pn	18 20 40.7	+1.8
CNGZ	Carnagh Statio	1.31	101	P	Pn	18 20 40.8	+2.0
WNVZ	Wahianoa	1.32	215	P	Pn	18 20 40.6	+1.5
TRVZ	Turoa	1.32	217	P	Pn	18 20 40.8	+1.7
MOVZ	Moawhango	1.32	208	P	Pn	18 20 40.2	+1.2
PUZ	Puketiti	1.35	83	P	Pn	18 20 40.2	+1.0
HIZ	Hauiti	1.37	258	P	Pn	18 20 40.8	+1.4
HIZ	Hauiti	1.37	258	P	Sn	18 21 00.5	+0.9
HIZ	Hauiti	1.37	258	P	Pn	18 20 40.8	+1.4
MHGZ	Mahia Peninsul	1.39	131	P	Pn	18 20 41.4	+1.7
KRHZ	Kereru	1.41	186	P	Pn	18 20 41.1	+1.3
PKVZ	Pokaka	1.41	222	P	Pn	18 20 41.6	+1.6
MTVZ	Mangateitei	1.42	216	P	Pn	18 20 41.9	+1.8
CKHZ	Cape Kidnapper	1.47	164	P	Pn	18 20 42.2	+1.7
WMGZ	Waiomatatini S	1.52	74	P	Pn	18 20 42.2	+1.1
MXZ	Matakaoa Point	1.54	64	P	Pn	18 20 42.8	+1.5
MXZ	Matakaoa Point	1.54	64	P	Pn	18 20 43.1	+1.9
KAHZ	Kahuranaki	1.57	171	P	Pn	18 20 43.2	+1.5
MKAZ	Moumakai	1.59	315	P	Pn	18 20 42.7	+0.8
KUZ	Kuaotunu	1.64	336	P	Pn	18 20 42.8	+0.3
KUZ	Kuaotunu	1.64	336	P	Pn	18 20 43.0	+0.6
VRZ	Vera Road	1.66	238	P	Pn	18 20 44.5	+1.8
PNHZ	Pukenui	1.69	190	P	Pn	18 20 44.0	+0.8
PXZ	Pawanui	1.80	173	P	Pn	18 20 45.4	+1.1
WPHZ	Waipukurau	1.82	183	P	Pn	18 20 45.5	+0.9
ETAZ	East Tamaki Re	1.83	314	P	Pn	18 20 45.9	+1.2
WIAZ	Waiheke Island	1.84	321	P	Pn	18 20 45.9	+1.1
TSZ	Takapari Road	1.87	194	P	Pn	18 20 46.1	+0.9
AWAZ	Awhitu Peninsu	1.93	307	P	Pn	18 20 47.0	+1.1
WAZ	Wanganui	1.95	219	P	Pn	18 20 48.0	+1.9
MBAZ	Motutapu North	1.98	318	P	Pn	18 20 47.9	+1.4
EPAZ	Eden Park BICE	1.99	313	P	Pn	18 20 47.7	+1.1
HBAZ	Herne Bay Bore	2.01	313	P	Pn	18 20 48.1	+1.2
PRHZ	Porangahau	2.02	178	P	Pn	18 20 47.9	+0.9
WTAZ	Waiatarua	2.05	309	P	Pn	18 20 48.7	+1.3
DREZ	Durham Road	2.08	242	P	Pn	18 20 50.2	+2.5
DVHZ	Dannevirke	2.08	188	P	Pn	18 20 48.0	+0.3
LREZ	Lake Rotokare	2.08	234	P	Pn	18 20 50.2	+2.5
ABAZ	Army Bay	2.14	319	P	Pn	18 20 50.1	+1.6
GRZ	Great Barrier	2.18	336	P	Pn	18 20 50.1	+1.1
NEZ	North Egmont	2.19	241	P	Pn	18 20 51.7	+2.6
ANWZ	Angora Road	2.21	182	P	Pn	18 20 50.3	+0.9
POWZ	Post Office Ro	2.23	196	P	Pn	18 20 51.1	+1.4
KHEZ	Kahui Hut	2.25	241	P	Pn	18 20 52.1	+2.2
KHEZ	Kahui Hut	2.25	241	P	Pn	18 20 52.5	+2.6
NBEZ	Newall Road No	2.34	243	P	Pn	18 20 53.4	+2.4
PRWZ	Pori Road	2.35	191	P	Pn	18 20 52.2	+1.1
BFZ	Birch Farm	2.45	186	P	Pn	18 20 52.4	+0.1
BFZ	Birch Farm	2.45	186	S	Sn	18 21 21.9	-0.8
BFZ	Birch Farm	2.45	186	P	Pn	18 20 52.7	+0.4
MRZ	Mangatainoka R	2.53	197	P	Pn	18 20 53.5	+0.1
TIWZ	Tintock	2.58	191	P	Pn	18 20 54.4	+0.3
CPWZ	Castlepoint	2.68	186	P	Pn	18 20 56.0	+0.7
HOWZ	Holdsworth Sta	2.77	197	P	Pn	18 20 56.2	-0.3
OGWZ	Otaki Gorge	2.79	202	P	Pn	18 20 57.0	+0.3
WCZ	Waipu Caves	2.90	322	P	Pn	18 20 59.7	+1.5
TMWZ	Te Maipa	2.91	190	P	Pn	18 20 58.2	0.0
KIW	Kapiti Island	2.91	206	P	Pn	18 20 58.0	-0.2
MTW	Mount Morrison	3.02	195	P	Pn	18 20 59.3	-0.5
CAW	Cannon Point	3.08	202	P	Pn	18 20 59.0	-1.5
TRWZ	Traveller	3.22	192	P	Pn	18 21 02.0	-0.3
PAWZ	Paruwai Farm	3.25	195	P	Pn	18 21 02.1	-0.7
DUWZ	D'Urville Isla	3.27	218	P	Pn	18 21 02.6	-0.4
MSWZ	Moikau Station	3.33	197	P	Pn	18 21 02.6	-1.1
WEL	Wellington	3.34	204	P	Pn	18 21 03.1	-0.7
SNZO	South Karori	3.38	204	P	Pn	18 21 03.9	-0.5
SNZO	South Karori	3.38	204	S	Sn	18 21 43.4	-0.8
BHW	Baring Head	3.42	202	P	Pn	18 21 03.8	-1.0
TCW	Tory Channel	3.45	210	P	Pn	18 21 04.4	-0.9
PLWZ	Palliser	3.47	196	P	Pn	18 21 04.7	-0.9
TUWZ	Tuamarina	3.77	212	P	Pn	18 21 08.6	-0.9
OUZ	Omahuta	3.84	321	P	Pn	18 21 12.4	+1.9
OUZ	Omahuta	3.84	321	P	Pn	18 21 12.6	+2.1
NNZ	Nelson	3.85	219	P	Pn	18 21 09.7	-0.9
TKNZ	Takaka Hill	3.94	224	P	Pn	18 21 11.1	-0.7
BSWZ	Blackbirch Sta	4.04	210	P	Pn	18 21 11.8	-1.2
QRZ	Quartz Range	4.05	229	P	Pn	18 21 12.7	-0.5
QRZ	Quartz Range	4.05	229	P	Pn	18 21 12.7	-0.5
MRNZ	Matariki Terra	4.30	222	P	Pn	18 21 15.5	-1.1
THZ	Tophouse	4.50	217	P	Pn	18 21 18.2	-1.1
KHZ	Kahutara	4.77	208	P	Pn	18 21 20.9	-1.8
RPZ	Rata Peaks	6.87	216	P	Pn	18 21 49.4	-1.7
ODZ	Otahua Downs	8.11	211	P	Pn	18 22 05.2	-2.5

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*IDC **22** 18:20:20.3±1.0, 28°.39N×104°.91E, h0^{km}, mb3.6/9, mbtmp3.7/9, MS3.2/2, Error ellipse: s-maj=28.3km s-min=18.3km az=48.0*

ISC 22 18:20:23.9±0.9**, 28°.5N**±0°.1×**105°.0E**±0°.1**, h19^{km}, n11,** σ**0^{s}95**/10**, mb3.6**/8**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	11.43	210	Pn	Pn	18 23 06.9	+0.7
	baz=14,slow=12,SNR=7.8						
CMAR				LR	LR	18 27 48.3	
	comp=Z,51nm,18.1s,baz=185,slow=40						
JOW	Kunigami	20.66	89	P	P	18 25 03.2	+0.5
	4.1nm,0.8s,baz=161,slow=12,SNR=6.2 4.1nm,0.8s						
KSRS	Korea Array	21.16	59	P	P	18 25 07.2	-0.6
	1.8nm,0.7s,baz=247,slow=10,SNR=9.4 1.8nm,0.7s						
MKAR	Makanchi Array	25.50	322	P	P	18 25 50.9	-0.1
	0.7nm,0.6s,baz=130,slow=11,SNR=8.6 0.7nm,0.6s						
USRK	Ussuriysk Ar.	26.63	47	P	P	18 26 01.8	+0.5
	1.6nm,0.6s,baz=253,slow=9.9,SNR=4.0 1.6nm,0.6s						
KURBB	Kurchatov Arra	29.82	325	P	P	18 26 28.4	-1.2
	0.6nm,0.6s,baz=132,slow=9.4,SNR=9.9 0.6nm,0.6s						
BVAR	Borovoye Array	35.35	324	P	P	18 27 17.7	-0.3
	0.2nm,0.4s,baz=117,slow=12,SNR=2.2 0.2nm,0.4s						
PETK	Petropavlovsk-	45.55	42	P	P	18 28 43.3	+1.0
	0.5nm,0.8s,baz=285,slow=5.7,SNR=3.7 0.5nm,0.8s						
KBZ	Khabaz	51.30	305	LR	LR	18 54 00.2	
	comp=Z,46nm,18.1s,baz=241,slow=39						
WRA	Warramunga Arr	55.86	146	P	P	18 29 58.9	-1.6
	1.0nm,1.0s,baz=337,slow=8.3,SNR=6.5 1.0nm,1.0s						
ASAR	Alice Springs	58.85	149	P	P	18 30 21.1	-0.4
	0.3nm,0.5s,baz=331,slow=6.7,SNR=11 0.3nm,0.5s						

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*IDC **22** 18:34:31.7±0.5, 17°.11S×171°.52E, h0^{km}, mb4.2/17, mbtmp4.3/20, ML4.9/2, MS4.1/51, Error ellipse: s-maj=18.2km s-min=15.1km az=104.0*

*NOU **22** 18:34:32.8, 16°.91S×171°.32E, h0^{km}, mb4.8/21, Vanuatu Islands Region*

*NEIC **22** 18:34:33.4±1.2, 17°.06S±0°.08×171°.47E±0°.04, h10^{km}±1^{km}, mb5.0/128, Mww5.0/24, Error ellipse: s-maj=14.8km s-min=5.0km az=20.0*

*NEIC **22** 18:34:33.3, 17°.07S×171°.49E, h12^{km}*

*NEIC **22** 18:34:33.3, 16°.87S×171°.59E, h12^{km}, Moment Tensor Solution. Duration: 1^{s}7 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.28; $M_{\theta\theta}$2.68; $M_{\phi\phi}$-2.40; $M_{r\theta}$0.45; $M_{\theta\phi}$-2.84; $M_{\phi r}$-2.31; Fault plane solution: $M_0$4.49000×10^{16} NP1:ϕ_s70.85000°, δ58.82000°, λ-174.31000°. NP2:ϕ_s337.89000°, δ85.13000°, λ-31.31000°. Principal axes: T 4.3904, Plg18.0000°, Azm28.0000°; N 0.1901, Plg58.0000°, Azm150.0000°; P -4.5805, Plg25.0000°, Azm290.0000°;*

*GCMT **22** 18:34:35.3±0.2, 17°.00S±0°.01×171°.52E±0°.01, h12^{km}, MW5.0/120, Moment Tensor Solution. s51,c71; s120,c195; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.55±.08; $M_{\theta\theta}$2.97±.08; $M_{\phi\phi}$-2.42±.07; $M_{r\theta}$0.06±.21; $M_{\theta\phi}$-3.26±.06; $M_{\phi r}$0.53±.20; Best double couple: $M_0$4.26900×10^{16} NP1:ϕ_s250.00000°, δ83.00000°, λ-176.00000°. NP2:ϕ_s160.00000°, δ86.00000°, λ-7.00000°. Principal axes: T 4.5110, Plg2.0000°, Azm205.0000°; N -0.4820, Plg82.0000°, Azm309.0000°; P -4.0280, Plg8.0000°, Azm115.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 18:34:33.4±0.3**, 17°.06S**±0°.06×**171°.54E**±0°.06**, h10^{km}, n520,** σ**1^{s}17**/479**, mb4.9**/84**, MS4.3**/51**, 6C-6D, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	3.27	258	P	Pn	18 35 23.5	-1.3
INH	Isangel	3.28	221	P	Pn	18 35 23.4	-1.5
VLAKA	Lakatoro	4.06	283	P	Pn	18 35 32.1	-3.6
SANVU	Saraoutou	4.46	290	Pn	Pn	18 35 39.1	-2.1
SANVU	Saraoutou	4.46	290	P	Pn	18 35 39.6	-1.6
MSVF	Nonsavu	6.25	97	Pn	Pn	18 36 05.7	-0.1
MSVF	Nonsavu	6.25	97	Pn	Pn	18 36 06.0	+0.1
	1.6nm,0.3s,baz=268,slow=10,SNR=21						
MSVF				LR	LR	18 37 46.6	
	comp=Z,600nm,19.8s,baz=287,slow=31 43nm,0.9s						
MSVF	Nonsavu	6.25	97	P	Pn	18 36 09.1	+3.3
YATNC	Mamie plateau,	6.63	221	P	Pn	18 36 10.4	-0.6
PINNC	Pines Island,	6.74	214	Pn	Pn	18 36 11.2	-1.2
PINNC	Pines Island,	6.74	214	P	Pn	18 36 12.7	+0.3
DZM	Mont Dzumac	6.92	223	Pn	Pn	18 36 13.8	-1.3
DZM	Mont Dzumac	6.92	223	*e*Pn	Pn	18 36 12.9	-2.2
	104nm,1.2s						
DZM	Mont Dzumac	6.92	223	Pn	Pn	18 36 14.1	-1.0
	29nm,1.0s,baz=49,slow=18,SNR=17						
DZM				LR	LR	18 38 36.0	
	comp=Z,4μm,21.3s,baz=44,slow=36						
DZM	Mont Dzumac	6.92	223	P	Pn	18 36 15.1	0.0
OUENC	Ouen Island, N	6.93	219	P	Pn	18 36 16.1	+1.0
ONTNC	Ouen Toro	7.08	222		Pn	18 36 15.5	-1.7
HNR	Honiara	13.59	302	Pn	Pn	18 37 45.5	-0.9
	2.8nm,0.3s,baz=202,slow=7.9,SNR=1.3						
HNR				LR	LR	18 42 23.9	
	comp=Z,1μm,19.9s,baz=146,slow=35 9.1nm,0.4s						
RAO	Raoul Island	15.52	143	LR	LR	18 42 30.7	
	comp=Z,774nm,20.7s,baz=324,slow=31						
NIUE	Niue	17.73	99	Pn	Pn	18 38 37.8	-2.9
NIUE				IAmb	IAmb	18 38 43.1	
	comp=Z,225nm,1.2s						
EIDS	Eidsvold	20.77	243	P	P	18 39 08.7	-6.0
TOZ	Tahuroa Road	20.89	171		P	18 39 12.8	-3.0
TOZ	Tahuroa Road	20.89	171	P	P	18 39 15.0	-0.8
HAZ	Te Kaha	21.34	166	P	P	18 39 22.5	+1.9
URZ	Urewera	21.68	168	P	P	18 39 24.7	+0.4
	comp=Z,22nm,1.2s,baz=88,slow=1.7,SNR=4.0						
URZ				LR	LR	18 46 16.2	
	comp=Z,790nm,18.2s,baz=348,slow=33 comp=Z,22nm,1.2s						
PUZ	Puketiti	21.75	166	P	P	18 39 28.2	+3.1
MWZ	Matawai	21.84	167	P	P	18 39 29.7	+3.7
RTZ	Ruatahuna	22.00	169	P	P	18 39 31.6	+3.8
ETVZ	East Tongariro	22.29	171	P	P	18 39 34.9	+3.8
FWVZ	Far West T-bar	22.39	172	P	P	18 39 36.9	+4.6
PKVZ	Pokaka	22.40	172	P	P	18 39 36.4	+4.3
BKZ	Black Stump Fm	22.45	170	P	P	18 39 35.5	+2.9
BKZ	Black Stump Fm	22.45	170	P	P	18 39 34.6	+2.0
WNVZ	Wahianoa	22.47	172	P	P	18 39 37.7	+4.7
PNHZ	Pukenui	23.13	171	P	P	18 39 42.0	+2.2
PXZ	Pawanui	23.35	170	P	P	18 39 43.5	+1.5
DVHZ	Dannevirke	23.50	171	P	P	18 39 44.7	+1.1
MRZ	Mangatainoka R	23.78	172		P	18 39 45.2	-1.0
MRZ				IAmb	IAmb	18 39 53.7	
	comp=Z,74nm,1.2s						
MRZ	Mangatainoka R	23.78	172	P	P	18 39 46.5	+0.3
BFZ	Birch Farm	23.89	171	P	P	18 39 47.3	+0.1
CTAO	Charters Tower	24.15	259	P	P	18 39 47.8	-2.2
CTAO				IAmb	IAmb	18 40 02.4	
	comp=Z,36nm,1.1s						
SNZO	South Karori	24.32	174	P	P	18 39 52.2	+1.0
LTZ	Lake Taylor	25.64	179	P	P	18 40 04.8	+1.5
GVZ	Greta Valley S	25.86	177	P	P	18 39 59.3	-5.9
RPZ	Rata Peaks	26.57	181	LR	LR	18 49 04.2	
	comp=Z,590nm,20.5s,baz=357,slow=33						
CNB	Canberra Magne	26.85	223	P	P	18 40 15.3	+1.0
RAR	Rarotonga	27.39	103	LR	LR	18 48 42.2	
	comp=Z,360nm,21.7s,baz=269,slow=31						
CMSA	Cobar Meteorol	27.53	234	P	P	18 40 21.7	+1.3
TOO	Toolangi	30.70	223	P	P	18 40 47.3	-1.2
STKA	Stephens Creek	30.86	236	P	P	18 40 49.6	-0.5
STKA	Stephens Creek	30.86	236	P	P	18 40 49.6	-0.5
	comp=Z,8.1nm,0.8s,baz=64,slow=9.4,SNR=13						
STKA				LR	LR	18 52 18.2	
	comp=Z,412nm,20.0s,baz=61,slow=35 comp=Z,8.1nm,0.8s						
GEXS	Deakin Univers	31.84	223	P	P	18 40 59.3	+0.8
MOO	Moorlands	32.74	214	P	P	18 41 08.0	+1.6
ARPS	Mount Arapiles	32.76	227	P	P	18 41 07.7	+1.0
JAY	Jayapura	33.57	292	LR	LR	18 53 32.6	
	comp=Z,294nm,21.4s,baz=5.0,slow=34						
WRA	Warramunga Arr	35.35	259	P	P	18 41 28.2	-1.1
	comp=Z,3.6nm,1.0s,baz=91,slow=8.5,SNR=9.8						
WRA				LR	LR	18 53 38.5	
	comp=Z,114nm,20.7s,baz=334,slow=32 comp=Z,3.6nm,1.0s						
H11S2	WAKE ISLAND Hy	35.65	352	T	T	19 19 03.6	
	baz=171,slow=76,SNR=35						
H11S3	WAKE ISLAND Hy	35.65	352	T	T	19 19 04.1	
	baz=171,slow=76,SNR=20						
H11S1	WAKE ISLAND Hy	35.66	352	T	T	19 19 05.1	
	baz=171,slow=76,SNR=19						
AS01	Alice Springs	35.77	253	P	P	18 41 33.5	+0.5
AS31	Alice Springs	35.81	253	P	P	18 41 32.0	-1.3
ASAR	Alice Springs	35.81	253	P	P	18 41 32.4	-0.9
ASAR	Alice Springs	35.81	253	P	P	18 41 33.0	-0.4
	comp=Z,24nm,0.8s,baz=80,slow=9.2,SNR=165 comp=Z,24nm,0.8s						
H11N1	WAKE ISLAND Hy	36.83	353	T	T	19 20 33.4	
	baz=173,slow=76,SNR=58						
H11N3	WAKE ISLAND Hy	36.83	353	T	T	19 20 32.5	
	baz=173,slow=76,SNR=28						
H11N2	WAKE ISLAND Hy	36.84	353	T	T	19 20 35.7	
	baz=173,slow=76,SNR=38						
TBI	Tubuai	37.05	106	*e*S	S	18 47 25.9	-3.9
	comp=Z,827nm,30.0s						
TBI				*e*LQ	LQ	18 50 04.1	
	comp=Z,737nm,24.2s						
TBI				*e*LR	LR	18 51 43.2	
	comp=Z,5μm,31.0s						
PPT2	Papeete2	37.08	97	*e*S	S	18 47 23.5	-7.1
	comp=Z,160nm,26.8s						
PPT2				*e*LQ	LQ	18 50 10.3	
	comp=Z,1μm,27.2s						
PPT2				*e*LR	LR	18 51 42.7	
	comp=Z,858nm,27.5s						
PPT2				*e*LR	LR	18 51 44.7	
	comp=Z,1μm,25.8s						
PPT	Papeete	37.08	97	LR	LR	18 53 33.3	
	comp=Z,284nm,20.9s,baz=269,slow=31						
GUMO	Guam	40.27	318	LR	LR	18 57 19.2	
	comp=Z,381nm,21.8s,baz=136,slow=34						
FITZ	Fitzroy Crossi	43.68	261	P	P	18 42 37.3	-1.6
FITZ	Fitzroy Crossi	43.68	261	LR	LR	18 59 56.1	
	comp=Z,520nm,20.0s,baz=92,slow=35						
BATI	Baumata	46.93	272	LR	LR	19 04 06.1	
	comp=Z,548nm,18.1s,baz=162,slow=38						
MBWA	Marble Bar	48.95	257	P	P	18 43 20.1	-0.2
NWAO	Narrogin (SRO)	51.16	241	LR	LR	19 04 37.3	
	comp=Z,521nm,19.1s,baz=90,slow=35						
DAV	Davao City (W)	51.37	294	LR	LR	19 03 21.6	
	comp=Z,107nm,21.7s,baz=120,slow=34						
KAPI	Kappang	52.07	277	LR	LR	19 04 34.3	
	comp=Z,236nm,21.3s,baz=92,slow=35						
TGY	Tagaytay City	58.77	299	LR	LR	19 11 09.1	
	comp=Z,53nm,18.1s,baz=142,slow=37						
JOW	Kunigami	60.56	315	LR	LR	19 09 36.5	
	comp=Z,117nm,20.8s,baz=118,slow=35						
VNDA	Vanda	60.68	182	P	P	18 44 45.1	+0.7
VNDA	Vanda	60.68	182	P	P	18 44 44.4	0.0
	comp=Z,1.5nm,0.8s,baz=344,slow=7.0,SNR=5.6						
VNDA				LR	LR	19 06 52.5	
	comp=Z,210nm,20.3s,baz=12,slow=32 comp=Z,1.5nm,0.8s						
SBA	Scott Base	60.87	181	P	P	18 44 46.7	+1.0
SBA				IAmb	IAmb	18 44 48.4	
	comp=Z,15nm,0.9s						
MJAR	Matsushiro Arr	61.92	330	P	P	18 44 54.3	+1.0
	comp=Z,1.8nm,1.1s,baz=157,slow=6.6,SNR=3.0 comp=Z,1.8nm,1.1s						
CASY	Casey	62.98	203	P	P	18 45 00.2	+0.1
LEM	Lembang	63.13	271	LR	LR	19 13 10.7	
	comp=Z,192nm,18.1s,baz=156,slow=37						
ASAJ	Asahikawa	66.38	338	LR	LR	19 09 09.3	
	comp=Z,110nm,21.1s,baz=156,slow=31						
KSRS	Korea Array	68.00	324	P	P	18 45 34.0	+1.1
	comp=Z,1.1nm,1.0s,baz=149,slow=5.8,SNR=4.3 comp=Z,1.1nm,1.0s						
SHEM	Shemya Is, Ala	69.53	2	LR	LR	19 08 13.9	
	comp=Z,138nm,21.7s,baz=360,slow=29						
NJ2	Nanjing	70.22	314	*e*P	P	18 45 48.6	+1.8
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
QIZ	Qiongzhong	70.45	298	P	P	18 45 48.6	+0.1
QIZ				S	S	18 55 04.6	+2.7
QIZ				LR	LR		
	comp=E,270nm,17.9s						
QIZ				LR	LR		
	comp=Z,220nm,24.0s						
USRK	Ussuriysk Ar.	70.86	331	P	P	18 45 51.1	+0.6
	comp=Z,1.0nm,0.8s,baz=122,slow=14,SNR=5.7 comp=Z,1.0nm,0.8s						
PETK	Petropavlovsk-	70.89	351	P	P	18 45 50.5	0.0
	comp=Z,1.8nm,1.0s,baz=114,slow=9.9,SNR=6.5						
PETK				LR	LR	19 11 49.6	
	comp=Z,217nm,20.4s,baz=155,slow=32 comp=Z,1.8nm,1.0s						
NIKH	Nikolski High	71.77	12	P	P	18 45 55.1	-0.7
NIKH	Nikolski High	71.77	12	P	P	18 45 55.9	+0.1
	baz=200						
WHN	Wuhan	72.56	311	P	P	18 46 02.8	+1.8
QSPA	South Pole Qui	72.98	180	P	P	18 46 02.9	-0.2
QSPA				IAmb	IAmb	18 46 30.7	
	comp=Z,19nm,1.1s						
QSPA	South Pole Qui	72.98	180	P	P	18 46 02.7	-0.4
	comp=Z,7.6nm,1.0s,baz=24,slow=3.4,SNR=13						
QSPA				LR	LR	19 13 08.6	
	comp=Z,167nm,21.7s,baz=44,slow=32 comp=Z,7.6nm,1.0s						
UNV	Unalaska Valle	73.09	13	P	P	18 46 04.2	+0.6
	baz=202						
PSI	Prapat	74.26	278	LR	LR	19 21 00.4	
	comp=Z,187nm,18.1s,baz=128,slow=38						
KLR	Kul'dur	74.83	334	LR	LR	19 15 40.7	
	comp=Z,42nm,20.1s,baz=146,slow=33						
SDPT	Sand Point	75.93	16	P	P	18 46 20.4	+0.3
	baz=208						
HNS	HongShan	76.09	317	⇑P	P	18 46 24.0	+2.6
HEH	HeiHe	77.46	333	*e*P	P	18 46 30.4	+1.6
HEH				pmax	pmax		
	comp=Z,4.0nm,1.1s						
CHIR	Chirikof Islan	77.71	18	P	P	18 46 30.7	+0.6
	baz=212						
MA2	Magadan	78.22	349	LR	LR	19 18 45.9	
	comp=Z,194nm,19.5s,baz=160,slow=34						
SII	Sitkinak Islan	78.77	19	P	P	18 46 36.0	0.0
	baz=213						
O14K	Tigyukauivet M	79.22	14	P	P	18 46 38.7	+0.3
	baz=206						
M11K	Mekoryuk	79.24	11	P	P	18 46 38.6	+0.2
	baz=202						
O15K	Ungalikthiuk R	79.49	15	P	P	18 46 39.5	-0.4
	baz=208						
OHAK	Old Harbor	79.59	19	P	P	18 46 40.1	-0.4
	baz=214						
CMAR	Chiang Mai Arr	79.64	293	P	P	18 46 41.4	-0.3
	comp=Z,0.8nm,0.9s,baz=114,slow=3.7,SNR=6.7						
CMAR				LR	LR	19 22 44.5	
	comp=Z,34nm,19.1s,baz=120,slow=36 comp=Z,0.8nm,0.9s						
Q17K	Contact Creek	79.71	17	P	P	18 46 40.8	-0.4
	baz=212						
N14K	Kuskokwak Cree	79.73	13	P	P	18 46 41.5	+0.4
	baz=206						
HHC	Hu-ho-hao-te	80.03	318	*e*P	P	18 46 44.3	+0.9
HHC				pmax	pmax		
	comp=Z,17nm,0.5s						
HHC				pmax	pmax		
	comp=Z,98nm,4.2s						
HHC				LR	LR		
	comp=N,140nm,16.5s						
HHC				LR	LR		
	comp=E,140nm,17.5s						
HHC				LR	LR		
	comp=Z,170nm,16.5s						
KDAK	Kodiak Island	80.27	19	LR	LR	19 16 08.7	
	comp=Z,225nm,20.8s,baz=205,slow=31						
KDAK	Kodiak Island	80.27	19	P	P	18 46 44.2	0.0
	baz=215						
O16K	Kokwok River B	80.28	15	P	P	18 46 43.1	-1.1
	baz=209						
Q18K	Katmai Hardscr	80.29	17	P	P	18 46 44.0	-0.4
	baz=212						
N15K	Kwethluk River	80.31	14		P	18 46 44.7	+0.3
N15K	Kwethluk River	80.31	14	P	P	18 46 44.0	-0.3
	baz=208						
P17K	Kvichak River	80.36	16	P	P	18 46 44.3	-0.3
	baz=211						
PZH	PanZhiHua	80.41	301	P	P	18 46 46.9	+1.1
PZH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,5.1s						
M14K	Bethel	80.42	13	P	P	18 46 45.1	+0.2
M14K				IAmb	IAmb	18 46 52.1	
	comp=Z,17nm,1.1s						
M14K	Bethel	80.42	13	P	P	18 46 44.5	-0.3
	baz=206						
M15K	Kasigluk River	80.65	13	P	P	18 46 45.9	-0.1
	baz=207,SNR=5.5						
O17K	Koliganek Bris	80.69	15	P	P	18 46 46.1	-0.3
	baz=210						
L14K	Kuka Creek	80.81	12	P	P	18 46 46.4	-0.5
L14K	Kuka Creek	80.81	12	P	P	18 46 46.9	0.0
	baz=205						
P18K	Big Mountain,	80.86	16	P	P	18 46 46.4	-0.9
P18K				IAmb	IAmb	18 46 53.6	
	comp=Z,15nm,0.9s						
P18K	Big Mountain,	80.86	16	P	P	18 46 47.2	-0.1
	baz=212						
N16K	Nishlik Lake	80.89	14	P	P	18 46 47.0	-0.5
	baz=209						
Q19K	Cape Douglas,	80.91	17	P	P	18 46 47.4	-0.1
	baz=214						
K13K	Kusilvak Mount	80.97	11	P	P	18 46 48.3	+0.5
K13K	Kusilvak Mount	80.97	11	P	P	18 46 48.1	+0.3
	baz=203						
Q20K	Shuyak Island	81.01	18	P	P	18 46 47.9	-0.1
	baz=215						
SEY	Seymchan	81.14	351	LR	LR	19 17 54.6	
	comp=Z,263nm,21.0s,baz=160,slow=32						
O18K	Koktuh Hills	81.25	16	P	P	18 46 49.3	-0.1
	baz=212						
N17K	Nushagak Hills	81.32	15	P	P	18 46 49.6	-0.1
	baz=210						
M16K	Timber Creek	81.33	14	P	P	18 46 50.8	+1.1
M16K				IAmb	IAmb	18 46 57.2	
	comp=Z,14nm,1.0s						
M16K	Timber Creek	81.33	14	P	P	18 46 49.9	+0.1
	baz=208,SNR=5.6						
L15K	Ungalak Mounta	81.36	13	P	P	18 46 49.6	-0.3
	baz=206						
GAMB	Gambell	81.62	7	P	P	18 46 50.5	-0.7
	baz=196						
P19K	Oil Pt	81.63	17	P	P	18 46 50.8	-0.6
	baz=214						
N18K	Kilae Creek	81.78	16	P	P	18 46 51.5	-0.7
	baz=211						
L16K	Owhat River	81.82	13	P	P	18 46 51.9	-0.4
	baz=208						
K15K	Wolf Creek Mou	81.90	12		P	18 46 51.5	-1.2
K15K				IAmb	IAmb	18 47 00.5	

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      comp=Z,18nm,1.1s
K15K  Wolf Creek Mou    81.90  12  P     P     18 46 52.1 -0.6
      baz=206
J14K  Nanvaranak Lak    81.92  11  P     P     18 46 52.1 -0.7
      baz=204
M17K  Holitna River     82.02  15  P     P     18 46 52.5 -0.9
      baz=210
HOM   Homer             82.09  18  P     P     18 46 53.8  0.0
      baz=215
O20K  Slope Mountain    82.16  17  P     P     18 46 53.8 -0.5
      baz=214
N19K  Bonanza Creek     82.26  16  P     P     18 46 54.1 -0.7
      baz=213
BRSE  Bradley Lake S    82.43  18  P     P     18 46 56.1 +0.5
      baz=216
L17K  Donlin            82.46  14  P     P     18 46 56.5 +0.8
      baz=209
M18K  Stony River       82.49  15  P     P     18 46 56.2 +0.3
      baz=211,SNR=9.1
L18K  Granite Mounta    82.91  14        P     18 46 58.0  0.0
L18K  Granite Mounta    82.91  14  P     P     18 46 58.0  0.0
      baz=210,SNR=5.2
K17K  Iditarod          82.97  13  P     P     18 46 58.1 -0.2
K17K                               IAmb  IAmb  18 47 05.7
      comp=Z,18nm,1.1s
K17K  Iditarod          82.97  13  P     P     18 46 58.7 +0.3
      baz=209
J16K  Anvik River       82.98  12  P     P     18 46 59.2 +0.8
      baz=207
SEW   Seward            83.11  19  P     P     18 46 59.4 +0.4
      baz=217
N20K  Mount Spurr       83.20  17  P     P     18 46 59.8 +0.2
      baz=215
SPCR  Spurr Chakacha    83.20  17  P     P     18 46 59.8 +0.2
      baz=215
SLKM  Skilak Lake       83.20  18  P     P     18 46 59.3 -0.3
M19K  Big River Lodg    83.21  15  P     P     18 46 59.8 +0.2
M19K                               IAmb  IAmb  18 47 11.7
      comp=Z,15nm,1.2s
M19K  Big River Lodg    83.21  15  P     P     18 46 59.8 +0.2
      baz=213
ANM   Nome              83.28  10  P     P     18 47 00.1 +0.2
      baz=202
L19K  White Mountain    83.32  15        P     18 47 00.1 -0.1
L19K  White Mountain    83.32  15  P     P     18 47 00.2  0.0
      baz=212,SNR=35
J17K  VABM Dome         83.40  13  P     P     18 47 00.7 +0.2
      baz=208
I17K  Unalakleet        83.51  12  P     P     18 47 01.1 +0.1
      baz=207
M20K  Styx River        83.52  16  P     P     18 47 01.2  0.0
Q23K  Middleton Isla    83.56  20  P     P     18 47 01.5 +0.1
      baz=220
P23K  Montague Islan    83.66  19  P     P     18 47 02.4 +0.5
      baz=219
RC01  Rabbit Creek A    83.81  18  P     P     18 47 02.8 +0.1
      baz=217
L20K  Farewell, AK      83.82  15  P     P     18 47 02.5 -0.3
      baz=213,SNR=25
SUA   Susitna One       83.82  17        P     18 47 02.9  0.0
SUA   Susitna One       83.82  17  P     P     18 47 02.7 -0.2
      baz=216
H16K  Elim              83.89  11  P     P     18 47 02.9 -0.1
      baz=205
G15K  Niukluk           83.90  10  P     P     18 47 02.5 -0.6
      baz=204
F14K  Arctic Creek      83.98   9  P     P     18 47 03.0 -0.4
      baz=201
J18K  Innoko River      83.98  14        P     18 47 04.0 +0.5
J18K  Innoko River      83.98  14  P     P     18 47 03.2 -0.3
      baz=210
SKT   Skwentna          84.03  17  P     P     18 47 03.3 -0.5
      baz=215
PWL   Port Wells        84.05  18  P     P     18 47 03.5 -0.4
PWL   Port Wells        84.05  18  P     P     18 47 04.2 +0.3
      baz=218
BELA  Belgrano 2        84.06 175        P     18 47 02.5 -1.4
BELA                               IAmb  IAmb  18 47 14.3
      comp=Z,10nm,1.0s
YBH   Yreka Blue Hor    84.22  43  LR    LR    19 16 35.3
      comp=Z,20nm,20.9s,baz=260,slow=30
M22K  Willow            84.23  17  P     P     18 47 05.0 +0.2
      baz=217
PMR   Palmer            84.39  18  P     P     18 47 05.0 -0.6
PMR   Palmer            84.39  18  P     P     18 47 05.7 +0.2
      baz=218
ISA   Isabella, Lake    84.41  50  P     P     18 47 06.0 -0.4
ISA                                IAmb  IAmb  18 47 14.3
      comp=Z,11nm,1.1s
GLI   Glacier Island    84.44  19  P     P     18 47 06.3 +0.4
GLI   Glacier Island    84.44  19  P     P     18 47 06.1 +0.2
      baz=220
KNK   Knik Glacier      84.44  18  P     P     18 47 06.4 +0.4
KNK   Knik Glacier      84.44  18  P     P     18 47 06.1 +0.2
      baz=218
F15K  North Star Dit    84.46  10  P     P     18 47 06.0 +0.1
      baz=203
K20K  Telida            84.51  15  P     P     18 47 05.7 -0.5
K20K  Telida            84.51  15  P     P     18 47 06.4 +0.1
      baz=213,SNR=5.9
FID   Port Fidalgo      84.53  19  P     P     18 47 05.8 -0.6
G16K  Koyuk River       84.56  11  P     P     18 47 06.1 -0.2
      baz=205
KAIM  Kayak Island      84.58  21  P     P     18 47 06.7 +0.1
      baz=222
GHO   Glory Hole Cre    84.59  18  P     P     18 47 06.8 +0.1
GHO                                IAmb  IAmb  18 47 17.1
      comp=Z,16nm,1.2s
H17K  Granite Mounta    84.60  12  P     P     18 47 07.0 +0.3
      baz=207
PPLA  Purkeypile        84.60  16  P     P     18 47 06.5 -0.4
      baz=215
EYAK  Cordova Ski Ar    84.61  20  P     P     18 47 06.5 -0.2
EYAK                               IAmb  IAmb  18 47 13.4
      comp=Z,14nm,1.2s
EYAK  Cordova Ski Ar    84.61  20  P     P     18 47 07.0 +0.2
      baz=221
J19K  Poorman           84.69  14        P     18 47 07.6 +0.5
J19K                               IAmb  IAmb  18 47 15.0
      comp=Z,21nm,1.4s
J19K  Poorman           84.69  14  P     P     18 47 06.4 -0.6
      baz=211
SML   Sawmill           84.79  18  P     P     18 47 07.5 -0.2
SML   Sawmill           84.79  18  P     P     18 47 07.8  0.0
      baz=218
BEKR  Beckworth         84.93  46  P     P     18 47 08.4 -0.7
WAKR  Walker            84.96  47        P     18 47 08.2 -1.1
M23K  Glacier View      84.96  18  P     P     18 47 08.7 +0.2
      baz=219
G17K  Kiwalik Mounta    84.96  11  P     P     18 47 09.2 +0.7
      baz=207
DIV   Divide            85.05  19        P     18 47 09.3 +0.2
GCSA  Galena City Sc    85.06  13  P     P     18 47 09.5 +0.7
      baz=210
CAST  Castle Rocks      85.06  16  P     P     18 47 09.0  0.0
      baz=215,SNR=17
PFO   Pinyon Flats O    85.06  53  P     P     18 47 09.9  0.0
PFO                                IAmb  IAmb  18 47 12.7
      comp=Z,13nm,1.5s
PFO   Pinyon Flats O    85.06  53  LR    LR    19 16 36.1
      comp=Z,153nm,21.6s,baz=254,slow=30
H18K  Honhosa River     85.10  12  P     P     18 47 09.6 +0.5
      baz=209
BGLC  Bering Glacier    85.11  21  P     P     18 47 09.8 +0.6
      baz=223
SCM   Sheep Creek Mo    85.11  18  P     P     18 47 09.4 +0.1
SCM   Sheep Creek Mo    85.11  18  P     P     18 47 09.6 +0.2
      baz=219
J20K  Nowinta River     85.19  14        P     18 47 08.7 -0.9
J20K                               IAmb  IAmb  18 47 17.0
      comp=Z,9.7nm,1.2s
J20K  Nowinta River     85.19  14  P     P     18 47 10.4 +0.8
      baz=213
SMAI  San Martin Ant    85.19 161        P     18 47 10.3 +0.6
KLU   Klutina           85.28  19  P     P     18 47 10.2  0.0
KLU                                IAmb  IAmb  18 47 26.4
      comp=Z,9.1nm,1.1s
KLU   Klutina           85.28  19  P     P     18 47 10.9 +0.7
      baz=220
BMRM  Bremner River     85.30  20  P     P     18 47 10.7 +0.4
      baz=222
YAK   Yakutsk           85.48 342  P     P     18 47 11.5 +0.4
YAK                                IAmb  IAmb  18 47 21.5
      comp=Z,17nm,1.2s
YAK   Yakutsk           85.48 342  LR    LR    19 24 36.9
      comp=Z,68nm,18.6s,baz=132,slow=35
GSC   Goldstone, Bar    85.50  51  P     P     18 47 11.9 -0.1
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GSC                                IAmb  IAmb  18 47 36.5
      comp=Z,15nm,1.8s
LHV   Little Huntoon    85.50  48  P     P     18 47 11.9 +0.2
LHV                                IAmb  IAmb  18 47 23.4
      comp=Z,16nm,1.3s
DSP   Deep Springs      85.51  49        P     18 47 11.5 -0.3
PAHR  Pah Rah Range     85.53  46        P     18 47 11.1 -0.9
WAT1  Susitna Watana    85.54  17  P     P     18 47 12.4 +1.0
      baz=218
TRF   Thorofare Moun    85.56  16  P     P     18 47 12.5 +0.8
      baz=216
WAT6  Susitna Watana    85.57  18  P     P     18 47 12.9 +1.2
      baz=219
MESA  MESA              85.61  21  P     P     18 47 12.2 +0.1
      baz=224
CRQM  Cirque            85.63  20  P     P     18 47 12.1  0.0
CRQM                               IAmb  IAmb  18 47 19.0
      comp=Z,12nm,1.1s
I20K  Naaghedeneel      85.63  14  P     P     18 47 12.1 +0.3
I20K  Naaghedeneel      85.63  14  P     P     18 47 13.0 +1.2
      baz=212
CRQE  Cirque            85.64  21  P     P     18 47 12.4 +0.3
      baz=223
RYN   Ryan              85.66  48  P     P     18 47 12.1 -0.7
RYN                                IAmb  IAmb  18 47 14.8
      comp=Z,26nm,1.9s
M24K  Tolsona, Glenn    85.67  19  P     P     18 47 12.7 +0.6
      baz=220
G18K  Tagagawik         85.70  12        P     18 47 11.3 -0.8
G18K                               IAmb  IAmb  18 47 22.8
      comp=Z,13nm,1.1s
G18K  Tagagawik         85.70  12  P     P     18 47 13.0 +0.9
      baz=208
F17K  Baldwin Pennin    85.70  11  P     P     18 47 13.2 +1.1
      baz=206
NVAR  Mina Array Bea    85.72  48  P     P     18 47 12.3 -0.9
NVAR  Mina Array Bea    85.72  48  P     P     18 47 13.5 +0.3
      comp=Z,0.4nm,0.4s,baz=251,slow=5.5,SNR=9.7
NVAR                               LR    LR    19 17 16.1
      comp=Z,296nm,21.1s,baz=244,slow=30
      comp=Z,0.4nm,0.4s
N25K  Chitina, Valde    85.78  19        P     18 47 12.8 +0.1
N25K                               IAmb  IAmb  18 47 19.0
      comp=Z,8.2nm,1.0s
N25K  Chitina, Valde    85.78  19  P     P     18 47 12.8 +0.1
      baz=222
GRAC  Grapevine Rang    85.79  49  P     P     18 47 14.2 +0.9
H19K  Roundabout Mou    85.83  13        P     18 47 12.9 +0.2
H19K  Roundabout Mou    85.83  13  P     P     18 47 13.7 +1.0
      baz=211
NV11  Mina Array Sit    85.83  48  P     P     18 47 13.4 -0.2
NV11                               IAmb  IAmb  18 47 20.7
      comp=Z,11nm,1.2s
VRDI  Verde Repeater    85.87  20        P     18 47 12.8 -0.5
VRDI                               IAmb  IAmb  18 47 20.0
      comp=Z,20nm,1.4s
BPAW  Bear Paw Mtn.     85.90  16  P     P     18 47 13.8 +0.6
      baz=216
GLB   Gilahina Butte    85.91  20  P     P     18 47 13.4 +0.1
RND   Reindeer          85.91  17        P     18 47 13.3 -0.1
RND                                IAmb  IAmb  18 47 19.3
      comp=Z,8.6nm,1.0s
J05D  Fort Rock, OR     85.92  42        P     18 47 13.3 -0.6
J05D                               IAmb  IAmb  18 47 21.0
      comp=Z,7.2nm,0.9s
GWY   Greenwater Val    85.96  50  P     P     18 47 14.2 -0.2
CRAG  Craig             85.98  28  P     P     18 47 14.4 +0.7
      baz=232
SIT   Sitka             86.02  26  P     P     18 47 14.4 +0.6
      baz=230
DHY   Denali Highway    86.06  17  P     P     18 47 14.6 +0.4
      baz=219
MCARA McCarthy VSAT     86.12  20  P     P     18 47 15.6 +1.3
      baz=223
F18K  Selawik           86.13  11  P     P     18 47 15.2 +1.0
      baz=208
H20K  Anotleneega Mo    86.13  13  P     P     18 47 15.2 +0.9
      baz=212
MCK   McKinley          86.15  16  P     P     18 47 15.3 +0.8
      baz=218
PINM  Pinnacle          86.15  22  P     P     18 47 15.2 +0.6
      baz=226
PNL   Peninsula         86.17  23  P     P     18 47 15.2 +0.6
      baz=226
E17K  Hotham Inlet      86.18  10  P     P     18 47 15.9 +1.4
      baz=206
HARP  HAARP             86.20  19  P     P     18 47 15.4 +0.7
      baz=221
G19K  Purcell Mounta    86.23  12  P     P     18 47 15.0 +0.2
G19K                               IAmb  IAmb  18 47 22.3
      comp=Z,14nm,1.2s
G19K  Purcell Mounta    86.23  12  P     P     18 47 14.4 -0.3
      baz=210
S31K  Pelican           86.24  25  P     P     18 47 15.6 +0.7
      baz=229
TPH   Tonopah           86.34  48  P     P     18 47 16.2  0.0
U33K  Whale Pass        86.38  27  P     P     18 47 15.6 -0.1
      baz=232
CTG   Chitna Glacier    86.39  21  P     P     18 47 15.4 -0.4
      baz=225
ULN   Ulaanbaatar       86.45 322  P     P     18 47 17.8 +1.4
BBB   Bella Bella       86.47  32  LR    LR    19 18 15.4
      comp=Z,184nm,20.5s,baz=211,slow=30
LPIG  La Paz            86.50  64  LR    LR    19 16 44.6
      comp=Z,274nm,21.1s,baz=238,slow=29
D17K  Noatak River      86.54   9  P     P     18 47 15.2 -1.0
      baz=204
PAX   Paxson            86.54  18  P     P     18 47 15.9 -0.5
      baz=221
V35K  Ketchikan         86.58  29  P     P     18 47 16.2 -0.4
      baz=233
TPNV  Topopah Spring    86.58  50        P     18 47 16.8 -0.6
TPNV                               IAmb  IAmb  18 47 19.4
      comp=Z,21nm,1.8s
S32K  Killisnoo         86.60  26  P     P     18 47 17.2 +0.5
      baz=231
O28M  Mount Upton       86.65  22  P     P     18 47 17.5 +0.2
O28M  Mount Upton       86.65  22  P     P     18 47 17.8 +0.5
      baz=226
F19K  Shaleruckik Mo    86.69  12  P     P     18 47 17.5 +0.5
      baz=209
E18K  Tukpahlearik C    86.70  10  P     P     18 47 17.4 +0.4
      baz=207
MLY   Manley            86.72  15  P     P     18 47 17.6 +0.3
      baz=216
C16K  Lisburne Hills    86.74   8  P     P     18 47 17.9 +0.7
      baz=202
H21K  Melozitna Rive    86.74  14  P     P     18 47 17.6 +0.4
H21K  Melozitna Rive    86.74  14  P     P     18 47 17.9 +0.6
      baz=214
P29M  Windy Craggy      86.76  23        P     18 47 18.0 +0.5
P29M                               IAmb  IAmb  18 47 24.5
      comp=Z,17nm,1.1s
P29M  Windy Craggy      86.76  23  P     P     18 47 18.2 +0.7
      baz=228
NEA2  Nenana            86.80  16  P     P     18 47 18.9 +1.3
      baz=218
IMAR  Indian Mountai    86.80  13  P     P     18 47 17.9 +0.4
113A  Mohawk Valley,    86.81  54  P     P     18 47 18.5 +0.1
SONM  Songino Array     86.82 322  P     P     18 47 18.5 +0.2
SONM  Songino Array     86.82 322  P     P     18 47 17.1 -1.1
      comp=Z,0.2nm,0.3s,baz=142,slow=7.5,SNR=4.2
SONM                               LR    LR    19 23 38.4
      comp=Z,60nm,21.9s,baz=108,slow=34
      comp=Z,0.2nm,0.3s
M26K  Nabesna, AK       86.88  19  P     P     18 47 18.5 +0.4
M26K                               IAmb  IAmb  18 47 25.1
      comp=Z,7.7nm,1.0s
M26K  Nabesna, AK       86.88  19  P     P     18 47 18.5 +0.4
      baz=223
O29M  Mount Kennedy     86.90  22  P     P     18 47 18.8 +0.5
      baz=227
WRAK  Wrangell Islan    86.91  28  P     P     18 47 18.7 +0.5
      baz=233
WRH   Wood River Hil    86.96  16        P     18 47 17.7 -0.6
K24K  Donnelly Dome     87.09  18  P     P     18 47 19.9 +0.9
      baz=220
R32K  Eaglecrest        87.14  25  P     P     18 47 20.5 +1.2
      baz=231
YUK8  Steele Glacier    87.16  21  P     P     18 47 20.8 +1.1
      baz=226
I23K  Minto, Yukon-K    87.17  15  P     P     18 47 20.4 +1.1
      baz=217
PLBC  Pleasant Camp     87.17  24  P     P     18 47 20.9 +1.4
      baz=229
M27K  Edge Creek, AK    87.21  20  P     P     18 47 20.4 +0.6
      baz=224
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HDA   Harding Lake      87.22  17  P     P     18 47 19.3 -0.3
HDA                                IAmb  IAmb  18 47 25.7
      comp=Z,8.4nm,1.0s
HDA   Harding Lake      87.22  17  P     P     18 47 21.0 +1.4
      baz=219
L26K  Log Cabin Wild    87.23  19  P     P     18 47 19.7  0.0
L26K  Log Cabin Wild    87.23  19  P     P     18 47 20.7 +1.0
      baz=223
S11A  Rachel            87.23  49  P     P     18 47 20.8 +0.3
WVOR  Wild Horse Val    87.23  44  P     P     18 47 20.1 -0.3
WVOR                               IAmb  IAmb  18 47 23.3
      comp=Z,22nm,1.9s
C17K  DeLong Mountai    87.24   9  P     P     18 47 21.2 +1.6
      baz=204
GTA   Gaotai            87.25 313  eP    P     18 47 23.3 +2.8
GTA                                pP    pwP   18 47 27.5 +0.5
GTA                                pmax  pmax
      comp=Z,7.0nm,1.2s
YUK3  Moose Creek       87.26  21  P     P     18 47 21.0 +0.8
      baz=225
H22K  Ishtalitna Cre    87.27  14  P     P     18 47 20.8 +0.9
      baz=215
F20K  Avaraart Lake     87.29  12  P     P     18 47 21.3 +1.5
      baz=211
G21K  Allakaket         87.30  13  P     P     18 47 21.0 +1.0
      baz=213
RIDG  Independent Ri    87.31  18  P     P     18 47 21.7 +1.6
      baz=221
COLA  College           87.34  16  P     P     18 47 21.5 +1.4
      baz=219
E19K  Redstone River    87.34  12  P     P     18 47 20.2 +0.1
E19K                               IAmb  IAmb  18 47 33.7
      comp=Z,6.8nm,1.0s
E19K  Redstone River    87.34  12  P     P     18 47 21.3 +1.2
      baz=210
P30M  Million Dollar    87.38  23  P     P     18 47 21.5 +1.0
      baz=229
I07A  Izee              87.40  42  P     P     18 47 21.0 -0.1
YUK6  Outpost Mounta    87.42  22  P     P     18 47 21.7 +0.7
      baz=227
IL31                    87.52  17  P     P     18 47 22.0 +1.0
IL31                               IAmb  IAmb  18 47 26.7
      comp=Z,5.9nm,0.9s
ILAR  Eielson Array     87.52  17  P     P     18 47 21.1 +0.1
ILAR  Eielson Array     87.52  17  P     P     18 47 20.3 -0.8
      comp=Z,1.4nm,0.8s,baz=237,slow=6.0,SNR=16
ILAR                               LR    LR    19 24 02.6
      comp=Z,192nm,18.1s,baz=226,slow=34
      comp=Z,1.4nm,0.8s
BRDH  Bariadhala        87.53 294  LR    LR    19 25 26.1
      comp=Z,63nm,19.7s,baz=134,slow=35
SKAG  Skagway           87.57  24  P     P     18 47 22.5 +1.1
      baz=230
YUK4  Talbot Arm        87.59  22  P     P     18 47 22.6 +0.8
      baz=227
W13A  Hualapai Mount    87.61  52  P     P     18 47 21.4 -1.1
W13A                               IAmb  IAmb  18 47 29.7
      comp=Z,11nm,1.6s
SYO   Syowa Base        87.62 196⇓eP   P     18 47 22.5 +0.9
R11B  Troy Canyon, C    87.63  49  P     P     18 47 22.0 -0.4
POKR  Poker Plat Res    87.64  16  P     P     18 47 21.8 +0.2
      baz=219
PRN   Pahroc Range      87.64  50  P     P     18 47 21.9 -0.6
PRN                                IAmb  IAmb  18 47 30.6
      comp=Z,9.0nm,1.2s
HYT   Haines Junctio    87.65  22  P     P     18 47 22.6 +0.7
      baz=228
H23K  Yukon River       87.66  15  P     P     18 47 22.7 +0.9
      baz=217
C18K  Utukok River      87.70  10  P     P     18 47 23.1 +1.1
      baz=206
L27K  Beaver Creek,     87.73  19  P     P     18 47 23.1 +0.9
      baz=224
SCRK  Sand Creek        87.74  18  P     P     18 47 22.1 -0.2
SCRK  Sand Creek        87.74  18  P     P     18 47 23.8 +1.5
      baz=222
J08A  Circle Bar Ran    87.75  43  P     P     18 47 23.0 +0.2
J08A                               IAmb  IAmb  18 47 29.9
      comp=Z,16nm,1.9s
BCAR  Beaver Creek A    87.75  19  P     P     18 47 22.2 -0.1
J25K  Salcha River,     87.82  17  P     P     18 47 23.2 +0.6
J25K                               IAmb  IAmb  18 47 29.3
      comp=Z,22nm,1.9s
J25K  Salcha River,     87.82  17  P     P     18 47 24.1 +1.5
      baz=221
F21K  Alatna River      87.90  13  P     P     18 47 24.0 +1.1
      baz=213
G22K  Bettles           88.09  14  P     P     18 47 24.7 +1.0
      baz=215
D19K  Kuna River        88.09  11  P     P     18 47 24.7 +0.9
      baz=209
H24K  Noodor Dome       88.09  16  P     P     18 47 24.9 +1.1
      baz=219
O30N  Mendenhall        88.13  23  P     P     18 47 25.4 +1.3
      baz=229
T35M  Bob Quinn         88.17  28  P     P     18 47 25.5 +1.1
      baz=234
N30M  Aishikik Lake     88.22  22  P     P     18 47 24.8 +0.3
      baz=228
E20K  Nigu River        88.24  11  P     P     18 47 25.5 +1.0
      baz=211
J26L  Joseph Creek      88.25  18  P     P     18 47 26.3 +1.6
      baz=222
B18K  Kokolik River     88.26   9  P     P     18 47 26.1 +1.7
      baz=206
G23K  Bananza Creek     88.26  14  P     P     18 47 25.9 +1.3
      baz=217
G08A  Pilot Rock        88.28  41  P     P     18 47 24.6 -0.7
P32M  Atlin             88.29  25  P     P     18 47 25.8 +0.9
      baz=231
S34M  Telegraph Cree    88.33  27  P     P     18 47 26.2 +1.1
      baz=234
K27K  Chicken           88.35  19  P     P     18 47 26.5 +1.4
      baz=224
C19K  Lookout Ridge     88.38  10  P     P     18 47 26.4 +1.3
      baz=208
M29M  Somme Creek       88.40  21  P     P     18 47 26.3 +0.9
      baz=227
F22K  John River        88.42  13  P     P     18 47 26.4 +1.1
      baz=214
PRP   Porcupine Dome    88.47  16  P     P     18 47 26.8 +1.1
      baz=221
Q32M  Nakina River      88.48  26  P     P     18 47 26.7 +0.7
      baz=233
WHY   Whitehorse        88.51  23  P     P     18 47 27.0 +1.0
      baz=230
D20K  Etivluk River     88.55  11  P     P     18 47 27.0 +1.0
      baz=210
COLD  Coldfoot          88.64  14  P     P     18 47 28.0 +1.7
      baz=216
N31M  Braeburn, Yuko    88.71  22  P     P     18 47 28.0 +1.2
      baz=230
E08A  Dider Farm, El    88.75  40  P     P     18 47 28.2 +0.9
SPR3  Spring Creek 3    88.79  49  P     P     18 47 28.4 +0.3
SPR3                               IAmb  IAmb  18 47 30.6
      comp=Z,13nm,1.6s
E21K  Killik River      88.83  12  P     P     18 47 28.5 +1.2
      baz=213
ELK   Elko              88.84  47        P     18 47 27.7 -0.5
G24K  Hadweenzic Riv    88.87  15  P     P     18 47 28.3 +0.9
      baz=219
PSUT  Pine Spring       88.95  49  P     P     18 47 28.0 -0.8
PSUT                               IAmb  IAmb  18 47 46.6
      comp=Z,14nm,1.9s
H25L  Birch Creek       88.96  16  P     P     18 47 29.0 +1.2
      baz=220
I26K  Coal Creek Min    88.97  17  P     P     18 47 27.4 -0.5
I26K  Coal Creek Min    88.97  17  P     P     18 47 28.6 +0.7
      baz=223
L29M  L29M              88.97  20  P     P     18 47 27.8 -0.3
L29M                               IAmb  IAmb  18 47 34.5
      comp=Z,9.4nm,1.4s
L29M  L29M              88.97  20  P     P     18 47 28.7 +0.7
      baz=228
LLLB  Lillooet          89.00  36  P     P     18 47 28.2 -0.3
LLLB                               IAmb  IAmb  18 47 47.7
      comp=Z,8.0nm,1.2s
E22K  Anaktuvuk Pass    89.02  13  P     P     18 47 28.4 +0.3
      baz=215
P33M  Teslin, Yukon     89.03  24  P     P     18 47 28.9 +0.4
      baz=232
D08A  Wollman Farm,     89.09  40  P     P     18 47 28.8 -0.1
D08A                               IAmb  IAmb  18 47 31.6
      comp=Z,17nm,1.6s
DLBC  Dease Lake        89.12  27  LR    LR    19 20 27.3
      comp=Z,22nm,20.0s,baz=239,slow=31
A19K  Wainwright        89.13   9  P     P     18 47 29.7 +1.2
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	baz=206						
KNB	**Kanab**	**89.13**	**51**	P	**P**	**18 47 29.3**	**-0.3**
KNB				IAmb	IAmb	18 47 38.7	
	comp=Z,8.5nm,1.2s						
BMO	**Blue Mountains**	**89.15**	**42**	P	**P**	**18 47 29.1**	**-0.3**
BMO				IAmb	IAmb	18 47 31.8	
	comp=Z,13nm,1.7s						
DAWY	**Dawson**	**89.22**	**19**		**P**	**18 47 29.3**	**+0.2**
DAWY	**Dawson**	**89.22**	**19**	P	**P**	**18 47 29.9**	**+0.8**
	baz=226						
G25K	**Bearman Lake**	**89.27**	**16**	P	**P**	**18 47 30.4**	**+1.1**
	baz=220						
C21K	**Knifeblade Rid**	**89.28**	**11**	P	**P**	**18 47 30.4**	**+1.2**
	baz=212						
R33M	**Jennings River**	**89.28**	**26**	P	**P**	**18 47 29.9**	**+0.2**
	baz=234						
U15A	**North Rim**	**89.31**	**52**		**P**	**18 47 30.0**	**-0.5**
U15A				IAmb	IAmb	18 47 39.4	
	comp=Z,15nm,1.5s						
F24K	**Squaw Lake**	**89.41**	**14**	P	**P**	**18 47 30.9**	**+0.8**
	baz=218						
B08A	**Colville Reser**	**89.42**	**39**	P	**P**	**18 47 30.5**	**0.0**
B08A				IAmb	IAmb	18 47 37.6	
	comp=Z,11nm,1.6s						
E23K	**Chandalar**	**89.44**	**14**	P	**P**	**18 47 29.9**	**-0.3**
E23K				IAmb	IAmb	18 49 28.0	
	comp=Z,20nm,2.0s						
E23K	**Chandalar**	**89.44**	**14**	P	**P**	**18 47 31.7**	**+1.5**
	baz=217						
D22K	**Ayikyak River**	**89.45**	**12**		**P**	**18 47 30.9**	**+0.7**
D22K				IAmb	IAmb	18 47 38.8	
	comp=Z,9.2nm,1.4s						
D22K	**Ayikyak River**	**89.45**	**12**	P	**P**	**18 47 31.8**	**+1.6**
	baz=214						
N32M	**Quiet Lake**	**89.51**	**24**	P	**P**	**18 47 31.9**	**+1.3**
	baz=232						
MFID	**Camas Ranch**	**89.52**	**44**	P	**P**	**18 47 30.6**	**-0.5**
MFID				IAmb	IAmb	18 47 33.0	
	comp=Z,28nm,2.0s						
B20K	**Meade River**	**89.58**	**10**	P	**P**	**18 47 31.3**	**+0.6**
	baz=210						
I27K	**Kandik River**	**89.63**	**18**	P	**P**	**18 47 31.4**	**+0.3**
	baz=224						
K29M	**Barlow Dome**	**89.67**	**20**	P	**P**	**18 47 31.7**	**+0.3**
	baz=228						
WUAZ	**Wupatki**	**89.67**	**53**	P	**P**	**18 47 31.6**	**-0.5**
M31M	**Drury Creek, Y**	**89.68**	**22**	P	**P**	**18 47 32.0**	**+0.6**
	baz=231						
B21K	**Ikpikpuk River**	**89.70**	**11**	P	**P**	**18 47 31.9**	**+0.6**
	baz=212						
E24K	**Your Creek**	**89.71**	**14**	P	**P**	**18 47 32.4**	**+0.9**
	baz=218						
TOLK	**Toolik Lake Re**	**89.92**	**13**	P	**P**	**18 47 33.2**	**+0.8**
	baz=217						
D23K	**Nanushuk River**	**89.94**	**13**	P	**P**	**18 47 33.1**	**+0.7**
	baz=216						
G26K	**Porcupine Rive**	**90.01**	**16**	P	**P**	**18 47 33.0**	**+0.3**
G26K	**Porcupine Rive**	**90.01**	**16**	P	**P**	**18 47 33.7**	**+1.0**
	baz=222						
I28M	**Miner Creek**	**90.01**	**18**	P	**P**	**18 47 33.5**	**+0.6**
	baz=226						
F25K	**Christian Rive**	**90.02**	**15**	P	**P**	**18 47 34.0**	**+1.1**
	baz=221						
PLID	**Pearl Lake**	**90.09**	**42**		**P**	**18 47 31.7**	**-2.2**
PLID				IAmb	IAmb	18 47 36.2	
	comp=Z,22nm,2.0s						
H27K	**Steamboat Moun**	**90.10**	**17**	P	**P**	**18 47 31.7**	**-1.6**
H27K	**Steamboat Moun**	**90.10**	**17**	P	**P**	**18 47 34.8**	**+1.5**
	baz=224						
MVU	**Marysvale**	**90.14**	**50**	P	**P**	**18 47 32.9**	**-1.4**
MVU				IAmb	IAmb	18 47 38.0	
	comp=Z,21nm,1.9s						
BMAR	**Burnt Mountain**	**90.16**	**16**	P	**P**	**18 47 33.7**	**+0.2**
X18A	**Snowflake**	**90.41**	**54**	P	**P**	**18 47 34.5**	**-1.2**
X18A				IAmb	IAmb	18 48 24.8	
	comp=Z,16nm,1.8s						
E25K	**Arctic Village**	**90.44**	**15**	P	**P**	**18 47 36.2**	**+1.4**
	baz=221						
I29M	**Ogilvie Camp,**	**90.45**	**19**	P	**P**	**18 47 33.9**	**-1.0**
I29M				IAmb	IAmb	18 49 11.2	
	comp=Z,4.1nm,0.6s						
I29M	**Ogilvie Camp,**	**90.45**	**19**	P	**P**	**18 47 36.0**	**+1.2**
	baz=227						
F26K	**Sheenjek River**	**90.47**	**15**	P	**P**	**18 47 35.5**	**+0.6**
	baz=222						
G27K	**Doyon Strip**	**90.48**	**17**	P	**P**	**18 47 36.1**	**+1.0**
	baz=224						
D24K	**Happy Valley**	**90.49**	**13**	P	**P**	**18 47 36.2**	**+1.3**
	baz=218						
HLID	**Hailey**	**90.52**	**44**	P	**P**	**18 47 35.3**	**-0.6**
B22K	**Teshekpuk Lake**	**90.53**	**11**	P	**P**	**18 47 35.7**	**+0.6**
	baz=213						
J30M	**Hart River**	**90.55**	**20**	P	**P**	**18 47 35.7**	**+0.3**
	baz=229						
C23K	**Itkillik River**	**90.66**	**12**	P	**P**	**18 47 36.6**	**+0.9**
	baz=216						
A21K	**Barrow**	**90.81**	**10**	P	**P**	**18 47 37.1**	**+0.7**
	baz=210						
A22K	**Sinclair Lake**	**90.82**	**10**	P	**P**	**18 47 37.3**	**+1.0**
	baz=212						
TROLL	**Troll, Antarti**	**90.84**	**183**	⇑P	**P**	**18 47 37.1**	**+0.2**
	comp=Z,672nm,0.9s						
HVU	**Hansel Valley**	**90.95**	**46**	P	**P**	**18 47 36.7**	**-1.2**
HVU				IAmb	IAmb	18 47 40.8	
	comp=Z,16nm,1.8s						
I30M	**Mount Dempster**	**90.96**	**19**	P	**P**	**18 47 35.4**	**-2.0**
I30M	**Mount Dempster**	**90.96**	**19**	P	**P**	**18 47 37.9**	**+0.5**
	baz=229						
C24K	**Franklin Bluff**	**90.97**	**13**	P	**P**	**18 47 38.1**	**+0.9**
	baz=218						
HMU	**Henry Mountain**	**91.01**	**51**	P	**P**	**18 47 37.5**	**-1.0**
HMU				IAmb	IAmb	18 47 41.0	
	comp=Z,7.1nm,1.2s						
H29M	**Whitestone**	**91.01**	**18**	P	**P**	**18 47 37.8**	**+0.4**
	baz=227						
Q16A	**Castle Valley**	**91.04**	**50**	P	**P**	**18 47 37.8**	**-0.8**
Q16A				IAmb	IAmb	18 47 42.7	
	comp=Z,7.1nm,1.1s						
MMPY	**Sheldon Lake,**	**91.08**	**23**	P	**P**	**18 47 38.8**	**+0.9**
	baz=234						
D25K	**Kavik River**	**91.17**	**14**	P	**P**	**18 47 39.1**	**+0.9**
	baz=220						
SNAA	**Sanae**	**91.41**	**182**	⇑P	**P**	**18 47 39.0**	**-0.6**
	comp=Z,130nm,1.0s						
SNAA	**Sanae**	**91.41**	**182**	P	**P**	**18 47 38.3**	**-1.2**
SNAA	**Sanae**	**91.41**	**182**	P	**P**	**18 47 37.6**	**-1.9**
	comp=Z,6.6nm,1.1s,baz=178,slow=4.3,SNR=10						
SNAA				LR	LR	19 26 49.5	
	comp=Z,163nm,18.4s,baz=202,slow=34						
	comp=Z,6.6nm,1.1s						
ESPZ	**Base Esperanza**	**91.42**	**160**	P	**P**	**18 47 39.2**	**-0.3**
TOAD	**Toad River Com**	**91.44**	**28**	P	**P**	**18 47 40.5**	**+0.8**
	baz=239						
E27K	**Coleen River**	**91.49**	**16**	P	**P**	**18 47 40.8**	**+1.1**
	baz=224						
F28M	**Old Crow**	**91.55**	**17**	P	**P**	**18 47 41.5**	**+1.6**
	baz=226						
EPYK	**Eagle Plains**	**91.61**	**18**	P	**P**	**18 47 41.7**	**+1.4**
	baz=229						
VNA3	**Neumayer Olymp**	**91.92**	**180**	⇑P	**P**	**18 47 41.6**	**-0.2**
	comp=Z,14nm,0.9s						
C26K	**Camden Bay**	**91.96**	**14**	P	**P**	**18 47 42.6**	**+0.9**
	baz=221						
H31M	**Peel River**	**91.98**	**20**	P	**P**	**18 47 42.8**	**+0.8**
	baz=231						
C27K	**Jago River**	**92.02**	**14**	P	**P**	**18 47 43.1**	**+1.1**
	baz=222						
G30M	**tAoh Zraii Nji**	**92.16**	**18**	P	**P**	**18 47 43.7**	**+0.8**
	baz=229						
BEAVL	**Fort Liard**	**92.20**	**27**	P	**P**	**18 47 44.7**	**+1.6**
	baz=239						
VNA2	**Neumayer--Watz**	**92.24**	**180**	⇑P	**P**	**18 47 43.2**	**0.0**
	comp=Z,7.8nm,1.1s,baz=170,slow=3.1						
E28M	**Babbage River**	**92.33**	**16**	P	**P**	**18 47 44.9**	**+1.4**
	baz=226						
D27M	**Malcolm River**	**92.41**	**15**	P	**P**	**18 47 44.9**	**+1.0**
	baz=225						
VNA1	**Neumayer--Stat**	**92.52**	**180**	⇑P	**P**	**18 47 44.5**	**0.0**
	comp=Z,10nm,0.9s						
E29M	**Blow River**	**92.62**	**17**	P	**P**	**18 47 45.7**	**+0.8**
	baz=228						
F30M	**Barrier River**	**92.70**	**18**	P	**P**	**18 47 46.2**	**+1.0**
	baz=230						
G31M	**Satah River**	**92.71**	**19**	P	**P**	**18 47 46.5**	**+1.3**
	baz=231						
PALK	**Pallekele**	**92.90**	**277**	LR	LR	19 29 34.5	
	comp=Z,50nm,19.9s,baz=107,slow=36						
D28M	**Stokes Point**	**93.04**	**16**	P	**P**	**18 47 47.9**	**+1.2**
	baz=227						
TIXI	**Tiksi**	**93.08**	**348**	LR	LR	19 24 38.9	
	comp=Z,151nm,21.8s,baz=163,slow=32						
F31M	**Tsiigehtchic**	**93.20**	**18**	P	**P**	**18 47 48.3**	**+0.8**
	baz=232						
ANMO	**Albuquerque**	**93.26**	**55**	LR	LR	19 25 37.1	
	comp=Z,76nm,18.5s,baz=352,slow=33						
PDAR	**Pinedale Array**	**93.54**	**46**	LR	LR	19 26 13.6	
	comp=Z,60nm,18.6s,baz=254,slow=33						
TXAR	**Lajitas Array**	**93.80**	**61**	P	**P**	**18 47 51.6**	**+0.3**
	comp=Z,0.8nm,0.9s,baz=235,slow=4.4,SNR=6.9						
TXAR				LR	LR	19 21 14.9	
	comp=Z,114nm,21.3s,baz=242,slow=30						
	comp=Z,0.8nm,0.9s						
INK	**Inuvik**	**93.81**	**18**	LR	LR	19 24 27.7	
	comp=Z,151nm,20.3s,baz=228,slow=32						
WRGLY	**Wrigley**	**94.41**	**24**	P	**P**	**18 47 53.5**	**+0.3**
	baz=240						
C36M	**Paulatuk**	**97.23**	**19**	P	**P**	**18 48 05.7**	**-0.2**
	baz=240						
WMQ	**Urumqi**	**97.29**	**313**	*e*P	Pdif	18 48 08.6	+1.6
WMQ				LR	LR		
	comp=Z,110nm,22.5s						
YKA	**Yellowknife Ar**	**97.74**	**27**	P	**P**	**18 48 08.4**	**+0.1**
	comp=Z,1.0nm,0.9s,baz=260,slow=4.2,SNR=3.5						
YKA				LR	LR	19 25 37.8	
	comp=Z,237nm,20.1s,baz=280,slow=31						
	comp=Z,1.0nm,0.9s						
CMIG	**Matias Romero**	**98.18**	**75**	LR	LR	19 24 16.4	
	comp=Z,88nm,18.8s,baz=178,slow=30						
A36M	**Sachs Harbour**	**98.22**	**16**	P	Pdif	18 48 10.9	+0.5
	baz=240						
PLCA	**Paso Flores**	**98.67**	**137**	LR	LR	19 27 54.2	
	comp=Z,30nm,18.6s,baz=249,slow=32						
ZALV	**Zalesovo Beam**	**101.70**	**323**	P	**Pdif**	**18 48 26.7**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=68,slow=3.9,SNR=1.3						
MKAR	**Makanchi Array**	**101.73**	**315**	P	**Pdif**	**18 48 27.4**	**+0.9**
	comp=Z,0.2nm,0.7s,baz=96,slow=4.7,SNR=1.8						
ARCES	**ARCESS Array B**	**123.50**	**346**	PKP	**PKPdf**	**18 53 28.1**	**-2.3**
	comp=Z,3.0nm,0.9s,baz=48,slow=2.0,SNR=4.2						
AKASG	**Malin Array Be**	**134.94**	**327**	PKP	**PKPdf**	**18 53 53.1**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=51,slow=2.9,SNR=1.1						
EKA	**Eskdalemuir Ar**	**141.58**	**355**	PKP	**PKPdf**	**18 54 04.4**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=349,slow=3.3,SNR=2.7						
CLL	**Collm**	**141.79**	**338**	*e*PKPdf	**PKPdf**	**18 54 04.0**	**-1.3**
CLL				*e*PKiKP	**PKiKP**	**18 54 08.0**	**-0.1**
CLL				*e*x	x	18 54 17.0	
CLL				AMS	AMS	19 56 00.0	
	comp=Z,100nm,20.5s						
RONA	**Rosalia, Austr**	**143.30**	**332**	*e*PKP	**PKPdf**	**18 54 08.6**	**+0.5**
	comp=Z,4.9nm,1.1s						
CONA	**Conrad Observa**	**143.32**	**332**	*e*PKP	**PKPdf**	**18 54 08.9**	**+0.7**
	comp=Z,7.0nm,1.7s						
GERES	**GERESS Array B**	**143.53**	**335**	PKP	**PKPdf**	**18 54 07.3**	**-1.3**
	comp=Z,0.9nm,0.9s,baz=57,slow=4.9,SNR=3.8						
ARSA	**Arzberg**	**143.98**	**332**	*i* PKP	**PKPdf**	**18 54 09.9**	**+0.5**
	comp=Z,5.0nm,1.1s						
SOKA	**Soboth**	**144.63**	**332**	*e*pPKP	**PKPdf**	**18 54 11.9**	**+1.3**
	comp=Z,11nm,1.3s						
BSTI	**Sart Tilman**	**144.71**	**344**	*d*PKP	**PKiKP**	**18 54 14.8**	**+0.7**
LIT	**Litokhoron**	**144.72**	**317**		**PKPab**	**18 54 09.2**	**-0.3**
UCC	**Uccle**	**144.81**	**346**	*d*PKP	**PKPdf**	**18 54 12.1**	**+1.5**
BGES	**Gesves**	**145.02**	**345**	*d*PKPdf	**PKPdf**	**18 54 11.1**	**+0.1**
LESA	**Schwarzleotal**	**145.07**	**335**	*i* pPKP	**PKPdf**	**18 54 11.7**	**+0.4**
	comp=Z,12nm,1.2s						
MYKA	**Terra Mystica**	**145.29**	**333**	*i* PKP	**PKPab**	**18 54 11.9**	**+0.4**
	comp=Z,7.7nm,1.0s						
WLF	**Walferdange**	**145.39**	**343**	*d*PKP	**PKiKP**	**18 54 13.6**	**-2.0**
DOU	**Dourbes**	**145.41**	**345**	*d*PKP	**PKiKP**	**18 54 16.9**	**+1.3**
WATA	**Walderalm**	**145.59**	**336**	*i* PKP	**PKPdf**	**18 54 12.0**	**-0.3**
	comp=Z,12nm,1.0s						
WTTA	**Wattenberg**	**145.62**	**336**	*e*PKP	**PKPbc**	**18 54 12.5**	**-0.1**
	comp=Z,9.9nm,1.0s						
ABTA	**Abfaltersbach**	**145.68**	**334**	*i* PKP	**PKPab**	**18 54 13.1**	**+0.1**
	comp=Z,17nm,1.1s						
MOTA	**Moosalm**	**145.76**	**336**	*i* pPKP	**PKPab**	**18 54 13.8**	**+0.5**
	comp=Z,9.6nm,0.9s						
RETA	**Reutte**	**145.78**	**337**	*i* pPKP	**PKPab**	**18 54 14.1**	**+0.8**
	comp=Z,8.5nm,1.5s						
SQTA	**Sankt Quirin**	**145.82**	**336**	*i* pPKP	**PKPab**	**18 54 14.2**	**+0.7**
	comp=Z,18nm,1.0s						
FETA	**Feichten**	**146.18**	**336**	*i* pPKP	**PKPab**	**18 54 14.9**	**0.0**
	comp=Z,6.4nm,0.9s						
DAVA	**Damuels**	**146.27**	**337**	*i* pPKP	**PKPbc**	**18 54 14.9**	**+0.4**
	comp=Z,7.7nm,1.0s						
FUORN	**Ofenpass-Fuorn**	**146.69**	**336**		**PKPab**	**18 54 17.1**	**0.0**
TUE	**Stuetta**	**147.16**	**337**		**PKPdf**	**18 54 12.2**	**-2.8**
ESDC	**Sonseca Array**	**157.13**	**351**	PKPab	**PKPab**	**18 55 01.6**	**+1.3**
	comp=Z,2.3nm,1.1s,baz=27,slow=3.5,SNR=7.7						
DBIC	**Dimbokro**	**169.09**	**199**	PKPab	**PKPab**	**18 55 54.1**	**+0.9**
	comp=Z,9.6nm,1.0s,baz=236,slow=5.3,SNR=5.0						
TORD	**Torodi Ar. Bea**	**169.45**	**250**	PKPab	**PKPab**	**18 55 55.3**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=89,slow=5.1,SNR=1.6						

GCMT 22 18:43:59.0±0.4**,41°.53S**±0°.02×**86°.40W**±0°.03**,h15**^{km}±2^{km}**, MW4.7**/71**, Moment Tensor Solution. s17,c20; s71,c87; Duration: 0 Moment tensor: Scale** 10^{16}**Nm;** M$_{rr}$-0.28±.09; M$_{\theta\theta}$0.25±.09; M$_{\phi\phi}$0.02±.08; M$_{r\theta}$-0.11±.16; M$_{\theta\phi}$-1.53±.08; M$_{\phi r}$-0.25±.17; **Best double couple:** M$_0$1.56500×10^{16} **NP1:**ϕ_s89.00000°**,**δ79.00000°**,** λ-173.00000°. **NP2:**ϕ_s357.00000°**,**δ83.00000°**,** λ-11.00000°. **Principal axes:** T 1.6770**,** Plg3.0000°**,** Azm43.0000°**;** N -0.2240**,** Plg77.0000°**,** Azm145.0000°**;** P -1.4530**,** Plg12.0000°**,** Azm313.0000°**; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function West Chile Rise**

IDC 22 18:48:26.1±2.1**,30°.38S**×**177°.61W,h0**^{km}**,mb3.6**/3**, mbtmp3.6**/3 **Error ellipse: s-maj=59.4km s-min=42.0km az=39.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.99**	**208**	Pn	Pn	18 50 28.8	-8.3
	0.2nm,0.3s,baz=48,slow=21,SNR=1.6						
URZ				Sn	Sn	18 52 05.4	-14
	0.6nm,0.3s,baz=100,slow=20,SNR=5.6						
ASAR	**Alice Springs**	**43.45**	**267**	P	P	18 56 31.2	+0.1
	0.3nm,0.5s,baz=107,slow=7.3,SNR=8.5						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**44.43**	**272**	P	P	18 56 38.6	-0.5
	0.5nm,0.4s,baz=111,slow=8.0,SNR=8.4						
	0.5nm,0.4s						
QSPA	**South Pole Qui**	**59.73**	**180**	P	P	18 58 32.5	0.0
	0.7nm,0.9s,baz=231,slow=9.9,SNR=1.5						
	0.7nm,0.9s						
FINES	**FINESS Array B**	**145.24**	**340**	PKPbc	PKPbc	19 08 03.9	-0.8
	2.2nm,0.9s,baz=56,slow=4.8,SNR=7.1						

IDC 22 18:52:10.9±6.7**,30°.16S**×**177°.72W,h0**^{km}**,mb3.3**/2**, mbtmp3.3**/2**,Error ellipse: s-maj=271.5km s-min=59.0km az=154.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.37**	**267**	P	P	19 00 15.4	+0.1
	0.2nm,0.5s,baz=106,slow=7.5,SNR=5.9						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**44.33**	**272**	P	P	19 00 23.2	+0.2
	0.2nm,0.3s,baz=111,slow=7.9,SNR=5.7						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**145.00**	**340**	PKPbc	PKPbc	19 11 47.5	-1.2
	5.8nm,1.2s,baz=60,slow=5.6,SNR=5.5						

IDC ***22*** *18:53:40.2±21.0, 36°.27N×71°.48E, h179*^{km}*±161*^{km}*, mb3.3/3, mbtmp3.6/7, ML3.1/4, Error ellipse: s-maj=197.3km s-min=83.5km az=172.0*

NNC ***22*** *18:53:47.4±1.2, 36°.98N×71°.25E, h127*^{km}*±25*^{km}*, mb2.9, mpv3.7, Error ellipse: s-maj=10.7km s-min=8.6km az=12.0*

ISC 22 18:53:41.9±2.1**,36°.7N**±0°.2×**71°.3E**±0°.1**,h150**^{km}**,n13,** σ**1**^{s}.**41**/16**,mb3.8**/3**,4C-3D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.43**	**355**	⇓P	**Pn**	**18 55 16.1**	**+1.8**
	1.8nm,0.3s						
KK31				⇓S	**Sn**	**18 56 25.0**	**-1.8**
	3.5nm,0.3s						
CHMS	**Chumysh**	**6.85**	**22**	⇑P	**Pn**	**18 55 21.6**	**+1.7**
	3.4nm,0.8s						
CHMS				⇓S	**Sn**	**18 56 36.1**	**-0.7**
	4.7nm,0.7s						
TKM2	**Tokmak 2**	**7.06**	**27**	⇑P	**Pn**	**18 55 24.9**	**+1.9**
	3.0nm,0.5s						
TKM2				⇑S	**Sn**	**18 56 41.9**	**-0.2**
	6.4nm,0.7s						
MDOK	**Medeo**	**7.85**	**33**	P	**Pn**	**18 55 35.1**	**+1.7**
	3.3nm,0.6s						
MK31	**Makanchi Array**	**13.02**	**36**	⇑P	**P**	**18 56 44.4**	**-1.6**
	0.4nm,0.5s,baz=209,slow=9.3,SNR=13						
MKAR	**Makanchi Array**	**13.02**	**36**	P	**Pn**	**18 56 41.3**	**+0.1**
	0.2nm,0.3s,baz=209,slow=8.9,SNR=11						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**14.88**	**18**	P	**P**	**18 57 06.8**	**+0.2**
	0.1nm,0.3s,baz=210,slow=8.2,SNR=9.6						
	0.5nm,0.6s						
AB31	**Akbulak array**	**15.02**	**330**	P	**P**	**18 57 09.9**	**+1.7**
	0.2nm,0.5s,baz=135,slow=11,SNR=5.5						
BVAR	**Borovoye Array**	**16.35**	**358**	P	**P**	**18 57 23.1**	**+0.3**
	baz=171,slow=12,SNR=4.8						
	0.7nm,0.6s						
ZALV	**Zalesovo Beam**	**19.66**	**24**	P	**P**	**18 57 58.5**	**-0.5**
	0.5nm,0.3s,baz=218,slow=10,SNR=7.7						
	1.1nm,0.3s						
FINES	**FINESS Array B**	**37.44**	**326**	P	**P**	**19 00 39.5**	**-0.8**
	1.5nm,0.7s,baz=128,slow=11,SNR=3.7						
	1.5nm,0.7s						
HFS	**Hagfors**	**43.05**	**322**	P	**P**	**19 01 25.3**	**-1.1**
	2.4nm,0.9s,baz=68,slow=12,SNR=1.4						
	2.4nm,0.9s						
NOA	**NORSAR Array B**	**44.36**	**323**	P	**P**	**19 01 35.7**	**-1.2**
	0.2nm,0.5s,baz=95,slow=7.8,SNR=1.8						
	0.2nm,0.5s						

GCG ***22*** *19:20:17.7±1.8, 16°.90N×94°.61W, h35*^{km}*±67*^{km}*, MD4.2, ML3.2*

MEX ***22*** *19:20:19.5±0.8, 16°.77N×94°.53W, h78*^{km}*±22*^{km}*, MD4.0*

ISC 22 19:20:18.9±1.4**,16°.70N**±0°.04×**94°.54W**±0°.02**,h27**^{km}±15^{km}**, n23,** σ**1**^{s}.**75**/42**,Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TUIG	**Tuzandepetl**	**1.33**	**5**	*e*P	**Pn**	**19 20 40.7**	**-1.1**
TUIG				*e*S	**Sb**	**19 21 00.1**	**+0.2**
TGIG		**1.36**	**86**	*e*P	**Pn**	**19 20 41.1**	**-1.1**
TGIG				*e*S	**Sn**	**19 20 58.8**	**-0.6**
TGIG		**1.36**	**86**	*e*P	**Pn**	**19 20 41.2**	**-1.1**
TGIG				*e*S	**Sn**	**19 20 58.8**	**-0.6**
TGIG				IAML		19 20 59.7	
	comp=E,444nm,0.2s						
PCIG		**1.61**	**128**	*e*P	**Pn**	**19 20 44.7**	**-0.9**
PCIG				*e*S	**Sn**	**19 21 05.4**	**-0.1**
HUIG	**Huatulco**	**1.77**	**239**	*e*P	**Pn**	**19 20 47.2**	**-0.6**
HUIG				*e*S	**Sn**	**19 21 10.2**	**+0.7**
HUIG	**Huatulco**	**1.77**	**239**	*e*P	**Pn**	**19 20 46.3**	**-1.6**
HUIG				*e*S	**Sn**	**19 21 09.4**	**-0.1**
HUIG				IAML		19 21 13.4	
	comp=Z,148nm,0.4s						
OXLC	**Oaxaca**	**2.10**	**280**	*e*P	**Pb**	**19 20 59.5**	**+3.0**
OXLC				*e*S	**Sb**	**19 21 23.0**	**+0.7**
OXBJ	**Oaxaca**	**2.12**	**280**	*e*P	**Pb**	**19 20 60.0**	**+3.1**
VHO	**Vista Hermosa**	**2.13**	**280**	*e*P	**Pb**	**19 20 55.0**	**-2.1**
VHO				*e*S	**Sb**	**19 21 20.9**	**-2.3**
CCIG	**Comitan**	**2.34**	**100**	*e*P	**Pn**	**19 20 56.0**	**+0.1**
CCIG				*e*S	**Sb**	**19 21 27.2**	**-2.0**
CCIG	**Comitan**	**2.34**	**100**	*e*P	**Pn**	**19 20 57.3**	**+1.5**
CCIG				IAML		19 21 37.3	
	comp=N,140nm,0.5s						
PEIG	**Puerto Escondi**	**2.60**	**255**	*e*P	**Pn**	**19 20 58.7**	**-0.6**
PEIG				*e*S	**Sn**	**19 21 29.1**	**-0.9**
PATR	**El Naranjo**	**2.72**	**125**	*e*P	**Pn**	**19 21 02.3**	**+1.2**
PATR				*e*S	**Sn**	**19 21 35.1**	**+1.8**
PAVE	**Pavencul**	**2.72**	**123**	*e*P	**Pn**	**19 21 02.2**	**+1.1**
PAVE				*e*S	**Sn**	**19 21 33.4**	**+0.1**
TOIG	**Toxpalan**	**2.78**	**300**	*e*P	**Pn**	**19 21 02.8**	**+0.9**
TOIG				*e*S	**Sn**	**19 21 34.1**	**-0.6**
YOIG	**Yosondua**	**2.88**	**274**	*e*P	**Pn**	**19 21 03.9**	**+0.4**
YOIG				*e*S	**Sn**	**19 21 35.0**	**-2.4**
TXIG	**Tlaxiaco**	**3.14**	**281**	*e*P	**Pn**	**19 21 07.3**	**+0.3**
TXIG				*e*S	**Sn**	**19 21 47.1**	**+3.4**
TPIG	**Tehuac#an**	**3.19**	**303**	*e*S	**Sn**	**19 21 48.7**	**+3.9**
HLIG	**Huajuapan de L**	**3.32**	**290**	*e*P	**Pn**	**19 21 10.9**	**+1.6**
HLIG				*e*S	**Sn**	**19 21 48.0**	**0.0**
JAUV	**Jalcomulco**	**3.42**	**321**	*e*P	**Pn**	**19 21 09.6**	**-0.9**
JAUV				*e*S	**Sn**	**19 21 47.5**	**-2.7**
PNIG	**Pinotepa**	**3.46**	**265**	*e*P	**Pn**	**19 21 09.8**	**-1.2**
PNIG				*e*S	**Sn**	**19 21 50.0**	**-1.1**
FTIG	**Fresnillo de T**	**3.64**	**290**	*e*P	**Pn**	**19 21 13.9**	**+0.3**
FTIG				*e*S	**Sn**	**19 21 58.1**	**+2.3**
TLIG	**Tlapa**	**3.95**	**283**	*e*S	**Sb**	**19 22 11.4**	**-3.8**

IDC ***22*** *19:21:12.1±0.8, 8°.67S×157°.73E, h0*^{km}*, mb3.9/10, mbtmp3.9/12, ML3.8/2, MS3.4/11, Error ellipse: s-maj=23.0km s-min=19.3km az=128.0*

NEIC ***22*** *19:21:14.2±2.2, 8°.6S±0°.1×157°.67E±0°.08, h10*^{km}*±1*^{km}*, mb4.5/16, Error ellipse: s-maj=18.4km s-min=13.2km az=24.0*

ISC 22 19:21:14.5±0.5**,8°.72S**±0°.09×**157°.60E**±0°.06**,h16**^{km}**,n42,** σ**0**^{s}.**98**/34**,mb4.3**/17**,MS3.5**/9**,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.42**	**107**	Pn	**Pn**	**19 21 52.5**	**-1.0**
HNR				Sn	**Sn**	**19 22 23.4**	**+0.7**
HNR	**Honiara**	**2.42**	**107**	Pn	**Pn**	**19 21 51.6**	**-1.9**
	46nm,0.3s,baz=226,slow=9.2,SNR=8.5						
HNR				Sn	**Sb**	**19 22 28.2**	**+0.9**
	348nm,0.3s,baz=331,slow=24,SNR=14						
HNR				LR	LR	19 22 47.5	
	comp=Z,805nm,18.2s,baz=233,slow=41						
	201nm,0.9s						
PATS	**Pohnpei**	**15.47**	**3**	Pn	**Pn**	**19 24 51.7**	**-0.6**
CTAO	**Charters Tower**	**15.75**	**223**	Pn	**P**	**19 24 58.5**	**-1.3**
DZM	**Mont Dzumac**	**15.76**	**148**	LR	LR	19 29 32.3	
	comp=Z,152nm,19.4s,baz=350,slow=32						
JAY	**Jayapura**	**17.91**	**289**	P	**Pn**	**19 25 23.1**	**-0.1**
	0.1nm,0.3s,baz=296,slow=12,SNR=2.3						
	4.8nm,0.9s						
ARMA	**Armidale**	**22.30**	**194**	P	**P**	**19 26 12.4**	**+0.9**
ARMA				IAmb	IAmb	19 26 34.2	
	comp=Z,33nm,1.4s						
WR8	**Warramunga Arr**	**24.98**	**241**	P	**P**	**19 26 38.1**	**+0.4**
WR8				IAmb	IAmb	19 26 38.1	
	comp=Z,13nm,1.2s						
WRA	**Warramunga Arr**	**25.11**	**241**	P	**P**	**19 26 39.2**	**+0.3**
WRA	**Warramunga Arr**	**25.11**	**241**	P	**P**	**19 26 39.9**	**+1.0**
	comp=Z,5.0nm,0.6s,baz=67,slow=9.3,SNR=35						
	comp=Z,5.0nm,0.6s						
GUMO	**Guam**	**25.52**	**330**	LR	LR	19 35 36.4	
	comp=Z,29nm,21.1s,baz=156,slow=34						
AS31	**Alice Springs**	**27.11**	**234**	P	**P**	**19 26 57.3**	**+0.3**
ASAR	**Alice Springs**	**27.11**	**234**	P	**P**	**19 26 58.0**	**+1.0**
ASAR	**Alice Springs**	**27.11**	**234**	P	**P**	**19 26 56.8**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=50,slow=9.2,SNR=5.9						
ASAR				LR	LR	19 37 25.7	
	comp=Z,88nm,19.0s,baz=92,slow=36						
	comp=Z,1.0nm,0.8s						
STKA	**Stephens Creek**	**27.42**	**211**	P	**P**	**19 27 00.8**	**+1.2**
STKA	**Stephens Creek**	**27.42**	**211**	P	**P**	**19 27 02.3**	**+2.7**
	comp=Z,4.0nm,0.6s,baz=37,slow=13,SNR=9.5						
	comp=Z,4.0nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**28.49**	**18**	T	T	19 55 49.4	
	baz=199,slow=75,SNR=74						
H11S2	**WAKE ISLAND Hy**	**28.49**	**18**	T	T	19 55 49.6	
	baz=199,slow=75,SNR=64						
H11S1	**WAKE ISLAND Hy**	**28.51**	**18**	T	T	19 55 50.7	
	baz=199,slow=75,SNR=40						
BBOO	**Buckleboo**	**31.17**	**217**	P	**P**	**19 27 32.7**	**-0.3**
FITZ	**Fitzroy Crossi**	**32.41**	**250**	P	**P**	**19 27 42.6**	**-1.4**
URZ	**Urewera**	**34.26**	**152**	LR	LR	19 39 41.8	
	comp=Z,111nm,19.3s,baz=258,slow=32						
RTZ	**Ruatahuna**	**34.49**	**153**	P	**P**	**19 28 02.8**	**+0.8**
DAV	**Davao City (W)**	**35.57**	**295**	LR	LR	19 40 38.2	
	comp=Z,29nm,21.2s,baz=148,slow=33						
TGY	**Tagaytay City**	**42.87**	**302**	LR	LR	19 46 29.9	
	comp=Z,42nm,19.6s,baz=94,slow=35						
PETK	**Petropavlovsk-**	**61.59**	**0**	P	**P**	**19 31 31.8**	**+0.8**
	comp=Z,0.7nm,0.9s,baz=141,slow=7.3,SNR=4.8						
PETK				LR	LR	19 55 31.7	
	comp=Z,35nm,20.7s,baz=144,slow=34						

	comp=Z,0.7nm,0.9s						
CMAR	Chiang Mai Arr	63.86	295	P	P	19 31 48.4	+1.5
	comp=Z,0.6nm,0.7s,baz=131,slow=5.9,SNR=6.3						
	comp=Z,0.6nm,0.7s						
SONM	Songino Array	72.19	327	P	P	19 32 39.5	+0.6
	comp=Z,0.2nm,0.4s,baz=122,slow=5.2,SNR=1.4						
	comp=Z,0.2nm,0.4s						
YAK	Yakutsk	73.80	347	LR	LR	20 02 53.7	
	comp=Z,25nm,20.8s,baz=184,slow=34						
QSPA	South Pole Qui	81.26	180	P	P	19 33 30.2	+0.3
QSPA				IAmb	IAmb	19 33 55.1	
	comp=Z,6.4nm,1.4s						
QSPA	South Pole Qui	81.26	180	P	P	19 33 30.3	+0.5
	comp=Z,0.9nm,0.6s,baz=346,slow=8.3,SNR=13						
QSPA				LR	LR	20 04 24.8	
	comp=Z,37nm,19.0s,baz=353,slow=32						
	comp=Z,0.9nm,0.6s						
CAST	Castle Rocks	81.41	20	P	P	19 33 29.9	-0.5
CAST				IAmb	IAmb	19 33 31.0	
	comp=Z,3.5nm,0.7s						
TIXI	Tiksi	82.44	351	LR	LR	20 13 33.9	
	comp=Z,25nm,18.0s,baz=46,slow=38						
IMAR	Indian Mountai	82.54	18	P	P	19 33 36.3	0.0
E19K	Redstone River	82.55	16	P	P	19 33 36.6	+0.3
E19K				IAmb	IAmb	19 33 48.7	
	comp=Z,4.1nm,0.9s						
MLY	Manley	82.88	20	P	P	19 33 38.3	+0.1
MLY				IAmb	IAmb	19 33 47.0	
	comp=Z,2.1nm,0.9s						
ILAR	Eielson Array	84.04	21	P	P	19 33 43.1	-0.9
	comp=Z,0.8nm,0.5s,baz=246,slow=4.6,SNR=12						
	comp=Z,0.8nm,0.5s						
G26K	Porcupine Rive	86.32	20	P	P	19 33 56.4	+1.0
G26K				IAmb	IAmb	19 34 06.3	
	comp=Z,6.8nm,1.2s						
MKAR	Makanchi Array	86.40	318	P	P	19 33 56.0	-0.3
MKAR	Makanchi Array	86.40	318	P	P	19 33 56.3	0.0
	comp=Z,0.3nm,0.6s,baz=111,slow=6.2,SNR=3.2						
	comp=Z,0.3nm,0.6s						
NVAR	Mina Array Bea	90.77	51	P	P	19 34 16.6	-0.9
	comp=Z,0.4nm,0.5s,baz=275,slow=7.3,SNR=3.7						
	comp=Z,0.4nm,0.5s						
BELA	Belgrano 2	93.27	177	P	P	19 34 27.3	-0.8
BELA				IAmb	IAmb	19 34 45.0	
	comp=Z,2.5nm,1.2s						

IDC 22 19:43:15.7±2.0, 31°.15S×177°.70W, h0km, mb3.6/3, mbtmp3.6/4, ML3.1/1, MS3.4/3, Error ellipse: s-maj=46.2km s-min=34.3km az=89.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.28	210	Pn	Pn	19 45 15.2	-1.8
	0.2nm,0.3s,baz=252,slow=19,SNR=1.4						
URZ				Sn	Sn	19 46 51.4	+0.1
	0.8nm,0.3s,baz=148,slow=21,SNR=7.8						
	4.0nm,0.8s						
STKA	Stephens Creek	34.56	258	LR	LR	20 02 29.7	
	comp=Z,40nm,18.3s,baz=201,slow=33						
ASAR	Alice Springs	43.33	268	P	P	19 51 19.6	-0.1
	0.5nm,0.7s,baz=105,slow=7.6,SNR=5.3						
ASAR				LR	LR	20 08 55.2	
	comp=Z,80nm,18.4s,baz=112,slow=36						
	0.5nm,0.7s						
WRA	Warramunga Arr	44.38	273	P	P	19 51 28.7	+0.5
	0.9nm,1.0s,baz=112,slow=8.0,SNR=5.6						
	0.9nm,1.0s						
QSPA	South Pole Qui	58.97	180	P	P	19 53 17.6	+0.8
	0.7nm,0.8s,baz=173,slow=14,SNR=1.8						
	0.7nm,0.8s						
PLCA	Paso Flores	81.81	133	LR	LR	20 23 55.4	
	comp=Z,18nm,19.0s,baz=246,slow=30						
FINES	FINESS Array B	145.93	340	PKPbc	PKPdf	20 02 54.8	-1.0
	4.4nm,1.1s,baz=51,slow=4.4,SNR=6.5						

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*IDC **22** 19:50:06.9±1.3, 5°.90S×130°.74E, h0km, mb4.0/3, mbtmp3.9/7, ML4.0/4, Error ellipse: s-maj=45.4km s-min=20.8km az=75.0*

*NEIC **22** 19:50:24.3±1.0, 6°.49S±0°.08×129°.6E±0°.1, h132km±6km, mb4.0/4, Error ellipse: s-maj=17.4km s-min=11.4km az=96.0*

ISC 22 19:50:24.3±0.7, 6°.56S±0°.06×129°.80E±0°.07, h146km, n28, σ2s.22/32, mb3.8/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.05	134	Pn	Pn	19 51 03.1	+3.4
SAUI				Sn	Sn	19 51 29.8	+2.8
SAUI	Saumlaki	2.05	134	P	Pn	19 51 03.0	+3.2
FAKI	Fak Fak	4.36	34	Pn	Pn	19 51 29.1	-0.1
FAKI	Fak Fak	4.36	34	P	Pn	19 51 29.1	-0.1
FAKI	Fak Fak	4.36	34	S	Sn	19 52 16.8	-3.0
MTN	Manton Dam	6.38	168	Pn	Pn	19 51 57.4	+1.3
MTN	Manton Dam	6.38	168	P	Pn	19 51 57.6	+1.5
KDU	Kakadu	6.63	157	P	Pn	19 52 00.0	+0.6
BATI	Baumata	7.07	239	Pn	Pn	19 52 08.2	+2.9
	2.2nm,0.3s,baz=100,slow=18,SNR=2.2						
BATI				Sn	Sn	19 53 24.3	-0.3
	2.1nm,0.3s,baz=39,slow=21,SNR=1.8						
	14nm,0.7s						
KNRA	Kununurra	9.12	186	Pn	Pn	19 52 33.0	+0.3
FITZ	Fitzroy Crossi	12.17	199	Pn	Pn	19 53 12.9	0.0
	0.6nm,0.3s,baz=29,slow=10,SNR=28						
FITZ				Sn	Sn	19 55 20.6	-6.8
	1.0nm,0.3s,baz=327,slow=23,SNR=8.3						
	1.3nm,0.3s						
FITZ	Fitzroy Crossi	12.17	199	P	Pn	19 53 13.0	+0.1
WRA	Warramunga Arr	14.01	162	Pn	Pn	19 53 34.1	-2.5
WRA	Warramunga Arr	14.01	162	Pn	Pn	19 53 33.4	-3.3
	0.7nm,0.3s,baz=346,slow=11,SNR=15						
WRA				Sn	Sn	19 56 01.9	-10
	1.5nm,0.3s,baz=338,slow=22,SNR=12						
	0.5nm,0.4s						
COEN	Coen	15.06	120	Pn	P	19 53 52.1	+0.5
COEN				IAmb	IAmb	19 53 53.5	
	comp=Z,16nm,1.1s						
COEN	Coen	15.06	120	P	P	19 53 52.6	+1.0
QIS	Mount Isa	16.85	147	P	P	19 54 12.2	+0.9
AS31	Alice Springs	17.46	167	P	P	19 54 18.9	+0.9
ASAR	Alice Springs	17.46	167	P	P	19 54 19.0	+1.0
ASAR	Alice Springs	17.46	167	P	Pn	19 54 19.1	+0.1
	comp=Z,0.5nm,0.3s,baz=348,slow=11,SNR=26						
ASAR				S	S	19 57 28.5	-4.0
	comp=Z,0.5nm,0.4s,baz=2.7,slow=27,SNR=5.5						
	comp=Z,1.3nm,0.5s						
AS01	Alice Springs	17.47	167	P	P	19 54 18.9	+0.8
BBOO	Buckleboo	26.76	168	P	P	19 55 53.2	+2.8
STKA	Stephens Creek	27.49	158	P	P	19 55 56.8	-0.2
	comp=Z,0.6nm,0.3s,baz=328,slow=13,SNR=4.4						
	comp=Z,0.6nm,0.3s						
MKAR	Makanchi Array	67.75	327	P	P	20 01 06.1	-0.1
MKAR	Makanchi Array	67.75	327	P	P	20 01 06.6	+0.4
	comp=Z,1.6nm,0.5s,baz=121,slow=7.0,SNR=30						
	comp=Z,1.6nm,0.5s						
MAKZ	Makanchi	67.93	327	P	P	20 01 07.4	+0.1
MAKZ				IAmb	IAmb	20 01 08.3	
	comp=Z,1.2nm,0.7s						
KURBB	Kurchatov Arra	72.04	329	P	P	20 01 32.0	-0.3
	comp=Z,0.3nm,0.4s,baz=130,slow=4.8,SNR=7.9						
	comp=Z,0.3nm,0.4s						
ABKAR	Akbulak array	82.05	322	P	P	20 02 28.9	+0.7

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*INMG **22** 19:59:58.5±3.4, 37°.92N×1°.18W, h23km±13km, ML3.6, Error ellipse: s-maj=26.3km s-min=15.7km az=27.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Murcia (ESP)*

*IDC **22** 20:00:00.8±1.7, 37°.51N×1°.84W, h0km, mb3.9/1, mbtmp3.5/5, ML2.8/4, MS2.9/1, Error ellipse: s-maj=30.5km s-min=17.7km az=60.0*

*NEIC **22** 20:00:00.3±1.2, 37°.54N±0°.08×1°.69W±0°.05, h5km±3km, mb_Lg3.3/10, Error ellipse: s-maj=11.5km s-min=5.1km az=171.0*

*SFS **22** 20:00:01.4, 37°.51N×1°.58W, h11km, mb4.2/5, ML4.1/22, ML4.0/29, MLv3.7/29*

*CRAAG **22** 20:00:01.0, 37°.56N×1°.66W, Ml3.8, Espagne*

*IGIL **22** 20:00:01.4, 37°.54N×1°.64W, h5km*

*MDD **22** 20:00:02.2±0.3, 37°.54N×1°.64W, h5km±1km, mb_Lg3.8/48, Error ellipse: s-maj=2.0km s-min=1.2km az=134.0*

*CNRM **22** 20:00:02.6, 37°.45N×1°.56W, h30km, ML3.2*

ISC 22 20:00:00.9±0.8, 37°.56N±0°.02×1°.65W±0°.02, h14km±4km, n139, σ1s.36/270, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLOR	Lorca, Murcia	0.10	344	Sg	Sg	20 00 06.2	-0.2
TLOR				Pg	Pg	20 00 04.0	-0.1
TLOR	Lorca, Murcia	0.10	344	Pg	Pg	20 00 03.9	-0.2
TLOR				Sg	Sg	20 00 06.0	-0.3
ELOR	Lorca, Murcia	0.11	318	Pg	Pg	20 00 04.2	0.0
ELOR				Sg	Sg	20 00 06.2	-0.3
EZAR	Zarzadilla de	0.32	354	Pg	Pg	20 00 07.5	-0.1
EZAR				Sg	Sg	20 00 12.7	+0.6
EZAR				*i* IVmb_Lg		20 00 14.0	
CART	Cartagena	0.52	86	Sg	Sg	20 00 16.8	-1.2
CART				Pg	Pg	20 00 10.6	-0.5
CART	Cartagena	0.52	86		Pg	20 00 10.4	-0.6
CART				Sg	Sg	20 00 18.4	+0.4
CART	Cartagena	0.52	86	P	Pg	20 00 10.7	-0.5
CART	Cartagena	0.52	86	S	Sb	20 00 20.0	+0.9
ENIJ	Nijar	0.73	217	Sg	Sg	20 00 22.5	-2.2
ENIJ				Pg	Pg	20 00 14.8	-0.3
ENIJ	Nijar	0.73	217	Pg	Pg	20 00 15.2	+0.1
ENIJ				Sg	Sb	20 00 25.5	+0.2
ENIJ				*i* IVmb_Lg		20 00 29.1	
ETRV	Los Montesinos	0.84	56	Pg	Pg	20 00 17.2	0.0
ETRV				Sg	Sn	20 00 29.4	-1.0
ETRV				*i* IVmb_Lg		20 00 38.1	
EQES	Quesada	1.15	283	Pg	Pg	20 00 24.2	+1.2
EQES				Sg	Sn	20 00 40.4	+2.2
AFON	Font Roja	1.41	38	Pg	Pn	20 00 25.8	-0.5
AFON				Sg	Sn	20 00 43.8	-0.8
E0802	Ubeda,Jaen	1.44	289	Pg	Pg	20 00 28.9	+0.3
E0802				Sg	Sg	20 00 48.2	+0.8
EQUE	Quentar	1.47	257	Pg	Pb	20 00 28.5	+0.5
EQUE				Sg	Sg	20 00 49.2	+1.0
EQUE				*i* IVmb_Lg		20 00 55.5	
EQTA	Presa de Quent	1.47	257	Sn	Sb	20 00 46.6	+0.1
EQTA				Pn	Pb	20 00 28.4	+0.5
E0803	Jimena (Jaen)	1.47	281	Pg	Pg	20 00 29.1	0.0
E0803				Sg	Sg	20 00 49.9	+1.6
EBEN2	Beniarda presa	1.61	45	Pn	Pn	20 00 27.9	-0.9
EBEN2				Sn	Sn	20 00 48.3	-1.1
ELGU	Los Guajares,	1.72	247	Sn	Sn	20 00 52.2	0.0
ELGU				Pn	Pn	20 00 31.0	+0.6
ELGU	Los Guajares,	1.72	247	Pn	Pb	20 00 32.4	+0.1
ELGU				Pg	Pg	20 00 34.2	+0.3
ELGU				Sn	Sb	20 00 54.4	+0.6
ELGU				*i* IVmb_Lg		20 00 59.3	
EVIV	Cofrentes, Val	1.76	14	Pn	Pb	20 00 32.3	-0.6
EVIV				Pg	Pg	20 00 34.6	0.0
EVIV				Sg	Sg	20 00 58.1	+0.6
EVIV				*i* IVmb_Lg		20 01 06.2	
EALB	Alboran	1.96	215	Pg	Pb	20 00 36.7	+0.5
EALB				Pn	Pn	20 00 32.0	-1.6
EALB				Sn	Sn	20 00 56.5	-1.5
EALB	Alboran	1.96	215	Pn	Pn	20 00 32.2	-1.4
EALB				Pg	Pb	20 00 36.9	+0.7
EALB				Sn	Sn	20 00 56.8	-1.1
EALB				Sg	Sg	20 01 05.5	+1.7
EGOR	Sierra Gorda,	2.01	258	Pg	Pg	20 00 39.5	+0.1
EGOR	Sierra Gorda,	2.01	258	Pn	Pb	20 00 37.3	+0.1
EGOR				*i* IVmb_Lg		20 00 41.8	
EGOR				Sn	Sg	20 01 04.7	-0.8
PSIM	Granatula de C	2.08	308	Pn	Pn	20 00 36.3	+0.9
PSIM				Pg	Pg	20 00 40.1	-0.8
PSIM				Sn	Sb	20 01 03.1	-1.1
PSIM				Sg	Sg	20 01 08.5	+0.7
ECHE	Chera	2.10	15	Pn	Pn	20 00 35.8	+0.2
ECHE				Pg	Pg	20 00 40.9	-0.2
ECHE				Sn	Sb	20 01 05.7	+1.0
ECHE				*i* IVmb_Lg		20 01 17.2	
EMAL	Malaga-Limoner	2.35	251	Pn	Pn	20 00 40.1	+1.1
EADA	Adamuz	2.39	286	Sn	Sn	20 01 09.4	+0.6
EADA				Pn	Pn	20 00 40.2	+0.5
EADA	Adamuz	2.39	286	Pn	Pn	20 00 40.3	+0.7
EADA				Pg	Pg	20 00 46.8	0.0
EADA				Sn	Sn	20 01 10.7	+1.9
EADA				Sg	Sg	20 01 19.3	+1.5
EADA				*i* IVmb_Lg		20 01 22.0	
WMELI	Melilla	2.47	206	Pn	Pn	20 00 39.8	-0.8
GOG	Mont Gurugu	2.57	205	P	Pn	20 00 41.2	-0.9
GOG	Mont Gurugu	2.57	205	S	Sn	20 01 09.8	-3.3
EMIJ	Mijas	2.69	249	Pn	Pn	20 00 43.4	-0.2
EMIJ	Mijas	2.69	249	Pn	Pn	20 00 43.6	0.0
EMIJ				Sn	Sn	20 01 18.2	+2.3
EIBI	Ibiza	2.78	57	Sn	Sn	20 01 14.8	-3.4
EIBI				Pn	Pn	20 00 44.5	-0.4
EIBI	Ibiza	2.78	57	Pn	Pn	20 00 44.5	-0.4
EIBI				Sn	Sn	20 01 16.1	-2.1
EIBI				*i* IVmb_Lg		20 01 16.6	
ESBB	Sonseca Array	2.78	320		Pn	20 00 46.0	+1.1
ESBB				IAmb_Lg		20 01 33.2	
	comp=Z,158nm,0.8s						
ESBB	Sonseca Array	2.78	320	Pn	Pn	20 00 46.1	+1.1
ESBB				Pg	Pg	20 00 54.6	+0.4
ESBB				Sn	Sn	20 01 17.0	-1.4
ESBB				Sg	Sg	20 01 28.6	-1.7
ESBB				*i* IVmb_Lg		20 01 32.3	
ESDC	Sonseca Array	2.78	320		Pn	20 00 45.2	+0.2
ESDC				IAmb_Lg		20 01 35.3	
	comp=Z,105nm,0.9s						
ESDC	Sonseca Array	2.78	320	Pn	Pn	20 00 45.7	+0.7
ESDC				Pg	Pg	20 00 54.4	+0.2
ESDC				Sn	Sn	20 01 17.6	-0.8
ESDC				Sg	Sg	20 01 28.1	-2.2
ESDC				*i* IVmb_Lg		20 01 32.9	
ESDC	Sonseca Array	2.78	320	Pn	Pn	20 00 45.7	+0.7
	comp=Z,0.6nm,0.3s,baz=139,slow=14,SNR=18						
ESDC				Pg	Pg	20 00 53.7	-0.5
	comp=Z,7.9nm,0.3s,baz=140,slow=17,SNR=64						
ESDC				Sn	Sn	20 01 17.4	-1.0
	comp=Z,10nm,0.3s,baz=137,slow=24,SNR=6.2						
ESDC				Lg	Lg	20 01 27.4	
	comp=Z,24nm,0.3s,baz=133,slow=30,SNR=3.4						
	comp=Z,1.2nm,0.3s						
TAF	Taforalt	2.81	193	P	Pn	20 00 45.4	0.0
TAF	Taforalt	2.81	193	S	Sn	20 01 18.3	-0.7
PAB	San Pablo	2.90	314		Pn	20 00 47.5	+0.8
PAB				IAmb_Lg		20 01 39.8	
	comp=Z,141nm,0.9s						
PAB	San Pablo	2.90	314	Pn	Pn	20 00 47.3	+0.6
PAB				Sn	Sn	20 01 20.8	-0.5
PAB				Sg	Sg	20 01 35.0	+0.9
PAB				*i* IVmb_Lg		20 01 35.8	
E0901	Celadas (Terue	2.95	8	Pg	Pg	20 00 57.2	-0.1
E0901				Sg	Sg	20 01 36.2	+0.6
E0901				*i* IVmb_Lg		20 01 43.0	
EMOS	Mosqueruela	2.95	18	Pn	Pn	20 00 49.2	+1.8
EMOS				Pg	Pg	20 00 57.2	-0.3
EMOS				Sg	Sg	20 01 37.7	+2.0
EMOS				*i* IVmb_Lg		20 01 50.1	
PALE	Palemas	2.98	219	P	Pn	20 00 48.8	+1.2
PALE	Palemas	2.98	219	S	Sn	20 01 21.7	-1.4
UCM	Universidad Co	3.02	336	Pg	Pg	20 00 57.0	-1.7
UCM				Pn	Pn	20 00 50.2	+2.0
UCM				Sg	Sg	20 01 37.8	+0.1
ECAB	El Cabril	3.03	281	Sg	Sg	20 01 38.4	+0.3
ECAB				Pn	Pn	20 00 48.6	+0.3
ECAB				Pg	Pg	20 00 57.8	-1.0
ECAB				Sn	Sn	20 01 25.2	+0.8
ECAB	El Cabril	3.03	281	Pn	Pn	20 00 48.7	+0.3
ECAB				Pg	Pg	20 00 57.8	-1.0
ECAB				Sn	Sn	20 01 24.8	+0.4
ECAB				Sg	Sg	20 01 38.7	+0.6
ECAB				*i* IVmb_Lg		20 01 40.6	
ETOR	Torete	3.27	355	Pn	Pn	20 00 53.1	+1.3
ETOR				Pg	Pg	20 01 03.3	-0.3
ETOR				Sg	Sg	20 01 46.8	+0.8
ETOR				*i* IVmb_Lg		20 01 51.5	
JBK	JBK	3.30	193	P	Pn	20 00 52.2	0.0
JBK	JBK	3.30	193	S	Sn	20 01 30.1	-1.2
ESPR	Espera	3.42	260	Pn	Pn	20 00 55.6	+1.9
ESPR	Espera	3.42	260	Pn	Pn	20 00 56.1	+2.4
ESPR				Sn	Sn	20 01 34.3	+0.2
ESPR				*i* IVmb_Lg		20 02 04.3	
AKLM	AKL	3.53	211	P	Pn	20 00 55.6	+0.4
AKLM	AKL	3.53	211	S	Sn	20 01 35.9	-0.9
SMIR	Smir Dam	3.54	239	P	Pn	20 00 54.5	-0.8
SMIR	Smir Dam	3.54	239	S	Sn	20 01 38.8	+2.0
GUD	Guadarrama	3.65	329	Pn	Pn	20 00 58.7	+1.7
GUD				Pg	Pg	20 01 09.5	-1.1
GUD				Sn	Sn	20 01 37.2	-2.6
GUD				Sg	Sg	20 01 55.5	-2.4
GUD				*i* IVmb_Lg		20 02 05.0	
ERTA	Horta de San J	3.73	24	Pn	Pn	20 00 58.9	+0.9
ERTA				Sn	Sn	20 01 41.8	+0.1
CHEFC	Chefchaouen	3.85	232	P	Pn	20 00 59.8	+0.1
CHEFC	Chefchaouen	3.85	232	S	Sn	20 01 45.4	+0.6
EMIN	Mina Concepcio	3.99	275	Pn	Pn	20 01 01.3	-0.2
EMIN				Sn	Sn	20 01 46.8	-1.3
EMIN	Mina Concepcio	3.99	275	Pn	Pn	20 01 01.6	+0.1
EMIN				Sn	Sn	20 01 47.8	-0.3
EMIN				Sg	Sg	20 02 04.6	-4.3
EMIN				*i* IVmb_Lg		20 02 15.1	
ETOS	Mallorca	4.13	56	Pn	Pn	20 01 03.8	+0.2
ETOS				Sn	Sn	20 01 48.0	-3.7
ETOS	Mallorca	4.13	56	Pn	Pn	20 01 03.7	+0.2
ETOS				Sn	Sn	20 01 49.8	-1.9
ESAC	San Caprasio	4.26	12	Pn	Pn	20 01 07.1	+1.8
ESAC				Pg	Pg	20 01 21.4	-1.0
ESAC				Sg	Sg	20 02 18.5	+0.9
ESAC				*i* IVmb_Lg		20 02 21.5	
EPLA	Plasencia	4.27	307	Pn	Pn	20 01 05.5	+0.1
EPLA				Pg	Pg	20 01 21.8	-0.8
EPLA				Sn	Sn	20 01 52.1	-2.9
EPLA				Sg	Sg	20 02 12.8	-5.1
EPLA				*i* IVmb_Lg		20 02 21.6	
PBAR	Barrancos	4.31	280	Pn	Pn	20 01 06.2	+0.3
PBAR	Barrancos	4.31	280	*e*Pn	Pn	20 01 06.2	+0.3
PBAR				*e*Pg	Pg	20 01 21.4	-2.0
PBAR				*e*Sn	Sn	20 01 55.8	-0.1
PBAR				*e*Sg	Sg	20 02 20.7	+1.5
PBAR				*i* AML	AML	20 02 24.0	
PBAR				*i* AML	AML	20 02 27.8	
PBAR				*i* AML	AML	20 02 32.9	
EPOB	Poblet	4.34	28	Pn	Pn	20 01 07.0	+0.5
EPOB				Sn	Sn	20 01 55.5	-1.3
EBAD	Badajoz	4.39	287	Sn	Sn	20 01 58.1	+0.2
EBAD				Pn	Pn	20 01 07.3	+0.2
EBAD	Badajoz	4.39	287	Pn	Pn	20 01 07.3	+0.2
EBAD				Sn	Sn	20 01 57.4	-0.6
EBAD				Sg	Sg	20 02 22.9	+1.1
EBAD				*i* IVmb_Lg		20 02 25.3	
EGRO	El Granado	4.63	271	Sn	Sn	20 02 03.0	-0.9
EGRO				Pn	Pn	20 01 10.4	0.0
EGRO	El Granado	4.63	271	Pn	Pn	20 01 10.2	-0.2
EGRO				Sn	Sn	20 02 02.7	-1.2
EGRO				*i* IVmb_Lg		20 02 35.7	
PVAQ	Vaqueiros	4.83	270	Pn	Pn	20 01 12.7	-0.3
PVAQ	Vaqueiros	4.83	270		Pn	20 01 12.4	-0.6
PVAQ				IAmb_Lg		20 02 40.4	
	comp=Z,38nm,1.1s						
PVAQ	Vaqueiros	4.83	270	*e*Pn	Pn	20 01 13.3	+0.3
PVAQ				*i* AML	AML	20 02 53.3	
PVAQ	Vaqueiros	4.83	270	P	Pn	20 01 12.7	-0.3
PESTR	Estremoz	4.86	287	Pn	Pn	20 01 14.2	+0.7
PESTR	Estremoz	4.86	287	Pn	Pn	20 01 14.2	+0.7
PESTR	Estremoz	4.86	287	*e*Pn	Pn	20 01 14.5	+1.0
PESTR				*e*Sn	Sn	20 02 09.2	-0.3
PESTR				*e*Sg	Sg	20 02 37.4	+0.7
PESTR				*i* AML	AML	20 02 39.0	
PESTR				*i* AML	AML	20 02 39.1	
PESTR				*i* AML	AML	20 02 43.4	
PESTR	Estremoz	4.86	287	P	Pn	20 01 15.3	+1.8
PMRV	Marv??o	4.88	294	*e*Pn	Pn	20 01 14.0	+0.3
PMRV				*e*Sn	Sn	20 02 09.0	-0.9
PMRV				*e*Sg	Sg	20 02 36.6	-0.7
PMRV				*i* AML	AML	20 02 41.0	
PMRV				*i* AML	AML	20 02 44.8	
PMRV				*i* AML	AML	20 02 48.4	
IFR	Ifrane	4.93	216	Sn	Sn	20 02 09.4	-2.0
PBEJ	Beja	4.94	277	*e*Pn	Pn	20 01 15.2	+0.5
PBEJ				*e*Sn	Sn	20 02 09.7	-1.9
PBEJ				*e*Sg	Sg	20 02 40.8	+1.3
PBEJ				*i* AML	AML	20 02 46.1	
PBEJ				*i* AML	AML	20 02 49.3	
PBEJ				*i* AML	AML	20 02 56.5	
PBDV	Barranco-do-Ve	5.01	268	*e*Pn	Pn	20 01 16.1	+0.5
PBDV				*e*Sn	Sn	20 02 13.0	-0.3
PBDV				*i* AML	AML	20 02 17.8	
PBDV				*e*Sg	Sg	20 02 47.4	+5.8
PBDV				*i* AML	AML	20 02 51.9	
PBDV				*i* AML	AML	20 02 53.5	
PCVE	Castro Verde	5.07	273	Pn	Pn	20 01 16.6	+0.2
PCVE	Castro Verde	5.07	273	*e*Pn	Pn	20 01 16.9	+0.4
PCVE				*e*Sn	Sn	20 02 14.0	-0.7
PCVE				*e*Sg	Sg	20 02 43.4	-0.2
PCVE				*i* AML	AML	20 02 48.1	
PCVE				*i* AML	AML	20 02 55.8	
PCVE				*i* AML	AML	20 02 57.4	
PCBR	Castelo Branco	5.09	298	*e*Pn	Pn	20 01 18.0	+1.3
PCBR				*e*Sn	Sn	20 02 13.2	-2.1
PCBR				*e*Sg	Sg	20 02 44.2	-0.2
PCBR				*i* AML	AML	20 02 45.6	
PCBR				*i* AML	AML	20 02 52.2	
PCBR				*i* AML	AML	20 02 52.8	
EVO	Evora	5.11	283	Pn	Pn	20 01 17.4	+0.4
EVO				Sn	Sn	20 02 14.0	-1.8
EVO	Evora	5.11	283	*e*Pn	Pn	20 01 17.6	+0.6
EVO				*e*Sn	Sn	20 02 16.5	+0.7
EVO				*e*Sg	Sg	20 02 46.2	+1.2
EVO				*i* AML	AML	20 02 48.5	
EVO				*i* AML	AML	20 02 50.8	
EVO				*i* AML	AML	20 02 53.5	
MAHO	Mahon	5.18	61	Pn	Pn	20 01 18.7	+0.8
MESJ	Messejana	5.22	275	*e*P	Pn	20 01 18.1	-0.3
MESJ	Messejana	5.22	275		Pn	20 01 18.4	0.0
MESJ	Messejana	5.22	275	*e*Pn	Pn	20 01 18.7	+0.3
MESJ				*e*Sn	Sn	20 02 16.4	-2.0
MESJ				*e*Sg	Sg	20 02 48.4	+0.1
MESJ				*i* AML	AML	20 02 54.1	
MESJ				*i* AML	AML	20 03 01.6	
MESJ				*i* AML	AML	20 03 02.3	
MDT	Midelt	5.31	208	Pn	Pn	20 01 20.5	+0.6
	comp=Z,0.7nm,0.3s,baz=20,slow=15,SNR=10						
MDT				Sn	Sn	20 02 19.1	-1.7
	comp=Z,0.4nm,0.3s,baz=216,slow=20,SNR=1.3						
	comp=Z,1.9nm,0.2s						
MDT	Midelt	5.31	208	P	Pn	20 01 20.9	+1.1
MDT	Midelt	5.31	208	S	Sn	20 02 19.7	-1.2
MD31	MD31	5.33	209	P	Pn	20 01 20.9	+0.9
MD31	MD31	5.33	209	S	Sn	20 02 19.7	-1.5
PMTG	Montargil	5.38	288	*e*Pn	Pn	20 01 21.1	+0.4
PMTG				*e*Sn	Sn	20 02 21.3	-1.2
PMTG				*e*Sg	Sg	20 02 54.8	+1.1
PMTG				*i* AML	AML	20 02 58.8	
PMTG				*i* AML	AML	20 02 59.6	
PMTG				*i* AML	AML	20 03 01.2	
MTE	Manteigas	5.40	304	Pn	Pn	20 01 21.4	+0.4
MTE	Manteigas	5.40	304	*e*Sg	Sg	20 02 51.3	-2.8
PSARD	Sardoal	5.49	294	*e*Pn	Pn	20 01 23.2	+1.0
PSARD				*e*Sn	Sn	20 02 23.9	-1.3
PSARD				*e*Sg	Sg	20 02 55.9	-1.3
PSARD				*i* AML	AML	20 03 00.7	
PSARD				*i* AML	AML	20 03 03.7	
PSARD				*i* AML	AML	20 03 04.7	
CEST	Esterri de Car	5.51	23	Pn	Pn	20 01 23.4	+0.9
MVO	Moncorvo	5.51	313	*e*Pn	Pn	20 01 23.3	+0.8
MVO				*e*Sn	Sn	20 02 24.7	-0.9
MVO				*e*Sg	Sg	20 02 57.2	-0.4
MVO				*i* AML	AML	20 03 04.4	
MVO				*i* AML	AML	20 03 07.8	
MVO				*i* AML	AML	20 03 09.4	
MORF	Marmelete	5.58	270	*e*P	Pn	20 01 23.0	-0.4
MORF	Marmelete	5.58	270	Pn	Pn	20 01 22.7	-0.7
MORF				IAmb_Lg		20 03 07.8	
	comp=Z,28nm,1.1s						
MORF	Marmelete	5.58	270	*e*Pn	Pn	20 01 23.3	-0.1
MORF				*e*Sn	Sn	20 02 25.9	-1.3
MORF				*i* AML	AML	20 02 29.6	
MORF				*i* AML	AML	20 03 10.8	
MORF				*i* AML	AML	20 03 20.8	
PTEO	Sao Teotonio	5.62	272	*e*Pn	Pn	20 01 24.3	+0.4
PTEO				*e*Sn	Sn	20 02 28.0	-0.2
PTEO				*e*Sg	Sg	20 03 01.1	-0.1
PTEO				*i* AML	AML	20 03 08.1	
PTEO				*i* AML	AML	20 03 20.9	
PFVI	Vila Bisbo	5.73	268	Pn	Pn	20 01 26.1	+0.6
PFVI				Sn	Sn	20 02 29.5	-1.5
PFVI	Vila Bisbo	5.73	268	Pn	Pn	20 01 25.3	-0.2

PFVI	Vila Bisbo	5.73	268	*e*Pn	Pn	20 01 26.3	+0.8
PFVI				*e*Sn	Sn	20 02 29.1	-2.0
PFVI				*i* AML	AML	20 03 14.6	
PFVI				*i* AML	AML	20 03 14.6	
PFVI				*i* AML	AML	20 03 22.8	
PFVI	Vila Bisbo	5.73	268	P	Pn	20 01 26.2	+0.8
ZHG	ZHG	5.78	226	P	Pn	20 01 26.5	+0.3
PBRG	Braganca	5.78	319	*e*Pn	Pn	20 01 27.2	+1.1
PBRG				*e*Sn	Sn	20 02 29.9	-2.3
PBRG				*i* AML	AML	20 03 08.7	
PBRG				*i* AML	AML	20 03 10.7	
PBRG				*i* AML	AML	20 03 11.2	
PVIS	Viseu	5.79	305	*e*Pn	Pn	20 01 27.7	+1.4
PVIS				*e*Sn	Sn	20 02 31.7	-0.8
ELAN	Lanestosa	5.83	347	Pn	Pn	20 01 28.6	+1.7
ELAN				Pg	Pg	20 01 52.2	-0.3
ELAN				Sg	Sg	20 03 08.5	+0.6
ELAN				*i* IVmb_Lg		20 03 18.5	
ECAL	Calabor	5.88	320	Pn	Pn	20 01 28.5	+1.0
ECAL				Sn	Sn	20 02 31.4	-3.3
PCAS	Casmilo, Conde	5.90	297	*e*Pn	Pn	20 01 29.1	+1.3
PCAS				*e*Sn	Sn	20 02 34.2	-0.9
PCAS				*e*Sg	Sg	20 03 10.0	-0.1
PCAS				*i* AML	AML	20 03 12.9	
PCAS				*i* AML	AML	20 03 17.1	
PCAS				*i* AML	AML	20 03 25.2	
COI	Coimbra	5.90	299	Pn	Pn	20 01 27.9	+0.2
COI				IAmb_Lg		20 03 13.8	
	comp=Z,109nm,0.8s						
COI	Coimbra	5.90	299	*e*Sg	Sg	20 03 09.0	-1.2
PSBE	So Bento	5.93	291	*e*Pn	Pn	20 01 29.6	+1.3
PSBE				*e*Sn	Sn	20 02 36.3	+0.3
PSBE				*e*Sg	Sg	20 03 12.1	+0.9
PSBE				*i* AML	AML	20 03 17.9	
PSBE				*i* AML	AML	20 03 18.9	
PSBE				*i* AML	AML	20 03 22.9	
PARRA	Arraiolos	5.95	284	*e*Pn	Pn	20 01 18.5	-10
PARRA				*e*Sn	Sn	20 02 16.4	-20
PARRA				*e*Sg	Sb	20 02 49.0	-6.5
PARRA				*i* AML	AML	20 02 49.1	
PARRA				*i* AML	AML	20 02 57.8	
PARRA				*i* AML	AML	20 03 03.1	
PVRL	Vila Real	5.99	310	*e*Pn	Pn	20 01 30.9	+1.9
PVRL				*e*Sn	Sn	20 02 37.6	+0.3
PVRL				*i* AML	AML	20 03 18.9	
PVRL				*i* AML	AML	20 03 19.8	
POLO	Lamas de Olo	6.09	311	*e*Pn	Pn	20 01 32.6	+2.1
POLO				*e*Sn	Sn	20 02 38.3	-1.7
POLO				*i* AML	AML	20 03 25.8	
POLO				*i* AML	AML	20 03 29.8	
PMAFR	Mafra	6.17	285	Pn	Pn	20 01 32.0	+0.6
PMAFR	Mafra	6.17	285	*e*Pn	Pn	20 01 32.4	+1.0
PMAFR				*e*Sn	Sn	20 02 40.6	-1.1
PMAFR				*e*Sg	Sg	20 03 18.6	-0.1
PMAFR				*i* AML	AML	20 03 26.5	
PMAFR				*i* AML	AML	20 03 28.4	
PMAFR				*i* AML	AML	20 03 37.3	
PCAB	Cabril	6.43	312	*e*Pn	Pn	20 01 36.0	+0.9
PCAB				*e*Sn	Sn	20 02 44.4	-4.0
PCAB				*i* AML	AML	20 03 29.8	
PCAB				*i* AML	AML	20 03 39.4	
PCAB				*i* AML	AML	20 03 39.6	
PGAV	Gavieira, Arco	6.74	313	*e*Pn	Pn	20 01 40.1	+0.7
PGAV				*e*Sn	Sn	20 02 52.7	-3.2
PGAV				*i* AML	AML	20 03 43.5	
PGAV				*i* AML	AML	20 03 44.2	
PGAV				*i* AML	AML	20 03 46.3	
VSL	Villasalto	8.86	74	Pn	Pn	20 02 09.8	+1.4
KEST	Kesra	9.03	98	Pn	Pn	20 02 14.2	+3.4
	comp=Z,0.7nm,0.3s,baz=274,slow=19,SNR=7.1						
KEST				Sn	Sn	20 03 53.8	+1.6
	comp=Z,0.3nm,0.3s,baz=266,slow=18,SNR=1.5 comp=Z,2.0nm,0.3s						
GERES	GERESS Array B	15.86	40	Pn	P	20 03 48.4	+1.0
	baz=234,slow=13,SNR=4.9						
GERES				LR	LR	20 09 45.6	
	comp=Z,52nm,21.6s,baz=335,slow=37 comp=Z,0.5nm,0.7s						
TORD	Torodi Ar. Bea	24.49	172	P	P	20 05 21.3	+1.6
	comp=Z,1.2nm,0.3s,baz=0.4,slow=11,SNR=1.5 comp=Z,1.2nm,0.3s						

IDC 22 20:02:07.0±2.0,32°.17S×178°.74W,h0^{km},mb3.7/3, mbtmp3.7/4,ML2.9/1,Error ellipse: s-maj=51.2km s-min=34.1km az=60.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.96	208	Pn	Pn	20 03 48.1	-2.0
	0.2nm,0.3s,baz=276,slow=16,SNR=2.5						
URZ				Sn	Sn	20 05 03.9	-6.1
	0.5nm,0.3s,baz=164,slow=17,SNR=7.2 6.8nm,0.9s						
ASAR	Alice Springs	42.41	269	P	P	20 10 03.6	+0.1
	0.7nm,0.9s,baz=111,slow=7.9,SNR=3.7 0.7nm,0.9s						
WRA	Warramunga Arr	43.56	274	P	P	20 10 13.0	+0.1
	0.5nm,0.5s,baz=113,slow=7.8,SNR=6.5 0.5nm,0.5s						
QSPA	South Pole Qui	57.95	180	P	P	20 12 01.2	+0.3
	1.6nm,1.2s,baz=314,slow=0.3,SNR=9.3 1.6nm,1.2s						
FINES	FINESS Array B	146.57	339	PKPbc	PKPdf	20 21 48.4	+0.3
	5.1nm,1.1s,baz=47,slow=2.5,SNR=5.0						

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*ISN **22** 20:25:03.4±1.1, 33°.79N×45°.64E, h9^{km}±6^{km}, ML2.8*

*TEH **22** 20:25:03.7, 33°.80N×45°.68E, h12^{km}±999^{km}*

ISC 22 20:25:04.3±1.1,33°.81N±0°.03×45°.73E±0°.04,h12^{km}±12^{km}, n12,σ0.^{s}62/17,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLG1	Gilan-e-Gharb	0.34	26	Pg	Pg	20 25 11.1	-0.2
GLG1				Sg	Sb	20 25 17.4	-0.5
IBDR	Badra	0.71	166	*e*Pg	Pg	20 25 18.0	-0.2
IBDR				*e*Sg	Sg	20 25 27.0	-0.5
IGHG	Ghaleghazi	0.87	53	Pg	Pn	20 25 21.7	-0.9
IDHR	Dehrash	1.05	31	Pg	Pn	20 25 24.8	-0.2
KCHF	Cheshme Sefid,	1.19	66	Pg	Pg	20 25 28.6	+1.4
BHD	Baghdad	1.25	245	*e*Pn	Pg	20 25 28.0	-0.3
BHD				*e*Sn	Sg	20 25 45.0	+0.5
ILIN	Lien	1.51	42	Pg	Pg	20 25 33.4	+0.1
IKFM	Kafar-mosalman	1.79	98	Pn	Pb	20 25 37.0	0.0
IBZA	Bozab	1.89	69	Pn	Pb	20 25 38.9	0.0
SNQR	Sonqor, Kerman	1.89	56	Pn	Pb	20 25 39.1	+0.1
IKRK	Kirkuk	1.96	325	*e*Pn	Pn	20 25 38.0	+0.6
IKRK				*e*Sn	Sb	20 26 04.0	-0.3
IKRK				AML	AML	20 26 18.4	
	comp=E,95nm,0.5s						
IKRK				AML	AML	20 26 19.3	
	comp=N,98nm,0.6s						
RAFI	Al-Rafai	2.10	171	*e*Pn	Pn	20 25 40.0	+0.7
RAFI				*e*Sn	Sb	20 26 08.0	-0.4

KRSC 22 20:28:19.8±1.7,53°.81N×157°.70E,h240^{km}±17^{km},Ml3.5, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GNL	Ganaly	0.19	129	*e*P	Pn	20 28 52.0	+0.9
KRX	Arik	0.73	128	*e*P	Pn	20 28 53.9	+1.3
KOK	Koryaka	0.77	133	*e*P	Pn	20 28 54.2	+1.5
KRER	Koryakskii	0.81	129	*e*P	Pn	20 28 54.9	+1.8
AVH	Avacha	0.83	131	*e*P	Pn	20 28 54.7	+1.7
SMAR	Somma	0.86	129	*e*P	Pn	20 28 54.9	+1.6
SDLR	Sedlovina	0.89	127	*e*P	Pn	20 28 54.4	+1.1
UGLR	Uglovaya	0.91	132	*e*P	Pn	20 28 54.8	+1.4
NLC	Nalytchevo	1.18	122	*e*S	S	20 29 23.9	+1.7
MTVR	Mutnovka	1.36	167	*e*P	Pn	20 28 57.1	+0.7
ASAK	Asacha	1.44	175	*e*P	Pn	20 28 57.3	+0.5
RUS	Russkaya	1.47	160	*e*S	S	20 29 26.6	+0.6
SPN	Mys Shipunski	1.56	116	*e*P	Pn	20 28 57.8	+0.1
SPN				*e*S	S	20 29 26.0	-1.3
MKZ	Mys Kozlova	2.48	71	*e*P	Pn	20 29 07.0	+0.9
MKZ				*e*S	S	20 29 41.7	-0.8
KBTR	Krutoberegovo	3.80	49	*e*P	Pn	20 29 23.0	+2.3
BKI	Bering	5.02	71	*e*S	S	20 30 33.0	-2.4

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*NOU **22** 20:41:40.4, 40°.28S×175°.93E, h80^{km}, MLv4.0/19, North Island, New Zealand*

*NEIC **22** 20:41:42.2±1.2, 40°.13S±0°.04×175°.69E±0°.08, h45^{km}±11^{km}, mb4.2/5, Error ellipse: s-maj=8.6km s-min=4.8km az=104.0*

*WEL **22** 20:41:42.3±0.8, 40°S±4°×17°6E±°, h41^{km}±8^{km}, M3.9/75, ML4.2/12, MLv3.9/75, Error ellipse: s-maj=6.1km s-min=4.2km az=116.7, confirmed*

ISC 22 20:41:42.8±0.8,40°.19S±0°.03×175°.82E±0°.03,h58^{km}±5^{km}, n155,σ1.^{s}20/166,mb4.3/4,North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TSZ	Takapari Road	0.17	41	P	Pn	20 41 50.6	-1.2
TSZ				S	Sn	20 41 56.8	-1.6
POWZ	Post Office Ro	0.21	190	P	Pn	20 41 51.5	-0.6
POWZ				S	Sn	20 41 58.0	-0.7
DVHZ	Dannevirke	0.29	113	P	Pn	20 41 52.1	-0.5
DVHZ				S	Sn	20 41 59.5	-0.3
OHWZ	Ohakea	0.38	267	P	Pn	20 41 53.1	-0.2
OHWZ				S	Sn	20 42 01.3	+0.3
PRWZ	Pori Road	0.39	162	P	Pn	20 41 53.7	+0.3
PNHZ	Pukenui	0.40	47	P	Pn	20 41 52.6	-1.0
PNHZ				S	Sn	20 42 00.4	-1.1
WPHZ	Waipukurau	0.49	76	P	Pn	20 41 54.1	-0.4
WPHZ				S	Sn	20 42 03.6	+0.6
MRZ	Mangatainoka R	0.51	201		Pn	20 41 54.6	0.0
MRZ				Sn	Sn	20 42 02.7	-0.5
MRZ	Mangatainoka R	0.51	201	P	Pn	20 41 54.6	0.0
ANWZ	Angora Road	0.57	119	P	Pn	20 41 55.6	+0.3
TIWZ	Tintock	0.59	175	P	Pn	20 41 56.0	+0.3
TIWZ				S	Sn	20 42 05.7	+0.8
BFZ	Birch Farm	0.59	147		Pn	20 41 55.7	+0.1
BFZ				Sn	Sn	20 42 05.9	+0.9
BFZ	Birch Farm	0.59	147	P	Pn	20 41 55.4	-0.2
BFZ	Birch Farm	0.59	147	P	Pn	20 41 55.7	+0.1
PRHZ	Porangahau	0.63	97	P	Pn	20 41 56.0	0.0
KRHZ	Kereru	0.69	38	P	Pn	20 41 56.0	-0.8
HOWZ	Holdsworth Sta	0.74	198	P	Pn	20 41 57.5	0.0
HOWZ				S	Sn	20 42 08.3	0.0
WAZ	Wanganui	0.77	304	P	Pn	20 41 57.7	-0.1
CPWZ	Castlepoint	0.78	158	P	Pn	20 41 58.5	+0.7
MOVZ	Moawhango	0.78	356	P	Pn	20 41 56.8	-1.2
MOVZ				S	Sn	20 42 07.6	-1.5
OGWZ	Otaki Gorge	0.80	218	P	Pn	20 41 58.2	+0.1
PXZ	Pawanui	0.82	79	P	Pn	20 41 57.9	-0.4
MTVZ	Mangateitei	0.84	342	P	Pn	20 41 58.0	-0.8
WNVZ	Wahianoa	0.88	349	P	Pn	20 41 58.4	-0.9
KWHZ	Kaweka Forest	0.89	32	P	Pn	20 41 58.7	-0.7
KAHZ	Kahuranaki	0.90	65	P	Pn	20 41 59.1	-0.4
TRVZ	Turoa	0.91	347	P	Pn	20 41 59.1	-0.7
TMWZ	Te Maipa	0.92	177	P	Pn	20 41 59.5	-0.2
WHVZ	Whangaehu Hut	0.92	349	P	Pn	20 41 59.1	-0.8
TUVZ	Tukino	0.93	352	P	Pn	20 41 59.2	-0.7
MAVZ	Matarangi	0.94	348	P	Pn	20 41 59.4	-0.8
FWVZ	Far West T-bar	0.95	348	P	Pn	20 41 59.6	-0.8
KIW	Kapiti Island	0.96	225	P	Pn	20 42 00.3	+0.1
PKVZ	Pokaka	0.97	338	P	Pn	20 41 59.8	-0.6
MTW	Mount Morrison	1.00	194	P	Pn	20 42 00.6	-0.1
MCHZ	McNeill Hill	1.01	43	P	Pn	20 42 00.9	+0.1
COVZ	Chateau Observ	1.01	348	P	Pn	20 42 00.4	-0.5
SNVZ	South Ngauruho	1.01	352	P	Pn	20 42 00.5	-0.5
NGZ	Ngauruhoe	1.02	351	P	Pn	20 42 00.7	-0.5
OTVZ	Oturere	1.03	353	P	Pn	20 42 00.7	-0.6
ETVZ	East Tongariro	1.05	356	P	Pn	20 42 00.9	-0.6
NNVZ	North Ngauruho	1.07	352	P	Pn	20 42 01.3	-0.5
TMVZ	Te Maari	1.07	355	P	Pn	20 42 01.2	-0.7
CAW	Cannon Point	1.08	212	P	Pn	20 42 01.5	-0.3
WTVZ	West Tongariro	1.08	351	P	Pn	20 42 01.4	-0.5
NTVZ	North Tongarir	1.09	354	P	Pn	20 42 01.4	-0.6
KRVZ	Karewarewa	1.10	353	P	Pn	20 42 01.7	-0.4
CKHZ	Cape Kidnapper	1.10	62	P	Pn	20 42 01.6	-0.5
BKZ	Black Stump Fm	1.15	27		Pn	20 42 01.8	-0.9
BKZ				Sn	Sn	20 42 17.2	-0.3
BKZ	Black Stump Fm	1.15	27	P	Pn	20 42 01.7	-0.9
BKZ	Black Stump Fm	1.15	27	P	Pn	20 42 01.8	-0.9
TWVZ	Taurewa	1.15	345	P	Pn	20 42 02.0	-0.8
RITZ	Rihia Road	1.21	2	P	Pn	20 42 03.0	-0.5
TRWZ	Traveller	1.21	185	P	Pn	20 42 03.3	-0.3
KATZ	Kakaramea	1.22	356	P	Pn	20 42 03.4	-0.3
PAWZ	Paruwai Farm	1.23	194	P	Pn	20 42 03.4	-0.4
ARHZ	Aropaoanui	1.30	45	P	Pn	20 42 03.7	-0.9
MSWZ	Moikau Station	1.30	199		Pn	20 42 04.0	-0.7
MSWZ	Moikau Station	1.30	199	P	Pn	20 42 04.1	-0.7
LREZ	Lake Rotokare	1.31	303	P	Pn	20 42 04.9	+0.1
HATZ	Hinemaiaia	1.31	9	P	Pn	20 42 03.9	-1.0
RATZ	Rangitukua	1.32	359	P	Pn	20 42 04.3	-0.8
NMHZ	Naumai	1.33	35	P	Pn	20 42 04.5	-0.7
VRZ	Vera Road	1.34	322	P	Pn	20 42 04.7	-0.6
WEL	Wellington	1.35	216	P	Pn	20 42 04.9	-0.5
SNZO	South Karori	1.40	217		Pn	20 42 05.3	-0.8
SNZO	South Karori	1.40	217	P	Pn	20 42 04.9	-1.2
SNZO	South Karori	1.40	217	P	Sn	20 42 23.3	-0.2
BHW	Baring Head	1.42	210		Pn	20 42 05.4	-0.8
BHW	Baring Head	1.42	210	P	Pn	20 42 05.4	-0.8
MRHZ	Matea Rd	1.43	19	P	Pn	20 42 05.4	-1.1
PLWZ	Palliser	1.44	197		Pn	20 42 05.9	-0.8
PLWZ	Palliser	1.44	197	P	Pn	20 42 05.9	-0.8
WATZ	Wairara	1.48	357	P	Pn	20 42 06.2	-1.0
WHTZ	Whakaora	1.52	4	P	Pn	20 42 07.1	-0.6
PREZ	Palmer Road	1.53	303	P	Pn	20 42 08.4	+0.6
MTHZ	Maungataniwha	1.55	31	P	Pn	20 42 06.9	-1.3
TCW	Tory Channel	1.55	228		Pn	20 42 07.2	-0.9
TCW	Tory Channel	1.55	228	P	Pn	20 42 07.3	-0.9
WHHZ	Waihua	1.56	45	P	Pn	20 42 07.1	-1.1
DUWZ	D'Urville Isla	1.57	246	P	Pn	20 42 07.5	-0.9
DREZ	Durham Road	1.60	308	P	Pn	20 42 08.9	+0.2
MHEZ	Mangahewa	1.60	313	P	Pn	20 42 09.2	+0.4
RAHZ	Arahi	1.60	38	P	Pn	20 42 07.4	-1.4
NEZ	North Egmont	1.61	304	P	Pn	20 42 09.5	+0.5
KHEZ	Kahui Hut	1.65	302	P	Pn	20 42 09.5	0.0
KHEZ	Kahui Hut	1.65	302	P	Pn	20 42 09.8	+0.3
NMEZ	Namu Road	1.68	297	P	Pn	20 42 10.5	+0.6
WPRZ	Whakapapatarin	1.69	9	P	Pn	20 42 09.2	-0.8
KUTZ	Kaahu Road	1.70	0	P	Pn	20 42 09.2	-0.9
PKE	Pukeiti	1.73	305	P	Pn	20 42 11.0	+0.6
PRRZ	Plateau Road	1.75	15	P	Pn	20 42 09.7	-1.0
NBEZ	Newall Road No	1.76	301	P	Pn	20 42 11.5	+0.6
RTZ	Ruatahuna	1.81	30		Pn	20 42 10.2	-1.5
HIZ	Hauiti	1.83	336		Pn	20 42 10.8	-1.1
HIZ	Hauiti	1.83	336	P	Pn	20 42 11.4	-0.5
HIZ	Hauiti	1.83	336	S	Sn	20 42 36.8	+2.8
HIZ	Hauiti	1.83	336	P	Pn	20 42 11.0	-0.9
SNGZ	Shannon Statio	1.83	41	P	Pn	20 42 10.2	-1.7
KNZ	Kokohu	1.85	52	P	Pn	20 42 10.3	-1.8
GRRZ	Galatos Road	1.85	7	P	Pn	20 42 11.5	-0.7
MUGZ	Murupara	1.86	24	P	Pn	20 42 11.1	-1.2
TLZ	Tolley Road	1.87	353	P	Pn	20 42 10.9	-1.5
TUWZ	Tuamarina	1.89	228		Pn	20 42 11.5	-1.2
TUWZ	Tuamarina	1.89	228	P	Pn	20 42 11.6	-1.0
HSRZ	Hossack Road	1.90	10	P	Pn	20 42 11.9	-1.0
MHGZ	Mahia Peninsul	1.92	58	P	Pn	20 42 11.6	-1.5
TARZ	Mount Tarawera	2.02	16	P	Pn	20 42 13.7	-0.9
UTU	Utuhina	2.03	8	P	Pn	20 42 13.3	-1.3
PRGZ	Paritu Road	2.04	52	P	Pn	20 42 12.9	-1.8
RAGZ	Rawiri	2.10	37	P	Pn	20 42 13.6	-2.0
RIGZ	Rimuhau	2.11	46	P	Pn	20 42 13.9	-1.8
BSWZ	Blackbirch Sta	2.12	223		Pn	20 42 14.4	-1.4
BSWZ	Blackbirch Sta	2.12	223	P	Pn	20 42 14.4	-1.4
NNZ	Nelson	2.12	240	Pn	Pn	20 42 14.3	-1.5
NNZ	Nelson	2.12	240	P	Pn	20 42 14.7	-1.0
URZ	Urewera	2.17	28	P	Pn	20 42 14.3	-2.3
URZ	Urewera	2.17	28	P	Pn	20 42 14.2	-2.3
MWZ	Matawai	2.28	36	P	Pn	20 42 15.8	-2.2
TKNZ	Takaka Hill	2.33	248		Pn	20 42 17.6	-1.2
TKNZ	Takaka Hill	2.33	248	P	Pn	20 42 17.9	-0.8
TKGZ	Te Karaka	2.35	43	P	Pn	20 42 16.8	-2.2
TOZ	Tahuroa Road	2.46	354		Pn	20 42 19.0	-1.5
CNGZ	Carnagh Statio	2.52	48	P	Pn	20 42 18.7	-2.5
QRZ	Quartz Range	2.59	255		Pn	20 42 20.9	-1.3
QRZ	Quartz Range	2.59	255	P	Pn	20 42 20.8	-1.3
QRZ	Quartz Range	2.59	255	S	Sn	20 42 51.1	-1.3
QRZ	Quartz Range	2.59	255	P	Pn	20 42 21.0	-1.3
MRNZ	Matariki Terra	2.62	241		Pn	20 42 21.5	-1.1
THZ	Tophouse	2.71	234	Pn	Pn	20 42 22.1	-1.8
KHZ	Kahutara	2.81	217	Pn	Pn	20 42 23.2	-2.0
KHZ	Kahutara	2.81	217	P	Pn	20 42 23.2	-2.0
KHZ	Kahutara	2.81	217	S	Sn	20 42 55.3	-2.6
MXZ	Matakaoa Point	3.26	37	Pn	Pn	20 42 29.1	-2.3
MXZ	Matakaoa Point	3.26	37	P	Pn	20 42 29.0	-2.4
DSZ	Denniston Nort	3.41	242	Pn	Pn	20 42 31.6	-1.9
KUZ	Kuaotunu	3.44	359	P	Pn	20 42 32.9	-0.9
LTZ	Lake Taylor	3.72	225	Pn	Pn	20 42 35.0	-2.7
RPZ	Rata Peaks	5.00	224	Pn	Pn	20 42 52.8	-2.4
RPZ	Rata Peaks	5.00	224	P	Pn	20 42 53.2	-2.0
OUZ	Omahuta	5.26	340	P	Pn	20 42 58.6	-0.2
FOZ	Fox Glacier	5.59	231	Pn	Pn	20 43 00.1	-3.1
ODZ	Otahua Downs	6.17	216	P	Pn	20 43 08.3	-2.9
JCZ	Jackson Bay	6.51	231	P	Pn	20 43 14.3	-1.7
CTZ	Chatham Island	6.66	125		Pn	20 43 17.3	-0.6
SYZ	Scrubby Hill	7.99	215	P	Pn	20 43 34.1	-2.0
AS31	Alice Springs	38.81	282	P	P	20 49 01.2	-0.9
AS31				IAmb	IAmb	20 49 03.3	
	comp=Z,2.7nm,1.4s						
ASAR	Alice Springs	38.81	282	P	P	20 49 00.9	-1.2
WR8	Warramunga Arr	40.60	287	P	P	20 49 16.1	-0.8
WR8				IAmb	IAmb	20 49 18.1	
	comp=Z,5.8nm,1.1s						
WRA	Warramunga Arr	40.72	287	P	P	20 49 17.4	-0.6
CASY	Casey	44.16	212	P	P	20 49 45.8	+0.5
QSPA	South Pole Qui	49.94	180	P	P	20 50 32.7	+2.2
QSPA				IAmb	IAmb	20 50 53.3	
	comp=Z,5.2nm,1.4s						
BO02	Sierra Bellavi	83.41	131	IAML		20 53 56.9	
	comp=N,62nm,0.2s						
PZH	PanZhiHua	95.56	300	P	P	20 55 03.1	+1.3
HHC	Hu-ho-hao-te	99.58	316	*e*P	Pdif	20 55 22.4	+2.9
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,41nm,3.6s						

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*BJI **22** 21:00:00.3, 23°.68N×122°.97E, h9^{km}, mB4.3/7, mb4.1/22, ML3.9/3, Ms4.1/18, Ms7 4.0/20*

*IDC **22** 21:00:00.6±0.6, 23°.86N×123°.02E, h0^{km}, mb3.9/22, mbtmp3.8/24, ML3.5/2, MS3.7/23, Error ellipse: s-maj=18.1km s-min=15.2km az=74.0*

*NEIC **22** 21:00:01.5±2.2, 23°.67N±0°.04×123°.03E±0°.06, h10^{km}±1^{km}, mb4.3/13, Error ellipse: s-maj=9.4km s-min=6.0km az=110.0*

*TAP **22** 21:00:05.1, 23°.77N×122°.97E, h46^{km}, ML4.8, D*

*NIED **22** 21:00:05.2, 23°.77N×122°.93E, h45^{km}, MW4.3, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}0.02; $M_{\theta\theta}$1.16; $M_{\phi\phi}$-1.18; $M_{r\theta}$2.25; $M_{\theta\phi}$-0.55; $M_{\phi r}$1.57; Fault plane solution: $M_0$3.03000×10^{15} NP1: ϕ_s147.00000°, δ25.00000°, λ1.00000°. NP2: ϕ_s56.00000°, δ90.00000°, λ115.00000°.*

*ASIES **22** 21:00:05.1, 23°.77N×122°.97E, h46^{km}, ML4.8, Mw4.5, Moment Tensor Solution. Moment tensor: Scale 10^{22}Nm; M_{rr}-5.86; $M_{\theta\theta}$5.70; $M_{\phi\phi}$0.16; $M_{r\theta}$0.58; $M_{\theta\phi}$0.31; $M_{\phi r}$2.40; Fault plane solution: $M_0$6.29775×10^{22} NP1: ϕ_s104.30000°, δ44.37000°, λ-62.49000°. NP2: ϕ_s248.23000°, δ51.67000°, λ-114.31000°. Principal axes: T Plg3.8360°, Azm355.1920°; N Plg18.8450°, Azm263.8810°; P Plg70.7400°, Azm96.2560°;*

*JMA **22** 21:00:05.2±0.1, 24°N±1°×122°.9E±0°.4, h45^{km}±4^{km}, MD4.4/15, MV4.1/15, NEAR ISHIGAKIJIMA ISLAND*

JMA Felt I J1 at NEAR ISHIGAKIJIMA ISLAND.

ISC 22 21:00:04.2±1.1,23°.70N±0°.02×122°.97E±0°.02,h26^{km}±8^{km}, n265,σ1.^{s}24/391,mb4.0/32,MS3.6/21,38C-4D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS4	EOS4	0.73	305	⇑*i*P	Pn	21 00 18.5	0.0
EOS4				*e*S	Sb	21 00 28.5	+1.1
JYNG	Yonagunijimaku	0.74	358	P	Pb	21 00 18.4	-0.2
JYNG				*e*S	Sb	21 00 27.5	-0.9
JYNG	Yonagunijimaku	0.74	358	A	A	21 00 18.4	
	comp=N,104nm,0.6s,comp=E,32nm,1.0s						
YOJ	Yonaguni jima	0.76	3		Pb	21 00 18.6	-0.1
YOJ					Sb	21 00 27.9	-0.8
YOJ	Yonaguni jima	0.76	3	P	Pb	21 00 18.7	-0.1
YOJ	Yonaguni jima	0.76	3	P	Pb	21 00 18.8	+0.1
YOJ				S	Sb	21 00 28.2	-0.4
YOJ	Yonaguni jima	0.76	3	A	A	21 00 18.8	
	comp=N,25nm,1.2s,comp=E,23nm,1.0s						
YOJ	Yonaguni jima	0.76	3	⇑*i*P	Pb	21 00 18.8	+0.1
YOJ				S	Sb	21 00 28.5	-0.1
EOS3	EOS3	0.83	314	⇑*i*P	Pn	21 00 20.5	+0.3
EOS3				S	Sn	21 00 32.1	+0.6
HATJ	Hateruma jima	0.84	65	P	Pb	21 00 20.8	+0.6
HATJ				*e*S	Sb	21 00 31.7	+0.6
HATJ	Hateruma jima	0.84	65	A	A	21 00 20.8	
	comp=N,26nm,2.4s,comp=E,25nm,2.3s						
IRIF	Iriomote-Funau	0.94	48	P	Pn	21 00 22.0	+0.3
IRIF				*e*S	Sn	21 00 34.1	-0.2
IRIF	Iriomote-Funau	0.94	48	A	A	21 00 22.0	
	comp=N,26nm,2.0s,comp=E,23nm,1.0s						
EOS2	EOS2	0.98	317	⇑*i*P	Pb	21 00 23.0	+0.6
EOS2				S	Sb	21 00 36.6	+1.6
JKRS	Kuro-shima	1.09	61	P	Pb	21 00 24.6	+0.2
JKRS				*e*S	Sb	21 00 38.8	+0.6
JKRS	Kuro-shima	1.09	61	A	A	21 00 24.6	
	comp=N,20nm,2.7s,comp=E,20nm,2.4s						
JIJ	Ishigaki jima	1.26	58	P	Pn	21 00 26.3	+0.2
JIJ				*e*S	Sn	21 00 42.2	0.0
JIJ	Ishigaki jima	1.26	58	A	A	21 00 26.3	
	comp=N,5.0nm,1.4s,comp=E,5.0nm,1.0s						
TEYL	Yanliau Villag	1.27	278	⇑*i*P	Pn	21 00 25.7	-0.6
TEYL				*e*S	Sn	21 00 40.8	-1.7
EHP	Heping Village	1.27	298	*e*P	Pb	21 00 27.8	+0.2
EHP				*e*S	Sn	21 00 42.7	0.0
HWA	Hwalien	1.28	283	*e*P	Pn	21 00 26.1	-0.3
HWA				*i* S	Sn	21 00 42.1	-0.6
EAHA	Aohua	1.29	299	*e*P	Pn	21 00 26.8	+0.3
EAHA				*e*S	Sn	21 00 42.6	-0.3
SHUL	Shoufeng	1.29	274	⇑P	Pn	21 00 26.3	-0.3
SHUL				*e*S	Sn	21 00 42.6	-0.5
TEGC	Jichi Village	1.31	271	P	Pn	21 00 26.5	-0.3
TEGC				*e*S	Sn	21 00 42.4	-1.2
TWD	Chiawan	1.31	287	⇑*i*P	Pn	21 00 26.1	-0.8
TWD				*i* S	Sn	21 00 41.5	-2.1
ETL	Fush Village	1.31	290	*e*P	Pn	21 00 26.5	-0.4
ETL				*i* S	Sn	21 00 42.4	-1.2
EWUT	Wuta	1.31	304	⇑P	Pn	21 00 26.9	-0.1
EWUT				S	Sn	21 00 43.5	-0.2
ENA	Nanau	1.33	303	⇑*i*P	Pn	21 00 27.1	-0.1
ENA				*e*S	Sn	21 00 43.5	-0.6
NACB	Ninganchiao	1.34	291		Pn	21 00 26.5	-0.8
NACB	Ninganchiao	1.34	291	P	Pn	21 00 26.6	-0.7
NACB	Ninganchiao	1.34	291	⇑*i*P	Pn	21 00 26.6	-0.7
NACB				S	Sn	21 00 42.9	-1.4
ESAO	Su ao	1.34	310	P	Pn	21 00 27.1	-0.2
ESAO				*e*S	Sn	21 00 44.1	-0.3
TWC	Suao	1.36	312	⇑*i*P	Pn	21 00 27.4	-0.2
TWC				*e*S	Sn	21 00 44.0	-0.8
ETM	Tongmen	1.38	281	⇑P	Pn	21 00 27.0	-0.8
ETM				*e*S	Sn	21 00 43.2	-2.0
ESL	Shilin	1.41	275	⇑*i*P	Pn	21 00 27.3	-1.0
ESL				*e*S	Sn	21 00 45.0	-1.0
EGFH	Guangfu	1.41	269	*e*P	Pn	21 00 28.2	-0.1
HGSD	Ruisui	1.43	262	⇑*i*P	Pn	21 00 28.0	-0.6
HGSD				*i* S	Sn	21 00 44.5	-2.1
ECBN	Changbin	1.45	255	P	Pn	21 00 28.6	-0.2
ECBN				*e*S	Sn	21 00 45.3	-1.6
ETLH	Xiulin Townshi	1.45	290	⇑P	Pn	21 00 28.4	-0.4
ETLH				S	Sn	21 00 45.7	-1.4
WARBT	Fenglin Townsh	1.45	271	⇑*i*P	Pn	21 00 27.9	-0.9
WARBT				*e*S	Sn	21 00 45.1	-1.9
LXIB	Xiulin Townshi	1.46	283	⇑P	Pn	21 00 28.4	-0.7
LXIB				*e*S	Sn	21 00 45.5	-1.9
NDS	Dongshan	1.47	309	*e*P	Pn	21 00 28.7	-0.4
NDS				*e*S	Sn	21 00 46.6	-0.9
EGS		1.48	320	*e*P	Pn	21 00 29.6	+0.4
EGS				*e*S	Sn	21 00 46.7	-1.0
EHYH	Wanrong	1.50	262	*e*P	Pn	21 00 29.7	+0.2
EHYH				S	Sn	21 00 47.9	-0.5
JISG	Ishigakijimahi	1.51	54	P	Pn	21 00 29.5	-0.1
JISG				*e*S	Sn	21 00 48.5	+0.1
JISG	Ishigakijimahi	1.51	54	A	A	21 00 29.5	
	comp=N,11nm,1.7s,comp=E,10.0nm,0.7s						
EHY	Hungye	1.52	263	⇑P	Pn	21 00 29.7	-0.1
EHY				*i* S	Sn	21 00 47.8	-1.1
CHKH	Chenggong	1.53	251	*e*P	Pn	21 00 29.3	-0.6
CHKH				*i* S	Sn	21 00 46.5	-2.5

ILA	Ilan	1.54	314	*e*P	Pn	21 00 30.8	+0.8
ILA				*e*S	Sn	21 00 48.1	-1.0
NTC	Toucheng	1.55	318	*e*P	Pn	21 00 30.2	+0.1
NTC				*e*S	Sn	21 00 48.3	-1.0
EYUL	Yuli	1.56	257	P	Pn	21 00 30.3	+0.1
EYUL				*e*S	Sn	21 00 48.7	-0.9
LATG	Datong	1.56	302	⇑*i*P	Pn	21 00 30.5	+0.2
LATG				*e*S	Sn	21 00 49.8	0.0
TWE	Neicheng	1.56	311	⇑*i*P	Pn	21 00 30.8	+0.5
TWE				*e*S	Sn	21 00 49.0	-0.7
YULB	Yu-li	1.56	259		Pn	21 00 30.1	-0.3
YULB				Sn	Sn	21 00 48.6	-1.3
YULB	Yu-li	1.56	259	P	Pn	21 00 31.0	+0.6
YULB	Yu-li	1.56	259	⇓*i*P	Pn	21 00 30.2	-0.3
YULB				*i* S	Sn	21 00 49.2	-0.7
TWF1	Yuli	1.57	257	⇓*i*P	Pn	21 00 30.3	-0.2
TWF1				*e*S	Sn	21 00 48.7	-1.4
TWB1	Santiao Chiao	1.58	326	⇑*i*P	Pn	21 00 30.7	+0.2
TWB1				*e*S	Sn	21 00 48.5	-1.6
ENTT	Nioudou	1.58	306	⇑*i*P	Pn	21 00 31.1	+0.5
ENTT				S	Sn	21 00 50.2	-0.1
CHKT	Chengkung	1.59	248	⇓*i*P	Pn	21 00 30.1	-0.6
CHKT				S	Sn	21 00 47.9	-2.6
FULB	Fuli	1.62	252	*e*P	Pn	21 00 30.6	-0.5
FULB				*e*S	Sn	21 00 49.7	-1.5
NNSB	Datong	1.62	297	⇑*i*P	Pn	21 00 31.4	+0.1
NNSB				*i* S	Sn	21 00 50.8	-0.6
WHF	Hehuan Shan	1.62	286	⇑*i*P	Pn	21 00 31.1	-0.5
WHF				S	Sn	21 00 50.2	-1.6
NNS	Nan Shan	1.63	297	⇑*i*P	Pn	21 00 31.5	+0.1
NNS				S	Sn	21 00 51.0	-0.7
TIPB	Shuangxi	1.64	321	⇑P	Pn	21 00 31.6	+0.2
TIPB				*e*S	Sn	21 00 51.4	-0.3
FUSB	Fushanzhiwuyua	1.64	310	⇑P	Pn	21 00 32.3	+0.8
FUSB				S	Sn	21 00 52.4	+0.6
OWD	Renai	1.66	279	P	Pn	21 00 31.6	-0.3
OWD				*i* S	Sn	21 00 51.0	-1.4
FUSS	Fushou	1.67	289	⇑*i*P	Pn	21 00 32.2	+0.2
FUSS				S	Sn	21 00 52.5	-0.2
VWDT	VWDT	1.68	272	⇑*i*P	Pn	21 00 32.0	+0.1
VWDT				*e*S	Sn	21 00 51.6	-1.0
EDH	Donghe	1.69	245	*e*P	Pn	21 00 31.9	-0.2
EDH				*i* S	Sn	21 00 50.6	-2.4
SXI1	Grass Mountain	1.71	324	⇑*i*P	Pn	21 00 32.7	+0.3
SXI1				*e*S	Sn	21 00 53.2	-0.2
EHD	Haiduan	1.71	252	*e*P	Pn	21 00 32.1	-0.3
EHD				S	Sn	21 00 52.1	-1.4
NWLT	Wulai	1.71	309	*e*P	Pn	21 00 33.3	+0.8
NWLT				*i* S	Sn	21 00 54.1	+0.6
ECS	Chishang	1.72	250	*e*P	Pn	21 00 32.8	+0.3
ECS				*e*S	Sn	21 00 53.1	-0.6
WUSB	Renai	1.72	280	⇑*i*P	Pn	21 00 32.7	0.0
WUSB				*e*S	Sn	21 00 52.5	-1.3
TWT	Tachien	1.73	289	P	Pn	21 00 33.5	+0.7
TWT				S	Sn	21 00 53.7	-0.4
NWF	Wu-fen Shan	1.74	322	⇑*i*P	Pn	21 00 33.2	+0.4
NWF				*e*S	Sn	21 00 53.4	-0.8
WFSB	Wu-fen Shan	1.74	322	⇑*i*P	Pn	21 00 33.3	+0.5
WFSB				*e*S	Sn	21 00 53.3	-0.8
TDCB	Techi	1.74	289	⇑*i*P	Pn	21 00 33.3	+0.4
TDCB				*e*S	Sn	21 00 53.4	-1.1
YHNB	Yeheng	1.74	304		Pn	21 00 33.2	+0.2
YHNB				Sn	Sn	21 00 53.7	-0.7
YHNB	Yeheng	1.74	304	P	Pn	21 00 33.6	+0.7
YHNB	Yeheng	1.74	304	*i* P	Pn	21 00 33.7	+0.8
YHNB				*e*S	Sn	21 00 53.9	-0.5
NSK	Sanguang	1.76	304	⇑*i*P	Pn	21 00 33.6	+0.4
NSK				S	Sn	21 00 54.1	-0.7
TWA	Mucha	1.79	315	⇑P	Pn	21 00 34.2	+0.7
TWA				*e*S	Sn	21 00 54.8	-0.7
TNOU	National Taiwa	1.81	323	*e*P	Pn	21 00 33.8	+0.1
TNOU				*e*S	Sn	21 00 54.9	-0.9
NHDH	Xindian Distri	1.82	314	*e*P	Pn	21 00 34.9	+1.1
NHDH				*e*S	Sn	21 00 55.2	-0.9
JTJ	Tarama	1.84	59	P	Pn	21 00 35.0	+0.9
SSLB	Suanglung	1.85	273		Pn	21 00 34.1	-0.2
SSLB				Sn	Sn	21 00 56.7	-0.2
SSLB	Suanglung	1.85	273	P	Pn	21 00 34.9	+0.6
SSLB	Suanglung	1.85	273	*e*P	Pn	21 00 34.4	+0.1
SSLB				*e*S	Sn	21 00 55.9	-1.0
TATO	Taipei	1.85	313		Pn	21 00 34.9	+0.6
TATO				Sn	Sn	21 00 57.8	+0.9
TATO	Taipei	1.85	313	P	Pn	21 00 35.2	+0.9
ELDTW	Lidau	1.86	254	*e*P	Pn	21 00 34.4	-0.2
ELDTW				*e*S	Sn	21 00 55.4	-2.0
LONT	Longtian	1.87	245	*e*P	Pn	21 00 35.5	+1.0
LONT				S	Sn	21 00 56.6	-0.7
TAP	Taipei	1.88	315	*e*P	Pn	21 00 35.2	+0.5
TAP				*e*S	Sn	21 00 56.9	-0.8
SMLT	Sun Moon Lake	1.90	276	P	Pn	21 00 35.7	+0.6
SMLT				*e*S	Sn	21 00 57.7	-0.7
WCS	Beigang Elemen	1.92	281	*e*P	Pn	21 00 35.7	+0.5
WCS				*e*S	Sn	21 00 58.4	-0.1
YM01	YM01	1.92	319	*e*P	Pn	21 00 35.6	+0.3
YM01				*e*S	Sn	21 00 57.8	-0.9
TTN	Taitung	1.93	241	*e*P	Pn	21 00 36.1	+0.8
TTN				*e*S	Sn	21 00 58.0	-0.7
NFF	Wufeng Townshi	1.93	299	*e*P	Pn	21 00 36.8	+1.3
NFF				*e*S	Sn	21 00 59.7	+0.8
WHP	Taichung City	1.94	288	*e*P	Pn	21 00 36.7	+1.2
WHP				*e*S	Sn	21 00 59.3	+0.2
WHYT	Xinyi Township	1.94	270	*e*P	Pn	21 00 36.4	+0.8
WHYT				*e*S	Sn	21 00 58.5	-0.7
YM08	YM08	1.94	320	*e*P	Pn	21 00 35.5	0.0
YM08				*e*S	Sn	21 00 57.8	-1.3
TYC	Yuchr	1.94	276	*e*P	Pn	21 00 36.4	+0.8
TYC				*e*S	Sn	21 00 59.1	-0.1
ZUZH	Zhuzihu	1.95	318	P	Pn	21 00 35.9	+0.2
ZUZH				*e*S	Sn	21 00 57.7	-1.7
TWGBT	Beinan	1.95	243	P	Pn	21 00 36.6	+0.9
TWGBT	Beinan	1.95	243	*e*P	Pn	21 00 36.2	+0.5
TWGBT				*e*S	Sn	21 00 58.0	-1.3
KSHI	Guanxi Townshi	1.95	303	*e*P	Pn	21 00 37.5	+1.7
KSHI				*e*S	Sn	21 01 00.7	+1.3
TWG	Pinlang	1.95	244		Pn	21 00 36.0	+0.2
TWG	Pinlang	1.95	244	P	Pn	21 00 36.2	+0.4
TWG				S	Sn	21 00 58.2	-1.2
ANP	Anpu	1.98	318	*e*P	Pn	21 00 36.7	+0.5
ANP				*e*S	Sn	21 00 59.6	-0.6
TWS1	Kuangyinshan	1.98	315	*e*P	Pn	21 00 37.1	+1.0
TWS1				*e*S	Sn	21 00 59.6	-0.6
ALS	Alishan	2.00	265	*i* P	Pn	21 00 37.6	+1.0
ALS				*e*S	Sn	21 01 00.8	0.0
TWY	Chenhua	2.00	322	*e*P	Pn	21 00 37.0	+0.6
NTST	Danshui	2.01	317	*e*P	Pn	21 00 36.6	+0.2
NTST				*e*S	Sn	21 00 59.9	-0.8
LIOB	Emei	2.02	298	⇑P	Pn	21 00 38.2	+1.6
LIOB				*e*S	Sn	21 01 01.7	+0.7
NSTT	Nanjuang	2.02	298	⇑P	Pn	21 00 38.2	+1.5
NSTT				*e*S	Sn	21 01 01.4	+0.3
NCU	National Centr	2.06	308	*e*P	Pn	21 00 35.7	-1.5
NCUH	Zhongli	2.06	308	*e*P	Pn	21 00 38.1	+1.0
NCUH				*e*S	Sn	21 01 03.2	+1.2
WJS	Zhushan	2.06	274	*e*P	Pn	21 00 38.8	+1.6
WJS				*i* S	Sn	21 01 03.9	+1.9
PCYT	Pengchaiyu	2.08	337	*e*P	Pn	21 00 38.4	+0.9
PCYT				*e*S	Sn	21 01 01.6	-1.1
STYH	Taoyuan	2.08	256	P	Pn	21 00 38.7	+1.2
STYH				S	Sn	21 01 02.3	-0.3
WNT	Mingjian	2.10	275	*e*P	Pn	21 00 39.4	+1.7
WNT				*i* S	Sn	21 01 04.7	+1.6
CHN5	Tsauling	2.10	268	*e*P	Pn	21 00 39.7	+1.8
CHN5				*e*S	Sn	21 01 03.4	+0.1
TWQ1	Liyutan	2.11	288	*e*P	Pn	21 00 39.8	+2.0
TWQ1				*e*S	Sn	21 01 04.4	+1.2
SBCB	Hsinchu	2.11	301	*e*P	Pn	21 00 38.8	+0.9
SBCB				*e*S	Sn	21 01 04.1	+0.8
LAY	Lan-yu	2.11	219	*e*P	Pn	21 00 37.5	-0.4
LAY				*e*S	Sn	21 01 02.1	-1.3
LYUB	Lan-yu	2.12	217	*e*P	Pn	21 00 37.8	-0.2
HSN	Hsinchu	2.13	301	*e*P	Pn	21 00 38.9	+0.8
HSN				*e*S	Sn	21 01 04.3	+0.6
NSY	Sanyi	2.14	290	*e*P	Pn	21 00 39.9	+1.6
NSY				*i* S	Sn	21 01 06.1	+2.1
TCU	Taichung	2.14	282	*e*P	Pn	21 00 40.7	+2.3
TCU				*e*S	Sn	21 01 06.3	+2.2
NMLH	Miaoli	2.16	293	P	Pn	21 00 40.7	+2.2
NMLH				*i* S	Sn	21 01 06.0	+1.5
ECL	Taimali	2.16	240	*e*P	Pn	21 00 38.4	-0.1
ECL				S	Sn	21 01 03.0	-1.5
TPUB	Ta-pu	2.19	260		Pn	21 00 40.8	+1.8
TPUB	Ta-pu	2.19	260	P	Pn	21 00 40.9	+2.0
TPUB	Ta-pu	2.19	260	S	Sn	21 01 06.7	+1.5
TPUB	Ta-pu	2.19	260	*e*P	Pn	21 00 40.8	+1.8
TPUB				*e*S	Sn	21 01 06.0	+0.8
WCKO	Fanlu	2.19	264	*e*P	Pn	21 00 41.0	+2.1
WCKO				*e*S	Sn	21 01 06.3	+1.1
WGK	Gukeng	2.21	270	*e*P	Pn	21 00 41.4	+2.2
WGK				*i* S	Sn	21 01 07.1	+1.4
WTP	Ta-pu	2.21	259	*e*P	Pn	21 00 40.9	+1.6
WTP				*e*S	Sn	21 01 06.4	+0.6
WDJ	Dajia District	2.22	287	*e*P	Pn	21 00 41.0	+1.5
WDJ				*e*S	Sn	21 01 07.9	+1.8
WDL	Douliou City	2.23	271	*e*P	Pn	21 00 41.8	+2.3
WDL				*e*S	Sn	21 01 07.7	+1.5
WDLH	Douliu	2.23	270	*e*P	Pn	21 00 42.2	+2.7
WDLH				*e*S	Sn	21 01 08.1	+1.9
WCHH	Zhanghua	2.24	280	*e*P	Pn	21 00 41.8	+2.2
WCHH				*i* S	Sn	21 01 08.1	+1.6
WCH1	Changhua City	2.25	280	*e*P	Pn	21 00 42.1	+2.4
WCH1				*e*S	Sn	21 01 09.1	+2.5
CHN2	Minshiung	2.29	266	*e*P	Pn	21 00 42.5	+2.1
CHN2				*e*S	Sn	21 01 10.9	+3.0
CHN1	Nanshi	2.30	258	*e*P	Pn	21 00 43.0	+2.5
CHN1				S	Sn	21 01 09.9	+1.9
TWK	Hsinying	2.32	260	*e*P	Pn	21 00 43.4	+2.6
TWK				S	Sn	21 01 11.0	+2.4
SNST	Tainan City	2.32	259	*e*P	Pn	21 00 42.9	+2.1
SNST				*e*S	Sn	21 01 10.2	+1.7
TAW	Tawu	2.33	235	*e*P	Pn	21 00 41.7	+0.8
TAW				*e*S	Sn	21 01 07.2	-1.6
CHY	Chiayi	2.34	265	*e*P	Pn	21 00 43.1	+2.0
CHY				*e*S	Sn	21 01 10.7	+1.6
TAWH	Dawu Township	2.35	235	*e*P	Pn	21 00 41.6	+0.4
TAWH				*e*S	Sn	21 01 08.0	-1.2
SSD	Sandimen	2.35	247	*e*P	Pn	21 00 42.3	+1.1
SSD				*e*S	Sn	21 01 07.1	-2.1
EAST	Anshuo	2.35	236	*e*P	Pn	21 00 41.9	+0.6
TSMG	Majia	2.36	246	*e*P	Pn	21 00 42.3	+1.0
WTK	Tuku	2.37	270	*e*P	Pn	21 00 43.6	+2.3
MASBT	Mashibuluo	2.41	244	*e*P	Pn	21 00 43.1	+1.1
SCST	Cishan	2.42	251	P	Pb	21 00 45.7	-1.3
SCST				*e*S	Sn	21 01 13.9	+3.1
WTCT	Ta-ch'eng	2.47	274	*e*P	Pn	21 00 45.2	+2.4
WTCT				*e*S	Sn	21 01 15.0	+2.9
CHN3	Shinhua	2.47	256	*e*P	Pb	21 00 47.1	-0.9
CHN3				*e*S	Sb	21 01 16.4	-1.6
SLIU	Shizi	2.49	234	*e*P	Pn	21 00 43.7	+0.6
ICHU	Yijhu	2.49	263	*e*P	Pn	21 00 45.6	+2.5
ICHU				S	Sn	21 01 14.8	+2.1
WSF	Szhu	2.52	269	*e*P	Pn	21 00 45.4	+1.9
WSF				*e*S	Sn	21 01 15.6	+2.2
WSL	Shuilin Townsh	2.52	266	*e*P	Pn	21 00 45.4	+1.9
WSL				*e*S	Sn	21 01 15.7	+2.2
SSHA	Shanhua	2.53	258	*e*P	Pn	21 00 46.2	+2.6
SCZT	Fangliau	2.54	239	*e*P	Pn	21 00 45.6	+1.9
CHN8	Yiju	2.56	263	*e*P	Pn	21 00 46.3	+2.3
CHN8				*i* S	Sn	21 01 16.7	+2.4
SMST	Manzhou Townsh	2.58	230	*e*P	Pn	21 00 45.7	+1.3
SMST				*e*S	Sn	21 01 16.2	+1.2
SNJT	Kaohsiung City	2.60	249	*e*P	Pb	21 00 49.6	-0.5
SCLT	Jiali	2.60	259	*e*P	Pn	21 00 46.5	+1.9
SCLT				*e*S	Sn	21 01 18.7	+3.2
TSEB	Hengchuen, Pin	2.62	227	*e*P	Pn	21 00 48.6	+3.7
TSEB				*e*S	Sn	21 01 18.4	+2.5
TWKBT	Hengchun	2.65	229	*e*P	Pn	21 00 47.5	+2.1
TWK1	Hengchun	2.66	229	*e*P	Pn	21 00 47.0	+1.6
HEN	Hengchun	2.66	231	*e*P	Pn	21 00 47.7	+2.2
HEN				*e*S	Sn	21 01 18.4	+1.5
TSCK	Chigu Township	2.71	259	*e*P	Pn	21 00 48.1	+2.1
TSCK				*e*S	Sn	21 01 20.2	+2.3
WSSB	Gushan	2.71	248	*e*P	Pb	21 00 50.0	-1.9
WSSB				*e*S	Sb	21 01 23.4	-1.4
WLCH	Liuqiu	2.74	241	*e*P	Pb	21 00 51.5	-1.1
TWP	Hsiaoliuchiu	2.76	241	*e*P	Pn	21 00 50.2	+3.4
WDGT	Dungji	3.07	262	P	Pn	21 00 52.6	+1.5
WDGT				*i* S	Sn	21 01 26.9	-0.1
PHUB	P'eng-hu	3.12	267	*e*P	Pn	21 00 52.3	+0.5
PNG	Penghu	3.13	268	*e*P	Pn	21 00 53.2	+1.3
VCHM	Qimei	3.29	262	*e*P	Pn	21 00 54.9	+0.8
VWUC	VWUC	3.46	292	*e*P	Pn	21 00 56.4	0.0
MATB	Ma-tsu	3.67	312	*e*P	Pn	21 00 59.3	-0.1
PTMZ	Houxiangcun	3.75	292	*e*P	Pn	21 01 00.5	0.0
XPSS	Dashiqiu	4.08	323	*e*P	Pn	21 01 04.5	-0.5
KNM	Kinmen	4.21	281	*e*P	Pn	21 01 08.7	+2.0
KNMB	Chin-men Tao	4.25	281	Pn	Pn	21 01 07.5	+0.1
KNMB	Chin-men Tao	4.25	281	*e*P	Pn	21 01 07.2	-0.1
MHZQ	Yeshan	4.30	305	*e*P	Pn	21 01 07.6	-0.3
AXDP	Jialang	4.71	286	*e*P	Pn	21 01 14.0	+0.3
ZPLA	Ao Xicun	4.79	274	*e*P	Pn	21 01 15.3	+0.6
DSXP	Dongshan	5.08	271	*e*P	Pn	21 01 19.3	+0.6
SXFK	Yanhouchang	5.52	300	*e*P	Pn	21 01 24.2	-0.7
JOW	Kunigami	5.72	56	Pn	Pn	21 01 26.2	-1.4
	comp=E,5.1nm,0.3s,baz=149,slow=24,SNR=20						
JOW				Sn	Sn	21 02 31.1	-1.3
	comp=E,1.6nm,0.3s,baz=103,slow=22,SNR=1.2						
	comp=E,14nm,0.3s						
SSE	Sheshan	7.53	348	Pn	Pn	21 01 52.8	+0.4
SSE				Sn	Sn	21 03 17.8	+0.9
SSE				LR	LR		
	comp=E,310nm,17.2s						
SSE				LR	LR		
	comp=E,190nm,14.4s						
SSE				LR	LR		
	comp=E,350nm,16.5s						
HKPS	Hong Kong Po S	8.26	262	Pn	Pn	21 02 03.2	+0.8
TGY	Tagaytay City	9.74	192	LR	LR	21 06 36.3	
	comp=E,258nm,19.5s,baz=75,slow=40						
QIZ	Qiongzhong	13.08	252	P	Pn	21 03 07.8	-0.7
QIZ				S	Sn	21 05 34.8	+1.6
QIZ				pmax	pmax		
	comp=E,30nm,1.2s						
QIZ				LR	LR		
	comp=E,300nm,18.1s						
QIZ				LR	LR		
	comp=E,390nm,16.5s						
KSRS	Korea Array	14.35	16	Pn	Pn	21 03 27.4	+1.7
	comp=E,0.4nm,0.3s,baz=192,slow=12,SNR=8.7						
KS19	Wonju Array Si	14.38	16		Pn	21 03 26.0	-0.1
DAV	Davao City (W)	16.73	171	LR	LR	21 10 24.5	
	comp=E,118nm,19.4s,baz=336,slow=37						
BJT	Baijiatuau	17.25	342	Pn	Pn	21 04 02.5	-0.9
JCJ	Chichijima	17.68	75	LR	LR	21 10 12.1	
	comp=E,1μm,20.6s,baz=314,slow=35						
MJAR	Matsushiro Arr	18.34	42	P	P	21 04 15.5	-1.3
	baz=257,slow=19,SNR=4.6						
	comp=E,0.6nm,0.7s						
PZH	PanZhiHua	19.42	283	P	Pn	21 04 31.1	+1.0
HHC	Hu-ho-hao-te	19.60	333	*e*P	Pn	21 04 40.3	+8.3
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,55nm,4.6s						
HHC				LR	LR		
	comp=N,340nm,12.5s						
HHC				LR	LR		
	comp=E,240nm,13.7s						
HHC				LR	LR		
	comp=Z,550nm,13.3s						
USRK	Ussuriysk Ar.	21.74	18	P	P	21 04 53.0	-0.6
	comp=Z,1.3nm,0.7s,baz=160,slow=4.5,SNR=4.7						
	comp=Z,1.3nm,0.7s						
BNX	BinXian	22.28	8	⇓P	P	21 04 59.0	-0.4
BNX				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CMAR	Chiang Mai Arr	23.00	261	P	P	21 05 06.6	-0.7
CMAR	Chiang Mai Arr	23.00	261	P	P	21 05 10.0	+2.7
	comp=Z,0.6nm,0.7s,baz=72,slow=10,SNR=5.9						
CMAR				PcP	PcP	21 08 57.5	+0.8
	comp=Z,0.2nm,0.3s,baz=69,slow=2.5,SNR=5.1						
CMAR				LR	LR	21 14 58.7	
	comp=Z,77nm,18.3s,baz=55,slow=39						
	comp=Z,0.6nm,0.7s						
GUMO	Guam	23.03	112	LR	LR	21 13 45.4	
	comp=Z,139nm,19.1s,baz=288,slow=36						
GTA	Gaotai	25.09	314	*e*P	P	21 05 27.8	+0.9
GTA				pP	pP	21 05 32.3	-1.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				LR	LR		
	comp=Z,250nm,12.0s						
GTA				LR	LR		
	comp=Z,420nm,13.8s						
GTA				LR	LR		
	comp=Z,350nm,12.7s						
KLR	Kul'dur	26.40	13	LR	LR	21 16 20.4	
	comp=Z,159nm,21.7s,baz=201,slow=37						
ULN	Ulaanbaatar	27.24	336	P	P	21 05 45.7	-0.7
ULN				IAmb	IAmb	21 06 07.4	
	comp=Z,7.2nm,1.4s						
SONM	Songino Array	27.46	335	P	P	21 05 47.0	-1.3
SONM	Songino Array	27.46	335	P	P	21 05 47.1	-1.1
	comp=Z,1.0nm,0.7s,baz=158,slow=8.8,SNR=6.0						
SONM				LR	LR	21 18 03.0	
	comp=Z,386nm,18.0s,baz=151,slow=40						
	comp=Z,1.0nm,0.7s						
KAPI	Kappang	28.72	187	LR	LR	21 17 09.5	
	comp=Z,141nm,18.6s,baz=116,slow=36						
PSI	Prapat	31.18	232	LR	LR	21 20 26.3	
	comp=Z,208nm,18.2s,baz=243,slow=39						
WMQ	Urumqi	35.17	313	*e*P	P	21 06 58.3	+2.3
YAK	Yakutsk	38.58	5	LR	LR	21 25 20.3	
	comp=Z,86nm,18.7s,baz=194,slow=40						
PETK	Petropavlovsk-	39.37	33	P	P	21 07 28.6	-2.8
PETK	Petropavlovsk-	39.37	33	P	P	21 07 30.2	-1.3
	comp=Z,0.7nm,0.8s,baz=223,slow=5.1,SNR=3.8						
PETK				LR	LR	21 23 36.0	
	comp=Z,66nm,19.2s,baz=225,slow=36						
	comp=Z,0.7nm,0.8s						
MKAR	Makanchi Array	39.82	316	P	P	21 07 34.4	-0.9
MKAR	Makanchi Array	39.82	316	P	P	21 07 35.2	-0.1
	comp=Z,0.5nm,0.5s,baz=99,slow=9.2,SNR=11						
MKAR				PcP	PcP	21 09 41.5	+0.4
	comp=Z,0.9nm,0.8s,baz=103,slow=4.9,SNR=4.4						
	comp=Z,0.5nm,0.5s						
MAKZ	Makanchi	40.03	316	P	P	21 07 36.1	-1.0
MA2	Magadan	40.82	21	LR	LR	21 25 34.2	
	comp=Z,85nm,18.7s,baz=232,slow=38						
ZALV	Zalesovo Beam	41.54	327	P	P	21 07 47.5	-1.9
ZALV	Zalesovo Beam	41.54	327	P	P	21 07 48.3	-1.0
	comp=Z,0.5nm,0.3s,baz=113,slow=10,SNR=4.0						
ZALV				LR	LR	21 26 23.0	
	comp=Z,170nm,18.4s,baz=136,slow=38						
	comp=Z,0.5nm,0.3s						
KSH	Kashi	42.53	303	P	P	21 08 00.0	+2.1
KSH				sP	sP	21 08 07.8	+0.6
KSH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NRN	Naryn	42.79	306		P	21 07 58.9	-1.3
NRN				IAmb	IAmb	21 08 14.4	
	comp=Z,5.0nm,0.9s						
KURBB	Kurchatov Arra	43.53	320	P	P	21 08 04.3	-1.3
	comp=Z,0.7nm,0.7s,baz=111,slow=7.8,SNR=3.1						
	comp=Z,0.7nm,0.7s						
AAK	Ala-Archa	44.09	307	LR	LR	21 29 24.5	
	comp=Z,161nm,19.2s,baz=99,slow=40						
WRA	Warramunga Arr	44.78	165	P	P	21 08 16.1	+0.2
	comp=Z,1.2nm,1.0s,baz=346,slow=8.9,SNR=4.7						
WRA				PcP	PcP	21 09 58.3	+0.5
	comp=Z,1.6nm,1.0s,baz=341,slow=3.3,SNR=6.1						
	comp=Z,1.2nm,1.0s						
DRK	Karamyk	45.74	303	P	P	21 08 22.1	-1.7
KKAR	Karatay Array	47.06	308	P	P	21 08 34.0	+0.2
KKAR	Karatay Array	47.06	308	P	P	21 08 33.5	-0.3
KKAR				IAmb	IAmb	21 08 54.8	
	comp=Z,1.6nm,1.1s						
TIXI	Tiksi	48.09	3	LR	LR	21 31 36.0	
	comp=Z,180nm,19.3s,baz=198,slow=40						
ASAR	Alice Springs	48.27	167	P	P	21 08 44.6	+1.3
	comp=Z,0.3nm,0.6s,baz=350,slow=6.5,SNR=4.8						
	comp=Z,0.3nm,0.6s						
HNR	Honiara	48.90	128	LR	LR	21 27 49.6	
	comp=Z,31nm,19.9s,baz=124,slow=34						
BVAR	Borovoye Array	49.08	321	P	P	21 08 47.6	-1.6
	comp=Z,0.5nm,0.4s,baz=90,slow=9.9,SNR=2.1						
BVAR				PcP	PcP	21 10 12.7	+0.1
	comp=Z,1.0nm,0.8s,baz=104,slow=4.6,SNR=1.8						
	comp=Z,0.5nm,0.4s						
BRVK	Borovoye	49.15	321	P	P	21 08 48.4	-1.3
BRVK				IAmb	IAmb	21 09 05.6	
	comp=Z,2.6nm,0.8s						
ABKAR	Akbulak array	54.94	314	P	P	21 09 32.3	-0.6
ABKAR	Akbulak array	54.94	314	P	P	21 09 32.6	-0.3
ABKAR				IAmb	IAmb	21 09 46.4	
	comp=Z,4.0nm,1.3s						
ARTI	Arti	56.56	323	LR	LR	21 35 37.7	
	comp=Z,48nm,18.5s,baz=96,slow=38						
STKA	Stephens Creek	58.07	161	P	P	21 09 56.6	+1.4
	comp=Z,1.6nm,0.5s,baz=333,slow=6.8,SNR=3.5						
	comp=Z,1.6nm,0.5s						
DZM	Mont Dzumac	62.12	134	LR	LR	21 33 39.0	
	comp=Z,36nm,20.1s,baz=23,slow=32						
C19K	Lookout Ridge	63.60	23	P	P	21 10 33.3	+0.8
J17K	VABM Dome	63.70	29	P	P	21 10 34.2	+1.0
D19K	Kuna River	64.11	24	P	P	21 10 37.0	+1.0
D19K				IAmb	IAmb	21 10 56.5	
	comp=Z,5.9nm,1.2s						
D20K	Etivluk River	64.67	23	P	P	21 10 39.9	+0.4
D20K				IAmb	IAmb	21 11 06.5	
	comp=Z,3.3nm,1.1s						
ILAR	Eielson Array	68.89	27	P	P	21 11 06.2	-0.2
	comp=Z,0.4nm,0.6s,baz=274,slow=6.0,SNR=4.9						
	comp=Z,0.4nm,0.6s						
SPITS	Spitsbergen Ar	70.30	348	P	P	21 11 13.8	-1.1
	comp=Z,0.6nm,0.4s,baz=78,slow=9.0,SNR=4.8						
SPITS				LR	LR	21 45 57.8	
	comp=Z,81nm,19.3s,baz=38,slow=39						
	comp=Z,0.6nm,0.4s						
ARCES	ARCESS Array B	70.59	338	P	P	21 11 16.3	-0.6
	comp=Z,1.8nm,0.9s,baz=64,slow=8.2,SNR=3.6						
ARCES				LR	LR	21 45 42.8	
	comp=Z,49nm,20.4s,baz=104,slow=39						
	comp=Z,1.8nm,0.9s						
FINES	FINESS Array B	72.68	330	P	P	21 11 29.0	-0.5
	comp=Z,0.7nm,0.3s,baz=50,slow=5.8,SNR=17						
	comp=Z,0.7nm,0.3s						
INK	Inuvik	73.05	22	LR	LR	21 46 25.1	
	comp=Z,29nm,18.2s,baz=258,slow=38						
AKASG	Malin Array Be	74.31	319	P	P	21 11 39.1	-0.2
	comp=Z,0.7nm,0.5s,baz=56,slow=6.4,SNR=2.8						
	comp=Z,0.7nm,0.5s						
BRTR	Keskin Array B	74.77	307	P	P	21 11 43.5	+1.0
	comp=Z,1.4nm,0.9s,baz=87,slow=6.4,SNR=7.3						
	comp=Z,1.4nm,0.9s						
EIL	Elat	77.03	297	LR	LR	21 51 22.7	
	comp=Z,43nm,19.9s,baz=244,slow=40						
HFS	Hagfors	78.78	331	P	P	21 12 04.2	-0.2
	comp=Z,3.3nm,1.1s,baz=72,slow=9.3,SNR=4.1						
	comp=Z,3.3nm,1.1s						
NOA	NORSAR Array B	79.41	333	P	P	21 12 07.1	-0.8
	comp=Z,1.2nm,0.8s,baz=62,slow=4.9,SNR=3.5						
NOA				LR	LR	21 50 59.6	
	comp=Z,98nm,18.0s,baz=75,slow=39						
	comp=Z,1.2nm,0.8s						
VYHS	Vyhne	81.40	319	*e*P	P	21 12 20.5	+1.6
YKA	Yellowknife Ar	82.77	23	P	P	21 12 25.8	+0.1
	comp=Z,1.5nm,0.9s,baz=311,slow=6.1,SNR=4.8						
	comp=Z,1.5nm,0.9s						
GERES	GERESS Array B	84.24	321	P	P	21 12 34.5	+0.8
	comp=Z,1.7nm,0.8s,baz=63,slow=4.8,SNR=12						
	comp=Z,1.7nm,0.8s						
NVAR	Mina Array Bea	95.66	44	P	P	21 13 29.1	+0.9
	comp=Z,0.6nm,0.7s,baz=319,slow=5.1,SNR=3.5						
	comp=Z,0.6nm,0.7s						

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*ISK **22** 21:02:49.3, 35°.93N×30°.97E, h17^{km}, ML2.9/17*
*AFAD **22** 21:02:49.7, 35°.93N×30°.95E, h42^{km}±1^{km}, MW3.3*
*NIC **22** 21:02:50.5, 36°.04N×30°.94E, h17^{km}±6^{km}, Ml2.8/7*
*GII **22** 21:02:51.2±0.0, 35°.861N±0°.003×30°.817E±0°.001, h20^{km}, Mws2.8, confirmed*
ISC 22 21:02:51.1±1.2**, 35°.98N**±0°.03×**30°.94E**±0°.02**, h23**^{km}±14^{km}**,**
n85, σ1^{s}.12/106**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKUM	Antalya-Kumluc	0.59	305	P	Pb	21 03 02.8	+0.1
KEMT	Kemer-ANTALYA	0.69	334	Pg	Pb	21 03 03.9	-0.6
DEMR	Demre-Antalya	0.87	287	Pg	Pn	21 03 07.9	-0.1
MNVG	Manavgat-Antal	0.90	26	Pg	Pb	21 03 07.8	-0.2
ANTB	Antalya	0.94	346	Pg	Pn	21 03 08.9	0.0
ANTB				Sg	Sn	21 03 23.4	+1.7
AKAS	Kas	1.10	283	Pn	Pn	21 03 11.1	-0.2
AKAS	Kas	1.10	283	P	Pn	21 03 11.1	-0.2
KSL	Kastellorizon	1.11	279	P	Pn	21 03 11.3	+0.1
KSL				S	Sb	21 03 25.7	+0.1
KORT	Korkueli	1.12	335	Pn	Pb	21 03 12.5	+0.6
KORT				Sn	Sn	21 03 27.7	+1.4

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KORT	Korkueli	1.12	335	P	Pb	21 03 12.5	+0.6
ELL	Elmali	1.13	313	Pn	Pn	21 03 11.4	-0.2
ELL	Elmali	1.13	313	P	Pn	21 03 11.6	0.0
ELL				S	Sn	21 03 26.9	+0.5
GAZI	Gazipasa	1.15	77	Pn	Pn	21 03 11.1	-0.7
GAZI	Gazipasa	1.15	77	P	Pn	21 03 11.2	-0.5
GAZI				S	Sb	21 03 23.5	-3.2
GAZI				*i* IAML		21 03 29.0	
	comp=N,666nm,0.7s						
BUCA	Burdur, Bucak-	1.38	347	P	Pb	21 03 17.1	+0.9
KNIK	Mula-Seydike	1.40	308	P	Pb	21 03 16.4	-0.1
KNIK				S	Sb	21 03 34.8	+0.8
KNIK				*i* IAML		21 03 38.0	
	comp=N,46nm,0.4s						
IZZE	Mula-Seydike	1.46	289	P	Pn	21 03 16.3	+0.3
IZZE				S	Sn	21 03 31.0	-3.4
IZZE				*i* IAML		21 03 35.0	
	comp=E,124nm,0.6s						
AKMS	Akamas	1.49	130	P	Pb	21 03 17.4	-0.7
AKMS				S	Sb	21 03 37.9	+1.1
AKMS				AML	AML	21 03 47.7	
	0.5nm,0.5s						
AKMS				AML	AML	21 03 48.9	
	0.3nm,0.5s						
BCK	Bucak	1.50	349	Pn	Pn	21 03 17.3	+0.6
BCK				Sn	Sb	21 03 37.2	+0.2
HDMB	Hadim	1.59	51	Pn	Pn	21 03 17.3	-0.7
ALFC	Alefka	1.59	121	P	Pn	21 03 17.5	-0.4
ALFC				S	Sb	21 03 41.5	+2.1
ALFC				AML	AML	21 03 49.7	
	0.4nm,0.5s						
ALFC				AML	AML	21 03 52.0	
	0.4nm,0.3s						
SEYD	Seydisehir-KON	1.59	27	Pn	Pn	21 03 17.7	-0.3
SEDI	Konya, Seydise	1.61	24	P	Pn	21 03 18.5	+0.3
CAME	Cameli-Denizli	1.63	307	Pn	Pn	21 03 18.9	+0.4
FETY	Fethiye	1.63	294	Pn	Pn	21 03 18.7	+0.3
FETY	Fethiye	1.63	294	P	Pn	21 03 18.7	+0.3
GOLH	Golhisar	1.67	319	P	Pn	21 03 19.9	+0.8
GOLH				S	Sn	21 03 39.6	-0.2
GOLH				*i* IAML		21 03 56.0	
	comp=E,78nm,0.6s						
ERMK	Ermenek	1.73	67	P	Pn	21 03 20.1	+0.2
CAEL	Denizli, Camel	1.73	312	P	Pn	21 03 20.4	+0.5
SABU	Mula-Dalaman	1.79	298	P	Pn	21 03 21.0	+0.3
NATA	Nata	1.80	132	P	Pb	21 03 24.7	+1.4
ISP	Isparta	1.86	350	Pn	Pn	21 03 22.5	+0.7
ISP	Isparta	1.86	350	P	Pn	21 03 23.1	+1.4
ISP	Isparta	1.86	350	S	Sb	21 03 48.1	+0.6
TROD	Troodos	1.89	123	P	Pn	21 03 21.9	-0.2
TROD				S	Sb	21 03 48.8	+0.7
TROD				AML	AML	21 04 10.6	
	0.2nm,0.6s						
TROD				AML	AML	21 04 11.8	
	0.2nm,0.7s						
XYLS	Xyliatos	1.98	119	P	Pn	21 03 22.6	-0.6
XYLS				S	Sn	21 03 47.9	+0.5
XYLS				AML	AML	21 03 57.6	
	0.2nm,0.5s						
XYLS				AML	AML	21 04 01.3	
	0.2nm,0.3s						
APMY	Acipayam-Deniz	1.98	319	Pn	Pn	21 03 23.5	+0.2
BAGO	Egridir - ISPA	2.01	357	P	Pn	21 03 23.5	-0.2
DNZT	Denizli-Tavas-	2.01	311	P	Pn	21 03 23.5	-0.2
DNZT				S	Sn	21 03 46.8	-1.3
DNZT				*i* IAML		21 03 49.0	
	comp=E,22nm,0.3s						
DALY	Dalyan (Mula)	2.02	295	Pn	Pn	21 03 23.9	+0.1
KKBE	Karaman, Kazim	2.03	52	P	Pb	21 03 25.7	-1.7
KKBE				S	Sn	21 03 48.5	-0.2
KKBE				*i* IAML		21 03 54.0	
	comp=E,41nm,0.5s						
KKBE				*i* IAML		21 03 56.0	
	comp=N,42nm,0.3s						
INCE	Denizli-Bozkur	2.04	328	P	Pn	21 03 25.2	+1.0
INCE				S	Sn	21 03 46.0	-2.9
INCE				*i* IAML		21 03 53.0	
	comp=E,78nm,0.4s						
BASM	Basmaki-Afyon	2.06	340	Pn	Pn	21 03 25.1	+0.7
ATHAL	Athalassa	2.17	112	P	Pn	21 03 26.9	+1.0
ATHAL				S	Sb	21 03 55.0	-1.3
ATHAL				AML	AML	21 04 13.4	
	0.3nm,0.4s						
ATHAL				AML	AML	21 04 21.2	
	0.4nm,0.8s						
TAVA	DENIZLI_Tavas	2.20	313	P	Pn	21 03 26.3	0.0
DOGA	KONYA_Doganhis	2.20	15	P	Pn	21 03 28.2	+1.8
CSS	Mathiatis	2.21	117	P	Pn	21 03 25.5	-0.8
CSS	Mathiatis	2.21	117	S	Sn	21 03 54.6	+1.7
CSS	Mathiatis	2.21	117	P	Pn	21 03 25.7	-0.6
CSS				S	Sn	21 03 53.2	+0.3
CSS				AML	AML	21 04 10.9	
	0.1nm,0.6s						
CSS				AML	AML	21 04 13.5	
	0.1nm,0.5s						
ASGA	Asgata	2.24	122	P	Pb	21 03 29.8	-1.0
DNIZ	Denizli-Tavas-	2.24	318	P	Pn	21 03 27.1	+0.2
DNIZ				S	Sn	21 03 54.9	+1.1
DNIZ				*i* IAML		21 04 00.0	
	comp=N,241nm,0.3s						
DNIZ				*i* IAML		21 04 00.0	
	comp=E,214nm,0.3s						
KONT	Konya--Tatoy	2.27	30	P	Pn	21 03 27.1	-0.1
YVAC	Isparta, Yalva	2.30	6	P	Pn	21 03 28.2	+0.5
AFYN	Afyon-Dinar-K	2.31	352	P	Pn	21 03 24.9	-3.0
TURN	Turunc	2.31	291	P	Pn	21 03 27.9	+0.2
TURN				S	Sn	21 03 50.5	-5.0
TURN				*i* IAML		21 03 56.0	
	comp=N,36nm,0.2s						
TURN				*i* IAML		21 03 56.0	
	comp=E,29nm,0.7s						
MVOU	Mavrovouni	2.40	113	P	Pn	21 03 28.1	-0.9
MVOU				S	Sn	21 03 57.4	-0.3
MVOU				AML	AML	21 04 14.8	
	0.1nm,0.5s						
MVOU				AML	AML	21 04 15.5	
	0.2nm,0.6s						
MULA	Mugla, Merkez-	2.46	302	P	Pn	21 03 29.9	0.0
PASA	Karahalli, USA	2.63	334	P	Pn	21 03 33.5	+1.3
ESEN	Aydn-Nazilli	2.75	312	P	Pn	21 03 33.2	-0.6
APE	Apeiranthos	4.49	286	P	Pn	21 03 57.8	+0.1
MMC7	Mount Meron ar	4.72	127	P	Pn	21 04 01.8	+0.8
MMA0B	Mount Meron ar	4.73	127	P	Pn	21 04 02.0	+0.9
MMA0B	Mount Meron ar	4.73	127	S	Sn	21 04 56.5	+1.1
GEM	Giv'at Ha'Em	4.78	124	P	Pn	21 04 02.6	+0.9
GEM	Giv'at Ha'Em	4.78	124	S	Sn	21 04 57.8	+1.4
NATI	Neve Ativ	4.80	123	P	Pn	21 04 03.2	+1.2
NATI	Neve Ativ	4.80	123	S	Sn	21 04 58.9	+2.0
MMLI	Mount Malkishu	5.13	132	P	Pn	21 04 07.2	+0.6
MMLI	Mount Malkishu	5.13	132	S	Sn	21 05 06.1	+0.9
HMDT	Nahal Hemdat	5.32	133	P	Pn	21 04 09.9	+0.7
HMDT	Nahal Hemdat	5.32	133	S	Sn	21 05 10.6	+0.8
DSI	Dead Sea	5.75	139	P	Pn	21 04 15.5	+0.4
DSI	Dead Sea	5.75	139	S	Sn	21 05 20.6	+0.2
KZIT	Kziot	5.83	149	P	Pn	21 04 16.4	+0.2
KZIT	Kziot	5.83	149	S	Sn	21 05 20.6	-1.8
MSBI	Mazada	5.94	140	P	Pn	21 04 18.1	+0.5
MSBI	Mazada	5.94	140	S	Sn	21 05 25.2	+0.2
GHAJ	Ghor Haditha	6.06	139	P	Pn	21 04 19.8	+0.5
GHAJ	Ghor Haditha	6.06	139	S	Sn	21 05 28.1	+0.2
PRNI	Paran	6.57	148	P	Pn	21 04 26.8	+0.5
PRNI	Paran	6.57	148	S	Sn	21 05 40.5	-0.1
MBRI	Mt Berech	7.02	150	P	Pn	21 04 33.0	+0.4
MBRI	Mt Berech	7.02	150	S	Sn	21 05 51.3	-0.5
EIL	Elat	7.14	151	P	Pn	21 04 34.4	+0.2
EIL	Elat	7.14	151	S	Sn	21 05 54.5	-0.3

IDC 22 21:04:00.4±2.0, 30°.68S×177°.67W, h0^{km}, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=59.6km s-min=39.1km az=47.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	8.70	208	Pn	Pn	21 05 58.9	-8.6
	0.2nm,0.3s,baz=104,slow=12,SNR=1.6						
URZ				Sn	Sn	21 07 37.5	-8.8
	1.0nm,0.3s,baz=300,slow=19,SNR=6.4						
ASAR	Alice Springs	43.38	267	P	P	21 12 04.4	-0.5
	0.2nm,0.6s,baz=105,slow=8.1,SNR=4.2						
	0.2nm,0.6s						
WRA	Warramunga Arr	44.39	272	P	P	21 12 13.2	+0.2
	0.9nm,0.8s,baz=111,slow=8.0,SNR=4.6						
	0.9nm,0.8s						
QSPA	South Pole Qui	59.43	180	P	P	21 14 04.7	0.0
	1.7nm,1.2s,baz=56,slow=2.4,SNR=6.1						
	1.7nm,1.2s						
FINES	FINESS Array B	145.51	340	PKPbc	PKPdf	21 23 39.0	-0.7
	4.1nm,1.1s,baz=48,slow=4.1,SNR=8.5						

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*JMA **22** 21:06:31.3±0.1, 23°.8N±0°.6×122°.9E±0°.5, h44^{km}, MV2.6/13, NEAR ISHIGAKIJIMA ISLAND*

*TAP **22** 21:06:31.2, 23°.80N×122°.95E, h47^{km}±1^{km}, ML3.0, D*

ISC 22 21:06:28.7±1.2, 23°.67N±0°.04×122°.96E±0°.03, h20^{km}±5^{km}, n64, σ1^s.04/95, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS4	EOS4	0.74	307	*e*P	Pn	21 06 44.4	+0.6
EOS4				*e*S	Sn	21 06 54.5	+0.2
JYNG	Yonagunijimaku	0.78	359	*e*P	Pn	21 06 44.4	-0.2
JYNG				*e*S	Sg	21 06 53.6	-0.8
YOJ	Yonaguni jima	0.79	3	*e*P	Pn	21 06 44.7	-0.1
YOJ				*e*S	Sg	21 06 54.0	-0.8
YOJ	Yonaguni jima	0.79	3	P	Pn	21 06 44.7	-0.1
YOJ				*i* S	Sg	21 06 54.5	-0.3
EOS3	EOS3	0.85	316	P	Pn	21 06 46.4	+1.0
EOS3				*e*S	Sn	21 06 57.5	+0.2
HATJ	Hateruma jima	0.86	63	*e*P	Pn	21 06 47.3	+1.5
HATJ				*e*S	Sn	21 06 58.7	+0.9
IRIF	Iriomote-Funau	0.97	46	P	Pg	21 06 48.1	+0.5
EOS2	EOS2	1.00	318	*e*P	Pg	21 06 49.3	+1.1
EOS2				*e*S	Sn	21 07 03.0	+2.0
JKRS	Kuro-shima	1.11	59	*e*P	Pg	21 06 50.9	+0.6
JKRS				*e*S	Sg	21 07 05.4	+0.5
JIJ	Ishigaki jima	1.28	57	*e*P	Pg	21 06 52.7	-0.8
JIJ				*e*S	Sg	21 07 08.8	-1.5
SHUL	Shoufeng	1.29	276	*e*S	Sb	21 07 09.2	+0.8
TEGC	Jichi Village	1.30	272	*e*S	Sn	21 07 08.7	0.0
EWUT	Wuta	1.33	306	*e*P	Pg	21 06 53.8	-0.7
ENA	Nanau	1.35	304	*e*P	Pb	21 06 53.5	+0.2
NACB	Ninganchiao	1.35	292	*e*P	Pb	21 06 53.1	-0.2
TWC	Suao	1.38	313	*e*P	Pg	21 06 54.8	-0.6
ESL	Shilin	1.41	276	*e*P	Pn	21 06 53.2	-0.1
HGSD	Ruisui	1.42	263	*e*P	Pn	21 06 53.5	0.0
HGSD				*e*S	Sn	21 07 10.2	-1.4
ECBN	Changbin	1.43	256	*e*P	Pn	21 06 54.5	+0.9
ECBN				S	Sn	21 07 10.9	-0.9
WARBT	Fenglin Townsh	1.45	272	*e*P	Pn	21 06 54.0	+0.2
WARBT				*e*S	Sn	21 07 11.0	-1.2
ETLH	Xiulin Townshi	1.46	292	*e*P	Pn	21 06 54.8	+0.8
ETLH				*e*S	Sn	21 07 12.0	-0.6
LXIB	Xiulin Townshi	1.46	284	*e*P	Pn	21 06 54.9	+0.8
EHYH	Wanrong	1.49	264	*e*P	Pn	21 06 55.5	+1.1
EHYH				*e*S	Sn	21 07 13.6	+0.3
EHY	Hungye	1.51	264	P	Pn	21 06 55.3	+0.6
EHY				*e*S	Sn	21 07 13.6	-0.3
CHKH	Chenggong	1.52	252	*e*S	Sn	21 07 12.5	-1.4
JISG	Ishigakijimahi	1.53	53	*e*P	Pn	21 06 55.5	+0.5
YULB	Yu-li	1.55	260	P	Pn	21 06 56.0	+0.7
YULB				*e*S	Sn	21 07 14.1	-0.7
TWF1	Yuli	1.56	259	*e*P	Pn	21 06 56.3	+0.9
TWF1				*e*S	Sn	21 07 14.3	-0.7
LATG	Datong	1.57	304	*e*P	Pg	21 06 58.7	-0.3
CHKT	Chengkung	1.57	249	*e*S	Sn	21 07 13.5	-1.8
TWE	Neicheng	1.58	312	*e*P	Pb	21 06 56.9	-0.3
ENTT	Nioudou	1.60	307	*e*P	Pb	21 06 57.6	-0.1
FULB	Fuli	1.60	253	S	Sn	21 07 15.2	-0.9
WHF	Hehuan Shan	1.62	287	*e*P	Pn	21 06 57.4	+0.7
NNSB	Datong	1.63	298	*e*P	Pn	21 06 57.3	+0.9
NNSB				*e*S	Sn	21 07 15.8	-1.2
FUSB	Fushanzhiwuyua	1.66	311	*e*P	Pb	21 06 58.5	-0.2
OWD	Renai	1.66	280	*e*P	Pn	21 06 57.8	+0.9
TIPB	Shuangxi	1.66	322	*e*P	Pb	21 06 59.0	+0.3
VWDT	VWDT	1.67	273	*e*P	Pn	21 06 57.7	+0.8
VWDT				*e*S	Sn	21 07 18.2	+0.4
EDH	Donghe	1.68	246	*e*P	Pn	21 06 57.7	+0.8
EDH				*e*S	Sn	21 07 16.8	-1.0
EHD	Haiduan	1.69	253	*e*P	Pn	21 06 57.9	+0.7
EHD				S	Sn	21 07 17.5	-0.8
WUSB	Renai	1.72	281	*e*P	Pn	21 06 58.5	+0.9
WUSB				*e*S	Sn	21 07 19.4	+0.2
SXI1	Grass Mountain	1.73	325	P	Pn	21 06 58.5	+0.8
YHNB	Yeheng	1.76	305	*e*P	Pb	21 06 59.5	-0.8
JTJ	Tarama	1.86	58	*e*S	Sb	21 07 23.4	-1.5
WCS	Beigang Elemen	1.92	282	*e*P	Pn	21 07 01.8	+1.5
TWGBT	Beinan	1.93	244	*e*P	Pn	21 07 01.8	+1.3
TWGBT				*e*S	Sn	21 07 22.9	-1.2
TWG	Pinlang	1.93	244	*e*P	Pn	21 07 02.1	+1.6
TWG				*e*S	Sn	21 07 23.4	-0.8
NFF	Wufeng Townshi	1.94	300	*e*P	Pb	21 07 03.1	-0.3
WHP	Taichung City	1.94	289	*e*P	Pb	21 07 04.0	+0.5
TYC	Yuchr	1.94	277	*e*P	Pn	21 07 02.3	+1.7
ALS	Alishan	1.98	266	*e*P	Pn	21 07 03.4	+1.9
LIOB	Emei	2.03	299	*e*P	Pb	21 07 04.0	-0.9
STYH	Taoyuan	2.07	257	*e*P	Pn	21 07 04.3	+1.9
STYH				*e*S	Sn	21 07 28.7	+1.1
LYUB	Lan-yu	2.09	218	*e*P	Pn	21 07 03.7	+1.1
ECL	Taimali	2.13	240	*e*P	Pn	21 07 04.1	+0.9
ECL				S	Sn	21 07 28.2	-1.0
TPUB	Ta-pu	2.17	261	*e*P	Pn	21 07 06.0	+2.2
TPUB				S	Sn	21 07 32.7	+2.5
WTP	Ta-pu	2.20	259	*e*P	Pb	21 07 07.1	-0.7
WTP				*e*S	Sn	21 07 33.3	+2.5
CHN1	Nanshi	2.29	258	*e*P	Pb	21 07 08.4	-0.9
CHN1				*e*S	Sb	21 07 36.8	-0.4
TWK	Hsinying	2.31	260	*e*P	Pb	21 07 09.3	-0.4
TWK				*e*S	Sb	21 07 37.2	-0.6
SNST	Tainan City	2.31	259	*e*P	Pb	21 07 08.4	-1.3
SNST				*e*S	Sb	21 07 37.4	-0.4
TAWH	Dawu Township	2.33	236	*e*P	Pn	21 07 07.7	+1.8
SSD	Sandimen	2.33	247	*e*P	Pb	21 07 09.6	-0.5
MASBT	Mashibuluo	2.39	244	*e*P	Pn	21 07 08.8	+2.1

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*IDC **22** 21:08:22.0±0.9, 28°.37N×104°.71E, h0^{km}, mb3.9/10, mbtmp3.9/11, MS3.4/2, Error ellipse: s-maj=28.2km s-min=17.1km az=49.0*

*NEIC **22** 21:08:24.8±1.7, 28°.37N±0°.09×104°.8E±0°.1, h10^{km}±1^{km}, mb4.4/14, Error ellipse: s-maj=17.6km s-min=13.0km az=138.0*

ISC 22 21:08:23.7±0.5, 28°.43N±0°.03×104°.87E±0°.05, h10^{km}, n43, σ2^s.02/55, mb4.1/18, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CD2	Chengdu	2.65	339	Pn	Pn	21 09 08.5	+1.9
CD2				Pg	Pg	21 09 14.9	+0.3
CD2				Sn	Sn	21 09 41.5	+2.6
CD2				Sg	Sg	21 09 49.4	+0.4
CD2				smax	smax		
	comp=N,1μm,0.7s						
CD2				smax	smax		
	comp=E,2μm,0.7s						
PZH	PanZhiHua	3.38	236	Pn	Pb	21 09 20.4	-3.4
PZH				Pg	Pg	21 09 28.5	0.0
PZH				Sn	Sn	21 09 58.0	+1.0
PZH				Sg	Sg	21 10 12.3	-0.1
PZH				smax	smax		
	comp=N,170nm,1.1s						
PZH				smax	smax		
	comp=E,200nm,1.0s						
KMI	Kunming	3.81	211	⇑Pn	Pb	21 09 27.3	-3.9
KMI				Pg	Pg	21 09 36.1	-0.6
KMI				Sn	Sn	21 10 12.0	+4.3
KMI				Sg	Sg	21 10 25.3	-0.8
KMI				smax	smax		
	comp=N,83nm,1.1s						
KMI				smax	smax		
	comp=E,67nm,1.4s						
KMI				LR	LR		
	comp=N,880nm,12.4s						
KMI				LR	LR		
	comp=E,1μm,8.7s						
KMI				LR	LR		
	comp=Z,420nm,13.9s						
ENH	Enshi	4.42	64		Pn	21 09 34.4	+3.4
XAN	Xi'an	6.58	31	Pn	Pn	21 10 02.5	+2.0
XAN				Pg	Pg	21 10 26.5	-3.2
XAN				Sn	Sn	21 11 13.6	-2.0
XAN				Sg	Sg	21 11 53.3	-1.5
XAN				smax	smax		
	comp=N,690nm,1.0s						
XAN				smax	smax		
	comp=E,600nm,1.0s						
SLVN	Son La	7.12	187	Pn	Pn	21 10 08.4	+0.3
LZH	Lanzhou	7.68	354	Pg	Pb	21 10 37.5	+0.4
LZH				Sn	Sb	21 12 02.0	-6.8
LZH				Sg	Sg	21 12 26.3	-4.0
LZH				smax	smax		
	comp=N,91nm,1.0s						
LZH				smax	smax		
	comp=E,160nm,1.1s						
LZH				LR	LR		
	comp=N,430nm,7.2s						
LZH				LR	LR		
	comp=E,1μm,7.0s						
LZH				LR	LR		
	comp=Z,810nm,8.5s						
CMAR	Chiang Mai Arr	11.32	210	Pn	Pn	21 11 10.0	+4.3
	comp=Z,0.1nm,0.3s,baz=18,slow=12,SNR=19						
GTA	Gaotai	11.72	340	*e*P	Pn	21 11 14.8	+3.6
GTA				pP		21 11 19.8	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				LR	LR		
	comp=N,250nm,12.7s						
GTA				LR	LR		
	comp=E,420nm,14.2s						
GTA				LR	LR		
	comp=Z,350nm,12.7s						
BJT	Baijiatuau	14.84	36	Pn	Pn	21 11 56.3	+2.6
EVN	Everest	15.93	273		Pn	21 12 08.3	-0.3
SONM	Songino Array	19.41	3	P	Pn	21 12 52.8	+1.6
SONM	Songino Array	19.41	3	P	Pn	21 12 51.1	-0.1
	comp=Z,0.7nm,0.6s,baz=183,slow=11,SNR=5.7						
ULN	Ulaanbaatar	19.48	4	P	Pn	21 12 54.1	+2.0
WMQ	Urumqi	20.63	323	*e*P	Pn	21 13 08.9	+3.2
KSAR	Wonju Array Be	21.26	59	P	P	21 13 11.0	+0.9
KSRS	Korea Array	21.29	59	P	P	21 13 11.6	+1.2
	comp=Z,7.4nm,1.0s,baz=235,slow=10,SNR=14						
	comp=Z,7.4nm,1.0s						
JNU	Nakatsue	22.80	72	LR	LR	21 21 41.2	
	comp=Z,34nm,20.8s,baz=246,slow=35						
MKAR	Makanchi Array	25.46	322		P	21 13 51.1	-0.8
MKAR	Makanchi Array	25.46	322	P	P	21 13 51.9	+0.1
	comp=Z,3.0nm,0.7s,baz=123,slow=9.7,SNR=26						
	comp=Z,3.0nm,0.7s						
MAKZ	Makanchi	25.64	322		P	21 13 54.6	+1.1
MAKZ				IAmb	IAmb	21 13 58.6	
	comp=Z,6.1nm,1.0s						
USRK	Ussuriysk Ar.	26.76	47	P	P	21 14 04.5	+0.9
	comp=Z,3.2nm,0.8s,baz=276,slow=7.5,SNR=5.9						
	comp=Z,3.2nm,0.8s						
NRN	Naryn	26.85	307		P	21 14 06.0	+1.1
NRN				IAmb	IAmb	21 14 09.6	
	comp=Z,9.4nm,1.4s						
ZALV	Zalesovo Beam	29.42	336	P	P	21 14 27.1	-0.1
	comp=Z,1.1nm,0.7s,baz=133,slow=11,SNR=4.1						
	comp=Z,1.1nm,0.7s						
KURBB	Kurchatov Arra	29.79	325	P	P	21 14 30.1	-0.4
	comp=Z,2.2nm,0.9s,baz=133,slow=9.7,SNR=16						
KURBB				LR	LR	21 28 07.9	
	comp=Z,147nm,18.0s,baz=174,slow=40						
	comp=Z,2.2nm,0.9s						
KURK	Kurchatov	29.80	326	P	P	21 14 30.7	+0.1
KURK				IAmb	IAmb	21 14 34.6	
	comp=Z,3.0nm,0.8s						
KKAR	Karatay Array	31.24	307	P	P	21 14 43.6	+0.1
BVAR	Borovoye Array	35.31	324	P	P	21 15 17.1	-1.8
	comp=Z,1.5nm,1.0s,baz=101,slow=7.5,SNR=3.2						
	comp=Z,1.5nm,1.0s						
BRVK	Borovoye	35.39	324	P	P	21 15 19.8	+0.3
BRVK				IAmb	IAmb	21 15 21.3	
	comp=Z,3.6nm,1.1s						
ABKAR	Akbulak array	39.97	314		P	21 15 58.7	+0.4
ABKAR	Akbulak array	39.97	314	P	P	21 15 58.7	+0.4
KIV	Kislovodsk	51.36	305	P	P	21 17 29.1	+0.4
RAYN	Ar Rayn	53.14	279	P	P	21 17 41.6	-0.5
RAYN				IAmb	IAmb	21 17 43.0	
	comp=Z,4.4nm,1.1s						
WB0	Warramunga Arr	55.77	146	P	P	21 18 01.3	+0.3
WB0				IAmb	IAmb	21 18 22.3	
	comp=Z,7.9nm,1.3s						
WRA	Warramunga Arr	55.89	146	P	P	21 18 01.9	-0.1
	comp=Z,1.5nm,0.9s,baz=338,slow=8.2,SNR=7.0						
	comp=Z,1.5nm,0.9s						
WR8	Warramunga Arr	55.98	146	P	P	21 18 02.7	+0.1
BRTR	Keskin Array B	58.67	301	P	P	21 18 21.1	-0.4
	comp=Z,0.8nm,0.9s,baz=87,slow=7.5,SNR=4.9						
	comp=Z,0.8nm,0.9s						
ASAR	Alice Springs	58.87	149	P	P	21 18 22.9	0.0
	comp=Z,0.7nm,0.8s,baz=332,slow=6.9,SNR=7.0						
	comp=Z,0.7nm,0.8s						
C19K	Lookout Ridge	65.69	23	P	P	21 19 08.8	+0.7
C19K				IAmb	IAmb	21 19 15.3	
	comp=Z,10.0nm,1.4s						
B20K	Meade River	66.25	22	P	P	21 19 11.4	-0.1
D20K	Etivluk River	66.84	23	P	P	21 19 16.0	+0.6
D20K				IAmb	IAmb	21 19 27.8	
	comp=Z,6.1nm,1.3s						
GERES	GERESS Array B	69.90	315	P	P	21 19 34.0	-1.0
	comp=Z,0.5nm,0.9s,baz=61,slow=10,SNR=3.5						
	comp=Z,0.5nm,0.9s						
BMAR	Burnt Mountain	71.48	22	P	P	21 19 45.2	+0.9

IDC 22 21:30:43.5±377.0, 14°.53N×67°.55W, h0^{km}, Error ellipse: s-maj=202.0km s-min=143.7km az=82.0, Caribbean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I51GB	BERMUDA INFRAS	17.94	8	I	I	23 16 20.0	
	0.2nm,1.5s,baz=189,slow=310,SNR=3.3						
I20EC	Galapagos	27.13	238	I	I	00 15 10.0	
	baz=54,slow=316,SNR=1.2						
I08BO	LAS PENAS INFR	30.56	182	I	I	00 38 20.0	
	0.1nm,1.4s,baz=1.2,slow=328,SNR=1.7						

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*IDC **22** 21:48:22.2±0.6, 14°.50N×92°.47W, h0^{km}, mb4.3/22, mbtmp4.3/23, ML4.6/1, MS3.9/26, Error ellipse: s-maj=27.4km s-min=12.5km az=58.0*

*NEIC **22** 21:48:24.9±2.4, 14°.35N±0°.06×92°.88W±0°.05, h10^{km}±1^{km}, mb4.7/107, Md4.8/113(MEX), Error ellipse: s-maj=10.5km s-min=6.8km az=207.0*

*SNET **22** 21:48:24.3±1.1, 14°.36N×93°.06W, h125^{km}±75^{km}, ML4.9*

*GCG **22** 21:48:26.8±1.9, 14°.29N×92°.93W, h32^{km}±9^{km}, MD4.9, ML4.9, MW4.4*

*GCMT **22** 21:48:26.9±0.4, 14°.41N±0°.02×93°.18W±0°.03, h22^{km}, MW4.9/83, Moment Tensor Solution. s54,c67; s83,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.66±.12; $M_{\theta\theta}$-1.79±.08; $M_{\phi\phi}$-0.86±.09; $M_{r\theta}$0.91±.12; $M_{\theta\phi}$0.70±.05; $M_{\phi r}$-1.76±.14; Best double couple: $M_0$3.08800×10^{16} NP1:ϕ_s289.00000°,δ28.00000°,λ65.00000°. NP2: ϕ_s138.00000°,δ64.00000°,λ103.00000°. Principal axes: T 3.4520, Plg68.0000°, Azm73.0000°; N -0.7280, Plg12.0000°, Azm312.0000°; P -2.7230, Plg18.0000°, Azm218.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MEX **22** 21:48:27.0±1.0, 14°.29N×93°.06W, h12^{km}±46^{km}, MD4.8*

*CATAC **22** 21:48:27.0±0.6, 14°N±3°×9°3W±°, h6^{km}±3^{km}, M5.0/5, mb5.1/2, mB5.2/2, MLv4.9/5, Mw(mB)4.5/2, Error ellipse: s-maj=7.1km s-min=5.9km az=77.1, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.10; $M_{\theta\theta}$-0.52; $M_{\phi\phi}$0.62; $M_{r\theta}$0.46; $M_{\theta\phi}$0.80; $M_{\phi r}$-0.53; Fault plane solution: $M_0$1.21367×10^{16} NP1:ϕ_s344.22391°, δ80.41176°,λ-147.95906°. NP2:ϕ_s248.27245°, δ58.45865°,λ-11.27043°. Principal axes: T 1.1032, Plg14.6028°, Azm112.4963°; N 0.1969, Plg56.7021°, Azm359.1271°; P -1.3001, Plg29.1880°, Azm210.8646°; Moment Tensor Solution. Moment tensor: Scale 10^{16} Nm; M_{rr}-0.14; $M_{\theta\theta}$-0.34; $M_{\phi\phi}$0.48; $M_{r\theta}$0.56; $M_{\theta\phi}$0.90; $M_{\phi r}$-0.62; Fault plane solution: $M_0$1.30112×10^{16} NP1: ϕ_s350.17503°,δ77.47817°,λ-146.25603°. NP2: ϕ_s251.93386°,δ57.16172°,λ-14.95417°. Principal axes: T 1.1107, Plg13.3049°, Azm117.3461°; N 0.3207, Plg54.2672°, Azm8.1562°; P -1.4315, Plg32.4628°, Azm215.9984°; Moment Tensor Solution. Moment tensor: Scale 10^{16} Nm; M_{rr}0.64; $M_{\theta\theta}$-1.31; $M_{\phi\phi}$0.66; $M_{r\theta}$0.56; $M_{\theta\phi}$0.06; $M_{\phi r}$-0.26; Fault plane solution: $M_0$1.29227×10^{16} NP1:ϕ_s120.53736°,δ68.92320°,* *λ128.17215°. NP2:ϕ_s235.11916°,δ42.81408°,λ31.94776°. Principal axes: T 0.9784, Plg50.6237°, Azm74.0761°; N 0.4865, Plg35.2174°, Azm284.7513°; P -1.4649, Plg15.3324°, Azm183.5921°; confirmed*

ISC 22 21:48:26.0±1.3**,14°.25N**±0°.04×**92°.95W**±0°.04**,h30**^{km}±9^{km}**, n583,**σ**$1^{s}85$**/637**,mb4.6**/64**,MS3.9**/25**,Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.93	45		Pn	21 48 42.7	-0.3
THIG					Sn	21 48 55.7	+0.4
THIG		0.93	45	eP	Pn	21 48 42.7	-0.3
THIG				eS	Sn	21 48 55.7	+0.4
THIG		0.93	45	i P	Pn	21 48 42.8	-0.3
	comp=Z,11µm,0.5s						
THIG				eS	Sb	21 48 53.9	-1.7
THIG				IAML		21 48 59.3	
	comp=E,32µm,0.5s						
SMCA	Catarina	1.04	54	i P	Pn	21 48 44.4	-0.1
	comp=Z,8µm,0.5s						
SMCA				i S	Sn	21 48 57.0	-1.1
SMCA				IAML		21 49 07.8	
	comp=N,15µm,0.5s						
PATR	El Naranjo	1.11	39	i P	Pn	21 48 45.0	-0.7
PATR				eS	Sn	21 48 59.1	-0.9
PAVE	Pavencul	1.20	38	i P	Pn	21 48 46.5	-0.4
PAVE				eS	Sn	21 49 01.6	-0.7
RTAL	Retalhuleu	1.25	77		Pn	21 48 48.0	+0.7
RTAL				Sn	Sn	21 49 02.8	-0.3
RTAL	Retalhuleu	1.25	77	eP	Pn	21 48 48.0	+0.7
RTAL				eS	Sn	21 49 03.8	+0.7
RTAL	Retalhuleu	1.25	77	P	Pn	21 48 48.0	+0.7
RTAL	Retalhuleu	1.25	77	S	Sb	21 49 04.2	-0.4
PCIG		1.47	350		Pn	21 48 48.4	-2.0
PCIG		1.47	350	i P	Pn	21 48 48.4	-2.0
PCIG				eS	Sn	21 49 03.3	-5.4
STG8	El Palmar, Qui	1.56	82	i P	Pn	21 48 49.8	-2.1
	comp=Z,8µm,0.2s						
STG8				IAML		21 49 16.1	
	comp=N,21µm,0.4s						
STG0	El Palmar, Qui	1.57	83	i P	Pn	21 48 49.9	-2.0
	comp=Z,15µm,0.8s						
STG0				i S	Sn	21 49 08.3	-3.0
STG0				IAML		21 49 10.0	
	comp=E,30µm,0.2s						
SOKI	Kika Raxquin	1.60	69	eP	Pn	21 48 53.7	+1.1
SOKI				i S	Sb	21 49 15.2	+0.1
SOKI				IAML		21 49 31.0	
	comp=N,21µm,0.6s						
HUEH	Huehuetenango	1.76	53		Pb	21 48 56.1	-1.6
HUEH	Huehuetenango	1.76	53	eP	Pb	21 48 56.0	-1.6
HUEH				eS	Sb	21 49 20.2	+0.7
HUEH	Huehuetenango	1.76	53	eP	Pb	21 48 56.4	-1.3
HUEH				eS	Sb	21 49 21.4	+1.9
HUEH	Huehuetenango	1.76	53	i P	Pb	21 48 56.2	-1.5
HUEH				i S	Sb	21 49 21.6	+2.1
HUEH				IAML		21 49 27.3	
	comp=E,32µm,0.5s						
HUEH	Huehuetenango	1.76	53	P	Pb	21 48 56.1	-1.6
ESSG	Sabana Grande	2.06	86	eP	Pn	21 48 58.8	+0.2
ESSG				IAML		21 49 31.2	
	comp=N,6µm,0.4s						
CCIG	Comitan	2.17	21		Pn	21 49 01.7	+1.5
CCIG				Sn	Sn	21 49 25.1	-1.1
CCIG	Comitan	2.17	21	i P	Pn	21 49 01.9	+1.7
CCIG				eS	Sb	21 49 31.2	0.0
CCIG	Comitan	2.17	21	i P	Pn	21 49 02.0	+1.8
	comp=Z,2µm,1.6s						
CCIG				IAML		21 49 37.9	
	comp=N,6µm,0.4s						
CCIG	Comitan	2.17	21	P	Pn	21 49 01.6	+1.4
FG16	Alotenango, Sa	2.36	89	i P	Pn	21 48 59.2	-3.7
FG16				i S	Sn	21 49 24.2	-6.8
FG16				IAML		21 49 33.0	
	comp=E,33µm,0.2s						
GCG4	OSOP	2.36	81	eP	Pn	21 49 04.6	+1.7
	comp=Z,4µm,0.6s						
GCG4				IAML		21 49 43.5	
	comp=E,9µm,0.6s						
TGBT	Tuxtla Gutierr	2.52	357		Pn	21 49 05.9	+1.1
TGBT					Sn	21 49 36.3	+1.8
TGBT	Tuxtla Gutierr	2.52	357	eP	Pn	21 49 05.9	+1.1
TGBT				eS	Sn	21 49 36.3	+1.8
TGIG		2.52	356		Pn	21 49 05.7	+0.7
TGIG					Sn	21 49 35.4	+0.7
TGIG		2.52	356	eP	Pn	21 49 05.7	+0.7
TGIG				eS	Sn	21 49 35.4	+0.7
TGIG		2.52	356	i P	Pn	21 49 05.9	+0.9
	comp=Z,3µm,0.7s						
TGIG				i S	Sn	21 49 35.3	+0.7
TGIG				IAML		21 49 39.8	
	comp=E,4µm,0.4s						
LOAL	Lomas de Alarc	3.08	94	eP	Pn	21 49 14.7	+2.1
LOAL	Lomas de Alarc	3.08	94	P	Pn	21 49 15.1	+2.4
LOAL	Lomas de Alarc	3.08	94	S	Sn	21 49 49.9	+1.3
NUBE	Las Nubes	3.09	96	eP	Pn	21 49 14.5	+1.6
NUBE	Las Nubes	3.09	96	eP	Pn	21 49 13.6	+0.7
NUBE				i S	Sn	21 49 49.9	+1.0
NUBE	Las Nubes	3.09	96	P	Pn	21 49 13.6	+0.7
NUBE	Las Nubes	3.09	96	S	Sn	21 49 48.3	-0.6
CEVE	Cerro Verde	3.25	97	eP	Pn	21 49 16.4	+1.2
CEVE				eS	Sb	21 49 58.6	-3.9
CEVE	Cerro Verde	3.25	97	S	Sn	21 49 56.8	+3.8
CEVE	Cerro Verde	3.25	97	P	Pn	21 49 16.9	+1.7
UNIC	Universidad Ca	3.31	94	S	Sn	21 49 57.3	+3.1
CMIG	Matias Romero	3.39	327	Pn	Pn	21 49 16.1	-0.7
	comp=E,50nm,0.3s,baz=148,slow=12,SNR=270						
CMIG				Sn	Sn	21 49 54.4	-1.5
	comp=E,87nm,0.3s,baz=112,slow=13,SNR=14						
CMIG				LR	LR	21 50 47.7	
	comp=E,1µm,18.5s,baz=140,slow=42						
	comp=E,110nm,0.3s						
HUIG	Huatulco	3.41	297	eP	Pn	21 49 15.1	-1.9
HUIG				eS	Sn	21 49 52.9	-3.6
HUIG	Huatulco	3.41	297	eP	Pn	21 49 16.6	-0.5
HUIG				IAML		21 50 42.6	
	comp=N,495nm,0.7s						
JAYA	Jayaque - finc	3.45	99	eP	Pn	21 49 19.3	+1.5
JAYA				IAML		21 50 12.0	
	comp=Z,2µm,0.3s						
JAYA	Jayaque - finc	3.45	99	eP	Pn	21 49 19.3	+1.5
JAYA	Jayaque - finc	3.45	99	S	Sn	21 49 56.8	-0.9
JAYA	Jayaque - finc	3.45	99	P	Pn	21 49 19.2	+1.5
MTO3	Montecristo	3.48	87	eP	Pn	21 49 19.5	+1.2
MTO3	Montecristo	3.48	87	P	Pn	21 49 19.9	+1.6
ESQI	Esquipulas	3.51	84		Pn	21 49 19.9	+1.4
ESQI	Esquipulas	3.51	84	eP	Pn	21 49 20.5	+1.9
ESQI	Esquipulas	3.51	84	P	Pn	21 49 20.3	+1.7
PMON	Piamonte	3.57	98	S	Sn	21 50 02.4	+1.9
PMON	Piamonte	3.57	98	P	Pn	21 49 20.8	+1.5
BOQS	Boqueron	3.60	98	eP	Pn	21 49 21.8	+1.9
VHSA	Villahermosa	3.71	0	eP	Pn	21 49 22.6	+1.4
VHSA				eS	Sb	21 50 10.4	-5.1
LOMA	Loma Larga	3.71	99	S	Sn	21 50 05.5	+1.2
LOMA	Loma Larga	3.71	99	P	Pn	21 49 23.2	+1.8
LFRS	El Faro	3.82	99	eP	Pn	21 49 24.5	+1.6
PAVA	Las Pavas	3.93	97	S	Sn	21 50 14.3	+4.7
PAVA	Las Pavas	3.93	97	P	Pn	21 49 26.1	+1.8
PETF	Flores	3.98	48		Pn	21 49 26.6	+1.6
PETF	Flores	3.98	48	eP	Pn	21 49 26.6	+1.6
PETF				eS	Sn	21 50 14.7	+4.0
PETF	Flores	3.98	48	i P	Pn	21 49 26.9	+1.9
PETF				IAML		21 50 37.0	
	comp=E,3µm,0.7s						
PETF	Flores	3.98	48	P	Pn	21 49 26.8	+1.8
TUIG	Tuzandepetl	4.02	340	eP	Pn	21 49 24.4	-1.1
TUIG				eS	Sn	21 50 07.9	-3.8
PEIG	Puerto Escondi	4.41	294		Pn	21 49 30.4	-0.5
PEIG	Puerto Escondi	4.41	294	eP	Pn	21 49 30.4	-0.5
PEIG				eS	Sn	21 50 16.9	-4.5
IZABA	Izabal, Puerto	4.47	70	eP	Pn	21 49 33.7	+2.1
IZABA				eS	Sb	21 50 34.8	-2.3
PACA	Pacayal	4.56	99	P	Pn	21 49 35.7	+2.7
OXLC	Oaxaca	4.58	308	eS	Sn	21 50 23.0	-2.6
OXIG	Oaxaca	4.60	308		Pn	21 49 34.6	+0.9
VHO	Vista Hermosa	4.60	308	eP	Pn	21 49 34.6	+0.9
VHO				eS	Sn	21 50 24.6	-1.7
BLLM	Bellamira	4.64	99	eP	Pn	21 49 35.2	+1.0
CNCH	Conchagua	5.06	100	eP	Pn	21 49 40.5	+0.6
CNCH	Conchagua	5.06	100	P	Pn	21 49 43.0	+3.0
YOIG	Yosondua	5.13	301		Pn	21 49 42.7	+1.6
YOIG	Yosondua	5.13	301	eP	Pn	21 49 42.7	+1.6
YOIG				eS	Sn	21 50 35.5	-4.0
PNIG	Pinotepa	5.43	294		Pn	21 49 45.4	+0.5
PNIG	Pinotepa	5.43	294	eP	Pn	21 49 45.4	+0.5
PNIG				eS	Sn	21 50 38.8	-7.7
POTN	Potosi Cosigui	5.43	103	P	Pn	21 49 46.0	+1.1
TOIG	Toxpalan	5.50	315		Pn	21 49 46.0	0.0
TOIG	Toxpalan	5.50	315	eP	Pn	21 49 46.0	0.0
TOIG				eS	Sn	21 50 41.6	-6.8
TGUH	Tegucigalpa,Un	5.51	91		Pn	21 49 47.4	+1.3
TGUH	Tegucigalpa,Un	5.51	91	P	Pn	21 49 48.1	+2.0
TXIG	Tlaxiaco	5.52	303		Pn	21 49 48.0	+1.6
TXIG					Sn	21 50 48.8	-0.2
TXIG	Tlaxiaco	5.52	303	eP	Pn	21 49 48.0	+1.6
TXIG				eS	Sn	21 50 48.8	-0.2
HLIG	Huajuapan de L	5.87	308		Pn	21 49 53.4	+2.3
HLIG					Sn	21 51 00.4	+2.8
HLIG	Huajuapan de L	5.87	308	eP	Pn	21 49 53.4	+2.3
HLIG				eS	Sn	21 51 00.4	+2.8
TPIG	Tehuac#an	5.93	315		Pn	21 49 52.4	+0.5
TPIG					Sn	21 50 59.0	0.0
TPIG	Tehuac#an	5.93	315	eP	Pn	21 49 52.4	+0.5
TPIG				eS	Sn	21 50 59.0	0.0
CRIN	San Cristobal	5.94	104		Pn	21 49 53.6	+1.6
HERN	Volcan Telica	6.17	105	Pn	Pn	21 49 57.4	+2.2
FTIG	Fresnillo de T	6.17	307		Pn	21 49 56.8	+1.6
FTIG	Fresnillo de T	6.17	307	eP	Pn	21 49 56.8	+1.6
FTIG				eS	Sn	21 50 57.8	-7.1
POLN	Al Sur del Vol	6.18	104	S	Sn	21 51 03.7	-1.2
JAUV	Jalcomulco	6.29	325	eP	Pn	21 49 54.4	-2.4
JAUV				eS	Sn	21 50 59.0	-8.7
CNGN	Cerro Negro	6.33	105		Pn	21 49 58.5	+1.3
TLIG	Tlapa	6.33	302		Pn	21 50 01.1	+3.6
TLIG	Tlapa	6.33	302	eP	Pn	21 49 57.2	-0.2
TLIG				eS	Sn	21 50 58.0	-11
CRIG	Cruz Grande	6.45	293		Pn	21 49 58.8	-0.1
CRIG	Cruz Grande	6.45	293	eP	Pn	21 49 58.8	-0.1
CRIG				eS	Sn	21 51 06.8	-4.8
DAIG	Los Arroyos	7.02	294		Pn	21 50 07.9	+1.1
DAIG	Los Arroyos	7.02	294	eP	Pn	21 50 07.9	+1.1
DAIG				eS	Sn	21 51 21.6	-4.0
PBCV	Popocatepetl	7.15	312	eP	Pn	21 50 10.7	+1.9
PBCV				eS	Sn	21 51 26.5	-2.7
PBPN	Popocatepetl	7.24	312	eP	Pn	21 50 09.3	-0.9
PBPN				eP	Pn	21 50 10.7	+0.5
PBPN				eS	Sn	21 51 23.7	-7.9
PBPN				eS	Sn	21 51 31.2	-0.5
PBXN	Popocatepetl	7.24	312	eP	Pn	21 50 11.2	+1.0
PBXN				eS	Sn	21 51 35.4	+3.8
PPM	Popocatepetl	7.25	312	eP	Pn	21 50 13.7	+3.3
PPM				eS	Sn	21 51 33.2	+1.2
PPIG	Popocatepetl	7.25	312		Pn	21 50 13.7	+3.3
PPIG					Sn	21 51 33.2	+1.2
BOAB	BOACO BROADBAN	7.31	103		Pn	21 50 11.8	+1.1
CXUV	Coxquihui	7.38	324	eP	Pn	21 50 10.2	-1.4
CXUV				eS	Sn	21 51 30.8	-3.6
MEIG	Mezcala	7.38	301		Pn	21 50 14.3	+2.5
MEIG					Sn	21 51 34.5	-0.1
MEIG	Mezcala	7.38	301	eP	Pn	21 50 14.3	+2.5
MEIG				eS	Sn	21 51 34.5	-0.1
TEIG	Tepich	7.43	36		Pn	21 50 12.6	+0.2
YAIG	Yautepec	7.45	309	eP	Pn	21 50 16.8	+4.0
YAIG				eS	Sn	21 51 35.6	-0.8
PLIG	Platanillo	7.52	304		Pn	21 50 16.1	+2.4
PLIG					Sn	21 51 39.0	+0.9
PLIG	Platanillo	7.52	304	eP	Pn	21 50 16.1	+2.4
PLIG				eS	Sn	21 51 39.0	+0.9
CAIG	El Cayaco	7.58	293		Pn	21 50 15.4	+0.9
CAIG	El Cayaco	7.58	293	eP	Pn	21 50 15.4	+0.9
CAIG				eS	Sn	21 51 33.9	-5.5
MPVM	San Francisco	7.62	311	eS	Sn	21 51 32.2	-8.3
XCVM	Xochimilco	7.72	311	eS	Sn	21 51 43.3	-0.1
TLVM	San Miguel Top	7.73	311	eP	Pn	21 50 08.9	-7.9
TLVM				eS	Sn	21 51 43.3	-0.2
VTVM	Tizayuca	7.82	315		Pn	21 50 20.2	+2.1
VTVM					Sn	21 51 47.2	+1.4
VTVM	Tizayuca	7.82	315	eP	Pn	21 50 20.2	+2.1
VTVM				eS	Sn	21 51 47.2	+1.4
MAVM	Malinalco, Edo	7.83	308	eP	Pn	21 50 21.6	+3.6
MAVM				eS	Sn	21 51 42.7	-3.1
AOVM	Tlapan	7.89	310	eP	Pn	21 50 24.7	+5.6
AOVM				eS	Sn	21 51 42.3	-5.3
ACON	Acoyapa	7.90	106		Pn	21 50 20.3	+1.4
CJVM	Cuajimalpa	7.92	311	eS	Sn	21 51 48.6	+0.5
INVM	La Marquesa	7.95	310	eP	Pn	21 50 21.5	+1.7
INVM				eS	Sn	21 51 51.5	+2.6
ZUVM	ZUMPANGO	8.07	314	eS	Sn	21 51 46.6	-5.3
ARIG	Puente Sto Nin	8.16	300		Pn	21 50 25.4	+3.0
ARIG					Sn	21 51 54.6	+0.9
ARIG	Puente Sto Nin	8.16	300	eP	Pn	21 50 25.4	+3.0
ARIG				eS	Sn	21 51 54.6	+0.9
DEIG	Demacu	8.37	317	eP	Pn	21 50 24.9	-0.6
DEIG				eS	Sn	21 51 56.5	-2.7
ESPN	Las Esperanzas	8.66	103	Pn	Pn	21 50 31.6	+2.3
JTS	Las Juntas de	8.75	116		Pn	21 50 32.4	+1.9
JTS	Las Juntas de	8.75	116	Pn	Pn	21 50 35.2	+4.7
	comp=E,2.4nm,0.3s,baz=315,slow=9.5,SNR=6.2						
JTS				Sn	Sn	21 52 02.5	-5.6
	comp=E,0.7nm,0.3s,baz=271,slow=9.8,SNR=0.7						
CTUV	Llano Grande	8.84	325	eP	Pn	21 50 28.9	-2.7
CTUV				eS	Sn	21 52 12.9	+2.7
ZIIG	Zihuatanejo	8.85	293		Pn	21 50 32.0	+0.1
ZIIG	Zihuatanejo	8.85	293	eP	Pn	21 50 32.0	+0.1
ZIIG				eS	Sn	21 52 05.3	-5.2
SOCE	Pocosol	9.00	114	Pn	Pn	21 50 35.7	+1.7
MOIG	Morelia	9.55	306		Pn	21 50 43.9	+2.1
MOIG	Morelia	9.55	306	eP	Pn	21 50 36.0	-5.8
MOIG				eS	Sn	21 52 18.2	-10
HDC	Heredia	9.61	115	Pn	Pn	21 50 43.5	+1.0
JRQG	Juriquilla Cam	9.61	313	Pn	Pn	21 50 44.5	+1.9
LCR2	La Lucha 2	9.83	116		Pn	21 50 47.6	+2.1
RPIG	Rio Verde	10.12	320	eP	Pn	21 50 44.3	-5.1
GTIG	Gomez Farias	10.57	327	eP	Pn	21 50 49.0	-6.4
GTIG				eS	Sn	21 52 44.9	-7.9
MMIG	Aquila	10.76	293		Pn	21 50 57.0	-1.1
MMIG					Sn	21 52 58.5	+0.9
MMIG	Aquila	10.76	293	eP	Pn	21 50 57.0	-1.1
MMIG				eS	Sn	21 52 58.5	+0.9
BRU2	Volcan	11.42	117		Pn	21 51 08.8	+1.6
MNGA	Volcan de Coli	11.46	298	eP	Pn	21 51 10.0	+2.2
MNGA				eS	Sn	21 53 11.6	-3.4
INCO	Volcan de Coli	11.47	299	eP	Pn	21 51 10.0	+1.9
INCO				eS	Sn	21 53 17.2	+1.7
SOMAC	Volcano de Col	11.49	299	eP	Pn	21 51 08.5	+0.1
SOMAC				eS	Sn	21 53 12.1	-3.9
CEGR	Campo Tres	11.63	298	eP	Pn	21 51 12.7	+2.6
CEGR				eS	Sn	21 53 20.0	+0.9
AAIG	Aguscalientes	11.80	312	eP	Pn	21 51 15.9	+3.4
ZAIG	Zacatecas	12.45	314		Pn	21 51 23.5	+2.1
SOR	Soroa	12.69	46		Pn	21 51 23.7	-0.7
CAMR	Camarioca	14.04	50	Pn	Pn	21 51 42.4	-0.4
833A	Chaparral WMA,	15.23	338		Pn	21 51 59.3	+0.3
MTDJ	Mount Denham	15.32	73	Pn	Pn	21 52 00.8	+0.6
PDIG	Papasquiaro	15.88	314	eP	Pn	21 52 03.5	-4.2
MLDN	Muldoon	15.92	347	Pn	Pn	21 52 09.1	+1.2
MLDN				IAmb	IAmb	21 52 31.3	
	comp=Z,100nm,1.4s						
HNDO	Hondo	16.30	340		Pn	21 52 13.4	+0.7
DRIO	Del Rio	16.69	336		Pn	21 52 18.5	+0.8
060A	Indiantown	17.32	41	P	Pn	21 52 25.4	-0.2
HPIG		17.33	319		P	21 52 27.3	+0.2
JCT	Junction City	17.34	340		P	21 52 27.1	0.0
DWPF	Disney Wildern	17.46	36		Pn	21 52 26.7	-0.6
DWPF				IAmb	IAmb	21 52 29.4	
	comp=Z,45nm,0.7s						
NATX	Nacogdoches	17.50	355		P	21 52 28.4	-0.3
BRAL	Brewton	17.69	17	P	P	21 52 30.6	-0.2
H06E1	SOCORRO T-PHAS	17.81	287	T	T	22 10 43.2	
	SNR=17						
TXAR	Lajitas Array	17.99	328	P	P	21 52 36.2	+1.9
TXAR	Lajitas Array	17.99	328	P	P	21 52 37.0	+2.7
	comp=Z,42nm,1.2s,baz=153,slow=11,SNR=53						
TXAR				S	S	21 56 02.6	+3.2
	comp=Z,0.2nm,0.5s,baz=29,slow=42,SNR=1.7						
TXAR				LR	LR	22 00 33.5	
	comp=Z,176nm,19.2s,baz=127,slow=40						
TX31	Lajitas Ar. Si	18.00	328	P	P	21 52 36.0	+1.7
250A	Grady	18.68	18	P	P	21 52 41.4	-0.3
250A				IAmb	IAmb	21 52 45.8	
	comp=Z,47nm,1.2s						
Z41A	Richland Creek	18.93	0	P	P	21 52 44.2	-0.2
Z41A				IAmb	IAmb	21 53 03.4	
	comp=Z,54nm,1.1s						
TIGA	Tifton	19.14	25	P	P	21 52 46.1	-0.7
TIGA				IAmb	IAmb	21 52 50.1	
	comp=Z,111nm,1.4s						
LRAL	Lakeview Retre	19.47	15	P	P	21 52 50.6	+0.2
OTAV	Otavalo	19.99	133	P	Pn	21 52 58.6	+0.1
MIAR	Mount Ida	20.22	358	P	P	21 52 58.0	-0.5
MIAR				IAmb	IAmb	21 53 03.8	
	comp=Z,28nm,0.8s						
UALR	University of	20.45	1	P	P	21 53 01.3	+0.3
UALR				IAmb	IAmb	21 53 33.4	
	comp=Z,23nm,0.9s						
ROSC	El Rosal	20.59	115	P	Pn	21 53 07.0	+1.5
	comp=Z,24nm,0.7s,baz=279,slow=3.2,SNR=13						
X34A	Smith Ranch, M	20.74	349	P	Pn	21 53 06.3	-0.4
X34A				IAmb	IAmb	21 53 36.9	
	comp=Z,35nm,1.0s						
MNTX	Cornudas Mount	20.77	329	P	Pn	21 53 05.9	-1.2
GOGA	Godfrey	20.93	23	P	P	21 53 05.5	-0.8
FLOC	Florencia	21.23	125	P	P	21 53 11.5	+1.9
FLOC				IAmb	IAmb	21 53 34.0	
	comp=Z,28nm,1.0s						
RUSC	La Rusia	21.23	111	P	P	21 53 11.8	+1.6
RUSC				IAmb	IAmb	21 53 16.1	
	comp=Z,44nm,1.0s						
FPAL	Fort Paine	21.27	17	P	P	21 53 09.6	-0.3
FPAL				IAmb	IAmb	21 53 23.6	
	comp=Z,34nm,1.2s						
COHC	Cochancay	21.45	140	P	P	21 53 13.1	+1.2
SWET	Sewanee	21.82	16	P	P	21 53 14.1	-1.7
SWET				IAmb	IAmb	21 53 41.2	
	comp=Z,37nm,1.4s						
SC01	Santiago de lo	21.87	73	P	P	21 53 16.0	-0.5
OK052	Battle Ridge R	21.93	352	P	P	21 53 16.3	-0.7
OK052				IAmb	IAmb	21 53 19.3	
	comp=Z,32nm,0.6s						
AMTX	Amarillo	22.01	341	P	P	21 53 18.0	+0.1
WVT	Waverly	22.27	11	P	P	21 53 19.7	-0.9
SDV	Santo Domingo	22.49	101	P	P	21 53 23.5	+0.1
SDV				IAmb	IAmb	21 53 26.7	
	comp=Z,13nm,0.8s						
SDV	Santo Domingo	22.49	101	LR	LR	22 03 04.7	
	comp=Z,310nm,20.3s,baz=276,slow=40						
BG3	Lake Jocassee	22.55	22	P	P	21 53 22.3	-1.3
BG3				IAmb	IAmb	21 53 44.2	
	comp=Z,36nm,1.2s						
CLTN	Cedars of Leba	22.55	14	P	P	21 53 22.2	-1.3
319A	Douglas	22.69	321	P	P	21 53 26.7	+1.4
319A				IAmb	IAmb	21 53 48.9	
	comp=Z,33nm,1.1s						
TKL	Tuckaleechee C	22.86	20	P	P	21 53 25.4	-1.5
TKL				IAmb	IAmb	21 53 58.0	
	comp=Z,35nm,1.2s						
Y22D	IRIS PASSCAL I	23.45	330	P	P	21 53 33.5	+0.5
TZTN	Tazewell	23.74	19	P	P	21 53 35.0	-0.6
TZTN				IAmb	IAmb	21 54 02.6	
	comp=Z,20nm,0.9s						
CCM	Cathedral Cave	23.76	3	P	P	21 53 34.2	-1.6
ANMO	Albuquerque	23.94	332	P	P	21 53 38.5	+0.8
ANMO	Albuquerque	23.94	332	LR	LR	22 04 28.9	
	comp=Z,278nm,18.6s,baz=226,slow=40						
TUC	Tucson	24.26	321	P	P	21 53 42.3	+1.7
TUC				IAmb	IAmb	21 53 45.1	
	comp=Z,19nm,0.9s						
WCI	Wyandotte Cave	24.60	13	P	P	21 53 42.1	-1.4
WCI				IAmb	IAmb	21 53 57.8	
	comp=Z,23nm,0.9s						
BAUV	El Baul	24.95	99	P	P	21 53 45.8	-1.1
BLA	Blacksburg	25.45	24	P	P	21 53 50.6	-0.7
BLA				IAmb	IAmb	21 54 14.0	
	comp=Z,30nm,1.1s						
ATAH	Atahualpa	25.69	145	LR	LR	22 02 09.3	
	comp=Z,274nm,20.0s,baz=296,slow=32						
SDCO	Great Sand Dun	25.93	337	P	P	21 53 56.9	+1.0
SDCO				IAmb	IAmb	21 53 59.2	
	comp=Z,34nm,1.3s						
SJG	San Juan	26.01	78	LR	LR	22 04 11.9	
	comp=Z,400nm,21.2s,baz=214,slow=37						
113A	Mohawk Valley,	26.45	318		P	21 54 00.9	+0.6
113A				IAmb	IAmb	21 54 03.9	
	comp=Z,15nm,1.4s						
MVCO	Mesa Verde	26.74	332		P	21 54 04.7	+1.5
MVCO				IAmb	IAmb	21 54 08.2	
	comp=Z,18nm,0.8s						
WUAZ	Wupatki	26.89	325		P	21 54 04.6	+0.1
ISCO	Idaho Springs	27.78	339	P	P	21 54 13.0	+0.4
PFO	Pinyon Flats O	28.75	316	LR	LR	22 07 22.3	
	comp=Z,121nm,20.7s,baz=132,slow=40						
V12A	Nelson	29.05	321	P	P	21 54 25.1	+1.4
V12A				IAmb	IAmb	21 54 27.5	
	comp=Z,14nm,1.0s						
Q16A	Castle Valley	29.37	330	P	P	21 54 28.1	+1.4
Q16A				IAmb	IAmb	21 54 51.2	
	comp=Z,12nm,1.3s						
ECSD	EROS Data Cent	29.55	355		P	21 54 27.1	-0.8
ECSD				IAmb	IAmb	21 54 30.4	
	comp=Z,7.6nm,0.8s						
CZSB	Cruzeiro do Su	29.67	136	P	P	21 54 31.3	+2.1
CZSB				IAmb	IAmb	21 54 48.2	
	comp=Z,19nm,1.2s						
NNA	Nana	30.56	148	LR	LR	22 04 37.6	
	comp=Z,296nm,21.8s,baz=320,slow=32						
GRAC	Grapevine Rang	31.42	321	P	P	21 54 45.8	+1.2
GRAC				IAmb	IAmb	21 54 48.9	
	comp=Z,11nm,0.8s						
HWUT	Hardware Ranch	31.69	333		P	21 54 46.8	-0.3
PD31	Pinedale Array	31.82	336	P	P	21 54 48.7	+0.4
PDAR	Pinedale Array	31.82	336	P	P	21 54 48.6	+0.3
PDAR	Pinedale Array	31.82	336	P	P	21 54 49.5	+1.2
	comp=Z,2.8nm,0.9s,baz=134,slow=10,SNR=16						
PDAR				PcP	PcP	21 57 38.4	-0.5
	comp=Z,0.4nm,0.5s,baz=157,slow=3.3,SNR=4.8						
PDAR				LR	LR	22 09 02.6	
	comp=Z,88nm,18.9s,baz=146,slow=39						
	comp=Z,2.8nm,0.9s						
HVU	Hansel Valley	32.38	332		P	21 54 54.3	+1.2
HVU				IAmb	IAmb	21 54 55.9	
	comp=Z,8.4nm,1.0s						
SADO	Sadowa	32.61	18	LR	LR	22 10 16.8	
	comp=Z,247nm,18.1s,baz=152,slow=41						
ELK	Elko	32.79	328	P	P	21 54 58.1	+1.3
ELK	Elko	32.79	328	LR	LR	22 09 59.3	
	comp=Z,323nm,19.6s,baz=159,slow=40						
NV11	Mina Array Sit	32.82	322	P	P	21 54 59.2	+2.3
NV11				IAmb	IAmb	21 55 01.3	
	comp=Z,14nm,0.9s						
SNOW	Snow King Moun	32.88	336	P	P	21 54 58.5	+0.9
NVAR	Mina Array Bea	32.91	322	P	P	21 55 00.3	+2.5
NVAR				PcP	PcP	21 57 43.2	+1.3
NVAR	Mina Array Bea	32.91	322	P	P	21 55 00.6	+2.7
	comp=Z,10nm,0.7s,baz=136,slow=8.7,SNR=59						
NVAR				PcP	PcP	21 57 43.8	+1.8
	comp=Z,2.8nm,0.8s,baz=132,slow=3.5,SNR=6.3						
NVAR				LR	LR	22 10 07.8	
	comp=Z,598nm,18.2s,baz=146,slow=40						
	comp=Z,10nm,0.7s						
RLMT	Red Lodge	33.74	339		P	21 55 05.3	+0.2
RLMT				IAmb	IAmb	21 55 07.6	
	comp=Z,14nm,1.5s						
BOAV	Boa Vista	34.12	107	P	P	21 55 07.9	-0.5
BOAV				IAmb	IAmb	21 55 09.7	
	comp=Z,8.0nm,0.9s						
YHL	Hebgen Lake	34.21	337	P	P	21 55 10.4	+1.2
YHL				IAmb	IAmb	21 55 17.0	
	comp=Z,24nm,1.4s						
HLID	Hailey	34.52	332		P	21 55 12.9	+1.2
EPLO	Experimental L	35.33	359	P	P	21 55 17.3	-1.1
EPLO				IAmb	IAmb	21 55 18.1	
	comp=Z,8.1nm,0.7s						
LRM	Limekiln Ridge	35.51	336	P	P	21 55 22.0	+1.7
WVOR	Wild Horse Val	35.78	327	P	P	21 55 23.2	+0.6
WVOR				IAmb	IAmb	21 55 25.9	
	comp=Z,12nm,1.2s						
ULM	Lac du Bonnet	35.98	357	P	P	21 55 22.3	-1.7
	comp=Z,3.7nm,0.6s,baz=172,slow=10,SNR=12						
ULM				LR	LR	22 12 48.5	
	comp=Z,182nm,21.2s,baz=200,slow=41						
	comp=Z,3.7nm,0.6s						
J08A	Circle Bar Ran	36.34	328	P	P	21 55 28.7	+1.4
J08A				IAmb	IAmb	21 55 30.6	
	comp=Z,13nm,0.8s						
MSO	Missoula	36.93	336		P	21 55 33.4	+1.1
MSO				IAmb	IAmb	21 55 39.0	

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        comp=Z,13nm,1.1s
YBH     Yreka Blue Hor   37.61 322  LR      LR       22 13 15.1
        comp=Z,28nm,18.0s,baz=132,slow=40
PINE    Pine Mountain    37.94 326  P       P        21 55 41.4 +0.5
LPAZ    La Paz           39.01 140  P       P        21 55 52.0 +1.3
LPAZ    La Paz           39.01 140  P       P        21 55 50.9 +0.2
        comp=Z,1.0nm,0.6s,baz=323,slow=11,SNR=4.7
LPAZ                                LR      LR       22 11 30.6
        comp=Z,162nm,21.0s,baz=318,slow=36
        comp=Z,1.0nm,0.6s
NEW     Newport          39.37 334  LR      LR       22 14 37.5
        comp=Z,257nm,18.5s,baz=142,slow=40
MDP     Montagnes des    40.70  99  LR      LR       22 13 26.1
        comp=Z,234nm,21.7s,baz=296,slow=37
PB11    IPOC Station P   40.83 145  P       P        21 56 06.7 +1.4
PB11                                IAmb    IAmb     21 56 45.7
        comp=Z,11nm,1.1s
LLLB    Lillooet         43.18 333          P        21 56 25.2 +1.2
LLLB                                IAmb    IAmb     21 56 31.0
        comp=Z,11nm,1.2s
SIV     San Ignacio      43.53 132  P       P        21 56 27.6 +0.3
        comp=Z,4.1nm,0.7s,baz=300,slow=8.6,SNR=18
SIV                                 PcP     PcP      21 58 16.0 +1.1
        comp=Z,1.9nm,0.7s,baz=288,slow=3.2,SNR=2.9
SIV                                 LR      LR       22 13 55.9
        comp=Z,278nm,19.4s,baz=305,slow=35
        comp=Z,4.1nm,0.7s
SCHQ    Schefferville    45.32  21  P       P        21 56 39.6  -1.4
        comp=Z,3.2nm,0.8s,baz=223,slow=12,SNR=2.1
SCHQ                                PcP     PcP      21 58 20.8 +0.5
        comp=Z,5.6nm,0.6s,baz=194,slow=4.2,SNR=9.0
SCHQ                                LR      LR       22 17 21.6
        comp=Z,477nm,18.0s,baz=203,slow=39
        comp=Z,3.2nm,0.8s
H03N2   Juan Fernandez   49.27 165  T       T        22 50 47.3
        baz=347
H03N1   Juan Fernandez   49.28 164  T       T        22 50 46.6
        baz=347
H03N3   Juan Fernandez   49.29 164  T       T        22 50 45.9
        baz=347
U35K    Hyder            50.38 334  P       P        21 57 21.8 +1.7
        baz=130
TOAD    Toad River Com   50.58 339  P       P        21 57 22.8 +1.1
        baz=138
YKA     Yellowknife Ar   50.58 347  P       P        21 57 22.0 +0.5
        comp=Z,15nm,1.0s,baz=150,slow=7.2,SNR=35
YKA                                 LR      LR       22 22 19.8
        comp=Z,90nm,18.5s,baz=146,slow=40
        comp=Z,15nm,1.0s
V35K    Ketchikan        50.70 333  P       P        21 57 24.4 +1.8
        baz=128
KOTAN   Kotaneelee Air   51.15 341  P       P        21 57 27.7 +1.8
        baz=140
T35M    Bob Quinn        51.18 335  P       P        21 57 28.1 +1.9
        baz=131
CFA     Coronel Fontan   51.39 153  P       P        21 57 29.4 +1.3
        comp=Z,1.5nm,0.7s,baz=334,slow=7.2,SNR=4.9
        comp=Z,1.5nm,0.7s
CRAG    Craig            51.47 332  P       P        21 57 29.8 +1.4
        baz=127
BEAVL   Fort Liard       51.52 340  P       P        21 57 30.4 +1.7
        baz=139
WRAK    Wrangell Islan   51.71 333  P       P        21 57 31.8 +1.6
        baz=128
U33K    Whale Pass       51.86 333  P       P        21 57 32.9 +1.6
        baz=127
DLBC    Dease Lake       52.06 336  LR      LR       22 23 10.4
        comp=Z,15nm,18.4s,baz=116,slow=40
MT09    Talagante        52.14 157  P       P        21 57 35.3 +1.4
MT09                                IAmb    IAmb     21 57 42.9
        comp=Z,9.5nm,0.9s
S34M    Telegraph Cree   52.15 335  P       P        21 57 34.7 +1.3
        baz=130
FRB     Frobisher Bay    52.28  13  LR      LR       22 23 03.0
        comp=Z,117nm,18.6s,baz=214,slow=40
WTLY    Watson Lake, Y   52.75 338  P       P        21 57 39.1 +1.3
WTLY                                IAmb    IAmb     21 57 45.9
        comp=Z,18nm,1.3s
WTLY    Watson Lake, Y   52.75 338  P       P        21 57 39.2 +1.3
        baz=134
R33M    Jennings River   53.06 337  P       P        21 57 41.7 +1.4
        baz=132
CPUP    Villa Florida    53.17 139  P       P        21 57 39.8  -1.5
        comp=Z,0.3nm,0.6s,baz=190,slow=9.8,SNR=3.7
CPUP                                LR      LR       22 21 45.0
        comp=Z,42nm,18.2s,baz=188,slow=38
        comp=Z,0.3nm,0.6s
Q32M    Nakina River     53.28 336  P       P        21 57 43.6 +1.5
Q32M                                IAmb    IAmb     21 57 50.5
        comp=Z,18nm,1.4s
Q32M    Nakina River     53.28 336  P       P        21 57 43.6 +1.5
        baz=130
S32K    Killisnoo        53.32 333  P       P        21 57 43.2 +1.2
        baz=126
WRGLY   Wrigley          53.39 343  P       P        21 57 43.8 +1.3
        baz=142
SIT     Sitka            53.40 333  P       P        21 57 44.2 +1.5
        baz=125
BDFB    Brasilia         53.43 122  P       P        21 57 43.9 +0.2
BDFB                                IAmb    IAmb     21 57 46.5
        comp=Z,9.7nm,1.1s
BDFB    Brasilia         53.43 122  P       P        21 57 42.7  -0.9
        comp=Z,4.4nm,0.7s,baz=149,slow=4.6,SNR=6.5
BDFB                                LR      LR       22 21 12.5
        comp=Z,146nm,18.3s,baz=315,slow=37
        comp=Z,4.4nm,0.7s
TGTN    Hyland Airport   53.58 340  P       P        21 57 45.6 +1.6
        baz=136
R32K    Eaglecrest       53.78 334  P       P        21 57 46.9 +1.4
        baz=127
P32M    Atlin            54.26 336  P       P        21 57 50.2 +1.2
        baz=129
P33M    Teslin, Yukon    54.30 337  P       P        21 57 50.7 +1.3
        baz=130
S31K    Pelican          54.33 333  P       P        21 57 51.1 +1.7
        baz=125
SKAG    Skagway          54.83 335  P       P        21 57 54.8 +1.8
        baz=127
N32M    Quiet Lake       55.01 338  P       P        21 57 55.9 +1.5
        baz=130
PLBC    Pleasant Camp    55.25 335  P       P        21 57 58.0 +1.9
        baz=126
MMPY    Sheldon Lake,    55.35 340          P        21 57 58.4 +1.5
MMPY                                IAmb    IAmb     21 58 00.1
        comp=Z,8.1nm,0.8s
MMPY    Sheldon Lake,    55.35 340  P       P        21 57 58.6 +1.8
        baz=133
WHY     Whitehorse       55.38 336  P       P        21 57 58.3 +1.1
        baz=128
FARO    Faro, Yukon      55.81 338  P       P        21 58 02.2 +2.0
        baz=130
P30M    Million Dollar   55.89 335  P       P        21 58 02.9 +2.1
        baz=125
O30N    Mendenhall       55.92 336  P       P        21 58 03.0 +2.0
        baz=127
P29M    Windy Craggy     55.92 334  P       P        21 58 03.2 +2.1
        baz=124
M31M    Drury Creek, Y   56.17 338  P       P        21 58 04.7 +2.0
        baz=129
N31M    Braeburn, Yuko   56.24 337  P       P        21 58 05.0 +1.8
        baz=127
HYT     Haines Junctio   56.51 336  P       P        21 58 06.6 +1.3
        baz=125
PNL     Peninsula        56.65 334  P       P        21 58 07.7 +1.6
        baz=122
O29M    Mount Kennedy    56.65 335  P       P        21 58 07.9 +1.6
        baz=124
N30M    Aishikik Lake    56.72 336  P       P        21 58 09.0 +2.3
        baz=126,SNR=5.9
YUK6    Outpost Mounta   56.93 335  P       P        21 58 09.9 +1.5
        baz=124
PINM    Pinnacle         57.24 334  P       P        21 58 11.8 +1.4
        baz=122
YUK4    Talbot Arm       57.27 336  P       P        21 58 12.2 +1.4
        baz=124
YUK8    Steele Glacier   57.68 335  P       P        21 58 15.3 +1.6
        baz=123
M29M    Somme Creek      57.83 337  P       P        21 58 15.8 +1.3
M29M    Somme Creek      57.83 337  P       P        21 58 16.6 +2.1
        baz=125,SNR=25
MESA    MESA             58.01 334  P       P        21 58 17.4 +1.4
        baz=120
L29M    L29M             58.09 338  P       P        21 58 17.8 +1.5
        baz=126,SNR=7.1
CTG     Chitna Glacier   58.16 335  P       P        21 58 18.6 +1.6
        baz=121
GRNC    Granite Creek    58.21 334  P       P        21 58 18.5 +1.1
YUK3    Moose Creek      58.23 336  P       P        21 58 18.9 +1.4
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        baz=123
K29M    Barlow Dome      58.31 339  P       P        21 58 19.2 +1.3
        baz=127
J30M    Hart River       58.34 340  P       P        21 58 19.4 +1.3
        baz=128
C36M    Paulatuk         58.46 348  P       P        21 58 19.9 +1.2
        baz=144
H31M    Peel River       58.49 341  P       P        21 58 20.8 +1.7
        baz=131
I30M    Mount Dempster   58.77 340  P       P        21 58 22.1 +1.0
        baz=129,SNR=8.1
CRQE    Cirque           58.79 334  P       P        21 58 22.1 +0.8
        baz=119
KAIM    Kayak Island     58.97 333  P       P        21 58 23.7 +1.2
        baz=118
MCARA   McCarthy VSAT    59.07 335  P       P        21 58 25.2 +2.1
MCARA   McCarthy VSAT    59.07 335  P       P        21 58 24.3 +1.2
        baz=120
DAWY    Dawson           59.11 338  P       P        21 58 24.6 +1.3
        baz=125
M27K    Edge Creek, AK   59.11 336  P       P        21 58 24.8 +1.3
        baz=121
VRDI    Verde Repeater   59.18 334  P       P        21 58 25.0 +0.9
VRDI                                IAmb    IAmb     21 58 26.6
        comp=Z,6.2nm,0.9s
G31M    Satah River      59.22 342  P       P        21 58 24.9 +0.9
        baz=132,SNR=9.5
F31M    Tsiigehtchic     59.41 343  P       P        21 58 26.6 +1.2
        baz=132
GLB     Gilahina Butte   59.43 334          P        21 58 26.9 +1.3
GLB                                 IAmb    IAmb     21 58 28.8
        comp=Z,11nm,1.0s
BCAR    Beaver Creek A   59.45 337  P       P        21 58 26.9 +1.2
L27K    Beaver Creek,    59.46 337  P       P        21 58 27.5 +1.7
        baz=122,SNR=8.3
I29M    Ogilvie Camp,    59.49 340  P       P        21 58 27.5 +1.5
        baz=127
BMRM    Bremner River    59.54 334  P       P        21 58 27.5 +1.1
BMRM                                IAmb    IAmb     21 58 29.1
        comp=Z,8.3nm,0.8s
BMRM    Bremner River    59.54 334  P       P        21 58 28.1 +1.7
        baz=118
M26K    Nabesna, AK      59.58 336  P       P        21 58 27.9 +1.2
        baz=120
EPYK    Eagle Plains     59.60 341  P       P        21 58 28.0 +1.3
        baz=129
G30M    tAoh Zraii Nji   59.84 342  P       P        21 58 29.9 +1.6
        baz=130
N25K    Chitina, Valde   59.84 334  P       P        21 58 31.0 +2.4
        baz=118,SNR=9.5
EYAK    Cordova Ski Ar   59.85 333  P       P        21 58 30.4 +1.9
        baz=116
INK     Inuvik           59.95 344          P        21 58 29.5 +0.6
INK     Inuvik           59.95 344  P       P        21 58 30.1 +1.1
        baz=133,SNR=6.4
H29M    Whitestone       60.03 341  P       P        21 58 30.9 +1.2
        baz=127,SNR=5.5
K27K    Chicken          60.07 337  P       P        21 58 31.8 +1.9
        baz=122
I28M    Miner Creek      60.10 339  P       P        21 58 32.1 +1.9
        baz=125
F30M    Barrier River    60.11 343  P       P        21 58 31.4 +1.2
        baz=130,SNR=6.9
HIN     Hinchinbrook I   60.11 333  P       P        21 58 31.7 +1.3
FID     Port Fidalgo     60.26 333  P       P        21 58 32.7 +1.4
G29M    Pine Creek       60.34 341  P       P        21 58 32.9 +1.1
        baz=128,SNR=7.1
P23K    Montague Islan   60.35 332  P       P        21 58 33.6 +1.7
        baz=115
KLU     Klutina          60.35 334  P       P        21 58 33.6 +1.5
        baz=117,SNR=6.1
RES     Resolute Bay     60.44 359  LR      LR       22 25 37.8
        comp=Z,118nm,21.8s,baz=163,slow=37
HARP    HAARP            60.45 335  P       P        21 58 34.5 +1.8
        baz=118
GLI     Glacier Island   60.59 333  P       P        21 58 35.4 +1.9
        baz=115
M24K    Tolsona, Glenn   60.74 334  P       P        21 58 36.5 +1.9
        baz=117
I27K    Kandik River     60.76 339  P       P        21 58 36.2 +1.5
        baz=123,SNR=9.7
SCRK    Sand Creek       60.76 337          P        21 58 35.6 +0.8
SCRK                                IAmb    IAmb     21 58 37.5
        comp=Z,3.7nm,0.8s
SCRK    Sand Creek       60.76 337  P       P        21 58 36.5 +1.7
        baz=120
A36M    Sachs Harbour    60.83 349  P       P        21 58 35.6 +0.7
        baz=143,SNR=5.8
PAX     Paxson           60.85 335  P       P        21 58 36.7 +1.3
        baz=118,SNR=8.7
J26L    Joseph Creek     60.87 337  P       P        21 58 37.0 +1.5
        baz=121,SNR=16
RIDG    Independent Ri   60.98 336  P       P        21 58 37.8 +1.6
        baz=119,SNR=9.3
H27K    Steamboat Moun   61.08 340  P       P        21 58 37.9 +1.1
        baz=124,SNR=8.9
SCM     Sheep Creek Mo   61.10 334  P       P        21 58 38.7 +1.5
        baz=116
PWL     Port Wells       61.13 333  P       P        21 58 38.8 +1.6
        baz=114
I26K    Coal Creek Min   61.14 338  P       P        21 58 38.2 +1.0
        baz=122,SNR=6.4
E29M    Blow River       61.23 343  P       P        21 58 39.2 +1.4
        baz=128,SNR=8.1
M23K    Glacier View     61.26 334  P       P        21 58 39.7 +1.6
        baz=115
SEW     Seward           61.33 332  P       P        21 58 40.2 +1.7
        baz=113
F28M    Old Crow         61.34 341  P       P        21 58 40.5 +1.9
        baz=126,SNR=9.6
K24K    Donnelly Dome    61.37 336  P       P        21 58 40.4 +1.6
        baz=118,SNR=5.1
KNK     Knik Glacier     61.41 333  P       P        21 58 40.2 +1.0
        baz=114
G27K    Doyon Strip      61.45 340  P       P        21 58 40.2 +0.9
        baz=124,SNR=7.3
SML     Sawmill          61.52 334  P       P        21 58 41.0 +1.1
        baz=115
J25K    Salcha River,    61.60 337  P       P        21 58 41.9 +1.4
        baz=119,SNR=6.9
WAT6    Susitna Watana   61.60 335  P       P        21 58 41.9 +1.3
        baz=116,SNR=14
DHY     Denali Highway   61.67 335  P       P        21 58 42.4 +1.3
        baz=116
GHO     Glory Hole Cre   61.76 333  P       P        21 58 42.5 +0.9
PMR     Palmer           61.78 333  P       P        21 58 43.1 +1.6
        baz=114
BRSE    Bradley Lake S   61.80 331  P       P        21 58 43.3 +1.5
        baz=111
E28M    Babbage River    61.84 342  P       P        21 58 42.7 +0.9
        baz=127,SNR=5.1
RC01    Rabbit Creek A   61.85 333  P       P        21 58 43.2 +1.2
        baz=113
KDAK    Kodiak Island    62.03 328  P       P        21 58 44.4 +1.1
KDAK    Kodiak Island    62.03 328  P       P        21 58 44.4 +1.1
        baz=108
WAT1    Susitna Watana   62.05 335  P       P        21 58 44.8 +1.3
        baz=115
PRP     Porcupine Dome   62.10 338          P        21 58 44.7 +0.8
PRP     Porcupine Dome   62.10 338  P       P        21 58 45.1 +1.2
        baz=119,SNR=14
HDA     Harding Lake     62.11 337  P       P        21 58 44.8 +1.0
        baz=117,SNR=5.3
HOM     Homer            62.19 331  P       P        21 58 45.8 +1.4
        baz=110
Q20K    Shuyak Island    62.20 329  P       P        21 58 45.6 +1.2
        baz=109
E27K    Coleen River     62.21 342  P       P        21 58 45.9 +1.4
        baz=124,SNR=11
OHAK    Old Harbor       62.21 328  P       P        21 58 46.0 +1.4
        baz=108
G26K    Porcupine Rive   62.23 340  P       P        21 58 45.6 +1.1
        baz=122,SNR=5.8
ILAR    Eielson Array    62.25 337  P       P        21 58 45.4 +0.7
        comp=Z,7.8nm,1.0s,baz=136,slow=4.5,SNR=44
        comp=Z,7.8nm,1.0s
SUA     Susitna One      62.44 333  P       P        21 58 47.4 +1.2
        baz=112,SNR=6.4
SII     Sitkinak Islan   62.48 327  P       P        21 58 47.9 +1.5
        baz=106
CCB     Clear Creek Bu   62.55 337          P        21 58 46.9 +0.3
CCB                                 IAmb    IAmb     21 58 53.2
        comp=Z,4.4nm,1.1s
H25L    Birch Creek      62.58 339  P       P        21 58 48.4 +1.6
        baz=119,SNR=7.0
MCK     McKinley         62.59 335  P       P        21 58 48.0 +1.0
        baz=115
CUT     Chulitna         62.60 334  P       P        21 58 48.8 +1.7
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        baz=113
POKR    Poker Plat Res   62.62 337  P       P        21 58 48.5 +1.4
        baz=117
D27M    Malcolm River    62.63 343  P       P        21 58 48.8 +1.5
        baz=126
COLA    College          62.67 337  P       P        21 58 49.0 +1.6
        baz=117
F26K    Sheenjek River   62.74 340  P       P        21 58 49.6 +1.6
        baz=122,SNR=6.5
BMAR    Burnt Mountain   62.75 340  P       P        21 58 48.9 +0.9
O20K    Slope Mountain   62.80 331  P       P        21 58 49.9 +1.3
        baz=110
R18K    Karluk           62.92 328  P       P        21 58 50.4 +1.2
        baz=107
Q19K    Cape Douglas,    62.92 329  P       P        21 58 50.5 +1.2
        baz=108
G25K    Bearman Lake     62.92 339  P       P        21 58 50.3 +1.2
        baz=119
P19K    Oil Pt           62.95 330  P       P        21 58 50.6 +1.1
        baz=109
SKT     Skwentna         62.98 333  P       P        21 58 50.8 +1.2
        baz=112,SNR=7.3
BWN     Browne           62.99 336  P       P        21 58 49.9 +0.3
N20K    Mount Spurr      63.00 332  P       P        21 58 51.4 +1.5
        baz=110
SPCR    Spurr Chakacha   63.00 332  P       P        21 58 51.0 +1.2
        baz=110
NEA2    Nenana           63.01 336  P       P        21 58 51.0 +1.3
        baz=115
TRF     Thorofare Moun   63.02 335  P       P        21 58 51.0 +0.9
        baz=114,SNR=11
H24K    Noodor Dome      63.12 338  P       P        21 58 51.4 +0.9
        baz=117,SNR=12
F25K    Christian Rive   63.18 340  P       P        21 58 52.7 +1.8
        baz=120,SNR=10
KTH     Kantishna Hill   63.33 335          P        21 58 52.7 +0.7
I23K    Minto, Yukon-K   63.36 337  P       P        21 58 53.0 +1.0
        baz=115,SNR=14
G24K    Hadweenzic Riv   63.37 339  P       P        21 58 53.2 +1.0
        baz=118,SNR=10
E25K    Arctic Village   63.42 341  P       P        21 58 54.3 +1.8
        baz=120,SNR=7.0
Q18K    Katmai Hardscr   63.51 329  P       P        21 58 54.2 +0.9
        baz=107
BPAW    Bear Paw Mtn.    63.57 335  P       P        21 58 54.4 +0.9
        baz=113,SNR=8.1
PPLA    Purkeypile       63.61 334  P       P        21 58 54.6 +0.6
        baz=111
O19K    Port Alsworth    63.65 331  P       P        21 58 55.3 +1.3
        baz=108
C27K    Jago River       63.65 342  P       P        21 58 55.3 +1.3
        baz=123,SNR=13
M20K    Styx River       63.66 333  P       P        21 58 55.3 +1.1
        baz=110,SNR=5.7
H23K    Yukon River      63.72 337  P       P        21 58 55.5 +1.0
        baz=115
CAST    Castle Rocks     63.76 334  P       P        21 58 55.3 +0.5
        baz=112,SNR=10
P18K    Big Mountain,    63.84 330  P       P        21 58 56.4 +1.0
        baz=107
MLY     Manley           63.84 336  P       P        21 58 56.2 +0.8
MLY     Manley           63.84 336  P       P        21 58 56.4 +1.0
        baz=114,SNR=17
Q17K    Contact Creek    63.85 328  P       P        21 58 56.4 +0.9
        baz=106
F24K    Squaw Lake       63.90 339  P       P        21 58 57.0 +1.3
        baz=118,SNR=5.2
N19K    Bonanza Creek    63.92 331  P       P        21 58 56.5 +0.6
        baz=108
O18K    Koktuh Hills     63.97 330  P       P        21 58 56.8 +0.7
        baz=107
CHUM    Lake Minchumin   64.03 335  P       P        21 58 57.6 +1.2
        baz=112
C26K    Camden Bay       64.16 342  P       P        21 58 59.0 +1.8
        baz=122,SNR=7.9
L20K    Farewell, AK     64.19 333  P       P        21 58 58.5 +0.8
        baz=110,SNR=13
PPT2    Papeete2         64.20 242  eS      S        22 07 29.2  -5.0
        comp=Z,60nm,24.8s
PPT2    Papeete2         64.20 242  eLR     LR       22 18 08.7
        comp=Z,84nm,23.2s
PPT2                                eLR     LR       22 18 12.4
        comp=Z,143nm,25.2s
M19K    Big River Lodg   64.22 332  P       P        21 58 59.2 +1.3
        baz=109
G23K    Bananza Creek    64.28 338  P       P        21 58 59.3 +1.1
        baz=115,SNR=6.4
D25K    Kavik River      64.29 342  P       P        21 58 59.8 +1.6
        baz=120,SNR=19
Q16K    King Salmon      64.35 329  P       P        21 58 59.7 +1.1
        baz=105
E24K    Your Creek       64.36 340  P       P        21 59 00.3 +1.6
        baz=117,SNR=7.4
P17K    Kvichak River    64.38 329  P       P        21 58 59.7 +0.8
        baz=106
I21K    Tanana           64.39 336  P       P        21 58 60.0 +1.1
        baz=113
H22K    Ishtalitna Cre   64.44 337  P       P        21 58 59.9 +0.7
        baz=114,SNR=6.2
L19K    White Mountain   64.52 333  P       P        21 59 00.7 +0.9
        baz=108
N18K    Kilae Creek      64.53 331  P       P        21 59 01.0 +1.1
        baz=107
COLD    Coldfoot         64.57 339  P       P        21 59 01.0 +1.0
        baz=115,SNR=6.8
K20K    Telida           64.57 334  P       P        21 59 00.8 +0.7
        baz=110,SNR=9.3
E23K    Chandalar        64.73 340  P       P        21 59 02.2 +1.0
        baz=116,SNR=13
M18K    Stony River      64.74 332  P       P        21 59 01.9 +0.7
        baz=107,SNR=6.5
O17K    Koliganek Bris   64.86 330  P       P        21 59 03.0 +1.0
        baz=105
J20K    Nowinta River    64.88 335  P       P        21 59 02.6 +0.6
        baz=110,SNR=5.6
H21K    Melozitna Rive   64.89 337  P       P        21 59 02.5 +0.4
        baz=112,SNR=6.5
G22K    Bettles          64.90 338  P       P        21 59 04.0 +1.8
        baz=114
D24K    Happy Valley     64.97 341  P       P        21 59 04.3 +1.7
        baz=118
TOLK    Toolik Lake Re   64.98 340  P       P        21 59 04.3 +1.6
        baz=116
CHNA    Chernabura Isl   65.05 324  P       P        21 59 04.9 +1.6
        baz=101
N17K    Nushagak Hills   65.11 331  P       P        21 59 04.4 +0.8
        baz=106
P16K    Nushagak River   65.11 329  P       P        21 59 05.3 +1.7
        baz=104
C24K    Franklin Bluff   65.20 341  P       P        21 59 05.3 +1.2
        baz=118
I20K    Naaghedeneel     65.23 336  P       P        21 59 05.0 +0.7
        baz=110
O16K    Kokwok River B   65.30 329  P       P        21 59 05.5 +0.7
        baz=104
L18K    Granite Mounta   65.35 332  P       P        21 59 06.0 +0.9
        baz=107
IMAR    Indian Mountai   65.37 337  P       P        21 59 05.2   0.0
F22K    John River       65.38 339  P       P        21 59 06.5 +1.2
        baz=113,SNR=8.8
J19K    Poorman          65.43 334  P       P        21 59 06.4 +0.7
        baz=108,SNR=9.3
M17K    Holitna River    65.46 331  P       P        21 59 06.3 +0.4
        baz=106
G21K    Allakaket        65.48 337  P       P        21 59 06.8 +0.9
        baz=112,SNR=7.5
D23K    Nanushuk River   65.48 340  P       P        21 59 07.2 +1.3
        baz=116,SNR=9.7
E22K    Anaktuvuk Pass   65.51 339  P       P        21 59 07.0 +0.8
        baz=114,SNR=16
H20K    Anotleneega Mo   65.63 336  P       P        21 59 08.2 +1.2
        baz=110
SDPT    Sand Point       65.64 325  P       P        21 59 08.6 +1.5
        baz=100
J18K    Innoko River     65.73 334  P       P        21 59 09.1 +1.4
        baz=107
F21K    Alatna River     65.73 338  P       P        21 59 09.3 +1.7
        baz=112,SNR=31
C23K    Itkillik River   65.84 341  P       P        21 59 09.9 +1.7
        baz=116,SNR=11
N16K    Nishlik Lake     65.85 330  P       P        21 59 09.0 +0.6
        baz=104
EUNU    Eureka           65.90   1          P        21 59 08.7 +0.2
L17K    Donlin           66.05 332  P       P        21 59 10.8 +1.1
        baz=105
O15K    Ungalikthiuk R   66.06 329  P       P        21 59 10.7 +0.9
        baz=102
M16K    Timber Creek     66.07 331  P       P        21 59 10.8 +1.0
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	baz=104						
D22K	Ayikyak River	66.11	340	P	P	21 59 11.7	+1.8
	baz=114,SNR=9.0						
K17K	Iditarod	66.21	333	P	P	21 59 11.1	+0.4
	baz=105						
SUMG	Summit	66.24	16	P	P	21 59 08.8	-2.4
SUMG				IAmb	IAmb	21 59 36.6	
	comp=Z,11nm,1.5s						
H19K	Roundabout Mou	66.26	336	P	P	21 59 11.7	+0.8
	baz=108,SNR=6.6						
E21K	Killik River	66.37	339	P	P	21 59 12.9	+1.2
	baz=112,SNR=9.4						
N15K	Kwethluk River	66.42	330	P	P	21 59 12.9	+0.8
	baz=103						
L16K	Owhat River	66.48	332	P	P	21 59 13.8	+1.3
	baz=104						
F20K	Avaraart Lake	66.49	338	P	P	21 59 13.7	+1.3
	baz=110,SNR=8.7						
G19K	Purcell Mounta	66.71	337	P	P	21 59 15.2	+1.4
	baz=108						
J17K	VABM Dome	66.73	333	P	P	21 59 15.3	+1.3
	baz=105						
O14K	Tigyukauivet M	66.80	329	P	P	21 59 16.0	+1.5
	baz=101						
M15K	Kasigluk River	66.82	330	P	P	21 59 15.7	+1.1
	baz=102						
C21K	Knifeblade Rid	66.91	340	P	P	21 59 16.5	+1.4
	baz=112,SNR=6.0						
H18K	Honhosa River	66.92	335	P	P	21 59 16.5	+1.3
	baz=106						
B22K	Teshekpuk Lake	66.93	341	P	P	21 59 16.6	+1.4
	baz=113						
B21K	Ikpikpuk River	67.03	340	P	P	21 59 17.1	+1.3
	baz=112						
E20K	Nigu River	67.07	339	P	P	21 59 17.8	+1.6
	baz=110,SNR=6.8						
N14K	Kuskokwak Cree	67.15	329	P	P	21 59 17.7	+1.0
	baz=101						
E19K	Redstone River	67.18	338	P	P	21 59 17.9	+1.0
	baz=108						
F19K	Shaleruckik Mo	67.18	337	P	P	21 59 18.3	+1.6
	baz=108						
G18K	Tagagawik	67.24	336	P	P	21 59 18.7	+1.5
	baz=106						
J16K	Anvik River	67.37	333	P	P	21 59 19.7	+1.6
	baz=104						
D20K	Etivluk River	67.37	339	P	P	21 59 18.9	+0.9
	baz=110,SNR=12						
L15K	Ungalak Mounta	67.41	331	P	P	21 59 19.9	+1.5
	baz=102						
M14K	Bethel	67.44	330	P	P	21 59 19.9	+1.3
	baz=101						
H17K	Granite Mounta	67.49	335	P	P	21 59 20.4	+1.6
	baz=105						
I17K	Unalakleet	67.56	334	P	P	21 59 20.9	+1.7
	baz=104						
K15K	Wolf Creek Mou	67.56	332	P	P	21 59 20.9	+1.6
	baz=102						
A22K	Sinclair Lake	67.67	342	P	P	21 59 20.6	+0.9
	baz=112						
D19K	Kuna River	67.82	339	P	P	21 59 22.0	+1.1
	baz=108						
L14K	Kuka Creek	67.90	331	P	P	21 59 22.5	+1.1
	baz=101						
G17K	Kiwalik Mounta	67.93	335	P	P	21 59 22.4	+0.8
	baz=104						
B20K	Meade River	67.99	340	P	P	21 59 23.7	+1.8
	baz=110,SNR=5.9						
M13K	Dall Lake	68.06	330	P	P	21 59 23.7	+1.3
	baz=100						
H16K	Elim	68.38	334	P	P	21 59 25.7	+1.3
	baz=102						
F17K	Baldwin Pennin	68.41	336	P	P	21 59 25.6	+1.1
	baz=104						
E18K	Tukpahlearik C	68.41	337	P	P	21 59 25.6	+1.0
	baz=105						
C19K	Lookout Ridge	68.52	339	P	P	21 59 26.7	+1.4
	baz=107						
J14K	Nanvaranak Lak	68.57	332	P	P	21 59 27.4	+1.8
	baz=100						
G16K	Koyuk River	68.60	335	P	P	21 59 26.5	+0.7
	baz=103						
E17K	Hotham Inlet	68.78	337	P	P	21 59 27.4	+0.5
	baz=104						
UNV	Unalaska Valle	68.92	322	P	P	21 59 28.8	+0.9
	baz=94						
K13K	Kusilvak Mount	68.94	331	P	P	21 59 29.1	+1.2
	baz=99						
C18K	Utukok River	68.95	339	P	P	21 59 29.0	+1.1
	baz=105						
G15K	Niukluk	69.21	335	P	P	21 59 30.8	+1.3
	baz=101						
A19K	Wainwright	69.33	340	P	P	21 59 31.5	+1.3
	baz=106						
B18K	Kokolik River	69.35	339	P	P	21 59 31.5	+1.1
	baz=105						
D17K	Noatak River	69.40	337	P	P	21 59 31.7	+1.0
	baz=103						
M11K	Mekoryuk	69.45	329	P	P	21 59 32.2	+1.1
	baz=97						
F15K	North Star Dit	69.60	335	P	P	21 59 33.5	+1.6
	baz=101						
C17K	DeLong Mountai	69.61	338	P	P	21 59 33.4	+1.3
	baz=103						
ANM	Nome	69.69	334	P	P	21 59 34.2	+1.6
	baz=100						
F14K	Arctic Creek	70.25	335	P	P	21 59 37.6	+1.7
	baz=99						
NIKH	Nikolski High	70.27	321	P	P	21 59 37.7	+1.4
	baz=92						
C16K	Lisburne Hills	70.36	338	P	P	21 59 37.1	+0.6
	baz=101						
P08K	Saint George I	70.85	325	P	P	21 59 40.9	+1.2
	baz=93						
TNA	Tin City	70.92	335	P	P	21 59 41.1	+1.1
	baz=98						
SPIA	Saint Paul Isl	71.26	326	P	P	21 59 43.7	+1.5
	baz=93						
GAMB	Gambell	72.36	333	P	P	21 59 50.1	+1.5
	baz=94						
BBTS	Babate	73.62	79	LR	LR	22 27 19.0	
	comp=Z,137nm,21.0s,baz=155,slow=32						
ESK	Eskdalemuir	78.28	36	P	P	22 00 21.3	-1.6
ESK				IAmb	IAmb	22 00 23.9	
	comp=Z,10nm,1.1s						
EKA	Eskdalemuir Ar	78.30	36	P	P	22 00 20.6	-2.5
	comp=Z,2.6nm,0.6s,baz=274,slow=5.7,SNR=20						
	comp=Z,2.6nm,0.6s						
SPITS	Spitsbergen Ar	80.03	11	P	P	22 00 31.4	-0.8
	comp=Z,1.8nm,0.7s,baz=299,slow=3.0,SNR=2.1						
	comp=Z,1.8nm,0.7s						
ESDC	Sonseca Array	80.28	52		P	22 00 32.2	-2.1
ESDC	Sonseca Array	80.28	52	P	P	22 00 32.2	-2.1
	comp=Z,1.9nm,0.9s,baz=288,slow=5.7,SNR=9.6						
	comp=Z,1.9nm,0.9s						
BILL	Bilibino	80.89	338	P	P	22 00 36.2	-0.7
NB2	NORSAR Subarra	84.37	28	P	P	22 00 54.9	-0.3
	comp=Z,0.8nm,0.7s,baz=293,slow=5.3						
NOA	NORSAR Array B	84.37	28	P	P	22 00 54.5	-0.7
	comp=Z,1.1nm,0.8s,baz=289,slow=5.2,SNR=4.3						
	comp=Z,1.1nm,0.8s						
HFS	Hagfors	85.83	29	P	P	22 01 01.1	-1.4
	comp=Z,2.0nm,0.7s,baz=170,slow=41,SNR=2.7						
	comp=Z,2.0nm,0.7s						
ARCES	ARCESS Array B	86.19	18	P	P	22 01 03.4	-0.7
ARCES	ARCESS Array B	86.19	18	P	P	22 01 03.0	-1.1
	comp=Z,2.1nm,0.6s,baz=321,slow=1.7,SNR=8.7						
	comp=Z,2.1nm,0.6s						
DBIC	Dimbokro	86.54	84	P	P	22 01 05.9	-1.0
DBIC	Dimbokro	86.54	84	P	P	22 01 05.8	-1.1
	comp=Z,5.1nm,0.6s,baz=278,slow=3.9,SNR=6.6						
	comp=Z,5.1nm,0.6s						
TIXI	Tiksi	89.83	348		P	22 01 21.3	0.0
PETK	Petropavlovsk-	89.92	325	P	P	22 01 23.6	+1.4
	comp=Z,1.6nm,0.9s,baz=88,slow=10,SNR=5.2						
	comp=Z,1.6nm,0.9s						
GERES	GERESS Array B	90.00	39	P	P	22 01 21.4	-1.4
	comp=Z,0.6nm,0.8s,baz=317,slow=4.2,SNR=4.3						
	comp=Z,0.6nm,0.8s						
FINES	FINESS Array B	90.66	25	P	P	22 01 24.4	-1.1
FINES	FINESS Array B	90.66	25	P	P	22 01 24.1	-1.3
	comp=Z,1.3nm,0.6s,baz=305,slow=2.2,SNR=11						
	comp=Z,1.3nm,0.6s						
TORD	Torodi Ar. Bea	91.21	76	P	P	22 01 28.3	-0.7
TORD	Torodi Ar. Bea	91.21	76	P	P	22 01 27.9	-1.1
	comp=Z,1.7nm,0.3s,baz=281,slow=4.8,SNR=2.2						
	comp=Z,1.7nm,0.3s						
VYHS	Vyhne	93.25	38	eP	P	22 01 39.6	+1.8
LANS	Liptovska Anna	93.34	37	eP	P	22 01 39.5	+1.3
KURBB	Kurchatov Arra	114.98	6	PKP	PKiKP	22 07 04.2	+0.2
	comp=Z,0.3nm,0.5s,baz=352,slow=1.8,SNR=6.7						
SONM	Songino Array	115.83	346	PKP	PKiKP	22 07 06.2	+0.3
	comp=Z,0.5nm,0.6s,baz=323,slow=0.7,SNR=2.1						
HHC	Hu-ho-hao-te	120.66	339	eP	PKiKP	22 07 16.0	+0.5
WMQ	Urumqi	122.21	359	ePKP	PKiKP	22 07 19.6	+1.2
WMQ				LR	LR		
	comp=Z,150nm,21.1s						
NJ2	Nanjing	124.79	327	eP	PKiKP	22 07 24.6	+0.9
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
GTA	Gaotai	125.31	348	eP	PKPdf	22 07 24.6	+0.2
GTA				pP	PKiKP	22 07 28.1	+3.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
STKA	Stephens Creek	127.38	241	PKP	PKiKP	22 07 29.3	+0.5
	comp=Z,2.5nm,0.9s,baz=339,slow=6.9,SNR=5.4						
WRA	Warramunga Arr	134.56	256	PKP	PKPdf	22 07 42.8	+0.6
	comp=Z,1.2nm,0.7s,baz=83,slow=2.2,SNR=13						
ASAR	Alice Springs	134.88	251	PKP	PKPdf	22 07 43.5	+0.7
	comp=Z,0.9nm,0.7s,baz=101,slow=1.8,SNR=8.0						
PZH	PanZhiHua	137.05	341	PKP	PKPdf	22 07 46.5	-0.4
CMAR	Chiang Mai Arr	145.45	340	PKPbc	PKPab	22 08 02.5	+0.3
	comp=Z,3.1nm,0.4s,baz=345,slow=4.5,SNR=35						

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*JMA **22** 21:58:56.3±0.1, 23.°8N±0.°6×122.°9E±0.°5, h42km, MV2.1/12, NEAR ISHIGAKIJIMA ISLAND*

*TAP **22** 21:58:57.1, 23.°81N×122.°87E, h27km±1km, ML2.6, D*

ISC 22 21:58:55.5±1.3**, 23.°68N**±0.°05×**122.°95E**±0.°03**, h31**km±13km**, n46, σ0s.92**/65**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS4	EOS4	0.73	307	eS	Sb	21 59 19.9	+0.8
JYNG	Yonagunijimaku	0.77	360	P	Pb	21 59 09.8	-0.7
JYNG				S	Sb	21 59 19.2	-1.4
YOJ	Yonaguni jima	0.78	4	eP	Pb	21 59 10.2	-0.6
YOJ				S	Sb	21 59 19.6	-1.4
EOS3	EOS3	0.84	316	P	Pb	21 59 11.7	+0.1
EOS3				S	Sb	21 59 23.1	+0.6
HATJ	Hateruma jima	0.87	64	eP	Pb	21 59 12.2	+0.1
HATJ				eS	Sb	21 59 23.8	+0.4
IRIF	Iriomote-Funau	0.97	47	P	Pb	21 59 13.5	-0.3
IRIF				eS	Sb	21 59 26.5	+0.3
EOS2	EOS2	0.99	318	eP	Pn	21 59 14.6	+1.4
EOS2				eS	Sb	21 59 27.6	+0.8
JKRS	Kuro-shima	1.12	60	eP	Pn	21 59 16.0	+1.0
TEYL	Yanliau Villag	1.25	279	eP	Pn	21 59 17.4	+0.4
TEYL				eS	Sn	21 59 32.7	-0.1
SHUL	Shoufeng	1.28	275	eS	Sn	21 59 33.6	+0.2
JIJ	Ishigaki jima	1.28	58	eP	Pn	21 59 17.8	+0.4
TEGC	Jichi Village	1.29	272	eS	Sn	21 59 33.2	-0.5
TWD	Chiawan	1.30	288	eS	Sn	21 59 32.3	-1.7
EWUT	Wuta	1.32	306	eP	Pn	21 59 18.4	+0.6
ENA	Nanau	1.34	304	eP	Pn	21 59 19.0	+0.9
NACB	Ninganchiao	1.34	292	eP	Pn	21 59 17.9	-0.2
NACB				eS	Sn	21 59 33.6	-1.2
ETM	Tongmen	1.37	282	eS	Sn	21 59 33.7	-1.9
TWC	Suao	1.37	313	eP	Pn	21 59 20.1	+1.6
EGFH	Guangfu	1.40	270	eS	Sn	21 59 35.8	-0.5
HGSD	Ruisui	1.41	263	P	Pn	21 59 19.2	+0.1
HGSD				S	Sn	21 59 35.2	-1.5
ECBN	Changbin	1.42	256	S	Sn	21 59 36.3	-0.7
WARBT	Fenglin Townsh	1.44	272	P	Pn	21 59 19.9	+0.4
WARBT				eS	Sn	21 59 36.2	-1.1
ETLH	Xiulin Townshi	1.45	292	eS	Sn	21 59 36.2	-1.4
LXIB	Xiulin Townshi	1.45	284	eP	Pn	21 59 20.0	+0.2
LXIB				eS	Sn	21 59 36.5	-1.3
EHYH	Wanrong	1.49	263	eS	Sn	21 59 38.1	-0.4
EHY	Hungye	1.50	264	eP	Pn	21 59 21.4	+1.0
EHY				eS	Sn	21 59 38.5	-0.5
CHKH	Chenggong	1.51	252	eS	Sn	21 59 37.9	-1.1
JISG	Ishigakijimahi	1.54	54	eP	Pn	21 59 21.6	+0.7
YULB	Yu-li	1.54	260	P	Pn	21 59 21.6	+0.6
YULB				eS	Sn	21 59 39.6	-0.4
TWF1	Yuli	1.55	258	eS	Sn	21 59 40.1	-0.1
LATG	Datong	1.56	304	eP	Pn	21 59 22.2	+1.0
CHKT	Chengkung	1.57	249	eS	Sn	21 59 39.2	-1.3
TWE	Neicheng	1.57	312	eP	Pn	21 59 22.4	+1.1
ENTT	Nioudou	1.59	307	eP	Pn	21 59 22.6	+1.0
NNSB	Datong	1.62	298	eP	Pn	21 59 22.8	+0.7
NNSB				eS	Sn	21 59 41.7	-0.3
NNS	Nan Shan	1.63	298	eS	Sn	21 59 42.1	-0.2
FUSB	Fushanzhiwuyua	1.65	311	P	Pn	21 59 23.5	+1.0
OWD	Renai	1.65	280	eP	Pn	21 59 23.0	+0.5
OWD				eS	Sn	21 59 41.6	-1.2
VWDT	VWDT	1.66	273	eP	Pn	21 59 23.7	+1.2
VWDT				eS	Sn	21 59 42.9	+0.1
EHD	Haiduan	1.69	252	eS	Sn	21 59 42.9	-0.6
WUSB	Renai	1.71	281	eP	Pn	21 59 24.5	+1.2
WUSB				eS	Sn	21 59 43.4	-0.9
SXI1	Grass Mountain	1.72	325	eP	Pn	21 59 23.9	+0.5
SXI1				eS	Sn	21 59 44.3	-0.1
YHNB	Yeheng	1.75	305	P	Pn	21 59 24.7	+0.9
YHNB				S	Sn	21 59 45.0	-0.1
NSK	Sanguang	1.76	305	eP	Pn	21 59 24.9	+0.8
TWGBT	Beinan	1.92	244	eS	Sn	21 59 48.8	-0.5
LIOB	Emei	2.02	299	eP	Pn	21 59 29.4	+2.0

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*GCG **22** 22:11:56.0±1.9, 14.°24N×92.°92W, h42km±999km, MD3.6, ML2.9*

*MEX **22** 22:11:57.7±0.9, 14.°43N×93.°08W, h22km±45km, MD3.8*

ISC 22 22:11:49.7±2.6**, 14.°3N**±0.°1×**93.°15W**±0.°09**, h17**km±11km**, n11, σ0s.69**/19**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.06	54	eP	Pn	22 12 10.2	+0.4
THIG				eS	Sn	22 12 25.4	+1.2
PATR	El Naranjo	1.22	47	eP	Pg	22 12 13.8	+0.5
PATR				eS	Sb	22 12 27.8	-0.2
PAVE	Pavencul	1.31	46	eP	Pg	22 12 15.3	+0.3
PAVE				eS	Sb	22 12 29.5	-1.2
PCIG		1.42	357	eP	Pg	22 12 17.7	+0.6
PCIG				eS	Sn	22 12 32.8	-0.3
RTAL	Retalhuleu	1.43	80	eP	Pb	22 12 16.1	+0.2
RTAL				eS	Sg	22 12 35.6	-0.4
STG8	El Palmar, Qui	1.75	84	i P	Pn	22 12 19.3	-0.2
STG0	El Palmar, Qui	1.76	85	i P	Pn	22 12 19.1	-0.5
STG0				IAML		22 12 41.8	
	comp=E,389nm,0.2s						
CCIG	Comitan	2.22	26	eP	Pb	22 12 29.7	+0.1
CCIG				eS	Sb	22 12 56.6	-0.2
CCIG	Comitan	2.22	26	eP	Pg	22 12 31.9	-0.5
CCIG				IAML		22 13 05.5	
	comp=N,30nm,0.5s						
TGIG		2.49	1	eP	Pb	22 12 32.6	-1.4
TGIG				eS	Sn	22 12 59.8	+0.3
TGIG		2.49	1	eP	Pb	22 12 34.6	+0.6
TGIG				i S	Sb	22 13 04.8	+0.4

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*MEX **22** 22:20:14.6±0.7, 14.°38N×93.°09W, h5km±21km, MD3.8*

*GCG **22** 22:20:14.6±2.3, 14.°20N×92.°91W, h38km±166km, MD3.9, ML3.4*

ISC 22 22:20:12.8±3.4**, 14.°2N**±0.°1×**93.°0W**±0.°1**, h33**km±15km**, n11, σ1s.82**/21**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.96	44	eP	Pb	22 20 31.5	+0.6
THIG				eS	Sb	22 20 42.7	-0.6
PATR	El Naranjo	1.13	37	eP	Pn	22 20 32.8	+0.1
PATR				eS	Sb	22 20 47.3	-1.3
PAVE	Pavencul	1.23	37	eP	Pn	22 20 34.4	+0.5
PAVE				eS	Sb	22 20 49.9	-1.4
RTAL	Retalhuleu	1.25	75	eP	Pn	22 20 35.8	+1.7
RTAL				eS	Sb	22 20 54.1	+2.3
PCIG		1.51	350	eP	Pn	22 20 36.6	-1.0
PCIG				eS	Sn	22 20 52.1	-4.0
STG8	El Palmar, Qui	1.57	81	eP	Pn	22 20 37.7	-0.9
STG8				i S	Sn	22 20 57.5	-0.4
STG8				IAML		22 21 01.6	
	comp=N,528nm,0.2s						
STG0	El Palmar, Qui	1.57	82	eP	Pn	22 20 37.8	-0.8
STG0				eS	Sn	22 20 56.2	-1.7
STG0				IAML		22 20 59.8	
	comp=E,507nm,0.3s						
CCIG	Comitan	2.20	21	eP	Pn	22 20 50.4	+3.1
CCIG				eS	Sb	22 21 18.0	-1.0
CCIG	Comitan	2.20	21	eP	Pb	22 20 51.4	-0.7
CCIG				IAML		22 21 22.0	
	comp=N,59nm,0.3s						
TGIG		2.56	356	eP	Pn	22 20 53.6	+1.6
TGIG				eS	Sn	22 21 23.7	+1.6
TGIG		2.56	356	eP	Pn	22 20 53.7	+1.6
TGIG				i S	Sn	22 21 24.0	+1.9
TGIG				IAML		22 21 27.3	
	comp=E,53nm,0.3s						

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*TIR **22** 22:22:28.0, 40.°45N×20.°79E, h0km±2km, Ml2.8/8*

*PDG **22** 22:22:28.7±0.5, 40.°52N×20.°88E, h8km±1km, ML2.8/8, Error ellipse: s-maj=1.0km s-min=1.6km az=0.0*

*ATH **22** 22:22:28.6, 40.°55N×20.°84E, h5km±1km, ML2.6/11, Manual Solution by A.Papageorgiou First location: 2019/06/22 22:23:30, This location: 2021/06/09 12:40:50 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*THE **22** 22:22:29.8, 40°N±2°×2°1E±°, h0km±1km, M2.5/12, MLh2.5/12*

*BEO **22** 22:22:29.3±0.4, 40.°44N×21.°05E, h4km±5km, ML2.4/10*

*SKO **22** 22:22:29.6, 40.°52N×20.°73E, h22km, ML2.4*

ISC 22 22:22:28.9±1.0**, 40.°47N**±0.°01×**20.°81E**±0.°02**, h5**km±8km**, n73, σ1s.02**/121**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	Korca	0.15	353	P	Pg	22 22 31.3	-0.6
KBN				Sg	Sg	22 22 34.1	+0.2
KBN				AML	AML	22 22 35.7	
	9.9nm,0.5s						
NEST	Nestorio	0.19	108	P	Pg	22 22 32.8	+0.2
NEST				Sg	Sg	22 22 36.5	+1.3
NEST				AML	AML	22 22 37.4	
	9.3nm,0.2s						
NEST	Nestorio	0.19	108	P	Pg	22 22 32.8	+0.2
NEST				S	Sg	22 22 34.6	-0.5
NEST	Nestorio	0.19	108	P	Pg	22 22 32.9	+0.3
NEST				S	Sg	22 22 37.0	+1.8
PENT	Pentalofos	0.37	138	P	Pg	22 22 36.2	+0.1
PENT				S	Sg	22 22 42.3	+1.3
OHR	Ohrid	0.64	359	i Pg	Pg	22 22 41.1	-0.1
OHR				i Sg	Sb	22 22 51.5	-0.3
OHR				eLg	Lg	22 22 52.8	
	comp=N,93nm,0.4s						
OHR				eLg	Lg	22 22 53.3	
	comp=E,177nm,0.5s						
KPRO	Kipourio	0.67	141	P	Pg	22 22 40.6	-1.1
KPRO				S	Sg	22 22 50.3	-0.1
KPRO	Kipourio	0.67	141	P	Pg	22 22 41.8	+0.1
KPRO				S	Sb	22 22 51.9	-0.8
KZN	Kozani	0.75	103	P	Pg	22 22 43.0	-0.3
KZN				S	Sg	22 22 54.2	+1.2
KZN	Kozani	0.75	103	P	Pg	22 22 43.2	0.0
KZN				S	Sg	22 22 54.4	+1.4
JAN	Janina	0.82	178	P	Pg	22 22 43.1	-1.5
JAN				S	Sg	22 22 55.3	+0.2
JAN	Janina	0.82	178	P	Pb	22 22 45.5	0.0
JAN				S	Sb	22 22 57.3	+0.4
SRN	Sarande	0.86	227	Pg	Pg	22 22 45.1	-0.3
SRN				Sg	Sb	22 22 58.1	0.0
SRN				AML	AML	22 23 00.9	
	comp=E,0.9nm,0.7s						
NASA	Naoussa	0.97	80	P	Pg	22 22 46.5	-0.9
NASA				S	Sg	22 22 59.4	-0.6
KTI	Kastanea	1.00	94	P	Pg	22 22 47.7	-0.3
VLO	Vlora	1.00	270	Pg	Pb	22 22 48.5	-0.3
VLO				Sg	Sb	22 23 02.3	0.0
VLO				AML	AML	22 23 07.5	
	comp=E,2.1nm,0.2s						
IGT	Igoumenitsa	1.01	202	Pg	Pg	22 22 47.8	-0.4
IGT				Sg	Sb	22 23 02.8	+0.3
IGT				AML	AML	22 23 06.5	
	comp=E,0.4nm,0.5s						
IGT	Igoumenitsa	1.01	202	P	Pg	22 22 48.0	-0.2
IGT	Igoumenitsa	1.01	202	i Pg	Pg	22 22 47.2	-1.0
IGT				i Sg	Sn	22 23 03.6	-0.7
IGT	Igoumenitsa	1.01	202	ePg	Pg	22 22 47.6	-0.6
IGT				eSg	Sn	22 23 04.0	-0.3
IGT	Igoumenitsa	1.01	202	P	Pn	22 22 49.8	+0.1
IGT				S	Sn	22 23 04.5	+0.1
KEK	Kerkira	1.09	226	P	Pb	22 22 50.0	-0.2
KEK	Kerkira	1.09	226	P	Pn	22 22 51.0	+0.2
KEK				S	Sn	22 23 07.1	+0.8
TIR	Tirane	1.13	321	Pg	Pn	22 22 51.3	-0.1
TIR				Sg	Sn	22 23 08.2	+0.9
TIR				AML	AML	22 23 14.2	
	comp=E,0.4nm,0.5s						
TIR	Tirane	1.13	321	i Pg	Pn	22 22 50.9	-0.5
TIR				i Sg	Sn	22 23 08.3	+0.9
TIR	Tirane	1.13	321	ePg	Pb	22 22 50.8	-0.1
TIR				eSg	Sn	22 23 11.2	+3.9
TETR	Tetrakomo, Epi	1.18	162	P	Pn	22 22 53.2	+1.0
TETR				S	Sn	22 23 09.5	+0.8
THL	Klokotos Trika	1.29	134	P	Pg	22 22 52.2	-1.5
THL				S	Sb	22 23 11.1	+0.5
THL	Klokotos Trika	1.29	134	P	Pg	22 22 53.5	-0.1
THL				S	Sn	22 23 11.6	+0.3
TYRN	Tyrnavos	1.33	124	P	Pn	22 22 53.5	-0.6
TYRN				S	Sn	22 23 13.1	+0.9
LIT	Litokhoron	1.34	106	P	Pn	22 22 54.3	0.0
LIT				S	Sg	22 23 11.8	0.0
LIT	Litokhoron	1.34	106	i Pg	Pn	22 22 54.1	-0.1
LIT				i Sg	Sn	22 23 15.3	+2.9
LIT	Litokhoron	1.34	106	P	Pn	22 22 53.7	-0.6
LIT				S	Sb	22 23 12.5	+0.6
SKO	Skopje	1.57	17	i Pg	Pg	22 22 58.6	-0.3
SKO				i Sg	Sg	22 23 19.6	+0.2
THE	Thessaloniki	1.65	84	P	Pn	22 22 58.3	-0.2
THE	Thessaloniki	1.65	84	i Pg	Pb	22 22 59.4	-0.4
THE				i Sg	Sn	22 23 19.8	-0.3
THE	Thessaloniki	1.65	84	P	Pn	22 22 58.0	-0.5
THE				S	Sn	22 23 19.3	-0.7
LKD2	Lefkada island	1.69	184	P	Pn	22 22 59.3	+0.3
LKD2				S	Sg	22 23 22.8	-0.3
LKD2	Lefkada island	1.69	184	P	Pg	22 23 00.8	-0.4
PUK	Puka	1.71	336	Pn	Pg	22 23 02.0	+0.2
PUK				Sn	Sg	22 23 28.3	+4.3
PUK				AML	AML	22 23 28.9	
	comp=E,0.4nm,0.6s						
KNT	Kendrikon	1.73	66	i Pn	Pn	22 22 59.2	-0.4
KNT				i Sn	Sg	22 23 26.1	+1.8
KNT	Kendrikon	1.73	66	P	Pn	22 22 59.2	-0.4
KNT				S	Sn	22 23 21.0	-1.0
EVR	Evrytania	1.73	153	P	Pn	22 23 00.1	+0.3
HORT	Hortiatis	1.75	85	P	Pn	22 22 58.9	-1.1
HORT				S	Sn	22 23 21.6	-1.0
NYDR	Nydri-Lefkada	1.76	183	P	Pn	22 23 00.0	0.0
ULC	Ulcinj	1.90	322	i Pn	Pb	22 23 03.0	-1.0
ULC	Ulcinj	1.90	322	ePn	Pn	22 23 02.2	+0.2
ULC				i Sn	Sg	22 23 28.9	-1.0
SOH	Sokhos	1.96	79	i Pn	Pn	22 23 03.6	+0.7
SOH				i Sn	Sn	22 23 29.3	+1.3
BCI	Bajram Curri	1.97	344	Pn	Pg	22 23 05.7	-1.0
BCI				Sn	Sg	22 23 33.9	+1.6
BCI				AML	AML	22 23 34.8	
	comp=E,0.4nm,0.7s						
PEHC	Pehcevo	2.05	50	i Pg	Pn	22 22 58.9	-5.1
DRME	Dracevica, Mon	2.10	325	ePn	Pb	22 23 06.2	-1.3
DRME	Dracevica, Mon	2.10	325	ePn	Pn	22 23 05.3	+0.5
DRME				i Sn	Sb	22 23 33.8	-0.2
SRS	Serrai	2.21	72	ePg	Pn	22 23 05.9	-0.3
SRS				eSg	Sn	22 23 34.2	+0.3
KKB	Krupnik	2.22	51	i Pn	Pn	22 23 07.3	+0.9
BUM	Brajici-Budva	2.33	322	ePn	Pn	22 23 07.9	0.0
BUM				i Sn	Sb	22 23 39.4	-1.1
BOSS	Bosilegrad	2.38	31	ePn	Pn	22 23 08.1	-0.5
BARS	Barje	2.46	17	i Pn	Pn	22 23 09.4	-0.3
BARS	Barje	2.46	17	ePn	Pn	22 23 09.3	-0.4
IVA	Berane	2.49	344	ePn	Pn	22 23 10.2	0.0
IVA				i Sn	Sn	22 23 42.5	+1.4
CEME	Cevo	2.51	326	ePn	Pn	22 23 10.3	-0.2
CEME				i Sn	Sb	22 23 43.6	-2.2
KOME	Kolasin	2.57	338	ePn	Pn	22 23 11.3	+0.1
KOME				i Sn	Sn	22 23 44.2	+1.3
HCY	Herceg Novi	2.63	319	ePn	Pn	22 23 12.4	+0.4
HCY				i Sn	Sb	22 23 46.7	-2.4

SELS	Selova	2.75	5	*e*Pn	Pn	22 23 15.7	+2.0
VTS	Vitosha	2.81	40	*e*Pn	Pn	22 23 16.1	+1.5
SJES	Sjenica	2.85	348	*e*Pn	Pb	22 23 18.4	-2.0
BRY	Bratogost	2.96	326	*e*Pn	Pn	22 23 16.8	+0.1
BRY				*i* Sn	Sn	22 23 54.4	+1.6
ZAPS	Zavoj	3.11	25	*e*Pn	Pn	22 23 18.1	-0.6
IVAS	Ivanjica	3.14	351	*e*Pn	Pn	22 23 19.3	+0.2
BOVS	Bovan	3.23	12	*e*Pn	Pn	22 23 19.4	-0.8
GRUS	Gruza	3.41	359	*e*Pn	Pn	22 23 24.4	+1.6
ZAGS	Zajecar	3.50	17	*e*Pn	Pn	22 23 23.5	-0.5
KUBS	Kucevo	3.99	9	*e*Pn	Pn	22 23 30.5	-0.2
TEKS	Tekeris	4.18	347	*e*Pn	Pn	22 23 33.7	+0.3

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*IDC **22** 22:22:36.4±0.6, 23°.85N×122°.91E, h0^{km}, mb3.9/21, mbtmp3.9/24, ML3.3/3, MS3.5/8, Error ellipse: s-maj=17.1km s-min=15.6km az=82.0*

*BJI **22** 22:22:38.0, 23°.72N×122°.84E, h11^{km}, mB4.4/8, mb4.1/19, Ms4.0/14, Ms7 3.8/15*

*NEIC **22** 22:22:39.0±2.1, 23°.71N±0°.02×122°.80E±0°.03, h10^{km}±1^{km}, mb4.4/24, Error ellipse: s-maj=5.1km s-min=3.0km az=59.0*

*TAP **22** 22:22:40.8, 23°.75N×122°.96E, h36^{km}, ML4.9, D*

*NIED **22** 22:22:40.5, 23°.73N×122°.92E, h41^{km}, MW4.2, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.46; $M_{\theta\theta}$2.31; $M_{\phi\phi}$-0.85; $M_{r\theta}$0.52; $M_{\theta\phi}$0.10; $M_{\phi r}$0.50; Fault plane solution: $M_0$2.08000×10^{15} NP1: ϕ_s115.00000°, δ44.00000°, λ-50.00000°. NP2: ϕ_s245.00000°, δ58.00000°, λ-122.00000°.*

*ASIES **22** 22:22:40.8, 23°.75N×122°.96E, h36^{km}, ML4.9, Mw4.3, Moment Tensor Solution. Moment tensor: Scale 10^{22}Nm; M_{rr}-3.46; $M_{\theta\theta}$3.91; $M_{\phi\phi}$-0.45; $M_{r\theta}$0.04; $M_{\theta\phi}$0.14; $M_{\phi r}$2.01; Fault plane solution: $M_0$4.22018×10^{22} NP1: ϕ_s112.16000°, δ49.91000°, λ-54.20000°. NP2: ϕ_s243.92000°, δ51.65000°, λ-124.80000°. Principal axes: T Plg0.9520°, Azm357.7230°; N Plg26.5840°, Azm267.2470°; P Plg63.3960°, Azm89.6250°;*

*JMA **22** 22:22:40.5±0.2, 23°.7N±0°.7×122°.9E±0°.6, h41^{km}, MD4.4/16, MV4.2/16, NEAR ISHIGAKIJIMA ISLAND*

ISC 22 22:22:40.4±0.4**, 23°.69N**±0°.02×**122°.94E**±0°.02**, h29^{km}, n269,** σ**1^s.35**/392**, mb4.1**/36**, MS3.8**/6**, 13C-31D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS4	EOS4	0.71	307	P	Pn	22 22 54.3	+0.1
EOS4				S	Sn	22 23 04.2	+0.1
JYNG	Yonagunijimaku	0.76	0	P	Pb	22 22 54.3	-0.8
JYNG				S	Sb	22 23 04.0	-1.1
JYNG	Yonagunijimaku	0.76	0	A	A	22 22 54.3	
	comp=N,122nm,0.6s,comp=E,35nm,0.9s						
YOJ	Yonaguni jima	0.77	5		Pb	22 22 54.7	-0.6
YOJ				Sg	Sb	22 23 04.3	-1.2
YOJ	Yonaguni jima	0.77	5	P	Pb	22 22 54.8	-0.6
YOJ	Yonaguni jima	0.77	5	S	Sb	22 23 05.1	-0.4
YOJ	Yonaguni jima	0.77	5	P	Pb	22 22 54.8	-0.6
YOJ				S	Sb	22 23 04.0	-1.5
YOJ	Yonaguni jima	0.77	5	A	A	22 22 54.8	
	comp=N,24nm,4.8s,comp=E,29nm,1.0s						
YOJ	Yonaguni jima	0.77	5	⇑*i*P	Pb	22 22 54.8	-0.6
YOJ				*i* S	Sb	22 23 04.2	-1.2
EOS3	EOS3	0.82	316	⇑*i*P	Pb	22 22 56.2	+0.1
EOS3				S	Sn	22 23 07.6	+0.6
HATJ	Hateruma jima	0.87	65	P	Pn	22 22 56.5	-0.3
HATJ				*e*S	Sn	22 23 07.8	-0.7
HATJ	Hateruma jima	0.87	65	A	A	22 22 56.5	
	comp=N,25nm,2.8s,comp=E,25nm,3.3s						
IRIF	Iriomote-Funau	0.97	48	P	Pb	22 22 57.9	-0.7
IRIF				S	Sb	22 23 10.9	-0.1
IRIF	Iriomote-Funau	0.97	48	A	A	22 22 57.9	
	comp=N,30nm,1.0s,comp=E,26nm,1.0s						
EOS2	EOS2	0.97	318	⇑P	Pb	22 22 58.8	+0.2
EOS2				*e*S	Sb	22 23 12.4	+1.4
JKRS	Kuro-shima	1.12	61	*e*P	Pb	22 23 00.5	-0.7
JKRS				*e*S	Sb	22 23 14.8	-0.7
JKRS	Kuro-shima	1.12	61	A	A	22 23 00.5	
	comp=N,22nm,2.4s,comp=E,20nm,2.3s						
TEYL	Yanliau Villag	1.24	278	⇓P	Pn	22 23 01.6	-0.3
TEYL				S	Sn	22 23 16.8	-0.8
HWA	Hwalien	1.25	283	*e*P	Pn	22 23 01.9	-0.1
HWA				*e*S	Sn	22 23 17.6	-0.3
SHUL	Shoufeng	1.26	275	⇓*i*P	Pn	22 23 02.0	-0.2
SHUL				S	Sn	22 23 18.3	+0.2
EAHA	Aohua	1.27	300	*e*P	Pn	22 23 02.6	+0.4
EAHA				*e*S	Sb	22 23 19.2	-0.4
TEGC	Jichi Village	1.28	271	P	Pn	22 23 02.2	-0.2
TEGC				*e*S	Sn	22 23 18.0	-0.6
JIJ	Ishigaki jima	1.29	58	*e*P	Pn	22 23 02.2	-0.3
JIJ				*e*S	Sn	22 23 18.5	-0.3
JIJ	Ishigaki jima	1.29	58	A	A	22 23 02.2	
	comp=N,6.0nm,3.2s,comp=E,5.0nm,1.2s						
TWD	Chiawan	1.29	288	⇑*i*P	Pn	22 23 01.8	-0.7
TWD				*i* S	Sn	22 23 16.8	-2.0
ETL	Fush Village	1.29	291	*e*P	Pn	22 23 02.2	-0.3
EWUT	Wuta	1.30	306	*e*P	Pn	22 23 02.9	+0.2
EWUT				*e*S	Sn	22 23 19.4	+0.3
ENA	Nanau	1.32	304	P	Pn	22 23 03.1	+0.2
ENA				*e*S	Sn	22 23 18.8	-0.8
NACB	Ninganchiao	1.32	292		Pn	22 23 02.4	-0.6
NACB				Sg	Sn	22 23 17.2	-2.4
NACB	Ninganchiao	1.32	292	P	Pn	22 23 03.1	+0.2
NACB	Ninganchiao	1.32	292	⇑P	Pn	22 23 02.3	-0.6
NACB				*e*S	Sn	22 23 17.3	-2.3
ESAO	Su ao	1.33	312	P	Pn	22 23 03.2	+0.1
ETM	Tongmen	1.35	282	*i* P	Pn	22 23 02.8	-0.6
ETM				*e*S	Sn	22 23 19.1	-1.3
TWC	Suao	1.35	313	P	Pn	22 23 03.6	+0.2
TWC				*e*S	Sn	22 23 19.3	-1.1
EGFH	Guangfu	1.39	269	*e*P	Pn	22 23 03.6	-0.2
EGFH				*e*S	Sn	22 23 20.6	-0.6
ESL	Shilin	1.39	275	⇓*i*P	Pn	22 23 03.1	-0.7
ESL				*e*S	Sn	22 23 20.2	-0.9
HGSD	Ruisui	1.40	262	⇓*i*P	Pn	22 23 03.7	-0.4
ECBN	Changbin	1.42	255	⇓*i*P	Pn	22 23 04.2	0.0
ECBN				*e*S	Sn	22 23 21.0	-0.9
WARBT	Fenglin Townsh	1.42	271	⇓*i*P	Pn	22 23 03.7	-0.7
WARBT				*e*S	Sn	22 23 21.0	-1.1
ETLH	Xiulin Townshi	1.43	291	*e*P	Pn	22 23 04.3	-0.2
ETLH				*e*S	Sn	22 23 21.2	-1.2
LXIB	Xiulin Townshi	1.44	284	⇓*i*P	Pn	22 23 04.1	-0.5
LXIB				*e*S	Sn	22 23 21.0	-1.6
NDS	Dongshan	1.46	310	*e*P	Pn	22 23 04.4	-0.5
NDS				*e*S	Sn	22 23 21.9	-1.1
EGS		1.47	322	⇑P	Pn	22 23 05.4	+0.4
EGS				*e*S	Sn	22 23 23.4	+0.1
EHYH	Wanrong	1.48	263	⇓*i*P	Pn	22 23 05.2	+0.2
EHYH				*e*S	Sn	22 23 23.0	-0.4
EHY	Hungye	1.49	263	⇓*i*P	Pn	22 23 05.4	0.0
EHY				S	Sn	22 23 23.4	-0.5
CHKH	Chenggong	1.50	251	⇓*i*P	Pn	22 23 04.9	-0.5
CHKH				S	Sn	22 23 22.5	-1.5
EYUL	Yuli	1.52	257	P	Pn	22 23 05.9	+0.1
EYUL				*e*S	Sn	22 23 24.9	+0.3
ILA	Ilan	1.53	315	*e*P	Pb	22 23 07.5	-0.6
ILA				*e*S	Sb	22 23 26.4	-0.6
YULB	Yu-li	1.54	259		Pn	22 23 05.6	-0.3
YULB				Sn	Sn	22 23 23.4	-1.5
YULB	Yu-li	1.54	259	P	Pn	22 23 06.0	+0.1
YULB	Yu-li	1.54	259	S	Sn	22 23 25.3	+0.4
YULB	Yu-li	1.54	259	⇓*i*P	Pn	22 23 05.9	0.0
YULB				*e*S	Sn	22 23 24.5	-0.4
JISG	Ishigakijimahi	1.54	54	*e*P	Pn	22 23 05.4	-0.5
JISG	Ishigakijimahi	1.54	54	A	A	22 23 05.4	
	comp=N,13nm,2.3s,comp=E,13nm,0.6s						
LATG	Datong	1.54	303	P	Pn	22 23 06.3	+0.2
TWF1	Yuli	1.54	258	⇓*i*P	Pn	22 23 06.0	0.0
TWF1				S	Sn	22 23 24.5	-0.6
TWE	Neicheng	1.55	312	*i* P	Pn	22 23 06.7	+0.6
CHKT	Chengkung	1.56	248	⇓*i*P	Pn	22 23 05.8	-0.5
CHKT				*e*S	Sn	22 23 23.5	-1.9
ENTT	Nioudou	1.57	307	P	Pn	22 23 06.9	+0.5
ENTT				S	Sn	22 23 26.6	+0.8
TWB1	Santiao Chiao	1.57	327	⇑*i*P	Pn	22 23 06.5	+0.1
TWB1				*e*S	Sn	22 23 25.4	-0.4
FULB	Fuli	1.59	252	⇓*i*P	Pn	22 23 06.2	-0.5
FULB				*i* S	Sn	22 23 25.1	-1.1
WHF	Hehuan Shan	1.60	287	⇓*i*P	Pn	22 23 07.0	-0.2
WHF				*e*S	Sn	22 23 25.8	-1.2
NNSB	Datong	1.60	298	*i* P	Pn	22 23 07.2	+0.3
NNSB				*e*S	Sn	22 23 25.9	-0.7
NNS	Nan Shan	1.61	298	*i* P	Pn	22 23 07.5	+0.4
NNS				*i* S	Sn	22 23 26.7	-0.4
FUSB	Fushanzhiwuyua	1.63	311	P	Pn	22 23 08.2	+0.9
TIPB	Shuangxi	1.63	322	⇑P	Pn	22 23 07.4	+0.1
TIPB				*e*S	Sn	22 23 27.0	-0.3
OWD	Renai	1.64	280	⇓P	Pn	22 23 07.3	-0.1
OWD				*i* S	Sn	22 23 27.3	-0.3
FUSS	Fushou	1.65	290	P	Pn	22 23 08.0	+0.3
FUSS				*e*S	Sn	22 23 27.8	-0.2
VWDT	VWDT	1.65	273	⇓*i*P	Pn	22 23 07.8	+0.4
VWDT				*i* S	Sn	22 23 27.5	-0.2
EDH	Donghe	1.66	245	⇓*e*P	Pn	22 23 07.5	-0.2
EDH				S	Sn	22 23 26.9	-1.2
EHD	Haiduan	1.68	252	⇓P	Pn	22 23 07.7	-0.2
EHD				S	Sn	22 23 27.8	-0.7
ECS	Chishang	1.69	250	*e*P	Pn	22 23 08.3	+0.3
WUSB	Renai	1.69	281	⇓*i*P	Pn	22 23 08.4	+0.2
WUSB				*e*S	Sn	22 23 28.4	-0.6
NWLT	Wulai	1.70	310	*e*P	Pn	22 23 09.4	+1.2
NWLT				S	Sn	22 23 29.6	+0.6
SXI1	Grass Mountain	1.70	325	*i* P	Pn	22 23 08.8	+0.5
SXI1				*e*S	Sn	22 23 29.5	+0.4
TDCB	Techi	1.72	289	P	Pn	22 23 09.1	+0.5
TDCB				*e*S	Sn	22 23 29.2	-0.5
YHNB	Yeheng	1.73	305		Pn	22 23 09.2	+0.6
YHNB	Yeheng	1.73	305	P	Pn	22 23 09.5	+0.9
YHNB	Yeheng	1.73	305	P	Pn	22 23 09.3	+0.6
YHNB				*e*S	Sn	22 23 29.5	-0.3
NWF	Wu-fen Shan	1.73	323	⇑P	Pn	22 23 09.1	+0.4
NWF				*e*S	Sn	22 23 29.5	-0.4
WFSB	Wu-fen Shan	1.73	323	⇑P	Pn	22 23 09.1	+0.4
NSK	Sanguang	1.75	305	⇑P	Pn	22 23 09.4	+0.5
NSK				*e*S	Sn	22 23 29.1	-1.0
TWA	Mucha	1.78	316	*e*P	Pn	22 23 10.3	+1.0
TWA				S	Sn	22 23 32.4	+1.4
TNOU	National Taiwa	1.80	324	*e*P	Pn	22 23 09.9	+0.4
TNOU				*e*S	Sn	22 23 31.3	-0.1
NHDH	Xindian Distri	1.81	315	P	Pn	22 23 10.7	+1.1
NHDH				*e*S	Sn	22 23 32.6	+1.0
SSLB	Suanglung	1.82	273		Pn	22 23 10.0	+0.2
SSLB	Suanglung	1.82	273	⇓P	Pn	22 23 10.2	+0.3
SSLB				*e*S	Sn	22 23 31.7	-0.3
ELDTW	Lidau	1.83	255	⇓P	Pn	22 23 10.0	-0.1
ELDTW				*e*S	Sn	22 23 31.1	-1.3
LONT	Longtian	1.84	245	*e*P	Pn	22 23 10.5	+0.5
LONT				*e*S	Sn	22 23 32.4	+0.1
TATO	Taipei	1.84	314		Pn	22 23 10.7	+0.6
TATO	Taipei	1.84	314	P	Pn	22 23 11.5	+1.4
JTJ	Tarama	1.87	59	*e*P	Pn	22 23 10.3	-0.1
JTJ	Tarama	1.87	59	A	A	22 23 10.3	
	comp=N,9.0nm,2.1s,comp=E,10.0nm,1.1s						
TAP	Taipei	1.87	316	*e*P	Pn	22 23 11.9	+1.4
SMLT	Sun Moon Lake	1.88	276	⇓*i*P	Pn	22 23 11.5	+0.8
SMLT				*i* S	Sn	22 23 33.8	+0.3
WCS	Beigang Elemen	1.89	282	*i* P	Pn	22 23 11.8	+1.0
WCS				*e*S	Sn	22 23 34.4	+0.7
TTN	Taitung	1.89	241	*e*P	Pn	22 23 11.5	+0.7
TTN				*e*S	Sn	22 23 33.6	-0.1
NFF	Wufeng Townshi	1.91	300	P	Pb	22 23 13.1	-1.6
NFF				*e*S	Sn	22 23 35.8	+1.5
WHYT	Xinyi Township	1.91	271	P	Pn	22 23 12.3	+1.2
WHYT				*e*S	Sn	22 23 34.5	+0.2
YM01	YM01	1.91	320	*e*P	Pn	22 23 11.4	+0.3
WHP	Taichung City	1.91	288	*e*P	Pn	22 23 12.8	+1.6
WHP				*e*S	Sn	22 23 35.3	+0.9
TWGBT	Beinan	1.92	243	P	Pn	22 23 11.5	+0.4
TWGBT				S	Sn	22 23 33.8	-0.5
TYC	Yuchr	1.92	277	*i* P	Pn	22 23 12.0	+0.9
TYC				S	Sn	22 23 34.3	-0.1
TWG	Pinlang	1.92	244		Pn	22 23 11.4	+0.2
TWG	Pinlang	1.92	244	P	Pn	22 23 11.6	+0.4
TWG				S	Sn	22 23 33.7	-0.8
YM08	YM08	1.93	321	*e*P	Pn	22 23 11.3	-0.1
KSHI	Guanxi Townshi	1.94	304	P	Pn	22 23 13.3	+1.9
KSHI				*e*S	Sn	22 23 36.9	+2.0
ZUZH	Zhuzihu	1.94	319	*e*P	Pn	22 23 11.8	+0.3
ZUZH				*e*S	Sn	22 23 33.9	-1.1
ALS	Alishan	1.96	265	⇓*i*P	Pn	22 23 13.3	+1.2
ALS				*i* S	Sn	22 23 36.8	+0.9
ANP	Anpu	1.97	319	*e*P	Pn	22 23 11.5	-0.5
TWS1	Kuangyinshan	1.97	316	*e*P	Pn	22 23 12.3	+0.4
TWS1				*e*S	Sn	22 23 37.0	+1.2
LIOB	Emei	2.00	299	P	Pn	22 23 14.2	+1.9
LIOB				*i* S	Sn	22 23 37.9	+1.5
NTST	Danshui	2.00	318	*e*P	Pn	22 23 12.9	+0.6
NSTT	Nanjuang	2.00	298	⇑P	Pn	22 23 14.1	+1.7
NSTT				S	Sn	22 23 37.5	+1.1
WJS	Zhushan	2.03	274	P	Pb	22 23 14.9	-1.7
WJS				S	Sn	22 23 39.4	+2.2
NCU	National Centr	2.04	309	*e*P	Pn	22 23 14.0	+1.1
NCUH	Zhongli	2.04	309	*e*P	Pn	22 23 14.2	+1.3
STYH	Taoyuan	2.05	256	⇓P	Pn	22 23 14.2	+1.2
STYH				S	Sn	22 23 37.5	-0.1
WNT	Mingjian	2.07	276	*e*P	Pn	22 23 15.4	+2.1
WNT				*i* S	Sn	22 23 40.0	+1.8
CHN5	Tsauling	2.08	268	⇑*i*P	Pn	22 23 15.3	+1.9
CHN5				*e*S	Sn	22 23 39.6	+1.3
LAY	Lan-yu	2.08	218	P	Pn	22 23 13.3	-0.2
PCYT	Pengchaiyu	2.09	338	*e*P	Pn	22 23 14.3	+0.8
TWQ1	Liyutan	2.09	289	*e*P	Pn	22 23 15.5	+2.0
TWQ1				*i* S	Sn	22 23 40.5	+2.0
LYUB	Lan-yu	2.09	217	*e*P	Pn	22 23 13.5	0.0
SBCB	Hsinchu	2.09	302	*e*P	Pn	22 23 15.4	+1.9
SBCB				*e*S	Sb	22 23 41.6	-1.8
HSN	Hsinchu	2.11	302	*e*P	Pn	22 23 14.5	+0.7
HSN				*e*S	Sn	22 23 40.7	+1.6
NSY	Sanyi	2.12	290	*i* P	Pn	22 23 16.1	+2.1
NSY				*i* S	Sn	22 23 41.8	+2.5
TCU	Taichung	2.12	283	*e*P	Pb	22 23 16.4	-1.8
TCU				*e*S	Sn	22 23 42.1	+2.7
ECL	Taimali	2.13	240	⇓*i*P	Pn	22 23 14.0	0.0
ECL				*e*S	Sn	22 23 38.5	-0.9
NMLH	Miaoli	2.14	294	*e*P	Pb	22 23 16.6	-1.8
NMLH				*e*S	Sb	22 23 42.6	-2.0
TPUB	Ta-pu	2.15	260		Pn	22 23 16.4	+1.9
TPUB	Ta-pu	2.15	260	P	Pn	22 23 16.3	+1.9
TPUB	Ta-pu	2.15	260	S	Sn	22 23 42.5	+2.3
TPUB	Ta-pu	2.15	260	⇓*i*P	Pn	22 23 16.2	+1.9
TPUB				*i* S	Sn	22 23 41.9	+1.6
WCKO	Fanlu	2.16	264	*e*P	Pn	22 23 16.8	+2.3
WCKO				*e*S	Sn	22 23 42.3	+2.1
WGK	Gukeng	2.18	270	*e*P	Pb	22 23 17.4	-1.8
WGK				*e*S	Sn	22 23 43.1	+2.3
WTP	Ta-pu	2.18	259	⇓*i*P	Pn	22 23 16.7	+1.9
WTP				*e*S	Sn	22 23 43.2	+2.3
WDL	Douliou City	2.20	271	*e*P	Pb	22 23 18.1	-1.4
WDL				*e*S	Sn	22 23 44.2	+2.9
WDLH	Douliu	2.20	270	*e*P	Pn	22 23 17.4	+2.4
WDLH				*e*S	Sn	22 23 43.4	+2.1
WDJ	Dajia District	2.20	288	*e*P	Pn	22 23 17.2	+2.2
WDJ				S	Sn	22 23 43.5	+2.2
WCHH	Zhanghua	2.21	281	P	Pb	22 23 17.8	-2.0
WCHH				*e*S	Sb	22 23 44.8	-2.0
WCH1	Changhua City	2.22	280	*e*P	Pb	22 23 18.1	-1.9
WCH1				*i* S	Sn	22 23 44.8	+3.0
CHN2	Minshiung	2.27	267	*e*P	Pb	22 23 18.9	-1.7
CHN2				*e*S	Sb	22 23 46.4	-1.9
CHN1	Nanshi	2.27	258	*i* P	Pn	22 23 18.4	+2.4
CHN1				S	Sb	22 23 46.4	-2.0
TWK	Hsinying	2.29	260	P	Pn	22 23 18.5	+2.2
TWK				*i* S	Sn	22 23 46.6	+3.0
SNST	Tainan City	2.29	259	*e*P	Pn	22 23 18.6	+2.3
SNST				*i* S	Sn	22 23 46.5	+3.0
TAW	Tawu	2.30	235	*e*P	Pn	22 23 17.1	+0.7
TAW				S	Sn	22 23 44.4	+0.6
CHY	Chiayi	2.31	266	*e*P	Pn	22 23 19.2	+2.6
CHY				*i* S	Sn	22 23 47.0	+2.9
TAWH	Dawu Township	2.32	235	*e*P	Pn	22 23 17.4	+0.8
TAWH				*e*S	Sn	22 23 43.2	-1.0
SSD	Sandimen	2.32	247	*e*P	Pn	22 23 17.9	+1.2
SSD				*e*S	Sn	22 23 43.9	-0.4
EAST	Anshuo	2.32	236	⇓*i*P	Pn	22 23 17.2	+0.5
TSMG	Majia	2.33	246	*e*P	Pn	22 23 18.8	+2.0
TSMG				S	Sn	22 23 45.0	+0.5
JIRB	Irabujima	2.33	60	*e*P	Pn	22 23 16.8	0.0
JIRB				*e*S	Sn	22 23 44.1	-0.5
WTK	Tuku	2.34	270	P	Pn	22 23 19.6	+2.7
WTK				*i* S	Sn	22 23 47.6	+2.9
MASBT	Mashibuluo	2.38	244	*e*P	Pn	22 23 18.7	+1.3
SCST	Cishan	2.39	251	P	Pb	22 23 20.9	-1.9
SCST				S	Sb	22 23 50.5	-1.3
JMJ	Miyako jima 2	2.42	62	P	Pn	22 23 18.8	+0.7
WTCT	Ta-ch'eng	2.44	275	*e*P	Pn	22 23 21.0	+2.7
WTCT				*e*S	Sn	22 23 50.2	+3.0
CHN3	Shinhua	2.44	256	*e*P	Pb	22 23 22.8	-0.8
CHN3				S	Sb	22 23 53.4	+0.1
SLIU	Shizi	2.46	234	*e*P	Pn	22 23 19.3	+0.7
SLIU				*e*S	Sn	22 23 47.9	+0.2
ICHU	Yijhu	2.46	263	*e*P	Pn	22 23 21.0	+2.4
ICHU				*e*S	Sn	22 23 51.4	+3.6
WSF	Szhu	2.49	269	*e*P	Pn	22 23 21.8	+2.8
WSF				*e*S	Sn	22 23 51.3	+2.8
WSL	Shuilin Townsh	2.49	267	*i* P	Pn	22 23 21.2	+2.2
WSL				*e*S	Sn	22 23 51.2	+2.7
SSHA	Shanhua	2.50	258	*e*P	Pb	22 23 22.4	-2.2
SSHA				*e*S	Sn	22 23 51.7	+3.1
SCZT	Fangliau	2.51	239	*e*P	Pn	22 23 20.5	+1.3
CHN8	Yiju	2.53	263	*i* P	Pn	22 23 22.1	+2.6
CHN8				*i* S	Sn	22 23 52.4	+3.1
SMST	Manzhou Townsh	2.55	230	*e*P	Pn	22 23 21.3	+1.4
SMST				*i* S	Sn	22 23 51.4	+1.4
SNJT	Kaohsiung City	2.57	249	*e*P	Pb	22 23 24.3	-1.5
SCLT	Jiali	2.57	259	*e*P	Pn	22 23 22.5	+2.3
SCLT				*i* S	Sn	22 23 54.2	+3.7
TSEB	Hengchuen, Pin	2.59	227	*e*P	Pn	22 23 23.0	+2.6
TSEB				*e*S	Sn	22 23 53.4	+2.5
TWKBT	Hengchun	2.62	229	*e*P	Pn	22 23 22.4	+1.5
TWKBT				*e*S	Sn	22 23 52.5	+0.8
TWK1	Hengchun	2.63	229	*e*P	Pn	22 23 22.6	+1.7
TWK1				S	Sn	22 23 52.7	+0.9
HEN	Hengchun	2.63	231	*e*P	Pn	22 23 23.5	+2.5
HEN				*e*S	Sn	22 23 53.8	+1.8
TSCK	Chigu Township	2.67	259	*i* P	Pn	22 23 24.1	+2.5
TSCK				S	Sn	22 23 55.9	+2.9
WSSB	Gushan	2.67	248	*e*P	Pb	22 23 25.3	-2.4
WSSB				*e*S	Sb	22 23 58.4	-1.7
WLCH	Liuqiu	2.71	241	*e*P	Pb	22 23 26.2	-2.0
TWP	Hsiaoliuchiu	2.72	241	*e*P	Pn	22 23 25.4	+3.2
TWP				*e*S	Sb	22 23 58.8	-2.6
WDGT	Dungji	3.04	263	⇓*i*P	Pn	22 23 28.2	+1.6
WDGT				*e*S	Sn	22 24 02.5	+0.5
PHUB	P'eng-hu	3.09	267	*e*P	Pn	22 23 29.0	+1.7
PHUB				*e*S	Sn	22 24 03.5	+0.2
PNG	Penghu	3.10	268	P	Pn	22 23 29.0	+1.5
PNG				*e*S	Sn	22 24 04.2	+0.5
VCHM	Qimei	3.26	262	*e*P	Pn	22 23 31.0	+1.4
VWUC	VWUC	3.44	293	*e*P	Pn	22 23 32.1	+0.1
MATB	Ma-tsu	3.66	313	*e*P	Pn	22 23 35.0	-0.1
PTMZ	Houxiangcun	3.73	292	*e*P	Pn	22 23 36.1	0.0
XPSS	Dashiqiu	4.07	323	*e*P	Pn	22 23 40.4	-0.4
KNM	Kinmen	4.18	281	*e*P	Pn	22 23 44.5	+2.3
KNMB	Chin-men Tao	4.23	281		Pn	22 23 43.2	+0.2
KNMB	Chin-men Tao	4.23	281	*e*P	Pn	22 23 43.5	+0.6
MHZQ	Yeshan	4.28	305	*e*P	Pn	22 23 43.2	-0.4
AXDP	Jialang	4.69	286	*e*P	Pn	22 23 49.7	+0.4
ZPLA	Ao Xicun	4.76	274	*e*P	Pn	22 23 51.0	+0.8
DSXP	Dongshan	5.05	271	*e*P	Pn	22 23 55.4	+1.1
SXFK	Yanhouchang	5.51	300	*e*P	Pn	22 23 59.8	-0.7
JOW	Kunigami	5.75	56	Pn	Pn	22 24 02.1	-1.8
JOW	Kunigami	5.75	56	Pn	Pn	22 24 02.3	-1.6
	comp=E,6.8nm,0.3s,baz=152,slow=19,SNR=14						
JOW				Sn	Sn	22 25 10.7	+1.7
	baz=288,slow=28						
	comp=E,18nm,0.4s						
JOW	Kunigami	5.75	56	P	Pn	22 24 02.3	-1.6
TGY	Tagaytay City	9.72	192	LR	LR	22 28 43.8	
	comp=E,253nm,20.1s,baz=185,slow=37						
JNU	Nakatsue	11.71	35	Pn	Pn	22 25 23.4	-2.1
	comp=E,0.1nm,0.3s,baz=230,slow=7.9,SNR=1.2						
JNU				Sn	Sn	22 27 16.4	-19
	comp=E,0.1nm,0.3s,baz=157,slow=15,SNR=2.0						
JNU				LR	LR	22 30 03.6	
	comp=E,121nm,19.3s,baz=194,slow=39						
	comp=E,11nm,1.3s						
QIZ	Qiongzhong	13.05	252	P	Pn	22 25 41.8	-2.2
QIZ				LR	LR		
	comp=E,240nm,14.4s						
QIZ				LR	LR		
	comp=E,360nm,15.9s						
INCN	Inchon	14.11	12	Pn	Pn	22 25 58.6	+0.2
KSRS	Korea Array	14.37	16	Pn	Pn	22 26 03.0	+1.2
	comp=E,0.1nm,0.3s,baz=187,slow=11,SNR=12						
KS19	Wonju Array Si	14.40	16		Pn	22 26 03.4	+1.0
DAV	Davao City (W)	16.72	171	LR	LR	22 32 28.1	
	comp=E,104nm,20.0s,baz=344,slow=35						
BJT	Baijiatuau	17.26	342		Pn	22 26 39.3	+0.1
MJAR	Matsushiro Arr	18.37	42	P	P	22 26 51.7	-1.2
	baz=228,slow=10.0,SNR=5.2						
MJAR				LR	LR	22 34 39.6	
	comp=E,90nm,19.2s,baz=224,slow=40						
	comp=E,1.0nm,0.6s						
PZH	PanZhiHua	19.40	283	P	Pn	22 27 06.1	+0.4
HHC	Hu-ho-hao-te	19.60	334	*e*P	Pn	22 27 16.1	+8.2
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,97nm,4.5s						
HHC				LR	LR		
	comp=N,240nm,11.2s						
HHC				LR	LR		
	comp=E,120nm,11.3s						
HHC				LR	LR		
	comp=Z,340nm,11.8s						
LZH	Lanzhou	20.61	311	*e*P	Pn	22 27 21.8	+1.8
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
LZH				LR	LR		
	comp=Z,320nm,14.3s						
LZH				LR	LR		
	comp=Z,320nm,14.6s						
LZH				LR	LR		
	comp=Z,480nm,15.5s						
USA0B	Ussuriysk Arra	21.77	18	P	P	22 27 28.6	-1.1
USRK	Ussuriysk Ar.	21.77	18	P	P	22 27 28.4	-1.3
USRK	Ussuriysk Ar.	21.77	18	P	P	22 27 27.4	-2.3
	comp=Z,1.2nm,0.6s,baz=203,slow=7.2,SNR=7.9						
	comp=Z,1.2nm,0.6s						
BNX	BinXian	22.30	8	⇓P	P	22 27 34.9	-0.5
BNX				pmax	pmax		
	comp=Z,8.0nm,0.7s						
CHTO	Chiang Mai	22.87	262		P	22 27 41.4	-0.4
CMAR	Chiang Mai Arr	22.98	261	P	P	22 27 43.5	+0.6
	comp=Z,1.1nm,0.3s,baz=67,slow=8.2,SNR=6.1						
CMAR				LR	LR	22 37 44.1	
	comp=Z,69nm,18.9s,baz=290,slow=40						
	comp=Z,1.1nm,0.3s						
GUMO	Guam	23.05	112	LR	LR	22 36 21.7	
	comp=Z,85nm,19.3s,baz=94,slow=36						
GTA	Gaotai	25.07	314	*e*P	P	22 28 03.3	+0.7
GTA				pP	pP	22 28 07.5	-2.5
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				LR	LR		
	comp=Z,170nm,14.5s						
GTA				LR	LR		
	comp=Z,210nm,16.0s						
GTA				LR	LR		
	comp=Z,180nm,14.2s						
JKA	Kamikawa-asahi	25.98	34	P	P	22 28 10.5	-0.1
GOMU	GeErMu	27.27	304	SKKS	SKKSdf	23 01 18.0	-3.8
SONM	Songino Array	27.46	335	P	P	22 28 23.4	-0.7
SONM	Songino Array	27.46	335	P	P	22 28 22.8	-1.2
	comp=Z,0.9nm,0.6s,baz=150,slow=8.8,SNR=6.5						
SONM				LR	LR	22 40 56.9	
	comp=Z,217nm,18.1s,baz=152,slow=40						
	comp=Z,0.9nm,0.6s						
WMQ	Urumqi	35.16	313	*e*P	P	22 29 34.6	+2.9
PEA0B	Petropavlovsk-	39.39	33	P	P	22 30 08.6	+1.2
PEA0B				IAmb	IAmb	22 30 20.3	
	comp=Z,6.2nm,1.2s						
PETK	Petropavlovsk-	39.39	33	P	P	22 30 08.3	+0.9
PETK	Petropavlovsk-	39.39	33	P	P	22 30 07.4	0.0
	comp=Z,1.1nm,0.8s,baz=164,slow=2.8,SNR=4.7						
	comp=Z,1.1nm,0.8s						
MKAR	Makanchi Array	39.81	316	P	P	22 30 10.4	-0.7
MKAR	Makanchi Array	39.81	316	P	P	22 30 11.1	+0.1
	comp=Z,0.7nm,0.5s,baz=98,slow=8.7,SNR=14						
MKAR				PcP	PcP	22 32 16.4	-0.4
	comp=Z,0.8nm,0.7s,baz=90,slow=6.1,SNR=3.9						
	comp=Z,0.7nm,0.5s						
MAKZ	Makanchi	40.02	316	P	P	22 30 11.9	-0.8
MAKZ				IAmb	IAmb	22 30 15.4	

	comp=Z,6.2nm,1.4s						
ZAA0	Zalesovo Array	41.53	327	P	P	22 30 25.5	+0.4
ZALV	Zalesovo Beam	41.53	327	P	P	22 30 24.7	-0.5
ZALV	Zalesovo Beam	41.53	327	P	P	22 30 22.9	-2.3
	comp=Z,0.8nm,0.4s,baz=118,slow=8.6,SNR=3.6						
ZALV				LR	LR	22 48 59.0	
	comp=Z,118nm,18.4s,baz=16,slow=38						
	comp=Z,0.8nm,0.4s						
KSH	Kashi	42.51	303	P	P	22 30 33.3	-0.2
KSH				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NRN	Naryn	42.77	306	P	P	22 30 35.6	-0.2
NRN				IAmb	IAmb	22 30 53.6	
	comp=Z,6.1nm,1.0s						
KURBB	Kurchatov Arra	43.52	320	P	P	22 30 40.0	-1.3
	comp=Z,0.3nm,0.5s,baz=108,slow=9.8,SNR=4.2						
	comp=Z,0.3nm,0.5s						
WRA	Warramunga Arr	44.77	165	P	P	22 30 52.1	+0.5
	comp=Z,0.8nm,0.8s,baz=344,slow=8.4,SNR=3.1						
WRA				PcP	PcP	22 32 34.2	+0.6
	comp=Z,0.7nm,0.7s,baz=341,slow=3.1,SNR=2.7						
	comp=Z,0.8nm,0.8s						
WR8	Warramunga Arr	44.82	164	P	P	22 30 54.2	+2.2
WR8				IAmb	IAmb	22 30 58.0	
	comp=Z,7.9nm,1.1s						
KK31	Karatay Array	47.04	308	P	P	22 31 10.3	+0.8
KK31				IAmb	IAmb	22 31 26.8	
	comp=Z,5.8nm,1.5s						
KKAR	Karatay Array	47.04	308	P	P	22 31 10.5	+1.0
TIXI	Tiksi	48.10	3	P	P	22 31 15.5	-1.6
	comp=Z,1.4nm,0.3s,baz=225,slow=13,SNR=1.4						
	comp=Z,1.4nm,0.3s						
AS31	Alice Springs	48.26	166	P	P	22 31 20.6	+1.6
ASAR	Alice Springs	48.26	166	P	P	22 31 20.6	+1.6
	comp=Z,0.5nm,0.7s,baz=348,slow=7.0,SNR=5.4						
	comp=Z,0.5nm,0.7s						
BVAR	Borovoye Array	49.07	321	P	P	22 31 23.1	-1.9
	comp=Z,0.4nm,0.5s,baz=104,slow=10.0,SNR=5.6						
BVAR				PcP	PcP	22 32 48.4	+0.1
	comp=Z,0.3nm,0.5s,baz=98,slow=3.1,SNR=1.7						
	comp=Z,0.4nm,0.5s						
ABKAR	Akbulak array	54.93	315	P	P	22 32 09.0	+0.4
ABKAR				IAmb	IAmb	22 32 26.4	
	comp=Z,1.7nm,0.7s						
ABKAR	Akbulak array	54.93	315	P	P	22 32 09.3	+0.7
STKA	Stephens Creek	58.06	161	P	P	22 32 32.2	+1.3
STKA	Stephens Creek	58.06	161	P	P	22 32 32.3	+1.3
	comp=Z,1.5nm,0.7s,baz=307,slow=14,SNR=3.0						
	comp=Z,1.5nm,0.7s						
C19K	Lookout Ridge	63.62	23	P	P	22 33 09.4	+1.0
J17K	VABM Dome	63.73	29	P	P	22 33 10.4	+1.2
H19K	Roundabout Mou	64.82	27		P	22 33 17.3	+1.1
H19K				IAmb	IAmb	22 33 18.5	
	comp=Z,5.1nm,0.9s						
J19K	Poorman	65.24	29		P	22 33 19.9	+0.8
J19K				IAmb	IAmb	22 33 22.1	
	comp=Z,3.0nm,0.8s						
CAST	Castle Rocks	66.86	29	P	P	22 33 30.2	+0.7
CAST				IAmb	IAmb	22 33 47.6	
	comp=Z,2.4nm,0.9s						
E23K	Chandalar	67.32	24		P	22 33 33.7	+1.3
E23K				IAmb	IAmb	22 33 37.0	
	comp=Z,3.8nm,1.1s						
KDAK	Kodiak Island	67.38	35	P	P	22 33 32.8	0.0
F24K	Squaw Lake	68.05	24		P	22 33 38.1	+1.1
F24K				IAmb	IAmb	22 33 39.1	
	comp=Z,3.3nm,0.8s						
ILAR	Eielson Array	68.91	27	P	P	22 33 41.4	-1.0
	comp=Z,0.3nm,0.5s,baz=270,slow=5.4,SNR=6.7						
	comp=Z,0.3nm,0.5s						
BMAR	Burnt Mountain	69.31	24	P	P	22 33 46.5	+1.6
BCAR	Beaver Creek A	71.50	29	P	P	22 33 59.6	+1.3
FINES	FINESS Array B	72.68	330	P	P	22 34 05.3	0.0
FINES	FINESS Array B	72.68	330	P	P	22 34 05.4	+0.1
	comp=Z,1.3nm,0.5s,baz=50,slow=6.1,SNR=17						
	comp=Z,1.3nm,0.5s						
L29M	L29M	73.08	28		P	22 34 09.1	+1.4
L29M				IAmb	IAmb	22 34 10.1	
	comp=Z,3.7nm,0.7s						
AKASG	Malin Array Be	74.30	319	P	P	22 34 14.8	-0.2
	comp=Z,0.8nm,0.6s,baz=61,slow=7.0,SNR=4.1						
	comp=Z,0.8nm,0.6s						
BRTR	Keskin Array B	74.75	307	P	P	22 34 18.4	+0.3
	comp=Z,1.3nm,1.0s,baz=86,slow=1.7,SNR=6.0						
	comp=Z,1.3nm,1.0s						
HFS	Hagfors	78.78	331	P	P	22 34 39.4	-0.8
	comp=Z,1.0nm,0.6s,baz=38,slow=2.6,SNR=5.3						
	comp=Z,1.0nm,0.6s						
NB2	NORSAR Subarra	79.41	333	P	P	22 34 43.0	-0.7
	comp=Z,1.4nm,0.8s,baz=58,slow=5.3						
NOA	NORSAR Array B	79.41	333	P	P	22 34 42.9	-0.8
	comp=Z,0.4nm,0.6s,baz=59,slow=5.3,SNR=3.9						
	comp=Z,0.4nm,0.6s						
NC204	NORSAR Array S	79.47	333	P	P	22 34 43.7	-0.4
VYHS	Vyhne	81.39	319	*e*	P	22 34 56.3	+1.7
YKA	Yellowknife Ar	82.79	23	P	P	22 35 02.1	+0.5
	comp=Z,2.0nm,0.9s,baz=316,slow=5.8,SNR=6.8						
	comp=Z,2.0nm,0.9s						
GERES	GERESS Array B	84.24	321	P	P	22 35 09.9	+0.4
	comp=Z,1.0nm,0.8s,baz=61,slow=5.0,SNR=7.5						
	comp=Z,1.0nm,0.8s						
NVAR	Mina Array Bea	95.69	44	P	P	22 36 05.5	+1.5
	comp=Z,0.6nm,0.5s,baz=295,slow=5.6,SNR=3.7						
	comp=Z,0.6nm,0.5s						

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*IDC **22** 22:31:32.4±0.5, 14.°50N×92.°53W, h0^{km}, mb4.6/26, mbtmp4.6/29, ML5.0/3, MS5.0/61, Error ellipse: s-maj=22.5km s-min=11.4km az=52.0*

*MOS **22** 22:31:32.1±0.9, 14.°38N×92.°77W, h10^{km}, mb5.2/28, MS5.2/22, Error ellipse: s-maj=9.5km s-min=5.1km az=102.7*

*NEIC **22** 22:31:34.9, 14.°40N×92.°95W, h26^{km}*

*NEIC **22** 22:31:34.9, 14.°60N×92.°74W, h26^{km}, Moment Tensor Solution. Duration: 3^{s}3 Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.39; M$_{θθ}$-1.85; M$_{φφ}$-0.54; M$_{rθ}$1.39; M$_{θφ}$1.00; M$_{φr}$-0.49; Fault plane solution: M$_0$2.80000×10^{17} NP1: φ$_s$302.86000°, δ29.45000°, λ97.90000°. NP2: φ$_s$113.81000°, δ60.86000°, λ85.56000°. Principal axes: T 2.8126, Plg74.0000°, Azm13.0000°; N -0.0180, Plg4.0000°, Azm116.0000°; P -2.7945, Plg16.0000°, Azm207.0000°;*

*ISC-PP **22** 22:31:34, 14.°39N×92.°96W, h35^{km}, Mwppsm6.0, Moment Tensor Solution. s28 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.53±.12; M$_{θθ}$0.14±.17; M$_{φφ}$-0.67±.18; M$_{rθ}$0.04±.14; M$_{θφ}$-0.28±.24; M$_{φr}$0.21±.09; Fault plane solution: M$_0$1.24000×10^{18} NP1:φ$_s$170.40000°, δ57.40000°, λ95.20000°. NP2:φ$_s$340.80000°, δ32.90000°, λ81.90000°.*

*NEIC **22** 22:31:34.9±2.0, 14.°39N±0.°05×92.°96W±0.°05, h17^{km}±1^{km}, mb5.0/162, Ms_20 5.2/524, Mwb5.5/40, Mww5.6/68, Md5.6/172(MEX) Error ellipse: s-maj=8.3km s-min=7.4km az=233.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.85; M$_{θθ}$-1.67; M$_{φφ}$-0.18; M$_{rθ}$0.20; M$_{θφ}$0.73; M$_{φr}$-0.03; Fault plane solution: M$_0$1.92000×10^{17} NP1:φ$_s$293.79000°, δ42.08000°, λ92.49000°. NP2: φ$_s$110.44000°, δ47.97000°, λ87.76000°. Principal axes: T 1.8627, Plg87.0000°, Azm352.0000°; N 0.1135, Plg2.0000°, Azm112.0000°; P -1.9763, Plg3.0000°, Azm202.0000°;*

*SNET **22** 22:31:35.7±1.2, 14.°08N×93.°10W, h35^{km}±999^{km}, ML5.2*

*GCG **22** 22:31:36.5±1.8, 14.°27N×92.°99W, h35^{km}±10^{km}, MD5.2, ML5.4, MW4.9*

*NEIC **22** 22:31:38.9, 14.°45N×92.°83W, h38^{km}*

*MEX **22** 22:31:38.1±1.1, 14.°39N×93.°05W, h12^{km}±23^{km}, MD5.6*

*GCMT **22** 22:31:38.9±0.1, 14.°40N±0.°01×93.°15W±0.°01, h23^{km}, MW5.6/152, Moment Tensor Solution. s147,c281; s152,c300; Duration: 1^{s}5 Moment tensor: Scale 10^{17} Nm; M$_{rr}$2.71±.03; M$_{θθ}$-2.09±.02; M$_{φφ}$-0.62±.02; M$_{rθ}$1.40±.04; M$_{θφ}$0.89±.02; M$_{φr}$-1.26±.04; Best double couple: M$_0$3.21400×10^{17} NP1:φ$_s$288.00000°, δ28.00000°, λ75.00000°. NP2:φ$_s$124.00000°, δ63.00000°, λ98.00000°. Principal axes: T 3.3490, Plg71.0000°, Azm52.0000°; N -0.2720, Plg7.0000°, Azm301.0000°; P -3.0790, Plg18.0000°, Azm209.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IPGP **22** 22:31:38.0, 14.°45N×92.°83W, h29^{km}, Mw5.5, Fault plane solution: NP1:φ$_s$289.00000°, δ35.00000°, λ82.00000°. NP2:φ$_s$118.00000°, δ55.00000°, λ96.00000°.*

*CATAC **22** 22:31:39.1±0.3, 14˚N±3˚×9˚3W±˚, h10^{km}, M5.4/7, mb5.8/7, mB5.8/7, MLv5.3/6, Mw(mB)5.4/7, MwMwp5.3/5, Mwp5.5/5, Error ellipse: s-maj=6.2km s-min=3.0km az=19.5, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.85; M$_{θθ}$-1.57; M$_{φφ}$-0.28; M$_{rθ}$0.34; M$_{θφ}$0.82; M$_{φr}$-0.35; Fault plane solution: M$_0$1.97481×10^{17} NP1: φ$_s$121.04662°, δ51.95730°, λ96.56851°. NP2: φ$_s$290.46285°, δ38.52081°, λ81.68288°. Principal axes: T 1.9185, Plg81.4866°, Azm64.1657°; N 0.1081, Plg5.1687°, Azm296.9878°; P -2.0266, Plg6.7463°, Azm206.3747°; Moment Tensor Solution. Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.85; M$_{θθ}$-1.57; M$_{φφ}$-0.29; M$_{rθ}$0.53; M$_{θφ}$0.80; M$_{φr}$-0.45; Fault plane solution: M$_0$2.02996×10^{17} NP1: φ$_s$121.08975°, δ54.95089°, λ96.31734°. NP2: φ$_s$290.17833°, δ35.54207°, λ81.08523°. Principal axes: T 1.9863, Plg78.9443°, Azm55.0274°; N 0.0847, Plg5.1683°, Azm297.4520°; P -2.0710, Plg9.7465°, Azm206.5618°; Moment Tensor Solution. Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.86; M$_{θθ}$-1.64; M$_{φφ}$-0.22; M$_{rθ}$0.53; M$_{θφ}$0.80; M$_{φr}$-0.34; Fault plane solution: M$_0$2.03203×10^{17} NP1: φ$_s$116.95920°, δ54.06716°, λ93.31838°. NP2: φ$_s$291.31649°, δ36.06519°, λ85.43362°. Principal axes: T 1.9622, Plg80.5902°, Azm41.4573°; N 0.1332, Plg2.6864°, Azm295.0104°; P -2.0954, Plg9.0115°, Azm204.5841°; Moment Tensor Solution. Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.73; M$_{θθ}$-1.47; M$_{φφ}$-0.26; M$_{rθ}$0.20; M$_{θφ}$0.70; M$_{φr}$-0.47; Fault plane solution: M$_0$1.83323×10^{17} NP1: φ$_s$125.51214°, δ52.12729°, λ103.82244°. NP2: φ$_s$283.67252°, δ39.95787°, λ72.92304°. Principal axes: T 1.8340, Plg77.4505°, Azm86.5445°; N -0.0015, Plg10.8707°, Azm296.9228°; P -1.8325, Plg6.1948°, Azm205.7284°; Moment Tensor Solution. Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.87; M$_{θθ}$-1.61; M$_{φφ}$-0.26; M$_{rθ}$0.38; M$_{θφ}$0.80; M$_{φr}$-0.35; Fault plane solution: M$_0$1.99627×10^{17} NP1:φ$_s$119.80969°, δ52.31544°, λ96.11459°. NP2:φ$_s$289.87008°, δ38.10455°, λ82.14876°. Principal axes: T 1.9435, Plg81.3695°, Azm59.9367°; N 0.1016, Plg4.8356°, Azm296.0628°; P -2.0451, Plg7.1316°, Azm205.4564°; confirmed*

*BJI **22** 22:31:42.2, 14.°50N×92.°80W, h60^{km}, mB5.5/24, Ms5.5/35, Ms7 5.3/35*

ISC 22 22:31:38.0±0.6**, 14.°34N**±0.°04×**92.°97W**±0.°03**, h42**^{km}±4^{km}**, n1214, σ1^{s}78**/1042**, mb4.9**/125**, MS5.2**/342**, 2C-12D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.88	50		Pn	22 31 52.1	-1.8
THIG		0.88	50	*e*P	Pn	22 31 52.6	-1.4
THIG				*e*S	Sn	22 32 04.0	-1.6
THIG		0.88	50	*i* P	Pn	22 31 52.4	-1.5
	comp=Z,34μm,0.5s						
THIG				*e*S	Sn	22 32 05.5	0.0
THIG				IAML		22 32 11.2	
	comp=E,85μm,0.6s						
SMCA	Catarina	1.00	59	*e*P	Pn	22 31 54.3	-1.4
	comp=Z,20μm,1.1s						
PATR	El Naranjo	1.04	43	⇓*e*P	Pn	22 31 54.7	-1.7
PATR				*e*S	Sn	22 32 08.7	-1.3
PAVE	Pavencul	1.14	42	⇓*e*P	Pn	22 31 56.2	-1.5
PAVE				*e*S	Sn	22 32 10.8	-1.4
RTAL	Retalhuleu	1.24	82		Pn	22 31 58.0	-1.0
RTAL					Sn	22 32 15.3	+0.8
RTAL	Retalhuleu	1.24	82	*e*P	Pn	22 31 58.0	-1.0
RTAL				*e*S	Sn	22 32 15.3	+0.8
RTAL	Retalhuleu	1.24	82	P	Pn	22 31 58.0	-1.0
PCIG		1.38	350		Pn	22 31 58.4	-2.4
PCIG					Sn	22 32 14.3	-3.4
PCIG		1.38	350	⇓*i*P	Pn	22 31 58.4	-2.4
PCIG				*e*S	Sn	22 32 14.3	-3.4
STG8	El Palmar, Qui	1.57	86	*i* P	Pn	22 31 59.7	-3.9
	comp=Z,17μm,0.3s						
STG8				IAML		22 32 24.0	
	comp=N,55μm,0.4s						
STG0	El Palmar, Qui	1.57	87	*i* P	Pn	22 31 59.8	-3.8
	comp=Z,26μm,0.2s						
STG0				IAML		22 32 26.9	
	comp=E,92μm,0.2s						
SOKI	Kika Raxquin	1.58	72	*e*P	Pn	22 32 04.1	+0.1
	comp=Z,15μm,0.8s						
SOKI				IAML		22 32 38.4	
	comp=N,44μm,0.8s						
HUEH	Huehuetenango	1.71	55		Pn	22 32 05.9	+0.3
HUEH	Huehuetenango	1.71	55	*e*P	Pn	22 32 06.2	+0.6
HUEH				*e*S	Sn	22 32 31.8	+5.4
HUEH	Huehuetenango	1.71	55	*e*P	Pn	22 32 06.8	+1.2
HUEH				*e*S	Sn	22 32 32.9	+6.5
HUEH	Huehuetenango	1.71	55	*e*P	Pn	22 32 06.3	+0.7
HUEH				IAML		22 32 35.2	
	comp=E,63μm,0.7s						
HUEH	Huehuetenango	1.71	55	P	Pn	22 32 06.2	+0.6
HUEH	Huehuetenango	1.71	55	S	Sn	22 32 30.9	+4.5
ESSG	Sabana Grande	2.07	89	*e*P	Pn	22 32 09.1	-1.2
ESSG				IAML		22 32 42.7	
	comp=E,14μm,0.6s						
CCIG	Comitan	2.09	22		Pn	22 32 11.5	+0.8
CCIG	Comitan	2.09	22	*e*P	Pn	22 32 11.2	+0.5
CCIG				*e*S	Sn	22 32 41.8	+6.2
CCIG	Comitan	2.09	22	*i* P	Pn	22 32 11.8	+1.1
	comp=Z,11μm,0.7s						
CCIG				IAML		22 32 49.2	
	comp=N,23μm,0.6s						
CCIG	Comitan	2.09	22	P	Pn	22 32 12.3	+1.6
GCG4	OSOP	2.37	84	*e*P	Pn	22 32 15.3	+0.7
	comp=Z,12μm,0.9s						
GCG4				*i* S	Sn	22 32 42.1	-0.4
FG16	Alotenango, Sa	2.38	91	*i* P	Pn	22 32 09.1	-5.7
FG16				IAML		22 32 40.3	
	comp=E,74μm,0.3s						
TGBT	Tuxtla Gutierr	2.42	357		Pn	22 32 15.4	+0.3
TGBT					Sn	22 32 45.8	+2.2
TGBT	Tuxtla Gutierr	2.42	357	*e*P	Pn	22 32 15.4	+0.3
TGBT				*e*S	Sn	22 32 45.8	+2.2
TGIG		2.42	356		Pn	22 32 15.3	+0.1
TGIG		2.42	356	*e*P	Pn	22 32 15.6	+0.3
TGIG				*e*S	Sn	22 32 43.6	-0.1
TGIG		2.42	356	*i* P	Pn	22 32 15.5	+0.3
	comp=Z,17μm,0.5s						
TGIG				*i* S	Sn	22 32 44.6	+0.9
TGIG				IAML		22 32 50.3	
	comp=E,25μm,0.5s						
LOAL	Lomas de Alarc	3.11	96	P	Pn	22 32 25.1	+0.5
LOAL	Lomas de Alarc	3.11	96	S	Sn	22 33 00.6	+0.1
NUBE	Las Nubes	3.12	98	*e*P	Pn	22 32 24.4	-0.5
NUBE				*i* S	Sn	22 33 01.9	+0.8
NUBE	Las Nubes	3.12	98	P	Pn	22 32 24.8	0.0
CEVE	Cerro Verde	3.28	99	*e*P	Pn	22 32 26.8	-0.4
CEVE				*e*S	Sn	22 33 07.1	+1.9
CEVE				IAML		22 33 17.1	
	comp=Z,8μm,0.5s						
CEVE	Cerro Verde	3.28	99	P	Pn	22 32 27.7	+0.5
CEVE	Cerro Verde	3.28	99	S	Sn	22 33 09.2	+4.0
CMIG	Matias Romero	3.30	326	Pn	Pn	22 32 26.6	-0.6
	comp=Z,84nm,0.3s,baz=142,slow=10,SNR=279						
CMIG				Sn	Sn	22 33 04.1	-1.0
	comp=Z,617nm,0.3s,baz=115,slow=14,SNR=5.2						
CMIG				LR	LR	22 33 57.5	
	comp=Z,15μm,18.4s,baz=133,slow=42						
	comp=Z,320nm,0.3s						
UNIC	Universidad Ca	3.33	96	S	Sn	22 33 08.3	+2.2
HUIG	Huatulco	3.35	295		Pn	22 32 26.5	-1.4
HUIG	Huatulco	3.35	295	*e*P	Pn	22 32 26.5	-1.4
HUIG				*e*S	Sn	22 32 59.2	-7.3
HUIG	Huatulco	3.35	295	*e*P	Pn	22 32 26.7	-1.2
HUIG				IAML		22 33 55.4	
	comp=N,3μm,0.8s						
JAYA	Jayaque - finc	3.48	101	*e*P	Pn	22 32 29.3	-0.5
JAYA				*e*S	Sn	22 33 10.3	+0.4
JAYA				IAML		22 33 11.6	
	comp=Z,3μm,0.3s						
JAYA	Jayaque - finc	3.48	101	*e*P	Pn	22 32 29.7	-0.1
JAYA				*i* S	Sn	22 33 09.7	-0.2
JAYA	Jayaque - finc	3.48	101	P	Pn	22 32 30.2	+0.4
MTO3	Montecristo	3.49	89	*e*P	Pn	22 32 29.6	-0.5
MTO3	Montecristo	3.49	89	P	Pn	22 32 30.0	-0.1
CEDA	San Andres	3.51	98	P	Pn	22 32 29.9	-0.1
ESQI	Esquipulas	3.52	86		Pn	22 32 30.2	-0.1
ESQI	Esquipulas	3.52	86	*e*P	Pn	22 32 31.1	+0.9
ESQI	Esquipulas	3.52	86	P	Pn	22 32 31.9	+1.6
PMON	Piamonte	3.60	100	P	Pn	22 32 31.6	+0.2
PMON	Piamonte	3.60	100	S	Sn	22 33 13.5	+0.8
VHSA	Villahermosa	3.62	0	*e*P	Pn	22 32 33.7	+2.1
VHSA				*e*S	Sn	22 33 16.9	+3.9
BOQS	Boqueron	3.63	99	*e*P	Pn	22 32 31.9	0.0
UEES	Universidad Ev	3.67	99	P	Pn	22 32 34.1	+1.7
UEES	Universidad Ev	3.67	99	S	Sn	22 33 15.7	+1.3
IGN	Direccin Gen	3.74	99	S	Sn	22 33 17.9	+1.8
PANCS	Alcalda de	3.75	101	S	Sn	22 33 16.2	-0.1
LOMA	Loma Larga	3.75	100	P	Pn	22 32 34.3	+0.8
LOMA	Loma Larga	3.75	100	S	Sn	22 33 19.3	+2.8
UDBS	Universidad Do	3.75	99	S	Sn	22 33 18.6	+2.2
LBRS	Las Brisas	3.85	99	*e*P	Pn	22 32 35.5	+0.6
LFRS	El Faro	3.86	100	*e*P	Pn	22 32 34.0	-0.9
TUIG	Tuzandepetl	3.93	339	*e*P	Pn	22 32 34.5	-1.3
TUIG				*e*S	Sn	22 33 23.3	+2.6
MIHL	Minatitlan	3.93	338	*e*P	Pn	22 32 35.9	+0.1
MIHL				*e*S	Sn	22 33 23.3	+2.6
PETF	Flores	3.93	49	Pn	Pn	22 32 36.7	+0.8
PETF	Flores	3.93	49	*e*P	Pn	22 32 36.8	+1.0
PETF				*e*S	Sn	22 33 22.4	+1.6
PETF	Flores	3.93	49	*e*P	Pn	22 32 37.3	+1.4
	comp=Z,2μm,1.1s						
PETF				IAML		22 32 47.8	
	comp=E,10μm,0.5s						
PETF	Flores	3.93	49	P	Pn	22 32 37.2	+1.3
PAVA	Las Pavas	3.96	99	P	Pn	22 32 37.7	+1.4
UESV	Universidad de	4.12	99	S	Sn	22 33 27.7	+2.3
PEIG	Puerto Escondi	4.36	293		Pn	22 32 41.1	-0.7
PEIG	Puerto Escondi	4.36	293	*e*P	Pn	22 32 41.1	-0.7
PEIG				*e*S	Sn	22 33 24.8	-6.6
IZABA	Izabal, Puerto	4.45	71	*e*P	Pn	22 32 44.7	+1.7
OXLC	Oaxaca	4.50	307	*e*P	Pn	22 32 46.7	+2.8
OXLC				*e*S	Sn	22 33 31.2	-4.0
OXBJ	Oaxaca	4.52	307	*e*P	Pn	22 32 47.1	+2.9
OXBJ				*e*S	Sn	22 33 32.3	-3.3
OXIG	Oaxaca	4.53	307		Pn	22 32 45.0	+0.7
VHO	Vista Hermosa	4.53	307	*e*P	Pn	22 32 45.0	+0.7
VHO				*e*S	Sn	22 33 37.0	+1.1
PACA	Pacayal	4.59	100	P	Pn	22 32 46.3	+1.3
LCND	La Caada	5.04	101	*e*P	Pn	22 32 51.2	+0.1
LCND	La Caada	5.04	101	P	Pn	22 32 52.6	+1.6
YOIG	Yosondua	5.07	300		Pn	22 32 52.9	+1.1
YOIG	Yosondua	5.07	300	*e*P	Pn	22 32 52.9	+1.1
YOIG				*e*S	Sn	22 33 49.0	-0.3
CNCH	Conchagua	5.10	101	*e*P	Pn	22 32 52.0	0.0
PNIG	Pinotepa	5.38	293		Pn	22 32 55.1	-0.7
PNIG	Pinotepa	5.38	293	*e*P	Pn	22 32 55.1	-0.7
PNIG				*e*S	Sn	22 33 48.4	-8.1
TOIG	Toxpalan	5.42	314		Pn	22 32 56.0	-0.4
TOIG	Toxpalan	5.42	314	*e*P	Pn	22 32 56.0	-0.4
TOIG				*e*S	Sn	22 33 55.9	-1.9
TXIG	Tlaxiaco	5.45	303		Pn	22 32 58.6	+1.6
TXIG	Tlaxiaco	5.45	303	*e*P	Pn	22 32 58.6	+1.6
TXIG				*e*S	Sn	22 33 57.7	-1.0
POTN	Potosi Cosigui	5.47	103	P	Pn	22 32 58.2	+1.1
POTN				S	Sn	22 33 58.6	-0.2
TGUH	Tegucigalpa,Un	5.53	92		Pn	22 32 57.6	-0.3
TGUH	Tegucigalpa,Un	5.53	92	P	Pn	22 33 01.3	+3.3
HLIG	Huajuapan de L	5.80	307		Pn	22 33 02.3	+0.6
HLIG	Huajuapan de L	5.80	307	*e*P	Pn	22 33 02.3	+0.6
HLIG				*e*S	Sn	22 33 59.8	-7.4
TPIG	Tehuac#an	5.85	314		Pn	22 33 02.7	+0.3
TPIG	Tehuac#an	5.85	314	*e*P	Pn	22 33 02.7	+0.3
TPIG				*e*S	Sn	22 34 14.1	+5.7
THEZ	Tehuacan	5.91	315	*e*P	Pn	22 33 04.6	+1.5
THEZ				*e*S	Sn	22 34 02.9	-6.8
CRIN	San Cristobal	5.98	105		Pn	22 33 04.1	0.0
PKGN	Cerro Pekin	6.06	105	P	Pn	22 33 04.8	-0.3
FTIG	Fresnillo de T	6.10	306		Pn	22 33 07.2	+1.4
FTIG	Fresnillo de T	6.10	306	*e*P	Pn	22 33 07.2	+1.4
FTIG				*e*S	Sn	22 34 15.4	+1.0
JAUV	Jalcomulco	6.20	324	*e*P	Pn	22 33 04.2	-2.9
JAUV				*e*S	Sn	22 34 12.5	-4.2
HERN	Volcan Telica	6.21	105		Pn	22 33 07.8	+0.5
POHV	Veracruz	6.26	319		Pn	22 33 26.3	+18
TLIG	Tlapa	6.27	301		Pn	22 33 09.4	+1.3
TLIG	Tlapa	6.27	301	*e*P	Pn	22 33 05.5	-2.5
TLIG				*e*S	Sn	22 34 17.7	-0.8
TLIG	Tlapa	6.27	301	P	Pn	22 33 14.0	+6.0
TLIG	Tlapa	6.27	301	S	Sn	22 34 30.0	+12
CNGN	Cerro Negro	6.37	106		Pn	22 33 10.7	+1.3
CNGN	Cerro Negro	6.37	106	P	Pn	22 33 09.7	+0.3
HMTT	Tlapaneco	6.38	303	*e*S	Sn	22 34 26.0	+4.7
CRIG	Cruz Grande	6.40	293		Pn	22 33 09.8	0.0
CRIG	Cruz Grande	6.40	293	*e*P	Pn	22 33 09.8	0.0
CRIG				*e*S	Sn	22 34 12.7	-9.0
PHPU	Puebla	6.83	314	*e*S	Sn	22 34 22.0	-11
MGAN	Managua	6.90	108		Pn	22 33 17.9	+1.3
DAIG	Los Arroyos	6.97	293		Pn	22 33 17.7	+0.1
DAIG	Los Arroyos	6.97	293	*e*P	Pn	22 33 17.7	+0.1
DAIG				*e*S	Sn	22 34 29.9	-5.7
PBCV	Popocatepetl	7.07	312	*e*P	Pn	22 33 20.4	+1.0
PBCV				*e*S	Sn	22 34 31.0	-7.7
PBPN	Popocatepetl	7.16	311	*e*P	Pn	22 33 21.4	+0.7
PBPN				*e*P	Pn	22 33 23.6	+2.9
PBPN				*e*S	Sn	22 34 38.0	-3.1
PBPN				*e*S	Sn	22 34 43.2	+2.2
PBXN	Popocatepetl	7.16	311	*e*P	Pn	22 33 23.1	+2.4
PBXN				*e*S	Sn	22 34 45.5	+4.5
PPM	Popocatepetl	7.17	312	*e*P	Pn	22 33 20.6	-0.3
PPM				*e*S	Sn	22 34 39.4	-2.0
PPIG	Popocatepetl	7.17	312		Pn	22 33 20.6	-0.3
MYIG	Merida	7.26	25	*e*P	Pn	22 33 21.5	-0.1
MYIG				*e*S	Sn	22 34 41.2	-1.6
CXUV	Coxquihui	7.29	323	*e*P	Pn	22 33 20.4	-1.6
CXUV				*e*S	Sn	22 34 36.0	-7.5
MEIG	Mezcala	7.32	300		Pn	22 33 23.9	+1.4
MEIG	Mezcala	7.32	300	*e*P	Pn	22 33 23.9	+1.4
MEIG				*e*S	Sn	22 34 37.4	-7.0
AMVM	AMECAMECA	7.33	311	*e*P	Pn	22 33 20.0	-2.8
AMVM				*e*S	Sn	22 34 45.0	+0.1
BOAB	BOACO BROADBAN	7.35	104		Pn	22 33 22.4	-0.4
TEIG	Tepich	7.37	37		Pn	22 33 22.0	-1.0
TEIG	Tepich	7.37	37	*e*P	Pn	22 33 21.6	-1.5
TEIG				*e*S	Sn	22 34 42.5	-2.9
YAIG	Yautepec	7.38	308		Pn	22 33 25.5	+2.2
YAIG	Yautepec	7.38	308	*e*P	Pn	22 33 25.5	+2.2
YAIG				*e*S	Sn	22 34 37.4	-8.4
PLIG	Platanillo	7.45	304		Pn	22 33 26.1	+1.8
PLIG	Platanillo	7.45	304	*e*P	Pn	22 33 26.1	+1.8
PLIG				*e*S	Sn	22 34 47.8	+0.1
CAIG	El Cayaco	7.53	292	*e*P	Pn	22 33 21.3	-4.0
CAIG				*e*S	Sn	22 34 42.4	-7.0
MPVM	San Francisco	7.54	311	*e*P	Pn	22 33 26.4	+0.7
MPVM				*e*S	Sn	22 34 50.6	+0.6
TLVM	San Miguel Top	7.65	310	*e*P	Pn	22 33 26.1	-1.1
TLVM				*e*S	Sn	22 34 52.0	-0.9
XCVM	Xochimilco	7.65	310	*e*P	Pn	22 33 23.3	-3.9
XCVM				*e*S	Sn	22 34 42.8	-10
COVM	Coyoacan	7.74	311	*e*S	Sn	22 34 44.6	-10
UNM	Universidad Na	7.74	311	Pn	Pn	22 33 29.0	+0.5
UNM	Universidad Na	7.74	311	*e*P	Pn	22 33 26.7	-1.7
UNM				*e*S	Sn	22 34 56.3	+1.3
UNM	Universidad Na	7.74	311	P	Pn	22 33 29.0	+0.5
VTVM	Tizayuca	7.74	315	*e*P	Pn	22 33 25.1	-3.4
VTVM				*e*S	Sn	22 34 57.7	+2.6
CUP5	Mexico City	7.75	311	*e*S	Sn	22 34 53.2	-1.9
PBVM	Pinon	7.75	312		Pn	22 33 28.8	+0.6
PBVM	Pinon	7.75	312	*e*P	Pn	22 33 28.8	+0.6
PBVM				*e*S	Sn	22 35 01.2	+6.6
MAVM	Malinalco, Edo	7.76	307		Pn	22 33 28.8	+0.2
MAVM	Malinalco, Edo	7.76	307	*e*P	Pn	22 33 28.8	+0.2
MAVM				*e*S	Sn	22 34 59.5	+4.2
SCT2	Benito Juarez	7.76	311	*e*P	Pn	22 33 30.8	+2.1
BJVM	Benito Juarez	7.76	311	*e*S	Sn	22 34 57.2	+1.6
AOVM	Tlapan	7.81	310		Pn	22 33 29.6	0.0
AOVM	Tlapan	7.81	310	*e*P	Pn	22 33 29.6	0.0
AOVM				*e*S	Sn	22 35 00.7	+3.7
CJVM	Cuajimalpa	7.84	310	*e*S	Sn	22 34 57.9	+0.4
INVM	La Marquesa	7.87	310	*e*P	Pn	22 33 28.4	-2.0
INVM				*e*S	Sn	22 35 01.9	+3.5
ACON	Acoyapa	7.95	106		Pn	22 33 32.3	+1.2
AZVM	Cuida Lopez Ma	7.98	312		Pn	22 33 34.4	+2.7
AZVM	Cuida Lopez Ma	7.98	312	*e*P	Pn	22 33 34.4	+2.7
AZVM				*e*S	Sn	22 35 08.4	+7.5
ZUVM	ZUMPANGO	7.99	314	*e*P	Pn	22 33 39.1	+7.2

ZUVM				*e*S	Sn	22 35 04.2	+3.0
ARIG	Puente Sto Nin	8.10	300		Pn	22 33 35.0	+2.0
ARIG	Puente Sto Nin	8.10	300	*e*P	Pn	22 33 35.0	+2.0
ARIG				*e*S	Sn	22 35 06.1	+2.8
DHIG	Demacu	8.29	316		Pn	22 33 37.3	+1.4
DEIG	Demacu	8.29	316	*e*P	Pn	22 33 37.3	+1.4
DEIG				*e*S	Sn	22 35 11.8	+3.4
ACIG	Acambay	8.66	311		Pn	22 33 40.5	-0.6
ACIG	Acambay	8.66	311	*e*P	Pn	22 33 40.5	-0.6
ACIG				*e*S	Sn	22 35 07.9	-10
ESPN	Las Esperanzas	8.70	103		Pn	22 33 43.0	+1.6
CTUV	Llano Grande	8.75	325	*e*P	Pn	22 33 42.8	+0.8
CTUV				*e*S	Sn	22 35 19.4	0.0
ZIIG	Zihuatanejo	8.79	293		Pn	22 33 43.9	+1.2
ZIIG	Zihuatanejo	8.79	293	*e*P	Pn	22 33 43.9	+1.2
ZIIG				*e*S	Sn	22 35 21.4	+1.0
JTS	Las Juntas de	8.80	116		Pn	22 33 45.0	+2.2
JTS	Las Juntas de	8.80	116	Pn	Pn	22 33 38.7	-4.1
	comp=E,0.6nm,0.3s,baz=296,slow=17,SNR=1.7						
JTS	Las Juntas de	8.80	116	P	Pn	22 33 45.0	+2.2
SOCE	Pocosol	9.05	115		Pn	22 33 47.1	+0.9
MOIG	Morelia	9.49	305		Pn	22 33 53.2	+0.8
MOIG	Morelia	9.49	305	*e*P	Pn	22 33 54.1	+1.8
MOIG				*e*S	Sn	22 35 45.5	+7.6
MOIG	Morelia	9.49	305	P	Pn	22 33 56.4	+4.0
MOIG	Morelia	9.49	305	S	Sn	22 35 54.4	+17
JRQG	Juriquilla Cam	9.53	313		Pn	22 33 53.3	+0.3
JRQG	Juriquilla Cam	9.53	313	*e*P	Pn	22 33 51.5	-1.5
JRQG				*e*S	Sn	22 35 41.8	+2.8
HDC	Heredia	9.67	116	Pn	Pn	22 33 56.8	+2.0
HDC	Heredia	9.67	116	*e*P	Pn	22 33 53.3	-1.5
LCR2	La Lucha 2	9.88	117		Pn	22 33 59.5	+1.7
RPIG	Rio Verde	10.04	319		Pn	22 34 00.4	+0.7
RPIG	Rio Verde	10.04	319	*e*P	Pn	22 34 00.4	+0.7
RPIG				*e*S	Sn	22 35 45.4	-5.7
GTIG	Gomez Farias	10.48	327		Pn	22 34 04.9	-0.8
GTIG	Gomez Farias	10.48	327	*e*P	Pn	22 34 04.9	-0.8
GTIG				*e*S	Sn	22 35 58.0	-3.8
MMIG	Aquila	10.71	293		Pn	22 34 08.7	-0.2
MMIG	Aquila	10.71	293	*e*P	Pn	22 34 08.7	-0.2
MMIG				*e*S	Sn	22 36 08.5	+1.0
PRVC	Isla de Provid	11.31	93	Pn	Pn	22 34 18.1	+1.1
MNGA	Volcan de Coli	11.40	298	*e*P	Pn	22 34 21.3	+2.8
MNGA				*e*S	Sn	22 36 24.2	-0.5
INCO	Volcan de Coli	11.41	298	*e*P	Pn	22 34 23.1	+4.3
INCO				*e*S	Sn	22 36 25.6	+0.4
SOMAC	Volcano de Col	11.43	298	*e*P	Pn	22 34 21.6	+2.6
SOMAC				*e*S	Sn	22 36 31.1	+5.5
BRU2	Volcan	11.48	118		Pn	22 34 20.8	+1.3
CDAR	Ciudad de Arme	11.53	295	*e*P	Pn	22 34 23.3	+3.2
CDAR				*e*S	Sn	22 36 30.9	+3.3
CEGR	Campo Tres	11.57	297	*e*P	Pn	22 34 22.7	+1.8
CEGR				*e*S	Sn	22 36 34.1	+5.3
AAIG	Aguscalientes	11.72	312		Pn	22 34 22.8	-0.2
AAIG	Aguscalientes	11.72	312	*e*P	Pn	22 34 22.8	-0.2
CIHU	Emiliano Zapat	12.28	295	*e*P	Pn	22 34 21.3	-9.1
CIHU				*e*S	Sn	22 36 42.2	-3.9
ZAIG	Zacatecas	12.37	314	*e*P	Pn	22 34 33.1	+1.2
SOR	Soroa	12.63	47		Pn	22 34 34.4	-0.8
SOR	Soroa	12.63	47	*e*P	Pn	22 34 35.5	+0.3
SOR	Soroa	12.63	47	P	Pn	22 34 34.4	-0.8
CJM	Chamela	12.64	296	*e*P	Pn	22 34 34.0	-1.3
CJM				*e*S	Sn	22 36 52.9	-1.9
ANIG	Ahuacatlan	12.87	303	*e*P	Pn	22 34 42.2	+3.6
ANIG				*e*S	Sn	22 37 04.2	+3.7
MNIG	Monterrey	13.15	330		Pn	22 34 41.9	-0.3
MNIG	Monterrey	13.15	330	*e*P	Pn	22 34 41.9	-0.3
KVTX	Kingsville	13.92	342	*e*P	P	22 34 59.4	-0.5
CAMR	Camarioca	13.99	50		Pn	22 34 53.2	-0.4
CAMR	Camarioca	13.99	50	*e*P	P	22 34 57.9	-2.9
833A	Chaparral WMA,	15.14	338		Pn	22 35 08.6	-0.4
833A				IAmb	IAmb	22 35 13.5	
	comp=Z,34nm,0.6s						
CAIB	Caibarien	15.14	56	*e*P	P	22 35 12.0	-1.6
MTDJ	Mount Denham	15.31	73		Pn	22 35 11.7	+0.3
MTDJ				IAmb	IAmb	22 35 18.0	
	comp=Z,57nm,0.8s						
MTDJ	Mount Denham	15.31	73	*e*P	P	22 35 15.2	-0.4
MCIG	Muzquiz	15.63	331		Pn	22 35 12.3	-3.1
MCIG	Muzquiz	15.63	331	*e*P	Pn	22 35 12.3	-3.1
MCIG				*e*S	Sn	22 38 12.2	+4.7
HKT	Hockley	15.76	351		Pn	22 35 15.9	-1.1
HKT				IAmb	IAmb	22 35 20.6	
	comp=Z,125nm,1.7s						
HKT	Hockley	15.76	351	*i* P	Pn	22 35 18.1	+1.2
PDIG	Papasquiaro	15.80	314	P	Pn	22 35 18.0	+0.1
PDIG	Papasquiaro	15.80	314	*e*P	Pn	22 35 18.0	+0.1
MLDN	Muldoon	15.83	347		Pn	22 35 17.7	-0.2
MLDN				IAmb	IAmb	22 35 22.8	
	comp=Z,215nm,1.5s						
PILO	Pilon	15.86	67	*e*P	P	22 35 20.9	-0.8
STH	Stony Hill	15.95	74	*e*P	Pn	22 35 01.1	-19
LMGC	Las Mercedes	16.27	67	*e*P	P	22 35 25.4	-0.7
DRIO	Del Rio	16.59	336		Pn	22 35 26.6	-1.0
DRIO				IAmb	IAmb	22 35 34.8	
	comp=Z,53nm,0.6s						
CHIV	Chivirico	16.77	68	P	Pn	22 35 30.3	+0.3
CHIV				IAmb	IAmb	22 35 37.4	
	comp=Z,146nm,1.7s						
CHIV	Chivirico	16.77	68	*e*P	P	22 35 37.1	+5.4
SSIG	Sanalona	16.93	310	*e*P	P	22 35 33.2	-0.1
YAR	Yar	16.94	67	*e*P	P	22 35 33.7	+0.1
MARVS	Santiago de Cu	17.24	69	*e*P	Pn	22 35 33.7	-2.1
JCT	Junction City	17.25	340		Pn	22 35 35.1	-0.8
JCT	Junction City	17.25	340	*e*P	P	22 35 38.9	+2.0
JCT	Junction City	17.25	340	P	Pn	22 35 35.1	-0.8
JCT				pmax	pmax		
	comp=Z,44nm,0.7s						
HPIG		17.25	319	P	P	22 35 36.8	-0.3
346A	Big Creek Wild	17.27	10		Pn	22 35 34.8	-1.3
HLGC	Holguin	17.37	66	*e*P	P	22 35 40.5	+2.1
DWPF	Disney Wildern	17.39	36		Pn	22 35 36.1	-1.6
DWPF				IAmb	IAmb	22 35 41.5	
	comp=Z,136nm,0.8s						
RCC	Rio Carpintero	17.43	69	*e*P	P	22 35 39.5	+0.5
PINC	Pinares de May	17.48	67	*e*P	Pn	22 35 36.9	-1.9
BCIG	La Boquilla	17.52	321	P	Pn	22 35 38.4	-1.0
BCIG	La Boquilla	17.52	321	*e*P	Pn	22 35 38.4	-1.0
BRDY	Brady	17.75	343		Pn	22 35 41.4	-0.7
H06E1	SOCORRO T-PHAS	17.77	287	T	T	22 53 59.2	
	SNR=75						
TXAR	Lajitas Array	17.90	328		P	22 35 44.5	+0.2
TXAR	Lajitas Array	17.90	328	P	P	22 35 45.7	+1.4
	comp=Z,1.4nm,0.3s,baz=139,slow=13,SNR=59						
TXAR				LR	LR	22 43 43.0	
	comp=Z,2µm,18.7s,baz=127,slow=41						
	comp=Z,5.5nm,0.5s						
GTBY	Guantanamo Bay	17.94	69	P	Pn	22 35 43.4	-1.0
GTBY	Guantanamo Bay	17.94	69	*e*P	Pn	22 35 43.3	-1.1
NMDO	Nuevo Mundo	18.23	68		Pn	22 35 47.6	-0.3
NMDO				IAmb	IAmb	22 35 56.4	
	comp=Z,28nm,1.2s						
NMDO	Nuevo Mundo	18.23	68	*e*P	Pn	22 35 52.3	+4.3
QMBU	Quimbuelo	18.28	69	*e*P	P	22 35 46.5	-1.9
SLBS	Sierra La Lagu	18.53	303	*e*P	P	22 35 51.0	-0.2
352A	Blakely	18.58	22	P	P	22 35 51.5	-0.1
TSIG	Topolobambo	18.78	309	*e*P	Pn	22 35 56.4	+1.8
MASC	Masc	18.80	69	*e*P	P	22 35 53.6	-0.5
Z41A	Richland Creek	18.83	0	P	P	22 35 54.5	+0.2
Z41A				IAmb	IAmb	22 36 02.3	
	comp=Z,116nm,0.7s						
CSIG	Choix	19.01	313	P	Pn	22 35 57.6	+0.2
CSIG	Choix	19.01	313	*e*P	Pn	22 35 57.6	+0.2
CSIG				*e*S	Sn	22 39 15.5	-14
LPIG	La Paz	19.02	303	P	Pn	22 36 00.4	+3.0
	comp=Z,4.1nm,0.3s,baz=309,slow=19,SNR=4.0						
	comp=Z,8.0nm,0.3s						
LPIG	La Paz	19.02	303	*e*P	Pn	22 35 57.9	+0.4
Z47A	Carrollton	19.29	13	P	P	22 35 58.7	-0.7
Z47A				IAmb	IAmb	22 36 09.2	
	comp=Z,117nm,1.2s						
CCAR	Cane Creek	19.52	3	P	P	22 36 01.9	+0.1
CCAR				IAmb	IAmb	22 36 07.0	
	comp=Z,59nm,0.8s						
OTAV	Otavalo	20.07	133	P	Pn	22 36 10.8	+0.3
OTAV	Otavalo	20.07	133	P	Pn	22 36 10.8	+0.3
OTAV				pmax	pmax		
	comp=Z,10.0nm,0.9s						
OTAV				MLR	MLR		
	comp=Z,2µm,19.0s						
OTAV	Otavalo	20.07	133	*e*P	Pn	22 36 12.1	+1.6
MIAR	Mount Ida	20.12	359	P	P	22 36 08.2	-0.2
MIAR				IAmb	IAmb	22 36 15.8	
	comp=Z,54nm,0.8s						
MIAR	Mount Ida	20.12	359	P	P	22 36 08.2	-0.2
MIAR				pmax	pmax		
	comp=Z,54nm,0.9s						
OXF	Oxford	20.34	8	P	P	22 36 10.2	-0.5
OXF				IAmb	IAmb	22 36 23.8	
	comp=Z,96nm,0.8s						
OXF	Oxford	20.34	8	P	P	22 36 10.2	-0.5
OXF				pmax	pmax		
	comp=Z,96nm,0.9s						
UALR	University of	20.35	1	P	P	22 36 10.7	-0.2
HTMS	Hat Mesa	20.50	333	P	P	22 36 13.3	+0.5
X34A	Smith Ranch, M	20.64	349	P	P	22 36 14.2	+0.1
X34A				IAmb	IAmb	22 36 24.3	
	comp=Z,72nm,0.6s						
ROSC	El Rosal	20.65	115	P	P	22 36 11.3	-3.4
	comp=Z,4.8nm,0.4s,baz=69,slow=2.6,SNR=28						
	comp=Z,4.8nm,0.4s						
257A	Skidaway Islan	20.67	30	IAMs_20	IAMs_20	22 45 01.9	
	comp=Z,9µm,18.0s						
MNTX	Cornudas Mount	20.68	329		P	22 36 13.8	-0.7
MNTX	Cornudas Mount	20.68	329	*e*P	P	22 36 14.1	-0.4
GOGA	Godfrey	20.85	23	P	P	22 36 14.8	-1.5
GOGA				IAmb	IAmb	22 36 26.8	
	comp=Z,62nm,0.9s						
GOGA	Godfrey	20.85	23	P	P	22 36 14.8	-1.5
GOGA				pmax	pmax		
	comp=Z,62nm,1.0s						
WMOK	Wichita Mounta	20.97	347	P	P	22 36 17.1	-0.6
WMOK	Wichita Mounta	20.97	347	P	P	22 36 17.1	-0.6
WMOK				pmax	pmax		
	comp=Z,17nm,0.6s						
SDDR	Presa de Saban	21.27	75		P	22 36 20.2	-0.8
SDDR	Presa de Saban	21.27	75	*e*P	P	22 36 21.7	+0.7
RUSC	La Rusia	21.28	111		P	22 36 21.6	-0.1
FLOC	Florencia	21.30	125	P	P	22 36 21.7	+0.4
FLOC				IAmb	IAmb	22 36 38.1	
	comp=Z,88nm,1.1s						
GUYB	Guaymas	21.43	312	*e*P	P	22 36 23.6	+1.0
COHC	Cochancay	21.53	140		P	22 36 25.5	+1.8
SWET	Sewanee	21.73	16	P	P	22 36 24.6	-1.1
SWET				IAmb	IAmb	22 36 35.8	
	comp=Z,32nm,0.7s						
SC01	Santiago de lo	21.86	74	P	P	22 36 26.4	-0.9
AMTX	Amarillo	21.91	340	P	P	22 36 27.4	-0.4
GRTK	Grand Turk	21.95	68	P	P	22 36 27.6	-0.6
GRTK				IAmb	IAmb	22 36 45.9	
	comp=Z,95nm,1.0s						
GRTK	Grand Turk	21.95	68	*e*P	P	22 36 28.8	+0.6
CSU	Charleston Sou	21.96	30	IAMs_20	IAMs_20	22 46 00.1	
	comp=Z,8µm,18.0s						
NHSC	New Hope	22.00	30	P	P	22 36 28.1	-0.6
NHSC				IAMs_20	IAMs_20	22 45 54.3	
	comp=Z,9µm,18.0s						
NZIG	Nacozari, Sono	22.09	319	*e*P	P	22 36 32.0	+2.2
NZIG				*e*S	S	22 40 35.2	+4.1
SRIG	Santa Rosalia	22.12	309	P	P	22 36 30.8	+0.8
HSIG		22.15	314		P	22 36 29.3	-1.0
WVT	Waverly	22.18	11	P	P	22 36 29.6	-1.0
WVT	Waverly	22.18	11	P	P	22 36 29.6	-1.0
WVT				pmax	pmax		
	comp=Z,20nm,0.8s						
SDV	Santo Domingo	22.53	101		P	22 36 34.8	+0.1
SDV				IAmb	IAmb	22 36 39.0	
	comp=Z,37nm,0.8s						
SDV	Santo Domingo	22.53	101	LR	LR	22 46 16.7	
	comp=Z,4µm,20.5s,baz=285,slow=40						
SDV	Santo Domingo	22.53	101	*e*P	P	22 36 36.2	+1.4
319A	Douglas	22.61	321		P	22 36 35.9	+0.6
319A				IAmb	IAmb	22 36 48.8	
	comp=Z,68nm,1.0s						
T35A	Sooner Cattle	22.70	353		P	22 36 34.7	-1.5
T35A				IAmb	IAmb	22 36 38.4	
	comp=Z,37nm,0.8s						
MGMO	Mountain Grove	22.73	1	P	P	22 36 35.4	-1.0
PAULI	Pauline	22.74	24	P	P	22 36 34.5	-2.0
PAULI				IAmb	IAmb	22 36 45.8	
	comp=Z,52nm,0.9s						
TKL	Tuckaleechee C	22.77	20	P	P	22 36 36.4	-0.5
TKL				IAmb	IAmb	22 36 58.4	
	comp=Z,83nm,1.1s						
TKL	Tuckaleechee C	22.77	20	P	P	22 36 36.4	-0.5
TKL				pmax	pmax		
	comp=Z,83nm,1.2s						
DR12	Loma Pena Alta	23.03	76	P	P	22 36 38.4	-1.4
Y22D	IRIS PASSCAL I	23.36	330	P	P	22 36 43.1	+0.1
Y22D	IRIS PASSCAL I	23.36	330	P	P	22 36 45.3	+2.3
	baz=144						
TZTN	Tazewell	23.66	19	P	P	22 36 44.8	-0.8
TZTN				IAmb	IAmb	22 37 08.3	
	comp=Z,62nm,0.8s						
CCM	Cathedral Cave	23.67	3	P	P	22 36 44.3	-1.4
CCM				IAmb	IAmb	22 36 47.8	
	comp=Z,25nm,0.6s						
CCM	Cathedral Cave	23.67	3	P	P	22 36 44.3	-1.4
CCM				pmax	pmax		
	comp=Z,25nm,0.6s						
ANMO	Albuquerque	23.85	332		P	22 36 48.3	+0.6
ANMO				IAmb	IAmb	22 36 55.8	
	comp=Z,25nm,0.7s						
ANMO	Albuquerque	23.85	332	LR	LR	22 47 29.5	
	comp=Z,4µm,18.1s,baz=226,slow=40						
ANMO	Albuquerque	23.85	332	*e*P	P	22 36 48.9	+1.2
ANMO	Albuquerque	23.85	332	*i* P	P	22 36 48.3	+0.6
ANMO				pmax	pmax		
	comp=Z,23nm,0.7s						
USIN	University of	23.99	10	P	P	22 36 47.5	-1.2
USIN				IAmb	IAmb	22 37 11.8	
	comp=Z,48nm,1.0s						
TUC	Tucson	24.17	321		P	22 36 51.3	+0.7
TUC				IAmb	IAmb	22 37 03.9	
	comp=Z,71nm,1.4s						
TUC	Tucson	24.17	321	*e*P	P	22 36 52.8	+2.2
TUC	Tucson	24.17	321	P	P	22 36 51.3	+0.7
TUC				pmax	pmax		
	comp=Z,71nm,1.4s						
TUC				MLR	MLR		
	comp=Z,10µm,18.0s						
WCI	Wyandotte Cave	24.51	13	P	P	22 36 52.5	-1.0
WCI				IAmb	IAmb	22 37 09.2	
	comp=Z,47nm,0.9s						
WCI	Wyandotte Cave	24.51	13	P	P	22 36 52.5	-1.0
WCI				pmax	pmax		
	comp=Z,47nm,0.9s						
T25A	Trinidad	24.89	338		P	22 36 57.8	+0.6
BAUV	El Baul	24.98	100	P	P	22 36 55.5	-2.6
BLA	Blacksburg	25.37	24	P	P	22 37 00.3	-1.1
BLA				IAmb	IAmb	22 37 30.8	
	comp=Z,74nm,1.3s						
BLA	Blacksburg	25.37	24	P	P	22 37 00.3	-1.1
BLA				pmax	pmax		
	comp=Z,74nm,1.3s						
ATAH	Atahualpa	25.78	145	LR	LR	22 45 46.5	
	comp=Z,5µm,18.2s,baz=299,slow=33						
SDCO	Great Sand Dun	25.83	337	P	P	22 37 05.7	-0.1
SJG	San Juan	26.01	78	IAMs_20	IAMs_20	22 46 50.9	
	comp=Z,6µm,22.0s						
SJG	San Juan	26.01	78	LR	LR	22 47 23.6	
	comp=Z,5µm,21.5s,baz=242,slow=37						
GCPR	Guaynabo City	26.09	78	IAMs_20	IAMs_20	22 48 01.0	
	comp=Z,5µm,18.0s						
PDPR	Patillas Dam,	26.12	78	P	P	22 37 08.9	+0.6
HDIL	Hopedale	26.31	6	P	P	22 37 08.9	-0.8
HDIL				IAmb	IAmb	22 37 49.3	
	comp=Z,32nm,0.8s						
MVCO	Mesa Verde	26.65	332		P	22 37 13.2	0.0
WUAZ	Wupatki	26.80	325		P	22 37 15.1	+0.6
WUAZ				IAmb	IAmb	22 37 23.1	
	comp=Z,21nm,0.8s						
WUAZ				IAMs_20	IAMs_20	22 49 34.9	
	comp=Z,6µm,18.0s						
GLA	Glamis	27.24	317	P	P	22 37 18.2	-0.1
GLA				IAmb	IAmb	22 37 59.1	
	comp=Z,23nm,0.9s						
GLA	Glamis	27.24	317	P	P	22 37 18.2	-0.1
GLA				pmax	pmax		
	comp=Z,23nm,0.9s						
PV01	Paradox Valley	27.44	333	P	P	22 37 20.2	0.0
PV01				IAmb	IAmb	22 37 26.0	
	comp=Z,86nm,1.5s						
SCIA	State Center	27.46	360	P	P	22 37 19.8	-0.3
BLYC	Blythe	27.48	318		P	22 37 21.0	+0.6
CBN	Corbin Frederi	27.49	27	P	P	22 37 20.2	-0.2
CBN				IAmb	IAmb	22 37 23.0	
	comp=Z,39nm,0.7s						
OGNE	Ogallala	27.66	345	P	P	22 37 21.6	-0.4
OGNE				IAmb	IAmb	22 37 60.0	
	comp=Z,34nm,0.9s						
ISCO	Idaho Springs	27.68	339		P	22 37 22.9	+0.4
ISCO	Idaho Springs	27.68	339	P	P	22 37 22.9	+0.4
ISCO				pmax	pmax		
	comp=Z,12nm,0.6s						
PCRV	Puerto La Cruz	27.98	95	LR	LR	22 49 29.3	
	comp=Z,4µm,20.5s,slow=39						
JFWS	Jewell Farm	28.57	4	P	P	22 37 30.5	+0.5
JFWS				IAmb	IAmb	22 38 28.4	
	comp=Z,28nm,0.8s						
JFWS	Jewell Farm	28.57	4	P	P	22 37 30.5	+0.5
JFWS				pmax	pmax		
	comp=Z,28nm,0.9s						
PFO	Pinyon Flats O	28.67	316		P	22 37 31.6	+0.4
PFO	Pinyon Flats O	28.67	316	LR	LR	22 50 51.6	
	comp=Z,2µm,18.6s,baz=130,slow=40						
PFO	Pinyon Flats O	28.67	316	P	P	22 37 31.6	+0.4
PFO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SABA	Saba	28.74	79	IAMs_20	IAMs_20	22 48 42.5	
	comp=Z,7µm,20.0s						
V12A	Nelson	28.97	321		P	22 37 35.0	+1.2
V12A				IAmb	IAmb	22 37 39.2	
	comp=Z,23nm,1.0s						
SEUS	St. Eustatius	28.99	80	IAMs_20	IAMs_20	22 48 20.0	
	comp=Z,6µm,20.0s						
SRU	San Rafael Swe	29.12	331	P	P	22 37 36.0	+0.8
SRU				IAmb	IAmb	22 37 40.7	
	comp=Z,69nm,1.9s						
SRU	San Rafael Swe	29.12	331	P	P	22 37 36.0	+0.8
SRU				pmax	pmax		
	comp=Z,69nm,1.9s						
ECSD	EROS Data Cent	29.46	355		P	22 37 37.1	-0.7
ECSD				IAmb	IAmb	22 37 41.8	
	comp=Z,19nm,0.7s						
WUPA	West Chester U	29.69	28	IAMs_20	IAMs_20	22 50 47.6	
	comp=Z,4µm,19.0s						
CZSB	Cruzeiro do Su	29.75	136	P	P	22 37 41.9	+1.1
CZSB				IAmb	IAmb	22 38 16.1	
	comp=Z,24nm,1.0s						
CZSB	Cruzeiro do Su	29.75	136	*e*P	P	22 37 42.9	+2.2
N58A	Sunbury	29.96	25	IAMs_20	IAMs_20	22 50 49.8	
	comp=Z,6µm,19.0s						
M57A	Sunshine Farm,	30.22	24	IAMs_20	IAMs_20	22 51 08.6	
	comp=Z,6µm,18.0s						
LUPA	Lehigh Univers	30.34	27	P	P	22 37 45.1	-0.6
LUPA				IAmb	IAmb	22 37 46.9	
	comp=Z,17nm,0.8s						
LUPA				IAMs_20	IAMs_20	22 51 16.7	
	comp=Z,6µm,18.0s						
MPU	Maple Canyon	30.36	331	P	P	22 37 46.5	+0.3
WVNY	West Valley, N	30.59	21	IAMs_20	IAMs_20	22 51 19.6	
	comp=Z,5µm,18.0s						
TPNV	Topopah Spring	30.62	322		P	22 37 49.5	+1.0
TPNV	Topopah Spring	30.62	322	P	P	22 37 49.5	+1.0
TPNV				pmax	pmax		
	comp=Z,14nm,1.1s						
TPNV				MLR	MLR		
	comp=Z,10µm,18.0s						
NNA	Nana	30.66	148	LR	LR	22 47 49.6	
	comp=Z,4µm,22.0s,baz=324,slow=32						
L56A	Greenwood	30.73	23	IAMs_20	IAMs_20	22 51 28.3	
	comp=Z,6µm,18.0s						
BRNJ	Basking Ridge	30.77	28	IAMs_20	IAMs_20	22 51 29.0	
	comp=Z,6µm,18.0s						
GDSD	La Dsirade Is	30.81	82	IAMs_20	IAMs_20	22 49 01.4	
	comp=Z,7µm,22.0s						
BIM	Bigot	30.88	86	IAMs_20	IAMs_20	22 49 22.5	
	comp=Z,7µm,21.0s						
KSPA	Keystone Colle	30.95	26	IAMs_20	IAMs_20	22 51 30.1	
	comp=Z,5µm,19.0s						
DUG	Dugway, Tooele	31.07	330	IAMs_20	IAMs_20	22 52 41.7	
	comp=Z,5µm,19.0s						
MEDO	Medina	31.31	21	IAMs_20	IAMs_20	22 51 42.6	
	comp=Z,5µm,19.0s						
PAL	Palisades	31.32	28	IAMs_20	IAMs_20	22 51 29.1	
	comp=Z,5µm,19.0s						
BINY	Binghamton	31.40	25	IAMs_20	IAMs_20	22 51 44.9	
	comp=Z,5µm,18.0s						
BBSR	BB Station	31.40	50	IAMs_20	IAMs_20	22 49 33.9	
	comp=Z,3µm,19.0s						
N62A	Caumsett State	31.47	29	IAMs_20	IAMs_20	22 51 42.0	
	comp=Z,6µm,19.0s						
J55A	Hilton	31.62	21	IAMs_20	IAMs_20	22 51 51.0	
	comp=Z,5µm,18.0s						
PDAR	Pinedale Array	31.73	336	P	P	22 37 57.9	-0.3
PDAR	Pinedale Array	31.73	336	P	P	22 37 59.2	+1.0
	comp=Z,6.3nm,0.6s,baz=135,slow=9.8,SNR=24						
PDAR				PcP	PcP	22 40 49.9	+0.7
	comp=Z,1.8nm,0.6s,baz=134,slow=5.2,SNR=3.8						
PDAR				LR	LR	22 54 08.2	
	comp=Z,940nm,18.3s,baz=146,slow=43						
	comp=Z,6.3nm,0.6s						
L59A	Walton	31.78	26	IAMs_20	IAMs_20	22 52 05.3	
	comp=Z,5µm,18.0s						
TPH	Tonopah	31.94	322	P	P	22 38 00.8	+0.7
TPH	Tonopah	31.94	322	P	P	22 38 00.9	+0.7
TPH				pmax	pmax		
	comp=Z,62nm,1.3s						
AHID	Auburn Hatcher	32.34	335	P	P	22 38 04.1	+0.5
AHID				IAmb	IAmb	22 38 21.2	
	comp=Z,30nm,0.9s						
SADO	Sadowa	32.52	18		P	22 38 03.0	-1.8
SADO				IAmb	IAmb	22 38 54.7	
	comp=Z,58nm,2.0s						
SADO	Sadowa	32.52	18	LR	LR	22 53 27.3	
	comp=Z,3µm,18.1s,baz=230,slow=41						
ELK	Elko	32.70	328		P	22 38 07.5	+0.7
ELK				IAMs_20	IAMs_20	22 52 48.0	
	comp=Z,4µm,20.0s						
ELK	Elko	32.70	328	LR	LR	22 52 59.1	
	comp=Z,4µm,19.8s,baz=158,slow=39						
ELK	Elko	32.70	328	P	P	22 38 07.5	+0.7
ELK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ELK				MLR	MLR		
	comp=Z,4µm,20.0s						
E46A	Sault Ste Mari	32.74	11	IAMs_20	IAMs_20	22 53 27.5	
	comp=Z,3µm,18.0s						
SNOW	Snow King Moun	32.78	336	P	P	22 38 07.9	+0.4
TRY	Troy	32.81	27	IAMs_20	IAMs_20	22 52 43.5	
	comp=Z,5µm,18.0s						
NVAR	Mina Array Bea	32.82	322	P	P	22 38 09.3	+1.4
NVAR	Mina Array Bea	32.82	322	P	P	22 38 10.2	+2.4
	comp=Z,20nm,0.7s,baz=136,slow=8.4,SNR=78						
NVAR				PcP	PcP	22 40 53.9	+1.7
	comp=Z,3.2nm,0.6s,baz=119,slow=1.5,SNR=4.6						
NVAR				LR	LR	22 53 08.5	
	comp=Z,7µm,18.4s,baz=132,slow=39						
	comp=Z,20nm,0.7s						
L61B	Northampton	33.03	28	IAMs_20	IAMs_20	22 52 30.2	
	comp=Z,5µm,19.0s						
BUKO	Buck Lake	33.05	18	P	P	22 38 07.5	-2.0
BUKO				IAmb	IAmb	22 38 36.5	
	comp=Z,60nm,1.8s						
J59A	Piesco	33.06	25	IAMs_20	IAMs_20	22 52 45.0	
	comp=Z,5µm,18.0s						
TEFE	Tefe	33.22	120	*e*P	P	22 38 12.6	+1.3
H17A	Grant Village	33.50	337	IAMs_20	IAMs_20	22 53 32.0	
	comp=Z,3µm,20.0s						
L64A	Middleborough	33.51	31	IAMs_20	IAMs_20	22 52 46.8	
	comp=Z,6µm,19.0s						
WES	Weston	33.61	30	IAMs_20	IAMs_20	22 53 13.6	
	comp=Z,5µm,18.0s						
YFT	Old Faithful	33.65	337	P	P	22 38 16.6	+1.7
YFT				IAmb	IAmb	22 38 31.6	
	comp=Z,27nm,0.8s						
J61A	Chester	33.79	27	IAMs_20	IAMs_20	22 52 56.5	
	comp=Z,5µm,19.0s						
CMB	Columbia Colle	33.86	319	IAMs_20	IAMs_20	22 52 44.1	
	comp=Z,3µm,18.0s						
LONY	Lake Ozonia	33.99	24	IAMs_20	IAMs_20	22 53 16.7	
	comp=Z,4µm,19.0s						
WBO	Williamsburg	34.04	23	P	P	22 38 16.2	-1.9
WBO				IAmb	IAmb	22 38 21.3	
	comp=Z,13nm,0.6s						
WBO				IAMs_20	IAMs_20	22 53 20.2	
	comp=Z,6µm,19.0s						
BOAV	Boa Vista	34.16	107	P	P	22 38 18.3	-1.2
BOAV				IAmb	IAmb	22 38 21.2	
	comp=Z,24nm,1.0s						
BOAV	Boa Vista	34.16	107	*e*P	P	22 38 18.3	-1.2
HNH	Hanover	34.20	27	IAMs_20	IAMs_20	22 53 08.1	

	comp=Z,5µm,19.0s						
HLID	Hailey	34.43	332		P	22 38 22.4	+0.7
HLID				IAmb	IAmb	22 38 54.9	
	comp=Z,16nm,1.0s						
VT1	Waterbury	34.49	26	IAMs_20	IAMs_20	22 53 28.9	
	comp=Z,4µm,19.0s						
I62A	Tamworth	34.76	28	IAMs_20	IAMs_20	22 53 50.9	
	comp=Z,5µm,19.0s						
BOZ	Bozeman (W)	34.91	337	P	P	22 38 26.2	+0.4
BOZ				IAmb	IAmb	22 38 32.6	
	comp=Z,21nm,1.2s						
BOZ	Bozeman (W)	34.91	337	P	P	22 38 26.2	+0.4
BOZ				pmax	pmax		
	comp=Z,21nm,1.2s						
BOZ				MLR	MLR		
	comp=Z,2µm,19.0s						
MFID	Camas Ranch	34.98	330	IAMs_20	IAMs_20	22 54 43.2	
	comp=Z,5µm,19.0s						
I63A	Otisfield	35.24	28	IAMs_20	IAMs_20	22 54 12.6	
	comp=Z,4µm,19.0s						
EPLO	Experimental L	35.24	359		P	22 38 27.2	-1.2
EPLO				IAmb	IAmb	22 38 29.4	
	comp=Z,17nm,0.6s						
TRQ	Mont Tremblant	35.35	22	IAMs_20	IAMs_20	22 54 09.7	
	comp=Z,5µm,18.0s						
ORV	Oroville	35.47	320	IAMs_20	IAMs_20	22 53 38.6	
	comp=Z,3µm,20.0s						
WVOR	Wild Horse Val	35.69	327	P	P	22 38 32.8	+0.3
WVOR				IAmb	IAmb	22 39 04.7	
	comp=Z,25nm,1.2s						
WVOR				IAMs_20	IAMs_20	22 55 15.1	
	comp=Z,4µm,19.0s						
WVOR	Wild Horse Val	35.69	327	P	P	22 38 32.8	+0.3
WVOR				pmax	pmax		
	comp=Z,25nm,1.2s						
WVOR				MLR	MLR		
	comp=Z,4µm,19.0s						
ULM	Lac du Bonnet	35.89	357		P	22 38 32.1	-1.8
ULM				IAmb	IAmb	22 38 34.6	
	comp=Z,8.9nm,0.6s						
ULM	Lac du Bonnet	35.89	357	P	P	22 38 32.6	-1.3
	comp=Z,8.9nm,0.5s,baz=175,slow=11,SNR=26						
ULM				PcP	PcP	22 41 00.8	+0.4
	comp=Z,7.6nm,0.8s,baz=146,slow=5.4,SNR=3.6						
ULM				LR	LR	22 56 09.6	
	comp=Z,2µm,21.0s,baz=174,slow=41						
	comp=Z,8.9nm,0.5s						
WVL	Waterville	36.06	29	IAMs_20	IAMs_20	22 54 46.3	
	comp=Z,4µm,19.0s						
HOPS	Hopland Field	36.13	318	IAMs_20	IAMs_20	22 52 39.2	
	comp=Z,4µm,20.0s						
J08A	Circle Bar Ran	36.25	328		P	22 38 38.2	+0.9
PLID	Pearl Lake	36.33	332	IAMs_20	IAMs_20	22 56 11.9	
	comp=Z,4µm,18.0s						
EGMT	Eagleton	36.35	341	P	P	22 38 38.6	+0.5
MACA	Manacapuru-AM	36.42	116	P	P	22 38 38.3	-0.6
MACA	Manacapuru-AM	36.42	116	*e*P	P	22 38 39.1	+0.2
O02D	Mt. Diablo Mer	36.63	320	IAMs_20	IAMs_20	22 53 53.5	
	comp=Z,3µm,20.0s						
PKME	Peaks-Kenny Pk	36.76	28	IAMs_20	IAMs_20	22 55 08.9	
	comp=Z,4µm,19.0s						
BMO	Blue Mountains	36.76	331	IAMs_20	IAMs_20	22 55 58.3	
	comp=Z,5µm,20.0s						
I07A	Izee	37.29	328		P	22 38 46.7	+0.5
YBH	Yreka Blue Hor	37.52	322	LR	LR	22 56 24.8	
	comp=Z,369nm,18.2s,baz=130,slow=40						
G65A	Princeton	37.52	30	IAMs_20	IAMs_20	22 54 57.1	
	comp=Z,4µm,19.0s						
JCC	Jacoby Creek,	37.78	320	IAMs_20	IAMs_20	22 53 26.7	
	comp=Z,4µm,21.0s						
LMQ	La Malbaie	38.09	25	IAMs_20	IAMs_20	22 55 39.1	
	comp=Z,4µm,19.0s						
HAWA	Hanford	38.95	330	IAMs_20	IAMs_20	22 57 32.3	
	comp=Z,4µm,18.0s						
G05A	Wamic	39.03	328	P	P	22 39 01.8	+1.2
G05A				IAmb	IAmb	22 39 45.9	
	comp=Z,45nm,1.3s						
LPAZ	La Paz	39.09	140		P	22 39 01.6	-0.5
LPAZ	La Paz	39.09	140	P	P	22 39 01.5	-0.7
	comp=Z,1.3nm,0.6s,baz=340,slow=9.0,SNR=7.4						
LPAZ				LR	LR	22 54 42.0	
	comp=Z,2µm,20.5s,baz=320,slow=36						
	comp=Z,1.3nm,0.6s						
LPAZ	La Paz	39.09	140	P	P	22 39 01.7	-0.5
LPAZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LPAZ	La Paz	39.09	140	*e*P	P	22 39 01.7	-0.5
HAL	Halifax	39.16	34	IAMs_20	IAMs_20	22 54 35.4	
	comp=Z,4µm,22.0s						
NEW	Newport	39.28	334	IAMs_20	IAMs_20	22 57 26.8	
	comp=Z,4µm,19.0s						
NEW	Newport	39.28	334	LR	LR	22 57 47.4	
	comp=Z,3µm,18.8s,baz=140,slow=40						
PB16	IPOC Station P	39.86	144		P	22 39 08.9	+0.4
MDP	Montagnes des	40.73	99	LR	LR	22 58 10.8	
	comp=Z,1µm,20.8s,baz=292,slow=40						
GBN	Guysborough	40.78	34	IAMs_20	IAMs_20	22 54 57.3	
	comp=Z,3µm,21.0s						
FFC	Flin Flon	40.90	352		P	22 39 15.8	-0.2
FFC	Flin Flon	40.90	352	P	P	22 39 15.8	-0.2
FFC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
PB11	IPOC Station P	40.92	145	P	P	22 39 17.4	+0.6
GO01	Chusmiza	41.10	145	P	P	22 39 18.7	0.0
GO01				IAmb	IAmb	22 39 31.6	
	comp=Z,57nm,1.9s						
ITTB	Itaituba	41.34	114	*e*P	P	22 39 20.3	+0.2
MAL2	Monte Alegre,	41.72	110	P	P	22 39 22.1	-1.2
MAL2				IAmb	IAmb	22 39 24.6	
	comp=Z,44nm,1.2s						
VILB	Vilhena	42.29	128	P	P	22 39 27.0	-1.0
VILB				IAmb	IAmb	22 39 53.3	
	comp=Z,28nm,1.2s						
VILB	Vilhena	42.29	128	*e*P	P	22 39 28.5	+0.5
NPGB	Novo Progresso	42.94	117	*e*P	P	22 39 31.6	-1.5
LLLB	Lillooet	43.09	333		P	22 39 33.7	-0.3
LLLB				IAmb	IAmb	22 39 42.6	
	comp=Z,23nm,1.0s						
SIV	San Ignacio	43.61	133	LR	LR	22 57 08.0	
	comp=Z,3µm,19.6s,baz=324,slow=35						
PDRB	Porto dos Gac	44.21	124	*e*P	P	22 39 43.5	0.0
CLDB	Colider	44.56	122	*e*P	P	22 39 46.3	0.0
PTLB	Pontes e Lacer	44.66	130	P	P	22 39 46.6	-0.4
PTLB	Pontes e Lacer	44.66	130	*e*P	P	22 39 47.4	+0.4
BBSD	Serra de San D	44.74	133	*e*P	P	22 39 47.1	-0.5
SCHQ	Schefferville	45.23	21	P	P	22 39 48.0	-3.1
	comp=Z,10nm,1.0s,baz=214,slow=5.0,SNR=6.9						
SCHQ				PcP	PcP	22 41 30.9	+0.4
	comp=Z,17nm,0.6s,baz=224,slow=3.5,SNR=16						
SCHQ				LR	LR	23 00 23.5	
	comp=Z,5µm,18.1s,baz=212,slow=38						
	comp=Z,10nm,1.0s						
GO02	Mina Guanaco	45.40	150	P	P	22 39 53.9	+0.8
GO02				IAmb	IAmb	22 41 34.2	
	comp=Z,45nm,1.6s						
BBB	Bella Bella	47.01	331	LR	LR	23 02 53.5	
	comp=Z,1µm,18.1s,baz=154,slow=40						
AC02	Maricunga	47.03	150	P	P	22 40 07.1	+1.0
AC02				IAmb	IAmb	22 41 40.6	
	comp=Z,36nm,1.8s						
PRPB	Parauapebas	47.41	113	*e*P	P	22 40 09.2	+0.5
TMAB	Tom-Au,PA,Br	47.45	107	*e*P	P	22 40 09.1	+0.1
SALV	Santo Antonio	47.54	128	*e*P	P	22 40 10.6	+0.9
SNDB	Serra Nova Dou	48.88	120	*e*P	P	22 40 18.6	-1.4
H03N2	Juan Fernandez	49.37	165	T	T	23 34 13.1	
	baz=347						
H03N1	Juan Fernandez	49.37	164	T	T	23 34 09.9	
	baz=347						
H03N3	Juan Fernandez	49.38	165	T	T	23 34 09.8	
	baz=347						
BDQN	Bodoquena, MS	49.62	133	*e*P	P	22 40 25.7	+0.1
MURT	Porto Murtinho	49.84	135	*e*P	P	22 40 27.4	+0.2
CO02	Combarbal	49.96	155	P	P	22 40 28.8	+0.6
U35K	Hyder	50.29	334	IAMs_20	IAMs_20	23 04 45.1	
	comp=Z,3µm,18.0s						
U35K	Hyder	50.29	334	P	P	22 40 32.7	+2.6
	baz=130						
ARAG	Araguaiana, MT	50.46	125	*e*P	P	22 40 30.9	-1.1
YKA	Yellowknife Ar	50.48	347	P	P	22 40 31.6	0.0
YKA	Yellowknife Ar	50.48	347	P	P	22 40 31.7	+0.2
	comp=Z,15nm,0.6s,baz=164,slow=14,SNR=65						
YKA				PcP	PcP	22 41 50.2	+1.1
	comp=Z,3.1nm,0.6s,baz=158,slow=2.5,SNR=5.2						
YKA				LR	LR	23 05 30.7	
	comp=Z,897nm,18.3s,baz=162,slow=40						
	comp=Z,15nm,0.6s						
TOAD	Toad River Com	50.48	339	P	P	22 40 32.5	+0.9
	baz=138,SNR=8.5						
SMTB	Santa Maria do	50.57	114	*e*P	P	22 40 32.6	-0.3
V35K	Ketchikan	50.61	332	IAMs_20	IAMs_20	23 04 20.6	
	comp=Z,2µm,20.0s						
V35K	Ketchikan	50.61	332	P	P	22 40 34.1	+1.5
	baz=128						
KOTAN	Kotaneelee Air	51.05	341	P	P	22 40 37.4	+1.5
	baz=140						
T35M	Bob Quinn	51.08	335	P	P	22 40 36.6	+0.4
T35M				IAmb	IAmb	22 40 48.2	
	comp=Z,12nm,0.8s						
T35M	Bob Quinn	51.08	335	P	P	22 40 38.6	+2.5
	baz=131						
LIRD	Liard River Hi	51.20	339	P	P	22 40 38.4	+1.5
	baz=137						
CRAG	Craig	51.38	332	P	P	22 40 41.1	+2.8
	baz=127						
BEAVL	Fort Liard	51.42	340	P	P	22 40 40.1	+1.4
	baz=139,SNR=17						
WRAK	Wrangell Islan	51.61	333	IAMs_20	IAMs_20	23 04 55.1	
	comp=Z,2µm,20.0s						
WRAK	Wrangell Islan	51.61	333	P	P	22 40 42.9	+2.8
	baz=128						
U33K	Whale Pass	51.77	333	IAMs_20	IAMs_20	23 04 46.2	
	comp=Z,2µm,19.0s						
U33K	Whale Pass	51.77	333	P	P	22 40 44.0	+2.8
	baz=127						
PEL	Peldehue	51.80	156	IAMs_20	IAMs_20	22 56 59.2	
	comp=Z,3µm,21.0s						
S34M	Telegraph Cree	52.05	335	P	P	22 40 46.4	+3.1
	baz=130						
T33K	Petersburg	52.12	333	P	P	22 40 46.7	+2.9
	baz=128						
TAOE	Nuku Hiva Isla	52.17	247	*e*P	P	22 40 50.4	+5.4
	comp=Z,335nm,27.3s						
TAOE				*e*S	S	22 48 03.1	-3.9
	comp=Z,1µm,25.3s						
TAOE				*e*SS	SS	22 51 47.8	+2.8
	comp=Z,552nm,25.8s						
TAOE				*e*LR	LR	22 55 46.4	
	comp=Z,1µm,22.7s						
FRB	Frobisher Bay	52.19	13	LR	LR	23 06 14.5	
	comp=Z,1µm,19.1s,baz=202,slow=40						
WTLY	Watson Lake, Y	52.66	338	P	P	22 40 49.8	+2.0
	baz=134						
R33M	Jennings River	52.97	337		P	22 40 51.1	+0.8
R33M	Jennings River	52.97	337	P	P	22 40 52.5	+2.3
	baz=132,SNR=9.5						
SJPY	San Joaquin	53.12	137	*e*P	P	22 40 51.8	0.0
Q32M	Nakina River	53.19	336	P	P	22 40 54.5	+2.4
	baz=130						
BO02	Sierra Bellavi	53.22	157	P	P	22 40 52.4	0.0
BO02				IAmb	IAmb	22 41 16.7	
	comp=Z,20nm,1.3s						
S32K	Killisnoo	53.22	333	IAMs_20	IAMs_20	23 06 02.6	
	comp=Z,2µm,19.0s						
S32K	Killisnoo	53.22	333	P	P	22 40 54.6	+2.6
	baz=126						
CPUP	Villa Florida	53.25	139	P	P	22 40 51.4	-1.3
CPUP	Villa Florida	53.25	139	P	P	22 40 51.2	-1.4
	comp=Z,0.6nm,0.6s,baz=178,slow=6.6,SNR=7.7						
CPUP				LR	LR	23 04 56.9	
	comp=Z,438nm,18.5s,baz=188,slow=38						
	comp=Z,0.6nm,0.6s						
CPUP	Villa Florida	53.25	139	P	P	22 40 51.4	-1.3
CPUP				pmax	pmax		
	comp=Z,4.0nm,1.5s						
CPUP	Villa Florida	53.25	139	*e*P	P	22 40 51.4	-1.3
WRGLY	Wrigley	53.29	343	P	P	22 40 53.9	+1.5
	baz=142,SNR=6.6						
SIT	Sitka	53.31	333	P	P	22 40 54.4	+1.7
	baz=125						
TGTN	Hyland Airport	53.48	340	P	P	22 40 56.3	+2.4
	baz=136						
BDFB	Brasilia	53.50	122		P	22 40 54.0	-0.8
BDFB	Brasilia	53.50	122	P	P	22 40 53.6	-1.1
	comp=Z,7.7nm,0.7s,baz=294,slow=8.8,SNR=11						
BDFB				LR	LR	23 04 25.9	
	comp=Z,2µm,20.0s,baz=314,slow=37						
	comp=Z,7.7nm,0.7s						
BDFB	Brasilia	53.50	122	P	P	22 40 54.0	-0.8
BDFB				pmax	pmax		
	comp=Z,10.0nm,0.9s						
R32K	Eaglecrest	53.68	334	IAMs_20	IAMs_20	23 06 52.7	
	comp=Z,2µm,18.0s						
R32K	Eaglecrest	53.68	334	P	P	22 40 57.8	+2.3
	baz=127						
TRCB	Terra Rica	54.06	132	IAMs_20	IAMs_20	23 03 22.5	
	comp=Z,2µm,20.0s						
P32M	Atlin	54.16	336	P	P	22 41 00.7	+1.7
	baz=129						
P33M	Teslin, Yukon	54.21	337	P	P	22 41 01.2	+1.9
	baz=130						
S31K	Pelican	54.23	333	P	P	22 41 01.5	+2.2
	baz=125						
R31K	City Hall, Gus	54.28	334	P	P	22 41 01.6	+1.8
	baz=126						
SDBA	SAO DESIDERIO	54.53	117	*e*P	P	22 41 00.9	-1.4
IPMB	Ipameri, GO	54.58	125	*e*P	P	22 41 02.5	-0.1
SKAG	Skagway	54.73	335	P	P	22 41 03.3	+0.3
	baz=127						
N32M	Quiet Lake	54.92	338	P	P	22 41 04.7	+0.3
N32M				IAMs_20	IAMs_20	23 07 17.0	
	comp=Z,1µm,18.0s						
N32M	Quiet Lake	54.92	338	P	P	22 41 06.8	+2.4
	baz=130						
PLBC	Pleasant Camp	55.16	335	P	P	22 41 08.3	+2.2
	baz=126						
MMPY	Sheldon Lake,	55.25	340	IAMs_20	IAMs_20	23 07 19.0	
	comp=Z,2µm,21.0s						
MMPY	Sheldon Lake,	55.25	340	P	P	22 41 09.0	+2.1
	baz=133,SNR=31						
WHY	Whitehorse	55.29	336	P	P	22 41 08.6	+1.4
	baz=128,SNR=6.0						
ILON	Igloolik, Nuna	55.44	5	P	P	22 41 08.3	+0.4
ILON				IAmb	IAmb	22 41 10.6	
	comp=Z,19nm,1.0s						
FARO	Faro, Yukon	55.72	338	P	P	22 41 11.9	+1.8
	baz=130,SNR=11						
P30M	Million Dollar	55.79	335	P	P	22 41 12.6	+1.9
	baz=125						
O30N	Mendenhall	55.83	336	IAMs_20	IAMs_20	23 08 17.4	
	comp=Z,2µm,19.0s						
O30N	Mendenhall	55.83	336	P	P	22 41 12.9	+1.9
	baz=127,SNR=5.3						
P29M	Windy Craggy	55.83	334	IAMs_20	IAMs_20	23 07 14.5	
	comp=Z,3µm,20.0s						
P29M	Windy Craggy	55.83	334	P	P	22 41 12.8	+1.8
	baz=124						
ITQB	Itaqui	56.07	142	*e*P	P	22 41 12.5	-0.5
M31M	Drury Creek, Y	56.07	338	IAMs_20	IAMs_20	23 09 19.7	
	comp=Z,2µm,18.0s						
M31M	Drury Creek, Y	56.07	338	P	P	22 41 14.4	+1.7
	baz=129						
N31M	Braeburn, Yuko	56.14	337	P	P	22 41 15.2	+2.0
	baz=127,SNR=8.3						
JANB	Januaria	56.29	119	*e*P	P	22 41 15.2	+0.3
PMNB	Patos De Minas	56.30	124	*e*P	P	22 41 15.0	0.0
HYT	Haines Junctio	56.42	336		P	22 41 16.6	+1.3
HYT				IAmb	IAmb	22 41 43.5	
	comp=Z,16nm,1.4s						
HYT	Haines Junctio	56.42	336	P	P	22 41 17.6	+2.3
	baz=125						
NBPB	Pedra_Branca-C	56.51	107	*e*P	P	22 41 16.4	-0.1
PNL	Peninsula	56.55	334	P	P	22 41 18.1	+1.9
	baz=122						
O29M	Mount Kennedy	56.56	335	P	P	22 41 18.1	+1.8
	baz=124						
FRTB	Fartura	56.62	131	*e*P	P	22 41 17.2	0.0
N30M	Aishikik Lake	56.63	336	IAMs_20	IAMs_20	23 09 12.5	
	comp=Z,2µm,18.0s						
N30M	Aishikik Lake	56.63	336	P	P	22 41 18.9	+2.2
	baz=126						
BCPM	Bancas Point	56.81	334	IAMs_20	IAMs_20	23 09 33.5	
	comp=Z,2µm,18.0s						
YUK6	Outpost Mounta	56.83	335	P	P	22 41 20.8	+2.4
	baz=124,SNR=9.7						
PINM	Pinnacle	57.15	334	P	P	22 41 23.1	+2.7
	baz=122						
PCA	Pinnacle	57.15	334	IAMs_20	IAMs_20	23 08 53.4	
	comp=Z,2µm,18.0s						
YUK4	Talbot Arm	57.17	336	P	P	22 41 22.8	+2.1
	baz=124,SNR=7.0						
NBCL	Cascavel-CE	57.25	105	*e*P	P	22 41 21.3	-0.5
ITAB	Concordia	57.26	136	*e*P	P	22 41 21.5	0.0
O28M	Mount Upton	57.48	335	IAMs_20	IAMs_20	23 10 10.2	
	comp=Z,2µm,18.0s						
O28M	Mount Upton	57.48	335	P	P	22 41 25.4	+2.4
	baz=122						
MAYO	Mayo, Yukon	57.49	339	P	P	22 41 24.5	+1.8
	baz=128						
YUK8	Steele Glacier	57.59	335	P	P	22 41 25.9	+2.2
	baz=123						
TABL	Table Mountain	57.71	334	IAMs_20	IAMs_20	23 09 00.2	
	comp=Z,2µm,19.0s						
M29M	Somme Creek	57.73	337	P	P	22 41 26.3	+1.8
	baz=125,SNR=47						
LOGN	Logan Glacier	57.85	335	IAMs_20	IAMs_20	23 10 18.9	
	comp=Z,2µm,18.0s						
MESA	MESA	57.92	334	IAMs_20	IAMs_20	23 05 36.8	
	comp=Z,2µm,20.0s						
MESA	MESA	57.92	334	P	P	22 41 28.5	+2.5
	baz=120						
YAH	Yahtse	57.92	334	IAMs_20	IAMs_20	23 10 06.9	
	comp=Z,2µm,18.0s						
L29M	L29M	57.99	338	IAMs_20	IAMs_20	23 10 42.7	
	comp=Z,2µm,18.0s						
L29M	L29M	57.99	338	P	P	22 41 27.6	+1.3
	baz=126,SNR=15						
CTGM	Chitina Glacie	58.06	335	P	P	22 41 27.6	+0.7
CTGM				IAmb	IAmb	22 41 45.8	
	comp=Z,9.4nm,0.8s						
CTGM				IAMs_20	IAMs_20	23 10 17.6	
	comp=Z,1µm,19.0s						
CTG	Chitna Glacier	58.06	335	P	P	22 41 28.9	+2.0
	baz=121						
GRNC	Granite Creek	58.12	334	P	P	22 41 27.9	+0.6
GRNC				IAMs_20	IAMs_20	23 08 05.0	
	comp=Z,2µm,20.0s						
YUK3	Moose Creek	58.14	336	P	P	22 41 29.2	+1.7
	baz=123						
K29M	Barlow Dome	58.21	339	P	P	22 41 28.9	+1.0
	baz=127						
BARN	Barnard Glacie	58.25	335	IAMs_20	IAMs_20	23 08 14.4	
	comp=Z,1µm,20.0s						
J30M	Hart River	58.25	340	P	P	22 41 29.5	+1.3
	baz=128						
ISLE	Juniper Island	58.30	334	IAMs_20	IAMs_20	23 10 10.8	
	comp=Z,2µm,18.0s						
SPB	Sao Paulo	58.34	130	IAMs_20	IAMs_20	23 08 20.9	
	comp=Z,1µm,21.0s						
VAO	Valinhos	58.35	129	IAMs_20	IAMs_20	23 07 49.0	
	comp=Z,2µm,18.0s						
VAO	Valinhos	58.35	129	*e*P	P	22 41 29.5	+0.1
C36M	Paulatuk	58.36	348	P	P	22 41 29.3	+0.7
	baz=144,SNR=6.1						
H31M	Peel River	58.40	341	P	P	22 41 30.2	+1.2
	baz=131,SNR=9.0						
DIAM	Diamantina, MG	58.42	122	*e*P	P	22 41 29.5	-0.6
WAX	Waxell Ridge	58.44	334	IAMs_20	IAMs_20	23 09 23.6	
	comp=Z,1µm,18.0s						
BGLC	Bering Glacier	58.47	333	P	P	22 41 31.5	+2.0
	baz=119						
TGL	Tana Glacier	58.59	334	IAMs_20	IAMs_20	23 10 39.4	
	comp=Z,1µm,18.0s						
PLCA	Paso Flores	58.61	160	P	P	22 41 31.3	+0.4
PLCA				IAmb	IAmb	22 43 02.3	
	comp=Z,14nm,1.4s						
PLCA	Paso Flores	58.61	160	P	P	22 41 31.5	+0.7
	comp=Z,3.3nm,0.9s,baz=336,slow=13,SNR=4.2						
PLCA				LR	LR	23 02 02.0	
	comp=Z,2µm,18.2s,baz=0.0,slow=31						
	comp=Z,3.3nm,0.9s						
PLCA	Paso Flores	58.61	160	*e*P	P	22 41 31.8	+1.0
BVCY	Beaver Creek	58.64	336	P	P	22 41 32.7	+1.9
	baz=122						
I30M	Mount Dempster	58.67	340	IAMs_20	IAMs_20	23 11 18.3	
	comp=Z,2µm,18.0s						
I30M	Mount Dempster	58.67	340	P	P	22 41 31.8	+0.8
	baz=129,SNR=16						
CRQE	Cirque	58.70	334	P	P	22 41 33.1	+1.8
	baz=119						
CRQM	Cirque	58.72	334	IAMs_20	IAMs_20	23 10 34.3	
	comp=Z,1µm,19.0s						
BERG	Berg Lake	58.78	333	IAMs_20	IAMs_20	23 09 22.6	
	comp=Z,1µm,20.0s						
J29N	Klondike Camp	58.82	339	P	P	22 41 33.3	+1.3
	baz=126						
KAIM	Kayak Island	58.88	333	P	P	22 41 33.2	+0.8
	baz=118						
BSCB	Bom Sucesso	58.93	126	*e*P	P	22 41 32.4	-1.1
MCARA	McCarthy VSAT	58.98	334	P	P	22 41 34.9	+1.8
	baz=120,SNR=9.5						
HMT	Hamilton	59.00	333	IAMs_20	IAMs_20	23 05 40.4	
	comp=Z,1µm,21.0s						
DAWY	Dawson	59.01	338		P	22 41 33.4	0.0
DAWY				IAmb	IAmb	22 41 36.2	
	comp=Z,7.5nm,0.6s						
DAWY				IAMs_20	IAMs_20	23 10 44.5	
	comp=Z,2µm,19.0s						
DAWY	Dawson	59.01	338	P	P	22 41 34.3	+1.0
	baz=125,SNR=11						
M27K	Edge Creek, AK	59.01	336	P	P	22 41 34.8	+1.3
	baz=121,SNR=7.3						
VRDI	Verde Repeater	59.08	334	IAMs_20	IAMs_20	23 10 45.5	
	comp=Z,1µm,18.0s						
G31M	Satah River	59.12	342	P	P	22 41 34.7	+0.7
	baz=132,SNR=26						
RAGM	Ragged Mountai	59.21	333	IAMs_20	IAMs_20	23 05 44.9	
	comp=Z,2µm,21.0s						
F31M	Tsiigehtchic	59.32	343	P	P	22 41 35.8	+0.5
	baz=132						
BCAR	Beaver Creek A	59.35	337	P	P	22 41 36.6	+0.9
L27K	Beaver Creek,	59.36	337	P	P	22 41 37.2	+1.4
	baz=122,SNR=16						
PLTB	Pedras Altas	59.38	141	*e*P	P	22 41 37.0	+0.7
I29M	Ogilvie Camp,	59.40	340	IAMs_20	IAMs_20	23 11 18.5	
	comp=Z,2µm,18.0s						
I29M	Ogilvie Camp,	59.40	340	P	P	22 41 36.5	+0.5
	baz=127						
BMRM	Bremner River	59.45	334	IAMs_20	IAMs_20	23 09 57.2	
	comp=Z,1µm,20.0s						
BMRM	Bremner River	59.45	334	P	P	22 41 38.5	+2.1
	baz=118,SNR=11						
SFJD	Kangerlussuaq	59.47	18	LR	LR	23 08 52.9	
	comp=Z,3µm,18.4s,baz=223,slow=38						
M26K	Nabesna, AK	59.48	336	IAMs_20	IAMs_20	23 09 05.0	
	comp=Z,2µm,21.0s						
M26K	Nabesna, AK	59.48	336	P	P	22 41 38.3	+1.7
	baz=120,SNR=10						
EPYK	Eagle Plains	59.50	341	IAMs_20	IAMs_20	23 10 58.2	
	comp=Z,1µm,18.0s						
EPYK	Eagle Plains	59.50	341	P	P	22 41 37.8	+1.1
	baz=129						
Q23K	Middleton Isla	59.53	332	P	P	22 41 39.1	+2.2
	baz=115						
TRQA	Tornquist	59.68	152	P	P	22 41 38.7	+0.4
TRQA				IAmb	IAmb	22 41 58.1	
	comp=Z,25nm,1.4s						
TRQA				IAMs_20	IAMs_20	23 03 04.7	
	comp=Z,2µm,21.0s						
TRQA	Tornquist	59.68	152	P	P	22 41 38.7	+0.4
TRQA				pmax	pmax		
	comp=Z,25nm,1.4s						
TRQA				MLR	MLR		
	comp=Z,2µm,21.0s						
G30M	tAoh Zraii Nji	59.74	342	IAMs_20	IAMs_20	23 10 42.4	
	comp=Z,2µm,18.0s						
G30M	tAoh Zraii Nji	59.74	342	P	P	22 41 38.9	+0.6
	baz=130,SNR=10						
N25K	Chitina, Valde	59.75	334	P	P	22 41 40.6	+2.1
	baz=118,SNR=21						
EYAK	Cordova Ski Ar	59.75	333	IAMs_20	IAMs_20	23 11 40.4	
	comp=Z,2µm,19.0s						
EYAK	Cordova Ski Ar	59.75	333	P	P	22 41 39.9	+1.5
	baz=116						
INK	Inuvik	59.85	344		P	22 41 39.1	+0.2
INK	Inuvik	59.85	344	LR	LR	23 10 24.8	
	comp=Z,1µm,19.3s,baz=134,slow=39						
INK	Inuvik	59.85	344	P	P	22 41 39.1	+0.2
INK				pmax	pmax		
	comp=Z,69nm,1.5s						
INK	Inuvik	59.85	344	P	P	22 41 39.8	+0.8
	baz=133,SNR=18						
H29M	Whitestone	59.94	341	P	P	22 41 40.7	+1.0
	baz=127,SNR=9.9						
L26K	Log Cabin Wild	59.94	336	P	P	22 41 41.4	+1.6
	baz=120						
K27K	Chicken	59.98	337	P	P	22 41 41.8	+1.9
	baz=122						
I28M	Miner Creek	60.00	339	P	P	22 41 40.5	+0.3
	baz=125,SNR=7.6						
F30M	Barrier River	60.02	343	P	P	22 41 41.0	+0.9
	baz=130,SNR=19						

HIN	Hinchinbrook I	60.02	333	IAMs_20	IAMs_20	23 11 58.4	
	comp=Z,1µm,18.0s						
DIV	Divide	60.03	333		P	22 41 41.1	+0.7
DIV				IAmb	IAmb	22 41 44.6	
	comp=Z,16nm,0.9s						
DIV				IAMs_20	IAMs_20	23 10 04.6	
	comp=Z,1µm,18.0s						
RCBR	Riachuelo	60.04	105		P	22 41 41.2	0.0
RCBR	Riachuelo	60.04	105	IAMs_20	IAMs_20	23 08 14.1	
	comp=Z,2µm,21.0s						
RCBR	Riachuelo	60.04	105	LR	LR	23 08 35.6	
	comp=Z,704nm,21.2s,baz=302,slow=37						
RCBR	Riachuelo	60.04	105	P	P	22 41 41.2	0.0
RCBR				pmax	pmax		
	comp=Z,52nm,0.9s						
RCBR				MLR	MLR		
	comp=Z,2µm,21.0s						
RCBR	Riachuelo	60.04	105	*e*P	P	22 41 40.2	-1.0
FID	Port Fidalgo	60.16	333	IAMs_20	IAMs_20	23 11 55.4	
	comp=Z,1µm,18.0s						
G29M	Pine Creek	60.25	341	P	P	22 41 42.5	+0.7
	baz=128,SNR=14						
P23K	Montague Islan	60.26	332	IAMs_20	IAMs_20	23 07 07.7	
	comp=Z,1µm,20.0s						
P23K	Montague Islan	60.26	332	P	P	22 41 43.7	+1.8
	baz=115						
KLU	Klutina	60.26	334	P	P	22 41 42.4	+0.4
KLU				IAmb	IAmb	22 41 46.2	
	comp=Z,16nm,0.8s						
KLU				IAMs_20	IAMs_20	23 10 21.6	
	comp=Z,1µm,19.0s						
KLU	Klutina	60.26	334	P	P	22 41 43.4	+1.4
	baz=117,SNR=10						
RES	Resolute Bay	60.35	359		P	22 41 41.9	-0.4
RES				IAmb	IAmb	22 41 44.5	
	comp=Z,15nm,0.7s						
RES				IAMs_20	IAMs_20	23 10 08.2	
	comp=Z,1µm,19.0s						
RES	Resolute Bay	60.35	359	LR	LR	23 10 19.4	
	comp=Z,1µm,19.5s,baz=178,slow=39						
RES	Resolute Bay	60.35	359	P	P	22 41 41.9	-0.4
RES				pmax	pmax		
	comp=Z,15nm,0.7s						
RES				MLR	MLR		
	comp=Z,1µm,19.0s						
HARP	HAARP	60.36	335	P	P	22 41 44.5	+1.9
	baz=118						
GLI	Glacier Island	60.49	333	IAMs_20	IAMs_20	23 07 24.9	
	comp=Z,1µm,21.0s						
GLI	Glacier Island	60.49	333	P	P	22 41 45.1	+1.6
	baz=115						
M24K	Tolsona, Glenn	60.64	334	P	P	22 41 46.2	+1.6
	baz=117,SNR=6.3						
I27K	Kandik River	60.67	339	P	P	22 41 46.0	+1.3
	baz=123,SNR=16						
SCRK	Sand Creek	60.67	337	P	P	22 41 46.5	+1.7
	baz=120,SNR=13						
SJMB	Sao Joao De Ma	60.67	121	*e*P	P	22 41 45.2	-0.1
A36M	Sachs Harbour	60.73	349	P	P	22 41 44.7	-0.2
A36M				IAMs_20	IAMs_20	23 11 08.0	
	comp=Z,1µm,18.0s						
A36M	Sachs Harbour	60.73	349	P	P	22 41 45.5	+0.6
	baz=143,SNR=9.2						
PAX	Paxson	60.76	335	IAMs_20	IAMs_20	23 10 28.7	
	comp=Z,1µm,20.0s						
PAX	Paxson	60.76	335	P	P	22 41 46.1	+0.7
	baz=118,SNR=33						
J26L	Joseph Creek	60.78	337	P	P	22 41 47.1	+1.6
	baz=121,SNR=30						
GUA01	Guaratinga, BA	60.83	118	*e*P	P	22 41 46.5	+0.1
RIDG	Independent Ri	60.88	336	P	P	22 41 47.6	+1.4
	baz=119,SNR=16						
H27K	Steamboat Moun	60.98	340	P	P	22 41 47.8	+0.9
	baz=124,SNR=19						
SCM	Sheep Creek Mo	61.01	334	P	P	22 41 47.5	+0.4
SCM				IAmb	IAmb	22 41 50.9	
	comp=Z,18nm,0.8s						
SCM				IAMs_20	IAMs_20	23 10 35.5	
	comp=Z,1µm,18.0s						
SCM	Sheep Creek Mo	61.01	334	P	P	22 41 47.5	+0.4
SCM				pmax	pmax		
	comp=Z,18nm,0.8s						
SCM				MLR	MLR		
	comp=Z,1µm,18.0s						
SCM	Sheep Creek Mo	61.01	334	P	P	22 41 48.1	+1.0
	baz=116,SNR=7.0						
PWL	Port Wells	61.04	333	IAMs_20	IAMs_20	23 12 31.2	
	comp=Z,1µm,18.0s						
PWL	Port Wells	61.04	333	P	P	22 41 48.0	+0.7
	baz=114						
I26K	Coal Creek Min	61.05	338	P	P	22 41 48.1	+0.9
	baz=122,SNR=16						
NBAN	Anadia - AL	61.07	110	*e*P	P	22 41 48.8	+0.5
E29M	Blow River	61.13	343	P	P	22 41 49.0	+1.2
	baz=128,SNR=15						
M23K	Glacier View	61.16	334	P	P	22 41 49.1	+1.0
	baz=115						
SEW	Seward	61.24	332	IAMs_20	IAMs_20	23 08 24.7	
	comp=Z,1µm,21.0s						
SEW	Seward	61.24	332	P	P	22 41 49.7	+1.2
	baz=113						
F28M	Old Crow	61.25	341	P	P	22 41 49.6	+1.1
	baz=126,SNR=54						
K24K	Donnelly Dome	61.27	336	P	P	22 41 49.8	+0.9
	baz=118						
KNK	Knik Glacier	61.32	333	P	P	22 41 50.0	+0.8
	baz=114						
G27K	Doyon Strip	61.35	340	IAMs_20	IAMs_20	23 12 27.2	
	comp=Z,1µm,19.0s						
G27K	Doyon Strip	61.35	340	P	P	22 41 50.1	+0.8
	baz=124,SNR=14						
SML	Sawmill	61.43	334	P	P	22 41 51.0	+1.0
	baz=115						
J25K	Salcha River,	61.51	337	P	P	22 41 51.5	+1.0
	baz=119,SNR=17						
WAT6	Susitna Watana	61.51	335	P	P	22 41 51.6	+1.0
	baz=116,SNR=21						
DHY	Denali Highway	61.58	335	P	P	22 41 51.7	+0.7
	baz=116						
RIB01	Linhares ES	61.62	122	*e*P	P	22 41 51.5	-0.3
PMR	Palmer	61.69	333	P	P	22 41 52.6	+1.0
	baz=114						
BRSE	Bradley Lake S	61.70	331	P	P	22 41 52.9	+1.1
	baz=111						
E28M	Babbage River	61.74	342	P	P	22 41 52.5	+0.7
	baz=127,SNR=12						
RC01	Rabbit Creek A	61.75	333	IAMs_20	IAMs_20	23 09 00.3	
	comp=Z,1µm,20.0s						
RC01	Rabbit Creek A	61.75	333	P	P	22 41 53.7	+1.6
	baz=113,SNR=11						
BRLK	Bradley Lake	61.78	331	IAMs_20	IAMs_20	23 08 27.2	
	comp=Z,1µm,20.0s						
CAM01	Campos-RJ	61.84	125	*e*P	P	22 41 53.3	+0.1
CNPM	China Poot	61.86	331	IAMs_20	IAMs_20	23 07 21.2	
	comp=Z,1µm,21.0s						
KDAK	Kodiak Island	61.94	328	LR	LR	23 09 24.9	
	comp=Z,903nm,19.8s,baz=110,slow=37						
KDAK	Kodiak Island	61.94	328	P	P	22 41 54.7	+1.4
	baz=108						
D28M	Stokes Point	61.95	343	P	P	22 41 54.5	+1.3
	baz=128						
WAT1	Susitna Watana	61.95	335	P	P	22 41 53.7	+0.2
	baz=115						
FIS	Fire Island	61.99	332	IAMs_20	IAMs_20	23 09 07.5	
	comp=Z,1µm,20.0s						
PRP	Porcupine Dome	62.01	338		P	22 41 53.9	0.0
PRP	Porcupine Dome	62.01	338	P	P	22 41 54.7	+0.9
	baz=119,SNR=38						
HDA	Harding Lake	62.01	337	IAMs_20	IAMs_20	23 10 49.0	
	comp=Z,2µm,20.0s						
HDA	Harding Lake	62.01	337	P	P	22 41 54.8	+1.1
	baz=117,SNR=10						
HOM	Homer	62.10	331	P	P	22 41 56.1	+1.7
	baz=110						
Q20K	Shuyak Island	62.11	329	P	P	22 41 56.2	+1.7
	baz=109						
E27K	Coleen River	62.11	341	P	P	22 41 55.5	+1.2
	baz=124,SNR=22						
OHAK	Old Harbor	62.12	328	P	P	22 41 56.0	+1.5
	baz=108						
G26K	Porcupine Rive	62.13	340	IAMs_20	IAMs_20	23 11 13.9	
	comp=Z,2µm,20.0s						
G26K	Porcupine Rive	62.13	340	P	P	22 41 55.5	+1.0
	baz=122,SNR=11						
ILAR	Eielson Array	62.16	337	P	P	22 41 54.8	+0.1
ILAR	Eielson Array	62.16	337	P	P	22 41 55.2	+0.5
	comp=Z,7.6nm,0.6s,baz=151,slow=5.0,SNR=48						
ILAR				LR	LR	23 11 06.3	
	comp=Z,2µm,19.2s,baz=118,slow=38						
	comp=Z,7.6nm,0.6s						
M22K	Willow	62.19	333	P	P	22 41 56.3	+1.4
	baz=113						
CAPN	Captain Cook N	62.27	332	P	P	22 41 57.1	+1.6
	baz=111						
RND	Reindeer	62.32	335		P	22 41 56.4	+0.4
RND				IAMs_20	IAMs_20	23 11 30.2	
	comp=Z,1µm,18.0s						
RND	Reindeer	62.32	335	P	P	22 41 56.4	+0.4
SUA	Susitna One	62.35	333	P	P	22 41 57.8	+1.6
	baz=112,SNR=17						
SII	Sitkinak Islan	62.40	327	P	P	22 41 58.4	+2.0
	baz=106						
FYU	Fort Yukon	62.43	339	IAMs_20	IAMs_20	23 13 06.7	
	comp=Z,2µm,19.0s						
H25L	Birch Creek	62.48	339	P	P	22 41 58.1	+1.2
	baz=119,SNR=17						
MCK	McKinley	62.49	335		P	22 41 56.9	-0.2
MCK				IAMs_20	IAMs_20	23 11 44.7	
	comp=Z,1µm,20.0s						
MCK	McKinley	62.49	335	P	P	22 41 56.9	-0.2
MCK				pmax	pmax		
	comp=Z,16nm,0.7s						
MCK				MLR	MLR		
	comp=Z,1µm,20.0s						
MCK	McKinley	62.49	335	P	P	22 41 58.1	+1.1
	baz=115,SNR=9.3						
CUT	Chulitna	62.51	334	IAMs_20	IAMs_20	23 11 53.0	
	comp=Z,1µm,20.0s						
CUT	Chulitna	62.51	334	P	P	22 41 58.2	+1.1
	baz=113						
POKR	Poker Plat Res	62.52	337	IAMs_20	IAMs_20	23 10 59.5	
	comp=Z,2µm,20.0s						
POKR	Poker Plat Res	62.52	337	P	P	22 41 58.2	+1.1
	baz=117						
D27M	Malcolm River	62.53	343	P	P	22 41 58.5	+1.2
	baz=126,SNR=12						
COLA	College	62.57	337	IAMs_20	IAMs_20	23 11 06.8	
	comp=Z,2µm,19.0s						
COLA	College	62.57	337	*i* P	P	22 41 58.1	+0.7
COLA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
COLA	College	62.57	337	P	P	22 41 58.3	+0.8
	baz=116						
F26K	Sheenjek River	62.65	340	IAMs_20	IAMs_20	23 13 53.4	
	comp=Z,2µm,19.0s						
F26K	Sheenjek River	62.65	340	P	P	22 41 59.2	+1.2
	baz=122,SNR=16						
BMAR	Burnt Mountain	62.65	340	P	P	22 41 58.6	+0.5
O20K	Slope Mountain	62.71	331	P	P	22 41 59.5	+0.9
	baz=110						
R18K	Karluk	62.83	328	P	P	22 41 59.9	+0.7
	baz=107						
G25K	Bearman Lake	62.83	339	P	P	22 42 00.9	+1.8
	baz=119,SNR=14						
Q19K	Cape Douglas,	62.83	329	P	P	22 42 00.0	+0.7
	baz=108						
P19K	Oil Pt	62.86	330	P	P	22 42 00.8	+1.3
	baz=109						
SKT	Skwentna	62.89	333	IAMs_20	IAMs_20	23 10 02.2	
	comp=Z,1µm,21.0s						
SKT	Skwentna	62.89	333	P	P	22 42 00.7	+1.0
	baz=112,SNR=11						
BWN	Browne	62.89	336	IAMs_20	IAMs_20	23 11 34.4	
	comp=Z,2µm,20.0s						
N20K	Mount Spurr	62.91	332	P	P	22 42 00.2	+0.3
	baz=110						
SPCR	Spurr Chakacha	62.91	332	P	P	22 42 00.2	+0.3
	baz=110						
NEA2	Nenana	62.92	336	IAMs_20	IAMs_20	23 11 46.8	
	comp=Z,1µm,19.0s						
NEA2	Nenana	62.92	336	P	P	22 42 00.6	+0.8
	baz=115,SNR=7.0						
TRF	Thorofare Moun	62.93	335	IAMs_20	IAMs_20	23 11 02.2	
	comp=Z,1µm,19.0s						
TRF	Thorofare Moun	62.93	335	P	P	22 42 01.0	+0.9
	baz=114,SNR=28						
CHIR	Chirikof Islan	62.97	326	P	P	22 42 01.4	+1.1
	baz=105						
H24K	Noodor Dome	63.02	338	P	P	22 42 01.4	+0.9
	baz=117,SNR=20						
F25K	Christian Rive	63.09	340	IAMs_20	IAMs_20	23 11 53.0	
	comp=Z,1µm,19.0s						
F25K	Christian Rive	63.09	340	P	P	22 42 02.5	+1.6
	baz=120,SNR=30						
KTH	Kantishna Hill	63.23	335	IAMs_20	IAMs_20	23 11 00.2	
	comp=Z,1µm,20.0s						
I23K	Minto, Yukon-K	63.27	337	IAMs_20	IAMs_20	23 13 19.2	
	comp=Z,2µm,18.0s						
I23K	Minto, Yukon-K	63.27	337	P	P	22 42 03.2	+1.1
	baz=115,SNR=24						
G24K	Hadweenzic Riv	63.28	339	P	P	22 42 03.4	+1.2
	baz=118,SNR=12						
E25K	Arctic Village	63.33	341	IAMs_20	IAMs_20	23 12 15.4	
	comp=Z,1µm,20.0s						
E25K	Arctic Village	63.33	341	P	P	22 42 04.0	+1.5
	baz=120,SNR=21						
KULLO	Kullorsuaq	63.41	10	*i* P	P	22 42 04.6	+1.8
KULLO				IAmb	IAmb	22 42 06.8	
	comp=Z,10nm,0.9s						
Q18K	Katmai Hardscr	63.42	329	P	P	22 42 04.2	+0.8
	baz=107						
BPAW	Bear Paw Mtn.	63.47	335	IAMs_20	IAMs_20	23 12 15.5	
	comp=Z,2µm,18.0s						
BPAW	Bear Paw Mtn.	63.47	335	P	P	22 42 04.0	+0.5
	baz=113,SNR=21						
PPLA	Purkeypile	63.51	334	P	P	22 42 05.2	+1.2
	baz=111,SNR=7.1						
C27K	Jago River	63.55	342	P	P	22 42 05.2	+1.3
	baz=123,SNR=20						
O19K	Port Alsworth	63.55	331	P	P	22 42 05.1	+1.1
	baz=108						
M20K	Styx River	63.56	333	IAMs_20	IAMs_20	23 10 08.0	
	comp=Z,1µm,20.0s						
M20K	Styx River	63.56	333	P	P	22 42 05.0	+0.8
	baz=110,SNR=18						
H23K	Yukon River	63.63	337	IAMs_20	IAMs_20	23 11 43.6	
	comp=Z,2µm,19.0s						
H23K	Yukon River	63.63	337	P	P	22 42 05.2	+0.7
	baz=115,SNR=6.8						
CAST	Castle Rocks	63.66	334		P	22 42 04.2	-0.5
CAST				IAMs_20	IAMs_20	23 11 10.6	
	comp=Z,1µm,19.0s						
CAST	Castle Rocks	63.66	334	P	P	22 42 05.5	+0.7
	baz=112,SNR=26						
P18K	Big Mountain,	63.75	330	P	P	22 42 06.0	+0.6
	baz=107						
MLY	Manley	63.75	336	P	P	22 42 05.6	+0.2
MLY				IAMs_20	IAMs_20	23 14 07.8	
	comp=Z,2µm,19.0s						
MLY	Manley	63.75	336	P	P	22 42 06.1	+0.7
	baz=114,SNR=35						
Q17K	Contact Creek	63.76	328	P	P	22 42 06.1	+0.5
	baz=106						
F24K	Squaw Lake	63.80	339	IAMs_20	IAMs_20	23 13 13.0	
	comp=Z,1µm,18.0s						
F24K	Squaw Lake	63.80	339	P	P	22 42 06.8	+1.1
	baz=118						
N19K	Bonanza Creek	63.82	331	P	P	22 42 06.6	+0.7
	baz=108,SNR=15						
O18K	Koktuh Hills	63.87	330	P	P	22 42 06.8	+0.6
	baz=107,SNR=11						
CHUM	Lake Minchumin	63.93	335	P	P	22 42 06.9	+0.4
	baz=112						
ICESG	Greenland Ices	64.05	19	*i* P	P	22 42 10.3	+2.7
ICESG				IAmb	IAmb	22 42 10.9	
	comp=Z,3.8nm,0.8s						
C26K	Camden Bay	64.06	342	P	P	22 42 09.0	+1.8
	baz=122,SNR=18						
L20K	Farewell, AK	64.09	333	P	P	22 42 08.2	+0.5
	baz=110,SNR=25						
M19K	Big River Lodg	64.13	332	IAMs_20	IAMs_20	23 09 00.1	
	comp=Z,1µm,21.0s						
M19K	Big River Lodg	64.13	332	P	P	22 42 09.1	+1.3
	baz=109,SNR=10						
G23K	Bananza Creek	64.19	338	P	P	22 42 09.3	+1.1
	baz=115,SNR=11						
D25K	Kavik River	64.19	342	IAMs_20	IAMs_20	23 14 43.1	
	comp=Z,1µm,19.0s						
D25K	Kavik River	64.19	342	P	P	22 42 09.6	+1.4
	baz=120,SNR=41						
PPT	Papeete	64.22	242	LR	LR	23 03 12.6	
	comp=Z,931nm,18.2s,baz=67,slow=29						
PPT2	Papeete2	64.23	242	*e*P	P	22 42 10.3	+1.1
	comp=Z,142nm,24.0s						
PPT2				*e*S	S	22 50 42.8	-1.4
	comp=Z,700nm,25.5s						
PPT2				*e*SS	SS	22 54 54.5	0.0
	comp=Z,473nm,25.5s						
PPT2				*e*LQ	LQ	22 58 38.3	
	comp=Z,1µm,29.2s						
PPT2				*e*LR	LR	23 01 17.8	
	comp=Z,1µm,22.2s						
PPT2				*e*LR	LR	23 01 23.4	
	comp=Z,2µm,24.5s						
Q16K	King Salmon	64.26	329	P	P	22 42 09.4	+0.8
	baz=105						
E24K	Your Creek	64.26	340	IAMs_20	IAMs_20	23 13 42.2	
	comp=Z,2µm,20.0s						
E24K	Your Creek	64.26	340	P	P	22 42 10.2	+1.5
	baz=117,SNR=13						
P17K	Kvichak River	64.29	329	P	P	22 42 09.5	+0.7
	baz=106						
H22K	Ishtalitna Cre	64.34	337	P	P	22 42 09.6	+0.4
	baz=114,SNR=20						
L19K	White Mountain	64.43	333	IAMs_20	IAMs_20	23 10 34.9	
	comp=Z,1µm,21.0s						
L19K	White Mountain	64.43	333	P	P	22 42 10.6	+0.8
	baz=108						
N18K	Kilae Creek	64.44	331	P	P	22 42 10.7	+0.8
	baz=107						
COLD	Coldfoot	64.47	339	P	P	22 42 11.7	+1.7
	baz=115,SNR=10						
K20K	Telida	64.48	334	P	P	22 42 10.4	+0.3
	baz=110,SNR=22						
E23K	Chandalar	64.64	340	IAMs_20	IAMs_20	23 14 30.0	
	comp=Z,2µm,18.0s						
E23K	Chandalar	64.64	340	P	P	22 42 13.0	+1.9
	baz=116						
M18K	Stony River	64.65	332	P	P	22 42 11.6	+0.4
	baz=107,SNR=8.8						
O17K	Koliganek Bris	64.77	330	P	P	22 42 13.4	+1.4
	baz=105,SNR=6.0						
J20K	Nowinta River	64.79	335	P	P	22 42 12.6	+0.5
	baz=110,SNR=11						
H21K	Melozitna Rive	64.79	337	IAMs_20	IAMs_20	23 14 50.5	
	comp=Z,1µm,18.0s						
H21K	Melozitna Rive	64.79	337	P	P	22 42 13.1	+0.9
	baz=112,SNR=10.0						
G22K	Bettles	64.81	338	P	P	22 42 13.2	+1.1
	baz=114						
D24K	Happy Valley	64.88	341	IAMs_20	IAMs_20	23 15 18.2	
	comp=Z,1µm,18.0s						
D24K	Happy Valley	64.88	341	P	P	22 42 14.2	+1.6
	baz=118,SNR=5.1						
TOLK	Toolik Lake Re	64.88	340	IAMs_20	IAMs_20	23 14 05.5	
	comp=Z,1µm,18.0s						
TOLK	Toolik Lake Re	64.88	340	P	P	22 42 13.9	+1.2
	baz=116,SNR=9.5						
CHNA	Chernabura Isl	64.96	324	P	P	22 42 15.1	+1.8
	baz=101						
N17K	Nushagak Hills	65.01	331	P	P	22 42 14.9	+1.3
	baz=106						
P16K	Nushagak River	65.02	329	P	P	22 42 14.9	+1.2
	baz=104						
C24K	Franklin Bluff	65.10	341	P	P	22 42 15.7	+1.7
	baz=118						
I20K	Naaghedeneel	65.14	335	IAMs_20	IAMs_20	23 13 15.5	
	comp=Z,2µm,18.0s						
I20K	Naaghedeneel	65.14	335	P	P	22 42 15.0	+0.6
	baz=110						
O16K	Kokwok River B	65.21	329	P	P	22 42 16.2	+1.3
	baz=104						
S14K	Fog Glacier	65.22	326	P	P	22 42 16.3	+1.2
	baz=101						
L18K	Granite Mounta	65.26	332	IAMs_20	IAMs_20	23 13 57.9	
	comp=Z,1µm,20.0s						
L18K	Granite Mounta	65.26	332	P	P	22 42 16.0	+0.8
	baz=107						
IMAR	Indian Mountai	65.28	337	P	P	22 42 14.9	-0.4
F22K	John River	65.28	339	P	P	22 42 16.8	+1.5
	baz=113,SNR=17						
J19K	Poorman	65.34	334	IAMs_20	IAMs_20	23 11 39.9	
	comp=Z,1µm,20.0s						
J19K	Poorman	65.34	334	P	P	22 42 15.9	+0.2
	baz=108,SNR=20						
M17K	Holitna River	65.37	331	P	P	22 42 16.6	+0.7
	baz=106						
G21K	Allakaket	65.38	337	P	P	22 42 16.7	+0.8
	baz=112,SNR=19						
D23K	Nanushuk River	65.39	340	P	P	22 42 17.6	+1.7
	baz=116,SNR=13						
E22K	Anaktuvuk Pass	65.41	339	P	P	22 42 17.3	+1.2
	baz=114,SNR=24						
H20K	Anotleneega Mo	65.54	336	P	P	22 42 17.9	+0.9
	baz=110,SNR=9.0						
SDPT	Sand Point	65.56	325	P	P	22 42 18.1	+1.0
	baz=100						
J18K	Innoko River	65.64	334	IAMs_20	IAMs_20	23 13 31.9	
	comp=Z,1µm,18.0s						
J18K	Innoko River	65.64	334	P	P	22 42 17.9	+0.2
	baz=107						
F21K	Alatna River	65.64	338	IAMs_20	IAMs_20	23 14 22.7	
	comp=Z,2µm,20.0s						
F21K	Alatna River	65.64	338	P	P	22 42 19.2	+1.6
	baz=112,SNR=59						
C23K	Itkillik River	65.75	341	IAMs_20	IAMs_20	23 15 07.3	
	comp=Z,2µm,20.0s						
C23K	Itkillik River	65.75	341	P	P	22 42 19.6	+1.5
	baz=116,SNR=13						
N16K	Nishlik Lake	65.76	330	P	P	22 42 19.8	+1.3
	baz=104						
EUNU	Eureka	65.81	1		P	22 42 18.3	-0.2
L17K	Donlin	65.96	332	P	P	22 42 20.5	+0.8
	baz=105,SNR=6.1						
O15K	Ungalikthiuk R	65.97	329	P	P	22 42 19.5	-0.3
	baz=102						
M16K	Timber Creek	65.98	331	P	P	22 42 20.6	+0.7
	baz=104						
D22K	Ayikyak River	66.01	340	P	P	22 42 21.5	+1.5
	baz=114,SNR=19						
GCSA	Galena City Sc	66.10	335	P	P	22 42 21.1	+0.6
	baz=108						
K17K	Iditarod	66.12	333	IAMs_20	IAMs_20	23 10 10.6	
	comp=Z,1µm,22.0s						
K17K	Iditarod	66.12	333	P	P	22 42 21.5	+0.8
	baz=105						
SUMG	Summit	66.16	16	*i* P	P	22 42 22.5	+1.3
SUMG				IAmb	IAmb	22 42 24.4	
	comp=Z,5.1nm,0.8s						
H19K	Roundabout Mou	66.17	336	IAMs_20	IAMs_20	23 13 48.7	
	comp=Z,1µm,18.0s						
H19K	Roundabout Mou	66.17	336	P	P	22 42 21.5	+0.5
	baz=108,SNR=11						
E21K	Killik River	66.27	339	IAMs_20	IAMs_20	23 14 13.3	
	comp=Z,2µm,19.0s						
E21K	Killik River	66.27	339	P	P	22 42 22.8	+1.1
	baz=112,SNR=16						
N15K	Kwethluk River	66.32	330	P	P	22 42 22.4	+0.3
	baz=103						
L16K	Owhat River	66.39	332	P	P	22 42 23.2	+0.7
	baz=104						
F20K	Avaraart Lake	66.39	338	IAMs_20	IAMs_20	23 16 02.7	
	comp=Z,2µm,21.0s						
F20K	Avaraart Lake	66.39	338	P	P	22 42 23.6	+1.2
	baz=110,SNR=21						
G19K	Purcell Mounta	66.61	337	IAMs_20	IAMs_20	23 12 28.6	
	comp=Z,1µm,21.0s						
G19K	Purcell Mounta	66.61	337	P	P	22 42 24.6	+0.8
	baz=108,SNR=7.9						
J17K	VABM Dome	66.64	333	IAMs_20	IAMs_20	23 10 54.3	
	comp=Z,1µm,22.0s						
J17K	VABM Dome	66.64	333	P	P	22 42 24.6	+0.6
	baz=105						
O14K	Tigyukauivet M	66.71	329	P	P	22 42 25.2	+0.6
	baz=101						
M15K	Kasigluk River	66.73	330	P	P	22 42 25.7	+1.0
	baz=102						
TBI	Tubuai	66.75	237	*e*PKP1	P	22 42 21.6	-3.8
	comp=Z,623nm,27.2s						
TBI				*e*S	S	22 51 15.7	+0.9
	comp=Z,2µm,24.8s						
TBI				*e*LQ	LQ	22 59 35.8	
	comp=Z,2µm,26.5s						
TBI				*e*LR	LR	23 02 34.7	
	comp=Z,8µm,26.5s						
TBI				*e*LR	LR	23 02 35.3	
	comp=Z,2µm,24.8s						
C21K	Knifeblade Rid	66.81	340	P	P	22 42 26.6	+1.5
	baz=112,SNR=12						
H18K	Honhosa River	66.82	335	IAMs_20	IAMs_20	23 13 30.0	
	comp=Z,992nm,18.0s						
H18K	Honhosa River	66.82	335	P	P	22 42 26.3	+1.1
	baz=106						

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SACV  Santiago Islan   66.83  80  IAMs_20  IAMs_20  23 07 25.2
      comp=Z,1µm,20.0s
B22K  Teshekpuk Lake   66.83 341  IAMs_20  IAMs_20  23 15 28.9
      comp=Z,1µm,20.0s
B22K  Teshekpuk Lake   66.83 341  P        P        22 42 26.2 +1.1
      baz=113
B21K  Ikpikpuk River   66.93 340  IAMs_20  IAMs_20  23 14 54.6
      comp=Z,2µm,20.0s
B21K  Ikpikpuk River   66.93 340  P        P        22 42 26.9 +1.2
      baz=112
E20K  Nigu River       66.97 339  P        P        22 42 27.2 +1.1
      baz=110
N14K  Kuskokwak Cree   67.06 329  P        P        22 42 27.5 +0.8
      baz=101
E19K  Redstone River   67.08 338  P        P        22 42 27.9 +1.1
      baz=108
F19K  Shaleruckik Mo   67.09 337  IAMs_20  IAMs_20  23 16 14.1
      comp=Z,2µm,18.0s
F19K  Shaleruckik Mo   67.09 337  P        P        22 42 27.7 +0.9
      baz=108
FALS  False Pass       67.15 324  P        P        22 42 28.1 +0.7
      baz=98
G18K  Tagagawik        67.15 336  IAMs_20  IAMs_20  23 14 28.6
      comp=Z,1µm,18.0s
G18K  Tagagawik        67.15 336  P        P        22 42 28.4 +1.1
      baz=106,SNR=7.4
D20K  Etivluk River    67.28 339  IAMs_20  IAMs_20  23 13 26.5
      comp=Z,2µm,22.0s
D20K  Etivluk River    67.28 339  P        P        22 42 29.3 +1.2
      baz=110,SNR=28
J16K  Anvik River      67.28 333  P        P        22 42 29.2 +1.1
      baz=104
L15K  Ungalak Mounta   67.32 331  P        P        22 42 29.2 +0.8
      baz=102
M14K  Bethel           67.35 330  P        P        22 42 29.7 +1.2
      baz=101,SNR=9.9
H17K  Granite Mounta   67.39 335  IAMs_20  IAMs_20  23 13 15.2
      comp=Z,1µm,21.0s
H17K  Granite Mounta   67.39 335  P        P        22 42 29.9 +1.1
      baz=105
I17K  Unalakleet       67.46 334  IAMs_20  IAMs_20  23 11 31.0
      comp=Z,1µm,21.0s
I17K  Unalakleet       67.46 334  P        P        22 42 30.5 +1.3
      baz=104
K15K  Wolf Creek Mou   67.47 332  P        P        22 42 30.6 +1.2
      baz=102,SNR=12
A22K  Sinclair Lake    67.57 342  P        P        22 42 30.9 +1.2
      baz=112
D19K  Kuna River       67.73 339  IAMs_20  IAMs_20  23 15 32.8
      comp=Z,2µm,19.0s
D19K  Kuna River       67.73 339  P        P        22 42 32.2 +1.3
      baz=108,SNR=9.9
F18K  Selawik          67.73 337  P        P        22 42 31.6 +0.7
      baz=106
L14K  Kuka Creek       67.81 331  P        P        22 42 32.2 +0.7
      baz=101
G17K  Kiwalik Mounta   67.84 335  P        P        22 42 32.6 +1.0
      baz=104
B20K  Meade River      67.90 340  P        P        22 42 33.5 +1.6
      baz=110
M13K  Dall Lake        67.96 330  P        P        22 42 34.1 +1.6
      baz=100
A21K  Barrow           68.18 342  P        P        22 42 34.6 +0.9
      baz=110
H16K  Elim             68.29 334  P        P        22 42 35.8 +1.4
      baz=102
F17K  Baldwin Pennin   68.31 336  IAMs_20  IAMs_20  23 15 16.5
      comp=Z,1µm,18.0s
F17K  Baldwin Pennin   68.31 336  P        P        22 42 35.9 +1.4
      baz=104
E18K  Tukpahlearik C   68.32 337  P        P        22 42 35.3 +0.8
      baz=105
C19K  Lookout Ridge    68.42 339  IAMs_20  IAMs_20  23 16 08.1
      comp=Z,2µm,19.0s
C19K  Lookout Ridge    68.42 339  P        P        22 42 36.8 +1.5
      baz=107
J14K  Nanvaranak Lak   68.48 332  P        P        22 42 37.2 +1.6
      baz=100
G16K  Koyuk River      68.50 335  P        P        22 42 37.0 +1.3
      baz=103
E17K  Hotham Inlet     68.69 337  P        P        22 42 38.0 +1.1
      baz=104
UNV   Unalaska Valle   68.83 322  P        P        22 42 38.6 +0.6
      baz=94
K13K  Kusilvak Mount   68.84 331  P        P        22 42 39.3 +1.4
      baz=99
C18K  Utukok River     68.86 339  P        P        22 42 39.2 +1.3
      baz=105
G15K  Niukluk          69.12 335  P        P        22 42 41.0 +1.5
      baz=101
A19K  Wainwright       69.23 340  P        P        22 42 41.6 +1.4
      baz=106
B18K  Kokolik River    69.25 339  P        P        22 42 41.6 +1.2
      baz=105
D17K  Noatak River     69.31 337  P        P        22 42 41.9 +1.2
      baz=103
BORG  Borgarnes        69.31  26  IAMs_20  IAMs_20  23 14 04.6
      comp=Z,2µm,18.0s
BORG  Borgarnes        69.31  26  LR       LR       23 13 17.2
      comp=Z,860nm,18.3s,baz=265,slow=36
RDOG  Red Dog Mine     69.32 338  IAMs_20  IAMs_20  23 17 41.1
      comp=Z,1µm,18.0s
RDOG  Red Dog Mine     69.32 338  P        P        22 42 41.4 +0.5
      baz=103
M11K  Mekoryuk         69.36 329  P        P        22 42 42.8 +1.7
      baz=97
F15K  North Star Dit   69.50 335  IAMs_20  IAMs_20  23 15 54.9
      comp=Z,1µm,19.0s
F15K  North Star Dit   69.50 335  P        P        22 42 42.7 +0.7
      baz=101
C17K  DeLong Mountai   69.52 338  P        P        22 42 42.9 +0.8
      baz=103
ANM   Nome             69.60 334  IAMs_20  IAMs_20  23 16 13.6
      comp=Z,1µm,18.0s
ANM   Nome             69.60 334  P        P        22 42 44.0 +1.4
      baz=100
F14K  Arctic Creek     70.15 335  P        P        22 42 47.2 +1.2
      baz=99
NIKH  Nikolski High    70.19 321  P        P        22 42 46.5 +0.1
      baz=92
C16K  Lisburne Hills   70.26 338  IAMs_20  IAMs_20  23 15 32.9
      comp=Z,1µm,22.0s
C16K  Lisburne Hills   70.26 338  P        P        22 42 47.2 +0.7
      baz=101
PMOZ  Porto Moniz, M   70.52  60 eP        P        22 42 50.8 +1.8
PMOZ                             eLR       LR       23 04 16.6
PMOZ                             i AMs_20           23 12 19.1
      comp=Z,847nm,18.0s
P08K  Saint George I   70.76 325  P        P        22 42 50.8 +1.0
      baz=93
TNA   Tin City         70.82 335  IAMs_20  IAMs_20  23 14 00.8
      comp=Z,960nm,20.0s
TNA   Tin City         70.82 335  P        P        22 42 51.6 +1.6
      baz=98
SPIA  Saint Paul Isl   71.17 326  P        P        22 42 53.5 +1.2
      baz=92
MACI  Morro de la Ar   71.57  65  IAMs_20  IAMs_20  23 08 20.9
      comp=Z,1µm,22.0s
DBG   Daneborg         71.63  16 i P       P        22 42 54.4 -0.4
DBG                               IAmb     IAmb     22 42 55.5
      comp=Z,4.2nm,1.0s
USHA  Ushuaia          71.98 165  LR       LR       23 09 20.6
      comp=Z,2µm,18.1s,baz=304,slow=32
GAMB  Gambell          72.26 333  P        P        22 43 00.6 +1.9
      baz=94
DAG   Danmarks Havn    72.55  13 i P       P        22 43 00.0 -0.2
DAG                               IAmb     IAmb     22 43 02.6
      comp=Z,12nm,1.0s
BBTS  Babate           73.62  79  LR       LR       23 10 30.4
      comp=Z,2µm,20.9s,baz=162,slow=32
RAR   Rarotonga        74.48 243  LR       LR       23 08 48.6
      comp=Z,363nm,21.3s,baz=60,slow=30
JMIC  Jan Mayen        74.74  20  LR       LR       23 17 03.8
      comp=Z,2µm,19.5s,baz=262,slow=37
LIS   Lisbon           76.41  53 eP        P        22 43 23.4 +0.1
LIS                               IAMs_20  IAMs_20  23 12 56.3
      comp=Z,2µm,27.1s
LIS   Lisbon           76.41  53 eP        P        22 43 25.6 +2.2
LIS   Lisbon           76.41  53 eP        P        22 43 23.5 +0.1
PSBE  So Bento         76.58  52 eP        P        22 43 25.0 +0.6
DSB   Dublin           76.62  38  IAMs_20  IAMs_20  23 18 32.2
      comp=Z,1µm,19.0s
PGAV  Gavieira, Arco   76.65  50 eP        P        22 43 25.0 +0.1
PGAV                             i Amb              22 43 25.8
      comp=Z,37nm,1.2s
PGAV                             eLR       LR       23 07 01.2
PGAV                             i AMs_20           23 11 56.3
      comp=Z,1µm,20.0s
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PCAS  Casmilo, Conde   76.73  52 eP        P        22 43 24.2 -1.0
COI   Coimbra          76.78  52 eP        P        22 43 25.6 +0.2
PFVI  Vila Bisbo       76.88  55 eP        P        22 43 25.3 -0.7
PTEO  Sao Teotonio     76.90  54 eP        P        22 43 25.0 -1.2
MORF  Marmelete        76.99  55 eP        P        22 43 26.7  0.0
MORF                              IAMs_20  IAMs_20  23 14 06.3
      comp=Z,1µm,19.6s
MORF  Marmelete        76.99  55  P        P        22 43 25.2 -1.5
MORF                              IAmb     IAmb     22 45 06.7
      comp=Z,24nm,1.5s
MORF                              IAMs_20  IAMs_20  23 14 53.8
      comp=Z,1µm,22.0s
MORF  Marmelete        76.99  55 eP        P        22 43 27.7 +0.9
MORF  Marmelete        76.99  55 eP        P        22 43 26.7  0.0
PSARD Sardoal          77.05  52 eP        P        22 43 28.7 +1.6
PMTG  Montargil        77.07  53 eP        P        22 43 26.2 -0.9
POLO  Lamas de Olo     77.08  50 eP        P        22 43 27.6 +0.4
PVIS  Viseu            77.10  51 eP        P        22 43 26.8 -0.5
MESJ  Messejana        77.25  54 eP        P        22 43 28.4 +0.2
MESJ                             eS        S        22 53 15.0 -0.1
MESJ                              IAMs_20  IAMs_20  23 16 06.6
      comp=Z,1µm,16.9s
MESJ  Messejana        77.25  54  IAMs_20  IAMs_20  23 16 01.8
      comp=Z,1µm,20.0s
MESJ  Messejana        77.25  54 eP        P        22 43 27.9 -0.3
MESJ  Messejana        77.25  54 eP        P        22 43 28.4 +0.2
MESJ                             eS        S        22 53 15.0 -0.1
EVO   Evora            77.31  53 eP        P        22 43 27.9 -0.6
MTE   Manteigas        77.41  51  P        P        22 43 27.5 -1.6
MTE                               IAMs_20  IAMs_20  23 11 28.7
      comp=Z,2µm,21.0s
MTE   Manteigas        77.41  51 eP        P        22 43 29.9 +0.8
MTE                              i Amb              22 43 49.2
      comp=Z,23nm,2.0s
MTE                              eS        S        22 53 18.8 +2.0
MTE                              eLQ       LQ       23 03 31.1
MTE                              eLR       LR       23 07 18.0
MTE                              i AMs_20           23 14 00.7
      comp=Z,1µm,20.0s
PCVE  Castro Verde     77.42  54 eP        P        22 43 30.9 +1.8
PCBR  Castelo Branco   77.54  52 eP        P        22 43 30.0 +0.3
PBDV  Barranco-do-Ve   77.57  55 eP        P        22 43 30.7 +0.8
PESTR Estremoz         77.59  53  IAMs_20  IAMs_20  23 15 02.7
      comp=Z,997nm,20.0s
PESTR Estremoz         77.59  53 eP        P        22 43 30.8 +0.7
PMRV  Marv??o          77.66  52 eP        P        22 43 32.4 +1.9
PMRV                             i Amb              22 43 49.8
      comp=Z,19nm,2.0s
PMRV                             eLR       LR       23 07 50.8
PMRV                             i AMs_20           23 12 47.5
      comp=Z,1µm,20.0s
MVO   Moncorvo         77.69  50 eP        P        22 43 30.5 -0.1
MVO                              i Amb              22 43 47.1
      comp=Z,28nm,2.0s
MVO                              eS        S        22 53 32.6  +13
MVO                              eLQ       LQ       23 04 11.3
MVO                              eLR       LR       23 08 11.8
MVO                              i AMs_20           23 12 25.7
      comp=Z,926nm,20.0s
PVAQ  Vaqueiros        77.71  54  IAMs_20  IAMs_20  23 15 23.9
      comp=Z,853nm,20.0s
PVAQ  Vaqueiros        77.71  54 eP        P        22 43 33.0 +2.3
PVAQ                             i Amb              22 43 46.3
      comp=Z,23nm,1.8s
PVAQ                             eLR       LR       23 06 35.1
PVAQ                             i AMs_20           23 15 51.9
      comp=Z,958nm,20.0s
PBRG  Braganca         77.81  50 eP        P        22 43 30.3 -1.0
PBAR  Barrancos        78.12  53 eP        P        22 43 31.5 -1.5
ESK   Eskdalemuir      78.21  36  P        P        22 43 31.3 -1.8
ESK                               IAmb     IAmb     22 43 33.9
      comp=Z,12nm,0.9s
ESK   Eskdalemuir      78.21  36  IAMs_20  IAMs_20  23 16 34.2
      comp=Z,1µm,20.0s
ESK   Eskdalemuir      78.21  36  P        P        22 43 31.3 -1.8
ESK                               pmax     pmax
      comp=Z,12nm,0.9s
ESK                               MLR      MLR
      comp=Z,1µm,20.0s
EKA   Eskdalemuir Ar   78.23  36  P        P        22 43 30.9 -2.4
      comp=Z,6.4nm,0.7s,baz=275,slow=5.6,SNR=30
      comp=Z,6.4nm,0.7s
EKA   Eskdalemuir Ar   78.23  36  P        P        22 43 31.3 -2.0
EKA                               pmax     pmax
      comp=Z,6.0nm,0.8s
AVE   Averroes         78.61  58  IAMs_20  IAMs_20  23 16 07.0
      comp=Z,1µm,19.0s
KBS   Kingsbay         78.85  11  IAMs_20  IAMs_20  23 20 50.4
      comp=Z,1µm,19.0s
SFS   San Fernando     79.06  55  IAMs_20  IAMs_20  23 16 03.6
      comp=Z,1µm,22.0s
SPITS Spitsbergen Ar   79.94  11  P        P        22 43 42.7 +0.5
      comp=Z,1.8nm,0.6s,baz=212,slow=3.0,SNR=12
SPITS                             LR       LR       23 20 19.7
      comp=Z,2µm,20.9s,baz=228,slow=37
      comp=Z,1.8nm,0.6s
PAB   San Pablo        79.97  52  P        P        22 43 41.7 -1.5
PAB                               IAmb     IAmb     22 44 32.1
      comp=Z,22nm,1.7s
PAB   San Pablo        79.97  52  P        P        22 43 41.7 -1.5
PAB                               pmax     pmax
      comp=Z,22nm,1.7s
PAB                               MLR      MLR
      comp=Z,2µm,20.0s
ESDC  Sonseca Array    80.24  52           P        22 43 42.4 -2.2
ESDC  Sonseca Array    80.24  52  P        P        22 43 42.3 -2.2
      comp=Z,4.6nm,0.9s,baz=290,slow=5.7,SNR=24
ESDC                              LR       LR       23 15 36.1
      comp=Z,1µm,19.6s,baz=286,slow=33
      comp=Z,4.6nm,0.9s
ESBB  Sonseca Array    80.24  52           P        22 43 42.4 -2.2
SHEM  Shemya Is, Ala   80.49 322  LR       LR       23 19 29.8
      comp=Z,151nm,19.3s,baz=54,slow=36
BILL  Bilibino         80.79 338           P        22 43 46.9  0.0
BILL  Bilibino         80.79 338 i P       P        22 43 46.9  0.0
BILL                              pmax     pmax
      comp=Z,30nm,0.8s
MDT   Midelt           81.02  58  LR       LR       23 15 36.7
      comp=Z,892nm,19.9s,baz=299,slow=33
ESPZ  Base Esperanza   82.34 165  P        P        22 43 54.9  0.0
ESPZ                              IAmb     IAmb     22 44 16.3
      comp=Z,13nm,0.9s
CLF   Chambon-Foret    82.92  42  IAMs_20  IAMs_20  23 16 10.2
      comp=Z,1µm,20.0s
CART  Cartagena        82.93  53  IAMs_20  IAMs_20  23 18 18.9
      comp=Z,838nm,20.0s
CEST  Esterri de Car   83.49  48  P        P        22 44 00.6 -1.2
CEST                              IAMs_20  IAMs_20  23 20 46.5
      comp=Z,697nm,19.0s
DOU   Dourbes          83.90  40 dP        P        22 44 03.4 -0.2
      comp=Z,3.2nm,0.9s
BMRD  Maredsous        83.96  40 dP        P        22 44 04.0 +0.2
KONO  Kongsberg        83.97  30  IAMs_20  IAMs_20  23 18 13.4
      comp=Z,1µm,21.0s
BGES  Gesves           84.13  40 dP        P        22 44 03.2 -1.5
      comp=Z,6.3nm,0.7s
BCLA  Clavier          84.26  40 dP        P        22 44 05.5 +0.2
      comp=Z,5.9nm,0.8s
BCLA                             dpP       pP       22 44 17.5 -0.4
NB2   NORSAR Subarra   84.29  28  P        P        22 44 05.1 -0.2
      comp=Z,3.1nm,0.7s,baz=293,slow=5.1
NOA   NORSAR Array B   84.29  28  P        P        22 44 04.8 -0.5
      comp=Z,1.7nm,0.6s,baz=291,slow=5.1,SNR=12
NOA                               LR       LR       23 19 35.9
      comp=Z,1µm,21.3s,baz=285,slow=34
      comp=Z,1.7nm,0.6s
BSTI  Sart Tilman      84.38  39 dP        P        22 44 06.2 +0.3
MEM   Membach          84.64  39 dP        P        22 44 07.4 +0.2
      comp=Z,4.0nm,0.9s
WLF   Walferdange      84.99  40  IAMs_20  IAMs_20  23 18 01.7
      comp=Z,1µm,20.0s
WLF   Walferdange      84.99  40 dP        P        22 44 09.2 +0.1
      comp=Z,4.8nm,0.9s
HFS   Hagfors          85.75  29  P        P        22 44 11.4 -1.2
      comp=Z,3.7nm,0.6s,baz=207,slow=2.9,SNR=12
HFS                               LR       LR       23 20 07.0
      comp=Z,1µm,21.5s,baz=279,slow=34
      comp=Z,3.7nm,0.6s
ECH   Echery           86.04  41  IAMs_20  IAMs_20  23 17 08.6
      comp=Z,798nm,22.0s
ARCES ARCESS Array B   86.10  18  P        P        22 44 13.5 -0.7
ARCES ARCESS Array B   86.10  18  P        P        22 44 13.2 -1.0
      comp=Z,2.0nm,0.5s,baz=272,slow=3.4,SNR=22
ARCES                             LR       LR       23 23 34.4
      comp=Z,1µm,18.2s,baz=306,slow=36
      comp=Z,2.0nm,0.5s
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ARCES ARCESS Array B   86.10  18  P        P        22 44 13.5 -0.7
ARCES                             pmax     pmax
      comp=Z,40nm,1.6s
KEV   Kevo             86.43  18  IAMs_20  IAMs_20  23 23 09.5
      comp=Z,970nm,20.0s
DBIC  Dimbokro         86.55  84  P        P        22 44 16.9 -0.6
DBIC  Dimbokro         86.55  84  P        P        22 44 17.4 -0.1
      comp=Z,16nm,0.7s,baz=288,slow=4.6,SNR=17
DBIC                              LR       LR       23 17 49.8
      comp=Z,826nm,21.8s,baz=308,slow=32
      comp=Z,16nm,0.7s
SENIN Lac Senin/Sane   86.67  43           P        22 44 17.1 -0.7
SENIN                             IAmb     IAmb     22 44 19.7
      comp=Z,6.7nm,0.8s
SENIN                             IAMs_20  IAMs_20  23 20 57.5
      comp=Z,983nm,20.0s
STU   Stuttgart        87.16  40  IAMs_20  IAMs_20  23 22 36.2
      comp=Z,954nm,20.0s
TUE   Stuetta          87.99  43  IAMs_20  IAMs_20  23 18 04.2
      comp=Z,847nm,21.0s
SEY   Seymchan         88.05 335  P        P        22 44 24.9 +1.1
      comp=Z,7.0nm,0.6s,baz=89,slow=5.4,SNR=13
SEY                               LR       LR       23 26 06.9
      comp=Z,741nm,21.8s,baz=66,slow=37
      comp=Z,7.0nm,0.6s
DAVA  Damuels          88.07  42 i P       P        22 44 23.7 -0.7
      comp=Z,5.8nm,0.8s
GRFO  Grafenberg       88.11  39  IAMs_20  IAMs_20  23 19 28.3
      comp=Z,1µm,22.0s
GRA1  Grafenberg Arr   88.11  39  IAMs_20  IAMs_20  23 19 28.3
      comp=Z,1µm,22.0s
GRF   Grafenberg Arr   88.11  39 eP        P        22 44 25.4 +1.0
      comp=Z,5.9nm,1.2s,baz=290,slow=5.3
DAVOX Davos/Dischmat   88.24  42  LR       LR       23 18 35.2
      comp=Z,974nm,21.5s,baz=284,slow=32
FUORN Ofenpass-Fuorn   88.54  42           P        22 44 25.6 -1.2
FUORN                             IAMs_20  IAMs_20  23 18 33.8
      comp=Z,949nm,20.0s
RETA  Reutte           88.57  41 eP        P        22 44 25.8 -0.9
      comp=Z,4.2nm,0.7s
CLL   Collm            88.61  37  IAMs_20  IAMs_20  23 27 07.3
      comp=Z,892nm,18.0s
CLL   Collm            88.61  37 eP        P        22 44 26.0 -0.6
CLL                              e                  22 54 48.0
CLL                               pmax     pmax
      comp=Z,900nm,18.7s
CLL   Collm            88.61  37 eP        P        22 44 26.0 -0.6
CLL                              eSKSac    SKSac    22 54 52.0 -0.6
CLL                              esS       pS       22 55 22.0 -4.1
CLL                              ePPS      PPS      22 56 40.0
CLL                              eSS       SS       23 01 00.0 -0.9
CLL                              eSSS      SSS      23 04 48.0
CLL                              eSSSS              23 07 24.0
CLL                               AMS      AMS      23 27 00.0
      comp=Z,900nm,18.7s
FETA  Feichten         88.71  42 eP        P        22 44 26.7 -0.7
      comp=Z,3.3nm,0.7s
MSSA  Maissana         88.80  45  IAMs_20  IAMs_20  23 18 32.7
      comp=Z,787nm,21.0s
MOTA  Moosalm          88.84  41 eP        P        22 44 27.0 -1.1
      comp=Z,3.5nm,0.8s
SQTA  Sankt Quirin     88.95  41 ePcP      P        22 44 29.0 +0.5
      comp=Z,3.7nm,0.9s
BRG   Berggiesshubel   89.32  37 eP        P        22 44 30.8 +0.8
BRG                               Amp               22 44 33.8
      comp=Z,2.6nm,1.0s
BRG   Berggiesshubel   89.32  37  PP       PP       22 48 01.0 +0.3
BRG   Berggiesshubel   89.32  37  S        S        22 55 20.0 +3.3
BRG   Berggiesshubel   89.32  37  SP       SP       22 56 26.0 +5.2
BRG   Berggiesshubel   89.32  37  SS       SS       23 01 17.0 +5.8
PET   Petropavlovsk    89.34 325 eP        P        22 44 30.1 +0.1
PET                              e                  22 48 02.4
PET                              eS        S        22 55 16.6 -0.1
PET                              e                  22 56 32.9
PET                               pmax     pmax
      comp=Z,300nm,10.3s
PET                               pmax     pmax
      comp=Z,10.0nm,1.4s
PET                               pmax     pmax
      comp=Z,300nm,9.1s
PET                               pmax     pmax
      comp=Z,100nm,16.1s
PET                               MLR      MLR
      comp=Z,300nm,18.0s
PET                               MLR      MLR
      comp=Z,300nm,18.0s
RICC  Richard          89.53  38  AMS      AMS      23 26 10.0
      comp=Z,1µm,18.9s
TIXI  Tiksi            89.73 348           P        22 44 31.4  0.0
TIXI                              IAMs_20  IAMs_20  23 32 11.8
      comp=Z,952nm,20.0s
TIXI  Tiksi            89.73 348  LR       LR       23 32 50.1
      comp=Z,914nm,18.3s,baz=62,slow=41
TIXI  Tiksi            89.73 348  P        P        22 44 31.4  0.0
TIXI                              pmax     pmax
      comp=Z,17nm,0.7s
TIXI                              MLR      MLR
      comp=Z,1µm,20.0s
KHC   Kasperske Hory   89.75  39 eP        P        22 44 30.0 -2.1
KHC                              eSKS      SKSac    22 54 42.4  -17
KHC                               AMS      AMS      23 23 50.0
      comp=Z,2µm,18.8s
KHC   Kasperske Hory   89.75  39 eP        P        22 44 30.0 -2.1
KHC                               MLR      MLR
      comp=Z,2µm,18.8s
LESA  Schwarzleotal    89.81  41 eP        P        22 44 32.5  0.0
      comp=Z,2.1nm,1.2s
PETK  Petropavlovsk-   89.83 325  P        P        22 44 32.6 +0.2
PETK  Petropavlovsk-   89.83 325  P        P        22 44 33.5 +1.2
      comp=Z,1.6nm,0.8s,baz=66,slow=8.4,SNR=5.3
      comp=Z,1.6nm,0.8s
PRA   Prague           89.91  38  AMS      AMS      23 26 20.0
      comp=Z,1µm,19.3s
GEC2  GERESS Array S   89.93  39  P        P        22 44 32.7 -0.3
GERES GERESS Array B   89.93  39  P        P        22 44 31.8 -1.2
      comp=Z,1.3nm,0.8s,baz=298,slow=2.9,SNR=9.3
GERES                             LR       LR       23 20 52.1
      comp=Z,1µm,21.8s,baz=280,slow=33
      comp=Z,1.3nm,0.8s
ABTA  Abfaltersbach    89.95  42 ePcP      P        22 44 33.7 +0.6
      comp=Z,7.7nm,1.4s
ZVC   Zvikov           90.01  39 eP        P        22 44 33.4 +0.1
ZVC                               AMS      AMS      23 27 30.0
      comp=Z,1µm,18.0s
PRU   Pruhonice        90.01  38  AMS      AMS      23 26 20.0
      comp=Z,1µm,18.8s
CIMO  Cimolais         90.06  42  IAMs_20  IAMs_20  23 19 25.0
      comp=Z,1µm,21.0s
GOPC  GO Pecny, Ondr   90.19  38  AMS      AMS      23 26 30.0
      comp=Z,1µm,18.5s
OSSC  Osservatorio P   90.24  45  IAMs_20  IAMs_20  23 19 13.9
      comp=Z,1µm,21.0s
VSL   Villasalto       90.25  49  IAMs_20  IAMs_20  23 19 01.5
      comp=Z,1µm,22.0s
STAL  STALIGIAL        90.25  42  IAMs_20  IAMs_20  23 19 42.1
      comp=Z,914nm,20.0s
CKRC  Cesky Krumlov    90.31  39 eSKS      SKSac    22 54 56.3 -6.5
CKRC                              AMS      AMS      23 24 30.0
      comp=Z,1µm,19.0s
BIOA  Bad Ischl, Aus   90.32  40 ePcP      P        22 44 35.0 +0.3
      comp=Z,2.2nm,0.7s
MA2   Magadan          90.37 333  P        P        22 44 35.0 +0.3
      comp=Z,4.5nm,0.4s,baz=72,slow=8.2,SNR=4.9
      comp=Z,4.5nm,0.4s
MA2   Magadan          90.37 333  P        P        22 44 35.0 +0.3
FINES FINESS Array B   90.58  25  P        P        22 44 34.3 -1.4
FINES FINESS Array B   90.58  25  P        P        22 44 34.6 -1.0
      comp=Z,4.4nm,0.9s,baz=277,slow=2.8,SNR=18
FINES                             LR       LR       23 27 03.6
      comp=Z,842nm,18.5s,baz=292,slow=37
      comp=Z,4.4nm,0.9s
MOA   Molln            90.66  40 ePcP      P        22 44 36.4 +0.1
      comp=Z,1.8nm,0.8s
CHVC  Chvalec          90.67  37  AMS      AMS      23 27 10.0
      comp=Z,1µm,19.7s
UPC   Upice            90.68  37  AMS      AMS      23 26 20.0
      comp=Z,1µm,18.3s
MYKA  Terra Mystica    90.72  41 eP        P        22 44 36.4 -0.3
      comp=Z,2.8nm,0.8s
PRED  Cave del Predi   90.74  42           P        22 44 35.6 -1.2
OSTC  Ostas            90.78  37 eP        P        22 44 35.5 -1.3
OSTC                              AMS      AMS      23 26 30.0
      comp=Z,1µm,20.2s
OSTC  Ostas            90.78  37 eP        P        22 44 35.5 -1.3
OSTC                              MLR      MLR
      comp=Z,1µm,20.2s
TREC  Trest            90.84  38  AMS      AMS      23 24 40.0
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	comp=Z,1µm,19.1s						
DPC	Dobruska-Polom	90.92	37	*e*P	P	22 44 37.5	0.0
DPC				AMS	AMS	23 26 20.0	
	comp=Z,1µm,20.0s						
DPC	Dobruska-Polom	90.92	37	*e*P	P	22 44 37.5	0.0
DPC				MLR	MLR		
	comp=Z,1µm,20.0s						
SABO	M.te Sabotino	90.93	42	IAMs_20	IAMs_20	23 20 02.5	
	comp=Z,1µm,22.0s						
TORD	Torodi Ar. Bea	91.21	76	P	P	22 44 37.6	-1.9
TORD	Torodi Ar. Bea	91.21	76	P	P	22 44 37.2	-2.3
	comp=Z,1.5nm,0.3s,baz=291,slow=5.8,SNR=2.9						
TORD				LR	LR	23 22 40.8	
	comp=Z,1µm,20.4s,baz=278,slow=34						
	comp=Z,1.5nm,0.3s						
ACRG	Accra	91.28	84	IAMs_20	IAMs_20	23 19 58.4	
	comp=Z,793nm,22.0s						
KRLC	Kraliky	91.30	37	AMS	AMS	23 27 00.0	
	comp=Z,1µm,18.8s						
OBKA	Obir	91.34	41	*e*PcP	P	22 44 40.0	+0.3
	comp=Z,4.7nm,0.9s						
KEST	Kesra	91.43	53	P	P	22 44 40.2	-0.1
KEST	Kesra	91.43	53	P	P	22 44 40.8	+0.5
	comp=Z,5.2nm,0.9s,baz=265,slow=4.2,SNR=7.0						
	comp=Z,5.2nm,0.9s						
CESX	Cesi	91.47	45	IAMs_20	IAMs_20	23 20 00.7	
	comp=Z,996nm,21.0s						
KRUC	Moravsky	91.48	38	*e*P	P	22 44 39.4	-0.7
VRAC	Vranov	91.50	38	LR	LR	23 26 12.0	
	comp=Z,631nm,19.4s,baz=292,slow=36						
VRAC	Vranov	91.50	38	*e*P	P	22 44 40.7	+0.5
SOKA	Soboth	91.58	41	*i* P	P	22 44 40.3	-0.4
	comp=Z,2.1nm,0.9s						
CONA	Conrad Observa	91.61	40	*e*P	P	22 44 40.2	-0.7
	comp=Z,2.3nm,0.7s						
FDMO	Fiordimonte	91.67	45	IAMs_20	IAMs_20	23 20 00.7	
	comp=Z,1µm,22.0s						
ARSA	Arzberg	91.67	40	IAMs_20	IAMs_20	23 20 50.5	
	comp=Z,1µm,22.0s						
ARSA	Arzberg	91.67	40	*i* P	P	22 44 40.5	-0.6
	comp=Z,2.2nm,1.0s						
GUMA	Gualdo di Mace	91.83	45	IAMs_20	IAMs_20	23 19 54.9	
	comp=Z,1µm,22.0s						
MORC	Moravsky Berou	91.87	37	IAMs_20	IAMs_20	23 26 50.7	
	comp=Z,898nm,21.0s						
MORC	Moravsky Berou	91.87	37	*e*P	P	22 44 41.5	-0.5
RONA	Rosalia, Austr	91.97	40	*e*P	P	22 44 41.8	-0.7
	comp=Z,2.9nm,0.6s						
CAMP	Campotosto	92.07	45	IAMs_20	IAMs_20	23 21 43.4	
	comp=Z,1µm,20.0s						
OKC	Ostrava-Krasne	92.20	37	AMS	AMS	23 29 30.0	
	comp=Z,800nm,15.9s						
MAUC	Maruska	92.22	38	*e*P	P	22 44 43.9	+0.4
MODS	Modra-Piesok	92.30	39	*e*P	P	22 44 44.8	+0.9
MODS	Modra-Piesok	92.30	39	*e*P	P	22 44 44.8	+0.9
RAO	Raoul Island	92.59	241	LR	LR	23 15 46.8	
	comp=Z,263nm,21.4s,baz=192,slow=28						
INTR	Introdacqua	92.61	46	IAMs_20	IAMs_20	23 20 43.6	
	comp=Z,969nm,22.0s						
PABE	Paberze	92.71	31	IAMs_20	IAMs_20	23 30 18.5	
	comp=Z,841nm,19.0s						
SUW	Suwalki	93.06	32	IAMs_20	IAMs_20	23 29 58.1	
	comp=Z,778nm,18.0s						
VYHS	Vyhne	93.19	38	*e*P	P	22 44 49.5	+1.5
VYHS	Vyhne	93.19	38	*e*P	P	22 44 49.5	+1.5
MSVF	Nonsavu	93.33	253	LR	LR	23 19 09.8	
	comp=Z,733nm,18.1s,baz=65,slow=30						
SGRT	San Giovanni R	93.97	45	IAMs_20	IAMs_20	23 23 40.8	
	comp=Z,988nm,20.0s						
PSZ	Piszkesteto	94.08	38	IAMs_20	IAMs_20	23 27 12.0	
	comp=Z,1µm,21.0s						
NACGM	Naroch	94.40	30	*e*P	P	22 44 53.6	+0.2
	comp=Z,7.0nm,0.8s,baz=302						
ACER	Acerenza	94.49	46	IAMs_20	IAMs_20	23 26 48.5	
	comp=Z,647nm,20.0s						
VAE	Valguarnera	94.65	50	LR	LR	23 24 21.3	
	comp=Z,2µm,20.0s,baz=343,slow=34						
MNK	Minsk	95.16	30	*i* P	P	22 44 54.7	-2.2
	comp=E,6.0nm,1.3s						
MNK				*i* P	P	22 44 54.7	-2.2
	comp=N,8.0nm,0.9s						
MNK				*i* P	P	22 44 54.7	-2.2
	comp=Z,4.0nm,0.8s,baz=303						
MNK				*i* PP	PP	22 48 44.4	-2.0
MNK				*i* PPP	PPP	22 50 46.6	
MNK				*i* SKS		22 54 11.7	
MNK				*i* S	SKSac	22 55 26.7	-2.6
MNK				*i* PS	PS	22 57 29.2	-1.6
MNK				*i* SS	SS	23 02 35.0	+0.4
MNK				*i* SSS	SSS	23 06 18.3	
MNK				*i* LQ	LQ	23 21 36.0	
MNK				*i* LRM	MLR	23 28 33.8	
	comp=E,443nm,18.5s						
MNK				*i* LRM	MLR	23 28 38.9	
	comp=N,372nm,19.8s						
MNK				*i* LRM	MLR	23 28 52.9	
	comp=Z,521nm,19.4s						
MNK	Minsk	95.16	30	*i* P	P	22 44 54.7	-2.2
MNK				*i*		22 48 44.4	
MNK				*i* PPP	PPP	22 50 46.6	
MNK				*i* S	SKSac	22 55 26.7	-2.6
MNK				*i* PS	PS	22 57 29.2	-1.6
MNK				*i* SS	SS	23 02 35.0	+0.4
MNK				*i* SSS	SSS	23 06 18.2	
MNK				pmax	pmax		
	comp=N,8.0nm,0.9s						
MNK				pmax	pmax		
	comp=E,6.0nm,1.3s						
MNK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MNK				MLR	MLR		
	comp=E,443nm,19.0s						
MNK				MLR	MLR		
	comp=N,372nm,20.0s						
MNK				MLR	MLR		
	comp=Z,521nm,19.0s						
CEL	Celeste	95.44	48	IAMs_20	IAMs_20	23 24 16.9	
	comp=Z,843nm,20.0s						
TIP	Timpagrande	95.70	47	IAMs_20	IAMs_20	23 30 27.6	
	comp=Z,755nm,20.0s						
KLMR	Klimovskoe	96.07	21	*e*P	P	22 45 00.6	-0.3
KLMR				pmax	pmax		
	comp=Z,11nm,1.2s						
KLMR				MLR	MLR		
	comp=Z,900nm,15.0s						
SCTE	Santa Cesarea	96.54	46	IAMs_20	IAMs_20	23 26 01.8	
	comp=Z,695nm,21.0s						
YAK	Yakutsk	96.83	341	IAMs_20	IAMs_20	23 32 23.0	
	comp=Z,605nm,20.0s						
YAK	Yakutsk	96.83	341	LR	LR	23 33 52.7	
	comp=Z,538nm,20.4s,baz=36,slow=39						
TIR	Tirane	96.96	44	IAMs_20	IAMs_20	23 32 07.6	
	comp=Z,663nm,20.0s						
BURAR	Bucovina Array	97.38	37	P	P	22 45 05.8	-1.5
MXZ	Matakaoa Point	97.61	233	IAMs_20	IAMs_20	23 19 13.3	
	comp=Z,1µm,21.0s						
KEK	Kerkira	97.62	46	IAMs_20	IAMs_20	23 26 55.3	
	comp=Z,783nm,22.0s						
KIEV	Kiev	97.95	33	IAMs_20	IAMs_20	23 32 19.2	
	comp=Z,747nm,20.0s						
AKASG	Malin Array Be	97.95	33	P	P	22 45 08.7	-1.0
	comp=Z,0.6nm,0.6s,baz=294,slow=4.2,SNR=2.5						
AKASG				LR	LR	23 32 39.0	
	comp=Z,525nm,18.2s,baz=305,slow=38						
	comp=Z,0.6nm,0.6s						
URZ	Urewera	98.67	233	LR	LR	23 19 28.5	
	comp=Z,401nm,21.8s,baz=84,slow=29						
OBN	Obninsk	98.80	27	LR	LR	23 28 37.5	
	comp=Z,928nm,20.5s,baz=240,slow=35						
MLR	Muntele Rosu	98.89	39	P	P	22 45 12.6	-1.6
MLR	Muntele Rosu	98.89	39	LR	LR	23 26 41.7	
	comp=Z,480nm,21.9s,baz=308,slow=34						
MLR	Muntele Rosu	98.89	39	P	P	22 45 12.6	-1.6
MLR				pmax	pmax		
	comp=Z,22nm,2.0s						
MLR				MLR	MLR		
	comp=Z,1µm,19.0s						
LIT	Litokhoron	99.30	45	IAMs_20	IAMs_20	23 26 21.6	
	comp=Z,822nm,20.0s						
RDO	Rodhopi	100.83	43	IAMs_20	IAMs_20	23 26 22.1	
	comp=Z,627nm,21.0s						
BHW	Baring Head	100.94	230	IAMs_20	IAMs_20	23 21 37.5	
	comp=Z,968nm,20.0s						
YSS	Yuzhno-Sakhali	101.22	325	*e*P	Pdif	22 45 22.2	-2.1
YSS				*e*		22 49 34.4	
YSS				*e*		22 55 59.9	
YSS				*e*S	Sdif	22 56 49.7	-11
YSS				*e*SS	SS	23 03 58.2	-1.8
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
ALN	Alexandroupoli	101.29	43	IAMs_20	IAMs_20	23 28 45.4	
	comp=Z,617nm,21.0s						
MANT	Manisa	104.19	44	IAMs_20	IAMs_20	23 37 30.9	
	comp=Z,535nm,18.0s						
BORA	Eskisehir	104.69	42	IAMs_20	IAMs_20	23 37 44.0	
	comp=Z,731nm,20.0s						
DZM	Mont Dzumac	104.90	251	*e*SS	SS	23 04 48.9	-4.6
	comp=Z,233nm,24.5s						
DZM	Mont Dzumac	104.90	251	*e*LQ	LQ	23 15 29.9	
	comp=Z,801nm,37.1s						
DZM				*e*LR	LR	23 20 14.0	
	comp=Z,1µm,24.0s						
ISP	Isparta	105.85	43	IAMs_20	IAMs_20	23 38 53.5	
	comp=Z,570nm,18.0s						
ANTO	Ankara	106.18	41	IAMs_20	IAMs_20	23 34 27.6	
	comp=Z,743nm,21.0s						
HEH	HeiHe	106.57	334	Pdif	Pdif	22 45 55.4	+7.4
HEH				AMB	AMB		
	comp=Z,240nm,8.9s						
HEH				LR	LR		
	comp=Z,270nm,21.9s						
HEH				LR	LR		
	comp=Z,280nm,21.4s						
HEH				LR	LR		
	comp=Z,520nm,24.7s						
TOKA	Tokat	108.19	38	IAMs_20	IAMs_20	23 31 46.4	
	comp=Z,547nm,22.0s						
HNR	Honiara	108.73	265	IAMs_20	IAMs_20	23 32 42.7	
	comp=Z,507nm,18.0s						
ARPR	Arapgir-MALATY	110.07	38	IAMs_20	IAMs_20	23 32 33.3	
	comp=Z,602nm,21.0s						
BRVK	Borovoye	111.34	11	IAMs_20	IAMs_20	23 41 19.2	
	comp=Z,720nm,20.0s						
MAK	Makhachkala	112.43	30	*i* P	Pdif	22 46 12.6	-1.7
MAK				*e*PPP	PPP	22 53 17.2	
MAK				*e*		22 56 49.0	
MAK				*e*PS	PS	23 00 26.8	-3.1
MAK				*e*SS	SS	23 06 35.1	+3.1
MAK				*e*SSS	SSS	23 10 45.9	
MAK				pmax	pmax		
	comp=Z,78nm,1.1s						
KURK	Kurchatov	114.80	6	PKIKP	PKiKP	22 50 14.2	+0.1
KURBB	Kurchatov Arra	114.89	6	PKP	PKiKP	22 50 14.2	-0.1
	comp=Z,1.7nm,0.6s,baz=348,slow=1.8,SNR=12						
ULN	Ulaanbaatar	115.54	345	IAMs_20	IAMs_20	23 47 49.2	
	comp=Z,683nm,18.0s						
KSRS	Korea Array	115.72	325	PKP	PKPdf	22 50 17.1	+0.8
	comp=Z,0.9nm,0.6s,baz=4.8,slow=1.9,SNR=6.0						
SONM	Songino Array	115.73	346	PKP	PKiKP	22 50 16.4	+0.2
	comp=Z,1.0nm,0.6s,baz=324,slow=1.6,SNR=5.4						
SYO	Syowa Base	117.77	163	⇑*e*Pdiff	Pdif	22 46 37.0	-0.2
SYO	Syowa Base	117.77	163	⇑*e*pPdiff	Pdif	22 46 42.3	+5.1
DL2	Dalian	117.94	330	PKP	PKPdf	22 50 17.9	-2.6
DL2				PP	PP	22 51 35.6	+1.7
DL2				AMB	AMB		
	comp=Z,190nm,7.7s						
DL2				LR	LR		
	comp=Z,250nm,19.0s						
DL2				LR	LR		
	comp=Z,430nm,20.6s						
DL2				LR	LR		
	comp=Z,440nm,19.3s						
MAKZ	Makanchi	118.96	4		PKPdf	22 50 21.2	-1.1
MAKZ				IAMs_20	IAMs_20	23 47 50.0	
	comp=Z,661nm,20.0s						
MAKZ	Makanchi	118.96	4	PKIKP	PKPdf	22 50 21.2	-1.1
MAKZ				MLR	MLR		
	comp=Z,700nm,20.0s						
MK31	Makanchi Array	119.00	4	*i* PKIKP	PKPdf	22 50 22.6	+0.2
MKAR	Makanchi Array	119.00	4	PKP	PKPdf	22 50 22.0	-0.4
	comp=Z,1.1nm,0.6s,baz=326,slow=1.1,SNR=12						
MKAR	Makanchi Array	119.00	4	PKIKP	PKPdf	22 50 22.0	-0.4
BJT	Baijiatuau	119.50	335	IAMs_20	IAMs_20	23 53 21.1	
	comp=Z,666nm,19.0s						
HHC	Hu-ho-hao-te	120.56	339	*e*PKP	PKPdf	22 50 25.0	-0.7
HHC				LR	LR		
	comp=Z,560nm,20.0s						
HHC				LR	LR		
	comp=Z,220nm,20.8s						
HHC				LR	LR		
	comp=Z,980nm,20.7s						
KDWAN	Kaudwane	120.67	109	PKPdf	PKPdf	22 50 25.8	-0.5
BOSA	Boshof	121.35	115	PKPdf	PKPdf	22 50 26.9	-0.6
BOSA	Boshof	121.35	115	PKP	PKPdf	22 50 27.4	0.0
	comp=Z,7.0nm,0.7s,baz=253,slow=1.9,SNR=8.5						
WMQ	Urumqi	122.12	359	*e*PKP	PKPdf	22 50 28.3	-0.2
WMQ				PP	PP	22 52 05.3	+3.1
WMQ				AMB	AMB		
	comp=Z,220nm,5.5s						
WMQ				LR	LR		
	comp=Z,690nm,17.7s						
WMQ				LR	LR		
	comp=Z,500nm,16.9s						
WMQ				LR	LR		
	comp=Z,750nm,20.1s						
AAK	Ala-Archa	122.14	11	IAMs_20	IAMs_20	23 49 34.0	
	comp=Z,709nm,20.0s						
MAW	Mawson	124.49	169	PKP	PKPdf	22 50 31.2	-0.9
	comp=Z,2.2nm,0.6s,baz=264,slow=9.2,SNR=1.9						
NJ2	Nanjing	124.70	327	*e*PKP	PKiKP	22 50 34.1	+0.1
GTA	Gaotai	125.21	348	*e*PKP	PKiKP	22 50 35.3	+0.3
KSH	Kashi	125.44	10	PKP	PKiKP	22 50 37.4	+1.9
KSH				LR	LR		
	comp=Z,580nm,19.2s						
KSH				LR	LR		
	comp=Z,530nm,18.2s						
KSH				LR	LR		
	comp=Z,760nm,22.0s						
LYN	LuoYang	125.69	334	PKP	PKiKP	22 50 37.8	+1.9
LYN				PP	PP	22 52 28.6	+2.0
LYN				AMB	AMB		
	comp=Z,530nm,10.7s						
LYN				LR	LR		
	comp=Z,750nm,19.9s						
LYN				LR	LR		
	comp=Z,420nm,19.9s						
LYN				LR	LR		
	comp=Z,930nm,19.6s						
LZH	Lanzhou	127.39	343	*e*PKP	PKPdf	22 50 34.8	-4.2
LZH				PP	PP	22 52 47.0	+9.3
LZH				AMB	AMB		
	comp=Z,220nm,6.2s						
LZH				LR	LR		
	comp=Z,1µm,17.5s						
LZH				LR	LR		
	comp=Z,290nm,16.3s						
LZH				LR	LR		
	comp=Z,1µm,18.0s						
STKA	Stephens Creek	127.41	241	PKP	PKiKP	22 50 39.5	+0.2
	comp=Z,2.2nm,0.7s,baz=81,slow=2.8,SNR=3.5						
NIL	Nilore	130.50	15	IAMs_20	IAMs_20	23 59 54.3	
	comp=Z,526nm,21.0s						
CD2	Chengdu	132.22	340	PKP	PKPdf	22 50 48.6	+0.5
CD2				PP	PP	22 53 12.4	+3.3
CD2				AMB	AMB		
	comp=Z,290nm,5.0s						
CD2				LR	LR		
	comp=Z,620nm,17.1s						
CD2				LR	LR		
	comp=Z,360nm,15.2s						
CD2				LR	LR		
	comp=Z,620nm,21.6s						
WRA	Warramunga Arr	134.57	256		PKPdf	22 50 52.2	-0.5
WRA	Warramunga Arr	134.57	256	PKhKP	PKPpre	22 50 46.4	
	comp=Z,0.6nm,0.7s,baz=85,slow=2.1,SNR=4.8						
WRA				PKP	PKiKP	22 50 53.8	-0.3
	comp=Z,1.5nm,0.6s,baz=83,slow=2.2,SNR=6.8						
ASAR	Alice Springs	134.90	251	PKPdf	PKPdf	22 50 53.6	+0.3
ASAR	Alice Springs	134.90	251	PKhKP	PKPpre	22 50 45.5	
	comp=Z,0.3nm,0.6s,baz=103,slow=3.5,SNR=4.5						
ASAR				PKP	PKPdf	22 50 54.1	+0.8
	comp=Z,1.1nm,0.6s,baz=98,slow=3.0,SNR=8.9						
GYA	Guiyang	135.18	335	⇓PKP	PKPdf	22 50 52.8	-1.1
GYA				AMB	AMB		
	comp=Z,360nm,12.0s						
GYA				LR	LR		
	comp=Z,190nm,12.2s						
GYA				LR	LR		
	comp=Z,100nm,7.8s						
GYA				LR	LR		
	comp=Z,220nm,13.6s						
PZH	PanZhiHua	136.95	341	PKP	PKPdf	22 50 57.5	+0.3
PZH				AMB	AMB		
	comp=Z,250nm,8.0s						
PZH				LR	LR		
	comp=Z,300nm,18.8s						
PZH				LR	LR		
	comp=Z,280nm,18.7s						
PZH				LR	LR		
	comp=Z,390nm,19.5s						
EVN	Everest	137.95	0	IAMs_20	IAMs_20	23 58 50.8	
	comp=Z,447nm,20.0s						
TNCH	TengChong	139.29	344	PKP	PKPdf	22 51 01.5	-0.1
TNCH				PP	PP	22 53 56.0	+2.2
TNCH				PKS	PKSdf	22 54 36.0	-2.1
TNCH				AMB	AMB		
	comp=Z,180nm,5.4s						
TNCH				LR	LR		
	comp=Z,410nm,18.1s						
TNCH				LR	LR		
	comp=Z,270nm,18.0s						
TNCH				LR	LR		
	comp=Z,510nm,17.6s						
QIZ	Qiongzhong	139.94	325	PKP	PKiKP	22 51 04.6	-0.5
QIZ				PP	PP	22 53 59.8	+1.6
QIZ				SS	SS	23 12 19.6	+3.0
QIZ				LR	LR		
	comp=Z,280nm,19.2s						
QIZ				LR	LR		
	comp=Z,500nm,16.5s						
SLVN	Son La	140.87	335	IAMs_20	IAMs_20	00 04 56.0	
	comp=Z,502nm,19.0s						
FITZ	Fitzroy Crossi	142.79	259	PKPdf	PKPdf	22 51 07.2	-0.5
KKM	Kota Kinabalu	144.67	303	IAMs_20	IAMs_20	23 54 44.4	
	comp=Z,314nm,18.0s						
CHTO	Chiang Mai	145.03	340		PKPbc	22 51 09.5	-1.5
CHTO				IAMs_20	IAMs_20	23 58 23.3	
	comp=Z,500nm,22.0s						
CHTO	Chiang Mai	145.03	340	PKP2	PKPbc	22 51 09.5	-1.5
CHTO				MLR	MLR		
	comp=Z,500nm,22.0s						
CM31	Chiang Mai Arr	145.36	340	PKPbc	PKPbc	22 51 10.9	-1.2
CMAR	Chiang Mai Arr	145.36	340	PKPbc	PKPbc	22 51 11.4	-0.7
CMAR	Chiang Mai Arr	145.36	340	PKPbc	PKPab	22 51 12.4	+0.2
	comp=Z,17nm,0.6s,baz=338,slow=3.1,SNR=35						
HYB	Hyderabad	147.35	15	*e*PKiKP	PKPab	22 51 19.5	-0.4
HYB				*e*PP	PP	22 54 43.5	+1.4
HYB				*e*SKSdf	SKSdf	22 58 22.4	+0.8
HYB				*e*SKKSac	SKKSac	23 01 33.5	+1.1
PSA00	Pilbara Seismi	148.02	252		PKPdf	22 51 18.4	+1.8
PSI	Prapat	159.29	324	PKPab	PKPab	22 52 10.9	+0.6
	comp=Z,8.2nm,0.6s,baz=345,slow=10,SNR=4.7						

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*WEL **22** 22:31:39.3±0.3, 43˚S±3˚×17˚1E±˚, h5^{km}, M4.0/46, ML4.0/9, MLv4.0/46, Error ellipse: s-maj=3.8km s-min=2.5km az=155.5, confirmed*

*WEL **22** 22:31:39.3, 43.̊03S×171.̊24E, h3^{km}, ML4.0, Mw3.7, Moment Tensor Solution. s4 Moment tensor: Scale 10^{14} Nm; M$_{rr}$-1.39; M$_{\theta\theta}$3.75; M$_{\phi\phi}$-2.36; M$_{r\theta}$-1.63; M$_{\theta\phi}$-2.36; M$_{\phi r}$0.59; Fault plane solution: M$_0$4.10000×10^{14} NP1: φ$_s$335.00000°, δ80.00000°, λ12.00000°. NP2: φ$_s$243.00000°, δ78.00000°, λ170.00000°. Principal axes: T 5.0270, Plg16.0000°, Azm200.0000°; N -1.8580, Plg74.0000°, Azm13.0000°; P -3.1690, Plg1.0000°, Azm109.0000°; Stations used: RPZ LTZ LBZ JCZ STRIKE-SLIP FAULTING*

*NOU **22** 22:31:40.4, 43.̊11S×171.̊25E, h9^{km}, MLv4.2/14, South Island, New Zealand*

ISC 22 22:31:39.7±1.1, **43.̊07S**±0.̊03×**171.̊25E**±0.̊02, **h6**^{km}±10^{km}, **n108,** σ1^{s}**25**/114, **South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APPS	Arthurs Pass P	0.26	63	P	Pg	22 31 44.6	-0.3
APPS				S	Sg	22 31 48.3	-0.1
INZ	Inchbonnie	0.37	23	P	Pg	22 31 46.4	-0.5
INZ				S	Sg	22 31 50.9	-0.9
WVZ	Waitaha Valley	0.37	269	P	Pg	22 31 47.3	+0.3
WVZ				S	Sg	22 31 52.2	+0.3
CSHS	Castle Hill	0.38	115	P	Pg	22 31 47.5	+0.3
MHCZ	Mount Hutt	0.52	153	P	Pg	22 31 50.1	+0.4
SPRS	Springfield Vo	0.57	118	P	Pg	22 31 50.9	+0.3
OXZ	Oxford	0.63	114	P	Pg	22 31 52.1	+0.2
RPZ	Rata Peaks	0.66	192	P	Pg	22 31 53.0	+0.6
RPZ	Rata Peaks	0.66	192	P	Pg	22 31 52.9	+0.5
WHFS	Whataroa Fire	0.68	253	P	Pg	22 31 52.9	+0.1
GCSZ	Gaunt Creek Bo	0.72	250	P	Pg	22 31 53.4	-0.1
GCSZ	Gaunt Creek Bo	0.72	250	P	Pg	22 31 53.5	-0.1
LTZ	Lake Taylor	0.81	69	P	Pg	22 31 55.2	0.0
LTZ				S	Sg	22 32 06.0	+0.5
SMHS	Summerhill	0.82	104	P	Pg	22 31 55.8	+0.4
ARCZ	Arundel	0.88	183	P	Pg	22 31 56.9	+0.3
ARCZ				S	Sb	22 32 09.2	-0.3
RACZ	Rakaia	0.93	136	P	Pg	22 31 57.9	+0.5
RACZ				S	Sb	22 32 11.3	+0.6
WACZ	Wakanui South	0.97	154	P	Pb	22 31 58.9	-0.1
WACZ				S	Sb	22 32 13.0	+0.8
SJFS	Springs Juncti	1.00	43	P	Pg	22 31 57.6	-1.4
AMCZ	Amberley	1.03	96	P	Pb	22 32 00.1	+0.1
MCNS	Mount Cook Ann	1.07	231	P	Pg	22 31 59.7	-0.6
WAKC	Waikari	1.07	85	P	Pg	22 32 00.1	-0.2
FOZ	Fox Glacier	1.14	246	P	Pg	22 32 01.4	-0.2
FOZ				S	Sn	22 32 17.7	-0.6
MQZ	McQueen's Vall	1.21	122	P	Pg	22 32 01.9	-0.9
GVZ	Greta Valley S	1.31	86	P	Pn	22 32 03.9	-0.7
TMZ	Timaru	1.33	187	P	Pn	22 32 04.3	-0.5
DSZ	Denniston Nort	1.39	18	P	Pn	22 32 04.7	-1.0
AKCZ	Akaroa Harbour	1.45	124	P	Pn	22 32 05.4	-1.1
OKCZ	Okains Bay	1.47	117	P	Pn	22 32 06.1	-0.7
LBZ	Lake Benmore	1.53	210	P	Pn	22 32 07.4	-0.2
THZ	Tophouse	1.79	44	P	Pn	22 32 11.2	-0.1
KHZ	Kahutara	1.81	70	P	Pn	22 32 11.0	-0.4
KHZ	Kahutara	1.81	70	P	Pn	22 32 11.0	-0.4
MRNZ	Matariki Terra	2.01	34	P	Pn	22 32 14.2	-0.1
ODZ	Otahua Downs	2.02	192	P	Pn	22 32 13.8	-0.6
ODZ	Otahua Downs	2.02	192	S	Sn	22 32 39.9	-0.1
ODZ	Otahua Downs	2.02	192	P	Pn	22 32 13.7	-0.6
JCZ	Jackson Bay	2.05	240	P	Pn	22 32 15.0	+0.1
JCZ	Jackson Bay	2.05	240	P	Pn	22 32 14.9	0.0
BSWZ	Blackbirch Sta	2.37	56	P	Pn	22 32 19.9	+0.7
WKZ	Wanaka	2.38	222	P	Pn	22 32 18.6	-0.8
TKNZ	Takaka Hill	2.40	33	P	Pn	22 32 19.8	+0.2
NNZ	Nelson	2.44	41	P	Pn	22 32 20.6	+0.6
QRZ	Quartz Range	2.44	24	P	Pn	22 32 19.8	-0.3
QRZ	Quartz Range	2.44	24	P	Pn	22 32 19.7	-0.3
CMWZ	Cape Campbell	2.56	60	P	Pb	22 32 25.7	-0.4
EAZ	Earnscleugh	2.57	212	P	Pn	22 32 20.5	-1.4
TUWZ	Tuamarina	2.59	52	P	Pn	22 32 23.0	+0.9
HHSZ	Highcliff Hill	2.85	189	P	Pn	22 32 25.0	-0.9
MSZ	Milford Sound	2.89	235	P	Pn	22 32 25.8	-0.5
TCW	Tory Channel	2.92	52	P	Pn	22 32 27.1	+0.4
DUWZ	D'Urville Isla	3.02	42	P	Pn	22 32 29.8	+1.7
TUZ	Tuapeka	3.11	201	P	Pn	22 32 28.1	-1.2
SNZO	South Karori	3.11	57	P	Pn	22 32 30.1	+0.8
BHW	Baring Head	3.16	60	P	Pn	22 32 31.7	+1.7
MLZ	Mavora Lakes	3.21	223	P	Pn	22 32 30.6	-0.3
MSWZ	Moikau Station	3.40	62	P	Pn	22 32 32.6	-0.8
CAW	Cannon Point	3.45	57	P	Pn	22 32 33.2	-0.9
KIW	Kapiti Island	3.51	52	P	Pn	22 32 34.5	-0.4
PAWZ	Paruwai Farm	3.53	63	P	Pn	22 32 34.6	-0.5
WHZ	Wether Hill Ro	3.68	219	P	Pn	22 32 36.0	-1.2
OGWZ	Otaki Gorge	3.69	54	P	Pn	22 32 36.0	-1.3
MTW	Mount Morrison	3.70	60	P	Pn	22 32 36.2	-1.2
SYZ	Scrubby Hill	3.78	203	P	Pn	22 32 38.1	-0.4
SYZ	Scrubby Hill	3.78	203	P	Pn	22 32 37.9	-0.6
HOWZ	Holdsworth Sta	3.85	57	P	Pn	22 32 40.0	+0.5
MRZ	Mangatainoka R	4.03	55	P	Pn	22 32 40.5	-1.5
NMEZ	Namu Road	4.16	29	P	Pn	22 32 45.0	+1.3
NBEZ	Newall Road No	4.28	28	P	Pn	22 32 46.3	+0.9
KHEZ	Kahui Hut	4.31	30	P	Pn	22 32 47.1	+1.2
KHEZ	Kahui Hut	4.31	30	P	Pn	22 32 47.0	+1.2
LREZ	Lake Rotokare	4.32	34	P	Pn	22 32 47.9	+1.9
PREZ	Palmer Road	4.32	32	P	Pn	22 32 47.2	+1.2
WAZ	Wanganui	4.34	42	P	Pn	22 32 48.6	+2.3
NEZ	North Egmont	4.36	30	P	Pn	22 32 47.6	+1.0
PKE	Pukeiti	4.39	29	P	Pn	22 32 48.2	+1.3
APZ	The Paps	4.42	210	P	Pn	22 32 45.3	-2.0
BFZ	Birch Farm	4.43	59	P	Pn	22 32 48.1	+0.6
DREZ	Durham Road	4.47	31	P	Pn	22 32 49.1	+1.0
PYZ	Puysegur Point	4.50	225	P	Pn	22 32 48.1	-0.3
PYZ	Puysegur Point	4.50	225	P	Pn	22 32 49.3	+0.9
DVHZ	Dannevirke	4.61	55	P	Pn	22 32 50.4	+0.5

TSZ	Takapari Road	4.64	51	P	Pn	22 32 55.5	+5.0
VRZ	Vera Road	4.75	35	P	Pn	22 32 53.0	+1.1
MTVZ	Mangateitei	4.87	42	P	Pn	22 32 56.4	+2.9
PKVZ	Pokaka	4.88	41	P	Pn	22 32 55.6	+1.9
WNVZ	Wahianoa	4.97	43	P	Pn	22 32 58.3	+3.2
MOVZ	Moawhango	4.99	44	P	Pn	22 32 57.5	+2.2
MAVZ	Matarangi	5.00	42	P	Pn	22 32 59.4	+3.8
WHVZ	Whangaehu Hut	5.00	42	P	Pn	22 32 57.7	+2.1
FWVZ	Far West T-bar	5.01	42	P	Pn	22 32 58.3	+2.7
TUVZ	Tukino	5.05	43	P	Pn	22 32 58.8	+2.7
NNVZ	North Ngauruho	5.13	41	P	Pn	22 33 01.4	+4.1
OTVZ	Oturere	5.13	42	P	Pn	22 32 58.3	+1.0
ETVZ	East Tongariro	5.18	42	P	Pn	22 33 00.4	+2.5
TMVZ	Te Maari	5.19	42	P	Pn	22 33 01.0	+2.9
HIZ	Hauiti	5.31	32	P	Pn	22 32 59.7	+0.1
HIZ	Hauiti	5.31	32	P	Pn	22 32 59.5	-0.1
BKZ	Black Stump Fm	5.56	47	P	Pn	22 33 04.7	+1.7
BKZ	Black Stump Fm	5.56	47	P	Pn	22 33 05.7	+2.7
TLZ	Tolley Road	5.75	36	P	Pn	22 33 06.2	+0.6
MTHZ	Maungataniwha	5.97	47	P	Pn	22 33 14.7	+6.0
TOZ	Tahuroa Road	6.24	33	P	Pn	22 33 12.4	+0.1
AWAZ	Awhitu Peninsu	6.54	25	P	Pn	22 33 17.0	+0.6
WTAZ	Waiatarua	6.64	24	P	Pn	22 33 18.7	+0.9
MKAZ	Moumakai	6.67	28	P	Pn	22 33 18.6	+0.4
MBAZ	Motutapu North	6.89	25	P	Pn	22 33 22.8	+1.5
WIAZ	Waiheke Island	6.94	27	P	Pn	22 33 22.7	+0.7
OUZ	Omahuta	8.05	14	P	Pn	22 33 37.7	+0.6

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*IDC **22** 22:35:04.4±0.5, 30°.87S×177°.31W, h0^{km}, mb4.5/15, mbtmp4.5/16, ML3.6/1, MS4.2/5, Error ellipse: s-maj=19.4km s-min=14.8km az=79.0*

*NEIC **22** 22:35:06.2±1.5, 30°.93S±0°.06×177°.3W±0°.1, h10^{km}±1^{km}, mb4.9/39, Error ellipse: s-maj=17.2km s-min=9.8km az=82.0*

ISC 22 22:35:09.0±0.3**, 30°.97S**±0°.04×**177°.32W**±0°.06**, h35^{km}, n145, σ1^{s}72**/157**, mb4.9**/42**, MS4.5**/7**, 6C-2D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.78	343	P	Pn	22 35 34.4	-2.8
RAO	Raoul Island	1.79	343		Pn	22 35 35.8	-1.6
RAO				Sn	Sn	22 35 58.3	-0.6
RAO	Raoul Island	1.79	343	Pn	Pn	22 35 35.7	-1.6
	290nm,0.3s,baz=109,slow=11,SNR=8.1						
RAO				Sn	Sn	22 35 57.5	-1.3
	462nm,0.3s,baz=332,slow=23,SNR=5.6						
RAO				LR	LR	22 36 10.0	
	comp=Z,851nm,19.6s,baz=136,slow=39						
RAO	Raoul Island	1.79	343	P	Pn	22 35 35.5	-1.9
RIZ	Raoul Island	1.80	343	P	Pn	22 35 35.1	-2.4
RIZ				S	Sn	22 35 57.9	-1.2
MXZ	Matakaoa Point	7.51	208	P	Pn	22 36 54.0	-1.9
MXZ				S	Sn	22 38 19.2	-0.6
WMGZ	Waiomatatini S	7.69	206	P	Pn	22 36 57.3	-1.1
WMGZ				S	Sn	22 38 23.4	-0.8
PKGZ	Pakihiroa	7.86	208	P	Pn	22 36 57.2	-3.6
PKGZ				S	Sn	22 38 27.1	-1.4
HAZ	Te Kaha	7.89	210	P	Pn	22 36 58.8	-2.3
RUGZ	Raukumara Rang	8.11	209	P	Pn	22 37 01.3	-3.0
MWZ	Matawai	8.48	209	P	Pn	22 37 05.5	-3.9
WCZ	Waipu Caves	8.55	232	P	Pn	22 37 14.5	+4.3
URZ	Urewera	8.60	211	Pn	Pn	22 37 06.4	-4.4
	1.2nm,0.3s,baz=267,slow=2.2,SNR=9.0						
URZ				Sn	Sn	22 38 43.0	-3.6
	7.7nm,0.3s,baz=185,slow=20,SNR=7.2						
URZ	Urewera	8.60	211	P	Pn	22 37 06.7	-4.2
URZ				S	Sn	22 38 43.2	-3.4
RAGZ	Rawiri	8.67	209	P	Pn	22 37 07.5	-4.4
OUZ	Omahuta	8.72	239	P	Pn	22 37 18.4	+5.8
SNGZ	Shannon Statio	8.94	208	P	Pn	22 37 12.6	-3.0
SNGZ				S	Sn	22 38 52.6	-2.6
RTZ	Ruatahuna	8.95	210		Pn	22 37 14.2	-1.6
MTHZ	Maungataniwha	9.21	210	P	Pn	22 37 17.0	-2.3
NMHZ	Naumai	9.43	209	P	Pn	22 37 19.6	-2.8
BKZ	Black Stump Fm	9.62	210	P	Pn	22 37 21.1	-3.8
BKZ				S	Sn	22 39 06.9	-4.9
CTZ	Chatham Island	12.76	178	Pn	Pn	22 38 05.3	-2.5
RPZ	Rata Peaks	15.71	213	Pn	Pn	22 38 42.2	-5.4
	2.5nm,0.3s,baz=36,slow=2.2,SNR=11						
RPZ				Sn	Sn	22 41 25.9	-14
	0.7nm,0.3s,baz=313,slow=22,SNR=1.7						
PINNC	Pines Island,	15.94	298		Pn	22 38 51.0	+0.4
ONTNC	Ouen Toro	16.87	297		P	22 39 03.1	-1.0
ONTNC				IAmb	IAmb	22 39 10.9	
	comp=Z,100nm,1.5s						
DZM	Mont Dzumac	17.01	298		P	22 39 05.9	+0.1
DZM	Mont Dzumac	17.01	298	*e*Pn	P	22 39 07.1	+1.3
	comp=Z,109nm,1.4s						
DZM				*e*LR	LR	22 42 54.5	
	comp=Z,983nm,26.0s						
DZM	Mont Dzumac	17.01	298	Pn	Pn	22 39 04.0	-0.2
	comp=Z,0.2nm,0.3s,baz=94,slow=12,SNR=6.7						
DZM				LR	LR	22 44 28.5	
	comp=Z,528nm,18.6s,baz=144,slow=33						
	comp=Z,7.4nm,1.0s						
RAR	Rarotonga	18.49	62		P	22 39 20.5	-1.6
TBI	Tubuai	25.87	80	*e*S	S	22 45 02.1	-3.0
	comp=Z,2μm,27.2s						
TBI				*e*LR	LR	22 46 52.6	
	comp=Z,1μm,21.0s						
ARMA	Armidale	26.67	263	P	P	22 40 45.4	+0.5
ARMA				IAmb	IAmb	22 41 07.0	
	comp=Z,74nm,1.8s						
EIDS	Eidsvold	28.35	273	P	P	22 41 00.7	+0.9
EIDS				IAmb	IAmb	22 41 51.1	
	comp=Z,34nm,1.4s						
PPT2	Papeete2	28.49	69	*e*S	S	22 45 43.5	-3.1
	comp=Z,303nm,25.5s						
PPT2				*e*LR	LR	22 48 13.0	
	comp=Z,341nm,21.2s						
TOO	Toolangi	31.29	248	P	P	22 41 25.6	-0.1
TOO				IAmb	IAmb	22 41 48.7	
	comp=Z,24nm,2.0s						
CTAO	Charters Tower	34.47	280	P	P	22 41 54.4	+0.8
STKA	Stephens Creek	34.93	258		P	22 41 58.9	+1.4
STKA	Stephens Creek	34.93	258	P	P	22 41 59.3	+1.8
	comp=Z,12nm,0.9s,baz=85,slow=9.0,SNR=16						
STKA				LR	LR	22 56 07.8	
	comp=Z,324nm,18.2s,baz=84,slow=36						
	comp=Z,12nm,0.9s						
BBOO	Buckleboo	39.38	255	P	P	22 42 35.7	+0.4
BBOO				IAmb	IAmb	22 43 38.5	
	comp=Z,93nm,2.0s						
AS31	Alice Springs	43.67	267		P	22 43 11.0	+0.4
ASAR	Alice Springs	43.67	267		P	22 43 10.7	+0.1
ASAR	Alice Springs	43.67	267	P	P	22 43 11.2	+0.7
	comp=Z,5.3nm,0.7s,baz=104,slow=7.3,SNR=55						
ASAR				PcP	PcP	22 44 58.5	+1.0
	comp=Z,3.9nm,0.9s,baz=121,slow=4.2,SNR=6.6						
ASAR				ScP	ScP	22 48 52.2	+5.9
	comp=Z,0.5nm,0.7s,baz=103,slow=3.6,SNR=3.1						
	comp=Z,5.3nm,0.7s						
WR0	Warramunga Arr	44.53	272	P	P	22 43 17.5	0.0
WR0				IAmb	IAmb	22 43 25.3	
	comp=Z,28nm,1.3s						
WR8	Warramunga Arr	44.56	272	P	P	22 43 18.0	+0.3
WR8				IAmb	IAmb	22 43 22.0	
	comp=Z,43nm,1.6s						
WRA	Warramunga Arr	44.71	272	P	P	22 43 18.9	0.0
WRA	Warramunga Arr	44.71	272	P	P	22 43 18.8	-0.1
	comp=Z,9.8nm,0.8s,baz=112,slow=7.7,SNR=24						
WRA				PcP	PcP	22 45 00.8	-0.2
	comp=Z,4.8nm,1.1s,baz=117,slow=3.8,SNR=6.7						
WRA				ScP	ScP	22 48 54.6	+4.0
	comp=Z,0.8nm,0.8s,baz=107,slow=3.9,SNR=5.5						
WRA				LR	LR	23 01 22.7	
	comp=Z,187nm,18.1s,baz=310,slow=35						
	comp=Z,9.8nm,0.8s						
FORT	Forrest	46.47	255	P	P	22 43 32.9	+0.2
VNDA	Vanda	47.59	186	P	P	22 43 42.2	+1.4
VNDA	Vanda	47.59	186	P	P	22 43 41.7	+0.9
	comp=Z,1.1nm,0.8s,baz=15,slow=6.3,SNR=7.0						
	comp=Z,1.1nm,0.8s						
KNRA	Kununurra	51.34	274	P	P	22 44 10.7	+0.5
FITZ	Fitzroy Crossi	52.95	270	P	P	22 44 21.2	-0.9
FITZ	Fitzroy Crossi	52.95	270	P	P	22 44 21.6	-0.6
	comp=Z,8.4nm,1.0s,baz=131,slow=11,SNR=5.6						
	comp=Z,8.4nm,1.0s						
CASY	Casey	54.91	208	P	P	22 44 36.7	+0.9
CASY				IAmb	IAmb	22 44 38.2	
	comp=Z,14nm,1.1s						
BATI	Baumata	58.31	277	LR	LR	23 10 27.4	
	comp=Z,322nm,18.6s,baz=188,slow=36						
QSPA	South Pole Qui	59.14	180	P	P	22 45 08.0	+2.1
QSPA	South Pole Qui	59.14	180	P	P	22 45 08.3	+2.4
	comp=Z,12nm,0.9s,baz=326,slow=3.8,SNR=9.4						
	comp=Z,12nm,0.9s						
SMAI	San Martin Ant	68.68	158	P	P	22 46 08.9	+0.5
SMAI				IAmb	IAmb	22 46 48.9	
	comp=Z,20nm,1.5s						
BELA	Belgrano 2	69.14	172	P	P	22 46 11.9	+0.7
BELA				IAmb	IAmb	22 46 13.1	
	comp=Z,5.2nm,0.9s						
ESPZ	Base Esperanza	74.81	156	P	P	22 46 45.1	-0.2
ESPZ				IAmb	IAmb	22 46 47.5	
	comp=Z,13nm,1.1s						
SYO	Syowa Base	76.69	193	⇑*e*P	P	22 46 56.6	+0.6
SYO	Syowa Base	76.69	193	⇓*e*PcP	PcP	22 47 06.0	-1.2
TROLL	Troll, Antarti	77.31	180	⇑P	P	22 47 00.6	+1.0
	comp=Z,304nm,0.9s						
SNAA	Sanae	77.57	178	⇑P	P	22 47 02.1	+1.1
	comp=Z,74nm,0.8s						
SNAA	Sanae	77.57	178	P	P	22 47 01.6	+0.6
SNAA				IAmb	IAmb	22 47 46.4	
	comp=Z,15nm,1.3s						
SNAA	Sanae	77.57	178	P	P	22 47 02.0	+1.1
	comp=Z,4.8nm,1.0s,baz=199,slow=8.2,SNR=9.3						
	comp=Z,4.8nm,1.0s						
VNA3	Neumayer Olymp	77.70	176	⇑P	P	22 47 02.5	+0.9
	comp=Z,15nm,0.8s						
VNA2	Neumayer--Watz	78.14	177	⇑P	P	22 47 05.3	+1.3
	comp=Z,8.2nm,0.8s,baz=172,slow=5.2						
VNA1	Neumayer--Stat	78.37	176	⇑P	P	22 47 06.9	+1.6
	comp=Z,12nm,1.0s						
JGF	Kuroka	78.73	324	P	P	22 47 07.9	+0.1
JGF				IAmb	IAmb	22 48 08.4	
	comp=Z,23nm,1.3s						
MJAR	Matsushiro Arr	79.04	325	P	P	22 47 08.6	-0.8
	comp=Z,4.9nm,1.0s,baz=153,slow=5.2,SNR=8.1						
	comp=Z,4.9nm,1.0s						
PLCA	Paso Flores	81.69	133	P	P	22 47 24.6	+0.7
	comp=Z,1.5nm,0.8s,baz=252,slow=9.6,SNR=2.0						
	comp=Z,1.5nm,0.8s						
KSRS	Korea Array	85.16	319	P	P	22 47 42.8	+1.4
	comp=Z,2.1nm,0.9s,baz=147,slow=6.5,SNR=6.8						
	comp=Z,2.1nm,0.9s						
PEA0B	Petropavlovsk-	86.51	345	P	P	22 47 48.4	+0.6
PEA0B				IAmb	IAmb	22 48 22.0	
	comp=Z,8.8nm,0.9s						
PETK	Petropavlovsk-	86.51	345		P	22 47 48.7	+0.9
PETK	Petropavlovsk-	86.51	345	P	P	22 47 48.4	+0.7
	comp=Z,4.7nm,0.8s,baz=134,slow=6.1,SNR=15						
	comp=Z,4.7nm,0.8s						
CMB	Columbia Colle	86.79	42	P	P	22 47 50.0	+0.4
CMB				IAmb	IAmb	22 47 54.3	
	comp=Z,7.1nm,1.2s						
O02D	Mt. Diablo Mer	86.97	39	P	P	22 47 52.0	+1.6
NJ2	Nanjing	87.06	310	*e*P	P	22 47 49.3	-1.6
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
WAKR	Walker	87.66	42	P	P	22 47 53.5	-0.5
WAKR				IAmb	IAmb	22 47 57.0	
	comp=Z,9.0nm,1.2s						
USRK	Ussuriysk Ar.	87.96	326	P	P	22 47 55.8	+0.8
USRK	Ussuriysk Ar.	87.96	326	P	P	22 47 56.7	+1.7
	comp=Z,3.4nm,0.8s,baz=147,slow=4.3,SNR=10						
	comp=Z,3.4nm,0.8s						
LHV	Little Huntoon	88.02	42	P	P	22 47 56.3	+0.9
LHV				IAmb	IAmb	22 48 01.1	
	comp=Z,11nm,1.3s						
NVAR	Mina Array Bea	88.26	42	P	P	22 47 57.5	+0.7
NVAR	Mina Array Bea	88.26	42	P	P	22 47 58.6	+1.7
	comp=Z,3.0nm,0.9s,baz=223,slow=8.5,SNR=11						
	comp=Z,3.0nm,0.9s						
SHPR	Sheep Range	88.86	45		P	22 48 00.1	+0.4
PRN	Pahroc Range	89.51	45	P	P	22 48 04.3	+1.6
PRN				IAmb	IAmb	22 48 14.1	
	comp=Z,11nm,1.3s						
PINE	Pine Mountain	90.50	37		P	22 48 07.7	+0.6
PINE				IAmb	IAmb	22 48 10.1	
	comp=Z,10nm,1.1s						
WVOR	Wild Horse Val	90.78	39	P	P	22 48 09.2	+0.7
TIA	Tai'an	90.79	313	P	P	22 48 10.1	+1.6
TIA				pmax	pmax		
	comp=Z,12nm,1.0s						
CN2	Changchun	90.95	322	*e*P	P	22 48 09.9	+0.9
CN2	Changchun	90.95	322	*e*S	S	22 59 14.8	+11
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,18.0s						
CN2				LR	LR		
	comp=E,200nm,18.0s						
CN2				LR	LR		
	comp=Z,400nm,16.0s						
BNX	BinXian	91.31	325	⇓P	P	22 48 11.3	+0.7
BNX				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TXAR	Lajitas Array	92.20	57	LR	LR	23 25 03.4	
	comp=Z,105nm,18.1s,baz=72,slow=32						
G08A	Pilot Rock	92.56	37		P	22 48 17.1	+0.5
G08A				IAmb	IAmb	22 48 19.1	
	comp=Z,6.1nm,1.0s						
MFID	Camas Ranch	92.97	40		P	22 48 19.2	+0.7
MFID				IAmb	IAmb	22 48 20.9	
	comp=Z,5.3nm,0.9s						
HLID	Hailey	93.85	40	P	P	22 48 23.3	+0.6
CMAR	Chiang Mai Arr	94.14	289	P	P	22 48 25.9	+1.6
	comp=Z,1.2nm,0.3s,baz=117,slow=5.1,SNR=5.7						
	comp=Z,1.2nm,0.3s						
HHC	Hu-ho-hao-te	97.05	314	*e*P	Pdif	22 48 39.3	+1.9
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,91nm,4.5s						
HHC				LR	LR		
	comp=N,220nm,21.6s						
HHC				LR	LR		
	comp=E,180nm,21.1s						
HHC				LR	LR		
	comp=Z,180nm,21.1s						
SLOR	San Lorenzo -	97.19	95	P	P	22 48 36.2	-2.8
ILAR	Eielson Array	98.35	13	P	P	22 48 41.2	-1.2
	comp=Z,0.4nm,0.8s,baz=201,slow=4.8,SNR=4.2						
	comp=Z,0.4nm,0.8s						
WMQ	Urumqi	114.04	308	*e*PKP	PKiKP	22 53 45.8	+1.5
WMQ				LR	LR		
	comp=N,240nm,16.1s						
WMQ				LR	LR		
	comp=E,300nm,22.7s						
WMQ				LR	LR		
	comp=Z,290nm,19.5s						
MKAR	Makanchi Array	118.59	310	PKP	PKiKP	22 53 52.9	0.0
	comp=Z,0.5nm,0.5s,baz=183,slow=1.1,SNR=4.1						
KURK	Kurchatov	121.87	313		PKiKP	22 53 58.9	-0.3
KURBB	Kurchatov Arra	121.90	313	PKP	PKiKP	22 53 58.7	-0.5
	comp=Z,1.2nm,0.2s,baz=98,slow=2.0,SNR=13						
KK31	Karatay Array	125.88	303		PKiKP	22 54 07.5	+0.1
KKAR	Karatay Array	125.88	303	PKPdf	PKiKP	22 54 07.2	-0.2
BVAR	Borovoye Array	127.22	315	PKP	PKiKP	22 54 09.9	+0.2
	comp=Z,2.9nm,0.8s,baz=90,slow=3.0,SNR=14						
SPITS	Spitsbergen Ar	132.31	356	PKP	PKiKP	22 54 19.5	+0.2
	comp=Z,2.0nm,0.8s,baz=106,slow=8.8,SNR=4.2						
ARTI	Arti	134.01	320	PKP	PKiKP	22 54 22.9	-0.3
	comp=Z,2.7nm,0.8s,baz=67,slow=2.5,SNR=5.3						
ARCES	ARCESS Array B	139.27	348	PKP	PKiKP	22 54 32.2	-1.5
	comp=Z,2.9nm,0.9s,baz=30,slow=2.6,SNR=3.6						
GNI	Garni	144.85	297		PKPdf	22 54 41.5	-0.9
FINES	FINESS Array B	145.88	340	PKPdf	PKPab	22 54 44.0	-0.4
FINES	FINESS Array B	145.88	340	PKPbc	PKPab	22 54 44.1	-0.3
	comp=Z,13nm,0.8s,baz=75,slow=2.8,SNR=37						
KBZ	Khabaz	145.91	303	PKPbc	PKPab	22 54 45.2	+0.1
	comp=Z,9.9nm,1.1s,baz=7.1,slow=0.1,SNR=11						
OBN	Obninsk	145.97	325	PKPbc	PKPab	22 54 44.4	-0.5
	comp=Z,16nm,0.7s,baz=126,slow=9.4,SNR=7.9						
NB2	NORSAR Subarra	149.40	352	PKP	PKiKP	22 54 53.7	-1.0
	comp=Z,1.8nm,0.7s,baz=15,slow=2.7						
NOA	NORSAR Array B	149.40	352	PKPbc	PKiKP	22 54 54.2	-0.5
	comp=Z,4.6nm,0.9s,baz=14,slow=4.2,SNR=12						
ARPR	Arapgir-MALATY	149.85	295		PKiKP	22 54 56.3	-0.2
HFS	Hagfors	149.91	349	PKPbc	PKiKP	22 54 55.1	-0.7
	comp=Z,7.2nm,0.8s,baz=180,slow=1.2,SNR=10						
MNK	Minsk	150.37	330	*i* PKiKP	PKiKP	22 54 57.3	+0.4
	comp=E,14nm,1.2s						
MNK				*i* PKiKP	PKiKP	22 54 57.3	+0.4
	comp=N,7.0nm,0.8s						
MNK				*i* PKiKP	PKiKP	22 54 57.3	+0.4
	comp=Z,17nm,0.8s,baz=45						
MNK				*i* PP	PP	22 58 36.0	+4.3
MNK				*i* PPP	PPP	23 01 52.9	
MNK				*i* SKKS		23 10 54.9	
MNK				*i* SS	SS	23 17 59.1	+12
MNK				*i* SSS	SSS	23 23 27.6	
MNK				*i* LR	LR	00 06 36.1	
NACGM	Naroch	150.56	331	LR	LR	00 07 02.0	
GAZ	Gaziantep	150.85	292	PKPbc	PKiKP	22 54 57.7	-0.8
PABE	Paberze	151.22	335	PKPbc	PKiKP	22 54 58.0	-0.5
BNN	Bunyan	151.81	295	PKPbc	PKiKP	22 55 00.6	0.0
AKASG	Malin Array Be	152.11	323	PKPbc	PKiKP	22 55 00.3	-0.2
AKASG	Malin Array Be	152.11	323	PKPbc	PKiKP	22 55 00.9	+0.3
	comp=Z,7.8nm,0.8s,baz=52,slow=2.7,SNR=20						
AKBB	Malin Array Si	152.11	323	PKPbc	PKiKP	22 54 59.6	-0.9
MMAI	Mount Meron Ar	152.23	283	PKPbc	PKiKP	22 55 03.4	+1.9
	comp=Z,2.8nm,0.5s,baz=90,slow=5.8,SNR=22						
SUW	Suwalki	152.65	333	PKPbc	PKiKP	22 55 01.0	-0.6
BR131	Keskin Array S	153.38	298	PKPbc	PKiKP	22 55 03.4	-0.4
BRTR	Keskin Array B	153.38	298	PKPbc	PKiKP	22 55 03.4	-0.4
BRTR	Keskin Array B	153.38	298	PKPbc	PKiKP	22 55 04.5	+0.7
	comp=Z,2.0nm,1.0s,baz=116,slow=2.9,SNR=8.2						
EKA	Eskdalemuir Ar	155.29	8	PKPab	PKPab	22 55 22.8	-0.4
	comp=Z,0.8nm,0.8s,baz=4.9,slow=3.6,SNR=3.4						
CLL	Collm	158.29	342	*e*PKPdf	PKPdf	22 55 02.0	0.0
CLL				*i* PKPab	PKPab	22 55 36.6	+0.4
	comp=Z,5.0nm,1.0s						
VYHS	Vyhne	158.61	330	*e*PKP	PKPab	22 55 38.0	+0.2
VRAC	Vranov	158.88	334	*e*PKP	PKPab	22 55 40.1	+1.2
KRUC	Moravsky	159.16	334	*e*PKP	PKPab	22 55 40.9	+0.8
GERES	GERESS Array B	160.28	338	PKPab	PKPab	22 55 45.7	+0.6
	comp=Z,0.8nm,0.9s,baz=54,slow=6.7,SNR=4.9						
LESA	Schwarzleotal	161.86	338	*i* PKP	PKPab	22 55 49.9	-2.2
	comp=Z,4.3nm,1.1s						
TORD	Torodi Ar. Bea	162.24	177	PKP	PKPdf	22 55 08.1	+0.6
	comp=Z,1.1nm,0.5s,baz=98,slow=0.1,SNR=1.5						
TORD				PKPab	PKPab	22 55 55.6	+1.3
	comp=Z,0.7nm,0.3s,baz=207,slow=4.5,SNR=1.3						
WATA	Walderalm	162.28	340	*i* PKP	PKPab	22 55 54.2	+0.3
	comp=Z,2.7nm,0.9s						
WTTA	Wattenberg	162.33	340	*i* PKP	PKPab	22 55 54.4	+0.2
	comp=Z,7.2nm,1.2s						
RETA	Reutte	162.38	342	*i* PKP	PKPab	22 55 55.5	+1.2
	comp=Z,4.1nm,1.0s						
MOTA	Moosalm	162.41	341	*i* PKP	PKPab	22 55 54.5	0.0
	comp=Z,4.9nm,1.1s						
DAVA	Damuels	162.79	343	*i* PKP	PKPab	22 55 57.2	+1.1
	comp=Z,3.4nm,1.1s						
ESDC	Sonseca Array	169.76	30	PKPab	PKPab	22 56 26.8	-0.2
	comp=Z,1.1nm,1.0s,baz=315,slow=3.9,SNR=4.5						

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*MEX **22** 22:42:25.8±0.6, 14°.30N×93°.00W, h6^{km}±31^{km}, MD3.6*

*GCG **22** 22:42:27.9±0.4, 14°.36N×92°.75W, h54^{km}±999^{km}, MD3.7*

ISC 22 22:42:20.5±2.6**, 14°.3N**±0°.1×**93°.08W**±0°.09**, h18^{km}**±6^{km}**, n8, σ0^{s}73**/14**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PATR	El Naranjo	1.18	44	*e*P	Pg	22 42 43.9	+0.5
PATR				*e*S	Sg	22 42 58.5	-0.4
PAVE	Pavencul	1.27	43	*e*P	Pg	22 42 45.6	+0.4
PAVE				*e*S	Sb	22 42 59.4	-0.8
RTAL	Retalhuleu	1.36	79	*e*P	Pn	22 42 43.6	-1.1
RTAL				*e*S	Sb	22 43 02.7	+0.1
PCIG		1.44	355	*e*P	Pg	22 42 48.1	-0.2
PCIG				*e*S	Sn	22 43 04.5	+0.3
STG8	El Palmar, Qui	1.68	83	*i* P	Pn	22 42 49.4	+0.1
STG0	El Palmar, Qui	1.69	84	*i* P	Pn	22 42 48.9	-0.4
TGIG		2.50	359	*e*P	Pb	22 43 04.9	-0.1
TGIG				*e*S	Sn	22 43 31.9	+1.4
TGIG		2.50	359	*e*P	Pb	22 43 05.6	+0.6
TGIG				*i* S	Sb	22 43 35.0	-0.6

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*IDC **22** 23:00:14.0±0.6, 28°.21S×178°.56W, h268^{km}±6^{km}, mb3.4/7, mbtmp4.0/8, Error ellipse: s-maj=19.7km s-min=19.5km az=122.0*

ISC 22 23:00:12.0±0.6**, 28°.44S**±0°.07×**179°.4W**±0°.1**, h250^{km}, n35, σ1^{s}60**/42**, mb3.7**/7**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	1.55	121	P	Pn	23 00 52.7	+2.1
RAO	Raoul Island	1.56	121	P	Pn	23 00 52.9	+2.1
	1μm,0.2s,baz=118,slow=8.9,SNR=22						
RAO				S	S	23 01 21.9	+0.6
	1μm,0.2s,baz=269,slow=23,SNR=8.3						
GLKZ	Green Lake	1.57	122	P	Pn	23 00 52.5	+1.8
GLKZ				S	S	23 01 21.2	-0.1
WMGZ	Waiomatatini S	9.52	190	P	Pn	23 02 24.2	-0.3
HAZ	Te Kaha	9.57	193	P	Pn	23 02 26.0	+0.9
RUGZ	Raukumara Rang	9.80	193	P	Pn	23 02 28.8	+0.7
URZ	Urewera	10.21	195	P	Pn	23 02 34.9	+1.9
	3.3nm,0.6s,baz=276,slow=4.3,SNR=13						
URZ				S	S	23 04 28.2	+0.6
	21nm,0.3s,baz=182,slow=22,SNR=21						
URZ	Urewera	10.21	195	P	Pn	23 02 35.1	+2.0
URZ				S	S	23 04 29.8	+2.2
TKGZ	Te Karaka	10.22	192	P	Pn	23 02 32.7	-0.5
TKGZ				S	S	23 04 26.3	-1.7
RAGZ	Rawiri	10.36	194	P	Pn	23 02 36.3	+1.1
RAGZ				S	S	23 04 30.4	-1.1
SNGZ	Shannon Statio	10.65	194	P	P	23 02 40.9	-2.7
SNGZ				S	S	23 04 37.4	-0.8
NMHZ	Naumai	11.07	195	P	P	23 02 47.4	-0.9
NMHZ				S	S	23 04 44.1	-3.9
BKZ	Black Stump Fm	11.21	196	P	P	23 02 48.7	-1.2
KWHZ	Kaweka Forest	11.48	196	P	P	23 02 51.5	-1.2
KWHZ				S	S	23 04 56.2	-1.1
KAHZ	Kahuranaki	11.72	194	P	Pn	23 02 52.1	0.0
DZM	Mont Dzumac	14.25	293	P	P	23 03 32.9	+9.1
	7.0nm,0.7s,baz=142,slow=12						
ASAR	Alice Springs	41.98	265	P	P	23 07 45.7	+6.7
	0.3nm,0.5s,baz=90,slow=7.8,SNR=7.2						
ASAR				PcP	PcP	23 09 31.0	+1.6
	0.4nm,0.6s,baz=97,slow=4.1,SNR=2.7						
	0.3nm,0.5s						
WRA	Warramunga Arr	42.79	271	P	P	23 07 51.7	+6.1
	0.9nm,0.4s,baz=107,slow=7.9,SNR=9.4						
	0.9nm,0.4s						
QSPA	South Pole Qui	61.66	180	P	P	23 10 05.3	+2.0
	1.3nm,0.7s,baz=249,slow=2.3,SNR=14						
	1.3nm,0.7s						
MJAR	Matsushiro Arr	75.92	326	P	P	23 11 32.6	+1.4
	1.9nm,0.7s,baz=164,slow=5.5,SNR=5.1						
	1.9nm,0.7s						
PETK	Petropavlovsk-	83.61	346	P	P	23 12 12.2	+0.2
	1.6nm,0.6s,baz=178,slow=6.3,SNR=7.2						
	1.6nm,0.6s						
NVAR	Mina Array Bea	87.67	44	P	P	23 12 29.9	-2.6
	1.0nm,0.7s,baz=215,slow=8.4,SNR=5.6						
	1.0nm,0.7s						
PDAR	Pinedale Array	95.60	44	P	P	23 13 05.6	-3.5
	0.2nm,0.4s,baz=256,slow=7.9,SNR=2.8						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	118.82	315	PKP	PKPdf	23 18 29.5	-0.7
	0.5nm,0.5s,baz=126,slow=1.5,SNR=5.6						
BVAR	Borovoye Array	124.12	317	PKP	PKPdf	23 18 40.3	0.0
	1.3nm,0.5s,baz=118,slow=1.0,SNR=12						
SPITS	Spitsbergen Ar	129.67	356	PKP	PKPdf	23 18 49.6	-0.7
	1.7nm,0.7s,baz=19,slow=4.9,SNR=2.7						
FINES	FINESS Array B	142.88	340	PKhKP	PKPpre	23 19 10.4	
	2.4nm,0.8s,baz=44,slow=3.2,SNR=18						
NB2	NORSAR Subarra	146.63	351	PKP	PKPdf	23 19 22.6	+1.0
	comp=Z,1.3nm,0.5s,baz=11,slow=2.9						
NOA	NORSAR Array B	146.63	351	PKPbc	PKPdf	23 19 22.4	+0.8
	comp=Z,0.4nm,0.5s,baz=40,slow=1.2,SNR=9.7						
HFS	Hagfors	147.08	348	PKPbc	PKPdf	23 19 23.6	+1.3
	comp=Z,4.0nm,0.6s,baz=45,slow=2.3,SNR=19						
AKASG	Malin Array Be	148.98	324	PKPbc	PKPbc	23 19 30.1	+0.1
	comp=Z,3.4nm,0.5s,baz=48,slow=3.3,SNR=30						
MMAI	Mount Meron Ar	149.79	287	PKPbc	PKiKP	23 19 35.1	+1.5
	comp=Z,3.0nm,0.5s,baz=77,slow=3.8,SNR=22						
BRTR	Keskin Array B	150.54	301	PKPbc	PKiKP	23 19 35.0	0.0
	comp=Z,1.2nm,0.5s,baz=149,slow=4.3,SNR=8.6						
EKA	Eskdalemuir Ar	152.99	5	PKPbc	PKPbc	23 19 37.5	-1.7
	comp=Z,0.2nm,0.4s,baz=316,slow=2.0,SNR=1.9						
EKA				PKPab	PKPab	23 19 49.8	-1.8
	comp=Z,1.1nm,0.6s,baz=349,slow=5.5,SNR=5.3						
TORD	Torodi Ar. Bea	164.75	184	PKPab	PKPab	23 20 43.8	+0.4
	comp=Z,0.9nm,0.4s,baz=176,slow=4.2,SNR=1.9						

GCG 22 23:09:26.9±2.2, 14°.26N×92°.92W, h30^{km}±11^{km}, MD4.3, ML3.6, MW3.1

MEX 22 23:09:27.4±0.9, 14°.35N×93°.10W, h16^{km}±999^{km}, MD3.9

ISC 22 23:09:21.3±2.3, 14°.25N±0°.08×93°.08W±0°.08, h20^{km}±6^{km}, n19, σ2^{s}.12/33, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.03	50	eP	Pn	23 09 42.6	+2.0
THIG				eS	Sn	23 09 54.5	0.0
THIG		1.03	50	i P	Pn	23 09 42.6	+2.0
THIG				i S	Sn	23 09 55.8	+1.3
THIG				IAML		23 09 57.4	
	comp=E,1μm,0.4s						
SMCA	Catarina	1.15	58	i S	Sn	23 09 57.2	-0.2
SMCA				IAML		23 10 00.5	
	comp=N,438nm,0.3s						
PATR	El Naranjo	1.19	43	eP	Pg	23 09 44.8	+0.3
PATR				eS	Sg	23 09 59.0	-1.1
PAVE	Pavencul	1.28	43	eP	Pg	23 09 46.3	+0.1
PAVE				eS	Sn	23 10 01.0	-0.1
RTAL	Retalhuleu	1.37	78	eP	Pg	23 09 48.5	+0.6
RTAL				eS	Sb	23 10 03.9	+0.5
PCIG		1.45	355	eP	Pb	23 09 48.4	+0.7
PCIG				eS	Sn	23 10 03.0	-2.0
STG8	El Palmar, Qui	1.69	83	i P	Pn	23 09 49.8	-0.2
STG8				i S	Sn	23 10 09.4	-1.8
STG8				IAML		23 10 10.4	
	comp=N,1μm,0.2s						
STG0	El Palmar, Qui	1.69	84	i P	Pn	23 09 49.8	-0.2
STG0				i S	Sn	23 10 08.9	-2.3
STG0				IAML		23 10 13.0	
	comp=E,1μm,0.2s						
SOKI	Kika Raxquin	1.72	71	IAML		23 10 26.8	
	comp=N,662nm,0.6s						
HUEH	Huehuetenango	1.86	55	eP	Pb	23 09 55.5	+0.7
HUEH				eS	Sb	23 10 17.1	-0.7
CCIG	Comitan	2.22	24	eP	Pb	23 10 02.2	+1.4
CCIG				eS	Sg	23 10 30.3	-2.5
CCIG	Comitan	2.22	24	i P	Pb	23 10 02.5	+1.7
CCIG				i S	Sg	23 10 30.5	-2.4
CCIG				IAML		23 10 40.4	
	comp=N,172nm,0.4s						
FG16	Alotenango, Sa	2.49	89	i P	Pn	23 09 59.5	-1.6
FG16				i S	Sn	23 10 25.1	-5.9
FG16				IAML		23 10 25.4	
	comp=N,2μm,0.3s						
TGIG		2.51	359	eP	Pb	23 10 05.5	-0.3
TGIG				eS	Sb	23 10 35.0	-1.5
TGIG		2.51	359	i P	Pb	23 10 05.5	-0.3
TGIG				i S	Sb	23 10 35.0	-1.5
TGIG				IAML		23 10 39.3	
	comp=E,107nm,0.3s						
NUBE	Las Nubes	3.22	96	i P	Pn	23 10 14.9	+3.9
MTO3	Montecristo	3.61	87	i P	Pn	23 10 19.9	+3.5
PETF	Flores	4.08	49	eP	Pn	23 10 26.9	+4.3
PETF				eS	Sn	23 11 09.5	-0.3

IDC 22 23:12:43.5±2.9, 24°.34N×95°.02E, h139^{km}±35^{km}, mb3.2/3, mbtmp3.7/5, Error ellipse: s-maj=33.6km s-min=18.4km az=43.0

ISC 22 23:12:41.5±1.0, 24°.58N±0°.10×95°.05E±0°.09, h112^{km}, n8, σ2^{s}.18/11, mb3.5/3, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRDH	Bariadhala	3.65	239	P	Pn	23 13 37.9	+1.7
	59nm,0.3s,baz=240,slow=21,SNR=1.4						
BRDH				S	Sn	23 14 18.5	-0.1
	172nm,0.4s,baz=244,slow=20,SNR=12						
CMAR	Chiang Mai Arr	7.09	148	P	Pn	23 14 23.3	+0.6
	3.1nm,0.5s,baz=324,slow=14,SNR=27						
RAMN	Ramite	7.97	289	Pn	Pn	23 14 36.3	+1.4
	baz=292,slow=0.0						
RAMN				Sn	Sn	23 15 59.1	-4.4
	45nm,0.4s,baz=292,slow=0.0						
GUN	Gumba	8.87	294	Pn	Pn	23 14 47.9	+0.7
	baz=296,slow=0.0						
GUN				Sn	Sn	23 16 24.6	-1.0
	34nm,0.3s,baz=296,slow=0.0						
PKI	Pulchoki	9.16	291	Pn	Pn	23 14 51.7	+0.6
	baz=293,slow=0.0						
MKAR	Makanchi Array	24.41	338	P	P	23 17 50.7	+1.3
	1.6nm,0.5s,baz=147,slow=10,SNR=26						
	1.6nm,0.5s						
BVAR	Borovoye Array	33.96	333	P	P	23 19 15.8	+1.8
	0.4nm,0.7s,baz=134,slow=8.2,SNR=2.0						
	0.4nm,0.7s						
ASAR	Alice Springs	60.99	139	P	P	23 22 40.8	-2.5
	0.4nm,0.7s,baz=322,slow=6.4,SNR=4.8						
	0.4nm,0.7s						

GCG 22 23:15:57.8±1.4, 14°.12N×93°.01W, h30^{km}±34^{km}, MD4.4, ML3.8, MW3.2

MEX 22 23:15:59.5±0.9, 14°.37N×93°.12W, h8^{km}±26^{km}, MD4.0

ISC 22 23:15:55.4±2.4, 14°.21N±0°.07×93°.06W±0°.04, h18^{km}±12^{km}, n19, σ1^{s}.63/33, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.03	48	eP	Pb	23 16 15.5	+0.7
THIG				eS	Sg	23 16 28.5	-0.6
THIG		1.03	48	i P	Pb	23 16 15.6	+0.7
THIG				i S	Sn	23 16 30.5	+1.4
THIG				IAML		23 16 35.3	
	comp=N,1μm,0.2s						
SMCA	Catarina	1.15	56	i P	Pn	23 16 17.7	+1.1
PATR	El Naranjo	1.20	41	eP	Pb	23 16 17.8	0.0
PATR				eS	Sb	23 16 32.2	-0.9
PAVE	Pavencul	1.29	41	eP	Pn	23 16 19.4	+0.5
PAVE				eS	Sb	23 16 35.5	-0.4
RTAL	Retalhuleu	1.35	77	eP	Pn	23 16 20.8	+1.3
RTAL				eS	Sb	23 16 39.2	+1.8
PCIG		1.49	354	eP	Pn	23 16 21.4	0.0
PCIG				eS	Sn	23 16 36.4	-4.1
STG8	El Palmar, Qui	1.67	82	i P	Pn	23 16 23.2	-0.8
STG8				i S	Sn	23 16 43.6	-1.6
STG8				IAML		23 16 47.9	
	comp=E,1μm,0.2s						
STG0	El Palmar, Qui	1.68	82	i P	Pn	23 16 22.7	-1.4
STG0				i S	Sn	23 16 43.1	-2.2
STG0				IAML		23 16 49.3	
	comp=E,2μm,0.2s						
HUEH	Huehuetenango	1.86	54	eP	Pn	23 16 27.6	+0.9
HUEH				eS	Sg	23 16 54.5	-1.1
HUEH	Huehuetenango	1.86	54	i S	Sg	23 16 54.5	-1.1
HUEH				IAML		23 16 55.7	
	comp=N,2μm,0.4s						
CCIG	Comitan	2.24	23	eP	Pb	23 16 35.9	+0.3
CCIG				eS	Sb	23 17 02.5	-0.5
CCIG	Comitan	2.24	23	i P	Pb	23 16 35.7	+0.2
CCIG				i S	Sb	23 17 03.2	+0.1
CCIG				IAML		23 17 13.3	
	comp=N,286nm,0.4s						
FG16	Alotenango, Sa	2.47	88	i P	Pn	23 16 32.0	-3.1
FG16				IAML		23 17 09.8	
	comp=N,2μm,0.2s						
TGIG		2.55	359	eP	Pn	23 16 38.3	+2.3
TGIG				eS	Sn	23 17 07.1	+0.4
TGIG		2.55	359	i P	Pn	23 16 38.6	+2.5
TGIG				i S	Sb	23 17 10.5	-1.4
TGIG				IAML		23 17 11.2	
	comp=E,276nm,0.4s						
HUIG	Huatulco	3.33	298	eP	Pn	23 16 49.1	+2.4
HUIG				eS	Sn	23 17 23.0	-2.9
JAYA	Jayaque - finc	3.55	99	i P	Pn	23 16 50.8	+1.0
PETF	Flores	4.08	48	eP	Pn	23 16 59.6	+2.6
PETF				eS	Sn	23 17 45.6	+1.2

SCB 22 23:17:11.7±1.2, 21°.39S×66°.94W, h199^{km}±11^{km}, ML3.5/3, Error ellipse: s-maj=9.1km s-min=5.4km az=0.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCB	Mochara	1.22	84	Pg	Pn	23 17 43.8	+0.2
MOCB				Sg	Sn	23 18 08.0	-0.1
MOCB				IAML		23 18 08.8	
	417nm,0.4s						
YJA	Yavi	1.54	121	Pg	Pn	23 17 46.9	+0.7
PB01	IPOC Station P	2.40	278	Pg	Pn	23 17 55.0	+0.5
PB01				Sg	Sn	23 18 28.3	+0.5
PB01				IAML		23 18 29.4	
	51nm,0.3s						
PB08	IPOC Station P	2.42	301	Pg	Pn	23 17 55.4	+0.4
GO01	Chusmiza	2.72	309	Pg	Pn	23 17 59.0	+0.4
PB11	IPOC Station P	3.02	302	Pg	Pn	23 18 01.5	-0.2
PB11				Sg	Sn	23 18 39.9	-0.8
PB11				IAML		23 18 42.6	
	148nm,0.2s						
PB16	IPOC Station P	3.88	321	Pg	Pn	23 18 13.4	+0.8
BBOJ	La Paz, Jacaqu	4.55	345	Pg	Pn	23 18 22.0	+1.1
SOEJ	Jacaque	4.55	345	Pg	Pn	23 18 22.2	+1.3
BBOE	La Paz, Chanca	4.66	348	Pg	Pn	23 18 23.2	+0.8
BBOD	La Paz, Gloria	4.98	341	Pg	Pn	23 18 26.3	-0.2
BBOB	La Paz, Bander	5.34	348	Pg	Pn	23 18 30.9	-0.1

ISN 22 23:35:44.1±1.1, 35°.14N×45°.85E, h43^{km}±47^{km}, ML2.8

TEH 22 23:35:44.1, 34°.95N×45°.73E, h8^{km}±82^{km}

ISC 22 23:35:44.3±1.1, 34°.97N±0°.06×45°.79E±0°.04, h10^{km}, n12, σ0^{s}.80/16, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KGS1	Ghasr-e-Shirin	0.49	199	Pg	Pg	23 35 53.0	-0.9
KGS1				Sg	Sg	23 36 01.1	+0.8
IDHR	Dehrash	0.56	118	Pg	Pb	23 35 55.7	-0.6
GLG1	Gilan-e-Gharb	0.86	173	Pg	Pg	23 35 60.0	-0.9
IGHG	Ghaleghazi	0.91	135	Pg	Pn	23 36 02.4	-1.0
ILIN	Lien	0.97	93	Pg	Pn	23 36 04.1	-0.1
KCHF	Cheshme Sefid,	1.25	123	Pg	Pg	23 36 08.3	+0.1
IKRK	Kirkuk	1.26	290	ePg	Pn	23 36 08.0	0.0
IKRK				eSg	Sb	23 36 24.0	-0.5
IKRK				AML	AML	23 36 28.2	
	comp=N,269nm,0.3s						
IKRK				AML	AML	23 36 28.3	
	comp=E,416nm,0.4s						
ILBA	Ilam Banvizeh	1.39	165	Pg	Pn	23 36 09.4	-0.4
SNQR	Sonqor, Kerman	1.52	94	Pg	Pg	23 36 13.8	+0.4
IBZA	Bozab	1.78	106	Pn	Pg	23 36 18.0	-0.4
IBDR	Badra	1.86	176	ePn	Pn	23 36 17.0	+0.8
IBDR				eSn	Sn	23 36 41.0	+1.3
IBDR				AML	AML	23 36 48.0	
	comp=E,59nm,0.7s						
IBDR				AML	AML	23 36 50.7	
	comp=N,33nm,0.7s						
BHD	Baghdad	2.06	215	ePn	Pn	23 36 19.0	+0.1
BHD				eSn	Sn	23 36 46.0	+1.4

NOU 22 23:37:34.1, 22°.34S×169°.57E, h0^{km}, mb3.6/8, Southeast of Loyalty Islands, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.67	301	P	Pn	23 38 03.7	-0.9
MARNC	Mare, Loyalty	1.67	301	S	Sn	23 38 26.1	-0.5
PINNC	Pines Island,	1.98	262	P	Pn	23 38 09.1	+0.2
YATNC	Mamie plateau,	2.50	276	P	Pn	23 38 15.1	-0.9
OUENC	Ouen Island, N	2.53	268	P	Pn	23 38 16.5	+0.1
ONTNC	Ouen Toro	2.88	270	P	Pn	23 38 20.6	-0.7
DZM	Mont Dzumac	2.91	275	P	Pn	23 38 22.1	+0.3
KOUNC	Koumac, New Ca	5.23	289	P	Pn	23 38 54.4	+0.7

JMA 22 23:41:41.3±0.2, 23°.8N±0°.8×122°.9E±0°.7, h47^{km}, MV2.3/9, NEAR ISHIGAKIJIMA ISLAND

TAP 22 23:41:41.9, 23°.87N×122°.95E, h56^{km}, ML2.8, D

ISC 22 23:41:40.9±1.1, 23°.72N±0°.04×122°.95E±0°.02, h30^{km}±12^{km}, n70, σ1^{s}.16/113, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS4	EOS4	0.70	305	P	Pb	23 41 54.5	+0.1
EOS4				i S	Sb	23 42 04.6	+1.0
JYNG	Yonagunijimaku	0.73	360	P	Pb	23 41 54.5	-0.6
JYNG				eS	Sb	23 42 04.3	-0.5
YOJ	Yonaguni jima	0.74	5	eP	Pb	23 41 54.8	-0.6
YOJ				S	Sb	23 42 04.5	-0.7
YOJ	Yonaguni jima	0.74	5	i P	Pb	23 41 55.0	-0.4
YOJ				i S	Sb	23 42 04.4	-0.8
EOS3	EOS3	0.81	315	P	Pb	23 41 56.6	+0.3
EOS3				S	Sb	23 42 08.2	+1.3
HATJ	Hateruma jima	0.86	67	eP	Pb	23 41 57.0	-0.2
HATJ				eS	Sb	23 42 08.2	-0.2
IRIF	Iriomote-Funau	0.94	49	eP	Pn	23 41 58.3	+0.2
EOS2	EOS2	0.95	317	P	Pn	23 41 59.2	+1.1
EOS2				eS	Sn	23 42 13.1	+2.4
JKRS	Kuro-shima	1.10	62	eP	Pn	23 42 00.8	+0.5
JKRS				eS	Sn	23 42 15.2	+0.8
JIJ	Ishigaki jima	1.27	59	eP	Pn	23 42 02.5	-0.1
JIJ				eS	Sn	23 42 18.7	+0.1
SHUL	Shoufeng	1.27	273	eP	Pn	23 42 03.0	+0.5
SHUL				eS	Sn	23 42 18.3	-0.3
TWD	Chiawan	1.29	287	eP	Pn	23 42 01.5	-1.3
TWD				eS	Sn	23 42 17.1	-2.0
EWUT	Wuta	1.29	304	eP	Pn	23 42 02.7	-0.2
EWUT				eS	Sn	23 42 18.4	-0.7
ENA	Nanau	1.31	303	eP	Pn	23 42 03.8	+0.7
ENA				eS	Sn	23 42 20.1	+0.5
NACB	Ninganchiao	1.32	290	eP	Pn	23 42 02.5	-0.7
NACB				eS	Sn	23 42 16.9	-2.9
TWC	Suao	1.34	312	eP	Pn	23 42 04.9	+1.4
ETM	Tongmen	1.35	281	eP	Pn	23 42 03.1	-0.6
ETM				eS	Sn	23 42 19.2	-1.5
EGFH	Guangfu	1.39	268	eP	Pn	23 42 05.2	+0.9
EGFH				eS	Sn	23 42 20.6	-1.0
HGSD	Ruisui	1.41	261	P	Pn	23 42 04.0	-0.6
ETLH	Xiulin Townshi	1.42	290	eP	Pn	23 42 04.7	-0.2
ETLH				eS	Sn	23 42 21.0	-1.6
ECBN	Changbin	1.43	254	eP	Pn	23 42 06.0	+1.2
ECBN				eS	Sn	23 42 21.1	-1.5
WARBT	Fenglin Townsh	1.43	270	eP	Pn	23 42 04.2	-0.6
WARBT				eS	Sn	23 42 21.0	-1.6
LXIB	Xiulin Townshi	1.44	282	eP	Pn	23 42 05.1	+0.1
LXIB				eS	Sn	23 42 21.3	-1.6
EHY	Hungye	1.50	262	eP	Pn	23 42 05.9	0.0
EHY				eS	Sn	23 42 23.0	-1.4
JISG	Ishigakijimahi	1.52	55	P	Pn	23 42 05.8	-0.2
JISG				eS	Sn	23 42 24.2	-0.5
LATG	Datong	1.53	302	eP	Pn	23 42 06.5	+0.2
TWE	Neicheng	1.54	311	eP	Pn	23 42 07.2	+1.0
YULB	Yu-li	1.55	258	eP	Pn	23 42 06.5	+0.1
YULB				eS	Sn	23 42 25.0	-0.5
TWB1	Santiao Chiao	1.55	326	eP	Pn	23 42 04.7	-1.8
TWF1	Yuli	1.56	257	P	Pn	23 42 06.1	-0.4
TWF1				eS	Sn	23 42 25.1	-0.6
ENTT	Nioudou	1.56	306	eP	Pn	23 42 07.2	+0.6
NNSB	Datong	1.59	297	eP	Pn	23 42 07.4	+0.2
NNSB				eS	Sn	23 42 26.1	-0.7
WHF	Hehuan Shan	1.59	286	eP	Pn	23 42 07.0	-0.5
WHF				eS	Sn	23 42 26.0	-1.3
FULB	Fuli	1.60	251	eP	Pn	23 42 06.9	-0.3
NNS	Nan Shan	1.61	297	eP	Pn	23 42 07.9	+0.5
NNS				eS	Sn	23 42 26.6	-0.6
TIPB	Shuangxi	1.61	321	eP	Pn	23 42 06.8	-0.6
FUSB	Fushanzhiwuyua	1.62	310	eP	Pn	23 42 07.8	+0.4
OWD	Renai	1.64	279	eP	Pn	23 42 07.9	+0.1
OWD				eS	Sn	23 42 27.1	-0.9
FUSS	Fushou	1.64	289	eP	Pn	23 42 08.3	+0.4
FUSS				eS	Sn	23 42 27.8	-0.4
VWDT	VWDT	1.65	272	eP	Pn	23 42 08.4	+0.6
VWDT				eS	Sn	23 42 26.8	-1.3
EDH	Donghe	1.68	244	eP	Pn	23 42 08.0	-0.3
EDH				eS	Sn	23 42 26.6	-2.2
SXI1	Grass Mountain	1.68	325	eP	Pn	23 42 08.4	+0.1
EHD	Haiduan	1.69	251	eP	Pn	23 42 07.8	-0.7
EHD				eS	Sn	23 42 27.8	-1.4
WUSB	Renai	1.70	280	P	Pn	23 42 09.0	+0.4
WUSB				S	Sn	23 42 29.0	-0.3
TWT	Tachien	1.70	289	eS	Sn	23 42 29.7	+0.1
YHNB	Yeheng	1.72	304	eP	Pn	23 42 09.4	+0.5
YHNB				eS	Sn	23 42 29.5	-0.4
NSK	Sanguang	1.73	304	eP	Pn	23 42 09.6	+0.5
NSK				eS	Sn	23 42 28.8	-1.4
ELDTW	Lidau	1.85	254	eP	Pn	23 42 10.4	-0.3
ELDTW				eS	Sn	23 42 31.5	-1.6
JTJ	Tarama	1.85	60	eS	Sn	23 42 33.5	+0.6
SMLT	Sun Moon Lake	1.88	275	eP	Pb	23 42 14.3	-0.3
WCS	Beigang Elemen	1.89	281	eP	Pn	23 42 11.6	+0.4
NFF	Wufeng Townshi	1.90	299	eP	Pn	23 42 12.9	+1.5
NFF				eS	Sn	23 42 35.0	+0.7
WHP	Taichung City	1.91	287	eP	Pn	23 42 14.0	+2.5
WHP				eS	Sn	23 42 34.9	+0.3
WHYT	Xinyi Township	1.92	270	eP	Pn	23 42 14.0	+2.4
TYC	Yuchr	1.92	276	eP	Pn	23 42 13.1	+1.6
TWG	Pinlang	1.94	243	eP	Pn	23 42 12.6	+0.7
TWG				eS	Sn	23 42 34.3	-1.0
ALS	Alishan	1.97	264	eP	Pn	23 42 13.5	+0.9
LIOB	Emei	1.99	298	eP	Pn	23 42 13.7	+1.2
LIOB				eS	Sn	23 42 38.4	+2.0
NSTT	Nanjuang	2.00	297	eP	Pn	23 42 14.0	+1.4
NSTT				eS	Sn	23 42 37.7	+1.1
CHN5	Tsauling	2.08	267	eP	Pn	23 42 15.7	+1.9
TPUB	Ta-pu	2.17	259	eP	Pn	23 42 17.2	+2.2
WTP	Ta-pu	2.19	258	eP	Pn	23 42 17.3	+2.0
WDLH	Douliu	2.21	270	eP	Pn	23 42 17.4	+1.9
CHN1	Nanshi	2.28	257	eP	Pn	23 42 18.9	+2.4
CHN1				eS	Sn	23 42 46.4	+2.7
TWK	Hsinying	2.30	259	eP	Pb	23 42 20.6	-1.2
TAWH	Dawu Township	2.34	235	eP	Pn	23 42 18.6	+1.3
TAWH				eS	Sn	23 42 44.9	-0.2
EAST	Anshuo	2.34	236	eP	Pn	23 42 19.9	+2.4
MASBT	Mashibuluo	2.40	243	eP	Pn	23 42 19.5	+1.4
SLIU	Shizi	2.48	233	eP	Pn	23 42 21.2	+1.9
VWUC	VWUC	3.43	292	eP	Pn	23 42 32.6	+0.3

IDC 22 23:49:27.7±1.9, 21°.58S×178°.47W, h457^{km}±19^{km}, mb3.3/10, mbtmp4.2/13, Error ellipse: s-maj=20.0km s-min=15.7km az=111.0

NEIC 22 23:49:28.6±1.9, 21°.67S±0°.10×178°.5W±0°.2, h464^{km}±9^{km}, mb4.1/11, Error ellipse: s-maj=23.6km s-min=14.0km az=86.0

ISC 22 23:49:27.1±0.6, 21°.64S±0°.08×178°.4W±0°.1, h450^{km}, n48, σ1^{s}.21/46, mb3.9/16, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.13	319	P	P	23 50 53.9	+0.9
	28nm,0.4s,baz=140,slow=8.5,SNR=28						
PINNC	Pines Island,	13.15	263		P	23 52 20.6	+2.1
FUNA	Funafuti	13.25	350		P	23 52 23.1	+3.5
DZM	Mont Dzumac	14.08	265	P	P	23 52 29.6	+1.0
DZM	Mont Dzumac	14.08	265	P	P	23 52 29.8	+1.1
	4.8nm,0.7s,baz=21,slow=18,SNR=6.1						
URZ	Urewera	17.00	192	P	P	23 52 59.0	-0.3
	4.7nm,0.3s,baz=341,slow=8.8,SNR=6.0						
URZ				S	S	23 55 57.9	+3.3
	9.3nm,0.8s,baz=74,slow=23,SNR=3.7						
QRZ	Quartz Range	20.61	200	P	P	23 53 33.9	0.0
LTZ	Lake Taylor	22.48	198	P	P	23 53 50.9	0.0
CTAO	Charters Tower	33.02	266	P	P	23 55 22.4	-1.4
CTAO				IAmb	IAmb	23 55 46.8	
	comp=Z,18nm,1.4s						
TOO	Toolangi	34.93	235	P	P	23 55 39.7	0.0
TOO				IAmb	IAmb	23 55 51.8	
	comp=Z,5.8nm,1.4s						
STKA	Stephens Creek	36.97	245	P	P	23 55 56.6	-0.2
	comp=Z,1.2nm,0.5s,baz=106,slow=13,SNR=3.6						
	comp=Z,1.2nm,0.5s						
BBOO	Buckleboo	41.71	245	P	P	23 56 34.0	-1.3
BBOO				IAmb	IAmb	23 56 46.9	
	comp=Z,12nm,1.1s						
AS31	Alice Springs	43.90	258	P	P	23 56 52.2	-0.6
ASAR	Alice Springs	43.90	258	P	P	23 56 51.9	-0.9
ASAR	Alice Springs	43.90	258	P	P	23 56 52.2	-0.5
	comp=Z,2.1nm,0.8s,baz=88,slow=8.6,SNR=16						
ASAR				PcP	PcP	23 58 29.6	+0.2
	comp=Z,0.7nm,0.5s,baz=105,slow=3.9,SNR=7.7						
	comp=Z,2.1nm,0.8s						
JAY	Jayapura	44.06	290	P	P	23 56 53.1	-0.9
	comp=Z,5.0nm,0.5s,baz=117,slow=3.5,SNR=7.8						
	comp=Z,5.0nm,0.5s						
WB0	Warramunga Arr	44.07	264	P	P	23 56 52.2	-1.8
WB0				IAmb	IAmb	23 56 53.4	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	44.08	263	P	P	23 56 52.1	-2.0
WRA	Warramunga Arr	44.08	263	P	P	23 56 51.9	-2.2
	comp=Z,1.4nm,0.6s,baz=94,slow=7.8,SNR=9.5						
	comp=Z,1.4nm,0.6s						
QSPA	South Pole Qui	68.43	180	P	P	23 59 43.6	+0.9
QSPA				IAmb	IAmb	23 59 47.4	
	comp=Z,3.1nm,1.1s						
QSPA	South Pole Qui	68.43	180	P	P	23 59 43.7	+1.1
	comp=Z,1.6nm,0.9s,baz=77,slow=1.2,SNR=5.7						
	comp=Z,1.6nm,0.9s						
PETK	Petropavlovsk-	77.28	345	P	P	00 00 33.3	-0.4
	comp=Z,2.3nm,0.6s,baz=122,slow=6.5,SNR=8.3						
	comp=Z,2.3nm,0.6s						
BELA	Belgrano 2	78.48	173	P	P	00 00 40.0	0.0
TXAR	Lajitas Array	87.98	57	P	P	00 01 28.4	-0.2
	comp=Z,0.5nm,0.8s,baz=266,slow=3.3,SNR=4.6						
	comp=Z,0.5nm,0.8s						
ILAR	Eielson Array	89.51	13	P	P	00 01 34.1	-0.6
ILAR	Eielson Array	89.51	13	P	P	00 01 33.6	-1.1
	comp=Z,0.6nm,0.6s,baz=223,slow=5.9,SNR=7.2						
	comp=Z,0.6nm,0.6s						
M29M	Somme Creek	89.59	17	P	P	00 01 35.2	-0.1
M29M				IAmb	IAmb	00 01 49.5	
	comp=Z,2.8nm,1.2s						
J26L	Joseph Creek	90.00	14	P	P	00 01 36.9	-0.2
J26L				IAmb	IAmb	00 01 38.9	
	comp=Z,1.6nm,0.7s						
PDAR	Pinedale Array	90.05	43	P	P	00 01 37.8	-0.3
	comp=Z,0.4nm,0.6s,baz=242,slow=3.2,SNR=4.8						
	comp=Z,0.4nm,0.6s						
CMAR	Chiang Mai Arr	90.15	290	P	P	00 01 39.6	+0.8
	comp=Z,1.6nm,0.8s,baz=133,slow=3.1,SNR=10						
	comp=Z,1.6nm,0.8s						
BVAR	Borovoye Array	119.71	320	PKP	PKPdf	00 07 23.6	-1.2
	comp=Z,0.4nm,0.4s,baz=126,slow=2.5,SNR=6.0						
ARCES	ARCESS Array B	129.97	349	PKP	PKPdf	00 07 43.5	-0.5
	comp=Z,1.6nm,0.7s,baz=11,slow=2.5,SNR=5.8						
FINES	FINESS Array B	136.76	343	PKP	PKPdf	00 07 56.5	-0.4
	comp=Z,1.5nm,0.8s,baz=64,slow=4.4,SNR=5.3						
HFS	Hagfors	140.60	350	PKhKP	PKPpre	00 07 57.0	
	comp=Z,0.5nm,0.3s,baz=65,slow=3.8,SNR=13						
AKASG	Malin Array Be	143.82	330	PKPbc	PKPab	00 08 07.7	-1.0
AKASG	Malin Array Be	143.82	330	PKP	PKPab	00 08 07.5	-1.2
	comp=Z,7.7nm,0.5s,baz=45,slow=4.2,SNR=96						
AKBB	Malin Array Si	143.82	330		PKPab	00 08 07.5	-1.2
EKA	Eskdalemuir Ar	146.17	5	PKPbc	PKPdf	00 08 14.2	+0.4
	comp=Z,0.7nm,0.6s,baz=317,slow=2.0,SNR=5.4						
BR131	Keskin Array S	147.31	311	PKPbc	PKPbc	00 08 18.1	-1.5
BRTR	Keskin Array B	147.31	311	PKPbc	PKPbc	00 08 18.4	-1.2
BRTR	Keskin Array B	147.31	311	PKPbc	PKPbc	00 08 18.3	-1.3
	comp=Z,0.7nm,0.5s,baz=144,slow=4.4,SNR=6.1						
MMAI	Mount Meron Ar	148.04	298	PKPbc	PKPbc	00 08 21.6	0.0
	comp=Z,0.7nm,0.4s,baz=82,slow=6.2,SNR=9.3						
STEB	Steborice	149.01	340	ePKP	PKPbc	00 08 23.3	-0.1
CSS	Mathiatis	149.22	302	PKPbc	PKPbc	00 08 23.1	-1.3
ZVC	Zvikov	150.52	343	ePKP	PKPbc	00 08 26.4	-0.6
KHC	Kasperske Hory	150.96	344	ePKP	PKPbc	00 08 27.7	-0.3
KHC				ex	x	00 08 36.6	
CKRC	Cesky Krumlov	151.05	343	ePKP	PKPbc	00 08 27.8	-0.4
GERES	GERESS Array B	151.19	343	PKPbc	PKPbc	00 08 28.0	-0.7
	comp=Z,0.4nm,0.4s,baz=29,slow=3.0,SNR=5.8						

IDC 22 23:56:42.5±4.4, 5°.46S×147°.96E, h193^{km}±35^{km}, mb3.0/3, mbtmp3.5/5, Error ellipse: s-maj=61.5km s-min=38.0km az=92.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.00	191	P	Pn	23 57 44.2	+0.1
	14nm,0.6s,baz=13,slow=13,SNR=2.3						
PMG				S	Sn	23 58 25.7	-6.9
	11nm,0.3s,baz=213,slow=21,SNR=6.9						
WRA	Warramunga Arr	19.57	221	P	P	00 00 55.4	-0.5
	0.5nm,0.4s,baz=44,slow=11,SNR=5.3						
ASAR	Alice Springs	22.61	215	P	P	00 01 27.7	+0.6
	0.4nm,0.6s,baz=51,slow=8.1,SNR=7.0						
	0.4nm,0.6s						
MKAR	Makanchi Array	77.69	320	P	P	00 08 18.1	+0.1
	0.2nm,0.4s,baz=106,slow=7.1,SNR=2.7						
	0.2nm,0.4s						
QSPA	South Pole Qui	84.51	180	P	P	00 08 53.3	-0.3
	1.6nm,1.1s,baz=27,slow=2.3,SNR=2.4						
	1.6nm,1.1s						

IDC 23 00:02:46.5±1.1, 30°.61S×177°.11W, h0^{km}, mb3.9/4, mbtmp3.9/4, MS3.2/1, Error ellipse: s-maj=34.5km

s-min=26.5km az=65.0

ISC 23 00:02:50.7±1.1**, 30°.80S**±0°.07×**177°.4W**±0°.2**, h27^{km}, n11,** σ**1^{s}.97**/14**, mb4.0**/4**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.62**	**343**	Pn	**Pn**	**00 03 14.4**	**-3.1**
	76nm,0.3s,baz=90,slow=20,SNR=1.7						
RAO				Sn	**Sb**	**00 03 40.2**	**+0.2**
	176nm,0.3s,baz=107,slow=19,SNR=2.5						
URZ	**Urewera**	**8.72**	**210**	Pn	**Pn**	**00 04 53.9**	**-1.2**
	0.4nm,0.3s,baz=53,slow=20,SNR=1.0						
URZ				Sn	**Sn**	**00 06 29.2**	**-3.3**
	1.3nm,0.3s,baz=120,slow=13,SNR=4.9						
URZ				LR	LR	00 07 38.6	
	comp=Z,156nm,19.1s,baz=11,slow=32						
STKA	**Stephens Creek**	**34.92**	**257**	P	**P**	**00 09 43.8**	**+3.6**
	1.4nm,0.5s,baz=99,slow=12,SNR=4.4						
	1.4nm,0.5s						
ASAR	**Alice Springs**	**43.64**	**267**	P	**P**	**00 10 53.8**	**+0.6**
	0.9nm,0.6s,baz=112,slow=8.0,SNR=17						
ASAR				PcP	**PcP**	**00 12 41.6**	**+1.4**
	0.5nm,0.7s,baz=107,slow=4.0,SNR=2.9						
	0.9nm,0.6s						
WRA	**Warramunga Arr**	**44.66**	**272**	P	**P**	**00 11 02.0**	**+0.6**
	1.1nm,0.5s,baz=113,slow=8.3,SNR=8.6						
	1.1nm,0.5s						
QSPA	**South Pole Qui**	**59.31**	**180**	P	**P**	**00 12 50.5**	**+0.5**
	1.1nm,0.8s,baz=29,slow=10,SNR=5.7						
	1.1nm,0.8s						
FINES	**FINESS Array B**	**145.71**	**340**	PKPbc	**PKPdf**	**00 22 24.8**	**-1.1**
	1.2nm,0.4s,baz=43,slow=5.5,SNR=20						
HFS	**Hagfors**	**149.75**	**349**	PKPbc	**PKPbc**	**00 22 36.5**	**-0.8**
	0.9nm,0.6s,baz=355,slow=3.3,SNR=1.3						
AKASG	**Malin Array Be**	**151.95**	**323**	PKPbc	**PKiKP**	**00 22 43.2**	**0.0**
	0.9nm,0.7s,baz=52,slow=3.4,SNR=5.6						
MMAI	**Mount Meron Ar**	**152.16**	**283**	PKPbc	**PKiKP**	**00 22 46.1**	**+1.8**
	0.4nm,0.3s,baz=95,slow=3.0,SNR=5.4						
TORD	**Torodi Ar. Bea**	**162.41**	**177**	PKPab	**PKPab**	**00 23 38.1**	**+0.2**
	0.3nm,0.7s,baz=183,slow=2.3,SNR=1.9						

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*IDC **23** 00:04:03.4±0.9, 56°.84N×122°.92E, h0^{km}, mb3.6/8, mbtmp3.7/12, ML3.8/4, Error ellipse: s-maj=17.8km s-min=12.9km az=111.0*

*YARS **23** 00:04:03.7, 56°.94N×122°.91E, h5^{km}, ML2.4/8*

ISC 23 00:04:03.2±0.5**, 56°.92N**±0°.03×**122°.88E**±0°.03**, h10^{km}, n25,** σ**2^{s}.59**/49**, mb3.5**/7**, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YKLR	**Yuktali**	**0.75**	**245**	*i* Pg	**Pb**	**00 04 17.6**	**-0.7**
	21nm,0.1s						
YKLR				*e*Sg	**Sg**	**00 04 27.6**	**+0.1**
	143nm,0.1s						
CLNS	**Chul'man**	**1.11**	**93**	*e*Pg	**Pn**	**00 04 24.2**	**-0.6**
	29nm,0.2s						
CLNS				*e*Sg	**Sb**	**00 04 38.7**	**-0.3**
	83nm,0.2s						
KHN	**Khani**	**1.69**	**271**	*i* Pg	**Pb**	**00 04 33.3**	**-1.2**
	16nm,0.1s						
KHN				*e*Sg	**Sn**	**00 04 54.7**	**+0.1**
	56nm,0.2s						
TNDR	**Tynda**	**2.05**	**149**	*e*Pn	**Pb**	**00 04 39.4**	**-1.2**
TNDR				*e*Pn	**Pb**	**00 04 39.4**	**-1.2**
TNDR				*i* Pn	**Pb**	**00 04 39.4**	**-1.2**
TNDR				*i* Pg	**Pg**	**00 04 41.1**	**-1.4**
	86nm,0.7s						
TNDR				*e*Sg	**Sg**	**00 05 08.9**	**-0.2**
	284nm,0.2s						
ALDR	**Aldan**	**2.17**	**38**	*i* Pg	**Pb**	**00 04 42.3**	**-0.3**
	20nm,0.2s						
ALDR				*e*Sg	**Sg**	**00 05 10.9**	**-2.0**
	142nm,0.2s						
CRS	**Chara**	**2.53**	**272**	*e*Pg	**Pb**	**00 04 48.1**	**-0.6**
	108nm,0.9s						
TUP	**Tupik**	**3.00**	**215**	*e*Sg	**Sg**	**00 05 36.9**	**-2.5**
	527nm,0.8s						
OLMR	**Olekminsk**	**3.69**	**341**	*e*Pn	**Pn**	**00 05 02.0**	**+1.8**
OLMR				*i* Pn	**Pn**	**00 05 02.0**	**+1.8**
OLMR				*e*Pn	**Pn**	**00 05 02.0**	**+1.8**
OLMR				*i* Pg	**Pb**	**00 05 10.2**	**+1.8**
	4.7nm,0.2s						
OLMR				*e*Sg	**Sg**	**00 05 56.7**	**-4.9**
	8.5nm,0.4s						
ZEA	**Zeya**	**4.05**	**140**	*e*Pg	**Pb**	**00 05 16.0**	**+1.5**
	10.0nm,0.3s						
ZEA				*e*Sg	**Sg**	**00 06 11.1**	**-1.9**
	150nm,0.4s						
CGD	**Chagda**	**4.53**	**63**	*e*Pn	**Pn**	**00 05 14.4**	**+2.8**
CGD				*i* Pg	**Pb**	**00 05 25.0**	**+2.3**
	2.2nm,0.3s						
CGD				*e*Sn	**Sn**	**00 06 05.5**	**+1.3**
CGD				*e*Sn	**Sn**	**00 06 05.5**	**+1.3**
CGD				*e*Sg	**Sg**	**00 06 24.6**	**-3.8**
	35nm,0.4s						
VTMR	**Vitim**	**6.02**	**299**	*i* Pg	Pb	00 05 52.3	+4.2
	8.8nm,0.3s						
VTMR				*e*Sg	**Sg**	**00 07 11.7**	**-4.6**
	50nm,0.6s						
YAK	**Yakutsk**	**6.19**	**31**	Pn	**Pn**	**00 05 36.1**	**+1.6**
	2.5nm,0.3s,baz=179,slow=2.5,SNR=1.6						
YAK				Sn	**Sn**	**00 06 44.1**	**-1.1**
	5.7nm,0.3s,baz=187,slow=23,SNR=11						
YAK				Lg	Lg	00 07 10.8	
	6.1nm,0.3s,baz=305,slow=23,SNR=11						
	8.6nm,0.4s						
YAK	**Yakutsk**	**6.19**	**31**	*i* Pg	**Pb**	**00 05 54.8**	**+3.9**
YAK				*e*Sn	**Sn**	**00 06 44.7**	**-0.5**
YAK				*e*Sn	**Sn**	**00 06 44.7**	**-0.5**
YAK				*e*Sn	**Sn**	**00 06 44.7**	**-0.5**
YAK				*e*Sg	**Sg**	**00 07 15.8**	**-5.8**
YAK				*e*Sg	**Sg**	**00 07 15.8**	**-5.8**
YAK				*e*Sg	**Sg**	**00 07 15.8**	**-5.8**
KLR	**Kul'dur**	**9.36**	**142**	Pn	**Pn**	**00 06 18.9**	**+0.9**
	0.5nm,0.3s,baz=333,slow=17,SNR=3.7						
KLR				Sn	**Sn**	**00 07 57.6**	**-5.7**
	0.4nm,0.3s,baz=216,slow=19,SNR=2.0						
KLR				Lg	Lg	00 08 53.9	
	1.2nm,0.3s,baz=247,slow=20,SNR=7.2						
	1.1nm,0.3s						
SONM	**Songino Array**	**13.53**	**235**	Pn	**Pn**	**00 07 15.6**	**+0.3**
	0.1nm,0.3s,baz=33,slow=14,SNR=1.6						
SONM				Lg	Lg	00 11 06.7	
	0.5nm,0.3s,baz=40,slow=27,SNR=9.1						
	0.1nm,0.3s						
TIXI	**Tiksi**	**15.00**	**7**	Pn	**Pn**	**00 07 32.1**	**-2.9**
	1.0nm,0.3s,baz=188,slow=18,SNR=10						
TIXI				Sn	Sn	00 10 10.0	-11
	0.5nm,0.3s,baz=102,slow=13,SNR=3.7						
	2.9nm,0.3s						
SEY	**Seymchan**	**15.86**	**56**	Pn	**P**	**00 07 49.8**	**-0.2**
	0.2nm,0.3s,baz=236,slow=12,SNR=2.3						
SEY				Lg	Lg	00 12 18.7	
	0.1nm,0.3s,baz=253,slow=19,SNR=4.7						
PETK	**Petropavlovsk-**	**20.18**	**86**	P	Pn	00 08 39.6	+0.1
	0.4nm,0.4s,baz=297,slow=4.2,SNR=2.9						
	0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**21.61**	**278**	P	**P**	**00 08 56.9**	**+3.9**
	1.1nm,0.7s,baz=66,slow=11,SNR=3.8						
	1.1nm,0.7s						
ILAR	**Eielson Array**	**41.01**	**41**	P	**P**	**00 11 47.8**	**+1.9**
	0.2nm,0.5s,baz=311,slow=7.0,SNR=2.8						
	0.2nm,0.5s						
FINES	**FINESS Array B**	**45.40**	**318**	P	**P**	**00 12 22.5**	**+1.2**
	1.7nm,0.7s,baz=49,slow=5.6,SNR=7.1						
	1.7nm,0.7s						
HFS	**Hagfors**	**50.67**	**322**	P	**P**	**00 13 03.9**	**+1.7**
	3.1nm,0.9s,baz=60,slow=8.5,SNR=8.8						
	3.1nm,0.9s						
AKASG	**Malin Array Be**	**51.46**	**306**	P	**P**	**00 13 09.9**	**+1.7**
	0.1nm,0.3s,baz=41,slow=8.9,SNR=2.1						
	0.1nm,0.3s						
WRA	**Warramunga Arr**	**77.17**	**169**	P	**P**	**00 15 58.7**	**+1.9**
	0.5nm,0.5s,baz=355,slow=6.4,SNR=6.8						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**80.81**	**170**	P	**P**	**00 16 17.6**	**+0.9**
	0.4nm,0.9s,baz=347,slow=8.0,SNR=1.9						
	0.4nm,0.9s						

CATAC 23 00:10:06.6±0.4**, 13°N**±3°×**8°8W**±°**, h38^{km}**±5^{km}**, M3.5**/17**, MLv3.5**/17**, Error ellipse: s-maj=7.4km s-min=2.9km az=30.6, confirmed, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
POTN	**Potosi Cosigui**	**0.54**	**49**	P	Pn	00 10 18.6	+0.8
POTN				S	Sn	00 10 27.9	+2.3
LCND	**La Caada**	**0.66**	**3**	P	Pn	00 10 19.9	+0.4
CRIN	**San Cristobal**	**0.85**	**86**	P	Pn	00 10 23.0	+0.9
CRIN	**San Cristobal**	**0.85**	**86**	S	Sn	00 10 36.1	+2.6
PACA	**Pacayal**	**0.91**	**334**	S	Sn	00 10 35.9	+1.0
PACA	**Pacayal**	**0.91**	**334**	P	Pn	00 10 23.3	+0.4
PKGN	**Cerro Pekin**	**0.92**	**89**	P	Pn	00 10 23.7	+0.7
PKGN				S	Sn	00 10 36.5	+1.5
POLN	**Al Sur del Vol**	**1.08**	**90**	P	Pn	00 10 25.2	0.0
POLN				S	Sn	00 10 40.3	+1.3
PLRN	**Geotermica Pol**	**1.13**	**93**	P	Pn	00 10 25.4	-0.4
PLRN				S	Sn	00 10 40.0	-0.1
CNGA	**Al SSO del Vol**	**1.20**	**97**	P	Pn	00 10 26.9	0.0
CNGA				S	Sn	00 10 42.0	0.0
CNGN	**Cerro Negro**	**1.20**	**97**	P	Pn	00 10 26.9	0.0
CNGN	**Cerro Negro**	**1.20**	**97**	S	Sn	00 10 42.6	+0.5
MOMN	**Momotombo**	**1.37**	**100**	P	Pn	00 10 29.3	+0.1
MOMN				S	Sn	00 10 46.4	+0.3
COPN	**Copaltepe**	**1.38**	**110**	P	Pn	00 10 29.5	+0.2
MOM2	**El Cardon**	**1.42**	**98**	P	Pn	00 10 30.6	+0.8
MOM2				S	Sn	00 10 48.1	+0.8
TGUH	**Tegucigalpa,Un**	**1.54**	**24**	P	Pn	00 10 32.0	+0.4
TGUH				S	Sn	00 10 51.2	+0.8
SAPS	**Ciudad Sandino**	**1.56**	**108**	S	Sn	00 10 50.7	0.0
SAPS	**Ciudad Sandino**	**1.56**	**108**	P	Pn	00 10 33.2	+1.5
APQ3	**Volcan Apoyequ**	**1.56**	**104**	S	Sn	00 10 51.2	+0.4
LOMA	**Loma Larga**	**1.57**	**309**	S	Sn	00 10 50.4	-0.8
UNAN	**Cigeo UNAN**	**1.70**	**108**	P	Pn	00 10 34.1	+0.4
UNAN				S	Sn	00 10 54.2	0.0
PMON	**Piamonte**	**1.72**	**308**	P	Pn	00 10 35.4	+1.3
PMON	**Piamonte**	**1.72**	**308**	S	Sn	00 10 54.6	-0.3
WILN	**Americas 2**	**1.76**	**106**	S	Sn	00 10 55.9	+0.2
NANN	**Nandasmo**	**1.90**	**112**	S	Sn	00 10 59.3	+0.3
NANN	**Nandasmo**	**1.90**	**112**	P	Pn	00 10 39.0	+2.6
RCVN	**Varillal2**	**1.92**	**61**	P	Pn	00 10 37.5	+0.6
RCVN	**Varillal2**	**1.92**	**61**	S	Sn	00 11 01.4	+1.5
MATN	**Matagalpa**	**1.97**	**82**	P	Pn	00 10 36.3	-1.1
RCPN	**Sur Rio San Ju**	**1.98**	**64**	P	Pn	00 10 37.2	-0.5

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*NEIC **23** 00:21:06.8, 20°.81S×173°.83W, h20^{km}, Moment Tensor Solution. Duration: 1^{s}.8 Moment tensor: Scale 10^{16}Nm; M_{rr}3.22; $M_{\theta\theta}$-0.34; $M_{\phi\phi}$-2.88; $M_{r\theta}$-3.20; $M_{\theta\phi}$0.02; $M_{\phi r}$-2.19; Fault plane solution: $M_0$4.95000×10^{16} NP1: ϕ_s350.34000°, δ25.95000°, λ45.29000°. NP2: ϕ_s218.09000°, δ71.88000°, λ108.90000°. Principal axes: T 5.5453, Plg59.0000°, Azm154.0000°; N -1.5810, Plg18.0000°, Azm32.0000°; P -3.9643, Plg25.0000°, Azm294.0000°;*

*NEIC **23** 00:21:06.8±1.3, 21°.11S±0°.10×173°.9W±0°.1, h10^{km}±1^{km}, mb5.2/81, Mww5.1/11 Error ellipse: s-maj=20.8km s-min=15.6km az=106.0*

*NEIC **23** 00:21:06.8, 21°.11S×173°.94W, h20^{km}*

*IDC **23** 00:21:06.6±0.5, 21°.18S×174°.33W, h0^{km}, mb4.7/17, mbtmp4.7/18, ML4.6/1, MS4.4/48, Error ellipse: s-maj=18.4km s-min=13.4km az=140.0*

*GCMT **23** 00:21:10.8±0.2, 21°.53S±0°.02×173°.72W±0°.01, h14^{km}, MW5.0/121, Moment Tensor Solution. s45,c53; s121,c163; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.22±.16; $M_{\theta\theta}$-0.23±.10; $M_{\phi\phi}$-2.99±.11; $M_{r\theta}$1.95±.29; $M_{\theta\phi}$-1.21±.07; $M_{\phi r}$1.08±.23; Best double couple: $M_0$4.00800×10^{16} NP1:ϕ_s182.00000°, δ34.00000°, λ57.00000°. NP2:ϕ_s41.00000°, δ62.00000°, λ111.00000°. Principal axes: T 4.1350, Plg67.0000°, Azm349.0000°; N -0.2490, Plg18.0000°, Azm211.0000°; P -3.8820, Plg14.0000°, Azm116.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NOU **23** 00:21:11.9, 20°.98S×173°.41W, h92^{km}, mb4.9/11, Tonga Islands*

ISC 23 00:21:06.6±0.3**, 21°.20S**±0°.06×**173°.92W**±0°.05**, h10^{km}, n535,** σ**1^{s}.62**/498**, mb5.2**/62**, MS4.5**/58**, 13C-24D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.30**	**61**		**Pn**	**00 22 08.2**	**-4.0**
NIUE	**Niue**	**4.30**	**61**	P	**Pn**	**00 22 08.4**	**-3.8**
TAVE	**Taveuni**	**7.22**	**307**	P	Pn	00 22 58.6	+6.4
AFI	**Afiamalu**	**7.53**	**16**		**Pn**	**00 22 54.4**	**-2.3**
DGTI	**Dogotuki**	**7.74**	**308**	P	Pn	00 23 05.1	+5.7
MSVF	**Nonsavu**	**8.33**	**293**		Pn	00 23 12.7	+5.2
MSVF	**Nonsavu**	**8.33**	**293**	LR	LR	00 26 06.4	
	comp=Z,4µm,19.1s,baz=78,slow=38						
MSVF	**Nonsavu**	**8.33**	**293**	P	Pn	00 23 14.3	+6.7
RAO	**Raoul Island**	**8.79**	**204**	Sn	**Sn**	**00 24 47.0**	**-6.1**
	110nm,0.3s,baz=60,slow=20,SNR=5.0						
RAR	**Rarotonga**	**13.19**	**93**		Pn	00 24 08.8	-5.4
RAR	**Rarotonga**	**13.19**	**93**	Pn	Pn	00 24 08.2	-5.9
	7.9nm,0.3s,baz=267,slow=7.7,SNR=16						
RAR				Sn	Sn	00 26 23.6	-17
	3.1nm,0.3s,baz=311,slow=20,SNR=2.2						
RAR	**Rarotonga**	**13.19**	**93**	P	Pn	00 24 08.9	-5.2
PINNC	**Pines Island,**	**17.35**	**262**		**P**	**00 25 10.5**	**+0.1**
PINNC				IAmb	IAmb	00 25 13.5	
	comp=Z,226nm,2.0s						
YATNC	**Mamie plateau,**	**17.87**	**264**	P	**P**	**00 25 18.6**	**+2.5**
ONTNC	**Ouen Toro**	**18.27**	**263**		**Pn**	**00 25 19.7**	**-0.6**
DZM	**Mont Dzumac**	**18.28**	**264**		**P**	**00 25 20.9**	**+0.1**
DZM	**Mont Dzumac**	**18.28**	**264**	*e*P	**Pn**	**00 25 20.6**	**0.0**
	comp=Z,85nm,1.6s						
DZM				*e*S	**Sn**	**00 28 39.0**	**-5.9**
	comp=Z,3µm,26.8s						
DZM				*e*LR	LR	00 29 38.0	
	comp=Z,1µm,23.0s						
DZM	**Mont Dzumac**	**18.28**	**264**	P	**P**	**00 25 21.6**	**+0.8**
	comp=Z,13nm,0.8s,baz=86,slow=19,SNR=9.0						
DZM				LR	LR	00 31 30.6	
	comp=Z,2µm,18.2s,baz=98,slow=35						
DZM	**Mont Dzumac**	**18.28**	**264**	P	**P**	**00 25 24.7**	**+3.9**
URZ	**Urewera**	**18.68**	**203**	P	**P**	**00 25 25.1**	**+0.1**
	comp=Z,2.0nm,0.3s,baz=6.8,slow=5.9,SNR=12						
URZ				S	Sn	00 28 33.4	-21
	comp=Z,11nm,1.0s,baz=354,slow=17,SNR=3.3						
	comp=Z,38nm,0.9s						
URZ	**Urewera**	**18.68**	**203**	P	**Pn**	**00 25 26.6**	**+1.3**
SANVU	**Saraoutou**	**18.81**	**285**		**Pn**	**00 25 26.7**	**-0.3**
SANVU				IAmb	IAmb	00 25 30.4	
	comp=Z,136nm,1.3s						
RTZ	**Ruatahuna**	**19.05**	**202**	P	**P**	**00 25 29.5**	**+0.4**
BFZ	**Birch Farm**	**21.14**	**201**	P	**P**	**00 25 54.0**	**+2.2**
SNZO	**South Karori**	**22.24**	**203**	P	**P**	**00 26 05.1**	**+1.6**
QRZ	**Quartz Range**	**22.70**	**207**	P	**P**	**00 26 09.8**	**+1.4**
TBI	**Tubuai**	**22.73**	**100**	*e*P	**P**	**00 26 05.4**	**-3.5**
	comp=Z,574nm,33.2s						
TBI				*e*S	**S**	**00 30 13.8**	**-3.8**
	comp=Z,2µm,29.2s						
TBI				*e*LR	LR	00 31 15.5	
	comp=Z,2µm,32.0s						
TBI				*e*LR	LR	00 31 22.6	
	comp=Z,6µm,29.5s						
PPT2	**Papeete2**	**23.23**	**85**	*e*P	**P**	**00 26 14.8**	**+0.5**
	comp=Z,141nm,30.2s						
PPT2				*e*S	**S**	**00 30 22.6**	**-4.0**
	comp=Z,1µm,25.8s						
PPT2				*e*LR	LR	00 31 32.8	
	comp=Z,1µm,29.0s						
PPT2				*e*LR	LR	00 31 40.5	
	comp=Z,778nm,20.2s						
PPT	**Papeete**	**23.24**	**85**	LR	LR	00 33 45.6	
	comp=Z,1µm,18.9s,baz=258,slow=32						
HNR	**Honiara**	**27.74**	**291**	LR	LR	00 37 30.0	
	comp=Z,594nm,18.5s,baz=150,slow=36						
ARMA	**Armidale**	**32.24**	**246**	P	**P**	**00 27 35.8**	**+0.3**
ARMA				IAmb	IAmb	00 27 40.5	
	comp=Z,43nm,1.4s						
TAOE	**Nuku Hiva Isla**	**34.76**	**74**	*e*S	**S**	**00 33 25.4**	**-2.8**
	comp=Z,392nm,27.9s						
TAOE				*e*LR	LR	00 36 57.8	
	comp=Z,951nm,26.3s						
CTAO	**Charters Tower**	**37.22**	**264**	P	**P**	**00 28 17.8**	**-0.8**
TOO	**Toolangi**	**38.62**	**236**	P	**P**	**00 28 28.7**	**-1.5**
TAU	**Tasmania Unive**	**38.88**	**227**	P	**P**	**00 28 32.8**	**+0.6**
TAU				IAmb	IAmb	00 28 34.0	
	comp=Z,47nm,1.2s						
STKA	**Stephens Creek**	**40.95**	**245**	P	**P**	**00 28 47.9**	**-1.8**
STKA	**Stephens Creek**	**40.95**	**245**	P	**P**	**00 28 47.8**	**-1.8**
	comp=Z,11nm,1.1s,baz=90,slow=12,SNR=8.5						
STKA				LR	LR	00 44 31.6	
	comp=Z,528nm,18.8s,baz=59,slow=35						
	comp=Z,11nm,1.1s						
COEN	**Coen**	**41.43**	**273**	P	**P**	**00 28 52.7**	**-1.1**
JAY	**Jayapura**	**47.90**	**287**	P	**P**	**00 29 44.8**	**-0.6**
	comp=Z,18nm,0.8s,baz=110,slow=15,SNR=12						
	comp=Z,18nm,0.8s						
JAY	**Jayapura**	**47.90**	**287**	P	**P**	**00 29 43.7**	**-1.7**
	comp=Z,607nmcomp=Z,38nm,1.4s						
AS31	**Alice Springs**	**48.08**	**257**	P	**P**	**00 29 45.0**	**-1.7**
ASAR	**Alice Springs**	**48.08**	**257**	P	**P**	**00 29 44.8**	**-2.0**
	comp=Z,22nm,0.9s,baz=100,slow=7.9,SNR=70						
ASAR				PcP	**PcP**	**00 31 15.5**	**+0.9**
	comp=Z,1.7nm,0.8s,baz=98,slow=3.7,SNR=1.1						
ASAR				S	**S**	**00 36 42.2**	**-3.4**
	comp=Z,1.3nm,1.1s,baz=100,slow=15,SNR=4.1						
ASAR				LR	LR	00 49 17.5	
	comp=Z,521nm,18.9s,baz=110,slow=35						
	comp=Z,22nm,0.9s						
WR8	**Warramunga Arr**	**48.13**	**262**	P	**P**	**00 29 44.6**	**-2.6**
WR8				IAmb	IAmb	00 29 46.2	
	comp=Z,25nm,1.2s						
WRA	**Warramunga Arr**	**48.28**	**262**	P	**P**	**00 29 46.2**	**-2.2**
WRA	**Warramunga Arr**	**48.28**	**262**	P	**P**	**00 29 45.7**	**-2.7**
	comp=Z,14nm,1.0s,baz=100,slow=7.5,SNR=28						
WRA				PcP	**PcP**	**00 31 17.2**	**+1.8**
	comp=Z,3.5nm,0.9s,baz=100,slow=3.0,SNR=3.0						
WRA				LR	LR	00 49 02.5	
	comp=Z,237nm,18.2s,baz=10.0,slow=35						
	comp=Z,14nm,1.0s						
FORT	**Forrest**	**52.53**	**247**	P	**P**	**00 30 19.5**	**-0.8**
FORT				IAmb	IAmb	00 30 37.5	
	comp=Z,35nm,0.8s						
BAKI	**Biak**	**52.60**	**285**	P	**P**	**00 30 20.8**	**-0.3**
	comp=Z,32nm,1.0s						
MTN	**Manton Dam**	**52.98**	**270**	P	**P**	**00 30 22.4**	**-1.5**
GUMO	**Guam**	**53.23**	**307**	LR	LR	00 50 42.2	
	comp=Z,138nm,20.2s,baz=126,slow=34						
KNRA	**Kununurra**	**54.42**	**266**	P	**P**	**00 30 32.9**	**-1.5**
FITZ	**Fitzroy Crossi**	**56.71**	**262**	P	**P**	**00 30 49.8**	**-1.1**
FITZ	**Fitzroy Crossi**	**56.71**	**262**	P	**P**	**00 30 49.5**	**-1.4**
	comp=Z,6.8nm,0.9s,baz=103,slow=14,SNR=6.6						
FITZ				LR	LR	00 54 39.2	
	comp=Z,437nm,18.4s,baz=97,slow=36						
	comp=Z,6.8nm,0.9s						
SWI	**Sorong**	**57.12**	**283**	P	**P**	**00 30 54.3**	**+0.5**
	comp=Z,58nm,1.0s						
SBA	**Scott Base**	**57.46**	**185**	P	**P**	**00 30 56.5**	**+1.3**
VNDA	**Vanda**	**57.59**	**186**	P	**P**	**00 30 57.3**	**+1.1**
VNDA	**Vanda**	**57.59**	**186**	P	**P**	**00 30 59.2**	**+3.0**
	comp=Z,2.4nm,1.0s,baz=14,slow=4.2,SNR=8.2						
VNDA				LR	LR	00 51 24.0	
	comp=Z,192nm,21.3s,baz=333,slow=32						
	comp=Z,2.4nm,1.0s						
SOEI	**Soe**	**60.33**	**271**	P	**P**	**00 31 15.9**	**-0.4**
PSA00	**Pilbara Seismi**	**61.22**	**256**	P	**P**	**00 31 21.3**	**-0.9**
PSA00				IAmb	IAmb	00 31 22.3	
	comp=Z,40nm,1.3s						
TNTI	**Ternate**	**61.34**	**283**	P	**P**	**00 31 22.3**	**-0.8**
MBWA	**Marble Bar**	**61.42**	**257**	P	**P**	**00 31 22.2**	**-1.4**
MBWA				IAmb	IAmb	00 31 28.0	
	comp=Z,29nm,1.2s						
NWAO	**Narrogin (SRO)**	**61.47**	**243**	LR	LR	00 57 08.3	
	comp=Z,360nm,19.1s,baz=50,slow=35						
MORW	**Morawa**	**63.09**	**247**	P	**P**	**00 31 34.6**	**-0.1**
LUWI	**Luwuk**	**64.82**	**279**	P	**P**	**00 31 46.0**	**-0.2**
CASY	**Casey**	**64.97**	**206**		**P**	**00 31 47.3**	**+0.9**
CASY				IAmb	IAmb	00 31 50.1	
	comp=Z,16nm,0.9s						
KAPI	**Kappang**	**66.15**	**274**	LR	LR	01 01 11.6	
	comp=Z,131nm,18.5s,baz=104,slow=37						
TOLI2	**Tolitoli**	**67.49**	**280**	P	**P**	**00 32 02.4**	**-1.0**
TOLI2				IAmb	IAmb	00 32 04.0	
	comp=Z,29nm,1.3s						
MPSI	**Mapaga**	**68.00**	**279**	P	**P**	**00 32 03.2**	**-3.4**
QSPA	**South Pole Qui**	**68.87**	**180**	P	**P**	**00 32 12.3**	**+0.9**
QSPA				IAmb	IAmb	00 32 17.9	
	comp=Z,16nm,1.0s						
QSPA	**South Pole Qui**	**68.87**	**180**	P	**P**	**00 32 13.4**	**+2.1**
	comp=Z,13nm,1.0s,baz=42,slow=2.8,SNR=13						
QSPA				LR	LR	00 57 26.1	
	comp=Z,278nm,21.2s,baz=14,slow=32						
	comp=Z,13nm,1.0s						
MJAR	**Matsushiro Arr**	**73.09**	**321**	P	**P**	**00 32 37.0**	**-0.2**
MJAR				IAmb	IAmb	00 32 39.4	
	comp=Z,17nm,1.4s						
MJAR	**Matsushiro Arr**	**73.09**	**321**	P	**P**	**00 32 37.1**	**-0.1**
	comp=Z,8.1nm,1.0s,baz=155,slow=5.7,SNR=14						
MJAR				LR	LR	01 01 09.3	
	comp=Z,107nm,19.6s,baz=123,slow=33						
	comp=Z,8.1nm,1.0s						
MJB9	**Matsu-Tunnel**	**73.09**	**321**	P	**P**	**00 32 37.0**	**-0.3**
JMN	**Monobe**	**73.87**	**317**	P	**P**	**00 32 42.3**	**+0.5**
JMN				IAmb	IAmb	00 32 46.6	
	comp=Z,39nm,1.1s						
NIKH	**Nikolski High**	**73.99**	**3**	P	**P**	**00 32 41.1**	**-1.0**
NIKH				IAmb	IAmb	00 32 46.6	
	comp=Z,38nm,1.5s						
NIKH	**Nikolski High**	**73.99**	**3**	P	**P**	**00 32 40.1**	**-1.9**
	baz=185						
SHEM	**Shemya Is, Ala**	**74.35**	**352**	LR	LR	01 01 38.3	
	comp=Z,350nm,19.7s,baz=126,slow=33						
UNV	**Unalaska Valle**	**75.01**	**5**	P	**P**	**00 32 46.2**	**-1.7**
	baz=187						
JNU	**Nakatsue**	**75.44**	**315**	LR	LR	01 02 51.6	
	comp=Z,45nm,18.8s,baz=116,slow=33						
ASAJ	**Asahikawa**	**76.22**	**329**	LR	LR	01 01 14.7	
	comp=Z,189nm,21.0s,baz=176,slow=32						
LPIG	**La Paz**	**76.52**	**57**	LR	LR	01 00 13.4	
	comp=Z,543nm,18.7s,baz=208,slow=30						
SMAI	**San Martin Ant**	**76.57**	**158**		**P**	**00 32 57.7**	**+0.8**
SMAI				IAmb	IAmb	00 33 00.8	
	comp=Z,22nm,1.0s						
CHNA	**Chernabura Isl**	**76.71**	**8**	P	**P**	**00 32 55.7**	**-2.0**
	baz=194						
LEM	**Lembang**	**76.84**	**268**	P	**P**	**00 32 59.6**	**0.0**
	comp=Z,11nm,0.4s,baz=108,slow=4.3,SNR=4.7						
	comp=Z,11nm,0.4s						
SDPT	**Sand Point**	**77.10**	**8**	P	**P**	**00 32 57.7**	**-2.1**
	baz=193						
PFO	**Pinyon Flats O**	**77.24**	**46**	LR	LR	01 06 00.1	
	comp=Z,100nm,18.1s,baz=262,slow=35						
CMB	**Columbia Colle**	**77.44**	**41**		**P**	**00 33 01.6**	**-0.7**
SSLB	**Suanglung**	**77.57**	**302**	P	**P**	**00 33 03.3**	**+0.1**
P08K	**Saint George I**	**77.58**	**2**	P	**P**	**00 33 00.5**	**-2.0**
	baz=184						
PEA0B	**Petropavlovsk-**	**77.99**	**343**	P	**P**	**00 33 05.2**	**+0.3**
PEA0B				IAmb	IAmb	00 33 07.8	
	comp=Z,38nm,1.2s						
PETK	**Petropavlovsk-**	**77.99**	**343**	P	**P**	**00 33 05.6**	**+0.7**
PETK	**Petropavlovsk-**	**77.99**	**343**	P	**P**	**00 33 06.1**	**+1.2**
	comp=Z,6.6nm,0.8s,baz=149,slow=5.8,SNR=20						
PETK				LR	LR	01 02 45.9	
	comp=Z,195nm,20.8s,baz=172,slow=32						
	comp=Z,6.6nm,0.8s						
S14K	**Fog Glacier**	**78.13**	**8**	P	**P**	**00 33 02.1**	**-3.7**
	baz=193						
SPIA	**Saint Paul Isl**	**78.13**	**2**	P	**P**	**00 33 02.5**	**-3.1**
	baz=183						
BELA	**Belgrano 2**	**78.35**	**172**	P	**P**	**00 33 07.1**	**+0.3**
BELA				IAmb	IAmb	00 33 11.4	
	comp=Z,19nm,1.4s						
YBH	**Yreka Blue Hor**	**78.51**	**37**	LR	LR	01 01 13.4	
	comp=Z,22nm,19.7s,baz=255,slow=31						
GWY	**Greenwater Val**	**78.64**	**44**	P	**P**	**00 33 07.6**	**-1.5**
NVAR	**Mina Array Bea**	**78.97**	**41**	P	**P**	**00 33 10.6**	**-0.4**
NVAR	**Mina Array Bea**	**78.97**	**41**	P	**P**	**00 33 14.1**	**+3.2**
	comp=Z,9.0nm,0.9s,baz=242,slow=4.1,SNR=33						
NVAR				LR	LR	01 02 36.5	
	comp=Z,270nm,18.7s,baz=234,slow=31						
	comp=Z,9.0nm,0.9s						
PMSA	**Palmer Station**	**79.11**	**156**	LR	LR	01 02 04.6	
	comp=Z,204nm,18.4s,baz=236,slow=31						
KSRS	**Korea Array**	**79.98**	**317**	LR	LR	01 05 20.4	
	comp=Z,32µm,20.1s,baz=145,slow=33						
OHAK	**Old Harbor**	**80.02**	**11**	P	**P**	**00 33 12.6**	**-3.3**
	baz=199						
R18K	**Karluk**	**80.14**	**11**	P	**P**	**00 33 12.8**	**-3.7**
	baz=198						
Q17K	**Contact Creek**	**80.57**	**10**	P	**P**	**00 33 15.4**	**-3.6**
	baz=197						
KDAK	**Kodiak Island**	**80.68**	**11**	LR	LR	01 02 59.0	
	comp=Z,280nm,21.6s,baz=213,slow=31						
KDAK	**Kodiak Island**	**80.68**	**11**	P	**P**	**00 33 15.6**	**-3.9**
	baz=200						
H04A	**Detroit Lake**	**80.78**	**35**	P	**P**	**00 33 20.9**	**+0.6**
O14K	**Tigyukauivet M**	**80.83**	**7**	P	**P**	**00 33 17.0**	**-3.2**
	baz=192						
MDSI	**Maura Dua**	**80.86**	**269**	P	**P**	**00 33 20.7**	**-0.8**

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O15K  Ungalikthiuk R   80.92   7 P     P     00 33 16.5 -4.2
      baz=193
P16K  Nushagak River   81.01   8 P     P     00 33 18.7 -2.5
      baz=195
Q18K  Katmai Hardscr   81.08  10 P     P     00 33 19.1 -2.6
      baz=198
WVOR  Wild Horse Val   81.27  38 P     P     00 33 23.0 -0.2
LCMT  Little Creek M   81.35  45 P     P     00 33 23.6 -0.2
P17K  Kvichak River    81.39   9 P     P     00 33 20.8 -2.3
      baz=196
USHA  Ushuaia          81.42 146 LR    LR    01 06 31.7
      comp=Z,169nm,18.1s,baz=154,slow=33
N14K  Kuskokwak Cree   81.45   6 P     P     00 33 21.3 -2.1
      baz=191
Q20K  Shuyak Island    81.49  11 P     P     00 33 21.1 -2.6
      baz=200
M11K  Mekoryuk         81.53   4 P     P     00 33 21.8 -2.1
      baz=187
O16K  Kokwok River B   81.54   8 P     P     00 33 21.8 -2.2
      baz=195
Q19K  Cape Douglas,    81.57  10 P     P     00 33 21.6 -2.6
      baz=199
USA0B Ussuriysk Arra   81.73 324 P     P     00 33 25.4 +0.1
USA0B                            IAmb  IAmb  00 33 59.0
      comp=Z,22nm,0.7s
USRK  Ussuriysk Ar.    81.73 324 P     P     00 33 25.5 +0.1
USRK  Ussuriysk Ar.    81.73 324 LR    LR    01 05 38.3
      comp=Z,396nm,20.5s,baz=139,slow=33
P18K  Big Mountain,    81.75  10 P     P     00 33 25.4 +0.1
P18K                             IAmb  IAmb  00 33 31.7
      comp=Z,24nm,1.1s
P18K  Big Mountain,    81.75  10 P     P     00 33 22.0 -3.2
      baz=197
M13K  Dall Lake        81.78   5 P     P     00 33 22.2 -2.9
      baz=190
O17K  Koliganek Bris   81.85   9 P     P     00 33 22.8 -2.8
      baz=196
N15K  Kwethluk River   81.86   7 P     P     00 33 22.4 -3.3
      baz=193
O18K  Koktuh Hills     82.20   9 P     P     00 33 27.8 +0.3
O18K  Koktuh Hills     82.20   9 P     P     00 33 24.4 -3.1
      baz=197
M14K  Bethel           82.23   6 P     P     00 33 24.7 -2.9
      baz=191,SNR=5.4
ELK   Elko             82.25  41 LR    LR    01 05 35.3
      comp=Z,308nm,18.7s,baz=248,slow=32
M15K  Kasigluk River   82.31   7 P     P     00 33 25.0 -3.0
      baz=192,SNR=11
N16K  Nishlik Lake     82.31   8 P     P     00 33 24.9 -3.2
      baz=194
P19K  Oil Pt           82.33  10 P     P     00 33 24.7 -3.5
      baz=199
H03S2 Juan Fernandez   82.43 123 T     T     02 05 49.3
      baz=247
H03S1 Juan Fernandez   82.44 123 T     T     02 05 58.2
      baz=247
H03S3 Juan Fernandez   82.45 123 T     T     02 05 53.7
      baz=247
ESPZ  Base Esperanza   82.48 156 P     P     00 33 29.6 +0.5
ESPZ                             IAmb  IAmb  00 33 32.3
      comp=Z,22nm,1.0s
N17K  Nushagak Hills   82.56   8 P     P     00 33 26.0 -3.4
      baz=196
HOM   Homer            82.61  11 P     P     00 33 26.8 -2.8
      baz=201
KSI   Kapahiang        82.63 269 P     P     00 33 33.1 +2.2
O19K  Port Alsworth    82.66  10 P     P     00 33 29.5 -0.4
O19K  Port Alsworth    82.66  10 P     P     00 33 27.3 -2.6
      baz=198
L14K  Kuka Creek       82.75   5 P     P     00 33 27.8 -2.4
      baz=190,SNR=10
M16K  Timber Creek     82.82   7 P     P     00 33 31.1 +0.4
M16K  Timber Creek     82.82   7 P     P     00 33 28.8 -1.9
      baz=194,SNR=9.7
O20K  Slope Mountain   82.83  11 P     P     00 33 28.6 -2.3
      baz=200
BRSE  Bradley Lake S   82.85  12 P     P     00 33 28.0 -2.9
      baz=202
N18K  Kilae Creek      82.89   9 P     P     00 33 27.9 -3.2
      baz=197
K13K  Kusilvak Mount   83.18   4 P     P     00 33 32.4 -0.1
K13K                             IAmb  IAmb  00 33 40.6
      comp=Z,14nm,1.1s
K13K  Kusilvak Mount   83.18   4 P     P     00 33 30.1 -2.3
      baz=188
L15K  Ungalak Mounta   83.19   6 P     P     00 33 30.8 -1.8
      baz=191,SNR=16
N19K  Bonanza Creek    83.23   9 P     P     00 33 30.6 -2.3
      baz=198,SNR=6.3
E07A  Sunnyside        83.24  34 P     P     00 33 32.8 -0.4
E07A                             IAmb  IAmb  00 33 38.8
      comp=Z,25nm,0.9s
BBB   Bella Bella      83.27  26 LR    LR    01 05 31.2
      comp=Z,91nm,18.5s,baz=212,slow=32
NJ2   Nanjing          83.29 308 eP    P     00 33 34.3 +0.5
NJ2                              pmax  pmax
      comp=Z,13nm,0.6s
HAWA  Hanford          83.30  35 P     P     00 33 32.9 -0.6
HAWA                             IAmb  IAmb  00 33 38.5
      comp=Z,18nm,0.9s
M17K  Holitna River    83.38   8 P     P     00 33 32.7 -0.9
      baz=195
L16K  Owhat River      83.43   7 P     P     00 33 32.6 -1.2
      baz=193,SNR=10.0
SEW   Seward           83.44  12 P     P     00 33 32.8 -1.1
      baz=203
SLKM  Skilak Lake      83.66  12 P     P     00 33 35.0 -0.1
M18K  Stony River      83.68   9 P     P     00 33 34.0 -1.1
      baz=197
P23K  Montague Islan   83.75  13 P     P     00 33 33.9 -1.6
      baz=204
K15K  Wolf Creek Mou   83.79   6 P     P     00 33 34.8 -0.8
      baz=191,SNR=40
CRAG  Craig            83.87  22 P     P     00 33 34.5 -1.7
      baz=218
N20K  Mount Spurr      83.96  10 P     P     00 33 35.6 -1.1
      baz=200
SPCR  Spurr Chakacha   83.96  10 P     P     00 33 35.3 -1.4
      baz=200
SPU   Mount Spurr      83.97  10 P     P     00 33 36.5 -0.1
SPU                              IAmb  IAmb  00 33 40.2
      comp=Z,9.4nm,1.0s
L17K  Donlin           83.98   7 P     P     00 33 35.8 -0.9
      baz=194,SNR=11
J14K  Nanvaranak Lak   84.07   5 P     P     00 33 36.5 -0.5
      baz=190
TXAR  Lajitas Array    84.25  56 P     P     00 33 38.4 -0.6
TXAR  Lajitas Array    84.25  56 P     P     00 33 41.7 +2.7
      comp=Z,2.5nm,0.9s,baz=244,slow=4.6,SNR=15
TXAR                             LR    LR    01 04 49.3
      comp=Z,208nm,19.6s,baz=236,slow=31
      comp=Z,2.5nm,0.9s
L18K  Granite Mounta   84.26   8 P     P     00 33 36.6 -1.5
      baz=196,SNR=11
M19K  Big River Lodg   84.28   9 P     P     00 33 36.3 -1.9
      baz=198,SNR=5.8
RC01  Rabbit Creek A   84.29  12 P     P     00 33 37.0 -1.3
      baz=202
V35K  Ketchikan        84.30  23 P     P     00 33 36.5 -1.9
      baz=219
KAIM  Kayak Island     84.35  14 P     P     00 33 36.4 -2.1
      baz=207
PWL   Port Wells       84.35  12 P     P     00 33 36.5 -2.1
      baz=204
U33K  Whale Pass       84.39  22 P     P     00 33 36.2 -2.6
      baz=218
SIT   Sitka            84.41  20 P     P     00 33 36.8 -2.1
      baz=216
HLID  Hailey           84.41  39 P     P     00 33 39.1 -0.4
M20K  Styx River       84.45  10 P     P     00 33 37.5 -1.7
      baz=199
SUA   Susitna One      84.46  11 P     P     00 33 39.5 +0.2
SUA                              IAmb  IAmb  00 33 43.7
      comp=Z,14nm,0.8s
SUA   Susitna One      84.46  11 P     P     00 33 37.2 -2.1
      baz=201,SNR=11
L19K  White Mountain   84.48   9 P     P     00 33 37.9 -1.3
      baz=198
K17K  Iditarod         84.55   7 P     P     00 33 38.5 -1.0
      baz=194
EYAK  Cordova Ski Ar   84.61  14 P     P     00 33 38.3 -1.5
      baz=206
GLI   Glacier Island   84.62  13 P     P     00 33 38.2 -1.8
      baz=205
GAMB  Gambell          84.71   1 P     P     00 33 38.4 -1.8
      baz=182
SKT   Skwentna         84.81  10 P     P     00 33 40.8 -0.1
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SKT                              IAmb  IAmb  00 33 44.7
      comp=Z,9.8nm,0.9s
SKT   Skwentna         84.81  10 P     P     00 33 39.8 -1.0
      baz=201,SNR=6.8
KNK   Knik Glacier     84.84  12 P     P     00 33 39.6 -1.4
      baz=204
J16K  Anvik River      84.85   6 P     P     00 33 39.9 -1.1
      baz=192,SNR=7.2
S31K  Pelican          84.87  19 P     P     00 33 39.4 -1.8
      baz=215
PMR   Palmer           84.87  12 P     P     00 33 39.7 -1.4
      baz=203
WRAK  Wrangell Islan   84.89  22 P     P     00 33 39.1 -2.2
      baz=218
ANMO  Albuquerque      84.90  50 LR    LR    01 05 31.9
      comp=Z,344nm,19.2s,baz=9.0,slow=31
L20K  Farewell, AK     84.90   9 P     P     00 33 39.4 -1.9
      baz=198,SNR=5.2
LLLB  Lillooet         84.91  30 P     P     00 33 42.3 +0.6
LLLB                             IAmb  IAmb  00 33 46.3
      comp=Z,15nm,1.1s
S32K  Killisnoo        84.98  20 P     P     00 33 40.0 -1.8
      baz=216
GHO   Glory Hole Cre   85.08  12 P     P     00 33 42.6 +0.3
KLR   Kul'dur          85.11 328 LR    LR    01 07 23.2
      comp=Z,252nm,20.6s,baz=149,slow=33
J17K  VABM Dome        85.12   7 P     P     00 33 41.0 -1.3
      baz=194,SNR=7.3
MESA  MESA             85.17  15 P     P     00 33 40.8 -2.1
      baz=210
WAX   Waxell Ridge     85.18  15 P     P     00 33 44.0 +1.1
SML   Sawmill          85.22  12 P     P     00 33 43.3 +0.3
SML                              IAmb  IAmb  00 33 49.9
      comp=Z,15nm,1.3s
SML   Sawmill          85.22  12 P     P     00 33 41.5 -1.5
      baz=204
BMRM  Bremner River    85.24  14 P     P     00 33 41.9 -1.2
      baz=207
PNL   Peninsula        85.39  17 P     P     00 33 42.0 -1.9
      baz=212
CRQE  Cirque           85.39  15 P     P     00 33 42.8 -1.2
      baz=208
KLU   Klutina          85.42  13 P     P     00 33 42.9 -1.1
      baz=206
I17K  Unalakleet       85.44   6 P     P     00 33 42.6 -1.3
      baz=192
SCM   Sheep Creek Mo   85.44  12 P     P     00 33 42.8 -1.3
      baz=204,SNR=15
J18K  Innoko River     85.46   8 P     P     00 33 42.7 -1.4
      baz=196,SNR=19
BKNI  Bangkinang       85.49 272 P     P     00 33 44.6 -0.8
MA2   Magadan          85.53 343 LR    LR    01 07 42.1
      comp=Z,322nm,20.7s,baz=168,slow=33
PINM  Pinnacle         85.53  16 P     P     00 33 43.0 -1.6
      baz=211
PPLA  Purkeypile       85.56  10 P     P     00 33 43.1 -1.6
      baz=200
R32K  Eaglecrest       85.65  20 P     P     00 33 42.8 -2.4
      baz=216
K20K  Telida           85.71   9 P     P     00 33 44.1 -1.2
      baz=198,SNR=11
ANM   Nome             85.74   4 P     P     00 33 43.0 -2.5
      baz=188
NEW   Newport          85.76  34 LR    LR    01 07 12.9
      comp=Z,623nm,18.9s,baz=202,slow=32
N25K  Chitina, Valde   85.81  14 P     P     00 33 44.0 -1.9
      baz=207,SNR=12
P29M  Windy Craggy     85.81  18 P     P     00 33 42.4 -3.5
      baz=213
M24K  Tolsona, Glenn   85.92  13 P     P     00 33 44.2 -2.3
      baz=206
MCARA McCarthy VSAT    85.97  14 P     P     00 33 44.6 -2.0
      baz=208
PLCA  Paso Flores      86.00 132 LR    LR    01 03 52.8
      comp=Z,221nm,20.0s,baz=231,slow=30
CTG   Chitna Glacier   86.00  15 P     P     00 33 44.7 -2.3
      baz=210,SNR=5.9
H16K  Elim             86.04   5 P     P     00 33 45.0 -1.9
      baz=191
WAT6  Susitna Watana   86.04  12 P     P     00 33 44.4 -2.8
      baz=204,SNR=15
PLBC  Pleasant Camp    86.06  18 P     P     00 33 45.3 -1.9
      baz=214
T35M  Bob Quinn        86.06  22 P     P     00 33 44.6 -2.6
      baz=220
CAST  Castle Rocks     86.07  10       P     00 33 46.9 -0.2
CAST                             IAmb  IAmb  00 33 52.7
      comp=Z,10nm,0.8s
CAST  Castle Rocks     86.07  10 P     P     00 33 46.0 -1.2
      baz=200,SNR=16
J19K  Poorman          86.11   8 P     P     00 33 45.6 -1.6
      baz=197,SNR=9.1
WAT1  Susitna Watana   86.12  11 P     P     00 33 45.9 -1.6
      baz=203
O28M  Mount Upton      86.12  16 P     P     00 33 45.6 -2.2
      baz=211
O29M  Mount Kennedy    86.15  17 P     P     00 33 45.0 -2.7
      baz=212
G15K  Niukluk          86.26   4 P     P     00 33 46.2 -1.7
      baz=189
CMIG  Matias Romero    86.29  70 LR    LR    01 04 10.4
      comp=Z,358nm,19.8s,baz=242,slow=30
SKAG  Skagway          86.37  19 P     P     00 33 47.7 -0.9
      baz=215
KTH   Kantishna Hill   86.38  10 P     P     00 33 48.8 +0.1
KTH                              IAmb  IAmb  00 33 52.2
      comp=Z,15nm,0.9s
TRF   Thorofare Moun   86.39  10       P     00 33 49.7 +0.8
TRF   Thorofare Moun   86.39  10 P     P     00 33 48.1 -0.8
      baz=202,SNR=34
HARP  HAARP            86.40  13 P     P     00 33 47.5 -1.3
      baz=206
P30M  Million Dollar   86.44  18 P     P     00 33 47.7 -1.4
      baz=214,SNR=5.9
S34M  Telegraph Cree   86.47  21 P     P     00 33 48.1 -1.1
      baz=219
J20K  Nowinta River    86.48   9 P     P     00 33 48.7 -0.4
      baz=198,SNR=19
H17K  Granite Mounta   86.54   6 P     P     00 33 49.2 -0.2
      baz=193
DHY   Denali Highway   86.56  12 P     P     00 33 49.4 -0.4
      baz=204,SNR=8.3
F14K  Arctic Creek     86.60   3 P     P     00 33 48.9 -0.7
      baz=187
RND   Reindeer         86.60  11       P     00 33 50.5 +0.7
TNA   Tin City         86.61   2 P     P     00 33 49.0 -0.7
      baz=185
GCSA  Galena City Sc   86.68   7 P     P     00 33 49.5 -0.6
      baz=196
YUK6  Outpost Mounta   86.74  17 P     P     00 33 50.3 -0.5
      baz=213
G16K  Koyuk River      86.77   5 P     P     00 33 50.3 -0.2
      baz=191
PAX   Paxson           86.84  13 P     P     00 33 50.8 -0.2
      baz=206,SNR=9.2
SYO   Syowa Base       86.84 191⇓eP    P     00 33 50.4 -0.7
M26K  Nabesna, AK      86.87  14 P     P     00 33 50.7 -0.5
      baz=208,SNR=12
HYT   Haines Junctio   86.87  17 P     P     00 33 50.8 -0.5
      baz=213
BPAW  Bear Paw Mtn.    86.88  10 P     P     00 33 51.1 -0.1
      baz=201,SNR=6.0
MCK   McKinley         86.88  11 P     P     00 33 51.2  0.0
      baz=203,SNR=19
PDAR  Pinedale Array   86.90  42 P     P     00 33 53.0 +1.0
      comp=Z,1.6nm,0.9s,baz=235,slow=4.5,SNR=11
PDAR                             LR    LR    01 08 07.4
      comp=Z,88nm,18.2s,baz=288,slow=32
      comp=Z,1.6nm,0.9s
H18K  Honhosa River    86.91   7 P     P     00 33 51.9 +0.7
      baz=194
Q32M  Nakina River     86.92  20 P     P     00 33 51.3 -0.3
      baz=218
YUK3  Moose Creek      86.92  15 P     P     00 33 51.1 -0.5
      baz=211,SNR=8.2
F15K  North Star Dit   86.92   4 P     P     00 33 51.8 +0.5
      baz=188
P32M  Atlin            86.96  19 P     P     00 33 50.9 -0.8
      baz=217
TROLL Troll, Antarti   87.00 179 ⇓P    P     00 33 52.8 +0.8
      comp=Z,297nm,0.8s
IPM   Ipoh             87.00 276 P     P     00 33 52.4 -0.5
IPM                              IAmb  IAmb  00 33 55.7
      comp=Z,23nm,0.9s
YUK4  Talbot Arm       87.01  16 P     P     00 33 52.0  0.0
      baz=212
G17K  Kiwalik Mounta   87.02   5 P     P     00 33 51.5 -0.2
      baz=192
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I20K  Naaghedeneel     87.03   8 P     P     00 33 51.9 +0.2
      baz=198
M27K  Edge Creek, AK   87.08  14 P     P     00 33 52.1 -0.2
      baz=210,SNR=25
VNA3  Neumayer Olymp   87.15 175 ⇓P    P     00 33 53.3 +0.7
      comp=Z,8.1nm,0.9s
SNAA  Sanae            87.17 177 ⇓P    P     00 33 53.5 +0.8
      comp=Z,86nm,0.8s
SNAA  Sanae            87.17 177 P     P     00 33 52.9 +0.1
SNAA                             IAmb  IAmb  00 33 58.3
      comp=Z,13nm,1.2s
SNAA  Sanae            87.17 177 P     P     00 33 53.3 +0.6
      comp=Z,6.2nm,1.0s,baz=182,slow=4.8,SNR=11
SNAA                             LR    LR    01 09 49.8
      comp=Z,335nm,19.9s,baz=124,slow=34
      comp=Z,6.2nm,1.0s
O30N  Mendenhall       87.22  18 P     P     00 33 52.7 -0.1
      baz=215,SNR=5.8
L26K  Log Cabin Wild   87.34  13 P     P     00 33 53.6 +0.3
      baz=208
BVCY  Beaver Creek     87.37  15 P     P     00 33 54.3 +0.8
      baz=210,SNR=5.9
WHY   Whitehorse       87.47  18 P     P     00 33 54.3 +0.1
      baz=216
H19K  Roundabout Mou   87.48   7 P     P     00 33 54.6 +0.7
      baz=196,SNR=9.8
N30M  Aishikik Lake    87.52  17 P     P     00 33 54.4 +0.1
      baz=214
K24K  Donnelly Dome    87.53  12 P     P     00 33 55.1 +0.7
      baz=206,SNR=12
G18K  Tagagawik        87.60   6 P     P     00 33 55.8 +1.3
      baz=194,SNR=8.5
VNA2  Neumayer--Watz   87.64 176 ⇓P    P     00 33 57.8 +2.9
      comp=Z,5.2nm,0.9s,baz=189,slow=3.7
H20K  Anotleneega Mo   87.64   8 P     P     00 33 55.8 +1.0
      baz=198,SNR=9.7
NEA2  Nenana           87.65  10 P     P     00 33 55.4 +0.6
      baz=203,SNR=6.1
RIDG  Independent Ri   87.66  12 P     P     00 33 55.8 +0.8
      baz=207,SNR=8.3
R33M  Jennings River   87.68  20 P     P     00 33 55.6 +0.4
      baz=219
L27K  Beaver Creek,    87.71  14 P     P     00 33 56.1 +0.9
L27K  Beaver Creek,    87.71  14 P     P     00 33 55.6 +0.4
      baz=210,SNR=9.0
BCAR  Beaver Creek A   87.72  14 P     P     00 33 55.7 +0.5
P33M  Teslin, Yukon    87.73  19 P     P     00 33 55.5 +0.1
      baz=218,SNR=5.8
MLY   Manley           87.79  10 P     P     00 33 56.0 +0.5
MLY   Manley           87.79  10 P     P     00 33 55.9 +0.3
      baz=201,SNR=8.0
VNA1  Neumayer--Stat   87.84 175 ⇓P    P     00 33 58.2 +2.4
      comp=Z,8.7nm,1.0s
HDA   Harding Lake     87.86  11 P     P     00 33 56.5 +0.7
HDA                              IAmb  IAmb  00 34 00.1
      comp=Z,16nm,0.8s
HDA   Harding Lake     87.86  11 P     P     00 33 56.3 +0.5
      baz=205,SNR=8.3
N31M  Braeburn, Yuko   87.89  17 P     P     00 33 55.9 -0.1
      baz=215
F17K  Baldwin Pennin   87.90   5 P     P     00 33 57.3 +1.4
      baz=192
M29M  Somme Creek      87.98  16 P     P     00 33 57.8 +1.2
      baz=212,SNR=12
G19K  Purcell Mounta   88.00   7 P     P     00 33 57.6 +1.2
      baz=195,SNR=8.3
SCRK  Sand Creek       88.05  13       P     00 33 57.8 +0.9
SCRK                             IAmb  IAmb  00 34 01.7
      comp=Z,11nm,1.0s
SCRK  Sand Creek       88.05  13 P     P     00 33 57.9 +1.0
      baz=208,SNR=15
H21K  Melozitna Rive   88.07   9 P     P     00 33 58.2 +1.4
      baz=199,SNR=8.8
I23K  Minto, Yukon-K   88.12  10 P     P     00 33 57.6 +0.6
      baz=203
F18K  Selawik          88.19   6 P     P     00 33 56.6 -0.7
      baz=193
ILAR  Eielson Array    88.20  11 P     P     00 33 58.0 +0.6
ILAR  Eielson Array    88.20  11 P     P     00 33 58.4 +1.0
      comp=Z,3.9nm,0.8s,baz=203,slow=4.7,SNR=29
      comp=Z,3.9nm,0.8s
IMAR  Indian Mountai   88.25   8 P     P     00 33 58.1 +0.4
J25K  Salcha River,    88.34  12       P     00 33 58.9 +0.7
J25K                             IAmb  IAmb  00 34 02.8
      comp=Z,14nm,0.9s
J25K  Salcha River,    88.34  12 P     P     00 33 58.5 +0.3
      baz=206,SNR=15
PSI   Prapat           88.35 274 LR    LR    01 14 39.8
      comp=Z,214nm,19.6s,baz=101,slow=36
N32M  Quiet Lake       88.40  18 P     P     00 33 58.6 +0.1
      baz=217
POKR  Poker Plat Res   88.42  11 P     P     00 33 58.9 +0.5
      baz=204
E17K  Hotham Inlet     88.48   5 P     P     00 33 59.6 +1.0
      baz=191
K27K  Chicken          88.50  13 P     P     00 33 59.4 +0.6
      baz=209
H22K  Ishtalitna Cre   88.50   9 P     P     00 33 59.6 +0.7
      baz=201,SNR=9.8
F19K  Shaleruckik Mo   88.60   6 P     P     00 34 00.3 +1.1
      baz=195
J26L  Joseph Creek     88.60  13 P     P     00 34 00.3 +0.8
      baz=208,SNR=38
L29M  L29M             88.63  15 P     P     00 34 00.2 +0.7
      baz=213,SNR=22
H23K  Yukon River      88.72  10 P     P     00 34 00.9 +1.0
      baz=202
G21K  Allakaket        88.79   8 P     P     00 34 01.4 +1.2
      baz=199,SNR=6.5
M31M  Drury Creek, Y   88.86  17 P     P     00 34 00.9 +0.2
      baz=216
E18K  Tukpahlearik C   88.91   5 P     P     00 34 01.9 +1.2
      baz=192
WTLY  Watson Lake, Y   88.94  21 P     P     00 34 01.2 +0.2
      baz=221
D17K  Noatak River     89.00   4 P     P     00 34 02.1 +1.0
      baz=190
H24K  Noodor Dome      89.00  10 P     P     00 34 01.2 -0.1
      baz=204
F20K  Avaraart Lake    89.03   7 P     P     00 34 02.4 +1.2
      baz=197,SNR=5.6
BJT   Baijiatuau       89.09 314 P     P     00 34 02.9 +0.6
BJI   Beijing          89.10 314 P     P     00 34 04.1 +1.9
PRP   Porcupine Dome   89.13  11 P     P     00 34 02.9 +0.9
PRP                              IAmb  IAmb  00 34 08.4
      comp=Z,14nm,0.9s
PRP   Porcupine Dome   89.13  11 P     P     00 34 03.6 +1.6
      baz=206,SNR=21
DAWY  Dawson           89.13  14 P     P     00 34 03.0 +1.1
DAWY                             IAmb  IAmb  00 34 07.5
      comp=Z,11nm,0.9s
DAWY  Dawson           89.13  14 P     P     00 34 03.3 +1.4
      baz=212,SNR=11
FARO  Faro, Yukon      89.18  18 P     P     00 34 03.0 +0.9
      baz=217
TOAD  Toad River Com   89.25  23 P     P     00 34 03.2 +0.7
      baz=224,SNR=27
E19K  Redstone River   89.26   6       P     00 34 03.7 +1.3
E19K                             IAmb  IAmb  00 34 07.7
      comp=Z,15nm,0.8s
E19K  Redstone River   89.26   6 P     P     00 34 04.0 +1.6
      baz=195,SNR=16
K29M  Barlow Dome      89.39  15 P     P     00 34 04.4 +1.2
      baz=213,SNR=12
I26K  Coal Creek Min   89.39  12 P     P     00 34 04.0 +1.0
      baz=208,SNR=18
G22K  Bettles          89.45   9 P     P     00 34 03.5 +0.3
      baz=201
G23K  Bananza Creek    89.47   9 P     P     00 34 04.7 +1.3
      baz=202,SNR=9.1
F21K  Alatna River     89.47   8 P     P     00 34 04.2 +0.8
      baz=199
H25L  Birch Creek      89.75  11 P     P     00 34 05.1 +0.5
      baz=206
C17K  DeLong Mountai   89.76   4 P     P     00 34 05.3 +0.6
      baz=190
G24K  Hadweenzic Riv   89.86  10 P     P     00 34 06.0 +0.8
      baz=204
F22K  John River       89.91   8 P     P     00 34 06.0 +0.6
      baz=200
COLD  Coldfoot         89.92   9 P     P     00 34 06.0 +0.5
      baz=202
I27K  Kandik River     89.97  13 P     P     00 34 06.1 +0.3
      baz=210
C18K  Utukok River     90.07   5 P     P     00 34 06.7 +0.5
      baz=192
MMPY  Sheldon Lake,    90.09  18 P     P     00 34 06.8 +0.4
      baz=219,SNR=10
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E20K	Nigu River	90.14	7	P	P	00 34 06.8	+0.2
	baz=196,SNR=8.2						
G25K	Bearman Lake	90.15	11	P	P	00 34 06.7	+0.3
	baz=206						
BILL	Bilibino	90.17	353	P	P	00 34 07.5	+0.9
BILL				IAmb	IAmb	00 34 11.5	
	comp=Z,13nm,1.0s						
TGTN	Hyland Airport	90.17	20	P	P	00 34 07.4	+0.6
	baz=222						
D19K	Kuna River	90.18	6	P	P	00 34 07.7	+1.0
	baz=194						
I28M	Miner Creek	90.19	14	P	P	00 34 07.4	+0.6
	baz=211,SNR=16						
BEAVL	Fort Liard	90.26	22	P	P	00 34 07.8	+0.6
	baz=224						
J30M	Hart River	90.29	15	P	P	00 34 08.2	+0.8
	baz=214,SNR=11						
I29M	Ogilvie Camp,	90.48	14	P	P	00 34 08.7	+0.5
	baz=213						
H27K	Steamboat Moun	90.53	13	P	P	00 34 08.9	+0.5
	baz=210,SNR=12						
D20K	Etivluk River	90.54	6	P	P	00 34 08.5	+0.2
	baz=196						
F24K	Squaw Lake	90.54	10	P	P	00 34 08.7	+0.3
	baz=204,SNR=5.6						
E22K	Anaktuvuk Pass	90.55	8	P	P	00 34 09.0	+0.6
	baz=200,SNR=11						
E21K	Killik River	90.57	7	P	P	00 34 09.2	+0.7
	baz=198						
KOTAN	Kotaneelee Air	90.58	23	P	P	00 34 08.1	-0.6
	baz=225						
C19K	Lookout Ridge	90.64	5	P	P	00 34 09.5	+0.6
	baz=193						
G26K	Porcupine Rive	90.73	11	P	P	00 34 10.7	+1.5
	baz=208,SNR=8.4						
B18K	Kokolik River	90.73	4	P	P	00 34 09.8	+0.6
	baz=191						
E23K	Chandalar	90.78	9	P	P	00 34 10.6	+1.0
	baz=202						
I30M	Mount Dempster	90.82	15	P	P	00 34 09.5	-0.3
	baz=214,SNR=20						
E24K	Your Creek	90.96	9	P	P	00 34 11.0	+0.6
	baz=203						
F25K	Christian Rive	90.97	10	P	P	00 34 10.3	-0.1
	baz=206,SNR=5.5						
G27K	Doyon Strip	91.01	12	P	P	00 34 10.3	-0.2
	baz=210,SNR=11						
BMAR	Burnt Mountain	91.01	11	P	P	00 34 11.6	+1.0
XLT	XiLinHaoTe	91.02	317	*e*P	P	00 34 13.3	+2.1
XLT				PP	PP	00 37 50.3	+2.3
XLT				pmax	pmax		
	comp=Z,10.0nm,1.1s						
D22K	Ayikyak River	91.14	8	P	P	00 34 11.6	+0.5
	baz=200						
C21K	Knifeblade Rid	91.16	7	P	P	00 34 11.5	+0.3
	baz=198						
H29M	Whitestone	91.19	14	P	P	00 34 11.6	+0.2
	baz=213,SNR=11						
TOLK	Toolik Lake Re	91.32	9	P	P	00 34 13.3	+1.3
	baz=202						
F26K	Sheenjek River	91.33	11	P	P	00 34 13.0	+0.9
	baz=207,SNR=9.2						
E25K	Arctic Village	91.46	10	P	P	00 34 13.5	+0.8
	baz=206,SNR=8.1						
D23K	Nanushuk River	91.47	8	P	P	00 34 13.2	+0.6
	baz=201,SNR=5.8						
B21K	Ikpikpuk River	91.62	7	P	P	00 34 13.8	+0.6
	baz=198						
EPYK	Eagle Plains	91.69	14	P	P	00 34 14.9	+1.2
	baz=214,SNR=5.8						
B20K	Meade River	91.74	6	P	P	00 34 14.8	+1.0
	baz=195						
H31M	Peel River	91.78	15	P	P	00 34 15.4	+1.2
	baz=216						
G29M	Pine Creek	91.85	13	P	P	00 34 16.0	+1.5
	baz=213,SNR=6.7						
D24K	Happy Valley	91.90	9	P	P	00 34 16.1	+1.5
	baz=203						
F28M	Old Crow	92.06	12	P	P	00 34 16.2	+0.8
	baz=211,SNR=5.7						
NNA	Nana	92.19	104	LR	LR	01 06 33.7	
	comp=Z,172nm,19.6s,baz=226,slow=30						
E27K	Coleen River	92.22	12	P	P	00 34 17.3	+1.1
	baz=210,SNR=9.7						
C23K	Itkillik River	92.30	8	P	P	00 34 16.7	+0.3
	baz=201						
G30M	tAoh Zraii Nji	92.30	14	P	P	00 34 17.4	+0.8
	baz=215,SNR=11						
D25K	Kavik River	92.42	9	P	P	00 34 17.7	+0.6
	baz=205						
C24K	Franklin Bluff	92.44	9	P	P	00 34 17.9	+0.8
	baz=203						
ATAH	Atahualpa	92.56	99	LR	LR	01 08 34.9	
	comp=Z,257nm,18.1s,baz=246,slow=31						
HHC	Hu-ho-hao-te	92.60	313	*e*P	P	00 34 19.4	+0.7
HHC				pmax	pmax		
	comp=Z,15nm,0.5s						
HHC				pmax	pmax		
	comp=Z,95nm,3.8s						
G31M	Satah River	92.70	15	P	P	00 34 19.0	+0.7
	baz=216,SNR=14						
JTS	Las Juntas de	92.71	80	LR	LR	01 07 03.9	
	comp=Z,176nm,19.4s,baz=267,slow=30						
A22K	Sinclair Lake	92.91	6	P	P	00 34 20.5	+1.4
	baz=197						
F30M	Barrier River	92.92	14	P	P	00 34 20.3	+1.0
	baz=215						
WRGLY	Wrigley	92.95	20	P	P	00 34 20.0	+0.4
	baz=226						
E28M	Babbage River	92.97	12	P	P	00 34 20.5	+0.9
	baz=212						
C27K	Jago River	93.12	10	P	P	00 34 20.3	0.0
	baz=208,SNR=6.9						
E29M	Blow River	93.12	13	P	P	00 34 20.9	+0.7
	baz=213						
C26K	Camden Bay	93.18	10	P	P	00 34 21.7	+1.2
	baz=207						
F31M	Tsiigehtchic	93.25	14	P	P	00 34 21.5	+0.6
	baz=217,SNR=5.8						
D27M	Malcolm River	93.25	11	P	P	00 34 21.7	+0.7
	baz=210						
D28M	Stokes Point	93.74	12	P	P	00 34 24.5	+1.4
	baz=212						
CM31	Chiang Mai Arr	93.95	288		P	00 34 24.8	-0.5
CMAR	Chiang Mai Arr	93.95	288	P	P	00 34 25.3	+0.1
CMAR	Chiang Mai Arr	93.95	288	P	P	00 34 26.6	+1.4
	comp=Z,4.9nm,0.8s,baz=108,slow=4.2,SNR=17						
CMAR				LR	LR	01 13 17.8	
	comp=Z,30nm,21.7s,baz=250,slow=34						
	comp=Z,4.9nm,0.8s						
INK	Inuvik	93.99	14	LR	LR	01 14 38.0	
	comp=Z,102nm,18.2s,baz=226,slow=34						
INK	Inuvik	93.99	14	P	P	00 34 25.6	+1.4
	baz=217						
YAK	Yakutsk	94.22	337	P	P	00 34 25.6	+0.1
YAK	Yakutsk	94.22	337	LR	LR	01 11 42.5	
	comp=Z,88nm,20.7s,baz=144,slow=32						
PZH	PanZhiHua	94.42	297	P	P	00 34 27.4	0.0
PZH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
PZH				pmax	pmax		
	comp=Z,130nm,5.2s						
YKA	Yellowknife Ar	95.58	24	P	P	00 34 33.3	+1.6
	comp=Z,1.4nm,0.8s,baz=237,slow=4.3,SNR=6.9						
YKA				LR	LR	01 10 58.3	
	comp=Z,96nm,21.5s,baz=262,slow=31						
	comp=Z,1.4nm,0.8s						
ECSD	EROS Data Cent	95.68	45	P	P	00 34 33.0	+0.4
ECSD				IAmb	IAmb	00 34 36.2	
	comp=Z,12nm,1.3s						
LZH	Lanzhou	96.25	306	*e*P	P	00 34 36.3	+0.7
LZH				sP	pwP	00 34 44.3	+0.4
LZH				pmax	pmax		
	comp=Z,62nm,1.3s						
C36M	Paulatuk	97.05	16	P	P	00 34 38.8	+0.7
	baz=226						
LPAZ	La Paz	98.25	111	LR	LR	01 10 48.5	
	comp=Z,310nm,19.6s,baz=236,slow=30						
A36M	Sachs Harbour	98.62	14	P	Pdif	00 34 45.9	+0.6
	baz=225						
ULM	Lac du Bonnet	98.72	39	LR	LR	01 15 19.4	
	comp=Z,231nm,19.6s,baz=264,slow=33						
SONM	Songino Array	98.81	318	LR	LR	01 14 58.9	
	comp=Z,54nm,20.1s,baz=118,slow=33						
WMQ	Urumqi	110.28	310	*e*PKP	PKiKP	00 39 38.3	-0.8
WMQ				LR	LR		
	comp=Z,110nm,23.1s						
ZALV	Zalesovo Beam	113.44	321	PKiKP	PKiKP	00 39 44.2	-0.4
	comp=Z,0.4nm,0.3s,baz=76,slow=1.8,SNR=3.6						
MKAR	Makanchi Array	114.46	313	PKiKP	PKiKP	00 39 47.9	+1.1
	comp=Z,1.0nm,0.8s,baz=54,slow=2.5,SNR=5.3						
KURBB	Kurchatov Arra	117.16	317	PKP	PKiKP	00 39 52.1	+0.2
	comp=Z,0.9nm,0.6s,baz=89,slow=1.8,SNR=8.0						
KURBB				PKKPbc	PKKPbc	00 50 17.9	+0.4
	comp=Z,1.2nm,1.0s,baz=270,slow=4.4,SNR=6.8						
BVAR	Borovoye Array	122.07	320	PKP	PKPdf	00 40 01.3	0.0
	comp=Z,3.9nm,0.8s,baz=82,slow=0.8,SNR=10						
BRVK	Borovoye	122.13	320		PKPdf	00 40 01.0	-0.3
RAYN	Ar Rayn	143.55	281	PKPdf	PKPbc	00 40 40.7	+1.0
GURO	Guroymak-BITLI	144.63	307	PKPdf	PKPab	00 40 42.4	-0.2
SUW	Suwalki	144.75	343	*e*PKP	PKPdf	00 40 43.3	-0.2
SUW	Suwalki	144.75	343	PKPdf	PKPab	00 40 42.1	-0.2
EKA	Eskdalemuir Ar	145.22	9	PKPbc	PKPdf	00 40 45.3	+1.0
	comp=Z,2.3nm,0.7s,baz=348,slow=3.1,SNR=6.3						
KOPT	Kop Dagi	145.23	310		PKPbc	00 40 44.5	-0.3
AKASG	Malin Array Be	145.40	334	PKPbc	PKPbc	00 40 44.1	-0.5
AKASG	Malin Array Be	145.40	334	PKPbc	PKPdf	00 40 45.2	+0.5
	comp=Z,11nm,0.9s,baz=40,slow=4.5,SNR=40						
KIEV	Kiev	145.41	334	⇓P	PKPdf	00 40 45.1	+0.4
LODK	Lodwar	146.49	242	PKPbc	PKPdf	00 40 48.7	+0.9
SORM	Soroca	147.72	332	⇓P	PKiKP	00 40 52.4	-1.0
MILM	Milestii Mici	148.40	330	⇑P	PKPbc	00 40 54.0	+0.7
GAZ	Gaziantep	148.69	307		PKPdf	00 40 51.5	+0.7
BNN	Bunyan	149.00	311		PKPbc	00 40 53.6	-1.8
OJC	Ojcow	149.08	343	*e*PKP	PKiKP	00 40 56.1	-0.2
OJC	Ojcow	149.08	343		PKPbc	00 40 54.1	-0.9
KSP	Ksiaz	149.35	347	*e*PKP	PKiKP	00 40 57.4	+0.6
ILGA	Ilgaz	149.37	316		PKPdf	00 40 53.4	+1.5
STHS	Stebnicka Huta	149.37	340	*e*PKP	PKiKP	00 40 58.1	+1.2
STHS				*e*		00 41 03.6	
BURAR	Bucovina Array	149.45	334	⇓P	PKiKP	00 40 58.7	+1.5
KOLS	Kolonicke sedl	149.46	339	*e*PKP	PKiKP	00 40 57.9	+0.8
KOLS				*e*		00 41 05.2	
CLL	Collm	149.47	351	*i* PKPbc	PKiKP	00 40 57.5	+0.5
	comp=Z,18nm,1.0s						
CLL				*i* PKPab	pPKPab	00 41 01.4	-1.0
	comp=Z,67nm,1.9s						
CLL				*i* x	x	00 41 04.3	
CLL				AMS	AMS	01 11 00.0	
	comp=Z,100nm,19.9s						
CLL				AMS	AMS	01 48 00.0	
	comp=Z,100nm,21.2s						
VLDR	Vladesti	149.53	329	⇓P	PKiKP	00 40 58.2	+0.9
OSTC	Ostas	149.63	347	AMS	AMS	01 57 10.0	
	comp=Z,200nm,17.7s						
CHVC	Chvalec	149.64	347	*e*PKP	PKPab	00 41 01.7	+0.2
NIE	Niedzica	149.66	341	*e*PKP	PKiKP	00 40 58.9	+1.3
TESR	Tescani	149.70	331	⇓P	PKiKP	00 40 59.0	+1.4
UPC	Upice	149.72	347	AMS	AMS	01 49 00.0	
	comp=Z,200nm,18.0s						
BRG	Berggiesshubel	149.75	350	*e*PKP	PKiKP	00 40 59.0	+1.3
BRG				Amp		00 41 01.1	
	comp=Z,15nm,1.0s						
DPC	Dobruska-Polom	149.81	347	*e*PKP	PKPab	00 41 01.0	-1.2
OKC	Ostrava-Krasne	149.87	344	AMS	AMS	01 48 10.0	
	comp=Z,200nm,23.3s						
STEB	Steborice	149.87	345	*e*PKP	PKiKP	00 40 59.5	+1.6
STEB				*e*x	x	00 41 05.8	
ONER	Baraj Valea Uz	149.95	331	⇑P	PKiKP	00 41 00.4	+2.1
CFR	Carcaliu	149.98	328	⇓P	PKiKP	00 40 59.4	+1.2
TPGR	Topolog	150.07	327	⇓P	PKiKP	00 40 60.0	+1.4
MORC	Moravsky Berou	150.07	345	*e*PKP	PKPbc	00 40 57.2	-0.3
MORC	Moravsky Berou	150.07	345	⇑P	PKiKP	00 40 59.4	+1.0
BMR	Baia Mare	150.08	336	⇓P	PKiKP	00 40 59.5	+1.1
BR131	Keskin Array S	150.10	314		PKPbc	00 40 57.1	-1.0
BRTR	Keskin Array B	150.10	314	PKPbc	PKiKP	00 40 59.1	+0.1
	comp=Z,6.2nm,0.8s,baz=113,slow=3.3,SNR=23						
LANS	Liptovska Anna	150.14	342	*e*PKP	PKiKP	00 41 00.0	+1.4
LANS				*e*PP	PP	00 44 32.2	+0.5
VRI	Vrincioaia	150.15	330	⇓P	PKiKP	00 40 59.3	+0.6
KIRS	Kirsehir-Merke	150.20	313	⇑P	PKiKP	00 40 59.8	+0.7
ARCR	ARCALIA	150.23	334	⇓P	PKPab	00 41 05.7	+1.7
TURR	Turia	150.33	331	⇑P	PKiKP	00 41 01.1	+2.1
TIRR	Tirgusor	150.35	327	⇓P	PKPab	00 41 06.4	+1.8
MAUC	Maruska	150.38	344	*e*PKP	PKiKP	00 41 00.3	+1.3
OZUR		150.40	332	⇓P	PKiKP	00 41 01.1	+1.9
PRA	Prague	150.44	349	AMS	AMS	01 57 40.0	
	comp=Z,200nm,18.0s						
PRU	Pruhonice	150.50	349	*e*PKP	PKPab	00 41 02.1	-2.9
PRU				AMS	AMS	01 50 10.0	
	comp=Z,100nm,22.2s						
GOPC	GO Pecny, Ondr	150.53	349	*e*PKP	PKPab	00 41 02.5	-2.6
ANTO	Ankara	150.59	315	PKPbc	PKPbc	00 40 58.0	-1.1
DOPR	Dopca	150.68	332	⇓P	PKiKP	00 41 01.2	+1.4
VRAC	Vranov	150.73	346	*e*PKP	PKPbc	00 40 58.8	-0.3
VRAC	Vranov	150.73	346	⇓P	PKiKP	00 41 01.3	+1.6
JAVC	Velka Javorina	150.89	344	*e*PKP	PKPbc	00 40 58.2	-1.3
VYHS	Vyhne	150.91	342	*e*PKP	PKiKP	00 41 01.3	+1.2
VYHS				*e*		00 41 10.9	
TREC	Trest	150.98	347	*e*PKP	PKiKP	00 41 03.4	+3.1
TREC				AMS	AMS	01 56 40.0	
	comp=Z,300nm,21.0s						
KRUC	Moravsky	151.01	346	*e*PKP	PKPbc	00 40 59.3	-0.4
MARR	Marisel-Cluj	151.05	335	⇓P	PKiKP	00 41 01.5	+0.9
ZVC	Zvikov	151.09	349	*e*PKP	PKiKP	00 41 03.2	+2.7
ZVC				*e*x	x	00 41 09.5	
ZVC				AMS	AMS	01 51 30.0	
	comp=Z,200nm,22.4s						
DRGR		151.11	336	⇓P	PKPab	00 41 10.2	+2.4
PSZ	Piszkesteto	151.11	341	PKPbc	PKPbc	00 40 58.7	-1.4
PSZ	Piszkesteto	151.11	341	⇓P	PKPab	00 41 05.9	-1.8
VOIR		151.24	332	⇑P	PKiKP	00 41 02.1	+1.1
GRF	Grafenberg Arr	151.28	353	*e*PKP	PKPab	00 41 10.0	+1.7
	baz=10.0,slow=3.6						
SAHE	Sakarya_HENDEK	151.28	319	⇑P	PKiKP	00 41 02.7	+1.5
MODS	Modra-Piesok	151.44	344	*e*PKP	PKiKP	00 41 02.3	+1.1
MODS				*e*		00 41 11.1	
MMAI	Mount Meron Ar	151.47	301	PKPbc	PKiKP	00 41 03.2	+1.3
	comp=Z,5.3nm,0.8s,baz=64,slow=3.4,SNR=14						
ARR	Arges	151.48	332	⇑P	PKiKP	00 41 04.0	+2.5
KHC	Kasperske Hory	151.50	350	*e*PKP	PKiKP	00 41 04.7	+3.3
KHC				*e*x	x	00 41 11.4	
KHC				AMS	AMS	01 57 40.0	
	comp=Z,200nm,21.4s						
CKRC	Cesky Krumlov	151.67	349	*e*PKP	PKiKP	00 41 02.6	+0.9
CKRC				AMS	AMS	01 55 40.0	
	comp=Z,200nm,22.4s						
SRO	Srobarova	151.68	342	*e*PKP	PKPab	00 41 13.6	+3.7
GERES	GERESS Array B	151.75	349	PKPbc	PKiKP	00 41 03.6	+1.6
	comp=Z,2.7nm,0.9s,baz=2.9,slow=2.0,SNR=9.8						
GERES				PKPab	sPKPab	00 41 12.1	-0.5
	comp=Z,1.9nm,0.8s,baz=19,slow=3.5,SNR=6.8						
SIRR	Siria	151.95	337	⇑P	PKiKP	00 41 04.4	+2.1
CONA	Conrad Observa	152.19	346	*i* pPKP	PKPab	00 41 14.8	+2.5
	comp=Z,7.0nm,1.0s						
SURR	Surduc	152.20	335	⇑P	PKPab	00 41 12.1	-0.1
RONA	Rosalia, Austr	152.31	345	*e*pPKP	PKiKP	00 41 05.0	+1.9
	comp=Z,7.4nm,1.0s						
BZS	Buzias	152.51	336	⇑P	PKiKP	00 41 05.0	+1.5
MOA	Molln	152.61	348	*e*pPKP	PKPab	00 41 16.4	+2.5
	comp=Z,16nm,2.0s						
BIOA	Bad Ischl, Aus	152.88	349	*i* pPKP	PKPab	00 41 17.9	+2.9
	comp=Z,13nm,1.1s						
ARSA	Arzberg	152.91	346	*i* pPKP	PKPab	00 41 18.2	+3.0
	comp=Z,7.3nm,1.1s						
BAND	Balkesir-Ban	153.25	320	⇑P	PKPbc	00 41 04.0	-1.1
LESA	Schwarzleotal	153.30	350	*i* pPKP	PKPab	00 41 18.0	+1.1
	comp=Z,13nm,1.1s						
RETA	Reutte	153.50	353	*e*pPKP	PKPab	00 41 19.5	+1.8
	comp=Z,7.1nm,1.3s						
WATA	Walderalm	153.55	352	*i* pPKP	PKPab	00 41 20.7	+2.7
	comp=Z,12nm,1.6s						
SOKA	Soboth	153.56	346	*i* pPKP	PKPab	00 41 20.3	+2.3
	comp=Z,12nm,1.5s						
MOTA	Moosalm	153.60	352	*i* pPKP	PKPab	00 41 20.1	+1.9
	comp=Z,0.5nm,0.4s						
WTTA	Wattenberg	153.61	351	*i* pPKP	PKiKP	00 41 08.3	+2.3
	comp=Z,6.0nm,1.1s						
SQTA	Sankt Quirin	153.71	352	*i* pPKP	PKPab	00 41 21.8	+3.2
	comp=Z,3.3nm,0.7s						
DAVA	Damuels	153.80	354	*i* pPKP	PKPab	00 41 21.5	+2.4
	comp=Z,3.8nm,0.9s						
OBKA	Obir	153.83	347	*i* pPKP	PKPab	00 41 21.3	+2.2
	comp=Z,2.4nm,0.9s						
MYKA	Terra Mystica	153.90	348	*e*pPKP	PKPab	00 41 23.3	+3.9
	comp=Z,2.9nm,0.6s						
FETA	Feichten	153.97	353	*i* pPKP	PKPab	00 41 19.9	+0.1
	comp=Z,4.9nm,1.1s						
ABTA	Abfaltersbach	153.98	350	*i* PKP	PKPab	00 41 16.8	-2.9
	comp=Z,11nm,1.3s						
EZN	Ezine	154.63	322	⇑P	PKPab	00 41 25.6	+2.9
ESDC	Sonseca Array	159.68	23	PKPab	PKPab	00 41 46.7	+2.3
	comp=Z,1.3nm,0.8s,baz=332,slow=4.6,SNR=12						
TIP	Timpagrande	159.88	335	⇓P	PKPab	00 41 48.0	+2.7
TORD	Torodi Ar. Bea	170.96	152	PKP	PKPdf	00 41 17.1	+1.0
	comp=Z,1.5nm,0.9s,baz=222,slow=3.9,SNR=5.8						
TORD				PKPab	pPKPab	00 42 36.0	+0.3
	comp=Z,2.2nm,1.0s,baz=230,slow=3.8,SNR=5.6						
TORD				PP	PP	00 46 27.7	+3.7
	comp=Z,1.0nm,1.0s,baz=194,slow=4.3,SNR=3.7						

IDC 23 00:25:53.1±2.3,**7°.71N**×**123°.20E**,**h0^{km}**,**mb4.2**/4,**mbtmp4.2**/4,**MS4.3**/1,**Error ellipse: s-maj=167.8km s-min=27.6km az=66.0**,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	25.76	175	P	P	00 31 25.9	+0.2
	2.6nm,0.3s,baz=8.9,slow=14,SNR=12						
	2.6nm,0.3s						
WRA	Warramunga Arr	29.59	158	P	P	00 31 59.5	-0.6
	2.1nm,0.5s,baz=335,slow=9.2,SNR=11						
	2.1nm,0.5s						
ASAR	Alice Springs	32.89	162	P	P	00 32 29.6	+0.4
	0.4nm,0.3s,baz=341,slow=9.3,SNR=7.2						
	0.4nm,0.3s						
DZM	Mont Dzumac	51.70	126	LR	LR	00 54 31.8	
	comp=Z,323nm,20.3s,baz=354,slow=33						
MKAR	Makanchi Array	52.30	325	P	P	00 35 06.5	-0.1
	1.2nm,0.5s,baz=119,slow=7.3,SNR=1.1						
	1.2nm,0.5s						

MOS ***23*** *00:28:15.9±0.9,28°.41N×104°.92E,h9^{km},mb4.9/41,Error ellipse: s-maj=6.4km s-min=4.3km az=119.6*

IDC ***23*** *00:28:16.0±0.5,28°.43N×104°.87E,h0^{km},mb4.3/27,mbtmp4.3/28,ML4.8/1,MS3.9/11,Error ellipse: s-maj=13.5km s-min=10.0km az=44.0*

BJI ***23*** *00:28:18.7,28°.39N×104°.82E,h7^{km},mB4.7/18,mb4.6/47,ML4.7/23,Ms4.5/56,Ms7 4.2/41*

NEIC ***23*** *00:28:18.6±1.0,28°.47N±0°.07×104°.89E±0°.08,h10^{km}±1^{km},mb4.9/111,Error ellipse: s-maj=12.9km s-min=10.8km az=139.0*

ISC 23 00:28:18.0±0.3,**28°.42N**±0°.03×**104°.94E**±0°.03,**h10^{km}**,**n613**,σ**1^s.03**/643,**mb4.7**/138,**MS4.1**/19,**16C-17D**,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GYA	Guiyang	2.48	142	⇓Pn	Pn	00 29 01.0	+2.3
GYA				Sn	Sn	00 29 32.8	+3.7
CD2	Chengdu	2.69	338	⇑Pn	Pn	00 29 03.3	+1.9
CD2				Pg	Pg	00 29 08.8	-0.7
CD2				Sn	Sb	00 29 36.0	-3.3
CD2				Sg	Sg	00 29 43.4	-0.9
CD2				smax	smax		
	comp=N,8µm,0.9s						
CD2				smax	smax		
	comp=E,13µm,1.1s						
PZH	PanZhiHua	3.42	237	Pg	Pn	00 29 13.8	+2.2
PZH				Sg	Sb	00 30 04.6	+4.0
PZH				smax	smax		
	comp=N,980nm,1.1s						
PZH				smax	smax		
	comp=E,740nm,1.3s						
KMI	Kunming	3.83	211	Pn	Pn	00 29 20.4	+3.1
KMI				Pg	Pg	00 29 29.8	-1.6
KMI				Sn	Sn	00 30 05.8	+3.3
KMI				Sg	Sg	00 30 19.3	-1.8
KMI				smax	smax		
	comp=N,310nm,1.0s						
KMI				smax	smax		
	comp=E,320nm,1.0s						
KMI				LR	LR		
	comp=N,3µm,4.9s						
KMI				LR	LR		
	comp=E,3µm,3.9s						
KMI				LR	LR		
	comp=Z,6µm,7.4s						
ENH	Enshi	4.38	64		Pn	00 29 27.1	+2.5
XAN	Xi'an	6.55	30	⇓Pn	Pn	00 29 55.4	+0.8
XAN				Pg	Pg	00 30 20.6	-3.0
XAN				Sg	Sg	00 31 46.9	-1.6
XAN				smax	smax		
	comp=N,2µm,1.2s						
XAN				smax	smax		
	comp=E,2µm,1.2s						
XAN				LR	LR		
	comp=N,7µm,10.7s						
XAN				LR	LR		
	comp=E,7µm,10.8s						
XAN				LR	LR		
	comp=Z,3µm,10.8s						
TNCH	TengChong	6.66	241	Pn	Pn	00 29 59.3	+3.1
TNCH				Sg	Sg	00 31 47.5	-4.4
TNCH				smax	smax		
	comp=N,600nm,1.7s						
TNCH				smax	smax		
	comp=E,500nm,1.1s						
CNSH	ChangSha	7.05	90	Pn	Pn	00 30 04.8	+3.5
CNSH				smax	smax		
	comp=N,790nm,1.1s						
CNSH				smax	smax		
	comp=E,1µm,0.7s						
SLVN	Son La	7.12	188		Pn	00 30 03.4	+1.1
LZH	Lanzhou	7.70	353	Pn	Pn	00 30 15.0	+4.6
LZH				Sg	Sg	00 32 22.6	-2.5
LZH				smax	smax		
	comp=N,340nm,0.9s						
LZH				smax	smax		
	comp=E,310nm,1.2s						
LZH				LR	LR		
	comp=N,2µm,7.4s						
LZH				LR	LR		
	comp=E,3µm,6.5s						
LZH				LR	LR		
	comp=Z,2µm,9.8s						
WHN	Wuhan	8.47	73	P	Pn	00 30 23.5	+2.7
WHN				LR	LR		
	comp=N,4µm,5.2s						
WHN				LR	LR		
	comp=E,6µm,8.7s						
WHN				LR	LR		
	comp=Z,6µm,8.7s						
LYN	LuoYang	8.87	45	⇑P	Pn	00 30 26.9	+0.7
LYN				smax	smax		
	comp=N,300nm,1.2s						
LYN				smax	smax		
	comp=E,350nm,1.1s						
LYN				LR	LR		
	comp=N,6µm,8.6s						
LYN				LR	LR		
	comp=E,5µm,10.0s						
LYN				LR	LR		
	comp=Z,1µm,8.2s						
GZH	Guangzhou	9.25	123	P	Pn	00 30 30.9	-0.6
GZH				S	Sn	00 32 15.5	-0.2
GZH				smax	smax		
	comp=N,360nm,1.1s						
GZH				smax	smax		
	comp=E,290nm,1.0s						
QIZ	Qiongzhong	10.37	153	P	Pn	00 30 46.5	-0.4
QIZ				S	Sn	00 32 44.8	+1.6
QIZ				pmax	pmax		
	comp=Z,29nm,1.8s						
QIZ				LR	LR		
	comp=E,2µm,9.2s						
QIZ				LR	LR		
	comp=Z,1µm,6.8s						
CHTO	Chiang Mai	11.03	211		Pn	00 30 57.4	+1.5
CHTO	Chiang Mai	11.03	211	P	Pn	00 30 57.4	+1.5
TIY	Taiyuan	11.19	32	*e*P	Pn	00 30 58.8	+0.7
TIY				S	Sn	00 33 07.8	+4.4
TIY				pmax	pmax		
	comp=Z,34nm,0.7s						
TIY				LR	LR		
	comp=N,2µm,10.3s						
TIY				LR	LR		
	comp=E,2µm,9.8s						
TIY				LR	LR		
	comp=Z,1µm,12.6s						
CM31	Chiang Mai Arr	11.34	210		Pn	00 31 01.9	+1.7
CMAR	Chiang Mai Arr	11.34	210		Pn	00 31 02.5	+2.3
CMAR	Chiang Mai Arr	11.34	210	Pn	Pn	00 31 03.7	+3.5
	0.2nm,0.3s,baz=27,slow=11,SNR=59						
CMAR				LR	LR	00 35 55.2	
	comp=Z,442nm,18.8s,baz=20,slow=41						

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CMAR  Chiang Mai Arr  11.34 210  P      Pn      00 31 02.5 +2.3
GTA   Gaotai          11.76 340  P      Pn      00 31 08.4 +2.5
GTA                              pP             00 31 13.3
GTA                              pmax   pmax
      comp=Z,13nm,1.2s
GTA                              LR     LR
      comp=N,1µm,14.5s
GTA                              LR     LR
      comp=E,3µm,14.2s
GTA                              LR     LR
      comp=Z,990nm,11.6s
LSA   Lhasa           12.13 279         Pn      00 31 12.2 +0.8
LSA   Lhasa           12.13 279  P      Pn      00 31 13.1 +1.7
LSA                              S      Sn      00 33 33.8 +6.7
LSA                              pmax   pmax
      comp=Z,6.0nm,0.5s
LSA   Lhasa           12.13 279  P      Pn      00 31 12.2 +0.8
HNS   HongShan        12.14  40  P      Pn      00 31 12.5 +1.5
HNS                              LR     LR
      comp=N,590nm,8.0s
HNS                              LR     LR
      comp=E,630nm,9.2s
HNS                              LR     LR
      comp=Z,690nm,10.4s
NJ2   Nanjing         12.56  70 eP      Pn      00 31 17.3 +0.5
NJ2                              pmax   pmax
      comp=Z,9.0nm,0.6s
NJ2                              LR     LR
      comp=N,970nm,9.0s
NJ2                              LR     LR
      comp=E,1µm,9.0s
NJ2                              LR     LR
      comp=Z,1µm,9.9s
BTO   Baotou          12.85  18 eP      Pn      00 31 21.3 +0.4
BTO                              pP             00 31 29.8
BTO                              PP     PnPn    00 31 32.5 +3.7
BTO                              S      Sn      00 33 46.9 +2.9
BTO                              pmax   pmax
      comp=Z,65nm,0.9s
BTO                              LR     LR
      comp=Z,2µm,11.2s
BTO                              LR     LR
      comp=Z,1µm,4.7s
BTO                              LR     LR
      comp=Z,2µm,9.8s
TIA   Tai'an          12.89  50  P      Pn      00 31 22.8 +1.4
TIA                              pmax   pmax
      comp=Z,15nm,1.3s
TIA                              LR     LR
      comp=Z,1µm,11.6s
TIA                              LR     LR
      comp=Z,1µm,13.9s
TIA                              LR     LR
      comp=Z,1µm,8.7s
BRDH  Bariadhala      13.29 248  LR     LR      00 37 29.9
      comp=Z,458nm,18.1s,baz=82,slow=42
HHC   Hu-ho-hao-te    13.54  22 eP      Pn      00 31 30.5 +0.3
HHC                              sP     P       00 31 37.3 -2.1
HHC                              pmax   pmax
      comp=Z,14nm,0.6s
HHC                              pmax   pmax
      comp=Z,95nm,6.2s
HHC                              LR     LR
      comp=Z,740nm,8.1s
HHC                              LR     LR
      comp=Z,380nm,7.6s
HHC                              LR     LR
      comp=Z,670nm,9.6s
BJT   Baijiatuau      14.82  36         Pn      00 31 47.5 -0.1
BJT   Baijiatuau      14.82  36  P      Pn      00 31 47.5 -0.1
BJI   Beijing         14.84  36  P      Pn      00 31 48.8 +0.9
BJI                              pP     P       00 31 52.4 -1.3
BJI                              sP             00 31 56.3
BJI                              S      Sn      00 34 34.5 +2.2
BJI                              pmax   pmax
      comp=Z,7.0nm,1.3s
BJI                              pmax   pmax
      comp=Z,60nm,6.2s
SSLB  Suanglung       15.11 104         Pn      00 31 52.1 +0.5
NACB  Ninganchiao     15.52 102  Pn     Pn      00 31 59.5 +2.4
EVN   Everest         15.99 273         Pn      00 32 03.1 -0.6
DL2   Dalian          17.36  49  P      P       00 32 23.3 +1.6
DL2                              pmax   pmax
      comp=Z,21nm,1.1s
DL2                              LR     LR
      comp=Z,630nm,14.1s
DL2                              LR     LR
      comp=Z,600nm,14.7s
XLT   XiLinHaoTe      17.85  27 eP      P       00 32 29.3 +2.1
XLT                              pP     sP      00 32 38.3 +6.8
XLT                              SS     S       00 36 13.3  +21
XLT                              pmax   pmax
      comp=Z,30nm,0.8s
XLT                              LR     LR
      comp=Z,39nm,7.6s
XLT                              LR     LR
      comp=Z,380nm,9.2s
XLT                              LR     LR
      comp=Z,470nm,13.8s
SONM  Songino Array   19.41   3         Pn      00 32 45.1 -0.5
SONM  Songino Array   19.41   3  P      Pn      00 32 45.1 -0.5
      comp=Z,2.7nm,0.3s,baz=185,slow=12,SNR=36
SONM                             PcP    PcP     00 37 06.3 +0.5
      comp=Z,0.5nm,0.5s,baz=187,slow=3.8,SNR=2.2
SONM                             Lg     Lg      00 38 34.7
      comp=Z,0.3nm,0.3s,baz=176,slow=25,SNR=2.1
SONM                             LR     LR      00 41 12.8
      comp=Z,322nm,20.8s,baz=182,slow=40
      comp=Z,5.0nm,0.4s
ULN   Ulaanbaatar     19.48   4         P       00 32 45.4 +0.1
ULN   Ulaanbaatar     19.48   4ceP      Pn      00 32 46.9 +0.5
ULN                              pmax   pmax
      comp=Z,9.0nm,0.6s
SNY   Shenyang        20.22  44 ⇓P      Pn      00 32 54.8 -0.3
SNY                              pmax   pmax
      comp=Z,20nm,0.6s
SNY                              pmax   pmax
      comp=Z,100nm,5.6s
SNY                              LR     LR
      comp=Z,560nm,20.0s
SNY                              LR     LR
      comp=Z,470nm,17.0s
SNY                              LR     LR
      comp=Z,400nm,11.2s
INCN  Inchon          20.29  58  P      P       00 32 53.7 -0.2
INCN  Inchon          20.29  58  P      P       00 32 53.7 -0.2
INCN                             pmax   pmax
      comp=Z,23nm,0.9s
TJN   Taejon          20.50  62         P       00 32 56.0 -0.2
TJN   Taejon          20.50  62  P      P       00 32 56.0 -0.2
TJN                              pmax   pmax
      comp=Z,357nm,1.8s
WMQ   Urumqi          20.68 323 eP      P       00 32 58.5 +0.3
WMQ                              pmax   pmax
      comp=Z,21nm,0.7s
WMQ                              LR     LR
      comp=Z,780nm,11.5s
WMQ                              LR     LR
      comp=Z,510nm,12.1s
JOW   Kunigami        20.73  89  LR     LR      00 41 35.0
      comp=Z,194nm,21.7s,baz=158,slow=38
KSAR  Wonju Array Be  21.21  59         P       00 33 03.4 -0.5
KSAR  Wonju Array Be  21.21  59  P      P       00 33 03.4 -0.5
KS19  Wonju Array Si  21.22  59  P      P       00 33 04.2 +0.2
KS19                             IAmb   IAmb    00 33 07.4
      comp=Z,17nm,0.6s
KSRS  Korea Array     21.25  59  P      P       00 33 05.1 +0.9
      comp=Z,11nm,0.7s,baz=245,slow=10,SNR=60
KSRS                             S      S       00 37 01.4 +1.0
      comp=Z,0.9nm,0.9s,baz=243,slow=17,SNR=4.6
      comp=Z,11nm,0.7s
ZAK   Zakamensk       21.97 357 eP      P       00 33 12.7 +0.7
ZAK                              pmax   pmax
      comp=Z,30nm,1.0s
CN2   Changchun       22.49  42  P      P       00 33 17.6  0.0
CN2                              PP     PnPn    00 33 46.1 +5.3
CN2                              sS     Sn      00 37 34.5 -2.8
CN2                              pmax   pmax
      comp=Z,20nm,0.7s
CN2                              pmax   pmax
      comp=Z,150nm,4.5s
CN2                              LR     LR
      comp=Z,170nm,12.0s
CN2                              LR     LR
      comp=Z,450nm,12.0s
JNU   Nakatsue        22.75  72  P      P       00 33 20.0 -0.5
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JNU   Nakatsue        22.75  72  LR     LR      00 41 51.1
      comp=Z,266nm,20.2s,baz=255,slow=36
KULM  Kulim           23.36 191  P      P       00 33 27.3 +0.5
KULM                             IAmb   IAmb    00 33 30.9
      comp=Z,78nm,1.8s
MOY   Mondy           23.41 354 eP      P       00 33 28.0 +0.9
MOY                              pmax   pmax
      comp=Z,14nm,2.8s
HIA   Hailar          23.71  25         P       00 33 30.5 +0.4
HIA                              IAmb   IAmb    00 33 33.4
      comp=Z,44nm,1.4s
HIA   Hailar          23.71  25  P      P       00 33 30.5 +0.4
HIA                              pmax   pmax
      comp=Z,44nm,1.4s
ZSN   Zaisan          24.60 326 eP      P       00 33 38.7 +0.4
ZSN                              pmax   pmax
      comp=Z,16nm,0.9s
ZSN   Zaisan          24.60 326 eP      P       00 33 38.8 +0.4
      comp=Z,16nm,0.9s
BNX   BinXian         24.77  40 ⇓P      P       00 33 41.0 +1.2
BNX                              pmax   pmax
      comp=Z,26nm,0.9s
SHLS  Shalkode        25.23 312 eP      P       00 33 42.0 -2.2
SHLS  Shalkode        25.23 312 eP      P       00 33 42.1 -2.2
MK31  Makanchi Array  25.51 322ceP      P       00 33 47.0 +0.4
MKAR  Makanchi Array  25.51 322         P       00 33 46.2 -0.4
MKAR  Makanchi Array  25.51 322  P      P       00 33 46.4 -0.1
      comp=Z,8.8nm,0.8s,baz=128,slow=10,SNR=60
MKAR                             PcP    PcP     00 37 16.5 -1.5
      comp=Z,1.2nm,0.8s,baz=146,slow=2.8,SNR=3.7
MKAR                             S      S       00 38 16.8 +2.9
      comp=Z,0.2nm,0.7s,baz=112,slow=14,SNR=1.3
MKAR                             ScP    ScP     00 40 57.4 -0.1
      comp=Z,0.9nm,0.9s,baz=103,slow=4.6,SNR=3.7
MKAR                             LR     LR      00 44 24.0
      comp=Z,209nm,19.2s,baz=128,slow=38
      comp=Z,8.8nm,0.8s
UZB   Uzynbulak       25.52 312 eP      P       00 33 47.1 +0.3
UZB   Uzynbulak       25.52 312 eP      P       00 33 47.1 +0.3
MAKZ  Makanchi        25.69 322  P      P       00 33 48.0 -0.1
MAKZ                             IAmb   IAmb    00 33 51.0
      comp=Z,14nm,0.9s
MAKZ  Makanchi        25.69 322  P      P       00 33 48.1 -0.1
MAKZ                             pmax   pmax
      comp=Z,14nm,0.9s
TARG  Taragay, Kyrgy  25.75 308  P      P       00 33 49.6 +0.3
TARG  Taragay, Kyrgy  25.75 308  P      P       00 33 49.6 +0.3
TARG                             pmax   pmax
      comp=Z,7.0nm,0.7s
KPKS  Kokpek          25.88 312 eP      P       00 33 50.3 +0.2
KPKS  Kokpek          25.88 312 eP      P       00 33 50.4 +0.3
SATY  Saty            25.88 311 eP      P       00 33 50.4 +0.3
SATY  Saty            25.88 311 eP      P       00 33 50.4 +0.3
PSI   Prapat          26.12 194  P      P       00 33 53.7 +1.3
PSI                              pmax   pmax
      comp=Z,14nm,0.9s
VLA   Vladivostok     26.18  49 i P     P       00 33 50.4 -2.3
VLA                              pmax   pmax
      comp=Z,16nm,0.9s
RPSI  Rantau Prapat   26.22 194  P      P       00 33 53.7 +0.5
RPSI                             IAmb   IAmb    00 34 03.0
      comp=Z,14nm,0.9s
KSH   Kashi           26.34 302  P      P       00 33 57.0 +2.7
KSH                              pP     sP      00 33 59.8 +1.0
KSH                              pmax   pmax
      comp=Z,3.0nm,0.8s
KSH                              LR     LR
      comp=Z,410nm,14.4s
KSH                              LR     LR
      comp=Z,280nm,18.2s
KSH                              LR     LR
      comp=Z,280nm,14.4s
USA0B Ussuriysk Arra  26.72  47  P      P       00 33 57.6  0.0
USA0B Ussuriysk Arra  26.72  47  P      P       00 33 57.6  0.0
USA0B                            pmax   pmax
      comp=Z,22nm,0.7s
USRK  Ussuriysk Ar.   26.73  47         P       00 33 57.9 +0.3
USRK  Ussuriysk Ar.   26.73  47  P      P       00 33 58.1 +0.5
      comp=Z,21nm,0.6s,baz=254,slow=9.0,SNR=56
      comp=Z,21nm,0.6s
TDK   Taldyqorghan    26.78 315 eP      P       00 33 58.3 +0.2
TDK   Taldyqorghan    26.78 315 eP      P       00 33 58.4 +0.2
MDOK  Medeo           26.83 311 eP      P       00 33 59.0 +0.3
MDOK  Medeo           26.83 311 eP      P       00 33 59.0 +0.3
NRN   Naryn           26.91 306  P      P       00 33 58.2 -1.4
NRN   Naryn           26.91 306  P      P       00 33 58.3 -1.4
NRN                              pmax   pmax
      comp=Z,8.0nm,1.1s
BOOM  Boomskoye usch  27.32 309  P      P       00 34 03.0 -0.2
BOOM                             IAmb   IAmb    00 34 03.1
      comp=Z,19nm,1.2s
BOOM  Boomskoye usch  27.32 309  P      P       00 34 03.0 -0.2
BOOM                             pmax   pmax
      comp=Z,19nm,1.2s
NIL   Nilore          27.58 289  P      P       00 34 05.0 -0.5
NIL                              IAmb   IAmb    00 34 13.3
      comp=Z,11nm,0.5s
NIL   Nilore          27.58 289  P      P       00 34 05.0 -0.5
NIL                              pmax   pmax
      comp=Z,11nm,0.5s
KUU   Kurty           27.60 312 eP      P       00 34 05.9 +0.4
KUU   Kurty           27.60 312 eP      P       00 34 05.9 +0.4
JGF   Kuroka          28.32  67  P      P       00 34 12.1 +0.1
AAK   Ala-Archa       28.37 308 i P     P       00 34 11.8 -0.8
AAK                              pmax   pmax
      comp=Z,8.0nm,2.2s
MAJO  Matsushiro      29.10  65  P      P       00 34 19.3 +0.4
MAJO                             IAmb   IAmb    00 34 27.5
      comp=Z,46nm,1.8s
MAJO  Matsushiro      29.10  65  P      P       00 34 19.3 +0.4
MAJO                             pmax   pmax
      comp=Z,46nm,1.8s
ZAA0  Zalesovo Array  29.45 336  P      P       00 34 20.8 -1.0
ZALV  Zalesovo Beam   29.45 336  P      P       00 34 21.6 -0.2
ZALV  Zalesovo Beam   29.45 336  P      P       00 34 21.3 -0.5
      comp=Z,5.7nm,0.6s,baz=137,slow=8.6,SNR=27
ZALV                             S      S       00 39 14.7 -1.1
      comp=Z,0.4nm,0.5s,baz=121,slow=17,SNR=1.9
ZALV                             LR     LR      00 47 01.0
      comp=Z,173nm,18.1s,baz=148,slow=38
      comp=Z,5.7nm,0.6s
DRK   Karamyk         29.47 301  P      P       00 34 21.6 -0.9
DRK   Karamyk         29.47 301  P      P       00 34 21.6 -0.9
DRK                              pmax   pmax
      comp=Z,15nm,0.3s
BTLS  Baital          29.57 312 eP      P       00 34 22.5 -0.4
BTLS  Baital          29.57 312 eP      P       00 34 22.5 -0.4
KURBB Kurchatov Arra  29.83 325  P      P       00 34 24.9 -0.3
      comp=Z,5.8nm,0.6s,baz=129,slow=9.8,SNR=53
KURBB                            PcP    PcP     00 37 26.9 -1.5
      comp=Z,1.3nm,0.7s,baz=123,slow=2.0,SNR=4.1
      comp=Z,5.8nm,0.6s
KURK  Kurchatov       29.84 325         P       00 34 23.8 -1.5
KURK  Kurchatov       29.84 325  P      P       00 34 24.9 -0.4
KURK                                            00 37 26.9
BTK   Batken          30.33 301  P      P       00 34 29.3 -0.6
BTK   Batken          30.33 301  P      P       00 34 29.3 -0.6
BTK                              pmax   pmax
      comp=Z,3.0nm,0.8s
PALK  Pallekele       31.09 232  P      P       00 34 36.8  0.0
PALK                             IAmb   IAmb    00 34 50.3
      comp=Z,31nm,1.2s
PALK  Pallekele       31.09 232  P      P       00 34 36.8  0.0
PALK                             pmax   pmax
      comp=Z,31nm,1.3s
KBL   Kabul           31.10 290  P      P       00 34 36.1 -0.7
KBL   Kabul           31.10 290  P      P       00 34 36.2 -0.7
KBL                              pmax   pmax
      comp=Z,8.0nm,1.2s
KK31  Karatay Array   31.30 307  P      P       00 34 37.8 -0.5
KK31  Karatay Array   31.30 307  P      P       00 34 37.8 -0.5
KK31                             pmax   pmax
      comp=Z,13nm,1.9s
KKAR  Karatay Array   31.30 307  P      P       00 34 37.9 -0.4
KKAR  Karatay Array   31.30 307  P      P       00 34 37.9 -0.4
SIMJ  Simiganj        31.47 298  P      P       00 34 39.6 -0.3
BRLS  Borolday        31.75 307 eP      P       00 34 43.1 +0.8
BRLS  Borolday        31.75 307 eP      P       00 34 43.1 +0.8
BRZS  Berezniki       32.60 320 eP      P       00 34 50.1 +0.5
BRZS  Berezniki       32.60 320 eP      P       00 34 50.2 +0.5
BVAR  Borovoye Array  35.36 324  P      P       00 35 13.4 -0.2
      comp=Z,1.5nm,0.5s,baz=122,slow=9.3,SNR=16
BVAR                             PcP    PcP     00 37 42.8 -0.8
      comp=Z,1.5nm,0.5s,baz=123,slow=2.9,SNR=5.8
BVAR                             LR     LR      00 48 59.9
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      comp=Z,138nm,19.8s,baz=126,slow=35
      comp=Z,1.5nm,0.5s
BRVK  Borovoye        35.43 324  P      P       00 35 14.1 -0.1
BRVK  Borovoye        35.43 324  P      P       00 35 14.1 -0.1
BRVK                             pmax   pmax
      comp=Z,10.0nm,1.5s
YAK   Yakutsk         37.37  19  P      P       00 35 30.4 -0.2
YAK   Yakutsk         37.37  19ceP      P       00 35 31.0 +0.4
YAK                              pmax   pmax
      comp=Z,36nm,0.6s
AB31  Akbulak array   40.02 314  P      P       00 35 52.9 -0.2
ABKAR Akbulak array   40.02 314  P      P       00 35 52.9 -0.2
ABKAR Akbulak array   40.02 314         P       00 35 53.0 -0.1
SVE   Sverdlovsk      42.09 325 eP      P       00 36 10.9 +0.9
SVE                              pmax   pmax
      comp=Z,14nm,1.3s
ARTI  Arti            43.08 324  P      P       00 36 17.5 -0.6
ARTI  Arti            43.08 324  P      P       00 36 17.5 -0.6
ARTI                             pmax   pmax
      comp=Z,5.0nm,0.5s
MA2   Magadan         43.95  32ceP      P       00 36 26.4 +1.4
MA2                              pmax   pmax
      comp=Z,19nm,1.7s
TIXI  Tiksi           45.24  10  P      P       00 36 34.2 -0.8
TIXI  Tiksi           45.24  10  LR     LR      00 59 25.3
      comp=Z,158nm,19.0s,baz=210,slow=41
TIXI  Tiksi           45.24  10ceP      P       00 36 34.9 -0.2
TIXI                             pmax   pmax
      comp=Z,51nm,1.7s
PETK  Petropavlovsk-  45.64  42  P      P       00 36 38.4 -0.2
PETK  Petropavlovsk-  45.64  42  P      P       00 36 38.9 +0.3
      comp=Z,0.9nm,0.6s,baz=234,slow=8.6,SNR=3.8
PETK                             PcP    PcP     00 38 15.9 -0.8
      comp=Z,0.6nm,0.6s,baz=264,slow=5.8,SNR=1.4
      comp=Z,0.9nm,0.6s
SEY   Seymchan        46.09  28ceP      P       00 36 43.1 +1.2
SEY                              pmax   pmax
      comp=Z,12nm,1.7s
AKT   Akhty           47.87 302 eP      P       00 36 56.2 -0.1
AKT                             e*SP    sP      00 37 02.5 +1.6
AKT                             e               00 38 18.3
AKT                             e               00 38 42.7
AKT                              pmax   pmax
      comp=Z,6.0nm,0.6s
KNRA  Kununurra       49.53 149  P      P       00 37 08.7 -0.5
GNI   Garni           50.24 300  P      P       00 37 13.7 -0.9
GNI   Garni           50.24 300  P      P       00 37 13.7 -0.9
GNI                              pmax   pmax
      comp=Z,5.0nm,1.0s
FITZ  Fitzroy Crossi  50.40 154  P      P       00 37 17.0 +1.3
      comp=Z,4.8nm,1.1s,baz=328,slow=6.8,SNR=1.7
      comp=Z,4.8nm,1.1s
KBZ   Khabaz          51.28 305  P      P       00 37 22.7 +0.5
      comp=Z,1.2nm,0.6s,baz=78,slow=9.3,SNR=4.5
      comp=Z,1.2nm,0.6s
KBZ   Khabaz          51.28 305ceP      P       00 37 24.6 +2.5
MBWA  Marble Bar      51.32 162  P      P       00 37 21.8 -0.8
MBWA                             IAmb   IAmb    00 38 14.8
      comp=Z,49nm,1.5s
KIV   Kislovodsk      51.42 305  P      P       00 37 23.4 +0.1
KIV                              IAmb   IAmb    00 37 34.0
      comp=Z,12nm,0.8s
KIV   Kislovodsk      51.42 305 eP      P       00 37 23.7 +0.4
KIV                              pmax   pmax
      comp=Z,13nm,1.1s
KIV                              pmax   pmax
      comp=Z,63nm,16.0s
GURO  Guroymak-BITLI  52.53 298  P      P       00 37 31.3 -0.4
RAYN  Ar Rayn         53.20 279  P      P       00 37 35.9 -0.9
RAYN                             IAmb   IAmb    00 37 38.1
      comp=Z,5.2nm,0.6s
RAYN  Ar Rayn         53.20 279  P      P       00 37 35.9 -0.9
RAYN                             pmax   pmax
      comp=Z,5.0nm,0.6s
BILL  Bilibino        53.30  24  P      P       00 37 36.5 -0.3
BILL                             IAmb   IAmb    00 37 37.6
      comp=Z,20nm,1.4s
BILL  Bilibino        53.30  24ceP      P       00 37 37.0 +0.2
BILL                             pmax   pmax
      comp=Z,15nm,1.7s
VORR  Voronezh        53.42 315 eP      P       00 37 35.4 -2.5
VORR                             pmax   pmax
      comp=Z,9.0nm,0.8s
VSR   Storozhevoye    53.46 314 eP      P       00 37 35.7 -2.5
VSR                              pmax   pmax
      comp=Z,6.0nm,0.8s
LPSR  Galich'ya Gora  53.59 316 eP      P       00 37 37.4 -1.7
LPSR                             pmax   pmax
      comp=Z,10.0nm,0.8s
KLMR  Klimovskoe      53.69 326 eP      P       00 37 37.3 -2.4
KLMR                            e               00 38 43.5
KLMR                             pmax   pmax
      comp=Z,28nm,1.3s
MOS   Moscow          54.37 320 eP      P       00 37 43.8 -1.0
MOS                             eS      S       00 45 22.9 +0.1
MOS                              pmax   pmax
      comp=Z,26nm,0.8s
OBN   Obninsk         54.97 319 eP      P       00 37 49.5 +0.4
OBN                             e               00 38 48.2
OBN                             ePPP    PPP     00 41 03.4
OBN                              pmax   pmax
      comp=Z,22nm,1.7s
PMG   Port Moresby    55.47 126  P      P       00 37 53.9 +0.6
PMG   Port Moresby    55.47 126  P      P       00 37 53.9 +0.6
PMG                              pmax   pmax
      comp=Z,30nm,0.9s
WB0   Warramunga Arr  55.73 146  P      P       00 37 54.3 -0.7
WB0                              IAmb   IAmb    00 39 19.6
      comp=Z,38nm,1.9s
WRA   Warramunga Arr  55.85 146  P      P       00 37 55.1 -0.8
WRA   Warramunga Arr  55.85 146  P      P       00 37 55.5 -0.4
      comp=Z,6.8nm,0.8s,baz=327,slow=7.4,SNR=26
      comp=Z,6.8nm,0.8s
WRA   Warramunga Arr  55.85 146 i P     P       00 37 55.7 -0.2
WRA                              pmax   pmax
      comp=Z,7.0nm,0.7s
COEN  Coen            56.07 134  P      P       00 37 57.4 -0.2
SIM   Simferopol'     57.40 307 eP      P       00 38 09.3 +2.6
SIM                              pmax   pmax
      comp=Z,20nm,0.8s
BR131 Keskin Array S  58.72 301         P       00 38 15.8 -0.5
BR131 Keskin Array S  58.72 301  P      P       00 38 15.8 -0.5
BR131                            pmax   pmax
      comp=Z,7.0nm,1.4s
BRTR  Keskin Array B  58.72 301         P       00 38 15.6 -0.7
BRTR  Keskin Array B  58.72 301  P      P       00 38 15.3 -1.0
      comp=Z,1.4nm,0.6s,baz=115,slow=5.3,SNR=13
      comp=Z,1.4nm,0.6s
BRTR  Keskin Array B  58.72 301  P      P       00 38 15.6 -0.7
AS31  Alice Springs   58.83 149         P       00 38 16.6 -0.3
ASAR  Alice Springs   58.83 149  P      P       00 38 16.9  0.0
      comp=Z,3.5nm,0.7s,baz=324,slow=6.7,SNR=30
ASAR                             PcP    PcP     00 39 06.2 -0.2
      comp=Z,1.3nm,0.6s,baz=336,slow=4.0,SNR=5.1
      comp=Z,3.5nm,0.7s
MMAI  Mount Meron Ar  58.97 293  P      P       00 38 17.4 -0.6
      comp=Z,0.2nm,0.2s,baz=60,slow=12,SNR=2.5
      comp=Z,0.2nm,0.2s
ANTO  Ankara          59.33 302  P      P       00 38 20.0 -0.4
ANTO                             IAmb   IAmb    00 38 21.0
      comp=Z,7.1nm,0.8s
ANTO  Ankara          59.33 302  P      P       00 38 20.0 -0.4
ANTO                             pmax   pmax
      comp=Z,7.0nm,0.8s
KEV   Kevo            59.47 337  P      P       00 38 20.5 -0.2
KEV   Kevo            59.47 337  P      P       00 38 20.5 -0.2
KEV                              pmax   pmax
      comp=Z,113nm,1.9s
AKASG Malin Array Be  59.76 314  P      P       00 38 22.2 -0.8
      comp=Z,3.3nm,0.7s,baz=68,slow=7.3,SNR=14
      comp=Z,3.3nm,0.7s
KIEV  Kiev            59.77 314         P       00 38 22.2 -0.8
KIEV                             IAmb   IAmb    00 38 22.8
      comp=Z,3.5nm,0.6s
KIEV  Kiev            59.77 314  P      P       00 38 22.3 -0.8
KIEV                             pmax   pmax
      comp=Z,3.0nm,0.6s
ARCES ARCESS Array B  60.00 336  P      P       00 38 23.7 -0.7
ARCES ARCESS Array B  60.00 336  P      P       00 38 24.0 -0.4
      comp=Z,4.4nm,0.8s,baz=83,slow=6.0,SNR=16
      comp=Z,4.4nm,0.8s
ARCES ARCESS Array B  60.00 336  P      P       00 38 24.0 -0.4
MNK   Minsk           60.02 319 i P     P       00 38 24.0 -0.8
      comp=E,5.0nm,1.3s
MNK                             i P     P       00 38 24.0 -0.8
      comp=N,3.0nm,0.9s
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MNK				*i* P	**P**	**00 38 24.0**	**-0.8**
	comp=Z,5.0nm,0.9s,baz=82						
MNK				*i* PP	**PP**	**00 40 37.2**	**+0.3**
MNK				*i* PPP	PPP	00 41 58.9	
MNK				*i* S	**S**	**00 46 37.8**	**+0.4**
MNK				*i* SS	**SS**	**00 50 36.6**	**+3.1**
MNK				*i* SSS	SSS	00 53 19.1	
MNK				*i* LQ	LQ	01 00 06.0	
MNK				*i* LR	LR	01 03 48.3	
MNK				*i* LRM	MLR	01 05 15.5	
	comp=Z,74nm,14.7s						
MNK				*i* LRM	MLR	01 06 50.1	
	comp=E,59nm,16.8s						
MNK				*i* LRM	MLR	01 06 56.3	
	comp=N,52nm,17.5s						
MNK	**Minsk**	**60.02**	**319**	*i* P	**P**	**00 38 24.0**	**-0.8**
MNK				*i*		00 40 37.1	
MNK				*i* PPP	PPP	00 41 58.8	
MNK				*i* S	**S**	**00 46 37.7**	**+0.4**
MNK				*i* SS	**SS**	**00 50 36.6**	**+3.1**
MNK				pmax	pmax		
	comp=N,3.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MNK				pmax	pmax		
	comp=E,5.0nm,1.3s						
MNK				MLR	MLR		
	comp=Z,74nm,15.0s						
MNK				MLR	MLR		
	comp=E,59nm,17.0s						
MNK				MLR	MLR		
	comp=N,52nm,18.0s						
CSS	**Mathiatis**	**60.11**	**296**	P	**P**	**00 38 25.0**	**-0.8**
CSS				IAmb	IAmb	00 38 29.1	
	comp=Z,4.5nm,0.8s						
FINES	**FINESS Array B**	**60.20**	**327**	P	**P**	**00 38 25.1**	**-0.7**
FINES	**FINESS Array B**	**60.20**	**327**	P	**P**	**00 38 23.9**	**-2.0**
	comp=Z,4.4nm,0.8s,baz=100,slow=7.2,SNR=14						
	comp=Z,4.4nm,0.8s						
FINES	**FINESS Array B**	**60.20**	**327**	*i* P	**P**	**00 38 25.7**	**-0.2**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BORA	**Eskisehir**	**61.08**	**302**		**P**	**00 38 31.0**	**-1.4**
BORA				IAmb	IAmb	00 38 32.1	
	comp=Z,3.7nm,0.6s						
VLDR	**Vladesti**	**61.41**	**309**	⇑P	**P**	**00 38 34.6**	**+0.2**
TIRR	**Tirgusor**	**61.48**	**308**	P	**P**	**00 38 34.0**	**-0.9**
TIRR				IAmb	IAmb	00 38 35.5	
	comp=Z,4.6nm,0.8s						
TIRR	**Tirgusor**	**61.48**	**308**	⇑P	**P**	**00 38 34.0**	**-0.9**
TIRR	**Tirgusor**	**61.48**	**308**	P	**P**	**00 38 34.0**	**-0.9**
CFR	**Carcaliu**	**61.52**	**308**	⇑P	**P**	**00 38 34.9**	**-0.3**
CFR	**Carcaliu**	**61.52**	**308**	P	**P**	**00 38 34.8**	**-0.3**
GAMB	**Gambell**	**62.00**	**30**	P	**P**	**00 38 38.1**	**0.0**
	baz=278						
PABE	**Paberze**	**62.09**	**321**		**P**	**00 38 38.1**	**-0.7**
SPITS	**Spitsbergen Ar**	**62.11**	**347**	P	**P**	**00 38 38.0**	**-0.6**
	comp=Z,3.6nm,0.8s,baz=81,slow=9.3,SNR=7.7						
SPITS				PcP	**PcP**	**00 39 17.9**	**-0.9**
	comp=Z,1.3nm,0.5s,baz=100,slow=5.0,SNR=6.4						
	comp=Z,3.6nm,0.8s						
TESR	**Tescani**	**62.23**	**310**	⇑P	**P**	**00 38 39.4**	**-0.6**
ELL	**Elmali**	**62.30**	**299**		**P**	**00 38 39.8**	**-0.9**
ELL	**Elmali**	**62.30**	**299**	P	**P**	**00 38 39.8**	**-0.9**
ELL				pmax	pmax		
	comp=Z,23nm,0.5s						
VRI	**Vrincioaia**	**62.33**	**309**	⇓P	**P**	**00 38 41.2**	**+0.6**
VRI	**Vrincioaia**	**62.33**	**309**	P	**P**	**00 38 41.2**	**+0.6**
PLOR	**Plostina**	**62.38**	**309**	⇓P	**P**	**00 38 41.7**	**+0.6**
PLOR	**Plostina**	**62.38**	**309**	P	**P**	**00 38 41.6**	**+0.6**
ONER	**Baraj Valea Uz**	**62.45**	**310**	⇑P	**P**	**00 38 42.0**	**+0.6**
CTAO	**Charters Tower**	**62.60**	**136**	P	**P**	**00 38 42.9**	**+0.2**
CTAO	**Charters Tower**	**62.60**	**136**	P	**P**	**00 38 42.9**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,55nm,1.8s						
OZUR		**62.91**	**310**	⇓P	**P**	**00 38 45.1**	**+0.5**
BURAR	**Bucovina Array**	**62.94**	**312**	P	**P**	**00 38 44.3**	**-0.5**
BURAR				IAmb	IAmb	00 41 00.7	
	comp=Z,5.6nm,1.0s						
BURAR	**Bucovina Array**	**62.94**	**312**	⇓P	**P**	**00 38 44.1**	**-0.6**
BURAR	**Bucovina Array**	**62.94**	**312**	P	**P**	**00 38 44.1**	**-0.6**
BUR08	**Bucovina Ar. S**	**62.94**	**312**		**P**	**00 38 44.2**	**-0.6**
BUR08				IAmb	IAmb	00 41 02.5	
	comp=Z,11nm,1.4s						
MLR	**Muntele Rosu**	**62.95**	**309**		**P**	**00 38 44.3**	**-0.6**
MLR				IAmb	IAmb	00 41 02.2	
	comp=Z,20nm,1.4s						
MLR	**Muntele Rosu**	**62.95**	**309**	⇓P	**P**	**00 38 45.3**	**+0.4**
MLR	**Muntele Rosu**	**62.95**	**309**	P	**P**	**00 38 45.3**	**+0.4**
BOSR	**Bodos**	**63.00**	**310**	⇓P	**P**	**00 38 45.9**	**+0.8**
TNA	**Tin City**	**63.33**	**28**	P	**P**	**00 38 46.6**	**-0.2**
	baz=280						
VOIR		**63.57**	**309**	⇓P	**P**	**00 38 48.6**	**-0.4**
VOIR		**63.57**	**309**	P	**P**	**00 38 48.6**	**-0.4**
C16K	**Lisburne Hills**	**63.83**	**25**	P	**P**	**00 38 50.4**	**+0.3**
C16K	**Lisburne Hills**	**63.83**	**25**	P	**P**	**00 38 49.4**	**-0.7**
	baz=281						
SPIA	**Saint Paul Isl**	**63.87**	**37**	P	**P**	**00 38 50.3**	**-0.3**
	baz=282						
F14K	**Arctic Creek**	**64.00**	**28**	P	**P**	**00 38 50.6**	**-0.7**
	baz=282						
ALN	**Alexandroupoli**	**64.06**	**304**	P	**P**	**00 38 51.4**	**-0.8**
ALN	**Alexandroupoli**	**64.06**	**304**	P	**P**	**00 38 51.4**	**-0.8**
ALN				pmax	pmax		
	comp=Z,4.0nm,1.4s						
P08K	**Saint George I**	**64.37**	**38**	P	**P**	**00 38 53.4**	**-0.5**
	baz=283						
KOLS	**Kolonicke sedl**	**64.53**	**314**	*e*P	**P**	**00 38 57.4**	**+2.3**
KOLS	**Kolonicke sedl**	**64.53**	**314**	*e*P	**P**	**00 38 57.4**	**+2.3**
MARR	**Marisel-Cluj**	**64.56**	**311**	⇑P	**P**	**00 38 55.7**	**+0.3**
C17K	**DeLong Mountai**	**64.57**	**24**	P	**P**	**00 38 54.6**	**-0.4**
	baz=283,SNR=5.2						
ANM	**Nome**	**64.59**	**29**	P	**P**	**00 38 54.7**	**-0.6**
	baz=283						
F15K	**North Star Dit**	**64.63**	**27**	P	**P**	**00 38 55.7**	**+0.2**
F15K				IAmb	IAmb	00 38 57.2	
	comp=Z,16nm,0.9s						
F15K	**North Star Dit**	**64.63**	**27**	P	**P**	**00 38 55.3**	**-0.2**
	baz=283						
KARP	**Karpathos**	**64.78**	**298**	P	**P**	**00 38 56.3**	**-0.7**
D17K	**Noatak River**	**64.78**	**25**	P	**P**	**00 38 56.5**	**+0.1**
	baz=283,SNR=8.4						
B18K	**Kokolik River**	**64.85**	**23**	P	**P**	**00 38 56.9**	**+0.1**
	baz=284						
A19K	**Wainwright**	**64.89**	**22**	P	**P**	**00 38 56.4**	**-0.7**
	baz=284						
G15K	**Niukluk**	**65.04**	**28**	P	**P**	**00 38 57.9**	**-0.3**
	baz=284						
M11K	**Mekoryuk**	**65.19**	**33**	P	**P**	**00 38 58.6**	**-0.5**
	baz=284						
C18K	**Utukok River**	**65.24**	**24**		**P**	**00 38 59.6**	**+0.2**
C18K				IAmb	IAmb	00 39 00.7	
	comp=Z,12nm,0.8s						
C18K	**Utukok River**	**65.24**	**24**	P	**P**	**00 38 59.6**	**+0.2**
	baz=285,SNR=5.5						
E17K	**Hotham Inlet**	**65.41**	**25**	P	**P**	**00 39 00.5**	**+0.1**
	baz=285						
HERR	**Herculane**	**65.52**	**309**	⇓P	**P**	**00 39 02.0**	**+0.4**
K13K	**Kusilvak Mount**	**65.53**	**31**	P	**P**	**00 39 01.3**	**0.0**
	baz=285,SNR=12						
G16K	**Koyuk River**	**65.63**	**27**	P	**P**	**00 39 02.0**	**+0.1**
	baz=285						
C19K	**Lookout Ridge**	**65.68**	**23**	P	**P**	**00 39 03.1**	**+0.8**
C19K	**Lookout Ridge**	**65.68**	**23**	P	**P**	**00 39 02.5**	**+0.2**
	baz=286,SNR=14						
OJC	**Ojcow**	**65.75**	**315**	P	**P**	**00 39 02.8**	**-0.2**
OJC	**Ojcow**	**65.75**	**315**	P	**P**	**00 39 02.8**	**-0.2**
E18K	**Tukpahlearik C**	**65.77**	**25**	P	**P**	**00 39 02.7**	**-0.2**
	baz=286						
F17K	**Baldwin Pennin**	**65.79**	**26**	P	**P**	**00 39 02.8**	**-0.1**
	baz=286						
J14K	**Nanvaranak Lak**	**65.81**	**30**	P	**P**	**00 39 02.9**	**-0.3**
	baz=285,SNR=5.8						
H16K	**Elim**	**65.88**	**28**	P	**P**	**00 39 03.1**	**-0.5**
	baz=286						
A21K	**Barrow**	**66.01**	**20**	P	**P**	**00 39 04.4**	**+0.1**
	baz=288						
B20K	**Meade River**	**66.24**	**22**	P	**P**	**00 39 06.5**	**+0.7**
B20K	**Meade River**	**66.24**	**22**	P	**P**	**00 39 06.0**	**+0.2**
	baz=288						
G17K	**Kiwalik Mounta**	**66.29**	**27**	P	**P**	**00 39 06.1**	**-0.2**
	baz=286						
F18K	**Selawik**	**66.36**	**26**	P	**P**	**00 39 06.6**	**0.0**
	baz=287						
D19K	**Kuna River**	**66.37**	**24**	P	**P**	**00 39 06.8**	**+0.1**
	baz=287,SNR=12						
HFS	**Hagfors**	**66.40**	**327**	P	**P**	**00 39 06.3**	**-0.8**
	comp=Z,3.5nm,0.8s,baz=76,slow=6.1,SNR=14						
	comp=Z,3.5nm,0.8s						
M13K	**Dall Lake**	**66.55**	**33**	P	**P**	**00 39 08.2**	**+0.3**
	baz=286						
L14K	**Kuka Creek**	**66.59**	**32**	P	**P**	**00 39 08.3**	**+0.1**
	baz=287,SNR=14						
A22K	**Sinclair Lake**	**66.62**	**21**	P	**P**	**00 39 08.1**	**-0.1**
	baz=289						
IDI	**Anoyia**	**66.62**	**299**	P	**P**	**00 39 08.0**	**-1.0**
I17K	**Unalakleet**	**66.74**	**29**	P	**P**	**00 39 08.8**	**-0.3**
	baz=287						
H17K	**Granite Mounta**	**66.75**	**27**	P	**P**	**00 39 09.1**	**-0.1**
	baz=287,SNR=6.4						
UNV	**Unalaska Valle**	**66.76**	**40**	P	**P**	**00 39 09.1**	**-0.3**
	baz=287						
D20K	**Etivluk River**	**66.83**	**23**	P	**P**	**00 39 09.7**	**+0.1**
	baz=289,SNR=33						
VYHS	**Vyhne**	**66.84**	**314**	*e*P	**P**	**00 39 10.3**	**+0.3**
VYHS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
VYHS	**Vyhne**	**66.84**	**314**	*e*P	**P**	**00 39 10.3**	**+0.3**
K15K	**Wolf Creek Mou**	**66.84**	**30**	P	**P**	**00 39 10.0**	**+0.2**
	baz=287,SNR=5.2						
J16K	**Anvik River**	**66.96**	**29**	P	**P**	**00 39 10.4**	**-0.1**
	baz=288						
G18K	**Tagagawik**	**66.96**	**26**	P	**P**	**00 39 10.3**	**-0.2**
	baz=288						
F19K	**Shaleruckik Mo**	**67.00**	**25**	P	**P**	**00 39 10.7**	**0.0**
	baz=288						
E19K	**Redstone River**	**67.01**	**25**	P	**P**	**00 39 10.9**	**+0.1**
	baz=289,SNR=9.1						
L15K	**Ungalak Mounta**	**67.05**	**31**	P	**P**	**00 39 11.0**	**-0.1**
	baz=287						
NC405	**NORSAR Array S**	**67.05**	**328**	P	**P**	**00 39 10.5**	**-0.7**
STEB	**Steborice**	**67.08**	**316**	*e*P	**P**	**00 39 11.5**	**0.0**
M14K	**Bethel**	**67.10**	**32**	P	**P**	**00 39 11.9**	**+0.4**
	baz=287,SNR=7.3						
E20K	**Nigu River**	**67.12**	**24**	P	**P**	**00 39 11.9**	**+0.3**
	baz=289,SNR=14						
B21K	**Ikpikpuk River**	**67.20**	**22**	P	**P**	**00 39 12.4**	**+0.5**
	baz=290,SNR=13						
MAUC	**Maruska**	**67.21**	**315**	*e*P	**P**	**00 39 12.8**	**+0.3**
MORC	**Moravsky Berou**	**67.27**	**315**	*e*P	**P**	**00 39 13.0**	**+0.2**
C21K	**Knifeblade Rid**	**67.30**	**22**	P	**P**	**00 39 13.0**	**+0.4**
	baz=290,SNR=8.9						
NB2	**NORSAR Subarra**	**67.31**	**328**	P	**P**	**00 39 11.5**	**-1.3**
	comp=Z,3.4nm,0.7s,baz=74,slow=6.5						
NOA	**NORSAR Array B**	**67.31**	**328**	P	**P**	**00 39 11.6**	**-1.3**
	comp=Z,2.1nm,0.7s,baz=73,slow=6.4,SNR=10						
	comp=Z,2.1nm,0.7s						
H18K	**Honhosa River**	**67.31**	**27**	P	**P**	**00 39 13.2**	**+0.5**
	baz=289						
B22K	**Teshekpuk Lake**	**67.33**	**21**	P	**P**	**00 39 13.4**	**+0.7**
	baz=291						
SRO	**Srobarova**	**67.38**	**313**	*e*P	**P**	**00 39 16.1**	**+2.7**
SRO	**Srobarova**	**67.38**	**313**	*e*P	**P**	**00 39 16.1**	**+2.7**
JAVC	**Velka Javorina**	**67.47**	**314**	*e*P	**P**	**00 39 15.2**	**+1.1**
N14K	**Kuskokwak Cree**	**67.48**	**33**	P	**P**	**00 39 14.5**	**+0.7**
	baz=288						
G19K	**Purcell Mounta**	**67.49**	**26**	P	**P**	**00 39 14.2**	**+0.3**
	baz=289						
J17K	**VABM Dome**	**67.58**	**29**	P	**P**	**00 39 15.0**	**+0.5**
	baz=289,SNR=5.3						
MORH	**Mrgy, Hungar**	**67.65**	**311**	⇓P	**P**	**00 39 15.3**	**+0.1**
F20K	**Avaraart Lake**	**67.70**	**25**	P	**P**	**00 39 15.4**	**+0.3**
	baz=290,SNR=8.3						
M15K	**Kasigluk River**	**67.72**	**32**	P	**P**	**00 39 16.5**	**+1.2**
	baz=288,SNR=5.2						
E21K	**Killik River**	**67.83**	**23**	P	**P**	**00 39 16.5**	**+0.5**
	baz=291						
DPC	**Dobruska-Polom**	**67.84**	**316**	*e*P	**P**	**00 39 17.0**	**+0.6**
DPC				AMS	AMS	01 10 00.0	
	comp=Z,100nm,15.6s						
DPC	**Dobruska-Polom**	**67.84**	**316**	*e*P	**P**	**00 39 17.0**	**+0.6**
DPC				MLR	MLR		
	comp=Z,100nm,15.6s						
H19K	**Roundabout Mou**	**67.94**	**26**	P	**P**	**00 39 17.4**	**+0.7**
	baz=290,SNR=11						
L16K	**Owhat River**	**67.95**	**31**	P	**P**	**00 39 17.8**	**+1.0**
	baz=289						
VRAC	**Vranov**	**68.00**	**315**	*e*P	**P**	**00 39 17.8**	**+0.4**
GCSA	**Galena City Sc**	**68.04**	**27**	P	**P**	**00 39 18.1**	**+0.8**
	baz=290						
D22K	**Ayikyak River**	**68.11**	**22**		**P**	**00 39 18.5**	**+0.8**
D22K	**Ayikyak River**	**68.11**	**22**	P	**P**	**00 39 18.7**	**+0.9**
	baz=292,SNR=20						
K17K	**Iditarod**	**68.13**	**30**	P	**P**	**00 39 19.1**	**+1.2**
	baz=290,SNR=19						
N15K	**Kwethluk River**	**68.17**	**32**	P	**P**	**00 39 19.5**	**+1.2**
	baz=289,SNR=6.5						
KRUC	**Moravsky**	**68.20**	**315**	*e*P	**P**	**00 39 18.9**	**+0.3**
L17K	**Donlin**	**68.33**	**30**	P	**P**	**00 39 20.5**	**+1.3**
	baz=290,SNR=8.6						
M16K	**Timber Creek**	**68.41**	**31**	P	**P**	**00 39 20.9**	**+1.1**
	baz=290,SNR=7.0						
C23K	**Itkillik River**	**68.41**	**21**	P	**P**	**00 39 20.0**	**+0.5**
	baz=294,SNR=13						
F21K	**Alatna River**	**68.45**	**24**	P	**P**	**00 39 20.4**	**+0.5**
	baz=292,SNR=8.1						
KONO	**Kongsberg**	**68.52**	**327**	P	**P**	**00 39 20.1**	**-0.3**
KONO	**Kongsberg**	**68.52**	**327**	P	**P**	**00 39 20.1**	**-0.3**
KONO				pmax	pmax		
	comp=Z,48nm,1.7s						
J18K	**Innoko River**	**68.55**	**29**	P	**P**	**00 39 21.3**	**+0.7**
	baz=291,SNR=17						
H20K	**Anotleneega Mo**	**68.57**	**26**	P	**P**	**00 39 21.3**	**+0.7**
	baz=291,SNR=14						
O15K	**Ungalikthiuk R**	**68.62**	**33**	P	**P**	**00 39 22.2**	**+1.1**
	baz=290						
N16K	**Nishlik Lake**	**68.68**	**32**	P	**P**	**00 39 22.6**	**+1.1**
	baz=290						
E22K	**Anaktuvuk Pass**	**68.69**	**23**	P	**P**	**00 39 22.0**	**+0.5**
	baz=293,SNR=15						
RONA	**Rosalia, Austr**	**68.70**	**314**	*i* P	**P**	**00 39 21.6**	**-0.3**
	comp=Z,2.4nm,0.9s						
G21K	**Allakaket**	**68.71**	**25**	P	**P**	**00 39 21.7**	**+0.2**
	baz=292,SNR=15						
D23K	**Nanushuk River**	**68.74**	**22**		**P**	**00 39 22.6**	**+0.9**
D23K				IAmb	IAmb	00 39 23.6	
	comp=Z,13nm,0.8s						
D23K	**Nanushuk River**	**68.74**	**22**	P	**P**	**00 39 22.7**	**+1.0**
	baz=294,SNR=11						
F22K	**John River**	**68.81**	**24**	P	**P**	**00 39 23.4**	**+1.2**
	baz=293						
IMAR	**Indian Mountai**	**68.82**	**25**	P	**P**	**00 39 22.2**	**0.0**
J19K	**Poorman**	**68.82**	**28**	P	**P**	**00 39 23.3**	**+1.0**
	baz=291,SNR=11						
CONA	**Conrad Observa**	**68.90**	**314**	*i* P	**P**	**00 39 23.3**	**+0.1**
	comp=Z,1.7nm,0.6s,SNR=5.2						
GOPC	**GO Pecny, Ondr**	**68.92**	**316**	AMS	AMS	01 10 50.0	
	comp=Z,100nm,16.8s						
KEK	**Kerkira**	**68.97**	**305**	P	**P**	**00 39 22.9**	**-0.7**
KEK				IAmb	IAmb	00 41 43.6	
	comp=Z,12nm,1.0s						
M17K	**Holitna River**	**68.97**	**31**	P	**P**	**00 39 24.5**	**+1.3**
	baz=291,SNR=7.5						
L18K	**Granite Mounta**	**69.01**	**30**	P	**P**	**00 39 24.5**	**+1.0**
	baz=291						
PRU	**Pruhonice**	**69.04**	**316**	AMS	AMS	01 11 00.0	
	comp=Z,100nm,15.3s						
C24K	**Franklin Bluff**	**69.07**	**21**	P	**P**	**00 39 24.6**	**+1.0**
	baz=295						
PRA	**Prague**	**69.08**	**316**	AMS	AMS	01 10 50.0	
	comp=Z,100nm,16.4s						
BRG	**Berggiesshubel**	**69.11**	**317**	*e*P	**P**	**00 39 24.3**	**0.0**
BRG				Amp		00 39 24.8	
	comp=Z,2.8nm,0.8s						
TOLK	**Toolik Lake Re**	**69.24**	**22**	P	**P**	**00 39 25.5**	**+0.7**
TOLK				IAmb	IAmb	00 39 26.3	
	comp=Z,7.7nm,0.6s						
TOLK	**Toolik Lake Re**	**69.24**	**22**	P	**P**	**00 39 25.3**	**+0.5**
	baz=295						
D24K	**Happy Valley**	**69.27**	**22**	P	**P**	**00 39 25.3**	**+0.3**
	baz=295,SNR=5.8						
G22K	**Bettles**	**69.28**	**24**	P	**P**	**00 39 25.2**	**+0.2**
	baz=294						
H21K	**Melozitna Rive**	**69.30**	**26**	P	**P**	**00 39 26.0**	**+0.7**
	baz=293,SNR=11						
O16K	**Kokwok River B**	**69.31**	**33**	P	**P**	**00 39 26.4**	**+1.0**
	baz=291,SNR=7.6						
ARSA	**Arzberg**	**69.35**	**313**	*e*P	**P**	**00 39 26.0**	**+0.2**
	comp=Z,1.1nm,0.4s						
J20K	**Nowinta River**	**69.35**	**27**	P	**P**	**00 39 26.5**	**+0.9**
	baz=292,SNR=16						
STKA	**Stephens Creek**	**69.37**	**147**	P	**P**	**00 39 26.1**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=324,slow=9.6,SNR=3.7						
	comp=Z,0.9nm,0.3s						
N17K	**Nushagak Hills**	**69.40**	**32**	P	**P**	**00 39 26.9**	**+1.0**
N17K				IAmb	IAmb	00 39 28.0	
	comp=Z,7.6nm,0.7s						
N17K	**Nushagak Hills**	**69.40**	**32**	P	**P**	**00 39 27.1**	**+1.2**
	baz=291						
ZVC	**Zvikov**	**69.44**	**316**	*e*P	**P**	**00 39 26.2**	**-0.2**
ZVC				AMS	AMS	01 11 10.0	
	comp=Z,100nm,18.6s						
E23K	**Chandalar**	**69.47**	**23**	P	**P**	**00 39 26.8**	**+0.5**
	baz=295,SNR=18						
CKRC	**Cesky Krumlov**	**69.58**	**315**	*e*P	**P**	**00 39 27.6**	**+0.3**
SDPT	**Sand Point**	**69.61**	**37**	P	**P**	**00 39 27.9**	**+0.7**
	baz=291						
COLD	**Coldfoot**	**69.62**	**24**	P	**P**	**00 39 27.9**	**+0.7**
	baz=295						
M18K	**Stony River**	**69.66**	**30**	P	**P**	**00 39 28.4**	**+0.9**
	baz=292,SNR=6.7						
K20K	**Telida**	**69.70**	**28**	P	**P**	**00 39 28.7**	**+0.9**
	baz=293						
O17K	**Koliganek Bris**	**69.72**	**32**	P	**P**	**00 39 28.7**	**+0.9**
	baz=292						
H22K	**Ishtalitna Cre**	**69.75**	**25**	P	**P**	**00 39 28.9**	**+0.9**
	baz=294,SNR=7.1						
L19K	**White Mountain**	**69.82**	**29**	P	**P**	**00 39 29.5**	**+1.0**
	baz=293,SNR=9.5						
E24K	**Your Creek**	**69.85**	**23**	P	**P**	**00 39 29.4**	**+0.7**
	baz=296,SNR=26						
SOKA	**Soboth**	**69.86**	**313**	*e*P	**P**	**00 39 28.7**	**-0.4**
	comp=Z,1.8nm,0.5s,SNR=4.6						
G23K	**Bananza Creek**	**69.90**	**24**		**P**	**00 39 29.2**	**+0.2**
G23K				IAmb	IAmb	00 39 30.0	
	comp=Z,4.3nm,0.8s						
G23K	**Bananza Creek**	**69.90**	**24**	P	**P**	**00 39 29.6**	**+0.6**
	baz=295,SNR=9.1						
KHC	**Kasperske Hory**	**69.92**	**316**	*e*P	**P**	**00 39 29.0**	**-0.4**
KHC				AMS	AMS	01 11 20.0	
	comp=Z,100nm,13.1s						
KHC	**Kasperske Hory**	**69.92**	**316**	*e*P	**P**	**00 39 29.0**	**-0.4**
KHC				MLR	MLR		
	comp=Z,100nm,13.1s						
N18K	**Kilae Creek**	**69.94**	**31**	P	**P**	**00 39 30.1**	**+0.9**
	baz=292						
MOA	**Molln**	**69.94**	**314**	*i* P	**P**	**00 39 29.9**	**+0.4**
	comp=Z,3.0nm,1.0s						
GEC2	**GERESS Array S**	**69.95**	**315**	P	**P**	**00 39 29.0**	**-0.6**
GEC2				IAmb	IAmb	00 41 15.8	
	comp=Z,19nm,1.4s						
GERES	**GERESS Array B**	**69.95**	**315**	P	**P**	**00 39 29.2**	**-0.4**
	comp=Z,1.7nm,0.5s,baz=69,slow=5.7,SNR=21						
	comp=Z,1.7nm,0.5s						
D25K	**Kavik River**	**69.98**	**21**	P	**P**	**00 39 29.9**	**+0.5**
	baz=297,SNR=9.9						
L20K	**Farewell, AK**	**70.12**	**29**	P	**P**	**00 39 31.4**	**+1.1**
	baz=293						
M19K	**Big River Lodg**	**70.13**	**30**	P	**P**	**00 39 31.6**	**+1.2**
	baz=293,SNR=7.2						
C26K	**Camden Bay**	**70.15**	**20**	P	**P**	**00 39 31.2**	**+0.9**
	baz=298						
CHUM	**Lake Minchumin**	**70.21**	**27**	P	**P**	**00 39 32.1**	**+1.3**
	baz=294						
OBKA	**Obir**	**70.23**	**313**	*e*P	**P**	**00 39 31.5**	**+0.1**
	comp=Z,8.7nm,1.5s						
P17K	**Kvichak River**	**70.24**	**33**	P	**P**	**00 39 32.2**	**+1.1**
	baz=292						
CHNA	**Chernabura Isl**	**70.27**	**38**	P	**P**	**00 39 31.6**	**+0.3**
	baz=291						
F24K	**Squaw Lake**	**70.30**	**23**	P	**P**	**00 39 32.0**	**+0.6**
	baz=297,SNR=8.1						
MLY	**Manley**	**70.35**	**26**	P	**P**	**00 39 32.4**	**+0.7**
MLY				IAmb	IAmb	00 39 33.5	
	comp=Z,9.7nm,0.7s						
MLY	**Manley**	**70.35**	**26**	P	**P**	**00 39 32.5**	**+0.7**
	baz=295,SNR=14						
BIOA	**Bad Ischl, Aus**	**70.39**	**314**	*i* P	**P**	**00 39 32.4**	**+0.1**
	comp=Z,1.8nm,0.5s						
H23K	**Yukon River**	**70.46**	**25**	P	**P**	**00 39 33.1**	**+0.8**
	baz=296,SNR=15						
CAST	**Castle Rocks**	**70.49**	**28**		**P**	**00 39 33.0**	**+0.4**
CAST				IAmb	IAmb	00 39 36.5	
	comp=Z,3.8nm,0.6s						
CAST	**Castle Rocks**	**70.49**	**28**	P	**P**	**00 39 33.4**	**+0.7**
	baz=294						
N19K	**Bonanza Creek**	**70.52**	**31**	P	**P**	**00 39 33.8**	**+0.9**
	baz=293,SNR=8.9						
O18K	**Koktuh Hills**	**70.57**	**32**	P	**P**	**00 39 34.0**	**+0.9**
	baz=293,SNR=6.8						
BPAW	**Bear Paw Mtn.**	**70.65**	**27**	P	**P**	**00 39 33.8**	**+0.3**
BPAW				IAmb	IAmb	00 39 36.1	
	comp=Z,9.5nm,0.7s						
BPAW	**Bear Paw Mtn.**	**70.65**	**27**	P	**P**	**00 39 34.4**	**+0.8**
	baz=295,SNR=18						
C27K	**Jago River**	**70.66**	**20**	P	**P**	**00 39 34.2**	**+0.8**
	baz=300,SNR=18						
PPLA	**Purkeypile**	**70.67**	**28**	P	**P**	**00 39 34.7**	**+0.9**
PPLA	**Purkeypile**	**70.67**	**28**	P	**P**	**00 39 34.7**	**+0.9**
	baz=295,SNR=12						
M20K	**Styx River**	**70.69**	**29**	P	**P**	**00 39 35.0**	**+1.1**
	baz=294,SNR=8.9						
P18K	**Big Mountain,**	**70.74**	**32**	P	**P**	**00 39 35.3**	**+1.1**
	baz=293,SNR=5.3						
E25K	**Arctic Village**	**70.80**	**22**	P	**P**	**00 39 35.1**	**+0.6**
	baz=298						
G24K	**Hadweenzic Riv**	**70.82**	**24**	P	**P**	**00 39 35.2**	**+0.7**
	baz=297,SNR=7.9						
I23K	**Minto, Yukon-K**	**70.83**	**26**	P	**P**	**00 39 35.2**	**+0.7**
	baz=296						
Q17K	**Contact Creek**	**70.87**	**34**	P	**P**	**00 39 35.4**	**+0.3**
	baz=293						
F25K	**Christian Rive**	**71.03**	**22**	P	**P**	**00 39 36.8**	**+1.0**
	baz=299,SNR=8.3						
H24K	**Noodor Dome**	**71.07**	**25**	P	**P**	**00 39 37.1**	**+1.0**
	baz=297,SNR=10						
LESA	**Schwarzleotal**	**71.10**	**314**	*i* P	**P**	**00 39 36.5**	**-0.2**
	comp=Z,6.1nm,1.0s						
Q18K	**Katmai Hardscr**	**71.14**	**33**	P	**P**	**00 39 36.7**	**0.0**
	baz=294						
GRF	**Grafenberg Arr**	**71.16**	**317**	*e*P	**P**	**00 39 36.3**	**-0.6**
	comp=Z,3.2nm,0.8s,baz=68,slow=6.8						
NEA2	**Nenana**	**71.19**	**26**	P	**P**	**00 39 37.2**	**+0.4**
NEA2	**Nenana**	**71.19**	**26**	P	**P**	**00 39 37.5**	**+0.8**
	baz=297,SNR=22						
TRF	**Thorofare Moun**	**71.21**	**27**	P	**P**	**00 39 37.6**	**+0.4**
	baz=296						
G25K	**Bearman Lake**	**71.27**	**23**	P	**P**	**00 39 38.2**	**+1.0**
	baz=298,SNR=7.4						
SKT	**Skwentna**	**71.33**	**29**		**P**	**00 39 37.8**	**+0.1**
SKT				IAmb	IAmb	00 39 39.4	
	comp=Z,6.8nm,0.6s						
SKT	**Skwentna**	**71.33**	**29**	P	**P**	**00 39 37.8**	**+0.1**
	baz=295,SNR=8.2						
ABTA	**Abfaltersbach**	**71.45**	**314**	*e*P	**P**	**00 39 37.7**	**-1.1**
	comp=Z,3.8nm,0.8s						
BMAR	**Burnt Mountain**	**71.47**	**22**	P	**P**	**00 39 39.4**	**+0.9**
F26K	**Sheenjek River**	**71.48**	**22**	P	**P**	**00 39 39.4**	**+0.8**
	baz=300,SNR=8.1						
COLA	**College**	**71.52**	**25**	P	**P**	**00 39 39.4**	**+0.7**
COLA	**College**	**71.52**	**25**	P	**P**	**00 39 39.4**	**+0.7**
	baz=298						
P19K	**Oil Pt**	**71.56**	**32**	P	**P**	**00 39 39.8**	**+0.6**
	baz=295						
POKR	**Poker Plat Res**	**71.57**	**25**	P	**P**	**00 39 40.0**	**+0.9**
	baz=298,SNR=8.5						
H25L	**Birch Creek**	**71.61**	**24**	P	**P**	**00 39 40.2**	**+0.9**
	baz=299						
MCK	**McKinley**	**71.63**	**27**	P	**P**	**00 39 40.1**	**+0.6**
	baz=297						
CCB	**Clear Creek Bu**	**71.65**	**26**		**P**	**00 39 39.5**	**0.0**
Q19K	**Cape Douglas,**	**71.67**	**32**	P	**P**	**00 39 39.8**	**-0.1**
	baz=295						
D27M	**Malcolm River**	**71.69**	**20**	P	**P**	**00 39 40.3**	**+0.5**
	baz=302						
WTTA	**Wattenberg**	**71.81**	**314**	*i* P	**P**	**00 39 40.5**	**-0.6**
	comp=Z,3.5nm,0.6s						
WATA	**Walderalm**	**71.82**	**314**	*e*P	**P**	**00 39 39.9**	**-1.2**
	comp=Z,2.1nm,1.0s						
R18K	**Karluk**	**71.85**	**34**	P	**P**	**00 39 41.1**	**+0.2**
	baz=294						
SUA	**Susitna One**	**71.89**	**29**		**P**	**00 39 41.4**	**+0.1**
SUA	**Susitna One**	**71.89**	**29**	P	**P**	**00 39 41.5**	**+0.3**
	baz=296,SNR=14						
ILAR	**Eielson Array**	**71.94**	**25**	P	**P**	**00 39 40.4**	**-0.9**
ILAR	**Eielson Array**	**71.94**	**25**	P	**P**	**00 39 40.0**	**-1.3**
	comp=Z,1.7nm,0.5s,baz=298,slow=5.2,SNR=21						
	comp=Z,1.7nm,0.5s						
ILAR	**Eielson Array**	**71.94**	**25**	P	**P**	**00 39 40.4**	**-0.9**
G26K	**Porcupine Rive**	**71.98**	**23**	P	**P**	**00 39 42.4**	**+0.9**

	baz=300						
E27K	Coleen River	72.06	21	P	P	00 39 42.6	+0.6
	baz=302,SNR=5.6						
PRP	Porcupine Dome	72.08	24		P	00 39 42.9	+0.5
PRP				IAmb	IAmb	00 39 43.9	
	comp=Z,16nm,0.7s						
PRP	Porcupine Dome	72.08	24	P	P	00 39 43.0	+0.7
	baz=299,SNR=26						
HDA	Harding Lake	72.09	26	P	P	00 39 42.3	+0.1
	baz=298						
SQTA	Sankt Quirin	72.10	314	*i* P	P	00 39 42.1	-0.7
	comp=Z,5.8nm,0.5s,SNR=4.6						
MOTA	Moosalm	72.12	315	*i* P	P	00 39 42.4	-0.5
	comp=Z,3.4nm,0.6s,SNR=4.6						
WAT1	Susitna Watana	72.20	28	P	P	00 39 43.0	0.0
	baz=298						
RETA	Reutte	72.28	315	*e*P	P	00 39 43.1	-0.7
	comp=Z,1.7nm,0.5s						
HOM	Homer	72.29	31	P	P	00 39 43.4	0.0
	baz=296						
D28M	Stokes Point	72.31	20	P	P	00 39 43.4	0.0
	baz=304						
Q20K	Shuyak Island	72.40	32	P	P	00 39 44.1	0.0
	baz=296						
SII	Sitkinak Islan	72.41	35	P	P	00 39 44.1	-0.2
	baz=295						
E28M	Babbage River	72.47	20	P	P	00 39 44.5	+0.1
	baz=304						
FDMO	Fiordimonte	72.48	310	P	P	00 39 44.9	-0.1
FETA	Feichten	72.48	314	*e*P	P	00 39 44.5	-0.5
	comp=Z,4.7nm,1.0s						
RC01	Rabbit Creek A	72.50	29	P	P	00 39 45.0	+0.3
	baz=297						
PMR	Palmer	72.53	29	P	P	00 39 45.4	+0.6
	baz=298						
GHO	Glory Hole Cre	72.53	29	P	P	00 39 45.8	+0.8
GHO				IAmb	IAmb	00 39 48.2	
	comp=Z,9.8nm,1.0s						
DHY	Denali Highway	72.56	27	P	P	00 39 45.3	+0.1
	baz=298,SNR=5.0						
OHAK	Old Harbor	72.57	34	P	P	00 39 45.8	+0.7
	baz=295						
J25K	Salcha River,	72.58	25	P	P	00 39 44.8	-0.5
	baz=300						
WAT6	Susitna Watana	72.64	28	P	P	00 39 46.2	+0.4
	baz=298						
BRSE	Bradley Lake S	72.67	31	P	P	00 39 46.2	+0.5
	baz=297						
KDAK	Kodiak Island	72.67	33		P	00 39 46.1	+0.4
KDAK	Kodiak Island	72.67	33	P	P	00 39 46.1	+0.4
KDAK	Kodiak Island	72.67	33	P	P	00 39 46.1	+0.4
	baz=296						
SML	Sawmill	72.77	28	P	P	00 39 46.9	+0.5
	baz=298,SNR=10						
G27K	Doyon Strip	72.77	22	P	P	00 39 47.0	+0.8
	baz=302,SNR=16						
K24K	Donnelly Dome	72.83	26	P	P	00 39 46.5	-0.2
	baz=300,SNR=8.1						
KNK	Knik Glacier	72.90	29	P	P	00 39 47.5	+0.4
	baz=298						
DAVA	Damuels	72.91	315	*e*P	P	00 39 46.9	-0.7
	comp=Z,0.9nm,0.5s						
F28M	Old Crow	72.92	21	P	P	00 39 47.5	+0.4
	baz=304						
FUORN	Ofenpass-Fuorn	72.93	314	P	P	00 39 47.2	-0.6
FUORN				IAmb	IAmb	00 41 25.0	
	comp=Z,13nm,1.1s						
M23K	Glacier View	73.03	28	P	P	00 39 48.3	+0.5
	baz=298						
I26K	Coal Creek Min	73.04	24	P	P	00 39 48.2	+0.4
	baz=301,SNR=9.1						
SEW	Seward	73.08	30	P	P	00 39 48.1	0.0
	baz=298						
E29M	Blow River	73.09	20	P	P	00 39 48.6	+0.5
	baz=305,SNR=8.5						
DAVOX	Davos/Dischmat	73.11	314	LR	LR	01 14 46.4	
	comp=Z,102nm,18.1s,baz=57,slow=38						
H27K	Steamboat Moun	73.12	23	P	P	00 39 49.0	+0.6
	baz=302,SNR=15						
SCM	Sheep Creek Mo	73.17	28	P	P	00 39 49.3	+0.5
	baz=299						
PWL	Port Wells	73.21	29	P	P	00 39 49.3	+0.4
	baz=298						
RIDG	Independent Ri	73.22	26		P	00 39 48.5	-0.5
RIDG				IAmb	IAmb	00 39 49.4	
	comp=Z,10.0nm,0.7s						
RIDG	Independent Ri	73.22	26	P	P	00 39 48.7	-0.3
	baz=300,SNR=12						
J26L	Joseph Creek	73.31	25	P	P	00 39 49.5	-0.1
	baz=301,SNR=22						
PAX	Paxson	73.37	27	P	P	00 39 49.7	-0.2
	baz=300,SNR=6.5						
NEEM	North Greenlan	73.38	355	*i* P	P	00 39 50.0	0.0
NEEM				IAmb	IAmb	00 39 51.9	
	comp=Z,17nm,1.0s						
SCRK	Sand Creek	73.43	25	P	P	00 39 50.2	-0.1
	baz=301,SNR=9.6						
I27K	Kandik River	73.43	23	P	P	00 39 51.0	+0.7
	baz=303,SNR=6.6						
BFO	Black Forest	73.44	316	P	P	00 39 49.8	-0.8
BFO				IAmb	IAmb	00 41 18.2	
	comp=Z,12nm,1.1s						
BFO	Black Forest	73.44	316	P	P	00 39 49.8	-0.8
BFO				pmax	pmax		
	comp=Z,12nm,1.1s						
M24K	Tolsona, Glenn	73.51	28	P	P	00 39 51.6	+0.8
	baz=300,SNR=6.8						
TUE	Stuetta	73.57	314	P	P	00 39 51.0	-0.6
TUE				IAmb	IAmb	00 41 27.5	
	comp=Z,5.7nm,0.8s						
GLI	Glacier Island	73.73	29	P	P	00 39 52.5	+0.4
	baz=299						
HARP	HAARP	73.78	27	P	P	00 39 52.8	+0.5
	baz=300						
G29M	Pine Creek	73.91	21	P	P	00 39 53.2	+0.2
	baz=305						
KLU	Klutina	73.92	28	P	P	00 39 53.5	+0.2
	baz=300,SNR=6.9						
P23K	Montague Islan	74.03	30	P	P	00 39 54.3	+0.5
	baz=299						
A36M	Sachs Harbour	74.07	14	P	P	00 39 54.3	+0.6
	baz=315,SNR=14						
I28M	Miner Creek	74.10	23	P	P	00 39 54.8	+0.6
	baz=304,SNR=7.8						
K27K	Chicken	74.12	25	P	P	00 39 54.9	+0.7
	baz=303						
L26K	Log Cabin Wild	74.17	26	P	P	00 39 55.0	+0.5
	baz=302						
DIV	Divide	74.17	28	P	P	00 39 54.4	-0.3
DIV				IAmb	IAmb	00 39 57.8	
	comp=Z,6.0nm,0.7s						
WLF	Walferdange	74.19	318	P	P	00 39 54.6	-0.3
WLF				IAmb	IAmb	00 39 56.5	
	comp=Z,11nm,0.9s						
WLF	Walferdange	74.19	318	P	P	00 39 54.6	-0.3
WLF				pmax	pmax		
	comp=Z,11nm,0.9s						
H29M	Whitestone	74.19	22	P	P	00 39 54.9	+0.3
	baz=305						
F30M	Barrier River	74.19	20	P	P	00 39 55.0	+0.3
	baz=307,SNR=6.9						
N25K	Chitina, Valde	74.41	28	P	P	00 39 56.8	+0.7
	baz=301,SNR=6.2						
INK	Inuvik	74.44	19		P	00 39 55.9	-0.1
INK				IAmb	IAmb	00 39 56.9	
	comp=Z,7.8nm,0.8s						
INK	Inuvik	74.44	19	P	P	00 39 55.9	-0.1
INK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
INK	Inuvik	74.44	19	P	P	00 39 56.1	+0.1
	baz=309,SNR=7.0						
G30M	tAoh Zraii Nji	74.44	21	P	P	00 39 55.9	-0.2
	baz=307,SNR=15						
EYAK	Cordova Ski Ar	74.47	29	P	P	00 39 57.2	+0.9
	baz=300						
M26K	Nabesna, AK	74.64	27	P	P	00 39 58.0	+0.7
	baz=302,SNR=9.9						
EPYK	Eagle Plains	74.65	22	P	P	00 39 57.3	0.0
	baz=307						
L27K	Beaver Creek,	74.73	26	P	P	00 39 58.7	+0.8
	baz=303,SNR=11						
BMRM	Bremner River	74.74	28	P	P	00 39 58.4	+0.5
BMRM				IAmb	IAmb	00 39 59.6	
	comp=Z,24nm,1.0s						
BMRM	Bremner River	74.74	28	P	P	00 39 58.4	+0.5
	baz=301,SNR=6.9						
BCAR	Beaver Creek A	74.75	26	P	P	00 39 58.8	+0.8
Q23K	Middleton Isla	74.78	30	P	P	00 39 58.5	+0.5
	baz=300						
F31M	Tsiigehtchic	74.92	20	P	P	00 39 58.7	-0.1
	baz=309						
DAWY	Dawson	75.08	24		P	00 39 59.5	-0.3
DAWY	Dawson	75.08	24	P	P	00 39 59.9	+0.1
	baz=305,SNR=5.7						
VRDI	Verde Repeater	75.08	28		P	00 40 00.4	+0.3
VRDI				IAmb	IAmb	00 40 01.6	
	comp=Z,7.4nm,0.7s						
G31M	Satah River	75.08	21	P	P	00 39 59.4	-0.3
	baz=308,SNR=5.1						
M27K	Edge Creek, AK	75.10	26	P	P	00 40 00.7	+0.5
	baz=303,SNR=9.9						
VOI	Vohitsoka	75.17	235	P	P	00 40 00.8	-0.2
MCARA	McCarthy VSAT	75.17	27	P	P	00 40 01.0	+0.7
	baz=302						
J29N	Klondike Camp	75.27	24	P	P	00 40 01.4	+0.4
	baz=306						
I30M	Mount Dempster	75.45	22	P	P	00 40 01.9	-0.2
	baz=307,SNR=11						
BVCY	Beaver Creek	75.47	26	P	P	00 40 02.6	+0.5
	baz=304,SNR=9.6						
CRQE	Cirque	75.48	28	P	P	00 40 02.7	+0.3
	baz=302						
H31M	Peel River	75.76	21	P	P	00 40 03.7	0.0
	baz=309,SNR=7.3						
J30M	Hart River	75.86	23	P	P	00 40 05.0	+0.6
	baz=307						
BNI	Bardonecchia	75.86	314	P	P	00 40 04.1	-0.7
BNI				IAmb	IAmb	00 41 35.0	
	comp=Z,9.2nm,0.9s						
BNI	Bardonecchia	75.86	314	P	P	00 40 04.1	-0.7
BNI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
K29M	Barlow Dome	75.88	24	P	P	00 40 05.2	+0.6
	baz=306,SNR=14						
YUK3	Moose Creek	75.98	26	P	P	00 40 05.8	+0.6
	baz=304						
CTG	Chitna Glacier	76.08	27	P	P	00 40 06.4	+0.6
	baz=304						
CTGM	Chitina Glacie	76.09	27	P	P	00 40 06.3	+0.5
CTGM				IAmb	IAmb	00 40 07.8	
	comp=Z,9.7nm,0.7s						
L29M	L29M	76.09	25	P	P	00 40 06.7	+1.0
	baz=306,SNR=12						
SUMG	Summit	76.20	349		P	00 40 06.5	-0.1
SUMG				IAmb	IAmb	00 40 08.0	
	comp=Z,16nm,1.1s						
SUMG	Summit	76.20	349	P	P	00 40 06.5	-0.1
SUMG				pmax	pmax		
	comp=Z,16nm,1.1s						
SUMG	Summit	76.20	349	*i* P	P	00 40 06.2	-0.4
SUMG				IAmb	IAmb	00 40 07.6	
	comp=Z,13nm,1.0s						
C36M	Paulatuk	76.25	16	P	P	00 40 06.3	0.0
	baz=317,SNR=18						
MESA	MESA	76.27	28	P	P	00 40 07.4	+0.5
	baz=304						
RES	Resolute Bay	76.33	5	P	P	00 40 07.2	+0.4
RES				IAmb	IAmb	00 40 41.0	
	comp=Z,30nm,1.9s						
RES	Resolute Bay	76.33	5	P	P	00 40 07.2	+0.4
RES				pmax	pmax		
	comp=Z,30nm,2.0s						
M29M	Somme Creek	76.36	25	P	P	00 40 08.0	+0.7
	baz=306						
EKA	Eskdalemuir Ar	76.57	326	P	P	00 40 06.8	-1.6
	comp=Z,2.1nm,0.7s,baz=59,slow=5.1,SNR=7.3						
	comp=Z,2.1nm,0.7s						
O28M	Mount Upton	76.66	27	P	P	00 40 09.6	+0.3
	baz=305						
YUK4	Talbot Arm	76.94	26	P	P	00 40 11.0	+0.2
	baz=306						
PINM	Pinnacle	77.02	28	P	P	00 40 11.7	+0.7
	baz=305						
YUK6	Outpost Mounta	77.29	27	P	P	00 40 13.2	+0.5
	baz=306						
N30M	Aishikik Lake	77.47	26	P	P	00 40 14.4	+0.8
	baz=307						
O29M	Mount Kennedy	77.58	27	P	P	00 40 14.8	+0.5
	baz=306						
PNL	Peninsula	77.62	28	P	P	00 40 15.2	+0.9
	baz=306						
HYT	Haines Junctio	77.70	26		P	00 40 15.3	+0.4
HYT				IAmb	IAmb	00 40 16.8	
	comp=Z,11nm,1.4s						
HYT	Haines Junctio	77.70	26	P	P	00 40 15.6	+0.8
	baz=307						
N31M	Braeburn, Yuko	77.95	25	P	P	00 40 17.1	+0.9
	baz=308						
M31M	Drury Creek, Y	78.02	24	P	P	00 40 17.0	+0.5
	baz=309						
KEST	Kesra	78.14	304	P	P	00 40 16.9	-0.9
KEST				IAmb	IAmb	00 41 47.7	
	comp=Z,14nm,1.2s						
KEST	Kesra	78.14	304	P	P	00 40 17.6	-0.2
	comp=Z,2.5nm,0.9s,baz=55,slow=12,SNR=2.1						
	comp=Z,2.5nm,0.9s						
BORG	Borgarnes	78.22	339	P	P	00 40 17.9	+0.4
BORG				IAmb	IAmb	00 40 20.2	
	comp=Z,8.8nm,0.8s						
BORG	Borgarnes	78.22	339	P	P	00 40 17.9	+0.4
BORG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
O30N	Mendenhall	78.28	26	P	P	00 40 18.6	+0.6
	baz=308						
P29M	Windy Craggy	78.32	27	P	P	00 40 18.9	+0.6
	baz=307						
P30M	Million Dollar	78.34	27	P	P	00 40 18.8	+0.4
	baz=308						
FARO	Faro, Yukon	78.38	24	P	P	00 40 19.1	+0.6
	baz=310						
SOEG	Soedalen	78.39	345	*i* P	P	00 40 18.3	0.0
SOEG				IAmb	IAmb	00 40 19.2	
	comp=Z,20nm,0.8s						
WHY	Whitehorse	78.81	26	P	P	00 40 21.6	+0.5
	baz=309						
MMPY	Sheldon Lake,	78.85	23	P	P	00 40 21.7	+0.6
	baz=312,SNR=5.6						
PLBC	Pleasant Camp	78.98	27	P	P	00 40 22.1	+0.2
	baz=308						
N32M	Quiet Lake	79.17	25	P	P	00 40 23.2	+0.3
	baz=311						
ICESG	Greenland Ices	79.39	348	*i* P	P	00 40 23.6	-0.7
ICESG				IAmb	IAmb	00 40 25.1	
	comp=Z,8.3nm,0.9s						
SKAG	Skagway	79.40	27	P	P	00 40 24.4	+0.4
	baz=309						
P33M	Teslin, Yukon	79.89	25	P	P	00 40 26.8	0.0
	baz=311						
P32M	Atlin	79.95	26	P	P	00 40 27.6	+0.5
	baz=310						
S31K	Pelican	79.97	28	P	P	00 40 27.8	+0.6
	baz=308						
R32K	Eaglecrest	80.47	27	P	P	00 40 30.6	+0.7
	baz=310						
TGTN	Hyland Airport	80.63	23	P	P	00 40 31.1	+0.2
	baz=314						
SIT	Sitka	80.92	29	P	P	00 40 32.6	+0.3
	baz=309						
WRGLY	Wrigley	80.95	20	P	P	00 40 32.8	+0.4
	baz=318						
S32K	Killisnoo	80.97	28	P	P	00 40 33.0	+0.4
	baz=310						
R33M	Jennings River	81.13	25	P	P	00 40 34.2	+0.5
	baz=312						
S34M	Telegraph Cree	82.07	27	P	P	00 40 39.0	+0.5
	baz=312						
WRAK	Wrangell Islan	82.58	28	P	P	00 40 41.8	+0.7
	baz=312						
BEAVL	Fort Liard	82.69	23	P	P	00 40 42.4	+0.7
	baz=317						
T35M	Bob Quinn	83.05	27	P	P	00 40 44.3	+0.7
	baz=313						
SFJD	Kangerlussuaq	83.09	351	*i* P	P	00 40 43.6	0.0
SFJD				IAmb	IAmb	00 40 44.6	
	comp=Z,18nm,0.8s						
TOAD	Toad River Com	83.61	24	P	P	00 40 47.3	+0.8
	baz=317						
V35K	Ketchikan	83.62	29	P	P	00 40 47.4	+0.9
	baz=312						
YKAW3	Yellowknife Wh	83.97	17	P	P	00 40 48.7	+0.6
YKAW3				IAmb	IAmb	00 40 49.1	
	comp=Z,5.1nm,0.9s						
YKA	Yellowknife Ar	84.03	17	P	P	00 40 48.5	0.0
	comp=Z,2.5nm,0.8s,baz=323,slow=5.9,SNR=12						
	comp=Z,2.5nm,0.8s						
YKA	Yellowknife Ar	84.03	17	*i* P	P	00 40 49.0	+0.5
YKA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ESDC	Sonseca Array	85.36	313	P	P	00 40 55.4	-0.3
	comp=Z,0.7nm,0.9s,baz=45,slow=6.2,SNR=8.4						
	comp=Z,0.7nm,0.9s						
LSZ	Lusaka	85.94	250	P	P	00 40 58.2	-0.8
LSZ				IAmb	IAmb	00 42 04.7	
	comp=Z,22nm,1.6s						
LSZ	Lusaka	85.94	250	P	P	00 40 58.2	-0.8
LSZ				pmax	pmax		
	comp=Z,22nm,1.7s						
BLKN	Baker Lake	86.12	9	P	P	00 40 58.4	-0.5
IVI	Ivigtut	88.05	347	*i* P	P	00 41 08.0	-0.3
IVI				IAmb	IAmb	00 41 08.6	
	comp=Z,8.4nm,0.8s						
TORD	Torodi Ar. Bea	95.14	288	P	P	00 41 41.5	-0.6
	comp=Z,0.5nm,0.7s,baz=55,slow=4.8,SNR=4.1						
	comp=Z,0.5nm,0.7s						
SCHQ	Schefferville	96.79	355	LR	LR	01 26 22.9	
	comp=Z,126nm,18.2s,baz=332,slow=36						
VNDA	Vanda	110.95	169	PKKPbc	PKKPbc	00 57 47.1	-3.2
	comp=Z,0.6nm,0.5s,baz=121,slow=5.9,SNR=6.5						
TXAR	Lajitas Array	116.39	28	PKP	PKiKP	00 47 02.0	-0.5
	comp=Z,0.4nm,0.8s,baz=323,slow=3.8,SNR=4.6						
QSPA	South Pole Qui	118.20	180	PKP	PKPdf	00 47 03.8	-0.9
	comp=Z,1.9nm,1.0s,baz=335,slow=1.3,SNR=6.8						
QSPA				PKKPbc	PKKPab	00 57 23.8	-0.5
	comp=Z,1.5nm,1.0s,baz=142,slow=3.6,SNR=3.6						
TROLL	Troll, Antarti	120.59	201	⇓PKPdf	PKPdf	00 47 08.7	-0.6
	comp=Z,92nm,0.5s						
SNAA	Sanae	122.29	201	⇓PKPdf	PKPdf	00 47 11.4	-1.1
	comp=Z,20nm,0.5s						
SNAA	Sanae	122.29	201	PKP	PKPdf	00 47 10.7	-1.7
	comp=Z,1.1nm,0.6s,baz=164,slow=5.6,SNR=5.3						
VNA2	Neumayer--Watz	123.86	201	⇓PKPdf	PKPdf	00 47 15.0	-0.4
	comp=Z,4.2nm,0.7s,baz=76,slow=3.1						
VNA3	Neumayer Olymp	124.52	201	⇓PKPdf	PKPdf	00 47 16.1	-0.6
	comp=Z,2.5nm,0.6s						
ROSC	El Rosal	146.92	359	PKPbc	PKPbc	00 48 02.0	0.0
	comp=Z,27nm,0.6s,baz=55,slow=18,SNR=12						
ROSC	El Rosal	146.92	359	PKP2	PKPbc	00 48 02.0	0.0
BDFB	Brasilia	151.97	291	PKPbc	PKPbc	00 48 11.6	-2.7
	comp=Z,0.8nm,0.4s,baz=68,slow=5.4,SNR=3.4						
LPAZ	La Paz	166.34	331	PKP	PKPdf	00 48 24.3	-0.8
	comp=Z,0.5nm,0.3s,baz=11,slow=5.2,SNR=4.2						

ROM 23 00:36:48.9±0.1**, 43°.210N**±0°.004×**12°.317E**±0°.005**, h10^{km}, ML1.2**/8**, Error ellipse: s-maj=0.4km s-min=0.3km az=53.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATTE	AVT- Monte Tez	0.03	114	P	Pg	00 36 51.2	+0.2
ATTE				S	Sg	00 36 52.5	+0.2
UMBT	Umbertide	0.10	12	P	Pg	00 36 52.1	+0.6
UMBT				S	Sg	00 36 54.3	+0.9
ATMI	Monte Miggiano	0.13	344	P	Pg	00 36 52.6	+0.6
ATMI				S	Sg	00 36 55.0	+0.8
ATMI				AML	AML		
	comp=E,223µm,0.2s						
ATMI				AML	AML		
	comp=N,220µm,0.5s						
MURB	Monte Urbino	0.16	71	P	Pg	00 36 53.1	+0.6
MURB				S	Sg	00 36 56.2	+1.1
ATVO	AVT- Monte Val	0.18	21	P	Pg	00 36 53.3	+0.4
ATVO				S	Sg	00 36 56.5	+0.8
ATVO				AML	AML		
	comp=E,48µm,0.5s						
ATVO				AML	AML		
	comp=N,42µm,1.3s						
ATVO				AML	AML		
	comp=N,42µm,0.7s						
ATVO				AML	AML		
	comp=E,48µm,1.5s						
ATCC	AVT- Casa Cast	0.24	96	P	Pg	00 36 54.5	+0.7
ATCC				S	Sg	00 36 58.6	+1.4
ATCC				AML	AML		
	comp=E,83µm,1.1s						
ATCC				AML	AML		
	comp=N,71µm,1.3s						
ATCC				AML	AML		
	comp=N,71µm,1.3s						
ATCC				AML	AML		
	comp=N,71µm,0.7s						
ATFO	Monte Foce - G	0.24	50	P	Pg	00 36 54.5	+0.5
ATPI	Pietralunga -	0.25	14	P	Pg	00 36 54.4	+0.4
ATPI				S	Sg	00 36 58.5	+1.0
ATPI				AML	AML		
	comp=E,33µm,1.6s						
ATPI				AML	AML		
	comp=N,31µm,1.0s						
ATPI				AML	AML		
	comp=E,33µm,1.6s						
ATPI				AML	AML		
	comp=N,31µm,1.0s						
CAFI	Castiglion Fio	0.28	295	P	Pg	00 36 55.2	+0.5
CAFI				S	Sg	00 36 59.7	+1.2
ASSB	Assisi San Ben	0.30	124	P	Pg	00 36 55.6	+0.6
ASSB				S	Sb	00 37 00.4	-1.0
BADI	Badiali	0.30	350	P	Pb	00 36 55.9	-0.5
BADI				S	Sg	00 37 00.3	+1.1
MGAB	Montegabbione	0.33	207	P	Pg	00 36 55.9	+0.3
MGAB				S	Sb	00 37 01.5	-0.8
MGAB				AML	AML		
	comp=E,72µm,1.0s						
MGAB				AML	AML		
	comp=N,76µm,0.4s						
MGAB				AML	AML		
	comp=N,76µm,1.6s						
PARC	Parchiule	0.44	353	P	Pg	00 36 58.2	+0.6
PARC				S	Sb	00 37 05.5	0.0

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*IDC **23** 00:37:23.5±1.7, 22°.69N×94°.27E, h109^{km}±19^{km}, mb3.5/9, mbtmp3.8/11, Error ellipse: s-maj=28.0km s-min=10.5km az=36.0*

ISC 23 00:37:23.1±0.7**, 22°.74N**±0°.10×**94°.27E**±0°.08**, h106^{km}, n14,** σ**1^{s}26**/17**, mb3.7**/9**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRDH	Bariadhala	2.43	269	P	Pn	00 38 00.3	-1.2
	60nm,0.3s,baz=294,slow=20,SNR=1.3						
BRDH				S	Sn	00 38 32.2	+1.3
	188nm,0.3s,baz=73,slow=19,SNR=18						
CMAR	Chiang Mai Arr	6.11	133	P	Pn	00 38 50.7	-0.3
	0.7nm,0.3s,baz=315,slow=13,SNR=6.0						
CMAR				S	Sn	00 39 59.0	-0.7
	0.6nm,0.3s,baz=319,slow=24,SNR=1.3						
LSA	Lhasa	7.47	339	Pn	Pn	00 39 11.3	+1.4
LSA				Sn	Sn	00 40 30.5	-2.7
LSA				smax	smax		
	comp=N,35nm,0.6s						
MKAR	Makanchi Array	25.87	341	P	P	00 42 46.2	+1.3
	comp=N,1.0nm,0.4s,baz=148,slow=9.6,SNR=19						
	comp=N,1.0nm,0.4s						
KURBB	Kurchatov Arra	30.42	340	P	P	00 43 25.5	+0.2
	comp=N,0.7nm,0.2s,baz=154,slow=8.6,SNR=4.3						
	comp=N,0.7nm,0.2s						
ZALV	Zalesovo Beam	31.97	349	P	P	00 43 39.2	+0.4
	comp=N,1.2nm,0.3s,baz=166,slow=9.4,SNR=6.8						
	comp=N,1.2nm,0.3s						
BVAR	Borovoye Array	35.29	335	P	P	00 44 07.9	+0.2
	comp=N,0.5nm,0.6s,baz=137,slow=7.4,SNR=3.1						
	comp=N,0.5nm,0.6s						
AKASG	Malin Array Be	57.02	317	P	P	00 46 57.6	-0.2
	comp=N,0.1nm,0.3s,baz=81,slow=6.9,SNR=3.7						
	comp=N,0.1nm,0.3s						
WRA	Warramunga Arr	57.70	134	P	P	00 47 02.8	-0.2
	comp=N,0.4nm,0.5s,baz=317,slow=7.3,SNR=5.3						
	comp=N,0.4nm,0.5s						
ASAR	Alice Springs	60.10	138	P	P	00 47 20.5	+0.9
	comp=N,0.3nm,0.5s,baz=314,slow=6.4,SNR=2.4						
	comp=N,0.3nm,0.5s						
ARCES	ARCESS Array B	61.48	338	P	P	00 47 29.3	+1.0
	comp=N,2.9nm,1.1s,baz=107,slow=6.0,SNR=1.4						
	comp=N,2.9nm,1.1s						
HFS	Hagfors	65.89	327	P	P	00 47 57.5	+0.1
	comp=N,0.6nm,0.6s,baz=69,slow=8.0,SNR=4.0						
	comp=N,0.6nm,0.6s						
TXAR	Lajitas Array	125.42	19	PKP	PKiKP	00 56 12.8	0.0
	comp=N,0.2nm,0.8s,baz=312,slow=3.1,SNR=2.2						
LPAZ	La Paz	162.22	288	PKPab	PKPab	00 57 59.0	-2.2
	comp=N,0.4nm,0.4s,baz=56,slow=3.6,SNR=2.4						

*MEX **23** 00:42:26.3±0.5, 14°.27N×93°.10W, h3^{km}±23^{km}, MD3.8*
*GCG **23** 00:42:28.0±0.8, 14°.27N×92°.87W, h61^{km}±27^{km}, MD4.3, ML3.2*
ISC 23 00:42:20.7±3.6, 14°.1N±0°.1×93°.1W±0°.1, h4^{km}±13^{km}, n14, σ1^{s}.18/18, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**1.15**	**46**	*e*P	**Pg**	**00 42 43.6**	**+0.9**
THIG				*e*S	**Sg**	**00 42 57.6**	**0.0**
SMCA	**Catarina**	**1.26**	**54**	*i* P	**Pn**	**00 42 45.6**	**+0.5**
SMCA				*i* S	**Sg**	**00 42 59.9**	**-1.3**
PATR	**El Naranjo**	**1.32**	**41**	*e*P	**Pn**	**00 42 45.8**	**-0.3**
PATR				*e*S	**Sg**	**00 43 01.6**	**-1.5**
PAVE	**Pavencul**	**1.41**	**40**	*e*P	**Pn**	**00 42 47.3**	**-0.1**
PAVE				*e*S	Sn	00 43 02.1	-4.4
RTAL	**Retalhuleu**	**1.44**	**73**	*e*P	**Pn**	**00 42 49.2**	**+1.6**
RTAL				*e*S	**Sn**	**00 43 05.9**	**-1.1**
PCIG		**1.59**	**357**	*e*P	**Pn**	**00 42 49.5**	**-0.1**
PCIG				*e*S	Sn	00 43 04.2	-6.3
STG8	**El Palmar, Qui**	**1.75**	**79**	*i* P	**Pn**	**00 42 50.8**	**-1.2**
STG8				*i* S	Sn	00 43 09.2	-5.6
STG8				IAML		00 43 13.9	
	comp=N,435nm,0.2s						
STG0	**El Palmar, Qui**	**1.75**	**79**	*i* P	**Pn**	**00 42 50.8**	**-1.2**
STG0				*i* S	Sn	00 43 08.0	-6.9
STG0				IAML		00 43 16.3	
	comp=E,656nm,0.2s						
HUEH	**Huehuetenango**	**1.98**	**52**	*e*P	**Pn**	**00 42 56.4**	**+1.3**
HUEH				*e*S	**Sn**	**00 43 22.1**	**+1.7**
CCIG	**Comitan**	**2.36**	**24**	*e*P	Pn	00 43 03.3	+3.0
CCIG				*e*S	**Sn**	**00 43 30.5**	**+0.7**
CCIG	**Comitan**	**2.36**	**24**	*i* P	Pn	00 43 03.5	+3.1
CCIG				*i* S	**Sn**	**00 43 28.7**	**-1.1**
CCIG				IAML		00 43 37.9	
	comp=N,63nm,0.4s						
FG16	**Alotenango, Sa**	**2.54**	**86**	*i* P	Pn	00 43 00.2	-2.6
FG16				IAML		00 43 22.3	
	comp=N,1µm,0.3s						
TGIG		**2.65**	**0**	*e*P	Pn	00 43 06.0	+1.7
TGIG				*e*S	**Sn**	**00 43 35.8**	**-1.1**
TGIG		**2.65**	**0**	*i* P	Pn	00 43 06.8	+2.6
TGIG				*i* S	**Sn**	**00 43 37.3**	**+0.4**
TGIG				IAML		00 43 52.9	
	comp=E,46nm,0.4s						

NNC 23 00:48:17.0±27.0, 37°.30N×71°.58E, h144^{km}±563^{km}, mb2.8, mpv3.7, 4C, Error ellipse: s-maj=301.7km s-min=179.5km az=169.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.86**	**352**	⇑P	Pn	00 49 41.5	-0.1
	2.9nm,0.3s,baz=179,slow=13,SNR=32						
KK31				⇑S	Sn	00 50 51.9	+4.0
	1.5nm,0.4s,baz=186,slow=26,SNR=3.7						
TKM2	**Tokmak 2**	**6.40**	**27**	⇑P	Pn	00 49 49.8	+0.7
	4.1nm,0.8s						
TKM2				⇑S	Sn	00 51 00.4	-0.9
	0.6nm,0.5s						
AB31	**Akbulak array**	**14.63**	**328**	P	Pn	00 51 36.7	-0.1
	0.3nm,0.6s,baz=162,slow=12,SNR=7.0						

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*AEIC **23** 01:18:59.1±1.0, 53°.1N±0°.2×168°.4W±0°.3, h74^{km}±5^{km}, Error ellipse: s-maj=43.0km s-min=3.1km az=143.0*
NEIC 23 01:18:58.8±0.8, 53°.1N±0°.3×168°.5W±0°.4, h77^{km}±6^{km}, ML2.9/8, ML2.7(AEIC), Error ellipse: s-maj=54.7km s-min=3.5km az=141.0, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**0.22**	**244**		Pn	01 19 10.4	+0.2
NIKH				IAML		01 19 19.6	
	comp=E,828nm,0.6s						
NIKH				IAML		01 19 19.9	
	comp=N,733nm,0.6s						
NIKH	**Nikolski High**	**0.22**	**244**		Sn	01 19 19.0	+0.3
OKSP	**Okmok Steeple**	**0.23**	**38**		Pn	01 19 10.1	-0.3
OKCE	**Okmok Cone E**	**0.42**	**31**		Pn	01 19 11.5	-0.1
OKTU	**Okmok Mt. Tuli**	**0.43**	**43**		Pn	01 19 11.6	-0.1
OKNC	**Okmok New Cone**	**0.46**	**32**		Pn	01 19 12.0	+0.1
OKFG	**Magazine Ridge**	**0.50**	**47**		Pn	01 19 12.1	-0.1
OKFG					Sn	01 19 22.5	+0.4
MAPS	**Pakushin South**	**1.20**	**51**		Pn	01 19 19.6	-0.5
MAPS					Sn	01 19 35.0	-1.2
MGOD	**Makushin Gods**	**1.23**	**53**		Pn	01 19 20.0	-0.5
MGOD					Sn	01 19 35.6	-1.1
MREP	**Makushin Rep't**	**1.30**	**54**		Pn	01 19 21.1	-0.3
MTBL	**Makushin Table**	**1.42**	**50**		Pn	01 19 23.2	+0.1
UNV	**Unalaska Valle**	**1.44**	**56**		Pn	01 19 22.8	-0.3
UNV				IAML		01 19 42.1	
	comp=E,128nm,0.3s						
UNV	**Unalaska Valle**	**1.44**	**56**		Sn	01 19 41.0	-0.5
AKRB	**Akutan Reef Bi**	**1.81**	**53**		Sn	01 19 50.1	-0.2
AKMO	**Akutan Morgan**	**1.82**	**55**		Pn	01 19 28.1	0.0
LVA	**Lava Point**	**1.84**	**53**		Pn	01 19 28.8	+0.3
AKBBA	**Akutan Broad B**	**1.86**	**55**		Pn	01 19 28.8	+0.1
AKUT	**Akutan**	**1.96**	**56**	Pn	Pn	01 19 30.5	+0.6
AKUT				IAML		01 19 57.8	
	comp=E,61nm,0.4s						
WECS	**Westdahl Cape**	**2.66**	**55**		Pn	01 19 39.8	+0.3
WESE	**West Dahl East**	**2.73**	**57**		Pn	01 19 40.4	0.0
ISLZ	**Isanotski Laza**	**3.30**	**58**		Pn	01 19 48.1	0.0

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*IDC **23** 01:19:25.0±1.7, 30°.66S×177°.31W, h0^{km}, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=44.4km s-min=27.9km az=75.0*
ISC 23 01:19:29.9±1.7, 31°.02S±0°.09×177°.5W±0°.2, h27^{km}, n7, σ2^{s}.07/8, mb3.8/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.79**	**349**	Pn	Pn	01 19 52.7	-6.3
	18nm,0.3s,baz=127,slow=20,SNR=1.2						
RAO				Sn	**Sn**	**01 20 19.5**	**-1.4**
	147nm,0.3s,baz=127,slow=20,SNR=4.3						
URZ	**Urewera**	**8.46**	**210**	Pn	**Pn**	**01 21 27.4**	**-3.2**
	0.2nm,0.3s,baz=25,slow=14,SNR=3.1						
URZ				Sn	**Sn**	**01 23 05.5**	**+0.3**
	1.4nm,0.3s,baz=68,slow=19,SNR=6.9						
STKA	**Stephens Creek**	**34.73**	**258**	P	**P**	**01 26 20.0**	**+2.2**
	1.4nm,0.6s,baz=139,slow=18,SNR=3.0						
	1.4nm,0.6s						
ASAR	**Alice Springs**	**43.47**	**267**	P	**P**	**01 27 32.0**	**+1.0**
	0.5nm,0.7s,baz=108,slow=8.4,SNR=4.9						
	0.5nm,0.7s						
WRA	**Warramunga Arr**	**44.52**	**273**	P	**P**	**01 27 39.1**	**-0.2**
	0.7nm,0.6s,baz=112,slow=8.3,SNR=3.5						
	0.7nm,0.6s						
QSPA	**South Pole Qui**	**59.09**	**180**	P	**P**	**01 29 29.1**	**+1.5**
	0.8nm,0.7s,baz=45,slow=19,SNR=6.5						
	0.8nm,0.7s						
FINES	**FINESS Array B**	**145.86**	**340**	PKPbc	**PKPdf**	**01 39 04.4**	**-0.9**
	0.9nm,0.5s,baz=40,slow=2.4,SNR=9.0						

IDC 23 01:27:33.1±3.2, 4°.96S×128°.49E, h0^{km}, mb3.2/1, mbtmp3.2/3, ML3.2/2, Error ellipse: s-maj=321.4km s-min=31.5km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.94**	**160**	Pn	Pn	01 31 20.9	+1.9
	0.1nm,0.3s,baz=339,slow=14,SNR=1.5						
WRA				Sn	Sn	01 34 04.5	-12
	0.1nm,0.3s,baz=339,slow=21,SNR=1.9						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**19.32**	**165**	P	P	01 31 59.3	-0.7
	0.2nm,0.3s,baz=346,slow=11,SNR=13						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**65.71**	**327**	P	P	01 38 19.7	0.0
	0.1nm,0.3s,baz=135,slow=5.8,SNR=1.9						
	0.1nm,0.3s						

RSNC 23 01:32:51.9±0.0, 12°N±1°×7°3W±°, h17^{km}±2^{km}, M2.8, mB4.1, mb3.8, ML2.4, MLv3.1, Mw(mB)3.1, Near north coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URIC	**Uribia, Colomb**	**0.84**	**108**	P	Pb	01 33 07.0	-1.1
URIC				S	Sb	01 33 18.3	-0.8
CRJC	**Cerrejon, Guaj**	**0.94**	**184**	P	Pb	01 33 08.6	-1.2
CRJC				S	Sb	01 33 21.2	-0.8
SMRC	**Santa Marta, M**	**1.60**	**240**	P	Pn	01 33 17.3	-2.1
SMRC				S	Sn	01 33 36.9	-2.7
ARGC	**Ariguani, Magd**	**2.52**	**214**	P	Pn	01 33 32.1	0.0
ARGC				S	Sn	01 34 01.9	-0.6
SJCC	**San Jacinto, C**	**3.10**	**229**	P	Pn	01 33 39.7	-0.5
SJCC				S	Sn	01 34 14.3	-2.6
OCAC	**Ocana**	**3.73**	**188**	P	Pn	01 33 47.3	-1.6
OCAC				S	Sn	01 34 32.7	+0.1
ZARC	**Zaragoza, Cauc**	**4.88**	**205**	P	Pn	01 34 06.0	+1.5
ZARC				S	Sn	01 35 02.2	+1.5
BRJC	**Barrancabermej**	**5.04**	**191**	P	Pn	01 34 05.3	-1.5
	0.1nm17nm,0.5s						
TAMC	**Tame, Arauca**	**5.58**	**170**	P	Pn	01 34 13.8	-0.5
	21nm,0.5s						
TAMC				S	Sn	01 35 17.0	-1.1
	21nm,0.5s						
PTBC	**PUERTO BERRIO,**	**5.63**	**197**	P	Pn	01 34 14.9	0.0
	158nm4.1nm,0.6s						
PTBC				S	Sn	01 35 21.5	+2.3
	158nm4.1nm,0.6s						
RUSC	**La Rusia**	**6.04**	**183**	P	Pn	01 34 20.8	-0.1
	5.9nm,0.9s						
HELC	**Santa Helena**	**6.33**	**205**	P	Pn	01 34 26.5	+1.7
	3.6nm,0.9s						
HELC				S	Sn	01 35 43.0	+6.0
	3.6nm,0.9s						
GUY2C	**Guyana, Caldas**	**7.15**	**201**	P	Pn	01 34 38.6	+2.3

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*IDC **23** 01:37:22.2±1.8, 30°.76S×177°.47W, h0^{km}, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=47.6km s-min=23.7km az=83.0*
ISC 23 01:37:26.7±1.5, 30°.92S±0°.09×177°.8W±0°.3, h35^{km}, n6, σ2^{s}.48/8, mb3.7/3, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.66**	**355**	Pn	**Pn**	**01 37 51.4**	**-2.0**
	119nm,0.3s,baz=75,slow=20,SNR=2.0						
RAO				Sn	**Sn**	**01 38 13.4**	**-0.1**
	171nm,0.3s,baz=105,slow=20,SNR=4.2						
URZ	**Urewera**	**8.45**	**209**	Pn	**Pn**	**01 39 24.4**	**-2.2**
	0.3nm,0.3s,baz=118,slow=16,SNR=1.6						
URZ				Sn	**Sn**	**01 40 59.1**	**-1.7**
	1.7nm,0.3s,baz=166,slow=23,SNR=7.6						
ASAR	**Alice Springs**	**43.28**	**267**	P	**P**	**01 45 28.2**	**+2.9**
	0.4nm,0.7s,baz=109,slow=8.6,SNR=7.2						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**44.32**	**273**	P	**P**	**01 45 35.8**	**+2.3**
	0.5nm,0.4s,baz=113,slow=7.9,SNR=6.5						
	0.5nm,0.4s						
QSPA	**South Pole Qui**	**59.20**	**180**	P	**P**	**01 47 26.3**	**+2.2**
	1.9nm,1.0s,baz=74,slow=4.7,SNR=3.5						
	1.9nm,1.0s						
FINES	**FINESS Array B**	**145.70**	**340**	PKPbc	**PKPab**	**01 57 00.6**	**-0.8**
	3.0nm,0.9s,baz=46,slow=4.2,SNR=7.1						

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*IDC **23** 02:03:56.8±0.6, 51°.50N×15°.96E, h0^{km}, mbtmp3.2/7, ML2.6/7, Error ellipse: s-maj=9.9km s-min=5.8km az=99.0*
*IPEC **23** 02:03:56.6±0.2, 51°.50N×16°.09E, h1^{km}, ML2.7/7, Error ellipse: s-maj=3.0km s-min=1.4km az=67.0*
*DNK **23** 02:03:57.1±1.9, 51°.47N×16°.27E, h34^{km}±46^{km}, ML2.6*
*VIE **23** 02:03:58.3±0.6, 51°.39N×15°.96E, h0^{km}, mb2.7/19, ml2.8/16, ms3.1/2, Error ellipse: s-maj=4.6km s-min=2.6km az=32.0 80 km WNW of Wroclaw Suspected Mining induced.*
*BGR **23** 02:03:58.2±0.7, 51°.40N×16°.08E, h1^{km}, ML3.0/12, Error ellipse: s-maj=12.2km s-min=3.3km az=12.0*
*PRU **23** 02:03:58.7, 51°.45N×16°.13E, h0^{km}*
*UPP **23** 02:03:58.8±3.1, 51°.66N×15°.57E, h0^{km}, ML2.5*
ISC 23 02:03:54.2±0.6, 51°.61N±0°.03×16°.10E±0°.02, h0^{km}, n80, σ1^{s}.50/157, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.78**	**171**	*e*Pg	**Pg**	**02 04 09.8**	**+0.8**
KSP				*e*Sg	**Sg**	**02 04 19.5**	**+0.5**
KSP	**Ksiaz**	**0.78**	**171**	*e*Pg	**Pg**	**02 04 09.8**	**+0.8**
CHVC	**Chvalec**	**1.02**	**182**	*e*PG	**Pb**	**02 04 14.6**	**-0.1**
CHVC				*e*SG	**Sg**	**02 04 26.2**	**-0.8**
OSTC	**Ostas**	**1.06**	**176**	*e*PG	**Pb**	**02 04 15.4**	**+0.1**
OSTC				*e*SG	**Sg**	**02 04 27.9**	**-0.1**
	comp=Z,130nm,0.4s						
UPC	**Upice**	**1.10**	**183**	*e*PG	**Pb**	**02 04 16.6**	**+0.5**
UPC				*e*SG	**Sg**	**02 04 29.6**	**0.0**
DPC	**Dobruska-Polom**	**1.27**	**174**	*e*PG	**Pg**	**02 04 18.8**	**+0.4**
DPC	**Dobruska-Polom**	**1.27**	**174**	*e*Pg	**Pg**	**02 04 18.7**	**+0.2**
PIVO	**Bartosovice**	**1.45**	**169**	*e*Pg	**Pg**	**02 04 22.0**	**0.0**
	baz=348						
PIVO				*e*Sg	**Sg**	**02 04 38.6**	**-2.1**
	94nm,0.4s,baz=348						
PVCC	**Panska Ves**	**1.45**	**222**	*e*PG	**Pb**	**02 04 23.0**	**+1.0**
PVCC				*e*SG	**Sg**	**02 04 41.0**	**+0.2**
	comp=Z,420nm,0.8s						
BRG	**Berggiesshubel**	**1.54**	**242**	*e*Pn	**Pn**	**02 04 23.5**	**+0.5**
BRG				*e*Sg	**Sg**	**02 04 44.8**	**+1.1**
BRG	**Berggiesshubel**	**1.54**	**242**	Pn	**Pb**	**02 04 23.6**	**0.0**
BRG				Pg	**Pg**	**02 04 25.6**	**+1.8**
BRG				Sg	**Sg**	**02 04 45.3**	**+1.5**
BRG				Amp		02 04 47.1	
	comp=Z,118nm,0.4s						
KRLC	**Kraliky**	**1.59**	**164**	*e*PG	**Pb**	**02 04 24.4**	**-0.1**
KRLC				*e*SG	**Sn**	**02 04 44.0**	**-1.0**
	comp=Z,66nm,0.6s						
PRA	**Prague**	**1.87**	**215**	*e*PN	**Pn**	**02 04 28.1**	**+0.7**
PRA				*e*SG	**Sg**	**02 04 54.4**	**+0.2**
GOPC	**GO Pecny, Ondr**	**1.89**	**207**	*e*PN	**Pn**	**02 04 28.8**	**+1.1**
PRU	**Pruhonice**	**1.90**	**212**	*e*PN	**Pn**	**02 04 28.2**	**+0.4**
PRU				*e*PG	**Pb**	**02 04 30.2**	**+0.5**
PRU				*e*SG	**Sg**	**02 04 56.0**	**+0.8**
	comp=Z,66nm,0.5s						
CLL	**Collm**	**1.96**	**262**	*e*Pn	**Pb**	**02 04 30.0**	**-0.8**
CLL				*e*Pg	**Pg**	**02 04 33.0**	**+1.2**
CLL				*e*x	x	02 04 37.0	
CLL				*e*Sg	**Sg**	**02 04 58.0**	**+0.8**
	comp=Z,64nm,0.5s						
STEB	**Steborice**	**1.98**	**147**	*e*PG	**Pg**	**02 04 31.9**	**-0.2**
STEB				*e*SG	**Sb**	**02 04 56.2**	**-0.1**
	comp=Z,187nm,0.5s						
MORC	**Moravsky Berou**	**2.05**	**153**	*e*Pn	**Pn**	**02 04 30.5**	**+0.6**
	baz=332						
MORC				*e*Sg	**Sb**	**02 04 58.0**	**-0.3**
	comp=Z,80nm,0.7s,baz=332						
MORC	**Moravsky Berou**	**2.05**	**153**	*e*Pn	**Pn**	**02 04 30.3**	**+0.4**
OKC	**Ostrava-Krasne**	**2.20**	**143**	*e*SG	**Sb**	**02 05 02.6**	**+0.1**
OKC	**Ostrava-Krasne**	**2.20**	**143**	*e*Sg	**Sb**	**02 05 02.2**	**-0.3**
VRAC	**Vranov**	**2.33**	**172**	Pn	**Pn**	**02 04 34.4**	**+0.7**
	comp=Z,2.2nm,0.3s,baz=351,slow=17,SNR=25						
VRAC				Pg	**Pg**	**02 04 38.4**	**-0.3**
	comp=Z,2.2nm,0.3s,baz=355,slow=17,SNR=9.6						
VRAC				Sn	**Sn**	**02 05 03.9**	**+1.0**
	comp=Z,3.2nm,0.3s,baz=67,slow=11,SNR=6.1						
	comp=Z,6.0nm,0.3s						
VRAC	**Vranov**	**2.33**	**172**	*e*Pn	**Pn**	**02 04 34.4**	**+0.7**
	baz=352						
VRAC				*e*Sg	**Sb**	**02 05 05.8**	**-0.4**
	comp=Z,68nm,0.7s,baz=352						
KRUC	**Moravsky**	**2.56**	**176**	*e*Pn	**Pn**	**02 04 37.5**	**+0.7**
	baz=356						
KRUC				*e*Sg	**Sb**	**02 05 13.0**	**+0.2**
	comp=Z,47nm,0.6s,baz=356						
KRUC	**Moravsky**	**2.56**	**176**	*e*PN	**Pn**	**02 04 37.6**	**+0.7**
KRUC				*e*SG	**Sb**	**02 05 13.1**	**+0.2**
TANN	**Tannenbergstha**	**2.59**	**244**	*e*Pn	**Pn**	**02 04 38.5**	**+1.1**
TANN				*e*Sg	**Sg**	**02 05 16.3**	**-1.1**
WERD	**Werda**	**2.67**	**246**	*e*Pn	**Pn**	**02 04 39.6**	**+1.2**
OJC	**Ojcow**	**2.72**	**119**	*e*Pn	**Pn**	**02 04 39.0**	**0.0**
OJC				*e*Pg	**Pg**	**02 04 47.2**	**+0.9**
OJC				*e*Sg	**Sg**	**02 05 22.4**	**+0.9**
JAVC	**Velka Javorina**	**2.93**	**159**	*e*Pn	**Pn**	**02 04 42.8**	**+0.8**
	baz=340						
JAVC				*e*Sg	**Sb**	**02 05 25.5**	**+1.8**
	comp=Z,51nm,0.7s,baz=340						
KHC	**Kasperske Hory**	**2.96**	**214**	*e*PN	**Pn**	**02 04 43.1**	**+0.7**
KHC				*e*PG	**Pb**	**02 04 49.1**	**+1.3**
KHC				*e*SN	**Sn**	**02 05 18.5**	**-0.2**
KHC				*e*SG	**Sg**	**02 05 27.9**	**-1.3**
	comp=Z,35nm,0.5s						
MOX	**Moxa**	**2.99**	**253**	*e*Pn	**Pn**	**02 04 44.4**	**+1.6**
MOX				*e*Sg	**Sg**	**02 05 30.6**	**+0.5**
MANZ	**Manzenberg**	**3.01**	**239**	*e*Pn	**Pn**	**02 04 45.0**	**+1.9**
CKRC	**Cesky Krumlov**	**3.02**	**203**	*e*PN	**Pn**	**02 04 44.5**	**+1.3**
CKRC				*e*PG	**Pg**	**02 04 50.7**	**-1.3**
CKRC				*e*SG	**Sg**	**02 05 30.1**	**-1.0**
	comp=Z,34nm,0.4s						
ROTZ	**Rotzenmuhle**	**3.09**	**235**	*e*Pn	**Pn**	**02 04 45.3**	**+1.2**
GEC2	**GERESS Array S**	**3.17**	**210**	*e*Pn	**Pn**	**02 04 46.1**	**+0.8**
GERES	**GERESS Array B**	**3.17**	**210**	Pn	**Pn**	**02 04 45.9**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=31,slow=13,SNR=55						
GERES				Pg	**Pb**	**02 04 52.5**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=31,slow=16,SNR=32						
GERES				Sn	**Sn**	**02 05 21.7**	**-2.1**
	comp=Z,0.5nm,0.3s,baz=31,slow=23,SNR=6.3						
GERES				Lg	Lg	02 05 32.8	
	comp=Z,0.8nm,0.3s,baz=26,slow=28,SNR=10.0						
	comp=Z,3.9nm,0.4s						
WET	**Wettzell**	**3.22**	**221**	*e*Pn	**Pn**	**02 04 46.6**	**+0.6**
LANS	**Liptovska Anna**	**3.27**	**138**	*e*PN	**Pn**	**02 04 48.0**	**+1.3**
LANS				*e*PG	**Pg**	**02 04 57.4**	**+0.6**
LANS				*e*SG	**Sg**	**02 05 38.5**	**-0.6**
MODS	**Modra-Piesok**	**3.33**	**166**	*e*PN	**Pn**	**02 04 49.0**	**+1.6**
MODS				*e*PG	**Pg**	**02 04 57.0**	**-0.9**
MODS				*e*SG	**Sg**	**02 05 39.5**	**-1.5**
NIE	**Niedzica**	**3.46**	**128**	*e*Pg	**Pg**	**02 05 01.5**	**+1.0**
NIE				*e*Sg	**Sg**	**02 05 47.4**	**+2.1**
VYHS	**Vyhne**	**3.58**	**149**	*e*PN	**Pn**	**02 04 51.6**	**+0.7**
VYHS				*e*PG	**Pg**	**02 05 03.2**	**+0.5**
VYHS				*e*SG	**Sg**	**02 05 52.2**	**+3.1**
CONA	**Conrad Observa**	**3.69**	**183**	*i* Pn	**Pn**	**02 04 53.9**	**+1.5**
	comp=Z,1.4nm,0.2s,SNR=11						
CONA				*e*Sn	**Sn**	**02 05 36.0**	**-0.6**
	comp=Z,6.9nm,0.4s						
RONA	**Rosalia, Austr**	**3.92**	**178**	*i* Pn	**Pn**	**02 04 56.9**	**+1.4**
	comp=Z,0.6nm,0.3s						
RONA				*e*Sn	**Sn**	**02 05 42.9**	**+0.7**
	comp=Z,24nm,0.6s						
STHS	**Stebnicka Huta**	**3.95**	**122**	*e*PN	**Pn**	**02 04 57.9**	**+1.9**
STHS				*e*PG	**Pg**	**02 05 12.4**	**+2.7**
STHS				*e*SG	**Sg**	**02 06 02.7**	**+1.8**
MOA	**Molln**	**3.95**	**198**	*i* Pn	**Pn**	**02 04 57.2**	**+1.2**
	comp=Z,3.0nm,0.2s,SNR=6.6						
MOA				*e*Sn	**Sn**	**02 05 43.6**	**+0.7**
	comp=Z,1.8nm,0.3s						
KECS	**Kecovo**	**4.21**	**136**	*e*PG	**Pg**	**02 05 16.7**	**+1.8**
KECS				*e*SG	**Sg**	**02 06 08.5**	**-1.0**
BIOA	**Bad Ischl, Aus**	**4.24**	**203**	*i* Pn	**Pn**	**02 05 01.1**	**+1.2**
	comp=Z,5.1nm,0.4s,SNR=6.5						
BIOA				*e*Sn	**Sn**	**02 05 50.9**	**+0.8**
	comp=Z,16nm,0.4s						
LUNU	**Lund**	**4.33**	**340**	P	**Pn**	**02 05 02.9**	**+1.8**
LUNU				S	**Sn**	**02 05 52.8**	**+0.5**
LUNU	**Lund**	**4.33**	**340**	P	**Pn**	**02 05 02.9**	**+1.8**
LUNU				*i* P	**Pn**	**02 05 03.0**	**+1.8**
LUNU				*i* S	**Sn**	**02 05 51.4**	**-0.9**
LUNU				S	**Sn**	**02 05 52.8**	**+0.5**
ARSA	**Arzberg**	**4.38**	**185**	*e*Pn	**Pn**	**02 05 04.5**	**+2.6**
	comp=Z,1.0nm,0.3s						
ARSA				*e*Sn	**Sn**	**02 05 51.9**	**-1.7**
	comp=Z,3.0nm,0.6s						
COP	**Copenhagen**	**4.63**	**333**	*e*S	**Sn**	**02 06 00.3**	**+0.6**
COP				IAML		02 06 12.1	
	comp=Z,15nm,0.6s						
BLEU	**Blekinge**	**4.71**	**358**	*i* P	**Pn**	**02 05 09.3**	**+3.0**
BLEU				*i* S	**Sn**	**02 06 01.0**	**-0.6**
BLEU				IAML		02 06 18.4	
	comp=Z,1.3nm,0.4s						
LESA	**Schwarzleotal**	**4.75**	**209**	*i* Pn	**Pn**	**02 05 08.2**	**+1.2**
	comp=Z,0.5nm,0.2s						
LESA				*e*Sn	**Sn**	**02 06 03.8**	**+1.1**
	comp=Z,4.3nm,0.5s						
KOLS	**Kolonicke sedl**	**4.78**	**122**	*e*PN	**Pn**	**02 05 08.8**	**+1.4**
KOLS				*e*SN	**Sn**	**02 06 02.2**	**-1.2**
KOLS				*e*SG	**Sg**	**02 06 27.8**	**+0.3**
BJUU	**Bjuv**	**4.83**	**339**	P	**Pn**	**02 05 09.8**	**+1.8**
BJUU				S	**Sn**	**02 06 03.0**	**-1.6**
BJUU	**Bjuv**	**4.83**	**339**	P	**Pn**	**02 05 09.8**	**+1.8**
BJUU				*i* P	**Pn**	**02 05 10.3**	**+2.2**
BJUU				*i* S	**Sn**	**02 06 02.4**	**-2.2**
BJUU				S	**Sn**	**02 06 03.0**	**-1.6**
SOKA	**Soboth**	**4.99**	**189**	*i* Pn	**Pn**	**02 05 12.8**	**+2.5**
	comp=Z,1.0nm,0.5s						
SOKA				*e*Sn	**Sn**	**02 06 08.9**	**+0.3**
	comp=Z,1.4nm,0.6s						
DEL	**Delary**	**5.05**	**346**	P	**Pn**	**02 05 13.1**	**+2.1**
DEL	**Delary**	**5.05**	**346**	P	**Pn**	**02 05 13.1**	**+2.1**
DEL				*i* P	**Pn**	**02 05 13.2**	**+2.2**
DEL				*i* S	**Sn**	**02 06 07.8**	**-2.1**
DEL				IAML		02 06 13.6	
	comp=Z,3.4nm,0.4s						
WATA	**Walderalm**	**5.20**	**216**	*i* Pn	**Pn**	**02 05 14.9**	**+1.7**
	comp=Z,1.9nm,0.3s,SNR=7.9						
WATA				*i* Sn	**Sn**	**02 06 12.2**	**-1.7**
	comp=Z,1.6nm,0.3s						
OBKA	**Obir**	**5.21**	**192**	*i* Pn	**Pn**	**02 05 16.2**	**+2.9**
	comp=Z,0.3nm,0.2s						
OBKA				*e*Sn	**Sn**	**02 06 14.5**	**+0.5**
	comp=Z,2.0nm,0.5s						
WTTA	**Wattenberg**	**5.23**	**216**	*i* Pn	**Pn**	**02 05 16.1**	**+2.3**
	comp=Z,2.8nm,0.5s						
WTTA				*i* Sn	**Sn**	**02 06 16.2**	**+1.3**
	comp=Z,1.5nm,0.3s						
MYKA	**Terra Mystica**	**5.24**	**199**	*e*Pn	**Pn**	**02 05 15.2**	**+1.4**
	comp=Z,2.5nm,0.8s						
MYKA				*i* Sn	**Sn**	**02 06 17.2**	**+2.3**
	comp=Z,1.6nm,0.5s						
MOTA	**Moosalm**	**5.37**	**219**	*i* Pn	**Pn**	**02 05 16.7**	**+1.1**
	comp=Z,1.7nm,0.3s						
MOTA				*i* Sn	**Sn**	**02 06 18.8**	**+0.6**
	comp=Z,1.8nm,0.4s						
RETA	**Reutte**	**5.39**	**222**	*i* Pn	**Pn**	**02 05 16.7**	**+0.8**
	comp=Z,0.8nm,0.2s,SNR=5.0						
RETA				*e*Sn	**Sn**	**02 06 20.6**	**+1.9**
	comp=Z,2.1nm,0.5s						
ABTA	**Abfaltersbach**	**5.41**	**207**	*i* Pn	**Pn**	**02 05 18.2**	**+2.2**
	comp=Z,1.0nm,0.3s						
ABTA				*e*Sn	**Sn**	**02 06 20.5**	**+1.5**
	comp=Z,1.3nm,0.3s						
SQTA	**Sankt Quirin**	**5.43**	**218**	*i* Pn	**Pn**	**02 05 18.4**	**+2.0**
	comp=Z,1.4nm,0.3s						
SQTA				*i* Sn	**Sn**	**02 06 20.9**	**+1.3**
	comp=Z,3.2nm,0.4s						
FABU	**Falkenberg**	**5.75**	**341**	P	**Pn**	**02 05 22.7**	**+2.0**
FABU	**Falkenberg**	**5.75**	**341**	P	**Pn**	**02 05 22.7**	**+2.0**
FETA	**Feichten**	**5.78**	**220**	*i* Pn	**Pn**	**02 05 23.4**	**+2.1**
	comp=Z,0.4nm,0.2s						
FETA				*i* Sn	**Sn**	**02 06 27.9**	**-0.5**
	comp=Z,1.1nm,0.5s						
DAVA	**Damuels**	**5.93**	**226**	*e*Pn	**Pn**	**02 05 24.4**	**+1.1**
	comp=Z,1.5nm,0.3s						
DAVA				*e*Sn	**Sn**	**02 06 33.4**	**+1.4**
	comp=Z,3.2nm,0.4s						
DAVOX	**Davos/Dischmat**	**6.32**	**223**	Pn	**Pn**	**02 05 29.5**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=36,slow=14,SNR=4.1						
DAVOX				Lg	Lg	02 07 14.3	
	comp=Z,0.4nm,0.3s,baz=37,slow=20,SNR=2.2						
	comp=Z,1.5nm,0.4s						
NACGM	**Naroch**	**7.21**	**59**	*e*P	Pn	02 05 47.5	+6.8
	comp=Z,5.0nm,0.7s,baz=246						
AKASG	**Malin Array Be**	**8.30**	**91**	Pn	**Pn**	**02 05 56.5**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=284,slow=12,SNR=4.8						
AKASG				Sn	**Sn**	**02 07 26.0**	**-4.1**
	comp=Z,0.6nm,0.3s,baz=280,slow=23,SNR=1.4						
AKASG				Lg	Lg	02 08 19.0	
	comp=Z,0.1nm,0.3s,baz=228,slow=38,SNR=1.3						
	comp=Z,0.2nm,0.3s						
HFS	**Hagfors**	**8.65**	**352**	Pn	**Pn**	**02 06 02.1**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=164,slow=13,SNR=6.7						
HFS				Sn	**Sn**	**02 07 37.3**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=163,slow=26,SNR=5.2						
	comp=Z,1.1nm,0.8s						
NOA	**NORSAR Array B**	**9.83**	**346**	Pn	**Pn**	**02 06 16.8**	**+0.1**
	baz=160,slow=10,SNR=1.8						
NOA				Sn	**Sn**	**02 08 04.3**	**-3.4**
	baz=147,slow=15,SNR=1.7						
	comp=Z,0.5nm,0.9s						
FINES	**FINESS Array B**	**11.28**	**25**	Pn	**Pn**	**02 06 37.5**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=217,slow=12,SNR=6.8						
FINES				Sn	**Sn**	**02 08 36.3**	**-6.7**
	comp=Z,0.2nm,0.3s,baz=207,slow=21,SNR=4.1						
	comp=Z,3.3nm,1.0s						
EKA	**Eskdalemuir Ar**	**12.06**	**296**	Pn	**Pn**	**02 06 46.2**	**-0.9**
	baz=103,slow=14						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ESDC	Sonseca Array	18.35	237	P	Pn	02 08 06.9	-3.0
	comp=Z,0.1nm,0.2s,baz=29,slow=16,SNR=1.3						
ARCES	ARCESS Array B	18.53	10	P	P	02 08 10.5	-1.3
	comp=Z,1.4nm,0.8s,baz=188,slow=9.6,SNR=2.0						

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*NEIC **23** 02:12:27.4±1.5, 44.°0N±0.°1×128.°2W±0.°2, h10km±2km, ML3.1/52, Error ellipse: s-maj=22.8km s-min=15.6km az=245.0*

*IDC **23** 02:12:28.3±2.8, 44.°06N×128.°07W, h0km, mb3.1/3, mbtmp3.3/7, ML3.3/4, MS3.2/10, Error ellipse: s-maj=58.9km s-min=17.3km az=55.0*

ISC 23 02:12:30.3±1.9**, 44.°1N**±0.°1×**128.°1W**±0.°2**, h10km, n44, σ1.s24**/29**, MS3.4**/6**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	Edson Butte	2.97	113	Pn	Pn	02 13 12.9	-4.7
KEBM				IAML		02 14 01.9	
	comp=N,71nm,3.2s						
KEBM				IAML		02 14 33.5	
	comp=E,67nm,1.9s						
I02E	Swisshome, OR	3.03	88	Pn	Pn	02 13 17.0	-1.3
I02E				IAML		02 14 30.7	
	comp=N,58nm,0.1s						
I02E				IAML		02 14 42.5	
	comp=E,36nm,1.9s						
HEBO	Mount Hebo	3.27	69	Pn	Pn	02 13 20.4	-1.2
I03D	Drain, OR	3.43	95		Pn	02 13 22.0	-1.8
G03D	McMinnville, O	3.60	70		Pn	02 13 25.7	-0.4
G03D				IAML		02 14 04.0	
	comp=E,21nm,2.6s						
G03D				IAML		02 14 36.9	
	comp=N,32nm,1.5s						
BUCK	Buck Mountain	3.65	87	Pn	Pn	02 13 25.3	-1.6
BUCK				IAML		02 14 56.2	
	comp=N,22nm,2.9s						
BUCK				IAML		02 14 59.8	
	comp=E,35nm,3.4s						
F03A	Seaside	3.68	59		Pn	02 13 26.7	-0.5
F03A				IAML		02 14 22.4	
	comp=N,48nm,3.2s						
H04D	Lebanon	3.84	82		Pn	02 13 28.1	-1.4
H04D				IAML		02 14 41.9	
	comp=E,25nm,2.6s						
H04D				IAML		02 16 00.0	
	comp=N,23nm,2.8s						
E03A	Lebam	4.00	51	Pn	Pn	02 13 30.9	-0.7
E03A				IAML		02 14 20.8	
	comp=E,21nm,2.4s						
E03A				IAML		02 15 21.9	
	comp=N,18nm,3.1s						
BBOR	Butler Butte	4.10	105		Pn	02 13 31.9	-1.2
BBOR				IAML		02 14 32.8	
	comp=E,16nm,1.3s						
BBOR				IAML		02 14 39.0	
	comp=N,17nm,2.0s						
H04A	Detroit Lake	4.25	80		Pn	02 13 33.9	-1.2
WISH	Wishkah	4.26	43	Pn	Pn	02 13 35.4	+0.2
WISH				IAML		02 16 12.0	
	comp=N,29nm,2.9s						
J04A	Umpqua Nationa	4.40	99		Pn	02 13 37.8	+0.5
NLWA	Neilton Lookou	4.41	40	Pn	Pn	02 13 38.5	+1.2
C03A	Quillayute Air	4.55	31	Pn	Pn	02 13 39.5	+0.3
YBH	Yreka Blue Hor	4.58	119	Pn	Pn	02 13 41.0	+1.2
	baz=297,slow=6.8,SNR=3.7						
YBH				LR	LR	02 15 19.8	
	comp=N,6.5nm,18.2s,baz=295,slow=38						
L04D	Klamath Falls	4.61	112	Pn	Pn	02 13 39.7	-0.4
HOOD	Mount Hood Mea	4.73	73		Pn	02 13 42.7	+1.0
HOOD				IAML		02 15 05.1	
	comp=N,15nm,1.9s						
J05D	Fort Rock, OR	5.01	97		Pn	02 13 46.5	+0.7
J05D				IAML		02 15 51.6	
	comp=N,12nm,4.6s						
J05D				IAML		02 17 05.1	
	comp=E,16nm,3.4s						
GNW	Green Mountain	5.04	45		Pn	02 13 45.9	+0.1
PINE	Pine Mountain	5.15	91		Pn	02 13 47.1	-0.5
PINE				IAML		02 16 10.1	
	comp=E,9.7nm,3.7s						
PINE				IAML		02 16 25.3	
	comp=N,11nm,4.2s						
OZB	Mount Ozzard	5.17	19	Pn	Pn	02 13 47.2	-0.6
G08A	Pilot Rock	6.59	76		Pn	02 14 06.9	-0.5
BBB	Bella Bella	8.09	360	Pn	Pn	02 14 27.8	+0.1
	comp=N,0.2nm,0.3s,baz=183,slow=7.5,SNR=7.5						
	comp=N,12nm,1.0s						
NEW	Newport	8.65	57	LR	LR	02 17 58.9	
	comp=N,160nm,20.6s,baz=210,slow=38						
NVAR	Mina Array Bea	9.27	124	Pn	Pn	02 14 44.8	+0.6
	comp=N,0.1nm,0.3s,baz=288,slow=15,SNR=4.9						
	comp=N,0.5nm,0.9s						
ELK	Elko	10.05	105	LR	LR	02 19 13.9	
	comp=N,34nm,18.4s,baz=262,slow=40						
PDAR	Pinedale Array	13.51	89	Pn	Pn	02 15 46.0	+3.8
	baz=296,slow=16,SNR=2.3						
PDAR				LR	LR	02 21 14.1	
	comp=N,50nm,19.9s,baz=272,slow=39						
	comp=N,0.2nm,0.7s						
PFO	Pinyon Flats O	13.82	135	LR	LR	02 20 21.3	
	comp=N,54nm,19.6s,baz=328,slow=34						
ANMO	Albuquerque	18.96	111	P	P	02 16 52.1	+0.3
	comp=N,0.1nm,0.3s,baz=315,slow=11,SNR=3.8						
	comp=N,0.5nm,0.4s						
YKA	Yellowknife Ar	20.03	18	P	P	02 17 01.7	-1.3
	comp=N,2.2nm,1.0s,baz=211,slow=10,SNR=8.6						
YKA				LR	LR	02 24 13.3	
	comp=N,40nm,20.6s,baz=214,slow=35						
	comp=N,2.2nm,1.0s						
ULM	Lac du Bonnet	22.61	63	LR	LR	02 26 35.0	
	comp=N,66nm,20.4s,baz=276,slow=37						
ILAR	Eielson Array	23.25	339	P	P	02 17 37.8	+0.3
	comp=N,0.3nm,0.6s,baz=146,slow=8.7,SNR=1.6						
	comp=N,0.3nm,0.6s						
TXAR	Lajitas Array	24.36	119	P	P	02 17 46.9	-1.7
	comp=N,0.3nm,0.9s,baz=322,slow=7.4,SNR=7.6						
	comp=N,0.3nm,0.9s						
SADO	Sadowa	34.51	71	LR	LR	02 33 46.1	
	comp=N,69nm,19.6s,baz=324,slow=37						
TKL	Tuckaleechee C	34.66	89	LR	LR	02 33 49.7	
	comp=N,70nm,19.8s,baz=328,slow=37						
FRB	Frobisher Bay	38.40	38	LR	LR	02 36 02.5	
	comp=N,61nm,18.9s,baz=32,slow=37						
SCHQ	Schefferville	39.98	52	LR	LR	02 35 38.2	
	comp=N,59nm,18.8s,baz=91,slow=35						
H11N3	WAKE ISLAND Hy	58.73	268	T	T	03 25 25.4	
	baz=50,slow=75,SNR=364						
H11N2	WAKE ISLAND Hy	58.73	268	T	T	03 25 21.4	
	baz=50,slow=75,SNR=275						
H11N1	WAKE ISLAND Hy	58.74	268	T	T	03 25 26.9	
	baz=50,slow=75,SNR=205						
H11S1	WAKE ISLAND Hy	59.66	267	T	T	03 26 36.4	
	baz=50,slow=75,SNR=55						
H11S2	WAKE ISLAND Hy	59.67	267	T	T	03 26 37.5	
	baz=50,slow=75,SNR=48						
H11S3	WAKE ISLAND Hy	59.68	267	T	T	03 26 36.2	
	baz=50,slow=75,SNR=35						

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*NOU **23** 02:14:16.1, 37.°46S×177.°77E, h177km, MLv3.6/11, Off E. Coast of N. Island, N.Z.*

*WEL **23** 02:14:22.1±1.1, 37°S±7°×17°7E±°, h99km±14km, M2.9/13, ML3.0/13, MLv2.9/13, Error ellipse: s-maj=9.8km s-min=7.1km az=165.2, confirmed*

ISC 23 02:14:17.3±2.2**, 37.°30S**±0.°08×**177.°47E**±0.°06**, h154km**±12km**, n53, σ1.s35**/73**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	Te Kaha	0.52	151	P	Pn	02 14 39.3	+0.3
HAZ				S	Sn	02 14 53.0	-2.9
RUGZ	Raukumara Rang	0.68	166	P	Pn	02 14 40.1	-0.1
RUGZ				S	Sn	02 14 54.6	-3.3
MXZ	Matakaoa Point	0.71	112	P	Pn	02 14 40.8	+0.6
MXZ	Matakaoa Point	0.71	112	P	Pn	02 14 41.3	+1.1
MXZ				S	Sn	02 14 57.8	0.0
PKGZ	Pakihiroa	0.74	140	P	Pn	02 14 42.0	+1.5
PKGZ				S	Sn	02 14 57.4	-0.9
OPRZ	Ohinepanea	0.91	233	P	Pn	02 14 41.8	+0.1
WMGZ	Waiomatatini S	0.91	125	P	Pn	02 14 43.1	+1.5
WMGZ				S	Sn	02 15 00.3	0.0
MARZ	Manawahe	0.93	223	P	Pn	02 14 42.3	+0.4
TWGZ	Tauwhareparae	0.96	155	P	Pn	02 14 43.9	+1.8
TWGZ				S	Sn	02 15 01.4	+0.1
PUZ	Puketiti	0.99	141	P	Pn	02 14 43.6	+1.3
PUZ				S	Sn	02 15 00.4	-1.2
EDRZ	Edgecumbe	0.99	216	P	Pn	02 14 43.1	+0.7
URZ	Urewera	1.00	197	P	Pn	02 14 42.8	+0.5
URZ	Urewera	1.00	197	P	Pn	02 14 43.0	+0.6
URZ				S	Sn	02 14 59.9	-1.8
MWZ	Matawai	1.03	178	P	Pn	02 14 44.0	+1.3
MWZ				S	Sn	02 15 01.7	-0.6
TGRZ	Tauranga	1.05	246	P	Pn	02 14 43.0	+0.2
OMRZ	Omania	1.19	227	P	Pn	02 14 44.9	+0.8
RAGZ	Rawiri	1.19	182	P	Pn	02 14 45.5	+1.3
RAGZ				S	Sn	02 15 03.8	-1.1
TARZ	Mount Tarawera	1.21	219	P	Pn	02 14 45.7	+1.4
MUGZ	Murupara	1.30	205	P	Pn	02 14 46.1	+1.0
MUGZ				S	Sn	02 15 05.6	-0.9
CNGZ	Carnagh Statio	1.31	154	P	Pn	02 14 47.7	+2.5
KMRZ	Kaimai	1.33	246	P	Pn	02 14 46.3	+0.8
RTZ	Ruatahuna	1.37	196	P	Pn	02 14 46.7	+0.8
RTZ				S	Sn	02 15 07.4	-0.5
RIGZ	Rimuhau	1.42	171	P	Pn	02 14 47.7	+1.3
RIGZ				S	Sn	02 15 08.6	-0.1
PRRZ	Plateau Road	1.47	215	P	Pn	02 14 48.2	+1.4
SNGZ	Shannon Statio	1.48	184	P	Pn	02 14 48.1	+1.2
SNGZ				S	Sn	02 15 09.5	-0.3
ALRZ	Allen Road	1.54	215	P	Pn	02 14 49.1	+1.5
TOZ	Tahuroa Road	1.62	254	P	Pn	02 14 49.8	+1.4
MTHZ	Maungataniwha	1.62	198	P	Pn	02 14 49.4	+1.0
MTHZ				S	Sn	02 15 13.8	+1.3
RAHZ	Arahi	1.64	191	P	Pn	02 14 50.1	+1.5
RAHZ				S	Sn	02 15 12.8	+0.1
KNZ	Kokohu	1.72	175	P	Pn	02 14 50.7	+1.2
MRHZ	Matea Rd	1.74	208	P	Pn	02 14 50.9	+1.2
MRHZ				S	Sn	02 15 14.7	-0.1
KUTZ	Kaahu Road	1.76	227	P	Pn	02 14 51.8	+1.9
WHHZ	Waihua	1.78	186	P	Pn	02 14 51.6	+1.5
WHHZ				S	Sn	02 15 15.9	+0.4
TLZ	Tolley Road	1.84	236	P	Pn	02 14 52.6	+1.8
MKAZ	Moumakai	1.86	275	P	Pn	02 14 52.3	+1.4
MHGZ	Mahia Peninsul	1.88	170	P	Pn	02 14 53.2	+2.0
GRZ	Great Barrier	1.93	302	P	Pn	02 14 53.1	+1.4
WATZ	Wairara	1.96	224	P	Pn	02 14 54.6	+2.4
ARHZ	Aropaoanui	1.99	191	P	Pn	02 14 53.9	+1.4
ARHZ				S	Sn	02 15 20.5	+0.8
BKZ	Black Stump Fm	2.01	202	P	Pn	02 14 53.9	+1.1
BKZ	Black Stump Fm	2.01	202	P	Sn	02 15 20.9	+0.6
BKZ	Black Stump Fm	2.01	202	P	Pn	02 14 53.6	+0.8
BKZ				S	Sn	02 15 20.0	-0.3
RITZ	Rihia Road	2.10	217	P	Pn	02 14 55.9	+2.2
KWHZ	Kaweka Forest	2.27	201	P	Pn	02 14 56.9	+1.0
NTVZ	North Tongarir	2.28	218	P	Pn	02 14 58.1	+2.0
TMVZ	Te Maari	2.28	217	P	Pn	02 14 57.9	+1.9
HIZ	Hauiti	2.40	239	P	Pn	02 14 59.6	+2.3
BFZ	Birch Farm	3.51	195	P	Pn	02 15 10.9	-0.3
BFZ	Birch Farm	3.51	195	S	Sn	02 15 52.0	-1.1
SNZO	South Karori	4.54	207	P	Pn	02 15 23.7	-0.9
QRZ	Quartz Range	5.21	226	P	Pn	02 15 33.0	-0.5
RPZ	Rata Peaks	8.05	215	P	Pn	02 16 09.8	-1.5
ODZ	Otahua Downs	9.29	211	P	Pn	02 16 25.5	-2.1

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*IDC **23** 02:14:59.3±0.7, 14.°44S×166.°79E, h0km, mb4.2/13, mbtmp4.2/14, ML4.3/1, MS3.6/11, Error ellipse: s-maj=27.8km s-min=16.6km az=95.0*

*NOU **23** 02:15:03.9, 14.°53S×166.°82E, h0km, MLv5.2/13, Vanuatu Islands*

*NEIC **23** 02:15:05.8±2.0, 14.°54S±0.°05×166.°86E±0.°08, h35km±1km, mb4.9/23, Error ellipse: s-maj=14.6km s-min=7.1km az=291.0*

ISC 23 02:15:05.1±0.6**, 14.°52S**±0.°06×**166.°78E**±0.°10**, h35km, n64, σ1.s36**/55**, mb4.6**/24**, MS3.6**/10**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.01	156		Pn	02 15 22.1	-0.8
SANVU				Sn	Sn	02 15 35.7	-0.2
SANVU	Saraoutou	1.01	156	P	Pn	02 15 22.0	-0.9
VLAKA	Lakatoro	1.70	159	P	Pn	02 15 33.2	+0.9
DVP	Devils Point	3.47	157	P	Pn	02 15 59.4	+2.8
LUES	Luesalemba Tem	3.92	347	P	Pn	02 16 06.5	+3.6
INH	Isangel	5.54	155	P	Pn	02 16 28.5	+3.3
YATNC	Mamie plateau,	7.50	179	P	Pn	02 16 54.4	+2.3
DZM	Mont Dzumac	7.52	182		Pn	02 16 53.4	+0.9
DZM	Mont Dzumac	7.52	182	Pn	Pn	02 16 53.1	+0.6
	4.8nm,0.3s,baz=40,slow=19,SNR=21						
DZM				Sn	Sn	02 18 14.2	-2.4
	baz=310,slow=21						
	39nm,0.6s						
DZM	Mont Dzumac	7.52	182	P	Pn	02 16 54.2	+1.7
ONTNC	Ouen Toro	7.76	182		Pn	02 16 56.6	+1.0
ONTNC	Ouen Toro	7.76	182	P	Pn	02 16 57.5	+1.9
ALEG	Aligegeo Malai	8.26	313	P	Pn	02 17 04.1	+1.5
MSVF	Nonsavu	11.29	108	Pn	Pn	02 17 50.8	+6.6
	0.1nm,0.3s,baz=216,slow=23,SNR=1.4						
MSVF				LR	LR	02 21 19.8	
	comp=Z,267nm,18.4s,baz=161,slow=34						
EIDS	Eidsvold	18.27	231	P	Pn	02 19 17.7	+1.8
CTAO	Charters Tower	20.36	251	P	Pn	02 19 40.7	-0.3
CTAO				IAmb	IAmb	02 19 41.6	
	comp=Z,30nm,0.9s						
ARMA	Armidale	21.09	219	P	P	02 19 48.3	+1.6
ARMA				IAmb	IAmb	02 19 51.9	
	comp=Z,53nm,1.6s						
HIZ	Hauiti	24.95	165	P	P	02 20 26.0	+0.8
BKZ	Black Stump Fm	26.00	163	P	P	02 20 35.1	+0.3
BKZ				IAmb	IAmb	02 21 11.2	
	comp=Z,112nm,2.0s						
STKA	Stephens Creek	28.77	229	P	P	02 21 00.3	+0.6
STKA	Stephens Creek	28.77	229	P	P	02 21 00.5	+0.7
	comp=Z,5.0nm,0.6s,baz=40,slow=8.1,SNR=11						
STKA				LR	LR	02 32 21.4	
	comp=Z,149nm,18.9s,baz=37,slow=36						
	comp=Z,5.0nm,0.6s						
WB0	Warramunga Arr	31.35	256	P	P	02 21 21.9	-0.9
WB2	Warramunga Arr	31.41	255	P	P	02 21 22.2	-1.0
WB2				IAmb	IAmb	02 22 03.2	
	comp=Z,39nm,1.8s						
WRA	Warramunga Arr	31.42	255	P	P	02 21 22.0	-1.3
	comp=Z,4.5nm,0.9s,baz=84,slow=8.5,SNR=17						
WRA				PcP	PcP	02 24 16.5	+0.1
	comp=Z,0.9nm,0.8s,baz=96,slow=4.9,SNR=2.0						
	comp=Z,4.5nm,0.9s						
AS31	Alice Springs	32.31	249	P	P	02 21 30.4	-0.7
ASAR	Alice Springs	32.31	249	P	P	02 21 30.0	-1.1
ASAR	Alice Springs	32.31	249	P	P	02 21 30.2	-0.9
	comp=Z,5.3nm,0.8s,baz=72,slow=9.5,SNR=43						
ASAR				PcP	PcP	02 24 17.5	-1.3
	comp=Z,0.4nm,0.6s,baz=77,slow=1.3,SNR=4.4						
ASAR				LR	LR	02 33 17.5	
	comp=Z,122nm,19.8s,baz=90,slow=34						
	comp=Z,5.3nm,0.8s						
RAR	Rarotonga	32.48	107	LR	LR	02 33 42.1	
	comp=Z,44nm,18.3s,baz=280,slow=35						
BBOO	Buckleboo	33.34	232	P	P	02 21 40.5	+0.6
GUMO	Guam	35.36	321	LR	LR	02 34 30.1	
	comp=Z,43nm,21.2s,baz=104,slow=33						
KNRA	Kununurra	36.69	263	P	P	02 22 08.5	-0.5
FITZ	Fitzroy Crossi	39.59	259	P	P	02 22 33.6	+0.1
NWAO	Narrogin (SRO)	48.45	239	LR	LR	02 43 51.8	
	comp=Z,119nm,19.0s,baz=74,slow=36						
MORW	Morawa	48.93	244	P	P	02 23 47.7	-0.5
JGF	Kuroka	57.10	332	P	P	02 24 48.4	+0.2
JGF				IAmb	IAmb	02 25 11.7	
	comp=Z,32nm,1.7s						
MJAR	Matsushiro Arr	57.50	333	P	P	02 24 49.1	-1.8
	comp=Z,1.7nm,0.9s,baz=173,slow=8.3,SNR=5.3						
	comp=Z,1.7nm,0.9s						
ASAJ	Asahikawa	62.38	341	LR	LR	02 49 06.6	
	comp=Z,38nm,20.5s,baz=150,slow=33						
VNDA	Vanda	63.06	181	P	P	02 25 29.4	+0.9
	comp=Z,0.4nm,0.3s,baz=30,slow=5.5,SNR=7.9						
	comp=Z,0.4nm,0.3s						
KSRS	Korea Array	63.30	326	P	P	02 25 31.4	+0.9
	comp=Z,0.4nm,0.5s,baz=148,slow=4.5,SNR=2.2						
	comp=Z,0.4nm,0.5s						
USRK	Ussuriysk Ar.	66.48	333	P	P	02 25 52.0	+0.9
	comp=Z,2.0nm,0.8s,baz=160,slow=6.1,SNR=4.1						
	comp=Z,2.0nm,0.8s						
PETK	Petropavlovsk-	67.80	354	P	P	02 25 59.4	+0.1
	comp=Z,1.6nm,0.8s,baz=115,slow=7.0,SNR=4.5						
	comp=Z,1.6nm,0.8s						
CMAR	Chiang Mai Arr	74.43	294	P	P	02 26 39.5	-0.8
	comp=Z,1.8nm,0.3s,baz=123,slow=5.0,SNR=7.0						
	comp=Z,1.8nm,0.3s						
MA2	Magadan	74.97	352	LR	LR	02 54 36.4	
	comp=Z,35nm,21.8s,baz=172,slow=32						
QSPA	South Pole Qui	75.51	180	P	P	02 26 46.0	+0.2
QSPA				IAmb	IAmb	02 27 21.0	
	comp=Z,19nm,1.9s						
QSPA	South Pole Qui	75.51	180	P	P	02 26 45.8	0.0
	comp=Z,0.8nm,0.6s,baz=304,slow=1.7,SNR=8.3						
	comp=Z,0.8nm,0.6s						
M14K	Bethel	79.07	15	P	P	02 27 04.9	-0.5
M14K				IAmb	IAmb	02 27 07.1	
	comp=Z,5.5nm,0.7s						
M16K	Timber Creek	80.08	16	P	P	02 27 11.7	+0.7
SONM	Songino Array	82.04	324	P	P	02 27 20.2	-1.7
	comp=Z,0.2nm,0.3s,baz=141,slow=9.3,SNR=1.4						
	comp=Z,0.2nm,0.3s						
E19K	Redstone River	85.85	13		P	02 27 42.4	+1.6
E19K				IAmb	IAmb	02 27 43.0	
	comp=Z,4.4nm,0.8s						
C18K	Utukok River	86.05	11	P	P	02 27 42.5	+0.8
C18K				IAmb	IAmb	02 29 24.9	
	comp=Z,16nm,1.5s						
ILAR	Eielson Array	86.47	18	P	P	02 27 42.9	-0.9
ILAR	Eielson Array	86.47	18	P	P	02 27 42.8	-1.1
	comp=Z,2.8nm,0.7s,baz=242,slow=5.2,SNR=11						
	comp=Z,2.8nm,0.7s						
D20K	Etivluk River	87.02	13		P	02 27 47.6	+1.1
D20K				IAmb	IAmb	02 27 48.6	
	comp=Z,6.1nm,0.8s						
PFO	Pinyon Flats O	87.26	54	LR	LR	03 05 27.0	
	comp=Z,45nm,18.2s,baz=228,slow=35						
NVAR	Mina Array Bea	87.49	49	LR	LR	02 58 44.1	
	comp=Z,64nm,21.4s,baz=274,slow=30						
D22K	Ayikyak River	88.02	14	IAmb	IAmb	02 27 53.9	
	comp=Z,5.3nm,0.7s						
DAWY	Dawson	88.42	21	IAmb	IAmb	02 27 56.5	
	comp=Z,4.0nm,0.7s						
D23K	Nanushuk River	88.55	14	IAmb	IAmb	02 28 16.0	
	comp=Z,14nm,1.5s						
INK	Inuvik	92.84	19	LR	LR	03 05 12.2	
	comp=Z,36nm,19.0s,baz=246,slow=32						
SNAA	Sanae	93.73	183	P	P	02 28 16.5	-1.6
	comp=Z,1.2nm,1.0s,baz=207,slow=9.0,SNR=1.7						
	comp=Z,1.2nm,1.0s						
ARCES	ARCESS Array B	119.93	345	PKP	PKiKP	02 33 50.5	-1.0
	comp=Z,1.0nm,0.5s,baz=64,slow=2.8,SNR=7.6						
FINES	FINESS Array B	125.35	338	PKP	PKPdf	02 34 00.9	-1.0
	comp=Z,2.0nm,1.0s,baz=324,slow=9.4,SNR=3.5						
KEST	Kesra	150.74	320	PKPbc	PKiKP	02 34 54.1	-0.8
	comp=Z,2.7nm,0.8s,baz=52,slow=1.7,SNR=4.3						
ESDC	Sonseca Array	153.65	344	PKPbc	PKPbc	02 34 59.1	-1.6
	comp=Z,0.4nm,0.8s,baz=11,slow=5.2,SNR=2.4						

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*FUNV **23** 02:17:25.3, 10.°92N×72.°39W, h14km, MW3.2*

*RSNC **23** 02:17:26.4±0.0, 11°N±3°×7°3W±°, h34km±10km, M2.5, ML2.5, MLv3.2*

ISC 23 02:17:24.1±1.3**, 10.°97N**±0.°04×**72.°41W**±0.°04**, h25km**±14km**, n14, σ1.s56**/24**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRJC	Cerrejon, Guaj	0.47	276	P	Pb	02 17 33.7	-0.1
CRJC				S	Sb	02 17 40.4	0.0
URIC	Uribia, Colomb	0.83	29	P	Pn	02 17 40.7	+0.4
URIC				S	Sn	02 17 53.1	+1.3
MCQV	Machiques	0.92	188	*e*P	Pb	02 17 40.9	-0.5
MCQV				*e*S	Sn	02 17 53.8	-0.2
SMRC	Santa Marta, M	1.79	276	P	Pn	02 17 53.4	-0.1
SMRC				S	Sn	02 18 11.8	-3.6
OCAC	Ocana	2.86	198	P	Pn	02 18 08.0	-0.3
OCAC				S	Sn	02 18 42.4	+0.4
SJCC	San Jacinto, C	2.92	249	P	Pn	02 18 10.0	+0.9
SJCC				S	Sn	02 18 45.2	+1.7
SOCV	Socops	3.08	150	*e*P	Pn	02 18 11.4	+0.2
SOCV				*e*S	Sn	02 18 45.5	-1.7
CAPV	Capacho	3.09	178	*e*P	Pn	02 18 12.5	+1.0
CAPV				*e*S	Sn	02 18 47.4	-0.4
TEPV	Terepaima	3.32	107	*e*P	Pn	02 18 16.1	+1.5
TEPV				*e*S	Sn	02 18 52.4	-0.9
BARC	Barichara	4.42	190	P	Pn	02 18 30.5	+0.7
BARC				S	Sn	02 19 22.9	+2.3
BAUV	El Baul	4.75	115	*e*P	Pn	02 18 35.1	+0.9
BAUV				*e*S	Sn	02 19 24.8	-3.7
BENV	Beln	4.84	102	*e*P	Pn	02 18 36.7	+1.2
TACV	Tcata	5.36	98	*e*P	Pn	02 18 43.3	+0.7
CACV	CAICARA DEL OR	6.71	120	*e*P	Pn	02 19 07.8	+6.7

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*NDI **23** 02:35:09.4±2.4, 9.°94N×93.°96E, h10km, ML4.2, MW4.3, mb4.3(NEIC)*

*IDC **23** 02:35:10.3±1.1, 10.°25N×93.°54E, h0km, mb3.8/13, mbtmp3.8/14, ML4.0/1, MS3.2/1, Error ellipse: s-maj=38.3km s-min=20.5km az=52.0*

*NEIC **23** 02:35:10.2±2.3, 10.°0N±0.°1×93.°9E±0.°1, h10km±1km, mb4.3/7, Error ellipse: s-maj=23.0km s-min=13.2km az=38.0*

ISC 23 02:35:13.3±0.7**, 10.°28N**±0.°09×**93.°92E**±0.°07**, h19km, n33, σ1.s47**/36**, mb3.9**/17**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	Port Blair	1.79	320		Pb	02 35 45.6	+0.1
PBA	Port Blair	1.79	320	*e*P	Pn	02 35 44.7	+1.5
PBA				*e*S	Sg	02 36 10.4	-0.7
PBA				IAML		02 36 14.4	
	comp=N,2µm,1.1s						
DGPR	DIGLIPUR	3.04	342	*e*P	Pn	02 36 02.6	+2.2
DGPR				*e*S	Sb	02 36 41.1	-2.5
DGPR				IAML		02 36 44.6	
	comp=N,2µm,0.8s						
SRIT	Nakonsritamara	5.85	106	Pn	Pn	02 36 38.0	-1.1
CMAR	Chiang Mai Arr	9.47	30	Pn	Pn	02 37 32.3	+3.4
	comp=N,0.3nm,0.3s,baz=205,slow=13,SNR=1.7						
	comp=N,1.6nm,0.3s						
MDRS	Chennai	13.68	283	*e*P	Pn	02 38 25.4	-1.0
MDRS				*e*S	Sn	02 41 00.6	+2.7
HYB	Hyderabad	16.51	297	*e*P	Pn	02 39 05.6	+1.5
EVN	Everest	18.81	340	P	Pn	02 39 33.4	+0.3
NIL	Nilore	30.02	324	P	P	02 41 19.1	-2.0
SIMJ	Simiganj	35.99	326	P	P	02 42 12.2	-1.1
SIMJ				IAmb	IAmb	02 42 14.3	
	comp=Z,4.5nm,0.8s						
ARSB	Arslanbob	36.01	333	P	P	02 42 13.3	-0.1
ARSB				IAmb	IAmb	02 42 15.5	
	comp=Z,4.1nm,0.8s						
MKAR	Makanchi Array	37.71	347	P	P	02 42 28.1	+0.4
MKAR	Makanchi Array	37.71	347	P	P	02 42 25.4	-2.3
	comp=Z,0.5nm,0.6s,baz=171,slow=7.6,SNR=4.7						
MKAR				LR	LR	03 01 49.9	
	comp=Z,32nm,18.7s,baz=222,slow=42						
	comp=Z,0.5nm,0.6s						
KKAR	Karatay Array	38.54	332	P	P	02 42 34.6	-0.2
SONM	Songino Array	38.88	13	P	P	02 42 38.3	+0.6
	comp=Z,0.2nm,0.4s,baz=209,slow=12,SNR=1.8						
	comp=Z,0.2nm,0.4s						
KURBB	Kurchatov Arra	42.18	345	P	P	02 43 04.4	-0.3
	comp=Z,0.5nm,0.6s,baz=158,slow=7.6,SNR=4.2						
	comp=Z,0.5nm,0.6s						
ZALV	Zalesovo Beam	44.16	352	P	P	02 43 20.2	-0.5
ZALV	Zalesovo Beam	44.16	352	P	P	02 43 21.1	+0.4
	comp=Z,1.1nm,0.6s,baz=174,slow=7.4,SNR=4.5						
	comp=Z,1.1nm,0.6s						
BVAR	Borovoye Array	46.66	341	P	P	02 43 39.7	-0.8
	comp=Z,0.4nm,0.5s,baz=120,slow=5.8,SNR=1.9						
	comp=Z,0.4nm,0.5s						
ABKAR	Akbulak array	48.04	330	P	P	02 43 51.0	-0.3
ABKAR	Akbulak array	48.04	330	P	P	02 43 51.8	+0.5
ABKAR				IAmb	IAmb	02 44 00.1	
	comp=Z,1.7nm,0.9s						
WRA	Warramunga Arr	49.85	127	P	P	02 44 07.8	+2.1
	comp=Z,0.5nm,0.7s,baz=304,slow=8.6,SNR=2.4						
	comp=Z,0.5nm,0.7s						
ASAR	Alice Springs	51.64	131	P	P	02 44 20.8	+1.6
	comp=Z,0.8nm,0.8s,baz=308,slow=7.0,SNR=5.2						
	comp=Z,0.8nm,0.8s						
KBZ	Khabaz	55.19	317	P	P	02 44 41.9	-3.0
	comp=Z,1.1nm,0.6s,baz=90,slow=4.0,SNR=2.5						
	comp=Z,1.1nm,0.6s						
BR131	Keskin Array S	60.72	310	P	P	02 45 22.9	-1.0
BR131				IAmb	IAmb	02 45 26.6	
	comp=Z,1.7nm,0.8s						
BRTR	Keskin Array B	60.72	310	P	P	02 45 23.1	-0.9
BRTR	Keskin Array B	60.72	310	P	P	02 45 22.5	-1.5
	comp=Z,1.0nm,0.7s,baz=119,slow=7.9,SNR=9.2						

	comp=Z,1.0nm,0.7s						
FINES	FINESS Array B	70.50	332	P	P	02 46 26.6	0.0
FINES	FINESS Array B	70.50	332	P	P	02 46 25.6	-1.0
	comp=Z,1.0nm,0.8s,baz=98,slow=8.6,SNR=1.1						
	comp=Z,1.0nm,0.8s						
ARCES	ARCESS Array B	72.94	340	P	P	02 46 41.2	0.0
	comp=Z,3.4nm,1.0s,baz=94,slow=5.3,SNR=4.7						
	comp=Z,3.4nm,1.0s						
GERES	GERESS Array B	75.90	318	P	P	02 46 58.6	-0.3
	comp=Z,0.6nm,0.7s,baz=88,slow=4.3,SNR=6.5						
	comp=Z,0.6nm,0.7s						
PRED	Cave del Predi	75.99	315	P	P	02 46 59.5	+0.1
PRED				IAmb	IAmb	02 47 15.8	
	comp=Z,7.3nm,1.4s						
SPITS	Spitsbergen Ar	77.45	348	P	P	02 47 06.2	-0.8
	comp=Z,0.6nm,0.6s,baz=92,slow=4.3,SNR=1.2						
	comp=Z,0.6nm,0.6s						

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*IDC **23** 02:45:14.2±1.2, 0°.88N×125°.30E, h0^{km}, mb3.8/6, mbtmp3.9/7, ML4.1/1, MS2.9/1, Error ellipse: s-maj=64.0km s-min=17.7km az=84.0*

*DJA **23** 02:45:27.2±0.3, 1°N±3°×12°5E±°, h121^{km}±6^{km}, M3.9/17, mb3.5/3, MLv4.0/17*

ISC 23 02:45:25.5±0.8**, 0°.77N**±0°.06×**124°.83E**±0°.05**, h92**^{km}**, n20,** σ**2^{s}.82**/20**, mb3.9**/6**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	0.87	257	P	Pn	02 45 48.8	+4.9
KMSI				S	Sn	02 46 04.4	+6.6
TNTI	Ternate	2.53	90	P	Pn	02 46 07.1	+2.3
TNTI				S	Sn	02 46 39.9	+4.8
LUWI	Luwuk	2.73	229	P	Pn	02 46 09.4	+1.9
MRSI	Marisa	2.91	264	P	Pn	02 46 11.0	+1.2
SGSI	Sangihe	2.98	13	P	Pn	02 46 13.9	+3.0
LBMI	Labuha	3.01	118	P	Pn	02 46 13.3	+2.1
SANI	Sanana	3.02	158	P	Pn	02 46 13.2	+1.7
APSI	Ampana	3.59	242	P	Pn	02 46 21.0	+1.9
NLAI	Namlea	4.58	150	P	Pn	02 46 34.0	+1.5
MPSI	Mapaga	4.95	265	P	Pn	02 46 39.1	+1.5
KDI	Kendari	5.19	205	P	Pn	02 46 42.5	+1.7
	0.4nm,0.8s						
TTSI	Tana Toraja	6.28	233	P	Pn	02 46 56.3	+0.7
FITZ	Fitzroy Crossi	18.76	178	P	P	02 49 35.9	-1.6
	0.5nm,0.3s,baz=10,slow=9.5,SNR=7.2						
	3.7nm,0.5s						
WRA	Warramunga Arr	22.59	156	P	P	02 50 16.2	-2.4
	1.9nm,0.4s,baz=330,slow=11,SNR=34						
	1.9nm,0.4s						
GUMO	Guam	23.57	56	LR	LR	02 58 19.9	
	comp=Z,33nm,21.1s,baz=106,slow=34						
ASAR	Alice Springs	25.84	161	P	P	02 50 46.6	-1.9
	0.5nm,0.3s,baz=345,slow=11,SNR=16						
	0.5nm,0.3s						
MJAR	Matsushiro Arr	37.69	18	P	P	02 52 29.0	-3.2
	1.8nm,0.8s,baz=194,slow=8.2,SNR=6.2						
	1.8nm,0.8s						
USRK	Ussuriysk Ar.	43.71	7	P	P	02 53 19.5	-1.9
	1.0nm,0.4s,baz=200,slow=8.1,SNR=2.4						
	1.0nm,0.4s						
PETK	Petropavlovsk-	58.87	22	P	P	02 55 13.0	-1.6
	0.7nm,0.6s,baz=174,slow=3.0,SNR=4.2						
	0.7nm,0.6s						
MKAR	Makanchi Array	58.95	327	P	P	02 55 16.6	+1.3
	0.1nm,0.3s,baz=132,slow=8.6,SNR=2.3						
	0.1nm,0.3s						

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*MEX **23** 02:46:14.3±0.7, 14°.41N×93°.09W, h5^{km}±20^{km}, MD4.2*

*GCG **23** 02:46:14.1±1.5, 14°.29N×92°.93W, h27^{km}±8^{km}, MD4.1, ML3.6, MW3.4*

*CATAC **23** 02:46:18.2±1.3, 14°N±5°×9°3W±°, h17^{km}±6^{km}, M3.6/6, MLv3.6/6, Error ellipse: s-maj=15.7km s-min=8.1km az=66.2, confirmed*

ISC 23 02:46:10.6±1.6**, 14°.31N**±0°.05×**93°.04W**±0°.03**, h20**^{km}±5^{km}**, n36,** σ**2^{s}.67**/55**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.95	51	*e*P	Pn	02 46 30.1	+1.2
THIG				*e*S	Sn	02 46 43.4	+1.5
SMCA	Catarina	1.08	60	*i* P	Pg	02 46 32.0	+0.5
SMCA				*i* S	Sn	02 46 46.3	+1.3
PATR	El Naranjo	1.12	44	*e*P	Pn	02 46 32.1	+0.8
PATR				*e*S	Sn	02 46 46.7	+0.4
PAVE	Pavencul	1.21	43	*e*P	Pn	02 46 33.7	+1.1
PAVE				*e*S	Sn	02 46 47.7	-0.9
RTAL	Retalhuleu	1.32	80	*e*P	Pn	02 46 35.6	+1.7
RTAL				*e*S	Sg	02 46 53.4	0.0
RTAL	Retalhuleu	1.32	80	P	Pn	02 46 35.7	+1.8
PCIG		1.40	353	*e*P	Pn	02 46 35.6	+0.6
PCIG				*e*S	Sn	02 46 50.0	-2.9
STG8	El Palmar, Qui	1.64	85	*i* P	Pn	02 46 37.2	-1.4
STG8				*i* S	Sn	02 46 55.4	-3.8
STG8				IAML		02 47 00.6	
	comp=E,2µm,0.1s						
STG0	El Palmar, Qui	1.65	86	*i* P	Pn	02 46 37.3	-1.2
STG0				*i* S	Sn	02 46 56.7	-2.6
STG0				IAML		02 47 02.0	
	comp=N,2µm,0.2s						
STG0				IAML		02 47 03.3	
	comp=E,2µm,0.2s						
SOKI	Kika Raxquin	1.66	72	*i* P	Pb	02 46 41.8	+1.1
SOKI				IAML		02 47 08.6	
	comp=N,638nm,0.6s						
HUEH	Huehuetenango	1.79	56	*e*P	Pb	02 46 43.8	+1.0
HUEH				*e*S	Sg	02 47 08.3	-0.2
HUEH	Huehuetenango	1.79	56	*i* P	Pb	02 46 43.7	+0.8
HUEH				*i* S	Sg	02 47 05.3	-3.1
HUEH				IAML		02 47 15.0	
	comp=E,957nm,0.5s						
HUEH	Huehuetenango	1.79	56	P	Pb	02 46 43.7	+0.8
CCIG	Comitan	2.15	24	*e*P	Pb	02 46 49.3	+0.4
CCIG				*e*S	Sg	02 47 17.9	-1.9
CCIG	Comitan	2.15	24	*i* P	Pb	02 46 49.5	+0.6
CCIG				*i* S	Sg	02 47 15.8	-3.9
CCIG				IAML		02 47 22.7	
	comp=N,223nm,0.5s						
CCIG				IAML		02 47 38.7	
	comp=Z,90nm,0.5s						
CCIG	Comitan	2.15	24	P	Pb	02 46 50.1	+1.2
CCIG	Comitan	2.15	24	S	Sg	02 47 16.2	-3.6
FG16	Alotenango, Sa	2.45	91	*i* P	Pn	02 46 47.2	-2.4
FG16				*i* S	Sn	02 47 13.4	-5.8
FG16				IAML		02 47 19.2	
	comp=N,2µm,0.2s						
TGIG		2.46	358	*e*P	Pn	02 46 50.5	+0.8
TGIG				*e*S	Sn	02 47 19.7	+0.6
TGIG		2.46	358	*i* P	Pn	02 46 52.6	+3.0
TGIG				*i* S	Sb	02 47 22.6	-1.4
TGIG				IAML		02 47 26.6	
	comp=E,181nm,0.3s						
NUBE	Las Nubes	3.18	97	*i* P	Pn	02 47 02.3	+2.6
NUBE				*i* S	Sn	02 47 38.3	+1.1
NUBE	Las Nubes	3.18	97	P	Pn	02 47 03.0	+3.2
NUBE	Las Nubes	3.18	97	S	Sn	02 47 37.4	+0.1
HUIG	Huatulco	3.30	296	*e*S	Sn	02 47 36.5	-3.5
PMON	Piamonte	3.66	99	P	Pb	02 47 15.3	+0.6
PETF	Flores	4.00	49	*e*P	Pn	02 47 15.3	+4.5
PETF	Flores	4.00	49	*i* P	Pn	02 47 15.2	+4.3
PETF				IAML		02 47 21.2	
	comp=N,82nm,0.4s						
PETF				IAML		02 48 29.8	
	comp=Z,43nm,0.3s						
PETF	Flores	4.00	49	P	Pn	02 47 15.2	+4.3
PEIG	Puerto Escondi	4.31	293	*e*P	Pn	02 47 17.3	+2.2
PEIG				*e*S	Sn	02 47 58.8	-6.1
YOIG	Yosondua	5.03	301	*e*P	Pn	02 47 29.4	+4.2
YOIG				*e*S	Sn	02 48 18.8	-4.2
PNIG	Pinotepa	5.33	294	*e*P	Pn	02 47 32.8	+3.7
PNIG				*e*S	Sn	02 48 24.6	-5.5
TOIG	Toxpalan	5.40	315	*e*P	Pn	02 47 34.3	+4.1
TOIG				*e*S	Sn	02 48 31.7	-0.1
TXIG	Tlaxiaco	5.42	303	*e*P	Pn	02 47 32.3	+1.8
TXIG				*e*S	Sn	02 48 27.5	-5.0
TPIG	Tehuac#an	5.83	315	*e*P	Pn	02 47 33.9	-2.2
TPIG				*e*S	Sn	02 48 34.8	-7.7
FTIG	Fresnillo de T	6.07	307	*e*P	Pn	02 47 49.4	+10
FTIG				*e*S	Sn	02 48 47.0	-1.3
JAUV	Jalcomulco	6.19	325	*e*P	Pn	02 47 45.1	+4.2
JAUV				*e*S	Sn	02 48 47.4	-3.8

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*THE **23** 02:54:47.1, 40°N±2°×2°1E±°, h0^{km}±1^{km}, M2.6/6, MLh2.6/6*

*TIR **23** 02:54:48.4, 40°.48N×20°.82E, h3^{km}±2^{km}, Ml2.7/5*

*ATH **23** 02:54:49.3, 40°.38N×20°.89E, h8^{km}±2^{km}, ML2.5/8, Manual Solution by A.Plessa First location: 2019/06/23 02:55:49, This location: 2019/06/23 17:57:57 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 3 km*

*PDG **23** 02:54:49.7±0.4, 40°.51N×20°.92E, h8^{km}±1^{km}, ML2.9/9, Error ellipse: s-maj=0.7km s-min=1.0km az=0.0*

*SKO **23** 02:54:50.3, 40°.48N×20°.88E, h6^{km}, ML2.6*

*BEO **23** 02:54:50.0±0.7, 40°.44N×21°.01E, h12^{km}±8^{km}, ML2.5/8*

ISC 23 02:54:49.1±1.0**, 40°.45N**±0°.02×**20°.86E**±0°.02**, h4**^{km}±8^{km}**, n76,** σ**1^{s}.22**/110**, 1D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEST	Nestorio	0.15	105	Pg	Pg	02 54 52.4	+0.3
NEST				Sg	Sg	02 54 56.3	+2.3
NEST				AML	AML	02 54 57.9	
	7.4nm,0.3s						
NEST	Nestorio	0.15	105	P	Pg	02 54 52.5	+0.3
NEST				S	Sg	02 54 56.5	+2.4
NEST	Nestorio	0.15	105	P	Pg	02 54 52.3	+0.2
KBN	Korca	0.18	342	Pg	Pg	02 54 50.9	-1.7
KBN				S	Sg	02 54 53.7	-1.3
KBN				AML	AML	02 54 54.1	
	21nm,0.4s						
PENT	Pentalofos	0.33	141	P	Pg	02 54 55.3	-0.2
PENT				S	Sg	02 55 01.9	+1.9
PENT	Pentalofos	0.33	141	P	Pg	02 54 55.1	-0.4
PENT				S	Sg	02 54 58.3	-1.7
KPRO	Kipourio	0.63	142	P	Pg	02 54 59.7	-1.4
KPRO				S	Sg	02 55 11.0	+1.6
KPRO	Kipourio	0.63	142	P	Pg	02 55 00.5	-0.7
KPRO				S	Sg	02 55 07.3	-2.1
OHR	Ohrid	0.66	356	*i* Pg	Pg	02 55 00.9	-0.8
OHR				*i* Sg	Sg	02 55 11.2	+0.8
OHR				*e*Lg	Lg	02 55 13.2	
	comp=N,142nm,0.3s						
OHR				*e*Lg	Lg	02 55 13.3	
	comp=E,242nm,0.4s						
KZN	Kozani	0.71	102	P	Pg	02 55 02.4	-0.3
KZN				S	Sn	02 55 16.0	-1.5
KZN	Kozani	0.71	102	P	Pg	02 55 02.3	-0.4
JAN	Janina	0.80	181	P	Pg	02 55 02.7	-1.7
SRN	Sarande	0.87	229	Pg	Pg	02 55 05.5	-0.4
SRN				S	Sg	02 55 18.9	+1.7
SRN				AML	AML	02 55 20.9	
	comp=E,0.9nm,0.7s						
KTI	Kastanea	0.96	93	P	Pg	02 55 07.3	-0.2
IGT	Igoumenitsa	1.01	204	Pg	Pg	02 55 08.2	-0.2
IGT				Sg	Sn	02 55 24.5	0.0
IGT	Igoumenitsa	1.01	204	*i* Pg	Pg	02 55 07.3	-1.1
IGT				*i* Sg	Sb	02 55 24.2	+1.6
IGT	Igoumenitsa	1.01	204	*e*Pg	Pg	02 55 07.3	-1.1
IGT				*e*Sg	Sn	02 55 24.6	0.0
IGT	Igoumenitsa	1.01	204	P	Pg	02 55 07.5	-0.9
VLO	Vlora	1.04	271	Pg	Pg	02 55 08.4	-0.7
VLO				S	Sg	02 55 23.0	+0.4
TETR	Tetrakomo, Epi	1.15	164	P	Pg	02 55 10.5	-0.7
TIR	Tirane	1.17	320	P	Pg	02 55 10.4	-1.2
TIR				Sg	Sb	02 55 28.0	+0.6
TIR				AML	AML	02 55 33.9	
	comp=E,0.6nm,0.6s						
TIR	Tirane	1.17	320	*i* Pg	Pg	02 55 10.7	-0.9
TIR				*i* Sg	Sb	02 55 28.1	+0.6
TIR	Tirane	1.17	320	*e*Pg	Pg	02 55 12.1	+0.6
TIR				*e*Sg	Sn	02 55 30.9	+2.2
THL	Klokotos Trika	1.25	135	P	Pn	02 55 12.2	-1.2
THL				S	Sn	02 55 31.0	+0.3
THL	Klokotos Trika	1.25	135	P	Pn	02 55 12.2	-1.2
TYRN	Tyrnavos	1.29	125	Pg_3		02 55 13.2	
LIT	Litokhoron	1.29	105	P	Pn	02 55 13.3	-0.7
LIT				S	Sn	02 55 33.3	+1.5
LIT	Litokhoron	1.29	105	*i* Pg	Pg	02 55 14.3	+0.4
LIT				*i* Sg	Sn	02 55 35.3	+3.5
LIT	Litokhoron	1.29	105	P	Pn	02 55 13.3	-0.7
SKO	Skopje	1.58	16	*i* Pg	Pg	02 55 19.3	-0.1
SKO				*i* Sg	Sg	02 55 39.8	-0.1
THE	Thessaloniki	1.61	83	*i* Pn	Pn	02 55 17.6	-0.8
THE				*i* Sn	Sg	02 55 40.2	-0.7
KNT	Kendrikon	1.70	65	*i* Pn	Pn	02 55 19.0	-0.6
KNT				*i* Sn	Sg	02 55 45.8	+2.1
KNT	Kendrikon	1.70	65	P	Pn	02 55 18.6	-0.9
HORT	Hortiatis	1.71	84	P	Pn	02 55 18.7	-1.1
HORT	Hortiatis	1.71	84	P	Pn	02 55 18.7	-1.1
PUK	Puka	1.75	336	Pn	Pb	02 55 21.8	0.0
PUK				Sn	Sg	02 55 45.6	+0.3
SOH	Sokhos	1.93	78	P	Pn	02 55 22.7	-0.1
SOH	Sokhos	1.93	78	*i* Pn	Pn	02 55 22.7	-0.1
SOH				*i* Sn	Sb	02 55 48.4	-1.0
ULC	Ulcinj	1.94	322	*i* Pn	Pn	02 55 23.2	+0.4
ULC	Ulcinj	1.94	322	*e*Pn	Pn	02 55 23.3	+0.4
ULC				*i* Sn	Sb	02 55 50.8	+1.2
BCI	Bajram Curri	2.00	343	Pn	Pb	02 55 25.7	-0.5
BCI				Sn	Sg	02 55 54.3	+0.9
BCI				AML	AML	02 55 59.5	
	comp=E,0.6nm,0.6s						
DRME	Dracevica, Mon	2.14	324	*e*Pn	Pn	02 55 25.9	+0.2
DRME	Dracevica, Mon	2.14	324	*e*Pn	Pn	02 55 26.6	+0.9
DRME				*i* Sn	Sb	02 55 55.6	+0.2
SRS	Serrai	2.18	71	*i* Pn	Pn	02 55 25.9	-0.3
SRS				*i* Sn	Sb	02 55 54.2	-2.1
SRS	Serrai	2.18	71	*e*Pn	Pn	02 55 25.7	-0.4
BUM	Brajici-Budva	2.37	322	*e*Pn	Pn	02 55 29.6	+0.8
BUM				*i* Sn	Sb	02 56 01.0	-0.9
BOSS	Bosilegrad	2.38	30	*e*Pn	Pn	02 55 28.0	-0.9
MMB	Musomishta	2.44	63	*i* Pn	Pn	02 55 29.7	-0.1
MMB				*i* Sn	Sn	02 56 00.6	+0.4
BARS	Barje	2.47	17	*i* Pn	Pn	02 55 29.1	-1.0
BARS	Barje	2.47	17	*e*Pn	Pn	02 55 29.0	-1.1
IVA	Berane	2.52	344	*e*Pn	Pn	02 55 31.5	+0.5
IVA				*i* Sn	Sb	02 56 04.2	-2.2
CEME	Cevo	2.55	326	*e*Pn	Pn	02 55 31.5	+0.2
CEME				*i* Sn	Sn	02 56 04.4	+1.6
KOME	Kolasin	2.60	338	⇓*i*Pn	Pn	02 55 32.8	+0.8
KOME				*i* Sn	Sb	02 56 06.5	-2.1
HCY	Herceg Novi	2.67	319	*e*Pn	Pn	02 55 34.0	+1.1
HCY				*i* Sn	Sb	02 56 08.6	-2.0
SELS	Selova	2.77	4	*e*Pn	Pn	02 55 34.7	+0.4
VTS	Vitosha	2.80	39	*e*Pn	Pn	02 55 34.2	-0.7
SJES	Sjenica	2.88	347	*e*Pn	Pn	02 55 36.8	+0.9
BRY	Bratogost	3.00	325	*e*Pn	Pn	02 55 38.6	+1.0
BRY				*i* Sn	Sn	02 56 16.4	+2.3
PLE	Pljevlja	3.08	340	*e*Pn	Pn	02 55 39.5	+0.9
PLE				*i* Sn	Sn	02 56 17.8	+1.9
GOCS	Kraljevo Serbi	3.11	0	*e*Pn	Pn	02 55 40.8	+1.8
ZAPS	Zavoj	3.11	25	*e*Pn	Pn	02 55 39.9	+0.9
IVAS	Ivanjica	3.17	351	*e*Pn	Pn	02 55 39.6	-0.2
BOVS	Bovan	3.24	11	*e*Pn	Pn	02 55 39.3	-1.4
GRUS	Gruza	3.43	358	*e*Pn	Pn	02 55 44.6	+1.2
ZAGS	Zajecar	3.51	16	*e*Pn	Pn	02 55 42.9	-1.5
TRUS	Trudelj	3.78	355	*e*Pn	Pn	02 55 47.3	-0.9
KUBS	Kucevo	4.00	8	*e*Pn	Pn	02 55 49.8	-1.4
TEKS	Tekeris	4.21	347	*e*Pn	Pn	02 55 53.9	-0.2
SOKA	Soboth	7.52	328	*i* Pn	Pn	02 56 40.6	+1.0
	comp=E,0.6nm,0.2s						
OBKA	Obir	7.59	325	*i* Pn	Pn	02 56 40.8	+0.2
	comp=E,0.6nm,0.3s						
ABTA	Abfaltersbach	8.73	319	*i* Pn	Pn	02 57 02.8	+6.6
	comp=E,0.5nm,0.5s						
LESA	Schwarzleotal	9.13	322	*e*Pn	Pn	02 57 01.9	+0.2
	comp=E,0.4nm,0.3s						
WTTA	Wattenberg	9.52	319	*i* Pn	Pn	02 57 07.7	+0.6
	comp=E,1.2nm,0.6s						
WATA	Walderalm	9.60	319	*i* Pn	Pn	02 57 07.7	-0.5
	comp=E,0.5nm,0.3s						
FETA	Feichten	9.84	315	*e*Pn	Pn	02 57 07.6	-3.9
	comp=E,0.5nm,0.4s						
MOTA	Moosalm	9.85	318	*i* Pn	Pn	02 57 17.9	+6.4
	comp=E,1.3nm,0.6s						

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*NEIC **23** 03:27:31.9±1.4, 40°.25N±0°.01×124°.34W±0°.03, h10^{km}±1^{km}, Error ellipse: s-maj=4.7km s-min=2.5km az=69.0*

NCEDC 23 03:27:31.9±1.8**, 40°.28N**±0°.01×**124°.29W**±0°.03**, h9**^{km}±2^{km}**, ML2.8**/19**, ML2.7**/63(NEIC)**, Error ellipse: s-maj=3.8km s-min=1.6km az=69.0, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETL	Petrolia	0.04	280		Pg	03 27 33.9	+0.3
PETL					Sg	03 27 35.6	+0.8
KMPM	Mount Pierce	0.19	44		Pg	03 27 36.4	+0.5
KMPM				Sg	Sg	03 27 40.0	+1.4
KCTM	Capetown	0.20	351		Pg	03 27 36.9	+0.9
KCTM					Sg	03 27 41.1	+2.3
FER	Ferndale	0.30	5		Pb	03 27 39.0	-0.4
FER					Sb	03 27 45.3	+0.9
BRIC	Briceland Vine	0.35	119		Pb	03 27 39.7	-0.5
BRIC					Sb	03 27 45.8	-0.1
KCRM	Chalk Rock	0.39	68		Pb	03 27 40.6	-0.4
KMRM	Mail Ridge	0.45	97		Pb	03 27 41.8	-0.3
KMRM				Sg	Sb	03 27 49.4	+0.4
JCC	Jacoby Creek,	0.57	21		Pg	03 27 43.5	+0.5
JCC					Sb	03 27 52.6	+0.3
KBSM	Bell Springs	0.65	124		Pb	03 27 45.2	-0.3
KPPM	Pickett Peak	0.71	85		Pb	03 27 46.7	+0.1
KHMM	Horse Mountain	0.73	36		Pb	03 27 46.5	-0.4
KHMM					Sb	03 27 57.9	+0.8
KHMM				IAML		03 27 59.5	
	comp=E,620nm,0.7s						
KIPM	Iron Peak	0.78	127		Pg	03 27 47.1	+0.1
KCPM	Cahto Peak	0.81	137		Pg	03 27 47.0	-0.5
KCPM					Sb	03 27 59.2	0.0
KRPM	Rodgers	0.90	13		Pg	03 27 48.6	-0.6
KHBM	Hayfork Bally	0.90	65		Pg	03 27 48.9	-0.4
KHBM	Hayfork Bally	0.90	65	IAML		03 28 04.6	
	comp=E,296nm,0.7s						
KHBM				IAML		03 28 10.6	
	comp=N,348nm,0.8s						
KFPM	Farley Peak	0.93	134		Pg	03 27 48.9	-0.8
KBNM	Bluenose Ridge	0.93	114		Pg	03 27 49.5	-0.3
GTC	Three Chop Rid	1.05	147		Pg	03 27 50.1	-1.9
MNDO	Woodland Fire	1.05	156		Pg	03 27 50.0	-2.1
DCMP	DeCamp, Califo	1.10	137		Pg	03 27 50.8	-2.1
DCMP	DeCamp, Califo	1.10	137	IAML		03 28 06.7	
	comp=N,135nm,0.5s						
WEAV	Weaverville	1.10	65		Pg	03 27 51.8	-1.2
O02D	Mt. Diablo Mer	1.16	95		Pb	03 27 52.9	-1.2
O02D	Mt. Diablo Mer	1.16	95	IAML		03 28 14.8	
	comp=N,164nm,1.2s						
O02D				IAML		03 28 16.3	
	comp=E,152nm,1.2s						
KOMM	Orleans Mounta	1.18	32		Pb	03 27 52.7	-1.9
KRMB	Red Mountain	1.27	13		Pn	03 27 53.8	-2.2
KRMB				IAML		03 28 21.9	
	comp=E,91nm,0.8s						
GROM	Round Mountain	1.30	106		Pn	03 27 54.6	-1.6
GWRM	Wonder Ranch	1.32	144		Pn	03 27 53.9	-2.6
GVV	Valley View	1.34	112		Pn	03 27 55.1	-1.8
N02D	Trinity Center	1.39	60		Pn	03 27 56.0	-1.6
N02D	Trinity Center	1.39	60	IAML		03 28 18.6	
	comp=E,156nm,0.4s						
N02D				IAML		03 28 19.9	
	comp=N,125nm,0.5s						
LBKM	Bonanza King	1.48	57		Pn	03 27 57.1	-1.6
GGUM	Gualala	1.55	156		Pn	03 27 56.7	-3.0
M02C	Callahan	1.56	44		Pn	03 27 58.3	-1.6
KSXB	Camp Six Broad	1.58	11		Pn	03 27 58.0	-2.1
KSXB	Camp Six Broad	1.58	11	IAML		03 28 39.0	
	comp=E,62nm,1.1s						
GSNM	Snow Mountain	1.59	147		Pn	03 27 57.8	-2.4
HOPS	Hopland Field	1.59	143		Pn	03 27 57.9	-2.4
HOPS				IAML		03 28 34.0	
	comp=E,58nm,1.5s						
SIGP	Signal Peak, C	1.60	6		Pn	03 27 58.1	-2.2
GCK	Clark Valley	1.61	117		Pn	03 27 58.9	-1.5
GHGM	Hogback Ridge	1.62	135		Pn	03 27 58.7	-1.9
GALB	Galbreath Wild	1.63	150		Pn	03 27 57.9	-2.9
LTCM	Tuscan Springs	1.66	92		Pn	03 27 60.0	-1.2
LSHM	Sage Hen Hill	1.79	73		Pn	03 28 01.9	-1.1
LAMM	Antelope Mount	1.83	43		Pn	03 28 02.4	-1.3
GHCM	House Creek	1.88	153		Pn	03 28 02.3	-1.9
YBH	Yreka Blue Hor	1.88	39		Pn	03 28 02.9	-1.4
O03E	Paynes Creek	1.91	89		Pn	03 28 02.9	-1.8
O03E	Paynes Creek	1.91	89	IAML		03 28 47.8	
	comp=N,43nm,0.9s						
O03E				IAML		03 28 55.2	
	comp=E,92nm,0.8s						
LGBM	Gray Butte	1.92	56		Pn	03 28 04.5	-0.4
L02F	Cave Junction	1.92	16		Pn	03 28 02.6	-2.2
L02F				IAML		03 28 52.4	
	comp=N,38nm,0.9s						
LDBM	Digger Butte	1.92	85		Pn	03 28 03.4	-1.6
LMPM	Military Pass	2.02	53		Pn	03 28 06.1	-0.1
LHEM	Herd Peak	2.07	49		Pn	03 28 06.7	-0.3
B040	Montague	2.10	42		Pn	03 28 06.4	-0.8
LBFM	Black Fox Moun	2.11	59		Pn	03 28 07.4	-0.2
LCMM	Colby Mountain	2.13	93		Pn	03 28 06.6	-1.2
OGOM	Van Goodin Ran	2.15	106		Pn	03 28 06.3	-1.7
LRDM	Redding Peak	2.17	84		Pn	03 28 07.5	-0.8
HATC	Hat Creek Radi	2.22	75		Pn	03 28 08.4	-0.6
HATC				IAML		03 29 01.7	
	comp=N,60nm,1.2s						
HATC				IAML		03 29 06.8	
	comp=E,70nm,2.1s						
ORV	Oroville	2.27	108		Pn	03 28 09.2	-0.4
LTIM	Timbered Crate	2.31	66		Pn	03 28 09.5	-0.8
MCCM	Marconi Confer	2.40	152	Pn	Pn	03 28 09.0	-2.3
MCCM				IAML		03 29 38.6	
	comp=N,59nm,2.7s						
MCCM				IAML		03 29 43.7	
	comp=E,61nm,3.7s						
L04D	Klamath Falls	2.45	37		Pn	03 28 12.6	+0.4
L04D				IAML		03 28 44.5	
	comp=N,27nm,1.5s						
L04D				IAML		03 29 12.7	
	comp=E,35nm,1.8s						
K02D	Willamette Mer	2.46	11		Pb	03 28 17.6	+1.3
K02D				IAML		03 28 42.8	
	comp=E,27nm,0.8s						
K02D				IAML		03 29 05.9	
	comp=N,25nm,3.5s						
FARB	Farallon Islan	2.77	158		Pn	03 28 14.2	-2.2
FARB	Farallon Islan	2.77	158	IAML		03 28 59.5	
	comp=N,54nm,2.9s						
BBOR	Butler Butte	2.87	24		Pn	03 28 18.1	+0.1
BBOR				IAML		03 29 32.6	
	comp=E,17nm,2.5s						
AFDM	Forest Hills D	2.89	116		Pn	03 28 18.2	+0.1
BGH	Bear Gulch	3.31	152		Pn	03 28 23.8	-0.1
J05D	Fort Rock, OR	3.77	36	Pn	Pn	03 28 30.4	0.0
J05D				IAML		03 29 52.0	
	comp=E,12nm,3.8s						
J05D				IAML		03 30 51.6	
	comp=N,15nm,3.9s						
PNTR	Pine Nut	3.81	107	IAML		03 29 55.9	
	comp=N,16nm,1.4s						
PAHR	Pah Rah Range	3.81	97	IAML		03 29 42.2	
	comp=N,7.4nm,4.4s						
PAHR				IAML		03 31 00.0	
	comp=E,8.9nm,5.0s						
HJGM	San Juan Grade	4.08	148		Pb	03 28 42.4	-1.5
WVOR	Wild Horse Val	4.77	61		Pn	03 28 41.8	-2.2
WVOR				IAML		03 29 58.4	
	comp=E,4.6nm,3.3s						
WVOR				IAML		03 30 19.1	
	comp=E,5.4nm,4.2s						

IDC 23 03:51:50.3±3.8**, 6°.71S**×**149°.99E, h0**^{km}**, mb3.1**/2**, mbtmp3.4**/3**, ML1.9**/1**, MS3.0**/1**, Error ellipse: s-maj=131.6km s-min=46.7km az=120.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.88	226	Pn	Pn	03 52 53.1	+1.8
	6.9nm,0.3s,baz=31,slow=12,SNR=4.8						
PMG				Sn	Sn	03 53 33.1	-4.5
	2.5nm,0.3s,baz=43,slow=19,SNR=2.1						
	15nm,0.3s						
HNR	Honiara	10.22	106	LR	LR	03 58 02.1	
	comp=Z,82nm,19.3s,baz=358,slow=36						
WRA	Warramunga Arr	20.10	228	P	P	03 56 24.0	-1.8
	0.5nm,0.5s,baz=53,slow=11,SNR=5.8						
	0.5nm,0.5s						
ASAR	Alice Springs	22.88	221	P	P	03 56 55.4	-0.3
	0.3nm,0.4s,baz=56,slow=9.1,SNR=11						
	0.3nm,0.4s						
TORD	Torodi Ar. Bea	148.15	284	PKPbc	PKPbc	04 11 39.4	+0.1

1.5nm,0.4s,baz=54,slow=3.1,SNR=1.9

IDC ***23*** *03:53:01.4±0.4, 40°.33N×124°.08W, h0^{km}, mb4.8/33, mbtmp4.8/39, ML4.0/4, MS5.3/86, Error ellipse: s-maj=9.6km s-min=6.8km az=35.0*

NCEDC ***23*** *03:53:02.9±2.8, 40°.27N±0°.03×124°.30W±0°.05, h9^{km}±3^{km}, Mwr5.6/6, mb5.4/586(NEIC), ML5.4/116(NEIC), Ms_20 5.4/810(NEIC), Mwb5.6/57(NEIC), Mwr5.6/74(NEIC), Mww5.6/73(NEIC), Error ellipse: s-maj=5.8km s-min=3.2km az=56.0*

PMR ***23*** *03:53:02.0, 40°.19N×124°.31W, h7^{km}*

IPGP ***23*** *03:53:02.0, 40°.28N×124°.30W, h13^{km}, Mw5.8, Fault plane solution: NP1:ϕ_s27.00000°, δ89.00000°, λ28.00000°. NP2:ϕ_s296.00000°, δ62.00000°, λ179.00000°.*

MOS ***23*** *03:53:02.1±1.1, 40°.27N×124°.18W, h13^{km}, mb5.6/67, MS5.6/27, Error ellipse: s-maj=7.6km s-min=4.8km az=103.8*

ISC-PP ***23*** *03:53:03, 40°.26N×124°.28W, h10^{km}, Mwppsm6.0, Moment Tensor Solution. s43 Moment tensor: Scale 10^{18}Nm; M_{rr}0.25±.14; $M_{\theta\theta}$0.42±.15; $M_{\phi\phi}$0.49±.13; $M_{r\theta}$0.12±.10; $M_{\theta\phi}$0.38±.09; $M_{\phi r}$-0.32±.09; Fault plane solution: $M_0$1.12000×10^{18} NP1:ϕ_s179.60000°, δ79.20000°, λ310.50000°. NP2:ϕ_s282.00000°, δ41.70000°, λ-163.60000°.*

NEIC ***23*** *03:53:03.9±2.8, 40°.26N±0°.04×124°.28W±0°.06, h14^{km}±1^{km} Error ellipse: s-maj=7.5km s-min=6.7km az=109.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.20; $M_{\theta\theta}$-2.59; $M_{\phi\phi}$2.39; $M_{r\theta}$0.80; $M_{\theta\phi}$-1.15; $M_{\phi r}$0.66; Fault plane solution: $M_0$2.94000×10^{17} NP1: ϕ_s212.35000°, δ86.86000°, λ-19.33000°. NP2: ϕ_s303.45000°, δ70.70000°, λ-176.67000°. Principal axes: T 2.7376, Plg11.0000°, Azm259.0000°; N 0.3657, Plg70.0000°, Azm23.0000°; P -3.1033, Plg16.0000°, Azm166.0000°; Moment Tensor Solution. Moment tensor: Scale 10^{17} Nm; M_{rr}0.51; $M_{\theta\theta}$-2.76; $M_{\phi\phi}$2.25; $M_{r\theta}$0.26; $M_{\theta\phi}$-1.85; $M_{\phi r}$1.02; Fault plane solution: $M_0$3.32000×10^{17} NP1:ϕ_s28.22000°, δ82.84000°, λ19.56000°. NP2:ϕ_s295.69000°, δ70.60000°, λ172.41000°. Principal axes: T 3.1612, Plg19.0000°, Azm253.0000°; N 0.2926, Plg69.0000°, Azm48.0000°; P -3.4538, Plg8.0000°, Azm161.0000°;*

NEIC ***23*** *03:53:03.5, 40°.27N×124°.29W, h12^{km}, Moment Tensor Solution. Duration: 3^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.21; $M_{\theta\theta}$-2.14; $M_{\phi\phi}$2.36; $M_{r\theta}$0.73; $M_{\theta\phi}$-1.85; $M_{\phi r}$-0.32; Fault plane solution: $M_0$3.03000×10^{17} NP1: ϕ_s205.12000°, δ74.46000°, λ-2.02000°. NP2:ϕ_s295.66000°, δ88.05000°, λ-164.45000°. Principal axes: T 3.1123, Plg10.0000°, Azm69.0000°; N -0.1781, Plg74.0000°, Azm303.0000°; P -2.9341, Plg12.0000°, Azm161.0000°;*

NEIC ***23*** *03:53:03.3, 40°.27N×124°.31W, h11^{km}*

NEIC ***23*** *03:53:03.3, 40°.27N×124°.31W, h11^{km}*

NEIC ***23*** *03:53:03.5, 40°.27N×124°.29W, h12^{km}*

GCMT ***23*** *03:53:05.9±0.1, 40°.25N±0°.01×124°.29W±0°.01, h15^{km}, MW5.7/159, Moment Tensor Solution. s127,c223; s159,c338; Duration: 1^{s}6 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.16±.04; $M_{\theta\theta}$-2.60±.04; $M_{\phi\phi}$2.75±.04; $M_{r\theta}$0.28±.12; $M_{\theta\phi}$-2.28±.03; $M_{\phi r}$1.46±.13; Best double couple: $M_0$3.80500×10^{17} NP1:ϕ_s294.00000°, δ68.00000°, λ177.00000°. NP2:ϕ_s25.00000°, δ87.00000°, λ22.00000°. Principal axes: T 3.9880, Plg17.0000°, Azm252.0000°; N -0.3720, Plg68.0000°, Azm32.0000°; P -3.6230, Plg13.0000°, Azm157.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 03:53:04.5±0.5**, 40°.23N**±0°.02×**124°.25W**±0°.03**, h19**^{km}±1^{km}**, h19**^{km}**:pP-P, n1447,** σ1^s**55**/913**, mb5.4**/420**, MS5.4**/516**, 19C-8D, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETL	**Petrolia**	**0.10**	**310**		**Pg**	**03 53 06.8**	**-1.5**
KMPM	**Mount Pierce**	**0.21**	**27**		**Pg**	**03 53 07.5**	**-2.4**
KMPM				IAML		03 53 12.2	
	comp=E,1333µm,1.1s						
KMPM				IAML		03 53 13.1	
	comp=N,1206µm,1.0s						
KCTM	**Capetown**	**0.26**	**345**		**Pg**	**03 53 08.0**	**-2.5**
BRIC	**Briceland Vine**	**0.29**	**113**		**Pb**	**03 53 10.8**	**-0.2**
BRIC					**Sb**	**03 53 16.9**	**+1.4**
FER	**Ferndale**	**0.35**	**358**		**Pg**	**03 53 10.2**	**-1.8**
FER					**Sb**	**03 53 16.6**	**-0.7**
KCRM	**Chalk Rock**	**0.38**	**59**		**Pg**	**03 53 11.7**	**-0.9**
KMRM	**Mail Ridge**	**0.41**	**91**		**Pb**	**03 53 12.9**	**-0.4**
KBSM	**Bell Springs**	**0.59**	**121**		**Pb**	**03 53 16.3**	**+0.2**
JCC	**Jacoby Creek,**	**0.61**	**16**		**Pg**	**03 53 14.6**	**-2.1**
KPPM	**Pickett Peak**	**0.69**	**80**		**Pb**	**03 53 17.9**	**0.0**
KIPM	**Iron Peak**	**0.72**	**125**		**Pg**	**03 53 18.1**	**-0.7**
KCPM	**Cahto Peak**	**0.74**	**136**		**Pg**	**03 53 18.2**	**-1.0**
KHMM	**Horse Mountain**	**0.76**	**31**		**Pg**	**03 53 17.7**	**-1.8**
KFPM	**Farley Peak**	**0.86**	**133**		**Pb**	**03 53 19.9**	**-1.0**
KBNM	**Bluenose Ridge**	**0.88**	**112**		**Pb**	**03 53 20.6**	**-0.5**
KHBM	**Hayfork Bally**	**0.90**	**61**		**Pb**	**03 53 20.0**	**-1.5**
KHBM	**Hayfork Bally**	**0.90**	**61**	IAML		03 53 41.9	
	comp=N,118µm,1.4s						
KRPM	**Rodgers**	**0.94**	**10**		**Pb**	**03 53 19.7**	**-2.6**
KRPM				IAML		03 53 42.6	
	comp=N,190µm,1.2s						
KRPM				IAML		03 53 45.2	
	comp=E,207µm,1.3s						
GTC	**Three Chop Rid**	**0.98**	**147**		**Pb**	**03 53 21.2**	**-1.7**
MNDO	**Woodland Fire**	**0.99**	**157**		**Pb**	**03 53 21.2**	**-1.8**
DCMP	**DeCamp, Califo**	**1.03**	**137**		**Pb**	**03 53 21.9**	**-1.8**
DCMP	**DeCamp, Califo**	**1.03**	**137**	IAML		03 53 48.5	
	comp=N,103µm,1.3s						
DCMP				IAML		03 53 48.5	
	comp=E,66µm,0.9s						
WEAV	**Weaverville**	**1.09**	**61**		**Pb**	**03 53 22.6**	**-2.3**
O02D	**Mt. Diablo Mer**	**1.12**	**92**		**Pb**	**03 53 24.0**	**-1.3**
O02D				IAML		03 53 47.5	
	comp=E,96µm,1.4s						
O02D				IAML		03 53 49.3	
	comp=N,122µm,1.4s						
KOMM	**Orleans Mounta**	**1.21**	**30**		**Pn**	**03 53 23.8**	**-2.7**
GROM	**Round Mountain**	**1.25**	**104**		**Pn**	**03 53 25.7**	**-1.3**
GWRM	**Wonder Ranch**	**1.25**	**144**		**Pn**	**03 53 25.0**	**-2.0**
GVV	**Valley View**	**1.29**	**110**		**Pn**	**03 53 26.1**	**-1.5**
KRMB	**Red Mountain**	**1.32**	**11**		**Pn**	**03 53 24.9**	**-3.1**
KRMB				IAML		03 53 57.6	
	comp=E,50µm,2.6s						
N02D	**Trinity Center**	**1.39**	**57**		**Pn**	**03 53 27.1**	**-1.9**
N02D	**Trinity Center**	**1.39**	**57**	IAML		03 53 55.6	
	comp=E,55µm,1.6s						
N02D				IAML		03 54 08.0	
	comp=N,48µm,1.3s						
LBKM	**Bonanza King**	**1.48**	**54**		**Pn**	**03 53 28.3**	**-1.9**
GGUM	**Gualala**	**1.49**	**157**		**Pn**	**03 53 27.8**	**-2.4**
GSNM	**Snow Mountain**	**1.52**	**147**		**Pn**	**03 53 28.8**	**-2.0**
HOPS	**Hopland Field**	**1.53**	**143**		**Pn**	**03 53 28.9**	**-1.9**
HOPS				IAML		03 54 08.9	
	comp=N,36µm,1.4s						
HOPS				IAML		03 54 11.3	
	comp=E,45µm,1.2s						
GCK	**Clark Valley**	**1.55**	**116**		**Pn**	**03 53 30.3**	**-0.8**
GHGM	**Hogback Ridge**	**1.55**	**135**		**Pn**	**03 53 29.3**	**-1.8**
GALB	**Galbreath Wild**	**1.56**	**150**		**Pn**	**03 53 29.0**	**-2.3**
M02C	**Callahan**	**1.57**	**42**		**Pn**	**03 53 29.3**	**-2.1**
M02C	**Callahan**	**1.57**	**42**	IAML		03 53 57.3	
	comp=N,36µm,1.2s						
KSXB	**Camp Six Broad**	**1.63**	**10**		**Pn**	**03 53 29.2**	**-3.0**
KSXB				IAML		03 54 07.3	
	comp=E,46µm,2.2s						
LTCM	**Tuscan Springs**	**1.63**	**90**		**Pn**	**03 53 31.0**	**-1.1**
SIGP	**Signal Peak, C**	**1.65**	**5**		**Pn**	**03 53 29.1**	**-3.3**
GFC	**Funks Creek**	**1.76**	**120**		**Pn**	**03 53 32.9**	**-1.0**
GRTM	**Round Top Moun**	**1.77**	**136**		**Pn**	**03 53 32.1**	**-2.0**
LSHM	**Sage Hen Hill**	**1.78**	**71**		**Pn**	**03 53 32.8**	**-1.4**
GDXM	**Geysers**	**1.81**	**141**		**Pn**	**03 53 32.9**	**-1.8**
GHCM	**House Creek**	**1.81**	**153**		**Pn**	**03 53 32.4**	**-2.3**
GGPM	**Geyser Peak**	**1.82**	**143**		**Pn**	**03 53 33.0**	**-1.9**
LCSM	**College of the**	**1.84**	**49**		**Pn**	**03 53 34.0**	**-1.2**
LAMM	**Antelope Mount**	**1.85**	**41**		**Pn**	**03 53 33.5**	**-1.8**
O03E	**Paynes Creek**	**1.87**	**87**		**Pn**	**03 53 33.9**	**-1.6**
O03E	**Paynes Creek**	**1.87**	**87**	IAML		03 54 11.5	
	comp=N,40µm,1.9s						
O03E				IAML		03 54 36.2	
	comp=E,44µm,1.9s						
LDBM	**Digger Butte**	**1.89**	**83**		**Pn**	**03 53 34.1**	**-1.8**
YBH	**Yreka Blue Hor**	**1.90**	**37**		**Pn**	**03 53 34.0**	**-2.0**
YBH	**Yreka Blue Hor**	**1.90**	**37**	Pn	**Pn**	**03 53 33.9**	**-2.0**
	comp=E,8.7nm,0.3s,baz=280,slow=5.8,SNR=690						
YBH				Sn	**Sn**	**03 53 54.3**	**-5.1**
	comp=E,37nm,0.3s,baz=185,slow=7.1,SNR=12						
YBH	**Yreka Blue Hor**	**1.90**	**37**	P	**Pn**	**03 53 34.0**	**-2.0**
LGBM	**Gray Butte**	**1.92**	**54**		**Pn**	**03 53 35.2**	**-1.1**
M03C	**McCloud**	**1.92**	**56**		**Pn**	**03 53 35.3**	**-1.0**
M03C	**McCloud**	**1.92**	**56**	IAML		03 54 16.9	
	comp=N,55µm,1.4s						
MNRC	**McLaughlin Min**	**1.94**	**133**		**Pn**	**03 53 35.1**	**-1.4**
MNRC	**McLaughlin Min**	**1.94**	**133**	IAML		03 54 32.0	
	comp=E,47µm,1.7s						
MNRC				IAML		03 54 46.4	
	comp=N,26µm,1.9s						
L02F	**Cave Junction**	**1.96**	**15**		**Pn**	**03 53 34.0**	**-2.7**
L02F				IAML		03 54 22.6	
	comp=E,27µm,1.5s						
KBO	**Bosley Butte**	**1.98**	**0**		**Pn**	**03 53 33.4**	**-3.7**
KBO	**Bosley Butte**	**1.98**	**0**	IAML		03 54 23.8	
	comp=E,32µm,1.7s						
KBO				IAML		03 54 32.6	
	comp=N,37µm,1.6s						
LMPM	**Military Pass**	**2.02**	**51**		**Pn**	**03 53 37.3**	**-0.4**
LMEM	**Manzanita Entr**	**2.07**	**81**		**Pn**	**03 53 36.8**	**-1.6**
LHEM	**Herd Peak**	**2.08**	**47**		**Pn**	**03 53 37.6**	**-0.9**
OSUM	**Sutter Buttes**	**2.08**	**117**		**Pn**	**03 53 36.2**	**-2.1**
LCMM	**Colby Mountain**	**2.09**	**91**		**Pn**	**03 53 37.4**	**-1.2**
OGOM	**Van Goodin Ran**	**2.11**	**105**		**Pn**	**03 53 36.6**	**-2.1**
LBFM	**Black Fox Moun**	**2.11**	**57**		**Pn**	**03 53 38.2**	**-0.7**
B040	**Montague**	**2.12**	**40**		**Pn**	**03 53 37.6**	**-1.3**
B040	**Montague**	**2.12**	**40**		**Pn**	**03 53 37.5**	**-1.3**
LRDM	**Redding Peak**	**2.14**	**83**		**Pn**	**03 53 38.2**	**-1.0**
HATC	**Hat Creek Radi**	**2.20**	**74**		**Pn**	**03 53 39.5**	**-0.6**
OSTM	**Stimpson Lane**	**2.21**	**112**		**Pn**	**03 53 37.8**	**-2.3**
ORV	**Oroville**	**2.22**	**107**		**Pn**	**03 53 38.1**	**-2.2**
ORV	**Oroville**	**2.22**	**107**	P	**Pn**	**03 53 38.1**	**-2.2**
PAM	**Palermo**	**2.24**	**109**		**Pn**	**03 53 38.2**	**-2.3**
SOUA	**Southern Orego**	**2.28**	**30**		**Pn**	**03 53 40.1**	**-1.0**
OAKV	**Oakville Exper**	**2.29**	**141**		**Pn**	**03 53 39.4**	**-1.9**
LTIM	**Timbered Crate**	**2.30**	**65**		**Pn**	**03 53 40.5**	**-1.0**
OHCM	**Honcut**	**2.31**	**112**		**Pn**	**03 53 40.0**	**-1.4**
MCCM	**Marconi Confer**	**2.34**	**152**		**Pn**	**03 53 39.5**	**-2.3**
MCCM				IAML		03 54 45.7	
	comp=N,15µm,2.3s						
CVS	**Carmenet Viney**	**2.34**	**143**		**Pn**	**03 53 39.8**	**-2.1**
CVS	**Carmenet Viney**	**2.34**	**143**	IAML		03 55 01.7	
	comp=E,16µm,2.2s						
KPK	**Kanaka Peak**	**2.35**	**105**		**Pn**	**03 53 40.5**	**-1.6**
KPK	**Kanaka Peak**	**2.35**	**105**	P	**Pn**	**03 53 40.5**	**-1.6**
LMHM	**Little Mount H**	**2.38**	**55**		**Pn**	**03 53 41.6**	**-1.1**
QRDG	**Quail Ridge Na**	**2.39**	**136**		**Pn**	**03 53 41.1**	**-1.4**
M04C	**Macdoel**	**2.40**	**49**		**Pn**	**03 53 41.9**	**-0.9**
NOLM	**Olema**	**2.46**	**152**		**Pn**	**03 53 41.4**	**-2.2**
L04D	**Klamath Falls**	**2.47**	**36**		**Pn**	**03 53 43.1**	**-0.7**
L04D				IAML		03 54 36.6	
	comp=N,25µm,2.0s						
RUSS	**Russell Ranch**	**2.50**	**132**		**Pn**	**03 53 42.8**	**-1.3**
RUSS	**Russell Ranch**	**2.50**	**132**	IAML		03 54 59.1	
	comp=N,30µm,3.5s						
NADM	**Allendale**	**2.50**	**134**		**Pn**	**03 53 43.4**	**-0.7**
K02D	**Willamette Mer**	**2.50**	**10**	IAML		03 54 38.3	
	comp=E,16µm,2.2s						
KEBM	**Edson Butte**	**2.64**	**359**		**Pn**	**03 53 45.1**	**-1.0**
KEBM				IAML		03 54 50.6	
	comp=E,18µm,1.6s						
KEBM				IAML		03 55 00.8	
	comp=N,16µm,1.6s						
AFDM	**Forest Hills D**	**2.83**	**116**		**Pn**	**03 53 47.3**	**-1.5**
BBOR	**Butler Butte**	**2.91**	**23**	IAML		03 54 53.7	
	comp=E,11µm,1.5s						
J01E	**Myrtle Point**	**2.94**	**5**	IAML		03 55 04.7	
	comp=E,16µm,2.0s						
BEKR	**Beckworth**	**3.01**	**96**		**Pn**	**03 53 50.7**	**-0.5**
BEKR				IAML		03 54 54.2	
	comp=N,16µm,1.9s						
I03D	**Drain, OR**	**3.53**	**11**	IAML		03 55 12.0	
	comp=N,8µm,1.9s						
I03D				IAML		03 55 29.9	
	comp=E,8µm,1.9s						
PAHR	**Pah Rah Range**	**3.77**	**96**	IAML		03 55 15.6	
	comp=E,6µm,2.4s						
PAHR				IAML		03 55 20.8	
	comp=N,7µm,2.0s						
J05D	**Fort Rock, OR**	**3.80**	**35**	IAML		03 55 30.4	
	comp=N,10µm,2.2s						
J05D				IAML		03 55 34.8	
	comp=E,9µm,2.5s						
I02E	**Swisshome, OR**	**3.89**	**4**	IAML		03 55 39.2	
	comp=N,6µm,2.4s						
I02E				IAML		03 55 45.8	
	comp=E,7µm,3.0s						
PACP	**Pacheco Peak**	**3.96**	**143**	IAML		03 55 38.8	
	comp=N,4µm,2.1s						
BUCK	**Buck Mountain**	**4.08**	**13**	IAML		03 55 39.9	
	comp=E,9µm,2.6s						
BUCR	**Buckhorn Ranch**	**4.09**	**127**	IAML		03 55 56.0	
	comp=E,4µm,2.8s						
COR	**Corvallis**	**4.41**	**9**		**Pn**	**03 54 09.8**	**-0.5**
COR				IAML		03 55 49.9	
	comp=E,6µm,1.6s						
COR	**Corvallis**	**4.41**	**9**	P	**Pn**	**03 54 09.8**	**-0.5**
WVOR	**Wild Horse Val**	**4.76**	**61**	IAML		03 56 06.5	
	comp=E,2µm,1.7s						
HULI	**Fort Hunter Li**	**4.82**	**150**	IAML		03 55 13.7	
	comp=E,4µm,1.7s						
NVAR	**Mina Array Bea**	**4.95**	**109**		**Pn**	**03 54 17.4**	**-0.6**
NVAR	**Mina Array Bea**	**4.95**	**109**	Pn	**Pn**	**03 54 17.9**	**0.0**
	comp=E,24nm,0.3s,baz=293,slow=14,SNR=398						
NVAR				Lg	Lg	03 55 33.3	
	baz=286,slow=12						
NVAR				LR	LR	03 55 50.0	
	comp=E,5µm,19.8s,baz=288,slow=34						
	comp=E,29nm,0.4s						
NV11	**Mina Array Sit**	**5.05**	**109**	IAML		03 55 56.9	
	comp=N,4µm,2.2s						
NV11				IAML		03 56 14.9	
	comp=E,4µm,3.0s						
I07A	**Izee**	**5.22**	**41**		**Pn**	**03 54 21.1**	**-0.5**
J08A	**Circle Bar Ran**	**5.33**	**52**		**Pn**	**03 54 21.9**	**-1.2**
ELK	**Elko**	**6.89**	**83**	Pn	**Pn**	**03 54 44.1**	**-0.5**
	comp=E,1.3nm,0.3s,baz=275,slow=13,SNR=99						
ELK				Lg	Lg	03 56 35.8	
	comp=E,2.0nm,0.3s,baz=343,slow=19,SNR=3.7						
ELK				LR	LR	03 57 42.3	
	comp=E,24µm,21.1s,baz=262,slow=42						
	comp=E,32nm,0.8s						
GSC	**Goldstone, Bar**	**7.67**	**127**		**Pn**	**03 54 56.6**	**+1.3**
GSC	**Goldstone, Bar**	**7.67**	**127**	P	**Pn**	**03 54 56.6**	**+1.3**
PLID	**Pearl Lake**	**7.78**	**49**		**Pn**	**03 54 58.1**	**+1.3**
PFO	**Pinyon Flats O**	**9.08**	**134**		**Pn**	**03 55 14.6**	**0.0**
PFO	**Pinyon Flats O**	**9.08**	**134**	Pn	**Pn**	**03 55 14.7**	**+0.1**
	comp=E,70nm,0.6s,baz=317,slow=11,SNR=78						
PFO				Lg	Lg	03 57 52.0	
	baz=270,slow=15						
PFO				LR	LR	03 58 52.6	
	comp=E,16µm,20.9s,baz=313,slow=39						
NEW	**Newport**	**9.52**	**30**	Pn	**Pn**	**03 55 20.7**	**+0.2**
	comp=E,0.2nm,0.3s,baz=210,slow=13,SNR=9.8						
NEW				Lg	Lg	03 58 01.0	
	comp=E,0.2nm,0.3s,baz=227,slow=19,SNR=3.7						
	comp=E,4.4nm,0.7s						
MSO	**Missoula**	**9.97**	**45**		**Pn**	**03 55 27.5**	**+0.7**
DLMT	**Dillon**	**9.98**	**55**		**Pn**	**03 55 27.4**	**+0.4**
CBX	**Cerro Bola**	**9.99**	**140**		**Pn**	**03 55 26.5**	**-0.5**
BPMT	**Black Pine Rid**	**10.02**	**48**		**Pn**	**03 55 27.6**	**+0.1**
BLYC	**Blythe**	**10.11**	**127**		**Pn**	**03 55 30.2**	**+1.6**
GLA	**Glamis**	**10.41**	**130**		**Pn**	**03 55 33.2**	**+0.4**
GLA	**Glamis**	**10.41**	**130**	P	**Pn**	**03 55 33.2**	**+0.4**
TPAW	**Teton Pass**	**10.44**	**67**		**Pn**	**03 55 34.7**	**+1.3**
LLLB	**Lillooet**	**10.51**	**8**		**Pn**	**03 55 34.0**	**-0.1**
YHL	**Hebgen Lake**	**10.69**	**60**		**Pn**	**03 55 37.8**	**+1.0**
PDAR	**Pinedale Array**	**11.31**	**72**		**Pn**	**03 55 45.5**	**+0.4**
PDAR	**Pinedale Array**	**11.31**	**72**	Pn	**Pn**	**03 55 46.0**	**+0.8**
	comp=E,0.2nm,0.3s,baz=247,slow=11,SNR=47						
PDAR				Lg	Lg	03 58 57.1	
	baz=287,slow=16						
PDAR				LR	LR	04 00 28.5	
	comp=E,9µm,18.9s,baz=253,slow=40						
	comp=E,21nm,1.0s						
PV19	**Morning Glory**	**11.99**	**94**		**Pn**	**03 55 57.1**	**+2.6**
PV03	**Paradox Valley**	**12.10**	**94**		**Pn**	**03 55 58.5**	**+2.4**
PV13	**Radium Mtn., P**	**12.15**	**95**		**Pn**	**03 55 59.0**	**+2.3**
BBB	**Bella Bella**	**12.25**	**349**		**Pn**	**03 55 58.9**	**+1.1**
BBB	**Bella Bella**	**12.25**	**349**	Pn	**Pn**	**03 55 59.2**	**+1.4**
	comp=E,0.5nm,0.3s,baz=174,slow=11,SNR=15						
TUC	**Tucson**	**13.42**	**122**		**Pn**	**03 56 16.9**	**+2.9**
TUC	**Tucson**	**13.42**	**122**	P	**Pn**	**03 56 16.9**	**+2.9**
DIB	**Dawson Inlet,**	**14.14**	**339**		**Pn**	**03 56 24.5**	**+1.0**
319A	**Douglas**	**15.00**	**121**	IAmb	IAmb	03 56 40.8	
	comp=Z,399nm,1.6s						
ANMO	**Albuquerque**	**15.05**	**105**		**Pn**	**03 56 37.7**	**+1.4**
ANMO	**Albuquerque**	**15.05**	**105**	Pn	**Pn**	**03 56 37.3**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=31,slow=12,SNR=50						
ANMO				Lg	Lg	04 00 52.5	
	comp=Z,0.1nm,0.3s,baz=231,slow=14,SNR=3.0						
ANMO				LR	LR	04 02 26.2	
	comp=Z,15µm,18.6s,baz=25,slow=38						
ANMO	**Albuquerque**	**15.05**	**105**	P	**Pn**	**03 56 37.7**	**+1.4**
ANMO				pmax	pmax		
	comp=Z,52nm,1.2s						
Y22D	**IRIS PASSCAL I**	**15.11**	**109**	P	**Pn**	**03 56 35.3**	**-1.7**
	baz=299						
T25A	**Trinidad**	**15.79**	**95**	IAmb	IAmb	03 56 49.2	
	comp=Z,224nm,1.1s						
V35K	**Ketchikan**	**15.88**	**344**	P	**Pn**	**03 56 46.0**	**-0.8**
	baz=159						
U35K	**Hyder**	**16.16**	**348**	P	**Pn**	**03 56 49.6**	**-0.7**
	baz=164						
SRIG	**Santa Rosalia**	**16.27**	**139**	IAmb	IAmb	03 56 56.9	
	comp=Z,809nm,1.6s						
CRAG	**Craig**	**16.35**	**342**	P	**P**	**03 56 55.1**	**-0.4**
CRAG	**Craig**	**16.35**	**342**	P	**Pn**	**03 56 51.2**	**-1.5**
	baz=155						
KSCO	**Kaye Shedlock’**	**16.70**	**87**	IAmb	IAmb	03 56 59.9	
	comp=Z,467nm,1.0s						
U33K	**Whale Pass**	**16.94**	**343**	P	**Pn**	**03 56 58.1**	**-2.1**
	baz=156						
WRAK	**Wrangell Islan**	**17.05**	**345**	P	**Pn**	**03 56 59.7**	**-1.9**
	baz=159						
T35M	**Bob Quinn**	**17.22**	**349**	P	**Pn**	**03 57 00.7**	**-3.0**
	baz=164						
T33K	**Petersburg**	**17.55**	**344**	P	**Pn**	**03 57 05.8**	**-1.9**
	baz=158						
S34M	**Telegraph Cree**	**18.25**	**348**	P	**Pn**	**03 57 14.9**	**-1.5**
	baz=163						
SIT	**Sitka**	**18.32**	**340**	P	**P**	**03 57 20.1**	**+2.8**
SIT	**Sitka**	**18.32**	**340**	P	**Pn**	**03 57 15.2**	**-2.1**
	baz=152						
S32K	**Killisnoo**	**18.51**	**342**	P	**Pn**	**03 57 19.9**	**+0.3**
S32K	**Killisnoo**	**18.51**	**342**	P	**P**	**03 57 17.0**	**-2.3**
	baz=155						
DLBC	**Dease Lake**	**18.60**	**350**	P	**Pn**	**03 57 22.3**	**+1.5**
	comp=Z,1.9nm,1.0s,baz=140,slow=12,SNR=37						
DLBC				LR	LR	04 04 52.6	
	comp=Z,1µm,18.5s,baz=140,slow=38						
TOAD	**Toad River Com**	**18.65**	**358**	P	**P**	**03 57 20.1**	**-0.9**
	baz=178						
JIS	**Juneau Island**	**19.20**	**344**	P	**Pn**	**03 57 29.9**	**+2.0**
R32K	**Eaglecrest**	**19.23**	**343**	P	**P**	**03 57 26.0**	**-1.3**
	baz=156						
LIRD	**Liard River Hi**	**19.24**	**357**	P	**P**	**03 57 26.9**	**-0.5**
	baz=176						
S31K	**Pelican**	**19.35**	**340**	P	**P**	**03 57 27.5**	**-1.1**
	baz=152						
Q32M	**Nakina River**	**19.43**	**347**	P	**P**	**03 57 29.0**	**-0.8**
	baz=162						
R31K	**City Hall, Gus**	**19.63**	**342**	P	**P**	**03 57 31.9**	**+0.3**
	baz=153						
R33M	**Jennings River**	**19.65**	**350**	P	**P**	**03 57 31.6**	**-0.4**
	baz=165						
BGNE	**Belgrade**	**19.77**	**78**	IAmb	IAmb	03 57 37.0	
	comp=Z,197nm,1.0s						
LPIG	**La Paz**	**19.90**	**140**	P	**Pn**	**03 57 36.2**	**-0.4**
	comp=Z,42nm,0.8s,baz=323,slow=18,SNR=11						
LPIG				S	Sn	04 01 32.8	+13
	comp=Z,10nm,0.3s,baz=44,slow=22,SNR=1.2						
LPIG				LR	LR	04 05 22.6	
	comp=Z,4µm,18.1s,baz=329,slow=37						
KOTAN	**Kotaneelee Air**	**19.93**	**0**	P	**P**	**03 57 35.1**	**+0.3**
	baz=181						
ELIS	**Ellis County**	**19.94**	**94**	IAmb	IAmb	03 57 38.3	
	comp=Z,222nm,1.1s						
BEAVL	**Fort Liard**	**19.98**	**359**	P	**P**	**03 57 35.6**	**+0.1**
	baz=178						
TX31	**Lajitas Ar. Si**	**20.05**	**116**	IAmb	IAmb	03 57 44.7	
	comp=Z,230nm,1.4s						
TXAR	**Lajitas Array**	**20.05**	**116**	P	Pn	03 57 38.8	+0.4
TXAR	**Lajitas Array**	**20.05**	**116**	P	Pn	03 57 38.0	-0.4
	comp=Z,42nm,1.1s,baz=301,slow=8.2,SNR=110						
TXAR				S	**S**	**04 01 15.6**	**-5.6**
	comp=Z,0.8nm,0.9s,baz=3.2,slow=11,SNR=1.0						
TXAR				Lg	Lg	04 03 38.5	
	baz=49,slow=10,SNR=1.7						
TXAR				LR	LR	04 05 52.9	
	comp=Z,4µm,18.1s,baz=300,slow=39						
TXAR	**Lajitas Array**	**20.05**	**116**	P	Pn	03 57 38.8	+0.4
WTLY	**Watson Lake, Y**	**20.11**	**353**	IAmb	IAmb	03 57 46.3	
	comp=Z,435nm,1.5s						
WTLY				IAMs_20	IAMs_20	04 06 08.9	
	comp=Z,14µm,20.0s						
WTLY	**Watson Lake, Y**	**20.11**	**353**	P	**P**	**03 57 36.5**	**-0.4**
	baz=170						
P32M	**Atlin**	**20.28**	**346**	IAmb	IAmb	03 57 48.7	
	comp=Z,286nm,1.4s						
P32M	**Atlin**	**20.28**	**346**	P	**P**	**03 57 37.8**	**-1.0**
	baz=159						
OK038	**West end E0370**	**20.33**	**92**	IAmb	IAmb	03 57 47.0	
	comp=Z,267nm,1.1s						
OK038				IAMs_20	IAMs_20	04 06 11.0	
	comp=Z,12µm,18.0s						
HPIG		**20.33**	**125**	P	Pn	03 57 42.0	+0.2
HPIG				IAmb	IAmb	03 57 52.5	
	comp=Z,192nm,1.3s						
HPIG				IAMs_20	IAMs_20	04 05 25.2	
	comp=Z,11µm,20.0s						
SGCY	**Sterling City**	**20.41**	**107**	IAmb	IAmb	03 57 47.0	
	comp=Z,303nm,1.7s						
SLBS	**Sierra La Lagu**	**20.43**	**140**	P	Pn	03 57 42.5	-0.4
SKAG	**Skagway**	**20.48**	**344**	P	Pn	03 57 42.4	-0.7
SKAG	**Skagway**	**20.48**	**344**	P	Pn	03 57 43.4	+0.3
KAN12	**Harper NE Stat**	**20.65**	**90**	IAmb	IAmb	03 57 56.3	
	comp=Z,334nm,1.2s						
KAN08	**Anthony NE Sta**	**20.69**	**90**	IAmb	IAmb	03 57 57.3	
	comp=Z,231nm,1.2s						
P33M	**Teslin, Yukon**	**20.71**	**348**	P	Pn	03 57 45.0	-0.9
P33M				IAmb	IAmb	03 57 53.0	
	comp=Z,224nm,1.4s						
P33M				IAMs_20	IAMs_20	04 06 17.7	
	comp=Z,12µm,22.0s						
P33M	**Teslin, Yukon**	**20.71**	**348**	P	**P**	**03 57 43.4**	**-0.1**
	baz=161						
PLBC	**Pleasant Camp**	**20.71**	**342**	P	**P**	**03 57 42.1**	**-1.2**
	baz=153						
FFC	**Flin Flon**	**20.77**	**38**	P	**P**	**03 57 42.1**	**-2.0**
FFC	**Flin Flon**	**20.77**	**38**	P	**P**	**03 57 42.1**	**-2.0**
FFC				pmax	pmax		
	comp=Z,102nm,1.0s						
FFC				MLR	MLR		
	comp=Z,3µm,19.0s						
ECSD	**EROS Data Cent**	**20.80**	**71**	IAMs_20	IAMs_20	04 06 11.6	
	comp=Z,11µm,19.0s						
KAN05	**Bluff City Nor**	**20.80**	**90**	IAmb	IAmb	03 57 55.8	
	comp=Z,253nm,1.0s						
CROK	**Carrier**	**20.90**	**92**	IAmb	IAmb	03 58 02.3	
	comp=Z,219nm,1.1s						
CROK				IAMs_20	IAMs_20	04 06 36.8	
	comp=Z,13µm,18.0s						
F33A	**5 Mile Ranch,**	**21.13**	**65**	IAMs_20	IAMs_20	04 06 05.1	
	comp=Z,13µm,21.0s						
ABTX	**Abilene, Hawle**	**21.16**	**103**	IAmb	IAmb	03 57 57.4	
	comp=Z,156nm,1.2s						
ABTX				IAMs_20	IAMs_20	04 06 24.9	
	comp=Z,11µm,20.0s						
P29M	**Windy Craggy**	**21.20**	**341**	IAmb	IAmb	03 58 02.9	
	comp=Z,198nm,1.4s						
P29M	**Windy Craggy**	**21.20**	**341**	P	**P**	**03 57 48.2**	**-0.5**
	baz=151						
KSU1	**Kansas State U**	**21.28**	**84**	IAMs_20	IAMs_20	04 06 45.6	
	comp=Z,10µm,18.0s						
P30M	**Million Dollar**	**21.44**	**342**	P	**P**	**03 57 50.6**	**-0.7**
	baz=153						
TGTN	**Hyland Airport**	**21.47**	**355**	P	**P**	**03 57 51.0**	**-0.6**
	baz=172						
WHY	**Whitehorse**	**21.49**	**346**	P	**P**	**03 57 53.0**	**+1.1**
WHY				IAMs_20	IAMs_20	04 06 25.3	
	comp=Z,15µm,20.0s						
WHY	**Whitehorse**	**21.49**	**346**	P	**P**	**03 57 51.3**	**-0.6**
	baz=158						

OK029	Liberty Lake	21.53	93	IAmb	IAmb	03 58 03.6	
	comp=Z,110nm,0.9s						
OK029				IAMs_20	IAMs_20	04 06 00.6	
	comp=Z,11µm,19.0s						
WTFS	Witchita Falls	21.54	99	P	P	03 57 50.5	-2.0
N32M	Quiet Lake	21.64	348	IAMs_20	IAMs_20	04 06 40.4	
	comp=Z,13µm,21.0s						
N32M	Quiet Lake	21.64	348	P	P	03 57 52.9	-0.6
	baz=162						
PNL	Peninsula	21.67	339	P	P	03 57 54.7	+1.0
PNL	Peninsula	21.67	339	P	P	03 57 52.5	-1.2
	baz=147						
X34A	Smith Ranch, M	21.68	97	IAmb	IAmb	03 58 14.0	
	comp=Z,313nm,1.8s						
X34A				IAMs_20	IAMs_20	04 05 22.6	
	comp=Z,13µm,19.0s						
OKCSW	OKLAHOMA CITY	21.68	94	IAmb	IAmb	03 57 60.0	
	comp=Z,296nm,1.2s						
N35A	Tabor	21.71	79	IAMs_20	IAMs_20	04 07 19.9	
	comp=Z,9µm,19.0s						
OK048	Pawnee Station	21.72	91	IAmb	IAmb	03 58 01.4	
	comp=Z,157nm,1.2s						
OK048				IAMs_20	IAMs_20	04 07 02.6	
	comp=Z,11µm,20.0s						
FNO	Franklin	21.76	95	IAMs_20	IAMs_20	04 06 17.8	
	comp=Z,9µm,19.0s						
AGMN	Agassiz Nation	21.78	59	P	P	03 57 51.8	-3.1
AGMN				IAmb	IAmb	03 58 04.0	
	comp=Z,222nm,1.0s						
AGMN				IAMs_20	IAMs_20	04 07 03.0	
	comp=Z,16µm,20.0s						
OK051	E0350 and S346	21.78	91	IAmb	IAmb	03 58 11.1	
	comp=Z,161nm,1.1s						
OK051				IAMs_20	IAMs_20	04 07 06.0	
	comp=Z,10µm,20.0s						
O30N	Mendenhall	21.84	344	IAmb	IAmb	03 58 06.9	
	comp=Z,273nm,1.4s						
O30N	Mendenhall	21.84	344	P	P	03 57 55.1	-0.5
	baz=155						
T35A	Sooner Cattle	21.90	90	P	P	03 57 53.7	-2.7
T35A				IAmb	IAmb	03 58 01.9	
	comp=Z,200nm,1.1s						
OK052	Battle Ridge R	21.97	92	IAmb	IAmb	03 58 09.9	
	comp=Z,234nm,1.0s						
OK052				IAMs_20	IAMs_20	04 07 12.1	
	comp=Z,12µm,19.0s						
QUOK	Quay	21.98	92	IAmb	IAmb	03 58 10.0	
	comp=Z,142nm,1.1s						
O29M	Mount Kennedy	21.99	341	IAmb	IAmb	03 58 06.4	
	comp=Z,251nm,1.4s						
O29M	Mount Kennedy	21.99	341	P	P	03 57 56.9	-0.4
	baz=150						
PLPT	Palo Pinto	22.07	101	IAmb	IAmb	03 58 15.5	
	comp=Z,197nm,1.4s						
JCT	Junction City	22.12	108	IAMs_20	IAMs_20	04 06 41.6	
	comp=Z,18µm,18.0s						
DRIO	Del Rio	22.13	112	IAmb	IAmb	03 58 03.0	
	comp=Z,203nm,1.1s						
HYT	Haines Junctio	22.19	343	IAmb	IAmb	03 58 09.6	
	comp=Z,306nm,1.7s						
HYT	Haines Junctio	22.19	343	P	P	03 57 59.1	-0.4
	baz=152						
ULM	Lac du Bonnet	22.23	54	IAmb	IAmb	03 58 18.1	
	comp=Z,156nm,1.2s						
ULM	Lac du Bonnet	22.23	54	P	P	03 57 56.3	-3.5
	comp=Z,24nm,0.6s,baz=261,slow=8.9,SNR=20						
ULM				S	S	04 02 00.7	-2.8
	comp=Z,5.3nm,0.9s,baz=312,slow=17,SNR=1.6						
ULM				Lg	Lg	04 04 34.6	
	comp=Z,0.2nm,0.3s,baz=196,slow=17,SNR=4.9						
ULM				LR	LR	04 06 53.5	
	comp=Z,11µm,20.8s,baz=256,slow=38						
	comp=Z,24nm,0.6s						
DEOK	Depew	22.25	92	IAmb	IAmb	03 58 21.4	
	comp=Z,174nm,1.5s						
DEOK				IAMs_20	IAMs_20	04 07 20.6	
	comp=Z,15µm,22.0s						
PINM	Pinnacle	22.26	339	P	P	03 57 59.6	-0.5
	baz=146						
PCA	Pinnacle	22.26	339	IAmb	IAmb	03 58 09.2	
	comp=Z,288nm,1.3s						
BRDY	Brady	22.29	106	IAmb	IAmb	03 58 04.1	
	comp=Z,173nm,0.9s						
N31M	Braeburn, Yuko	22.43	345	IAmb	IAmb	03 58 12.2	
	comp=Z,216nm,1.2s						
N31M	Braeburn, Yuko	22.43	345	P	P	03 58 01.1	-0.8
	baz=156						
YUK6	Outpost Mounta	22.50	342	P	P	03 58 01.8	-1.0
	baz=151						
FW07	Weatherford	22.51	101	IAmb	IAmb	03 58 12.5	
	comp=Z,142nm,1.1s						
FW07				IAMs_20	IAMs_20	04 05 55.7	
	comp=Z,12µm,19.0s						
FW06	Azle	22.56	100	IAMs_20	IAMs_20	04 05 57.1	
	comp=Z,11µm,19.0s						
N30M	Aishikik Lake	22.67	344	IAmb	IAmb	03 58 18.2	
	comp=Z,160nm,1.3s						
N30M	Aishikik Lake	22.67	344	P	P	03 58 03.7	-0.8
	baz=154						
FARO	Faro, Yukon	22.71	349	IAmb	IAmb	03 58 15.5	
	comp=Z,158nm,1.2s						
FARO				IAMs_20	IAMs_20	04 07 24.6	
	comp=Z,15µm,21.0s						
FARO	Faro, Yukon	22.71	349	P	P	03 58 04.2	-0.7
	baz=162						
TUL3	Leonard	22.77	92	IAMs_20	IAMs_20	04 07 32.3	
	comp=Z,12µm,21.0s						
O28M	Mount Upton	22.81	340	IAmb	IAmb	03 58 18.7	
	comp=Z,262nm,1.4s						
O28M	Mount Upton	22.81	340	P	P	03 58 05.9	-0.3
	baz=147						
MMPY	Sheldon Lake,	22.82	352	IAmb	IAmb	03 58 16.5	
	comp=Z,149nm,1.2s						
MMPY				IAMs_20	IAMs_20	04 07 47.5	
	comp=Z,9µm,21.0s						
MMPY	Sheldon Lake,	22.82	352	P	P	03 58 05.0	-1.0
	baz=166						
MESA	MESA	22.82	337	IAMs_20	IAMs_20	04 07 37.3	
	comp=Z,11µm,18.0s						
MESA	MESA	22.82	337	P	P	03 58 05.7	-0.5
	baz=143						
M31M	Drury Creek, Y	22.85	348	IAmb	IAmb	03 58 16.9	
	comp=Z,239nm,1.4s						
M31M				IAMs_20	IAMs_20	04 07 19.2	
	comp=Z,13µm,22.0s						
M31M	Drury Creek, Y	22.85	348	P	P	03 58 06.2	-0.1
	baz=160						
YUK4	Talbot Arm	22.91	342	P	P	03 58 06.9	-0.3
	baz=151						
HNDO	Hondo	23.02	110	IAmb	IAmb	03 58 11.2	
	comp=Z,243nm,1.6s						
WRGLY	Wrigley	23.04	1	IAMs_20	IAMs_20	04 07 58.5	
	comp=Z,16µm,18.0s						
WRGLY	Wrigley	23.04	1	P	P	03 58 08.7	+0.5
	baz=182						
YKA	Yellowknife Ar	23.04	11	P	P	03 58 07.0	-1.3
YKA	Yellowknife Ar	23.04	11	P	P	03 58 07.6	-0.7
	comp=Z,8.5nm,0.9s,baz=191,slow=18,SNR=30						
YKA				S	S	04 02 18.6	+0.8
	comp=Z,1.3nm,1.0s,baz=167,slow=12,SNR=1.2						
YKA				Lg	Lg	04 05 15.8	
	baz=264,slow=21,SNR=1.2						
YKA				LR	LR	04 08 04.6	
	comp=Z,22µm,18.6s,baz=194,slow=39						
	comp=Z,8.5nm,0.9s						
YKAW1	Yellowknife Wh	23.05	12	IAmb	IAmb	03 58 16.9	
	comp=Z,151nm,1.1s						
WHTX	Lake Whitney,	23.09	102	IAmb	IAmb	03 58 11.8	
	comp=Z,132nm,1.2s						
WHTX				IAMs_20	IAMs_20	04 07 37.0	
	comp=Z,16µm,18.0s						
YKAW3	Yellowknife Wh	23.11	11	IAmb	IAmb	03 58 17.5	
	comp=Z,211nm,1.2s						
I37A	Lemond, Waseca	23.12	70	IAMs_20	IAMs_20	04 07 30.0	
	comp=Z,11µm,20.0s						
YUK8	Steele Glacier	23.14	341	P	P	03 58 09.2	-0.3
	baz=149						
BGLC	Bering Glacier	23.19	335	P	P	03 58 09.1	-0.6
	baz=141						
GRNC	Granite Creek	23.21	338	IAmb	IAmb	03 58 20.2	
	comp=Z,212nm,1.4s						
CTG	Chitna Glacier	23.28	339	P	P	03 58 10.3	-0.6
	baz=146						
SCIA	State Center	23.40	76	IAMs_20	IAMs_20	04 08 27.5	
	comp=Z,9µm,18.0s						
KAIM	Kayak Island	23.41	334	P	P	03 58 10.6	-1.4
	baz=139						
P38A	Dawn	23.51	81	IAmb	IAmb	03 58 39.2	
	comp=Z,136nm,1.2s						
P38A				IAMs_20	IAMs_20	04 07 50.5	
	comp=Z,11µm,20.0s						
N38A	Joes South For	23.53	78	IAmb	IAmb	03 58 29.5	
	comp=Z,137nm,1.1s						
N38A				IAMs_20	IAMs_20	04 08 03.0	
	comp=Z,9µm,18.0s						
SPMN	Marine on St.	23.55	67	IAMs_20	IAMs_20	04 07 53.1	
	comp=Z,13µm,20.0s						
TGL	Tana Glacier	23.55	337	IAmb	IAmb	03 58 36.4	
	comp=Z,120nm,1.4s						
CRQE	Cirque	23.62	337	P	P	03 58 13.4	-0.8
	baz=142						
CRQM	Cirque	23.64	337	IAmb	IAmb	03 58 34.6	
	comp=Z,249nm,1.6s						
HMT	Hamilton	23.67	335	IAmb	IAmb	03 58 24.6	
	comp=Z,198nm,1.4s						
U38A	Gravette	23.67	90	IAMs_20	IAMs_20	04 08 22.1	
	comp=Z,9µm,18.0s						
Q23K	Middleton Isla	23.73	331	IAMs_20	IAMs_20	04 04 49.1	
	comp=Z,8µm,19.0s						
Q23K	Middleton Isla	23.73	331	P	P	03 58 14.3	-0.8
	baz=134						
YUK3	Moose Creek	23.73	341	P	P	03 58 14.9	-0.5
	baz=148						
TREL	Terrell	23.78	99	IAmb	IAmb	03 58 24.2	
	comp=Z,135nm,1.1s						
M29M	Somme Creek	23.84	344	P	P	03 58 15.7	-0.6
	baz=152						
HHAR	Hobbs	24.06	90	IAMs_20	IAMs_20	04 08 50.5	
	comp=Z,11µm,18.0s						
MCARA	McCarthy VSAT	24.10	338	P	P	03 58 18.7	+0.1
	baz=143						
VRDI	Verde Repeater	24.11	337	IAmb	IAmb	03 58 27.5	
	comp=Z,239nm,1.7s						
BMRM	Bremner River	24.26	336	P	P	03 58 19.9	-0.3
	baz=140						
EYAK	Cordova Ski Ar	24.32	334	P	P	03 58 22.3	+1.7
EYAK	Cordova Ski Ar	24.32	334	P	P	03 58 18.9	-1.7
	baz=137						
L29M	L29M	24.37	345	IAmb	IAmb	03 58 31.7	
	comp=Z,204nm,1.3s						
L29M	L29M	24.37	345	P	P	03 58 20.1	-1.0
	baz=154						
BVCY	Beaver Creek	24.37	341	P	P	03 58 21.8	+0.6
	baz=148						
GLB	Gilahina Butte	24.38	337	IAmb	IAmb	03 58 32.6	
	comp=Z,104nm,1.4s						
Z38A	Mt. Pleasant	24.39	97	IAmb	IAmb	03 58 49.7	
	comp=Z,82nm,1.2s						
Z38A				IAMs_20	IAMs_20	04 09 14.2	
	comp=Z,12µm,20.0s						
MAYO	Mayo, Yukon	24.40	347	IAMs_20	IAMs_20	04 08 17.2	
	comp=Z,11µm,19.0s						
MAYO	Mayo, Yukon	24.40	347	P	P	03 58 20.3	-1.1
	baz=158						
HIN	Hinchinbrook I	24.46	333	IAmb	IAmb	03 58 33.4	
	comp=Z,177nm,1.4s						
E38A	The Farm, Brul	24.47	64	IAMs_20	IAMs_20	04 07 16.3	
	comp=Z,12µm,21.0s						
P23K	Montague Islan	24.50	332	IAMs_20	IAMs_20	04 05 13.8	
	comp=Z,10µm,22.0s						
P23K	Montague Islan	24.50	332	P	P	03 58 20.6	-1.7
	baz=134						
M27K	Edge Creek, AK	24.58	340	IAmb	IAmb	03 58 32.4	
	comp=Z,200nm,1.5s						
M27K	Edge Creek, AK	24.58	340	P	P	03 58 21.3	-1.9
	baz=146						
EYMN	Ely	24.62	61	P	P	03 58 20.2	-3.3
EYMN	Ely	24.62	61	IAMs_20	IAMs_20	04 08 41.1	
	comp=Z,14µm,18.0s						
P40A	Paris	24.65	81	IAMs_20	IAMs_20	04 08 26.8	
	comp=Z,8µm,20.0s						
FID	Port Fidalgo	24.71	334	IAmb	IAmb	03 58 35.2	
	comp=Z,227nm,1.7s						
N25K	Chitina, Valde	24.75	337	P	P	03 58 24.9	+0.3
	baz=141						
DIV	Divide	24.75	335	IAmb	IAmb	03 58 40.8	
	comp=Z,114nm,1.2s						
R40A	Maddies Statio	24.77	84	IAMs_20	IAMs_20	04 08 55.0	
	comp=Z,12µm,20.0s						
L40A	Anamosa	24.86	75	IAMs_20	IAMs_20	04 09 12.9	
	comp=Z,14µm,18.0s						
K29M	Barlow Dome	24.92	346	IAmb	IAmb	03 58 36.0	
	comp=Z,154nm,1.2s						
K29M	Barlow Dome	24.92	346	P	P	03 58 26.7	+0.6
	baz=156						
M26K	Nabesna, AK	24.92	339	P	P	03 58 26.3	+0.2
	baz=144						
MIAR	Mount Ida	24.95	93	IAMs_20	IAMs_20	04 08 17.9	
	comp=Z,13µm,18.0s						
GLI	Glacier Island	25.02	333	P	P	03 58 27.1	+0.1
	baz=136						
KLU	Klutina	25.07	335	P	P	03 58 27.1	-0.4
	baz=138						
MGMO	Mountain Grove	25.08	87	IAmb	IAmb	03 58 54.4	
	comp=Z,142nm,1.2s						
I40A	Norwalk	25.13	71	IAmb	IAmb	03 58 43.0	
	comp=Z,72nm,0.9s						
I40A				IAMs_20	IAMs_20	04 08 44.2	
	comp=Z,12µm,20.0s						
BCAR	Beaver Creek A	25.15	341	P	P	03 58 29.5	+1.3
L27K	Beaver Creek,	25.16	341	IAmb	IAmb	03 58 39.5	
	comp=Z,161nm,1.4s						
L27K	Beaver Creek,	25.16	341	P	P	03 58 28.7	+0.4
	baz=147						
KVTX	Kingsville	25.17	112	IAMs_20	IAMs_20	04 08 40.2	
	comp=Z,10µm,19.0s						
ZAIG	Zacatecas	25.28	127	P	P	03 58 31.9	+1.9
ZAIG				IAmb	IAmb	03 58 35.3	
	comp=Z,111nm,1.4s						
KDAK	Kodiak Island	25.28	323	P	P	03 58 30.1	+0.7
KDAK				IAmb	IAmb	03 58 40.1	
	comp=Z,126nm,1.4s						
KDAK	Kodiak Island	25.28	323	LR	LR	04 06 11.6	
	comp=Z,16µm,18.3s,baz=120,slow=31						
KDAK	Kodiak Island	25.28	323	P	P	03 58 30.1	+0.7
KDAK				pmax	pmax		
	comp=Z,126nm,1.5s						
KDAK	Kodiak Island	25.28	323	P	P	03 58 29.0	-0.4
	baz=122						
NATX	Nacogdoches	25.30	100	IAmb	IAmb	03 59 03.9	
	comp=Z,145nm,1.2s						
NATX				IAMs_20	IAMs_20	04 08 54.4	
	comp=Z,12µm,20.0s						
HKT	Hockley	25.31	105	P	P	03 58 30.5	+0.7
HKT	Hockley	25.31	105	P	P	03 58 30.5	+0.7
HKT				pmax	pmax		
	comp=Z,250nm,1.3s						
HKT				MLR	MLR		
	comp=Z,21µm,18.0s						
OHAK	Old Harbor	25.32	322	IAmb	IAmb	03 58 40.4	
	comp=Z,119nm,1.2s						
OHAK				IAMs_20	IAMs_20	04 06 00.5	
	comp=Z,12µm,19.0s						
OHAK	Old Harbor	25.32	322	P	P	03 58 31.9	+2.2
OHAK	Old Harbor	25.32	322	P	P	03 58 29.8	+0.1
	baz=120						
N41A	Harden Midland	25.33	78	IAmb	IAmb	03 58 37.0	
	comp=Z,76nm,1.1s						
SEW	Seward	25.34	330	IAMs_20	IAMs_20	04 05 48.0	
	comp=Z,9µm,19.0s						
SEW	Seward	25.34	330	P	P	03 58 29.4	-0.4
	baz=131						
G40A	Rib Lake	25.38	67	IAmb	IAmb	03 58 34.0	
	comp=Z,94nm,1.3s						
G40A				IAMs_20	IAMs_20	04 08 48.7	
	comp=Z,14µm,21.0s						
J30M	Hart River	25.39	348	IAmb	IAmb	03 58 39.8	
	comp=Z,109nm,1.0s						
J30M				IAMs_20	IAMs_20	04 08 58.3	
	comp=Z,15µm,21.0s						
J30M	Hart River	25.39	348	P	P	03 58 30.9	+0.5
	baz=158						
PWL	Port Wells	25.43	332	P	P	03 58 30.6	-0.1
	baz=134						
SII	Sitkinak Islan	25.44	320	IAMs_20	IAMs_20	04 06 11.5	
	comp=Z,12µm,18.0s						
SII	Sitkinak Islan	25.44	320	P	P	03 58 32.0	+1.2
SII	Sitkinak Islan	25.44	320	P	P	03 58 29.9	-0.9
	baz=117						
JFWS	Jewell Farm	25.48	73	IAMs_20	IAMs_20	04 08 56.4	
	comp=Z,13µm,19.0s						
DAWY	Dawson	25.48	345	IAMs_20	IAMs_20	04 07 21.7	
	comp=Z,7µm,18.0s						
DAWY	Dawson	25.48	345	P	P	03 58 30.8	-0.3
	baz=152						
L26K	Log Cabin Wild	25.52	340	P	P	03 58 31.6	+0.1
	baz=145						
HARP	HAARP	25.53	337	P	P	03 58 30.7	-0.9
	baz=141						
X40A	Basin Creek Fa	25.54	93	IAMs_20	IAMs_20	04 08 34.6	
	comp=Z,10µm,20.0s						
MENT	Mentasta	25.55	339	P	P	03 58 33.8	+2.0
J29N	Klondike Camp	25.60	346	P	P	03 58 32.1	-0.1
	baz=155						
CCM	Cathedral Cave	25.61	84	IAMs_20	IAMs_20	04 07 54.3	
	comp=Z,8µm,20.0s						
M24K	Tolsona, Glenn	25.61	336	P	P	03 58 31.7	-0.7
	baz=139						
BRSE	Bradley Lake S	25.62	328	P	P	03 58 32.1	-0.3
	baz=128						
WLAR	White Oak Lake	25.64	95	IAMs_20	IAMs_20	04 08 01.3	
	comp=Z,9µm,22.0s						
SYI	Shuyak Island	25.64	325	IAMs_20	IAMs_20	04 06 41.0	
	comp=Z,13µm,18.0s						
Q20K	Shuyak Island	25.65	325	P	P	03 58 32.1	-0.6
	baz=124						
WHAR	Wooly Hollow	25.66	91	IAmb	IAmb	03 58 41.5	
	comp=Z,104nm,1.0s						
WHAR				IAMs_20	IAMs_20	04 09 26.8	
	comp=Z,9µm,18.0s						
CNPM	China Poot	25.68	328	IAMs_20	IAMs_20	04 06 17.0	
	comp=Z,11µm,19.0s						
BRLK	Bradley Lake	25.69	328	IAmb	IAmb	03 58 58.5	
	comp=Z,118nm,1.2s						
BRLK				IAMs_20	IAMs_20	04 06 17.1	
	comp=Z,9µm,19.0s						
O22K	Cooper Landing	25.69	331	IAMs_20	IAMs_20	04 06 00.4	
	comp=Z,8µm,20.0s						
O22K	Cooper Landing	25.69	331	P	P	03 58 32.8	-0.2
	baz=131						
SCM	Sheep Creek Mo	25.78	335	P	P	03 58 33.4	-0.5
	baz=136						
UALR	University of	25.80	92	IAMs_20	IAMs_20	04 08 20.7	
	comp=Z,9µm,20.0s						
CHIR	Chirikof Islan	25.85	318	IAMs_20	IAMs_20	04 06 10.3	
	comp=Z,8µm,18.0s						
CHIR	Chirikof Islan	25.85	318	P	P	03 58 33.7	-0.8
	baz=114						
KNK	Knik Glacier	25.86	333	P	P	03 58 34.6	0.0
	baz=134						
M23K	Glacier View	25.88	334	P	P	03 58 34.5	-0.2
	baz=136						
SLKM	Skilak Lake	25.89	330	IAmb	IAmb	03 58 44.5	
	comp=Z,111nm,1.2s						
SLKM				IAMs_20	IAMs_20	04 06 05.7	
	comp=Z,7µm,20.0s						
HOM	Homer	25.93	328	IAMs_20	IAMs_20	04 06 25.6	
	comp=Z,10µm,19.0s						
HOM	Homer	25.93	328	P	P	03 58 34.9	-0.3
	baz=126						
I30M	Mount Dempster	26.00	348	P	P	03 58 36.6	+0.7
	baz=159						
L42A	Oliver, Polo	26.01	75	IAmb	IAmb	03 58 46.6	
	comp=Z,112nm,1.1s						
L42A				IAMs_20	IAMs_20	04 09 14.6	
	comp=Z,9µm,18.0s						
K27K	Chicken	26.04	342	IAmb	IAmb	03 58 45.8	
	comp=Z,100nm,1.4s						
K27K	Chicken	26.04	342	P	P	03 58 36.6	+0.5
	baz=148						
R18K	Karluk	26.04	322	P	P	03 58 36.4	+0.2
	baz=119						
Z41A	Richland Creek	26.05	95	IAmb	IAmb	03 58 47.4	
	comp=Z,162nm,1.4s						
PAX	Paxson	26.06	338	P	P	03 58 36.7	+0.2
	baz=141						
TBO	Thunder Bay	26.08	60	IAmb	IAmb	03 58 55.8	
	comp=Z,90nm,1.1s						
RC01	Rabbit Creek A	26.09	332	IAmb	IAmb	03 58 48.7	
	comp=Z,91nm,1.2s						
RC01				IAMs_20	IAMs_20	04 06 13.9	
	comp=Z,8µm,21.0s						
RC01	Rabbit Creek A	26.09	332	P	P	03 58 37.5	+0.8
	baz=132						
SML	Sawmill	26.09	334	IAmb	IAmb	03 59 12.0	
	comp=Z,176nm,1.4s						
SML	Sawmill	26.09	334	P	P	03 58 37.4	+0.6
	baz=135						
COWI	Conover	26.13	65	IAmb	IAmb	03 58 45.5	
	comp=Z,152nm,1.8s						
COWI				IAMs_20	IAMs_20	04 08 17.3	
	comp=Z,11µm,20.0s						
PMR	Palmer	26.22	333	IAmb	IAmb	03 58 47.5	
	comp=Z,139nm,1.4s						
PMR	Palmer	26.22	333	P	P	03 58 39.2	+1.4
PMR	Palmer	26.22	333	P	P	03 58 38.6	+0.9
	baz=133						
SLM	Saint Louis	26.23	82	IAmb	IAmb	03 59 11.9	
	comp=Z,80nm,1.1s						
SLM				IAMs_20	IAMs_20	04 08 13.6	
	comp=Z,9µm,18.0s						
H31M	Peel River	26.26	351	IAMs_20	IAMs_20	04 09 43.5	
	comp=Z,10µm,19.0s						
H31M	Peel River	26.26	351	P	P	03 58 38.4	+0.2
	baz=162,SNR=42						
LCAR	Lake Charles	26.27	88	IAMs_20	IAMs_20	04 10 00.7	
	comp=Z,8µm,18.0s						
FIS	Fire Island	26.31	331	IAMs_20	IAMs_20	04 06 20.4	
	comp=Z,8µm,22.0s						
I42A	Draeger Farm,	26.36	70	IAmb	IAmb	03 58 57.5	
	comp=Z,88nm,1.3s						
I42A				IAMs_20	IAMs_20	04 09 20.7	
	comp=Z,12µm,22.0s						
Q19K	Cape Douglas,	26.37	325	IAMs_20	IAMs_20	04 06 38.0	
	comp=Z,11µm,19.0s						
Q19K	Cape Douglas,	26.37	325	P	P	03 58 38.8	-0.5
	baz=122						
CAPN	Captain Cook N	26.42	330	P	P	03 58 39.0	-0.5
	baz=129						
I29M	Ogilvie Camp,	26.44	347	IAmb	IAmb	03 58 48.5	
	comp=Z,57nm,0.9s						
I29M				IAMs_20	IAMs_20	04 09 42.2	
	comp=Z,10µm,20.0s						
I29M	Ogilvie Camp,	26.44	347	P	P	03 58 40.1	+0.3
	baz=156						
WAT6	Susitna Watana	26.46	336	P	P	03 58 40.1	-0.1
	baz=137						
SCRK	Sand Creek	26.46	340	IAmb	IAmb	03 58 52.1	
	comp=Z,108nm,1.3s						
SCRK	Sand Creek	26.46	340	P	P	03 58 39.3	-0.8
	baz=145						
RIDG	Independent Ri	26.50	339	P	P	03 58 40.5	+0.1
	baz=143						
HDIL	Hopedale	26.52	78	IAmb	IAmb	03 59 20.0	
	comp=Z,78nm,1.1s						
HDIL				IAMs_20	IAMs_20	04 10 11.2	
	comp=Z,9µm,18.0s						
CCAR	Cane Creek	26.57	93	IAmb	IAmb	03 59 18.9	
	comp=Z,150nm,1.2s						
CCAR				IAMs_20	IAMs_20	04 08 54.9	
	comp=Z,9µm,20.0s						
O20K	Slope Mountain	26.58	328	P	P	03 58 40.6	-0.6
	baz=126						
P19K	Oil Pt	26.59	327	IAMs_20	IAMs_20	04 07 13.8	
	comp=Z,11µm,18.0s						
P19K	Oil Pt	26.59	327	P	P	03 58 40.6	-0.6
	baz=124						
FCC	Fort Churchill	26.62	36	P	P	03 58 40.8	-0.6
FCC				IAmb	IAmb	03 58 43.3	
	comp=Z,74nm,1.0s						
FCC	Fort Churchill	26.62	36	P	P	03 58 40.8	-0.6
FCC				pmax	pmax		
	comp=Z,74nm,1.0s						
FCC				MLR	MLR		
	comp=Z,18µm,18.0s						
M22K	Willow	26.68	332	P	P	03 58 41.7	-0.2
	baz=132						
DHY	Denali Highway	26.71	337	P	P	03 58 42.5	+0.1
	baz=138,SNR=24						
SUA	Susitna One	26.71	332	IAmb	IAmb	03 58 52.1	
	comp=Z,143nm,1.3s						
SUA	Susitna One	26.71	332	P	P	03 58 42.7	+0.3
	baz=131						
ILSW	Iliamna Southw	26.74	327	IAmb	IAmb	03 58 59.3	
	comp=Z,136nm,1.2s						
ILSW				IAMs_20	IAMs_20	04 07 10.8	
	comp=Z,10µm,18.0s						
ACHA	Angle Creek He	26.76	323	IAMs_20	IAMs_20	04 06 51.5	
	comp=Z,8µm,19.0s						
J26L	Joseph Creek	26.79	341	IAmb	IAmb	03 58 52.5	
	comp=Z,94nm,1.3s						
J26L	Joseph Creek	26.79	341	P	P	03 58 43.2	+0.1
	baz=146,SNR=23						
K24K	Donnelly Dome	26.80	339	P	P	03 58 43.2	+0.1

	baz=142						
HBAR	Harrisburg	26.82	89	IAMs_20	IAMs_20	04 09 58.4	
	comp=Z,9µm,18.0s						
I28M	Miner Creek	26.82	345	IAmb	IAmb	03 58 59.3	
	comp=Z,135nm,1.6s						
I28M				IAMs_20	IAMs_20	04 08 07.2	
	comp=Z,7µm,18.0s						
I28M	Miner Creek	26.82	345	P	P	03 58 43.6	+0.3
	baz=153,SNR=14						
F42A	Maple Grove Fa	26.83	66	IAmb	IAmb	03 58 47.1	
	comp=Z,82nm,1.3s						
F42A				IAMs_20	IAMs_20	04 09 53.9	
	comp=Z,11µm,20.0s						
Q18K	Katmai Hardscr	26.83	324	P	P	03 58 43.4	-0.1
	baz=120						
RED	Redoubt Volcan	26.84	328	IAmb	IAmb	03 58 53.8	
	comp=Z,100nm,1.2s						
WAT1	Susitna Watana	26.90	335	P	P	03 58 44.2	+0.2
	baz=136						
K43A	Burlington	26.90	73	IAmb	IAmb	03 59 02.6	
	comp=Z,82nm,1.2s						
K43A				IAMs_20	IAMs_20	04 10 14.1	
	comp=Z,7µm,18.0s						
SPU	Mount Spurr	27.02	330	IAmb	IAmb	03 58 54.8	
	comp=Z,177nm,1.4s						
Q17K	Contact Creek	27.05	322	P	P	03 58 45.1	-0.4
	baz=118						
Q44A	Meyer Farm, Va	27.09	81	IAMs_20	IAMs_20	04 09 59.3	
	comp=Z,9µm,20.0s						
N20K	Mount Spurr	27.09	330	P	P	03 58 46.0	+0.2
	baz=128						
SPCR	Spurr Chakacha	27.09	330	P	P	03 58 46.1	+0.3
	baz=128,SNR=5.3						
EPYK	Eagle Plains	27.12	349	IAMs_20	IAMs_20	04 10 12.2	
	comp=Z,9µm,18.0s						
EPYK	Eagle Plains	27.12	349	IAmb	IAmb	03 58 54.4	
	comp=Z,189nm,1.4s						
EPYK	Eagle Plains	27.12	349	P	P	03 58 46.3	+0.4
	baz=159,SNR=18						
H43A	Windswept, Lux	27.14	69	IAmb	IAmb	03 58 51.8	
	comp=Z,58nm,0.8s						
H43A				IAMs_20	IAMs_20	04 09 53.3	
	comp=Z,12µm,20.0s						
PARMO	Parma	27.15	86	IAmb	IAmb	03 58 56.4	
	comp=Z,66nm,0.8s						
CUT	Chulitna	27.17	333	P	P	03 58 46.6	+0.2
	baz=133						
H29M	Whitestone	27.24	348	IAMs_20	IAMs_20	04 10 16.2	
	comp=Z,12µm,19.0s						
H29M	Whitestone	27.24	348	P	P	03 58 47.3	+0.3
	baz=156,SNR=121						
PVMO	Portageville	27.27	87	IAMs_20	IAMs_20	04 09 11.2	
	comp=Z,7µm,21.0s						
L44A	Lake County Fo	27.28	74	IAmb	IAmb	03 58 57.6	
	comp=Z,84nm,1.1s						
L44A				IAMs_20	IAMs_20	04 10 43.2	
	comp=Z,12µm,19.0s						
I27K	Kandik River	27.29	344	P	P	03 58 47.7	+0.2
	baz=150,SNR=59						
P18K	Big Mountain,	27.31	325	IAmb	IAmb	03 58 56.8	
	comp=Z,75nm,1.2s						
P18K				IAMs_20	IAMs_20	04 07 06.9	
	comp=Z,10µm,19.0s						
P18K	Big Mountain,	27.31	325	P	P	03 58 47.7	0.0
	baz=121						
M44A	Midewin, Midew	27.31	76	IAmb	IAmb	03 59 24.4	
	comp=Z,105nm,1.3s						
M44A				IAMs_20	IAMs_20	04 10 37.9	
	comp=Z,11µm,18.0s						
G31M	Satah River	27.33	351	IAmb	IAmb	03 58 56.0	
	comp=Z,72nm,1.1s						
G31M				IAMs_20	IAMs_20	04 11 27.6	
	comp=Z,12µm,20.0s						
G31M	Satah River	27.33	351	P	P	03 58 47.6	-0.1
	baz=163,SNR=22						
SKT	Skwentna	27.33	332	IAmb	IAmb	03 58 58.5	
	comp=Z,162nm,1.9s						
SKT				IAMs_20	IAMs_20	04 07 14.5	
	comp=Z,7µm,19.0s						
SKT	Skwentna	27.33	332	P	P	03 58 47.9	0.0
	baz=130,SNR=9.4						
J25K	Salcha River,	27.34	340	IAmb	IAmb	03 58 57.3	
	comp=Z,162nm,1.4s						
J25K	Salcha River,	27.34	340	P	P	03 58 49.2	+1.3
	baz=143,SNR=71						
O19K	Port Alsworth	27.34	327	IAmb	IAmb	03 58 57.5	
	comp=Z,86nm,1.0s						
O19K	Port Alsworth	27.34	327	P	P	03 58 48.3	+0.3
	baz=124,SNR=6.3						
143A	Socs Landing,	27.35	95	IAMs_20	IAMs_20	04 09 27.6	
	comp=Z,7µm,19.0s						
I26K	Coal Creek Min	27.37	343	P	P	03 58 48.7	+0.6
	baz=148,SNR=24						
HQIL	Hanson Quary C	27.38	75	IAMs_20	IAMs_20	04 10 47.8	
	comp=Z,11µm,18.0s						
RND	Reindeer	27.41	336	IAmb	IAmb	03 59 20.0	
	comp=Z,95nm,1.3s						
HDBT	Hernando Brdge	27.42	90	IAMs_20	IAMs_20	04 10 19.3	
	comp=Z,8µm,19.0s						
MET	Memphis--Engin	27.52	90	IAMs_20	IAMs_20	04 10 21.1	
	comp=Z,8µm,18.0s						
O18K	Koktuh Hills	27.54	326	IAMs_20	IAMs_20	04 07 34.0	
	comp=Z,12µm,18.0s						
O18K	Koktuh Hills	27.54	326	P	P	03 58 49.8	+0.1
	baz=122						
HDA	Harding Lake	27.60	339	P	P	03 58 50.0	-0.2
	baz=140						
CNBA	Chernabura Isl	27.62	314	P	P	03 58 51.0	+0.5
CNBA				IAmb	IAmb	03 58 60.0	
	comp=Z,78nm,1.1s						
CHNA	Chernabura Isl	27.62	314	P	P	03 58 52.1	+1.6
CHNA	Chernabura Isl	27.62	314	P	P	03 58 50.6	+0.2
	baz=107						
G30M	tAoh Zraii Nji	27.62	350	IAMs_20	IAMs_20	04 09 17.5	
	comp=Z,8µm,18.0s						
G30M	tAoh Zraii Nji	27.62	350	P	P	03 58 51.0	+0.6
	baz=160,SNR=17						
MCK	McKinley	27.67	336	IAmb	IAmb	03 59 00.1	
	comp=Z,114nm,1.4s						
MCK				IAMs_20	IAMs_20	04 11 42.6	
	comp=Z,6µm,18.0s						
MCK	McKinley	27.67	336	P	P	03 58 51.4	+0.5
	baz=137,SNR=9.8						
HALT	Halls	27.71	88	IAMs_20	IAMs_20	04 09 35.9	
	comp=Z,7µm,22.0s						
P17K	Kvichak River	27.75	324	P	P	03 58 51.3	-0.2
	baz=119						
N19K	Bonanza Creek	27.76	328	IAmb	IAmb	03 59 01.1	
	comp=Z,68nm,1.1s						
N19K				IAMs_20	IAMs_20	04 07 59.8	
	comp=Z,10µm,18.0s						
N19K	Bonanza Creek	27.76	328	P	P	03 58 52.1	+0.3
	baz=124,SNR=18						
F31M	Tsiigehtchic	27.77	352	P	P	03 58 52.0	+0.4
	baz=164,SNR=6.7						
G29M	Pine Creek	27.82	348	IAmb	IAmb	03 59 00.6	
	comp=Z,106nm,1.1s						
G29M				IAMs_20	IAMs_20	04 10 33.6	
	comp=Z,12µm,20.0s						
G29M	Pine Creek	27.82	348	P	P	03 58 52.6	+0.4
	baz=157,SNR=29						
H27K	Steamboat Moun	27.82	345	IAmb	IAmb	03 59 01.2	
	comp=Z,88nm,1.3s						
H27K	Steamboat Moun	27.82	345	P	P	03 58 53.1	+0.9
	baz=151,SNR=23						
M20K	Styx River	27.86	331	IAmb	IAmb	03 59 02.3	
	comp=Z,77nm,1.2s						
M20K				IAMs_20	IAMs_20	04 07 29.9	
	comp=Z,8µm,20.0s						
M20K	Styx River	27.86	331	P	P	03 58 53.1	+0.4
	baz=128						
ILAR	Eielson Array	27.86	339	P	P	03 58 53.3	+0.8
ILAR	Eielson Array	27.86	339	P	P	03 58 53.1	+0.5
	comp=Z,6.8nm,0.9s,baz=154,slow=7.8,SNR=42						
ILAR				PcP	PcP	04 02 09.0	+1.1
	comp=Z,1.7nm,0.7s,baz=179,slow=2.0,SNR=7.8						
ILAR				LR	LR	04 08 47.8	
	comp=Z,3µm,19.4s,baz=135,slow=34						
	comp=Z,6.8nm,0.9s						
T45A	Paducah	27.89	85	IAmb	IAmb	03 59 31.7	
	comp=Z,87nm,1.0s						
TRF	Thorofare Moun	27.89	335	IAmb	IAmb	03 59 02.2	
	comp=Z,166nm,1.6s						
TRF	Thorofare Moun	27.89	335	P	P	03 58 53.3	+0.2
	baz=134,SNR=20						
S14K	Fog Glacier	28.07	317	P	P	03 58 54.1	-0.5
	baz=110						
PRP	Porcupine Dome	28.11	341	P	P	03 58 55.1	+0.2
	baz=144,SNR=13						
OXF	Oxford	28.15	91	IAMs_20	IAMs_20	04 10 50.7	
	comp=Z,8µm,19.0s						
PPLA	Purkeypile	28.16	333	IAMs_20	IAMs_20	04 07 43.4	
	comp=Z,7µm,20.0s						
PPLA	Purkeypile	28.16	333	P	P	03 58 55.7	+0.3
	baz=131,SNR=24						
F30M	Barrier River	28.16	351	IAmb	IAmb	03 59 10.3	
	comp=Z,136nm,1.4s						
F30M				IAMs_20	IAMs_20	04 10 53.8	
	comp=Z,9µm,20.0s						
F30M	Barrier River	28.16	351	P	P	03 58 54.6	-0.6
	baz=161,SNR=11						
SFIN	Lafayette	28.20	77	IAmb	IAmb	03 59 06.6	
	comp=Z,68nm,1.2s						
SFIN				IAMs_20	IAMs_20	04 11 04.6	
	comp=Z,9µm,18.0s						
COLA	College	28.21	339	P	P	03 58 59.3	+3.7
COLA	College	28.21	339	*i* P	P	03 58 55.0	-0.6
COLA				pmax	pmax		
	comp=Z,37nm,1.5s						
COLA	College	28.21	339	P	P	03 58 56.0	+0.4
	baz=140						
N18K	Kilae Creek	28.26	327	IAmb	IAmb	03 59 05.8	
	comp=Z,79nm,1.1s						
N18K	Kilae Creek	28.26	327	P	P	03 58 56.0	-0.2
	baz=122,SNR=32						
SDPT	Sand Point	28.26	315	P	P	03 58 55.2	-1.0
	baz=107						
I45A	Fountain	28.28	70	IAMs_20	IAMs_20	04 10 29.4	
	comp=Z,13µm,21.0s						
POKR	Poker Plat Res	28.28	339	IAmb	IAmb	03 59 05.5	
	comp=Z,104nm,1.4s						
POKR	Poker Plat Res	28.28	339	P	P	03 58 56.8	+0.5
	baz=141						
Y45A	Yeager Farm, C	28.29	92	IAMs_20	IAMs_20	04 12 16.5	
	comp=Z,8µm,21.0s						
O17K	Koliganek Bris	28.32	325	P	P	03 58 57.1	+0.5
	baz=119,SNR=5.2						
NEA2	Nenana	28.34	338	IAmb	IAmb	03 59 05.1	
	comp=Z,104nm,1.3s						
NEA2	Nenana	28.34	338	P	P	03 58 57.3	+0.4
	baz=138,SNR=27						
M19K	Big River Lodg	28.35	330	IAmb	IAmb	03 59 06.9	
	comp=Z,174nm,1.6s						
M19K				IAMs_20	IAMs_20	04 07 46.4	
	comp=Z,7µm,20.0s						
M19K	Big River Lodg	28.35	330	P	P	03 58 57.4	+0.5
	baz=126,SNR=13						
G27K	Doyon Strip	28.36	346	IAmb	IAmb	03 59 06.0	
	comp=Z,122nm,1.4s						
G27K				IAMs_20	IAMs_20	04 09 05.7	
	comp=Z,7µm,19.0s						
G27K	Doyon Strip	28.36	346	P	P	03 58 57.5	+0.5
	baz=151,SNR=108						
USIN	University of	28.36	83	IAmb	IAmb	03 59 07.2	
	comp=Z,127nm,1.6s						
USIN				IAMs_20	IAMs_20	04 10 46.9	
	comp=Z,11µm,21.0s						
P16K	Nushagak River	28.38	323	IAMs_20	IAMs_20	04 07 59.2	
	comp=Z,11µm,19.0s						
P16K	Nushagak River	28.38	323	P	P	03 58 57.2	0.0
	baz=117						
CAST	Castle Rocks	28.47	334	IAmb	IAmb	03 59 06.9	
	comp=Z,131nm,1.9s						
CAST	Castle Rocks	28.47	334	P	P	03 58 58.4	+0.4
	baz=132,SNR=17						
L46A	Eue Claire	28.50	74	IAmb	IAmb	03 59 08.5	
	comp=Z,129nm,1.4s						
L46A				IAMs_20	IAMs_20	04 11 29.3	
	comp=Z,11µm,19.0s						
L20K	Farewell, AK	28.50	331	P	P	03 58 58.5	+0.2
	baz=128,SNR=25						
BPAW	Bear Paw Mtn.	28.57	336	P	P	03 58 59.3	+0.4
	baz=134,SNR=46						
INK	Inuvik	28.59	353	IAmb	IAmb	03 59 10.5	
	comp=Z,99nm,1.4s						
INK	Inuvik	28.59	353	LR	LR	04 11 37.9	
	comp=Z,14µm,18.2s,baz=168,slow=39						
INK	Inuvik	28.59	353	P	P	03 58 59.2	+0.3
	baz=165,SNR=21						
M18K	Stony River	28.67	328	P	P	03 58 59.9	+0.1
	baz=124,SNR=20						
O16K	Kokwok River B	28.68	324	IAMs_20	IAMs_20	04 08 10.2	
	comp=Z,11µm,19.0s						
O16K	Kokwok River B	28.68	324	P	P	03 58 59.5	-0.3
	baz=118,SNR=5.6						
L19K	White Mountain	28.69	330	IAmb	IAmb	03 59 09.8	
	comp=Z,152nm,1.6s						
L19K				IAMs_20	IAMs_20	04 07 57.4	
	comp=Z,7µm,20.0s						
L19K	White Mountain	28.69	330	P	P	03 59 00.7	+0.7
	baz=126,SNR=21						
N17K	Nushagak Hills	28.73	326	IAmb	IAmb	03 59 10.2	
	comp=Z,69nm,1.2s						
N17K				IAMs_20	IAMs_20	04 08 21.5	
	comp=Z,11µm,18.0s						
N17K	Nushagak Hills	28.73	326	P	P	03 59 01.0	+0.7
	baz=120,SNR=7.4						
F28M	Old Crow	28.76	348	P	P	03 59 00.2	-0.3
	baz=155,SNR=37						
H25L	Birch Creek	28.79	342	P	P	03 59 01.6	+0.9
	baz=144,SNR=24						
WVT	Waverly	28.79	86	P	P	03 58 58.1	-3.0
WVT	Waverly	28.79	86	P	P	03 58 58.1	-3.0
WVT				pmax	pmax		
	comp=Z,18nm,0.9s						
WVT				MLR	MLR		
	comp=Z,5µm,21.0s						
I23K	Minto, Yukon-K	28.84	338	IAmb	IAmb	03 59 10.6	
	comp=Z,117nm,1.4s						
I23K	Minto, Yukon-K	28.84	338	P	P	03 59 01.2	0.0
	baz=138,SNR=12						
CHUM	Lake Minchumin	28.85	334	P	P	03 59 01.7	+0.3
	baz=132,SNR=10.0						
G26K	Porcupine Rive	28.90	344	P	P	03 59 02.5	+0.7
	baz=148,SNR=21						
BLO	Bloomington	28.91	80	IAmb	IAmb	03 59 12.0	
	comp=Z,56nm,1.1s						
BLO				IAMs_20	IAMs_20	04 12 07.3	
	comp=Z,6µm,18.0s						
H24K	Noodor Dome	28.96	340	IAmb	IAmb	03 59 11.6	
	comp=Z,110nm,1.6s						
H24K	Noodor Dome	28.96	340	P	P	03 59 03.1	+0.8
	baz=141,SNR=9.6						
PLAL	Pickwick Lake	29.00	89	IAmb	IAmb	03 59 13.8	
	comp=Z,63nm,1.1s						
T47A	Sharon Grove	29.07	84	IAMs_20	IAMs_20	04 09 49.8	
	comp=Z,6µm,19.0s						
K20K	Telida	29.11	333	P	P	03 59 04.6	+0.9
	baz=129,SNR=25						
MLY	Manley	29.15	337	IAmb	IAmb	03 59 13.3	
	comp=Z,148nm,1.6s						
MLY	Manley	29.15	337	P	P	03 59 04.6	+0.5
	baz=136,SNR=32						
146A	Union	29.17	94	IAMs_20	IAMs_20	04 11 11.7	
	comp=Z,10µm,18.0s						
E29M	Blow River	29.18	350	IAmb	IAmb	03 59 12.7	
	comp=Z,84nm,1.5s						
E29M				IAMs_20	IAMs_20	04 12 00.4	
	comp=Z,8µm,18.0s						
E29M	Blow River	29.18	350	P	P	03 59 04.8	+0.6
	baz=158,SNR=31						
C36M	Paulatuk	29.18	0	IAMs_20	IAMs_20	04 12 21.9	
	comp=Z,10µm,21.0s						
C36M	Paulatuk	29.18	0	P	P	03 59 04.7	+0.5
	baz=180,SNR=14						
BLKN	Baker Lake	29.20	25	P	P	03 59 03.5	-0.9
S12K	Black Hills	29.23	315	P	P	03 59 05.1	+0.3
	baz=106						
G25K	Bearman Lake	29.26	342	P	P	03 59 05.5	+0.6
	baz=144,SNR=9.6						
M17K	Holitna River	29.28	327	IAmb	IAmb	03 59 14.9	
	comp=Z,111nm,1.1s						
M17K	Holitna River	29.28	327	P	P	03 59 05.2	0.0
	baz=121,SNR=19						
O15K	Ungalikthiuk R	29.30	322	IAMs_20	IAMs_20	04 08 38.4	
	comp=Z,9µm,19.0s						
O15K	Ungalikthiuk R	29.30	322	P	P	03 59 04.8	-0.5
	baz=115						
WCI	Wyandotte Cave	29.32	82	IAMs_20	IAMs_20	04 11 50.5	
	comp=Z,11µm,20.0s						
GLMI	Grayling	29.36	68	IAmb	IAmb	03 59 12.2	
	comp=Z,76nm,0.8s						
GLMI				IAMs_20	IAMs_20	04 10 57.9	
	comp=Z,12µm,22.0s						
J47A	Sunmer	29.39	71	IAMs_20	IAMs_20	04 11 14.9	
	comp=Z,10µm,21.0s						
N16K	Nishlik Lake	29.39	325	P	P	03 59 06.9	+0.6
	baz=118,SNR=8.0						
H23K	Yukon River	29.39	339	P	P	03 59 07.1	+0.9
	baz=138,SNR=18						
346A	Big Creek Wild	29.40	96	IAmb	IAmb	03 59 19.2	
	comp=Z,88nm,1.0s						
346A				IAMs_20	IAMs_20	04 12 35.1	
	comp=Z,8µm,18.0s						
L18K	Granite Mounta	29.42	329	IAMs_20	IAMs_20	04 08 30.7	
	comp=Z,6µm,20.0s						
L18K	Granite Mounta	29.42	329	P	P	03 59 07.2	+0.7
	baz=123,SNR=25						
E46A	Sault Ste Mari	29.47	65	IAmb	IAmb	03 59 17.2	
	comp=Z,72nm,1.1s						
BMAR	Burnt Mountain	29.48	344	P	P	03 59 08.7	+1.8
G24K	Hadweenzic Riv	29.53	341	IAmb	IAmb	03 59 16.8	
	comp=Z,128nm,1.3s						
G24K	Hadweenzic Riv	29.53	341	P	P	03 59 08.3	+0.9
	baz=142,SNR=19						
E27K	Coleen River	29.56	347	IAMs_20	IAMs_20	04 11 39.7	
	comp=Z,10µm,21.0s						
E27K	Coleen River	29.56	347	P	P	03 59 08.3	+0.6
	baz=153,SNR=28						
E28M	Babbage River	29.61	349	IAmb	IAmb	03 59 16.6	
	comp=Z,67nm,1.3s						
E28M				IAMs_20	IAMs_20	04 10 27.9	
	comp=Z,9µm,18.0s						
E28M	Babbage River	29.61	349	P	P	03 59 08.5	+0.4
	baz=156,SNR=12						
F26K	Sheenjek River	29.61	345	IAMs_20	IAMs_20	04 11 56.9	
	comp=Z,6µm,18.0s						
F26K	Sheenjek River	29.61	345	P	P	03 59 09.1	+0.9
	baz=148,SNR=65						
J20K	Nowinta River	29.66	334	P	P	03 59 08.6	+0.1
	baz=130,SNR=53						
P48A	Milroy	29.66	79	IAMs_20	IAMs_20	04 12 38.3	
	comp=Z,5µm,18.0s						
O48B	Farmland	29.68	77	IAMs_20	IAMs_20	04 12 30.7	
	comp=Z,8µm,19.0s						
Z47A	Carrollton	29.69	92	IAmb	IAmb	03 59 16.7	
	comp=Z,45nm,0.9s						
Z47A				IAMs_20	IAMs_20	04 12 00.5	
	comp=Z,7µm,20.0s						
V48A	Smith Brothers	29.69	87	IAMs_20	IAMs_20	04 11 31.4	
	comp=Z,5µm,19.0s						
M16K	Timber Creek	29.73	326	P	P	03 59 09.8	+0.5
	baz=119,SNR=12						
FALS	False Pass	29.77	313	P	P	03 59 11.2	+1.7
FALS	False Pass	29.77	313	P	P	03 59 09.1	-0.5
	baz=103						
F25K	Christian Rive	29.84	344	IAmb	IAmb	03 59 20.0	
	comp=Z,107nm,1.4s						
F25K	Christian Rive	29.84	344	P	P	03 59 10.2	0.0
	baz=146,SNR=61						
N15K	Kwethluk River	29.84	324	IAmb	IAmb	03 59 20.2	
	comp=Z,135nm,1.6s						
N15K	Kwethluk River	29.84	324	P	P	03 59 10.6	+0.4
	baz=116,SNR=6.8						
H22K	Ishtalitna Cre	29.96	338	P	P	03 59 11.9	+0.7
	baz=136,SNR=47						
X48A	Hartselle	29.98	89	IAMs_20	IAMs_20	04 12 27.2	
	comp=Z,8µm,20.0s						
O14K	Tigyukauivet M	30.00	322	IAMs_20	IAMs_20	04 09 10.2	
	comp=Z,8µm,20.0s						
O14K	Tigyukauivet M	30.00	322	P	P	03 59 12.3	+0.6
	baz=113						
L17K	Donlin	30.01	328	P	P	03 59 12.5	+0.8
	baz=121,SNR=16						
J19K	Poorman	30.05	333	IAMs_20	IAMs_20	04 08 53.4	
	comp=Z,6µm,21.0s						
J19K	Poorman	30.05	333	P	P	03 59 12.3	+0.3
	baz=127,SNR=25						
J18K	Innoko River	30.13	331	IAmb	IAmb	03 59 22.1	
	comp=Z,87nm,1.4s						
J18K				IAMs_20	IAMs_20	04 09 29.5	
	comp=Z,7µm,18.0s						
J18K	Innoko River	30.13	331	P	P	03 59 13.0	+0.3
	baz=125,SNR=16						
R49A	Shelbyville	30.16	81	IAMs_20	IAMs_20	04 11 42.5	
	comp=Z,8µm,20.0s						
D28M	Stokes Point	30.16	350	P	P	03 59 13.5	+0.6
	baz=158						
I20K	Naaghedeneel	30.16	335	P	P	03 59 12.8	-0.2
	baz=130,SNR=8.3						
G23K	Bananza Creek	30.19	340	IAmb	IAmb	03 59 22.7	
	comp=Z,68nm,1.2s						
G23K	Bananza Creek	30.19	340	P	P	03 59 13.9	+0.6
	baz=139,SNR=49						
H21K	Melozitna Rive	30.21	337	IAmb	IAmb	03 59 22.7	
	comp=Z,105nm,1.4s						
H21K	Melozitna Rive	30.21	337	P	P	03 59 14.7	+1.2
	baz=134,SNR=42						
N49A	Columbus Grove	30.26	75	IAmb	IAmb	03 59 23.5	
	comp=Z,49nm,1.1s						
E25K	Arctic Village	30.26	344	IAMs_20	IAMs_20	04 13 11.1	
	comp=Z,6µm,19.0s						
E25K	Arctic Village	30.26	344	P	P	03 59 15.3	+1.4
	baz=147,SNR=14						
F24K	Squaw Lake	30.28	342	P	P	03 59 15.3	+1.2
	baz=143,SNR=8.3						
L16K	Owhat River	30.28	327	P	P	03 59 15.1	+1.0
	baz=119,SNR=40						
O49A	Covington	30.30	77	IAMs_20	IAMs_20	04 12 22.3	
	comp=Z,9µm,19.0s						
K17K	Iditarod	30.32	329	IAMs_20	IAMs_20	04 08 57.5	
	comp=Z,7µm,20.0s						
K17K	Iditarod	30.32	329	P	P	03 59 15.0	+0.6
	baz=122,SNR=28						
M15K	Kasigluk River	30.34	325	P	P	03 59 15.4	+0.9
	baz=116,SNR=6.5						
D27M	Malcolm River	30.41	348	IAMs_20	IAMs_20	04 11 31.1	
	comp=Z,10µm,20.0s						
D27M	Malcolm River	30.41	348	P	P	03 59 16.0	+0.8
	baz=154						
N14K	Kuskokwak Cree	30.47	323	IAMs_20	IAMs_20	04 09 25.4	
	comp=Z,10µm,18.0s						
N14K	Kuskokwak Cree	30.47	323	P	P	03 59 15.8	+0.2
	baz=114,SNR=6.0						
SWET	Sewanee	30.55	87	IAmb	IAmb	04 00 20.9	
	comp=Z,60nm,1.3s						
SWET				IAMs_20	IAMs_20	04 11 00.2	
	comp=Z,6µm,20.0s						
LRAL	Lakeview Retre	30.57	92	IAmb	IAmb	03 59 27.9	
	comp=Z,46nm,1.1s						
LRAL				IAMs_20	IAMs_20	04 13 03.9	
	comp=Z,9µm,19.0s						
COLD	Coldfoot	30.62	340	P	P	03 59 17.7	+0.7
	baz=139,SNR=9.5						
Y49A	Blount Mountai	30.69	90	IAMs_20	IAMs_20	04 12 18.1	
	comp=Z,9µm,18.0s						
IMAR	Indian Mountai	30.72	337	P	P	03 59 18.5	+0.6
I49A	Point Hope	30.73	69	IAmb	IAmb	03 59 23.6	
	comp=Z,34nm,0.8s						
G22K	Bettles	30.74	339	P	P	03 59 18.8	+0.8
	baz=137						
H20K	Anotleneega Mo	30.75	335	P	P	03 59 19.4	+1.2
	baz=130,SNR=27						
T50A	Nancy	30.78	83	IAmb	IAmb	04 00 23.1	
	comp=Z,54nm,1.3s						
T50A				IAMs_20	IAMs_20	04 10 56.2	
	comp=Z,8µm,18.0s						
R50A	Paris	30.80	81	IAMs_20	IAMs_20	04 12 01.5	
	comp=Z,6µm,22.0s						
E24K	Your Creek	30.86	343	IAmb	IAmb	03 59 29.0	
	comp=Z,79nm,1.2s						
E24K	Your Creek	30.86	343	P	P	03 59 20.1	+0.8
	baz=142						
M14K	Bethel	30.93	324	IAMs_20	IAMs_20	04 09 40.5	
	comp=Z,10µm,18.0s						
M14K	Bethel	30.93	324	P	P	03 59 20.6	+0.9
	baz=114,SNR=6.7						
GCSA	Galena City Sc	30.94	333	P	P	03 59 21.2	+1.4
	baz=127						
AKUT	Akutan	30.97	311	P	P	03 59 21.5	+1.3
AKUT	Akutan	30.97	311	P	P	03 59 21.8	+1.6
J17K	VABM Dome	30.98	330	IAmb	IAmb	03 59 29.1	
	comp=Z,59nm,1.4s						
J17K				IAMs_20	IAMs_20	04 09 46.9	
	comp=Z,6µm,18.0s						
J17K	VABM Dome	30.98	330	P	P	03 59 20.8	+0.6
	baz=122,SNR=7.7						
M50A	Fremont	31.00	74	IAMs_20	IAMs_20	04 12 16.7	
	comp=Z,9µm,19.0s						
G21K	Allakaket	31.01	338	P	P	03 59 21.8	+1.3
	baz=134,SNR=24						
W50A	Signal Mountai	31.03	87	IAmb	IAmb	03 59 30.9	
	comp=Z,46nm,1.2s						
W50A				IAMs_20	IAMs_20	04 11 25.9	

	comp=Z,5µm,20.0s						
K50A	**Casco**	**31.05**	**71**	IAMs_20	IAMs_20	04 12 17.0	
	comp=Z,10µm,21.0s						
E23K	**Chandalar**	**31.12**	**342**	IAmb	IAmb	03 59 31.4	
	comp=Z,88nm,1.2s						
E23K	**Chandalar**	**31.12**	**342**	P	**P**	**03 59 22.5**	**+1.0**
	baz=141,SNR=24						
L15K	**Ungalak Mounta**	**31.12**	**326**	P	**P**	**03 59 22.3**	**+0.9**
	baz=116,SNR=8.3						
C27K	**Jago River**	**31.20**	**347**	IAMs_20	IAMs_20	04 12 41.9	
	comp=Z,9µm,20.0s						
C27K	**Jago River**	**31.20**	**347**	P	**P**	**03 59 23.4**	**+1.3**
	baz=151,SNR=18						
H19K	**Roundabout Mou**	**31.27**	**335**	P	**P**	**03 59 23.8**	**+1.0**
	baz=128,SNR=25						
ACSO	**Alum Creek Sta**	**31.30**	**76**	IAmb	IAmb	03 59 33.0	
	comp=Z,73nm,1.1s						
Q51A	**Peebles**	**31.33**	**79**	IAmb	IAmb	04 00 28.2	
	comp=Z,37nm,1.0s						
BRAL	**Brewton**	**31.34**	**95**	IAMs_20	IAMs_20	04 11 41.4	
	comp=Z,6µm,20.0s						
F22K	**John River**	**31.35**	**340**	P	**P**	**03 59 25.3**	**+1.9**
	baz=137						
UNV	**Unalaska Valle**	**31.35**	**310**	P	**P**	**03 59 25.3**	**+1.7**
UNV	**Unalaska Valle**	**31.35**	**310**	P	**P**	**03 59 24.8**	**+1.2**
	baz=98,SNR=32						
K15K	**Wolf Creek Mou**	**31.41**	**327**	IAmb	IAmb	03 59 33.6	
	comp=Z,79nm,1.2s						
K15K				IAMs_20	IAMs_20	04 10 06.4	
	comp=Z,10µm,18.0s						
K15K	**Wolf Creek Mou**	**31.41**	**327**	P	**P**	**03 59 24.9**	**+0.9**
	baz=117,SNR=14						
M13K	**Dall Lake**	**31.42**	**323**	P	**P**	**03 59 25.3**	**+1.2**
	baz=112,SNR=5.1						
P51A	**Williamsport**	**31.43**	**78**	IAmb	IAmb	03 59 34.0	
	comp=Z,78nm,1.1s						
P51A				IAMs_20	IAMs_20	04 12 56.1	
	comp=Z,7µm,18.0s						
D25K	**Kavik River**	**31.43**	**345**	IAmb	IAmb	03 59 33.9	
	comp=Z,86nm,1.2s						
D25K				IAMs_20	IAMs_20	04 12 45.0	
	comp=Z,8µm,20.0s						
D25K	**Kavik River**	**31.43**	**345**	P	**P**	**03 59 25.9**	**+1.7**
	baz=147,SNR=26						
L14K	**Kuka Creek**	**31.49**	**325**	IAmb	IAmb	03 59 34.4	
	comp=Z,98nm,1.2s						
L14K				IAMs_20	IAMs_20	04 10 08.5	
	comp=Z,10µm,18.0s						
L14K	**Kuka Creek**	**31.49**	**325**	P	**P**	**03 59 25.2**	**+0.5**
	baz=114,SNR=26						
F21K	**Alatna River**	**31.50**	**339**	IAmb	IAmb	03 59 33.5	
	comp=Z,66nm,1.5s						
F21K	**Alatna River**	**31.50**	**339**	P	**P**	**03 59 25.7**	**+0.9**
	baz=134						
J16K	**Anvik River**	**31.51**	**329**	IAmb	IAmb	03 59 34.9	
	comp=Z,93nm,1.3s						
J16K				IAMs_20	IAMs_20	04 10 13.0	
	comp=Z,7µm,18.0s						
J16K	**Anvik River**	**31.51**	**329**	P	**P**	**03 59 25.6**	**+0.8**
	baz=120,SNR=17						
S51A	**Beattyville**	**31.54**	**81**	IAMs_20	IAMs_20	04 12 24.1	
	comp=Z,8µm,22.0s						
CPCT	**Cooper Cave**	**31.55**	**86**	IAMs_20	IAMs_20	04 11 43.5	
	comp=Z,5µm,21.0s						
TOLK	**Toolik Lake Re**	**31.56**	**343**	P	**P**	**03 59 26.3**	**+0.9**
	baz=141,SNR=15						
250A	**Grady**	**31.58**	**93**	IAMs_20	IAMs_20	04 13 11.7	
	comp=Z,8µm,19.0s						
N51A	**Ashland**	**31.60**	**75**	IAmb	IAmb	04 00 31.8	
	comp=Z,39nm,0.9s						
X51A	**Calhoun**	**31.61**	**88**	IAmb	IAmb	03 59 36.3	
	comp=Z,44nm,1.1s						
TLIG	**Tlapa**	**31.66**	**128**	IAmb	IAmb	03 59 50.6	
	comp=Z,55nm,1.4s						
TLIG				IAMs_20	IAMs_20	04 13 24.5	
	comp=Z,7µm,19.0s						
C26K	**Camden Bay**	**31.66**	**347**	P	**P**	**03 59 27.3**	**+1.2**
	baz=149						
H18K	**Honhosa River**	**31.69**	**333**	P	**P**	**03 59 26.3**	**-0.2**
	baz=125						
E22K	**Anaktuvuk Pass**	**31.71**	**341**	P	**P**	**03 59 26.3**	**-0.3**
	baz=138,SNR=30						
D24K	**Happy Valley**	**31.80**	**344**	IAmb	IAmb	03 59 37.0	
	comp=Z,114nm,1.4s						
D24K				IAMs_20	IAMs_20	04 11 40.7	
	comp=Z,5µm,19.0s						
D24K	**Happy Valley**	**31.80**	**344**	P	**P**	**03 59 27.3**	**0.0**
	baz=143,SNR=11						
A36M	**Sachs Harbour**	**31.84**	**359**	IAmb	IAmb	03 59 39.1	
	comp=Z,91nm,1.4s						
A36M				IAMs_20	IAMs_20	04 11 50.1	
	comp=Z,7µm,21.0s						
A36M	**Sachs Harbour**	**31.84**	**359**	P	**P**	**03 59 27.2**	**-0.4**
	baz=179,SNR=14						
I17K	**Unalakleet**	**31.85**	**330**	IAmb	IAmb	03 59 37.4	
	comp=Z,99nm,1.4s						
I17K				IAMs_20	IAMs_20	04 10 34.0	
	comp=Z,7µm,18.0s						
I17K	**Unalakleet**	**31.85**	**330**	P	**P**	**03 59 27.2**	**-0.7**
	baz=121,SNR=5.1						
G19K	**Purcell Mounta**	**31.86**	**335**	IAmb	IAmb	03 59 36.9	
	comp=Z,82nm,1.4s						
G19K	**Purcell Mounta**	**31.86**	**335**	P	**P**	**03 59 27.9**	**0.0**
	baz=128,SNR=5.1						
TZTN	**Tazewell**	**31.92**	**83**	IAmb	IAmb	04 00 37.6	
	comp=Z,53nm,1.3s						
TZTN				IAMs_20	IAMs_20	04 11 31.2	
	comp=Z,6µm,21.0s						
F20K	**Avaraart Lake**	**32.02**	**337**	IAmb	IAmb	03 59 38.8	
	comp=Z,106nm,1.9s						
F20K	**Avaraart Lake**	**32.02**	**337**	P	**P**	**03 59 29.7**	**+0.4**
	baz=131						
TKL	**Tuckaleechee C**	**32.05**	**85**	LR	LR	04 12 32.7	
	comp=Z,3µm,20.0s,baz=290,slow=37						
D23K	**Nanushuk River**	**32.07**	**342**	P	**P**	**03 59 30.7**	**+1.0**
	baz=140,SNR=24						
P52A	**Corning**	**32.08**	**77**	IAmb	IAmb	04 00 35.1	
	comp=Z,38nm,1.1s						
P52A				IAMs_20	IAMs_20	04 13 43.4	
	comp=Z,8µm,18.0s						
H17K	**Granite Mounta**	**32.12**	**332**	IAmb	IAmb	03 59 38.2	
	comp=Z,110nm,1.9s						
H17K				IAMs_20	IAMs_20	04 10 08.0	
	comp=Z,6µm,20.0s						
H17K	**Granite Mounta**	**32.12**	**332**	P	**P**	**03 59 30.8**	**+0.6**
	baz=123						
W52A	**Murphy**	**32.13**	**86**	IAMs_20	IAMs_20	04 12 00.9	
	comp=Z,5µm,22.0s						
Q52A	**Bidwell**	**32.16**	**78**	IAmb	IAmb	04 00 38.1	
	comp=Z,95nm,1.4s						
Q52A				IAMs_20	IAMs_20	04 13 44.5	
	comp=Z,5µm,21.0s						
O52A	**Adamsville**	**32.18**	**76**	IAmb	IAmb	03 59 40.2	
	comp=Z,40nm,1.1s						
M52A	**Chesterland**	**32.21**	**73**	IAMs_20	IAMs_20	04 13 03.7	
	comp=Z,8µm,20.0s						
G18K	**Tagagawik**	**32.23**	**334**	IAmb	IAmb	03 59 39.0	
	comp=Z,86nm,1.8s						
G18K	**Tagagawik**	**32.23**	**334**	P	**P**	**03 59 31.5**	**+0.4**
	baz=126,SNR=9.4						
C24K	**Franklin Bluff**	**32.23**	**344**	IAMs_20	IAMs_20	04 13 20.1	
	comp=Z,8µm,21.0s						
C24K	**Franklin Bluff**	**32.23**	**344**	P	**P**	**03 59 31.0**	**-0.1**
	baz=144						
J14K	**Nanvaranak Lak**	**32.46**	**327**	IAmb	IAmb	03 59 42.9	
	comp=Z,73nm,1.1s						
J14K	**Nanvaranak Lak**	**32.46**	**327**	P	**P**	**03 59 33.7**	**+0.5**
	baz=116,SNR=7.3						
152A	**Waverly Hall**	**32.47**	**91**	IAMs_20	IAMs_20	04 14 20.2	
	comp=Z,8µm,19.0s						
D22K	**Ayikyak River**	**32.48**	**341**	P	**P**	**03 59 34.1**	**+0.7**
	baz=137,SNR=9.4						
Y52A	**Lilburn**	**32.49**	**88**	IAmb	IAmb	03 59 52.6	
	comp=Z,57nm,1.4s						
E21K	**Killik River**	**32.49**	**340**	IAmb	IAmb	03 59 42.5	
	comp=Z,79nm,1.2s						
E21K				IAMs_20	IAMs_20	04 14 53.3	
	comp=Z,5µm,18.0s						
E21K	**Killik River**	**32.49**	**340**	P	**P**	**03 59 33.7**	**+0.2**
	baz=135						
F19K	**Shaleruckik Mo**	**32.51**	**336**	IAmb	IAmb	03 59 42.4	
	comp=Z,62nm,1.4s						
F19K	**Shaleruckik Mo**	**32.51**	**336**	P	**P**	**03 59 34.3**	**+0.7**
	baz=128						
451A	**Vernon**	**32.59**	**95**	IAMs_20	IAMs_20	04 14 36.5	
	comp=Z,7µm,18.0s						
K13K	**Kusilvak Mount**	**32.59**	**325**	P	**P**	**03 59 35.0**	**+0.7**
	baz=113						
O53A	**New Philadelph**	**32.61**	**76**	IAmb	IAmb	03 59 44.2	
	comp=Z,44nm,1.1s						
NIKH	**Nikolski High**	**32.65**	**308**	P	**P**	**03 59 36.4**	**+1.4**
NIKH	**Nikolski High**	**32.65**	**308**	P	**P**	**03 59 35.7**	**+0.7**
	baz=95,SNR=10						
P53A	**Whipple**	**32.67**	**77**	IAmb	IAmb	04 00 47.7	
	comp=Z,51nm,1.3s						
G17K	**Kiwalik Mounta**	**32.69**	**333**	P	**P**	**03 59 35.9**	**+0.8**
	baz=123,SNR=5.9						
C23K	**Itkillik River**	**32.73**	**343**	IAMs_20	IAMs_20	04 12 21.2	
	comp=Z,6µm,19.0s						
C23K	**Itkillik River**	**32.73**	**343**	P	**P**	**03 59 36.3**	**+0.9**
	baz=141,SNR=12						
E19K	**Redstone River**	**32.74**	**337**	P	**P**	**03 59 37.0**	**+1.4**
	baz=130,SNR=22						
M11K	**Mekoryuk**	**32.74**	**322**	P	**P**	**03 59 36.1**	**+0.4**
	baz=109						
N53A	**Lisbon**	**32.76**	**75**	IAmb	IAmb	04 00 44.9	
	comp=Z,52nm,1.4s						
N53A				IAMs_20	IAMs_20	04 13 22.2	
	comp=Z,8µm,18.0s						
V53A	**Saluda**	**32.77**	**85**	IAmb	IAmb	03 59 55.2	
	comp=Z,71nm,1.2s						
V53A				IAMs_20	IAMs_20	04 15 25.0	
	comp=Z,5µm,18.0s						
H16K	**Elim**	**32.81**	**331**	P	**P**	**03 59 36.8**	**+0.5**
	baz=120						
352A	**Blakely**	**32.83**	**93**	IAmb	IAmb	03 59 44.1	
	comp=Z,46nm,1.0s						
352A				IAMs_20	IAMs_20	04 12 50.6	
	comp=Z,8µm,21.0s						
BG3	**Lake Jocassee**	**32.93**	**86**	IAMs_20	IAMs_20	04 12 26.0	
	comp=Z,6µm,22.0s						
E20K	**Nigu River**	**32.96**	**339**	P	**P**	**03 59 38.9**	**+1.3**
	baz=132,SNR=21						
F18K	**Selawik**	**32.97**	**335**	P	**P**	**03 59 38.2**	**+0.7**
	baz=126						
BUKO	**Buck Lake**	**32.97**	**66**	IAmb	IAmb	03 59 47.1	
	comp=Z,53nm,1.1s						
ALLY	**Alegheny Colle**	**33.08**	**73**	IAMs_20	IAMs_20	04 14 23.6	
	comp=Z,7µm,19.0s						
ERPA	**Erie**	**33.09**	**72**	IAMs_20	IAMs_20	04 13 29.9	
	comp=Z,5µm,19.0s						
GOGA	**Godfrey**	**33.12**	**89**	IAMs_20	IAMs_20	04 15 19.4	
	comp=Z,6µm,21.0s						
C21K	**Knifeblade Rid**	**33.21**	**341**	P	**P**	**03 59 40.5**	**+0.8**
	baz=135,SNR=61						
S54A	**Dingess, Beckl**	**33.21**	**80**	IAmb	IAmb	03 59 50.8	
	comp=Z,51nm,1.1s						
S54A				IAMs_20	IAMs_20	04 15 33.4	
	comp=Z,9µm,20.0s						
Q54A	**Coxs Mills**	**33.23**	**78**	IAmb	IAmb	03 59 50.6	
	comp=Z,60nm,1.2s						
G16K	**Koyuk River**	**33.23**	**332**	IAMs_20	IAMs_20	04 10 43.1	
	comp=Z,5µm,21.0s						
G16K	**Koyuk River**	**33.23**	**332**	P	**P**	**03 59 40.4**	**+0.5**
	baz=121						
SADO	**Sadowa**	**33.24**	**67**	IAmb	IAmb	03 59 58.1	
	comp=Z,59nm,1.2s						
SADO	**Sadowa**	**33.24**	**67**	LR	LR	04 13 58.5	
	comp=Z,9µm,18.4s,baz=294,slow=38						
O54A	**Avella**	**33.25**	**76**	IAmb	IAmb	03 59 47.2	
	comp=Z,109nm,2.0s						
D20K	**Etivluk River**	**33.38**	**339**	IAmb	IAmb	03 59 49.5	
	comp=Z,126nm,1.8s						
D20K				IAMs_20	IAMs_20	04 14 13.5	
	comp=Z,6µm,20.0s						
D20K	**Etivluk River**	**33.38**	**339**	P	**P**	**03 59 41.7**	**+0.5**
	baz=132,SNR=8.1						
F17K	**Baldwin Pennin**	**33.41**	**334**	P	**P**	**03 59 41.9**	**+0.5**
	baz=123						
HLK	**Haleakala**	**33.46**	**244**	IAMs_20	IAMs_20	04 08 51.4	
	comp=Z,6µm,22.0s						
KHLH	**Kahului Airpor**	**33.49**	**244**	IAMs_20	IAMs_20	04 09 51.2	
	comp=Z,6µm,19.0s						
B21K	**Ikpikpuk River**	**33.49**	**341**	IAmb	IAmb	03 59 51.4	
	comp=Z,85nm,1.2s						
B21K	**Ikpikpuk River**	**33.49**	**341**	P	**P**	**03 59 43.0**	**+0.8**
	baz=136,SNR=9.3						
P08K	**Saint George I**	**33.51**	**315**	P	**P**	**03 59 42.7**	**+0.3**
	baz=100						
JOKA	**Jonika Flow**	**33.52**	**241**	IAMs_20	IAMs_20	04 09 48.3	
	comp=Z,7µm,18.0s						
POHA	**Pohakuloa**	**33.65**	**242**	IAMs_20	IAMs_20	04 09 58.7	
	comp=Z,5µm,19.0s						
D19K	**Kuna River**	**33.66**	**338**	IAmb	IAmb	03 59 52.6	
	comp=Z,87nm,1.1s						
D19K	**Kuna River**	**33.66**	**338**	P	**P**	**03 59 44.0**	**+0.3**
	baz=130,SNR=19						
G15K	**Niukluk**	**33.66**	**331**	P	**P**	**03 59 44.1**	**+0.5**
	baz=118						
HATHI	**Halema‘uma‘u T**	**33.70**	**241**	IAMs_20	IAMs_20	04 12 09.0	
	comp=Z,7µm,18.0s						
PUH	**Pauahi**	**33.71**	**241**	IAMs_20	IAMs_20	04 10 30.2	
	comp=Z,7µm,18.0s						
UWE	**Uwekahuna**	**33.73**	**241**	IAMs_20	IAMs_20	04 10 08.6	
	comp=Z,6µm,18.0s						
HODGE	**Hodges**	**33.73**	**87**	IAMs_20	IAMs_20	04 13 10.3	
	comp=Z,5µm,20.0s						
154A	**Montrose**	**33.73**	**90**	IAMs_20	IAMs_20	04 14 22.4	
	comp=Z,9µm,18.0s						
MLH	**Mauna Loa**	**33.74**	**241**	IAMs_20	IAMs_20	04 10 10.0	
	comp=Z,8µm,19.0s						
B22K	**Teshekpuk Lake**	**33.74**	**343**	IAMs_20	IAMs_20	04 12 52.9	
	comp=Z,5µm,19.0s						
B22K	**Teshekpuk Lake**	**33.74**	**343**	P	**P**	**03 59 44.3**	**0.0**
	baz=138,SNR=9.5						
E18K	**Tukpahlearik C**	**33.75**	**336**	IAmb	IAmb	03 59 53.5	
	comp=Z,57nm,1.5s						
E18K	**Tukpahlearik C**	**33.75**	**336**	P	**P**	**03 59 44.8**	**+0.4**
	baz=125						
MCWV	**Mont Chateau**	**33.78**	**76**	IAmb	IAmb	03 59 54.8	
	comp=Z,57nm,1.1s						
553A	**Crawfordville**	**33.80**	**95**	IAMs_20	IAMs_20	04 14 54.3	
	comp=Z,8µm,18.0s						
HLP	**Hilina Pali**	**33.82**	**241**	IAMs_20	IAMs_20	04 09 43.2	
	comp=Z,7µm,19.0s						
PAULI	**Pauline**	**33.84**	**85**	IAmb	IAmb	03 59 47.3	
	comp=Z,71nm,1.3s						
PAULI				IAMs_20	IAMs_20	04 13 05.3	
	comp=Z,5µm,20.0s						
TIGA	**Tifton**	**33.87**	**92**	IAMs_20	IAMs_20	04 13 24.1	
	comp=Z,10µm,22.0s						
AIN	**Ainahou**	**33.87**	**241**	IAMs_20	IAMs_20	04 09 37.5	
	comp=Z,6µm,18.0s						
MWH	**Mokuaweoweo**	**33.88**	**242**	IAMs_20	IAMs_20	04 09 45.9	
	comp=Z,6µm,20.0s						
HUH	**Hualalai**	**33.91**	**242**	IAMs_20	IAMs_20	04 09 01.5	
	comp=Z,7µm,21.0s						
V55A	**Taylorsville**	**33.93**	**83**	IAmb	IAmb	03 59 52.8	
	comp=Z,44nm,1.0s						
E17K	**Hotham Inlet**	**33.95**	**335**	P	**P**	**03 59 46.5**	**+0.4**
	baz=123						
R55A	**Marlinton**	**33.97**	**79**	IAmb	IAmb	03 59 47.9	
	comp=Z,62nm,1.0s						
R55A				IAMs_20	IAMs_20	04 12 50.3	
	comp=Z,5µm,20.0s						
ANM	**Nome**	**33.98**	**329**	P	**P**	**03 59 45.9**	**-0.5**
	baz=116						
SPIA	**Saint Paul Isl**	**33.99**	**316**	P	**P**	**03 59 48.7**	**+2.1**
SPIA	**Saint Paul Isl**	**33.99**	**316**	P	**P**	**03 59 46.3**	**-0.2**
	baz=100						
VLDQ	**Val d'Or**	**34.03**	**61**	IAmb	IAmb	03 59 52.5	
	comp=Z,45nm,1.0s						
WVNY	**West Valley, N**	**34.04**	**71**	IAmb	IAmb	03 59 52.2	
	comp=Z,31nm,0.8s						
KHU	**Kahuku**	**34.06**	**241**	P	**P**	**03 59 48.8**	**+0.9**
KHU				IAMs_20	IAMs_20	04 09 10.6	
	comp=Z,7µm,21.0s						
KHU	**Kahuku**	**34.06**	**241**	P	**P**	**03 59 48.8**	**+0.9**
KHU				pmax	pmax		
	comp=Z,228nm,1.2s						
BLA	**Blacksburg**	**34.07**	**81**	IAmb	IAmb	03 59 54.2	
	comp=Z,30nm,0.8s						
KMSC	**Kings Mountain**	**34.09**	**85**	IAmb	IAmb	04 00 06.0	
	comp=Z,95nm,1.4s						
KMSC				IAMs_20	IAMs_20	04 15 41.8	
	comp=Z,6µm,20.0s						
F15K	**North Star Dit**	**34.22**	**332**	IAMs_20	IAMs_20	04 11 41.6	
	comp=Z,5µm,19.0s						
F15K	**North Star Dit**	**34.22**	**332**	P	**P**	**03 59 48.9**	**+0.3**
	baz=118						
KIP	**Kipapa**	**34.25**	**247**	IAMs_20	IAMs_20	04 08 59.3	
	comp=Z,8µm,22.0s						
HON	**Honolulu**	**34.30**	**247**	IAMs_20	IAMs_20	04 09 00.8	
	comp=Z,9µm,20.0s						
CMIG	**Matias Romero**	**34.30**	**124**	LR	LR	04 15 23.9	
	comp=Z,6µm,18.3s,baz=285,slow=39						
DELO	**Deloro Mine**	**34.35**	**67**	IAMs_20	IAMs_20	04 14 01.0	
	comp=Z,7µm,20.0s						
B20K	**Meade River**	**34.40**	**341**	P	**P**	**03 59 49.8**	**-0.3**
	baz=133						
Q56A	**Snyder Ridge,**	**34.44**	**77**	IAmb	IAmb	04 00 00.8	
	comp=Z,36nm,0.9s						
C19K	**Lookout Ridge**	**34.46**	**338**	IAMs_20	IAMs_20	04 15 09.0	
	comp=Z,5µm,19.0s						
C19K	**Lookout Ridge**	**34.46**	**338**	P	**P**	**03 59 51.4**	**+0.7**
	baz=129,SNR=11						
MMNY	**Mt. Morris Dam**	**34.48**	**70**	IAmb	IAmb	04 00 00.8	
	comp=Z,60nm,1.0s						
A22K	**Sinclair Lake**	**34.58**	**343**	P	**P**	**03 59 52.1**	**+0.6**
	baz=137						
C18K	**Utukok River**	**34.65**	**337**	IAmb	IAmb	04 00 00.9	
	comp=Z,73nm,1.1s						
C18K				IAMs_20	IAMs_20	04 16 06.9	
	comp=Z,4µm,18.0s						
C18K	**Utukok River**	**34.65**	**337**	P	**P**	**03 59 52.6**	**+0.4**
	baz=126,SNR=14						
D17K	**Noatak River**	**34.69**	**335**	P	**P**	**03 59 52.8**	**+0.2**
	baz=123						
F14K	**Arctic Creek**	**34.74**	**331**	P	**P**	**03 59 52.6**	**-0.4**
	baz=116						
RDOG	**Red Dog Mine**	**34.83**	**336**	P	**P**	**03 59 53.3**	**-0.5**
	baz=123						
L56A	**Greenwood**	**34.85**	**71**	IAmb	IAmb	04 00 07.5	
	comp=Z,97nm,1.2s						
PECO	**Prince Edward**	**34.89**	**68**	IAMs_20	IAMs_20	04 13 42.4	
	comp=Z,10µm,22.0s						
BIRD	**Birdtown, Kers**	**34.94**	**85**	IAMs_20	IAMs_20	04 16 42.3	
	comp=Z,4µm,18.0s						
SSPA	**Standing Stone**	**34.97**	**74**	P	**P**	**03 59 54.5**	**-0.8**
S57A	**Dark Hollow, R**	**35.00**	**79**	IAmb	IAmb	03 59 57.3	
	comp=Z,63nm,1.2s						
S57A				IAMs_20	IAMs_20	04 14 40.7	
	comp=Z,6µm,18.0s						
T57A	**Hurt**	**35.02**	**81**	IAMs_20	IAMs_20	04 14 05.3	
	comp=Z,4µm,18.0s						
KEKH	**Kekaha**	**35.09**	**249**	IAMs_20	IAMs_20	04 09 41.6	
	comp=Z,6µm,22.0s						
C17K	**DeLong Mountai**	**35.15**	**336**	P	**P**	**03 59 56.2**	**-0.3**
	baz=123						
A21K	**Barrow**	**35.18**	**343**	P	**P**	**03 59 56.9**	**+0.2**
	baz=135						
B18K	**Kokolik River**	**35.24**	**338**	P	**P**	**03 59 57.4**	**+0.1**
	baz=126,SNR=6.6						
TNA	**Tin City**	**35.38**	**330**	IAMs_20	IAMs_20	04 12 54.2	
	comp=Z,6µm,18.0s						
TNA	**Tin City**	**35.38**	**330**	P	**P**	**03 59 58.1**	**-0.4**
	baz=114						
456A	**Hilliard**	**35.39**	**92**	IAMs_20	IAMs_20	04 16 37.4	
	comp=Z,6µm,20.0s						
K57A	**Scipio Center**	**35.48**	**70**	IAmb	IAmb	04 00 09.5	
	comp=Z,57nm,1.0s						
V58A	**Windy Hill, Pi**	**35.54**	**82**	IAmb	IAmb	04 00 00.9	
	comp=Z,44nm,1.0s						
V58A				IAMs_20	IAMs_20	04 15 10.2	
	comp=Z,8µm,18.0s						
A19K	**Wainwright**	**35.55**	**339**	P	**P**	**04 00 00.2**	**+0.3**
	baz=128						
257A	**Skidaway Islan**	**35.59**	**90**	IAMs_20	IAMs_20	04 16 54.8	
	comp=Z,5µm,21.0s						
656A	**Willston**	**35.63**	**94**	IAmb	IAmb	04 00 02.7	
	comp=Z,84nm,1.1s						
C16K	**Lisburne Hills**	**35.72**	**335**	IAmb	IAmb	04 00 10.7	
	comp=Z,96nm,1.2s						
C16K	**Lisburne Hills**	**35.72**	**335**	P	**P**	**04 00 00.7**	**-0.7**
	baz=121,SNR=5.1						
R58B	**Mineral**	**35.74**	**78**	IAMs_20	IAMs_20	04 15 03.4	
	comp=Z,7µm,18.0s						
NHSC	**New Hope**	**35.77**	**87**	IAMs_20	IAMs_20	04 16 08.3	
	comp=Z,6µm,19.0s						
N58A	**Sunbury**	**35.78**	**73**	IAMs_20	IAMs_20	04 15 06.1	
	comp=Z,8µm,19.0s						
X58A	**Rowland**	**35.83**	**84**	IAmb	IAmb	04 00 21.0	
	comp=Z,83nm,1.6s						
X58A				IAMs_20	IAMs_20	04 16 55.9	
	comp=Z,6µm,18.0s						
ATKA	**Atka Island**	**35.88**	**307**	P	**P**	**04 00 04.3**	**+1.3**
CSU	**Charleston Sou**	**35.90**	**87**	IAMs_20	IAMs_20	04 16 12.7	
	comp=Z,6µm,19.0s						
WBO	**Williamsburg**	**35.91**	**66**	IAmb	IAmb	04 00 11.9	
	comp=Z,79nm,1.3s						
WBO				IAMs_20	IAMs_20	04 14 46.3	
	comp=Z,7µm,20.0s						
BINY	**Binghamton**	**35.98**	**71**	IAmb	IAmb	04 00 04.5	
	comp=Z,65nm,1.1s						
CBN	**Corbin Frederi**	**36.05**	**78**	IAmb	IAmb	04 00 05.6	
	comp=Z,60nm,1.1s						
CBN				IAMs_20	IAMs_20	04 14 15.4	
	comp=Z,7µm,22.0s						
SDMD	**Soldier’s Deli**	**36.08**	**76**	IAMs_20	IAMs_20	04 15 25.2	
	comp=Z,5µm,18.0s						
GAMB	**Gambell**	**36.26**	**326**	P	**P**	**04 00 05.7**	**-0.3**
	baz=108						
MVL	**Millersville**	**36.27**	**74**	IAMs_20	IAMs_20	04 15 23.3	
	comp=Z,9µm,21.0s						
W59A	**Clinton**	**36.28**	**83**	IAMs_20	IAMs_20	04 15 33.8	
	comp=Z,7µm,21.0s						
T59A	**Double "B" Far**	**36.31**	**80**	IAmb	IAmb	04 00 07.7	
	comp=Z,53nm,1.0s						
T59A				IAMs_20	IAMs_20	04 15 30.5	
	comp=Z,4µm,20.0s						
TEIG	**Tepich**	**36.59**	**112**	P	**P**	**04 00 09.8**	**+0.5**
TEIG				IAMs_20	IAMs_20	04 16 37.7	
	comp=Z,5µm,21.0s						
L59A	**Walton**	**36.66**	**70**	IAmb	IAmb	04 00 19.9	
	comp=Z,81nm,1.0s						
CCIG	**Comitan**	**36.67**	**121**	IAMs_20	IAMs_20	04 17 27.2	
	comp=Z,5µm,19.0s						
ILON	**Igloolik, Nuna**	**36.70**	**24**	IAmb	IAmb	04 00 17.9	
	comp=Z,82nm,1.1s						
J59A	**Piesco**	**36.76**	**68**	IAmb	IAmb	04 00 27.3	
	comp=Z,78nm,1.5s						
J59A				IAMs_20	IAMs_20	04 14 37.7	
	comp=Z,8µm,20.0s						
MNTQ	**Montreal, Queb**	**36.97**	**65**	IAmb	IAmb	04 00 13.6	
	comp=Z,126nm,1.7s						
DWPF	**Disney Wildern**	**37.10**	**96**	P	**P**	**04 00 14.2**	**+0.6**
DWPF				IAmb	IAmb	04 00 16.0	
	comp=Z,126nm,1.2s						
DWPF	**Disney Wildern**	**37.10**	**96**	IAMs_20	IAMs_20	04 15 12.2	
	comp=Z,5µm,20.0s						
RES	**Resolute Bay**	**37.11**	**12**	LR	LR	04 16 19.4	
	comp=Z,15µm,19.4s,baz=222,slow=38						
FRNY	**Flat Rock**	**37.12**	**66**	IAmb	IAmb	04 00 21.0	
	comp=Z,178nm,1.9s						
ACCN	**Adirondack Com**	**37.37**	**68**	IAMs_20	IAMs_20	04 14 55.9	
	comp=Z,7µm,20.0s						
V61A	**Roper**	**37.47**	**81**	IAMs_20	IAMs_20	04 15 04.1	
	comp=Z,5µm,19.0s						
S61A	**Accomac**	**37.49**	**78**	IAMs_20	IAMs_20	04 16 13.5	
	comp=Z,5µm,18.0s						
TRY	**Troy**	**37.52**	**69**	IAmb	IAmb	04 00 27.3	
	comp=Z,86nm,1.0s						
R61A	**Willards**	**37.53**	**77**	IAMs_20	IAMs_20	04 16 20.5	
	comp=Z,6µm,20.0s						
PETF	**Flores**	**37.73**	**118**	IAMs_20	IAMs_20	04 16 54.1	
	comp=Z,6µm,19.0s						
HUEH	**Huehuetenango**	**37.79**	**122**	IAMs_20	IAMs_20	04 17 06.8	
	comp=Z,6µm,19.0s						
VT1	**Waterbury**	**37.81**	**66**	IAMs_20	IAMs_20	04 16 19.6	
	comp=Z,7µm,20.0s						
J61A	**Chester**	**38.17**	**68**	IAMs_20	IAMs_20	04 16 31.1	
	comp=Z,8µm,21.0s						
LDAQ	**Lac Daran**	**38.19**	**60**	IAmb	IAmb	04 00 30.0	
	comp=Z,113nm,1.7s						
RTAL	**Retalhuleu**	**38.25**	**123**	IAMs_20	IAMs_20	04 14 40.0	
	comp=Z,6µm,22.0s						
LBNH	**Lisbon**	**38.41**	**66**	IAmb	IAmb	04 00 25.9	
	comp=Z,221nm,1.9s						
LBNH				IAMs_20	IAMs_20	04 16 39.3	
	comp=Z,7µm,22.0s						
060A	**Indiantown**	**38.46**	**96**	IAMs_20	IAMs_20	04 16 21.0	
	comp=Z,5µm,20.0s						
061Z	**Ochoppi**	**38.67**	**98**	IAMs_20	IAMs_20	04 18 51.5	
	comp=Z,5µm,19.0s						
UCCT	**U. Connecticut**	**38.79**	**70**	IAmb	IAmb	04 00 37.7	
	comp=Z,80nm,1.0s						
SOR	**Soroa**	**38.82**	**104**	IAmb	IAmb	04 00 31.3	
	comp=Z,133nm,1.2s						
LMQ	**La Malbaie**	**38.86**	**61**	IAmb	IAmb	04 00 36.5	
	comp=Z,120nm,1.1s						
H62A	**Milan**	**38.87**	**66**	IAMs_20	IAMs_20	04 16 53.6	
	comp=Z,6µm,21.0s						
I62A	**Tamworth**	**38.91**	**67**	IAmb	IAmb	04 00 35.1	
	comp=Z,264nm,1.9s						

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I62A                                 IAMs_20  IAMs_20  04 16 28.5
       comp=Z,7µm,21.0s
G62A   West of Eustis    39.17  64   IAmb     IAmb     04 00 31.8
       comp=Z,97nm,1.3s
WES    Weston            39.28  69   IAMs_20  IAMs_20  04 17 17.7
       comp=Z,8µm,21.0s
I63A   Otisfield         39.39  66   IAMs_20  IAMs_20  04 16 32.4
       comp=Z,6µm,20.0s
E62A   Clayton Lake      39.57  62   IAmb     IAmb     04 00 42.6
       comp=Z,83nm,1.0s
ESQI   Esquipulas        39.77 120   IAMs_20  IAMs_20  04 19 13.1
       comp=Z,5µm,18.0s
D62A   Allapoint, All    39.80  61   IAMs_20  IAMs_20  04 16 49.0
       comp=Z,8µm,21.0s
FRB    Frobisher Bay     39.82  35   LR       LR       04 17 47.2
       comp=Z,6µm,21.6s,baz=264,slow=38
MTO3   Montecristo       39.87 120   IAMs_20  IAMs_20  04 19 06.7
       comp=Z,6µm,18.0s
CAMR   Camarioca         39.89 102   IAMs_20  IAMs_20  04 20 05.9
       comp=Z,6µm,18.0s
M65A   Busby, Falmout    39.99  70   P        P        04 00 37.6 -0.2
       baz=286
SCHQ   Schefferville     40.25  49   P        P        04 00 38.8 -1.0
       comp=Z,70nm,1.0s,baz=278,slow=7.3,SNR=25
SCHQ                                 LR       LR       04 17 34.9
       comp=Z,9µm,18.1s,baz=278,slow=37
       comp=Z,70nm,1.0s
F64A   Sherman           40.52  63   P        P        04 00 41.5 -0.6
F64A                                 IAmb     IAmb     04 00 43.0
       comp=Z,84nm,1.3s
G65A   Princeton         41.22  64   IAmb     IAmb     04 00 49.0
       comp=Z,148nm,1.4s
EMMW   East Machias      41.41  64   IAmb     IAmb     04 00 50.4
       comp=Z,135nm,1.4s
TGUH   Tegucigalpa,Un    41.51 118   IAMs_20  IAMs_20  04 19 04.3
       comp=Z,7µm,20.0s
GGN    Saint George      41.73  64   IAmb     IAmb     04 00 53.0
       comp=Z,120nm,1.3s
BATG   Bathurst New B    41.76  60   IAmb     IAmb     04 00 52.9
       comp=Z,111nm,1.1s
CRIN   San Cristobal     42.64 119   IAMs_20  IAMs_20  04 21 04.8
       comp=Z,4µm,18.0s
HERN   Volcan Telica     42.85 119   IAMs_20  IAMs_20  04 19 46.8
       comp=Z,4µm,21.0s
LMN    Caledonia Moun    42.93  62   P        P        04 01 01.7 -0.2
LMN                                  IAMs_20  IAMs_20  04 18 49.9
       comp=Z,6µm,21.0s
HAL    Halifax           44.09  63   IAmb     IAmb     04 01 12.3
       comp=Z,100nm,1.2s
ACON   Acoyapa           44.42 118   IAMs_20  IAMs_20  04 20 44.6
       comp=Z,4µm,22.0s
MIDW   Midway            44.92 272   IAMs_20  IAMs_20  04 16 25.2
       comp=Z,3µm,18.0s
BLUN   Bluefields        45.35 117   P        P        04 01 23.0 +1.5
       comp=Z,1µmcomp=Z,94nm,1.2s
CHIV   Chivirico         45.42 102   IAmb     IAmb     04 01 24.7
       comp=Z,314nm,1.7s
CHIV                                 IAMs_20  IAMs_20  04 22 21.5
       comp=Z,5µm,19.0s
MTDJ   Mount Denham      45.66 105   IAMs_20  IAMs_20  04 21 08.9
       comp=Z,4µm,22.0s
JTS    Las Juntas de     45.79 120   P        P        04 01 24.7 -0.4
JTS    Las Juntas de     45.79 120   IAMs_20  IAMs_20  04 23 59.8
       comp=Z,3µm,19.0s
JTS    Las Juntas de     45.79 120   LR       LR       04 22 18.7
       comp=Z,4µm,21.5s,baz=313,slow=38
JTS    Las Juntas de     45.79 120   P        P        04 01 24.7 -0.4
JTS                                  pmax     pmax
       comp=Z,34nm,1.2s
JTS                                  MLR      MLR
       comp=Z,3µm,19.0s
BILL   Bilibino          45.81 331   P        P        04 01 24.7 +0.1
BILL                                 IAmb     IAmb     04 01 33.9
       comp=Z,62nm,1.4s
BILL                                 IAMs_20  IAMs_20  04 19 37.2
       comp=Z,5µm,18.0s
BILL   Bilibino          45.81 331ceP         P        04 01 25.1 +0.5
BILL                                 pmax     pmax
       comp=Z,59nm,2.5s
NMDO   Nuevo Mundo       46.15 100   IAmb     IAmb     04 01 35.4
       comp=Z,77nm,1.0s
NMDO                                 IAMs_20  IAMs_20  04 22 40.8
       comp=Z,6µm,18.0s
GTBY   Guantanamo Bay    46.43 101   IAMs_20  IAMs_20  04 22 17.2
       comp=Z,4µm,20.0s
HDC    Heredia           46.56 119   IAMs_20  IAMs_20  04 23 58.2
       comp=Z,3µm,18.0s
LCR2   La Lucha 2        46.83 119   IAMs_20  IAMs_20  04 24 08.2
       comp=Z,3µm,19.0s
ILULI  Ilulissat         47.14  28   IAmb     IAmb     04 01 42.6
       comp=Z,57nm,1.2s
ILULI  Ilulissat         47.14  28 i P        P        04 01 33.6 -1.4
ILULI                                IAmb     IAmb     04 01 35.1
       comp=Z,6.5nm,0.6s
SFJD   Kangerlussuaq     47.44  31   P        P        04 01 37.6 +0.2
SFJD   Kangerlussuaq     47.44  31   LR       LR       04 23 28.3
       comp=Z,3µm,18.9s,baz=276,slow=39
SFJD   Kangerlussuaq     47.44  31   P        P        04 01 37.6 +0.2
SFJD                                 pmax     pmax
       comp=Z,89nm,1.1s
SFJD   Kangerlussuaq     47.44  31 i P        P        04 01 36.7 -0.6
SFJD                                 IAmb     IAmb     04 01 38.9
       comp=Z,21nm,1.0s
NEEM   North Greenlan    47.45  17 i P        P        04 01 37.9 +0.2
NEEM                                 IAmb     IAmb     04 01 40.7
       comp=Z,18nm,1.3s
BBSR   BB Station        47.85  80   P        P        04 01 40.3 -0.7
BBSR   BB Station        47.85  80   IAMs_20  IAMs_20  04 22 51.9
       comp=Z,3µm,18.0s
BRU2   Volcan            48.40 119   IAMs_20  IAMs_20  04 23 55.9
       comp=Z,2µm,18.0s
XMAS   Kiritimati        48.47 227   IAMs_20  IAMs_20  04 16 28.9
       comp=Z,3µm,19.0s
GRTK   Grand Turk        48.52  96   IAMs_20  IAMs_20  04 23 12.3
       comp=Z,4µm,20.0s
IVI    Ivigtut           49.30  38   IAmb     IAmb     04 02 08.8
       comp=Z,66nm,1.2s
IVI    Ivigtut           49.30  38 i P        P        04 01 52.5 +0.7
IVI                                  IAmb     IAmb     04 01 52.9
       comp=Z,11nm,0.7s
SDDR   Presa de Saban    49.88  99   IAmb     IAmb     04 02 07.3
       comp=Z,61nm,1.0s
SDDR                                 IAMs_20  IAMs_20  04 24 08.5
       comp=Z,3µm,20.0s
BCIP   Isla Barro Col    50.07 116   IAMs_20  IAMs_20  04 24 45.1
       comp=Z,2µm,19.0s
GMAL   Guarumal, Vera    50.13 118   P        P        04 01 59.7 +1.0
       comp=Z,26nm,1.3s
CACAO  El Cacao, Vera    50.68 118   P        P        04 02 03.6 +0.8
       comp=Z,0.7nm,2.9s
SUMG   Summit            50.93  23   P        P        04 02 03.9 -0.5
SUMG                                 IAmb     IAmb     04 02 11.9
       comp=Z,83nm,1.1s
SUMG   Summit            50.93  23   P        P        04 02 03.9 -0.5
SUMG                                 pmax     pmax
       comp=Z,83nm,1.1s
SUMG                                 MLR      MLR
       comp=Z,7µm,18.0s
SUMG   Summit            50.93  23 i P        P        04 02 04.7 +0.2
SUMG                                 IAmb     IAmb     04 02 05.5
       comp=Z,15nm,0.9s
TAOE   Nuku Hiva Isla    51.00 200   eS       S        04 09 21.0 -0.5
       comp=Z,369nm,25.6s
TAOE                                 eLQ      LQ       04 14 16.2
       comp=Z,4µm,22.2s
TAOE                                 eLR      LR       04 16 29.8
       comp=Z,876nm,21.3s
ICESG  Greenland Ices    51.22  27 i P        P        04 02 07.1 +0.4
ICESG                                IAmb     IAmb     04 02 09.4
       comp=Z,66nm,1.2s
PET    Petropavlovsk     51.98 312   eP       P        04 02 12.2 +0.1
PET                                  eS       S        04 09 28.5 -5.7
PET                                  pmax     pmax
       comp=Z,200nm,7.2s
PET                                  pmax     pmax
       comp=Z,500nm,6.4s
PET                                  pmax     pmax
       comp=Z,70nm,1.2s
PET                                  MLR      MLR
       comp=Z,800nm,15.0s
PET                                  MLR      MLR
       comp=Z,1µm,13.0s
SEY    Seymchan          52.23 325   LR       LR       04 23 11.6
       comp=Z,4µm,18.2s,baz=82,slow=35
SEY    Seymchan          52.23 325ceP         P        04 02 14.4 +0.6
SEY                                  pmax     pmax
       comp=Z,60nm,2.5s
PEA0B  Petropavlovsk-    52.50 312   P        P        04 02 16.2 +0.2
PEA0B  Petropavlovsk-    52.50 312   P        P        04 02 16.2 +0.2
PEA0B                                pmax     pmax
       comp=Z,110nm,1.3s
PETK   Petropavlovsk-    52.50 312   P        P        04 02 16.1 +0.1
PETK   Petropavlovsk-    52.50 312   P        P        04 02 15.9  0.0
       comp=Z,25nm,1.0s,baz=74,slow=12,SNR=49
PETK                                 LR       LR       04 21 05.7
       comp=Z,706nm,20.7s,baz=76,slow=32
       comp=Z,25nm,1.0s
PETK   Petropavlovsk-    52.50 312   P        P        04 02 16.1 +0.1
SJCC   San Jacinto, C    52.84 111   P        P        04 02 20.5 +1.5
       comp=Z,1µmcomp=Z,104nm,1.3s
ANGG   Ammassalik, Gr    52.84  31   IAMs_20  IAMs_20  04 27 27.9
       comp=Z,4µm,19.0s
APAC   Apartado, Choc    53.23 114   P        P        04 02 23.9 +2.1
       comp=Z,119nm,1.0s
CRPR   Cabo Rojo, PR     53.63  97   IAMs_20  IAMs_20  04 24 38.6
       comp=Z,4µm,22.0s
OBIP   Obispado Ponce    53.99  97   IAMs_20  IAMs_20  04 29 04.1
       comp=Z,3µm,20.0s
CELP   Cerrillos         53.99  96   IAMs_20  IAMs_20  04 29 05.2
       comp=Z,2µm,20.0s
MA2    Magadan           54.00 321   P        P        04 02 27.8 +0.9
MA2                                  IAmb     IAmb     04 02 36.9
       comp=Z,50nm,1.3s
MA2                                  IAMs_20  IAMs_20  04 24 26.7
       comp=Z,4µm,19.0s
MA2    Magadan           54.00 321   LR       LR       04 24 37.7
       comp=Z,3µm,18.6s,baz=78,slow=35
MA2    Magadan           54.00 321   P        P        04 02 28.6 +1.7
MA2    Magadan           54.00 321ceP         P        04 02 28.6 +1.7
MA2                                  pmax     pmax
       comp=Z,37nm,1.3s
UREC   San Jos de Ur     54.07 113   P        P        04 02 28.1 +0.1
       comp=Z,3µmcomp=Z,20nm,1.0s
DBBC   Dabeiba           54.11 114   P        P        04 02 29.8 +1.4
GCPR   Guaynabo City     54.23  96   IAMs_20  IAMs_20  04 25 37.4
       comp=Z,2µm,20.0s
SKR    Severo-Kuril's    54.27 310c iP        P        04 02 29.5 +0.5
SKR                                 eS        S        04 10 06.7 +1.3
SKR                                  pmax     pmax
       comp=Z,63nm,1.1s
SKR                                  pmax     pmax
       comp=Z,600nm,9.4s
SKR                                  MLR      MLR
       comp=Z,800nm,17.0s
SJG    San Juan          54.30  96   P        P        04 02 29.6  0.0
SJG    San Juan          54.30  96   IAMs_20  IAMs_20  04 26 18.3
       comp=Z,3µm,20.0s
SJG    San Juan          54.30  96   LR       LR       04 28 18.0
       comp=Z,2µm,19.8s,baz=282,slow=39
SJG    San Juan          54.30  96   P        P        04 02 29.6  0.0
SJG                                  pmax     pmax
       comp=Z,98nm,1.0s
SJG                                  MLR      MLR
       comp=Z,3µm,20.0s
SJG    San Juan          54.30  96   P        P        04 02 30.1 +0.5
       comp=Z,791nmcomp=Z,49nm,0.9s
SOEG   Soedalen          54.38  27 i P        P        04 02 30.1 +0.6
SOEG                                 IAmb     IAmb     04 02 31.5
       comp=Z,21nm,1.2s
IGPR   InterUniversit    54.42  96   IAMs_20  IAMs_20  04 27 55.4
       comp=Z,3µm,20.0s
PDPR   Patillas Dam,     54.45  96   IAMs_20  IAMs_20  04 27 56.3
       comp=Z,3µm,19.0s
HUMP   Col San Antoni    54.51  96   IAMs_20  IAMs_20  04 28 12.8
       comp=Z,3µm,19.0s
DAG    Danmarks Havn     54.65  16 i P        P        04 02 33.1 +1.7
DAG                                  IAmb     IAmb     04 02 38.0
       comp=Z,26nm,0.9s
CBOC   Ciudad Bolivar    55.07 115   P        P        04 02 36.8 +1.4
       comp=Z,965nmcomp=Z,72nm,1.4s
PLMC   San Jos del P     55.57 116   P        P        04 02 39.8 +0.9
       comp=Z,594nmcomp=Z,46nm,1.2s
PTBC   PUERTO BERRIO,    55.68 113   P        P        04 02 40.7 +1.0
       comp=Z,459nmcomp=Z,62nm,1.1s
GUY2C  Guyana, Caldas    55.97 115   P        P        04 02 43.8 +1.5
       comp=Z,774nmcomp=Z,72nm,1.0s
YOTC   Yotoco, Valle     56.19 117   P        P        04 02 44.6 +1.1
       comp=Z,626nmcomp=Z,61nm,1.1s
PAMC   Pamplona, Colo    56.37 111   P        P        04 02 46.0 +0.9
       comp=Z,7µmcomp=Z,66nm,0.9s
JAMC   Jamundi, Valle    56.53 118   P        P        04 02 47.2 +1.2
       comp=Z,3µmcomp=Z,75nm,1.0s
BARC   Barichara         56.54 112   P        P        04 02 47.7 +1.6
SMRT   St. Maarten       56.68  94   IAMs_20  IAMs_20  04 26 09.2
       comp=Z,3µm,22.0s
SDV    Santo Domingo     56.80 108   P        P        04 02 48.4 +0.5
SDV                                  IAmb     IAmb     04 02 51.1
       comp=Z,60nm,0.9s
SDV                                  IAMs_20  IAMs_20  04 29 21.2
       comp=Z,2µm,20.0s
SDV    Santo Domingo     56.80 108   LR       LR       04 29 51.7
       comp=Z,2µm,20.3s,baz=300,slow=39
SDV    Santo Domingo     56.80 108   eP       P        04 02 48.7 +0.8
SDV    Santo Domingo     56.80 108   P        P        04 02 48.7 +0.8
       comp=Z,1µmcomp=Z,72nm,1.2s
SABA   Saba              56.81  95   IAMs_20  IAMs_20  04 28 13.6
       comp=Z,4µm,22.0s
ROSC   El Rosal          56.97 115   P        P        04 02 47.5 -1.8
       comp=Z,8.3nm,0.3s,baz=35,slow=3.3,SNR=18
ROSC                                 LR       LR       04 30 20.7
       comp=Z,2µm,20.0s,baz=336,slow=39
       comp=Z,8.3nm,0.3s
ORTC   Ortega, Tolima    57.00 116   P        P        04 02 50.0 +0.9
       comp=Z,905nmcomp=Z,85nm,1.2s
POPC   Popayan, Colom    57.02 118   P        P        04 02 50.3 +0.8
       comp=Z,704nmcomp=Z,41nm,1.0s
SEUS   St. Eustatius     57.08  95   IAMs_20  IAMs_20  04 28 21.9
       comp=Z,4µm,21.0s
RUSC   La Rusia          57.10 113   P        P        04 02 51.8 +1.5
       comp=Z,1µmcomp=Z,82nm,1.1s
PAC1   Pacto, Paraso     57.32 122   P        P        04 02 52.8 +1.3
       comp=Z,887nmcomp=Z,51nm,1.2s
TIXI   Tiksi             57.34 339   P        P        04 02 50.2 -0.4
TIXI                                 IAmb     IAmb     04 02 58.2
       comp=Z,95nm,1.8s
TIXI                                 IAMs_20  IAMs_20  04 27 49.3
       comp=Z,3µm,21.0s
TIXI   Tiksi             57.34 339   LR       LR       04 28 09.6
       comp=Z,3µm,19.7s,baz=70,slow=37
TIXI   Tiksi             57.34 339ceP         P        04 02 51.4 +0.8
TIXI                                 pmax     pmax
       comp=Z,22nm,1.3s
CVER   Cruz Verde, Cu    57.37 115   P        P        04 02 54.5 +2.3
       comp=Z,3µmcomp=Z,218nm,1.1s
CRUC   La Cruz           57.55 119   P        P        04 02 55.6 +2.2
OTAV   Otavalo           57.56 122   eP       P        04 02 52.5 -1.1
OTAV   Otavalo           57.56 122   P        P        04 02 55.5 +2.0
       comp=Z,905nmcomp=Z,64nm,1.2s
TAMC   Tame, Arauca      57.64 111   P        P        04 02 55.1 +1.5
       comp=Z,2µmcomp=Z,117nm,1.2s
ANWB   Willy Bob         57.89  94   IAMs_20  IAMs_20  04 26 56.3
       comp=Z,4µm,22.0s
KBS    Kingsbay          58.38   9   P        P        04 02 58.2 +0.3
KBS                                  IAmb     IAmb     04 03 06.5
       comp=Z,46nm,1.0s
KBS    Kingsbay          58.38   9   P        P        04 02 58.2 +0.3
KBS                                  pmax     pmax
       comp=Z,46nm,1.0s
KBS    Kingsbay          58.38   9 i P        P        04 03 01.0 +3.1
FLOC   Florencia         58.41 118   P        P        04 03 00.9 +1.9
       comp=Z,1µmcomp=Z,86nm,1.2s
PIAT   Ana Tenorio       58.62 123   P        P        04 03 03.0 +2.1
       comp=Z,2µmcomp=Z,54nm,1.1s
GDHS   Morne Mazeau,     58.74  95   IAMs_20  IAMs_20  04 30 12.7
       comp=Z,3µm,21.0s
ABD    La Joyeuse, An    58.83  94   IAMs_20  IAMs_20  04 32 59.3
       comp=Z,2µm,18.0s
CBE    Ff, Capester      58.99  95   IAMs_20  IAMs_20  04 30 18.4
       comp=Z,3µm,21.0s
TDBA   Terre de Bas,     59.10  95   IAMs_20  IAMs_20  04 29 09.3
       comp=Z,3µm,20.0s
MACC   Macarena, Meta    59.23 116   P        P        04 03 05.3 +0.6
       comp=Z,1µmcomp=Z,183nm,1.1s
GDSD   La Dsirade Is     59.25  94   IAMs_20  IAMs_20  04 27 50.4
       comp=Z,2µm,21.0s
MAGL   Barre de l'ile    59.31  95   IAMs_20  IAMs_20  04 30 37.9
       comp=Z,3µm,20.0s
BORG   Borgarnes         59.49  29   P        P        04 03 06.9 +1.1
BORG                                 IAmb     IAmb     04 03 12.2
       comp=Z,30nm,0.9s
BORG   Borgarnes         59.49  29   LR       LR       04 29 06.0
       comp=Z,4µm,18.0s,baz=292,slow=36
BORG   Borgarnes         59.49  29   P        P        04 03 06.9 +1.1
BORG                                 pmax     pmax
       comp=Z,30nm,1.0s
BORG                                 MLR      MLR
       comp=Z,4µm,18.0s
SPITS  Spitsbergen Ar    59.51   9   P        P        04 03 05.0 -0.7
       comp=Z,34nm,1.1s,baz=333,slow=1.3,SNR=17
       comp=Z,34nm,1.1s
SPITS  Spitsbergen Ar    59.51   9   P        P        04 03 05.6 -0.2
SPITS                                pmax     pmax
       comp=Z,95nm,1.2s
GUVC   San Jose del G    59.78 115   P        P        04 03 08.9 +0.4
       comp=Z,69nm,1.1s
PTLC   Puerto Leguiza    60.02 119   P        P        04 03 13.4 +3.2
       comp=Z,1µmcomp=Z,68nm,1.6s
SVN    Savane Anatole    60.07  96   IAMs_20  IAMs_20  04 28 55.2
       comp=Z,4µm,22.0s
JMIC   Jan Mayen         60.08  20   LR       LR       04 29 40.5
       comp=Z,5µm,18.5s,baz=324,slow=37
FDF    Fort de France    60.15  96   P        P        04 03 10.3 -0.8
FDF                                  IAMs_20  IAMs_20  04 28 57.3
       comp=Z,4µm,22.0s
FDF    Fort de France    60.15  96   P        P        04 03 10.3 -0.8
FDF                                  pmax     pmax
       comp=Z,328nm,1.3s
FDF                                  MLR      MLR
       comp=Z,4µm,22.0s
MCRA   Macar, Loja       60.15 127   P        P        04 03 11.9 +0.9
       comp=Z,982nmcomp=Z,58nm,1.1s
ILAM   Ilet Lapin Mar    60.33  96   IAMs_20  IAMs_20  04 29 13.1
       comp=Z,3µm,22.0s
BIM    Bigot             60.34  96   IAMs_20  IAMs_20  04 30 40.5
       comp=Z,2µm,20.0s
HSPB   Hornsund (broa    60.38  10   eP       P        04 03 12.5 +0.8
PCRV   Puerto La Cruz    60.38 102   LR       LR       04 32 02.1
       comp=Z,2µm,20.3s,slow=39
MPOM   Morne Pois Mar    60.55  96   IAMs_20  IAMs_20  04 33 19.8
       comp=Z,2µm,19.0s
TYV    Tymovskoe         61.87 314   eP       P        04 03 23.0 +0.7
TYV                                  eS       S        04 11 44.6 -0.2
TYV                                  pmax     pmax
       comp=Z,28nm,1.1s
TYV                                  pmax     pmax
       comp=Z,200nm,2.7s
TYV                                  smax     smax
       comp=N,400nm,8.0s
TYV                                  smax     smax
       comp=E,300nm,8.0s
TYV                                  MLR      MLR
       comp=N,800nm,19.0s
TYV                                  MLR      MLR
       comp=Z,1µm,18.0s
WAKE   Wake Island       62.02 272   IAMs_20  IAMs_20  04 35 24.6
       comp=Z,2µm,18.0s
YAK    Yakutsk           62.13 329   IAMs_20  IAMs_20  04 33 23.6
       comp=Z,3µm,21.0s
YAK    Yakutsk           62.13 329   P        P        04 03 22.9 -0.9
       comp=Z,44nm,0.4s,baz=46,slow=2.8,SNR=8.0
YAK                                  S        S        04 11 51.6 +3.9
       comp=Z,11nm,0.3s,baz=117,slow=3.5,SNR=1.3
YAK                                  LR       LR       04 28 53.6
       comp=Z,2µm,20.5s,baz=55,slow=35
       comp=Z,44nm,0.4s
YAK    Yakutsk           62.13 329   eP       P        04 03 23.6 -0.2
YAK                                  e*PP     pP       04 03 29.1 -1.0
YAK                                  e                 04 04 04.7
YAK                                  e                 04 05 39.5
YAK                                  eS       S        04 11 47.2 -0.5
YAK                                  e                 04 13 15.2
YAK                                  eSS      SS       04 15 50.1 +0.3
YAK                                  pmax     pmax
       comp=Z,26nm,0.9s
YAK                                  pmax     pmax
       comp=N,4.0nm,0.9s
YAK                                  pmax     pmax
       comp=E,10.0nm,1.1s
YAK                                  pmax     pmax
       comp=Z,165nm,2.9s
YAK                                  pmax     pmax
       comp=N,48nm,1.9s
YAK                                  pmax     pmax
       comp=E,142nm,3.4s
YAK                                  smax     smax
       comp=N,309nm,8.9s
YAK                                  smax     smax
       comp=E,326nm,6.6s
YAK                                  MLR      MLR
       comp=E,2µm,23.0s
PPT    Papeete           62.15 207   LR       LR       04 25 37.1
       comp=E,1µm,18.2s,baz=14,slow=31
PPT2   Papeete2          62.17 207   eP       P        04 03 22.5 -2.1
       comp=E,63nm,24.0s
PPT2                                 eS       S        04 11 47.0 -2.2
       comp=E,226nm,24.0s
PPT2                                 eSS      SS       04 15 45.2 -7.6
       comp=E,109nm,24.8s
PPT2                                 eLQ      LQ       04 19 04.3
       comp=E,2µm,29.0s
PPT2                                 eLR      LR       04 21 39.0
       comp=E,779nm,20.2s
PPT2                                 eLR      LR       04 21 40.9
       comp=E,745nm,21.0s
UGL    Uglegorsk         63.11 313   eP       P        04 03 40.0 +9.5
UGL                                  pmax     pmax
       comp=Z,100nm,0.4s
YSS    Yuzhno-Sakhali    63.82 310   P        P        04 03 35.0 -0.3
YSS                                  IAmb     IAmb     04 03 52.4
       comp=Z,48nm,1.1s
YSS    Yuzhno-Sakhali    63.82 310   P        P        04 03 35.6 +0.3
YSS    Yuzhno-Sakhali    63.82 310αeP         P        04 03 35.6 +0.3
YSS                                  e                 04 04 11.5
YSS                                  e                 04 05 57.1
YSS                                  eS       S        04 12 11.8 +2.6
YSS                                  eSS      SS       04 16 21.0 +4.2
YSS                                  pmax     pmax
       comp=Z,20nm,1.0s
YSS                                  pmax     pmax
       comp=Z,300nm,3.3s
YSS                                  pmax     pmax
       comp=N,100nm,3.4s
YSS                                  pmax     pmax
       comp=E,200nm,2.9s
YSS                                  smax     smax
       comp=N,400nm,7.0s
YSS                                  smax     smax
       comp=E,300nm,9.1s
YSS                                  MLR      MLR
       comp=Z,700nm,14.0s
YSS                                  MLR      MLR
       comp=N,600nm,15.0s
YSS                                  MLR      MLR
       comp=E,1µm,16.0s
GRNR   Gornyy            65.28 316   eP       P        04 03 44.9 +0.1
GRNR                                 MLR      MLR
       comp=E,910nm,20.0s
GRNR                                 MLR      MLR
       comp=N,380nm,21.0s
GRNR                                 MLR      MLR
       comp=Z,740nm,17.0s
SGC2   Sao Gabriel da    65.65 113   P        P        04 03 47.3 -0.4
       comp=Z,18nm,1.1s
ERM    Erimo             66.22 306   P        P        04 03 52.6 +1.6
ERM    Erimo             66.22 306ceP         P        04 03 53.2 +2.2
ERM                                  pmax     pmax
       comp=Z,85nm,1.3s
JEM    Erimo             66.22 306   P        P        04 03 52.3 +1.3
TBTG   Tabatinga, AM     66.51 118   eP       P        04 03 52.5 -0.6
TBTG   Tabatinga, AM     66.51 118   P        P        04 03 53.3 +0.1
       comp=Z,1µmcomp=Z,144nm,1.1s
CZSB   Cruzeiro do Su    67.30 123   eP       P        04 03 58.1  0.0
CZSB   Cruzeiro do Su    67.30 123   P        P        04 03 59.3 +1.2
       comp=Z,62nm,1.2s
TBI    Tubuai            67.47 205   eS       S        04 12 49.4 -4.7
       comp=Z,1µm,28.0s
TBI                                  eSS      SS       04 17 12.2 -3.0
       comp=Z,1µm,25.2s
TBI                                  eLQ      LQ       04 21 07.3
       comp=Z,7µm,41.2s
TBI                                  eLR      LR       04 24 12.1
       comp=Z,3µm,25.2s
TBI                                  eLR      LR       04 24 14.0
       comp=Z,1µm,25.5s
NNA    Nana              68.02 129   P        P        04 04 03.4 +0.7
NNA    Nana              68.02 129   LR       LR       04 31 52.3
       comp=Z,694nm,18.6s,baz=327,slow=34
NNA    Nana              68.02 129ceP         P        04 04 04.3 +1.6
NNA                                  pmax     pmax
       comp=Z,120nm,1.3s
ZEA    Zeya              68.09 323   eP       P        04 04 02.6  0.0
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ZEA                                 e                  04 06 29.4
ZEA                                 eS        S        04 13 04.2 +3.1
ZEA                                  pmax     pmax
      comp=Z,20nm,1.4s
ZEA                                  pmax     pmax
      comp=Z,200nm,6.2s
ZEA                                  smax     smax
      comp=N,500nm,16.5s
ARCES ARCESS Array B  68.31  11      P        P        04 04 02.8  -1.0
ARCES ARCESS Array B  68.31  11      P        P        04 04 02.4  -1.4
      comp=N,16nm,1.1s,baz=318,slow=1.6,SNR=12
ARCES                                LR       LR       04 35 56.7
      comp=N,3µm,18.2s,baz=334,slow=38
      comp=N,16nm,1.1s
ARCES ARCESS Array B  68.31  11      P        P        04 04 02.8  -1.0
ARCES                                pmax     pmax
      comp=Z,80nm,1.4s
KEV   Kevo            68.32  10      P        P        04 04 05.5 +1.7
KEV   Kevo            68.32  10      P        P        04 04 05.5 +1.7
KEV                                  pmax     pmax
      comp=Z,72nm,1.1s
KEV                                  MLR      MLR
      comp=Z,4µm,21.0s
TEY   Ternei          68.45 311     eP        P        04 03 58.1  -6.9
TEY                                 e                  04 13 11.0
BOAV  Boa Vista       68.57 106     eP        P        04 04 05.6  -0.6
BOAV  Boa Vista       68.57 106      P        P        04 04 06.9 +0.7
KLR   Kul'dur         68.63 317      P        P        04 04 05.7  -0.4
      comp=Z,8.6nm,1.2s,baz=35,slow=3.4,SNR=8.1
KLR                                  LR       LR       04 33 47.9
      comp=Z,1µm,19.3s,baz=57,slow=36
      comp=Z,8.6nm,1.2s
KLR   Kul'dur         68.63 317ceP            P        04 04 06.7 +0.6
KLR                                  pmax     pmax
      comp=Z,32nm,2.5s
RAR   Rarotonga       69.51 215      LR       LR       04 28 36.6
      comp=Z,934nm,18.1s,baz=21,slow=31
AFI   Afiamalu        69.61 230      IAMs_20  IAMs_20  04 28 05.0
      comp=Z,2µm,21.0s
TEFE  Tefe            69.67 113     eP        P        04 04 13.6 +0.6
HEH   HeiHe           70.21 320     eP        P        04 04 15.0  -0.8
HEH                                  S        S        04 13 31.8 +5.6
HEH                                  sS       sS       04 13 40.8 +4.1
HEH                                  pmax     pmax
      comp=Z,31nm,1.5s
HEH                                  pmax     pmax
      comp=Z,380nm,7.1s
HEH                                  LR       LR
      comp=Z,1µm,17.7s
HEH                                  LR       LR
      comp=Z,790nm,20.2s
HEH                                  LR       LR
      comp=Z,2µm,19.9s
BOD   Bodaibo         70.86 331     eP        P        04 04 17.7  -2.0
BOD                                  pmax     pmax
      comp=Z,47nm,1.6s
LVZ   Lovozero        71.03   8      P        P        04 04 20.5  -0.1
LVZ   Lovozero        71.03   8ceP            P        04 04 22.2 +1.6
LVZ                                  pmax     pmax
      comp=Z,105nm,1.3s
APA   Apatity         71.20   9⇓iP            P        04 04 23.8 +2.2
APA                                  pmax     pmax
      comp=Z,18nm,1.0s
USA0B Ussuriysk Arra  71.58 313    i P        P        04 04 24.6 +0.3
USRK  Ussuriysk Ar.   71.58 313      P        P        04 04 24.4 +0.1
USRK  Ussuriysk Ar.   71.58 313      P        P        04 04 24.5 +0.2
      comp=Z,18nm,1.1s,baz=58,slow=4.8,SNR=16
USRK                                 LR       LR       04 36 44.9
      comp=Z,742nm,18.0s,baz=50,slow=37
      comp=Z,18nm,1.1s
MACA  Manacapuru-AM   72.24 110      IAMs_20  IAMs_20  04 41 46.2
      comp=Z,1µm,18.0s
MACA  Manacapuru-AM   72.24 110     eP        P        04 04 28.8 +0.2
VLA   Vladivostok     72.32 312    i P        P        04 04 27.8  -0.9
VLA                                  pmax     pmax
      comp=Z,62nm,1.5s
ESK   Eskdalemuir     72.41  31      IAMs_20  IAMs_20  04 41 36.2
      comp=Z,1µm,20.0s
EKA   Eskdalemuir Ar  72.42  31      P        P        04 04 28.4  -0.7
      comp=Z,8.4nm,1.1s,baz=296,slow=4.3,SNR=6.0
      comp=Z,8.4nm,1.1s
MJAR  Matsushiro Arr  72.52 303      P        P        04 04 30.1   0.0
      comp=Z,15nm,1.1s,baz=39,slow=5.5,SNR=20
      comp=Z,15nm,1.1s
MAJO  Matsushiro      72.52 303      P        P        04 04 29.3  -0.8
MAJO                                 IAmb     IAmb     04 04 40.9
      comp=Z,34nm,1.0s
MAJO  Matsushiro      72.52 303      P        P        04 04 30.4 +0.3
MAJO  Matsushiro      72.52 303      P        P        04 04 29.3  -0.8
MAJO                                 pmax     pmax
      comp=Z,34nm,1.0s
MJB9  Matsu-Tunnel    72.52 303      IAmb     IAmb     04 04 40.9
      comp=Z,37nm,1.1s
NC303 NORSAR Array S  72.65  21      IAmb     IAmb     04 04 36.0
      comp=Z,41nm,1.0s
MDJ   Mudanjiang      72.66 314      IAMs_20  IAMs_20  04 37 24.5
      comp=Z,2µm,19.0s
MDP   Montagnes des   72.69  98      LR       LR       04 40 31.4
      comp=Z,782nm,20.2s,baz=310,slow=39
NB2   NORSAR Subarra  72.76  21      P        P        04 04 30.3  -0.8
      comp=Z,206nm,3.3s,baz=324,slow=6.2
NB2   NORSAR Subarra  72.76  21      P        P        04 04 30.3  -0.8
      baz=324,slow=6.2
NOA   NORSAR Array B  72.76  21      P        P        04 04 30.8  -0.3
      comp=Z,12nm,1.0s,baz=325,slow=6.0,SNR=12
NOA                                  LR       LR       04 36 46.7
      comp=Z,4µm,19.5s,baz=325,slow=36
      comp=Z,12nm,1.0s
NB201 NORSAR Array S  72.77  21      IAmb     IAmb     04 04 36.9
      comp=Z,49nm,1.4s
NAO01 NORSAR Array S  72.83  21      IAmb     IAmb     04 04 37.1
      comp=Z,43nm,1.1s
NC405 NORSAR Array S  72.84  21      P        P        04 04 31.1  -0.4
MSHR  Mys Shultsa     73.07 312ceP            P        04 04 33.4 +0.2
MSHR                                 pmax     pmax
      comp=Z,32nm,1.3s
NC602 NORSAR Array S  73.10  21      IAmb     IAmb     04 04 51.2
      comp=Z,64nm,1.7s
BNX   BinXian         73.12 316 ⇑P            P        04 04 33.4   0.0
BNX                                  PcP      PcP      04 04 50.5 +0.4
BNX                                  S        S        04 13 59.8  -0.1
BNX                                  pmax     pmax
      comp=Z,42nm,1.4s
BNX                                  pmax     pmax
      comp=Z,220nm,6.0s
BNX                                  LR       LR
      comp=Z,1µm,16.3s
BNX                                  LR       LR
      comp=Z,1µm,21.7s
BNX                                  LR       LR
      comp=Z,930nm,16.3s
PSTR  Posyet          73.23 312    i P        P        04 04 34.6 +0.5
KONO  Kongsberg       73.45  22      P        P        04 04 36.0 +0.9
KONO                                 IAmb     IAmb     04 04 41.6
      comp=Z,61nm,1.4s
KONO  Kongsberg       73.45  22      P        P        04 04 36.0 +0.9
JGF   Kuroka          73.64 303      P        P        04 04 36.7   0.0
FUTU  Fugatoga        73.76 235      IAMs_20  IAMs_20  04 28 41.2
      comp=Z,3µm,21.0s
INU   Inuyama         74.01 303      P        P        04 04 40.5 +1.6
HFS   Hagfors         74.19  20      P        P        04 04 38.9  -0.6
      comp=Z,28nm,1.0s,baz=336,slow=3.3,SNR=12
HFS                                  LR       LR       04 38 09.6
      comp=Z,6µm,18.9s,baz=328,slow=37
      comp=Z,28nm,1.0s
HIA   Hailar          74.57 322      IAMs_20  IAMs_20  04 43 50.4
      comp=Z,1µm,21.0s
CIT   Chita           75.31 327     eP        P        04 04 48.6 +2.4
CIT                                 e                  04 04 56.6
CIT                                 e                  04 05 02.2
CIT                                  pmax     pmax
      comp=Z,96nm,1.8s
CN2   Changchun       75.44 315      P        P        04 04 46.8  -0.2
CN2                                  sP       sP       04 04 53.3  -2.5
CN2                                  S        S        04 14 24.0  -2.1
CN2                                  SS       SS       04 19 15.4  -0.3
CN2                                  pmax     pmax
      comp=Z,10.0nm,1.7s
CN2                                  pmax     pmax
      comp=Z,200nm,3.0s
CN2                                  LR       LR
      comp=Z,1µm,23.0s
CN2                                  LR       LR
      comp=Z,710nm,23.0s
CN2                                  LR       LR
      comp=Z,1µm,17.0s
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JCJ   Chichijima      75.58 293      LR       LR       04 31 29.9
      comp=Z,2µm,21.9s,baz=59,slow=30
FINES FINESS Array B  75.85  14      P        P        04 04 48.7  -0.3
FINES FINESS Array B  75.85  14      P        P        04 04 48.4  -0.6
      comp=Z,28nm,1.1s,baz=338,slow=3.9,SNR=16
FINES                                LR       LR       04 38 46.0
      comp=Z,5µm,19.5s,baz=344,slow=36
      comp=Z,28nm,1.1s
FINES FINESS Array B  75.85  14      P        P        04 04 48.7  -0.3
MAL2  Monte Alegre,   76.21 105      IAmb     IAmb     04 04 58.9
      comp=Z,35nm,1.1s
MAL2                                 IAMs_20  IAMs_20  04 41 01.4
      comp=Z,2µm,20.0s
ITTB  Itaituba        76.65 108     eP        P        04 04 53.7  -0.6
LPAZ  La Paz          76.67 125      P        P        04 04 54.9  -0.1
      comp=Z,17nm,0.9s,baz=343,slow=5.9,SNR=30
LPAZ                                 LR       LR       04 38 25.3
      comp=Z,1µm,19.1s,baz=324,slow=36
      comp=Z,17nm,0.9s
LPAZ  La Paz          76.67 125     eP        P        04 04 54.7  -0.2
PB16  IPOC Station P  77.37 127      IAmb     IAmb     04 05 13.6
      comp=Z,77nm,1.5s
KSRS  Korea Array     78.29 309      P        P        04 05 03.7 +0.6
      comp=Z,6.2nm,1.0s,baz=61,slow=5.9,SNR=19
      comp=Z,6.2nm,1.0s
KSAR  Wonju Array Be  78.32 309      P        P        04 05 03.1  -0.2
KSAR  Wonju Array Be  78.32 309      P        P        04 05 03.1  -0.2
KLMR  Klimovskoe      78.40   8     eP        P        04 05 02.6  -0.7
KLMR                                e                  04 07 59.6
KLMR                                 SS       SS       04 20 05.8 +6.6
KLMR                                 pmax     pmax
      comp=Z,125nm,1.2s
TA02  Huaiquique      78.48 129      IAMs_20  IAMs_20  04 37 57.1
      comp=Z,1µm,22.0s
VSU   Vasula          78.73  15ceP            P        04 05 05.7 +0.5
VSU                                  pmax     pmax
      comp=Z,60nm,1.3s
NPGB  Novo Progresso  78.74 109     eP        P        04 05 04.6  -1.3
MSVF  Nonsavu         78.75 235      LR       LR       04 34 13.3
      comp=Z,3µm,18.6s,baz=30,slow=31
MSVF  Nonsavu         78.75 235    i P        P        04 05 10.5 +4.6
MSVF                                 pmax     pmax
      comp=Z,23nm,1.2s
TJN   Taejon          79.34 309      P        P        04 05 09.4 +0.4
TJN   Taejon          79.34 309      P        P        04 05 08.2  -0.8
VILB  Vilhena         79.43 117     eP        P        04 05 09.9 +0.3
PB01  IPOC Station P  79.45 129      IAmb     IAmb     04 05 18.4
      comp=Z,39nm,1.0s
PGAV  Gavieira, Arco  79.72  43     eS        S        04 15 17.9 +5.3
PGAV                                eLQ       LQ       04 28 30.7
PGAV                                eLR       LR       04 30 53.4
PGAV                               i AMs_20            04 38 01.5
      comp=Z,3µm,20.0s
XLT   XiLinHaoTe      80.18 320     eP        P        04 05 14.3 +0.8
XLT                                  PP       PP       04 08 13.3  -2.0
XLT                                  S        S        04 15 18.8 +1.3
XLT                                  pmax     pmax
      comp=Z,14nm,1.2s
XLT                                  pmax     pmax
      comp=Z,370nm,5.2s
XLT                                  LR       LR
      comp=Z,1µm,14.9s
XLT                                  LR       LR
      comp=Z,1µm,15.8s
MOY   Mondy           80.35 333     eP        P        04 05 15.4 +1.1
MOY                                  pmax     pmax
      comp=Z,38nm,1.5s
POLO  Lamas de Olo    80.39  43     eP        P        04 05 21.0 +6.3
POLO                               i Amb               04 05 25.2
      comp=Z,42nm,1.9s
PB05  IPOC Station P  80.43 131      IAmb     IAmb     04 05 21.0
      comp=Z,50nm,1.2s
ZAK   Zakamensk       80.61 331     eP        P        04 05 17.7 +2.0
ZAK                                  pmax     pmax
      comp=Z,13nm,1.6s
PVIS  Viseu           80.81  44     eP        P        04 05 18.2 +1.2
PABE  Paberze         80.86  18      IAMs_20  IAMs_20  04 39 21.9
      comp=Z,2µm,21.0s
DL2   Dalian          80.90 314      P        P        04 05 16.0  -1.3
DL2                                  S        S        04 15 24.8  -0.1
DL2                                  sS       SKKSac   04 15 37.3  -0.1
DL2                                  pmax     pmax
      comp=Z,20nm,1.2s
DL2                                  pmax     pmax
      comp=Z,190nm,6.4s
DL2                                  LR       LR
      comp=Z,980nm,22.7s
DL2                                  LR       LR
      comp=Z,720nm,16.3s
DL2                                  LR       LR
      comp=Z,2µm,19.0s
PDRB  Porto dos Gac   80.90 114     eP        P        04 05 16.9  -0.7
PMOZ  Porto Moniz, M  80.91  55     eLQ       LQ       04 31 21.4
PMOZ                                eLR       LR       04 32 07.4
PMOZ                               i AMs_20            04 39 52.3
      comp=Z,2µm,20.0s
MVO   Moncorvo        80.94  43     eP        P        04 05 19.3 +1.7
MVO                                i Amb               04 05 37.0
      comp=Z,51nm,1.9s
MVO                                 eS        SKSac    04 15 34.0  -1.5
MVO                                 eLQ       LQ       04 28 35.4
MVO                                 eLR       LR       04 31 02.0
MVO                                i AMs_20            04 38 37.4
      comp=Z,3µm,18.0s
TMAB  Tom-Au,PA,Br    80.99 101     eP        P        04 05 17.7  -0.4
SIV   San Ignacio     81.02 120      LR       LR       04 43 23.8
      comp=Z,1µm,19.1s,baz=338,slow=37
CLDB  Colider         81.05 112     eP        P        04 05 18.2  -0.2
PMAR  Madeira         81.15  55     eP        P        04 05 20.4 +1.4
PMAR                               i Amb               04 05 34.2
      comp=Z,148nm,1.3s
ULN   Ulaanbaatar     81.18 328      P        P        04 05 17.4  -1.5
ULN   Ulaanbaatar     81.18 328      P        P        04 05 17.4  -1.5
ULN                                  pmax     pmax
      comp=Z,34nm,1.5s
ULN                                  MLR      MLR
      comp=Z,3µm,19.0s
MTE   Manteigas       81.22  44     eP        P        04 05 24.4 +5.2
MTE                                 eS        SKSac    04 15 35.5  -1.9
MTE                                 eLQ       LQ       04 28 03.4
MTE                                 eLR       LR       04 32 03.8
MTE                                i AMs_20            04 40 51.3
      comp=Z,2µm,16.0s
KIRV  Kirov           81.41   3      LR       LR       04 45 58.7
      comp=Z,2µm,18.4s,baz=343,slow=39
KIRV  Kirov           81.41   3    i P        P        04 05 20.9 +1.3
PSARD Sardoal         81.47  45     eP        P        04 05 22.1 +1.7
PSARD                              i Amb               04 05 45.5
      comp=Z,45nm,1.4s
SONM  Songino Array   81.47 328      P        P        04 05 16.8  -3.6
SONM                                 IAmb     IAmb     04 05 28.2
      comp=Z,56nm,1.6s
SONM  Songino Array   81.47 328      P        P        04 05 20.6 +0.2
      comp=Z,7.3nm,1.1s,baz=45,slow=3.4,SNR=15
SONM                                 S        S        04 15 34.2 +3.3
      comp=Z,0.3nm,0.3s,baz=54,slow=7.3,SNR=1.2
SONM                                 LR       LR       04 41 32.5
      comp=Z,2µm,18.7s,baz=38,slow=36
      comp=Z,7.3nm,1.1s
CLL   Collm           81.50  26      IAmb     IAmb     04 05 31.0
      comp=Z,37nm,1.3s
CLL   Collm           81.50  26    i P        P        04 05 19.8  -0.5
CLL                                i                   04 05 23.6
CLL                                 eS        SKSac    04 15 35.0  -3.7
CLL                                  pmax     pmax
      comp=Z,9.0nm,1.3s
CLL                                  smax     smax
      comp=Z,3µm,20.0s
CLL   Collm           81.50  26    i P        P        04 05 19.8  -0.5
      comp=Z,9.0nm,1.3s
CLL                                i x        x        04 05 23.6
      comp=Z,38nm,1.3s
CLL                                 ePP       PP       04 08 26.0 +0.3
CLL                                 ePPP      PPP      04 10 15.0
CLL                                 eS        SKSac    04 15 35.0  -3.7
CLL                                 ePPS      PPS      04 16 34.0
CLL                                 eSS       SS       04 20 30.0   -16
CLL                                 ex        x        04 22 24.0
CLL                                 eSSS      SSS      04 24 09.0
CLL                                 ex        x        04 25 36.0
CLL                                 eSSSS              04 27 00.0
CLL                                  AMS      AMS      04 38 00.0
      comp=N,2µm,21.8s
CLL                                  AMS      AMS      04 38 00.0
      comp=E,2µm,21.0s
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CLL                                  AMS      AMS      04 42 00.0
      comp=N,2µm,18.4s
CLL                                  AMS      AMS      04 42 00.0
      comp=E,1µm,18.6s
CLL                                  AMS      AMS      04 42 00.0
      comp=Z,3µm,20.0s
CLL                                  AMS      AMS      04 42 00.0
PCBR  Castelo Branco  81.66  44     eP        P        04 05 23.4 +2.1
PCBR                               i Amb               04 05 44.0
      comp=Z,32nm,1.3s
PTLB  Pontes e Lacer  81.93 118      IAmb     IAmb     04 05 31.2
      comp=Z,31nm,1.1s
PTLB                                 IAMs_20  IAMs_20  04 45 20.3
      comp=Z,1µm,21.0s
PTLB  Pontes e Lacer  81.93 118     eP        P        04 05 22.5  -0.4
PMRV  Marv??o         82.01  44     eP        P        04 05 25.0 +1.8
PMRV                               i Amb               04 05 48.1
      comp=Z,48nm,1.7s
PMRV                                eS        SKSac    04 15 42.6   0.0
PMRV                                eLQ       LQ       04 28 16.3
PMRV                                eLR       LR       04 31 28.9
PMRV                               i AMs_20            04 38 13.5
      comp=Z,2µm,20.0s
GUMO  Guam            82.03 281      IAMs_20  IAMs_20  04 33 29.1
      comp=Z,2µm,21.0s
GUMO  Guam            82.03 281      LR       LR       04 34 03.4
      comp=Z,1µm,21.7s,baz=60,slow=30
SUW   Suwalki         82.04  19     eP        P        04 05 25.5 +2.4
NACGM Naroch          82.05  16     eP        P        04 05 27.7 +4.6
BRG   Berggiesshubel  82.18  25     eP        P        04 05 23.9   0.0
BRG                                  Amp               04 05 25.3
      comp=Z,5.4nm,0.9s
BRG   Berggiesshubel  82.18  25      P        P        04 05 27.7 +3.9
BRG                                  Amp               04 05 30.2
      comp=Z,20nm,1.1s
BBSD  Serra de San D  82.18 120     eP        P        04 05 23.8  -0.5
PRPB  Parauapebas     82.21 105     eP        P        04 05 24.1  -0.5
GRF   Grafenberg Arr  82.26  27     eP        P        04 05 24.3  -0.1
      comp=Z,22nm,1.3s,baz=327,slow=4.6
PESTR Estremoz        82.31  45     eP        P        04 05 29.1 +4.3
PESTR                              i Amb               04 05 33.6
      comp=Z,49nm,1.6s
BFO   Black Forest    82.33  30      P        P        04 05 22.7  -2.1
BFO   Black Forest    82.33  30      P        P        04 05 22.7  -2.1
BFO                                  pmax     pmax
      comp=Z,21nm,1.4s
BFO                                  MLR      MLR
      comp=Z,4µm,18.0s
RICC  Richard         82.51  25     eP        P        04 05 26.6 +1.0
RICC                                ex        x        04 05 34.9
RICC                                 AMS      AMS      04 43 10.0
      comp=Z,3µm,17.3s
PTEO  Sao Teotonio    82.64  46     eP        P        04 05 31.7 +5.2
PTEO                               i Amb               04 05 50.9
      comp=Z,48nm,1.8s
MNK   Minsk           82.66  16    i P        P        04 05 24.5  -1.9
      comp=E,38nm,1.0s
MNK                                i P        P        04 05 24.5  -1.9
      comp=N,13nm,1.1s
MNK                                i P        P        04 05 24.5  -1.9
      comp=Z,51nm,1.0s,baz=339
MNK                                i PP       PP       04 08 35.7 +0.6
MNK                                i PPP      PPP      04 10 25.6
MNK                                i S        S        04 15 42.8 +0.2
MNK                                i SS       SS       04 21 05.0 +2.0
MNK                                i SSS      SSS      04 24 33.8
MNK                                i LQ       LQ       04 35 47.9
MNK   Minsk           82.66  16    i P        P        04 05 24.4  -1.9
MNK                                i                   04 08 35.7
MNK                                i PPP      PPP      04 10 25.6
MNK                                i S        S        04 15 42.7 +0.2
MNK                                i SS       SS       04 21 05.0 +2.0
MNK                                i SSS      SSS      04 24 33.8
MNK                                  pmax     pmax
      comp=Z,51nm,1.0s
MNK                                  pmax     pmax
      comp=N,13nm,1.1s
MNK                                  pmax     pmax
      comp=E,38nm,1.0s
MNK                                  MLR      MLR
      comp=N,3µm,21.0s
MNK                                  MLR      MLR
      comp=Z,5µm,21.0s
MNK                                  MLR      MLR
      comp=E,2µm,20.0s
PVCC  Panska Ves      82.68  25     epP       pP       04 05 32.0  -1.0
PVCC  Panska Ves      82.68  25     eP        P        04 05 32.0 +5.5
MESJ  Messejana       82.70  46     eP        P        04 05 27.0 +0.1
MESJ                                eS        SKSac    04 15 45.4  -1.9
MESJ                                 IAMs_20  IAMs_20  04 39 01.4
      comp=Z,2µm,19.4s
MESJ  Messejana       82.70  46     eP        P        04 05 29.2 +2.3
MORF  Marmelete       82.85  46     eP        P        04 05 27.8 +0.1
MORF                                eS        SKSac    04 15 47.0  -1.4
MORF                                 IAMs_20  IAMs_20  04 37 25.7
      comp=E,2µm,22.1s
MORF  Marmelete       82.85  46     eP        P        04 05 29.1 +1.4
MORF                               i Amb               04 05 36.8
      comp=E,47nm,1.8s
MORF  Marmelete       82.85  46     eP        P        04 05 27.8 +0.1
MORF                                eS        SKSac    04 15 47.0  -1.4
PFVI  Vila Bisbo      82.88  47     eP        P        04 05 29.4 +1.6
PFVI                               i Amb               04 05 38.7
      comp=E,56nm,1.6s
ZAA0  Zalesovo Array  82.92 343      IAmb     IAmb     04 05 35.8
      comp=Z,45nm,1.3s
ZALV  Zalesovo Beam   82.92 343      P        P        04 05 27.4  -0.3
ZALV  Zalesovo Beam   82.92 343      P        P        04 05 27.6  -0.1
      comp=Z,4.3nm,0.8s,baz=11,slow=3.0,SNR=13
ZALV                                 S        SKSac    04 15 45.9  -2.2
      comp=Z,0.3nm,0.3s,baz=81,slow=9.2,SNR=1.4
ZALV                                 LR       LR       04 44 36.7
      comp=Z,1µm,18.2s,baz=18,slow=37
      comp=Z,4.3nm,0.8s
PCVE  Castro Verde    82.95  46     eP        P        04 05 32.9 +4.7
PCVE                               i Amb               04 05 51.7
      comp=Z,33nm,1.5s
BJI   Beijing         82.99 318      P        P        04 05 29.1 +0.8
BJI                                  pP       pP       04 05 33.4  -1.3
BJI                                  sP       sP       04 05 36.4  -0.7
BJI                                  PP       PP       04 08 41.1 +2.7
BJI                                  S        S        04 15 45.5  -0.9
BJI                                  SS       SS       04 21 08.8   0.0
BJI                                  pmax     pmax
      comp=Z,4.0nm,1.7s
BJI                                  pmax     pmax
      comp=Z,100nm,11.6s
BJI                                  LR       LR
      comp=Z,610nm,25.5s
BJI                                  LR       LR
      comp=Z,380nm,25.9s
BJI                                  LR       LR
      comp=Z,500nm,18.6s
PRA   Prague          83.03  25      AMS      AMS      04 43 10.0
      comp=Z,3µm,17.8s
CHVC  Chvalec         83.10  24      AMS      AMS      04 42 00.0
      comp=Z,2µm,19.1s
PBAR  Barrancos       83.11  45     eP        P        04 05 32.2 +3.2
PBAR                               i Amb               04 05 40.4
      comp=Z,46nm,1.7s
PRU   Pruhonice       83.13  25     eSKS      S        04 15 54.8 +7.3
PRU                                  AMS      AMS      04 43 20.0
      comp=Z,3µm,17.5s
R9F13 Warsaw-Wawer    83.14  21     eP        P        04 05 32.4 +3.6
R9F13                               eS        SKSac    04 15 50.1 +0.5
UPC   Upice           83.16  24     eSKS      S        04 15 55.0 +7.2
UPC                                  AMS      AMS      04 42 00.0
      comp=Z,2µm,18.1s
MOS   Moscow          83.17  10     eP        P        04 05 30.8 +1.9
MOS                                 eS        SKSac    04 15 50.2 +0.5
MOS                                  pmax     pmax
      comp=Z,49nm,1.2s
MOS                                  MLR      MLR
      comp=Z,2µm,17.0s
OSTC  Ostas           83.18  24     eP        P        04 05 28.8  -0.3
OSTC                                 AMS      AMS      04 42 00.0
      comp=Z,2µm,18.5s
OSTC  Ostas           83.18  24     eP        P        04 05 28.8  -0.3
OSTC                                 MLR      MLR
      comp=Z,2µm,18.5s
SVE   Sverdlovsk      83.22 357     eP        P        04 05 29.2   0.0
SVE                                 eS        S        04 15 47.6  -0.6
SVE                                  pmax     pmax
      comp=Z,27nm,1.2s
SVE                                  MLR      MLR
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	comp=Z,1µm,17.0s						
GOPC	GO Pecny, Ondr	83.28	25	AMS	AMS	04 43 30.0	
	comp=Z,3µm,17.4s						
PBDV	Barranco-do-Ve	83.29	46	*e*P	P	04 05 32.6	+2.6
PVAQ	Vaqueiros	83.30	46	IAMs_20	IAMs_20	04 39 14.4	
	comp=Z,1µm,20.0s						
PVAQ	Vaqueiros	83.30	46	*e*P	P	04 05 35.0	+5.0
PVAQ				*i* Amb		04 05 40.9	
	comp=Z,42nm,1.4s						
PVAQ				*e*LR	LR	04 33 07.4	
PVAQ				*i* AMs_20		04 39 44.0	
	comp=Z,2µm,20.0s						
DPC	Dobruska-Polom	83.39	24	*e*SKS	S	04 15 54.2	+3.9
DPC				AMS	AMS	04 42 10.0	
	comp=Z,2µm,17.7s						
ZVC	Zvikov	83.49	26	AMS	AMS	04 44 30.0	
	comp=Z,3µm,16.2s						
KHC	Kasperske Hory	83.55	26	*e*P	P	04 05 29.0	-2.1
KHC				*e*pP	P	04 05 35.2	+4.1
KHC				*e*SKS	S	04 15 59.7	+7.8
KHC				AMS	AMS	04 42 30.0	
	comp=Z,3µm,17.3s						
KHC	Kasperske Hory	83.55	26	*e*P	P	04 05 35.2	+4.1
KHC				*e*		04 15 59.7	
KHC				MLR	MLR		
	comp=Z,3µm,17.3s						
ESBB	Sonseca Array	83.62	42	P	P	04 05 29.7	-2.0
ESDC	Sonseca Array	83.62	42	P	P	04 05 31.8	+0.1
ESDC				IAmb	IAmb	04 05 38.0	
	comp=Z,72nm,1.9s						
ESDC	Sonseca Array	83.62	42	P	P	04 05 31.0	-0.7
	comp=Z,5.0nm,1.2s,baz=311,slow=4.0,SNR=15						
ESDC				LR	LR	04 40 20.1	
	comp=Z,3µm,19.3s,baz=312,slow=34						
	comp=Z,5.0nm,1.2s						
OBN	Obninsk	83.62	11	LR	LR	04 44 06.9	
	comp=Z,4µm,18.3s,baz=292,slow=37						
OBN	Obninsk	83.62	11	⇓*e*P	P	04 05 30.9	-0.3
OBN				*e*		04 08 43.8	
OBN				*e*PPP	PPP	04 10 34.8	
OBN				*e*S	SKSac	04 15 52.2	-0.5
OBN				*e*SS	SS	04 21 18.9	+1.8
OBN				pmax	pmax		
	comp=Z,114nm,2.5s						
OBN				MLR	MLR		
	comp=Z,4µm,18.0s						
ARTI	Arti	83.73	359	P	P	04 05 30.3	-1.5
ARTI				IAmb	IAmb	04 05 40.7	
	comp=Z,28nm,1.0s						
ARTI				IAMs_20	IAMs_20	04 47 25.9	
	comp=Z,2µm,19.0s						
ARTI	Arti	83.73	359	LR	LR	04 47 55.9	
	comp=Z,2µm,19.2s,baz=340,slow=39						
ARTI	Arti	83.73	359	P	P	04 05 30.3	-1.5
ARTI				pmax	pmax		
	comp=Z,28nm,1.0s						
KRLC	Kraliky	83.78	24	*e*P	P	04 05 32.7	+0.5
KRLC				AMS	AMS	04 42 40.0	
	comp=Z,3µm,19.2s						
KRLC	Kraliky	83.78	24	*e*P	P	04 05 32.7	+0.5
KRLC				*e*		04 05 32.9	
KRLC				MLR	MLR		
	comp=Z,3µm,19.2s						
DAVA	Damuels	83.78	29	*e*pP	P	04 05 32.9	+0.4
	comp=Z,33nm,1.3s						
GERES	GERESS Array B	83.83	26	P	P	04 05 32.3	-0.3
	comp=Z,1.6nm,0.8s,baz=335,slow=5.9,SNR=8.6						
GERES				LR	LR	04 43 14.1	
	comp=Z,2µm,19.3s,baz=325,slow=36						
	comp=Z,1.6nm,0.8s						
CEST	Esterri de Car	83.94	37	IAmb	IAmb	04 05 44.7	
	comp=Z,46nm,1.3s						
RETA	Reutte	83.94	29	*e*pP	P	04 05 34.0	+0.8
	comp=Z,13nm,1.3s						
TREC	Trest	84.04	25	AMS	AMS	04 47 50.0	
	comp=Z,3µm,15.1s						
CKRC	Cesky Krumlov	84.06	26	*e*P	P	04 05 38.6	+4.9
CKRC				*e*SKS	S	04 16 03.6	+6.6
CKRC				AMS	AMS	04 47 40.0	
	comp=Z,2µm,16.6s						
CKRC	Cesky Krumlov	84.06	26	*e*P	P	04 05 38.6	+4.9
CKRC				*e*		04 16 03.6	
CKRC				MLR	MLR		
	comp=Z,2µm,16.6s						
MOTA	Moosalm	84.19	29	*e*P	P	04 05 34.1	-0.5
	comp=Z,25nm,1.7s						
DAVOX	Davos/Dischmat	84.20	30	LR	LR	04 45 23.0	
	comp=Z,2µm,18.7s,baz=320,slow=37						
STEB	Steborice	84.20	24	*e*P	P	04 05 34.2	-0.2
TUE	Stuetta	84.26	30	P	P	04 05 36.4	+1.4
TUE				IAmb	IAmb	04 06 04.8	
	comp=Z,48nm,1.5s						
MORC	Moravsky Berou	84.27	24	IAmb	IAmb	04 06 03.9	
	comp=Z,26nm,1.4s						
MORC	Moravsky Berou	84.27	24	*e*P	P	04 05 34.7	-0.1
SANVU	Saraoutou	84.28	244	IAMs_20	IAMs_20	04 34 23.9	
	comp=Z,1µm,21.0s						
FETA	Feichten	84.32	29	*e*pP	P	04 05 35.7	+0.5
	comp=Z,12nm,1.3s						
SQTA	Sankt Quirin	84.33	29	*e*pP	P	04 05 36.0	+0.8
	comp=Z,28nm,1.4s						
BNI	Bardonecchia	84.36	33	IAmb	IAmb	04 06 01.0	
	comp=Z,29nm,1.2s						
WATA	Walderalm	84.37	28	*e*pP	P	04 05 36.3	+0.8
	comp=Z,23nm,1.2s						
VRAC	Vranov	84.39	25	LR	LR	04 44 14.9	
	comp=Z,2µm,19.1s,baz=328,slow=36						
VRAC	Vranov	84.39	25	*e*P	P	04 05 35.3	0.0
OKC	Ostrava-Krasne	84.40	23	*e*S	S	04 16 02.6	+2.3
OKC				AMS	AMS	04 43 30.0	
	comp=Z,2µm,17.5s						
MACI	Morro de la Ar	84.43	58	IAMs_20	IAMs_20	04 40 53.5	
	comp=Z,2µm,21.0s						
WTTA	Wattenberg	84.45	28	*e*pP	P	04 05 36.7	+0.8
	comp=Z,28nm,1.7s						
FUORN	Ofenpass-Fuorn	84.48	30	IAMs_20	IAMs_20	04 41 29.4	
	comp=Z,2µm,22.0s						
KRUC	Moravsky	84.54	25	*e*P	P	04 05 35.6	-0.5
OJC	Ojcow	84.56	22	*e*P	P	04 05 36.1	0.0
SALV	Santo Antonio	84.59	116	*e*P	P	04 05 36.1	-0.6
HHC	Hu-ho-hao-te	84.68	321	*e*P	P	04 05 37.3	+0.2
HHC				sP	sP	04 05 44.0	-1.9
HHC				PP	PP	04 08 51.8	-0.5
HHC				S	SKSac	04 16 00.5	+0.2
HHC				SS	SS	04 21 38.9	+5.0
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,200nm,4.4s						
HHC				LR	LR		
	comp=Z,840nm,16.1s						
HHC				LR	LR		
	comp=Z,730nm,15.3s						
HHC				LR	LR		
	comp=Z,1µm,16.8s						
LESA	Schwarzleotal	84.69	28	*e*pP	P	04 05 37.1	+0.1
	comp=Z,17nm,1.2s						
MAUC	Maruska	84.72	24	*e*P	P	04 05 37.7	+0.6
BIOA	Bad Ischl, Aus	84.80	27	*e*P	P	04 05 36.1	-1.3
	comp=Z,23nm,1.3s						
MOA	Molln	84.88	27	*e*pP	P	04 05 39.0	+1.1
	comp=Z,19nm,1.4s						
SNDB	Serra Nova Dou	85.01	110	*e*P	P	04 05 39.6	+0.7
JAVC	Velka Javorina	85.12	24	*e*P	P	04 05 39.2	+0.1
RAO	Raoul Island	85.20	225	LR	LR	04 35 57.7	
	comp=Z,409nm,20.4s,baz=355,slow=30						
ABTA	Abfaltersbach	85.21	28	*e*pP	P	04 05 39.9	+0.3
	comp=Z,36nm,1.2s						
JOW	Kunigami	85.22	301	LR	LR	04 37 14.5	
	comp=Z,541nm,21.4s,baz=100,slow=31						
TIA	Tai'an	85.31	315	P	P	04 05 42.3	+2.1
TIA				pmax	pmax		
	comp=Z,12nm,1.4s						
TIA				pmax	pmax		
	comp=Z,270nm,7.8s						
TIA				LR	LR		
	comp=Z,730nm,18.2s						
TIA				LR	LR		
	comp=Z,420nm,14.5s						
TIA				LR	LR		
	comp=Z,2µm,17.7s						
SMOL	Smolenice	85.35	24	*e*P	P	04 05 41.0	+0.8
SMOL				pmax	pmax		
	comp=Z,29nm,1.7s						
CONA	Conrad Observa	85.35	26	*e*PcP	P	04 05 40.7	+0.4
	comp=Z,22nm,1.1s						
HNR	Honiara	85.38	254	LR	LR	04 38 10.8	
	comp=Z,608nm,19.1s,baz=49,slow=32						
LANS	Liptovska Anna	85.41	23	*e*P	P	04 05 41.9	+1.4
LANS				pmax	pmax		
	comp=Z,15nm,1.4s						
LANS	Liptovska Anna	85.41	23	*e*P	P	04 05 41.9	+1.4
NIE	Niedzica	85.42	22	*e*P	P	04 05 44.1	+3.6
MODS	Modra-Piesok	85.42	25	*e*P	P	04 05 40.5	-0.1
MODS				pmax	pmax		
	comp=Z,96nm,1.3s						
MODS	Modra-Piesok	85.42	25	*e*P	P	04 05 40.5	-0.1
BTO	Baotou	85.60	322	*e*P	P	04 05 38.4	-3.3
BTO				pP	PcP	04 05 43.6	-1.0
BTO				sP	pP	04 05 46.3	-1.9
BTO				PP	PP	04 08 48.0	-12
BTO	Baotou	85.60	322	S	SKSac	04 16 07.3	+1.1
BTO	Baotou	85.60	322	SS	SS	04 22 01.3	+14
BTO				pmax	pmax		
	comp=Z,12nm,0.5s						
BTO				pmax	pmax		
	comp=Z,230nm,4.5s						
BTO				LR	LR		
	comp=N,1µm,16.7s						
BTO				LR	LR		
	comp=E,3µm,16.3s						
BTO				LR	LR		
	comp=Z,1µm,15.9s						
SMTB	Santa Maria do	85.63	105	*e*P	P	04 05 41.5	-0.6
STHS	Stebnicka Huta	85.69	22	*e*P	P	04 05 42.2	+0.3
STHS	Stebnicka Huta	85.69	22	*e*P	P	04 05 42.2	+0.3
RONA	Rosalia, Austr	85.70	25	*e*PcP	P	04 05 42.8	+0.8
	comp=Z,30nm,1.6s,SNR=5.5						
MYKA	Terra Mystica	85.71	28	*e*P	P	04 05 40.4	-1.7
	comp=Z,15nm,1.2s						
HNS	HongShan	85.72	317	⇓P	P	04 05 43.5	+1.3
HNS				S	S	04 16 16.6	+2.8
HNS				SS	SS	04 21 51.5	+2.3
HNS				pmax	pmax		
	comp=Z,20nm,1.6s						
HNS				pmax	pmax		
	comp=Z,380nm,8.6s						
HNS				LR	LR		
	comp=Z,1µm,19.1s						
HNS				LR	LR		
	comp=Z,600nm,18.6s						
HNS				LR	LR		
	comp=Z,1µm,19.6s						
INH	Isangel	85.75	240	P	P	04 05 44.5	+2.1
VYHS	Vyhne	85.81	24	*e*P	P	04 05 42.5	0.0
VYHS				pmax	pmax		
	comp=Z,176nm,2.9s						
VYHS	Vyhne	85.81	24	*e*P	P	04 05 42.4	0.0
ARSA	Arzberg	85.83	26	*e*PcP	P	04 05 42.6	0.0
	comp=Z,16nm,1.5s						
TEOL	Teolo	86.08	29	IAmb	IAmb	04 05 58.4	
	comp=Z,30nm,0.9s						
OBKA	Obir	86.14	27	*i* P	P	04 05 42.1	-2.1
	comp=Z,27nm,1.0s						
SOKA	Soboth	86.16	27	*i* PcP	P	04 05 44.3	0.0
	comp=Z,32nm,2.1s,SNR=5.7						
BRVK	Borovoye	86.24	351	P	P	04 05 44.4	-0.1
BRVK				IAmb	IAmb	04 05 52.7	
	comp=Z,36nm,1.1s						
BRVK	Borovoye	86.24	351	P	P	04 05 44.4	-0.1
BRVK				pmax	pmax		
	comp=Z,36nm,1.2s						
SRO	Srobarova	86.25	24	*e*P	P	04 05 45.8	+1.2
SRO				pmax	pmax		
	comp=Z,51nm,1.6s						
SRO	Srobarova	86.25	24	*e*P	P	04 05 45.8	+1.2
BVAR	Borovoye Array	86.26	351	P	P	04 05 44.8	+0.2
	comp=Z,18nm,1.1s,baz=27,slow=3.6,SNR=22						
BVAR				S	SKSac	04 16 10.7	+1.0
	comp=Z,0.4nm,0.4s,baz=47,slow=11,SNR=1.6						
BVAR				LR	LR	04 49 59.6	
	comp=Z,2µm,18.2s,baz=1.2,slow=40						
	comp=Z,18nm,1.1s						
LPSR	Galich'ya Gora	86.40	10	*e*P	P	04 05 45.0	-0.3
LPSR				pmax	pmax		
	comp=Z,102nm,1.0s						
KOLS	Kolonicke sedl	86.42	21	*e*P	P	04 05 50.8	+5.3
KOLS				pmax	pmax		
	comp=Z,12nm,1.3s						
KOLS	Kolonicke sedl	86.42	21	*e*P	P	04 05 50.8	+5.3
AVE	Averroes	86.44	48	IAMs_20	IAMs_20	04 43 48.0	
	comp=Z,2µm,20.0s						
AKASG	Malin Array Be	86.51	17	P	P	04 05 44.8	-1.0
	comp=Z,1.7nm,0.8s,baz=336,slow=4.2,SNR=16						
AKASG				S	S	04 16 20.9	-0.1
	comp=Z,0.3nm,0.4s,baz=14,slow=13,SNR=1.5						
AKASG				LR	LR	04 44 37.2	
	comp=Z,1µm,18.8s,baz=340,slow=36						
	comp=Z,1.7nm,0.8s						
AKASG	Malin Array Be	86.51	17	*i* P	P	04 05 45.2	-0.6
AKASG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
AKBB	Malin Array Si	86.51	17	IAmb	IAmb	04 05 54.0	
	comp=Z,57nm,1.3s						
AKBB	Malin Array Si	86.51	17	*ce*P	P	04 05 45.7	-0.1
AKBB				pmax	pmax		
	comp=Z,61nm,1.4s						
KIEV	Kiev	86.51	17	P	P	04 05 44.2	-1.6
KIEV				IAmb	IAmb	04 05 54.0	
	comp=Z,52nm,1.3s						
KIEV	Kiev	86.51	17	P	P	04 05 44.2	-1.6
KIEV				pmax	pmax		
	comp=Z,52nm,1.3s						
KIEV				MLR	MLR		
	comp=Z,2µm,18.0s						
PSZ	Piszkesteto	86.64	23	IAmb	IAmb	04 05 56.6	
	comp=Z,40nm,1.3s						
PSZ				IAMs_20	IAMs_20	04 45 09.0	
	comp=Z,2µm,20.0s						
TIY	Taiyuan	86.66	318	*e*P	P	04 05 49.3	+2.4
TIY				SKS	SKSac	04 16 15.1	+2.3
TIY				S	S	04 16 25.3	+2.2
TIY				pmax	pmax		
	comp=Z,220nm,8.1s						
TIY				LR	LR		
	comp=Z,550nm,16.5s						
TIY				LR	LR		
	comp=Z,1µm,17.2s						
TIY				LR	LR		
	comp=Z,330nm,23.4s						
SSE	Sheshan	86.70	309	P	P	04 05 45.4	-1.7
SSE				S	S	04 16 22.6	-0.9
SSE				pmax	pmax		
	comp=Z,13nm,0.8s						
SSE				pmax	pmax		
	comp=Z,130nm,4.0s						
SSE				LR	LR		
	comp=Z,390nm,23.5s						
SSE				LR	LR		
	comp=Z,210nm,23.0s						
BDQN	Bodoquena, MS	87.06	120	*e*P	P	04 05 48.8	-0.1
ARAG	Araguaiana, MT	87.16	113	*e*P	P	04 05 49.2	-0.3
KURK	Kurchatov	87.24	346	P	P	04 05 49.3	-0.2
KURK				IAmb	IAmb	04 05 57.3	
	comp=Z,45nm,1.2s						
KURK	Kurchatov	87.24	346	IAMs_20	IAMs_20	04 47 38.0	
	comp=Z,2µm,19.0s						
KURK	Kurchatov	87.24	346	P	P	04 05 50.0	+0.6
MURT	Porto Murtinho	87.34	121	*e*P	P	04 05 50.3	+0.1
VORR	Voronezh	87.35	10	*e*P	P	04 05 53.1	+3.2
VORR				pmax	pmax		
	comp=Z,80nm,1.1s						
KURBB	Kurchatov Arra	87.35	346	P	P	04 05 50.0	0.0
	comp=Z,4.5nm,0.6s,baz=16,slow=4.4,SNR=26						
KURBB				S	SKSac	04 16 13.9	-2.4
	comp=Z,0.2nm,0.5s,baz=358,slow=14,SNR=1.2						
KURBB				LR	LR	04 48 11.7	
	comp=Z,1µm,20.3s,baz=348,slow=38						
	comp=Z,4.5nm,0.6s						
NJ2	Nanjing	87.39	311	*e*P	P	04 05 50.8	+0.3
NJ2				SKS	SKSac	04 16 18.4	+1.1
NJ2				pmax	pmax		
	comp=Z,14nm,0.6s						
NJ2				LR	LR		
	comp=Z,1µm,18.9s						
NJ2				LR	LR		
	comp=Z,960nm,17.1s						
NJ2				LR	LR		
	comp=Z,1µm,16.1s						
BELG	Belogornoye	87.48	5	LR	LR	04 48 14.5	
	comp=Z,2µm,19.8s,baz=344,slow=38						
BELG	Belogornoye	87.48	5	*i* P	P	04 05 49.7	-0.8
BELG				pmax	pmax		
	comp=Z,16nm,0.9s						
VA01	Torpederas	87.61	138	IAMs_20	IAMs_20	04 38 43.1	
	comp=Z,1µm,19.0s						
VSR	Storozhevoye	87.79	10	*e*P	P	04 05 54.7	+2.7
VSR				pmax	pmax		
	comp=Z,70nm,1.3s						
VSR				MLR	MLR		
	comp=Z,4µm,18.0s						
VORD	Divnogorie	88.05	10	*e*P	P	04 05 54.5	+1.2
VORD				pmax	pmax		
	comp=Z,40nm,1.1s						
MT02	Curacav	88.06	138	IAMs_20	IAMs_20	04 39 58.8	
	comp=Z,2µm,18.0s						
VRH	Novokhopyorsk	88.12	9	*e*P	P	04 05 56.1	+2.5
VRH				pmax	pmax		
	comp=Z,40nm,1.0s						
CFA	Coronel Fontan	88.30	135	LR	LR	04 40 30.8	
	comp=Z,353nm,19.8s,baz=330,slow=32						
MT05	Renca	88.36	138	IAMs_20	IAMs_20	04 38 54.1	
	comp=Z,985nm,20.0s						
SACV	Santiago Islan	88.37	72	IAMs_20	IAMs_20	04 41 05.2	
	comp=Z,1µm,20.0s						
MDT	Midelt	88.39	47	LR	LR	04 43 34.3	
	comp=Z,748nm,18.4s,baz=338,slow=34						
MT03	Universidad Ad	88.56	138	IAMs_20	IAMs_20	04 40 23.3	
	comp=Z,1µm,19.0s						
MT08	Bocatoma Ro	88.78	137	IAMs_20	IAMs_20	04 39 17.1	
	comp=Z,1µm,20.0s						
BO04	La Punta	88.90	138	IAmb	IAmb	04 06 08.0	
	comp=Z,40nm,1.2s						
BO01	Tunca	88.97	139	IAmb	IAmb	04 06 10.8	
	comp=Z,38nm,1.2s						
LYN	LuoYang	89.06	316	P	P	04 06 00.6	+2.2
LYN				pP	sP	04 06 05.9	-1.3
LYN				SKS	SKSac	04 16 27.8	+0.5
LYN				S	S	04 16 48.0	+2.0
LYN				pmax	pmax		
	comp=Z,28nm,1.3s						
LYN				pmax	pmax		
	comp=Z,270nm,4.5s						
LYN				LR	LR		
	comp=Z,760nm,14.4s						
LYN				LR	LR		
	comp=Z,860nm,15.8s						
LYN				LR	LR		
	comp=Z,990nm,16.8s						
PINNC	Pines Island,	89.11	239	IAMs_20	IAMs_20	04 37 51.1	
	comp=Z,2µm,20.0s						
RPRD	Ribas do Rio P	89.12	118	*e*P	P	04 05 58.5	-0.2
DZM	Mont Dzumac	89.39	240	*e*P	P	04 06 00.3	+0.3
	comp=Z,87nm,1.2s						
DZM	Mont Dzumac	89.39	240	*e*PP	PP	04 09 18.0	-14
	comp=Z,79nm,24.6s						
DZM				*e*S	S	04 16 44.0	-5.3
	comp=Z,608nm,25.1s						
DZM				*e*SS	SS	04 22 34.5	-11
	comp=Z,571nm,27.4s						
DZM				*e*LQ	LQ	04 29 41.5	
	comp=Z,352nm,25.7s						
DZM				*e*LR	LR	04 34 17.4	
	comp=Z,4µm,23.4s						
DZM	Mont Dzumac	89.39	240	P	P	04 06 01.7	+1.7
	comp=Z,30nm,1.1s,baz=75,slow=12,SNR=7.2						
DZM				LR	LR	04 37 27.0	
	comp=Z,2µm,21.5s,baz=6.5,slow=30						
	comp=Z,30nm,1.1s						
DZM	Mont Dzumac	89.39	240	P	P	04 06 02.1	+2.1
BO02	Sierra Bellavi	89.44	139	IAMs_20	IAMs_20	04 40 30.6	
	comp=Z,1µm,20.0s						
NBPB	Pedra_Branca-C	89.48	98	*e*P	P	04 06 00.0	-0.6
NBCL	Cascavel-CE	89.61	96	*e*P	P	04 06 01.7	+0.5
AKTO	Aktyubinsk	89.69	359	LR	LR	04 50 49.0	
	comp=Z,3µm,19.9s,baz=6.5,slow=39						
BDFB	Brasilia	89.82	111	IAmb	IAmb	04 06 14.9	
	comp=Z,35nm,1.5s						
BDFB	Brasilia	89.82	111	P	P	04 06 02.9	+0.7
	comp=Z,8.7nm,1.0s,baz=327,slow=7.9,SNR=7.1						
BDFB				LR	LR	04 51 26.6	
	comp=Z,2µm,18.8s,baz=317,slow=39						
	comp=Z,8.7nm,1.0s						
SDBA	SAO DESIDERIO	89.95	106	*e*P	P	04 06 03.6	+0.8
MILM	Milestii Mici	89.97	18	*e*P	P	04 05 58.0	-4.4
	comp=Z,190nm,6.9s						
MILM	Milestii Mici	89.97	18	*e*PS	PS	04 18 13.0	+12
MILM				*e*SS	SS	04 23 04.0	+14
MILM				*e*L	L	04 34 29.0	
MILM				LQM		04 43 03.0	
	comp=Z,1µm,22.0s						
MILM				LRM	MLR	04 50 05.0	
	comp=Z,1µm,17.0s						
MILM	Milestii Mici	89.97	18	*e*P	P	04 05 58.0	-4.4
MILM				pmax	pmax		
	comp=Z,190nm,6.9s						
MILM				MLR	MLR		
	comp=Z,1µm,17.0s						
VSL	Villasalto	90.07	34	IAMs_20	IAMs_20	04 43 59.6	
	comp=Z,1µm,19.0s						
MKAR	Makanchi Array	90.18	342	P	P	04 06 03.0	-0.5
MKAR	Makanchi Array	90.18	342	P	P	04 06 03.2	-0.2
	comp=Z,4.8nm,1.1s,baz=17,slow=6.3,SNR=11						
MKAR				S	SKSac	04 16 31.3	-2.2
	comp=Z,0.2nm,0.5s,baz=46,slow=4.2,SNR=1.5						
MKAR				LR	LR	04 48 40.7	
	comp=Z,2µm,20.5s,baz=360,slow=37						
	comp=Z,4.8nm,1.1s						
MKAR	Makanchi Array	90.18	342	*i* P	P	04 06 05.6	+2.1
MKAR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MAKZ	Makanchi	90.24	342	P	P	04 06 03.1	-0.6
MAKZ				IAmb	IAmb	04 06 08.9	
	comp=Z,23nm,1.0s						
MAKZ	Makanchi	90.24	342	P	P	04 06 03.2	-0.6
MAKZ				pmax	pmax		
	comp=Z,23nm,1.0s						
MAKZ				MLR	MLR		
	comp=Z,3µm,20.0s						
MLR	Muntele Rosu	90.58	20	LR	LR	04 48 45.2	
	comp=Z,8µm,18.9s,baz=333,slow=37						
SJPY	San Joaquin	90.67	123	*e*P	P	04 06 06.0	+0.2
BI02	San Fabin de	90.67	140	IAMs_20	IAMs_20	04 37 08.1	
	comp=Z,888nm,19.0s						
AB31	Akbulak array	90.82	357	IAmb	IAmb	04 06 16.6	
	comp=Z,28nm,1.1s						
ABKAR	Akbulak array	90.82	357	P	P	04 06 06.0	-0.3
ABKAR	Akbulak array	90.82	357	IAmb	IAmb	04 06 16.6	
	comp=Z,28nm,1.1s						
CPUP	Villa Florida	90.83	124	P	P	04 06 06.2	-0.3
	comp=Z,1.2nm,0.8s,baz=42,slow=1.3,SNR=6.9						
CPUP				LR	LR	04 48 25.9	
	comp=Z,236nm,20.9s,baz=198,slow=37						
	comp=Z,1.2nm,0.8s						
CPUP	Villa Florida	90.83	124	*e*P	P	04 06 05.5	-1.0
WHN	Wuhan	91.08	313	P	P	04 06 13.1	+5.2
WHN				S	S	04 17 06.5	+1.7
WHN				LR	LR		
	comp=Z,2µm,14.4s						
WHN				LR	LR		
	comp=Z,1µm,15.1s						
WHN				LR	LR		
	comp=Z,3µm,19.4s						
GTA	Gaotai	91.11	327	*e*P	P	04 06 08.8	+0.7
GTA				pP	pP	04 06 13.3	-1.2
GTA				SKS	SKSac	04 16 40.3	+0.9
GTA				S	S	04 17 02.6	-2.6
GTA				SS	SS	04 23 06.0	-1.6
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				LR	LR		
	comp=Z,2µm,17.1s						
GTA				LR	LR		
	comp=Z,2µm,17.8s						
GTA				LR	LR		
	comp=Z,4µm,18.5s						
IPMB	Ipameri, GO	91.24	113	*e*P	P	04 06 08.4	-0.3
XAN	Xi'an	91.30	318	⇑P	P	04 06 13.9	+5.0
XAN				pP	sP	04 06 21.8	+4.1
XAN				SKS	SKSac	04 16 40.3	-0.1
XAN				pmax	pmax		
	comp=Z,44nm,1.1s						
XAN				pmax	pmax		
	comp=Z,310nm,9.3s						
XAN				LR	LR		
	comp=Z,1µm,19.0s						
XAN				LR	LR		
	comp=Z,1µm,22.4s						
XAN				LR	LR		

	comp=Z,2µm,14.4s						
TRCB	**Terra Rica**	**91.43**	**119**	IAMs_20	IAMs_20	04 49 34.1	
	comp=Z,892nm,19.0s						
TRCB	**Terra Rica**	**91.43**	**119**	_e_P	**P**	**04 06 09.5**	**0.0**
WMQ	**Urumqi**	**91.51**	**337**	_e_P	P	04 06 15.3	+5.6
WMQ				PP	**PP**	**04 09 50.9**	**+4.1**
WMQ				SKS	**SKSac**	**04 16 42.6**	**+1.3**
WMQ				pmax	pmax		
	comp=Z,28nm,1.1s						
WMQ				LR	LR		
	comp=Z,2µm,16.3s						
WMQ				LR	LR		
	comp=Z,1µm,16.9s						
WMQ				LR	LR		
	comp=Z,2µm,17.5s						
PCMB	**Pacaembu**	**91.55**	**117**	_e_P	**P**	**04 06 10.0**	**0.0**
JANB	**Januaria**	**92.11**	**108**	_e_P	**P**	**04 06 13.0**	**+0.2**
LZH	**Lanzhou**	**92.12**	**323**	_e_P	**P**	**04 06 13.4**	**+0.6**
LZH				pP	sP	04 06 22.9	+1.2
LZH				PP	**PP**	**04 09 54.3**	**+2.3**
LZH				SKS	**SKSac**	**04 16 46.3**	**+1.1**
LZH				S	**S**	**04 17 10.8**	**-3.6**
LZH				pmax	pmax		
	comp=Z,160nm,4.1s						
LZH				LR	LR		
	comp=Z,3µm,16.7s						
LZH				LR	LR		
	comp=Z,2µm,17.0s						
LZH				LR	LR		
	comp=Z,4µm,17.0s						
RCBR	**Riachuelo**	**92.46**	**95**	IAMs_20	IAMs_20	04 47 14.5	
	comp=Z,1µm,21.0s						
RCBR	**Riachuelo**	**92.46**	**95**	LR	LR	04 51 18.9	
	comp=Z,309nm,21.8s,baz=305,slow=38						
RCBR	**Riachuelo**	**92.46**	**95**	_e_P	**P**	**04 06 15.4**	**+0.9**
LR05	**Currie**	**93.15**	**143**	IAMs_20	IAMs_20	04 41 56.7	
	comp=Z,1µm,20.0s						
KEST	**Kesra**	**93.18**	**36**	P	**P**	**04 06 18.1**	**+0.4**
	comp=Z,2.8nm,1.0s,baz=37,slow=2.9,SNR=4.4						
KEST				LR	LR	04 48 12.4	
	comp=Z,2µm,19.4s,baz=332,slow=36						
	comp=Z,2.8nm,1.0s						
ERBR	**Yeremizino-Bor**	**93.35**	**11**	_e_P	**P**	**04 06 15.4**	**-2.7**
ERBR				_e_*PP	**PcP**	**04 06 18.5**	**-0.2**
ERBR				_e_S	**SKSac**	**04 16 49.1**	**-2.3**
ERBR				pmax	pmax		
	comp=Z,5.0nm,0.4s						
MXZ	**Matakaoa Point**	**93.62**	**222**	IAMs_20	IAMs_20	04 40 23.1	
	comp=Z,2µm,22.0s						
BBTS	**Babate**	**93.65**	**67**	LR	LR	04 47 36.7	
	comp=Z,2µm,18.3s,baz=198,slow=35						
ANN	**Anapa**	**93.77**	**13**	_e_P	**P**	**04 06 16.1**	**-3.9**
ANN				_e_*PP	**PcP**	**04 06 20.0**	**-0.5**
ANN				_e_S	**SKSac**	**04 16 50.0**	**-3.6**
ANN				pmax	pmax		
	comp=Z,18nm,1.1s						
CEL	**Celeste**	**93.78**	**30**	IAMs_20	IAMs_20	04 44 09.5	
	comp=Z,1µm,22.0s						
VAE	**Valguarnera**	**93.87**	**32**	LR	LR	04 48 14.2	
	comp=Z,2µm,18.1s,baz=1.5,slow=35						
PLCA	**Paso Flores**	**94.23**	**142**	P	**P**	**04 06 20.3**	**-1.7**
	comp=Z,0.7nm,0.9s,baz=329,slow=5.1,SNR=4.9						
PLCA				LR	LR	04 42 53.8	
	comp=Z,853nm,18.2s,baz=344,slow=32						
	comp=Z,0.7nm,0.9s						
LABN	**Labinsk**	**94.44**	**11**	_e_P	**P**	**04 06 19.9**	**-3.2**
LABN				_e_*PP	**PcP**	**04 06 24.1**	**+0.6**
LABN				_e_S	**SKSac**	**04 16 54.3**	**-3.0**
LABN				pmax	pmax		
	comp=Z,13nm,0.7s						
LABN				MLR	MLR		
	comp=N,4µm,15.0s						
LABN				MLR	MLR		
	comp=Z,2µm,16.0s						
LABN				MLR	MLR		
	comp=E,4µm,14.0s						
URZ	**Urewera**	**94.76**	**222**	LR	LR	04 41 44.5	
	comp=E,990nm,20.3s,baz=38,slow=31						
ITAB	**Concordia**	**94.79**	**122**	IAMs_20	IAMs_20	04 52 00.1	
	comp=Z,947nm,21.0s						
PMG	**Port Moresby**	**94.93**	**262**	LR	LR	04 47 10.4	
	comp=Z,993nm,18.1s,baz=16,slow=34						
TOZ	**Tahuroa Road**	**95.21**	**224**	IAMs_20	IAMs_20	04 48 02.1	
	comp=Z,1µm,18.0s						
SOC	**Sochi**	**95.32**	**12**	_e_P	**P**	**04 06 25.1**	**-2.1**
SOC				_e_		04 10 17.5	
SOC				_e_PPP	PPP	04 12 18.1	
SOC				_e_S	**SKSac**	**04 17 00.8**	**-1.3**
SOC				_e_SS	**SS**	**04 24 05.4**	**-1.6**
SOC				_e_SSS	SSS	04 27 50.7	
SOC				MLR	MLR		
	comp=Z,4µm,18.0s						
WDD	**Wied Dalam**	**95.33**	**33**	IAMs_20	IAMs_20	04 51 12.7	
	comp=Z,1µm,18.0s						
KIV	**Kislovodsk**	**95.38**	**9**	_e_P	**P**	**04 06 29.3**	**+1.8**
KIV				_e_		04 10 18.7	
KIV				_e_		04 17 04.8	
KIV				_e_SS	SS	04 24 14.0	+6.1
KIV				pmax	pmax		
	comp=Z,18nm,1.1s						
KIV				pmax	pmax		
	comp=Z,7.0nm,3.7s						
KIV				MLR	MLR		
	comp=Z,3µm,20.0s						
KVAR	**Kislovodsk Arr**	**95.38**	**9**	LR	LR	04 52 22.3	
	comp=Z,2µm,18.2s,baz=258,slow=37						
VAO	**Valinhos**	**95.43**	**115**	IAMs_20	IAMs_20	04 53 45.0	
	comp=Z,1µm,20.0s						
JAY	**Jayapura**	**95.47**	**271**	LR	LR	04 41 51.1	
	comp=Z,1µm,20.5s,baz=12,slow=31						
SPB	**Sao Paulo**	**95.50**	**116**	IAMs_20	IAMs_20	04 52 17.9	
	comp=Z,2µm,22.0s						
LL02	**Futaleuf**	**95.57**	**144**	IAMs_20	IAMs_20	04 39 47.7	
	comp=Z,927nm,22.0s						
SHA1	**Shidzhatmaz**	**95.58**	**9**	_i_ P	**P**	**04 06 28.3**	**-0.4**
KBZ	**Khabaz**	**95.62**	**9**	P	**P**	**04 06 28.4**	**-0.2**
	comp=Z,1.9nm,0.8s,baz=321,slow=8.3,SNR=4.4						
KBZ				LR	LR	04 51 48.5	
	comp=Z,4µm,19.1s,baz=338,slow=37						
	comp=Z,1.9nm,0.8s						
BOOM	**Boomskoye usch**	**95.66**	**345**	IAMs_20	IAMs_20	04 53 26.6	
	comp=Z,2µm,19.0s						
AAK	**Ala-Archa**	**95.79**	**346**	LR	LR	04 54 05.2	
	comp=Z,1µm,19.5s,baz=355,slow=38						
AAK	**Ala-Archa**	**95.79**	**346**	_i_ P	**P**	**04 06 29.4**	**-0.1**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.6s						
GOMU	**GeErMu**	**95.89**	**329**	SS	SS	04 24 25.9	+10
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.5s						
GOMU				LR	LR		
	comp=N,1µm,21.1s						
GOMU				LR	LR		
	comp=E,850nm,19.9s						
GOMU				LR	LR		
	comp=Z,2µm,21.4s						
KKAR	**Karatay Array**	**95.98**	**349**	P	**P**	**04 06 32.3**	**+2.1**
KKAR	**Karatay Array**	**95.98**	**349**	P	**P**	**04 06 32.3**	**+2.1**
TARG	**Taragay, Kyrgy**	**96.00**	**344**	IAMs_20	IAMs_20	04 54 41.9	
	comp=Z,2µm,19.0s						
TRQA	**Tornquist**	**96.53**	**135**	IAMs_20	IAMs_20	04 44 44.1	
	comp=Z,1µm,20.0s						
SMPI	**Sarmi**	**96.66**	**273**	P	**P**	**04 06 34.4**	**+0.7**
	comp=Z,21nm,0.8s						
MAK	**Makhachkala**	**96.86**	**6**	_e_P	P	04 06 27.4	-6.7
MAK				_e_SS	SS	04 24 24.9	-3.7
MAK				pmax	pmax		
	comp=Z,63nm,1.2s						
MAK				MLR	MLR		
	comp=Z,2µm,18.0s						
HKPS	**Hong Kong Po S**	**97.42**	**307**	IAMs_20	IAMs_20	04 55 56.0	
	comp=Z,1µm,18.0s						
BRTR	**Keskin Array B**	**97.91**	**17**	P	**P**	**04 06 38.4**	**-0.7**
	comp=Z,1.1nm,0.9s,baz=0.7,slow=5.2,SNR=5.5						
BRTR				LR	LR	04 52 13.0	
	comp=Z,2µm,21.4s,baz=344,slow=36						
	comp=Z,1.1nm,0.9s						
TOKA	**Tokat**	**97.93**	**15**	IAMs_20	IAMs_20	04 55 15.1	
	comp=Z,1µm,21.0s						
AKT	**Akhty**	**98.35**	**6**	_e_P	Pdif	04 06 42.3	+1.2
AKT				_e_		04 10 42.8	
AKT				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AKT				MLR	MLR		
	comp=Z,2µm,18.0s						
GYA	**Guiyang**	**98.49**	**315**	⇑P	Pdif	04 06 42.1	+0.1
GYA				S	**S**	**04 18 05.4**	**-4.6**
GYA				pmax	pmax		
	comp=Z,11nm,0.9s						
GYA				pmax	pmax		
	comp=Z,160nm,7.0s						
GYA				LR	LR		
	comp=Z,460nm,15.4s						
GYA				LR	LR		
	comp=Z,240nm,13.0s						
GYA				LR	LR		
	comp=Z,310nm,15.0s						
TGY	**Tagaytay City**	**98.98**	**297**	LR	LR	04 46 09.1	
	comp=Z,662nm,19.8s,baz=26,slow=32						
GNI	**Garni**	**99.37**	**9**	IAMs_20	IAMs_20	04 55 01.2	
	comp=Z,1µm,20.0s						
GNI	**Garni**	**99.37**	**9**	LR	LR	04 53 53.0	
	comp=Z,2µm,18.2s,baz=350,slow=37						
GNI	**Garni**	**99.37**	**9**	_i_ P	**Pdif**	**04 06 47.9**	**+2.2**
GNI				pmax	pmax		
	comp=Z,17nm,1.5s						
ARPR	**Arapgir-MALATY**	**99.47**	**14**	IAMs_20	IAMs_20	04 55 41.0	
	comp=Z,1µm,20.0s						
IDI	**Anoyia**	**99.65**	**25**	LR	LR	04 53 15.6	
	comp=Z,1µm,21.1s,baz=327,slow=36						
ARG	**Arkhangelos**	**99.80**	**22**	IAMs_20	IAMs_20	04 54 22.1	
	comp=Z,1µm,20.0s						
COEN	**Coen**	**100.81**	**261**	IAMs_20	IAMs_20	04 43 23.5	
	comp=Z,1µm,22.0s						
GEVA	**Gevas**	**100.98**	**10**	IAMs_20	IAMs_20	04 58 14.6	
	comp=Z,939nm,21.0s						
PZH	**PanZhiHua**	**101.02**	**319**	P	**Pdif**	**04 06 52.5**	**-0.8**
RPZ	**Rata Peaks**	**101.87**	**222**	P	**Pdif**	**04 06 57.0**	**+0.7**
	comp=Z,16nm,1.0s,baz=74,slow=15,SNR=3.2						
EIDS	**Eidsvold**	**102.11**	**247**	IAMs_20	IAMs_20	04 50 01.4	
	comp=Z,1µm,18.0s						
FAKI	**Fak Fak**	**102.19**	**277**	IAMs_20	IAMs_20	04 47 00.9	
	comp=Z,924nm,20.0s						
CTAO	**Charters Tower**	**102.32**	**254**	IAMs_20	IAMs_20	04 50 06.7	
	comp=Z,968nm,20.0s						
QIZ	**Qiongzhong**	**102.49**	**308**	P	**Pdif**	**04 06 58.3**	**-1.5**
QIZ				S	**Sdif**	**04 18 44.8**	**+1.4**
QIZ				SS	**SS**	**04 25 47.8**	**-1.4**
QIZ				LR	LR		
	comp=Z,620nm,22.6s						
QIZ				LR	LR		
	comp=Z,630nm,20.4s						
SLVN	**Son La**	**104.09**	**314**	IAMs_20	IAMs_20	05 01 53.2	
	comp=Z,859nm,21.0s						
ARMA	**Armidale**	**104.85**	**243**	IAMs_20	IAMs_20	04 44 35.2	
	comp=Z,1µm,20.0s						
EVN	**Everest**	**106.27**	**332**	IAMs_20	IAMs_20	05 01 27.2	
	comp=Z,912nm,20.0s						
GHAJ	**Ghor Haditha**	**106.41**	**18**	IAMs_20	IAMs_20	05 00 05.9	
	comp=Z,781nm,20.0s						
KKM	**Kota Kinabalu**	**107.94**	**295**	IAMs_20	IAMs_20	04 48 58.9	
	comp=Z,786nm,21.0s						
DLV	**Lat**	**108.75**	**305**	IAMs_20	IAMs_20	05 03 34.7	
	comp=Z,1µm,19.0s						
CHTO	**Chiang Mai**	**108.82**	**317**	IAMs_20	IAMs_20	05 00 43.8	
	comp=Z,895nm,18.0s						
MTN	**Manton Dam**	**109.30**	**269**	IAMs_20	IAMs_20	04 50 36.0	
	comp=Z,1µm,20.0s						
WRAB	**Tennant Creek**	**111.13**	**261**	IAMs_20	IAMs_20	04 52 25.5	
	comp=Z,1µm,20.0s						
WRA	**Warramunga Arr**	**111.14**	**261**	PKiKP	**PKiKP**	**04 11 37.4**	**+0.3**
	comp=Z,1.3nm,0.9s,baz=18,slow=1.7,SNR=6.2						
KNRA	**Kununurra**	**112.84**	**268**	IAMs_20	IAMs_20	04 52 16.9	
	comp=Z,978nm,19.0s						
KAPI	**Kappang**	**112.97**	**283**	IAMs_20	IAMs_20	04 51 06.2	
	comp=Z,577nm,19.0s						
TOO	**Toolangi**	**113.16**	**240**	IAMs_20	IAMs_20	04 50 50.6	
	comp=Z,912nm,20.0s						
ASAR	**Alice Springs**	**113.64**	**258**	PKiKP	**PKiKP**	**04 11 42.1**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=75,slow=2.3,SNR=6.8						
ASAR				PKKPab	**PKKPab**	**04 22 31.4**	**+0.3**
	comp=Z,1.6nm,1.0s,baz=235,slow=3.3,SNR=4.9						
UOSS	**Minazif**	**115.16**	**360**	IAMs_20	IAMs_20	05 08 43.6	
	comp=Z,832nm,21.0s						
RAYN	**Ar Rayn**	**115.86**	**10**	IAMs_20	IAMs_20	05 06 44.5	
	comp=Z,717nm,20.0s						
HYB	**Hyderabad**	**118.85**	**335**	_e_PKiKP	**PKPdf**	**04 11 51.3**	**-0.7**
HYB				_e_PP	**PP**	**04 13 10.9**	**+1.5**
ATD	**Arta Tunnel**	**127.13**	**16**	IAMs_20	IAMs_20	05 14 31.3	
	comp=Z,724nm,19.0s						
FURI	**Furi**	**128.63**	**22**	IAMs_20	IAMs_20	05 15 14.8	
	comp=Z,826nm,20.0s						
QSPA	**South Pole Qui**	**130.04**	**180**		**PKiKP**	**04 12 12.8**	**+0.1**
QSPA	**South Pole Qui**	**130.04**	**180**	PKP	**PKPdf**	**04 12 11.9**	**+0.1**
	comp=Z,19nm,1.1s,baz=114,slow=0.6,SNR=23						
VNA3	**Neumayer Olymp**	**135.38**	**155**	⇓PKPdf	**PKiKP**	**04 12 22.8**	**-0.5**
	comp=Z,12nm,0.7s						
VNA2	**Neumayer--Watz**	**136.16**	**155**	⇓PKPdf	**PKPdf**	**04 12 23.5**	**+0.3**
	comp=Z,3.3nm,0.6s,baz=314,slow=5.6						
SNAA	**Sanae**	**137.43**	**156**	⇓PKPdf	**PKPdf**	**04 12 23.1**	**-2.6**
	comp=Z,37nm,0.9s						
SNAA	**Sanae**	**137.43**	**156**	PKhKP	PKPpre	04 12 22.6	
	comp=Z,2.9nm,1.0s,baz=181,slow=1.9,SNR=3.0						
TROLL	**Troll, Antarti**	**138.93**	**158**	⇓PKPdf	**PKPdf**	**04 12 24.5**	**-4.0**
	comp=Z,52nm,1.0s						
KSANE	**Kasane**	**145.42**	**59**	_i_ P	**PKPab**	**04 12 42.0**	**+0.3**
KGCAE	**Kacgae**	**146.83**	**69**	_i_ P	**PKPbc**	**04 12 46.1**	**+0.3**
SOOWA	**Sowa**	**148.08**	**61**	_i_ P	**PKPdf**	**04 12 47.2**	**+1.2**
PHPEN	**Phepeng**	**148.90**	**72**		**PKPbc**	**04 12 50.8**	**-0.4**
PHPEN	**Phepeng**	**148.90**	**72**	_i_ P	**PKPbc**	**04 12 50.9**	**-0.4**
SKOMA	**Sekoma**	**149.10**	**69**	_i_ P	**PKPbc**	**04 12 50.3**	**-1.4**
BROLN	**Tlhalogang**	**149.20**	**60**	_i_ P	**PKPdf**	**04 12 48.6**	**+0.8**
LPHEP	**Lephephe**	**149.73**	**65**	_i_ P	**PKPdf**	**04 12 50.3**	**+1.7**
SYO	**Syowa Base**	**149.89**	**168**	⇑_i_sPKPdf	**PKPbc**	**04 12 52.4**	**+0.3**
SYO	**Syowa Base**	**149.89**	**168**	⇓_e_PKiKP	**PKiKP**	**04 12 54.4**	**+1.4**
SYO	**Syowa Base**	**149.89**	**168**	⇑_i_PKPab	**PKPab**	**04 12 58.6**	**+0.8**
MAKGR	**Makgori**	**150.51**	**70**	_i_ P	**PKPbc**	**04 12 53.1**	**-2.0**
MAW	**Mawson**	**152.29**	**186**	PKPbc	**PKPbc**	**04 12 57.9**	**+0.1**
	comp=Z,8.9nm,0.9s,baz=162,slow=6.4,SNR=6.9						
BOSA	**Boshof**	**152.44**	**75**	PKPbc	**PKPbc**	**04 12 59.0**	**-0.5**
	comp=Z,4.4nm,0.8s,baz=323,slow=1.3,SNR=9.8						
BOSA	**Boshof**	**152.44**	**75**	PKIKP	**PKPbc**	**04 12 59.0**	**-0.5**

IDC ***23*** *03:56:17.2±1.8, 30°.80S×177°.40W, h0^{km}, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=42.7km s-min=23.9km az=85.0*

ISC 23 03:56:21.1±1.7**, 30°.8S**±0°.1×**177°.4W**±0°.3**, h27**^{km}**, n7, σ0^{s}.86**/7**, mb4.0**/4**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.58**	**342**	Pn	**Pn**	**03 56 47.2**	**-0.1**
	14nm,0.3s,baz=228,slow=23,SNR=1.4						
RAO				Sn	**Sb**	**03 57 09.5**	**+0.4**
	125nm,0.3s,baz=195,slow=23,SNR=2.5						
URZ	**Urewera**	**8.77**	**210**	Pn	Pn	03 58 19.6	-6.4
	0.4nm,0.3s,baz=330,slow=20,SNR=1.4						
URZ				Sn	Sn	03 59 55.1	-8.9
	0.8nm,0.3s,baz=74,slow=17,SNR=6.0						
STKA	**Stephens Creek**	**34.94**	**257**	P	**P**	**04 03 11.8**	**+1.0**
	1.5nm,0.7s,baz=106,slow=7.4,SNR=3.7						
	1.5nm,0.7s						
ASAR	**Alice Springs**	**43.65**	**267**	P	**P**	**04 04 23.2**	**-0.5**
	0.5nm,0.6s,baz=109,slow=6.9,SNR=8.2						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**44.67**	**272**	P	**P**	**04 04 30.6**	**-1.3**
	0.9nm,0.5s,baz=111,slow=8.1,SNR=8.3						
	0.9nm,0.5s						
QSPA	**South Pole Qui**	**59.35**	**180**	P	**P**	**04 06 20.9**	**+0.2**
	2.5nm,1.1s,baz=43,slow=6.2,SNR=3.1						
	2.5nm,1.1s						
FINES	**FINESS Array B**	**145.67**	**340**	PKPbc	**PKPdf**	**04 15 56.1**	**-0.1**
	1.1nm,0.5s,baz=34,slow=4.0,SNR=11						

IDC ***23*** *04:10:31.7±8.2, 18°.23S×169°.60E, h260^{km}±53^{km}, mb3.2/3, mbtmp3.8/4, Error ellipse: s-maj=125.8km s-min=78.7km az=121.0*

NOU ***23*** *04:10:36.4, 18°.66S×169°.47E, h257^{km}, MLv4.0/14, Vanuatu Islands*

ISC 23 04:10:34.9±1.9**, 18°.61S**±0°.07×**169°.5E**±0°.2**, h250**^{km}**, n15, σ2^{s}.64**/16**, mb3.7**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INH	**Isangel**	**0.96**	**195**	P	**Pn**	**04 11 12.8**	**+3.1**
DVP	**Devils Point**	**1.55**	**304**	P	**Pn**	**04 11 15.9**	**+2.2**
DVP	**Devils Point**	**1.55**	**304**	S	**S**	**04 11 47.7**	**+3.6**
MARNC	**Mare, Loyalty**	**3.18**	**206**	P	**Pn**	**04 11 30.1**	**+0.7**
MARNC	**Mare, Loyalty**	**3.18**	**206**	P	**S**	**04 12 12.5**	**-0.1**
SANVU	**Saraoutou**	**3.85**	**324**	P	**Pn**	**04 11 38.1**	**+1.0**
YATNC	**Mamie plateau,**	**4.23**	**215**	P	**Pn**	**04 11 42.5**	**+1.1**
PINNC	**Pines Island,**	**4.43**	**206**	P	**Pn**	**04 11 46.2**	**+2.4**
DZM	**Mont Dzumac**	**4.50**	**220**	P	**Pn**	**04 11 46.2**	**+1.4**
	9.8nm,0.6s,baz=60,slow=18,SNR=24						
DZM				S	**S**	**04 12 45.2**	**+5.0**
	baz=73,slow=20						
DZM	**Mont Dzumac**	**4.50**	**220**	P	**Pn**	**04 11 46.1**	**+1.4**
ONTNC	**Ouen Toro**	**4.67**	**218**	P	**Pn**	**04 11 46.4**	**-0.3**
KOUNC	**Koumac, New Ca**	**5.31**	**248**	P	**Pn**	**04 11 56.4**	**+1.9**
STKA	**Stephens Creek**	**28.41**	**237**	P	**P**	**04 16 05.2**	**-1.5**
	1.5nm,0.7s,baz=64,slow=10,SNR=4.0						
	1.5nm,0.7s						
WRA	**Warramunga Arr**	**33.21**	**262**	P	**P**	**04 16 45.2**	**-3.6**
	0.5nm,0.7s,baz=77,slow=6.8,SNR=2.6						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**33.55**	**255**	P	**P**	**04 16 48.9**	**-2.8**
	1.0nm,0.5s,baz=85,slow=8.4,SNR=17						
	1.0nm,0.5s						

WEL ***23*** *04:29:29.8±0.5, 38°S±2°×17°6E±°, h4^{km}±2^{km}, M4.0/21, ML4.3/21, MLv4.0/21, Error ellipse: s-maj=2.6km s-min=2.3km az=101.8, confirmed*

WEL ***23*** *04:29:29.8, 38°.33S×176°.38E, h5^{km}, ML4.0, Mw3.9, Moment Tensor Solution. s14 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.63; M$_{\theta\theta}$6.98; M$_{\phi\phi}$-6.35; M$_{r\theta}$-5.33; M$_{\theta\phi}$4.06; M$_{\phi r}$-1.28; Fault plane solution: M$_0$9.13000×10^{14} NP1: φ$_s$302.00000°, δ74.00000°, λ20.00000°. NP2: φ$_s$206.00000°, δ70.00000°, λ163.00000°. Principal axes: T 10.7590, Plg26.0000°, Azm165.0000°; N -3.2610, Plg64.0000°, Azm337.0000°; P -7.4980, Plg3.0000°, Azm73.0000°; Stations used: OPRZ RTZ URZ BKZ TOZ MWZ OTVZ WIZ WHVZ HIZ HAZ MKAZ WAZ MRZ STRIKE-SLIP FAULTING*

NOU ***23*** *04:29:30.3, 38°.38S×176°.36E, h0^{km}, MLv3.9/10, North Island, New Zealand*

ISC 23 04:29:30.2±0.9**, 38°.34S**±0°.02×**176°.38E**±0°.02**, h5**^{km}±8^{km}**, n44, σ0^{s}.55**/54**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HLRZ	**Highlands Stat**	**0.09**	**347**	P	**Pg**	**04 29 31.8**	**-0.4**
HLRZ				S	**Sg**	**04 29 33.3**	**-0.1**
HRRZ	**Handcock Road**	**0.09**	**235**	P	**Pg**	**04 29 32.1**	**-0.1**
HRRZ				S	**Sg**	**04 29 34.2**	**+0.7**
RRRZ	**Republican Roa**	**0.11**	**90**	P	**Pg**	**04 29 32.1**	**-0.4**
RRRZ				S	**Sg**	**04 29 34.0**	**0.0**
HSRZ	**Hossack Road**	**0.11**	**285**	P	**Pg**	**04 29 32.4**	**-0.1**
HSRZ				S	**Sg**	**04 29 34.7**	**+0.7**
TARZ	**Mount Tarawera**	**0.14**	**44**	P	**Pg**	**04 29 33.1**	**-0.1**
PRRZ	**Plateau Road**	**0.16**	**176**	P	**Pg**	**04 29 33.4**	**0.0**
GRRZ	**Galatos Road**	**0.21**	**267**	P	**Pg**	**04 29 34.6**	**+0.2**
MKRZ	**Makatiti**	**0.21**	**19**	P	**Pg**	**04 29 34.5**	**+0.1**
MKRZ				S	**Sg**	**04 29 38.1**	**+0.9**
UTU	**Utuhina**	**0.22**	**318**	P	**Pg**	**04 29 34.6**	**+0.2**
UTU				S	**Sg**	**04 29 38.1**	**+0.8**
ALRZ	**Allen Road**	**0.23**	**187**	P	**Pg**	**04 29 34.8**	**+0.1**
ALRZ				S	**Sg**	**04 29 38.6**	**+1.0**
OMRZ	**Omania**	**0.23**	**359**	P	**Pg**	**04 29 34.5**	**-0.3**
OMRZ				S	**Sg**	**04 29 38.3**	**+0.5**
WPRZ	**Whakapapatarin**	**0.25**	**223**	P	**Pg**	**04 29 35.3**	**+0.3**
WPRZ				S	**Sg**	**04 29 39.7**	**+1.3**
NGRZ	**Ngongotaha**	**0.28**	**327**	P	**Pg**	**04 29 35.7**	**0.0**
KARZ	**Kaharoa**	**0.34**	**342**	P	**Pg**	**04 29 36.5**	**-0.2**
LIRZ	**Lichensteins R**	**0.34**	**1**	P	**Pg**	**04 29 36.5**	**-0.3**
MUGZ	**Murupara**	**0.34**	**114**	P	**Pg**	**04 29 36.7**	**-0.1**
MUGZ				S	**Sg**	**04 29 41.4**	**+0.1**
EDRZ	**Edgecumbe**	**0.37**	**51**	P	**Pg**	**04 29 37.1**	**-0.2**
MARZ	**Manawahe**	**0.42**	**34**	P	**Pg**	**04 29 38.2**	**-0.2**
KUTZ	**Kaahu Road**	**0.46**	**251**	P	**Pg**	**04 29 39.4**	**+0.3**
WHTZ	**Whakaora**	**0.47**	**225**	P	**Pb**	**04 29 39.9**	**-1.2**
MRHZ	**Matea Rd**	**0.49**	**176**	P	**Pg**	**04 29 39.7**	**-0.1**
OPRZ	**Ohinepanea**	**0.51**	**16**	P	**Pg**	**04 29 39.6**	**-0.4**
RTZ	**Ruatahuna**	**0.55**	**120**	P	**Pg**	**04 29 40.8**	**0.0**
URZ	**Urewera**	**0.58**	**82**	P	**Pg**	**04 29 41.0**	**-0.4**
URZ	**Urewera**	**0.58**	**82**	S	**Sg**	**04 29 49.7**	**+0.7**
URZ	**Urewera**	**0.58**	**82**	P	**Pg**	**04 29 41.2**	**-0.2**
KMRZ	**Kaimai**	**0.60**	**325**	P	**Pg**	**04 29 41.6**	**-0.2**
WATZ	**Wairara**	**0.63**	**234**	P	**Pg**	**04 29 42.6**	**+0.3**
MTHZ	**Maungataniwha**	**0.63**	**145**	P	**Pg**	**04 29 42.5**	**+0.2**
TLZ	**Tolley Road**	**0.66**	**271**	P	**Pg**	**04 29 42.6**	**-0.4**
WHRZ	**Whale Island**	**0.67**	**44**	P	**Pg**	**04 29 43.9**	**+0.7**
RATZ	**Rangitukua**	**0.71**	**222**	P	**Pb**	**04 29 44.7**	**-0.5**
RITZ	**Rihia Road**	**0.76**	**212**	P	**Pb**	**04 29 45.1**	**-0.8**
RAHZ	**Arahi**	**0.80**	**136**	P	**Pb**	**04 29 46.3**	**-0.4**
NMHZ	**Naumai**	**0.83**	**156**	P	**Pb**	**04 29 46.9**	**-0.3**
RAGZ	**Rawiri**	**0.83**	**101**	P	**Pg**	**04 29 46.2**	**+0.1**
BKZ	**Black Stump Fm**	**0.83**	**174**	P	**Pg**	**04 29 45.8**	**-0.4**
HIZ	**Hauiti**	**1.21**	**261**	P	**Pg**	**04 29 51.9**	**-1.5**
KUZ	**Kuaotunu**	**1.67**	**342**	P	**Pb**	**04 30 01.3**	**-0.3**
MXZ	**Matakaoa Point**	**1.71**	**64**	P	**Pb**	**04 30 02.1**	**-0.1**
KHEZ	**Kahui Hut**	**2.08**	**242**	P	**Pn**	**04 30 06.0**	**+0.1**
BFZ	**Birch Farm**	**2.34**	**182**	P	**Pn**	**04 30 08.5**	**-1.0**
OUZ	**Omahuta**	**3.83**	**323**	P	**Pn**	**04 30 30.3**	**+0.4**
QRZ	**Quartz Range**	**3.88**	**229**	P	**Pn**	**04 30 31.5**	**+1.0**

SJA ***23*** *04:44:58.8±0.6, 20°.45S×69°.31W, h90^{km}±2^{km}, ML3.4, MW3.5*

GUC ***23*** *04:44:59.9±0.7, 20°.44S×69°.29W, h84^{km}±3^{km}, ML3.3*

ISC 23 04:45:01.0±1.4**, 20°.47S**±0°.03×**69°.32W**±0°.05**, h80**^{km}±9^{km}**, n23, σ0^{s}.81**/43**, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.36**	**26**	_e_P	**Pn**	**04 45 13.4**	**-0.8**
PB08				_i_ S	**Sn**	**04 45 24.2**	**+0.3**
PB08				IAML		04 45 25.5	
	comp=E,4µm,0.2s						
PB08	**IPOC Station P**	**0.36**	**26**	_i_ P	**Pn**	**04 45 13.5**	**-0.8**
PB08				_i_ S	**Sn**	**04 45 24.6**	**+0.7**
PB08				IAML		04 45 25.8	
	comp=Z,2µm,0.1s						
PB01	**IPOC Station P**	**0.59**	**195**	_e_P	**Pn**	**04 45 15.6**	**-0.2**
PB01				_i_ S	**Sn**	**04 45 27.8**	**+1.1**
PB01				IAML		04 45 29.9	
	comp=N,3µm,0.2s						
PB01	**IPOC Station P**	**0.59**	**195**	_i_ P	**Pn**	**04 45 15.6**	**-0.2**
PB01				_i_ S	**Sn**	**04 45 27.9**	**+1.1**
PB01				IAML		04 45 29.8	
	comp=Z,3µm,0.2s						
PB11	**IPOC Station P**	**0.77**	**336**	_e_P	**Pn**	**04 45 16.9**	**-0.7**
PB11				_i_ S	**Sn**	**04 45 30.2**	**+0.2**
PB11	**IPOC Station P**	**0.77**	**336**	_i_ P	**Pn**	**04 45 16.9**	**-0.7**
PB11				_i_ S	**Sn**	**04 45 30.2**	**+0.2**
PB11				IAML		04 45 30.9	
	comp=Z,1µm,0.2s						
TA02	**Huaiquique**	**0.78**	**284**	_e_P	**Pn**	**04 45 17.1**	**-0.5**
TA02				_i_ S	**Sn**	**04 45 30.7**	**+0.7**
TA02	**Huaiquique**	**0.78**	**284**	_i_ P	**Pn**	**04 45 16.7**	**-0.9**
TA02				_i_ S	**Sn**	**04 45 30.2**	**+0.2**
TA02				IAML		04 45 33.8	
	comp=Z,1µm,0.1s						
GO01	**Chusmiza**	**0.80**	**9**	_e_P	**Pn**	**04 45 17.4**	**-0.9**
GO01				_i_ S	**Sn**	**04 45 30.9**	**-0.3**
GO01	**Chusmiza**	**0.80**	**9**	_i_ P	**Pn**	**04 45 17.4**	**-0.9**
GO01				_i_ S	**Sn**	**04 45 31.4**	**+0.2**
GO01				IAML		04 45 32.6	
	comp=Z,1µm,0.3s						
TA01	**Diego Aracena**	**0.81**	**263**	_e_P	**Pn**	**04 45 17.4**	**-0.5**
TA01				_i_ S	**Sn**	**04 45 30.9**	**+0.5**
TA01				IAML		04 45 35.3	
	comp=E,716nm,0.2s						
TA01	**Diego Aracena**	**0.81**	**263**	_i_ P	**Pn**	**04 45 17.3**	**-0.5**
TA01				_i_ S	**Sn**	**04 45 31.4**	**+1.0**
TA01				IAML		04 45 32.3	
	comp=Z,361nm,0.3s						
PATCX	**Punta Patache**	**0.85**	**246**	_i_ P	**Pn**	**04 45 18.3**	**-0.1**
PATCX				_i_ S	**Sn**	**04 45 32.4**	**+0.9**
PATCX				IAML		04 45 35.6	
	comp=Z,697nm,0.5s						
PB09	**IPOC Station P**	**1.32**	**177**	_e_P	**Pn**	**04 45 24.2**	**-0.1**
PB09				_i_ S	**Sn**	**04 45 43.1**	**+1.3**
PB09				IAML		04 45 45.2	
	comp=N,986nm,0.4s						
PB09	**IPOC Station P**	**1.32**	**177**	_i_ P	**Pn**	**04 45 24.1**	**-0.1**
PB09				_i_ S	**Sn**	**04 45 42.6**	**+0.8**
PB09				IAML		04 45 46.1	
	comp=Z,837nm,0.8s						
PB03	**IPOC Station P**	**1.62**	**194**	_e_P	**Pn**	**04 45 27.8**	**-0.4**

PB03				*i* S	**Sn**	**04 45 48.7**	**+0.1**
PB03				IAML		04 45 53.9	
	comp=E,462nm,0.3s						
PB03	**IPOC Station P**	**1.62**	**194**	*i* P	**Pn**	**04 45 27.9**	**-0.2**
PB03				*i* S	**Sn**	**04 45 49.2**	**+0.6**
PB03				IAML		04 45 53.0	
	comp=Z,403nm,0.2s						
PB16	**IPOC Station P**	**2.13**	**355**	*e*P	**Pn**	**04 45 35.2**	**0.0**
PB16				*i* S	**Sn**	**04 46 02.1**	**+0.9**
PB16				IAML		04 46 06.9	
	comp=N,250nm,0.3s						
PB16	**IPOC Station P**	**2.13**	**355**	*i* P	**Pn**	**04 45 34.5**	**-0.8**
PB16				*i* S	**Sn**	**04 46 01.5**	**+0.3**
PB16				IAML		04 46 07.3	
	comp=Z,166nm,0.4s						
PB06	**IPOC Station P**	**2.24**	**186**	*i* P	**Pn**	**04 45 35.8**	**-0.5**
PB06				*i* S	**Sn**	**04 46 03.5**	**+0.2**
PB06				IAML		04 46 11.2	
	comp=Z,233nm,0.3s						
PB05	**IPOC Station P**	**2.51**	**199**	*i* P	**Pn**	**04 45 39.2**	**-0.7**
PB05				IAML		04 46 17.4	
	comp=Z,117nm,0.5s						
LPAZ	**La Paz**	**4.31**	**15**	*i* P	**Pn**	**04 46 06.3**	**+1.5**
LPAZ				IAML		04 47 19.3	
	comp=Z,3.0nm,3.8s						
GO02	**Mina Guanaco**	**4.68**	**183**	*i* P	**Pn**	**04 46 07.0**	**-2.5**
GO02				IAML		04 47 32.3	
	comp=Z,59nm,0.5s						

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*JMA **23** 04:52:14.6±0.2, 24°N±1°×122°.4E±0°.4, h67km±2km,*
MV2.8/12, TAIWAN REGION
*TAP **23** 04:52:14.4, 24°.60N×122°.38E, h71km, ML3.4, C*
ISC 23 04:52:14.4±1.2**, 24°.57N**±0°.03×**122°.40E**±0°.03**, h70**km±6km**,**
n152, σ1s.**18**/288**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS2	**EOS2**	**0.22**	**225**	P	**Pn**	**04 52 25.1**	**+0.3**
EOS2				*i* S	**Sn**	**04 52 33.6**	**+1.1**
EOS3	**EOS3**	**0.30**	**195**	P	**Pn**	**04 52 25.9**	**+0.6**
EOS3				S	**Sn**	**04 52 34.7**	**+1.4**
EOS4	**EOS4**	**0.46**	**190**	*e*P	**Pn**	**04 52 26.8**	**+0.5**
EOS4				S	**Sn**	**04 52 36.2**	**+1.1**
TWC	**Suao**	**0.51**	**274**	*i* P	**Pn**	**04 52 26.9**	**-0.3**
TWC				*i* S	**Sn**	**04 52 35.2**	**-1.4**
ESAO	**Su ao**	**0.51**	**270**	*e*P	**Pn**	**04 52 27.3**	**+0.1**
ESAO				*i* S	**Sn**	**04 52 35.8**	**-0.8**
JYNG	**Yonagunijimaku**	**0.51**	**104**	P	**Pn**	**04 52 27.3**	**+0.1**
JYNG				*e*S	**Sn**	**04 52 36.6**	**0.0**
YOJ	**Yonaguni jima**	**0.56**	**101**	P	**Pn**	**04 52 27.9**	**+0.2**
YOJ	**Yonaguni jima**	**0.56**	**101**	P	**Pn**	**04 52 28.0**	**+0.2**
YOJ				S	**Sn**	**04 52 37.8**	**+0.2**
TWB1	**Santiao Chiao**	**0.57**	**319**	*e*P	**Pn**	**04 52 28.2**	**+0.3**
TWB1				S	**Sn**	**04 52 36.5**	**-1.3**
EWUT	**Wuta**	**0.58**	**258**	P	**Pn**	**04 52 28.4**	**+0.5**
EWUT				*e*S	**Sn**	**04 52 37.2**	**-0.7**
NTC	**Toucheng**	**0.59**	**298**	*i* S	**Sn**	**04 52 38.1**	**0.0**
ENA	**Nanau**	**0.62**	**257**	*e*P	**Pn**	**04 52 28.6**	**+0.2**
ENA				*e*S	**Sn**	**04 52 38.5**	**-0.2**
ILA	**Ilan**	**0.63**	**288**	*i* P	**Pn**	**04 52 28.6**	**+0.2**
ILA				*i* S	**Sn**	**04 52 38.8**	**+0.1**
NDS	**Dongshan**	**0.63**	**276**	P	**Pn**	**04 52 28.1**	**-0.4**
NDS				*e*S	**Sn**	**04 52 37.4**	**-1.4**
EAHA	**Aohua**	**0.65**	**248**	*e*P	**Pn**	**04 52 28.4**	**-0.3**
EAHA				S	**Sn**	**04 52 39.5**	**+0.3**
TIPB	**Shuangxi**	**0.66**	**307**	*e*P	**Pn**	**04 52 28.9**	**+0.1**
TIPB				*i* S	**Sn**	**04 52 38.8**	**-0.7**
TWE	**Neicheng**	**0.69**	**283**	*i* P	**Pn**	**04 52 29.2**	**+0.2**
TWE				*e*S	**Sn**	**04 52 38.9**	**-1.0**
SXI1	**Grass Mountain**	**0.71**	**317**	*i* P	**Pn**	**04 52 29.9**	**+0.5**
SXI1				*e*S	**Sn**	**04 52 40.4**	**-0.1**
NWF	**Wu-fen Shan**	**0.75**	**311**	*i* P	**Pn**	**04 52 30.2**	**+0.3**
NWF				S	**Sn**	**04 52 40.5**	**-0.9**
WFSB	**Wu-fen Shan**	**0.75**	**311**	*e*P	**Pn**	**04 52 30.3**	**+0.4**
WFSB				*i* S	**Sn**	**04 52 40.9**	**-0.4**
ENTT	**Nioudou**	**0.76**	**275**	P	**Pn**	**04 52 30.6**	**+0.6**
ENTT				*i* S	**Sn**	**04 52 41.9**	**+0.3**
FUSB	**Fushanzhiwuyua**	**0.77**	**284**	P	**Pn**	**04 52 30.4**	**+0.4**
FUSB				S	**Sn**	**04 52 41.2**	**-0.4**
LATG	**Datong**	**0.80**	**267**	*i* P	**Pn**	**04 52 31.0**	**+0.5**
LATG				S	**Sn**	**04 52 42.7**	**+0.3**
TNOU	**National Taiwa**	**0.81**	**315**	*e*P	**Pn**	**04 52 30.9**	**+0.4**
TNOU				S	**Sn**	**04 52 42.2**	**-0.2**
ETL	**Fush Village**	**0.82**	**240**	*e*P	**Pn**	**04 52 30.6**	**-0.1**
ETL				*e*S	**Sn**	**04 52 42.3**	**-0.4**
NACB	**Ninganchiao**	**0.84**	**242**	P	**Pn**	**04 52 30.5**	**-0.3**
NACB	**Ninganchiao**	**0.84**	**242**	P	**Pn**	**04 52 30.6**	**-0.2**
NACB				S	**Sn**	**04 52 42.5**	**-0.5**
NWLT	**Wulai**	**0.84**	**284**	*e*P	**Pn**	**04 52 31.7**	**+0.8**
NWLT				*i* S	**Sn**	**04 52 43.5**	**+0.2**
TWA	**Mucha**	**0.85**	**299**	P	**Pn**	**04 52 31.4**	**+0.4**
TWA				*i* S	**Sn**	**04 52 42.7**	**-0.6**
TWD	**Chiawan**	**0.89**	**236**	P	**Pn**	**04 52 31.1**	**-0.3**
TWD				*e*S	**Sn**	**04 52 43.2**	**-0.8**
NHDH	**Xindian Distri**	**0.89**	**296**	*e*P	**Pn**	**04 52 31.9**	**+0.4**
NHDH				*e*S	**Sn**	**04 52 44.3**	**+0.2**
ETLH	**Xiulin Townshi**	**0.92**	**247**	*e*P	**Pn**	**04 52 31.8**	**-0.1**
ETLH				*e*S	**Sn**	**04 52 44.1**	**-0.8**
TATO	**Taipei**	**0.92**	**296**	P	**Pn**	**04 52 32.1**	**+0.2**
TATO	**Taipei**	**0.92**	**296**	S	**Sn**	**04 52 44.7**	**-0.2**
TATO	**Taipei**	**0.92**	**296**	P	**Pn**	**04 52 31.9**	**0.0**
TATO				*e*S	**Sn**	**04 52 45.1**	**+0.2**
HWA	**Hwalien**	**0.94**	**231**	P	**Pn**	**04 52 33.0**	**+0.9**
HWA				*e*S	**Sn**	**04 52 46.5**	**+1.3**
NNSB	**Datong**	**0.94**	**261**	*e*P	**Pn**	**04 52 32.5**	**+0.3**
NNSB				*i* S	**Sn**	**04 52 45.7**	**+0.2**
NNSH	**Datong**	**0.94**	**261**	P	**Pn**	**04 52 32.7**	**+0.4**
NNSH				S	**Sn**	**04 52 45.7**	**+0.3**
YHNB	**Yeheng**	**0.94**	**276**	P	**Pn**	**04 52 32.9**	**+0.8**
YHNB	**Yeheng**	**0.94**	**276**	*i* P	**Pn**	**04 52 33.0**	**+0.8**
YHNB				S	**Sn**	**04 52 46.2**	**+0.8**
NNS	**Nan Shan**	**0.95**	**262**	*i* P	**Pn**	**04 52 32.8**	**+0.5**
NNS				S	**Sn**	**04 52 46.1**	**+0.4**
YM01	**YM01**	**0.95**	**307**	*e*P	**Pn**	**04 52 32.6**	**+0.3**
YM01				S	**Sn**	**04 52 45.3**	**-0.2**
NSK	**Sanguang**	**0.96**	**276**	*e*P	**Pn**	**04 52 33.1**	**+0.7**
NSK				*i* S	**Sn**	**04 52 46.1**	**+0.3**
YM08	**YM08**	**0.96**	**310**	P	**Pn**	**04 52 32.1**	**-0.3**
YM08				*e*S	**Sn**	**04 52 44.9**	**-0.8**
ZUZH	**Zhuzihu**	**0.97**	**307**	*e*P	**Pn**	**04 52 32.7**	**+0.1**
ZUZH				S	**Sn**	**04 52 45.5**	**-0.6**
ANP	**Anpu**	**1.01**	**307**	*e*P	**Pn**	**04 52 33.6**	**+0.5**
ANP				*e*S	**Sn**	**04 52 47.0**	**+0.1**
TWY	**Chenhua**	**1.01**	**314**	P	**Pn**	**04 52 33.5**	**+0.5**
TWY				*e*S	**Sn**	**04 52 47.3**	**+0.5**
TEYL	**Yanliau Villag**	**1.02**	**226**	*e*P	**Pn**	**04 52 32.6**	**-0.4**
TEYL				S	**Sn**	**04 52 46.8**	**-0.2**
ETM	**Tongmen**	**1.03**	**234**	*e*P	**Pn**	**04 52 33.1**	**0.0**
ETM				S	**Sn**	**04 52 46.8**	**-0.4**
TWS1	**Kuangyinshan**	**1.04**	**301**	*e*P	**Pn**	**04 52 34.0**	**+0.7**
TWS1				*e*S	**Sn**	**04 52 48.4**	**+1.0**
NTST	**Danshui**	**1.05**	**304**	P	**Pn**	**04 52 32.7**	**-0.8**
NTST				*e*S	**Sn**	**04 52 48.0**	**+0.4**
LXIB	**Xiulin Townshi**	**1.06**	**239**	P	**Pn**	**04 52 33.6**	**-0.2**
LXIB				*e*S	**Sn**	**04 52 47.2**	**-0.9**
NTY	**Taoyuan**	**1.09**	**293**	P	**Pn**	**04 52 34.2**	**+0.3**
NTY				*e*S	**Sn**	**04 52 49.9**	**+1.3**
PCYT	**Pengchaiyu**	**1.09**	**344**	*e*P	**Pn**	**04 52 35.5**	**+1.5**
SHUL	**Shoufeng**	**1.10**	**225**	*i* P	**Pn**	**04 52 34.1**	**0.0**
SHUL				*i* S	**Sn**	**04 52 48.4**	**-0.3**
FUSS	**Fushou**	**1.10**	**253**	*e*P	**Pn**	**04 52 35.0**	**+0.6**
FUSS				*e*S	**Sn**	**04 52 50.2**	**+0.9**
WHF	**Hehuan Shan**	**1.12**	**248**	P	**Pn**	**04 52 34.4**	**-0.4**
WHF				S	**Sn**	**04 52 49.6**	**-0.4**
KSHI	**Guanxi Townshi**	**1.13**	**281**	P	**Pn**	**04 52 35.7**	**+1.2**
KSHI				*e*S	**Sn**	**04 52 51.7**	**+2.1**
TWT	**Tachien**	**1.16**	**254**	*e*P	**Pn**	**04 52 36.1**	**+1.0**
TWT				*e*S	**Sn**	**04 52 51.6**	**+1.0**
ESL	**Shilin**	**1.16**	**230**	P	**Pn**	**04 52 34.4**	**-0.6**
ESL				S	**Sn**	**04 52 49.0**	**-1.3**
TEGC	**Jichi Village**	**1.17**	**223**	*e*P	**Pn**	**04 52 33.6**	**-1.3**
TEGC				S	**Sn**	**04 52 49.8**	**-0.5**
NFF	**Wufeng Townshi**	**1.17**	**273**	*e*P	**Pn**	**04 52 35.9**	**+0.8**
NFF				*i* S	**Sn**	**04 52 50.8**	**+0.3**
NCUH	**Zhongli**	**1.18**	**290**	*e*P	**Pn**	**04 52 35.8**	**+0.7**
NCUH				S	**Sn**	**04 52 50.5**	**0.0**
TDCB	**Techi**	**1.18**	**255**	*e*P	**Pn**	**04 52 36.1**	**+0.8**
TDCB				S	**Sn**	**04 52 50.6**	**-0.3**
NJD	**Zhudong**	**1.21**	**278**	*e*P	**Pn**	**04 52 36.2**	**+0.7**
NJD				*e*S	**Sn**	**04 52 52.2**	**+0.9**
IRIF	**Iriomote-Funau**	**1.23**	**101**	P	**Pn**	**04 52 36.0**	**+0.2**
IRIF				*e*S	**Sn**	**04 52 52.1**	**+0.3**
WARBT	**Fenglin Townsh**	**1.26**	**228**	*e*P	**Pn**	**04 52 35.7**	**-0.5**
WARBT				*e*S	**Sn**	**04 52 49.9**	**-2.7**
LIOB	**Emei**	**1.27**	**274**	P	**Pn**	**04 52 37.2**	**+1.0**
LIOB				*i* S	**Sn**	**04 52 53.7**	**+1.0**
EGFH	**Guangfu**	**1.27**	**225**	*e*P	**Pn**	**04 52 36.4**	**+0.1**
EGFH				S	**Sn**	**04 52 51.5**	**-1.1**
HSN1	**Hsinchu**	**1.28**	**279**	P	**Pn**	**04 52 36.7**	**+0.3**
HSN1				*e*S	**Sn**	**04 52 54.2**	**+1.4**
NSTT	**Nanjuang**	**1.28**	**273**	*e*P	**Pn**	**04 52 37.3**	**+0.9**
NSTT				S	**Sn**	**04 52 52.8**	**-0.1**
OWD	**Renai**	**1.28**	**241**	P	**Pn**	**04 52 36.8**	**+0.2**
OWD				*e*S	**Sn**	**04 52 51.5**	**-1.6**
SBCB	**Hsinchu**	**1.31**	**280**	P	**Pn**	**04 52 37.2**	**+0.5**
SBCB				*e*S	**Sn**	**04 52 54.5**	**+0.9**
WUSB	**Renai**	**1.31**	**244**	P	**Pn**	**04 52 37.5**	**+0.6**
WUSB				*e*S	**Sn**	**04 52 53.4**	**-0.4**
WHP	**Taichung City**	**1.36**	**258**	*i* P	**Pn**	**04 52 39.1**	**+1.6**
WHP				*i* S	**Sn**	**04 52 55.5**	**+0.6**
HATJ	**Hateruma jima**	**1.38**	**112**	*e*P	**Pn**	**04 52 38.5**	**+0.8**
HGSD	**Ruisui**	**1.40**	**220**	*e*P	**Pn**	**04 52 39.0**	**+1.0**
HGSD				*e*S	**Sn**	**04 52 57.4**	**+1.6**
VWDT	**VWDT**	**1.41**	**235**	*i* P	**Pn**	**04 52 38.6**	**+0.5**
VWDT				*i* S	**Sn**	**04 52 55.3**	**-0.7**
WPL	**Puli Township**	**1.43**	**247**	P	**Pn**	**04 52 39.0**	**+0.6**
WPL				S	**Sn**	**04 52 57.5**	**+1.0**
EHYH	**Wanrong**	**1.45**	**222**	*e*P	**Pn**	**04 52 38.6**	**0.0**
EHYH				*e*S	**Sn**	**04 52 55.0**	**-1.9**
DPDB	**Guoxing**	**1.45**	**249**	P	**Pn**	**04 52 39.5**	**+0.7**
DPDB				S	**Sn**	**04 52 57.4**	**+0.4**
EHY	**Hungye**	**1.45**	**223**	*e*P	**Pn**	**04 52 37.9**	**-0.8**
EHY				*e*S	**Sn**	**04 52 54.9**	**-2.1**
WCS	**Beigang Elemen**	**1.45**	**250**	*e*P	**Pn**	**04 52 40.5**	**+1.8**
WCS				S	**Sn**	**04 52 58.5**	**+1.4**
NMLH	**Miaoli**	**1.47**	**269**	P	**Pn**	**04 52 39.4**	**+0.5**
NMLH				S	**Sn**	**04 52 58.2**	**+0.8**
JKRS	**Kuro-shima**	**1.50**	**103**	*e*P	**Pn**	**04 52 40.0**	**+0.7**
TWQ1	**Liyutan**	**1.50**	**262**	P	**Pn**	**04 52 39.8**	**+0.4**
TWQ1				*e*S	**Sn**	**04 52 58.8**	**+0.6**
ECBN	**Changbin**	**1.52**	**215**	P	**Pn**	**04 52 39.0**	**-0.6**
ECBN				*e*S	**Sn**	**04 52 56.3**	**-2.4**
SMLT	**Sun Moon Lake**	**1.53**	**244**	P	**Pn**	**04 52 41.7**	**+1.8**
SMLT				*e*S	**Sn**	**04 53 01.4**	**+2.3**
SSLB	**Suanglung**	**1.54**	**240**	P	**Pn**	**04 52 40.4**	**+0.6**
SSLB	**Suanglung**	**1.54**	**240**	*e*P	**Pn**	**04 52 40.9**	**+1.0**
SSLB				S	**Sn**	**04 52 58.5**	**-0.5**
YULB	**Yu-li**	**1.55**	**221**	P	**Pn**	**04 52 39.4**	**-0.6**
YULB	**Yu-li**	**1.55**	**221**	*e*P	**Pn**	**04 52 39.4**	**-0.6**
YULB				*e*S	**Sn**	**04 52 57.3**	**-2.1**
TYC	**Yuchr**	**1.56**	**245**	*e*P	**Pn**	**04 52 42.0**	**+1.9**
TYC				*i* S	**Sn**	**04 53 00.6**	**+1.1**
TWF1	**Yuli**	**1.58**	**220**	*e*P	**Pn**	**04 52 39.9**	**-0.6**
TWF1				*e*S	**Sn**	**04 52 57.2**	**-2.9**
JIJ	**Ishigaki jima**	**1.60**	**97**	*e*P	**Pn**	**04 52 40.9**	**+0.3**
JIJ				*e*S	**Sn**	**04 53 00.4**	**-0.1**
WWF	**Wufeng**	**1.64**	**252**	P	**Pn**	**04 52 42.7**	**+1.5**
WWF				S	**Sn**	**04 53 03.7**	**+2.2**
CHKH	**Chenggong**	**1.66**	**214**	P	**Pn**	**04 52 41.2**	**-0.2**
CHKH				S	**Sn**	**04 52 59.1**	**-2.7**
WHYT	**Xinyi Township**	**1.66**	**239**	*e*P	**Pn**	**04 52 42.9**	**+1.3**
WHYT				*i* S	**Sn**	**04 53 03.2**	**+1.1**
WJS	**Zhushan**	**1.70**	**244**	*e*P	**Pn**	**04 52 44.1**	**+2.1**
WJS				S	**Sn**	**04 53 05.0**	**+2.1**
FULB	**Fuli**	**1.70**	**217**	P	**Pn**	**04 52 41.9**	**-0.2**
FULB				*e*S	**Sn**	**04 53 02.0**	**-1.1**
WNT1	**Nantou City**	**1.71**	**247**	P	**Pn**	**04 52 43.3**	**+1.2**
WNT1				S	**Sn**	**04 53 05.8**	**+2.8**
WNT	**Mingjian**	**1.71**	**247**	P	**Pn**	**04 52 43.6**	**+1.4**
WNT				S	**Sn**	**04 53 05.1**	**+1.8**
JISG	**Ishigakijimahi**	**1.74**	**89**	*e*P	**Pn**	**04 52 42.9**	**+0.5**
CHKT	**Chengkung**	**1.75**	**213**	P	**Pn**	**04 52 42.3**	**-0.3**
CHKT				*e*S	**Sn**	**04 53 00.8**	**-3.2**
WCHH	**Zhanghua**	**1.75**	**254**	P	**Pn**	**04 52 43.2**	**+0.5**
WCHH				*e*S	**Sn**	**04 53 03.9**	**-0.2**
WCH1	**Changhua City**	**1.77**	**254**	P	**Pn**	**04 52 43.7**	**+0.9**
WCH1				S	**Sn**	**04 53 04.9**	**+0.5**
EHD	**Haiduan**	**1.79**	**218**	P	**Pn**	**04 52 42.4**	**-0.8**
EHD				*e*S	**Sn**	**04 53 03.1**	**-2.0**
ALS	**Alishan**	**1.80**	**234**	*e*P	**Pn**	**04 52 45.0**	**+1.3**
ALS				*e*S	**Sn**	**04 53 07.9**	**+2.1**
ECS	**Chishang**	**1.83**	**217**	*e*P	**Pn**	**04 52 45.0**	**+1.3**
ECS				*e*S	**Sn**	**04 53 06.7**	**+0.7**
CHN5	**Tsauling**	**1.85**	**239**	*e*P	**Pn**	**04 52 45.8**	**+1.7**
CHN5				*e*S	**Sn**	**04 53 08.4**	**+1.7**
ELDTW	**Lidau**	**1.87**	**223**	*e*P	**Pn**	**04 52 44.3**	**-0.1**
ELDTW				S	**Sn**	**04 53 06.0**	**-1.2**
EDH	**Donghe**	**1.89**	**213**	*e*S	**Sn**	**04 53 04.3**	**-3.0**
WGK	**Gukeng**	**1.90**	**243**	P	**Pn**	**04 52 46.9**	**+2.3**
WGK				*e*S	**Sn**	**04 53 10.6**	**+3.0**
WDLH	**Douliu**	**1.92**	**243**	*e*P	**Pn**	**04 52 46.9**	**+2.0**
WDLH				S	**Sn**	**04 53 09.9**	**+1.8**
WCKO	**Fanlu**	**2.00**	**236**	P	**Pn**	**04 52 46.9**	**+0.9**
WCKO				*e*S	**Sn**	**04 53 12.6**	**+2.6**
LONT	**Longtian**	**2.03**	**215**	*e*P	**Pn**	**04 52 46.9**	**+0.5**
LONT				*e*S	**Sn**	**04 53 10.5**	**-0.3**
WTK	**Tuku**	**2.04**	**245**	*e*P	**Pn**	**04 52 46.9**	**+0.4**
WTK				*e*S	**Sn**	**04 53 12.1**	**+1.0**
STYH	**Taoyuan**	**2.04**	**227**	*e*P	**Pn**	**04 52 48.2**	**+1.7**
STYH				*e*S	**Sn**	**04 53 11.6**	**+0.5**
CHN2	**Minshiung**	**2.04**	**240**	*e*P	**Pn**	**04 52 50.4**	**+3.8**
CHN2				*e*S	**Sn**	**04 53 12.1**	**+0.9**
CHN4	**Tsaushan**	**2.05**	**234**	*e*P	**Pn**	**04 52 48.6**	**+1.9**
CHN4				*e*S	**Sn**	**04 53 14.2**	**+2.8**
TPUB	**Ta-pu**	**2.06**	**232**	P	**Pn**	**04 52 48.2**	**+1.4**
TPUB	**Ta-pu**	**2.06**	**232**	S	**Sn**	**04 53 13.3**	**+1.7**
TPUB	**Ta-pu**	**2.06**	**232**	*e*P	**Pn**	**04 52 48.5**	**+1.6**
TPUB				S	**Sn**	**04 53 12.9**	**+1.3**
STYT	**Tauyuan**	**2.06**	**227**	*e*P	**Pn**	**04 52 48.2**	**+1.3**
STYT				S	**Sn**	**04 53 12.3**	**+0.7**
WTCT	**Ta-ch'eng**	**2.06**	**250**	P	**Pn**	**04 52 47.4**	**+0.6**
WTCT				S	**Sn**	**04 53 11.2**	**-0.4**
CHY	**Chiayi**	**2.10**	**240**	P	**Pn**	**04 52 48.4**	**+1.0**
CHY				S	**Sn**	**04 53 14.6**	**+2.0**
WTP	**Ta-pu**	**2.10**	**231**	*e*P	**Pn**	**04 52 48.9**	**+1.5**
WTP				S	**Sn**	**04 53 14.5**	**+1.8**
TWGBT	**Beinan**	**2.13**	**215**	*e*P	**Pn**	**04 52 48.7**	**+1.0**
TWGBT				S	**Sn**	**04 53 11.8**	**-1.4**
TWG	**Pinlang**	**2.13**	**215**	*e*P	**Pn**	**04 52 49.0**	**+1.3**
TWG				*e*S	**Sn**	**04 53 11.1**	**-2.2**
TWK	**Hsinying**	**2.18**	**234**	P	**Pn**	**04 52 50.4**	**+1.9**
TWK				*e*S	**Sn**	**04 53 14.5**	**-0.1**
CHN1	**Nanshi**	**2.20**	**232**	*e*P	**Pn**	**04 52 50.1**	**+1.3**
CHN1				S	**Sn**	**04 53 16.2**	**+1.1**
SNST	**Tainan City**	**2.20**	**233**	P	**Pn**	**04 52 50.1**	**+1.3**
SNST				S	**Sn**	**04 53 16.4**	**+1.3**
SGST	**Jiashian**	**2.23**	**229**	P	**Pn**	**04 52 50.0**	**+0.8**
SGST				*e*S	**Sn**	**04 53 16.1**	**+0.3**
WSL	**Shuilin Townsh**	**2.25**	**243**	*e*P	**Pn**	**04 52 51.0**	**+1.7**
WSL				S	**Sn**	**04 53 17.4**	**+1.3**
ICHU	**Yijhu**	**2.29**	**239**	P	**Pn**	**04 52 51.3**	**+1.4**
ICHU				*e*S	**Sn**	**04 53 19.8**	**+2.7**
ECL	**Taimali**	**2.37**	**214**	*e*P	**Pn**	**04 52 51.4**	**+0.3**
ECL				S	**Sn**	**04 53 17.9**	**-1.3**
TSMG	**Majia**	**2.46**	**221**	P	**Pn**	**04 52 54.5**	**+2.2**
TSMG				*e*S	**Sn**	**04 53 23.2**	**+1.9**
MASBT	**Mashibuluo**	**2.54**	**220**	*e*P	**Pn**	**04 52 55.9**	**+2.6**
MASBT				*i* S	**Sn**	**04 53 25.1**	**+1.9**
TSCK	**Chigu Township**	**2.55**	**237**	*e*P	**Pn**	**04 52 55.0**	**+1.5**
TSCK				*e*S	**Sn**	**04 53 24.5**	**+1.0**
TAWH	**Dawu Township**	**2.62**	**212**	*e*P	**Pn**	**04 52 55.4**	**+1.0**
TAWH				*e*S	**Sn**	**04 53 24.5**	**-0.7**
VWUC	**VWUC**	**2.72**	**279**	*e*P	**Pn**	**04 52 55.7**	**0.0**
VWUC				*e*S	**Sn**	**04 53 25.0**	**-2.5**
MATB	**Ma-tsu**	**2.72**	**306**	*e*P	**Pn**	**04 52 55.3**	**-0.5**
MATB				*e*S	**Sn**	**04 53 27.2**	**-0.4**
SLIU	**Shizi**	**2.77**	**212**	P	**Pn**	**04 52 56.9**	**+0.4**
SLIU				*e*S	**Sn**	**04 53 29.4**	**+0.5**
PHUB	**P'eng-hu**	**2.79**	**248**	P	**Pn**	**04 52 56.9**	**+0.1**
PHUB				S	**Sn**	**04 53 28.5**	**-0.9**
WDGT	**Dungji**	**2.83**	**243**	P	**Pn**	**04 52 57.2**	**0.0**
WDGT				*e*S	**Sn**	**04 53 29.6**	**-0.7**
PTMZ	**Houxiangcun**	**3.02**	**280**	*i* P	**Pn**	**04 53 00.1**	**+0.3**
PTMZ				*e*S	**Sn**	**04 53 32.7**	**-2.1**
VCHM	**Qimei**	**3.04**	**244**	P	**Pn**	**04 53 00.1**	**0.0**
VCHM				S	**Sn**	**04 53 34.4**	**-1.1**
MHZQ	**Yeshan**	**3.41**	**297**	*e*P	**Pn**	**04 53 05.2**	**+0.1**
MHZQ				*e*S	**Sn**	**04 53 43.1**	**-1.3**
KNMB	**Chin-men Tao**	**3.66**	**269**	*e*P	**Pn**	**04 53 07.4**	**-1.1**
AXDP	**Jialang**	**4.04**	**276**	*e*P	**Pn**	**04 53 14.1**	**+0.3**
AXDP				*e*S	**Sn**	**04 53 57.8**	**-2.1**
ZPLA	**Ao Xicun**	**4.29**	**262**	P	**Pn**	**04 53 17.6**	**+0.3**
ZPLA				*e*S	**Sn**	**04 54 04.1**	**-1.9**
DSXP	**Dongshan**	**4.63**	**260**	*e*P	**Pn**	**04 53 20.3**	**-1.5**
DSXP				*e*S	**Sn**	**04 54 10.8**	**-3.4**

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*SDD **23** 04:56:39.9±1.0, 19°.15N×68°.37W, h19km±69km, MD3.2,*
ML2.1, MW2.3
*RSPR **23** 04:56:39.2, 19°.28N×68°.50W, h83km±3km, MD2.8/16*
*NEIC **23** 04:56:40.6±1.6, 19°.2N±0°.1×68°.55W±0°.04, h35km±2km,*
ML2.4/16, Md2.8/16(RSPR), Error ellipse: s-maj=22.0km
s-min=6.8km az=359.0
ISC 23 04:56:39.8±1.6**, 19°.08N**±0°.08×**68°.41W**±0°.04**, h12**km±11km**,**
n56, σ1s.**14**/60**, 15C-2D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HIDR	**Higuey Centro**	**0.57**	**211**	⇑*e*P	**Pg**	**04 56 50.5**	**-0.4**
HIDR	**Higuey Centro**	**0.57**	**211**	*e*Pg	**Pg**	**04 56 51.1**	**+0.1**
HIDR				*e*Sg	**Sg**	**04 57 00.2**	**+1.7**
HIDR				IAML		04 57 02.7	
	comp=N,83nm,0.2s						
SMDR	**Samana, DR**	**0.77**	**286**	⇑*e*P	Pb	04 56 53.4	-1.7
SMDR	**Samana, DR**	**0.77**	**286**	*e*S	**Sg**	**04 57 05.9**	**+1.2**
DR12	**Loma Pena Alta**	**0.97**	**253**	Pn	Pb	04 56 57.1	-1.5
HATOM	**Hato Mayor del**	**0.97**	**253**	*e*Pg	Pb	04 56 57.4	-1.1
HATOM				*e*Sg	**Sb**	**04 57 11.4**	**+0.1**
HATOM				IAML		04 57 33.7	
	comp=N,18nm,1.7s						
IDE	**Isla Desecheo**	**1.12**	**128**		**Pb**	**04 56 58.5**	**-2.7**
IDE					**Sb**	**04 57 14.1**	**-1.7**
IDE	**Isla Desecheo**	**1.12**	**128**	⇑*e*P	**Pb**	**04 56 58.5**	**-2.7**
AGPR	**Aguadilla, PR**	**1.37**	**116**		**Sb**	**04 57 24.4**	**+1.5**
AGPR	**Aguadilla, PR**	**1.37**	**116**	⇑*e*P	**Pn**	**04 57 04.0**	**-0.8**
AGPR	**Aguadilla, PR**	**1.37**	**116**	*e*S	**Sb**	**04 57 24.6**	**+1.7**
AGPR	**Aguadilla, PR**	**1.37**	**116**	*e*Pg	**Pn**	**04 57 04.0**	**-0.8**
AGPR				⇑*e*Sg	**Sn**	**04 57 21.6**	**-1.3**
AGPR				IAML		04 57 26.0	
	comp=N,63nm,2.8s						
LSP	**Las Mesas**	**1.54**	**125**		Pn	04 57 05.2	-2.0
LSP					**Sg**	**04 57 30.8**	**+1.2**
LSP	**Las Mesas**	**1.54**	**125**	⇑*e*P	Pn	04 57 05.2	-2.0
LSP	**Las Mesas**	**1.54**	**125**	*e*S	**Sg**	**04 57 30.8**	**+1.2**
CRPR	**Cabo Rojo, PR**	**1.63**	**131**		**Pn**	**04 57 08.6**	**+0.3**
CRPR					**Sn**	**04 57 30.4**	**+1.1**
CRPR	**Cabo Rojo, PR**	**1.63**	**131**	IAML		04 58 00.5	
	comp=E,32nm,1.9s						
CRPR				IAML		04 58 01.4	
	comp=N,27nm,1.8s						
CRPR	**Cabo Rojo, PR**	**1.63**	**131**	⇑*e*P	**Pn**	**04 57 08.6**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.63**	**131**	*e*S	**Sn**	**04 57 30.4**	**+1.1**
CRPR	**Cabo Rojo, PR**	**1.63**	**131**	*e*Pg	**Pn**	**04 57 09.2**	**+0.8**
CRPR				*e*Sg	**Sn**	**04 57 30.3**	**+1.1**
CRPR				IAML		04 58 00.9	
	comp=N,30nm,1.6s						
MLPR	**Magueyes Islan**	**1.70**	**130**	⇑*e*P	**Pn**	**04 57 08.9**	**-0.4**
MLPR	**Magueyes Islan**	**1.70**	**130**	*e*S	**Sn**	**04 57 32.8**	**+1.8**
MLPR	**Magueyes Islan**	**1.70**	**130**	*e*Pg	**Pn**	**04 57 09.9**	**+0.6**
MLPR				*e*Sg	**Sn**	**04 57 31.5**	**+0.5**
MLPR				IAML		04 57 40.7	
	comp=N,7.6nm,1.9s						
AOPR	**Arecibo Observ**	**1.73**	**115**		**Pn**	**04 57 10.7**	**+1.0**
AOPR					**Sn**	**04 57 32.8**	**+1.1**
AOPR	**Arecibo Observ**	**1.73**	**115**	IAML		04 57 37.2	
	comp=N,35nm,0.6s						
AOPR				IAML		04 57 42.5	
	comp=E,50nm,0.9s						
AOPR	**Arecibo Observ**	**1.73**	**115**	⇑*e*P	**Pn**	**04 57 10.7**	**+1.0**
AOPR	**Arecibo Observ**	**1.73**	**115**	*e*S	**Sn**	**04 57 32.8**	**+1.1**
AOPR	**Arecibo Observ**	**1.73**	**115**	*e*Pg	**Pn**	**04 57 09.8**	**+0.1**
AOPR				*e*Sg	**Sn**	**04 57 32.2**	**+0.5**
AOPR				IAML		04 57 39.0	
	comp=N,30nm,1.2s						
UUPR	**Utuado, UPR, P**	**1.80**	**117**		**Pn**	**04 57 11.1**	**+0.4**
UUPR					**Sn**	**04 57 33.5**	**+0.1**
UUPR	**Utuado, UPR, P**	**1.80**	**117**	⇑*e*P	**Pn**	**04 57 11.1**	**+0.4**
UUPR	**Utuado, UPR, P**	**1.80**	**117**	*e*S	**Sn**	**04 57 33.5**	**+0.1**
EMPR	**Esperanza - Ma**	**1.88**	**108**		**Pn**	**04 57 12.4**	**+0.6**
EMPR	**Esperanza - Ma**	**1.88**	**108**		**Sn**	**04 57 36.1**	**+0.8**
EMPR	**Esperanza - Ma**	**1.88**	**108**	IAML		04 57 28.6	
	comp=N,72nm,1.5s						
EMPR	**Esperanza - Ma**	**1.88**	**108**	⇑*e*P	**Pn**	**04 57 12.4**	**+0.6**
EMPR	**Esperanza - Ma**	**1.88**	**108**	*e*S	**Sn**	**04 57 36.1**	**+0.8**
OBIP	**Obispado Ponce**	**2.00**	**121**		**Pn**	**04 57 12.5**	**-0.9**
OBIP					**Sn**	**04 57 39.5**	**+1.2**
OBIP	**Obispado Ponce**	**2.00**	**121**	IAML		04 57 45.4	
	comp=N,23nm,2.2s						
OBIP	**Obispado Ponce**	**2.00**	**121**	⇑*e*P	**Pn**	**04 57 12.5**	**-0.9**
OBIP	**Obispado Ponce**	**2.00**	**121**	*e*S	**Sn**	**04 57 39.5**	**+1.2**
CELP	**Cerrillos**	**2.00**	**120**		**Pn**	**04 57 14.0**	**+0.6**
CELP					**Sn**	**04 57 39.3**	**+0.9**
CELP	**Cerrillos**	**2.00**	**120**	⇓*e*P	**Pn**	**04 57 14.0**	**+0.6**
CELP	**Cerrillos**	**2.00**	**120**	*e*S	**Sn**	**04 57 39.3**	**+0.9**
CELP	**Cerrillos**	**2.00**	**120**	*e*Pg	**Pn**	**04 57 14.2**	**+0.7**
CELP				*e*Sg	**Sn**	**04 57 39.3**	**+0.9**
CELP				IAML		04 57 43.9	
	comp=N,16nm,0.5s						
ECPR	**Experimental S**	**2.08**	**111**	⇓*e*P	Pn	04 57 13.3	-1.2
ECPR	**Experimental S**	**2.08**	**111**	*e*S	**Sn**	**04 57 38.6**	**-1.8**
GCPR	**Guaynabo City**	**2.33**	**109**		**Pn**	**04 57 19.8**	**+1.8**
GCPR					**Sn**	**04 57 48.5**	**+1.9**
GCPR	**Guaynabo City**	**2.33**	**109**	IAML		04 58 05.8	
	comp=E,13nm,1.8s						
GCPR	**Guaynabo City**	**2.33**	**109**	⇑*e*P	**Pn**	**04 57 19.8**	**+1.8**
GCPR	**Guaynabo City**	**2.33**	**109**	*e*S	**Sn**	**04 57 48.5**	**+1.9**
PDPR	**Patillas Dam,**	**2.50**	**115**	⇑*e*P	**Pn**	**04 57 19.8**	**-0.5**
PDPR	**Patillas Dam,**	**2.50**	**115**	*e*S	**Sn**	**04 57 50.3**	**-0.4**
HUMP	**Col San Antoni**	**2.60**	**111**		**Pn**	**04 57 21.7**	**0.0**
HUMP					**Sn**	**04 57 53.7**	**+0.5**
HUMP	**Col San Antoni**	**2.60**	**111**	IAML		04 58 05.2	
	comp=N,13nm,2.4s						
HUMP				IAML		04 58 19.9	
	comp=E,10nm,2.2s						
HUMP	**Col San Antoni**	**2.60**	**111**	⇑*e*P	**Pn**	**04 57 21.7**	**0.0**
HUMP	**Col San Antoni**	**2.60**	**111**	*e*S	**Sn**	**04 57 53.7**	**+0.5**

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*ISU **23** 05:11:22, 42°.14N×64°.30E, h2km*
*NNC **23** 05:11:24.5±3.0, 42°.78N×64°.63E, h0km, mb3.5, mpv3.2,*
Error ellipse: s-maj=31.3km s-min=12.5km az=26.0,
Suspected Mining explosion.
ISC 23 05:11:19.7±0.9**, 42°.40N**±0°.05×**64°.48E**±0°.08**, h0**km**, n6,**
σ**2**s.**14**/12**, 4C-5D, Northwestern Uzbekistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TMD	**Tamdy-Bulak**	**0.66**	**169**	P	**Pg**	**05 11 32.2**	**-0.1**
TMD				S	**Sg**	**05 11 39.4**	**-1.4**
NUT	**Nurota**	**2.05**	**153**	P	**Pb**	**05 11 57.4**	**-0.4**
NUT				S	**Sn**	**05 12 21.8**	**+0.1**
KK31	**Karatay Array**	**4.50**	**79**	Pn	**Pn**	**05 12 31.0**	**+1.9**
	0.8nm,0.2s,baz=266,slow=16,SNR=39						
KK31				⇑Sn	**Sn**	**05 13 22.7**	**+0.5**
	1.3nm,0.2s,baz=208,slow=77,SNR=4.8						
KK31				⇓Lg	Lg	05 13 47.3	
	5.1nm,0.5s,baz=286,slow=28,SNR=4.7						
AB31	**Akbulak array**	**7.55**	**337**	⇓Pn	**Pn**	**05 13 11.7**	**+0.7**
	0.6nm,0.5s,baz=162,slow=15,SNR=16						
AB31				Sn	**Sn**	**05 14 36.0**	**-1.2**
	0.6nm,0.3s,baz=157,slow=24,SNR=4.2						
AB31				⇑Lg	Lg	05 15 19.6	
	2.1nm,0.5s,baz=152,slow=29,SNR=4.2						
OTUK	**Ortayu**	**8.05**	**41**	⇓Pn	**Pn**	**05 13 19.3**	**+1.4**
	1.2nm,0.3s						
OTUK				⇓Sn	**Sn**	**05 14 45.4**	**-4.2**
	2.6nm,0.5s						
AKTO	**Aktyubinsk**	**9.19**	**333**	⇑Pn	**Pn**	**05 13 35.2**	**+1.8**
	0.2nm,0.4s						
AKTO				⇓Sn	**Sn**	**05 15 14.2**	**-3.3**
	0.7nm,0.5s						
AKTO				⇑Lg	Lg	05 16 12.9	
	0.9nm,0.5s						

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*AEIC **23** 05:17:04.6±1.0, 51°.4N±0°.1×162°.6W±0°.1, h7km±9km, Error*
ellipse: s-maj=20.1km s-min=11.2km az=167.0
NEIC 23 05:16:59.6±0.6**, 51°.5N**±0°.1×**162°.4W**±0°.1**, h10**km±2km**,**
ML2.8/12**, ML2.8**(AEIC)**, Error ellipse: s-maj=17.7km**

s-min=13.8km az=184.0,South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESE	West Dahl East	3.29	337		Pn	05 17 52.0	+0.7
AKUT	Akutan	3.38	324	Pn	Pn	05 17 51.4	-0.8
AHB	Akutan Harbor	3.38	323		Pn	05 17 52.6	+0.3
AHB					Pb	05 17 52.8	-6.7
AHB					Sn	05 18 30.2	-2.2
AHB					Lg	05 18 31.8	
AKBBA	Akutan Broad B	3.41	322		Pn	05 17 52.6	-0.1
AKBBA					Pb	05 17 53.1	-6.9
AKBBA					Sn	05 18 31.2	-2.0
ZRO	Akutan Zero	3.42	322		Pn	05 17 53.0	+0.1
WEBT	Westdahl Beart	3.44	336		Pn	05 17 53.8	+0.6
WEBT					Pb	05 17 54.0	-6.6
UNV	Unalaska Valle	3.46	315	Pn	Pn	05 17 53.3	-0.2
UNV				IAML		05 18 40.7	
	comp=N,12nm,1.0s						
ISNN	Isanotski Nort	3.48	346		Sn	05 18 34.7	-0.1
AKRB	Akutan Reef Bi	3.48	321		Pn	05 17 54.4	+0.6
LVA	Lava Point	3.49	322		Pn	05 17 53.7	-0.3
AKGG	Akutan Green G	3.51	323		Pn	05 17 54.2	+0.1
MREP	Makushin Rep't	3.55	313		Pn	05 17 54.7	-0.1
MGOD	Makushin Gods	3.60	312		Pn	05 17 55.3	-0.1
MTBL	Makushin Table	3.62	315		Pn	05 17 56.0	+0.2
MAPS	Pakushin South	3.64	312		Pn	05 17 55.8	-0.1
CNBA	Chernabura Isl	3.75	25	Pn	Pn	05 17 57.4	-0.1
CNBA				IAML		05 18 42.6	
	comp=N,9.2nm,1.0s						
CNBA				IAML		05 18 42.7	
	comp=E,12nm,1.2s						
OKTU	Okmok Mt. Tuli	3.96	301		Pn	05 18 00.2	-0.2
OKER	Okmok East Rim	4.00	302		Pn	05 18 01.1	+0.1
OKSP	Okmok Steeple	4.04	299		Pn	05 18 01.4	-0.1
SDPT	Sand Point	4.05	16	Pn	Pn	05 18 01.3	-0.3
SDPT				IAML		05 18 29.8	
	comp=E,17nm,1.2s						
NIKH	Nikolski High	4.26	293	Pn	Pn	05 18 03.7	-0.8
NIKH					Pb	05 18 04.2	-10
NIKH				IAML		05 19 06.1	
	comp=E,14nm,0.9s						
NIKH				IAML		05 19 20.5	
	comp=N,14nm,1.0s						
OHAK	Old Harbor	7.83	39		Pn	05 18 53.2	-0.2

DNK ***23*** *05:23:51.6±2.8, 81°.60N×49°.28W, h31km±41km, ML1.8*
OTT ***23*** *05:23:52.4±1.7, 81°.34N×50°.17W, h18km, ML3.2/3, 231km southeast from Alert, Nu*
ISC 23 05:23:45.7±0.9**, 81°.47N**±0°.08×**49°.52W**±0°.06**, h10**km**, n8, σ3ˢ81**/13**, Near north coast of Kalaallit Nunaat**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEEM	North Greenlan	4.06	185	*e*	Pn	05 24 51.0	+3.0
	baz=6.6,slow=12						
NEEM				*i* P	Pb	05 24 52.3	-5.0
NEEM				*i* S	Sn	05 25 38.8	+3.2
NEEM				IAML		05 26 00.8	
	comp=Z,5.9nm,0.3s						
NOR	Nord	4.80	72	*e*P	Pn	05 24 58.6	+0.7
NOR				*e*S	Sn	05 25 51.2	-2.3
NOR				IAML		05 26 27.8	
	comp=Z,4.2nm,0.3s						
EUNU	Eureka	6.02	275	PN	Pn	05 25 17.8	+3.1
EUNU				SN	Sn	05 26 23.5	+0.1
EUNU				Trac		05 26 26.8	
	comp=Z,2.3nm,0.2s						
KULLO	Kullorsuaq	7.10	197	SN	Sn	05 26 49.1	-0.9
DAG	Danmarks Havn	7.37	113	*i* P	Pn	05 25 37.8	+4.6
DAG				*i* S	Sn	05 26 51.3	-5.4
DAG				IAML		05 26 57.2	
	comp=Z,5.8nm,0.4s						
SUMG	Summit	9.25	159	*i* P	Pn	05 26 01.2	+2.0
SUMG				IAML		05 27 43.8	
	comp=Z,1.0nm,0.3s						
POIN	Pond Inlet	10.65	230	PN	Pn	05 26 19.1	+1.1
POIN				SN	Sn	05 28 11.4	-5.7
POIN				Trac		05 28 17.3	
	comp=Z,0.1nm,0.0s						
RES	Resolute Bay	11.16	258	PN	Pn	05 26 26.0	+1.1
RES				SN	Sn	05 28 22.9	-6.5
RES				Trac		05 28 27.7	
	comp=Z,26nm,1.4s						

IDC ***23*** *05:23:54.3±3.1, 7°.40S×128°.57E, h135km±29km, mb3.5/9, mbtmp4.1/13, Error ellipse: s-maj=36.5km s-min=14.0km az=73.0*
NEIC ***23*** *05:23:55.2±1.8, 7°.35S±0°.08×128°.48E±0°.05, h146km±9km, mb4.3/13, Error ellipse: s-maj=12.5km s-min=6.4km az=204.0*
ISC 23 05:23:55.6±0.5**, 7°.43S**±0°.06×**128°.46E**±0°.05**, h151**km**, n63, σ1ˢ45**/66**, mb3.9**/13**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.87	101	Pn	Pn	05 24 41.4	0.0
SAUI				Sn	Sn	05 25 15.5	-1.3
SAUI	Saumlaki	2.87	101	P	Pn	05 24 43.4	+2.0
SAUI	Saumlaki	2.87	101	S	Sn	05 25 17.5	+0.8
SOEI	Soe	4.74	241		Pn	05 25 05.7	-0.1
SOEI	Soe	4.74	241	P	Pn	05 25 07.2	+1.4
SOEI	Soe	4.74	241	S	Sn	05 26 01.0	+0.5
BATI	Baumata	5.48	239	P	Pn	05 25 17.0	+1.5
	125nm,0.4s,baz=112,slow=3.1,SNR=19						
BATI				S	Sn	05 26 15.9	-1.9
	203nm,0.5s,baz=9.0,slow=19,SNR=10						
FAKI	Fak Fak	5.86	40	Pn	Pn	05 25 20.9	+0.4
FAKI	Fak Fak	5.86	40	P	Pn	05 25 20.9	+0.4
MTN	Manton Dam	5.99	154		Pn	05 25 22.4	+0.2
MTN	Manton Dam	5.99	154	P	Pn	05 25 22.4	+0.2
MMRI	Maumere	6.27	259	Pn	Pn	05 25 24.3	-1.7
KDU	Kakadu	6.55	143	P	Pn	05 25 29.7	0.0
KNRA	Kununurra	8.20	178		Pn	05 25 51.0	-0.7
PLAI	Plampang	10.66	262	P	Pn	05 26 27.0	+2.6
FITZ	Fitzroy Crossi	10.95	194		Pn	05 26 26.8	-1.4
FITZ	Fitzroy Crossi	10.95	194	P	Pn	05 26 26.3	-1.9
	4.9nm,0.3s,baz=30,slow=11,SNR=45						
FITZ				S	Sn	05 28 19.9	-10
	21nm,0.3s,baz=303,slow=23,SNR=12						
WB0	Warramunga Arr	13.55	155		Pn	05 26 59.3	-2.6
WRA	Warramunga Arr	13.68	156		Pn	05 27 00.5	-3.1
WRA	Warramunga Arr	13.68	156	P	Pn	05 27 01.1	-2.5
	1.9nm,0.3s,baz=330,slow=14,SNR=59						
WRA				S	Sn	05 29 25.9	-9.3
	15nm,0.4s,baz=335,slow=22,SNR=18						
WR8	Warramunga Arr	13.76	155		Pn	05 27 01.9	-2.6
COEN	Coen	15.84	115		Pn	05 27 29.7	-0.8
COEN				IAmb	IAmb	05 27 44.0	
	comp=Z,13nm,1.1s						
COEN	Coen	15.84	115	P	P	05 27 31.7	+0.5
MBWA	Marble Bar	16.05	211	Pn	Pn	05 27 30.7	-2.2
MBWA				IAmb	IAmb	05 27 35.9	
	comp=Z,9.2nm,0.9s						
PSA00	Pilbara Seismi	16.34	210	P	Pn	05 27 37.6	+1.2
QIS	Mount Isa	16.93	142	P	Pn	05 27 44.0	+0.3
AS31	Alice Springs	16.97	163		P	05 27 44.1	+0.5
AS31				IAmb	IAmb	05 27 46.4	
	comp=Z,5.1nm,0.4s						
ASAR	Alice Springs	16.97	163	P	Pn	05 27 44.8	+0.6
ASAR	Alice Springs	16.97	163	P	Pn	05 27 45.4	+1.2
	comp=Z,7.6nm,0.5s,baz=340,slow=11,SNR=126						
ASAR				S	S	05 30 47.8	-5.1
	comp=Z,1.8nm,0.3s,baz=340,slow=24,SNR=7.7						
AS01	Alice Springs	16.98	163	P	Pn	05 27 44.7	+0.4
GIRL	Giralia	20.40	221	P	P	05 28 22.6	+1.8
MEEK	Meekatharra	21.27	205	P	P	05 28 30.4	+0.2
FORT	Forrest	23.23	181	P	P	05 28 50.6	+1.2
MORW	Morawa	24.50	207	P	P	05 29 02.7	+1.8
MORW				IAmb	IAmb	05 29 03.5	
	comp=Z,15nm,0.8s						
MORW	Morawa	24.50	207	P	P	05 29 02.8	+1.8
BLDU	Ballidu	25.56	204	P	P	05 29 11.9	+1.4
BBOO	Buckleboo	26.22	165	P	P	05 29 17.3	+0.8
BBOO				IAmb	IAmb	05 29 44.6	
	comp=Z,9.3nm,1.1s						
BBOO	Buckleboo	26.22	165	P	P	05 29 17.3	+0.8
STKA	Stephens Creek	27.23	155	P	P	05 29 26.0	+0.4
STKA	Stephens Creek	27.23	155	P	P	05 29 25.9	+0.3
	comp=Z,3.0nm,0.5s,baz=334,slow=9.6,SNR=7.9						
	comp=Z,3.0nm,0.5s						
NWAO	Narrogin (SRO)	27.43	201	P	P	05 29 27.6	+0.3
HTT	Hallett	27.63	161	P	P	05 29 30.6	+1.5
EIDS	Eidsvold	28.01	132	P	P	05 29 31.8	-0.7
EIDS				IAmb	IAmb	05 29 47.8	
	comp=Z,7.3nm,1.1s						
KULM	Kulim	30.49	294	P	P	05 29 55.6	+1.0
KULM				IAmb	IAmb	05 30 10.0	
	comp=Z,5.2nm,1.0s						
QIZ	Qiongzhong	32.06	325	P	P	05 30 06.6	-1.7
MJAR	Matsushiro Arr	44.69	11	P	P	05 31 53.0	-0.5
	comp=Z,0.6nm,0.4s,baz=185,slow=7.9,SNR=2.1						
	comp=Z,0.6nm,0.4s						
SONM	Songino Array	58.38	343	P	P	05 33 36.1	+1.0
	comp=Z,0.5nm,0.5s,baz=167,slow=8.9,SNR=4.4						
	comp=Z,0.5nm,0.5s						
PETK	Petropavlovsk-	65.22	19	P	P	05 34 19.9	-0.8
PETK	Petropavlovsk-	65.22	19	P	P	05 34 20.8	+0.2
	comp=Z,0.6nm,0.7s,baz=200,slow=7.7,SNR=2.4						
	comp=Z,0.6nm,0.7s						
MKAR	Makanchi Array	67.76	328	P	P	05 34 34.7	-2.3
MKAR	Makanchi Array	67.76	328	P	P	05 34 37.8	+0.8
	comp=Z,0.2nm,0.4s,baz=116,slow=8.1,SNR=3.4						
	comp=Z,0.2nm,0.4s						
ZAA0	Zalesovo Array	71.30	334	P	P	05 34 56.4	-2.0
ZALV	Zalesovo Beam	71.30	334	P	P	05 34 57.9	-0.5
ZALV	Zalesovo Beam	71.30	334	P	P	05 34 58.7	+0.2
	comp=Z,1.6nm,0.6s,baz=123,slow=5.3,SNR=6.0						
	comp=Z,1.6nm,0.6s						
KURBB	Kurchatov Arra	72.08	329	P	P	05 35 03.3	+0.1
	comp=Z,0.6nm,0.5s,baz=137,slow=5.1,SNR=5.6						
	comp=Z,0.6nm,0.5s						
KURK	Kurchatov	72.09	329	P	P	05 35 02.5	-0.8
VNDA	Vanda	72.21	173	P	P	05 35 03.9	+0.2
VNDA	Vanda	72.21	173	P	P	05 35 04.2	+0.5
	comp=Z,0.6nm,0.6s,baz=331,slow=7.6,SNR=6.3						
	comp=Z,0.6nm,0.6s						
SBA	Scott Base	73.12	172	P	P	05 35 10.2	+1.3
ABKAR	Akbulak array	81.90	322	P	P	05 35 56.9	-1.3
QSPA	South Pole Qui	82.55	180	P	P	05 36 01.6	+0.1
	comp=Z,1.8nm,0.8s,baz=293,slow=2.3,SNR=9.8						
	comp=Z,1.8nm,0.8s						
CPUP	Villa Florida	145.97	171	PKPbc	PKPbc	05 43 18.9	+0.6
	comp=Z,0.5nm,0.8s,baz=305,slow=3.2,SNR=4.2						
LPAZ	La Paz	151.28	145	PKPbc	PKiKP	05 43 34.1	+0.6
	comp=Z,0.7nm,0.4s,baz=199,slow=2.6,SNR=7.6						

JMA ***23*** *05:26:36.4±0.1, 24°N±1°×122°.4E±0°.4, h55km±2km, MV2.9/14, NW OFF ISHIGAKIJIMA IS*
TAP ***23*** *05:26:36.5, 24°.44N×122°.41E, h55km, ML3.6, C*
ISC 23 05:26:36.8±1.2**, 24°.43N**±0°.02×**122°.42E**±0°.02**, h54**km±5km**, n154, σ1ˢ19**/303**, 1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS2	EOS2	0.17	266	*i* P	Pn	05 26 45.5	+0.3
EOS2				S	Sn	05 26 52.8	+1.5
EOS3	EOS3	0.17	212	P	Pn	05 26 45.7	+0.5
EOS3				*i* S	Sn	05 26 52.7	+1.6
EOS4	EOS4	0.32	196	*i* P	Pn	05 26 46.0	0.0
EOS4				S	Sn	05 26 53.1	+0.4
JYNG	Yonagunijimaku	0.48	87	P	Pn	05 26 48.1	0.0
JYNG				*e*S	Sn	05 26 56.6	+0.4
ESAO	Su ao	0.54	286	P	Pn	05 26 48.2	-0.5
ESAO				*e*S	Sn	05 26 56.9	-0.5
YOJ	Yonaguni jima	0.54	87	P	Pn	05 26 48.7	-0.1
YOJ				*e*S	Sn	05 26 57.4	-0.1
YOJ	Yonaguni jima	0.54	87	*i* P	Pn	05 26 48.8	-0.1
YOJ				*e*S	Sn	05 26 56.5	-1.0
TWC	Suao	0.55	289	P	Pn	05 26 48.2	-0.6
TWC				S	Sn	05 26 56.4	-1.1
EWUT	Wuta	0.58	272	*e*P	Pn	05 26 49.5	+0.2
EWUT				S	Sn	05 26 58.5	+0.3
EGS		0.60	313	*e*P	Pn	05 26 49.0	-0.5
EGS				S	Sn	05 26 59.1	+0.4
ENA	Nanau	0.61	270	*i* P	Pn	05 26 49.6	-0.1
ENA				S	Sn	05 26 58.8	-0.2
EAHA	Aohua	0.62	261	*i* P	Pn	05 26 49.6	-0.1
EAHA				S	Sn	05 26 59.6	+0.5
EHP	Heping Village	0.63	259	P	Pn	05 26 50.2	+0.4
EHP				*i* S	Sn	05 27 00.1	+0.9
NDS	Dongshan	0.67	288	*e*P	Pn	05 26 49.4	-0.9
NDS				*e*S	Sn	05 26 58.4	-1.7
NTC	Toucheng	0.68	309	P	Pn	05 26 50.3	-0.2
NTC				S	Sn	05 27 00.6	+0.2
ILA	Ilan	0.69	299	*e*P	Pn	05 26 49.8	-0.8
ILA				*e*S	Sn	05 27 00.0	-0.7
TWB1	Santiao Chiao	0.69	326	*e*P	Pn	05 26 50.5	-0.1
TWB1				*i* S	Sn	05 26 60.0	-0.8
TWE	Neicheng	0.74	293	*i* P	Pn	05 26 51.2	0.0
TWE				*i* S	Sn	05 27 01.8	+0.1
TIPB	Shuangxi	0.76	315	*e*P	Pn	05 26 51.4	-0.1
TIPB				S	Sn	05 27 02.2	-0.1
ETL	Fush Village	0.77	250	*e*P	Pn	05 26 51.4	-0.2
ETL				S	Sn	05 27 02.1	-0.4
NACB	Ninganchiao	0.79	251	*e*P	Pn	05 26 51.3	-0.5
NACB				S	Sn	05 27 02.3	-0.6
ENTT	Nioudou	0.80	285	*i* P	Pn	05 26 52.5	+0.5
ENTT				S	Sn	05 27 03.9	+0.7
LATG	Datong	0.82	278	*i* P	Pn	05 26 52.6	+0.3
LATG				*e*S	Sn	05 27 04.9	+1.2
FUSB	Fushanzhiwuyua	0.82	294	*e*P	Pn	05 26 52.5	+0.2
FUSB				S	Sn	05 27 04.1	+0.4
SXI1	Grass Mountain	0.82	324	*e*P	Pn	05 26 52.2	-0.2
SXI1				S	Sn	05 27 03.5	-0.3
TWD	Chiawan	0.82	245	*e*P	Pn	05 26 51.7	-0.6
TWD				*e*S	Sn	05 27 02.6	-1.1
NWF	Wu-fen Shan	0.86	318	*e*P	Pn	05 26 52.1	-0.8
NWF				*e*S	Sn	05 27 02.1	-2.6
WFSB	Wu-fen Shan	0.86	318	P	Pn	05 26 52.8	+0.1
WFSB				*i* S	Sn	05 27 04.1	-0.4
HWA	Hwalien	0.87	239	*e*P	Pn	05 26 53.5	+0.6
HWA				S	Sn	05 27 05.7	+1.1
ETLH	Xiulin Townshi	0.88	256	*e*P	Pn	05 26 52.6	-0.5
ETLH				*e*S	Sn	05 27 04.4	-0.7
NWLT	Wulai	0.90	293	*e*P	Pn	05 26 54.0	+0.7
NWLT				*i* S	Sn	05 27 06.2	+0.8
TNOU	National Taiwa	0.92	321	*i* P	Pn	05 26 53.5	-0.2
TNOU				*i* S	Sn	05 27 05.4	-0.6
TEYL	Yanliau Villag	0.93	233	P	Pn	05 26 54.0	+0.3
TEYL				*e*S	Sn	05 27 05.0	-1.2
TWA	Mucha	0.93	306	*i* P	Pn	05 26 53.8	+0.1
TWA				*i* S	Sn	05 27 06.1	-0.1
NNSB	Datong	0.94	270	*i* P	Pn	05 26 53.9	-0.1
NNSB				*i* S	Sn	05 27 06.4	-0.2
NNSH	Datong	0.94	270	P	Pn	05 26 54.0	+0.1
NNSH				S	Sn	05 27 06.3	-0.3
NNS	Nan Shan	0.95	271	*e*P	Pn	05 26 54.0	-0.1
NNS				*e*S	Sn	05 27 06.8	0.0
ETM	Tongmen	0.96	241	*e*P	Pn	05 26 53.4	-0.7
ETM				*e*S	Sn	05 27 05.9	-1.0
NHDH	Xindian Distri	0.97	303	*e*P	Pn	05 26 54.4	+0.2
NHDH				*e*S	Sn	05 27 07.8	+0.8
YHNB	Yeheng	0.98	284	*i* P	Pn	05 26 55.0	+0.6
YHNB				S	Sn	05 27 07.9	+0.5
NSK	Sanguang	0.99	285	*i* P	Pn	05 26 55.0	+0.4
NSK				S	Sn	05 27 08.1	+0.4
LXIB	Xiulin Townshi	1.00	246	*e*P	Pn	05 26 54.2	-0.6
LXIB				*e*S	Sn	05 27 06.8	-1.2
TATO	Taipei	1.00	303	⇓P	Pn	05 26 54.6	0.0
TATO				S	Sn	05 27 08.1	+0.3
SHUL	Shoufeng	1.01	231	*e*P	Pn	05 26 54.3	-0.4
SHUL				*e*S	Sn	05 27 07.5	-0.4
YM01	YM01	1.05	313	*e*P	Pn	05 26 55.2	-0.1
YM01				S	Sn	05 27 08.9	-0.1
YM08	YM08	1.06	315	*e*P	Pn	05 26 57.2	+1.7
YM08				*e*S	Sn	05 27 09.0	-0.3
TEGC	Jichi Village	1.07	228	P	Pn	05 26 54.9	-0.7
TEGC				*e*S	Sn	05 27 08.6	-1.0
ZUZH	Zhuzihu	1.07	313	*e*P	Pn	05 26 55.5	-0.2
ZUZH				*e*S	Sn	05 27 09.7	0.0
FUSS	Fushou	1.08	261	*i* P	Pn	05 26 56.3	+0.3
FUSS				*e*S	Sn	05 27 09.7	-0.5
ESL	Shilin	1.09	236	P	Pn	05 26 55.4	-0.3
ESL				*e*S	Sn	05 27 07.8	-2.1
WHF	Hehuan Shan	1.09	255	*e*P	Pn	05 26 55.9	-0.3
WHF				*e*S	Sn	05 27 09.5	-1.0
TWY	Chenhua	1.12	319	P	Pn	05 26 56.2	0.0
TWY				S	Sn	05 27 11.2	+0.6
TWS1	Kuangyinshan	1.13	307	*e*P	Pn	05 26 56.5	+0.2
TWS1				S	Sn	05 27 11.0	+0.2
NTST	Danshui	1.14	310	P	Pn	05 26 57.0	+0.5
NTST				*e*S	Sn	05 27 11.5	+0.3
TWT	Tachien	1.14	261	P	Pn	05 26 56.9	+0.2
TWT				*e*S	Sn	05 27 11.6	+0.2
TDCB	Techi	1.16	262	P	Pn	05 26 57.4	+0.5
TDCB				*e*S	Sn	05 27 11.2	-0.7
WARBT	Fenglin Townsh	1.18	233	P	Pn	05 26 56.5	-0.5
WARBT				*e*S	Sn	05 27 10.0	-2.0
EGFH	Guangfu	1.18	230	*e*P	Pn	05 26 58.2	+1.2
EGFH				*e*S	Sn	05 27 10.6	-1.4
KSHI	Guanxi Townshi	1.18	287	*i* P	Pn	05 26 58.3	+1.3
KSHI				*e*S	Sn	05 27 14.7	+2.6
NFF	Wufeng Townshi	1.20	280	*i* P	Pn	05 26 58.0	+0.6
NFF				*i* S	Sn	05 27 13.9	+1.3
IRIF	Iriomote-Funau	1.20	94	P	Pn	05 26 57.2	-0.2
IRIF				*e*S	Sn	05 27 12.3	-0.3
OWD	Renai	1.23	248	*i* P	Pn	05 26 57.4	-0.4
OWD				*e*S	Sn	05 27 11.4	-2.0
PCYT	Pengchaiyu	1.23	345	*e*P	Pn	05 26 58.2	+0.4
PCYT				S	Sn	05 27 13.4	0.0
NCUH	Zhongli	1.24	296	*e*P	Pn	05 26 58.6	+0.7
WUSB	Renai	1.26	250	*e*P	Pn	05 26 58.2	0.0
WUSB				*i* S	Sn	05 27 13.8	-0.4
LIOB	Emei	1.29	280	*i* P	Pn	05 26 59.6	+1.0
LIOB				S	Sn	05 27 15.9	+1.1
HGSD	Ruisui	1.30	224	*e*P	Pn	05 26 58.7	0.0
HGSD				*e*S	Sn	05 27 13.4	-1.6
NSTT	Nanjuang	1.30	279	P	Pn	05 26 59.7	+1.0
NSTT				*e*S	Sn	05 27 16.8	+1.8
HATJ	Hateruma jima	1.32	106	*e*P	Pn	05 26 59.1	+0.2
VWDT	VWDT	1.34	240	P	Pn	05 26 59.2	0.0
VWDT				*e*S	Sn	05 27 16.1	+0.1
WHP	Taichung City	1.35	264	*e*P	Pn	05 27 00.6	+1.2
WHP				S	Sn	05 27 16.8	+0.6
SBCB	Hsinchu	1.35	286	*e*P	Pn	05 27 00.3	+1.0
EHYH	Wanrong	1.35	227	*e*P	Pn	05 26 59.3	-0.1
EHYH				*e*S	Sn	05 27 15.4	-0.8
EHY	Hungye	1.36	228	P	Pn	05 26 59.1	-0.4
EHY				*e*S	Sn	05 27 14.6	-1.9
HSN	Hsinchu	1.37	286	P	Pn	05 26 59.9	+0.4
HSN				S	Sn	05 27 16.4	-0.2
NHW	Xinwu Township	1.37	295	P	Pn	05 26 59.9	+0.3
NHW				*e*S	Sn	05 27 17.8	+1.1
WPL	Puli Township	1.39	253	P	Pn	05 27 00.8	+0.9
WPL				S	Sn	05 27 17.2	-0.1
DPDB	Guoxing	1.42	254	*e*P	Pn	05 27 01.1	+0.8
DPDB				S	Sn	05 27 18.6	+0.7
ECBN	Changbin	1.42	219	P	Pn	05 26 59.7	-0.5
ECBN				*e*S	Sn	05 27 15.7	-2.1
WCS	Beigang Elemen	1.42	255	*e*P	Pn	05 27 01.1	+0.9
WCS				*e*S	Sn	05 27 18.9	+1.0
YULB	Yu-li	1.45	225	*e*P	Pn	05 26 59.9	-0.8
YULB				*e*S	Sn	05 27 16.8	-1.9
JKRS	Kuro-shima	1.47	97	*e*P	Pn	05 27 01.3	+0.4
JKRS				*e*S	Sn	05 27 19.5	+0.5
SSLB	Suanglung	1.48	245	*e*P	Pn	05 27 01.1	0.0
SSLB				*i* S	Sn	05 27 18.2	-1.2
TWF1	Yuli	1.48	224	*e*P	Pn	05 27 00.6	-0.6
TWF1				*i* S	Sn	05 27 17.9	-1.6
NMLH	Miaoli	1.48	274	*e*P	Pn	05 27 02.7	+1.5
NMLH				*e*S	Sn	05 27 19.2	-0.3
SMLT	Sun Moon Lake	1.49	249	P	Pn	05 27 01.6	+0.3
SMLT				S	Sn	05 27 19.6	-0.1
TWQ1	Liyutan	1.50	267	*e*P	Pn	05 27 04.4	+3.0
TWQ1				*e*S	Sn	05 27 20.9	+1.0
NSY	Sanyi	1.51	270	*e*P	Pn	05 27 01.6	+0.1
NSY				*e*S	Sn	05 27 23.2	+3.1
TYC	Yuchr	1.52	250	*e*P	Pn	05 27 02.5	+0.9
TYC				*e*S	Sn	05 27 20.7	+0.5
CHKH	Chenggong	1.55	217	*e*P	Pn	05 27 01.8	-0.1
CHKH				*e*S	Sn	05 27 18.0	-3.0
JIJ	Ishigaki jima	1.58	92	*e*P	Pn	05 27 02.2	-0.2
JIJ				*e*S	Sn	05 27 21.1	-0.6
FULB	Fuli	1.60	220	*e*P	Pn	05 27 02.0	-0.7
FULB				*e*S	Sn	05 27 20.9	-1.4
WHYT	Xinyi Township	1.60	243	*e*P	Pn	05 27 03.5	+0.7
WHYT				*i* S	Sn	05 27 22.3	-0.1
TCU	Taichung	1.61	260	*e*P	Pn	05 27 03.2	+0.3
TCU				*e*S	Sn	05 27 23.8	+1.3
WWF	Wufeng	1.61	257	*e*P	Pn	05 27 04.5	+1.6
WWF				S	Sn	05 27 24.6	+2.0
CHKT	Chengkung	1.64	216	P	Pn	05 27 03.0	-0.2
CHKT				*e*S	Sn	05 27 19.7	-3.5
WJS	Zhushan	1.66	249	P	Pn	05 27 05.1	+1.6
WJS				S	Sn	05 27 25.3	+1.7
WNT1	Nantou City	1.67	252	P	Pn	05 27 05.3	+1.6
WNT1				S	Sn	05 27 26.8	+2.9
WNT	Mingjian	1.67	251	P	Pn	05 27 05.1	+1.4
WNT				S	Sn	05 27 25.7	+1.6
EHD	Haiduan	1.69	221	*e*P	Pn	05 27 03.4	-0.5
EHD				*e*S	Sn	05 27 22.2	-2.3
ECS	Chishang	1.72	220	P	Pn	05 27 05.4	+1.0
ECS				S	Sn	05 27 26.2	+0.9
WCHH	Zhanghua	1.73	259	*e*P	Pn	05 27 05.6	+1.1
WCHH				S	Sn	05 27 27.0	+1.6
ALS	Alishan	1.73	238	*e*P	Pn	05 27 05.8	+1.0
ALS				*i* S	Sn	05 27 25.5	-0.5
JISG	Ishigakijimahi	1.73	84	*e*P	Pn	05 27 04.3	-0.2
JISG				*e*S	Sn	05 27 25.1	-0.5
WCH1	Changhua City	1.74	259	P	Pn	05 27 05.2	+0.5
WCH1				S	Sn	05 27 27.5	+1.8
EDH	Donghe	1.77	215	*e*P	Pn	05 27 04.0	-1.1
EDH				*e*S	Sn	05 27 23.6	-2.9
ELDTW	Lidau	1.78	226	*e*P	Pn	05 27 05.7	+0.4
ELDTW				*i* S	Sn	05 27 25.4	-1.5
CHN5	Tsauling	1.79	243	*e*P	Pn	05 27 07.1	+1.7
CHN5				*i* S	Sn	05 27 28.1	+1.0
WGK	Gukeng	1.85	247	P	Pn	05 27 07.4	+1.3
WGK				S	Sn	05 27 29.8	+1.5
WDLH	Douliu	1.87	247	*e*P	Pn	05 27 08.0	+1.6
WDLH				*e*S	Sn	05 27 30.6	+1.8
LONT	Longtian	1.92	218	*e*P	Pn	05 27 08.6	+1.5
LONT				*e*S	Sn	05 27 30.6	+0.4
WCKO	Fanlu	1.93	240	P	Pn	05 27 07.5	+0.3
WCKO				*e*S	Sn	05 27 32.4	+2.0
STYH	Taoyuan	1.96	230	*e*P	Pn	05 27 08.4	+0.9
STYH				*i* S	Sn	05 27 31.0	0.0
STYT	Tauyuan	1.97	231	P	Pn	05 27 08.3	+0.5
STYT				*e*S	Sn	05 27 32.0	+0.5
CHN4	Tsaushan	1.98	238	P	Pn	05 27 09.5	+1.6
CHN4				S	Sn	05 27 33.8	+2.1
TPUB	Ta-pu	1.98	236	*e*P	Pn	05 27 09.4	+1.4
TPUB				S	Sn	05 27 33.0	+1.2
CHN2	Minshiung	1.99	244	*e*S	Sn	05 27 34.9	+3.2
WTK	Tuku	1.99	249	P	Pn	05 27 09.1	+1.0
WTK				*e*S	Sn	05 27 33.0	+1.1
TWGBT	Beinan	2.02	218	*e*P	Pn	05 27 09.1	+0.7
TWGBT				*e*S	Sn	05 27 29.7	-2.9
TWG	Pinlang	2.02	218	*e*P	Pn	05 27 09.8	+1.4
TWG				*e*S	Sn	05 27 29.2	-3.4
WTP	Ta-pu	2.03	235	P	Pn	05 27 10.2	+1.6
WTP				S	Sn	05 27 33.9	+1.1
TTN	Taitung	2.03	215	*e*S	Sn	05 27 34.0	+1.1
CHY	Chiayi	2.04	243	*e*P	Pn	05 27 10.6	+1.8
CHY				*e*S	Sn	05 27 35.0	+1.9
JTJ	Tarama	2.09	84	*e*P	Pn	05 27 10.0	+0.6
JTJ				*e*S	Sn	05 27 34.6	+0.3
TWK	Hsinying	2.11	237	*e*P	Pn	05 27 10.4	+0.7
TWK				*e*S	Sn	05 27 36.2	+1.4
CHN1	Nanshi	2.13	235	*e*P	Pn	05 27 11.1	+1.2
CHN1				*e*S	Sn	05 27 37.7	+2.5
SNST	Tainan City	2.13	236	P	Pn	05 27 11.1	+1.2
SNST				*e*S	Sn	05 27 35.8	+0.5
SGST	Jiashian	2.15	232	*e*P	Pn	05 27 10.4	+0.2
SGST				S	Sn	05 27 36.6	+0.9
WSF	Szhu	2.15	249	P	Pn	05 27 10.8	+0.6
WSF				*e*S	Sn	05 27 37.8	+2.0
WSL	Shuilin Townsh	2.19	246	*e*P	Pn	05 27 12.3	+1.5
WSL				*e*S	Sn	05 27 38.4	+1.6
ICHU	Yijhu	2.23	242	P	Pn	05 27 12.3	+1.1
ICHU				*e*S	Sn	05 27 39.2	+1.6
ECL	Taimali	2.26	217	*e*P	Pn	05 27 13.1	+1.3
ECL				*e*S	Sn	05 27 35.5	-3.1
CHN8	Yiju	2.29	242	P	Pn	05 27 12.4	+0.3
CHN8				S	Sn	05 27 40.3	+1.2
SCST	Cishan	2.34	229	P	Pn	05 27 14.1	+1.3
SCST				*e*S	Sn	05 27 43.8	+3.5
SSD	Sandimen	2.34	225	P	Pn	05 27 13.8	+1.0
SSD				S	Sn	05 27 41.5	+1.1
TSMG	Majia	2.36	224	*e*P	Pn	05 27 14.6	+1.5

TSMG				eS	Sn	05 27 42.4	+1.4
MASBT	**Mashibuluo**	2.44	222	eP	Pn	05 27 14.4	+0.2
MASBT				eS	Sn	05 27 43.8	+1.0
TSCK	**Chigu Township**	2.49	240	P	Pn	05 27 15.8	+1.0
TSCK				eS	Sn	05 27 45.0	+1.0
TAWH	**Dawu Township**	2.51	214	P	Pn	05 27 14.3	-0.8
TAWH				eS	Sn	05 27 44.0	-0.5
SCZT	**Fangliau**	2.63	219	eP	Pn	05 27 19.4	+2.6
SCZT				eS	Sn	05 27 50.4	+2.8
JMJ	**Miyako jima 2**	2.65	81	eP	Pn	05 27 18.3	+1.3
JMJ				eS	Sn	05 27 49.4	+1.4
SLIU	**Shizi**	2.66	214	eP	Pn	05 27 20.3	+3.1
SLIU				eS	Sn	05 27 49.1	+0.9
PNG	**Penghu**	2.75	252	P	Pn	05 27 18.3	-0.2
PNG				eS	Sn	05 27 49.5	-1.0
VWUC	**VWUC**	2.75	282	eP	Pn	05 27 18.2	-0.3
VWUC				eS	Sn	05 27 48.2	-2.3
PHUB	**P'eng-hu**	2.76	251	P	Pn	05 27 18.1	-0.4
PHUB				eS	Sn	05 27 48.9	-1.7
WDGT	**Dungji**	2.78	246	P	Pn	05 27 19.4	+0.6
WDGT				eS	Sn	05 27 50.8	-0.4
MATB	**Ma-tsu**	2.82	308	eP	Pn	05 27 18.7	-0.7
MATB				eS	Sn	05 27 52.2	+0.2
TWKBT	**Hengchun**	2.88	211	P	Pn	05 27 20.7	+0.4
TWKBT				eS	Sn	05 27 53.8	+0.1
VCHM	**Qimei**	2.99	247	P	Pn	05 27 22.1	+0.3
VCHM				eS	Sn	05 27 55.8	-0.6
PTMZ	**Houxiangcun**	3.06	282	P	Pn	05 27 22.4	-0.2
PTMZ				eS	Sn	05 27 55.8	-2.2
XPSS	**Dashiqiu**	3.20	322	eP	Pn	05 27 24.1	-0.4
XPSS				eS	Sn	05 28 00.1	-1.4
KNMB	**Chin-men Tao**	3.67	271	eP	Pn	05 27 29.7	-1.3
KNMB				eS	Sn	05 28 10.3	-2.7
AXDP	**Jialang**	4.07	278	eP	Pn	05 27 36.0	-0.5
AXDP				eS	Sn	05 28 20.9	-2.0
ZPLA	**Ao Xicun**	4.29	264	eP	Pn	05 27 38.9	-0.6
ZPLA				eS	Sn	05 28 25.3	-3.0

GCG ***23*** *05:31:01.3±1.8, 14°.24N×93°.00W, h24km±8km, MD4.2, ML3.7, MW3.3*

CATAC ***23*** *05:31:02.7±1.2, 14°N±5°×9°3W±°, h4km±4km, M3.6/7, MLv3.6/7, Error ellipse: s-maj=13.9km s-min=6.2km az=53.2, confirmed*

MEX ***23*** *05:31:02.7±0.8, 14°.36N×93°.12W, h26km±94km, MD4.2*

ISC 23 05:30:58.3±1.5**, 14°.31N**±0°.05×**93°.06W**±0°.03**, h17**km±9km**, n39, σ2ˢ.25**/64**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.97	52	eP	Pn	05 31 17.8	+0.6
THIG				eS	Sn	05 31 30.3	-0.3
THIG		0.97	52	i P	Pn	05 31 18.1	+0.9
THIG				i S	Sn	05 31 32.1	+1.5
SMCA	**Catarina**	1.10	60	i P	Pg	05 31 20.1	+0.6
SMCA				i S	Sn	05 31 35.8	+2.1
PATR	**El Naranjo**	1.13	45	eP	Pg	05 31 20.2	0.0
PATR				eS	Sg	05 31 34.2	-0.9
PAVE	**Pavencul**	1.23	44	eP	Pb	05 31 21.7	+0.5
PAVE				eS	Sb	05 31 36.5	-0.3
RTAL	**Retalhuleu**	1.34	81	eP	Pb	05 31 23.6	+0.6
RTAL				eS	Sg	05 31 41.7	0.0
RTAL	**Retalhuleu**	1.34	81	P	Pg	05 31 23.8	-0.3
RTAL	**Retalhuleu**	1.34	81	S	Sn	05 31 39.6	-0.1
PCIG		1.39	354	eP	Pn	05 31 23.6	+0.6
PCIG				eS	Sn	05 31 37.7	-3.4
STG8	**El Palmar, Qui**	1.66	85	i P	Pn	05 31 25.5	-1.4
STG8				i S	Sn	05 31 43.6	-4.3
STG8				IAML		05 31 47.8	
	comp=E,1μm,0.3s						
STG0	**El Palmar, Qui**	1.67	86	i P	Pn	05 31 25.5	-1.4
STG0				i S	Sn	05 31 44.0	-4.1
STG0				IAML		05 31 52.2	
	comp=E,2μm,0.2s						
HUEH	**Huehuetenango**	1.81	56	eP	Pb	05 31 31.9	+0.8
HUEH				eS	Sb	05 31 54.4	+0.7
HUEH	**Huehuetenango**	1.81	56	i P	Pb	05 31 31.3	+0.1
HUEH				i S	Sg	05 31 55.6	-1.0
HUEH				IAML		05 32 01.7	
	comp=E,915nm,0.4s						
HUEH	**Huehuetenango**	1.81	56	P	Pb	05 31 32.1	+1.0
CCIG	**Comitan**	2.15	24	eP	Pb	05 31 37.6	+0.7
CCIG				eS	Sb	05 32 04.9	+1.4
CCIG	**Comitan**	2.15	24	i P	Pb	05 31 37.5	+0.5
CCIG				i S	Sg	05 32 05.8	-1.8
CCIG				IAML		05 32 10.5	
	comp=N,219nm,0.4s						
CCIG	**Comitan**	2.15	24	P	Pb	05 31 38.0	+1.0
CCIG	**Comitan**	2.15	24	S	Sg	05 32 06.1	-1.5
TGIG		2.45	359	eP	Pn	05 31 40.4	+2.7
TGIG				eS	Sn	05 32 09.4	+2.1
TGIG		2.45	359	i P	Pb	05 31 40.7	-1.3
TGIG				i S	Sb	05 32 11.9	-0.2
TGIG				IAML		05 32 12.2	
	comp=E,199nm,0.5s						
FG16	**Alotenango, Sa**	2.47	91	i P	Pn	05 31 35.6	-2.5
FG16				i S	Sn	05 32 02.1	-5.9
FG16				IAML		05 32 03.6	
	comp=N,2μm,0.3s						
NUBE	**Las Nubes**	3.21	97	i P	Pn	05 31 51.0	+2.9
NUBE				i S	Sn	05 32 28.6	+2.6
NUBE	**Las Nubes**	3.21	97	P	Pn	05 31 49.9	+1.8
NUBE	**Las Nubes**	3.21	97	S	Sn	05 32 26.0	0.0
HUIG	**Huatulco**	3.28	297	eP	Pn	05 31 50.5	+1.5
HUIG				eS	Sn	05 32 21.6	-6.1
CEVE	**Cerro Verde**	3.37	98	P	Pn	05 31 52.1	+1.7
CEVE	**Cerro Verde**	3.37	98	S	Sn	05 32 31.6	+1.5
JAYA	**Jayaque - finc**	3.56	100	i P	Pn	05 31 55.6	+2.5
JAYA				i S	Sn	05 32 34.4	-0.5
JAYA	**Jayaque - finc**	3.56	100	P	Pn	05 31 55.4	+2.4
PMON	**Piamonte**	3.68	99	P	Pn	05 31 57.7	+3.1
PMON	**Piamonte**	3.68	99	S	Sn	05 32 37.5	-0.3
PETF	**Flores**	4.02	49	eP	Pn	05 31 58.4	-0.7
PETF				eS	Sn	05 32 45.6	-0.4
YOIG	**Yosondua**	5.01	301	eP	Pn	05 32 18.1	+5.1
YOIG				eS	Sn	05 33 10.9	+0.2
PNIG	**Pinotepa**	5.31	294	eP	Pn	05 32 20.2	+3.4
PNIG				eS	Sn	05 33 11.3	-6.4
TOIG	**Toxpalan**	5.38	315	eP	Pn	05 32 20.7	+2.7
TOIG				eS	Sn	05 33 17.9	-1.7
TXIG	**Tlaxiaco**	5.39	303	eP	Pn	05 32 21.6	+3.3
TXIG				eS	Sn	05 33 21.9	+1.7
HLIG	**Huajuapan de L**	5.75	308	eP	Pn	05 32 23.1	0.0
HLIG				eS	Sn	05 33 28.8	-0.1
FTIG	**Fresnillo de T**	6.05	307	eP	Pn	05 32 32.5	+5.3
FTIG				eS	Sn	05 33 35.6	-0.5
JAUV	**Jalcomulco**	6.17	325	eP	Pn	05 32 26.0	-2.8
JAUV				eS	Sn	05 33 36.5	-2.6

IDC ***23*** *05:41:35.1±0.8, 31°.15S×177°.69W, h0km, mb4.0/8, mbtmp4.0/8, Error ellipse: s-maj=29.8km s-min=25.1km az=156.0*

NEIC ***23*** *05:41:41.0±1.6, 30°.18S±0°.08×177°.8W±0°.2, h35km±2km, mb4.3/13, Error ellipse: s-maj=31.4km s-min=11.0km az=75.0*

ISC 23 05:41:40.2±0.7**, 31°.33S**±0°.07×**177°.8W**±0°.1**, h35**km**, n46, σ1ˢ.86**/49**, mb4.2**/15**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	2.07	358	Sn	Sn	05 42 32.8	-4.3
	63nm,0.3s,baz=257,slow=22,SNR=1.9						
MXZ	**Matakaoa Point**	6.99	206	S	Sn	05 44 37.0	-1.2
HAZ	**Te Kaha**	7.36	208	P	Pn	05 43 23.0	-2.2
HAZ				S	Sn	05 44 49.0	+1.6
PUZ	**Puketiti**	7.45	204	S	Sn	05 44 48.7	-1.1
MWZ	**Matawai**	7.96	207	P	Pn	05 43 31.8	-1.6
MWZ				S	Sn	05 45 02.0	-0.3
URZ	**Urewera**	8.06	210	Pn	Pn	05 43 30.7	-4.2
	0.4nm,0.3s,baz=8.1,slow=13,SNR=1.9						
URZ				Sn	Sn	05 45 03.2	-1.5
	3.5nm,0.3s,baz=108,slow=19,SNR=12						
URZ	**Urewera**	8.06	210	P	Pn	05 43 33.1	-1.7
URZ				S	Sn	05 45 03.2	-1.5
RIGZ	**Rimuhau**	8.20	205	S	Sn	05 45 06.8	-1.2
PRGZ	**Paritu Road**	8.35	204	P	Pn	05 43 37.5	-1.2
PRGZ				S	Sn	05 45 09.8	-2.0
SNGZ	**Shannon Statio**	8.42	207	S	Sn	05 45 11.9	-1.7
KNZ	**Kokohu**	8.51	204	S	Sn	05 45 12.3	-3.3
RAHZ	**Arahi**	8.63	207	S	Sn	05 45 17.9	-0.9
WHHZ	**Waihua**	8.72	206	S	Sn	05 45 19.3	-1.5
NMHZ	**Naumai**	8.90	208	P	Pn	05 43 45.0	-1.4
NMHZ				S	Sn	05 45 23.4	-2.0
BKZ	**Black Stump Fm**	9.09	209	S	Sn	05 45 26.9	-3.1
FUTU	**Fugatoga**	16.94	359	Pn	Pn	05 45 19.9	-15
ARMA	**Armidale**	26.18	264	P	P	05 47 12.9	+1.2
ARMA				IAmb	IAmb	05 47 35.7	
	comp=Z,11nm,1.1s						
CAN	**Canberra**	27.92	253	P	P	05 47 30.8	+3.6
EIDS	**Eidsvold**	27.93	274	P	P	05 47 27.6	+0.3
EIDS				IAmb	IAmb	05 47 33.5	
	comp=Z,7.6nm,1.1s						
TOO	**Toolangi**	30.74	248	P	P	05 47 56.0	+3.9
TOO				IAmb	IAmb	05 48 11.5	
	comp=Z,3.1nm,1.1s						
CTAO	**Charters Tower**	34.09	280	P	P	05 48 21.2	-0.5
CTAO				IAmb	IAmb	05 48 39.1	
	comp=Z,7.7nm,1.1s						
STKA	**Stephens Creek**	34.41	258	P	P	05 48 25.9	+1.6
	comp=Z,2.3nm,0.7s,baz=87,slow=8.8,SNR=4.5						
	comp=Z,2.3nm,0.7s						
BBOO	**Buckleboo**	38.86	255	P	P	05 49 04.5	+2.3
BBOO				IAmb	IAmb	05 49 05.8	
	comp=Z,13nm,1.1s						
COEN	**Coen**	39.66	287	P	P	05 49 07.4	-1.7
AS31	**Alice Springs**	43.20	268	P	P	05 49 39.1	+1.0
ASAR	**Alice Springs**	43.20	268	P	P	05 49 39.1	+1.0
ASAR	**Alice Springs**	43.20	268	P	P	05 49 39.3	+1.2
	comp=Z,3.1nm,0.8s,baz=105,slow=7.7,SNR=20						
	comp=Z,3.1nm,0.8s						
WR8	**Warramunga Arr**	44.13	273	P	P	05 49 46.6	+1.0
WR8				IAmb	IAmb	05 49 55.0	
	comp=Z,3.5nm,0.8s						
WRA	**Warramunga Arr**	44.28	273	P	P	05 49 47.9	+1.2
WRA	**Warramunga Arr**	44.28	273	P	P	05 49 47.5	+0.8
	comp=Z,2.6nm,0.8s,baz=112,slow=8.0,SNR=12						
	comp=Z,2.6nm,0.8s						
WB0	**Warramunga Arr**	44.30	273	P	P	05 49 46.6	-0.4
WB0				IAmb	IAmb	05 50 01.0	
	comp=Z,5.5nm,0.9s						
SBA	**Scott Base**	47.12	184	P	P	05 50 17.6	+9.2
VNDA	**Vanda**	47.19	186	P	P	05 50 18.5	+10
QSPA	**South Pole Qui**	58.78	180	P	P	05 51 35.6	+0.9
	comp=Z,2.4nm,1.1s,baz=74,slow=2.4,SNR=6.7						
	comp=Z,2.4nm,1.1s						
SNAA	**Sanae**	77.23	178	P	P	05 53 32.1	+1.8
	comp=Z,1.2nm,1.1s,baz=199,slow=9.4,SNR=1.7						
	comp=Z,1.2nm,1.1s						
PETK	**Petropavlovsk-**	86.74	346	P	P	05 54 20.0	-0.2
	comp=Z,1.2nm,0.9s,baz=160,slow=5.4,SNR=2.5						
	comp=Z,1.2nm,0.9s						
NVAR	**Mina Array Bea**	88.83	43	P	P	05 54 29.4	-1.4
	comp=Z,0.4nm,0.8s,baz=238,slow=4.0,SNR=1.5						
	comp=Z,0.4nm,0.8s						
TXAR	**Lajitas Array**	92.77	57	P	P	05 54 50.2	+1.0
	comp=Z,0.6nm,1.0s,baz=264,slow=6.8,SNR=3.5						
	comp=Z,0.6nm,1.0s						
BVAR	**Borovoye Array**	127.16	315	PKP	PKiKP	06 00 41.3	+0.4
	comp=Z,0.3nm,0.4s,baz=90,slow=2.9,SNR=3.6						
KBZ	**Khabaz**	145.74	303	PKPbc	PKPdf	06 01 13.0	-1.8
	comp=Z,1.5nm,0.6s,baz=180,slow=1.0,SNR=3.7						
FINES	**FINESS Array B**	146.06	340	PKPbc	PKPdf	06 01 14.9	+0.1
	comp=Z,1.8nm,0.7s,baz=20,slow=1.6,SNR=8.9						
NB2	**NORSAR Subarra**	149.69	351	PKP	PKiKP	06 01 26.7	+0.1
	comp=Z,1.8nm,1.1s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	149.69	351	PKPbc	PKPbc	06 01 23.4	-2.1
	comp=Z,0.6nm,0.9s,baz=16,slow=2.6,SNR=1.7						
HFS	**Hagfors**	150.18	348	PKPbc	PKPbc	06 01 26.7	0.0
	comp=Z,1.1nm,0.8s,baz=46,slow=6.2,SNR=2.1						
AKASG	**Malin Array Be**	152.12	322	PKPbc	PKiKP	06 01 33.1	+1.3
	comp=Z,1.8nm,0.8s,baz=64,slow=1.3,SNR=7.8						
BRTR	**Keskin Array B**	153.15	297	PKPbc	PKiKP	06 01 35.3	+0.7
	comp=Z,0.3nm,0.5s,baz=134,slow=6.2,SNR=2.2						

IDC ***23*** *05:53:58.2±1.6, 21°.13N×93°.35E, h72km±11km, mb3.6/13, mbtmp3.9/15, MS3.5/1, Error ellipse: s-maj=35.5km s-min=9.7km az=37.0*

ISC 23 05:53:56.0±1.1**, 21°.2N**±0°.2×**93°.4E**±0°.1**, h45**km**, n17, σ1ˢ.66**/19**, mb3.9**/13**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRDH	**Bariadhala**	2.21	313	P	Pn	05 54 32.3	+2.0
	107nm,0.4s,baz=90,slow=8.0,SNR=13						
BRDH				S	Sn	05 54 59.8	+3.3
	361nm,0.3s,baz=53,slow=20,SNR=21						
CMAR	**Chiang Mai Arr**	5.88	116	P	Pn	05 55 21.4	+0.8
	1.0nm,0.4s,baz=290,slow=14,SNR=7.9						
CMAR				S	Sn	05 56 30.7	+3.9
	2.0nm,0.6s,baz=289,slow=16,SNR=4.1						
MKAR	**Makanchi Array**	27.11	343	P	P	05 59 35.1	+0.4
	0.9nm,0.5s,baz=157,slow=9.5,SNR=13						
	0.9nm,0.5s						
SONM	**Songino Array**	28.60	18	P	P	05 59 48.6	+0.5
	0.6nm,0.4s,baz=198,slow=8.1,SNR=3.1						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	31.64	342	P	P	06 00 14.8	+0.1
	1.4nm,0.7s,baz=158,slow=8.3,SNR=7.1						
KURBB				LR	LR	06 15 08.0	
	comp=Z,80nm,19.1s,baz=158,slow=40						
	1.4nm,0.7s						
ZALV	**Zalesovo Beam**	33.38	351	P	P	06 00 30.2	+0.4
	2.0nm,0.3s,baz=167,slow=9.1,SNR=9.9						
	2.0nm,0.3s						
BVAR	**Borovoye Array**	36.39	337	P	P	06 00 55.6	-0.3
	0.7nm,0.5s,baz=116,slow=10,SNR=4.2						
	0.7nm,0.5s						
MJAR	**Matsushiro Arr**	41.75	58	P	P	06 01 40.2	-0.8
	0.5nm,0.6s,baz=269,slow=11,SNR=1.9						
	0.5nm,0.6s						
ASAR	**Alice Springs**	59.51	136	P	P	06 03 55.3	+0.3
	0.7nm,0.5s,baz=313,slow=6.7,SNR=4.5						
	0.7nm,0.5s						
FINES	**FINESS Array B**	60.81	329	P	P	06 04 02.1	-1.2
	0.8nm,0.6s,baz=107,slow=13,SNR=4.0						
	0.8nm,0.6s						
ARCES	**ARCESS Array B**	62.64	338	P	P	06 04 15.1	-0.4
	3.6nm,0.9s,baz=82,slow=8.7,SNR=6.5						
	3.6nm,0.9s						
HFS	**Hagfors**	66.78	328	P	P	06 04 41.5	-1.1
	1.4nm,0.6s,baz=93,slow=5.0,SNR=10						
	1.4nm,0.6s						
GERES	**GERESS Array B**	67.68	315	P	P	06 04 47.6	-1.1
	0.4nm,0.6s,baz=75,slow=7.2,SNR=4.1						
	0.4nm,0.6s						
NB2	**NORSAR Subarra**	67.95	329	P	P	06 04 48.4	-1.7
	comp=Z,0.6nm,0.6s,baz=84,slow=6.5						
NOA	**NORSAR Array B**	67.95	329	P	P	06 04 48.6	-1.4
	comp=Z,1.4nm,0.9s,baz=86,slow=6.0,SNR=4.4						
	comp=Z,1.4nm,0.9s						
ILAR	**Eielson Array**	82.76	22	P	P	06 06 13.8	-1.2
	comp=Z,0.2nm,0.6s,baz=313,slow=6.0,SNR=2.4						
	comp=Z,0.2nm,0.6s						
TXAR	**Lajitas Array**	127.17	19	PKP	PKPdf	06 12 55.2	-1.0
	comp=Z,0.4nm,0.9s,baz=349,slow=1.4,SNR=2.5						

IDC ***23*** *05:56:06.7±2.8, 5°.14S×151°.59E, h114km±22km, mb3.7/11, mbtmp4.1/12, MS3.4/1, Error ellipse: s-maj=21.8km s-min=16.5km az=81.0*

NEIC ***23*** *05:56:08.3±1.2, 5°.1S±0°.1×151°.6E±0°.2, h134km±10km, mb4.3/15, Error ellipse: s-maj=26.1km s-min=12.6km az=129.0*

ISC 23 05:56:08.1±0.6**, 5°.16S**±0°.08×**151°.6E**±0°.1**, h129**km**, n35, σ0ˢ.80**/39**, mb4.1**/17**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	1.13	31		Pn	05 56 31.8	-0.5
RABL				Sn	Sn	05 56 50.2	-0.3
PMG	**Port Moresby**	6.08	226	Pn	Pn	05 57 35.8	+0.1
PMG	**Port Moresby**	6.08	226	P	Pn	05 57 35.9	+0.2
	15nm,0.3s,baz=20,slow=9.4,SNR=4.3						
PMG				S	Sn	05 58 42.5	-1.6
	86nm,0.4s,baz=331,slow=20,SNR=7.6						
COEN	**Coen**	12.04	223	Pn	Pn	05 58 55.3	-0.3
CTAO	**Charters Tower**	15.71	199	Pn	Pn	05 59 41.7	-0.8
CTAO				IAmb	IAmb	06 00 06.9	
	comp=Z,21nm,1.5s						
MTN	**Manton Dam**	21.57	248	P	P	06 00 48.2	+0.6
DZM	**Mont Dzumac**	22.13	141	P	P	06 00 54.0	+0.4
DZM				IAmb	IAmb	06 00 55.4	
	comp=Z,16nm,0.9s						
DZM	**Mont Dzumac**	22.13	141	P	P	06 00 53.9	+0.4
	comp=Z,15nm,0.8s,baz=312,slow=12,SNR=11						
	comp=Z,15nm,0.8s						
WB0	**Warramunga Arr**	22.15	228	P	P	06 00 53.2	-0.5
WB0				IAmb	IAmb	06 00 55.5	
	comp=Z,14nm,1.2s						
WR8	**Warramunga Arr**	22.19	227		P	06 00 53.6	-0.5
WR8				IAmb	IAmb	06 00 55.4	
	comp=Z,17nm,1.1s						
WRAB	**Tennant Creek**	22.28	227	P	P	06 00 54.7	-0.4
WRAB				IAmb	IAmb	06 00 56.3	
	comp=Z,13nm,0.5s						
WRA	**Warramunga Arr**	22.30	227	P	P	06 00 54.2	-0.9
WRA	**Warramunga Arr**	22.30	227	P	P	06 00 54.5	-0.7
	comp=Z,12nm,0.8s,baz=52,slow=10.0,SNR=22						
WRA				PcP	PcP	06 04 48.1	+1.8
	comp=Z,0.5nm,0.5s,baz=48,slow=1.9,SNR=2.7						
WRA				ScP	ScP	06 08 13.1	+1.1
	comp=Z,2.1nm,0.9s,baz=52,slow=2.8,SNR=9.0						
	comp=Z,12nm,0.8s						
KNRA	**Kununurra**	24.72	243		P	06 01 17.7	+0.1
AS31	**Alice Springs**	25.07	221		P	06 01 20.6	-0.1
ASAR	**Alice Springs**	25.07	221	P	P	06 01 20.6	-0.2
ASAR	**Alice Springs**	25.07	221	P	P	06 01 20.9	+0.2
	comp=Z,4.8nm,0.7s,baz=59,slow=8.6,SNR=54						
ASAR				PcP	PcP	06 04 54.0	+1.8
	comp=Z,0.4nm,0.7s,baz=65,slow=3.0,SNR=2.1						
	comp=Z,4.8nm,0.7s						
ARMA	**Armidale**	25.12	180	P	P	06 01 21.1	-0.2
ARMA				IAmb	IAmb	06 01 33.8	
	comp=Z,17nm,1.2s						
FITZ	**Fitzroy Crossi**	28.41	241		P	06 01 49.9	-0.9
FITZ				IAmb	IAmb	06 01 51.4	
	comp=Z,2.6nm,0.9s						
MJAR	**Matsushiro Arr**	43.33	344	LR	LR	06 19 45.6	
	comp=Z,53nm,20.6s,baz=246,slow=33						
CMAR	**Chiang Mai Arr**	56.93	296	P	P	06 05 41.6	+1.3
	comp=Z,1.7nm,0.8s,baz=117,slow=6.1,SNR=9.2						
	comp=Z,1.7nm,0.8s						
SONM	**Songino Array**	65.98	328	P	P	06 06 41.3	+0.5
	comp=Z,1.0nm,0.5s,baz=143,slow=4.1,SNR=7.6						
	comp=Z,1.0nm,0.5s						
VNDA	**Vanda**	72.52	178	P	P	06 07 20.9	+0.5
VNDA	**Vanda**	72.52	178	P	P	06 07 20.9	+0.5
	comp=Z,0.8nm,0.8s,baz=329,slow=4.7,SNR=3.8						
	comp=Z,0.8nm,0.8s						
SBA	**Scott Base**	73.09	177	P	P	06 07 24.1	+0.4
SBA				IAmb	IAmb	06 07 34.5	
	comp=Z,8.3nm,1.4s						
MKAR	**Makanchi Array**	79.80	319	P	P	06 08 02.4	+0.2
	comp=Z,0.4nm,0.5s,baz=97,slow=6.9,SNR=6.5						
	comp=Z,0.4nm,0.5s						
ZALV	**Zalesovo Beam**	80.78	327	P	P	06 08 06.0	-1.2
	comp=Z,0.7nm,0.4s,baz=116,slow=6.8,SNR=3.7						
	comp=Z,0.7nm,0.4s						
ILAR	**Eielson Array**	82.95	22	P	P	06 08 17.6	-0.8
	comp=Z,0.5nm,0.7s,baz=248,slow=5.1,SNR=6.6						
	comp=Z,0.5nm,0.7s						
DOT	**Dot Lake**	83.55	24	P	P	06 08 20.1	-1.4
QSPA	**South Pole Qui**	84.80	180	P	P	06 08 28.1	+0.2
QSPA				IAmb	IAmb	06 08 48.6	
	comp=Z,3.8nm,1.3s						
QSPA	**South Pole Qui**	84.80	180	P	P	06 08 27.7	-0.3
	comp=Z,1.2nm,0.6s,baz=348,slow=7.2,SNR=12						
	comp=Z,1.2nm,0.6s						
BVAR	**Borovoye Array**	88.80	323	P	P	06 08 46.6	-0.8
	comp=Z,0.7nm,0.6s,baz=108,slow=3.3,SNR=4.2						
	comp=Z,0.7nm,0.6s						
GERES	**GERESS Array B**	123.71	328	PKP	PKPdf	06 14 50.6	-0.3
	comp=Z,0.3nm,0.5s,baz=42,slow=2.2,SNR=4.2						
EKA	**Eskdalemuir Ar**	126.01	342	PKP	PKiKP	06 14 55.9	+0.5
	comp=Z,0.2nm,0.4s,baz=28,slow=2.3,SNR=1.5						
TORD	**Torodi Ar. Bea**	149.25	287	PKPbc	PKPbc	06 15 41.9	-0.8
	comp=Z,1.0nm,0.3s,baz=87,slow=2.4,SNR=1.6						

IDC ***23*** *06:03:33.8±1.2, 14°.64N×92°.39W, h0km, mb4.1/11, mbtmp4.1/13, ML4.1/2, MS3.2/9, Error ellipse: s-maj=40.1km s-min=18.1km az=41.0*

NEIC ***23*** *06:03:35.5±2.1, 14°.28N±0°.03×92°.97W±0°.03, h10km±1km, mb4.3/113, Md4.7/117(MEX), Error ellipse: s-maj=7.8km s-min=2.9km az=138.0*

GCG ***23*** *06:03:37.4±1.6, 14°.28N×92°.93W, h24km±7km, MD4.5, ML4.7*

MEX ***23*** *06:03:38.7±0.9, 14°.57N×93°.20W, h25km±46km, MD4.7*

SNET ***23*** *06:03:39.7±1.1, 14°.32N×92°.77W, h22km±6km, ML4.6*

CATAC ***23*** *06:03:40.5±0.6, 14°N±4°×9°3W±°, h13km±4km, M4.8/22, MLv4.8/22, Error ellipse: s-maj=10.4km s-min=6.7km az=130.9, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.26; $M_{\theta\theta}$-1.56; $M_{\phi\phi}$1.30; $M_{r\theta}$1.45; $M_{\theta\phi}$1.74; $M_{\phi r}$-1.89; Fault plane solution: $M_0$3.28468×10^{15} NP1:ϕ_s155.68262°, δ88.75252°, λ133.40955°. NP2: ϕ_s247.00102°, δ43.42391°, λ1.81497°. Principal axes: T 2.8225, Plg31.9350°, Azm100.6138°; N 0.7828, Plg43.3967°, Azm334.5028°; P -3.6054, Plg29.8789°, Azm211.5977°; Moment Tensor Solution. Moment tensor: Scale 10^{15} Nm; M_{rr}0.37; $M_{\theta\theta}$-1.68; $M_{\phi\phi}$1.30; $M_{r\theta}$1.37; $M_{\theta\phi}$1.65; $M_{\phi r}$-1.91; Fault plane solution: $M_0$3.25439×10^{15} NP1:ϕ_s153.87064°, δ86.97137°, λ132.58055°. NP2:ϕ_s247.16134°, δ42.66757°, λ4.47116°. Principal axes: T 2.8680, Plg33.8689°, Azm99.0560°; N 0.6689, Plg42.5071°, Azm331.0910°; P -3.5369, Plg28.8537°, Azm210.7596°; confirmed*

ISC 23 06:03:36.4±1.4**, 14°.30N**±0°.05×**93°.02W**±0°.04**, h25**km±10km**, n252, σ2ˢ.50**/277**, mb4.3**/47**, MS3.3**/7**, 14C-7D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.94	50		Pb	06 03 53.3	-0.8
THIG					Sb	06 04 05.4	-0.8
THIG		0.94	50	eP	Pb	06 03 53.3	-0.8
THIG				eS	Sb	06 04 05.4	-0.8
THIG		0.94	50	i P	Pb	06 03 53.4	-0.8
THIG				i S	Sn	06 04 06.3	-0.4
THIG				IAML		06 04 08.0	
	comp=E,13μm,0.5s						
SMCA	**Catarina**	1.06	59	i P	Pn	06 03 54.9	-0.8
SMCA				i S	Sn	06 04 09.3	-0.4
PATR	**El Naranjo**	1.11	43	eP	Pn	06 03 55.5	-1.0
PATR				eS	Sb	06 04 08.2	-3.0
PAVE	**Pavencul**	1.20	42	eP	Pn	06 03 57.0	-0.8
PAVE				eS	Sn	06 04 11.2	-2.2
RTAL	**Retalhuleu**	1.30	80		Pn	06 03 58.8	-0.1
RTAL				Sn	Sn	06 04 15.0	-0.5
RTAL	**Retalhuleu**	1.30	80	eP	Pn	06 03 58.6	-0.3
RTAL				eS	Sn	06 04 13.5	-2.0
RTAL	**Retalhuleu**	1.30	80	eP	Pn	06 03 58.8	-0.1
RTAL				eS	Sn	06 04 13.7	-1.8
RTAL	**Retalhuleu**	1.30	80	P	Pn	06 03 58.7	-0.1
RTAL	**Retalhuleu**	1.30	80	S	Sn	06 04 14.9	-0.5
PCIG		1.41	352		Pn	06 03 59.1	-1.3
PCIG		1.41	352	eP	Pn	06 03 59.1	-1.3
PCIG				eS	Sn	06 04 10.2	-8.0
STG8	**El Palmar, Qui**	1.62	85	i P	Pn	06 04 00.5	-3.1
STG8				IAML		06 04 26.8	
	comp=N,12μm,0.2s						
STG0	**El Palmar, Qui**	1.63	85	i P	Pn	06 04 00.6	-3.0
STG0				i S	Sn	06 04 17.9	-5.9
STG0				IAML		06 04 21.1	
	comp=N,19μm,0.3s						
SOKI	**Kika Raxquin**	1.65	72	i P	Pb	06 04 05.0	-1.2
SOKI				i S	Sb	06 04 26.2	-0.5
SOKI				IAML		06 04 33.5	
	comp=N,9μm,0.7s						
HUEH	**Huehuetenango**	1.78	55		Pn	06 04 06.8	+1.1
HUEH	**Huehuetenango**	1.78	55	eP	Pn	06 04 06.8	+1.1
HUEH				eS	Sb	06 04 29.9	-0.5
HUEH	**Huehuetenango**	1.78	55	eP	Pn	06 04 06.6	+0.9
HUEH				eS	Sb	06 04 28.7	-1.7
HUEH	**Huehuetenango**	1.78	55	i P	Pb	06 04 07.2	-1.3
HUEH				i S	Sb	06 04 29.6	-0.8
HUEH				IAML		06 04 35.3	
	comp=E,13μm,0.7s						
HUEH	**Huehuetenango**	1.78	55	P	Pb	06 04 07.1	-1.3
ESSG	**Sabana Grande**	2.12	88	i P	Pn	06 04 10.4	+0.2
ESSG				i S	Sn	06 04 36.0	+0.2
ESSG				IAML		06 04 41.9	
	comp=E,3μm,0.3s						
CCIG	**Comitan**	2.14	23	Pn	Pn	06 04 12.6	+1.9
CCIG	**Comitan**	2.14	23	eP	Pb	06 04 12.7	-1.9
CCIG				eS	Sn	06 04 34.5	-2.1
CCIG	**Comitan**	2.14	23	i P	Pb	06 04 12.9	-1.7

CCIG				i S	Sb	06 04 40.0	-0.9
CCIG				IAML		06 04 48.4	
	comp=N,3μm,0.5s						
GCG4	OSOP	2.42	83	i P	Pn	06 04 16.2	+1.7
GCG4				i S	Sn	06 04 44.1	+0.6
GCG4				IAML		06 04 56.4	
	comp=E,3μm,0.5s						
FG16	Alotenango, Sa	2.43	90	i P	Pn	06 04 10.2	-4.4
FG16				IAML		06 04 48.4	
	comp=N,14μm,0.4s						
TGBT	Tuxtla Gutierr	2.46	358		Pn	06 04 16.3	+1.4
TGBT					Sn	06 04 45.4	+1.3
TGBT	Tuxtla Gutierr	2.46	358	eP	Pn	06 04 16.3	+1.4
TGBT				eS	Sn	06 04 45.4	+1.3
TGIG		2.46	358		Pn	06 04 16.2	+1.2
TGIG					Sn	06 04 44.9	+0.5
TGIG		2.46	358	eP	Pn	06 04 16.2	+1.2
TGIG				eS	Sn	06 04 44.9	+0.5
TGIG		2.46	358	i P	Pn	06 04 16.2	+1.2
TGIG				i S	Sn	06 04 46.3	+2.0
TGIG				IAML		06 04 49.1	
	comp=E,1μm,0.5s						
LOAL	Lomas de Alarc	3.15	95	⇓P	Pn	06 04 25.9	+1.4
NUBE	Las Nubes	3.17	97	eP	Pn	06 04 25.4	+0.7
NUBE				eS	Sn	06 05 00.0	-1.7
NUBE	Las Nubes	3.17	97	i P	Pn	06 04 25.6	+0.8
NUBE	Las Nubes	3.17	97	S	Sn	06 04 57.2	-4.5
NUBE	Las Nubes	3.17	97	⇑P	Pn	06 04 25.8	+1.1
RTR	El Retiro	3.29	97	eP	Pn	06 04 27.3	+0.8
CMIG	Matias Romero	3.31	327	Pn	Pn	06 04 27.0	+0.5
	comp=E,10nm,0.3s,baz=143,slow=12,SNR=49						
CMIG				Sn	Sn	06 05 05.0	0.0
	comp=E,33nm,0.3s,baz=94,slow=13,SNR=9.2						
CMIG				LR	LR	06 05 57.6	
	comp=E,299nm,20.1s,baz=143,slow=42						
	comp=E,37nm,0.3s						
HUIG	Huatulco	3.32	296		Pn	06 04 26.7	0.0
HUIG					Sn	06 04 58.1	-7.4
HUIG	Huatulco	3.32	296	eP	Pn	06 04 26.7	0.0
HUIG				eS	Sn	06 04 58.1	-7.4
CEVE	Cerro Verde	3.33	98	eP	Pn	06 04 28.5	+1.5
CEVE				IAML		06 05 22.4	
	comp=Z,2μm,0.4s						
CEVE	Cerro Verde	3.33	98	S	Sn	06 05 07.1	+1.2
CEVE	Cerro Verde	3.33	98	⇑P	Pn	06 04 28.8	+1.8
SNJE	San Jose	3.34	97	eP	Pn	06 04 27.7	+0.6
UNIC	Universidad Ca	3.38	95	S	Sn	06 05 06.4	-0.6
UNIC	Universidad Ca	3.38	95	⇑P	Pn	06 04 29.1	+1.5
JAYA	Jayaque - finc	3.52	100	eP	Pn	06 04 30.0	+0.3
JAYA				IAML		06 05 14.2	
	comp=Z,867nm,0.3s						
JAYA	Jayaque - finc	3.52	100	i P	Pn	06 04 29.9	+0.3
JAYA				i S	Sn	06 05 08.0	-2.6
JAYA	Jayaque - finc	3.52	100	S	Sn	06 05 07.8	-2.8
JAYA	Jayaque - finc	3.52	100	⇑P	Pn	06 04 30.3	+0.7
MTO3	Montecristo	3.54	88	eP	Pn	06 04 30.1	+0.1
CEDA	San Andres	3.55	98	S	Sn	06 05 09.3	-1.8
CEDA	San Andres	3.55	98	⇓P	Pn	06 04 32.6	+2.7
ESQI	Esquipulas	3.57	85		Pn	06 04 31.9	+1.7
ESQI	Esquipulas	3.57	85	eP	Pn	06 04 31.0	+0.8
ESQI	Esquipulas	3.57	85	⇓P	Pn	06 04 32.4	+2.2
PMON	Piamonte	3.64	99	S	Sn	06 05 12.0	-1.5
PMON	Piamonte	3.64	99	⇓P	Pn	06 04 32.1	+0.9
BOQS	Boqueron	3.67	98	eP	Pn	06 04 32.7	+1.0
ITCA	Escuela Especi	3.68	99	⇑P	Pn	06 04 33.2	+1.4
PIC2	El Picacho	3.69	98	eP	Pn	06 04 32.4	+0.3
UEES	Universidad Ev	3.71	99	S	Sn	06 05 14.2	-1.0
UEES	Universidad Ev	3.71	99	⇑P	Pn	06 04 34.1	+1.9
UTEC	Universidad Te	3.75	99	S	Sn	06 05 15.1	-1.0
UTEC	Universidad Te	3.75	99	⇑P	Pn	06 04 34.2	+1.5
LOMA	Loma Larga	3.79	99	eP	Pn	06 04 34.1	+0.8
LOMA	Loma Larga	3.79	99	S	Sn	06 05 16.3	-0.8
LOMA	Loma Larga	3.79	99	⇓P	Pn	06 04 34.4	+1.1
UDBS	Universidad Do	3.79	98	S	Sn	06 05 16.3	-0.9
UDBS	Universidad Do	3.79	98	⇑P	Pn	06 04 34.6	+1.3
TUIG	Tuzandepetl	3.95	340	eP	Pn	06 04 36.1	+0.7
TUIG				eS	Sn	06 05 16.3	-4.6
PETF	Flores	4.00	49		Pn	06 04 37.7	+1.7
PETF	Flores	4.00	49	eP	Pn	06 04 37.3	+1.3
PETF				eS	Sn	06 05 17.4	-4.7
PETF	Flores	4.00	49	eP	Pn	06 04 37.4	+1.3
PETF	Flores	4.00	49	i P	Pn	06 04 37.6	+1.6
PETF				IAML		06 05 43.8	
	comp=N,1μm,0.5s						
PETF	Flores	4.00	49	⇓P	Pn	06 04 37.8	+1.7
PAVA	Las Pavas	4.00	98	eP	Pn	06 04 37.7	+1.5
PAVA	Las Pavas	4.00	98	⇑P	Pn	06 04 36.9	+0.7
UESV	Universidad de	4.16	99	⇑P	Pn	06 04 39.8	+1.5
PEIG	Puerto Escondi	4.33	293		Pn	06 04 41.0	+0.4
PEIG					Sn	06 05 20.4	-10
PEIG	Puerto Escondi	4.33	293	eP	Pn	06 04 41.0	+0.4
PEIG				eS	Sn	06 05 20.4	-10
PQSS	Presa 15 de Se	4.38	98	eP	Pn	06 04 42.4	+1.2
PQSS	Presa 15 de Se	4.38	98	⇑P	Pn	06 04 42.5	+1.2
TECA	Tecapa	4.46	100	eP	Pn	06 04 43.8	+1.3
IZABA	Izabal, Puerto	4.51	71	⇑P	Pn	06 04 44.8	+1.7
OXIG	Oaxaca	4.52	308		Pn	06 04 46.7	+3.3
OXIG					Sn	06 05 35.6	+0.4
VHO	Vista Hermosa	4.52	308	eP	Pn	06 04 46.7	+3.3
VHO				eS	Sn	06 05 35.6	+0.5
PACA	Pacayal	4.63	100	eP	Pn	06 04 46.7	+1.8
PACA	Pacayal	4.63	100	⇑P	Pn	06 04 47.2	+2.3
BLLM	Bellamira	4.72	100	eP	Pn	06 04 47.6	+1.6
YOIG	Yosondua	5.05	301		Pn	06 04 53.9	+3.2
YOIG					Sn	06 05 44.4	-4.1
YOIG	Yosondua	5.05	301	eP	Pn	06 04 53.9	+3.2
YOIG				eS	Sn	06 05 44.4	-4.1
LCND	La Caada	5.08	101	eP	Pn	06 04 51.7	+0.8
LCND	La Caada	5.08	101	⇓P	Pn	06 04 52.3	+1.4
CNCH	Conchagua	5.14	101	eP	Pn	06 04 53.0	+1.2
CNCH	Conchagua	5.14	101	⇑P	Pn	06 04 53.7	+1.9
PNIG	Pinotepa	5.35	294		Pn	06 04 56.4	+1.7
PNIG					Sn	06 05 50.9	-4.7
PNIG	Pinotepa	5.35	294	eP	Pn	06 04 56.4	+1.7
PNIG				eS	Sn	06 05 50.9	-4.7
TOIG	Toxpalan	5.42	315		Pn	06 04 56.8	+1.2
TOIG					Sn	06 05 52.5	-4.8
TOIG	Toxpalan	5.42	315	eP	Pn	06 04 56.8	+1.2
TOIG				eS	Sn	06 05 52.5	-4.8
TXIG	Tlaxiaco	5.43	303		Pn	06 04 59.2	+3.2
TXIG					Sn	06 05 56.4	-1.6
TXIG	Tlaxiaco	5.43	303	eP	Pn	06 04 59.2	+3.2
TXIG				eS	Sn	06 05 56.4	-1.6
TGUH	Tegucigalpa,Un	5.58	92		Pn	06 04 58.0	+0.2
HLIG	Huajuapan de L	5.79	308		Pn	06 05 03.9	+3.1
HLIG					Sn	06 06 00.9	-5.6
HLIG	Huajuapan de L	5.79	308	eP	Pn	06 05 03.9	+3.1
HLIG				eS	Sn	06 06 00.9	-5.6
TPIG	Tehuac#an	5.84	315		Pn	06 04 59.8	-1.8
TPIG					Sn	06 06 04.3	-3.6
TPIG	Tehuac#an	5.84	315	eP	Pn	06 04 59.8	-1.8
TPIG				eS	Sn	06 06 04.3	-3.6
FTIG	Fresnillo de T	6.09	307		Pn	06 05 08.4	+3.5
FTIG					Sn	06 06 12.7	-1.1
FTIG	Fresnillo de T	6.09	307	eP	Pn	06 05 08.4	+3.5
FTIG				eS	Sn	06 06 12.7	-1.1
JAUV	Jalcomulco	6.21	325	eP	Pn	06 05 05.2	-1.2
JAUV				eS	Sn	06 06 12.9	-3.7
TLIG	Tlapa	6.25	302		Pn	06 05 10.4	+3.3
TLIG	Tlapa	6.25	302	eP	Pn	06 05 11.2	+4.1
TLIG				eS	Sn	06 06 16.9	-0.8
HERN	Volcan Telica	6.25	105	Pn	Pn	06 05 07.0	0.0
CNGN	Cerro Negro	6.40	105		Pn	06 05 09.0	-0.1
DAIG	Los Arroyos	6.94	294		Pn	06 05 15.1	-1.3
DAIG					Sn	06 06 24.2	-10
DAIG	Los Arroyos	6.94	294	eP	Pn	06 05 15.1	-1.3
DAIG				eS	Sn	06 06 24.2	-10
PBCV	Popocatepetl	7.06	312	eP	Pn	06 05 23.2	+4.8
PBCV				eS	Sn	06 06 34.9	-3.3
PBPN	Popocatepetl	7.15	312	eP	Pn	06 05 16.7	-3.2
PBPN				eP	Pb	06 05 24.6	-16
PBPN				eS	Sn	06 06 28.4	-12
PBPN				eS	Sb	06 06 35.4	-30
PBXN	Popocatepetl	7.15	312	eP	Pn	06 05 24.4	+4.6
PBXN				eS	Sn	06 06 33.3	-7.2
PPM	Popocatepetl	7.17	312	eP	Pn	06 05 24.5	+4.5
PPM				eS	Sn	06 06 40.3	-0.7
PPIG	Popocatepetl	7.17	312		Pn	06 05 24.5	+4.5
PPIG					Sn	06 06 40.3	-0.7
CXUV	Coxquihui	7.29	324	eP	Pn	06 05 21.6	+0.2
CXUV				eS	Sn	06 06 29.8	-14
MEIG	Mezcala	7.30	300		Pn	06 05 25.5	+4.1
MEIG					Sn	06 06 43.6	0.0
MEIG	Mezcala	7.30	300	eP	Pn	06 05 25.5	+4.1
MEIG				eS	Sn	06 06 43.6	0.0
AMVM	AMECAMECA	7.32	312		Pn	06 05 17.9	-4.1
AMVM	AMECAMECA	7.32	312	eP	Pn	06 05 17.9	-4.1
AMVM				eS	Sn	06 06 45.3	+0.8
YAIG	Yautepec	7.36	309		Pn	06 05 25.7	+3.3
YAIG					Sn	06 06 39.8	-5.5
YAIG	Yautepec	7.36	309	eP	Pn	06 05 25.7	+3.3
YAIG				eS	Sn	06 06 39.8	-5.5
BOAB	BOACO BROADBAN	7.39	104		Pn	06 05 22.4	-0.2
TEIG	Tepich	7.43	37		Pn	06 05 23.3	+0.1
PLIG	Platanillo	7.44	304		Pn	06 05 24.6	+1.3
PLIG					Sn	06 06 41.8	-5.2
PLIG	Platanillo	7.44	304	eP	Pn	06 05 24.6	+1.3
PLIG				eS	Sn	06 06 41.8	-5.2
CAIG	El Cayaco	7.50	292		Pn	06 05 24.7	+0.6
CAIG					Sn	06 06 40.3	-8.1
CAIG	El Cayaco	7.50	292	eP	Pn	06 05 24.7	+0.6
CAIG				eS	Sn	06 06 40.3	-8.1
MPVM	San Francisco	7.53	311	eS	Sn	06 06 46.0	-3.5
TLVM	San Miguel Top	7.64	311	eS	Sn	06 06 42.7	-10
VTVM	Tizayuca	7.74	315	eS	Sn	06 06 44.0	-11
MAVM	Malinalco, Edo	7.74	308		Pn	06 05 32.4	+4.6
MAVM	Malinalco, Edo	7.74	308	eP	Pn	06 05 32.4	+4.6
MAVM				eS	Sn	06 06 41.0	-14
AOVM	Tlapan	7.80	310		Pn	06 05 33.1	+4.4
AOVM	Tlapan	7.80	310	eP	Pn	06 05 33.1	+4.4
AOVM				eS	Sn	06 06 46.0	-11
INVM	La Marquesa	7.86	310	eP	Pn	06 05 22.4	-7.1
INVM				eS	Sn	06 06 48.4	-9.5
ARIG	Puente Sto Nin	8.07	300		Pn	06 05 35.9	+3.8
ARIG					Sn	06 06 58.8	-3.9
ARIG	Puente Sto Nin	8.07	300	eP	Pn	06 05 35.9	+3.8
ARIG				eS	Sn	06 06 58.8	-3.9
DHIG	Demacu	8.28	317		Pn	06 05 37.8	+2.7
DHIG					Sn	06 07 07.0	-1.1
DEIG	Demacu	8.28	317	eP	Pn	06 05 37.8	+2.7
DEIG				eS	Sn	06 07 07.0	-1.1
CTUV	Llano Grande	8.76	325	eP	Pn	06 05 42.4	+1.0
CTUV				eS	Sn	06 07 16.8	-2.5
ZIIG	Zihuatanejo	8.77	293	eP	Pn	06 05 43.4	+1.9
ZIIG				eS	Sn	06 07 20.5	+0.9
JTS	Las Juntas de	8.83	116	Pn	Pn	06 05 42.9	+0.4
MOIG	Morelia	9.47	305		Pn	06 05 53.6	+2.2
MOIG	Morelia	9.47	305	eP	Pn	06 05 50.5	-0.9
MOIG				eS	Sn	06 07 31.9	-5.3
LCR2	La Lucha 2	9.91	116		Pn	06 05 58.8	+1.4
MNGA	Volcan de Coli	11.37	298	eP	Pn	06 06 23.3	+5.7
MNGA				eS	Sn	06 08 17.7	-6.3
INCO	Volcan de Coli	11.38	299	eP	Pn	06 06 23.3	+5.5
INCO				eS	Sn	06 08 27.8	+3.3
SOMAC	Volcano de Col	11.41	299	eP	Pn	06 06 21.8	+3.7
SOMAC				eS	Sn	06 08 19.7	-5.3
CEGR	Campo Tres	11.54	297	eP	Pn	06 06 24.7	+4.9
CEGR				eS	Sn	06 08 25.2	-2.9
SOR	Soroa	12.70	47		Pn	06 06 35.5	+0.1
CAMR	Camarioca	14.05	50	Pn	Pn	06 06 55.5	+1.6
833A	Chaparral WMA,	15.16	338		Pn	06 07 10.6	+1.7
061Z	Ochoppi	16.16	43		Pn	06 07 20.6	-1.3
HNDO	Hondo	16.22	340		Pn	06 07 24.0	+1.4
DRIO	Del Rio	16.61	336		Pn	06 07 28.0	+0.5
435B	Jarrell	16.93	346		P	06 07 34.0	+0.6
JCT	Junction City	17.27	340		P	06 07 37.9	+0.7
060A	Indiantown	17.32	41	P	P	06 07 38.1	+0.4
553A	Crawfordville	17.68	25		Pn	06 07 39.7	-1.2
SAND	Sanderson	17.70	333	P	P	06 07 43.8	+1.8
SAND				IAmb	IAmb	06 07 45.1	
	comp=Z,14nm,0.7s						
BRDY	Brady	17.77	343		P	06 07 43.5	+0.7
TXAR	Lajitas Array	17.91	328		P	06 07 47.6	+3.3
TXAR	Lajitas Array	17.91	328	P	P	06 07 46.4	+2.1
	comp=Z,0.2nm,0.3s,baz=142,slow=12,SNR=24						
TXAR				LR	LR	06 15 53.4	
	comp=Z,50nm,20.1s,baz=71,slow=41						
	comp=Z,5.3nm,0.8s						
TX31	Lajitas Ar. Si	17.91	328		P	06 07 46.5	+2.1
OZNA	Ozona	18.14	337		P	06 07 47.7	+0.8
FW16	Waxahatchie	18.44	350	P	P	06 07 47.1	-3.0
250A	Grady	18.65	18		Pn	06 07 54.9	+2.1
250A				IAmb	IAmb	06 07 56.6	
	comp=Z,17nm,1.0s						
FW05	UT at Dallas	18.91	350	P	Pn	06 07 58.9	+3.0
SGCY	Sterling City	19.04	338	IAmb	IAmb	06 08 01.0	
	comp=Z,15nm,0.8s						
LRAL	Lakeview Retre	19.44	15	P	P	06 08 00.9	0.0
152A	Waverly Hall	19.79	21	IAmb	IAmb	06 08 10.1	
	comp=Z,10nm,0.7s						
APMT	Aspermont	20.01	342	P	P	06 08 08.1	+0.8
APMT				IAmb	IAmb	06 08 13.9	
	comp=Z,13nm,0.7s						
SN07	Snyder 07	20.03	340	IAmb	IAmb	06 08 11.0	
	comp=Z,10nm,0.8s						
MIAR	Mount Ida	20.16	359	IAmb	IAmb	06 08 16.6	
	comp=Z,15nm,0.9s						
POST	Post	20.21	339	IAmb	IAmb	06 08 19.2	
	comp=Z,9.7nm,0.7s						
154A	Montrose	20.35	25	P	P	06 08 10.9	0.0
DKNS	Dickens	20.57	341	IAmb	IAmb	06 08 20.2	
	comp=Z,8.1nm,0.6s						
X34A	Smith Ranch, M	20.68	349	IAmb	IAmb	06 08 40.5	
	comp=Z,12nm,0.7s						
ROSC	El Rosal	20.68	115	P	P	06 08 12.7	-2.4
	comp=Z,1.9nm,0.3s,baz=174,slow=1.8,SNR=3.9						
	comp=Z,1.9nm,0.3s						
MNTX	Cornudas Mount	20.69	329		Pn	06 08 17.1	0.0
X48A	Hartselle	20.78	14	IAmb	IAmb	06 08 22.4	
	comp=Z,11nm,1.0s						
WHAR	Wooly Hollow	20.91	2		P	06 08 17.6	+0.7
WHAR				IAmb	IAmb	06 08 25.4	
	comp=Z,11nm,1.1s						
GOGA	Godfrey	20.91	23	P	P	06 08 16.8	-0.2
GOGA				IAmb	IAmb	06 08 23.8	
	comp=Z,11nm,0.9s						
Y52A	Lilburn	21.10	21	P	P	06 08 19.0	0.0
Y52A				IAmb	IAmb	06 08 32.4	
	comp=Z,13nm,0.9s						
MSTX	Muleshoe	21.48	337	P	P	06 08 24.9	+1.6
MSTX				IAmb	IAmb	06 08 26.0	
	comp=Z,10nm,0.8s						
AMTX	Amarillo	21.93	341	P	P	06 08 29.4	+1.3
AMTX				IAmb	IAmb	06 08 32.7	
	comp=Z,17nm,0.9s						
319A	Douglas	22.61	321		P	06 08 37.1	+1.7
319A				IAmb	IAmb	06 08 46.0	
	comp=Z,7.8nm,0.9s						
TKL	Tuckaleechee C	22.83	20	P	P	06 08 33.3	-4.3
	comp=Z,3.2nm,0.8s,baz=180,slow=13,SNR=5.6						
	comp=Z,3.2nm,0.8s						
U49A	Red Boiling Sp	23.05	15	IAmb	IAmb	06 08 49.1	
	comp=Z,5.2nm,0.7s						
BNM	Barren Site	23.29	330		P	06 08 44.5	+2.0
LENM	Lemitar	23.47	330	P	P	06 08 47.1	+2.9
CCM	Cathedral Cave	23.71	3	P	P	06 08 46.2	-0.1
CCM				IAmb	IAmb	06 08 47.3	
	comp=Z,4.1nm,0.7s						
ANMO	Albuquerque	23.86	332		P	06 08 50.5	+2.5
ANMO	Albuquerque	23.86	332	IAmb	IAmb	06 08 55.1	
	comp=Z,4.0nm,0.7s						
R40A	Maddies Statio	23.90	1	P	P	06 08 49.4	+1.3
R40A				IAmb	IAmb	06 09 03.2	
	comp=Z,14nm,1.1s						
TUC	Tucson	24.18	321	P	P	06 08 53.6	+2.8
TUC				IAmb	IAmb	06 08 55.3	
	comp=Z,4.6nm,0.8s						
WCI	Wyandotte Cave	24.57	13	P	P	06 08 54.4	+0.1
WCI				IAmb	IAmb	06 09 38.7	
	comp=Z,9.9nm,0.8s						
BAUV	El Baul	25.02	100		P	06 08 57.2	-1.4
P40A	Paris	25.15	2	IAmb	IAmb	06 08 59.4	
	comp=Z,4.9nm,0.7s						
SDCO	Great Sand Dun	25.85	337	P	P	06 09 07.2	+1.0
SDCO				IAmb	IAmb	06 09 09.3	
	comp=Z,5.0nm,1.1s						
SJG	San Juan	26.06	78	LR	LR	06 19 33.8	
	comp=Z,102nm,21.7s,baz=188,slow=38						
T59A	Double "B" Far	26.46	29	IAmb	IAmb	06 09 10.1	
	comp=Z,7.1nm,0.8s						
MVCO	Mesa Verde	26.66	332	IAmb	IAmb	06 09 24.4	
	comp=Z,6.5nm,0.7s						
PV13	Radium Mtn., P	27.58	332	IAmb	IAmb	06 09 30.9	
	comp=Z,3.8nm,0.8s						
PV02	Paradox Valley	27.59	333	IAmb	IAmb	06 10 07.3	
	comp=Z,6.7nm,1.0s						
PV05	Paradox Valley	27.64	332	IAmb	IAmb	06 09 34.5	
	comp=Z,8.2nm,1.4s						
PV18	Skein Mesa, Pa	27.70	332	IAmb	IAmb	06 09 32.8	
	comp=Z,5.7nm,0.9s						
PV07	Paradox Valley	27.74	333	IAmb	IAmb	06 09 26.7	
	comp=Z,3.2nm,0.8s						
PV17	East Wray Mesa	27.75	332	IAmb	IAmb	06 09 28.3	
	comp=Z,4.8nm,0.8s						
PV16	Nyswonger Mesa	27.75	332	IAmb	IAmb	06 09 27.7	
	comp=Z,5.8nm,1.2s						
PV19	Morning Glory	27.78	332	IAmb	IAmb	06 09 33.9	
	comp=Z,7.1nm,1.0s						
PV20	West Nyswonger	27.80	332	IAmb	IAmb	06 09 35.4	
	comp=Z,8.4nm,1.0s						
PV10	Paradox Valley	27.86	332	IAmb	IAmb	06 09 36.6	
	comp=Z,7.1nm,1.0s						
PV22	Blue Mesa, Par	27.88	333	IAmb	IAmb	06 09 29.4	
	comp=Z,4.6nm,0.7s						
PFO	Pinyon Flats O	28.66	316	LR	LR	06 20 43.4	
	comp=Z,76nm,18.4s,baz=111,slow=36						
V12A	Nelson	28.97	321	IAmb	IAmb	06 09 37.8	
	comp=Z,3.8nm,0.9s						
ECSD	EROS Data Cent	29.49	355		P	06 09 38.0	-0.4
ECSD				IAmb	IAmb	06 09 40.7	
	comp=Z,3.1nm,0.7s						
PDAR	Pinedale Array	31.75	337	P	P	06 09 59.9	+1.3
	comp=Z,0.7nm,0.7s,baz=135,slow=9.8,SNR=6.3						
PDAR				LR	LR	06 23 59.0	
	comp=Z,27nm,18.3s,baz=18,slow=39						
	comp=Z,0.7nm,0.7s						
HVU	Hansel Valley	32.30	332	IAmb	IAmb	06 10 07.3	
	comp=Z,3.1nm,0.8s						
ELK	Elko	32.71	328	LR	LR	06 25 09.1	
	comp=Z,87nm,18.5s,baz=191,slow=40						
NV11	Mina Array Sit	32.73	322	IAmb	IAmb	06 10 11.4	
	comp=Z,4.8nm,0.8s						
NVAR	Mina Array Bea	32.82	322	P	P	06 10 10.9	+2.8
	comp=Z,4.3nm,0.7s,baz=136,slow=8.6,SNR=39						
NVAR				PcP	PcP	06 12 54.8	+1.9
	comp=Z,1.1nm,0.7s,baz=134,slow=3.8,SNR=6.5						
	comp=Z,4.3nm,0.7s						
LHV	Little Huntoon	32.83	321	IAmb	IAmb	06 10 12.4	
	comp=Z,4.0nm,0.8s						
LOHW	Long Hollow	32.87	336	IAmb	IAmb	06 10 11.2	
	comp=Z,5.1nm,0.8s						
YNE	Yellowstone No	33.83	338	IAmb	IAmb	06 10 21.8	
	comp=Z,2.6nm,0.8s						
PNTR	Pine Nut	34.02	322	IAmb	IAmb	06 10 29.6	
	comp=Z,3.8nm,0.9s						
YHL	Hebgen Lake	34.14	337	IAmb	IAmb	06 10 24.7	
	comp=Z,2.5nm,0.9s						
HLID	Hailey	34.44	332		P	06 10 23.5	+1.3
J08A	Circle Bar Ran	36.26	328	IAmb	IAmb	06 10 40.8	
	comp=Z,5.5nm,0.7s						
PLID	Pearl Lake	36.34	332		P	06 10 39.6	+1.1
PLID				IAmb	IAmb	06 10 40.9	
	comp=Z,3.2nm,0.7s						
MSO	Missoula	36.85	336	IAmb	IAmb	06 10 45.1	
	comp=Z,3.4nm,0.8s						
YBH	Yreka Blue Hor	37.52	323	LR	LR	06 28 43.5	
	comp=Z,7.2nm,19.4s,baz=129,slow=40						
NEW	Newport	39.30	334	LR	LR	06 30 39.2	
	comp=Z,64nm,19.0s,baz=136,slow=41						
YKAW1	Yellowknife Wh	50.48	347		P	06 12 32.5	+0.6
YKAW1				IAmb	IAmb	06 12 33.2	
	comp=Z,8.4nm,0.8s						
YKA	Yellowknife Ar	50.51	347	P	P	06 12 32.3	+0.2
	comp=Z,3.9nm,0.8s,baz=156,slow=6.8,SNR=36						
YKA				PcP	PcP	06 13 50.1	+0.2
	comp=Z,0.4nm,0.8s,baz=152,slow=3.4,SNR=3.8						
	comp=Z,3.9nm,0.8s						
YKAW3	Yellowknife Wh	50.57	347		P	06 12 33.3	+0.7
YKAW3				IAmb	IAmb	06 12 34.0	
	comp=Z,6.5nm,0.8s						
BDFB	Brasilia	53.52	122	P	P	06 12 54.8	-0.6
	comp=Z,4.0nm,0.9s,baz=200,slow=2.3,SNR=5.4						
	comp=Z,4.0nm,0.9s						
ILAR	Eielson Array	62.18	337	P	P	06 13 55.8	+0.5
	comp=Z,2.0nm,0.9s,baz=140,slow=5.2,SNR=10						
	comp=Z,2.0nm,0.9s						
EKA	Eskdalemuir Ar	78.30	36	P	P	06 15 30.9	-3.3
	comp=Z,1.7nm,0.7s,baz=278,slow=6.7,SNR=5.7						
	comp=Z,1.7nm,0.7s						
ESDC	Sonseca Array	80.30	52	P	P	06 15 42.8	-2.7
	comp=Z,0.9nm,0.9s,baz=294,slow=6.5,SNR=5.5						
	comp=Z,0.9nm,0.9s						
NOA	NORSAR Array B	84.35	28	P	P	06 16 05.3	-0.9
	comp=Z,0.5nm,0.8s,baz=266,slow=4.4,SNR=2.3						
NOA				LR	LR	06 52 04.4	
	comp=Z,20nm,20.1s,baz=220,slow=35						
	comp=Z,0.5nm,0.8s						
ARCES	ARCESS Array B	86.16	18	P	P	06 16 14.6	-0.4
	comp=Z,1.9nm,0.9s,baz=300,slow=4.7,SNR=4.1						
	comp=Z,1.9nm,0.9s						
WRA	Warramunga Arr	134.51	256	PKP	PKPdf	06 22 54.4	+1.1
	comp=Z,0.5nm,0.7s,baz=72,slow=1.8,SNR=5.6						
CMAR	Chiang Mai Arr	145.38	340	PKPbc	PKPbc	06 23 12.9	+0.1
	comp=Z,2.4nm,0.3s,baz=338,slow=3.6,SNR=13						

IDC 23 06:06:54.3±5.2, 36°.53N×82°.14E, h0^{km}, mb3.2/2, mbtmp3.4/4, ML3.2/2, Error ellipse: s-maj=85.4km s-min=45.7km az=2.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MKAR	Makanchi Array	10.26	1	Pn	Pn	06 09 23.7	+0.9
	0.4nm,0.3s,baz=184,slow=13,SNR=11						
	0.9nm,0.5s						
BVAR	Borovoye Array	18.44	337	P	Pn	06 11 10.8	-0.4
	baz=146,slow=13,SNR=4.5						
	1.0nm,0.6s						
SONM	Songino Array	21.14	50	P	P	06 11 40.8	0.0
	0.7nm,0.7s,baz=236,slow=10,SNR=4.4						
	0.7nm,0.7s						
NOA	NORSAR Array B	49.77	323	P	P	06 15 48.3	-0.1
	0.2nm,0.6s,baz=86,slow=7.4,SNR=1.7						
	0.2nm,0.6s						

NNC 23 06:08:03.4±2.1, 37°.90N×77°.93E, h0^{km}, mb4.0, mpv3.5, 1D, Error ellipse: s-maj=50.9km s-min=13.9km az=80.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MDOK	Medeo	5.30	353	Pg	Pb	06 09 39.2	+2.3
	3.3nm,0.5s						
MDOK				Pg	Pg	06 09 39.7	-5.2
	5.5nm,0.4s						
MDOK				Lg	Lg	06 10 51.2	
	7.1nm,0.6s						
MDOK				⇓Lg	Lg	06 10 51.9	
	9.9nm,0.7s						
KST	Kastek	5.35	344	Pg	Pb	06 09 41.7	+3.9
	2.1nm,0.4s						
KST				Lg	Lg	06 10 54.2	
	5.3nm,0.4s						
KOTS	Kotyrbulak	5.36	354	Pg	Pg	06 09 42.4	-3.8
	4.1nm,0.5s						
KOTS				Lg	Lg	06 10 55.1	
	13nm,0.5s						
KTBS	Karatobe	5.88	351	Pg	Pb	06 09 50.4	+3.6
	2.1nm,0.5s						
KTBS				Lg	Lg	06 11 10.1	
	5.8nm,0.7s						
KRBS	Karabastau	6.03	344	Pg	Pb	06 09 53.0	+3.6
	1.3nm,0.3s						
KRBS				Lg	Lg	06 11 13.7	
	2.4nm,0.8s						

IDC 23 06:10:28.7±11.0, 24°.92S×179°.62W, h416^{km}±113^{km}, mb3.2/4, mbtmp4.2/5, Error ellipse: s-maj=81.3km s-min=30.2km az=38.0

ISC 23 06:10:34.8±2.0, 25°.3S±0°.2×179°.9W±0°.3, h464^{km}, n7, $\sigma 0^{s}.70$/7, mb3.6/4, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
URZ	Urewera	13.13	190	P	P	06 13 25.2	-0.3
	44nm,1.3s,baz=20,slow=17,SNR=2.2						
URZ				S	S	06 15 45.9	-0.4
	29nm,1.1s,baz=12,slow=9.3,SNR=2.8						
STKA	Stephens Creek	34.27	250	P	P	06 16 41.2	+0.3
	1.3nm,0.5s,baz=90,slow=9.1,SNR=4.8						

	1.3nm,0.5s						
ASAR	Alice Springs	41.88	262	P	P	06 17 43.6	+0.2
	1.1nm,0.3s,baz=92,slow=7.4,SNR=26						
	1.1nm,0.3s						
WRA	Warramunga Arr	42.39	268	P	P	06 17 47.1	-0.3
	0.6nm,0.3s,baz=106,slow=8.1,SNR=37						
	0.6nm,0.3s						
QSPA	South Pole Qui	64.76	180	P	P	06 20 27.0	+0.8
	1.0nm,1.0s,baz=157,slow=2.5,SNR=1.7						
	1.0nm,1.0s						
HFS	Hagfors	143.96	348	PKP	PKPbc	06 29 14.1	-1.0
	1.6nm,0.6s,baz=29,slow=3.3,SNR=12						
AKASG	Malin Array Be	146.20	326	PKPbc	PKPdf	06 29 19.2	-0.9
	0.2nm,0.3s,baz=44,slow=3.9,SNR=2.3						

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*IDC **23** 06:18:17.6±1.2, 30°.56S×177°.43W, h0^{km}, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=39.0km s-min=20.7km az=80.0*

ISC 23 06:18:18.4±1.2, 30°.64S±0°.06×177°.5W±0°.2, h10^{km}, n10, σ2^{s}.02/13, mb4.0/4, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.42	346	Pn	Pg	06 18 44.5	-1.2
	337nm,0.3s,baz=50,slow=21,SNR=12						
RAO				Sn	Sg	06 19 02.7	-1.5
	399nm,0.3s,baz=116,slow=22,SNR=16						
URZ	Urewera	8.80	209	Pn	Pn	06 20 23.2	-2.4
	0.3nm,0.3s,baz=201,slow=19,SNR=1.3						
URZ				Sn	Sn	06 22 01.8	-3.1
	1.6nm,0.3s,baz=236,slow=20,SNR=6.5						
STKA	Stephens Creek	34.83	257	P	P	06 25 13.4	+3.8
	3.1nm,0.8s,baz=81,slow=11,SNR=4.2						
ASAR	Alice Springs	43.51	267	P	P	06 26 23.9	+1.6
	0.5nm,0.7s,baz=108,slow=8.0,SNR=5.1						
ASAR				PcP	PcP	06 28 11.2	+0.9
	0.4nm,0.9s,baz=121,slow=4.4,SNR=1.6						
	0.5nm,0.7s						
WRA	Warramunga Arr	44.52	272	P	P	06 26 31.5	+1.0
	1.1nm,0.5s,baz=111,slow=7.9,SNR=11						
	1.1nm,0.5s						
QSPA	South Pole Qui	59.47	180	P	P	06 28 22.5	+1.1
	1.2nm,1.1s,baz=270,slow=2.2,SNR=6.7						
	1.2nm,1.1s						
FINES	FINESS Array B	145.51	340	PKPbc	PKPab	06 37 56.3	-0.1
	2.8nm,0.6s,baz=52,slow=4.1,SNR=20						
NOA	NORSAR Array B	149.05	352	PKPbc	PKiKP	06 38 06.5	-1.0
	0.2nm,0.5s,baz=14,slow=2.5,SNR=3.7						
HFS	Hagfors	149.56	349	PKPbc	PKiKP	06 38 07.4	-1.0
	1.0nm,0.6s,baz=27,slow=2.5,SNR=2.4						
AKASG	Malin Array Be	151.74	323	PKPbc	PKiKP	06 38 13.1	-0.1
	0.2nm,0.4s,baz=55,slow=2.6,SNR=4.6						

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*SNET **23** 06:25:50.8±1.7, 13°.00N×89°.48W, h27^{km}, ML3.9*

*CATAC **23** 06:25:51.7±0.5, 13°N±2°×8°9W±°, h23^{km}±3^{km}, M3.9/24, MLv3.9/24, Error ellipse: s-maj=5.6km s-min=3.6km az=29.4, confirmed*

*GCG **23** 06:25:52.6±1.1, 13°.09N×89°.64W, h23^{km}±7^{km}, MD4.1, ML3.6*

ISC 23 06:25:52.2±1.5, 13°.06N±0°.05×89°.43W±0°.04, h28^{km}±11^{km}, n93, σ0^{s}.88/110, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAYA	Jayaque - finc	0.59	358	*e*P	Pb	06 26 04.3	0.0
JAYA				*e*S	Sb	06 26 12.2	-0.2
JAYA	Jayaque - finc	0.59	358	*i* P	Pb	06 26 04.2	0.0
JAYA				*i* S	Sb	06 26 12.4	0.0
JAYA	Jayaque - finc	0.59	358	P	Pn	06 26 04.4	-0.6
PANCS	Alcalda de	0.60	24	*e*P	Pb	06 26 04.4	+0.1
PANCS				*e*S	Sb	06 26 13.3	+0.7
PANCS	Alcalda de	0.60	24	P	Pn	06 26 04.8	-0.2
ITCA	Escuela Especi	0.63	13	*e*P	Pb	06 26 04.9	+0.1
ITCA	Escuela Especi	0.63	13	P	Pn	06 26 05.1	-0.4
ITCA	Escuela Especi	0.63	13	S	Sn	06 26 14.3	-0.4
LOMA	Loma Larga	0.64	23	*e*P	Pb	06 26 05.1	+0.2
PMON	Piamonte	0.66	10	*e*P	Pb	06 26 05.3	-0.1
PMON				*e*S	Sn	06 26 15.7	+0.3
PMON	Piamonte	0.66	10	P	Pb	06 26 05.5	+0.1
LFRS	El Faro	0.67	32	*e*P	Pn	06 26 05.8	-0.1
SEMO	Seminario San	0.67	17	*e*P	Pb	06 26 05.5	0.0
SEMO	Seminario San	0.67	17	P	Pb	06 26 05.7	+0.2
SEMO	Seminario San	0.67	17	S	Sn	06 26 16.0	+0.3
UTEC	Universidad Te	0.68	19	*e*P	Pb	06 26 05.6	0.0
UTEC	Universidad Te	0.68	19	P	Pb	06 26 05.8	+0.2
UTEC	Universidad Te	0.68	19	S	Sn	06 26 16.2	+0.4
UEES	Universidad Ev	0.68	16	*e*P	Pb	06 26 05.6	-0.1
UEES	Universidad Ev	0.68	16	P	Pb	06 26 05.8	+0.1
UEES	Universidad Ev	0.68	16	S	Sb	06 26 15.5	+0.6
BOQS	Boqueron	0.69	12	*e*P	Pb	06 26 05.9	0.0
BOQS				*e*S	Sn	06 26 16.1	-0.2
UESS	Universidad de	0.69	19	*e*P	Pb	06 26 05.8	-0.1
UESS				*e*S	Sn	06 26 16.2	0.0
IGN	Direccin Gen	0.70	21	*e*P	Pb	06 26 06.0	0.0
IGN	Direccin Gen	0.70	21	P	Pb	06 26 06.0	0.0
IGN	Direccin Gen	0.70	21	S	Sn	06 26 16.6	+0.3
PIC2	El Picacho	0.70	14	*e*P	Pb	06 26 06.2	+0.1
AEIL	Aeropuerto Ilo	0.70	26	*e*P	Pb	06 26 06.3	+0.2
UDBS	Universidad Do	0.71	22	*e*P	Pb	06 26 05.9	-0.2
UDBS	Universidad Do	0.71	22	P	Pb	06 26 06.2	+0.1
UDBS	Universidad Do	0.71	22	S	Sn	06 26 16.6	+0.1
CEDA	San Andres	0.74	3	*e*P	Pb	06 26 06.2	-0.5
CEDA				*e*S	Sn	06 26 16.9	-0.4
CEDA	San Andres	0.74	3	P	Pb	06 26 06.5	-0.1
CEDA	San Andres	0.74	3	S	Sn	06 26 17.6	+0.2
LFU	La Fuente	0.75	24	*e*P	Pb	06 26 07.0	+0.1
LBRS	Las Brisas	0.77	29	*e*P	Pn	06 26 07.5	+0.1
LBRS				*e*S	Sb	06 26 18.2	+0.8
CEVE	Cerro Verde	0.79	346	*e*P	Pb	06 26 06.9	-0.7
CEVE				*e*S	Sn	06 26 18.8	0.0
CEVE	Cerro Verde	0.79	346	P	Pb	06 26 07.1	-0.5
CEVE	Cerro Verde	0.79	346	S	Sn	06 26 19.3	+0.5
SNVI	San Vicente	0.80	46	*e*P	Pb	06 26 07.3	-0.4
SBLS	San Blas	0.80	346	*e*P	Pb	06 26 06.9	-0.8
PAVA	Las Pavas	0.81	36	*e*P	Pb	06 26 07.9	+0.1
PAVA				*e*S	Sb	06 26 18.9	+0.5
PAVA	Las Pavas	0.81	36	P	Pn	06 26 08.1	+0.2
PAVA	Las Pavas	0.81	36	S	Sn	06 26 20.4	+1.3
SNJE	San Jose	0.82	348	*e*P	Pb	06 26 07.3	-0.8
UESV	Universidad de	0.85	47	*e*P	Pb	06 26 08.1	-0.4
UESV				*e*S	Sb	06 26 19.5	0.0
UESV	Universidad de	0.85	47	P	Pb	06 26 08.1	-0.4
UESV	Universidad de	0.85	47	S	Sb	06 26 20.4	+0.8
RTR	El Retiro	0.86	346	*e*P	Pb	06 26 07.9	-0.9
NUBE	Las Nubes	0.91	338	*e*P	Pb	06 26 08.1	-1.4
NUBE	Las Nubes	0.91	338	*i* P	Pb	06 26 08.0	-1.4
NUBE				*i* S	Sb	06 26 20.2	-1.1
NUBE	Las Nubes	0.91	338	P	Pb	06 26 08.1	-1.4
UNIC	Universidad Ca	0.93	353	*e*P	Pb	06 26 08.9	-0.9
UNIC				*e*S	Sn	06 26 21.8	-0.2
UNIC	Universidad Ca	0.93	353	P	Pb	06 26 09.1	-0.7
LOAL	Lomas de Alarc	1.00	340	*e*P	Pb	06 26 09.8	-1.2
LOAL	Lomas de Alarc	1.00	340	P	Pb	06 26 10.2	-0.7
LOAL	Lomas de Alarc	1.00	340	S	Sn	06 26 23.9	+0.3
TECA	Tecapa	1.00	64	*e*P	Pn	06 26 10.2	-0.5
TECA				*e*P	Pn	06 26 10.2	-0.5
TECA				*e*S	Sb	06 26 24.0	0.0
PQSS	Presa 15 de Se	1.02	56	*e*P	Pn	06 26 10.3	-0.4
PQSS				*e*S	Sb	06 26 23.3	-1.0
PQSS	Presa 15 de Se	1.02	56	P	Pn	06 26 10.5	-0.1
PQSS	Presa 15 de Se	1.02	56	S	Sb	06 26 24.5	+0.3
PACA	Pacayal	1.15	69	*e*P	Pn	06 26 13.0	+0.3
PACA	Pacayal	1.15	69	P	Pn	06 26 13.3	+0.7
PACA	Pacayal	1.15	69	S	Sb	06 26 29.7	+1.4
LCY	Lacayo	1.16	72	*e*P	Pn	06 26 12.9	+0.1
RANC	El Ranchito	1.17	71	P	Pn	06 26 04.4	-8.6
RANC	El Ranchito	1.17	71	S	Sn	06 26 21.2	-6.9
VSM	San Miguel	1.18	72	*e*P	Pn	06 26 13.5	+0.3
BLLM	Bellamira	1.22	72	*e*P	Pn	06 26 13.8	+0.2
BLLM				*e*S	Sn	06 26 29.5	+0.3
CNRM	Centro Naciona	1.29	71	*e*P	Pn	06 26 14.9	+0.4
MTO3	Montecristo	1.33	3	*e*P	Pn	06 26 14.8	-0.5
CAHU	Cacacuatique	1.38	59	*e*P	Pn	06 26 15.7	-0.2
ESQI	Esquipulas	1.50	3	*e*P	Pn	06 26 17.1	-0.3
ESQI	Esquipulas	1.50	3	P	Pn	06 26 17.4	+0.1
ESQI	Esquipulas	1.50	3	S	Sn	06 26 36.8	+0.7
LCND	La Caada	1.52	80	*e*P	Pn	06 26 17.4	-0.2
LCND	La Caada	1.52	80	P	Pn	06 26 17.9	+0.3
LCND	La Caada	1.52	80	S	Sn	06 26 36.9	+0.4
CNCH	Conchagua	1.57	82	*e*P	Pn	06 26 18.4	+0.1
CNCH	Conchagua	1.57	82	S	Sn	06 26 39.1	+1.2
POTN	Potosi Cosigui	1.88	92	P	Pn	06 26 22.6	+0.1
POTN				S	Sn	06 26 46.2	+1.0
STG0	El Palmar, Qui	2.30	306	*i* S	Sb	06 27 03.0	+1.6
STG0				IAML		06 27 07.9	
	comp=E,632nm,0.2s						
TGUH	Tegucigalpa,Un	2.32	64	P	Pn	06 26 28.8	0.0
CRIN	San Cristobal	2.35	98	P	Pn	06 26 29.5	+0.5
PKGN	Cerro Pekin	2.42	99	P	Pn	06 26 30.7	+0.7
TEL3	Telica 3	2.57	101	P	Pn	06 26 31.9	-0.2
POLN	Al Sur del Vol	2.58	99	P	Pn	06 26 31.9	-0.4
PLRN	Geotermica Pol	2.64	100	P	Pn	06 26 32.5	-0.6
RTAL	Retalhuleu	2.64	304	P	Pn	06 26 34.3	+1.2
CNGA	Al SSO del Vol	2.72	102	P	Pn	06 26 34.1	0.0
CNGN	Cerro Negro	2.72	101	P	Pn	06 26 34.0	-0.2
COPN	Copaltepe	2.90	107	P	Pn	06 26 36.6	-0.1
PETF	Flores	3.86	354	*i* P	Pn	06 26 50.6	+0.7

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*IDC **23** 06:26:18.5±10.0, 55°.80S×27°.39W, h120^{km}±88^{km}, mb3.6/3, mbtmp4.1/4, ML4.8/1, Error ellipse: s-maj=59.1km s-min=27.3km az=55.0*

ISC 23 06:26:17.3±1.1, 55°.8S±0°.2×27°.3W±0°.3, h112^{km}, n13, σ0^{s}.57/13, mb3.9/3, 5C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	17.08	158	⇑P	P	06 30 07.3	-1.5
	comp=Z,1.3nm,0.5s						
VNA3	Neumayer Olymp	17.28	161	⇑P	P	06 30 11.0	0.0
	comp=Z,1.5nm,0.5s						
VNA2	Neumayer--Watz	17.48	158	⇑P	P	06 30 13.3	+0.1
	comp=Z,2.1nm,0.3s,baz=316,slow=12						
SNAA	Sanae	19.02	156	⇑P	P	06 30 30.6	+0.4
	comp=Z,200nm,0.4s						
SNAA	Sanae	19.02	156	P	P	06 30 30.8	+0.7
	comp=Z,2.6nm,0.3s,baz=311,slow=12,SNR=87						
	comp=Z,6.4nm,0.4s						
TROLL	Troll, Antarti	20.53	154	⇑P	P	06 30 46.9	+0.5
	comp=Z,202nm,0.3s						
QSPA	South Pole Qui	34.48	180	P	P	06 32 53.9	-0.2
	comp=Z,2.4nm,0.6s,baz=202,slow=3.6,SNR=34						
	comp=Z,2.4nm,0.6s						
VNDA	Vanda	46.84	183	P	P	06 34 35.5	+0.3
	comp=Z,1.1nm,0.8s,baz=183,slow=6.8,SNR=8.3						
	comp=Z,1.1nm,0.8s						
LPAZ	La Paz	50.15	305	P	P	06 35 02.0	+0.1
	comp=Z,0.6nm,0.4s,baz=142,slow=6.4,SNR=4.7						
	comp=Z,0.6nm,0.4s						
FINES	FINESS Array B	124.18	28	PKP	PKPdf	06 45 00.8	-0.3
	comp=Z,0.7nm,0.6s,baz=194,slow=2.8,SNR=4.5						
ARCES	ARCESS Array B	130.72	22	PKP	PKPdf	06 45 13.5	+0.1
	comp=Z,2.5nm,1.0s,baz=219,slow=2.3,SNR=1.5						
ILAR	Eielson Array	149.87	312	PKPbc	PKPbc	06 45 52.8	0.0
	comp=Z,0.9nm,0.7s,baz=107,slow=3.0,SNR=9.3						
SONM	Songino Array	150.79	86	PKPbc	PKPbc	06 45 55.5	-0.1
	comp=Z,1.3nm,0.4s,baz=218,slow=4.4,SNR=5.7						

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*NOU **23** 06:26:04.0, 32°.42S×177°.37W, h184^{km}, MLv4.9/6, South of Kermadec Islands*

*IDC **23** 06:26:17.5±1.9, 33°.12S×179°.10W, h0^{km}, mb3.8/4, mbtmp3.9/5, ML3.6/1, Error ellipse: s-maj=48.3km s-min=30.1km az=53.0*

*WEL **23** 06:26:22.9±0.6, 33°S±4°×17°9W±°, h33^{km}, M4.6/1, ML4.7/5, MLv4.6/1, Error ellipse: s-maj=11.2km s-min=3.7km az=110.1, confirmed*

ISC 23 06:26:23.2±0.9, 33°.37S±0°.06×178°.91W±0°.10, h48^{km}, n57, σ1^{s}.97/80, mb3.8/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	4.18	12	P	Pn	06 27 21.9	-2.5
GLKZ				S	Sn	06 28 09.9	-2.1
MXZ	Matakaoa Point	4.76	208	P	Pn	06 27 34.2	+1.9
HAZ	Te Kaha	5.14	211	P	Pn	06 27 36.8	-0.7
HAZ				S	Sn	06 28 35.8	+0.3
PUZ	Puketiti	5.23	205	P	Pn	06 27 37.8	-1.0
PUZ				S	Sn	06 28 37.7	-0.1
RUGZ	Raukumara Rang	5.36	210	P	Pn	06 27 41.7	+0.9
RUGZ				S	Sn	06 28 41.5	+0.3
TWGZ	Tauwhareparae	5.42	207	P	Pn	06 27 41.8	+0.3
TWGZ				S	Sn	06 28 43.3	+0.8
GRZ	Great Barrier	5.45	237	P	Pn	06 27 44.7	+2.8
KUZ	Kuaotunu	5.54	231	P	Pn	06 27 46.5	+3.4
CNGZ	Carnagh Statio	5.61	204	P	Pn	06 27 44.4	+0.4
TKGZ	Te Karaka	5.70	207	P	Pn	06 27 44.0	-1.2
TKGZ				S	Sn	06 28 48.1	-1.3
MWZ	Matawai	5.74	209	P	Pn	06 27 46.0	+0.2
MWZ				S	Sn	06 28 50.3	0.0
URZ	Urewera	5.85	212	Pn	Pn	06 27 46.3	-1.0
	1.4nm,0.3s,baz=275,slow=5.8,SNR=28						
URZ				Sn	Sn	06 28 50.7	-2.4
	4.6nm,0.3s,baz=85,slow=23,SNR=6.5						
	6.9nm,0.3s						
URZ	Urewera	5.85	212	P	Pn	06 27 48.6	+1.3
URZ	Urewera	5.85	212	P	Pn	06 27 46.3	-1.0
URZ				S	Sn	06 28 50.6	-2.4
RAGZ	Rawiri	5.92	209	P	Pn	06 27 50.0	+1.6
RAGZ				S	Sn	06 28 55.8	+0.9
RIGZ	Rimuhau	5.97	206	P	Pn	06 27 50.1	+1.2
RIGZ				S	Sn	06 28 53.9	-2.1
MKAZ	Moumakai	6.12	231	P	Pn	06 27 54.0	+3.0
PRGZ	Paritu Road	6.12	204	P	Pn	06 27 51.9	+0.9
PRGZ				S	Sn	06 28 56.2	-3.5
MUGZ	Murupara	6.18	213	P	Pn	06 27 51.0	-0.9
MUGZ				S	Sn	06 28 58.0	-3.3
SNGZ	Shannon Statio	6.20	208	P	Pn	06 27 52.7	+0.6
SNGZ				S	Sn	06 28 59.7	-1.9
RTZ	Ruatahuna	6.20	211	P	Pn	06 27 52.7	+0.5
RTZ				S	Sn	06 28 59.7	-2.2
KNZ	Kokohu	6.28	205	P	Pn	06 27 51.6	-1.6
KNZ				S	Sn	06 28 58.0	-5.6
MHGZ	Mahia Peninsul	6.32	203	P	Pn	06 27 53.1	-0.6
MHGZ				S	Sn	06 29 03.4	-1.2
RAHZ	Arahi	6.41	209	P	Pn	06 27 55.8	+0.8
RAHZ				S	Sn	06 29 06.7	-0.2
MTHZ	Maungataniwha	6.46	211	P	Pn	06 27 56.6	+0.8
MTHZ				S	Sn	06 29 09.8	+1.6
OUZ	Omahuta	6.47	251	P	Pn	06 27 57.3	+1.5
OUZ	Omahuta	6.47	251	P	Pn	06 27 57.2	+1.5
OUZ				S	Sn	06 29 02.2	-6.1
WHHZ	Waihua	6.49	208	P	Pn	06 27 56.8	+0.7
WHHZ				S	Sn	06 29 07.7	-1.1
MRHZ	Matea Rd	6.63	213	P	Pn	06 27 58.1	0.0
MRHZ				S	Sn	06 29 12.0	-0.5
NMHZ	Naumai	6.68	210	P	Pn	06 27 59.7	+0.9
NMHZ				S	Sn	06 29 12.3	-1.3
ARHZ	Aropaoanui	6.75	208	P	Pn	06 27 58.9	-0.6
ARHZ				S	Sn	06 29 11.9	-3.2
BKZ	Black Stump Fm	6.87	211	P	Pn	06 28 01.3	-0.1
BKZ	Black Stump Fm	6.87	211	P	Pn	06 27 59.8	-1.5
BKZ				S	Sn	06 29 15.4	-2.8
MCHZ	McNeill Hill	7.02	209	P	Pn	06 28 03.5	+0.2
MCHZ				S	Sn	06 29 20.3	-1.5
CKHZ	Cape Kidnapper	7.06	206	P	Pn	06 28 02.6	-1.3
CKHZ				S	Sn	06 29 16.7	-6.0
KWHZ	Kaweka Forest	7.12	211	P	Pn	06 28 04.0	-0.8
KWHZ				S	Sn	06 29 20.8	-3.5
TMVZ	Te Maari	7.20	216	P	Pn	06 28 05.9	0.0
TMVZ				S	Sn	06 29 24.4	-1.9
ETVZ	East Tongariro	7.21	216	P	Pn	06 28 06.5	+0.4
KAHZ	Kahuranaki	7.25	207	P	Pn	06 28 04.9	-1.7
OTVZ	Oturere	7.25	216	P	Pn	06 28 06.7	0.0
SNVZ	South Ngauruho	7.28	216	P	Pn	06 28 07.1	0.0
FWVZ	Far West T-bar	7.38	216	P	Pn	06 28 08.3	-0.2
WNVZ	Wahianoa	7.41	215	P	Pn	06 28 07.7	-1.2
PNHZ	Pukenui	7.62	210	P	Pn	06 28 10.1	-1.6
PRHZ	Porangahau	7.75	206	P	Pn	06 28 11.9	-1.5
BFZ	Birch Farm	8.26	207	P	Pn	06 28 20.1	-0.2
ASAR	Alice Springs	42.27	271	P	P	06 34 11.8	-0.3
	1.1nm,0.8s,baz=110,slow=7.2,SNR=12						
	1.1nm,0.8s						
WRA	Warramunga Arr	43.53	276	P	P	06 34 21.6	-0.8
	0.3nm,0.3s,baz=117,slow=8.0,SNR=6.7						
	0.3nm,0.3s						
QSPA	South Pole Qui	56.75	180	P	P	06 36 05.5	+3.5
	1.6nm,1.0s,baz=63,slow=2.3,SNR=7.7						
	1.6nm,1.0s						
SNAA	Sanae	75.22	179	P	P	06 38 02.3	+2.0
	0.5nm,0.4s,baz=42,slow=11,SNR=2.5						
	0.5nm,0.4s						
H03S2	Juan Fernandez	79.48	124	T	T	08 06 43.5	
	baz=235,slow=74,SNR=15						
H03S1	Juan Fernandez	79.49	124	T	T	08 06 43.3	
	baz=235,slow=74,SNR=12						
H03S3	Juan Fernandez	79.50	124	T	T	08 06 41.9	
	baz=235,slow=74,SNR=12						
H03N3	Juan Fernandez	79.69	123	T	T	08 06 54.4	
	baz=240,slow=72,SNR=24						
H03N2	Juan Fernandez	79.69	123	T	T	08 06 53.1	
	baz=240,slow=72,SNR=21						
H03N1	Juan Fernandez	79.70	123	T	T	08 06 56.2	
	baz=240,slow=72,SNR=37						
FINES	FINESS Array B	147.62	338	PKPbc	PKPbc	06 46 01.3	-0.2
	1.6nm,0.8s,baz=53,slow=2.3,SNR=4.3						

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*CATAC **23** 06:51:46.7±0.6, 7°N±2°×7°3W±°, h152^{km}±6^{km}, M4.4/5, MLv4.4/5, Error ellipse: s-maj=9.6km s-min=4.7km az=100.9, confirmed*

*IDC **23** 06:51:47.4±0.6, 6°.78N×72°.96W, h160^{km}±8^{km}, mb3.3/8, mbtmp3.9/12, Error ellipse: s-maj=19.2km s-min=7.2km az=134.0*

*RSNC **23** 06:51:48.6±0.0, 7°N±1°×7°3W±°, h148^{km}±2^{km}, M4.0, mB4.7, mb4.3, ML3.6, Mw(mB)4.0*

ISC 23 06:51:47.4±0.7, 6°.87N±0°.03×73°.10W±0°.04, h154^{km}±5^{km}, n73, σ1^{s}.22/108, mb3.4/8, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.29	197	P	Pn	06 52 08.6	0.0
BARC				S	Sn	06 52 23.9	-0.9
PAMC	Pamplona, Colo	0.61	40	P	Pn	06 52 11.3	+1.0
PAMC				S	Sn	06 52 28.4	+0.6
BRJC	Barrancabermej	0.65	279	P	Pn	06 52 10.2	+0.3
BRJC				S	Sn	06 52 27.4	+0.3
RUSC	La Rusia	0.97	179	P	Pn	06 52 12.7	-0.1
RUSC				S	Sn	06 52 31.2	-1.1
RUSC	La Rusia	0.97	179	P	Pn	06 52 12.6	-0.2
RUSC				S	Sn	06 52 31.2	-1.1
TAMC	Tame, Arauca	1.37	108	P	Pn	06 52 16.9	+1.0
TAMC				S	Sn	06 52 37.4	-0.3
OCAC	Ocana	1.38	351	P	Pn	06 52 16.4	+0.2
OCAC				S	Sn	06 52 38.0	-0.3
PTBC	PUERTO BERRIO,	1.39	256	P	Pn	06 52 15.2	-0.9
PTBC				S	Sn	06 52 36.5	-1.5
SPBC	San Pablo de B	1.55	219	P	Pn	06 52 17.4	-0.4
SPBC				S	Sn	06 52 39.7	-1.5
ZARC	Zaragoza, Cauc	1.85	290	P	Pn	06 52 20.8	-0.2
ZARC				S	Sn	06 52 46.9	0.0
NORC	Norcasia	2.19	234	P	Pn	06 52 24.3	-0.7
NORC				S	Sn	06 52 52.6	-1.3
CHIC	Chingaza	2.31	196	P	Pn	06 52 26.6	-0.2
CHIC				S	Sn	06 52 55.8	-1.4
ROSC	El Rosal	2.35	211	P	Pn	06 52 28.6	+1.3
	342nm,0.3s,baz=299,slow=15,SNR=246						
ROSC				S	Sn	06 52 58.9	+0.9
	892nm,0.4s,baz=111,slow=19,SNR=12						
ROSC	El Rosal	2.35	211	P	Pn	06 52 28.3	+1.0
ROSC				S	Sn	06 52 57.8	-0.3
HELC	Santa Helena	2.51	255	P	Pn	06 52 29.6	+0.5
HELC				S	Sn	06 53 00.3	-1.0
HELC	Santa Helena	2.51	255	P	Pn	06 52 29.1	0.0
HELC				S	Sn	06 52 59.2	-2.1
CVER	Cruz Verde, Cu	2.53	203	P	Pn	06 52 30.3	+0.8
CVER				S	Sn	06 53 01.9	0.0
MEDEC	Medelln, Ant	2.54	257	P	Pn	06 52 29.6	+0.2
MEDEC				S	Sn	06 53 01.6	-0.2
UREC	San Jos de Ur	2.57	290	P	Pn	06 52 28.3	-1.2
UREC				S	Sn	06 53 00.6	-1.5
GUY2C	Guyana, Caldas	2.78	234	P	Pn	06 52 33.1	+0.4
GUY2C				S	Sn	06 53 06.9	-0.7
VILC	Villavicencio,	2.80	192	P	Pn	06 52 32.1	-0.5
VILC				S	Sn	06 53 06.4	-1.1
NIZA	Niza - Manizal	2.97	233	P	Pn	06 52 35.8	+1.0
NIZA				S	Sn	06 53 11.8	+0.4
CMAN1	Manizales, Cal	3.00	234	P	Pn	06 52 31.2	-4.0
CMAN1				S	Sn	06 53 11.3	-0.9
CBOC	Ciudad Bolivar	3.06	251	P	Pn	06 52 36.0	+0.1
CBOC				S	Sn	06 53 13.2	-0.1
DBBC	Dabeiba	3.09	273	P	Pn	06 52 36.1	0.0
DBBC				S	Sn	06 53 12.5	-1.4
SDV	Santo Domingo	3.16	50	P	Pn	06 52 38.6	+1.6
	47nm,0.3s,baz=232,slow=3.8,SNR=15						
SDV				S	Sn	06 53 15.0	-0.6
	175nm,0.4s,baz=102,slow=20,SNR=23						
SDV	Santo Domingo	3.16	50	P	Pn	06 52 37.9	+0.8
ARGC	Ariguani, Magd	3.18	339	P	Pn	06 52 38.5	+1.3
ARGC				S	Sn	06 53 16.7	+0.9
ANIL	Santa Ana	3.29	224	P	Pn	06 52 40.0	+1.1
APAC	Apartado, Choc	3.60	287	P	Pn	06 52 42.5	-0.1
APAC				S	Sn	06 53 25.4	0.0
PRAC	Prado	3.60	210	P	Pn	06 52 42.4	-0.2
PRAC				S	Sn	06 53 24.1	-1.5
PRAC	Prado	3.60	210	P	Pn	06 52 41.9	-0.8
ORTC	Ortega, Tolima	3.64	216	P	Pn	06 52 42.8	-0.3
ORTC				S	Sn	06 53 26.8	+0.5
SJCC	San Jacinto, C	3.65	326	P	Pn	06 52 42.8	-0.4
SJCC				S	Sn	06 53 23.8	-2.8
SJCC	San Jacinto, C	3.65	326	P	Pn	06 52 42.0	-1.2
PLMC	San Jos del P	3.72	239	P	Pn	06 52 44.1	-0.1
PLMC				S	Sn	06 53 28.5	+0.2
LCBC	Los crdobas,	3.79	302	P	Pn	06 52 44.1	-0.9
URMC	La Uribe, Meta	3.82	200	P	Pn	06 52 45.7	+0.2
CRJC	Cerrejon, Guaj	4.13	3	P	Pn	06 52 48.6	-0.9
YOTC	Yotoco, Valle	4.32	229	P	Pn	06 52 51.4	-0.7
GUVC	San Jose del G	4.32	174	P	Pn	06 52 50.5	-1.5
SOLC	Bahia Solano	4.33	262	P	Pn	06 52 52.5	+0.5
SMRC	Santa Marta, M	4.41	345	P	Pn	06 52 53.4	+0.3
MACC	Macarena, Meta	4.75	189	P	Pn	06 52 55.8	-1.9
URI	Uribia	4.92	13	P	Pn	06 52 58.7	-1.1
URI				S	Sn	06 53 54.6	-1.9
URIC	Uribia, Colomb	4.92	13	P	Pn	06 52 58.7	-1.2
MALC	Bahia Malaga	5.08	236	P	Pn	06 53 03.8	+1.8
JAMC	Jamundi, Valle	5.08	225	P	Pn	06 53 04.7	+2.5
	775nm23nm,0.8s						
GARC	Garzon, Huila	5.23	207	P	Pn	06 53 03.2	-1.0
POPC	Popayan, Colom	5.59	220	P	Pn	06 53 08.3	-0.6
	405nm17nm,0.6s						
FLOC	Florencia	5.84	206	P	Pn	06 53 12.1	+0.1
FLOC				S	Sn	06 54 17.4	-0.8
FLOC	Florencia	5.84	206	P	Pn	06 53 11.1	-0.9
	677nm18nm,0.4s						
BBAC	Balboa, Cauca	6.35	221	P	Pn	06 53 19.7	+0.7
	931nm18nm,0.7s						
CRUC	La Cruz	6.52	216	P	Pn	06 53 25.0	+3.6
	662nm,1.9s						
BCIP	Isla Barro Col	7.05	289	P	Pn	06 53 25.8	-2.4
	42nm,1.7s						
AZU	Azuero	7.18	278	P	Pn	06 53 29.1	-0.7
	67nm,1.8s						
CACAO	El Cacao, Vera	7.72	274	P	Pn	06 53 35.8	-1.3
GMAL	Guarumal, Vera	8.12	277	P	Pn	06 53 43.1	+0.7
	29nm,0.9s						
PAC1	Pacto, Paraso	8.68	221	P	Pn	06 53 51.5	+1.5
PCRV	Puerto La Cruz	8.99	68	P	Pn	06 53 52.9	-1.1
	5.5nm,0.5s,baz=345,slow=2.9,SNR=19						
PCRV				S	Sn	06 55 34.0	0.0
	7.4nm,0.5s,baz=173,slow=18,SNR=2.0						
SGC2	Sao Gabriel da	9.27	139	P	Pn	06 53 54.6	-3.1
MTDJ	Mount Denham	12.09	339	P	Pn	06 54 37.8	+3.0
JTS	Las Juntas de	12.20	287	P	Pn	06 54 38.8	+2.5
	4.1nm,0.6s,baz=257,slow=21,SNR=4.8						
LPAZ	La Paz	23.53	168	P	P	06 56 42.7	-1.8
	0.4nm,0.3s,baz=335,slow=13,SNR=3.2						
	0.4nm,0.3s						
TXAR	Lajitas Array	36.45	312	P	P	06 58 38.7	+1.0
	0.3nm,0.6s,baz=120,slow=8.6,SNR=5.9						
	0.3nm,0.6s						
ULM	Lac du Bonnet	47.25	340	P	P	07 00 04.7	-0.2
	2.5nm,0.4s,baz=147,slow=7.8,SNR=9.5						
	2.5nm,0.4s						
PDAR	Pinedale Array	48.05	324	P	P	07 00 11.5	0.0
	0.4nm,0.5s,baz=137,slow=7.7,SNR=4.5						
	0.4nm,0.5s						
NVAR	Mina Array Bea	51.47	315	P	P	07 00 37.8	+0.4
	0.3nm,0.6s,baz=122,slow=7.9,SNR=2.6						
	0.3nm,0.6s						
YKA	Yellowknife Ar	63.23	340	P	P	07 01 59.3	+0.2
	1.6nm,0.6s,baz=135,slow=5.8,SNR=33						
	1.6nm,0.6s						
ILAR	Eielson Array	76.93	335	P	P	07 03 22.9	+0.3
	0.3nm,0.7s,baz=111,slow=5.0,SNR=4.4						
	0.3nm,0.7s						

ARCES	**ARCESS Array B**	**86.62**	**20**	P	**P**	**07 04 12.8**	**-0.3**
	1.7nm,0.9s,baz=277,slow=4.7,SNR=4.1						
	1.7nm,0.9s						
MKAR	**Makanchi Array**	**122.27**	**20**	PKP	**PKPdf**	**07 10 23.4**	**-1.0**
	0.3nm,0.4s,baz=337,slow=2.2,SNR=7.6						
ASAR	**Alice Springs**	**149.16**	**234**	PKPbc	**PKPbc**	**07 11 17.5**	**-1.1**
	2.2nm,0.6s,baz=119,slow=3.2,SNR=4.2						

IDC ***23*** *06:52:05.7±0.5, 31°.03S×177°.41W, h0^{km}, mb4.5/18, mbtmp4.5/18, MS4.9/51, Error ellipse: s-maj=18.8km s-min=14.7km az=88.0*

MOS ***23*** *06:52:06.8±1.0, 31°.04S×177°.55W, h10^{km}, mb5.2/18, Error ellipse: s-maj=13.2km s-min=9.2km az=111.5*

NEIC ***23*** *06:52:08.4±1.0, 30°.96S±0°.09×177°.5W±0°.1, h10^{km}±1^{km}, mb5.1/105, Mww5.2/35, Error ellipse: s-maj=19.1km s-min=13.9km az=72.0*

BJI ***23*** *06:52:10.2, 30°.54S×176°.62W, h42^{km}, mB5.6/21, mb5.1/22, Ms5.2/23, Ms7 4.9/26*

GCMT ***23*** *06:52:11.4±0.1, 31°.06S±0°.01×176°.96W±0°.01, h12^{km}, MW5.3/136, Moment Tensor Solution. s97,c161; s136,c246; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.86±.01; $M_{\theta\theta}$-0.09±.01; $M_{\phi\phi}$-0.76±.01; $M_{r\theta}$0.27±.03; $M_{\theta\phi}$-0.20±.01; $M_{\phi r}$0.72±.03; Best double couple: $M_0$1.14000×10^{17} NP1:ϕ_s192.00000°,δ24.00000°,λ84.00000°. NP2:ϕ_s19.00000°,δ66.00000°,λ93.00000°. Principal axes: T 1.1600, Plg69.0000°, Azm294.0000°; N -0.0400, Plg2.0000°, Azm198.0000°; P -1.1200, Plg21.0000°, Azm107.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***23*** *06:52:12.4, 31°.15S×176°.69W, h14^{km}, Moment Tensor Solution. Duration: 2^{s}5 Moment tensor: Scale 10^{16}Nm; M_{rr}8.62; $M_{\theta\theta}$-0.57; $M_{\phi\phi}$-8.05; $M_{r\theta}$-1.41; $M_{\theta\phi}$-2.49; $M_{\phi r}$2.66; Fault plane solution: $M_0$9.21000×10^{16} NP1: ϕ_s209.36000°,δ39.49000°,λ110.09000°. NP2:ϕ_s4.00000°,δ53.32000°,λ74.19000°. Principal axes: T 9.3564, Plg75.0000°, Azm224.0000°; N -0.2901, Plg13.0000°, Azm14.0000°; P -9.0664, Plg7.0000°, Azm105.0000°;*

NEIC ***23*** *06:52:12.4, 30°.95S×177°.51W, h14^{km}*

NOU ***23*** *06:52:36.0, 33°.31S×178°.01W, h109^{km}, ML4.8/10, South of Kermadec Islands*

ISC 23 06:52:07.7±0.3, **31°.07S**±0°.04×**177°.50W**±0°.06, **h10**^{km}, **n341**, σ**1^{s}69**/291, **mb5.1**/86, **MS5.0**/67, **24C-13D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.84**	**348**	P	**Pn**	**06 52 38.0**	**-1.4**
GLKZ				S	**Sg**	**06 53 03.9**	**-3.0**
RAO	**Raoul Island**	**1.85**	**348**	Pn	**Pn**	**06 52 37.9**	**-1.6**
	404nm,0.3s,baz=96,slow=12,SNR=17						
RAO				Sn	**Sb**	**06 53 02.3**	**-2.5**
	508nm,0.3s,baz=131,slow=22,SNR=14						
RAO				LR	LR	06 53 13.8	
	comp=Z,11µm,19.0s,baz=160,slow=37						
RAO	**Raoul Island**	**1.85**	**348**	P	**Pn**	**06 52 38.6**	**-0.9**
RIZ	**Raoul Island**	**1.86**	**348**	P	**Pn**	**06 52 38.0**	**-1.6**
RIZ				S	**Sb**	**06 53 03.3**	**-1.8**
MXZ	**Matakaoa Point**	**7.35**	**207**	P	Pn	06 53 49.1	-5.9
MXZ				S	**Sn**	**06 55 15.5**	**-2.9**
HAZ	**Te Kaha**	**7.72**	**209**	P	Pn	06 53 56.9	-3.3
HAZ				S	**Sn**	**06 55 26.7**	**-1.0**
PUZ	**Puketiti**	**7.81**	**205**	P	Pn	06 53 56.0	-5.4
PUZ				S	**Sn**	**06 55 27.6**	**-2.4**
RUGZ	**Raukumara Rang**	**7.95**	**209**	P	Pn	06 54 00.4	-3.0
RUGZ				S	**Sn**	**06 55 32.1**	**-1.3**
KUZ	**Kuaotunu**	**7.99**	**223**	P	**Pn**	**06 54 06.3**	**+2.5**
TWGZ	**Tauwhareparae**	**8.01**	**207**	P	Pn	06 53 59.9	-4.2
TWGZ				S	**Sn**	**06 55 32.4**	**-2.4**
TKGZ	**Te Karaka**	**8.29**	**206**	P	Pn	06 54 03.3	-4.6
TKGZ				S	**Sn**	**06 55 38.4**	**-3.1**
MWZ	**Matawai**	**8.32**	**208**	P	Pn	06 54 03.9	-4.6
MWZ				S	**Sn**	**06 55 39.0**	**-3.5**
OPRZ	**Ohinepanea**	**8.35**	**214**	P	**Pn**	**06 54 09.1**	**+0.3**
OPRZ				S	**Sn**	**06 55 40.7**	**-2.5**
WCZ	**Waipu Caves**	**8.37**	**232**	P	**Pn**	**06 54 12.4**	**+3.5**
TGRZ	**Tauranga**	**8.41**	**216**	P	**Pn**	**06 54 09.3**	**-0.2**
URZ	**Urewera**	**8.43**	**210**	Pn	Pn	06 54 06.4	-3.5
	2.0nm,0.3s,baz=262,slow=2.9,SNR=12						
URZ				Sn	**Sn**	**06 55 41.3**	**-3.9**
	12nm,0.3s,baz=177,slow=20,SNR=17						
URZ	**Urewera**	**8.43**	**210**	P	Pn	06 54 06.2	-3.7
URZ	**Urewera**	**8.43**	**210**	P	Pn	06 54 06.0	-3.9
URZ				S	Sn	06 55 38.9	-6.3
RAGZ	**Rawiri**	**8.51**	**208**	P	Pn	06 54 08.2	-2.8
RAGZ				S	**Sn**	**06 55 44.9**	**-2.2**
OUZ	**Omahuta**	**8.54**	**239**	P	Pn	06 54 18.5	+7.1
OUZ	**Omahuta**	**8.54**	**239**	P	Pn	06 54 17.4	+6.0
RIGZ	**Rimuhau**	**8.55**	**206**	P	Pn	06 54 08.6	-3.0
RIGZ				S	**Sn**	**06 55 44.8**	**-3.4**
MKAZ	**Moumakai**	**8.56**	**223**	P	**Pn**	**06 54 14.1**	**+2.5**
MUGZ	**Murupara**	**8.76**	**211**	P	Pn	06 54 11.2	-3.3
MUGZ				S	**Sn**	**06 55 49.8**	**-3.5**
RTZ	**Ruatahuna**	**8.79**	**210**	P	**Pn**	**06 54 12.7**	**-2.2**
TOZ	**Tahuroa Road**	**8.81**	**219**	P	**Pn**	**06 54 15.6**	**+0.5**
KNZ	**Kokohu**	**8.86**	**205**	P	Pn	06 54 10.9	-4.9
MHGZ	**Mahia Peninsul**	**8.90**	**204**	P	Pn	06 54 11.3	-4.9
BKZ	**Black Stump Fm**	**9.46**	**210**	P	Pn	06 54 19.9	-4.1
BKZ	**Black Stump Fm**	**9.46**	**210**	P	Pn	06 54 19.5	-4.5
HIZ	**Hauiti**	**9.73**	**218**	P	**Pn**	**06 54 27.4**	**-0.3**
HIZ	**Hauiti**	**9.73**	**218**	P	**Pn**	**06 54 27.4**	**-0.3**
BFZ	**Birch Farm**	**10.85**	**206**	P	Pn	06 54 38.4	-4.6
QRZ	**Quartz Range**	**12.64**	**217**	P	**Pn**	**06 55 05.6**	**-1.9**
CTZ	**Chatham Island**	**12.66**	**177**	P	Pn	06 55 02.9	-4.9
THZ	**Tophouse**	**13.16**	**213**		Pn	06 55 20.1	+5.3
KHZ	**Kahutara**	**13.40**	**210**		**Pn**	**06 55 20.4**	**+2.5**
MSVF	**Nonsavu**	**13.88**	**342**		**Pn**	**06 55 23.2**	**-1.4**
MSVF	**Nonsavu**	**13.88**	**342**	*de*P	**Pn**	**06 55 27.1**	**+2.4**
RPZ	**Rata Peaks**	**15.54**	**213**	Pn	Pn	06 55 40.9	-5.9
	3.1nm,0.3s,baz=30,slow=5.8,SNR=11						
RPZ				Sn	Sn	06 58 24.9	-14
	2.1nm,0.3s,baz=10.0,slow=22,SNR=8.6						
RPZ	**Rata Peaks**	**15.54**	**213**	P	**Pn**	**06 55 41.9**	**-4.9**
PINNC	**Pines Island,**	**15.85**	**298**		**Pn**	**06 55 50.9**	**-0.1**
FUTU	**Fugatoga**	**16.70**	**358**	Pn	**Pn**	**06 56 00.7**	**-1.1**
ODZ	**Otahua Downs**	**16.76**	**210**	P	**Pn**	**06 55 58.2**	**-4.3**
ONTNC	**Ouen Toro**	**16.78**	**297**	Pn	**Pn**	**06 56 03.0**	**+0.2**
JCZ	**Jackson Bay**	**16.90**	**216**	P	**Pn**	**06 55 59.8**	**-4.6**
DZM	**Mont Dzumac**	**16.92**	**298**		**Pn**	**06 56 04.3**	**-0.4**
DZM				IAmb	IAmb	06 56 12.7	
	comp=Z,189nm,1.6s						
DZM	**Mont Dzumac**	**16.92**	**298**	*e*Pn	**P**	**06 56 08.9**	**+2.2**
	comp=Z,267nm,1.6s						
DZM				*e*LR	LR	06 59 56.5	
	comp=Z,9µm,25.6s						
DZM	**Mont Dzumac**	**16.92**	**298**	Pn	**P**	**06 56 10.3**	**+3.6**
	comp=Z,0.3nm,0.3s,baz=165,slow=20,SNR=9.0						
DZM				LR	LR	07 01 48.3	
	comp=Z,8µm,18.1s,baz=152,slow=34						
RAR	**Rarotonga**	**18.67**	**63**	P	**P**	**06 56 20.9**	**-5.0**
	comp=Z,21nm,0.8s,baz=119,slow=12,SNR=2.2						
RAR				LR	LR	07 02 45.4	
	comp=Z,4µm,19.1s,baz=246,slow=34						
SANVU	**Saraoutou**	**20.93**	**315**	P	**P**	**06 56 50.4**	**-0.2**
EIDS	**Eidsvold**	**28.21**	**274**	P	**P**	**06 58 00.4**	**-0.3**
EIDS				IAmb	IAmb	06 58 17.0	
	comp=Z,54nm,1.4s						
CAN	**Canberra**	**28.28**	**252**	P	**P**	**06 58 01.6**	**+0.3**
CAN				IAmb	IAmb	06 58 09.4	
	comp=Z,61nm,1.4s						
CAN	**Canberra**	**28.28**	**252**	P	**P**	**06 58 01.6**	**+0.3**
CAN				pmax	pmax		
	comp=Z,61nm,1.4s						
PPT	**Papeete**	**28.68**	**69**	LR	LR	07 07 24.5	
	comp=Z,3µm,18.8s,baz=248,slow=32						
HNR	**Honiara**	**30.07**	**311**	LR	LR	07 09 38.8	
	comp=Z,1µm,18.1s,baz=158,slow=35						
TOO	**Toolangi**	**31.11**	**248**	P	**P**	**06 58 27.6**	**+1.2**
TOO	**Toolangi**	**31.11**	**248**	P	**P**	**06 58 27.6**	**+1.2**
TOO				pmax	pmax		
	comp=Z,12nm,1.2s						
CTAO	**Charters Tower**	**34.34**	**280**	P	**P**	**06 58 55.4**	**+0.6**
CTAO				IAmb	IAmb	06 58 59.2	
	comp=Z,42nm,0.8s						
CTAO	**Charters Tower**	**34.34**	**280**	P	**P**	**06 58 55.4**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,42nm,0.9s						
STKA	**Stephens Creek**	**34.76**	**258**	P	**P**	**06 58 59.1**	**+0.8**
STKA	**Stephens Creek**	**34.76**	**258**	P	**P**	**06 58 58.7**	**+0.4**
	comp=Z,16nm,0.9s,baz=102,slow=10,SNR=16						
STKA				LR	LR	07 13 16.4	
	comp=Z,3µm,18.2s,baz=95,slow=36						
	comp=Z,16nm,0.9s						
STKA	**Stephens Creek**	**34.76**	**258**	*c i*P	**P**	**06 58 59.8**	**+1.5**
BBOO	**Buckleboo**	**39.21**	**255**	P	**P**	**06 59 35.8**	**-0.3**
PMG	**Port Moresby**	**39.29**	**296**	P	**P**	**06 59 37.2**	**+0.3**
PMG				IAmb	IAmb	07 00 26.1	
	comp=Z,40nm,1.1s						
PMG	**Port Moresby**	**39.29**	**296**	LR	LR	07 14 51.0	
	comp=Z,1µm,18.3s,baz=149,slow=35						
PMG	**Port Moresby**	**39.29**	**296**	P	**P**	**06 59 37.2**	**+0.3**
PMG				pmax	pmax		
	comp=Z,40nm,1.2s						
COEN	**Coen**	**39.87**	**286**	P	**P**	**06 59 41.4**	**-0.4**
TAOE	**Nuku Hiva Isla**	**41.18**	**66**	*e*LR	LR	07 10 38.3	
	comp=Z,1µm,20.8s						
AS31	**Alice Springs**	**43.51**	**267**	P	**P**	**07 00 12.1**	**+0.5**
ASAR	**Alice Springs**	**43.51**	**267**	P	**P**	**07 00 11.9**	**+0.3**
ASAR	**Alice Springs**	**43.51**	**267**	P	**P**	**07 00 11.8**	**+0.1**
	comp=Z,7.1nm,0.6s,baz=104,slow=7.5,SNR=85						
ASAR				PcP	**PcP**	**07 02 00.5**	**+0.9**
	comp=Z,1.1nm,0.4s,baz=120,slow=4.1,SNR=2.0						
ASAR				ScP	**ScP**	**07 05 52.8**	**+1.7**
	comp=Z,1.9nm,0.9s,baz=106,slow=3.9,SNR=4.7						
ASAR				LR	LR	07 17 44.7	
	comp=Z,1µm,18.1s,baz=119,slow=35						
	comp=Z,7.1nm,0.6s						
WR8	**Warramunga Arr**	**44.42**	**273**	P	**P**	**07 00 19.1**	**+0.2**
WR8				IAmb	IAmb	07 00 21.6	
	comp=Z,17nm,0.8s						
WRAB	**Tennant Creek**	**44.55**	**273**	P	**P**	**07 00 20.1**	**+0.1**
WRAB				IAmb	IAmb	07 00 36.1	
	comp=Z,22nm,0.9s						
WRAB	**Tennant Creek**	**44.55**	**273**	P	**P**	**07 00 20.1**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,22nm,1.0s						
WRA	**Warramunga Arr**	**44.56**	**273**	P	**P**	**07 00 20.1**	**0.0**
WRA	**Warramunga Arr**	**44.56**	**273**	P	**P**	**07 00 20.1**	**0.0**
	comp=Z,14nm,0.6s,baz=111,slow=8.1,SNR=83						
WRA				PcP	**PcP**	**07 02 03.4**	**+0.2**
	comp=Z,3.3nm,0.8s,baz=119,slow=2.4,SNR=2.2						
WRA				ScP	**ScP**	**07 05 57.4**	**+1.9**
	comp=Z,3.2nm,1.1s,baz=108,slow=3.6,SNR=5.6						
WRA				LR	LR	07 19 07.2	
	comp=Z,5µm,18.0s,baz=113,slow=36						
	comp=Z,14nm,0.6s						
WB0	**Warramunga Arr**	**44.59**	**273**		**P**	**07 00 20.5**	**+0.2**
WB0				IAmb	IAmb	07 00 22.8	
	comp=Z,25nm,0.8s						
FORT	**Forrest**	**46.30**	**256**	P	**P**	**07 00 34.1**	**+0.4**
SBA	**Scott Base**	**47.40**	**184**	P	**P**	**07 00 43.9**	**+2.2**
SBA				IAmb	IAmb	07 01 06.8	
	comp=Z,25nm,1.3s						
SBA	**Scott Base**	**47.40**	**184**	P	**P**	**07 00 43.9**	**+2.2**
SBA				pmax	pmax		
	comp=Z,25nm,1.3s						
VNDA	**Vanda**	**47.47**	**186**	P	**P**	**07 00 41.8**	**-0.4**
VNDA	**Vanda**	**47.47**	**186**	P	**P**	**07 00 41.5**	**-0.8**
	comp=Z,0.7nm,0.9s,baz=358,slow=6.0,SNR=3.5						
VNDA				LR	LR	07 18 41.7	
	comp=Z,1µm,19.2s,baz=22,slow=34						
	comp=Z,0.7nm,0.9s						
VNDA	**Vanda**	**47.47**	**186**	P	**P**	**07 00 41.8**	**-0.4**
VNDA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
JAY	**Jayapura**	**48.59**	**297**	LR	LR	07 18 56.1	
	comp=Z,461nm,21.8s,baz=177,slow=33						
MTN	**Manton Dam**	**50.52**	**279**	P	**P**	**07 01 06.5**	**+0.1**
KNRA	**Kununurra**	**51.19**	**275**	P	**P**	**07 01 10.5**	**-0.9**
KNRA				IAmb	IAmb	07 01 15.1	
	comp=Z,26nm,1.0s						
FITZ	**Fitzroy Crossi**	**52.80**	**270**	P	**P**	**07 01 23.5**	**+0.1**
FITZ	**Fitzroy Crossi**	**52.80**	**270**	P	**P**	**07 01 23.4**	**0.0**
	comp=Z,6.6nm,0.8s,baz=168,slow=9.3,SNR=10.0						
FITZ				LR	LR	07 24 16.7	
	comp=Z,4µm,18.1s,baz=116,slow=36						
	comp=Z,6.6nm,0.8s						
NWAO	**Narrogin (SRO)**	**54.57**	**250**	LR	LR	07 23 15.4	
	comp=Z,894nm,19.4s,baz=86,slow=34						
CASY	**Casey**	**54.75**	**208**	P	**P**	**07 01 37.5**	**+0.5**
CASY				IAmb	IAmb	07 01 40.3	
	comp=Z,26nm,1.1s						
MBWA	**Marble Bar**	**56.59**	**264**	P	**P**	**07 01 50.4**	**-0.5**
MORW	**Morawa**	**56.76**	**254**	P	**P**	**07 01 52.2**	**+0.2**
GUMO	**Guam**	**57.26**	**315**	LR	LR	07 25 26.4	
	comp=Z,829nm,18.8s,baz=124,slow=35						
BATI	**Baumata**	**58.17**	**277**	LR	LR	07 28 25.2	
	comp=Z,5µm,18.2s,baz=137,slow=37						
QSPA	**South Pole Qui**	**59.04**	**180**	P	**P**	**07 02 08.5**	**+0.8**
QSPA	**South Pole Qui**	**59.04**	**180**	P	**P**	**07 02 07.4**	**-0.3**
	comp=Z,5.2nm,0.9s,baz=34,slow=0.5,SNR=21						
QSPA				LR	LR	07 26 34.1	
	comp=Z,2µm,18.0s,baz=41,slow=35						
	comp=Z,5.2nm,0.9s						
MMRI	**Maumere**	**60.17**	**278**	P	**P**	**07 02 15.8**	**-0.3**
GIRL	**Giralia**	**60.66**	**260**	P	**P**	**07 02 19.3**	**0.0**
KAPI	**Kappang**	**64.16**	**280**	LR	LR	07 30 27.5	
	comp=Z,349nm,18.5s,baz=128,slow=36						
DAV	**Davao City (W)**	**66.30**	**295**	LR	LR	07 33 05.2	
	comp=Z,172nm,18.8s,baz=162,slow=37						
SMAI	**San Martin Ant**	**68.64**	**158**	P	**P**	**07 03 12.2**	**+1.6**
BELA	**Belgrano 2**	**69.06**	**172**	P	**P**	**07 03 13.6**	**+0.4**
BELA				IAmb	IAmb	07 03 35.5	
	comp=Z,17nm,1.2s						
PMSA	**Palmer Station**	**71.47**	**156**	LR	LR	07 30 26.6	
	comp=Z,1µm,18.5s,baz=240,slow=32						
MAW	**Mawson**	**71.83**	**201**	P	**P**	**07 03 30.5**	**+0.3**
	comp=Z,4.9nm,0.9s,baz=92,slow=6.0,SNR=5.4						
MAW				LR	LR	07 35 41.8	
	comp=Z,2µm,18.6s,baz=114,slow=36						
	comp=Z,4.9nm,0.9s						
LEM	**Lembang**	**73.57**	**272**	LR	LR	07 37 53.1	
	comp=Z,1µm,18.6s,baz=115,slow=37						
TGY	**Tagaytay City**	**74.22**	**298**	LR	LR	07 36 08.2	
	comp=Z,320nm,19.3s,baz=98,slow=36						
MG03	**Isla Dawson**	**74.64**	**144**	P	**P**	**07 03 47.5**	**+0.5**
ESPZ	**Base Esperanza**	**74.78**	**156**	P	**P**	**07 03 49.0**	**+1.4**
ESPZ				IAmb	IAmb	07 04 08.6	
	comp=Z,40nm,1.5s						
USHA	**Ushuaia**	**75.12**	**146**	LR	LR	07 29 37.3	
	comp=Z,622nm,19.8s,baz=212,slow=30						
SYO	**Syowa Base**	**76.56**	**193**	⇓*i*P	**P**	**07 03 57.6**	**-0.1**
SYO	**Syowa Base**	**76.56**	**193**	⇑*e*sP	sP	07 04 03.0	+3.0
SYO	**Syowa Base**	**76.56**	**193**	⇑*i*PcP	**PcP**	**07 04 08.4**	**-0.9**
TROLL	**Troll, Antarti**	**77.20**	**180**	⇑P	**P**	**07 04 00.1**	**-1.4**
	comp=Z,26nm,0.5s						
JOW	**Kunigami**	**77.43**	**312**	LR	LR	07 33 26.3	
	comp=Z,289nm,20.6s,baz=127,slow=32						
SNAA	**Sanae**	**77.47**	**178**	⇑P	P	07 03 58.1	-4.9
	comp=Z,28nm,1.2s						
SNAA	**Sanae**	**77.47**	**178**	P	**P**	**07 04 04.8**	**+1.8**
SNAA				IAmb	IAmb	07 04 29.5	
	comp=Z,19nm,1.1s						
SNAA	**Sanae**	**77.47**	**178**	P	**P**	**07 04 03.0**	**0.0**
	comp=Z,3.3nm,1.0s,baz=209,slow=6.4,SNR=5.8						
	comp=Z,3.3nm,1.0s						
SNAA	**Sanae**	**77.47**	**178**	⇓*e*P	**P**	**07 04 06.8**	**+3.8**
SNAA				pmax	pmax		
	comp=Z,19nm,1.1s						
VNA3	**Neumayer Olymp**	**77.61**	**176**	⇑P	**P**	**07 04 02.6**	**-1.1**
	comp=Z,3.6nm,0.8s						
VNA2	**Neumayer--Watz**	**78.05**	**177**	⇑P	P	07 04 01.0	-5.1
	comp=Z,1.8nm,0.4s,baz=164,slow=4.1						
VNA1	**Neumayer--Stat**	**78.27**	**176**	⇑P	**P**	**07 04 05.7**	**-1.6**
	comp=Z,3.6nm,0.9s						
MJAR	**Matsushiro Arr**	**79.04**	**325**	P	**P**	**07 04 10.6**	**-1.3**
	comp=Z,4.9nm,1.0s,baz=162,slow=4.3,SNR=9.5						
	comp=Z,4.9nm,1.0s						
MAJO	**Matsushiro**	**79.04**	**325**	⇓*i*P	**P**	**07 04 10.7**	**-1.3**
MAJO				pmax	pmax		
	comp=Z,18nm,1.6s						
JNU	**Nakatsue**	**80.35**	**318**	LR	LR	07 35 18.7	
	comp=Z,202nm,21.8s,baz=106,slow=32						
PLCA	**Paso Flores**	**81.73**	**133**	P	**P**	**07 04 26.2**	**-0.5**
	comp=Z,2.3nm,0.9s,baz=226,slow=8.3,SNR=4.4						
PLCA				LR	LR	07 33 24.7	
	comp=Z,1µm,19.0s,baz=240,slow=30						
	comp=Z,2.3nm,0.9s						
QZH	**Quanzhou**	**82.70**	**305**	P	**P**	**07 04 31.3**	**-0.4**
QZH				*e*S	**S**	**07 14 47.3**	**-2.3**
QZH				pmax	pmax		
	comp=Z,360nm,4.6s						
QZH				LR	LR		
	comp=Z,500nm,19.9s						
ASAJ	**Asahikawa**	**83.23**	**332**	LR	LR	07 37 05.7	
	comp=Z,846nm,20.4s,baz=166,slow=32						
SHEM	**Shemya Is, Ala**	**83.77**	**355**	LR	LR	07 35 17.4	
	comp=Z,877nm,21.7s,baz=134,slow=31						
LPIG	**La Paz**	**84.52**	**58**	LR	LR	07 34 53.1	
	comp=Z,2µm,19.7s,baz=206,slow=30						
SKR	**Severo-Kuril's**	**84.68**	**344**	*e*P	P	07 04 35.8	-5.4
SKR				*e*S	**SKSac**	**07 15 02.4**	**-2.6**
SKR				pmax	pmax		
	comp=Z,400nm,4.1s						
SKR				MLR	MLR		
	comp=Z,800nm,17.0s						
KSRS	**Korea Array**	**85.14**	**319**	P	**P**	**07 04 43.5**	**-0.3**
	comp=Z,3.8nm,0.9s,baz=140,slow=5.7,SNR=11						
	comp=Z,3.8nm,0.9s						
KSAR	**Wonju Array Be**	**85.15**	**319**	P	**P**	**07 04 43.9**	**-0.1**
KSAR	**Wonju Array Be**	**85.15**	**319**	P	**P**	**07 04 43.9**	**-0.1**
MT09	**Talagante**	**85.35**	**127**	P	**P**	**07 04 45.8**	**+0.3**
MT09				IAmb	IAmb	07 05 05.2	
	comp=Z,28nm,1.2s						
YSS	**Yuzhno-Sakhali**	**85.54**	**334**	α*e*P	**P**	**07 04 46.2**	**+0.5**
YSS				*e*		07 08 04.6	
YSS				*e*S	**SKSac**	**07 15 10.8**	**+0.1**
YSS				*e*		07 16 34.6	
YSS				pmax	pmax		
	comp=Z,400nm,3.5s						
YSS				pmax	pmax		
	comp=N,200nm,4.0s						
YSS				pmax	pmax		
	comp=E,100nm,3.7s						
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				MLR	MLR		
	comp=N,400nm,20.0s						
YSS				MLR	MLR		
	comp=Z,500nm,20.0s						
YSS				MLR	MLR		
	comp=E,200nm,19.0s						
QIZ	**Qiongzhong**	**85.67**	**295**	P	**P**	**07 04 47.8**	**+0.8**
QIZ				S	**S**	**07 15 17.6**	**-2.1**
QIZ				SS	**SS**	**07 20 57.4**	**+0.9**
QIZ				pmax	pmax		
	comp=E,250nm,5.1s						
QIZ				LR	LR		
	comp=E,260nm,16.9s						
QIZ				LR	LR		
	comp=E,340nm,16.4s						
KULM	**Kulim**	**85.75**	**279**	P	**P**	**07 04 47.0**	**-0.6**
LMEL	**Las Melosas**	**85.84**	**127**	P	**P**	**07 04 48.6**	**+0.6**
LMEL				IAmb	IAmb	07 04 52.0	
	comp=Z,24nm,1.3s						
PSI	**Prapat**	**85.94**	**276**	LR	LR	07 45 47.1	
	comp=Z,1µm,19.0s,baz=119,slow=38						
PET	**Petropavlovsk**	**86.29**	**346**	*e*P	P	07 04 55.8	+6.6
PET				*e*S	**S**	**07 15 32.4**	**+8.2**
PET				*e*SS	**SS**	**07 21 07.4**	**+3.0**
PET				pmax	pmax		
	comp=Z,200nm,5.7s						
PET				pmax	pmax		
	comp=Z,400nm,7.3s						
PET				MLR	MLR		
	comp=Z,800nm,17.0s						
PET				MLR	MLR		
	comp=Z,800nm,18.0s						
PFO	**Pinyon Flats O**	**86.34**	**47**	LR	LR	07 38 06.4	
	comp=Z,1µm,18.5s,baz=236,slow=32						
PFO	**Pinyon Flats O**	**86.34**	**47**	⇓*e*P	**P**	**07 04 51.6**	**+1.4**
PFO				pmax	pmax		
	comp=Z,31nm,2.0s						
PEA0B	**Petropavlovsk-**	**86.57**	**345**	P	**P**	**07 04 50.5**	**-0.1**
PEA0B				IAmb	IAmb	07 05 05.6	
	comp=Z,30nm,1.4s						
PEA0B	**Petropavlovsk-**	**86.57**	**345**	⇓*e*P	**P**	**07 04 50.7**	**+0.1**
PETK	**Petropavlovsk-**	**86.57**	**345**	P	**P**	**07 04 50.7**	**0.0**
PETK	**Petropavlovsk-**	**86.57**	**345**	P	**P**	**07 04 50.4**	**-0.2**
	comp=Z,7.8nm,0.8s,baz=140,slow=5.9,SNR=20						
	comp=Z,7.8nm,0.8s						
PETK	**Petropavlovsk-**	**86.57**	**345**	P	**P**	**07 04 50.7**	**0.0**
NJ2	**Nanjing**	**87.01**	**310**	*e*P	**P**	**07 04 55.3**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MSHR	**Mys Shultsa**	**87.16**	**325**	*i* P	**P**	**07 04 53.0**	**-0.7**
MSHR				pmax	pmax		
	comp=Z,23nm,1.3s						
VLA	**Vladivostok**	**87.20**	**325**	⇑*e*P	**P**	**07 04 54.8**	**+0.9**
VLA				pmax	pmax		
	comp=Z,55nm,2.6s						
GSC	**Goldstone, Bar**	**87.24**	**46**	IAmb	IAmb	07 05 07.9	
	comp=Z,22nm,1.6s						
AFDM	**Forest Hills D**	**87.27**	**41**	IAmb	IAmb	07 04 56.0	
	comp=Z,11nm,1.3s						
PSTR	**Posyet**	**87.38**	**325**	⇑*e*P	**P**	**07 04 56.1**	**+1.3**
113A	**Mohawk Valley,**	**87.52**	**49**	IAmb	IAmb	07 04 57.8	
	comp=Z,31nm,1.8s						
QSM	**Queen of Sheba**	**87.64**	**45**	IAmb	IAmb	07 05 36.9	
	comp=Z,19nm,1.5s						
GWY	**Greenwater Val**	**87.91**	**45**	IAmb	IAmb	07 04 59.5	
	comp=Z,16nm,1.4s						
USA0B	**Ussuriysk Arra**	**87.96**	**326**	*ce*P	**P**	**07 04 57.9**	**+0.3**
USRK	**Ussuriysk Ar.**	**87.96**	**326**	P	**P**	**07 04 57.6**	**+0.1**
	comp=Z,4.5nm,0.7s,baz=143,slow=6.1,SNR=8.1						
USRK				LR	LR	07 38 21.0	
	comp=Z,262nm,21.6s,baz=147,slow=32						
	comp=Z,4.5nm,0.7s						
PNTR	**Pine Nut**	**88.14**	**41**	IAmb	IAmb	07 05 00.7	
	comp=Z,12nm,1.0s						
LHV	**Little Huntoon**	**88.20**	**42**	IAmb	IAmb	07 05 04.5	
	comp=Z,18nm,1.4s						
BEKR	**Beckworth**	**88.25**	**40**	IAmb	IAmb	07 05 00.8	
	comp=Z,19nm,1.7s						
GMN	**Gold Mountain**	**88.29**	**44**	IAmb	IAmb	07 05 02.3	
	comp=Z,12nm,1.3s						
YBH	**Yreka Blue Hor**	**88.29**	**38**	LR	LR	07 40 19.7	
	comp=Z,60nm,18.4s,baz=244,slow=33						
WCT	**Wildcat Mounta**	**88.34**	**45**	IAmb	IAmb	07 05 01.6	
	comp=Z,16nm,1.6s						
NVAR	**Mina Array Bea**	**88.44**	**42**	P	**P**	**07 04 59.9**	**-0.4**
	comp=Z,3.9nm,1.0s,baz=223,slow=5.5,SNR=15						
NVAR				LR	LR	07 37 57.6	
	comp=Z,1µm,19.3s,baz=210,slow=31						
	comp=Z,3.9nm,1.0s						
RYN	**Ryan**	**88.44**	**42**	IAmb	IAmb	07 05 02.9	
	comp=Z,34nm,1.9s						
NV11	**Mina Array Sit**	**88.53**	**43**	IAmb	IAmb	07 05 12.8	
	comp=Z,24nm,1.8s						
TPNV	**Topopah Spring**	**88.67**	**45**	IAmb	IAmb	07 05 03.5	
	comp=Z,14nm,1.2s						
PAHR	**Pah Rah Range**	**88.69**	**41**	IAmb	IAmb	07 05 14.3	
	comp=Z,28nm,1.9s						
V12A	**Nelson**	**88.72**	**46**	IAmb	IAmb	07 05 03.9	
	comp=Z,20nm,1.6s						
Y14A	**Wickenburg**	**88.75**	**49**	IAmb	IAmb	07 05 03.8	
	comp=Z,31nm,2.0s						
TYV	**Tymovskoe**	**88.84**	**336**	*e*P	**P**	**07 05 02.3**	**+0.7**
TYV				pmax	pmax		
	comp=Z,8.0nm,1.5s						
TYV				pmax	pmax		
	comp=Z,200nm,3.2s						
TUC	**Tucson**	**89.19**	**51**	P	**P**	**07 05 04.1**	**+0.3**
TUC				IAmb	IAmb	07 05 06.2	
	comp=Z,18nm,1.6s						
TUC	**Tucson**	**89.19**	**51**	P	**P**	**07 05 04.1**	**+0.3**
TUC				pmax	pmax		
	comp=Z,19nm,1.6s						
S11A	**Rachel**	**89.42**	**44**	IAmb	IAmb	07 05 46.9	
	comp=Z,21nm,1.4s						
MDJ	**Mudanjiang**	**89.42**	**325**	P	**P**	**07 05 04.3**	**-0.2**
MDJ				SKS	**SKSac**	**07 15 33.3**	**-1.2**
MDJ				pmax	pmax		
	comp=Z,15nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,330nm,4.5s						
MDJ				LR	LR		
	comp=Z,390nm,17.9s						
MDJ				LR	LR		
	comp=Z,310nm,19.2s						
MDJ				LR	LR		
	comp=Z,750nm,19.2s						
DL2	**Dalian**	**89.74**	**317**	P	**P**	**07 05 05.8**	**-0.3**
DL2				SKS	**SKSac**	**07 15 34.4**	**-2.2**
DL2				S	**S**	**07 15 56.8**	**-0.9**
DL2				pmax	pmax		
	comp=Z,13nm,0.7s						
DL2				pmax	pmax		
	comp=Z,470nm,8.4s						
DL2				LR	LR		
	comp=Z,310nm,16.9s						
DL2				LR	LR		

	comp=Z,300nm,18.3s						
DL2				LR	LR		
	comp=Z,910nm,17.0s						
X16A	**Lo Mia Camp, P**	**90.06**	**49**	IAmb	IAmb	07 05 32.8	
	comp=Z,33nm,1.9s						
J05D	**Fort Rock, OR**	**90.16**	**37**	P	**P**	**07 05 08.3**	**+0.1**
J05D				IAmb	IAmb	07 05 21.4	
	comp=Z,13nm,1.4s						
H04A	**Detroit Lake**	**90.66**	**36**		**P**	**07 05 10.7**	**+0.4**
H04A				IAmb	IAmb	07 05 12.5	
	comp=Z,15nm,1.2s						
TIA	**Tai'an**	**90.74**	**313**	P	**P**	**07 05 11.1**	**+0.2**
TIA				PP	**PP**	**07 08 51.9**	**+5.1**
TIA				SS	SS	07 22 14.3	+4.2
TIA				pmax	pmax		
	comp=Z,260nm,3.6s						
TIA				LR	LR		
	comp=Z,250nm,13.7s						
TIA				LR	LR		
	comp=Z,200nm,18.6s						
TIA				LR	LR		
	comp=Z,520nm,23.0s						
WUAZ	**Wupatki**	**90.78**	**48**	IAmb	IAmb	07 05 14.4	
	comp=Z,12nm,1.2s						
I05D	**Terrebonne, OR**	**90.85**	**37**	IAmb	IAmb	07 05 43.5	
	comp=Z,27nm,1.6s						
CN2	**Changchun**	**90.94**	**323**	P	**P**	**07 05 11.8**	**+0.2**
CN2				pP	pwP	07 05 22.3	+2.7
CN2				SKS	**SKSac**	**07 15 39.3**	**-4.0**
CN2				sS	ScS	07 16 22.6	+11
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,220nm,4.0s						
CN2				LR	LR		
	comp=Z,220nm,18.0s						
CN2				LR	LR		
	comp=Z,290nm,18.0s						
CN2				LR	LR		
	comp=Z,290nm,21.0s						
WVOR	**Wild Horse Val**	**90.96**	**39**	IAmb	IAmb	07 05 35.2	
	comp=Z,14nm,1.5s						
KDAK	**Kodiak Island**	**90.96**	**13**	LR	LR	07 43 01.8	
	comp=Z,606nm,18.5s,baz=208,slow=34						
GRNR	**Gornyy**	**91.08**	**333**	*e*P	**P**	**07 05 11.6**	**-0.5**
BNX	**BinXian**	**91.31**	**325**	⇓P	**P**	**07 05 12.6**	**-0.6**
BNX				pP	**pwP**	**07 05 22.8**	**+1.5**
BNX				sS	sS	07 16 30.5	+16
BNX				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BNX				pmax	pmax		
	comp=Z,250nm,9.2s						
BNX				LR	LR		
	comp=Z,230nm,14.6s						
BNX				LR	LR		
	comp=Z,270nm,20.1s						
BNX				LR	LR		
	comp=Z,720nm,17.4s						
I07A	**Izee**	**91.62**	**38**	IAmb	IAmb	07 05 16.7	
	comp=Z,9.0nm,1.2s						
ELK	**Elko**	**91.74**	**42**	LR	LR	07 39 41.7	
	comp=Z,1µm,19.8s,baz=242,slow=31						
KLR	**Kul'dur**	**91.83**	**329**	LR	LR	07 41 58.2	
	comp=Z,617nm,20.9s,baz=141,slow=33						
KLR	**Kul'dur**	**91.83**	**329**	*c i*P	**P**	**07 05 15.7**	**+0.1**
KLR				pmax	pmax		
	comp=Z,13nm,2.0s						
TXAR	**Lajitas Array**	**92.39**	**57**	P	**P**	**07 05 18.2**	**-0.6**
TXAR	**Lajitas Array**	**92.39**	**57**	P	**P**	**07 05 19.0**	**+0.2**
	comp=Z,0.6nm,1.0s,baz=210,slow=7.2,SNR=5.3						
TXAR				LR	LR	07 39 40.9	
	comp=Z,648nm,19.5s,baz=230,slow=31						
	comp=Z,0.6nm,1.0s						
CMIG	**Matias Romero**	**92.55**	**72**	LR	LR	07 38 34.4	
	comp=Z,505nm,19.4s,baz=210,slow=30						
G08A	**Pilot Rock**	**92.73**	**37**	P	**P**	**07 05 19.7**	**-0.3**
G08A				IAmb	IAmb	07 05 21.7	
	comp=Z,9.9nm,1.2s						
NNA	**Nana**	**92.82**	**106**	LR	LR	07 38 47.5	
	comp=Z,617nm,19.2s,baz=224,slow=30						
HNS	**HongShan**	**93.00**	**312**	⇓P	**P**	**07 05 22.1**	**+0.8**
HNS				SKS	**SKSac**	**07 15 54.9**	**-0.3**
HNS				S	**S**	**07 16 24.3**	**-3.2**
HNS				LR	LR		
	comp=Z,440nm,16.9s						
HNS				LR	LR		
	comp=Z,270nm,16.9s						
HNS				LR	LR		
	comp=Z,440nm,18.1s						
MFID	**Camas Ranch**	**93.15**	**40**	IAmb	IAmb	07 05 23.6	
	comp=Z,7.2nm,1.1s						
BMO	**Blue Mountains**	**93.30**	**38**	IAmb	IAmb	07 05 35.4	
	comp=Z,11nm,1.8s						
BBB	**Bella Bella**	**93.48**	**28**	LR	LR	07 41 37.7	
	comp=Z,740nm,19.1s,baz=220,slow=32						
SRU	**San Rafael Swe**	**93.53**	**46**	P	**P**	**07 05 23.2**	**-0.7**
SRU	**San Rafael Swe**	**93.53**	**46**	P	**P**	**07 05 23.2**	**-0.7**
SRU				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ANMO	**Albuquerque**	**93.66**	**51**	LR	LR	07 42 40.0	
	comp=Z,1µm,18.4s,baz=326,slow=32						
BJI	**Beijing**	**93.70**	**315**	P	**P**	**07 05 24.8**	**+0.4**
BJI				pP	**pwP**	**07 05 35.1**	**+2.6**
BJI				sP	sP	07 05 39.4	+13
BJI				SKS	**SKSac**	**07 15 55.6**	**-3.4**
BJI				S	**S**	**07 16 32.3**	**-1.2**
BJI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BJI				pmax	pmax		
	comp=Z,72nm,6.4s						
BJI				LR	LR		
	comp=Z,150nm,16.2s						
BJI				LR	LR		
	comp=Z,100nm,17.3s						
BJI				LR	LR		
	comp=Z,220nm,18.5s						
HVU	**Hansel Valley**	**93.83**	**43**	IAmb	IAmb	07 05 28.9	
	comp=Z,20nm,1.9s						
PV13	**Radium Mtn., P**	**94.01**	**47**	P	**P**	**07 05 25.2**	**-1.0**
CMAR	**Chiang Mai Arr**	**94.03**	**289**	P	**P**	**07 05 27.0**	**+0.6**
	comp=Z,2.8nm,0.3s,baz=148,slow=3.6,SNR=5.2						
CMAR				LR	LR	07 51 09.3	
	comp=Z,117nm,18.5s,baz=125,slow=38						
	comp=Z,2.8nm,0.3s						
MA2	**Magadan**	**94.05**	**344**	LR	LR	07 47 31.2	
	comp=Z,544nm,18.4s,baz=166,slow=35						
ATAH	**Atahualpa**	**94.09**	**101**	LR	LR	07 42 00.6	
	comp=Z,473nm,18.0s,baz=248,slow=32						
S31K	**Pelican**	**95.20**	**21**	P	**P**	**07 05 31.4**	**+0.6**
NEW	**Newport**	**95.66**	**36**	LR	LR	07 41 37.6	
	comp=Z,1µm,20.3s,baz=222,slow=31						
MCMT	**McKenzie Canyo**	**95.70**	**40**	P	**P**	**07 05 33.6**	**-0.3**
ESQI	**Esquipulas**	**95.83**	**77**	P	**P**	**07 05 34.6**	**-0.3**
PZH	**PanZhiHua**	**96.00**	**297**	P	**P**	**07 05 36.8**	**+1.3**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PZH				pmax	pmax		
	comp=Z,110nm,5.1s						
PDAR	**Pinedale Array**	**96.32**	**43**	P	**P**	**07 05 35.7**	**-1.0**
	comp=Z,0.5nm,0.9s,baz=226,slow=4.3,SNR=3.9						
PDAR				LR	LR	07 42 31.7	
	comp=Z,574nm,19.6s,baz=226,slow=31						
	comp=Z,0.5nm,0.9s						
SEY	**Seymchan**	**96.73**	**347**	LR	LR	07 49 04.1	
	comp=Z,682nm,18.2s,baz=126,slow=35						
SEY	**Seymchan**	**96.73**	**347**	⇓*e*P	**P**	**07 05 38.9**	**+1.2**
SEY				pmax	pmax		
	comp=Z,5.0nm,1.5s						
BOZ	**Bozeman (W)**	**96.86**	**40**	IAmb	IAmb	07 05 47.1	
	comp=Z,9.9nm,1.7s						
HHC	**Hu-ho-hao-te**	**97.01**	**314**	*e*P	**P**	**07 05 41.8**	**+2.1**
HHC				pP	pwP	07 05 52.5	+4.7
HHC				SKS	**SKSac**	**07 16 15.1**	**-1.8**
HHC				S	**S**	**07 16 58.6**	**-3.9**
HHC				SS	**SS**	**07 23 41.3**	**+1.6**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,74nm,4.3s						
HHC				LR	LR		
	comp=Z,160nm,15.3s						
HHC				LR	LR		
	comp=Z,180nm,16.8s						
HHC				LR	LR		
	comp=Z,260nm,16.0s						
JTS	**Las Juntas de**	**97.39**	**82**	LR	LR	07 40 40.1	
	comp=Z,511nm,19.1s,baz=252,slow=30						
LPAZ	**La Paz**	**97.47**	**114**	LR	LR	07 42 30.9	
	comp=Z,335nm,19.0s,baz=235,slow=31						
DLBC	**Dease Lake**	**97.57**	**23**	LR	LR	07 41 38.3	
	comp=Z,32nm,21.0s,baz=206,slow=30						
COLA	**College**	**98.39**	**12**	⇑*e*P	Pdif	07 05 49.1	+3.9
COLA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ILAR	**Eielson Array**	**98.48**	**13**	P	**P**	**07 05 44.9**	**-0.7**
	comp=Z,0.3nm,0.8s,baz=206,slow=3.7,SNR=2.6						
ILAR				LR	LR	07 46 22.6	
	comp=Z,320nm,19.4s,baz=200,slow=33						
	comp=Z,0.3nm,0.8s						
CPUP	**Villa Florida**	**99.23**	**128**	LR	LR	07 44 49.7	
	comp=Z,156nm,18.1s,baz=89,slow=32						
LZH	**Lanzhou**	**99.47**	**306**	S	**S**	**07 17 23.3**	**-0.4**
LZH	**Lanzhou**	**99.47**	**306**	SS	SS	07 24 19.4	+4.8
LZH				pmax	pmax		
	comp=Z,14nm,1.7s						
LZH				pmax	pmax		
	comp=Z,170nm,8.9s						
LZH				LR	LR		
	comp=N,310nm,15.9s						
LZH				LR	LR		
	comp=E,340nm,16.5s						
LZH				LR	LR		
	comp=Z,420nm,15.6s						
WMQ	**Urumqi**	**113.98**	**308**	*e*PKP	**PKiKP**	**07 10 48.0**	**+1.1**
WMQ				LR	LR		
	comp=Z,170nm,19.5s						
MKAR	**Makanchi Array**	**118.53**	**310**	PKPdf	**PKPdf**	**07 10 54.8**	**-0.7**
MKAR	**Makanchi Array**	**118.53**	**310**	PKP	**PKPdf**	**07 10 54.1**	**-1.3**
	comp=Z,0.5nm,0.8s,baz=107,slow=3.0,SNR=3.4						
MKAR	**Makanchi Array**	**118.53**	**310**	PKIKP	**PKPdf**	**07 10 54.8**	**-0.7**
KURK	**Kurchatov**	**121.83**	**313**	*c i*PKIKP	**PKiKP**	**07 11 04.1**	**+2.3**
KURBB	**Kurchatov Arra**	**121.86**	**313**	PKP	**PKPdf**	**07 11 01.3**	**-0.4**
	comp=Z,2.1nm,0.2s,baz=103,slow=2.1,SNR=5.1						
AAK	**Ala-Archa**	**122.85**	**303**	⇑*i*PKIKP	**PKPdf**	**07 11 04.7**	**+0.6**
KK31	**Karatay Array**	**125.81**	**303**		**PKPdf**	**07 11 08.7**	**-0.9**
KK31	**Karatay Array**	**125.81**	**303**	PKIKP	**PKPdf**	**07 11 08.7**	**-0.9**
KKAR	**Karatay Array**	**125.81**	**303**		**PKPdf**	**07 11 08.8**	**-0.7**
KKAR	**Karatay Array**	**125.81**	**303**		**PKPdf**	**07 11 08.9**	**-0.7**
KKAR	**Karatay Array**	**125.81**	**303**	PKIKP	**PKPdf**	**07 11 08.9**	**-0.7**
BVAR	**Borovoye Array**	**127.19**	**315**	PKP	**PKPdf**	**07 11 10.7**	**-1.2**
	comp=Z,2.8nm,1.0s,baz=102,slow=2.6,SNR=5.9						
BRVK	**Borovoye**	**127.25**	**315**	*d i*PKIKP	**PKPdf**	**07 11 11.4**	**-0.6**
ABKAR	**Akbulak array**	**133.67**	**310**	PKPdf	**PKPdf**	**07 11 24.9**	**+0.7**
KIRV	**Kirov**	**138.12**	**325**	⇑*e*PKIKP	**PKiKP**	**07 11 33.8**	**-0.4**
ARCES	**ARCESS Array B**	**139.34**	**348**	PKhKP	PKPpre	07 11 29.7	
	comp=Z,3.0nm,0.9s,baz=304,slow=2.2,SNR=4.0						
BELG	**Belogornoye**	**140.97**	**316**	⇓*e*PKIKP	**PKPdf**	**07 11 36.7**	**-0.9**
RAYN	**Ar Rayn**	**141.25**	**270**		**PKPdf**	**07 11 39.4**	**+0.3**
RAYN	**Ar Rayn**	**141.25**	**270**	PKIKP	**PKPdf**	**07 11 39.4**	**+0.3**
KLMR	**Klimovskoe**	**141.56**	**332**	*e*PKIKP	**PKPdf**	**07 11 39.9**	**+1.5**
KLMR				pmax	pmax		
	comp=Z,20nm,1.7s						
MAK	**Makhachkala**	**142.57**	**301**	*e*PKIKP	**PKPdf**	**07 11 39.9**	**-0.9**
MAK				*e*		07 18 45.6	
MAK				pmax	pmax		
	comp=Z,24nm,0.3s						
GNI	**Garni**	**144.76**	**297**	*c i*PKIKP	**PKPab**	**07 11 43.7**	**-0.2**
VRH	**Novokhopyorsk**	**144.83**	**316**	*e*PKHKP	PKPpre	07 11 40.9	
VRH				pmax	pmax		
	comp=Z,20nm,0.9s						
MOS	**Moscow**	**145.13**	**325**	*i* PKP2	**PKPbc**	**07 11 42.1**	**-2.3**
MOS				pmax	pmax		
	comp=Z,63nm,1.0s						
NCK	**Nalchik**	**145.37**	**303**	⇓*i*PKIKP	**PKPbc**	**07 11 45.9**	**+0.3**
GOF	**Gofitskoye**	**145.53**	**306**	*ce*PKIKP	**PKPdf**	**07 11 45.5**	**-0.4**
KBZ	**Khabaz**	**145.84**	**303**	PKPbc	**PKPdf**	**07 11 47.3**	**+0.8**
	comp=Z,8.9nm,0.9s,baz=66,slow=3.3,SNR=23						
LPSR	**Galich'ya Gora**	**145.90**	**320**	*e*PKP2	**PKPdf**	**07 11 46.1**	**-0.2**
LPSR				pmax	pmax		
	comp=Z,54nm,1.0s						
FIA1	**FINESS Array S**	**145.92**	**340**		**PKPdf**	**07 11 45.6**	**-0.4**
FINES	**FINESS Array B**	**145.92**	**340**		**PKPdf**	**07 11 45.3**	**-0.7**
FINES	**FINESS Array B**	**145.92**	**340**	PKPbc	**PKPdf**	**07 11 45.8**	**-0.2**
	comp=Z,12nm,0.7s,baz=64,slow=4.4,SNR=29						
KIV	**Kislovodsk**	**145.96**	**304**		**PKPdf**	**07 11 47.1**	**+0.3**
KIV	**Kislovodsk**	**145.96**	**304**	*i* PKP2	**PKPdf**	**07 11 46.6**	**-0.2**
KIV				pmax	pmax		
	comp=Z,20nm,1.1s						
OBN	**Obninsk**	**145.97**	**325**		**PKPdf**	**07 11 45.5**	**-0.8**
OBN	**Obninsk**	**145.97**	**325**	*c i*PKP2	**PKPdf**	**07 11 46.0**	**-0.3**
OBN				*e*PPP	PPP	07 18 21.3	
OBN				pmax	pmax		
	comp=Z,32nm,1.1s						
SHA1	**Shidzhatmaz**	**146.01**	**303**	*c i*PKP2	**PKPdf**	**07 11 47.2**	**+0.1**
GEVA	**Gevas**	**146.09**	**294**		**PKPdf**	**07 11 48.4**	**+1.1**
VORR	**Voronezh**	**146.12**	**318**	*e*PKIKP	**PKPdf**	**07 11 44.0**	**-2.7**
VORR				pmax	pmax		
	comp=Z,40nm,0.9s						
VSR	**Storozhevoye**	**146.32**	**317**	*e*PKIKP	**PKPdf**	**07 11 45.1**	**-1.9**
VSR				pmax	pmax		
	comp=Z,30nm,1.0s						
VORD	**Divnogorie**	**146.34**	**317**	*e*PKIKP	**PKPdf**	**07 11 45.6**	**-1.5**
VORD				pmax	pmax		
	comp=Z,20nm,1.0s						
ERBR	**Yeremizino-Bor**	**147.17**	**307**	*i* PKP2	**PKPbc**	**07 11 51.7**	**+0.8**
ERBR				pmax	pmax		
	comp=Z,58nm,0.8s						
LABN	**Labinsk**	**147.23**	**305**	*i* PKP2	**PKPdf**	**07 11 50.2**	**+1.4**
LABN				pmax	pmax		
	comp=Z,17nm,0.6s						
VSLR	**Vesyoloye**	**147.94**	**303**	*d i*PKP2	**PKPbc**	**07 11 53.0**	**-0.1**
VSU	**Vasula**	**148.01**	**336**	*c i*PKIKP	**PKPdf**	**07 11 50.5**	**+0.9**
NB2	**NORSAR Subarra**	**149.48**	**352**	PKP	**PKPbc**	**07 11 54.8**	**-1.7**
	comp=Z,70nm,2.0s,baz=17,slow=2.6						
NB2	**NORSAR Subarra**	**149.48**	**352**	PKP	**PKPbc**	**07 11 54.8**	**-1.7**
	baz=17,slow=2.6						
NOA	**NORSAR Array B**	**149.48**	**352**	PKPbc	**PKPbc**	**07 11 55.2**	**-1.3**
	comp=Z,5.3nm,1.0s,baz=14,slow=4.2,SNR=9.5						
ANN	**Anapa**	**149.48**	**307**	*i* PKP2	**PKPbc**	**07 11 56.5**	**-0.4**
ANN				*e*SS	SS	07 34 38.6	-5.4
ANN				pmax	pmax		
	comp=Z,31nm,1.0s						
HFS	**Hagfors**	**149.99**	**349**	PKPbc	**PKPbc**	**07 11 56.6**	**-1.1**
	comp=Z,7.7nm,0.9s,baz=32,slow=2.7,SNR=10						
MNK	**Minsk**	**150.38**	**330**	*i* PKiKP	**PKPbc**	**07 11 59.7**	**+0.9**
	comp=Z,22nm,0.9s						
MNK				*i* PP	**PP**	**07 15 35.1**	**+0.7**
MNK				*i* PPP	PPP	07 18 53.9	
MNK				*i* SKS	**SKSdf**	**07 18 58.0**	**-3.2**
MNK				*i* SKKS	**SKKSdf**	**07 27 51.2**	**-3.1**
MNK				*i* SS	**SS**	**07 34 50.2**	**-2.5**
MNK				*i* SSS	SSS	07 40 30.9	
MNK				*i* LQ	LQ	08 11 42.2	
MNK				*i* LR	LR	08 22 37.9	
MNK				*i* LRM	MLR	08 25 00.6	
	comp=E,452nm,20.6s						
MNK				*i* LRM	MLR	08 25 00.6	
	comp=N,286nm,18.2s						
MNK				*i* LRM	MLR	08 25 00.6	
	comp=Z,454nm,18.7s						
MNK	**Minsk**	**150.38**	**330**	*i* PKIKP	**PKPbc**	**07 11 59.7**	**+0.9**
MNK				*i*		07 15 35.0	
MNK				*i*		07 18 58.0	
MNK				*i* SS	SS	07 34 50.2	-2.5
MNK				*i* SSS	SSS	07 40 30.9	
MNK				pmax	pmax		
	comp=Z,22nm,0.9s						
NACGM	**Naroch**	**150.57**	**331**	⇑*i*PKiKP	**PKPbc**	**07 11 58.4**	**-0.9**
	comp=Z,23nm,0.9s,baz=46						
SIM	**Simferopol'**	**151.70**	**308**	*e*PKIKP	**PKiKP**	**07 12 05.9**	**+3.3**
SIM				*e*		07 15 50.0	
SIM				pmax	pmax		
	comp=Z,28nm,0.8s						
BNN	**Bunyan**	**151.71**	**295**		**PKPbc**	**07 12 02.9**	**+0.2**
AKASG	**Malin Array Be**	**152.10**	**322**		**PKPbc**	**07 12 02.2**	**-0.7**
AKASG	**Malin Array Be**	**152.10**	**322**	PKPbc	**PKPbc**	**07 12 02.4**	**-0.5**
	comp=Z,8.7nm,0.8s,baz=48,slow=2.7,SNR=20						
AKBB	**Malin Array Si**	**152.10**	**322**	PKP	**PKPdf**	**07 11 55.5**	**-0.8**
MMAI	**Mount Meron Ar**	**152.11**	**283**	PKPbc	**PKPbc**	**07 12 02.6**	**-1.0**
	comp=Z,3.2nm,0.5s,baz=104,slow=2.3,SNR=9.3						
KIEV	**Kiev**	**152.11**	**322**		**PKPbc**	**07 12 02.2**	**-0.7**
KIEV	**Kiev**	**152.11**	**322**	PKIKP	**PKPbc**	**07 12 02.2**	**-0.7**
AK12	**Malin Array Si**	**152.16**	**322**	PKP	**PKPdf**	**07 11 56.0**	**-0.4**
BR131	**Keskin Array S**	**153.30**	**297**		**PKPbc**	**07 12 06.8**	**+0.6**
BR131	**Keskin Array S**	**153.30**	**297**	PKIKP	**PKPbc**	**07 12 06.8**	**+0.6**
BRTR	**Keskin Array B**	**153.30**	**297**		**PKPbc**	**07 12 05.0**	**-1.2**
BRTR					**PKPab**	**07 12 16.7**	**-1.5**
BRTR	**Keskin Array B**	**153.30**	**297**	PKPbc	**PKPbc**	**07 12 05.0**	**-1.2**
	comp=Z,1.9nm,0.9s,baz=108,slow=4.0,SNR=7.2						
RNPP9	**Sopachiv**	**153.33**	**326**	PKP	**PKPdf**	**07 11 57.2**	**-0.9**
KMPD	**K-Podol'skiy**	**154.79**	**321**	PKP	**PKPdf**	**07 11 59.2**	**-1.0**
EKA	**Eskdalemuir Ar**	**155.42**	**8**	PKPab	**PKPab**	**07 12 25.7**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=331,slow=6.4,SNR=3.7						
BURAR	**Bucovina Array**	**156.02**	**320**		**PKPab**	**07 12 28.6**	**-0.8**
OSTC	**Ostas**	**158.01**	**336**	*e*PKPAB	**PKPab**	**07 12 41.1**	**+3.4**
OSTC	**Ostas**	**158.01**	**336**	*e*PKP2	**PKPab**	**07 12 41.1**	**+3.4**
DPC	**Dobruska-Polom**	**158.15**	**336**	*e*PKPAB	**PKPab**	**07 12 41.9**	**+3.5**
DPC	**Dobruska-Polom**	**158.15**	**336**	*e*PKP2	**PKPab**	**07 12 41.9**	**+3.5**
MORC	**Moravsky Berou**	**158.16**	**333**	*e*PKP	**PKPab**	**07 12 39.4**	**+0.9**
CLL	**Collm**	**158.34**	**342**	*e*PKIKP	**PKPdf**	**07 12 02.0**	**-2.8**
CLL				*i*		07 12 38.2	
CLL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CLL				pmax	pmax		
	comp=Z,400nm,20.2s						
CLL	**Collm**	**158.34**	**342**	*e*PKPdf	**PKPdf**	**07 12 02.0**	**-2.8**
CLL				*i* PKPab	**PKPab**	**07 12 38.2**	**-0.8**
	comp=Z,6.0nm,1.0s						
CLL				*e*x	x	07 12 53.0	
CLL				*e*SKPdf	**SKPdf**	**07 15 36.0**	**-1.2**
CLL				*e*(PP)		07 16 36.0	
CLL				*e*PPP	PPP	07 19 48.0	
CLL				*e*x	x	07 22 42.0	
CLL				*e*PSKS		07 26 42.0	
CLL				*e*x	x	07 27 30.0	
CLL				*e*PPS	PPS	07 29 34.0	
CLL				*e*x	x	07 31 33.0	
CLL				*e*SS	**SS**	**07 36 18.0**	**-0.7**
CLL				*e*x	x	07 41 24.0	
CLL				AMS	AMS	08 28 00.0	
	comp=Z,400nm,20.2s						
BRG	**Berggiesshubel**	**158.46**	**340**	*e*PKP	**PKPab**	**07 12 39.3**	**-0.3**
BRG				Amp		07 12 41.2	
	comp=Z,7.4nm,1.4s						
VYHS	**Vyhne**	**158.62**	**329**	*e*PKP2	**PKPab**	**07 12 39.2**	**-1.3**
VYHS	**Vyhne**	**158.62**	**329**	*e*PKP	**PKPab**	**07 12 39.2**	**-1.3**
JAVC	**Velka Javorina**	**158.84**	**331**	*e*PKP	**PKPab**	**07 12 41.9**	**+0.5**
VRAC	**Vranov**	**158.91**	**334**	*e*PKP	**PKPab**	**07 12 41.1**	**-0.5**
KRUC	**Moravsky**	**159.18**	**334**	*e*PKP	**PKPab**	**07 12 42.3**	**-0.5**
MODS	**Modra-Piesok**	**159.38**	**331**	*e*PKP2	**PKPab**	**07 12 44.4**	**+0.6**
MODS	**Modra-Piesok**	**159.38**	**331**	*e*PKP	**PKPab**	**07 12 44.4**	**+0.6**
ZVC	**Zvikov**	**159.65**	**338**	*e*PKPAB	**PKPab**	**07 12 45.7**	**+0.9**
KHC	**Kasperske Hory**	**160.11**	**338**	*e*PKPAB	**PKPab**	**07 12 45.5**	**-1.4**
KHC				*e*pPKP	**sPKPab**	**07 12 49.8**	**+0.5**
KHC	**Kasperske Hory**	**160.11**	**338**	*e*PKP2	**PKPab**	**07 12 45.5**	**-1.4**
CONA	**Conrad Observa**	**160.31**	**333**	*i* PKP	**PKPab**	**07 12 48.3**	**+0.4**
	comp=Z,8.8nm,1.5s						
RONA	**Rosalia, Austr**	**160.32**	**331**	*i* PKP	**PKPab**	**07 12 48.2**	**+0.3**
	comp=Z,5.4nm,1.1s						
GERES	**GERESS Array B**	**160.32**	**338**	PKPab	**PKPab**	**07 12 47.6**	**-0.3**
	comp=Z,0.8nm,0.9s,baz=11,slow=5.0,SNR=5.1						
MOA	**Molln**	**160.98**	**335**	*e*PKP	**PKPab**	**07 12 50.5**	**-0.3**
	comp=Z,10nm,1.8s						
ARSA	**Arzberg**	**160.99**	**332**	*e*PKP	**PKPab**	**07 12 50.9**	**+0.1**
	comp=Z,2.1nm,0.7s						
BIOA	**Bad Ischl, Aus**	**161.34**	**336**	*i* PKP	**PKPab**	**07 12 52.2**	**-0.1**
	comp=Z,1.0nm,0.4s						
SOKA	**Soboth**	**161.65**	**332**	*e*PKP	**PKPab**	**07 12 54.0**	**+0.2**
	comp=Z,9.7nm,2.2s						
LESA	**Schwarzleotal**	**161.90**	**337**	*i* PKP	**PKPab**	**07 12 57.3**	**+2.5**
	comp=Z,9.9nm,1.5s						
OBKA	**Obir**	**161.99**	**332**	*i* PKP	**PKPab**	**07 12 57.2**	**+1.9**
	comp=Z,3.7nm,1.3s						
MYKA	**Terra Mystica**	**162.24**	**334**	*e*PKP	**PKPab**	**07 12 57.6**	**+1.3**
	comp=Z,5.1nm,1.1s						
WATA	**Walderalm**	**162.32**	**339**	*e*PKP	**PKPab**	**07 12 56.5**	**-0.2**
	comp=Z,8.7nm,1.2s						
WTTA	**Wattenberg**	**162.37**	**339**	*i* PKP	**PKPab**	**07 12 57.2**	**+0.2**
	comp=Z,5.8nm,1.1s						
RETA	**Reutte**	**162.42**	**341**	*e*PKP	**PKPab**	**07 12 57.2**	**+0.1**
	comp=Z,3.3nm,0.8s						
MOTA	**Moosalm**	**162.46**	**340**	*i* PKP	**PKPab**	**07 12 56.5**	**-0.8**
	comp=Z,7.2nm,1.4s						
SQTA	**Sankt Quirin**	**162.54**	**340**	*e*PKP	**PKPab**	**07 12 58.2**	**+0.6**
	comp=Z,7.0nm,0.9s						
ABTA	**Abfaltersbach**	**162.54**	**337**	*e*PKP	**PKPab**	**07 12 57.5**	**-0.2**
	comp=Z,6.7nm,1.1s						
DAVA	**Damuels**	**162.84**	**343**	*e*PKP	**PKPab**	**07 12 58.3**	**-0.7**
	comp=Z,6.0nm,1.2s						
FETA	**Feichten**	**162.86**	**341**	*e*PKP	**PKPab**	**07 13 00.0**	**+0.9**
	comp=Z,3.1nm,1.3s						
PMOZ	**Porto Moniz, M**	**163.18**	**79**	*e*PKPab	PKPab	07 12 51.7	-9.4
PMOZ				*e*PP	**PP**	**07 16 50.9**	**+4.3**
PMOZ				*e*LR	LR	08 13 59.6	
PMOZ				*i* AMs_20		08 39 53.2	
	comp=Z,401nm,18.0s						
PGAV	**Gavieira, Arco**	**166.11**	**36**	*e*PKPab	PKPab	07 12 53.6	-20
PGAV				*e*PP	**PP**	**07 17 07.4**	**+6.7**
PGAV				*e*LR	LR	08 18 16.5	
PGAV				*i* AMs_20		08 28 43.2	
	comp=Z,540nm,18.0s						
MVO	**Moncorvo**	**167.33**	**35**	*e*PKPab	PKPab	07 12 53.1	-26
MVO				*e*LR	LR	08 18 43.6	
MVO				*i* AMs_20		08 22 13.0	
	comp=Z,633nm,20.0s						
MTE	**Manteigas**	**167.63**	**38**	*e*PKPab	PKPab	07 12 52.7	-28
MTE				*e*PP	PP	07 17 26.1	+18
MTE				*e*LR	LR	08 17 39.5	
MTE				*i* AMs_20		08 25 56.3	
	comp=Z,504nm,20.0s						
PMRV	**Marv??o**	**168.39**	**41**	*e*PKPab	PKPab	07 12 57.0	-27
PMRV				*e*LR	LR	08 16 37.2	
PMRV				*i* AMs_20		08 30 18.3	
	comp=Z,445nm,18.0s						
PVAQ	**Vaqueiros**	**169.45**	**50**	*e*PKPab	PKPab	07 12 55.2	-33
PVAQ				*e*PP	PP	07 17 28.4	+10

IDC ***23*** *07:04:00.0±0.6, 2°.98S×139°.88E, h0^{km}, mb4.0/15, mbtmp4.0/16, ML4.4/1, MS4.0/1, Error ellipse: s-maj=16.7km s-min=9.7km az=147.0*

DJA ***23*** *07:04:04.9±0.4, 3°S±3°×14°0E±°, h33^{km}±7^{km}, M4.9/10, mb4.7/10, mB5.8/1, MLv5.0/7, Mw(mB)5.3/1*

NEIC ***23*** *07:04:07.2±1.2, 2°.96S±0°.07×139°.72E±0°.05, h35^{km}±2^{km}, mb4.5/45, Error ellipse: s-maj=13.0km s-min=6.2km az=144.0*

ISC 23 07:04:05.6±0.4**, 2°.98S**±0°.04×**140°.03E**±0°.05**, h35^{km}, n108,** σ1^{s}.**81**/110**, mb4.4**/39**, 1D, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.41**	**20**	P	**Pn**	**07 04 14.6**	**-0.5**
GENI	**Genyem**	**0.41**	**20**	S	**Sn**	**07 04 22.5**	**+0.9**
GENI	**Genyem**	**0.41**	**20**	P	**Pn**	**07 04 14.4**	**-0.7**
JAY	**Jayapura**	**0.82**	**56**	Pg	**Pn**	**07 04 19.6**	**-1.1**
	840nm,0.3s,baz=215,slow=12,SNR=3357						
JAY				Lg	Lg	07 04 30.7	
	1µm,0.3s,baz=267,slow=23,SNR=14						
JAY				LR	LR	07 04 51.2	
	comp=Z,1µm,18.5s,baz=315,slow=54						
JAY	**Jayapura**	**0.82**	**56**	P	**Pn**	**07 04 19.6**	**-1.1**
JAY				S	**Sn**	**07 04 30.3**	**-1.4**
WAMI	**Wamena**	**1.59**	**236**	P	**Pn**	**07 04 32.5**	**+1.3**
WAMI				S	**Sn**	**07 04 53.3**	**+2.7**
SMPI	**Sarmi**	**1.64**	**307**	P	**Pn**	**07 04 31.8**	**-0.2**
SMPI				S	**Sn**	**07 04 55.1**	**+3.2**
SRPI	**Serui, Papua**	**3.94**	**286**	P	**Pn**	**07 05 04.4**	**+0.8**
BAKI	**Biak**	**4.30**	**294**	P	**Pn**	**07 05 09.5**	**+0.9**
BAKI				S	**Sn**	**07 05 59.6**	**+2.0**
RKPI	**Ransiki, Papua**	**6.03**	**284**	P	**Pn**	**07 05 33.4**	**+1.1**
MANU	**Manus Island**	**7.39**	**83**		Pn	07 05 56.2	+5.1
FAKI	**Fak Fak**	**7.77**	**270**	Pn	**Pn**	**07 05 54.0**	**-2.3**
FAKI	**Fak Fak**	**7.77**	**270**	P	**Pn**	**07 05 57.0**	**+0.7**
FAKI	**Fak Fak**	**7.77**	**270**	P	**Pn**	**07 05 56.7**	**+0.4**
	0.3nm58nm,0.9s						
SWI	**Sorong**	**9.01**	**283**	P	**Pn**	**07 06 14.4**	**+1.1**
	38nm,0.6s						
PMG	**Port Moresby**	**9.54**	**132**	Pn	Pn	07 06 26.1	+5.6
COEN	**Coen**	**11.34**	**164**		**Pn**	**07 06 47.2**	**+2.0**
COEN	**Coen**	**11.34**	**164**	P	**Pn**	**07 06 48.5**	**+3.3**
KDU	**Kakadu**	**12.20**	**217**	P	**Pn**	**07 06 56.2**	**-0.8**
MTN	**Manton Dam**	**13.17**	**221**		**Pn**	**07 07 08.8**	**-1.5**
MTN	**Manton Dam**	**13.17**	**221**	P	**Pn**	**07 07 09.6**	**-0.6**
TNTI	**Ternate**	**13.19**	**286**	Pn	**Pn**	**07 07 08.2**	**-2.4**
KNRA	**Kununurra**	**16.80**	**221**		**Pn**	**07 07 56.2**	**-2.1**
KNRA				IAmb	IAmb	07 08 13.4	
	comp=Z,28nm,0.7s						
SOEI	**Soe**	**17.04**	**246**		**Pn**	**07 07 59.0**	**-2.5**
SOEI	**Soe**	**17.04**	**246**	P	**Pn**	**07 08 01.5**	**+0.1**
SOEI	**Soe**	**17.04**	**246**	P	**Pn**	**07 08 02.7**	**+1.3**
QIS	**Mount Isa**	**17.47**	**181**	P	**P**	**07 08 08.4**	**+0.8**
DAV	**Davao City (W)**	**17.54**	**305**	LR	LR	07 13 33.0	
	comp=Z,499nm,21.9s,baz=358,slow=33						
WB0	**Warramunga Arr**	**17.57**	**198**		**Pn**	**07 08 05.7**	**-2.1**

WR0	Warramunga Arr	17.70	197		P	07 08 10.5	+0.3
WR0				IAmb	IAmb	07 08 17.5	
	comp=Z,33nm,1.4s						
WR8	Warramunga Arr	17.71	197		Pn	07 08 08.6	-1.0
WB2	Warramunga Arr	17.74	198	Pn	Pn	07 08 08.9	-1.2
WB2				IAmb	IAmb	07 08 32.0	
	comp=Z,14nm,0.7s						
WRA	Warramunga Arr	17.75	198		Pn	07 08 08.2	-1.9
WRA	Warramunga Arr	17.75	198	P	Pn	07 08 09.4	-0.7
	comp=Z,1.2nm,0.3s,baz=20,slow=12,SNR=30						
WRA				S	Sn	07 11 16.1	-11
	comp=Z,3.5nm,0.6s,baz=15,slow=22,SNR=5.2						
	comp=Z,4.4nm,0.5s						
CTAO	Charters Tower	18.05	161	P	P	07 08 16.4	+2.4
TOLI2	Tolitoli	19.66	282		P	07 08 29.7	-2.1
TOLI2				IAmb	IAmb	07 08 34.5	
	comp=Z,14nm,0.5s						
TOLI2	Tolitoli	19.66	282	P	P	07 08 31.6	-0.1
TTSI	Tana Toraja	20.18	269	P	P	07 08 38.4	+1.0
	comp=Z,81nm,0.9s						
PCI	Palu	20.28	275	P	P	07 08 39.0	+0.5
	comp=Z,112nm,0.9s						
KAPI	Kappang	20.32	264	P	P	07 08 36.9	-2.1
KAPI				IAmb	IAmb	07 08 52.9	
	comp=Z,13nm,0.9s						
MPSI	Mapaga	20.39	279	P	P	07 08 40.3	+0.7
	comp=Z,23nm,0.7s						
FITZ	Fitzroy Crossi	20.60	222	P	P	07 08 41.3	-0.6
FITZ	Fitzroy Crossi	20.60	222	P	P	07 08 40.9	-1.0
	comp=Z,4.0nm,0.3s,baz=58,slow=7.0,SNR=17						
FITZ				S	S	07 12 21.2	-9.2
	comp=Z,16nm,0.6s,baz=158,slow=11,SNR=7.5						
	comp=Z,4.0nm,0.3s						
FITZ	Fitzroy Crossi	20.60	222	P	P	07 08 42.5	+0.6
AS01	Alice Springs	21.38	195	P	P	07 08 51.9	+1.6
AS31	Alice Springs	21.40	196		P	07 08 51.1	+0.6
AS31				IAmb	IAmb	07 09 06.2	
	comp=Z,8.9nm,0.5s						
ASAR	Alice Springs	21.40	196		P	07 08 51.2	+0.7
ASAR	Alice Springs	21.40	196	P	P	07 08 50.2	-0.2
	comp=Z,3.9nm,0.8s,baz=27,slow=10,SNR=28						
ASAR				S	S	07 12 41.4	-4.9
	comp=Z,2.6nm,0.8s,baz=18,slow=20,SNR=4.5						
	comp=Z,3.9nm,0.8s						
MYLDM	Lahad Datu	22.98	291	P	P	07 09 03.8	-3.6
MYLDM				IAmb	IAmb	07 09 26.6	
	comp=Z,22nm,1.0s						
MYLDM	Lahad Datu	22.98	291	P	P	07 09 08.6	+1.2
BKB	Balikpapan	23.18	274	P	P	07 09 06.5	-2.9
EIDS	Eidsvold	24.67	155	P	P	07 09 25.4	+2.1
EIDS				IAmb	IAmb	07 09 40.2	
	comp=Z,33nm,1.3s						
EIDS	Eidsvold	24.67	155	P	P	07 09 26.1	+2.8
KKM	Kota Kinabalu	25.41	291	P	P	07 09 28.4	-1.9
MBWA	Marble Bar	26.77	226	P	P	07 09 40.9	-1.5
MBWA				IAmb	IAmb	07 09 48.8	
	comp=Z,22nm,1.3s						
BBOO	Buckleboo	29.90	187	P	P	07 10 11.0	+0.8
BBOO				IAmb	IAmb	07 10 21.8	
	comp=Z,17nm,1.2s						
TPUB	Ta-pu	32.25	325	P	P	07 10 29.6	-1.4
MORW	Morawa	34.54	219	P	P	07 10 50.8	-0.1
TOO	Toolangi	34.79	172	P	P	07 10 55.9	+2.9
NWAO	Narrogin (SRO)	36.65	213	P	P	07 11 08.8	-0.2
BKNI	Bangkinang	39.11	274	P	P	07 11 37.7	+7.7
MJAR	Matsushiro Arr	39.36	358	P	P	07 11 30.8	-1.0
	comp=Z,0.8nm,0.6s,baz=171,slow=8.3,SNR=1.4						
	comp=Z,0.8nm,0.6s						
NJ2	Nanjing	40.23	332	*e*P	P	07 11 40.6	+1.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
RPSI	Rantau Prapat	41.47	277	P	P	07 11 47.8	-1.8
KSRS	Korea Array	41.77	345	P	P	07 11 52.3	+0.7
	comp=Z,1.0nm,0.7s,baz=155,slow=8.4,SNR=5.7						
	comp=Z,1.0nm,0.7s						
JTM	Tenmabayashi	43.57	1	P	P	07 12 06.6	+0.5
CMAR	Chiang Mai Arr	45.72	299	P	P	07 12 22.6	-1.1
	comp=Z,0.8nm,0.3s,baz=121,slow=6.3,SNR=7.9						
	comp=Z,0.8nm,0.3s						
JKA	Kamikawa-asahi	46.94	3	P	P	07 12 34.0	+1.1
PZH	PanZhiHua	47.20	311	P	P	07 12 36.8	+1.4
PZH				pmax	pmax		
	comp=Z,9.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,6.1s						
USRK	Ussuriysk Ar.	47.52	352	P	P	07 12 37.1	-0.3
	comp=Z,1.3nm,0.5s,baz=167,slow=9.0,SNR=3.0						
	comp=Z,1.3nm,0.5s						
CN2	Changchun	48.38	346	*e*P	P	07 12 44.1	0.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BNX	BinXian	49.79	348	⇓P	P	07 12 55.3	+0.5
BNX				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC	Hu-ho-hao-te	50.78	332	*e*P	P	07 13 06.0	+3.4
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,64nm,4.1s						
LZH	Lanzhou	51.49	322	*e*P	P	07 13 08.0	-0.1
LZH				pP	pP	07 13 15.8	-2.9
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
GTA	Gaotai	56.07	323	*e*P	P	07 13 42.9	+1.4
GTA				pP	pP	07 13 46.8	-5.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
PETK	Petropavlovsk-	57.83	12	P	P	07 13 54.0	+0.5
	comp=Z,0.8nm,0.7s,baz=192,slow=6.7,SNR=1.9						
	comp=Z,0.8nm,0.7s						
SONM	Songino Array	58.53	334	P	P	07 13 58.8	+0.1
SONM	Songino Array	58.53	334	P	P	07 13 58.5	-0.2
	comp=Z,0.9nm,0.5s,baz=157,slow=8.9,SNR=6.3						
	comp=Z,0.9nm,0.5s						
EVN	Everest	59.67	305		P	07 14 06.8	-0.7
EVN				IAmb	IAmb	07 14 19.6	
	comp=Z,4.6nm,0.8s						
MKAR	Makanchi Array	70.81	322		P	07 15 17.9	-0.8
MKAR	Makanchi Array	70.81	322	P	P	07 15 18.1	-0.6
	comp=Z,2.9nm,0.9s,baz=113,slow=8.0,SNR=12						
	comp=Z,2.9nm,0.9s						
MAKZ	Makanchi	71.01	322		P	07 15 19.5	-0.4
MAKZ				IAmb	IAmb	07 15 20.8	
	comp=Z,7.2nm,1.1s						
ZALV	Zalesovo Beam	72.83	329	P	P	07 15 29.5	-1.1
	comp=Z,0.7nm,0.5s,baz=127,slow=7.1,SNR=3.7						
	comp=Z,0.7nm,0.5s						
BOOM	Boomskoye usch	73.26	316	P	P	07 15 33.8	+0.1
BOOM				IAmb	IAmb	07 15 48.0	
	comp=Z,4.8nm,1.1s						
KURBB	Kurchatov Arra	74.71	325	P	P	07 15 40.3	-1.5
	comp=Z,0.4nm,0.4s,baz=114,slow=5.4,SNR=5.2						
	comp=Z,0.4nm,0.4s						
VNDA	Vanda	75.40	175	P	P	07 15 45.5	+0.3
VNDA	Vanda	75.40	175	P	P	07 15 45.1	-0.2
	comp=Z,0.5nm,0.8s,baz=312,slow=8.1,SNR=3.9						
	comp=Z,0.5nm,0.8s						
KKAR	Karatay Array	77.25	315	P	P	07 15 56.0	-0.4
BVAR	Borovoye Array	80.29	325	P	P	07 16 11.7	-1.2
	comp=Z,2.1nm,0.6s,baz=110,slow=5.7,SNR=8.5						
	comp=Z,2.1nm,0.6s						
J20K	Nowinta River	82.38	24	P	P	07 16 25.2	+1.5
C19K	Lookout Ridge	82.60	18	P	P	07 16 26.7	+1.9
C19K				IAmb	IAmb	07 16 28.5	
	comp=Z,5.8nm,1.1s						
E19K	Redstone River	82.61	20	P	P	07 16 26.6	+1.7
E19K				IAmb	IAmb	07 16 45.0	
	comp=Z,4.7nm,1.1s						
MLY	Manley	84.06	24	P	P	07 16 34.0	+1.5
MLY				IAmb	IAmb	07 16 47.1	
	comp=Z,3.1nm,1.2s						
I23K	Minto, Yukon-K	84.65	24	P	P	07 16 37.2	+1.9
I23K				IAmb	IAmb	07 16 38.8	
	comp=Z,2.5nm,0.8s						
H23K	Yukon River	84.80	23	P	P	07 16 38.8	+2.6
H23K				IAmb	IAmb	07 16 39.4	
	comp=Z,2.3nm,0.8s						
CCB	Clear Creek Bu	85.12	24		P	07 16 38.4	+0.7
CCB				IAmb	IAmb	07 16 45.5	
	comp=Z,8.0nm,1.5s						
D23K	Nanushuk River	85.45	20		P	07 16 41.8	+2.5
ILAR	Eielson Array	85.54	24	P	P	07 16 39.7	-0.2
ILAR	Eielson Array	85.54	24	P	P	07 16 39.2	-0.6
	comp=Z,1.2nm,0.8s,baz=264,slow=4.5,SNR=15						
	comp=Z,1.2nm,0.8s						
C23K	Itkillik River	85.78	19	P	P	07 16 42.2	+1.3
J25K	Salcha River,	86.12	25	P	P	07 16 44.6	+1.8
QSPA	South Pole Qui	86.96	180	P	P	07 16 45.4	-1.6
	comp=Z,0.9nm,0.8s,baz=331,slow=1.1,SNR=5.4						
	comp=Z,0.9nm,0.8s						
L27K	Beaver Creek,	87.28	27	P	P	07 16 50.2	+1.7
L27K				IAmb	IAmb	07 16 55.9	
	comp=Z,2.3nm,1.2s						
G26K	Porcupine Rive	87.34	23	P	P	07 16 50.6	+2.0
G26K				IAmb	IAmb	07 16 52.2	
	comp=Z,3.7nm,0.9s						
H27K	Steamboat Moun	88.06	23		P	07 16 54.1	+1.9
H27K				IAmb	IAmb	07 16 55.6	
	comp=Z,4.2nm,1.1s						
I28M	Miner Creek	88.56	24	P	P	07 16 55.9	+1.3
I28M				IAmb	IAmb	07 16 57.5	
	comp=Z,2.5nm,1.1s						
DBIC	Dimbokro	144.82	277	PKP	PKPab	07 23 37.8	-1.2
	comp=Z,4.6nm,0.6s,baz=53,slow=0.2,SNR=8.1						
LPAZ	La Paz	146.22	125	PKPbc	PKPab	07 23 44.4	-0.5
	comp=Z,2.1nm,0.8s,baz=262,slow=1.2,SNR=11						

DJA 23 07:17:13.6±0.7,2°S±9°×14°0E±°,h23^{km}±9^{km},M3.9/6, mB6.0/1,mb4.5/1,MLv3.6/6,Mw(mB)5.7/1,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	0.24	176	P	Pn	07 17 21.0	-0.8
JAY	Jayapura	0.58	106	P	Pn	07 17 25.8	-0.7
SMPI	Sarmi	1.48	284	P	Pn	07 17 39.6	+0.7
WAMI	Wamena	2.10	223	P	Pn	07 17 48.0	+0.7
RKPI	Ransiki, Papua	6.03	278	P	Pn	07 18 41.4	0.0

MDD 23 07:18:24.0±1.1,28°.16N×16°.67W,h7^{km}±7^{km},mb_Lg0.1/5, Error ellipse: s-maj=5.5km s-min=5.0km az=93.0, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLAJ	Vilaflor (Tene	0.01	256	P	Pg	07 18 25.4	0.0
CVIL	Vilaflor	0.02	85	P	Pg	07 18 25.5	0.0
CADE	Adeje, Tenerif	0.07	273	P	Pg	07 18 25.9	+0.1
CCHO	La Orotava (Te	0.07	356	P	Pg	07 18 26.2	+0.2
CTFS	San Miguel de	0.08	157	P	Pg	07 18 26.4	+0.5
CTFS				S	Sg	07 18 27.7	+0.4
CTFS				*i* IVmb_Lg		07 18 28.1	
CCAN	Las Canadas	0.09	39	P	Pg	07 18 26.2	0.0

IDC 23 07:18:43.5±3.0,31°.11S×177°.05W,h0^{km},mb3.8/3, mbtmp3.8/4,ML3.3/1,Error ellipse: s-maj=73.4km s-min=35.8km az=122.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.60	212	Pn	Pn	07 20 47.7	-1.5
	0.3nm,0.3s,baz=343,slow=2.7,SNR=0.9						
URZ				Sn	Sn	07 22 29.2	+2.3
	1.3nm,0.3s,baz=206,slow=22,SNR=6.7						
	3.2nm,0.7s						
STKA	Stephens Creek	35.12	258	P	P	07 25 40.7	+1.9
	2.4nm,0.7s,baz=94,slow=13,SNR=4.0						
	2.4nm,0.7s						
ASAR	Alice Springs	43.89	267	P	P	07 26 51.8	-0.3
	0.3nm,0.7s,baz=103,slow=7.6,SNR=4.5						
	0.3nm,0.7s						
WRA	Warramunga Arr	44.94	272	P	P	07 26 59.3	-1.3
	1.3nm,0.7s,baz=114,slow=7.9,SNR=9.3						
	1.3nm,0.7s						
FINES	FINESS Array B	146.09	340	PKPbc	PKPdf	07 38 24.1	+0.2
	2.7nm,0.8s,baz=44,slow=4.2,SNR=12						

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*IDC **23** 07:21:20.6±1.0,38°.64N×74°.09E,h0^{km},mb3.8/16, mbtmp3.9/22,ML3.2/6,MS3.8/2,Error ellipse: s-maj=17.5km s-min=13.9km az=139.0*

*NNC **23** 07:21:25.7±2.4,38°.83N×73°.93E,h0^{km},mb4.2,mpv3.9, Error ellipse: s-maj=19.3km s-min=13.6km az=165.0*

*NEIC **23** 07:21:25.9±1.4,38°.55N±0°.06×74°.10E±0°.09,h94^{km}±15^{km}, mb4.1/6,Error ellipse: s-maj=10.2km s-min=9.4km az=98.0*

*SOME **23** 07:21:37.2,39°.48N×74°.28E,h15^{km}*

ISC 23 07:21:21.1±0.6,38°.67N±0°.05×74°.17E±0°.03,h10^{km},n78, σ2^{s}94/88,mb3.8/17,7C-2D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	2.01	294		Pb	07 21 56.4	-1.5
DRK				Sn	Sg	07 22 29.0	+3.2
ARSB	Arslanbob	2.80	341		Pb	07 22 09.8	-1.5
BTK	Batken	2.94	299		Pb	07 22 12.9	-0.8
NRN	Naryn	3.10	26		Pb	07 22 14.4	-2.0
AML	Almayashu	3.48	354	P	Pb	07 22 19.6	-3.3
	SNR=53						
UCH	Uchtor	3.56	4	P	Pb	07 22 21.3	-3.2
	SNR=11						
ULHL	Ulahol	3.91	23	P	Pg	07 22 34.9	-1.0
	SNR=9.6						
AAK	Ala-Archa	3.97	3	P	Pb	07 22 26.9	-4.3
	SNR=14						
AAK	Ala-Archa	3.97	3		Pn	07 22 26.4	+4.2
AAK	Ala-Archa	3.97	3	Pn	Pb	07 22 27.2	-4.0
	3.0nm,0.3s,baz=191,slow=7.6,SNR=13						
AAK				Lg	Lg	07 23 28.0	
	7.2nm,0.3s,baz=90,slow=20,SNR=6.6						
AAK				LR	LR	07 24 07.3	
	comp=Z,139nm,19.5s,baz=214,slow=42						
	14nm,0.6s						
AAK	Ala-Archa	3.97	3	Pn	Pn	07 22 26.8	+4.6
AAK				Pg	Pg	07 22 36.8	-0.3
AAK				Lg	Lg	07 23 26.8	
EKS2	Erkin-Say	4.00	356	P	Pn	07 22 27.1	+4.6
	SNR=26						
SIMJ	Simiganj	4.04	271		Pn	07 22 24.3	+1.2
BOOM	Boomskoye usch	4.05	19	Pn	Pn	07 22 28.0	+4.7
MRKS	Merke	4.13	350	*e*P	Pg	07 22 37.1	-3.1
	40nm,0.5s						
MRKS				*e*S	Sb	07 23 19.7	-4.2
	50nm,0.4s						
TARG	Taragay, Kyrgy	4.13	41		Pn	07 22 29.1	+4.4
FRU1	Bishkek	4.15	5	Pn	Pn	07 22 28.5	+3.9
KDJ	Kajisay	4.15	33	Pn	Pn	07 22 29.0	+4.4
CHMS	Chumysh	4.35	6	P	Pg	07 22 42.9	-1.4
	SNR=7.3						
TKM2	Tokmak 2	4.38	14	P	Pn	07 22 32.8	+4.9
	SNR=14						
TKM2	Tokmak 2	4.38	14	⇑Pn	Pn	07 22 32.0	+4.2
	4.6nm,0.5s						
TKM2				⇑Pg	Pg	07 22 43.6	-1.4
	33nm,0.7s						
TKM2				⇑Sn	Sn	07 23 23.9	+4.8
	58nm,0.7s						
KST	Kastek	4.57	17	*e*P	Pb	07 22 44.7	+3.2
	8.8nm,0.5s						
KST				*e*S	Sb	07 23 32.8	-4.0
	82nm,0.8s						
USP	Ospenovka	4.60	3	P	Pg	07 22 47.2	-2.0
	SNR=8.0						
MTBS	Maitube	4.77	20	*e*P	Pg	07 22 50.0	-2.5
	60nm,0.5s						
MTBS				*e*S	Sb	07 23 41.6	-0.7
	16nm,0.5s						
PRZ	Przheval'sk	4.99	39	Pn	Pn	07 22 40.2	+4.0
NIL	Nilore	5.07	189		Pn	07 22 38.2	+1.1
KOTS	Kotyrbulak	5.07	25	*e*P	Pg	07 22 55.1	-3.1
	28nm,0.4s						
KOTS				*e*S	Sb	07 23 50.6	-0.5
	54nm,0.6s						
KK31	Karatay Array	5.22	329		Pn	07 22 42.7	+3.4
KK31	Karatay Array	5.22	329	⇓Pn	Pn	07 22 42.4	+3.1
	7.1nm,0.5s,baz=137,slow=13,SNR=58						
KK31				⇑Pg	Pg	07 22 56.7	-4.3
	7.8nm,0.4s,baz=147,slow=16,SNR=8.6						
KK31				⇑Sn	Sn	07 23 41.9	+2.4
	9.5nm,0.5s						
KK31				⇑Lg	Lg	07 24 03.6	
	23nm,0.6s,baz=135,slow=15,SNR=4.4						
KKAR	Karatay Array	5.22	329		Pn	07 22 41.8	+2.6
BRLS	Borolday	5.45	324	*e*P	Pg	07 23 04.9	-0.6
	9.4nm,0.2s						
BRLS				*e*S	Sb	07 24 07.4	+5.5
	13nm,0.1s						
KBL	Kabul	5.83	227	Pn	Pn	07 22 48.4	+0.7
JMU	Jammu	5.97	174	*e*P	Pn	07 22 45.0	-4.5
JMU				*e*S	Sn	07 23 46.2	-12
JMU				IAML		07 24 07.8	
	comp=N,134nm,0.5s						
SHLS	Shalkode	6.01	40	*e*P	Pg	07 23 20.8	+4.6
	comp=N,19nm,0.5s						
SHLS				*e*S	Sg	07 24 34.4	+0.4
	comp=N,35nm,0.8s						
DHRM	DHARAMSHALA	6.64	164	*e*P	Pn	07 22 55.1	-3.8
DHRM				*e*S	Sn	07 24 03.7	-11
DHRM				IAML		07 24 27.5	
	comp=E,103nm,0.6s						
HNLY	HANLEY	7.06	145	*e*P	Pn	07 23 01.2	-3.8
HNLY				*e*S	Sn	07 24 14.1	-11
KLP	Kalpa	7.87	154	*e*P	Pn	07 23 11.5	-4.3
KLP				*e*S	Sn	07 24 32.3	-13
KLP				IAML		07 25 00.6	
	comp=N,133nm,1.3s						
SMLA	Simla	7.92	161	*e*P	Pn	07 23 12.1	-4.1
SMLA				*e*S	Sn	07 24 33.3	-13
SMLA				IAML		07 24 52.5	
	comp=E,104nm,0.8s						
MAKZ	Makanchi	9.95	33		Pn	07 23 46.8	+2.7
MK31	Makanchi Array	10.07	34	Pn	Pn	07 23 48.5	+2.7
MKAR	Makanchi Array	10.07	34		Pn	07 23 47.8	+2.0
MKAR	Makanchi Array	10.07	34	Pn	Pn	07 23 49.4	+3.6
	comp=E,0.2nm,0.3s,baz=214,slow=13,SNR=14						
MKAR				Lg	Lg	07 26 43.3	
	comp=E,0.1nm,0.3s,baz=217,slow=32,SNR=2.3						
	comp=E,3.2nm,0.9s						
KUDL	Kundal	10.68	169	*e*P	Pn	07 23 49.7	-4.4
KUDL				*e*S	Sn	07 25 37.2	-16
KUDL				IAML		07 25 54.2	
	comp=E,114nm,0.9s						
WMQ	Urumqi	11.40	59	*e*P	Pn	07 24 08.6	+4.6
KURBB	Kurchatov Arra	12.34	13	Pn	Pn	07 24 17.9	+1.1
	comp=E,0.1nm,0.3s,baz=204,slow=11,SNR=6.4						
KURBB				Lg	Lg	07 27 50.6	
	baz=195,slow=28						
	comp=E,0.6nm,0.5s						
BVAR	Borovoye Array	14.59	351	Pn	Pn	07 24 46.1	-1.3
	comp=E,0.1nm,0.3s,baz=148,slow=14,SNR=10.0						
	comp=E,2.6nm,0.7s						
BRVK	Borovoye	14.64	351		Pn	07 24 47.9	-0.2
AB31	Akbulak array	14.70	321		Pn	07 24 48.4	-0.6
AB31	Akbulak array	14.70	321	⇓P	Pn	07 24 48.1	-0.9
	comp=E,1.1nm,0.5s,baz=131,slow=13,SNR=26						
ABKAR	Akbulak array	14.70	321		Pn	07 24 48.2	-0.7
AKTO	Aktyubinsk	16.41	321	Pn	Pn	07 25 10.2	-1.2
	comp=E,0.5nm,0.3s,baz=130,slow=13,SNR=11						
AKTO				Sn	Sn	07 28 06.7	-6.8
	comp=E,0.1nm,0.3s,baz=148,slow=23,SNR=1.8						
	comp=E,1.8nm,0.7s						
AKTO	Aktyubinsk	16.41	321	⇑P	P	07 25 13.3	-0.9
	comp=E,7.0nm,1.1s						
ZAA0	Zalesovo Array	16.93	22		Pn	07 25 18.1	+0.2
ZAA0				IAmb	IAmb	07 25 21.7	
	comp=Z,8.6nm,0.9s						
ZALV	Zalesovo Beam	16.93	22	Pn	Pn	07 25 18.4	+0.5
	comp=Z,0.3nm,0.3s,baz=201,slow=14,SNR=15						
	comp=Z,5.4nm,0.7s						
GTA	Gaotai	19.92	80	*e*P	Pn	07 25 55.5	+0.8
GTA				pP	sP	07 26 00.0	+0.9
GTA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GTA				LR	LR		
	comp=N,290nm,17.5s						
GTA				LR	LR		
	comp=E,330nm,17.5s						
GTA				LR	LR		
	comp=Z,400nm,18.2s						
ARTI	Arti	20.59	335	P	P	07 25 59.7	-0.3
ARTI	Arti	20.59	335	P	Pn	07 26 01.2	-1.1
	comp=Z,4.4nm,0.7s,baz=163,slow=7.1,SNR=4.7						
	comp=Z,4.4nm,0.7s						
GNI	Garni	22.74	283	P	P	07 26 19.7	-3.7
GNI				IAmb	IAmb	07 26 34.7	
	comp=Z,10nm,0.9s						
KBZ	Khabaz	23.98	292	P	P	07 26 36.4	+0.7
	comp=Z,0.6nm,0.5s,baz=146,slow=11,SNR=1.5						
	comp=Z,0.6nm,0.5s						
SONM	Songino Array	25.04	58	P	P	07 26 42.7	-2.7
SONM	Songino Array	25.04	58	P	P	07 26 48.2	+2.8
	comp=Z,2.5nm,0.8s,baz=261,slow=9.3,SNR=10						
	comp=Z,2.5nm,0.8s						
ULN	Ulaanbaatar	25.48	58	P	P	07 26 45.9	-3.6
ULN				IAmb	IAmb	07 26 54.4	
	comp=Z,5.7nm,0.7s						
BRTR	Keskin Array B	31.24	285	P	P	07 27 42.5	+1.5
	comp=Z,1.1nm,0.8s,baz=85,slow=9.4,SNR=5.3						
	comp=Z,1.1nm,0.8s						
AKASG	Malin Array Be	33.63	306	P	P	07 28 02.2	+0.6
	comp=Z,0.2nm,0.2s,baz=82,slow=7.5,SNR=5.4						
	comp=Z,0.2nm,0.2s						
FINES	FINESS Array B	37.16	324	P	P	07 28 32.7	+0.9
	comp=Z,1.6nm,0.4s,baz=115,slow=10,SNR=15						
	comp=Z,1.6nm,0.4s						
ARCES	ARCESS Array B	40.15	336	P	P	07 28 58.8	+2.0
	comp=Z,1.1nm,0.4s,baz=106,slow=8.9,SNR=18						
	comp=Z,1.1nm,0.4s						
TIXI	Tiksi	42.82	22	P	P	07 29 15.1	-3.5
TIXI				IAmb	IAmb	07 29 25.1	
	comp=Z,2.8nm,0.8s						
HFS	Hagfors	42.96	320	P	P	07 29 20.7	+0.8
	comp=Z,3.5nm,0.5s,baz=94,slow=8.8,SNR=31						
	comp=Z,3.5nm,0.5s						
GERES	GERESS Array B	43.77	304	P	P	07 29 27.8	+1.0
	comp=Z,0.3nm,0.6s,baz=84,slow=8.5,SNR=2.7						
	comp=Z,0.3nm,0.6s						
NB2	NORSAR Subarra	44.20	322	P	P	07 29 30.4	+0.4
	comp=Z,1.1nm,0.5s,baz=92,slow=8.6						
NOA	NORSAR Array B	44.20	322	P	P	07 29 30.6	+0.6
	comp=Z,2.0nm,0.6s,baz=92,slow=7.8,SNR=9.4						
	comp=Z,2.0nm,0.6s						
EKA	Eskdalemuir Ar	52.50	315	P	P	07 30 34.9	+0.9
	comp=Z,0.5nm,0.6s,baz=72,slow=7.2,SNR=2.4						
	comp=Z,0.5nm,0.6s						
ESDC	Sonseca Array	58.67	298	P	P	07 31 19.6	+0.9
	comp=Z,0.4nm,0.6s,baz=65,slow=5.8,SNR=4.2						
	comp=Z,0.4nm,0.6s						
SFJD	Kangerlussuaq	66.63	339	LR	LR	08 02 39.1	
	comp=Z,478nm,19.9s,baz=292,slow=37						
TORD	Torodi Ar. Bea	68.27	270	P	P	07 32 23.0	+0.6
	comp=Z,1.1nm,0.4s,baz=41,slow=5.6,SNR=3.5						
	comp=Z,1.1nm,0.4s						
ILAR	Eielson Array	71.98	17	P	P	07 32 45.1	+0.6
	comp=Z,0.6nm,0.8s,baz=335,slow=6.0,SNR=7.1						
	comp=Z,0.6nm,0.8s						
YKA	Yellowknife Ar	78.93	4	P	P	07 33 25.3	+0.9
	comp=Z,0.9nm,0.9s,baz=350,slow=6.0,SNR=6.4						
	comp=Z,0.9nm,0.9s						
WRA	Warramunga Arr	81.06	124	P	P	07 33 37.5	+1.0
	comp=Z,0.8nm,1.1s,baz=316,slow=5.3,SNR=2.4						
	comp=Z,0.8nm,1.1s						

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*GCG **23** 07:42:51.8±1.4,14°.19N×93°.01W,h15^{km}±6^{km},MD4.2, ML3.7*

*CATAC **23** 07:42:51.3±0.9,14°N±5°×9°3W±°,h1^{km},M3.8/6,MLv3.8/6, Error ellipse: s-maj=11.5km s-min=10.1km az=72.3, confirmed*

*MEX **23** 07:42:55.2±0.6,14°.38N×93°.05W,h16^{km}±34^{km},MD4.2*

ISC 23 07:42:51.6±1.5,14°.31N±0°.06×93°.04W±0°.03,h28^{km}±14^{km}, n37,σ2^{s}55/57,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.95	51	*e*P	Pn	07 43 09.6	+0.4
THIG				*e*S	Sn	07 43 21.9	+0.1
THIG		0.95	51	*i* P	Pn	07 43 09.7	+0.5
THIG				*i* S	Sn	07 43 23.4	+1.5
THIG				IAML		07 43 25.7	
	comp=E,1µm,0.5s						
SMCA	Catarina	1.08	60	*i* P	Pb	07 43 11.6	-0.1
SMCA				*i* S	Sn	07 43 27.8	+2.9
PATR	El Naranjo	1.12	44	*e*P	Pb	07 43 11.9	-0.5
PATR				*e*S	Sb	07 43 25.5	-1.2
PAVE	Pavencul	1.21	43	*e*P	Pb	07 43 13.4	-0.6
PAVE				*e*S	Sb	07 43 27.3	-2.0
RTAL	Retalhuleu	1.32	80	*e*P	Pb	07 43 14.9	-0.7
RTAL				*e*S	Sn	07 43 29.7	-1.2
RTAL	Retalhuleu	1.32	80	P	Pb	07 43 15.3	-0.4
RTAL	Retalhuleu	1.32	80	S	Sb	07 43 33.7	+1.6
PCIG		1.40	353	*e*P	Pn	07 43 15.7	+0.4
PCIG				*e*S	Sn	07 43 29.4	-3.5

STG8	El Palmar, Qui	1.64	85	i P	Pn	07 43 16.7	-2.1
STG8				i S	Sn	07 43 39.3	+0.2
STG8				IAML		07 43 41.3	
	comp=E,1µm,0.3s						
STG0	El Palmar, Qui	1.65	86	i P	Pn	07 43 16.8	-2.0
STG0				i S	Sn	07 43 38.0	-1.2
STG0				IAML		07 43 42.2	
	comp=E,2µm,0.3s						
HUEH	Huehuetenango	1.79	56	eP	Pb	07 43 23.2	-0.7
HUEH				eS	Sb	07 43 47.3	+1.3
HUEH	Huehuetenango	1.79	56	i P	Pb	07 43 23.4	-0.5
HUEH				i S	Sb	07 43 49.3	+3.3
HUEH				IAML		07 43 51.7	
	comp=N,1µm,0.5s						
HUEH	Huehuetenango	1.79	56	P	Pb	07 43 23.4	-0.5
CCIG	Comitan	2.14	24	i P	Pb	07 43 29.5	-0.4
CCIG				i S	Sb	07 43 57.9	+1.7
CCIG				IAML		07 44 13.6	
	comp=N,219nm,0.3s						
CCIG	Comitan	2.14	24	P	Pb	07 43 29.5	-0.4
FG16	Alotenango, Sa	2.45	91	i P	Pn	07 43 26.3	-3.6
TGIG		2.46	358	eP	Pb	07 43 32.5	-2.6
TGIG				eS	Sn	07 44 00.1	+1.0
TGIG		2.46	358	i P	Pb	07 43 32.6	-2.6
TGIG				i S	Sb	07 44 03.6	-1.4
TGIG				IAML		07 44 10.9	
	comp=E,203nm,0.6s						
NUBE	Las Nubes	3.18	97	i P	Pn	07 43 42.0	+2.0
NUBE	Las Nubes	3.18	97	P	Pn	07 43 41.7	+1.7
HUIG	Huatulco	3.30	296	eP	Pn	07 43 43.8	+2.3
HUIG				eS	Sn	07 44 16.7	-3.2
JAYA	Jayaque - finc	3.54	100	i P	Pn	07 43 46.4	+1.4
JAYA				i S	Sn	07 44 27.1	+1.1
JAYA	Jayaque - finc	3.54	100	P	Pn	07 43 46.5	+1.5
PETF	Flores	4.00	49	eP	Pn	07 43 53.8	+2.6
PETF				eS	Sn	07 44 31.9	-5.3
PETF	Flores	4.00	49	i P	Pn	07 43 54.8	+3.7
PETF				IAML		07 45 01.6	
	comp=E,85nm,0.7s						
PETF	Flores	4.00	49	P	Pn	07 43 54.9	+3.7
PEIG	Puerto Escondi	4.31	293	eP	Pn	07 43 58.2	+2.7
PEIG				eS	Sn	07 44 41.0	-3.8
VHO	Vista Hermosa	4.50	308	eP	Pn	07 43 58.1	-0.1
VHO				eS	Sn	07 44 53.4	+3.7
YOIG	Yosondua	5.03	301	eP	Pn	07 44 10.9	+5.4
PNIG	Pinotepa	5.33	294	eP	Pn	07 44 13.7	+4.2
TOIG	Toxpalan	5.40	315	eP	Pn	07 44 13.4	+3.0
TOIG				eS	Sn	07 45 13.0	+1.2
TXIG	Tlaxiaco	5.42	303	eP	Pn	07 44 15.1	+4.3
HLIG	Huajuapan de L	5.77	308	eP	Pn	07 44 22.4	+6.8
HLIG				eS	Sn	07 45 15.8	-5.2
FTIG	Fresnillo de T	6.07	307	eP	Pn	07 44 25.7	+6.0
FTIG				eS	Sn	07 45 21.8	-6.4
JAUV	Jalcomulco	6.19	325	eP	Pn	07 44 22.4	+1.1
JAUV				eS	Sn	07 45 29.3	-1.9
CXUV	Coxquihui	7.28	324	eP	Pn	07 44 39.1	+3.0

MEX ***23*** *07:45:33.5±1.0, 14°.34N×93°.14W, h11^{km}±42^{km}, MD4.2*
GCG ***23*** *07:45:34.8±1.4, 14°.31N×92°.89W, h50^{km}±8^{km}, MD4.3, ML3.5*
ISC 23 07:45:31.6±1.5**, 14°.29N**±0°.06×**93°.02W**±0°.03**, h31^{km}**±12^{km}**, n25, σ2^{s}.21**/45**, 1D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.95	50	eP	Pb	07 45 49.6	0.0
THIG				eS	Sn	07 46 02.5	+1.1
THIG		0.95	50	i P	Pb	07 45 49.6	0.0
THIG				i S	Sn	07 46 02.4	+1.1
THIG				IAML		07 46 05.2	
	comp=E,958nm,1.4s						
SMCA	Catarina	1.07	58	i P	Pn	07 45 51.6	+1.1
SMCA				i S	Sn	07 46 05.3	+1.0
SMCA				IAML		07 46 07.6	
	comp=E,418nm,1.8s						
PATR	El Naranjo	1.12	43	eP	Pn	07 45 51.8	+0.5
PATR				eS	Sn	07 46 06.3	+0.5
PAVE	Pavencul	1.21	42	eP	Pn	07 45 53.4	+0.7
PAVE				eS	Sn	07 46 07.7	-0.4
RTAL	Retalhuleu	1.30	80	eP	Pn	07 45 55.1	+1.4
RTAL				eS	Sb	07 46 12.6	+0.7
PCIG		1.42	352	eP	Pn	07 45 55.2	-0.1
PCIG				eS	Sn	07 46 10.9	-2.0
STG8	El Palmar, Qui	1.62	84	i P	Pn	07 45 56.7	-1.5
STG8				i S	Sn	07 46 15.6	-2.7
STG8				IAML		07 46 20.4	
	comp=N,1µm,0.1s						
STG0	El Palmar, Qui	1.63	85	i P	Pn	07 45 57.0	-1.3
STG0				i S	Sn	07 46 13.9	-4.4
STG0				IAML		07 46 20.8	
	comp=E,1µm,0.8s						
SOKI	Kika Raxquin	1.65	71	i P	Pb	07 46 01.3	-0.3
SOKI				IAML		07 46 31.6	
	comp=N,516nm,1.3s						
HUEH	Huehuetenango	1.79	55	eP	Pb	07 46 03.4	-0.5
HUEH				eS	Sb	07 46 27.3	+1.3
HUEH	Huehuetenango	1.79	55	i P	Pb	07 46 03.2	-0.6
HUEH				i S	Sb	07 46 27.0	+1.0
HUEH				IAML		07 46 32.3	
	comp=N,816nm,1.7s						
CCIG	Comitan	2.16	23	eP	Pb	07 46 09.3	-0.8
CCIG				eS	Sb	07 46 36.7	+0.2
CCIG	Comitan	2.16	23	i P	Pb	07 46 09.1	-1.0
CCIG				i S	Sb	07 46 34.6	-1.9
CCIG				IAML		07 46 44.9	
	comp=N,144nm,2.0s						
TGIG		2.48	358	eP	Pn	07 46 12.5	+2.7
TGIG				eS	Sn	07 46 42.3	+3.2
TGIG		2.48	358	⇓iP	Pn	07 46 12.5	+2.7
TGIG				i S	Sb	07 46 42.7	-2.9
TGIG				IAML		07 46 46.0	
	comp=E,134nm,2.1s						
NUBE	Las Nubes	3.17	97	i P	Pn	07 46 21.8	+2.4
NUBE				i S	Sn	07 46 56.4	+0.1
JAYA	Jayaque - finc	3.52	100	i P	Pn	07 46 26.6	+2.3
JAYA				i S	Sn	07 47 04.0	-1.1
PEIG	Puerto Escondi	4.33	294	eP	Pn	07 46 38.0	+2.7
PEIG				eS	Sn	07 47 19.4	-5.6
YOIG	Yosondua	5.05	301	eP	Pn	07 46 51.0	+5.5
YOIG				eS	Sn	07 47 41.6	-1.4
PNIG	Pinotepa	5.35	294	eP	Pn	07 46 51.9	+2.5
PNIG				eS	Sn	07 47 39.2	-11
TOIG	Toxpalan	5.42	315	eP	Pn	07 46 50.0	-0.5
TOIG				eS	Sn	07 47 54.5	+2.5
TXIG	Tlaxiaco	5.44	303	eP	Pn	07 46 52.9	+2.1
TXIG				eS	Sn	07 47 50.5	-2.1
HLIG	Huajuapan de L	5.79	308	eP	Pn	07 47 00.8	+5.1
HLIG				eS	Sn	07 47 56.1	-5.0
FTIG	Fresnillo de T	6.09	307	eP	Pn	07 47 03.7	+4.0
FTIG				eS	Sn	07 47 59.4	-9.0

NEIC ***23*** *07:45:40.4±1.3, 19°.6S±0°.1×177°.2W±0°.2, h527^{km}±16^{km}, mb4.1/19, Error ellipse: s-maj=26.3km s-min=16.1km az=62.0*
IDC ***23*** *07:45:43.5±2.5, 20°.51S×177°.83W, h490^{km}±24^{km}, mb3.1/5, mbtmp4.0/7, Error ellipse: s-maj=36.5km s-min=23.4km az=45.0*
ISC 23 07:45:41.8±1.4**, 20°.2S**±0°.2×**177°.6W**±0°.2**, h500^{km}, n32, σ0^{s}.95**/31**, mb4.0**/14**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.76	300	P	P	07 47 07.7	+0.8
MSVF	Nonsavu	4.76	300	P	P	07 47 08.0	+1.1
	6.9nm,0.5s,baz=135,slow=16,SNR=12						
FUTU	Fugatoga	5.87	355	P	P	07 47 11.0	-6.0
NIUE	Niue	7.34	83	P	P	07 47 25.6	-6.0
DZM	Mont Dzumac	14.98	260	P	P	07 48 52.3	+0.4
	2.9nm,0.8s,baz=71,slow=15,SNR=1.5						
CTAO	Charters Tower	33.87	264	P	P	07 51 43.7	+1.3
CTAO				IAmb	IAmb	07 51 48.3	
	comp=Z,11nm,1.2s						
TOO	Toolangi	36.36	234	P	P	07 52 02.2	-0.8
TOO				IAmb	IAmb	07 52 23.4	
	comp=Z,3.7nm,1.2s						
STKA	Stephens Creek	38.23	244	P	P	07 52 19.1	+0.7
STKA				IAmb	IAmb	07 52 38.6	
	comp=Z,19nm,1.2s						
STKA	Stephens Creek	38.23	244	P	P	07 52 18.1	-0.3
	comp=Z,0.7nm,0.4s,baz=73,slow=7.8,SNR=1.2						
	comp=Z,0.7nm,0.4s						
BBOO	Buckleboo	42.99	243	P	P	07 52 55.9	-0.7
WR8	Warramunga Arr	44.84	262	P	P	07 53 11.4	+0.4
WR8				IAmb	IAmb	07 53 18.4	
	comp=Z,6.4nm,1.1s						
AS31	Alice Springs	44.93	256	P	P	07 53 12.2	+0.5
AS31				IAmb	IAmb	07 53 32.0	
	comp=Z,2.1nm,1.2s						
ASAR	Alice Springs	44.93	256	P	P	07 53 12.0	+0.2
ASAR	Alice Springs	44.93	256	P	P	07 53 12.0	+0.2
	comp=Z,2.6nm,0.5s,baz=93,slow=8.1,SNR=54						
ASAR				PcP	pP	07 54 44.6	+1.1
	comp=Z,0.4nm,1.0s,baz=99,slow=3.3,SNR=1.6						
	comp=Z,2.6nm,0.5s						
WB0	Warramunga Arr	44.97	262	P	P	07 53 12.5	+0.5
WB0				IAmb	IAmb	07 53 29.6	
	comp=Z,9.6nm,1.3s						
WB2	Warramunga Arr	44.98	262	P	P	07 53 12.1	0.0
WB2				IAmb	IAmb	07 53 21.1	
	comp=Z,15nm,1.5s						
WRAB	Tennant Creek	44.98	262	P	P	07 53 12.6	+0.5
WRAB				IAmb	IAmb	07 53 14.7	
	comp=Z,4.0nm,0.8s						
WRA	Warramunga Arr	44.99	262	P	P	07 53 12.5	+0.3
WRA	Warramunga Arr	44.99	262	P	P	07 53 12.4	+0.3
	comp=Z,1.2nm,0.8s,baz=98,slow=7.6,SNR=17						
	comp=Z,1.2nm,0.8s						
PSA00	Pilbara Seismi	58.08	257	P	P	07 54 45.6	-1.4
PSA00				IAmb	IAmb	07 55 02.7	
	comp=Z,20nm,1.3s						
SBA	Scott Base	58.20	184	P	P	07 54 47.2	+0.3
VNDA	Vanda	58.24	185	P	P	07 54 48.3	+1.1
VNDA	Vanda	58.24	185	P	P	07 54 47.5	+0.3
	comp=Z,1.3nm,0.8s,baz=321,slow=4.4,SNR=10.0						
	comp=Z,1.3nm,0.8s						
MBWA	Marble Bar	58.26	257	P	P	07 54 48.2	-0.1
MBWA				IAmb	IAmb	07 54 53.3	
	comp=Z,13nm,1.2s						
NWAO	Narrogin (SRO)	58.82	243	P	P	07 54 50.4	-1.5
MORW	Morawa	60.27	247	P	P	07 55 01.9	+0.3
LUWI	Luwuk	61.22	280	P	P	07 55 05.0	-3.1
QSPA	South Pole Qui	69.87	180	P	P	07 56 02.3	+0.6
QSPA				IAmb	IAmb	07 56 24.0	
	comp=Z,4.5nm,1.3s						
QSPA	South Pole Qui	69.87	180	P	P	07 56 02.3	+0.6
	comp=Z,1.1nm,0.6s,baz=108,slow=19,SNR=8.3						
	comp=Z,1.1nm,0.6s						
BELA	Belgrano 2	79.81	173	P	P	07 56 56.3	-0.9
AKASG	Malin Array Be	142.91	332	PKP	PKPdf	08 04 18.6	+0.7
	comp=Z,0.2nm,0.4s,baz=46,slow=3.8,SNR=4.3						
BRTR	Keskin Array B	146.89	313	PKPbc	PKPab	08 04 31.5	+0.5
	comp=Z,0.3nm,0.4s,baz=148,slow=2.8,SNR=2.2						

IDC ***23*** *07:54:08.7±1.1, 0°.89N×97°.36E, h0^{km}, mb3.7/9, mbtmp3.7/10, ML3.2/1, Error ellipse: s-maj=31.2km s-min=19.2km az=67.0*
DJA ***23*** *07:54:13.5±0.5, 1°N±3°×9°8E±°, h19^{km}±3^{km}, M3.9/12, mb3.8/1, MLv4.0/12*
ISC 23 07:54:13.0±0.8**, 0°.92N**±0°.06×**97°.45E**±0°.09**, h27^{km}, n29, σ0^{s}.84**/19**, mb3.7**/9**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.40	18	P	Pn	07 54 22.9	-0.1
GSI				S	Sb	07 54 28.6	+1.0
SNSI	Sinabang, Aceh	1.86	323	P	Pb	07 54 45.1	-1.2
MNSI	Mandailing Nat	2.13	93	P	Pn	07 54 47.5	+0.7
PSI	Prapat	2.38	38	Pn	Pn	07 54 50.6	+0.3
	5.4nm,0.3s,baz=286,slow=7.9,SNR=13						
PSI				Sn	Sn	07 55 18.6	0.0
	4.7nm,0.3s,baz=110,slow=18,SNR=7.2						
	14nm,0.4s						
SISI	Saibi	2.77	144	P	Pn	07 54 56.0	+0.4
TSI	Tuntungan	2.79	23	P	Pn	07 54 56.8	+0.8
PPI	Padang Panjang	3.25	115	P	Pn	07 55 02.8	+0.6
MLSI	Meulaboh, Aceh	3.49	343	P	Pn	07 55 07.5	+2.0
H08S2	Diego Garcia H	26.31	251	T	T	08 26 52.8	
	baz=71,slow=75,SNR=56						
H08S3	Diego Garcia H	26.31	251	T	T	08 26 47.3	
	baz=71,slow=75,SNR=279						
H08S1	Diego Carcia H	26.33	251	T	T	08 26 48.4	
	baz=71,slow=75,SNR=32						
H01W3	Cape Leeuwin H	38.89	158	T	T	08 42 51.0	
	baz=332						
H01W2	Cape Leeuwin H	38.90	158	T	T	08 42 55.3	
	baz=332,slow=74,SNR=8.3						
H01W1	Cape Leeuwin H	38.91	158	T	T	08 42 48.8	
	baz=332,slow=74,SNR=9.2						
WRA	Warramunga Arr	41.67	122	P	P	08 01 59.6	0.0
	0.4nm,0.7s,baz=296,slow=8.2,SNR=5.0						
	0.4nm,0.7s						
ASAR	Alice Springs	43.02	127	P	P	08 02 10.2	-0.5
	0.6nm,0.6s,baz=300,slow=7.5,SNR=6.9						
	0.6nm,0.6s						
KSRS	Korea Array	45.94	34	P	P	08 02 33.9	+0.3
	0.8nm,0.8s,baz=214,slow=9.8,SNR=2.9						
	0.8nm,0.8s						
SONM	Songino Array	47.37	8	P	P	08 02 44.0	-0.8
	0.5nm,0.5s,baz=190,slow=8.4,SNR=3.8						
	0.5nm,0.5s						
MKAR	Makanchi Array	47.57	346	P	P	08 02 46.4	+0.1
	1.0nm,0.5s,baz=161,slow=9.1,SNR=15						
	1.0nm,0.5s						
KURBB	Kurchatov Arra	52.07	345	P	P	08 03 20.3	-0.1
	0.4nm,0.4s,baz=170,slow=6.9,SNR=6.0						
	0.4nm,0.4s						
ZALV	Zalesovo Beam	53.87	351	P	P	08 03 33.0	-0.7
	1.1nm,0.4s,baz=179,slow=7.4,SNR=5.5						
	1.1nm,0.4s						
BVAR	Borovoye Array	56.60	341	P	P	08 03 52.6	-0.8
	0.2nm,0.3s,baz=146,slow=8.2,SNR=3.8						
	0.2nm,0.3s						
H04N2	CROZET ISLANDS	61.69	214	T	T	09 11 28.6	
	baz=54,slow=75,SNR=339						
H04N1	CROZET ISLANDS	61.70	214	T	T	09 11 29.1	
	baz=54,slow=75,SNR=251						
H04N3	CROZET ISLANDS	61.70	214	T	T	09 11 27.7	
	baz=54,slow=75,SNR=277						
H04S1	CROZET ISLANDS	62.02	214	T	T	09 11 35.4	
	baz=54,slow=76,SNR=48						
H04S3	CROZET ISLANDS	62.03	214	T	T	09 11 35.1	
	baz=54,slow=76,SNR=82						
H04S2	CROZET ISLANDS	62.04	214	T	T	09 11 36.4	
	baz=54,slow=76,SNR=33						
QSPA	South Pole Qui	90.86	180	P	P	08 07 14.9	+0.9
	0.6nm,0.8s,baz=240,slow=2.0,SNR=1.5						
	0.6nm,0.8s						

IDC 23 07:57:03.0±3.0**, 31°.42S**×**177°.62W, h0^{km}, mb3.7**/2**, mbtmp3.9**/3**, ML3.0**/1**, Error ellipse: s-maj=71.3km s-min=36.5km az=118.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.07	211	Pn	Pn	07 59 01.7	+0.2
	0.2nm,0.3s,baz=333,slow=6.9,SNR=2.3						
URZ				Sn	Sn	08 00 33.9	+0.4
	1.2nm,0.3s,baz=108,slow=15,SNR=15						
	21nm,1.2s						
ASAR	Alice Springs	43.38	268	P	P	08 05 07.8	+0.4
	0.4nm,0.4s,baz=106,slow=7.3,SNR=10						
	0.4nm,0.4s						
WRA	Warramunga Arr	44.47	273	P	P	08 05 15.6	-0.6
	1.2nm,0.8s,baz=113,slow=8.3,SNR=10.0						
	1.2nm,0.8s						
FINES	FINESS Array B	146.22	340	PKPbc	PKPdf	08 16 43.7	+0.2
	0.9nm,0.6s,baz=59,slow=2.6,SNR=10						

IDC ***23*** *08:06:48.4±0.9, 28°.38N×104°.89E, h0^{km}, mb3.6/11, mbtmp3.7/12, ML4.0/1, Error ellipse: s-maj=35.7km s-min=16.7km az=56.0*
ISC 23 08:06:51.8±0.8**, 28°.5N**±0°.1×**105°.0E**±0°.2**, h19^{km}, n13, σ0^{s}.76**/13**, mb3.8**/11**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.45	210	Pn	Pn	08 09 35.3	+0.9
	1.2nm,0.3s,baz=26,slow=12,SNR=14						
SONM	Songino Array	19.33	3	P	Pn	08 11 18.0	+0.9
	0.5nm,0.3s,baz=184,slow=9.5,SNR=5.2						
	0.7nm,0.3s						
KSRS	Korea Array	21.14	59	P	P	08 11 36.4	+0.8
	0.8nm,0.5s,baz=239,slow=10,SNR=6.1						
	0.8nm,0.5s						
MKAR	Makanchi Array	25.48	322	P	P	08 12 19.0	+0.2
	1.5nm,0.8s,baz=130,slow=10,SNR=12						
	1.5nm,0.8s						
ZALV	Zalesovo Beam	29.40	335	P	P	08 12 54.0	+0.2
	0.8nm,0.5s,baz=142,slow=9.3,SNR=2.5						
	0.8nm,0.5s						
KURBB	Kurchatov Arra	29.80	325	P	P	08 12 58.1	+0.7
	0.9nm,0.6s,baz=134,slow=9.5,SNR=9.5						
	0.9nm,0.6s						
WRA	Warramunga Arr	55.88	146	P	P	08 16 27.5	-1.0
	0.5nm,0.5s,baz=336,slow=8.4,SNR=12						
	0.5nm,0.5s						
ASAR	Alice Springs	58.87	149	P	P	08 16 49.3	-0.2
	0.5nm,0.5s,baz=330,slow=7.0,SNR=9.6						
	0.5nm,0.5s						
AKASG	Malin Array Be	59.75	314	P	P	08 16 54.4	-0.9
	0.1nm,0.3s,baz=71,slow=6.2,SNR=1.9						
	0.1nm,0.3s						
ARCES	ARCESS Array B	59.95	336	P	P	08 16 56.4	0.0
	1.3nm,0.7s,baz=106,slow=7.6,SNR=5.8						
	1.3nm,0.7s						
HFS	Hagfors	66.37	327	P	P	08 17 39.0	-0.1
	0.6nm,0.6s,baz=80,slow=6.6,SNR=1.6						
	0.6nm,0.6s						
NOA	NORSAR Array B	67.27	328	P	P	08 17 43.9	-1.1
	0.2nm,0.5s,baz=69,slow=5.2,SNR=1.9						
	0.2nm,0.5s						
ILAR	Eielson Array	71.83	25	P	P	08 18 12.9	-0.1
	0.2nm,0.6s,baz=291,slow=5.7,SNR=1.6						
	0.2nm,0.6s						

NEIC ***23*** *08:09:23.8±0.8, 31°.89S±0°.08×177°.9W±0°.2, h10^{km}±1^{km}, mb4.2/12, Error ellipse: s-maj=25.7km s-min=6.9km az=116.0*
IDC ***23*** *08:09:25.6±1.1, 31°.76S×178°.44W, h0^{km}, mb4.3/3, mbtmp4.3/3, Error ellipse: s-maj=37.4km s-min=31.0km az=51.0*
WEL ***23*** *08:09:28.7±0.8, 32°S±5°×17°8W±1°5, h33^{km}, mB4.9/7, ML4.9/14, MLv4.7/9, Mw(mB)4.2/7, Error ellipse: s-maj=20.8km s-min=3.6km az=106.4, confirmed*
ISC 23 08:09:25.4±0.7**, 32°.03S**±0°.05×**177°.8W**±0°.1**, h24^{km}, n62, σ2^{s}.21**/65**, mb4.2**/10**, 3C, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.76	358	P	Pb	08 10 14.2	+0.2
GLKZ				S	Sb	08 10 43.2	-4.1
RAO	Raoul Island	2.77	358	Pn	Pn	08 10 06.8	-1.5
RAO	Raoul Island	2.77	358	P	Pb	08 10 15.5	+1.4
RIZ	Raoul Island	2.78	358	S	Sb	08 10 45.4	-2.5
MXZ	Matakaoa Point	6.38	209	P	Pn	08 11 00.8	+3.0
MXZ				S	Sn	08 12 08.5	-1.3
WMGZ	Waiomatatini S	6.55	207	P	Pn	08 11 01.1	+0.9
WMGZ				S	Sn	08 12 13.6	-0.6
PKGZ	Pakihiroa	6.73	209	P	Pn	08 11 01.8	-0.9
PKGZ				S	Sn	08 12 17.6	-0.9
HAZ	Te Kaha	6.76	211	P	Pn	08 11 03.6	+0.6
HAZ				S	Sn	08 12 18.4	-0.9
PUZ	Puketiti	6.83	207	P	Pn	08 11 03.3	-0.9
PUZ				S	Sn	08 12 18.8	-2.4
RUGZ	Raukumara Rang	6.98	211	P	Pn	08 11 06.0	-0.2
RUGZ				S	Sn	08 12 21.9	-3.0
TWGZ	Tauwhareparae	7.04	208	P	Pn	08 11 06.8	-0.1
TWGZ				S	Sn	08 12 24.2	-1.9
KUZ	Kuaotunu	7.12	227	P	Pn	08 11 12.0	+4.0
CNGZ	Carnagh Statio	7.21	206	P	Pn	08 11 09.0	-0.4
TKGZ	Te Karaka	7.31	208	P	Pn	08 11 08.0	-2.6
TKGZ				S	Sn	08 12 30.0	-2.8
MWZ	Matawai	7.36	210	P	Pn	08 11 09.7	-1.6
MWZ				S	Sn	08 12 29.6	-4.4
OPRZ	Ohinepanea	7.42	217	P	Pn	08 11 14.7	+2.6
URZ	Urewera	7.48	212	Pn	Pn	08 11 11.5	-1.5
	6.1nm,0.3s,baz=311,slow=1.5,SNR=39						
URZ				Sn	Sn	08 12 28.9	-8.0
	2.5nm,0.3s,baz=148,slow=20,SNR=8.6						
URZ	Urewera	7.48	212	P	Pn	08 11 11.4	-1.5
URZ				S	Sn	08 12 31.7	-5.2
RAGZ	Rawiri	7.54	210	P	Pn	08 11 16.5	+2.6
RIGZ	Rimuhau	7.58	207	P	Pn	08 11 17.2	+2.9
RIGZ				S	Sn	08 12 35.5	-3.9
WCZ	Waipu Caves	7.59	237	P	Pn	08 11 17.8	+3.4
PRGZ	Paritu Road	7.72	206	P	Pn	08 11 18.9	+2.6
PRGZ				S	Sn	08 12 39.3	-3.7
MUGZ	Murupara	7.81	213	P	Pn	08 11 18.2	+0.7
MUGZ				S	Sn	08 12 40.4	-4.7
SNGZ	Shannon Statio	7.81	209	P	Pn	08 11 16.9	-0.6
RTZ	Ruatahuna	7.83	211	P	Pn	08 11 19.0	+1.2
OUZ	Omahuta	7.84	244	P	Pn	08 11 20.0	+2.1
KNZ	Kokohu	7.89	207	P	Pn	08 11 17.7	-0.8
TOZ	Tahuroa Road	7.91	222	P	Pn	08 11 21.8	+3.0
MHGZ	Mahia Peninsul	7.92	205	P	Pn	08 11 18.2	-0.7
MHGZ				S	Sn	08 12 46.1	-1.7
ARHZ	Aropaoanui	8.36	209	P	Pn	08 11 23.2	-1.8
ARHZ				S	Sn	08 12 51.7	-7.0
NIUE	Niue	14.72	31	Pn	Pn	08 12 50.2	-2.0
TOO	Toolangi	30.50	249	P	P	08 15 34.4	-2.3
CTAO	Charters Tower	34.24	281	P	P	08 16 08.9	-0.7
CTAO				IAmb	IAmb	08 16 18.5	
	comp=Z,1.9nm,0.8s						
BBOO	Buckleboo	38.71	256	P	P	08 16 46.4	-1.1
COEN	Coen	39.89	288	P	P	08 16 58.5	+0.9
COEN				IAmb	IAmb	08 17 16.1	
	comp=Z,9.0nm,1.1s						
AS31	Alice Springs	43.20	269	P	P	08 17 24.3	-0.4
ASAR	Alice Springs	43.20	269	P	P	08 17 23.9	-0.8
ASAR	Alice Springs	43.20	269	P	P	08 17 24.2	-0.5
	comp=Z,2.5nm,0.6s,baz=105,slow=7.6,SNR=32						
	comp=Z,2.5nm,0.6s						
WR0	Warramunga Arr	44.16	274	P	P	08 17 31.6	-0.8
WR0				IAmb	IAmb	08 17 38.1	
	comp=Z,2.8nm,0.9s						
WR8	Warramunga Arr	44.20	274	P	P	08 17 32.0	-0.7
WR8				IAmb	IAmb	08 17 42.7	
	comp=Z,5.0nm,1.1s						
WRA	Warramunga Arr	44.34	274	P	P	08 17 33.1	-0.7
	comp=Z,3.7nm,0.3s,baz=112,slow=8.0,SNR=72						
	comp=Z,3.7nm,0.3s						
WB0	Warramunga Arr	44.37	274	P	P	08 17 33.3	-0.8
VNDA	Vanda	46.50	186	P	P	08 17 51.6	+1.4
VNDA				IAmb	IAmb	08 18 10.3	
	comp=Z,2.1nm,0.7s						
KNRA	Kununurra	51.00	276	P	P	08 18 23.0	-2.6
FITZ	Fitzroy Crossi	52.53	271	P	P	08 18 34.3	-2.6
CASY	Casey	53.78	208	P	P	08 18 47.4	+1.9
CASY				IAmb	IAmb	08 18 55.6	
	comp=Z,2.9nm,0.9s						
QSPA	South Pole Qui	58.09	180	P	P	08 19 22.6	+6.0
	comp=Z,0.9nm,0.7s,baz=0.2,slow=0.7,SNR=15						
	comp=Z,0.9nm,0.7s						
TROLL	Troll, Antarti	76.25	180	⇑P	P	08 21 20.5	+8.9
	comp=Z,35nm,0.3s						
SNAA	Sanae	76.53	178	⇑P	P	08 21 22.3	+9.2
	comp=Z,21nm,0.4s						
VNA3	Neumayer Olymp	76.67	176	⇑P	P	08 21 22.9	+9.0
	comp=Z,1.0nm,0.6s						
H03S2	Juan Fernandez	79.44	123	T	T	09 50 19.5	
	baz=237,slow=75,SNR=9.7						
H03S1	Juan Fernandez	79.45	123	T	T	09 50 23.8	
	baz=237,slow=75,SNR=8.1						
H03S3	Juan Fernandez	79.46	123	T	T	09 50 22.6	
	baz=237,slow=75,SNR=11						
H03N3	Juan Fernandez	79.64	123	T	T	09 50 22.3	
	baz=241,slow=72,SNR=17						
H03N2	Juan Fernandez	79.64	123	T	T	09 50 21.0	
	baz=241,slow=72,SNR=13						
H03N1	Juan Fernandez	79.66	123	T	T	09 50 21.5	
	baz=241,slow=72,SNR=44						
FINES	FINESS Array B	146.72	339	PKPbc	PKPab	08 29 07.0	+1.3
	comp=Z,2.4nm,0.6s,baz=61,slow=4.4,SNR=22						
NB2	NORSAR Subarra	150.38	351	PKP	PKiKP	08 29 17.1	+2.3
	comp=Z,0.4nm,0.5s,baz=17,slow=2.6						
NOA	NORSAR Array B	150.38	351	PKPbc	PKiKP	08 29 17.3	+2.5
	comp=Z,0.4nm,0.5s,baz=16,slow=4.1,SNR=3.6						
HFS	Hagfors	150.87	348	PKPbc	PKiKP	08 29 18.0	+2.3
	comp=Z,1.1nm,0.5s,baz=40,slow=2.2,SNR=9.6						
AKASG	Malin Array Be	152.67	321	PKPbc	PKiKP	08 29 21.6	+1.9
	comp=Z,0.3nm,0.4s,baz=70,slow=1.8,SNR=4.9						
TORD	Torodi Ar. Bea	161.20	179	PKPab	PKPab	08 30 12.1	+4.4
	comp=Z,0.4nm,0.5s,baz=149,slow=3.0,SNR=1.3						

IDC 23 08:13:05.6±1.9**, 21°.77S**×**173°.74W, h0^{km}, mb3.8**/2**,**

mbtmp4.1/3,ML3.1/1,Error ellipse: s-maj=124.5km s-min=35.6km az=170.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAR	Rarotonga	13.02	90	Pn	Pn	08 16 10.2	-1.7
	1.0nm,0.3s,baz=354,slow=19,SNR=1.4						
RAR				Sn	Sn	08 18 25.1	-12
	0.7nm,0.3s,baz=76,slow=20,SNR=1.2						
	10.0nm,0.5s						
ASAR	Alice Springs	48.11	257	P	P	08 21 47.5	-0.1
	1.8nm,0.9s,baz=91,slow=8.4,SNR=10						
	1.8nm,0.9s						
WRA	Warramunga Arr	48.37	262	P	P	08 21 48.9	-0.7
	1.0nm,0.9s,baz=95,slow=8.0,SNR=21						
	1.0nm,0.9s						
AKASG	Malin Array Be	145.98	334	PKPbc	PKPab	08 32 47.7	+0.1
	0.2nm,0.3s,baz=40,slow=4.4,SNR=2.1						

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*FCIAR **23** 08:19:14.0,78°.95N×6°.30E,h10^{km},station ZFI2 has station magnitude of 3.50 station OMEGA has station magnitude of 3.50*

*BER **23** 08:19:15.3±3.5,78°.74N×5°.36E,h17^{km}±13^{km},Mw3.5, ML2.8(NAO),Confirmed Earthquake*

*NAO **23** 08:19:17.3±1.1,78°.76N×6°.46E,h15^{km},ML2.8*

*KOLA **23** 08:19:19.4,78°.44N×7°.80E,h0^{km},ML2.1,Error ellipse: s-maj=20.2km s-min=10.5km az=110.0,Greenland sea,Knipovich ridge, middle*

ISC 23 08:19:15.7±2.6,**78°.80N**±0°.06×**5°.98E**±0°.10,**h31**^{km}±17^{km},**n22,**σ**1^{s}.70**/38,**2C,Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	Kingsbay	1.17	81	Pn	Pn	08 19 37.0	+1.2
KBS				Sn	Sb	08 19 51.9	-0.1
KBS	Kingsbay	1.17	81	P	Pn	08 19 36.6	+0.8
KBS				S	Sb	08 19 51.6	-0.3
KBS	Kingsbay	1.17	81	⇑*i*P	Pn	08 19 36.9	+1.2
KBS				*e*S	Sb	08 19 51.9	-0.1
KBS				IAML		08 19 53.9	
	comp=Z,71nm,0.3s						
BRBA	Barentsburg A	1.82	110	Pn	Pn	08 19 46.1	+1.4
BRBA				Sn	Sb	08 20 08.9	-1.7
BRBA	Barentsburg A	1.82	110	*e*P	Pn	08 19 46.6	+1.9
BRBA				*e*S	Sn	08 20 06.9	+0.2
BRBA				IAML		08 20 10.5	
	comp=Z,48nm,0.3s						
SPA0	Spitsbergen Ar	2.18	102	Pn	Pn	08 19 51.6	+1.9
	baz=286,slow=37						
SPA0				Sn	Sn	08 20 17.4	+1.9
	baz=266,slow=22						
SPA0	Spitsbergen Ar	2.18	102	*e*P	Pn	08 19 49.7	0.0
SPA0				*e*S	Sn	08 20 16.3	+0.8
SPA0	Spitsbergen Ar	2.18	102	⇑*i*P	Pn	08 19 51.6	+1.9
SPA0				*e*S	Sn	08 20 16.8	+1.3
SPA0				IAML		08 20 22.3	
	comp=Z,25nm,0.3s						
SPITS	Spitsbergen Ar	2.18	102	P	Pn	08 19 51.3	+1.6
SPITS				S	Sn	08 20 14.9	-0.6
HSPB	Hornsund (broa	2.70	127	Pn	Pn	08 19 59.6	+2.7
HSPB				Sn	Sn	08 20 27.3	-1.2
HSPB	Hornsund (broa	2.70	127	P	Pn	08 19 58.1	+1.2
HSPB				S	Sn	08 20 25.5	-2.9
HSPB	Hornsund (broa	2.70	127	*e*P	Pn	08 19 58.9	+2.1
HSPB				*e*S	Sn	08 20 31.0	+2.6
HSPB	Hornsund (broa	2.70	127	*e*P	Pn	08 19 58.1	+1.2
HSPB				*e*S	Sn	08 20 26.7	-1.7
HSPB				IAML		08 20 31.3	
	comp=Z,10.0nm,0.2s						
HOPEN	Hopen	4.67	110	Pn	Pn	08 20 24.6	+0.8
HOPEN				Sn	Sn	08 21 14.7	-2.1
HOPEN	Hopen	4.67	110	*e*P	Pn	08 20 24.0	+0.1
HOPEN				*e*S	Sn	08 21 16.2	-0.6
HOPEN	Hopen	4.67	110	*e*P	Pn	08 20 24.5	+0.7
HOPEN				*e*S	Sn	08 21 15.1	-1.8
HOPEN				IAML		08 21 20.0	
	comp=Z,7.5nm,0.4s						
DAG	Danmarks Havn	5.58	261	*e*S	Sn	08 21 30.1	-9.0
DBG	Daneborg	7.51	247	*e*P	Pn	08 20 58.8	-4.0
DBG				*e*S	Sn	08 22 16.5	-10
ZFI2	Zemlya Franca-	7.51	55	*e*P	Pn	08 21 04.8	+2.0
ZFI2				*e*S	Sn	08 22 24.1	-2.6
	comp=Z,12nm,1.7s						
OMEGA	Omega	7.53	55	*e*P	Pn	08 21 04.8	+1.8
OMEGA				*e*S	Sn	08 22 24.1	-2.9
	comp=Z,12nm,1.2s						
JNW	Jan Mayen West	8.62	213	*e*P	Pn	08 21 16.6	-1.5
JMIC	Jan Mayen	8.67	213	*e*P	Pn	08 21 17.4	-1.3

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*ASRS **23** 08:41:13.5,53°.8N±0°.8×88°.2E±0°.8,h1^{km}±1^{km},MLh3.5/18, confirmed*

*NNC **23** 08:41:17.4±2.2,53°.64N×87°.97E,h0^{km},mb3.9,mpv3.5, Error ellipse: s-maj=16.9km s-min=9.6km az=64.0, Suspected Mining explosion.*

ISC 23 08:41:12.8±0.8,**53°.87N**±0°.03×**88°.24E**±0°.02,**h0**^{km},**n24,**σ**0^{s}.92**/47,**4C-13D,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUZB	Luzhba, Kemero	0.44	117	⇓P	Pb	08 41 23.3	-0.2
LUZB				S	Sb	08 41 30.2	-0.5
ERU	Erunakovo, Kuz	0.57	299	⇓P	Pb	08 41 25.1	-0.6
ERU				S	Sb	08 41 33.6	-0.8
KALT3	Kaltan 3	0.59	234	P	Pg	08 41 24.5	+0.4
KALT3				S	Sg	08 41 33.0	+1.2
MALIN	Malinovka, Kuz	0.72	232	Pg	Pg	08 41 26.8	+0.1
KOTO	Kotino, Kuzbas	0.84	293	⇓P	Pb	08 41 30.2	-0.1
KOTO				S	Sb	08 41 42.6	+0.5
TASR	Tashtagol	1.13	191	P	Pb	08 41 34.8	-0.3
TASR				Sg	Sn	08 41 51.5	-0.6
POMOR	Pomortsevo, Ku	1.14	299	Pg	Pg	08 41 34.5	-0.2
POMOR				Sg	Sn	08 41 52.7	+0.2
BJR3	Bachatsky-3 (S	1.28	287	⇓P	Pb	08 41 37.6	-0.1
BJR3				Sg	Sb	08 41 54.7	0.0
BJR2	Bachatsky-2, K	1.31	289	Pg	Pg	08 41 37.3	-0.6
BJR2				Sg	Sg	08 41 55.1	+0.2
ELT	Eltsovka	1.34	244	⇓P	Pg	08 41 37.5	-0.9
ELT				S	Sn	08 41 57.0	-0.2
BJR1	Bachatsky 1, K	1.35	287	⇓P	Pn	08 41 38.7	-0.1
BJR1				Sg	Sb	08 41 57.0	+0.3
VEH	Verkhnyaya Baz	1.39	115	⇓P	Pb	08 41 39.5	-0.1
VEH				Sg	Sg	08 41 57.0	-0.3
SALR	Pechorkino, Sa	1.59	291	Pg	Pn	08 41 40.9	-1.3
SALR				Sg	Sg	08 42 05.2	+1.3
BRCR	Berchikul'	1.78	2	⇑P	Pb	08 41 46.2	-0.1
BRCR				Sg	Sb	08 42 09.5	+0.4
ZAA0	Zalesovo Array	2.02	274	⇓Pn	Pb	08 41 49.7	-0.7
	7.5nm,0.7s						
ZAA0				⇑Sn	Sg	08 42 17.3	-0.5
	24nm,0.7s						
DJO	Djoy, Khakassi	2.09	120	⇓P	Pg	08 41 52.2	-0.7
DJO				Sg	Sg	08 42 19.1	-0.8
YALR	Yailyu, Altay	2.13	190	⇓P	Pb	08 41 51.3	-1.0
YALR				Sg	Sb	08 42 18.7	-0.6
ARTR	Artybash	2.15	196	Pg	Pb	08 41 51.9	-0.7
ARTR				Sg	Sn	08 42 17.6	+0.4
CERR	Cheremushki	2.16	117	Pg	Pb	08 41 53.0	+0.3
CERR				Sg	Sg	08 42 23.4	+1.4
BALAH	Balakhonka, Ku	2.17	325	Pg	Pb	08 41 52.3	-0.6
BALAH				Sg	Sg	08 42 23.9	+1.3
KURK	Kurchatov	6.69	246	Pn	Pn	08 42 53.8	+1.6
KURK				Sn	Sn	08 44 07.3	-1.8
KURK				Lg	Lg	08 44 43.0	
KURBB	Kurchatov Arra	6.79	245	⇑Pn	Pn	08 42 54.7	+1.2
	5.2nm,0.4s						
KURBB				⇑Sn	Sn	08 44 10.8	-0.6
	16nm,0.6s						
KURBB				⇓Lg	Lg	08 44 45.0	
	28nm,0.8s						
MK31	Makanchi Array	8.03	211	Pn	Pn	08 43 13.2	+2.5
	2.2nm,0.6s,baz=28,slow=12,SNR=21						
MK31				⇓Sn	Sn	08 44 41.8	-0.4
	1.8nm,0.5s						
MK31				⇓Lg	Lg	08 45 25.9	
	9.0nm,0.8s						
MAKZ	Makanchi	8.12	212	Pn	Pn	08 43 13.6	+1.7
MAKZ				Sn	Sn	08 44 42.4	-1.9
MAKZ				Lg	Lg	08 45 25.7	

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*NEIC **23** 08:50:15.8±0.9,19°.454N±0°.007×155°.425W±0°.004, h5^{km}±1^{km},Error ellipse: s-maj=2.9km s-min=1.3km az=218.0*

HVO 23 08:50:15.3±1.0,**19°.454N**±0°.004×**155°.420W**±0°.006, **h6**^{km}±4^{km},**ML2.8**/43,**ML2.8**/42(NEIC),**Error ellipse: s-maj=0.9km s-min=0.6km az=120.0,Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLH	Mauna Loa	0.05	39		Pg	08 50 17.5	+0.5
MLH				Sg	Sg	08 50 19.2	+1.0
MLH				IAML		08 50 19.2	
	comp=E,6µm,0.1s						
AIN	Ainahou	0.09	204		Pg	08 50 18.0	+0.6
AIN				Sg	Sg	08 50 20.1	+1.2
WRMHI	West Rim	0.12	112		Pg	08 50 18.6	+0.6
WRMHI					Sg	08 50 20.8	+1.1
UWE	Uwekahuna	0.12	105		Pg	08 50 18.7	+0.7
UWE				Sg	Sg	08 50 21.4	+1.6
UWE				IAML		08 50 21.7	
	comp=E,6µm,0.3s						
UWE				IAML		08 50 21.7	
	comp=N,5µm,0.1s						
OBL	Observatory Le	0.13	106		Pg	08 50 18.7	+0.6
OBL					Sg	08 50 21.1	+1.1
RSD	Rainshed	0.14	86		Pg	08 50 19.5	+1.3
SDHHI	Sand Hill	0.14	118		Pg	08 50 18.8	+0.6
SDHHI					Sg	08 50 21.1	+1.0
UWB	Uwekahuna Bluf	0.14	102		Pg	08 50 18.8	+0.5
UWB					Sg	08 50 21.1	+1.0
SBLHI	Steaming Bluff	0.15	100		Pg	08 50 18.9	+0.5
SBLHI					Sg	08 50 21.2	+0.8
RIM	Rim	0.15	113		Pg	08 50 18.9	+0.5
RIM					Sg	08 50 21.6	+1.1
HATHI	Halema‘uma‘u T	0.15	101		Pg	08 50 18.9	+0.4
HATHI				IAML		08 50 23.0	
	comp=E,2µm,0.4s						
HATHI				IAML		08 50 24.0	
	comp=N,2µm,0.2s						
KKO	Keanakako'i	0.16	111		Pg	08 50 19.1	+0.5
KKO					Sg	08 50 21.5	+0.8
BYL	Byron's Ledge	0.16	105		Pg	08 50 19.0	+0.4
BYL				IAML		08 50 23.6	
	comp=E,2µm,0.5s						
HMH	Humu‘ula Sheep	0.16	338		Pg	08 50 19.3	+0.6
HMH				IAML		08 50 22.3	
	comp=E,3µm,0.4s						
MWH	Mokuaweoweo	0.17	281		Pg	08 50 19.3	+0.4
MWH				IAML		08 50 24.4	
	comp=N,2µm,0.3s						
MWH				IAML		08 50 24.9	
	comp=E,2µm,0.4s						
HLP	Hilina Pali	0.19	146		Pg	08 50 19.7	+0.5
PUH	Pauahi	0.21	112		Pg	08 50 19.7	+0.2
HTC	Hot Caves	0.22	174		Pg	08 50 20.0	+0.3
ALEP	Alea Permanent	0.23	292		Pg	08 50 20.2	+0.2
ALEP					Sg	08 50 23.7	+0.6
KNHH	Kane Nui o Ham	0.25	107		Pg	08 50 20.6	+0.4
KHU	Kahuku	0.28	222	Pg	Pg	08 50 20.8	0.0
STCH	Steam Cracks	0.29	104		Pg	08 50 21.0	+0.1
STCH				IAML		08 50 27.4	
	comp=E,1µm,0.1s						
STCH				IAML		08 50 27.8	
	comp=N,1µm,0.1s						
NPOC	North of Pu‘u	0.30	102		Pg	08 50 21.2	0.0
NPOC					Sg	08 50 26.0	+0.8
JCUZ	Jacuzzi	0.31	103		Pg	08 50 21.4	0.0
JCUZ					Sg	08 50 26.0	+0.5
POHA	Pohakuloa	0.32	341		Pg	08 50 21.7	+0.1
POHA				IAML		08 50 31.2	
	comp=N,1µm,0.5s						
POHA				IAML		08 50 32.4	
	comp=N,1µm,0.5s						
JOKA	Jonika Flow	0.39	93		Pg	08 50 22.8	-0.2
JOKA					Sg	08 50 22.9	-5.2
JOKA				IAML		08 50 29.7	
	comp=E,1µm,0.5s						
JOKA				IAML		08 50 30.3	
	comp=N,1µm,0.2s						
HUH	Hualalai	0.45	300		Pg	08 50 25.0	+0.8
CPH	Captain Cook	0.47	274		Pg	08 50 24.2	-0.3
KKH	Kailua Kona	0.60	290		Pg	08 50 25.9	-1.0
MHA	Mahukona	0.86	328		Sg	08 50 40.9	-2.2
HLK	Haleakala	1.51	329		Pn	08 50 38.8	-4.4
HLK					Sn	08 50 56.0	-7.5
KHLH	Kahului Airpor	1.72	327		Pn	08 50 42.5	-3.4
KHLH					Sn	08 51 01.6	-6.6

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*IDC **23** 08:54:59.2±14.0,24°.01S×179°.47W,h381^{km}±125^{km}, mb3.1/5,mbtmp3.9/6,Error ellipse: s-maj=104.7km s-min=22.7km az=45.0*

ISC 23 08:55:10.3±2.1,**24°.0S**±0°.3×**179°.7W**±0°.3,**h512**^{km},**n9,**σ**0^{s}.31**/8,**mb3.5**/6,**2D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	14.49	190	P	P	08 58 07.0	-7.8
	6.5nm,0.7s,baz=275,slow=4.0,SNR=8.1						
URZ				S	S	09 00 34.6	-12
	3.2nm,0.5s,baz=48,slow=23,SNR=9.2						
ASAR	Alice Springs	42.29	261	P	P	09 02 18.8	0.0
	0.3nm,0.3s,baz=95,slow=8.3,SNR=9.3						
	0.3nm,0.3s						
WRA	Warramunga Arr	42.67	266	P	P	09 02 22.0	+0.1
	0.7nm,0.3s,baz=99,slow=7.3,SNR=38						
	0.7nm,0.3s						
VNDA	Vanda	54.32	185	P	P	09 03 47.2	-0.4
	0.6nm,0.7s,baz=352,slow=6.5,SNR=2.2						
	0.6nm,0.7s						
QSPA	South Pole Qui	66.10	180	P	P	09 05 06.4	+0.2
	1.5nm,0.6s,baz=23,slow=2.4,SNR=12						
	1.5nm,0.6s						
TROLL	Troll, Antarti	84.25	181	⇓P	P	09 06 47.7	+0.3
	comp=Z,111nm,0.3s						
SNAA	Sanae	84.58	179	P	P	09 06 49.1	+0.1
	comp=Z,0.4nm,0.5s,baz=198,slow=13,SNR=1.5						
	comp=Z,0.4nm,0.5s						
VNA3	Neumayer Olymp	84.78	177	⇓P	P	09 06 50.2	+0.3
	comp=Z,1.0nm,0.4s						
HFS	Hagfors	142.68	349	PKP	PKiKP	09 13 47.6	-0.2
	comp=Z,1.1nm,0.9s,baz=45,slow=4.3,SNR=4.0						

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*IDC **23** 09:00:54.8±3.2,33°.37S×179°.09W,h0^{km},mb3.4/2, mbtmp3.5/3,ML3.5/1,Error ellipse: s-maj=73.4km s-min=46.9km az=114.0*

*WEL **23** 09:01:00.5±0.7,34°S±6°×17°9W±1°5,h33^{km},M4.1/6, mB4.8/2,ML4.5/13,MLv4.1/6,Mw(mB)4.0/2,Error ellipse: s-maj=21.0km s-min=4.4km az=109.3,confirmed*

ISC 23 09:01:00.5±1.2,**33°.54S**±0°.07×**178°.9W**±0°.1,**h48**^{km},**n21,**σ**1^{s}.73**/33,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	4.35	11	P	Pn	09 02 03.7	-0.3
GLKZ				S	Sn	09 02 54.0	+0.5
MXZ	Matakaoa Point	4.61	209	P	Pn	09 02 08.4	+0.8
MXZ				S	Sn	09 03 01.6	+1.8
WMGZ	Waiomatatini S	4.79	206	P	Pn	09 02 10.7	+0.7
WMGZ				S	Sn	09 03 06.0	+1.7
PKGZ	Pakihiroa	4.96	209	P	Pn	09 02 11.6	-0.9
PKGZ				S	Sn	09 03 11.2	+2.7
HAZ	Te Kaha	4.99	212	P	Pn	09 02 13.3	+0.5
HAZ				S	Sn	09 03 12.9	+3.6
PUZ	Puketiti	5.07	206	P	Pn	09 02 15.9	+2.0
PUZ				S	Sn	09 03 12.2	+0.9
RUGZ	Raukumara Rang	5.21	211	P	Pn	09 02 18.1	+2.1
RUGZ				S	Sn	09 03 16.8	+2.0
TWGZ	Tauwhareparae	5.27	208	P	Pn	09 02 16.6	-0.1
TWGZ				S	Sn	09 03 15.6	-0.6
CNGZ	Carnagh Statio	5.46	205	P	Pn	09 02 21.0	+1.8
TKGZ	Te Karaka	5.55	207	P	Pn	09 02 22.1	+1.6
TKGZ				S	Sn	09 03 19.5	-3.4
MWZ	Matawai	5.59	210	P	Pn	09 02 21.1	0.0
URZ	Urewera	5.71	213	Pn	Pn	09 02 21.3	-1.4
	1.4nm,0.3s,baz=268,slow=3.8,SNR=14						
URZ				Sn	Sn	09 03 24.3	-2.5
	2.0nm,0.3s,baz=51,slow=15,SNR=7.5						
	3.2nm,0.3s						
URZ	Urewera	5.71	213	P	Pn	09 02 20.9	-1.8
URZ				S	Sn	09 03 24.2	-2.6
WCZ	Waipu Caves	6.05	245	P	Pn	09 02 28.5	+1.2
KNZ	Kokohu	6.12	206	P	Pn	09 02 25.9	-2.5
KNZ				S	Sn	09 03 35.3	-1.8
OUZ	Omahuta	6.42	253	P	Pn	09 02 32.7	+0.2
BKZ	Black Stump Fm	6.73	212	P	Pn	09 02 36.7	0.0
TSZ	Takapari Road	7.70	211	P	Pn	09 02 50.3	+0.4
ASAR	Alice Springs	42.28	271	P	P	09 08 48.6	-0.9
	0.4nm,0.7s,baz=109,slow=7.1,SNR=4.1						
	0.4nm,0.7s						
WRA	Warramunga Arr	43.55	276	P	P	09 08 59.2	-0.6
	0.3nm,0.4s,baz=116,slow=8.0,SNR=7.7						
	0.3nm,0.4s						
FINES	FINESS Array B	147.79	338	PKPbc	PKPbc	09 20 39.5	+0.3
	1.4nm,0.9s,baz=51,slow=5.9,SNR=3.6						

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*UCR **23** 09:01:10.0±0.8,11°.70N×86°.43W,h88^{km}±5^{km},MW3.6*

*CATAC **23** 09:01:11.7±0.3,12°N±3°×8°6W±°,h60^{km}±3^{km},M3.2/25, MLv3.2/25,Error ellipse: s-maj=6.9km s-min=3.1km az=33.5,confirmed*

*SNET **23** 09:01:18.0±0.8,11°.97N×86°.80W,h35^{km}±379^{km},ML3.0*

ISC 23 09:01:10.9±1.3,**11°.69N**±0°.05×**86°.46W**±0°.04,**h80**^{km}±8^{km}, **n75,**σ**1^{s}.11**/99,**Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRUN	El Crucero	0.33	29	P	Pn	09 01 18.0	-5.6
CRUN				S	Sn	09 01 28.1	-4.8
SABN	Sabanita	0.40	48	P	Pn	09 01 23.1	-0.8
NANN	Nandasmo	0.42	53	P	Pn	09 01 25.0	+0.9
NANN	Nandasmo	0.42	53	S	Sn	09 01 35.1	+1.3
MASN	Masaya	0.42	46	P	Sn	09 01 35.4	+1.4
MAS3	Al N del Volca	0.44	40	P	Pn	09 01 23.9	-0.3
MAS3				S	Sn	09 01 33.8	-0.2
ABCN	Banco Central	0.46	19	P	Pn	09 01 21.9	-2.4
ABCN	Banco Central	0.46	19	S	Sn	09 01 34.4	+0.1
UNAN	Cigeo UNAN	0.46	24	P	Pn	09 01 24.6	+0.2
UNAN				S	Sn	09 01 35.4	+1.0
ENAN	Enatrel Managu	0.47	25	P	Pn	09 01 24.5	+0.1
SAPS	Ciudad Sandino	0.48	7	P	Pn	09 01 24.9	+0.3
SAPS	Ciudad Sandino	0.48	7	S	Sn	09 01 35.6	+0.9
TISN	Laguna Tiscapa	0.49	23	P	Pn	09 01 23.8	-0.9
MGAN	Managua	0.50	25	*e*P	Pn	09 01 24.2	-0.5
MGAN				*e*S	Sn	09 01 35.6	+0.7
MGAN	Managua	0.50	25	P	Pn	09 01 24.8	+0.1
COPN	Copaltepe	0.50	345	*e*P	Pn	09 01 24.4	-0.4
COPN	Copaltepe	0.50	345	P	Pn	09 01 24.9	+0.1
APQ2	Apoyeque	0.52	15	P	Pn	09 01 24.9	0.0
APQ2				S	Sn	09 01 35.5	+0.2
WILN	Americas 2	0.54	30	S	Sn	09 01 35.4	-0.1
APQ3	Volcan Apoyequ	0.59	9	P	Pn	09 01 25.8	+0.3
APQ3				S	Sn	09 01 37.2	+0.9
ARIN	Rivas	0.66	111	*e*P	Pn	09 01 25.8	-0.4
ARIN				*e*S	Sn	09 01 37.1	-0.4
MOMN	Momotombo	0.72	354	P	Pn	09 01 26.8	-0.1
MOMN				S	Sn	09 01 39.0	+0.2
MOM2	El Cardon	0.74	358	P	Pn	09 01 27.4	+0.3
MOM2				S	Sn	09 01 39.2	+0.1
JAPN	Al SSO del Vol	0.79	102	*e*P	Pn	09 01 27.5	0.0
JAPN	Al SSO del Vol	0.79	102	S	Sn	09 01 40.9	+1.0
MORN	Al O del Volca	0.81	100	P	Pn	09 01 27.8	0.0
CNGA	Al SSO del Vol	0.83	344	P	Pn	09 01 28.3	+0.1
CNGA				S	Sn	09 01 41.8	+0.8
CNGN	Cerro Negro	0.84	344	*e*P	Pn	09 01 28.1	-0.1
CNGN				*e*S	Sn	09 01 41.1	+0.1
CNGN	Cerro Negro	0.84	344	P	Pn	09 01 28.3	+0.1
PLRN	Geotermica Pol	0.94	341	P	Pn	09 01 29.0	-0.3
PLRN				S	Sn	09 01 43.0	0.0
POLN	Al Sur del Vol	1.01	340	P	Pn	09 01 29.5	-0.8
POLN				S	Sn	09 01 44.2	-0.4
LCRUZ	La Cruz	1.02	127	*e*P	Pn	09 01 30.1	-0.1
CARN	Rivas	1.05	118	*e*P	Pn	09 01 30.3	-0.3
CARN				*e*S	Sn	09 01 45.0	-0.2
CARN	Rivas	1.05	118	P	Pn	09 01 30.4	-0.2
CARN				S	Sn	09 01 45.1	-0.2
BOAB	BOACO BROADBAN	1.08	46	P	Pn	09 01 30.8	-0.3
BOAB	BOACO BROADBAN	1.08	46	S	Sn	09 01 45.7	-0.4
PKGN	Cerro Pekin	1.10	333	P	Pn	09 01 31.4	+0.3
PKGN				S	Sn	09 01 47.3	+0.9
CRIN	San Cristobal	1.16	330	*e*P	Pn	09 01 32.3	+0.3
CRIN				*e*S	Sn	09 01 48.3	+0.5
CRIN	San Cristobal	1.16	330	P	Pn	09 01 32.5	+0.5
ACON	Acoyapa	1.29	77	*e*P	Pn	09 01 32.9	-0.7
ACON				*e*S	Sn	09 01 49.8	-0.9
ACON	Acoyapa	1.29	77	P	Pn	09 01 33.2	-0.4
MATN	Matagalpa	1.34	23	P	Pn	09 01 34.3	0.0
MATN	Matagalpa	1.34	23	S	Sn	09 01 52.1	+0.2
LAPC	Finca la Perla	1.36	132	*e*P	Pn	09 01 34.0	-0.6
ELI1	Hacienda Flor	1.37	139	*e*P	Pn	09 01 35.0	+0.5
PEJA	Penjamo Buenos	1.38	125	*e*P	Pn	09 01 34.6	-0.1
VRLE	La Escondida,	1.40	130	*e*P	Pn	09 01 34.9	-0.2
ALIBA	Liberia Airpor	1.41	140	*e*P	Pn	09 01 35.8	+0.6
GPS1	Guardaparques	1.42	130	*e*P	Pn	09 01 35.1	-0.2
MESS	Mesas	1.56	127	*e*P	Pn	09 01 37.1	0.0
VMAR	Armenia, Volca	1.58	123	*e*P	Pn	09 01 36.8	-0.6
CUI	Cuipilapa	1.64	129	*e*P	Pn	09 01 38.0	-0.1
CUI				*e*S	Sn	09 01 58.7	0.0
POTN	Potosi Cosigui	1.66	322	*e*P	Pn	09 01 38.7	+0.4
POTN	Potosi Cosigui	1.66	322	P	Pn	09 01 38.6	+0.4
POTN				S	Sn	09 01 59.9	+0.9
PLVR	Palo Verde	1.72	141	*e*P	Pn	09 01 39.3	-0.1
LCHIL	Los Chiles	1.83	111	*e*P	Pn	09 01 41.0	+0.4
NICO	Nicoya	1.84	147	*e*P	Pn	09 01 40.8	+0.1
RCPN	Sur Rio San Ju	1.86	11	P	Pn	09 01 41.0	-0.1
RCVN	Varillal2	1.90	8	P	Pn	09 01 41.8	+0.1
CMARA	Lajas Hojancha	1.95	148	*e*P	Pn	09 01 42.2	0.0
JTS	Las Juntas de	2.03	133	*e*P	Pn	09 01 43.0	-0.3
CNCH	Conchagua	2.07	320	*e*P	Pn	09 01 44.3	+0.4
CNCH				*e*S	Sn	09 02 06.2	-2.8
CNCH				IAML		09 02 17.4	
	comp=Z,252nm,0.2s						
CNCH	Conchagua	2.07	320	P	Pn	09 01 44.7	+0.8
CNCH	Conchagua	2.07	320	S	Sn	09 02 10.1	+1.1
VARE2	V. Arenal	2.10	125	*e*P	Pn	09 01 45.5	+1.2
LCND	La Caada	2.13	319	*e*P	Pn	09 01 45.1	+0.5
LCND	La Caada	2.13	319	S	Sn	09 02 09.0	-1.3
PACA	Pacayal	2.54	314	*e*P	Pn	09 01 51.4	+1.2
PACA				*e*S	Sn	09 02 17.3	-2.9
PACA	Pacayal	2.54	314	P	Pn	09 01 52.3	+2.2
PACA	Pacayal	2.54	314	S	Sn	09 02 21.5	+1.3
PQSS	Presa 15 de Se	2.81	313	*e*P	Pn	09 01 55.0	+1.2
PQSS				*e*S	Sn	09 02 23.5	-3.1
PQSS				IAML		09 02 34.4	
	comp=Z,23nm,0.2s						
ABE2	San Pablo	3.08	130	*e*P	Pn	09 01 58.6	+0.9
LOMA	Loma Larga	3.28	307	*e*P	Pn	09 02 01.8	+1.6
LOMA				*e*S	Sn	09 02 35.8	-2.4
JAYA	Jayaque - finc	3.51	304	*e*P	Pn	09 02 04.7	+1.4
JAYA				*e*S	Sn	09 02 40.1	-3.7
JAYA				IAML		09 02 49.5	
	comp=Z,97nm,0.2s						
NUBE	Las Nubes	3.91	305	*e*P	Pn	09 02 10.2	+1.4

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*NNC **23** 09:19:28.8±1.5,44°.74N×81°.80E,h0^{km},mb3.7,mpv3.4, Error ellipse: s-maj=16.4km s-min=8.3km az=126.0, Suspected Mining explosion.*

*SOME **23** 09:19:28.7,44°.70N×81°.88E,h25^{km}*

ISC 23 09:19:25.4±1.5,**44°.66N**±0°.06×**82°.08E**±0°.10,**h0**^{km},**n15,**σ**0^{s}.93**/22,**1C-1D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	Jarkent	1.67	259	P	Pg	09 19 57.8	+0.4
	9.9nm,0.1s						
DJR				S	Sb	09 20 18.8	+0.1
	11nm,0.2s						
DJR	Jarkent	1.67	259	*e*P	Pn	09 19 56.3	+0.3
	1.2nm,0.1s						
DJR				*e*S	Sn	09 20 16.0	-2.2
	5.3nm,0.3s						
KTMS	Ketmen	1.74	226	P	Pg	09 19 59.7	+1.0
	3.3nm,0.1s						
KTMS				S	Sg	09 20 21.9	+0.6
	17nm,0.2s						
KTMS	Ketmen	1.74	226	*e*P	Pg	09 19 58.7	0.0
	1.1nm,0.1s						
KTMS				*e*S	Sn	09 20 20.1	+0.1
	5.5nm,0.2s						
KNOS	Konyrlen	2.10	263	Pg	Pb	09 20 04.6	+0.2
	20nm,0.2s						
KNOS				Lg	Lg	09 20 30.2	

	9.0nm,0.2s						
MK31	**Makanchi Array**	**2.14**	**4**	Pn	**Pb**	**09 20 04.7**	**-0.3**
	5.2nm,0.3s,baz=184,slow=14,SNR=243						
MK31				Sn	**Sb**	**09 20 32.1**	**+0.1**
	0.6nm,0.1s,baz=183,slow=24,SNR=8.8						
PDGK	**Podgornoye**	**2.29**	**235**	⇓Pn	**Pb**	**09 20 07.1**	**-0.7**
	5.1nm,0.5s						
PDGK				⇑Sn	**Sb**	**09 20 36.9**	**+0.2**
	6.1nm,0.5s						
SHLS	**Shalkode**	**2.42**	**232**	Pg	**Pn**	**09 20 06.8**	**+0.6**
	21nm,0.2s						
SHLS				Lg	Lg	09 20 34.0	
	27nm,0.3s						
SHLS	**Shalkode**	**2.42**	**232**	*e*P	**Pn**	**09 20 06.8**	**+0.6**
	21nm,0.2s						
SHLS				*e*S	**Sn**	**09 20 34.0**	**-2.6**
	27nm,0.3s						
BLB	**Baldybastay**	**2.64**	**259**	Pg	**Pb**	**09 20 14.0**	**+0.3**
	23nm,0.2s						
BLB				Lg	Lg	09 20 46.3	
	18nm,0.2s						
UZB	**Uzynbulak**	**2.68**	**237**	Pg	**Pb**	**09 20 13.1**	**-1.2**
	7.6nm,0.2s						
UZB				Lg	Lg	09 20 45.3	
	3.0nm,0.2s						
KPKS	**Kokpek**	**2.72**	**245**	Pg	**Pb**	**09 20 15.0**	**0.0**
	1.5nm,0.3s						
KPKS				Lg	Lg	09 20 48.7	
	11nm,0.2s						
ARXS	**Arharly**	**3.08**	**263**	Pg	**Pb**	**09 20 20.9**	**-0.2**
	4.2nm,0.2s						
ARXS				Lg	Lg	09 20 58.2	
	8.7nm,0.5s						
SATY	**Saty**	**3.10**	**240**	Pg	**Pb**	**09 20 21.5**	**0.0**
	3.6nm,0.2s						
SATY				Lg	Lg	09 20 59.8	
	18nm,0.3s						
KTBS	**Karatobe**	**4.00**	**258**	Pg	**Pb**	**09 20 37.3**	**+0.6**
	2.2nm,0.7s						
KTBS				Lg	Lg	09 21 26.2	
	7.0nm,0.7s						

IDC 23 09:34:42.7±58.0, 16°.39S×174°.48W, h566^{km}±137^{km}, mb3.0/3, mbtmp4.0/4, Error ellipse: s-maj=884.5km s-min=143.5km az=77.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.27**	**258**	P	P	09 36 34.0	+0.1
	14nm,0.8s,baz=96,slow=12,SNR=6.1						
STKA	**Stephens Creek**	**42.65**	**241**	P	P	09 41 49.9	-0.4
	1.4nm,0.8s,baz=99,slow=13,SNR=3.0						
	1.4nm,0.8s						
WRA	**Warramunga Arr**	**48.62**	**258**	P	P	09 42 35.6	-0.3
	0.4nm,0.6s,baz=92,slow=7.0,SNR=13						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**48.83**	**253**	P	P	09 42 37.5	+0.1
	2.2nm,0.4s,baz=89,slow=8.0,SNR=45						
	2.2nm,0.4s						

*IDC **23** 09:36:59.9±1.4, 30°.00N×85°.48E, h0^{km}, mb3.7/7, mbtmp3.7/9, ML3.9/2, MS3.2/3, Error ellipse: s-maj=55.3km s-min=18.5km az=61.0*

ISC 23 09:37:05.0±1.5, 30°.0N±0°.2×85°.6E±0°.3, h35^{km}, n11, σ0^{s}.51/9, mb3.7/7, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**15.39**	**328**	LR	LR	09 46 28.8	
	comp=Z,47nm,18.4s,baz=104,slow=37						
CMAR	**Chiang Mai Arr**	**16.78**	**130**	Pn	**P**	**09 40 58.7**	**-0.5**
	0.6nm,0.3s,baz=314,slow=13,SNR=8.2						
CMAR				LR	LR	09 48 22.0	
	comp=Z,36nm,18.7s,baz=200,slow=41						
	0.9nm,0.3s						
MKAR	**Makanchi Array**	**16.92**	**352**	Pn	**Pn**	**09 40 58.5**	**-0.4**
	0.1nm,0.3s,baz=166,slow=13,SNR=13						
	1.9nm,0.8s						
KURBB	**Kurchatov Arra**	**21.23**	**348**	P	**P**	**09 41 47.1**	**-0.6**
	0.9nm,0.5s,baz=168,slow=10.0,SNR=8.5						
	0.9nm,0.5s						
ZALV	**Zalesovo Beam**	**23.90**	**359**	P	**P**	**09 42 15.0**	**-0.2**
	1.3nm,0.8s,baz=172,slow=10.0,SNR=4.3						
	1.3nm,0.8s						
SONM	**Songino Array**	**23.93**	**36**	P	**P**	**09 42 16.3**	**+0.5**
	0.4nm,0.6s,baz=230,slow=9.0,SNR=1.7						
	0.4nm,0.6s						
JOW	**Kunigami**	**37.55**	**84**	LR	LR	10 01 09.3	
	comp=Z,106nm,19.2s,baz=174,slow=38						
FINES	**FINESS Array B**	**49.58**	**327**	P	**P**	**09 45 52.4**	**+0.1**
	0.9nm,0.7s,baz=101,slow=8.6,SNR=5.9						
	0.9nm,0.7s						
ARCES	**ARCESS Array B**	**51.79**	**337**	P	**P**	**09 46 09.6**	**+0.7**
	1.8nm,0.8s,baz=107,slow=7.8,SNR=4.1						
	1.8nm,0.8s						
WRA	**Warramunga Arr**	**68.37**	**130**	P	**P**	**09 48 03.3**	**+0.1**
	1.9nm,1.0s,baz=324,slow=6.5,SNR=13						
	1.9nm,1.0s						
ASAR	**Alice Springs**	**70.76**	**133**	P	**P**	**09 48 18.1**	**+0.2**
	0.6nm,0.8s,baz=318,slow=6.8,SNR=4.1						
	0.6nm,0.8s						

*HEL **23** 09:45:51.6±0.3, 67°.70N×21°.19E, h0^{km}, ML1.8, Suspected explosion*

*UPP **23** 09:45:51.4±0.1, 67°.63N×21°.03E, h0^{km}, ML2.1, Unknown*

*IDC **23** 09:45:52.3±1.0, 67°.61N×21°.24E, h0^{km}, mbtmp3.0/4, ML1.9/3, Error ellipse: s-maj=17.3km s-min=8.1km az=103.0*

ISC 23 09:45:51.1±0.7, 67°.61N±0°.02×20°.97E±0°.03, h0^{km}, n35, σ1^{s}.06/50, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.42**	**325**	P	**Pg**	**09 45 59.5**	**+0.3**
KUA				S	**Sg**	**09 46 05.2**	**+0.6**
MASU	**Masugnsbyn**	**0.42**	**111**	P	**Pg**	**09 45 59.3**	**0.0**
DUNU	**Dundret**	**0.52**	**198**	P	**Pb**	**09 46 01.8**	**-1.3**
RATU	**Laukkuluspa**	**0.57**	**293**	P	**Pg**	**09 46 02.4**	**+0.5**
LANU	**Lannavaara**	**0.59**	**41**	PG	**Pg**	**09 46 02.3**	**0.0**
KOVU	**Salmi**	**0.69**	**334**	P	**Pg**	**09 46 04.4**	**+0.1**
SALU	**Saltoluokta**	**0.98**	**257**	P	**Pg**	**09 46 10.1**	**+0.3**
PAJU	**Pajala**	**1.02**	**124**	P	**Pg**	**09 46 10.2**	**-0.5**
PAJU	**Pajala**	**1.02**	**124**	PG	**Pg**	**09 46 10.2**	**-0.5**
PAJU				SB	**Sg**	**09 46 23.9**	**+0.1**
ERTU	**Ertsjaerv**	**1.17**	**155**	P	**Pg**	**09 46 13.0**	**-0.5**
ERTU	**Ertsjaerv**	**1.17**	**155**	PG	**Pg**	**09 46 13.2**	**-0.2**
ERTU				SG	**Sb**	**09 46 29.3**	**-0.4**
KLF	**Kolari**	**1.22**	**107**	PN	**Pg**	**09 46 14.2**	**-0.2**
KLF				MSG		09 46 27.1	
	comp=Z,5.0nm,0.2s						
KLF				SN	**Sg**	**09 46 30.2**	**0.0**
HEF	**Hetta**	**1.29**	**50**	PN	**Pg**	**09 46 14.4**	**-1.4**
	baz=236						
HEF				MSG		09 46 27.1	
	comp=Z,6.7nm,0.2s						
HEF				SN	**Sg**	**09 46 31.8**	**-0.7**
KIF	**Kilpisjarvi**	**1.40**	**358**	PN	**Pn**	**09 46 17.4**	**-0.5**
KIF				MSG		09 46 32.6	
	comp=Z,22nm,0.2s						
KIF				SN	**Sg**	**09 46 36.1**	**+0.1**
HARU	**Harads**	**1.46**	**180**	P	**Pn**	**09 46 18.4**	**-0.2**
I37NO	**I37NO**	**1.71**	**330**	I	I	09 56 05.0	
	baz=148,slow=315,SNR=4.2						
KALU	**Kalix**	**2.00**	**151**	PG	**Pb**	**09 46 27.2**	**-1.1**
KALU				SG	**Sb**	**09 46 54.0**	**+0.3**
TOF	**Tornio**	**2.03**	**138**	PG	**Pb**	**09 46 28.2**	**-0.6**
TOF				MSG		09 46 52.5	
	comp=Z,6.2nm,0.2s						
TOF				SG	**Sb**	**09 46 55.1**	**+0.5**
TRO	**Tromso**	**2.16**	**341**	SG	**Sb**	**09 46 58.1**	**-0.3**
RNF	**Rovaniemi**	**2.21**	**115**	PG	**Pb**	**09 46 30.6**	**-1.4**
RNF				SG	**Sb**	**09 46 59.9**	**0.0**
ARA0	**ARCESS Array S**	**2.55**	**39**	PG	**Pn**	**09 46 35.2**	**+1.5**
	baz=225						
ARA0				SG	**Sn**	**09 47 07.4**	**+2.0**
ARCES	**ARCESS Array B**	**2.55**	**39**	Pn	**Pn**	**09 46 34.1**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=224,slow=12,SNR=14						
ARCES				Sn	**Sn**	**09 47 07.1**	**+1.7**
	comp=Z,0.9nm,0.3s,baz=217,slow=24,SNR=10						
	comp=Z,0.8nm,0.2s						
RANF	**Ranua**	**2.81**	**122**	SG	**Sb**	**09 47 17.6**	**+0.7**
KEV	**Kevo**	**3.08**	**43**	MSG		09 47 18.7	
	comp=Z,2.8nm,0.2s						
KEV				SB	**Sn**	**09 47 19.7**	**+1.3**
OUL	**Oulu**	**3.22**	**140**	SG	**Sb**	**09 47 29.7**	**+0.9**
VRF	**Varrio**	**3.30**	**84**	SG	**Sb**	**09 47 30.2**	**-0.9**
OLKF	**Oulanka, Finla**	**3.56**	**107**	PB	**Pn**	**09 46 49.2**	**+1.6**
OLKF				SB	**Sn**	**09 47 31.9**	**+1.6**
MSF	**Maaselka**	**3.63**	**114**	PN	**Pn**	**09 46 49.9**	**+1.4**
UMAU	**Umeaa**	**3.75**	**182**	PN	**Pn**	**09 46 51.7**	**+1.6**
UMAU				SN	**Sn**	**09 47 35.9**	**+1.1**
KU6	**Riekki**	**3.87**	**110**	SB	**Sn**	**09 47 41.0**	**+3.1**
KU1	**Kurvinen**	**4.00**	**117**	PN	**Pn**	**09 46 55.3**	**+1.8**
KU1				SN	**Sn**	**09 47 41.8**	**+0.8**
HUSU	**Husum**	**4.35**	**190**	SN	**Sn**	**09 47 49.6**	**-0.1**
FINES	**FINESS Array B**	**6.57**	**158**	Pn	**Pn**	**09 47 29.8**	**+0.9**
	baz=349,slow=12,SNR=1.0						
FINES				Sn	**Sn**	**09 48 43.6**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=342,slow=22,SNR=1.5						
FINES				Lg	Lg	09 49 18.0	
	comp=Z,0.2nm,0.3s,baz=346,slow=27,SNR=4.1						
	comp=Z,0.5nm,0.5s						
HFS	**Hagfors**	**8.16**	**207**	Pn	**Pn**	**09 47 50.3**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=21,slow=12,SNR=1.8						
HFS				Sn	**Sn**	**09 49 21.7**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=26,slow=26,SNR=2.5						
	comp=Z,1.1nm,0.9s						
SPITS	**Spitsbergen Ar**	**10.70**	**355**	Pn	**Pn**	**09 48 24.6**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=175,slow=17,SNR=7.5						

*IDC **23** 09:53:42.3±1.2, 2°.33N×126°.10E, h0^{km}, mb3.9/7, mbtmp3.9/7, Error ellipse: s-maj=110.5km s-min=17.7km az=67.0*

*NEIC **23** 09:53:52.9±1.9, 2°.11N±0°.08×125°.62E±0°.07, h80^{km}±6^{km}, mb4.3/12, Error ellipse: s-maj=12.0km s-min=10.8km az=181.0*

ISC 23 09:53:54.1±0.7, 2°.07N±0°.09×125°.60E±0°.09, h100^{km}, n24, σ1^{s}.46/24, mb4.1/10, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.19**	**126**		**Pn**	**09 54 28.0**	**-1.1**
LUWI	**Luwuk**	**4.19**	**222**	Pn	**Pn**	**09 54 53.9**	**-2.0**
TOLI2	**Tolitoli**	**4.91**	**259**	Pn	**Pn**	**09 55 04.9**	**-0.7**
MTN	**Manton Dam**	**15.80**	**160**	Pn	**Pn**	**09 57 28.1**	**-2.9**
MTN				IAmb	IAmb	09 57 39.3	
	comp=Z,17nm,1.1s						
KNRA	**Kununurra**	**17.91**	**170**	P	**Pn**	**09 57 56.7**	**0.0**
KNRA				IAmb	IAmb	09 58 00.3	
	comp=Z,29nm,1.4s						
FITZ	**Fitzroy Crossi**	**20.04**	**180**	P	**P**	**09 58 19.7**	**+0.4**
FITZ	**Fitzroy Crossi**	**20.04**	**180**	P	Pn	09 58 20.6	-1.4
	comp=Z,2.5nm,0.8s,baz=10,slow=9.6,SNR=1.9						
	comp=Z,2.5nm,0.8s						
YULB	**Yu-li**	**21.60**	**349**	P	**P**	**09 58 32.9**	**-3.2**
TPUB	**Ta-pu**	**21.65**	**348**	P	**P**	**09 58 34.8**	**-1.8**
WB0	**Warramunga Arr**	**23.35**	**159**	P	**P**	**09 58 53.0**	**-0.8**
WB0				IAmb	IAmb	09 58 54.0	
	comp=Z,5.7nm,0.5s						
WRA	**Warramunga Arr**	**23.50**	**159**	P	**P**	**09 58 53.4**	**-1.7**
WRA	**Warramunga Arr**	**23.50**	**159**	P	**P**	**09 58 54.8**	**-0.3**
	comp=Z,3.4nm,0.5s,baz=338,slow=10,SNR=45						
	comp=Z,3.4nm,0.5s						
MBWA	**Marble Bar**	**23.79**	**194**	P	**P**	**09 58 59.7**	**+1.9**
MBWA				IAmb	IAmb	09 59 33.1	
	comp=Z,18nm,1.3s						
AS31	**Alice Springs**	**26.83**	**163**	P	**P**	**09 59 26.6**	**+1.3**
ASAR	**Alice Springs**	**26.83**	**163**	P	**P**	**09 59 25.7**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=342,slow=8.1,SNR=17						
ASAR				PcP	**PcP**	**10 02 47.1**	**+1.4**
	comp=Z,0.4nm,0.4s,baz=351,slow=2.3,SNR=8.0						
	comp=Z,0.5nm,0.3s						
STKA	**Stephens Creek**	**37.02**	**157**	P	**P**	**10 00 54.4**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=339,slow=8.6,SNR=4.1						
	comp=Z,1.8nm,0.6s						
ARMA	**Armidale**	**40.74**	**144**	P	**P**	**10 01 25.6**	**+0.1**
MKAR	**Makanchi Array**	**58.29**	**326**	P	**P**	**10 03 38.4**	**-0.1**
MKAR	**Makanchi Array**	**58.29**	**326**	P	**P**	**10 03 39.6**	**+1.2**
	comp=Z,0.5nm,0.4s,baz=122,slow=7.6,SNR=11						
	comp=Z,0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**62.53**	**328**	P	**P**	**10 04 08.2**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=129,slow=5.9,SNR=7.3						
	comp=Z,0.7nm,0.6s						
KURK	**Kurchatov**	**62.54**	**328**	P	**P**	**10 04 07.7**	**+0.4**
KURK				IAmb	IAmb	10 04 08.8	
	comp=Z,1.9nm,0.7s						
VNDA	**Vanda**	**81.93**	**173**	P	**P**	**10 06 03.8**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=322,slow=5.4,SNR=1.9						
	comp=Z,0.2nm,0.3s						
D19K	**Kuna River**	**83.07**	**21**	P	**P**	**10 06 09.1**	**+0.8**
D19K				IAmb	IAmb	10 06 31.2	
	comp=Z,7.1nm,1.4s						
IMAR	**Indian Mountai**	**84.31**	**24**	P	**P**	**10 06 15.5**	**+0.9**

*HLW **23** 10:19:19.7, 36°.67N×26°.86E, h27^{km}±19^{km}, Md3.9, Ml3.6*

*GII **23** 10:19:21.8±0.0, 36°.461N±0°.003×26°.873E±0°.001, h150^{km}, Mws3.6, confirmed*

*ISK **23** 10:19:21.9, 36°.71N×26°.73E, h144^{km}±1^{km}, ML2.8/22*

*IDC **23** 10:19:21.4±1.4, 36°.61N×26°.77E, h152^{km}±17^{km}, mb3.5/7, mbtmp3.8/12, Error ellipse: s-maj=24.6km s-min=14.6km az=159.0*

*THE **23** 10:19:22.5, 37°N±4°×2°7E±°, h140^{km}±8^{km}, M3.2/8, MLh3.2/8*

*AFAD **23** 10:19:24.0, 36°.76N×26°.86E, h130^{km}±5^{km}, ML3.1*

*ATH **23** 10:19:27.0, 36°.13N×27°.18E, h138^{km}±7^{km}, ML3.5/4, Manual Solution by A.Moschou First location: 2019/06/23 10:20:33, This location: 2019/06/24 07:08:13 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 14 km; Longitude uncertainty: 9 km*

ISC 23 10:19:20.9±0.7, 36°.61N±0°.04×26°.79E±0°.04, h150^{km}±6^{km}, n109, σ1^{s}.59/140, mb3.9/6, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YAZI	**Mula-Dat§a-**	**0.54**	**82**	P	**Pn**	**10 19 43.3**	**+0.9**
YAZI				S	**Sn**	**10 19 57.3**	**-1.5**
BODT	**Bodrum**	**0.61**	**42**	Pg	**Pn**	**10 19 43.5**	**+0.6**
BODT				Sg	**Sn**	**10 19 59.2**	**-0.5**
BODT	**Bodrum**	**0.61**	**42**	P	**Pn**	**10 19 43.5**	**+0.6**
DAT	**Datca**	**0.64**	**79**	Pg	**Pn**	**10 19 44.3**	**+1.2**
DAT				Sg	**Sn**	**10 20 00.3**	**+0.2**
BDRM	**Kayabasi**	**0.69**	**49**	P	**Pn**	**10 19 43.9**	**+0.6**
BDRM				S	**Sn**	**10 19 59.5**	**-1.1**
DDIM	**Aydin, Didim**	**0.92**	**23**	P	**Pn**	**10 19 45.5**	**+0.5**
DDIM				S	**Sn**	**10 19 59.0**	**-4.5**
MLSB	**Milas**	**1.04**	**49**	Pg	**Pn**	**10 19 47.0**	**+1.0**
THR8	**Santorini-Mono**	**1.08**	**259**	P	**Pn**	**10 19 47.0**	**+0.7**
THERA	**Ancient Thera,**	**1.09**	**257**	P	**Pn**	**10 19 46.8**	**+0.4**
SMG	**Samos**	**1.10**	**2**	P	**Pn**	**10 19 46.5**	**0.0**
SMG				S	**Sn**	**10 20 05.1**	**-1.1**
KARP	**Karpathos**	**1.10**	**164**	Pn	**Pn**	**10 19 48.4**	**+1.8**
KARP	**Karpathos**	**1.10**	**164**	P	**Pn**	**10 19 48.2**	**+1.6**
KARP	**Karpathos**	**1.10**	**164**	P	**Pn**	**10 19 48.3**	**+1.6**
KARP				S	**Sn**	**10 20 03.2**	**-3.1**
THR2	**Thira island,**	**1.11**	**262**	P	**Pn**	**10 19 47.2**	**+0.7**
APE	**Apeiranthos**	**1.11**	**295**	Pg	**Pn**	**10 19 46.9**	**+0.3**
APE				Sg	**Sn**	**10 20 05.1**	**-1.3**
APE	**Apeiranthos**	**1.11**	**295**	P	**Pn**	**10 19 47.0**	**+0.3**
APE				S	**Sn**	**10 20 05.2**	**-1.3**
GCAM	**G?zelcaml?**	**1.14**	**18**	Pg	**Pn**	**10 19 47.2**	**+0.3**
GCAM	**G?zelcaml?**	**1.14**	**18**	P	**Pn**	**10 19 46.9**	**+0.1**
ARG	**Arkhangelos**	**1.15**	**110**	Pn	**Pn**	**10 19 48.9**	**+2.0**
ARG	**Arkhangelos**	**1.15**	**110**	P	**Pn**	**10 19 48.7**	**+1.8**
ARG				S	**Sn**	**10 20 08.5**	**+1.7**
ARG	**Arkhangelos**	**1.15**	**110**	P	**Pn**	**10 19 48.7**	**+1.8**
ARG				S	**Sn**	**10 20 05.2**	**-1.6**
TURN	**Turunc**	**1.18**	**82**	Pn	**Pn**	**10 19 48.5**	**+1.3**
TURN	**Turunc**	**1.18**	**82**	P	**Pn**	**10 19 48.4**	**+1.2**
TURN				S	**Sn**	**10 20 06.5**	**-0.8**
TURN				*i* IAML		10 20 08.0	
	comp=E,330nm,0.3s						
TURN				*i* IAML		10 20 09.0	
	comp=N,277nm,0.4s						
MULA	**Mugla, Merkez-**	**1.38**	**62**	P	**Pn**	**10 19 50.3**	**+1.0**
MULA				S	**Sn**	**10 20 10.4**	**-0.7**
MULA				*i* IAML		10 20 15.0	
	comp=E,104nm,0.3s						
DGB	**zmir**	**1.44**	**3**	P	**Pn**	**10 19 49.3**	**-0.4**
DGB				S	**Sn**	**10 20 06.3**	**-5.7**
DALY	**Dalyan (Mula)**	**1.51**	**82**	Pn	**Pn**	**10 19 52.6**	**+2.1**
ZKR	**Zakros**	**1.57**	**198**	Pn	**Pn**	**10 19 53.4**	**+2.2**
ZKR	**Zakros**	**1.57**	**198**	P	**Pn**	**10 19 52.9**	**+1.7**
ZKR				S	**Sn**	**10 20 13.6**	**-0.8**
AYDB	**Zeytinkoy-Aydi**	**1.59**	**33**	Pn	**Pn**	**10 19 52.1**	**+0.5**
ESEN	**Aydn-Nazilli**	**1.71**	**46**	P	**Pn**	**10 19 53.7**	**+0.9**
URLA	**Izmir**	**1.75**	**355**	Pn	**Pn**	**10 19 53.5**	**+0.3**
URLA	**Izmir**	**1.75**	**355**	P	**Pn**	**10 19 53.5**	**+0.3**
SABU	**Mula-Dalaman**	**1.76**	**82**	P	**Pn**	**10 19 54.8**	**+1.5**
SABU				S	**Sn**	**10 20 17.5**	**-0.7**
SABU				*i* IAML		10 20 22.0	
	comp=N,184nm,0.6s						
SABU				*i* IAML		10 20 23.0	
	comp=E,140nm,0.4s						
IZMR	**zmir-demi**	**1.78**	**31**	P	**Pn**	**10 19 53.8**	**+0.4**
IZMR				S	**Sn**	**10 20 14.0**	**-4.6**
NAZL	**Nazilli-Aydin**	**1.80**	**41**	Pn	**Pn**	**10 19 54.7**	**+1.0**
FETY	**Fethiye**	**1.84**	**89**	Pn	**Pn**	**10 19 56.0**	**+1.8**
FETY	**Fethiye**	**1.84**	**89**	P	**Pn**	**10 19 57.2**	**+3.1**
FETY				S	**Sn**	**10 20 20.2**	**+0.4**
CHOS	**Chios island**	**1.87**	**342**	P	**Pn**	**10 19 54.2**	**-0.3**
TAVA	**DENIZLI_Tavas**	**1.90**	**63**	P	**Pn**	**10 19 55.9**	**+1.0**
TAVA				S	**Sn**	**10 20 19.8**	**-1.3**
TAVA				*i* IAML		10 20 22.0	
	comp=N,98nm,0.7s						
TAVA				*i* IAML		10 20 22.0	
	comp=E,94nm,0.6s						
DNZT	**Denizli-Tavas-**	**1.91**	**69**	P	**Pn**	**10 19 56.5**	**+1.5**
DNZT				S	**Sn**	**10 20 19.0**	**-2.2**
IACM	**Heraklion**	**1.91**	**228**	P	**Pn**	**10 19 55.6**	**+0.7**
MHLO	**Agia Marina, M**	**1.93**	**273**	P	**Pn**	**10 19 56.0**	**+0.9**
ODEM	**Odemis-Izmir**	**1.95**	**31**	Pn	**Pn**	**10 19 56.2**	**+0.7**
IZZE	**Mula-Seydike**	**1.97**	**94**	P	**Pn**	**10 19 57.0**	**+1.4**
IZZE				S	**Sn**	**10 20 20.6**	**-1.6**
IZZE				*i* IAML		10 20 25.0	
	comp=E,141nm,0.4s						
IDI	**Anoyia**	**2.03**	**230**	P	**Pn**	**10 19 56.8**	**+0.3**
	104nm,0.3s,baz=30,slow=11,SNR=240						
IDI				S	**Sn**	**10 20 21.6**	**-2.2**
	117nm,0.3s,baz=339,slow=17,SNR=3.9						
KIRA	**zmir-Kiraz**	**2.04**	**38**	P	**Pn**	**10 19 57.2**	**+0.8**
CAME	**Cameli-Denizli**	**2.04**	**80**	Pn	**Pn**	**10 19 58.1**	**+1.5**
DNIZ	**Denizli-Tavas-**	**2.06**	**60**	P	**Pn**	**10 19 58.3**	**+1.6**
DNIZ				S	**Sn**	**10 20 23.8**	**-0.6**
DNIZ				*i* IAML		10 20 26.0	
	comp=N,112nm,0.5s						
CAEL	**Denizli, Camel**	**2.09**	**75**	P	**Pn**	**10 19 58.7**	**+1.5**
CAEL				S	**Sn**	**10 20 23.0**	**-2.1**
CAEL				*i* IAML		10 20 28.0	
	comp=E,158nm,0.5s						
CAEL				*i* IAML		10 20 31.0	
	comp=N,175nm,0.6s						
APMY	**Acipayam-Deniz**	**2.18**	**66**	Pn	**Pn**	**10 19 59.7**	**+1.5**
KNIK	**Mula-Seydike**	**2.25**	**83**	P	**Pn**	**10 20 00.1**	**+1.2**
KNIK				S	**Sn**	**10 20 26.9**	**-1.5**
KNIK				*i* IAML		10 20 30.0	
	comp=N,55nm,0.2s						
KNIK				*i* IAML		10 20 32.0	
	comp=E,88nm,0.5s						
KSL	**Kastellorizon**	**2.30**	**101**	P	**Pn**	**10 20 01.1**	**+1.6**
KSL	**Kastellorizon**	**2.30**	**101**	P	**Pn**	**10 20 01.1**	**+1.6**
KSL				S	**Sn**	**10 20 26.1**	**-3.2**
AKAS	**Kas**	**2.30**	**99**	Pn	**Pn**	**10 20 01.9**	**+2.2**
AKAS	**Kas**	**2.30**	**99**	P	**Pn**	**10 20 01.5**	**+1.8**
AKAS				S	**Sn**	**10 20 28.9**	**-0.6**
GOLH	**Golhisar**	**2.30**	**73**	P	**Pn**	**10 20 01.7**	**+2.0**
GOLH				S	**Sn**	**10 20 29.2**	**-0.4**
GOLH				*i* IAML		10 20 31.0	
	comp=N,107nm,0.8s						
GOLH				*i* IAML		10 20 34.0	
	comp=E,120nm,0.5s						
MANT	**Manisa**	**2.34**	**36**	P	**Pn**	**10 20 00.2**	**0.0**
KULA	**Kula-Manisa**	**2.41**	**37**	Pn	**Pn**	**10 20 01.8**	**+0.9**
INCE	**Denizli-Bozkur**	**2.48**	**63**	P	**Pn**	**10 20 03.0**	**+1.2**
INCE				*i* IAML		10 20 35.0	
	comp=N,67nm,0.6s						
INCE				*i* IAML		10 20 35.0	
	comp=E,70nm,0.5s						
ELL	**Elmali**	**2.51**	**86**	Pn	**Pn**	**10 20 04.2**	**+2.0**
DEMR	**Demre-Antalya**	**2.54**	**98**	Pn	**Pn**	**10 20 04.2**	**+1.8**
GORD	**Gordes-Manisa**	**2.54**	**25**	Pn	**Pn**	**10 20 02.4**	**-0.1**
IMMV	**Iera Moni Meta**	**2.55**	**244**	P	**Pn**	**10 20 03.0**	**+0.4**
SLUM	**Salum**	**5.27**	**195**	P	**Pn**	**10 20 38.1**	**+0.2**
SLUM				S	**Sn**	**10 21 34.6**	**-3.4**
CSS	**Mathiatis**	**5.56**	**105**	P	**Pn**	**10 20 41.5**	**-0.2**
CSS	**Mathiatis**	**5.56**	**105**	S	**Sn**	**10 21 43.9**	**-1.0**
BRTR	**Keskin Array B**	**6.22**	**58**	P	**Pn**	**10 20 52.5**	**+1.9**
	1.5nm,0.9s,baz=229,slow=13,SNR=7.5						
SWA2		**7.43**	**189**	P	**Pn**	**10 21 07.0**	**+0.2**
SWA2				S	**Sn**	**10 22 26.4**	**-3.4**
MMC7	**Mount Meron ar**	**7.92**	**114**	P	**Pn**	**10 21 12.8**	**-0.5**
MMA0B	**Mount Meron ar**	**7.94**	**114**	P	**Pn**	**10 21 13.0**	**-0.4**
MMA0B	**Mount Meron ar**	**7.94**	**114**	S	**Sn**	**10 22 40.8**	**-1.1**
MMAI	**Mount Meron Ar**	**7.94**	**114**	P	**Pn**	**10 21 13.0**	**-0.5**
	4.9nm,0.4s,baz=298,slow=12,SNR=12						
MMAI				S	**Sn**	**10 22 39.3**	**-2.6**
	4.8nm,0.4s,baz=300,slow=26,SNR=9.1						
GEM	**Giv'at Ha'Em**	**8.04**	**112**	P	**Pn**	**10 21 14.3**	**-0.4**
GEM	**Giv'at Ha'Em**	**8.04**	**112**	S	**Sn**	**10 22 41.7**	**-2.6**
NATI	**Neve Ativ**	**8.07**	**112**	P	**Pn**	**10 21 14.9**	**-0.2**
NATI	**Neve Ativ**	**8.07**	**112**	S	**Sn**	**10 22 44.4**	**-0.6**
MMLI	**Mount Malkishu**	**8.25**	**118**	P	**Pn**	**10 21 17.0**	**-0.6**
MMLI	**Mount Malkishu**	**8.25**	**118**	S	**Sn**	**10 22 47.7**	**-1.7**
HMDT	**Nahal Hemdat**	**8.42**	**119**	P	**Pn**	**10 21 18.7**	**-1.2**
HMDT	**Nahal Hemdat**	**8.42**	**119**	S	**Sn**	**10 22 52.1**	**-1.4**
KZIT	**Kziot**	**8.51**	**130**	P	**Pn**	**10 21 19.9**	**-1.1**
KZIT	**Kziot**	**8.51**	**130**	S	**Sn**	**10 22 54.0**	**-1.7**
YTIR	**Yattir**	**8.67**	**125**	P	**Pn**	**10 21 22.4**	**-0.8**
YTIR	**Yattir**	**8.67**	**125**	S	**Sn**	**10 22 57.9**	**-1.7**
DSI	**Dead Sea**	**8.71**	**123**	P	**Pn**	**10 21 22.8**	**-1.0**
DSI	**Dead Sea**	**8.71**	**123**	S	**Sn**	**10 22 58.5**	**-2.1**
KRMI	**Paran Flat**	**9.27**	**132**	P	**Pn**	**10 21 30.3**	**-0.8**
KRMI	**Paran Flat**	**9.27**	**132**	S	**Sn**	**10 23 11.5**	**-2.5**
PRNI	**Paran**	**9.27**	**130**	P	**Pn**	**10 21 30.3**	**-0.9**
PRNI	**Paran**	**9.27**	**130**	S	**Sn**	**10 23 12.3**	**-1.7**
HRFI	**Mount Harif**	**9.51**	**131**	P	**Pn**	**10 21 33.3**	**-1.2**
HRFI	**Mount Harif**	**9.51**	**131**	S	**Sn**	**10 23 17.9**	**-2.0**
HFRF	**Wahat Farafira**	**9.52**	**172**	P	**Pn**	**10 21 36.5**	**+2.0**
MBRI	**Mt Berech**	**9.61**	**133**	P	**Pn**	**10 21 35.3**	**-0.5**
MBRI	**Mt Berech**	**9.61**	**133**	S	**Sn**	**10 23 20.9**	**-1.6**
EIL2	**Elat**	**9.72**	**133**	P	**Pn**	**10 21 36.2**	**-1.0**
EIL2	**Elat**	**9.72**	**133**	S	**Sn**	**10 23 21.3**	**-3.7**
HKAT	**Jabal Katrina**	**10.09**	**141**	P	**Pn**	**10 21 44.1**	**+1.9**
KEST	**Kesra**	**14.13**	**272**	P	**P**	**10 22 37.7**	**+0.3**
	3.3nm,0.7s,baz=94,slow=19,SNR=4.3						
KEST				S	Sn	10 24 58.7	-12
	0.7nm,0.4s,baz=114,slow=20,SNR=1.2						
AKASG	**Malin Array Be**	**14.19**	**6**	P	**P**	**10 22 37.3**	**-0.6**
	0.1nm,0.3s,baz=195,slow=11,SNR=4.5						
KBZ	**Khabaz**	**14.21**	**55**	P	**P**	**10 22 39.1**	**+1.1**
	6.8nm,0.9s,baz=238,slow=9.5,SNR=14						
GERES	**GERESS Array B**	**15.53**	**326**	P	**Pn**	**10 22 51.8**	**+0.1**
	0.4nm,0.7s,baz=138,slow=12,SNR=5.1						
BELG	**Belogornoye**	**21.55**	**36**	P	**P**	**10 23 58.6**	**+0.5**
	5.6nm,0.5s,baz=243,slow=4.5,SNR=2.7						
	5.6nm,0.5s						
ESDC	**Sonseca Array**	**24.32**	**287**	P	**P**	**10 24 24.4**	**-0.2**
	0.3nm,0.4s,baz=88,slow=9.7,SNR=3.1						
	0.3nm,0.4s						
HFS	**Hagfors**	**25.00**	**344**	P	**P**	**10 24 30.0**	**-0.4**
	0.5nm,0.5s,baz=185,slow=9.8,SNR=1.7						
	0.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**32.44**	**230**	P	**P**	**10 25 38.1**	**+1.3**
	1.7nm,0.4s,baz=34,slow=9.4,SNR=2.7						
	1.7nm,0.4s						
KURBB	**Kurchatov Arra**	**39.18**	**52**	P	**P**	**10 26 34.4**	**+0.6**
	1.4nm,0.4s,baz=273,slow=8.7,SNR=15						
	1.4nm,0.4s						
MKAR	**Makanchi Array**	**41.88**	**58**	P	**P**	**10 26 56.9**	**+0.8**
	1.4nm,0.5s,baz=275,slow=7.7,SNR=22						
	1.4nm,0.5s						
ZALV	**Zalesovo Beam**	**43.05**	**47**	P	**P**	**10 27 05.2**	**-0.2**
	0.9nm,0.3s,baz=270,slow=7.9,SNR=5.1						
	0.9nm,0.3s						

*HEL **23** 10:23:29.7±0.1, 67°.82N×34°.06E, h0^{km}, ML1.8, Explosion*

*KOLA **23** 10:23:29.1, 67°.69N×34°.22E, h0^{km}, ML2.0, Error ellipse: s-maj=3.7km s-min=1.5km az=130.0, Khibiny Massif*

*IDC **23** 10:23:33.1±3.0, 68°.09N×33°.98E, h0^{km}, mbtmp3.0/2, ML2.0/2, Error ellipse: s-maj=37.5km s-min=14.5km az=58.0*

ISC 23 10:23:26.8±1.1, 67°.59N±0°.04×34°.42E±0°.05, h0^{km}, n28, σ1^{s}.33/45, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVZ	Lovozero	0.33	15	P	Pg	10 23 33.7	+0.7
LVZ				S	Sg	10 23 37.5	+0.3
LVZ	Lovozero	0.33	15	PG	Pg	10 23 33.8	+0.7
LVZ				SG	Sg	10 23 37.4	+0.2
APA	Apatity	0.39	268	S	Sg	10 23 39.0	-0.3
APA0	Apatity Array	0.55	273	P	Pg	10 23 38.0	+0.7
APA0				S	Sg	10 23 44.6	+0.2
KVDA	Kovda	1.08	215	P	Pb	10 23 49.0	+0.6
KVDA				S	Sb	10 24 04.4	+1.4
TERR	Teriberka	1.64	9	P	Pn	10 23 56.8	-0.1
TERR				S	Sn	10 24 16.8	-1.9
VRF	Varrio	1.85	277	PG	Pn	10 24 00.3	+0.6
VRF				MSG		10 24 20.2	
	comp=Z,9.2nm,0.2s						
VRF				SG	Sn	10 24 21.8	-1.9
OLKF	Oulanka, Finla	2.35	240	PB	Pb	10 24 10.2	+0.3
OLKF				MSG		10 24 39.7	
	comp=Z,2.8nm,0.2s						
OLKF				SB	Sb	10 24 40.7	+1.3
KU6	Riekki	2.38	231	PN	Pb	10 24 09.5	-1.0
KU6				SN	Sb	10 24 40.8	+0.4
KU6				MSG		10 24 41.7	
	comp=Z,2.8nm,0.2s						
RAJF	Raja-Jooseppi	2.47	294	PG	Pn	10 24 09.5	+1.3
RAJF				SG	Sn	10 24 38.9	-0.1
MSF	Maaselka	2.72	234	PN	Pb	10 24 15.1	-1.1
	baz=48						
MSF				SN	Sb	10 24 50.7	+0.6
KU2	Taivalkoski	3.10	236	PB	Pb	10 24 22.5	-0.3
VADS	Vadso	3.14	327	P	Pn	10 24 18.9	+1.6
VADS				S	Sn	10 24 52.8	-2.7
VADS	Vadso	3.14	327	*e*P	Pn	10 24 17.6	+0.2
RANF	Ranua	3.41	246	PB	Pb	10 24 27.9	-0.1
	baz=53						
RANF				SB	Sb	10 25 10.9	+1.0
RNF	Rovaniemi	3.43	257	PN	Pn	10 24 22.3	+0.9
RNF				SN	Sn	10 25 04.3	+1.6
KEV	Kevo	3.48	312	*e*P	Pn	10 24 22.5	+0.5
KEV	Kevo	3.48	312	PB	Pn	10 24 22.5	+0.5
KEV				SB	Sn	10 25 02.6	-1.2
ARA0	ARCESS Array S	3.81	305	PN	Pn	10 24 26.6	0.0
ARCES	ARCESS Array B	3.81	305	Pn	Pn	10 24 26.7	0.0
	comp=Z,0.2nm,0.3s,baz=118,slow=14,SNR=75						
ARCES				Pg	Pb	10 24 34.0	-0.9
	comp=Z,0.2nm,0.3s,baz=115,slow=16,SNR=6.1						
ARCES				Sn	Sn	10 25 07.9	-4.3
	comp=Z,0.2nm,0.3s,baz=107,slow=18,SNR=7.2						
ARCES				Lg	Lg	10 25 19.6	
	comp=Z,0.6nm,0.3s,baz=111,slow=33,SNR=12						
	comp=Z,0.7nm,0.2s						
ARCES	ARCESS Array B	3.81	305	P	Pn	10 24 26.4	-0.2
ARCES				S	Sn	10 25 09.8	-2.3
KLF	Kolari	4.05	270	PG	Pb	10 24 40.2	+1.3
	baz=76						
KLF				SG	Sb	10 25 30.9	+2.5
HEF	Hetta	4.13	286	PN	Pn	10 24 31.4	+0.3
HEF				SG	Sb	10 25 31.4	+0.7
OUL	Oulu	4.25	238	PG	Pg	10 24 45.9	-2.3
	baz=48						
PAJU	Pajala	4.42	268	PG	Pb	10 24 46.6	+1.4
LANU	Lannavaara	4.73	281	PN	Pn	10 24 39.4	+0.1
I37NO	I37NO	6.04	292	I	I	11 00 00.0	
	baz=96,slow=317,SNR=4.8						
FINES	FINESS Array B	7.13	214	Pn	Pn	10 25 21.5	+9.3
	comp=Z,0.1nm,0.3s,baz=30,slow=14,SNR=1.7						
	comp=Z,1.8nm,1.0s						

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*DJA **23** 10:38:44.6±0.2, 7°S±3°×13°0E±°, h181^{km}±6^{km}, M4.6/14, mB5.0/2, mb4.4/14, MLv4.7/13, Mw(mB)4.4/2*

*IDC **23** 10:38:45.4±2.6, 6°.98S×129°.44E, h168^{km}±23^{km}, mb3.6/14, mbtmp4.2/16, Error ellipse: s-maj=24.1km s-min=12.0km az=74.0*

*NEIC **23** 10:38:45.0±1.7, 6°.90S±0°.09×129°.33E±0°.06, h155^{km}±11^{km}, mb4.5/9, Error ellipse: s-maj=14.5km s-min=5.3km az=153.0*

ISC 23 10:38:43.9±0.4**, 7°.00S**±0°.05×**129°.39E**±0°.05**, h150**^{km}**, n83, σ1^{s}.72**/82**, mb4.1**/21**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	2.13	117		Pn	10 39 23.8	+3.2
SAUI	Saumlaki	2.13	117	P	Pn	10 39 24.1	+3.6
SAUI	Saumlaki	2.13	117	P	Pn	10 39 23.2	+2.7
SAUI				S	Sn	10 39 52.0	+3.3
BNDI	Bandanaira	2.52	12	P	Pn	10 39 31.1	+5.8
BNDI	Bandanaira	2.52	12	P	Pn	10 39 29.1	+3.8
AAI	Ambon	3.50	340	P	Pn	10 39 41.4	+3.6
MSAI	Masohi	3.66	353	P	Pn	10 39 42.6	+2.8
NLAI	Namlea	4.38	328	P	Pn	10 39 52.9	+3.7
FAKI	Fak Fak	4.96	35		Pn	10 39 57.2	+0.4
FAKI	Fak Fak	4.96	35	P	Pn	10 39 56.9	+0.1
FAKI				S	Sn	10 40 50.8	-2.8
SOEI	Soe	5.76	241		Pn	10 40 09.4	+1.8
SOEI	Soe	5.76	241	P	Pn	10 40 10.1	+2.5
SOEI	Soe	5.76	241	S	Sn	10 41 13.4	+0.4
SOEI	Soe	5.76	241	P	Pn	10 40 09.4	+1.8
	0.7nm65nm,0.8s						
MTN	Manton Dam	6.05	164		Pn	10 40 11.5	+0.2
MTN	Manton Dam	6.05	164	P	Pn	10 40 11.8	+0.5
MTN	Manton Dam	6.05	164	S	Sn	10 41 16.0	-3.8
SWI	Sorong	6.38	17	P	Pn	10 40 15.1	-0.6
	0.3nm22nm,0.6s						
KDU	Kakadu	6.41	152	P	Pn	10 40 16.4	+0.3
BATI	Baumata	6.50	240	P	Pn	10 40 19.1	+1.8
	26nm,0.3s,baz=43,slow=19,SNR=6.1						
BATI				S	Sn	10 41 30.6	+0.1
	122nm,0.4s,baz=60,slow=20,SNR=12						
RKPI	Ransiki, Papua	7.25	41	P	Pn	10 40 27.5	+0.2
MMRI	Maumere	7.27	257	Pn	Pn	10 40 30.7	+3.0
MMRI	Maumere	7.27	257	P	Pn	10 40 30.6	+2.9
	0.3nm43nm,0.9s						
EDFI	Ende, Flores	7.83	257	P	Pn	10 40 34.9	-0.2
	0.1nm13nm,0.8s						
TNTI	Ternate	7.98	345	P	Pn	10 40 39.2	+2.0
	51nm,0.9s						
KNRA	Kununurra	8.64	184		Pn	10 40 45.0	-0.9
BAKI	Biak	8.84	50	P	Pn	10 40 48.2	-0.4
	52nm,0.7s						
KAPI	Kappang	9.79	281	P	Pn	10 41 02.4	+1.2
WBSI	Waikabubak, Su	10.24	254	P	Pn	10 41 09.1	+1.9
	64nm,0.9s						
FITZ	Fitzroy Crossi	11.62	198		Pn	10 41 24.1	-1.2
FITZ	Fitzroy Crossi	11.62	198	P	Pn	10 41 22.9	-2.3
	10nm,0.3s,baz=30,slow=12,SNR=109						
FITZ				S	Sn	10 43 24.0	-10
	15nm,0.3s,baz=90,slow=20,SNR=6.7						
FITZ	Fitzroy Crossi	11.62	198	P	Pn	10 41 22.7	-2.6
	35nm,0.6s						
PLAI	Plampang	11.65	260	P	Pn	10 41 25.8	+0.1
WRA	Warramunga Arr	13.73	160		Pn	10 41 48.2	-4.3
WRA	Warramunga Arr	13.73	160	P	Pn	10 41 49.1	-3.4
	8.0nm,0.7s,baz=339,slow=14,SNR=76						
WRA				S	Sn	10 44 13.3	-11
	12nm,0.5s,baz=337,slow=23,SNR=10.0						
SMKI	Samarinda	13.79	298	P	P	10 42 21.0	+24
WR8	Warramunga Arr	13.80	159		Pn	10 41 50.0	-3.4
COEN	Coen	15.21	118	P	Pn	10 42 13.5	+2.5
QIS	Mount Isa	16.72	145	P	P	10 42 30.1	+0.9
AS31	Alice Springs	17.12	166	P	P	10 42 34.2	+0.6
AS31				IAmb	IAmb	10 42 35.3	
	comp=Z,15nm,0.6s						
ASAR	Alice Springs	17.12	166	P	P	10 42 34.6	+0.9
ASAR	Alice Springs	17.12	166	P	P	10 42 33.8	+0.1
	comp=Z,23nm,0.4s,baz=341,slow=11,SNR=414						
ASAR				S	S	10 45 37.0	-7.7
	comp=Z,4.9nm,0.6s,baz=345,slow=24,SNR=6.2						
ASAR				ScP	ScP	10 50 27.6	-3.6
	comp=Z,0.6nm,0.6s,baz=339,slow=1.3,SNR=2.6						
AS01	Alice Springs	17.14	166	P	P	10 42 34.4	+0.6
PSA00	Pilbara Seismi	17.17	212	P	P	10 42 33.9	-0.3
PSA00	Pilbara Seismi	17.17	212	P	P	10 42 35.0	+0.8
MTSU	Mount Surprise	18.27	129	P	P	10 42 47.7	+1.4
CTAO	Charters Tower	20.89	130	P	P	10 43 15.2	+0.6
FORT	Forrest	23.69	183	P	P	10 43 42.6	+0.7
FORT	Forrest	23.69	183	P	P	10 43 42.9	+1.0
QLP	Quilpie	24.05	146	P	P	10 43 47.5	+2.1
BBOO	Buckleboo	26.41	167	P	P	10 44 09.4	+2.8
BBOO	Buckleboo	26.41	167	P	P	10 44 08.0	+1.4
STKA	Stephens Creek	27.24	157	P	P	10 44 14.4	+0.4
STKA				IAmb	IAmb	10 44 44.0	
	comp=Z,18nm,1.0s						
STKA	Stephens Creek	27.24	157	P	P	10 44 14.7	+0.6
	comp=Z,1.9nm,0.5s,baz=328,slow=12,SNR=4.9						
	comp=Z,1.9nm,0.5s						
EIDS	Eidsvold	27.62	134	P	P	10 44 19.0	+1.5
RPSI	Rantau Prapat	31.90	287	P	P	10 44 56.1	+0.7
PSI	Prapat	31.93	287	P	P	10 44 56.1	+0.2
	comp=Z,8.9nm,0.7s,baz=153,slow=2.3,SNR=6.0						
	comp=Z,8.9nm,0.7s						
CMAR	Chiang Mai Arr	39.27	311	P	P	10 45 57.1	-1.2
CMAR	Chiang Mai Arr	39.27	311	P	P	10 45 58.3	0.0
	comp=Z,1.9nm,0.6s,baz=128,slow=8.5,SNR=19						
	comp=Z,1.9nm,0.6s						
CHTO	Chiang Mai	39.49	311	P	P	10 45 58.6	-1.5
CHTO				IAmb	IAmb	10 46 00.9	
	comp=Z,5.2nm,0.8s						
NJ2	Nanjing	40.12	346	*e*P	P	10 46 05.8	+0.8
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
PZH	PanZhiHua	42.77	322	P	P	10 46 27.3	+0.4
MJAR	Matsushiro Arr	44.10	10	P	P	10 46 35.6	-1.6
	comp=Z,1.0nm,0.6s,baz=182,slow=10,SNR=4.3						
	comp=Z,1.0nm,0.6s						
KSRS	Korea Array	44.25	358	P	P	10 46 37.9	-0.5
	comp=Z,0.5nm,0.6s,baz=179,slow=9.7,SNR=2.7						
	comp=Z,0.5nm,0.6s						
BJI	Beijing	48.38	346	P	P	10 47 10.1	-0.4
BJI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HHC	Hu-ho-hao-te	50.36	342	*e*P	P	10 47 26.4	+0.6
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,44nm,4.9s						
USRK	Ussuriysk Ar.	51.02	2	P	P	10 47 30.0	-0.5
	comp=Z,1.6nm,0.7s,baz=168,slow=8.4,SNR=4.9						
	comp=Z,1.6nm,0.7s						
SONM	Songino Array	58.26	342	P	P	10 48 23.3	+0.5
	comp=Z,0.5nm,0.5s,baz=154,slow=5.3,SNR=2.2						
	comp=Z,0.5nm,0.5s						
WMQ	Urumqi	63.07	327	*e*P	P	10 48 56.9	+1.5
WMQ				pmax	pmax		
	comp=Z,32nm,0.6s						
PETK	Petropavlovsk-	64.52	18	P	P	10 49 04.1	-0.5
	comp=Z,0.7nm,0.8s,baz=202,slow=7.3,SNR=3.0						
	comp=Z,0.7nm,0.8s						
MKAR	Makanchi Array	67.90	327	P	P	10 49 26.0	-0.3
	comp=Z,4.5nm,0.4s,baz=128,slow=7.6,SNR=54						
	comp=Z,4.5nm,0.4s						
MAKZ	Makanchi	68.08	327	P	P	10 49 26.9	-0.6
MAKZ				IAmb	IAmb	10 49 28.2	
	comp=Z,4.8nm,0.5s						
ZALV	Zalesovo Beam	71.32	334	P	P	10 49 45.7	-1.3
	comp=Z,1.1nm,0.5s,baz=129,slow=7.8,SNR=6.6						
	comp=Z,1.1nm,0.5s						
KURBB	Kurchatov Arra	72.20	329	P	P	10 49 51.9	-0.4
	comp=Z,1.8nm,0.5s,baz=127,slow=4.9,SNR=16						
	comp=Z,1.8nm,0.5s						
VNDA	Vanda	72.52	173	P	P	10 49 53.2	-0.6
	comp=Z,0.3nm,0.5s,baz=287,slow=5.7,SNR=2.5						
	comp=Z,0.3nm,0.5s						
KKAR	Karatay Array	72.95	319	P	P	10 49 56.8	-0.3
BVAR	Borovoye Array	77.75	328	P	P	10 50 23.8	-0.3
	comp=Z,2.2nm,0.7s,baz=126,slow=7.3,SNR=9.9						
	comp=Z,2.2nm,0.7s						
AB31	Akbulak array	82.14	322		P	10 50 46.9	-1.0
AB31				IAmb	IAmb	10 50 47.7	
	comp=Z,2.6nm,0.6s						
ABKAR	Akbulak array	82.14	322		P	10 50 46.9	-1.0
QSPA	South Pole Qui	82.97	180	P	P	10 50 50.9	-1.2
	comp=Z,0.7nm,0.5s,baz=339,slow=0.3,SNR=11						
	comp=Z,0.7nm,0.5s						
TORD	Torodi Ar. Bea	128.22	281	PKP	PKPdf	10 57 32.7	-0.8
	comp=Z,1.5nm,0.3s,baz=63,slow=2.7,SNR=2.4						
CPUP	Villa Florida	146.23	169	PKPbc	PKPdf	10 58 07.0	+0.7
	comp=Z,0.4nm,0.6s,baz=135,slow=1.4,SNR=6.1						
LPAZ	La Paz	151.08	143	PKPbc	PKPbc	10 58 20.8	-0.2
	comp=Z,0.9nm,0.4s,baz=159,slow=2.0,SNR=8.1						

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*DJA **23** 10:45:59.9±0.3, 6°S±3°×10°4E±°, h54^{km}, M4.7/20, mB5.6/2, mb4.8/7, MLv4.7/20, Mw(mB)5.1/2*

*IDC **23** 10:46:02.5±1.8, 5°.41S×104°.07E, h63^{km}±15^{km}, mb4.0/21, mbtmp4.3/24, MS3.4/12, Error ellipse: s-maj=18.9km s-min=9.6km az=54.0*

*NEIC **23** 10:46:02.4±1.8, 5°.64S±0°.06×103°.84E±0°.08, h62^{km}±5^{km}, mb4.5/38, Error ellipse: s-maj=13.3km s-min=4.6km az=52.0*

ISC 23 10:46:01.6±0.9**, 5°.68S**±0°.05×**103°.88E**±0°.05**, h57**^{km}±8^{km}**, n140, σ1^{s}.42**/132**, mb4.4**/41**, MS3.5**/10**, 2D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LWLI	Liwa	0.68	15	P	Pn	10 46 14.6	-1.0
MDSI	Maura Dua	1.22	14	P	Pn	10 46 22.0	-0.5
MDSI				S	Sn	10 46 37.7	-0.4
KLI	Kotabumi	1.27	50	P	Pn	10 46 23.5	+0.4
KLI				S	Sn	10 46 39.9	+0.8
BLSI	Bandar Lampung	1.39	77	P	Pn	10 46 23.4	-1.4
BLSI				S	Sn	10 46 42.5	+0.3
MNAI	Manna	1.60	325		Pn	10 46 27.6	0.0
MNAI				Sn	Sn	10 46 45.8	-1.5
MNAI	Manna	1.60	325	P	Pn	10 46 27.6	0.0
MNAI				S	Sn	10 46 47.7	+0.4
CGJI	Cibinong	2.03	117	P	Pn	10 46 31.8	-1.6
CGJI				S	Sn	10 46 55.2	-2.4
SBJI	Serang	2.28	101	P	Pn	10 46 36.0	-0.8
SBJI				S	Sn	10 47 04.0	+0.2
KSI	Kapahiang	2.39	327	P	Pn	10 46 38.5	+0.1
KSI				S	Sn	10 47 06.9	+0.3
PMBI	Palembang	2.88	18		Pn	10 46 44.3	-0.6
PMBI	Palembang	2.88	18	P	Pn	10 46 44.4	-0.6
SKJI	Sukabumi	2.97	116	P	Pn	10 46 45.5	-0.7
DBJI	Dramaga	2.98	107	P	Pn	10 46 45.3	-1.2
CNJI	Cibinong	3.61	117	P	Pn	10 46 54.5	-0.6
LEM	Lembang	3.89	107	P	Pn	10 47 00.8	+1.8
	62nm,0.5s,baz=325,slow=19,SNR=10						
LEM				S	Sn	10 47 44.0	+0.6
	66nm,0.5s,baz=304,slow=23,SNR=1.7						
LEM				LR	LR	10 48 51.2	
	comp=Z,344nm,19.8s,baz=334,slow=44						
LEM	Lembang	3.89	107	P	Pn	10 46 57.9	-1.1
PPBI	Pangkal Pinang	4.16	33	P	Pn	10 47 03.1	+0.5
TPI	Tanjungpandan	4.75	52	P	Pn	10 47 10.1	-0.6
CMJI	Cimerak	5.00	115	P	Pn	10 47 12.9	-1.1
	0.5nm59nm,0.6s						
PPI	Padang Panjang	6.25	326	P	Pn	10 47 30.8	-0.4
	0.2nm55nm,0.8s						
SISI	Saibi	6.45	312	P	Pn	10 47 33.3	-0.7
	0.9nm5μm116nm,0.8s						
BKNI	Bangkinang	6.61	334	Pn	Pn	10 47 36.1	0.0
BKNI	Bangkinang	6.61	334	P	Pn	10 47 36.1	0.0
UGM	Wanagama	6.96	109	Pn	Pn	10 47 43.3	+2.3
MYKOM	Kota Tinggi	7.42	360		Pn	10 47 46.7	-0.6
PCJI	Pacitan	7.66	109	P	Pn	10 47 49.3	-1.3
	0.3nm44nm,0.8s						
MNSI	Mandailing Nat	7.73	326	P	Pn	10 47 54.8	+3.2
GSI	Gunungsitoli	9.37	318		Pn	10 48 11.9	-2.1
GSI	Gunungsitoli	9.37	318	P	Pn	10 48 11.4	-2.6
STKI	Sintang	9.49	53	P	Pn	10 48 22.5	+6.8
RPSI	Rantau Prapat	9.68	329		Pn	10 48 19.4	+1.2
RPSI	Rantau Prapat	9.68	329	Pn	Pn	10 48 16.6	-1.7
PSI	Prapat	9.77	329	P	Pn	10 48 19.5	-0.2
	3.9nm,0.4s,baz=167,slow=19,SNR=4.6						
PSI				LR	LR	10 52 13.8	
	comp=Z,339nm,20.9s,baz=149,slow=39						
JAGI	Jajag, Banyuwa	10.56	106		Pn	10 48 29.9	-0.4
KULM	Kulim	11.36	343	Pn	Pn	10 48 40.9	-0.4
BNSI	Bone	16.21	86	P	P	10 49 48.6	+0.6
MPSI	Mapaga	17.07	70	P	P	10 49 58.9	+1.4
MYLDM	Lahad Datu	18.15	54	Pn	Pn	10 50 11.3	+1.5
MYLDM				IAmb	IAmb	10 50 21.1	
	comp=Z,42nm,1.4s						
GIRL	Giralia	19.61	150		P	10 50 26.2	+0.9
BATI	Baumata	20.10	104	P	P	10 50 28.6	-2.2
	comp=Z,18nm,0.3s,baz=281,slow=10,SNR=6.2						
BATI	Baumata	20.10	104	P	Pn	10 50 46.6	+14
SOEI	Soe	20.60	103	P	P	10 50 37.5	+1.2
MBWA	Marble Bar	21.75	137	P	P	10 50 50.8	+2.4
MBWA				IAmb	IAmb	10 51 06.3	
	comp=Z,20nm,1.1s						
PSA00	Pilbara Seismi	22.11	137	P	P	10 50 52.9	+0.6
PSA00				IAmb	IAmb	10 50 55.1	
	comp=Z,17nm,0.9s						
PSA00	Pilbara Seismi	22.11	137	P	P	10 50 52.9	+0.6
CM31	Chiang Mai Arr	24.47	349	P	P	10 51 14.2	-1.3
CM31				IAmb	IAmb	10 51 15.8	
	comp=Z,10.0nm,0.6s						
CMAR	Chiang Mai Arr	24.47	349	P	P	10 51 14.4	-1.0
CMAR	Chiang Mai Arr	24.47	349	P	P	10 51 14.0	-1.5
	comp=Z,6.5nm,0.6s,baz=168,slow=9.6,SNR=48						
CMAR				LR	LR	11 02 07.9	
	comp=Z,56nm,18.5s,baz=185,slow=40						
	comp=Z,6.5nm,0.6s						
FITZ	Fitzroy Crossi	24.57	122	P	P	10 51 16.2	-0.1
FITZ	Fitzroy Crossi	24.57	122	P	P	10 51 15.6	-0.8
	comp=Z,9.5nm,0.9s,baz=288,slow=3.2,SNR=5.6						
	comp=Z,9.5nm,0.9s						
CHTO	Chiang Mai	24.82	349		P	10 51 17.3	-1.3
KNRA	Kununurra	26.36	114	P	P	10 51 30.6	-2.0
KNRA				IAmb	IAmb	10 52 12.0	
	comp=Z,30nm,1.4s						
PALK	Pallekele	26.47	299	LR	LR	11 00 14.8	
	comp=Z,66nm,21.6s,baz=120,slow=32						
MTN	Manton Dam	27.80	107	P	P	10 51 44.8	-0.8
MTN				IAmb	IAmb	10 51 47.3	
	comp=Z,31nm,1.2s						
H01W3	Cape Leeuwin H	30.57	163	T	T	11 25 14.7	
	baz=341,slow=76,SNR=11						
H01W1	Cape Leeuwin H	30.58	163	T	T	11 25 17.8	
	baz=341,slow=76,SNR=14						
H01W2	Cape Leeuwin H	30.58	163	T	T	11 25 35.0	
	baz=341,slow=76,SNR=18						
H08S2	Diego Garcia H	31.23	265	T	T	11 25 42.9	
	baz=87,slow=75,SNR=5.8						
H08S3	Diego Garcia H	31.24	265	T	T	11 25 36.1	
	baz=87,slow=75,SNR=16						
H08S1	Diego Carcia H	31.25	265	T	T	11 25 33.6	
	baz=87,slow=75,SNR=8.0						
PZH	PanZhiHua	32.06	356	P	P	10 52 26.3	+3.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.7s						
WB0	Warramunga Arr	32.81	118	P	P	10 52 28.9	-0.9
WB0				IAmb	IAmb	10 53 02.8	
	comp=Z,8.5nm,1.2s						
WRA	Warramunga Arr	32.82	118	P	P	10 52 28.9	-1.0
WRA	Warramunga Arr	32.82	118	P	P	10 52 29.0	-1.0
	comp=Z,1.7nm,0.8s,baz=291,slow=8.7,SNR=15						
WRA				PcP	PcP	10 55 14.2	+0.2
	comp=Z,1.2nm,0.4s,baz=302,slow=1.9,SNR=7.4						
	comp=Z,1.7nm,0.8s						
WR8	Warramunga Arr	32.97	118	P	P	10 52 30.2	-1.0
WR8				IAmb	IAmb	10 52 36.3	
	comp=Z,4.4nm,0.8s						
TPUB	Ta-pu	33.13	29	P	P	10 52 32.6	+0.1
AS31	Alice Springs	33.98	125		P	10 52 40.0	0.0
AS31				IAmb	IAmb	10 52 40.4	
	comp=Z,2.2nm,0.6s						
ASAR	Alice Springs	33.98	125	P	P	10 52 39.7	-0.3
	comp=Z,4.5nm,0.7s,baz=297,slow=8.5,SNR=41						
ASAR				PcP	PcP	10 55 17.6	+0.4
	comp=Z,1.5nm,0.7s,baz=296,slow=2.1,SNR=5.0						
ASAR				LR	LR	11 06 16.7	
	comp=Z,76nm,20.7s,baz=276,slow=36						
	comp=Z,4.5nm,0.7s						
EVN	Everest	37.28	335	P	P	10 53 07.7	-1.2
EVN				IAmb	IAmb	10 53 24.0	
	comp=Z,3.9nm,0.8s						
COEN	Coen	39.53	105	P	P	10 53 25.5	-1.8
NJ2	Nanjing	40.14	20	*e*P	P	10 53 34.3	+2.2
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
PMG	Port Moresby	43.04	98	P	P	10 53 53.9	-2.2
	comp=Z,22nm,1.1s,baz=308,slow=19,SNR=2.1						
	comp=Z,22nm,1.1s						
STKA	Stephens Creek	43.83	131	P	P	10 54 02.8	+0.6
STKA	Stephens Creek	43.83	131	P	P	10 54 03.0	+0.8
	comp=Z,15nm,0.7s,baz=303,slow=10,SNR=24						
	comp=Z,15nm,0.7s						
HHC	Hu-ho-hao-te	46.84	8	*e*P	P	10 54 28.3	+2.3
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,37nm,4.4s						
KSRS	Korea Array	48.42	26	P	P	10 54 37.0	-1.1
	comp=Z,0.6nm,0.6s,baz=218,slow=7.6,SNR=3.3						
	comp=Z,0.6nm,0.6s						
NIL	Nilore	48.70	326	P	P	10 54 39.7	-0.7
EIDS	Eidsvold	49.19	119	P	P	10 54 44.0	-0.3
TARG	Taragay, Kyrgy	52.85	336	P	P	10 55 10.9	-1.1
TARG				IAmb	IAmb	10 55 21.9	
	comp=Z,4.2nm,1.2s						
CN2	Changchun	52.97	19	*e*P	P	10 55 14.9	+2.6
SONM	Songino Array	53.33	2	P	P	10 55 15.0	0.0
SONM	Songino Array	53.33	2	P	P	10 55 14.5	-0.6
	comp=Z,0.8nm,0.3s,baz=185,slow=9.1,SNR=6.6						
SONM				ScP	ScP	11 00 13.0	-2.0
	comp=Z,1.3nm,0.9s,baz=159,slow=4.3,SNR=4.3						
SONM				LR	LR	11 19 32.9	
	comp=Z,63nm,18.4s,baz=220,slow=38						
	comp=Z,0.8nm,0.3s						
KDJ	Kajisay	53.44	335	P	P	10 55 15.8	-0.3
KDJ				IAmb	IAmb	10 55 18.9	
	comp=Z,4.7nm,0.8s						
ARSB	Arslanbob	54.66	332	P	P	10 55 24.6	-0.3
ARSB				IAmb	IAmb	10 55 25.4	
	comp=Z,4.8nm,1.0s						
BTK	Batken	54.75	329		P	10 55 24.7	-0.8
BTK				IAmb	IAmb	10 55 27.9	
	comp=Z,6.1nm,0.5s						
AAK	Ala-Archa	55.01	334	LR	LR	11 24 03.2	
	comp=Z,15nm,18.1s,baz=152,slow=42						
MKAR	Makanchi Array	55.64	342		P	10 55 30.1	-1.6
MKAR	Makanchi Array	55.64	342	P	P	10 55 30.0	-1.7
	comp=Z,2.1nm,0.4s,baz=154,slow=7.8,SNR=28						
	comp=Z,2.1nm,0.4s						
USRK	Ussuriysk Ar.	55.73	24	P	P	10 55 30.6	-1.8
USRK	Ussuriysk Ar.	55.73	24	P	P	10 55 31.1	-1.3
	comp=Z,1.4nm,0.5s,baz=212,slow=5.7,SNR=4.1						
	comp=Z,1.4nm,0.5s						
KK31	Karatay Array	57.20	331	P	P	10 55 43.5	+0.6
KKAR	Karatay Array	57.20	331	P	P	10 55 41.7	-1.1
KKAR	Karatay Array	57.20	331	P	P	10 55 43.3	+0.5
KKAR				IAmb	IAmb	10 55 53.1	
	comp=Z,1.3nm,0.6s						
KURBB	Kurchatov Arra	60.20	342	P	P	10 56 01.7	-1.8
	comp=Z,0.8nm,0.5s,baz=158,slow=6.4,SNR=6.9						
KURBB				PcP	PcP	10 56 48.8	+0.3
	comp=Z,0.3nm,0.5s,baz=157,slow=3.7,SNR=1.8						
	comp=Z,0.8nm,0.5s						
H04N2	CROZET ISLANDS	60.28	219	T	T	12 02 12.8	
	baz=64,slow=75,SNR=331						
H04N1	CROZET ISLANDS	60.29	219	T	T	12 02 10.5	
	baz=64,slow=75,SNR=34						
H04N3	CROZET ISLANDS	60.30	219	T	T	12 02 07.9	
	baz=64,slow=75,SNR=50						
H04S1	CROZET ISLANDS	60.50	218	T	T	12 02 18.3	
	baz=65,slow=75,SNR=42						
H04S3	CROZET ISLANDS	60.52	218	T	T	12 02 33.3	
	baz=65,slow=75,SNR=50						
H04S2	CROZET ISLANDS	60.52	218	T	T	12 02 22.0	
	baz=65,slow=75,SNR=33						
CASY	Casey	60.67	177	P	P	10 56 06.2	-0.3
ZAA0	Zalesovo Array	61.53	347		P	10 56 11.1	-1.4
ZAA0				IAmb	IAmb	10 56 25.1	
	comp=Z,2.8nm,0.8s						
ZALV	Zalesovo Beam	61.53	347	P	P	10 56 10.8	-1.6
ZALV	Zalesovo Beam	61.53	347	P	P	10 56 10.4	-2.0
	comp=Z,3.6nm,0.4s,baz=159,slow=6.4,SNR=16						
ZALV				LR	LR	11 23 25.1	
	comp=Z,21nm,21.3s,baz=129,slow=37						
	comp=Z,3.6nm,0.4s						
BVAR	Borovoye Array	64.98	338	P	P	10 56 33.6	-1.8
	comp=Z,1.8nm,0.5s,baz=142,slow=9.4,SNR=12						
BVAR				LR	LR	11 27 57.5	
	comp=Z,32nm,19.5s,baz=165,slow=39						
	comp=Z,1.8nm,0.5s						
AB31	Akbulak array	66.72	330		P	10 56 45.8	-0.8
AB31				IAmb	IAmb	10 56 46.3	
	comp=Z,2.8nm,0.6s						
ABKAR	Akbulak array	66.72	330		P	10 56 46.0	-0.7
MAW	Mawson	67.75	196	P	P	10 56 53.7	+0.9
	comp=Z,1.2nm,0.6s,baz=30,slow=18,SNR=1.6						
	comp=Z,1.2nm,0.6s						
MSVF	Nonsavu	73.23	107	P	P	10 57 27.1	-0.3
PEA0B	Petropavlovsk-	73.99	30	P	P	10 57 28.8	-2.2
PEA0B				IAmb	IAmb	10 57 40.3	

	comp=Z,14nm,1.5s						
PETK	Petropavlovsk-	73.99	30	P	P	10 57 28.8	-2.2
PETK	Petropavlovsk-	73.99	30	P	P	10 57 28.0	-3.0
	comp=Z,1.0nm,0.6s,baz=235,slow=5.1,SNR=5.6						
	comp=Z,1.0nm,0.6s						
LPHEP	Lephephe	76.79	247	P	P	10 57 45.3	-2.5
LPHEP				IAmb	IAmb	10 57 47.9	
	comp=Z,11nm,1.4s						
VNDA	Vanda	77.83	169	P	P	10 57 53.3	+0.8
VNDA	Vanda	77.83	169	P	P	10 57 54.2	+1.8
	comp=Z,1.6nm,0.9s,baz=302,slow=5.2,SNR=6.5						
	comp=Z,1.6nm,0.9s						
BRTR	Keskin Array B	78.65	312	P	P	10 57 58.1	+0.3
	comp=Z,0.6nm,0.6s,baz=120,slow=5.2,SNR=4.4						
	comp=Z,0.6nm,0.6s						
TIXI	Tiksi	78.90	8	LR	LR	11 34 45.8	
	comp=Z,36nm,18.5s,baz=202,slow=37						
SBA	Scott Base	78.92	169	P	P	10 58 00.4	+1.9
QSPA	South Pole Qui	84.30	180	P	P	10 58 27.5	+0.3
QSPA				IAmb	IAmb	10 58 29.4	
	comp=Z,4.0nm,0.9s						
QSPA	South Pole Qui	84.30	180	P	P	10 58 28.6	+1.4
	comp=Z,2.4nm,0.7s,baz=265,slow=0.8,SNR=19						
	comp=Z,2.4nm,0.7s						
AKASG	Malin Array Be	84.75	322	P	P	10 58 27.5	-2.0
	comp=Z,0.3nm,0.4s,baz=96,slow=4.5,SNR=1.6						
	comp=Z,0.3nm,0.4s						
TROLL	Troll, Antarti	88.13	198	⇓P	P	10 58 48.7	+2.7
	comp=Z,75nm,0.7s						
KOLS	Kolonicke sedl	88.75	319	eP	P	10 58 52.0	+2.9
FINES	FINESS Array B	89.15	332	P	P	10 58 50.9	+0.2
	comp=Z,0.7nm,0.4s,baz=103,slow=4.4,SNR=9.7						
	comp=Z,0.7nm,0.4s						
SNAA	Sanae	89.85	198	⇓P	P	10 58 56.8	+3.0
	comp=Z,61nm,0.9s						
SNAA	Sanae	89.85	198	P	P	10 58 54.7	+0.8
SNAA				IAmb	IAmb	10 58 57.8	
	comp=Z,6.4nm,1.1s						
SNAA	Sanae	89.85	198	P	P	10 58 56.9	+3.0
	comp=Z,3.1nm,0.9s,baz=119,slow=19,SNR=7.6						
	comp=Z,3.1nm,0.9s						
VYHS	Vyhne	90.93	318	eP	P	10 59 00.8	+1.5
ARCES	ARCESS Array B	91.23	340	LR	LR	11 44 51.7	
	comp=Z,27nm,18.6s,baz=68,slow=39						
MODS	Modra-Piesok	91.95	318	eP	P	10 59 06.3	+2.3
SPITS	Spitsbergen Ar	95.01	348	LR	LR	11 48 06.3	
	comp=Z,15nm,18.2s,baz=82,slow=39						
YKA	Yellowknife Ar	116.66	19	PKP	PKiKP	11 04 39.3	+0.3
	comp=Z,0.8nm,0.8s,baz=317,slow=2.5,SNR=4.0						
NVAR	Mina Array Bea	129.79	43	SKPbc	SKPbc	11 08 22.3	-0.6
	comp=Z,0.7nm,0.8s,baz=309,slow=5.7,SNR=5.1						
PDAR	Pinedale Array	132.69	34	PKP	PKPdf	11 05 10.9	+0.2
	comp=Z,0.3nm,0.6s,baz=314,slow=2.1,SNR=3.7						
PDAR				SKPbc	SKPbc	11 08 31.9	-1.3
	comp=Z,0.3nm,0.6s,baz=282,slow=4.2,SNR=3.6						
TXAR	Lajitas Array	144.92	45	PKPdf	PKPbc	11 05 32.8	+0.4
TXAR	Lajitas Array	144.92	45	PKP	PKPbc	11 05 32.6	+0.2
	comp=Z,3.3nm,0.7s,baz=320,slow=2.1,SNR=50						
N58A	Sunbury	144.99	1	PKPbc	PKPab	11 05 31.0	-1.1
BDFB	Brasilia	145.02	232	PKPbc	PKPdf	11 05 34.9	+1.2
	comp=Z,5.5nm,0.6s,baz=128,slow=3.8,SNR=9.6						
RLO	Rose Lookout	145.05	27	PKPbc	PKPab	11 05 31.6	-0.9
LPAZ	La Paz	156.79	200	PKP	PKPdf	11 05 54.9	+2.6
	comp=Z,0.8nm,0.3s,baz=225,slow=4.3,SNR=5.2						

IDC 23 11:03:30.6±2.9**, 5°.43S**×**146°.88E, h218**^{km}±29^{km}**, mb2.9**/2, **mbtmp3.7**/4**, Error ellipse: s-maj=86.8km s-min=20.9km az=120.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.96	176	P	Pn	11 04 31.4	-1.0
	21nm,0.4s,baz=354,slow=9.2,SNR=21						
PMG				S	S	11 05 19.1	-2.0
	baz=16,slow=19						
WRA	Warramunga Arr	18.89	219	P	P	11 07 35.4	+0.5
	1.7nm,0.5s,baz=40,slow=11,SNR=22						
WRA				S	S	11 10 56.2	-1.9
	0.7nm,0.8s,baz=44,slow=20,SNR=2.9						
ASAR	Alice Springs	22.02	213	P	P	11 08 08.5	+0.9
	0.7nm,0.5s,baz=36,slow=9.4,SNR=27						
ASAR				S	S	11 11 54.8	+0.1
	0.5nm,0.6s,baz=31,slow=18,SNR=4.1						
	0.7nm,0.5s						
ILAR	Eielson Array	85.01	23	P	P	11 15 40.3	-0.9
	0.3nm,0.8s,baz=257,slow=3.6,SNR=4.5						
	0.3nm,0.8s						

CATAC 23 11:07:46.9±0.8**, 12°N**±5°×**8°8W**±°**, h23**^{km}±5^{km}**, M2.8**/7**, MLv2.8**/7**, Error ellipse: s-maj=11.9km s-min=6.1km az=37.7, confirmed, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PKGN	Cerro Pekin	0.87	53	P	Pb	11 08 02.4	-0.9
PKGN				S	Sn	11 08 16.6	+0.9
POTN	Potosi Cosigui	0.88	12	P	Pb	11 08 03.2	-0.2
POTN				S	Sn	11 08 15.2	-0.5
POLN	Al Sur del Vol	0.99	59	P	Pn	11 08 04.0	-1.4
CNGN	Cerro Negro	1.03	69	P	Pb	11 08 06.2	+0.1
COPN	Copaltepe	1.07	88	P	Pn	11 08 06.3	-0.1
CNCH	Conchagua	1.14	353	P	Pn	11 08 07.4	-0.2
CNCH	Conchagua	1.14	353	S	Sn	11 08 23.0	+0.5
LCND	La Caada	1.18	350	P	Pn	11 08 08.2	+0.2
LCND	La Caada	1.18	350	S	Sb	11 08 23.7	+0.2
TGUH	Tegucigalpa,Un	1.95	12	S	Sn	11 08 43.2	+0.7
RCVN	Varillal2	2.05	45	S	Sn	11 08 45.9	+0.9
RCVN	Varillal2	2.05	45	P	Pn	11 08 20.7	+0.7
RCPN	Sur Rio San Ju	2.08	48	S	Sn	11 08 45.5	-0.1

IDC 23 11:08:59.6±10.0**, 19°.22S**×**64°.88E, h0**^{km}**, mb3.7**/4**, mbtmp3.7**/4**, MS3.3**/3**, Error ellipse: s-maj=370.7km s-min=37.4km az=56.0, Mauritius-Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H04N2	CROZET ISLANDS	28.96	199	T	T	11 46 08.2	
	baz=28,slow=75,SNR=41						
H04N1	CROZET ISLANDS	28.96	199	T	T	11 46 10.5	
	baz=28,slow=75,SNR=48						
H04N3	CROZET ISLANDS	28.98	199	T	T	11 46 06.6	
	baz=28,slow=75,SNR=40						
LBTB	Lobatse	36.75	254	LR	LR	11 29 47.8	
	comp=Z,58nm,18.1s,baz=108,slow=34						
CMAR	Chiang Mai Arr	50.20	44	LR	LR	11 37 02.1	
	comp=Z,25nm,18.4s,baz=185,slow=34						
ASAR	Alice Springs	63.85	107	P	P	11 19 34.2	-0.2
	0.5nm,0.6s,baz=264,slow=5.7,SNR=11						
	0.5nm,0.6s						
WRA	Warramunga Arr	64.99	104	P	P	11 19 42.1	+0.2
	1.0nm,0.9s,baz=260,slow=5.2,SNR=6.7						
	1.0nm,0.9s						
MKAR	Makanchi Array	67.56	13	LR	LR	11 47 59.8	
	comp=Z,20nm,18.9s,baz=220,slow=35						
BVAR	Borovoye Array	72.10	3	P	P	11 20 25.6	+0.1
	0.3nm,0.5s,baz=189,slow=7.3,SNR=2.3						
	0.3nm,0.5s						
SONM	Songino Array	76.41	27	P	P	11 20 50.9	-0.1
	0.2nm,0.4s,baz=215,slow=4.8,SNR=1.3						
	0.2nm,0.4s						

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*IDC **23** 11:21:42.9±0.6, 30°.74S×177°.46W, h0^{km}, mb4.3/12, mbtmp4.3/12, MS3.6/4, Error ellipse: s-maj=23.4km s-min=15.8km az=85.0*

*NEIC **23** 11:21:44.6±2.3, 30°.6S±0°.1×177°.4W±0°.2, h10^{km}±1^{km}, mb4.5/15, Error ellipse: s-maj=26.1km s-min=21.3km az=61.0*

ISC 23 11:21:47.2±0.6**, 30°.79S**±0°.06×**177°.6W**±0°.1**, h27**^{km}**, n55,** σ**1^{s}.11**/56**, mb4.5**/21**, 5D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.56	350	Pn	Pn	11 22 12.5	-0.7
	572nm,0.3s,baz=112,slow=19,SNR=16						
RAO				Sn	Sb	11 22 34.4	-0.3
	595nm,0.3s,baz=128,slow=19,SNR=7.4						
URZ	Urewera	8.62	209	Pn	Pn	11 23 39.8	-10
	1.0nm,0.3s,baz=3.6,slow=16,SNR=6.2						
URZ				Sn	Sn	11 25 22.2	-4.4
	1.6nm,0.3s,baz=53,slow=20,SNR=6.4						
MSVF	Nonsavu	13.59	342	LR	LR	11 28 53.9	
	comp=Z,93nm,18.6s,baz=170,slow=32						
PINNC	Pines Island,	15.63	298	Pn	Pn	11 25 24.9	-0.8
PINNC				IAmb	IAmb	11 25 40.0	
	comp=Z,40nm,1.1s						
RPZ	Rata Peaks	15.72	212	Pn	Pn	11 25 18.6	-8.1
	comp=Z,0.6nm,0.3s,baz=51,slow=16,SNR=1.6						
FUTU	Fugatoga	16.42	358	P	Pn	11 25 34.9	-0.9
DZM	Mont Dzumac	16.70	298	LR	LR	11 31 12.6	
	comp=Z,367nm,18.4s,baz=188,slow=34						
RAR	Rarotonga	18.64	63	LR	LR	11 32 32.9	
	comp=Z,133nm,18.9s,baz=246,slow=35						
ARMA	Armidale	26.43	263	P	P	11 27 24.5	+2.5
ARMA				IAmb	IAmb	11 27 43.9	
	comp=Z,12nm,1.1s						
CTAO	Charters Tower	34.19	280	P	P	11 28 32.0	+1.4
CTAO				IAmb	IAmb	11 28 39.2	
	comp=Z,7.3nm,1.1s						
STKA	Stephens Creek	34.71	257	P	P	11 28 36.4	+1.4
STKA	Stephens Creek	34.71	257	P	P	11 28 37.0	+2.0
	comp=Z,4.0nm,0.4s,baz=99,slow=16,SNR=19						
STKA				LR	LR	11 41 51.3	
	comp=Z,163nm,18.1s,baz=65,slow=35						
	comp=Z,4.0nm,0.4s						
RABL	Rabaul	38.87	307	P	P	11 29 09.3	-1.2
BBOO	Buckleboo	39.18	255	P	P	11 29 13.6	+0.7
BBOO				IAmb	IAmb	11 29 39.1	
	comp=Z,10nm,1.1s						
AS31	Alice Springs	43.42	267	P	P	11 29 48.1	+0.1
ASAR	Alice Springs	43.42	267	P	P	11 29 47.8	-0.2
ASAR	Alice Springs	43.42	267	P	P	11 29 48.2	+0.2
	comp=Z,1.4nm,0.4s,baz=107,slow=8.1,SNR=73						
ASAR				PcP	PcP	11 31 35.2	-0.9
	comp=Z,0.8nm,0.4s,baz=107,slow=3.8,SNR=7.5						
ASAR				ScP	ScP	11 35 29.2	+3.5
	comp=Z,1.4nm,1.1s,baz=134,slow=2.7,SNR=4.9						
	comp=Z,1.4nm,0.4s						
WR8	Warramunga Arr	44.30	272	P	P	11 29 54.9	-0.1
WR8				IAmb	IAmb	11 30 03.1	
	comp=Z,7.9nm,1.0s						
WRA	Warramunga Arr	44.44	272	P	P	11 29 56.0	-0.2
WRA	Warramunga Arr	44.44	272	P	P	11 29 56.2	0.0
	comp=Z,3.0nm,0.3s,baz=115,slow=7.9,SNR=80						
WRA				PcP	PcP	11 31 39.6	0.0
	comp=Z,1.0nm,0.9s,baz=126,slow=2.8,SNR=2.6						
	comp=Z,3.0nm,0.3s						
VNDA	Vanda	47.74	186	P	P	11 30 23.0	+1.7
	comp=Z,0.7nm,0.7s,baz=27,slow=2.3,SNR=7.7						
	comp=Z,0.7nm,0.7s						
FITZ	Fitzroy Crossi	52.69	270	P	P	11 30 59.7	0.0
FITZ	Fitzroy Crossi	52.69	270	P	P	11 31 00.2	+0.6
	comp=Z,1.3nm,0.5s,baz=95,slow=6.2,SNR=1.5						
	comp=Z,1.3nm,0.5s						
CASY	Casey	54.95	208	P	P	11 31 15.6	+0.2
CASY				IAmb	IAmb	11 31 16.0	
	comp=Z,5.3nm,0.7s						
QSPA	South Pole Qui	59.32	180	P	P	11 31 47.6	+1.1
QSPA				IAmb	IAmb	11 32 14.1	
	comp=Z,4.5nm,0.9s						
QSPA	South Pole Qui	59.32	180	P	P	11 31 47.2	+0.7
	comp=Z,5.0nm,1.0s,baz=23,slow=3.4,SNR=7.3						
	comp=Z,5.0nm,1.0s						
BELA	Belgrano 2	69.35	172	P	P	11 32 51.7	-0.2
BELA				IAmb	IAmb	11 32 52.0	
	comp=Z,3.5nm,1.0s						
TROLL	Troll, Antarti	77.48	180	⇓P	P	11 33 39.9	-0.1
	comp=Z,152nm,0.8s						
SNAA	Sanae	77.75	178	⇓P	P	11 33 40.6	-0.8
	comp=Z,43nm,0.9s						
SNAA	Sanae	77.75	178	P	P	11 33 40.8	-0.6
SNAA				IAmb	IAmb	11 33 59.0	
	comp=Z,1.4nm,0.9s						
SNAA	Sanae	77.75	178	P	P	11 33 40.9	-0.6
	comp=Z,2.3nm,0.9s,baz=190,slow=9.2,SNR=5.0						
	comp=Z,2.3nm,0.9s						
VNA3	Neumayer Olymp	77.89	176	⇓P	P	11 33 41.2	-1.0
	comp=Z,6.7nm,0.8s						
VNA2	Neumayer--Watz	78.33	177	⇓P	P	11 33 44.3	-0.3
	comp=Z,4.9nm,0.8s,baz=160,slow=5.6						
VNA1	Neumayer--Stat	78.56	176	⇓P	P	11 33 45.3	-0.4
	comp=Z,4.4nm,0.7s						
KSRS	Korea Array	84.86	319	P	P	11 34 19.6	+0.3
	comp=Z,0.5nm,0.6s,baz=148,slow=5.5,SNR=2.8						
	comp=Z,0.5nm,0.6s						
PETK	Petropavlovsk-	86.28	345	P	P	11 34 25.6	-0.5
	comp=Z,1.9nm,1.0s,baz=159,slow=5.5,SNR=3.9						
	comp=Z,1.9nm,1.0s						
USRK	Ussuriysk Ar.	87.67	326	P	P	11 34 32.7	-0.3
	comp=Z,2.3nm,0.7s,baz=121,slow=5.6,SNR=3.5						
	comp=Z,2.3nm,0.7s						
NVAR	Mina Array Bea	88.30	43	P	P	11 34 36.5	-0.1
	comp=Z,1.6nm,0.8s,baz=240,slow=4.0,SNR=9.7						
	comp=Z,1.6nm,0.8s						
KLR	Kul'dur	91.54	330	P	P	11 34 51.8	+0.7
	comp=Z,1.4nm,0.6s,baz=174,slow=2.9,SNR=4.6						
	comp=Z,1.4nm,0.6s						
MKAR	Makanchi Array	118.28	310	PKP	PKPdf	11 40 30.9	-0.8
	comp=Z,0.2nm,0.4s,baz=50,slow=4.5,SNR=4.6						
KURBB	Kurchatov Arra	121.60	313	PKP	PKPdf	11 40 36.9	-1.0
	comp=Z,0.4nm,0.5s,baz=97,slow=2.5,SNR=4.2						
BVAR	Borovoye Array	126.92	316	PKP	PKPdf	11 40 48.2	+0.1
	comp=Z,0.7nm,0.7s,baz=67,slow=1.9,SNR=4.1						
ARCES	ARCESS Array B	139.04	348	PKhKP	PKPpre	11 41 03.0	
	comp=Z,0.8nm,0.7s,baz=39,slow=1.8,SNR=3.7						
KBZ	Khabaz	145.60	304	PKPbc	PKPab	11 41 23.4	0.0
	comp=Z,1.3nm,0.5s,baz=90,slow=3.0,SNR=3.5						
FIA1	FINESS Array S	145.63	340		PKPdf	11 41 22.0	-0.3
FINES	FINESS Array B	145.63	340		PKPdf	11 41 21.8	-0.5
FINES	FINESS Array B	145.63	340	PKPbc	PKPdf	11 41 22.2	-0.1
	comp=Z,6.4nm,0.4s,baz=41,slow=3.9,SNR=103						
NB2	NORSAR Subarra	149.19	352	PKP	PKPbc	11 41 32.5	-0.1
	comp=Z,0.9nm,0.6s,baz=20,slow=3.0						
NOA	NORSAR Array B	149.19	352	PKPbc	PKPbc	11 41 32.1	-0.5
	comp=Z,1.1nm,0.7s,baz=14,slow=2.5,SNR=6.7						
HFS	Hagfors	149.69	349	PKPbc	PKPbc	11 41 32.7	-1.0
	comp=Z,1.2nm,0.5s,baz=69,slow=4.8,SNR=8.5						
AKASG	Malin Array Be	151.81	323	PKPbc	PKPbc	11 41 38.8	-0.3
	comp=Z,0.4nm,0.3s,baz=52,slow=2.8,SNR=9.3						
AKASG				PKPab	pPKPbc	11 41 46.8	+0.3
	comp=Z,2.0nm,0.8s,baz=52,slow=2.4,SNR=8.4						
EIL	Elat	151.89	276	PKPbc	PKiKP	11 41 40.6	+0.2
	comp=Z,4.9nm,0.8s,baz=30,slow=14,SNR=2.9						
MMAI	Mount Meron Ar	151.94	283	PKPbc	PKiKP	11 41 41.5	+1.0
	comp=Z,1.4nm,0.4s,baz=120,slow=5.7,SNR=4.9						
BRTR	Keskin Array B	153.08	298	PKPbc	PKPbc	11 41 42.2	-0.3
	comp=Z,0.5nm,0.4s,baz=108,slow=4.7,SNR=4.1						
BRTR				PKPab	PKPab	11 41 55.1	+1.0
	comp=Z,0.7nm,0.5s,baz=124,slow=3.8,SNR=4.2						
TORD	Torodi Ar. Bea	162.43	178	PKPab	PKPab	11 42 33.8	-0.7
	comp=Z,2.6nm,0.4s,baz=188,slow=3.1,SNR=1.6						

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*SDD **23** 11:29:12.3±1.8, 17°.92N×69°.06W, h100^{km}±29^{km}, MD3.5, ML2.3, MW3.1*

*NEIC **23** 11:29:13.2±1.6, 18°.8N±0°.3×68°.61W±0°.07, h143^{km}±12^{km}, ML2.5/18, Md3.3/7(RSPR), Error ellipse: s-maj=43.6km s-min=9.2km az=183.0*

*RSPR **23** 11:29:17.6, 18°.80N×68°.47W, h125^{km}±3^{km}, MD3.3/7*

ISC 23 11:29:17.0±2.2**, 18°.6N**±0°.1×**68°.64W**±0°.07**, h107**^{km}±15^{km}**, n36,** σ**1^{s}.39**/40**, 16C-1D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HIDR	Higuey Centro	0.08	302	⇑eSg	Sn	11 29 42.3	-0.5
HIDR				IAML		11 29 42.8	
	comp=N,86nm,0.2s						
PCDR	Punta Cana, DR	0.25	98	⇑eSg	Sn	11 29 43.0	-0.5
PCDR				IAML		11 30 22.0	
	comp=N,90nm,1.3s						
MIDR	Miches	0.58	318	⇑ePg	Pn	11 29 32.8	-1.3
MIDR				⇑eSg	Sn	11 29 47.2	+0.4
MIDR				IAML		11 29 47.7	
	comp=N,15nm,0.7s						
SMDR	Samana, DR	0.90	325	eS	Sn	11 29 54.4	+2.6
IDE	Isla Desecheo	1.12	98		Pn	11 29 39.3	+0.1
IDE					Sn	11 29 57.3	+1.2
IDE	Isla Desecheo	1.12	98	⇓eP	Pn	11 29 39.3	+0.1
IDE	Isla Desecheo	1.12	98	eS	Sn	11 29 57.3	+1.2
SDD	Santo Domingo	1.21	266	Pn	Pn	11 29 40.0	-0.2
SDD				IAML		11 30 09.1	
	comp=N,35nm,1.3s						
SDD				IAML		11 30 43.2	
	comp=E,25nm,0.9s						
AGPR	Aguadilla, PR	1.46	93		Pn	11 29 43.0	-0.1
AGPR				IAML		11 30 32.9	
	comp=E,57nm,1.5s						
AGPR	Aguadilla, PR	1.46	93		Sn	11 30 03.1	+0.2
AGPR	Aguadilla, PR	1.46	93	IAML		11 30 00.5	
	comp=N,51nm,1.0s						
AGPR	Aguadilla, PR	1.46	93	⇑eP	Pn	11 29 43.0	-0.1
AGPR	Aguadilla, PR	1.46	93	eS	Sn	11 30 03.1	+0.2
AGPR	Aguadilla, PR	1.46	93	⇑ePg	Pn	11 29 41.5	-1.5
AGPR				⇑eSg	Sn	11 30 06.2	+3.3
AGPR				IAML		11 30 43.8	
	comp=N,62nm,2.0s						
PRSN	Puerto Rico Se	1.46	103	Pn	Pn	11 29 41.8	-1.3
PRSN				IAML		11 30 06.5	
	comp=N,48nm,0.2s						
PRSN				IAML		11 30 07.6	
	comp=E,43nm,0.2s						
LSP	Las Mesas	1.52	104		Pn	11 29 44.7	+0.8
LSP					Sn	11 30 05.9	+1.5
LSP	Las Mesas	1.52	104	⇑eP	Pn	11 29 44.7	+0.8
LSP	Las Mesas	1.52	104	eS	Sn	11 30 05.9	+1.5
CRPR	Cabo Rojo, PR	1.55	110		Pn	11 29 42.8	-1.5
CRPR	Cabo Rojo, PR	1.55	110	IAML		11 30 50.4	
	comp=N,16nm,1.3s						
CRPR	Cabo Rojo, PR	1.55	110	⇑eP	Pn	11 29 42.8	-1.5
CRPR	Cabo Rojo, PR	1.55	110	⇑ePg	Pn	11 29 42.3	-2.0
CRPR				IAML		11 30 24.7	
	comp=N,20nm,2.2s						
MLPR	Magueyes Islan	1.62	110	⇑eP	Pn	11 29 46.9	+1.8
MLPR	Magueyes Islan	1.62	110	eS	Sn	11 30 08.2	+1.7
MLPR	Magueyes Islan	1.62	110	⇑ePg	Pn	11 29 43.3	-1.8
MLPR				IAML		11 30 45.1	
	comp=N,8.2nm,1.8s						
AOPR	Arecibo Observ	1.81	96		Pn	11 29 45.3	-2.1
AOPR					Sn	11 30 09.0	-1.5
AOPR				IAML		11 30 14.4	
	comp=N,25nm,0.9s						
AOPR				IAML		11 30 15.5	
	comp=E,32nm,0.5s						
AOPR	Arecibo Observ	1.81	96	⇑eP	Pn	11 29 47.8	+0.4
AOPR	Arecibo Observ	1.81	96	eS	Sn	11 30 11.3	+0.7
AOPR	Arecibo Observ	1.81	96	⇑ePg	Pn	11 29 46.0	-1.4
AOPR				⇑eSg	Sn	11 30 11.7	+1.1
AOPR				IAML		11 30 16.3	
	comp=N,22nm,0.6s						
UUPR	Utuado, UPR, P	1.85	99		Sn	11 30 11.6	0.0
UUPR	Utuado, UPR, P	1.85	99		Pn	11 29 46.1	-1.8
UUPR	Utuado, UPR, P	1.85	99	⇑eP	Pn	11 29 47.3	-0.7
UUPR	Utuado, UPR, P	1.85	99	eS	Sn	11 30 11.6	0.0
EMPR	Esperanza - Ma	2.01	92	Pn	Pn	11 29 48.0	-1.9
CELP	Cerrillos	2.02	103	Pn	Pn	11 29 49.2	-0.9
PDPR	Patillas Dam,	2.55	102	Pn	Pn	11 29 56.5	-0.4
PDPR				IAML		11 30 56.5	
	comp=N,8.5nm,1.2s						

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*JMA **23** 11:30:33.5±0.2, 24°N±2°×122°.5E±0°.5, h76^{km}±2^{km}, MV1.8/9, NW OFF ISHIGAKIJIMA IS*

*TAP **23** 11:30:33.2, 24°.50N×122°.40E, h86^{km}, ML2.6, C*

ISC 23 11:30:32.8±1.4**, 24°.45N**±0°.04×**122°.46E**±0°.03**, h85**^{km}±8^{km}**, n49,** σ**0^{s}.79**/87**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS3	EOS3	0.21	219	eP	Pn	11 30 45.8	+0.8
EOS3				eS	Sn	11 30 55.4	+1.5
EOS2	EOS2	0.21	261	P	Pn	11 30 45.5	+0.6
EOS2				eS	Sn	11 30 55.0	+1.0
EOS4	EOS4	0.35	202	eP	Pn	11 30 45.8	+0.4
JYNG	Yonagunijimaku	0.44	90	eP	Pn	11 30 46.4	0.0
JYNG				eS	Sn	11 30 56.1	-0.6
YOJ	Yonaguni jima	0.50	89	eP	Pn	11 30 47.0	0.0
YOJ				eS	Sn	11 30 56.3	-1.2
ESAO	Su ao	0.58	283	eP	Sn	11 30 57.7	-0.9
ESAO				eS	Sn	11 30 57.9	-0.7
TWC	Suao	0.58	286	eS	Sn	11 30 56.7	-2.0
EWUT	Wuta	0.62	270	eP	Pn	11 30 48.2	+0.2
EWUT				eS	Sn	11 30 59.0	-0.4
ENA	Nanau	0.66	268	eP	Pn	11 30 48.5	+0.1
ENA				eS	Sn	11 30 59.6	-0.4
TWE	Neicheng	0.77	291	eP	Pn	11 30 50.0	+0.5
TWE				eS	Sn	11 31 01.0	-1.0
SXI1	Grass Mountain	0.83	320	eP	Pn	11 30 50.2	-0.1
SXI1				eS	Sn	11 31 02.8	-0.6
ENTT	Nioudou	0.84	283	eP	Pn	11 30 51.3	+1.0
ENTT				eS	Sn	11 31 03.3	0.0
NACB	Ninganchiao	0.84	251	eP	Pn	11 30 50.2	-0.1
NACB				eS	Sn	11 31 02.9	-0.4
FUSB	Fushanzhiwuyua	0.85	291	eP	Pn	11 30 51.0	+0.5
FUSB				eS	Sn	11 31 02.8	-1.0
LATG	Datong	0.86	276	eP	Pn	11 30 51.0	+0.5
LATG				eS	Sn	11 31 03.9	+0.1
TWD	Chiawan	0.87	245	eP	Pn	11 30 50.6	0.0
TWD				eS	Sn	11 31 03.5	-0.5
ETLH	Xiulin Townshi	0.93	255	eS	Sn	11 31 04.8	-0.5
TEYL	Yanliau Villag	0.98	234	eS	Sn	11 31 05.9	-0.2
ETM	Tongmen	1.01	242	eP	Pn	11 30 52.2	0.0
ETM				eS	Sn	11 31 06.0	-0.7
YHNB	Yeheng	1.01	283	eP	Pn	11 30 53.1	+0.8
YHNB				eS	Sn	11 31 06.7	-0.3
NSK	Sanguang	1.03	283	eS	Sn	11 31 06.9	-0.4
LXIB	Xiulin Townshi	1.05	246	eP	Pn	11 30 53.1	+0.3
LXIB				eS	Sn	11 31 07.2	-0.6
SHUL	Shoufeng	1.05	231	eP	Pn	11 30 53.4	+0.6
SHUL				eS	Sn	11 31 07.7	+0.1
YM01	YM01	1.07	311	eS	Sn	11 31 06.7	-1.3
ZUZH	Zhuzihu	1.09	311	eS	Sn	11 31 06.8	-1.8
WHF	Hehuan Shan	1.13	255	eP	Pn	11 30 54.7	+0.6
WHF				eS	Sn	11 31 10.0	-0.1
IRIF	Iriomote-Funau	1.16	95	P	Pn	11 30 54.2	+0.2
TDCB	Techi	1.21	261	eS	Sn	11 31 11.4	+0.2
WARBT	Fenglin Townsh	1.22	234	eP	Pn	11 30 54.9	+0.1
WARBT				eS	Sn	11 31 10.4	-1.0
EGFH	Guangfu	1.23	231	eP	Pn	11 30 55.1	+0.3
EGFH				eS	Sn	11 31 10.8	-0.6
OWD	Renai	1.27	247	eP	Pn	11 30 56.3	+0.7
OWD				eS	Sn	11 31 11.8	-0.8
WUSB	Renai	1.31	250	eP	Pn	11 30 56.9	+0.9
WUSB				eS	Sn	11 31 13.1	-0.4
LIOB	Emei	1.33	279	eP	Pn	11 30 57.0	+0.9
LIOB				eS	Sn	11 31 14.4	+0.7
HGSD	Ruisui	1.35	225	eP	Pn	11 30 56.7	+0.4
HGSD				eS	Sn	11 31 13.4	-0.6
VWDT	VWDT	1.39	240	eP	Sn	11 31 15.5	+0.5
VWDT				eS	Sn	11 31 15.8	+0.7
WHP	Taichung City	1.39	263	eP	Pn	11 30 58.6	+1.6
WHP				eS	Sn	11 31 15.8	+0.6
EHYH	Wanrong	1.40	227	eP	Pn	11 30 57.9	+0.9
EHYH				eS	Sn	11 31 14.2	-1.0
EHY	Hungye	1.40	228	eP	Pn	11 30 58.0	+0.9
EHY				eS	Sn	11 31 13.9	-1.5
JKRS	Kuro-shima	1.43	98	eP	Pn	11 30 58.4	+1.1
JKRS				S	Sn	11 31 16.6	+0.7
YULB	Yu-li	1.50	226	eP	Pn	11 30 58.4	+0.1
YULB				eS	Sn	11 31 16.0	-1.6
TWF1	Yuli	1.53	225	eP	Pn	11 30 58.6	0.0
TWF1				eS	Sn	11 31 17.6	-0.6
JIJ	Ishigaki jima	1.54	93	P	Pn	11 30 59.1	+0.4
JIJ				eS	Sn	11 31 18.0	-0.4
CHKH	Chenggong	1.59	218	eS	Sn	11 31 18.7	-0.8
FULB	Fuli	1.64	221	eP	Pn	11 31 01.2	+1.0
FULB				eS	Sn	11 31 20.4	-0.5
CHKT	Chengkung	1.68	217	eS	Sn	11 31 20.1	-1.5
JISG	Ishigakijimahi	1.69	85	P	Pn	11 31 01.1	+0.4
JISG				eS	Sn	11 31 21.3	-0.6
EHD	Haiduan	1.73	222	eP	Pn	11 31 01.8	+0.5
EHD				eS	Sn	11 31 22.1	-0.9
EDH	Donghe	1.81	216	eP	Pn	11 31 02.4	+0.1
EDH				eS	Sn	11 31 23.5	-1.3
ELDTW	Lidau	1.82	227	eP	Pn	11 31 03.2	+0.6
ELDTW				eS	Sn	11 31 24.2	-1.0

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*IDC **23** 11:36:41.0±0.7, 30°.81S×177°.47W, h0^{km}, mb4.0/10, mbtmp4.0/10, MS3.6/4, Error ellipse: s-maj=24.4km s-min=17.4km az=85.0*

ISC 23 11:36:45.2±0.7**, 30°.83S**±0°.07×**177°.6W**±0°.1**, h27**^{km}**, n23,** σ**0^{s}.97**/21**, mb4.1**/12**, MS3.6**/4**, 4D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.60	350	Pn	Pn	11 37 10.9	-0.7
	163nm,0.3s,baz=76,slow=19,SNR=8.6						
RAO				Sn	Sb	11 37 33.7	-0.2
	233nm,0.3s,baz=108,slow=20,SNR=6.1						
URZ	Urewera	8.60	209	Pn	Pn	11 38 43.0	-4.8
	0.5nm,0.3s,baz=14,slow=4.2,SNR=1.9						
URZ				Sn	Sn	11 40 21.6	-2.3

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           3.1nm,0.3s,baz=0.0,slow=20,SNR=7.2
STKA  Stephens Creek   34.73 257  P       P        11 43 34.1 +1.1
           1.5nm,0.7s,baz=100,slow=6.1,SNR=4.4
           1.5nm,0.7s
ASAR  Alice Springs    43.44 267  P       P        11 44 46.9 +0.8
           0.7nm,0.6s,baz=104,slow=7.4,SNR=17
ASAR                              PcP     PcP      11 46 34.6 +0.5
           0.5nm,0.8s,baz=102,slow=3.6,SNR=1.3
           0.7nm,0.6s
WRA   Warramunga Arr   44.47 272  P       P        11 44 54.4 +0.1
           1.9nm,0.6s,baz=114,slow=8.0,SNR=20
           1.9nm,0.6s
VNDA  Vanda            47.70 186  P       P        11 45 20.6 +1.6
           0.4nm,0.8s,baz=5.4,slow=12,SNR=2.2
           0.4nm,0.8s
GUMO  Guam             57.04 315  LR      LR       12 09 05.1
           comp=Z,51nm,20.4s,baz=116,slow=34
QSPA  South Pole Qui   59.28 180  P       P        11 46 44.5 +0.3
           5.1nm,1.0s,baz=14,slow=4.2,SNR=8.1
           5.1nm,1.0s
TROLL Troll, Antarti   77.44 180 ⇓P       P        11 48 33.5  -4.2
           comp=Z,52nm,1.1s
SNAA  Sanae            77.71 178 ⇓P       P        11 48 38.2  -0.9
           comp=Z,22nm,0.9s
SNAA  Sanae            77.71 178  P       P        11 48 38.2  -0.9
           comp=Z,2.1nm,1.0s,baz=183,slow=18,SNR=4.9
           comp=Z,2.1nm,1.0s
VNA3  Neumayer Olymp   77.85 176 ⇓P       P        11 48 38.5  -1.4
           comp=Z,1.3nm,0.7s
VNA2  Neumayer--Watz   78.29 177 ⇓P       P        11 48 42.8 +0.6
           comp=Z,1.6nm,0.4s,baz=157,slow=4.1
MJAR  Matsushiro Arr   78.80 325  P       P        11 48 44.9  -0.5
           comp=Z,1.0nm,0.9s,baz=138,slow=7.4,SNR=2.2
MJAR                              LR      LR       12 20 50.5
           comp=Z,26nm,18.2s,baz=159,slow=34
           comp=Z,1.0nm,0.9s
PLCA  Paso Flores      81.95 133  LR      LR       12 18 23.4
           comp=Z,24nm,18.1s,baz=219,slow=31
KSRS  Korea Array      84.91 319  P       P        11 49 17.3  -0.2
           comp=Z,0.3nm,0.3s,baz=150,slow=7.0,SNR=2.6
           comp=Z,0.3nm,0.3s
NVAR  Mina Array Bea   88.32  42  P       P        11 49 34.9 +0.4
           comp=Z,2.5nm,0.9s,baz=240,slow=7.9,SNR=12
           comp=Z,2.5nm,0.9s
TXAR  Lajitas Array    92.32  57  P       P        11 49 52.5  -0.7
           comp=Z,0.9nm,1.1s,baz=245,slow=4.6,SNR=4.0
           comp=Z,0.9nm,1.1s
ATAH  Atahualpa        94.21 101  LR      LR       12 24 30.0
           comp=Z,40nm,18.9s,baz=233,slow=30
KBZ   Khabaz          145.65 303  PKPbc   PKPab    11 56 21.7 +0.3
           comp=Z,3.6nm,1.0s,baz=56,slow=3.6,SNR=5.9
FINES FINESS Array B  145.67 340  PKPbc   PKPdf    11 56 19.3  -1.0
           comp=Z,4.9nm,0.8s,baz=33,slow=3.3,SNR=18
HFS   Hagfors         149.74 349  PKPbc   PKPbc    11 56 32.2 +0.5
           comp=Z,1.6nm,0.9s,baz=27,slow=6.6,SNR=1.9
AKASG Malin Array Be  151.86 323  PKPbc   PKPbc    11 56 37.4 +0.4
           comp=Z,1.8nm,0.8s,baz=59,slow=2.5,SNR=4.4
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NEIC ***23*** *11:37:48.1±1.9, 14°.74S±0°.04×173°.56W±0°.06, h10^{km}±1^{km}, mb4.5/39, Error ellipse: s-maj=10.5km s-min=6.3km az=262.0*

IDC ***23*** *11:37:49.9±0.7, 14°.97S×173°.87W, h0^{km}, mb4.1/11, mbtmp4.1/11, MS3.8/31, Error ellipse: s-maj=29.3km s-min=19.5km az=130.0*

GCMT ***23*** *11:37:57.1±0.3, 14°.62S±0°.03×173°.85W±0°.03, h17^{km}±1^{km}, MW4.8/75, Moment Tensor Solution. s24,c28; s75,c101; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.74±.15; $M_{\theta\theta}$-1.18±.11; $M_{\phi\phi}$-0.56±.09; $M_{r\theta}$-0.60±.27; $M_{\theta\phi}$0.94±.07; $M_{\phi r}$0.33±.28; Best double couple: $M_0$1.92900×10^{16} NP1:ϕ_s129.00000°,δ35.00000°,λ95.00000°. NP2: ϕ_s303.00000°,δ55.00000°,λ87.00000°. Principal axes: T 1.8690, Plg79.0000°, Azm201.0000°; N 0.1190, Plg3.0000°, Azm305.0000°; P -1.9880, Plg10.0000°, Azm35.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 11:37:52.2±0.5**, 14°.73S**±0°.10×**173°.56W**±0°.08**, h35**^{km}**, n111,** σ**1**^{s}**57**/75**, mb4.4**/28**, MS4.0**/29**, Samoa Islands region**

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Code  Station Name      Δ°   AZ°    Phase ID          Time     Res
                                   Op      ISC       h  m  s   ISC
AFI   Afiamalu          1.91  65          Pn       11 38 21.1  -1.2
FUTU  Fugatoga          4.44 275          Pn       11 38 54.7  -2.3
NIUE  Niue              5.55 142   Pn      Pn       11 39 10.4  -1.9
MSVF  Nonsavu           8.60 249   Pn      Pn       11 39 57.3 +3.0
MSVF  Nonsavu           8.60 249   Pn      Pn       11 39 54.5 +0.2
           0.2nm,0.3s,baz=101,slow=16,SNR=2.3
MSVF                               LR      LR       11 42 35.3
           comp=Z,1µm,18.9s,baz=29,slow=35
FUNA  Funafuti          9.40 310   Pn      Pn       11 40 03.8  -1.4
RAR   Rarotonga        14.61 118   LR      LR       11 44 40.8
           comp=Z,66nm,20.6s,baz=283,slow=28
DZM   Mont Dzumac      20.32 246  eLR      LR       11 47 16.5
           754nm,27.9s
PPT   Papeete          23.20 100   LR      LR       11 48 56.9
           comp=Z,83nm,20.0s,baz=286,slow=28
PPT2  Papeete2         23.21 100  eS       S        11 47 07.0 +1.0
           674nm,31.0s
PPT2                              eLR      LR       11 48 29.7
           234nm,25.0s
PPT2                              eLR      LR       11 48 35.5
           173nm,26.5s
TBI   Tubuai           24.31 114  eS       S        11 47 11.9   -12
           2µm,27.2s
TBI                               eLR      LR       11 49 01.8
           544nm,24.8s
URZ   Urewera          24.85 198   LR      LR       11 50 49.4
           comp=Z,523nm,19.2s,baz=18,slow=32
TAOE  Nuku Hiva Isla   33.20  84  eLR      LR       11 53 12.7
           240nm,23.2s
H11N3 WAKE ISLAND Hy   39.25 330   T       T        12 27 02.4
           baz=150,slow=76,SNR=26
H11N1 WAKE ISLAND Hy   39.26 330   T       T        12 27 00.1
           baz=150,slow=76,SNR=28
H11N2 WAKE ISLAND Hy   39.27 330   T       T        12 27 09.4
           baz=150,slow=76,SNR=24
TOO   Toolangi         42.77 230   P       P        11 45 45.2  -1.3
STKA  Stephens Creek   44.24 239   LR      LR       12 02 44.8
           comp=Z,101nm,18.3s,baz=38,slow=34
WB0   Warramunga Arr   49.81 256   P       P        11 46 40.1  -1.9
WB0                                IAmb    IAmb     11 46 42.6
           comp=Z,7.4nm,0.9s
WRA   Warramunga Arr   49.85 256   P       P        11 46 40.7  -1.7
WRA   Warramunga Arr   49.85 256   P       P        11 46 41.4  -1.0
           comp=Z,2.5nm,0.7s,baz=92,slow=7.6,SNR=11
           comp=Z,2.5nm,0.7s
AS31  Alice Springs    50.17 251   P       P        11 46 43.6  -1.2
AS31                               IAmb    IAmb     11 46 45.8
           comp=Z,5.7nm,0.8s
ASAR  Alice Springs    50.18 251   P       P        11 46 44.2  -0.7
           comp=Z,21nm,0.8s,baz=90,slow=7.7,SNR=78
ASAR                               LR      LR       12 05 29.5
           comp=Z,115nm,21.8s,baz=91,slow=33
           comp=Z,21nm,0.8s
PSA00 Pilbara Seismi   63.25 253   P       P        11 48 16.5  -1.2
SBA   Scott Base       63.91 185   P       P        11 48 21.0   0.0
VNDA  Vanda            64.03 186   P       P        11 48 21.6  -0.3
VNDA  Vanda            64.03 186   P       P        11 48 24.1 +2.3
           comp=Z,1.1nm,0.9s,baz=34,slow=7.3,SNR=4.3
VNDA                               LR      LR       12 16 50.8
           comp=Z,35nm,18.0s,baz=340,slow=37
           comp=Z,1.1nm,0.9s
NWAO  Narrogin (SRO)   64.81 240   LR      LR       12 13 57.2
           comp=Z,98nm,21.2s,baz=56,slow=34
SHEM  Shemya Is, Ala   68.02 352   LR      LR       12 11 56.3
           comp=Z,124nm,22.0s,baz=134,slow=30
PETK  Petropavlovsk-   71.95 342   P       P        11 49 15.3 +3.5
           comp=Z,2.0nm,0.9s,baz=160,slow=5.5,SNR=4.7
PETK                               LR      LR       12 20 34.0
           comp=Z,20nm,18.1s,baz=161,slow=36
           comp=Z,2.0nm,0.9s
PFO   Pinyon Flats O   72.58  47   LR      LR       12 13 35.4
           comp=Z,186nm,20.4s,baz=257,slow=29
LPIG  La Paz           72.82  59   LR      LR       12 12 46.0
           comp=Z,110nm,19.3s,baz=213,slow=29
YBH   Yreka Blue Hor   73.16  37   LR      LR       12 13 47.5
           comp=Z,9.9nm,21.8s,baz=258,slow=29
NVAR  Mina Array Bea   73.94  42   P       P        11 49 24.1  -0.2
NVAR  Mina Array Bea   73.94  42   P       P        11 49 29.1 +4.8
           comp=Z,1.2nm,1.0s,baz=244,slow=8.8,SNR=5.4
NVAR                               LR      LR       12 14 46.6
           comp=Z,138nm,20.8s,baz=210,slow=30
           comp=Z,1.2nm,1.0s
GMN   Gold Mountain    74.00  44   P       P        11 49 22.9  -1.8
NV11  Mina Array Sit   74.03  42   P       P        11 49 26.8 +2.1
NV11                               IAmb    IAmb     11 49 37.1
           comp=Z,6.1nm,1.4s
KDAK  Kodiak Island    74.30  11   LR      LR       12 18 25.3
           comp=Z,89nm,18.5s,baz=209,slow=33
TPH   Tonopah          74.45  43   P       P        11 49 25.0  -2.2
QSPA  South Pole Qui   75.31 180   P       P        11 49 30.7  -1.0
QSPA                               IAmb    IAmb     11 49 36.6
           comp=Z,7.1nm,1.1s
QSPA  South Pole Qui   75.31 180   P       P        11 49 33.7 +2.0
           comp=Z,4.0nm,0.8s,baz=37,slow=5.2,SNR=6.8
           comp=Z,4.0nm,0.8s
KSRS  Korea Array      75.57 316   P       P        11 49 38.2 +4.8
           comp=Z,0.9nm,0.9s,baz=117,slow=7.0,SNR=4.9
           comp=Z,0.9nm,0.9s
M14K  Bethel           75.79   6   P       P        11 49 34.1   0.0
LCMT  Little Creek M   76.58  46   P       P        11 49 38.4  -1.0
LCMT                               IAmb    IAmb     11 49 55.4
           comp=Z,4.2nm,1.3s
KNB   Kanab            76.87  46           P        11 49 40.1  -1.0
KNB                                IAmb    IAmb     11 50 06.2
           comp=Z,6.9nm,1.3s
U15A  North Rim        76.95  47           P        11 49 40.4  -1.3
U15A                               IAmb    IAmb     11 49 48.5
           comp=Z,9.4nm,1.4s
K15K  Wolf Creek Mou   77.35   6   P       P        11 49 44.3 +1.3
BBB   Bella Bella      77.36  27   LR      LR       12 16 35.0
           comp=Z,103nm,19.0s,baz=218,slow=30
TMUT  Trail Mountain   79.10  44           P        11 49 51.5  -2.1
TMUT                               IAmb    IAmb     11 50 03.7
           comp=Z,5.7nm,1.0s
HLID  Hailey           79.21  39   P       P        11 49 54.3 +0.4
HVU   Hansel Valley    79.31  42   P       P        11 49 52.9  -1.6
MA2   Magadan          79.48 342   LR      LR       12 23 15.1
           comp=Z,27nm,19.0s,baz=126,slow=34
VHRN  Van Horn         79.89  54   P       P        11 49 57.2  -0.7
VHRN                               IAmb    IAmb     11 50 07.8
           comp=Z,4.9nm,1.1s
MNTX  Cornudas Mount   79.95  53           P        11 49 58.3 +0.3
MNTX                               IAmb    IAmb     11 50 28.7
           comp=Z,6.9nm,1.5s
NEW   Newport          80.24  34   LR      LR       12 19 53.3
           comp=Z,77nm,19.2s,baz=224,slow=31
PV12  Saucer Basin,    80.29  46   P       P        11 49 59.2  -0.8
TXAR  Lajitas Array    80.37  56   P       P        11 50 05.7 +5.2
           comp=Z,2.2nm,1.2s,baz=262,slow=4.0,SNR=7.6
TXAR                               LR      LR       12 19 54.4
           comp=Z,61nm,18.0s,baz=238,slow=31
           comp=Z,2.2nm,1.2s
ANMO  Albuquerque      80.49  50   P       P        11 49 59.6  -1.5
ANMO  Albuquerque      80.49  50   LR      LR       12 18 16.1
           comp=Z,190nm,20.9s,baz=325,slow=30
M26K  Nabesna, AK      80.53  14   P       P        11 50 01.1 +0.6
M26K                               IAmb    IAmb     11 50 08.0
           comp=Z,6.8nm,1.2s
M27K  Edge Creek, AK   80.76  14   P       P        11 50 00.5  -1.3
M27K                               IAmb    IAmb     11 50 10.6
           comp=Z,8.6nm,1.3s
MCMT  McKenzie Canyo   80.83  39   P       P        11 50 01.9  -0.9
DLBC  Dease Lake       81.13  22   LR      LR       12 21 04.7
           comp=Z,7.6nm,18.2s,baz=203,slow=32
WRH   Wood River Hil   81.32  11           P        11 50 03.7  -0.9
WRH                                IAmb    IAmb     11 50 14.6
           comp=Z,6.0nm,1.0s
CCB   Clear Creek Bu   81.53  11   P       P        11 50 05.9 +0.2
CCB                                IAmb    IAmb     11 50 15.5
           comp=Z,4.9nm,1.1s
SCRK  Sand Creek       81.69  13   P       P        11 50 06.4  -0.3
ILAR  Eielson Array    81.82  11   P       P        11 50 11.8 +4.6
           comp=Z,0.9nm,0.8s,baz=206,slow=5.1,SNR=7.0
ILAR                               LR      LR       12 20 00.9
           comp=Z,58nm,20.7s,baz=226,slow=31
           comp=Z,0.9nm,0.8s
SEY   Seymchan         81.83 345   LR      LR       12 24 17.1
           comp=Z,40nm,19.2s,baz=124,slow=34
YHL   Hebgen Lake      81.86  40           P        11 50 06.8  -1.5
YHL                                IAmb    IAmb     11 50 15.8
           comp=Z,8.5nm,1.3s
PDAR  Pinedale Array   81.87  42   P       P        11 50 06.3  -2.0
PDAR  Pinedale Array   81.87  42   P       P        11 50 12.7 +4.3
           comp=Z,0.5nm,0.8s,baz=241,slow=5.0,SNR=4.8
PDAR                               LR      LR       12 22 13.6
           comp=Z,63nm,18.1s,baz=234,slow=32
           comp=Z,0.5nm,0.8s
J25K  Salcha River,    81.97  12   P       P        11 50 06.5  -1.6
J25K                               IAmb    IAmb     11 50 13.8
           comp=Z,4.4nm,1.1s
PRP   Porcupine Dome   82.75  11           P        11 50 13.2 +0.9
PRP                                IAmb    IAmb     11 50 22.8
           comp=Z,3.5nm,0.9s
CMIG  Matias Romero    83.80  71   LR      LR       12 21 01.2
           comp=Z,74nm,18.5s,baz=219,slow=31
E21K  Killik River     84.14   7   P       P        11 50 18.7  -0.5
BMAR  Burnt Mountain   84.62  11   P       P        11 50 21.9 +0.2
ABTX  Abilene, Hawle   84.80  55   P       P        11 50 21.8  -1.6
H29M  Whitestone       84.85  14           P        11 50 23.4 +0.6
E25K  Arctic Village   85.06  10   P       P        11 50 22.9  -1.0
E25K                               IAmb    IAmb     11 50 33.4
           comp=Z,2.6nm,0.8s
H03S2 Juan Fernandez   85.70 124   T       T        13 25 24.7
           baz=252,slow=75,SNR=6.3
H03S1 Juan Fernandez   85.72 124   T       T        13 25 24.9
           baz=252,slow=75,SNR=5.9
H03S3 Juan Fernandez   85.72 124   T       T        13 25 23.3
           baz=252,slow=75,SNR=5.5
INK   Inuvik           87.65  14   LR      LR       12 22 05.2
           comp=Z,30nm,21.2s,baz=221,slow=30
MAW   Mawson           88.38 199   LR      LR       12 28 05.3
           comp=Z,73nm,18.1s,baz=102,slow=34
YAK   Yakutsk          88.44 337   LR      LR       12 27 52.9
           comp=Z,16nm,19.7s,baz=124,slow=34
YKA   Yellowknife Ar   89.55  23   P       P        11 50 50.7 +5.1
           comp=Z,0.6nm,0.9s,baz=247,slow=4.0,SNR=4.8
YKA                                LR      LR       12 23 42.9
           comp=Z,86nm,20.6s,baz=217,slow=31
           comp=Z,0.6nm,0.9s
ULM   Lac du Bonnet    93.51  39   LR      LR       12 29 30.1
           comp=Z,121nm,18.1s,baz=278,slow=33
TKL   Tuckaleechee C   98.26  55   LR      LR       12 29 12.9
           comp=Z,73nm,21.2s,baz=280,slow=31
JAVC  Velka Javorina  144.73 347  ePKP     PKiKP    11 57 29.5 +0.3
KRUC  Moravsky        144.80 349  ePKP     PKiKP    11 57 28.5  -0.7
GERES GERESS Array B  145.46 352   PKPbc   PKiKP    11 57 30.5  -0.2
           comp=Z,0.4nm,0.5s,baz=20,slow=3.3,SNR=5.6
BRTR  Keskin Array B  145.54 321   PKPbc   PKiKP    11 57 30.9  -0.3
           comp=Z,3.7nm,0.9s,baz=65,slow=2.5,SNR=11
CONA  Conrad Observa  145.99 349  ePKP     PKiKP    11 57 32.5 +0.6
           comp=Z,7.9nm,1.7s
RONA  Rosalia, Austr  146.12 348  i PKP    PKiKP    11 57 32.6 +0.5
           comp=Z,6.3nm,1.1s
MOA   Molln           146.34 350  i PKP    PKiKP    11 57 33.3 +0.9
           comp=Z,5.2nm,1.1s
BIOA  Bad Ischl, Aus  146.59 351  ePKP     PKiKP    11 57 36.4 +3.4
           comp=Z,5.1nm,1.0s
ARSA  Arzberg         146.70 349  i PKP    PKiKP    11 57 34.3 +1.1
           comp=Z,4.2nm,1.4s
LESA  Schwarzleotal   146.99 352  i PKP    PKiKP    11 57 34.4 +0.5
           comp=Z,2.1nm,0.8s
RETA  Reutte          147.14 355  i PKP    PKiKP    11 57 35.5 +1.3
           comp=Z,3.1nm,1.2s
WATA  Walderalm       147.21 354  i PKP    PKiKP    11 57 36.9 +2.4
           comp=Z,6.0nm,1.2s
MOTA  Moosalm         147.25 354  i PKP    PKiKP    11 57 35.7 +1.2
           comp=Z,3.1nm,0.9s
WTTA  Wattenberg      147.27 353  i PKP    PKiKP    11 57 35.4 +0.8
           comp=Z,1.9nm,0.7s
SOKA  Soboth          147.34 349  i PKP    PKiKP    11 57 35.7 +1.1
           comp=Z,9.3nm,1.7s
SQTA  Sankt Quirin    147.36 354  i PKP    PKiKP    11 57 36.2 +1.5
           comp=Z,5.2nm,1.1s
DAVA  Damuels         147.41 356  i PKP    PKiKP    11 57 36.9 +2.0
           comp=Z,4.5nm,0.9s
OBKA  Obir            147.59 350  i PKP    PKiKP    11 57 36.4 +1.2
           comp=Z,4.5nm,1.2s
FETA  Feichten        147.60 355  ePKP     PKiKP    11 57 37.7 +2.4
           comp=Z,1.8nm,0.7s
MYKA  Terra Mystica   147.63 351  i PKP    PKPab    11 57 35.9 +0.6
           comp=Z,6.6nm,1.2s
ABTA  Abfaltersbach   147.68 352  i PKP    PKPab    11 57 35.1  -0.4
           comp=Z,5.1nm,1.2s
DAVOX Davos/Dischmat  147.91 356   PKPbc   PKPab    11 57 38.4 +1.8
           comp=Z,2.4nm,0.5s,baz=333,slow=4.5,SNR=6.1
ESDC  Sonseca Array   153.52  18   PKPbc   PKiKP    11 57 51.0 +3.5
           comp=Z,0.7nm,0.8s,baz=341,slow=3.5,SNR=7.3
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IDC ***23*** *11:42:44.2±1.2, 35°.73N×26°.82E, h0^{km}, mb3.7/4, mbtmp3.6/9, ML3.3/5, Error ellipse: s-maj=24.5km s-min=16.7km az=172.0*

ISK ***23*** *11:42:44.9, 36°.02N×26°.92E, h12^{km}, ML3.4/16*

ATH ***23*** *11:42:44.8, 36°.04N×26°.91E, h12^{km}±4^{km}, ML3.4/13, Manual Solution by M.Kolligri First location: 2019/06/23 11:43:49, This location: 2019/06/23 20:08:44 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*

AFAD ***23*** *11:42:46.6, 35°.98N×27°.20E, h14^{km}, ML3.1*

THE ***23*** *11:42:47.4, 36°N±3°×2°7E±°, h40^{km}±8^{km}, M3.5/11, MLh3.5/11*

ISC 23 11:42:45.1±1.1**, 36°.01N**±0°.02×**26°.92E**±0°.02**, h12**^{km}±8^{km}**, n89,** σ**1**^{s}**38**/125**, mb3.3**/3**, Dodecanese Islands**

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Code  Station Name      Δ°   AZ°    Phase ID          Time     Res
                                   Op      ISC       h  m  s   ISC
KARP  Karpathos         0.50 156   Pg      Pb       11 42 55.4  -0.4
KARP                               Sg      Sb       11 43 02.6  -0.5
KARP  Karpathos         0.50 156   P       Pb       11 42 55.5  -0.4
KARP                               S       Sb       11 43 02.5  -0.5
NISR  Nisiros           0.63  16   P       Pn       11 42 58.6  -1.3
NISR                               S       Sb       11 43 07.6 +0.8
YAZI  Mula-Dat§a-       0.80  32   P       Pb       11 43 00.6  -0.4
YAZI                               S       Sb       11 43 11.0  -0.8
DAT   Datca             0.90  36   Pg      Pb       11 43 02.7   0.0
DAT                                Sg      Sn       11 43 15.3  -1.3
DAT   Datca             0.90  36   P       Pn       11 43 03.1  -0.5
DAT                                S       Sg       11 43 13.6  -0.6
DAT                              i IAML             11 43 17.0
           comp=N,631nm,0.4s
DAT                              i IAML             11 43 17.0
           comp=E,599nm,0.4s
KLNA  Kalymnos          0.95   3   P       Pg       11 43 02.6  -0.9
KLNA                               S       Sg       11 43 15.3  -0.6
ARG   Arkhangelos       1.00  77   Pg      Pg       11 43 04.2  -0.2
ARG                                Sg      Sn       11 43 18.7  -0.3
ARG   Arkhangelos       1.00  77   P       Pb       11 43 04.1  -0.3
ARG                                S       Sg       11 43 17.6 +0.2
ARG   Arkhangelos       1.00  77   P       Pb       11 43 04.1  -0.3
ARG                                S       Sg       11 43 17.1  -0.3
ZKR   Zakros            1.06 213   Pg      Pn       11 43 05.8 +0.1
ZKR                                Sg      Sn       11 43 20.9 +0.6
ZKR   Zakros            1.06 213   P       Pg       11 43 05.5   0.0
ZKR                                S       Sn       11 43 20.1  -0.3
BODT  Bodrum            1.10  17   Pn      Pn       11 43 06.2  -0.2
BODT  Bodrum            1.10  17   P       Pg       11 43 05.9  -0.4
BDRM  Kayabasi          1.14  22   P       Pg       11 43 07.3 +0.2
AMGA  Amorgos Island    1.17 315   P       Pb       11 43 06.3  -0.9
THERA Ancient Thera,    1.22 288   P       Pn       11 43 07.6  -0.4
CMBO  Columbo, Santo    1.31 291   P       Pn       11 43 08.9  -0.3
CMBO                               S       Sb       11 43 25.8  -0.5
CMBO  Columbo, Santo    1.31 291   P       Pn       11 43 08.5  -0.7
THR9  Santorini-Faro    1.31 286   P       Pn       11 43 08.8  -0.4
TURN  Turunc            1.32  54   Pn      Pb       11 43 09.4  -0.4
TURN  Turunc            1.32  54   P       Pn       11 43 08.6  -0.7
TURN                               S       Sb       11 43 24.8  -1.8
TURN                             i IAML             11 43 30.0
           comp=N,274nm,0.5s
TURN                             i IAML             11 43 30.0
           comp=E,373nm,0.5s
MLSB  Milas             1.46  28   Pn      Pb       11 43 11.6  -0.7
DDIM  Aydin, Didim      1.47  10   P       Pg       11 43 14.4 +1.0
DDIM                               S       Sg       11 43 33.8 +1.3
DDIM                             i IAML             11 43 49.0
           comp=E,351nm,0.7s
DDIM                             i IAML             11 43 56.0
           comp=N,321nm,0.7s
APE   Apeiranthos       1.54 314   Pn      Pn       11 43 11.9  -0.5
APE   Apeiranthos       1.54 314   P       Pn       11 43 11.5  -0.9
APE                                S       Sn       11 43 30.2  -2.2
APE   Apeiranthos       1.54 314   P       Pn       11 43 11.7  -0.7
DALY  Dalyan (Mula)     1.62  59   Pn      Pb       11 43 13.9  -1.0
IACM  Heraklion         1.66 246   P       Pn       11 43 14.2 +0.2
IACM  Heraklion         1.66 246   P       Pn       11 43 14.0 +0.1
MULA  Mugla, Merkez-    1.68  42   P       Pb       11 43 16.2 +0.2
MULA                               S       Sb       11 43 37.7 +0.5
SMG   Samos             1.70 358   P       Pn       11 43 13.5  -1.1
SMG   Samos             1.70 358   P       Pn       11 43 13.3  -1.4
GCAM  G?zelcaml?        1.71   8   Pn      Pb       11 43 15.2  -1.3
GCAM  G?zelcaml?        1.71   8   P       Pg       11 43 18.2 +0.2
GCAM                               S       Sg       11 43 43.0 +2.9
GCAM                             i IAML             11 43 51.0
           comp=N,181nm,0.2s
GCAM                             i IAML             11 43 51.0
           comp=E,197nm,0.3s
IDI   Anoyia            1.80 247   Pn      Pn       11 43 16.6 +0.6
IDI   Anoyia            1.80 247   P       Pn       11 43 16.4 +0.4
IDI   Anoyia            1.80 247   Pn      Pn       11 43 15.8  -0.2
           6.3nm,0.3s,baz=62,slow=15,SNR=55
IDI                                Sn      Sn       11 43 37.6  -1.2
           59nm,0.3s,baz=35,slow=16,SNR=9.8
IDI   Anoyia            1.80 247   P       Pn       11 43 15.9  -0.1
SABU  Mula-Dalaman      1.84  63   P       Pn       11 43 17.3 +0.7
SABU                               S       Sn       11 43 37.5  -2.4
FETY  Fethiye           1.86  70   Pn      Pb       11 43 17.6  -1.4
IZZE  Mula-Seydike      1.92  76   P       Pn       11 43 18.0 +0.5
IZZE                               S       Sn       11 43 40.9  -0.7
IZZE                             i IAML             11 43 50.0
           comp=E,246nm,0.5s
DGB   zmir              2.04 359   P       Pn       11 43 18.2  -1.1
DGB                                S       Sg       11 43 51.9 +1.1
AYDB  Zeytinkoy-Aydi    2.09  22   Pn      Pn       11 43 20.5 +0.4
DNZT  Denizli-Tavas-    2.12  52   P       Pb       11 43 22.3  -1.2
DNZT                               S       Sn       11 43 46.4  -0.4
ESEN  Aydn-Nazilli      2.13  32   P       Pn       11 43 21.0 +0.6
ESEN                               S       Sg       11 43 53.7 +0.3
CAME  Cameli-Denizli    2.14  63   Pn      Pn       11 43 21.3 +0.6
KSL   Kastellorizon     2.16  85   P       Pn       11 43 21.7 +0.8
KSL   Kastellorizon     2.16  85   P       Pn       11 43 21.6 +0.7
TAVA  DENIZLI_Tavas     2.17  47   P       Pb       11 43 23.5  -0.8
AKAS  Kas               2.19  83   Pn      Pn       11 43 22.0 +0.6
AKAS  Kas               2.19  83   P       Pn       11 43 22.3 +0.9
AKAS                               S       Sn       11 43 47.0  -1.5
AKAS                             i IAML             11 44 05.0
           comp=E,193nm,1.1s
AKAS                             i IAML             11 44 10.0
           comp=N,228nm,1.0s
CAEL  Denizli, Camel    2.23  59   P       Pb       11 43 24.6  -0.8
CAEL                               S       Sb       11 43 51.9  -1.2
CAEL                             i IAML             11 44 15.0
           comp=N,221nm,0.7s
ZEYE  Izmir, Urla-Ze    2.25 352   P       Pn       11 43 20.9  -1.3
ZEYE                               S       Sg       11 43 56.1  -1.5
IZMR  zmir-demi         2.28  21   P       Pb       11 43 26.2  -0.1
KNIK  Mula-Seydike      2.30  68   P       Pn       11 43 24.1 +1.2
KNIK                               S       Sn       11 43 50.2  -1.0
URLA  Izmir             2.37 354   P       Pb       11 43 28.1 +0.5
URLA                               S       Sg       11 43 58.9  -2.2
IMMV  Iera Moni Meta    2.45 258   P       Pn       11 43 26.1 +1.3
GOLH  Golhisar          2.46  59   P       Pn       11 43 25.9 +0.9
GOLH                               S       Sn       11 43 56.6 +1.6
GOLH                             i IAML             11 44 01.0
           comp=E,118nm,0.4s
GOLH                             i IAML             11 44 07.0
           comp=N,155nm,0.6s
CHOS  Chios island      2.48 344   P       Pn       11 43 24.6  -0.8
CHOS  Chios island      2.48 344   P       Pn       11 43 24.5  -0.8
KIRA  zmir-Kiraz        2.49  28   P       Pb       11 43 28.2  -1.6
KIRA                               S       Sb       11 43 59.8  -0.6
KARB  zmir-Karabur      2.69 352   P       Pn       11 43 27.0  -1.1
KARB                               S       Sb       11 44 05.5  -0.5
INCE  Denizli-Bozkur    2.73  51   P       Pb       11 43 34.9 +1.1
INCE                               S       Sn       11 44 02.2 +0.5
AKUM  Antalya-Kumluc    2.79  82   P       Pn       11 43 29.3  -0.2
MANT  Manisa            2.81  27   P       Pb       11 43 32.7  -2.6
KARY  Karystos          2.83 316   P       Pn       11 43 30.1  -0.1
ANKY  Antikythira Is    2.94 268   P       Pn       11 43 32.8 +1.2
KORT  Korkueli          2.94  69   P       Pn       11 43 34.2 +2.5
KORT                               S       Sb       11 44 10.5  -2.9
KORT                             i IAML             11 44 31.0
           comp=N,55nm,0.7s
KORT                             i IAML             11 44 31.0
           comp=E,76nm,0.6s
AKHS  Akhisar           2.96  14   P       Pg       11 43 42.1 +0.3
IZMD  zmir-Dikili-      2.97   0   P       Pg       11 43 41.0  -1.1
BRDR  BURDUR-Merkez     3.03  55   P       Pb       11 43 39.8 +0.7
BRDR                               S       Sn       11 44 11.1 +1.8
PASA  Karahalli, USA    3.11  41   P       Pn       11 43 35.2 +1.2
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ATHU	Athens Univers	3.18	309	P	Pn	11 43 34.9	-0.1
PTL	Penteli	3.18	311	P	Pn	11 43 35.0	0.0
MET6	Megalochori,Me	3.27	300	P	Pn	11 43 36.8	+0.6
MET5	Makryloggos,Me	3.28	301	P	Pn	11 43 37.2	+0.8
SIGR	SIGRI	3.31	346	P	Pn	11 43 35.8	-1.0
KYMI	Kymi, Euboea I	3.45	320	P	Pn	11 43 38.8	+0.1
BRTR	Keskin Array B	6.49	53	Pn	Pn	11 44 27.0	+6.5
	0.2nm,0.3s,baz=236,slow=16,SNR=4.0						
	0.4nm,0.5s						
MMAI	Mount Meron Ar	7.61	111	Pn	Pn	11 44 35.2	-0.7
	1.7nm,0.3s,baz=312,slow=11,SNR=4.1						
MMAI				Sn	Sn	11 45 56.7	-5.4
	1.1nm,0.3s,baz=298,slow=24,SNR=2.2						
	0.9nm,0.3s						
EIL	Elat	9.25	131	Pn	Pn	11 44 55.9	-2.3
	0.6nm,0.3s,baz=0.0,slow=15,SNR=2.6						
EIL				Sn	Sn	11 46 34.5	-7.8
	0.3nm,0.3s,baz=307,slow=20,SNR=2.1						
	2.7nm,0.5s						
AKASG	Malin Array Be	14.79	6	Pn	P	11 46 20.4	+0.5
	baz=194,slow=10						
VRAC	Vranov	15.29	334	Pn	P	11 46 25.7	+0.2
	0.2nm,0.3s,baz=122,slow=13,SNR=2.4						
	1.8nm,0.7s						
GERES	GERESS Array B	16.09	327	Pn	P	11 46 35.9	+1.5
	baz=141,slow=13,SNR=7.3						
	0.8nm,0.7s						
ESDC	Sonseca Array	24.60	288	P	P	11 48 04.4	-0.8
	1.0nm,0.7s,baz=90,slow=10,SNR=11						
	1.0nm,0.7s						
EKA	Eskdalemuir Ar	28.21	323	P	P	11 48 39.2	+1.7
	0.2nm,0.4s,baz=119,slow=9.7,SNR=3.5						
	0.2nm,0.4s						
TORD	Torodi Ar. Bea	32.13	231	P	P	11 49 12.3	-0.2
	1.6nm,0.3s,baz=31,slow=8.6,SNR=1.3						
	1.6nm,0.3s						
MKAR	Makanchi Array	42.11	57	P	P	11 50 40.6	+3.6
	0.1nm,0.4s,baz=272,slow=7.1,SNR=1.5						
	0.1nm,0.4s						

IDC ***23*** *11:58:35.6±2.2, 5.°97N×126.°57E, h25^{km}±13^{km}, mb4.0/19, mbtmp4.2/19, MS3.4/7, Error ellipse: s-maj=29.9km s-min=11.5km az=66.0*

NEIC ***23*** *11:58:37.9±1.7, 5.°94N±0.°06×126.°30E±0.°09, h35^{km}±2^{km}, mb4.5/29, Error ellipse: s-maj=16.5km s-min=10.1km az=252.0*

DJA ***23*** *11:58:40.2±1.4, 6°N±3°×12°6E±°, h27^{km}±14^{km}, M4.7/13, mb4.7/13, mB5.1/3, MLv4.7/11, Mw(mB)4.5/3*

ISC 23 11:58:41.1±0.4**, 5.°93N**±0.°05×**126.°29E**±0.°08**, h71**^{km}**, n78, σ1.^{s}73**/81**, mb4.4**/36**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	1.34	328		Pn	11 59 01.6	-2.3
DAV	Davao City (W)	1.34	328	Pg	Pn	11 59 03.6	-0.4
	86nm,0.3s,baz=108,slow=3.2,SNR=8.8						
DAV				Lg	Lg	11 59 23.1	
	453nm,0.3s,baz=234,slow=19,SNR=8.4						
DAV				LR	LR	11 59 39.9	
	comp=Z,244nm,18.5s,baz=190,slow=44						
SGSI	Sangihe	2.35	199	P	Pn	11 59 15.9	-1.6
SGSI				S	Sn	11 59 46.7	+1.3
TNTI	Ternate	5.23	168		Pn	11 59 53.7	-3.1
TNTI	Ternate	5.23	168	P	Pn	11 59 56.0	-0.9
	74nm,0.9s						
KMSI	Cibinong	5.79	203	P	Pn	12 00 04.6	+0.1
MRSI	Marisa	6.94	219	P	Pn	12 00 20.3	+0.2
TOLI2	Tolitoli	7.28	229		Pn	12 00 20.9	-4.0
LUWI	Luwuk	7.76	207		Pn	12 00 29.9	-1.6
LUWI	Luwuk	7.76	207	P	Pn	12 00 32.7	+1.3
	2µm98nm,1.2s						
MYLDM	Lahad Datu	7.79	265	Pn	Pn	12 00 30.0	-1.7
SANI	Sanana	7.93	182	P	Pn	12 00 31.5	-2.2
	0.1nm29nm,1.0s						
APSI	Ampana	8.22	214	P	Pn	12 00 39.1	+1.4
	78nm,0.8s						
MPSI	Mapaga	8.45	229	P	Pn	12 00 41.3	+0.4
FAKI	Fak Fak	10.61	146	Pn	Pn	12 01 07.6	-2.9
BAKI	Biak	12.09	125	P	Pn	12 01 29.4	-1.2
	21nm,1.5s						
PLAI	Plampang	16.93	210	P	P	12 02 36.9	+2.4
	45nm,0.9s						
MTN	Manton Dam	19.26	166	P	P	12 02 58.6	-1.4
JOW	Kunigami	20.88	5	LR	LR	12 10 39.7	
	comp=Z,57nm,21.4s,baz=216,slow=35						
KNRA	Kununurra	21.60	174	P	P	12 03 25.1	-0.2
KNRA				IAmb	IAmb	12 03 26.0	
	comp=Z,19nm,0.8s						
FITZ	Fitzroy Crossi	23.88	182	P	P	12 03 46.6	-1.7
IPM	Ipoh	25.20	268	P	P	12 04 00.3	-0.1
IPM				IAmb	IAmb	12 04 04.0	
	comp=Z,18nm,1.1s						
COEN	Coen	25.91	140	P	P	12 04 07.0	+0.2
WB0	Warramunga Arr	26.75	163	P	P	12 04 13.2	-1.2
WB0				IAmb	IAmb	12 04 39.4	
	comp=Z,11nm,1.0s						
WRA	Warramunga Arr	26.90	163	P	P	12 04 13.5	-2.2
WRA	Warramunga Arr	26.90	163	P	P	12 04 14.0	-1.7
	comp=Z,3.1nm,1.0s,baz=345,slow=9.2,SNR=11						
WRA				ScP	ScP	12 11 16.9	+6.2
	comp=Z,0.9nm,1.1s,baz=342,slow=2.9,SNR=2.6						
	comp=Z,3.1nm,1.0s						
PSI	Prapat	27.45	265	LR	LR	12 15 48.8	
	comp=Z,72nm,19.3s,baz=53,slow=37						
PSA00	Pilbara Seismi	28.05	193	P	P	12 04 24.9	-1.0
PSA00				IAmb	IAmb	12 04 26.0	
	comp=Z,13nm,1.1s						
GSI	Gunungsitoli	29.01	262	P	P	12 04 33.0	-1.6
CMAR	Chiang Mai Arr	29.43	297	P	P	12 04 39.7	+1.5
	comp=Z,0.4nm,0.3s,baz=104,slow=9.3,SNR=6.6						
CMAR				LR	LR	12 18 06.0	
	comp=Z,43nm,18.4s,baz=110,slow=40						
	comp=Z,0.4nm,0.3s						
AS31	Alice Springs	30.34	166	P	P	12 04 45.6	-0.6
ASAR	Alice Springs	30.34	166	P	P	12 04 45.6	-0.7
ASAR	Alice Springs	30.34	166	P	P	12 04 45.4	-0.8
	comp=Z,2.5nm,0.6s,baz=343,slow=8.1,SNR=52						
ASAR				PcP	PcP	12 07 45.3	+0.3
	comp=Z,1.1nm,0.7s,baz=345,slow=2.4,SNR=5.4						
ASAR				ScP	ScP	12 11 27.7	+6.3
	comp=Z,0.6nm,0.9s,baz=340,slow=3.5,SNR=3.1						
	comp=Z,2.5nm,0.6s						
KSRS	Korea Array	31.42	2	P	P	12 04 53.6	-1.9
	comp=Z,0.3nm,0.5s,baz=185,slow=9.7,SNR=6.2						
	comp=Z,0.3nm,0.5s						
USRK	Ussuriysk Ar.	38.45	7	P	P	12 05 55.6	-0.4
USRK	Ussuriysk Ar.	38.45	7	P	P	12 05 56.1	+0.1
	comp=Z,0.8nm,0.6s,baz=190,slow=6.9,SNR=3.7						
	comp=Z,0.8nm,0.6s						
EIDS	Eidsvold	39.35	143	P	P	12 06 04.7	+0.9
EIDS				IAmb	IAmb	12 06 24.8	
	comp=Z,7.6nm,1.1s						
BBOO	Buckleboo	39.63	167	P	P	12 06 06.1	+0.1
STKA	Stephens Creek	40.33	160	P	P	12 06 11.6	-0.2
STKA	Stephens Creek	40.33	160	P	P	12 06 11.8	0.0
	comp=Z,10nm,0.8s,baz=336,slow=10,SNR=16						
STKA				LR	LR	12 26 07.6	
	comp=Z,63nm,20.4s,baz=19,slow=41						
	comp=Z,10nm,0.8s						
ARMA	Armidale	43.54	148	P	P	12 06 38.5	+0.3
ARMA				IAmb	IAmb	12 07 18.8	
	comp=Z,11nm,1.1s						
SONM	Songino Array	45.09	341	P	P	12 06 51.5	+1.2
	comp=Z,0.9nm,0.7s,baz=156,slow=7.6,SNR=4.0						
SONM				PcP	PcP	12 08 30.2	+0.3
	comp=Z,0.5nm,0.6s,baz=149,slow=3.0,SNR=2.1						
	comp=Z,0.9nm,0.7s						
PALK	Pallekele	45.29	274	LR	LR	12 25 35.9	
	comp=Z,34nm,20.8s,baz=116,slow=36						
TOO	Toolangi	46.83	159	P	P	12 07 03.7	-0.3
MKAR	Makanchi Array	55.52	325	P	P	12 08 08.2	-0.8
MKAR	Makanchi Array	55.52	325	P	P	12 08 09.3	+0.3
	comp=Z,1.7nm,0.8s,baz=121,slow=8.5,SNR=13						
MKAR				PcP	PcP	12 09 08.1	-0.1
	comp=Z,1.7nm,0.7s,baz=125,slow=2.9,SNR=6.5						
MKAR				ScP	ScP	12 13 07.0	+6.0
	comp=Z,0.4nm,0.7s,baz=139,slow=4.2,SNR=2.5						
MKAR				LR	LR	12 32 50.2	
	comp=Z,36nm,18.8s,baz=48,slow=37						
	comp=Z,1.7nm,0.8s						
ZALV	Zalesovo Beam	58.44	333	P	P	12 08 31.1	+1.7
	comp=Z,0.8nm,0.6s,baz=124,slow=7.2,SNR=4.1						
	comp=Z,0.8nm,0.6s						
AAK	Ala-Archa	58.45	317	LR	LR	12 37 01.0	
	comp=Z,48nm,18.6s,baz=118,slow=39						
KURBB	Kurchatov Arra	59.67	327	P	P	12 08 38.6	+0.6
	comp=Z,2.6nm,0.7s,baz=127,slow=6.0,SNR=22						
	comp=Z,2.6nm,0.7s						
KKAR	Karatay Array	61.34	316	P	P	12 08 48.8	-0.8
BVAR	Borovoye Array	65.25	327	P	P	12 09 15.9	+0.6
	comp=Z,1.7nm,0.8s,baz=114,slow=7.1,SNR=3.5						
	comp=Z,1.7nm,0.8s						
TIXI	Tiksi	65.67	1	P	P	12 09 17.8	+0.3
TIXI				IAmb	IAmb	12 09 26.9	
	comp=Z,5.5nm,0.8s						
AB31	Akbulak array	70.18	320		P	12 09 45.7	-0.6
ABKAR	Akbulak array	70.18	320	P	P	12 09 45.3	-1.0
LVA	Lava Point	72.23	35	P	P	12 09 59.4	+0.7
AKUT	Akutan	72.38	35	P	P	12 09 59.3	-0.2
L14K	Kuka Creek	75.78	28	P	P	12 10 18.8	-0.3
L14K				IAmb	IAmb	12 10 21.4	
	comp=Z,5.9nm,0.9s						
M14K	Bethel	75.98	29	P	P	12 10 21.4	+1.2
M14K				IAmb	IAmb	12 10 42.6	
	comp=Z,6.4nm,1.0s						
M16K	Timber Creek	77.47	29	P	P	12 10 29.3	+0.6
M16K				IAmb	IAmb	12 10 54.9	
	comp=Z,7.0nm,1.1s						
C19K	Lookout Ridge	78.85	21	P	P	12 10 37.1	+0.9
C19K				IAmb	IAmb	12 10 38.8	
	comp=Z,4.8nm,0.7s						
D20K	Etivluk River	79.83	21	P	P	12 10 42.5	+0.9
D20K				IAmb	IAmb	12 10 45.9	
	comp=Z,4.1nm,0.9s						
B22K	Teshekpuk Lake	81.18	20		P	12 10 49.6	+0.9
D22K	Ayikyak River	81.27	21		P	12 10 50.0	+0.8
D22K				IAmb	IAmb	12 10 52.5	
	comp=Z,3.5nm,0.8s						
MLY	Manley	81.69	25	P	P	12 10 52.4	+0.8
MLY				IAmb	IAmb	12 10 53.6	
	comp=Z,4.6nm,0.9s						
D23K	Nanushuk River	82.00	21		P	12 10 54.4	+1.4
D23K				IAmb	IAmb	12 10 55.9	
	comp=Z,5.1nm,0.8s						
C23K	Itkillik River	82.09	20	P	P	12 10 54.5	+1.0
ILAR	Eielson Array	83.32	26	P	P	12 10 59.1	-0.9
	comp=Z,0.8nm,0.6s,baz=259,slow=5.9,SNR=14						
	comp=Z,0.8nm,0.6s						
VNDA	Vanda	85.65	173	P	P	12 11 11.3	-0.1
	comp=Z,1.0nm,0.7s,baz=320,slow=5.6,SNR=6.9						
	comp=Z,1.0nm,0.7s						
ARCES	ARCESS Array B	88.25	340	P	P	12 11 23.9	-0.3
	comp=Z,3.2nm,0.8s,baz=75,slow=4.9,SNR=14						
	comp=Z,3.2nm,0.8s						
SPITS	Spitsbergen Ar	88.25	349	P	P	12 11 23.3	-0.8
	comp=Z,2.3nm,0.7s,baz=86,slow=8.8,SNR=6.4						
	comp=Z,2.3nm,0.7s						
BRTR	Keskin Array B	88.29	310	P	P	12 11 23.9	-1.4
	comp=Z,0.6nm,0.8s,baz=106,slow=4.7,SNR=2.8						
FINES	FINESS Array B	89.70	332	P	P	12 11 30.2	-1.0
	comp=Z,2.7nm,0.9s,baz=81,slow=8.6,SNR=7.3						
	comp=Z,2.7nm,0.9s						
AKASG	Malin Array Be	89.92	321	P	P	12 11 31.2	-1.3
	comp=Z,0.5nm,0.6s,baz=66,slow=5.2,SNR=2.1						
HFS	Hagfors	95.88	332	P	P	12 11 58.7	-1.1
	comp=Z,1.6nm,0.8s,baz=72,slow=4.7,SNR=2.1						
	comp=Z,1.6nm,0.8s						
NOA	NORSAR Array B	96.64	334	P	P	12 12 01.7	-1.5
	comp=Z,1.0nm,0.9s,baz=65,slow=4.6,SNR=3.3						
	comp=Z,1.0nm,0.9s						
YKA	Yellowknife Ar	97.69	24	P	P	12 12 07.8	-0.1
	comp=Z,0.5nm,0.7s,baz=308,slow=4.9,SNR=4.5						
	comp=Z,0.5nm,0.7s						
TXAR	Lajitas Array	120.59	51	PKP	PKiKP	12 17 26.4	+0.7
	comp=Z,0.3nm,0.7s,baz=311,slow=4.5,SNR=4.6						
TORD	Torodi Ar. Bea	121.80	289	PKP	PKPdf	12 17 28.0	-0.1
	comp=Z,1.8nm,0.3s,baz=92,slow=2.7,SNR=1.4						

NOU 23 12:05:21.4, 10.°66S×164.°81E, h50^{km}**, MLv4.3**/13**, Santa Cruz Islands Region, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUES	Luesalemba Tem	1.08	90	P	Pn	12 05 39.3	-1.0
LUES	Luesalemba Tem	1.08	90	S	Sn	12 05 55.1	+0.8
HURO	Huro Makira	2.87	274	P	Pn	12 06 03.6	-1.0
HURO	Huro Makira	2.87	274	S	Sn	12 06 39.0	+1.1
ALEG	Aligegeo Malai	4.48	295	P	Pn	12 06 26.9	+0.1
ALEG	Aligegeo Malai	4.48	295	S	Sn	12 07 17.5	-0.1
HNR	Honiara	4.94	284	P	Pn	12 06 33.9	+0.7
SAVO	Savo Central	5.15	287	P	Pn	12 06 36.9	+0.9
SANVU	Saraoutou	5.30	154	P	Pn	12 06 38.1	+0.1
SANVU	Saraoutou	5.30	154	S	Sn	12 07 37.7	-0.1
TATA	Tatamba Isabel	5.43	294	P	Pn	12 06 39.9	+0.1
VLAKA	Lakatoro	5.98	155	P	Pn	12 06 48.2	+0.8

JMA ***23*** *13:12:18.5±0.4, 44°N±2°×14°8E±°, h0^{km}, MV3.5/21, SE OFF ETOROFU*

SKHL ***23*** *13:12:19.0±0.2, 44.°50N×148.°40E, h56^{km}±9^{km}, mb4.1/4*

ISC 23 13:12:15.1±3.3**, 44.°31N**±0.°10×**148.°4E**±0.°2**, h3**^{km}±15^{km}**, n16, σ1.^{s}52**/24**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	1.00	338	*i* P	Pg	13 12 34.2	0.0
KUR				AMB	AMB	13 12 34.6	
	120nm,0.4s						
KUR				*i* S	Sg	13 12 45.5	-1.7
KUR				A	A	13 12 46.2	
	350nm,0.2s						
KUR				A	A	13 12 46.2	
	460nm,0.2s						
SHO	Shikotan	1.22	249	*i* P	Pn	13 12 39.8	+0.8
SHO				AMB	AMB	13 12 40.7	
	40nm,0.3s						
SHO				*i* S	Sg	13 12 54.2	0.0
SHO				A	A	13 12 56.3	
	170nm,0.3s						
SHO				A	A	13 12 56.3	
	190nm,0.3s						
YUK	Yuzh-Kuril'sk	1.85	262	*i* P	Pn	13 12 48.0	+0.3
YUK				AMB	AMB	13 12 49.7	
	110nm,0.4s						
YUK				*i* S	Sn	13 13 09.9	-1.7
YUK				A	A	13 13 12.5	
	260nm,0.6s						
YUK				A	A	13 13 12.5	
	340nm,0.6s						
NEM2	Nemuro 2	2.15	245	*e*P	Pn	13 12 51.5	-0.3
NEM2				*e*S	Sn	13 13 15.8	-3.1
NMR	Nemuro--Hokkai	2.15	245	*e*P	Pn	13 12 51.7	-0.2
NMR				*i* S	Sn	13 13 15.8	-3.3
GLVR	Golovnino	2.16	256	*e*P	Pn	13 12 53.2	+1.3
GLVR				AMB	AMB	13 12 55.6	
	20nm,0.2s						
GLVR				*i* S	Sn	13 13 19.5	+0.3
GLVR				A	A	13 13 27.6	
	220nm,0.4s						
GLVR				A	A	13 13 27.6	
	330nm,0.4s						
JRA	Rausu	2.39	262	*e*P	Pn	13 12 56.4	+1.2
JNSB	Nemuroshibetsu	2.51	259	P	Pn	13 12 58.2	+1.5
JNSB				*e*S	Sn	13 13 27.0	-0.8
JKHN	Kushirohamanak	2.65	244	*e*P	Pn	13 12 59.6	+0.9
JNK	Nakash	2.76	256	*e*P	Pn	13 13 01.1	+0.9
JNK				*e*S	Sn	13 13 32.4	-1.6
AKK	Akkeshi	2.89	245	*e*P	Pn	13 13 03.1	+1.1
JAK	Akkeshi	3.00	245	*e*P	Pn	13 13 03.7	+0.3
JAK				*e*S	Sn	13 13 37.5	-2.4
JTKR	Abashiri--Toko	3.26	266	*e*P	Pn	13 13 10.0	+3.0
JAR	Ashorobuto	3.51	255	P	Pn	13 13 12.5	+2.1
JAR				*e*S	Sn	13 13 52.3	-0.2
JMP	Maruseppu	3.64	267	*e*P	Pn	13 13 15.2	+2.8
JCH	Churui	4.04	247	*e*P	Pn	13 13 19.1	+1.3

NNC ***23*** *13:16:15.1±0.5, 50.°00N×78.°69E, h0^{km}, mb2.9, mpv2.5, Error ellipse: s-maj=10.2km s-min=2.7km az=76.0, Suspected Mining explosion.*

IDC ***23*** *13:16:16.1±1.1, 50.°05N×78.°69E, h0^{km}, mbtmp2.6/2, ML2.2/2, Error ellipse: s-maj=14.7km s-min=6.7km az=67.0*

ISC 23 13:16:15.8±0.9**, 50.°00N**±0.°05×**78.°69E**±0.°08**, h0**^{km}**, n17, σ0.^{s}83**/29**, 16C-7D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	Kurchatov Arra	0.60	349	⇑P	Pg	13 16 26.2	-1.0
KUR07				⇑S	Sg	13 16 35.7	+0.7
KUR06	Kurchatov Arra	0.62	350	⇑P	Pg	13 16 26.8	-0.8
KUR06				⇑S	Sg	13 16 36.1	+0.5
KUR14	Kurchatov Arra	0.62	354	⇑P	Pg	13 16 26.3	-1.4
KUR14				⇓S	Sg	13 16 35.8	0.0
KUR15	Kurchatov Arra	0.63	352	⇑P	Pg	13 16 26.8	-1.0
KUR15				⇑S	Sg	13 16 36.0	+0.1
KURBB	Kurchatov Arra	0.64	351	Pg	Pg	13 16 27.2	-0.8
	1.4nm,0.3s,baz=169,slow=19,SNR=22						
KURBB				Lg	Lg	13 16 36.3	
	1.4nm,0.3s,baz=168,slow=31,SNR=8.5						
KURBB	Kurchatov Arra	0.64	351	⇑P	Pg	13 16 27.1	-0.9
	6.1nm,0.2s						
KURBB				⇓S	Sg	13 16 36.7	+0.5
	20nm,0.5s						
KUR16	Kurchatov Arra	0.64	349	⇑P	Pg	13 16 27.1	-1.0
KUR16				⇑S	Sg	13 16 36.5	+0.1
KUR17	Kurchatov Arra	0.65	347	⇑P	Pg	13 16 27.6	-0.6
KUR17				⇓S	Sg	13 16 37.2	+0.5
KUR05	Kurchatov Arra	0.65	351	⇑P	Pg	13 16 27.5	-0.9
KUR05				⇑S	Sg	13 16 36.7	-0.1
KUR04	Kurchatov Arra	0.67	352	⇓P	Pg	13 16 27.8	-0.9
KUR04				⇓S	Sg	13 16 37.5	+0.1
KURK	Kurchatov	0.72	356	P	Pg	13 16 28.8	-0.8
KURK				S	Sg	13 16 38.6	-0.4
MK31	Makanchi Array	4.00	142	⇓Pn	Pn	13 17 19.4	+1.0
	0.1nm,0.1s,baz=322,slow=9.9,SNR=17						
MK31				⇓Pg	Pg	13 17 30.8	-1.6
	0.2nm,0.3s,baz=331,slow=15,SNR=9.0						
MK31				⇑Sn	Sn	13 18 06.6	+0.6
	0.7nm,0.5s						
MK31				Lg	Lg	13 18 21.6	
	3.1nm,0.4s,baz=321,slow=26,SNR=19						
MKAR	Makanchi Array	4.00	142	Pn	Pn	13 17 19.6	+1.2
	0.1nm,0.3s,baz=321,slow=9.8,SNR=14						
MKAR				Pg	Pb	13 17 27.2	+0.1
	0.4nm,0.3s,baz=321,slow=14,SNR=8.9						
MKAR				Lg	Lg	13 18 21.8	
	1.5nm,0.3s,baz=327,slow=26,SNR=12						
	0.2nm,0.3s						
OTUK	Ortayu	4.53	250	⇑Pn	Pn	13 17 26.3	+0.7
	0.5nm,0.3s						
OTUK				⇑Lg	Lg	13 18 36.0	
	3.0nm,0.5s						
ZALV	Zalesovo Beam	5.47	41	Pn	Pn	13 17 39.2	+0.7
	0.4nm,0.3s,baz=229,slow=14,SNR=5.7						
	1.1nm,0.4s						
BVAR	Borovoye Array	6.00	303	Sn	Sn	13 18 54.5	-0.7
	0.1nm,0.3s,baz=112,slow=22,SNR=6.9						
BVAR				Lg	Lg	13 19 27.3	
	baz=115,slow=24,SNR=5.1						
I31KZ	AKTYUBINSK INF	13.24	280	I	I	14 31 50.0	
	baz=85,slow=316,SNR=3.9						

IDC ***23*** *13:23:08.4±0.8, 16.°42S×178.°32E, h0^{km}, mb4.0/11, mbtmp4.0/11, MS3.6/38, Error ellipse: s-maj=29.7km s-min=21.5km az=127.0*

NEIC ***23*** *13:23:09.3±1.6, 16.°39S±0.°02×177.°5E±0.°1, h10^{km}±1^{km}, mb4.7/56, Error ellipse: s-maj=18.8km s-min=3.1km az=279.0*

ISC 23 13:23:11.8±0.5**, 16.°44S**±0.°06×**177.°62E**±0.°09**, h24**^{km}**, n238, σ0.^{s}77**/182**, mb4.7**/39**, MS3.7**/36**, Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	1.35	162		Pn	13 23 35.6	+0.3
MSVF				Sn	Sb	13 23 54.0	+0.5
FUTU	Fugatoga	4.62	63	Pn	Pn	13 24 20.4	+0.3
DZM	Mont Dzumac	11.95	240	*e*LR	LR	13 28 36.5	
	439nm,24.2s						
NIUE	Niue	12.15	104	Pn	Pn	13 26 03.5	0.0
RAO	Raoul Island	13.40	163	LR	LR	13 30 36.9	
	comp=Z,217nm,21.7s,baz=325,slow=34						
HNR	Honiara	18.57	290	LR	LR	13 33 53.3	
	comp=Z,150nm,18.9s,baz=177,slow=34						
URZ	Urewera	21.75	181	LR	LR	13 35 21.6	
	comp=Z,182nm,19.6s,baz=358,slow=34						
RAR	Rarotonga	21.91	106	LR	LR	13 34 19.8	
	comp=Z,95nm,22.0s,baz=277,slow=32						
LTZ	Lake Taylor	26.66	189	P	P	13 28 48.0	-0.8
LTZ				IAmb	IAmb	13 29 01.5	
	comp=Z,24nm,1.4s						
PPT2	Papeete2	31.37	97	*e*S	S	13 34 24.3	-13
	comp=Z,68nm,23.8s						
PPT2				*e*LR	LR	13 37 30.9	
	comp=Z,319nm,30.5s						
PPT2				*e*LR	LR	13 37 40.7	
	comp=Z,216nm,30.0s						
PPT	Papeete	31.37	97	LR	LR	13 38 55.5	
	comp=Z,47nm,19.2s,baz=292,slow=31						
TBI	Tubuai	31.66	108	*e*LR	LR	13 37 47.2	
	comp=Z,1µm,29.5s						
STKA	Stephens Creek	36.09	238	LR	LR	13 44 33.5	
	comp=Z,113nm,18.2s,baz=42,slow=35						
H11S2	WAKE ISLAND Hy	36.33	342	T	T	14 09 07.5	
	baz=157						
H11S3	WAKE ISLAND Hy	36.34	342	T	T	14 09 20.3	
	baz=157						
H11S1	WAKE ISLAND Hy	36.35	342	T	T	14 09 23.4	
	baz=157						
H11N3	WAKE ISLAND Hy	37.44	343	T	T	14 10 36.5	
	baz=165						
H11N1	WAKE ISLAND Hy	37.44	343	T	T	14 10 33.0	
	baz=165						
H11N2	WAKE ISLAND Hy	37.45	343	T	T	14 10 31.8	
	baz=165						
JAY	Jayapura	38.85	287	LR	LR	13 46 10.2	
	comp=Z,48nm,20.4s,baz=316,slow=35						
WR8	Warramunga Arr	41.03	258	P	P	13 30 52.0	-1.6
WRA	Warramunga Arr	41.19	258	P	P	13 30 53.8	-1.1
WRA	Warramunga Arr	41.19	258	P	P	13 31 00.6	+5.7
	comp=Z,0.7nm,1.0s,baz=90,slow=8.5,SNR=3.1						
	comp=Z,0.7nm,1.0s						
AS31	Alice Springs	41.57	253	P	P	13 30 56.5	-1.4
ASAR	Alice Springs	41.57	253	P	P	13 30 56.8	-1.2
ASAR	Alice Springs	41.57	253	P	P	13 31 04.2	+6.3
	comp=Z,3.1nm,1.0s,baz=88,slow=9.2,SNR=20						
ASAR				LR	LR	13 47 00.9	
	comp=Z,123nm,18.2s,baz=98,slow=34						
	comp=Z,3.1nm,1.0s						
TAOE	Nuku Hiva Isla	41.82	85	*e*LR	LR	13 42 14.3	
	comp=Z,147nm,26.5s						
GUMO	Guam	44.02	311	LR	LR	13 48 10.7	
	comp=Z,26nm,19.8s,baz=146,slow=34						
DAV	Davao City (W)	56.53	290	LR	LR	13 53 44.7	
	comp=Z,27nm,21.9s,baz=139,slow=32						
KAPI	Kappang	57.80	274	LR	LR	13 59 38.5	
	comp=Z,36nm,18.3s,baz=71,slow=38						
VNDA	Vanda	61.62	184	P	P	13 33 26.6	-0.4
VNDA	Vanda	61.62	184	P	P	13 33 26.3	-0.7
	comp=Z,0.1nm,0.3s,baz=45,slow=1.4,SNR=1.1						
	comp=Z,0.1nm,0.3s						
TGY	Tagaytay City	63.68	295	LR	LR	13 58 34.4	
	comp=Z,33nm,21.7s,baz=106,slow=33						
JOW	Kunigami	64.38	311	LR	LR	13 56 56.8	
	comp=Z,61nm,20.2s,baz=166,slow=31						
MJAR	Matsushiro Arr	64.51	325	P	P	13 33 47.6	+0.8
	comp=Z,2.2nm,1.0s,baz=169,slow=6.2,SNR=5.7						
MJAR				LR	LR	13 56 29.8	
	comp=Z,28nm,21.6s,baz=142,slow=31						
	comp=Z,2.2nm,1.0s						
MJB9	Matsu-Tunnel	64.51	325	P	P	13 33 43.8	-3.0
CASY	Casey	65.90	204	P	P	13 33 54.8	-0.6
JNU	Nakatsue	66.49	318	LR	LR	13 59 35.5	
	comp=Z,31nm,20.7s,baz=110,slow=33						
ASAJ	Asahikawa	68.22	334	LR	LR	14 01 27.9	
	comp=Z,53nm,18.6s,baz=158,slow=34						
SHEM	Shemya Is, Ala	68.94	358	LR	LR	13 58 36.4	
	comp=Z,56nm,20.2s,baz=290,slow=31						
PETK	Petropavlovsk-	71.36	347	P	P	13 34 30.9	+1.4
	comp=Z,2.3nm,0.8s,baz=123,slow=7.3,SNR=7.0						
PETK				LR	LR	14 04 02.5	
	comp=Z,16nm,18.6s,baz=202,slow=34						
	comp=Z,2.3nm,0.8s						
AKUT	Akutan	71.71	10	P	P	13 34 30.0	-1.5
USRK	Ussuriysk Ar.	73.30	328	LR	LR	14 01 57.0	
	comp=Z,41nm,21.2s,baz=197,slow=32						
QSPA	South Pole Qui	73.61	180	P	P	13 34 44.2	+1.2
QSPA				IAmb	IAmb	13 35 16.8	
	comp=Z,6.8nm,1.2s						
QSPA	South Pole Qui	73.61	180	P	P	13 34 43.8	+0.8
	comp=Z,0.7nm,0.7s,baz=33,slow=3.3,SNR=3.2						
	comp=Z,0.7nm,0.7s						
NJ2	Nanjing	74.10	311	*e*P	P	13 34 44.6	-1.6
NJ2				pmax	pmax		

	comp=Z,9.0nm,0.5s						
CN2	Changchun	76.57	324	*e*P	P	13 35 00.8	+0.6
KLR	Kul'dur	76.96	331	LR	LR	14 06 11.1	
	comp=Z,36nm,19.0s,baz=154,slow=33						
KDAK	Kodiak Island	77.95	16	LR	LR	14 01 53.3	
	comp=Z,46nm,21.4s,baz=194,slow=30						
O17K	Koliganek Bris	78.67	13	P	P	13 35 12.5	+1.0
	baz=205						
Q20K	Shuyak Island	78.73	15	P	P	13 35 12.2	+0.4
	baz=209						
M15K	Kasigluk River	78.82	11	P	P	13 35 12.7	+0.4
	baz=201						
MA2	Magadan	78.83	346	LR	LR	14 05 40.0	
	comp=Z,23nm,19.8s,baz=148,slow=32						
N16K	Nishlik Lake	78.97	12	P	P	13 35 13.5	+0.2
	baz=203						
O18K	Koktuh Hills	79.15	14	P	P	13 35 14.0	-0.2
O18K	Koktuh Hills	79.15	14	P	P	13 35 15.1	+0.9
	baz=207						
N17K	Nushagak Hills	79.34	12	P	P	13 35 16.6	+1.4
	baz=205						
K13K	Kusilvak Mount	79.36	8	P	P	13 35 16.5	+1.2
	baz=197						
M16K	Timber Creek	79.44	11	P	P	13 35 16.7	+0.9
	baz=203						
L15K	Ungalak Mounta	79.61	10	P	P	13 35 16.5	-0.1
	baz=200						
O19K	Port Alsworth	79.66	14	P	P	13 35 17.2	+0.3
	baz=207						
ILSW	Iliamna Southw	79.75	14	P	P	13 35 17.7	+0.1
PSI	Prapat	79.97	276	LR	LR	14 14 55.4	
	comp=Z,69nm,18.0s,baz=268,slow=38						
L16K	Owhat River	79.98	11	P	P	13 35 18.5	-0.2
	baz=202						
M17K	Holitna River	80.08	12	P	P	13 35 19.2	-0.1
	baz=204						
PFO	Pinyon Flats O	80.11	51	LR	LR	14 05 11.0	
	comp=Z,45nm,18.6s,baz=244,slow=32						
BRSE	Bradley Lake S	80.14	16	P	P	13 35 19.3	-0.3
	baz=211						
K15K	Wolf Creek Mou	80.18	10	P	P	13 35 19.8	0.0
K15K				IAmb	IAmb	13 35 21.5	
	comp=Z,9.3nm,0.9s						
K15K	Wolf Creek Mou	80.18	10	P	P	13 35 19.7	0.0
	baz=200						
GAMB	Gambell	80.38	5	P	P	13 35 21.0	+0.3
	baz=190						
M18K	Stony River	80.49	13	P	P	13 35 21.7	+0.2
	baz=206						
L17K	Donlin	80.59	11	P	P	13 35 22.6	+0.7
	baz=204						
GSC	Goldstone, Bar	80.63	49	P	P	13 35 21.4	-1.5
DSP	Deep Springs	80.78	47		P	13 35 22.4	-1.1
SEW	Seward	80.78	16	P	P	13 35 22.9	-0.1
	baz=212						
CAPN	Captain Cook N	80.92	15	P	P	13 35 23.8	+0.1
	baz=210						
L18K	Granite Mounta	80.98	12	P	P	13 35 24.9	+0.8
L18K				IAmb	IAmb	13 35 25.9	
	comp=Z,8.3nm,1.0s						
L18K	Granite Mounta	80.98	12	P	P	13 35 24.6	+0.6
	baz=205						
LPIG	La Paz	81.04	62	LR	LR	14 04 48.1	
	comp=Z,45nm,18.0s,baz=170,slow=31						
NVAR	Mina Array Bea	81.06	46	P	P	13 35 23.8	-1.5
	comp=Z,1.6nm,0.9s,baz=234,slow=8.8,SNR=10						
	comp=Z,1.6nm,0.9s						
Q23K	Middleton Isla	81.08	18	P	P	13 35 24.9	+0.3
	baz=215						
K17K	Iditarod	81.13	11	P	P	13 35 25.2	+0.4
	baz=203						
NV11	Mina Array Sit	81.16	46	P	P	13 35 24.3	-1.4
M19K	Big River Lodg	81.17	13	P	P	13 35 25.2	+0.2
	baz=207						
GMN	Gold Mountain	81.24	47	P	P	13 35 24.9	-1.4
J16K	Anvik River	81.26	10	P	P	13 35 26.0	+0.6
	baz=201						
L19K	White Mountain	81.32	13		P	13 35 26.6	+0.7
L19K				IAmb	IAmb	13 35 27.2	
	comp=Z,8.4nm,0.9s						
L19K	White Mountain	81.32	13	P	P	13 35 26.3	+0.4
	baz=207						
SEY	Seymchan	81.54	349	LR	LR	14 07 49.5	
	comp=Z,38nm,19.5s,baz=130,slow=33						
J05D	Fort Rock, OR	81.60	40		P	13 35 27.3	-0.6
J05D				IAmb	IAmb	13 35 28.2	
	comp=Z,7.1nm,0.9s						
J17K	VABM Dome	81.62	10	P	P	13 35 28.2	+0.8
	baz=203						
SUA	Susitna One	81.62	15	P	P	13 35 27.8	+0.3
	baz=211						
L20K	Farewell, AK	81.79	13	P	P	13 35 28.5	+0.1
	baz=208						
M22K	Willow	82.02	15	P	P	13 35 28.8	-0.7
	baz=211						
KAIM	Kayak Island	82.06	18	P	P	13 35 29.7	-0.1
	baz=217						
GLI	Glacier Island	82.07	17	P	P	13 35 29.9	0.0
	baz=214						
J18K	Innoko River	82.11	11	P	P	13 35 30.4	+0.4
J18K	Innoko River	82.11	11	P	P	13 35 30.2	+0.2
	baz=205						
PMR	Palmer	82.13	15	P	P	13 35 30.4	+0.3
	baz=212						
EYAK	Cordova Ski Ar	82.17	17	P	P	13 35 30.4	+0.1
	baz=215						
SML	Sawmill	82.52	16	P	P	13 35 32.2	0.0
	baz=213						
K20K	Telida	82.53	12	P	P	13 35 32.0	-0.2
	baz=207						
SCM	Sheep Creek Mo	82.80	16	P	P	13 35 33.2	-0.5
SCM				IAmb	IAmb	13 35 34.0	
	comp=Z,3.3nm,0.8s						
SCM	Sheep Creek Mo	82.80	16	P	P	13 35 33.4	-0.3
	baz=214						
BMRM	Bremner River	82.84	18	P	P	13 35 33.3	-0.6
	baz=216						
BBB	Bella Bella	82.91	30	LR	LR	14 04 31.0	
	comp=Z,34nm,19.2s,baz=221,slow=30						
CAST	Castle Rocks	83.01	13	P	P	13 35 34.1	-0.6
	baz=209,SNR=6.0						
GCSA	Galena City Sc	83.25	11	P	P	13 35 35.7	-0.1
	baz=205						
J20K	Nowinta River	83.25	12	P	P	13 35 35.6	-0.3
J20K				IAmb	IAmb	13 35 37.0	
	comp=Z,4.0nm,0.9s						
J20K	Nowinta River	83.25	12	P	P	13 35 35.7	-0.1
	baz=207						
S31K	Pelican	83.31	23	P	P	13 35 34.9	-1.4
	baz=224						
WAT6	Susitna Watana	83.32	15	P	P	13 35 35.4	-1.1
	baz=213						
M24K	Tolsona, Glenn	83.34	16	P	P	13 35 35.7	-0.8
	baz=215						
CHUM	Lake Minchumin	83.37	13	P	P	13 35 36.0	-0.5
	baz=209						
KTH	Kantishna Hill	83.39	14	P	P	13 35 36.3	-0.4
KTH				IAmb	IAmb	13 35 36.4	
	comp=Z,4.6nm,1.1s						
TRF	Thorofare Moun	83.44	14	P	P	13 35 36.1	-1.0
	baz=211						
HHC	Hu-ho-hao-te	83.56	316	*e*P	P	13 35 39.1	+0.9
HHC				pmax	pmax		
	comp=Z,19nm,0.8s						
HHC				pmax	pmax		
	comp=Z,53nm,4.7s						
MCARA	McCarthy VSAT	83.64	18	P	P	13 35 37.6	-0.4
	baz=218						
I20K	Naaghedeneel	83.74	12	P	P	13 35 38.3	0.0
	baz=207						
RND	Reindeer	83.75	14		P	13 35 37.9	-0.6
DHY	Denali Highway	83.83	15	P	P	13 35 38.7	-0.4
	baz=214						
BPAW	Bear Paw Mtn.	83.85	13	P	P	13 35 38.0	-1.0
BPAW				IAmb	IAmb	13 36 16.6	
	comp=Z,5.6nm,1.5s						
BPAW	Bear Paw Mtn.	83.85	13	P	P	13 35 38.6	-0.4
	baz=210						
P29M	Windy Craggy	83.99	21	P	P	13 35 39.5	-0.3
	baz=223						
MCK	McKinley	84.00	14	P	P	13 35 39.3	-0.5
	baz=212						
G18K	Tagagawik	84.00	10	P	P	13 35 39.5	-0.2
	baz=203						
H19K	Roundabout Mou	84.04	11	P	P	13 35 39.7	-0.1
	baz=205						
F17K	Baldwin Pennin	84.13	8	P	P	13 35 40.0	-0.3
	baz=200						
ELK	Elko	84.23	45	LR	LR	14 06 43.5	
	comp=Z,47nm,18.4s,baz=254,slow=31						
H20K	Anotleneega Mo	84.29	11	P	P	13 35 41.0	-0.2
	baz=206						
M26K	Nabesna, AK	84.46	17	IAmb	IAmb	13 35 42.8	
	comp=Z,7.2nm,1.1s						
M26K	Nabesna, AK	84.46	17	P	P	13 35 41.7	-0.5
	baz=218,SNR=6.6						
G19K	Purcell Mounta	84.49	10	P	P	13 35 41.7	-0.5
	baz=204						
P30M	Million Dollar	84.61	21	P	P	13 35 42.7	-0.3
	baz=223						
E17K	Hotham Inlet	84.65	8	P	P	13 35 42.8	-0.2
	baz=200						
MENT	Mentasta	84.68	17	IAmb	IAmb	13 35 44.0	
	comp=Z,4.9nm,1.1s						
NEA2	Nenana	84.70	14	IAmb	IAmb	13 35 42.5	
	comp=Z,4.1nm,1.1s						
NEA2	Nenana	84.70	14	P	P	13 35 42.8	-0.5
	baz=212						
MLY	Manley	84.71	13	P	P	13 35 42.7	-0.7
	baz=210,SNR=5.8						
YUK3	Moose Creek	84.72	19	P	P	13 35 43.0	-0.7
	baz=220						
M27K	Edge Creek, AK	84.74	18	P	P	13 35 43.0	-0.7
	baz=219,SNR=5.2						
CMAR	Chiang Mai Arr	84.82	291	P	P	13 35 49.2	+4.3
	comp=Z,0.7nm,0.6s,baz=110,slow=3.7,SNR=8.1						
CMAR				LR	LR	14 14 29.0	
	comp=Z,12nm,18.4s,baz=135,slow=36						
	comp=Z,0.7nm,0.6s						
WRH	Wood River Hil	84.83	14		P	13 35 42.9	-1.0
H21K	Melozitna Rive	84.83	12	IAmb	IAmb	13 35 46.3	
	comp=Z,3.5nm,0.9s						
H21K	Melozitna Rive	84.83	12	P	P	13 35 43.6	-0.4
	baz=208						
K24K	Donnelly Dome	84.84	15	P	P	13 35 44.1	0.0
	baz=215						
L26K	Log Cabin Wild	84.85	17	IAmb	IAmb	13 35 44.9	
	comp=Z,6.1nm,1.2s						
L26K	Log Cabin Wild	84.85	17	P	P	13 35 43.7	-0.4
	baz=217						
HYT	Haines Junctio	84.95	20	P	P	13 35 44.7	0.0
	baz=223						
F19K	Shaleruckik Mo	85.01	10	P	P	13 35 45.0	+0.3
	baz=204						
RIDG	Independent Ri	85.03	16		P	13 35 44.0	-1.0
RIDG				IAmb	IAmb	13 35 45.4	
	comp=Z,7.2nm,1.1s						
RIDG	Independent Ri	85.03	16	P	P	13 35 44.7	-0.3
	baz=216,SNR=5.6						
CCB	Clear Creek Bu	85.04	14		P	13 35 43.7	-1.2
CCB				IAmb	IAmb	13 35 44.9	
	comp=Z,5.6nm,0.8s						
HDA	Harding Lake	85.05	15	P	P	13 35 44.8	-0.2
	baz=214						
D17K	Noatak River	85.08	7	P	P	13 35 44.9	-0.2
	baz=199						
BVCY	Beaver Creek	85.09	18	P	P	13 35 45.0	-0.3
	baz=220						
I23K	Minto, Yukon-K	85.11	13	P	P	13 35 45.4	+0.1
	baz=212						
PZH	PanZhiHua	85.12	299	P	P	13 35 46.8	+0.3
PZH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,5.1s						
E18K	Tukpahlearik C	85.14	8	P	P	13 35 45.4	0.0
	baz=201						
COLA	College	85.22	14	P	P	13 35 45.0	-0.8
COLA	College	85.22	14	P	P	13 35 45.1	-0.8
	baz=213						
L27K	Beaver Creek,	85.31	17	P	P	13 35 45.8	-0.6
	baz=219						
H22K	Ishtalitna Cre	85.33	12	P	P	13 35 45.9	-0.5
	baz=210,SNR=5.9						
MVU	Marysvale	85.35	48	IAmb	IAmb	13 35 47.9	
	comp=Z,8.9nm,1.4s						
ILAR	Eielson Array	85.36	14	P	P	13 35 45.5	-1.1
ILAR	Eielson Array	85.36	14	P	P	13 35 45.7	-0.9
	comp=Z,4.1nm,0.8s,baz=233,slow=6.2,SNR=42						
ILAR				LR	LR	14 06 24.2	
	comp=Z,30nm,20.4s,baz=190,slow=30						
	comp=Z,4.1nm,0.8s						
SCRK	Sand Creek	85.44	16	P	P	13 35 46.4	-0.7
	baz=217						
G21K	Allakaket	85.46	11	P	P	13 35 46.8	-0.3
	baz=208						
F20K	Avaraart Lake	85.54	10	P	P	13 35 47.2	-0.2
	baz=206						
J25K	Salcha River,	85.61	15	IAmb	IAmb	13 35 48.3	
	comp=Z,5.4nm,1.1s						
J25K	Salcha River,	85.61	15	P	P	13 35 47.9	0.0
	baz=216						
H23K	Yukon River	85.65	13	P	P	13 35 47.8	-0.3
	baz=212						
E19K	Redstone River	85.67	9	P	P	13 35 48.4	+0.3
	baz=204						
WHY	Whitehorse	85.72	21	P	P	13 35 48.7	+0.1
	baz=225						
M29M	Somme Creek	85.84	19	P	P	13 35 49.1	0.0
	baz=222						
J26L	Joseph Creek	85.98	16	IAmb	IAmb	13 35 50.8	
	comp=Z,5.1nm,0.9s						
J26L	Joseph Creek	85.98	16	P	P	13 35 49.8	0.0
	baz=217,SNR=6.0						
K27K	Chicken	86.00	17	P	P	13 35 49.9	+0.1
	baz=219						
H24K	Noodor Dome	86.03	14	P	P	13 35 50.5	+0.6
	baz=213						
HLID	Hailey	86.06	42		P	13 35 50.0	-0.9
G22K	Bettles	86.20	12	P	P	13 35 51.1	+0.4
	baz=210						
R33M	Jennings River	86.29	24	P	P	13 35 51.1	-0.4
	baz=229						
G23K	Bananza Creek	86.31	12	P	P	13 35 51.7	+0.3
	baz=211						
HVU	Hansel Valley	86.36	45		P	13 35 51.1	-1.1
HVU				IAmb	IAmb	13 35 52.3	
	comp=Z,7.2nm,1.4s						
L29M	L29M	86.44	19	IAmb	IAmb	13 35 52.9	
	comp=Z,6.8nm,1.1s						
L29M	L29M	86.44	19	P	P	13 35 52.1	+0.1
	baz=222,SNR=5.8						
D19K	Kuna River	86.49	9	P	P	13 35 52.5	+0.3
	baz=203						
E20K	Nigu River	86.57	9	P	P	13 35 52.9	+0.3
	baz=205						
NEW	Newport	86.61	37	LR	LR	14 09 39.9	
	comp=Z,35nm,18.5s,baz=188,slow=32						
COLD	Coldfoot	86.72	12	P	P	13 35 53.3	+0.1
	baz=211						
I26K	Coal Creek Min	86.72	15	IAmb	IAmb	13 35 54.2	
	comp=Z,5.9nm,1.2s						
I26K	Coal Creek Min	86.72	15	P	P	13 35 53.2	-0.1
	baz=218,SNR=5.5						
DAWY	Dawson	86.78	17	P	P	13 35 53.8	+0.2
	baz=221						
B18K	Kokolik River	86.81	7	P	P	13 35 54.3	+0.6
	baz=200						
YAK	Yakutsk	86.84	339	LR	LR	14 15 43.5	
	comp=Z,15nm,19.3s,baz=142,slow=36						
G24K	Hadweenzic Riv	86.84	13	P	P	13 35 54.1	+0.2
	baz=213						
H25L	Birch Creek	86.86	14	P	P	13 35 54.1	+0.2
	baz=215						
D20K	Etivluk River	86.92	9	P	P	13 35 54.6	+0.3
	baz=205						
K29M	Barlow Dome	87.17	18	P	P	13 35 55.8	+0.1
	baz=223						
G25K	Bearman Lake	87.20	14	P	P	13 35 56.0	+0.4
	baz=215						
F24K	Squaw Lake	87.44	13	P	P	13 35 57.0	+0.2
F24K	Squaw Lake	87.44	13	P	P	13 35 56.8	0.0
	baz=213						
C21K	Knifeblade Rid	87.60	10	P	P	13 35 57.9	+0.3
	baz=206						
I28M	Miner Creek	87.68	16	P	P	13 35 58.3	+0.2
	baz=220						
E24K	Your Creek	87.79	12	P	P	13 35 58.9	+0.4
	baz=212						
H27K	Steamboat Moun	87.87	15	P	P	13 35 59.3	+0.4
	baz=219						
G26K	Porcupine Rive	87.89	14	IAmb	IAmb	13 35 59.6	
	comp=Z,3.5nm,0.9s						
G26K	Porcupine Rive	87.89	14	P	P	13 35 59.4	+0.6
	baz=217						
F25K	Christian Rive	87.99	13	P	P	13 35 59.2	-0.2
	baz=215						
B21K	Ikpikpuk River	88.05	9	P	P	13 36 00.1	+0.5
	baz=207						
TOLK	Toolik Lake Re	88.06	11	P	P	13 35 59.8	0.0
	baz=211						
D23K	Nanushuk River	88.13	11	P	P	13 36 00.1	+0.1
	baz=210						
ANMO	Albuquerque	88.20	53	LR	LR	14 10 50.6	
	comp=Z,38nm,18.2s,baz=339,slow=33						
TOAD	Toad River Com	88.26	26	P	P	13 36 01.1	+0.2
	baz=234						
MMPY	Sheldon Lake,	88.33	21	P	P	13 36 00.7	-0.4
	baz=228						
TXAR	Lajitas Array	88.45	59	LR	LR	14 09 51.9	
	comp=Z,27nm,18.5s,baz=256,slow=32						
I30M	Mount Dempster	88.51	18	P	P	13 36 01.8	-0.2
	baz=224						
H29M	Whitestone	88.69	16	P	P	13 36 02.3	-0.4
	baz=222						
YHL	Hebgen Lake	88.72	42	IAmb	IAmb	13 36 04.5	
	comp=Z,3.4nm,1.0s						
B22K	Teshekpuk Lake	88.88	9	P	P	13 36 03.2	-0.3
	baz=208						
PDAR	Pinedale Array	88.94	45	P	P	13 36 03.4	-1.4
	comp=Z,0.7nm,0.8s,baz=204,slow=3.3,SNR=5.8						
	comp=Z,0.7nm,0.8s						
C24K	Franklin Bluff	89.15	11	P	P	13 36 04.1	-0.6
	baz=212						
EPYK	Eagle Plains	89.25	17	P	P	13 36 05.0	-0.4
	baz=223						
D25K	Kavik River	89.26	12	P	P	13 36 05.3	-0.1
	baz=214						
G29M	Pine Creek	89.30	16	P	P	13 36 05.5	-0.1
	baz=222						
F28M	Old Crow	89.36	15	P	P	13 36 05.4	-0.4
	baz=220						
E27K	Coleen River	89.38	14	P	P	13 36 05.6	-0.4
	baz=219						
KOTAN	Kotaneelee Air	89.50	25	P	P	13 36 06.1	-0.5
	baz=235						
G30M	tAoh Zraii Nji	89.83	16	IAmb	IAmb	13 36 08.9	
	comp=Z,6.7nm,1.2s						
G30M	tAoh Zraii Nji	89.83	16	P	P	13 36 07.4	-0.8
	baz=224						
SONM	Songino Array	89.98	320	P	P	13 36 11.9	+2.5
	comp=Z,0.2nm,0.3s,baz=108,slow=4.7,SNR=1.9						
SONM				LR	LR	14 15 22.9	
	comp=Z,13nm,18.5s,baz=90,slow=35						
	comp=Z,0.2nm,0.3s						
E28M	Babbage River	90.19	14	P	P	13 36 09.0	-0.7
	baz=221						
G31M	Satah River	90.33	17	P	P	13 36 10.3	0.0
	baz=226						
YKA	Yellowknife Ar	94.62	26	LR	LR	14 15 20.7	
	comp=Z,50nm,18.2s,baz=211,slow=33						
PALK	Pallekele	98.63	275	LR	LR	14 21 34.0	
	comp=Z,36nm,18.7s,baz=146,slow=35						
JTS	Las Juntas de	99.90	82	LR	LR	14 10 16.2	
	comp=Z,25nm,21.2s,baz=122,slow=28						
GERES	GERESS Array B	145.11	341	PKPbc	PKPdf	13 42 48.0	+0.7
	comp=Z,0.2nm,0.3s,baz=20,slow=2.0,SNR=7.2						
ESDC	Sonseca Array	156.81	3	PKPab	PKPab	13 43 35.2	+0.3
	comp=Z,0.9nm,1.0s,baz=346,slow=3.9,SNR=5.1						

IDC ***23*** *13:32:06.6±1.9, 30°.74S×177°.48W, h0^{km}, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=50.2km s-min=24.0km az=84.0*

ISC 23 13:32:11.1±1.7**, 30°.7S**±0°.1×**177°.4W**±0°.3**, h33^{km}, n6, σ1^{s}.13**/6**, mb3.6**/3**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.50	343	Pn	Pn	13 32 34.9	-0.8
	71nm,0.3s,baz=63,slow=20,SNR=1.7						
RAO				Sn	Sb	13 32 58.2	+1.2
	106nm,0.3s,baz=225,slow=23,SNR=2.6						
URZ	Urewera	8.79	209	Pn	Pn	13 34 08.5	-7.2
	0.3nm,0.3s,baz=24,slow=10,SNR=1.3						
ASAR	Alice Springs	43.58	267	P	P	13 40 12.9	+0.6
	0.4nm,0.7s,baz=106,slow=7.3,SNR=4.2						
	0.4nm,0.7s						
WRA	Warramunga Arr	44.60	272	P	P	13 40 19.5	-0.9
	0.7nm,0.8s,baz=111,slow=8.0,SNR=4.6						
	0.7nm,0.8s						
QSPA	South Pole Qui	59.41	180	P	P	13 42 10.8	+0.6
	0.9nm,1.0s,baz=173,slow=17,SNR=1.9						
	0.9nm,1.0s						
FINES	FINESS Array B	145.59	340	PKPbc	PKPbc	13 51 45.1	-0.3
	0.8nm,0.7s,baz=48,slow=5.5,SNR=5.8						

IDC ***23*** *13:47:20.5±2.4, 31°.11S×120°.57E, h0^{km}, mbtmp3.4/5, ML3.5/4, Error ellipse: s-maj=52.6km s-min=24.2km az=151.0*

AUST ***23*** *13:47:24.0±0.4, 31°S±5°×12°0E±°, h10^{km}, mb3.7/4, ML3.8/7, Error ellipse: s-maj=11.9km s-min=6.9km az=145.3*

NOU ***23*** *13:47:23.8, 30°.88S×119°.99E, h0^{km}, MLv4.6/9, Western Australia*

ISC 23 13:47:21.5±0.9**, 30°.75S**±0°.06×**120°.09E**±0°.06**, h10^{km}, n26, σ2^{s}.78**/26**, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLBR	Kellerberrin	2.17	247	P	Pn	13 48 00.0	+2.3
KLBR	Kellerberrin	2.17	247	P	Pn	13 47 59.7	+2.0
BLDU	Ballidu	2.92	272	P	Pn	13 48 09.3	+1.3
BLDU	Ballidu	2.92	272	P	Pn	13 48 09.3	+1.3
NWAO	Narrogin (SRO)	3.26	228	P	Pn	13 48 14.7	+2.0
NWAO	Narrogin (SRO)	3.26	228	Pn	Pn	13 48 14.3	+1.6
	6.1nm,0.2s,baz=63,slow=13,SNR=33						
NWAO				Sn	Sn	13 48 48.6	-3.0
	9.6nm,0.3s,baz=60,slow=10,SNR=5.6						
NWAO				Lg	Lg	13 48 58.8	
	48nm,0.3s,baz=137,slow=23,SNR=27						
NWAO	Narrogin (SRO)	3.26	228	P	Pn	13 48 14.7	+2.0
MUN	Mundaring	3.54	249	P	Pn	13 48 18.1	+1.6
MUN	Mundaring	3.54	249	P	Pn	13 48 18.1	+1.6
MORW	Morawa	3.90	295	P	Pn	13 48 23.2	+1.7
MORW	Morawa	3.90	295	P	Pn	13 48 23.6	+2.1
MEEK	Meekatharra	4.30	342	P	Pn	13 48 31.4	+4.3
MEEK	Meekatharra	4.30	342	P	Pn	13 48 31.1	+4.0
FORT	Forrest	6.86	92	P	Pn	13 49 05.0	+2.9
	comp=Z,0.4nmcomp=Z,35nm,1.0s						
FORT	Forrest	6.86	92	P	Pn	13 49 05.9	+3.8
PSAB3	Pilbara Seismi	9.13	359	P	Pn	13 49 36.0	+2.7
PSA00	Pilbara Seismi	9.15	359	P	Pn	13 49 39.8	+6.2
WRKA	Warakurna	9.22	54	P	Pn	13 49 38.2	+3.5
	comp=Z,0.0nmcomp=Z,7.2nm,2.7s						
MBWA	Marble Bar	9.56	358	P	Pn	13 49 41.9	+2.6
	comp=Z,0.1nmcomp=Z,8.8nm,1.5s						
MBWA	Marble Bar	9.56	358	P	Pn	13 49 45.0	+5.7
MULG	Mulgathing	12.05	91	P	Pn	13 50 15.4	+2.1
FITZ	Fitzroy Crossi	13.57	23	P	Pn	13 50 35.3	+1.2
	comp=Z,2.3nm,2.4s						
FITZ	Fitzroy Crossi	13.57	23	Pn	Pn	13 50 36.3	+2.2
	comp=Z,0.3nm,0.3s,baz=201,slow=11,SNR=18						
FITZ				Sn	Sn	13 53 01.5	-3.6
	comp=Z,0.2nm,0.3s,baz=294,slow=22,SNR=2.1						
	comp=Z,2.2nm,0.8s						
ASAR	Alice Springs	14.16	63	Pn	Pn	13 50 41.5	-0.8
	comp=Z,0.2nm,0.3s,baz=238,slow=11,SNR=18						
ASAR				Sn	Sn	13 53 08.9	-11
	comp=Z,0.4nm,0.3s,baz=245,slow=21,SNR=4.8						
ASAR				Lg	Lg	13 54 44.7	
	comp=Z,0.3nm,0.3s,baz=233,slow=27,SNR=2.4						
	comp=Z,0.3nm,0.5s						
WRA	Warramunga Arr	16.77	53	Pn	Pn	13 51 14.1	-2.5
	comp=Z,0.2nm,0.3s,baz=224,slow=12,SNR=7.8						
WRA				Sn	Sn	13 54 09.0	-14
	comp=Z,0.1nm,0.3s,baz=226,slow=23,SNR=1.9						
WRA				Lg	Lg	13 56 03.1	
	baz=217,slow=29						
	comp=Z,0.1nm,0.4s						
STKA	Stephens Creek	18.41	99	Pn	P	13 51 32.2	-4.6
	comp=Z,0.1nm,0.3s,baz=142,slow=23,SNR=1.3						
STKA				Sn	Sn	13 54 51.5	-11
	comp=Z,0.1nm,0.3s,baz=27,slow=19,SNR=1.1						
	comp=Z,1.1nm,0.9s						

IDC ***23*** *13:53:03.7±1.3, 60°.68S×32°.46W, h0^{km}, mb3.8/3, mbtmp3.7/4, ML3.5/1, MS3.2/3, Error ellipse: s-maj=62.0km s-min=28.7km az=86.0*

ISC 23 13:53:04.9±1.2, 60°.7S±0°.2×32°.6W±0°.2, h10^{km}, n18, σ1ˢ20/12, 1C-4D, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA3	Neumayer Olymp	13.98	149	⇓P	Pn	13 56 22.3	-0.4
	comp=Z,0.1nm,0.1s						
VNA1	Neumayer--Stat	14.01	145	⇓P	Pn	13 56 23.4	+0.3
	comp=Z,0.4nm,0.2s						
VNA2	Neumayer--Watz	14.40	146	⇑P	Pn	13 56 29.1	+0.6
	comp=Z,0.6nm,0.2s,baz=305,slow=16						
SNAA	Sanae	16.05	145	⇓P	P	13 56 52.0	-1.7
	comp=Z,2.3nm,0.2s						
SNAA	Sanae	16.05	145	Pn	P	13 56 52.0	-1.7
	comp=Z,0.2nm,0.3s,baz=306,slow=14,SNR=12						
SNAA				Sn	Sn	13 59 47.8	-0.2
	comp=Z,0.1nm,0.3s,baz=238,slow=15,SNR=1.7						
SNAA				LR	LR	14 01 50.2	
	comp=Z,73nm,21.9s,baz=130,slow=33						
	comp=Z,0.8nm,0.6s						
TROLL	Troll, Antarti	17.72	144	⇓P	P	13 57 14.8	+2.5
	comp=Z,3.9nm,0.2s						
QSPA	South Pole Qui	29.55	180	P	P	13 59 09.5	+0.1
	comp=Z,1.0nm,0.9s,baz=343,slow=5.0,SNR=1.8						
	comp=Z,1.0nm,0.9s						
PLCA	Paso Flores	30.62	293	LR	LR	14 09 46.5	
	comp=Z,20nm,20.1s,baz=213,slow=33						
VNDA	Vanda	41.75	185	P	P	14 00 53.7	+0.2
	comp=Z,0.6nm,1.0s,baz=197,slow=8.1,SNR=3.6						
	comp=Z,0.6nm,1.0s						
BDFB	Brasilia	46.35	339	LR	LR	14 19 39.6	
	comp=Z,95nm,19.1s,baz=193,slow=34						
H10S2	ASCENSION HYDR	53.32	22	T	T	15 00 41.9	
	baz=28,slow=74,SNR=49						
H10S3	ASCENSION HYDR	53.33	22	T	T	15 00 36.2	
	baz=192,slow=74,SNR=52						
H10N1	ASCENSION HYDR	54.44	22	T	T	15 01 53.3	
	baz=190,slow=75,SNR=18						
H10N3	ASCENSION HYDR	54.44	22	T	T	15 02 03.1	
	baz=190,slow=75,SNR=43						
H10N2	ASCENSION HYDR	54.46	22	T	T	15 01 58.1	
	baz=190,slow=75,SNR=21						
TORD	Torodi Ar. Bea	78.49	34	P	P	14 05 06.0	+0.1
	comp=Z,0.8nm,0.4s,baz=200,slow=6.7,SNR=2.2						
	comp=Z,0.8nm,0.4s						
MKAR	Makanchi Array	140.77	80	PKP	PKPdf	14 12 33.4	-0.4
	comp=Z,0.4nm,0.8s,baz=225,slow=1.4,SNR=2.6						
ILAR	Eielson Array	150.86	307	PKPbc	PKiKP	14 12 56.4	-0.1
	comp=Z,1.0nm,1.0s,baz=122,slow=1.2,SNR=7.4						

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*IDC **23** 13:54:13.1±3.4, 5°.99S×146°.33E, h137^{km}±19^{km}, mb3.9/3, mbtmp4.1/6, Error ellipse: s-maj=53.8km s-min=20.1km az=56.0*

ISC 23 13:54:11.7±3.0, 6°.0S±0°.2×146°.3E±0°.3, h100^{km}, n6, σ3ˢ00/7, mb4.2/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.51	166	P	Pn	13 55 04.6	+0.3
	11nm,0.3s,baz=344,slow=7.4,SNR=3.0						
PMG				S	Sn	13 55 48.5	+3.5
	18nm,0.5s,baz=30,slow=24,SNR=3.1						
JAY	Jayapura	6.54	302	P	Pn	13 55 48.4	+2.9
	6.8nm,0.8s,baz=146,slow=7.9,SNR=6.4						
WRA	Warramunga Arr	18.09	219	P	P	13 58 16.1	+0.3
	2.7nm,0.5s,baz=43,slow=12,SNR=13						
ASAR	Alice Springs	21.24	213	P	P	13 58 48.8	-1.1
	2.0nm,0.4s,baz=35,slow=12,SNR=18						
	2.0nm,0.4s						
FITZ	Fitzroy Crossi	23.47	237	P	P	13 59 09.9	-2.7
	5.5nm,0.6s,baz=53,slow=9.5,SNR=12						
	5.5nm,0.6s						
MAW	Mawson	81.99	203	P	P	14 06 17.6	-2.7
	2.7nm,0.5s,baz=63,slow=6.8,SNR=14						
	2.7nm,0.5s						

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*IDC **23** 14:35:01.2±8.9, 7°.05S×129°.39E, h172^{km}±93^{km}, mb3.1/2, mbtmp4.0/6, Error ellipse: s-maj=84.3km s-min=24.7km az=40.0*

ISC 23 14:35:00.8±1.2, 7°.17S±0°.09×129°.46E±0°.07, h150^{km}, n16, σ2ˢ68/20, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	2.00	114	P	Pn	14 35 38.4	+2.5
SOEI	Soe	5.75	243	P	Pn	14 36 26.9	+2.6
SOEI	Soe	5.75	243	S	Sn	14 37 31.8	+2.3
MTN	Manton Dam	5.88	164	P	Pn	14 36 28.1	+2.2
MTN	Manton Dam	5.88	164	S	Sn	14 37 34.5	+2.0
KDU	Kakadu	6.24	152	P	Pn	14 36 32.2	+1.5
KDU	Kakadu	6.24	152	S	Sn	14 37 41.7	+0.7
BATI	Baumata	6.48	242	P	Pn	14 36 36.2	+2.3
	56nm,0.5s,baz=113,slow=2.0,SNR=12						
BATI				S	Sn	14 37 46.9	0.0
	29nm,0.3s,baz=56,slow=21,SNR=8.1						
FITZ	Fitzroy Crossi	11.48	199	P	Pn	14 37 41.1	+0.7
	3.6nm,0.3s,baz=28,slow=11,SNR=38						
FITZ				S	Sn	14 39 43.3	-4.1
	6.0nm,0.3s,baz=138,slow=20,SNR=8.3						
FITZ	Fitzroy Crossi	11.48	199	P	Pn	14 37 41.2	+0.8
WRA	Warramunga Arr	13.55	160	P	Pn	14 38 06.5	-0.7
	1.6nm,0.4s,baz=336,slow=14,SNR=19						
WRA				S	Sn	14 40 32.0	-5.2
	0.9nm,0.4s,baz=350,slow=20,SNR=5.6						
QIS	Mount Isa	16.55	145	P	Pn	14 38 46.7	+2.4
ASAR	Alice Springs	16.95	166	P	P	14 38 50.8	+2.1
	4.8nm,0.7s,baz=343,slow=9.3,SNR=71						
ASAR				S	S	14 41 55.1	-2.6
	0.7nm,0.7s,baz=354,slow=27,SNR=4.7						
AS01	Alice Springs	16.96	166	P	Pn	14 38 51.2	+1.9
MKAR	Makanchi Array	68.07	327	P	P	14 45 41.8	-2.5
	0.2nm,0.3s,baz=114,slow=8.0,SNR=7.0						
	0.2nm,0.3s						
KURBB	Kurchatov Arra	72.37	329	P	P	14 46 06.5	-3.8
	0.1nm,0.4s,baz=123,slow=5.2,SNR=1.7						
	0.1nm,0.4s						

IDC 23 14:39:39.2±2.2, 15°.76S×179°.46E, h0^{km}, mb3.7/3, mbtmp3.7/4, ML5.2/1, MS3.5/4, Error ellipse: s-maj=85.4km s-min=23.8km az=126.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	2.39	214	Pn	Pn	14 40 19.8	+0.1
	28nm,0.3s,baz=58,slow=18,SNR=92						
MSVF				Sn	Sn	14 40 50.1	+0.4
	28nm,0.3s,baz=72,slow=20,SNR=4.3						
	36nm,0.3s						
HNR	Honiara	20.05	286	LR	LR	14 50 42.1	
	comp=Z,160nm,19.3s,baz=38,slow=33						
RAR	Rarotonga	20.42	109	LR	LR	14 51 07.3	
	comp=Z,36nm,18.2s,baz=252,slow=34						
WRA	Warramunga Arr	43.06	258	P	P	14 47 40.0	-1.3
	0.4nm,0.8s,baz=87,slow=8.2,SNR=1.6						
	0.4nm,0.8s						
ASAR	Alice Springs	43.46	252	P	P	14 47 45.0	+0.6
	0.9nm,0.6s,baz=89,slow=8.2,SNR=14						
ASAR				LR	LR	15 03 32.7	
	comp=Z,58nm,21.1s,baz=127,slow=33						
	0.9nm,0.6s						
ILAR	Eielson Array	84.28	14	P	P	14 52 12.0	-0.5
	1.4nm,1.0s,baz=220,slow=4.7,SNR=8.9						
	1.4nm,1.0s						
CFA	Coronel Fontan	99.85	127	LR	LR	15 30 22.3	
	comp=Z,83nm,21.9s,baz=164,slow=30						
GERES	GERESS Array B	145.00	344	PKPbc	PKPab	14 59 17.8	-0.1
	0.4nm,0.7s,baz=320,slow=2.9,SNR=4.2						

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*IDC **23** 14:43:43.4±2.3, 18°.12S×178°.39W, h579^{km}±23^{km}, mb2.8/5, mbtmp3.7/6, Error ellipse: s-maj=36.9km s-min=25.4km az=143.0*

ISC 23 14:43:43.4±1.0, 18°.1S±0°.2×178°.4W±0°.2, h579^{km}, n7, σ0ˢ76/8, mb3.3/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.36	276	P	P	14 45 03.3	+0.1
	4.1nm,0.7s,baz=153,slow=16,SNR=2.1						
WRA	Warramunga Arr	44.56	260	P	P	14 51 04.9	-0.2
	0.3nm,0.5s,baz=96,slow=7.0,SNR=7.3						
	0.3nm,0.5s						
ASAR	Alice Springs	44.70	254	P	P	14 51 07.0	+0.9
	1.4nm,0.5s,baz=88,slow=8.9,SNR=44						
ASAR				PcP	PcP	14 52 36.0	+0.1
	0.1nm,0.4s,baz=93,slow=2.9,SNR=1.2						
	1.4nm,0.5s						
QSPA	South Pole Qui	71.93	180	P	P	14 54 08.2	-0.5
	2.1nm,1.1s,baz=34,slow=7.3,SNR=2.6						
	2.1nm,1.1s						
PETK	Petropavlovsk-	73.88	345	P	P	14 54 19.4	-0.4
	0.9nm,0.8s,baz=162,slow=6.2,SNR=2.7						
	0.9nm,0.8s						
TXAR	Lajitas Array	86.14	58	P	P	14 55 25.2	+0.9
	0.2nm,0.6s,baz=282,slow=6.0,SNR=2.5						
	0.2nm,0.6s						
GERES	GERESS Array B	147.81	345	PKPbc	PKPbc	15 02 23.0	-0.9
	0.3nm,0.4s,baz=9.5,slow=3.2,SNR=3.7						

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*HVO **23** 15:07:14.8±0.8, 19°.467N±0°.008×155°.614W±0°.008, h-2^{km}±4^{km}, ML2.8/11, ML2.8/37(NEIC), Error ellipse: s-maj=1.2km s-min=1.0km az=190.0*

NEIC 23 15:07:15.2±0.7, 19°.467N±0°.007×155°.613W±0°.007, h5^{km}±1^{km}, Error ellipse: s-maj=2.3km s-min=1.4km az=8.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MWH	Mokuaweoweo	0.02	41		Pg	15 07 16.1	-0.7
MWH					Sg	15 07 16.7	-1.2
ALEP	Alea Permanent	0.08	338		Pg	15 07 17.7	+0.5
ALEP					Sg	15 07 19.6	+1.0
AIN	Ainahou	0.17	123		Sg	15 07 22.0	+1.0
AIN	Ainahou	0.17	123		Pg	15 07 19.0	+0.3
AIN				IAML		15 07 20.5	
	comp=E,4µm,0.3s						
AIN				IAML		15 07 21.4	
	comp=N,4µm,0.8s						
HMH	Humu‘ula Sheep	0.18	42		Pg	15 07 19.5	+0.6
HMH					Sg	15 07 22.5	+1.2
HMH	Humu‘ula Sheep	0.18	42	IAML		15 07 23.5	
	comp=N,2µm,0.6s						
HMH				IAML		15 07 23.8	
	comp=E,2µm,0.5s						
MLH	Mauna Loa	0.22	83		Sg	15 07 23.1	+0.8
MLH	Mauna Loa	0.22	83		Pg	15 07 20.0	+0.5
MLH				IAML		15 07 24.5	
	comp=E,2µm,0.5s						
MLH				IAML		15 07 26.4	
	comp=N,3µm,0.4s						
KHU	Kahuku	0.22	180		Pg	15 07 19.8	+0.2
KHU	Kahuku	0.22	180		Sg	15 07 23.1	+0.6
KHU	Kahuku	0.22	180	IAML		15 07 20.7	
	comp=E,2µm,0.6s						
CPH	Captain Cook	0.29	274		Pg	15 07 20.8	-0.1
POHA	Pohakuloa	0.30	15		Pg	15 07 20.7	-0.4
POHA					Sg	15 07 25.9	+0.8
POHA	Pohakuloa	0.30	15	IAML		15 07 23.5	
	comp=E,1µm,0.4s						
POHA				IAML		15 07 31.0	
	comp=E,1µm,0.6s						
HUH	Hualalai	0.30	316		Pg	15 07 21.2	0.0
HUH					Sg	15 07 26.3	+1.1
HUH	Hualalai	0.30	316	IAML		15 07 26.6	
	comp=N,3µm,0.5s						
HUH				IAML		15 07 30.5	
	comp=E,4µm,0.5s						
HTC	Hot Caves	0.31	138		Pg	15 07 21.3	+0.1
UWE	Uwekahuna	0.31	99		Pg	15 07 21.3	+0.1
UWE	Uwekahuna	0.31	99		Sg	15 07 26.2	+1.0
UWE	Uwekahuna	0.31	99	IAML		15 07 23.3	
	comp=N,4µm,0.7s						
UWE				IAML		15 07 24.5	
	comp=E,6µm,0.8s						
SDHHI	Sand Hill	0.31	104		Pg	15 07 21.0	-0.3
SDHHI					Sg	15 07 26.2	+0.7
RSD	Rainshed	0.32	91		Pg	15 07 21.5	+0.1
RSD					Sg	15 07 26.0	+0.4
UWB	Uwekahuna Bluf	0.32	98		Pg	15 07 21.6	+0.2
UWB					Sg	15 07 26.3	+0.6
SBLHI	Steaming Bluff	0.33	97		Pg	15 07 21.5	-0.1
SBLHI					Sg	15 07 26.5	+0.5
HATHI	Halema‘uma‘u T	0.34	97		Pg	15 07 21.8	+0.1
HATHI	Halema‘uma‘u T	0.34	97	IAML		15 07 25.9	
	comp=E,3µm,0.9s						
HATHI				IAML		15 07 25.9	
	comp=N,3µm,1.1s						
HLP	Hilina Pali	0.34	121		Pg	15 07 21.8	+0.1
HLP				IAML		15 07 28.5	
	comp=N,2µm,0.7s						
HLP	Hilina Pali	0.34	121		Sg	15 07 27.0	+0.9
HLP	Hilina Pali	0.34	121	IAML		15 07 22.9	
	comp=E,2µm,0.8s						
KKO	Keanakako'i	0.34	102		Pg	15 07 21.8	0.0
BYL	Byron's Ledge	0.34	99		Pg	15 07 21.8	0.0
BYL				IAML		15 07 28.6	
	comp=N,1µm,0.6s						
BYL	Byron's Ledge	0.34	99		Sg	15 07 26.5	+0.2
BYL	Byron's Ledge	0.34	99	IAML		15 07 25.2	
	comp=E,3µm,0.7s						
PUH	Pauahi	0.39	104		Pg	15 07 22.5	-0.2
PUH					Sg	15 07 28.1	+0.3
PUH	Pauahi	0.39	104	IAML		15 07 29.6	
	comp=N,1µm,0.9s						
PUH				IAML		15 07 30.1	
	comp=E,653nm,0.7s						
KNHH	Kane Nui o Ham	0.43	102		Pg	15 07 23.3	-0.2
STCH	Steam Cracks	0.47	100		Pg	15 07 24.0	-0.3
STCH					Sg	15 07 30.6	+0.3
STCH	Steam Cracks	0.47	100	IAML		15 07 32.5	
	comp=N,595nm,0.6s						
STCH				IAML		15 07 39.5	
	comp=E,579nm,0.6s						
NPOC	North of Pu‘u	0.48	99		Pg	15 07 24.2	-0.2
NPOC					Sg	15 07 31.1	+0.4
JCUZ	Jacuzzi	0.49	100		Pg	15 07 24.4	-0.2
JCUZ					Sg	15 07 31.5	+0.4
JOKA	Jonika Flow	0.58	93	Pg	Pg	15 07 25.8	-0.5
JOKA				IAML		15 07 34.5	
	comp=N,703nm,0.7s						

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*IDC **23** 15:42:26.4±0.6, 7°.29N×81°.17W, h0^{km}, mb4.0/18, mbtmp4.1/26, ML3.9/8, MS3.6/22, Error ellipse: s-maj=20.5km s-min=11.1km az=51.0*

*UPA **23** 15:42:27.2±2.0, 7°.33N×81°.11W, h4^{km}±6^{km}, MW4.7, Fault plane solution: NP1:ϕ_s80.00000°, δ86.00000°, λ38.00000°.*

*NEIC **23** 15:42:29.0±1.2, 7°.35N±0°.07×81°.19W±0°.07, h13^{km}±3^{km}, mb4.6/125, Error ellipse: s-maj=12.2km s-min=7.7km az=220.0*

*CATAC **23** 15:42:32.0±0.4, 8°N±5°×8°1W±°, h10^{km}, M4.8/7, mb5.0/7, mB5.1/5, MLv4.9/7, Mw(mB)4.5/5, Error ellipse: s-maj=14.0km s-min=3.8km az=37.1, confirmed*

ISC 23 15:42:27.4±1.1, 7°.32N±0°.03×81°.12W±0°.02, h9^{km}±6^{km}, n235, σ1ˢ68/192, mb4.5/79, MS3.5/18, 21C-5D, Panama

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CACAO	El Cacao, Vera	0.26	84	P	Pg	15 42 32.8	+0.3
CACAO				S	Sg	15 42 37.4	+1.4
CACAO	El Cacao, Vera	0.26	84	⇑iP	Pg	15 42 33.0	+0.4
CACAO				eS	Sg	15 42 38.0	+2.0
GMAL	Guarumal, Vera	0.46	346	P	Pg	15 42 36.4	+0.1
GMAL				S	Sb	15 42 43.5	-1.1
GMAL	Guarumal, Vera	0.46	346	⇑iP	Pg	15 42 36.5	+0.1
GMAL				eS	Sg	15 42 43.0	+0.6
RSUS3	Rio de Jesus,	0.66	356	⇑iP	Pg	15 42 39.4	-0.8
RSUS3				eS	Sg	15 42 42.4	-6.5
TOSI3	Tonosi	0.68	82	⇑iP	Pg	15 42 39.7	-0.7
TOSI3				eS	Sg	15 42 49.5	+0.2
STIA3	Santiago, Vera	0.79	11	⇑iP	Pg	15 42 41.6	-1.1
STIA3				eS	Sn	15 42 55.7	-1.1
MESA3	La Mesa, Verag	0.83	355	⇑iP	Pg	15 42 42.1	-1.3
ACHO3	Achotines, Los	0.94	84	⇓iP	Pg	15 42 44.1	-1.4
ACHO3				eS	Sn	15 42 59.3	-1.2
AZU	Azuero	0.96	60	P	Pg	15 42 44.5	-1.3
AZU				S	Sb	15 42 58.4	-0.7
AZU	Azuero	0.96	60	⇓iP	Pg	15 42 44.6	-1.3
AZU				eS	Sb	15 42 58.4	-0.7
CALO3	Calobre, Verag	1.04	15	⇑iP	Pg	15 42 45.6	-1.7
PCRI3	Pocri, Los San	1.05	71	⇓iP	Pg	15 42 46.0	-1.6
PCRI3				eS	Sb	15 43 01.4	-0.3
LOMA3	Las Lomas, Chi	1.68	311	⇑eP	Pn	15 42 56.9	-0.1
GUAL3	Gualaca, Chiri	1.68	316	⇑iP	Pn	15 42 56.2	-0.8
GUAL3				eS	Sg	15 43 23.1	+1.7
LOCO3	Loma Colorada,	1.69	310	⇓eP	Pn	15 42 56.6	-0.5
LOCO3				⇑iP	Pb	15 42 57.0	-1.6
PSOM3	Paja de Sombre	1.81	319	⇑iP	Pn	15 42 57.9	-1.0
PSOM3				eS	Sn	15 43 20.7	-1.2
BQSF3	Alto Boquete,	1.93	318	⇑iP	Pn	15 43 00.8	+0.3
PTAR3	Potrerillos Ar	1.93	315	⇑iP	Pn	15 43 00.3	-0.3
PTAR3				eS	Sb	15 43 27.6	+0.4
LESP3	La Esperanza,	1.98	303	⇑iP	Pn	15 43 00.8	-0.3
BC3P	Paso Ancho	2.10	315	⇑iP	Pn	15 43 03.3	+0.4
TABO3	Taboga, Panama	2.13	46	eP	Pn	15 43 03.7	+0.5
TABO3				eS	Sb	15 43 32.0	-0.9
BRU2	Volcan	2.14	313		Pn	15 43 03.1	-0.3
BRU2	Volcan	2.14	313	⇑iP	Pn	15 43 03.7	+0.2
BRU2				eS	Sb	15 43 32.4	-0.8
ARRA3	Arraijan, Pana	2.19	41	eP	Pb	15 43 06.2	-1.0
ARRA3				eS	Sb	15 43 34.4	0.0
BCIP	Isla Barro Col	2.23	35		Pn	15 43 05.6	+1.0
BCIP	Isla Barro Col	2.23	35	P	Pn	15 43 05.3	+0.7
BCIP				S	Sb	15 43 34.2	-1.6
BCIP	Isla Barro Col	2.23	35	eP	Pn	15 43 05.4	+0.8
BCIP				eS	Sb	15 43 35.9	+0.2
MLIR3	Monte Lirio, C	2.24	311	⇑iP	Pn	15 43 05.7	+0.9
UPA	Univ. de Panam	2.28	43	⇓iP	Pn	15 43 05.9	+0.6
UPA				eS	Sb	15 43 36.0	-1.1
CHPO	Chepo, Panama	2.71	47	⇑iP	Pn	15 43 12.6	+1.4
CHPO				eS	Sb	15 43 49.3	0.0
DRK0	Durika	2.86	313	⇑iP	Pn	15 43 14.1	+0.7
CNTA3	Canitas, Panam	2.91	49	⇑iP	Pn	15 43 14.0	+0.1
CNTA3				eS	Sb	15 43 54.6	-0.6
PTAC	Punta Ardita,	3.29	93	eP	Pn	15 43 14.6	-4.5
PTAC				eS	Sn	15 43 53.0	-5.5
MAPC	Malpelo	3.33	188	P	Pn	15 43 16.8	-2.9
MAPC				S	Sn	15 43 52.6	-6.8
LCR2	La Lucha 2	3.74	310		Pn	15 43 25.8	+0.3
HDC	Heredia	3.99	312		Pn	15 43 28.8	-0.1
HDC	Heredia	3.99	312	eP	Pn	15 43 31.9	+3.0
TRT2	Tortugero	4.13	321	P	Pn	15 43 35.8	+5.1
TRT2	Tortugero	4.13	321	S	Sb	15 44 27.5	-2.9
APAC	Apartado, Choc	4.54	82	P	Pn	15 43 37.9	+1.6
COVE	Coope Vega, Sa	4.69	316	P	Pn	15 43 44.4	+6.0
JTS	Las Juntas de	4.81	308		Pn	15 43 39.3	-0.8
JTS	Las Juntas de	4.81	308	Pn	Pn	15 43 40.4	+0.3
	12nm,0.3s,baz=181,slow=9.5,SNR=18						
JTS				Sn	Sn	15 44 37.6	+1.6
	baz=208,slow=20						
	15nm,0.4s						
DBBC	Dabeiba	4.88	93	P	Pn	15 43 41.4	+0.3
MALC	Bahia Malaga	4.99	131	P	Pn	15 43 41.7	-0.9
GR1C	Gorgona, Isla	5.20	145	P	Pn	15 43 43.0	-2.4
SAIC	Isla e San And	5.22	354	P	Pn	15 43 45.8	+0.1
	222nm,0.8s						
CBOC	Ciudad Bolivar	5.27	106	P	Pn	15 43 45.0	-1.6
	60nm,0.9s						
BLUN	Bluefields	5.34	331	P	Pn	15 43 49.3	+1.9
PLMC	San Jos del P	5.37	116	P	Pn	15 43 47.1	-0.8
	1µm55nm,0.8s						
UREC	San Jos de Ur	5.55	85	P	Pn	15 43 51.4	+1.1
	581nm53nm,0.6s						
UREC	San Jos de Ur	5.55	85	⇑iP	Pn	15 43 51.6	+1.3
UREC				eS	Sn	15 44 50.6	-3.8
HELC	Santa Helena	5.66	101	P	Pn	15 43 52.1	0.0
HELC				S	Sn	15 44 57.0	-0.6
HELC	Santa Helena	5.66	101	P	Pn	15 43 50.8	-1.3
	599nm56nm,0.8s						
ESPN	Las Esperanzas	5.77	327		Pn	15 43 53.8	+0.5
YOTC	Yotoco, Valle	5.79	125	P	Pn	15 43 52.3	-1.4
	642nm38nm,0.4s						
JAMC	Jamundi, Valle	6.01	132	P	Pn	15 43 55.4	-1.5
	79nm,0.6s						
PRVC	Isla de Provid	6.03	358		Pn	15 43 57.0	+0.2
PRVC	Isla de Provid	6.03	358	P	Pn	15 43 57.8	+1.0
PRVC	Isla de Provid	6.03	358	P	Pn	15 43 57.1	+0.3
	140nm,0.6s						
GUY2C	Guyana, Caldas	6.08	110	P	Pn	15 43 58.6	+0.6
	625nm62nm,0.7s						
GUY2C				S	Sn	15 45 09.4	+1.3
	625nm62nm,0.7s						
ACON	Acoyapa	6.11	319		Pn	15 43 57.6	-0.3
ACON	Acoyapa	6.11	319	P	Pn	15 44 02.1	+4.2
ACON	Acoyapa	6.11	319	P	Pn	15 44 01.6	+3.6
ZARC	Zaragoza, Cauc	6.21	88	P	Pn	15 43 59.5	+0.1
	692nm52nm,0.6s						
ANIL	Santa Ana	6.34	116	P	Pn	15 44 02.3	+0.9
	2µm89nm,0.8s						
SJCC	San Jacinto, C	6.41	66	P	Pn	15 44 01.9	-0.2
	2µm186nm,0.6s						
NORC	Norcasia	6.45	105	P	Pn	15 44 03.8	+1.1
	557nm25nm,0.7s						
POPC	Popayan, Colom	6.49	137	P	Pn	15 44 02.2	-1.2
	877nm78nm,0.8s						
BBAC	Balboa, Cauca	6.52	144	P	Pn	15 44 04.0	+0.2
	964nm51nm,0.8s						
PTBC	PUERTO BERRIO,	6.66	96	P	Pn	15 44 06.5	+1.0
	23nm,0.7s						
ORTC	Ortega, Tolima	6.75	120	P	Pn	15 44 07.6	+0.8
	875nm100nm,0.8s						
BOAB	BOACO BROADBAN	6.79	319		Pn	15 44 07.5	+0.2
BOAB	BOACO BROADBAN	6.79	319	P	Pn	15 44 12.6	+5.3
BOAB	BOACO BROADBAN	6.79	319	S	Sn	15 45 28.4	+3.6
PRAC	Prado	7.16	120	P	Pn	15 44 13.3	+0.8
PRAC				S	Sn	15 45 35.4	+1.3
PRAC	Prado	7.16	120	P	Pn	15 44 14.2	+1.7
	995nm64nm,0.6s						
ROSC	El Rosal	7.19	110	Pn	Pn	15 44 15.9	+2.7
	4.8nm,0.3s,baz=291,slow=15,SNR=4.3						
ROSC				Sn	Sn	15 45 38.4	+3.0
	1.6nm,0.3s,baz=191,slow=21,SNR=1.0						
ROSC				LR	LR	15 46 59.9	
	comp=Z,303nm,20.9s,baz=264,slow=38						
	18nm,0.5s						
ARGC	Ariguani, Magd	7.25	69	P	Pn	15 44 15.8	+2.2
	131nm,0.9s						
OTAV	Otavalo	7.52	159		Pn	15 44 17.6	-0.1
OTAV	Otavalo	7.52	159	eP	Pn	15 44 18.8	+1.1
OTAV	Otavalo	7.52	159	P	Pn	15 44 19.4	+1.7
GARC	Garzon, Huila	7.57	132	P	Pn	15 44 20.4	+2.1
FLOC	Florencia	7.88	136		Pn	15 44 24.3	+2.0
VILC	Villavicencio,	8.04	113	P	Pn	15 44 30.0	+5.3
RUSC	La Rusia	8.11	100		Pn	15 44 28.3	+2.5
SLOR	San Lorenzo -	8.41	162		Pn	15 44 31.7	+1.7
MACC	Macarena, Meta	8.88	125	P	Pn	15 44 37.5	+1.5
SDV	Santo Domingo	10.50	81		Pn	15 44 59.9	+1.5
SDV	Santo Domingo	10.50	81	Pn	Pn	15 45 00.5	+2.1
	1.5nm,0.3s,baz=236,slow=8.9,SNR=16						
SDV				Sn	Sn	15 46 52.7	-3.7
	1.6nm,0.3s,baz=282,slow=19,SNR=1.6						
SDV				LR	LR	15 50 19.5	
	comp=Z,472nm,18.4s,baz=244,slow=45						
	16nm,0.6s						
SDV	Santo Domingo	10.50	81	eP	Pn	15 45 00.8	+2.5
SDV	Santo Domingo	10.50	81	P	Pn	15 45 01.3	+2.9
BAUV	El Baul	13.05	82		Pn	15 45 31.2	-1.9
ATAH	Atahualpa	14.61	169	Pn	Pn	15 45 55.7	+0.8
	0.8nm,0.3s,baz=8.7,slow=13,SNR=5.7						
ATAH				LR	LR	15 50 53.2	
	comp=Z,388nm,22.0s,baz=354,slow=35						
	6.2nm,0.5s						
SDDR	Presa de Saban	15.03	39		Pn	15 46 00.4	+0.2
BANI	BANI	15.20	43	Pn	Pn	15 46 02.0	-0.5
TBTG	Tabatinga, AM	15.99	135	P	P	15 46 17.8	+1.5
TBTG	Tabatinga, AM	15.99	135	eP	Pn	15 46 12.6	-0.1
PCRV	Puerto La Cruz	16.54	79	Pn	P	15 46 23.2	+0.8
	1.3nm,0.3s,baz=205,slow=2.8,SNR=6.9						
PCRV				LR	LR	15 54 40.3	
	comp=Z,345nm,18.7s,slow=44						
	7.2nm,0.5s						
CMIG	Matias Romero	16.58	307	Pn	Pn	15 46 22.1	+1.8
	0.3nm,0.3s,baz=148,slow=9.0,SNR=11						
	7.2nm,0.8s						
CZSB	Cruzeiro do Su	17.14	151		Pn	15 46 25.9	-1.5
CZSB	Cruzeiro do Su	17.14	151	eP	Pn	15 46 26.5	-0.9
SJG	San Juan	18.10	52	P	P	15 46 41.8	+2.1
	1.0nm,0.3s,baz=248,slow=8.4,SNR=6.2						
	9.0nm,0.7s						
NNA	Nana	19.64	167	P	P	15 46 57.6	+0.9
	1.1nm,0.3s,baz=337,slow=4.0,SNR=2.7						
	4.7nm,0.5s						
TEFE	Tefe	19.65	123	eP	P	15 46 55.9	-0.9
TLIG	Tlapa	19.83	303		P	15 46 58.5	-0.3
BOAV	Boa Vista	21.09	102		P	15 47 13.3	+0.9
BOAV	Boa Vista	21.09	102	eP	P	15 47 10.4	-2.1
MACA	Manacapuru-AM	22.89	116	eP	P	15 47 29.6	-2.2
LPAZ	La Paz	26.74	151	P	P	15 48 09.8	+1.5
LPAZ	La Paz	26.74	151	P	P	15 48 08.5	+0.2

	1.8nm,0.7s,baz=334,slow=11,SNR=5.4						
	1.8nm,0.7s						
LPAZ	La Paz	26.74	151	eP	P	15 48 04.5	-3.8
ITTB	Itaituba	27.86	114	eP	P	15 48 15.8	-1.9
PB16	IPOC Station P	27.95	156	P	P	15 48 20.4	+1.4
PB16				IAmb	IAmb	15 48 22.2	
	comp=Z,7.5nm,0.9s						
TKL	Tuckaleechee C	28.31	355	LR	LR	15 59 25.8	
	comp=Z,188nm,20.2s,baz=194,slow=36						
MDP	Montagnes des	28.39	93	LR	LR	16 00 26.6	
	comp=Z,116nm,19.1s,baz=304,slow=38						
NPGB	Novo Progresso	29.39	118	eP	P	15 48 28.3	-3.1
LCAR	Lake Charles	30.06	344	P	P	15 48 37.1	+0.1
TXAR	Lajitas Array	30.50	319	P	P	15 48 42.1	+0.9
	comp=Z,0.5nm,0.7s,baz=125,slow=7.4,SNR=5.2						
TXAR				PcP	PcP	15 51 41.7	+1.3
	comp=Z,0.3nm,0.7s,baz=136,slow=5.9,SNR=4.3						
	comp=Z,0.5nm,0.7s						
PDRB	Porto dos Gac	30.70	128	eP	P	15 48 40.6	-2.2
CLDB	Colider	31.01	125	eP	P	15 48 42.0	-3.7
PTLB	Pontes e Lacer	31.40	136	eP	P	15 48 45.9	-3.2
SN07	Snyder 07	31.53	327	P	P	15 48 49.8	-0.3
BBSD	Serra de San D	31.68	140	eP	P	15 48 48.1	-3.4
WMOK	Wichita Mounta	31.77	332	IAmb	IAmb	15 48 54.9	
	comp=Z,9.4nm,1.3s						
CCM	Cathedral Cave	31.95	345	P	P	15 48 53.4	-0.3
CCM				IAmb	IAmb	15 49 05.1	
	comp=Z,4.0nm,0.7s						
RTBA	Rita Blanca	35.07	329	IAmb	IAmb	15 49 26.8	
	comp=Z,8.5nm,0.8s						
SNDB	Serra Nova Dou	35.31	123	eP	P	15 49 17.7	-5.5
ANMO	Albuquerque	36.04	323	P	P	15 49 29.6	+0.1
ANMO				IAmb	IAmb	15 49 39.0	
	comp=Z,11nm,1.5s						
ANMO	Albuquerque	36.04	323	IAmb	IAmb	15 49 36.8	
	comp=Z,2.9nm,0.8s						
ANMO	Albuquerque	36.04	323	IAmb	IAmb	15 49 39.0	
	comp=Z,11nm,1.5s						
ANMO	Albuquerque	36.04	323	P	P	15 49 30.1	+0.7
	comp=Z,3.6nm,0.9s,baz=83,slow=8.1,SNR=6.3						
ANMO				LR	LR	16 05 50.8	
	comp=Z,57nm,20.7s,baz=222,slow=39						
	comp=Z,3.6nm,0.9s						
T25A	Trinidad	36.47	328	IAmb	IAmb	15 49 38.6	
	comp=Z,10nm,1.1s						
SADO	Sadowa	37.35	2	P	P	15 49 41.0	+0.7
	comp=Z,1.1nm,0.5s,baz=153,slow=16,SNR=2.0						
SADO				LR	LR	16 05 04.4	
	comp=Z,133nm,20.2s,baz=168,slow=36						
	comp=Z,1.1nm,0.5s						
SDCO	Great Sand Dun	37.50	327	IAmb	IAmb	15 49 47.5	
	comp=Z,11nm,1.4s						
Q24A	Divide	38.23	329	IAmb	IAmb	15 49 50.0	
	comp=Z,6.6nm,0.8s						
PV15	Paradox Valley	39.56	325	IAmb	IAmb	15 50 04.3	
	comp=Z,16nm,1.3s						
PV02	Paradox Valley	39.62	325	IAmb	IAmb	15 50 05.3	
	comp=Z,18nm,1.3s						
PV12	Saucer Basin,	39.73	325	IAmb	IAmb	15 50 10.5	
	comp=Z,15nm,0.9s						
PV18	Skein Mesa, Pa	39.74	325	IAmb	IAmb	15 50 08.2	
	comp=Z,9.9nm,0.8s						
BDFB	Brasilia	39.94	125	P	P	15 50 02.6	0.0
	comp=Z,1.3nm,0.6s,baz=315,slow=12,SNR=2.4						
BDFB				LR	LR	16 07 08.8	
	comp=Z,212nm,18.9s,baz=228,slow=37						
	comp=Z,1.3nm,0.6s						
CPUP	Villa Florida	40.64	146	P	P	15 50 08.6	+0.5
	comp=Z,0.2nm,0.5s,baz=301,slow=2.5,SNR=2.8						
	comp=Z,0.2nm,0.5s						
K22A	Casper	41.72	332	IAmb	IAmb	15 50 21.7	
	comp=Z,9.7nm,0.9s						
RSSD	Black Hills	41.77	335	P	P	15 50 17.4	-0.1
RSSD				IAmb	IAmb	15 50 22.0	
	comp=Z,13nm,1.1s						
PFO	Pinyon Flats O	41.84	314	LR	LR	16 09 22.7	
	comp=Z,61nm,21.8s,baz=153,slow=39						
PSUT	Pine Spring	42.87	321	P	P	15 50 25.9	-0.6
BW06	Boulder Array	43.29	329	P	P	15 50 29.2	-0.7
BW06				IAmb	IAmb	15 50 34.5	
	comp=Z,14nm,1.2s						
PD31	Pinedale Array	43.29	329	IAmb	IAmb	15 50 34.5	
	comp=Z,12nm,1.2s						
PDAR	Pinedale Array	43.29	329	P	P	15 50 28.9	-1.0
PDAR	Pinedale Array	43.29	329	P	P	15 50 30.2	+0.4
	comp=Z,3.7nm,0.9s,baz=134,slow=11,SNR=21						
PDAR				LR	LR	16 10 19.1	
	comp=Z,40nm,19.9s,baz=126,slow=39						
	comp=Z,3.7nm,0.9s						
HWUT	Hardware Ranch	43.53	327	IAmb	IAmb	15 50 36.6	
	comp=Z,8.4nm,1.1s						
TPAW	Teton Pass	44.52	329	IAmb	IAmb	15 50 46.8	
	comp=Z,6.0nm,0.9s						
ULM	Lac du Bonnet	44.54	347	P	P	15 50 38.5	-0.9
	comp=Z,3.2nm,0.8s,baz=155,slow=6.4,SNR=4.7						
	comp=Z,3.2nm,0.8s						
FXWY	Fox Creek	44.66	329	IAmb	IAmb	15 50 46.0	
	comp=Z,7.6nm,1.2s						
RLMT	Red Lodge	44.88	332	IAmb	IAmb	15 50 47.1	
	comp=Z,7.2nm,0.8s						
ELK	Elko	45.07	323	P	P	15 50 44.5	+0.3
	comp=Z,1.1nm,0.8s,baz=129,slow=7.5,SNR=4.1						
	comp=Z,1.1nm,0.8s						
YNE	Yellowstone No	45.15	331	IAmb	IAmb	15 50 50.9	
	comp=Z,8.3nm,1.2s						
NVAR	Mina Array Bea	45.65	318	P	P	15 50 49.7	+0.8
NVAR	Mina Array Bea	45.65	318	P	P	15 50 49.4	+0.6
	comp=Z,1.2nm,0.8s,baz=128,slow=6.1,SNR=7.6						
NVAR				PcP	PcP	15 52 27.8	+0.8
	comp=Z,0.6nm,0.6s,baz=167,slow=4.0,SNR=3.6						
NVAR				LR	LR	16 14 39.9	
	comp=Z,82nm,18.1s,baz=191,slow=42						
	comp=Z,1.2nm,0.8s						
BOZ	Bozeman (W)	46.36	330	IAmb	IAmb	15 50 58.7	
	comp=Z,7.9nm,1.1s						
MFID	Camas Ranch	47.09	325	IAmb	IAmb	15 51 04.5	
	comp=Z,3.6nm,0.9s						
EGMT	Eagleton	47.30	334	IAmb	IAmb	15 51 05.4	
	comp=Z,8.0nm,1.1s						
PLID	Pearl Lake	48.26	327	IAmb	IAmb	15 51 14.8	
	comp=Z,4.3nm,0.9s						
MSO	Missoula	48.37	330	IAmb	IAmb	15 51 17.8	
	comp=Z,5.7nm,1.1s						
PLCA	Paso Flores	48.79	169	P	P	15 51 13.0	0.0
	comp=Z,1.6nm,0.5s,baz=335,slow=9.7,SNR=8.5						
PLCA				LR	LR	16 08 28.1	
	comp=Z,33nm,20.6s,baz=42,slow=32						
	comp=Z,1.6nm,0.5s						
LNOR	Lincton Mounta	50.00	327	IAmb	IAmb	15 51 29.7	
	comp=Z,4.2nm,0.8s						
G08A	Pilot Rock	50.02	326	IAmb	IAmb	15 51 27.3	
	comp=Z,6.4nm,1.2s						
NEW	Newport	50.93	330	LR	LR	16 17 18.0	
	comp=Z,38nm,18.9s,baz=162,slow=41						
MXC	Moxie City	51.53	326	IAmb	IAmb	15 51 39.0	
	comp=Z,11nm,1.0s						
B08A	Colville Reser	52.12	328	IAmb	IAmb	15 51 41.9	
	comp=Z,6.6nm,1.1s						
GNW	Green Mountain	53.52	326	IAmb	IAmb	15 51 52.6	
	comp=Z,7.1nm,1.0s						
FRB	Frobisher Bay	57.05	7	LR	LR	16 18 20.2	
	comp=Z,50nm,18.1s,baz=255,slow=38						
BBB	Bella Bella	58.92	328	LR	LR	16 22 24.3	
	comp=Z,31nm,18.0s,baz=92,slow=41						
YKA	Yellowknife Ar	60.25	343	P	P	15 52 36.1	+0.3
	comp=Z,0.9nm,0.9s,baz=136,slow=6.6,SNR=6.8						
	comp=Z,0.9nm,0.9s						
DLBC	Dease Lake	63.22	334	LR	LR	16 22 37.2	
	comp=Z,4.8nm,19.9s,baz=98,slow=38						
P33M	Teslin, Yukon	65.38	334	P	P	15 53 09.5	-0.7
O30N	Mendenhall	67.07	334	IAmb	IAmb	15 53 27.0	
	comp=Z,6.4nm,1.0s						
ICESG	Greenland Ices	67.36	15	i P	P	15 53 22.9	-0.2
ICESG				IAmb	IAmb	15 53 28.1	
	comp=Z,11nm,1.0s						
RES	Resolute Bay	67.79	356	LR	LR	16 24 30.7	
	comp=Z,45nm,18.2s,baz=82,slow=37						
N30M	Aishikik Lake	67.82	335	IAmb	IAmb	15 53 31.5	
	comp=Z,5.0nm,0.8s						
M29M	Somme Creek	68.84	335	IAmb	IAmb	15 54 03.0	
	comp=Z,6.0nm,1.1s						
K29M	Barlow Dome	69.10	337	IAmb	IAmb	15 53 40.3	
	comp=Z,6.7nm,1.2s						
I30M	Mount Dempster	69.33	338	IAmb	IAmb	15 53 41.0	
	comp=Z,4.8nm,1.1s						
DAWY	Dawson	69.94	337	IAmb	IAmb	15 53 43.9	
	comp=Z,4.6nm,1.2s						
SUMG	Summit	70.10	13	i P	P	15 53 40.0	-0.2
I29M	Ogilvie Camp,	70.11	338	IAmb	IAmb	15 53 46.2	
	comp=Z,6.6nm,1.4s						
M27K	Edge Creek, AK	70.25	334	IAmb	IAmb	15 53 46.9	
	comp=Z,3.6nm,0.9s						
F30M	Barrier River	70.33	341	IAmb	IAmb	15 53 45.6	
	comp=Z,5.9nm,0.9s						
BCAR	Beaver Creek A	70.49	335	P	P	15 53 42.7	+0.4
G29M	Pine Creek	70.74	340	IAmb	IAmb	15 54 05.0	
	comp=Z,5.4nm,1.1s						
M26K	Nabesna, AK	70.75	334	IAmb	IAmb	15 53 49.5	
	comp=Z,7.0nm,1.1s						
I28M	Miner Creek	70.76	338	P	P	15 53 44.3	+0.3
I28M				IAmb	IAmb	15 54 07.1	
	comp=Z,4.5nm,1.1s						
BORG	Borgarnes	70.83	23	LR	LR	16 25 25.1	
	comp=Z,20nm,18.3s,baz=256,slow=36						
NEEM	North Greenlan	71.86	7	eP	P	15 53 51.0	+0.3
NEEM				IAmb	IAmb	15 53 55.8	
	comp=Z,13nm,0.8s						
I26K	Coal Creek Min	71.93	337	IAmb	IAmb	15 53 57.6	
	comp=Z,9.3nm,1.5s						
PAX	Paxson	72.02	334	IAmb	IAmb	15 53 56.8	
	comp=Z,10nm,1.3s						
PCAS	Casmilo, Conde	72.03	50	eP	P	15 53 56.0	+4.0
PMTG	Montargil	72.15	51	eP	P	15 53 52.6	-0.2
J25K	Salcha River,	72.55	336	IAmb	IAmb	15 54 00.2	
	comp=Z,6.3nm,0.8s						
PESTR	Estremoz	72.62	52	eP	P	15 53 56.9	+1.3
PESTR				i Amb		15 54 01.9	
	comp=Z,17nm,2.0s						
PBAR	Barrancos	73.00	52	eP	P	15 54 00.2	+2.3
IL31		73.22	336	IAmb	IAmb	15 54 03.5	
	comp=Z,4.6nm,0.9s						
ILAR	Eielson Array	73.22	336	P	P	15 53 57.4	-1.2
ILAR	Eielson Array	73.22	336	P	P	15 53 58.7	+0.1
	comp=Z,2.0nm,0.7s,baz=116,slow=4.4,SNR=12						
ILAR				LR	LR	16 29 46.5	
	comp=Z,40nm,18.2s,baz=104,slow=39						
	comp=Z,2.0nm,0.7s						
SUA	Susitna One	73.93	332	IAmb	IAmb	15 54 08.2	
	comp=Z,6.6nm,0.8s						
H24K	Noodor Dome	73.95	337	IAmb	IAmb	15 54 10.8	
	comp=Z,5.2nm,1.1s						
KDAK	Kodiak Island	73.99	328	LR	LR	16 29 39.4	
	comp=Z,45nm,18.6s,baz=126,slow=38						
NEA2	Nenana	74.05	335	IAmb	IAmb	15 54 08.4	
	comp=Z,5.6nm,1.0s						
TRF	Thorofare Moun	74.25	334	IAmb	IAmb	15 54 12.2	
	comp=Z,5.5nm,1.0s						
I23K	Minto, Yukon-K	74.33	336	IAmb	IAmb	15 54 12.7	
	comp=Z,7.3nm,1.0s						
SKT	Skwentna	74.42	332	IAmb	IAmb	15 54 10.8	
	comp=Z,6.8nm,1.0s						
D25K	Kavik River	74.59	340	IAmb	IAmb	15 54 37.0	
	comp=Z,4.3nm,0.9s						
BPAW	Bear Paw Mtn.	74.72	335	IAmb	IAmb	15 54 12.3	
	comp=Z,8.8nm,1.0s						
MLY	Manley	74.86	336	IAmb	IAmb	15 54 13.3	
	comp=Z,5.8nm,1.0s						
G23K	Bananza Creek	75.05	337	IAmb	IAmb	15 54 15.2	
	comp=Z,5.5nm,1.2s						
ESDC	Sonseca Array	75.48	51	P	P	15 54 13.2	+0.8
	comp=Z,1.3nm,0.6s,baz=274,slow=5.6,SNR=12						
	comp=Z,1.3nm,0.6s						
J20K	Nowinta River	76.08	334	IAmb	IAmb	15 54 20.0	
	comp=Z,6.3nm,1.1s						
F21K	Alatna River	76.50	338	IAmb	IAmb	15 54 22.6	
	comp=Z,8.4nm,1.4s						
D22K	Ayikyak River	76.61	339	IAmb	IAmb	15 54 23.0	
	comp=Z,5.6nm,1.2s						
EKA	Eskdalemuir Ar	77.17	35	P	P	15 54 21.7	+0.1
	comp=Z,0.7nm,0.6s,baz=235,slow=7.1,SNR=3.4						
	comp=Z,0.7nm,0.6s						
J14K	Nanvaranak Lak	80.07	332	IAmb	IAmb	15 54 43.8	
	comp=Z,7.3nm,0.8s						
SPITS	Spitsbergen Ar	84.43	12	LR	LR	16 35 37.1	
	comp=Z,24nm,18.6s,baz=269,slow=38						
HFS	Hagfors	86.11	30	P	P	15 55 08.1	-0.6
	comp=Z,1.3nm,0.7s,baz=242,slow=3.2,SNR=3.8						
	comp=Z,1.3nm,0.7s						
GERES	GERESS Array B	87.71	41	P	P	15 55 17.9	+1.0
	comp=Z,0.4nm,0.7s,baz=256,slow=5.4,SNR=3.9						
	comp=Z,0.4nm,0.7s						
SNAA	Sanae	93.22	162	P	P	15 55 41.6	-0.4
	comp=Z,1.1nm,0.9s,baz=292,slow=7.6,SNR=9.7						
	comp=Z,1.1nm,0.9s						
KURBB	Kurchatov Arra	119.66	15	PKP	PKPdf	16 01 18.3	+0.3
	comp=Z,0.2nm,0.5s,baz=332,slow=2.1,SNR=1.8						
KSRS	Korea Array	127.85	331	PKP	PKPdf	16 01 34.4	+0.4
	comp=Z,0.6nm,1.0s,baz=42,slow=2.5,SNR=4.1						
ASAR	Alice Springs	142.69	240	PKhKP	PKPpre	16 01 57.4	
	comp=Z,0.9nm,0.9s,baz=120,slow=3.5,SNR=14						
ASAR				PKP	PKPdf	16 02 02.4	+0.3
	comp=Z,1.1nm,0.7s,baz=104,slow=2.1,SNR=6.6						
WRA	Warramunga Arr	143.42	246	PKhKP	PKPpre	16 02 00.2	
	comp=Z,2.7nm,0.8s,baz=102,slow=2.7,SNR=11						
PZH	PanZhiHua	146.27	355	PKPbc	PKPdf	16 02 07.3	-1.1
H01W1	Cape Leeuwin H	149.17	205	T	T	18 49 42.5	
	baz=150,slow=76,SNR=5.8						
H01W2	Cape Leeuwin H	149.17	205	T	T	18 49 42.2	
	baz=150,slow=76,SNR=6.0						
H01W3	Cape Leeuwin H	149.18	205	T	T	18 49 46.6	
	baz=150,slow=76,SNR=3.9						
CMAR	Chiang Mai Arr	154.39	360	PKPbc	PKPbc	16 02 29.6	+0.2
	comp=Z,0.8nm,0.7s,baz=326,slow=3.6,SNR=7.5						

IDC ***23*** *15:44:46.8±2.2, 30°.22S×123°.42E, h0^{km}, mbtmp3.6/5, ML3.7/4, Error ellipse: s-maj=40.5km s-min=17.3km az=143.0*

NOU ***23*** *15:44:48.4, 30°.33S×123°.40E, h0^{km}, mb4.1/12, Western Australia*

AUST ***23*** *15:44:49.2±0.3, 30°S±5°×12°3E±°, h10^{km}, mb4.3/7, ML3.7/5, Error ellipse: s-maj=10.0km s-min=4.8km az=171.6*

ISC 23 15:44:48.1±0.9**, 30°.35S**±0°.10×**123°.41E**±0°.06**, h10^{km}, n32,** σ**1ˢ60**/33**, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FORT	Forrest	4.04	97	P	Pn	15 45 51.9	+1.9
FORT	Forrest	4.04	97	S	Sn	15 46 36.6	-0.7
FORT	Forrest	4.04	97	P	Pn	15 45 52.1	+2.1
KLBR	Kellerberrin	5.01	254	P	Pn	15 46 04.6	+1.2
	comp=Z,0.5nmcomp=Z,38nm,0.8s						
KLBR	Kellerberrin	5.01	254	P	Pn	15 46 05.2	+1.8
MEEK	Meekatharra	5.61	310	P	Pn	15 46 13.9	+2.3
	comp=Z,0.4nmcomp=Z,21nm,0.6s						
MEEK	Meekatharra	5.61	310	P	Pn	15 46 13.2	+1.6
BLDU	Ballidu	5.79	266	P	Pn	15 46 15.5	+1.4
BLDU	Ballidu	5.79	266	P	Pn	15 46 15.1	+1.0
NWAO	Narrogin (SRO)	5.86	242	P	Pn	15 46 15.7	+0.7
NWAO	Narrogin (SRO)	5.86	242	Pn	Pn	15 46 17.7	+2.7
	comp=Z,7.7nm,0.9s,baz=61,slow=11,SNR=10						
NWAO				Sn	Sn	15 47 19.4	-2.9
	comp=Z,4.2nm,0.3s,baz=157,slow=8.3,SNR=5.9						
NWAO				Lg	Lg	15 47 51.3	
	comp=Z,11nm,0.3s,baz=151,slow=23,SNR=10.0						
NWAO	Narrogin (SRO)	5.86	242	P	Pn	15 46 16.9	+1.9
MUN	Mundaring	6.38	253	P	Pn	15 46 22.4	+0.2
	comp=Z,55nm,2.2s,comp=Z,0.2nm						
MUN	Mundaring	6.38	253	P	Pn	15 46 22.7	+0.5
MORW	Morawa	6.53	279	P	Pn	15 46 26.3	+2.0
MORW	Morawa	6.53	279	P	Pn	15 46 25.4	+1.1
WRKA	Warakurna	6.84	41	P	Pn	15 46 31.1	+2.5
	comp=Z,0.1nmcomp=Z,4.3nm,1.3s						
RKGY	Rocky Gully	6.90	230	P	Pn	15 46 31.2	+1.9
	comp=Z,38nm,2.4s,comp=Z,0.2nm						
MULG	Mulgathing	9.21	92	P	Pn	15 47 01.4	+0.4
	comp=Z,17nm,2.4s,comp=Z,0.1nm						
PSA00	Pilbara Seismi	9.30	339	P	Pn	15 47 03.9	+1.5
PSA00	Pilbara Seismi	9.30	339	P	Pn	15 47 03.4	+1.0
MBWA	Marble Bar	9.73	339	P	Pn	15 47 09.6	+1.4
BBOO	Buckleboo	11.07	106	P	Pn	15 47 27.4	+0.9
BBOO	Buckleboo	11.07	106	P	Pn	15 47 27.7	+1.2
GIRL	Giralia	11.23	311	P	Pn	15 47 29.7	+0.9
ASAR	Alice Springs	11.48	57	Pn	Pn	15 47 32.1	-0.1
	comp=Z,0.4nm,0.3s,baz=230,slow=11,SNR=58						
ASAR				Sn	Sn	15 49 29.9	-11
	comp=Z,1.0nm,0.3s,baz=238,slow=23,SNR=11						
ASAR				Lg	Lg	15 50 44.9	
	comp=Z,0.7nm,0.3s,baz=240,slow=26,SNR=6.3						
	comp=Z,0.8nm,0.5s						
AS31	Alice Springs	11.48	57	P	Pn	15 47 32.1	-0.2
AS01	Alice Springs	11.51	57	P	Pn	15 47 33.4	+0.7
FITZ	Fitzroy Crossi	12.36	10	Pn	Pn	15 47 43.1	-1.1
	comp=Z,0.3nm,0.3s,baz=184,slow=12,SNR=20						
FITZ				Sn	Sn	15 49 53.0	-9.2
	comp=Z,0.3nm,0.3s,baz=253,slow=13,SNR=1.8						
FITZ				Lg	Lg	15 51 17.2	
	comp=Z,0.2nm,0.3s,baz=149,slow=14,SNR=1.5						
	comp=Z,0.8nm,0.3s						
LCRK	Leigh Creek	12.79	94	P	Pn	15 47 48.9	-1.2
WRA	Warramunga Arr	14.32	46	Pn	Pn	15 48 09.2	-1.8
	comp=Z,0.4nm,0.3s,baz=222,slow=12,SNR=22						
WRA				Sn	Sn	15 50 41.5	-8.5
	comp=Z,0.6nm,0.3s,baz=218,slow=22,SNR=5.7						
WRA				Lg	Lg	15 52 17.5	
	comp=Z,0.1nm,0.3s,baz=224,slow=30,SNR=3.4						
	comp=Z,0.8nm,0.3s						
STKA	Stephens Creek	15.66	100	Pn	Pn	15 48 27.2	-1.7
	comp=Z,0.3nm,0.3s,baz=276,slow=9.2,SNR=6.7						
STKA				Sn	Sn	15 51 10.7	-12
	comp=Z,0.4nm,0.3s,baz=270,slow=14,SNR=4.5						
STKA				Lg	Lg	15 52 49.4	
	comp=Z,0.4nm,0.3s,baz=335,slow=20,SNR=1.6						
	comp=Z,0.9nm,0.8s						

NNC 23 15:56:04.0±2.0**, 36°.62N×70°.48E, h137^{km}**±45^{km}**, mb3.1, mpv3.8, 3C-2D, Error ellipse: s-maj=19.1km s-min=16.0km az=151.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.47	0	⇓P	Pn	15 57 37.1	+0.2
	2.8nm,0.3s,baz=180,slow=12,SNR=97						
KK31				⇑S	Sn	15 58 49.5	0.0
	1.5nm,0.3s,baz=190,slow=23,SNR=6.7						
AAK	Ala-Archa	6.76	26	P	Pn	15 57 40.6	-0.1
AAK				S	Sn	15 58 57.6	+1.1
TKM2	Tokmak 2	7.42	30	⇑P	Pn	15 57 49.6	-0.2
	2.4nm,0.6s						
TKM2				⇓S	Sn	15 59 12.7	+0.2
	1.6nm,0.8s						
AB31	Akbulak array	14.78	332	⇑P	Pn	15 59 26.1	+0.1
	0.6nm,0.3s,baz=158,slow=12,SNR=48						

FCIAR ***23*** *15:59:33.0, 79°.75N×21°.42E, h10^{km}, station OMEGA has station magnitude of 4.50 station ZFI2 has station magnitude of 4.50*

IDC ***23*** *15:59:33.7±0.6, 79°.93N×19°.96E, h0^{km}, mb3.8/16, mbtmp3.9/20, ML3.9/4, MS3.0/11, Error ellipse: s-maj=14.6km s-min=7.0km az=115.0*

NEIC ***23*** *15:59:34.6±1.4, 79°.88N±0°.10×19°.5E±0°.5, h10^{km}±6^{km}, mb4.2/18, Error ellipse: s-maj=15.6km s-min=9.7km az=217.0*

KOLA ***23*** *15:59:36.3, 79°.88N×21°.39E, h0^{km}, ML2.9, Error ellipse: s-maj=84.6km s-min=31.0km az=60.0, Spitsbergen, Barentz Sea*

BER ***23*** *15:59:37.3±3.9, 79°.87N×20°.06E, h21^{km}±20^{km}, ML3.2, ML4.4(NAO), Confirmed Earthquake*

ISC 23 15:59:34.5±1.5**, 79°.83N**±0°.04×**20°.21E**±0°.05**, h10^{km}**±9^{km}**, n108,** σ**2ˢ07**/125**, mb4.0**/24**, MS3.0**/7**, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	1.78	244		Pn	16 00 04.0	-1.2
KBS	Kingsbay	1.78	244	P	Pn	16 00 03.7	-1.5
KBS				S	Sn	16 00 26.2	-1.6
KBS	Kingsbay	1.78	244	eP	Pn	16 00 04.0	-1.2
KBS				eS	Sg	16 00 28.8	-2.8
KBS				IAML		16 00 34.5	
	comp=Z,1μm,0.3s						
SPA0	Spitsbergen Ar	1.81	206	Pn	Pn	16 00 05.6	-0.1
	baz=34,slow=16						
SPA0				Pg	Pg	16 00 08.5	-0.7
	baz=29,slow=16						
SPA0				Sg	Sg	16 00 33.2	+0.5
	baz=33,slow=28						
SPA0	Spitsbergen Ar	1.81	206	eP	Pn	16 00 03.8	-1.9
SPA0				eS	Sn	16 00 26.1	-2.6
SPA0	Spitsbergen Ar	1.81	206	eP	Pn	16 00 05.5	-0.3
SPA0				Pg	Pg	16 00 08.5	-0.7
	baz=29,slow=16						
SPA0				Sg	Sg	16 00 33.2	+0.5
	baz=33,slow=28						
SPA0				IAML		16 00 37.6	
	comp=Z,1μm,0.7s						
SPITS	Spitsbergen Ar	1.81	206	Pn	Pn	16 00 05.3	-0.4
	baz=37,slow=13						
SPITS				Pg	Pg	16 00 08.7	-0.5
	baz=44,slow=14						
SPITS				Sn	Sn	16 00 24.2	-4.5
	baz=38,slow=26						
SPITS				Lg	Lg	16 00 33.6	
	baz=41,slow=27						
SPITS	Spitsbergen Ar	1.81	206	P	Pn	16 00 05.3	-0.4
SPITS				S	Sb	16 00 29.9	-0.6
SPB2	Spitsbergen Ar	1.82	206		Pn	16 00 05.3	-0.4
BRBA	Barentsburg A	2.12	216	Pn	Pn	16 00 09.8	-0.1
BRBA				Sg	Sg	16 00 40.9	-1.6
BRBA	Barentsburg A	2.12	216	eP	Pn	16 00 09.6	-0.2
BRBA				Sg	Sg	16 00 40.9	-1.6
HSPB	Hornsund (broa	2.99	201	P	Pn	16 00 21.6	-0.2
HSPB				S	Sn	16 00 57.9	+0.3
HSPB	Hornsund (broa	2.99	201	eP	Pn	16 00 22.8	+1.0
HSPB				eS	Sg	16 01 10.8	+0.3
HSPB	Hornsund (broa	2.99	201	eP	Pn	16 00 21.8	-0.1
HSPB				e		16 00 29.1	
HSPB				eSg	Sg	16 01 10.0	-0.4
HOPEN	Hopen	3.48	161	eP	Pn	16 00 23.5	-5.0
HOPEN				eS	Sn	16 01 10.3	+0.7
HOPEN	Hopen	3.48	161	eP	Pn	16 00 28.7	+0.2
HOPEN				e		16 00 40.4	
HOPEN				e		16 01 26.5	
ZFI2	Zemlya Franca-	4.70	65	eP	Pn	16 00 44.7	-0.6
ZFI2				eS	Sn	16 01 35.5	-4.2
	comp=Z,400nm,1.2s						
OMEGA	Omega	4.71	65	eP	Pn	16 00 44.7	-0.8
OMEGA				eS	Sn	16 01 35.5	-4.6
	comp=Z,393nm,0.6s						
DAG	Danmarks Havn	8.31	269	eP	Pn	16 01 33.4	-1.3
DAG	Danmarks Havn	8.31	269	i P	Pn	16 01 34.9	+0.2
DAG				i S		16 01 47.7	
VADS	Vadso	10.02	162	P	Pn	16 01 58.5	+0.3
VADS				S	Sn	16 03 43.7	-6.8
VADS	Vadso	10.02	162	eP	Pn	16 01 51.7	-6.5
TRO	Tromso	10.26	183	eP	Pn	16 02 03.3	+1.9
KEV	Kevo	10.27	167		Pn	16 02 01.4	-0.2
KEV	Kevo	10.27	167	Pn	Pn	16 02 01.9	+0.3
KEV				Sn	Sn	16 03 51.5	-5.0
KEV	Kevo	10.27	167	eP	Pn	16 02 01.5	-0.1
KEV				Sn	Sn	16 03 51.5	-5.0
JETT	Jettan, Norway	10.33	180	Pn	Pn	16 02 03.7	+1.2
JETT				Sn	Sn	16 03 52.6	-5.5
JETT	Jettan, Norway	10.33	180	eP	Pn	16 02 04.1	+1.6
JETT				Sn	Sn	16 03 52.6	-5.5
DBG	Daneborg	10.34	259	eP	Pn	16 02 00.9	-1.7
DBG	Daneborg	10.34	259	i P	Pn	16 02 01.2	-1.4
ARA0	ARCESS Array S	10.44	170	Pn	Pn	16 02 02.4	-1.5
	baz=352,slow=12						
ARA0				Sn	Sn	16 03 52.0	-8.7
	baz=351,slow=28						
ARA0	ARCESS Array S	10.44	170	eP	Pn	16 02 03.0	-0.9
ARA0				Sn	Sn	16 03 52.0	-8.7
	baz=351,slow=28						
ARCES	ARCESS Array B	10.44	170		Pn	16 02 03.2	-0.7
ARCES	ARCESS Array B	10.44	170	Pn	Pn	16 02 02.7	-1.2
	comp=Z,1.5nm,0.3s,baz=0.9,slow=13,SNR=103						
ARCES				Sn	Sn	16 03 50.8	-10
	comp=Z,2.8nm,0.3s,baz=0.9,slow=22,SNR=9.2						
ARCES				Lg	Lg	16 05 04.7	
	baz=2.2,slow=26						
ARCES				LR	LR	16 06 19.2	
	comp=Z,67nm,19.1s,baz=293,slow=38						
	comp=Z,3.0nm,0.3s						
ARCES	ARCESS Array B	10.44	170	P	Pn	16 02 03.7	-0.2
ARCES				S	Sn	16 03 53.8	-6.9
KIF	Kilpisjarvi	10.89	179	Pn	Pn	16 02 09.2	-0.8
KIF				Sn	Sn	16 04 03.8	-7.8
KIF	Kilpisjarvi	10.89	179	eP	Pn	16 02 08.8	-1.1
KIF				Sn	Sn	16 04 03.8	-7.8
JNW	Jan Mayen West	11.19	234	eP	Pn	16 02 15.9	+1.7
JMIC	Jan Mayen	11.24	234	Pn	Pn	16 02 15.6	+0.7
	comp=Z,3.7nm,0.3s,baz=53,slow=16,SNR=2.5						
	comp=Z,17nm,0.4s						
JMIC	Jan Mayen	11.24	234	eP	Pn	16 02 15.9	+1.0

TERR	Teriberka	11.33	152	P	Pn	16 02 14.3	-1.7
TERR				S	Sn	16 04 13.7	-8.7
HEF	Hetta	11.52	174	Pn	Pn	16 02 16.7	-2.0
HEF				Sn	Sn	16 04 20.4	-6.7
HEF	Hetta	11.52	174	*e*P	Pn	16 02 17.8	-0.9
HEF				Sn	Sn	16 04 20.4	-6.7
LVZ	Lovozero	12.57	154	Pn	Pn	16 02 32.3	-0.8
LVZ	Lovozero	12.57	154	P	Pn	16 02 32.3	-0.8
LVZ				S	Sn	16 04 42.2	-11
APA0	Apatity Array	12.74	157	Pn	Pn	16 02 34.9	-0.4
	baz=346,slow=14						
APA0				Sn	Sn	16 04 49.0	-7.9
	baz=346,slow=14						
APA0	Apatity Array	12.74	157	P	Pn	16 02 36.2	+0.9
APA0				S	Sn	16 04 47.7	-9.2
APA0	Apatity Array	12.74	157	Pn	Pn	16 02 34.9	-0.4
	baz=346,slow=14						
APA0				Sn	Sn	16 04 49.0	-7.9
	baz=346,slow=14						
APA	Apatity	12.80	157	P	Pn	16 02 34.9	-1.3
APA				S	Sn	16 04 49.5	-9.0
KVDA	Kovda	13.63	158	P	Pn	16 02 46.2	-1.2
KVDA				S	Sn	16 05 11.7	-7.0
SUMG	Summit	14.94	273	Pn	Pn	16 03 02.5	-3.1
SUMG	Summit	14.94	273	*i* P	Pn	16 03 02.0	-3.6
LSH	Leshukonskoye	16.59	140	*e*P	Pn	16 03 22.9	-3.8
LSH				*e*S	Sn	16 06 21.6	-8.9
FIA1	FINESS Array S	18.56	171		P	16 03 49.3	-1.7
FIA0	FINESS Array S	18.56	171	P	P	16 03 50.0	-1.0
	baz=355,slow=14						
FIA0	FINESS Array S	18.56	171	P	P	16 03 50.0	-1.0
	baz=355,slow=14						
FINES	FINESS Array B	18.56	171	P	P	16 03 49.1	-1.8
	comp=Z,1.1nm,0.5s,baz=10,slow=11,SNR=10						
FINES				S	Sn	16 07 07.7	-11
	comp=Z,1.0nm,0.5s,baz=359,slow=23,SNR=1.8						
FINES				LR	LR	16 10 24.7	
	comp=Z,38nm,19.2s,baz=356,slow=35						
NC405	NORSAR Array S	18.98	193	P	Pn	16 03 56.5	+0.3
NC405				IAmb	IAmb	16 04 01.4	
	comp=Z,22nm,1.4s						
NB201	NORSAR Array S	19.06	193	P	P	16 03 56.3	-0.2
NB201				IAmb	IAmb	16 04 11.2	
	comp=Z,15nm,1.3s						
NB2	NORSAR Subarra	19.07	193	P	Pn	16 03 59.7	+2.3
	comp=Z,0.6nm,0.4s,baz=357,slow=7.4						
NOA	NORSAR Array B	19.07	193	P	P	16 03 57.1	+0.4
	baz=2.7,slow=10,SNR=8.7						
NOA				LR	LR	16 11 14.9	
	comp=Z,19nm,19.6s,baz=0.0,slow=37						
	comp=Z,1.1nm,0.8s						
NBO00	NORSAR Array S	19.10	194	P	P	16 03 56.9	0.0
NC602	NORSAR Array S	19.36	193	P	P	16 03 59.9	+0.1
NRA0	NORESS Array S	19.36	193	P	P	16 04 00.2	+0.5
	baz=4.6,slow=14						
NRA0	NORESS Array S	19.36	193	P	P	16 04 00.2	+0.5
	baz=4.6,slow=14						
HFS	Hagfors	19.89	190	P	P	16 04 06.3	+0.8
	baz=3.1,slow=28						
HFS	Hagfors	19.89	190	P	P	16 04 06.3	+0.8
	comp=Z,1.9nm,0.3s,baz=13,slow=9.1,SNR=50						
HFS				LR	LR	16 12 46.1	
	comp=Z,21nm,18.1s,baz=349,slow=40						
	comp=Z,5.9nm,0.4s						
HFS	Hagfors	19.89	190	P	P	16 04 06.3	+0.8
	baz=3.1,slow=28						
KLMR	Klimovskoe	19.91	152	*e*P	P	16 04 07.5	+1.8
KLMR				*e*S	S	16 07 09.6	-40
KONO	Kongsberg	20.53	195	P	P	16 04 13.4	+0.9
TIXI	Tiksi	23.74	48	LR	LR	16 14 31.8	
	comp=Z,28nm,19.0s,baz=192,slow=38						
PABE	Paberze	24.46	175	P	P	16 04 55.1	+2.0
ARTI	Arti	26.42	129	P	P	16 05 13.3	+2.6
BELG	Belogornoye	29.03	144	LR	LR	16 18 17.9	
	comp=Z,34nm,18.8s,baz=346,slow=39						
AKASG	Malin Array Be	29.41	168	P	P	16 05 38.1	+0.6
	comp=Z,1.7nm,0.5s,baz=355,slow=9.3,SNR=14						
AKASG				LR	LR	16 17 15.9	
	comp=Z,31nm,20.1s,baz=56,slow=36						
	comp=Z,1.7nm,0.5s						
AKBB	Malin Array Si	29.41	168	P	P	16 05 39.1	+1.6
AKBB				IAmb	IAmb	16 05 40.5	
	comp=Z,3.0nm,0.6s						
KIEV	Kiev	29.42	168	P	P	16 05 39.0	+1.4
KIEV				IAmb	IAmb	16 05 40.5	
	comp=Z,2.7nm,0.6s						
VRAC	Vranov	30.67	185	LR	LR	16 18 39.5	
	comp=Z,35nm,18.5s,baz=276,slow=37						
GERES	GERESS Array B	31.19	188	P	P	16 05 55.2	+1.9
	comp=Z,0.2nm,0.6s,baz=16,slow=10,SNR=3.6						
	comp=Z,0.2nm,0.6s						
BVAR	Borovoye Array	31.46	117	P	P	16 05 56.6	+1.0
	comp=Z,1.1nm,0.6s,baz=353,slow=11,SNR=5.5						
	comp=Z,1.1nm,0.6s						
AKTO	Aktyubinsk	32.18	133	LR	LR	16 21 13.9	
	comp=Z,48nm,18.7s,baz=246,slow=40						
BUR08	Bucovina Ar. S	32.36	174	P	P	16 06 04.0	+0.3
BURAR	Bucovina Array	32.39	174	P	P	16 06 05.0	+1.1
BURAR				IAmb	IAmb	16 06 08.3	
	comp=Z,1.8nm,0.6s						
ZALV	Zalesovo Beam	32.99	101	P	P	16 06 09.5	+0.6
	comp=Z,0.5nm,0.4s,baz=353,slow=11,SNR=3.6						
	comp=Z,0.5nm,0.4s						
AB31	Akbulak array	33.59	131	P	P	16 06 15.3	+1.1
AB31				IAmb	IAmb	16 06 45.3	
	comp=Z,3.2nm,1.4s						
ABKAR	Akbulak array	33.59	131	P	P	16 06 15.9	+1.6
MLR	Muntele Rosu	34.52	173	P	P	16 06 22.4	-0.2
MLR				IAmb	IAmb	16 06 59.9	
	comp=Z,5.9nm,1.4s						
MLR	Muntele Rosu	34.52	173	LR	LR	16 22 06.8	
	comp=Z,15nm,18.2s,baz=352,slow=39						
KURBB	Kurchatov Arra	35.11	110	P	P	16 06 29.5	+2.1
	comp=Z,3.1nm,0.7s,baz=345,slow=7.8,SNR=24						
	comp=Z,3.1nm,0.7s						
ILAR	Eielson Array	35.43	350	P	P	16 06 30.3	+0.3
	comp=Z,0.7nm,0.8s,baz=3.1,slow=8.2,SNR=9.4						
	comp=Z,0.7nm,0.8s						
KBZ	Khabaz	37.18	152	P	P	16 06 48.6	+3.5
	comp=Z,0.6nm,0.4s,baz=342,slow=3.2,SNR=3.6						
	comp=Z,0.6nm,0.4s						
SPU	Mount Spurr	39.15	354	P	P	16 07 01.5	-0.1
MAKZ	Makanchi	39.38	107		P	16 07 04.5	+0.8
MAKZ				IAmb	IAmb	16 07 08.6	
	comp=Z,2.9nm,0.7s						
MK31	Makanchi Array	39.45	107	P	P	16 07 05.6	+1.3
MK31				IAmb	IAmb	16 07 08.9	
	comp=Z,2.7nm,0.6s						
MKAR	Makanchi Array	39.45	107		P	16 07 06.0	+1.8
MKAR	Makanchi Array	39.45	107	P	P	16 07 06.3	+2.1
	comp=Z,2.8nm,0.6s,baz=345,slow=7.2,SNR=25						
	comp=Z,2.8nm,0.6s						
BRTR	Keskin Array B	40.55	164	P	P	16 07 16.4	+2.8
	comp=Z,0.7nm,0.7s,baz=347,slow=5.1,SNR=4.3						
	comp=Z,0.7nm,0.7s						
GNI	Garni	40.89	151	LR	LR	16 24 44.1	
	comp=Z,21nm,20.2s,baz=24,slow=37						
KKAR	Karatay Array	41.13	121	P	P	16 07 19.9	+1.7
ESDC	Sonseca Array	41.33	209	P	P	16 07 22.3	+2.4
	comp=Z,0.3nm,0.6s,baz=10,slow=8.7,SNR=5.0						
	comp=Z,0.3nm,0.6s						
BOOM	Boomskoye usch	42.58	115	P	P	16 07 32.7	+2.5
BOOM				IAmb	IAmb	16 07 36.2	
	comp=Z,2.9nm,0.6s						
SONM	Songino Array	42.68	83	P	P	16 07 31.8	+0.8
	comp=Z,0.3nm,0.4s,baz=335,slow=6.4,SNR=2.2						
	comp=Z,0.3nm,0.4s						
PETK	Petropavlovsk-	45.08	35	P	P	16 07 50.0	0.0
	comp=Z,1.2nm,0.8s,baz=27,slow=10,SNR=5.2						
	comp=Z,1.2nm,0.8s						
MJAR	Matsushiro Arr	58.92	56	P	P	16 09 34.3	+1.0
	comp=Z,1.2nm,0.9s,baz=343,slow=5.9,SNR=4.6						
	comp=Z,1.2nm,0.9s						
NVAR	Mina Array Bea	59.70	323	P	P	16 09 40.0	+1.1
	comp=Z,0.2nm,0.3s,baz=51,slow=5.1,SNR=2.2						
	comp=Z,0.2nm,0.3s						
TXAR	Lajitas Array	66.85	308	P	P	16 10 25.9	-0.3
	comp=Z,0.7nm,0.7s,baz=39,slow=3.8,SNR=9.0						
	comp=Z,0.7nm,0.7s						
CMAR	Chiang Mai Arr	69.96	98	P	P	16 10 46.1	+0.5
	comp=Z,0.4nm,0.6s,baz=358,slow=7.2,SNR=4.1						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	117.28	71	PKP	PKPdf	16 18 18.4	-0.9
	comp=Z,0.4nm,0.9s,baz=339,slow=2.3,SNR=1.7						

*IDC **23** 16:05:05.0±0.6,30°.81S×177°.66W,h0km,mb4.3/12,*
mbtmp4.3/13,ML3.9/1,MS3.8/16,Error ellipse:
s-maj=24.9km s-min=15.6km az=95.0

*NEIC **23** 16:05:07.5±1.6,30°.8S±0°.1×177°.7W±0°.2,h10km±1km,*
mb4.8/25,Error ellipse: s-maj=24.8km s-min=17.3km
az=106.0

*NOU **23** 16:05:12.1,31°.77S×176°.87W,h0km,mb4.5/11,*
Kermadec Islands Region

ISC 23 16:05:09.2±0.5**,30°.84S**±0°.06×**177°.7W**±0°.1**,h27km,n106,**
σ**1s.31**/93**,mb4.7**/25**,MS3.8**/13**,7D,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.60	351	Pn	Pn	16 05 34.1	-1.6
	638nm,0.3s,baz=102,slow=20,SNR=19						
RAO				Sn	Sn	16 05 52.7	-2.9
	2µm,0.3s,baz=212,slow=24,SNR=10.0						
RAO				LR	LR	16 06 09.0	
	comp=Z,1µm,18.7s,baz=135,slow=41						
OUZ	Omahuta	8.55	237	P	Pn	16 07 17.2	+6.1
URZ	Urewera	8.57	209	Pn	Pn	16 07 09.3	-2.1
	1.3nm,0.3s,baz=119,slow=19,SNR=11						
URZ				Sn	Sn	16 08 44.0	-3.0
	4.9nm,0.3s,baz=172,slow=16,SNR=5.0						
	4.2nm,0.3s						
URZ	Urewera	8.57	209	P	Pn	16 07 10.3	-1.1
RTZ	Ruatahuna	8.92	208	Pn	Pn	16 07 15.6	-0.8
QRZ	Quartz Range	12.75	216	P	Pn	16 08 11.4	+2.8
THZ	Tophouse	13.28	212		Pn	16 08 14.8	-1.2
KHZ	Kahutara	13.53	209	P	Pn	16 08 17.4	-1.9
MSVF	Nonsavu	13.63	342	LR	LR	16 12 53.0	
	comp=Z,768nm,18.7s,baz=185,slow=34						
MSVF	Nonsavu	13.63	342	P	P	16 08 40.6	+11
RPZ	Rata Peaks	15.66	212	Pn	Pn	16 08 44.1	-3.8
	1.1nm,0.3s,baz=42,slow=14,SNR=5.8						
RPZ				Sn	Sn	16 11 25.1	-15
	0.4nm,0.3s,baz=341,slow=21,SNR=1.7						
RPZ	Rata Peaks	15.66	212	P	P	16 08 49.8	-2.0
OUENC	Ouen Island, N	16.20	297	P	P	16 09 14.3	+16
YATNC	Mamie plateau,	16.37	299	P	P	16 09 17.0	+17
DZM	Mont Dzumac	16.70	298		P	16 09 07.5	+4.0
DZM	Mont Dzumac	16.70	298	LR	LR	16 14 30.1	
	comp=Z,497nm,18.8s,baz=123,slow=34						
DZM	Mont Dzumac	16.70	298	P	P	16 09 20.5	+17
ODZ	Otahua Downs	16.89	210	P	P	16 09 05.1	-0.3
JCZ	Jackson Bay	17.01	215	P	P	16 09 07.5	+0.7
RAR	Rarotonga	18.69	63	LR	LR	16 16 12.9	
	comp=Z,138nm,19.1s,baz=263,slow=36						
ARMA	Armidale	26.40	263	P	P	16 10 46.0	+2.4
ARMA				IAmb	IAmb	16 11 15.7	
	comp=Z,50nm,1.4s						
EIDS	Eidsvold	28.06	273	P	P	16 10 60.0	+1.5
EIDS				IAmb	IAmb	16 11 01.5	
	comp=Z,18nm,1.4s						
CAN	Canberra	28.22	252	P	P	16 11 02.5	+2.7
PPT	Papeete	28.72	69	LR	LR	16 22 01.7	
	comp=Z,88nm,18.4s,baz=284,slow=35						
HNR	Honiara	29.82	311	P	P	16 11 13.1	-1.0
TOO	Toolangi	31.07	247	P	P	16 11 25.7	+0.6
CTAO	Charters Tower	34.17	280		P	16 11 52.1	-0.3
CTAO				IAmb	IAmb	16 12 06.3	
	comp=Z,11nm,0.9s						
STKA	Stephens Creek	34.68	257		P	16 11 56.6	0.0
STKA	Stephens Creek	34.68	257	P	P	16 11 57.6	+1.0
	comp=Z,12nm,1.0s,baz=104,slow=11,SNR=13						
STKA				LR	LR	16 24 00.2	
	comp=Z,92nm,21.5s,baz=54,slow=33						
	comp=Z,12nm,1.0s						
BBOO	Buckleboo	39.14	255	P	P	16 12 35.0	+0.4
BBOO				IAmb	IAmb	16 13 13.4	
	comp=Z,76nm,1.7s						
COEN	Coen	39.69	286	P	P	16 12 39.7	+0.4
COEN				IAmb	IAmb	16 12 47.3	
	comp=Z,72nm,1.9s						
AS31	Alice Springs	43.39	267		P	16 13 09.3	-0.3
ASAR	Alice Springs	43.39	267	P	P	16 13 09.5	-0.1
ASAR	Alice Springs	43.39	267	P	P	16 13 09.1	-0.6
	comp=Z,3.4nm,0.7s,baz=105,slow=7.0,SNR=74						
ASAR				PcP	PcP	16 14 57.8	-0.1
	comp=Z,1.0nm,0.7s,baz=102,slow=4.0,SNR=4.6						
ASAR				ScP	ScP	16 18 48.1	+0.7
	comp=Z,1.7nm,1.0s,baz=120,slow=4.3,SNR=5.1						
ASAR				LR	LR	16 30 56.2	
	comp=Z,135nm,18.2s,baz=116,slow=36						
	comp=Z,3.4nm,0.7s						
WR8	Warramunga Arr	44.28	272		P	16 13 16.4	-0.4
WR8				IAmb	IAmb	16 13 22.1	
	comp=Z,8.4nm,0.8s						
WRA	Warramunga Arr	44.42	272	P	P	16 13 17.2	-0.7
WRA	Warramunga Arr	44.42	272	P	P	16 13 17.2	-0.7
	comp=Z,8.1nm,0.8s,baz=111,slow=8.0,SNR=30						
	comp=Z,8.1nm,0.8s						
WB0	Warramunga Arr	44.45	273		P	16 13 17.2	-0.9
WB0				IAmb	IAmb	16 13 19.9	
	comp=Z,10nm,0.8s						
SBA	Scott Base	47.62	184		P	16 13 43.4	+1.1
SBA				IAmb	IAmb	16 13 47.5	
	comp=Z,9.7nm,1.1s						
VNDA	Vanda	47.69	186	P	P	16 13 43.8	+0.9
VNDA				IAmb	IAmb	16 14 45.9	
	comp=Z,9.1nm,1.7s						
VNDA	Vanda	47.69	186	P	P	16 13 42.5	-0.3
	comp=Z,0.5nm,0.7s,baz=360,slow=4.2,SNR=4.5						
	comp=Z,0.5nm,0.7s						
FITZ	Fitzroy Crossi	52.66	270	P	P	16 14 20.5	-0.8
CASY	Casey	54.89	208	P	P	16 14 37.1	+0.2
GUMO	Guam	57.01	315	LR	LR	16 37 32.8	
	comp=Z,45nm,18.9s,baz=134,slow=34						
BATI	Baumata	58.01	277	LR	LR	16 38 40.6	
	comp=Z,328nm,19.8s,baz=144,slow=35						
QSPA	South Pole Qui	59.27	180	P	P	16 15 10.0	+1.9
QSPA				IAmb	IAmb	16 15 25.0	
	comp=Z,11nm,0.8s						
QSPA	South Pole Qui	59.27	180	P	P	16 15 09.6	+1.4
	comp=Z,6.8nm,1.0s,baz=45,slow=2.7,SNR=12						
QSPA				LR	LR	16 37 49.9	
	comp=Z,57nm,19.3s,baz=44,slow=33						
	comp=Z,6.8nm,1.0s						
MAW	Mawson	72.00	201	P	P	16 16 29.6	-0.5
	comp=Z,3.6nm,0.9s,baz=177,slow=6.4,SNR=3.6						
MAW				LR	LR	16 47 34.4	
	comp=Z,66nm,18.1s,baz=95,slow=35						
	comp=Z,3.6nm,0.9s						
SYO	Syowa Base	76.75	193	⇓*e*P	P	16 16 56.2	-1.4
SYO	Syowa Base	76.75	193	⇓*e*sP	P	16 17 03.2	+5.6
TROLL	Troll, Antarti	77.43	180	⇓P	P	16 17 02.1	+0.4
	comp=Z,266nm,0.9s						
SNAA	Sanae	77.70	178	⇓P	P	16 17 03.8	+0.8
	comp=Z,36nm,0.9s						
SNAA	Sanae	77.70	178	P	P	16 17 03.9	+0.9
SNAA	Sanae	77.70	178	P	P	16 17 03.3	+0.2
	comp=Z,1.9nm,0.9s,baz=190,slow=6.1,SNR=4.6						
SNAA				LR	LR	16 50 31.3	
	comp=Z,38nm,19.2s,baz=28,slow=35						
	comp=Z,1.9nm,0.9s						
VNA3	Neumayer Olymp	77.84	176	⇓P	P	16 17 03.9	+0.1
	comp=Z,8.5nm,0.8s						
VNA2	Neumayer--Watz	78.28	177	⇓P	P	16 17 06.7	+0.5
	comp=Z,7.0nm,1.0s,baz=191,slow=4.7						
VNA1	Neumayer--Stat	78.51	176	⇓P	P	16 17 07.6	+0.2
	comp=Z,8.4nm,1.1s						
MJAR	Matsushiro Arr	78.78	325	P	P	16 17 09.4	0.0
	comp=Z,0.9nm,0.9s,baz=161,slow=4.6,SNR=2.4						
	comp=Z,0.9nm,0.9s						
H03S2	Juan Fernandez	79.97	123	T	T	17 46 40.8	
	baz=238,slow=74,SNR=6.6						
H03S1	Juan Fernandez	79.98	123	T	T	17 46 41.7	
	baz=238,slow=74,SNR=8.9						
H03S3	Juan Fernandez	79.98	123	T	T	17 46 41.1	
	baz=238,slow=74,SNR=8.6						
KSRS	Korea Array	84.88	319	P	P	16 17 41.5	+0.1
	comp=Z,0.8nm,0.8s,baz=138,slow=6.1,SNR=5.3						
	comp=Z,0.8nm,0.8s						
AKUT	Akutan	85.25	7	P	P	16 17 43.7	+0.9
PET	Petropavlovsk	86.03	346	P	P	16 17 47.2	+0.5
PET				IAmb	IAmb	16 18 25.8	
	comp=Z,16nm,1.4s						
PFO	Pinyon Flats O	86.28	47	LR	LR	16 55 33.7	
	comp=Z,49nm,18.2s,baz=166,slow=35						
PEA0B	Petropavlovsk-	86.32	345	P	P	16 17 48.8	+0.6
PETK	Petropavlovsk-	86.32	345		P	16 17 48.5	+0.3
PETK	Petropavlovsk-	86.32	345	P	P	16 17 48.1	0.0
	comp=Z,5.5nm,1.0s,baz=120,slow=7.1,SNR=12						
	comp=Z,5.5nm,1.0s						
USRK	Ussuriysk Ar.	87.70	326	P	P	16 17 55.8	+0.7
	comp=Z,2.1nm,0.8s,baz=170,slow=3.7,SNR=6.4						
	comp=Z,2.1nm,0.8s						
NVAR	Mina Array Bea	88.36	43	P	P	16 17 59.5	+0.8
	comp=Z,1.1nm,0.8s,baz=217,slow=8.1,SNR=5.3						
NVAR				LR	LR	16 52 34.8	
	comp=Z,40nm,18.3s,baz=210,slow=32						
	comp=Z,1.1nm,0.8s						
X16A	Lo Mia Camp, P	90.01	49		P	16 18 08.1	+1.6
X16A				IAmb	IAmb	16 18 09.4	
	comp=Z,4.8nm,1.0s						
KDAK	Kodiak Island	90.77	13	LR	LR	16 55 49.8	
	comp=Z,55nm,18.1s,baz=200,slow=34						
NEW	Newport	95.55	36	LR	LR	16 57 54.0	
	comp=Z,28nm,18.1s,baz=191,slow=33						
PDAR	Pinedale Array	96.25	43	LR	LR	16 56 11.4	
	comp=Z,20nm,18.6s,baz=232,slow=32						
MKAR	Makanchi Array	118.29	310	PKP	PKPdf	16 23 52.9	-0.8
	comp=Z,1.2nm,1.0s,baz=90,slow=1.5,SNR=5.4						
KURBB	Kurchatov Arra	121.61	313	PKP	PKPdf	16 23 58.8	-1.2
	comp=Z,1.2nm,0.7s,baz=107,slow=2.1,SNR=9.5						
BVAR	Borovoye Array	126.94	316	PKP	PKPdf	16 24 09.6	-0.4
	comp=Z,2.0nm,0.8s,baz=132,slow=2.2,SNR=6.9						
ARTI	Arti	133.73	320	PKP	PKPdf	16 24 23.4	+0.6
	comp=Z,2.4nm,0.5s,baz=99,slow=1.9,SNR=5.0						
AKTO	Aktyubinsk	134.62	312	PKP	PKiKP	16 24 25.9	-0.3
	comp=Z,2.1nm,0.9s,baz=143,slow=1.7,SNR=4.8						
KBZ	Khabaz	145.61	303	PKPbc	PKPdf	16 24 44.5	-0.2
	comp=Z,4.3nm,0.9s,baz=18,slow=3.2,SNR=4.8						
FINES	FINESS Array B	145.67	340	PKPbc	PKPdf	16 24 43.9	-0.4
	comp=Z,8.8nm,0.6s,baz=47,slow=3.7,SNR=52						
NB2	NORSAR Subarra	149.24	352	PKP	PKPbc	16 24 53.8	-0.8
	comp=Z,3.9nm,0.7s,baz=16,slow=4.3						
NOA	NORSAR Array B	149.24	352	PKPbc	PKPbc	16 24 54.1	-0.5
	comp=Z,4.1nm,0.8s,baz=14,slow=4.3,SNR=10						
HFS	Hagfors	149.74	349	PKPbc	PKPbc	16 24 54.6	-1.2
	comp=Z,2.2nm,0.7s,baz=45,slow=2.5,SNR=6.7						
AKASG	Malin Array Be	151.84	322	PKPbc	PKPbc	16 25 00.3	-0.7
	comp=Z,3.9nm,0.8s,baz=49,slow=2.8,SNR=17						
AKASG				PKPab	PKPab	16 25 09.7	-0.5
	comp=Z,7.2nm,0.7s,baz=49,slow=2.9,SNR=18						
EIL	Elat	151.87	276	PKPbc	PKiKP	16 25 02.5	+0.4
	comp=Z,12nm,0.8s,baz=86,slow=2.3,SNR=10						
MMAI	Mount Meron Ar	151.93	283	PKPbc	PKiKP	16 25 02.7	+0.4
	comp=Z,8.8nm,0.6s,baz=76,slow=4.8,SNR=16						
MMAI				PKPab	PKPab	16 25 11.6	+0.3
	comp=Z,4.8nm,0.6s,baz=89,slow=4.5,SNR=7.8						
BRTR	Keskin Array B	153.08	298	PKPbc	PKPbc	16 25 03.9	-0.6
	comp=Z,5.2nm,1.1s,baz=128,slow=4.1,SNR=14						
CLL	Collm	158.08	342	*e*PKPab	PKPab	16 25 36.0	-0.7
CLL				*i* x	x	16 25 42.9	
	comp=Z,4.0nm,0.8s						
CONA	Conrad Observa	160.05	333	*e*PKP	PKPab	16 25 45.6	+0.1
	comp=Z,2.1nm,1.0s						
RONA	Rosalia, Austr	160.06	331	*e*PKP	PKPab	16 25 46.3	+0.8
	comp=Z,3.1nm,1.1s						
GERES	GERESS Array B	160.06	338	PKPab	PKPab	16 25 45.4	-0.1
	comp=Z,0.8nm,0.7s,baz=39,slow=5.1,SNR=6.7						
BIOA	Bad Ischl, Aus	161.08	336	*e*PKP	PKPab	16 25 47.0	-2.9
	comp=Z,1.2nm,0.8s						
SOKA	Soboth	161.39	332	*e*PKP	PKPab	16 25 51.0	-0.4
	comp=Z,3.4nm,1.7s						
LESA	Schwarzleotal	161.64	337	*e*PKP	PKPab	16 25 50.0	-2.5
	comp=Z,0.6nm,0.5s						
OBKA	Obir	161.72	332	*e*PKP	PKPab	16 25 53.6	+0.7
	comp=Z,4.5nm,1.2s						
MYKA	Terra Mystica	161.98	334	*e*PKP	PKPab	16 25 54.8	+0.9
	comp=Z,3.2nm,1.1s						
WATA	Walderalm	162.07	339	*e*PKP	PKPab	16 25 54.5	+0.1
	comp=Z,3.0nm,0.6s						
WTTA	Wattenberg	162.11	339	*i* PKP	PKPab	16 25 54.6	0.0
	comp=Z,2.5nm,0.8s						
RETA	Reutte	162.17	341	*e*PKP	PKPab	16 25 51.9	-2.8
	comp=Z,3.2nm,0.9s						
MOTA	Moosalm	162.20	340	*i* PKP	PKPab	16 25 55.4	+0.4
	comp=Z,4.0nm,0.8s						
SQTA	Sankt Quirin	162.28	340	*e*PKP	PKPab	16 25 55.7	+0.4
	comp=Z,1.5nm,0.5s						
ABTA	Abfaltersbach	162.28	337	*e*PKP	PKPab	16 25 54.0	-1.3
	comp=Z,1.3nm,0.5s						
DAVA	Damuels	162.59	343	*e*PKP	PKPab	16 25 56.3	-0.4
	comp=Z,1.6nm,0.5s						
FETA	Feichten	162.60	341	*e*PKP	PKPab	16 25 59.3	+2.5
	comp=Z,3.7nm,1.3s						
DAVOX	Davos/Dischmat	163.06	342	PKPab	PKPab	16 25 58.3	-0.5
	comp=Z,0.7nm,0.3s,baz=326,slow=3.6,SNR=1.8						

AUST 23 16:06:05.0±0.4**,30°S**±2°×**11°8E**±°**,h10km,mb4.7**/1**,**
ML2.4/3**,Error ellipse: s-maj=6.7km s-min=4.8km**
az=61.1,Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLDU	Ballidu	0.90	257	P	Pb	16 06 22.6	-0.1
BLDU	Ballidu	0.90	257	S	Sg	16 06 34.1	+0.1
KLBR	Kellerberrin	1.17	179	P	Pb	16 06 27.4	0.0
KLBR	Kellerberrin	1.17	179	S	Sb	16 06 42.1	-0.5
MORW	Morawa	1.99	312	P	Pn	16 06 38.5	-0.2
MORW	Morawa	1.99	312	S	Sn	16 07 04.2	+0.5
MUN	Mundaring	2.03	219	P	Pn	16 06 40.5	+1.2
NWAO	Narrogin (SRO)	2.54	189	P	Pn	16 06 47.1	+0.8
NWAO	Narrogin (SRO)	2.54	189	S	Sn	16 07 15.7	-1.5
MEEK	Meekatharra	3.85	12	P	Pn	16 07 04.5	+0.2
RKGY	Rocky Gully	4.23	188	P	Pn	16 07 09.6	+0.1
FORT	Forrest	8.92	95	P	Pn	16 08 13.1	-0.8
	comp=Z,37nm,0.9s,comp=Z,0.1nm						

TAP 23 16:25:49.0,23°.39N×120°.49E,h12km,ML1.7,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHN4	Tsaushan	0.11	111	*e*P	Pg	16 25 52.2	+0.3
CHN4				*e*S	Sg	16 25 54.3	+0.3
WCKO	Fanlu	0.12	66	P	Pg	16 25 52.4	+0.3
WCKO				*e*S	Sg	16 25 54.8	+0.4
CHY	Chiayi	0.12	332	*i* P	Pb	16 25 52.8	-0.6
CHY				*i* S	Sg	16 25 55.5	+1.2
TWK	Hsinying	0.12	179	P	Pb	16 25 52.8	-0.6
TWK				S	Sg	16 25 56.0	+1.5
CHN2	Minshiung	0.14	356	*i* P	Pb	16 25 53.4	-0.3
CHN2				S	Sg	16 25 56.8	+2.0
TPUB	Ta-pu	0.16	124	*i* P	Pg	16 25 53.2	+0.5
TPUB				*i* S	Sg	16 25 56.4	+1.1
SNST	Tainan City	0.17	176	*i* P	Pg	16 25 53.5	+0.6
SNST				S	Sg	16 25 57.3	+1.7
WTP	Ta-pu	0.19	140	*i* P	Pb	16 25 53.9	-0.6
WTP				*e*S	Sg	16 25 57.9	+1.8
ICHU	Yijhu	0.19	261	*i* P	Pb	16 25 54.2	-0.3
ICHU				*e*S	Sg	16 25 58.0	+1.9
CHN1	Nanshi	0.21	169	*e*P	Pb	16 25 54.4	-0.5
CHN1				*i* S	Sg	16 25 58.2	+1.6
CHN8	Yiju	0.26	260	*e*P	Pb	16 25 55.6	0.0
CHN8				*e*S	Sb	16 26 01.1	+1.0
WSL	Shuilin Townsh	0.27	299	*i* P	Pb	16 25 55.8	-0.1
WSL				S	Sb	16 26 00.8	+0.3
CHN5	Tsauling	0.27	41	*i* P	Pb	16 25 55.5	-0.5
CHN5				*e*S	Sb	16 25 59.9	-0.7
WDLH	Douliu	0.30	9	P	Pb	16 25 56.1	-0.3
WDLH				*i* S	Sb	16 26 01.9	+0.5
WGK	Gukeng	0.30	13	*e*S	Sb	16 26 02.9	+1.5
WTK	Tuku	0.31	343	*i* P	Pb	16 25 56.5	-0.1
WTK				S	Sb	16 26 01.9	+0.3
ALS	Alishan	0.32	68	P	Pb	16 25 56.7	-0.2
ALS				*i* S	Sb	16 26 02.2	+0.1
SGST	Jiashian	0.32	164	P	Pb	16 25 56.2	-0.5
SGST				S	Sb	16 26 01.5	-0.4
STYT	Tauyuan	0.34	132	P	Pb	16 25 56.6	-0.4
STYT				S	Sb	16 26 02.3	-0.2
STYH	Taoyuan	0.34	129	*e*P	Pb	16 25 56.7	-0.4
STYH				S	Sb	16 26 01.8	-0.9
WSF	Szhu	0.34	316	P	Pb	16 25 57.0	-0.2
WSF				*e*S	Sb	16 26 03.7	+1.1
TSCK	Chigu Township	0.44	237	*e*P	Pb	16 25 59.3	+0.5
TSCK				S	Sb	16 26 06.7	+1.3
WHYT	Xinyi Township	0.46	48	*e*P	Pb	16 25 59.3	+0.2
WHYT				*e*S	Sb	16 26 05.8	0.0
SCST	Cishan	0.50	179	*e*P	Pn	16 26 01.6	-0.6
SCST				S	Sn	16 26 10.0	-0.7
WTCT	Ta-ch'eng	0.51	338	*e*P	Pb	16 26 00.1	+0.2
WTCT				S	Sb	16 26 07.2	-0.2
ELDTW	Lidau	0.53	112	P	Pb	16 26 00.1	-0.2
ELDTW				S	Sb	16 26 07.7	-0.4
ELDTW	Lidau	0.53	112	*e*P	Pb	16 26 00.0	-0.4
ELDTW				*e*S	Sb	16 26 07.3	-0.7
SSLB	Suanglung	0.58	47	P	Pb	16 26 01.2	-0.1
SSLB				S	Sb	16 26 10.2	+0.6

TYC	**Yuchr**	**0.61**	**34**	P	Pb	16 26 02.2	+0.5
TYC				S	Sb	16 26 11.9	+1.5
SSD	**Sandimen**	**0.66**	**168**	*e*P	Pn	16 26 03.4	-0.8
SSD				S	Sn	16 26 13.0	-1.5
VWDT	**VWDT**	**0.70**	**59**	*e*P	Pn	16 26 04.2	-0.7
VWDT				*e*S	Sn	16 26 14.5	-1.2
VWDT	**VWDT**	**0.70**	**59**	P	Pb	16 26 04.0	+0.8
VWDT				*e*S	Sn	16 26 14.5	-1.2
DPDB	**Guoxing**	**0.76**	**32**	*i* P	Pb	16 26 04.6	+0.3
DPDB				S	Sb	16 26 15.6	+1.0
LONT	**Longtian**	**0.76**	**129**	P	Pb	16 26 04.4	+0.1
LONT				S	Sb	16 26 15.7	+1.0
TWG	**Pinlang**	**0.78**	**136**	*i* P	Pb	16 26 05.2	+0.6
TWG				S	Sn	16 26 17.1	-0.6
MASBT	**Mashibuluo**	**0.79**	**170**	*e*P	Pn	16 26 05.9	-0.1
MASBT				*e*S	Sn	16 26 18.3	+0.6
TWGBT	**Beinan**	**0.79**	**136**	*e*P	Pb	16 26 05.0	+0.2
TWGBT				*i* S	Sn	16 26 16.8	-1.1
WUSB	**Renai**	**0.83**	**44**	*i* P	Pg	16 26 05.4	+0.2
WUSB				*i* S	Sb	16 26 17.2	+0.4
WUSB	**Renai**	**0.83**	**44**	*e*P	Pg	16 26 05.2	0.0
WUSB				*e*S	Sb	16 26 17.7	+0.8
OWD	**Renai**	**0.85**	**48**	*i* P	Pb	16 26 05.8	-0.1
OWD				*i* S	Sb	16 26 17.4	+0.1
PHUB	**P'eng-hu**	**0.85**	**279**	*e*P	Pn	16 26 06.4	-0.5
PHUB				*e*S	Sn	16 26 18.5	-0.7
ECL	**Taimali**	**0.90**	**151**	*e*P	Pn	16 26 07.7	+0.2
ECL				*i* S	Sn	16 26 20.2	-0.3
WHP	**Taichung City**	**0.98**	**25**	P	Pn	16 26 09.1	+0.3
WHP				S	Sn	16 26 22.8	+0.1
WHF	**Hehuan Shan**	**1.04**	**43**	*e*P	Pn	16 26 10.2	+0.4
WHF				*e*S	Sn	16 26 24.5	0.0
LXIB	**Xiulin Townshi**	**1.06**	**53**	P	Pg	16 26 09.7	+0.2
LXIB				S	Sn	16 26 24.7	0.0
TAWH	**Dawu Township**	**1.11**	**160**	*i* P	Pn	16 26 10.7	+0.3
TAWH				*i* S	Sn	16 26 26.3	+0.6
LATG	**Datong**	**1.49**	**40**	P	Pb	16 26 16.4	-0.3
LATG				*e*S	Sb	16 26 36.3	+0.6
YHNB	**Yeheng**	**1.51**	**32**	*e*P	Pb	16 26 17.3	+0.2
YHNB				*i* S	Sb	16 26 37.0	+0.7

TAP 23 16:25:51.7, 23°.22N×121°.45E, h43km, ML1.4, 1D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHKH	**Chenggong**	**0.06**	**238**	P	Pn	16 25 58.5	0.0
CHKH				S	Sn	16 26 03.7	+0.5
ECBN	**Changbin**	**0.10**	**3**	*i* P	Pn	16 25 58.9	+0.2
ECBN				*i* S	Sn	16 26 04.2	+0.6
CHKT	**Chengkung**	**0.14**	**211**	*i* P	Pn	16 25 59.1	+0.2
CHKT				S	Sn	16 26 04.2	+0.3
FULB	**Fuli**	**0.14**	**261**	P	Pn	16 25 59.5	+0.6
FULB				*e*S	Sn	16 26 06.1	+2.2
TWF1	**Yuli**	**0.19**	**314**	P	Pn	16 25 59.7	+0.4
TWF1				*e*S	Sn	16 26 06.8	+2.3
YULB	**Yu-li**	**0.22**	**321**	*e*P	Pn	16 26 00.1	+0.6
YULB				S	Sn	16 26 06.1	+1.2
EHD	**Haiduan**	**0.23**	**252**	*i* P	Pn	16 25 59.8	+0.2
EHD				*e*S	Sn	16 26 04.4	-0.7
HGSD	**Ruisui**	**0.27**	**356**	*e*P	Pn	16 26 01.7	+1.8
HGSD				*e*S	Sn	16 26 09.5	+3.8
EDH	**Donghe**	**0.28**	**208**	⇓*e*P	Pn	16 26 00.5	+0.5
EDH				*i* S	Sn	16 26 06.7	+0.9
EHYH	**Wanrong**	**0.29**	**341**	*e*P	Pn	16 26 00.6	+0.5
EHYH				*i* S	Sn	16 26 06.8	+0.9
EHY	**Hungye**	**0.31**	**338**	*i* P	Pn	16 26 00.6	+0.3
EHY				*e*S	Sn	16 26 06.5	+0.1
LONT	**Longtian**	**0.43**	**223**	*e*P	Pn	16 26 03.7	+2.0
LONT				*e*S	Sn	16 26 12.1	+3.4
WARBT	**Fenglin Townsh**	**0.50**	**354**	*e*P	Pn	16 26 03.3	+0.7
WARBT				*e*S	Sn	16 26 10.3	0.0
TWGBT	**Beinan**	**0.52**	**220**	*e*P	Pn	16 26 03.5	+0.6
TWGBT				*i* S	Sn	16 26 11.9	+1.1
TWG	**Pinlang**	**0.53**	**221**	P	Pn	16 26 03.6	+0.6
TWG				S	Sn	16 26 11.8	+0.9
SHUL	**Shoufeng**	**0.57**	**11**	*i* P	Pn	16 26 04.1	+0.5
SHUL				S	Sn	16 26 13.0	+1.0
SSLB	**Suanglung**	**0.72**	**321**	*e*P	Pn	16 26 05.6	0.0
SSLB				*e*S	Sn	16 26 18.2	+2.6
ECL	**Taimali**	**0.77**	**216**	*i* P	Pn	16 26 06.8	+0.7
ECL				*e*S	Sn	16 26 19.0	+2.4
OWD	**Renai**	**0.77**	**341**	*e*S	Sn	16 26 16.5	-0.4
LXIB	**Xiulin Townshi**	**0.80**	**358**	P	Pn	16 26 07.6	+0.9
LXIB				*i* S	Sn	16 26 18.5	+1.0

IDC ***23*** *16:29:05.7±1.0, 8°.79S×159°.49E, h108km±23km, mb3.6/7, mbtmp3.9/8, Error ellipse: s-maj=50.9km s-min=25.7km az=124.0*

NEIC ***23*** *16:29:06.5±1.9, 8°.9S±0°.1×159°.5E±0°.1, h113km±11km, mb4.3/10, Error ellipse: s-maj=23.2km s-min=18.4km az=220.0*

ISC 23 16:29:05.4±0.7, 8°.76S±0°.08×159°.40E±0°.09, h100km, n35, σ1s02/29, mb3.9/12, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TATA	**Tatamba Isabel**	**0.54**	**47**	P	**Pn**	**16 29 21.2**	**-0.4**
TATA	**Tatamba Isabel**	**0.54**	**47**	S	**Sn**	**16 29 33.3**	**-0.3**
SAVO	**Savo Central**	**0.56**	**134**	P	**Pn**	**16 29 21.8**	**+0.1**
HNR	**Honiara**	**0.86**	**141**	P	**Pn**	**16 29 25.0**	**+0.6**
	521nm,0.3s,baz=326,slow=3.6,SNR=294						
HNR				S	**Sn**	**16 29 39.8**	**+1.1**
	4μm,0.5s,baz=36,slow=24,SNR=22						
HNR				LR	LR	16 29 54.2	
	comp=Z,27nm,19.5s,baz=196,slow=62						
HNR	**Honiara**	**0.86**	**141**	P	**Pn**	**16 29 24.7**	**+0.3**
ALEG	**Aligegeo Malai**	**1.28**	**90**	P	**Pn**	**16 29 28.9**	**-0.1**
HURO	**Huro Makira**	**2.99**	**125**	P	**Pn**	**16 29 52.9**	**+1.8**
HURO	**Huro Makira**	**2.99**	**125**	S	Sn	16 30 32.5	+6.2
RABL	**Rabaul**	**8.50**	**302**		**Pn**	**16 31 08.3**	**+2.4**
EIDS	**Eidsvold**	**18.32**	**205**	P	**P**	**16 33 09.8**	**-2.1**
EIDS				IAmb	IAmb	16 33 17.1	
	comp=Z,13nm,1.1s						
JAY	**Jayapura**	**19.60**	**287**	P	**P**	**16 33 26.2**	**+0.1**
	comp=Z,4.5nm,0.6s,baz=138,slow=4.9,SNR=6.0						
WR8	**Warramunga Arr**	**26.52**	**242**	P	**P**	**16 34 34.2**	**+0.2**
WR8				IAmb	IAmb	16 34 37.1	
	comp=Z,17nm,1.5s						
WB0	**Warramunga Arr**	**26.55**	**243**	P	**P**	**16 34 34.5**	**+0.3**
WB0				IAmb	IAmb	16 34 35.8	
	comp=Z,11nm,1.1s						
WRA	**Warramunga Arr**	**26.66**	**243**	P	**P**	**16 34 35.6**	**+0.4**
WRA	**Warramunga Arr**	**26.66**	**243**	P	**P**	**16 34 35.7**	**+0.5**
	comp=Z,3.2nm,0.9s,baz=68,slow=9.5,SNR=8.3						
	comp=Z,3.2nm,0.9s						
H11S3	**WAKE ISLAND Hy**	**28.02**	**15**	T	T	17 03 30.6	
	baz=194,slow=76,SNR=46						
H11S2	**WAKE ISLAND Hy**	**28.02**	**15**	T	T	17 03 31.0	
	baz=194,slow=76,SNR=70						
H11S1	**WAKE ISLAND Hy**	**28.04**	**15**	T	T	17 03 36.9	
	baz=194,slow=76,SNR=38						
AS31	**Alice Springs**	**28.54**	**236**	P	**P**	**16 34 50.6**	**-1.4**
ASAR	**Alice Springs**	**28.54**	**236**	P	**P**	**16 34 50.1**	**-1.9**
ASAR	**Alice Springs**	**28.54**	**236**	P	**P**	**16 34 52.0**	**0.0**
	comp=Z,0.7nm,0.8s,baz=61,slow=10,SNR=13						
	comp=Z,0.7nm,0.8s						
H11N1	**WAKE ISLAND Hy**	**29.24**	**15**	T	T	17 05 19.7	
	baz=193,slow=76,SNR=37						
H11N3	**WAKE ISLAND Hy**	**29.25**	**15**	T	T	17 05 22.7	
	baz=193,slow=76,SNR=52						
H11N2	**WAKE ISLAND Hy**	**29.26**	**15**	T	T	17 05 21.6	
	baz=193,slow=76,SNR=38						
KNRA	**Kununurra**	**30.70**	**254**	P	**P**	**16 35 10.8**	**-0.3**
FITZ	**Fitzroy Crossi**	**34.07**	**251**	P	**P**	**16 35 40.4**	**-0.2**
FITZ				IAmb	IAmb	16 35 55.6	
	comp=Z,1.8nm,1.2s						
INU	**Inuyama**	**48.70**	**336**	P	**P**	**16 37 40.5**	**+0.8**
INU				IAmb	IAmb	16 37 43.7	
	comp=Z,12nm,1.3s						
KSRS	**Korea Array**	**54.60**	**329**	P	**P**	**16 38 24.0**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=141,slow=7.3,SNR=2.9						
	comp=Z,0.5nm,0.6s						
USRK	**Ussuriysk Ar.**	**58.26**	**337**	P	**P**	**16 38 49.6**	**+0.1**
SONM	**Songino Array**	**73.20**	**326**	P	**P**	**16 40 26.4**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=142,slow=5.1,SNR=5.4						
	comp=Z,1.0nm,0.7s						
J14K	**Nanvaranak Lak**	**76.77**	**17**	P	**P**	**16 40 45.5**	**-0.1**
J14K				IAmb	IAmb	16 40 50.0	
	comp=Z,14nm,1.2s						
P18K	**Big Mountain,**	**76.98**	**22**	P	**P**	**16 40 45.9**	**-1.0**
MKAR	**Makanchi Array**	**87.62**	**318**	P	**P**	**16 41 42.4**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=94,slow=5.8,SNR=7.4						
	comp=Z,0.9nm,0.7s						
ZALV	**Zalesovo Beam**	**88.09**	**325**	P	**P**	**16 41 43.4**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=46,slow=4.2,SNR=1.7						
	comp=Z,0.4nm,0.5s						
BVAR	**Borovoye Array**	**96.33**	**323**	P	**P**	**16 42 21.5**	**-1.3**
	comp=Z,0.3nm,0.6s,baz=57,slow=5.2,SNR=2.0						
	comp=Z,0.3nm,0.6s						

JMA ***23*** *16:29:06.7±0.1, 35°.6N±0°.7×135°.5E±0°.9, h355km±1km, MV3.2/39, W PART OF WAKASA BAY*

IDC ***23*** *16:29:06.6±1.1, 35°.47N×135°.67E, h354km±13km, mb2.6/5, mbtmp3.5/11, Error ellipse: s-maj=20.6km s-min=16.9km az=96.0*

ISC 23 16:29:06.5±0.8, 35°.56N±0°.08×135°.60E±0°.09, h350km, n19, σ0s94/22, mb2.8/5, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JWT	**Wachi**	**0.32**	**210**	*i* P	**Pn**	**16 29 51.4**	**+0.9**
JWT				*e*S	**S**	**16 30 26.1**	**+0.4**
JKY	**Yasaka**	**0.41**	**279**	P	**Pn**	**16 29 51.6**	**+1.0**
JKSM	**Kasumi**	**0.76**	**272**	P	**Pn**	**16 29 52.2**	**+0.9**
JEG	**Eigenji**	**0.78**	**123**	P	**Pn**	**16 29 52.8**	**+1.2**
JKG	**Kaga**	**0.93**	**40**	P	**Pn**	**16 29 52.9**	**+1.0**
JYTA	**Yamagatataniai**	**0.93**	**88**	P	**Pn**	**16 29 53.0**	**+1.0**
JWY	**Kouya**	**1.34**	**180**	*i* P	**Pn**	**16 29 54.8**	**+0.8**
JWY				S	**S**	**16 30 32.2**	**+0.1**
JKN2	**Miekihoku**	**1.43**	**157**	P	**Pn**	**16 29 55.1**	**+0.8**
JKN2				S	**S**	**16 30 33.5**	**+0.8**
MJAR	**Matsushiro Arr**	**2.33**	**64**	P	**Pn**	**16 30 01.2**	**+1.1**
	1.6nm,0.5s,baz=270,slow=10,SNR=16						
JNU	**Nakatsue**	**4.60**	**239**	P	**Pn**	**16 30 22.4**	**+0.6**
	9.9nm,0.4s,baz=68,slow=1.8,SNR=32						
KSRS	**Korea Array**	**6.46**	**289**	P	**Pn**	**16 30 43.5**	**+1.0**
	0.7nm,0.5s,baz=106,slow=12,SNR=8.3						
USRK	**Ussuriysk Ar.**	**9.06**	**343**	P	**P**	**16 31 14.2**	**-1.1**
	8.3nm,0.7s,baz=171,slow=11,SNR=38						
ASAJ	**Asahikawa**	**10.09**	**30**	P	**Pn**	**16 31 24.9**	**-0.5**
	3.7nm,0.3s,baz=229,slow=16,SNR=38						
KLR	**Kul'dur**	**13.95**	**349**	P	**Pn**	**16 32 10.3**	**-0.6**
	1.8nm,0.5s,baz=199,slow=6.5,SNR=4.2						
SONM	**Songino Array**	**24.86**	**309**	P	**P**	**16 33 59.5**	**+1.0**
	0.4nm,0.5s,baz=124,slow=8.5,SNR=2.7						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**43.22**	**309**	P	**P**	**16 36 34.5**	**+0.4**
	0.2nm,0.4s,baz=92,slow=7.6,SNR=2.1						
	0.2nm,0.4s						
ILAR	**Eielson Array**	**53.22**	**31**	P	**P**	**16 37 49.8**	**+0.3**
	0.3nm,0.5s,baz=258,slow=5.6,SNR=2.7						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**55.22**	**181**	P	**P**	**16 38 02.9**	**-1.4**
	0.2nm,0.6s,baz=2.7,slow=7.3,SNR=1.3						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**58.93**	**182**	P	**P**	**16 38 29.1**	**-1.0**
	0.3nm,0.9s,baz=3.7,slow=5.3,SNR=4.7						
	0.3nm,0.9s						

IDC 23 16:36:25.7±2.1, 5°.92S×130°.74E, h0km, mb3.4/2, mbtmp3.4/4, ML3.5/2, Error ellipse: s-maj=134.9km s-min=29.8km az=72.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.37**	**166**	Pn	Pn	16 39 50.2	-0.3
	0.2nm,0.3s,baz=347,slow=9.4,SNR=10						
WRA				Sn	Sn	16 42 17.4	-13
	0.2nm,0.3s,baz=348,slow=20,SNR=5.5						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**17.90**	**171**	P	Pn	16 40 36.4	0.0
	0.1nm,0.3s,baz=350,slow=10,SNR=19						
ASAR				S	Sn	16 43 40.4	-16
	0.7nm,0.9s,baz=14,slow=32,SNR=1.3						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**67.74**	**326**	P	P	16 47 25.4	+0.2
	0.2nm,0.4s,baz=115,slow=8.1,SNR=2.8						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**71.99**	**328**	P	P	16 47 51.1	-0.1
	0.2nm,0.5s,baz=131,slow=4.8,SNR=4.3						
	0.2nm,0.5s						

NEIC ***23*** *16:43:33.9±1.2, 5°.97S±0°.06×148°.61E±0°.09, h51km±7km, mb4.3/22, Error ellipse: s-maj=14.3km s-min=6.4km az=121.0*

IDC ***23*** *16:43:34.9±3.4, 6°.03S×148°.56E, h72km±29km, mb3.5/8, mbtmp3.8/11, MS3.1/3, Error ellipse: s-maj=42.8km s-min=15.7km az=92.0*

ISC 23 16:43:34.4±0.6, 5°.99S±0°.07×148°.59E±0°.09, h65km, n45, σ0s78/46, mb4.2/18, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.68**	**203**		**Pn**	**16 44 28.2**	**-0.7**
PMG	**Port Moresby**	**3.68**	**203**	P	**Pn**	**16 44 28.5**	**-0.3**
	110nm,0.7s,baz=24,slow=5.9,SNR=24						
PMG				S	**Sn**	**16 45 11.4**	**+0.4**
	111nm,0.6s,baz=20,slow=18,SNR=5.6						
PMG				LR	LR	16 45 32.8	
	comp=Z,52nm,21.0s,baz=316,slow=32						
RABL	**Rabaul**	**3.98**	**64**	Pn	**Pn**	**16 44 32.5**	**-0.6**
JAY	**Jayapura**	**8.58**	**293**	P	**Pn**	**16 45 35.4**	**-0.6**
	5.6nm,0.9s,baz=132,slow=14,SNR=2.2						
COEN	**Coen**	**9.54**	**214**	Pn	**Pn**	**16 45 47.6**	**-1.5**
HNR	**Honiara**	**11.77**	**108**	LR	LR	16 50 10.0	
	comp=Z,63nm,18.1s,baz=80,slow=34						
SAUI	**Saumlaki**	**17.27**	**262**		**P**	**16 47 32.2**	**+0.2**
EIDS	**Eidsvold**	**19.42**	**173**	P	**P**	**16 47 55.6**	**+0.1**
WB0	**Warramunga Arr**	**19.45**	**224**	P	**P**	**16 47 56.0**	**+0.2**
WB0				IAmb	IAmb	16 48 12.8	
	comp=Z,14nm,1.5s						
WR8	**Warramunga Arr**	**19.50**	**223**	P	**P**	**16 47 56.6**	**+0.2**
WRA	**Warramunga Arr**	**19.60**	**224**	P	**P**	**16 47 57.6**	**+0.1**
WRA	**Warramunga Arr**	**19.60**	**224**	P	**P**	**16 47 57.3**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=50,slow=11,SNR=16						
WRA				PcP	**PcP**	**16 52 15.4**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=48,slow=2.1,SNR=2.4						
KNRA	**Kununurra**	**21.70**	**242**	P	**P**	**16 48 20.5**	**+0.4**
KNRA				IAmb	IAmb	16 48 58.3	
	comp=Z,16nm,1.1s						
AS31	**Alice Springs**	**22.55**	**217**	P	**P**	**16 48 29.0**	**-0.3**
ASAR	**Alice Springs**	**22.55**	**217**	P	**P**	**16 48 28.9**	**-0.4**
ASAR	**Alice Springs**	**22.55**	**217**	P	**P**	**16 48 28.8**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=54,slow=8.8,SNR=22						
ASAR				PcP	**PcP**	**16 52 21.1**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=52,slow=3.1,SNR=4.1						
	comp=Z,1.1nm,0.6s						
ARMA	**Armidale**	**24.47**	**174**	P	**P**	**16 48 49.8**	**+2.3**
ARMA				IAmb	IAmb	16 48 51.8	
	comp=Z,30nm,1.4s						
FITZ	**Fitzroy Crossi**	**25.42**	**240**	P	**P**	**16 48 56.5**	**+0.3**
MBWA	**Marble Bar**	**31.76**	**239**	P	**P**	**16 49 53.3**	**+0.7**
KSRS	**Korea Array**	**47.32**	**338**	P	**P**	**16 52 01.6**	**0.0**
	comp=Z,0.4nm,0.6s,baz=151,slow=7.7,SNR=4.2						
	comp=Z,0.4nm,0.6s						
USRK	**Ussuriysk Ar.**	**52.15**	**345**	P	**P**	**16 52 39.3**	**+1.1**
USRK	**Ussuriysk Ar.**	**52.15**	**345**	P	**P**	**16 52 38.7**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=160,slow=4.6,SNR=4.5						
	comp=Z,1.0nm,0.6s						
PEA0B	**Petropavlovsk-**	**59.38**	**6**	P	**P**	**16 53 29.9**	**+0.1**
PETK	**Petropavlovsk-**	**59.38**	**6**	P	**P**	**16 53 30.0**	**+0.2**
PETK	**Petropavlovsk-**	**59.38**	**6**	P	**P**	**16 53 30.7**	**+0.9**
	comp=Z,1.4nm,0.6s,baz=157,slow=5.3,SNR=13						
	comp=Z,1.4nm,0.6s						
BRDH	**Bariadhala**	**62.52**	**299**	LR	LR	17 23 19.8	
	comp=Z,115nm,18.0s,baz=320,slow=38						
K15K	**Wolf Creek Mou**	**78.00**	**21**	P	**P**	**16 55 26.9**	**+1.4**
K15K				IAmb	IAmb	16 55 59.7	
	comp=Z,9.9nm,1.4s						
MKAR	**Makanchi Array**	**78.50**	**320**	P	**P**	**16 55 27.9**	**-0.7**
MKAR	**Makanchi Array**	**78.50**	**320**	P	**P**	**16 55 28.1**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=109,slow=6.8,SNR=3.1						
	comp=Z,0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**79.84**	**327**	P	**P**	**16 55 34.9**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=124,slow=7.2,SNR=1.8						
	comp=Z,0.4nm,0.5s						
CAST	**Castle Rocks**	**82.20**	**23**	P	**P**	**16 55 48.4**	**+0.3**
CAST				IAmb	IAmb	16 55 55.3	
	comp=Z,3.8nm,1.4s						
E19K	**Redstone River**	**82.60**	**18**	P	**P**	**16 55 51.4**	**+1.3**
E19K				IAmb	IAmb	16 56 27.7	
	comp=Z,3.4nm,1.2s						
C19K	**Lookout Ridge**	**82.89**	**17**	P	**P**	**16 55 52.7**	**+1.1**
C19K				IAmb	IAmb	16 56 05.0	
	comp=Z,4.5nm,1.4s						
QSPA	**South Pole Qui**	**83.98**	**180**	P	**P**	**16 55 56.7**	**-0.8**
QSPA				IAmb	IAmb	16 56 01.2	
	comp=Z,2.8nm,1.1s						
QSPA	**South Pole Qui**	**83.98**	**180**	P	**P**	**16 55 56.3**	**-1.1**
	comp=Z,0.9nm,0.6s,baz=286,slow=0.6,SNR=9.8						
	comp=Z,0.9nm,0.6s						
G23K	**Bananza Creek**	**84.59**	**21**	P	**P**	**16 56 01.3**	**+0.9**
G23K				IAmb	IAmb	16 56 01.7	
	comp=Z,1.4nm,0.9s						
ILAR	**Eielson Array**	**84.85**	**23**	P	**P**	**16 56 01.0**	**-0.7**
ILAR	**Eielson Array**	**84.85**	**23**	P	**P**	**16 56 00.8**	**-0.8**
	comp=Z,0.7nm,0.6s,baz=247,slow=4.8,SNR=10.0						
	comp=Z,0.7nm,0.6s						
J25K	**Salcha River,**	**85.38**	**23**	P	**P**	**16 56 04.4**	**0.0**
J25K				IAmb	IAmb	16 56 05.1	
	comp=Z,1.4nm,0.8s						
H27K	**Steamboat Moun**	**87.48**	**22**	P	**P**	**16 56 15.7**	**+1.1**
H27K				IAmb	IAmb	16 56 41.7	
	comp=Z,2.3nm,1.3s						
C27K	**Jago River**	**87.99**	**19**	P	**P**	**16 56 18.2**	**+1.3**
DIB	**Dawson Inlet,**	**88.16**	**36**	P	**P**	**16 56 18.2**	**+0.2**
I30M	**Mount Dempster**	**89.18**	**24**	P	**P**	**16 56 22.4**	**-0.4**
I30M				IAmb	IAmb	16 56 53.5	
	comp=Z,2.6nm,1.4s						
PTLB	**Pontes e Lacer**	**145.25**	**128**		**PKPbc**	**17 03 05.1**	**-0.4**
VILB	**Vilhena**	**145.76**	**123**	PKPbc	**PKPdf**	**17 03 06.9**	**+0.2**

STR 23 16:46:07.9±1.0, 49°N±3°×°±°, h10km, MLv1.2/6, Error ellipse: s-maj=0.0km s-min=0.0km az=83.6, preliminary, Germany

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEEW	**Neewiller pres**	**0.21**	**187**	Pg	Pg	16 46 11.9	-0.3
NEEW				Sg	Sg	16 46 15.7	+0.5
LEMB	**Lembach**	**0.28**	**243**	Pg	Pg	16 46 13.1	-0.5
LEMB				Sg	Sg	16 46 17.3	-0.1
HOHE	**HOHENGOEFT**	**0.67**	**221**	Pg	Pg	16 46 20.5	-0.3
OPP	**Oppenau**	**0.67**	**178**	Pg	Pg	16 46 20.2	-0.6
OPP	**Oppenau**	**0.67**	**178**	Sg	Sg	16 46 28.2	-1.3
VOEL	**Voellerdingen**	**0.70**	**254**	Pg	Pg	16 46 21.0	-0.4
VOEL				Pn	Pb	16 46 22.9	+0.8
ABH	**Alteburg**	**0.81**	**332**	Pg	Pg	16 46 23.6	0.0
ABH	**Alteburg**	**0.81**	**332**	Sg	Sg	16 46 34.6	+0.4

NAO ***23*** *16:51:50.1, 33°.40N×46°.70E, h33km, mb4.5*

MOS ***23*** *16:51:57.7±1.1, 34°.40N×45°.60E, h13km, mb4.8/26, Error ellipse: s-maj=7.3km s-min=3.8km az=111.3*

IDC ***23*** *16:51:58.4±0.5, 34°.55N×45°.57E, h0km, mb4.3/30, mbtmp4.3/37, ML4.2/6, MS3.7/41, Error ellipse: s-maj=8.9km s-min=8.0km az=115.0*

TEH ***23*** *16:51:59.3, 34°.45N×45°.63E, h12km±10km*

THR ***23*** *16:51:59.2±0.0, 34°.40N×45°.48E, h6km±4km, ML4.6*

ISN ***23*** *16:51:59.5±0.8, 34°.43N×45°.53E, h6km±4km, ML4.2*

NEIC ***23*** *16:51:59.9±1.3, 34°.44N±0°.03×45°.62E±0°.07, h10km±1km, mb4.7/137, Error ellipse: s-maj=10.3km s-min=5.6km az=280.0*

ISC 23 16:51:59.9±0.8, 34°.42N±0°.02×45°.62E±0°.03, h13km±5km, n689, σ1s30/643, mb4.6/137, MS3.8/49, 26C-26D, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KGS1	**Ghasr-e-Shirin**	**0.09**	**343**	Pg	**Pg**	**16 52 02.4**	**-0.5**
GLG1	**Gilan-e-Gharb**	**0.39**	**142**	Pg	**Pb**	**16 52 08.9**	**+0.2**
IDHR	**Dehrash**	**0.69**	**66**	Pg	**Pb**	**16 52 13.5**	**-0.5**
IGHG	**Ghaleghazi**	**0.79**	**96**	Pg	**Pb**	**16 52 16.0**	**+0.4**
ILBA	**Ilam Banvizeh**	**0.93**	**148**	Pg	**Pn**	**16 52 18.5**	**-0.2**
ILBA	**Ilam Banvizeh**	**0.93**	**148**	*e*PgA		16 52 18.9	
ILBA				IAML		16 52 48.4	
	comp=Z,2.2nm,1.0s						
KCHF	**Cheshme Sefid,**	**1.18**	**96**	Pg	**Pg**	**16 52 23.0**	**+0.2**
ILIN	**Lien**	**1.21**	**65**	Pg	**Pg**	**16 52 23.2**	**-0.2**
IBDR	**Badra**	**1.33**	**169**	*e*Pg	**Pg**	**16 52 26.0**	**+0.5**
IBDR				*e*Sg	**Sg**	**16 52 44.0**	**+1.3**
IBDR				AML	AML	16 52 54.3	
	comp=N,4μm,0.5s						
IBDR				AML	AML	16 53 05.4	
	comp=E,5μm,0.8s						
IKRK	**Kirkuk**	**1.44**	**313**	*e*Pn	**Pg**	**16 52 27.0**	**-0.6**
IKRK				*e*Sn	**Sg**	**16 52 47.0**	**+0.7**
BHD	**Baghdad**	**1.54**	**222**	*e*Pn	**Pg**	**16 52 29.0**	**-0.5**
BHD				*e*Sn	**Sg**	**16 52 50.0**	**+0.4**
SNQR	**Sonqor, Kerman**	**1.71**	**75**	Pg	**Pb**	**16 52 31.8**	**+0.4**
SRSL	**SARDASHT**	**1.80**	**355**	*e*PnA		16 52 32.4	
SRSL				*e*Sg	**Sg**	**16 52 58.2**	**+0.3**
SRSL				IAML		16 52 58.8	
	comp=Z,130nm,1.0s						
IBZA	**Bozab**	**1.85**	**88**	Pn	**Pb**	**16 52 34.3**	**+0.5**
IKFM	**Kafar-mosalman**	**2.05**	**115**	Pn	**Pb**	**16 52 36.5**	**-0.5**
MAHB	**Mahabad**	**2.35**	**2**	Pn	**Pb**	**16 52 40.2**	**-2.0**
HSAM	**Samen**	**2.48**	**94**	Pn	**Pb**	**16 52 42.4**	**-2.0**
NGD1	**Naghade .Az. G**	**2.53**	**356**	Pn	**Pb**	**16 52 42.5**	**-2.7**
RAFI	**Al-Rafai**	**2.72**	**171**	*e*Pn	**Pb**	**16 52 46.0**	**-2.4**
RAFI				*e*Sn	**Sb**	**16 53 20.0**	**-1.6**
HAGD	**Aghdareh**	**2.93**	**81**	Pn	**Pb**	**16 52 49.2**	**-2.9**
IHSH	**Hashtrud**	**3.18**	**24**	Pn	**Pn**	**16 52 52.2**	**+2.4**
IAZR	**Azarshahr**	**3.27**	**5**	Pn	**Pn**	**16 52 53.3**	**+2.2**
ZNJK	**Zanjan**	**3.36**	**47**	*e*PnA		16 52 55.2	
ZNJK				IAML		16 53 51.9	
	comp=Z,1.5nm,1.0s						
QABG	**Abgarm-Qazvin**	**3.50**	**67**	Pn	**Pn**	**16 52 56.6**	**+2.5**
GTMR	**Gotvand**	**3.50**	**123**	*e*PnA		16 52 56.3	
GTMR				IAML		16 54 09.4	
	comp=Z,1.4nm,1.0s						
ASAO	**Ashtian**	**3.64**	**87**	*e*PnA		16 52 59.8	
ASAO				IAML		16 54 24.3	
	comp=Z,1.2nm,1.0s						
KHMZ	**Khomeyn**	**3.66**	**99**	*e*PnA		16 53 01.9	
KHMZ				IAML		16 54 13.5	
	comp=Z,0.9nm,1.0s						
ITBZ	**Tabriz**	**3.83**	**6**	Pn	**Pn**	**16 53 00.3**	**+1.6**
AHWZ	**Ahwaz**	**3.99**	**140**	Pn	**Pn**	**16 53 02.9**	**+2.1**
IHRS	**Heris**	**4.06**	**16**	Pn	**Pn**	**16 53 04.3**	**+2.4**
IGZV	**Ghazvin**	**4.24**	**61**	Pn	**Pn**	**16 53 07.1**	**+2.7**
GIDE	**GILAN DEYLAMAN**	**4.29**	**53**	*e*PnA		16 53 10.1	
GIDE				IAML		16 54 39.7	
	comp=Z,5.6nm,1.0s						
GEVA	**Gevas**	**4.40**	**333**		**Pn**	**16 53 07.1**	**+0.5**
IQOM	**Qom**	**4.51**	**83**	Pn	**Pn**	**16 53 10.6**	**+2.4**
IPIR	**Pirpir**	**4.73**	**110**	Pn	**Pn**	**16 53 13.3**	**+2.1**
GAS1	**Astara - Iran**	**4.74**	**32**	Pn	**Pn**	**16 53 13.4**	**+2.4**
GRMI	**Germi**	**4.75**	**22**	Pn	**Pn**	**16 53 13.5**	**+2.2**
GRMI	**Germi**	**4.75**	**22**	*e*PnA		16 53 13.6	
GRMI				IAML		16 54 42.8	
	comp=Z,1.4nm,1.0s						
JHBN	**Jahan bin**	**4.75**	**116**	Pn	**Pn**	**16 53 13.2**	**+1.7**
QAMS	**Qamsar**	**4.84**	**96**	Pn	**Pn**	**16 53 15.1**	**+2.5**
KLST	**Kelardasht - M**	**4.91**	**63**	Pn	**Pn**	**16 53 16.2**	**+2.6**
ZNGN	**Zangian**	**4.95**	**116**	Pn	**Pn**	**16 53 17.0**	**+2.8**
MAKU	**Maku**	**4.99**	**352**	Pn	**Pn**	**16 53 16.7**	**+2.1**
IVRN	**Varamin**	**5.06**	**82**	Pn	**Pn**	**16 53 18.1**	**+2.6**
IKLH	**Kolahrood**	**5.08**	**101**	Pn	**Pn**	**16 53 18.7**	**+2.8**
DAMV	**Damavand**	**5.35**	**75**	*e*PnA		16 53 23.5	
DAMV				IAML		16 55 01.8	
	comp=Z,0.0nm,1.0s						
IBRJ	**Brojen**	**5.35**	**116**	Pn	**Pn**	**16 53 21.6**	**+2.0**
IDMV	**Damavand**	**5.39**	**76**	Pn	**Pn**	**16 53 22.5**	**+2.3**
KRSH	**Karshahi**	**5.42**	**93**	Pn	**Pn**	**16 53 22.7**	**+2.2**
ISFB	**Sefidab**	**5.47**	**89**	Pn	**Pn**	**16 53 23.5**	**+2.3**
KBD	**Kabd**	**5.51**	**161**	P	**Pn**	**16 53 22.8**	**+1.1**
KBD				S	**Sn**	**16 54 25.2**	**+0.2**
GNI	**Garni**	**5.77**	**353**	Pn	**Pn**	**16 53 27.3**	**+2.0**
	comp=Z,2.0nm,0.3s,baz=236,slow=9.0,SNR=6.2						
GNI				Lg	Lg	16 54 57.0	
	comp=Z,4.4nm,0.3s,baz=209,slow=19,SNR=3.1						
GNI				LR	LR	16 55 26.1	
	comp=Z,115nm,20.3s,baz=172,slow=37						
	comp=Z,13nm,0.7s						
GNI	**Garni**	**5.77**	**353**	P	Pn	16 53 29.9	+4.6
IZEF	**Zefreh**	**5.79**	**103**	Pn	**Pn**	**16 53 28.8**	**+2.9**
IFIR	**Firoozkooh**	**5.98**	**76**	Pn	**Pn**	**16 53 30.9**	**+2.6**
KLNJ	**Kolanjah**	**6.07**	**122**	Pn	**Pn**	**16 53 31.1**	**+1.4**
KLNJ	**Kolanjah**	**6.07**	**122**	*e*Pn	**Pn**	**16 53 31.3**	**+1.6**
KLNJ				IAML		16 55 47.7	
	comp=Z,0.4nm,1.0s						

ILAS	Lasjerd	6.11	79	Pn	Pn	16 53 32.6	+2.6
IRAM	Ramesheh	6.24	113	Pn	Pn	16 53 33.7	+1.9
ANAR	Anarak	6.86	98	Pn	Pn	16 53 42.4	+2.1
IGLO	Ghaloghah	7.01	70	Pn	Pn	16 53 44.6	+2.1
AKT	Akhty	7.25	13	*e*P	Pn	16 53 51.1	+5.5
AKT				*e*S	Sn	16 55 16.9	+9.2
AKT				pmax	pmax		
	comp=Z,8.0nm,0.8s						
AKT				smax	smax		
	comp=N,33nm,0.9s						
AKT				smax	smax		
	comp=E,19nm,0.6s						
AKT				MLR	MLR		
	comp=Z,740nm,13.0s						
GAZ	Gaziantep	7.37	294		Pn	16 53 47.3	+0.1
MMAI	Mount Meron Ar	8.63	264	Pn	Pn	16 54 05.4	+0.9
	comp=Z,2.2nm,0.3s,baz=71,slow=15,SNR=10						
MMAI				Sn	Sn	16 55 42.5	+0.8
	comp=Z,1.9nm,0.3s,baz=106,slow=28,SNR=1.4						
MMAI				Lg	Lg	16 56 33.6	
	comp=Z,10nm,0.3s,baz=62,slow=32,SNR=4.3						
MMAI				LR	LR	16 58 06.5	
	comp=Z,664nm,18.3s,baz=106,slow=43						
	comp=Z,1.1nm,0.3s						
MAK	Makhachkala	8.66	9	*e*P	Pn	16 54 02.8	-2.0
MAK				*e*S	Sn	16 55 40.9	-1.3
MAK				pmax	pmax		
	comp=Z,111nm,1.0s						
MAK				MLR	MLR		
	comp=Z,727nm,10.0s						
GHIR	Ghir-Karzin	8.77	132	*e*PnA		16 54 10.5	
GHIR				IAML		16 56 08.4	
	comp=Z,22nm,1.0s						
GHAJ	Ghor Haditha	9.01	253		Pn	16 54 09.5	-0.1
MRVT	Maraveh tapeh	9.07	66	*e*Pn	Pn	16 54 14.2	+3.6
NCK	Nalchik	9.20	351	⇓*e*P	Pn	16 54 17.3	+5.0
KBZ	Khabaz	9.54	348	Pn	Pn	16 54 21.9	+5.0
	comp=Z,0.3nm,0.3s,baz=169,slow=9.1,SNR=26						
KBZ				Lg	Lg	16 56 59.9	
	baz=240,slow=20,SNR=0.6						
SHA1	Shidzhatmaz	9.59	347	⇑*e*P	Pn	16 54 21.7	+3.9
KVAR	Kislovodsk Arr	9.79	347	LR	LR	16 58 00.7	
	comp=Z,805nm,21.1s,baz=16,slow=38						
KIV	Kislovodsk	9.79	347	P	Pn	16 54 25.7	+5.2
KIV	Kislovodsk	9.79	347	*e*P	Pn	16 54 23.3	+2.8
KIV				*e*S	Sn	16 56 15.4	+5.1
KIV				pmax	pmax		
	comp=Z,39nm,1.1s						
KIV				MLR	MLR		
	comp=Z,104nm,13.0s						
SBZV	Sabzevar	9.98	75	*e*Pn	Pn	16 54 26.9	+3.7
BJRD	Bojnurd	10.09	68	*e*PnA		16 54 28.6	
CSS	Mathiatis	10.14	277	P	Pn	16 54 24.1	-1.0
	comp=Z,16nm,1.0s						
EIL	Elat	10.21	245	Pn	Pn	16 54 27.2	+1.0
	comp=Z,2.8nm,0.3s,baz=64,slow=4.0,SNR=17						
EIL				Sn	Sn	16 56 23.2	+2.6
	comp=Z,0.6nm,0.3s,baz=26,slow=18,SNR=1.1						
EIL				Lg	Lg	16 57 19.9	
	comp=Z,1.2nm,0.3s,baz=55,slow=18,SNR=2.5						
EIL				LR	LR	16 59 18.9	
	comp=Z,733nm,18.6s,baz=66,slow=43						
	comp=Z,7.4nm,0.4s						
SOC	Sochi	10.24	335	*e*P	Pn	16 54 29.0	+2.5
SOC				*e*		16 56 23.7	
SOC				pmax	pmax		
	comp=Z,55nm,1.3s						
SOC				MLR	MLR		
	comp=Z,1μm,13.0s						
SMRA	Abu-Samra	10.64	153	P	Pn	16 54 32.5	+0.4
SMRA				S	Sn	16 56 27.4	-3.7
TRNA	Turayna	10.80	152	P	Pn	16 54 35.6	+1.3
TRNA				S	Sn	16 56 31.0	-4.0
RAYN	Ar Rayn	10.86	181		Pn	16 54 33.8	-1.3
RAYN	Ar Rayn	10.86	181	P	Pn	16 54 34.5	-0.6
RAYN				S	Sn	16 56 35.2	-1.2
RAYN	Ar Rayn	10.86	181	P	Pn	16 54 33.8	-1.3
LABN	Labinsk	10.89	341	*e*P	Pn	16 54 33.6	-1.7
LABN				*e*S	Sn	16 56 37.2	+0.2
LABN				pmax	pmax		
	comp=Z,12nm,0.7s						
BR104	Keskin Array S	10.93	302	P	Pn	16 54 34.9	-1.2
	comp=Z,46nmcomp=Z,4.8nm,1.0s						
BR131	Keskin Array S	10.94	302	P	Pn	16 54 40.5	+4.3
BR131	Keskin Array S	10.94	302	⇑*e*P	Pn	16 54 40.6	+4.4
BRTR	Keskin Array B	10.94	302	Pn	Pn	16 54 39.1	+2.9
	comp=Z,2.4nm,1.0s,baz=128,slow=14,SNR=12						
BRTR				Lg	Lg	16 57 45.9	
	baz=121,slow=30,SNR=1.4						
BRTR	Keskin Array B	10.94	302	*i* P	Pn	16 54 41.0	+4.8
BRTR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
JRN	Qarnain Island	11.34	144	P	Pn	16 54 42.3	+0.7
JRN				S	Sn	16 56 45.2	-2.9
SLWR	Sila	11.59	151	P	Pn	16 54 46.7	+1.6
ERBR	Yeremizino-Bor	11.95	342	*e*P	Pn	16 54 49.9	+0.1
ERBR				*e*S	Sn	16 57 05.3	+2.4
ERBR				pmax	pmax		
	comp=Z,9.0nm,0.4s						
ANN	Anapa	12.13	331	*e*P	Pn	16 54 52.8	+0.4
ANN				*e*S	Sn	16 57 11.7	+4.3
ANN				pmax	pmax		
	comp=Z,33nm,1.5s						
ANN				MLR	MLR		
	comp=N,818nm,13.0s						
ANN				MLR	MLR		
	comp=Z,687nm,13.0s						
ANN				MLR	MLR		
	comp=E,588nm,14.0s						
SHME	Shamm	12.33	130	P	Pn	16 54 54.9	-0.3
SHME	Shamm	12.33	130	Pn	Pn	16 54 54.6	-0.6
SHME				Sn	Sn	16 57 05.2	-7.3
ISP	Isparta	12.67	290	⇑*e*P	Pn	16 55 04.7	+4.8
AJN	Ajban	12.76	138	P	Pn	16 55 02.0	+1.0
AJN				S	Sn	16 57 17.6	-5.3
NAZ	Nazwa, Dubai	12.81	134	P	Pn	16 55 03.0	+1.2
NAZ				S	Sn	16 57 19.8	-4.5
NAZ	Nazwa, Dubai	12.81	134	Pn	Pn	16 55 00.5	-1.3
MASF	Masafi	12.83	132	P	Pn	16 55 02.2	+0.1
MSFE	Esma-Masafi	12.84	132	Pn	Pn	16 55 00.3	-1.9
ASUD	Al Ashush, Dub	12.90	137	P	Pn	16 55 03.8	+0.8
ASUD				S	Sn	16 57 22.1	-4.3
MDH	Madha	12.97	132	P	Pn	16 55 03.8	-0.1
MDH				S	Sn	16 57 22.2	-5.9
MDH	Madha	12.97	132	Pn	Pn	16 55 02.8	-1.1
UOSS	Minazif	13.17	133		Pn	16 55 04.8	-1.9
UOSS	Minazif	13.17	133	P	Pn	16 55 05.2	-1.5
UOSS	Minazif	13.17	133	Pn	Pn	16 55 03.9	-2.8
HATD	Hatta, Dubai	13.22	134	P	Pn	16 55 06.8	-0.5
HATD	Hatta, Dubai	13.22	134	Pn	Pn	16 55 06.3	-1.0
ASHO	Ashiyiah	13.28	134	P	Pn	16 55 08.0	-0.2
	SNR=10						
ASHO	Ashiyiah	13.28	134	Pn	Pn	16 55 07.0	-1.2
MZR	Muzera	13.29	147	P	Pn	16 55 07.1	-1.2
MZR	Muzera	13.29	147	Pn	Pn	16 55 07.7	-0.6
ALNE	Al Ain	13.58	137	P	Pn	16 55 12.1	-0.2
ALNE	Al Ain	13.58	137	Pn	Pn	16 55 11.4	-0.9
SIM	Simferopol'	13.74	323	P	Pn	16 55 13.4	-0.9
SIM				S	Sn	16 57 39.0	-7.7
SIM				pmax	pmax		
	comp=Z,10.0nm,13.0s						
SIM				smax	smax		
	comp=Z,120nm,15.0s						
SOHO	SOHO	13.98	134	P	Pn	16 55 17.6	-0.1
SOHO	SOHO	13.98	134	Pn	Pn	16 55 15.8	-1.8
YLV	Yalova	14.28	300	P	Pn	16 55 19.9	-1.9
	comp=Z,14nm,0.7s						
MANT	Manisa	14.32	291	Pn	Pn	16 55 22.6	0.0
UMZA	Um Al Zommool	14.35	142	P	Pn	16 55 22.6	-0.2
ARQ	Araqi	14.58	136	P	Pn	16 55 25.2	-0.8
	SNR=7.0						
HOQ	Hoqain	14.86	134	P	Pn	16 55 30.2	+0.4
BSY	Bisya	15.43	136	P	Pn	16 55 36.2	-1.2
SMDO	Samad	15.70	133	P	Pn	16 55 41.2	+0.3
WSAR	Wadi Sarin	15.92	131	Pn	Pn	16 55 43.4	-0.3
	baz=322,slow=20,SNR=9.5						
WSAR				Sn	Sn	16 58 28.8	-11
	baz=17,slow=19,SNR=4.0						
WSAR	Wadi Sarin	15.92	131	P	Pn	16 55 43.3	-0.3
JMDO	Jabal Madar	16.25	134	P	Pn	16 55 47.8	-0.1
JURR	Jurilovca	16.50	314	⇑P	P	16 55 54.1	+0.5
APE	Apeiranthos	16.52	285	⇑*e*P	Pn	16 55 51.3	-0.1
TIRR	Tirgusor	16.62	312	P	P	16 55 54.4	-0.5
TIRR	Tirgusor	16.62	312	⇑P	P	16 55 55.7	+0.8
TIRR	Tirgusor	16.62	312	P	P	16 55 55.7	+0.8
TIRR	Tirgusor	16.62	312	P	Pn	16 55 51.6	-0.9
	comp=Z,14nm,1.0s						
ALN	Alexandroupoli	16.78	298		P	16 55 56.5	-0.2
TPGR	Topolog	16.83	313	⇑P	P	16 55 56.8	-0.4
PURM	Purcari	16.99	320	P	Pn	16 55 56.2	-0.9
	comp=Z,10μmcomp=Z,75nm,0.5s						
VRH	Novokhopyorsk	17.02	352	*e*P	Pn	16 55 56.2	-1.2
VRH				pmax	pmax		
	comp=Z,42nm,1.5s						
HARR	Harsova	17.04	312	⇑P	P	16 56 00.3	+0.7
HARR	Harsova	17.04	312	P	P	16 56 00.2	+0.7
IDI	Anoyia	17.04	279	P	P	16 55 59.5	-0.3
IDI				IAmb	IAmb	16 56 08.0	
	comp=Z,82nm,1.3s						
IDI	Anoyia	17.04	279	Pn	P	16 56 01.7	+2.0
	comp=Z,2.2nm,0.3s,baz=61,slow=11,SNR=9.8						
CFR	Carcaliu	17.17	314	⇑P	P	16 56 00.6	-0.4
CFR	Carcaliu	17.17	314	P	P	16 56 00.5	-0.4
VORD	Divnogorie	17.17	346	*e*P	P	16 55 59.8	-1.1
VORD				pmax	pmax		
	comp=Z,40nm,1.0s						
RDO	Rodhopi	17.22	299	P	P	16 56 01.4	-0.2
MHTO	MHTO	17.25	138	P	Pn	16 55 58.8	-1.8
VSR	Storozhevoye	17.43	346	*e*P	Pn	16 56 01.9	-0.7
VSR				pmax	pmax		
	comp=Z,30nm,1.0s						
DOK	Doka	17.46	152	P	Pn	16 56 01.3	-1.9
MILM	Milestii Mici	17.80	320	*e*P	Pn	16 56 06.0	-1.2
	comp=Z,80nm,1.9s						
MILM				*i* S	Sn	16 59 28.0	+2.6
	comp=Z,160nm,3.2s						
MILM				*e*L	L	17 02 35.0	
MILM				LRM	MLR	17 05 08.0	
	comp=Z,300nm,13.5s						
MILM	Milestii Mici	17.80	320	*e*P	Pn	16 56 06.0	-1.2
MILM				*i* S	Sn	16 59 28.0	+2.6
MILM				pmax	pmax		
	comp=Z,80nm,1.9s						
MILM				smax	smax		
	comp=N,160nm,3.2s						
MILM				MLR	MLR		
	comp=Z,300nm,13.5s						
VORR	Voronezh	17.86	347	*e*P	Pn	16 56 07.6	-0.3
VORR				pmax	pmax		
	comp=Z,25nm,1.4s						
WHFO	Wadi Hawf	17.97	154	P	Pn	16 56 07.0	-2.5
	SNR=12						
BELG	Belogornoye	18.03	4	P	Pn	16 56 08.8	-1.1
	comp=Z,0.9nm,0.3s,baz=142,slow=2.4,SNR=8.3						
BELG				S	S	16 59 33.7	-3.0
	comp=Z,32nm,0.9s,baz=252,slow=23,SNR=6.9						
BELG				LR	LR	17 03 52.6	
	comp=Z,151nm,21.0s,baz=137,slow=40						
	comp=Z,26nm,0.9s						
AB31	Akbulak array	18.22	31		P	16 56 12.7	+0.1
ABKAR	Akbulak array	18.22	31		P	16 56 12.7	+0.1
ABTO	Aybut	18.33	156	P	Pn	16 56 11.4	-2.6
VRI	Vrincioaia	18.37	314	⇑P	P	16 56 15.6	+1.3
VRI	Vrincioaia	18.37	314	P	P	16 56 15.6	+1.3
VRI	Vrincioaia	18.37	314	P	Pn	16 56 13.4	-0.9
	comp=Z,11nm,1.2s						
AKTO	Aktyubinsk	18.40	26	P	P	16 56 14.3	-0.2
	comp=Z,0.2nm,0.3s,baz=209,slow=8.9,SNR=17						
AKTO				S	Sn	16 59 36.6	-3.2
	comp=Z,1.0nm,0.5s,baz=292,slow=12,SNR=1.6						
AKTO				LR	LR	17 05 07.2	
	comp=Z,101nm,21.5s,baz=187,slow=43						
	comp=Z,6.8nm,0.9s						
PLOR	Plostina	18.41	314	⇑P	P	16 56 14.9	+0.1
PLOR	Plostina	18.41	314	P	P	16 56 14.9	+0.1
DMTO	DMTO	18.60	151	P	P	16 56 15.7	-1.3
	SNR=14						
MLR	Muntele Rosu	18.65	312	P	P	16 56 16.9	-0.6
MLR	Muntele Rosu	18.65	312	P	Pn	16 56 17.7	-0.1
	comp=Z,0.3nm,0.3s,baz=87,slow=5.9,SNR=4.9						
MLR				PcP	PcP	17 00 46.8	+1.1
	comp=Z,2.3nm,0.8s,baz=121,slow=4.9,SNR=3.1						
MLR				LR	LR	17 04 49.5	
	comp=Z,196nm,20.6s,baz=132,slow=42						
	comp=Z,2.0nm,0.7s						
MLR	Muntele Rosu	18.65	312	⇑P	Pn	16 56 18.8	+0.9
MLR	Muntele Rosu	18.65	312	P	P	16 56 16.7	-0.8
	comp=Z,11nm,0.9s						
TESR	Tescani	18.77	316	⇑P	Pn	16 56 18.6	-0.5
TESR	Tescani	18.77	316	P	P	16 56 17.9	-0.7
	comp=Z,3μmcomp=Z,17nm,0.9s						
LPSR	Galich'ya Gora	18.80	347	*e*P	P	16 56 17.5	-1.4
LPSR				pmax	pmax		
	comp=Z,102nm,1.3s						
SORM	Soroca	18.82	322	⇓P	P	16 56 18.4	-0.7
SORM	Soroca	18.82	322	P	P	16 56 18.4	-0.7
SORM	Soroca	18.82	322	P	P	16 56 17.9	-1.2
	comp=Z,20nm,0.9s						
VOIR		19.18	311	⇓P	Pn	16 56 25.1	+0.9
VOIR		19.18	311	P	Pn	16 56 25.1	+0.9
DOPR	Dopca	19.23	313	⇓P	Pn	16 56 25.0	+0.3
LIT	Litokhoron	19.25	294	P	P	16 56 23.9	0.0
LIT	Litokhoron	19.25	294	P	P	16 56 23.9	0.0
LIT				pmax	pmax		
	comp=Z,20nm,1.1s						
KBL	Kabul	19.31	83	Pn	Pn	16 56 26.7	+0.8
KBL	Kabul	19.31	83	P	Pn	16 56 26.7	+0.8
KBL				pmax	pmax		
	comp=Z,24nm,1.4s						
ARR	Arges	19.41	311	⇑P	Pn	16 56 27.3	+0.4
VAY	Valandovo	19.43	298	*i* Pg	P	16 56 21.5	-4.4
VAY				*i* Sg		16 56 27.4	
LOT	Lotru	19.99	310	⇓P	Pn	16 56 33.2	-0.7
AK07	Malin Array Si	20.09	328	P	P	16 56 32.1	-0.9
AK09	Malin Array Si	20.10	329	P	P	16 56 32.3	-0.9
AKASG	Malin Array Be	20.19	329	P	P	16 56 32.9	-1.2
AKASG	Malin Array Be	20.19	329	P	P	16 56 33.4	-0.8
	comp=Z,7.7nm,0.8s,baz=142,slow=9.5,SNR=42						
AKASG				S	S	17 00 18.1	-2.2
	comp=Z,0.2nm,0.4s,baz=138,slow=21,SNR=1.6						
AKASG				PcP	PcP	17 00 49.2	+1.0
	comp=Z,0.1nm,0.3s,baz=110,slow=1.8,SNR=4.4						
AKASG				LR	LR	17 05 27.2	
	comp=Z,138nm,18.8s,baz=124,slow=40						
	comp=Z,7.7nm,0.8s						
AKBB	Malin Array Si	20.19	329	P	P	16 56 32.6	-1.5
AKBB				IAmb	IAmb	16 56 43.5	
	comp=Z,39nm,1.1s						
AKBB	Malin Array Si	20.19	329	*c* *i*P	P	16 56 33.0	-1.1
AKBB				pmax	pmax		
	comp=Z,40nm,1.0s						
AKBB	Malin Array Si	20.19	329	P	P	16 56 33.2	-0.9
BURAR	Bucovina Array	20.19	317	P	P	16 56 33.8	-0.5
BURAR				IAmb	IAmb	16 56 37.6	
	comp=Z,20nm,0.7s						
BURAR	Bucovina Array	20.19	317	⇑P	Pn	16 56 35.3	-1.0
BURAR	Bucovina Array	20.19	317	P	Pn	16 56 35.2	-1.0
KIEV	Kiev	20.19	329	P	P	16 56 32.6	-1.5
KIEV				IAmb	IAmb	16 56 43.5	
	comp=Z,35nm,1.1s						
KIEV	Kiev	20.19	329	⇓P	P	16 56 33.6	-0.6
KIEV	Kiev	20.19	329	P	P	16 56 33.5	-0.6
ARCR	ARCALIA	20.41	315	⇓P	Pn	16 56 37.8	-0.8
DJES	Djerdap	20.48	307	⇓P	Pn	16 56 38.5	-1.0
GZR	Gura Zlata	20.60	309	⇓P	P	16 56 38.9	+0.1
GZR	Gura Zlata	20.60	309	P	P	16 56 38.8	+0.1
HERR	Herculane	20.63	307	⇑P	Pn	16 56 40.4	-0.9
BOVS	Bovan	20.68	304	⇓P	P	16 56 40.1	+0.6
BTK	Batken	20.80	67	IAmb	IAmb	16 56 52.7	
	comp=Z,33nm,1.4s						
MARR	Marisel-Cluj	20.95	313	⇓P	P	16 56 43.3	+0.8
MDVR	Moldovita	21.06	307	⇑P	P	16 56 44.9	+1.2
KKAR	Karatay Array	21.20	58	P	P	16 56 46.1	+1.0
KKAR	Karatay Array	21.20	58	P	P	16 56 46.2	+1.0
STNU	Starunia	21.20	319	P	P	16 56 44.2	-0.9
BMR	Baia Mare	21.21	315	⇓P	P	16 56 46.2	+0.9
BMR	Baia Mare	21.21	315	P	P	16 56 46.1	+0.9
DRGR		21.25	312	⇓P	P	16 56 46.6	+0.8
DRGR		21.25	312	P	P	16 56 46.5	+0.8
BZS	Buzias	21.44	309	⇑P	P	16 56 47.4	-0.2
BZS	Buzias	21.44	309	P	P	16 56 47.4	-0.2
OBN	Obninsk	21.64	346	P	P	16 56 48.8	-0.8
	comp=Z,22nm,0.4s,baz=158,slow=5.4,SNR=8.2						
OBN				S	S	17 00 44.7	-4.0
	comp=Z,26nm,0.7s,baz=174,slow=23,SNR=13						
	comp=Z,22nm,0.4s						
OBN	Obninsk	21.64	346	⇑P	P	16 56 47.8	-1.8
OBN	Obninsk	21.64	346	*c* *i*P	P	16 56 48.0	-1.6
OBN				*e*		16 57 09.6	
OBN				*e*PPP	PPP	16 57 21.7	
OBN				pmax	pmax		
	comp=Z,23nm,0.6s						
SIRR	Siria	21.67	310	⇑P	P	16 56 51.3	+1.1
MOS	Moscow	22.03	348	*e*P	P	16 56 54.8	+0.9
MOS				*e*		16 57 15.3	
MOS				*e*S	S	17 00 51.3	-5.1
MOS				pmax	pmax		
	comp=Z,77nm,1.2s						
RNPP8	Varash	22.15	326	P	P	16 56 54.2	-1.0
KOLS	Kolonicke sedl	22.56	317	*e*P	P	16 57 00.9	+1.2
KOLS				pmax	pmax		
	comp=Z,17nm,0.9s						
KOLS	Kolonicke sedl	22.56	317	*e*P	P	16 57 00.8	+1.1
ARSB	Arslanbob	22.61	64	IAmb	IAmb	16 57 19.0	
	comp=Z,35nm,1.3s						
ATD	Arta Tunnel	22.92	187	LR	LR	17 06 41.1	
	comp=Z,11nm,18.0s,baz=358,slow=38						
PSZ	Piszkesteto	23.47	313	P	P	16 57 08.3	-0.8
PSZ	Piszkesteto	23.47	313	⇓P	P	16 57 09.1	0.0
PSZ	Piszkesteto	23.47	313	P	P	16 57 09.1	0.0
MORH	Mrgy, Hungar	23.59	308	⇓P	P	16 57 10.1	-0.1
MNK	Minsk	23.61	334	*i* P	P	16 57 09.3	-1.1
	comp=E,29nm,1.0s						
MNK				*i* P	P	16 57 09.3	-1.1
	comp=N,36nm,1.0s						
MNK				*i* P	P	16 57 09.3	-1.1
	comp=Z,48nm,0.9s,baz=141						
MNK				*i* PP	PnPn	16 57 36.1	-1.3
MNK				*i* PPP	PPP	16 57 43.6	
MNK				*i* S	S	17 01 25.4	+1.1
MNK				*i* SS	SnSn	17 02 04.6	+3.2
MNK				*i* SSS	SSS	17 02 17.0	
MNK				*i* LQ	LQ	17 04 30.3	
MNK				*i* LR	LR	17 06 18.5	
MNK				*i* LRM	MLR	17 07 43.0	
	comp=E,188nm,14.9s						
MNK				*i* LRM	MLR	17 07 58.1	
	comp=Z,150nm,15.3s						
MNK				*i* LRM	MLR	17 08 41.1	
	comp=N,156nm,20.1s						
MNK	Minsk	23.61	334	*i* P	P	16 57 09.3	-1.1
MNK				*i* PPP	PPP	16 57 43.5	
MNK				*i* S	S	17 01 25.4	+1.1
MNK				*i* SS	SnSn	17 02 04.5	+3.2
MNK				*i* SSS	SSS	17 02 17.0	
MNK				pmax	pmax		
	comp=Z,48nm,0.9s						
MNK				pmax	pmax		
	comp=N,36nm,1.0s						
MNK				pmax	pmax		
	comp=E,29nm,1.0s						
MNK				MLR	MLR		
	comp=E,188nm,15.0s						
MNK				MLR	MLR		
	comp=Z,150nm,15.0s						
MNK				MLR	MLR		
	comp=N,156nm,20.0s						
ARTI	Arti	23.65	18	P	P	16 57 11.2	+0.5
ARTI				IAmb	IAmb	16 57 22.1	
	comp=Z,22nm,0.9s						
ARTI	Arti	23.65	18	P	P	16 57 10.9	+0.2
	comp=Z,1.7nm,0.5s,baz=211,slow=6.7,SNR=7.1						
ARTI				S	S	17 01 28.1	+3.2
	comp=Z,0.8nm,0.5s,baz=168,slow=23,SNR=1.4						
	comp=Z,1.7nm,0.5s						
NIE	Niedzica	23.92	316	*e*P	P	16 57 12.3	-1.2
AAK	Ala-Archa	23.95	61	P	P	16 57 13.8	-0.1
	comp=Z,0.9nm,0.4s,baz=256,slow=15,SNR=5.4						
	comp=Z,0.9nm,0.4s						
AAK	Ala-Archa	23.95	61	⇑*e*P	P	16 57 14.7	+0.8
AAK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
LANS	Liptovska Anna	24.27	315	*e*P	P	16 57 17.1	+0.3
LANS				pmax	pmax		
	comp=Z,9.0nm,1.3s						
LANS	Liptovska Anna	24.27	315	*e*P	P	16 57 17.1	+0.3
KIRV	Kirov	24.31	5	P	P	16 57 16.6	-0.3
	comp=Z,12nm,0.6s,baz=209,slow=8.1,SNR=7.0						
KIRV				LR	LR	17 08 37.8	
	comp=Z,127nm,19.9s,baz=191,slow=41						
	comp=Z,12nm,0.6s						
NACGM	Naroch	24.33	333	⇑*i*P	P	16 57 16.5	-0.6
	comp=Z,22nm,0.8s,baz=139						
VYHS	Vyhne	24.36	313	*e*P	P	16 57 17.4	-0.1
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
VYHS	Vyhne	24.36	313	*e*P	P	16 57 17.4	-0.1
SRO	Srobarova	24.39	312	*e*P	P	16 57 18.7	+0.9
SRO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SRO	Srobarova	24.39	312	*e*P	P	16 57 18.7	+0.9
OJC	Ojcow	24.60	318	*e*P	P	16 57 19.2	-0.5
KSH	Kashi	24.71	69	P	P	16 57 20.9	0.0
KSH				sP	sP	16 57 25.6	-1.2
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KSH				LR	LR		
	comp=N,730nm,14.4s						
KSH				LR	LR		
	comp=E,750nm,14.8s						
KSH				LR	LR		
	comp=Z,620nm,15.8s						
BOOM	Boomskoye usch	24.98	62	IAmb	IAmb	16 57 28.7	
	comp=Z,11nm,1.0s						
ISAL	Salakas	25.08	333	*e*P	P	16 57 24.6	+0.7
SUW	Suwalki	25.16	328	*e*P	P	16 57 24.1	-0.5
SUW	Suwalki	25.16	328	*e*P	P	16 57 24.4	-0.1
JAVC	Velka Javorina	25.21	313	*e*P	P	16 57 26.2	+1.0
SMOL	Smolenice	25.21	312	*e*P	P	16 57 25.9	+0.7
SMOL				pmax	pmax		
	comp=Z,13nm,1.3s						
KOGS	Kog	25.23	307	*e*P	P	16 57 25.5	+0.2
MODS	Modra-Piesok	25.25	312	*e*P	P	16 57 25.3	-0.3
MODS				pmax	pmax		
	comp=Z,52nm,1.3s						
MODS	Modra-Piesok	25.25	312	*e*P	P	16 57 25.3	-0.3
MAUC	Maruska	25.33	315	*e*P	P	16 57 27.1	+0.8
OKC	Ostrava-Krasne	25.36	316	AMS	AMS	17 09 20.0	
	comp=Z,200nm,19.1s						
BRVK	Borovoye	25.57	36	P	P	16 57 28.6	+0.2
BRVK	Borovoye	25.57	36	P	P	16 57 28.6	+0.2
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BVAR	Borovoye Array	25.60	36	P	P	16 57 29.3	+0.6
	comp=Z,2.8nm,0.6s,baz=224,slow=8.3,SNR=14						
BVAR				PcP	PcP	17 01 00.4	+1.1
	comp=Z,1.5nm,0.8s,baz=211,slow=2.4,SNR=4.8						
	comp=Z,2.8nm,0.6s						
RONA	Rosalia, Austr	25.61	310	*i* P	P	16 57 29.0	+0.1
	comp=Z,12nm,1.0s						
RONA				*e*PcP	PcP	17 01 00.3	+0.8
	comp=Z,1.4nm,1.2s						
STEB	Steborice	25.61	316	*e*P	P	16 57 29.0	+0.2
BOJS	Bojanci	25.63	305	*e*P	P	16 57 29.0	0.0
MORC	Moravsky Berou	25.68	315	IAmb	IAmb	16 57 36.7	
	comp=Z,13nm,1.0s						
MORC	Moravsky Berou	25.68	315	*e*P	P	16 57 29.5	0.0
MORC	Moravsky Berou	25.68	315	⇓P	P	16 57 29.7	+0.2
MORC	Moravsky Berou	25.68	315	P	P	16 57 29.7	+0.2
PABE	Paberze	25.86	331	*e*P	P	16 57 30.5	-0.5
ARSA	Arzberg	25.96	309	*i* P	P	16 57 32.0	0.0
	comp=Z,6.3nm,1.1s						
ARSA				*e*PcP	PcP	17 01 01.5	+1.3
	comp=Z,4.8nm,1.4s						
CONA	Conrad Observa	25.97	310	*i* P	P	16 57 31.9	-0.3
	comp=Z,12nm,1.4s						
VRAC	Vranov	26.04	314	P	P	16 57 33.0	+0.3
	comp=Z,6.0nm,0.8s,baz=105,slow=8.7,SNR=10						
VRAC				LR	LR	17 09 46.9	
	comp=Z,224nm,18.5s,baz=123,slow=41						
	comp=Z,6.0nm,0.8s						
VRAC	Vranov	26.04	314	*e*P	P	16 57 33.2	+0.5
VRAC	Vranov	26.04	314	⇓P	P	16 57 33.0	+0.3
VRAC	Vranov	26.04	314	P	P	16 57 33.0	+0.3
KRUC	Moravsky	26.06	313	*e*P	P	16 57 33.1	+0.2
SOKA	Soboth	26.10	307	*i* P	P	16 57 33.1	-0.3
	comp=Z,4.9nm,0.9s						
SOKA				*e*PcP	PcP	17 01 02.3	+1.6
	comp=Z,4.4nm,1.0s						
VSVD	Vaisvydziai	26.22	332	*e*P	P	16 57 34.3	+0.1
KRLC	Kraliky	26.25	315	*e*P	P	16 57 34.5	-0.2
KRLC	Kraliky	26.25	315	*e*P	P	16 57 34.5	-0.2
OBKA	Obir	26.37	307	*i* P	P	16 57 36.5	+0.7

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               comp=Z,8.6nm,1.2s
CRNS  Crni Vrh           26.45 306 i P    P      16 57 36.5  0.0
DPC   Dobruska-Polom     26.64 316 eP     P      16 57 37.4 -0.7
DPC                                  AMS  AMS    17 11 10.0
               comp=Z,200nm,14.2s
DPC   Dobruska-Polom     26.64 316 eP     P      16 57 37.4 -0.7
DPC                                  MLR  MLR
               comp=Z,200nm,14.2s
TREC  Trest              26.70 313   AMS  AMS    17 11 10.0
               comp=Z,200nm,12.7s
KLMR  Klimovskoe         26.75 353 eP     P      16 57 37.1 -1.8
KLMR                                 pmax pmax
               comp=Z,16nm,0.9s
OSTC  Ostas              26.79 316 eP     P      16 57 39.6 +0.1
OSTC  Ostas              26.79 316 eP     P      16 57 39.6 +0.1
CADS  Cadrg              26.84 306 eP     P      16 57 39.5 -0.5
KSP   Ksiaz              26.87 317 eP     P      16 57 40.2 +0.1
UPC   Upice              26.88 316   AMS  AMS    17 11 20.0
               comp=Z,200nm,14.6s
CHVC  Chvalec            26.89 316 eP     P      16 57 39.9 -0.5
CHVC                                 AMS  AMS    17 10 10.0
               comp=Z,200nm,16.7s
CHVC  Chvalec            26.89 316 eP     P      16 57 39.9 -0.5
CHVC                                 MLR  MLR
               comp=Z,200nm,16.7s
MOA   Molln              26.95 309 i P    P      16 57 41.4 +0.4
               comp=Z,10nm,1.0s
MYKA  Terra Mystica      27.01 307 epP    pP     16 57 43.0 -2.7
               comp=Z,2.4nm,0.4s
PBUR  Paburge            27.05 330 eP     P      16 57 41.7  0.0
VSU   Vasula             27.16 338d iP    P      16 57 41.1 -1.5
VSU                                  pmax pmax
               comp=Z,29nm,1.0s
VSU   Vasula             27.16 338 eP     P      16 57 40.9 -1.7
CKRC  Cesky Krumlov      27.25 311 eP     P      16 57 47.1 +3.5
CKRC                                 AMS  AMS    17 11 40.0
               comp=Z,200nm,8.1s
CKRC  Cesky Krumlov      27.25 311 eP     P      16 57 47.1 +3.5
CKRC                                 MLR  MLR
               comp=Z,200nm,8.1s
BIOA  Bad Ischl, Aus     27.31 309 i P    P      16 57 44.4 +0.2
               comp=Z,10nm,1.0s
BIOA                               i PcP  PcP    17 01 03.6 +0.2
               comp=Z,3.8nm,1.2s
GOPC  GO Pecny, Ondr     27.36 314   AMS  AMS    17 12 20.0
               comp=Z,300nm,12.5s
PRU   Pruhonice          27.53 314   AMS  AMS    17 12 20.0
               comp=Z,300nm,14.9s
ZVC   Zvikov             27.54 313 eP     P      16 57 46.3 +0.1
ZVC                                  AMS  AMS    17 10 20.0
               comp=Z,100nm,15.9s
PRA   Prague             27.63 314   AMS  AMS    17 12 30.0
               comp=Z,200nm,17.4s
GERES GERESS Array B     27.63 311   P    P      16 57 46.9 -0.3
               comp=Z,1.1nm,0.8s,baz=122,slow=9.6,SNR=8.0
GERES                                PcP  PcP    17 01 05.4 +1.1
               comp=Z,0.9nm,0.5s,baz=151,slow=3.0,SNR=5.7
               comp=Z,1.1nm,0.8s
ABTA  Abfaltersbach      27.79 306 i P    P      16 57 48.8 +0.2
               comp=Z,7.9nm,1.7s
ABTA                               i PcP  PcP    17 01 05.4 +0.7
               comp=Z,6.1nm,1.1s
KHC   Kasperske Hory     27.81 312 eP     P      16 57 52.4 +3.7
KHC                                  AMS  AMS    17 12 30.0
               comp=Z,200nm,15.8s
KHC   Kasperske Hory     27.81 312 eP     P      16 57 52.4 +3.7
KHC                                  MLR  MLR
               comp=Z,200nm,15.8s
LESA  Schwarzleotal      27.86 308 i P    P      16 57 48.5 -0.7
               comp=Z,2.7nm,0.6s
LESA                               i PcP  PcP    17 01 05.2 +0.4
               comp=Z,2.2nm,0.4s
BRG   Berggiesshubel     28.23 315 eP     P      16 57 51.8 -0.6
BRG                                  Amp         16 57 53.0
               comp=Z,3.4nm,1.1s
BRG   Berggiesshubel     28.23 315   P    P      16 57 57.8 +5.4
BRG                                  Amp         16 57 58.3
               comp=Z,2.8nm,0.9s
WTTA  Wattenberg         28.50 307 i P    P      16 57 54.3 -0.7
               comp=Z,5.2nm,0.9s
WTTA                               ePcP   PcP    17 01 07.8 +1.3
               comp=Z,6.0nm,0.8s
WATA  Walderalm          28.56 307 i P    P      16 57 54.9 -0.6
               comp=Z,8.5nm,1.0s
WATA                               i PcP  PcP    17 01 07.3 +0.7
               comp=Z,3.7nm,0.6s
SQTA  Sankt Quirin       28.77 307 i P    P      16 57 56.6 -0.7
               comp=Z,1.6nm,0.5s
SQTA                               i PcP  PcP    17 01 07.6 +0.5
               comp=Z,5.3nm,0.8s
KURBB Kurchatov Arra     28.86  46   P    P      16 57 59.4 +1.4
               comp=Z,4.2nm,0.9s,baz=254,slow=9.3,SNR=20
KURBB                                PcP  PcP    17 01 07.4 +0.3
               comp=Z,2.4nm,1.0s,baz=243,slow=2.8,SNR=9.0
KURBB                                ScP  ScP    17 04 47.6 -0.6
               comp=Z,1.1nm,0.9s,baz=254,slow=4.0,SNR=7.9
KURBB                                LR   LR     17 11 52.3
               comp=Z,174nm,20.6s,baz=180,slow=42
               comp=Z,4.2nm,0.9s
MOTA  Moosalm            28.87 307 eP     P      16 57 57.2 -1.1
               comp=Z,5.4nm,0.7s
MOTA                               ePcP   PcP    17 01 08.0 +0.6
               comp=Z,4.3nm,1.1s
KURK  Kurchatov          28.95  46   P    P      16 57 59.8 +1.1
KURK  Kurchatov          28.95  46   P    P      16 57 59.4 +0.7
KURK                                             17 01 07.4
CLL   Collm              28.95 316 i P    P      16 57 57.7 -1.0
CLL                                i             16 58 03.0
CLL                                  pmax pmax
               comp=Z,9.0nm,1.4s
CLL   Collm              28.95 316 i P    P      16 57 57.7 -1.0
               comp=Z,9.0nm,1.4s
CLL                                i x    x      16 58 03.0
CLL                                  AMS  AMS    17 11 00.0
               comp=Z,200nm,19.2s
FETA  Feichten           29.04 306 i P    P      16 57 59.4 -0.4
               comp=Z,4.5nm,0.8s
FETA                               i PcP  PcP    17 01 08.5 +0.6
               comp=Z,5.7nm,1.0s
RETA  Reutte             29.13 307 i P    P      16 57 59.8 -0.7
               comp=Z,1.5nm,0.5s
RETA                               ePcP   PcP    17 01 08.8 +0.8
               comp=Z,2.5nm,0.9s
MEF   Metsahovi          29.28 338 eP     P      16 58 00.9 -0.7
GRF   Grafenberg Arr     29.45 312 eP     P      16 58 02.7 -0.5
               comp=Z,6.8nm,1.1s,baz=108,slow=10
DAVOX Davos/Dischmat     29.56 306   P    P      16 58 04.3 -0.2
               comp=Z,1.4nm,0.5s,baz=126,slow=14,SNR=3.8
               comp=Z,1.4nm,0.5s
DAVA  Damuels            29.67 307 i P    P      16 58 04.5 -0.9
               comp=Z,4.5nm,0.6s
DAVA                               ePcP   PcP    17 01 10.5 +1.1
               comp=Z,2.5nm,0.5s
BSD   Bornholm Skovb     29.67 324 eP     P      16 58 02.6 -2.5
BSD                                  IAmb IAmb   16 58 07.4
               comp=Z,7.7nm,0.9s
FIA1  FINESS Array S     29.80 341   P    P      16 58 05.2 -1.0
FINES FINESS Array B     29.80 341   P    P      16 58 04.8 -1.3
FINES FINESS Array B     29.80 341   P    P      16 58 05.5 -0.6
               comp=Z,2.8nm,0.4s,baz=146,slow=11,SNR=48
FINES                                PcP  PcP    17 01 09.5 +0.2
               comp=Z,0.8nm,0.5s,baz=152,slow=3.3,SNR=1.9
FINES                                LR   LR     17 11 53.7
               comp=Z,215nm,18.6s,baz=148,slow=40
               comp=Z,2.8nm,0.4s
BLEU  Blekinge           29.89 326 i P    P      16 58 06.4 -0.7
MAKZ  Makanchi           29.98  55   P    P      16 58 08.7 +0.7
MAKZ  Makanchi           29.98  55   P    P      16 58 08.7 +0.7
MAKZ                                 pmax pmax
               comp=Z,3.0nm,0.9s
MK31  Makanchi Array     30.19  55deP     P      16 58 11.1 +1.3
MKAR  Makanchi Array     30.19  55   P    P      16 58 10.9 +1.1
MKAR  Makanchi Array     30.19  55   P    P      16 58 11.2 +1.3
               comp=Z,1.9nm,0.6s,baz=251,slow=7.4,SNR=21
MKAR                                 PcP  PcP    17 01 10.4 -0.3
               comp=Z,0.7nm,0.8s,baz=282,slow=0.7,SNR=2.6
MKAR                                 ScP  ScP    17 04 52.1 -0.5
               comp=Z,1.1nm,1.1s,baz=251,slow=4.4,SNR=4.2
MKAR                                 LR   LR     17 11 56.8
               comp=Z,58nm,19.4s,baz=262,slow=40
               comp=Z,1.9nm,0.6s
KEF   Keuruu             30.72 341 eP     P      16 58 14.1 -0.2
RAF   Rauma              30.73 337 eP     P      16 58 14.4 +0.1
DEL   Delary             30.89 325 i P    P      16 58 15.0 -0.8
BNI   Bardonecchia       31.50 301   P    P      16 58 20.8 -0.8
BNI   Bardonecchia       31.50 301   P    P      16 58 20.8 -0.8
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BNI                                  pmax pmax
               comp=Z,19nm,1.0s
FABU  Falkenberg         31.71 326 i P    P      16 58 22.9 -0.1
BORU  Boraas             32.02 327 i P    P      16 58 25.9 +0.1
LODK  Lodwar             32.28 199   P    P      16 58 30.4 +1.8
ONAU  Onsala             32.29 326 i P    P      16 58 27.3 -0.8
HFS   Hagfors            33.04 331   P    P      16 58 34.3 -0.4
               comp=Z,22nm,0.8s,baz=128,slow=9.6,SNR=55
HFS                                  LR   LR     17 15 18.2
               comp=Z,89nm,18.4s,baz=130,slow=42
               comp=Z,22nm,0.8s
ZALV  Zalesovo Beam      33.64  42   P    P      16 58 40.4 +0.4
ZALV  Zalesovo Beam      33.64  42   P    P      16 58 40.9 +0.9
               comp=Z,0.9nm,0.3s,baz=260,slow=8.9,SNR=8.2
ZALV                                 LR   LR     17 14 31.1
               comp=Z,98nm,20.8s,baz=225,slow=40
               comp=Z,0.9nm,0.3s
WMQ   Urumqi             33.66  61 eP     P      16 58 43.5 +3.1
OSL   Oslo               34.16 329 eP     P      16 58 44.2 -0.2
KONO  Kongsberg          34.49 328   P    P      16 58 45.8 -1.5
KONO                                 IAmb IAmb   16 58 47.3
               comp=Z,8.9nm,0.8s
KONO  Kongsberg          34.49 328   P    P      16 58 45.8 -1.5
KONO                                 pmax pmax
               comp=Z,9.0nm,0.9s
KONO  Kongsberg          34.49 328 eP     P      16 58 46.4 -0.9
NB2   NORSAR Subarra     34.57 331   P    P      16 58 46.7 -1.4
               comp=Z,8.3nm,1.1s,baz=124,slow=8.6
NB2   NORSAR Subarra     34.57 331   P    P      16 58 46.7 -1.4
               baz=124,slow=8.6
NOA   NORSAR Array B     34.57 331   P    P      16 58 46.6 -1.4
               comp=Z,2.4nm,0.7s,baz=126,slow=8.7,SNR=12
NOA                                  LR   LR     17 14 12.4
               comp=Z,104nm,19.1s,baz=140,slow=39
               comp=Z,2.4nm,0.7s
NAO01 NORSAR Array S     34.59 331   IAmb IAmb   16 58 47.5
               comp=Z,11nm,1.1s
SKAR  Skarslia           35.58 329 eP     P      16 58 58.6 +1.9
BLS5  Blasjo             35.78 326 eP     P      16 58 58.7 +0.2
ODD1  Odda               35.93 327 eP     P      16 59 00.8 +1.0
BER   Bergen             36.72 328 eP     P      16 59 07.2 +0.8
ARA0  ARCESS Array S     36.90 348 eP     P      16 59 08.0 +0.1
ARCES ARCESS Array B     36.90 348   P    P      16 59 07.4 -0.5
ARCES                                IAmb IAmb   16 59 08.9
               comp=Z,12nm,1.0s
ARCES ARCESS Array B     36.90 348   P    P      16 59 07.2 -0.6
               comp=Z,11nm,0.9s,baz=156,slow=9.2,SNR=32
ARCES                                LR   LR     17 15 36.3
               comp=Z,125nm,18.3s,baz=140,slow=39
               comp=Z,11nm,0.9s
ARCES ARCESS Array B     36.90 348   P    P      16 59 07.4 -0.5
ARCES                                pmax pmax
               comp=Z,12nm,1.0s
STOK  Stokkvaagen        37.26 339 eP     P      16 59 10.8 -0.1
SUE   Sulen              37.28 328 eP     P      16 59 14.0 +2.9
STEI  Steigen            37.77 342 eP     P      16 59 11.4 -3.9
JETT  Jettan, Norway     37.86 346 eP     P      16 59 16.1 +0.1
TRO   Tromso             38.22 345 eP     P      16 59 18.9 -0.1
EKA   Eskdalemuir Ar     39.38 317   P    P      16 59 28.2 -0.7
               comp=Z,2.7nm,0.6s,baz=103,slow=9.5,SNR=14
               comp=Z,2.7nm,0.6s
ESDC  Sonseca Array      39.52 293   P    P      16 59 29.4 -1.0
ESDC  Sonseca Array      39.52 293   P    P      16 59 29.8 -0.6
               comp=Z,2.7nm,0.9s,baz=64,slow=8.5,SNR=26
ESDC                                 PcP  PcP    17 01 39.1 +1.2
               comp=Z,1.9nm,0.9s,baz=53,slow=3.0,SNR=7.8
ESDC                                 LR   LR     17 16 55.0
               comp=Z,89nm,18.7s,baz=112,slow=38
               comp=Z,2.7nm,0.9s
PBRG  Braganca           41.32 296 eP     P      16 59 45.5 +0.3
MDT   Midelt             41.51 282   LR   LR     17 22 10.0
               comp=Z,51nm,18.0s,baz=69,slow=44
MVO   Moncorvo           41.62 295 eP     P      16 59 47.5 -0.3
MVO                                i Amb         16 59 53.5
               comp=Z,28nm,1.8s
PALK  Pallekele          42.10 122   LR   LR     17 17 50.8
               comp=Z,129nm,20.3s,baz=304,slow=37
PBAR  Barrancos          42.14 291 eP     P      16 59 51.8 -0.1
PBAR                               i Amb         17 00 02.3
               comp=Z,12nm,1.6s
POLO  Lamas de Olo       42.16 296 eP     P      16 59 51.7 -0.5
PCBR  Castelo Branco     42.17 293 eP     P      16 59 52.0 -0.1
PCBR                               i Amb         16 59 58.6
               comp=Z,19nm,1.6s
PMRV  Marv??o            42.17 293 eP     P      16 59 52.4 +0.2
PESTR Estremoz           42.43 292 eP     P      16 59 54.0 -0.3
PBEJ  Beja               42.81 291 eP     P      16 59 58.4 +1.0
GTA   Gaotai             43.07  67 eP     P      17 00 00.8 +1.1
GTA                                  pP   sP     17 00 05.5 -0.2
GTA                                  pmax pmax
               comp=Z,6.0nm,1.5s
GTA                                  LR   LR
               comp=N,170nm,12.0s
GTA                                  LR   LR
               comp=E,140nm,13.8s
GTA                                  LR   LR
               comp=Z,150nm,16.0s
TORD  Torodi Ar. Bea     44.99 253   P    P      17 00 14.9 -0.3
TORD                                 IAmb IAmb   17 00 17.1
               comp=Z,14nm,1.4s
TORD  Torodi Ar. Bea     44.99 253   P    P      17 00 15.4 +0.2
               comp=Z,4.8nm,0.8s,baz=45,slow=10.0,SNR=6.9
               comp=Z,4.8nm,0.8s
SPB2  Spitsbergen Ar     45.63 352   P    P      17 00 19.7 +0.2
SPITS Spitsbergen Ar     45.63 352   P    P      17 00 20.0 +0.5
               comp=Z,9.1nm,0.7s,baz=138,slow=9.0,SNR=18
               comp=Z,9.1nm,0.7s
SPITS Spitsbergen Ar     45.63 352   P    P      17 00 20.0 +0.5
SONM  Songino Array      46.55  54   P    P      17 00 26.4 -0.8
               comp=Z,0.5nm,0.5s,baz=258,slow=7.2,SNR=2.4
SONM                                 PcP  PcP    17 02 01.8 +0.4
               comp=Z,0.4nm,0.6s,baz=251,slow=4.4,SNR=4.4
SONM                                 LR   LR     17 23 36.8
               comp=Z,107nm,20.1s,baz=278,slow=41
               comp=Z,0.5nm,0.5s
KBS   Kingsbay           46.76 352   P    P      17 00 28.3  0.0
KBS   Kingsbay           46.76 352⇓eP     P      17 00 28.4  0.0
KBS                                  pmax pmax
               comp=Z,7.0nm,1.3s
ULN   Ulaanbaatar        46.99  54d iP    P      17 00 32.1 +1.4
ULN                                  pmax pmax
               comp=Z,6.0nm,1.1s
PZH   PanZhiHua          48.49  83   P    P      17 00 43.5 +0.8
PZH                                  pmax pmax
               comp=Z,6.0nm,0.7s
PZH                                  pmax pmax
               comp=Z,100nm,4.4s
CHTO  Chiang Mai         49.60  94   P    P      17 00 50.2 -0.9
CHTO                                 IAmb IAmb   17 00 57.4
               comp=Z,10nm,1.4s
CHTO  Chiang Mai         49.60  94   P    P      17 00 50.2 -0.9
CHTO                                 pmax pmax
               comp=Z,10.0nm,1.4s
CM31  Chiang Mai Arr     49.77  94   P    P      17 00 52.3 -0.2
CMAR  Chiang Mai Arr     49.77  94   P    P      17 00 52.1 -0.3
               comp=Z,1.5nm,0.7s,baz=292,slow=8.1,SNR=15
CMAR                                 LR   LR     17 26 38.3
               comp=Z,61nm,19.2s,baz=295,slow=42
               comp=Z,1.5nm,0.7s
XAN   Xi'an              51.54  71 ⇑P     P      17 01 06.0 +0.4
XAN                                  pP   sP     17 01 12.0 +0.3
XAN                                  pmax pmax
               comp=Z,16nm,0.8s
LSZ   Lusaka             52.13 201   LR   LR     17 25 34.6
               comp=Z,146nm,18.8s,baz=36,slow=39
DBIC  Dimbokro           54.02 251   P    P      17 01 24.2 +0.1
               comp=Z,5.7nm,0.5s,baz=59,slow=7.5,SNR=8.7
DBIC                                 LR   LR     17 27 30.0
               comp=Z,116nm,18.0s,baz=105,slow=40
               comp=Z,5.7nm,0.5s
TIXI  Tiksi              55.64  22   P    P      17 01 34.0 -1.0
TIXI                                 IAmb IAmb   17 01 36.6
               comp=Z,10nm,1.4s
TIXI  Tiksi              55.64  22   LR   LR     17 30 02.9
               comp=Z,57nm,19.3s,baz=321,slow=41
TIXI  Tiksi              55.64  22   P    P      17 01 34.0 -1.0
TIXI                                 pmax pmax
               comp=Z,10.0nm,1.4s
YAK   Yakutsk            57.55  34   LR   LR     17 30 43.4
               comp=Z,122nm,18.2s,baz=270,slow=40
YAK   Yakutsk            57.55  34⇓eP     P      17 01 48.8  0.0
YAK                                  pmax pmax
               comp=Z,3.0nm,0.6s
HEH   HeiHe              59.52  47 eP     P      17 02 02.9 +0.2
HEH                                  pmax pmax
               comp=Z,8.0nm,0.8s
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NJ2   Nanjing            60.02  70 eP     P      17 02 07.1 +0.7
NJ2                                  pmax pmax
               comp=Z,9.0nm,0.5s
KDWAN Kaudwane           60.83 202   P    P      17 02 13.3 +1.3
KLR   Kul'dur            62.52  47   LR   LR     17 32 54.2
               comp=Z,82nm,18.7s,baz=280,slow=39
KLR   Kul'dur            62.52  47deP     P      17 02 23.4 +0.3
KLR                                  pmax pmax
               comp=Z,7.0nm,1.7s
EUNU  Eureka             62.76 352   P    P      17 02 24.5 +0.2
KSAR  Wonju Array Be     64.58  61   P    P      17 02 36.3 -0.6
KSAR  Wonju Array Be     64.58  61   P    P      17 02 36.3 -0.6
KSRS  Korea Array        64.61  61   P    P      17 02 37.3 +0.2
               comp=Z,1.2nm,0.7s,baz=279,slow=6.6,SNR=6.7
               comp=Z,1.2nm,0.7s
USA0B Ussuriysk Arra     64.62  53⇓eP     P      17 02 35.6 -1.5
USRK  Ussuriysk Ar.      64.62  53   P    P      17 02 37.0 -0.1
               comp=Z,2.6nm,0.6s,baz=285,slow=5.6,SNR=9.3
USRK                                 LR   LR     17 34 28.7
               comp=Z,84nm,18.5s,baz=262,slow=40
               comp=Z,2.6nm,0.6s
USRK  Ussuriysk Ar.      64.62  53   P    P      17 02 37.0 -0.1
BOSA  Boshof             65.58 200   P    P      17 02 43.9 +0.5
               comp=Z,4.7nm,0.8s,baz=33,slow=5.2,SNR=7.3
               comp=Z,4.7nm,0.8s
SEY   Seymchan           66.97  28   LR   LR     17 37 39.9
               comp=Z,70nm,18.4s,baz=304,slow=41
SEY   Seymchan           66.97  28deP     P      17 02 52.0 +0.1
SEY                                  pmax pmax
               comp=Z,11nm,1.4s
MA2   Magadan            68.02  32   LR   LR     17 36 52.6
               comp=Z,74nm,18.4s,baz=296,slow=40
BILL  Bilibino           68.73  20   P    P      17 03 03.2 +0.4
BILL  Bilibino           68.73  20c iP    P      17 03 03.0 +0.1
BILL                                 pmax pmax
               comp=Z,11nm,1.1s
FRB   Frobisher Bay      69.31 334   LR   LR     17 34 15.4
               comp=Z,78nm,18.0s,baz=62,slow=37
ILON  Igloolik, Nuna     69.64 343   IAmb IAmb   17 03 09.2
               comp=Z,6.0nm,0.8s
LEM   Lembang            71.40 112   LR   LR     17 37 17.9
               comp=Z,124nm,18.0s,baz=166,slow=38
ASAJ  Asahikawa          71.46  49   LR   LR     17 38 30.4
               comp=Z,40nm,21.6s,baz=300,slow=39
MJAR  Matsushiro Arr     72.33  58   P    P      17 03 25.5 +0.1
               comp=Z,1.8nm,1.1s,baz=310,slow=6.0,SNR=5.2
MJAR                                 LR   LR     17 39 17.6
               comp=Z,59nm,18.4s,baz=298,slow=39
               comp=Z,1.8nm,1.1s
A36M  Sachs Harbour      73.69 357   P    P      17 03 32.3 -0.6
               baz=7.9,SNR=8.1
A22K  Sinclair Lake      73.85   7   P    P      17 03 33.8  0.0
               baz=342
A19K  Wainwright         73.90   9   P    P      17 03 34.7 +0.6
               baz=337
SCHQ  Schefferville      73.97 326   LR   LR     17 35 10.4
               comp=Z,32nm,20.6s,baz=5.0,slow=35
B20K  Meade River        74.56   8   P    P      17 03 37.9 -0.1
               baz=341
B18K  Kokolik River      74.58  10   P    P      17 03 37.7 -0.3
               baz=337
B22K  Teshekpuk Lake     74.64   7   P    P      17 03 38.6 +0.3
               baz=344
PETK  Petropavlovsk-     74.84  35   P    P      17 03 39.1 -0.7
               comp=Z,2.2nm,1.0s,baz=316,slow=4.0,SNR=6.9
PETK                                 LR   LR     17 40 29.5
               comp=Z,50nm,18.6s,baz=324,slow=39
               comp=Z,2.2nm,1.0s
C16K  Lisburne Hills     75.03  11   P    P      17 03 41.2 +0.5
               baz=334
C19K  Lookout Ridge      75.12   9   P    P      17 03 41.4 +0.1
               baz=339
C17K  DeLong Mountai     75.19  11   P    P      17 03 41.7 +0.1
               baz=336
B21K  Ikpikpuk River     75.21   7   IAmb IAmb   17 03 43.6
               comp=Z,10nm,1.2s
B21K  Ikpikpuk River     75.21   7   P    P      17 03 42.0 +0.4
               baz=343
C18K  Utukok River       75.33  10   P    P      17 03 42.5  0.0
               baz=337
C23K  Itkillik River     75.38   6   P    P      17 03 42.9 +0.2
               baz=346
C21K  Knifeblade Rid     75.64   7   P    P      17 03 44.4 +0.2
               baz=343
C24K  Franklin Bluff     75.64   5   P    P      17 03 44.9 +0.8
               baz=348
C26K  Camden Bay         75.69   4   P    P      17 03 45.1 +0.7
               baz=351
D20K  Etivluk River      75.86   8   P    P      17 03 45.9 +0.4
               baz=341
D19K  Kuna River         75.88   9   P    P      17 03 46.0 +0.4
               baz=340
D17K  Noatak River       75.92  11   P    P      17 03 46.5 +0.7
               baz=336
C27K  Jago River         76.04   3   IAmb IAmb   17 03 48.5
               comp=Z,9.0nm,1.1s
C27K  Jago River         76.04   3   P    P      17 03 46.4 -0.1
               baz=352
D22K  Ayikyak River      76.12   7   P    P      17 03 47.4 +0.5
D22K                                 IAmb IAmb   17 03 48.9
               comp=Z,6.2nm,1.1s
D22K  Ayikyak River      76.12   7   P    P      17 03 47.1 +0.2
               baz=344
D24K  Happy Valley       76.19   5   P    P      17 03 47.2 -0.1
               baz=348
D25K  Kavik River        76.19   4   IAmb IAmb   17 03 49.1
               comp=Z,7.5nm,1.1s
D25K  Kavik River        76.19   4   P    P      17 03 47.6 +0.2
               baz=350,SNR=7.1
D23K  Nanushuk River     76.22   6   IAmb IAmb   17 03 54.2
               comp=Z,8.6nm,1.2s
D23K  Nanushuk River     76.22   6   P    P      17 03 48.0 +0.5
               baz=346
E20K  Nigu River         76.34   8   P    P      17 03 48.4 +0.1
               baz=342
E21K  Killik River       76.41   7   IAmb IAmb   17 03 50.0
               comp=Z,8.2nm,1.3s
E21K  Killik River       76.41   7   P    P      17 03 48.8 +0.1
               baz=344
D28M  Stokes Point       76.51   2   P    P      17 03 49.4 +0.3
               baz=356
D27M  Malcolm River      76.53   2   IAmb IAmb   17 03 55.9
               comp=Z,5.8nm,1.1s
D27M  Malcolm River      76.53   2   P    P      17 03 49.5 +0.1
               baz=354
E18K  Tukpahlearik C     76.55  10   P    P      17 03 49.4  0.0
               baz=338
TOLK  Toolik Lake Re     76.63   6   P    P      17 03 50.0 +0.1
               baz=347,SNR=7.6
E17K  Hotham Inlet       76.68  11   P    P      17 03 50.6 +0.4
               baz=337
E22K  Anaktuvuk Pass     76.93   7   IAmb IAmb   17 03 53.0
               comp=Z,4.0nm,0.9s
E22K  Anaktuvuk Pass     76.93   7   P    P      17 03 51.4 -0.2
               baz=345,SNR=6.7
E19K  Redstone River     76.97   9   P    P      17 03 51.9 +0.1
               baz=341
BLKN  Baker Lake         77.06 344   P    P      17 03 51.9 -0.3
BLKN                                 IAmb IAmb   17 03 53.1
               comp=Z,8.5nm,1.0s
E23K  Chandalar          77.20   6   P    P      17 03 53.2 +0.1
               baz=347
E28M  Babbage River      77.22   2   IAmb IAmb   17 03 54.9
               comp=Z,8.7nm,1.1s
E28M  Babbage River      77.22   2   P    P      17 03 53.6 +0.5
               baz=356,SNR=6.3
E24K  Your Creek         77.27   5   IAmb IAmb   17 03 55.4
               comp=Z,10nm,1.4s
E24K  Your Creek         77.27   5   P    P      17 03 53.7 +0.2
               baz=348,SNR=6.6
F17K  Baldwin Pennin     77.36  11   P    P      17 03 54.4 +0.5
               baz=338
E25K  Arctic Village     77.43   4   IAmb IAmb   17 03 56.0
               comp=Z,7.5nm,1.1s
E25K  Arctic Village     77.43   4   P    P      17 03 54.5 +0.1
               baz=351,SNR=7.3
F18K  Selawik            77.45  10   P    P      17 03 54.5  0.0
               baz=339
E29M  Blow River         77.47   1   P    P      17 03 54.5 -0.1
               baz=357,SNR=12
F19K  Shaleruckik Mo     77.50   9   P    P      17 03 54.2 -0.5
               baz=340
F22K  John River         77.50   7   P    P      17 03 54.7 -0.1
               baz=345
F20K  Avaraart Lake      77.55   8   IAmb IAmb   17 03 56.5
               comp=Z,5.3nm,1.1s
F20K  Avaraart Lake      77.55   8   P    P      17 03 54.9 -0.1
               baz=342,SNR=5.1
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E27K  Coleen River     77.57   3  P      P      17 03 55.1  0.0
      baz=354,SNR=9.4
INK   Inuvik           77.59 360  P      P      17 03 55.3 +0.1
INK                               IAmb   IAmb   17 03 55.9
      comp=Z,6.2nm,1.0s
INK   Inuvik           77.59 360  P      P      17 03 55.3 +0.1
INK                               pmax   pmax
      comp=Z,6.0nm,1.0s
INK   Inuvik           77.59 360  P      P      17 03 55.3 +0.1
      baz=0.8
F21K  Alatna River     77.64   7  IAmb   IAmb   17 03 57.4
      comp=Z,7.3nm,1.1s
F21K  Alatna River     77.64   7  P      P      17 03 55.7 +0.1
      baz=344,SNR=7.4
DAV   Davao City (W)   77.77  90  LR     LR     17 41 05.3
      comp=Z,42nm,18.1s,baz=7.0,slow=38
F24K  Squaw Lake       77.87   5  IAmb   IAmb   17 03 58.9
      comp=Z,5.5nm,1.2s
F24K  Squaw Lake       77.87   5  P      P      17 03 56.9 +0.1
      baz=349
F26K  Sheenjek River   77.94   4  P      P      17 03 57.7 +0.4
      baz=352
F25K  Christian Rive   77.95   4  IAmb   IAmb   17 03 59.4
      comp=Z,6.5nm,1.2s
F25K  Christian Rive   77.95   4  P      P      17 03 57.6 +0.3
      baz=350,SNR=6.2
COLD  Coldfoot         77.96   6  IAmb   IAmb   17 03 59.5
      comp=Z,5.6nm,1.0s
COLD  Coldfoot         77.96   6  P      P      17 03 57.6 +0.3
      baz=347,SNR=5.3
G22K  Bettles          78.14   7  P      P      17 03 58.6 +0.3
      baz=346
G16K  Koyuk River      78.16  12  P      P      17 03 58.2 -0.2
      baz=337
BMAR  Burnt Mountain   78.17   4  P      P      17 03 59.0 +0.4
G15K  Niukluk          78.23  12  P      P      17 03 58.8  0.0
      baz=335
G19K  Purcell Mounta   78.24   9  IAmb   IAmb   17 04 00.4
      comp=Z,6.6nm,0.8s
G19K  Purcell Mounta   78.24   9  P      P      17 03 58.7 -0.2
      baz=341,SNR=5.8
G18K  Tagagawik        78.26  10  P      P      17 03 58.6 -0.4
      baz=340
F30M  Barrier River    78.28   1  P      P      17 03 58.9 -0.2
      baz=359,SNR=13
G21K  Allakaket        78.32   8  P      P      17 03 59.5 +0.1
      baz=344
G17K  Kiwalik Mounta   78.33  11  P      P      17 03 59.0 -0.4
      baz=338
ANM   Nome             78.38  13  P      P      17 03 59.4 -0.3
      baz=334
F31M  Tsiigehtchic     78.46 360  P      P      17 04 00.1 +0.1
      baz=0.6
G23K  Bananza Creek    78.48   6  P      P      17 04 00.4 +0.1
      baz=347
G26K  Porcupine Rive   78.70   4  P      P      17 04 02.0 +0.6
      baz=352,SNR=7.5
G24K  Hadweenzic Riv   78.70   5  IAmb   IAmb   17 04 03.6
      comp=Z,8.2nm,1.2s
G24K  Hadweenzic Riv   78.70   5  P      P      17 04 01.9 +0.5
      baz=349,SNR=5.8
G25K  Bearman Lake     78.74   5  P      P      17 04 02.1 +0.5
      baz=350
IMAR  Indian Mountai   78.81   8  P      P      17 04 02.1 +0.1
H16K  Elim             78.87  12  P      P      17 04 02.6 +0.2
      baz=337
G30M  tAoh Zraii Nji   78.91   1  P      P      17 04 02.5 -0.1
      baz=358,SNR=11
H19K  Roundabout Mou   78.91   9  P      P      17 04 02.3 -0.3
      baz=342
G27K  Doyon Strip      78.94   3  IAmb   IAmb   17 04 04.9
      comp=Z,7.3nm,1.1s
G27K  Doyon Strip      78.94   3  P      P      17 04 03.0 +0.2
      baz=354,SNR=12
G29M  Pine Creek       78.95   1  P      P      17 04 02.8  0.0
      baz=357,SNR=11
H17K  Granite Mounta   78.97  11  P      P      17 04 02.4 -0.5
      baz=339
G31M  Satah River      78.98 360  P      P      17 04 02.6 -0.3
      baz=0.1,SNR=12
H18K  Honhosa River    79.00  10  P      P      17 04 03.4 +0.3
      baz=340
H20K  Anotleneega Mo   79.14   9  P      P      17 04 04.3 +0.4
      baz=343
H22K  Ishtalitna Cre   79.15   7  P      P      17 04 04.1 +0.2
      baz=346
H21K  Melozitna Rive   79.23   8  IAmb   IAmb   17 04 06.4
      comp=Z,8.9nm,1.0s
H21K  Melozitna Rive   79.23   8  P      P      17 04 04.8 +0.5
      baz=345,SNR=9.6
H25L  Birch Creek      79.25   5  P      P      17 04 04.6 +0.2
      baz=350,SNR=6.3
H23K  Yukon River      79.39   6  IAmb   IAmb   17 04 07.7
      comp=Z,8.6nm,1.1s
H23K  Yukon River      79.39   6  P      P      17 04 05.6 +0.3
      baz=347,SNR=7.0
EPYK  Eagle Plains     79.52   1  P      P      17 04 05.8 -0.2
      baz=358,SNR=9.7
H24K  Noodor Dome      79.52   6  IAmb   IAmb   17 04 08.0
      comp=Z,6.2nm,1.1s
H24K  Noodor Dome      79.52   6  P      P      17 04 06.3 +0.3
      baz=349,SNR=5.5
H27K  Steamboat Moun   79.52   3  IAmb   IAmb   17 04 08.1
      comp=Z,8.7nm,1.1s
H27K  Steamboat Moun   79.52   3  P      P      17 04 06.3 +0.3
      baz=354,SNR=12
GCSA  Galena City Sc   79.60  10  P      P      17 04 06.6 +0.3
      baz=341
H29M  Whitestone       79.64   2  IAmb   IAmb   17 04 08.4
      comp=Z,7.8nm,1.0s
H29M  Whitestone       79.64   2  P      P      17 04 06.6  0.0
      baz=357,SNR=9.0
I17K  Unalakleet       79.83  11  P      P      17 04 07.4 -0.2
      baz=338
I20K  Naaghedeneel     79.86   9  P      P      17 04 08.2 +0.4
      baz=343
PRP   Porcupine Dome   80.01   5  P      P      17 04 09.1 +0.3
      baz=351
MLY   Manley           80.05   7  IAmb   IAmb   17 04 10.8
      comp=Z,5.1nm,1.0s
MLY   Manley           80.05   7  P      P      17 04 09.1 +0.2
      baz=346,SNR=8.0
I23K  Minto, Yukon-K   80.07   6  P      P      17 04 08.8 -0.1
      baz=348
H31M  Peel River       80.10 360  IAmb   IAmb   17 04 19.5
      comp=Z,8.5nm,1.1s
H31M  Peel River       80.10 360  P      P      17 04 08.9 -0.2
      baz=0.1,SNR=5.6
I27K  Kandik River     80.14   3  P      P      17 04 09.3 -0.1
      baz=354
I28M  Miner Creek      80.37   2  IAmb   IAmb   17 04 11.6
      comp=Z,7.5nm,1.1s
I28M  Miner Creek      80.37   2  P      P      17 04 10.6  0.0
      baz=355,SNR=8.7
I26K  Coal Creek Min   80.37   4  IAmb   IAmb   17 04 12.5
      comp=Z,7.5nm,1.1s
I26K  Coal Creek Min   80.37   4  P      P      17 04 10.5  0.0
      baz=353,SNR=9.3
J14K  Nanvaranak Lak   80.38  13  P      P      17 04 10.4 -0.1
      baz=336
J16K  Anvik River      80.41  12  P      P      17 04 11.0 +0.3
      baz=338
COLA  College          80.47   6deP     P      17 04 10.7 -0.3
COLA                              pmax   pmax
      comp=Z,12nm,1.1s
COLA  College          80.47   6  P      P      17 04 11.2 +0.2
      baz=349
J19K  Poorman          80.48   9  IAmb   IAmb   17 04 13.1
      comp=Z,7.0nm,1.1s
J19K  Poorman          80.48   9  P      P      17 04 11.4 +0.2
      baz=342
J20K  Nowinta River    80.50   9  IAmb   IAmb   17 04 13.2
      comp=Z,9.2nm,1.1s
J20K  Nowinta River    80.50   9  P      P      17 04 11.8 +0.6
      baz=344,SNR=5.1
I29M  Ogilvie Camp,    80.50   2  IAmb   IAmb   17 04 12.2
      comp=Z,4.9nm,1.0s
I29M  Ogilvie Camp,    80.50   2  P      P      17 04 11.5 +0.2
      baz=357,SNR=5.5
J17K  VABM Dome        80.55  11  P      P      17 04 11.5  0.0
      baz=340
NEA2  Nenana           80.64   6  P      P      17 04 11.9 -0.1
      baz=348
ILAR  Eielson Array    80.65   5  P      P      17 04 11.5 -0.6
ILAR  Eielson Array    80.65   5  P      P      17 04 12.1  0.0
      comp=Z,2.0nm,0.9s,baz=331,slow=4.1,SNR=16
      comp=Z,2.0nm,0.9s
I30M  Mount Dempster   80.67   1  IAmb   IAmb   17 04 13.5
      comp=Z,8.4nm,0.9s
I30M  Mount Dempster   80.67   1  P      P      17 04 12.7 +0.4
      baz=358,SNR=12
K13K  Kusilvak Mount   80.91  14  P      P      17 04 13.0 -0.4
      baz=335
J25K  Salcha River,    80.92   5  P      P      17 04 13.6  0.0
      baz=351
BPAW  Bear Paw Mtn.    80.94   7  IAmb   IAmb   17 04 15.0
      comp=Z,8.2nm,1.1s
BPAW  Bear Paw Mtn.    80.94   7  P      P      17 04 13.5 -0.2
      baz=346,SNR=7.1
HDA   Harding Lake     81.00   5  P      P      17 04 13.9  0.0
      baz=350
J26L  Joseph Creek     81.15   4  P      P      17 04 14.7 -0.1
      baz=352,SNR=6.0
K15K  Wolf Creek Mou   81.17  12  P      P      17 04 15.2 +0.4
      baz=338
K20K  Telida           81.30   9  IAmb   IAmb   17 04 17.4
      comp=Z,7.0nm,1.1s
K20K  Telida           81.30   9  P      P      17 04 15.9 +0.3
      baz=344,SNR=5.2
K17K  Iditarod         81.31  11  P      P      17 04 15.6  0.0
      baz=340
J30M  Hart River       81.33   1  IAmb   IAmb   17 04 17.4
      comp=Z,8.3nm,1.0s
J30M  Hart River       81.33   1  P      P      17 04 16.2 +0.4
      baz=358,SNR=12
KTH   Kantishna Hill   81.48   7  IAmb   IAmb   17 04 18.7
      comp=Z,5.2nm,0.9s
CAST  Castle Rocks     81.48   8  IAmb   IAmb   17 04 18.0
      comp=Z,9.0nm,1.2s
CAST  Castle Rocks     81.48   8  P      P      17 04 16.7 +0.2
      baz=345,SNR=5.8
MCK   McKinley         81.50   6  P      P      17 04 16.6 -0.1
      baz=348
SCRK  Sand Creek       81.64   4  IAmb   IAmb   17 04 19.3
      comp=Z,9.4nm,1.0s
SCRK  Sand Creek       81.64   4  P      P      17 04 17.4 -0.1
      baz=352,SNR=15
TRF   Thorofare Moun   81.64   7  P      P      17 04 17.6  0.0
      baz=347
K24K  Donnelly Dome    81.69   5  P      P      17 04 17.6 -0.1
      baz=350,SNR=5.3
K27K  Chicken          81.70   3  P      P      17 04 17.5 -0.1
      baz=354
L15K  Ungalak Mounta   81.75  13  P      P      17 04 17.6 -0.3
      baz=338
DAWY  Dawson           81.77   2  IAmb   IAmb   17 04 19.4
      comp=Z,7.3nm,1.2s
DAWY  Dawson           81.77   2  P      P      17 04 17.9 -0.2
      baz=356,SNR=6.0
RIDG  Independent Ri   81.82   5  P      P      17 04 18.7 +0.3
      baz=351,SNR=9.0
L14K  Kuka Creek       81.83  13  P      P      17 04 18.7 +0.4
      baz=337
L17K  Donlin           81.86  11  P      P      17 04 18.3 -0.2
      baz=340
DOT   Dot Lake         81.96   4  IAmb   IAmb   17 04 20.7
      comp=Z,7.2nm,1.0s
PPLA  Purkeypile       81.97   8  P      P      17 04 19.0 -0.3
      baz=345
L18K  Granite Mounta   82.03  10  P      P      17 04 19.5 +0.1
      baz=342
K29M  Barlow Dome      82.04   1  IAmb   IAmb   17 04 21.1
      comp=Z,5.1nm,0.9s
K29M  Barlow Dome      82.04   1  P      P      17 04 19.3 -0.3
      baz=357,SNR=5.6
YKAW3 Yellowknife Wh   82.06 351  IAmb   IAmb   17 04 20.2
      comp=Z,5.1nm,1.0s
L16K  Owhat River      82.07  12  P      P      17 04 19.9 +0.4
      baz=339
YKAW1 Yellowknife Wh   82.11 351  IAmb   IAmb   17 04 20.5
      comp=Z,11nm,1.2s
YKA   Yellowknife Ar   82.12 351  P      P      17 04 19.6 -0.3
      comp=Z,3.2nm,0.9s,baz=13,slow=6.1,SNR=22
YKA                               LR     LR     17 42 17.9
      comp=Z,56nm,18.7s,baz=31,slow=37
      comp=Z,3.2nm,0.9s
L20K  Farewell, AK     82.17   9  P      P      17 04 20.5 +0.3
      baz=344,SNR=5.1
DHY   Denali Highway   82.29   6  P      P      17 04 20.9  0.0
      baz=349
WRGLY Wrigley          82.30 355  P      P      17 04 20.9 +0.2
      baz=9.1
L19K  White Mountain   82.33  10  P      P      17 04 21.5 +0.5
      baz=343
M14K  Bethel           82.52  13  P      P      17 04 21.7 -0.2
      baz=337
PAX   Paxson           82.54   5  P      P      17 04 22.5 +0.3
      baz=351
M19K  Big River Lodg   82.66   9  P      P      17 04 23.3 +0.6
      baz=344
BCAR  Beaver Creek A   82.67   3  P      P      17 04 23.2 +0.4
L27K  Beaver Creek,    82.67   3  IAmb   IAmb   17 04 24.7
      comp=Z,4.8nm,1.1s
L27K  Beaver Creek,    82.67   3  P      P      17 04 23.3 +0.5
      baz=354,SNR=6.0
M17K  Holitna River    82.69  11  P      P      17 04 23.3 +0.4
      baz=341
WAT6  Susitna Watana   82.74   6  P      P      17 04 23.1 -0.3
      baz=349
L29M  L29M             82.76   2  IAmb   IAmb   17 04 25.7
      comp=Z,7.4nm,1.3s
L29M  L29M             82.76   2  P      P      17 04 23.3  0.0
      baz=357,SNR=5.1
M16K  Timber Creek     82.80  12  P      P      17 04 24.0 +0.5
      baz=340
M15K  Kasigluk River   82.81  13  P      P      17 04 23.8 +0.4
      baz=338
M20K  Styx River       82.84   9  P      P      17 04 23.8 +0.1
      baz=344
M18K  Stony River      82.85  10  P      P      17 04 24.2 +0.6
      baz=342
SKT   Skwentna         82.94   8  IAmb   IAmb   17 04 25.9
      comp=Z,6.0nm,1.0s
SKT   Skwentna         82.94   8  P      P      17 04 24.9 +0.7
      baz=346,SNR=5.2
HARP  HAARP            83.13   5  P      P      17 04 25.4 +0.3
      baz=351
M26K  Nabesna, AK      83.27   4  IAmb   IAmb   17 04 27.7
      comp=Z,6.1nm,1.1s
M26K  Nabesna, AK      83.27   4  P      P      17 04 26.7 +0.8
      baz=353
MMPY  Sheldon Lake,    83.27 359  IAmb   IAmb   17 04 27.6
      comp=Z,8.8nm,1.3s
MMPY  Sheldon Lake,    83.27 359  P      P      17 04 26.7 +0.8
      baz=2.6
M22K  Willow           83.32   7  P      P      17 04 27.1 +1.0
      baz=347
M24K  Tolsona, Glenn   83.34   6  P      P      17 04 26.6 +0.3
      baz=350
BVCY  Beaver Creek     83.36   3  P      P      17 04 27.0 +0.6
      baz=355
M27K  Edge Creek, AK   83.37   4  IAmb   IAmb   17 04 29.2
      comp=Z,6.2nm,1.1s
M27K  Edge Creek, AK   83.37   4  P      P      17 04 26.9 +0.3
      baz=354,SNR=5.7
N15K  Kwethluk River   83.41  13  P      P      17 04 27.0 +0.4
      baz=339
M29M  Somme Creek      83.42   2  P      P      17 04 26.8  0.0
      baz=357
SML   Sawmill          83.45   7  P      P      17 04 26.9  0.0
      baz=348
SCM   Sheep Creek Mo   83.52   6  P      P      17 04 27.4 +0.2
      baz=349
SUA   Susitna One      83.53   8  P      P      17 04 27.4  0.0
      baz=346,SNR=5.9
N17K  Nushagak Hills   83.56  11  P      P      17 04 27.7 +0.3
      baz=341
PMR   Palmer           83.58   7  P      P      17 04 27.8 +0.3
      baz=348
FARO  Faro, Yukon      83.69 360  IAmb   IAmb   17 04 30.3
      comp=Z,6.6nm,1.1s
FARO  Faro, Yukon      83.69 360  P      P      17 04 28.6 +0.6
      baz=0.9,SNR=5.9
N19K  Bonanza Creek    83.69  10  P      P      17 04 28.8 +0.6
      baz=343
M31M  Drury Creek, Y   83.72   0  P      P      17 04 28.6 +0.3
      baz=0.0
KNK   Knik Glacier     83.82   7  P      P      17 04 29.1 +0.4
      baz=348
KLU   Klutina          83.97   6  P      P      17 04 29.5 -0.1
      baz=350,SNR=7.8
RC01  Rabbit Creek A   84.01   7  IAmb   IAmb   17 04 31.4
      comp=Z,4.6nm,0.8s
RC01  Rabbit Creek A   84.01   7  P      P      17 04 30.0 +0.3
      baz=347
O14K  Tigyukauivet M   84.04  14  P      P      17 04 30.3 +0.5
      baz=338
O17K  Koliganek Bris   84.29  11  P      P      17 04 31.0 -0.1
      baz=341
O16K  Kokwok River B   84.30  12  P      P      17 04 30.7 -0.5
      baz=340
PWL   Port Wells       84.38   7  P      P      17 04 31.1 -0.5
      baz=348
O15K  Ungalikthiuk R   84.38  13  P      P      17 04 31.4 -0.1
      baz=339
N31M  Braeburn, Yuko   84.43   1  P      P      17 04 32.1 +0.2
      baz=359
N30M  Aishikik Lake    84.44   1  P      P      17 04 32.0 +0.1
      baz=358
YUK4  Talbot Arm       84.52   2  P      P      17 04 32.2 -0.3
      baz=357
BMRM  Bremner River    84.59   5  P      P      17 04 32.9 +0.2
      baz=352
CRQE  Cirque           84.91   4  P      P      17 04 34.3 -0.1
      baz=353
P19K  Oil Pt           84.98   9  P      P      17 04 35.1 +0.5
      baz=344
HYT   Haines Junctio   85.07   2  IAmb   IAmb   17 04 37.1
      comp=Z,6.6nm,1.0s
HYT   Haines Junctio   85.07   2  P      P      17 04 35.0 -0.1
      baz=357,SNR=6.8
BRSE  Bradley Lake S   85.22   8  P      P      17 04 35.3 -0.6
      baz=346
WHY   Whitehorse       85.27   0  P      P      17 04 35.3 -0.9
      baz=360
P23K  Montague Islan   85.32   7  P      P      17 04 36.0 -0.3
      baz=349
Q19K  Cape Douglas,    85.63  10  P      P      17 04 38.1 +0.2
      baz=344
WTLY  Watson Lake, Y   85.70 357  P      P      17 04 38.9 +0.6
      baz=4.6
PINM  Pinnacle         85.71   3  P      P      17 04 38.3 -0.1
      baz=355
Q17K  Contact Creek    85.92  11  P      P      17 04 39.0 -0.4
      baz=342
PNL   Peninsula        86.17   3  P      P      17 04 40.4 -0.1
      baz=356
PLBC  Pleasant Camp    86.46   1  P      P      17 04 42.5 +0.6
      baz=358
SKAG  Skagway          86.47   0  P      P      17 04 42.3 +0.4
      baz=359
R33M  Jennings River   86.49 358  P      P      17 04 42.8 +0.5
      baz=2.9
SADO  Sadowa           86.61 324  LR     LR     17 45 15.8
      comp=Z,42nm,18.1s,baz=157,slow=37
KDAK  Kodiak Island    86.88  10  P      P      17 04 44.5 +0.5
      baz=345
Q32M  Nakina River     86.96 359  P      P      17 04 44.5 -0.2
      baz=1.8
OHAK  Old Harbor       87.33  10  P      P      17 04 46.0 -0.2
      baz=344
SII   Sitkinak Islan   87.83  11  P      P      17 04 48.0 -0.7
      baz=344
S34M  Telegraph Cree   87.98 358  P      P      17 04 49.1 -0.2
      baz=2.7
CHIR  Chirikof Islan   88.30  12  P      P      17 04 50.3 -0.6
      baz=343
S32K  Killisnoo        88.47   0  P      P      17 04 51.2 -0.4
      baz=360
ULM   Lac du Bonnet    89.08 336  LR     LR     17 45 36.3
      comp=Z,53nm,19.7s,baz=81,slow=36
WRAK  Wrangell Islan   89.50 359  P      P      17 04 56.7 +0.2
      baz=1.7
NEW   Newport          96.25 348  LR     LR     17 49 32.8
      comp=Z,55nm,20.9s,baz=13,slow=36
QSPA  South Pole Qui  124.25 180  PKP    PKiKP  17 10 58.0 +0.3
      comp=Z,2.3nm,1.0s,baz=224,slow=1.6,SNR=5.2
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VAO ***23*** *17:09:16.6±0.6, 22°.09S × 70°.67W, h10^{km}, mb4.7*

SJA ***23*** *17:09:19.6±0.6, 22°.00S × 70°.49W, h17^{km}±2^{km}, ML4.5, MW4.3*

NEIC ***23*** *17:09:22.7, 22°.00S × 70°.39W, h29^{km}*

GUC ***23*** *17:09:23.2±0.8, 21°.95S × 70°.42W, h21^{km}±3^{km}, ML4.4*

NEIC ***23*** *17:09:23.0±2.1, 22°.00S±0°.03 × 70°.39W±0°.07, h32^{km}±4^{km}, mb4.5/31, Mwr4.3/58, Mwr4.7(GUC), Error ellipse: s-maj=9.2km s-min=5.0km az=85.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.42; $M_{\theta\theta}$-0.09; $M_{\phi\phi}$-2.33; $M_{r\theta}$-0.20; $M_{\theta\phi}$0.37; $M_{\phi r}$-2.17; Fault plane solution: $M_0$3.24000×10^{15} NP1:ϕ_s342.25000°, δ24.88000°, λ73.42000°. NP2:ϕ_s180.42000°, δ66.22000°, λ97.54000°. Principal axes: T 3.2868, Plg68.0000°, Azm105.0000°; N -0.0931, Plg7.0000°, Azm357.0000°; P -3.1938, Plg21.0000°, Azm265.0000°;*

IDC ***23*** *17:09:25.8±1.9, 21°.98S × 70°.23W, h48^{km}±17^{km}, mb4.0/12, mbtmp4.2/18, ML4.0/6, MS3.5/14 Error ellipse: s-maj=18.6km s-min=13.7km az=77.0*

ISC 23 17:09:18.7±1.2, **21°.95S**±0°.02 × **70°.43W**±0°.04, **h4^{km}**±7^{km}, **n171, σ1^{s}.48**/174, **mb4.6**/26, **MS3.5**/10, **8C-9D, Near coast of northern Chile**

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Code  Station Name      Δ°   AZ°     Phase ID        Time      Res
                                   Op       ISC     h  m  s    ISC
PB03  IPOC Station P   0.64   99            Pn     17 09 34.0 -0.7
PB03  IPOC Station P   0.64   99⇓iP         Pn     17 09 34.8 +0.2
PB03                             i S        Sb     17 09 43.0 +1.2
PB03  IPOC Station P   0.64   99 eP         Pg     17 09 29.0 -1.9
PB03                             eS         Sn     17 09 43.4 -1.9
PB03                              IAML             17 09 44.6
      comp=Z,15μm,0.4s
PB05  IPOC Station P   0.92  167            Pn     17 09 39.1 +0.5
PB05  IPOC Station P   0.92  167⇓iP         Pn     17 09 39.2 +0.6
PB05                             i S        Sb     17 09 50.8 +0.7
PB05                              IAML             17 09 53.8
      comp=E,20μm,0.4s
PB05  IPOC Station P   0.92  167 eP         Pg     17 09 34.0 -2.5
PB05                              IAML             17 09 57.2
      comp=Z,13μm,0.4s
PB06  IPOC Station P   1.09  134            Pn     17 09 41.1 +0.1
PB06  IPOC Station P   1.09  134⇓iP         Pn     17 09 41.8 +0.8
PB06                             i S        Sb     17 09 55.6 +0.5
PB06                              IAML             17 10 00.2
      comp=E,23μm,0.6s
PB06  IPOC Station P   1.09  134 eP         Pn     17 09 41.1 +0.1
PB06                              IAML             17 10 00.6
      comp=Z,10μm,0.3s
PB09  IPOC Station P   1.11   82            Pn     17 09 42.2 +0.9
PB09  IPOC Station P   1.11   82⇓iP         Pn     17 09 42.7 +1.4
PB09                             i S        Sn     17 09 57.2 +0.1
PB09  IPOC Station P   1.11   82 eP         Pn     17 09 42.0 +0.7
PB09                              IAML             17 10 03.4
      comp=Z,5μm,0.5s
PATCX Punta Patache    1.15   13            Pn     17 09 42.8 +1.1
PATCX Punta Patache    1.15   13⇓iP         Pn     17 09 42.8 +1.1
PATCX                            i S        Sn     17 09 57.5 -0.4
PATCX Punta Patache    1.15   13 eP         Pn     17 09 42.9 +1.1
PATCX                            eS         Sn     17 09 59.7 +1.7
PB01  IPOC Station P   1.26   44            Pg     17 09 44.0 +1.2
PB01  IPOC Station P   1.26   44⇓iP         Pg     17 09 44.6 +1.8
PB01                             i S        Sn     17 10 00.3 -0.3
PB01  IPOC Station P   1.26   44 eP         Pg     17 09 44.7 +1.8
PB01                             eS         Sn     17 10 01.1 +0.5
PB01                              IAML             17 10 08.2
      comp=Z,4μm,0.2s
TA01  Diego Aracena    1.40   10            Pg     17 09 46.6 +1.1
TA01  Diego Aracena    1.40   10⇓iP         Pg     17 09 46.6 +1.1
TA01                             eS         Sg     17 10 03.7 +0.1
TA01                              IAML             17 10 08.2
      comp=E,11μm,0.3s
TA01  Diego Aracena    1.40   10 eP         Pg     17 09 46.0 +0.5
TA01                              IAML             17 10 07.0
      comp=Z,7μm,0.7s
PB10  IPOC Station P   1.56  184            Pn     17 09 48.2 +0.9
PB10  IPOC Station P   1.56  184 eP         Pn     17 09 48.3 +1.1
PB10                             i S        Sn     17 10 08.8 +0.9
PB10  IPOC Station P   1.56  184 eP         Pn     17 09 48.0 +0.7
PB10                             eS         Sg     17 10 12.7 +3.8
PB10                              IAML             17 10 15.3
      comp=Z,3μm,0.4s
TA02  Huaiquique       1.69   10            Pb     17 09 50.7 +0.3
TA02  Huaiquique       1.69   10 eP         Pb     17 09 50.7 +0.3
TA02                             i S        Sb     17 10 12.1  0.0
TA02                              IAML             17 10 15.1
      comp=N,5μm,0.1s
TA02  Huaiquique       1.69   10 eP         Pg     17 09 51.4 +0.3
TA02                             eS         Sg     17 10 14.8 +1.6
TA02                              IAML             17 10 22.0
      comp=Z,3μm,0.8s
HMBC  Humberstone      1.74   17            Pb     17 09 51.5 +0.3
HMBC  Humberstone      1.74   17⇑iP         Pb     17 09 51.6 +0.3
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HMBC				iS	Sb	17 10 13.5	0.0
HMBC				IAML		17 10 26.2	
	comp=N,6µm,0.5s						
HMBC	Humberstone	1.74	17	eP	Pb	17 09 51.6	+0.3
HMBC				eS	Sg	17 10 15.3	+0.7
HMBC				IAML		17 10 20.0	
	comp=Z,4µm,0.7s						
PB08	IPOC Station P	2.16	34		Pb	17 09 58.8	+0.2
PB08	IPOC Station P	2.16	34	⇑iP	Pb	17 09 58.8	+0.2
PB08				eS	Sb	17 10 25.9	0.0
PB08				IAML		17 10 30.2	
	comp=N,4µm,0.6s						
PB08	IPOC Station P	2.16	34	eP	Pb	17 09 59.0	+0.4
PB08				eS	Sg	17 10 28.8	+0.7
PB08				IAML		17 10 31.5	
	comp=Z,3µm,0.5s						
PB11	IPOC Station P	2.29	19		Pb	17 09 59.4	-1.4
PB11	IPOC Station P	2.29	19	⇑iP	Pb	17 09 59.4	-1.4
PB11				iS	Sb	17 10 28.4	-1.2
PB11				IAML		17 10 36.0	
	comp=N,4µm,0.3s						
PB11	IPOC Station P	2.29	19	eP	Pb	17 09 59.9	-0.9
PB11				eS	Sn	17 10 20.9	-5.4
PB11				IAML		17 10 36.6	
	comp=Z,3µm,0.7s						
AF01	San Pedro de A	2.31	116	⇓iP	Pg	17 10 02.8	-0.2
AF01	San Pedro de A	2.31	116	eP	Pn	17 09 58.9	+1.0
AF01				eS	Sg	17 10 33.4	+0.4
AF01				IAML		17 10 51.6	
	comp=Z,11µm,1.0s						
GO01	Chusmiza	2.55	27		Pn	17 10 02.1	+0.9
GO01	Chusmiza	2.55	27	⇓iP	Pb	17 10 05.3	+0.1
GO01				eS	Sb	17 10 37.4	+0.2
GO01	Chusmiza	2.55	27	eP	Pb	17 10 04.8	-0.5
GO01				eS	Sg	17 10 38.6	-2.0
PB14	IPOC Station P	2.66	179		Pn	17 10 03.5	+0.8
PB14	IPOC Station P	2.66	179	eP	Pn	17 10 03.1	+0.4
PB14				eS	Sn	17 10 36.9	+1.2
PB14				IAML		17 10 45.6	
	comp=Z,2µm,0.4s						
GO02	Mina Guanaco	3.29	167		Pn	17 10 13.7	+2.3
GO02	Mina Guanaco	3.29	167	eP	Pn	17 10 13.6	+2.3
GO02	Mina Guanaco	3.29	167	eP	Pn	17 09 58.8	-13
GO02				eS	Sn	17 10 53.8	+2.7
PB16	IPOC Station P	3.70	14		Pn	17 10 19.6	+2.4
PB16	IPOC Station P	3.70	14	eP	Pn	17 10 19.7	+2.6
PB16				eS	Sb	17 11 06.1	-4.3
PB16				IAML		17 11 19.8	
	comp=Z,422nm,0.6s						
AC01	Pan de Azucar	4.18	182		Pn	17 10 23.1	-0.3
AC01	Pan de Azucar	4.18	182	eP	Pn	17 10 23.0	-0.3
AC01				eS	Sb	17 11 21.0	-2.8
AC01				IAML		17 11 35.1	
	comp=Z,672nm,1.2s						
AC02	Maricunga	5.01	167		Pn	17 10 37.7	+2.6
AC02	Maricunga	5.01	167	eP	Pn	17 10 37.7	+2.6
AC02				eS	Sb	17 11 45.3	-2.7
AC02				IAML		17 12 06.8	
	comp=Z,504nm,0.4s						
AC06	Mina Casimiro	5.38	179		Pn	17 10 40.3	+0.5
GO03	Copiapo	5.62	178		Pn	17 10 44.3	+1.1
LPAZ	La Paz	6.04	21		Pn	17 10 55.2	+5.8
LPAZ	La Paz	6.04	21	P	Pn	17 10 54.5	+5.2
	comp=Z,2.6nm,0.3s,baz=251,slow=2.7,SNR=61						
LPAZ				LR	LR	17 13 33.8	
	comp=Z,442nm,20.4s,baz=206,slow=41						
	comp=Z,16nm,0.5s						
LPAZ	La Paz	6.04	21	eP	Pn	17 10 49.3	0.0
LCO	Las Campanas	7.04	182	Pn	Pn	17 11 02.2	-0.6
CFA	Coronel Fontan	9.81	169	P	Pn	17 11 41.7	+1.0
	comp=Z,0.9nm,0.3s,baz=350,slow=11,SNR=14						
CFA				S	Sn	17 13 38.7	+7.3
	comp=Z,7.1nm,0.7s,baz=145,slow=14,SNR=2.2						
	comp=Z,1.2nm,0.3s						
BBSD	Serra de San D	10.40	65	eP	Pn	17 11 49.1	+0.4
SIV	San Ignacio	10.65	58	P	Pn	17 11 53.9	+1.6
	comp=Z,0.6nm,0.3s,baz=240,slow=12,SNR=170						
SIV				S	Sn	17 13 52.5	+0.4
	comp=Z,5.7nm,0.8s,baz=298,slow=14,SNR=5.6						
SIV				LR	LR	17 16 50.5	
	comp=Z,492nm,19.6s,baz=292,slow=42						
	comp=Z,63nm,0.8s						
MT02	Curacav	11.28	183	Pn	Pn	17 11 59.5	-1.2
NNA	Nana	11.65	327	P	Pn	17 12 11.6	+5.7
	comp=Z,0.6nm,0.3s,baz=82,slow=15,SNR=1.6						
	comp=Z,3.6nm,0.3s						
PTLB	Pontes e Lacer	12.50	61		Pn	17 12 18.1	+0.7
PTLB	Pontes e Lacer	12.50	61	eP	Pn	17 12 18.6	+1.1
CPUP	Villa Florida	12.73	113		Pn	17 12 21.7	+1.1
CPUP	Villa Florida	12.73	113	P	Pn	17 12 21.0	+0.4
	baz=149,slow=13,SNR=7.1						
CPUP				LR	LR	17 18 19.3	
	comp=Z,52nm,20.1s,baz=154,slow=42						
	comp=Z,0.7nm,0.7s						
BDQN	Bodoquena, MS	12.85	86	eP	Pn	17 12 22.1	-0.2
VILB	Vilhena	13.23	49		Pn	17 12 30.0	+2.5
VILB	Vilhena	13.23	49	eP	Pn	17 12 28.5	+0.9
SJPY	San Joaquin	13.49	106	eP	Pn	17 12 31.3	+0.2
H03N1	Juan Fernandez	13.68	211	T	T	17 26 44.4	
	baz=37,slow=72,SNR=1327						
H03N2	Juan Fernandez	13.69	211	T	T	17 26 48.2	
	baz=37,slow=72,SNR=874						
H03N3	Juan Fernandez	13.70	211	T	T	17 26 47.1	
	baz=37,slow=72,SNR=1143						
CZSB	Cruzeiro do Su	14.31	351	eP	Pn	17 12 41.6	-0.6
SALV	Santo Antonio	15.18	69	eP	Pn	17 12 54.4	+0.4
RPRD	Ribas do Rio P	15.67	88	eP	Pn	17 13 00.9	+0.4
TRCB	Terra Rica	16.48	96	eP	Pn	17 13 11.2	+0.2
PDRB	Porto dos Gac	16.65	54	eP	Pn	17 13 13.8	+0.6
C2SB	Chapadao do Su	16.80	82	eP	Pn	17 13 15.6	+0.7
PTGB	Pitanga	17.09	103	eP	Pn	17 13 19.1	+0.4
CPSB	Cacapava Do Su	17.41	122	eP	Pn	17 13 16.3	-6.2
ITAB	Concordia	17.45	111	eP	Pn	17 13 22.4	-0.7
TRQA	Tornquist	17.63	157	P	P	17 13 28.4	+2.1
TRQA				IAmb	IAmb	17 13 39.9	
	comp=Z,20nm,0.8s						
PCMB	Pacaembu	17.81	92	eP	Pn	17 13 27.2	-0.4
CLDB	Colider	17.82	54	eP	Pn	17 13 27.9	0.0
LDASE	Londrina, Braz	17.88	98	eP	Pn	17 13 28.5	-0.1
PLTB	Pedras Altas	17.89	127	eP	Pn	17 13 27.9	-0.7
PLCA	Paso Flores	18.73	180	P	P	17 13 36.9	-1.5
PLCA	Paso Flores	18.73	180	P	P	17 13 39.0	+0.5
	comp=Z,0.2nm,0.3s,baz=350,slow=11,SNR=6.7						
PLCA				LR	LR	17 20 10.0	
	comp=Z,98nm,20.6s,baz=1.5,slow=34						
	comp=Z,1.6nm,0.6s						
ITRB	Iturama	18.89	87	eP	P	17 13 40.4	0.0
CNLB	Canela	19.10	117	eP	P	17 13 41.4	-1.2
TEFE	Tefe	19.18	18	eP	P	17 13 43.5	+0.1
FRTB	Fartura	19.31	98	eP	P	17 13 44.2	-0.7
NPGB	Novo Progresso	20.77	47	eP	P	17 14 00.4	-0.4
SNDB	Serra Nova Dou	20.80	65	eP	P	17 13 59.7	-1.5
MACA	Manacapuru-AM	20.94	28	eP	P	17 14 02.3	-0.3
IPMB	Ipameri, GO	21.25	83	eP	P	17 14 05.3	-0.7
SPB	Sao Paulo	21.27	99	eP	P	17 14 06.1	-0.1
PET01	Itanhaem-SP	21.42	101	eP	P	17 14 06.9	-0.9
VAO	Valinhos	21.71	97	eP	P	17 14 10.0	-1.0
BDFB	Brasilia	22.12	77	P	P	17 14 13.1	-2.4
BDFB	Brasilia	22.12	77	P	P	17 14 15.2	-0.3
	comp=Z,5.1nm,0.5s,baz=259,slow=11,SNR=12						
BDFB				LR	LR	17 24 06.5	
	comp=Z,170nm,20.1s,baz=266,slow=40						
	comp=Z,5.1nm,0.5s						
ITTB	Itaituba	22.55	41	eP	P	17 14 18.3	-1.7
PRPB	Parauapebas	25.36	55	eP	P	17 14 46.4	-0.7
SMTB	Santa Maria do	25.53	63	eP	P	17 14 48.4	-0.3
JANB	Januaria	25.68	79	eP	P	17 14 49.0	-1.0
BOAV	Boa Vista	26.06	23	P	P	17 14 53.1	-0.3
BOAV				IAmb	IAmb	17 14 55.2	
	comp=Z,16nm,0.9s						
SDV	Santo Domingo	30.64	360	LR	LR	17 28 56.2	
	comp=Z,88nm,19.1s,baz=176,slow=38						
BAUV	El Baul	30.79	5	P	P	17 15 35.4	-0.2
MDP	Montagnes des	32.04	35	LR	LR	17 30 12.6	
	comp=Z,67nm,18.9s,baz=236,slow=39						
PCRV	Puerto La Cruz	32.43	11	LR	LR	17 29 45.7	
	comp=Z,106nm,19.9s,slow=38						
RCBR	Riachuelo	37.02	69	P	P	17 16 29.5	-0.4
CRPR	Cabo Rojo, PR	39.84	5	P	P	17 16 51.0	-2.4
PDPR	Patillas Dam,	39.95	7	P	P	17 16 51.5	-2.8
PDPR				IAmb	IAmb	17 17 01.0	
	comp=Z,15nm,1.1s						
CELP	Cerrillos	39.96	6	P	P	17 16 51.8	-2.5
SJG	San Juan	40.03	6	LR	LR	17 34 21.1	
	comp=Z,26nm,18.2s,baz=170,slow=37						
H06E1	SOCORRO T-PHAS	56.64	313	T	T	18 20 47.5	
WVT	Waverly	60.06	344	P	P	17 19 24.8	-2.1
WVT				IAmb	IAmb	17 19 34.3	
	comp=Z,6.1nm,1.1s						
VNA3	Neumayer Olymp	60.11	161	⇑P	P	17 19 27.2	+0.3
	comp=Z,7.2nm,0.6s						
TXAR	Lajitas Array	60.20	327	P	P	17 19 29.4	+1.2
	comp=Z,0.2nm,0.4s,baz=144,slow=7.8,SNR=4.4						
	comp=Z,0.2nm,0.4s						
VNA1	Neumayer--Stat	60.34	160	⇑P	P	17 19 27.7	-0.7
	comp=Z,3.5nm,0.8s						
VNA2	Neumayer--Watz	60.70	160	⇑P	P	17 19 31.6	+0.7
	comp=Z,5.7nm,0.7s,baz=276,slow=7.8						
Q56A	Snyder Ridge,	61.22	352	P	P	17 19 34.1	-0.7
SNAA	Sanae	62.32	161	⇑P	P	17 19 42.5	+0.6
	comp=Z,97nm,0.5s						
SNAA	Sanae	62.32	161	P	P	17 19 42.3	+0.4
SNAA				IAmb	IAmb	17 19 43.6	
	comp=Z,5.7nm,0.8s						
SNAA	Sanae	62.32	161	P	P	17 19 42.3	+0.4
	comp=Z,4.5nm,0.6s,baz=281,slow=8.0,SNR=49						
	comp=Z,4.5nm,0.6s						
TROLL	Troll, Antarti	64.04	161	⇑P	P	17 19 54.4	+1.0
	comp=Z,176nm,0.5s						
QSPA	South Pole Qui	68.24	180	P	P	17 20 20.4	-0.1
QSPA				IAmb	IAmb	17 20 22.7	
	comp=Z,4.8nm,0.7s						
QSPA	South Pole Qui	68.24	180	P	P	17 20 21.7	+1.3
	comp=Z,3.7nm,0.6s,baz=163,slow=1.1,SNR=37						
	comp=Z,3.7nm,0.6s						
DBIC	Dimbokro	70.22	74	P	P	17 20 32.6	-0.7
	comp=Z,7.1nm,0.6s,baz=281,slow=7.0,SNR=7.3						
DBIC				LR	LR	17 49 22.1	
	comp=Z,38nm,22.0s,baz=58,slow=34						
	comp=Z,7.1nm,0.6s						
GWY	Greenwater Val	72.48	322	IAmb	IAmb	17 21 02.7	
	comp=Z,6.2nm,1.2s						
TPNV	Topopah Spring	72.79	323	IAmb	IAmb	17 20 60.0	
	comp=Z,4.5nm,1.1s						
WCT	Wildcat Mounta	72.89	323	IAmb	IAmb	17 21 01.0	
	comp=Z,5.2nm,1.2s						
DUG	Dugway, Tooele	73.36	327	IAmb	IAmb	17 21 09.4	
	comp=Z,5.2nm,1.1s						
GMN	Gold Mountain	73.61	323	P	P	17 20 54.1	+0.5
PDAR	Pinedale Array	73.81	331	P	P	17 20 55.6	+1.0
	comp=Z,0.5nm,0.7s,baz=153,slow=8.2,SNR=4.9						
	comp=Z,0.5nm,0.7s						
HWUT	Hardware Ranch	73.83	329	IAmb	IAmb	17 21 08.7	
	comp=Z,4.6nm,0.8s						
NVAR	Mina Array Bea	74.99	323	P	P	17 21 03.2	+1.6
	comp=Z,0.7nm,0.7s,baz=116,slow=3.4,SNR=4.3						
	comp=Z,0.7nm,0.7s						
ELK	Elko	75.00	326	LR	LR	17 55 26.9	
	comp=Z,42nm,18.0s,baz=86,slow=37						
PAHR	Pah Rah Range	76.48	323	IAmb	IAmb	17 21 13.3	
	comp=Z,3.7nm,0.8s						
HLID	Hailey	76.68	329	IAmb	IAmb	17 21 28.6	
	comp=Z,3.5nm,1.1s						
PLID	Pearl Lake	78.58	329	IAmb	IAmb	17 21 24.8	
	comp=Z,5.7nm,1.2s						
TORD	Torodi Ar. Bea	78.84	71	P	P	17 21 23.0	-0.5
TORD				IAmb	IAmb	17 21 23.8	
	comp=Z,4.6nm,0.7s						
TORD	Torodi Ar. Bea	78.84	71	P	P	17 21 23.0	-0.5
	comp=Z,5.2nm,0.5s,baz=259,slow=4.6,SNR=5.6						
	comp=Z,5.2nm,0.5s						
MAW	Mawson	84.30	164	P	P	17 21 52.5	+1.0
	comp=Z,2.8nm,0.6s,baz=257,slow=3.2,SNR=4.3						
	comp=Z,2.8nm,0.6s						
BOSA	Boshof	84.48	118	P	P	17 21 53.7	+0.3
	comp=Z,5.4nm,0.8s,baz=255,slow=5.4,SNR=6.7						
	comp=Z,5.4nm,0.8s						
ESDC	Sonseca Array	87.15	45	P	P	17 22 06.2	0.0
	comp=Z,0.6nm,1.0s,baz=264,slow=7.3,SNR=3.1						
ESDC				LR	LR	17 59 55.7	
	comp=Z,34nm,18.3s,baz=136,slow=35						
	comp=Z,0.6nm,1.0s						
MATP	Matopo	90.36	112	LR	LR	17 58 44.2	
	comp=Z,16nm,19.5s,baz=238,slow=33						
YKA	Yellowknife Ar	91.15	341	P	P	17 22 24.7	+0.4
	comp=Z,1.6nm,0.9s,baz=136,slow=4.0,SNR=11						
	comp=Z,1.6nm,0.9s						
DAVOX	Davos/Dischmat	99.36	43	LR	LR	18 03 40.8	
	comp=Z,14nm,19.1s,baz=195,slow=33						
H11S2	WAKE ISLAND Hy	126.53	277	T	T	19 47 57.3	
	baz=104,slow=75,SNR=281						
H11S1	WAKE ISLAND Hy	126.54	277	T	T	19 47 56.1	
	baz=104,slow=75,SNR=314						
H11S3	WAKE ISLAND Hy	126.55	277	T	T	19 47 58.7	
	baz=104,slow=75,SNR=300						
H11N3	WAKE ISLAND Hy	126.63	279	T	T	19 48 05.9	
	baz=104,slow=75,SNR=154						
H11N2	WAKE ISLAND Hy	126.64	279	T	T	19 48 05.2	
	baz=104,slow=75,SNR=111						
H11N1	WAKE ISLAND Hy	126.64	279	T	T	19 48 05.8	
	baz=104,slow=75,SNR=88						
ASAR	Alice Springs	128.85	209	PKP	PKPdf	17 28 28.6	+0.2
	comp=Z,1.2nm,0.9s,baz=131,slow=2.5,SNR=9.4						
WRA	Warramunga Arr	131.84	212	PKP	PKiKP	17 28 34.9	-0.2
	comp=Z,1.1nm,0.8s,baz=153,slow=1.7,SNR=9.3						
PETK	Petropavlovsk-	132.07	323	PKP	PKPdf	17 28 33.9	+0.5
	comp=Z,1.1nm,0.8s,baz=119,slow=1.5,SNR=4.3						
BVAR	Borovoye Array	136.96	34	PKP	PKiKP	17 28 43.6	-0.8
	comp=Z,0.9nm,0.7s,baz=282,slow=2.9,SNR=5.5						
KURBB	Kurchatov Arra	142.48	33	PKP	PKPdf	17 28 52.5	-0.2
	comp=Z,0.3nm,0.4s,baz=305,slow=3.3,SNR=2.7						
ZALV	Zalesovo Beam	142.95	24	PKP	PKPdf	17 28 51.0	-2.4
	comp=Z,1.6nm,0.6s,baz=328,slow=5.3,SNR=8.6						
KSH	Kashi	146.48	51	PKPbc	PKPbc	17 29 01.9	+0.3
MKAR	Makanchi Array	146.82	35	PKPbc	PKPdf	17 29 00.4	0.0
	comp=Z,2.8nm,0.9s,baz=325,slow=0.9,SNR=9.9						
USRK	Ussuriysk Ar.	151.10	325	PKPbc	PKiKP	17 29 13.7	0.0
	comp=Z,0.5nm,0.3s,baz=207,slow=0.9,SNR=4.2						
MJAR	Matsushiro Arr	151.22	307	PKPbc	PKPbc	17 29 14.1	+0.3
	comp=Z,2.7nm,0.8s,baz=97,slow=1.5,SNR=9.2						
SONM	Songino Array	154.05	5	PKP	PKPdf	17 29 12.3	+0.6
	comp=Z,0.5nm,0.6s,baz=334,slow=4.2,SNR=2.7						
SONM				PKPbc	PKiKP	17 29 20.1	+0.2
	comp=Z,0.6nm,0.6s,baz=354,slow=2.9,SNR=3.1						
SONM				PKPab	PKPab	17 29 33.5	+0.3
	comp=Z,1.1nm,0.6s,baz=332,slow=4.9,SNR=5.8						
KSRS	Korea Array	157.86	318	PKPab	PKPab	17 29 51.3	+1.6
	comp=Z,1.0nm,1.0s,baz=72,slow=1.5,SNR=2.8						
CMAR	Chiang Mai Arr	169.44	107	PKPab	PKPab	17 30 40.5	-0.6
	comp=Z,0.4nm,0.6s,baz=253,slow=6.1,SNR=4.5						
PZH	PanZhiHua	171.54	56	PKP	PKPdf	17 29 27.5	-1.8

IDC ***23*** *17:10:15.3±2.0, 14°.65S×178°.05W, h390^{km}±20^{km}, mb3.2/7, mbtmp3.9/8, Error ellipse: s-maj=51.5km s-min=19.6km az=144.0*

ISC 23 17:10:15.7±1.1, **14°.8S**±0°.3×**178°.0W**±0°.3, **h400**^{km}, **n12**, σ**0^{s}.85**/15, **mb3.4**/7, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.78	231	P	Pn	17 11 34.7	-0.9
	8.4nm,0.7s,baz=40,slow=8.2,SNR=6.9						
MSVF				S	S	17 12 41.2	+0.7
	0.7nm,0.3s,baz=274,slow=22,SNR=1.3						
WRA	Warramunga Arr	45.64	256	P	P	17 17 58.4	-0.3
	0.6nm,0.7s,baz=80,slow=6.0,SNR=8.6						
WRA				PcP	PcP	17 19 30.2	+1.0
	0.3nm,0.8s,baz=96,slow=3.9,SNR=1.7						
	0.6nm,0.7s						
ASAR	Alice Springs	46.06	251	P	P	17 18 02.4	+0.4
	4.2nm,0.6s,baz=85,slow=8.3,SNR=153						
ASAR				PcP	PcP	17 19 31.4	+0.7
	0.5nm,0.6s,baz=98,slow=4.0,SNR=7.9						
	4.2nm,0.6s						
PETK	Petropavlovsk-	70.75	345	P	P	17 20 50.5	+0.8
	1.1nm,0.7s,baz=119,slow=8.6,SNR=3.8						
	1.1nm,0.7s						
ILAR	Eielson Array	82.75	13	P	P	17 21 55.6	-0.1
	0.9nm,0.5s,baz=220,slow=5.7,SNR=15						
	0.9nm,0.5s						
TXAR	Lajitas Array	84.02	58	P	P	17 22 03.8	+0.8
	0.5nm,0.7s,baz=220,slow=7.6,SNR=5.1						
	0.5nm,0.7s						
PDAR	Pinedale Array	84.83	43	P	P	17 22 06.1	-0.9
	0.3nm,0.5s,baz=246,slow=4.2,SNR=2.2						
	0.3nm,0.5s						
SONM	Songino Array	91.41	319	P	P	17 22 37.0	-0.7
	0.2nm,0.4s,baz=116,slow=3.4,SNR=1.3						
	0.2nm,0.4s						
ARCES	ARCESS Array B	123.29	350	PKP	PKiKP	17 28 25.2	-0.4
	0.5nm,0.4s,baz=342,slow=0.4,SNR=10.0						
BRTR	Keskin Array B	142.76	318	PKP	PKPdf	17 29 01.5	-1.3
	0.7nm,0.8s,baz=341,slow=2.6,SNR=3.6						
MMAI	Mount Meron Ar	144.65	307	PKP	PKPdf	17 29 07.3	+1.2
	1.1nm,0.4s,baz=57,slow=3.1,SNR=4.8						
GERES	GERESS Array B	144.66	347	PKP	PKPdf	17 29 05.8	+0.2
	0.9nm,0.7s,baz=46,slow=5.8,SNR=6.1						

BGR ***23*** *17:30:43.0±0.4, 51°.21N×5°.15E, h5^{km}, ML2.1/8, Error ellipse: s-maj=5.6km s-min=3.3km az=134.0*

UCC ***23*** *17:30:43.2±0.6, 51°.24N×5°.11E, h4^{km}, ML2.0/11*

LDG ***23*** *17:30:43.5±0.1, 51°.23N×5°.14E, h4^{km}, Ml2.8/27, Error ellipse: s-maj=2.1km s-min=1.3km az=3.0*

BNS ***23*** *17:30:44.2±0.5, 51°.24N×5°.22E, h0^{km}±3^{km}, ML2.1*

STR ***23*** *17:30:44.1±1.4, 51°N±10°×°±°, h10^{km}, MLv3.0/6, Error ellipse: s-maj=0.0km s-min=0.0km az=6.1, preliminary*

ISC 23 17:30:41.8±0.7, **51°.18N**±0°.02×**5°.13E**±0°.01, **h0**^{km}, **n79**, σ**1^{s}.55**/155, **11C-51D**, **The Netherlands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BMOL	Mol	0.04	322	bP	Pg	17 30 44.0	+1.5
BMOL				dP	Pg	17 30 44.0	+1.5
BMOL				dP	Pg	17 30 44.1	+1.6
BMOL				bP	Pg	17 30 44.2	+1.6
BMOL				dS	Sg	17 30 45.2	+2.2
BMOL				dS	Sg	17 30 45.2	+2.2
BMOL				dS	Sg	17 30 45.5	+2.5
BMOL				dS	Sg	17 30 45.7	+2.6
BDSL	Dessel	0.05	312	bP	Pg	17 30 44.2	+1.5
BDSL				dS	Sg	17 30 45.7	+2.3
BOPT	Opiter	0.33	102	κP	Pb	17 30 49.8	-0.7
BOPT				dS	Sb	17 30 55.1	-1.2
BEBN	Eben Emael	0.52	138	bP	Pb	17 30 53.9	+0.1
BEBN				dS	Sb	17 31 01.5	-0.3
	comp=E,60nm,0.0s						
OPLO	Oploo	0.59	46	ePg	Pg	17 30 54.1	+1.0
OPLO				eSg	Sb	17 31 02.8	-1.1
UCC	Uccle	0.62	232	dP	Pb	17 30 55.1	-0.2
UCC				dS	Sg	17 31 02.9	+1.3
	comp=E,26nm,0.0s						
UCC	Uccle	0.62	232	ePg	Pb	17 30 55.2	-0.2
UCC				eSg	Sb	17 31 03.0	-1.6
BLCH	La Chartreuse	0.62	151	bP	Pb	17 30 55.8	+0.4
BLCH				dS	Sb	17 31 05.0	+0.3
BSTI	Sart Tilman	0.66	155	bP	Pb	17 30 56.9	+0.7
BSTI				dS	Sb	17 31 06.7	+0.8
	comp=Z,10nm,0.0s						
RODG	Roetgen-Dahlhe	0.67	93	ePg	Pb	17 30 56.1	-0.1
RODG				eSg	Sb	17 31 05.6	-0.4
	comp=Z,139nm,0.4s						
BCLA	Clavier	0.77	172	κP	Pb	17 30 58.9	+0.9
BCLA				dS	Sb	17 31 09.9	+0.8
	comp=E,32nm,0.0s						
BGES	Gesves	0.80	182	κP	Pb	17 30 59.3	+0.8
BGES				dS	Sb	17 31 10.4	+0.5
	comp=E,47nm,0.0s						
MEM	Membach	0.80	135	bP	Pb	17 30 59.0	+0.5
MEM				dP	Pb	17 30 59.1	+0.5
MEM				dS	Sb	17 31 10.7	+0.8
	comp=E,27nm,0.0s						
MEM				dS	Sb	17 31 10.8	+0.8
MEM	Membach	0.80	135	ePg	Pb	17 30 58.8	+0.2
MEM				eSg	Sb	17 31 10.3	+0.4
BRQR	Ronquire	0.81	225	dP	Pb	17 30 58.9	+0.1
BSKQ	Steenkerk	0.85	231	dP	Pb	17 30 59.3	-0.1
BTNL	Ternell	0.87	133	κP	Pb	17 31 00.3	+0.5
DREG	Dreilaegerbach	0.87	126	ePg	Pb	17 31 00.3	+0.6
DREG				eSg	Sb	17 31 12.8	+0.8
	comp=E,29nm,0.2s						
BMRD	Maredsous	0.91	195	dP	Pn	17 31 01.6	-0.2
BMRD				dS	Sb	17 31 14.1	+1.0
GSH	Grosshau	0.91	119	ePg	Pb	17 31 01.0	+0.6
GSH				eSg	Sb	17 31 13.2	+0.1
	comp=E,55nm,0.2s						
KLL	Kalltalsperre	0.92	125	ePg	Pb	17 31 01.3	+0.7
KLL				eSg	Sb	17 31 14.2	+0.8
	comp=E,30nm,0.1s						
BHOU	Houvegnez	1.00	146	bP	Pn	17 31 03.1	+0.1
BHOU				dS	Sn	17 31 18.1	+0.3
	comp=E,36nm,0.0s						
OLFT	Oleftalsperre	1.07	130	ePg	Pn	17 31 04.1	+0.1
OLFT				eSg	Sb	17 31 18.6	+0.9
PLH	Pulheim	1.08	99	ePg	Pb	17 31 03.3	0.0
PLH				eSg	Sb	17 31 17.7	-0.3
BBOU	Bougnies	1.09	224	dP	Pn	17 31 04.5	+0.2
GIVF	Givet	1.10	190	ePg	Pn	17 31 05.1	+0.7
GIVF				eSg	Sn	17 31 19.9	-0.4
	comp=E,68nm,0.3s						
DOU	Dourbes	1.14	197	κP	Pn	17 31 05.6	+0.6
DOU				dS	Sn	17 31 21.4	+0.2
	comp=E,29nm,0.0s						
LAUG	Laupendahl	1.16	81	ePg	Pb	17 31 04.8	+0.3
LAUG				eSg	Sg	17 31 19.4	+0.6
	comp=E,50nm,0.4s						
HES	Velbert-Hesper	1.22	81	ePg	Pg	17 31 05.2	+0.2
HES				eSg	Sg	17 31 20.8	0.0
	comp=E,58nm,0.3s						
STB	Steinbach	1.24	118	ePg	Pn	17 31 06.6	+0.3
STB				eSg	Sb	17 31 23.0	+0.6
	comp=E,52nm,0.2s						
LKLB	Kalborn	1.25	150	bP	Pn	17 31 07.2	+0.7
LKLB				dS	Sn	17 31 24.6	+0.6
BAIF	Baives	1.27	208	ePn	Pn	17 31 07.5	+0.8
BAIF	Baives	1.27	208	ePg	Pn	17 31 09.2	+2.5
BAIF				eSg	Sn	17 31 24.2	-0.2
	comp=E,26nm,0.3s						
TDN	Todenfeld	1.30	117	ePg	Pn	17 31 07.6	+0.4
TDN				eSg	Sb	17 31 24.8	+0.4
	comp=E,49nm,0.2s						
WTSB	Winterswijk	1.31	52	ePg	Pn	17 31 07.4	+0.1
WTSB				eSg	Sb	17 31 24.6	+0.2
BNS	Bensberg	1.31	99	ePg	Pn	17 31 08.0	+0.6
BNS				eSg	Sb	17 31 24.7	+0.1
	comp=E,73nm,0.2s						
HILG	Hillesheim	1.33	132	ePg	Pn	17 31 08.7	+1.1
HILG				eSg	Sn	17 31 25.8	-0.2
	comp=E,33nm,0.4s						
LOH	Wallersheim-Lo	1.34	138	ePg	Pb	17 31 08.7	+0.9
LOH				eSg	Sn	17 31 26.8	+0.4
	comp=E,33nm,0.3s						
BUG	Bochum--Univer	1.37	78	eSg	Sg	17 31 24.9	-0.9
BOST	Ostende	1.38	273	bP	Pb	17 31 08.4	0.0
BOST				dS	Sg	17 31 25.7	-0.3
HOBG	Hohbusch	1.41	97	eSg	Sb	17 31 27.5	+0.2
	comp=E,56nm,0.3s						
LVIA	Vianden	1.43	151	bP	Pb	17 31 10.2	+1.1
LVIA				dS	Sn	17 31 29.4	+1.1
	comp=N,23nm,0.0s						
ENTS	Ennepetalsperr	1.44	87	eSg	Sg	17 31 26.6	-1.3
BHE	Schloss Buerre	1.55	122	ePg	Pb	17 31 11.2	-0.1
BHE				eSg	Sn	17 31 30.9	-0.4
	comp=N,31nm,0.2s						
WLF	Walferdange	1.66	156	Pn	Pg	17 31 14.1	+0.6
WLF	Walferdange	1.66	156	dP	Pb	17 31 13.3	+0.1
WLF				dS	Sg	17 31 36.7	+1.8
	comp=E,33nm,0.0s						
WLF	Walferdange	1.66	156	ePg	Pg	17 31 14.6	+1.1
WLF				eSg	Sg	17 31 36.7	+1.8
BGG	Burgeitz	1.71	124	ePn	Pn	17 31 13.5	+0.6
BGG				eSg	Sn	17 31 35.2	-0.2
	comp=E,12nm,0.1s						
SORT	Sorpetalsperre	1.80	84	eSn	Sn	17 31 34.9	-2.6
	comp=E,13nm,0.4s						
ABH	Alteburg	2.02	129	Pn	Pn	17 31 17.4	+0.3
ABH	Alteburg	2.02	129	Sn	Sg	17 31 46.8	+0.1
KASTN	Kahler Asten	2.07	88	ePn	Pn	17 31 17.6	-0.2
KASTN				ePg	Pg	17 31 21.8	+0.4
KASTN				eSn	Sn	17 31 42.8	-1.5
KASTN				eSg	Sb	17 31 47.1	+0.6
TNS	Taunus Mts	2.32	113	eSg	Sb	17 31 54.8	+1.1
MANO	Manonville	2.41	167	Pn	Pn	17 31 24.0	+1.5
VOEL	Voellerdingen	2.56	149	Pg	Pg	17 31 31.7	+0.8
SAVF	Savonnieres en	2.57	180	ePg	Pg	17 31 32.8	+1.8
	baz=0.6						
SAVF	Savonnieres en	2.57	180	ePg	Pg	17 31 32.9	+1.9
SAVF				eSg	Sg	17 32 06.1	+1.8
	comp=E,18nm,0.3s						
SAVF				eSg	Sb	17 32 06.3	+5.5
	comp=E,20nm,0.5s						
PAGF	Fort de Pagny	2.66	171	ePg	Pg	17 31 32.8	+0.1
PAGF				eSg	Sg	17 32 07.7	+0.6
	comp=E,13nm,0.4s						
MEZF	Maizieres J'vi	2.68	181	ePg	Pg	17 31 34.3	+1.1

MEZF				eSg	Sg	17 32 09.5	+1.6
	comp=E,20nm,0.5s						
SFTF	Sexfontaines	2.98	181	ePg	Pg	17 31 39.5	+0.6
SFTF				eSg	Sg	17 32 15.9	-1.6
	comp=E,12nm,0.3s						
CDF	Champ du Feu	3.10	152	ePg	Pb	17 31 39.6	+1.7
CDF				eSg	Sg	17 32 21.2	-0.2
	comp=E,1.8nm,0.2s						
HAU	Haudompre	3.28	165	ePg	Pg	17 31 44.2	-0.4
HAU				eSg	Sg	17 32 26.6	-0.4
	comp=E,12nm,0.4s						
HINF	Hinteralfeld	3.55	161	ePg	Pg	17 31 48.6	-1.2
HINF				eSg	Sg	17 32 34.9	-0.9
	comp=E,4.9nm,0.4s						
LOR	Lormes	4.00	192	ePn	Pn	17 31 44.3	-0.1
LOR	Lormes	4.00	192	eP	Pn	17 31 46.7	+2.3
	baz=12						
LOR				eSn	Sn	17 32 29.4	-2.6
LOR				eSg	Sg	17 32 51.3	+0.9
	comp=E,5.5nm,0.3s						
SSF	Saint Saulge	4.26	195	ePn	Pn	17 31 47.8	0.0
SSF				eSn	Sn	17 32 35.6	-2.6
SSF				eSg	Sg	17 32 58.0	-0.5
	comp=E,6.5nm,0.4s						
LDF	La Druitiere	4.27	235	ePn	Pn	17 31 48.6	+0.6
LDF				eSn	Sn	17 32 37.1	-1.3
LDF				eSg	Sg	17 32 59.5	+0.7
	comp=E,3.9nm,0.4s						
FLN	La Foliniere	4.36	238	ePn	Pn	17 31 49.6	+0.5
FLN				eSn	Sn	17 32 37.4	-3.1
FLN				eSg	Sg	17 33 02.2	+0.6
	comp=E,5.0nm,0.5s						
AVF	Avril sur Loir	4.55	196	ePg	Pg	17 32 08.4	-0.5
AVF				eSg	Sg	17 33 07.1	-0.7
	comp=E,1.4nm,0.3s						
CABF	La Chapelle	4.62	172	eSg	Sg	17 33 09.5	-0.6
	comp=E,3.0nm,0.5s						
SMF	Signal de Mont	4.62	191	ePn	Pn	17 31 52.0	-0.8
SMF				eSg	Sg	17 33 09.3	-0.8
	comp=E,2.0nm,0.2s						
GRR	Gorron	4.78	237	ePn	Pn	17 31 55.5	+0.5
GRR				eSn	Sn	17 32 46.8	-4.2
	comp=E,4.4nm,0.2s						
BGF	Bois d'Agland	4.87	199	ePn	Pn	17 31 56.1	-0.1
BGF				eSn	Sn	17 32 49.3	-3.9
BGF				eSg	Sg	17 33 18.7	+0.7
	comp=E,6.8nm,0.4s						
TCF	Toulx Ste Croi	5.26	203	ePn	Pn	17 32 01.3	-0.4
MFF	Saint Martin d	5.75	219	ePn	Pn	17 32 09.0	+0.7
MFF	Saint Martin d	5.75	219	ePn	Pn	17 32 09.2	+0.9
MFF				eSn	Sn	17 33 09.2	-5.7
	comp=E,1.0nm,0.2s						
MFF				eSn	Sn	17 33 09.3	-5.7
	comp=E,1.7nm,0.4s						
SGMF	Saint Gilles	5.78	243	ePn	Pn	17 32 08.0	-0.7
SGMF				eSn	Sn	17 33 11.0	-4.7
ROSF	Rostrenen	6.14	246	ePn	Pn	17 32 13.1	-0.6
ROSF				eSn	Sn	17 33 20.2	-4.4
	comp=E,1.6nm,0.4s						
QUIF	Quistinic	6.31	242	ePn	Pn	17 32 16.6	+0.7
QUIF				eSn	Sn	17 33 22.7	-5.9
	comp=E,0.6nm,0.3s						

NOU 23 17:59:28.1,22°.11S×170°.04E,h0^{km},mb4.1/8,Southeast of Loyalty Islands,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.97	288	P	Pn	18 00 01.9	-0.8
MARNC	Mare, Loyalty	1.97	288	S	Sn	18 00 28.6	+0.4
PINNC	Pines Island,	2.45	258	P	Pn	18 00 09.5	+0.1
YATNC	Mamie plateau,	2.92	270	P	Pn	18 00 15.6	-0.3
OUENC	Ouen Island, N	2.98	263	P	Pn	18 00 17.0	+0.4
ONTNC	Ouen Toro	3.33	266	P	Pn	18 00 20.4	-1.1
DZM	Mont Dzumac	3.33	270	P	Pn	18 00 22.0	+0.4
KOUNC	Koumac, New Ca	5.58	285	P	Pn	18 00 53.3	+0.8

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*IDC **23** 18:05:38.6±2.4,37°.73N×77°.82E,h0^{km},mb3.6/4,
mbtmp3.4/8,ML2.9/4,Error ellipse: s-maj=35.6km
s-min=25.7km az=35.0*

*NNC **23** 18:05:42.6±2.1,37°.84N×78°.01E,h0^{km},mb3.9,mpv3.5,
Error ellipse: s-maj=19.4km s-min=13.5km az=88.0*

ISC 23 18:05:40.8±2.0,**37°.8N**±0°.1×**78°.2E**±0°.1,**h10^{km},n18,
σ2^{s}.56**/18,**mb3.6**/4,**1C-1D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	5.29	2	Pg	Pg	18 07 18.8	-3.3
	12nm,0.9s						
SATY				Lg	Lg	18 08 30.4	
	44nm,1.2s						
UZB	Uzynbulak	5.42	7	Pg	Pb	18 07 18.4	+2.7
	1.5nm,0.4s						
UZB				Lg	Lg	18 08 29.5	
	11nm,1.3s						
MDOK	Medeo	5.46	352	⇓Pg	Pb	18 07 20.2	+3.9
	7.3nm,0.6s						
MDOK				Pg	Pg	18 07 20.5	-4.8
	5.5nm,0.6s						
MDOK				Lg	Lg	18 08 33.6	
	11nm,0.6s						
MDOK				⇑Lg	Lg	18 08 34.2	
	16nm,0.8s						
SHLS	Shalkode	5.48	10	Pg	Pg	18 07 23.8	-1.9
	9.5nm,0.9s						
SHLS				Lg	Lg	18 08 38.7	
	16nm,0.8s						
KST	Kastek	5.53	343	Pg	Pb	18 07 22.0	+4.4
	2.8nm,0.9s						
KST				Lg	Lg	18 08 35.9	
	8.1nm,1.9s						
AAK	Ala-Archa	5.61	331	Pn	Pn	18 07 06.1	+1.6
	0.4nm,0.3s,baz=149,slow=5.9,SNR=4.1						
AAK				Pg	Pb	18 07 19.6	+0.7
	0.8nm,0.3s,baz=151,slow=5.8,SNR=5.5						
AAK				Sn	Sn	18 08 08.3	-0.8
	0.8nm,0.3s,baz=190,slow=10,SNR=1.8						
AAK				Lg	Lg	18 08 33.8	
	0.5nm,0.3s,baz=303,slow=16,SNR=3.5						
	1.2nm,0.4s						
KPKS	Kokpek	5.71	4	Pg	Pb	18 07 25.8	+5.2
	1.8nm,0.8s						
KPKS				Lg	Lg	18 08 42.2	
	13nm,0.9s						
KTBS	Karatobe	6.04	350	Pg	Pb	18 07 31.4	+5.2
	3.0nm,0.8s						
KTBS				Lg	Lg	18 08 51.2	
	8.2nm,1.2s						
KRBS	Karabastau	6.21	343	Pg	Pb	18 07 33.5	+4.3
	1.5nm,0.5s						
KRBS				Lg	Lg	18 08 56.0	
	3.3nm,0.6s						
KNOS	Konyrlen	6.63	6	Pg	Pb	18 07 42.6	+6.3
	1.9nm,1.0s						
KNOS				Lg	Lg	18 09 10.6	
	2.7nm,0.9s						
MKAR	Makanchi Array	9.53	17	Pn	Pn	18 07 59.2	+1.2
	0.6nm,0.3s,baz=204,slow=13,SNR=29						
MKAR				Sn	Sn	18 09 43.0	-2.2
	0.2nm,0.3s,baz=191,slow=21,SNR=3.6						
MKAR				Lg	Lg	18 10 39.9	
	baz=200,slow=34,SNR=1.1						
	0.9nm,0.3s						
KURBB	Kurchatov Arra	12.86	1	Pn	Pn	18 08 43.2	-0.3
	baz=189,slow=12,SNR=2.1						
	0.1nm,0.5s						
BVAR	Borovoye Array	16.19	343	Pn	P	18 09 31.6	+0.2
	baz=140,slow=10,SNR=14						
ZALV	Zalesovo Beam	16.83	14	Pn	P	18 09 38.8	+0.3
	0.1nm,0.3s,baz=195,slow=15,SNR=4.2						
	0.7nm,0.6s						
SONM	Songino Array	22.92	55	P	P	18 10 46.3	+1.3
	0.6nm,0.5s,baz=263,slow=10,SNR=3.5						
	0.6nm,0.5s						
FINES	FINESS Array B	39.74	324	P	P	18 13 11.9	-1.3
	0.6nm,0.7s,baz=133,slow=12,SNR=3.9						
	0.6nm,0.7s						
HFS	Hagfors	45.65	321	P	P	18 13 59.2	-2.0
	1.2nm,0.7s,baz=110,slow=8.1,SNR=3.3						
	1.2nm,0.7s						
NOA	NORSAR Array B	46.85	322	P	P	18 14 08.5	-2.2
	0.5nm,0.6s,baz=89,slow=7.9,SNR=3.0						
	0.5nm,0.6s						

IDC 23 18:14:59.3±9.2,**7°.02S**×**129°.92E,h171^{km}**±96^{km}**,mb2.9**/1**,
mbtmp3.6**/5**,Error ellipse: s-maj=84.8km s-min=26.4km
az=40.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.95	242	P	Pn	18 16 39.5	+0.8
	19nm,0.9s,baz=35,slow=15,SNR=1.7						
BATI				S	Sn	18 17 57.6	+0.6
	19nm,0.9s,baz=114,slow=13,SNR=1.7						
FITZ	Fitzroy Crossi	11.77	200	P	Pn	18 17 41.5	-0.6
	0.9nm,0.3s,baz=31,slow=12,SNR=22						
FITZ				S	Sn	18 19 46.5	-6.1
	1.9nm,0.3s,baz=187,slow=17,SNR=9.6						
WRA	Warramunga Arr	13.54	162	P	Pn	18 18 03.0	-1.6
	0.6nm,0.3s,baz=337,slow=13,SNR=23						
WRA				S	Sn	18 20 24.4	-11
	0.5nm,0.3s,baz=337,slow=25,SNR=7.1						
ASAR	Alice Springs	16.98	167	P	Pn	18 18 47.5	+0.5
	0.3nm,0.5s,baz=342,slow=9.0,SNR=15						
ASAR				S	S	18 21 50.2	-4.3
	0.4nm,0.8s,baz=344,slow=26,SNR=1.7						
MKAR	Makanchi Array	68.20	327	P	P	18 25 41.2	-0.1
	0.2nm,0.4s,baz=128,slow=8.0,SNR=4.5						
	0.2nm,0.4s						

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*CNRM **23** 18:34:28.1,34°.40N×9°.34W,h22^{km},ML3.0*

*MDD **23** 18:34:30.4±0.8,34°.52N×9°.52W,h24^{km}±8^{km},Mb4.1/15,
M_mb3.5/15,Error ellipse: s-maj=8.4km s-min=3.8km
az=72.0*

*SFS **23** 18:34:30.8,34°.49N×9°.52W,h52^{km},ML3.4/12,ML3.2/16,
MLv3.0/16*

*IGIL **23** 18:34:31.5,34°.51N×9°.46W,h30^{km},ML2.2*

*INMG **23** 18:34:32.2±1.4,34°.52N×9°.46W,h28^{km}±10^{km},ML2.3,
Error ellipse: s-maj=6.6km s-min=4.6km az=69.0,
#DIST_RANGE: REGIONAL #IPMA_REGION: Mar de
Marrocos*

ISC 23 18:34:29.5±1.5,**34°.49N**±0°.04×**9°.39W**±0°.06,**h35^{km},n89,
σ1^{s}.70**/133,**12C,West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AVE	Averroes	2.03	125	Pn	Pn	18 35 02.8	+1.7
AVE				Sn	Sn	18 35 27.2	+1.9
ZHG	ZHG	2.51	114	P	Pn	18 35 06.8	-1.0
ZHG	ZHG	2.51	114	S	Sn	18 35 36.3	-0.9
PFVI	Vila Bisbo	2.67	10	Pn	Pn	18 35 11.0	+1.0
PFVI				Sn	Sn	18 35 39.6	-1.6
PFVI	Vila Bisbo	2.67	10	eP	Pn	18 35 11.1	+1.0
PFVI				eS	Sn	18 35 40.6	-0.6
PFVI				i AML	AML	18 35 46.2	
PFVI				i AML	AML	18 35 46.4	
PFVI				i AML	AML	18 35 47.8	
PFVI	Vila Bisbo	2.67	10	P	Pn	18 35 11.4	+1.4
PFVI	Vila Bisbo	2.67	10	S	Sn	18 35 44.8	+3.6
MORF	Marmelete	2.87	12	eP	Pn	18 35 13.7	+0.9
MORF				eS	Sn	18 35 44.8	-1.3
MORF				IAML		18 35 45.7	
	comp=N,11nm,0.1s						
MORF	Marmelete	2.87	12	eP	Pn	18 35 13.7	+0.9
MORF				eS	Sn	18 35 45.3	-0.8
MORF				i AML	AML	18 35 46.5	
MORF				i AML	AML	18 35 50.1	
MORF				i AML	AML	18 35 50.7	
PBDV	Barranco-do-Ve	2.99	23	eP	Pn	18 35 16.9	+2.5
PBDV				eS	Sn	18 35 49.1	+0.1
PBDV				i AML	AML	18 35 53.9	
PBDV				i AML	AML	18 35 54.1	
PBDV				i AML	AML	18 36 01.5	
PTEO	Sao Teotonio	3.10	10	eP	Pn	18 35 16.9	+1.0
PTEO				eS	Sn	18 35 50.9	-0.7
PTEO				i AML	AML	18 35 51.2	
PTEO				i AML	AML	18 35 51.2	
PTEO				i AML	AML	18 35 54.0	
PVAQ	Vaqueiros	3.21	24	Pn	Pn	18 35 18.6	+1.2
PVAQ	Vaqueiros	3.21	24	eP	Pn	18 35 18.7	+1.4
PVAQ				eS	Sn	18 35 54.1	-0.2
PVAQ				i AML	AML	18 35 58.2	
PVAQ				i AML	AML	18 35 58.8	
PVAQ				i AML	AML	18 36 01.0	
PVAQ	Vaqueiros	3.21	24	P	Pn	18 35 18.4	+1.0
PVAQ	Vaqueiros	3.21	24	S	Sn	18 35 57.4	+3.1
PCVE	Castro Verde	3.32	19	Pn	Pn	18 35 20.8	+1.9
PCVE				Sn	Sn	18 35 55.8	-1.4
PCVE	Castro Verde	3.32	19	eP	Pn	18 35 20.8	+1.9
PCVE				eS	Sn	18 35 56.9	-0.2
PCVE				i AML	AML	18 35 59.4	
PCVE				i AML	AML	18 36 01.3	
PCVE				i AML	AML	18 36 01.4	
CHEFC	Chefchaouen	3.38	78	P	Pn	18 35 19.6	-0.3
CHEFC	Chefchaouen	3.38	78	S	Sn	18 35 58.9	0.0
EGRO	El Granado	3.41	26	Pn	Pn	18 35 21.6	+1.5
EGRO				Sn	Sn	18 35 58.9	-0.3
EGRO	El Granado	3.41	26	Pn	Pn	18 35 21.6	+1.5
EGRO				⇑iIVmb_VC		18 35 26.1	
	comp=N,294nm,SNR=6.3						
EGRO				Sn	Sn	18 35 58.4	-0.9
MESJ	Messejana	3.47	15	eP	Pn	18 35 22.4	+1.4
MESJ				eS	Sn	18 35 59.3	-1.6
MESJ				IAML		18 36 02.0	
	comp=N,4.4nm,0.1s						
MESJ	Messejana	3.47	15	eP	Pn	18 35 22.6	+1.6
MESJ				eS	Sn	18 36 00.5	-0.4
MESJ				i AML	AML	18 36 03.7	
MESJ				i AML	AML	18 36 05.7	
MESJ				i AML	AML	18 36 06.2	
SMIR	Smir Dam	3.49	69	P	Pn	18 35 20.5	-0.8
SMIR	Smir Dam	3.49	69	S	Sn	18 36 01.7	+0.3
ESPR	Espera	3.73	49	Pn	Pn	18 35 26.5	+2.0
ESPR				Sn	Sn	18 36 06.4	-0.7
ESPR	Espera	3.73	49	Pn	Pn	18 35 26.5	+2.0
ESPR				⇑iIVmb_VC		18 35 28.8	
	comp=N,219nm,SNR=3.3						
ESPR				Sn	Sn	18 36 06.4	-0.7
PBEJ	Beja	3.73	19	eP	Pn	18 35 26.4	+1.8
PBEJ				eS	Sn	18 36 06.9	-0.5
PBEJ				i AML	AML	18 36 08.2	
PBEJ				i AML	AML	18 36 08.9	
PBEJ				i AML	AML	18 36 09.3	
LCRM	LCR	3.84	101	P	Pn	18 35 24.7	-1.6
LCRM	LCR	3.84	101	S	Sn	18 36 08.8	-1.4
CZD	Col de Zad	3.90	111	P	Pn	18 35 25.7	-1.5
CZD	Col de Zad	3.90	111	S	Sn	18 36 11.5	-0.3
EMIN	Mina Concepcio	3.94	33	Pn	Pn	18 35 28.7	+1.3
EMIN				Sn	Sn	18 36 10.4	-2.0
EMIN	Mina Concepcio	3.94	33	Pn	Pn	18 35 28.7	+1.3
EMIN				⇑iIVmb_VC		18 35 31.6	
	comp=N,124nm,SNR=2.8						
EMIN				Sn	Sn	18 36 11.8	-0.5
TIO	Tiouine	3.98	153	Pn	Pn	18 35 29.6	+1.5
TIO				Sn	Sn	18 36 12.7	-1.0
TIO	Tiouine	3.98	153	P	Pn	18 35 27.3	-0.9
TIO	Tiouine	3.98	153	S	Sn	18 36 14.0	+0.3
TTIG	Tnine Tigouga,	4.01	168	P	Pn	18 35 25.8	-2.8
TTIG	Tnine Tigouga,	4.01	168	S	Sn	18 36 12.0	-2.4
PBAR	Barrancos	4.13	27	Pn	Pn	18 35 31.4	+1.3
PBAR				Sn	Sn	18 36 16.3	-1.0
PBAR	Barrancos	4.13	27	eP	Pn	18 35 31.8	+1.6
PBAR				eS	Sn	18 36 16.7	-0.5
PBAR				i AML	AML	18 36 21.0	
PBAR				i AML	AML	18 36 22.4	
PBAR				i AML	AML	18 36 22.9	
EVO	Evora	4.18	15	Pn	Pn	18 35 31.6	+0.9
EVO				Sn	Sn	18 36 16.8	-1.6
EVO	Evora	4.18	15	eP	Pn	18 35 32.3	+1.6
EVO				eS	Sn	18 36 17.3	-1.1
EVO				i AML	AML	18 36 18.4	
EVO				i AML	AML	18 36 18.4	
EVO				i AML	AML	18 36 19.0	
MD31	MD31	4.18	111	P	Pn	18 35 30.2	-0.6
MD31	MD31	4.18	111	S	Sn	18 36 18.5	-0.1
OUZM	OUZ	4.20	147	P	Pn	18 35 29.9	-1.3
OUZM	OUZ	4.20	147	S	Sn	18 36 19.4	+0.3
EMIJ	Mijas	4.29	60	Pn	Pn	18 35 34.8	+2.5
EMIJ				Sn	Sn	18 36 22.2	+1.0
EMIJ	Mijas	4.29	60	Pn	Pn	18 35 34.1	+1.8
EMIJ				Sn	Sn	18 36 20.8	-0.4
MDT	Midelt	4.32	111	P	Pn	18 35 31.6	-1.2
MDT	Midelt	4.32	111	S	Sn	18 36 21.1	-0.9
PARRA	Arraiolos	4.32	4	eP	Pn	18 35 35.4	+2.6
PARRA				eS	Sn	18 36 23.3	+1.4
PARRA				i AML	AML	18 36 24.8	
PARRA				i AML	AML	18 36 26.2	
PARRA				i AML	AML	18 36 28.7	
PMAFR	Mafra	4.46	1	Pn	Pn	18 35 35.1	+0.6
PMAFR				Sn	Sn	18 36 23.0	-2.2
PMAFR	Mafra	4.46	1	eP	Pn	18 35 35.2	+0.7
PMAFR				eS	Sn	18 36 22.6	-2.6
PMAFR				i AML	AML	18 36 26.4	
PMAFR				i AML	AML	18 36 26.4	
PMAFR				i AML	AML	18 36 27.4	
PALE	Palemas	4.54	79	P	Pn	18 35 34.8	-0.9
PALE	Palemas	4.54	79	S	Sn	18 36 27.9	+0.6
AKLM	AKL	4.56	88	P	Pn	18 35 34.5	-1.6
AKLM	AKL	4.56	88	S	Sn	18 36 25.5	-2.4
PESTR	Estremoz	4.60	18	eP	Pn	18 35 38.8	+2.3
PESTR				eS	Sn	18 36 27.2	-1.5
PMTG	Montargil	4.66	11	eP	Pn	18 35 38.2	+0.8
PMTG				eS	Sn	18 36 27.8	-2.4
PMTG				i AML	AML	18 36 31.5	
PMTG				i AML	AML	18 36 34.4	
PMTG				i AML	AML	18 36 37.3	
EBAD	Badajoz	4.66	23	Pn	Pn	18 35 38.8	+1.4
EBAD	Badajoz	4.66	23	Pn	Pn	18 35 38.8	+1.4
EBAD				⇑iIVmb_VC		18 35 43.4	
	comp=N,196nm,SNR=3.2						
EBAD				Sn	Sn	18 36 29.9	-0.4
ECAB	El Cabril	4.80	41	Pn	Pn	18 35 41.1	+1.8
ECAB				Sn	Sn	18 36 33.8	+0.1
ECAB	El Cabril	4.80	41	Pn	Pn	18 35 41.0	+1.8
ECAB				⇑iIVmb_VC		18 35 50.5	
	comp=N,82nm,SNR=2.0						
ECAB				Sn	Sn	18 36 32.2	-1.6
EGOR	Sierra Gorda,	5.02	57	Pn	Pn	18 35 44.9	+2.4
PSBE	So Bento	5.04	5	eP	Pn	18 35 44.7	+2.1
PSBE				eS	Sn	18 36 37.2	-2.3
PMRV	Marv??o	5.18	17	eP	Pn	18 35 45.3	+0.8
PMRV				eS	Sn	18 36 40.2	-2.8
PMRV				i AML	AML	18 36 43.8	
PMRV				i AML	AML	18 36 44.6	
PMRV				i AML	AML	18 36 47.8	
PSARD	Sardoal	5.19	10	eP	Pn	18 35 45.6	+0.9
PSARD				eS	Sn	18 36 41.2	-2.1
PSARD				i AML	AML	18 36 42.6	
PSARD				i AML	AML	18 36 44.4	
PSARD				i AML	AML	18 36 45.5	
ELGU	Los Guajares,	5.25	62	Pn	Pn	18 35 46.8	+1.3
ELGU				⇑iIVmb_VC		18 35 53.5	
	comp=N,74nm,SNR=2.1						
ELGU				Sn	Sn	18 36 45.1	+0.2
EADA	Adamuz	5.34	45	Pn	Pn	18 35 48.3	+1.6
EADA				Sn	Sn	18 36 44.7	-2.3
EADA	Adamuz	5.34	45	Pn	Pn	18 35 48.3	+1.6
EADA				⇑iIVmb_VC		18 35 49.9	
	comp=N,206nm,SNR=4.2						
EADA				Sn	Sn	18 36 45.7	-1.3
ZGR	Zagora	5.40	143	P	Pn	18 35 46.0	-1.6
PCBR	Castelo Branco	5.55	15	eP	Pn	18 35 51.1	+1.5
PCBR				eS	Sn	18 36 50.2	-1.9
PCBR				i AML	AML	18 36 51.4	
PCBR				i AML	AML	18 36 51.7	
PCBR				i AML	AML	18 36 53.4	
PCAS	Casmilo, Conde	5.60	7	eP	Pn	18 35 51.4	+1.2
PCAS				eS	Sn	18 36 50.6	-2.7
PCAS				i AML	AML	18 36 52.9	
PCAS				i AML	AML	18 36 55.8	
PCAS				i AML	AML	18 36 56.2	
JBK	JBK	5.64	90	P	Pn	18 35 48.3	-2.6
JBK	JBK	5.64	90	S	Sn	18 36 50.9	-3.7
EQES	Quesada	6.08	55	Pn	Pn	18 35 59.5	+2.5
EQES				⇑iIVmb_VC		18 36 04.4	
	comp=N,70nm,SNR=1.6						
EQES				Sn	Sn	18 37 04.5	-1.0
EPLA	Plasencia	6.16	24	Pn	Pn	18 35 59.7	+1.8
EPLA				Sn	Sn	18 37 05.6	-1.5
PSIM	Granatula de C	6.25	45	Pn	Pn	18 36 01.2	+1.9
PSIM				Sn	Sn	18 37 07.4	-2.2
PVIS	Viseu	6.33	10	eP	Pn	18 36 00.9	+0.6
PAB	San Pablo	6.46	37	Pn	Pn	18 36 04.0	+1.9
PAB				⇑iIVmb_VC		18 36 06.0	
	comp=N,52nm,SNR=1.5						
PAB				Sn	Sn	18 37 11.1	-3.4
MVO	Moncorvo	6.92	15	eP	Pn	18 36 10.3	+1.9
MVO				eS	Sn	18 37 21.7	-4.2
MVO				i AML	AML	18 37 24.2	
MVO				i AML	AML	18 37 30.8	
MVO				i AML	AML	18 37 32.9	
POLO	Lamas de Olo	6.99	10	eP	Pn	18 36 10.8	+1.5
POLO				eS	Sn	18 37 24.8	-2.8
POLO				i AML	AML	18 37 26.2	
POLO				i AML	AML	18 37 27.8	
POLO				i AML	AML	18 37 29.6	
ELOB	Lobios	7.44	8	Pn	Pn	18 36 16.3	+0.7
PGAV	Gavieira, Arco	7.51	6	eP	Pn	18 36 17.4	+0.8
PGAV				eS	Sn	18 37 36.2	-4.4
PGAV				i AML	AML	18 37 41.2	
ECAL	Calabor	7.72	15	Pn	Pn	18 36 21.3	+1.8
ECAL				Sn	Sn	18 37 42.4	-3.3
ECAL	Calabor	7.72	15	Pn	Pn	18 36 21.6	+2.1
ECAL				⇑iIVmb_VC		18 36 29.7	
	comp=N,96nm,SNR=1.1						
EAGO	Agolada(Pontev	8.36	7	Pn	Pn	18 36 29.5	+1.3
EAGO				⇑iIVmb_VC		18 36 33.3	
	comp=N,109nm,SNR=0.9						
ETOR	Torete	8.58	40	Pn	Pn	18 36 33.4	+2.1
ETOR				⇑iIVmb_VC		18 36 38.9	
	comp=N,67nm,SNR=1.4						
ETOR				Sn	Sn	18 38 06.7	-0.1

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*IDC **23** 18:35:50.8±1.9,30°.58S×177°.46W,h0^{km},mb3.5/3,
mbtmp3.5/3,MS3.6/1,Error ellipse: s-maj=50.9km
s-min=22.7km az=82.0*

ISC 23 18:35:55.0±1.6,**30°.71S**±0°.08×**177°.7W**±0°.3,**h33^{km},n6,
σ2^{s}.18**/8,**mb3.5**/3,**Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.46	353	Pn	Pn	18 36 17.8	-1.2
	138nm,0.3s,baz=82,slow=21,SNR=5.2						
RAO				Sn	Sn	18 36 36.2	-0.8
	201nm,0.3s,baz=100,slow=24,SNR=7.0						
URZ	Urewera	8.66	208	Pn	Pn	18 37 55.3	-2.5
	0.4nm,0.3s,baz=138,slow=3.6,SNR=2.4						
URZ				Sn	Sn	18 39 33.5	-0.8
	0.3nm,0.3s,baz=61,slow=20,SNR=1.6						
ASAR	Alice Springs	43.34	267	P	P	18 43 57.0	+2.8
	0.2nm,0.5s,baz=107,slow=7.7,SNR=4.8						
ASAR				LR	LR	19 01 09.5	
	comp=Z,60nm,18.2s,baz=100,slow=35						
	0.2nm,0.5s						
WRA	Warramunga Arr	44.35	272	P	P	18 44 04.2	+1.8
	0.4nm,0.5s,baz=114,slow=7.9,SNR=2.4						
	0.4nm,0.5s						
QSPA	South Pole Qui	59.40	180	P	P	18 45 55.7	+1.7
	1.3nm,1.1s,baz=69,slow=8.6,SNR=1.2						
	1.3nm,1.1s						
FINES	FINESS Array B	145.52	340	PKPbc	PKPab	18 55 29.1	-0.3
	0.5nm,0.4s,baz=50,slow=4.3,SNR=8.4						

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*NEIC **23** 18:42:08.1±1.5,22°.4S±0°.1×179°.0W±0°.1,h500^{km}±6^{km},
mb4.9/73,Error ellipse: s-maj=16.7km s-min=14.7km
az=121.0*

*NOU **23** 18:42:08.3,22°.39S×178°.88W,h503^{km},mb5.0/86,South
of Fiji Islands*

*IDC **23** 18:42:08.5±0.4,22°.30S×179°.05W,h503^{km}±3^{km},mb4.1/24,
mbtmp5.0/27,Error ellipse: s-maj=8.9km s-min=8.4km
az=119.0*

*GCMT **23** 18:42:09.1±0.4,22°.27S±0°.04×178°.89W±0°.05,
h500^{km}±3^{km},MW5.1/60,Moment Tensor Solution.
s60,c77; Duration: 0 Moment tensor: Scale 10^{16}Nm;
M_{rr}-5.01±.26; $M_{\theta\theta}$2.53±.48; $M_{\phi\phi}$2.48±.47; $M_{r\theta}$-0.46±.61;
$M_{\theta\phi}$-3.84±.46; $M_{\phi r}$-2.81±.62; Best double couple:
$M_0$6.45100×10^{16} NP1:ϕ_s111.00000°,δ42.00000°,
λ-128.00000°. NP2:ϕ_s338.00000°,δ58.00000°,
λ-61.00000°. Principal axes: T 6.5960, Plg9.0000°,
Azm47.0000°; N -0.2910, Plg24.0000°, Azm141.0000°; P*

-6.3050, Plg64.0000°, Azm299.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function

ISC 23 18:42:08.1±0.3**, 22°.42S**±0°.04×**178°.87W**±0°.04**,**
h506km±3km**, h507**km**:pP-P, n689,** σ**1ˢ.13**/756**, mb4.9**/89**,**
58C-35D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	4.17	1	P	P	18 43 27.5	-0.9
LKBA	Tubou, Lakemba	4.17	1	S	S	18 44 33.3	-0.4
MSVF	Nonsavu	5.49	328		P	18 43 39.2	-0.9
MSVF	Nonsavu	5.49	328	P	P	18 43 38.8	-1.3
	54nm,0.4s,baz=146,slow=7.4,SNR=45						
MSVF				S	S	18 44 53.5	-1.5
	74nm,0.9s,baz=246,slow=23,SNR=2.3						
MSVF	Nonsavu	5.49	328	P	P	18 43 39.7	-0.4
MSVF	Nonsavu	5.49	328	S	S	18 44 54.8	-0.3
TAVE	Taveuni	5.77	350	P	P	18 43 42.0	-0.6
TAVE	Taveuni	5.77	350	S	S	18 44 59.6	-0.1
DGTI	Dogotuki	6.23	348	P	P	18 43 46.0	-1.1
DGTI	Dogotuki	6.23	348	S	S	18 45 07.7	-0.1
RIZ	Raoul Island	6.85	173	P	P	18 43 52.0	-0.9
RAO	Raoul Island	6.86	173	P	P	18 43 52.6	-0.3
RAO	Raoul Island	6.86	173	P	P	18 43 51.3	-1.7
	239nm,0.4s,baz=38,slow=23,SNR=2.0						
RAO				S	S	18 45 13.1	-5.7
	299nm,0.3s,baz=224,slow=22,SNR=6.8						
GLKZ	Green Lake	6.87	173	P	P	18 43 51.8	-1.2
GLKZ				S	S	18 45 17.2	-1.9
FUTU	Fugatoga	8.10	5		P	18 44 04.9	-1.0
FUTU	Fugatoga	8.10	5	P	P	18 44 05.2	-0.7
NIUE	Niue	9.01	70		P	18 44 13.9	-1.3
NIUE	Niue	9.01	70	P	P	18 44 13.6	-1.6
NIUE				S	S	18 46 00.1	+0.5
AFI	Afiamalu	10.82	40	P	P	18 44 33.4	-1.0
INH	Isangel	11.44	282	P	P	18 44 42.1	+1.3
MARNC	Mare, Loyalty	12.19	272	P	P	18 44 48.9	+0.2
MARNC	Mare, Loyalty	12.19	272	S	S	18 47 01.6	+0.6
PINNC	Pines Island,	12.65	267	P	P	18 44 53.4	-0.2
PINNC	Pines Island,	12.65	267	P	P	18 44 54.6	+1.1
PINNC	Pines Island,	12.65	267	S	S	18 47 10.4	+0.6
YATNC	Mamie plateau,	13.19	269	P	P	18 45 00.7	+1.4
OUENC	Ouen Island, N	13.21	267	P	P	18 45 00.2	+0.7
ONTNC	Ouen Toro	13.58	268	P	P	18 45 04.3	+0.9
DZM	Mont Dzumac	13.60	269	P	P	18 45 03.4	-0.4
DZM	Mont Dzumac	13.60	269	*e*P	P	18 45 02.6	-1.1
	171nm,0.9s						
DZM				*e*S	S	18 47 29.6	+1.1
	73nm,1.2s						
DZM	Mont Dzumac	13.60	269	P	P	18 45 02.7	-1.1
	77nm,0.8s,baz=103,slow=14,SNR=31						
DZM				S	S	18 47 28.2	-0.3
	24nm,1.1s,baz=120,slow=18,SNR=3.4						
DZM	Mont Dzumac	13.60	269	P	P	18 45 03.8	+0.1
OUZ	Omahuta	14.35	206	P	P	18 45 11.8	+0.6
VLAKA	Lakatoro	14.38	294	P	P	18 45 11.8	0.0
VLAKA	Lakatoro	14.38	294	S	S	18 47 44.2	+0.8
GRZ	Great Barrier	14.63	198	P	P	18 45 16.1	+1.8
WCZ	Waipu Caves	14.71	202	P	P	18 45 18.4	+3.4
SANVU	Saraoutou	14.88	295		P	18 45 15.9	-1.2
SANVU	Saraoutou	14.88	295	P	P	18 45 17.8	+0.7
SANVU	Saraoutou	14.88	295	S	S	18 47 54.1	+1.1
KUZ	Kuaotunu	15.02	197	P	P	18 45 18.3	0.0
MBAZ	Motutapu North	15.28	199	P	P	18 45 22.6	+1.6
MXZ	Matakaoa Point	15.28	189	P	P	18 45 23.4	+2.3
ETAZ	East Tamaki Re	15.44	199	P	P	18 45 27.2	+4.5
WMGZ	Waiomatatini S	15.52	188	P	P	18 45 22.2	-1.3
WMGZ				S	S	18 48 07.8	+3.2
WTAZ	Waiatarua	15.53	200	P	P	18 45 24.4	+0.8
HAZ	Te Kaha	15.55	190	P	P	18 45 24.5	+0.7
HAZ				S	S	18 48 04.0	-1.1
AWAZ	Awhitu Peninsu	15.63	200	P	P	18 45 25.8	+1.1
RUGZ	Raukumara Rang	15.77	190	P	P	18 45 26.6	+0.3
PUZ	Puketiti	15.79	188	P	P	18 45 27.8	+1.4
TWGZ	Tauwhareparae	15.93	189	P	P	18 45 25.8	-2.0
TOZ	Tahuroa Road	16.01	196	P	P	18 45 28.6	0.0
TOZ				IAmb	IAmb	18 45 33.8	
	comp=Z,36nm,0.6s						
TOZ	Tahuroa Road	16.01	196	P	P	18 45 28.5	-0.1
MWZ	Matawai	16.16	190	P	P	18 45 29.8	-0.4
MWZ				S	S	18 48 17.1	+0.6
OMRZ	Omania	16.16	194	P	P	18 45 31.7	+1.5
URZ	Urewera	16.16	191	P	P	18 45 28.1	-2.0
	comp=Z,17nm,0.3s,baz=273,slow=2.8,SNR=32						
URZ				S	S	18 48 09.6	-6.7
	comp=Z,9.8nm,0.6s,baz=84,slow=18,SNR=1.8						
URZ	Urewera	16.16	191	P	P	18 45 29.0	-1.1
URZ				S	S	18 48 12.5	-3.8
TARZ	Mount Tarawera	16.25	193	P	P	18 45 32.7	+1.4
HSRZ	Hossack Road	16.38	194	P	P	18 45 34.0	+1.5
MUGZ	Murupara	16.43	192	P	P	18 45 32.8	-0.2
RIGZ	Rimuhau	16.48	189	P	P	18 45 34.0	+0.5
RIGZ				S	S	18 48 24.6	+2.3
RTZ	Ruatahuna	16.53	191	P	P	18 45 33.5	-0.5
RTZ				IAmb	IAmb	18 45 47.6	
	comp=Z,39nm,1.1s						
RTZ	Ruatahuna	16.53	191	P	P	18 45 34.6	+0.5
PRRZ	Plateau Road	16.53	193	P	P	18 45 34.0	0.0
TLZ	Tolley Road	16.57	196	P	P	18 45 36.2	+1.8
ALRZ	Allen Road	16.60	193	P	P	18 45 36.1	+1.4
SNGZ	Shannon Statio	16.63	190	P	P	18 45 34.6	-0.4
MTHZ	Maungataniwha	16.78	192	P	P	18 45 34.4	-2.2
RAHZ	Arahi	16.80	191	P	P	18 45 35.7	-1.1
KNZ	Kokohu	16.81	189	P	P	18 45 37.1	+0.4
MRHZ	Matea Rd	16.85	193	P	P	18 45 37.5	+0.2
HIZ	Hauiti	16.92	197	P	P	18 45 42.1	+4.2
NMHZ	Naumai	17.03	192	P	P	18 45 38.7	-0.4
RITZ	Rihia Road	17.11	194	P	P	18 45 38.5	-1.3
BKZ	Black Stump Fm	17.15	192		P	18 45 38.0	-2.3
BKZ	Black Stump Fm	17.15	192	P	P	18 45 37.9	-2.3
BKZ				S	S	18 48 30.2	-3.5
TMVZ	Te Maari	17.27	194	P	P	18 45 42.0	+0.5
TWVZ	Taurewa	17.29	195	P	P	18 45 41.7	+0.1
WTVZ	West Tongariro	17.30	195	P	P	18 45 42.0	+0.3
OTVZ	Oturere	17.33	194	P	P	18 45 40.8	-1.3
SNVZ	South Ngauruho	17.36	194	P	P	18 45 42.0	-0.3
MCHZ	McNeill Hill	17.38	192	P	P	18 45 41.5	-0.9
KWHZ	Kaweka Forest	17.42	192	P	P	18 45 42.3	-0.4
TUVZ	Tukino	17.43	194	P	P	18 45 43.2	+0.3
FWVZ	Far West T-bar	17.44	195	P	P	18 45 43.0	-0.2
MAVZ	Matarangi	17.45	195	P	P	18 45 43.6	+0.2
WHVZ	Whangaehu Hut	17.46	194	P	P	18 45 43.2	-0.2
TRVZ	Turoa	17.48	195	P	P	18 45 43.6	0.0
WNVZ	Wahianoa	17.50	194	P	P	18 45 41.9	-1.7
VRZ	Vera Road	17.52	197	P	P	18 45 45.1	+1.5
PKVZ	Pokaka	17.52	195	P	P	18 45 43.9	+0.2
MOVZ	Moawhango	17.54	194	P	P	18 45 43.4	-0.6
KRHZ	Kereru	17.64	192	P	P	18 45 43.3	-1.5
KAHZ	Kahuranaki	17.69	191	P	P	18 45 46.2	+1.0
RAR	Rarotonga	17.78	90	P	P	18 45 47.0	+0.8
	comp=Z,38nm,0.9s,baz=189,slow=7.9,SNR=3.6						
NEZ	North Egmont	17.84	198	P	P	18 45 50.4	+3.8
PREZ	Palmer Road	17.88	198	P	P	18 45 50.3	+3.3
PXZ	Pawanui	17.92	191	P	P	18 45 46.4	-0.9
LREZ	Lake Rotokare	17.93	197	P	P	18 45 49.4	+2.0
PNHZ	Pukenui	17.93	192	P	P	18 45 46.6	-0.9
TSZ	Takapari Road	18.12	193	P	P	18 45 48.2	-1.0
DVHZ	Dannevirke	18.31	192	P	P	18 45 50.4	-0.5
BFZ	Birch Farm	18.67	192	P	P	18 45 52.5	-1.6
BFZ				IAmb	IAmb	18 45 53.1	
	comp=Z,60nm,1.1s						
BFZ	Birch Farm	18.67	192	P	P	18 45 53.1	-1.0
MRZ	Mangatainoka R	18.78	193		P	18 45 53.2	-1.9
MRZ				IAmb	IAmb	18 46 09.7	
	comp=Z,38nm,1.1s						
MRZ	Mangatainoka R	18.78	193	P	P	18 45 53.6	-1.6
MSWZ	Moikau Station	19.57	193	P	P	18 46 02.1	-0.3
SNZO	South Karori	19.59	195	P	P	18 46 02.8	+0.3
TCW	Tory Channel	19.60	196		P	18 46 02.1	-0.6
PLWZ	Palliser	19.72	193	P	P	18 46 03.4	-0.3
QRZ	Quartz Range	19.73	200	P	P	18 46 05.0	+1.1
QRZ	Quartz Range	19.73	200	P	P	18 46 05.0	+1.1
TKNZ	Takaka Hill	19.79	198	P	P	18 46 04.6	+0.2
NNZ	Nelson	19.84	197	P	P	18 46 05.7	+0.9
BSWZ	Blackbirch Sta	20.18	196	P	P	18 46 08.5	+0.6
MRNZ	Matariki Terra	20.19	198	P	P	18 46 07.9	-0.1
THZ	Tophouse	20.48	198		P	18 46 11.7	+1.0
THZ				IAmb	IAmb	18 46 20.5	
	comp=Z,34nm,0.9s						
THZ	Tophouse	20.48	198	P	P	18 46 11.3	+0.6
DSZ	Denniston Nort	20.80	200	P	P	18 46 14.3	+0.8
KHZ	Kahutara	20.92	196	P	P	18 46 14.5	0.0
GVZ	Greta Valley S	21.57	196	P	P	18 46 20.0	-0.4
GVZ	Greta Valley S	21.57	196	P	P	18 46 20.3	-0.2
LTZ	Lake Taylor	21.60	198	P	P	18 46 20.9	0.0
LTZ	Lake Taylor	21.60	198	P	P	18 46 20.7	-0.1
INZ	Inchbonnie	21.80	199	P	P	18 46 21.6	-0.9
INZ	Inchbonnie	21.80	199	P	P	18 46 22.1	-0.4
OXZ	Oxford	22.17	198	P	P	18 46 26.2	+0.3
WVZ	Waitaha Valley	22.34	200	P	P	18 46 27.3	-0.1
MQZ	McQueen's Vall	22.36	196	P	P	18 46 28.2	+0.7
RPZ	Rata Peaks	22.82	199	P	P	18 46 32.0	+0.3
	comp=Z,27nm,0.5s,baz=219,slow=0.9,SNR=26						
	comp=Z,27nm,0.5s						
RPZ	Rata Peaks	22.82	199	P	P	18 46 32.6	+0.9
RPZ	Rata Peaks	22.82	199	P	P	18 46 31.4	-0.2
FOZ	Fox Glacier	23.05	201	P	P	18 46 33.5	-0.2
TMZ	Timaru	23.44	198	P	P	18 46 37.0	-0.2
LBZ	Lake Benmore	23.69	200	P	P	18 46 38.8	-0.7
ALEG	Aligegeo Malai	23.87	301	P	P	18 46 40.4	-1.0
JCZ	Jackson Bay	23.88	202	P	P	18 46 41.3	0.0
HNR	Honiara	24.07	299	P	P	18 46 41.1	-2.2
	comp=Z,23nm,0.4s,baz=168,slow=22,SNR=14						
	comp=Z,23nm,0.4s						
ODZ	Otahua Downs	24.15	198	P	P	18 46 44.1	+0.6
WKZ	Wanaka	24.46	201	P	P	18 46 46.0	-0.3
MSZ	Milford Sound	24.71	203	P	P	18 46 50.1	+1.7
EAZ	Earnscleugh	24.73	200	P	P	18 46 49.3	+0.7
MLZ	Mavora Lakes	25.24	202	P	P	18 46 54.3	+1.1
DCZ	Deep Cove	25.67	203	P	P	18 46 58.0	+1.1
WHZ	Wether Hill Ro	25.76	201	P	P	18 46 58.5	+0.7
TBI	Tubuai	27.09	98	*e*sS	sS	18 53 48.0	-1.6
	comp=Z,1µm,33.8s						
ARMA	Armidale	27.53	247	P	P	18 47 11.9	-1.9
EIDS	Eidsvold	27.60	258		P	18 47 13.1	-1.2
EIDS				IAmb	IAmb	18 47 15.2	
	comp=Z,17nm,0.6s						
EIDS	Eidsvold	27.60	258	P	P	18 47 14.6	+0.3
PPT2	Papeete2	27.92	85	*e*S	S	18 51 16.6	-8.7
	comp=Z,60nm,25.5s						
PPT2				*e*sS	sS	18 53 56.6	-6.9
	comp=Z,215nm,25.8s						
PPT2				*e*sS	SS	18 54 02.6	-26
	comp=Z,218nm,23.2s						
PMOR	Pomariorio Ree	30.21	81	*e*P	P	18 47 37.1	0.0
	comp=Z,178nm,1.1s						
CAN	Canberra	30.79	238	P	P	18 47 40.8	-1.1
CAN				IAmb	IAmb	18 47 44.2	
	comp=Z,22nm,0.6s						
CAN	Canberra	30.79	238	P	P	18 47 41.8	-0.1
CAN				pP	pP	18 49 07.2	+0.4
XMAS	Kiritimati	32.08	43	P	P	18 47 52.5	-0.6
CTAO	Charters Tower	32.54	267		P	18 47 56.4	-0.7
CTAO				IAmb	IAmb	18 47 57.8	
	comp=Z,41nm,0.7s						
CTAO	Charters Tower	32.54	267	P	P	18 47 56.8	-0.3
CTAO	Charters Tower	32.54	267	P	P	18 47 56.8	-0.3
CMSA	Cobar Meteorol	32.74	246	P	P	18 47 58.9	+0.3
RABL	Rabaul	33.39	299	P	P	18 48 02.9	-1.4
RABL				IAmb	IAmb	18 48 18.1	
	comp=Z,24nm,0.6s						
GLAD	Gladstone	33.44	229	P	P	18 48 04.9	+0.5
QLP	Quilpie	33.75	255	P	P	18 48 07.2	-0.1
QLP	Quilpie	33.75	255	S	S	18 52 54.1	-0.5
TOO	Toolangi	34.13	236		P	18 48 10.7	+0.4
TOO				IAmb	IAmb	18 48 12.2	
	comp=Z,26nm,0.7s						
CORO	Coronation Par	34.22	228	P	P	18 48 12.6	+1.6
TAU	Tasmania Unive	34.70	226		P	18 48 15.9	+1.0
TAU				IAmb	IAmb	18 48 16.6	
	comp=Z,52nm,0.7s						
TAU	Tasmania Unive	34.70	226	P	P	18 48 16.0	+1.0
TAU	Tasmania Unive	34.70	226	P	P	18 48 15.4	+0.4
MTSU	Mount Surprise	34.73	270	P	P	18 48 15.2	-0.5
GEXS	Deakin Univers	35.21	235	P	P	18 48 20.2	+0.9
STKA	Stephens Creek	36.25	246		P	18 48 27.9	-0.2
STKA	Stephens Creek	36.25	246	P	P	18 48 28.4	+0.3
	comp=Z,19nm,0.5s,baz=92,slow=10,SNR=102						
	comp=Z,19nm,0.5s						
STKA	Stephens Creek	36.25	246	P	P	18 48 28.4	+0.3
COEN	Coen	36.94	277	P	P	18 48 32.1	-1.9
MANU	Manus Island	38.54	297	P	P	18 48 45.6	-1.4
MANU				IAmb	IAmb	18 48 46.9	
	comp=Z,14nm,0.7s						
HTT	Hallett	38.63	244	P	P	18 48 47.8	+0.1
WHYH	Whyalla	39.73	245	P	P	18 48 57.0	+0.6
BBOO	Buckleboo	40.99	245		P	18 49 05.9	-0.7
BBOO				IAmb	IAmb	18 49 07.6	
	comp=Z,63nm,1.1s						
BBOO	Buckleboo	40.99	245	P	P	18 49 06.3	-0.3
AS01	Alice Springs	43.27	259	P	P	18 49 24.5	-0.3
AS31	Alice Springs	43.32	259		P	18 49 24.2	-1.0
AS31				IAmb	IAmb	18 49 25.8	
	comp=Z,12nm,0.5s						
ASAR	Alice Springs	43.32	259		P	18 49 24.4	-0.7
ASAR	Alice Springs	43.32	259	P	P	18 49 24.1	-1.0
	comp=Z,30nm,0.7s,baz=100,slow=8.1,SNR=346						
ASAR				PcP	pwP	18 51 02.6	+0.1
	comp=Z,14nm,0.8s,baz=105,slow=4.2,SNR=17						
ASAR				S	S	18 55 13.5	-2.3
	comp=Z,6.2nm,1.0s,baz=96,slow=16,SNR=14						
	comp=Z,30nm,0.7s						
WR8	Warramunga Arr	43.41	264	IAmb	IAmb	18 49 25.5	
	comp=Z,18nm,0.7s						
WB0	Warramunga Arr	43.55	264	IAmb	IAmb	18 49 26.6	
	comp=Z,32nm,0.7s						
WRA	Warramunga Arr	43.56	264	P	P	18 49 24.8	-2.2
WRA	Warramunga Arr	43.56	264	P	P	18 49 25.4	-1.7
	comp=Z,29nm,0.8s,baz=97,slow=7.9,SNR=242						
WRA				pP	pP	18 50 59.2	+0.4
	comp=Z,2.8nm,0.7s,baz=97,slow=7.3,SNR=1.9						
WRA				PcP	PcP	18 51 04.4	+0.6
	comp=Z,16nm,1.0s,baz=98,slow=4.1,SNR=13						
WRA				ScP	ScP	18 54 08.0	+1.2
	comp=Z,3.7nm,0.8s,baz=99,slow=3.8,SNR=6.5						
WRA				S	S	18 55 13.5	-5.8
	comp=Z,4.5nm,1.0s,baz=97,slow=14,SNR=6.9						
	comp=Z,29nm,0.8s						
JAY	Jayapura	43.92	291	P	P	18 49 28.8	-1.2
	comp=Z,44nm,0.5s,baz=140,slow=4.1,SNR=44						
	comp=Z,44nm,0.5s						
JAY	Jayapura	43.92	291	P	P	18 49 28.8	-1.2
	comp=Z,58nm,0.6s						
GENI	Genyem	44.35	290	P	P	18 49 33.5	+0.3
GENI	Genyem	44.35	290	P	P	18 49 33.0	-0.2
	comp=Z,52nm,0.9s						
SMPI	Sarmi	45.91	290	P	P	18 49 44.2	-1.0
KDU	Kakadu	47.21	273	P	P	18 49 54.1	-1.0
HMH	Humu'ula Sheep	47.61	30		P	18 49 58.2	-0.1
HMH				IAmb	IAmb	18 49 59.2	
	comp=Z,68nm,0.8s						
FORT	Forrest	47.81	248		P	18 49 58.6	-0.7
FORT	Forrest	47.81	248	P	P	18 49 59.1	-0.2
SRPI	Serui, Papua	48.12	289	P	P	18 50 02.8	+0.9
	comp=Z,45nm,0.7s						
MTN	Manton Dam	48.40	273		P	18 50 02.4	-1.6
MTN				IAmb	IAmb	18 50 03.6	
	comp=Z,40nm,0.6s						
MTN	Manton Dam	48.40	273	P	P	18 50 02.9	-1.1
BAKI	Biak	48.57	289	P	P	18 50 06.3	+1.1
	comp=Z,50nm,0.7s						
KNRA	Kununurra	49.75	268		P	18 50 13.1	-0.9
KNRA				IAmb	IAmb	18 50 15.2	
	comp=Z,49nm,0.6s						
DRV	Dumont d'Urvil	51.28	200	P	P	18 50 24.9	+0.6
DRV				pP	pP	18 52 00.5	-0.3
FITZ	Fitzroy Crossi	51.99	264		P	18 50 30.0	-0.3
FITZ	Fitzroy Crossi	51.99	264	P	P	18 50 30.6	+0.3
SWI	Sorong	52.98	287	P	P	18 50 36.5	-1.0
	comp=Z,1µmcomp=Z,167nm,0.8s						
SOEI	Soe	55.77	273	P	P	18 50 58.0	+0.7
SBA	Scott Base	55.91	184		P	18 51 00.5	+3.5
VNDA	Vanda	55.93	185		P	18 50 59.6	+2.3
VNDA	Vanda	55.93	185	P	P	18 50 59.8	+2.6
	comp=Z,6.4nm,0.7s,baz=354,slow=8.1,SNR=32						
VNDA				PcP	PcP	18 51 50.1	+1.7
	comp=Z,2.6nm,0.6s,baz=52,slow=4.7,SNR=4.0						
	comp=Z,6.4nm,0.7s						
BATI	Baumata	56.17	273	P	P	18 51 00.1	+0.1
	comp=Z,36nm,0.6s,baz=247,slow=2.2,SNR=5.6						
	comp=Z,36nm,0.6s						
PSA00	Pilbara Seismi	56.46	258		P	18 51 00.9	-0.9
PSA00				IAmb	IAmb	18 51 02.0	
	comp=Z,87nm,1.1s						
PSA00	Pilbara Seismi	56.46	258	P	P	18 51 00.4	-1.5
PSA00				IAmb	IAmb	18 51 02.2	
	comp=Z,18nm,0.5s						
PSA00	Pilbara Seismi	56.46	258	P	P	18 51 01.3	-0.5
KLBR	Kellerberrin	56.52	246	P	P	18 51 02.1	0.0
MEEK	Meekatharra	56.54	252	P	P	18 51 02.0	-0.3
MBWA	Marble Bar	56.66	259		P	18 51 02.0	-1.2
MBWA	Marble Bar	56.66	259	P	P	18 51 02.7	-0.5
MBWA	Marble Bar	56.66	259	P	P	18 51 02.3	-0.9
NWAO	Narrogin (SRO)	56.80	244		P	18 51 03.2	-0.7
NWAO				IAmb	IAmb	18 51 05.7	
	comp=Z,39nm,0.8s						
NWAO	Narrogin (SRO)	56.80	244	P	P	18 51 04.4	+0.4
NWAO	Narrogin (SRO)	56.80	244	P	P	18 51 04.3	+0.3
BLDU	Ballidu	57.55	247	P	P	18 51 08.8	-0.3
MMRI	Maumere	58.04	274	IAmb	IAmb	18 51 14.1	
	comp=Z,37nm,0.8s						
MORW	Morawa	58.36	249	IAmb	IAmb	18 51 15.3	
	comp=Z,78nm,1.1s						
MORW	Morawa	58.36	249	P	P	18 51 15.1	+0.4
CCD	Concordia, Ant	60.41	195	P	P	18 51 29.5	+1.4
BNSI	Bone	61.58	277	P	P	18 51 36.4	+0.1
	comp=Z,61nm,1.0s						
KAPI	Kappang	61.67	277	P	P	18 51 35.8	-1.1
	comp=Z,8.2nm,0.3s,baz=115,slow=4.7,SNR=6.6						
	comp=Z,8.2nm,0.3s						
CASY	Casey	61.89	206		P	18 51 37.7	+0.3
CASY				IAmb	IAmb	18 51 38.7	
	comp=Z,20nm,0.8s						
PLAI	Plampang	62.09	272	P	P	18 51 39.6	-0.1
TOLI2	Tolitoli	63.23	283		P	18 51 45.6	-1.4
TOLI2				IAmb	IAmb	18 51 48.4	
	comp=Z,32nm,0.6s						
TOLI2	Tolitoli	63.23	283	P	P	18 51 47.6	+0.6
PCI	Palu	63.23	281	P	P	18 51 48.0	+0.9
	comp=Z,62nm,1.4s						
MPSI	Mapaga	63.70	282	P	P	18 51 48.9	-1.1
	comp=Z,608nmcomp=Z,56nm,0.9s						
JAGI	Jajag, Banyuwa	65.57	271		P	18 51 59.7	-2.2
JAGI	Jajag, Banyuwa	65.57	271	P	P	18 52 01.0	-0.9
JAGI	Jajag, Banyuwa	65.57	271	P	P	18 52 01.0	-0.9
	comp=Z,106nm,0.7s						
QSPA	South Pole Qui	67.66	180		P	18 52 15.8	+1.7
QSPA				IAmb	IAmb	18 52 17.0	
	comp=Z,49nm,0.8s						
QSPA	South Pole Qui	67.66	180	P	P	18 52 15.9	+1.8
	comp=Z,45nm,0.8s,baz=27,slow=1.1,SNR=248						
	comp=Z,45nm,0.8s						
QSPA	South Pole Qui	67.66	180	P	P	18 52 15.8	+1.7
PCJI	Pacitan	68.42	270	P	P	18 52 19.4	-0.1
WOJI	Wonogiri, Jawa	68.78	270	P	P	18 52 22.2	+0.5
UGM	Wanagama	69.13	270		P	18 52 22.3	-1.6
KKM	Kota Kinabalu	69.48	286		P	18 52 25.6	-0.4
KKM	Kota Kinabalu	69.48	286	P	P	18 52 26.7	+0.7
JGF	Kuroka	71.05	323	IAmb	IAmb	18 52 35.2	
	comp=Z,13nm,0.6s						
STKI	Sintang	71.25	278	P	P	18 52 37.1	+0.7
	comp=Z,52nm,0.8s						
MJAR	Matsushiro Arr	71.28	325	P	P	18 52 35.5	-0.6
	comp=Z,15nm,0.5s,baz=159,slow=5.4,SNR=63						
MJAR				pP	pP	18 54 21.8	+0.4
	comp=Z,1.4nm,0.8s,baz=146,slow=7.4,SNR=2.5						
	comp=Z,15nm,0.5s						
MAJO	Matsushiro	71.28	325		P	18 52 35.5	-0.6
MAJO				IAmb	IAmb	18 52 36.6	
	comp=Z,22nm,0.7s						
MAJO	Matsushiro	71.28	325	P	P	18 52 36.4	+0.3
MAJO	Matsushiro	71.28	325	P	P	18 52 35.5	-0.6
JMN	Monobe	71.71	320		P	18 52 38.3	-0.4
JMN				IAmb	IAmb	18 52 45.1	
	comp=Z,27nm,1.1s						
JMN	Monobe	71.71	320	P	P	18 52 39.4	+0.7
BBJI	Bungbulang	71.95	269	P	P	18 52 39.8	-0.8
LEM	Lembang	72.20	270	P	P	18 52 41.9	-0.3
	comp=Z,119nm,0.6s,baz=64,slow=7.6,SNR=42						
JSD	Sado	72.37	326	P	P	18 52 44.1	+1.7
KSM	Kuching	72.89	279	P	P	18 52 45.9	0.0
DBJI	Dramaga	73.11	270	P	P	18 52 47.0	-0.2
	comp=Z,99nm,1.0s						
TWGBT	Beinan	73.74	304	P	P	18 52 49.4	-1.2
CGJI	Cibinong	74.06	269	P	P	18 52 51.5	-1.1
NACB	Ninganchiao	74.09	305	IAmb	IAmb	18 52 52.7	
	comp=Z,54nm,0.8s						
NACB	Ninganchiao	74.09	305	P	P	18 52 52.7	+0.2
TPUB	Ta-pu	74.35	304	P	P	18 52 53.7	-0.3
SSLB	Suanglung	74.37	304	IAmb	IAmb	18 52 53.7	
	comp=Z,46nm,0.6s						
SSLB	Suanglung	74.37	304	P	P	18 52 53.7	-0.4
JKA	Kamikawa-asahi	75.03	332	IAmb	IAmb	18 52 59.9	
	comp=Z,32nm,0.9s						
NIKH	Nikolski High	75.58	6	P	P	18 52 59.6	-0.6
	baz=190						
MDSI	Maura Dua	76.24	271	P	P	18 53 03.5	-1.3
	comp=Z,42nm,1.1s						
UNV	Unalaska Valle	76.70	7	P	P	18 53 06.3	0.0
	baz=192						
YSS	Yuzhno-Sakhali	77.25	334	P	P	18 53 10.8	+1.2
TJN	Taejon	77.44	318	P	P	18 53 11.9	+1.1
BELA	Belgrano 2	77.77	173		P	18 53 12.4	+0.4
BELA				IAmb	IAmb	18 53 13.7	
	comp=Z,24nm,0.7s						
KSRS	Korea Array	77.80	319	P	P	18 53 12.9	+0.2
	comp=Z,5.3nm,0.9s,baz=141,slow=6.1,SNR=25						
	comp=Z,5.3nm,0.9s						
PEA0B	Petropavlovsk-	77.92	346	P	P	18 53 13.0	0.0
PEA0B				IAmb	IAmb	18 53 14.0	
	comp=Z,39nm,1.1s						
PETK	Petropavlovsk-	77.92	346	P	P	18 53 12.3	-0.7
	comp=Z,18nm,0.7s,baz=122,slow=7.0,SNR=74						
PETK				pP	pP	18 55 01.3	+0.2
	comp=Z,1.6nm,1.0s,baz=174,slow=6.7,SNR=2.3						
	comp=Z,18nm,0.7s						
KSI	Kapahiang	78.02	271	P	P	18 53 16.3	+1.7
	comp=Z,117nm,1.2s						
INCN	Inchon	78.60	319	P	P	18 53 18.0	+0.9
CHNA	Chernabura Isl	78.70	11	P	P	18 53 16.8	-0.3
	baz=198						
SDPT	Sand Point	79.04	11	P	P	18 53 19.3	+0.3
	baz=197						
S12K	Black Hills	79.12	10	P	P	18 53 19.2	-0.3
	baz=196						
MAW	Mawson	79.49	200	P	P	18 53 22.6	+1.2
	comp=Z,11nm,0.8s,baz=184,slow=2.9,SNR=20						
	comp=Z,11nm,0.8s						
USRK	Ussuriysk Ar.	80.10	326		P	18 53 25.5	+0.7
USRK	Ussuriysk Ar.	80.10	326	P	P	18 53 24.7	-0.1
	comp=Z,26nm,1.0s,baz=126,slow=3.9,SNR=29						
	comp=Z,26nm,1.0s						
NJ2	Nanjing	80.49	310	⇑P	P	18 53 28.3	+1.1
NJ2				pmax	pmax		
	comp=Z,24nm,1.0s						
MDJ	Mudanjiang	81.63	326	P	P	18 53 33.3	+0.5
MDJ				S	SKSac	19 03 03.8	-0.1
MDJ				pmax	pmax		
	comp=Z,28nm,1.0s						
R18K	Karluk	82.27	13	P	P	18 53 36.0	+0.4
	baz=203						
MNSI	Mandailing Nat	82.48	274	P	P	18 53 37.1	-0.8
	comp=Z,33nm,0.7s						
IPM	Ipoh	82.58	278	P	P	18 53 39.3	+0.9
Q17K	Contact Creek	82.63	12	P	P	18 53 38.2	+0.5
	baz=201						
KDAK	Kodiak Island	82.87	14	P	P	18 53 39.4	+0.7
	baz=204						
WHN	Wuhan	82.93	307	⇓P	P	18 53 40.0	+0.3
WHN				pmax	pmax		
	comp=Z,120nm,1.3s						
P16K	Nushagak River	82.97	11	P	P	18 53 38.7	-0.4
	baz=199						
NVAR	Mina Array Bea	82.97	44	P	P	18 53 41.0	+1.0
	comp=Z,2.0nm,0.9s,baz=218,slow=8.7,SNR=7.7						
NVAR				pP	pP	18 55 30.8	+0.9
	comp=Z,5.0nm,0.9s,baz=228,slow=8.6,SNR=8.7						
	comp=Z,2.0nm,0.9s						
M11K	Mekoryuk	83.15	6	P	P	18 53 40.4	+0.3
	baz=192						
Q18K	Katmai Hardscr	83.16	12	P	P	18 53 40.5	+0.2
	baz=202						
KULM	Kulim	83.24	279	P	P	18 53 42.0	+0.3
N14K	Kuskokwak Cree	83.25	9	P	P	18 53 41.2	+0.7
	baz=196						
CN2	Changchun	83.33	323	⇑*i*P	P	18 53 42.1	+0.7
CN2				sP	sP	18 56 25.3	+3.0
CN2				PP	PP	18 57 06.5	+3.9
CN2				SKS	SKSac	19 03 14.4	-0.6
CN2	Changchun	83.33	323	sS	sS	19 06 40.8	+4.6
CN2				pmax	pmax		

	comp=Z,40nm,1.1s						
CN2				pmax	pmax		
	comp=Z,60nm,3.5s						
P17K	Kvichak River	83.40	11	P	P	18 53 41.4	0.0
	baz=201						
O16K	Kokwok River B	83.48	10	P	P	18 53 42.0	+0.2
	baz=199						
M13K	Dall Lake	83.50	8	P	P	18 53 42.4	+0.6
	baz=194						
BNX	BinXian	83.53	325	⇑P	P	18 53 42.6	+0.3
BNX				pmax	pmax		
	comp=Z,39nm,0.9s						
N15K	Kwethluk River	83.71	9		P	18 53 42.5	-0.4
N15K				IAmb	IAmb	18 53 45.6	
	comp=Z,16nm,0.7s						
N15K	Kwethluk River	83.71	9	P	P	18 53 43.1	+0.2
	baz=198,SNR=8.0						
P18K	Big Mountain,	83.81	12	P	P	18 53 43.0	-0.4
	baz=202						
O17K	Koliganek Bris	83.82	11	P	P	18 53 43.4	0.0
	baz=200						
PSI	Prapat	83.86	276	P	P	18 53 43.5	-1.4
	comp=Z,13nm,0.6s,baz=196,slow=3.9,SNR=6.2						
	comp=Z,13nm,0.6s						
PSI	Prapat	83.86	276	P	P	18 53 45.0	+0.1
M14K	Bethel	84.01	8	P	P	18 53 44.9	+0.6
	baz=196						
M15K	Kasigluk River	84.13	9	P	P	18 53 45.8	+0.9
	baz=197						
N16K	Nishlik Lake	84.21	10	P	P	18 53 46.2	+0.8
	baz=199						
O18K	Koktuh Hills	84.24	12	P	P	18 53 46.3	+0.7
	baz=202						
P19K	Oil Pt	84.44	13	P	P	18 53 47.7	+1.1
	baz=204						
L14K	Kuka Creek	84.48	8	P	P	18 53 47.2	+0.6
	baz=195						
N17K	Nushagak Hills	84.52	11	P	P	18 53 47.9	+1.0
	baz=200						
GSI	Gunungsitoli	84.53	274		P	18 53 47.4	-0.7
GSI	Gunungsitoli	84.53	274	P	P	18 53 48.6	+0.5
GSI	Gunungsitoli	84.53	274	P	P	18 53 49.8	+1.7
	comp=Z,67nm,1.8s						
SYO	Syowa Base	84.68	193	⇑*e*P	P	18 53 46.0	-1.7
SYO	Syowa Base	84.68	193	⇓*e*PcP	P	18 53 49.8	+2.1
M16K	Timber Creek	84.70	10	P	P	18 53 48.6	+0.8
	baz=198						
O19K	Port Alsworth	84.73	12	P	P	18 53 48.3	+0.4
	baz=203						
K13K	Kusilvak Mount	84.83	7	P	P	18 53 48.9	+0.5
	baz=193						
O20K	Slope Mountain	84.96	13	P	P	18 53 49.9	+0.7
	baz=204						
L15K	Ungalak Mounta	84.96	8	P	P	18 53 49.5	+0.4
	baz=196						
BRSE	Bradley Lake S	85.05	14	P	P	18 53 50.0	+0.4
	baz=206						
N19K	Bonanza Creek	85.27	12	P	P	18 53 50.0	-0.7
	baz=203						
M17K	Holitna River	85.30	10	P	P	18 53 51.3	+0.6
	baz=200						
SRIT	Nakonsritamara	85.49	281	P	P	18 53 52.9	+0.2
K15K	Wolf Creek Mou	85.55	8	P	P	18 53 52.7	+0.8
	baz=196						
M18K	Stony River	85.66	11	P	P	18 53 52.9	+0.5
	baz=201						
J14K	Nanvaranak Lak	85.75	7	P	P	18 53 53.1	+0.3
	baz=194						
TROLL	Troll, Antarti	85.81	180	⇓P	P	18 53 53.9	+0.5
	comp=Z,804nm,0.5s						
TROLL				⇑pP	pP	18 55 45.6	+1.0
	comp=Z,241nm,0.8s						
U15A	North Rim	85.85	48		P	18 53 54.8	+0.5
L17K	Donlin	85.86	10	P	P	18 53 54.3	+0.9
	baz=199						
N20K	Mount Spurr	86.07	13	P	P	18 53 54.1	-0.4
	baz=205						
SPCR	Spurr Chakacha	86.07	13	P	P	18 53 54.7	+0.2
	baz=205						
SNAA	Sanae	86.12	179	⇓P	P	18 53 54.7	-0.1
	comp=Z,101nm,0.5s						
SNAA				⇑pP	pP	18 55 47.7	+1.8
	comp=Z,26nm,0.7s						
SNAA	Sanae	86.12	179		P	18 53 54.5	-0.2
SNAA	Sanae	86.12	179	P	P	18 53 54.8	0.0
	comp=Z,4.9nm,0.6s,baz=207,slow=7.4,SNR=54						
	comp=Z,4.9nm,0.6s						
L18K	Granite Mounta	86.19	10	P	P	18 53 55.7	+0.8
	baz=200						
HNS	HongShan	86.25	313	⇑P	P	18 53 57.0	+1.2
HNS				pmax	pmax		
	comp=Z,28nm,1.2s						
VNA3	Neumayer Olymp	86.28	177	⇓P	P	18 53 55.2	-0.3
	comp=Z,29nm,0.8s						
VNA3				⇑pP	pP	18 55 48.2	+1.5
	comp=Z,4.8nm,0.8s						
M19K	Big River Lodg	86.30	11	P	P	18 53 56.1	+0.6
	baz=203						
LYN	LuoYang	86.34	310	P	P	18 53 57.9	+1.6
LYN				pmax	pmax		
	comp=Z,42nm,0.8s						
K17K	Iditarod	86.41	9	P	P	18 53 56.8	+0.8
	baz=199						
L19K	White Mountain	86.47	11		P	18 53 56.9	+0.6
L19K	White Mountain	86.47	11	P	P	18 53 56.9	+0.6
	baz=202,SNR=7.5						
RC01	Rabbit Creek A	86.49	14	P	P	18 53 57.0	+0.6
	baz=207						
M20K	Styx River	86.51	12	P	P	18 53 56.4	-0.2
	baz=204						
HEH	HeiHe	86.52	329	*e*P	P	18 53 56.8	0.0
HEH				pmax	pmax		
	comp=Z,31nm,0.6s						
PWL	Port Wells	86.60	14	P	P	18 53 57.3	+0.4
	baz=208						
SUA	Susitna One	86.61	13		P	18 53 56.4	-0.7
SUA	Susitna One	86.61	13	P	P	18 53 56.2	-0.9
	baz=206,SNR=6.2						
J16K	Anvik River	86.63	8	P	P	18 53 57.0	0.0
	baz=197						
BJT	Baijiatuau	86.68	316	IAmb	IAmb	18 53 59.4	
	comp=Z,15nm,0.7s						
BJT	Baijiatuau	86.68	316	P	P	18 53 58.6	+0.8
VNA2	Neumayer--Watz	86.72	177	⇓P	P	18 53 57.7	+0.2
	comp=Z,12nm,0.6s,baz=178,slow=3.9						
VNA2				⇑pP	pP	18 55 50.0	+0.9
	comp=Z,2.5nm,0.7s,baz=184,slow=5.4						
KAIM	Kayak Island	86.75	17	P	P	18 53 57.3	-0.3
	baz=212						
CRAG	Craig	86.80	24	P	P	18 53 57.6	-0.4
	baz=222						
GYA	Guiyang	86.90	300	⇑P	P	18 54 00.3	+1.0
GYA				pmax	pmax		
	comp=Z,16nm,1.2s						
GLI	Glacier Island	86.91	15	P	P	18 53 58.1	-0.3
	baz=209						
SKT	Skwentna	86.91	13	P	P	18 53 58.9	+0.5
	baz=205						
L20K	Farewell, AK	86.92	11	P	P	18 53 59.0	+0.6
	baz=203						
SLVN	Son La	86.92	294	P	P	18 54 00.7	+1.2
J17K	VABM Dome	86.94	9	P	P	18 53 59.0	+0.6
	baz=198						
EYAK	Cordova Ski Ar	86.95	16	P	P	18 53 59.0	+0.5
	baz=210						
VNA1	Neumayer--Stat	86.95	177	⇓P	P	18 53 59.0	+0.4
	comp=Z,24nm,1.0s						
KNK	Knik Glacier	87.06	14	P	P	18 53 59.3	+0.2
	baz=208						
PMR	Palmer	87.07	14	P	P	18 54 00.0	+0.9
PMR	Palmer	87.07	14	P	P	18 53 59.3	+0.2
	baz=207						
V35K	Ketchikan	87.27	25	P	P	18 54 00.3	+0.2
	baz=223						
U33K	Whale Pass	87.28	24	P	P	18 53 60.0	-0.2
	baz=222						
J18K	Innoko River	87.36	10	P	P	18 54 00.3	-0.2
	baz=200						
SML	Sawmill	87.44	14	P	P	18 54 00.8	-0.1
	baz=208						
BMRM	Bremner River	87.60	16	P	P	18 54 02.2	+0.5
	baz=211,SNR=5.2						
MESA	MESA	87.64	17	P	P	18 54 02.5	+0.4
	baz=214						
SCM	Sheep Creek Mo	87.69	14	P	P	18 54 02.7	+0.6
	baz=209,SNR=8.7						
K20K	Telida	87.70	11	P	P	18 54 02.5	+0.5
	baz=203						
KLU	Klutina	87.72	15	P	P	18 54 03.0	+0.7
	baz=210						
H16K	Elim	87.73	7	P	P	18 54 02.7	+0.5
	baz=195						
CRQE	Cirque	87.81	17	P	P	18 54 03.3	+0.5
	baz=213						
G15K	Niukluk	87.89	6	P	P	18 54 03.6	+0.7
	baz=194						
PNL	Peninsula	87.95	19	P	P	18 54 03.9	+0.6
	baz=216						
J19K	Poorman	88.03	10	P	P	18 54 03.7	+0.2
	baz=202						
CAST	Castle Rocks	88.11	12	P	P	18 54 03.8	-0.2
	baz=205						
F14K	Arctic Creek	88.14	5	P	P	18 54 04.0	0.0
	baz=192						
N25K	Chitina, Valde	88.14	16	P	P	18 54 04.3	0.0
	baz=211,SNR=6.6						
M24K	Tolsona, Glenn	88.19	15	P	P	18 54 04.8	+0.4
	baz=210						
WAT6	Susitna Watana	88.25	14	P	P	18 54 04.7	-0.2
	baz=209,SNR=8.3						
WAT1	Susitna Watana	88.30	13	P	P	18 54 05.9	+1.0
	baz=208						
H17K	Granite Mounta	88.30	8	P	P	18 54 05.5	+0.6
	baz=198						
MCARA	McCarthy VSAT	88.36	16	P	P	18 54 05.7	+0.5
	baz=213						
R32K	Eaglecrest	88.42	22	P	P	18 54 06.3	+0.8
	baz=220						
J20K	Nowinta River	88.44	11	P	P	18 54 05.9	+0.4
	baz=203						
G16K	Koyuk River	88.45	7	P	P	18 54 06.0	+0.6
	baz=195						
CTG	Chitna Glacier	88.46	17	P	P	18 54 06.4	+0.6
	baz=214						
GCSA	Galena City Sc	88.54	9	P	P	18 54 06.1	+0.2
	baz=200						
PLCA	Paso Flores	88.54	134	P	P	18 54 08.6	+1.8
	comp=Z,2.9nm,0.8s,baz=208,slow=4.1,SNR=5.6						
	comp=Z,2.9nm,0.8s						
O28M	Mount Upton	88.62	18	P	P	18 54 07.0	+0.3
	baz=215,SNR=5.8						
XAN	Xi'an	88.65	308	⇑P	P	18 54 08.3	+1.0
XAN				pP	PcP	18 54 14.3	+5.9
XAN				pmax	pmax		
	comp=Z,60nm,0.8s						
O29M	Mount Kennedy	88.71	19	P	P	18 54 08.5	+1.5
	baz=217						
PLBC	Pleasant Camp	88.72	20	P	P	18 54 07.9	+1.1
	baz=219						
G17K	Kiwalik Mounta	88.75	7	P	P	18 54 07.1	+0.2
	baz=197						
DHY	Denali Highway	88.77	14	P	P	18 54 07.4	+0.2
	baz=209						
TXAR	Lajitas Array	88.77	58	P	P	18 54 09.8	+1.8
	comp=Z,0.8nm,0.9s,baz=217,slow=6.1,SNR=6.1						
TXAR				pP	pwP	18 56 01.4	-0.6
	comp=Z,1.8nm,0.9s,baz=223,slow=5.1,SNR=9.3						
TXAR				PKKPbc	PKKPbc	19 11 45.2	-0.1
	comp=Z,0.3nm,0.6s,baz=90,slow=4.1,SNR=5.4						
	comp=Z,0.8nm,0.9s						
XLT	XiLinHaoTe	88.85	319	*e*P	P	18 54 08.3	+0.3
XLT				pmax	pmax		
	comp=Z,16nm,1.0s						
BPAW	Bear Paw Mtn.	88.94	12	P	P	18 54 08.2	+0.3
	baz=206						
P30M	Million Dollar	89.06	20	P	P	18 54 09.6	+1.1
	baz=218						
SKAG	Skagway	89.06	21	P	P	18 54 09.6	+1.2
	baz=220						
PAX	Paxson	89.11	15	P	P	18 54 09.4	+0.7
	baz=211						
YUK8	Steele Glacier	89.16	18	P	P	18 54 10.1	+0.9
	baz=216						
M26K	Nabesna, AK	89.22	16	P	P	18 54 10.2	+0.9
	baz=213						
H19K	Roundabout Mou	89.34	9	P	P	18 54 10.3	+0.7
	baz=201						
S34M	Telegraph Cree	89.34	23	P	P	18 54 10.9	+1.1
	baz=223						
YUK3	Moose Creek	89.37	17	P	P	18 54 10.7	+0.6
	baz=215,SNR=6.6						
G18K	Tagagawik	89.38	8	P	P	18 54 10.4	+0.6
	baz=199						
HYT	Haines Junctio	89.45	19	P	P	18 54 11.1	+0.7
	baz=218						
M27K	Edge Creek, AK	89.47	16	P	P	18 54 11.9	+1.4
	baz=214,SNR=7.6						
KMI	Kunming	89.50	297	P	P	18 54 13.4	+1.8
KMI				pmax	pmax		
	comp=Z,21nm,1.3s						
YUK4	Talbot Arm	89.53	18	P	P	18 54 12.7	+1.9
	baz=217						
H20K	Anotleneega Mo	89.55	10	P	P	18 54 11.2	+0.6
	baz=202						
P32M	Atlin	89.69	21	P	P	18 54 12.6	+1.2
	baz=221						
Q32M	Nakina River	89.71	22	P	P	18 54 12.7	+1.0
	baz=222						
NEA2	Nenana	89.76	12	P	P	18 54 12.4	+0.8
	baz=207						
K24K	Donnelly Dome	89.76	14	P	P	18 54 12.7	+1.1
	baz=210						
G19K	Purcell Mounta	89.83	9	P	P	18 54 12.3	+0.4
	baz=200						
MLY	Manley	89.83	12	P	P	18 54 12.0	+0.1
	baz=206						
O30N	Mendenhall	89.83	19	P	P	18 54 13.1	+1.0
	baz=219						
RIDG	Independent Ri	89.92	14	P	P	18 54 12.7	+0.3
	baz=211						
CMAR	Chiang Mai Arr	89.99	290	P	P	18 54 15.3	+1.5
	comp=Z,26nm,0.9s,baz=134,slow=3.2,SNR=183						
CMAR				pP	pP	18 56 06.2	+0.8
	comp=Z,0.1nm,0.4s,baz=105,slow=6.8,SNR=1.6						
	comp=Z,26nm,0.9s						
HDA	Harding Lake	90.03	13	P	P	18 54 13.3	+0.5
	baz=209						
H21K	Melozitna Rive	90.03	10	P	P	18 54 12.8	-0.1
	baz=204						
L27K	Beaver Creek,	90.07	16		P	18 54 12.3	-0.8
L27K	Beaver Creek,	90.07	16	P	P	18 54 13.6	+0.5
	baz=214						
N30M	Aishikik Lake	90.07	19	P	P	18 54 13.7	+0.4
	baz=218						
HHC	Hu-ho-hao-te	90.11	315	*e*P	P	18 54 15.4	+1.4
HHC				pmax	pmax		
	comp=Z,26nm,0.6s						
HHC				pmax	pmax		
	comp=Z,86nm,4.0s						
CHTO	Chiang Mai	90.14	290	P	P	18 54 15.7	+1.3
E17K	Hotham Inlet	90.14	7	P	P	18 54 13.9	+0.6
	baz=196						
I23K	Minto, Yukon-K	90.20	12	P	P	18 54 14.4	+0.8
	baz=207						
COLA	College	90.25	13	P	P	18 54 14.2	+0.4
SCRK	Sand Creek	90.32	15	P	P	18 54 14.9	+0.5
	baz=212						
ILAR	Eielson Array	90.36	13	P	P	18 54 12.8	-1.6
	comp=Z,1.6nm,0.9s,baz=232,slow=5.6,SNR=9.9						
ILAR				pP	pP	18 56 06.8	0.0
	comp=Z,1.3nm,1.0s,baz=243,slow=5.1,SNR=5.0						
	comp=Z,1.6nm,0.9s						
F19K	Shaleruckik Mo	90.39	8	P	P	18 54 14.9	+0.5
	baz=200						
P33M	Teslin, Yukon	90.46	21	P	P	18 54 15.6	+0.6
	baz=222						
M29M	Somme Creek	90.46	18	P	P	18 54 15.6	+0.6
	baz=217						
N31M	Braeburn, Yuko	90.49	19	P	P	18 54 15.3	+0.2
	baz=219						
H22K	Ishtalitna Cre	90.50	11	P	P	18 54 15.2	+0.2
	baz=205						
J25K	Salcha River,	90.55	14	P	P	18 54 16.1	+0.8
	baz=211						
E18K	Tukpahlearik C	90.60	7	P	P	18 54 15.8	+0.4
	baz=197						
G21K	Allakaket	90.71	10	P	P	18 54 16.7	+0.7
	baz=203						
H23K	Yukon River	90.77	12	P	P	18 54 16.7	+0.5
	baz=207						
K27K	Chicken	90.82	15	P	P	18 54 17.8	+1.3
	baz=214						
J26L	Joseph Creek	90.86	14	P	P	18 54 17.7	+0.9
	baz=212						
F20K	Avaraart Lake	90.87	9	P	P	18 54 17.4	+0.7
	baz=201						
PZH	PanZhiHua	90.89	298	P	P	18 54 18.6	+0.7
PZH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,100nm,5.2s						
PDAR	Pinedale Array	90.91	44	P	P	18 54 17.3	-0.5
	comp=Z,0.7nm,0.7s,baz=212,slow=5.3,SNR=4.1						
PDAR				pP	pP	18 56 10.1	+0.3
	comp=Z,1.1nm,0.9s,baz=207,slow=3.0,SNR=4.0						
	comp=Z,0.7nm,0.7s						
E19K	Redstone River	91.05	8	P	P	18 54 17.7	+0.2
	baz=200						
L29M	L29M	91.09	17	P	P	18 54 18.4	+0.5
	baz=217						
PRP	Porcupine Dome	91.30	13	P	P	18 54 19.6	+0.7
	baz=211						
F21K	Alatna River	91.36	10	P	P	18 54 19.7	+0.6
	baz=203						
G22K	Bettles	91.41	10	P	P	18 54 19.7	+0.6
	baz=205						
M31M	Drury Creek, Y	91.46	19	P	P	18 54 19.9	+0.3
	baz=220						
G23K	Bananza Creek	91.47	11	P	P	18 54 19.7	+0.2
	baz=207						
DAWY	Dawson	91.52	16	P	P	18 54 20.5	+0.6
	baz=216						
I26K	Coal Creek Min	91.64	14	P	P	18 54 20.8	+0.5
	baz=213						
C18K	Utukok River	91.72	6	P	P	18 54 20.8	+0.2
	baz=196						
F22K	John River	91.83	10	P	P	18 54 21.9	+0.8
	baz=205						
K29M	Barlow Dome	91.84	17	P	P	18 54 22.3	+0.9
	baz=218						
H25L	Birch Creek	91.89	13	P	P	18 54 22.4	+1.0
	baz=210						
COLD	Coldfoot	91.91	11	P	P	18 54 21.8	+0.3
	baz=206						
D19K	Kuna River	91.92	8	P	P	18 54 22.7	+1.2
	baz=199						
G24K	Hadweenzic Riv	91.94	12	P	P	18 54 22.4	+0.8
	baz=209						
E20K	Nigu River	91.94	8	P	P	18 54 22.6	+0.9
	baz=201						
G25K	Bearman Lake	92.26	12	P	P	18 54 23.9	+0.9
	baz=210						
D20K	Etivluk River	92.31	8	P	P	18 54 24.1	+0.7
	baz=201						
C19K	Lookout Ridge	92.33	7	P	P	18 54 24.2	+0.7
	baz=198						
B18K	Kokolik River	92.35	6	P	P	18 54 24.5	+1.0
	baz=196						
E21K	Killik River	92.42	9	P	P	18 54 24.7	+0.8
	baz=203						
E22K	Anaktuvuk Pass	92.46	10	P	P	18 54 25.3	+1.3
	baz=205						
I28M	Miner Creek	92.51	15	P	P	18 54 25.1	+0.7
	baz=216						
F24K	Squaw Lake	92.58	11	P	P	18 54 25.5	+0.9
	baz=208						
J30M	Hart River	92.74	17	P	P	18 54 26.6	+1.1
	baz=219						
H27K	Steamboat Moun	92.78	14	P	P	18 54 26.7	+1.1
	baz=214						
G26K	Porcupine Rive	92.89	13	P	P	18 54 27.5	+1.5
	baz=212						
E24K	Your Creek	92.96	11	P	P	18 54 27.4	+1.0
	baz=208						
C21K	Knifeblade Rid	92.97	8	P	P	18 54 27.9	+1.5
	baz=202						
D22K	Ayikyak River	93.01	9	P	P	18 54 27.6	+1.1
	baz=204						
F25K	Christian Rive	93.07	12	P	P	18 54 26.7	-0.2
	baz=211						
A19K	Wainwright	93.23	6	P	P	18 54 28.7	+1.3
	baz=196						
I30M	Mount Dempster	93.23	17	P	P	18 54 28.7	+0.9
	baz=219						
TOLK	Toolik Lake Re	93.28	10	P	P	18 54 28.9	+1.1
	baz=207						
LZH	Lanzhou	93.29	308	*e*P	P	18 54 30.1	+1.3
LZH				pP	pwP	18 56 25.9	+0.6
LZH				pmax	pmax		
	comp=Z,39nm,0.8s						
D23K	Nanushuk River	93.40	10	P	P	18 54 29.3	+1.1
	baz=206						
F26K	Sheenjek River	93.45	13	P	P	18 54 29.5	+0.9
	baz=212						
B20K	Meade River	93.47	7	P	P	18 54 29.4	+0.9
	baz=200						
H29M	Whitestone	93.52	15	P	P	18 54 29.7	+0.8
	baz=217						
E25K	Arctic Village	93.54	12	P	P	18 54 29.6	+0.7
	baz=211						
YAK	Yakutsk	93.59	338	P	P	18 54 28.6	-0.6
EPYK	Eagle Plains	94.05	16	P	P	18 54 32.3	+1.0
	baz=218						
G29M	Pine Creek	94.16	15	P	P	18 54 32.3	+0.5
	baz=217						
C23K	Itkillik River	94.19	9	P	P	18 54 32.9	+1.1
	baz=206						
H31M	Peel River	94.23	17	P	P	18 54 32.7	+0.5
	baz=221						
C24K	Franklin Bluff	94.39	10	P	P	18 54 33.1	+0.4
	baz=208						
D25K	Kavik River	94.43	11	P	P	18 54 33.4	+0.4
	baz=210						
G30M	tAoh Zraii Nji	94.65	16	P	P	18 54 35.0	+0.9
	baz=219						
A22K	Sinclair Lake	94.66	8	P	P	18 54 34.6	+0.6
	baz=202						
E28M	Babbage River	95.17	14	P	P	18 54 36.9	+0.5
	baz=216						
C27K	Jago River	95.18	12	P	P	18 54 37.6	+1.2
	baz=212						
F30M	Barrier River	95.25	15	P	P	18 54 37.5	+0.8
	baz=219						
E29M	Blow River	95.36	14	P	P	18 54 37.7	+0.5
	baz=218						
D27M	Malcolm River	95.40	13	P	P	18 54 38.6	+1.2
	baz=215						
SONM	Songino Array	96.67	319	P	P	18 54 43.1	-0.6
	comp=Z,0.6nm,0.5s,baz=132,slow=4.4,SNR=6.2						
SONM				PKKPbc	PKKPbc	19 11 25.6	-0.2
	comp=Z,0.5nm,0.7s,baz=222,slow=1.9,SNR=4.3						
	comp=Z,0.6nm,0.5s						
GTA	Gaotai	97.56	309	P	P	18 54 48.9	+0.9
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
LPAZ	La Paz	102.06	113	PKKPbc	PKKPbc	19 11 09.6	-0.8
	comp=Z,0.3nm,0.3s,baz=77,slow=3.8,SNR=4.0						
ZALV	Zalesovo Beam	111.47	321	PKiKP	PKiKP	18 59 43.1	-1.1
	comp=Z,1.2nm,0.5s,baz=89,slow=0.9,SNR=6.8						
MKAR	Makanchi Array	111.91	313	Pdiff	Pdif	18 55 52.2	+0.7
	comp=Z,0.6nm,0.6s,baz=76,slow=4.5,SNR=5.1						
MKAR				PKiKP	PKiKP	18 59 44.3	-1.0
	comp=Z,1.0nm,0.6s,baz=221,slow=1.4,SNR=12						
MKAR				PKKPbc	PKKPbc	19 10 39.9	-0.2
	comp=Z,0.8nm,0.9s,baz=260,slow=4.8,SNR=4.6						
MKAR				PKKPab	PKKPab	19 10 50.4	+1.5
	comp=Z,1.4nm,1.0s,baz=260,slow=4.8,SNR=4.6						
KURBB	Kurchatov Arra	114.89	317	PKP	PKPdf	18 59 49.8	-1.0
	comp=Z,0.9nm,0.5s,baz=106,slow=1.7,SNR=19						
KURBB				PKKPbc	PKKPbc	19 10 30.3	+0.1
	comp=Z,0.1nm,0.3s,baz=285,slow=3.9,SNR=4.4						
KURBB				PKKPab	PKKPab	19 10 37.1	+1.7
	comp=Z,0.9nm,0.8s,baz=279,slow=4.8,SNR=7.3						
KSH	Kashi	115.31	304	PKP	PKiKP	18 59 57.4	+5.2
BDFB	Brasilia	118.79	124	PKP	PKPdf	18 59 59.3	-0.3
	comp=Z,0.8nm,0.4s,baz=142,slow=4.9,SNR=3.0						
BDFB				PKKPbc	PKKPbc	19 10 16.8	+0.4
	comp=Z,1.4nm,0.6s,baz=95,slow=8.5,SNR=3.4						
KKAR	Karatay Array	119.79	308		PKPdf	19 00 00.2	-0.3
BVAR	Borovoye Array	120.01	319	PKP	PKPdf	19 00 00.1	-0.5
	comp=Z,2.9nm,0.4s,baz=113,slow=1.6,SNR=30						
SPITS	Spitsbergen Ar	123.72	356	PKP	PKPdf	19 00 06.9	-0.2
	comp=Z,5.1nm,0.6s,baz=76,slow=3.5,SNR=9.0						
BOSA	Boshof	124.18	206	PKP	PKPdf	19 00 09.6	-0.1
	comp=Z,2.4nm,0.7s,baz=85,slow=4.0,SNR=5.1						
SUMG	Summit	125.20	14	*i* P	PKPdf	19 00 11.0	+0.4
ARTI	Arti	126.41	324		PKPdf	19 00 13.0	+0.2
ARTI	Arti	126.41	324	PKP	PKPdf	19 00 12.7	-0.1
	comp=Z,3.4nm,0.4s,baz=353,slow=1.0,SNR=12						
AKTO	Aktyubinsk	127.94	317	PKP	PKPdf	19 00 15.2	-0.7
	comp=Z,2.2nm,0.6s,baz=12,slow=0.6,SNR=8.2						
KIRV	Kirov	130.21	329	PKP	PKPdf	19 00 19.9	0.0
	comp=Z,9.0nm,0.7s,baz=117,slow=1.6,SNR=4.6						
ARCES	ARCESS Array B	130.65	349	PKhKP	PKPpre	19 00 11.1	

	comp=Z,1.5nm,0.9s,baz=39,slow=2.2,SNR=6.4						
ARCES				PKP	PKPdf	19 00 20.1	-0.4
	comp=Z,4.1nm,0.7s,baz=11,slow=2.5,SNR=10						
ARCES				SKPbc	SKPab	19 02 58.3	+0.8
	comp=Z,5.9nm,0.9s,baz=23,slow=4.9,SNR=6.6						
BELG	Belogornoye	133.63	322	PKP	PKPdf	19 00 26.9	+0.4
	comp=Z,9.6nm,0.6s,baz=16,slow=1.6,SNR=8.3						
FINES	FINESS Array B	137.37	343	PKhKP	PKPpre	19 00 21.3	
	comp=Z,0.7nm,0.3s,baz=62,slow=3.2,SNR=12						
FINES				PKP	PKPdf	19 00 32.1	-1.1
	comp=Z,1.4nm,0.4s,baz=65,slow=4.7,SNR=12						
FINES				SKPbc	SKPbc	19 03 19.9	+1.0
	comp=Z,2.5nm,0.7s,baz=29,slow=4.4,SNR=6.5						
OBN	Obninsk	138.03	330	PKP	PKPdf	19 00 35.1	+0.5
	comp=Z,10nm,0.5s,baz=288,slow=15,SNR=3.2						
KBZ	Khabaz	139.60	312	PKP	PKPdf	19 00 36.6	-1.2
	comp=Z,1.3nm,0.5s,baz=167,slow=6.1,SNR=3.7						
NB2	NORSAR Subarra	140.78	352	PKP	PKPdf	19 00 33.7	-5.8
	comp=Z,1.6nm,0.6s,baz=17,slow=2.6						
NOA	NORSAR Array B	140.78	352	PKhKP	PKPpre	19 00 32.8	
	comp=Z,0.3nm,0.4s,baz=15,slow=2.9,SNR=13						
HFS	Hagfors	141.29	350	PKhKP	PKPpre	19 00 34.9	
	comp=Z,2.9nm,0.4s,baz=72,slow=4.8,SNR=60						
MNK	Minsk	142.18	335	*i* PKP	PKPdf	19 00 40.2	-2.0
MNK				*i* PKP	PKPdf	19 00 40.2	-2.0
MNK				*i* PKP	PKPdf	19 00 40.2	-2.0
	comp=Z,15nm,0.9s,baz=43						
MNK				*i* PKiKP	PKiKP	19 00 43.9	-1.4
MNK				*i* pPKiKP	pPKPdf	19 02 41.9	+0.4
MNK				*i* PP	PP	19 03 49.9	-4.8
MNK				*i* SKS	SKSdf	19 07 02.3	-1.3
MNK				*i* PPP	PPP	19 07 07.1	
MNK				*i* SKKS	SKKSdf	19 16 20.3	-4.8
MNK				*i* SS	SS	19 21 49.7	+2.0
MNK				*i* SSS	SSS	19 27 19.2	
MNK				*i* LRM	MLR	20 03 55.9	
	comp=Z,24nm,18.0s						
MNK				*i* LRM	MLR	20 03 58.8	
	comp=N,14nm,17.7s						
MNK				*i* LRM	MLR	20 04 02.7	
	comp=E,18nm,18.1s						
NACGM	Naroch	142.31	336	⇓*i*PKP	PKPdf	19 00 39.2	-3.2
	comp=Z,16nm,0.8s,baz=41						
KOPT	Kop Dagi	142.40	307		PKPdf	19 00 42.0	-1.4
HOMB	Homborsund	143.79	353	*i* P	PKPab	19 00 43.5	-0.3
BORU	Boraas	143.82	349	*i* P	PKPab	19 00 42.8	-1.1
SNART	Snartemo	143.85	355	*i* P	PKPab	19 00 43.6	-0.4
ONAU	Onsala	144.19	350	*i* P	PKPbc	19 00 44.0	-1.0
AK03	Malin Array Si	144.25	329	PKP	PKPbc	19 00 43.2	-2.3
AKASG	Malin Array Be	144.27	329	PKP	PKPbc	19 00 44.6	-1.0
	comp=Z,20nm,0.3s,baz=42,slow=4.5,SNR=206						
AKBB	Malin Array Si	144.27	329		PKPbc	19 00 45.0	-0.6
AKBB	Malin Array Si	144.27	329	PKP	PKPbc	19 00 44.2	-1.4
KIEV	Kiev	144.28	329		PKPbc	19 00 45.0	-0.6
KIEV	Kiev	144.28	329	⇑P	PKPbc	19 00 45.1	-0.5
KIEV	Kiev	144.28	329	PKP	PKPbc	19 00 44.2	-1.4
SUW	Suwalki	144.32	338	*e*pPKPbc	PKPbc	19 00 45.3	-0.3
FABU	Falkenberg	144.43	349	*i* P	PKPbc	19 00 44.9	-0.9
BLEU	Blekinge	144.46	346	*i* P	PKPbc	19 00 45.2	-0.8
DEL	Delary	144.72	348	*i* P	PKPdf	19 00 46.0	-0.5
BJUU	Bjuv	145.25	348	*i* P	PKPdf	19 00 47.6	+0.2
BSD	Bornholm Skovb	145.76	346	*i* P	PKPdf	19 00 49.4	+1.1
BZK	Bozkurt	146.33	313	⇓P	PKPbc	19 00 52.3	+0.4
SORM	Soroca	146.38	326	⇓P	PKPbc	19 00 51.5	-0.3
PURM	Purcari	146.56	323	⇓P	PKPbc	19 00 52.3	-0.1
GKP	Gorka Klasztor	146.84	342	*e*PKPbc	PKPbc	19 00 53.1	+0.2
MILM	Milestii Mici	146.91	324	⇓P	PKPbc	19 00 52.8	-0.6
EKA	Eskdalemuir Ar	146.98	4	PKPbc	PKPbc	19 00 52.6	-0.7
	comp=Z,6.2nm,0.8s,baz=346,slow=2.6,SNR=15						
EKA				pPKPbc	pPKPdf	19 02 49.6	-0.6
	comp=Z,2.1nm,0.8s,baz=354,slow=3.6,SNR=2.5						
BEIL	Beino	147.06	299	*e*P	PKPbc	19 00 54.7	+0.4
HWQ	Hawqa	147.31	299	*e*P	PKPbc	19 00 54.7	-0.3
BRTR	Keskin Array B	147.48	310		PKPbc	19 00 55.3	0.0
BRTR	Keskin Array B	147.48	310	PKPbc	PKPbc	19 00 55.1	-0.2
	comp=Z,11nm,0.9s,baz=141,slow=3.4,SNR=54						
KIRS	Kirsehir-Merke	147.50	308	⇑P	PKPbc	19 00 55.7	+0.4
BHL	Bhannes	147.63	298	*e*P	PKPbc	19 00 55.6	-0.2
VASR	Vaslui	147.63	325	⇓P	PKPbc	19 00 55.5	+0.2
SHBL	Chebaa	147.66	297	*e*P	PKPbc	19 00 56.3	+0.3
QRWL	Qaraoun	147.67	298	*e*P	PKPbc	19 00 56.1	+0.2
TLCR		147.95	322	⇑P	PKPbc	19 00 56.5	+0.4
VLDR	Vladesti	147.97	323	⇑P	PKPbc	19 00 56.7	+0.6
MMAI	Mount Meron Ar	148.00	297	PKPbc	PKPbc	19 00 57.9	+1.1
	comp=Z,8.7nm,0.3s,baz=81,slow=6.8,SNR=82						
MMAI				pPKPbc	pPKPdf	19 02 53.1	+0.8
	comp=Z,2.1nm,0.8s,baz=19,slow=8.9,SNR=1.0						
ANTO	Ankara	148.02	310	⇓P	PKPbc	19 00 57.0	+0.4
VARL	Varlezi	148.06	324	⇓P	PKPbc	19 00 57.5	+1.1
SCTR	Scanteiesti	148.12	323	⇑P	PKPbc	19 00 56.7	+0.2
JURR	Jurilovca	148.16	321	⇓P	PKPbc	19 00 56.7	+0.1
NEGRR	Negrea	148.27	323	⇑P	PKPbc	19 00 57.7	+0.8
BURAR	Bucovina Array	148.30	328	⇑P	PKiKP	19 00 58.4	+0.1
TESR	Tescani	148.31	325	⇑P	PKPbc	19 00 58.0	+0.9
CFR	Carcaliu	148.34	322	⇑P	PKPbc	19 00 57.0	-0.1
TPGR	Topolog	148.37	322	⇓P	PKPbc	19 00 57.7	+0.5
COSR	Cosmesti PH	148.38	324	⇑P	PKPab	19 01 03.6	+1.3
ONER	Baraj Valea Uz	148.56	325	⇓P	PKiKP	19 00 58.7	-0.1
TIRR	Tirgusor	148.60	321	⇑P	PKPbc	19 00 58.0	+0.2
OJC	Ojcow	148.62	337	*e*PKPbc	PKPbc	19 00 57.5	-0.1
OJC				*e*PKPab	PKPab	19 01 03.4	+0.2
KOLS	Kolonicke sedl	148.67	333	*e*PKP	PKiKP	19 00 58.9	0.0
KOLS				*e*		19 03 01.4	
VRI	Vrincioaia	148.69	324	⇓P	PKPbc	19 00 58.4	+0.4
STHS	Stebnicka Huta	148.72	334	*e*PKP	PKPbc	19 00 57.8	-0.2
PLOR	Plostina	148.74	325	⇑P	PKPbc	19 00 58.9	+0.8
HARR	Harsova	148.75	322	⇑P	PKPbc	19 00 58.2	+0.1
MFTR	Murfatlar	148.76	320	⇑P	PKPbc	19 00 58.4	+0.3
TLBR	Topalu	148.77	321	⇑P	PKPbc	19 00 58.9	+0.8
MANR	Mangalia	148.87	320	⇑P	PKPbc	19 00 59.2	+0.7
TURR	Turia	148.95	325	⇑P	PKiKP	19 01 00.4	+0.8
OZUR		149.04	326	⇑P	PKPbc	19 00 59.2	+0.3
BMR	Baia Mare	149.07	330	⇑P	PKPbc	19 00 59.4	+0.6
ARCR	ARCALIA	149.09	328	⇓P	PKPab	19 01 06.8	+1.6
NIE	Niedzica	149.09	335	*e*PKPbc	PKiKP	19 00 59.8	0.0
NIE				*e*PKPab	PKPab	19 01 06.1	+0.9
BOSR	Bodos	149.12	326	⇑P	PKPbc	19 00 59.4	+0.4
NEHR	Nehoiu	149.20	324	⇓P	PKPbc	19 00 58.9	-0.3
KSP	Ksiaz	149.26	341	*e*PKPbc	PKPbc	19 00 59.7	+0.5
KSP				*e*PKPab	PKPab	19 01 06.6	+0.8
ISR	Istrita	149.26	324	⇓P	PKPab	19 01 06.6	+0.5
DOPR	Dopca	149.33	326	⇓P	PKPbc	19 01 00.2	+0.6
MLR	Muntele Rosu	149.35	325	PKP	PKPdf	19 00 54.5	-0.3
	comp=Z,13nm,1.1s,baz=193,slow=5.7,SNR=4.1						
MLR				PKPbc	PKPbc	19 00 59.3	-0.5
	comp=Z,7.7nm,0.6s,baz=20,slow=3.4,SNR=20						
MLR				pPKPbc	pPKPbc	19 02 58.0	+0.2
	comp=Z,7.2nm,1.1s,baz=120,slow=2.7,SNR=4.0						
MLR	Muntele Rosu	149.35	325	⇑P	PKiKP	19 01 00.7	+0.1
TGMR	Targu Mures	149.39	327	⇑P	PKPab	19 01 08.1	+1.6
LEHL	Lehliu	149.51	322	⇓P	PKPab	19 01 07.6	+0.5
OSTC	Ostas	149.53	341	⇑*e*PKP	PKPbc	19 01 00.5	+0.6
CHVC	Chvalec	149.56	341	⇑*e*PKP	PKPbc	19 01 00.7	+0.7
STEB	Steborice	149.57	339	⇑*e*PKP	PKPbc	19 01 00.3	+0.3
STEB				*e*PKPAB	PKPab	19 01 07.8	+0.7
LANS	Liptovska Anna	149.62	336	*e*PKP	PKiKP	19 01 01.5	+0.6
LANS				*e*		19 01 07.5	
UPC	Upice	149.64	341	⇑*e*PKP	PKPbc	19 01 00.6	+0.5
UPC				*e*PKPAB	PKPab	19 01 08.2	+0.8
DPC	Dobruska-Polom	149.68	341	⇑*e*PKP	PKiKP	19 01 01.4	+0.4
CBBR	Cluj-Babes-Bol	149.70	329	⇑P	PKPbc	19 01 00.4	0.0
CLL	Collm	149.72	345	*e*PKPdf	PKPdf	19 00 56.0	+1.0
CLL				⇓*i*PKPbc	PKPbc	19 01 00.3	0.0
	comp=Z,27nm,0.7s						
CLL				*i* x	x	19 01 01.6	
CLL				*i* PKPab	PKPab	19 01 07.2	-0.5
	comp=Z,17nm,0.9s						
CLL				*i* x	x	19 01 15.0	
CLL				*i* pPKPbc	pPKPbc	19 02 58.6	0.0
MDB	Medias	149.73	327	⇑P	PKiKP	19 01 01.4	+0.2
KRLC	Kraliky	149.78	340	⇑*e*PKP	PKPbc	19 01 01.1	+0.6
MORC	Moravsky Berou	149.79	339	*e*PKP	PKPbc	19 01 00.8	+0.2
MORC				*e*		19 01 08.4	
MORC				*e*		19 02 59.7	
MORC	Moravsky Berou	149.79	339	⇓P	PKPbc	19 01 01.2	+0.6
VOIR		149.86	325	⇑P	PKPbc	19 01 00.4	-0.5
BRG	Berggiesshubel	149.89	344	*i* PKP	PKPbc	19 01 01.1	+0.4
BRG				Amp		19 01 02.0	
	comp=Z,18nm,0.7s						
BRG	Berggiesshubel	149.89	344	P	PKPab	19 01 09.0	+0.6
BRG				Amp		19 01 09.8	
	comp=Z,9.3nm,0.8s						
BRG				pPKP	pPKPbc	19 02 59.6	+0.6
BRG				Amp		19 03 01.1	
	comp=Z,4.3nm,0.9s						
NEF	NEVSHA	149.97	320	P	PKPbc	19 01 01.6	+0.5
PVCC	Panska Ves	150.04	343	⇑*e*PKP	PKiKP	19 01 01.9	+0.2
MAUC	Maruska	150.04	338	⇑*e*PKP	PKiKP	19 01 02.2	+0.4
ARR	Arges	150.13	326	⇓P	PKiKP	19 01 02.9	+0.8
RICC	Richard	150.15	343	⇑*e*PKP	PKPbc	19 01 01.8	+0.5
CTYL	Yalikoy Yolu	150.32	316	⇓P	PKPab	19 01 11.0	+0.5
VYHS	Vyhne	150.40	336	*e*PKP	PKPbc	19 01 02.5	+0.5
VYHS				*e*		19 01 11.5	
VYHS				*e*		19 03 01.6	
PSZ	Piszkesteto	150.45	334	⇑P	PKPbc	19 01 02.1	-0.1
ISP	Isparta	150.46	308		PKPbc	19 01 02.0	-0.5
PRA	Prague	150.49	342	⇑*e*PKP	PKiKP	19 01 02.8	+0.2
VRAC	Vranov	150.51	339	PKPbc	PKPbc	19 01 02.6	+0.4
	comp=Z,4.0nm,0.8s,baz=62,slow=3.2,SNR=11						
VRAC				PKPab	PKPab	19 01 11.9	+0.9
	comp=Z,11nm,0.7s,baz=19,slow=2.9,SNR=19						
VRAC				pPKPbc	pPKPbc	19 03 01.1	+0.5
	comp=Z,1.5nm,0.6s,baz=266,slow=5.5,SNR=2.4						
VRAC	Vranov	150.51	339	*e*PKP	PKPbc	19 01 02.3	+0.1
VRAC				*e*		19 03 01.5	
VRAC	Vranov	150.51	339	⇓P	PKPab	19 01 11.3	+0.2
LOT	Lotru	150.52	327	⇓P	PKPbc	19 01 01.9	-0.6
JAVC	Velka Javorina	150.52	338	*e*PKP	PKiKP	19 01 03.7	+0.9
JAVC				*e*		19 01 12.6	
JAVC				*e*		19 03 02.5	
PRU	Pruhonice	150.53	342	⇑*e*PKP	PKPbc	19 01 02.2	0.0
PHSR	Pinarhisar	150.73	317	⇑P	PKPab	19 01 14.5	+2.2
SZH	Strazhitsa	150.73	321	P	PKPbc	19 01 02.9	0.0
KRUC	Moravsky	150.78	339	*e*PKP	PKPbc	19 01 02.8	0.0
KRUC				*e*		19 01 12.8	
KRUC				*e*		19 03 01.7	
TREC	Trest	150.87	341	⇑*e*PKP	PKPbc	19 01 03.4	+0.3
SIRR	Siria	150.96	330	⇑P	PKPbc	19 01 03.4	0.0
GZR	Gura Zlata	151.06	328	⇓P	PKPbc	19 01 03.6	0.0
MODS	Modra-Piesok	151.07	337	*e*PKP	PKPbc	19 01 03.8	+0.3
MODS				*e*		19 01 13.4	
MODS				*e*		19 03 01.8	
SURR	Surduc	151.12	329	⇓P	PKPbc	19 01 04.1	+0.4
ZVC	Zvikov	151.12	342	⇑*e*PKP	PKPbc	19 01 03.6	0.0
BZS	Buzias	151.46	329	⇓P	PKPbc	19 01 04.4	-0.1
KHC	Kasperske Hory	151.57	343	⇑*e*PKP	PKPbc	19 01 05.0	+0.3
KHC				*e*PKPAB	PKPab	19 01 16.1	+0.5
HERR	Herculane	151.60	327	⇑P	PKPbc	19 01 04.4	-0.4
CKRC	Cesky Krumlov	151.65	341	⇑*e*PKP	PKPbc	19 01 05.0	+0.2
CKRC				*e*PKPAB	PKPab	19 01 16.0	+0.1
GERES	GERESS Array B	151.80	342	PKP	PKPdf	19 00 58.3	0.0
	comp=Z,0.4nm,0.7s,baz=219,slow=3.4,SNR=4.5						
GERES				PKPbc	PKPbc	19 01 05.2	0.0
	comp=Z,2.9nm,0.8s,baz=38,slow=2.4,SNR=23						
GERES				PKPab	PKPab	19 01 16.9	+0.2
	comp=Z,3.3nm,0.7s,baz=33,slow=5.1,SNR=13						
GERES				pPKPbc	pPKPbc	19 03 03.5	-0.3
	comp=Z,1.9nm,0.9s,baz=354,slow=1.3,SNR=6.0						
VALD	Valchedram	151.89	324	P	PKPbc	19 01 05.9	+0.4
MPEP	Malo Peshtene	151.94	323	P	PKPbc	19 01 05.8	+0.2
CONA	Conrad Observa	151.94	339	*i* PKiKP	PKPbc	19 01 05.9	+0.3
	comp=Z,12nm,1.1s,SNR=7.1						
CONA				*e*PKP	PKPab	19 01 17.4	+0.1
	comp=Z,12nm,0.8s						
RONA	Rosalia, Austr	151.99	338	*e*PKiKP	PKPbc	19 01 06.0	+0.3
	comp=Z,3.7nm,0.5s,SNR=6.2						
RONA				*i* PKP	PKPab	19 01 16.9	-0.5
	comp=Z,17nm,1.0s						
MDVR	Moldovita	152.02	328	⇓P	PKPbc	19 01 05.1	-0.7
CAVK	Edirne/Enez-Ca	152.10	317	⇑P	PKPab	19 01 18.7	+0.6
MORH	Mrgy, Hungar	152.33	333	⇓P	PKPdf	19 00 58.7	-0.4
EZN	Ezine	152.46	315	⇑P	PKPbc	19 01 06.3	-0.5
MOA	Molln	152.53	341	*e*PKP	PKPbc	19 01 06.7	-0.1
	comp=Z,4.0nm,1.0s						
MOA				*i* PKP	PKPab	19 01 19.1	-0.6
	comp=Z,8.1nm,0.7s						
ARSA	Arzberg	152.65	338	*e*PKP	PKPbc	19 01 06.7	-0.4
	comp=Z,1.6nm,0.8s						
ARSA				*i* PKP	PKPab	19 01 20.1	0.0
	comp=Z,4.2nm,0.7s						
VTS	Vitosha	152.70	323	*i* P	PKPab	19 01 21.6	+0.8
BOVS	Bovan	152.84	326	⇑P	PKPbc	19 01 07.1	-0.5
BIOA	Bad Ischl, Aus	152.86	341	*e*PKiKP	PKiKP	19 01 08.4	+0.7
	comp=Z,3.5nm,1.0s						
BIOA				*i* PKP	PKPab	19 01 20.8	-0.2
	comp=Z,13nm,0.9s						
MMB	Musomishta	153.09	320	*i* P	PKPab	19 01 23.0	+0.7
KKB	Krupnik	153.26	322	*i* P	PKPab	19 01 23.8	+0.8
SOKA	Soboth	153.31	338	*e*PKiKP	PKPbc	19 01 08.9	+0.2
	comp=Z,4.2nm,1.1s						
SOKA				*e*PKP	PKPab	19 01 22.6	-0.5
	comp=Z,10.0nm,1.0s						
LESA	Schwarzleotal	153.38	342	*e*PKP	PKPbc	19 01 08.6	-0.2
	comp=Z,1.2nm,0.4s						
LESA				*i* PKP	PKPab	19 01 23.0	-0.4
	comp=Z,17nm,1.2s						
OBKA	Obir	153.62	339	*e*PKiKP	PKiKP	19 01 09.9	+0.6
	comp=Z,2.6nm,0.8s						
OBKA				*e*PKP	PKPab	19 01 24.0	-0.4
	comp=Z,6.4nm,0.7s						
WATA	Walderalm	153.76	344	*e*PKiKP	PKiKP	19 01 10.3	+0.7
	comp=Z,1.9nm,0.7s						
WATA				*i* PKP	PKPab	19 01 24.6	-0.5
	comp=Z,9.1nm,1.0s						
WTTA	Wattenberg	153.81	344	*i* PKP	PKPbc	19 01 09.3	-0.5
	comp=Z,2.4nm,0.5s						
WTTA				*i* PKP	PKPab	19 01 24.9	-0.4
	comp=Z,12nm,0.6s						
MYKA	Terra Mystica	153.81	340	*i* PKP	PKPbc	19 01 08.9	-0.8
	comp=Z,3.3nm,0.9s						
MYKA				*i* PKP	PKPab	19 01 24.9	-0.3
	comp=Z,6.5nm,0.6s						
RETA	Reutte	153.82	345	*i* PKiKP	PKiKP	19 01 10.5	+0.8
	comp=Z,3.3nm,0.9s						
RETA				*i* PKP	PKPab	19 01 25.1	-0.1
	comp=Z,13nm,1.3s						
MOTA	Moosalm	153.87	344	*i* PKP	PKPdf	19 01 01.1	-0.4
	comp=Z,4.6nm,1.0s						
MOTA				*i* PKP	PKPab	19 01 25.2	-0.3
	comp=Z,8.3nm,0.9s						
VAY	Valandovo	153.92	321	*i* P	PKPab	19 01 26.5	+0.8
SQTA	Sankt Quirin	153.96	344	*e*PKP	PKPdf	19 01 00.7	-0.8
	comp=Z,4.0nm,0.9s						
SQTA				*e*PKP	PKPab	19 01 25.7	-0.1
	comp=Z,9.7nm,1.2s						
ABTA	Abfaltersbach	154.04	342	*e*PKP	PKPdf	19 01 00.6	-1.0
	comp=Z,5.4nm,0.9s						
ABTA				*i* PKP	PKPab	19 01 25.8	-0.4
	comp=Z,6.8nm,0.6s						
DAVA	Damuels	154.21	346	*e*PKP	PKPbc	19 01 10.0	-0.6
	comp=Z,3.8nm,1.0s						
DAVA				*i* PKP	PKPab	19 01 26.4	-0.6
	comp=Z,7.3nm,0.7s						
FETA	Feichten	154.26	345	*e*PKP	PKPdf	19 01 01.8	-0.2
	comp=Z,5.6nm,0.9s						
FETA				*i* PKP	PKPab	19 01 27.0	-0.2
	comp=Z,7.8nm,1.2s						
DAVOX	Davos/Dischmat	154.69	346	PKP	PKPdf	19 01 02.2	-0.4
	comp=Z,0.7nm,0.3s,baz=267,slow=4.0,SNR=4.6						
DAVOX				PKPbc	PKiKP	19 01 11.9	+0.2
	comp=Z,2.9nm,0.6s,baz=355,slow=1.5,SNR=6.6						
DAVOX				PKPab	PKPab	19 01 28.7	-0.4
	comp=Z,4.5nm,0.7s,baz=350,slow=5.7,SNR=6.9						
OHR	Ohrid	155.06	323	*i* P	PKPab	19 01 31.6	+0.8
ESDC	Sonseca Array	162.26	13	PKP	PKPdf	19 01 12.6	+0.9
	comp=Z,0.5nm,1.1s,baz=354,slow=5.4,SNR=2.7						
ESDC				PKPab	PKPab	19 02 01.7	-0.4
	comp=Z,0.8nm,0.8s,baz=3.3,slow=5.2,SNR=6.4						
DBIC	Dimbokro	163.31	159	PKP	PKPdf	19 01 13.2	-0.1
	comp=Z,6.0nm,0.7s,baz=163,slow=6.4,SNR=5.0						
DBIC				PKPab	PKPab	19 02 07.8	+0.7
	comp=Z,5.4nm,0.7s,baz=202,slow=6.6,SNR=4.6						
KEST	Kesra	164.93	333	PKPab	PKPab	19 02 14.3	+0.3
	comp=Z,7.8nm,0.8s,baz=294,slow=19,SNR=10						
TORD	Torodi Ar. Bea	170.76	183	PKP	PKPdf	19 01 18.2	-0.5
	comp=Z,2.7nm,0.3s,baz=359,slow=0.7,SNR=2.0						
TORD				PKPab	PKPab	19 02 40.6	+0.6
	comp=Z,3.3nm,0.4s,baz=204,slow=3.2,SNR=2.1						

*IDC **23** 19:13:06.6±1.2, 30°.54S×177°.57W, h0^{km}, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=34.1km s-min=26.4km az=105.0*

ISC 23 19:13:11.5±1.2**, 30°.49S**±0°.08×**177°.7W**±0°.2**, h33^{km}, n14, σ1^{s}.25**/12**, mb4.1**/4**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.25	351	Pn	Pn	19 13 32.6	0.0
	77nm,0.3s,baz=42,slow=19,SNR=5.1						
RAO				Sn	Sn	19 13 46.5	-1.9
	689nm,0.3s,baz=200,slow=21,SNR=18						
URZ	Urewera	8.86	208	Pn	Pn	19 15 08.9	-8.2
	0.9nm,0.3s,baz=243,slow=23,SNR=7.3						
URZ				Sn	Sn	19 16 53.5	-2.3
	1.4nm,0.3s,baz=215,slow=23,SNR=8.5						
STKA	Stephens Creek	34.72	257	P	P	19 20 00.4	+2.0
	1.4nm,0.4s,baz=98,slow=12,SNR=9.8						
	1.4nm,0.4s						
ASAR	Alice Springs	43.37	267	P	P	19 21 10.8	-0.1
	0.2nm,0.4s,baz=105,slow=7.5,SNR=15						
	0.2nm,0.4s						
WRA	Warramunga Arr	44.37	272	P	P	19 21 19.1	+0.1
	0.9nm,0.3s,baz=110,slow=8.1,SNR=24						
	0.9nm,0.3s						
QSPA	South Pole Qui	59.62	180	P	P	19 23 11.8	-0.2
	2.0nm,1.1s,baz=95,slow=21,SNR=1.6						
	2.0nm,1.1s						
H03S2	Juan Fernandez	80.19	123	T	T	20 54 39.8	
	baz=238,slow=74,SNR=6.6						
H03S1	Juan Fernandez	80.20	123	T	T	20 54 39.3	
	baz=238,slow=74,SNR=6.8						
H03S3	Juan Fernandez	80.21	123	T	T	20 54 38.6	
	baz=238,slow=74,SNR=8.5						
KURBB	Kurchatov Arra	121.34	314	PKP	PKPdf	19 32 00.3	-0.5
	0.3nm,0.5s,baz=123,slow=1.5,SNR=3.2						
FINES	FINESS Array B	145.32	340	PKPbc	PKPdf	19 32 45.2	+0.1
	2.5nm,0.5s,baz=57,slow=4.4,SNR=20						
HFS	Hagfors	149.39	349	PKPbc	PKPbc	19 32 56.3	-0.1
	0.4nm,0.3s,baz=228,slow=3.7,SNR=4.1						
AKASG	Malin Array Be	151.53	323	PKPbc	PKiKP	19 33 02.2	+0.1
	0.5nm,0.4s,baz=44,slow=3.3,SNR=5.0						
MMAI	Mount Meron Ar	151.81	284	PKPbc	PKiKP	19 33 04.6	+1.1
	0.4nm,0.4s,baz=64,slow=5.0,SNR=1.4						

*IDC **23** 19:20:37.1±0.8, 45°.11N×153°.24E, h0^{km}, mb3.8/17, mbtmp3.7/21, ML3.3/4, MS2.8/3, Error ellipse: s-maj=18.7km s-min=17.5km az=158.0*

*JMA **23** 19:20:41.5±0.9, 46°N±8°×15°3E±°, h30^{km}, MV4.5/12, KURILE ISLANDS REGION*

*SKHL **23** 19:20:42.2±0.6, 45°.00N×153°.20E, h45^{km}±3^{km}, mb4.8/5*

*MOS **23** 19:20:42.0±1.4, 45°.15N×153°.08E, h45^{km}, mb4.4/5, Error ellipse: s-maj=9.9km s-min=8.5km az=27.0*

ISC 23 19:20:40.7±0.7**, 45°.14N**±0°.07×**153°.20E**±0°.07**, h22^{km}, n69, σ1^{s}.92**/83**, mb4.0**/20**, 5C-2D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	3.77	273	PN	Pn	19 21 37.5	+0.1
KUR				*e*S	Sn	19 22 20.7	-0.4
KUR				pmax	pmax		
	comp=Z,101nm,0.5s						
KUR				smax	smax		
	comp=N,175nm,0.5s						
KUR				smax	smax		
	comp=E,244nm,0.5s						
KUR	Kuril'sk	3.77	273	*e*P	Pn	19 21 38.1	+0.7
KUR				AMB	AMB	19 21 40.2	
	comp=E,50nm,0.3s						
KUR				*i* S	Sn	19 22 20.3	-0.8
KUR				A	A	19 22 22.4	
	comp=E,270nm,0.4s						
KUR				A	A	19 22 22.4	
	comp=E,150nm,0.4s						
SHO	Shikotan	4.73	257	*e*PN	Pn	19 21 51.5	+0.9
SHO				pmax	pmax		
	comp=N,11nm,0.3s						
SHO				pmax	pmax		
	comp=Z,24nm,0.3s						
SHO				pmax	pmax		
	comp=E,18nm,0.2s						
SHO	Shikotan	4.73	257	*e*P	Pn	19 21 51.5	+0.9
SHO				AMB	AMB	19 21 52.4	
	comp=E,30nm,0.3s						
SHO				*i* S	Sn	19 22 42.1	-2.6
SHO				A	A	19 22 46.3	
	comp=E,100nm,0.5s						
SHO				A	A	19 22 46.3	
	comp=E,110nm,0.5s						
YUK	Yuzh-Kuril'sk	5.36	261	*e*PN	Pn	19 21 59.5	+0.3
YUK				pmax	pmax		
	comp=Z,115nm,0.3s						
YUK				pmax	pmax		
	comp=N,34nm,0.4s						
YUK				pmax	pmax		
	comp=E,27nm,0.1s						
YUK	Yuzh-Kuril'sk	5.36	261	*e*P	Pn	19 21 59.8	+0.6
YUK				AMB	AMB	19 22 01.9	
	comp=E,110nm,0.6s						
YUK				*i* S	Sn	19 22 58.3	-1.8
YUK				A	A	19 23 04.8	
	comp=E,230nm,0.8s						
YUK				A	A	19 23 04.8	
	comp=E,250nm,0.8s						
NEM2	Nemuro 2	5.64	254	P	Pn	19 22 02.5	-0.6
NEM2				*e*S	Sn	19 23 02.9	-4.3
NMR	Nemuro--Hokkai	5.65	254	*e*PN	Pn	19 22 02.5	-0.7
NMR	Nemuro--Hokkai	5.65	254	*e*P	Pn	19 22 02.5	-0.7
NMR				*i* S	Sn	19 23 03.9	-3.5
GLVR	Golovnino	5.67	258	*e*PN	Pn	19 22 03.9	+0.3
GLVR				pmax	pmax		
	comp=Z,97nm,0.3s						
GLVR				pmax	pmax		
	comp=N,33nm,0.1s						
GLVR	Golovnino	5.67	258	*e*P	Pn	19 22 03.9	+0.3
GLVR				AMB	AMB	19 22 04.8	
	comp=N,100nm,0.3s						
GLVR				*i* S	Sn	19 23 06.8	-1.2
GLVR				A	A	19 23 17.9	
	comp=N,190nm,0.4s						
GLVR				A	A	19 23 17.9	
	comp=N,310nm,0.4s						
RUSJ	Misakicho	5.77	262	*e*PN	Pn	19 22 06.5	+1.6
SKR	Severo-Kuril’s	5.88	18	*e*PN	Pn	19 22 05.8	-0.6
SKR				pmax	pmax		
	comp=Z,20nm,0.5s						
SKR				pmax	pmax		
	comp=N,50nm,0.6s						
JRA	Rausu	5.90	261	P	Pn	19 22 08.1	+1.5
JNK	Nakash	6.27	259	P	Pn	19 22 12.4	+0.5
JNK				*e*S	Sn	19 23 18.2	-4.6
AKK	Akkeshi	6.38	254	*e*P	Pn	19 22 13.4	+0.1
JAK	Akkeshi	6.49	254	P	Pn	19 22 14.4	-0.4
JAK				*e*S	Sn	19 23 23.2	-4.8
JTKR	Abashiri--Toko	6.74	263	*e*P	Pn	19 22 19.6	+1.4
JAR	Ashorobuto	7.02	258	*e*P	Pn	19 22 23.2	+1.1
JAR				*e*S	Sn	19 23 39.8	-1.3
JOB	Onbets	7.11	255	*e*P	Pn	19 22 23.5	+0.2
JOB				*e*S	Sn	19 23 39.3	-4.0
YSS	Yuzhno-Sakhali	7.49	288	*e*PN	Pn	19 22 30.8	+2.3
YSS				pmax	pmax		
	comp=Z,20nm,0.4s						
YSS				MLR	MLR		
	comp=Z,100nm,13.0s						
YSS				MLR	MLR		
	comp=N,100nm,12.0s						
YSS				MLR	MLR		
	comp=E,100nm,13.0s						
YSS	Yuzhno-Sakhali	7.49	288	*e*P	Pn	19 22 30.7	+2.3
YSS				AMB	AMB	19 22 31.5	
	comp=E,30nm,0.3s						
JCH	Churui	7.54	254	*e*P	Pn	19 22 29.2	0.0
JCH				*e*S	Sn	19 23 49.5	-4.5
ASAJ	Asahikawa	7.63	266	Pn	Pn	19 22 29.1	-1.4
	comp=E,0.8nm,0.3s,baz=65,slow=25,SNR=8.4						
ASAJ				Sn	Sn	19 23 58.5	+2.3
	comp=E,0.1nm,0.3s,baz=55,slow=27,SNR=1.5						
	comp=E,3.0nm,0.8s						
ERM	Erimo	7.93	250	⇓*e*PN	Pn	19 22 36.8	+2.3
PETK	Petropavlovsk-	8.50	19	Pn	Pn	19 22 40.2	-2.2
	comp=E,0.3nm,0.3s,baz=179,slow=12,SNR=11						
PETK				Sn	Sn	19 24 14.5	-3.0
	comp=E,0.1nm,0.3s,baz=210,slow=7.8,SNR=1.2						
	comp=E,2.8nm,0.8s						
TYV	Tymovskoe	9.09	313	*e*PN	Pn	19 22 53.1	+2.7
TYV				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TYV				pmax	pmax		
	comp=Z,100nm,3.7s						
TYV	Tymovskoe	9.09	313	*e*P	Pn	19 22 53.1	+2.7

TYV				*e*S	Sn	19 24 30.5	-1.5
JANG	Nango	9.82	245	*e*S	Sn	19 24 38.5	-11
MA2	Magadan	14.53	355	Pn	Pn	19 24 02.4	-2.4
	comp=Z,0.5nm,0.3s,baz=184,slow=10,SNR=4.5						
MA2				LR	LR	19 30 15.6	
	comp=Z,12nm,21.5s,baz=175,slow=40						
KLR	Kul'dur	15.13	293	Pn	Pn	19 24 12.3	-0.6
	comp=Z,0.1nm,0.3s,baz=266,slow=22,SNR=1.9						
KLR				LR	LR	19 31 19.8	
	comp=Z,42nm,18.4s,baz=132,slow=42						
	comp=Z,0.3nm,0.3s						
KLR	Kul'dur	15.13	293⇑	*e*P	Pn	19 24 14.2	+1.3
KLR				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KLR	Kul'dur	15.13	293	*e*P	Pn	19 24 11.5	-1.4
SEY	Seymchan	17.84	359	P	Pn	19 24 45.5	-1.6
	comp=Z,0.2nm,0.3s,baz=184,slow=13,SNR=5.1						
	comp=Z,0.8nm,0.6s						
SEY	Seymchan	17.84	359⇑	*e*P	Pn	19 24 46.2	-0.9
SEY				pmax	pmax		
	comp=Z,4.0nm,1.3s						
SEY	Seymchan	17.84	359	*e*P	Pn	19 24 46.2	-0.9
HEH	HeiHe	18.05	296	*e*P	Pn	19 24 49.5	-0.4
HEH				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KSRS	Korea Array	20.43	257	P	P	19 25 17.6	+1.4
	comp=Z,0.2nm,0.3s,baz=62,slow=7.4,SNR=2.3						
	comp=Z,0.2nm,0.3s						
YAK	Yakutsk	21.72	329	P	P	19 25 28.4	-1.6
	comp=Z,11nm,0.4s,baz=130,slow=2.3,SNR=5.7						
	comp=Z,11nm,0.4s						
SONM	Songino Array	31.96	292	P	P	19 27 05.5	+0.6
	comp=Z,0.6nm,0.8s,baz=65,slow=6.8,SNR=4.6						
	comp=Z,0.6nm,0.8s						
GTA	Gaotai	39.31	281	*e*P	P	19 28 12.1	+4.1
GTA				sP	pwP	19 28 24.3	+2.2
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ZALV	Zalesovo Beam	43.62	307	P	P	19 28 42.4	-0.6
	comp=Z,0.8nm,0.7s,baz=76,slow=12,SNR=3.6						
	comp=Z,0.8nm,0.7s						
MK31	Makanchi Array	47.75	299⇓	*i*P	P	19 29 17.3	+1.5
MKAR	Makanchi Array	47.75	299	P	P	19 29 15.5	-0.3
	comp=Z,1.2nm,0.7s,baz=70,slow=7.9,SNR=9.5						
MKAR				LR	LR	19 51 43.4	
	comp=Z,24nm,19.9s,baz=133,slow=39						
	comp=Z,1.2nm,0.7s						
MKAR	Makanchi Array	47.75	299	*e*P	P	19 29 17.6	+1.8
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	47.75	299	*e*P	P	19 29 17.6	+1.8
KURK	Kurchatov	48.32	305	P	P	19 29 20.7	+0.6
KURK	Kurchatov	48.32	305	*e*P	P	19 29 20.6	+0.5
KURBB	Kurchatov Arra	48.41	305	P	P	19 29 20.7	-0.1
	comp=Z,0.7nm,0.8s,baz=72,slow=8.5,SNR=7.1						
	comp=Z,0.7nm,0.8s						
BVAR	Borovoye Array	51.94	310	P	P	19 29 47.9	+0.4
	comp=Z,0.5nm,0.6s,baz=49,slow=7.3,SNR=2.7						
	comp=Z,0.5nm,0.6s						
AAK	Ala-Archa	54.61	297⇑	*e*P	P	19 30 09.2	+1.6
AAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
AAK	Ala-Archa	54.61	297	*e*P	P	19 30 09.2	+1.6
ARCES	ARCESS Array B	59.39	341	P	P	19 30 39.7	-1.1
	comp=Z,1.3nm,0.8s,baz=35,slow=7.0,SNR=1.5						
	comp=Z,1.3nm,0.8s						
FINES	FINESS Array B	65.52	335	P	P	19 31 23.4	+1.5
	comp=Z,1.5nm,0.5s,baz=32,slow=8.6,SNR=15						
	comp=Z,1.5nm,0.5s						
PDAR	Pinedale Array	65.66	53	P	P	19 31 23.6	+0.2
	comp=Z,0.5nm,0.6s,baz=280,slow=1.5,SNR=6.4						
	comp=Z,0.5nm,0.6s						
OBN	Obninsk	66.67	326	*e*P	P	19 31 28.2	-1.1
OBN				*e**PP	pwP	19 31 40.1	-4.1
OBN				*e*		19 31 58.1	
OBN				*e*		19 33 57.2	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,14nm,17.0s						
WRA	Warramunga Arr	67.01	199	P	P	19 31 30.7	-1.0
	comp=Z,0.7nm,1.0s,baz=8.9,slow=6.8,SNR=1.4						
	comp=Z,0.7nm,1.0s						
NOA	NORSAR Array B	69.77	341	P	P	19 31 47.7	-1.0
	comp=Z,0.3nm,0.7s,baz=28,slow=6.3,SNR=2.4						
	comp=Z,0.3nm,0.7s						
HFS	Hagfors	69.99	340	P	P	19 31 52.0	+2.0
	comp=Z,1.0nm,0.8s,baz=36,slow=5.4,SNR=4.3						
	comp=Z,1.0nm,0.8s						
HFS	Hagfors	69.99	340	P	P	19 31 52.0	+2.0
ASAR	Alice Springs	70.70	199	P	P	19 31 55.7	+1.0
	comp=Z,0.8nm,0.9s,baz=12,slow=6.7,SNR=5.0						
	comp=Z,0.8nm,0.9s						
AKT	Akhty	71.07	310	*e*P	P	19 31 51.3	-5.8
KBZ	Khabaz	72.02	314⇑	*e*P	P	19 32 04.8	+2.2
KBZ				pmax	pmax		
	comp=Z,9.0nm,3.1s						
KBZ	Khabaz	72.02	314	*e*P	P	19 32 04.8	+2.2
AKASG	Malin Array Be	72.92	327	P	P	19 32 07.6	-0.2
	comp=Z,0.7nm,0.5s,baz=36,slow=6.4,SNR=3.8						
	comp=Z,0.7nm,0.5s						
AKBB	Malin Array Si	72.92	327⇑	*e*P	P	19 32 09.5	+1.7
AKBB				pmax	pmax		
	comp=Z,4.0nm,1.3s						
EKA	Eskdalemuir Ar	77.92	346	P	P	19 32 37.6	+1.2
	comp=Z,0.2nm,0.4s,baz=15,slow=5.8,SNR=3.6						
	comp=Z,0.2nm,0.4s						
TXAR	Lajitas Array	78.24	60	P	P	19 32 38.9	+0.1
	comp=Z,1.0nm,0.6s,baz=308,slow=4.5,SNR=13						
	comp=Z,1.0nm,0.6s						
SNAA	Sanae	151.02	195	PKPbc	PKPbc	19 40 28.5	-1.9
	comp=Z,1.3nm,0.6s,baz=231,slow=2.6,SNR=12						

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*IDC **23** 19:30:31.2±1.9, 18°.97S×177°.52W, h574^{km}±19^{km}, mb3.3/11, mbtmp4.3/14, Error ellipse: s-maj=21.2km s-min=16.7km az=127.0*

ISC 23 19:30:30.6±0.7**, 19°.0S**±0°.2×**177°.5W**±0°.1**, h570**^{km}**, n23, σ0^{s}.59**/23**, mb3.8**/11**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.40	285	P	P	19 31 58.3	+1.2
	21nm,0.6s,baz=138,slow=19,SNR=35						
DZM	Mont Dzumac	15.36	256	P	P	19 33 42.8	-0.6
	11nm,0.8s,baz=81,slow=23,SNR=7.8						
RAR	Rarotonga	16.80	101	P	P	19 33 57.2	+0.6
	14nm,0.6s,baz=9.8,slow=23,SNR=1.8						
STKA	Stephens Creek	38.90	243	P	P	19 37 08.0	-0.1
	1.9nm,0.4s,baz=84,slow=9.4,SNR=12						
	1.9nm,0.4s						
JAY	Jayapura	44.03	287	P	P	19 37 49.1	+0.2
	4.9nm,0.6s,baz=127,slow=6.8,SNR=7.9						
	4.9nm,0.6s						
WRA	Warramunga Arr	45.30	260	P	P	19 37 58.0	-0.5
	1.2nm,0.4s,baz=98,slow=7.7,SNR=20						
WRA				PcP	PcP	19 39 26.0	-0.1
	0.3nm,0.4s,baz=89,slow=3.3,SNR=2.5						
	1.2nm,0.4s						
ASAR	Alice Springs	45.35	255	P	P	19 37 58.7	-0.2
	2.3nm,0.4s,baz=88,slow=7.5,SNR=73						
ASAR				PcP	PcP	19 39 26.1	-0.2
	0.8nm,0.7s,baz=88,slow=3.4,SNR=5.1						
	2.3nm,0.4s						
FITZ	Fitzroy Crossi	53.72	261	P	P	19 39 00.6	+0.2
	1.5nm,0.6s,baz=79,slow=5.2,SNR=1.6						
	1.5nm,0.6s						
MJAR	Matsushiro Arr	69.26	323	P	P	19 40 40.9	-0.3
	2.5nm,0.8s,baz=149,slow=6.0,SNR=10						
	2.5nm,0.8s						
QSPA	South Pole Qui	71.10	180	P	P	19 40 52.2	+0.4
	2.7nm,1.1s,baz=265,slow=2.3,SNR=6.4						
	2.7nm,1.1s						
PETK	Petropavlovsk-	74.91	345	P	P	19 41 13.7	+0.2
	3.2nm,0.6s,baz=116,slow=7.8,SNR=15						
	3.2nm,0.6s						
ILAR	Eielson Array	86.71	13	P	P	19 42 13.8	-0.2
	1.0nm,0.8s,baz=228,slow=4.7,SNR=5.0						
	1.0nm,0.8s						
CMAR	Chiang Mai Arr	90.05	289	P	P	19 42 31.6	+1.0
	0.8nm,0.8s,baz=116,slow=3.1,SNR=5.8						
	0.8nm,0.8s						
SONM	Songino Array	94.91	319	P	P	19 42 52.3	-0.1
	0.2nm,0.4s,baz=104,slow=6.1,SNR=1.8						
	0.2nm,0.4s						
MKAR	Makanchi Array	110.49	314	PKiKP	PKiKP	19 47 57.2	-1.5
	0.2nm,0.4s,baz=196,slow=0.9,SNR=8.8						
BVAR	Borovoye Array	118.20	321	PKP	PKPdf	19 48 12.8	-0.5
	0.9nm,0.4s,baz=113,slow=2.5,SNR=9.7						
ARCES	ARCESS Array B	127.50	350	PKP	PKPdf	19 48 30.4	-0.2
	0.7nm,0.4s,baz=346,slow=1.9,SNR=10						
FINES	FINESS Array B	134.43	344	PKP	PKPdf	19 48 43.6	-0.3
	2.4nm,1.1s,baz=96,slow=4.2,SNR=5.3						
AKASG	Malin Array Be	141.89	332	PKhKP	PKPpre	19 48 53.3	
	1.0nm,0.4s,baz=42,slow=3.9,SNR=12						
EKA	Eskdalemuir Ar	143.43	5	PKP	PKPab	19 48 58.5	-0.4
	2.2nm,0.5s,baz=324,slow=2.9,SNR=12						
BRTR	Keskin Array B	146.13	314	PKPbc	PKPbc	19 49 07.8	-0.1
	1.1nm,0.6s,baz=127,slow=3.6,SNR=6.6						
MMAI	Mount Meron Ar	147.44	302	PKPbc	PKiKP	19 49 12.4	-0.6
	2.6nm,0.5s,baz=69,slow=4.6,SNR=6.6						
GERES	GERESS Array B	148.84	346	PKPbc	PKPbc	19 49 14.9	+0.4
	1.8nm,0.8s,baz=27,slow=1.5,SNR=9.1						

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*IDC **23** 19:35:50.7±0.2, 17°.22N×94°.70W, h125^{km}±2^{km}, mb4.1/23, mbtmp4.5/25, MS3.3/15, Error ellipse: s-maj=11.6km s-min=7.2km az=74.0*

*NEIC **23** 19:35:51.5±2.2, 17°.20N±0°.07×94°.74W±0°.05, h134^{km}±6^{km}, mb4.7/316, Md5.1/154(MEX), Error ellipse: s-maj=10.0km s-min=6.5km az=192.0*

*CATAC **23** 19:35:52.7±0.3, 17°N±6°×9°5W±°, h77^{km}±31^{km}, M5.4/13, mb5.1/6, mB5.6/4, MLv5.6/13, Mw(mB)5.2/4, Error ellipse: s-maj=13.3km s-min=4.3km az=22.5, confirmed*

*MEX **23** 19:35:52.1±1.2, 17°.18N×94°.75W, h136^{km}±10^{km}, MD5.1*

*GCMT **23** 19:35:52.5±0.4, 17°.34N±0°.03×94°.68W±0°.03, h139^{km}±3^{km}, MW4.9/104, Moment Tensor Solution. s24,c24; s104,c145; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.06±.07; $M_{\theta\theta}$-0.49±.10; $M_{\phi\phi}$2.55±.11; $M_{r\theta}$0.71±.07; $M_{\theta\phi}$-0.98±.10; $M_{\phi r}$-0.44±.08; Best double couple: $M_0$2.62500×10^{16} NP1:ϕ_s183.00000°, δ41.00000°, λ-60.00000°. NP2:ϕ_s326.00000°, δ55.00000°, λ-114.00000°. Principal axes: T 2.9170, Plg7.0000°, Azm73.0000°; N -0.5850, Plg19.0000°, Azm340.0000°; P -2.3340, Plg69.0000°, Azm182.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 19:35:50.5±0.3**, 17°.16N**±0°.04×**94°.76W**±0°.03**, h131**^{km}±3^{km}**, h131**^{km}**:pP-P, n600, σ1^{s}.22**/498**, mb4.7**/152**, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.14	240	P	Pn	19 36 09.2	+0.8
	8µm,0.3s,baz=146,slow=2.4						
CMIG				S	Sn	19 36 22.1	+0.3
	15µm,0.4s,baz=18,slow=23,SNR=27						
TGIG		1.61	103		Pn	19 36 21.2	+1.3
TGIG					Sn	19 36 41.8	-0.7
TGBT	Tuxtla Gutierr	1.64	103		Pn	19 36 21.6	+1.4
TGBT					Sn	19 36 42.8	-0.2
OXBJ	Oaxaca	1.88	267		Pn	19 36 24.7	+1.3
OXBJ					Sn	19 36 50.2	+1.8
OXIG	Oaxaca	1.89	268		Pn	19 36 25.0	+1.6
OXIG					Sn	19 36 49.8	+1.3
HUIG	Huatulco	1.90	223		Pn	19 36 22.6	-0.7
HUIG					Sn	19 36 48.6	+0.3
PCIG		2.07	134		Pn	19 36 27.2	+1.8
PCIG					Sn	19 36 51.0	-1.1
PANG	Puerto Angel	2.22	228		Pn	19 36 26.1	-1.1
PANG					Sn	19 36 54.8	-0.6
TOIG	Toxpalan	2.39	293		Pn	19 36 30.6	+1.1
TOIG					Sn	19 36 59.3	-0.1
PEIG	Puerto Escondi	2.57	244		Pn	19 36 30.7	-1.0
PEIG					Sn	19 37 01.1	-2.2
CCIG	Comitan	2.66	109		Pn	19 36 34.4	+1.4
CCIG	Comitan	2.66	109	P	Pn	19 36 34.1	+1.1
CCIG	Comitan	2.66	109	S	Sn	19 37 03.7	-1.9
YOIG	Yosondua	2.69	264		Pn	19 36 33.9	+0.5
YOIG					Sn	19 37 03.5	-2.9
TPIG	Tehuac#an	2.78	297		Pn	19 36 35.8	+1.4
TPIG					Sn	19 37 08.0	-0.4
TXIG	Tlaxiaco	2.88	272		Pn	19 36 37.0	+1.2
TXIG					Sn	19 37 08.9	-1.9
HLIG	Huajuapan de L	2.98	283		Pn	19 36 38.6	+1.5
HLIG					Sn	19 37 12.2	-0.9
THIG		3.28	133		Pn	19 36 43.1	+2.3
THIG					Sn	19 37 15.3	-4.5
FTIG	Fresnillo de T	3.31	283		Pn	19 36 42.9	+1.6
FTIG					Sn	19 37 19.1	-1.4
PNIG	Pinotepa	3.32	257		Pn	19 36 40.5	-0.8
PNIG					Sn	19 37 19.9	-0.7
HUEH	Huehuetenango	3.62	120		Pn	19 36 46.6	+1.0
HUEH	Huehuetenango	3.62	120	P	Pn	19 36 46.5	+0.9
TLIG	Tlapa	3.66	277		Pn	19 36 47.0	+1.1
TLIG	Tlapa	3.66	277	P	Pn	19 36 47.0	+1.1
HMTT	Tlapaneco	3.68	280		Pn	19 36 47.6	+1.4
HMTT					Sn	19 37 27.5	-1.8
MGIG	Malinaltepec	3.71	272		Pn	19 36 47.4	+0.9
MGIG					Sn	19 37 29.7	-0.3
PHPU	Puebla	3.75	300		Pn	19 36 49.9	+2.8
RTAL	Retalhuleu	3.94	131		Pn	19 36 52.2	+2.6
RTAL	Retalhuleu	3.94	131	P	Pn	19 36 52.1	+2.5
RTAL	Retalhuleu	3.94	131	S	Sn	19 37 39.6	+4.2
PPIG	Popocatepetl	4.14	298		Pn	19 36 55.5	+2.9
PPIG					Sn	19 37 40.4	-0.3
CRIG	Cruz Grande	4.21	265		Pn	19 36 52.4	-0.6
CRIG					Sn	19 37 39.7	-1.9
AMVM	AMECAMECA	4.30	298		Pn	19 36 57.3	+2.7
YAIG	Yautepec	4.43	293		Pn	19 36 58.2	+2.0
YAIG					Sn	19 37 45.2	-2.0
VTVM	Tizayuca	4.61	305		Pn	19 37 00.9	+2.2
DAIG	Los Arroyos	4.68	269		Pn	19 36 59.3	-0.1
DAIG					Sn	19 37 50.8	-2.2
PLIG	Platanillo	4.68	286		Pn	19 37 01.4	+1.9
PLIG					Sn	19 37 50.2	-2.9
PETF	Flores	4.69	92		Pn	19 36 59.4	0.0
PETF	Flores	4.69	92	P	Pn	19 36 59.8	+0.4
PETF	Flores	4.69	92	S	Sn	19 37 51.5	-1.5
PBVM	Pinon	4.69	300		Pn	19 37 01.5	+2.0
MEIG	Mezcala	4.70	280		Pn	19 37 01.1	+1.4
MEIG					Sn	19 37 50.2	-3.3
UNM	Universidad Na	4.72	298		Pn	19 37 02.8	+2.6
AOVM	Tlapan	4.82	296		Pn	19 37 04.6	+3.0
MAVM	Malinalco, Edo	4.85	292		Pn	19 37 04.3	+2.5
MAVM					Sn	19 37 57.5	+0.2
ZUVM	ZUMPANGO	4.88	304		Pn	19 37 02.9	+0.6
AZVM	Cuida Lopez Ma	4.93	300		Pn	19 37 05.7	+2.8
DHIG	Demacu	5.12	308		Pn	19 37 07.9	+2.5
CAIG	El Cayaco	5.27	270		Pn	19 37 07.2	-0.1
CAIG					Sn	19 38 06.1	-0.9
ARIG	Puente Sto Nin	5.44	283		Pn	19 37 11.7	+2.1
ARIG					Sn	19 38 07.9	-3.4
ATVM	ATLACOMULCO	5.47	299		Pn	19 37 13.7	+3.4
ACIG	Acambay	5.61	301		Pn	19 37 14.6	+2.7
NUBE	Las Nubes	5.79	123	P	Pn	19 37 16.5	+2.1
ESQI	Esquipulas	5.82	116		Pn	19 37 15.1	+0.4
ESQI	Esquipulas	5.82	116	P	Pn	19 37 16.7	+2.0
IZABA	Izabal, Puerto	6.09	103	P	Pn	19 37 18.2	-0.1
IZABA	Izabal, Puerto	6.09	103	S	Sn	19 38 24.9	-2.0
PMON	Piamonte	6.27	122	P	Pn	19 37 23.4	+2.6
ZIIG	Zihuatanejo	6.42	275		Pn	19 37 23.8	+1.1
ZIIG					Sn	19 38 32.1	-2.6
JRQG	Juriquilla Cam	6.43	304		Pn	19 37 25.9	+2.8
PAVA	Las Pavas	6.58	121	P	Pn	19 37 27.3	+2.3
MOIG	Morelia	6.60	293		Pn	19 37 27.6	+2.3
MOIG	Morelia	6.60	293	P	Pn	19 37 29.0	+3.7
MOIG	Morelia	6.60	293	S	Sn	19 38 42.9	+3.5
TEIG	Tepich	6.86	63		Pn	19 37 27.0	-1.6
GTIG	Gomez Farias	7.19	326		Pn	19 37 33.5	+0.5
MMIG	Aquila	8.26	279		Pn	19 37 48.5	+1.0
MMIG					Sn	19 39 15.3	-4.0
ZAIG	Zacatecas	9.22	308		Pn	19 38 01.0	+0.3
BOAB	BOACO BROADBAN	9.96	117		Pn	19 38 11.7	+1.3
ACON	Acoyapa	10.62	118		Pn	19 38 17.9	-1.3
JTS	Las Juntas de	11.72	124	P	Pn	19 38 33.7	-0.1
	11nm,0.3s,baz=298,slow=12,SNR=16						
JTS				S	Sn	19 40 39.2	-3.9
	4.0nm,0.3s,baz=314,slow=18,SNR=1.5						
EF71	Pawnee	11.81	346	P	P	19 38 38.9	-3.6
833A	Chaparral WMA,	11.90	340		Pn	19 38 36.9	+0.8
SOR	Soroa	12.38	61		Pn	19 38 39.7	-2.7
PAR1A	Puntarenas Pro	12.68	125	*e*P	Pn	19 38 48.4	+2.0
HKT	Hockley	12.77	356	P	P	19 38 54.3	+1.1
ABE2	San Pablo	12.78	124	*e*P	Pn	19 38 48.4	+0.5
VICA	Volcano Irazu	12.78	123	*e*P	Pn	19 38 49.1	+1.1
LCR2	La Lucha 2	12.79	124		Pn	19 38 49.3	+1.3
LCR2	La Lucha 2	12.79	124	*e*P	Pn	19 38 49.1	+1.1
VTR0	Volcan Turrial	12.83	122	*e*P	Pn	19 38 50.4	+1.8
CVTV	Tajo	12.85	122	*e*P	Pn	19 38 49.4	+0.6
VTCV	VTCV, Calle Va	12.88	122	*e*P	Pn	19 38 50.5	+1.4
PIEC	Cerro El Cedra	12.90	124	*e*P	Pn	19 38 50.5	+1.1
RESJ	San Isidro (Tu	12.92	122	*e*P	Pn	19 38 51.4	+1.9
HNDO	Hondo	12.99	342	P	P	19 38 56.3	+0.6
HNDO	Hondo	12.99	342	P	P	19 38 55.3	-0.5
SAJE	San Jernim	13.42	124	*e*P	Pn	19 38 57.2	+1.2
EDPE	Pejibaye, P	13.48	125	*e*P	Pn	19 38 57.8	+1.1
DRK0	Durika	13.68	124	*e*P	Pn	19 39 00.4	+1.0
435B	Jarrell	13.80	350	P	P	19 39 06.9	+2.2
EDP2	Potrero Grande	13.88	124	*e*P	Pn	19 39 03.2	+1.4
BRU2	Volcan	14.40	124		Pn	19 39 06.5	-2.1
SAND	Sanderson	14.41	333		Pn	19 39 06.7	-1.7
TXAR	Lajitas Array	14.61	328		Pn	19 39 11.5	+0.4
TXAR	Lajitas Array	14.61	328	P	P	19 39 12.7	-1.2
	4.6nm,1.1s,baz=152,slow=12,SNR=11						
TXAR				LR	LR	19 45 22.7	
	comp=Z,33nm,18.8s,baz=113,slow=39						
OZNA	Ozona	14.88	338		P	19 39 16.2	-0.6
346A	Big Creek Wild	14.96	18	P	P	19 39 17.7	+0.1
FW13	Cleburne	15.32	351	IAmb	IAmb	19 39 40.1	
	comp=Z,37nm,0.7s						
ALPN	Alpine	15.45	330		P	19 39 23.1	-0.1
061Z	Ochoppi	15.52	54		Pn	19 39 19.4	-2.9
SGCY	Sterling City	15.78	340	IAmb	IAmb	19 39 31.1	
	comp=Z,28nm,1.0s						
MNHN	Monahans	15.88	334	IAmb	IAmb	19 39 33.8	
	comp=Z,31nm,1.0s						
PLPT	Palo Pinto	15.91	349	IAmb	IAmb	19 39 47.4	
	comp=Z,33nm,0.7s						
LPIG	La Paz	16.10	298	LR	LR	19 46 11.1	
	comp=Z,88nm,20.1s,baz=120,slow=38						
Z35A	Perchaven, San	16.26	353	IAmb	IAmb	19 39 42.5	
	comp=Z,48nm,0.8s						
APMT	Aspermont	16.80	344	IAmb	IAmb	19 39 58.4	
	comp=Z,37nm,0.7s						
WTFS	Witchita Falls	16.87	349	IAmb	IAmb	19 39 51.7	
	comp=Z,34nm,0.9s						
MIAR	Mount Ida	17.34	3	IAmb	IAmb	19 39 45.3	
	comp=Z,37nm,0.8s						
DKNS	Dickens	17.34	343	IAmb	IAmb	19 39 58.1	
	comp=Z,27nm,0.9s						
X34A	Smith Ranch, M	17.58	352	IAmb	IAmb	19 40 03.0	
	comp=Z,54nm,0.8s						
CHIV	Chivirico	17.61	78	P	P	19 39 45.4	-1.7
CHIV				IAmb	IAmb	19 39 57.3	
	comp=Z,39nm,0.9s						
152A	Waverly Hall	17.91	29	IAmb	IAmb	19 39 60.0	
	comp=Z,29nm,0.6s						
Y49A	Blount Mountai	18.24	23	P	P	19 39 53.2	-0.6
Y49A				IAmb	IAmb	19 40 09.5	
	comp=Z,29nm,1.1s						
DEOK	Depew	18.67	356	P	P	19 39 58.5	0.0
OK029	Liberty Lake	18.71	353	P	P	19 39 58.7	-0.2
PLAL	Pickwick Lake	18.72	17	P	P	19 39 57.7	-1.3
PLAL				IAmb	IAmb	19 40 11.5	
	comp=Z,34nm,1.0s						
FCAR	Ozark Folk Cen	18.80	7	P	P	19 39 59.9	+0.1
RLO	Rose Lookout	18.93	359	IAmb	IAmb	19 40 04.5	
	comp=Z,34nm,0.8s						
HHAR	Hobbs	19.06	2	IAmb	IAmb	19 40 06.2	
	comp=Z,38nm,0.6s						
LCAR	Lake Charles	19.10	9	IAmb	IAmb	19 40 04.2	
	comp=Z,52nm,1.0s						
GOGA	Godfrey	19.11	30	IAmb	IAmb	19 40 17.2	
	comp=Z,39nm,1.1s						
U38A	Gravette	19.20	1	IAmb	IAmb	19 40 07.7	
	comp=Z,20nm,0.7s						
OK048	Pawnee Station	19.28	355	IAmb	IAmb	19 40 10.0	
	comp=Z,57nm,0.9s						
ELIS	Ellis County	19.28	348	IAmb	IAmb	19 40 10.7	
	comp=Z,32nm,1.0s						
X51A	Calhoun	19.46	25	IAmb	IAmb	19 40 06.7	
	comp=Z,29nm,0.7s						
V48A	Smith Brothers	19.80	19	IAmb	IAmb	19 40 10.2	
	comp=Z,23nm,0.8s						
W50A	Signal Mountai	19.84	23	IAmb	IAmb	19 40 10.7	
	comp=Z,40nm,0.7s						
WVT	Waverly	19.87	17	P	P	19 40 10.1	-1.3
WVT				IAmb	IAmb	19 40 26.3	
	comp=Z,18nm,0.8s						
KAN17	Caldwell West	19.98	353	IAmb	IAmb	19 40 17.0	
	comp=Z,32nm,0.9s						
MGMO	Mountain Grove	20.04	6	IAmb	IAmb	19 40 30.6	
	comp=Z,42nm,1.1s						
T42A	Van Buren	20.05	9	P	P	19 40 13.0	-0.4
T42A				IAmb	IAmb	19 40 13.7	
	comp=Z,31nm,0.9s						
KAN09	Caldwell North	20.06	353	IAmb	IAmb	19 40 17.7	
	comp=Z,34nm,0.8s						
KAN05	Bluff City Nor	20.06	353	IAmb	IAmb	19 40 17.8	
	comp=Z,45nm,0.9s						
DUN6	Lazy B Ranch	20.06	322	IAmb	IAmb	19 40 23.2	
	comp=Z,51nm,1.1s						
KAN01	Argonia South	20.09	353	IAmb	IAmb	19 40 18.0	
	comp=Z,37nm,0.7s						
CLTN	Cedars of Leba	20.28	20	IAmb	IAmb	19 40 15.2	
	comp=Z,15nm,0.8s						
W52A	Murphy	20.31	26	IAmb	IAmb	19 40 16.1	
	comp=Z,43nm,0.9s						
HODGE	Hodges	20.36	31	IAmb	IAmb	19 40 31.8	
	comp=Z,31nm,1.0s						
CPCT	Cooper Cave	20.37	25	IAmb	IAmb	19 40 32.8	
	comp=Z,56nm,1.2s						
RTBA	Rita Blanca	20.46	341	IAmb	IAmb	19 40 22.0	
	comp=Z,15nm,0.7s						
CGM3	Cape Girardeau	20.56	12	IAmb	IAmb	19 40 20.6	
	comp=Z,18nm,0.9s						
ANMO	Albuquerque	20.56	332	P	P	19 40 19.8	+0.7
	comp=Z,3.5nm,0.9s,baz=242,slow=12,SNR=5.6						
ANMO				pP	pP	19 40 42.6	-0.2
	comp=Z,2.6nm,0.7s,baz=245,slow=14,SNR=2.7						
	comp=Z,3.5nm,0.9s						
TKL	Tuckaleechee C	20.85	26	IAmb	IAmb	19 40 39.0	
	comp=Z,29nm,0.9s						
TKL	Tuckaleechee C	20.85	26	P	P	19 40 20.6	-1.4
	comp=Z,21nm,0.7s,baz=193,slow=14,SNR=36						
	comp=Z,21nm,0.7s						
JSC	Jenkinsville	20.90	33	IAmb	IAmb	19 40 23.3	
	comp=Z,18nm,0.9s						
S44A	Carbondale	21.02	12	IAmb	IAmb	19 40 25.2	
	comp=Z,29nm,0.6s						
CCM	Cathedral Cave	21.04	8	P	P	19 40 22.6	-1.4
CCM				IAmb	IAmb	19 40 23.7	
	comp=Z,25nm,0.6s						
PAULI	Pauline	21.05	31	IAmb	IAmb	19 40 24.4	
	comp=Z,25nm,0.9s						
R40A	Maddies Statio	21.16	5	IAmb	IAmb	19 40 27.8	
	comp=Z,20nm,0.9s						
V53A	Saluda	21.28	28	IAmb	IAmb	19 40 44.7	
	comp=Z,26nm,0.9s						
R32A	Long Quarter,	21.46	351	IAmb	IAmb	19 40 32.9	
	comp=Z,19nm,0.8s						
KMSC	Kings Mountain	21.54	31	IAmb	IAmb	19 40 29.4	
	comp=Z,39nm,0.8s						
TZTN	Tazewell	21.71	25	IAmb	IAmb	19 40 36.1	
	comp=Z,19nm,0.8s						
V55A	Taylorsville	22.17	30	IAmb	IAmb	19 40 35.3	
	comp=Z,35nm,0.7s						
W57A	Gilead	22.24	33	IAmb	IAmb	19 40 44.7	
	comp=Z,21nm,0.8s						
WCI	Wyandotte Cave	22.26	18	P	P	19 40 35.4	-1.4
P38A	Dawn	22.41	2	IAmb	IAmb	19 40 37.8	
	comp=Z,24nm,0.6s						
P40A	Paris	22.41	6	IAmb	IAmb	19 40 37.9	
	comp=Z,48nm,0.9s						
S51A	Beattyville	22.64	24	IAmb	IAmb	19 40 39.5	
	comp=Z,23nm,0.7s						
R49A	Shelbyville	22.67	20	IAmb	IAmb	19 40 39.5	
	comp=Z,34nm,0.7s						
X16A	Lo Mia Camp, P	22.77	322	IAmb	IAmb	19 40 46.3	
	comp=Z,22nm,1.1s						
P43A	Skaggs, Pawnee	22.86	10	IAmb	IAmb	19 40 42.5	
	comp=Z,51nm,1.0s						
R50A	Paris	22.94	21	IAmb	IAmb	19 40 43.2	
	comp=Z,18nm,0.7s						
V58A	Windy Hill, Pi	23.19	34	IAmb	IAmb	19 40 45.4	
	comp=Z,27nm,1.1s						
OTAV	Otavalo	23.25	135	P	P	19 40 48.0	+0.9
OTAV	Otavalo	23.25	135	*e*P	P	19 40 48.1	+1.1
WUAZ	Wupatki	23.51	324	IAmb	IAmb	19 40 53.5	
	comp=Z,22nm,1.0s						
BLA	Blacksburg	23.64	30	IAmb	IAmb	19 40 50.3	
	comp=Z,35nm,0.8s						
S54A	Dingess, Beckl	23.72	27	IAmb	IAmb	19 40 50.2	
	comp=Z,17nm,0.8s						

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HDIL  Hopedale          23.79  10 IAmb  IAmb   19 40 51.1
      comp=Z,28nm,0.6s
Q51A  Peebles           23.95  22 IAmb  IAmb   19 40 52.4
      comp=Z,28nm,0.8s
T57A  Hurt              24.04  32 IAmb  IAmb   19 40 54.2
      comp=Z,19nm,0.5s
SFIN  Lafayette         24.07  14 IAmb  IAmb   19 40 53.8
      comp=Z,28nm,0.7s
PV02  Paradox Valley    24.29 332 IAmb  IAmb   19 41 00.4
      comp=Z,30nm,1.0s
Q52A  Bidwell           24.31  24 IAmb  IAmb   19 40 55.3
      comp=Z,26nm,0.6s
BGNE  Belgrade          24.34 354 IAmb  IAmb   19 40 58.2
      comp=Z,28nm,0.8s
PV03  Paradox Valley    24.38 332 IAmb  IAmb   19 41 00.9
      comp=Z,20nm,1.2s
PV18  Skein Mesa, Pa    24.40 332 P     P      19 40 58.4 +1.5
PV18                              IAmb  IAmb   19 41 01.1
      comp=Z,31nm,1.1s
P51A  Williamsport      24.46  22 IAmb  IAmb   19 40 57.5
      comp=Z,34nm,0.8s
PV19  Morning Glory     24.48 332 IAmb  IAmb   19 41 04.7
      comp=Z,20nm,1.1s
PV04  Paradox Valley    24.52 332 IAmb  IAmb   19 41 01.0
      comp=Z,18nm,1.0s
PV22  Blue Mesa, Par    24.58 333 P     P      19 40 59.5 +0.9
L34A  Svendsen Farm,    24.76 357 IAmb  IAmb   19 41 01.0
      comp=Z,38nm,0.9s
S57A  Dark Hollow, R    24.78  31 IAmb  IAmb   19 40 59.6
      comp=Z,10nm,0.7s
M44A  Midewin, Midew    24.82  12 IAmb  IAmb   19 41 01.1
      comp=Z,32nm,0.8s
P52A  Corning           24.94  24 IAmb  IAmb   19 41 00.4
      comp=Z,20nm,0.8s
L40A  Anamosa           25.00   6 IAmb  IAmb   19 41 03.3
      comp=Z,21nm,0.7s
P53A  Whipple           25.10  25 IAmb  IAmb   19 41 04.9
      comp=Z,16nm,0.7s
N49A  Columbus Grove    25.38  19 IAmb  IAmb   19 41 04.3
      comp=Z,15nm,0.8s
O52A  Adamsville        25.47  24 IAmb  IAmb   19 41 05.8
      comp=Z,24nm,0.7s
Q56A  Snyder Ridge,     25.69  29 P     P      19 41 06.7 -1.8
Q56A                              IAmb  IAmb   19 41 08.0
      comp=Z,16nm,0.8s
O53A  New Philadelph    25.83  24 IAmb  IAmb   19 41 08.7
      comp=Z,21nm,0.7s
ECSD  EROS Data Cent    26.53 357 IAmb  IAmb   19 41 17.5
      comp=Z,15nm,0.8s
P57A  Homestead Farm    26.59  30 IAmb  IAmb   19 41 15.8
      comp=Z,10nm,0.7s
I37A  Lemond, Waseca    26.79   2 IAmb  IAmb   19 41 17.7
      comp=Z,18nm,1.1s
I40A  Norwalk           26.88   7 IAmb  IAmb   19 41 19.6
      comp=Z,13nm,0.6s
I42A  Draeger Farm,     27.10   9 IAmb  IAmb   19 41 20.9
      comp=Z,24nm,1.1s
PDAR  Pinedale Array    28.47 337 P     P      19 41 34.3 +0.8
      comp=Z,0.3nm,0.5s,baz=169,slow=8.5,SNR=3.8
PDAR                              pP    pP     19 42 00.2 -1.4
      comp=Z,2.7nm,0.9s,baz=147,slow=8.5,SNR=2.9
PDAR                              PcP   PcP    19 44 42.3  0.0
      comp=Z,0.5nm,0.7s,baz=262,slow=2.4,SNR=2.9
PDAR                              LR    LR     19 56 14.1
      comp=Z,20nm,19.0s,baz=164,slow=43
MZP   Montezuma Peak    28.53 320 P     P      19 41 36.1 +2.0
MMNY  Mt. Morris Dam    29.26  26 IAmb  IAmb   19 41 38.9
      comp=Z,15nm,0.8s
E38A  The Farm, Brul    29.48   4 IAmb  IAmb   19 41 42.3
      comp=Z,18nm,0.8s
NVAR  Mina Array Bea    29.55 320 P     P      19 41 45.7 +2.6
      comp=Z,7.9nm,0.9s,baz=137,slow=9.5,SNR=34
NVAR                              pP    pP     19 42 12.6 +1.2
      comp=Z,6.1nm,0.8s,baz=122,slow=7.3,SNR=8.4
NVAR                              PcP   PcP    19 44 46.6 +1.4
      comp=Z,2.7nm,0.9s,baz=152,slow=4.0,SNR=3.8
      comp=Z,7.9nm,0.9s
BINY  Binghamton        29.67  29 P     P      19 41 41.5 -2.4
BINY                              IAmb  IAmb   19 41 42.7
      comp=Z,10nm,0.8s
L59A  Walton            30.11  30 IAmb  IAmb   19 41 46.7
      comp=Z,14nm,0.7s
SADO  Sadowa            30.49  22 IAmb  IAmb   19 41 50.0
      comp=Z,15nm,0.9s
SADO  Sadowa            30.49  22 LR    LR     19 56 07.5
      comp=Z,42nm,20.6s,baz=182,slow=40
PECO  Prince Edward     30.62  26 IAmb  IAmb   19 41 50.7
      comp=Z,18nm,0.8s
J57A  Williamstown      30.62  27 IAmb  IAmb   19 41 51.1
      comp=Z,17nm,0.8s
EYMN  Ely               30.82   4 P     P      19 41 52.6 -1.4
EYMN                              IAmb  IAmb   19 41 53.3
      comp=Z,11nm,0.8s
DELO  Deloro Mine       30.85  24 IAmb  IAmb   19 41 52.9
      comp=Z,13nm,0.8s
MDND  Maddock           30.86 354 IAmb  IAmb   19 41 55.2
      comp=Z,16nm,0.8s
BUKO  Buck Lake         30.98  21 IAmb  IAmb   19 41 54.4
      comp=Z,21nm,0.9s
TBO   Thunder Bay       31.70   7 IAmb  IAmb   19 42 01.3
      comp=Z,18nm,0.9s
LONY  Lake Ozonia       32.20  28 IAmb  IAmb   19 42 05.3
      comp=Z,13nm,0.8s
WBO   Williamsburg      32.21  26 IAmb  IAmb   19 42 05.2
      comp=Z,15nm,0.7s
FRNY  Flat Rock         32.82  28 IAmb  IAmb   19 42 11.5
      comp=Z,11nm,0.9s
J08A  Circle Bar Ran    32.96 327 IAmb  IAmb   19 42 15.8
      comp=Z,17nm,1.0s
ULM   Lac du Bonnet     33.02 359 P     P      19 42 10.8 -2.3
ULM                               IAmb  IAmb   19 42 13.2
      comp=Z,19nm,1.1s
ULM   Lac du Bonnet     33.02 359 P     P      19 42 11.6 -1.5
      comp=Z,12nm,0.9s,baz=173,slow=9.9,SNR=13
ULM                               pP    pP     19 42 40.9 -0.7
      comp=Z,4.1nm,0.6s,baz=190,slow=11,SNR=3.9
      comp=Z,12nm,0.9s
NEW   Newport           36.01 334 LR    LR     19 57 49.8
      comp=Z,39nm,18.2s,baz=140,slow=37
D62A  Allapoint, All    36.60  30 IAmb  IAmb   19 42 44.2
      comp=Z,12nm,0.9s
LPAZ  La Paz            42.35 140 IAmb  IAmb   19 43 34.9
      comp=Z,12nm,0.7s
LPAZ  La Paz            42.35 140 P     P      19 43 33.9 +1.2
      comp=Z,13nm,0.8s,baz=332,slow=6.4,SNR=62
LPAZ                              pP    pP     19 44 02.3 -0.1
      comp=Z,6.8nm,0.7s,baz=332,slow=6.8,SNR=5.2
LPAZ                              PcP   PcP    19 45 25.2 +1.3
      comp=Z,1.9nm,0.6s,baz=324,slow=2.9,SNR=2.0
      comp=Z,13nm,0.8s
LPAZ  La Paz            42.35 140 eP    P      19 43 33.2 +0.6
PB16  IPOC Station P    43.15 144 P     P      19 43 41.3 +2.3
PB16                              IAmb  IAmb   19 43 42.6
      comp=Z,13nm,1.0s
SCHQ  Schefferville     43.29  23 P     P      19 43 38.4 -0.6
      comp=Z,5.5nm,0.8s,baz=222,slow=9.9,SNR=3.6
SCHQ                              LR    LR     20 04 28.4
      comp=Z,118nm,18.1s,baz=182,slow=40
      comp=Z,5.5nm,0.8s
BBB   Bella Bella       43.72 331 LR    LR     20 03 22.9
      comp=Z,48nm,18.5s,baz=157,slow=38
PB11  IPOC Station P    44.21 145 IAmb  IAmb   19 43 49.9
      comp=Z,21nm,0.9s
VILB  Vilhena           45.39 129 eP    P      19 43 56.5 +0.2
NPGB  Novo Progresso    45.77 118 eP    P      19 43 58.4 -1.0
PB09  IPOC Station P    46.09 146 P     P      19 44 02.8 +1.0
PB09                              IAmb  IAmb   19 44 12.1
      comp=Z,15nm,1.1s
SIV   San Ignacio       46.78 133 P     P      19 44 07.6 +0.4
      comp=Z,8.3nm,0.5s,baz=297,slow=7.8,SNR=46
SIV                               pP    pP     19 44 36.9 -0.5
      comp=Z,3.6nm,0.7s,baz=292,slow=9.6,SNR=3.4
SIV                               PcP   PcP    19 45 39.7 +1.2
      comp=Z,5.9nm,0.9s,baz=270,slow=2.3,SNR=4.1
      comp=Z,8.3nm,0.5s
TOAD  Toad River Com    47.25 339 P     P      19 44 11.1 +0.8
      baz=138
V35K  Ketchikan         47.33 332 P     P      19 44 11.6 +0.7
      baz=129
YKAW1 Yellowknife Wh    47.34 348 IAmb  IAmb   19 44 14.6
      comp=Z,4.4nm,0.8s
YKA   Yellowknife Ar    47.37 348 P     P      19 44 11.2 +0.1
      comp=Z,1.8nm,0.8s,baz=215,slow=6.8,SNR=16
YKA                               pP    pP     19 44 41.7 +0.6
      comp=Z,3.8nm,0.8s,baz=151,slow=7.0,SNR=11
      comp=Z,1.8nm,0.8s
YKAW3 Yellowknife Wh    47.43 348 IAmb  IAmb   19 44 15.5
      comp=Z,4.2nm,0.9s
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CLDB  Colider           47.53 123 eP    P      19 44 12.1 -0.9
PTLB  Pontes e Lacer    47.80 131 eP    P      19 44 14.9 -0.1
T35M  Bob Quinn         47.81 335 P     P      19 44 15.5 +0.9
      baz=131
KOTAN Kotaneelee Air    47.84 341 P     P      19 44 16.3 +1.6
      baz=141
BBSD  Serra de San D    47.92 134 eP    P      19 44 15.6 -0.4
CRAG  Craig             48.09 332 P     P      19 44 17.5 +0.7
      baz=127
BEAVL Fort Liard        48.20 340 P     P      19 44 18.2 +0.6
      baz=140
WRAK  Wrangell Islan    48.33 333 P     P      19 44 19.7 +1.2
      baz=128
U33K  Whale Pass        48.48 332 P     P      19 44 20.6 +0.8
      baz=127
S34M  Telegraph Cree    48.79 335 P     P      19 44 23.6 +1.6
      baz=131
WTLY  Watson Lake, Y    49.41 338 P     P      19 44 28.1 +1.3
      baz=135
R33M  Jennings River    49.71 337 P     P      19 44 30.7 +1.5
      baz=132
FRB   Frobisher Bay     49.90  15 LR    LR     20 10 21.6
      comp=Z,40nm,18.2s,baz=249,slow=42
Q32M  Nakina River      49.92 336 P     P      19 44 32.2 +1.3
      baz=130
SIT   Sitka             50.03 332 P     P      19 44 32.5 +1.0
      baz=126
TGTN  Hyland Airport    50.25 340 P     P      19 44 34.2 +1.0
      baz=136
SALV  Santo Antonio     50.62 128 eP    P      19 44 36.4 -0.1
P32M  Atlin             50.90 336 P     P      19 44 39.4 +1.3
      baz=129
P33M  Teslin, Yukon     50.95 337 P     P      19 44 40.4 +1.9
      baz=130
S31K  Pelican           50.95 333 P     P      19 44 39.4 +1.0
      baz=125
LCO   Las Campanas      51.45 153 P     P      19 44 44.5 +1.7
SNDB  Serra Nova Dou    51.79 121 eP    P      19 44 45.6 +0.3
PLBC  Pleasant Camp     51.89 334 P     P      19 44 46.5 +1.2
      baz=126
MMPY  Sheldon Lake,     52.02 340 P     P      19 44 47.8 +1.4
      baz=134,SNR=6.7
WHY   Whitehorse        52.03 336 P     P      19 44 48.1 +1.6
      baz=128
FARO  Faro, Yukon       52.47 338 P     P      19 44 51.3 +1.6
      baz=131
P30M  Million Dollar    52.52 335 P     P      19 44 51.6 +1.4
      baz=126
P29M  Windy Craggy      52.56 334 P     P      19 44 52.4 +2.0
      baz=125
O30N  Mendenhall        52.56 336 P     P      19 44 51.5 +1.1
      baz=127
BDQN  Bodoquena, MS     52.80 134 eP    P      19 44 51.9 -0.8
ILON  Igloolik, Nuna    52.81   6 P     P      19 44 51.7 -0.3
M31M  Drury Creek, Y    52.83 338 P     P      19 44 53.8 +1.5
      baz=130
N31M  Braeburn, Yuko    52.88 337 P     P      19 44 54.1 +1.3
      baz=128,SNR=5.9
HYT   Haines Junctio    53.16 335 P     P      19 44 56.2 +1.3
      baz=126,SNR=7.5
PNL   Peninsula         53.28 334 P     P      19 44 57.0 +1.4
      baz=123
O29M  Mount Kennedy     53.29 335 P     P      19 44 57.4 +1.6
      baz=124
N30M  Aishikik Lake     53.37 336 P     P      19 44 58.1 +1.7
      baz=126,SNR=6.4
ARAG  Araguaiana, MT    53.48 125 eP    P      19 44 57.5 -0.2
YUK6  Outpost Mounta    53.57 335 P     P      19 44 59.4 +1.4
      baz=125
PINM  Pinnacle          53.87 334 P     P      19 45 01.4 +1.4
      baz=122
YUK4  Talbot Arm        53.91 336 P     P      19 45 01.7 +1.3
      baz=125,SNR=5.3
O28M  Mount Upton       54.21 334 P     P      19 45 04.0 +1.2
      baz=123
M29M  Somme Creek       54.48 337 IAmb  IAmb   19 45 07.5
      comp=Z,15nm,1.1s
M29M  Somme Creek       54.48 337 P     P      19 45 05.5 +1.1
      baz=126,SNR=9.9
MESA  MESA              54.64 333 P     P      19 45 06.4 +0.7
      baz=120
L29M  L29M              54.75 338 IAmb  IAmb   19 45 08.8
      comp=Z,10.0nm,1.1s
L29M  L29M              54.75 338 P     P      19 45 07.4 +1.2
      baz=126,SNR=11
CFA   Coronel Fontan    54.76 152 P     P      19 45 08.8 +2.0
      comp=Z,4.3nm,0.6s,baz=326,slow=6.8,SNR=19
CFA                               pP    pP     19 45 38.2 +0.6
      comp=Z,4.4nm,0.8s,baz=322,slow=5.8,SNR=6.2
      comp=Z,4.3nm,0.6s
CTG   Chitna Glacier    54.79 334 P     P      19 45 08.4 +1.6
      baz=122
K29M  Barlow Dome       54.97 338 P     P      19 45 08.7 +0.7
      baz=127,SNR=7.3
J30M  Hart River        55.02 340 P     P      19 45 09.6 +1.3
      baz=129
H31M  Peel River        55.19 341 P     P      19 45 10.2 +0.8
      baz=132
BVCY  Beaver Creek      55.38 336 P     P      19 45 12.0 +1.2
      baz=123
CRQE  Cirque            55.42 334 P     P      19 45 12.2 +1.0
      baz=120
I30M  Mount Dempster    55.45 340 P     P      19 45 11.9 +0.5
      baz=129,SNR=8.3
KAIM  Kayak Island      55.59 332 P     P      19 45 12.4 +0.1
      baz=118
MCARA McCarthy VSAT     55.71 334 P     P      19 45 13.9 +0.8
      baz=120
M27K  Edge Creek, AK    55.75 336 P     P      19 45 14.1 +0.5
      baz=122,SNR=5.2
DAWY  Dawson            55.77 338 P     P      19 45 14.5 +0.9
      baz=126,SNR=6.7
G31M  Satah River       55.92 342 P     P      19 45 14.9 +0.3
      baz=133,SNR=7.5
NRS   Narsarsuaq        56.05  26 P     P      19 45 13.3 -2.2
NRS   Narsarsuaq        56.05  26 iP    P      19 45 13.5 -2.0
NRS                               IAmb  IAmb   19 45 14.6
      comp=Z,32nm,0.9s
GLB   Gilahina Butte    56.06 334 IAmb  IAmb   19 45 18.8
      comp=Z,5.1nm,0.9s
BCAR  Beaver Creek A    56.09 336 P     P      19 45 17.1 +1.2
L27K  Beaver Creek,     56.11 336 P     P      19 45 16.6 +0.6
      baz=122,SNR=7.0
F31M  Tsiigehtchic      56.13 343 P     P      19 45 16.6 +0.6
      baz=133
I29M  Ogilvie Camp,     56.17 340 P     P      19 45 17.0 +0.6
      baz=127,SNR=8.3
BMRM  Bremner River     56.17 333 P     P      19 45 17.5 +1.0
      baz=118
M26K  Nabesna, AK       56.22 335 P     P      19 45 17.4 +0.6
      baz=121,SNR=9.3
Q23K  Middleton Isla    56.24 331 P     P      19 45 17.4 +0.4
      baz=116
EPYK  Eagle Plains      56.29 341 P     P      19 45 17.5 +0.2
      baz=130
SJPY  San Joaquin       56.34 137 eP    P      19 45 18.1 -0.1
BDFB  Brasilia          56.45 123 IAmb  IAmb   19 45 20.9
      comp=Z,6.3nm,0.6s
BDFB  Brasilia          56.45 123 P     P      19 45 20.2 +1.0
      comp=Z,5.8nm,0.5s,baz=264,slow=8.2,SNR=10
      comp=Z,5.8nm,0.5s
N25K  Chitina, Valde    56.47 334 P     P      19 45 19.3 +0.6
      baz=119,SNR=8.1
CPUP  Villa Florida     56.50 139 P     P      19 45 18.9 -0.3
      comp=Z,1.0nm,0.8s,baz=195,slow=7.5,SNR=8.8
CPUP                              pP    pP     19 45 49.7 -0.7
      comp=Z,0.5nm,0.6s,baz=175,slow=9.9,SNR=2.2
CPUP                              PcP   PcP    19 46 14.8 +0.4
      comp=Z,0.5nm,0.5s,baz=163,slow=2.1,SNR=4.3
      comp=Z,1.0nm,0.8s
G30M  tAoh Zraii Nji    56.54 342 P     P      19 45 19.3 +0.3
      baz=130
INK   Inuvik            56.67 344 P     P      19 45 20.6 +0.8
      baz=134,SNR=6.9
H29M  Whitestone        56.72 340 P     P      19 45 21.5 +1.3
      baz=128,SNR=8.4
K27K  Chicken           56.72 337 P     P      19 45 21.2 +0.9
      baz=123
I28M  Miner Creek       56.77 339 P     P      19 45 20.9 +0.2
      baz=126
F30M  Barrier River     56.83 343 P     P      19 45 21.4 +0.4
      baz=131,SNR=5.8
P23K  Montague Islan    56.97 332 P     P      19 45 23.2 +1.1
      baz=115
KLU   Klutina           56.98 334 P     P      19 45 22.6 +0.3
      baz=117,SNR=6.5
G29M  Pine Creek        57.04 341 P     P      19 45 22.9 +0.4
      baz=128,SNR=8.5
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HARP  HAARP             57.09 335 P     P      19 45 23.4 +0.5
      baz=118
GLI   Glacier Island    57.21 333 P     P      19 45 24.8 +1.0
      baz=116
M24K  Tolsona, Glenn    57.37 334 P     P      19 45 26.0 +1.0
      baz=117
SCRK  Sand Creek        57.41 337 P     P      19 45 25.5 +0.3
      baz=121,SNR=5.3
I27K  Kandik River      57.43 339 P     P      19 45 26.1 +0.8
      baz=124,SNR=6.5
PCMB  Pacaembu          57.45 131 eP    P      19 45 26.4 +0.3
PAX   Paxson            57.49 335 P     P      19 45 26.4 +0.6
      baz=118,SNR=11
J26L  Joseph Creek      57.53 337 P     P      19 45 27.1 +1.1
      baz=121,SNR=9.6
RES   Resolute Bay      57.53 360 LR    LR     20 14 41.9
      comp=Z,33nm,18.5s,baz=5.5,slow=41
RIDG  Independent Ri    57.62 336 IAmb  IAmb   19 45 29.3
      comp=Z,16nm,1.2s
RIDG  Independent Ri    57.62 336 P     P      19 45 27.6 +0.9
      baz=120,SNR=7.5
A36M  Sachs Harbour     57.65 349 P     P      19 45 27.1 +0.4
      baz=145
SCM   Sheep Creek Mo    57.73 334 P     P      19 45 28.6 +1.1
      baz=116,SNR=7.2
PWL   Port Wells        57.75 332 P     P      19 45 27.7 +0.1
      baz=114
H27K  Steamboat Moun    57.76 340 P     P      19 45 28.7 +1.1
      baz=124
I26K  Coal Creek Min    57.80 338 P     P      19 45 28.0 +0.2
      baz=122
M23K  Glacier View      57.88 333 P     P      19 45 28.9 +0.4
      baz=116
E29M  Blow River        57.94 343 P     P      19 45 29.5 +0.7
      baz=129,SNR=11
SEW   Seward            57.95 331 P     P      19 45 29.5 +0.6
      baz=113
K24K  Donnelly Dome     58.01 336 IAmb  IAmb   19 45 31.7
      comp=Z,10nm,1.0s
K24K  Donnelly Dome     58.01 336 P     P      19 45 29.7 +0.3
      baz=119,SNR=8.7
KNK   Knik Glacier      58.04 333 P     P      19 45 30.5 +0.9
      baz=115
F28M  Old Crow          58.04 341 P     P      19 45 29.6 +0.1
      baz=127,SNR=6.9
G27K  Doyon Strip       58.13 340 P     P      19 45 30.7 +0.6
      baz=125,SNR=9.3
SML   Sawmill           58.15 333 P     P      19 45 31.0 +0.5
      baz=115,SNR=5.7
WAT6  Susitna Watana    58.24 334 P     P      19 45 31.9 +0.8
      baz=116,SNR=6.8
J25K  Salcha River,     58.25 337 P     P      19 45 31.7 +0.6
      baz=120,SNR=5.1
DHY   Denali Highway    58.31 335 P     P      19 45 32.3 +0.7
      baz=117
GHO   Glory Hole Cre    58.39 333 IAmb  IAmb   19 45 34.4
      comp=Z,8.7nm,1.0s
PMR   Palmer            58.41 333 P     P      19 45 33.2 +1.1
      baz=114,SNR=5.9
BRSE  Bradley Lake S    58.42 330 P     P      19 45 33.1 +0.8
      baz=111
RC01  Rabbit Creek A    58.47 332 P     P      19 45 33.7 +1.1
      baz=113,SNR=5.2
E28M  Babbage River     58.55 342 P     P      19 45 33.6 +0.6
      baz=128,SNR=6.2
KDAK  Kodiak Island     58.64 328 P     P      19 45 34.7 +0.9
      baz=108
WAT1  Susitna Watana    58.68 334 P     P      19 45 34.7 +0.7
      baz=115
HDA   Harding Lake      58.75 336 IAmb  IAmb   19 45 35.6
      comp=Z,6.9nm,1.1s
HDA   Harding Lake      58.75 336 P     P      19 45 35.3 +0.8
      baz=118,SNR=8.0
PRP   Porcupine Dome    58.76 338 IAmb  IAmb   19 45 36.7
      comp=Z,7.9nm,1.1s
PRP   Porcupine Dome    58.76 338 P     P      19 45 35.2 +0.5
      baz=120,SNR=7.1
OHAK  Old Harbor        58.83 327 P     P      19 45 35.9 +0.8
      baz=108
ILAR  Eielson Array     58.90 337 P     P      19 45 35.0 -0.5
ILAR  Eielson Array     58.90 337 P     P      19 45 36.0 +0.5
      comp=Z,0.9nm,0.4s,baz=123,slow=5.1,SNR=21
ILAR                              pP    pP     19 46 07.1 +0.4
      comp=Z,7.5nm,1.0s,baz=115,slow=6.0,SNR=20
      comp=Z,0.9nm,0.4s
E27K  Coleen River      58.91 341 P     P      19 45 36.2 +0.7
      baz=125,SNR=9.5
G26K  Porcupine Rive    58.91 340 P     P      19 45 36.5 +1.0
      baz=122,SNR=5.1
SUA   Susitna One       59.07 332 IAmb  IAmb   19 45 39.3
      comp=Z,11nm,1.1s
SUA   Susitna One       59.07 332 P     P      19 45 37.5 +0.7
      baz=112,SNR=8.0
SII   Sitkinak Islan    59.11 326 P     P      19 45 37.8 +0.7
      baz=106
FYU   Fort Yukon        59.19 339 IAmb  IAmb   19 45 57.8
      comp=Z,6.3nm,1.1s
H25L  Birch Creek       59.24 339 P     P      19 45 38.8 +1.0
      baz=120,SNR=8.0
ITQB  Itaqui            59.34 141 eP    P      19 45 39.7 +0.7
D27M  Malcolm River     59.34 343 P     P      19 45 39.2 +0.6
      baz=126
O20K  Slope Mountain    59.42 330 P     P      19 45 39.5 +0.3
      baz=110
BMAR  Burnt Mountain    59.43 340 P     P      19 45 39.9 +0.7
F26K  Sheenjek River    59.43 340 P     P      19 45 39.7 +0.5
      baz=122,SNR=13
R18K  Karluk            59.53 327 P     P      19 45 40.4 +0.4
      baz=107
Q19K  Cape Douglas,     59.54 329 P     P      19 45 40.4 +0.3
      baz=108
P19K  Oil Pt            59.57 330 P     P      19 45 40.6 +0.3
      baz=109
G25K  Bearman Lake      59.59 339 P     P      19 45 40.8 +0.6
      baz=120,SNR=12
SKT   Skwentna          59.61 333 IAmb  IAmb   19 45 42.6
      comp=Z,6.4nm,0.9s
SKT   Skwentna          59.61 333 P     P      19 45 40.7 +0.2
      baz=112,SNR=10
N20K  Mount Spurr       59.62 332 P     P      19 45 41.0 +0.4
      baz=111
SPCR  Spurr Chakacha    59.62 332 P     P      19 45 40.9 +0.3
      baz=111
NEA2  Nenana            59.66 336 P     P      19 45 40.6 -0.1
      baz=116,SNR=5.3
CHIR  Chirikof Islan    59.68 325 P     P      19 45 41.4 +0.4
      baz=104
H24K  Noodor Dome       59.77 338 IAmb  IAmb   19 45 43.4
      comp=Z,7.3nm,1.0s
H24K  Noodor Dome       59.77 338 P     P      19 45 42.0 +0.5
      baz=118,SNR=9.7
F25K  Christian Rive    59.86 340 IAmb  IAmb   19 45 44.6
      comp=Z,6.0nm,1.1s
F25K  Christian Rive    59.86 340 P     P      19 45 42.9 +0.7
      baz=121,SNR=8.3
I23K  Minto, Yukon-K    60.01 337 IAmb  IAmb   19 45 45.1
      comp=Z,9.6nm,1.0s
I23K  Minto, Yukon-K    60.01 337 P     P      19 45 43.7 +0.6
      baz=116,SNR=12
G24K  Hadweenzic Riv    60.04 339 IAmb  IAmb   19 45 45.5
      comp=Z,9.8nm,1.1s
G24K  Hadweenzic Riv    60.04 339 P     P      19 45 44.0 +0.7
      baz=118,SNR=5.9
E25K  Arctic Village    60.11 340 P     P      19 45 44.4 +0.7
      baz=121,SNR=14
Q18K  Katmai Hardscr    60.13 328 P     P      19 45 44.6 +0.5
      baz=107
BPAW  Bear Paw Mtn.     60.21 335 IAmb  IAmb   19 45 46.2
      comp=Z,7.5nm,1.0s
BPAW  Bear Paw Mtn.     60.21 335 P     P      19 45 44.9 +0.4
      baz=114,SNR=8.5
O19K  Port Alsworth     60.26 330 P     P      19 45 45.2 +0.3
      baz=108
M20K  Styx River        60.28 332 IAmb  IAmb   19 45 47.0
      comp=Z,4.3nm,0.8s
M20K  Styx River        60.28 332 P     P      19 45 45.8 +0.7
      baz=110,SNR=7.4
C27K  Jago River        60.36 342 P     P      19 45 45.9 +0.5
      baz=124
H23K  Yukon River       60.38 337 P     P      19 45 46.3 +0.7
      baz=116,SNR=8.3
CAST  Castle Rocks      60.39 334 IAmb  IAmb   19 45 47.1
      comp=Z,6.1nm,1.0s
CAST  Castle Rocks      60.39 334 P     P      19 45 45.6 -0.1
      baz=112
P18K  Big Mountain,     60.46 329 P     P      19 45 46.1 -0.1
      baz=107
Q17K  Contact Creek     60.47 328 P     P      19 45 46.9 +0.5
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	baz=106						
ITAB	**Concordia**	60.47	136	*e*P	P	19 45 47.3	+0.5
MLY	**Manley**	60.49	336	IAmb	IAmb	19 45 48.3	
	comp=Z,8.7nm,1.0s						
MLY	**Manley**	60.49	336	P	P	19 45 47.1	+0.6
	baz=114,SNR=12						
N19K	**Bonanza Creek**	60.54	331	IAmb	IAmb	19 45 48.7	
	comp=Z,10nm,0.8s						
N19K	**Bonanza Creek**	60.54	331	P	P	19 45 47.5	+0.6
	baz=108,SNR=6.2						
F24K	**Squaw Lake**	60.57	339	P	P	19 45 47.6	+0.6
	baz=118,SNR=6.7						
O18K	**Koktuh Hills**	60.58	330	P	P	19 45 47.8	+0.7
	baz=107						
L20K	**Farewell, AK**	60.81	333	P	P	19 45 49.2	+0.5
	baz=110,SNR=6.6						
M19K	**Big River Lodg**	60.85	332	P	P	19 45 49.7	+0.8
	baz=109,SNR=8.9						
G23K	**Bananza Creek**	60.94	338	IAmb	IAmb	19 45 51.5	
	comp=Z,6.2nm,1.1s						
G23K	**Bananza Creek**	60.94	338	P	P	19 45 49.9	+0.4
	baz=116,SNR=5.7						
Q16K	**King Salmon**	60.97	328	P	P	19 45 50.2	+0.5
	baz=105						
D25K	**Kavik River**	60.99	341	P	P	19 45 50.2	+0.5
	baz=121,SNR=6.7						
P17K	**Kvichak River**	61.00	329	P	P	19 45 49.6	-0.3
	baz=106						
E24K	**Your Creek**	61.04	340	P	P	19 45 50.5	+0.4
	baz=118,SNR=14						
H22K	**Ishtalitna Cre**	61.09	337	P	P	19 45 50.4	0.0
	baz=114,SNR=5.3						
L19K	**White Mountain**	61.15	332	P	P	19 45 51.4	+0.5
L19K				IAmb	IAmb	19 45 52.5	
	comp=Z,7.4nm,1.1s						
L19K	**White Mountain**	61.15	332	P	P	19 45 51.1	+0.2
	baz=109,SNR=5.9						
N18K	**Kilae Creek**	61.15	331	P	P	19 45 51.3	+0.3
	baz=107,SNR=6.7						
K20K	**Telida**	61.20	334	IAmb	IAmb	19 45 52.8	
	comp=Z,10.0nm,1.1s						
K20K	**Telida**	61.20	334	P	P	19 45 51.8	+0.5
	baz=110,SNR=7.2						
COLD	**Coldfoot**	61.23	339	P	P	19 45 52.0	+0.7
	baz=116,SNR=6.2						
M18K	**Stony River**	61.37	331	P	P	19 45 52.7	+0.4
	baz=107,SNR=10						
DIAM	**Diamantina, MG**	61.38	123	*e*P	P	19 45 53.8	+0.5
E23K	**Chandalar**	61.41	340	P	P	19 45 53.2	+0.6
	baz=117,SNR=12						
VAO	**Valinhos**	61.45	129	*e*P	P	19 45 52.7	-0.9
SPB	**Sao Paulo**	61.46	130	*e*P	P	19 45 54.1	+0.6
O17K	**Koliganek Bris**	61.48	329	P	P	19 45 53.3	+0.3
	baz=105,SNR=6.3						
J20K	**Nowinta River**	61.52	335	IAmb	IAmb	19 45 54.8	
	comp=Z,8.3nm,1.1s						
J20K	**Nowinta River**	61.52	335	P	P	19 45 53.7	+0.4
	baz=110,SNR=6.3						
H21K	**Melozitna Rive**	61.54	336	P	P	19 45 53.8	+0.3
	baz=112,SNR=12						
G22K	**Bettles**	61.56	338	P	P	19 45 54.1	+0.6
	baz=114						
TOLK	**Toolik Lake Re**	61.66	340	P	P	19 45 55.0	+0.7
	baz=117,SNR=5.6						
D24K	**Happy Valley**	61.66	341	P	P	19 45 55.0	+0.8
	baz=118,SNR=5.6						
CHNA	**Chernabura Isl**	61.68	323	P	P	19 45 55.1	+0.6
	baz=100						
N17K	**Nushagak Hills**	61.72	330	P	P	19 45 55.0	+0.2
	baz=106,SNR=7.9						
CPSB	**Cacapava Do Su**	61.79	140	*e*P	P	19 45 54.8	-0.8
PLCA	**Paso Flores**	61.84	159	P	P	19 45 57.7	+1.8
PLCA	**Paso Flores**	61.84	159	P	P	19 45 57.5	+1.8
	comp=Z,20nm,0.9s,baz=333,slow=8.1,SNR=40						
PLCA				pP	pP	19 46 27.9	+0.7
	comp=Z,9.2nm,1.0s,baz=328,slow=9.4,SNR=5.1						
	comp=Z,20nm,0.9s						
PLCA	**Paso Flores**	61.84	159	*e*P	P	19 45 57.6	+1.8
I20K	**Naaghedeneel**	61.87	335	P	P	19 45 55.7	+0.1
	baz=110,SNR=6.2						
C24K	**Franklin Bluff**	61.90	341	IAmb	IAmb	19 45 57.9	
	comp=Z,9.4nm,0.9s						
C24K	**Franklin Bluff**	61.90	341	P	P	19 45 56.4	+0.7
	baz=119						
O16K	**Kokwok River B**	61.92	329	P	P	19 45 56.2	+0.2
	baz=104						
S14K	**Fog Glacier**	61.94	325	P	P	19 45 56.0	-0.3
	baz=101						
ICESG	**Greenland Ices**	61.96	19	*i* P	P	19 45 54.4	-2.2
ICESG				IAmb	IAmb	19 45 56.6	
	comp=Z,14nm,0.8s						
L18K	**Granite Mounta**	61.98	332	P	P	19 45 56.6	+0.2
	baz=107,SNR=11						
J19K	**Poorman**	62.07	334	P	P	19 45 57.2	+0.2
J19K				IAmb	IAmb	19 45 58.3	
	comp=Z,9.8nm,0.9s						
J19K	**Poorman**	62.07	334	P	P	19 45 57.0	0.0
	baz=109,SNR=8.3						
M17K	**Holitna River**	62.08	331	P	P	19 45 57.0	-0.1
	baz=106,SNR=5.9						
G21K	**Allakaket**	62.13	337	P	P	19 45 57.9	+0.6
	baz=112						
D23K	**Nanushuk River**	62.17	340	P	P	19 45 58.7	+1.1
	baz=116,SNR=8.3						
E22K	**Anaktuvuk Pass**	62.18	339	IAmb	IAmb	19 45 59.7	
	comp=Z,5.3nm,0.9s						
E22K	**Anaktuvuk Pass**	62.18	339	P	P	19 45 58.4	+0.6
	baz=115,SNR=8.0						
H20K	**Anotleneega Mo**	62.28	336	P	P	19 45 59.2	+0.8
	baz=110,SNR=8.6						
J18K	**Innoko River**	62.36	333	P	P	19 45 59.2	+0.2
	baz=108,SNR=10.0						
F21K	**Alatna River**	62.39	338	IAmb	IAmb	19 46 01.6	
	comp=Z,10nm,0.8s						
F21K	**Alatna River**	62.39	338	P	P	19 45 59.8	+0.6
	baz=113,SNR=13						
N16K	**Nishlik Lake**	62.47	330	P	P	19 46 00.4	+0.7
	baz=104						
C23K	**Itkillik River**	62.54	341	IAmb	IAmb	19 46 02.4	
	comp=Z,13nm,0.9s						
C23K	**Itkillik River**	62.54	341	P	P	19 46 00.6	+0.6
	baz=117,SNR=8.9						
L17K	**Donlin**	62.67	332	P	P	19 46 01.7	+0.7
	baz=105,SNR=5.1						
O15K	**Ungalikthiuk R**	62.68	328	P	P	19 46 02.1	+0.9
	baz=102						
M16K	**Timber Creek**	62.69	330	P	P	19 46 01.7	+0.5
	baz=104						
D22K	**Ayikyak River**	62.78	340	IAmb	IAmb	19 46 04.2	
	comp=Z,8.1nm,0.9s						
D22K	**Ayikyak River**	62.78	340	P	P	19 46 02.3	+0.6
	baz=114,SNR=6.8						
GCSA	**Galena City Sc**	62.83	335	P	P	19 46 02.1	+0.2
	baz=108						
K17K	**Iditarod**	62.84	332	P	P	19 46 02.1	0.0
	baz=106,SNR=5.5						
H19K	**Roundabout Mou**	62.91	336	P	P	19 46 02.7	+0.3
	baz=109,SNR=13						
TRQA	**Tornquist**	62.97	151	P	P	19 46 04.6	+1.3
TRQA				IAmb	IAmb	19 46 05.0	
	comp=Z,8.7nm,0.8s						
N15K	**Kwethluk River**	63.03	329	P	P	19 46 03.4	-0.1
	baz=103						
E21K	**Killik River**	63.04	339	IAmb	IAmb	19 46 05.4	
	comp=Z,6.7nm,1.1s						
E21K	**Killik River**	63.04	339	P	P	19 46 03.5	0.0
	baz=113,SNR=6.0						
EUNU	**Eureka**	63.05	2	P	P	19 46 03.7	+0.4
EUNU				IAmb	IAmb	19 46 05.4	
	comp=Z,6.0nm,0.7s						
L16K	**Owhat River**	63.10	331	P	P	19 46 04.4	+0.5
	baz=104,SNR=6.0						
F20K	**Avaraart Lake**	63.15	337	IAmb	IAmb	19 46 06.2	
	comp=Z,6.6nm,0.9s						
F20K	**Avaraart Lake**	63.15	337	P	P	19 46 04.8	+0.7
	baz=110,SNR=5.7						
G19K	**Purcell Mounta**	63.35	336	P	P	19 46 06.0	+0.5
	baz=108,SNR=14						
J17K	**VABM Dome**	63.36	333	P	P	19 46 05.6	0.0
	baz=105						
M15K	**Kasigluk River**	63.44	330	P	P	19 46 06.4	+0.2
	baz=102						
H18K	**Honhosa River**	63.55	335	P	P	19 46 07.1	+0.3
	baz=107						
C21K	**Knifeblade Rid**	63.59	340	P	P	19 46 07.0	0.0
	baz=112,SNR=5.0						
B22K	**Teshekpuk Lake**	63.62	341	IAmb	IAmb	19 46 09.1	
	comp=Z,8.0nm,0.8s						
B22K	**Teshekpuk Lake**	63.62	341	P	P	19 46 07.3	+0.1
	baz=114,SNR=5.9						
B21K	**Ikpikpuk River**	63.71	340	P	P	19 46 08.1	+0.4
	baz=113,SNR=8.6						
E20K	**Nigu River**	63.74	339	P	P	19 46 08.4	+0.3
	baz=110,SNR=5.0						
N14K	**Kuskokwak Cree**	63.76	329	P	P	19 46 08.5	+0.3
	baz=101						
F19K	**Shaleruckik Mo**	63.83	337	IAmb	IAmb	19 46 10.5	
	comp=Z,8.2nm,1.1s						
F19K	**Shaleruckik Mo**	63.83	337	P	P	19 46 09.7	+1.1
	baz=108						
E19K	**Redstone River**	63.84	338	P	P	19 46 09.4	+0.8
	baz=109						
G18K	**Tagagawik**	63.89	336	P	P	19 46 10.4	+1.4
	baz=107,SNR=6.0						
SUMG	**Summit**	63.93	16	*i* P	P	19 46 10.0	+0.3
J16K	**Anvik River**	64.00	333	P	P	19 46 10.7	+1.0
	baz=104,SNR=5.8						
L15K	**Ungalak Mounta**	64.03	331	P	P	19 46 10.8	+0.8
	baz=102						
D20K	**Etivluk River**	64.04	339	IAmb	IAmb	19 46 12.2	
	comp=Z,7.4nm,0.9s						
D20K	**Etivluk River**	64.04	339	P	P	19 46 11.2	+1.2
	baz=110						
M14K	**Bethel**	64.06	330	P	P	19 46 10.8	+0.6
	baz=101,SNR=8.6						
H17K	**Granite Mounta**	64.12	335	P	P	19 46 10.9	+0.3
	baz=105,SNR=8.2						
K15K	**Wolf Creek Mou**	64.18	332	P	P	19 46 11.1	+0.1
K15K				IAmb	IAmb	19 46 13.1	
	comp=Z,11nm,1.1s						
K15K	**Wolf Creek Mou**	64.18	332	P	P	19 46 11.3	+0.3
	baz=102,SNR=8.0						
A22K	**Sinclair Lake**	64.37	342	P	P	19 46 12.7	+0.7
	baz=113						
F18K	**Selawik**	64.48	336	P	P	19 46 12.9	+0.1
	baz=106						
D19K	**Kuna River**	64.49	339	P	P	19 46 12.8	-0.1
	baz=109						
L14K	**Kuka Creek**	64.52	330	P	P	19 46 13.2	0.0
	baz=101						
G17K	**Kiwalik Mounta**	64.57	335	P	P	19 46 14.1	+0.7
	baz=105,SNR=5.4						
M13K	**Dall Lake**	64.67	329	P	P	19 46 14.7	+0.6
	baz=100,SNR=6.0						
B20K	**Meade River**	64.68	340	IAmb	IAmb	19 46 16.3	
	comp=Z,10nm,0.9s						
B20K	**Meade River**	64.68	340	P	P	19 46 14.7	+0.7
	baz=110,SNR=9.0						
H16K	**Elim**	65.02	334	P	P	19 46 16.9	+0.6
	baz=103						
F17K	**Baldwin Pennin**	65.05	336	P	P	19 46 17.1	+0.6
	baz=105						
E18K	**Tukpahlearik C**	65.06	337	P	P	19 46 17.0	+0.4
	baz=106,SNR=5.8						
C19K	**Lookout Ridge**	65.19	339	IAmb	IAmb	19 46 20.0	
	comp=Z,9.5nm,1.1s						
C19K	**Lookout Ridge**	65.19	339	P	P	19 46 18.4	+0.9
	baz=107,SNR=13						
J14K	**Nanvaranak Lak**	65.19	332	P	P	19 46 18.4	+0.9
	baz=101,SNR=8.3						
G16K	**Koyuk River**	65.24	335	P	P	19 46 18.5	+0.8
	baz=103						
E17K	**Hotham Inlet**	65.44	337	P	P	19 46 19.8	+0.8
	baz=104,SNR=9.3						
K13K	**Kusilvak Mount**	65.56	331	P	P	19 46 20.2	+0.3
	baz=99						
UNV	**Unalaska Valle**	65.56	322	P	P	19 46 20.6	+0.6
	baz=94,SNR=6.8						
C18K	**Utukok River**	65.61	338	P	P	19 46 20.8	+0.5
	baz=106,SNR=5.0						
G15K	**Niukluk**	65.84	334	P	P	19 46 22.1	+0.4
	baz=101						
A19K	**Wainwright**	66.01	340	P	P	19 46 23.0	+0.4
	baz=106,SNR=7.4						
B18K	**Kokolik River**	66.02	339	P	P	19 46 22.7	0.0
	baz=105,SNR=5.1						
D17K	**Noatak River**	66.06	337	P	P	19 46 23.3	+0.3
	baz=103,SNR=6.7						
F15K	**North Star Dit**	66.23	335	P	P	19 46 24.7	+0.5
	baz=101						
C17K	**DeLong Mountai**	66.28	338	P	P	19 46 24.3	-0.1
	baz=104						
C16K	**Lisburne Hills**	67.01	338	P	P	19 46 28.9	-0.2
	baz=102						
BORG	**Borgarnes**	67.55	26	LR	LR	20 16 26.5	
	comp=Z,25nm,18.0s,baz=277,slow=36						
SPIA	**Saint Paul Isl**	67.89	325	P	P	19 46 35.0	+0.3
	baz=92						
PMOZ	**Porto Moniz, M**	70.63	61	*e*P	P	19 46 52.7	+0.4
PCAS	**Casmilo, Conde**	76.36	52	*e*P	P	19 47 25.6	+0.1
PCAB	**Cabril**	76.39	50	*e*P	P	19 47 26.1	+0.4
POLO	**Lamas de Olo**	76.63	51	*e*P	P	19 47 27.0	-0.1
PVIS	**Viseu**	76.68	51	*e*P	P	19 47 27.1	-0.3
PSARD	**Sardoal**	76.70	52	*e*P	P	19 47 27.3	-0.2
PMTG	**Montargil**	76.75	53	*e*P	P	19 47 27.5	-0.3
PMTG				*i* Amb		19 47 57.8	
	comp=Z,20nm,1.7s						
EKA	**Eskdalemuir Ar**	76.97	36	P	P	19 47 28.1	-0.5
	comp=Z,3.5nm,0.5s,baz=283,slow=5.7,SNR=29						
EKA				pP	pP	19 47 59.8	-1.5
	comp=Z,5.5nm,0.9s,baz=281,slow=5.8,SNR=5.6						
	comp=Z,3.5nm,0.5s						
MESJ	**Messejana**	77.00	54	*e*P	P	19 47 29.2	0.0
MTE	**Manteigas**	77.01	52	*e*P	P	19 47 29.1	-0.2
EVO	**Evora**	77.03	53	*e*P	P	19 47 29.4	+0.2
EVO				*i* Amb		19 47 35.4	
	comp=Z,18nm,1.7s						
PCBR	**Castelo Branco**	77.17	52	*e*P	P	19 47 30.3	+0.3
MVO	**Moncorvo**	77.24	51	*e*P	P	19 47 30.4	-0.1
PBEJ	**Beja**	77.24	54	*e*P	P	19 47 31.1	+0.6
PBEJ				*i* Amb		19 47 32.0	
	comp=Z,18nm,1.4s						
PESTR	**Estremoz**	77.28	53	*e*P	P	19 47 30.8	0.0
PMRV	**Marv??o**	77.32	52	*e*P	P	19 47 30.4	-0.5
PBRG	**Braganca**	77.32	50	*e*P	P	19 47 30.9	-0.1
SPITS	**Spitsbergen Ar**	77.53	11	P	P	19 47 31.4	0.0
	comp=Z,0.7nm,0.4s,baz=343,slow=3.0,SNR=5.3						
SPITS				LR	LR	20 26 29.7	
	comp=Z,21nm,18.3s,baz=300,slow=39						
	comp=Z,0.7nm,0.4s						
PBAR	**Barrancos**	77.85	54	*e*P	P	19 47 34.0	+0.1
PAB	**San Pablo**	79.59	52	P	P	19 47 42.8	-0.7
PAB				IAmb	IAmb	19 47 44.5	
	comp=Z,10nm,0.8s						
ESDC	**Sonseca Array**	79.85	52	P	P	19 47 45.1	+0.2
ESDC	**Sonseca Array**	79.85	52	P	P	19 47 44.9	0.0
	comp=Z,6.2nm,0.9s,baz=294,slow=5.6,SNR=46						
ESDC				pP	pP	19 48 17.4	-0.4
	comp=Z,2.1nm,1.1s,baz=284,slow=6.1,SNR=3.6						
	comp=Z,6.2nm,0.9s						
ESBB	**Sonseca Array**	79.85	52	P	P	19 47 43.9	-0.9
ESBB				IAmb	IAmb	19 47 45.8	
	comp=Z,11nm,1.1s						
MDT	**Midelt**	81.02	58	LR	LR	20 19 52.7	
	comp=Z,31nm,18.9s,baz=12,slow=33						
NB2	**NORSAR Subarra**	82.64	28	P	P	19 47 59.6	+0.5
	comp=Z,5.7nm,0.8s,baz=294,slow=5.3						
NOA	**NORSAR Array B**	82.64	28	P	P	19 47 59.8	+0.6
	comp=Z,3.2nm,0.8s,baz=294,slow=5.3,SNR=13						
NOA				pP	pP	19 48 32.8	+0.6
	comp=Z,1.9nm,0.8s,baz=291,slow=5.2,SNR=4.6						
NOA				LR	LR	20 27 01.0	
	comp=Z,11nm,18.1s,baz=275,slow=37						
	comp=Z,3.2nm,0.8s						
ARCES	**ARCESS Array B**	83.97	18	P	P	19 48 04.9	-0.8
	comp=Z,2.6nm,0.7s,baz=289,slow=3.7,SNR=15						
ARCES				pP	pP	19 48 39.6	+0.7
	comp=Z,5.7nm,0.9s,baz=292,slow=3.8,SNR=5.7						
	comp=Z,2.6nm,0.7s						
HFS	**Hagfors**	84.12	29	P	P	19 48 06.5	-0.2
	comp=Z,1.6nm,0.7s,baz=315,slow=0.4,SNR=4.9						
HFS				pP	pP	19 48 39.2	-0.6
	comp=Z,1.4nm,0.9s,baz=246,slow=11,SNR=1.6						
HFS				LR	LR	20 24 10.3	
	comp=Z,11nm,21.9s,baz=264,slow=34						
	comp=Z,1.6nm,0.7s						
ESPZ	**Base Esperanza**	85.50	164	P	P	19 48 12.8	-0.5
PETK	**Petropavlovsk-**	86.55	325	P	P	19 48 18.8	-0.1
PETK	**Petropavlovsk-**	86.55	325	P	P	19 48 20.1	+1.2
	comp=Z,6.8nm,1.2s,baz=80,slow=11,SNR=8.9						
PETK				pP	pP	19 48 52.4	+0.2
	comp=Z,3.3nm,0.9s,baz=64,slow=10,SNR=6.3						
	comp=Z,6.8nm,1.2s						
TIXI	**Tiksi**	86.62	347	LR	LR	20 33 25.1	
	comp=Z,14nm,18.5s,baz=14,slow=40						
DAVA	**Damuels**	87.11	41	*e*pP	pP	19 48 56.7	+1.3
	comp=Z,1.5nm,0.6s						
RETA	**Reutte**	87.59	41	*e*pP	pP	19 48 58.6	+1.0
	comp=Z,0.2nm,0.3s						
FETA	**Feichten**	87.75	41	*i* pP	pP	19 48 59.5	+1.0
	comp=Z,3.3nm,0.9s						
MOTA	**Moosalm**	87.86	41	*i* pP	pP	19 48 59.7	+0.7
	comp=Z,1.9nm,0.6s						
DBIC	**Dimbokro**	87.97	84	P	P	19 48 27.1	+0.7
	comp=Z,4.3nm,0.7s,baz=113,slow=13,SNR=1.9						
	comp=Z,4.3nm,0.7s						
SQTA	**Sankt Quirin**	87.97	41	*i* pP	pP	19 49 00.7	+1.2
	comp=Z,2.7nm,0.4s						
WATA	**Walderalm**	88.16	41	*i* pP	pP	19 49 02.3	+1.8
	comp=Z,3.2nm,0.4s,SNR=5.9						
WTTA	**Wattenberg**	88.22	41	*i* pP	pP	19 49 01.8	+1.0
	comp=Z,6.3nm,0.4s,SNR=9.5						
FINES	**FINESS Array B**	88.75	24	P	P	19 48 28.7	-0.5
	comp=Z,1.7nm,0.9s,baz=292,slow=4.4,SNR=4.9						
	comp=Z,1.7nm,0.9s						
LESA	**Schwarzleotal**	88.81	40	*e*pP	pP	19 49 04.1	+0.7
	comp=Z,2.2nm,0.4s						
GERES	**GERESS Array B**	88.84	39	P	P	19 48 30.4	+0.3
	comp=Z,0.3nm,0.6s,baz=328,slow=3.6,SNR=4.6						
GERES				pP	pP	19 49 03.0	-0.5
	comp=Z,0.9nm,0.9s,baz=300,slow=2.9,SNR=4.1						
	comp=Z,0.3nm,0.6s						
ABTA	**Abfaltersbach**	88.98	41	*i* pP	pP	19 49 05.7	+1.4
	comp=Z,5.0nm,0.5s,SNR=9.3						
BIOA	**Bad Ischl, Aus**	89.29	40	*e*pP	pP	19 49 07.2	+1.6
	comp=Z,1.0nm,0.4s						
MOA	**Molln**	89.61	40	*i* pP	pP	19 49 08.2	+1.1
	comp=Z,0.9nm,0.5s						
MYKA	**Terra Mystica**	89.74	41	*i* pP	pP	19 49 11.0	+3.2
	comp=Z,2.9nm,0.5s,SNR=4.4						
OBKA	**Obir**	90.36	41	*e*pP	pP	19 49 12.2	+1.4
	comp=Z,4.0nm,0.9s						
CONA	**Conrad Observa**	90.54	39	*i* pP	pP	19 49 14.9	+3.4
	comp=Z,4.3nm,1.2s						
SOKA	**Soboth**	90.58	40	*i* pP	pP	19 49 14.5	+2.8
	comp=Z,3.4nm,1.1s						
ARSA	**Arzberg**	90.63	40	*i* pP	pP	19 49 12.7	+0.8
	comp=Z,1.5nm,0.7s						
RONA	**Rosalia, Austr**	90.90	39	*i* pP	pP	19 49 15.5	+2.3
	comp=Z,7.4nm,1.1s						
MNK	**Minsk**	93.58	29	*i* P	P	19 48 52.5	+0.7
	comp=E,15nm,0.9s						
MNK				*i* P	P	19 48 52.5	+0.7
	comp=N,12nm,0.9s						
MNK				*i* P	P	19 48 52.5	+0.7
	comp=Z,16nm,0.7s,baz=306						
MNK				*i* pP	pP	19 49 25.4	0.0
MNK				*i* PP	PP	19 52 40.0	+2.5
MNK				*i* PPP	PPP	19 54 39.9	
MNK				*i* S	SKSac	19 59 13.0	-1.0
MNK				*i* SS	SS	20 06 08.2	-0.3
MNK				*i* SSS	SSS	20 09 50.4	
MNK				*i* LQ	LQ	20 24 39.2	
MNK				*i* LR	LR	20 28 33.7	
MNK				*i* LRM	MLR	20 31 34.9	
	comp=N,39nm,17.7s						
MNK				*i* LRM	MLR	20 31 47.5	
	comp=E,38nm,21.3s						
MNK				*i* LRM	MLR	20 32 23.3	
	comp=Z,18nm,15.2s						
MKAR	**Makanchi Array**	116.29	2	PKP	PKPdf	19 54 17.9	-0.8
	comp=Z,0.2nm,0.5s,baz=338,slow=3.1,SNR=2.5						
HHC	**Hu-ho-hao-te**	117.32	338	*e*P	PKPdf	19 54 17.5	-3.5
NJ2	**Nanjing**	121.41	327	*e*P	PKPdf	19 54 28.8	-0.1
NJ2				pmax	pmax		
	comp=Z,12nm,0.7s						
GTA	**Gaotai**	122.10	347	*e*P	PKPdf	19 54 30.3	+0.1
GTA				sP	pPKPdf	19 55 04.8	-0.5
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BOSA	**Boshof**	124.07	113	PKP	PKPdf	19 54 34.3	+0.1
	comp=Z,6.3nm,0.9s,baz=64,slow=1.4,SNR=8.4						
STKA	**Stephens Creek**	127.21	243	PKP	PKiKP	19 54 41.0	+0.5
	comp=Z,2.8nm,0.7s,baz=30,slow=5.8,SNR=4.2						
MAW	**Mawson**	127.56	169	PKP	PKiKP	19 54 40.3	+0.3
	comp=Z,3.9nm,0.9s,baz=344,slow=1.8,SNR=6.2						
WRA	**Warramunga Arr**	133.50	259	PKP	PKiKP	19 54 53.4	-0.1
	comp=Z,1.3nm,0.5s,baz=86,slow=2.6,SNR=14						
PZH	**PanZhiHua**	133.73	339	PKP	PKPdf	19 54 51.3	-1.4
ASAR	**Alice Springs**	134.11	253	PKhKP	PKPpre	19 54 42.9	
	comp=Z,0.4nm,0.8s,baz=94,slow=2.6,SNR=2.2						
ASAR				PKP	PKPdf	19 54 53.9	+0.6
	comp=Z,1.1nm,0.8s,baz=77,slow=2.1,SNR=9.7						
CMAR	**Chiang Mai Arr**	142.12	339	PKhKP	PKPpre	19 55 03.4	
	comp=Z,0.4nm,0.3s,baz=338,slow=4.6,SNR=5.4						

*DJA **23** 19:58:22.7±0.6, 8°S±3°×10°8E±°, h17^{km}±4^{km}, M4.4/22, mB4.7/1, mb4.4/6, MLv4.4/22, Mw(mB)3.9/1*

*NEIC **23** 19:58:24.1±1.7, 7°.9S±0°.1×107°.85E±0°.10, h75^{km}±8^{km}, mb4.4/18, Error ellipse: s-maj=17.2km s-min=13.0km az=209.0*

*IDC **23** 19:58:27.7±0.9, 7°.63S×108°.31E, h93^{km}±7^{km}, mb3.7/16, mbtmp4.1/18, MS3.3/2, Error ellipse: s-maj=24.3km s-min=11.7km az=46.0*

ISC 23 19:58:23.5±0.9, **8°.10S**±0°.06×**107°.95E**±0°.04, **h65**^{km}±8^{km}, **n78**, σ1^{s}**87**/82, **mb4.3**/26, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CMJI	**Cimerak**	0.59	58	P	Pn	19 58 36.9	+0.1
CMJI				S	Sn	19 58 45.2	-1.3
BBJI	**Bungbulang**	0.70	335	P	Pn	19 58 37.6	-0.5
CNJI	**Cibinong**	1.13	314	P	Pn	19 58 43.6	+0.2
CNJI				S	Sn	19 58 56.7	-1.5
LEM	**Lembang**	1.30	345	P	Pn	19 58 47.5	+1.6
	753nm,0.5s,baz=119,slow=9.6,SNR=121						
LEM				LR	LR	19 58 55.5	
	comp=Z,78nm,19.7s,baz=176,slow=26						
LEM				S	Sn	19 59 04.4	+1.7
	677nm,0.4s,baz=304,slow=21,SNR=9.8						
LEM	**Lembang**	1.30	345	P	Pn	19 58 47.3	+1.4
LEM				S	Sn	19 59 05.4	+2.8
SKJI	**Sukabumi**	1.76	308	P	Pn	19 58 53.2	+1.4
SKJI				S	Sn	19 59 14.7	+1.5
DBJI	**Dramaga**	1.94	322	P	Pn	19 58 55.1	+0.8
YOGI	**Yogyakarta**	2.34	83	P	Pn	19 59 00.3	+0.6
UGM	**Wanagama**	2.56	86		Pn	19 59 03.8	+1.1
UGM				Sn	Sn	19 59 32.5	-0.2
UGM	**Wanagama**	2.56	86	P	Pn	19 59 03.7	+1.1
UGM	**Wanagama**	2.56	86	P	Pn	19 59 03.7	+1.1
SBJI	**Serang**	2.67	317	P	Pn	19 59 05.7	+1.6
CGJI	**Cibinong**	2.68	303	P	Pn	19 59 04.8	+0.5
SMRI	**Semarang**	2.68	67	Pn	Pn	19 59 06.9	+2.6
SMRI				Sn	Sn	19 59 38.0	+2.2
SMRI	**Semarang**	2.68	67	P	Pn	19 59 07.1	+2.8
SMRI	**Semarang**	2.68	67	P	Pn	19 59 06.5	+2.2
WOJI	**Wonogiri, Jawa**	2.96	85	P	Pn	19 59 08.8	+0.7
PCJI	**Pacitan**	3.20	92	P	Pn	19 59 13.0	+1.6
XMI	**Christmas Isla**	3.23	223	P	Pn	19 59 11.3	-0.5
NGJI	**Ngawi**	3.56	78	P	Pn	19 59 18.0	+1.7
GRJI	**Gresik**	4.64	76	P	Pn	19 59 32.1	+0.9
LWLI	**Liwa**	4.93	308	P	Pn	19 59 36.3	+1.1
BWJI	**Bawean**	5.18	65	P	Pn	19 59 39.9	+1.4
MDSI	**Maura Dua**	5.19	314	P	Pn	19 59 40.8	+2.2
	0.1nm721nm18nm,1.2s						
TPI	**Tanjungpandan**	5.32	357	P	Pn	19 59 42.6	+2.2
GMJI	**Gumukmas**	5.44	92	P	Pn	19 59 44.4	+2.3
	0.3nm31nm,0.6s						
KMMI	**Kalianget**	6.06	81	P	Pn	19 59 51.6	+1.1
	0.4nm49nm,1.5s						
JAGI	**Jajag, Banyuwa**	6.15	94	Pn	Pn	19 59 53.5	+1.7
JAGI				Sn	Sn	20 01 00.7	-0.2
JAGI	**Jajag, Banyuwa**	6.15	94	P	Pn	19 59 53.6	+1.8
MNAI	**Manna**	6.20	307	Pn	Pn	19 59 54.8	+2.4
BATI	**Baumata**	15.66	99	P	Pn	20 01 59.5	-0.8
	15nm,0.7s,baz=267,slow=19,SNR=1.1						
FITZ	**Fitzroy Crossi**	19.87	122	P	P	20 02 50.1	+0.5
FITZ	**Fitzroy Crossi**	19.87	122	P	Pn	20 02 51.6	-0.1
	3.0nm,0.8s,baz=319,slow=11,SNR=2.0						
FITZ				S	S	20 06 23.4	-6.6
	2.7nm,0.9s,baz=106,slow=15,SNR=1.7						
KNRA	**Kununurra**	21.70	112	P	P	20 03 10.9	+1.6
KNRA				IAmb	IAmb	20 03 42.5	
	comp=Z,14nm,1.1s						
MTN	**Manton Dam**	23.27	104	P	P	20 03 25.8	+0.1
MTN				IAmb	IAmb	20 03 42.6	
	comp=Z,56nm,1.5s						
FAKI	**Fak Fak**	24.72	79	P	P	20 03 38.5	-0.5

CMAR	Chiang Mai Arr	27.84	341	LR	LR	20 15 09.6	
	comp=Z,38nm,18.4s,baz=155,slow=36						
WB0	Warramunga Arr	28.12	117	P	P	20 04 09.7	+0.2
WB0				IAmb	IAmb	20 04 32.4	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	28.13	118	P	P	20 04 10.8	+1.1
WRA	Warramunga Arr	28.13	118	P	P	20 04 09.9	+0.2
	comp=Z,0.8nm,0.8s,baz=288,slow=10.0,SNR=7.1						
	comp=Z,0.8nm,0.8s						
WR8	Warramunga Arr	28.28	117	P	P	20 04 12.2	+1.3
WR8				IAmb	IAmb	20 04 42.9	
	comp=Z,16nm,1.5s						
ASAR	Alice Springs	29.29	125	P	P	20 04 21.6	+1.6
	comp=Z,0.2nm,0.6s,baz=297,slow=8.3,SNR=5.1						
ASAR				PcP	PcP	20 07 27.4	+1.9
	comp=Z,0.3nm,0.7s,baz=294,slow=2.4,SNR=2.2						
	comp=Z,0.2nm,0.6s						
YULB	Yu-li	33.91	22	P	P	20 04 58.8	-1.6
H08S2	Diego Garcia H	35.12	268	T	T	20 42 23.8	
	baz=92,slow=75,SNR=41						
H08S3	Diego Garcia H	35.13	268	T	T	20 42 24.5	
	baz=92,slow=75,SNR=81						
H08S1	Diego Carcia H	35.13	268	T	T	20 42 24.5	
	baz=92,slow=75,SNR=41						
STKA	Stephens Creek	39.21	132	P	P	20 05 47.3	+1.8
STKA	Stephens Creek	39.21	132	P	P	20 05 47.2	+1.7
	comp=Z,2.0nm,0.5s,baz=316,slow=8.8,SNR=7.4						
	comp=Z,2.0nm,0.5s						
SONM	Songino Array	55.70	359	P	P	20 07 51.0	-2.3
	comp=Z,0.5nm,0.4s,baz=185,slow=8.9,SNR=5.1						
SONM				PcP	PcP	20 08 52.1	+0.1
	comp=Z,1.1nm,0.5s,baz=186,slow=3.4,SNR=7.5						
	comp=Z,0.5nm,0.4s						
WSAR	Wadi Sarin	57.40	304	P	P	20 08 07.4	+1.7
	baz=293,slow=24,SNR=4.6						
ARSB	Arslanbob	58.73	330	P	P	20 08 12.7	-2.1
ARSB				IAmb	IAmb	20 08 26.8	
	comp=Z,2.6nm,1.1s						
BTK	Batken	58.92	327	P	P	20 08 13.4	-2.7
BTK				IAmb	IAmb	20 08 16.7	
	comp=Z,5.2nm,1.4s						
SIMJ	Simiganj	58.94	325	P	P	20 08 13.6	-2.8
SIMJ				IAmb	IAmb	20 08 19.3	
	comp=Z,5.1nm,1.5s						
MKAR	Makanchi Array	59.23	340	P	P	20 08 15.9	-2.1
MKAR	Makanchi Array	59.23	340	P	P	20 08 16.6	-1.4
	comp=Z,2.2nm,0.6s,baz=150,slow=8.1,SNR=32						
MKAR				PcP	PcP	20 09 06.0	+0.2
	comp=Z,0.5nm,0.7s,baz=123,slow=4.5,SNR=3.7						
	comp=Z,2.2nm,0.6s						
ASAJ	Asahikawa	60.69	28	LR	LR	20 36 47.9	
	comp=Z,29nm,18.8s,baz=162,slow=38						
H04N2	CROZET ISLANDS	61.05	221	T	T	21 15 24.5	
	baz=70,slow=75,SNR=213						
H04N1	CROZET ISLANDS	61.07	221	T	T	21 15 24.7	
	baz=70,slow=75,SNR=214						
H04N3	CROZET ISLANDS	61.07	221	T	T	21 15 23.6	
	baz=70,slow=75,SNR=135						
KKAR	Karatay Array	61.28	329	P	P	20 08 29.6	-2.5
KKAR				IAmb	IAmb	20 08 30.0	
	comp=Z,3.3nm,1.5s						
KURBB	Kurchatov Arra	63.80	340	P	P	20 08 48.1	-0.6
	comp=Z,1.8nm,0.2s,baz=163,slow=6.5,SNR=1.5						
	comp=Z,1.8nm,0.2s						
ZALV	Zalesovo Beam	64.83	345	P	P	20 08 54.0	-1.3
	comp=Z,0.6nm,0.4s,baz=165,slow=6.0,SNR=2.5						
	comp=Z,0.6nm,0.4s						
BVAR	Borovoye Array	68.74	337	P	P	20 09 19.8	-0.5
	comp=Z,1.5nm,0.4s,baz=128,slow=8.5,SNR=25						
	comp=Z,1.5nm,0.4s						
BRVK	Borovoye	68.81	337	P	P	20 09 18.3	-2.4
BRVK				IAmb	IAmb	20 09 20.9	
	comp=Z,1.5nm,0.5s						
AB31	Akbulak array	70.83	329		P	20 09 30.6	-2.6
AB31				IAmb	IAmb	20 09 33.7	
	comp=Z,4.3nm,0.5s						
ABKAR	Akbulak array	70.83	329		P	20 09 30.5	-2.7
VNDA	Vanda	74.72	170	P	P	20 09 57.7	+1.9
ARTI	Arti	76.06	334	P	P	20 10 02.1	-1.7
MATP	Matopo	77.37	251	P	P	20 10 15.7	+3.5
	comp=Z,0.7nm,0.7s,baz=109,slow=3.7,SNR=6.0						
	comp=Z,0.7nm,0.7s						
LSZ	Lusaka	78.08	256	P	P	20 10 19.9	+3.7
	comp=Z,1.4nm,0.5s,baz=107,slow=7.2,SNR=4.8						
	comp=Z,1.4nm,0.5s						
SEY	Seymchan	78.52	19	P	P	20 10 15.0	-2.4
	comp=Z,0.9nm,0.7s,baz=208,slow=22,SNR=2.8						
	comp=Z,0.9nm,0.7s						
QSPA	South Pole Qui	81.90	180	P	P	20 10 35.7	-0.1
BRTR	Keskin Array B	83.25	312	P	P	20 10 44.0	+0.7
	comp=Z,0.7nm,0.7s,baz=153,slow=3.9,SNR=5.1						
	comp=Z,0.7nm,0.7s						
SNAA	Sanae	88.76	197	P	P	20 11 13.1	+3.3
	comp=Z,1.2nm,1.1s,baz=259,slow=17,SNR=1.6						
	comp=Z,1.2nm,1.1s						
AKASG	Malin Array Be	89.13	321	P	P	20 11 11.8	0.0
	comp=Z,0.2nm,0.5s,baz=84,slow=3.8,SNR=1.9						
	comp=Z,0.2nm,0.5s						
FINES	FINESS Array B	93.18	332	P	P	20 11 30.1	-0.2
	comp=Z,0.9nm,0.6s,baz=119,slow=6.7,SNR=4.6						
	comp=Z,0.9nm,0.6s						
ARCES	ARCESS Array B	94.89	340	P	P	20 11 36.9	-1.1
	comp=Z,1.4nm,0.9s,baz=103,slow=6.8,SNR=1.5						
	comp=Z,1.4nm,0.9s						
TXAR	Lajitas Array	143.56	50	PKP	PKPdf	20 17 51.4	-0.4
	comp=Z,0.2nm,0.5s,baz=279,slow=2.0,SNR=3.6						

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*JMA **23** 19:58:31.4±0.2, 23°.9N±0°.9×122°.5E±0°.6, h15^{km}, MV2.6/13,*
NW OFF ISHIGAKIJIMA IS
*TAP **23** 19:58:32.4, 23°.91N×122°.50E, h31^{km}, ML2.8, C*
ISC 23 19:58:30.3±1.1, **23°.83N**±0°.02×**122°.56E**±0°.02, **h19**^{km}±3^{km},
n82, σ0^{s}68/118, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS4	EOS4	0.36	322	eP	Pn	19 58 39.5	-0.7
EOS4				eS	Sb	19 58 44.7	+1.4
EOS3	EOS3	0.50	334	P	Pn	19 58 41.7	-0.6
EOS3				eS	Sn	19 58 50.6	+0.2
EOS2	EOS2	0.66	333	eP	Pn	19 58 44.6	+0.2
EOS2				eS	Sn	19 58 53.7	-0.5
JYNG	Yonagunijimaku	0.71	30	P	Pn	19 58 44.9	-0.4
JYNG				eS	Sg	19 58 53.7	+0.1
YOJ	Yonaguni jima	0.75	33	eP	Pn	19 58 45.6	-0.2
YOJ	Yonaguni jima	0.75	33	eP	Pn	19 58 45.5	-0.4
YOJ				eS	Sn	19 58 56.9	+0.3
TEYL	Yanliau Villag	0.88	272	eP	Pg	19 58 47.7	+0.2
TEYL				eS	Sg	19 58 59.7	+0.5
EAHA	Aohua	0.90	303	eP	Pb	19 58 47.2	-0.1
EAHA				eS	Sb	19 58 58.5	-0.4
SHUL	Shoufeng	0.92	267	eP	Pg	19 58 48.2	+0.1
SHUL				eS	Sb	19 59 00.0	+0.7
TWD	Chiawan	0.92	286	eP	Pb	19 58 47.8	+0.2
TWD				eS	Sb	19 58 58.5	-0.9
EWUT	Wuta	0.94	311	eP	Pg	19 58 48.4	-0.2
EWUT				eS	Sg	19 59 00.6	-0.5
NACB	Ninganchiao	0.95	291	eP	Pn	19 58 48.6	0.0
NACB				eS	Sb	19 58 59.9	-0.4
ENA	Nanau	0.95	308	P	Pg	19 58 48.8	-0.1
ENA				eS	Sb	19 59 00.7	+0.2
ETM	Tongmen	0.99	278	eP	Pb	19 58 48.8	0.0
ETM				eS	Sb	19 59 02.0	+0.6
TWC	Suao	1.01	320	eP	Pb	19 58 49.0	-0.2
TWC				eS	Sb	19 59 02.0	-0.1
ESL	Shilin	1.03	269	eP	Pb	19 58 49.5	-0.1
ESL				eS	Sb	19 59 02.1	-0.7
ETLH	Xiulin Townshi	1.05	291	eP	Pb	19 58 50.1	+0.2
ETLH				eS	Sb	19 59 03.0	-0.4
LXIB	Xiulin Townshi	1.07	280	eP	Pb	19 58 50.4	+0.2
WARBT	Fenglin Townsh	1.08	264	eP	Pb	19 58 49.6	-0.8
WARBT				eS	Sb	19 59 02.9	-1.3
HGSD	Ruisui	1.10	252	eP	Pn	19 58 50.3	-0.4
HGSD				eS	Sb	19 59 04.5	-0.1
NDS	Dongshan	1.11	316	eP	Pn	19 58 50.8	0.0
ECBN	Changbin	1.14	243	eP	Pn	19 58 51.3	+0.1
EGS		1.16	330	eP	Pg	19 58 52.1	-0.7
HATJ	Hateruma jima	1.16	79	eP	Pg	19 58 53.4	+0.7
HATJ				eS	Sg	19 59 08.4	+0.5
EHYH	Wanrong	1.17	253	eP	Pb	19 58 52.1	+0.3
LATG	Datong	1.18	307	eP	Pg	19 58 52.8	-0.3
IRIF	Iriomote-Funau	1.18	65	P	Pg	19 58 53.8	+0.7
EHY	Hungye	1.18	254	eP	Pn	19 58 51.9	+0.1
EHY				eS	Sn	19 59 07.9	+0.5
TWE	Neicheng	1.20	317	eP	Pg	19 58 53.6	0.0
TWE				eS	Sb	19 59 06.9	-0.7
ENTT	Nioudou	1.21	312	eP	Pg	19 58 53.5	-0.3
WHF	Hehuan Shan	1.23	285	eP	Pn	19 58 52.9	+0.1
WHF				eS	Sb	19 59 07.8	-0.9
NNSB	Datong	1.23	299	eP	Pb	19 58 53.3	+0.3
YULB	Yu-li	1.24	250	eP	Pn	19 58 53.1	+0.5
YULB				eS	Sb	19 59 09.1	+0.3
NNS	Nan Shan	1.24	299	eP	Pb	19 58 53.3	+0.1
NNS				eS	Sb	19 59 07.9	-1.0
CHKH	Chenggong	1.25	239	eP	Pn	19 58 52.1	-0.6
CHKH				eS	Sb	19 59 06.8	-2.0
TWF1	Yuli	1.26	248	eP	Pn	19 58 53.2	+0.4
TWF1				eS	Sb	19 59 09.4	+0.3
FUSS	Fushou	1.27	289	eP	Pb	19 58 54.1	+0.3
OWD	Renai	1.27	276	eP	Pn	19 58 53.0	-0.2
FUSB	Fushanzhiwuyua	1.28	316	eP	Pg	19 58 54.6	-0.4
TIPB	Shuangxi	1.32	329	eP	Pb	19 58 54.5	+0.1
TIPB				eS	Sb	19 59 10.7	-0.2
CHKT	Chengkung	1.32	237	eP	Pn	19 58 53.5	-0.2
CHKT				eS	Sn	19 59 08.9	-1.9
FULB	Fuli	1.32	242	eP	Pn	19 58 53.6	-0.2
FULB				eS	Sn	19 59 10.8	-0.1
WUSB	Renai	1.33	277	eP	Pn	19 58 53.3	-0.6
YHNB	Yeheng	1.37	308	eP	Pb	19 58 55.3	0.0
NSK	Sanguang	1.38	308	eP	Pb	19 58 56.0	+0.5
JKRS	Kuro-shima	1.38	73	eP	Pg	19 58 57.1	+0.2
JKRS				eS	Sg	19 59 15.3	+0.3
SXI1	Grass Mountain	1.40	334	eP	Pb	19 58 55.5	-0.4
EHD	Haiduan	1.42	242	eP	Pn	19 58 55.2	+0.1
EHD				eS	Sn	19 59 12.5	-0.7
ECS	Chishang	1.44	239	eP	Pb	19 58 56.8	+0.4
ECS				eS	Sn	19 59 14.7	+1.0
EDH	Donghe	1.44	234	eP	Pn	19 58 55.0	-0.4
EDH				eS	Sn	19 59 12.4	-1.3
TWA	Mucha	1.45	322	eP	Pg	19 58 57.6	-0.6
SSLB	Suanglung	1.47	269	eP	Pn	19 58 56.1	+0.3
SMLT	Sun Moon Lake	1.52	272	eP	Pb	19 58 58.1	+0.1
SMLT				eS	Sn	19 59 15.3	-0.7
JIJ	Ishigaki jima	1.54	70	eP	Pg	19 58 59.3	-0.6
JIJ				eS	Sg	19 59 19.8	-0.2
NFF	Wufeng Townshi	1.54	301	eP	Pb	19 58 59.0	+0.8
ELDTW	Lidau	1.56	246	eP	Pn	19 58 57.3	+0.2
TYC	Yuchr	1.56	273	eP	Pb	19 58 59.6	+1.0
WHYT	Xinyi Township	1.57	265	eP	Pb	19 58 58.8	+0.1
KSHI	Guanxi Townshi	1.57	307	eP	Pb	19 58 59.0	+0.2
YM01	YM01	1.59	326	eP	Pb	19 58 58.2	-0.9
LONT	Longtian	1.61	235	eP	Pn	19 58 58.2	+0.5
ZUZH	Zhuzihu	1.61	325	eP	Pb	19 58 59.7	+0.2
LIOB	Emei	1.63	300	eP	Pb	19 58 59.8	+0.1
NSTT	Nanjuang	1.63	299	eP	Pn	19 58 58.7	+0.7
ALS	Alishan	1.64	259	eP	Pn	19 58 59.6	+1.2
TWGBT	Beinan	1.70	234	eP	Pn	19 58 59.2	+0.3
TWG	Pinlang	1.70	234	eP	Pn	19 58 59.3	+0.3
CHN5	Tsauling	1.74	263	eP	Pb	19 59 01.9	+0.2
JISG	Ishigakijimahi	1.76	64	eP	Pb	19 59 01.7	-0.3
STYH	Taoyuan	1.77	248	eP	Pn	19 59 00.8	+1.0
STYH				eS	Sn	19 59 22.5	+0.6
WCKO	Fanlu	1.84	258	eP	Pb	19 59 03.1	-0.1
TPUB	Ta-pu	1.85	254	eP	Pn	19 59 02.4	+1.3
WTP	Ta-pu	1.88	252	eP	Pb	19 59 03.7	-0.3
CHN1	Nanshi	1.98	251	eP	Pb	19 59 05.0	-0.6
TWK	Hsinying	1.98	254	eP	Pb	19 59 05.0	-0.8
SNST	Tainan City	1.99	253	eP	Pb	19 59 05.8	-0.1
LAY	Lan-yu	2.02	208	eP	Pn	19 59 03.6	+0.3
SSD	Sandimen	2.08	239	eP	Pn	19 59 05.8	+1.6
EAST	Anshuo	2.14	228	eP	Pn	19 59 05.3	+0.3
MASBT	Mashibuluo	2.15	236	eP	Pn	19 59 06.4	+1.3
SCZT	Fangliau	2.31	231	eP	Pb	19 59 10.2	-1.1
PTMZ	Houxiangcun	3.36	292	eP	Pn	19 59 24.6	+2.9

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*RSPR **23** 19:58:43.3, 18°.58N×68°.96W, h125^{km}±1^{km}, MD3.8/23*
*NEIC **23** 19:58:44.1±2.5, 18°.56N±0°.09×68°.98W±0°.06,*
h117^{km}±11^{km}, mb4.0/1, ML3.9/32, Md3.8/23(RSPR), Error
ellipse: s-maj=13.0km s-min=6.7km az=200.0
*OSPL **23** 19:58:44.6±3.7, 18°.52N×68°.97W, h138^{km}±22^{km}, ML3.7*
*SDD **23** 19:58:45.7±3.9, 18°.58N×68°.93W, h122^{km}±15^{km}, MD4.0,*
ML4.1, MW3.9
ISC 23 19:58:43.8±1.0, **18°.58N**±0°.05×**68°.96W**±0°.03, **h121**^{km}±8^{km},
n116, σ1^{s}28/153, **26C-32D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HIDR	Higuey Centro	0.23	86	⇑iP	Pn	19 59 00.3	-0.4
HIDR	Higuey Centro	0.23	86	eS	Sn	19 59 12.0	-1.3
HIDR	Higuey Centro	0.23	86	⇑ePg	Pn	19 58 59.9	-0.8
HIDR				⇑eSg	Sn	19 59 12.0	-1.3
HIDR				IAML		19 59 13.9	
	comp=N,7μm,0.2s						
MIDR	Miches	0.42	348	⇑ePg	Pn	19 59 01.1	-0.4
MIDR				⇓eSg	Sn	19 59 13.9	-0.8
MIDR				IAML		19 59 14.6	
	comp=N,4μm,0.5s						
SMDR	Samana, DR	0.74	343	⇓iP	Pn	19 59 03.1	-0.5
SMDR	Samana, DR	0.74	343	eS	Sn	19 59 18.7	0.0
SMDR	Samana, DR	0.74	343	⇓ePg	Pn	19 59 03.0	-0.7
SMDR				⇑eSg	Sn	19 59 18.8	+0.2
SMDR				IAML		19 59 22.3	
	comp=N,3μm,0.7s						
SDD	Santo Domingo	0.92	263		Pn	19 59 04.7	-0.5
SDD					Sn	19 59 21.3	+0.1
SDD	Santo Domingo	0.92	263	⇓iP	Pn	19 59 04.7	-0.5
SDD	Santo Domingo	0.92	263	eS	Sn	19 59 21.3	+0.1
SDD	Santo Domingo	0.92	263	⇑ePg	Pn	19 59 04.5	-0.6
SDD				⇓eSg	Sn	19 59 21.0	-0.2
SDD				IAML		19 59 25.4	
	comp=N,261nm,0.3s						
SDD	Santo Domingo	0.92	263	i P	Pn	19 59 04.5	-0.6
SDD				eS	Sn	19 59 21.0	-0.2
DR08	Loma La Naviza	1.08	291	⇓ePg	Pn	19 59 06.5	-0.3
DR08				⇑eSg	Sn	19 59 23.8	-0.5
DR08				IAML		19 59 26.3	
	comp=N,70μm,0.2s						
NADR	Nagua	1.15	312	⇓ePg	Pn	19 59 07.4	-0.1
NADR				⇑eSg	Sn	19 59 26.6	+1.3
NADR				IAML		19 59 32.4	
	comp=N,9μm,0.3s						
LONA1	Toro Cenizo, N	1.18	313	i P	Pn	19 59 07.4	-0.3
LONA1				eS	Sn	19 59 25.9	0.0
BANI	BANI	1.34	262		Pn	19 59 07.9	-1.8
BANI	BANI	1.34	262	⇑ePg	Pn	19 59 09.8	+0.2
BANI				⇑eSg	Sn	19 59 31.0	+1.7
BANI				IAML		19 59 35.1	
	comp=N,3μm,0.3s						
IDE	Isla Desecheo	1.42	97		Pn	19 59 10.2	-0.2
IDE					Sn	19 59 31.7	+1.1
IDE	Isla Desecheo	1.42	97	⇓eP	Pn	19 59 10.2	-0.2
IDE	Isla Desecheo	1.42	97	eS	Sn	19 59 31.7	+1.1
CADR	Cabrera	1.43	320	⇓ePg	Pn	19 59 09.9	-0.6
CADR				⇑eSg	Sn	19 59 29.7	-1.1
CADR				IAML		19 59 31.5	
	comp=N,5μm,0.2s						
ABDR	Alto Bandera	1.60	279	⇓ePg	Pn	19 59 13.2	+0.3
ABDR				⇑eSg	Sn	19 59 34.8	-0.2
ABDR				IAML		19 59 40.0	
	comp=N,2μm,0.3s						
AGPR	Aguadilla, PR	1.75	93		Pn	19 59 15.6	+1.2
AGPR					Sn	19 59 38.0	+0.5
AGPR	Aguadilla, PR	1.75	93	IAML		19 59 43.4	
	comp=E,1μm,0.4s						
AGPR				IAML		19 59 44.5	
	comp=N,833nm,0.5s						
AGPR	Aguadilla, PR	1.75	93	⇑eP	Pn	19 59 15.6	+1.2
AGPR	Aguadilla, PR	1.75	93	eS	Sn	19 59 38.0	+0.5
AGPR	Aguadilla, PR	1.75	93	⇓ePg	Pn	19 59 14.8	+0.5
AGPR				⇑eSg	Sn	19 59 38.0	+0.5
AGPR				IAML		19 59 44.5	
	comp=N,718nm,0.5s						
AGPR	Aguadilla, PR	1.75	93	i P	Pn	19 59 14.9	+0.5
AGPR				eS	Sn	19 59 38.0	+0.5
AGPR				IAML		19 59 43.5	
	comp=Z,410nm,0.2s						
PRSN	Puerto Rico Se	1.76	101		Pn	19 59 15.6	+1.2
PRSN					Sn	19 59 38.6	+1.0
PRSN	Puerto Rico Se	1.76	101	IAML		19 59 44.8	
	comp=E,2μm,0.2s						
PRSN	Puerto Rico Se	1.76	101	⇓eP	Pn	19 59 15.6	+1.2
PRSN	Puerto Rico Se	1.76	101	eS	Sn	19 59 38.6	+1.0
PRSN	Puerto Rico Se	1.76	101	⇑ePg	Pn	19 59 14.7	+0.4
PRSN				⇓eSg	Sn	19 59 37.9	+0.3
PRSN				IAML		19 59 50.2	
	comp=N,1μm,0.2s						
LSP	Las Mesas	1.82	102		Pn	19 59 16.1	+0.9
LSP					Sn	19 59 41.6	+2.6
LSP	Las Mesas	1.82	102	⇑iP	Pn	19 59 16.1	+0.9
LSP	Las Mesas	1.82	102	eS	Sn	19 59 41.6	+2.6
CRPR	Cabo Rojo, PR	1.84	108		Pn	19 59 15.3	-0.1
CRPR					Sn	19 59 38.5	-1.0
CRPR	Cabo Rojo, PR	1.84	108	⇑iP	Pn	19 59 15.3	-0.1
CRPR	Cabo Rojo, PR	1.84	108	eS	Sn	19 59 38.5	-1.0
CRPR	Cabo Rojo, PR	1.84	108	⇓ePg	Pn	19 59 15.2	-0.1
CRPR				eSg	Sn	19 59 38.1	-1.4
CRPR				IAML		19 59 42.4	
	comp=N,276nm,0.3s						
CRPR	Cabo Rojo, PR	1.84	108	i P	Pn	19 59 15.1	-0.3
CRPR				eS	Sn	19 59 39.0	-0.5
CRPR				IAML		19 59 42.5	
	comp=Z,330nm,0.4s						
SC01	Santiago de lo	1.88	297		Pn	19 59 17.0	+1.2
SC01					Sn	19 59 43.2	+2.8
SC01	Santiago de lo	1.88	297	⇑iP	Pn	19 59 17.0	+1.2
SC01	Santiago de lo	1.88	297	eS	Sn	19 59 43.2	+2.8
SC01	Santiago de lo	1.88	297	⇓ePg	Pn	19 59 16.3	+0.4
SC01				⇓eSg	Sn	19 59 42.3	+1.9
SC01				IAML		19 59 49.9	
	comp=N,2μm,0.3s						
SC01	Santiago de lo	1.88	297	i P	Pn	19 59 16.3	+0.4
SC01				IAML		19 59 53.5	
	comp=Z,946nm,0.7s						
MLPR	Magueyes Islan	1.91	108	⇑iP	Pn	19 59 15.8	-0.4
MLPR	Magueyes Islan	1.91	108	eS	Sn	19 59 40.3	-0.7
MLPR	Magueyes Islan	1.91	108	⇑ePg	Pn	19 59 15.8	-0.4
MLPR				⇑eSg	Sn	19 59 40.1	-1.0
MLPR				IAML		19 59 45.0	
	comp=N,90nm,0.3s						
SODR	Sosua Marina B	1.93	308	⇓eSg	Sn	19 59 42.3	+0.9
SODR				IAML		20 00 05.7	
	comp=N,2μm,0.8s						
GBPR	Guanica, Bosqu	2.06	106		Pn	19 59 18.2	+0.1
GBPR	Guanica, Bosqu	2.06	106	⇑iP	Pn	19 59 18.2	+0.1
AOPR	Arecibo Observ	2.10	96		Pn	19 59 19.7	+1.0
AOPR					Sn	19 59 45.8	+0.5
AOPR	Arecibo Observ	2.10	96	⇓eP	Pn	19 59 19.7	+1.0
AOPR	Arecibo Observ	2.10	96	eS	Sn	19 59 45.8	+0.5
AOPR	Arecibo Observ	2.10	96	⇓ePg	Pn	19 59 18.4	-0.3
AOPR				⇑eSg	Sn	19 59 44.3	-1.0
AOPR				IAML		19 59 54.5	
	comp=N,2μm,0.3s						
UUPR	Utuado, UPR, P	2.15	98		Pn	19 59 20.8	+1.6
UUPR					Sn	19 59 47.0	+0.7
UUPR	Utuado, UPR, P	2.15	98	⇑iP	Pn	19 59 20.8	+1.6
UUPR	Utuado, UPR, P	2.15	98	eS	Sn	19 59 47.0	+0.7
PODR	Polo	2.25	260	⇑ePg	Pn	19 59 20.7	+0.1
PODR				eSg	Sn	19 59 48.5	-0.2
PODR				IAML		19 59 55.9	
	comp=N,438nm,0.5s						
PODR	Polo	2.25	260	i P	Pn	19 59 20.5	-0.1
PODR				eS	Sn	19 59 43.5	-5.3
SDDR	Presa de Saban	2.25	281		Pn	19 59 21.9	+1.4
SDDR	Presa de Saban	2.25	281	IAML		19 59 56.9	
	comp=N,1μm,0.8s						
SDDR				IAML		19 59 57.0	
	comp=N,641nm,1.0s						
SDDR	Presa de Saban	2.25	281	⇓iP	Pn	19 59 21.9	+1.4
SDDR	Presa de Saban	2.25	281	eS	Sn	19 59 51.1	+2.5
SDDR	Presa de Saban	2.25	281	⇓ePg	Pn	19 59 21.4	+0.9
SDDR				⇑eSg	Sn	19 59 50.9	+2.3
SDDR				IAML		19 59 56.8	
	comp=N,976nm,0.5s						
SDDR	Presa de Saban	2.25	281	i P	Pn	19 59 21.9	+1.4
SDDR				eS	Sn	19 59 50.8	+2.2
SDDR				IAML		19 59 56.5	
	comp=Z,354nm,0.4s						
MADR	Mao Valverde	2.26	296	ePg	Pn	19 59 17.5	-3.1
MADR				⇑eSg	Sn	19 59 49.5	+0.7
MADR				IAML		19 59 60.0	
	comp=N,2μm,0.5s						
OBIP	Obispado Ponce	2.29	103		Pn	19 59 21.1	0.0
OBIP					Sn	19 59 49.9	+0.4
OBIP	Obispado Ponce	2.29	103	IAML		19 59 55.4	
	comp=E,326nm,0.6s						
OBIP	Obispado Ponce	2.29	103	⇑iP	Pn	19 59 21.1	0.0
OBIP	Obispado Ponce	2.29	103	eS	Sn	19 59 49.9	+0.4
LUDR	Luperon	2.30	305	⇓ePg	Pn	19 59 20.2	-0.9
LUDR				⇑eSg	Sn	19 59 49.6	-0.1
LUDR				IAML		20 00 02.0	
	comp=N,5μm,0.4s						
EMPR	Esperanza - Ma	2.30	92		Pn	19 59 22.4	+1.3
EMPR					Sn	19 59 51.5	+1.8
EMPR	Esperanza - Ma	2.30	92	IAML		19 59 56.4	
	comp=N,987nm,0.5s						
EMPR	Esperanza - Ma	2.30	92	⇑eP	Pn	19 59 22.4	+1.3
EMPR	Esperanza - Ma	2.30	92	eS	Sn	19 59 51.5	+1.8
CELP	Cerrillos	2.31	102		Pn	19 59 21.3	0.0
CELP					Sn	19 59 50.0	+0.1
CELP	Cerrillos	2.31	102	IAML		19 59 57.2	
	comp=N,372nm,0.6s						
CELP	Cerrillos	2.31	102	⇓iP	Pn	19 59 21.3	0.0
CELP	Cerrillos	2.31	102	eS	Sn	19 59 50.0	+0.1
CELP	Cerrillos	2.31	102	⇑ePg	Pn	19 59 21.2	0.0
CELP				⇓eSg	Sn	19 59 50.1	+0.1
CELP				IAML		19 59 57.1	
	comp=N,368nm,0.3s						
LODU1	El Espartillar	2.40	265	i P	Pn	19 59 22.9	+0.5
LODU1				IAML		20 00 01.4	
	comp=Z,470nm,0.7s						
LOVI	El Cajuil, Ovi	2.42	252	i P	Pn	19 59 22.1	-0.6
LOVI				eS	Sn	19 59 49.6	-2.9
LOVI				IAML		19 59 58.5	
	comp=Z,488nm,0.4s						
ECPR	Experimental S	2.47	96	⇑eP	Pn	19 59 24.1	+0.7
ECPR	Experimental S	2.47	96	eS	Sn	19 59 52.3	-1.4
SJG	San Juan	2.70	99		Pn	19 59 26.8	+0.5
SJG	San Juan	2.70	99	IAML		20 00 03.1	
	comp=Z,314nm,0.3s						
SJG				IAML		20 00 12.4	
	comp=Z,257nm,0.4s						
SJG	San Juan	2.70	99	⇓eP	Pn	19 59 26.8	+0.5
SJG	San Juan	2.70	99	⇑ePg	Pn	19 59 26.3	-0.1
SJG				⇓eSg	Sn	19 59 57.4	-1.6
SJG	San Juan	2.70	99	i P	Pn	19 59 26.2	-0.1
SJG				eS	Sn	19 59 57.4	-1.6
SJG				IAML		20 00 04.8	
	comp=Z,160nm,0.5s						
GCPR	Guaynabo City	2.74	95		Pn	19 59 27.1	+0.3
GCPR					Sn	19 59 57.0	-2.7
GCPR	Guaynabo City	2.74	95	⇓eP	Pn	19 59 27.1	+0.3
GCPR	Guaynabo City	2.74	95	eS	Sn	19 59 57.0	-2.7
IGPR	InterUniversit	2.77	102		Pn	19 59 26.8	-0.4
IGPR					Sn	20 00 00.1	-0.4
IGPR	InterUniversit	2.77	102	⇓eP	Pn	19 59 26.8	-0.4
IGPR	InterUniversit	2.77	102	eS	Sn	20 00 00.1	-0.4
PDPR	Patillas Dam,	2.84	101	Pn	Pn	19 59 27.8	-0.3
PDPR				IAML		20 00 06.9	
	comp=E,220nm,0.6s						
PDPR				IAML		20 00 17.3	
	comp=N,217nm,0.5s						
PDPR	Patillas Dam,	2.84	101	⇓eP	Pn	19 59 27.8	-0.3
PDPR	Patillas Dam,	2.84	101	eS	Sn	20 00 01.6	-0.5
HUMP	Col San Antoni	2.98	98		Pn	19 59 30.1	+0.2
HUMP					Sn	20 00 03.3	-2.1
HUMP	Col San Antoni	2.98	98	IAML		20 00 09.2	
	comp=N,350nm,0.3s						
HUMP				IAML		20 00 15.5	
	comp=E,306nm,0.2s						
HUMP	Col San Antoni	2.98	98	⇓eP	Pn	19 59 30.1	+0.2
HUMP	Col San Antoni	2.98	98	eS	Sn	20 00 03.3	-2.1
GRTK	Grand Turk	3.57	325	Pn	Pn	19 59 35.8	-1.8
GRTK				IAML		20 00 23.4	
	comp=E,376nm,0.3s						
GRTK				IAML		20 00 24.0	
	comp=E,318nm,0.3s						
GRTK	Grand Turk	3.57	325	i P	Pn	19 59 35.9	-1.8
GRTK				eS	Sn	20 00 16.2	-3.0
GRTK				IAML		20 00 19.0	
	comp=Z,102nm,0.1s						
MASC	Masc	5.23	289	⇓iP	Pn	19 59 58.1	-1.8
MASC				IAML		20 01 01.0	
	comp=Z,24nm,0.8s						
ABD	La Joyeuse, An	7.42	105	⇓eP	Pn	20 00 30.7	+1.2
ABD	La Joyeuse, An	7.42	105	eS	Sn	20 01 51.5	-0.7
CBE	Ff, Capester	7.45	108	⇑eP	Pn	20 00 31.7	+1.8
BIM	Bigot	8.57	117	Pn	Pn	20 00 44.7	-0.4

ILAM	Ilet Lapin Mar	8.62	115	Pn	Pn	20 00 41.4	-4.3
BAUV	El Baul	9.62	175		Pn	20 00 59.0	-0.2
SDV	Santo Domingo	9.77	190	Pn	Pn	20 01 01.8	+0.4
RUSC	La Rusia	13.23	198		Pn	20 01 49.5	+1.8
BOAV	Boa Vista	18.08	152	Pn	Pn	20 02 47.2	-0.2
BOAV				IAmb	IAmb	20 02 47.9	
	comp=Z,5.6nm,0.6s						

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*SJA **23** 19:58:57.6±0.7, 29°.29S×71°.48W, h45^{km}±10^{km}, ML3.3, MW3.6*

*GUC **23** 19:58:59.5±0.8, 29°.27S×71°.32W, h52^{km}±3^{km}, ML3.5*

ISC 23 19:58:59.1±1.3, **29°.29S**±0°.03×**71°.53W**±0°.05, **h50**^{km}, **n38**, σ**1^{s}69**/62, **1C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	La Serena	0.67	158	eP	Pn	19 59 12.6	0.0
CO05				eS	Sn	19 59 21.9	-0.4
CO05				IAML		19 59 24.3	
	comp=N,2μm,0.3s						
LCO	Las Campanas	0.78	69	eP	Pn	19 59 12.3	-1.8
LCO				eS	Sn	19 59 21.7	-3.3
LCO	Las Campanas	0.78	69	eP	Pn	19 59 12.7	-1.4
LCO				eS	Sn	19 59 22.7	-2.3
GO04	Tololo Observa	1.08	144	⇑iP	Pn	19 59 17.7	-0.5
GO04				eS	Sn	19 59 31.3	-1.0
GO04				IAML		19 59 34.3	
	comp=N,2μm,0.4s						
GO04	Tololo Observa	1.08	144	eP	Pn	19 59 17.7	-0.5
GO04				eS	Sn	19 59 32.0	-0.3
AC04	Llanos de Chal	1.15	20	eP	Pn	19 59 18.7	-0.3
AC04				i S	Sn	19 59 32.8	-0.9
AC04				IAML		19 59 35.8	
	comp=N,2μm,0.2s						
AC04	Llanos de Chal	1.15	20	eP	Pn	19 59 18.7	-0.3
AC04				eS	Sn	19 59 33.8	+0.2
AC04				IAML		19 59 36.9	
	comp=Z,756nm,0.2s						
CO06	Fray Jorge	1.38	184	eP	Pn	19 59 22.0	0.0
CO06				i S	Sn	19 59 38.8	-0.4
CO01	Juntas del Tor	1.42	119	eP	Pn	19 59 22.6	-0.2
CO01				i S	Sn	19 59 39.5	-1.1
CO01	Juntas del Tor	1.42	119	eP	Pn	19 59 22.8	-0.1
CO01				eS	Sn	19 59 40.1	-0.5
CO01				IAML		19 59 40.4	
	comp=Z,551nm,0.3s						
CO03	El Pedregal	1.71	155	eP	Pn	19 59 26.2	-0.3
CO03				i S	Sn	19 59 46.4	-0.9
CO03	El Pedregal	1.71	155	eP	Pn	19 59 26.2	-0.3
CO03				eS	Sn	19 59 46.8	-0.4
CO03				IAML		19 59 48.9	
	comp=Z,247nm,0.3s						
CO02	Combarbal	1.96	167	eP	Pn	19 59 29.9	-0.2
CO02	Combarbal	1.96	167	eP	Pn	19 59 29.8	-0.3
CO02				eS	Sn	19 59 44.0	-10
CO02				IAML		19 59 54.1	
	comp=Z,218nm,0.4s						
AROD	Rodeo	1.99	117	eP	Pn	19 59 32.2	+1.6
AROD				eS	Sn	19 59 51.2	-3.3
GO03	Copiapo	2.04	34	eP	Pn	19 59 30.6	-0.5
GO03	Copiapo	2.04	34	eP	Pn	19 59 30.9	-0.2
GO03				eS	Sn	20 00 05.2	+10
AC06	Mina Casimiro	2.19	29	eP	Pn	19 59 32.8	-0.2
AC06				eS	Sn	19 59 58.2	-0.7
AC06				IAML		20 00 11.8	
	comp=E,284nm,0.4s						
ACDV	Cuesta del Vie	2.27	113	eP	Pn	19 59 36.6	+2.2
ACDV				IAML		20 00 06.9	
	comp=Z,98nm,0.6s						
ACCO	Cerro Coronel	2.50	122	eP	Pn	19 59 34.5	-3.1
AGUA	GUANDACOL	2.66	95	eP	Pn	19 59 42.0	+2.4
AGUA				IAML		20 00 34.2	
	comp=Z,132nm,0.6s						
VCA	Vinchina	2.96	80	eP	Pn	19 59 44.9	+1.0
VCA				IAML		20 00 30.7	
	comp=Z,110nm,0.3s						
RTLS	Leoncito	3.15	143	eP	Pn	19 59 49.6	+3.0
RTLS				IAML		20 00 32.2	
	comp=Z,158nm,0.4s						
AC02	Maricunga	3.24	41	eP	Pn	19 59 48.0	+0.1
AC02	Maricunga	3.24	41	eP	Pn	19 59 48.3	+0.4
AC02				eS	Sn	20 00 42.0	+17
AC01	Pan de Azucar	3.24	15	eP	Pn	19 59 46.1	-1.4
AC01	Pan de Azucar	3.24	15	eP	Pn	19 59 46.0	-1.5
AC01				eS	Sn	20 00 31.0	+6.2
AC01				IAML		20 00 46.3	
	comp=Z,93nm,0.3s						
RTLL	Cerro Villicun	3.33	128	eP	Pn	19 59 51.3	+2.6
RTLL				eS	Sn	20 00 27.7	+0.6
CFA	Coronel Fontan	3.66	130	eP	Pn	19 59 54.8	+1.6
CFA				eS	Sn	20 00 36.2	+1.1
AVFE	Valle Fertil	3.79	112	eP	Pn	19 59 56.0	+0.9
AVFE				eS	Sn	20 00 38.9	+0.5
AVFE				IAML		20 00 59.8	
	comp=Z,63nm,0.3s						
MT02	Curacav	3.97	175	eP	Pn	19 59 57.4	-0.1
ACLC	CERRO LA CRUZ	4.00	93	eP	Pn	19 59 58.8	+0.8
ACLC				eS	Sn	20 00 47.1	+3.4
ACLC				IAML		20 01 11.2	
	comp=Z,24nm,0.6s						
ASAL	Salagasta	4.02	146	eP	Pn	20 00 01.2	+2.9
ASAL				eS	Sn	20 00 44.0	-0.2
MT04	Ro Olivares	4.27	164	eP	Pn	20 00 03.5	+1.7
MT04				eS	Sn	20 00 49.8	-0.7
MT04				IAML		20 01 04.3	
	comp=Z,16nm,0.5s						
MT08	Bocatoma Ro	4.34	163	eP	Pn	20 00 01.9	-0.8
MT08				eS	Sn	20 01 05.7	+14
MT08				IAML		20 01 32.2	
	comp=Z,20nm,0.9s						
MT01	Popeta	4.56	177	eP	Pn	20 00 05.2	-0.4
MT01				eS	Sn	20 00 56.9	-0.5
MT01				IAML		20 01 18.0	
	comp=Z,21nm,0.7s						
ACHE	Chepes	4.60	115	eP	Pn	20 00 02.3	-4.1
ACHE				eS	Sn	20 00 58.5	-0.1
BO01	Tunca	5.10	176	eP	Pn	20 00 12.7	-0.3
BO01				eS	Sn	20 01 11.2	+0.6
BO01				IAML		20 01 40.0	
	comp=Z,21nm,4.9s						

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*YARS **23** 20:10:21.8, 63°.04N×137°.10E, h11^{km}, ML2.3/7*

*MOS **23** 20:10:21.3±1.0, 63°.10N×137°.12E, h11^{km}, mb4.0/4, Error ellipse: s-maj=19.4km s-min=10.6km az=98.4*

*IDC **23** 20:10:21.7±0.7, 63°.08N×137°.10E, h0^{km}, mb3.7/12, mbtmp3.7/18, ML4.2/5, Error ellipse: s-maj=14.3km s-min=8.2km az=171.0*

ISC 23 20:10:22.4±0.5, **63°.10N**±0°.03×**137°.14E**±0°.03, **h10**^{km}, **n45**, σ**2^{s}48**/88, **mb3.6**/14, **2C-1D, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UNR	Ust'-Nera	3.07	59	i Pn	Pn	20 11 11.9	+1.0
UNR				i Pn	Pn	20 11 11.9	+1.0
UNR				ePn	Pn	20 11 11.9	+1.0
UNR				i Pg	Pb	20 11 17.0	-0.1
	7.1nm,0.3s						
UNR				eSn	Sn	20 11 48.0	+0.3
UNR				eSn	Sn	20 11 48.0	+0.3
UNR				eSg	Sb	20 11 57.5	+2.9
	50nm,0.4s						
YAK	Yakutsk	3.62	256	Pn	Pn	20 11 19.6	+1.3
	28nm,0.3s,baz=68,slow=5.9,SNR=84						
YAK				Pg	Pg	20 11 28.4	-3.1
	23nm,0.3s,baz=74,slow=9.5,SNR=8.1						
YAK				Sn	Sn	20 12 02.4	+1.4
	20nm,0.3s,baz=177,slow=17,SNR=2.2						
YAK				Lg	Lg	20 12 15.4	
	38nm,0.3s,baz=108,slow=20,SNR=15						
	79nm,0.3s						
YAK	Yakutsk	3.62	256	eP	Pn	20 11 19.3	+0.9
YAK				e		20 12 02.9	
YAK				pmax	pmax		
	comp=Z,93nm,0.3s						
YAK				pmax	pmax		
	comp=Z,133nm,0.3s						
YAK				smax	smax		
	comp=E,57nm,0.7s						
YAK				smax	smax		
	comp=N,21nm,0.2s						
YAK				smax	smax		
	comp=N,246nm,0.6s						
YAK				smax	smax		
	comp=E,296nm,0.7s						
YAK	Yakutsk	3.62	256	i Pn	Pn	20 11 19.5	+1.1
YAK				i Pn	Pn	20 11 19.5	+1.1
YAK				i Pn	Pn	20 11 19.5	+1.1
YAK				i Pg	Pb	20 11 26.6	+0.3
	comp=E,1.2nm,0.3s						
YAK				eSg	Sg	20 12 14.3	-4.0
	comp=E,5.3nm,0.8s						
MOMR	Moma	4.26	35	ePn	Pn	20 11 28.8	+1.5
MOMR				i Pn	Pn	20 11 28.8	+1.5
MOMR				i Pn	Pn	20 11 28.8	+1.5
MOMR				i Pg	Pb	20 11 39.5	+2.2
	comp=E,0.2nm,1.9s						
MOMR				eSn	Sn	20 12 19.2	+2.2
MOMR				eSn	Sn	20 12 19.2	+2.2
MOMR				eSg	Sg	20 12 37.4	-1.7
	comp=E,26nm,1.3s						
BTGS	Batagay	4.69	348	ePn	Pn	20 11 33.1	0.0
BTGS				i Pn	Pn	20 11 33.1	0.0
BTGS				ePn	Pn	20 11 33.1	0.0
BTGS				i Pg	Pg	20 11 48.9	-3.1
	comp=E,1.8nm,0.4s						
BTGS				eSn	Sn	20 12 27.6	+0.2
BTGS				eSn	Sn	20 12 27.6	+0.2
BTGS				eSg	Sg	20 12 52.0	-0.6
	comp=E,9.6nm,1.2s						
SUUS	Susuman	5.05	89	eSn	Sn	20 12 34.6	-1.8
SUUS				eSn	Sn	20 12 34.6	-1.8
SUUS				eSg	Sg	20 12 60.0	-4.3
	comp=E,60nm,0.9s						
SUUS				eSg	Sg	20 12 60.0	-4.3
	comp=E,110nm,0.9s						
CGD	Chagda	5.40	219	i Pn	Pn	20 11 42.5	-0.3
CGD				i Pn	Pn	20 11 42.5	-0.3
CGD				i Pn	Pn	20 11 42.5	-0.3
CGD				ePg	Pb	20 11 58.3	+1.6
	comp=E,7.4nm,0.6s						
CGD				eSg	Sb	20 13 07.2	+5.8
	comp=E,76nm,0.3s						
DEPR	Deputatskiy	6.42	9	ePn	Pn	20 11 57.5	+0.7
DEPR				ePg	Pg	20 12 19.2	-5.9
	comp=E,1.3nm,0.8s						
DEPR				eSn	Sn	20 13 11.4	+1.5
DEPR				eSn	Sn	20 13 11.4	+1.5
DEPR				eSg	Sg	20 13 45.5	-2.6
	comp=E,3.8nm,1.8s						
TLON	Talon	6.46	116	eSg	Sg	20 13 46.6	-3.0
	comp=E,170nm,0.6s						
YBGR	Belaya Gora	6.59	30	ePn	Pn	20 12 00.4	+1.2
YBGR				i Pg	Pb	20 12 21.7	+4.7
	comp=E,1.5nm,0.6s						
YBGR				eSg	Sg	20 13 49.7	-4.1
	comp=E,2.3nm,1.6s						
SEY	Seymchan	6.94	85	Pn	Pn	20 12 05.7	+1.7
	comp=E,4.1nm,0.3s,baz=272,slow=20,SNR=81						
SEY				Sn	Sn	20 13 19.6	-3.2
	comp=E,5.4nm,0.3s,baz=0.6,slow=18,SNR=5.1						
SEY				Lg	Lg	20 13 59.9	
	comp=E,2.6nm,0.3s,baz=203,slow=23,SNR=5.9						
	comp=E,10nm,0.3s						
SEY	Seymchan	6.94	85	ePn	Pn	20 12 05.4	+1.4
SEY				eSg	Sg	20 14 00.8	-4.0
	comp=E,50nm,0.8s						
MGD	Magadan 1	7.17	109	ePn	Pn	20 12 08.0	+0.9
MGD				eSg	Sg	20 14 05.0	-7.2
	comp=E,60nm,0.5s						
ALDR	Aldan	7.28	237	ePn	Pn	20 12 08.9	+0.1
ALDR				ePg	Pb	20 12 32.1	+3.3
	comp=E,12nm,0.5s						
ALDR				eSg	Sg	20 14 07.2	-8.7
	comp=E,88nm,0.5s						
TLAR	Talaya	7.42	99	ePn	Pn	20 12 11.5	+0.8
TLAR				eSg	Sg	20 14 14.7	-5.6
	comp=E,100nm,0.5s						
MA2	Magadan	7.44	112	Pn	Pn	20 12 13.1	+2.2
	comp=E,0.3nm,0.3s,baz=346,slow=19,SNR=1.6						
MA2				Lg	Lg	20 14 17.5	
	comp=E,1.6nm,0.3s,baz=78,slow=22,SNR=4.5						
	comp=E,1.5nm,0.3s						
MA2	Magadan	7.44	112	i Pg	Pb	20 12 35.0	+3.5
	comp=E,34nm,1.9s						
MA2				eSg	Sb	20 14 12.9	+13
	comp=E,70nm,2.4s						
GADL	Gadlja	7.62	110	eSg	Sg	20 14 21.1	-5.7
	comp=E,170nm,0.7s						
OLMR	Olekminsk	8.37	258	ePn	Pn	20 12 22.8	-0.8
OLMR				ePg	Pb	20 12 52.3	+5.1
	comp=E,1.7nm,1.4s						
OLMR				eSn	Sn	20 13 56.9	-1.0
OLMR				eSn	Sn	20 13 56.9	-1.0
OLMR				eSg	Sg	20 14 43.5	-7.1
	comp=E,8.4nm,0.9s						
CLNS	Chul'man	8.77	230	ePn	Pn	20 12 28.0	-1.2
CLNS				ePg	Pg	20 12 58.9	-11
	comp=E,2.1nm,0.5s						
CLNS				eSg	Sg	20 14 53.2	-10
	comp=E,39nm,0.5s						
TIXI	Tiksi	9.14	343	Pn	Pn	20 12 35.4	+1.3
	comp=E,2.1nm,0.3s,baz=148,slow=15,SNR=39						
TIXI				Sn	Sn	20 14 14.2	-2.8
	comp=E,2.7nm,0.3s,baz=237,slow=7.8,SNR=8.2						
TIXI				Lg	Lg	20 15 12.6	
	comp=E,0.5nm,0.3s,baz=176,slow=10,SNR=3.6						
	comp=E,4.8nm,0.4s						
BOD	Bodaibo	12.54	256	eP	Pn	20 13 16.8	-3.8
BOD				pmax	pmax		
	comp=Z,16nm,0.8s						
KLR	Kul'dur	14.22	195	Lg	Lg	20 17 46.3	
	comp=Z,0.2nm,0.3s,baz=108,slow=22,SNR=4.4						
KLR	Kul'dur	14.22	195	⇓eP	Pn	20 13 43.7	+0.1
KLR				pmax	pmax		
	comp=Z,4.0nm,1.8s						
PEA0B	Petropavlovsk-	14.70	123	⇑eP	Pn	20 13 51.8	+1.7
PETK	Petropavlovsk-	14.70	123	Pn	Pn	20 13 50.9	+0.8
	comp=Z,0.2nm,0.3s,baz=346,slow=11,SNR=14						
USRK	Ussuriysk Ar.	19.17	191	P	P	20 14 46.3	+0.5
	comp=Z,0.1nm,0.3s,baz=353,slow=11,SNR=2.2						
	comp=Z,1.5nm,0.8s						
ULN	Ulaanbaatar	22.57	242	⇑eP	P	20 15 24.9	+2.2
ULN				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM	Songino Array	22.86	242	P	P	20 15 26.7	+1.0
	comp=Z,0.5nm,0.6s,baz=44,slow=9.9,SNR=3.7						
	comp=Z,0.5nm,0.6s						
SONM	Songino Array	22.86	242	eP	P	20 15 30.2	+4.5
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ZALV	Zalesovo Beam	28.03	276	P	P	20 16 14.2	+0.9
	comp=Z,0.4nm,0.4s,baz=59,slow=8.9,SNR=1.8						
	comp=Z,0.4nm,0.4s						
ILAR	Eielson Array	31.58	53	P	P	20 16 45.1	+0.5
	comp=Z,0.7nm,0.6s,baz=300,slow=8.3,SNR=8.5						
	comp=Z,0.7nm,0.6s						
ILAR	Eielson Array	31.58	53	eP	P	20 16 45.4	+0.8
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	Kurchatov	33.02	276	P	P	20 16 58.6	+1.3
KURBB	Kurchatov Arra	33.13	276	P	P	20 16 58.6	+0.3
	comp=Z,1.1nm,0.3s,baz=48,slow=9.3,SNR=9.1						
	comp=Z,1.1nm,0.3s						
INK	Inuvik	34.03	42	P	P	20 17 07.1	+1.1
	comp=Z,2.2nm,0.4s,baz=191,slow=6.7,SNR=2.7						
	comp=Z,2.2nm,0.4s						
MKAR	Makanchi Array	34.21	268	P	P	20 17 08.1	+0.3
	comp=Z,0.1nm,0.3s,baz=44,slow=8.6,SNR=4.5						
	comp=Z,0.1nm,0.3s						
BVAR	Borovoye Array	35.10	285	P	P	20 17 15.6	+0.3
	comp=Z,0.4nm,0.3s,baz=58,slow=8.7,SNR=4.7						
	comp=Z,0.4nm,0.3s						
ARCES	ARCESS Array B	39.22	329	P	P	20 17 52.1	+1.9
	comp=Z,1.9nm,0.9s,baz=48,slow=8.1,SNR=1.7						
	comp=Z,1.9nm,0.9s						
FINES	FINESS Array B	45.37	321	P	P	20 18 40.6	+0.4
	comp=Z,0.6nm,0.7s,baz=23,slow=8.6,SNR=1.8						
	comp=Z,0.6nm,0.7s						
OBN	Obninsk	47.08	310	eP	P	20 18 54.9	+1.2
OBN				pmax	pmax		
	comp=Z,5.0nm,0.5s						
NOA	NORSAR Array B	49.60	329	P	P	20 19 14.4	+1.2
	comp=Z,0.3nm,0.7s,baz=28,slow=7.5,SNR=1.4						
	comp=Z,0.3nm,0.7s						
AKASG	Malin Array Be	53.25	311	P	P	20 19 41.2	+0.7
	comp=Z,0.1nm,0.3s,baz=43,slow=6.7,SNR=1.4						
	comp=Z,0.1nm,0.3s						
WRA	Warramunga Arr	82.80	183	P	P	20 22 45.6	-0.8
	comp=Z,0.2nm,0.5s,baz=358,slow=5.5,SNR=1.4						
	comp=Z,0.2nm,0.5s						

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*IDC **23** 20:12:00.7±1.8, 30°.50S×177°.42W, h0^{km}, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=44.5km s-min=22.1km az=83.0*

ISC 23 20:12:05.3±1.8, **30°.5S**±0°.1×**177°.4W**±0°.3, **h33**^{km}, **n6**, σ**1^{s}11**/7, **mb3.7**/4, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.30	338	Pn	Pn	20 12 26.7	-0.5
	191nm,0.3s,baz=69,slow=24,SNR=5.9						
RAO				Sn	Sb	20 12 46.5	+0.9
	360nm,0.3s,baz=56,slow=20,SNR=7.1						
STKA	Stephens Creek	35.00	257	P	P	20 18 55.7	+1.0
	1.6nm,0.6s,baz=93,slow=12,SNR=4.6						
	1.6nm,0.6s						
ASAR	Alice Springs	43.65	267	P	P	20 20 06.1	-0.9
	0.5nm,0.8s,baz=110,slow=7.7,SNR=2.7						
	0.5nm,0.8s						
WRA	Warramunga Arr	44.65	272	P	P	20 20 13.9	-1.2
	0.7nm,0.6s,baz=113,slow=8.0,SNR=3.5						
	0.7nm,0.6s						
QSPA	South Pole Qui	59.65	180	P	P	20 22 06.6	+0.6
	0.3nm,0.6s,baz=0.0,slow=3.0,SNR=1.1						
	0.3nm,0.6s						
FINES	FINESS Array B	145.39	340	PKPbc	PKPbc	20 31 38.5	-0.5
	2.2nm,0.7s,baz=42,slow=4.3,SNR=16						

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*IDC **23** 20:13:46.5±1.9, 30°.48S×177°.26W, h0^{km}, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=44.9km s-min=22.3km az=78.0*

ISC 23 20:13:47.8±1.8, **30°.5S**±0°.1×**177°.2W**±0°.3, **h10**^{km}, **n6**, σ**1^{s}10**/6, **mb4.1**/4, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.39	331	Pn	Pn	20 14 13.7	+0.3
	324nm,0.3s,baz=108,slow=19,SNR=9.6						
RAO				Sn	Sb	20 14 32.1	+0.3
	420nm,0.3s,baz=78,slow=20,SNR=5.5						
STKA	Stephens Creek	35.18	257	P	P	20 20 42.6	+0.5
	3.5nm,0.8s,baz=107,slow=5.9,SNR=5.5						
	3.5nm,0.8s						
ASAR	Alice Springs	43.84	267	P	P	20 21 53.4	-1.0
	0.7nm,0.8s,baz=107,slow=8.3,SNR=4.1						
	0.7nm,0.8s						
WRA	Warramunga Arr	44.84	272	P	P	20 22 00.3	-2.1
	1.4nm,0.7s,baz=113,slow=7.6,SNR=4.9						
	1.4nm,0.7s						
QSPA	South Pole Qui	59.63	180	P	P	20 23 52.7	+0.8
	1.9nm,1.1s,baz=59,slow=5.9,SNR=1.5						
	1.9nm,1.1s						
FINES	FINESS Array B	145.47	340	PKPbc	PKPbc	20 33 24.2	-1.2
	1.9nm,0.7s,baz=40,slow=3.6,SNR=9.2						

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*IDC **23** 20:22:53.4±1.0, 30°.69S×177°.35W, h0^{km}, mb4.1/5, mbtmp4.1/5, Error ellipse: s-maj=30.4km s-min=21.7km az=91.0*

ISC 23 20:22:57.7±1.0, **30°.80S**±0°.07×**177°.6W**±0°.2, **h27**^{km}, **n16**, σ**1^{s}33**/20, **mb4.1**/5, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.57	350	Pn	Pn	20 23 22.3	-1.5
	315nm,0.3s,baz=62,slow=23,SNR=13						
RAO				Sn	Sb	20 23 45.0	-0.5
	463nm,0.3s,baz=266,slow=23,SNR=7.1						
URZ	Urewera	8.62	209	Pn	Pn	20 24 58.7	-1.9
	0.3nm,0.3s,baz=20,slow=20,SNR=1.3						
URZ				Sn	Sn	20 26 34.6	-2.3
	0.8nm,0.3s,baz=348,slow=15,SNR=2.2						
STKA	Stephens Creek	34.72	257	P	P	20 29 47.9	+2.4
	7.0nm,0.8s,baz=96,slow=11,SNR=8.6						
	7.0nm,0.8s						
ASAR	Alice Springs	43.42	267	P	P	20 30 59.9	+1.4
	1.3nm,0.7s,baz=106,slow=7.6,SNR=21						
ASAR				PcP	PcP	20 32 48.4	+1.8
	0.6nm,0.7s,baz=121,slow=3.9,SNR=4.1						
	1.3nm,0.7s						
WRA	Warramunga Arr	44.45	272	P	P	20 31 07.0	+0.4
	4.3nm,0.8s,baz=112,slow=7.7,SNR=25						
WRA				PcP	PcP	20 32 49.9	-0.1
	0.6nm,0.8s,baz=111,slow=2.7,SNR=2.9						
	4.3nm,0.8s						
QSPA	South Pole Qui	59.31	180	P	P	20 32 58.8	+1.8
	1.3nm,0.9s,baz=333,slow=1.2,SNR=2.2						
	1.3nm,0.9s						
PETK	Petropavlovsk-	86.28	345	P	P	20 35 36.6	0.0
	0.8nm,0.7s,baz=157,slow=9.4,SNR=4.0						
	0.8nm,0.7s						
KURBB	Kurchatov Arra	121.61	313	PKP	PKPdf	20 41 47.9	-0.5
	0.4nm,0.7s,baz=87,slow=1.7,SNR=2.5						
BVAR	Borovoye Array	126.93	316	PKP	PKPdf	20 41 58.2	-0.4
	0.4nm,0.6s,baz=125,slow=3.5,SNR=2.7						
KBZ	Khabaz	145.61	304	PKPbc	PKPab	20 42 34.1	+0.2
	1.6nm,0.8s,baz=99,slow=2.6,SNR=4.0						
FINES	FINESS Array B	145.64	340	PKPbc	PKPdf	20 42 32.3	-0.5
	7.7nm,0.7s,baz=61,slow=3.6,SNR=33						
NB2	NORSAR Subarra	149.20	352	PKP	PKPbc	20 42 43.0	-0.1
	comp=Z,2.0nm,1.1s,baz=13,slow=2.5						
NOA	NORSAR Array B	149.20	352	PKPbc	PKPbc	20 42 41.8	-1.3
	comp=Z,0.9nm,0.8s,baz=15,slow=3.7,SNR=3.8						
HFS	Hagfors	149.70	349	PKPbc	PKPbc	20 42 43.4	-0.9
	comp=Z,1.2nm,0.6s,baz=30,slow=2.3,SNR=5.5						
AKASG	Malin Array Be	151.82	323	PKPbc	PKPbc	20 42 48.9	-0.7
	comp=Z,0.9nm,0.7s,baz=55,slow=2.5,SNR=6.1						
MMAI	Mount Meron Ar	151.95	283	PKPbc	PKiKP	20 42 51.8	+0.9
	comp=Z,0.5nm,0.4s,baz=79,slow=7.5,SNR=1.6						

IDC 23 20:23:23.3±395.0, **11°.70S**×**64°.80E**, **h0**^{km}, **Error ellipse: s-maj=215.2km s-min=137.5km az=17.0, South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I52GB	DIEGO GARCIA I	8.71	61	I	I	21 17 00.0	
	baz=238,slow=318,SNR=1.7						
I32KE	NAIROBI INFRAS	29.64	288	I	I	23 26 45.8	
	baz=108,slow=322,SNR=1.6						
I19DJ	I19DJ	31.49	316	I	I	23 32 30.0	
	baz=136,slow=312,SNR=1.2						

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*STR **23** 20:43:41.9±1.6, 42°N±18°×1°3E±1°0, h10^{km}, MLv3.9/11, Error ellipse: s-maj=0.0km s-min=0.0km az=7.0, preliminary*

*NEIC **23** 20:43:47.8±2.0, 41°.86N±0°.04×12°.82E±0°.05, h10^{km}±2^{km}, ML3.4/46, Error ellipse: s-maj=6.7km s-min=5.6km az=303.0*

*IDC **23** 20:43:47.1±1.2, 41°.96N×12°.55E, h0^{km}, mb3.7/7, mbtmp3.5/16, ML3.2/8, MS2.9/9, Error ellipse: s-maj=20.1km s-min=14.5km az=73.0*

*ROM **23** 20:43:47.7±0.0, 41°.859N±0°.002×12°.763E±0°.004, h11^{km}, ML3.7/316, Mw3.6, Error ellipse: s-maj=0.3km s-min=0.2km az=231.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-2.40; $M_{\theta\theta}$1.27; $M_{\phi\phi}$1.14; $M_{r\theta}$-0.04; $M_{\theta\phi}$-1.72; $M_{\phi r}$-0.49; Fault plane solution: $M_0$2.71583×10^{14} NP1:ϕ_s324.00000°, δ49.00000°, λ-76.00000°. NP2:ϕ_s123.00000°, δ43.00000°, λ-106.00000°.*

*LDG **23** 20:43:48.3±0.1, 41°.87N×12°.81E, h10^{km}, Ml3.1/18 Error ellipse: s-maj=2.0km s-min=1.4km az=8.0*

*PRU **23** 20:43:51.6, 42°.02N×12°.82E, h10^{km}*

*BEO **23** 20:43:59.5±0.7, 42°.42N×13°.66E, h0^{km}, ML3.5/5*

ISC 23 20:43:48.3±0.7, **41°.86N**±0°.02×**12°.76E**±0°.02, **h14**^{km}±4^{km}, **n367**, σ**1^{s}82**/419, **mb3.8**/6, **MS3.0**/3, **17C-8D, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RMP	Rome, Mte Porz	0.06	219	⇑P	Pg	20 43 50.4	-0.6
RMP				S	Sg	20 43 51.8	-1.1
RMP				AML	AML		
RMP				AML	AML		
RMP				AML	AML		
RDP	Rocca di Papa	0.11	196	⇑P	Pg	20 43 51.3	-0.2
RDP				S	Sg	20 43 53.3	-0.4
VIVA	Pratoni del Vi	0.11	175	⇑P	Pg	20 43 51.3	-0.2

VIVA				S	Sg	20 43 53.4	-0.4
VIVA				AML	AML		
VIVA				AML	AML		
VIVA				AML	AML		
MA9	**Marino**	0.12	218	⇑P	Pg	20 43 51.1	-0.4
MA9				S	Sg	20 43 53.1	-0.7
RCAV	**Rocca di Cave**	0.14	96	⇑P	Pg	20 43 51.7	-0.3
RCAV				S	Sg	20 43 53.9	-0.6
RCAV				AML	AML		
RCAV				AML	AML		
RCAV				AML	AML		
SAMA	**S.Maria delle**	0.15	237	⇑P	Pg	20 43 51.6	-0.4
SAMA				S	Sg	20 43 54.2	-0.2
SAMA				AML	AML		
SAMA				AML	AML		
	comp=N,70850µm,0.6s						
SAMA				AML	AML		
MTCE	**Montecelio**	0.16	356	⇑P	Pg	20 43 51.8	-0.4
MTCE				S	Sg	20 43 54.7	-0.2
MTCE				AML	AML		
	comp=E,55650µm,0.3s						
MTCE				AML	AML		
LAV9	**Lanuvio**	0.19	193	P	Pg	20 43 52.8	+0.1
LAV9				S	Sg	20 43 56.0	+0.5
LAV9				AML	AML		
LAV9				AML	AML		
LAV9				AML	AML		
LAV9				AML	AML		
CERT	**Cerreto**	0.19	63	P	Pg	20 43 52.4	-0.3
CERT				S	Sg	20 43 55.6	-0.1
CERT				AML	AML		
	comp=E,93550µm,0.8s						
CERT				AML	AML		
	comp=N,68400µm,0.8s						
CERT				AML	AML		
	comp=N,68400µm,1.2s						
LATB	**Latina**	0.40	157	⇓P	Pg	20 43 55.8	-0.4
LATB				S	Sb	20 44 01.9	-1.2
LATB				AML	AML		
	comp=N,9310µm,0.9s						
LATB				AML	AML		
	comp=E,14150µm,0.4s						
LATB				AML	AML		
	comp=N,9310µm,1.1s						
SRES	**S.Oreste - Sor**	0.42	334	⇑P	Pg	20 43 56.1	-0.5
SRES				S	Sg	20 44 02.8	+0.5
GUAR	**Guarcino**	0.42	99	⇓P	Pb	20 43 56.2	-1.4
GUAR				S	Sb	20 44 02.3	-1.6
GUAR				AML	AML		
	comp=E,41250µm,0.4s						
GUAR				AML	AML		
	comp=N,30350µm,0.4s						
GIUL	**Giuliano Di Ro**	0.48	129	⇓P	Pg	20 43 57.2	-0.6
GIUL				S	Sb	20 44 04.4	-1.1
GIUL				AML	AML		
	comp=N,18450µm,0.7s						
GIUL				AML	AML		
	comp=E,19300µm,1.2s						
GIUL				AML	AML		
	comp=N,18450µm,1.3s						
FIAM	**Fiamignano**	0.49	33	⇑P	Pb	20 43 57.4	-1.3
FIAM				AML	AML		
	comp=E,23700µm,1.1s						
FIAM				AML	AML		
	comp=N,17650µm,0.6s						
FIAM				AML	AML		
	comp=N,9625µm,1.0s						
FIAM				AML	AML		
	comp=E,11720µm,0.5s						
FIAM				AML	AML		
	comp=E,23700µm,0.9s						
PTQR	**Pietraquaria**	0.51	71	⇑P	Pb	20 43 57.7	-1.4
PTQR				S	Sb	20 44 05.1	-1.3
PTQR				AML	AML		
	comp=N,13085µm,1.2s						
PTQR				AML	AML		
	comp=E,21900µm,1.1s						
TOLF	**Tolfa**	0.60	290	⇑P	Pg	20 43 59.9	-0.2
TOLF				S	Sg	20 44 08.5	+0.5
TOLF				AML	AML		
	comp=E,10740µm,0.6s						
TOLF				AML	AML		
	comp=N,14600µm,0.5s						
TOLF				AML	AML		
	comp=E,10740µm,1.4s						
TOLF				AML	AML		
	comp=N,14600µm,1.5s						
VVLD	**Villa Vallelon**	0.65	89	P	Pb	20 44 00.0	-1.4
VVLD				AML	AML		
	comp=N,13300µm,0.6s						
VVLD				AML	AML		
	comp=N,13300µm,1.4s						
VVLD				AML	AML		
	comp=E,13350µm,0.4s						
BARO	**Barbarano Roma**	0.65	307	P	Pg	20 44 00.8	-0.3
BARO				AML	AML		
	comp=E,6990µm,0.4s						
BARO				AML	AML		
	comp=E,27300µm,1.6s						
BARO				AML	AML		
	comp=N,38950µm,1.6s						
BARO				AML	AML		
	comp=N,38950µm,0.4s						
BARO				AML	AML		
	comp=E,27450µm,1.6s						
BARO				AML	AML		
	comp=N,7660µm,0.5s						
LRP	**Arpino**	0.66	109	P	Pg	20 44 00.1	-1.0
LRP				AML	AML		
	comp=E,24100µm,0.4s						
LRP				AML	AML		
	comp=N,13400µm,0.8s						
LRP				AML	AML		
	comp=E,24100µm,1.6s						
LRP				AML	AML		
	comp=N,13400µm,1.2s						
AQU	**L'Aquila**	0.69	44	P	Pg	20 44 00.6	-1.1
LIK	**San Giovanni I**	0.70	120	P	Pb	20 44 01.3	-0.9
LIK				AML	AML		
	comp=E,20650µm,1.0s						
LIK				AML	AML		
	comp=N,16300µm,0.4s						
LIK				AML	AML		
	comp=E,20650µm,1.0s						
ARRO	**Arrone**	0.72	1	P	Pg	20 44 01.3	-0.9
ARRO				AML	AML		
	comp=E,7690µm,0.9s						
ARRO				AML	AML		
	comp=N,9845µm,1.2s						
ARRO				AML	AML		
	comp=E,7690µm,1.1s						
ARRO				AML	AML		
	comp=N,9845µm,0.8s						
POFI	**Posta Fibreno**	0.73	101	⇓P	Pg	20 44 01.3	-1.2
POFI				AML	AML		
	comp=N,7190µm,0.6s						
POFI				AML	AML		
	comp=E,5940µm,0.9s						
POFI				AML	AML		
	comp=E,7185µm,0.9s						
POFI				AML	AML		
	comp=N,5840µm,0.6s						
POFI				AML	AML		
	comp=E,7185µm,1.1s						
POFI				AML	AML		
	comp=E,5940µm,1.1s						
RM33	**Pellescritta (**	0.73	28	P	Pg	20 44 01.5	-1.1
RM33				AML	AML		
	comp=E,12000µm,0.9s						
RM33				AML	AML		
	comp=N,13050µm,0.4s						
RM33				AML	AML		
	comp=E,12000µm,0.9s						
RM33				AML	AML		
	comp=N,12800µm,0.4s						
RM33				AML	AML		
	comp=E,12000µm,1.1s						
RM33				AML	AML		
	comp=E,12000µm,1.1s						
FAGN	**Fagnano**	0.74	56	P	Pb	20 44 02.0	-1.0
FAGN				AML	AML		
	comp=E,23500µm,0.4s						
FAGN				AML	AML		
	comp=N,17650µm,1.6s						
FAGN				AML	AML		
	comp=E,23500µm,1.6s						
FAGN				AML	AML		
	comp=N,17650µm,0.4s						
CESX	**Cesi**	0.76	350		Pg	20 44 02.0	-1.0
CESX				Sg	Sn	20 44 15.2	-0.8
CESX	**Cesi**	0.76	350	P	Pg	20 44 02.1	-1.0
CESX				AML	AML		
	comp=E,9495µm,0.5s						
CESX				AML	AML		
	comp=N,12700µm,0.4s						
LNSS	**Leonessa**	0.77	16	P	Pg	20 44 02.0	-1.2
LNSS				AML	AML		
	comp=E,10475µm,0.7s						
LNSS				AML	AML		
	comp=N,10135µm,0.6s						
LNSS				AML	AML		
	comp=N,10800µm,0.9s						
LNSS				AML	AML		
	comp=N,10155µm,0.6s						
LNSS				AML	AML		
	comp=N,10800µm,1.1s						
LNSS				AML	AML		
	comp=E,10450µm,0.7s						
LNSS				AML	AML		
	comp=E,10460µm,0.7s						
CAMP	**Campotosto**	0.83	36	Pg	Pg	20 44 03.1	-1.3
CAMP				IAML		20 44 25.2	
	comp=E,1µm,0.8s						
CAMP				IAML		20 44 25.5	
	comp=N,2µm,0.8s						
CAMP	**Campotosto**	0.83	36	P	Pg	20 44 03.2	-1.2
CAMP				AML	AML		
	comp=E,3660µm,0.9s						
CAMP				AML	AML		
	comp=N,5080µm,0.6s						
CAMP				AML	AML		
	comp=E,3660µm,1.1s						
GAVE	**Gavelli**	0.84	7	P	Pg	20 44 03.3	-1.3
GAVE				AML	AML		
	comp=E,9930µm,1.1s						
GAVE				AML	AML		
	comp=E,9935µm,1.1s						
GAVE				AML	AML		
	comp=E,9935µm,0.9s						
GAVE				AML	AML		
	comp=N,10610µm,0.4s						
GAVE				AML	AML		
	comp=N,3010µm,0.4s						
GAVE				AML	AML		
	comp=E,9870µm,0.3s						
GIGS	**Gran Sasso**	0.84	46	P	Pg	20 44 03.3	-1.3
GIGS				AML	AML		
	comp=N,2780µm,0.5s						
GIGS				AML	AML		
	comp=N,2780µm,1.5s						
GIGS				AML	AML		
	comp=E,3145µm,1.2s						
T0110	**Collepietro**	0.84	64	P	Pb	20 44 03.6	-1.2
T0110				AML	AML		
	comp=E,11850µm,1.1s						
T0110				AML	AML		
	comp=N,10755µm,0.4s						
T0110				AML	AML		
	comp=E,11850µm,0.9s						
INTR	**Introdacqua**	0.87	80		Pg	20 44 03.5	-1.6
INTR				IAML		20 44 27.3	
	comp=E,2µm,1.0s						
INTR	**Introdacqua**	0.87	80	P	Pg	20 44 03.9	-1.3
INTR				AML	AML		
	comp=E,5760µm,1.0s						
INTR				AML	AML		
	comp=N,13450µm,0.8s						
INTR				AML	AML		
	comp=E,8370µm,1.1s						
INTR				AML	AML		
	comp=N,13650µm,0.8s						
MCI	**Monte Cassino**	0.88	115	P	Pg	20 44 03.8	-1.5
MCI				AML	AML		
	comp=E,14650µm,0.2s						
MCI				AML	AML		
	comp=N,12850µm,0.9s						
SMA1	**SAN MARTINO**	0.88	29	P	Pb	20 44 04.8	-0.6
SMA1				AML	AML		
	comp=E,19950µm,0.6s						
SMA1				AML	AML		
	comp=E,19950µm,1.4s						
SMA1				AML	AML		
	comp=N,14450µm,1.4s						
MOMA	**Monte Martano**	0.95	352	P	Pg	20 44 05.4	-1.3
MOMA				AML	AML		
	comp=E,11350µm,0.7s						
MOMA				AML	AML		
	comp=N,9100µm,0.3s						
MOMA				AML	AML		
	comp=E,11350µm,1.3s						
MOMA				AML	AML		
	comp=N,9100µm,1.7s						
VCEL	**Villa Celiera**	0.97	56	P	Pb	20 44 06.3	-0.6
VCEL				AML	AML		
	comp=E,10340µm,0.5s						
VCEL				AML	AML		
	comp=N,9285µm,0.7s						
CERA	**Filignano**	0.98	105	P	Pg	20 44 05.6	-1.6
CERA				AML	AML		
	comp=E,6650µm,1.6s						
CERA				AML	AML		
	comp=N,6415µm,1.0s						
CERA				AML	AML		
	comp=E,6960µm,1.6s						
CERA				AML	AML		
	comp=N,6670µm,1.0s						
CERA				AML	AML		
	comp=E,6960µm,0.4s						
CERA				AML	AML		
	comp=E,6650µm,0.4s						
TERO	**Teramo**	0.99	39	P	Pg	20 44 06.2	-1.2
TERO				AML	AML		
	comp=N,5355µm,0.5s						
TERO				AML	AML		
	comp=E,4775µm,0.5s						
TERO				AML	AML		
	comp=E,2775µm,0.5s						
TERO				AML	AML		
	comp=N,3260µm,1.1s						
NRCA	**Norcia**	1.01	15	Pg	Pg	20 44 05.8	-1.9
NRCA				IAML		20 44 26.6	
	comp=E,1µm,0.6s						
NRCA				IAML		20 44 28.9	
	comp=N,1µm,0.9s						
NRCA	**Norcia**	1.01	15	P	Pg	20 44 06.0	-1.8
NRCA				AML	AML		
	comp=E,3410µm,0.4s						
NRCA				AML	AML		
	comp=N,3140µm,0.7s						
NRCA				AML	AML		
	comp=N,3360µm,0.7s						
NRCA				AML	AML		
	comp=N,3360µm,1.3s						
NRCA				AML	AML		
	comp=E,3725µm,0.4s						
NRCA				AML	AML		
	comp=N,3140µm,1.3s						
MTRA	**Matera**	1.01	28	P	Pg	20 44 06.2	-1.7
MTRA				AML	AML		
	comp=E,8735µm,0.4s						
MTRA				AML	AML		
	comp=E,8690µm,0.4s						
MTRA				AML	AML		
	comp=N,9765µm,0.4s						
MTRA				AML	AML		
	comp=N,9965µm,0.4s						
MTRA				AML	AML		
	comp=E,8740µm,0.4s						
LATE	**Laterza**	1.03	317	P	Pg	20 44 06.9	-1.3
LATE				AML	AML		
	comp=N,3925µm,0.8s						
LATE				AML	AML		
	comp=E,3600µm,0.5s						
LATE				AML	AML		
	comp=N,3925µm,1.2s						
RNI2	**Rionero Sannit**	1.06	98	P	Pg	20 44 07.3	-1.4
RNI2				AML	AML		
	comp=E,6840µm,1.5s						
RNI2				AML	AML		
	comp=E,7030µm,1.5s						
RNI2				AML	AML		
	comp=N,4700µm,0.7s						
RNI2				AML	AML		
	comp=N,4565µm,0.7s						
RNI2				AML	AML		
	comp=E,6840µm,0.5s						
RNI2				AML	AML		
	comp=E,7030µm,0.5s						
LPEL	**Lama dei Pelig**	1.08	80	P	Pg	20 44 07.2	-1.9
LPEL				AML	AML		
	comp=E,3985µm,1.0s						
LPEL				AML	AML		
	comp=N,3015µm,0.8s						
LPEL				AML	AML		
	comp=E,4110µm,1.0s						
LPEL				AML	AML		
	comp=N,3045µm,0.8s						
LPEL				AML	AML		
	comp=E,4110µm,1.0s						
LPEL				AML	AML		
	comp=N,3045µm,1.2s						
LPEL				AML	AML		
	comp=E,3985µm,1.0s						
LPEL				AML	AML		
	comp=N,3015µm,1.2s						
MC2	**Monte Cornacci**	1.10	17	P	Pg	20 44 08.0	-1.5
MODR	**Mondragone**	1.10	130	P	Pg	20 44 07.4	-2.1
MODR				AML	AML		
	comp=E,3060µm,0.7s						
MODR				AML	AML		
	comp=N,3870µm,0.4s						
MMO1	**Montemonaco**	1.12	22	P	Pg	20 44 08.3	-1.6
FEMA	**Monte Fema**	1.12	11	P	Pg	20 44 08.1	-1.8
MIDA	**Miranda**	1.14	101	P	Pg	20 44 08.3	-2.0
MIDA				AML	AML		
	comp=E,2425µm,0.5s						
MIDA				AML	AML		
	comp=N,2280µm,0.5s						
MIDA				AML	AML		
	comp=E,2525µm,0.5s						
MIDA				AML	AML		
	comp=E,2425µm,1.5s						
MIDA				AML	AML		
	comp=N,2595µm,1.0s						
CESI	**CESI - Serrava**	1.15	5	P	Pb	20 44 08.4	-1.6
CESI				AML	AML		
	comp=E,5995µm,0.9s						
CESI				AML	AML		
	comp=N,6225µm,1.6s						
CESI				AML	AML		
	comp=E,6170µm,0.9s						
CESI				AML	AML		
	comp=N,6455µm,1.6s						
CESI				AML	AML		
	comp=E,6170µm,1.1s						
CESI				AML	AML		
	comp=E,5995µm,1.1s						
CESI				AML	AML		
	comp=N,6225µm,0.4s						
CESI				AML	AML		
	comp=N,6455µm,0.4s						
MGAB	**Montegabbione**	1.15	336	P	Pb	20 44 09.5	-0.6
MGAB				AML	AML		
	comp=N,2125µm,1.1s						
MGAB				AML	AML		
	comp=E,3385µm,0.4s						
MGAB				AML	AML		
	comp=N,1980µm,0.9s						
MGAB				AML	AML		
	comp=E,3715µm,0.4s						
SACS	**San Casciano d**	1.17	328	P	Pb	20 44 09.3	-1.1
VENT	**Ventotene**	1.18	155	P	Pb	20 44 09.1	-1.4
VENT				AML	AML		
	comp=N,5260µm,0.3s						
VENT				AML	AML		
	comp=E,4080µm,0.5s						
VAGA	**Valle Agricola**	1.19	111	P	Pb	20 44 09.8	-1.0
VAGA				AML	AML		
	comp=E,1655µm,1.6s						
VAGA				AML	AML		
	comp=N,3510µm,0.5s						
VAGA				AML	AML		
	comp=E,1745µm,1.6s						
VAGA				AML	AML		
	comp=N,3665µm,0.5s						
VAGA				AML	AML		
	comp=E,1745µm,0.4s						
VAGA				AML	AML		
	comp=N,3510µm,1.5s						
VAGA				AML	AML		
	comp=N,3665µm,1.5s						
VAGA				AML	AML		
	comp=E,1655µm,0.4s						
FDMO	**Fiordimonte**	1.20	12		Pb	20 44 09.6	-1.2
FDMO				IAML		20 44 31.1	
	comp=N,837nm,0.9s						
FDMO	**Fiordimonte**	1.20	12	P	Pb	20 44 09.7	-1.1
FDMO				AML	AML		
	comp=E,4420µm,0.5s						
FDMO				AML	AML		
	comp=N,2235µm,1.0s						
SF03	**Valle Cupa**	1.23	320	P	Pn	20 44 10.6	-0.6
SF14	**Selvena**	1.23	317	P	Pn	20 44 10.3	-0.9
MF5	**Montefalcone A**	1.24	25	P	Pb	20 44 10.7	-0.9
MF5				AML	AML		
	comp=E,4600µm,0.7s						
MF5				AML	AML		
	comp=E,4600µm,1.3s						
MF5				AML	AML		
	comp=N,7615µm,0.5s						
PIGN	**Pignataro Magg**	1.26	121	P	Pn	20 44 10.8	-0.7
PIGN				AML	AML		
	comp=E,1806µm,0.8s						
PIGN				AML	AML		
	comp=N,1995µm,0.9s						
PIGN				AML	AML		
	comp=N,2040µm,0.9s						
PIGN				AML	AML		
	comp=E,1806µm,1.2s						
PIGN				AML	AML		
	comp=E,1653µm,0.4s						
MML1	**Montelago di S**	1.26	7	P	Pn	20 44 10.5	-1.1
SF04	**Casetta**	1.27	321	P	Pn	20 44 10.9	-0.8
CSP1	**Cessapalombo**	1.27	15	P	Pn	20 44 10.6	-1.2
CSP1				AML	AML		
	comp=E,3845µm,1.2s						
CSP1				AML	AML		
	comp=N,5405µm,0.5s						
CSP1				AML	AML		
	comp=E,3845µm,0.8s						
CSP1				AML	AML		
	comp=N,5405µm,1.5s						
GUMA	**Gualdo di Mace**	1.27	19		Pb	20 44 11.6	-0.6
GUMA	**Gualdo di Mace**	1.27	19	P	Pn	20 44 11.3	-0.5
GUMA				AML	AML		
	comp=N,11150µm,0.5s						
GUMA				AML	AML		
	comp=E,13250µm,0.8s						
GUMA				AML	AML		
	comp=E,12700µm,0.5s						
GUMA				AML	AML		
	comp=N,12750µm,0.5s						
OFFI	**Offida**	1.27	32	P	Pg	20 44 11.8	-1.0
OFFI				AML	AML		
	comp=E,9145µm,0.5s						
OFFI				AML	AML		
	comp=N,9010µm,0.6s						
OFFI				AML	AML		
	comp=E,9145µm,1.5s						
OFFI				AML	AML		
	comp=N,9010µm,1.4s						
SF13	**Bagnolo**	1.27	319	P	Pn	20 44 11.1	-0.6
TRTR	**Tortoreto Alta**	1.28	42	P	Pg	20 44 11.9	-0.9
TRTR				AML	AML		
	comp=E,8905µm,0.5s						
TRTR				AML	AML		
	comp=N,7490µm,1.5s						
TRTR				AML	AML		
	comp=E,8905µm,1.5s						
SF11	**Podere del Sol**	1.28	322	P	Pn	20 44 11.1	-0.8
SEF1	**Sefro**	1.29	6	P	Pn	20 44 11.1	-0.9
SF01	**Poggio Pratacc**	1.30	317	P	Pn	20 44 11.2	-0.9
SGG	**Gregorio Mates**	1.31	111	P	Pb	20 44 11.8	-0.9
SGG				AML	AML		
	comp=E,1905µm,0.6s						
SGG				AML	AML		
	comp=N,1725µm,1.0s						
SGG				AML	AML		
	comp=E,2005µm,0.6s						
SGG				AML	AML		

	comp=N,1795µm,1.0s						
SGG				AML	AML		
	comp=E,2005µm,1.4s						
SGG				AML	AML		
	comp=E,1905µm,1.4s						
SAP2	**Sant’Angelo in**	**1.32**	**21**	P	**Pg**	**20 44 13.0**	**-0.8**
SAP2				AML	AML		
	comp=N,19700µm,0.4s						
SAP2				AML	AML		
	comp=E,3425µm,0.5s						
ATCC	**AVT- Casa Cast**	**1.33**	**356**	P	**Pn**	**20 44 11.9**	**-0.5**
PF6	**Pievefavera**	**1.33**	**14**	P	**Pn**	**20 44 11.6**	**-0.9**
FIU1	**Fiuminata**	**1.33**	**6**	P	**Pn**	**20 44 12.1**	**-0.5**
MAON	**Monte Argentar**	**1.33**	**296**	P	**Pn**	**20 44 11.6**	**-0.9**
MAON				AML	AML		
	comp=N,698µm,1.2s						
MAON				AML	AML		
	comp=N,698µm,0.8s						
MAON				AML	AML		
	comp=E,986µm,1.2s						
TRIV	**Trivento**	**1.34**	**93**	P	**Pn**	**20 44 12.1**	**-0.7**
TRIV				AML	AML		
	comp=E,1575µm,0.8s						
TRIV				AML	AML		
	comp=N,1540µm,0.9s						
TRIV				AML	AML		
	comp=N,1655µm,0.9s						
TRIV				AML	AML		
	comp=N,1655µm,1.1s						
TRIV				AML	AML		
	comp=E,1575µm,1.2s						
TRIV				AML	AML		
	comp=N,1540µm,1.1s						
TRIV				AML	AML		
	comp=E,1615µm,0.8s						
MDAR	**Monte D'Aria**	**1.36**	**12**	P	**Pn**	**20 44 12.7**	**-0.3**
ATTE	**AVT- Monte Tez**	**1.37**	**348**	P	**Pn**	**20 44 13.1**	**0.0**
ATTE				AML	AML		
	comp=E,1865µm,0.5s						
ATTE				AML	AML		
	comp=N,1770µm,1.0s						
ARCI	**Arcidosso**	**1.37**	**317**	P	**Pn**	**20 44 12.9**	**-0.2**
ARCI				AML	AML		
	comp=E,524µm,0.7s						
ARCI				AML	AML		
	comp=N,498µm,1.6s						
ARCI				AML	AML		
	comp=N,496µm,1.2s						
ARCI				AML	AML		
	comp=N,498µm,0.4s						
ARCI				AML	AML		
	comp=E,566µm,0.7s						
MNTP	**Montappone**	**1.38**	**22**	P	**Pb**	**20 44 13.4**	**-0.5**
GAG1	**Gagliole**	**1.40**	**9**	P	**Pg**	**20 44 14.1**	**-1.1**
SNTG	**Esanatoglia**	**1.40**	**6**	P	**Pn**	**20 44 13.1**	**-0.4**
SNTG				AML	AML		
	comp=E,2180µm,1.2s						
SNTG				AML	AML		
	comp=E,2170µm,1.2s						
SNTG				AML	AML		
	comp=N,2000µm,0.8s						
SNTG				AML	AML		
	comp=N,1840µm,0.9s						
IOCA	**Ischia Osserva**	**1.41**	**142**	P	**Pn**	**20 44 13.4**	**-0.2**
IOCA				AML	AML		
	comp=E,9655µm,0.5s						
IOCA				AML	AML		
	comp=N,8175µm,0.5s						
MURB	**Monte Urbino**	**1.41**	**353**	Pn	**Pn**	**20 44 13.7**	**+0.1**
MURB	**Monte Urbino**	**1.41**	**353**	P	**Pn**	**20 44 13.7**	**+0.1**
MURB				AML	AML		
	comp=E,5860µm,0.4s						
MURB				AML	AML		
	comp=E,6195µm,0.4s						
MURB				AML	AML		
	comp=N,4785µm,1.1s						
MURB				AML	AML		
	comp=E,6195µm,1.6s						
MURB				AML	AML		
	comp=E,5860µm,1.6s						
MURB				AML	AML		
	comp=N,4700µm,1.0s						
BSSO	**Busso**	**1.41**	**102**	P	**Pg**	**20 44 13.9**	**-1.5**
BSSO				AML	AML		
	comp=E,708µm,1.1s						
BSSO				AML	AML		
	comp=N,657µm,1.0s						
BSSO				AML	AML		
BSSO				AML	AML		
IFOR	**Ischia Forio P**	**1.42**	**144**	P	**Pn**	**20 44 13.0**	**-0.7**
IFOR				AML	AML		
	comp=N,30350µm,0.4s						
IFOR				AML	AML		
	comp=E,21250µm,1.0s						
IFOR				AML	AML		
	comp=N,30350µm,1.6s						
IMTC	**Ischia Forio M**	**1.42**	**143**	P	**Pn**	**20 44 13.1**	**-0.6**
IMTC				AML	AML		
	comp=N,4140µm,0.4s						
IMTC				AML	AML		
	comp=E,5070µm,0.5s						
PTRJ	**Pietraroja**	**1.42**	**110**	P	**Pb**	**20 44 13.5**	**-1.1**
FOSV	**Fossato di Vic**	**1.43**	**0**	P	**Pn**	**20 44 13.7**	**-0.3**
FOSV				AML	AML		
	comp=E,2380µm,0.8s						
FOSV				AML	AML		
	comp=N,1655µm,1.3s						
FOSV				AML	AML		
	comp=N,1655µm,0.7s						
FRES	**Fresagrandinar**	**1.43**	**85**	P	**Pb**	**20 44 13.7**	**-1.1**
FRES				AML	AML		
	comp=E,1300µm,0.9s						
FRES				AML	AML		
	comp=N,6460µm,1.1s						
FRES				AML	AML		
	comp=E,1300µm,1.1s						
FRES				AML	AML		
	comp=N,6460µm,0.9s						
ATVA	**AVT- Monte Val**	**1.46**	**346**	P	**Pn**	**20 44 14.1**	**-0.2**
CPOZ	**Campi Flegrei,**	**1.46**	**135**	P	**Pn**	**20 44 13.6**	**-0.6**
CPOZ				AML	AML		
	comp=E,10200µm,1.1s						
CPOZ				AML	AML		
	comp=E,10200µm,0.9s						
CPOZ				AML	AML		
	comp=N,3220µm,0.5s						
CSFT	**Campi Flegrei**	**1.47**	**134**	P	**Pn**	**20 44 13.9**	**-0.4**
CSFT				AML	AML		
	comp=E,6825µm,0.3s						
CSFT				AML	AML		
	comp=N,6770µm,0.3s						
CSFT				AML	AML		
	comp=E,6825µm,1.7s						
ATLO	**AVT- Montelove**	**1.48**	**350**	P	**Pn**	**20 44 14.3**	**-0.2**
COLB	**Campi Flegrei**	**1.48**	**134**	P	**Pn**	**20 44 14.2**	**-0.3**
COLB				AML	AML		
	comp=E,4015µm,1.1s						
COLB				AML	AML		
	comp=N,2915µm,0.9s						
COLB				AML	AML		
	comp=E,4015µm,0.9s						
COLB				AML	AML		
	comp=N,2915µm,1.1s						
EL6	**Elcito**	**1.49**	**10**	P	**Pn**	**20 44 14.7**	**-0.1**
EL6				AML	AML		
	comp=E,4320µm,0.9s						
EL6				AML	AML		
	comp=N,3905µm,0.5s						
EL6				AML	AML		
	comp=E,4320µm,1.1s						
EL6				AML	AML		
	comp=N,3905µm,1.5s						
TRE1	**Treia**	**1.51**	**16**	P	**Pb**	**20 44 15.4**	**-0.7**
ATFO	**Monte Foce - G**	**1.51**	**355**	P	**Pn**	**20 44 15.1**	**0.0**
ATFO				AML	AML		
	comp=E,1545µm,0.7s						
ATFO				AML	AML		
	comp=N,1775µm,0.6s						
ATFO				AML	AML		
	comp=E,1545µm,1.3s						
ATMI	**Monte Miggiano**	**1.52**	**346**	P	**Pb**	**20 44 15.5**	**-0.7**
ATMI				AML	AML		
	comp=E,3720µm,0.6s						
ATMI				AML	AML		
	comp=N,4370µm,0.5s						
SACR	**S. Croce Del S**	**1.53**	**107**	P	**Pb**	**20 44 15.5**	**-1.1**
SACR				AML	AML		
	comp=N,818µm,1.0s						
SACR				AML	AML		
	comp=N,814µm,0.8s						
SACR				AML	AML		
	comp=N,818µm,1.0s						
SACR				AML	AML		
	comp=E,1124µm,1.0s						
SACR				AML	AML		
	comp=N,814µm,1.2s						
SACR				AML	AML		
	comp=E,1155µm,1.0s						
ATVO	**AVT- Monte Val**	**1.54**	**350**	P	**Pn**	**20 44 15.4**	**-0.1**
ATVO				AML	AML		
	comp=E,1290µm,0.9s						
ATVO				AML	AML		
	comp=N,1505µm,0.7s						
ATVO				AML	AML		
	comp=E,1290µm,1.1s						
CING	**Cingoli**	**1.55**	**12**	P	**Pb**	**20 44 16.0**	**-0.8**
ATSC	**Scheggia e Pas**	**1.56**	**358**	P	**Pn**	**20 44 15.9**	**+0.2**
VITU	**Vitulano (BN)**	**1.56**	**115**	P	**Pn**	**20 44 15.2**	**-0.5**
VITU				AML	AML		
	comp=E,626µm,0.5s						
VITU				AML	AML		
	comp=N,1785µm,0.6s						
VITU				AML	AML		
	comp=N,1875µm,0.5s						
VITU				AML	AML		
	comp=E,1675µm,0.6s						
SSFR	**Montelago di S**	**1.57**	**1**	P	**Pn**	**20 44 16.0**	**+0.1**
SSFR				AML	AML		
	comp=N,1565µm,1.1s						
SSFR				AML	AML		
	comp=E,2415µm,0.2s						
SSFR				AML	AML		
	comp=N,1565µm,0.9s						
SSFR				AML	AML		
	comp=E,2380µm,0.3s						
SSFR				AML	AML		
	comp=N,2215µm,0.8s						
CAFI	**Castiglion Fio**	**1.58**	**339**	P	**Pn**	**20 44 15.9**	**0.0**
CAFI				AML	AML		
	comp=N,778µm,0.6s						
CAFI				AML	AML		
	comp=E,772µm,0.5s						
MMUR	**Monte Murano**	**1.59**	**6**	P	**Pb**	**20 44 16.9**	**-0.7**
PAOL	**Paolisi**	**1.59**	**121**	Pn	**Pn**	**20 44 15.5**	**-0.6**
PAOL				IAML		20 44 49.9	
	comp=N,552nm,0.8s						
PAOL				IAML		20 44 52.6	
	comp=E,437nm,1.1s						
PAOL	**Paolisi**	**1.59**	**121**	P	**Pn**	**20 44 15.6**	**-0.6**
PAOL				AML	AML		
	comp=N,1315µm,0.9s						
PAOL				AML	AML		
	comp=N,1385µm,0.9s						
PAOL				AML	AML		
	comp=N,1385µm,1.1s						
PAOL				AML	AML		
	comp=N,1315µm,1.1s						
PAOL				AML	AML		
	comp=E,1124µm,0.8s						
PAOL				AML	AML		
	comp=E,1134µm,0.8s						
ATPI	**Pietralunga -**	**1.61**	**351**	P	**Pb**	**20 44 17.1**	**-0.7**
ATPI				AML	AML		
	comp=E,1445µm,0.7s						
ATPI				AML	AML		
	comp=N,1095µm,0.8s						
ATPI				AML	AML		
	comp=N,1105µm,0.8s						
ATPI				AML	AML		
	comp=E,1380µm,0.7s						
OVO	**Vesuviano**	**1.61**	**129**	P	**Pn**	**20 44 16.5**	**+0.1**
OVO				AML	AML		
	comp=E,3005µm,0.8s						
OVO				AML	AML		
	comp=N,3230µm,0.9s						
ATBU	**Serra di Buran**	**1.62**	**355**	P	**Pb**	**20 44 17.3**	**-0.8**
CIGN	**Sant’Elia a Pi**	**1.62**	**97**	P	**Pb**	**20 44 17.0**	**-1.0**
CIGN				AML	AML		
	comp=E,615µm,1.1s						
CIGN				AML	AML		
	comp=N,453µm,0.5s						
VVDG	**Vesuvio Valle**	**1.62**	**129**	P	**Pn**	**20 44 16.1**	**-0.4**
VBKN	**Vesuvio Bunker**	**1.63**	**129**	P	**Pn**	**20 44 16.2**	**-0.4**
CRTO	**Cratere Ovest,**	**1.63**	**129**	P	**Pn**	**20 44 16.4**	**-0.3**
ATPC	**Poggio Castell**	**1.63**	**352**	P	**Pn**	**20 44 16.6**	**-0.1**
VCRE	**Vesuvio Crater**	**1.64**	**129**	⇑P	**Pn**	**20 44 16.6**	**-0.2**
VCRE				AML	AML		
	comp=E,3650µm,0.8s						
VCRE				AML	AML		
	comp=N,3860µm,0.6s						
ATMC	**Monte Cedrone**	**1.64**	**345**	P	**Pn**	**20 44 17.3**	**+0.6**
VTIR	**Vesuvio Tirone**	**1.64**	**129**	⇑P	**Pn**	**20 44 16.5**	**-0.2**
VTIR				AML	AML		
	comp=N,1033µm,0.7s						
VTIR				AML	AML		
	comp=E,1500µm,0.9s						
ARVD	**Arcevia**	**1.64**	**5**	P	**Pb**	**20 44 17.5**	**-0.8**
ARVD				AML	AML		
	comp=E,1405µm,1.1s						
ARVD				AML	AML		
	comp=N,1026µm,1.4s						
ARVD				AML	AML		
	comp=N,1026µm,0.6s						
ARVD				AML	AML		
	comp=E,1405µm,0.9s						
PP3	**Marolino**	**1.64**	**22**	P	**Pb**	**20 44 17.3**	**-1.0**
GATE	**Gambatesa**	**1.65**	**101**	P	**Pg**	**20 44 18.2**	**-1.7**
PSB1	**Pescosannita**	**1.67**	**112**	P	**Pb**	**20 44 17.5**	**-1.3**
RIBO	**Ribolla Roccas**	**1.67**	**311**	P	**Pn**	**20 44 16.8**	**-0.3**
CASP	**Castiglione de**	**1.68**	**304**	Pn	**Pn**	**20 44 16.5**	**-0.9**
CASP	**Castiglione de**	**1.68**	**304**	⇓P	**Pn**	**20 44 16.6**	**-0.7**
CASP				AML	AML		
	comp=E,418µm,1.0s						
CASP				AML	AML		
	comp=N,480µm,0.5s						
BADI	**Badiali**	**1.69**	**347**	P	**Pn**	**20 44 17.8**	**+0.3**
BADI				AML	AML		
	comp=N,1025µm,0.9s						
BADI				AML	AML		
	comp=N,1025µm,1.1s						
BADI				AML	AML		
	comp=E,887µm,0.6s						
APEC	**Apecchio**	**1.71**	**352**	P	**Pn**	**20 44 17.7**	**-0.1**
APEC				AML	AML		
	comp=E,1129µm,0.6s						
APEC				AML	AML		
	comp=N,1460µm,0.6s						
APEC				AML	AML		
	comp=E,1129µm,1.4s						
MPAG	**Monte Paganucc**	**1.77**	**0**	P	**Pn**	**20 44 19.1**	**+0.5**
MPAG				AML	AML		
	comp=E,1030µm,0.6s						
MPAG				AML	AML		
	comp=N,1058µm,0.9s						
SSP9	**Sansepolcro**	**1.77**	**345**	P	**Pn**	**20 44 19.4**	**+0.8**
SSP9				AML	AML		
	comp=E,1175µm,1.6s						
SSP9				AML	AML		
	comp=N,1490µm,1.1s						
SSP9				AML	AML		
	comp=E,1175µm,0.4s						
COR1	**Corinaldo**	**1.78**	**6**	P	**Pb**	**20 44 19.8**	**-0.8**
MELA	**Melanico ??? S**	**1.78**	**94**	P	**Pn**	**20 44 18.8**	**+0.1**
MELA				AML	AML		
	comp=N,1510µm,0.7s						
MELA				AML	AML		
	comp=E,1060µm,0.4s						
MELA				AML	AML		
	comp=N,1550µm,0.7s						
MELA				AML	AML		
	comp=E,1006µm,0.4s						
AOI	**Ancona**	**1.80**	**20**	P	**Pb**	**20 44 20.4**	**-0.7**
MRB1	**Monte Rocchett**	**1.82**	**113**	P	**Pb**	**20 44 19.9**	**-1.6**
MRB1				AML	AML		
	comp=E,1625µm,0.6s						
MRB1				AML	AML		
	comp=E,1625µm,0.7s						
MRB1				AML	AML		
	comp=N,1460µm,0.6s						
MRB1				AML	AML		
	comp=N,1585µm,0.6s						
MRB1				AML	AML		
	comp=E,1625µm,1.3s						
MRB1				AML	AML		
	comp=E,1625µm,1.4s						
PARC	**Parchiule**	**1.83**	**348**	P	**Pn**	**20 44 19.2**	**-0.1**
PARC				AML	AML		
	comp=N,741µm,0.6s						
PARC				AML	AML		
	comp=E,774µm,1.2s						
PE3	**Peglio**	**1.84**	**354**	P	**Pb**	**20 44 21.1**	**-0.7**
PE3				AML	AML		
	comp=E,3540µm,0.9s						
PE3				AML	AML		
	comp=N,4260µm,0.6s						
PE3				AML	AML		
	comp=N,4260µm,1.4s						
MOCO	**Biccari - m.te**	**1.87**	**104**	P	**Pn**	**20 44 20.2**	**+0.3**
MOCO				AML	AML		
	comp=E,557µm,0.7s						
MOCO				AML	AML		
	comp=N,287µm,1.4s						
MOCO				AML	AML		
	comp=N,287µm,0.6s						
MOCO				AML	AML		
	comp=E,557µm,1.3s						
BIOG	**Biogem**	**1.90**	**110**	P	**Pb**	**20 44 21.4**	**-1.4**
MTMR	**Montemarano**	**1.94**	**118**	P	**Pn**	**20 44 20.4**	**-0.4**
CSNT	**Castellina Chi**	**1.94**	**327**	P	**Pn**	**20 44 20.8**	**-0.1**
CSNT				AML	AML		
	comp=E,176µm,0.6s						
CSNT				AML	AML		
	comp=N,202µm,0.9s						
CPGN	**Carpegna, Ital**	**1.96**	**351**	P	**Pb**	**20 44 22.6**	**-1.4**
OSSC	**Osservatorio P**	**2.00**	**327**	Pn	**Pn**	**20 44 22.2**	**+0.5**
OSSC	**Osservatorio P**	**2.00**	**327**	P	**Pn**	**20 44 22.4**	**+0.6**
SNAL	**S. Angelo Dei**	**2.07**	**116**	P	**Pn**	**20 44 22.8**	**+0.1**
PESA	**Pesaro**	**2.08**	**2**	P	**Pb**	**20 44 24.6**	**-1.2**
PESA				AML	AML		
	comp=E,1070µm,0.8s						
PESA				AML	AML		
	comp=N,1165µm,1.6s						
PESA				AML	AML		
	comp=N,1165µm,0.4s						
PESA				AML	AML		
	comp=E,1070µm,1.2s						
SGTA	**Sant Agata di**	**2.09**	**109**	P	**Pb**	**20 44 23.8**	**-2.2**
SGTA				AML	AML		
	comp=E,509µm,0.9s						
SGTA				AML	AML		
	comp=N,350µm,1.2s						
SGTA				AML	AML		
	comp=E,509µm,1.1s						
SGTA				AML	AML		
	comp=N,350µm,0.8s						
SGTA				AML	AML		
	comp=N,370µm,1.0s						
SGTA				AML	AML		
	comp=E,516µm,0.6s						
MCRV	**Calabrutti - M**	**2.11**	**120**	P	**Pn**	**20 44 23.1**	**-0.2**
MCRV				AML	AML		
	comp=E,495µm,0.6s						
MCRV				AML	AML		
	comp=N,464µm,0.6s						
RUFI	**Rufina**	**2.18**	**336**	P	**Pn**	**20 44 25.1**	**+0.9**
RUFI				AML	AML		
	comp=E,362µm,1.0s						
RUFI				AML	AML		
	comp=E,362µm,1.0s						
RUFI				AML	AML		
	comp=N,286µm,1.1s						
SGRT	**San Giovanni R**	**2.24**	**92**	Pn	**Pn**	**20 44 25.5**	**+0.5**
SGRT				IAML		20 45 10.4	
	comp=E,248nm,0.8s						
SGRT				IAML		20 45 18.9	
	comp=N,220nm,0.9s						
SGRT	**San Giovanni R**	**2.24**	**92**	P	**Pn**	**20 44 25.7**	**+0.7**
SGRT				AML	AML		
	comp=N,560µm,1.0s						
SGRT				AML	AML		
	comp=E,633µm,0.6s						
SGRT				AML	AML		
	comp=N,560µm,1.0s						
VULT	**Monte Vulture**	**2.33**	**112**	P	**Pn**	**20 44 27.5**	**+1.1**
LMD	**Lutirano**	**2.34**	**341**	P	**Pn**	**20 44 27.7**	**+1.2**
CDRU	**Civita di Ruta**	**2.36**	**125**	P	**Pn**	**20 44 26.6**	**-0.2**
CDRU				AML	AML		
	comp=N,132µm,0.7s						
CDRU				AML	AML		
	comp=N,132µm,1.3s						
CDRU				AML	AML		
	comp=E,152µm,1.0s						
MSAG	**Monte S. Angel**	**2.36**	**93**	P	**Pn**	**20 44 27.0**	**+0.3**
MSAG				AML	AML		
	comp=N,942µm,1.2s						
MSAG				AML	AML		
	comp=E,194µm,0.7s						
MSAG				AML	AML		
	comp=N,397µm,1.2s						
MSAG				AML	AML		
	comp=E,464µm,0.5s						
SEI	**Scarperia**	**2.42**	**335**	P	**Pn**	**20 44 28.4**	**+0.9**
MPPT	**Montemurlo**	**2.43**	**330**	P	**Pn**	**20 44 28.6**	**+1.0**
MOCL	**Monte Cuccoli**	**2.44**	**332**	P	**Pn**	**20 44 28.6**	**+0.9**
MOCL				AML	AML		
	comp=E,280µm,0.9s						
MOCL				AML	AML		
	comp=N,292µm,1.6s						
MOCL				AML	AML		
	comp=E,280µm,1.1s						
MTCR	**Monte La Croce**	**2.52**	**330**	P	**Pn**	**20 44 30.0**	**+1.0**
PALZ	**Palazzo San Ge**	**2.58**	**110**	P	**Pn**	**20 44 30.2**	**+0.6**
PALZ				AML	AML		
	comp=N,584µm,1.0s						
PALZ				AML	AML		
	comp=E,526µm,0.9s						
PALZ				AML	AML		
	comp=N,584µm,1.0s						
SMPL	**Sampolo**	**2.60**	**276**	P	**Pn**	**20 44 29.4**	**-0.5**
SMPL				S	**Sn**	**20 45 03.4**	**+2.0**
SMPL	**Sampolo**	**2.60**	**276**	P	**Pn**	**20 44 29.4**	**-0.5**
SMPL				AML	AML		
	comp=E,74µm,0.7s						
SMPL				AML	AML		
	comp=N,54µm,1.3s						
SMPL				AML	AML		
	comp=N,54µm,0.7s						
IMOL	**Imola, Italy**	**2.60**	**344**	P	**Pn**	**20 44 31.9**	**+1.9**
ACER	**Acerenza**	**2.63**	**113**	Pn	**Pn**	**20 44 30.1**	**-0.3**
ACER				IAML		20 45 31.0	
	comp=N,170nm,1.0s						
ACER				IAML		20 45 37.2	
	comp=E,163nm,0.8s						
ACER	**Acerenza**	**2.63**	**113**	P	**Pn**	**20 44 30.8**	**+0.4**
ACER				AML	AML		
	comp=E,366µm,0.8s						
ACER				AML	AML		
	comp=E,410µm,0.9s						
ACER				AML	AML		
	comp=N,414µm,0.8s						
ACER				AML	AML		
	comp=N,452µm,0.7s						
ACER				AML	AML		
	comp=E,410µm,1.1s						
ACER				AML	AML		
	comp=E,366µm,1.2s						
ACER				AML	AML		
	comp=N,414µm,1.2s						
POPM	**Popiglio**	**2.63**	**327**	P	**Pn**	**20 44 31.4**	**+1.1**
BULG	**Bulgheria - Ca**	**2.67**	**131**	P	**Pn**	**20 44 31.1**	**+0.2**
BULG				AML	AML		
	comp=E,162µm,0.9s						
BULG				AML	AML		
	comp=N,185µm,0.6s						
BULG				AML	AML		
	comp=E,162µm,1.1s						
BULG				AML	AML		
	comp=N,185µm,1.4s						
MGR	**Morigerati**	**2.73**	**128**	P	**Pn**	**20 44 32.4**	**+0.7**
MGR				AML	AML		
	comp=N,142µm,0.8s						
MGR				AML	AML		
	comp=E,140µm,0.9s						
CARD	**Cardoso**	**2.73**	**323**	P	**Pn**	**20 44 31.8**	**0.0**
CARD				AML	AML		
	comp=N,108µm,0.8s						
CARD				AML	AML		
	comp=N,108µm,1.2s						
CARD				AML	AML		

	comp=E,96µm,1.0s						
MORSI	Morsiglia	2.74	295	P	Pn	20 44 31.6	-0.2
MORSI				S	Sn	20 45 04.6	-0.2
AGLI	Aglientu	2.79	256	P	Pn	20 44 31.3	-1.2
AGLI				AML	AML		
	comp=N,144µm,0.5s						
AGLI				AML	AML		
	comp=E,118µm,0.4s						
ZCCA	Zocca	2.81	333	Pn	Pn	20 44 34.5	+1.6
ZCCA				IAML		20 45 43.0	
	comp=N,94nm,2.5s						
ZCCA				IAML		20 45 55.2	
	comp=E,71nm,4.3s						
DGI	Dorgali Grotta	2.84	238	P	Pn	20 44 32.3	-0.9
PGF	Pioggiola	2.87	285	ePn	Pn	20 44 33.7	-0.1
PGF				eSn	Sn	20 45 05.2	-3.1
	comp=E,39nm,0.5s						
PGF	Pioggiola	2.87	285	P	Pn	20 44 33.8	0.0
PGF	Pioggiola	2.87	285	S	Sn	20 45 10.5	+2.3
AJAC	Base Areonaval	2.98	273	P	Pn	20 44 35.2	+0.1
AJAC				S	Sn	20 45 12.4	+1.7
AMUR	Altamura	3.05	107	P	Pn	20 44 37.1	+1.0
AMUR				AML	AML		
	comp=E,156µm,1.6s						
AMUR				AML	AML		
	comp=N,177µm,0.9s						
AMUR				AML	AML		
	comp=E,156µm,0.4s						
AMUR				AML	AML		
	comp=N,177µm,1.1s						
ORI	Oriolo Calabro	3.32	121	P	Pn	20 44 40.6	+0.7
CET2	Cetraro	3.37	133	P	Pn	20 44 41.2	+0.7
CET2				AML	AML		
	comp=E,146µm,0.9s						
CET2				AML	AML		
	comp=N,182µm,0.8s						
CET2				AML	AML		
	comp=E,146µm,1.1s						
CET2				AML	AML		
	comp=N,182µm,1.2s						
MSSA	Maissana	3.41	317	Pn	Pn	20 44 42.0	+0.8
VSL	Villasalto	3.49	228	Pn	Pn	20 44 41.7	-0.5
VSL				IAML		20 45 27.1	
	comp=E,63nm,0.8s						
VSL	Villasalto	3.49	228	P	Pn	20 44 41.8	-0.5
VSL				AML	AML		
	comp=E,160µm,0.7s						
VSL				AML	AML		
	comp=N,101µm,1.4s						
VSL				AML	AML		
	comp=N,101µm,0.6s						
VSL				AML	AML		
	comp=E,160µm,1.3s						
TEOL	Teolo	3.58	348	Pn	Pn	20 44 44.0	+0.5
CELI	Celico	3.77	129	P	Pn	20 44 47.1	+1.0
SKDS	Skadanscina	3.79	13	ePn	Pn	20 44 45.0	-1.4
SKDS	Skadanscina	3.79	13	ePn	Pn	20 44 47.0	+0.6
SKDS				eSn	Sn	20 45 28.3	-2.6
STON	Ston	3.80	73	ePn	Pn	20 44 46.9	+0.5
STON	Ston	3.80	73	ePn	Pn	20 44 47.5	+1.1
STON				eSg	Sn	20 45 32.9	+2.0
A050A	Klekovaca	3.81	45	ePn	Pn	20 44 48.5	+1.9
KNDS	Knezji Dol	3.85	17	ePn	Pn	20 44 47.9	+0.7
TRI	Trieste	3.92	10	Pn	Pn	20 44 46.7	-1.3
TRI	Trieste	3.92	10	P	Pn	20 44 47.0	-1.0
TRI				AML	AML		
	comp=E,84µm,1.0s						
TRI				AML	AML		
	comp=N,68µm,1.0s						
TRI				AML	AML		
	comp=E,84µm,1.0s						
TIP	Timpagrande	4.06	130	Pn	Pn	20 44 51.1	+1.0
BOJS	Bojanci	4.07	26	ePn	Pn	20 44 51.2	+1.1
BOJS	Bojanci	4.07	26	i Pn	Pn	20 44 51.6	+1.6
BOJS	Bojanci	4.07	26	ePn	Pn	20 44 51.9	+1.8
BOJS				eSn	Sn	20 45 33.0	-4.5
BOJS	Bojanci	4.07	26	P	Pn	20 44 51.5	+1.4
CGRP	Cima Grappa	4.08	351	P	Pn	20 44 50.7	+0.3
CGRP				AML	AML		
	comp=N,240µm,0.6s						
CGRP				AML	AML		
	comp=E,346µm,0.5s						
JAVS	Javornik	4.14	13	i Pn	Pn	20 44 51.4	+0.2
SABO	M.te Sabotino	4.16	8	Pn	Pn	20 44 51.4	-0.1
SABO				IAML		20 46 13.1	
	comp=N,80nm,0.8s						
SABO	M.te Sabotino	4.16	8	P	Pn	20 44 51.4	-0.1
SABO				AML	AML		
	comp=E,926µm,0.5s						
SABO				AML	AML		
	comp=N,763µm,0.6s						
SABO				AML	AML		
	comp=E,207µm,0.5s						
SABO				AML	AML		
	comp=N,199µm,0.6s						
SABO				AML	AML		
	comp=E,207µm,1.5s						
SABO				AML	AML		
	comp=E,926µm,1.5s						
SABO				AML	AML		
	comp=N,763µm,1.4s						
SABO				AML	AML		
	comp=N,199µm,1.4s						
DOSS	Dosso del Somm	4.17	345	P	Pn	20 44 52.3	+0.6
DOSS				AML	AML		
	comp=N,100µm,0.7s						
DOSS				AML	AML		
	comp=N,100µm,1.3s						
DOSS				AML	AML		
	comp=E,102µm,0.5s						
VARA	Varagna	4.18	342	P	Pn	20 44 52.5	+0.6
MAGA	Magasa	4.20	339	P	Pn	20 44 52.4	+0.3
MAGA				AML	AML		
	comp=N,188µm,0.4s						
MAGA				AML	AML		
	comp=E,368µm,0.5s						
TREB	Trebinje	4.24	76	ePn	Pn	20 44 53.4	+1.0
HCY	Herceg Novi	4.31	80	ePn	Pn	20 44 54.3	+0.9
PANI	Panarotta	4.31	347	P	Pn	20 44 54.2	+0.6
BLY	Banja Luka	4.33	47	ePn	Pn	20 44 55.2	+1.5
BLY	Banja Luka	4.33	47	ePn	Pn	20 44 55.5	+1.8
A051A	Mrakovica	4.37	42	ePn	Pn	20 44 55.2	+0.9
LJU	Ljubljana	4.37	16	ePn	Pn	20 44 56.3	+2.0
LJU	Ljubljana	4.37	16	P	Pn	20 44 55.1	+0.8
DST2	Trieste	4.38	2	P	Pn	20 44 54.6	+0.2
DST2				AML	AML		
	comp=N,492µm,1.2s						
DST2				AML	AML		
	comp=E,447µm,1.0s						
STAL	STALIGIAL	4.40	360	Pn	Pn	20 44 54.4	-0.3
STAL				IAML		20 45 51.2	
	comp=E,50nm,0.4s						
STAL				IAML		20 45 52.8	
	comp=N,55nm,0.5s						
BRY	Bratogost	4.41	74	ePn	Pn	20 44 55.6	+0.7
VINO	Villanova	4.41	5	P	Pn	20 44 54.6	-0.3
VINO				AML	AML		
	comp=E,181µm,0.6s						
VINO				AML	AML		
	comp=N,244µm,0.6s						
VINO				AML	AML		
	comp=E,181µm,1.4s						
CRES	Cresnjevec Ost	4.42	25	ePn	Pn	20 44 54.8	-0.1
SLATY	Slatina	4.45	47	ePn	Pb	20 45 01.6	-4.5
CIMO	Cimolais	4.45	357	Pn	Pn	20 44 55.2	-0.2
CIMO				IAML		20 45 53.9	
	comp=N,21nm,0.6s						
VNDS	Vrh nad Dolski	4.46	18	ePn	Pn	20 44 56.8	+1.2
ZIAN	Ziano	4.50	349	P	Pn	20 44 57.1	+1.0
VAE	Valguarnera	4.56	163	Pn	Pn	20 45 00.7	+3.7
	comp=N,3.0nm,0.3s,baz=84,slow=20,SNR=1.7						
PTCC	Patocco-Chiusa	4.56	5	P	Pn	20 44 56.7	-0.3
ENR	Entracque	4.57	303	P	Pn	20 44 57.7	+0.6
ENR	Entracque	4.57	303	AML	AML		
	comp=N,37µm,0.7s						
ENR				AML	AML		
	comp=N,37µm,1.3s						
ENR				AML	AML		
	comp=E,44µm,0.4s						
CLUD	Cludinico	4.59	1	AML	AML		
	comp=E,100µm,1.1s						
CLUD				AML	AML		
	comp=E,100µm,0.9s						
CLUD				AML	AML		
	comp=N,69µm,0.8s						
CLUD				AML	AML		
	comp=N,69µm,1.2s						
PRED	Cave del Predi	4.62	7	Pn	Pn	20 44 57.3	-0.4
PRED				IAML		20 45 56.2	
	comp=E,19nm,0.7s						
CALF	Calern	4.69	296	P	Pn	20 44 58.5	-0.2
CALF				S	Sn	20 45 51.3	-1.8
KOSI	Kohlern	4.71	348	AML	AML		
	comp=N,103µm,0.7s						
KOSI				AML	AML		
	comp=E,144µm,0.8s						
UPM	Unac-Piva	4.74	72	ePn	Pn	20 45 02.6	+3.1
DRME	Dracevica, Mon	4.80	84	ePn	Pn	20 45 01.5	+1.3
DRME	Dracevica, Mon	4.80	84	ePn	Pn	20 45 02.6	+2.4
MYKA	Terra Mystica	4.81	7	i Pn	Pn	20 45 01.2	+0.8
	comp=E,2.7nm,0.4s,SNR=11						
MYKA				eSn	Sn	20 45 57.1	+1.2
	comp=E,22nm,0.9s						
OBKA	Obir	4.82	15	ePn	Pn	20 45 02.4	+1.8
OBKA	Obir	4.82	15	i Pn	Pn	20 45 02.6	+2.1
	comp=E,2.2nm,0.2s						
OBKA				i Sn	Sn	20 45 58.8	+2.5
	comp=E,30nm,0.6s						
LMR	La Mourre	4.84	290	ePn	Pn	20 44 59.7	-1.0
LMR				eSn	Sn	20 45 51.9	-4.7
	comp=E,19nm,0.7s						
ABTA	Abfaltersbach	4.89	358	i Pn	Pn	20 45 02.4	+0.9
	comp=E,7.5nm,0.3s,SNR=28						
ABTA				eSn	Sn	20 45 59.3	+1.4
	comp=E,32nm,0.6s						
SALSA	La sagne	4.89	296	P	Pn	20 45 01.9	+0.4
SALSA				S	Sn	20 45 58.3	+0.2
ENAUX	Enaux	4.93	299	P	Pn	20 45 02.6	+0.5
ENAUX				S	Sn	20 45 59.3	+0.4
FUORN	Ofenpass-Fuorn	5.08	340	Pn	Pn	20 45 05.5	+1.2
FUORN				IAML		20 46 09.5	
	comp=E,20nm,1.1s						
FUORN				IAML		20 46 21.1	
	comp=N,16nm,1.3s						
SOKA	Soboth	5.08	18	i Pn	Pn	20 45 05.8	+1.6
	comp=N,3.3nm,0.4s,SNR=7.4						
SOKA				eSn	Sn	20 46 03.5	+0.7
	comp=N,8.3nm,0.6s						
KOME	Kolasin	5.11	77	ePn	Pn	20 45 07.1	+2.6
RUDO	Rudo	5.18	68	ePn	Pn	20 45 06.7	+1.3
TUE	Stuetta	5.22	333	Pn	Pn	20 45 07.1	+1.0
TUE				IAML		20 46 13.2	
	comp=E,13nm,0.7s						
TUE				IAML		20 46 29.8	
	comp=N,12nm,0.8s						
MBDF	Montbardon	5.22	305	ePn	Pn	20 45 06.2	+0.1
MBDF				eSn	Sn	20 46 01.2	-5.0
	comp=N,15nm,0.7s						
BBLS	Lazi&#263i	5.28	65	ePn	Pn	20 45 08.4	+1.5
BBLS	Lazi&#263i	5.28	65	ePn	Pn	20 45 08.8	+1.9
DAVOX	Davos/Dischmat	5.33	338	Pn	Pn	20 45 06.8	-0.8
	comp=N,1.0nm,0.3s,baz=162,slow=20,SNR=5.8						
DAVOX				Sn	Sn	20 46 08.5	-0.5
	comp=N,1.0nm,0.3s,baz=343,slow=20,SNR=3.1						
	comp=N,1.4nm,0.3s						
BLAF	les Blancs	5.35	295	P	Pn	20 45 08.2	+0.4
FETA	Feichten	5.36	345	i Pn	Pn	20 45 10.1	+2.1
	comp=N,2.3nm,0.4s						
FETA				eSn	Sn	20 46 12.4	+2.8
	comp=N,11nm,1.0s						
ARTF	Artigues	5.40	291	P	Pn	20 45 08.3	-0.2
BNI	Bardonecchia	5.45	308	Pn	Pn	20 45 11.0	+1.8
WTTA	Wattenberg	5.46	352	ePn	Pn	20 45 11.2	+1.7
	comp=N,2.7nm,0.4s,SNR=6.0						
WTTA				i Sn	Sn	20 46 14.0	+1.9
	comp=N,35nm,0.5s						
SQTA	Sankt Quirin	5.47	349	ePn	Pn	20 45 12.0	+2.5
	comp=N,3.0nm,0.3s,SNR=6.9						
SQTA				i Sn	Sn	20 46 14.8	+2.5
	comp=N,32nm,0.8s						
SJES	Sjenica	5.51	73	ePn	Pn	20 45 12.5	+2.5
SJES	Sjenica	5.51	73	ePn	Pn	20 45 12.5	+2.5
WATA	Walderalm	5.54	352	i Pn	Pn	20 45 12.4	+2.0
	comp=N,6.6nm,0.5s,SNR=10.0						
WATA				i Sn	Sn	20 46 16.9	+2.9
	comp=N,24nm,0.7s						
LESA	Schwarzleotal	5.56	359	i Pn	Pn	20 45 12.0	+1.3
	comp=N,3.9nm,0.3s,SNR=7.1						
LESA				i Sn	Sn	20 46 15.2	+0.7
	comp=N,11nm,0.6s						
MOTA	Moosalm	5.61	348	i Pn	Pn	20 45 13.8	+2.3
	comp=N,2.5nm,0.3s						
MOTA				eSn	Sn	20 46 18.2	+2.5
	comp=N,18nm,0.9s						
TEKS	Tekeris	5.63	59	ePn	Pn	20 45 12.8	+1.2
TEKS	Tekeris	5.63	59	ePn	Pn	20 45 12.8	+1.2
LPG	La Plagne	5.67	312	eP	Pn	20 45 15.6	+3.2
SMRF	Simiane la Rot	5.68	294	ePn	Pn	20 45 12.4	+0.1
SMRF				eSn	Sn	20 46 13.4	-4.0
	comp=N,4.2nm,0.4s						
LPL	La Plagne	5.69	312	eP	Pn	20 45 16.4	+3.8
IVAS	Ivanjica	5.71	70	ePn	Pn	20 45 14.0	+1.2
RUSF	Rustrel	5.73	294	P	Pn	20 45 13.4	+0.5
ARSA	Arzberg	5.74	19	Pn	Pn	20 45 13.4	+0.3
ARSA	Arzberg	5.74	19	ePn	Pn	20 45 14.1	+1.0
	comp=N,2.3nm,0.3s,SNR=6.8						
ARSA				eSn	Sn	20 46 20.5	+1.7
	comp=N,4.6nm,0.7s						
ARSA	Arzberg	5.74	19	ePn	Pn	20 45 15.2	+2.1
DAVA	Damuels	5.80	340	ePn	Pn	20 45 14.7	+0.7
	comp=N,2.5nm,0.4s						
DAVA				eSn	Sn	20 46 23.7	+3.2
	comp=N,12nm,0.4s						
RETA	Reutte	5.80	347	ePn	Pn	20 45 16.9	+2.9
	comp=N,0.6nm,0.3s,SNR=4.3						
RETA				eSn	Sn	20 46 22.6	+2.2
	comp=N,3.2nm,0.6s						
BIOA	Bad Ischl, Aus	5.86	6	i Pn	Pn	20 45 15.9	+1.1
	comp=N,4.7nm,0.3s,SNR=5.5						
BIOA				eSn	Sn	20 46 23.9	+2.0
	comp=N,27nm,0.6s						
ORIF	Oris-en-Rattie	5.87	304	eP	Pn	20 45 18.3	+3.4
SENIN	Lac Senin/Sane	5.97	321	Pn	Pn	20 45 17.4	+0.9
MORH	Mrgy, Hungar	6.08	42	ePn	Pn	20 45 18.1	+0.4
TRUS	Trudelj	6.08	65	ePn	Pn	20 45 19.3	+1.5
MOA	Molln	6.08	10	i Pn	Pn	20 45 18.8	+1.0
	comp=N,2.3nm,0.3s,SNR=18						
MOA				i Sn	Sn	20 46 27.7	+0.5
	comp=N,9.0nm,0.4s						
MOA	Molln	6.08	10	ePn	Pn	20 45 19.7	+1.9
MOA				eSn	Sn	20 46 23.5	-3.7
FRGS	Fruska Gora	6.10	55	ePn	Pn	20 45 19.7	+1.7
FRGS	Fruska Gora	6.10	55	ePn	Pn	20 45 18.0	0.0
GRUS	Gruza	6.19	68	ePn	Pn	20 45 20.4	+1.2
GOCS	Kraljevo Serbi	6.22	71	ePn	Pn	20 45 21.4	+1.7
SELS	Selova	6.33	75	ePn	Pn	20 45 22.7	+1.5
AVAS	Avala Beograd	6.33	61	ePn	Pn	20 45 21.1	-0.1
RONA	Rosalia, Austr	6.36	22	i Pn	Pn	20 45 22.0	+0.4
	comp=N,1.8nm,0.3s,SNR=7.7						
RONA				i Sn	Sn	20 46 32.8	-1.2
	comp=N,0.3nm,0.2s						
CONA	Conrad Observa	6.45	19	i Pn	Pn	20 45 23.7	+0.7
	comp=N,2.2nm,0.3s,SNR=12						
CONA				eSn	Sn	20 46 35.8	-0.7
	comp=N,5.4nm,0.4s						
VIVF	Saint-Julien-l	6.61	300	ePn	Pn	20 45 24.9	-0.1
VIVF				eSn	Sn	20 46 34.4	-5.8
	comp=N,2.3nm,0.4s						
KEST	Kesra	6.67	205	Pn	Pn	20 45 29.4	+3.4
KEST	Kesra	6.67	205	Pn	Pn	20 45 29.6	+3.6
	comp=N,5.1nm,0.3s,baz=7.0,slow=3.8,SNR=50						
KEST				LR	LR	20 48 08.7	
	comp=N,138nm,19.7s,baz=334,slow=39						
MAHO	Mahon	6.73	256	Pn	Pn	20 45 25.3	-1.3
CABF	La Chapelle	6.74	317	eP	Pn	20 45 29.8	+2.9
BARS	Barje	6.78	79	ePn	Pn	20 45 28.9	+1.5
BOVS	Bovan	6.82	72	⇓P	Pn	20 45 34.2	+6.2
LASF	Ste Croix	6.89	292	ePn	Pn	20 45 27.3	-1.6
LASF				eSn	Sn	20 46 41.1	-6.1
	comp=N,2.2nm,0.5s						
GEC2	GERESS Array S	7.02	5	Pn	Pn	20 45 29.5	-1.2
GERES	GERESS Array B	7.02	5	Pn	Pn	20 45 30.1	-0.6
GERES	GERESS Array B	7.02	5	Pn	Pn	20 45 30.6	-0.1
	comp=N,0.1nm,0.3s,baz=186,slow=15,SNR=10						
GERES				Sn	Sn	20 46 45.6	-4.7
	comp=N,0.2nm,0.3s,baz=188,slow=25,SNR=7.4						
	comp=N,0.6nm,0.3s						
VRSS	Vrsac	7.03	60	ePn	Pn	20 45 31.6	+0.8
CKRC	Cesky Krumlov	7.04	8	ePN	Pn	20 45 31.4	+0.4
CKRC				eSN	Sn	20 46 47.1	-3.8
MDVR	Moldovita	7.15	63	⇓P	Pn	20 45 33.5	+0.9
ZAGS	Zajecar	7.23	71	ePn	Pn	20 45 35.0	+1.4
MODS	Modra-Piesok	7.25	25	ePN	Pn	20 45 34.1	+0.2
HINF	Hinteralfeld	7.28	327	eSn	Sn	20 46 50.4	-6.4
	comp=N,8.1nm,0.8s						
KHC	Kasperske Hory	7.29	4	ePN	Pn	20 45 33.8	-0.6
KHC				eSN	Sn	20 46 53.1	-3.9
KHC				ex	x	20 47 14.5	
ZAPS	Zavoj	7.43	76	ePn	Pn	20 45 38.2	+1.9
ECH	Echery	7.49	330	Pn	Pn	20 45 36.9	-0.2
CDF	Champ du Feu	7.61	331	ePn	Pn	20 45 36.9	-1.9
CDF	Champ du Feu	7.61	331	eP	Pn	20 45 42.8	+4.0
CDF				eSn	Sn	20 46 58.3	-6.5
	comp=N,9.2nm,0.8s						
HAU	Haudompre	7.64	326	eP	Pn	20 45 42.5	+3.3
HAU				eSn	Sn	20 46 58.9	-6.6
	comp=N,6.1nm,0.5s						
KRUC	Moravsky	7.64	18	ePN	Pn	20 45 39.0	-0.2
ZVC	Zvikov	7.64	7	ePN	Pn	20 45 40.4	+1.2
HERR	Herculane	7.66	64	⇑P	Pn	20 45 40.9	+1.5
TREC	Trest	7.68	14	ePN	Pn	20 45 39.5	-0.2
TREC				eSN	Sn	20 47 01.7	-4.7
LBL	Lubilhac	7.69	299	P	Pn	20 45 40.9	+1.0
JAVC	Velka Javorina	7.80	25	ePN	Pn	20 45 42.8	+1.3
VTS	Vitosha	7.81	81	ePn	Pn	20 45 42.9	+1.2
VYHS	Vyhne	7.90	31	ePN	Pn	20 45 44.4	+1.7
VYHS				eSN	Sn	20 47 12.1	+0.2
GRA1	Grafenberg Arr	7.90	353	Pn	Pn	20 45 41.4	-1.4
MTLF	Montolieu	7.92	284	ePn	Pn	20 45 41.1	-1.8
MTLF				eSn	Sn	20 47 07.2	-5.1
	comp=N,2.8nm,0.6s						
VRAC	Vranov	7.92	19	Pn	Pn	20 45 44.2	+1.2
	comp=N,0.3nm,0.3s,baz=197,slow=12,SNR=2.5						
VRAC				LR	LR	20 49 42.6	
	comp=N,14nm,20.4s,baz=223,slow=45						
	comp=N,1.0nm,0.3s						
VRAC	Vranov	7.92	19	ePN	Pn	20 45 43.5	+0.5
SMF	Signal de Mont	7.99	310	eP	Pn	20 45 47.3	+3.4
SMF				eSn	Sn	20 47 07.2	-6.8
	comp=N,0.2nm,0.2s						
PAGF	Fort de Pagny	8.33	326	eP	Pn	20 45 51.5	+2.9
LOR	Lormes	8.34	313	eP	Pn	20 45 52.2	+3.5
	baz=127						
LOR				eSn	Sn	20 47 16.4	-6.3
	comp=N,0.9nm,0.4s						
AVF	Avril sur Loir	8.35	309	eP	Pn	20 45 51.4	+2.6
AVF				eSn	Sn	20 47 16.2	-6.7
	comp=N,0.9nm,0.5s						
CAF	Calviac	8.37	295	ePn	Pn	20 45 49.0	-0.2
SFTF	Sexfontaines	8.37	322	eP	Pn	20 45 53.1	+3.9
SSF	Saint Saulge	8.41	311	eP	Pn	20 45 52.8	+3.1
BGF	Bois d'Agland	8.52	307	ePn	Pn	20 45 50.4	-0.9
BGF				eSn	Sn	20 47 22.6	-4.7
	comp=N,4.1nm,0.5s						
CEST	Esterri de Car	8.57	279	Pn	Pn	20 45 49.2	-2.8
MEZF	Maizieres J'vi	8.58	323	eP	Pn	20 45 56.2	+4.2
MORC	Moravsky Berou	8.59	21	ePN	Pn	20 45 52.8	+0.6
SAVF	Savonnieres en	8.63	324	eP	Pn	20 45 57.8	+5.0
TCF	Toulx Ste Croi	8.79	304	eP	Pn	20 45 57.2	+2.3
BRG	Berggiesshubel	9.05	5	er		20 47 35.6	
BRG				Amp		20 47 38.1	
	comp=Z,2.9nm,0.8s						
BRG				r		20 48 02.4	
BRG				Amp		20 48 21.3	
	comp=Z,3.3nm,1.1s						
EPF	Esparros	9.26	281	eP	Pn	20 46 04.4	+3.0
EPF				eSn	Sn	20 47 39.1	-6.2
	comp=Z,0.1nm,0.1s						
CLL	Collm	9.45	1	ePn	Pn	20 46 04.0	+0.1
CLL				ex	x	20 47 52.0	
CLL				ex	x	20 47 56.0	
CLL				ex	x	20 48 04.0	
CLL				eSb	Sn	20 48 21.0	+31
CLL				eSg		20 48 47.0	
CLL				AMS	AMS	20 49 00.0	
	comp=N,100nm,20.2s						
CLL				AMS	AMS	20 49 00.0	
	comp=E,100nm,21.0s						
CLL				AMS	AMS	20 49 00.0	
	comp=Z,100nm,18.9s						
VOIR		9.60	64	⇑P	Pn	20 46 09.2	+3.0
MLR	Muntele Rosu	10.22	65	Pn	Pn	20 46 17.0	+2.4
	comp=Z,0.1nm,0.3s,baz=137,slow=15,SNR=5.2						
MLR				LR	LR	20 51 04.8	
	comp=Z,96nm,19.0s,baz=257,slow=42						
	comp=Z,3.4nm,1.1s						
MLR	Muntele Rosu	10.22	65	⇑P	Pn	20 46 18.1	+3.5
BURAR	Bucovina Array	10.56	53	Pn	Pn	20 46 24.0	+4.7
BURAR	Bucovina Array	10.56	53	⇓P	Pn	20 46 22.8	+3.5
PLOR	Plostina	10.79	64	⇑P	Pn	20 46 18.6	-3.8
LDF	La Druitiere	11.29	311	ePn	Pn	20 46 28.1	-1.1
ESDC	Sonseca Array	12.86	266	Pn	Pn	20 46 49.0	-1.7
	comp=Z,0.1nm,0.3s,baz=73,slow=14,SNR=7.8						
	comp=Z,0.6nm,0.8s						
ROSF	Rostrenen	13.03	305	ePn	Pn	20 46 51.7	-1.2
AKASG	Malin Array Be	14.39	47	Pn	Pn	20 47 12.2	+0.7
	comp=Z,0.3nm,0.3s,baz=241,slow=10,SNR=1.8						
AKASG				LR	LR	20 53 48.3	
	comp=Z,53nm,19.9s,baz=232,slow=42						
	comp=Z,0.2nm,0.2s						
BRTR	Keskin Array B	15.96	91	Pn	P	20 47 36.5	+0.4
	baz=286,slow=10,SNR=3.6						
	comp=Z,0.5nm,0.7s						
HFS	Hagfors	18.31	1	LR	LR	20 55 52.4	
	comp=Z,23nm,19.6s,baz=173,slow=40						
NOA	NORSAR Array B	19.23	358	P	Pn	20 48 12.7	-0.2
	baz=177,slow=9.4,SNR=1.4						
NOA				LR	LR	20 56 41.3	
	comp=Z,29nm,18.4s,baz=70,slow=40						
	comp=Z,0.2nm,0.5s						
MMAI	Mount Meron Ar	19.99	109	P	Pn	20 48 22.9	+0.7
	comp=Z,1.2nm,0.5s,baz=330,slow=12,SNR=4.0						
	comp=Z,1.2nm,0.5s						
FINES	FINESS Array B	21.20	18	P	P	20 48 33.6	+0.5
	comp=Z,1.9nm,1.0s,baz=193,slow=11,SNR=4.0						
	comp=Z,1.9nm,1.0s						
KBZ	Khabaz	22.14	75	P	P	20 48 46.6	+3.2
	comp=Z,2.0nm,0.7s,baz=284,slow=4.1,SNR=5.5						
	comp=Z,2.0nm,0.7s						
BELG	Belogornoye	25.72	54	LR	LR	21 00 53.4	
	comp=Z,41nm,19.9s,baz=260,slow=40						
ARTI	Arti	32.54	48	LR	LR	21 05 07.1	
	comp=Z,27nm,18.5s,baz=202,slow=39						
BBTS	Babate	37.08	232	LR	LR	21 08 27.7	
	comp=Z,14nm,19.9s,baz=328,slow=40						
BVAR	Borovoye Array	39.52	53	P	P	20 51 20.1	+1.7
	comp=Z,0.3nm,0.6s,baz=283,slow=8.7,SNR=3.6						
	comp=Z,0.3nm,0.6s						
ZALV	Zalesovo Beam	47.76	49	P	P	20 52 25.3	+0.7
	comp=Z,0.8nm,0.5s,baz=284,slow=7.0,SNR=4.2						
	comp=Z,0.8nm,0.5s						
MKAR	Makanchi Array	48.51	59	P	P	20 52 31.7	+1.1
	comp=Z,1.0nm,0.7s,baz=289,slow=6.8,SNR=8.9						
	comp=Z,1.0nm,0.7s						
BOSA	Boshof	71.07	168	P	P	20 55 07.5	+1.6
	comp=Z,1.6nm,0.6s,baz=349,slow=6.3,SNR=4.5						
	comp=Z,1.6nm,0.6s						

IDC ***23*** *20:47:21.4±0.9, 28.°27N×104.°74E, h0km, mb3.7/8, mbtmp3.8/9, ML3.8/1, MS2.7/3, Error ellipse: s-maj=37.4km s-min=16.1km az=56.0*

ISC 23 20:47:24.4±1.1**, 28.°3N**±0.°2×**104.°8E**±0.°2**, h19km, n11, σ0.s78**/10**, mb3.7**/8**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.16	210	LR	LR	20 54 45.5	
	comp=Z,30nm,19.9s,baz=185,slow=40						
SONM	Songino Array	19.55	3	P	P	20 51 51.3	+0.3
	0.3nm,0.3s,baz=187,slow=12,SNR=8.3						
	1.1nm,0.5s						
KSRS	Korea Array	21.42	59	P	P	20 52 11.5	+0.3
	1.4nm,0.6s,baz=247,slow=10,SNR=8.0						
	1.4nm,0.6s						
JNU	Nakatsue	22.91	71	LR	LR	21 01 16.9	
	comp=Z,6.4nm,21.7s,baz=288,slow=36						
MKAR	Makanchi Array	25.54	322	P	P	20 52 52.4	+0.5
	1.8nm,0.6s,baz=127,slow=10,SNR=17						
	1.8nm,0.6s						
ZALV	Zalesovo Beam	29.52	336	P	P	20 53 26.0	-1.4
	0.6nm,0.5s,baz=140,slow=9.7,SNR=3.7						
	0.6nm,0.5s						
KURBB	Kurchatov Arra	29.87	326	P	P	20 53 29.3	-1.3
	0.7nm,0.7s,baz=134,slow=9.3,SNR=8.3						
	0.7nm,0.7s						

BVAR	**Borovoye Array**	**35.39**	**324**	P	**P**	**20 54 19.1**	**+0.3**
	0.4nm,0.7s,baz=107,slow=9.7,SNR=2.3						
BVAR				LR	LR	21 09 16.0	
	comp=Z,37nm,18.1s,baz=186,slow=37						
	0.4nm,0.7s						
AKTO	**Aktyubinsk**	**41.53**	**315**	P	**P**	**20 55 10.7**	**+0.3**
	1.0nm,0.6s,baz=83,slow=12,SNR=4.5						
	1.0nm,0.6s						
WRA	**Warramunga Arr**	**55.81**	**146**	P	**P**	**20 57 00.4**	**-0.2**
	1.2nm,0.6s,baz=337,slow=8.2,SNR=11						
	1.2nm,0.6s						
ASAR	**Alice Springs**	**58.78**	**149**	P	**P**	**20 57 21.6**	**+0.1**
	0.7nm,0.6s,baz=334,slow=6.8,SNR=10						
ASAR				PcP	**PcP**	**20 58 11.0**	**-0.1**
	0.5nm,1.0s,baz=337,slow=4.4,SNR=1.4						
	0.7nm,0.6s						

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*IDC **23** 21:01:25.4±0.5, 55.°83N×143.°18E, h0^{km}, mb3.5/18, mbtmp3.7/25, ML3.6/6, MS3.1/14, Error ellipse: s-maj=11.2km s-min=8.9km az=137.0*

*NEIC **23** 21:01:29.1±0.9, 55.°7N±0.°1×143.°5E±0.°2, h10^{km}±1^{km}, mb4.4/47, Error ellipse: s-maj=19.3km s-min=18.4km az=191.0*

*MOS **23** 21:01:29.6±1.4, 55.°46N×143.°52E, h31^{km}, mb4.6/15, MS3.1/4, Error ellipse: s-maj=13.9km s-min=6.2km az=85.0*

*NERS **23** 21:01:33.3, 56.°34N×143.°14E, h33^{km}*

*SKHL **23** 21:01:35.0±0.2, 55.°00N×143.°50E, h13^{km}±2^{km}, mb4.6/5*

ISC 23 21:01:28.9±0.4**, 55.°64N**±0.°04×**143.°47E**±0.°05**, h10**^{km}**, n139,** σ1^{s}**64**/134**, mb4.3**/60**, MS3.3**/10**, 13C-6D, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKH	**Okha**	**2.11**	**189**	⇑*i*P	Pn	21 01 57.8	-6.4
OKH				*i* S	**Sn**	**21 02 32.3**	**+1.8**
OKH				pmax	pmax		
	comp=Z,669nm,0.3s						
OKH				smax	smax		
	comp=N,7µm,0.7s						
OKH				smax	smax		
	comp=E,7µm,0.8s						
OKH	**Okha**	**2.11**	**189**	*e*P	Pn	21 01 57.9	-6.3
OKH				*e*Pg	Pb	21 02 02.2	-5.0
OKH				AMB	AMB	21 02 08.3	
	comp=E,1µm,0.7s						
OKH				*e*S	Sn	21 02 22.1	-8.4
OKH				*e*Sg	**Sb**	**21 02 32.6**	**-0.9**
OKH				A	A	21 02 35.5	
	comp=E,7µm,0.6s						
OKH				A	A	21 02 35.5	
	comp=E,9µm,0.6s						
NKL	**Nikolayevsk**	**2.98**	**214**	*e*P	**Pn**	**21 02 14.2**	**-1.9**
NKL				*e*S	**Sn**	**21 02 52.0**	**+0.2**
NKL				pmax	pmax		
	comp=E,658nm,0.4s						
NKL				pmax	pmax		
	comp=N,718nm,0.3s						
NKL				pmax	pmax		
	comp=Z,2µm,1.0s						
NKL				smax	smax		
	comp=E,2µm,0.3s						
NKL				smax	smax		
	comp=N,2µm,0.2s						
NKL				MLR	MLR		
	comp=E,1µm,7.0s						
NKL				MLR	MLR		
	comp=N,3µm,11.0s						
NKL				MLR	MLR		
	comp=Z,3µm,11.0s						
NKL	**Nikolayevsk**	**2.98**	**214**	*e*P	Pn	21 02 13.4	-2.7
NKL				AMB	AMB	21 02 13.6	
	comp=Z,160nm,0.4s						
NKL				*e*Pg	**Pb**	**21 02 24.7**	**+2.8**
NKL				*e*S	**Sn**	**21 02 46.7**	**-5.1**
NKL				*e*Sg	**Sb**	**21 02 59.6**	**+1.3**
NKL				A	A	21 03 09.8	
	comp=Z,1µm,0.5s						
NKL				A	A	21 03 09.8	
	comp=Z,1µm,0.5s						
TYV	**Tymovskoe**	**4.81**	**186**	*e*P	**Pn**	**21 02 39.8**	**-1.5**
TYV				pmax	pmax		
	comp=Z,10.0nm,0.4s						
TYV				pmax	pmax		
	comp=Z,100nm,3.8s						
TYV	**Tymovskoe**	**4.81**	**186**	*e*P	**Pn**	**21 02 39.7**	**-1.5**
TYV				AMB	AMB	21 02 43.3	
	comp=Z,10.0nm,0.4s						
TYV				*e*Pg	**Pb**	**21 02 56.8**	**+3.7**
TYV				AMB	AMB	21 02 58.3	
	comp=Z,20nm,0.5s						
TLON	**Talon**	**4.98**	**32**	*e*P	**Pn**	**21 02 42.0**	**-1.6**
TLON				Pmax		21 02 42.2	
	comp=Z,130nm,0.3s						
TLON				*e*S	**Sn**	**21 03 38.9**	**-2.3**
TLON				*e*Sg	**Sb**	**21 03 58.3**	**+2.3**
TLON				Sgmax		21 04 04.6	
	comp=Z,440nm,0.4s						
MA2	**Magadan**	**5.57**	**42**	Pn	**Pn**	**21 02 50.2**	**-1.5**
	comp=Z,12nm,0.3s,baz=314,slow=12,SNR=30						
MA2				Sn	**Sn**	**21 03 54.7**	**-1.0**
	comp=Z,4.7nm,0.3s,baz=18,slow=20,SNR=4.0						
MA2				LR	LR	21 05 21.9	
	comp=Z,175nm,19.4s,baz=234,slow=43						
MA2	**Magadan**	**5.57**	**42**	⇑*i*P	**Pn**	**21 02 50.2**	**-1.5**
MA2				Pmax		21 02 50.9	
	comp=Z,10.0nm,0.3s						
MA2				*e*S	**Sn**	**21 03 55.0**	**-0.7**
MA2				Smax		21 03 55.5	
	comp=Z,20nm,0.3s						
MA2				Smax		21 03 55.5	
	comp=Z,10.0nm,0.3s						
MA2				*e*Sg	Sb	21 04 22.8	+10
MA2				Sgmax		21 04 24.8	
	comp=Z,40nm,0.7s						
GADL	**Gadlja**	**5.84**	**43**	*e*P	**Pn**	**21 02 54.4**	**-1.0**
GADL				Pmax		21 02 54.7	
	comp=Z,210nm,0.3s						
GADL				*e*S	**Sn**	**21 04 00.6**	**-1.7**
GADL				*e*Sg	**Sg**	**21 04 33.5**	**-2.6**
GADL				Sgmax		21 04 58.4	
	comp=Z,380nm,0.7s						
MGD	**Magadan 1**	**5.88**	**38**	*e*P	Pn	21 02 53.5	-2.5
MGD				Pmax		21 02 53.8	
	comp=Z,50nm,0.3s						
MGD				*e*S	**Sn**	**21 04 01.4**	**-2.0**
MGD				Smax		21 04 02.7	
	comp=Z,60nm,0.4s						
MGD				*e*S	**Sg**	**21 04 34.8**	**-2.7**
MGD				Sgmax		21 04 35.2	
	comp=Z,60nm,0.4s						
GRNR	**Gornyy**	**6.45**	**224**	⇓*i*P	**Pn**	**21 03 01.3**	**-2.6**
GRNR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
GRNR				MLR	MLR		
	comp=E,240nm,16.0s						
GRNR				MLR	MLR		
	comp=N,210nm,10.0s						
GRNR				MLR	MLR		
	comp=Z,330nm,12.0s						
GRNR	**Gornyy**	**6.45**	**224**	*e*P	**Pn**	**21 03 05.9**	**+2.0**
GRNR				AMB	AMB	21 03 06.5	
	comp=Z,10.0nm,0.3s						
EKMR	**Ekimchan**	**6.66**	**252**	*e*P	Pn	21 03 03.3	-3.5
TLAR	**Talaya**	**7.23**	**37**	*e*P	**Pn**	**21 03 12.7**	**-1.9**
TLAR				Pmax		21 03 13.7	
	comp=Z,10.0nm,0.3s						
TLAR				*e*S	**Sn**	**21 04 36.9**	**+0.2**
TLAR				*e*Sg	Sb	21 05 13.5	+13
TLAR				Sgmax		21 05 23.1	
	comp=Z,60nm,1.0s						
SUUS	**Susuman**	**7.56**	**17**	*e*P	Pn	21 03 15.7	-3.3
SUUS				Pmax		21 03 22.8	
SUUS				*e*S	**Sn**	**21 04 43.6**	**-1.1**
SUUS				*e*Sg	Sb	21 05 19.9	+10
SUUS				Sgmax		21 05 34.1	
	comp=Z,50nm,0.8s						
SEY	**Seymchan**	**8.62**	**28**	Pn	**Pn**	**21 03 31.4**	**-2.1**
	comp=Z,1.1nm,0.3s,baz=237,slow=12,SNR=12						
SEY				Sn	**Sn**	**21 05 04.7**	**-5.9**
	comp=Z,2.3nm,0.3s,baz=114,slow=23,SNR=6.9						
SEY				LR	LR	21 06 59.4	
	comp=Z,91nm,19.7s,baz=158,slow=39						
	comp=Z,3.1nm,0.3s						
SEY	**Seymchan**	**8.62**	**28**	*e*P	**Pn**	**21 03 31.7**	**-1.8**
SEY				Pmax		21 03 32.3	
SEY				*e*S	Sn	21 05 04.2	-6.4
SEY				*e*Sg	Sg	21 05 53.6	-11
SEY				Sgmax		21 05 58.5	
	comp=Z,20nm,0.8s						
PEA0B	**Petropavlovsk-**	**8.69**	**101**		**Pn**	**21 03 34.8**	**+0.3**
PEA0B	**Petropavlovsk-**	**8.69**	**101**	*ce*P	**Pn**	**21 03 35.7**	**+1.2**
PETK	**Petropavlovsk-**	**8.69**	**101**		**Pn**	**21 03 35.2**	**+0.7**
PETK	**Petropavlovsk-**	**8.69**	**101**	Pn	**Pn**	**21 03 35.8**	**+1.3**
	comp=Z,1.5nm,0.3s,baz=339,slow=10,SNR=46						
PETK				Sn	**Sn**	**21 05 12.8**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=190,slow=41,SNR=1.7						
PETK				Lg	Lg	21 06 07.2	
	baz=154,slow=31						
	comp=Z,1.6nm,0.3s						
YSS	**Yuzhno-Sakhali**	**8.71**	**183**	*e*P	**Pn**	**21 03 33.6**	**-1.1**
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
YAK	**Yakutsk**	**9.59**	**318**	Pn	**Pn**	**21 03 44.6**	**-2.1**
	comp=Z,1.1nm,0.3s,baz=114,slow=3.5,SNR=1.7						
YAK				Sn	Sn	21 05 25.1	-9.3
	comp=Z,0.6nm,0.3s,baz=152,slow=16,SNR=1.3						
YAK				Lg	Lg	21 06 13.6	
	comp=Z,1.3nm,0.3s,baz=17,slow=23,SNR=6.0						
	comp=Z,5.5nm,0.5s						
YAK	**Yakutsk**	**9.59**	**318**	*e*P	**Pn**	**21 03 44.3**	**-2.5**
YAK				*e*S	**Sn**	**21 05 34.9**	**+0.5**
YAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.6s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.3s						
YAK				smax	smax		
	comp=E,25nm,1.4s						
YAK				smax	smax		
	comp=N,18nm,1.5s						
YAK				pmax	pmax		
	comp=E,167nm,1.1s						
YAK				pmax	pmax		
	comp=Z,103nm,1.1s						
YAK				pmax	pmax		
	comp=N,120nm,1.1s						
KLR	**Kul'dur**	**9.60**	**233**	Pn	**Pn**	**21 03 44.8**	**-2.3**
	comp=N,0.4nm,0.3s,baz=2.2,slow=12,SNR=4.7						
KLR				Lg	Lg	21 06 24.7	
	comp=N,0.9nm,0.3s,baz=50,slow=11,SNR=4.1						
KLR				LR	LR	21 07 24.0	
	comp=N,59nm,18.1s,baz=69,slow=37						
	comp=N,0.4nm,0.3s						
KLR	**Kul'dur**	**9.60**	**233**	⇑*e*P	**Pn**	**21 03 47.5**	**+0.5**
KLR	**Kul'dur**	**9.60**	**233**	*e*P	**Pn**	**21 03 47.5**	**+0.5**
EVEN	**Evensk**	**10.30**	**46**	*e*	**Pn**	**21 03 55.3**	**-1.3**
HEH	**HeiHe**	**11.07**	**248**	*e*P	**Pn**	**21 04 05.3**	**-1.9**
HEH				S	Sn	21 06 02.4	-8.6
HEH				smax	smax		
	comp=N,62nm,0.9s						
HEH				smax	smax		
	comp=E,39nm,1.0s						
ASAJ	**Asahikawa**	**11.54**	**183**	Pn	**Pn**	**21 04 13.8**	**+0.1**
	comp=E,0.4nm,0.3s,baz=24,slow=20,SNR=1.7						
ASAJ				LR	LR	21 08 48.7	
	comp=E,38nm,19.7s,baz=327,slow=38						
	comp=E,1.3nm,0.3s						
USRK	**Ussuriysk Ar.**	**13.60**	**217**	Lg	Lg	21 08 38.9	
	comp=E,0.1nm,0.3s,baz=299,slow=40,SNR=1.6						
MDJ	**Mudanjiang**	**14.14**	**225**	P	**P**	**21 04 56.5**	**-0.2**
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BILL	**Bilibino**	**16.30**	**31**	*ce*P	**Pn**	**21 05 20.2**	**+2.7**
BILL				pmax	pmax		
	comp=Z,11nm,1.0s						
TIXI	**Tiksi**	**17.24**	**344**		**Pn**	**21 05 30.1**	**+0.8**
TIXI	**Tiksi**	**17.24**	**344**	LR	LR	21 10 56.7	
	comp=Z,24nm,20.5s,baz=189,slow=34						
TIXI	**Tiksi**	**17.24**	**344**	⇑*e*P	**P**	**21 05 31.9**	**+1.0**
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MJB9	**Matsu-Tunnel**	**19.43**	**193**	P	**P**	**21 05 55.7**	**+0.5**
MAJO	**Matsushiro**	**19.43**	**193**	P	**P**	**21 05 54.8**	**-0.4**
MAJO	**Matsushiro**	**19.43**	**193**	*d i*P	**P**	**21 05 55.5**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MJAR	**Matsushiro Arr**	**19.43**	**193**	P	**P**	**21 05 55.4**	**+0.1**
MJAR	**Matsushiro Arr**	**19.43**	**193**	P	**P**	**21 05 54.4**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=3.0,slow=11,SNR=19						
MJAR				LR	LR	21 14 44.5	
	comp=Z,43nm,19.7s,baz=40,slow=41						
	comp=Z,5.1nm,0.7s						
MJAR	**Matsushiro Arr**	**19.43**	**193**	P	**P**	**21 05 55.4**	**+0.1**
MJAR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KSRS	**Korea Array**	**21.01**	**217**	P	**P**	**21 06 12.4**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=22,slow=11,SNR=5.5						
	comp=Z,1.0nm,0.7s						
AMKA	**Amchitka**	**21.57**	**86**	P	**P**	**21 06 17.6**	**-0.7**
ULN	**Ulaanbaatar**	**23.62**	**266**	⇑*e*P	**P**	**21 06 44.1**	**+4.1**
ULN				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SONM	**Songino Array**	**24.01**	**267**	P	**P**	**21 06 40.2**	**-3.5**
	comp=Z,0.3nm,0.5s,baz=52,slow=8.8,SNR=5.7						
SONM				Lg	Lg	21 14 01.2	
	baz=55,slow=28						
SONM				LR	LR	21 15 20.1	
	comp=Z,50nm,19.5s,baz=116,slow=35						
	comp=Z,0.3nm,0.5s						
HHC	**Hu-ho-hao-te**	**25.60**	**248**	*e*P	**P**	**21 06 59.1**	**+0.9**
HHC				pmax	pmax		
	comp=Z,12nm,0.5s						
HHC				pmax	pmax		
	comp=Z,68nm,5.1s						
HHC				LR	LR		
	comp=N,88nm,10.7s						
HHC				LR	LR		
	comp=E,74nm,9.5s						
HHC				LR	LR		
	comp=Z,110nm,11.1s						
C16K	**Lisburne Hills**	**26.26**	**41**	P	**P**	**21 07 03.5**	**-0.3**
K13K	**Kusilvak Mount**	**26.96**	**55**	P	**P**	**21 07 09.7**	**-0.5**
C18K	**Utukok River**	**27.80**	**40**	P	**P**	**21 07 16.3**	**-1.4**
C18K				IAmb	IAmb	21 07 32.7	
	comp=Z,6.4nm,1.3s						
C19K	**Lookout Ridge**	**28.38**	**39**	P	**P**	**21 07 22.5**	**-0.4**
D19K	**Kuna River**	**28.94**	**40**		**P**	**21 07 26.9**	**-0.9**
D19K				IAmb	IAmb	21 07 32.6	
	comp=Z,2.9nm,0.7s						
G18K	**Tagagawik**	**28.97**	**46**	P	**P**	**21 07 27.7**	**-0.5**
G18K				IAmb	IAmb	21 07 45.8	
	comp=Z,7.0nm,1.2s						
B20K	**Meade River**	**29.21**	**37**	P	**P**	**21 07 29.5**	**-0.7**
D20K	**Etivluk River**	**29.47**	**40**	P	**P**	**21 07 31.4**	**-1.1**
D20K				IAmb	IAmb	21 07 38.6	
	comp=Z,8.2nm,1.2s						
H19K	**Roundabout Mou**	**29.93**	**46**	P	**P**	**21 07 35.9**	**-0.6**
H19K				IAmb	IAmb	21 07 43.8	
	comp=Z,5.5nm,1.0s						
E21K	**Killik River**	**30.46**	**40**	P	**P**	**21 07 41.0**	**-0.4**
E21K				IAmb	IAmb	21 07 48.5	
	comp=Z,4.9nm,0.9s						
B22K	**Teshekpuk Lake**	**30.47**	**37**		**P**	**21 07 40.9**	**-0.4**
F21K	**Alatna River**	**30.82**	**43**	P	**P**	**21 07 43.2**	**-1.3**
F21K				IAmb	IAmb	21 07 50.9	
	comp=Z,6.8nm,1.4s						
G21K	**Allakaket**	**30.94**	**44**	P	P	21 07 43.3	-2.2
G21K				IAmb	IAmb	21 07 52.8	
	comp=Z,4.5nm,1.1s						
C23K	**Itkillik River**	**31.48**	**37**	P	**P**	**21 07 49.9**	**-0.3**
D23K	**Nanushuk River**	**31.58**	**39**	P	**P**	**21 07 50.2**	**-1.0**
D23K				IAmb	IAmb	21 07 57.8	
	comp=Z,4.4nm,1.0s						
E23K	**Chandalar**	**32.13**	**41**	P	**P**	**21 07 55.0**	**-1.0**
D24K	**Happy Valley**	**32.21**	**38**	P	**P**	**21 07 56.2**	**-0.4**
E24K	**Your Creek**	**32.54**	**40**	P	**P**	**21 07 58.9**	**-0.7**
E24K				IAmb	IAmb	21 08 05.2	
	comp=Z,4.9nm,1.3s						
F24K	**Squaw Lake**	**32.89**	**41**		**P**	**21 08 01.9**	**-0.8**
GTA	**Gaotai**	**33.00**	**259**	*e*P	**P**	**21 08 01.1**	**-2.9**
GTA				sP	pP	21 08 07.5	+0.5
GTA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
D25K	**Kavik River**	**33.03**	**38**	P	**P**	**21 08 03.4**	**-0.6**
D25K				IAmb	IAmb	21 08 09.9	
	comp=Z,6.9nm,1.1s						
G24K	**Hadweenzic Riv**	**33.24**	**43**		**P**	**21 08 04.8**	**-0.9**
G24K				IAmb	IAmb	21 08 12.3	
	comp=Z,3.3nm,1.0s						
E25K	**Arctic Village**	**33.60**	**40**	P	**P**	**21 08 08.2**	**-0.6**
E25K				IAmb	IAmb	21 08 15.8	
	comp=Z,5.1nm,0.9s						
COLA	**College**	**33.61**	**46**	⇑*e*P	**P**	**21 08 11.0**	**+2.2**
COLA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WRH	**Wood River Hil**	**33.63**	**47**		**P**	**21 08 08.6**	**-0.5**
WRH				IAmb	IAmb	21 08 16.2	
	comp=Z,7.3nm,1.3s						
F25K	**Christian Rive**	**33.70**	**41**		**P**	**21 08 09.2**	**-0.6**
F25K				IAmb	IAmb	21 08 17.3	
	comp=Z,4.4nm,0.8s						
KDAK	**Kodiak Island**	**34.01**	**59**	LR	LR	21 23 35.2	
	comp=Z,64nm,18.1s,baz=251,slow=39						
IL31		**34.03**	**46**	P	**P**	**21 08 11.4**	**-1.1**
IL31				IAmb	IAmb	21 08 19.6	
	comp=Z,7.4nm,1.4s						
ILAR	**Eielson Array**	**34.03**	**46**	P	**P**	**21 08 11.8**	**-0.8**
	comp=Z,0.8nm,0.8s,baz=284,slow=8.0,SNR=8.5						
	comp=Z,0.8nm,0.8s						
BMAR	**Burnt Mountain**	**34.14**	**41**	P	**P**	**21 08 13.9**	**+0.4**
F26K	**Sheenjek River**	**34.23**	**40**	P	**P**	**21 08 13.6**	**-0.7**
F26K				IAmb	IAmb	21 08 21.7	
	comp=Z,5.5nm,1.0s						
G26K	**Porcupine Rive**	**34.58**	**42**	P	**P**	**21 08 16.4**	**-0.8**
G26K				IAmb	IAmb	21 08 24.8	
	comp=Z,5.8nm,1.1s						
E27K	**Coleen River**	**35.01**	**39**		**P**	**21 08 20.3**	**-0.7**
E27K				IAmb	IAmb	21 08 28.6	
	comp=Z,7.0nm,1.2s						
RIDG	**Independent Ri**	**35.22**	**47**		**P**	**21 08 22.0**	**-0.9**
RIDG				IAmb	IAmb	21 08 27.7	
	comp=Z,11nm,1.4s						
G27K	**Doyon Strip**	**35.42**	**41**		**P**	**21 08 24.3**	**-0.3**
E28M	**Babbage River**	**35.61**	**38**		**P**	**21 08 25.2**	**-0.9**
E28M				IAmb	IAmb	21 08 32.4	
	comp=Z,4.5nm,0.8s						
F28M	**Old Crow**	**35.81**	**40**	P	**P**	**21 08 27.7**	**-0.2**
F28M				IAmb	IAmb	21 08 35.2	
	comp=Z,6.6nm,1.0s						
I28M	**Miner Creek**	**36.56**	**43**	P	**P**	**21 08 34.5**	**+0.1**
G29M	**Pine Creek**	**36.73**	**40**	P	**P**	**21 08 34.4**	**-1.4**
G29M				IAmb	IAmb	21 08 44.1	
	comp=Z,10nm,1.4s						
WMQ	**Urumqi**	**36.95**	**275**	*e*P	**P**	**21 08 38.3**	**+0.4**
WMQ				pmax	pmax		
	comp=Z,18nm,0.7s						
F30M	**Barrier River**	**37.27**	**39**	P	**P**	**21 08 39.1**	**-1.3**
G30M	**tAoh Zraii Nji**	**37.36**	**40**	P	**P**	**21 08 40.7**	**-0.4**
INK	**Inuvik**	**37.79**	**37**	P	**P**	**21 08 44.5**	**-0.2**
INK				IAmb	IAmb	21 08 53.2	
	comp=Z,8.6nm,1.3s						
INK	**Inuvik**	**37.79**	**37**	P	**P**	**21 08 44.5**	**-0.2**
INK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KURK	**Kurchatov**	**37.90**	**290**	P	P	21 08 42.3	-3.6
KURBB	**Kurchatov Arra**	**38.00**	**290**	P	P	21 08 42.3	-4.4
	comp=Z,1.0nm,0.9s,baz=62,slow=9.0,SNR=7.0						
	comp=Z,1.0nm,0.9s						
I30M	**Mount Dempster**	**38.02**	**42**	P	**P**	**21 08 46.2**	**-0.6**
MKAR	**Makanchi Array**	**38.16**	**283**	P	P	21 08 44.1	-4.0
	comp=Z,0.4nm,0.7s,baz=49,slow=9.7,SNR=4.3						
	comp=Z,0.4nm,0.7s						
H31M	**Peel River**	**38.53**	**41**	P	**P**	**21 08 50.2**	**-0.8**
H31M				IAmb	IAmb	21 08 58.3	
	comp=Z,9.0nm,1.1s						
BVAR	**Borovoye Array**	**40.88**	**298**	P	P	21 09 06.4	-4.3
	comp=Z,0.4nm,0.7s,baz=63,slow=8.6,SNR=3.8						
	comp=Z,0.4nm,0.7s						
MMPY	**Sheldon Lake,**	**41.24**	**44**	P	**P**	**21 09 12.9**	**-0.6**
PZH	**PanZhiHua**	**41.85**	**243**	P	**P**	**21 09 21.3**	**+2.2**
KIRV	**Kirov**	**47.10**	**315**	⇑*e*P	**P**	**21 10 02.5**	**+2.0**
ARCES	**ARCESS Array B**	**47.35**	**335**	LR	LR	21 32 16.7	
	comp=Z,26nm,18.2s,baz=44,slow=39						
KLMR	**Klimovskoe**	**49.36**	**321**	*e*P	**P**	**21 10 15.7**	**-2.2**
KLMR				pmax	pmax		
	comp=Z,13nm,1.6s						
CMAR	**Chiang Mai Arr**	**49.99**	**240**	P	P	21 10 20.3	-2.9
	comp=Z,0.2nm,0.3s,baz=34,slow=7.2,SNR=1.9						
	comp=Z,0.2nm,0.3s						
BELG	**Belogornoye**	**52.01**	**309**	LR	LR	21 33 25.3	
	comp=Z,24nm,18.3s,baz=294,slow=37						
BELG	**Belogornoye**	**52.01**	**309**	⇓*e*P	**P**	**21 10 39.7**	**+1.7**
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES	**FINESS Array B**	**53.34**	**328**	P	P	21 10 43.9	-3.8
	comp=Z,0.5nm,0.8s,baz=29,slow=7.0,SNR=7.7						
	comp=Z,0.5nm,0.8s						
FINES	**FINESS Array B**	**53.34**	**328**	*i* P	**P**	**21 10 49.2**	**+1.5**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
OBN	**Obninsk**	**54.59**	**318**	*e*P	**P**	**21 10 58.9**	**+2.0**
OBN				*e*		21 12 02.2	
OBN				*e*		21 13 01.5	
OBN				*e*PPP	PPP	21 14 10.7	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VRH	**Novokhopyorsk**	**55.41**	**312**	*e*P	**P**	**21 11 02.7**	**-0.2**
VRH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
VSU	**Vasula**	**55.48**	**325**	⇑*e*P	**P**	**21 11 05.2**	**+1.9**
VSU				pmax	pmax		
	comp=Z,35nm,3.0s						
LPSR	**Galich'ya Gora**	**55.53**	**314**	*e*P	**P**	**21 11 03.8**	**0.0**
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
VSR	**Storozhevoye**	**56.48**	**313**	*e*P	**P**	**21 11 09.9**	**-0.6**
VSR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NEW	**Newport**	**56.57**	**52**	LR	LR	21 36 29.9	
	comp=Z,29nm,19.1s,baz=220,slow=37						
NC405	**NORSAR Array S**	**57.54**	**335**	P	**P**	**21 11 19.2**	**+1.2**
NB2	**NORSAR Subarra**	**57.73**	**335**	P	**P**	**21 11 21.0**	**+1.7**
	comp=Z,1.8nm,0.6s,baz=31,slow=6.5						
NOA	**NORSAR Array B**	**57.73**	**335**	P	P	21 11 16.0	-3.3
	comp=Z,0.4nm,0.6s,baz=28,slow=7.3,SNR=9.3						
NOA				LR	LR	21 39 45.4	
	comp=Z,22nm,18.9s,baz=205,slow=40						
	comp=Z,0.4nm,0.6s						
HFS	**Hagfors**	**57.89**	**333**	P	P	21 11 16.6	-3.8
	comp=Z,1.2nm,0.8s,baz=37,slow=7.1,SNR=12						
HFS				LR	LR	21 39 12.7	
	comp=Z,36nm,18.5s,baz=20,slow=39						
	comp=Z,1.2nm,0.8s						
KIV	**Kislovodsk**	**60.45**	**305**	P	**P**	**21 11 39.9**	**+1.4**
KIV	**Kislovodsk**	**60.45**	**305**	*e*P	**P**	**21 11 41.3**	**+2.8**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,22nm,17.0s						
KBZ	**Khabaz**	**60.53**	**305**	*d i*P	**P**	**21 11 39.1**	**+0.2**
KBZ				pmax	pmax		
	comp=Z,8.0nm,2.5s						
SHA1	**Shidzhatmaz**	**60.63**	**305**	⇓*e*P	**P**	**21 11 41.2**	**+1.3**
AKASG	**Malin Array Be**	**60.81**	**318**	P	P	21 11 36.8	-4.0
	comp=Z,0.2nm,0.2s,baz=36,slow=7.4,SNR=5.7						
	comp=Z,0.2nm,0.2s						
AKASG	**Malin Array Be**	**60.81**	**318**	*ce*P	**P**	**21 11 42.2**	**+1.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKBB	**Malin Array Si**	**60.81**	**318**	⇑*e*P	**P**	**21 11 42.1**	**+1.4**
AKBB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
RLMT	**Red Lodge**	**62.45**	**50**	P	**P**	**21 11 51.8**	**-0.4**
NVAR	**Mina Array Bea**	**63.51**	**60**	P	**P**	**21 11 59.1**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=305,slow=4.6,SNR=2.1						
	comp=Z,0.3nm,0.5s						
PDAR	**Pinedale Array**	**64.19**	**51**	P	**P**	**21 12 01.9**	**-1.9**
	comp=Z,0.2nm,0.6s,baz=2.7,slow=2.6,SNR=7.2						
PDAR				LR	LR	21 44 04.6	
	comp=Z,15nm,18.7s,baz=248,slow=40						
	comp=Z,0.2nm,0.6s						
CLL	**Collm**	**65.78**	**328**	*i* P	**P**	**21 12 15.2**	**+1.6**
CLL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CLL	**Collm**	**65.78**	**328**	*i* P	**P**	**21 12 15.2**	**+1.6**
	comp=Z,3.0nm,0.8s						
KHC	**Kasperske Hory**	**67.53**	**327**	⇓*e*P	**P**	**21 12 28.3**	**+3.4**
KHC				pmax	pmax		
	comp=Z,7.0nm,2.0s						
GERES	**GERESS Array B**	**67.74**	**327**	P	P	21 12 22.8	-3.5
	comp=Z,0.3nm,0.8s,baz=42,slow=5.8,SNR=5.3						
	comp=Z,0.3nm,0.8s						
BRTR	**Keskin Array B**	**67.92**	**308**	P	P	21 12 23.9	-3.7
	comp=Z,0.3nm,0.6s,baz=53,slow=4.9,SNR=3.6						
	comp=Z,0.3nm,0.6s						

BRTR	Keskin Array B	67.92	308	*ce*P	P	21 12 31.2	+3.6
WRA	Warramunga Arr	75.67	189	P	P	21 13 12.8	-1.3
	comp=Z,1.7nm,0.8s,baz=3.5,slow=6.4,SNR=13						
	comp=Z,1.7nm,0.8s						
ASAR	Alice Springs	79.40	189	P	P	21 13 33.9	-1.0
	comp=Z,1.3nm,0.7s,baz=4.7,slow=6.4,SNR=16						
	comp=Z,1.3nm,0.7s						
ESDC	Sonseca Array	81.09	335	P	P	21 13 41.0	-3.0
	comp=Z,0.4nm,0.9s,baz=357,slow=5.9,SNR=5.4						
	comp=Z,0.4nm,0.9s						
QSPA	South Pole Qui	145.38	180	PKPbc	PKPdf	21 21 03.4	-2.1
	comp=Z,11nm,0.9s,baz=300,slow=1.0,SNR=48						
SNAA	Sanae	158.53	209	PKPab	PKPab	21 21 58.5	-1.6
	comp=Z,0.5nm,0.6s,baz=149,slow=18,SNR=1.6						

IDC 23 21:16:50.7±6.6, 30°.93S×177°.51W, h0km, mb3.4/2, mbtmp3.4/2, Error ellipse: s-maj=269.2km s-min=61.7km az=156.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.50	267	P	P	21 24 56.4	+0.2
	0.3nm,0.6s,baz=110,slow=6.6,SNR=1.5						
	0.3nm,0.6s						
WRA	Warramunga Arr	44.54	272	P	P	21 25 04.2	-0.3
	0.3nm,0.4s,baz=114,slow=7.9,SNR=5.9						
	0.3nm,0.4s						
FINES	FINESS Array B	145.78	340	PKPbc	PKPdf	21 36 30.1	-0.5
	0.5nm,0.7s,baz=46,slow=4.0,SNR=4.5						

WEL 23 21:19:07.1±0.7, 31°S±6°×18°0E±1°1, h33km, M4.8/6, ML5.0/9, MLv4.8/6, Error ellipse: s-maj=15.8km s-min=3.5km az=118.0, confirmed, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	2.73	50	P	Pn	21 19 47.9	-0.7
GLKZ				S	Sn	21 20 20.5	0.0
RIZ	Raoul Island	2.73	49	P	Pn	21 19 48.0	-0.7
OUZ	Omahuta	6.59	229	P	Pn	21 20 41.8	+0.2
WMGZ	Waiomatatini S	6.83	189	P	Pn	21 20 44.6	-0.4
WIAZ	Waiheke Island	6.86	212	S	Sn	21 22 04.5	+2.2
HAZ	Te Kaha	6.87	193	P	Pn	21 20 47.1	+1.7
HAZ				S	Sn	21 22 06.4	+4.0
PKGZ	Pakihiroa	6.92	191	P	Pn	21 20 45.7	-0.6
RUGZ	Raukumara Rang	7.09	193	P	Pn	21 20 48.8	+0.1
RUGZ				S	Sn	21 22 11.7	+3.6
TWGZ	Tauwhareparae	7.24	191	P	Pn	21 20 52.2	+1.5
TWGZ				S	Sn	21 22 16.2	+4.5
URZ	Urewera	7.49	196	P	Pn	21 20 56.5	+2.4
URZ				S	Sn	21 22 22.0	+4.2
CNGZ	Carnagh Statio	7.51	189	P	Pn	21 20 55.6	+1.3
CNGZ				S	Sn	21 22 16.8	-1.5
TKGZ	Te Karaka	7.52	191	P	Pn	21 20 57.0	+2.6
TKGZ				S	Sn	21 22 22.3	+3.8
RAGZ	Rawiri	7.65	194	S	Sn	21 22 25.8	+3.9
MUGZ	Murupara	7.78	197	P	Pn	21 21 00.9	+2.8
MUGZ				S	Sn	21 22 28.0	+3.0
RIGZ	Rimuhau	7.79	191	S	Sn	21 22 25.9	+0.6
SNGZ	Shannon Statio	7.94	193	P	Pn	21 21 02.7	+2.4
SNGZ				S	Sn	21 22 28.9	-0.2
PRGZ	Paritu Road	7.99	190	S	Sn	21 22 33.3	+3.2
MTHZ	Maungataniwha	8.12	196	P	Pn	21 21 04.9	+2.1
MTHZ				S	Sn	21 22 35.4	+2.0
RAHZ	Arahi	8.13	195	P	Pn	21 21 02.6	-0.2
RAHZ				S	Sn	21 22 35.4	+1.9
MHGZ	Mahia Peninsul	8.21	190	S	Sn	21 22 35.4	-0.1
NMHZ	Naumai	8.36	196	P	Pn	21 21 07.4	+1.3
NMHZ				S	Sn	21 22 42.0	+2.7
KRHZ	Kereru	8.99	197	P	Pn	21 21 13.1	-1.5
KRHZ				S	Sn	21 22 52.8	-1.9
KAHZ	Kahuranaki	9.02	194	P	Pn	21 21 15.0	0.0
PXZ	Pawanui	9.24	194	P	Pn	21 21 16.6	-1.5
PXZ				S	Sn	21 22 57.8	-3.2
PNHZ	Pukenui	9.28	197	P	Pn	21 21 16.3	-2.4
PNHZ				S	Sn	21 22 59.0	-2.9
TSZ	Takapari Road	9.48	198	P	Pn	21 21 18.2	-3.2
TSZ				S	Sn	21 23 05.6	-1.2
PRHZ	Porangahau	9.52	194	P	Pn	21 21 19.9	-2.0
PRHZ				S	Sn	21 23 05.1	-2.6
DVHZ	Dannevirke	9.66	196	P	Pn	21 21 21.0	-2.8
DVHZ				S	Sn	21 23 06.2	-4.9
MRZ	Mangatainoka R	10.15	198	P	Pn	21 21 25.9	-4.6
MRZ				S	Sn	21 23 16.1	-7.0

NEIC 23 21:26:32.7±1.2, 20°.5S±0°.1×178°.1W±0°.1, h542km±8km, mb4.3/38, Error ellipse: s-maj=18.5km s-min=16.8km az=179.0

IDC 23 21:26:34.2±3.7, 20°.49S×178°.28W, h559km±41km, mb3.5/13, mbtmp4.4/13, Error ellipse: s-maj=17.7km s-min=14.9km az=90.0

ISC 23 21:26:31.5±0.4, 20°.47S±0°.10×178°.13W±0°.08, h534km, n147, σ1s21/144, mb4.3/35, 18C-9D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.53	306	P	P	21 27 58.1	+1.6
NIUE	Niue	7.84	81	P	P	21 28 28.6	+1.4
PINNC	Pines Island,	13.60	258	P	P	21 29 29.3	+2.7
DZM	Mont Dzumac	14.47	261	P	P	21 29 36.7	+0.9
DZM	Mont Dzumac	14.47	261	P	P	21 29 39.5	+3.7
	11nm,1.0s,baz=90,slow=11,SNR=2.9						
RAR	Rarotonga	17.17	96	P	P	21 30 04.1	+1.5
TOZ	Tahuroa Road	18.07	196	P	P	21 30 12.3	+1.7
URZ	Urewera	18.20	192	P	P	21 30 09.7	-2.1
	4.8nm,0.3s,baz=266,slow=5.1,SNR=8.4						
QRZ	Quartz Range	21.80	199	P	P	21 30 44.6	+0.3
PMG	Port Moresby	35.22	283	P	P	21 32 40.2	-1.1
JAY	Jayapura	43.92	289	P	P	21 33 51.5	+0.2
	10.0nm,0.4s,baz=81,slow=2.1,SNR=6.2						
	10.0nm,0.4s						
AS31	Alice Springs	44.41	257	P	P	21 33 54.9	-0.1
ASAR	Alice Springs	44.41	257	P	P	21 33 54.8	-0.2
	5.2nm,0.6s,baz=96,slow=7.7,SNR=78						
ASAR				PcP	PcP	21 35 27.4	+0.2
	1.5nm,0.5s,baz=98,slow=3.7,SNR=12						
	5.2nm,0.6s						
WRA	Warramunga Arr	44.49	262	P	P	21 33 54.9	-0.7
	2.3nm,0.4s,baz=97,slow=7.6,SNR=59						
WRA				PcP	PcP	21 35 27.4	-0.2
	0.8nm,0.6s,baz=92,slow=3.2,SNR=4.2						
	2.3nm,0.4s						
VNDA	Vanda	57.93	185	P	P	21 35 31.9	-0.2
	0.9nm,0.5s,baz=346,slow=6.0,SNR=8.4						
	0.9nm,0.5s						
QSPA	South Pole Qui	69.60	180	P	P	21 36 47.8	+1.0
QSPA	South Pole Qui	69.60	180	P	P	21 36 48.0	+1.2
	4.5nm,0.7s,baz=344,slow=0.3,SNR=33						
	4.5nm,0.7s						
MJAR	Matsushiro Arr	70.12	324	P	P	21 36 50.2	0.0
	1.0nm,0.5s,baz=166,slow=6.4,SNR=4.3						
	1.0nm,0.5s						
PETK	Petropavlovsk-	76.21	345	P	P	21 37 24.8	+0.1
	3.7nm,0.7s,baz=126,slow=7.7,SNR=12						
	3.7nm,0.7s						
NVAR	Mina Array Bea	81.08	43	P	P	21 37 52.7	+1.4
	2.6nm,0.8s,baz=223,slow=9.5,SNR=15						
	2.6nm,0.8s						
J05D	Fort Rock, OR	82.16	38		P	21 37 58.5	+2.0
Y14A	Wickenburg	82.26	50	P	P	21 37 57.3	+0.1
KLR	Kul'dur	82.44	330	P	P	21 37 58.5	+0.9
	1.2nm,0.8s,baz=234,slow=1.3,SNR=5.0						
	1.2nm,0.8s						
L14K	Kuka Creek	82.47	7		P	21 37 58.5	+1.1
L14K				IAmb	IAmb	21 37 59.0	
	comp=Z,6.9nm,0.8s						
PINE	Pine Mountain	82.64	38		P	21 37 59.2	+0.1
PINE				IAmb	IAmb	21 38 01.9	
	comp=Z,10nm,0.9s						
PRN	Pahroc Range	82.66	46	P	P	21 37 59.2	-0.1
M16K	Timber Creek	82.67	9		P	21 37 58.6	+0.1
WVOR	Wild Horse Val	83.18	40	P	P	21 38 02.2	+0.4
WVOR				IAmb	IAmb	21 38 13.9	
	comp=Z,14nm,0.9s						
L16K	Owhat River	83.25	9	P	P	21 38 02.0	+0.6
M17K	Holitna River	83.27	10	P	P	21 38 02.0	+0.5
M17K				IAmb	IAmb	21 38 03.9	
	comp=Z,11nm,1.1s						
NLWA	Neilton Lookou	83.28	34	P	P	21 38 03.4	+1.5
NLWA				IAmb	IAmb	21 38 04.6	
	comp=Z,11nm,1.1s						
K15K	Wolf Creek Mou	83.53	8		P	21 38 03.9	+1.1
L18K	Granite Mounta	84.16	10		P	21 38 06.8	+0.8
L18K				IAmb	IAmb	21 38 07.9	
	comp=Z,5.1nm,0.8s						
L19K	White Mountain	84.43	11	P	P	21 38 08.1	+0.8
L19K				IAmb	IAmb	21 38 08.8	
	comp=Z,7.5nm,1.1s						
CAST	Castle Rocks	86.07	11	P	P	21 38 14.0	-1.2
CAST				IAmb	IAmb	21 38 15.0	
	comp=Z,4.7nm,0.7s						
VHRN	Van Horn	86.73	56		P	21 38 19.8	+0.5
MNTX	Cornudas Mount	86.83	55		P	21 38 19.3	-0.3
BSUT	Blindstream Ca	87.14	45	P	P	21 38 21.7	+0.5
TX31	Lajitas Ar. Si	87.14	57		P	21 38 22.4	+1.3
TXAR	Lajitas Array	87.14	57	P	P	21 38 23.2	+2.0
TXAR	Lajitas Array	87.14	57	P	P	21 38 23.3	+2.2
	comp=Z,1.7nm,0.8s,baz=222,slow=7.5,SNR=15						
	comp=Z,1.7nm,0.8s						
M27K	Edge Creek, AK	87.41	16	P	P	21 38 22.5	+0.8
M27K				IAmb	IAmb	21 38 23.6	
	comp=Z,6.2nm,1.1s						
ALPN	Alpine	87.61	56	P	P	21 38 23.8	+0.5
ALPN				IAmb	IAmb	21 38 25.8	
	comp=Z,3.2nm,0.8s						
TROLL	Troll, Antarti	87.76	180	⇑P	P	21 38 22.9	-0.5
	comp=Z,19nm,0.4s						
H21K	Melozitna Rive	88.00	10	P	P	21 38 24.7	+0.5
H21K				IAmb	IAmb	21 38 25.1	
	comp=Z,2.5nm,0.7s						
MCMT	McKenzie Canyo	88.01	40		P	21 38 25.1	0.0
CCB	Clear Creek Bu	88.01	13	P	P	21 38 23.9	-0.3
SNAA	Sanae	88.04	179	P	P	21 38 22.3	-2.3
SNAA				IAmb	IAmb	21 38 38.4	
	comp=Z,7.7nm,1.5s						
VNA3	Neumayer Olymp	88.18	176	⇑P	P	21 38 24.9	-0.2
	comp=Z,5.4nm,0.6s						
ILAR	Eielson Array	88.31	13	P	P	21 38 25.2	-0.5
	comp=Z,1.4nm,0.4s,baz=215,slow=5.3,SNR=22						
	comp=Z,1.4nm,0.4s						
VNA2	Neumayer--Watz	88.62	177	⇑P	P	21 38 27.2	0.0
	comp=Z,2.7nm,0.6s,baz=183,slow=4.6						
K27K	Chicken	88.76	15	P	P	21 38 28.5	+0.8
K27K				IAmb	IAmb	21 38 29.7	
	comp=Z,3.9nm,0.9s						
J26L	Joseph Creek	88.81	14		P	21 38 28.9	+0.8
J26L				IAmb	IAmb	21 38 29.9	
	comp=Z,5.8nm,0.8s						
PDAR	Pinedale Array	89.02	43	P	P	21 38 30.8	+1.0
	comp=Z,1.5nm,0.6s,baz=214,slow=3.5,SNR=17						
	comp=Z,1.5nm,0.6s						
E19K	Redstone River	89.03	8		P	21 38 29.5	+0.5
D19K	Kuna River	89.91	7	P	P	21 38 33.3	+0.3
D19K				IAmb	IAmb	21 38 34.6	
	comp=Z,5.1nm,1.1s						
CMAR	Chiang Mai Arr	90.00	290	P	P	21 38 36.0	+1.5
	comp=Z,0.8nm,0.8s,baz=108,slow=2.2,SNR=7.6						
	comp=Z,0.8nm,0.8s						
D20K	Etivluk River	90.30	8		P	21 38 35.2	+0.4
D20K				IAmb	IAmb	21 38 36.1	
	comp=Z,5.6nm,1.1s						
C19K	Lookout Ridge	90.32	7	P	P	21 38 35.8	+0.8
C19K				IAmb	IAmb	21 38 36.5	
	comp=Z,5.0nm,0.9s						
E22K	Anaktuvuk Pass	90.43	10		P	21 38 36.0	+0.5
E22K				IAmb	IAmb	21 38 36.9	
	comp=Z,3.7nm,1.0s						
G26K	Porcupine Rive	90.84	13	P	P	21 38 37.6	+0.3
G26K				IAmb	IAmb	21 38 39.9	
	comp=Z,4.6nm,1.0s						
D22K	Ayikyak River	90.98	9		P	21 38 38.8	+0.8
D22K				IAmb	IAmb	21 38 39.5	
	comp=Z,3.1nm,0.8s						
MKAR	Makanchi Array	111.09	313	PKiKP	PKiKP	21 44 03.3	-1.0
	comp=Z,0.7nm,0.6s,baz=80,slow=1.1,SNR=6.4						
KURBB	Kurchatov Arra	113.95	317	PKiKP	PKiKP	21 44 08.7	-0.9
	comp=Z,0.9nm,0.6s,baz=101,slow=1.6,SNR=8.6						
BVAR	Borovoye Array	118.98	320	PKP	PKPdf	21 44 18.6	-0.6
	comp=Z,2.2nm,0.5s,baz=20,slow=0.4,SNR=8.9						
ARTI	Arti	125.22	325	PKP	PKPdf	21 44 30.7	-0.3
	comp=Z,3.7nm,0.8s,baz=118,slow=2.3,SNR=6.3						
AKTO	Aktyubinsk	126.97	318	PKP	PKPdf	21 44 34.1	-0.4
	comp=Z,1.1nm,0.6s,baz=111,slow=6.5,SNR=4.1						
ARCES	ARCESS Array B	128.87	350	PKP	PKPdf	21 44 37.0	-0.7
	comp=Z,0.8nm,0.5s,baz=48,slow=1.8,SNR=11						
FINES	FINESS Array B	135.71	344	PKhKP	PKPpre	21 44 42.8	
	comp=Z,1.5nm,0.9s,baz=168,slow=31,SNR=2.5						
NB2	NORSAR Subarra	138.94	353	PKP	PKPpre	21 44 48.6	
	comp=Z,0.9nm,0.8s,baz=10,slow=3.2						
NOA	NORSAR Array B	138.94	353	PKhKP	PKPpre	21 44 47.4	
	comp=Z,0.5nm,0.6s,baz=13,slow=1.8,SNR=5.1						
HFS	Hagfors	139.49	351	PKhKP	PKPpre	21 44 49.0	
	comp=Z,1.0nm,0.4s,baz=72,slow=6.4,SNR=18						
HOMB	Homborsund	141.94	354	*i* P	PKPdf	21 44 59.0	-3.1
BORU	Boraas	142.03	350	*i* P	PKPdf	21 44 58.0	-4.3
ONAU	Onsala	142.39	351	*i* P	PKPdf	21 44 59.2	-3.8
FABU	Falkenberg	142.65	350	*i* P	PKPdf	21 44 59.7	-3.7
BLEU	Blekinge	142.74	347	*i* P	PKPdf	21 45 00.4	-3.2
AKASG	Malin Array Be	142.93	331		PKPdf	21 45 01.2	-2.9
AKASG	Malin Array Be	142.93	331	PKhKP	PKPpre	21 45 00.9	
	comp=Z,7.5nm,0.5s,baz=44,slow=4.3,SNR=86						
AKBB	Malin Array Si	142.93	331		PKPdf	21 45 01.0	-3.1
KIEV	Kiev	142.94	331		PKPdf	21 45 01.2	-3.0
KIEV	Kiev	142.94	331	⇑P	PKPdf	21 45 01.1	-3.0
DEL	Delary	142.96	349	*i* P	PKPdf	21 45 01.0	-3.0
BJUU	Bjuv	143.48	350	*i* P	PKPab	21 45 03.0	-0.3
LUNU	Lund	143.83	349	*i* P	PKPab	21 45 04.8	+0.1
EKA	Eskdalemuir Ar	144.99	5	PKPbc	PKPdf	21 45 07.0	-0.6
	comp=Z,3.2nm,0.7s,baz=343,slow=2.6,SNR=8.6						
SORM	Soroca	145.12	329	⇑P	PKPbc	21 45 08.7	-0.2
MILM	Milestii Mici	145.70	327	⇑P	PKPbc	21 45 10.1	-0.5
BR131	Keskin Array S	146.73	312	PKPbc	PKPbc	21 45 13.5	-0.4
BRTR	Keskin Array B	146.73	312	PKPbc	PKPbc	21 45 13.0	-0.9
BRTR	Keskin Array B	146.73	312	PKPbc	PKPbc	21 45 13.5	-0.4
	comp=Z,2.6nm,0.6s,baz=132,slow=4.2,SNR=20						
KIRS	Kirsehir-Merke	146.79	311	⇑P	PKPbc	21 45 14.1	+0.1
TLCR		146.82	324	⇑P	PKPbc	21 45 13.4	-0.3
BURAR	Bucovina Array	146.98	331	⇑P	PKPbc	21 45 14.9	+0.7
TESR	Tescani	147.08	328	⇓P	PKPbc	21 45 14.2	-0.2
CFR	Carcaliu	147.19	325	⇑P	PKPbc	21 45 15.6	+0.9
TPGR	Topolog	147.24	324	⇑P	PKPbc	21 45 15.4	+0.4
VRI	Vrincioaia	147.48	327	⇑P	PKPbc	21 45 15.6	0.0
PLOR	Plostina	147.53	327	⇓P	PKPbc	21 45 16.0	+0.3
HARR	Harsova	147.62	324	⇑P	PKPbc	21 45 16.1	+0.2
MMAI	Mount Meron Ar	147.70	300	PKPbc	PKiKP	21 45 17.4	-0.7
	comp=Z,4.6nm,0.5s,baz=64,slow=7.5,SNR=23						
TURR	Turia	147.71	328	⇓P	PKiKP	21 45 17.1	-0.5
OSTC	Ostas	147.91	343	*e*PKP	PKiKP	21 45 17.4	-0.5
CHVC	Chvalec	147.93	343	*e*PKP	PKPbc	21 45 17.1	+0.6
STEB	Steborice	148.00	340	*e*PKP	PKPbc	21 45 16.2	-0.5
STEB				*e*x	x	21 45 21.8	
CLL	Collm	148.01	347	⇓*i*PKPbc	PKPbc	21 45 16.9	+0.3
	comp=Z,12nm,0.8s						
CLL				*i* PKPab	PKPab	21 45 21.3	0.0
	comp=Z,7.0nm,0.8s						
UPC	Upice	148.01	343	*e*PKP	PKPbc	21 45 17.2	+0.5
DPC	Dobruska-Polom	148.06	342	*e*PKP	PKiKP	21 45 17.6	-0.6
DPC				*e*x	x	21 45 22.3	
DOPR	Dopca	148.08	328	⇑P	PKiKP	21 45 17.9	-0.5
MLR	Muntele Rosu	148.14	327	⇑P	PKPbc	21 45 17.2	-0.2
KRLC	Kraliky	148.18	342	*e*PKP	PKPbc	21 45 17.6	+0.4
BRG	Berggiesshubel	148.20	345	*e*P	PKPbc	21 45 17.4	+0.3
BRG				Amp		21 45 18.1	
	comp=Z,5.3nm,0.9s						
BRG	Berggiesshubel	148.20	345	P	PKPab	21 45 22.4	+0.2
BRG				Amp		21 45 23.0	
	comp=Z,4.6nm,0.7s						
VOIR		148.63	328	⇑P	PKPbc	21 45 18.7	+0.2
PRU	Pruhonice	148.87	344	*e*PKP	PKPbc	21 45 19.3	+0.5
PRU				*e*x	x	21 45 25.4	
ARR	Arges	148.88	328	⇓P	PKiKP	21 45 20.7	+0.6
VRAC	Vranov	148.91	341	*e*PKP	PKPbc	21 45 19.2	+0.2
VRAC	Vranov	148.91	341	⇓P	PKiKP	21 45 20.0	+0.1
JAVC	Velka Javorina	148.97	340	*e*PKP	PKiKP	21 45 20.5	+0.3
KRUC	Moravsky	149.19	341	*e*PKP	PKPbc	21 45 19.8	+0.1
TREC	Trest	149.25	342	*e*PKP	PKPbc	21 45 19.5	-0.3
ZVC	Zvikov	149.47	344	*e*PKP	PKiKP	21 45 20.9	-0.2
GZR	Gura Zlata	149.76	330	⇓P	PKPbc	21 45 21.4	+0.1
KHC	Kasperske Hory	149.91	345	*e*PKP	PKiKP	21 45 21.9	-0.2
KHC				*e*x	x	21 45 30.2	
CKRC	Cesky Krumlov	150.01	343	*e*PKP	PKPbc	21 45 21.6	0.0
BZS	Buzias	150.12	332	⇑P	PKPbc	21 45 22.0	+0.1
GERES	GERESS Array B	150.14	344	PKPbc	PKPbc	21 45 22.1	0.0
	comp=Z,1.9nm,0.7s,baz=15,slow=1.5,SNR=17						
GERES				PKPab	PKPab	21 45 30.4	+0.1
	comp=Z,1.2nm,0.7s,baz=24,slow=4.7,SNR=6.2						
HERR	Herculane	150.31	330	⇓P	PKPbc	21 45 22.3	-0.1
CONA	Conrad Observa	150.37	341	*i* PKP	PKiKP	21 45 22.9	-0.2
	comp=Z,3.7nm,0.7s						
RONA	Rosalia, Austr	150.43	340	*e*PKP	PKPbc	21 45 22.9	+0.2
	comp=Z,5.1nm,0.5s						
MORH	Mrgy, Hungar	150.88	336	⇑P	PKPbc	21 45 23.6	-0.1
MOA	Molln	150.90	343	*e*PKP	PKPbc	21 45 23.6	-0.1
	comp=Z,1.7nm,0.5s						
BIOA	Bad Ischl, Aus	151.22	343	*e*PKP	PKPbc	21 45 23.9	-0.5
	comp=Z,0.7nm,0.4s						
BOVS	Bovan	151.58	329	⇓P	PKPbc	21 45 25.5	+0.1
LESA	Schwarzleotal	151.72	344	*i* PKP	PKPbc	21 45 25.5	-0.2
	comp=Z,1.5nm,0.4s						
WATA	Walderalm	152.06	346	*i* PKP	PKPbc	21 45 26.1	-0.5
	comp=Z,2.2nm,0.5s						
RETA	Reutte	152.10	347	*e*PKP	PKPbc	21 45 25.9	-0.6
	comp=Z,2.4nm,1.1s						
WTTA	Wattenberg	152.12	346	*i* PKP	PKPbc	21 45 26.6	-0.1
	comp=Z,2.2nm,0.4s						
MOTA	Moosalm	152.16	346	*e*PKP	PKPbc	21 45 26.7	-0.1
	comp=Z,2.2nm,0.8s						
MYKA	Terra Mystica	152.19	342	*i* PKP	PKPbc	21 45 25.5	-1.2
	comp=Z,1.9nm,0.4s						
SQTA	Sankt Quirin	152.26	346	*i* PKP	PKPbc	21 45 26.8	-0.1
	comp=Z,3.1nm,0.8s						
ABTA	Abfaltersbach	152.39	344	*i* PKP	PKPbc	21 45 26.6	-0.5
	comp=Z,3.5nm,0.6s						
DAVA	Damuels	152.47	348	*e*PKP	PKiKP	21 45 27.8	+0.2
	comp=Z,2.1nm,0.7s						
FETA	Feichten	152.55	347	*i* PKP	PKPbc	21 45 27.4	-0.2
	comp=Z,1.6nm,0.5s						
CIMO	Cimolais	152.81	344	PKPbc	PKPbc	21 45 27.1	-1.0
ESDC	Sonseca Array	160.22	13	PKPab	PKPab	21 46 14.0	+0.2
	comp=Z,1.0nm,1.0s,baz=5.7,slow=3.8,SNR=7.3						
KEST	Kesra	163.44	338	PKPab	PKPab	21 46 26.4	-1.7
	comp=Z,1.8nm,0.6s,baz=285,slow=22,SNR=2.4						

IDC 23 21:30:41.0±0.5, 4°.36S×152°.84E, h0km, mb4.1/16, mbtmp4.2/16, MS3.3/10, Error ellipse: s-maj=16.4km s-min=12.6km az=60.0

NEIC 23 21:30:46.6±1.5, 4°.3S±0°.1×152°.63E±0°.07, h33km±6km, mb4.8/27, Error ellipse: s-maj=16.5km s-min=9.5km az=195.0

ISC 23 21:30:48.1±0.4, 4°.26S±0°.06×152°.78E±0°.06, h55km, n72, σ1s42/68, mb4.5/28, MS3.3/8, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	0.62	276		Pn	21 30 55.3	-5.7
RABL					Sn	21 31 04.1	-6.4
I40PG	Keravat	0.77	267	Pg	Pn	21 30 57.5	-5.4
	baz=197,slow=331						
I40PG				I	I	21 38 00.0	
	63nm,0.5s,baz=95,slow=304,SNR=0.3						
MANU	Manus Island	5.84	292		Pn	21 32 12.1	0.0
PMG	Port Moresby	7.57	227	Pn	Pn	21 32 37.9	+2.1
	4.4nm,0.3s,baz=16,slow=6.8,SNR=6.2						
PMG				Sn	Sn	21 33 59.7	-0.5
	2.0nm,0.3s,baz=140,slow=20,SNR=1.9						
PMG				LR	LR	21 35 32.0	
	comp=Z,242nm,21.8s,baz=64,slow=38						
HNR	Honiara	8.78	126	Pn	Pn	21 32 50.7	-1.7
	5.2nm,0.3s,baz=190,slow=7.1,SNR=3.6						
HNR				Sn	Sn	21 34 30.1	+0.2
	6.0nm,0.3s,baz=171,slow=20,SNR=15						
PATS	Pohnpei	12.33	27	Pn	Pn	21 33 38.5	-2.6
GUMO	Guam	19.39	336	LR	LR	21 43 20.7	
	comp=Z,46nm,18.8s,baz=136,slow=39						
FAKI	Fak Fak	20.53	273	P	P	21 35 21.5	-0.7
FAKI				IAmb	IAmb	21 35 35.8	
	comp=Z,30nm,1.0s						
DZM	Mont Dzumac	22.11	144	P	P	21 35 38.3	-0.9
DZM				IAmb	IAmb	21 35 42.5	
	comp=Z,47nm,1.2s						
DZM	Mont Dzumac	22.11	144	P	P	21 35 38.2	-0.9
	comp=Z,28nm,0.9s,baz=319,slow=10,SNR=15						
	comp=Z,28nm,0.9s						
WB0	Warramunga Arr	23.64	228	P	P	21 35 52.9	-1.7
WB0				IAmb	IAmb	21 36 06.5	
	comp=Z,46nm,1.5s						
WR8	Warramunga Arr	23.68	227	P	P	21 35 52.5	-2.5
WRAB	Tennant Creek	23.77	228	P	P	21 35 54.4	-1.4
WRAB				IAmb	IAmb	21 36 07.0	
	comp=Z,45nm,1.6s						
WRA	Warramunga Arr	23.79	228	P	P	21 35 53.6	-2.3
WRA	Warramunga Arr	23.79	228	P	P	21 35 54.5	-1.5
	comp=Z,4.8nm,0.6s,baz=51,slow=10.0,SNR=26						
WRA				PcP	PcP	21 39 39.9	+1.4
	comp=Z,0.5nm,0.7s,baz=56,slow=2.4,SNR=2.4						
	comp=Z,4.8nm,0.6s						
KNRA	Kununurra	26.19	243	P	P	21 36 18.2	+0.4
KNRA				IAmb	IAmb	21 36 27.7	
	comp=Z,34nm,1.4s						
AS31	Alice Springs	26.53	222	P	P	21 36 19.1	-1.8
ASAR	Alice Springs	26.53	222	P	P	21 36 20.2	-0.7
ASAR	Alice Springs	26.53	222	P	P	21 36 19.8	-1.1
	comp=Z,0.5nm,0.3s,baz=55,slow=9.1,SNR=12						
ASAR				PcP	PcP	21 39 44.6	0.0
	comp=Z,1.1nm,0.8s,baz=49,slow=2.1,SNR=4.3						
	comp=Z,0.5nm,0.3s						
MSVF	Nonsavu	28.13	120	LR	LR	21 47 37.4	
	comp=Z,81nm,19.2s,baz=165,slow=36						
DAV	Davao City (W)	29.39	292	LR	LR	21 48 01.6	
	comp=Z,30nm,18.8s,baz=116,slow=35						
STKA	Stephens Creek	29.41	200	P	P	21 36 45.0	-1.4
STKA				IAmb	IAmb	21 36 47.5	
	comp=Z,43nm,1.4s						
STKA	Stephens Creek	29.41	200	P	P	21 36 45.1	-1.3
	comp=Z,2.3nm,0.8s,baz=28,slow=12,SNR=4.0						
	comp=Z,2.3nm,0.8s						
BATI	Baumata	29.47	257	LR	LR	21 49 09.0	
	comp=Z,216nm,18.2s,baz=124,slow=38						
FITZ	Fitzroy Crossi	29.90	241	P	P	21 36 49.5	-1.5
KAPI	Kappang	32.92	267	LR	LR	21 54 29.6	
	comp=Z,62nm,18.5s,baz=78,slow=43						
JOW	Kunigami	38.95	324	P	P	21 38 10.4	+1.5
	comp=Z,30nm,0.8s,baz=140,slow=8.9,SNR=5.8						
NIUE	Niue	39.26	115	P	P	21 38 10.1	-1.5
URZ	Urewera	40.46	150	P	P	21 38 21.4	+0.1
	comp=Z,6.5nm,0.6s,baz=27,slow=4.5,SNR=2.0						
	comp=Z,6.5nm,0.6s						
RTZ	Ruatahuna	40.67	150	P	P	21 38 23.7	+0.5
BKZ	Black Stump Fm	40.87	151	P	P	21 38 25.8	+0.9
MRNZ	Matariki Terra	41.08	157	P	P	21 38 27.5	+1.0
JSG	Sagara	41.09	342	P	P	21 38 26.1	-0.6
THZ	Tophouse	41.45	157	P	P	21 38 30.2	+0.6
THZ				IAmb	IAmb	21 38 31.1	
	comp=Z,38nm,1.0s						
TCW	Tory Channel	41.54	155	P	P	21 38 30.9	+0.7
TUWZ	Tuamarina	41.58	156	P	P	21 38 31.9	+1.3
FOZ	Fox Glacier	41.91	161	P	P	21 38 35.2	+2.0
FOZ				IAmb	IAmb	21 38 49.5	
	comp=Z,57nm,1.1s						
LTZ	Lake Taylor	42.09	158	P	P	21 38 36.1	+1.4
RPZ	Rata Peaks	42.48	160	P	P	21 38 38.3	+0.4
GVZ	Greta Valley S	42.53	158	P	P	21 38 38.5	+0.1
JNU	Nakatsue	42.58	332	P	P	21 38 40.2	+1.4
	comp=Z,5.5nm,0.6s,baz=192,slow=4.8,SNR=5.1						
	comp=Z,5.5nm,0.6s						
LBZ	Lake Benmore	42.80	162	P	P	21 38 41.2	+0.7
LBZ				IAmb	IAmb	21 38 47.8	
	comp=Z,38nm,1.5s						
MJAR	Matsushiro Arr	42.81	343	P	P	21 38 41.9	+1.2
	comp=Z,0.8nm,0.4s,baz=177,slow=7.4,SNR=4.5						
	comp=Z,0.8nm,0.4s						
KSRS	Korea Array	47.51	333	P	P	21 39 19.2	+1.4
	comp=Z,1.3nm,0.8s,baz=146,slow=9.9,SNR=6.7						
	comp=Z,1.3nm,0.8s						
KLR	Kul'dur	56.33	344	P	P	21 40 23.9	+0.6
	comp=Z,1.7nm,0.7s,baz=168,slow=4.1,SNR=7.9						
KLR				LR	LR	22 03 47.0	
	comp=Z,19nm,18.1s,baz=189,slow=35						
	comp=Z,1.7nm,0.7s						
PEA0B	Petropavlovsk-	57.31	4	P	P	21 40 31.9	+1.7
PEA0B				IAmb	IAmb	21 40 46.3	
	comp=Z,15nm,1.5s						
PETK	Petropavlovsk-	57.31	4	P	P	21 40 31.5	+1.3
PETK	Petropavlovsk-	57.31	4	P	P	21 40 30.9	+0.7
	comp=Z,0.8nm,0.6s,baz=166,slow=6.2,SNR=3.6						
	comp=Z,0.8nm,0.6s						
CMAR	Chiang Mai Arr	57.63	295	P	P	21 40 35.2	+2.1
	comp=Z,0.2nm,0.2s,baz=152,slow=38,SNR=2.2						
	comp=Z,0.2nm,0.2s						

DRV	**Dumont d'Urvil**	**62.93**	**186**	P	**P**	**21 41 08.9**	**+0.5**
DRV				x	x	21 41 23.4	
SONM	**Songino Array**	**65.86**	**328**	P	**P**	**21 41 29.1**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=145,slow=5.4,SNR=4.3						
	comp=Z,0.4nm,0.5s						
VNDA	**Vanda**	**73.36**	**178**	P	**P**	**21 42 14.4**	**+0.7**
VNDA				IAmb	IAmb	21 42 17.9	
	comp=Z,6.8nm,0.8s						
VNDA	**Vanda**	**73.36**	**178**	P	**P**	**21 42 14.2**	**+0.6**
	comp=Z,4.9nm,0.7s,baz=331,slow=6.4,SNR=22						
	comp=Z,4.9nm,0.7s						
M14K	**Bethel**	**73.71**	**21**	P	**P**	**21 42 17.0**	**+1.1**
M14K				IAmb	IAmb	21 42 19.0	
	comp=Z,6.0nm,0.9s						
SBA	**Scott Base**	**73.91**	**177**	P	**P**	**21 42 17.0**	**+0.2**
K15K	**Wolf Creek Mou**	**74.91**	**20**	P	**P**	**21 42 23.8**	**+0.9**
K15K				IAmb	IAmb	21 42 25.0	
	comp=Z,16nm,1.5s						
M16K	**Timber Creek**	**75.00**	**22**	P	**P**	**21 42 24.2**	**+0.7**
M16K				IAmb	IAmb	21 42 27.9	
	comp=Z,8.3nm,1.2s						
E19K	**Redstone River**	**79.68**	**17**		**P**	**21 42 49.8**	**+0.3**
MKAR	**Makanchi Array**	**79.91**	**319**	P	**P**	**21 42 51.2**	**0.0**
MKAR	**Makanchi Array**	**79.91**	**319**	P	**P**	**21 42 52.8**	**+1.6**
	comp=Z,0.2nm,0.5s,baz=98,slow=9.2,SNR=2.6						
MKAR				LR	LR	22 20 03.7	
	comp=Z,13nm,18.0s,baz=158,slow=37						
	comp=Z,0.2nm,0.5s						
ILAR	**Eielson Array**	**81.67**	**22**	P	**P**	**21 42 58.5**	**-1.7**
	comp=Z,1.2nm,0.9s,baz=245,slow=5.3,SNR=6.3						
QSPA	**South Pole Qui**	**85.69**	**180**	P	**P**	**21 43 21.2**	**+0.3**
QSPA				IAmb	IAmb	21 43 24.7	
	comp=Z,9.2nm,0.8s						
QSPA	**South Pole Qui**	**85.69**	**180**	P	**P**	**21 43 21.1**	**+0.1**
	comp=Z,8.1nm,0.8s,baz=348,slow=1.4,SNR=38						
	comp=Z,8.1nm,0.8s						
BVAR	**Borovoye Array**	**88.80**	**323**	LR	LR	22 21 39.6	
	comp=Z,16nm,21.5s,baz=110,slow=34						
NVAR	**Mina Array Bea**	**91.77**	**52**	P	**P**	**21 43 50.6**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=261,slow=4.2,SNR=2.6						
	comp=Z,0.7nm,0.7s						
ARTI	**Arti**	**95.96**	**326**	LR	LR	22 30 54.7	
	comp=Z,16nm,18.2s,baz=102,slow=38						
PLCA	**Paso Flores**	**120.22**	**143**	PKP	**PKiKP**	**21 49 34.3**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=250,slow=3.6,SNR=6.2						
GERES	**GERESS Array B**	**123.59**	**329**	PKP	**PKiKP**	**21 49 39.9**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=44,slow=3.0,SNR=2.4						
ROSC	**El Rosal**	**133.05**	**87**	PKP	**PKPdf**	**21 49 58.5**	**-0.6**
	comp=Z,8.0nm,0.4s,baz=109,slow=14,SNR=2.9						
LPAZ	**La Paz**	**134.69**	**118**	PKP	**PKiKP**	**21 50 03.5**	**-0.2**
	comp=Z,2.4nm,0.6s,baz=252,slow=0.3,SNR=14						
TORD	**Torodi Ar. Bea**	**150.12**	**289**	PKPbc	**PKPbc**	**21 50 33.6**	**-0.3**
	comp=Z,2.0nm,0.4s,baz=68,slow=2.0,SNR=1.5						
BDFB	**Brasilia**	**151.46**	**134**	PKPbc	**PKiKP**	**21 50 37.6**	**0.0**
	comp=Z,8.4nm,0.4s,baz=302,slow=2.6,SNR=17						

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*NEIC **23** 21:40:14.8±1.2, 6°.78S±0°.09×154°.81E±0°.08, h10^{km}±1^{km}, mb4.5/29, Error ellipse: s-maj=15.2km s-min=11.7km az=30.0*

*IDC **23** 21:40:24.3±2.1, 6°.84S×154°.56E, h92^{km}±20^{km}, mb3.7/14, mbtmp4.1/16, MS3.6/5, Error ellipse: s-maj=16.8km s-min=13.3km az=171.0*

ISC 23 21:40:19.7±0.5**, 6°.75S**±0°.07×**154°.78E**±0°.07**, h56^{km}, n59,** σ1^{s}.**40**/60**, mb4.2**/29**, MS3.5**/4**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**3.63**	**314**	Pn	**Pn**	**21 41 11.4**	**-2.1**
I40PG	**Keravat**	**3.67**	**311**	I	I	22 04 00.0	
	70nm,0.4s,baz=121,slow=309,SNR=0.6						
HNR	**Honiara**	**5.77**	**118**	Pn	**Pn**	**21 41 39.7**	**-3.1**
HNR	**Honiara**	**5.77**	**118**	P	Pn	21 41 50.8	+8.0
	52nm,0.6s,baz=239,slow=9.3,SNR=3.6						
HNR				S	Sn	21 42 57.8	+10
	53nm,0.5s,baz=239,slow=18,SNR=3.6						
PMG	**Port Moresby**	**7.99**	**250**		**Pn**	**21 42 11.1**	**-2.1**
PMG					**Sn**	**21 43 41.2**	**-1.0**
PMG	**Port Moresby**	**7.99**	**250**	P	**Pn**	**21 42 13.0**	**-0.2**
	28nm,0.8s,baz=66,slow=10,SNR=6.2						
PMG				S	**Sn**	**21 43 42.0**	**-0.2**
	48nm,0.7s,baz=70,slow=18,SNR=4.7						
PMG				LR	LR	21 45 36.2	
	comp=Z,228nm,18.1s,baz=44,slow=40						
PATS	**Pohnpei**	**13.95**	**15**	Pn	**Pn**	**21 43 30.3**	**-4.4**
CTAO	**Charters Tower**	**15.63**	**211**	Pn	**Pn**	**21 43 55.0**	**-1.6**
DZM	**Mont Dzumac**	**18.95**	**145**	P	**Pn**	**21 44 41.7**	**+4.1**
	4.3nm,0.8s,baz=343,slow=20,SNR=1.5						
WB0	**Warramunga Arr**	**23.65**	**235**	P	**P**	**21 45 25.1**	**-1.1**
WB0				IAmb	IAmb	21 45 52.9	
	comp=Z,11nm,1.1s						
WR8	**Warramunga Arr**	**23.66**	**234**	P	**P**	**21 45 25.2**	**-1.1**
WR8				IAmb	IAmb	21 45 37.1	
	comp=Z,13nm,1.1s						
ARMA	**Armidale**	**23.73**	**187**	P	**P**	**21 45 26.1**	**-0.8**
WRA	**Warramunga Arr**	**23.78**	**235**	P	**P**	**21 45 27.4**	**0.0**
WRA	**Warramunga Arr**	**23.78**	**235**	P	**P**	**21 45 25.9**	**-1.6**
	comp=Z,6.2nm,0.9s,baz=60,slow=9.8,SNR=15						
WRA				PcP	**PcP**	**21 49 10.9**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=61,slow=2.5,SNR=4.6						
	comp=Z,6.2nm,0.9s						
MSVF	**Nonsavu**	**25.20**	**118**	P	**P**	**21 45 39.9**	**-0.5**
MSVF				IAmb	IAmb	21 45 42.5	
	comp=Z,11nm,1.0s						
ASAR	**Alice Springs**	**26.17**	**228**	P	**P**	**21 45 48.1**	**-1.1**
	comp=Z,2.5nm,0.8s,baz=60,slow=9.0,SNR=20						
ASAR				LR	LR	21 55 16.5	
	comp=Z,108nm,18.2s,baz=80,slow=34						
	comp=Z,2.5nm,0.8s						
KNRA	**Kununurra**	**26.99**	**249**	P	**P**	**21 45 56.8**	**+0.3**
KNRA				IAmb	IAmb	21 46 20.6	
	comp=Z,25nm,1.3s						
STKA	**Stephens Creek**	**27.87**	**205**	P	**P**	**21 46 03.5**	**-0.7**
	comp=Z,2.8nm,0.9s,baz=38,slow=14,SNR=4.3						
STKA				LR	LR	21 55 52.2	
	comp=Z,97nm,18.8s,baz=25,slow=34						
	comp=Z,2.8nm,0.9s						
FITZ	**Fitzroy Crossi**	**30.55**	**246**	P	**P**	**21 46 27.7**	**-0.6**
FITZ	**Fitzroy Crossi**	**30.55**	**246**	LR	LR	21 59 29.8	
	comp=Z,137nm,18.3s,baz=95,slow=38						
TPUB	**Ta-pu**	**44.78**	**313**	P	**P**	**21 48 29.4**	**+1.2**
YHNB	**Yeheng**	**45.10**	**315**	P	**P**	**21 48 31.4**	**+0.6**
KSRS	**Korea Array**	**50.62**	**332**	P	**P**	**21 49 13.5**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=146,slow=8.8,SNR=2.1						
	comp=Z,0.6nm,0.6s						
PEA0B	**Petropavlovsk-**	**59.68**	**2**	P	**P**	**21 50 19.1**	**+0.9**
PETK	**Petropavlovsk-**	**59.68**	**2**	P	**P**	**21 50 20.1**	**+2.0**
PETK	**Petropavlovsk-**	**59.68**	**2**	P	**P**	**21 50 19.1**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=164,slow=7.5,SNR=12						
	comp=Z,0.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**60.48**	**296**	P	**P**	**21 50 25.6**	**+1.3**
	comp=Z,1.8nm,0.7s,baz=110,slow=7.0,SNR=14						
	comp=Z,1.8nm,0.7s						
SONM	**Songino Array**	**69.01**	**327**	P	**P**	**21 51 19.5**	**0.0**
	comp=Z,0.4nm,0.5s,baz=135,slow=4.2,SNR=4.9						
	comp=Z,0.4nm,0.5s						
LSA	**Lhasa**	**70.95**	**304**	P	**P**	**21 51 33.4**	**+1.2**
LSA				IAmb	IAmb	21 51 35.1	
	comp=Z,4.7nm,0.9s						
EVN	**Everest**	**74.02**	**301**	P	**P**	**21 51 50.8**	**+0.1**
EVN				IAmb	IAmb	21 51 53.3	
	comp=Z,4.3nm,0.7s						
K15K	**Wolf Creek Mou**	**76.56**	**19**	P	**P**	**21 52 05.4**	**+1.6**
K15K				IAmb	IAmb	21 52 17.9	
	comp=Z,7.7nm,1.1s						
L19K	**White Mountain**	**78.81**	**22**	P	**P**	**21 52 17.6**	**+1.2**
L19K				IAmb	IAmb	21 52 33.9	
	comp=Z,5.5nm,1.2s						
J20K	**Nowinta River**	**80.31**	**20**	P	**P**	**21 52 25.7**	**+1.3**
CAST	**Castle Rocks**	**80.57**	**21**	P	**P**	**21 52 26.6**	**+0.7**
E19K	**Redstone River**	**81.46**	**17**	P	**P**	**21 52 31.6**	**+1.1**
E19K				IAmb	IAmb	21 52 37.6	
	comp=Z,7.4nm,1.5s						
IMAR	**Indian Mountai**	**81.57**	**19**	P	**P**	**21 52 32.4**	**+1.4**
D19K	**Kuna River**	**81.91**	**16**	P	**P**	**21 52 34.8**	**+1.9**
D19K				IAmb	IAmb	21 52 39.8	
	comp=Z,3.6nm,1.2s						
C19K	**Lookout Ridge**	**81.94**	**15**	P	**P**	**21 52 33.9**	**+0.8**
C19K				IAmb	IAmb	21 52 53.0	
	comp=Z,4.6nm,1.2s						
D20K	**Etivluk River**	**82.47**	**16**	P	**P**	**21 52 37.0**	**+1.2**
MKAR	**Makanchi Array**	**83.08**	**319**	P	**P**	**21 52 40.6**	**+1.1**
MKAR	**Makanchi Array**	**83.08**	**319**	P	**P**	**21 52 40.5**	**+1.0**
	comp=Z,0.8nm,0.6s,baz=117,slow=4.4,SNR=9.7						
	comp=Z,0.8nm,0.6s						
ILAR	**Eielson Array**	**83.22**	**22**	P	**P**	**21 52 39.8**	**0.0**
	comp=Z,0.2nm,0.4s,baz=238,slow=5.4,SNR=6.0						
ILAR				LR	LR	22 30 42.3	
	comp=Z,32nm,18.2s,baz=282,slow=36						
	comp=Z,0.2nm,0.4s						
QSPA	**South Pole Qui**	**83.22**	**180**	P	**P**	**21 52 40.1**	**+0.1**
QSPA	**South Pole Qui**	**83.22**	**180**	P	**P**	**21 52 39.7**	**-0.3**
	comp=Z,2.0nm,0.8s,baz=93,slow=0.7,SNR=11						
	comp=Z,2.0nm,0.8s						
MAKZ	**Makanchi**	**83.29**	**319**	P	**P**	**21 52 42.2**	**+1.7**
MAKZ				IAmb	IAmb	21 53 00.8	
	comp=Z,2.5nm,0.9s						
J25K	**Salcha River,**	**83.70**	**22**	P	**P**	**21 52 42.9**	**+0.6**
DOT	**Dot Lake**	**83.72**	**23**	P	**P**	**21 52 43.2**	**+0.8**
ZALV	**Zalesovo Beam**	**83.85**	**326**	P	**P**	**21 52 42.2**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=112,slow=6.1,SNR=3.9						
	comp=Z,0.4nm,0.3s						
HYT	**Haines Junctio**	**85.25**	**27**	P	**P**	**21 52 52.7**	**+2.4**
HYT				IAmb	IAmb	21 53 06.8	
	comp=Z,3.7nm,0.9s						
KDJ	**Kajisay**	**85.37**	**313**	P	**P**	**21 52 52.7**	**+1.3**
KDJ				IAmb	IAmb	21 52 53.9	
	comp=Z,3.0nm,0.8s						
K29M	**Barlow Dome**	**86.42**	**24**	P	**P**	**21 52 56.8**	**+0.7**
K29M				IAmb	IAmb	21 52 59.5	
	comp=Z,3.1nm,0.9s						
KURBB	**Kurchatov Arra**	**86.53**	**322**	P	**P**	**21 52 56.6**	**-0.1**
	comp=Z,0.3nm,0.2s,baz=101,slow=4.6,SNR=4.8						
	comp=Z,0.3nm,0.2s						
NVAR	**Mina Array Bea**	**91.74**	**52**	P	**P**	**21 53 23.2**	**+1.4**
	comp=Z,1.0nm,0.8s,baz=268,slow=5.7,SNR=4.6						
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**96.22**	**28**	P	**P**	**21 53 42.3**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=270,slow=4.1,SNR=4.1						
	comp=Z,0.4nm,0.7s						
AKASG	**Malin Array Be**	**117.21**	**324**	PKP	**PKPdf**	**21 58 58.5**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=61,slow=2.1,SNR=5.7						
BRTR	**Keskin Array B**	**118.06**	**312**	PKP	**PKPdf**	**21 59 00.6**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=84,slow=2.6,SNR=2.7						
GERES	**GERESS Array B**	**126.73**	**329**	PKP	**PKiKP**	**21 59 17.9**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=34,slow=2.5,SNR=9.0						
BDFB	**Brasilia**	**148.31**	**135**	PKPbc	**PKPbc**	**22 00 00.0**	**-0.9**
	comp=Z,2.1nm,0.7s,baz=79,slow=4.7,SNR=3.9						
TORD	**Torodi Ar. Bea**	**152.75**	**286**	PKPbc	**PKPbc**	**22 00 11.5**	**+0.1**
	comp=Z,3.6nm,0.5s,baz=44,slow=3.2,SNR=2.3						
TORD				PKPab	**PKPab**	**22 00 22.4**	**+0.1**
	comp=Z,2.8nm,0.5s,baz=45,slow=2.9,SNR=1.7						

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*UPP **23** 22:04:07.7±0.1, 67°.18N×20°.64E, h0^{km}, ML1.6, Unknown*

*HEL **23** 22:04:08.2±0.4, 67°.16N×20°.62E, h0^{km}, ML1.3, Explosion*

*IDC **23** 22:04:30.3±1.0, 67°.18N×20°.93E, h0^{km}, mbtmp2.5/4, ML1.7/4, Error ellipse: s-maj=15.8km s-min=8.1km az=117.0*

ISC 23 22:04:06.8±0.8**, 67°.18N**±0°.03×**20°.74E**±0°.03**, h0^{km}, n23,** σ1^{s}.**89**/34**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.09**	**229**	P	**Pg**	**22 04 09.1**	**+0.7**
DUNU				S	**Sg**	**22 04 10.1**	**+0.5**
MASU	**Masugnsbyn**	**0.56**	**60**	P	**Pb**	**22 04 19.2**	**-0.3**
RATU	**Laukkuluspa**	**0.78**	**326**	P	**Pg**	**22 04 22.0**	**+0.2**
ERTU	**Ertsjaerv**	**0.85**	**137**	P	**Pg**	**22 04 23.7**	**+0.6**
ERTU	**Ertsjaerv**	**0.85**	**137**	PG	**Pg**	**22 04 23.6**	**+0.6**
ERTU				SB	**Sb**	**22 04 35.8**	**-0.5**
SALU	**Saltoluokta**	**0.89**	**284**	P	**Pg**	**22 04 23.7**	**-0.1**
PAJU	**Pajala**	**0.94**	**99**	P	**Pb**	**22 04 25.9**	**0.0**
PAJU	**Pajala**	**0.94**	**99**	PG	**Pb**	**22 04 26.1**	**+0.2**
PAJU				SB	**Sb**	**22 04 38.9**	**0.0**
LANU	**Lannavaara**	**0.99**	**28**	PB	**Pb**	**22 04 27.4**	**+0.6**
LANU				SB	**Sn**	**22 04 42.2**	**-0.5**
HARU	**Harads**	**1.03**	**175**	P	**Pg**	**22 04 27.0**	**+0.6**
KLF	**Kolari**	**1.26**	**86**	PG	**Pn**	**22 04 31.6**	**+0.1**
	baz=272						
KLF				MSG		22 04 47.6	
	comp=Z,1.6nm,0.2s						
KLF				SB	**Sn**	**22 04 49.6**	**+0.6**
HEF	**Hetta**	**1.66**	**41**	PG	**Pg**	**22 04 38.7**	**+0.2**
	baz=222						
HEF				MSG		22 04 59.3	
	comp=Z,1.3nm,0.2s						
HEF				SG	**Sn**	**22 04 59.3**	**+0.3**
KALU	**Kalix**	**1.69**	**141**	P	**Pb**	**22 04 38.7**	**0.0**
KALU	**Kalix**	**1.69**	**141**	PG	**Pg**	**22 04 39.2**	**+0.1**
KALU				SG	**Sn**	**22 04 59.9**	**+0.1**
SJUU	**Sjulsmark**	**1.72**	**168**	P	**Pn**	**22 04 38.6**	**+0.8**
TOF	**Tornio**	**1.81**	**126**	PG	**Pg**	**22 04 41.5**	**+0.2**
TOF				SG	**Sn**	**22 05 02.0**	**-0.6**
TOF				MSG		22 05 02.9	
	comp=Z,2.1nm,0.2s						
KIF	**Kilpisjarvi**	**1.83**	**1**	PG	**Pg**	**22 04 42.2**	**+0.3**
KIF				SB	**Sn**	**22 05 03.0**	**-0.3**
KIF				MSG		22 05 04.4	
	comp=Z,3.0nm,0.2s						
I37NO	**I37NO**	**2.06**	**338**	I	I	22 17 37.9	
	baz=159,slow=329,SNR=1.9						
RNF	**Rovaniemi**	**2.16**	**103**	PG	**Pg**	**22 04 47.6**	**-0.5**
RNF				SN	**Sn**	**22 05 10.0**	**-1.3**
ARCES	**ARCESS Array B**	**2.95**	**35**	Pn	Pg	22 05 17.8	+15
	comp=Z,0.1nm,0.3s,baz=217,slow=14,SNR=8.6						
ARCES				Sn	Sg	22 05 54.0	+13
	comp=Z,0.1nm,0.3s,baz=218,slow=22,SNR=3.6						
	comp=Z,0.3nm,0.3s						
FINES	**FINESS Array B**	**6.21**	**156**	Pn	**Pg**	**22 06 03.3**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=344,slow=14,SNR=3.5						
FINES				Sn	**Sb**	**22 07 14.4**	**+4.1**
	comp=Z,0.1nm,0.3s,baz=347,slow=25,SNR=2.4						
FINES				Lg	Lg	22 07 42.6	
	comp=Z,0.2nm,0.3s,baz=346,slow=27,SNR=1.7						
	comp=Z,1.2nm,1.0s						
NOA	**NORSAR Array B**	**7.43**	**219**	Pn	**Pb**	**22 06 20.9**	**+4.4**
	baz=34,slow=11,SNR=1.6						
NOA				Sn	**Sb**	**22 07 41.1**	**-4.5**
	baz=33,slow=21,SNR=1.2						
NOA				Lg	Lg	22 08 24.1	
	baz=16,slow=16,SNR=1.6						
	comp=Z,0.1nm,0.7s						
HFS	**Hagfors**	**7.73**	**207**	Pn	**Pb**	**22 06 22.1**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=15,slow=13,SNR=1.0						
HFS				Sn	**Sb**	**22 07 47.6**	**-6.5**
	comp=Z,0.1nm,0.3s,baz=21,slow=24,SNR=1.8						
HFS				Lg	Lg	22 08 30.1	
	comp=Z,0.1nm,0.3s,baz=37,slow=27,SNR=1.8						
	comp=Z,0.4nm,0.7s						

RSNC 23 22:10:45.9±0.0**, 11°N**±1°×**7°4W**±°**, h11^{km}**±2^{km}**, M3.2, mb4.3, mB4.9, ML2.8, Mw(mB)4.2, Near north coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMRC	**Santa Marta, M**	**0.47**	**271**	P	Pg	22 10 54.1	-1.0
SMRC				S	Sg	22 11 01.0	-0.2
CRJC	**Cerrejon, Guaj**	**0.86**	**99**	P	Pg	22 11 01.6	-1.0
CRJC				S	Sg	22 11 14.1	+0.2
ARGC	**Ariguani, Magd**	**1.38**	**201**	P	Pn	22 11 09.8	-1.4
ARGC				S	Sn	22 11 29.3	-0.2
URIC	**Uribia, Colomb**	**1.81**	**72**	P	Pn	22 11 15.7	-1.3
URIC				S	Sn	22 11 38.9	-1.0
SJCC	**San Jacinto, C**	**1.89**	**228**	P	Pn	22 11 16.9	-1.2
SJCC				S	Sn	22 11 42.9	+1.0
OCAC	**Ocana**	**2.93**	**172**	P	Pn	22 11 31.2	-1.5
OCAC				S	Sn	22 12 06.8	-1.2
LCBC	**Los crdobas,**	**3.45**	**229**	P	Pn	22 11 38.4	-1.2
LCBC				S	Sn	22 12 24.1	+3.6
ZARC	**Zaragoza, Cauc**	**3.81**	**197**	P	Pn	22 11 46.7	+2.2
ZARC				S	Sn	22 12 33.2	+3.9
SDV	**Santo Domingo**	**3.81**	**126**	P	Pn	22 11 44.5	-0.3
SDV				S	Sn	22 12 27.8	-1.9
UREC	**San Jos de Ur**	**3.82**	**208**	P	Pn	22 11 45.1	+0.4
UREC				S	Sn	22 12 30.5	+0.9
PAMC	**Pamplona, Colo**	**3.94**	**165**	P	Pn	22 11 47.4	+0.7
PAMC				S	Sn	22 12 34.1	+0.9
BRJC	**Barrancabermej**	**4.16**	**180**	P	Pn	22 11 50.6	+1.2
BRJC				S	Sn	22 12 40.2	+2.1
APAC	**Apartado, Choc**	**4.28**	**221**	P	Pn	22 11 52.0	+1.0
PTBC	**PUERTO BERRIO,**	**4.64**	**189**	P	Pn	22 11 58.4	+2.3
PTBC				S	Sn	22 12 51.3	+1.3
TAMC	**Tame, Arauca**	**5.08**	**157**	P	Pn	22 12 00.5	-1.6
	29nm,0.6s						
TAMC				S	Sn	22 12 58.4	-2.4
	29nm,0.6s						
HELC	**Santa Helena**	**5.24**	**200**	P	Pn	22 12 05.9	+1.3
RUSC	**La Rusia**	**5.28**	**173**	P	Pn	22 12 06.2	+1.0
	11nm,0.5s						
RUSC				S	Sn	22 13 08.1	+1.9
	11nm,0.5s						
SPBC	**San Pablo de B**	**5.48**	**183**	P	Pn	22 12 11.9	+4.2
	1µm8.4nm,0.5s						
SPBC				S	Sn	22 13 15.6	+4.8
	1µm8.4nm,0.5s						
NORC	**Norcasia**	**5.67**	**191**	P	Pn	22 12 11.7	+1.5
	16nm,0.4s						
CBOC	**Ciudad Bolivar**	**5.72**	**203**	P	Pn	22 12 11.1	+0.1
	4.8nm,0.4s						
GUY2C	**Guyana, Caldas**	**6.11**	**195**	P	Pn	22 12 16.9	+0.3
	25nm,0.6s						

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*IDC **23** 22:26:58.7±1.6, 10°.51S×113°.69E, h0^{km}, mb3.8/10, mbtmp3.9/12, ML3.8/2, MS2.9/2, Error ellipse: s-maj=53.0km s-min=17.7km az=44.0*

*NEIC **23** 22:26:59.9±1.8, 10°.50S±0°.08×113°.66E±0°.08, h10^{km}±1^{km}, mb4.6/19, Error ellipse: s-maj=13.9km s-min=12.0km az=231.0*

*DJA **23** 22:26:59.0±0.5, 11°S±4°×11°4E±°, h10^{km}, M4.3/12, mb4.5/4, MLv4.2/12*

ISC 23 22:27:01.0±0.5**, 10°.50S**±0°.05×**113°.70E**±0°.05**, h23^{km}, n58,** σ1^{s}.**33**/57**, mb4.2**/18**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGI	**Jajag, Banyuwa**	**2.07**	**13**		**Pn**	**22 27 33.3**	**-1.1**
JAGI	**Jajag, Banyuwa**	**2.07**	**13**	P	**Pb**	**22 27 36.5**	**-1.4**
JAGI				S	**Sb**	**22 28 03.7**	**+0.5**
GMJI	**Gumukmas**	**2.23**	**354**	P	**Pn**	**22 27 37.0**	**+0.4**
GMJI				S	**Sb**	**22 28 07.3**	**-0.5**
SRBI	**Singaraja**	**2.83**	**32**	P	**Pb**	**22 27 48.7**	**-2.2**
SRBI				S	**Sb**	**22 28 23.2**	**-1.9**
PCJI	**Pacitan**	**3.38**	**312**	P	**Pn**	**22 27 51.9**	**-0.6**
KMMI	**Kalianget**	**3.44**	**4**	P	**Pn**	**22 27 53.8**	**+0.5**
WOJI	**Wonogiri, Jawa**	**3.81**	**314**	P	**Pn**	**22 27 56.8**	**-1.5**
NGJI	**Ngawi**	**3.82**	**324**	P	**Pn**	**22 27 58.4**	**-0.1**
UGM	**Wanagama**	**4.06**	**309**		**Pn**	**22 28 01.3**	**-0.5**
UGM	**Wanagama**	**4.06**	**309**	P	**Pn**	**22 28 01.5**	**-0.3**
UGM				S	**Sn**	**22 28 47.4**	**-1.2**
YOGI	**Yogyakarta**	**4.29**	**308**	P	**Pn**	**22 28 02.8**	**-2.2**
PLAI	**Plampang**	**4.35**	**68**	P	**Pn**	**22 28 07.0**	**+1.2**
CMJI	**Cimerak**	**5.84**	**297**	P	**Pn**	**22 28 24.5**	**-1.8**
	0.3nm62nm,1.1s						
LEM	**Lembang**	**7.03**	**301**	Sn	**Sn**	**22 30 02.3**	**+0.1**
	4.7nm,0.3s,baz=151,slow=20,SNR=2.1						
EDFI	**Ende, Flores**	**8.07**	**78**	P	**Pn**	**22 28 58.4**	**+1.4**
	12nm,0.5s						
KAPI	**Kappang**	**8.11**	**48**	LR	LR	22 32 55.2	
	comp=Z,109nm,21.1s,baz=190,slow=44						
CGJI	**Cibinong**	**8.81**	**295**	P	**Pn**	**22 29 03.3**	**-3.8**
BATI	**Baumata**	**9.81**	**89**	Pn	**Pn**	**22 29 21.2**	**+0.4**
	2.5nm,0.3s,baz=239,slow=5.9,SNR=2.2						
BATI				Sn	**Sn**	**22 31 07.8**	**-2.5**
	3.5nm,0.3s,baz=224,slow=22,SNR=1.9						
	13nm,0.4s						
MBWA	**Marble Bar**	**12.08**	**152**	Pn	**Pn**	**22 29 52.0**	**+0.1**
FITZ	**Fitzroy Crossi**	**13.81**	**124**	Pn	**Pn**	**22 30 14.5**	**-1.0**
FITZ	**Fitzroy Crossi**	**13.81**	**124**	Pn	**Pn**	**22 30 15.1**	**-0.4**
	0.2nm,0.3s,baz=305,slow=9.8,SNR=1.4						
FITZ				Sn	Sn	22 32 36.6	-12
	0.3nm,0.3s,baz=7.1,slow=23,SNR=7.7						
	1.7nm,0.7s						
MORW	**Morawa**	**18.60**	**174**	P	**Pn**	**22 31 16.5**	**-0.6**
MORW				IAmb	IAmb	22 31 26.2	
	comp=Z,23nm,1.4s						
FAKI	**Fak Fak**	**19.89**	**69**		**Pn**	**22 31 31.9**	**-0.9**
FAKI				IAmb	IAmb	22 31 40.0	
	comp=Z,70nm,1.4s						
KULM	**Kulim**	**20.37**	**320**	P	**P**	**22 31 36.2**	**-0.1**
KULM				IAmb	IAmb	22 31 48.7	
	comp=Z,33nm,1.3s						
DAV	**Davao City (W)**	**21.09**	**35**	LR	LR	22 42 21.1	
	comp=Z,22nm,18.3s,baz=234,slow=44						
WB0	**Warramunga Arr**	**21.98**	**117**	P	**P**	**22 31 52.9**	**-0.7**
WRA	**Warramunga Arr**	**21.99**	**118**	P	**P**	**22 31 54.0**	**+0.3**
WRA	**Warramunga Arr**	**21.99**	**118**	P	**P**	**22 31 54.5**	**+0.7**
	comp=Z,2.0nm,0.6s,baz=290,slow=11,SNR=14						
	comp=Z,2.0nm,0.6s						
WR8	**Warramunga Arr**	**22.14**	**118**	P	**P**	**22 31 56.1**	**+0.8**
ASAR	**Alice Springs**	**23.29**	**127**	P	**P**	**22 32 08.9**	**+1.5**
	comp=Z,1.6nm,0.8s,baz=302,slow=8.5,SNR=11						
	comp=Z,1.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**32.25**	**333**	P	**P**	**22 33 29.9**	**+1.9**
	comp=Z,0.9nm,0.3s,baz=156,slow=8.8,SNR=1.7						
	comp=Z,0.9nm,0.3s						
H08S2	**Diego Garcia H**	**40.77**	**270**	T	T	23 17 57.6	
	baz=96,slow=74,SNR=18						
H08S3	**Diego Garcia H**	**40.78**	**270**	T	T	23 17 55.7	
	baz=96,slow=74,SNR=33						
H08S1	**Diego Carcia H**	**40.79**	**270**	T	T	23 17 59.0	
	baz=96,slow=74,SNR=22						
KSRS	**Korea Array**	**49.53**	**15**	P	**P**	**22 35 51.8**	**+1.8**
	comp=Z,0.4nm,0.3s,baz=201,slow=6.2,SNR=1.6						
	comp=Z,0.4nm,0.3s						
MJAR	**Matsushiro Arr**	**52.17**	**25**	P	**P**	**22 36 10.9**	**+0.9**
	comp=Z,0.6nm,0.5s,baz=213,slow=7.5,SNR=1.5						
	comp=Z,0.6nm,0.5s						
USRK	**Ussuriysk Ar.**	**56.92**	**16**	P	**P**	**22 36 45.4**	**+1.1**
	comp=Z,1.1nm,0.6s,baz=195,slow=6.3,SNR=5.4						
	comp=Z,1.1nm,0.6s						
SONM	**Songino Array**	**58.44**	**354**	P	**P**	**22 36 56.4**	**+1.3**
LTZ	**Lake Taylor**	**59.99**	**133**	P	**P**	**22 37 05.4**	**-0.6**
MKAR	**Makanchi Array**	**63.57**	**336**	P	**P**	**22 37 30.1**	**+0.2**
MKAR	**Makanchi Array**	**63.57**	**336**	P	**P**	**22 37 31.3**	**+1.5**
	comp=Z,0.3nm,0.5s,baz=136,slow=8.2,SNR=6.3						
	comp=Z,0.3nm,0.5s						
UOSS	**Minazif**	**66.18**	**303**	P	**P**	**22 37 47.5**	**+0.2**
UOSS				IAmb	IAmb	22 37 56.7	
	comp=Z,13nm,1.1s						
KKAR	**Karatay Array**	**66.30**	**327**	P	**P**	**22 37 47.7**	**0.0**
KURBB	**Kurchatov Arra**	**68.13**	**337**	P	**P**	**22 38 00.3**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=146,slow=5.8,SNR=5.3						
	comp=Z,0.4nm,0.6s						
CTZ	**Chatham Island**	**68.14**	**133**	P	**P**	**22 38 00.3**	**+0.9**
ZALV	**Zalesovo Beam**	**68.72**	**342**	P	**P**	**22 38 03.2**	**+0.5**
ZALV	**Zalesovo Beam**	**68.72**	**342**	P	**P**	**22 38 03.6**	**+0.9**
	comp=Z,1.2nm,0.6s,baz=150,slow=7.5,SNR=4.1						
	comp=Z,1.2nm,0.6s						
BVAR	**Borovoye Array**	**73.27**	**334**	P	**P**	**22 38 31.5**	**+1.1**
	comp=Z,0.6nm,0.6s,baz=135,slow=5.6,SNR=2.7						
	comp=Z,0.6nm,0.6s						
AB31	**Akbulak array**	**75.87**	**327**	P	**P**	**22 38 47.4**	**+1.9**
AB31				IAmb	IAmb	22 38 47.6	
	comp=Z,2.2nm,0.7s						
ABKAR	**Akbulak array**	**75.87**	**327**	P	**P**	**22 38 47.4**	**+1.8**
ABKAR				IAmb	IAmb	22 38 47.7	
	comp=Z,2.2nm,0.7s						
ABKAR	**Akbulak array**	**75.87**	**327**	P	**P**	**22 38 47.2**	**+1.7**
GRHM	**Grahamstown, E**	**82.10**	**238**	P	**P**	**22 39 21.1**	**+0.8**
BOSA	**Boshof**	**83.70**	**242**	P	**P**	**22 39 26.0**	**-2.8**
BOSA				IAmb	IAmb	22 39 39.3	
	comp=Z,9.9nm,1.4s						
LBTB	**Lobatse**	**83.93**	**246**	P	**P**	**22 39 27.9**	**-2.1**
LBTB				IAmb	IAmb	22 39 46.2	
	comp=Z,7.2nm,1.4s						
KOPT	**Kop Dagi**	**84.13**	**312**	P	**P**	**22 39 30.4**	**-0.4**
KOPT				IAmb	IAmb	22 39 30.5	
	comp=Z,4.8nm,1.0s						
SNAA	**Sanae**	**88.12**	**196**	P	**P**	**22 39 49.6**	**-0.1**
SNAA				IAmb	IAmb	22 39 53.6	
	comp=Z,4.7nm,1.4s						
M17K	**Holitna River**	**98.59**	**29**	P	Pdif	22 40 39.3	+1.5
L18K	**Granite Mounta**	**99.03**	**28**	P	**Pdif**	**22 40 40.6**	**+0.8**
L18K				IAmb	IAmb	22 40 44.5	
	comp=Z,3.5nm,1.3s						

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*NEIC **23** 22:39:08.3±1.8, 40°.30N±0°.01×125°.03W±0°.04, h10^{km}±1^{km}, Error ellipse: s-maj=5.7km s-min=2.9km az=82.0*

*NCEDC **23** 22:39:10.8±1.9, 40°.32N±0°.02×124°.87W±0°.04, h12^{km}±4^{km}, Mwr3.9/4, mb3.8/8(NEIC), ML3.6/91(NEIC), Error ellipse: s-maj=5.0km s-min=3.0km az=69.0*

*IDC **23** 22:39:11.0±1.5, 40°.44N×124°.61W, h0^{km}, mb3.3/5, mbtmp3.3/9, ML3.6/4, MS3.2/16, Error ellipse: s-maj=19.4km s-min=13.7km az=79.0*

ISC 23 22:39:09.8±1.8**, 40°.32N**±0°.04×**124°.83W**±0°.07**, h6^{km}**±11^{km}**, n157,** σ1^{s}.**13**/138**, mb3.7**/5**, MS3.2**/12**, Near coast of northern California**

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Code  Station Name        Δ°  AZ°  Phase ID                Time     Res
                                   Op     ISC            h  m  s    ISC
PETL  Petrolia           0.37  94         Pb      22 39 19.3 +0.4
PETL                                      Sb      22 39 25.5 +0.6
KCTM  Capetown           0.41  67         Pb      22 39 20.6 +1.1
KCTM                                      Sb      22 39 28.1 +2.2
FER   Ferndale           0.50  59         Pb      22 39 22.1 +1.0
FER                                       Sb      22 39 30.7 +2.0
KSMM  Slide Mountain     0.52 104         Pb      22 39 21.9 +0.5
KMPM  Mount Pierce       0.55  79  Pg     Pb      22 39 22.5 +0.5
KMPM                               Sg     Sb      22 39 30.5 +0.3
BRIC  Briceland Vine     0.74 106         Pb      22 39 25.7 +0.6
KCRM  Chalk Rock         0.78  82         Pb      22 39 26.2 +0.4
JCC   Jacoby Creek,      0.79  50         Pg      22 39 25.2 +0.2
JCC                                Sg     Sg      22 39 35.3 +0.2
JCC                                IAML           22 39 36.4
      comp=E,4μm,0.6s
KMRM  Mail Ridge         0.86  96  Pg     Pn      22 39 28.0 -0.6
KMRM                               Sg     Sb      22 39 38.7 -0.4
KHMM  Horse Mountain     1.00  56         Pg      22 39 29.1  0.0
KHMM                               Sg     Sg      22 39 42.0 -0.2
KBSM  Bell Springs       1.02 112         Pb      22 39 29.9 -0.1
KRPM  Rodgers            1.04  36         Pg      22 39 29.2 -0.6
KRPM  Rodgers            1.04  36  IAML           22 39 43.0
      comp=N,2μm,0.6s
KRPM                               IAML           22 40 01.9
      comp=E,2μm,0.9s
KCPM  Cahto Peak         1.14 123         Pg      22 39 31.5 -0.3
KIPM  Iron Peak          1.15 116         Pg      22 39 31.7 -0.2
KFPM  Farley Peak        1.27 122         Pg      22 39 33.5 -0.7
KHBM  Hayfork Bally      1.27  74         Pg      22 39 32.8 -1.5
KHBM                               IAML           22 39 53.4
      comp=N,1μm,0.5s
KHBM                               IAML           22 39 53.5
      comp=E,1μm,0.5s
MNDO  Woodland Fire      1.30 140         Pn      22 39 33.1 -1.4
KBNM  Bluenose Ridge     1.32 108         Pn      22 39 34.4 -0.6
GTC   Three Chop Rid     1.34 133         Pn      22 39 34.0 -1.1
KRMB  Red Mountain       1.39  30         Pn      22 39 34.0 -1.9
KRMB  Red Mountain       1.39  30  IAML           22 39 51.2
      comp=E,2μm,0.6s
KOMM  Orleans Mounta     1.42  47         Pn      22 39 34.9 -1.5
DCMP  DeCamp, Califo     1.42 126         Pn      22 39 35.2 -1.0
DCMP  DeCamp, Califo     1.42 126  IAML           22 39 59.8
      comp=N,1μm,0.4s
WEAV  Weaverville        1.47  72         Pn      22 39 35.6 -1.4
O02D  Mt. Diablo Mer     1.57  94         Pn      22 39 37.7 -0.6
O02D                               IAML           22 40 11.4
      comp=N,1μm,1.8s
O02D                               IAML           22 40 19.2
      comp=E,578nm,0.8s
GWRM  Wonder Ranch       1.62 133         Pn      22 39 37.8 -1.1
SIGP  Signal Peak, C     1.66  20         Pn      22 39 37.3 -2.2
KSXB  Camp Six Broad     1.68  25  Pn     Pn      22 39 37.7 -2.1
KSXB                               IAML           22 39 59.9
      comp=N,841nm,0.5s
GROM  Round Mountain     1.70 103         Pn      22 39 39.8 -0.4
GVV   Valley View        1.74 107         Pn      22 39 40.0 -0.7
N02D  Trinity Center     1.74  67         Pn      22 39 39.6 -1.1
N02D  Trinity Center     1.74  67  IAML           22 39 50.9
      comp=E,833nm,0.5s
GGUM  Gualala            1.78 144         Pn      22 39 39.7 -1.5
LBKM  Bonanza King       1.81  64         Pn      22 39 40.7 -1.0
M02C  Callahan           1.84  54         Pn      22 39 40.7 -1.4
M02C  Callahan           1.84  54  IAML           22 40 03.7
      comp=E,531nm,0.5s
M02C                               IAML           22 40 05.8
      comp=N,485nm,0.7s
GSNM  Snow Mountain      1.87 137         Pn      22 39 41.2 -1.2
GALB  Galbreath Wild     1.89 140         Pn      22 39 41.3 -1.4
HOPS  Hopland Field      1.89 134         Pn      22 39 41.8 -0.9
HOPS                               IAML           22 40 19.8
      comp=N,268nm,0.8s
HOPS                               IAML           22 40 24.6
      comp=E,260nm,0.9s
GHGM  Hogback Ridge      1.95 127         Pn      22 39 43.2 -0.3
KBO   Bosley Butte       1.95  13  Pn     Pn      22 39 41.2 -2.3
KBO                                IAML           22 40 04.7
      comp=N,723nm,0.3s
GCK   Clark Valley       1.99 112         Pn      22 39 44.9 +0.8
L02F  Cave Junction      2.04  27  Pn     Pn      22 39 43.1 -1.6
L02F                               IAML           22 40 08.9
      comp=N,673nm,0.4s
LTCM  Tuscan Springs     2.07  92         Pn      22 39 44.6 -0.5
LAMM  Antelope Mount     2.11  51         Pn      22 39 44.8 -1.0
GHCM  House Creek        2.12 143         Pn      22 39 44.6 -1.3
YBH   Yreka Blue Hor     2.14  48         Pn      22 39 44.9 -1.3
YBH                                IAML           22 40 15.2
      comp=E,250nm,0.4s
YBH                                IAML           22 40 15.3
      comp=N,224nm,0.7s
YBH   Yreka Blue Hor     2.14  48  Pn     Pn      22 39 45.1 -1.1
      comp=N,2.4nm,0.3s,baz=265,slow=5.1,SNR=410
YBH                                Sn     Sn      22 40 09.8 -3.3
      comp=N,3.3nm,0.3s,baz=177,slow=19,SNR=11
LCSM  College of the     2.15  58         Pn      22 39 45.8 -0.5
GRTM  Round Top Moun     2.16 129         Pn      22 39 45.8 -0.6
GDXM  Geysers            2.18 133         Pn      22 39 46.7 +0.1
LSHM  Sage Hen Hill      2.18  76         Pn      22 39 46.2 -0.5
GGPM  Geyser Peak        2.18 135         Pn      22 39 45.9 -0.9
GFC   Funks Creek        2.19 116         Pn      22 39 47.3 +0.6
LGBM  Gray Butte         2.25  62         Pn      22 39 47.7 -0.1
M03C  McCloud            2.27  64         Pn      22 39 47.5 -0.5
M03C                               IAML           22 40 18.1
      comp=N,618nm,0.8s
M03C                               IAML           22 40 21.4
      comp=E,478nm,1.0s
O03E  Paynes Creek       2.31  90         Pn      22 39 47.5 -1.0
O03E  Paynes Creek       2.31  90  IAML           22 40 25.5
      comp=E,286nm,0.8s
O03E                               IAML           22 40 38.1
      comp=N,276nm,1.6s
LDBM  Digger Butte       2.33  86         Pn      22 39 48.0 -0.8
LMPM  Military Pass      2.33  59         Pn      22 39 49.3 +0.3
MNRC  McLaughlin Min     2.33 127         Pn      22 39 47.7 -1.1
MNRC  McLaughlin Min     2.33 127  IAML           22 40 55.1
      comp=N,204nm,1.4s
B040  Montague           2.37  49         Pn      22 39 48.7 -0.5
B040  Montague           2.37  49         Pn      22 39 48.7 -0.5
LHEM  Herd Peak          2.37  56         Pn      22 39 49.1 -0.3
LBFM  Black Fox Moun     2.46  64         Pn      22 39 50.6 -0.1
LMEM  Manzanita Entr     2.50  84         Pn      22 39 51.9 +0.7
OSUM  Sutter Buttes      2.52 114         Pn      22 39 50.8 -0.4
LCMM  Colby Mountain     2.54  93         Pn      22 39 51.4 -0.4
OGOM  Van Goodin Ran     2.56 104         Pn      22 39 51.3 -0.6
LRDM  Redding Peak       2.58  86         Pn      22 39 52.3 +0.1
KEBM  Edson Butte        2.58   8  Pn     Pn      22 39 51.7 -0.5
KEBM                               IAML           22 40 25.5
      comp=E,153nm,0.7s
KEBM                               IAML           22 40 37.3
      comp=N,223nm,0.9s
LGMM  Garner Mountai     2.60  60         Pn      22 39 52.5 -0.2
HATC  Hat Creek Radi     2.61  78         Pn      22 39 52.7 +0.1
HATC                               IAML           22 40 51.6
      comp=N,419nm,2.0s
MCCM  Marconi Confer     2.64 144         Pn      22 39 52.5 -0.5
MCCM                               IAML           22 40 43.9
      comp=E,154nm,1.8s
MCCM                               IAML           22 40 46.1
      comp=N,159nm,1.2s
ORV   Oroville           2.67 105         Pn      22 39 53.4 +0.1
LTIM  Timbered Crate     2.68  70         Pn      22 39 53.2 -0.4
L04D  Klamath Falls      2.69  44         Pn      22 39 53.9 +0.1
M04C  Macdoel            2.69  56         Pn      22 39 53.7 -0.2
LBCM  Butte Creek Ri     2.70  78         Pn      22 39 53.7 -0.2
LASM  Arnica Sink        2.77  61         Pn      22 39 54.4 -0.6
J01E  Myrtle Point       2.92  13  Pn     Pn      22 39 57.2 +0.4
J01E                               IAML           22 40 34.5
      comp=E,184nm,0.3s
J01E                               IAML           22 40 37.2
      comp=N,149nm,0.8s
BBOR  Butler Butte       3.03  31         Pn      22 39 58.4 -0.1
BBOR                               IAML           22 40 34.9
      comp=E,312nm,0.5s
K04D  Chiloquin, OR      3.26  44         Pn      22 40 01.8 +0.1
AFDM  Forest Hills D     3.27 113         Pn      22 40 02.3 +0.6
BEKR  Beckworth          3.46  96         Pn      22 40 04.7 +0.4
BEKR                               IAML           22 40 47.4
      comp=E,82nm,0.6s
BEKR                               IAML           22 40 49.1
      comp=N,75nm,0.7s
I03D  Drain, OR          3.55  18         Pn      22 40 05.4 -0.1
I03D                               IAML           22 40 46.9
      comp=E,67nm,0.7s
J04A  Umpqua Nationa     3.56  34         Pn      22 40 05.8  0.0
CMLM  Mount Lewis        3.77 138         Pn      22 40 06.0 -2.5
J05D  Fort Rock, OR      4.00  41         Pn      22 40 11.6 -0.3
J05D                               IAML           22 41 14.7
      comp=E,51nm,0.8s
BUCK  Buck Mountain      4.11  19  Pn     Pn      22 40 13.5 +0.3
BUCK                               IAML           22 41 18.0
      comp=N,50nm,1.1s
BUCK                               IAML           22 41 33.0
      comp=E,60nm,1.6s
CMB   Columbia Colle     4.13 122         Pn      22 40 14.8 +1.3
PNTR  Pine Nut           4.21 105         Pn      22 40 15.9 +1.1
PNTR                               IAML           22 41 48.5
      comp=N,107nm,1.4s
PNTR                               IAML           22 41 50.1
      comp=E,86nm,1.1s
PAHR  Pah Rah Range      4.22  97         Pn      22 40 14.9  0.0
HJGM  San Juan Grade     4.34 143         Pn      22 40 10.9 -5.4
HJGM                                      Pb      22 40 20.6 -5.9
COR   Corvallis          4.41  14  Pn     Pn      22 40 17.0 -0.3
COR                                IAML           22 41 09.9
      comp=E,51nm,0.9s
COR                                IAML           22 41 35.9
      comp=E,44nm,1.4s
SAO   San Andreas Ge     4.43 142         Pn      22 40 15.9 -1.7
H04D  Lebanon            4.48  20         Pn      22 40 19.0 +0.7
H04D                               IAML           22 41 11.8
      comp=N,60nm,1.0s
H04D                               IAML           22 41 18.7
      comp=E,66nm,0.7s
PINE  Pine Mountain      4.52  39         Pn      22 40 18.6 -0.4
WAKR  Walker             4.55 112  Pn     Pn      22 40 19.9 +0.5
BBGB  Big Mountain B     4.77 140         Pn      22 40 22.3 -0.1
I05D  Terrebonne, OR     4.78  32  Pn     Pn      22 40 22.3 -0.1
H04A  Detroit Lake       4.78  23  Pn     Pn      22 40 22.6 +0.1
WVOR  Wild Horse Val     5.12  64  Pn     Pn      22 40 26.6 -0.5
RYN   Ryan               5.16 107  Pn     Pn      22 40 27.6 -0.2
MMSM  Mammoth Summit     5.25 119         Pn      22 40 24.7 -4.5
LHV   Little Huntoon     5.32 111  Pn     Pn      22 40 30.2 +0.4
NVAR  Mina Array Bea     5.39 108  Pn     Pn      22 40 31.2 +0.2
NVAR  Mina Array Bea     5.39 108  Pn     Pn      22 40 32.8 +1.8
      comp=E,0.7nm,0.3s,baz=294,slow=14,SNR=6.9
NVAR                               Lg     Lg      22 41 52.0
      comp=E,0.3nm,0.3s,baz=286,slow=30,SNR=2.2
      comp=E,1.4nm,0.5s
NV11  Mina Array Sit     5.50 108  Pn     Pn      22 40 32.5  0.0
J08A  Circle Bar Ran     5.63  55         Pn      22 40 33.7 -0.5
MZP   Montezuma Peak     6.36 112  Pn     Pn      22 40 44.7 +0.4
GMN   Gold Mountain      6.63 115  Pn     Pn      22 40 48.0 -0.1
BAKC  Calstate           6.72 136         Pb      22 40 59.2 -7.8
WASM  Alta Sierra Ca     6.74 131         Pn      22 40 49.1 -0.4
ISA   Isabella, Lake     6.84 131         Pn      22 40 50.6 -0.1
ELK   Elko               7.32  84  Pn     Pn      22 40 59.7 +2.2
      comp=E,0.2nm,0.3s,baz=262,slow=15,SNR=4.2
      comp=E,0.3nm,0.3s
LNOR  Lincton Mounta     7.33  39         Pn      22 40 57.2 -0.2
CCAC  Calif City Air     7.46 132         Pn      22 40 59.2 -0.1
PLID  Pearl Lake         8.06  51         Pn      22 41 07.3 -0.3
GSC   Goldstone, Bar     8.08 126         Pn      22 41 08.1 +0.2
HLID  Hailey             8.41  64         Pn      22 41 13.5 +1.1
PFO   Pinyon Flats O     9.46 132  Pn     Pn      22 41 28.4 +1.6
      comp=E,0.5nm,0.3s,baz=317,slow=10,SNR=7.1
PFO                                LR     LR      22 45 20.6
      comp=E,113nm,19.1s,baz=278,slow=39
      comp=E,1.7nm,0.5s
NEW   Newport            9.67  32  LR     LR      22 45 21.5
      comp=E,108nm,19.9s,baz=234,slow=39
MCMT  McKenzie Canyo     9.92  59         Pn      22 41 32.9 -0.2
MSO   Missoula          10.23  47         Pn      22 41 37.9 +0.6
DLMT  Dillon            10.30  57         Pn      22 41 38.8 +0.6
BOZ   Bozeman (W)       11.01  57         Pn      22 41 48.1  0.0
PDAR  Pinedale Array    11.70  73  Pn     Pn      22 42 01.1 +3.6
      comp=E,0.1nm,0.3s,baz=258,slow=14,SNR=6.3
PDAR                               LR     LR      22 47 15.8
      comp=E,72nm,18.1s,baz=246,slow=42
      comp=E,0.7nm,0.8s
BBB   Bella Bella       12.09 350  LR     LR      22 46 07.1
      comp=E,28nm,18.5s,baz=216,slow=35
RSSD  Black Hills       15.86  69  Pn     Pn      22 42 53.1 -0.7
PECS  Pecos             19.16 111  P      P       22 43 32.9 -1.2
PECS                               IAmb   IAmb    22 44 17.3
      comp=Z,2.9nm,0.7s
LPIG  La Paz            20.26 139  LR     LR      22 51 16.9
      comp=Z,57nm,20.2s,baz=231,slow=36
TXAR  Lajitas Array     20.49 116  P      Pn      22 43 51.3 +0.6
      comp=Z,0.4nm,0.7s,baz=311,slow=10,SNR=7.1
TXAR                               LR     LR      22 51 35.4
      comp=Z,24nm,20.4s,baz=318,slow=36
      comp=Z,0.4nm,0.7s
FFC   Flin Flon         20.98  39  P      P       22 43 53.3 -0.3
FFC                                IAmb   IAmb    22 43 54.3
      comp=Z,7.0nm,1.1s
ECSD  EROS Data Cent    21.19  71  P      P       22 43 52.7 -3.2
ECSD                               IAmb   IAmb    22 43 55.9
      comp=Z,5.7nm,1.4s
ULM   Lac du Bonnet     22.53  54  P      P       22 44 08.5 -1.8
ULM   Lac du Bonnet     22.53  54  P      P       22 44 09.8 -0.5
      comp=Z,2.0nm,0.6s,baz=264,slow=10.0,SNR=4.8
ULM                                LR     LR      22 53 24.0
      comp=Z,108nm,18.4s,baz=343,slow=38
      comp=Z,2.0nm,0.6s
YKA   Yellowknife Ar    23.05  12  P      P       22 44 17.7 +2.2
      comp=Z,0.4nm,0.9s,baz=202,slow=11,SNR=2.9
YKA                                LR     LR      22 53 37.6
      comp=Z,50nm,18.0s,baz=210,slow=38
      comp=Z,0.4nm,0.9s
KDAK  Kodiak Island     24.95 324  LR     LR      22 51 52.4
      comp=Z,101nm,19.2s,baz=86,slow=30
ILAR  Eielson Array     27.62 340  P      P       22 44 59.6 +1.8
      comp=Z,0.2nm,0.6s,baz=134,slow=10,SNR=1.7
      comp=Z,0.2nm,0.6s
INK   Inuvik            28.44 353  LR     LR      22 57 36.1
      comp=Z,51nm,19.2s,baz=20,slow=39
SADO  Sadowa            33.61  67  LR     LR      23 00 37.2
      comp=Z,71nm,18.1s,baz=312,slow=38
FRB   Frobisher Bay     40.00  35  LR     LR      23 04 56.9
      comp=Z,39nm,18.6s,baz=247,slow=39
SCHQ  Schefferville     40.52  49  LR     LR      23 04 37.3
      comp=Z,35nm,18.4s,baz=158,slow=38
MA2   Magadan           53.65 321  LR     LR      23 09 47.1
      comp=Z,23nm,18.1s,baz=144,slow=34
SJG   San Juan          54.75  96  LR     LR      23 16 02.7
      comp=Z,12nm,18.3s,baz=117,slow=40
H11N3 WAKE ISLAND Hy    61.12 272  T      T       23 56 01.9
      baz=53,slow=75,SNR=81
H11N2 WAKE ISLAND Hy    61.13 272  T      T       23 56 03.0
      baz=53,slow=75,SNR=88
H11N1 WAKE ISLAND Hy    61.14 272  T      T       23 56 04.5
      baz=53,slow=75,SNR=88
H11S1 WAKE ISLAND Hy    61.99 271  T      T       23 57 40.4
      baz=54,slow=75,SNR=274
H11S2 WAKE ISLAND Hy    62.00 271  T      T       23 57 42.6
      baz=54,slow=75,SNR=214
H11S3 WAKE ISLAND Hy    62.01 271  T      T       23 57 41.7
      baz=54,slow=75,SNR=152
NOA   NORSAR Array B    72.84  21  LR     LR      23 20 44.4
      comp=Z,13nm,20.2s,baz=190,slow=34
KURBB Kurchatov Arra    87.15 345  P      P       22 51 57.8 +1.2
      comp=Z,0.4nm,0.9s,baz=20,slow=4.7,SNR=2.0
      comp=Z,0.4nm,0.9s
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*IDC **23** 22:43:41.8±7.4, 31°.82S×179°.59W, h160^{km}±54^{km}, mb3.5/4, mbtmp3.9/5, Error ellipse: s-maj=63.0km s-min=21.3km az=48.0*

*WEL **23** 22:43:46.1±1.2, 32°S±12°×18°0E±2°5, h33^{km}, M4.5/6, mB4.7/3, ML4.8/6, MLv4.5/6, Mw(mB)4.0/3, Error ellipse: s-maj=35.3km s-min=4.2km az=114.5, confirmed*

ISC 23 22:43:45.3±0.9**, 31°.92S**±0°.09×**179°.9W**±0°.2**, h200**^{km}**, n27, σ1.**^{s}**80**/34**, mb3.6**/4**, Kermadec Islands region**

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Code  Station Name        Δ°  AZ°  Phase ID                Time     Res
                                   Op     ISC            h  m  s    ISC
GLKZ  Green Lake         3.16  34  P      Pn      22 44 37.4 +0.6
GLKZ                               S      Sn      22 45 15.1 -2.0
WMGZ  Waiomatatini S     6.05 193  P      Pn      22 45 13.4 +0.3
WMGZ                               S      Sn      22 46 24.0 +1.4
HAZ   Te Kaha            6.12 197  P      Pn      22 45 14.0 -0.1
HAZ                                S      Sn      22 46 23.6 -0.9
PKGZ  Pakihiroa          6.16 195  P      Pn      22 45 14.8 +0.2
PKGZ                               S      Sn      22 46 25.8 +0.5
RUGZ  Raukumara Rang     6.35 197  P      Pn      22 45 17.2  0.0
RUGZ                               S      Sn      22 46 27.1 -2.8
TWGZ  Tauwhareparae      6.48 195  S      Sn      22 46 33.3 +0.5
MWZ   Matawai            6.74 197  P      Pn      22 45 21.5 -0.5
MWZ                                S      Sn      22 46 39.3 +0.4
TKGZ  Te Karaka          6.76 195  P      Pn      22 45 22.9 +0.6
TKGZ                               S      Sn      22 46 38.2 -1.2
URZ   Urewera            6.78 200  P      Pn      22 45 21.6 -1.0
      4.1nm,0.6s,baz=0.1,slow=19,SNR=15
URZ                                S      Sn      22 46 39.6 -0.2
      9.8nm,0.3s,baz=198,slow=19,SNR=17
URZ   Urewera            6.78 200  P      Pn      22 45 22.3 -0.3
RAGZ  Rawiri             6.92 198  S      Sn      22 46 42.7 -0.5
RIGZ  Rimuhau            7.03 195  S      Sn      22 46 44.6 -1.3
MUGZ  Murupara           7.08 202  S      Sn      22 46 46.1 -0.9
SNGZ  Shannon Statio     7.21 197  S      Sn      22 46 49.3 -0.6
PRGZ  Paritu Road        7.22 194  S      Sn      22 46 49.7 -0.4
BKZ   Black Stump Fm     7.80 201  P      Pn      22 45 32.9 -3.0
BKZ                                S      Sn      22 47 02.4 -1.6
KRHZ  Kereru             8.28 200  P      Pn      22 45 41.2 -0.9
PNHZ  Pukenui            8.58 200  P      Pn      22 45 43.1 -2.9
OGWZ  Otaki Gorge        9.72 203  P      Pn      22 45 56.5 -4.3
KIW   Kapiti Island      9.85 204  P      Pn      22 45 58.8 -3.7
TUWZ  Tuamarina         10.69 206  P      Pn      22 46 08.0 -5.3
CTZ   Chatham Island    12.09 168  P      P       22 46 36.2 +0.5
ASAR  Alice Springs     41.41 270  P      P       22 51 15.2 +2.8
      0.9nm,0.7s,baz=105,slow=7.6,SNR=8.2
      0.9nm,0.7s
WRA   Warramunga Arr    42.54 275  P      P       22 51 23.8 +2.3
      1.2nm,0.4s,baz=117,slow=8.4,SNR=14
      1.2nm,0.4s
QSPA  South Pole Qui    58.20 180  P      P       22 53 19.9 +1.7
      1.5nm,0.6s,baz=356,slow=8.7,SNR=15
      1.5nm,0.6s
SNAA  Sanae             76.68 179  P      P       22 55 14.6 +0.8
      0.5nm,0.6s,baz=182,slow=15,SNR=6.0
      0.5nm,0.6s
FINES FINESS Array B   145.96 338  PKPbc  PKiKP   23 03 00.7 -3.0
      1.0nm,0.9s,baz=48,slow=5.4,SNR=3.5
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*NEIC **23** 22:45:28.9±1.0, 25°.6S±0°.1×179°.5E±0°.1, h500^{km}±8^{km}, mb4.1/12, Error ellipse: s-maj=23.1km s-min=7.8km az=129.0*

*IDC **23** 22:45:29.7±2.1, 25°.52S×179°.54E, h512^{km}±22^{km}, mb3.1/8, mbtmp4.0/10, Error ellipse: s-maj=23.1km s-min=16.8km az=93.0*

ISC 23 22:45:29.1±0.5**, 25°.60S**±0°.08×**179°.6E**±0°.1**, h507**^{km}**, n52, σ0.**^{s}**94**/47**, mb3.6**/15**, 4D, South of Fiji Islands**

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Code  Station Name        Δ°  AZ°  Phase ID                Time     Res
                                   Op     ISC            h  m  s    ISC
MSVF  Nonsavu            7.95 350  P      P       22 47 24.7 -0.7
MSVF  Nonsavu            7.95 350  P      P       22 47 25.0 -0.4
      4.7nm,0.3s,baz=222,slow=15,SNR=7.5
DZM   Mont Dzumac       12.50 284  P      P       22 48 15.6 +2.6
URZ   Urewera           12.79 189  P      P       22 48 16.2 +0.5
      14nm,0.6s,baz=46,slow=1.9,SNR=7.1
URZ                                S      S       22 50 32.7 -0.5
      14nm,0.8s,baz=357,slow=17,SNR=8.6
BKZ   Black Stump Fm    13.77 190  P      P       22 48 25.5 -0.6
MRZ   Mangatainoka R    15.38 191  P      P       22 48 43.7 +0.8
MSWZ  Moikau Station    16.17 192  P      P       22 48 50.2 -1.0
QRZ   Quartz Range      16.27 199  P      P       22 48 52.6 +0.4
BBOO  Buckleboo         38.43 249  P      P       22 52 05.2 -1.7
AS31  Alice Springs     41.38 263  P      P       22 52 28.8 -2.0
AS31                               IAmb   IAmb    22 52 30.3
      comp=Z,1.5nm,0.9s
ASAR  Alice Springs     41.38 263  P      P       22 52 28.3 -2.5
ASAR  Alice Springs     41.38 263  P      P       22 52 31.4 +0.6
      comp=Z,1.3nm,0.6s,baz=105,slow=8.3,SNR=9.8
      comp=Z,1.3nm,0.6s
WRA   Warramunga Arr    41.91 268  P      P       22 52 35.0  0.0
WRA   Warramunga Arr    41.91 268  P      P       22 52 34.8 -0.2
      comp=Z,1.0nm,0.7s,baz=103,slow=8.1,SNR=4.9
      comp=Z,1.0nm,0.7s
WB0   Warramunga Arr    41.91 268  P      P       22 52 34.7 -0.2
WB0                                IAmb   IAmb    22 52 50.8
      comp=Z,15nm,1.4s
KNRA  Kununurra         48.29 271  P      P       22 53 23.7 -0.3
KNRA                               IAmb   IAmb    22 53 38.7
      comp=Z,15nm,1.1s
FITZ  Fitzroy Crossi    50.31 267  P      P       22 53 38.6 -0.4
VNDA  Vanda             52.66 185  P      P       22 53 55.3 +0.3
SBA   Scott Base        52.67 183  P      P       22 53 55.8 +0.7
SBA                                IAmb   IAmb    22 54 12.7
      comp=Z,11nm,1.5s
CASY  Casey             58.41 206  P      P       22 54 35.1 -0.1
CASY                               IAmb   IAmb    22 54 48.7
      comp=Z,20nm,1.4s
QSPA  South Pole Qui    64.49 180  P      P       22 55 16.1 +0.9
QSPA                               IAmb   IAmb    22 55 17.3
      comp=Z,2.6nm,0.7s
QSPA  South Pole Qui    64.49 180  P      P       22 55 16.4 +1.2
      comp=Z,2.5nm,0.6s,baz=309,slow=0.5,SNR=16
      comp=Z,2.5nm,0.6s
MAW   Mawson            76.02 201  P      P       22 56 23.8 +0.4
      comp=Z,1.5nm,0.8s,baz=116,slow=15,SNR=1.6
      comp=Z,1.5nm,0.8s
PETK  Petropavlovsk-    80.65 347  P      P       22 56 48.5 +0.2
      comp=Z,1.0nm,0.9s,baz=98,slow=8.0,SNR=2.6
      comp=Z,1.0nm,0.9s
TROLL Troll, Antarti    82.64 181  ⇓P     P       22 56 58.9 +0.4
      comp=Z,263nm,0.6s
SNAA  Sanae             82.98 179  ⇓P     P       22 56 59.9 -0.4
      comp=Z,11nm,0.4s
SNAA  Sanae             82.98 179  P      P       22 57 00.0 -0.2
      comp=Z,0.5nm,0.5s,baz=189,slow=16,SNR=6.6
      comp=Z,0.5nm,0.5s
VNA3  Neumayer Olymp    83.21 177  ⇓P     P       22 57 01.2 -0.1
      comp=Z,4.5nm,0.7s
VNA2  Neumayer--Watz    83.62 178  ⇓P     P       22 57 03.2 -0.2
      comp=Z,1.2nm,0.6s,baz=172,slow=4.0
NVAR  Mina Array Bea    86.25  44  P      P       22 57 17.3 +0.4
      comp=Z,0.4nm,0.5s,baz=240,slow=4.2,SNR=2.8
      comp=Z,0.4nm,0.5s
TXAR  Lajitas Array     91.67  58  P      P       22 57 43.3 +1.1
      comp=Z,0.5nm,0.9s,baz=206,slow=6.0,SNR=4.5
      comp=Z,0.5nm,0.9s
KURBB Kurchatov Arra   116.18 316  PKP    PKPdf   23 03 13.0 -1.1
      comp=Z,0.2nm,0.5s,baz=97,slow=2.5,SNR=2.4
KKAR  Karatay Array    120.55 306  PKPdf  PKPdf   23 03 22.3 -0.5
BVAR  Borovoye Array   121.43 318  PKP    PKPdf   23 03 23.3 -0.8
      comp=Z,0.8nm,0.5s,baz=97,slow=2.3,SNR=6.5
TDBA  Terre de Bas,    122.38  87  PKPdf  PKPdf   23 03 25.2 -1.8
ARCES ARCESS Array B   133.46 348  PKPdf  PKPdf   23 03 46.4 -0.2
ARCES ARCESS Array B   133.46 348  PKP    PKPdf   23 03 46.2 -0.4
      comp=Z,0.5nm,0.6s,baz=60,slow=2.2,SNR=5.5
FINES FINESS Array B   139.91 341  PKhKP  PKPpre  23 03 50.6
      comp=Z,1.0nm,0.8s,baz=46,slow=6.0,SNR=4.8
FINES                              SKPbc  SKPbc   23 06 46.7 +0.1
      comp=Z,0.9nm,0.7s,baz=318,slow=2.6,SNR=4.3
NB201 NORSAR Array S   143.66 350  PKPbc  PKPab   23 04 03.5 -0.6
NB2   NORSAR Subarra   143.68 350  PKP    PKPab   23 04 03.4 -0.8
      comp=Z,1.4nm,0.7s,baz=16,slow=3.2
NOA   NORSAR Array B   143.68 350  PKP    PKPab   23 04 03.5 -0.7
      comp=Z,1.9nm,0.7s,baz=22,slow=3.8,SNR=14
NAO01 NORSAR Array S   143.92 351  PKPbc  PKPbc   23 04 04.7 -0.3
NC602 NORSAR Array S   143.92 350  PKPbc  PKPbc   23 04 03.9 -1.1
HFS   Hagfors          144.12 348  PKP    PKPbc   23 04 04.8 -0.8
      comp=Z,2.5nm,0.4s,baz=45,slow=1.2,SNR=38
KONO  Kongsberg        145.25 351  PKPdf  PKPdf   23 04 08.5 +0.4
AKASG Malin Array Be   146.15 326  PKPbc  PKPdf   23 04 10.8 +0.8
      comp=Z,0.8nm,0.5s,baz=47,slow=4.1,SNR=7.4
MMAI  Mount Meron Ar   147.99 292  PKPbc  PKiKP   23 04 18.6 -0.3
      comp=Z,1.4nm,0.4s,baz=81,slow=5.2,SNR=12
BRTR  Keskin Array B   148.24 305  PKPdf  PKPdf   23 04 15.3 +1.4
BRTR  Keskin Array B   148.24 305  PKPbc  PKPbc   23 04 16.8 -1.2
      comp=Z,0.8nm,0.8s,baz=93,slow=3.3,SNR=4.5
ANTO  Ankara           148.82 305  PKPbc  PKPbc   23 04 19.5 +0.1
EKA   Eskdalemuir Ar   150.23   3  PKPbc  PKPbc   23 04 21.0 -1.1
      comp=Z,0.4nm,0.4s,baz=344,slow=2.8,SNR=4.3
CLL   Collm            152.34 342  i PKPbc PKPbc  23 04 26.8 -0.2
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*CATAC **23** 23:05:37.7±0.9, 13°N±5°×8°9W±°, h18^{km}±6^{km}, M3.6/8, MLv3.6/8, Error ellipse: s-maj=10.8km s-min=6.3km az=22.0, confirmed*

*SNET **23** 23:05:37.9±1.0, 13°.04N×89°.47W, h32^{km}±2^{km}, ML3.3*

ISC 23 23:05:38.6±2.6**, 13°.1N**±0°.1×**89°.50W**±0°.08**, h43**^{km}**, n33, σ0.**^{s}**62**/37**, 1D, El Salvador**

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Code  Station Name        Δ°  AZ°  Phase ID                Time     Res
                                   Op     ISC            h  m  s    ISC
PANCS Alcalda de         0.64  29  S      Sn      23 05 59.7 -0.7
PANCS Alcalda de         0.64  29  P      Pn      23 05 50.5 -0.9
ITCA  Escuela Especi     0.66  19  eS     Sn      23 06 01.1 +0.2
ITCA  Escuela Especi     0.66  19  P      Pn      23 05 51.1 -0.5
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ITCA	Escuela Especi	0.66	19	S	Sn	23 06 00.0	-0.9
LOMA	Loma Larga	0.67	28	*e*P	Pn	23 05 51.3	-0.5
LOMA				*e*S	Sn	23 06 02.1	+0.8
LOMA	Loma Larga	0.67	28	P	Pn	23 05 51.1	-0.8
LOMA	Loma Larga	0.67	28	S	Sn	23 06 01.0	-0.3
PMON	Piamonte	0.68	15	*e*P	Pn	23 05 51.4	-0.6
PMON	Piamonte	0.68	15	P	Pn	23 05 51.4	-0.6
UEES	Universidad Ev	0.71	21	P	Pn	23 05 51.7	-0.6
UEES	Universidad Ev	0.71	21	S	Sn	23 06 02.4	+0.2
LFRS	El Faro	0.71	37	⇓*i*P	Pn	23 05 51.9	-0.4
BOQS	Boqueron	0.71	17	*i* P	Pn	23 05 52.2	-0.3
PIC2	El Picacho	0.73	19	*e*P	Pn	23 05 52.5	-0.2
CEVE	Cerro Verde	0.78	351	*i* P	Pn	23 05 53.2	-0.3
CEVE				IAML		23 06 06.6	
	comp=Z,1μm,0.2s						
CEVE	Cerro Verde	0.78	351	P	Pn	23 05 53.3	-0.1
CEVE	Cerro Verde	0.78	351	S	Sn	23 06 04.5	+0.3
LFU	La Fuente	0.79	28	*e*S	Sn	23 06 04.9	+0.8
LBRS	Las Brisas	0.81	33	*e*P	Pn	23 05 53.7	0.0
PAVA	Las Pavas	0.86	40	*e*P	Pn	23 05 54.0	-0.3
PAVA				*e*S	Sn	23 06 06.3	+0.5
PAVA	Las Pavas	0.86	40	P	Pn	23 05 53.9	-0.4
NUBE	Las Nubes	0.89	342	*e*P	Pn	23 05 54.3	-0.6
NUBE				*e*S	Sn	23 06 06.6	-0.1
NUBE	Las Nubes	0.89	342	P	Pn	23 05 54.1	-0.7
UNIC	Universidad Ca	0.93	357	P	Pn	23 05 55.0	-0.2
UNIC	Universidad Ca	0.93	357	S	Sn	23 06 08.2	+0.8
LOAL	Lomas de Alarc	0.98	344	*e*P	Pn	23 05 56.7	+0.7
PACA	Pacayal	1.22	70	*e*P	Pn	23 05 59.4	+0.1
PACA				*e*S	Sn	23 06 14.7	+0.1
PACA	Pacayal	1.22	70	P	Pn	23 05 59.9	+0.6
PACA	Pacayal	1.22	70	S	Sn	23 06 15.4	+0.8
CAHU	Cacacuatique	1.44	60	*e*P	Pn	23 06 02.0	-0.5
ESQI	Esquipulas	1.51	6	*e*S	Sn	23 06 23.4	+1.6
CNCH	Conchagua	1.64	82	*e*P	Pn	23 06 04.4	-0.6

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*IDC **23** 23:23:03.2±0.6, 18°.42N×145°.88E, h166^{km}±5^{km}, mb3.9/22, mbtmp4.3/23, Error ellipse: s-maj=14.1km s-min=9.4km az=103.0*

*NEIC **23** 23:23:05.8±1.3, 18°.28N±0°.08×145°.9E±0°.1, h179^{km}±7^{km}, mb4.6/303, Error ellipse: s-maj=15.4km s-min=10.7km az=74.0*

ISC 23 23:23:01.6±0.3**, 18°.38N**±0°.05×**145°.93E**±0°.08**, h145**^{km}**, n557, σ1^{s}.01**/501**, mb4.7**/177**, 1D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	4.87	192	S	Sn	23 25 10.5	+1.3
	170nm,0.3s,baz=176,slow=21,SNR=4.2						
JOW	Kunigami	18.32	300	Pn	Pn	23 27 07.9	+1.3
JOW				IAmb	IAmb	23 27 08.6	
	comp=Z,43nm,1.2s						
JOW	Kunigami	18.32	300	P	Pn	23 27 07.5	+0.8
	comp=Z,16nm,0.5s,baz=134,slow=14,SNR=4.7						
JGF	Kuroka	18.76	338	P	P	23 27 10.6	+1.0
MJAR	Matsushiro Arr	19.33	341	P	P	23 27 15.6	-0.1
	comp=Z,2.8nm,0.5s,baz=168,slow=10,SNR=11						
H11S3	WAKE ISLAND Hy	19.70	86	T	T	23 48 18.2	
	baz=274,slow=74,SNR=6.1						
H11S1	WAKE ISLAND Hy	19.71	86	T	T	23 48 18.8	
	baz=274,slow=74,SNR=6.6						
H11S2	WAKE ISLAND Hy	19.71	86	T	T	23 48 18.0	
	baz=274,slow=74,SNR=9.6						
H11N1	WAKE ISLAND Hy	19.86	83	T	T	23 48 49.8	
	baz=267,slow=75,SNR=9.6						
H11N2	WAKE ISLAND Hy	19.87	83	T	T	23 48 49.9	
	baz=267,slow=75,SNR=9.7						
H11N3	WAKE ISLAND Hy	19.88	83	T	T	23 48 50.1	
	baz=267,slow=75,SNR=13						
JMM	Marumori	19.93	348		Pn	23 27 24.5	-0.8
MANU	Manus Island	20.34	176	P	P	23 27 27.7	+0.9
MANU				IAmb	IAmb	23 27 29.2	
	comp=Z,22nm,0.8s						
JSD	Sado	20.70	343	P	P	23 27 32.5	+2.1
JTM	Tenmabayashi	22.72	350	P	P	23 27 52.4	+1.3
YULB	Yu-li	23.53	286	P	P	23 27 58.4	-0.5
YULB				IAmb	IAmb	23 28 04.7	
	comp=Z,37nm,1.4s						
YHNB	Yeheng	23.66	290	P	P	23 28 01.8	+1.7
SSLB	Suanglung	23.90	287	P	P	23 28 02.4	+0.3
SSLB				IAmb	IAmb	23 28 44.0	
	comp=Z,29nm,1.0s						
KSRS	Korea Array	24.70	324	P	P	23 28 08.8	-0.4
	comp=Z,1.2nm,0.7s,baz=140,slow=7.9,SNR=6.9						
	comp=Z,1.2nm,0.7s						
FAKI	Fak Fak	25.09	214	P	P	23 28 16.5	+3.5
NJ2	Nanjing	27.93	304	*e*P	P	23 28 41.3	+3.0
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
COEN	Coen	32.25	185	P	P	23 29 15.9	-0.6
COEN				IAmb	IAmb	23 29 48.2	
	comp=Z,18nm,1.2s						
MTN	Manton Dam	34.29	206	P	P	23 29 34.1	-0.1
MTN				IAmb	IAmb	23 29 34.8	
	comp=Z,15nm,0.7s						
KAPI	Kappang	34.73	230	P	P	23 29 38.8	+0.7
	comp=Z,6.8nm,0.5s,baz=70,slow=3.6,SNR=4.7						
	comp=Z,6.8nm,0.5s						
SOEI	Soe	35.19	219	P	P	23 29 41.3	-0.9
PEA0B	Petropavlovsk-	35.85	12	P	P	23 29 48.4	+1.2
PEA0B				IAmb	IAmb	23 30 21.6	
	comp=Z,17nm,1.5s						
PETK	Petropavlovsk-	35.85	12	P	P	23 29 47.8	+0.6
	comp=Z,2.5nm,0.6s,baz=210,slow=7.4,SNR=10						
PETK				PcP	PcP	23 32 10.4	-0.9
	comp=Z,3.0nm,0.7s,baz=165,slow=4.4,SNR=9.2						
	comp=Z,2.5nm,0.6s						
BATI	Baumata	35.91	219	P	P	23 29 47.3	-0.9
	comp=Z,21nm,0.3s,baz=42,slow=4.4,SNR=4.3						
HHC	Hu-ho-hao-te	36.98	315	*e*P	P	23 29 59.8	+2.7
HHC				pmax	pmax		
	comp=Z,15nm,0.6s						
HHC				pmax	pmax		
	comp=Z,81nm,5.0s						
KNRA	Kununurra	37.83	208	P	P	23 30 04.2	-0.1
CTAO	Charters Tower	38.23	180	P	P	23 30 07.1	-0.5
CTAO				IAmb	IAmb	23 30 39.8	
	comp=Z,18nm,1.4s						
WB0	Warramunga Arr	39.56	197	P	P	23 30 18.9	+0.2
WB0				IAmb	IAmb	23 30 20.0	
	comp=Z,10.0nm,0.5s						
WR8	Warramunga Arr	39.71	197	P	P	23 30 19.6	-0.4
WR8				IAmb	IAmb	23 30 58.1	
	comp=Z,19nm,1.5s						
WRA	Warramunga Arr	39.75	197	P	P	23 30 19.4	-0.8
WRA	Warramunga Arr	39.75	197	P	P	23 30 19.4	-0.8
	comp=Z,4.7nm,0.5s,baz=18,slow=8.9,SNR=34						
WRA				PcP	PcP	23 32 23.1	-0.8
	comp=Z,0.8nm,0.5s,baz=16,slow=3.6,SNR=4.8						
	comp=Z,4.7nm,0.5s						
FITZ	Fitzroy Crossi	41.37	210	P	P	23 30 34.1	+0.5
FITZ	Fitzroy Crossi	41.37	210	P	P	23 30 33.9	+0.2
	comp=Z,6.6nm,0.5s,baz=31,slow=9.9,SNR=18						
	comp=Z,6.6nm,0.5s						
AS31	Alice Springs	43.41	196	P	P	23 30 50.1	+0.1
ASAR	Alice Springs	43.41	196	P	P	23 30 50.0	-0.1
ASAR	Alice Springs	43.41	196	P	P	23 30 49.6	-0.5
	comp=Z,1.2nm,0.4s,baz=18,slow=11,SNR=27						
	comp=Z,1.2nm,0.4s						
SONM	Songino Array	43.53	321	P	P	23 30 50.2	-0.8
	comp=Z,1.1nm,0.7s,baz=137,slow=8.0,SNR=5.2						
	comp=Z,1.1nm,0.7s						
EIDS	Eidsvold	43.77	173	P	P	23 30 51.9	-1.0
EIDS				IAmb	IAmb	23 31 24.5	
	comp=Z,20nm,1.4s						
CMAR	Chiang Mai Arr	44.48	278	P	P	23 30 59.1	+0.3
	comp=Z,0.6nm,0.3s,baz=83,slow=8.2,SNR=5.7						
	comp=Z,0.6nm,0.3s						
MBWA	Marble Bar	46.93	214	P	P	23 31 18.0	+0.1
MBWA				IAmb	IAmb	23 31 18.6	
	comp=Z,17nm,0.8s						
PSA00	Pilbara Seismi	47.21	214	P	P	23 31 19.8	-0.2
PSA00	Pilbara Seismi	47.21	214	P	P	23 31 20.2	+0.2
PSA00				IAmb	IAmb	23 31 20.5	
	comp=Z,13nm,0.6s						
MSVF	Nonsavu	47.81	137	P	P	23 31 26.3	+1.5
ARMA	Armidale	48.83	173	P	P	23 31 32.1	-0.4
NIKH	Nikolski High	49.14	35	P	P	23 31 35.5	+1.0
	baz=243						
P08K	Saint George I	50.54	30	P	P	23 31 45.7	+0.7
	baz=240						
UNV	Unalaska Valle	50.79	34	P	P	23 31 47.2	+0.3
UNV				IAmb	IAmb	23 31 52.7	
	comp=Z,8.7nm,0.8s						
UNV	Unalaska Valle	50.79	34	P	P	23 31 47.3	+0.3
	baz=245						
LVA	Lava Point	51.18	34	P	P	23 31 49.6	-0.3
GIRL	Giralia	51.21	219	P	P	23 31 51.4	+1.0
AKUT	Akutan	51.31	34	P	P	23 31 50.7	0.0
BBOO	Buckleboo	51.77	191	P	P	23 31 54.4	0.0
CAN	Canberra	53.48	177	P	P	23 32 06.2	-0.8
GAMB	Gambell	53.67	22	P	P	23 32 08.6	+0.7
	baz=233						
S12K	Black Hills	53.90	34	P	P	23 32 09.3	-0.5
S12K				IAmb	IAmb	23 32 49.3	
	comp=Z,11nm,0.8s						
S12K	Black Hills	53.90	34	P	P	23 32 09.7	-0.1
	baz=248						
M13K	Dall Lake	55.22	28	P	P	23 32 20.0	+0.8
	baz=243						
K13K	Kusilvak Mount	55.37	26	P	P	23 32 21.9	+1.6
K13K				IAmb	IAmb	23 32 22.7	
	comp=Z,9.0nm,0.8s						
K13K	Kusilvak Mount	55.37	26	P	P	23 32 20.8	+0.6
	baz=241						
S14K	Fog Glacier	55.42	33	P	P	23 32 21.2	+0.3
	baz=250						
O14K	Tigyukauivet M	55.68	30	P	P	23 32 22.7	+0.2
	baz=246						
N14K	Kuskokwak Cree	55.76	29	P	P	23 32 23.9	+0.9
N14K				IAmb	IAmb	23 32 25.1	
	comp=Z,14nm,0.8s						
N14K	Kuskokwak Cree	55.76	29	P	P	23 32 23.6	+0.5
	baz=245						
L14K	Kuka Creek	55.93	27	P	P	23 32 25.8	+1.6
L14K				IAmb	IAmb	23 32 26.4	
	comp=Z,9.5nm,1.2s						
L14K	Kuka Creek	55.93	27	P	P	23 32 24.9	+0.7
	baz=244						
M14K	Bethel	55.98	28	P	P	23 32 26.0	+1.4
M14K				IAmb	IAmb	23 32 26.6	
	comp=Z,8.0nm,0.7s						
M14K	Bethel	55.98	28	P	P	23 32 25.7	+1.0
	baz=245						
TNA	Tin City	56.03	21	P	P	23 32 25.8	+0.9
	baz=236						
J14K	Nanvaranak Lak	56.21	25	P	P	23 32 27.3	+1.1
J14K				IAmb	IAmb	23 32 28.5	
	comp=Z,8.5nm,0.9s						
J14K	Nanvaranak Lak	56.21	25	P	P	23 32 26.9	+0.7
	baz=242						
O15K	Ungalikthiuk R	56.33	30	P	P	23 32 28.4	+1.2
O15K	Ungalikthiuk R	56.33	30	P	P	23 32 27.9	+0.7
	baz=248						
M15K	Kasigluk River	56.53	28	P	P	23 32 29.4	+0.8
	baz=246						
F14K	Arctic Creek	56.54	22	P	P	23 32 29.0	+0.5
	baz=237						
L15K	Ungalak Mounta	56.59	27	P	P	23 32 30.4	+1.4
	baz=245						
N15K	Kwethluk River	56.59	29	P	P	23 32 30.3	+1.3
N15K				IAmb	IAmb	23 32 31.0	
	comp=Z,9.8nm,0.7s						
N15K	Kwethluk River	56.59	29	P	P	23 32 29.8	+0.8
	baz=247						
K15K	Wolf Creek Mou	56.84	26	P	P	23 32 32.0	+1.3
K15K	Wolf Creek Mou	56.84	26	P	P	23 32 31.8	+1.1
	baz=244						
G15K	Niukluk	57.12	23	P	P	23 32 33.6	+1.0
	baz=240						
P16K	Nushagak River	57.16	31	P	P	23 32 34.5	+1.5
P16K	Nushagak River	57.16	31	P	P	23 32 33.9	+0.9
	baz=250						
F15K	North Star Dit	57.26	22	P	P	23 32 34.8	+1.2
F15K				IAmb	IAmb	23 32 35.1	
	comp=Z,5.9nm,0.6s						
F15K	North Star Dit	57.26	22	P	P	23 32 34.4	+0.8
	baz=239						
O16K	Kokwok River B	57.31	30	P	P	23 32 35.2	+1.2
O16K				IAmb	IAmb	23 32 36.0	
	comp=Z,11nm,1.2s						
O16K	Kokwok River B	57.31	30	P	P	23 32 35.3	+1.2
	baz=249						
N16K	Nishlik Lake	57.31	29	P	P	23 32 35.4	+1.3
	baz=248						
CHIR	Chirikof Islan	57.37	35	P	P	23 32 35.4	+0.9
	baz=254						
M16K	Timber Creek	57.44	28	P	P	23 32 36.1	+1.1
M16K				IAmb	IAmb	23 32 36.5	
	comp=Z,5.0nm,0.7s						
M16K	Timber Creek	57.44	28	P	P	23 32 35.1	+0.2
	baz=248						
L16K	Owhat River	57.48	27	P	P	23 32 36.1	+0.9
L16K	Owhat River	57.48	27	P	P	23 32 35.5	+0.4
	baz=247						
H16K	Elim	57.62	24	P	P	23 32 36.9	+0.8
	baz=242						
J16K	Anvik River	57.65	25	P	P	23 32 38.1	+1.6
J16K				IAmb	IAmb	23 32 38.7	
	comp=Z,7.9nm,0.8s						
J16K	Anvik River	57.65	25	P	P	23 32 37.0	+0.6
	baz=244						
O17K	Koliganek Bris	57.85	30	P	P	23 32 38.2	+0.4
	baz=250						
I17K	Unalakleet	57.88	25	P	P	23 32 39.4	+1.4
I17K	Unalakleet	57.88	25	P	P	23 32 39.4	+1.4
	baz=244						
G16K	Koyuk River	57.93	23	P	P	23 32 39.4	+1.1
	baz=242						
Q17K	Contact Creek	57.95	32	P	P	23 32 39.7	+1.0
	baz=252						
P17K	Kvichak River	57.97	31	P	P	23 32 39.9	+1.2
	baz=251						
N17K	Nushagak Hills	58.06	29		P	23 32 40.6	+1.2
N17K				IAmb	IAmb	23 32 41.3	
	comp=Z,5.0nm,0.6s						
N17K	Nushagak Hills	58.06	29	P	P	23 32 40.4	+1.1
	baz=250						
L17K	Donlin	58.16	27	P	P	23 32 41.0	+1.1
	baz=248						
ACHA	Angle Creek He	58.22	32	P	P	23 32 37.4	-3.1
M17K	Holitna River	58.26	28	P	P	23 32 42.3	+1.6
M17K	Holitna River	58.26	28	P	P	23 32 41.8	+1.1
	baz=249						
J17K	VABM Dome	58.32	26	P	P	23 32 42.7	+1.6
J17K				IAmb	IAmb	23 32 44.0	
	comp=Z,15nm,1.3s						
J17K	VABM Dome	58.32	26	P	P	23 32 42.2	+1.1
	baz=246						
SII	Sitkinak Islan	58.35	34	P	P	23 32 42.5	+1.1
SII	Sitkinak Islan	58.35	34	P	P	23 32 42.4	+1.0
	baz=255						
K17K	Iditarod	58.38	27	P	P	23 32 43.2	+1.7
K17K				IAmb	IAmb	23 32 43.9	
	comp=Z,14nm,0.8s						
K17K	Iditarod	58.38	27	P	P	23 32 42.8	+1.3
	baz=247,SNR=8.4						
C16K	Lisburne Hills	58.39	19	P	P	23 32 42.3	+0.8
C16K				IAmb	IAmb	23 32 42.9	
	comp=Z,10nm,0.8s						
C16K	Lisburne Hills	58.39	19	P	P	23 32 42.3	+0.8
	baz=237						
ZAA0	Zalesovo Array	58.40	323	P	P	23 32 41.6	-0.1
ZALV	Zalesovo Beam	58.40	323	P	P	23 32 41.1	-0.7
ZALV	Zalesovo Beam	58.40	323	P	P	23 32 40.6	-1.1
	comp=Z,3.8nm,0.6s,baz=100,slow=7.1,SNR=18						
	comp=Z,3.8nm,0.6s						
R18K	Karluk	58.48	33	P	P	23 32 42.9	+0.7
	baz=254						
Q18K	Katmai Hardscr	58.51	32	P	P	23 32 42.9	+0.3
	baz=253						
G17K	Kiwalik Mounta	58.61	23	P	P	23 32 43.9	+0.8
	baz=243						
P18K	Big Mountain,	58.62	31	P	P	23 32 44.0	+0.7
	baz=252						
H17K	Granite Mounta	58.64	24	P	P	23 32 44.5	+1.3
H17K				IAmb	IAmb	23 32 45.3	
	comp=Z,8.5nm,0.8s						
H17K	Granite Mounta	58.64	24	P	P	23 32 44.2	+0.9
	baz=244,SNR=5.9						
N18K	Kilae Creek	58.72	29	P	P	23 32 45.5	+1.6
N18K				IAmb	IAmb	23 32 46.0	
	comp=Z,10nm,1.1s						
N18K	Kilae Creek	58.72	29	P	P	23 32 44.8	+0.9
	baz=251						
O18K	Koktuh Hills	58.78	30	P	P	23 32 45.8	+1.5
O18K				IAmb	IAmb	23 33 24.9	
	comp=Z,9.2nm,1.0s						
O18K	Koktuh Hills	58.78	30	P	P	23 32 45.2	+0.9
	baz=252						
D17K	Noatak River	58.81	20	P	P	23 32 45.2	+0.8
	baz=240						
F17K	Baldwin Pennin	58.83	22	P	P	23 32 45.1	+0.7
	baz=242						
MKAR	Makanchi Array	58.84	314	P	P	23 32 44.6	-0.4
MKAR	Makanchi Array	58.84	314	P	P	23 32 44.1	-0.9
	comp=Z,1.6nm,0.5s,baz=92,slow=7.9,SNR=23						
	comp=Z,1.6nm,0.5s						
L18K	Granite Mounta	58.89	27		P	23 32 46.8	+1.8
L18K				IAmb	IAmb	23 32 47.4	
	comp=Z,14nm,1.4s						
L18K	Granite Mounta	58.89	27	P	P	23 32 46.3	+1.3
	baz=249						
E17K	Hotham Inlet	58.93	21	P	P	23 32 46.6	+1.4
	baz=241						
OHAK	Old Harbor	58.99	34	P	P	23 32 46.6	+0.8
OHAK				IAmb	IAmb	23 33 05.0	
	comp=Z,21nm,1.3s						
M18K	Stony River	59.02	28	P	P	23 32 46.4	+0.5
	baz=250,SNR=5.0						
MAKZ	Makanchi	59.05	314	P	P	23 32 46.5	0.0
C17K	DeLong Mountai	59.18	19	P	P	23 32 48.0	+1.1
	baz=239						
H18K	Honhosa River	59.33	24	P	P	23 32 48.8	+0.7
H18K				IAmb	IAmb	23 32 49.5	
	comp=Z,7.8nm,0.8s						
H18K	Honhosa River	59.33	24	P	P	23 32 48.9	+0.9
	baz=246,SNR=5.2						
J18K	Innoko River	59.33	26	P	P	23 32 48.7	+0.7
J18K	Innoko River	59.33	26	P	P	23 32 48.4	+0.4
	baz=248						
N19K	Bonanza Creek	59.42	29		P	23 32 50.1	+1.3
N19K				IAmb	IAmb	23 32 51.0	
	comp=Z,7.5nm,0.8s						
N19K	Bonanza Creek	59.42	29	P	P	23 32 49.6	+0.8
	baz=252,SNR=5.2						
KDAK	Kodiak Island	59.51	33	P	P	23 32 50.2	+0.9
KDAK	Kodiak Island	59.51	33	P	P	23 32 50.5	+1.2
	baz=256						
E18K	Tukpahlearik C	59.51	21		P	23 32 50.7	+1.5
E18K				IAmb	IAmb	23 32 51.2	
	comp=Z,6.7nm,0.8s						
E18K	Tukpahlearik C	59.51	21	P	P	23 32 49.9	+0.7
	baz=242						
G18K	Tagagawik	59.53	23	P	P	23 32 50.2	+0.8
G18K				IAmb	IAmb	23 32 50.9	
	comp=Z,8.1nm,0.9s						
G18K	Tagagawik	59.53	23	P	P	23 32 49.6	+0.2
	baz=245,SNR=5.9						
P19K	Oil Pt	59.67	31	P	P	23 32 50.9	+0.4
P19K	Oil Pt	59.67	31	P	P	23 32 51.3	+0.8
	baz=254						
L19K	White Mountain	59.68	28	P	P	23 32 51.3	+0.7
L19K	White Mountain	59.68	28	P	P	23 32 51.5	+1.0
	baz=251						
Q20K	Shuyak Island	59.81	32	P	P	23 32 51.2	-0.2
	baz=255						
SYI	Shuyak Island	59.81	32	P	P	23 32 51.7	+0.3
C18K	Utukok River	59.90	20		P	23 32 52.4	+0.5
C18K				IAmb	IAmb	23 32 53.2	
	comp=Z,6.0nm,0.8s						
C18K	Utukok River	59.90	20	P	P	23 32 52.6	+0.7
	baz=241,SNR=5.2						
J19K	Poorman	59.98	26	P	P	23 32 53.5	+1.1
J19K				IAmb	IAmb	23 32 54.2	
	comp=Z,6.0nm,0.8s						
J19K	Poorman	59.98	26	P	P	23 32 53.1	+0.6
	baz=249,SNR=6.4						
B18K	Kokolik River	60.06	19	P	P	23 32 53.9	+1.0
	baz=240						
L20K	Farewell, AK	60.21	28	P	P	23 32 54.5	+0.4
	baz=252						
G19K	Purcell Mounta	60.21	23	P	P	23 32 55.1	+1.1
G19K				IAmb	IAmb	23 32 55.6	
	comp=Z,7.6nm,0.8s						
G19K	Purcell Mounta	60.21	23	P	P	23 32 54.5	+0.4
	baz=246,SNR=5.8						
H19K	Roundabout Mou	60.22	24		P	23 32 55.4	+1.4
H19K				IAmb	IAmb	23 32 56.0	
	comp=Z,7.7nm,0.8s						
H19K	Roundabout Mou	60.22	24	P	P	23 32 54.6	+0.6
	baz=248,SNR=5.9						
F19K	Shaleruckik Mo	60.24	22	P	P	23 32 55.2	+1.0
	baz=246						
M20K	Styx River	60.36	28	P	P	23 32 56.2	+1.0
M20K				IAmb	IAmb	23 32 57.4	
	comp=Z,4.9nm,0.8s						
M20K	Styx River	60.36	28	P	P	23 32 55.9	+0.6
	baz=253						
K20K	Telida	60.41	27	P	P	23 32 56.3	+0.9
	baz=251						
CNPM	China Poot	60.62	31	P	P	23 32 57.0	+0.1
C19K	Lookout Ridge	60.63	20	P	P	23 32 58.0	+1.1
C19K				IAmb	IAmb	23 32 58.9	
	comp=Z,11nm,0.8s						
C19K	Lookout Ridge	60.63	20	P	P	23 32 57.7	+0.9
	baz=242,SNR=14						
J20K	Nowinta River	60.65	26		P	23 32 58.5	+1.5
J20K				IAmb	IAmb	23 33 00.0	
	comp=Z,8.6nm,1.1s						
J20K	Nowinta River	60.65	26	P	P	23 32 58.3	+1.3
	baz=250,SNR=12						
E19K	Redstone River	60.70	22		P	23 32 58.5	+1.2
E19K				IAmb	IAmb	23 32 59.1	
	comp=Z,7.5nm,1.1s						
E19K	Redstone River	60.70	22	P	P	23 32 57.9	+0.6
	baz=246,SNR=6.1						
A19K	Wainwright	60.70	18	P	P	23 32 58.3	+1.1
	baz=240						
H20K	Anotleneega Mo	60.81	24	P	P	23 32 58.7	+0.6
	baz=249,SNR=6.9						
D19K	Kuna River	60.83	20	P	P	23 32 59.1	+0.9
D19K				IAmb	IAmb	23 32 59.8	
	comp=Z,6.9nm,0.8s						
D19K	Kuna River	60.83	20	P	P	23 32 58.9	+0.6
	baz=244,SNR=5.5						
BRLK	Bradley Lake	60.85	31	P	P	23 32 58.3	-0.2
BRLK				IAmb	IAmb	23 32 59.3	
	comp=Z,8.8nm,0.9s						
BRSE	Bradley Lake S	60.91	31	P	P	23 32 59.1	+0.2
	baz=256						
TAU	Tasmania Unive	61.00	179	P	P	23 32 58.8	-0.8
F20K	Avaraart Lake	61.07	22	P	P	23 33 01.1	+1.3
F20K				IAmb	IAmb	23 33 01.7	
	comp=Z,4.3nm,0.7s						
F20K	Avaraart Lake	61.07	22	P	P	23 33 00.4	+0.7
	baz=247,SNR=5.0						
SKT	Skwentna	61.12	29		P	23 33 00.5	+0.3
SKT				IAmb	IAmb	23 33 00.8	
	comp=Z,12nm,1.0s						
SKT	Skwentna	61.12	29	P	P	23 33 00.3	+0.1
	baz=254,SNR=9.1						
ABAZ	Army Bay	61.12	154	P	P	23 33 01.4	+0.8
CAST	Castle Rocks	61.28	27	P	P	23 33 01.7	+0.4
	baz=253						
SUA	Susitna One	61.34	29	IAmb	IAmb	23 33 46.0	
	comp=Z,6.4nm,0.6s						
SLKM	Skilak Lake	61.35	30	P	P	23 33 02.1	+0.3
SLKM				IAmb	IAmb	23 33 03.3	
	comp=Z,5.6nm,0.4s						
E20K	Nigu River	61.38	21	P	P	23 33 02.8	+0.8
	baz=246						
IMAR	Indian Mountai	61.42	24	P	P	23 33 03.0	+0.8
D20K	Etivluk River	61.43	21		P	23 33 03.3	+1.0
D20K	Etivluk River	61.43	21	P	P	23 33 02.7	+0.5
	baz=246,SNR=21						
SEW	Seward	61.63	31	P	P	23 33 04.0	+0.3
SEW				IAmb	IAmb	23 33 18.5	
	comp=Z,13nm,0.9s						
SEW	Seward	61.63	31	P	P	23 33 04.3	+0.6
	baz=257						
KURK	Kurchatov	61.65	318	P	P	23 33 02.8	-1.2
H21K	Melozitna Rive	61.68	24	P	P	23 33 05.2	+1.2
H21K				IAmb	IAmb	23 33 05.5	
	comp=Z,4.9nm,0.6s						
H21K	Melozitna Rive	61.68	24	P	P	23 33 04.4	+0.4
	baz=251,SNR=7.0						
G21K	Allakaket	61.70	23	P	P	23 33 05.3	+1.3
G21K	Allakaket	61.70	23	P	P	23 33 04.8	+0.8
	baz=250,SNR=5.2						
KURBB	Kurchatov Arra	61.70	318	P	P	23 33 02.9	-1.4
	comp=Z,3.6nm,0.6s,baz=92,slow=7.3,SNR=41						
	comp=Z,3.6nm,0.6s						
RC01	Rabbit Creek A	61.72	30	P	P	23 33 04.5	+0.3
RC01	Rabbit Creek A	61.72	30	P	P	23 33 04.6	+0.3
	baz=256,SNR=5.8						

B20K	Meade River	61.80	19	P	P	23 33 05.4	+0.8
	baz=244						
BPAW	Bear Paw Mtn.	61.94	26	IAmb	IAmb	23 33 07.3	
	comp=Z,14nm,1.0s						
BPAW	Bear Paw Mtn.	61.94	26	P	P	23 33 06.2	+0.5
	baz=254,SNR=15						
F21K	Alatna River	61.95	23	P	P	23 33 06.3	+0.5
	baz=250						
TRF	Thorofare Moun	62.06	27	P	P	23 33 06.9	+0.2
	baz=255						
PMR	Palmer	62.12	29		P	23 33 06.8	-0.1
PMR				IAmb	IAmb	23 33 07.5	
	comp=Z,15nm,1.2s						
PMR	Palmer	62.12	29	P	P	23 33 06.7	-0.2
	baz=257,SNR=6.5						
C21K	Knifeblade Rid	62.21	20	P	P	23 33 08.2	+0.7
	baz=247,SNR=5.6						
E21K	Killik River	62.21	21	P	P	23 33 07.9	+0.4
	baz=248						
KDJ	Kajisay	62.26	308	P	P	23 33 08.8	+0.3
GHO	Glory Hole Cre	62.26	29	IAmb	IAmb	23 33 08.8	
	comp=Z,10nm,0.8s						
MLY	Manley	62.31	25	IAmb	IAmb	23 33 09.8	
	comp=Z,8.0nm,0.7s						
MLY	Manley	62.31	25	P	P	23 33 08.7	+0.4
	baz=253,SNR=15						
H22K	Ishtalitna Cre	62.31	24	P	P	23 33 09.5	+1.3
	baz=252						
PWL	Port Wells	62.34	30	P	P	23 33 09.1	+0.6
PWL	Port Wells	62.34	30	P	P	23 33 09.4	+1.0
	baz=258						
KNK	Knik Glacier	62.40	30	P	P	23 33 09.7	+0.9
	baz=257						
B21K	Ikpikpuk River	62.45	20	IAmb	IAmb	23 33 49.5	
	comp=Z,6.6nm,0.9s						
B21K	Ikpikpuk River	62.45	20	P	P	23 33 09.8	+0.9
	baz=247						
SML	Sawmill	62.54	29	P	P	23 33 10.0	+0.1
	baz=257,SNR=15						
G22K	Bettles	62.58	23	P	P	23 33 11.0	+1.1
	baz=252						
P23K	Montague Islan	62.62	31	P	P	23 33 11.4	+1.1
P23K	Montague Islan	62.62	31	P	P	23 33 10.8	+0.5
	baz=259						
WAT1	Susitna Watana	62.67	28	P	P	23 33 10.5	-0.2
	baz=257						
MCK	McKinley	62.72	27	P	P	23 33 11.5	+0.5
	baz=256						
D22K	Ayikyak River	62.81	21	P	P	23 33 12.5	+1.0
	baz=250,SNR=12						
M23K	Glacier View	62.82	29	P	P	23 33 11.8	+0.2
	baz=258						
E22K	Anaktuvuk Pass	62.86	22	IAmb	IAmb	23 33 13.7	
	comp=Z,7.5nm,0.7s						
E22K	Anaktuvuk Pass	62.86	22	P	P	23 33 12.4	+0.6
	baz=251,SNR=13						
NEA2	Nenana	62.88	26	IAmb	IAmb	23 33 52.4	
	comp=Z,5.4nm,0.9s						
NEA2	Nenana	62.88	26	P	P	23 33 12.7	+0.7
	baz=255,SNR=6.9						
A22K	Sinclair Lake	62.88	18	P	P	23 33 12.2	+0.4
	baz=246,SNR=5.6						
I23K	Minto, Yukon-K	62.90	25	IAmb	IAmb	23 33 13.9	
	comp=Z,8.0nm,0.6s						
I23K	Minto, Yukon-K	62.90	25	P	P	23 33 12.5	+0.4
	baz=255,SNR=12						
GLI	Glacier Island	62.93	30	P	P	23 33 13.0	+0.6
GLI	Glacier Island	62.93	30	P	P	23 33 12.4	0.0
	baz=259						
WAT6	Susitna Watana	62.98	28	P	P	23 33 12.9	0.0
	baz=258,SNR=9.9						
H23K	Yukon River	63.01	25	IAmb	IAmb	23 33 14.7	
	comp=Z,4.9nm,0.7s						
H23K	Yukon River	63.01	25	P	P	23 33 14.1	+1.3
	baz=254,SNR=6.4						
SCM	Sheep Creek Mo	63.01	29	P	P	23 33 13.4	+0.4
	baz=258,SNR=12						
Q23K	Middleton Isla	63.04	32	P	P	23 33 14.4	+1.4
	baz=260						
G23K	Bananza Creek	63.08	24	P	P	23 33 14.5	+1.3
	baz=253,SNR=6.9						
B22K	Teshekpuk Lake	63.10	19	P	P	23 33 14.4	+1.1
	baz=248						
HIN	Hinchinbrook I	63.13	31	P	P	23 33 14.7	+1.0
HIN				IAmb	IAmb	23 33 15.3	
	comp=Z,9.8nm,0.7s						
COLD	Coldfoot	63.16	23	P	P	23 33 14.9	+1.1
	baz=253						
BOOM	Boomskoye usch	63.17	309	P	P	23 33 14.7	+0.2
DHY	Denali Highway	63.25	28	P	P	23 33 15.7	+1.0
	baz=258						
WRH	Wood River Hil	63.26	26		P	23 33 14.2	-0.3
WRH				IAmb	IAmb	23 33 14.9	
	comp=Z,4.8nm,0.6s						
D23K	Nanushuk River	63.52	21	IAmb	IAmb	23 33 18.5	
	comp=Z,8.5nm,0.8s						
D23K	Nanushuk River	63.52	21	P	P	23 33 17.6	+1.5
	baz=252,SNR=7.8						
EYAK	Cordova Ski Ar	63.52	31	P	P	23 33 17.2	+1.0
	baz=260						
WTVZ	West Tongariro	63.58	155	P	P	23 33 17.4	+0.4
M24K	Tolsona, Glenn	63.60	29	P	P	23 33 18.3	+1.4
M24K				IAmb	IAmb	23 33 39.7	
	comp=Z,8.1nm,0.8s						
M24K	Tolsona, Glenn	63.60	29	P	P	23 33 18.1	+1.3
	baz=259						
NNVZ	North Ngauruho	63.60	155	P	P	23 33 17.6	+0.4
KLU	Klutina	63.60	30	IAmb	IAmb	23 33 18.5	
	comp=Z,8.3nm,0.7s						
KLU	Klutina	63.60	30	P	P	23 33 17.8	+0.9
	baz=260,SNR=6.5						
E23K	Chandalar	63.62	22	IAmb	IAmb	23 33 19.1	
	comp=Z,16nm,1.1s						
E23K	Chandalar	63.62	22	P	P	23 33 18.0	+1.1
	baz=253,SNR=11						
NGZ	Ngauruhoe	63.63	155	P	P	23 33 17.4	+0.1
OTVZ	Oturere	63.65	155	P	P	23 33 18.0	+0.5
SNVZ	South Ngauruho	63.66	155	P	P	23 33 17.7	+0.1
H24K	Noodor Dome	63.68	25	IAmb	IAmb	23 33 18.4	
	comp=Z,3.5nm,0.7s						
H24K	Noodor Dome	63.68	25	P	P	23 33 18.0	+0.7
	baz=256,SNR=9.5						
FWVZ	Far West T-bar	63.68	155	P	P	23 33 17.8	0.0
TRVZ	Turoa	63.72	155	P	P	23 33 18.1	0.0
WHVZ	Whangaehu Hut	63.72	155	P	P	23 33 18.2	+0.2
HDA	Harding Lake	63.73	27	IAmb	IAmb	23 33 17.5	
	comp=Z,5.0nm,0.8s						
HDA	Harding Lake	63.73	27	P	P	23 33 17.2	-0.4
	baz=257,SNR=5.8						
RTZ	Ruatahuna	63.74	153	P	P	23 33 16.9	-1.1
RTZ	Ruatahuna	63.74	153	P	P	23 33 16.8	-1.2
MWZ	Matawai	63.74	153	P	P	23 33 16.6	-1.3
TOLK	Toolik Lake Re	63.81	22	IAmb	IAmb	23 33 19.9	
	comp=Z,14nm,1.2s						
TOLK	Toolik Lake Re	63.81	22	P	P	23 33 19.2	+1.2
	baz=253,SNR=7.0						
C23K	Itkillik River	63.83	20	P	P	23 33 19.2	+1.2
	baz=251,SNR=8.1						
IL31		63.83	26	IAmb	IAmb	23 33 18.2	
	comp=Z,8.0nm,1.1s						
ILAR	Eielson Array	63.83	26	P	P	23 33 17.2	-1.0
	comp=Z,4.4nm,0.8s,baz=250,slow=6.4,SNR=48						
ILAR				pP	pwP	23 33 56.1	-0.4
	comp=Z,3.4nm,0.8s,baz=258,slow=5.2,SNR=10						
	comp=Z,4.4nm,0.8s						
QRZ	Quartz Range	63.88	158	P	P	23 33 19.0	+0.2
MOVZ	Moawhango	63.89	155	P	P	23 33 18.4	-0.6
BKZ	Black Stump Fm	63.99	154	P	P	23 33 18.8	-0.8
BKZ	Black Stump Fm	63.99	154	P	P	23 33 18.4	-1.2
RAGM	Ragged Mountai	64.03	31	P	P	23 33 20.3	+0.7
RAGM				IAmb	IAmb	23 34 02.8	
	comp=Z,16nm,1.4s						
E24K	Your Creek	64.03	22	IAmb	IAmb	23 33 21.4	
	comp=Z,6.1nm,0.7s						
E24K	Your Creek	64.03	22	P	P	23 33 20.5	+1.0
	baz=254,SNR=12						
G24K	Hadweenzic Riv	64.05	24	IAmb	IAmb	23 33 21.5	
	comp=Z,6.0nm,0.8s						
G24K	Hadweenzic Riv	64.05	24	P	P	23 33 20.4	+0.8
	baz=256,SNR=8.9						
NMHZ	Naumai	64.07	154	P	P	23 33 20.4	+0.3
PAX	Paxson	64.08	28	IAmb	IAmb	23 33 21.2	
	comp=Z,7.5nm,0.6s						
PAX	Paxson	64.08	28	P	P	23 33 20.5	+0.6
	baz=259,SNR=11						
KAIM	Kayak Island	64.08	32	P	P	23 33 21.1	+1.2
KAIM	Kayak Island	64.08	32	P	P	23 33 20.9	+1.0
	baz=262						
F24K	Squaw Lake	64.10	23	IAmb	IAmb	23 33 22.1	
	comp=Z,5.3nm,0.9s						
F24K	Squaw Lake	64.10	23	P	P	23 33 21.0	+1.0
	baz=255,SNR=6.7						
HARP	HAARP	64.12	29	P	P	23 33 21.0	+0.8
	baz=260,SNR=5.0						
BMRM	Bremner River	64.15	31	P	P	23 33 21.2	+0.7
BMRM				IAmb	IAmb	23 33 22.8	
	comp=Z,9.9nm,0.9s						
BMRM	Bremner River	64.15	31	P	P	23 33 21.1	+0.7
	baz=261						
D24K	Happy Valley	64.22	21	P	P	23 33 21.7	+1.1
	baz=253,SNR=8.7						
HMT	Hamilton	64.22	31	P	P	23 33 21.8	+1.0
HMT				IAmb	IAmb	23 33 22.5	
	comp=Z,5.6nm,0.8s						
N25K	Chitina, Valde	64.25	30	IAmb	IAmb	23 33 22.9	
	comp=Z,6.1nm,0.8s						
N25K	Chitina, Valde	64.25	30	P	P	23 33 22.0	+0.9
	baz=261,SNR=5.8						
KRHZ	Kereru	64.34	154	P	P	23 33 20.6	-1.2
DUWZ	D'Urville Isla	64.37	157	P	P	23 33 21.3	-0.7
SUCK	Suckling Hills	64.42	32	P	P	23 33 23.5	+1.3
J25K	Salcha River,	64.44	26	P	P	23 33 21.7	-0.6
	baz=259,SNR=7.1						
MRNZ	Matariki Terra	64.47	158	P	P	23 33 22.6	0.0
RIDG	Independent Ri	64.50	27		P	23 33 22.9	+0.2
RIDG				IAmb	IAmb	23 33 23.7	
	comp=Z,9.6nm,0.8s						
RIDG	Independent Ri	64.50	27	P	P	23 33 22.9	+0.2
	baz=260,SNR=10.0						
PNHZ	Pukenui	64.50	155	P	P	23 33 21.4	-1.5
TSZ	Takapari Road	64.53	155	P	P	23 33 21.9	-1.2
NNZ	Nelson	64.53	157	P	P	23 33 22.2	-0.7
PRP	Porcupine Dome	64.56	25	P	P	23 33 23.8	+0.7
	baz=258						
G25K	Bearman Lake	64.60	24	P	P	23 33 23.9	+0.7
	baz=257						
H25L	Birch Creek	64.60	25	P	P	23 33 24.1	+1.0
	baz=258,SNR=6.9						
GLB	Gilahina Butte	64.60	30		P	23 33 24.3	+1.0
GLB				IAmb	IAmb	23 33 25.5	
	comp=Z,7.5nm,0.8s						
KAHZ	Kahuranaki	64.68	154	P	P	23 33 23.4	-0.7
VRDI	Verde Repeater	64.74	30		P	23 33 25.1	+0.7
VRDI				IAmb	IAmb	23 33 25.8	
	comp=Z,8.0nm,0.7s						
DVHZ	Dannevirke	64.81	155	P	P	23 33 23.4	-1.5
DOT	Dot Lake	64.83	28	IAmb	IAmb	23 33 25.7	
	comp=Z,9.6nm,0.7s						
THZ	Tophouse	64.84	158	P	P	23 33 24.7	-0.3
THZ	Tophouse	64.84	158	P	P	23 33 24.7	-0.3
CRQE	Cirque	64.85	31	P	P	23 33 25.7	+0.6
	baz=263,SNR=6.0						
TCW	Tory Channel	64.86	157	P	P	23 33 24.4	-0.7
MRZ	Mangatainoka R	64.89	155	P	P	23 33 24.6	-0.7
FYU	Fort Yukon	64.89	24	IAmb	IAmb	23 33 27.6	
	comp=Z,8.2nm,0.8s						
SCRK	Sand Creek	64.92	27	IAmb	IAmb	23 33 26.5	
	comp=Z,7.9nm,1.0s						
SCRK	Sand Creek	64.92	27	P	P	23 33 25.6	+0.1
	baz=260,SNR=10						
F25K	Christian Rive	64.96	23	IAmb	IAmb	23 33 27.7	
	comp=Z,6.6nm,0.8s						
F25K	Christian Rive	64.96	23	P	P	23 33 26.5	+0.9
	baz=257,SNR=12						
MCARA	McCarthy VSAT	64.97	30	P	P	23 33 26.4	+0.8
	baz=262						
L26K	Log Cabin Wild	65.05	28	P	P	23 33 26.9	+0.8
	baz=261						
HOWZ	Holdsworth Sta	65.06	156	P	P	23 33 25.3	-1.2
D25K	Kavik River	65.10	21	IAmb	IAmb	23 33 28.2	
	comp=Z,7.9nm,0.8s						
D25K	Kavik River	65.10	21	P	P	23 33 26.6	+0.2
	baz=256,SNR=11						
E25K	Arctic Village	65.10	23	P	P	23 33 27.7	+1.2
	baz=257,SNR=5.2						
M26K	Nabesna, AK	65.12	29	P	P	23 33 27.3	+0.6
	baz=262						
J26L	Joseph Creek	65.19	27	IAmb	IAmb	23 34 07.3	
	comp=Z,8.0nm,0.9s						
J26L	Joseph Creek	65.19	27	P	P	23 33 27.0	-0.1
	baz=260,SNR=14						
WVZ	Waitaha Valley	65.27	160	P	P	23 33 27.1	-0.6
BMAR	Burnt Mountain	65.32	23	P	P	23 33 29.1	+1.2
FOZ	Fox Glacier	65.39	161	P	P	23 33 27.5	-0.9
MSWZ	Moikau Station	65.41	156	P	P	23 33 27.5	-1.2
YAH	Yahtse	65.47	31	IAmb	IAmb	23 33 31.1	
	comp=Z,7.5nm,0.6s						
I26K	Coal Creek Min	65.49	26	P	P	23 33 28.3	-0.6
I26K	Coal Creek Min	65.49	26	P	P	23 33 28.8	-0.2
	baz=260						
LTZ	Lake Taylor	65.52	159	P	P	23 33 27.9	-1.5
LTZ	Lake Taylor	65.52	159	P	P	23 33 27.8	-1.5
G26K	Porcupine Rive	65.53	24	IAmb	IAmb	23 34 10.0	
	comp=Z,6.0nm,0.8s						
G26K	Porcupine Rive	65.53	24	P	P	23 33 30.3	+1.2
	baz=259,SNR=9.8						
F26K	Sheenjek River	65.54	23	IAmb	IAmb	23 33 31.5	
	comp=Z,8.9nm,0.8s						
F26K	Sheenjek River	65.54	23	P	P	23 33 30.5	+1.2
	baz=258,SNR=16						
PLWZ	Palliser	65.54	156	P	P	23 33 28.6	-0.9
M27K	Edge Creek, AK	65.63	29	IAmb	IAmb	23 33 31.6	
	comp=Z,5.0nm,0.7s						
M27K	Edge Creek, AK	65.63	29	P	P	23 33 30.7	+0.6
	baz=263,SNR=6.6						
KHZ	Kahutara	65.64	158	P	P	23 33 28.1	-2.0
CTG	Chitna Glacier	65.73	31	P	P	23 33 31.6	+0.8
	baz=264,SNR=5.3						
CTGM	Chitina Glacie	65.73	31	P	P	23 33 32.0	+1.3
L27K	Beaver Creek,	65.74	28	IAmb	IAmb	23 33 32.1	
	comp=Z,4.2nm,0.7s						
L27K	Beaver Creek,	65.74	28	P	P	23 33 31.3	+0.7
	baz=263,SNR=6.3						
K27K	Chicken	65.76	27	P	P	23 33 31.6	+0.9
	baz=262						
BCAR	Beaver Creek A	65.76	28	P	P	23 33 31.5	+0.7
GVZ	Greta Valley S	65.94	159	P	P	23 33 30.9	-1.2
C27K	Jago River	66.09	21	P	P	23 33 33.5	+0.8
C27K				IAmb	IAmb	23 34 13.9	
	comp=Z,10nm,1.2s						
C27K	Jago River	66.09	21	P	P	23 33 33.7	+1.0
	baz=258						
BVCY	Beaver Creek	66.11	29	P	P	23 33 33.6	+0.7
	baz=264						
I27K	Kandik River	66.17	26	P	P	23 33 33.9	+0.5
	baz=262						
PINM	Pinnacle	66.18	32	P	P	23 33 34.3	+0.8
	baz=265						
YUK3	Moose Creek	66.23	30	P	P	23 33 34.8	+0.8
	baz=264						
O28M	Mount Upton	66.27	31	P	P	23 33 35.3	+0.9
	baz=265,SNR=10						
LBZ	Lake Benmore	66.28	161	P	P	23 33 33.4	-0.8
H27K	Steamboat Moun	66.30	25	IAmb	IAmb	23 33 35.9	
	comp=Z,7.3nm,0.8s						
H27K	Steamboat Moun	66.30	25	P	P	23 33 35.2	+1.1
	baz=262,SNR=7.9						
G27K	Doyon Strip	66.33	24	P	P	23 33 34.9	+0.5
G27K	Doyon Strip	66.33	24	P	P	23 33 35.3	+0.9
	baz=261						
DCZ	Deep Cove	66.41	164	P	P	23 33 34.0	-0.9
E27K	Coleen River	66.57	23	P	P	23 33 36.8	+1.0
	baz=261,SNR=6.5						
MLZ	Mavora Lakes	66.57	163	P	P	23 33 34.8	-1.3
PNL	Peninsula	66.58	32	P	P	23 33 36.9	+0.8
	baz=266						
I28M	Miner Creek	66.85	26	P	P	23 33 38.3	+0.6
	baz=263,SNR=5.2						
BVAR	Borovoye Array	66.86	320	P	P	23 33 36.5	-1.3
	comp=Z,8.4nm,0.6s,baz=93,slow=7.6,SNR=73						
BVAR				pP	pwP	23 34 16.1	+0.1
	comp=Z,1.7nm,0.6s,baz=94,slow=6.9,SNR=2.6						
	comp=Z,8.4nm,0.6s						
BRVK	Borovoye	66.92	321	P	P	23 33 37.5	-0.8
BRVK				IAmb	IAmb	23 33 38.5	
	comp=Z,5.6nm,0.8s						
DAWY	Dawson	66.93	27		P	23 33 39.3	+1.1
DAWY	Dawson	66.93	27	P	P	23 33 39.1	+0.8
	baz=264,SNR=6.1						
D27M	Malcolm River	66.97	22	P	P	23 33 39.4	+1.0
	baz=261						
O29M	Mount Kennedy	67.03	32	IAmb	IAmb	23 33 41.5	
	comp=Z,12nm,0.8s						
O29M	Mount Kennedy	67.03	32	P	P	23 33 40.3	+1.3
	baz=267,SNR=7.6						
YUK4	Talbot Arm	67.06	30	P	P	23 33 40.7	+1.5
	baz=266,SNR=6.8						
F28M	Old Crow	67.14	24	P	P	23 33 40.4	+1.0
	baz=263,SNR=6.5						
KKAR	Karatay Array	67.14	310	P	P	23 33 39.8	-0.1
YUK6	Outpost Mounta	67.17	31	P	P	23 33 41.3	+1.3
	baz=267,SNR=6.5						
M29M	Somme Creek	67.22	29	IAmb	IAmb	23 33 42.3	
	comp=Z,8.3nm,0.8s						
M29M	Somme Creek	67.22	29	P	P	23 33 41.4	+1.2
	baz=266,SNR=14						
E28M	Babbage River	67.39	23	P	P	23 33 42.2	+1.2
	baz=262,SNR=5.1						
L29M	L29M	67.42	29	IAmb	IAmb	23 33 43.5	
	comp=Z,12nm,0.7s						
L29M	L29M	67.42	29	P	P	23 33 42.7	+1.4
	baz=266,SNR=17						
P29M	Windy Craggy	67.42	32	IAmb	IAmb	23 33 43.7	
	comp=Z,12nm,0.8s						
P29M	Windy Craggy	67.42	32	P	P	23 33 42.8	+1.4
	baz=268,SNR=6.4						
I29M	Ogilvie Camp,	67.52	26	P	P	23 33 43.0	+1.2
	baz=265						
H29M	Whitestone	67.57	25	P	P	23 33 43.2	+1.1
	baz=265						
HYT	Haines Junctio	67.59	31		P	23 33 44.3	+1.8
HYT				IAmb	IAmb	23 33 44.8	
	comp=Z,14nm,0.8s						
HYT	Haines Junctio	67.59	31	P	P	23 33 43.9	+1.4
	baz=268,SNR=14						
K29M	Barlow Dome	67.74	28	IAmb	IAmb	23 33 45.3	
	comp=Z,5.8nm,0.8s						
K29M	Barlow Dome	67.74	28	P	P	23 33 44.4	+1.1
	baz=266,SNR=11						
G29M	Pine Creek	67.77	24	IAmb	IAmb	23 34 24.7	
	comp=Z,5.6nm,0.8s						
G29M	Pine Creek	67.77	24	P	P	23 33 44.5	+1.1
	baz=265,SNR=5.5						
N30M	Aishikik Lake	67.81	30	IAmb	IAmb	23 33 45.9	
	comp=Z,8.4nm,0.7s						
N30M	Aishikik Lake	67.81	30	P	P	23 33 45.0	+1.1
	baz=268,SNR=8.8						
P30M	Million Dollar	67.83	32	P	P	23 33 45.4	+1.4
	baz=268						
E29M	Blow River	67.97	23	P	P	23 33 45.5	+0.9
E29M	Blow River	67.97	23	P	P	23 33 45.8	+1.2
	baz=264						
PLBC	Pleasant Camp	68.12	33	P	P	23 33 46.9	+1.2
	baz=269,SNR=7.3						
S31K	Pelican	68.17	34	P	P	23 33 47.0	+1.0
	baz=270						
EPYK	Eagle Plains	68.25	25	IAmb	IAmb	23 34 26.8	
	comp=Z,6.2nm,0.8s						
EPYK	Eagle Plains	68.25	25	P	P	23 33 47.0	+0.6
	baz=266,SNR=6.5						
O30N	Mendenhall	68.28	31	P	P	23 33 47.6	+0.9
O30N	Mendenhall	68.28	31	P	P	23 33 47.4	+0.7
	baz=269						
J30M	Hart River	68.30	27	P	P	23 33 47.8	+0.9
	baz=267,SNR=7.1						
I30M	Mount Dempster	68.31	26	P	P	23 33 47.6	+0.7
	baz=267						
N31M	Braeburn, Yuko	68.44	30	IAmb	IAmb	23 33 49.9	
	comp=Z,11nm,0.8s						
N31M	Braeburn, Yuko	68.44	30	P	P	23 33 48.9	+1.1
	baz=269,SNR=8.4						
G30M	tAoh Zraii Nji	68.48	24	P	P	23 33 49.0	+1.1
	baz=266						
SKAG	Skagway	68.65	33	P	P	23 33 50.1	+1.2
	baz=270						
F30M	Barrier River	68.69	24	IAmb	IAmb	23 33 50.8	
	comp=Z,9.7nm,0.9s						
F30M	Barrier River	68.69	24	P	P	23 33 50.0	+0.9
	baz=266,SNR=8.9						
WHY	Whitehorse	68.87	31		P	23 33 51.8	+1.3
WHY				IAmb	IAmb	23 33 52.5	
	comp=Z,12nm,0.9s						
WHY	Whitehorse	68.87	31	P	P	23 33 51.4	+0.9
	baz=270,SNR=5.5						
M31M	Drury Creek, Y	69.11	30	P	P	23 33 52.5	+0.7
M31M	Drury Creek, Y	69.11	30	P	P	23 33 52.5	+0.7
	baz=270						
H31M	Peel River	69.19	26		P	23 33 53.3	+1.0
H31M				IAmb	IAmb	23 34 33.2	
	comp=Z,6.3nm,0.8s						
H31M	Peel River	69.19	26	P	P	23 33 53.1	+0.8
	baz=268,SNR=6.7						
G31M	Satah River	69.25	25		P	23 33 53.1	+0.6
G31M				IAmb	IAmb	23 34 33.2	
	comp=Z,13nm,0.8s						
G31M	Satah River	69.25	25	P	P	23 33 53.0	+0.5
	baz=268,SNR=6.9						
P32M	Atlin	69.47	32		P	23 33 55.3	+1.2
P32M				IAmb	IAmb	23 33 56.0	
	comp=Z,5.8nm,0.8s						
P32M	Atlin	69.47	32	P	P	23 33 54.9	+0.8
	baz=271						
INK	Inuvik	69.58	23		P	23 33 55.0	+0.5
INK				IAmb	IAmb	23 34 34.9	
	comp=Z,6.3nm,0.7s						
INK	Inuvik	69.58	23	P	P	23 33 55.5	+0.9
	baz=268						
FARO	Faro, Yukon	69.60	30	P	P	23 33 55.8	+1.0
	baz=271						
P33M	Teslin, Yukon	69.90	32	P	P	23 33 57.6	+0.8
	baz=272						
Q32M	Nakina River	70.23	33	P	P	23 34 00.1	+1.1
Q32M	Nakina River	70.23	33	P	P	23 34 00.1	+1.1
	baz=273						
WRAK	Wrangell Islan	70.34	36	P	P	23 34 00.4	+1.1
	baz=274						
MMPY	Sheldon Lake,	70.56	29	P	P	23 34 01.8	+1.1
	baz=272						
R33M	Jennings River	70.88	33	P	P	23 34 04.1	+1.3
R33M	Jennings River	70.88	33	P	P	23 34 03.9	+1.1
	baz=274						
S34M	Telegraph Cree	70.89	34	P	P	23 34 04.5	+1.7
S34M				IAmb	IAmb	23 34 05.0	
	comp=Z,5.7nm,0.8s						
S34M	Telegraph Cree	70.89	34	P	P	23 34 04.0	+1.2
	baz=274						
HG4B	Hotspring	71.36	40	P	P	23 34 06.2	+0.6
T35M	Bob Quinn	71.44	35	P	P	23 34 07.2	+1.0
	baz=275						
TGTN	Hyland Airport	72.04	30	P	P	23 34 10.6	+1.0
	baz=275						
A36M	Sachs Harbour	72.31	19	P	P	23 34 11.1	+0.2
A36M				IAmb	IAmb	23 34 51.2	
	comp=Z,15nm,1.0s						
HOLB	Holberg	73.47	41	P	P	23 34 19.6	+1.4
AB31	Akbulak array	73.72	317	P	P	23 34 17.9	-1.7
ABKAR	Akbulak array	73.72	317	P	P	23 34 18.1	-1.6
ABKAR	Akbulak array	73.72	317	P	P	23 34 17.9	-1.8
ABKAR				IAmb	IAmb	23 34 18.8	
	comp=Z,2.2nm,0.6s						
BEAVL	Fort Liard	73.76	31	P	P	23 34 21.0	+1.3
	baz=278						
TOAD	Toad River Com	73.88	33	P	P	23 34 21.2	+0.8
	baz=279						
WRGLY	Wrigley	74.05	28	P	P	23 34 20.9	-0.3
WRGLY				IAmb	IAmb	23 34 22.9	
	comp=Z,11nm,0.7s						
WRGLY	Wrigley	74.05	28	P	P	23 34 22.1	+0.8
	baz=279						
NLWA	Neilton Lookou	76.84	44	P	P	23 34 39.2	+1.6
NLWA				IAmb	IAmb	23 34 40.0	
	comp=Z,21nm,1.4s						
I02E	Swisshome, OR	77.60	48	P	P	23 34 42.9	+1.1
YKAW3	Yellowknife Wh	78.14	28	IAmb	IAmb	23 34 45.2	
	comp=Z,4.8nm,0.6s						
YKA	Yellowknife Ar	78.17	28	P	P	23 34 44.5	-0.1
YKA	Yellowknife Ar	78.17	28	P	P	23 34 44.3	-0.3
	comp=Z,2.5nm,0.7s,baz=219,slow=6.8,SNR=26						
YKA				pP	pwP	23 35 24.2	0.0
	comp=Z,1.8nm,0.8s,baz=296,slow=6.0,SNR=5.9						
	comp=Z,2.5nm,0.7s						
BUCK	Buck Mountain	78.18	47	P	P	23 34 47.0	+1.7
BUCK				IAmb	IAmb	23 34 47.5	
	comp=Z,15nm,1.1s						
YKAW1	Yellowknife Wh	78.22	28	IAmb	IAmb	23 34 45.7	
	comp=Z,4.5nm,0.7s						
YBH	Yreka Blue Hor	78.99	50	P	P	23 34 50.6	+0.9
O02D	Mt. Diablo Mer	79.33	51	P	P	23 34 52.7	+1.1
O02D				IAmb	IAmb	23 35 04.9	
	comp=Z,22nm,1.4s						

SPITS	Spitsbergen Ar	79.52	351	P	P	23 34 51.3	-0.5
	comp=Z,0.2nm,0.3s,baz=134,slow=4.8,SNR=5.4						
	comp=Z,0.2nm,0.3s						
KBS	Kingsbay	79.63	352	P	P	23 34 52.4	+0.1
J05D	Fort Rock, OR	79.64	48	P	P	23 34 54.5	+1.2
J05D				IAmb	IAmb	23 34 55.1	
	comp=Z,9.8nm,1.0s						
RES	Resolute Bay	79.68	14		P	23 34 52.8	+0.1
PINE	Pine Mountain	79.71	47		P	23 34 55.1	+1.4
PINE				IAmb	IAmb	23 34 55.7	
	comp=Z,14nm,0.8s						
HAWA	Hanford	79.97	44	P	P	23 34 55.5	+0.7
HAWA				IAmb	IAmb	23 34 56.5	
	comp=Z,10nm,1.1s						
K05A	Summer Lake	80.03	48	P	P	23 34 56.5	+1.1
K05A				IAmb	IAmb	23 34 57.4	
	comp=Z,11nm,0.9s						
D08A	Wollman Farm,	80.19	44	P	P	23 34 56.5	+0.6
D08A				IAmb	IAmb	23 34 56.9	
	comp=Z,4.2nm,0.5s						
NEW	Newport	81.00	42		P	23 35 00.7	+0.4
BEKR	Beckworth	81.21	51	P	P	23 35 02.2	+0.4
CMB	Columbia Colle	81.72	53		P	23 35 04.7	+0.4
BMO	Blue Mountains	81.91	46		P	23 35 05.7	+0.5
PNTR	Pine Nut	82.00	52	IAmb	IAmb	23 35 07.6	
	comp=Z,9.1nm,0.9s						
KEV	Kevo	82.30	342	P	P	23 35 05.0	-1.6
PLID	Pearl Lake	82.72	45		P	23 35 08.9	-0.7
ARCES	ARCESS Array B	82.86	342	P	P	23 35 08.8	-0.8
ARCES	ARCESS Array B	82.86	342	P	P	23 35 08.0	-1.6
	comp=Z,2.0nm,0.6s,baz=74,slow=7.3,SNR=23						
	comp=Z,2.0nm,0.6s						
RYN	Ryan	82.94	52	P	P	23 35 09.6	-1.2
LHV	Little Huntoon	83.07	52	P	P	23 35 11.8	+0.6
LHV				IAmb	IAmb	23 35 54.8	
	comp=Z,8.3nm,1.2s						
NVAR	Mina Array Bea	83.16	52	P	P	23 35 12.9	+0.9
NVAR	Mina Array Bea	83.16	52	P	P	23 35 12.8	+0.8
	comp=Z,3.6nm,0.6s,baz=268,slow=5.9,SNR=19						
NVAR				pP	pwP	23 35 53.1	+1.0
	comp=Z,2.5nm,0.8s,baz=272,slow=5.5,SNR=4.3						
	comp=Z,3.6nm,0.6s						
NV11	Mina Array Sit	83.27	52	P	P	23 35 12.3	-0.2
DSP	Deep Springs	83.74	53	P	P	23 35 15.4	+0.8
MZP	Montezuma Peak	84.08	52	P	P	23 35 17.1	+0.3
TPH	Tonopah	84.08	52	P	P	23 35 17.1	+0.4
HLID	Hailey	84.30	46	P	P	23 35 17.9	+0.3
POIN	Pond Inlet	84.59	12	P	P	23 35 18.1	-0.2
POIN				IAmb	IAmb	23 35 18.8	
	comp=Z,10nm,1.4s						
ELK	Elko	84.67	49		P	23 35 20.1	+0.5
DLMT	Dillon	84.89	44	IAmb	IAmb	23 36 03.9	
	comp=Z,9.6nm,1.4s						
BLKN	Baker Lake	84.99	23	P	P	23 35 19.8	-0.6
QSM	Queen of Sheba	85.03	54	P	P	23 35 21.5	+0.2
GWY	Greenwater Val	85.11	54		P	23 35 22.2	+0.4
TPNV	Topopah Spring	85.18	53		P	23 35 22.5	+0.4
R11B	Troy Canyon, C	85.21	51		P	23 35 22.8	+0.5
BOZ	Bozeman (W)	85.44	43	P	P	23 35 23.7	+0.5
BOZ				IAmb	IAmb	23 36 05.4	
	comp=Z,6.5nm,0.9s						
YHL	Hebgen Lake	86.01	44		P	23 35 27.4	+1.1
ILON	Igloolik, Nuna	86.17	15	P	P	23 35 25.4	-0.7
ILON				IAmb	IAmb	23 35 25.7	
	comp=Z,12nm,1.5s						
PSUT	Pine Spring	86.43	51		P	23 35 29.0	+0.7
PSUT				IAmb	IAmb	23 35 29.5	
	comp=Z,5.2nm,0.7s						
FXWY	Fox Creek	86.57	45	P	P	23 35 29.7	+0.7
DUG	Dugway, Tooele	86.59	49	IAmb	IAmb	23 35 30.2	
	comp=Z,4.7nm,0.7s						
GCMT	Greycliff	86.64	43	P	P	23 35 26.4	-2.8
TPAW	Teton Pass	86.67	45		P	23 35 30.4	+0.8
HWUT	Hardware Ranch	86.96	47		P	23 35 31.3	+0.5
HWUT				IAmb	IAmb	23 36 13.6	
	comp=Z,9.7nm,1.1s						
RLMT	Red Lodge	87.16	43	P	P	23 35 32.8	+1.0
RLMT				IAmb	IAmb	23 36 14.7	
	comp=Z,18nm,1.4s						
FFC	Flin Flon	87.24	33		P	23 35 31.7	0.0
FFC				IAmb	IAmb	23 36 13.3	
	comp=Z,10nm,0.9s						
FIA1	FINESS Array S	87.26	335	P	P	23 35 28.9	-2.6
FINES	FINESS Array B	87.26	335	P	P	23 35 28.8	-2.8
	comp=Z,2.9nm,0.4s,baz=60,slow=4.6,SNR=55						
	comp=Z,2.9nm,0.4s						
LCMT	Little Creek M	87.42	52	P	P	23 35 33.7	+0.6
KNB	Kanab	87.73	52		P	23 35 35.0	+0.3
KNB				IAmb	IAmb	23 36 18.2	
	comp=Z,13nm,1.1s						
PD31	Pinedale Array	87.89	46	P	P	23 35 35.8	+0.4
PDAR	Pinedale Array	87.89	46	P	P	23 35 35.0	-0.3
	comp=Z,0.5nm,0.3s,baz=236,slow=1.5,SNR=12						
PDAR				pP	pwP	23 36 16.1	+0.3
	comp=Z,0.6nm,0.8s,baz=63,slow=4.0,SNR=3.0						
	comp=Z,0.5nm,0.3s						
TMUT	Trail Mountain	88.07	49	P	P	23 35 37.0	+0.7
Q16A	Castle Valley	88.24	50	P	P	23 35 37.7	+0.7
Q16A				IAmb	IAmb	23 35 38.5	
	comp=Z,5.1nm,0.7s						
U15A	North Rim	88.34	52	P	P	23 35 38.4	+0.7
U15A				IAmb	IAmb	23 35 39.2	
	comp=Z,3.9nm,0.7s						
SRU	San Rafael Swe	88.64	49	IAmb	IAmb	23 35 39.7	
	comp=Z,6.6nm,0.7s						
Y14A	Wickenburg	88.70	55	IAmb	IAmb	23 35 40.4	
	comp=Z,5.2nm,0.5s						
RDMU	Red Mountain	88.75	48	IAmb	IAmb	23 36 22.3	
	comp=Z,10nm,1.2s						
HMU	Henry Mountain	88.92	50	IAmb	IAmb	23 36 22.3	
	comp=Z,4.8nm,0.8s						
WUAZ	Wupatki	89.37	53		P	23 35 43.3	+1.0
WUAZ				IAmb	IAmb	23 35 44.1	
	comp=Z,6.5nm,0.9s						
X16A	Lo Mia Camp, P	89.73	54	P	P	23 35 45.2	+1.1
PV21	Cone Mtn., Par	89.96	49	P	P	23 35 45.5	+0.4
PV21				IAmb	IAmb	23 36 27.3	
	comp=Z,8.5nm,0.8s						
PV23	Carpenter Ridg	89.98	49	P	P	23 35 45.6	+0.3
PV10	Paradox Valley	89.99	49	P	P	23 35 45.5	+0.2
PV14	Lion Creek, Pa	90.00	49	P	P	23 35 44.6	-0.8
PV05	Paradox Valley	90.06	50	IAmb	IAmb	23 36 27.9	
	comp=Z,8.1nm,1.0s						
PV04	Paradox Valley	90.08	49	P	P	23 35 45.8	+0.2
PV04				IAmb	IAmb	23 36 28.5	
	comp=Z,11nm,1.0s						
PV16	Nyswonger Mesa	90.11	49	IAmb	IAmb	23 36 28.0	
	comp=Z,10nm,0.9s						
PV03	Paradox Valley	90.18	49	IAmb	IAmb	23 36 28.1	
	comp=Z,8.9nm,1.0s						
PV13	Radium Mtn., P	90.23	50	IAmb	IAmb	23 36 28.9	
	comp=Z,6.6nm,0.8s						
PV01	Paradox Valley	90.42	49	IAmb	IAmb	23 35 48.0	
	comp=Z,6.8nm,0.7s						
NACGM	Naroch	90.64	330	⇓*i*P	P	23 35 46.1	-1.5
	comp=Z,6.0nm,0.8s,baz=56						
PABE	Paberze	91.62	331	P	P	23 35 50.7	-1.3
ULM	Lac du Bonnet	92.74	35	P	P	23 35 56.4	-1.0
	comp=Z,2.3nm,0.7s,baz=309,slow=8.1,SNR=5.1						
ULM				pP	pwP	23 36 37.6	-0.3
	comp=Z,3.2nm,0.9s,baz=282,slow=4.8,SNR=4.1						
	comp=Z,2.3nm,0.7s						
HFS	Hagfors	92.76	338	P	P	23 35 53.8	-3.5
	comp=Z,1.4nm,0.5s,baz=72,slow=4.8,SNR=17						
NB2	NORSAR Subarra	92.94	340	P	P	23 35 54.7	-3.5
	comp=Z,0.4nm,0.5s,baz=45,slow=5.1						
NOA	NORSAR Array B	92.94	340	P	P	23 35 55.7	-2.5
	comp=Z,0.3nm,0.6s,baz=46,slow=4.6,SNR=3.7						
	comp=Z,0.3nm,0.6s						
BRTR	Keskin Array B	94.49	314	P	P	23 36 04.0	-1.9
	comp=Z,0.5nm,0.7s,baz=39,slow=6.3,SNR=3.9						
	comp=Z,0.5nm,0.7s						
SNAA	Sanae	123.66	191	PKP	PKPdf	23 41 39.6	-1.8
	comp=Z,0.4nm,0.7s,baz=253,slow=4.9,SNR=6.9						
PLCA	Paso Flores	141.63	133	PKhKP	PKPpre	23 42 09.8	
	comp=Z,1.4nm,0.5s,baz=233,slow=3.0,SNR=13						
LPAZ	La Paz	147.45	92	PKPbc	PKPdf	23 42 27.1	-0.4
	comp=Z,3.4nm,0.6s,baz=264,slow=2.8,SNR=19						

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*IDC **23** 23:29:22.4±0.8, 27°.35N×143°.25E, h0^{km}, mb4.1/19, mbtmp4.0/21, ML3.5/2, MS2.9/5, Error ellipse: s-maj=21.2km s-min=15.4km az=95.0*

*JMA **23** 23:29:29.5±0.1, 27°.4N±0°.6×142°.9E±0°.8, h82^{km}, MD4.0/18, MV4.0/18, NEAR CHICHIJIMA ISLAND*

ISC 23 23:29:26.8±0.7, 27°.42N±0°.06×143°.14E±0°.08, h27^{km}, n38, σ1^{s}72/42, mb4.0/19, MS3.0/3, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	0.91	250	P	Pb	23 29 45.4	+1.4
CBIJ				S	Sn	23 29 57.2	+1.2
CBIJ	Chichi jima	0.91	250	A	A	23 29 45.4	
	comp=N,24nm,1.0s,comp=E,18nm,0.9s						
JCJ	Chichijima	0.91	250	Pn	Pb	23 29 44.0	0.0
	baz=0.0,slow=0.0						
JCJ				Sn	Sb	23 29 55.2	-0.4
	baz=180,slow=0.0						
JHH2	Haha-jima-NKT2	1.16	228	P	Pb	23 29 48.5	+0.2
JHH2				S	Sb	23 30 02.8	-0.2
JHH2	Haha-jima-NKT2	1.16	228	A	A	23 29 48.5	
	comp=N,8.0nm,0.4s,comp=E,10.0nm,0.4s						
JHJ2	Mitsune	6.36	334	*e*S	Sn	23 32 09.3	-1.2
BSO1	Boso 1	7.45	346	*e*P	Pn	23 31 14.3	+1.0
BSO1				*e*S	Sn	23 32 35.4	-1.2
BSO3	Boso 3	7.70	344	*e*P	Pn	23 31 19.0	+2.0
BSO3				*e*S	Sn	23 32 44.7	+1.6
BSO4	Boso 4	7.92	343	*e*P	Pn	23 31 22.5	+2.3
BSO4				*e*S	Sn	23 32 50.5	+1.7
JRY	Ryogami san	9.30	338	*e*P	Pn	23 31 41.3	+2.1
JHO	Hitachi	9.42	347	*e*P	Pn	23 31 41.2	+0.4
JHO				*e*S	Sn	23 33 20.3	-5.6
JAG	Ashikaga	9.51	342	*e*P	Pn	23 31 42.5	+0.5
MJAR	Matsushiro Arr	10.01	337	Pn	Pn	23 31 50.0	+1.1
	comp=E,0.3nm,0.3s,baz=162,slow=12,SNR=9.1						
MJAR				Sn	Sn	23 33 33.6	-6.7
	comp=E,0.2nm,0.3s,baz=156,slow=19,SNR=5.2						
MJAR				LR	LR	23 35 37.5	
	comp=E,40nm,19.5s,baz=182,slow=37						
	comp=E,1.3nm,0.3s						
JNU	Nakatsue	12.02	301	LR	LR	23 36 28.5	
	comp=E,75nm,21.9s,baz=90,slow=35						
KSRS	Korea Array	16.26	312	Pn	P	23 33 17.3	+1.1
	comp=E,0.3nm,0.3s,baz=116,slow=11,SNR=5.9						
USRK	Ussuriysk Ar.	19.00	335	P	Pn	23 33 47.0	-0.2
	comp=E,0.2nm,0.3s,baz=153,slow=13,SNR=8.1						
	comp=E,4.6nm,0.8s						
DAV	Davao City (W)	26.21	223	LR	LR	23 43 40.6	
	comp=E,24nm,21.8s,baz=332,slow=33						
SONM	Songino Array	35.08	315	P	P	23 36 18.5	+0.8
	comp=E,1.1nm,0.7s,baz=112,slow=8.1,SNR=5.3						
	comp=E,1.1nm,0.7s						
CMAR	Chiang Mai Arr	41.49	267	P	P	23 37 11.6	-0.3
	comp=E,0.9nm,0.4s,baz=55,slow=8.0,SNR=7.7						
CMAR				LR	LR	23 53 06.8	
	comp=E,21nm,21.5s,baz=115,slow=34						
	comp=E,0.9nm,0.4s						
WRA	Warramunga Arr	47.84	191	P	P	23 38 01.8	-0.7
	comp=E,4.5nm,0.8s,baz=11,slow=8.3,SNR=18						
	comp=E,4.5nm,0.8s						
FITZ	Fitzroy Crossi	48.32	203	P	P	23 38 05.7	-0.4
	comp=E,3.7nm,0.8s,baz=26,slow=7.4,SNR=2.8						
	comp=E,3.7nm,0.8s						
ZALV	Zalesovo Beam	49.80	319	P	P	23 38 18.1	+1.0
	comp=E,0.9nm,0.6s,baz=97,slow=7.6,SNR=5.4						
ZALV				PcP	PcP	23 39 37.5	-0.1
	comp=E,1.1nm,0.6s,baz=108,slow=4.8,SNR=3.7						
	comp=E,0.9nm,0.6s						
MKAR	Makanchi Array	50.93	309	P	P	23 38 26.1	+0.3
	comp=E,0.7nm,0.7s,baz=91,slow=9.3,SNR=7.5						
	comp=E,0.7nm,0.7s						
ASAR	Alice Springs	51.56	191	P	P	23 38 29.8	-1.0
	comp=E,0.7nm,0.5s,baz=7.2,slow=8.2,SNR=8.1						
	comp=E,0.7nm,0.5s						
KURBB	Kurchatov Arra	53.42	314	P	P	23 38 44.8	+0.5
	comp=E,4.2nm,0.5s,baz=91,slow=7.8,SNR=84						
	comp=E,4.2nm,0.5s						
KDAK	Kodiak Island	53.60	37	LR	LR	00 01 59.3	
	comp=E,22nm,19.0s,baz=219,slow=36						
ILAR	Eielson Array	57.02	29	P	P	23 39 09.3	-0.6
	comp=E,0.4nm,0.9s,baz=275,slow=6.9,SNR=4.2						
	comp=E,0.4nm,0.9s						
BVAR	Borovoye Array	58.38	317	P	P	23 39 20.6	+0.8
	comp=E,3.7nm,0.7s,baz=92,slow=7.6,SNR=21						
	comp=E,3.7nm,0.7s						
YKA	Yellowknife Ar	71.45	29	P	P	23 40 44.7	+0.1
	comp=E,0.4nm,0.7s,baz=298,slow=5.0,SNR=4.1						
	comp=E,0.4nm,0.7s						
ARCES	ARCESS Array B	73.52	341	P	P	23 40 58.3	+1.5
	comp=E,2.0nm,0.9s,baz=56,slow=5.6,SNR=3.8						
	comp=E,2.0nm,0.9s						
FINES	FINESS Array B	78.03	334	P	P	23 41 23.1	+0.5
	comp=E,1.1nm,0.4s,baz=78,slow=5.2,SNR=13						
	comp=E,1.1nm,0.4s						
KBZ	Khabaz	78.41	313	P	P	23 41 25.9	+0.8
	comp=E,5.4nm,0.8s,baz=99,slow=3.2,SNR=14						
	comp=E,5.4nm,0.8s						
AKASG	Malin Array Be	82.86	324	P	P	23 41 48.4	-0.4
	comp=E,0.7nm,0.4s,baz=53,slow=5.4,SNR=8.4						
	comp=E,0.7nm,0.4s						
HFS	Hagfors	83.46	337	P	P	23 41 51.8	0.0
	comp=E,1.1nm,0.6s,baz=47,slow=5.0,SNR=5.7						
	comp=E,1.1nm,0.6s						
NOA	NORSAR Array B	83.62	339	P	P	23 41 52.7	0.0
	comp=E,0.6nm,0.7s,baz=45,slow=5.0,SNR=3.9						
	comp=E,0.6nm,0.7s						
BRTR	Keskin Array B	86.40	313	P	P	23 42 07.0	-0.1
	comp=E,0.7nm,0.8s,baz=60,slow=3.0,SNR=5.4						
	comp=E,0.7nm,0.8s						
GERES	GERESS Array B	91.67	329	P	P	23 42 31.1	-0.7
	comp=E,0.4nm,0.6s,baz=33,slow=5.8,SNR=3.3						
	comp=E,0.4nm,0.6s						
LPAZ	La Paz	149.02	76	PKPbc	PKiKP	23 49 14.2	-1.0
	comp=E,1.0nm,0.7s,baz=228,slow=1.8,SNR=5.6						

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*IDC **23** 23:34:57.1±0.7, 28°.37N×104°.85E, h0^{km}, mb3.9/19, mbtmp3.9/20, ML4.3/1, MS3.2/10, Error ellipse: s-maj=23.1km s-min=14.7km az=49.0*

*NEIC **23** 23:35:08.6±1.5, 29°.9N±0°.1×105°.1E±0°.1, h10^{km}±1^{km}, mb4.6/117, Error ellipse: s-maj=23.2km s-min=15.4km az=132.0*

ISC 23 23:35:00.8±0.4, 28°.50N±0°.04×104°.91E±0°.05, h19^{km}, n356, σ0^{s}88/337, mb4.5/80, MS3.1/9, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CD2	Chengdu	2.60	338	Pn	Pn	23 35 43.8	+1.9
CD2				Pg	Pg	23 35 50.3	-0.4
CD2				Sn	Sb	23 36 17.1	-1.3
CD2				Sg	Sg	23 36 24.3	-0.1
CD2				smax	smax		
	comp=N,3µm,0.7s						
CD2				smax	smax		
	comp=E,5µm,0.9s						
KMI	Kunming	3.88	210	Pn	Pn	23 36 01.9	+2.2
KMI				Pg	Pb	23 36 10.8	+2.0
KMI				Sg	Sb	23 36 58.4	+2.9
KMI				smax	smax		
	comp=N,71nm,0.9s						
KMI				smax	smax		
	comp=E,96nm,0.8s						
KMI				LR	LR		
	comp=N,820nm,4.8s						
KMI				LR	LR		
	comp=E,730nm,4.0s						
KMI				LR	LR		
	comp=Z,1µm,7.2s						
ENH	Enshi	4.37	65		Pn	23 36 07.5	+1.3
TNCH	TengChong	6.67	240	Pn	Pn	23 36 37.4	-0.6
TNCH				Pg	Pg	23 37 06.3	-2.3
TNCH				Sg	Sg	23 38 30.1	-4.9
TNCH				smax	smax		
	comp=N,220nm,1.4s						
TNCH				smax	smax		
	comp=E,120nm,1.6s						
TNCH				LR	LR		
	comp=N,300nm,1.9s						
TNCH				LR	LR		
	comp=E,380nm,2.5s						
TNCH				LR	LR		
	comp=Z,180nm,5.7s						
CNSH	ChangSha	7.08	91	P	Pn	23 36 42.8	-0.6
CNSH				S	Sn	23 38 00.8	-2.5
CNSH				smax	smax		
	comp=N,170nm,1.0s						
CNSH				smax	smax		
	comp=E,120nm,0.8s						
SLVN	Son La	7.20	187		Pg	23 37 13.4	-5.1
WHN	Wuhan	8.47	74	P	Pn	23 37 04.3	+1.8
WHN				S	Sn	23 38 37.9	+0.2
WHN				LR	LR		
	comp=N,1µm,4.7s						
WHN				LR	LR		
	comp=E,2µm,8.7s						
WHN				LR	LR		
	comp=Z,2µm,8.3s						
CMAR	Chiang Mai Arr	11.39	210	Pn	Pn	23 37 43.8	+1.1
	comp=Z,0.6nm,0.3s,baz=26,slow=14,SNR=14						
CMAR				LR	LR	23 42 27.0	
	comp=Z,148nm,18.5s,baz=25,slow=40						
GTA	Gaotai	11.67	340	*e*P	Pn	23 37 49.3	+2.9
GTA				sP		23 37 58.3	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				LR	LR		
	comp=N,410nm,12.0s						
GTA				LR	LR		
	comp=E,720nm,14.5s						
GTA				LR	LR		
	comp=Z,250nm,9.8s						
HNS	HongShan	12.09	40	⇓Pn	Pn	23 37 50.5	-1.6
HNS				Sn	Sn	23 40 02.6	-3.8
HNS				LR	LR		
	comp=N,330nm,13.5s						
HNS				LR	LR		
	comp=E,390nm,13.1s						
HNS				LR	LR		
	comp=Z,190nm,14.3s						
NJ2	Nanjing	12.56	70	*e*P	Pn	23 37 56.0	-2.5
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
NJ2				LR	LR		
	comp=N,820nm,11.1s						
NJ2				LR	LR		
	comp=E,210nm,10.2s						
NJ2				LR	LR		
	comp=Z,320nm,9.1s						
SONM	Songino Array	19.34	3	P	Pn	23 39 25.6	-0.6
SONM	Songino Array	19.34	3	P	Pn	23 39 26.5	+0.3
	comp=Z,1.0nm,0.3s,baz=184,slow=11,SNR=13						
SONM				LR	LR	23 47 52.1	
	comp=Z,83nm,21.6s,baz=138,slow=40						
	comp=Z,1.8nm,0.4s						
ULN	Ulaanbaatar	19.40	4		P	23 39 24.9	-0.9
WMQ	Urumqi	20.60	322	*e*P	P	23 39 39.1	+0.3
WMQ				LR	LR		
	comp=N,210nm,16.9s						
KSRS	Korea Array	21.23	59	P	P	23 39 46.0	+0.4
	comp=N,2.1nm,0.5s,baz=243,slow=10.0,SNR=14						
	comp=N,2.1nm,0.5s						
JNU	Nakatsue	22.75	72	LR	LR	23 48 19.2	
	comp=N,65nm,21.2s,baz=239,slow=35						
MKAR	Makanchi Array	25.43	322		P	23 40 28.0	+0.8
MKAR	Makanchi Array	25.43	322	P	P	23 40 27.8	+0.6
	comp=N,1.3nm,0.5s,baz=127,slow=9.9,SNR=13						
	comp=N,1.3nm,0.5s						
MAKZ	Makanchi	25.61	322	P	P	23 40 29.1	+0.3
KDJ	Kajisay	26.26	309	P	P	23 40 35.5	+0.5
KSH	Kashi	26.27	302	P	P	23 40 39.1	+4.0
KSH				pmax	pmax		
	comp=Z,2.0nm,0.9s						
USRK	Ussuriysk Ar.	26.69	47	P	P	23 40 39.1	+0.4
	comp=Z,5.7nm,0.6s,baz=252,slow=8.5,SNR=14						
	comp=Z,5.7nm,0.6s						
AAK	Ala-Archa	28.30	308	LR	LR	23 53 26.5	
	comp=Z,52nm,18.8s,baz=109,slow=39						
MJAR	Matsushiro Arr	29.09	65	LR	LR	23 52 38.2	
	comp=Z,34nm,19.1s,baz=224,slow=36						
KLR	Kul'dur	29.16	37	LR	LR	23 54 14.4	
	comp=Z,45nm,18.0s,baz=220,slow=40						
ZALV	Zalesovo Beam	29.37	336	P	P	23 41 03.0	+0.6
ZALV	Zalesovo Beam	29.37	336	P	P	23 41 02.7	+0.3
	comp=Z,1.5nm,0.5s,baz=139,slow=9.7,SNR=7.5						
ZALV				LR	LR	23 54 02.7	
	comp=Z,27nm,20.5s,baz=119,slow=39						
	comp=Z,1.5nm,0.5s						
KURBB	Kurchatov Arra	29.75	325	P	P	23 41 06.0	+0.2
	comp=Z,1.5nm,0.5s,baz=130,slow=9.8,SNR=16						
KURBB				PcP	PcP	23 44 08.7	-0.6
	comp=Z,0.3nm,0.5s,baz=111,slow=3.2,SNR=2.1						
	comp=Z,1.5nm,0.5s						
KURK	Kurchatov	29.76	325	P	P	23 41 06.2	+0.2
KKAR	Karatay Array	31.23	307	P	P	23 41 18.1	-1.0
BVAR	Borovoye Array	35.28	324	P	P	23 41 54.6	+0.4
	comp=Z,0.6nm,0.5s,baz=124,slow=9.2,SNR=4.5						
	comp=Z,0.6nm,0.5s						
YAK	Yakutsk	37.31	19	LR	LR	23 58 48.0	
	comp=Z,47nm,20.6s,baz=80,slow=38						
AB31	Akbulak array	39.95	314		P	23 42 33.9	+0.2
ABKAR	Akbulak array	39.95	314		P	23 42 33.8	+0.1
ARTI	Arti	43.00	324	LR	LR	00 01 32.5	
	comp=Z,24nm,20.6s,baz=120,slow=37						
TIXI	Tiksi	45.17	10		P	23 43 15.7	-0.2
TIXI				IAmb	IAmb	23 43 16.3	
	comp=Z,8.2nm,0.6s						
TIXI	Tiksi	45.17	10	LR	LR	00 03 40.7	
	comp=Z,55nm,18.4s,baz=201,slow=38						
WRA	Warramunga Arr	55.93	146	P	P	23 44 36.7	-1.1
	comp=Z,1.9nm,0.7s,baz=337,slow=8.2,SNR=12						
	comp=Z,1.9nm,0.7s						
BRTR	Keskin Array B	58.66	301	P	P	23 44 56.8	-0.3
	comp=Z,0.4nm,0.6s,baz=86,slow=7.4,SNR=4.3						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	58.91	149	P	P	23 44 58.1	-0.7
	comp=Z,0.8nm,0.5s,baz=335,slow=6.4,SNR=8.9						
	comp=Z,0.8nm,0.5s						
AKASG	Malin Array Be	59.68	314	P	P	23 45 03.3	-0.5
	comp=Z,0.4nm,0.5s,baz=71,slow=7.1,SNR=6.6						
	comp=Z,0.4nm,0.5s						
ARCES	ARCESS Array B	59.91	336	P	P	23 45 05.2	+0.1
	comp=Z,0.7nm,0.5s,baz=72,slow=7.8,SNR=12						
	comp=Z,0.7nm,0.5s						
FINES	FINESS Array B	60.12	327	P	P	23 45 06.6	0.0
	comp=Z,0.7nm,0.5s,baz=94,slow=7.1,SNR=6.2						
	comp=Z,0.7nm,0.5s						
GAMB	Gambell	61.95	30	P	P	23 45 18.2	-0.8
	baz=278						
SPITS	Spitsbergen Ar	62.02	347	P	P	23 45 19.8	+0.5
	comp=Z,0.8nm,0.5s,baz=89,slow=6.3,SNR=1.5						
	comp=Z,0.8nm,0.5s						
TNA	Tin City	63.27	28	P	P	23 45 26.8	-1.0
	baz=281						
C16K	Lisburne Hills	63.77	25	P	P	23 45 30.5	-0.6
	baz=282						
SPIA	Saint Paul Isl	63.82	37	P	P	23 45 31.9	+0.3
	baz=283						
F14K	Arctic Creek	63.94	28	P	P	23 45 31.8	-0.4
	baz=282						
P08K	Saint George I	64.32	38	P	P	23 45 35.2	+0.3
	baz=284						
C17K	DeLong Mountai	64.51	24	P	P	23 45 35.2	-0.8
	baz=284						
F15K	North Star Dit	64.57	27	P	P	23 45 36.3	-0.1
	baz=284						
D17K	Noatak River	64.72	25	P	P	23 45 37.2	-0.1
	baz=284						
B18K	Kokolik River	64.79	23	P	P	23 45 37.8	+0.1
	baz=284,SNR=8.8						
A19K	Wainwright	64.83	22	P	P	23 45 37.8	-0.1
	baz=284						
G15K	Niukluk	64.99	28	P	P	23 45 38.9	-0.2
	baz=284						
C18K	Utukok River	65.18	24	P	P	23 45 40.9	+0.5
C18K				IAmb	IAmb	23 45 44.1	
	comp=Z,3.3nm,0.9s						
C18K	Utukok River	65.18	24	P	P	23 45 40.1	-0.3
	baz=285						
E17K	Hotham Inlet	65.34	25	P	P	23 45 41.4	0.0
	baz=285						
K13K	Kusilvak Mount	65.47	31	P	P	23 45 43.5	+1.2
K13K				IAmb	IAmb	23 45 44.1	
	comp=Z,5.5nm,0.8s						
K13K	Kusilvak Mount	65.47	31	P	P	23 45 42.7	+0.4
	baz=285						
G16K	Koyuk River	65.58	27	P	P	23 45 42.7	-0.2
	baz=286						
NIKH	Nikolski High	65.61	42	P	P	23 45 43.5	+0.2
	baz=286						
C19K	Lookout Ridge	65.62	23	P	P	23 45 44.1	+0.9
C19K	Lookout Ridge	65.62	23	P	P	23 45 43.4	+0.2
	baz=286,SNR=13						
E18K	Tukpahlearik C	65.71	25	P	P	23 45 44.3	+0.6
E18K				IAmb	IAmb	23 46 17.4	
	comp=Z,4.3nm,1.0s						
E18K	Tukpahlearik C	65.71	25	P	P	23 45 44.4	+0.6
	baz=286						
F17K	Baldwin Pennin	65.73	26	P	P	23 45 43.9	0.0
	baz=286						
J14K	Nanvaranak Lak	65.76	30	P	P	23 45 44.9	+0.8
J14K				IAmb	IAmb	23 45 45.7	

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      comp=Z,7.7nm,1.2s
J14K  Nanvaranak Lak   65.76  30  P     P     23 45 44.1  0.0
      baz=286
B20K  Meade River      66.17  22        P     23 45 47.6 +0.9
B20K  Meade River      66.17  22  P     P     23 45 46.3 -0.4
      baz=288,SNR=12
G17K  Kiwalik Mounta   66.23  27  P     P     23 45 47.1 -0.1
      baz=287
F18K  Selawik          66.31  26  P     P     23 45 47.7 +0.2
      baz=288
D19K  Kuna River       66.31  24  P     P     23 45 48.3 +0.6
D19K  Kuna River       66.31  24  P     P     23 45 47.8 +0.2
      baz=288,SNR=7.7
HFS   Hagfors          66.32 327  P     P     23 45 47.6 -0.2
      comp=Z,0.5nm,0.3s,baz=80,slow=6.9,SNR=8.8
      comp=Z,0.5nm,0.3s
M13K  Dall Lake        66.49  33  P     P     23 45 49.4 +0.6
      baz=287
L14K  Kuka Creek       66.54  32  P     P     23 45 49.5 +0.4
      baz=287
A22K  Sinclair Lake    66.55  21  P     P     23 45 49.3 +0.2
      baz=290
I17K  Unalakleet       66.68  29  P     P     23 45 51.3 +1.3
H17K  Granite Mounta   66.69  28  P     P     23 45 51.0 +0.9
H17K                              IAmb  IAmb  23 45 51.2
      comp=Z,3.7nm,0.6s
H17K  Granite Mounta   66.69  28  P     P     23 45 50.2 +0.1
      baz=288
D20K  Etivluk River    66.76  23        P     23 45 51.3 +0.8
D20K  Etivluk River    66.76  23  P     P     23 45 51.0 +0.5
      baz=289,SNR=14
K15K  Wolf Creek Mou   66.79  31  P     P     23 45 52.1 +1.4
K15K                              IAmb  IAmb  23 46 23.5
      comp=Z,8.4nm,1.2s
K15K  Wolf Creek Mou   66.79  31  P     P     23 45 51.8 +1.1
      baz=288
J16K  Anvik River      66.90  29  P     P     23 45 53.0 +1.6
J16K                              IAmb  IAmb  23 45 53.2
      comp=Z,3.1nm,0.8s
J16K  Anvik River      66.90  29  P     P     23 45 51.8 +0.3
      baz=288
G18K  Tagagawik        66.90  26  P     P     23 45 51.6 +0.2
G18K                              IAmb  IAmb  23 45 53.8
      comp=Z,7.8nm,1.5s
G18K  Tagagawik        66.90  26  P     P     23 45 51.5 +0.1
      baz=289
F19K  Shaleruckik Mo   66.94  25  P     P     23 45 51.6 -0.1
      baz=289
E19K  Redstone River   66.95  25  P     P     23 45 52.4 +0.7
E19K                              IAmb  IAmb  23 45 52.8
      comp=Z,2.6nm,0.7s
E19K  Redstone River   66.95  25  P     P     23 45 51.8 +0.1
      baz=289
M14K  Bethel           67.05  32  P     P     23 45 53.9 +1.5
M14K  Bethel           67.05  32  P     P     23 45 53.1 +0.7
      baz=288
E20K  Nigu River       67.06  24  P     P     23 45 52.5  0.0
      baz=290
B21K  Ikpikpuk River   67.14  22  P     P     23 45 53.1 +0.3
      baz=290,SNR=6.5
NB2   NORSAR Subarra   67.22 328  P     P     23 45 52.1 -1.5
      comp=Z,0.2nm,0.4s,baz=72,slow=6.5
NOA   NORSAR Array B   67.22 328  P     P     23 45 52.4 -1.2
      comp=Z,0.4nm,0.6s,baz=76,slow=5.3,SNR=5.0
      comp=Z,0.4nm,0.6s
C21K  Knifeblade Rid   67.24  22  P     P     23 45 53.8 +0.3
      baz=291
H18K  Honhosa River    67.25  27  P     P     23 45 54.1 +0.4
H18K  Honhosa River    67.25  27  P     P     23 45 53.9 +0.2
      baz=289
B22K  Teshekpuk Lake   67.27  21  P     P     23 45 54.3 +0.7
B22K  Teshekpuk Lake   67.27  21  P     P     23 45 54.0 +0.4
      baz=291
NC204 NORSAR Array S   67.36 329  P     P     23 45 54.4 -0.1
NC204                             IAmb  IAmb  23 46 05.4
      comp=Z,6.5nm,1.1s
G19K  Purcell Mounta   67.43  26  P     P     23 45 55.4 +0.7
      baz=290
N14K  Kuskokwak Cree   67.43  33  P     P     23 45 56.1 +1.2
N14K  Kuskokwak Cree   67.43  33  P     P     23 45 55.4 +0.5
      baz=289
J17K  VABM Dome        67.52  29  P     P     23 45 56.4 +1.1
J17K                              IAmb  IAmb  23 45 56.9
      comp=Z,3.5nm,0.7s
J17K  VABM Dome        67.52  29  P     P     23 45 55.7 +0.4
      baz=289
F20K  Avaraart Lake    67.64  25  P     P     23 45 56.6 +0.6
F20K                              IAmb  IAmb  23 45 56.9
      comp=Z,2.2nm,0.6s
F20K  Avaraart Lake    67.64  25  P     P     23 45 56.2 +0.2
      baz=291
M15K  Kasigluk River   67.66  32  P     P     23 45 56.9 +0.6
      baz=289
E21K  Killik River     67.77  23  P     P     23 45 56.7 -0.2
      baz=292
O14K  Tigyukauivet M   67.85  34  P     P     23 45 57.7 +0.3
      baz=289
H19K  Roundabout Mou   67.89  26  IAmb  IAmb  23 45 59.1
      comp=Z,9.4nm,1.3s
H19K  Roundabout Mou   67.89  26  P     P     23 45 57.9 +0.3
      baz=291
L16K  Owhat River      67.89  31  P     P     23 45 58.5 +0.8
      baz=290
D22K  Ayikyak River    68.05  22  IAmb  IAmb  23 46 00.1
      comp=Z,5.5nm,1.1s
D22K  Ayikyak River    68.05  22  P     P     23 45 59.2 +0.5
      baz=292
K17K  Iditarod         68.08  30  P     P     23 45 59.5 +0.6
      baz=290
N15K  Kwethluk River   68.11  32  P     P     23 46 00.7 +1.5
N15K  Kwethluk River   68.11  32  P     P     23 45 59.6 +0.4
      baz=290
L17K  Donlin           68.28  30  P     P     23 46 00.9 +0.7
      baz=290
C23K  Itkillik River   68.35  21  P     P     23 46 00.9 +0.5
      baz=294,SNR=5.3
M16K  Timber Creek     68.36  31  P     P     23 46 01.2 +0.6
      baz=290
F21K  Alatna River     68.39  24  P     P     23 46 01.4 +0.6
      baz=292
J18K  Innoko River     68.50  29  IAmb  IAmb  23 46 02.7
      comp=Z,3.5nm,0.6s
J18K  Innoko River     68.50  29  P     P     23 46 01.3 -0.3
      baz=291
H20K  Anotleneega Mo   68.51  26  P     P     23 46 01.3 -0.3
      baz=292
O15K  Ungalikthiuk R   68.57  33  P     P     23 46 03.5 +1.4
O15K  Ungalikthiuk R   68.57  33  P     P     23 46 02.3 +0.3
      baz=290
S12K  Black Hills      68.59  37  P     P     23 46 02.3 +0.1
      baz=290
E22K  Anaktuvuk Pass   68.63  23  IAmb  IAmb  23 46 06.1
      comp=Z,8.0nm,1.4s
E22K  Anaktuvuk Pass   68.63  23  P     P     23 46 02.4 +0.1
      baz=294,SNR=5.4
N16K  Nishlik Lake     68.63  32  P     P     23 46 02.6 +0.1
      baz=291
G21K  Allakaket        68.65  25  IAmb  IAmb  23 46 03.3
      comp=Z,3.2nm,0.6s
G21K  Allakaket        68.65  25  P     P     23 46 02.0 -0.4
      baz=293
D23K  Nanushuk River   68.68  22  P     P     23 46 02.0 -0.5
      baz=294
F22K  John River       68.75  24  P     P     23 46 03.1 +0.1
      baz=294
IMAR  Indian Mountai   68.76  26  P     P     23 46 03.5 +0.4
J19K  Poorman          68.76  28  IAmb  IAmb  23 46 04.7
      comp=Z,6.6nm,1.1s
J19K  Poorman          68.76  28  P     P     23 46 04.1 +1.0
      baz=292
M17K  Holitna River    68.92  31  IAmb  IAmb  23 46 06.7
      comp=Z,6.0nm,0.8s
M17K  Holitna River    68.92  31  P     P     23 46 04.7 +0.6
      baz=292
L18K  Granite Mounta   68.95  30  P     P     23 46 05.3 +1.0
L18K                              IAmb  IAmb  23 46 13.0
      comp=Z,5.7nm,1.4s
L18K  Granite Mounta   68.95  30  P     P     23 46 04.7 +0.3
      baz=292
C24K  Franklin Bluff   69.00  21  P     P     23 46 05.0 +0.5
      baz=296
TOLK  Toolik Lake Re   69.18  22  P     P     23 46 06.5 +0.7
TOLK                              IAmb  IAmb  23 46 06.9
      comp=Z,2.7nm,0.7s
TOLK  Toolik Lake Re   69.18  22  P     P     23 46 06.1 +0.4
      baz=295
D24K  Happy Valley     69.21  22  P     P     23 46 06.6 +0.8
D24K                              IAmb  IAmb  23 46 06.9
      comp=Z,4.1nm,0.6s
D24K  Happy Valley     69.21  22  P     P     23 46 06.5 +0.6
      baz=296
G22K  Bettles          69.22  24  P     P     23 46 06.1 +0.2
      baz=294
H21K  Melozitna Rive   69.25  26  P     P     23 46 07.0 +0.9
H21K                              IAmb  IAmb  23 46 10.0
      comp=Z,1.9nm,0.8s
H21K  Melozitna Rive   69.25  26  P     P     23 46 06.7 +0.5
      baz=294
O16K  Kokwok River B   69.26  33  P     P     23 46 07.8 +1.5
O16K                              IAmb  IAmb  23 46 09.3
      comp=Z,6.2nm,1.1s
O16K  Kokwok River B   69.26  33  P     P     23 46 07.0 +0.8
      baz=292
J20K  Nowinta River    69.29  27  IAmb  IAmb  23 46 08.1
      comp=Z,2.9nm,0.6s
J20K  Nowinta River    69.29  27  P     P     23 46 07.3 +0.9
      baz=293
N17K  Nushagak Hills   69.34  32  P     P     23 46 08.0 +1.2
N17K                              IAmb  IAmb  23 46 41.8
      comp=Z,7.8nm,1.4s
N17K  Nushagak Hills   69.34  32  P     P     23 46 08.1 +1.2
      baz=292
E23K  Chandalar        69.41  23  P     P     23 46 07.7 +0.5
      baz=296
CLL   Collm            69.44 318  eP    P     23 46 11.0 +3.4
      comp=Z,3.0nm,0.8s
P16K  Nushagak River   69.51  33  P     P     23 46 08.9 +1.1
      baz=292
COLD  Coldfoot         69.56  24  P     P     23 46 08.1  0.0
      baz=295
SDPT  Sand Point       69.56  37  P     P     23 46 08.9 +0.7
      baz=291
M18K  Stony River      69.60  30  P     P     23 46 09.3 +0.9
      baz=293
K20K  Telida           69.64  28  P     P     23 46 09.2 +0.5
K20K  Telida           69.64  28  P     P     23 46 09.1 +0.5
      baz=294
O17K  Koliganek Bris   69.67  32  P     P     23 46 09.3 +0.5
      baz=292
H22K  Ishtalitna Cre   69.69  25  P     P     23 46 09.0 +0.1
      baz=295
S14K  Fog Glacier      69.72  36  P     P     23 46 10.0 +0.7
      baz=292
L19K  White Mountain   69.77  29  P     P     23 46 10.9 +1.5
L19K                              IAmb  IAmb  23 46 13.5
      comp=Z,3.2nm,0.8s
L19K  White Mountain   69.77  29  P     P     23 46 10.1 +0.6
      baz=293
E24K  Your Creek       69.79  23  P     P     23 46 09.6 +0.1
      baz=296,SNR=5.9
G23K  Bananza Creek    69.84  24  P     P     23 46 10.1 +0.3
G23K  Bananza Creek    69.84  24  P     P     23 46 10.2 +0.4
      baz=296
GERES GERESS Array B   69.87 315  P     P     23 46 09.6 -0.8
      comp=Z,0.4nm,0.5s,baz=76,slow=6.0,SNR=4.1
      comp=Z,0.4nm,0.5s
N18K  Kilae Creek      69.88  31  P     P     23 46 11.2 +1.0
N18K  Kilae Creek      69.88  31  P     P     23 46 10.7 +0.5
      baz=293
D25K  Kavik River      69.91  21  P     P     23 46 10.3  0.0
D25K                              IAmb  IAmb  23 46 13.9
      comp=Z,2.2nm,0.8s
D25K  Kavik River      69.91  21  P     P     23 46 10.2  0.0
      baz=298
L20K  Farewell, AK     70.07  29  P     P     23 46 11.9 +0.6
      baz=294
P17K  Kvichak River    70.19  33  P     P     23 46 12.9 +0.8
      baz=293
CNBA  Chernabura Isl   70.23  38  P     P     23 46 11.4 -0.9
F24K  Squaw Lake       70.24  23  P     P     23 46 13.0 +0.7
F24K  Squaw Lake       70.24  23  P     P     23 46 12.5 +0.2
      baz=297
Q16K  King Salmon      70.29  33  P     P     23 46 13.2 +0.6
      baz=293
MLY   Manley           70.29  26  IAmb  IAmb  23 46 14.1
      comp=Z,2.2nm,0.6s
MLY   Manley           70.29  26  P     P     23 46 12.7  0.0
      baz=296
H23K  Yukon River      70.40  25  IAmb  IAmb  23 46 15.7
      comp=Z,2.6nm,0.6s
H23K  Yukon River      70.40  25  P     P     23 46 13.4 +0.1
      baz=296
CAST  Castle Rocks     70.44  28  P     P     23 46 13.9 +0.4
      baz=295
N19K  Bonanza Creek    70.47  31  P     P     23 46 15.1 +1.2
N19K                              IAmb  IAmb  23 46 15.8
      comp=Z,4.1nm,0.7s
N19K  Bonanza Creek    70.47  31  P     P     23 46 14.3 +0.5
      baz=294
O18K  Koktuh Hills     70.52  32  P     P     23 46 15.4 +1.4
O18K  Koktuh Hills     70.52  32  P     P     23 46 14.7 +0.6
      baz=294
BPAW  Bear Paw Mtn.    70.59  27  IAmb  IAmb  23 46 16.4
      comp=Z,7.3nm,1.3s
BPAW  Bear Paw Mtn.    70.59  27  P     P     23 46 15.1 +0.6
      baz=296
C27K  Jago River       70.59  20  P     P     23 46 15.2 +0.8
C27K                              IAmb  IAmb  23 46 15.6
      comp=Z,5.2nm,0.9s
C27K  Jago River       70.59  20  P     P     23 46 14.6 +0.2
      baz=300
M20K  Styx River       70.63  29  P     P     23 46 15.6 +0.8
M20K                              IAmb  IAmb  23 46 16.8
      comp=Z,2.4nm,0.8s
M20K  Styx River       70.63  29  P     P     23 46 15.1 +0.3
      baz=295
P18K  Big Mountain,    70.69  32  P     P     23 46 15.6 +0.4
      baz=294
E25K  Arctic Village   70.74  22  P     P     23 46 16.0 +0.7
E25K  Arctic Village   70.74  22  P     P     23 46 15.2 -0.1
      baz=299
G24K  Hadweenzic Riv   70.76  24  P     P     23 46 16.5 +1.1
G24K                              IAmb  IAmb  23 46 17.3
      comp=Z,6.2nm,1.4s
G24K  Hadweenzic Riv   70.76  24  P     P     23 46 15.5 +0.1
      baz=298
I23K  Minto, Yukon-K   70.77  26  P     P     23 46 16.5 +1.1
I23K                              IAmb  IAmb  23 46 37.6
      comp=Z,4.3nm,1.3s
I23K  Minto, Yukon-K   70.77  26  P     P     23 46 15.3 -0.2
      baz=297
Q17K  Contact Creek    70.82  34  P     P     23 46 16.0  0.0
      baz=294
F25K  Christian Rive   70.97  22  P     P     23 46 17.6 +0.9
F25K  Christian Rive   70.97  22  P     P     23 46 16.8  0.0
      baz=299
H24K  Noodor Dome      71.01  25  P     P     23 46 17.5 +0.5
      baz=298
NEA2  Nenana           71.13  26  IAmb  IAmb  23 46 19.0
      comp=Z,4.6nm,0.7s
NEA2  Nenana           71.13  26  P     P     23 46 18.0 +0.3
      baz=297,SNR=5.7
TRF   Thorofare Moun   71.15  27  P     P     23 46 18.7 +0.6
      baz=297
G25K  Bearman Lake     71.21  23  P     P     23 46 18.7 +0.6
      baz=299
SKT   Skwentna         71.28  29  P     P     23 46 18.7  0.0
SKT                               IAmb  IAmb  23 46 19.6
      comp=Z,4.1nm,1.1s
SKT   Skwentna         71.28  29  P     P     23 46 18.6  0.0
      baz=296
BMAR  Burnt Mountain   71.41  22  P     P     23 46 20.9 +1.5
F26K  Sheenjek River   71.42  22  P     P     23 46 20.7 +1.2
F26K  Sheenjek River   71.42  22  P     P     23 46 20.0 +0.5
      baz=300
EUNU  Eureka           71.49   2  P     P     23 46 21.0 +1.2
EUNU                              IAmb  IAmb  23 46 45.0
      comp=Z,7.6nm,1.4s
H25L  Birch Creek      71.55  24  P     P     23 46 20.9 +0.7
      baz=299
CCB   Clear Creek Bu   71.59  26  P     P     23 46 21.0 +0.6
O20K  Slope Mountain   71.61  31  P     P     23 46 21.1 +0.4
      baz=296
Q19K  Cape Douglas,    71.62  32  P     P     23 46 21.5 +0.7
      baz=295
CUT   Chulitna         71.62  28  P     P     23 46 20.5 -0.2
      baz=297
SUA   Susitna One      71.84  29  IAmb  IAmb  23 46 23.3
      comp=Z,5.0nm,0.8s
SUA   Susitna One      71.84  29  P     P     23 46 22.0 -0.2
      baz=297
IL31                   71.88  25  P     P     23 46 22.2 +0.1
ILAR  Eielson Array    71.88  25  P     P     23 46 21.4 -0.8
      comp=Z,0.6nm,0.4s,baz=286,slow=4.3,SNR=16
      comp=Z,0.6nm,0.4s
G26K  Porcupine Rive   71.92  23  IAmb  IAmb  23 46 24.1
      comp=Z,3.3nm,0.6s
G26K  Porcupine Rive   71.92  23  P     P     23 46 22.3 -0.1
      baz=301
CHIR  Chirikof Islan   71.93  36  P     P     23 46 23.1 +0.5
      baz=295
E27K  Coleen River     71.99  21  P     P     23 46 24.5 +1.6
E27K                              IAmb  IAmb  23 46 36.5
      comp=Z,5.9nm,1.5s
E27K  Coleen River     71.99  21  P     P     23 46 22.8 -0.1
      baz=302
PRP   Porcupine Dome   72.02  24  P     P     23 46 24.2 +1.0
PRP                               IAmb  IAmb  23 46 24.5
      comp=Z,4.5nm,0.6s
PRP   Porcupine Dome   72.02  24  P     P     23 46 23.3 +0.1
      baz=300
WAT1  Susitna Watana   72.14  28  P     P     23 46 23.8 -0.1
      baz=298
Q20K  Shuyak Island    72.35  32  P     P     23 46 25.2 +0.1
      baz=296
E28M  Babbage River    72.41  20  P     P     23 46 25.6 +0.3
E28M  Babbage River    72.41  20  P     P     23 46 24.7 -0.6
      baz=304
RC01  Rabbit Creek A   72.44  29  P     P     23 46 25.8 +0.1
      baz=298
PMR   Palmer           72.47  29  IAmb  IAmb  23 46 26.7
      comp=Z,4.9nm,0.6s
PMR   Palmer           72.47  29  P     P     23 46 25.7 -0.1
      baz=298
CNPM  China Poot       72.48  31  P     P     23 46 26.1 +0.2
DHY   Denali Highway   72.50  27  P     P     23 46 26.1 -0.1
DHY                               IAmb  IAmb  23 46 26.5
      comp=Z,3.5nm,1.2s
DHY   Denali Highway   72.50  27  P     P     23 46 25.9 -0.2
      baz=299
OHAK  Old Harbor       72.52  34  P     P     23 46 26.1  0.0
OHAK  Old Harbor       72.52  34  P     P     23 46 26.7 +0.5
      baz=296
J25K  Salcha River,    72.52  25  P     P     23 46 25.6 -0.6
J25K  Salcha River,    72.52  25  P     P     23 46 25.7 -0.4
      baz=300
WAT6  Susitna Watana   72.59  28  P     P     23 46 26.7  0.0
      baz=299
BRSE  Bradley Lake S   72.61  31  P     P     23 46 26.6 -0.1
      baz=297
KDAK  Kodiak Island    72.62  33  P     P     23 46 26.9 +0.2
KDAK  Kodiak Island    72.62  33  P     P     23 46 27.0 +0.2
      baz=296
G27K  Doyon Strip      72.71  22  IAmb  IAmb  23 46 28.6
      comp=Z,2.0nm,0.7s
G27K  Doyon Strip      72.71  22  P     P     23 46 27.3 +0.1
      baz=303
SML   Sawmill          72.71  28  IAmb  IAmb  23 46 28.3
      comp=Z,6.2nm,0.7s
SML   Sawmill          72.71  28  P     P     23 46 27.6 +0.3
      baz=299
K24K  Donnelly Dome    72.77  26  P     P     23 46 27.6  0.0
      baz=300
F28M  Old Crow         72.85  21  P     P     23 46 29.4 +1.4
F28M  Old Crow         72.85  21  P     P     23 46 28.0  0.0
      baz=304
M23K  Glacier View     72.97  28  P     P     23 46 28.7 -0.1
      baz=299
I26K  Coal Creek Min   72.98  24  P     P     23 46 29.4 +0.7
I26K  Coal Creek Min   72.98  24  P     P     23 46 29.5 +0.7
      baz=302
E29M  Blow River       73.03  20  IAmb  IAmb  23 46 30.5
      comp=Z,3.9nm,1.2s
E29M  Blow River       73.03  20  P     P     23 46 29.2 +0.2
      baz=306
H27K  Steamboat Moun   73.06  23  IAmb  IAmb  23 46 33.5
      comp=Z,2.7nm,0.8s
H27K  Steamboat Moun   73.06  23  P     P     23 46 29.4 +0.1
      baz=303
SCM   Sheep Creek Mo   73.11  28  P     P     23 46 30.3 +0.6
SCM                               IAmb  IAmb  23 46 56.5
      comp=Z,8.6nm,1.2s
SCM   Sheep Creek Mo   73.11  28  P     P     23 46 30.3 +0.6
      baz=300
PWL   Port Wells       73.16  29  P     P     23 46 30.7 +0.8
PWL   Port Wells       73.16  29  P     P     23 46 29.6 -0.3
      baz=299
RIDG  Independent Ri   73.16  26  IAmb  IAmb  23 46 30.0
      comp=Z,3.0nm,0.6s
RIDG  Independent Ri   73.16  26  P     P     23 46 30.1 +0.1
      baz=301
J26L  Joseph Creek     73.25  25  IAmb  IAmb  23 46 31.3
      comp=Z,3.8nm,0.7s
J26L  Joseph Creek     73.25  25  P     P     23 46 30.1 -0.4
      baz=302,SNR=9.7
PAX   Paxson           73.31  27  P     P     23 46 31.1 +0.2
PAX   Paxson           73.31  27  P     P     23 46 30.7 -0.2
      baz=301
SCRK  Sand Creek       73.37  25  P     P     23 46 31.4 +0.1
SCRK  Sand Creek       73.37  25  P     P     23 46 31.5 +0.3
      baz=302
I27K  Kandik River     73.37  23  P     P     23 46 31.1 -0.1
      baz=303
M24K  Tolsona, Glenn   73.46  28  P     P     23 46 32.8 +1.1
M24K  Tolsona, Glenn   73.46  28  P     P     23 46 32.6 +0.9
      baz=300
GLI   Glacier Island   73.68  29  P     P     23 46 34.2 +1.2
      baz=300
G29M  Pine Creek       73.84  21  IAmb  IAmb  23 46 59.9
      comp=Z,6.6nm,1.4s
G29M  Pine Creek       73.84  21  P     P     23 46 34.4 +0.5
      baz=306
KLU   Klutina          73.87  28  P     P     23 46 34.9 +0.7
      baz=301
A36M  Sachs Harbour    74.00  14  P     P     23 46 34.6  0.0
A36M  Sachs Harbour    74.00  14  P     P     23 46 34.9 +0.3
      baz=316
FID   Port Fidalgo     74.00  29  P     P     23 46 35.2 +0.3
FID                               IAmb  IAmb  23 47 12.1
      comp=Z,10nm,1.3s
I28M  Miner Creek      74.04  23  P     P     23 46 35.4 +0.3
      baz=304
K27K  Chicken          74.06  25  P     P     23 46 36.2 +1.1
K27K  Chicken          74.06  25  P     P     23 46 35.6 +0.5
      baz=303
F30M  Barrier River    74.13  20  P     P     23 46 36.3 +0.8
F30M                              IAmb  IAmb  23 46 41.1
      comp=Z,5.9nm,1.2s
F30M  Barrier River    74.13  20  P     P     23 46 35.9 +0.4
      baz=308
H29M  Whitestone       74.13  22  P     P     23 46 35.6 +0.1
H29M  Whitestone       74.13  22  P     P     23 46 35.7 +0.1
      baz=306
HIN   Hinchinbrook I   74.17  29  P     P     23 46 36.5 +0.7
N25K  Chitina, Valde   74.36  28  P     P     23 46 37.3 +0.3
      baz=302
INK   Inuvik           74.37  19  P     P     23 46 36.9  0.0
      baz=309
G30M  tAoh Zraii Nji   74.38  21  P     P     23 46 37.0  0.0
G30M                              IAmb  IAmb  23 46 37.4
      comp=Z,3.6nm,0.7s
G30M  tAoh Zraii Nji   74.38  21  P     P     23 46 36.7 -0.3
      baz=307
EYAK  Cordova Ski Ar   74.42  29  P     P     23 46 38.0 +0.7
      baz=301
M26K  Nabesna, AK      74.58  27  P     P     23 46 39.2 +1.0
      baz=303
EPYK  Eagle Plains     74.58  22  P     P     23 46 38.7 +0.4
      baz=307
L27K  Beaver Creek,    74.67  26  P     P     23 46 39.3 +0.5
      baz=304
BMRM  Bremner River    74.68  28  P     P     23 46 39.6 +0.7
      baz=302
BCAR  Beaver Creek A   74.69  26  P     P     23 46 40.1 +1.2
Q23K  Middleton Isla   74.72  30  P     P     23 46 40.0 +1.0
      baz=301
DAWY  Dawson           75.02  24  P     P     23 46 40.9 +0.1
      baz=305
G31M  Satah River      75.02  21  P     P     23 46 40.7 +0.1
      baz=309
M27K  Edge Creek, AK   75.04  26  P     P     23 46 41.5 +0.4
      baz=304
MCARA McCarthy VSAT    75.11  27  P     P     23 46 42.1 +0.8
      baz=303
KAIM  Kayak Island     75.31  29  P     P     23 46 43.1 +0.7
      baz=302
BERG  Berg Lake        75.37  29  P     P     23 46 43.1 +0.4
I30M  Mount Dempster   75.39  22  P     P     23 46 43.0  0.0
      baz=308
BVCY  Beaver Creek     75.41  26  P     P     23 46 43.3 +0.2
      baz=304
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CRQE	Cirque	75.43	28	P	P	23 46 43.4	+0.1
	baz=303						
H31M	Peel River	75.70	21	P	P	23 46 44.6	0.0
	baz=309						
J30M	Hart River	75.80	23	P	P	23 46 45.2	-0.1
	baz=308						
K29M	Barlow Dome	75.82	24		P	23 46 46.0	+0.6
K29M	Barlow Dome	75.82	24	P	P	23 46 46.5	+1.0
	baz=307						
CTG	Chitna Glacier	76.03	27	P	P	23 46 47.0	+0.2
	baz=304						
L29M	L29M	76.03	25	P	P	23 46 47.7	+1.1
L29M	L29M	76.03	25	P	P	23 46 47.2	+0.6
	baz=307						
MESA	MESA	76.22	28	P	P	23 46 47.8	-0.1
	baz=304						
M29M	Somme Creek	76.30	25	P	P	23 46 49.1	+0.9
	baz=306						
N30M	Aishikik Lake	77.41	26	P	P	23 46 55.3	+0.8
	baz=308						
O29M	Mount Kennedy	77.53	27	P	P	23 46 55.6	+0.5
	baz=307						
PNL	Peninsula	77.56	28	P	P	23 46 55.7	+0.4
	baz=306						
HYT	Haines Junctio	77.64	26	P	P	23 46 56.7	+0.9
	baz=308						
N31M	Braeburn, Yuko	77.89	25	P	P	23 46 58.0	+0.9
N31M				IAmb	IAmb	23 47 01.7	
	comp=Z,4.8nm,0.9s						
N31M	Braeburn, Yuko	77.89	25	P	P	23 46 58.0	+0.9
	baz=309						
O30N	Mendenhall	78.22	26	P	P	23 47 00.2	+1.2
O30N	Mendenhall	78.22	26	P	P	23 46 60.0	+1.0
	baz=309						
P29M	Windy Craggy	78.27	27	P	P	23 47 00.3	+1.1
	baz=308						
WHY	Whitehorse	78.75	26	P	P	23 47 02.1	+0.2
	baz=310						
MMPY	Sheldon Lake,	78.79	23	P	P	23 47 02.2	+0.1
	baz=312						
PLBC	Pleasant Camp	78.93	27	P	P	23 47 03.1	+0.3
	baz=309						
POIN	Pond Inlet	79.05	1	P	P	23 47 03.6	+0.4
POIN				IAmb	IAmb	23 47 05.0	
	comp=Z,4.0nm,1.1s						
WRAK	Wrangell Islan	82.52	28	P	P	23 47 23.3	+1.3
	baz=312						
T35M	Bob Quinn	83.00	27	P	P	23 47 25.0	+0.5
	baz=314						
TOAD	Toad River Com	83.55	24	P	P	23 47 28.0	+0.6
	baz=318						
V35K	Ketchikan	83.56	29	P	P	23 47 28.8	+1.4
	baz=313						
YKA	Yellowknife Ar	83.96	17	P	P	23 47 29.8	+0.4
	comp=Z,0.7nm,0.7s,baz=324,slow=4.5,SNR=6.7						
	comp=Z,0.7nm,0.7s						
ESDC	Sonseca Array	85.29	313	P	P	23 47 36.8	+0.1
	comp=Z,0.3nm,0.8s,baz=72,slow=4.9,SNR=2.9						
	comp=Z,0.3nm,0.8s						
TXAR	Lajitas Array	116.33	28	PKP	PKiKP	23 53 43.3	-0.3
	comp=Z,0.1nm,0.6s,baz=343,slow=1.6,SNR=2.6						
QSPA	South Pole Qui	118.29	180	PKP	PKPdf	23 53 44.2	-1.9
	comp=Z,1.7nm,1.1s,baz=34,slow=0.5,SNR=2.4						
SNAA	Sanae	122.36	201	PKP	PKPdf	23 53 52.8	-1.0
	comp=Z,0.2nm,0.5s,baz=130,slow=17,SNR=1.5						
ROSC	El Rosal	146.84	359	PKPbc	PKPbc	23 54 43.0	-0.1
	comp=Z,4.9nm,0.4s,baz=328,slow=15,SNR=4.7						

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*BGR **24** 00:11:42.2, 35°.59N×140°.92E, h54$^{km}\pm$6^{km}, mb5.2*

*BJI **24** 00:11:43.9, 34°.96N×140°.18E, h86^{km}, mB5.1/49, mb4.8/78, Ms4.6/85, Ms7 4.6/83*

*MOS **24** 00:11:43.0±0.9, 34°.91N×139°.89E, h52^{km}, mb5.6/94, MS4.8/24, Error ellipse: s-maj=6.2km s-min=3.4km az=117.5*

*NIED **24** 00:11:44.2, 34°.93N×139°.96E, h61^{km}, MW5.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}7.90; $M_{\theta\theta}$-5.16; $M_{\phi\phi}$-2.74; $M_{r\theta}$2.94; $M_{\theta\phi}$-5.01; $M_{\phi r}$1.61; Fault plane solution: $M_0$9.14000×10^{16} NP1: ϕ_s227.00000°, δ35.00000°, λ83.00000°. NP2: ϕ_s56.00000°, δ56.00000°, λ95.00000°.*

*NEIC **24** 00:11:44.7, 34°.90N×140°.00E, h42^{km}*

*JMA **24** 00:11:44.2±0.1, 34°.9N±0°.6×140°.0E±0°.6, h61$^{km}\pm$1^{km}, MD5.2/39, MW5.3/39, SOUTHERN BOSO PENINSULA*

JMA Felt IV J1 at SOUTHERN BOSO PENINSULA .

*IDC **24** 00:11:45.1±0.6, 34°.89N×139°.93E, h58$^{km}\pm$5^{km}, mb4.8/36, mbtmp5.1/40, MS4.5/55, Error ellipse: s-maj=10.6km s-min=7.5km az=55.0*

*NEIC **24** 00:11:45.1±1.4, 34°.93N±0°.04×140°.01E±0°.06, h46$^{km}\pm$4^{km}, mb5.5/797, Mwr5.2/19, Mww5.2/17, Error ellipse: s-maj=7.2km s-min=5.9km az=91.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}5.41; $M_{\theta\theta}$-2.86; $M_{\phi\phi}$-2.54; $M_{r\theta}$1.93; $M_{\theta\phi}$-4.76; $M_{\phi r}$-1.26; Fault plane solution: $M_0$7.06000×10^{16} NP1: ϕ_s69.83000°, δ52.90000°, λ124.01000°. NP2: ϕ_s201.62000°, δ48.61000°, λ53.51000°. Principal axes: T 6.5462, Plg63.0000°, Azm42.0000°; N 0.9360, Plg26.0000°, Azm228.0000°; P -7.4822, Plg2.0000°, Azm137.0000°;*

*NEIC **24** 00:11:45.2, 34°.93N×140°.37E, h50^{km}, Moment Tensor Solution. Duration: 1^{s}6 Moment tensor: Scale 10^{16}Nm; M_{rr}9.14; $M_{\theta\theta}$-6.82; $M_{\phi\phi}$-2.32; $M_{r\theta}$1.75; $M_{\theta\phi}$-2.95; $M_{\phi r}$-0.86; Fault plane solution: $M_0$8.96000×10^{16} NP1: ϕ_s235.46000°, δ41.72000°, λ77.28000°. NP2: ϕ_s72.29000°, δ49.52000°, λ101.11000°. Principal axes: T 9.4543, Plg81.0000°, Azm40.0000°; N -1.0889, Plg8.0000°, Azm245.0000°; P -8.3654, Plg4.0000°, Azm154.0000°;*

*GCMT **24** 00:11:45.8±0.1, 34°.96N±0°.01×140°.01E±0°.01, h51^{km}, MW5.3/149, Moment Tensor Solution. s125,c195; s149,c253; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.95±.02; $M_{\theta\theta}$-0.69±.01; $M_{\phi\phi}$-0.25±.01; $M_{r\theta}$0.26±.01; $M_{\theta\phi}$-0.53±.01; $M_{\phi r}$0.02±.01; Best double couple: $M_0$1.03500×10^{17} NP1: ϕ_s228.00000°, δ39.00000°, λ77.00000°. NP2: ϕ_s64.00000°, δ52.00000°, λ100.00000°. Principal axes: T 0.9950, Plg80.0000°, Azm18.0000°; N 0.0800, Plg8.0000°, Azm238.0000°; P -1.0750, Plg6.0000°, Azm147.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **24** 00:11:45.2, 34°.93N×140°.00E, h50^{km}*

ISC 24 00:11:44.6±0.3**, 34°.90N**±0°.02×**140°.00E**±0°.02**, h55**$^{km}\pm$1^{km}**, h55**^{km}**:pP-P, n1903,** σ**1^{s}46**/1816**, mb5.4**/570**, MS4.6**/100**, 117C-53D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TATJ	Tateyama 2	0.16	327	*i* P	Pn	00 11 53.8	+0.5
TATJ				*e*S	Sn	00 12 00.5	+1.1
TATJ	Tateyama 2	0.16	327	A	A	00 11 53.8	
	comp=N,2µm,3.1s,comp=E,2µm,2.1s						
BSO4	Boso 4	0.30	71	*i* P	Pn	00 11 54.9	+0.8
JKUC	kamogawauchiur	0.31	32	*i* P	Pn	00 11 54.3	+0.1
JKUC				*e*S	Sn	00 12 02.1	+0.8
JKUC	kamogawauchiur	0.31	32	A	A	00 11 54.3	
	comp=N,956nm,2.1s,comp=E,374nm,1.7s						
KTR	Katsuura	0.36	46	*i* P	Pn	00 11 55.1	+0.3
JYO	Yokosk	0.42	320	⇓*e*P	Pn	00 11 55.6	+0.3
JYO				⇓*e*S	Sn	00 12 03.9	+0.8
JYO	Yokosk	0.42	320	A	A	00 11 55.6	
	comp=N,2µm,1.6s,comp=E,975nm,1.5s						
BSO3	Boso 3	0.43	102	*i* P	Pn	00 11 55.8	+0.7
JIM2	Oshima 3	0.50	249	P	Pn	00 11 55.9	-0.2
JIM2				*e*S	Sn	00 12 04.2	-0.3
JIM2	Oshima 3	0.50	249	A	A	00 11 55.9	
	comp=N,1µm,0.4s,comp=E,732nm,0.5s						
BSO2	Boso 2	0.64	103	*e*X		00 12 08.8	
JTHY	Toshimahigashi	0.69	238	P	Pn	00 11 58.6	+0.1
JTHY				*e*S	Sn	00 12 08.9	+0.4
JTHY	Toshimahigashi	0.69	238	A	A	00 11 58.6	
	comp=N,380nm,0.3s,comp=E,583nm,0.7s						
JNIO	Niijimaoohara	0.80	228	A	A	00 11 59.9	
	comp=N,400nm,1.7s,comp=E,496nm,1.5s						
TOK	Tokyo	0.81	346	A	A	00 11 59.5	
	comp=N,693nm,1.9s,comp=E,1µm,0.4s						
JHTM	Izuhatsuma	0.81	275	A	A	00 11 59.6	
	comp=N,791nm,0.4s,comp=E,540nm,0.4s						
JOD2	Odawara 2	0.83	296	⇓P	Pn	00 11 59.5	-0.8
JOD2				⇓*e*S	Sn	00 12 10.4	-1.3
JOD2	Odawara 2	0.83	296	A	A	00 11 59.5	
	comp=N,283nm,3.6s,comp=E,180nm,0.4s						
JSMT	Sammumatsuo	0.83	26	A	A	00 11 60.0	
	comp=N,293nm,1.9s,comp=E,404nm,1.8s						
BSO1	Boso 1	0.84	106	⇓P	Pn	00 12 00.0	+0.2
JSKK	Shikinejimakit	0.86	229	A	A	00 12 00.6	
	comp=N,191nm,2.5s,comp=E,236nm,2.0s						
JMYK	Miyake Tsubota	0.91	204	P	Pn	00 12 01.4	+0.1
JMYK				*e*S	Sn	00 12 13.8	+0.3
JMYK	Miyake Tsubota	0.91	204	A	A	00 12 01.4	
	comp=N,218nm,0.3s,comp=E,195nm,3.3s						
JIZS	Izushimoda	0.94	259	P	Pn	00 12 01.5	-0.1
JIZS				*e*S	Sn	00 12 13.8	-0.3
JIZS	Izushimoda	0.94	259	A	A	00 12 01.5	
	comp=N,138nm,1.0s,comp=E,217nm,1.7s						
JSGW	Sagamiharawaka	0.95	318	A	A	00 12 01.3	
	comp=N,107nm,2.0s,comp=E,103nm,1.5s						
JKO	Kozu shima	1.00	225	A	A	00 12 02.5	
	comp=N,238nm,2.6s,comp=E,341nm,3.5s						
JMKN	Mikurajimanish	1.05	199	P	Pn	00 12 03.5	+0.4
JMKN				*e*S	Sn	00 12 17.0	+0.1
JMKN	Mikurajimanish	1.05	199	A	A	00 12 03.5	
	comp=N,135nm,1.3s,comp=E,143nm,0.6s						
JFNN	Fujinakano	1.12	286	A	A	00 12 03.6	
	comp=N,227nm,3.1s,comp=E,105nm,3.5s						
JIHU	Itakohorinouch	1.15	22	A	A	00 12 04.2	
	comp=N,351nm,3.4s,comp=E,352nm,1.7s						
JYN	Shimob	1.33	297	⇓P	Pn	00 12 06.7	-0.3
JYN				⇓*e*S	Sn	00 12 23.4	-0.3
JYN	Shimob	1.33	297	A	A	00 12 06.7	
	comp=N,101nm,1.2s,comp=E,78nm,1.2s						
JYT	Yasato	1.34	7	A	A	00 12 06.7	
	comp=N,74nm,1.1s,comp=E,119nm,2.0s						
JRY	Ryogami san	1.43	322	⇓P	Pn	00 12 08.0	-0.3
JRY	Ryogami san	1.43	322	A	A	00 12 08.0	
	comp=N,39nm,2.0s,comp=E,39nm,2.3s						
SHZ3	Shizuoka 3	1.48	277	P	Pn	00 12 09.3	+0.4
SHZ3	Shizuoka 3	1.48	277	A	A	00 12 09.3	
	comp=N,121nm,2.0s,comp=E,57nm,1.3s						
JSG	Sagara	1.51	262		Pn	00 12 09.9	+0.7
JSG				Sn	Sn	00 12 29.2	+1.5
JSG	Sagara	1.51	262	S	Sn	00 12 29.7	+1.9
JSG	Sagara	1.51	262	A	A	00 12 09.2	
	comp=N,114nm,2.5s,comp=E,132nm,2.3s						
JHYU	Hitachinakayam	1.52	18	A	A	00 12 09.3	
	comp=N,65nm,4.6s,comp=E,60nm,3.5s						
JAG	Ashikaga	1.59	344	⇓P	Pn	00 12 09.8	-0.6
JAG				⇓S	Sn	00 12 28.7	-1.1
JAG	Ashikaga	1.59	344	A	A	00 12 09.8	
	comp=N,80nm,1.9s,comp=E,43nm,1.0s						
JKKS	Kakegawashinom	1.66	266	A	A	00 12 11.3	
	comp=N,70nm,4.5s,comp=E,92nm,3.8s						
JHO	Hitachi	1.77	15	A	A	00 12 12.9	
	comp=N,41nm,3.5s,comp=E,41nm,4.1s						
JHJ2	Mitsune	1.79	185		Pn	00 12 13.1	0.0
JHJ2				Sn	Sn	00 12 34.4	-0.2
JHJ2	Mitsune	1.79	185	P	Pn	00 12 13.5	+0.5
JHJ2	Mitsune	1.79	185	S	Sn	00 12 35.4	+0.8
JHJ2	Mitsune	1.79	185	A	A	00 12 13.7	
	comp=N,103nm,0.3s,comp=E,111nm,0.3s						
JNT	Takato	1.81	303	A	A	00 12 13.1	
	comp=N,38nm,2.4s,comp=E,34nm,1.4s						
JNY	Yasuok	1.81	285	A	A	00 12 13.2	
	comp=N,59nm,2.6s,comp=E,58nm,1.9s						
JHCJ	Hachijojimakas	1.83	185	A	A	00 12 14.3	
	comp=N,58nm,1.9s,comp=E,44nm,4.1s						
HMMJ	Hamamatsu 2	1.87	269	A	A	00 12 14.2	
	comp=N,33nm,2.9s,comp=E,18nm,4.1s						
JKT	Katashina	1.96	342	A	A	00 12 15.3	
	comp=N,60nm,1.1s,comp=E,64nm,0.3s						
TTO5	TONANKAI O.B.S	1.99	252	A	A	00 12 16.0	
	comp=N,80nm,2.2s,comp=E,101nm,4.6s						
JGK	Kuni	2.00	327	A	A	00 12 15.8	
	comp=N,45nm,2.6s,comp=E,46nm,1.8s						
JSSY	Shinshiroyabe	2.04	271	A	A	00 12 16.6	
	comp=N,27nm,2.1s,comp=E,17nm,6.4s						
JSB	Shiboa	2.07	358	A	A	00 12 16.9	
	comp=N,138nm,3.0s,comp=E,95nm,1.9s						
JNG	Nsakai	2.16	315	A	A	00 12 18.0	
	comp=N,29nm,4.3s,comp=E,30nm,1.2s						
MJAR	Matsushiro Arr	2.19	319	P	Pn	00 12 18.6	0.0
	comp=E,7µm,0.4s,baz=154,slow=11						
MJAR				S	Sn	00 12 45.0	+0.3
	comp=E,2µm,0.5s,baz=185,slow=20,SNR=8.4						
MAJO	Matsushiro	2.19	319		Pn	00 12 19.3	+0.6
MAJO				Sn	Sn	00 12 43.8	-0.9
MAJO	Matsushiro	2.19	319	P	Pn	00 12 19.6	+0.9
MAJO	Matsushiro	2.19	319	*d i*P	Pn	00 12 19.3	+0.6
MJB9	Matsu-Tunnel	2.20	319		Pn	00 12 20.3	+1.6
MJB9				Sn	Sn	00 12 45.1	+0.3
TTO4	TONANKAI O.B.S	2.21	247	A	A	00 12 19.2	
	comp=N,50nm,3.3s,comp=E,64nm,5.0s						
JFFD	Fukushimafurud	2.24	12	A	A	00 12 19.3	
	comp=N,24nm,2.7s,comp=E,34nm,4.8s						
JGF	Kuroka	2.27	289		Pn	00 12 20.9	+1.2
JGF				Sn	Sn	00 12 46.2	-0.4
JGF	Kuroka	2.27	289	P	Pn	00 12 20.9	+1.2
JGF	Kuroka	2.27	289	A	A	00 12 19.7	
	comp=N,48nm,2.0s,comp=E,18nm,2.0s						
ONAJ	Iwakimizuishiy	2.30	16	A	A	00 12 20.2	
	comp=N,24nm,2.9s,comp=E,43nm,3.2s						
JAA	Atsumi	2.36	264	A	A	00 12 21.2	
	comp=N,17nm,2.4s,comp=E,12nm,4.0s						
JUON	Uonuma	2.43	342	A	A	00 12 21.9	
	comp=N,20nm,2.6s,comp=E,23nm,5.0s						
JAOM	Aogashimamukai	2.43	185	A	A	00 12 22.9	
	comp=N,56nm,2.5s,comp=E,69nm,2.4s						
INU	Inuyama	2.48	281		Pn	00 12 23.1	+0.6
INU	Inuyama	2.48	281	P	Pn	00 12 23.3	+0.7
JFY	Yanaizu	2.52	355	A	A	00 12 23.2	
	comp=N,22nm,2.3s,comp=E,22nm,2.1s						
JGN	Niukaw	2.56	302	A	A	00 12 23.7	
	comp=N,12nm,3.7s,comp=E,11nm,4.0s						
JFK	Kawauchi	2.57	16	A	A	00 12 24.0	
	comp=N,18nm,1.8s,comp=E,20nm,1.6s						
JICN	Ichinomiyachia	2.62	280	A	A	00 12 24.6	
	comp=N,60nm,2.1s,comp=E,27nm,3.4s						
JJN	Nakama	2.66	327	A	A	00 12 25.1	
	comp=N,33nm,2.3s,comp=E,34nm,2.3s						
JOTO	OTAMA OYAMA	2.67	6	A	A	00 12 25.4	
	comp=N,88nm,1.5s,comp=E,56nm,1.0s						
TTO2	TONANKAI O.B.S	2.72	246	A	A	00 12 26.3	
	comp=N,56nm,5.4s,comp=E,56nm,3.0s						
JTT	Ttatey	2.76	309	A	A	00 12 26.5	
	comp=N,34nm,2.9s,comp=E,35nm,2.5s						
JYTA	Yamagatataniai	2.76	286	A	A	00 12 26.5	
	comp=N,23nm,2.7s,comp=E,15nm,3.5s						
JIZZ	Izumozaki	2.83	339	A	A	00 12 27.5	
	comp=N,96nm,2.7s,comp=E,93nm,2.9s						
JMST	Minamisoumatoc	2.91	14	A	A	00 12 28.9	
	comp=N,16nm,2.4s,comp=E,22nm,2.2s						
TTO1	TONANKAI O.B.S	2.95	245	A	A	00 12 29.6	
	comp=N,58nm,3.9s,comp=E,41nm,5.5s						
TSUJ	Tsu 2	2.95	267	A	A	00 12 29.4	
	comp=N,14nm,3.3s,comp=E,14nm,4.3s						
JNS	Sasagawa	2.97	350	A	A	00 12 29.5	
	comp=N,21nm,4.2s,comp=E,24nm,3.2s						
JEG	Eigenji	2.97	276	A	A	00 12 29.6	
	comp=N,22nm,4.7s,comp=E,11nm,1.9s						
JYAR	Yonezawaarcadi	3.01	2	A	A	00 12 30.2	
	comp=N,43nm,5.4s,comp=E,42nm,5.4s						
JMM	Marumori	3.03	12		Pn	00 12 29.6	-0.5
JMM				Sn	Sn	00 13 05.1	-0.1
JMM	Marumori	3.03	12	P	Pn	00 12 30.0	-0.1
JMM	Marumori	3.03	12	S	Sn	00 13 04.8	-0.4
JMM	Marumori	3.03	12	A	A	00 12 30.6	
	comp=N,16nm,2.3s,comp=E,26nm,2.1s						
JKN2	Miekihoku	3.14	259	A	A	00 12 32.1	
	comp=N,9.0nm,4.1s,comp=E,7.0nm,4.7s						
JKG	Kaga	3.29	296	A	A	00 12 34.0	
	comp=N,25nm,4.6s,comp=E,25nm,2.1s						
JJH	Hakui	3.30	309	A	A	00 12 34.1	
	comp=N,20nm,5.9s,comp=E,14nm,2.9s						
JYS	Shirataka	3.32	1	A	A	00 12 34.5	
	comp=N,40nm,1.8s,comp=E,34nm,1.5s						
JSZ	Suzu	3.32	321	A	A	00 12 34.4	
	comp=N,11nm,2.3s,comp=E,11nm,3.4s						
JFM	Mihama	3.34	282	A	A	00 12 34.9	
	comp=N,15nm,3.3s,comp=E,10.0nm,1.8s						
JSD	Sado	3.43	336		Pn	00 12 34.4	-1.1
JSD				Sn	Sn	00 13 12.6	-2.4
JSD	Sado	3.43	336	P	Pn	00 12 34.6	-1.0
JSD	Sado	3.43	336	A	A	00 12 36.0	
	comp=N,10.0nm,3.2s,comp=E,12nm,2.3s						
JOU	Okura	3.50	9	A	A	00 12 37.2	
	comp=N,41nm,1.9s,comp=E,24nm,2.1s						
JHE	Heguri	3.56	267	A	A	00 12 37.9	
	comp=N,10.0nm,3.0s,comp=E,10.0nm,4.8s						
JAW	Awa shima	3.60	351	A	A	00 12 38.4	
	comp=N,20nm,3.1s,comp=E,14nm,3.5s						
JYA	Atsumi	3.70	357	A	A	00 12 39.8	
	comp=N,14nm,3.9s,comp=E,18nm,3.8s						
JIO	Ouri	3.71	17	A	A	00 12 40.2	
	comp=N,7.0nm,2.5s,comp=E,11nm,3.3s						
JOFO	Osakifurukawao	3.77	11	A	A	00 12 40.9	
	comp=N,102nm,2.3s,comp=E,176nm,2.5s						
JHG	Hegura jima	3.85	321	A	A	00 12 41.8	
	comp=N,7.0nm,2.2s,comp=E,8.0nm,4.6s						
JWM	Minabe	3.98	256	A	A	00 12 43.9	
	comp=N,6.0nm,3.5s,comp=E,5.0nm,5.9s						
JYK	Kaneyama	4.03	4	A	A	00 12 44.4	
	comp=N,9.0nm,2.0s,comp=E,13nm,4.5s						
JMIK	Miki	4.07	270	A	A	00 12 45.0	
	comp=N,10.0nm,2.4s,comp=E,11nm,4.0s						
JKY	Yasaka	4.07	282	A	A	00 12 45.0	
	comp=N,13nm,3.1s,comp=E,7.0nm,3.2s						
JKMT	Kesennumamotoy	4.08	16	A	A	00 12 45.3	
	comp=N,9.0nm,3.1s,comp=E,20nm,3.4s						
JYYZ	Yamagatayuza	4.11	359	A	A	00 12 45.6	
	comp=N,109nm,4.0s,comp=E,88nm,3.4s						
JMK	Ichinoseki	4.17	13	A	A	00 12 46.5	
	comp=N,9.0nm,2.4s,comp=E,16nm,6.0s						
JTB	Tobi-shima	4.31	355	A	A	00 12 48.3	
	comp=N,15nm,3.6s,comp=E,15nm,3.0s						
JKSM	Kasumi	4.42	281	A	A	00 12 49.9	
	comp=N,8.0nm,2.5s,comp=E,5.0nm,2.0s						
JRG	Rokugo	4.52	6	A	A	00 12 51.4	
	comp=N,19nm,2.0s,comp=E,19nm,4.9s						
JYW	Yuwa	4.64	2	A	A	00 12 53.0	
	comp=N,35nm,2.8s,comp=E,24nm,4.9s						
MIYJ	Miyakonagasawa	4.89	17	A	A	00 12 56.6	
	comp=N,7.0nm,6.0s,comp=E,17nm,3.0s						
JSZI	Iwateshizukuis	4.90	9	A	A	00 12 56.6	
	comp=N,33nm,3.8s,comp=E,38nm,2.7s						
JOG3	Oga3	5.07	352	A	A	00 12 58.2	
	comp=N,21nm,4.2s,comp=E,18nm,2.8s						
JKR	Kurayoshi	5.08	277	A	A	00 12 59.2	
	comp=N,6.0nm,5.1s,comp=E,6.0nm,4.6s						
JKZ	Kuzumaki	5.19	11	A	A	00 13 00.8	
	comp=N,7.0nm,3.4s,comp=E,7.0nm,5.7s						
JMN	Monobe	5.19	259		Pn	00 12 59.3	-0.4
JTH	Tanohata	5.25	16	A	A	00 13 01.6	
	comp=N,6.0nm,2.9s,comp=E,10.0nm,3.7s						
JAH	Hinai	5.31	5	A	A	00 13 02.4	
	comp=N,9.0nm,5.3s,comp=E,12nm,5.7s						
JNTW	Noshirotokiwa	5.37	1	A	A	00 13 03.2	
	comp=N,38nm,4.3s,comp=E,35nm,3.9s						
JKEN	Kujiedanarisaw	5.47	14	A	A	00 13 04.7	
	comp=N,11nm,2.4s,comp=E,14nm,4.5s						
JANG	Nango	5.60	12	A	A	00 13 06.5	
	comp=N,9.0nm,3.3s,comp=E,9.0nm,3.4s						
JHHS	Hirosakihyakuz	5.75	3	A	A	00 13 08.5	
	comp=N,19nm,2.8s,comp=E,22nm,4.1s						
JTM	Tenmabayashi	5.94	8		Pn	00 13 09.7	-0.2
JTM	Tenmabayashi	5.94	8	P	Pn	00 13 10.3	+0.4
JSI2	Shiura 2	6.16	3	A	A	00 13 14.3	
	comp=N,4.0nm,2.3s,comp=E,5.0nm,5.8s						
JARK	Aomorirokkasho	6.20	10	A	A	00 13 14.8	
	comp=N,7.0nm,2.7s,comp=E,10.0nm,3.2s						
ERM	Erimo	7.53	18		Pn	00 13 30.5	-1.1
ERM	Erimo	7.53	18	P	Pn	00 13 29.6	-2.0
ERM	Erimo	7.53	18	P	Pn	00 13 30.5	-1.1
JEM	Erimo	7.53	18	P	Pn	00 13 29.6	-2.0
JNU	Nakatsue	7.78	259		Pn	00 13 35.5	+0.3
JNU	Nakatsue	7.78	259	P	Pn	00 13 36.3	+1.2
	comp=E,46nm,0.5s,baz=93,slow=1.8,SNR=18						
JNU				LR	LR	00 17 03.3	
	comp=E,4µm,18.2s,baz=72,slow=41						
JNU	Nakatsue	7.78	259	P	Pn	00 13 36.6	+1.5
JCJ	Chichijima	8.00	166		Pn	00 13 36.6	-1.5
JCJ	Chichijima	8.00	166	P	Pn	00 13 35.1	-3.0
	baz=180,slow=0.0						
JCJ				S	Sn	00 15 03.5	-3.7
	baz=180,slow=0.0						
JCJ	Chichijima	8.00	166	P	Pn	00 13 36.8	-1.4
ASAJ	Asahikawa	9.43	12	P	Pn	00 13 55.2	-2.4
	comp=E,40nm,0.3s,baz=220,slow=12,SNR=38						
ASAJ				S	Sn	00 15 39.1	-3.0
	comp=E,92nm,0.7s,baz=89,slow=31,SNR=6.7						
ASAJ	Asahikawa	9.43	12	P	Pn	00 13 55.7	-1.9
JKA	Kamikawa-asahi	9.43	12		Pn	00 13 55.7	-1.9
NMR	Nemuro--Hokkai	9.56	26	*e*P	Pn	00 13 55.7	-3.7
GLVR	Golovnino	9.81	24	P	Pn	00 14 01.4	-1.4
GLVR				pmax	pmax		
	comp=Z,1µm,1.2s						
GLVR				pmax	pmax		
	comp=Z,354nm,0.9s						
GLVR				pmax	pmax		
	comp=N,363nm,0.3s						
GLVR				pmax	pmax		
	comp=E,215nm,0.4s						
RUSJ	Misakicho	10.05	22	*e*P	Pn	00 14 03.9	-2.2
RUSJ				*i* S	Sn	00 15 51.4	-5.9
KSRS	Korea Array	10.09	288	P	Pn	00 14 08.0	+1.3
	comp=E,9.6nm,0.5s,baz=104,slow=13,SNR=58						
KSRS				PcP	PcP	00 20 13.1	+0.2
	comp=E,3.5nm,0.7s,baz=135,slow=0.2,SNR=10						
KSRS				ScP	ScP	00 23 41.1	+0.7
	comp=E,0.4nm,0.4s,baz=153,slow=1.3,SNR=4.3						
KSRS	Korea Array	10.09	288	P	Pn	00 14 08.0	+1.3
KSAR	Wonju Array Be	10.12	288		Pn	00 14 08.2	+1.1
KSAR	Wonju Array Be	10.12	288	P	Pn	00 14 08.2	+1.1
KS19	Wonju Array Si	10.14	288		Pn	00 14 08.8	+1.4
YUK	Yuzh-Kuril'sk	10.19	25	*e*P	Pn	00 14 06.3	-1.7
YUK				pmax	pmax		
	comp=Z,252nm,0.5s						
YUK				pmax	pmax		
	comp=N,181nm,0.3s						
YUK				pmax	pmax		
	comp=E,169nm,0.4s						
YUK				pmax	pmax		
	comp=Z,414nm,1.4s						
MSHR	Mys Shultsa	10.32	321	*de*P	Pn	00 14 09.3	-0.5
VLA	Vladivostok	10.35	325	*de*P	Pn	00 14 12.3	+2.0
VLA				pmax	pmax		
	comp=Z,287nm,1.4s						
TJN	Taejon	10.39	282		Pn	00 14 11.6	+0.8
TJN	Taejon	10.39	282	P	Pn	00 14 11.9	+1.1
TJN	Taejon	10.39	282	*c i*P	Pn	00 14 15.9	+5.1
SHO	Shikotan	10.40	28	*e*P	Pn	00 14 08.1	-2.8
SHO				pmax	pmax		
	comp=Z,64nm,0.4s						
SHO				pmax	pmax		
	comp=N,31nm,0.2s						
SHO				pmax	pmax		
	comp=E,28nm,0.2s						
SHO				pmax	pmax		
	comp=Z,153nm,1.3s						
TEY	Ternei	10.46	347	⇑*e*P	Pn	00 14 10.4	-1.3
TEY				*e*		00 16 12.0	
TEY				pmax	pmax		
	comp=N,20nm,0.9s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.9s						
TEY				pmax	pmax		
	comp=Z,20nm,0.9s						
PSTR	Posyet	10.55	320	*c i*P	Pn	00 14 15.6	+2.6
INCN	Inchon	11.10	287	Pn	Pn	00 14 23.4	+2.8
INCN	Inchon	11.10	287	P	Pn	00 14 19.8	-0.8
INCN	Inchon	11.10	287	P	Pn	00 14 22.2	+1.6
INCN	Inchon	11.10	287	P	Pn	00 14 23.4	+2.8
USA0B	Ussuriysk Arra	11.15	329		Pn	00 14 22.2	+1.0
USA0B	Ussuriysk Arra	11.15	329	P	Pn	00 14 22.2	+1.0
USRK	Ussuriysk Ar.	11.15	329		Pn	00 14 23.1	+1.9
USRK	Ussuriysk Ar.	11.15	329	P	Pn	00 14 21.7	+0.5
	comp=Z,8.6nm,0.5s,baz=138,slow=13,SNR=35						
USRK				LR	LR	00 18 30.4	
	comp=Z,3µm,20.3s,baz=153,slow=36						
USRK	Ussuriysk Ar.	11.15	329	P	Pn	00 14 23.1	+1.9
KUR	Kuril'sk	11.95	28	*e*P	Pn	00 14 30.7	-1.4
KUR				pmax	pmax		
	comp=Z,208nm,0.9s						
KUR				MLR	MLR		
	comp=Z,2µm,19.0s						
YSS	Yuzhno-Sakhali	12.22	9		Pn	00 14 32.8	-3.0
YSS	Yuzhno-Sakhali	12.22	9	P	Pn	00 14 34.3	-1.5
YSS	Yuzhno-Sakhali	12.22	9	*e*P	Pn	00 14 32.5	-3.3
YSS				*e*S	Sn	00 16 43.7	-6.7
YSS				pmax	pmax		
	comp=Z,200nm,3.2s						
YSS				pmax	pmax		
	comp=N,200nm,3.3s						
YSS				pmax	pmax		
	comp=Z,100nm,0.9s						

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YSS                                pmax    pmax
      comp=N,90nm,0.8s
YSS                                smax    smax
      comp=N,40nm,0.8s
YSS                                smax    smax
      comp=E,40nm,0.8s
YSS                                MLR     MLR
      comp=Z,2µm,18.0s
YSS                                MLR     MLR
      comp=N,2µm,20.0s
YSS                                MLR     MLR
      comp=E,2µm,16.0s
MDJ   Mudanjiang         12.57 324         Pn         00 14 40.4 -0.2
MDJ   Mudanjiang         12.57 324   P     Pn         00 14 41.8 +1.2
MDJ                                  S     Sn         00 17 04.9 +6.0
MDJ                                  pmax  pmax
      comp=E,20nm,1.5s
MDJ                                  pmax  pmax
      comp=E,790nm,4.6s
MDJ                                  LR    LR
      comp=E,3µm,21.5s
MDJ                                  LR    LR
      comp=E,2µm,17.5s
MDJ                                  LR    LR
      comp=E,5µm,19.9s
MDJ   Mudanjiang         12.57 324   P     Pn         00 14 41.3 +0.7
JOW   Kunigami           12.88 235   Pn    Pn         00 14 44.8  0.0
JOW   Kunigami           12.88 235   P     Pn         00 14 44.2 -0.6
      comp=E,7.4nm,0.3s,baz=310,slow=26,SNR=1.6
JOW   Kunigami           12.88 235   P     Pn         00 14 47.4 +2.6
UGL   Uglegorsk          14.25   6  eP     Pn         00 15 02.4 -0.9
UGL                                  MLR   MLR
      comp=E,2µm,19.0s
UGL                                  MLR   MLR
      comp=N,1µm,17.0s
UGL                                  MLR   MLR
      comp=Z,2µm,19.0s
CN2   Changchun          14.33 313  eP     Pn         00 15 06.3 +1.9
CN2                                 epP    P          00 15 16.0 +6.0
CN2                                 eS     Sn         00 17 43.8 +2.1
CN2                                  pmax  pmax
      comp=Z,20nm,1.1s
CN2                                  pmax  pmax
      comp=Z,400nm,5.0s
CN2                                  LR    LR
      comp=Z,700nm,12.0s
CN2                                  LR    LR
      comp=Z,700nm,12.0s
CN2                                  LR    LR
      comp=Z,900nm,13.0s
BNX   BinXian            14.46 322 ⇑P      Pn         00 15 05.5 -0.5
BNX                                  S     Sn         00 17 46.0 +1.2
BNX                                  pmax  pmax
      comp=Z,21nm,1.1s
BNX                                  pmax  pmax
      comp=Z,760nm,4.1s
BNX                                  LR    LR
      comp=Z,2µm,22.2s
BNX                                  LR    LR
      comp=Z,2µm,18.4s
BNX                                  LR    LR
      comp=Z,3µm,20.8s
SNY   Shenyang           14.61 303 ⇓P      Pn         00 15 09.8 +1.8
SNY                                  pmax  pmax
      comp=Z,25nm,1.4s
SNY                                  pmax  pmax
      comp=Z,480nm,3.5s
SNY                                  LR    LR
      comp=Z,540nm,13.8s
SNY                                  LR    LR
      comp=Z,1µm,19.4s
SNY                                  LR    LR
      comp=Z,2µm,20.5s
DL2   Dalian             15.23 291   P     Pn         00 15 17.1 +1.0
DL2                                  S     Sn         00 18 03.1 -0.5
DL2                                  pmax  pmax
      comp=Z,60nm,1.0s
DL2                                  pmax  pmax
      comp=Z,570nm,11.0s
DL2                                  LR    LR
      comp=Z,970nm,19.6s
DL2                                  LR    LR
      comp=Z,2µm,19.5s
DL2                                  LR    LR
      comp=Z,3µm,21.0s
KLR   Kul'dur            15.56 339   P     Pn         00 15 17.1 -3.2
      comp=Z,7.3nm,0.3s,baz=145,slow=11,SNR=39
KLR                                  LR    LR         00 20 57.6
      comp=Z,2µm,21.6s,baz=160,slow=36
KLR   Kul'dur            15.56 339deP      Pn         00 15 16.4 -3.9
GRNR  Gornyy             16.08 352⇓iP      Pn         00 15 22.7 -4.2
GRNR                                 pmax  pmax
      comp=Z,8.0nm,0.8s
GRNR                                 MLR   MLR
      comp=E,720nm,19.0s
GRNR                                 MLR   MLR
      comp=N,630nm,17.0s
GRNR                                 MLR   MLR
      comp=Z,1µm,17.0s
TYV   Tymovskoe          16.08   6  eP     Pn         00 15 23.2 -3.6
TYV                                 eS     Sn         00 18 20.4 -3.6
TYV                                  pmax  pmax
      comp=Z,195nm,0.8s
TYV                                  pmax  pmax
      comp=Z,400nm,3.1s
TYV                                  smax  smax
      comp=N,27nm,1.6s
TYV                                  smax  smax
      comp=E,54nm,1.6s
TYV                                  smax  smax
      comp=N,1µm,3.5s
TYV                                  smax  smax
      comp=E,800nm,3.5s
TYV                                  MLR   MLR
      comp=N,2µm,21.0s
TYV                                  MLR   MLR
      comp=Z,2µm,22.0s
TYV                                  MLR   MLR
      comp=E,2µm,20.0s
SSE   Sheshan            16.23 262   P     Pn         00 15 27.8 -1.1
SSE                                  S     Sn         00 18 26.3 -1.7
SSE                                  pmax  pmax
      comp=E,5.0nm,0.4s
SSE                                  LR    LR
      comp=E,460nm,16.7s
SSE                                  LR    LR
      comp=E,650nm,16.3s
NJ2   Nanjing            17.86 267 ⇑P      P          00 15 51.1 +1.9
NJ2                                  pmax  pmax
      comp=E,24nm,0.5s
NJ2                                  pmax  pmax
      comp=E,630nm,7.3s
NJ2                                  LR    LR
      comp=E,860nm,15.8s
NJ2                                  LR    LR
      comp=E,690nm,18.4s
NJ2                                  LR    LR
      comp=E,1µm,24.5s
HEH   HeiHe              17.89 333  eP     Pn         00 15 45.5 -3.8
HEH                                  SS    SnSn       00 19 28.5 +6.4
HEH                                  pmax  pmax
      comp=E,31nm,0.9s
HEH                                  pmax  pmax
      comp=E,440nm,4.6s
HEH                                  LR    LR
      comp=E,2µm,18.8s
HEH                                  LR    LR
      comp=E,1µm,16.0s
HEH                                  LR    LR
      comp=E,3µm,18.6s
TIA   Tai'an             18.65 281   P     P          00 15 57.8 -0.1
TIA                                  pmax  pmax
      comp=E,7.0nm,0.6s
TIA                                  pmax  pmax
      comp=E,360nm,5.8s
TIA                                  LR    LR
      comp=E,780nm,15.5s
TIA                                  LR    LR
      comp=E,3µm,14.8s
NACB  Ninganchiao        19.22 241   P     P          00 16 03.2 -1.0
BJI   Beijing            19.57 292   P     Pn         00 16 12.9 +3.3
BJI                                  pP    sP         00 16 23.3 -3.2
BJI                                  PP    PnPn       00 16 32.6 +8.1
BJI                                  S     S          00 19 38.5 -7.3
BJI                                  pmax  pmax
      comp=E,13nm,2.0s
BJI                                  pmax  pmax
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      comp=E,130nm,3.0s
BJI                                  LR    LR
      comp=E,310nm,17.6s
BJI                                  LR    LR
      comp=E,430nm,20.6s
BJI                                  LR    LR
      comp=E,850nm,24.9s
BJT   Baijiatuau         19.57 292   P     P          00 16 08.5 +0.6
BJT   Baijiatuau         19.57 292   P     Pn         00 16 10.1 +0.4
BJT   Baijiatuau         19.57 292   P     P          00 16 08.5 +0.6
BJT                                  pmax  pmax
      comp=Z,110nm,1.8s
SKR   Severo-Kuril's     19.65  32  eP     P          00 16 09.3 +0.7
SKR                                 eS     Sn         00 19 50.6 +0.3
SKR                                  pmax  pmax
      comp=Z,203nm,0.9s
SKR                                  pmax  pmax
      comp=Z,600nm,5.3s
SKR                                  MLR   MLR
      comp=Z,500nm,14.0s
SSLB  Suanglung          19.92 241   P     P          00 16 11.7 -0.1
YULB  Yu-li              19.92 240   P     Pn         00 16 12.7 -1.1
YULB  Yu-li              19.92 240   P     Pn         00 16 13.4 -0.4
TWGBT Beinan             20.44 239   P     Pn         00 16 19.7 -0.3
TWG   Pinlang            20.44 239   P     P          00 16 17.2 -0.3
TPUB  Ta-pu              20.45 241   P     P          00 16 17.6  0.0
XLT   XiLinHaoTe         20.50 303  eP     P          00 16 15.8 -2.2
XLT                                  S     S          00 19 56.4 -7.9
XLT                                  pmax  pmax
      comp=Z,13nm,0.8s
XLT                                  LR    LR
      comp=Z,760nm,15.3s
XLT                                  LR    LR
      comp=Z,1µm,22.1s
HNS   HongShan           20.56 284 ⇑P      P          00 16 16.3 -2.3
HNS                                  pmax  pmax
      comp=Z,17nm,0.7s
HNS                                  LR    LR
      comp=Z,950nm,16.8s
HNS                                  LR    LR
      comp=Z,380nm,15.0s
HNS                                  LR    LR
      comp=Z,860nm,16.5s
HIA   Hailar             20.70 320   P     P          00 16 19.2 -0.9
HIA   Hailar             20.70 320   P     Pn         00 16 22.5 -0.4
HIA   Hailar             20.70 320   P     P          00 16 19.2 -0.9
HIA                                  pmax  pmax
      comp=Z,27nm,1.0s
ZEA   Zeya               20.87 338  eP     P          00 16 19.2 -2.6
ZEA                                 e                 00 20 02.1
ZEA                                  pmax  pmax
      comp=Z,10.0nm,1.4s
ZEA                                  pmax  pmax
      comp=E,30nm,0.4s
ZEA                                  pmax  pmax
      comp=N,60nm,0.7s
ZEA                                  pmax  pmax
      comp=Z,120nm,0.9s
ZEA                                  MLR   MLR
      comp=E,500nm,13.0s
ZEA                                  MLR   MLR
      comp=N,1µm,17.0s
ZEA                                  MLR   MLR
      comp=Z,900nm,17.0s
GUMO  Guam               21.67 167   P     P          00 16 30.0 -0.7
GUMO  Guam               21.67 167   P     P          00 16 30.3 -0.3
      comp=Z,104nm,0.4s,baz=68,slow=3.6,SNR=5.4
      comp=Z,104nm,0.4s
GUMO  Guam               21.67 167   P     P          00 16 33.7 +3.1
WHN   Wuhan              21.99 266   P     P          00 16 34.1 +0.1
WHN                                  S     S          00 20 27.3 -6.3
WHN                                  SS    SnSn       00 21 10.1 +7.4
WHN                                  pmax  pmax
      comp=Z,90nm,0.7s
WHN                                  LR    LR
      comp=Z,1µm,10.1s
WHN                                  LR    LR
      comp=Z,2µm,9.6s
WHN                                  LR    LR
      comp=Z,2µm,21.5s
PEA0B Petropavlovsk-     22.11  29   P     P          00 16 34.5 -0.6
PEA0B Petropavlovsk-     22.11  29c iP     P          00 16 35.4 +0.3
PETK  Petropavlovsk-     22.11  29   P     P          00 16 34.8 -0.3
PETK  Petropavlovsk-     22.11  29   P     P          00 16 35.0 -0.1
      comp=Z,36nm,0.9s,baz=218,slow=9.0,SNR=74
PETK                                 PcP   PcP        00 20 30.0 -0.6
      comp=Z,7.1nm,0.9s,baz=131,slow=4.5,SNR=5.0
PETK                                 LR    LR         00 25 26.6
      comp=Z,650nm,21.1s,baz=221,slow=37
      comp=Z,36nm,0.9s
TIY   Taiyuan            22.36 285  eP     P          00 16 40.4 +2.3
TIY                                  PP    PnPn       00 17 04.3 +1.6
TIY                                  S     S          00 20 37.6 -2.8
TIY                                  SS    SnSn       00 21 17.3 +5.5
TIY                                  pmax  pmax
      comp=Z,190nm,4.4s
TIY                                  LR    LR
      comp=Z,680nm,17.9s
TIY                                  LR    LR
      comp=Z,570nm,17.9s
TIY                                  LR    LR
      comp=Z,1µm,20.6s
PET   Petropavlovsk      22.44  30   P     P          00 16 38.8 +0.1
PET   Petropavlovsk      22.44  30   P     P          00 16 39.5 +0.9
PET   Petropavlovsk      22.44  30ceP      P          00 16 38.9 +0.3
PET                                 e*SP   sP         00 16 55.1 -2.8
PET                                 eS     S          00 20 43.1 +1.9
PET                                  pmax  pmax
      comp=Z,300nm,13.2s
PET                                  pmax  pmax
      comp=Z,58nm,0.9s
PET                                  MLR   MLR
      comp=Z,400nm,18.0s
PET                                  MLR   MLR
      comp=Z,400nm,19.0s
LYN   LuoYang            22.61 277   P     P          00 16 40.5 -0.1
LYN                                  S     S          00 20 41.0 -3.5
LYN                                  pmax  pmax
      comp=Z,21nm,0.6s
LYN                                  pmax  pmax
      comp=Z,260nm,5.2s
LYN                                  LR    LR
      comp=Z,590nm,12.0s
LYN                                  LR    LR
      comp=Z,3µm,17.5s
LYN                                  LR    LR
      comp=Z,4µm,17.9s
HHC   Hu-ho-hao-te       23.16 293⇑iP      P          00 16 48.3 +1.9
HHC                                  pmax  pmax
      comp=Z,17nm,1.0s
HHC                                  pmax  pmax
      comp=Z,91nm,6.1s
HHC                                  LR    LR
      comp=Z,450nm,17.6s
HHC                                  LR    LR
      comp=Z,790nm,21.4s
HHC                                  LR    LR
      comp=Z,1µm,25.2s
BTO   Baotou             24.31 292  eP     P          00 16 59.5 +2.5
BTO                                  pP    sP         00 17 14.3 -2.9
BTO                                  sP    pP         00 17 21.8  +11
BTO                                  PP    PnPn       00 17 37.0 +7.6
BTO                                  SS    SnSn       00 22 11.3  +12
BTO                                  pmax  pmax
      comp=Z,31nm,0.7s
BTO                                  pmax  pmax
      comp=Z,310nm,4.0s
BTO                                  LR    LR
      comp=Z,1µm,15.5s
BTO                                  LR    LR
      comp=Z,2µm,13.4s
BTO                                  LR    LR
      comp=Z,2µm,12.8s
XAN   Xi'an              25.59 277 ⇓P      P          00 17 06.9 -1.7
XAN                                  S     S          00 21 27.3 -5.4
XAN                                  pmax  pmax
      comp=Z,20nm,0.1s
XAN                                  pmax  pmax
      comp=Z,330nm,8.3s
XAN                                  LR    LR
      comp=Z,1µm,15.8s
XAN                                  LR    LR
      comp=Z,2µm,18.0s
XAN                                  LR    LR
      comp=Z,3µm,17.2s
MA2   Magadan            25.68  13   P     P          00 17 09.7 +0.5
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MA2                                  IAmb  IAmb       00 17 12.3
      comp=Z,135nm,0.8s
MA2   Magadan            25.68  13   LR    LR         00 27 58.8
      comp=Z,911nm,19.4s,baz=182,slow=38
MA2   Magadan            25.68  13   P     P          00 17 10.3 +1.1
MA2   Magadan            25.68  13c iP     P          00 17 09.8 +0.6
MA2                                  pmax  pmax
      comp=Z,163nm,0.9s
ENH   Enshi              26.06 268   P     P          00 17 11.1 -1.9
ENH   Enshi              26.06 268   P     P          00 17 14.6 +1.6
TGY   Tagaytay City      26.91 224   LR    LR         00 26 22.7
      comp=Z,151nm,20.2s,baz=153,slow=33
ULN   Ulaanbaatar        27.68 308   P     P          00 17 26.9 -0.6
ULN                                        PcP        00 20 43.9 +0.6
ULN   Ulaanbaatar        27.68 308   P     P          00 17 27.2 -0.3
ULN                                  S     S          00 22 03.4 -2.4
ULN   Ulaanbaatar        27.68 308c iP     P          00 17 26.4 -1.1
ULN                                  pmax  pmax
      comp=Z,24nm,1.9s
YAK   Yakutsk            27.93 350   P     P          00 17 28.7 -0.6
YAK                                  IAmb  IAmb       00 17 32.9
      comp=Z,116nm,0.8s
YAK                                        PcP        00 20 43.8 +0.4
YAK   Yakutsk            27.93 350   P     P          00 17 28.5 -0.8
      comp=Z,67nm,0.5s,baz=166,slow=2.1,SNR=31
YAK                                  PcP   PcP        00 20 43.1 -0.3
      comp=Z,29nm,0.6s,baz=120,slow=1.9,SNR=4.6
YAK                                  LR    LR         00 28 54.5
      comp=Z,2µm,18.9s,baz=148,slow=37
      comp=Z,67nm,0.5s
YAK   Yakutsk            27.93 350  eP     P          00 17 28.7 -0.6
YAK                                 e*PP   pP         00 17 43.3 +0.1
YAK                                 e                 00 18 16.5
YAK                                 e                 00 20 43.4
YAK                                 eS     S          00 22 08.8 -0.2
YAK                                 e*SS   sS         00 22 34.0 +1.7
YAK                                 eSS    SnSn       00 23 31.0 +3.7
YAK                                 e                 00 28 09.7
YAK                                  pmax  pmax
      comp=Z,171nm,1.1s
YAK                                  pmax  pmax
      comp=E,15nm,1.2s
YAK                                  pmax  pmax
      comp=N,100nm,1.3s
YAK                                  pmax  pmax
      comp=Z,65nm,1.3s
YAK                                  pmax  pmax
      comp=N,59nm,1.4s
YAK                                  pmax  pmax
      comp=E,23nm,1.4s
YAK                                  smax  smax
      comp=N,432nm,4.3s
YAK                                  smax  smax
      comp=E,356nm,2.7s
YAK                                  MLR   MLR
      comp=Z,2µm,20.0s
YAK                                  MLR   MLR
      comp=E,516nm,20.0s
YAK                                  MLR   MLR
      comp=N,918nm,20.0s
SONM  Songino Array      28.10 308   P     P          00 17 30.7 -0.5
SONM                                       PcP        00 20 44.5 +0.3
SONM  Songino Array      28.10 308   P     P          00 17 29.8 -1.4
      comp=N,5.9nm,0.8s,baz=108,slow=8.8,SNR=22
SONM                                 PcP   PcP        00 20 43.8 -0.5
      comp=N,5.4nm,0.7s,baz=141,slow=3.1,SNR=8.8
SONM                                 ScP   ScP        00 24 20.6 +0.1
      comp=N,2.4nm,0.9s,baz=94,slow=3.1,SNR=5.7
SONM                                 LR    LR         00 29 30.5
      comp=N,2µm,18.5s,baz=106,slow=38
      comp=N,5.9nm,0.8s
H11N2 WAKE ISLAND Hy     28.16 115   T     T          00 47 07.5
      baz=308,slow=75,SNR=7249
H11N1 WAKE ISLAND Hy     28.16 115   T     T          00 47 07.2
      baz=308,slow=75,SNR=2917
H11N3 WAKE ISLAND Hy     28.18 115   T     T          00 47 09.6
      baz=308,slow=75,SNR=3301
H11S3 WAKE ISLAND Hy     28.78 118   T     T          00 47 54.3
      baz=310,slow=76,SNR=1398
H11S1 WAKE ISLAND Hy     28.78 118   T     T          00 47 53.8
      baz=310,slow=76,SNR=1186
BOD   Bodaibo            28.78 331  eP     P          00 17 36.8 -0.1
BOD                                  pmax  pmax
      comp=Z,50nm,1.6s
H11S2 WAKE ISLAND Hy     28.79 118   T     T          00 47 54.8
      baz=310,slow=76,SNR=1668
SEY   Seymchan           29.11  12   LR    LR         00 30 19.1
      comp=Z,1µm,19.5s,baz=198,slow=38
SEY   Seymchan           29.11  12c iP     P          00 17 40.7 +0.9
SEY                                  pmax  pmax
      comp=Z,19nm,0.9s
LZH   Lanzhou            29.36 283  eP     P          00 17 40.5 -2.0
LZH                                  S     S          00 22 32.8 +0.5
LZH                                  SS    SnSn       00 24 06.8 +4.0
LZH                                  pmax  pmax
      comp=Z,150nm,4.0s
LZH                                  LR    LR
      comp=Z,940nm,16.2s
LZH                                  LR    LR
      comp=Z,920nm,16.5s
LZH                                  LR    LR
      comp=Z,1µm,16.2s
GYA   Guiyang            29.77 263 ⇓P      P          00 17 44.5 -1.7
GYA                                  S     S          00 22 30.9 -8.0
GYA                                  SS    ScP        00 24 21.9 -4.2
GYA                                  pmax  pmax
      comp=Z,34nm,1.3s
GYA                                  pmax  pmax
      comp=Z,200nm,5.8s
GYA                                  LR    LR
      comp=Z,580nm,17.8s
GYA                                  LR    LR
      comp=Z,770nm,18.0s
GYA                                  LR    LR
      comp=Z,970nm,18.6s
CD2   Chengdu            30.58 273   P     P          00 17 52.8 -0.4
CD2                                  S     S          00 22 52.3 +0.9
CD2                                  pmax  pmax
      comp=Z,60nm,0.7s
CD2                                  pmax  pmax
      comp=Z,270nm,7.0s
CD2                                  LR    LR
      comp=Z,3µm,18.6s
CD2                                  LR    LR
      comp=Z,3µm,18.0s
DAV   Davao City (W)     30.71 209   LR    LR         00 29 53.9
      comp=Z,692nm,21.3s,baz=59,slow=36
DAV   Davao City (W)     30.71 209   P     P          00 17 58.8 +4.4
ZAK   Zakamensk          30.76 312  eP     P          00 17 53.3 -1.4
ZAK                                 e                 00 20 51.3
ZAK                                  pmax  pmax
      comp=Z,9.0nm,1.2s
ZAK                                  pmax  pmax
      comp=Z,6.0nm,1.1s
QIZ   Qiongzhong         31.02 247   P     P          00 17 58.1 +0.9
QIZ                                  LR    LR
      comp=Z,490nm,17.0s
QIZ                                  LR    LR
      comp=Z,590nm,25.9s
GTA   Gaotai             32.15 290  eP     P          00 18 08.3 +1.2
GTA                                  PcP   PcP        00 20 55.8 +0.8
GTA                                  S     S          00 23 12.6 -3.4
GTA                                  PcS   PcS        00 24 39.6 -0.3
GTA                                  pmax  pmax
      comp=Z,13nm,0.8s
GTA                                  LR    LR
      comp=Z,730nm,18.7s
GTA                                  LR    LR
      comp=Z,960nm,20.7s
GTA                                  LR    LR
      comp=Z,1µm,21.9s
AMKA  Amchitka           32.61  47   P     P          00 18 11.8 +1.0
KMI   Kunming            33.54 263   P     P          00 18 17.5 -1.9
KMI                                  S     S          00 23 38.8 +0.9
KMI                                  pmax  pmax
      comp=Z,22nm,0.7s
KMI                                  LR    LR
      comp=Z,490nm,13.3s
KMI                                  LR    LR
      comp=Z,910nm,18.2s
KMI                                  LR    LR
      comp=Z,820nm,16.6s
PZH   PanZhiHua          33.78 266   P     P          00 18 19.6 -1.8
PZH                                  S     S          00 23 42.9 +1.5
PZH                                  pmax  pmax
      comp=Z,20nm,1.1s
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PZH				pmax	pmax		
	comp=Z,110nm,5.7s						
PZH				LR	LR		
	comp=Z,370nm,13.3s						
PZH				LR	LR		
	comp=Z,360nm,14.7s						
PZH				LR	LR		
	comp=Z,490nm,16.3s						
SLVN	Son La	34.39	257	P	P	00 18 26.0	-0.7
SLVN	Son La	34.39	257	P	P	00 18 27.2	+0.6
KIWB	Kanaga Island	34.87	48	P	P	00 18 31.4	+1.0
BILL	Bilibino	36.40	16	P	P	00 18 42.9	-0.4
BILL	Bilibino	36.40	16	c iP	P	00 18 43.1	-0.2
BILL				pmax	pmax		
	comp=Z,21nm,1.3s						
GOMU	GeErMu	36.53	285	P	P	00 18 42.9	-2.4
GOMU				pmax	pmax		
	comp=Z,16nm,0.9s						
GOMU				LR	LR		
	comp=Z,400nm,19.2s						
GOMU				LR	LR		
	comp=Z,250nm,18.3s						
GOMU				LR	LR		
	comp=Z,410nm,19.2s						
SMPI	Sarmi	36.71	182	P	P	00 18 48.4	+1.9
	comp=Z,5µmcomp=Z,27nm,0.6s						
MIDW	Midway	36.72	88		P	00 18 46.0	-0.5
MIDW				IAmb	IAmb	00 19 28.4	
	comp=Z,94nm,1.1s						
TNCH	TengChong	37.03	266	⇑P	P	00 18 47.8	-1.6
TNCH				PP	PnPn	00 20 17.5	+2.2
TNCH				S	S	00 24 28.6	-2.9
TNCH				pmax	pmax		
	comp=Z,64nm,0.4s						
TNCH				pmax	pmax		
	comp=Z,270nm,5.7s						
TNCH				LR	LR		
	comp=Z,580nm,17.3s						
TNCH				LR	LR		
	comp=Z,470nm,17.3s						
TNCH				LR	LR		
	comp=Z,880nm,23.3s						
JAY	Jayapura	37.22	179	LR	LR	00 30 46.3	
	comp=Z,662nm,20.8s,baz=14,slow=31						
JAY	Jayapura	37.22	179	P	P	00 18 51.5	+0.7
	comp=Z,48nm,1.2s						
TIXI	Tiksi	37.28	354	P	P	00 18 50.2	-0.5
TIXI	Tiksi	37.28	354	P	P	00 18 50.5	-0.2
	comp=Z,9.4nm,0.3s,baz=159,slow=5.5,SNR=29						
TIXI				PcP	PcP	00 21 09.0	0.0
	comp=Z,7.7nm,0.8s,baz=170,slow=4.5,SNR=3.6						
TIXI				LR	LR	00 36 11.8	
	comp=Z,897nm,18.1s,baz=163,slow=39						
	comp=Z,9.4nm,0.3s						
TIXI	Tiksi	37.28	354	P	P	00 18 50.4	-0.4
TIXI				pP	pP	00 19 03.6	-1.3
TIXI				sP	sP	00 19 09.2	-2.1
GENI	Genyem	37.29	180	P	P	00 18 53.1	+1.7
GENI	Genyem	37.29	180	P	P	00 18 52.8	+1.4
	comp=Z,121nm,1.1s						
MANU	Manus Island	37.39	168	P	P	00 18 53.6	+1.3
TOLI2	Tolitoli	38.09	212	P	P	00 18 55.4	-2.8
KRAR	Krasnoyarsk	38.25	318	⇑iP	P	00 19 00.2	+1.1
CHTO	Chiang Mai	39.67	257	P	P	00 19 09.8	-1.6
CHTO	Chiang Mai	39.67	257	P	P	00 19 10.8	-0.6
CHTO	Chiang Mai	39.67	257	P	P	00 19 10.7	-0.7
CHTO	Chiang Mai	39.67	257	P	P	00 19 09.8	-1.6
CHTO				pmax	pmax		
	comp=Z,14nm,1.0s						
CM31	Chiang Mai Arr	39.86	257	P	P	00 19 12.3	-0.7
CMAR	Chiang Mai Arr	39.86	257	P	P	00 19 11.0	-2.0
CMAR					PcP	00 21 18.6	+0.6
CMAR	Chiang Mai Arr	39.86	257	P	P	00 19 12.2	-0.8
	comp=Z,4.1nm,0.4s,baz=48,slow=7.3,SNR=33						
CMAR				PcP	PcP	00 21 18.2	+0.2
	comp=Z,3.4nm,0.5s,baz=11,slow=1.6,SNR=13						
CMAR				LR	LR	00 38 09.9	
	comp=Z,476nm,18.2s,baz=50,slow=40						
	comp=Z,4.1nm,0.4s						
SPIA	Saint Paul Isl	39.93	40	P	P	00 19 13.7	+0.6
	baz=258						
NIKH	Nikolski High	40.06	47	P	P	00 19 14.4	+0.2
NIKH	Nikolski High	40.06	47	P	P	00 19 15.6	+1.4
NIKH	Nikolski High	40.06	47	P	P	00 19 14.6	+0.4
	baz=264,SNR=9.1						
P08K	Saint George I	40.19	41	P	P	00 19 16.4	+1.1
	baz=259						
WMQ	Urumqi	40.82	299	eP	P	00 19 21.9	+1.1
WMQ				PcP	PcP	00 21 21.5	+0.7
WMQ				S	S	00 25 27.5	-0.4
WMQ				pmax	pmax		
	comp=Z,44nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,400nm,3.8s						
WMQ				LR	LR		
	comp=Z,310nm,15.7s						
WMQ				LR	LR		
	comp=Z,430nm,16.7s						
WMQ				LR	LR		
	comp=Z,520nm,20.3s						
WMQ	Urumqi	40.82	299	P	P	00 19 21.6	+0.8
WMQ				sP	sP	00 19 40.3	-1.0
GAMB	Gambell	41.14	30	P	P	00 19 23.8	+0.9
GAMB	Gambell	41.14	30	P	P	00 19 24.3	+1.4
	baz=249						
LSA	Lhasa	41.29	277	P	P	00 19 24.5	-0.8
LSA	Lhasa	41.29	277	P	P	00 19 24.5	-0.8
LSA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
UNV	Unalaska Valle	41.54	46	P	P	00 19 27.1	+0.7
	baz=265						
LVA	Lava Point	41.84	45	P	P	00 19 29.7	+0.8
AKUT	Akutan	42.00	46	P	P	00 19 30.9	+0.8
ZSN	Zaisan	42.51	304	eP	P	00 19 34.8	+0.4
ZSN				eS	S	00 25 53.1	+0.5
ZSN				pmax	pmax		
	comp=Z,45nm,1.1s						
ZSN	Zaisan	42.51	304	eP	P	00 19 34.9	+0.4
	comp=Z,45nm,1.1s						
ZSN				eS	S	00 25 53.2	+0.5
ZAA0	Zalesovo Array	42.54	314	P	P	00 19 34.0	-0.6
ZALV	Zalesovo Beam	42.54	314	P	P	00 19 33.8	-0.8
ZALV	Zalesovo Beam	42.54	314	P	P	00 19 34.3	-0.3
	comp=Z,11nm,0.4s,baz=105,slow=7.3,SNR=62						
ZALV				pP	pP	00 19 49.7	+0.9
	comp=Z,16nm,0.7s,baz=97,slow=6.1,SNR=7.1						
ZALV				PcP	PcP	00 21 25.9	-0.2
	comp=Z,21nm,0.5s,baz=109,slow=2.9,SNR=16						
ZALV				ScP	ScP	00 25 13.1	+0.8
	comp=Z,1.7nm,0.7s,baz=90,slow=1.5,SNR=3.7						
ZALV				LR	LR	00 37 52.1	
	comp=Z,530nm,21.3s,baz=90,slow=37						
	comp=Z,11nm,0.4s						
M11K	Mekoryuk	42.66	36	P	P	00 19 36.1	+0.7
M11K				IAmb	IAmb	00 19 39.0	
	comp=Z,86nm,1.1s						
M11K	Mekoryuk	42.66	36	P	P	00 19 37.3	+1.9
	baz=258,SNR=6.2						
KSM	Kuching	43.25	226	P	P	00 19 39.5	-1.2
KSM	Kuching	43.25	226	P	P	00 19 42.1	+1.4
TNA	Tin City	43.28	29	P	P	00 19 41.5	+1.2
TNA				IAmb	IAmb	00 19 43.5	
	comp=Z,52nm,0.8s						
TNA	Tin City	43.28	29	P	P	00 19 42.1	+1.8
	baz=251,SNR=8.8						
SAUI	Saumlaki	43.43	193	P	P	00 19 43.2	+1.1
BRDH	Bariadhala	43.71	267	LR	LR	00 41 23.7	
	comp=Z,784nm,18.3s,baz=64,slow=41						
K13K	Kusilvak Mount	43.71	34	P	P	00 19 44.9	+1.0
K13K				IAmb	IAmb	00 19 47.1	
	comp=Z,82nm,0.9s						
K13K	Kusilvak Mount	43.71	34	P	P	00 19 45.8	+1.9
	baz=258,SNR=37						
F14K	Arctic Creek	43.88	29	P	P	00 19 47.5	+2.3
	baz=253						
ANM	Nome	44.02	30	P	P	00 19 47.4	+1.0
ANM	Nome	44.02	30	P	P	00 19 47.4	+1.0
ANM				pmax	pmax		
	comp=Z,263nm,1.7s						
ANM	Nome	44.02	30	P	P	00 19 48.8	+2.5
	baz=255						
KAPI	Kappang	44.04	210	P	P	00 19 45.9	-1.1
KAPI	Kappang	44.04	210	LR	LR	00 39 35.7	
	comp=Z,148nm,18.4s,baz=36,slow=38						
KAPI	Kappang	44.04	210	P	P	00 19 51.9	+4.9
KAPI	Kappang	44.04	210	P	P	00 19 45.9	-1.1
KAPI				pmax	pmax		
	comp=Z,40nm,1.3s						
M13K	Dall Lake	44.06	37	P	P	00 19 47.8	+1.1
M13K	Dall Lake	44.06	37	P	P	00 19 49.0	+2.3
	baz=261,SNR=20						
S12K	Black Hills	44.24	43	P	P	00 19 47.7	-0.6
MK31	Makanchi Array	44.31	304	c iP	P	00 19 49.0	0.0
MKAR	Makanchi Array	44.31	304	P	P	00 19 49.3	+0.3
MKAR	Makanchi Array	44.31	304	P	P	00 19 49.1	+0.1
	comp=Z,9.9nm,0.6s,baz=90,slow=10.0,SNR=106						
MKAR				PcP	PcP	00 21 32.0	-0.4
	comp=Z,13nm,0.9s,baz=82,slow=5.3,SNR=7.1						
MKAR				ScP	ScP	00 25 19.7	0.0
	comp=Z,3.0nm,0.9s,baz=91,slow=5.0,SNR=5.4						
MKAR				LR	LR	00 39 14.7	
	comp=Z,1µm,18.9s,baz=81,slow=37						
	comp=Z,9.9nm,0.6s						
J14K	Nanvaranak Lak	44.38	33	P	P	00 19 50.1	+0.9
J14K				IAmb	IAmb	00 19 52.4	
	comp=Z,66nm,1.1s						
J14K	Nanvaranak Lak	44.38	33	P	P	00 19 50.8	+1.6
	baz=258,SNR=18						
MAKZ	Makanchi	44.53	304	P	P	00 19 51.0	+0.3
MAKZ	Makanchi	44.53	304	P	P	00 19 51.0	+0.3
MAKZ				pmax	pmax		
	comp=Z,16nm,0.7s						
MAKZ	Makanchi	44.53	304	P	P	00 19 50.9	+0.3
MAKZ				sP	sP	00 20 09.9	-1.4
MAKZ				PcP	PcP	00 21 32.5	-0.5
L14K	Kuka Creek	44.53	35	P	P	00 19 51.9	+1.4
L14K				IAmb	IAmb	00 19 54.1	
	comp=Z,116nm,1.1s						
L14K	Kuka Creek	44.53	35	P	P	00 19 52.9	+2.5
	baz=261,SNR=42						
F15K	North Star Dit	44.62	29	P	P	00 19 52.6	+1.4
F15K				IAmb	IAmb	00 19 54.6	
	comp=Z,73nm,0.9s						
F15K	North Star Dit	44.62	29	P	P	00 19 53.3	+2.1
	baz=254,SNR=18						
G15K	Niukluk	44.68	30	P	P	00 19 53.4	+1.8
	baz=256						
M14K	Bethel	44.79	36	P	P	00 19 54.3	+1.9
M14K	Bethel	44.79	36	P	P	00 19 54.9	+2.4
	baz=262,SNR=91						
N14K	Kuskokwak Cree	44.81	37	P	P	00 19 54.3	+1.6
N14K	Kuskokwak Cree	44.81	37	P	P	00 19 55.0	+2.3
	baz=263,SNR=7.7						
O14K	Tigyukauivet M	44.95	38	P	P	00 19 54.8	+1.0
O14K	Tigyukauivet M	44.95	38	P	P	00 19 55.6	+1.8
	baz=264,SNR=5.7						
C16K	Lisburne Hills	45.12	25	P	P	00 19 55.8	+0.7
C16K	Lisburne Hills	45.12	25	P	P	00 19 56.6	+1.5
	baz=251,SNR=48						
SDPT	Sand Point	45.13	44	P	P	00 19 55.0	-0.3
SDPT				IAmb	IAmb	00 19 55.8	
	comp=Z,63nm,0.8s						
SDPT	Sand Point	45.13	44	P	P	00 19 55.0	-0.3
	baz=269						
L15K	Ungalak Mounta	45.15	35	P	P	00 19 57.2	+1.8
	baz=261,SNR=16						
K15K	Wolf Creek Mou	45.22	34	P	P	00 19 57.6	+1.6
K15K				IAmb	IAmb	00 19 59.5	
	comp=Z,81nm,0.9s						
K15K	Wolf Creek Mou	45.22	34	P	P	00 19 58.4	+2.4
	baz=261,SNR=32						
SRIT	Nakonsritamara	45.28	244	P	P	00 19 55.8	-1.2
SRIT	Nakonsritamara	45.28	244	P	P	00 19 57.0	0.0
H16K	Elim	45.35	31	P	P	00 19 58.7	+1.8
	baz=258						
M15K	Kasigluk River	45.40	36	P	P	00 19 59.2	+1.9
	baz=263,SNR=34						
EVN	Everest	45.46	277	P	P	00 19 58.0	-1.2
G16K	Koyuk River	45.47	30	P	P	00 19 58.6	+0.8
G16K	Koyuk River	45.47	30	P	P	00 19 59.3	+1.5
	baz=257						
CHNA	Chernabura Isl	45.63	45	P	P	00 19 59.9	+0.6
CHNA	Chernabura Isl	45.63	45	P	P	00 19 59.6	+0.3
	baz=270,SNR=6.7						
CNBA	Chernabura Isl	45.63	45	P	P	00 19 59.1	-0.1
CNBA				IAmb	IAmb	00 20 00.7	
	comp=Z,67nm,0.9s						
N15K	Kwethluk River	45.63	37	P	P	00 20 00.9	+1.6
N15K	Kwethluk River	45.63	37	P	P	00 20 00.8	+1.6
	baz=264,SNR=43						
O15K	Ungalikthiuk R	45.68	39	P	P	00 20 01.2	+1.6
O15K	Ungalikthiuk R	45.68	39	P	P	00 20 01.2	+1.6
	baz=265,SNR=23						
D17K	Noatak River	45.76	27	P	P	00 20 02.2	+2.0
	baz=254,SNR=43						
J16K	Anvik River	45.80	33	P	P	00 20 02.0	+1.5
J16K	Anvik River	45.80	33	P	P	00 20 02.7	+2.2
	baz=261,SNR=12						
I17K	Unalakleet	45.86	32	P	P	00 20 03.0	+2.0
I17K				IAmb	IAmb	00 20 04.3	
	comp=Z,75nm,0.9s						
I17K	Unalakleet	45.86	32	P	P	00 20 03.1	+2.1
	baz=260,SNR=8.8						
RDOG	Red Dog Mine	45.93	26	P	P	00 20 03.0	+1.5
RDOG				IAmb	IAmb	00 20 04.4	
	comp=Z,60nm,0.8s						
RDOG	Red Dog Mine	45.93	26	P	P	00 20 02.9	+1.5
	baz=254						
C17K	DeLong Mountai	45.95	25	P	P	00 20 03.6	+1.9
	baz=253,SNR=22						
E17K	Hotham Inlet	46.07	28	P	P	00 20 04.5	+1.9
	baz=256,SNR=9.6						
L16K	Owhat River	46.10	35	P	P	00 20 04.2	+1.3
L16K				IAmb	IAmb	00 20 05.8	
	comp=Z,80nm,1.0s						
L16K	Owhat River	46.10	35	P	P	00 20 04.8	+1.9
	baz=263,SNR=44						
F17K	Baldwin Pennin	46.14	28	P	P	00 20 04.7	+1.6
F17K				IAmb	IAmb	00 20 06.2	
	comp=Z,58nm,0.8s						
F17K	Baldwin Pennin	46.14	28	P	P	00 20 05.0	+1.8
	baz=257						
G17K	Kiwalik Mounta	46.18	30	P	P	00 20 05.5	+2.0
	baz=258,SNR=14						
M16K	Timber Creek	46.27	36	P	P	00 20 06.0	+1.8
M16K				IAmb	IAmb	00 20 07.4	
	comp=Z,81nm,1.0s						
M16K	Timber Creek	46.27	36	P	P	00 20 06.5	+2.2
	baz=264,SNR=30						
N16K	Nishlik Lake	46.32	37	P	P	00 20 06.9	+2.2
	baz=265,SNR=51						
KURK	Kurchatov	46.37	310	P	P	00 20 05.0	-0.2
KURK				IAmb	IAmb	00 20 06.1	
	comp=Z,67nm,0.9s						
KURK	Kurchatov	46.37	310	P	P	00 20 05.2	0.0
KURK				S	S	00 26 46.1	-2.4
KURK	Kurchatov	46.37	310	P	P	00 20 05.4	+0.2
KURK						00 21 39.1	
KURK	Kurchatov	46.37	310	P	P	00 20 05.0	-0.2
KURK				PcP	PcP	00 21 38.1	-1.2
H17K	Granite Mounta	46.38	31	P	P	00 20 06.9	+1.8
H17K				IAmb	IAmb	00 20 08.3	
	comp=Z,42nm,0.9s						
H17K	Granite Mounta	46.38	31	P	P	00 20 07.2	+2.1
	baz=260,SNR=28						
KURBB	Kurchatov Arra	46.44	309	P	P	00 20 05.4	-0.3
	comp=Z,22nm,0.5s,baz=84,slow=7.7,SNR=302						
KURBB				PcP	PcP	00 21 39.0	-0.6
	comp=Z,8.3nm,0.7s,baz=87,slow=4.3,SNR=7.3						
KURBB				S	S	00 26 47.8	-1.8
	comp=Z,0.3nm,0.3s,baz=77,slow=14,SNR=4.9						
KURBB				LR	LR	00 40 18.4	
	comp=Z,2µm,21.5s,baz=96,slow=37						
	comp=Z,22nm,0.5s						
J17K	VABM Dome	46.50	33	P	P	00 20 07.5	+1.5
J17K	VABM Dome	46.50	33	P	P	00 20 08.4	+2.4
	baz=262,SNR=51						
O16K	Kokwok River B	46.59	38	P	P	00 20 08.2	+1.4
O16K				IAmb	IAmb	00 20 09.8	
	comp=Z,58nm,0.9s						
O16K	Kokwok River B	46.59	38	P	P	00 20 08.7	+2.0
	baz=266,SNR=24						
P16K	Nushagak River	46.61	39	P	P	00 20 08.1	+1.2
P16K	Nushagak River	46.61	39	P	P	00 20 09.3	+2.3
	baz=267,SNR=9.5						
E18K	Tukpahlearik C	46.62	27	P	P	00 20 08.8	+2.0
E18K				IAmb	IAmb	00 20 10.2	
	comp=Z,51nm,0.9s						
E18K	Tukpahlearik C	46.62	27	P	P	00 20 09.1	+2.2
	baz=257,SNR=29						
B18K	Kokolik River	46.68	24	P	P	00 20 09.7	+2.3
	baz=254,SNR=40						
C18K	Utukok River	46.70	25	P	P	00 20 08.6	+1.0
C18K	Utukok River	46.70	25	P	P	00 20 09.3	+1.7
	baz=255,SNR=57						
L17K	Donlin	46.70	35	P	P	00 20 10.1	+2.5
	baz=264,SNR=60						
K17K	Iditarod	46.77	34	P	P	00 20 10.0	+1.9
K17K	Iditarod	46.77	34	P	P	00 20 10.6	+2.4
	baz=263,SNR=74						
PDGK	Podgornoye	46.79	299	P	P	00 20 07.8	-0.9
F18K	Selawik	46.80	28	P	P	00 20 10.4	+2.1
	baz=258,SNR=13						
SOEI	Soe	46.84	201	P	P	00 20 10.1	+0.8
SOEI				IAmb	IAmb	00 20 50.7	
	comp=Z,65nm,1.1s						
SOEI	Soe	46.84	201	P	P	00 20 11.9	+2.6
SHLS	Shalkode	46.84	299	eP	P	00 20 06.7	-2.4
SHLS				eS	S	00 26 51.4	-4.3
SHLS				pmax	pmax		
	comp=Z,31nm,1.0s						
SHLS	Shalkode	46.84	299	eP	P	00 20 06.8	-2.4
	comp=Z,31nm,1.0s						
SHLS				eS	S	00 26 51.5	-4.3
M17K	Holitna River	47.04	36	P	P	00 20 11.3	+1.0
M17K	Holitna River	47.04	36	P	P	00 20 12.7	+2.4
	baz=265,SNR=68						
H18K	Honhosa River	47.07	31	P	P	00 20 12.2	+1.7
H18K				IAmb	IAmb	00 20 12.8	
	comp=Z,54nm,0.9s						
H18K	Honhosa River	47.07	31	P	P	00 20 12.2	+1.7
	baz=261,SNR=31						
G18K	Tagagawik	47.07	29	P	P	00 20 11.9	+1.5
G18K				IAmb	IAmb	00 20 13.2	
	comp=Z,74nm,0.9s						
G18K	Tagagawik	47.07	29	P	P	00 20 12.1	+1.6
	baz=260,SNR=59						
N17K	Nushagak Hills	47.10	37	P	P	00 20 12.8	+2.1
N17K	Nushagak Hills	47.10	37	P	P	00 20 13.2	+2.4
	baz=266,SNR=41						
O17K	Koliganek Bris	47.11	38	P	P	00 20 12.8	+2.0
	baz=267,SNR=18						
UZB	Uzynbulak	47.16	299	eP	P	00 20 11.7	0.0
UZB				eS	S	00 27 00.3	0.0
UZB				pmax	pmax		
	comp=Z,22nm,0.9s						
UZB	Uzynbulak	47.16	299	eP	P	00 20 11.7	0.0
	comp=Z,22nm,0.9s						
UZB				eS	S	00 27 00.3	0.0
A19K	Wainwright	47.16	23	P	P	00 20 12.9	+1.8
	baz=254,SNR=38						
TDK	Taldyqorghan	47.25	302	eP	P	00 20 12.2	+0.1
TDK				pmax	pmax		
	comp=Z,7.0nm,0.3s						
TDK	Taldyqorghan	47.25	302	eP	P	00 20 12.3	+0.1
	comp=Z,6.6nm,0.3s						
Q16K	King Salmon	47.30	39	P	P	00 20 13.9	+1.7
	baz=269,SNR=6.9						
KPKS	Kokpek	47.34	300	c iP	P	00 20 13.1	+0.1
KPKS				eS	S	00 27 03.1	+0.4
KPKS	Kokpek	47.34	300	⇑iP	P	00 20 13.2	+0.1
KPKS				eS	S	00 27 03.2	+0.4
C19K	Lookout Ridge	47.38	25	P	P	00 20 14.8	+1.9
C19K	Lookout Ridge	47.38	25	P	P	00 20 14.9	+2.1
	baz=256,SNR=100						
P17K	Kvichak River	47.42	39	P	P	00 20 14.7	+1.4
	baz=268,SNR=8.5						
BATI	Baumata	47.45	202	LR	LR	00 39 34.2	
	comp=Z,203nm,21.9s,baz=90,slow=35						
L18K	Granite Mounta	47.46	35	P	P	00 20 15.3	+1.8
L18K				IAmb	IAmb	00 20 17.2	
	comp=Z,69nm,1.1s						
L18K	Granite Mounta	47.46	35	P	P	00 20 16.0	+2.4
	baz=265,SNR=45						
J18K	Innoko River	47.56	33	P	P	00 20 15.8	+1.5
J18K				IAmb	IAmb	00 20 17.2	
	comp=Z,108nm,1.9s						
J18K	Innoko River	47.56	33	P	P	00 20 15.9	+1.6
	baz=264,SNR=23						
F19K	Shaleruckik Mo	47.58	28	P	P	00 20 15.1	+0.8
	baz=260						
SATY	Saty	47.62	299	eP	P	00 20 15.2	0.0
SATY				eS	S	00 27 06.9	+0.1
SATY	Saty	47.62	299	eP	P	00 20 15.3	0.0
SATY				eS	S	00 27 06.9	+0.1
GCSA	Galena City Sc	47.64	31	P	P	00 20 15.8	+1.0
	baz=263,SNR=6.0						
SAVO	Savo Central	47.65	153	P	P	00 20 16.3	+0.8
Q17K	Contact Creek	47.69	40	P	P	00 20 15.6	0.0
	baz=270,SNR=7.9						
G19K	Purcell Mounta	47.74	29	P	P	00 20 16.4	+0.7
G19K				IAmb	IAmb	00 20 18.1	
	comp=Z,38nm,0.9s						
G19K	Purcell Mounta	47.74	29	P	P	00 20 17.1	+1.4
	baz=261,SNR=28						
PRZ	Przheval'sk	47.74	298	P	P	00 20 16.7	+0.4
PRZ	Przheval'sk	47.74	298	P	P	00 20 16.7	+0.4
PRZ				pmax	pmax		
	comp=Z,85nm,0.9s						
N18K	Kilae Creek	47.75	37	P	P	00 20 17.4	+1.6
N18K	Kilae Creek	47.75	37	P	P	00 20 18.1	+2.3
	baz=268,SNR=30						
D19K	Kuna River	47.76	26	P	P	00 20 17.1	+1.2
D19K	Kuna River	47.76	26	P	P	00 20 17.6	+1.7
	baz=258,SNR=78						
M18K	Stony River	47.82	36	P	P	00 20 18.7	+2.4
	baz=267,SNR=34						
KDU	Kakadu	47.86	190	P	P	00 20 16.1	-1.0
	comp=Z,35nm,1.1s						
E19K	Redstone River	47.90	28	P	P	00 20 18.2	+1.4
E19K	Redstone River	47.90	28	P	P	00 20 18.7	+1.9
	baz=260,SNR=89						
H19K	Roundabout Mou	47.92	30	P	P	00 20 18.7	+1.7
H19K	Roundabout Mou	47.92	30	P	P	00 20 18.9	+2.0
	baz=263,SNR=57						
HNR	Honiara	47.96	153	LR	LR	00 39 17.9	
	comp=Z,295nm,21.6s,baz=336,slow=34						
ACHA	Angle Creek He	47.99	40	P	P	00 20 18.4	+0.6
P18K	Big Mountain,	48.05	38	P	P	00 20 19.2	+1.1
P18K	Big Mountain,	48.05	38	P	P	00 20 19.9	+1.8
	baz=269,SNR=15						
O18K	Koktuh Hills	48.06	38	P	P	00 20 19.8	+1.5
O18K	Koktuh Hills	48.06	38	P	P	00 20 20.5	+2.3
	baz=269,SNR=13						
J19K	Poorman	48.10	32	P	P	00 20 19.4	+0.9
J19K	Poorman	48.10	32	P	P	00 20 20.1	+1.7
	baz=265,SNR=68						
Q18K	Katmai Hardscr	48.16	39	P	P	00 20 19.6	+0.5
	baz=270						
MTN	Manton Dam	48.22	192	P	P	00 20 19.9	+0.1
MTN	Manton Dam	48.22	192	P	P	00 20 19.0	-0.8
	comp=Z,37nm,1.0s						
L19K	White Mountain	48.32	35	P	P	00 20 21.5	+1.3
L19K				IAmb	IAmb	00 20 23.4	
	comp=Z,65nm,1.2s						
L19K	White Mountain	48.32	35	P	P	00 20 22.1	+1.9
	baz=267,SNR=38						
D20K	Etivluk River	48.35	26	P	P	00 20 21.0	+0.7
D20K	Etivluk River	48.35	26	P	P	00 20 21.9	+1.6
	baz=260,SNR=83						
JOHN	Johnston Islan	48.38	99	P	P	00 20 21.8	+0.6
JOHN	Johnston Islan	48.38	99	P	P	00 20 23.2	+2.0
B20K	Meade River	48.41	24	P	P	00 20 22.4	+1.6
B20K	Meade River	48.41	24	P	P	00 20 22.6	+1.9
	baz=258,SNR=96						
F20K	Avaraart Lake	48.41	28	P	P	00 20 21.8	+1.0
F20K	Avaraart Lake	48.41	28	P	P	00 20 22.5	+1.7
	baz=262,SNR=14						
E20K	Nigu River	48.42	27	P	P	00 20 22.6	+1.7
	baz=260,SNR=48						
N19K	Bonanza Creek	48.44	37	P	P	00 20 22.8	+1.5
N19K				IAmb	IAmb	00 20 24.4	
	comp=Z,30nm,0.9s						
N19K	Bonanza Creek	48.44	37	P	P	00 20 23.3	+2.1
	baz=269,SNR=16						
R18K	Karluk	48.47	41	P	P	00 20 21.0	-0.4
	baz=272						
O19K	Port Alsworth	48.51	37	P	P	00 20 23.4	+1.8
O19K				IAmb	IAmb	00 20 24.7	
	comp=Z,57nm,0.8s						
O19K	Port Alsworth	48.51	37	P	P	00 20 23.5	+1.8
	baz=269,SNR=7.6						
M19K	Big River Lodg	48.52	35	P	P	00 20 23.2	+1.5
M19K	Big River Lodg	48.52	35	P	P	00 20 23.9	+2.1
	baz=268,SNR=15						
H20K	Anotleneega Mo	48.56	30	P	P	00 20 23.8	+1.7
	baz=264,SNR=34						
MDOK	Medeo	48.57	300	eP	P	00 20 22.6	0.0

MDOK				eS	S	00 27 20.3	0.0
MDOK	Medeo	48.57	300	eP	P	00 20 22.6	0.0
MDOK				eS	S	00 27 20.3	0.0
AAA	Alma-Ata	48.65	300	eP	P	00 20 23.2	+0.1
AAA				pmax	pmax		
	comp=Z,39nm,0.6s						
AAA	Alma-Ata	48.65	300	eP	P	00 20 23.2	+0.1
	comp=Z,38nm,0.6s						
I20K	Naaghedeneel	48.66	31	P	P	00 20 24.4	+1.7
I20K	Naaghedeneel	48.66	31	P	P	00 20 25.1	+2.4
	baz=265,SNR=12						
COEN	Coen	48.68	176	P	P	00 20 23.8	+0.4
COEN				IAmb	IAmb	00 20 26.1	
	comp=Z,31nm,0.7s						
COEN	Coen	48.68	176	P	P	00 20 23.8	+0.4
	comp=Z,46nm,1.2s						
COEN	Coen	48.68	176	P	P	00 20 25.6	+2.2
KDJ	Kajisay	48.70	298	P	P	00 20 24.0	+0.4
KDJ	Kajisay	48.70	298	P	P	00 20 24.0	+0.4
KDJ				pmax	pmax		
	comp=Z,21nm,0.7s						
K20K	Telida	48.74	33	P	P	00 20 25.2	+1.8
K20K	Telida	48.74	33	P	P	00 20 25.5	+2.1
	baz=267,SNR=84						
J20K	Nowinta River	48.76	32	P	P	00 20 24.9	+1.4
J20K	Nowinta River	48.76	32	P	P	00 20 25.6	+2.1
	baz=266,SNR=74						
L20K	Farewell, AK	48.79	34	P	P	00 20 25.9	+2.1
	baz=268,SNR=46						
Q19K	Cape Douglas,	48.86	39	P	P	00 20 25.1	+0.6
Q19K	Cape Douglas,	48.86	39	P	P	00 20 24.3	-0.1
	baz=271						
A21K	Barrow	48.87	22	P	P	00 20 25.9	+1.7
	baz=257,SNR=5.1						
P19K	Oil Pt	49.06	38	P	P	00 20 26.6	+0.7
P19K				IAmb	IAmb	00 20 28.4	
	comp=Z,48nm,0.9s						
P19K	Oil Pt	49.06	38	P	P	00 20 27.2	+1.2
	baz=271,SNR=6.4						
C21K	Knifeblade Rid	49.07	25	P	P	00 20 27.9	+2.1
	baz=261,SNR=58						
IMAR	Indian Mountai	49.07	30	P	P	00 20 27.2	+1.3
ILSW	Iliamna Southw	49.10	38	P	P	00 20 27.5	+1.1
OHAK	Old Harbor	49.11	41	P	P	00 20 26.8	+0.6
OHAK	Old Harbor	49.11	41	P	P	00 20 27.3	+1.0
M20K	Styx River	49.12	35	P	P	00 20 28.1	+1.7
M20K				IAmb	IAmb	00 20 29.2	
	comp=Z,31nm,0.9s						
M20K	Styx River	49.12	35	P	P	00 20 28.6	+2.2
	baz=269,SNR=18						
B21K	Ikpikpuk River	49.21	25	P	P	00 20 28.8	+2.0
B21K	Ikpikpuk River	49.21	25	P	P	00 20 28.8	+2.0
	baz=261,SNR=82						
G21K	Allakaket	49.22	29	P	P	00 20 28.6	+1.5
G21K				IAmb	IAmb	00 20 30.0	
	comp=Z,50nm,1.0s						
G21K	Allakaket	49.22	29	P	P	00 20 28.9	+1.8
	baz=264,SNR=47						
E21K	Killik River	49.26	26	P	P	00 20 28.7	+1.3
	baz=262						
RED	Redoubt Volcan	49.29	37	P	P	00 20 28.7	+1.0
F21K	Alatna River	49.30	28	P	P	00 20 28.9	+1.2
F21K	Alatna River	49.30	28	P	P	00 20 29.1	+1.4
	baz=264,SNR=34						
A22K	Sinclair Lake	49.33	23	P	P	00 20 29.6	+1.9
	baz=259,SNR=60						
ULHL	Ulahol	49.35	299	P	P	00 20 29.2	+0.5
	SNR=6.7						
O20K	Slope Mountain	49.36	38	P	P	00 20 29.5	+1.2
	baz=271						
H21K	Melozitna Rive	49.44	30	P	P	00 20 30.6	+1.9
H21K				IAmb	IAmb	00 20 31.8	
	comp=Z,66nm,1.1s						
H21K	Melozitna Rive	49.44	30	P	P	00 20 30.6	+1.9
	baz=266,SNR=58						
KDAK	Kodiak Island	49.46	41	P	P	00 20 28.9	0.0
KDAK				IAmb	IAmb	00 20 30.2	
	comp=Z,65nm,1.0s						
KDAK	Kodiak Island	49.46	41	LR	LR	00 41 12.2	
	comp=Z,207nm,21.7s,baz=242,slow=36						
KDAK	Kodiak Island	49.46	41	c iP	P	00 20 29.7	+0.8
KDAK				pmax	pmax		
	comp=Z,94nm,1.0s						
KDAK	Kodiak Island	49.46	41	P	P	00 20 29.5	+0.6
	baz=273						
KDAK	Kodiak Island	49.46	41	P	P	00 20 29.5	+0.6
BOOM	Boomskoye usch	49.51	299	P	P	00 20 30.3	+0.5
BOOM				IAmb	IAmb	00 21 52.5	
	comp=Z,35nm,1.1s						
BOOM	Boomskoye usch	49.51	299	P	P	00 20 30.3	+0.5
BOOM				pmax	pmax		
	comp=Z,35nm,1.1s						
N20K	Mount Spurr	49.56	36	P	P	00 20 31.6	+1.8
	baz=270						
SPCR	Spurr Chakacha	49.56	36	P	P	00 20 31.8	+2.1
	baz=270,SNR=19						
CAST	Castle Rocks	49.64	33	P	P	00 20 32.0	+1.7
	baz=268						
TKM2	Tokmak 2	49.66	300	P	P	00 20 31.7	+0.7
	SNR=64						
PSI	Prapat	49.71	239	LR	LR	00 41 55.7	
	comp=Z,162nm,18.4s,baz=34,slow=36						
B22K	Teshekpuk Lake	49.73	24	P	P	00 20 32.1	+1.4
B22K				IAmb	IAmb	00 20 33.5	
	comp=Z,65nm,0.9s						
B22K	Teshekpuk Lake	49.73	24	P	P	00 20 32.4	+1.7
	baz=261,SNR=43						
NRN	Naryn	49.73	298	P	P	00 20 32.3	+0.6
NRN	Naryn	49.73	298	P	P	00 20 32.3	+0.6
NRN				pmax	pmax		
	comp=Z,13nm,0.8s						
STLK	Strandline Lak	49.74	36	P	P	00 20 32.2	+1.1
STLK				IAmb	IAmb	00 20 34.1	
	comp=Z,62nm,1.5s						
D22K	Ayikyak River	49.79	26	P	P	00 20 32.9	+1.6
D22K	Ayikyak River	49.79	26	P	P	00 20 33.4	+2.0
	baz=263,SNR=95						
F22K	John River	49.83	28	P	P	00 20 33.8	+2.1
	baz=265,SNR=16						
HOM	Homer	49.87	38	P	P	00 20 32.0	0.0
HOM	Homer	49.87	38	P	P	00 20 32.9	+0.9
	baz=272						
SKT	Skwentna	49.88	35	P	P	00 20 32.5	+0.4
SKT				IAmb	IAmb	00 20 34.5	
	comp=Z,47nm,1.1s						
SKT	Skwentna	49.88	35	P	P	00 20 33.2	+1.1
	baz=270,SNR=27						
E22K	Anaktuvuk Pass	50.03	27	P	P	00 20 34.8	+1.6
E22K	Anaktuvuk Pass	50.03	27	P	P	00 20 35.0	+1.9
	baz=265,SNR=111						
H22K	Ishtalitna Cre	50.04	30	P	P	00 20 35.5	+2.2
	baz=267,SNR=97						
G22K	Bettles	50.05	29	P	P	00 20 34.8	+1.5
	baz=266						
CAPN	Captain Cook N	50.08	37	P	P	00 20 35.9	+2.4
	baz=272						
CNPM	China Poot	50.08	38	P	P	00 20 34.4	+0.7
CNPM				IAmb	IAmb	00 20 36.7	
	comp=Z,23nm,0.7s						
BPAW	Bear Paw Mtn.	50.14	32	P	P	00 20 35.3	+1.2
BPAW				IAmb	IAmb	00 20 37.1	
	comp=Z,58nm,1.3s						
BPAW	Bear Paw Mtn.	50.14	32	P	P	00 20 35.9	+1.8
	baz=269,SNR=37						
KBK	Karagaybulak	50.19	299	P	P	00 20 35.8	+0.8
	SNR=20						
SGDS	Sogindy	50.22	301	⇑iP	P	00 20 35.1	+0.1
BRZS	Berezniki	50.24	309	c iP	P	00 20 34.7	-0.3
BRZS	Berezniki	50.24	309	⇑iP	P	00 20 34.7	-0.3
CHMS	Chumysh	50.24	300	P	P	00 20 35.5	+0.3
	SNR=21						
BRLK	Bradley Lake	50.25	38	P	P	00 20 35.7	+0.7
BRLK				IAmb	IAmb	00 20 37.8	
	comp=Z,54nm,1.0s						
KSH	Kashi	50.25	295	P	P	00 20 39.4	+4.0
KSH				S	S	00 27 44.6	+0.7
KSH				pmax	pmax		
	comp=Z,28nm,1.0s						
KSH				pmax	pmax		
	comp=Z,130nm,4.5s						
KSH				LR	LR		
	comp=Z,330nm,17.2s						
KSH				LR	LR		
	comp=Z,400nm,21.0s						
KSH				LR	LR		
	comp=Z,610nm,24.0s						
SUA	Susitna One	50.26	36	P	P	00 20 35.8	+0.7
SUA				IAmb	IAmb	00 20 37.9	
	comp=Z,51nm,1.0s						
SUA	Susitna One	50.26	36	P	P	00 20 35.8	+0.7
	baz=271,SNR=32						
MLY	Manley	50.27	31	P	P	00 20 36.8	+1.7
MLY	Manley	50.27	31	P	P	00 20 36.9	+1.9
	baz=268,SNR=97						
BTLS	Baital	50.27	303	c iP	P	00 20 35.3	0.0
BTLS	Baital	50.27	303	⇑iP	P	00 20 35.4	0.0
BRSE	Bradley Lake S	50.32	38	P	P	00 20 36.9	+1.4
	baz=273,SNR=8.5						
USP	Ospenovka	50.36	300	P	P	00 20 36.6	+0.5
	SNR=40						
FRU1	Bishkek	50.38	300	P	P	00 20 36.9	+0.6
FRU1				IAmb	IAmb	00 20 38.1	
	comp=Z,78nm,1.2s						
FRU1	Bishkek	50.38	300	P	P	00 20 36.9	+0.6
FRU1				pmax	pmax		
	comp=Z,78nm,1.2s						
TRF	Thorofare Moun	50.45	33	P	P	00 20 37.9	+1.3
	baz=270						
CUT	Chulitna	50.46	35	P	P	00 20 37.1	+0.7
CUT	Chulitna	50.46	35	P	P	00 20 37.3	+0.8
	baz=271						
AAK	Ala-Archa	50.52	300	P	P	00 20 37.6	+0.2
	SNR=19						
AAK	Ala-Archa	50.52	300	P	P	00 20 37.6	+0.2
AAK				IAmb	IAmb	00 20 38.9	
	comp=Z,34nm,1.1s						
AAK	Ala-Archa	50.52	300	LR	LR	00 44 10.5	
	comp=Z,300nm,19.1s,baz=76,slow=38						
AAK	Ala-Archa	50.52	300	P	P	00 20 37.4	0.0
AAK				S	S	00 27 45.4	-2.2
AAK	Ala-Archa	50.52	300	P	P	00 20 37.6	+0.2
AAK				pmax	pmax		
	comp=Z,34nm,1.1s						
AAK	Ala-Archa	50.52	300	i P	P	00 20 37.6	+0.2
	SNR=20						
D23K	Nanushuk River	50.52	26	P	P	00 20 38.3	+1.5
D23K				IAmb	IAmb	00 20 39.5	
	comp=Z,40nm,1.1s						
D23K	Nanushuk River	50.52	26	P	P	00 20 38.6	+1.8
	baz=265,SNR=27						
FIS	Fire Island	50.52	36	P	P	00 20 37.7	+0.8
SLKM	Skilak Lake	50.55	37	P	P	00 20 37.4	+0.2
SLKM				IAmb	IAmb	00 20 38.8	
	comp=Z,42nm,0.9s						
M22K	Willow	50.55	35	P	P	00 20 37.6	+0.5
M22K	Willow	50.55	35	P	P	00 20 38.9	+1.8
	baz=272,SNR=7.2						
COLD	Coldfoot	50.58	28	P	P	00 20 38.4	+1.1
COLD				IAmb	IAmb	00 20 40.5	
	comp=Z,92nm,1.9s						
COLD	Coldfoot	50.58	28	P	P	00 20 39.0	+1.7
	baz=267,SNR=8.4						
C23K	Itkillik River	50.62	25	P	P	00 20 39.0	+1.5
C23K	Itkillik River	50.62	25	P	P	00 20 39.3	+1.7
	baz=264,SNR=34						
G23K	Bananza Creek	50.62	29	P	P	00 20 39.1	+1.4
G23K				IAmb	IAmb	00 20 40.6	
	comp=Z,34nm,1.0s						
G23K	Bananza Creek	50.62	29	P	P	00 20 39.4	+1.7
	baz=268,SNR=45						
RC01	Rabbit Creek A	50.76	36	P	P	00 20 39.5	+0.8
RC01	Rabbit Creek A	50.76	36	P	P	00 20 39.5	+0.8
	baz=272,SNR=24						
OTUK	Ortayu	50.77	307	P	P	00 20 37.8	-1.3
H23K	Yukon River	50.79	30	P	P	00 20 40.8	+1.8
H23K	Yukon River	50.79	30	P	P	00 20 41.4	+2.4
	baz=269,SNR=121						
O22K	Cooper Landing	50.79	37	P	P	00 20 39.6	+0.6
	baz=273						
BWN	Browne	50.81	32	P	P	00 20 41.1	+2.1
E23K	Chandalar	50.84	27	P	P	00 20 40.7	+1.3
E23K	Chandalar	50.84	27	P	P	00 20 41.2	+1.8
	baz=267,SNR=61						
I23K	Minto, Yukon-K	50.85	31	P	P	00 20 40.8	+1.4
I23K	Minto, Yukon-K	50.85	31	P	P	00 20 41.3	+1.9
	baz=270,SNR=38						
TOLK	Toolik Lake Re	50.89	26	P	P	00 20 41.4	+1.7
TOLK				IAmb	IAmb	00 20 42.6	
	comp=Z,57nm,1.1s						
TOLK	Toolik Lake Re	50.89	26	P	P	00 20 41.5	+1.8
	baz=266,SNR=30						
SEW	Seward	50.95	37	P	P	00 20 41.2	+1.0
SEW				IAmb	IAmb	00 20 41.9	
	comp=Z,52nm,0.9s						
SEW	Seward	50.95	37	P	P	00 20 40.8	+0.7
	baz=274,SNR=7.1						
NEA2	Nenana	50.98	32	P	P	00 20 41.7	+1.4
NEA2	Nenana	50.98	32	P	P	00 20 42.1	+1.7
	baz=270,SNR=155						
EKS2	Erkin-Say	51.02	300	P	P	00 20 27.3	-14
	SNR=6.8						
PMR	Palmer	51.03	36	P	P	00 20 40.9	+0.2
PMR				IAmb	IAmb	00 20 42.6	
	comp=Z,74nm,1.1s						
PMR	Palmer	51.03	36	P	P	00 20 41.7	+1.0
PMR	Palmer	51.03	36	P	P	00 20 40.9	+0.2
PMR				pmax	pmax		
	comp=Z,74nm,1.1s						
PMR	Palmer	51.03	36	P	P	00 20 41.4	+0.7
	baz=273,SNR=32						
MCK	McKinley	51.05	33	P	P	00 20 41.9	+1.0
	baz=271						
RND	Reindeer	51.09	33	P	P	00 20 42.1	+0.8
RND	Reindeer	51.09	33	P	P	00 20 42.1	+0.8
RND				pmax	pmax		
	comp=Z,89nm,1.0s						
GHO	Glory Hole Cre	51.12	35	P	P	00 20 42.3	+0.8
BVA0	Borovoye Array	51.18	313	P	P	00 20 40.7	-1.3
BVAR	Borovoye Array	51.18	313	P	P	00 20 41.9	-0.2
	comp=Z,15nm,0.5s,baz=88,slow=7.2,SNR=68						
BVAR				PcP	PcP	00 21 56.2	-0.6
	comp=Z,19nm,0.6s,baz=114,slow=3.7,SNR=11						
BVAR				LR	LR	00 43 57.1	
	comp=Z,655nm,18.5s,baz=80,slow=38						
	comp=Z,15nm,0.5s						
D24K	Happy Valley	51.19	26	P	P	00 20 43.2	+1.3
D24K	Happy Valley	51.19	26	P	P	00 20 43.5	+1.6
	baz=267,SNR=32						
AML	Almayashu	51.22	299	P	P	00 20 25.5	-17
	SNR=18						
BRVK	Borovoye	51.24	313	P	P	00 20 42.4	-0.1
BRVK	Borovoye	51.24	313	P	P	00 20 42.0	-0.5
BRVK				S	S	00 27 55.2	-1.7
BRVK	Borovoye	51.24	313	P	P	00 20 42.4	-0.1
BRVK				pmax	pmax		
	comp=Z,15nm,0.6s						
BRVK	Borovoye	51.24	313	P	P	00 20 42.4	-0.1
BRVK				pP	pP	00 20 56.2	-0.9
BRVK				PcP	PcP	00 21 56.6	-0.4
WAT1	Susitna Watana	51.25	34	P	P	00 20 43.1	+0.7
	baz=272						
E24K	Your Creek	51.27	27	P	P	00 20 43.8	+1.2
E24K				IAmb	IAmb	00 20 45.8	
	comp=Z,68nm,1.1s						
E24K	Your Creek	51.27	27	P	P	00 20 44.5	+2.0
	baz=268,SNR=50						
C24K	Franklin Bluff	51.27	25	P	P	00 20 44.0	+1.6
	baz=266						
KNK	Knik Glacier	51.36	36	P	P	00 20 44.0	+0.7
KNK				IAmb	IAmb	00 20 46.2	
	comp=Z,64nm,0.9s						
KNK	Knik Glacier	51.36	36	P	P	00 20 44.4	+1.1
	baz=273,SNR=19						
SML	Sawmill	51.40	35	P	P	00 20 44.1	+0.5
SML	Sawmill	51.40	35	P	P	00 20 44.8	+1.2
	baz=273,SNR=46						
WRH	Wood River Hil	51.40	32	P	P	00 20 44.2	+0.7
WRH				IAmb	IAmb	00 20 47.2	
	comp=Z,42nm,1.0s						
KNRA	Kununurra	51.41	194	P	P	00 20 44.2	+0.1
KNRA				IAmb	IAmb	00 20 55.3	
	comp=Z,33nm,0.8s						
KNRA	Kununurra	51.41	194	P	P	00 20 42.8	-1.2
	comp=Z,46nm,0.8s						
PWL	Port Wells	51.45	36	P	P	00 20 44.3	+0.3
PWL				IAmb	IAmb	00 20 45.8	
	comp=Z,54nm,0.9s						
PWL	Port Wells	51.45	36	P	P	00 20 44.8	+0.8
	baz=274,SNR=10						
H24K	Noodor Dome	51.47	30	P	P	00 20 45.5	+1.3
H24K				IAmb	IAmb	00 20 47.5	
	comp=Z,71nm,1.1s						
H24K	Noodor Dome	51.47	30	P	P	00 20 46.4	+2.2
	baz=270,SNR=112						
F24K	Squaw Lake	51.48	28	P	P	00 20 45.4	+1.2
F24K	Squaw Lake	51.48	28	P	P	00 20 46.0	+1.8
	baz=269,SNR=25						
COLA	College	51.50	31	P	P	00 20 45.6	+1.4
COLA				IAmb	IAmb	00 20 47.4	
	comp=Z,49nm,0.8s						
COLA	College	51.50	31	P	P	00 20 45.9	+1.8
COLA	College	51.50	31	P	P	00 20 46.0	+1.8
COLA	College	51.50	31	P	P	00 20 45.6	+1.4
	baz=271						
COLA	College	51.50	31	P	P	00 20 45.5	+1.4
CCB	Clear Creek Bu	51.52	32	P	P	00 20 45.2	+0.8
LEM	Lembang	51.53	223	LR	LR	00 43 10.9	
	comp=Z,247nm,19.8s,baz=340,slow=37						
LUES	Luesalemba Tem	51.53	147	P	P	00 20 47.3	+2.3
WAT6	Susitna Watana	51.63	34	P	P	00 20 46.4	+1.0
	baz=273,SNR=31						
G24K	Hadweenzic Riv	51.63	29	P	P	00 20 46.6	+1.4
G24K	Hadweenzic Riv	51.63	29	P	P	00 20 47.6	+2.4
	baz=270,SNR=67						
MDSI	Maura Dua	51.66	228	P	P	00 20 43.9	-2.1
	comp=Z,71nm,0.9s						
M23K	Glacier View	51.68	35	P	P	00 20 46.7	+1.0
	baz=274,SNR=16						
GSI	Gunungsitoli	51.72	239	P	P	00 20 44.9	-1.6
GSI				IAmb	IAmb	00 20 47.1	
	comp=Z,58nm,0.8s						
GSI	Gunungsitoli	51.72	239	P	P	00 20 48.8	+2.3
GSI	Gunungsitoli	51.72	239	P	P	00 20 46.3	-0.2
	comp=Z,88nm,1.1s						
DHY	Denali Highway	51.77	34	P	P	00 20 47.4	+0.9
DHY				IAmb	IAmb	00 20 48.8	
	comp=Z,52nm,1.3s						
DHY	Denali Highway	51.77	34	P	P	00 20 47.4	+0.9
	baz=273,SNR=26						
SCM	Sheep Creek Mo	51.87	35	P	P	00 20 48.5	+1.3
SCM	Sheep Creek Mo	51.87	35	P	P	00 20 48.5	+1.3
SCM				pmax	pmax		
	comp=Z,93nm,0.9s						
SCM	Sheep Creek Mo	51.87	35	P	P	00 20 48.6	+1.5
	baz=274,SNR=34						
HDA	Harding Lake	51.90	32	P	P	00 20 47.7	+0.5
HDA	Harding Lake	51.90	32	P	P	00 20 47.7	+0.5
	baz=272,SNR=59						
IL31		51.91	31	P	P	00 20 47.9	+0.6
IL31				IAmb	IAmb	00 20 51.0	
	comp=Z,49nm,0.9s						
ILAR	Eielson Array	51.91	31	P	P	00 20 47.8	+0.5
	comp=Z,28nm,0.9s,baz=272,slow=6.3,SNR=243						
	comp=Z,28nm,0.9s						
ARSB	Arslanbob	51.95	298	P	P	00 20 48.7	+0.6
ARSB				IAmb	IAmb	00 20 57.3	
	comp=Z,50nm,0.9s						
ARSB	Arslanbob	51.95	298	P	P	00 20 48.7	+0.6
ARSB				pmax	pmax		
	comp=Z,50nm,0.9s						
P23K	Montague Islan	51.98	37	P	P	00 20 48.9	+1.0
P23K	Montague Islan	51.98	37	P	P	00 20 49.3	+1.4
	baz=275,SNR=16						
GLI	Glacier Island	52.06	36	P	P	00 20 49.5	+1.0
GLI				IAmb	IAmb	00 20 50.6	
	comp=Z,50nm,1.0s						
GLI	Glacier Island	52.06	36	P	P	00 20 49.5	+1.0
	baz=275,SNR=16						
D25K	Kavik River	52.07	26	P	P	00 20 50.1	+1.6
D25K				IAmb	IAmb	00 20 51.2	
	comp=Z,52nm,0.8s						
D25K	Kavik River	52.07	26	P	P	00 20 50.2	+1.6
	baz=269,SNR=59						
G25K	Bearman Lake	52.18	29	P	P	00 20 51.8	+2.5
	baz=271,SNR=30						
H25L	Birch Creek	52.31	29	P	P	00 20 52.6	+2.5
	baz=272,SNR=36						
F25K	Christian Rive	52.34	28	P	P	00 20 52.5	+1.9
F25K				IAmb	IAmb	00 20 54.1	
	comp=Z,43nm,0.8s						
F25K	Christian Rive	52.34	28	P	P	00 20 53.0	+2.5
	baz=271,SNR=98						
E25K	Arctic Village	52.36	27	P	P	00 20 52.5	+1.8
E25K				IAmb	IAmb	00 20 54.1	
	comp=Z,52nm,0.9s						
E25K	Arctic Village	52.36	27	P	P	00 20 53.0	+2.4
	baz=271,SNR=43						
FID	Port Fidalgo	52.37	36	P	P	00 20 51.2	+0.5
M24K	Tolsona, Glenn	52.39	35	P	P	00 20 52.3	+1.3
M24K				IAmb	IAmb	00 20 53.5	
	comp=Z,57nm,0.9s						
M24K	Tolsona, Glenn	52.39	35	P	P	00 20 53.0	+1.9
	baz=275,SNR=12						
HIN	Hinchinbrook I	52.39	37	P	P	00 20 52.1	+1.1
K24K	Donnelly Dome	52.45	33	P	P	00 20 52.0	+0.7
K24K				IAmb	IAmb	00 20 53.3	
	comp=Z,65nm,1.1s						
K24K	Donnelly Dome	52.45	33	P	P	00 20 52.1	+0.8
	baz=274,SNR=20						
PRP	Porcupine Dome	52.46	30	P	P	00 20 52.4	+0.9
PRP	Porcupine Dome	52.46	30	P	P	00 20 52.0	+0.5
	baz=273,SNR=14						
FYU	Fort Yukon	52.53	29	P	P	00 20 53.8	+1.9
KLU	Klutina	52.57	36	P	P	00 20 53.1	+0.8
KLU				IAmb	IAmb	00 20 54.9	
	comp=Z,54nm,1.0s						
KLU	Klutina	52.57	36	P	P	00 20 53.9	+1.6
	baz=275,SNR=25						
J25K	Salcha River,	52.57	32	P	P	00 20 51.9	-0.4
J25K	Salcha River,	52.57	32	P	P	00 20 52.3	0.0
	baz=274,SNR=12						
Q23K	Middleton Isla	52.58	38	P	P	00 20 53.5	+1.3
	baz=277						
C26K	Camden Bay	52.59	25	P	P	00 20 53.7	+1.4
	baz=270						
PAX	Paxson	52.65	34	P	P	00 20 53.9	+1.0
PAX	Paxson	52.65	34	P	P	00 20 53.9	+1.0
PAX				pmax	pmax		
	comp=Z,29nm,1.0s						
PAX	Paxson	52.65	34	P	P	00 20 54.2	+1.3
	baz=275,SNR=26						
DIV	Divide	52.67	36	P	P	00 20 54.4	+1.3
DZA	Taraz	52.70	301	eP	P	00 20 53.5	0.0
DZA	Taraz	52.70	301	eP	P	00 20 53.6	0.0
EYAK	Cordova Ski Ar	52.75	37	P	P	00 20 54.8	+1.2
EYAK				IAmb	IAmb	00 20 56.3	
	comp=Z,48nm,1.0s						
EYAK	Cordova Ski Ar	52.75	37	P	P	00 20 54.7	+1.2
EYAK	Cordova Ski Ar	52.75	37	P	P	00 20 55.1	+1.6
	baz=276,SNR=9.6						
BMAR	Burnt Mountain	52.76	28	P	P	00 20 55.6	+2.0
HARP	HAARP	52.84	34	P	P	00 20 56.2	+1.9
	baz=275,SNR=17						
RIDG	Independent Ri	52.86	33	P	P	00 20 55.0	+0.5
RIDG				IAmb	IAmb	00 20 57.7	
	comp=Z,27nm,0.8s						
RIDG	Independent Ri	52.86	33	P	P	00 20 55.1	+0.7
	baz=275,SNR=23						
MTSU	Mount Surprise	52.90	175	P	P	00 20 54.8	-0.3
	comp=Z,12nm,1.1s						
MTSU	Mount Surprise	52.90	175	P	P	00 20 56.6	+1.5
F26K	Sheenjek River	52.91	28	P	P	00 20 56.6	+1.8
F26K	Sheenjek River	52.91	28	P	P	00 20 57.4	+2.6
	baz=272,SNR=99						
C27K	Jago River	53.01	25	P	P	00 20 56.9	+1.5
C27K				IAmb	IAmb	00 20 58.0	
	comp=Z,47nm,0.9s						
C27K	Jago River	53.01	25	P	P	00 20 57.5	+2.1
	baz=271,SNR=17						
G26K	Porcupine Rive	53.09	29	P	P	00 20 57.9	+1.9
G26K				IAmb	IAmb	00 20 59.7	
	comp=Z,61nm,1.1s						
G26K	Porcupine Rive	53.09	29	P	P	00 20 58.4	+2.5
	baz=273,SNR=53						
N25K	Chitina, Valde	53.19	35	P	P	00 20 58.1	+1.2
N25K	Chitina, Valde	53.19	35	P	P	00 20 58.6	+1.7
	baz=276,SNR=17						
DOT	Dot Lake	53.22	33	P	P	00 20 57.2	+0.2
KK31	Karatay Array	53.22	301	P	P	00 20 57.3	-0.1
KK31				IAmb	IAmb	00 20 58.8	
	comp=Z,59nm,0.9s						
KK31	Karatay Array	53.22	301	P	P	00 20 57.3	-0.1
KK31				pmax	pmax		
	comp=Z,59nm,0.9s						
KKAR	Karatay Array	53.22	301	P	P	00 20 57.3	-0.1
KKAR	Karatay Array	53.22	301	P	P	00 20 57.3	-0.1
KKAR				IAmb	IAmb	00 20 58.8	
	comp=Z,62nm,0.9s						

KKAR	Karatay Array	53.22	301	P	P	00 20 57.3	-0.1
SCRK	Sand Creek	53.22	32	P	P	00 20 58.0	+0.8
SCRK				IAmb	IAmb	00 20 59.3	
	comp=Z,68nm,1.0s						
SCRK	Sand Creek	53.22	32	P	P	00 20 58.0	+0.8
	baz=275,SNR=76						
BMRM	Bremner River	53.26	36	P	P	00 20 58.5	+1.1
BMRM				IAmb	IAmb	00 21 00.1	
	comp=Z,62nm,0.9s						
BMRM	Bremner River	53.26	36	P	P	00 20 59.1	+1.7
	baz=277,SNR=23						
RAGM	Ragged Mountai	53.30	37	P	P	00 20 58.9	+1.3
RAGM				IAmb	IAmb	00 21 00.7	
	comp=Z,57nm,1.2s						
DRK	Karamyk	53.35	296	P	P	00 20 59.3	+0.6
DRK				IAmb	IAmb	00 21 11.0	
	comp=Z,38nm,0.7s						
DRK	Karamyk	53.35	296	P	P	00 20 59.3	+0.6
DRK				pmax	pmax		
	comp=Z,38nm,0.7s						
J26L	Joseph Creek	53.36	32	P	P	00 20 58.4	+0.3
J26L	Joseph Creek	53.36	32	P	P	00 20 58.5	+0.3
	baz=275,SNR=35						
MENT	Mentasta	53.45	34	P	P	00 21 00.3	+1.6
MENT				IAmb	IAmb	00 21 01.8	
	comp=Z,48nm,0.8s						
MENT	Mentasta	53.45	34	P	P	00 21 00.7	+2.0
I26K	Coal Creek Min	53.46	31	P	P	00 20 58.7	0.0
I26K	Coal Creek Min	53.46	31	P	P	00 20 58.8	+0.1
	baz=275,SNR=12						
KAIM	Kayak Island	53.48	37	P	P	00 21 00.5	+1.5
KAIM				IAmb	IAmb	00 21 02.0	
	comp=Z,47nm,0.8s						
KAIM	Kayak Island	53.48	37	P	P	00 21 00.9	+2.0
	baz=278,SNR=8.3						
HMT	Hamilton	53.51	37	P	P	00 21 00.9	+1.7
HMT				IAmb	IAmb	00 21 01.4	
	comp=Z,35nm,1.0s						
GLB	Gilahina Butte	53.58	35	P	P	00 21 01.2	+1.5
GLB				IAmb	IAmb	00 21 02.8	
	comp=Z,88nm,1.6s						
L26K	Log Cabin Wild	53.60	33	P	P	00 21 01.5	+1.6
L26K	Log Cabin Wild	53.60	33	P	P	00 21 01.9	+2.0
	baz=276,SNR=58						
BRLS	Borolday	53.72	301	*e*P	P	00 21 02.4	+1.4
BRLS				pmax	pmax		
	comp=Z,30nm,1.1s						
BRLS	Borolday	53.72	301	*e*P	P	00 21 02.4	+1.4
	comp=Z,30nm,1.1s						
BERG	Berg Lake	53.77	37	P	P	00 21 02.8	+1.7
BERG				IAmb	IAmb	00 21 04.1	
	comp=Z,71nm,1.0s						
VRDI	Verde Repeater	53.78	36	P	P	00 21 02.8	+1.5
VRDI				IAmb	IAmb	00 21 03.5	
	comp=Z,33nm,1.0s						
SUCK	Suckling Hills	53.78	37	P	P	00 21 02.5	+1.3
SUCK				IAmb	IAmb	00 21 03.8	
	comp=Z,32nm,1.0s						
IUG	Iuzhnay	53.83	300	*e*P	P	00 21 02.0	+0.1
IUG				pmax	pmax		
	comp=Z,56nm,0.9s						
IUG	Iuzhnay	53.83	300	*e*P	P	00 21 02.0	+0.1
	comp=Z,56nm,0.9s						
M26K	Nabesna, AK	53.84	34	P	P	00 21 03.1	+1.4
M26K				IAmb	IAmb	00 21 04.7	
	comp=Z,59nm,1.3s						
M26K	Nabesna, AK	53.84	34	P	P	00 21 03.5	+1.9
	baz=277,SNR=33						
E27K	Coleen River	53.85	27	P	P	00 21 02.8	+1.3
E27K				IAmb	IAmb	00 21 04.3	
	comp=Z,35nm,0.8s						
E27K	Coleen River	53.85	27	P	P	00 21 03.8	+2.2
	baz=274,SNR=36						
G27K	Doyon Strip	53.94	29	P	P	00 21 03.9	+1.6
G27K	Doyon Strip	53.94	29	P	P	00 21 04.3	+2.1
	baz=275,SNR=30						
MCARA	McCarthy VSAT	53.96	35	P	P	00 21 03.8	+1.3
MCARA				IAmb	IAmb	00 21 05.5	
	comp=Z,61nm,1.0s						
MCARA	McCarthy VSAT	53.96	35	P	P	00 21 04.4	+1.9
	baz=278,SNR=16						
CRQM	Cirque	54.00	36	P	P	00 21 04.2	+1.3
CRQM				IAmb	IAmb	00 21 05.8	
	comp=Z,66nm,1.0s						
D27M	Malcolm River	54.00	26	P	P	00 21 04.2	+1.5
D27M				IAmb	IAmb	00 21 05.8	
	comp=Z,54nm,1.1s						
D27M	Malcolm River	54.00	26	P	P	00 21 04.7	+2.0
	baz=274,SNR=9.2						
BGLC	Bering Glacier	54.02	37	P	P	00 21 05.4	+2.5
	baz=279						
CRQE	Cirque	54.02	36	P	P	00 21 04.7	+1.6
	baz=278,SNR=14						
H27K	Steamboat Moun	54.04	29	P	P	00 21 04.4	+1.4
H27K	Steamboat Moun	54.04	29	P	P	00 21 05.4	+2.3
	baz=276,SNR=46						
K27K	Chicken	54.05	32	P	P	00 21 03.9	+0.8
K27K				IAmb	IAmb	00 21 05.9	
	comp=Z,36nm,0.8s						
K27K	Chicken	54.05	32	P	P	00 21 04.7	+1.6
	baz=277						
I27K	Kandik River	54.07	30	P	P	00 21 04.8	+1.5
	baz=276,SNR=28						
CHM	Chimkent	54.09	300	*e*P	P	00 21 03.8	+0.1
CHM				pmax	pmax		
	comp=Z,15nm,0.7s						
CHM	Chimkent	54.09	300	*e*P	P	00 21 03.9	+0.1
	comp=Z,15nm,0.7s						
TGL	Tana Glacier	54.15	36	P	P	00 21 04.6	+0.6
TGL				IAmb	IAmb	00 21 06.0	
	comp=Z,36nm,1.0s						
WAX	Waxell Ridge	54.18	37	P	P	00 21 05.4	+1.3
WAX				IAmb	IAmb	00 21 06.5	
	comp=Z,33nm,0.9s						
NIL	Nilore	54.21	289	P	P	00 21 05.2	+0.5
NIL	Nilore	54.21	289	P	P	00 21 05.5	+0.8
NIL	Nilore	54.21	289	P	P	00 21 05.2	+0.5
NIL				pmax	pmax		
	comp=Z,72nm,0.8s						
NIL	Nilore	54.21	289	P	P	00 21 05.3	+0.6
L27K	Beaver Creek,	54.29	33	P	P	00 21 05.9	+1.0
L27K				IAmb	IAmb	00 21 07.9	
	comp=Z,43nm,0.9s						
L27K	Beaver Creek,	54.29	33	P	P	00 21 06.8	+1.9
	baz=278,SNR=59						
BCAR	Beaver Creek A	54.31	33	P	P	00 21 06.2	+1.2
M27K	Edge Creek, AK	54.36	34	P	P	00 21 07.0	+1.5
M27K				IAmb	IAmb	00 21 08.4	
	comp=Z,59nm,0.9s						
M27K	Edge Creek, AK	54.36	34	P	P	00 21 07.4	+1.8
	baz=278,SNR=66						
ISLE	Juniper Island	54.41	36	P	P	00 21 06.8	+0.9
FITZ	Fitzroy Crossi	54.44	197	P	P	00 21 05.1	-1.2
	comp=Z,5.2nm,1.2s						
FITZ	Fitzroy Crossi	54.44	197	LR	LR	00 42 21.4	
	comp=Z,163nm,21.8s,baz=44,slow=34						
F28M	Old Crow	54.55	28	IAmb	IAmb	00 21 10.1	
	comp=Z,90nm,1.5s						
F28M	Old Crow	54.55	28	P	P	00 21 08.9	+2.2
	baz=276,SNR=33						
E28M	Babbage River	54.57	26	IAmb	IAmb	00 21 09.5	
	comp=Z,37nm,0.9s						
E28M	Babbage River	54.57	26	P	P	00 21 09.0	+2.2
	baz=276,SNR=40						
BARN	Barnard Glacie	54.66	36	P	P	00 21 08.3	+0.5
MESA	MESA	54.67	37	P	P	00 21 08.5	+0.7
MESA	MESA	54.67	37	P	P	00 21 09.4	+1.5
	baz=280						
GRNC	Granite Creek	54.67	36	IAmb	IAmb	00 21 10.4	
	comp=Z,33nm,0.9s						
YAH	Yahtse	54.74	37	P	P	00 21 09.6	+1.2
YAH				IAmb	IAmb	00 21 10.6	
	comp=Z,31nm,1.0s						
D28M	Stokes Point	54.78	25	P	P	00 21 10.1	+1.9
	baz=276						
I28M	Miner Creek	54.79	30	IAmb	IAmb	00 21 10.9	
	comp=Z,42nm,0.9s						
I28M	Miner Creek	54.79	30	P	P	00 21 10.3	+1.7
	baz=278,SNR=69						
WRAB	Tennant Creek	54.79	187	P	P	00 21 08.7	-0.2
WRAB	Tennant Creek	54.79	187	P	P	00 21 08.7	-0.2
WRAB				pmax	pmax		
	comp=Z,59nm,0.7s						
WRA	Warramunga Arr	54.80	187	P	P	00 21 07.5	-1.5
WRA	Warramunga Arr	54.80	187	P	P	00 21 08.3	-0.7
	comp=Z,57nm,0.7s,baz=3.3,slow=7.6,SNR=165						
WRA				PcP	PcP	00 22 11.4	+0.7
	comp=Z,20nm,0.7s,baz=0.4,slow=4.0,SNR=8.3						
WRA				S	S	00 28 43.2	-2.7
	comp=Z,2.6nm,0.8s,baz=2.1,slow=12,SNR=5.7						
WRA				LR	LR	00 43 51.1	
	comp=Z,398nm,21.4s,baz=34,slow=35						
	comp=Z,57nm,0.7s						
WRA	Warramunga Arr	54.80	187	*i* P	P	00 21 08.3	-0.7
WRA				pmax	pmax		
	comp=Z,59nm,0.7s						
BVCY	Beaver Creek	54.82	34	P	P	00 21 10.4	+1.6
	baz=279,SNR=17						
CTG	Chitna Glacier	54.83	36	P	P	00 21 10.5	+1.6
	baz=280,SNR=13						
CTGM	Chitina Glacie	54.84	36	P	P	00 21 09.9	+0.9
CTGM				IAmb	IAmb	00 21 11.7	
	comp=Z,30nm,0.9s						
CTAO	Charters Tower	55.00	173	P	P	00 21 11.1	+0.7
CTAO				IAmb	IAmb	00 21 29.8	
	comp=Z,62nm,1.8s						
CTAO	Charters Tower	55.00	173	P	P	00 21 11.1	+0.7
CTAO				pmax	pmax		
	comp=Z,62nm,1.8s						
LOGN	Logan Glacier	55.02	36	P	P	00 21 11.8	+1.4
TABL	Table Mountain	55.02	36	P	P	00 21 11.3	+0.9
YUK3	Moose Creek	55.11	35	P	P	00 21 12.5	+1.4
	baz=280,SNR=10						
QIS	Mount Isa	55.15	180	P	P	00 21 10.3	-1.2
	comp=Z,22nm,0.9s						
QIS	Mount Isa	55.15	180	P	P	00 21 12.5	+1.0
E29M	Blow River	55.19	27	P	P	00 21 12.3	+1.1
E29M				IAmb	IAmb	00 21 14.6	
	comp=Z,55nm,1.1s						
E29M	Blow River	55.19	27	P	P	00 21 13.3	+2.0
	baz=277,SNR=59						
DAWY	Dawson	55.22	32	P	P	00 21 12.9	+1.3
	baz=279,SNR=24						
H29M	Whitestone	55.31	29	P	P	00 21 13.5	+1.3
H29M				IAmb	IAmb	00 21 14.8	
	comp=Z,36nm,1.1s						
H29M	Whitestone	55.31	29	P	P	00 21 14.2	+2.0
	baz=278,SNR=20						
G29M	Pine Creek	55.35	28	P	P	00 21 14.3	+1.8
G29M	Pine Creek	55.35	28	P	P	00 21 14.8	+2.3
	baz=278,SNR=56						
O28M	Mount Upton	55.42	36	P	P	00 21 14.1	+0.7
O28M	Mount Upton	55.42	36	P	P	00 21 14.7	+1.3
	baz=281,SNR=9.0						
I29M	Ogilvie Camp,	55.47	30	IAmb	IAmb	00 21 16.2	
	comp=Z,64nm,1.0s						
I29M	Ogilvie Camp,	55.47	30	P	P	00 21 15.0	+1.7
	baz=279,SNR=66						
KIP	Kipapa	55.49	87	P	P	00 21 15.5	+1.3
KIP	Kipapa	55.49	87⇓	*e*P	P	00 21 16.6	+2.5
KIP				pmax	pmax		
	comp=Z,140nm,1.0s						
PCA	Pinnacle	55.52	37	P	P	00 21 14.7	+0.8
PINM	Pinnacle	55.52	37	P	P	00 21 15.2	+1.4
	baz=281						
YUK8	Steele Glacier	55.53	35	P	P	00 21 15.5	+1.4
	baz=281,SNR=6.0						
J29N	Klondike Camp	55.66	31	P	P	00 21 16.4	+1.6
J29N	Klondike Camp	55.66	31	P	P	00 21 16.5	+1.6
	baz=280						
SIMJ	Simiganj	55.67	296	P	P	00 21 15.4	0.0
SIMJ				IAmb	IAmb	00 21 16.5	
	comp=Z,61nm,0.9s						
SIMJ	Simiganj	55.67	296	P	P	00 21 15.2	-0.1
BCPM	Bancas Point	55.85	37	P	P	00 21 17.5	+1.3
BCPM				IAmb	IAmb	00 23 02.4	
	comp=Z,33nm,0.6s						
M29M	Somme Creek	55.92	34	P	P	00 21 18.1	+1.4
M29M				IAmb	IAmb	00 21 20.1	
	comp=Z,45nm,0.8s						
M29M	Somme Creek	55.92	34	P	P	00 21 19.1	+2.4
	baz=281,SNR=80						
L29M	L29M	55.94	33	P	P	00 21 18.6	+1.8
L29M	L29M	55.94	33	P	P	00 21 19.3	+2.5
	baz=281,SNR=94						
EPYK	Eagle Plains	55.95	29	P	P	00 21 18.7	+1.9
	baz=280,SNR=79						
SVE	Sverdlovsk	56.00	319	*de*P	P	00 21 17.5	+0.3
SVE				*e*S	S	00 29 01.9	+0.6
SVE				pmax	pmax		
	comp=Z,69nm,1.3s						
SVE				MLR	MLR		
	comp=Z,937nm,18.0s						
PNL	Peninsula	56.03	37	P	P	00 21 19.6	+2.2
PNL	Peninsula	56.03	37	P	P	00 21 19.0	+1.6
	baz=282,SNR=6.2						
G30M	tAoh Zraii Nji	56.04	28	P	P	00 21 18.9	+1.5
	baz=280,SNR=54						
YUK4	Talbot Arm	56.05	35	P	P	00 21 19.8	+2.0
	baz=282,SNR=16						
K29M	Barlow Dome	56.07	32	IAmb	IAmb	00 21 20.4	
	comp=Z,36nm,0.9s						
K29M	Barlow Dome	56.07	32	P	P	00 21 19.8	+2.0
	baz=281,SNR=51						
F30M	Barrier River	56.10	27	P	P	00 21 19.9	+2.1
	baz=280,SNR=39						
YUK6	Outpost Mounta	56.26	36	P	P	00 21 21.8	+2.4
	baz=282,SNR=22						
I30M	Mount Dempster	56.30	30	P	P	00 21 21.1	+1.7
	baz=281,SNR=174						
O29M	Mount Kennedy	56.30	36	P	P	00 21 20.7	+1.2
O29M	Mount Kennedy	56.30	36	P	P	00 21 21.9	+2.4
	baz=282,SNR=52						
SANVU	Saraoutou	56.34	148	P	P	00 21 20.8	+0.7
SANVU	Saraoutou	56.34	148	P	P	00 21 22.0	+1.9
SANVU	Saraoutou	56.34	148	P	P	00 21 20.6	+0.6
SANVU				pP	pP	00 21 34.2	+0.1
J30M	Hart River	56.44	31	P	P	00 21 21.5	+1.1
J30M	Hart River	56.44	31	P	P	00 21 22.2	+1.8
	baz=281,SNR=33						
HYT	Haines Junctio	56.70	36	P	P	00 21 23.8	+1.5
HYT				IAmb	IAmb	00 21 27.1	
	comp=Z,42nm,0.8s						
HYT	Haines Junctio	56.70	36	P	P	00 21 24.8	+2.5
	baz=283,SNR=42						
N30M	Aishikik Lake	56.76	35	P	P	00 21 24.2	+1.6
N30M				IAmb	IAmb	00 21 26.2	
	comp=Z,53nm,1.6s						
N30M	Aishikik Lake	56.76	35	P	P	00 21 24.7	+2.1
	baz=283,SNR=12						
G31M	Satah River	56.80	28	P	P	00 21 23.4	+0.6
G31M				IAmb	IAmb	00 21 24.4	
	comp=Z,42nm,0.9s						
G31M	Satah River	56.80	28	P	P	00 21 24.0	+1.2
	baz=282,SNR=26						
INK	Inuvik	56.81	26	IAmb	IAmb	00 21 25.0	
	comp=Z,35nm,1.0s						
INK	Inuvik	56.81	26	LR	LR	00 48 47.1	
	comp=Z,208nm,20.6s,baz=280,slow=39						
INK	Inuvik	56.81	26	P	P	00 21 24.0	+1.2
	baz=281,SNR=28						
MAYO	Mayo, Yukon	56.83	32	P	P	00 21 24.6	+1.5
MAYO	Mayo, Yukon	56.83	32	P	P	00 21 25.1	+2.1
	baz=282						
P29M	Windy Craggy	56.86	37	P	P	00 21 25.4	+2.0
P29M				IAmb	IAmb	00 21 27.0	
	comp=Z,48nm,0.8s						
P29M	Windy Craggy	56.86	37	P	P	00 21 25.8	+2.4
	baz=283,SNR=29						
F31M	Tsiigehtchic	56.90	27	P	P	00 21 24.6	+1.1
F31M				IAmb	IAmb	00 21 25.8	
	comp=Z,52nm,1.1s						
F31M	Tsiigehtchic	56.90	27	P	P	00 21 24.3	+0.8
	baz=282,SNR=8.9						
HYB	Hyderabad	57.00	269	*e*P	P	00 21 26.0	+1.0
HYB				*e*pP	pP	00 21 39.2	-0.5
HYB				*e*PP	PP	00 23 33.1	+1.1
HYB				*e*S	S	00 29 17.8	+2.2
H31M	Peel River	57.01	29	P	P	00 21 26.0	+1.7
	baz=282,SNR=63						
KHLH	Kahului Airpor	57.05	86	P	P	00 21 25.2	0.0
KBL	Kabul	57.12	292	P	P	00 21 25.2	-0.6
KBL				IAmb	IAmb	00 21 26.5	
	comp=Z,54nm,0.9s						
KBL	Kabul	57.12	292	P	P	00 21 25.5	-0.3
	SNR=23						
KBL	Kabul	57.12	292	P	P	00 21 25.2	-0.6
KBL				pmax	pmax		
	comp=Z,54nm,0.9s						
P30M	Million Dollar	57.12	36	P	P	00 21 27.6	+2.4
	baz=284						
ARTI	Arti	57.32	319	P	P	00 21 26.4	-0.2
ARTI	Arti	57.32	319	LR	LR	00 49 08.2	
	comp=Z,828nm,18.1s,baz=74,slow=39						
ARTI	Arti	57.32	319*c*	*i*P	P	00 21 26.3	-0.3
ARTI				*PP	pP	00 21 40.7	-0.7
ARTI						00 22 18.8	
ARTI				S	S	00 29 18.1	-0.5
ARTI				SS	SS	00 33 07.6	-0.5
ARTI				pmax	pmax		
	comp=Z,36nm,0.8s						
ARTI				MLR	MLR		
	comp=Z,768nm,18.0s						
ARTI	Arti	57.32	319	P	P	00 21 26.4	-0.2
ARTI				pP	pP	00 21 40.5	-0.9
ARTI				PcP	PcP	00 22 19.4	-0.8
N31M	Braeburn, Yuko	57.36	35	P	P	00 21 28.1	+1.2
N31M				IAmb	IAmb	00 21 30.3	
	comp=Z,56nm,0.9s						
N31M	Braeburn, Yuko	57.36	35	P	P	00 21 29.1	+2.2
	baz=284,SNR=16						
O30N	Mendenhall	57.39	35	P	P	00 21 28.4	+1.3
O30N	Mendenhall	57.39	35	P	P	00 21 29.0	+1.9
	baz=284,SNR=18						
PLBC	Pleasant Camp	57.58	37	P	P	00 21 30.4	+2.0
	baz=285,SNR=43						
M31M	Drury Creek, Y	57.83	34	P	P	00 21 31.4	+1.3
M31M				IAmb	IAmb	00 21 33.0	
	comp=Z,47nm,0.9s						
M31M	Drury Creek, Y	57.83	34	P	P	00 21 31.9	+1.8
	baz=284,SNR=33						
WHY	Whitehorse	57.99	35	P	P	00 21 32.8	+1.4
WHY	Whitehorse	57.99	35	P	P	00 21 33.5	+2.1
	baz=285,SNR=48						
S31K	Pelican	58.04	39	P	P	00 21 33.1	+1.5
S31K				IAmb	IAmb	00 21 34.8	
	comp=Z,29nm,1.1s						
S31K	Pelican	58.04	39	P	P	00 21 33.5	+1.9
	baz=286						
SKAG	Skagway	58.09	37	P	P	00 21 33.6	+1.7
SKAG				IAmb	IAmb	00 21 35.4	
	comp=Z,50nm,1.1s						
SKAG	Skagway	58.09	37	P	P	00 21 34.5	+2.6
SKAG	Skagway	58.09	37	P	P	00 21 34.3	+2.4
	baz=285,SNR=6.8						
R31K	City Hall, Gus	58.16	38	P	P	00 21 34.4	+2.0
	baz=286						
FARO	Faro, Yukon	58.29	33	P	P	00 21 34.7	+1.3
FARO				IAmb	IAmb	00 21 36.2	
	comp=Z,48nm,0.9s						
FARO	Faro, Yukon	58.29	33	P	P	00 21 35.2	+1.8
	baz=285,SNR=41						
POHA	Pohakuloa	58.33	87	P	P	00 21 35.2	+0.7
POHA	Pohakuloa	58.33	87	P	P	00 21 35.2	+0.7
MWH	Mokuaweoweo	58.41	87	P	P	00 21 35.8	+0.4
HMH	Humu‘ula Sheep	58.45	87	P	P	00 21 35.0	-0.4
AB31	Akbulak array	58.45	311	IAmb	IAmb	00 21 35.5	
	comp=Z,51nm,0.9s						
AB31	Akbulak array	58.45	311	P	P	00 21 34.1	-0.5
ABKAR	Akbulak array	58.45	311	P	P	00 21 34.3	-0.3
ABKAR	Akbulak array	58.45	311	IAmb	IAmb	00 21 35.5	
	comp=Z,51nm,0.9s						
AS01	Alice Springs	58.52	187	P	P	00 21 35.6	+0.3
AS31	Alice Springs	58.52	187	P	P	00 21 35.3	-0.1
AS31	Alice Springs	58.52	187	P	P	00 21 34.5	-0.8
	comp=Z,15nm,0.7s						
ASAR	Alice Springs	58.53	187	P	P	00 21 35.0	-0.4
	comp=Z,28nm,0.9s,baz=12,slow=9.9,SNR=100						
ASAR				PcP	PcP	00 22 25.4	+0.1
	comp=Z,12nm,0.8s,baz=15,slow=4.1,SNR=8.5						
ASAR				S	S	00 29 33.3	-1.8
	comp=Z,8.3nm,1.1s,baz=22,slow=18,SNR=20						
ASAR				LR	LR	00 46 06.7	
	comp=Z,424nm,21.9s,baz=9.0,slow=35						
	comp=Z,28nm,0.9s						
MLH	Mauna Loa	58.58	87	P	P	00 21 36.8	+0.6
AIN	Ainahou	58.58	87	P	P	00 21 36.7	+0.5
A36M	Sachs Harbour	58.67	21	P	P	00 21 37.0	+1.3
A36M	Sachs Harbour	58.67	21	P	P	00 21 37.5	+1.7
	baz=286,SNR=13						
RSD	Rainshed	58.68	87	P	P	00 21 37.3	+0.4
N32M	Quiet Lake	58.70	35		P	00 21 37.3	+1.0
N32M				IAmb	IAmb	00 21 39.0	
	comp=Z,55nm,0.9s						
N32M	Quiet Lake	58.70	35	P	P	00 21 38.1	+1.8
	baz=286						
HATHI	Halema‘uma‘u T	58.72	87	P	P	00 21 37.3	+0.2
SIT	Sitka	58.76	40	P	P	00 21 37.4	+0.8
SIT				IAmb	IAmb	00 21 40.0	
	comp=Z,92nm,1.6s						
SIT	Sitka	58.76	40	P	P	00 21 37.4	+0.8
SIT				pmax	pmax		
	comp=Z,93nm,1.6s						
SIT	Sitka	58.76	40	P	P	00 21 38.7	+2.1
	baz=287						
PUH	Pauahi	58.78	87	P	P	00 21 37.9	+0.4
KNHH	Kane Nui o Ham	58.81	87	P	P	00 21 38.9	+1.2
R32K	Eaglecrest	58.82	38	P	P	00 21 38.6	+1.5
R32K				IAmb	IAmb	00 21 40.4	
	comp=Z,25nm,0.9s						
R32K	Eaglecrest	58.82	38	P	P	00 21 39.4	+2.3
	baz=287,SNR=12						
P32M	Atlin	58.84	36	P	P	00 21 39.0	+1.7
P32M				IAmb	IAmb	00 21 40.5	
	comp=Z,40nm,0.9s						
P32M	Atlin	58.84	36	P	P	00 21 39.2	+1.9
	baz=287,SNR=27						
STCH	Steam Cracks	58.85	87	P	P	00 21 37.5	-0.4
JIS	Juneau Island	58.89	38	P	P	00 21 39.2	+1.7
MBWA	Marble Bar	58.98	202	P	P	00 21 37.5	-0.9
MBWA				IAmb	IAmb	00 21 38.0	
	comp=Z,35nm,0.6s						
MBWA	Marble Bar	58.98	202	P	P	00 21 37.0	-1.5
	comp=Z,46nm,1.8s						
MBWA	Marble Bar	58.98	202	P	P	00 21 40.3	+1.8
S32K	Killisnoo	59.03	39	P	P	00 21 39.3	+0.8
S32K	Killisnoo	59.03	39	P	P	00 21 40.4	+1.9
	baz=287,SNR=6.1						
P33M	Teslin, Yukon	59.10	36	P	P	00 21 40.3	+1.3
P33M	Teslin, Yukon	59.10	36	P	P	00 21 41.1	+2.0
	baz=287,SNR=40						
MMPY	Sheldon Lake,	59.12	33	P	P	00 21 40.3	+1.2
MMPY				IAmb	IAmb	00 21 41.8	
	comp=Z,32nm,0.9s						
MMPY	Sheldon Lake,	59.12	33	P	P	00 21 41.3	+2.1
	baz=287,SNR=34						
AKTO	Aktyubinsk	59.26	313	LR	LR	00 48 54.0	
	comp=Z,650nm,19.2s,baz=61,slow=38						
AKTO	Aktyubinsk	59.26	313	P	P	00 21 39.0	-1.2
PSA00	Pilbara Seismi	59.33	202	P	P	00 21 39.6	-1.3
PSA00	Pilbara Seismi	59.33	202	IAmb	IAmb	00 21 40.5	
	comp=Z,22nm,0.6s						
PSA00	Pilbara Seismi	59.33	202	P	P	00 21 39.3	-1.6
	comp=Z,35nm,1.0s						
Q32M	Nakina River	59.74	37	P	P	00 21 44.9	+1.2
Q32M	Nakina River	59.74	37	P	P	00 21 46.0	+2.3
	baz=288,SNR=11						
T33K	Petersburg	60.07	39	P	P	00 21 48.0	+2.4
	baz=289						
U33K	Whale Pass	60.21	40	P	P	00 21 47.8	+1.2
U33K				IAmb	IAmb	00 21 49.4	
	comp=Z,42nm,0.9s						
U33K	Whale Pass	60.21	40	P	P	00 21 48.8	+2.2
	baz=289,SNR=8.3						
R33M	Jennings River	60.24	36	P	P	00 21 48.3	+1.3
R33M				IAmb	IAmb	00 21 50.5	
	comp=Z,109nm,2.0s						
R33M	Jennings River	60.24	36	P	P	00 21 49.2	+2.2
	baz=289,SNR=17						
CRAG	Craig	60.42	41	P	P	00 21 50.2	+2.2
	baz=289						
WRAK	Wrangell Islan	60.52	40	P	P	00 21 50.6	+1.9
WRAK				IAmb	IAmb	00 21 52.0	
	comp=Z,26nm,1.1s						
WRAK	Wrangell Islan	60.52	40	P	P	00 21 50.6	+1.9
	baz=289,SNR=6.3						
WRKA	Warakurna	60.63	192	P	P	00 21 48.8	-1.0
	comp=Z,24nm,0.7s						
S34M	Telegraph Cree	60.65	38	P	P	00 21 50.8	+1.2
S34M				IAmb	IAmb	00 21 53.1	
	comp=Z,40nm,1.1s						
S34M	Telegraph Cree	60.65	38	P	P	00 21 52.0	+2.4
	baz=290,SNR=14						
PALK	Pallekele	60.79	258	LR	LR	00 51 32.9	
	comp=Z,301nm,18.3s,baz=48,slow=39						
PALK	Pallekele	60.79	258	P	P	00 21 51.1	-0.1
TGTN	Hyland Airport	60.80	33	P	P	00 21 52.8	+2.1
	baz=290,SNR=18						

EIDS	Eidsvold	60.85	169	P	P	00 21 51.7	+0.4
EIDS				IAmb	IAmb	00 22 19.4	
	comp=Z,38nm,1.4s						
EIDS	Eidsvold	60.85	169	P	P	00 21 50.9	-0.3
	comp=Z,19nm,0.9s						
EIDS	Eidsvold	60.85	169	P	P	00 21 54.0	+2.7
DLBC	Dease Lake	61.02	37	LR	LR	00 49 05.3	
	comp=Z,8.7nm,21.5s,baz=274,slow=37						
WTLY	Watson Lake, Y	61.04	35	P	P	00 21 53.6	+1.3
WTLY				IAmb	IAmb	00 21 55.3	
	comp=Z,37nm,1.1s						
WTLY	Watson Lake, Y	61.04	35	P	P	00 21 54.1	+1.8
	baz=290						
KIRV	Kirov	61.26	323	LR	LR	00 50 26.7	
	comp=Z,939nm,20.6s,baz=62,slow=38						
KIRV	Kirov	61.26	323	c *i*P	P	00 21 53.7	0.0
QLP	Quilpie	61.27	176	P	P	00 21 53.0	-1.1
	comp=Z,52nm,0.8s						
QLP	Quilpie	61.27	176	P	P	00 21 56.4	+2.3
V35K	Ketchikan	61.28	41	P	P	00 21 55.2	+1.3
V35K	Ketchikan	61.28	41	P	P	00 21 55.4	+1.5
	baz=290						
T35M	Bob Quinn	61.41	39	P	P	00 21 56.2	+1.3
T35M				IAmb	IAmb	00 21 58.6	
	comp=Z,57nm,1.1s						
T35M	Bob Quinn	61.41	39	P	P	00 21 57.5	+2.6
	baz=291,SNR=23						
HOPEN	Hopen	61.83	346	*e*P	P	00 21 58.2	+0.9
U35K	Hyder	61.91	40	P	P	00 21 59.5	+1.4
	baz=291						
DZM	Mont Dzumac	61.97	152	P	P	00 22 00.3	+1.3
DZM				IAmb	IAmb	00 22 01.9	
	comp=Z,73nm,1.3s						
DZM	Mont Dzumac	61.97	152	*e*P	P	00 21 59.1	+0.1
	comp=Z,126nm,1.2s						
DZM				*e*S	S	00 30 24.3	+4.9
	comp=Z,253nm,33.1s						
DZM				*e*LR	LR	00 40 18.7	
	comp=Z,1µm,31.1s						
DZM	Mont Dzumac	61.97	152	P	P	00 22 01.3	+2.3
DZM	Mont Dzumac	61.97	152	P	P	00 22 00.7	+1.7
WRGLY	Wrigley	62.27	31	P	P	00 22 02.1	+1.6
WRGLY	Wrigley	62.27	31	P	P	00 22 02.3	+1.8
	baz=293,SNR=21						
RUBB	Prince Rupert	62.38	41	P	P	00 22 02.0	+0.7
SPA0	Spitsbergen Ar	62.39	349	*e*P	P	00 22 01.6	+0.4
SPB2	Spitsbergen Ar	62.39	349	IAmb	IAmb	00 22 03.2	
	comp=Z,22nm,0.8s						
SPITS	Spitsbergen Ar	62.39	349	P	P	00 22 01.4	+0.3
	comp=Z,4.5nm,0.3s,baz=89,slow=5.3,SNR=61						
SPITS				LR	LR	00 50 00.6	
	comp=Z,308nm,20.8s,baz=10,slow=37						
	comp=Z,4.5nm,0.3s						
EUNU	Eureka	62.47	8	IAmb	IAmb	00 22 03.2	
	comp=Z,50nm,0.9s						
KBS	Kingsbay	62.56	350	P	P	00 22 02.5	+0.3
KBS				IAmb	IAmb	00 22 04.2	
	comp=Z,41nm,0.9s						
KBS	Kingsbay	62.56	350	c *i*P	P	00 22 03.1	+0.9
KBS				pmax	pmax		
	comp=Z,37nm,0.8s						
KBS	Kingsbay	62.56	350	*e*P	P	00 22 01.6	-0.6
KBS	Kingsbay	62.56	350	*i* P	P	00 22 02.5	+0.3
KBS	Kingsbay	62.56	350	P	P	00 22 01.4	-0.8
LIRD	Liard River Hi	62.56	35	P	P	00 22 04.5	+2.0
	baz=292,SNR=18						
BEAVL	Fort Liard	62.75	34	P	P	00 22 05.3	+1.6
	baz=293						
NOR	Nord	63.11	356	*i* P	P	00 22 05.9	+0.1
NOR				IAmb	IAmb	00 22 21.9	
	comp=Z,60nm,1.6s						
TOAD	Toad River Com	63.19	35	P	P	00 22 08.2	+1.4
	baz=293,SNR=14						
KOTAN	Kotaneelee Air	63.23	34	P	P	00 22 08.4	+1.4
	baz=294						
HSPB	Hornsund (broa	63.29	348	*e*P	P	00 22 07.7	+0.6
HSPB				*e*pP	pP	00 22 22.9	+0.7
HSPB	Hornsund (broa	63.29	348	*e*P	P	00 22 07.8	+0.8
LVZ	Lovozero	63.59	336	c*e*P	P	00 22 09.4	+0.2
LVZ				pmax	pmax		
	comp=Z,50nm,1.7s						
MSVF	Nonsavu	63.61	139	P	P	00 22 11.1	+1.1
MSVF	Nonsavu	63.61	139	LR	LR	00 46 11.0	
	comp=Z,192nm,20.8s,baz=355,slow=32						
MSVF	Nonsavu	63.61	139	P	P	00 22 12.7	+2.7
MSVF	Nonsavu	63.61	139	⇑*i*P	P	00 22 11.9	+1.9
MSVF				pmax	pmax		
	comp=Z,27nm,1.1s						
VADS	Vadso	64.15	339	*e*P	P	00 22 12.9	+0.1
APA	Apatity	64.16	336	⇓*i*P	P	00 22 10.0	-2.9
APA				pmax	pmax		
	comp=Z,15nm,0.7s						
APA				MLR	MLR		
	comp=Z,1µm,25.0s						
BBB	Bella Bella	64.40	43	LR	LR	00 47 56.1	
	comp=Z,134nm,20.1s,baz=321,slow=34						
BELG	Belogornoye	64.58	317	LR	LR	00 52 59.3	
	comp=Z,835nm,18.2s,baz=58,slow=38						
BELG	Belogornoye	64.58	317	c *i*P	P	00 22 15.6	-0.3
KLMR	Klimovskoe	64.95	328	*e*P	P	00 22 16.3	-1.8
KLMR				*e**PP	pP	00 22 32.0	-1.3
KLMR				*e*		00 24 39.7	
KLMR				pmax	pmax		
	comp=Z,27nm,0.8s						
KLMR				MLR	MLR		
	comp=Z,356nm,16.0s						
RES	Resolute Bay	64.95	14	LR	LR	00 52 11.0	
	comp=Z,268nm,22.0s,baz=8.5,slow=37						
KEV	Kevo	65.03	339	P	P	00 22 17.6	-0.9
KEV				IAmb	IAmb	00 22 35.5	
	comp=Z,61nm,1.6s						
KEV	Kevo	65.03	339	P	P	00 22 17.6	-0.9
KEV				pmax	pmax		
	comp=Z,61nm,1.6s						
HOLB	Holberg	65.04	45	P	P	00 22 19.7	+0.7
HOLB				IAmb	IAmb	00 22 21.1	
	comp=Z,50nm,1.0s						
HAMF	Hammerfest	65.45	341	*e*P	P	00 22 20.8	-0.4
ARA0	ARCESS Array S	65.59	339	*e*P	P	00 22 22.2	0.0
ARCES	ARCESS Array B	65.59	339	P	P	00 22 22.1	0.0
ARCES	ARCESS Array B	65.59	339	P	P	00 22 22.3	+0.1
	comp=Z,5.7nm,0.4s,baz=55,slow=7.4,SNR=130						
ARCES				PP	PP	00 24 52.4	+5.9
	comp=Z,6.6nm,1.0s,baz=61,slow=9.9,SNR=4.7						
ARCES				LR	LR	00 54 17.6	
	comp=Z,730nm,20.2s,baz=76,slow=39						
	comp=Z,5.7nm,0.4s						
YKAW3	Yellowknife Wh	66.19	29	IAmb	IAmb	00 22 27.4	
	comp=Z,26nm,1.0s						
YKA	Yellowknife Ar	66.23	29	P	P	00 22 26.7	+0.3
YKA	Yellowknife Ar	66.23	29	P	P	00 22 26.9	+0.5
	comp=Z,12nm,0.8s,baz=303,slow=7.0,SNR=76						
YKA				pP	pP	00 22 41.9	+0.3
	comp=Z,4.5nm,0.9s,baz=301,slow=7.1,SNR=4.7						
YKA				LR	LR	00 53 39.9	
	comp=Z,70nm,18.7s,baz=174,slow=38						
	comp=Z,12nm,0.8s						
YKAW1	Yellowknife Wh	66.28	29	IAmb	IAmb	00 22 28.5	
	comp=Z,33nm,0.9s						
CMSA	Cobar Meteorol	66.30	175	P	P	00 22 27.1	0.0
	comp=Z,25nm,0.8s						
CMSA	Cobar Meteorol	66.30	175	P	P	00 22 29.3	+2.2
STKA	Stephens Creek	66.44	179	P	P	00 22 28.4	+0.4
STKA	Stephens Creek	66.44	179	P	P	00 22 27.4	-0.5
	comp=Z,128nm,0.8s						
STKA	Stephens Creek	66.44	179	P	P	00 22 28.6	+0.7
	comp=Z,18nm,0.7s,baz=345,slow=7.9,SNR=27						
	comp=Z,18nm,0.7s						
STKA	Stephens Creek	66.44	179	P	P	00 22 29.0	+1.0
CBB	Campbell River	66.90	44	P	P	00 22 32.1	+1.2
JETT	Jettan, Norway	67.01	341	*e*P	P	00 22 31.4	+0.1
HMDM	Hanimaadhoo	67.16	262	P	P	00 22 34.0	+0.9
NGCH	Negor - Chabah	67.28	286	P	P	00 22 33.4	-0.3
TRO	Tromso	67.36	341	*e*P	P	00 22 33.3	-0.2
MORW	Morawa	67.52	203	P	P	00 22 35.1	+0.2
MORW				IAmb	IAmb	00 22 42.8	
	comp=Z,44nm,1.2s						
NEEM	North Greenlan	67.72	3	*i* P	P	00 22 36.0	+0.1
NEEM				IAmb	IAmb	00 22 38.1	
	comp=Z,92nm,0.9s						
DAG	Danmarks Havn	67.80	355	*i* P	P	00 22 36.0	-0.1
DAG				IAmb	IAmb	00 22 36.8	
	comp=Z,35nm,0.9s						
HTT	Hallett	67.98	181	P	P	00 22 33.9	-3.9
HTT	Hallett	67.98	181	P	P	00 22 40.5	+2.7
CLRS	Cowichan Lake	68.17	45	P	P	00 22 40.1	+1.2
MOS	Moscow	68.28	324	*e*P	P	00 22 37.4	-2.1
MOS				*e*		00 22 54.3	
MOS				*e*		00 23 03.9	
MOS				*e*S	S	00 31 31.3	-4.5
MOS				pmax	pmax		
	comp=Z,49nm,1.0s						
MOS				pmax	pmax		
	comp=Z,100nm,1.4s						
MOS				MLR	MLR		
	comp=Z,700nm,20.0s						
C03A	Quillayute Air	68.33	46	P	P	00 22 41.7	+1.8
VRH	Novokhopyorsk	68.39	318	*e*P	P	00 22 39.3	-0.9
VRH				pmax	pmax		
	comp=Z,52nm,0.7s						
LLLB	Lillooet	68.60	43	P	P	00 22 42.5	+0.8
PGC	Sidney	68.65	45	P	P	00 22 42.5	+0.6
PGC				IAmb	IAmb	00 22 44.4	
	comp=Z,37nm,1.0s						
BLDU	Ballidu	68.76	201	P	P	00 22 41.4	-1.2
	comp=Z,52nm,1.2s						
BLDU	Ballidu	68.76	201	P	P	00 22 44.7	+2.1
MAK	Makhachkala	68.87	308	*e*P	P	00 22 42.1	-1.3
MAK				*e*		00 25 15.8	
MAK				*e*S	S	00 31 40.2	-3.1
MAK				pmax	pmax		
	comp=Z,81nm,1.1s						
MAK				MLR	MLR		
	comp=Z,901nm,16.0s						
NLWA	Neilton Lookou	69.01	46	P	P	00 22 45.6	+1.4
NLWA				IAmb	IAmb	00 22 47.7	
	comp=Z,78nm,1.1s						
OBN	Obninsk	69.12	323	P	P	00 22 44.5	-0.2
OBN				IAmb	IAmb	00 23 19.5	
	comp=Z,39nm,0.5s						
OBN	Obninsk	69.12	323	LR	LR	00 55 52.3	
	comp=Z,930nm,18.6s,baz=2.0,slow=38						
OBN	Obninsk	69.12	323	c *i*P	P	00 22 43.9	-0.8
OBN				*e*		00 23 06.4	
OBN				*e*		00 25 26.2	
OBN				*i* S	S	00 31 36.5	-9.3
OBN				pmax	pmax		
	comp=Z,72nm,1.6s						
OBN				MLR	MLR		
	comp=Z,981nm,21.0s						
OBN	Obninsk	69.12	323	P	P	00 22 44.3	-0.4
LPSR	Galich'ya Gora	69.20	320	*e*P	P	00 22 44.2	-1.1
LPSR				pmax	pmax		
	comp=Z,70nm,0.8s						
WISH	Wishkah	69.20	47	P	P	00 22 47.0	+1.6
WISH				IAmb	IAmb	00 22 49.1	
	comp=Z,66nm,1.0s						
KLBR	Kellerberrin	69.37	200	P	P	00 22 45.0	-1.4
	comp=Z,124nm,0.9s						
KLBR	Kellerberrin	69.37	200	P	P	00 22 48.6	+2.2
AKT	Akhty	69.43	307	c *i*P	P	00 22 46.9	-0.1
AKT				*e**PP	pP	00 23 01.3	-0.9
AKT				*e*		00 23 06.3	
AKT				*e*S	S	00 31 50.5	+0.3
AKT				pmax	pmax		
	comp=Z,21nm,0.5s						
AKT				MLR	MLR		
	comp=Z,1µm,19.0s						
STEI	Steigen	69.50	341	*e*P	P	00 22 46.4	-0.5
RADR	Rader Ridge	69.53	47	P	P	00 22 48.5	+1.1
RADR				IAmb	IAmb	00 22 50.8	
	comp=Z,72nm,1.1s						
VORR	Voronezh	69.53	319	*e*P	P	00 22 46.0	-1.3
VORR				pmax	pmax		
	comp=Z,34nm,0.7s						
GNW	Green Mountain	69.55	46	P	P	00 22 49.2	+1.8
GNW				IAmb	IAmb	00 22 50.8	
	comp=Z,57nm,1.2s						
E03A	Lebam	69.61	47	P	P	00 22 49.3	+1.5
E03A				IAmb	IAmb	00 22 51.0	
	comp=Z,59nm,1.1s						
VSR	Storozhevoye	69.78	319	*e*P	P	00 22 46.1	-2.8
VSR				pmax	pmax		
	comp=Z,30nm,0.8s						
VORD	Divnogorie	69.84	319	*e*P	P	00 22 46.7	-2.5
VORD				pmax	pmax		
	comp=Z,20nm,0.9s						
FAUS	Fauske	69.87	340	*e*P	P	00 22 49.0	-0.1
F03A	Seaside	69.91	48	P	P	00 22 51.2	+1.4
F03A				IAmb	IAmb	00 22 52.3	
	comp=Z,88nm,1.3s						
FINES	FINESS Array B	70.17	332	P	P	00 22 50.6	-0.4
FINES	FINESS Array B	70.17	332	P	P	00 22 50.8	-0.3
	comp=Z,20nm,0.3s,baz=53,slow=6.3,SNR=447						
FINES				LR	LR	00 55 38.3	
	comp=Z,461nm,20.0s,baz=33,slow=38						
	comp=Z,20nm,0.3s						
KEF	Keuruu	70.18	333	*e*P	P	00 22 50.9	-0.2
KULLO	Kullorsuaq	70.20	5	*i* P	P	00 22 50.7	-0.3
KULLO				IAmb	IAmb	00 22 52.0	
	comp=Z,41nm,0.8s						
D05A	Enumclaw	70.23	46	P	P	00 22 52.8	+1.2
D05A				IAmb	IAmb	00 22 55.1	
	comp=Z,99nm,1.4s						
JLN	Jalan Bani Buh	70.24	284	P	P	00 22 51.9	-0.2
DBG	Daneborg	70.28	354	*i* P	P	00 22 51.1	-0.4
DBG				IAmb	IAmb	00 22 52.0	
	comp=Z,16nm,1.0s						
WSAR	Wadi Sarin	70.31	285	P	P	00 22 53.1	+0.5
	SNR=5.4						
WBK	Wadi Bani Khal	70.36	284	P	P	00 22 53.8	+0.8
G03D	McMinnville, O	70.45	48	P	P	00 22 53.9	+0.8
LON	Longmire	70.55	46	P	P	00 22 54.7	+0.9
LON	Longmire	70.55	46	P	P	00 22 54.7	+0.9
LON				pmax	pmax		
	comp=Z,13nm,1.1s						
BIDO	Bidbid	70.57	286	P	P	00 22 55.0	+0.8
	SNR=14						
GOF	Gofitskoye	70.66	312	c *i*P	P	00 22 54.5	+0.1
COR	Corvallis	70.74	49	P	P	00 22 56.6	+1.8
COR				IAmb	IAmb	00 22 58.4	
	comp=Z,74nm,1.0s						
COR	Corvallis	70.74	49	P	P	00 22 56.6	+1.8
COR				pmax	pmax		
	comp=Z,73nm,1.0s						
NWAO	Narrogin (SRO)	70.77	200	P	P	00 22 55.0	0.0
NWAO				IAmb	IAmb	00 22 55.6	
	comp=Z,46nm,0.7s						
NWAO	Narrogin (SRO)	70.77	200	P	P	00 22 55.7	+0.7
NWAO	Narrogin (SRO)	70.77	200	P	P	00 22 55.0	0.0
NWAO				pmax	pmax		
	comp=Z,46nm,0.7s						
SHME	Shamm	70.86	289	P	P	00 22 56.1	+0.3
SHME	Shamm	70.86	289	*i* P	P	00 22 56.2	+0.3
	SNR=12						
SMDO	Samad	70.86	285	P	P	00 22 56.3	+0.2
	SNR=10.0						
G04A	Mulino	70.93	48	P	P	00 22 57.6	+1.6
G04A				IAmb	IAmb	00 23 00.3	
	comp=Z,40nm,0.9s						
KEBM	Edson Butte	70.95	51	P	P	00 22 57.0	+0.8
MOR8	Moi Rana	70.96	340	*e*P	P	00 22 54.6	-1.2
J01E	Myrtle Point	71.06	50	P	P	00 22 58.1	+1.3
J01E				IAmb	IAmb	00 22 59.9	
	comp=Z,39nm,0.9s						
NCK	Nalchik	71.10	310	c*e*P	P	00 22 57.0	-0.1
NCK				pmax	pmax		
	comp=Z,32nm,1.1s						
H04D	Lebanon	71.12	49	P	P	00 22 58.5	+1.4
BUCK	Buck Mountain	71.13	49	P	P	00 22 59.2	+1.9
BUCK				IAmb	IAmb	00 23 00.9	
	comp=Z,78nm,1.0s						
I03D	Drain, OR	71.16	50	P	P	00 22 58.6	+1.3
I03D				IAmb	IAmb	00 23 00.7	
	comp=Z,60nm,0.9s						
JMDO	Jabal Madar	71.17	284	P	P	00 22 58.0	+0.2
	SNR=5.2						
HOQ	Hoqain	71.18	286	P	P	00 22 58.3	+0.4
	SNR=12						
MASF	Masafi	71.19	288	P	P	00 22 58.6	+0.7
MSFE	Esma-Masafi	71.19	288	P	P	00 22 58.3	+0.3
UOSS	Minazif	71.36	288	P	P	00 22 59.2	+0.3
UOSS	Minazif	71.36	288	P	P	00 22 59.0	0.0
UOSS	Minazif	71.36	288	P	P	00 22 58.4	-0.6
HOOD	Mount Hood Mea	71.38	47	P	P	00 23 00.3	+1.4
HOOD				IAmb	IAmb	00 23 01.7	
	comp=Z,70nm,1.1s						
H04A	Detroit Lake	71.38	48	P	P	00 23 00.3	+1.5
H04A				IAmb	IAmb	00 23 01.4	
	comp=Z,48nm,1.0s						
LEIR	Leirfjorden	71.38	340	*e*P	P	00 22 58.1	-0.3
KBZ	Khabaz	71.42	311	P	P	00 22 59.4	+0.5
	comp=Z,42nm,0.8s,baz=63,slow=4.3,SNR=109						
KBZ				LR	LR	00 58 48.4	
	comp=Z,364nm,18.8s,baz=51,slow=40						
	comp=Z,42nm,0.8s						
KVAR	Kislovodsk Arr	71.43	311	LR	LR	00 59 21.5	
	comp=Z,233nm,18.8s,baz=264,slow=40						
KIV	Kislovodsk	71.44	311	P	P	00 22 59.6	+0.3
KIV	Kislovodsk	71.44	311	P	P	00 22 59.8	+0.6
KIV	Kislovodsk	71.44	311	⇓P	P	00 23 00.0	+0.8
KIV	Kislovodsk	71.44	311	*e*P	P	00 22 59.5	+0.3
KIV				*e*S	S	00 32 13.2	-0.3
KIV				*e*SS	SS	00 36 50.4	+2.1
KIV				pmax	pmax		
	comp=Z,71nm,0.9s						
KIV				pmax	pmax		
	comp=Z,36nm,3.3s						
KIV				MLR	MLR		
	comp=Z,346nm,18.0s						
KIV	Kislovodsk	71.44	311	*i* P	P	00 22 59.8	+0.6
	SNR=49						
KIV	Kislovodsk	71.44	311	P	P	00 22 59.5	+0.3
HATD	Hatta, Dubai	71.48	288	P	P	00 23 00.2	+0.5
HATD	Hatta, Dubai	71.48	288	*i* P	P	00 22 59.8	+0.1
	SNR=11						
UMQ	Umm Al-Quwin	71.50	289	P	P	00 23 00.6	+0.8
SOHO	SOHO	71.52	287	P	P	00 23 00.1	+0.2
SOHO	SOHO	71.52	287	*i* P	P	00 22 59.5	-0.4
	SNR=14						
MXC	Moxie City	71.54	46	P	P	00 23 00.6	+0.9
MXC				IAmb	IAmb	00 23 02.4	
	comp=Z,41nm,0.9s						
SHA1	Shidzhatmaz	71.56	311	c *i*P	P	00 23 00.4	+0.2
MEF	Metsahovi	71.57	332	*e*P	P	00 22 59.3	-0.2
ASHO	Ashiyiah	71.61	288	P	P	00 23 00.8	+0.3
ASHO	Ashiyiah	71.61	288	*i* P	P	00 23 00.6	0.0
	SNR=6.4						
ILON	Igloolik, Nuna	71.61	14	IAmb	IAmb	00 23 01.0	
	comp=Z,44nm,1.1s						
G05A	Wamic	71.62	47	P	P	00 23 01.2	+1.0
BSY	Bisya	71.69	285	P	P	00 23 01.2	+0.2
	SNR=10						
VSU	Vasula	71.71	329	c *i*P	P	00 22 59.2	-1.2
VSU				pmax	pmax		
	comp=Z,44nm,0.9s						
VSU	Vasula	71.71	329	*e*P	P	00 22 59.5	-0.9
NAZ	Nazwa, Dubai	71.77	288	P	P	00 23 01.6	+0.2
NAZ	Nazwa, Dubai	71.77	288	P	P	00 23 01.3	-0.1
KSXB	Camp Six Broad	71.77	51	P	P	00 23 01.8	+0.5
BLKN	Baker Lake	71.80	22	IAmb	IAmb	00 23 02.4	
	comp=Z,61nm,0.9s						
E07A	Sunnyside	71.81	46	P	P	00 23 02.6	+1.3
E07A				IAmb	IAmb	00 23 04.1	
	comp=Z,51nm,1.1s						
L02F	Cave Junction	71.82	51	P	P	00 23 02.2	+0.8
ERBR	Yeremizino-Bor	71.87	313	*e*P	P	00 23 00.8	-0.9
ERBR				*e**PP	pP	00 23 16.2	-0.7
ERBR				*e*S	S	00 32 14.6	-3.6
ERBR				pmax	pmax		
	comp=Z,63nm,0.8s						
ERBR				MLR	MLR		
	comp=Z,347nm,19.0s						
WAH2	Wahluke Slope	71.87	45	P	P	00 23 02.5	+0.9
ARQ	Araqi	71.93	286	P	P	00 23 03.0	+0.5
	SNR=8.5						
FAQ	Al Faqa, Dubai	71.94	288	P	P	00 23 02.3	-0.1
FAQ	Al Faqa, Dubai	71.94	288	*i* P	P	00 23 02.1	-0.4
	SNR=10						
MHTO	MHTO	71.98	283	P	P	00 23 02.9	+0.1
	SNR=7.5						
BBOR	Butler Butte	71.99	50	P	P	00 23 03.8	+1.2
G06A	Carlson Farm,	72.03	47	P	P	00 23 03.5	+0.8
RAF	Rauma	72.06	333	*e*P	P	00 23 02.1	-0.3
GNI	Garni	72.06	307	P	P	00 23 04.1	+1.0
GNI	Garni	72.06	307	LR	LR	00 57 30.9	
	comp=Z,755nm,19.9s,baz=48,slow=38						
GNI	Garni	72.06	307	P	P	00 23 04.1	+1.0
GNI	Garni	72.06	307	P	P	00 23 04.1	+1.0
GNI				pmax	pmax		
	comp=Z,37nm,1.2s						
I05D	Terrebonne, OR	72.07	48	P	P	00 23 03.6	+0.6
D08A	Wollman Farm,	72.09	45	IAmb	IAmb	00 23 05.3	
	comp=Z,38nm,0.8s						
F07A	Phinny Hill Vi	72.11	46	P	P	00 23 04.4	+1.3
F07A				IAmb	IAmb	00 23 05.9	
	comp=Z,40nm,0.9s						
J04A	Umpqua Nationa	72.17	49	P	P	00 23 04.6	+0.8
J04A				IAmb	IAmb	00 23 06.7	
	comp=Z,70nm,0.9s						
ALNE	Al Ain	72.17	287	P	P	00 23 04.1	+0.2
	SNR=11						
ALNE	Al Ain	72.17	287	*i* P	P	00 23 03.8	0.0
	SNR=29						
ASUD	Al Ashush, Dub	72.21	288	P	P	00 23 04.6	+0.6
ASUD	Al Ashush, Dub	72.21	288	*i* P	P	00 23 04.4	+0.3
	SNR=10						
TOO	Toolangi	72.28	175	P	P	00 23 05.2	+1.2
TOO	Toolangi	72.28	175	P	P	00 23 04.2	+0.2
	comp=Z,9.8nm,1.5s						
TOO	Toolangi	72.28	175	P	P	00 23 05.2	+1.2
TOO				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LABN	Labinsk	72.29	312	*e*P	P	00 23 00.1	-4.1
LABN				*e*S	S	00 32 18.7	-4.3
LABN				pmax	pmax		
	comp=Z,35nm,0.8s						
LABN				MLR	MLR		
	comp=Z,345nm,18.0s						
E08A	Dider Farm, El	72.31	45	P	P	00 23 05.4	+1.1
E08A				IAmb	IAmb	00 23 06.7	
	comp=Z,30nm,0.8s						
KMPM	Mount Pierce	72.33	53	P	P	00 23 05.1	+0.5
KMPM				IAmb	IAmb	00 23 40.8	
	comp=Z,48nm,1.2s						
KHMM	Horse Mountain	72.35	52	P	P	00 23 05.2	+0.4
KHMM				IAmb	IAmb	00 23 08.3	
	comp=Z,112nm,1.7s						
NEW	Newport	72.47	43	IAmb	IAmb	00 23 07.5	
	comp=Z,38nm,0.8s						
AJN	Ajban	72.51	288	P	P	00 23 05.7	-0.2
YBH	Yreka Blue Hor	72.57	51	P	P	00 23 07.2	+1.2
YBH	Yreka Blue Hor	72.57	51	P	P	00 23 07.3	+1.2
YBH				pmax	pmax		
	comp=Z,21nm,1.0s						
L04D	Klamath Falls	72.58	50	P	P	00 23 07.6	+1.4
L04D				IAmb	IAmb	00 23 09.0	
	comp=Z,60nm,1.0s						
YPT	Yellepit	72.60	46	P	P	00 23 07.7	+1.7
PINE	Pine Mountain	72.61	49	P	P	00 23 07.9	+1.5
J05D	Fort Rock, OR	72.69	49	P	P	00 23 08.3	+1.5
J05D				IAmb	IAmb	00 23 10.0	
	comp=Z,36nm,1.0s						
K04D	Chiloquin, OR	72.71	50	P	P	00 23 08.3	+1.4
K04D				IAmb	IAmb	00 23 09.8	
	comp=Z,42nm,1.0s						
MTSE	Matsula	72.75	331	*e*P	P	00 23 06.7	+0.1
SUMG	Summit	72.81	360	*i* P	P	00 23 08.0	+0.7
SUMG				IAmb	IAmb	00 23 09.4	
	comp=Z,48nm,0.8s						
E09A	Wood Farm, Sta	72.83	45	P	P	00 23 08.8	+1.5
E09A				IAmb	IAmb	00 23 10.0	
	comp=Z,54nm,1.0s						
DQM	DQM	72.87	283	P	P	00 23 08.1	+0.1
KARS	Kars	72.90	308	IAmb	IAmb	00 23 09.8	
	comp=Z,70nm,0.9s						
G08A	Pilot Rock	73.01	46	P	P	00 23 09.7	+1.1
KCPM	Cahto Peak	73.06	53	P	P	00 23 10.4	+1.3
KCPM				IAmb	IAmb	00 23 11.5	
	comp=Z,51nm,1.1s						
K05A	Summer Lake	73.20	49	P	P	00 23 11.0	+1.1
K05A				IAmb	IAmb	00 23 13.2	
	comp=Z,68nm,1.0s						
UMZA	Um Al Zommool	73.32	286	P	P	00 23 10.4	-0.3
O02D	Mt. Diablo Mer	73.33	53	P	P	00 23 11.5	+0.9
O02D				IAmb	IAmb	00 23 13.9	
	comp=Z,50nm,1.2s						
VSLR	Vesyoloye	73.33	312	c *i*P	P	00 23 10.6	+0.2
VSLR				pmax	pmax		
	comp=Z,61nm,0.9s						
NUUG	Nuugaatsiaq	73.45	4	*i* P	P	00 23 10.9	+0.4
NUUG				IAmb	IAmb	00 23 11.4	
	comp=Z,19nm,1.0s						
SOC	Sochi	73.46	312	c *i*P	P	00 23 10.2	-0.9
SOC				*e*		00 25 57.1	
SOC				*e*PPP	PPP	00 27 35.3	

SOC				eS	S	00 32 36.1	-0.3
SOC				eSS	SS	00 37 21.6	+2.6
SOC				MLR	MLR		
	comp=Z,353nm,20.0s						
MNK	Minsk	73.61	326	i P	P	00 23 12.4	+0.6
	comp=E,25nm,1.0s						
MNK				i P	P	00 23 12.4	+0.6
	comp=N,22nm,1.0s						
MNK				i P	P	00 23 12.4	+0.6
	comp=Z,67nm,0.8s,baz=52						
MNK				i pP	PcP	00 23 29.0	+1.5
MNK				i PP	PP	00 25 57.1	+1.2
MNK				i PPP	PPP	00 27 42.1	
MNK				i S	S	00 32 38.9	+1.2
MNK				i sS	sS	00 33 07.4	+3.8
MNK				i ScS	ScS	00 33 16.3	0.0
MNK				i SS	SS	00 37 24.1	+3.4
MNK				i SSS	SSS	00 40 45.6	
MNK				i LQ	LQ	00 50 45.8	
MNK				i LR	LR	00 56 22.4	
MNK				i LRM	MLR	00 58 06.7	
	comp=Z,714nm,20.5s						
MNK				i LRM	MLR	00 58 12.4	
	comp=E,322nm,19.3s						
MNK				i LRM	MLR	00 58 14.4	
	comp=N,555nm,21.7s						
MNK	Minsk	73.61	326	i P	P	00 23 12.4	+0.6
MNK				i *PP	PcP	00 23 28.9	+1.5
MNK				i		00 25 57.0	
MNK				i PPP	PPP	00 27 42.1	
MNK				i S	S	00 32 38.9	+1.2
MNK				i *SS	sS	00 33 07.4	+3.8
MNK				i		00 33 16.3	
MNK				i SS	SS	00 37 24.1	+3.4
MNK				pmax	pmax		
	comp=E,25nm,1.0s						
MNK				pmax	pmax		
	comp=Z,67nm,0.8s						
MNK				pmax	pmax		
	comp=N,22nm,1.0s						
MNK				MLR	MLR		
	comp=Z,714nm,21.0s						
MNK				MLR	MLR		
	comp=E,322nm,19.0s						
MNK				MLR	MLR		
	comp=N,555nm,22.0s						
ISAL	Salakas	73.75	327	eP	P	00 23 12.6	0.0
HATC	Hat Creek Radi	73.85	51	P	P	00 23 14.9	+1.3
HATC				IAmb	IAmb	00 23 16.0	
	comp=Z,49nm,1.1s						
NACGM	Naroch	73.87	326	⇑iP	P	00 23 13.5	+0.2
	comp=Z,40nm,0.9s,baz=52						
JRN	Qarnain Island	73.98	289	P	P	00 23 13.8	-0.7
GDXM	Geysers	74.05	54	P	P	00 23 16.1	+1.3
SLIT	Slitere, Latvi	74.07	330	eP	P	00 23 14.1	-0.3
SCO	Scoresbysund	74.11	354	P	P	00 23 15.6	+1.1
SCO	Scoresbysund	74.11	354	P	P	00 23 15.6	+1.1
SCO				pmax	pmax		
	comp=Z,33nm,0.9s						
SCO	Scoresbysund	74.11	354	i P	P	00 23 15.2	+0.8
SCO				IAmb	IAmb	00 23 16.6	
	comp=Z,30nm,0.8s						
GEVA	Gevas	74.13	306	IAmb	IAmb	00 23 17.4	
	comp=Z,110nm,1.9s						
ANN	Anapa	74.18	314c	iP	P	00 23 14.7	-0.6
ANN				e*PP	pP	00 23 29.1	-1.5
ANN				i S	S	00 32 42.0	-2.4
ANN				pmax	pmax		
	comp=Z,42nm,0.8s						
ANN				MLR	MLR		
	comp=Z,417nm,21.0s						
JTMT	Jette	74.34	42	P	P	00 23 17.8	+1.4
J08A	Circle Bar Ran	74.35	48	IAmb	IAmb	00 23 19.5	
	comp=Z,68nm,1.4s						
UMMG	Uummannaq	74.37	4	i P	P	00 23 16.3	+0.4
UMMG				IAmb	IAmb	00 23 17.3	
	comp=Z,14nm,0.8s						
VSVD	Vaisvydziai	74.45	328	eP	P	00 23 16.7	0.0
GHWR	Ruwais	74.47	289	P	P	00 23 16.9	-0.5
MZR	Muzera	74.50	287	P	P	00 23 17.3	-0.3
	SNR=8.3						
MZR	Muzera	74.50	287	i P	P	00 23 17.1	-0.5
	SNR=30						
GURO	Guroymak-BITLI	74.68	306	IAmb	IAmb	00 23 20.7	
	comp=Z,137nm,1.9s						
PABE	Paberze	74.74	328	IAmb	IAmb	00 23 19.6	
	comp=Z,58nm,0.9s						
PABE	Paberze	74.74	328	eP	P	00 23 18.6	+0.3
WVOR	Wild Horse Val	74.76	49	P	P	00 23 20.2	+1.3
WVOR	Wild Horse Val	74.76	49	P	P	00 23 20.2	+1.3
WVOR				pmax	pmax		
	comp=Z,31nm,1.1s						
PLID	Pearl Lake	74.87	45	IAmb	IAmb	00 23 22.0	
	comp=Z,88nm,1.9s						
SHMA	Al-Shehemyia	74.96	291	P	P	00 23 19.7	-0.5
BEKR	Beckworth	75.07	52	IAmb	IAmb	00 23 23.3	
	comp=Z,54nm,1.0s						
SAKB	Bahrain	75.22	291	P	P	00 23 21.1	-0.5
AKASG	Malin Array Be	75.28	322	P	P	00 23 21.2	-0.4
AKASG				IAmb	IAmb	00 25 19.4	
	comp=Z,72nm,1.1s						
AKASG	Malin Array Be	75.28	322	P	P	00 23 21.1	-0.4
	comp=Z,10nm,0.4s,baz=49,slow=5.9,SNR=145						
AKASG				LR	LR	00 59 06.5	
	comp=Z,1µm,20.3s,baz=48,slow=38						
	comp=Z,10nm,0.4s						
AKBB	Malin Array Si	75.28	322	IAmb	IAmb	00 23 21.7	
	comp=Z,37nm,0.8s						
AKBB	Malin Array Si	75.28	322c	iP	P	00 23 21.1	-0.4
AKBB				pmax	pmax		
	comp=Z,45nm,0.8s						
PBUR	Paburge	75.28	329	eP	P	00 23 21.5	+0.1
KIEV	Kiev	75.29	322	P	P	00 23 21.1	-0.5
KIEV				IAmb	IAmb	00 23 21.7	
	comp=Z,33nm,0.8s						
KIEV	Kiev	75.29	322	⇑P	P	00 23 21.2	-0.5
KIEV	Kiev	75.29	322	P	P	00 23 21.2	-0.4
KIEV	Kiev	75.29	322	i P	P	00 23 21.0	-0.5
	SNR=46						
SLWR	Sila	75.33	289	P	P	00 23 22.0	-0.3
TRNA	Turayna	75.35	290	P	P	00 23 21.7	-0.7
NC303	NORSAR Array S	75.52	337	IAmb	IAmb	00 23 24.0	
	comp=Z,119nm,1.9s						
HFS	Hagfors	75.55	335	P	P	00 23 22.6	-0.4
	comp=Z,4.1nm,0.4s,baz=27,slow=0.3,SNR=74						
HFS				LR	LR	00 59 00.2	
	comp=Z,816nm,21.0s,baz=30,slow=38						
	comp=Z,4.1nm,0.4s						
MPK	Martis Peak	75.60	52	P	P	00 23 26.0	+2.0
DOMB	Dombas	75.61	338	eP	P	00 23 23.5	+0.2
SMRA	Abu-Samra	75.65	290	P	P	00 23 23.6	-0.6
	SNR=6.3						
KBD	Kabd	75.68	296	P	P	00 23 24.3	+0.1
NB2	NORSAR Subarra	75.70	337	P	P	00 23 23.5	-0.4
	comp=Z,27nm,0.9s,baz=42,slow=5.9						
NB2	NORSAR Subarra	75.70	337	P	P	00 23 23.5	-0.4
	baz=42,slow=5.9						
NOA	NORSAR Array B	75.70	337	P	P	00 23 23.7	-0.2
	comp=Z,6.2nm,0.5s,baz=40,slow=5.8,SNR=93						
NOA				LR	LR	00 59 48.8	
	comp=Z,914nm,20.7s,baz=35,slow=38						
	comp=Z,6.2nm,0.5s						
PAHR	Pah Rah Range	75.79	51	P	P	00 23 26.2	+1.3
PAHR				IAmb	IAmb	00 23 27.6	
	comp=Z,76nm,1.4s						
NC602	NORSAR Array S	75.83	337	eP	P	00 23 24.0	-0.5
GLAD	Gladstone	75.87	174	P	P	00 23 26.5	+1.7
ILULI	Ilulissat	75.88	4	i P	P	00 23 24.7	0.0
ILULI				IAmb	IAmb	00 23 26.1	
	comp=Z,28nm,0.9s						
LYMT	Lyon Mountain	75.89	42	P	P	00 23 26.0	+0.5
MFID	Camas Ranch	75.92	47	P	P	00 23 26.0	+0.5
MFID				IAmb	IAmb	00 23 28.4	
	comp=Z,116nm,1.7s						
PNTR	Pine Nut	75.99	52	P	P	00 23 27.4	+1.3
PNTR				IAmb	IAmb	00 23 29.2	
	comp=Z,66nm,1.3s						
SIM	Simferopol'	76.04	315	eP	P	00 23 23.9	-2.1
SIM				pmax	pmax		
	comp=Z,50nm,0.9s						
SIM				MLR	MLR		
	comp=Z,324nm,20.0s						
SAO	San Andreas Ge	76.04	55	P	P	00 23 26.9	+0.7
SAO	San Andreas Ge	76.04	55	P	P	00 23 26.9	+0.7
SAO				pmax	pmax		
	comp=Z,30nm,1.0s						
CMB	Columbia Colle	76.06	53	P	P	00 23 27.1	+0.8
CMB				IAmb	IAmb	00 23 29.0	
	comp=Z,74nm,1.1s						
CMB	Columbia Colle	76.06	53	P	P	00 23 27.1	+0.8
CMB				pmax	pmax		
	comp=Z,74nm,1.2s						
SUW	Suwalki	76.06	327	eP	P	00 23 25.4	-0.5
SUW	Suwalki	76.06	327	eP	P	00 23 25.8	-0.1
AKN	Aaknes	76.12	339	eP	P	00 23 26.9	+0.7
DMTO	DMTO	76.12	282	P	P	00 23 27.0	+0.1
FFC	Flin Flon	76.12	32	P	P	00 23 26.7	+0.4
FFC	Flin Flon	76.12	32	P	P	00 23 26.7	+0.4
FFC				pmax	pmax		
	comp=Z,19nm,0.9s						
DOK	Doka	76.30	283	P	P	00 23 27.5	-0.4
HRY	Holter Researc	76.30	42	P	P	00 23 28.7	+1.0
ICESG	Greenland Ices	76.32	360	i P	P	00 23 28.3	+0.6
ICESG				IAmb	IAmb	00 23 29.2	
	comp=Z,49nm,0.8s						
WAKR	Walker	76.42	53	P	P	00 23 30.1	+1.5
WAKR				IAmb	IAmb	00 23 31.6	
	comp=Z,36nm,1.0s						
BBGB	Big Mountain B	76.42	55	P	P	00 23 28.9	+0.4
FCC	Fort Churchill	76.42	26	IAmb	IAmb	00 23 29.5	
	comp=Z,77nm,1.3s						
DLMT	Dillon	76.67	44	IAmb	IAmb	00 23 32.4	
	comp=Z,66nm,1.0s						
OSL	Oslo	76.70	336	eP	P	00 23 29.8	+0.4
PMPB	Monarch Peak	76.78	55	IAmb	IAmb	00 23 38.2	
	comp=Z,59nm,1.3s						
RBK	Rabkut	76.83	282	P	P	00 23 31.0	0.0
SKAR	Skarslia	76.90	338	eP	P	00 23 31.0	+0.3
RYN	Ryan	76.94	52	P	P	00 23 32.8	+1.3
RYN				IAmb	IAmb	00 23 34.3	
	comp=Z,48nm,1.1s						
WHFO	Wadi Hawf	76.96	283	P	P	00 23 31.0	-0.7
SOEG	Soedalen	77.01	357	i P	P	00 23 31.2	+0.1
SOEG				IAmb	IAmb	00 23 32.8	
	comp=Z,41nm,0.9s						
HYA	Hoyanger	77.16	339	eP	P	00 23 32.3	+0.3
NVAR	Mina Array Bea	77.20	52	P	P	00 23 34.5	+1.5
NVAR	Mina Array Bea	77.20	52	P	P	00 23 34.6	+1.6
	comp=Z,25nm,0.8s,baz=284,slow=5.7,SNR=139						
	comp=Z,25nm,0.8s						
STRU	Stroemstad	77.23	336	i P	P	00 23 32.2	-0.3
DIKM	Dikmen	77.27	312	⇓P	P	00 23 34.2	+1.1
TOKA	Tokat	77.28	310	IAmb	IAmb	00 23 35.2	
	comp=Z,42nm,1.1s						
KONO	Kongsberg	77.29	337	P	P	00 23 33.1	+0.3
KONO	Kongsberg	77.29	337	P	P	00 23 33.1	+0.3
KONO				pmax	pmax		
	comp=Z,19nm,1.2s						
KONO	Kongsberg	77.29	337	eP	P	00 23 32.7	0.0
NV11	Mina Array Sit	77.29	52	P	P	00 23 34.7	+1.2
NV11				IAmb	IAmb	00 23 36.4	
	comp=Z,74nm,1.6s						
SORM	Soroca	77.31	320	⇑P	P	00 23 32.4	-0.7
SORM	Soroca	77.31	320	P	P	00 23 32.4	-0.7
PURM	Purcari	77.48	318	⇓P	P	00 23 34.1	0.0
BLEU	Blekinge	77.56	332	i P	P	00 23 33.2	-1.1
ABTO	Aybut	77.64	283	P	P	00 23 35.2	-0.3
Q09A	Carvers	77.69	51	P	P	00 23 37.3	+1.6
Q09A				IAmb	IAmb	00 24 31.5	
	comp=Z,54nm,0.7s						
BORU	Boraas	77.72	334	i P	P	00 23 34.2	-1.0
YHL	Hebgen Lake	77.78	44	P	P	00 23 37.7	+1.5
ELK	Elko	77.81	49	P	P	00 23 37.8	+1.4
ELK				IAmb	IAmb	00 23 39.4	
	comp=Z,29nm,0.9s						
ELK	Elko	77.81	49	P	P	00 23 37.8	+1.4
ELK				pmax	pmax		
	comp=Z,29nm,1.0s						
MILM	Milestii Mici	77.82	319	eP	P	00 23 34.8	-1.2
	comp=Z,200nm,3.3s						
MILM				eS	S	00 33 25.0	+0.7
MILM				eL	L	00 58 54.0	
MILM				LRM	MLR	01 01 00.0	
	comp=Z,400nm,16.5s						
MILM	Milestii Mici	77.82	319	⇑P	P	00 23 35.1	-0.9
MILM	Milestii Mici	77.82	319	eP	P	00 23 34.8	-1.2
MILM				eS	S	00 33 25.0	+0.7
MILM				pmax	pmax		
	comp=Z,200nm,3.3s						
MILM				MLR	MLR		
	comp=Z,400nm,16.5s						
YHB	Horse Butte	77.83	44	P	P	00 23 37.0	+0.6
YHB				IAmb	IAmb	00 23 39.2	
	comp=Z,28nm,0.9s						
ASK	Askoy	78.00	339	eP	P	00 23 36.6	-0.1
YHH	Holmes Hill	78.01	43	P	P	00 23 38.6	+1.1
DSP	Deep Springs	78.02	53	IAmb	IAmb	00 23 40.5	
	comp=Z,50nm,1.2s						
ODD1	Odda	78.02	338	eP	P	00 23 37.4	+0.4
BER	Bergen	78.04	339	eP	P	00 23 37.6	+0.7
GCMT	Greycliff	78.05	42	P	P	00 23 38.8	+1.3
SFJD	Kangerlussuaq	78.10	4	i P	P	00 23 37.5	+0.3
SFJD				IAmb	IAmb	00 23 38.2	
	comp=Z,31nm,0.9s						
YNM	Yellowstone No	78.13	43	P	P	00 23 39.7	+1.6
YNR	Norris Junctio	78.15	43	P	P	00 23 40.3	+2.1
YNR				IAmb	IAmb	00 23 41.7	
	comp=Z,65nm,1.5s						
DEL	Delary	78.18	333	i P	P	00 23 37.0	-0.8
ONAU	Onsala	78.21	334	i P	P	00 23 37.0	-0.9
FABU	Falkenberg	78.22	334	i P	P	00 23 37.1	-0.8
YFT	Old Faithful	78.22	44	P	P	00 23 40.7	+2.1
YMP	Mirror Lake Pl	78.43	43	P	P	00 23 41.1	+1.3
YMP				IAmb	IAmb	00 23 43.1	
	comp=Z,72nm,1.5s						
BLS5	Blasjo	78.47	338	eP	P	00 23 39.9	+0.5
ILGA	Ilgaz	78.56	312	IAmb	IAmb	00 23 42.3	
	comp=Z,43nm,0.8s						
BEL	Belsk	78.60	326	eP	P	00 23 40.8	+0.6
FXWY	Fox Creek	78.61	44	P	P	00 23 41.4	+0.6
FXWY				IAmb	IAmb	00 23 43.9	
	comp=Z,103nm,1.9s						
GAZ	Gaziantep	78.62	307	IAmb	IAmb	00 23 43.0	
	comp=Z,40nm,0.9s						
GRAC	Grapevine Rang	78.62	53	P	P	00 23 42.3	+1.6
GRAC				IAmb	IAmb	00 23 43.6	
	comp=Z,47nm,1.1s						
RLMT	Red Lodge	78.69	42	IAmb	IAmb	00 23 44.0	
	comp=Z,48nm,1.4s						
HVU	Hansel Valley	78.70	47	P	P	00 23 43.0	+1.8
HVU				IAmb	IAmb	00 23 44.1	
	comp=Z,42nm,0.9s						
HVU	Hansel Valley	78.70	47	P	P	00 23 43.0	+1.8
HVU				pmax	pmax		
	comp=Z,42nm,0.9s						
HOMB	Homborsund	78.72	336	i P	P	00 23 40.5	-0.2
BJUU	Bjuv	78.79	333	i P	P	00 23 40.9	-0.3
BIR	Birlad	78.86	319	⇑P	P	00 23 42.5	+0.7
BIR	Birlad	78.86	319	P	P	00 23 42.4	+0.7
OVD	Ostervraa, Den	78.87	335	i P	P	00 23 41.3	-0.2
OVD				IAmb	IAmb	00 23 43.2	
	comp=Z,24nm,0.6s						
VLDR	Vladesti	78.88	319	⇑P	P	00 23 42.5	+0.6
TLCR		78.89	318	⇑P	P	00 23 42.5	+0.5
TLCR		78.89	318	P	P	00 23 42.4	+0.5
PRAR	RASCA	78.91	321	⇑P	P	00 23 42.3	+0.3
LUNU	Lund	78.96	332	i P	P	00 23 41.7	-0.4
VARL	Varlezi	78.97	319	⇓P	P	00 23 43.2	+0.8
R11B	Troy Canyon, C	78.99	51	IAmb	IAmb	00 23 45.7	
	comp=Z,128nm,1.8s						
KMY	Karmoy	79.01	338	eP	P	00 23 42.6	+0.3
SNART	Snartemo	79.09	337	eP	P	00 23 42.9	+0.1
SNART	Snartemo	79.09	337	i P	P	00 23 42.9	+0.1
FRB	Frobisher Bay	79.11	12	LR	LR	01 00 30.9	
	comp=Z,294nm,21.1s,baz=330,slow=37						
JURR	Jurilovca	79.12	317	⇑P	P	00 23 43.3	+0.1
GKP	Gorka Klasztor	79.15	329	eP	P	00 23 43.3	+0.1
GKP	Gorka Klasztor	79.15	329	eP	P	00 23 43.6	+0.4
WCT	Wildcat Mounta	79.23	53	IAmb	IAmb	00 23 46.8	
	comp=Z,61nm,1.5s						
DGMT	Dagmar	79.23	38	IAmb	IAmb	00 23 45.6	
	comp=Z,55nm,1.2s						
TESR	Tescani	79.23	320	⇑P	P	00 23 43.9	+0.1
IZVR	Izvoarele	79.24	319	⇑P	P	00 23 45.0	+1.1
CCAC	Calif City Air	79.25	55	IAmb	IAmb	00 23 46.8	
	comp=Z,71nm,1.0s						
BURAR	Bucovina Array	79.27	321	P	P	00 23 44.4	+0.3
BURAR	Bucovina Array	79.27	321	⇑P	P	00 23 44.5	+0.3
BURAR	Bucovina Array	79.27	321	P	P	00 23 44.4	+0.3
CFR	Carcaliu	79.27	318	⇓P	P	00 23 44.2	+0.2
CFR	Carcaliu	79.27	318	P	P	00 23 44.2	+0.2
S11A	Rachel	79.30	52	IAmb	IAmb	00 23 46.8	
	comp=Z,44nm,1.0s						
COP	Copenhagen	79.31	333	i P	P	00 23 44.2	+0.3
COP				IAmb	IAmb	00 23 44.5	
	comp=Z,48nm,0.8s						
TPGR	Topolog	79.32	318	⇑P	P	00 23 44.6	+0.3
LAO	LASA Array	79.34	40	IAmb	IAmb	00 23 47.0	
	comp=Z,53nm,1.1s						
TPNV	Topopah Spring	79.38	52	IAmb	IAmb	00 23 47.0	
	comp=Z,42nm,0.9s						
BR131	Keskin Array S	79.40	311	P	P	00 23 45.5	+0.5
	SNR=20						
BR131	Keskin Array S	79.40	311c	iP	P	00 23 45.0	0.0
BRTR	Keskin Array B	79.40	311	P	P	00 23 45.0	0.0
BRTR	Keskin Array B	79.40	311	P	P	00 23 45.2	+0.2
	comp=Z,16nm,0.8s,baz=110,slow=4.1,SNR=96						
	comp=Z,16nm,0.8s						
SPR3	Spring Creek 3	79.40	50	IAmb	IAmb	00 23 48.7	
	comp=Z,131nm,1.9s						
TOZ	Tahuroa Road	79.43	152	P	P	00 23 46.5	+1.8
ODBI	Odobesti	79.49	319	⇓P	P	00 23 47.0	+1.8
HWUT	Hardware Ranch	79.53	46	IAmb	IAmb	00 23 48.7	
	comp=Z,72nm,1.1s						
QSM	Queen of Sheba	79.55	53	IAmb	IAmb	00 23 48.3	
	comp=Z,101nm,1.2s						
GWY	Greenwater Val	79.55	53	IAmb	IAmb	00 23 48.4	
	comp=Z,92nm,1.3s						
TIRR	Tirgusor	79.57	317	P	P	00 23 45.0	-0.7
TIRR	Tirgusor	79.57	317	⇓P	P	00 23 46.1	+0.5
TIRR	Tirgusor	79.57	317	P	P	00 23 46.1	+0.5
KIRS	Kirsehir-Merke	79.58	311	⇓P	P	00 23 46.5	+0.6
VRI	Vrincioaia	79.60	319	⇑P	P	00 23 46.3	+0.5
VRI	Vrincioaia	79.60	319	P	P	00 23 46.3	+0.5
BORG	Borgarnes	79.61	352	P	P	00 23 46.9	+1.5
BORG	Borgarnes	79.61	352	P	P	00 23 46.9	+1.5
BORG				pmax	pmax		
	comp=Z,25nm,0.9s						
DUG	Dugway, Tooele	79.63	48	IAmb	IAmb	00 23 49.2	
	comp=Z,55nm,0.9s						
PLOR	Plostina	79.65	319	⇓P	P	00 23 46.7	+0.5
PLOR	Plostina	79.65	319	P	P	00 23 46.6	+0.5
HARR	Harsova	79.69	318	⇑P	P	00 23 46.7	+0.3
HARR	Harsova	79.69	318	P	P	00 23 46.6	+0.3
PASC	Pasadena Art C	79.70	56	IAmb	IAmb	00 23 48.9	
	comp=Z,54nm,1.3s						
TLBR	Topalu	79.72	318	⇑P	P	00 23 46.9	+0.4
ANGG	Ammassalik, Gr	79.80	359	i P	P	00 23 46.3	-0.2
ANGG				IAmb	IAmb	00 23 47.0	
	comp=Z,32nm,1.1s						
BISRR	Bisoca	79.81	319	⇑P	P	00 23 48.4	+1.3
ANTO	Ankara	79.83	312	P	P	00 23 47.9	+0.6
ANTO				IAmb	IAmb	00 23 48.4	
	comp=Z,33nm,0.8s						
ANTO	Ankara	79.83	312	P	P	00 23 47.9	+0.6
ANTO	Ankara	79.83	312	⇑P	P	00 23 47.9	+0.6
ANTO	Ankara	79.83	312	P	P	00 23 47.9	+0.6
ANTO				pmax	pmax		
	comp=Z,33nm,0.9s						
TURR	Turia	79.86	320	⇑P	P	00 23 48.5	+1.2
HIZ	Hauiti	79.86	153	P	P	00 23 48.9	+1.8
KOLS	Kolonicke sedl	79.86	324	eP	P	00 23 46.9	-0.3
KOLS				pmax	pmax		
	comp=Z,12nm,0.9s						
KOLS	Kolonicke sedl	79.86	324	eP	P	00 23 46.9	-0.3
KOLS				ePP	PP	00 26 52.9	+4.3
ISOG	Isortoq, Green	79.88	360	i P	P	00 23 47.0	+0.1
ISOG				IAmb	IAmb	00 23 48.3	
	comp=Z,62nm,1.2s						
PRN	Pahroc Range	79.89	51	P	P	00 23 49.2	+1.5
PRN				IAmb	IAmb	00 23 50.6	
	comp=Z,37nm,1.0s						
TCUT	Toone Canyon	79.92	47	P	P	00 23 48.8	+0.8
TCUT				IAmb	IAmb	00 23 50.6	
	comp=Z,55nm,0.9s						
OZUR		79.95	320	⇑P	P	00 23 48.7	+1.0
PDAR	Pinedale Array	79.99	44	P	P	00 23 48.8	+0.5
PDAR	Pinedale Array	79.99	44	P	P	00 23 49.0	+0.7
	comp=Z,10nm,0.7s,baz=273,slow=2.7,SNR=96						
PDAR				pP	pP	00 24 05.1	+1.3
	comp=Z,3.4nm,0.7s,baz=230,slow=1.2,SNR=4.1						
	comp=Z,10nm,0.7s						
BOSR	Bodos	80.03	320	⇑P	P	00 23 49.3	+1.1
STHS	Stebnicka Huta	80.03	324	eP	P	00 23 47.4	-0.7
STHS				pmax	pmax		
	comp=Z,14nm,1.0s						
STHS	Stebnicka Huta	80.03	324	eP	P	00 23 47.4	-0.7
STHS				ePP	PP	00 26 45.8	-4.2
BMR	Baia Mare	80.10	322	⇑P	P	00 23 49.3	+0.7
BMR	Baia Mare	80.10	322	P	P	00 23 49.2	+0.7
NEHR	Nehoiu	80.11	319	⇑P	P	00 23 50.2	+1.6
ICOR	Ion Corvin	80.13	317	⇑P	P	00 23 49.5	+0.8
OJC	Ojcow	80.16	326	eP	P	00 23 49.0	+0.2
OJC				epP	pP	00 24 04.1	-0.2
ISR	Istrita	80.18	319	⇑P	P	00 23 50.1	+1.1
ISR	Istrita	80.18	319	P	P	00 23 50.1	+1.1
DOPR	Dopca	80.25	320	⇑P	P	00 23 50.5	+1.1
MLR	Muntele Rosu	80.26	319	P	P	00 23 49.6	+0.1
	comp=Z,2.8nm,0.4s,baz=350,slow=6.9,SNR=14						
MLR				LR	LR	01 03 38.0	
	comp=Z,488nm,18.0s,baz=24,slow=39						
	comp=Z,2.8nm,0.4s						
MLR	Muntele Rosu	80.26	319	⇑P	P	00 23 49.7	+0.1
VRZ	Vera Road	80.36	153	P	P	00 23 51.5	+1.8
RAYN	Ar Rayn	80.39	292	P	P	00 23 50.5	0.0
RAYN				IAmb	IAmb	00 23 51.6	
	comp=Z,69nm,0.8s						
RAYN	Ar Rayn	80.39	292	P	P	00 23 50.8	+0.3
RAYN	Ar Rayn	80.39	292	P	P	00 23 50.6	0.0
RAYN	Ar Rayn	80.39	292	i P	P	00 23 50.5	0.0
	SNR=96						
MPU	Maple Canyon	80.46	48	IAmb	IAmb	00 23 53.5	
	comp=Z,50nm,0.9s						
NIE	Niedzica	80.48	325	eP	P	00 23 51.2	+0.7
CICN	Ciocanesti	80.51	318	⇑P	P	00 23 51.9	+1.2
WTVZ	West Tongariro	80.67	153	P	P	00 23 52.6	+1.1
CBBR	Cluj-Babes-Bol	80.68	321	⇓P	P	00 23 52.8	+1.2
NNVZ	North Ngauruho	80.69	153	P	P	00 23 52.7	+1.0
NGZ	Ngauruhoe	80.72	153	P	P	00 23 52.9	+1.0
MESR	Meseseni	80.73	322	⇓P	P	00 23 53.0	+1.1
OTVZ	Oturere	80.74	153	P	P	00 23 53.1	+1.2
SNVZ	South Ngauruho	80.75	153	P	P	00 23 53.1	+1.1
VOIR		80.78	320	⇓P	P	00 23 52.9	+0.6
VOIR		80.78	320	P	P	00 23 52.9	+0.6
FWVZ	Far West T-bar	80.78	153	P	P	00 23 53.2	+0.9
WHVZ	Whangaehu Hut	80.81	153	P	P	00 23 53.3	+0.9
NUUK	Nuuk	80.82	5	i P	P	00 23 52.8	+0.8
NUUK				IAmb	IAmb	00 23 53.9	
	comp=Z,52nm,0.8s						
WNVZ	Wahianoa	80.86	153	P	P	00 23 53.4	+0.9
PRD	Provadia	80.96	317	⇑iP	P	00 23 53.6	+0.5
MOVZ	Moawhango	80.98	153	P	P	00 23 53.3	+0.2
MVU	Marysvale	81.02	49	P	P	00 23 55.8	+1.9
MVU				IAmb	IAmb	00 23 58.6	
	comp=Z,45nm,1.1s						
ARR	Arges	81.04	320	⇑P	P	00 23 54.8	+1.2
BKZ	Black Stump Fm	81.06	152	P	P	00 23 53.9	+0.4
LANS	Liptovska Anna	81.06	325	eP	P	00 23 54.3	+0.6
LANS				pmax	pmax		
	comp=Z,14nm,1.4s						
LANS	Liptovska Anna	81.06	325	eP	P	00 23 54.3	+0.6
LANS				ePP	PP	00 26 58.3	-0.2
QRZ	Quartz Range	81.08	156	P	P	00 23 54.3	+0.8
DRGR		81.09	322	⇑P	P	00 23 54.3	+0.4
DRGR		81.09	322	P	P	00 23 54.3	+0.4
NMHZ	Naumai	81.12	152	P	P	00 23 54.6	+0.7
RUE	Ruedersdorf	81.17	330	eP	P	00 23 54.1	0.0
	comp=Z,22nm,0.9s,baz=39,slow=5.1						
OKC	Ostrava-Krasne	81.19	326	AMS	AMS	01 02 40.0	
	comp=Z,500nm,21.4s						
PFO	Pinyon Flats O	81.19	55	P	P	00 23 55.7	+0.9
PFO				IAmb	IAmb	00 23 57.2	
	comp=Z,69nm,1.3s						
PFO	Pinyon Flats O	81.19	55	LR	LR	00 52 05.8	
	comp=Z,256nm,22.0s,baz=252,slow=30						
PFO	Pinyon Flats O	81.19	55c	iP	P	00 23 55.7	+0.9
PFO				pmax	pmax		
	comp=Z,89nm,1.1s						
LCMT	Little Creek M	81.28	51	IAmb	IAmb	00 23 58.1	
	comp=Z,44nm,0.9s						
STEB	Steborice	81.29	326	eP	P	00 23 55.1	+0.3
KSP	Ksiaz	81.30	328	eP	P	00 23 55.2	+0.4
KSP				epP	pP	00 24 10.2	-0.2

RDMU	Red Mountain	81.35	46	IAmb	IAmb	00 23 58.2	
	comp=Z,69nm,0.9s						
HUMR	Humele	81.41	319	⇑P	P	00 23 54.6	-0.9
Q16A	Castle Valley	81.41	48	IAmb	IAmb	00 23 59.0	
	comp=Z,111nm,1.5s						
KRHZ	Kereru	81.42	152	P	P	00 23 55.6	+0.2
BSEG	Bad Segeberg	81.43	333	eP	P	00 23 55.3	-0.2
	comp=Z,24nm,1.1s,baz=39,slow=5.1						
LOT	Lotru	81.44	320	⇓P	P	00 23 56.7	+0.9
MORC	Moravsky Berou	81.51	326	eP	P	00 23 56.4	+0.4
MORC	Moravsky Berou	81.51	326	⇑P	P	00 23 56.5	+0.5
MORC	Moravsky Berou	81.51	326	P	P	00 23 56.5	+0.5
CTYL	Yalikoy Yolu	81.53	315	⇓P	P	00 23 56.7	+0.5
P18A	Preston Nutter	81.54	47	IAmb	IAmb	00 23 59.7	
	comp=Z,48nm,1.0s						
COPA	Copaceanca	81.54	319	⇑P	P	00 23 56.7	+0.5
DUWZ	D'Urville Isla	81.54	155	P	P	00 23 56.5	+0.5
OSTC	Ostas	81.54	328	eP	P	00 23 56.6	+0.4
OSTC				AMS	AMS	01 04 20.0	
	comp=Z,400nm,13.4s						
OSTC	Ostas	81.54	328	eP	P	00 23 56.6	+0.4
OSTC				MLR	MLR		
	comp=Z,400nm,13.4s						
KNB	Kanab	81.55	51	IAmb	IAmb	00 23 59.8	
	comp=Z,63nm,0.9s						
CHVC	Chvalec	81.59	328	eP	P	00 23 57.0	+0.6
CHVC				AMS	AMS	01 04 20.0	
	comp=Z,400nm,14.3s						
CHVC	Chvalec	81.59	328	eP	P	00 23 57.0	+0.6
CHVC				MLR	MLR		
	comp=Z,400nm,14.3s						
DEV	Deva	81.60	321	⇓P	P	00 23 57.3	+0.8
DEV	Deva	81.60	321	P	P	00 23 57.3	+0.8
TSZ	Takapari Road	81.63	153	P	P	00 23 56.4	-0.1
KRLC	Kraliky	81.64	327	eP	P	00 23 56.9	+0.2
KRLC	Kraliky	81.64	327	eP	P	00 23 56.9	+0.2
DPC	Dobruska-Polom	81.64	327	eP	P	00 23 57.2	+0.5
DPC				AMS	AMS	01 04 20.0	
	comp=Z,400nm,17.9s						
DPC	Dobruska-Polom	81.64	327	eP	P	00 23 57.2	+0.5
DPC				MLR	MLR		
	comp=Z,400nm,17.9s						
UPC	Upice	81.67	328	eP	P	00 23 57.3	+0.5
UPC				eS	S	00 34 04.2	-0.7
UPC				AMS	AMS	01 04 20.0	
	comp=Z,500nm,16.4s						
UPC	Upice	81.67	328	eP	P	00 23 57.3	+0.5
UPC				e		00 34 04.2	
UPC				MLR	MLR		
	comp=Z,500nm,16.4s						
SRU	San Rafael Swe	81.69	48	P	P	00 23 58.4	+1.0
SRU				IAmb	IAmb	00 23 59.8	
	comp=Z,65nm,0.8s						
SRU	San Rafael Swe	81.69	48	P	P	00 23 58.4	+1.0
SRU				pmax	pmax		
	comp=Z,65nm,0.8s						
SZH	Strazhitsa	81.69	318	⇑iP	P	00 23 57.2	+0.1
TKX	Tecate	81.70	56	P	P	00 23 57.8	+0.5
PSZ	Piszkesteto	81.72	324	⇓P	P	00 23 57.5	+0.3
PSZ	Piszkesteto	81.72	324	P	P	00 23 57.5	+0.3
PSZ	Piszkesteto	81.72	324	eP	P	00 23 58.2	+1.0
NNZ	Nelson	81.72	155	P	P	00 23 57.2	+0.3
ASF	Jabal al Asfar	81.73	303	P	P	00 23 58.0	+0.5
	comp=Z,19nm,0.8s,baz=80,slow=2.3,SNR=20						
	comp=Z,19nm,0.8s						
KAHZ	Kahuranaki	81.75	152	P	P	00 23 58.2	+1.0
GORT1	Trebel	81.78	332	eP	P	00 23 57.4	+0.2
	comp=Z,33nm,1.2s,baz=39,slow=5.1						
K22A	Casper	81.79	43	IAmb	IAmb	00 24 00.9	
	comp=Z,49nm,1.3s						
CBX	Cerro Bola	81.81	56	P	P	00 23 58.8	+0.8
CBX				IAmb	IAmb	00 24 01.1	
	comp=Z,48nm,0.9s						
VYHS	Vyhne	81.82	325	eP	P	00 23 57.9	+0.3
VYHS				pmax	pmax		
	comp=Z,28nm,1.1s						
VYHS	Vyhne	81.82	325	eP	P	00 23 57.9	+0.3
VYHS				ePP	PP	00 27 06.2	+1.5
JMB	Yambol	81.88	317	⇑iP	P	00 23 58.5	+0.4
MDND	Maddock	81.91	36	IAmb	IAmb	00 23 60.0	
	comp=Z,58nm,0.9s						
DVHZ	Dannevirke	81.92	153	P	P	00 23 57.7	-0.3
ULM	Lac du Bonnet	81.92	32	P	P	00 23 57.9	-0.2
	comp=Z,15nm,0.8s,baz=313,slow=5.7,SNR=28						
	comp=Z,15nm,0.8s						
SIRR	Siria	81.98	322	⇑P	P	00 23 58.8	+0.3
GZR	Gura Zlata	82.00	321	⇑P	P	00 23 58.9	+0.2
GZR	Gura Zlata	82.00	321	P	P	00 23 58.9	+0.2
MRZ	Mangatainoka R	82.01	153	P	P	00 23 58.5	+0.1
MRZ				IAmb	IAmb	00 23 59.2	
	comp=Z,37nm,1.0s						
MRZ	Mangatainoka R	82.01	153	P	P	00 23 58.5	+0.1
THZ	Tophouse	82.05	156	P	P	00 23 58.3	-0.4
CCX	Cicese	82.08	57	P	P	00 23 59.8	+0.5
CCX				IAmb	IAmb	00 24 01.6	
	comp=Z,50nm,1.1s						
SURR	Surduc	82.09	321	⇑P	P	00 23 59.5	+0.4
JAVC	Velka Javorina	82.11	326	eP	P	00 24 00.3	+1.1
TUWZ	Tuamarina	82.11	155	P	P	00 23 58.8	-0.1
YUH	Yuha Desert	82.12	56	IAmb	IAmb	00 24 02.1	
	comp=Z,34nm,1.0s						
RSSD	Black Hills	82.19	41	P	P	00 24 00.2	+0.2
RSSD				IAmb	IAmb	00 24 01.9	
	comp=Z,87nm,1.9s						
RSSD	Black Hills	82.19	41	P	P	00 24 00.2	+0.2
RSSD				pmax	pmax		
	comp=Z,87nm,2.0s						
U15A	North Rim	82.24	51	P	P	00 24 00.9	+0.5
MMAI	Mount Meron Ar	82.25	305	P	P	00 24 00.4	+0.2
	comp=Z,13nm,0.7s,baz=39,slow=5.4,SNR=32						
MMAI				pP	pP	00 24 17.2	+1.4
	comp=Z,3.5nm,0.5s,baz=359,slow=3.3,SNR=4.7						
MMAI				LR	LR	01 04 00.6	
	comp=Z,462nm,20.7s,baz=16,slow=38						
	comp=Z,13nm,0.7s						
E28A	Huff	82.26	37	IAmb	IAmb	00 24 01.1	
	comp=Z,31nm,1.0s						
VRAC	Vranov	82.28	327	LR	LR	01 03 43.5	
	comp=Z,458nm,19.8s,baz=31,slow=38						
VRAC	Vranov	82.28	327	eP	P	00 24 00.5	+0.5
VRAC				epP	pP	00 24 15.8	+0.2
VRAC	Vranov	82.28	327	⇑P	P	00 24 00.7	+0.6
VRAC	Vranov	82.28	327	P	P	00 24 00.6	+0.5
BFZ	Birch Farm	82.28	153	P	P	00 23 59.9	+0.1
PVCC	Panska Ves	82.28	328	eP	P	00 24 00.4	+0.4
PVCC	Panska Ves	82.28	328	eP	P	00 24 00.4	+0.4
HMU	Henry Mountain	82.28	49	IAmb	IAmb	00 24 03.0	
	comp=Z,56nm,0.8s						
BRG	Berggiesshubel	82.29	329	eP	P	00 23 60.0	-0.1
	comp=Z,11nm,0.9s,baz=39,slow=5.1						
BRG	Berggiesshubel	82.29	329	eP	P	00 24 00.1	+0.1
BRG				Amp		00 24 00.9	
	comp=Z,11nm,0.9s						
BRG				pP	sP	00 24 18.3	-3.4
BRG				Amp		00 24 19.0	
	comp=Z,5.5nm,0.8s						
BRG				PP	PP	00 27 09.5	+1.1
BRG				Amp		00 27 10.5	
	comp=Z,6.1nm,1.1s						
BRG	Berggiesshubel	82.29	329	S	S	00 34 12.0	+0.7
BRG	Berggiesshubel	82.29	329	SS	SS	00 39 33.0	+1.8
FLTG	Flechtingen	82.31	331	eP	P	00 23 59.3	-0.7
	comp=Z,19nm,0.9s,baz=39,slow=5.1						
BAND	Balkesir-Ban	82.35	314	⇑P	P	00 24 01.1	+0.5
CLL	Collm	82.36	330	⇑iP	P	00 24 00.2	-0.2
CLL				i *PP	pP	00 24 15.6	-0.4
CLL				pmax	pmax		
	comp=Z,32nm,1.0s						
CLL				pmax	pmax		
	comp=Z,300nm,19.1s						
CLL	Collm	82.36	330	eP	P	00 24 00.0	-0.4
	comp=Z,28nm,1.0s,baz=39,slow=5.1						
CLL	Collm	82.36	330	⇑iP	P	00 24 00.2	-0.2
	comp=Z,32nm,1.0s						
CLL				ePcP	PcP	00 24 06.0	+0.5
CLL				i pP	pP	00 24 15.6	-0.4
CLL				i sP	sP	00 24 22.7	+0.6
CLL				ex	x	00 25 28.0	
CLL				ePP	PP	00 27 12.0	+3.0
CLL				ex	x	00 27 17.0	
CLL				ex	x	00 27 24.0	
CLL				ePPPP		00 30 30.0	
CLL				eS	S	00 34 12.0	0.0
CLL				ePS	PnS	00 35 00.0	-7.0
CLL				ePPS	PPS	00 35 30.0	
CLL				eSS	SS	00 39 36.0	+3.8
CLL				eSSS	SSS	00 43 00.0	
CLL				eSSSS		00 45 30.0	
CLL				AMS	AMS	01 03 00.0	
	comp=N,300nm,19.4s						
CLL				AMS	AMS	01 03 00.0	
	comp=E,300nm,21.4s						
CLL				AMS	AMS	01 03 00.0	
	comp=Z,300nm,20.0s						
CLL				AMS	AMS	01 05 00.0	
	comp=Z,300nm,19.1s						
BLYC	Blythe	82.41	54	IAmb	IAmb	00 24 03.9	
	comp=Z,34nm,1.0s						
O20A	White River Ci	82.42	46	IAmb	IAmb	00 24 03.3	
	comp=Z,48nm,0.9s						
BZS	Buzias	82.45	321	⇑P	P	00 24 00.8	-0.2
BZS	Buzias	82.45	321	P	P	00 24 00.8	-0.2
CSS	Mathiatis	82.46	307	IAmb	IAmb	00 24 04.0	
	comp=Z,42nm,0.7s						
RICC	Richard	82.47	329	eP	P	00 24 04.5	+3.5
ESJX	Sierra Juarez	82.49	56	IAmb	IAmb	00 24 04.5	
	comp=Z,56nm,1.1s						
ISP	Isparta	82.49	311	⇑eP	P	00 24 00.8	-0.7
ISP				pmax	pmax		
	comp=Z,15nm,0.9s						
HERR	Herculane	82.53	321	⇑P	P	00 24 01.4	0.0
KRUC	Moravsky	82.54	326	eP	P	00 24 01.7	+0.3
KRUC				epP	pP	00 24 16.4	-0.6
SRO	Srobarova	82.55	325	eP	P	00 24 02.5	+1.1
SRO				pmax	pmax		
	comp=Z,26nm,0.9s						
SRO	Srobarova	82.55	325	eP	P	00 24 02.5	+1.1
GLA	Glamis	82.62	55	IAmb	IAmb	00 24 05.0	
	comp=Z,36nm,0.8s						
NRDL	Niedersach Rie	82.63	332	eP	P	00 24 01.5	-0.2
	comp=Z,12nm,1.1s,baz=39,slow=5.1						
MODS	Modra-Piesok	82.64	326	eP	P	00 24 01.6	-0.3
MODS				pmax	pmax		
	comp=Z,45nm,1.1s						
MODS	Modra-Piesok	82.64	326	eP	P	00 24 01.6	-0.3
MODS				ePP	PP	00 27 12.6	+1.2
GOPC	GO Pecny, Ondr	82.64	328	AMS	AMS	01 05 00.0	
	comp=Z,500nm,15.3s						
PRA	Prague	82.68	328	eP	P	00 24 02.2	+0.1
PRA				AMS	AMS	01 04 20.0	
	comp=Z,600nm,19.1s						
PRA	Prague	82.68	328	eP	P	00 24 02.2	+0.1
PRA				MLR	MLR		
	comp=Z,600nm,19.1s						
PRA				MLR	MLR		
	comp=Z,9µm,20.7s						
ASSE	Asse, Remlinge	82.69	331	eP	P	00 24 01.8	-0.2
	comp=Z,8.1nm,0.8s,baz=39,slow=5.1						
PRU	Pruhonice	82.69	328	eP	P	00 24 02.6	+0.5
PRU				AMS	AMS	01 04 20.0	
	comp=Z,600nm,19.3s						
PRU	Pruhonice	82.69	328	eP	P	00 24 02.6	+0.5
PRU				MLR	MLR		
	comp=Z,600nm,19.3s						
DIM	Dimitrovgrad	82.71	317	⇑iP	P	00 24 03.2	+0.8
RETH	Rethem/Aller,	82.72	332	eP	P	00 24 02.0	-0.2
	comp=Z,12nm,0.9s,baz=39,slow=5.1						
RETH				epP	pP	00 24 18.3	+0.5
LTZ	Lake Taylor	82.75	157	P	P	00 24 03.1	+0.8
TREC	Trest	82.78	327	eP	P	00 24 02.8	+0.1
TREC	Trest	82.78	327	eP	P	00 24 02.8	+0.1
VALD	Valchedram	82.80	319	⇑iP	P	00 24 03.4	+0.6
MPEP	Malo Peshtene	82.86	319	⇑iP	P	00 24 03.7	+0.6
NEUB	Neuenburg	82.95	330	eP	P	00 24 03.2	-0.2
	comp=Z,25nm,0.9s,baz=39,slow=5.1						
MDVR	Moldovita	82.97	321	⇑P	P	00 24 03.7	0.0
CLZ	Clausthal	83.03	331	eP	P	00 24 03.9	0.0
	comp=Z,23nm,1.0s,baz=39,slow=5.1						
CLZ				epP	pP	00 24 19.4	-0.1
PV22	Blue Mesa, Par	83.11	47	IAmb	IAmb	00 24 07.4	
	comp=Z,71nm,1.0s						
KDZ	Kurdzhali	83.12	317	⇑iP	P	00 24 05.2	+0.7
MSZ	Milford Sound	83.16	160	P	P	00 24 05.2	+1.0
GVZ	Greta Valley S	83.16	156	P	P	00 24 04.0	-0.4
PGB	Panagyurishte	83.18	318	⇑iP	P	00 24 05.4	+0.5
ZVC	Zvikov	83.25	328	eP	P	00 24 04.9	-0.2
ZVC				AMS	AMS	01 05 20.0	
	comp=Z,400nm,16.0s						
PV07	Paradox Valley	83.25	47	IAmb	IAmb	00 24 08.2	
	comp=Z,65nm,1.4s						
CAVK	Edirne/Enez-Ca	83.26	316	⇓P	P	00 24 05.9	+0.6
TANN	Tannenbergstha	83.26	329	eP	P	00 24 05.0	-0.2
	comp=Z,29nm,1.7s,baz=39,slow=5.1						
MANT	Manisa	83.27	313	IAmb	IAmb	00 27 05.5	
	comp=Z,31nm,0.7s						
EPLO	Experimental L	83.28	32	IAmb	IAmb	00 24 06.2	
	comp=Z,44nm,0.9s						
RDO	Rodhopi	83.32	316	IAmb	IAmb	00 24 07.1	
	comp=Z,35nm,0.9s						
WUAZ	Wupatki	83.39	51	IAmb	IAmb	00 24 09.0	
	comp=Z,49nm,1.0s						
RZN	Rozhen	83.41	317	⇑iP	P	00 24 07.2	+0.9
PV15	Paradox Valley	83.41	47	IAmb	IAmb	00 24 08.4	
	comp=Z,40nm,1.0s						
GTTG	Gottingen	83.42	331	eP	P	00 24 05.7	-0.1
	comp=Z,14nm,1.0s,baz=39,slow=5.1						
MOX	Moxa	83.44	330	eP	P	00 24 05.9	-0.2
	comp=Z,22nm,1.4s,baz=39,slow=5.1						
MOX				epP	pP	00 24 21.4	-0.3
MORH	Mrgy, Hungar	83.52	323	⇑P	P	00 24 06.4	-0.1
LBZ	Lake Benmore	83.54	159	P	P	00 24 06.7	+0.4
LBZ				IAmb	IAmb	00 24 07.5	
	comp=Z,47nm,1.0s						
LBZ	Lake Benmore	83.54	159	P	P	00 24 06.6	+0.3
RONA	Rosalia, Austr	83.58	326	i P	P	00 24 07.6	+0.8
	comp=Z,31nm,1.0s,SNR=17						
CONA	Conrad Observa	83.61	326	i P	P	00 24 07.9	+0.8
	comp=Z,30nm,1.2s,SNR=23						
PLNA	Plana	83.62	318	⇑iP	P	00 24 08.2	+1.0
VTS	Vitosha	83.63	318	⇑iP	P	00 24 08.2	+0.9
CKRC	Cesky Krumlov	83.66	327	eP	P	00 24 07.3	+0.1
CKRC				AMS	AMS	01 05 40.0	
	comp=Z,400nm,18.5s						
CKRC	Cesky Krumlov	83.66	327	eP	P	00 24 07.3	+0.1
CKRC				MLR	MLR		
	comp=Z,400nm,18.5s						
IBBN	Ibbenburen	83.67	333	eP	P	00 24 06.7	-0.5
	comp=Z,16nm,0.9s,baz=39,slow=5.1						
FRGS	Fruska Gora	83.68	322	⇑iP	P	00 24 07.5	+0.1
MQZ	McQueen's Vall	83.70	157	P	P	00 24 08.3	+1.3
EZN	Ezine	83.73	315	⇑P	P	00 24 08.0	+0.3
EZN	Ezine	83.73	315	P	P	00 24 07.9	+0.3
MANZ	Manzenberg	83.74	329	eP	P	00 24 07.6	0.0
	comp=Z,3.6nm,1.0s,baz=39,slow=5.1						
KHC	Kasperske Hory	83.75	328	eP	P	00 24 07.6	-0.1
KHC				epP	pP	00 24 22.0	-1.3
KHC				eSKS	SKSac	00 34 24.6	-1.3
KHC				AMS	AMS	01 05 40.0	
	comp=Z,500nm,14.5s						
KHC	Kasperske Hory	83.75	328	eP	P	00 24 07.6	-0.1
KHC				e		00 24 22.0	
KHC				e		00 34 24.6	
KHC				MLR	MLR		
	comp=Z,500nm,14.5s						
BOVS	Bovan	83.76	320	⇑P	P	00 24 07.8	0.0
SFX	San Felipe	83.81	56	P	P	00 24 08.1	-0.2
SFX				IAmb	IAmb	00 24 11.5	
	comp=Z,28nm,0.9s						
ROTZ	Rotzenmuhle	83.86	329	eP	P	00 24 08.5	+0.3
	comp=Z,8.7nm,1.4s,baz=39,slow=5.1						
ROTZ				epP	pP	00 24 23.1	-0.7
GEC2	GERESS Array S	83.91	328	eP	P	00 24 08.2	-0.4
	comp=Z,12nm,0.9s,baz=39,slow=5.1						
GERES	GERESS Array B	83.91	328	P	P	00 24 08.3	-0.2
	comp=Z,6.3nm,0.7s,baz=35,slow=4.9,SNR=72						
GERES				LR	LR	01 06 10.5	
	comp=Z,335nm,19.2s,baz=35,slow=39						
	comp=Z,6.3nm,0.7s						
UBBA	Unterbreizbach	83.97	331	eP	P	00 24 08.5	-0.1
	comp=Z,46nm,1.9s,baz=39,slow=5.1						
IVI	Ivigtut	84.01	4	i P	P	00 24 08.6	-0.1
IVI				IAmb	IAmb	00 24 09.5	
	comp=Z,26nm,1.0s						
WET	Wettzell	84.04	328	eP	P	00 24 09.3	+0.1
	comp=Z,16nm,1.1s,baz=39,slow=5.1						
WET				epP	pP	00 24 24.7	-0.2
MVCO	Mesa Verde	84.12	48	IAmb	IAmb	00 24 12.6	
	comp=Z,45nm,1.0s						
ISCO	Idaho Springs	84.17	45	P	P	00 24 11.1	+0.8
ISCO	Idaho Springs	84.17	45	P	P	00 24 11.1	+0.8
ISCO				pmax	pmax		
	comp=Z,19nm,0.9s						
NRS	Narsarsuaq	84.19	3	i P	P	00 24 09.5	-0.1
NRS				IAmb	IAmb	00 24 10.6	
	comp=Z,20nm,1.1s						
PYZ	Puysegur Point	84.21	162	P	P	00 24 10.8	+1.2
KKB	Krupnik	84.21	318	⇑iP	P	00 24 10.4	+0.3
BEHE	Becsehely	84.24	324	P	P	00 24 10.4	+0.3
TEKS	Tekeris	84.25	322	⇑iP	P	00 24 10.1	-0.2
ARSA	Arzberg	84.26	326	i P	P	00 24 10.8	+0.5
	comp=Z,20nm,1.0s,SNR=15						
ODZ	Otahua Downs	84.28	159	P	P	00 24 11.2	+1.1
ODZ				IAmb	IAmb	00 24 11.9	
	comp=Z,31nm,1.0s						
ODZ	Otahua Downs	84.28	159	P	P	00 24 10.7	+0.7
KASTN	Kahler Asten	84.29	332	eP	P	00 24 10.0	-0.4
	comp=Z,13nm,0.9s,baz=39,slow=5.1						
KASTN				epP	pP	00 24 25.4	-0.7
GRF	Grafenberg Arr	84.33	329	eP	P	00 24 10.9	+0.3
	comp=Z,43nm,1.0s,baz=39,slow=5.1						
GRFO	Grafenberg	84.33	329	P	P	00 24 11.5	+0.9
GRFO				IAmb	IAmb	00 24 11.7	
	comp=Z,39nm,1.0s						
GRFO	Grafenberg	84.33	329	P	P	00 24 11.5	+0.9
GRFO				pmax	pmax		
	comp=Z,39nm,1.0s						
PEHC	Pehcevo	84.38	318	i P	P	00 24 15.4	+4.3
MOA	Molln	84.40	327	i P	P	00 24 11.5	+0.6
	comp=Z,18nm,0.9s,SNR=14						
KOGS	Kog	84.51	325	eP	P	00 24 11.0	-0.5
BUG	Bochum--Univer	84.54	332	eP	P	00 24 11.0	-0.6
	comp=Z,18nm,1.0s,baz=39,slow=5.1						
BUG				epP	pP	00 24 26.7	-0.5
SUSD	Miller	84.62	38	IAmb	IAmb	00 24 15.0	
	comp=Z,33nm,0.6s						
W18A	Petrified Fore	84.68	51	P	P	00 24 13.6	+0.8
PPT2	Papeete2	84.75	116	eP	P	00 24 09.1	-4.0
	comp=Z,80nm,25.5s						
PPT2	Papeete2	84.75	116	ePP	PP	00 27 24.4	-5.7
	comp=Z,32nm,21.8s						
PPT2				eS	SKSac	00 34 32.2	-0.8
	comp=Z,96nm,26.2s						
PPT2				eSS	SS	00 40 07.4	-2.9
	comp=Z,505nm,29.2s						
PPT2				eLQ	LQ	00 46 56.3	
	comp=Z,686nm,36.5s						
PPT2				eLR	LR	00 50 41.5	
	comp=Z,724nm,29.5s						
PPT2				eLR	LR	00 50 46.8	
	comp=Z,1µm,30.8s						
EKA	Eskdalemuir Ar	84.75	340	P	P	00 24 12.6	0.0
	comp=Z,4.1nm,0.6s,baz=35,slow=4.8,SNR=16						
	comp=Z,4.1nm,0.6s						
BBLS	Lazi&#263i	84.80	321	⇑iP	P	00 24 13.5	+0.4
BIOA	Bad Ischl, Aus	84.80	327	i P	P	00 24 13.3	+0.3
	comp=Z,26nm,0.9s,SNR=18						
VAY	Valandovo	84.87	318	i P	P	00 24 14.2	+0.7
PERS	Pernice	84.91	325	eP	P	00 24 13.7	+0.1
SOKA	Soboth	84.91	325	i P	P	00 24 13.7	+0.1
	comp=Z,59nm,1.0s,SNR=38						
SJES	Sjenica	84.92	321	⇑iP	P	00 24 13.9	+0.1
F33A	5 Mile Ranch,	84.93	36	IAmb	IAmb	00 24 15.1	
	comp=Z,40nm,0.9s						
RUDO	Rudo	84.99	321	⇑iP	P	00 24 12.9	-1.1
Q24A	Divide	84.99	45	P	P	00 24 15.5	+1.0
Q24A				IAmb	IAmb	00 24 16.7	
	comp=Z,23nm,0.9s						
SKO	Skopje	85.04	319	i P	P	00 24 15.4	+1.1
TNS	Taunus Mts	85.05	331	eP	P	00 24 14.1	-0.2
	comp=Z,19nm,1.2s,baz=39,slow=5.1						
RJOB	Jochberg	85.14	327	eP	P	00 24 15.0	+0.2
	comp=Z,22nm,1.0s,baz=39,slow=5.1						
RJOB				epP	pP	00 24 29.0	-1.4
GCIS	Gornji Cirnik	85.23	325	eP	P	00 24 15.0	-0.2
A051A	Mrakovica	85.23	323	⇑iP	P	00 24 14.9	-0.4
OBKA	Obir	85.26	326	⇑iP	P	00 24 14.4	-1.0
OBKA	Obir	85.26	326	i P	P	00 24 15.0	-0.4
	comp=Z,12nm,0.7s,SNR=6.8						
BLY	Banja Luka	85.29	323	⇑iP	P	00 24 15.2	-0.3
CRES	Cresnjevec Ost	85.34	325	⇑iP	P	00 24 15.4	-0.3
LESA	Schwarzleotal	85.43	327	i P	P	00 24 16.3	0.0
	comp=Z,26nm,1.1s,SNR=17						
FUR	Furstenfeldbru	85.48	328	eP	P	00 24 16.4	0.0
	comp=Z,37nm,0.8s,baz=39,slow=5.1						
VNDS	Vrh nad Dolski	85.49	325	eP	P	00 24 15.9	-0.6
UPM	Unac-Piva	85.52	321	⇑iP	P	00 24 17.2	+0.3
EYMN	Ely	85.56	32	IAmb	IAmb	00 24 18.0	
	comp=Z,27nm,0.9s						
SDCO	Great Sand Dun	85.59	46	IAmb	IAmb	00 24 19.5	
	comp=Z,23nm,1.0s						
MYKA	Terra Mystica	85.59	326	i P	P	00 24 16.4	-0.7
	comp=Z,12nm,0.5s,SNR=8.3						
BEBN	Eben Emael	85.66	333	dP	P	00 24 16.7	-0.4
BTNL	Ternell	85.66	333	dP	P	00 24 16.5	-0.8
	comp=Z,12nm,0.9s						
BOJS	Bojanci	85.67	325	⇑iP	P	00 24 17.0	-0.4
MEM	Membach	85.69	333	dP	P	00 24 17.0	-0.4
	comp=Z,14nm,0.9s						
TUC	Tucson	85.77	53	P	P	00 24 18.6	+0.4
TUC	Tucson	85.77	53	P	P	00 24 18.6	+0.4
TUC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
A050A	Klekovaca	85.80	323	⇑iP	P	00 24 17.9	-0.2
BSTI	Sart Tilman	85.87	333	dP	P	00 24 18.1	-0.2
	comp=Z,3.7nm,0.9s						
STU	Stuttgart	85.89	330	IAmb	IAmb	00 24 19.5	
	comp=Z,22nm,0.8s						
STU	Stuttgart	85.89	330	eP	P	00 24 18.6	+0.2
STU	Stuttgart	85.89	330	eP	P	00 24 18.1	-0.3
	comp=Z,72nm,1.0s,baz=39,slow=5.1						
BHOU	Houvegnez	85.89	332	dP	P	00 24 18.6	+0.2
	comp=Z,9.2nm,1.0s						
TBO	Thunder Bay	85.90	30	IAmb	IAmb	00 24 19.5	
	comp=Z,24nm,0.9s						
BRY	Bratogost	85.92	321	⇑iP	P	00 24 17.8	-1.1
OHR	Ohrid	85.98	319	i P	P	00 24 19.3	+0.3
WATA	Walderalm	85.98	328	i P	P	00 24 18.8	-0.3
	comp=Z,8.6nm,1.1s						
WTTA	Wattenberg	86.01	328	i P	P	00 24 19.0	-0.3
	comp=Z,4.3nm,0.7s,SNR=5.5						
ABTA	Abfaltersbach	86.01	327	i P	P	00 24 18.0	-1.1
	comp=Z,17nm,0.9s,SNR=8.6						
SABO	M.te Sabotino	86.10	326	IAmb	IAmb	00 24 18.9	
	comp=Z,23nm,1.0s						
BCLA	Clavier	86.11	333	dP	P	00 24 19.0	-0.4
	comp=Z,12nm,0.9s						
MOTA	Moosalm	86.18	328	i P	P	00 24 19.6	-0.5
	comp=Z,5.3nm,0.7s,SNR=6.9						
BGES	Gesves	86.22	333	dP	P	00 24 19.2	-0.7
	comp=Z,13nm,1.0s						
RETA	Reutte	86.22	328	i P	P	00 24 20.1	0.0
	comp=Z,24nm,1.1s,SNR=10.0						
RETA	Reutte	86.22	328	i PP	PKiKP	00 29 38.6	+11
	comp=Z,3.7nm,1.4s						
TRI	Trieste	86.22	325	IAmb	IAmb	00 24 19.0	
	comp=Z,22nm,0.9s						
SKDS	Skadanscina	86.23	325	⇑iP	P	00 24 18.3	-1.9
SQTA	Sankt Quirin	86.23	328	i P	P	00 24 20.0	-0.3
	comp=Z,12nm,1.1s						
HCY	Herceg Novi	86.27	321	⇑iP	P	00 24 20.2	-0.2
STAL	STALIGIAL	86.29	326	IAmb	IAmb	00 24 19.6	
	comp=Z,22nm,0.8s						
ECSD	EROS Data Cent	86.31	37	IAmb	IAmb	00 24 21.3	
	comp=Z,19nm,0.9s						
TIR	Tirane	86.32	319	IAmb	IAmb	00 24 22.1	
	comp=Z,20nm,0.9s						
UBR	Ueberruh	86.35	329	eP	P	00 24 20.3	-0.5
	comp=Z,15nm,1.2s,baz=39,slow=5.1						
UBR				epP	pP	00 24 37.4	+0.9
STON	Ston	86.38	321	⇑iP	P	00 24 21.5	+0.6
WLF	Walferdange	86.39	332	IAmb	IAmb	00 24 22.4	
	comp=Z,68nm,1.6s						
WLF	Walferdange	86.39	332	eP	P	00 24 20.9	+0.1
	comp=Z,38nm,1.3s,baz=39,slow=5.1						
BMRD	Maredsous	86.40	333	dP	P	00 24 20.3	-0.6
	comp=Z,21nm,0.9s						
BFO	Black Forest	86.59	330	P	P	00 24 21.6	-0.3
BFO				IAmb	IAmb	00 24 22.1	
	comp=Z,26nm,1.1s						
BFO	Black Forest	86.59	330	P	P	00 24 21.6	-0.3
BFO				pmax	pmax		
	comp=Z,26nm,1.1s						
BFO	Black Forest	86.59	330	eP	P	00 24 21.5	-0.4
	comp=Z,22nm,1.1s,baz=39,slow=5.1						
FETA	Feichten	86.59	328	i P	P	00 24 21.8	-0.3

	comp=Z,11nm,1.0s,SNR=5.9						
DOU	Dourbes	86.63	333	*d*P	P	00 24 21.4	-0.6
T25A	Trinidad	86.64	46	IAmb	IAmb	00 24 24.4	
	comp=Z,30nm,1.1s						
DUN6	Lazy B Ranch	86.72	52	P	P	00 24 23.5	+0.6
DUN6				IAmb	IAmb	00 24 24.8	
	comp=Z,40nm,1.0s						
DAVA	Damuels	86.76	329	*i* P	P	00 24 22.4	-0.5
	comp=Z,20nm,1.2s,SNR=7.7						
ANMO	Albuquerque	86.85	49	P	P	00 24 24.9	+1.3
ANMO	Albuquerque	86.85	49	P	P	00 24 24.9	+1.3
ANMO				pmax	pmax		
	comp=Z,14nm,1.2s						
SPMN	Marine on St.	87.04	34	IAmb	IAmb	00 24 25.4	
	comp=Z,26nm,1.0s						
FUORN	Ofenpass-Fuorn	87.11	328	IAmb	IAmb	00 24 26.0	
	comp=Z,38nm,1.1s						
DAVOX	Davos/Dischmat	87.15	328	LR	LR	01 07 35.5	
	comp=Z,598nm,19.5s,baz=12,slow=38						
BGNE	Belgrade	87.19	40	P	P	00 24 24.6	-0.3
319A	Douglas	87.35	53	P	P	00 24 25.8	-0.2
TEOL	Teolo	87.45	326	P	P	00 24 25.0	-1.1
TEOL				IAmb	IAmb	00 24 26.1	
	comp=Z,24nm,1.1s						
IDI	Anoyia	87.58	312	P	P	00 24 25.3	-1.7
	comp=Z,7.5nm,0.5s,baz=89,slow=6.1,SNR=16						
	comp=Z,7.5nm,0.5s						
SCHQ	Schefferville	87.70	15	P	P	00 24 26.8	-0.3
	comp=Z,31nm,0.8s,baz=342,slow=4.7,SNR=18						
	comp=Z,31nm,0.8s						
SRIG	Santa Rosalia	87.89	58	P	P	00 24 28.6	+0.2
RTBA	Rita Blanca	88.10	46	IAmb	IAmb	00 24 31.8	
	comp=Z,73nm,1.7s						
MSEY	Mahe Island	88.16	263	P	P	00 24 30.0	0.0
MSEY	Mahe Island	88.16	263	P	P	00 24 30.0	0.0
MSEY				pmax	pmax		
	comp=Z,104nm,1.5s						
CBKS	Cedar Bluff	88.18	42	P	P	00 24 29.9	+0.2
CBKS				IAmb	IAmb	00 24 30.8	
	comp=Z,24nm,0.9s						
CBKS	Cedar Bluff	88.18	42	P	P	00 24 29.9	+0.2
CBKS				pmax	pmax		
	comp=Z,24nm,1.0s						
GUMA	Gualdo di Mace	88.41	324	IAmb	IAmb	00 24 37.6	
	comp=Z,31nm,0.8s						
TBI	Tubuai	88.44	120	*e*S	S	00 35 06.1	-6.3
	comp=Z,658nm,26.8s						
TBI	Tubuai	88.44	120	*e*LR	LR	00 52 39.5	
	comp=Z,3µm,25.8s						
PRMA	PARMA	88.52	327	P	P	00 24 31.6	+0.4
PRMA				IAmb	IAmb	00 24 32.8	
	comp=Z,50nm,1.3s						
ZCCA	Zocca	88.54	326	IAmb	IAmb	00 24 40.7	
	comp=Z,26nm,0.8s						
SENIN	Lac Senin/Sane	88.58	329	IAmb	IAmb	00 24 37.8	
	comp=Z,42nm,1.9s						
F42A	Maple Grove Fa	88.71	31	P	P	00 24 32.3	+0.3
F42A				IAmb	IAmb	00 24 33.6	
	comp=Z,28nm,1.0s						
CAMP	Campotosto	88.77	324	IAmb	IAmb	00 24 33.4	
	comp=Z,30nm,0.9s						
ACER	Acerenza	88.79	321	IAmb	IAmb	00 24 33.5	
	comp=Z,28nm,0.8s						
N35A	Tabor	88.90	39	P	P	00 24 33.5	+0.5
INTR	Introdacqua	88.92	323	IAmb	IAmb	00 24 34.2	
	comp=Z,30nm,0.9s						
R32A	Long Quarter,	89.02	42	P	P	00 24 34.3	+0.6
OSSC	Osservatorio P	89.05	325	IAmb	IAmb	00 24 33.9	
	comp=Z,17nm,0.8s						
I40A	Norwalk	89.06	34	IAmb	IAmb	00 24 34.5	
	comp=Z,22nm,0.9s						
MSSA	Maissana	89.23	327	P	P	00 24 33.3	-1.3
ATD	Arta Tunnel	89.26	283	P	P	00 24 35.4	+0.2
ATD				IAmb	IAmb	00 24 37.0	
	comp=Z,59nm,1.8s						
SCIA	State Center	89.34	37	P	P	00 24 35.6	+0.5
MNTX	Cornudas Mount	89.66	51	P	P	00 24 37.0	+0.1
CPRX	Cap Rock	89.73	49	P	P	00 24 37.5	+0.3
MSTX	Muleshoe	89.76	48	P	P	00 24 37.6	+0.2
AMTX	Amarillo	89.79	46	P	P	00 24 38.1	+0.7
AMTX				IAmb	IAmb	00 24 39.6	
	comp=Z,31nm,0.8s						
I42A	Draeger Farm,	89.84	33	P	P	00 24 37.6	+0.3
I42A				IAmb	IAmb	00 24 38.3	
	comp=Z,22nm,0.9s						
H43A	Windswept, Lux	89.89	32	P	P	00 24 38.0	+0.4
H43A				IAmb	IAmb	00 24 39.3	
	comp=Z,24nm,0.9s						
JFWS	Jewell Farm	89.99	34	IAmb	IAmb	00 24 38.6	
	comp=Z,18nm,0.9s						
N38A	Joes South For	90.17	37	P	P	00 24 39.2	+0.2
N38A				IAmb	IAmb	00 24 40.5	
	comp=Z,27nm,1.0s						
L40A	Anamosa	90.19	35	IAmb	IAmb	00 24 40.2	
	comp=Z,25nm,1.0s						
KAN12	Harper NE Stat	90.22	43	P	P	00 24 39.8	+0.5
HTMS	Hat Mesa	90.25	49	P	P	00 24 40.0	+0.4
KAN08	Anthony NE Sta	90.28	43	P	P	00 24 40.3	+0.7
ELIS	Ellis County	90.29	44	P	P	00 24 40.2	+0.5
OK038	West end E0370	90.38	44	P	P	00 24 41.1	+1.0
OK038				IAmb	IAmb	00 24 42.1	
	comp=Z,29nm,1.0s						
KAN01	Argonia South	90.45	43	P	P	00 24 41.1	+0.7
KAN01				IAmb	IAmb	00 24 41.6	
	comp=Z,24nm,1.0s						
KAN14	Manchester OK	90.48	43	P	P	00 24 41.2	+0.7
KAN14				IAmb	IAmb	00 24 42.2	
	comp=Z,20nm,0.9s						
SMWD	Samnorwood	90.49	45	P	P	00 24 41.8	+1.2
VHRN	Van Horn	90.52	51	P	P	00 24 41.6	+0.6
KAN09	Caldwell North	90.54	42	P	P	00 24 41.6	+0.8
CEL	Celeste	90.67	319	P	P	00 24 41.3	-0.1
KAN13	South Haven SW	90.71	42	IAmb	IAmb	00 24 43.3	
	comp=Z,25nm,1.0s						
CROK	Carrier	90.79	43	P	P	00 24 42.6	+0.7
VLDQ	Val d'Or	90.84	24	P	P	00 24 41.7	-0.2
VLDQ				IAmb	IAmb	00 24 42.0	
	comp=Z,14nm,0.9s						
PECS	Pecos	90.84	50	P	P	00 24 42.3	-0.1
I45A	Fountain	90.89	31	P	P	00 24 43.1	+0.8
P38A	Dawn	90.89	38	IAmb	IAmb	00 24 43.3	
	comp=Z,16nm,0.9s						
L42A	Oliver, Polo	90.97	35	IAmb	IAmb	00 24 43.5	
	comp=Z,24nm,0.9s						
DKNS	Dickens	91.09	47	P	P	00 24 44.4	+0.9
POST	Post	91.15	48	IAmb	IAmb	00 24 45.5	
	comp=Z,12nm,0.9s						
ODSA	Odessa	91.16	49	IAmb	IAmb	00 24 45.5	
	comp=Z,13nm,0.9s						
T35A	Sooner Cattle	91.31	42	IAmb	IAmb	00 24 46.1	
	comp=Z,24nm,0.8s						
OK051	E0350 and S346	91.43	42	IAmb	IAmb	00 24 46.6	
	comp=Z,21nm,0.9s						
OK048	Pawnee Station	91.44	43	P	P	00 24 45.0	0.0
OK048				IAmb	IAmb	00 24 46.7	
	comp=Z,26nm,1.0s						
SN07	Snyder 07	91.50	47	IAmb	IAmb	00 24 46.5	
	comp=Z,14nm,1.0s						
MNHN	Monahans	91.56	50	P	P	00 24 46.0	+0.3
WMOK	Wichita Mounta	91.60	45	P	P	00 24 44.7	-1.1
WMOK				IAmb	IAmb	00 24 47.5	
	comp=Z,14nm,0.9s						
WMOK	Wichita Mounta	91.60	45		P	00 24 45.6	-0.2
WMOK	Wichita Mounta	91.60	45	P	P	00 24 44.7	-1.1
WMOK				pmax	pmax		
	comp=Z,14nm,0.9s						
OK029	Liberty Lake	91.60	43	P	P	00 24 46.3	+0.5
SN05	Snyder 5	91.66	47	P	P	00 24 46.6	+0.5
SN05				IAmb	IAmb	00 24 47.6	
	comp=Z,13nm,1.0s						
ALPN	Alpine	91.66	51	P	P	00 24 47.0	+0.7
ALPN				IAmb	IAmb	00 24 48.5	
	comp=Z,51nm,2.0s						
P40A	Paris	91.72	38	IAmb	IAmb	00 24 47.2	
	comp=Z,21nm,1.0s						
QUOK	Quay	91.75	43	P	P	00 24 46.6	+0.2
SLBS	Sierra La Lagu	91.78	59	P	P	00 24 47.8	+0.9
OK031	S. Brethren Rd	91.83	43	IAmb	IAmb	00 24 48.6	
	comp=Z,22nm,0.9s						
OKCSW	OKLAHOMA CITY	91.89	44	P	P	00 24 47.4	+0.3
DEOK	Depew	92.10	43	P	P	00 24 48.4	+0.4
J47A	Sunmer	92.14	31	P	P	00 24 48.5	+0.4
J47A				IAmb	IAmb	00 24 49.5	
	comp=Z,20nm,1.0s						
M44A	Midewin, Midew	92.20	34	IAmb	IAmb	00 24 49.8	
	comp=Z,26nm,1.0s						
X34A	Smith Ranch, M	92.24	44	P	P	00 24 49.5	+0.8
HDIL	Hopedale	92.27	35	P	P	00 24 48.8	+0.1
TX31	Lajitas Ar. Si	92.34	52	IAmb	IAmb	00 24 51.6	
	comp=Z,30nm,1.2s						
TXAR	Lajitas Array	92.34	52	P	P	00 24 50.2	+0.8
TXAR	Lajitas Array	92.34	52	P	P	00 24 50.4	+1.0
	comp=Z,9.5nm,0.8s,baz=296,slow=3.4,SNR=125						
	comp=Z,9.5nm,0.8s						
I49A	Point Hope	92.39	29	P	P	00 24 49.6	+0.4
TUL3	Leonard	92.44	42	IAmb	IAmb	00 24 51.1	
	comp=Z,20nm,0.9s						
WTFS	Witchita Falls	92.47	45	IAmb	IAmb	00 24 50.7	
	comp=Z,27nm,1.0s						
L46A	Eue Claire	92.50	33	P	P	00 24 49.5	-0.2
ABTX	Abilene, Hawle	92.58	47	P	P	00 24 50.9	+0.6
HPIG		92.63	55	P	P	00 24 51.6	+0.7
HPIG				IAmb	IAmb	00 24 53.3	
	comp=Z,22nm,0.9s						
RLO	Rose Lookout	92.68	42	P	P	00 24 50.9	+0.2
RLO				IAmb	IAmb	00 24 51.7	
	comp=Z,18nm,0.9s						
U38A	Gravette	92.82	41	P	P	00 24 51.2	-0.2
U38A				IAmb	IAmb	00 24 52.6	
	comp=Z,15nm,0.8s						
OZNA	Ozona	92.86	49	P	P	00 24 51.3	-0.4
P43A	Skaggs, Pawnee	92.88	36	P	P	00 24 51.6	0.0
P43A				IAmb	IAmb	00 24 52.9	
	comp=Z,17nm,0.9s						
SAND	Sanderson	92.91	50	P	P	00 24 52.0	0.0
SAND				IAmb	IAmb	00 24 53.8	
	comp=Z,22nm,1.4s						
HHAR	Hobbs	93.18	41	P	P	00 24 53.0	-0.1
HHAR				IAmb	IAmb	00 24 53.5	
	comp=Z,15nm,1.2s						
FW03	Perrin-Whitt E	93.22	46	P	P	00 24 52.1	-1.1
FW03				IAmb	IAmb	00 24 54.5	
	comp=Z,25nm,0.9s						
CCM	Cathedral Cave	93.25	38	P	P	00 24 53.0	-0.3
CCM				IAmb	IAmb	00 24 54.0	
	comp=Z,12nm,0.9s						
CCM	Cathedral Cave	93.25	38	P	P	00 24 53.0	-0.3
CCM				pmax	pmax		
	comp=Z,12nm,0.9s						
MGMO	Mountain Grove	93.41	39	IAmb	IAmb	00 24 54.9	
	comp=Z,14nm,0.9s						
Z35A	Perchaven, San	93.49	45	P	P	00 24 54.5	0.0
LMQ	La Malbaie	93.54	20	P	P	00 24 54.4	-0.1
LMQ				IAmb	IAmb	00 24 56.0	
	comp=Z,23nm,1.0s						
FW06	Azle	93.57	45	P	P	00 24 55.2	+0.3
FW06				IAmb	IAmb	00 24 57.6	
	comp=Z,22nm,1.0s						
FW07	Weatherford	93.63	46	P	P	00 24 55.8	+0.6
FW07				IAmb	IAmb	00 24 57.0	
	comp=Z,27nm,1.2s						
N47A	Urbana	93.67	33	IAmb	IAmb	00 24 55.7	
	comp=Z,16nm,0.9s						
Q44A	Meyer Farm, Va	93.70	36	P	P	00 24 55.5	+0.2
Q44A				IAmb	IAmb	00 24 56.6	
	comp=Z,16nm,1.1s						
FVM	French Village	93.72	38	P	P	00 24 55.7	+0.3
FVM	French Village	93.72	38	P	P	00 24 55.7	+0.3
FVM				pmax	pmax		
	comp=Z,9.0nm,1.0s						
DELO	Deloro Mine	93.89	26	P	P	00 24 56.2	+0.2
DELO				IAmb	IAmb	00 25 50.3	
	comp=Z,43nm,1.9s						
BRDY	Brady	93.91	47	IAmb	IAmb	00 24 58.3	
	comp=Z,21nm,1.0s						
JCT	Junction City	93.99	48	IAmb	IAmb	00 24 58.3	
	comp=Z,16nm,0.7s						
FW13	Cleburne	94.09	46	P	P	00 24 58.0	+0.7
CEST	Esterri de Car	94.14	331	P	P	00 24 57.3	-0.1
CEST				IAmb	IAmb	00 24 58.6	
	comp=Z,12nm,1.0s						
FW14	Alvarado	94.19	45	P	P	00 24 58.4	+0.6
DRIO	Del Rio	94.22	50	P	P	00 24 58.6	+0.6
OLIL	Olney	94.27	36	P	P	00 24 58.4	+0.5
OLIL				IAmb	IAmb	00 24 59.5	
	comp=Z,18nm,0.9s						
N49A	Columbus Grove	94.31	32	P	P	00 24 58.6	+0.5
N49A				IAmb	IAmb	00 24 58.9	
	comp=Z,14nm,0.9s						
WHTX	Lake Whitney,	94.33	46	P	P	00 24 59.0	+0.6
WHTX				IAmb	IAmb	00 25 00.2	
	comp=Z,26nm,1.2s						
MNTQ	Montreal, Queb	94.39	23	P	P	00 24 58.7	+0.3
O48B	Farmland	94.42	33	IAmb	IAmb	00 24 59.6	
	comp=Z,13nm,0.8s						
FCAR	Ozark Folk Cen	94.44	40	P	P	00 24 57.0	-1.8
FCAR				IAmb	IAmb	00 28 36.9	
	comp=Z,16nm,0.9s						
S44A	Carbondale	94.52	37	P	P	00 24 58.9	-0.3
S44A				IAmb	IAmb	00 24 59.9	
	comp=Z,11nm,0.9s						
SIUC	Southern Illin	94.53	37	P	P	00 24 58.7	-0.4
SIUC				IAmb	IAmb	00 25 00.4	
	comp=Z,12nm,0.8s						
CGM3	Cape Girardeau	94.63	38	P	P	00 25 00.2	+0.6
CGM3				IAmb	IAmb	00 26 54.1	
	comp=Z,33nm,2.0s						
MIAR	Mount Ida	94.67	42	P	P	00 24 59.4	-0.5
MIAR				IAmb	IAmb	00 25 02.4	
	comp=Z,12nm,0.8s						
MIAR	Mount Ida	94.67	42	P	P	00 24 59.4	-0.5
MIAR				pmax	pmax		
	comp=Z,12nm,0.9s						
WHAR	Wooly Hollow	94.81	40	P	P	00 25 00.1	-0.3
WHAR				IAmb	IAmb	00 25 00.9	
	comp=Z,19nm,1.4s						
BATG	Bathurst New B	94.92	17	IAmb	IAmb	00 25 02.7	
	comp=Z,27nm,0.9s						
ACSO	Alum Creek Sta	95.39	32	IAmb	IAmb	00 25 03.8	
	comp=Z,17nm,0.9s						
WCI	Wyandotte Cave	95.53	35	P	P	00 25 04.3	+0.6
WCI				IAmb	IAmb	00 25 04.9	
	comp=Z,13nm,0.9s						
WCI	Wyandotte Cave	95.53	35	P	P	00 25 04.3	+0.6
WCI				pmax	pmax		
	comp=Z,13nm,0.9s						
KEST	Kesra	96.00	322	P	P	00 25 05.6	-0.4
	comp=Z,6.2nm,0.8s,baz=323,slow=6.0,SNR=6.6						
	comp=Z,6.2nm,0.8s						
KEST	Kesra	96.00	322	P	P	00 25 06.3	+0.2
T47A	Sharon Grove	96.13	36	IAmb	IAmb	00 25 07.8	
	comp=Z,14nm,0.9s						
R50A	Paris	96.40	34	IAmb	IAmb	00 25 08.9	
	comp=Z,8.7nm,0.9s						
WVT	Waverly	96.46	37	P	P	00 25 08.3	+0.4
WVT				IAmb	IAmb	00 27 25.0	
	comp=Z,30nm,2.0s						
WVT	Waverly	96.46	37	P	P	00 25 08.4	+0.4
WVT				pmax	pmax		
	comp=Z,30nm,2.0s						
O54A	Avella	96.53	30	IAmb	IAmb	00 25 09.8	
	comp=Z,8.3nm,0.7s						
T50A	Nancy	97.19	35	IAmb	IAmb	00 25 12.4	
	comp=Z,8.7nm,0.9s						
S51A	Beattyville	97.26	33	P	Pdif	00 25 12.0	+0.4
V48A	Smith Brothers	97.26	37	P	P	00 25 11.5	-0.2
PBRG	Braganca	97.80	336	*e*P	P	00 25 13.6	-0.4
PBRG				*i* Amb		00 25 35.0	
	comp=Z,12nm,1.6s						
PGAV	Gavieira, Arco	98.16	337	*e*LR	LR	01 04 31.0	
PGAV				*i* AMs_20		01 13 40.6	
	comp=Z,240nm,20.0s						
PCAB	Cabril	98.31	336	*e*P	P	00 25 16.0	-0.3
PCAB				*i* Amb		00 25 24.9	
	comp=Z,22nm,2.0s						
MVO	Moncorvo	98.47	335	*e*P	P	00 25 16.9	-0.2
MVO				*i* Amb		00 25 27.5	
	comp=Z,19nm,1.9s						
MVO				*e*LR	LR	01 09 10.5	
MVO				*i* AMs_20		01 14 03.5	
	comp=Z,330nm,20.0s						
POLO	Lamas de Olo	98.54	336	*e*P	P	00 25 17.2	-0.2
POLO				*i* Amb		00 25 21.5	
	comp=Z,7.8nm,1.5s						
ESDC	Sonseca Array	98.68	333	P	P	00 25 17.0	-1.0
	comp=Z,0.4nm,0.8s,baz=18,slow=3.9,SNR=6.4						
ESDC				PP	PP	00 29 14.6	-3.9
	comp=Z,1.2nm,1.0s,baz=26,slow=6.7,SNR=4.3						
	comp=Z,0.4nm,0.8s						
MTE	Manteigas	99.32	335	*e*P	Pdif	00 25 21.4	+0.5
MTE				*i* Amb		00 25 24.1	
	comp=Z,15nm,1.6s						
MTE				*e*LR	LR	01 08 12.1	
MTE				*i* AMs_20		01 14 28.3	
	comp=Z,290nm,20.0s						
COI	Coimbra	99.79	336	*e*P	Pdif	00 25 23.1	+0.2
COI				*i* Amb		00 25 25.7	
	comp=Z,22nm,1.8s						
PMRV	Marv??o	100.14	335	*e*P	Pdif	00 25 23.7	-0.7
PMRV				*i* Amb		00 25 40.4	
	comp=Z,14nm,1.9s						
PMRV				*e*LR	LR	01 08 28.7	
PMRV				*i* AMs_20		01 15 14.9	
	comp=Z,419nm,20.0s						
PSBE	So Bento	100.54	336	*e*P	Pdif	00 25 26.6	+0.3
PSBE				*i* Amb		00 25 28.3	
	comp=Z,28nm,1.6s						
HODGE	Hodges	100.67	35	Pdif	Pdif	00 25 26.6	-0.3
PMOZ	Porto Moniz, M	109.32	340	*e*LR	LR	01 15 48.1	
PMOZ				*i* AMs_20		01 19 30.3	
	comp=Z,255nm,20.0s						
MAW	Mawson	117.12	205	PKP	PKPdf	00 30 22.0	-0.3
	comp=Z,5.0nm,0.7s,baz=326,slow=6.2,SNR=10						
TORD	Torodi Ar. Bea	117.98	313		PKPdf	00 30 25.0	-0.7
TORD	Torodi Ar. Bea	117.98	313	PKP	PKPdf	00 30 24.9	-0.9
	comp=Z,1.2nm,0.3s,baz=359,slow=3.6,SNR=5.9						
KDWAN	Kaudwane	123.22	263		PKiKP	00 30 36.0	+0.1
QSPA	South Pole Qui	124.64	180	PKP	PKPdf	00 30 36.0	-0.9
	comp=Z,6.9nm,0.6s,baz=292,slow=0.9,SNR=54						
BOSA	Boshof	125.01	257	PKP	PKPdf	00 30 38.0	-0.9
	comp=Z,2.1nm,0.9s,baz=95,slow=3.5,SNR=4.8						
SYO	Syowa Base	125.78	206	⇓*e*Pdiff	Pdif	00 27 19.4	+1.9
SYO	Syowa Base	125.78	206	⇓*e*PKPdf	PKiKP	00 30 39.6	+0.2
DBIC	Dimbokro	127.01	314	PKP	PKPdf	00 30 43.1	+0.1
	comp=Z,11nm,0.7s,baz=39,slow=2.4,SNR=7.0						
SDV	Santo Domingo	127.70	40	PKP	PKPdf	00 30 44.8	+0.2
	comp=Z,33nm,0.7s,baz=13,slow=0.7,SNR=18						
SDV	Santo Domingo	127.70	40	*e*P	PKiKP	00 30 45.1	-0.2
ROSC	El Rosal	128.96	46	PKP	PKiKP	00 30 48.1	+0.1
	comp=Z,17nm,0.9s,baz=202,slow=2.0,SNR=9.2						
OTAV	Otavalo	129.90	54		PKiKP	00 30 50.1	+0.2
OTAV	Otavalo	129.90	54	PKIKP	PKiKP	00 30 50.1	+0.2
OTAV	Otavalo	129.90	54	*e*P	PKiKP	00 30 49.8	-0.1
ATAH	Atahualpa	135.20	61	PKP	PKPdf	00 30 59.5	+0.4
	comp=Z,5.4nm,0.7s,baz=11,slow=5.0,SNR=4.3						
SNAA	Sanae	138.37	197	⇓PKPdf	PKPdf	00 30 51.2	-12
	comp=Z,56nm,1.3s						
SNAA	Sanae	138.37	197	PKhKP	PKPpre	00 30 50.6	
	comp=Z,1.6nm,0.7s,baz=151,slow=4.4,SNR=11						
SNAA				PKP	PKPdf	00 31 02.4	-0.4
	comp=Z,3.1nm,0.8s,baz=339,slow=1.0,SNR=7.8						
NNA	Nana	139.57	65	PKP	PKPdf	00 31 06.5	-0.1
	comp=Z,11nm,0.7s,baz=238,slow=1.4,SNR=4.3						
VNA2	Neumayer--Watz	139.95	196	⇓PKPdf	PKPdf	00 30 56.7	-8.9
	comp=Z,5.4nm,0.7s,baz=111,slow=3.6						
VNA3	Neumayer Olymp	140.21	195	⇓PKPdf	PKPdf	00 30 57.2	-8.9
	comp=Z,1.8nm,0.5s						
VNA1	Neumayer--Stat	140.35	196	⇓PKPdf	PKPdf	00 30 57.8	-8.4
	comp=Z,13nm,1.4s						
ITTB	Itaituba	146.31	29	*e*P	PKPdf	00 31 18.8	+0.3
H03N2	Juan Fernandez	147.89	99	T	T	03 16 52.9	
	baz=290,slow=76,SNR=390						
H03N3	Juan Fernandez	147.90	99	T	T	03 16 53.9	
	baz=290,slow=76,SNR=485						
H03N1	Juan Fernandez	147.91	99	T	T	03 16 52.7	
	baz=290,slow=76,SNR=631						
LPAZ	La Paz	148.75	61	PKP	PKPdf	00 31 24.1	+0.9
	comp=Z,34nm,0.8s,baz=243,slow=1.6,SNR=19						
LPAZ				PKPbc	PKiKP	00 31 27.8	-0.7
	comp=Z,34nm,0.8s,baz=334,slow=3.0,SNR=75						
LPAZ	La Paz	148.75	61	*e*P	PKPdf	00 31 21.6	-1.6
ESPZ	Base Esperanza	149.59	165		PKPbc	00 31 27.1	+0.1
PB11	IPOC Station P	149.79	68		PKPdf	00 31 24.4	+0.2
NBPB	Pedra_Branca-C	150.79	359	*e*P	PKPdf	00 31 25.9	+0.1
RCBR	Riachuelo	150.83	352		PKiKP	00 31 32.0	-0.2
RCBR	Riachuelo	150.83	352	PKIKP	PKiKP	00 31 32.0	-0.2
VILB	Vilhena	151.51	45	*e*P	PKPdf	00 31 26.8	-0.1
PDRB	Porto dos Gac	152.28	37	*e*P	PKPdf	00 31 29.0	+1.0
LCO	Las Campanas	153.37	86		PKiKP	00 31 38.0	+0.7
LCO	Las Campanas	153.37	86	PKIKP	PKiKP	00 31 38.0	+0.7
COYC	Coyhaique	153.46	123		PKiKP	00 31 37.0	+0.4
PLCA	Paso Flores	155.25	113	PKP	PKPdf	00 31 31.9	+0.3
	comp=Z,5.0nm,0.9s,baz=233,slow=5.5,SNR=6.5						
PLCA				PKPab	pPKPbc	00 31 56.2	-0.4
	comp=Z,6.3nm,0.9s,baz=245,slow=8.3,SNR=4.7						
BDFB	Brasilia	159.52	23		PKPdf	00 31 38.6	+0.9
BDFB	Brasilia	159.52	23	PKP	PKPdf	00 31 38.5	+0.8
	comp=Z,1.2nm,0.4s,baz=97,slow=7.4,SNR=4.5						
BDFB				PKPab	PKPab	00 32 15.2	-0.5
	comp=Z,3.9nm,0.8s,baz=329,slow=3.0,SNR=5.1						
TRQA	Tornquist	162.05	107		PKPab	00 32 28.0	+1.6
TRQA	Tornquist	162.05	107	PKP2	PKPab	00 32 28.0	+1.6
CPUP	Villa Florida	162.83	65	PKP	PKPdf	00 31 40.3	-0.5
	comp=Z,1.0nm,1.0s,baz=176,slow=3.5,SNR=5.8						
CPUP				PKPab	PKPab	00 32 29.6	-0.5
	comp=Z,0.9nm,0.8s,baz=161,slow=4.4,SNR=5.9						

SOME ***24*** *00:19:39.5, 42°03N×70°42E, h0^{km}*

ISU ***24*** *00:19:41, 42°12N×70°37E, h17^{km}*

KRNET 24 00:19:39.6±0.1, 42°05N×70°43E, h10^{km}, mb3.3, 16C-12D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	0.31	289	*e*P	Pg	00 19 45.8	-0.1
IUG				*e*S	Sg	00 19 50.2	+0.1
CHM	Chimkent	0.67	294	*e*P	Pg	00 19 52.7	+0.1
CHM				*e*S	Sg	00 20 02.0	+0.6
CHM	Chimkent	0.67	294	*e*P	Pg	00 19 52.7	+0.1
	38nm,0.1s						
CHM				*e*S	Sg	00 20 02.0	+0.6
	454nm,0.3s						
TRKS	Terek-Say	0.74	134	⇓*e*P	Pb	00 19 55.1	+0.3
TRKS				⇓*e*S	Sb	00 20 06.4	+1.3
TGS	TashGRES	0.92	228	P	Pn	00 20 01.3	+2.6
TGS				S	Sn	00 20 15.0	+3.0
KKAR	Karatay Array	1.06	3	⇑*e*P	Pg	00 20 00.0	0.0
KKAR				⇑*e*S	Sb	00 20 14.6	+0.6
BRLS	Borolday	1.07	336	*e*P	Pg	00 19 56.8	-3.5
BRLS				*e*S	Sg	00 20 09.0	-5.3
BRLS	Borolday	1.07	336	*e*P	Pg	00 19 56.8	-3.5
	5.4nm,0.2s						
BRLS				*e*S	Sg	00 20 08.9	-5.3
	84nm,0.2s						
DZA	Taraz	1.08	38	*e*P	Pg	00 20 00.0	-0.4
DZA				*e*S	Sb	00 20 14.6	0.0
DZA	Taraz	1.08	38	*e*P	Pg	00 19 60.0	-0.4
	22nm,0.1s						
DZA				*e*S	Sb	00 20 14.6	0.0
	290nm,0.3s						
ARK	Arkit	1.17	102	⇑*e*P	Pn	00 20 02.3	0.0
ARK				⇑*e*S	Sn	00 20 18.6	+0.2
NZBK	Nazarbek	1.28	230	P	Pg	00 20 05.4	+1.2
NZBK				S	Sg	00 20 21.6	+0.7
MNAS	Manas	1.60	73	⇑*e*P	Pb	00 20 09.9	+0.4
MNAS				⇑*e*S	Sg	00 20 31.8	+0.5
CHMI	Chimion	1.96	155	P	Pg	00 20 18.0	+0.8
CHMI				S	Sg	00 20 44.4	+1.8
BTK	Batken	2.01	171	⇑*e*P	Pb	00 20 16.0	-0.3
BTK				⇑*e*S	Sg	00 20 43.0	-1.2
ARSB	Arslanbob	2.05	110	⇑*e*P	Pb	00 20 16.8	-0.2
ARSB				⇑*e*S	Sg	00 20 44.6	-0.8
MRKS	Merke	2.19	70	*e*P	Pg	00 20 20.7	-0.9
	9.8nm,0.5s						
MRKS				*e*S	Sg	00 20 50.0	0.0
	59nm,0.5s						
OHH	Osh	2.34	130	⇑*e*P	Pb	00 20 21.0	-1.0
OHH				⇑*e*S	Sb	00 20 51.8	+0.9
EKS2	Erkin-Say	2.56	75	⇓*e*P	Pb	00 20 24.3	-1.4
EKS2				⇓*e*S	Sb	00 20 57.4	+0.1
DRK	Karamyk	2.77	157	⇓*e*P	Pn	00 20 26.8	+2.5
DRK				⇓*e*S	Sb	00 21 01.8	-1.7
SALK	Salom-Alik	2.80	113	⇓*e*P	Pb	00 20 27.6	-2.3
SALK				⇓*e*S	Sb	00 21 03.3	-1.1
GAR	Garm	3.04	182	⇓*e*P	Pn	00 20 30.3	+2.3
GAR				⇓*e*S	Sn	00 21 07.7	+3.2
AAK	Ala-Archa	3.07	78	⇓*e*P	Pb	00 20 31.6	-2.9
AAK				⇓*e*S	Sb	00 21 09.6	-2.5
SFK	Sufi-Kurgan	3.09	130	⇑*e*P	Pn	00 20 31.6	+2.9
SFK				⇑*e*S	Sb	00 21 09.6	-3.1
CHMS	Chumysh	3.34	72	⇑*i*P	Pn	00 20 34.9	+3.0
CHMS				⇑*e*S	Sb	00 21 15.7	-3.9

SJA 24 00:23:38.0±0.7, 22°.63S×66°.18W, h265km±4km, ML3.6, MW3.4, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YJA	Yavi	0.77	54	*e*P	Pn	00 24 14.9	+0.8
YJA				*e*S	S	00 24 41.4	-1.3
SALTA		1.59	185	*e*P	Pn	00 24 19.4	+0.3
SLA	San Lorenzo	2.17	163	*e*P	Pn	00 24 23.8	+0.3
SLA				*e*S	S	00 24 58.0	-1.5
ALOL	LOMAS DE OLMED	2.34	121	*e*P	Pn	00 24 25.1	+0.2
PB09	IPOC Station P	2.95	286	*e*P	Pn	00 24 32.2	+1.1
PB09				*e*S	S	00 25 11.1	-2.3
PB06	IPOC Station P	3.13	268	*e*P	Pn	00 24 33.4	+0.3
PB06				*e*S	S	00 25 14.9	-1.8
PB06				IAML		00 25 16.9	
	comp=Z,46nm,0.1s						
PB03	IPOC Station P	3.36	279	*e*P	Pn	00 24 35.7	+0.2
PB03				*e*S	S	00 25 18.3	-2.9
PB03				IAML		00 25 22.0	
	comp=Z,106nm,0.1s						
PB01	IPOC Station P	3.45	297	*e*P	Pn	00 24 37.0	+0.5
PB01				*e*S	S	00 25 20.0	-3.0
PB01				IAML		00 25 21.7	
	comp=Z,62nm,0.2s						
PB08	IPOC Station P	3.71	311	*e*P	Pn	00 24 41.4	+1.6
PB08				*e*S	S	00 25 29.1	+0.4
PB05	IPOC Station P	3.72	266	*e*P	Pn	00 24 39.4	0.0
PB05				*e*S	S	00 25 24.9	-3.4
PB05				IAML		00 25 25.9	
	comp=Z,29nm,0.4s						
GO02	Mina Guanaco	4.01	230	*e*P	Pn	00 24 42.2	-0.7
GO02				*e*S	S	00 25 31.8	-2.9
PATCX	Punta Patache	4.11	295	*e*P	Pn	00 24 44.4	+0.5
PATCX				*e*S	S	00 25 33.4	-3.0
PATCX				IAML		00 25 36.3	
	comp=Z,46nm,0.3s						
PB10	IPOC Station P	4.12	257	*e*P	Pn	00 24 43.9	0.0
PB10				*e*S	S	00 25 32.0	-4.4
PB10				IAML		00 25 35.1	
	comp=Z,58nm,0.5s						
HMBC	Humberstone	4.17	303	*e*P	Pn	00 24 44.6	-0.1
HMBC				*e*S	S	00 25 35.2	-2.6
HMBC				IAML		00 25 39.8	
	comp=Z,49nm,0.2s						
TA01	Diego Aracena	4.25	298	*e*P	Pn	00 24 45.9	+0.4
TA01				*e*S	S	00 25 36.3	-2.9
TA01				IAML		00 25 38.2	
	comp=Z,39nm,0.3s						
PB11	IPOC Station P	4.32	311	*e*P	Pn	00 24 46.7	+0.3
PB11				*e*S	S	00 25 38.0	-2.9
PB11				IAML		00 25 40.2	
	comp=Z,31nm,0.2s						
PB14	IPOC Station P	4.35	242	*e*P	Pn	00 24 46.6	-0.2
PB14				*e*S	S	00 25 38.0	-3.8
PB14				IAML		00 25 40.0	
	comp=Z,92nm,0.2s						
AC02	Maricunga	4.97	212	*e*P	Pn	00 24 54.6	+0.2
AC02				*e*S	S	00 25 47.9	-7.5
PB16	IPOC Station P	5.29	323	*e*P	Pn	00 25 00.4	+2.0
PB16				*e*S	S	00 25 58.3	-4.4
PB16				IAML		00 26 05.8	
	comp=Z,16nm,1.6s						
AC01	Pan de Azucar	5.33	228	*e*P	Pn	00 24 57.1	-1.2
AC01				*e*S	S	00 25 57.3	-5.3
AC01				IAML		00 25 57.9	
	comp=Z,30nm,0.2s						

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*IDC **24** 00:26:05.1±1.0, 35°.80N×27°.18E, h0km, mb3.8/7, mbtmp3.7/13, ML3.4/7, Error ellipse: s-maj=21.9km s-min=14.9km az=179.0*

*ISK **24** 00:26:06.7, 35°.77N×27°.07E, h8km, ML3.5/31*

*ATH **24** 00:26:06.1, 35°.80N×27°.20E, h8km±2km, ML3.3/17, Manual Solution by M.Kolligri First location: 2019/06/24 00:27:20, This location: 2019/06/24 00:58:59 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*AFAD **24** 00:26:07.8, 35°.87N×27°.19E, h13km±1km, MW3.7*

*THE **24** 00:26:07.1, 36°N±2°×2°7E±°, h6km±6km, M3.2/11, MLh3.2/11*

*GII **24** 00:26:08.2±0.0, 35°.300N±0°.003×27°.279E±0°.001, h1km, Mws3.5, confirmed*

ISC 24 00:26:07.2±0.8, 35°.73N±0°.02×27°.19E±0°.02, h18km±4km, n156, σ1°.25/192, mb3.6/7, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.18	188	Pg	Pg	00 26 11.6	-0.3
KARP				Sg	Sg	00 26 15.9	+0.8
KARP	Karpathos	0.18	188	P	Pg	00 26 11.4	-0.5
KARP				S	Sg	00 26 15.5	+0.4
KARP	Karpathos	0.18	188	P	Pg	00 26 11.4	-0.5
KARP				S	Sg	00 26 15.3	+0.3
ARG	Arkhangelos	0.90	57	Pg	Pg	00 26 23.8	-1.1
ARG	Arkhangelos	0.90	57	P	Pg	00 26 23.7	-1.1
ARG				S	Sb	00 26 37.6	+1.6
ARG	Arkhangelos	0.90	57	P	Pg	00 26 23.3	-1.6
ARG				S	Sg	00 26 33.9	-2.9
YAZI	Mula-Dat§a-	0.98	12	P	Pg	00 26 24.3	-1.9
YAZI				S	Sg	00 26 38.9	-0.2
YAZI				*i* IAML		00 26 40.0	
	comp=E,915nm,1.0s						
YAZI				*i* IAML		00 26 43.0	
	comp=N,396nm,0.6s						
ZKR	Zakros	1.00	233	Pg	Pb	00 26 25.3	-0.7
ZKR	Zakros	1.00	233	P	Pn	00 26 26.2	-0.1
ZKR	Zakros	1.00	233	P	Pn	00 26 26.2	-0.1
ZKR				S	Sn	00 26 40.7	+0.7
DAT	Datca	1.05	17	Pg	Pg	00 26 27.0	-0.6
DAT				Sg	Sb	00 26 42.2	+1.8
KLNA	Kalymnos	1.24	352	P	Pn	00 26 28.5	-1.1
KLNA				S	Sb	00 26 44.4	-1.4
BODT	Bodrum	1.34	4	Pn	Pn	00 26 31.8	+0.8
BODT				Sn	Sb	00 26 50.1	+1.5
BODT	Bodrum	1.34	4	P	Pn	00 26 30.3	-0.7
BODT				S	Sb	00 26 48.3	-0.3
TURN	Turunc	1.35	39	Pn	Pn	00 26 31.6	+0.5
TURN	Turunc	1.35	39	P	Pn	00 26 31.4	+0.2
TURN				S	Sb	00 26 49.5	+0.6
TURN				*i* IAML		00 26 55.0	
	comp=N,531nm,0.6s						
TURN				*i* IAML		00 26 55.0	
	comp=E,488nm,0.7s						
BDRM	Kayabasi	1.35	9	P	Pn	00 26 30.4	-0.8
BDRM				S	Sb	00 26 47.3	-1.7
BDRM				*i* IAML		00 26 54.0	
	comp=E,239nm,1.0s						
AMGA	Amorgos Island	1.52	317	P	Pn	00 26 32.7	-0.8
AMGA				S	Sn	00 26 53.3	+0.4
THERA	Ancient Thera,	1.53	295	P	Pn	00 26 33.6	0.0
THERA				S	Sn	00 26 53.3	+0.2
THR8	Santorini-Mono	1.54	297	P	Pn	00 26 33.7	-0.1
THR6	Thira Island,	1.58	294	P	Pn	00 26 34.7	+0.3
THR2	Thira island,	1.59	297	P	Pn	00 26 34.4	-0.1
THR3	Thira Island,	1.60	296	P	Pn	00 26 34.4	-0.3
DALY	Dalyan (Mula)	1.61	47	Pn	Pb	00 26 36.6	+0.2
THR9	Santorini-Faro	1.61	294	P	Pn	00 26 35.2	+0.4
CMBO	Columbo, Santo	1.63	298	P	Pn	00 26 34.9	0.0
CMBO				S	Sn	00 26 56.6	+1.2
CMBO	Columbo, Santo	1.63	298	P	Pn	00 26 34.9	0.0
CMBO				S	Sn	00 26 56.0	+0.6
MLSB	Milas	1.64	17	Pn	Pn	00 26 36.6	+1.5
THR5	Thira Island,	1.65	295	P	Pn	00 26 34.7	-0.5
SAP3	Santorini-Thir	1.65	296	P	Pn	00 26 35.9	+0.6
SAP3				S	Sn	00 26 57.4	+1.3
SAP3	Santorini-Thir	1.65	296	P	Pn	00 26 36.2	+0.8
SAP3				S	Sn	00 26 56.5	+0.4
DDIM	Aydin, Didim	1.73	1	P	Pg	00 26 40.1	-0.4
IACM	Heraklion	1.78	257	P	Pn	00 26 37.7	+0.7
IACM				S	Sb	00 27 01.9	+0.7
MULA	Mugla, Merkez-	1.78	30	P	Pn	00 26 38.1	+1.0
MULA				S	Sn	00 27 01.8	+2.5
MULA				*i* IAML		00 27 11.0	
	comp=E,320nm,1.0s						
MULA				*i* IAML		00 27 12.0	
	comp=N,176nm,1.0s						
FETY	Fethiye	1.78	59	Pn	Pb	00 26 39.2	-0.1
FETY	Fethiye	1.78	59	P	Pn	00 26 37.5	+0.4
FETY				S	Sb	00 27 01.5	+0.1
FETY	Fethiye	1.78	59	P	Pg	00 26 40.1	-1.4
IZZE	Mula-Seydike	1.79	66	P	Pb	00 26 39.2	-0.3
IZZE				S	Sg	00 27 04.1	-1.0
IZZE				*i* IAML		00 27 11.0	
	comp=N,546nm,0.4s						
IZZE				*i* IAML		00 27 15.0	
	comp=E,248nm,0.6s						
SABU	Mula-Dalaman	1.81	52	P	Pb	00 26 39.9	+0.2
SABU				S	Sg	00 27 04.3	-1.1
SABU				*i* IAML		00 27 13.0	
	comp=N,344nm,0.6s						
SABU				*i* IAML		00 27 13.0	
	comp=E,170nm,0.6s						
APE	Apeiranthos	1.90	316	Pn	Pn	00 26 38.1	-0.6
APE	Apeiranthos	1.90	316	P	Pn	00 26 38.2	-0.5
APE				S	Sn	00 27 01.3	-0.8
APE	Apeiranthos	1.90	316	P	Pn	00 26 38.0	-0.6
IDI	Anoyia	1.93	258	Pn	Pn	00 26 39.3	+0.2
IDI	Anoyia	1.93	258	P	Pn	00 26 39.7	+0.5
IDI				S	Sn	00 27 04.3	+1.4
IDI	Anoyia	1.93	258	Pn	Pn	00 26 40.1	+0.9
	6.8nm,0.3s,baz=108,slow=6.7,SNR=29						
IDI				Sn	Sb	00 27 05.3	-0.2
	21nm,0.3s,baz=326,slow=20,SNR=11						
IDI	Anoyia	1.93	258	P	Pn	00 26 39.3	+0.2
GCAM	G?zelcaml?	1.97	1	Pn	Pn	00 26 40.8	+1.1
GCAM	G?zelcaml?	1.97	1	P	Pb	00 26 43.3	+0.7
GCAM				*i* IAML		00 27 21.0	
	comp=E,80nm,1.1s						
GCAM				*i* IAML		00 27 23.0	
	comp=N,126nm,0.7s						
SMG	Samos	2.00	352	P	Pn	00 26 39.4	-0.7
SMG	Samos	2.00	352	P	Pn	00 26 39.0	-1.1
AKAS	Kas	2.02	75	Pn	Pb	00 26 43.5	0.0
CAME	Cameli-Denizli	2.10	54	Pn	Pb	00 26 43.9	-0.9
DNZT	Denizli-Tavas-	2.14	43	P	Pb	00 26 45.2	-0.3
DNZT				S	Sg	00 27 14.8	-1.4
DNZT				*i* IAML		00 27 16.0	
	comp=N,117nm,0.6s						
DNZT				*i* IAML		00 27 17.0	
	comp=E,282nm,0.8s						
CAEL	Denizli, Camel	2.21	50	P	Pb	00 26 46.4	-0.3
CAEL				*i* IAML		00 27 26.0	
	comp=E,827nm,1.1s						
CAEL				*i* IAML		00 27 41.0	
	comp=N,787nm,1.0s						
TAVA	DENIZLI_Tavas	2.22	38	P	Pb	00 26 45.8	-1.1
TAVA				*i* IAML		00 27 23.0	
	comp=N,170nm,1.1s						
TAVA				*i* IAML		00 27 23.0	
	comp=E,200nm,1.0s						
KNIK	Mula-Seydike	2.23	59	P	Pb	00 26 46.2	-0.7
KNIK				*i* IAML		00 27 28.0	
	comp=N,154nm,0.8s						
KNIK				*i* IAML		00 27 28.0	
	comp=E,90nm,0.7s						
ESEN	Aydn-Nazilli	2.27	24	P	Pn	00 26 44.5	+0.8
ESEN				*i* IAML		00 27 20.0	
	comp=N,85nm,0.9s						
ESEN				*i* IAML		00 27 28.0	
	comp=E,90nm,0.6s						
AYDB	Zeytinkoy-Aydi	2.29	14	Pn	Pn	00 26 45.7	+1.5
NAZL	Nazilli-Aydin	2.40	21	Pn	Pn	00 26 47.4	+1.7
DNIZ	Denizli-Tavas-	2.41	38	P	Pn	00 26 48.0	+2.2
DNIZ				S	Sn	00 27 18.3	+3.4
DNIZ				*i* IAML		00 27 24.0	
	comp=N,304nm,0.5s						
DNIZ				*i* IAML		00 27 29.0	
	comp=E,370nm,0.5s						
ELL	Elmali	2.42	64	Pn	Pb	00 26 48.9	-1.4
APMY	Acipayam-Deniz	2.44	44	Pn	Pn	00 26 48.4	+2.2
GOLH	Golhisar	2.44	51	P	Pb	00 26 49.2	-1.3
GOLH				S	Sg	00 27 24.4	-1.2
GOLH				*i* IAML		00 27 28.0	
	comp=N,298nm,0.7s						
GOLH				*i* IAML		00 27 35.0	
	comp=E,222nm,0.8s						
MHLO	Agia Marina, M	2.45	294	P	Pn	00 26 47.0	+0.7
MHLO				S	Sn	00 27 16.4	+0.6
MHLO	Agia Marina, M	2.45	294	P	Pn	00 26 46.8	+0.5
IZMR	zmir-demi	2.48	14	P	Pn	00 26 48.6	+1.9
IZMR				S	Sn	00 27 20.4	+3.8
IZMR				*i* IAML		00 27 37.0	
	comp=E,78nm,0.8s						
IZMR				*i* IAML		00 27 38.0	
	comp=N,78nm,1.2s						
ZEYE	Izmir, Urla-Ze	2.57	348	P	Pn	00 26 47.3	-0.6
IMMV	Iera Moni Meta	2.63	265	Pn	Pn	00 26 49.5	+0.8
IMMV	Iera Moni Meta	2.63	265	P	Pn	00 26 50.1	+1.3
ODEM	Odemis-Izmir	2.64	15	Pn	Pn	00 26 50.7	+1.7
KIRA	zmir-Kiraz	2.65	21	P	Pn	00 26 51.1	+2.0
KIRA				S	Sb	00 27 26.9	+0.4
KIRA				*i* IAML		00 27 45.0	
	comp=E,84nm,0.7s						
KIRA				*i* IAML		00 27 50.0	
	comp=N,60nm,0.9s						
BLCB	Balcova	2.66	357	Pn	Pn	00 26 50.6	+1.5
URLA	Izmir	2.67	350	Pn	Pn	00 26 50.5	+1.1
GVD	Gavdhos	2.69	252	Pn	Pn	00 26 50.9	+1.4
CHOS	Chios island	2.81	341	Pn	Pn	00 26 51.3	0.0
CHOS	Chios island	2.81	341	P	Pn	00 26 51.0	-0.3
CHOS	Chios island	2.81	341	P	Pn	00 26 50.6	-0.6
KORT	Korkueli	2.85	63	Pn	Pb	00 26 55.0	-2.6
KULA	Kula-Manisa	3.02	22	Pn	Pn	00 26 56.2	+2.0
BASM	Basmaki-Afyon	3.17	45	Pn	Pn	00 26 59.2	+2.9
BCK	Bucak	3.24	57	Pn	Pn	00 27 00.2	+3.0
GORD	Gordes-Manisa	3.27	14	Pn	Pn	00 26 59.8	+2.1
DKL	Dikili	3.35	356	Pn	Pn	00 26 59.9	+1.3
KTHA	Kythira Island	3.39	280	Pn	Pn	00 27 00.1	+0.9
ISP	Isparta	3.40	51	Pn	Pn	00 27 02.2	+2.8
ISP	Isparta	3.40	51	P	Pb	00 27 06.3	-0.6
ISP	Isparta	3.40	51	S	Sb	00 27 50.6	+2.7
MET5	Makryloggos,Me	3.62	303	P	Pn	00 27 03.7	+1.4
SIGR	SIGRI	3.64	343	P	Pn	00 27 01.6	-1.0
KYMI	Kymi, Euboea I	3.81	321	P	Pn	00 27 03.6	-1.4
VIL2	Platees	4.00	309	P	Pn	00 27 07.2	-0.4
LTK	Loutraki	4.09	305	P	Pn	00 27 08.4	-0.4
AKMS	Akamas	4.26	98	P	Pn	00 27 11.9	+0.7
ALFC	Alefka	4.45	96	P	Pn	00 27 14.2	+0.4
LIA	Limnos Island	4.46	340	P	Pn	00 27 13.9	0.0
GUR	Goura	4.47	301	P	Pn	00 27 16.1	+1.9
ITM	Ithomi	4.48	290	P	Pn	00 27 14.5	+0.2
NATA	Nata	4.50	101	P	Pn	00 27 15.4	+0.9
PYL	PYLOS	4.55	286	P	Pn	00 27 16.8	+1.6
PYL2	Kinigos	4.57	287	P	Pn	00 27 17.0	+1.6
KLV	Kalavryta, Ach	4.66	301	P	Pn	00 27 16.6	0.0
TROD	Troodos	4.70	98	P	Pn	00 27 17.9	+0.5
NEO	Neokhori	4.77	320	P	Pn	00 27 18.9	+0.8
CSS	Mathiatis	5.08	97	P	Pn	00 27 24.6	+2.2
CSS	Mathiatis	5.08	97	S	Sn	00 28 23.1	+2.5
BRTR	Keskin Array B	6.49	50	Pn	Pn	00 27 43.6	+1.7
	0.3nm,0.3s,baz=240,slow=16,SNR=9.1						
	1.1nm,0.6s						
MMA0B	Mount Meron ar	7.31	109	P	Pn	00 27 53.3	+0.2
MMA0B	Mount Meron ar	7.31	109	S	Sn	00 29 15.4	-0.2
MMAI	Mount Meron Ar	7.31	109	Pn	Pn	00 27 53.2	+0.1
	1.3nm,0.3s,baz=318,slow=12,SNR=15						
MMAI				Sn	Sn	00 29 16.7	+1.0
	2.3nm,0.3s,baz=297,slow=27,SNR=9.3						
	0.6nm,0.2s						
GEM	Giv'at Ha'Em	7.43	107	P	Pn	00 27 54.9	+0.2
GEM	Giv'at Ha'Em	7.43	107	S	Sn	00 29 19.2	+0.6
NATI	Neve Ativ	7.47	107	P	Pn	00 27 55.8	+0.6
NATI	Neve Ativ	7.47	107	S	Sn	00 29 19.9	+0.4
AMAZ	Amatzia	7.68	121	P	Pn	00 27 57.8	-0.3
AMAZ	Amatzia	7.68	121	S	Sn	00 29 23.7	-1.0
KZIT	Kziot	7.71	127	P	Pn	00 27 58.0	-0.6
KZIT	Kziot	7.71	127	S	Sn	00 29 22.9	-2.5
HMDT	Nahal Hemdat	7.74	114	P	Pn	00 27 59.1	+0.1
HMDT	Nahal Hemdat	7.74	114	S	Sn	00 29 25.4	-0.7
YTIR	Yattir	7.92	121	P	Pn	00 28 01.2	-0.3
YTIR	Yattir	7.92	121	S	Sn	00 29 29.2	-1.5
DSI	Dead Sea	7.99	119	P	Pn	00 28 02.2	-0.2
DSI	Dead Sea	7.99	119	S	Sn	00 29 31.2	-1.0
MSBI	Mazada	8.12	121	P	Pn	00 28 03.8	-0.2
MSBI	Mazada	8.12	121	S	Sn	00 29 34.2	-1.1
GHAJ	Ghor Haditha	8.27	120	P	Pn	00 28 05.9	-0.3
GHAJ	Ghor Haditha	8.27	120	S	Sn	00 29 38.2	-0.9
KRMI	Paran Flat	8.45	129	P	Pn	00 28 08.2	-0.5
KRMI	Paran Flat	8.45	129	S	Sn	00 29 40.9	-2.7
PRNI	Paran	8.47	127	P	Pn	00 28 08.4	-0.6
PRNI	Paran	8.47	127	S	Sn	00 29 41.7	-2.4
HRFI	Mount Harif	8.70	128	P	Pn	00 28 11.4	-0.8
HRFI	Mount Harif	8.70	128	S	Sn	00 29 47.7	-2.1
MBRI	Mt Berech	8.79	130	P	Pn	00 28 13.0	-0.5
MBRI	Mt Berech	8.79	130	S	Sn	00 29 49.2	-2.9
EIL	Elat	8.90	131	Pn	Pn	00 28 15.8	+1.0
	0.6nm,0.3s,baz=355,slow=2.2,SNR=15						
EIL				Sn	Sn	00 29 54.8	+0.2
	0.5nm,0.3s,baz=344,slow=14,SNR=6.8						
	2.0nm,0.5s						
EIL	Elat	8.90	131	P	Pn	00 28 14.5	-0.4
EIL	Elat	8.90	131	S	Sn	00 29 51.4	-3.2
KEST	Kesra	14.50	275	Pn	Pn	00 29 32.7	+1.1
	0.1nm,0.3s,baz=235,slow=5.5,SNR=5.8						
	1.3nm,0.7s						
MODS	Modra-Piesok	14.61	333	*e*PN	P	00 29 40.2	+1.0
AKASG	Malin Array Be	15.04	5	Pn	Pn	00 29 38.9	+0.1
	0.5nm,0.3s,baz=196,slow=12,SNR=4.9						
KRUC	Moravsky	15.51	333	*e*PN	P	00 29 49.7	+0.5
VRAC	Vranov	15.64	333	Pn	Pn	00 29 48.2	+1.6
	0.3nm,0.3s,baz=116,slow=9.7,SNR=5.4						
	3.3nm,0.8s						
VRAC	Vranov	15.64	333	*e*PN	P	00 29 50.8	+0.2
MORC	Moravsky Berou	15.71	336	*e*PN	P	00 29 51.8	+0.3
KRLC	Kraliky	16.22	335	*e*P	P	00 29 59.9	+2.8
GERES	GERESS Array B	16.44	327	Pn	Pn	00 29 58.1	+1.1
	baz=148,slow=10,SNR=11						
	1.3nm,0.7s						
DPC	Dobruska-Polom	16.61	335	*e*P	P	00 30 02.9	+1.5
KHC	Kasperske Hory	16.71	327	*e*P	P	00 30 03.5	+1.0
ESDC	Sonseca Array	24.90	288	P	P	00 31 28.5	-0.6
	1.3nm,0.8s,baz=82,slow=9.8,SNR=18						
	1.3nm,0.8s						
FINES	FINESS Array B	25.75	359	P	P	00 31 35.8	-0.6
	2.2nm,0.8s,baz=158,slow=9.9,SNR=7.1						
	2.2nm,0.8s						
HFS	Hagfors	25.94	345	P	P	00 31 37.5	-0.7
	0.8nm,0.8s,baz=154,slow=14,SNR=2.1						
	0.8nm,0.8s						
ARCES	ARCESS Array B	33.88	359	P	P	00 32 47.0	-1.4
	2.0nm,0.8s,baz=170,slow=8.6,SNR=6.3						
	2.0nm,0.8s						
KURBB	Kurchatov Arra	39.48	51	P	P	00 33 37.1	+0.8
	0.6nm,0.6s,baz=280,slow=8.7,SNR=6.6						
KURBB				PcP	PcP	00 35 45.2	+1.3
	0.7nm,0.7s,baz=264,slow=4.5,SNR=7.0						
	0.6nm,0.6s						
MKAR	Makanchi Array	42.08	57	P	P	00 33 57.9	0.0
	0.6nm,0.7s,baz=280,slow=7.3,SNR=5.0						
	0.6nm,0.7s						
KSRS	Korea Array	76.62	53	P	P	00 37 57.3	+0.5
	1.6nm,0.9s,baz=300,slow=5.7,SNR=5.7						
	1.6nm,0.9s						

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*IDC **24** 00:30:29.0±0.6, 6°.80N×72°.95W, h161km±6km, mb3.6/9, mbtmp4.2/13, MS2.8/2, Error ellipse: s-maj=16.2km s-min=7.6km az=127.0*

*RSNC **24** 00:30:30.0±0.0, 7°N±1°×7°3W±°, h154km±1km, M4.2, mB4.9, mb4.7, ML3.9, Mw(mB)4.2*

*NEIC **24** 00:30:41.4±2.1, 8°.8N±0°.1×73°.3W±0°.1, h126km±11km, mb4.4/49, Error ellipse: s-maj=20.1km s-min=17.6km az=209.0*

ISC 24 00:30:28.9±0.5, 6°.84N±0°.03×73°.07W±0°.03, h156km±4km, n110, σ1°.10/137, mb4.3/30, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.27	205	P	Pn	00 30 50.5	+0.1
BARC				S	Sn	00 31 05.2	-1.5
PAMC	Pamplona, Colo	0.62	36	P	Pn	00 30 53.2	+1.1
PAMC				S	Sn	00 31 10.5	+0.7
BRJC	Barrancabermej	0.68	281	P	Pn	00 30 52.2	+0.3
BRJC				S	Sn	00 31 09.8	+0.4
RUSC	La Rusia	0.94	181	P	Pn	00 30 54.3	0.0
RUSC				S	Sn	00 31 12.9	-0.8
TAMC	Tame, Arauca	1.33	107	P	Pn	00 30 58.5	+1.3
TAMC				S	Sn	00 31 20.2	+1.3
PTBC	PUERTO BERRIO,	1.41	258	P	Pn	00 30 57.1	-0.9
PTBC				S	Sn	00 31 18.1	-2.2
OCAC	Ocana	1.41	350	P	Pn	00 30 58.5	+0.3
OCAC				S	Sn	00 31 21.6	+0.9
SPBC	San Pablo de B	1.54	220	P	Pn	00 30 59.3	-0.2
SPBC				S	Sn	00 31 22.1	-0.8
ZARC	Zaragoza, Cauc	1.89	290	P	Pn	00 31 03.1	0.0
ZARC				S	Sn	00 31 28.8	-0.7
NORC	Norcasia	2.19	235	P	Pn	00 31 06.4	-0.3
NORC				S	Sn	00 31 34.7	-1.1
CHIC	Chingaza	2.29	197	P	Pn	00 31 08.1	-0.1
CHIC				S	Sn	00 31 38.7	+0.2
ROSC	El Rosal	2.34	212	P	Pn	00 31 10.1	+1.3
	970nm,0.3s,baz=288,slow=6.9,SNR=405						
ROSC				S	Sn	00 31 41.0	+1.5
	1μm,0.5s,baz=84,slow=18,SNR=7.1						
ROSC	El Rosal	2.34	212	P	Pn	00 31 09.8	+1.0
ROSC				S	Sn	00 31 41.2	+1.6
CVER	Cruz Verde, Cu	2.51	204	P	Pn	00 31 11.6	+0.7
CVER				S	Sn	00 31 46.0	+2.7
HELC	Santa Helena	2.53	255	P	Pn	00 31 11.1	+0.1
HELC				S	Sn	00 31 43.4	0.0
MEDEC	Medelln, Ant	2.56	258	P	Pn	00 31 12.4	+1.1
MEDEC				S	Sn	00 31 43.2	-0.8
UREC	San Jos de Ur	2.61	291	P	Pn	00 31 10.1	-1.5
UREC				S	Sn	00 31 42.1	-2.5
VILC	Villavicencio,	2.78	193	P	Pn	00 31 13.4	-0.5
VILC				S	Sn	00 31 49.9	+1.2
PTGC	Puerto Gaitan,	2.78	160	P	Pn	00 31 13.2	-0.6
PTGC				S	Sn	00 31 46.6	-2.0
GUY2C	Guyana, Caldas	2.79	235	P	Pn	00 31 14.6	+0.2
GUY2C				S	Sn	00 31 51.4	+2.0
NIZA	Niza - Manizal	2.97	234	P	Pn	00 31 17.8	+1.4
NIZA				S	Sn	00 31 55.1	+1.9
CBOC	Ciudad Bolivar	3.08	252	P	Pn	00 31 17.9	+0.2
CBOC				S	Sn	00 31 54.5	-0.9
DBBC	Dabeiba	3.12	273	P	Pn	00 31 17.7	-0.4
DBBC				S	Sn	00 31 55.3	-0.9
SDV	Santo Domingo	3.16	50	Pn	Pn	00 31 20.1	+1.4
SDV				Sn	Sn	00 31 56.2	-1.0
SDV	Santo Domingo	3.16	50	P	Pn	00 31 19.7	+1.0
	548nm,0.3s,baz=215,slow=4.9,SNR=248						
SDV				S	Sn	00 31 56.4	-0.8
	152nm,0.4s,baz=50,slow=11,SNR=9.3						
SDV				LR	LR	00 32 20.9	
	comp=Z,27nm,19.9s,baz=228,slow=36						
SDV	Santo Domingo	3.16	50	P	Pn	00 31 19.6	+1.0
SDV				S	Sn	00 31 57.4	+0.2
ARGC	Ariguani, Magd	3.22	339	P	Pn	00 31 20.6	+1.3
ARGC				S	Sn	00 31 58.9	+0.5
ANIL	Santa Ana	3.29	225	P	Pn	00 31 20.6	+0.1
ANIL				S	Sn	00 32 00.1	-0.4
PRAC	Prado	3.59	210	P	Pn	00 31 23.6	-0.5
PRAC				S	Sn	00 32 07.1	+0.1
ORTC	Ortega, Tolima	3.63	217	P	Pn	00 31 24.2	-0.4
ORTC				S	Sn	00 32 07.7	-0.1
APAC	Apartado, Choc	3.64	287	P	Pn	00 31 24.2	-0.4
SJCC	San Jacinto, C	3.69	326	P	Pn	00 31 24.1	-1.2
PLMC	San Jos del P	3.73	239	P	Pn	00 31 25.9	0.0
URMC	La Uribe, Meta	3.80	200	P	Pn	00 31 26.5	-0.3
LCBC	Los crdobas,	3.83	302	P	Pn	00 31 28.3	+1.1
CRJC	Cerrejon, Guaj	4.16	3	P	Pn	00 31 30.5	-1.0
GUVC	San Jose del G	4.29	174	P	Pn	00 31 31.7	-1.4
SMRC	Santa Marta, M	4.45	345	P	Pn	00 31 35.5	+0.3
MACC	Macarena, Meta	4.73	189	P	Pn	00 31 36.8	-2.1
BETC	Betania	4.76	210	P	Pn	00 31 38.0	-1.3
URIC	Uribia, Colomb	4.95	12	P	Pn	00 31 40.3	-1.5
JAMC	Jamundi, Valle	5.08	225	P	Pn	00 31 43.2	-0.6
	2μm58nm,0.5s						
MALC	Bahia Malaga	5.09	237	P	Pn	00 31 44.5	+0.8
GARC	Garzon, Huila	5.21	208	P	Pn	00 31 44.1	-1.4
POPC	Popayan, Colom	5.58	220	P	Pn	00 31 49.8	-0.6
	847nm47nm,0.6s						
FLOC	Florencia	5.82	206	P	Pn	00 31 52.6	-0.8
	1μm74nm,1.0s						
PCRV	Puerto La Cruz	8.97	68	P	Pn	00 32 33.6	-1.7
	12nm,0.4s,baz=1.9,slow=1.8,SNR=36						
MTDJ	Mount Denham	12.13	339	*e*P	Pn	00 33 19.6	+2.8
MTDJ				*e*S	Sn	00 35 21.3	-10
JTS	Las Juntas de	12.24	287	P	Pn	00 33 19.9	+1.6
	4.6nm,0.7s,baz=162,slow=19,SNR=1.4						
SJG	San Juan	13.08	30	P	Pn	00 33 28.2	-0.7
	5.9nm,0.4s,baz=36,slow=21,SNR=6.1						
GTBY	Guantanamo Bay	13.16	352	*e*P	P	00 33 33.1	-1.2
MASC	Masc	13.30	355	*e*P	P	00 33 34.2	-1.7
RCC	Rio Carpintero	13.32	349	*e*P	P	00 33 35.2	-1.0
MARVS	Santiago de Cu	13.37	348	*e*P	P	00 33 36.0	-0.7

QMBU	**Quimbuelo**	**13.39**	**353**	*e*P	**P**	**00 33 35.5**	**-1.4**
PILO	**Pilon**	**13.66**	**342**	*e*P	**P**	**00 33 38.7**	**-1.3**
PINC	**Pinares de May**	**13.82**	**349**	*e*P	**P**	**00 33 41.5**	**-0.2**
YAR	**Yar**	**13.82**	**347**	*e*P	**P**	**00 33 41.4**	**-0.4**
VILB	**Vilhena**	**23.45**	**147**		**pP**	**00 35 56.5**	**+2.0**
VILB				IAmb	IAmb	00 35 56.8	
	comp=Z,18nm,1.1s						
LPAZ	**La Paz**	**23.49**	**168**		pP	00 35 57.6	+1.9
LPAZ	**La Paz**	**23.49**	**168**	P	**P**	**00 35 25.1**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=292,slow=3.3,SNR=1.7						
LPAZ				pP	**pP**	**00 35 55.9**	**+0.3**
	comp=Z,3.6nm,0.7s,baz=356,slow=12,SNR=7.6						
	comp=Z,0.5nm,0.4s						
PB01	**IPOC Station P**	**27.93**	**173**	P	**pP**	**00 36 36.3**	**-2.0**
PB01				IAmb	IAmb	00 36 39.4	
	comp=Z,4.5nm,0.9s						
X48A	**Hartselle**	**30.36**	**337**	P	**P**	**00 36 27.4**	**+1.3**
X48A				IAmb	IAmb	00 36 28.1	
	comp=Z,4.8nm,0.6s						
V48A	**Smith Brothers**	**31.41**	**338**	P	**P**	**00 36 37.0**	**+1.6**
V48A				IAmb	IAmb	00 36 37.9	
	comp=Z,12nm,0.9s						
CLTN	**Cedars of Leba**	**31.55**	**339**	P	**P**	**00 36 38.0**	**+1.4**
WVT	**Waverly**	**32.14**	**337**	P	**P**	**00 36 42.7**	**+1.0**
WVT				IAmb	IAmb	00 36 43.0	
	comp=Z,5.2nm,0.7s						
CGM3	**Cape Girardeau**	**33.87**	**336**	P	**P**	**00 36 57.5**	**+0.8**
CGM3				IAmb	IAmb	00 36 57.8	
	comp=Z,6.7nm,0.6s						
T42A	**Van Buren**	**34.25**	**334**	P	**P**	**00 37 00.7**	**+0.7**
T42A				IAmb	IAmb	00 37 01.5	
	comp=Z,4.8nm,0.6s						
FVM	**French Village**	**34.77**	**336**	P	**P**	**00 37 04.7**	**+0.2**
CCM	**Cathedral Cave**	**35.18**	**335**	P	**P**	**00 37 08.7**	**+0.7**
SFIN	**Lafayette**	**35.68**	**341**	P	**P**	**00 37 12.9**	**+0.7**
WVNY	**West Valley, N**	**35.76**	**353**	P	**P**	**00 37 13.9**	**+1.0**
WVNY				IAmb	IAmb	00 37 42.3	
	comp=Z,7.7nm,1.1s						
TXAR	**Lajitas Array**	**36.49**	**312**	P	**P**	**00 37 20.1**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=126,slow=9.4,SNR=19						
	comp=Z,0.5nm,0.4s						
WMOK	**Wichita Mounta**	**36.50**	**323**	P	**P**	**00 37 19.1**	**-0.1**
WMOK				IAmb	IAmb	00 37 19.6	
	comp=Z,3.1nm,0.8s						
J57A	**Williamstown**	**36.52**	**356**		**P**	**00 37 18.9**	**-0.3**
J57A				IAmb	IAmb	00 37 20.9	
	comp=Z,5.5nm,0.6s						
P38A	**Dawn**	**37.47**	**334**		**P**	**00 37 27.3**	**-0.1**
EMMW	**East Machias**	**38.04**	**6**	P	**P**	**00 37 32.4**	**+0.3**
JFWS	**Jewell Farm**	**38.99**	**340**	P	**P**	**00 37 40.1**	**0.0**
MNTX	**Cornudas Mount**	**39.00**	**314**		**P**	**00 37 41.3**	**+0.9**
ANMO	**Albuquerque**	**41.53**	**317**	LR	LR	00 59 12.0	
	comp=Z,63nm,20.0s,baz=52,slow=41						
SDCO	**Great Sand Dun**	**42.57**	**321**	P	**P**	**00 38 11.4**	**+1.6**
K30B	**Basset**	**42.69**	**331**	P	**P**	**00 38 10.7**	**+0.2**
EYMN	**Ely**	**43.87**	**342**	P	**P**	**00 38 19.9**	**+0.1**
PV02	**Paradox Valley**	**44.90**	**319**	P	**P**	**00 38 29.8**	**+1.4**
PV02				IAmb	IAmb	00 38 30.4	
	comp=Z,4.4nm,0.7s						
PV13	**Radium Mtn., P**	**44.92**	**319**	IAmb	IAmb	00 38 30.6	
	comp=Z,3.9nm,0.7s						
PV07	**Paradox Valley**	**44.97**	**320**	P	**P**	**00 38 30.3**	**+1.3**
PV03	**Paradox Valley**	**45.00**	**319**	P	**P**	**00 38 30.5**	**+1.4**
PV12	**Saucer Basin,**	**45.00**	**319**	P	**P**	**00 38 31.4**	**+2.2**
PV12				IAmb	IAmb	00 38 42.8	
	comp=Z,12nm,1.4s						
PV18	**Skein Mesa, Pa**	**45.03**	**319**	P	**P**	**00 38 31.1**	**+1.7**
PV18				IAmb	IAmb	00 38 33.2	
	comp=Z,10nm,1.3s						
PV05	**Paradox Valley**	**45.06**	**319**	P	**P**	**00 38 30.2**	**+0.5**
PV04	**Paradox Valley**	**45.11**	**320**	P	**P**	**00 38 31.6**	**+1.6**
HMU	**Henry Mountain**	**46.06**	**318**	IAmb	IAmb	00 38 40.3	
	comp=Z,9.5nm,1.2s						
EPLO	**Experimental L**	**46.09**	**341**	P	**P**	**00 38 37.6**	**+0.3**
EPLO				IAmb	IAmb	00 39 08.0	
	comp=Z,12nm,1.3s						
KNB	**Kanab**	**47.00**	**316**		**P**	**00 38 46.7**	**+1.9**
ULM	**Lac du Bonnet**	**47.29**	**340**	P	**P**	**00 38 46.1**	**-0.4**
ULM				IAmb	IAmb	00 38 47.3	
	comp=Z,5.2nm,0.8s						
ULM	**Lac du Bonnet**	**47.29**	**340**	P	**P**	**00 38 46.1**	**-0.4**
	comp=Z,4.3nm,0.4s,baz=149,slow=8.1,SNR=16						
	comp=Z,4.3nm,0.4s						
PLCA	**Paso Flores**	**47.39**	**177**	P	**P**	**00 38 46.5**	**-1.0**
	comp=Z,2.5nm,1.1s,baz=82,slow=4.0,SNR=2.9						
	comp=Z,2.5nm,1.1s						
PDAR	**Pinedale Array**	**48.09**	**324**	P	**P**	**00 38 53.6**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=125,slow=8.9,SNR=8.6						
	comp=Z,0.8nm,0.5s						
SCHQ	**Schefferville**	**48.12**	**5**	P	**P**	**00 38 52.2**	**-0.6**
	comp=Z,5.0nm,0.8s,baz=195,slow=5.7,SNR=5.2						
	comp=Z,5.0nm,0.8s						
BGU	**Big Grassy Mou**	**49.16**	**320**	IAmb	IAmb	00 39 02.6	
	comp=Z,3.3nm,0.7s						
TPAW	**Teton Pass**	**49.34**	**324**	P	**P**	**00 39 03.9**	**+1.1**
TPAW				IAmb	IAmb	00 39 04.9	
	comp=Z,5.4nm,1.2s						
RLMT	**Red Lodge**	**49.39**	**327**	P	**P**	**00 39 03.9**	**+0.9**
PINE	**Pine Mountain**	**55.67**	**319**	IAmb	IAmb	00 39 51.6	
	comp=Z,5.4nm,0.9s						
BLKN	**Baker Lake**	**59.67**	**349**	P	**P**	**00 40 16.2**	**-0.3**
BLKN				IAmb	IAmb	00 40 16.7	
	comp=Z,4.6nm,0.7s						
YKA	**Yellowknife Ar**	**63.27**	**340**	P	**P**	**00 40 40.6**	**0.0**
	comp=Z,1.7nm,0.6s,baz=138,slow=5.8,SNR=20						
	comp=Z,1.7nm,0.6s						
SUMG	**Summit**	**68.96**	**11**		**P**	**00 41 17.8**	**+0.4**
SUMG				IAmb	IAmb	00 41 18.3	
	comp=Z,5.1nm,0.7s						
ILAR	**Eielson Array**	**76.97**	**335**	P	**P**	**00 42 04.0**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=99,slow=4.2,SNR=4.7						
	comp=Z,0.4nm,0.7s						
ARCES	**ARCESS Array B**	**86.64**	**20**	P	**P**	**00 42 54.8**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=298,slow=2.5,SNR=2.4						
	comp=Z,1.2nm,0.8s						
ASAR	**Alice Springs**	**149.16**	**234**	PKPbc	**PKPbc**	**00 49 58.8**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=118,slow=3.8,SNR=4.1						
ASAR				pPKPbc	**pPKPbc**	**00 50 41.0**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=125,slow=4.3,SNR=1.9						
WRA	**Warramunga Arr**	**150.39**	**241**	PKPbc	**PKPbc**	**00 50 01.6**	**-1.3**
	comp=Z,0.6nm,0.5s,baz=110,slow=2.3,SNR=7.3						
WRA				pPKPbc	**pPKPbc**	**00 50 44.5**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=107,slow=2.8,SNR=2.4						

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*SDD **24** 00:46:42.4±2.6, 19°.57N×70°.13W, h20km±22km, MD3.3, ML2.5, MW3.1*

*OSPL **24** 00:46:48.7±4.5, 19°.50N×70°.42W, h45km±32km, ML2.3*

ISC 24 00:46:42.6±1.0**, 19°.53N**±0°.04×**70°.13W**±0°.02**, h15**km±8km**,**
n22, σ2^{s}01/35**, 21C, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CADR	**Cabrera**	**0.23**	**51**	⇑*e*Pg	**Pg**	**00 46 47.9**	**+0.3**
CADR				IAML		00 46 55.1	
	comp=N,378nm,0.2s						
LONA1	**Toro Cenizo, N**	**0.28**	**120**	*i* P	**Pg**	**00 46 48.4**	**-0.3**
LONA1				*e*S	**Sg**	**00 46 53.6**	**+0.9**
LONA1				IAML		00 46 55.6	
	comp=Z,784nm,0.8s						
NADR	**Nagua**	**0.31**	**124**	⇑*e*Pg	**Pg**	**00 46 48.4**	**-0.6**
NADR				⇑*e*Sg	**Sg**	**00 46 54.3**	**+1.0**
NADR				IAML		00 46 54.7	
	comp=N,926nm,0.6s						
DR08	**Loma La Naviza**	**0.57**	**170**	⇑*e*Sg	**Sg**	**00 46 59.8**	**-1.6**
DR08				IAML		00 47 02.4	
	comp=N,2µm,0.1s						
SC01	**Santiago de lo**	**0.58**	**260**	⇑*e*Pg	**Pg**	**00 46 52.2**	**-1.8**
SC01				IAML		00 47 08.2	
	comp=N,143nm,0.2s						
SC01	**Santiago de lo**	**0.58**	**260**	*i* P	**Pn**	**00 46 57.1**	**+0.8**
SC01				*e*S	**Sb**	**00 47 03.0**	**+0.6**
SC01				IAML		00 47 10.5	
	comp=Z,130nm,0.5s						
ABDR	**Alto Bandera**	**0.85**	**214**	⇑*e*Pg	**Pg**	**00 46 56.7**	**-2.5**
ABDR				⇑*e*Sg	**Sb**	**00 47 11.5**	**+0.8**
ABDR				IAML		00 47 41.2	
	comp=N,95nm,0.2s						
SMDR	**Samana, DR**	**0.92**	**105**	⇑*e*Pg	**Pb**	**00 46 58.2**	**-2.0**
SMDR				IAML		00 47 15.8	
	comp=N,46nm,0.6s						
BANI	**BANI**	**1.15**	**191**	⇑*e*Pg	**Pb**	**00 47 02.0**	**-2.2**
BANI				IAML		00 47 19.1	
	comp=N,211nm,0.1s						
MIDR	**Miches**	**1.15**	**118**	⇑*e*Pg	**Pn**	**00 47 02.4**	**-1.8**
MIDR				⇑*e*Sg	**Sb**	**00 47 19.0**	**0.0**
MIDR				IAML		00 47 19.8	
	comp=N,45nm,0.1s						
SDDR	**Presa de Saban**	**1.22**	**244**	⇑*e*Pg	**Pb**	**00 47 05.5**	**0.0**
SDDR				⇑*e*Sg	**Sb**	**00 47 20.3**	**-0.8**
SDDR				IAML		00 47 22.4	
	comp=N,38nm,0.5s						
SDDR	**Presa de Saban**	**1.22**	**244**	*i* P	**Pn**	**00 47 03.7**	**-1.6**
SDDR				*e*S	**Sb**	**00 47 16.0**	**-5.1**
SDDR				IAML		00 47 21.8	
	comp=Z,26nm,0.5s						
REDR	**Restauracion**	**1.25**	**254**	⇑*e*Pg	**Pg**	**00 47 08.0**	**+1.3**
REDR				⇑*e*Sg	**Sg**	**00 47 28.0**	**+5.0**
REDR				IAML		00 47 30.1	
	comp=N,126nm,0.1s						
MCDR	**Montecristi**	**1.49**	**284**	⇑*e*Pg	**Pn**	**00 47 07.9**	**-0.9**
MCDR				IAML		00 47 38.8	
	comp=N,56nm,0.3s						
HIDR	**Higuey Centro**	**1.62**	**125**	⇑*e*Pg	**Pn**	**00 47 11.5**	**+0.8**
HIDR				⇑*e*Sg	**Sn**	**00 47 33.0**	**+1.6**
HIDR				IAML		00 47 38.8	
	comp=N,96nm,0.2s						
LODU1	**El Espartillar**	**1.73**	**228**	*i* P	**Pn**	**00 47 12.9**	**+0.8**
LODU1				IAML		00 47 36.8	
	comp=Z,35nm,0.6s						
PODR	**Polo**	**1.74**	**219**	⇑*e*Pg	**Pn**	**00 47 13.3**	**+0.8**
PODR				⇑*e*Sg	**Sb**	**00 47 37.2**	**+1.1**
PODR				IAML		00 47 37.8	
	comp=N,38nm,0.5s						
PODR	**Polo**	**1.74**	**219**	*i* P	**Pn**	**00 47 12.7**	**+0.2**
PODR				*e*S	**Sb**	**00 47 35.8**	**-0.3**
JIDR	**Jimani**	**1.93**	**238**	⇑*e*Pg	**Pn**	**00 47 16.1**	**+1.2**
LOBH	**Bahia de las A**	**2.19**	**221**	*i* P	**Pn**	**00 47 20.3**	**+1.8**
GRTK	**Grand Turk**	**2.19**	**335**	*i* P	**Pb**	**00 47 21.2**	**-0.8**
GRTK				*e*S	**Sn**	**00 47 43.2**	**-2.1**
GRTK				IAML		00 47 47.8	
	comp=Z,42nm,1.1s						
CRPR	**Cabo Rojo, PR**	**3.23**	**117**	*i* P	**Pb**	**00 47 39.2**	**-0.5**
CRPR				*e*S	**Sn**	**00 48 16.0**	**+4.9**
CRPR				IAML		00 48 18.8	
	comp=Z,29nm,1.1s						

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*MEX **24** 00:55:12.7±0.8, 14°.71N×92°.69W, h71km±10km, MD3.8*

*GCG **24** 00:55:13.2±1.1, 14°.68N×92°.58W, h58km±11km, MD3.8, ML3.4, MW3.5*

ISC 24 00:55:08.8±1.9**, 14°.50N**±0°.09×**92°.83W**±0°.07**, h56**km±25km**,**
n16, σ1^{s}83/22**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**0.68**	**53**	*i* P	**Pn**	**00 55 23.6**	**+1.0**
THIG				*e*S	**Sn**	**00 55 32.9**	**+0.2**
THIG		**0.68**	**53**	*i* P	**Pn**	**00 55 23.3**	**+0.7**
SMCA	**Catarina**	**0.81**	**64**	*e*P	**Pn**	**00 55 25.2**	**+0.9**
SMCA				*i* P		00 55 25.4	
SMCA				*i* S	**Sn**	**00 55 35.3**	**-0.4**
SMCA				IAML		00 55 36.4	
	comp=E,1µm,0.1s						
PATR	**El Naranjo**	**0.84**	**43**	*i* P	**Pn**	**00 55 25.0**	**+0.1**
PATR				*e*S	**Sn**	**00 55 34.9**	**-1.9**
PAVE	**Pavencul**	**0.94**	**42**	*i* P	**Pn**	**00 55 26.4**	**+0.2**
PAVE				*e*S	**Sn**	**00 55 37.4**	**-1.4**
RTAL	**Retalhuleu**	**1.10**	**88**	*i* P	**Pn**	**00 55 30.0**	**+1.9**
RTAL				*e*S	**Sn**	**00 55 42.8**	**+0.4**
PCIG		**1.26**	**343**	*e*P	**Pn**	**00 55 31.5**	**+1.4**
PCIG				*e*S	**Sn**	**00 55 45.9**	**-0.2**
STG8	**El Palmar, Qui**	**1.44**	**92**	*e*P	Pn	00 55 30.8	-2.0
STG8				IAML		00 55 47.0	
	comp=E,1µm,0.1s						
STG0	**El Palmar, Qui**	**1.45**	**93**	*e*P	Pn	00 55 30.9	-2.0
STG0				*i* S	**Sn**	**00 55 45.5**	**-5.4**
STG0				IAML		00 55 47.8	
	comp=E,2µm,0.2s						
HUEH	**Huehuetenango**	**1.52**	**57**	*i* P	**Pn**	**00 55 35.7**	**+1.7**
HUEH				*e*S	**Sn**	**00 55 53.6**	**+0.8**
CCIG	**Comitan**	**1.90**	**21**	*e*P	**Pn**	**00 55 40.8**	**+1.8**
CCIG				*e*S	**Sn**	**00 55 59.6**	**-2.3**
CCIG	**Comitan**	**1.90**	**21**	*i* P	**Pn**	**00 55 40.8**	**+1.8**
CCIG				IAML		00 56 08.0	
	comp=N,188nm,0.3s						
FG16	**Alotenango, Sa**	**2.26**	**95**	*i* P	Pn	00 55 41.3	-2.7
FG16				*i* S	Sn	00 56 02.8	-8.0
FG16				IAML		00 56 09.3	
	comp=N,876nm,0.2s						
TGIG		**2.28**	**353**	*e*P	**Pn**	**00 55 44.4**	**+0.2**
TGIG				*e*S	**Sn**	**00 56 09.7**	**-1.5**
TGIG		**2.28**	**353**	IAML		00 56 21.6	
	comp=E,68nm,0.6s						
HUIG	**Huatulco**	**3.41**	**292**	*e*P	**Pn**	**00 55 60.0**	**+0.5**

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*IDC **24** 00:55:23.6±0.6, 1°.47S×120°.40E, h0km, mb4.3/12, mbtmp4.3/14, ML3.5/2, MS3.4/3, Error ellipse: s-maj=33.4km s-min=12.1km az=70.0*

*NEIC **24** 00:55:26.2±2.0, 1°.51S±0°.03×120°.36E±0°.07, h10km±1km, mb4.5/18, Error ellipse: s-maj=12.3km s-min=5.2km az=263.0*

*DJA **24** 00:55:26.4±0.2, 1°S±2°×12°0E±°, h10km, M4.8/14, mB5.0/1, mb5.1/2, MLv4.7/14, Mw(mB)4.4/1*

ISC 24 00:55:25.7±0.4**, 1°.52S**±0°.03×**120°.28E**±0°.04**, h10**km**, n68,**
σ1^{s}50/74**, mb4.5**/30**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCI	**Palu**	**0.76**	**324**	P	**Pg**	**00 55 39.0**	**-1.3**
PCI				S	**Sg**	**00 55 48.0**	**-2.2**
APSI	**Ampana**	**1.50**	**66**	P	**Pb**	**00 55 52.5**	**-1.1**
TTSI	**Tana Toraja**	**1.58**	**197**	P	**Pn**	**00 55 53.5**	**-0.3**
TTSI				S	**Sn**	**00 56 16.1**	**+1.8**
MPSI	**Mapaga**	**1.89**	**348**	P	**Pn**	**00 55 56.2**	**-1.8**
SPSI	**Sidrap Palu**	**2.48**	**192**	P	**Pn**	**00 56 07.9**	**+1.8**
LUWI	**Luwuk**	**2.54**	**79**		**Pn**	**00 56 07.6**	**+0.7**
LUWI	**Luwuk**	**2.54**	**79**	P	**Pn**	**00 56 08.1**	**+1.2**
LUWI				S	**Sb**	**00 56 41.5**	**-1.2**
MRSI	**Marisa**	**2.59**	**40**	P	**Pn**	**00 56 07.8**	**+0.1**
TOLI2	**Tolitoli**	**2.66**	**11**		**Pn**	**00 56 09.2**	**+0.5**
TOLI2				Sn	**Sn**	**00 56 42.9**	**+1.9**
BNSI	**Bone**	**2.86**	**183**	P	**Pb**	**00 56 15.2**	**-1.7**
BKB	**Balikpapan**	**3.39**	**274**	P	**Pn**	**00 56 18.1**	**-0.6**
KAPI	**Kappang**	**3.51**	**189**		**Pn**	**00 56 22.6**	**+2.3**
KAPI	**Kappang**	**3.51**	**189**	Pn	**Pn**	**00 56 22.4**	**+2.1**
	16nm,0.3s,baz=322,slow=7.5,SNR=36						
KAPI				Sn	**Sn**	**00 57 05.2**	**+3.3**
	8.3nm,0.3s,baz=144,slow=12,SNR=5.1						
KAPI				LR	LR	00 57 44.2	
	comp=Z,421nm,19.8s,baz=350,slow=39						
	40nm,0.4s						
KMSI	**Cibinong**	**4.25**	**61**	P	**Pn**	**00 56 30.7**	**+0.2**
BBSI	**Bau Bau**	**4.55**	**150**	P	**Pn**	**00 56 37.0**	**+2.3**
BSSI	**Bau Bau, Buton**	**4.59**	**177**	P	**Pn**	**00 56 36.9**	**+1.6**
MYLDM	**Lahad Datu**	**6.89**	**345**		**Pn**	**00 57 09.5**	**+2.7**
KKM	**Kota Kinabalu**	**8.54**	**332**		**Pn**	**00 57 31.4**	**+1.7**
KKM					**Sn**	**00 59 06.9**	**+0.7**
BATI	**Baumata**	**9.26**	**159**	LR	LR	01 01 28.1	
	comp=Z,422nm,20.5s,baz=160,slow=39						
DAV	**Davao City (W)**	**10.04**	**32**	LR	LR	01 01 51.3	
	comp=Z,203nm,21.1s,baz=153,slow=39						
FITZ	**Fitzroy Crossi**	**17.29**	**163**	P	**Pn**	**00 59 27.8**	**+0.4**
	baz=33,slow=5.3,SNR=3.3						
	5.1nm,1.1s						
PSA00	**Pilbara Seismi**	**19.93**	**181**	P	**P**	**00 59 57.9**	**0.0**
IPM	**Ipoh**	**20.14**	**287**	P	**P**	**01 00 01.6**	**+1.4**
IPM				IAmb	IAmb	01 00 06.4	
	comp=Z,15nm,0.8s						
WRA	**Warramunga Arr**	**22.90**	**144**	P	**P**	**01 00 28.4**	**-1.5**
WRA	**Warramunga Arr**	**22.90**	**144**	P	**P**	**01 00 28.1**	**-1.7**
	comp=Z,13nm,0.8s,baz=322,slow=11,SNR=36						
	comp=Z,13nm,0.8s						
WR8	**Warramunga Arr**	**23.00**	**144**		**P**	**01 00 29.1**	**-1.8**
WR8				IAmb	IAmb	01 00 33.0	
	comp=Z,26nm,1.1s						
ASAR	**Alice Springs**	**25.67**	**150**	P	**P**	**01 00 55.2**	**-0.8**
	comp=Z,2.1nm,0.7s,baz=327,slow=8.6,SNR=12						
ASAR				PcP	**PcP**	**01 04 25.9**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=335,slow=2.0,SNR=5.9						
	comp=Z,2.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**28.89**	**314**	P	**P**	**01 01 25.4**	**+0.4**
	comp=Z,1.5nm,0.5s,baz=136,slow=7.0,SNR=8.1						
	comp=Z,1.5nm,0.5s						
PZH	**PanZhiHua**	**33.11**	**329**	P	**P**	**01 02 03.8**	**+1.6**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2	**Nanjing**	**33.42**	**358**	*e*P	**P**	**01 02 06.8**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,16nm,0.8s						
STKA	**Stephens Creek**	**36.28**	**148**	P	**P**	**01 02 28.6**	**-0.8**
	comp=Z,7.4nm,0.7s,baz=335,slow=9.1,SNR=8.4						
	comp=Z,7.4nm,0.7s						
LYN	**LuoYang**	**36.62**	**349**	P	**P**	**01 02 35.5**	**+3.2**
LYN				pmax	pmax		
	comp=Z,20nm,1.1s						
TIA	**Tai'an**	**37.66**	**356**	P	**P**	**01 02 45.0**	**+3.9**
TIA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSAR	**Wonju Array Be**	**39.41**	**10**	P	**P**	**01 02 56.5**	**+0.7**
KSRS	**Korea Array**	**39.42**	**10**	P	**P**	**01 02 55.9**	**0.0**
	comp=Z,1.1nm,0.6s,baz=191,slow=9.1,SNR=4.6						
	comp=Z,1.1nm,0.6s						
KS19	**Wonju Array Si**	**39.46**	**10**	P	**P**	**01 02 56.2**	**-0.1**
HHC	**Hu-ho-hao-te**	**42.91**	**350**	*e*P	**P**	**01 03 28.0**	**+3.3**
HHC				pmax	pmax		
	comp=Z,16nm,0.7s						
EVN	**Everest**	**43.50**	**315**		**P**	**01 03 30.5**	**+0.2**
EVN				IAmb	IAmb	01 03 36.2	
	comp=Z,16nm,1.3s						
GTA	**Gaotai**	**44.86**	**337**	*e*P	**P**	**01 03 41.9**	**+1.5**
GTA				pP	sP	01 03 47.5	+2.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
XLT	**XiLinHaoTe**	**45.38**	**356**	*e*P	**P**	**01 03 47.9**	**+3.5**
XLT				sP	sP	01 03 55.1	+5.8
XLT				pmax	pmax		
	comp=Z,8.0nm,0.6s						
USRK	**Ussuriysk Ar.**	**46.71**	**12**	P	**P**	**01 03 54.4**	**-0.4**
SONM	**Songino Array**	**50.63**	**348**	P	**P**	**01 04 25.2**	**+0.2**
	comp=Z,2.2nm,0.8s,baz=170,slow=7.7,SNR=10.0						
	comp=Z,2.2nm,0.8s						
WMQ	**Urumqi**	**53.74**	**331**	*e*P	**P**	**01 04 49.0**	**+0.8**
WMQ				pmax	pmax		
	comp=Z,20nm,0.9s						
WMQ				LR	LR		
	comp=N,1µm,16.7s						
WMQ				LR	LR		
	comp=E,1µm,23.3s						
WMQ				LR	LR		
	comp=Z,2µm,21.1s						
KSH	**Kashi**	**57.55**	**320**	P	**P**	**01 05 16.3**	**+0.6**
KSH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MKAR	**Makanchi Array**	**58.52**	**330**	P	**P**	**01 05 22.3**	**-0.1**
MKAR	**Makanchi Array**	**58.52**	**330**	P	**P**	**01 05 22.1**	**-0.3**
	comp=Z,5.3nm,0.8s,baz=131,slow=7.9,SNR=28						
	comp=Z,5.3nm,0.8s						
NRN	**Naryn**	**58.62**	**322**	P	**P**	**01 05 23.6**	**+0.1**
MAKZ	**Makanchi**	**58.69**	**330**		**P**	**01 05 23.9**	**+0.4**
MAKZ				IAmb	IAmb	01 05 26.0	
	comp=Z,4.8nm,0.9s						
BOOM	**Boomskoye usch**	**59.27**	**323**	P	**P**	**01 05 27.3**	**-0.5**
BOOM				IAmb	IAmb	01 05 30.1	
	comp=Z,5.1nm,1.1s						
KBL	**Kabul**	**59.88**	**312**	P	**P**	**01 05 30.9**	**-1.4**
AAK	**Ala-Archa**	**60.22**	**322**	P	**P**	**01 05 33.0**	**-1.4**
AAK				IAmb	IAmb	01 05 37.7	
	comp=Z,2.6nm,0.6s						
ZAA0	**Zalesovo Array**	**62.61**	**337**	P	**P**	**01 05 48.4**	**-1.7**
ZAA0				IAmb	IAmb	01 05 52.1	
	comp=Z,2.7nm,0.8s						
ZALV	**Zalesovo Beam**	**62.61**	**337**	P	**P**	**01 05 48.7**	**-1.4**
ZALV	**Zalesovo Beam**	**62.61**	**337**	P	**P**	**01 05 48.8**	**-1.3**
	comp=Z,3.5nm,0.9s,baz=123,slow=5.5,SNR=10						
	comp=Z,3.5nm,0.9s						
PEA0B	**Petropavlovsk-**	**62.77**	**24**	P	**P**	**01 05 50.8**	**-0.3**
PETK	**Petropavlovsk-**	**62.77**	**24**	P	**P**	**01 05 50.6**	**-0.6**
PETK	**Petropavlovsk-**	**62.77**	**24**	P	**P**	**01 05 49.5**	**-1.7**
	comp=Z,2.9nm,0.9s,baz=207,slow=3.0,SNR=6.3						
	comp=Z,2.9nm,0.9s						
KK31	**Karatay Array**	**62.94**	**321**	P	**P**	**01 05 52.2**	**-0.4**
KKAR	**Karatay Array**	**62.94**	**321**	P	**P**	**01 05 52.0**	**-0.5**
KURBB	**Kurchatov Arra**	**62.95**	**332**	P	**P**	**01 05 51.3**	**-1.1**
	comp=Z,1.3nm,0.5s,baz=132,slow=6.3,SNR=8.8						
	comp=Z,1.3nm,0.5s						
KURK	**Kurchatov**	**62.97**	**332**	P	**P**	**01 05 51.8**	**-0.7**
BVAR	**Borovoye Array**	**68.41**	**330**	P	**P**	**01 06 26.4**	**-1.2**
	comp=Z,2.0nm,0.7s,baz=126,slow=9.3,SNR=7.1						
	comp=Z,2.0nm,0.7s						
AB31	**Akbulak array**	**72.29**	**323**		**P**	**01 06 50.5**	**-0.9**
AB31				IAmb	IAmb	01 06 57.3	
	comp=Z,6.7nm,1.5s						
ABKAR	**Akbulak array**	**72.29**	**323**		**P**	**01 06 50.6**	**-0.8**
ABKAR				IAmb	IAmb	01 06 57.3	
	comp=Z,6.7nm,1.5s						
TIXI	**Tiksi**	**73.26**	**3**	P	**P**	**01 06 56.3**	**-0.4**
TIXI				IAmb	IAmb	01 06 59.7	
	comp=Z,5.2nm,1.1s						
QSPA	**South Pole Qui**	**88.42**	**180**	P	**P**	**01 08 16.5**	**-1.4**
	comp=Z,3.2nm,1.0s,baz=282,slow=2.0,SNR=12						
	comp=Z,3.2nm,1.0s						
TXAR	**Lajitas Array**	**129.89**	**52**	PKP	**PKPdf**	**01 14 36.1**	**-0.3**
	comp=Z,0.2nm,0.7s,baz=101,slow=1.3,SNR=3.8						
LPAZ	**La Paz**	**160.45**	**155**	PKP	**PKPdf**	**01 15 27.1**	**-0.5**
	comp=Z,1.0nm,0.9s,baz=175,slow=0.8,SNR=4.7						
LPAZ				PKPab	**PKPab**	**01 16 09.1**	**+0.8**
	comp=Z,0.8nm,0.8s,baz=156,slow=2.3,SNR=4.6						

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*IDC **24** 01:05:24.0±0.3, 2°.72S×138°.58E, h0km, mb5.4/29, mbtmp5.4/37, ML5.1/7, MS6.0/8, Error ellipse: s-maj=10.9km s-min=9.2km az=77.0*

*BJI **24** 01:05:24.2, 2°.80S×138°.70E, h20km, mB6.3/81, mb5.7/89, Ms6.2/99, Ms7 6.1/99*

*MOS **24** 01:05:27.6±1.1, 2°.71S×138°.53E, h34km, mb5.9/60, MS5.9/45, Error ellipse: s-maj=7.6km s-min=4.3km az=112.6*

*NEIC **24** 01:05:28.7, 2°.79S×138°.53E, h21km*

*NEIC **24** 01:05:28.8, 2°.80S×138°.54E, h24km*

*NEIC **24** 01:05:28.8, 2°.80S×138°.44E, h24km, Moment Tensor Solution. Duration: 5^{s}3 Moment tensor: Scale 10^{18}Nm; M$_{rr}$1.95; M$_{\theta\theta}$-1.26; M$_{\phi\phi}$-0.69; M$_{r\theta}$-0.07; M$_{\theta\phi}$0.88; M$_{\phi r}$0.22; Fault plane solution: M$_{0}$1.94000×10^{18} NP1: ϕ_s122.11000°, δ42.35000°, λ84.12000°. NP2: ϕ_s310.04000°, δ47.92000°, λ95.33000°. Principal axes: T 1.9719, Plg85.0000°, Azm271.0000°; N -0.0654, Plg4.0000°, Azm126.0000°; P -1.9065, Plg3.0000°, Azm36.0000°;*

*IPGP **24** 01:05:28.0, 2°.86S×138°.49E, h26km, Mw6.1, Fault plane solution: NP1: ϕ_s312.00000°, δ38.00000°, λ95.00000°. NP2: ϕ_s126.00000°, δ52.00000°, λ86.00000°.*

*DJA **24** 01:05:28.3±0.4, 3°S±2°×13°9E±°, h25km±3km, M6.1/121, mB6.5/109, mb5.7/121, MLv6.1/11, Mw6.1/8, Mw(mB)6.2/109, MwMwp5.9/103, Mwp6.0/103*

*ISC-PP **24** 01:05:29, 2°.78S×138°.57E, h32km, Mwppsm6.4, Moment Tensor Solution. s48 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.31±.13; M$_{\theta\theta}$-0.58±.15; M$_{\phi\phi}$0.29±.09; M$_{r\theta}$-0.02±.14; M$_{\theta\phi}$-0.21±.12; M$_{\phi r}$0.44±.17; Fault plane solution: M$_{0}$5.69000×10^{18} NP1: ϕ_s152.00000°, δ69.30000°, λ152.00000°. NP2: ϕ_s252.60000°, δ63.90000°, λ23.20000°.*

*NEIC **24** 01:05:29.5±2.2, 2°.78S±0°.07×138°.57E±0°.05, h28km±1km, mb5.9/386, Ms_20 6.3/694, Mwb6.0/82, Mww6.1/41 Error ellipse: s-maj=12.6km s-min=8.5km az=186.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$1.16; M$_{\theta\theta}$-0.91; M$_{\phi\phi}$-0.25; M$_{r\theta}$0.29; M$_{\theta\phi}$0.72; M$_{\phi r}$-0.29; Fault plane solution: M$_{0}$1.34000×10^{18} NP1: ϕ_s297.53000°, δ36.52000°, λ82.24000°. NP2: ϕ_s127.15000°, δ53.86000°, λ95.71000°. Principal axes: T 1.2275, Plg80.0000°, Azm61.0000°; N 0.2070, Plg5.0000°, Azm304.0000°; P -1.4344, Plg9.0000°, Azm213.0000°;*

*GCMT **24** 01:05:31.5±0.1, 2°.66S×138°.58E, h20km, MW6.1/175, Moment Tensor Solution. s175,c421; s175,c658; Duration: 2^{s}8 Moment tensor: Scale 10^{18}Nm; M$_{rr}$1.81±.01; M$_{\theta\theta}$-1.24±.01; M$_{\phi\phi}$-0.57±.01; M$_{r\theta}$0.01±.02; M$_{\theta\phi}$0.93±.01; M$_{\phi r}$0.04±.02; Best double couple: M$_{0}$1.85000×10^{18} NP1: ϕ_s124.00000°, δ45.00000°, λ88.00000°. NP2: ϕ_s306.00000°, δ45.00000°, λ92.00000°. Principal axes: T 1.8110, Plg89.0000°, Azm293.0000°; N 0.0760, Plg1.0000°, Azm125.0000°; P -1.8900, Plg0.0000°, Azm35.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 24 01:05:28.6±0.3**, 2°.75S**±0°.03×**138°.63E**±0°.03**, h27**km±1km**,**

24d 1h

h28km**:pP-P,n1807,**σ**1**s**75**/1599,**mb5.9**/341,**MS6.3**/453,
72C-41D,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.76	6	Pg	Pb	01 05 39.8	-3.5
SMPI				Sg	Sb	01 05 51.0	-2.3
GENI	Genyem	1.54	84	P	Pn	01 05 54.9	+0.6
GENI	Genyem	1.54	84	P	Pn	01 05 53.9	-0.4
GENI	Genyem	1.54	84	⇓P	Pn	01 05 53.3	-1.0
JAY	Jayapura	2.09	84	Pn	Pn	01 06 00.4	-1.4
	98nm,0.3s,baz=253,slow=8.7,SNR=114						
JAY				Lg	Lg	01 06 33.5	
	508nm,0.3s,baz=109,slow=22,SNR=8.5						
	1µm,0.5s						
JAY	Jayapura	2.09	84	P	Pn	01 06 00.5	-1.4
SRPI	Serui, Papua	2.54	290	P	Pn	01 06 07.8	-0.3
BAKI	Biak	2.96	302	P	Pn	01 06 14.7	+0.9
RKPI	Ransiki, Papua	4.62	285	P	Pn	01 06 36.2	-0.4
KMPI	Kaimana, Papua	5.00	259	P	Pn	01 06 43.4	+1.5
MMPI	Merauke	5.94	163	P	Pn	01 06 57.0	+2.2
FAKI	Fak Fak	6.38	268		Pn	01 07 02.1	+1.2
FAKI	Fak Fak	6.38	268	P	Pn	01 07 02.7	+1.9
FAKI	Fak Fak	6.38	268	P	Pn	01 07 02.0	+1.2
	11nm31µm1µm,0.7s						
FAKI	Fak Fak	6.38	268	⇓P	Pn	01 07 01.1	+0.2
SWI	Sorong	7.60	284	P	Pn	01 07 18.0	+0.3
	3.1nm137µm16µm830nm,0.6s						
MANU	Manus Island	8.76	86	Pn	Pn	01 07 37.5	+4.0
MANU	Manus Island	8.76	86	⇓P	Pn	01 07 36.4	+2.9
BNDI	Bandanaira	8.88	258	P	Pn	01 07 37.0	+1.7
BNDI	Bandanaira	8.88	258	P	Pn	01 07 35.6	+0.3
	30µm1µm,2.2s						
SAUI	Saumlaki	8.96	234	Pn	Pn	01 07 39.8	+3.5
SAUI	Saumlaki	8.96	234	P	Pn	01 07 37.7	+1.4
SAUI	Saumlaki	8.96	234	P	Pn	01 07 38.2	+1.9
SAUI	Saumlaki	8.96	234	⇓P	Pn	01 07 37.2	+0.9
MSAI	Masohi	9.71	266	P	Pn	01 07 47.7	+1.1
AAI	Ambon	10.46	265	P	Pn	01 07 57.3	+0.4
	102µm14µm719nm,1.4s						
PMG	Port Moresby	10.75	128	Pn	Pn	01 08 01.9	+1.1
PMG	Port Moresby	10.75	128	Pn	Pn	01 08 00.4	-0.5
	35nm,0.9s,baz=239,slow=13,SNR=2.5						
PMG	Port Moresby	10.75	128	LR	LR	01 13 52.2	
	comp=Z,140µm,20.7s,baz=320,slow=42						
PMG	Port Moresby	10.75	128	P	Pn	01 08 01.9	+1.1
PMG	Port Moresby	10.75	128	P	Pn	01 08 02.0	+1.1
PMG	Port Moresby	10.75	128	P	Pn	01 08 01.9	+1.1
PMG	Port Moresby	10.75	128	⇓P	Pn	01 08 04.2	+3.3
I39PW	PALAU INFRASON	11.00	338	I	I	02 09 00.0	
	baz=160,slow=316,SNR=2.7						
NLAI	Namlea	11.52	267	P	Pn	01 08 12.4	+0.9
KDU	Kakadu	11.60	211	P	Pn	01 08 12.8	+0.3
KDU	Kakadu	11.60	211	⇑P	Pn	01 08 11.6	-0.9
TNTI	Ternate	11.79	287	Pn	Pn	01 08 17.7	+2.5
TNTI	Ternate	11.79	287	P	Pn	01 08 16.2	+1.1
TNTI	Ternate	11.79	287	P	Pn	01 08 18.2	+3.1
	32µm14µm365nm,2.5s						
COEN	Coen	12.00	158	Pn	Pn	01 08 18.4	+0.4
COEN	Coen	12.00	158	P	Pn	01 08 18.5	+0.4
COEN	Coen	12.00	158	⇓P	Pn	01 08 18.6	+0.5
MTN	Manton Dam	12.47	216	Pn	Pn	01 08 23.4	-1.0
MTN	Manton Dam	12.47	216	P	Pn	01 08 24.9	+0.5
MTN	Manton Dam	12.47	216	⇑P	Pn	01 08 23.3	-1.2
SANI	Sanana	12.65	273	P	Pn	01 08 24.0	-2.8
SANI	Sanana	12.65	273	P	Pn	01 08 28.0	+1.1
SANI	Sanana	12.65	273	P	Pn	01 08 25.1	-1.8
	57µm8µm513nm,0.9s						
SANI	Sanana	12.65	273	⇓P	Pn	01 08 25.2	-1.7
RABL	Rabaul	13.58	96	Pn	Pn	01 08 41.6	+2.0
SGSI	Sangihe	14.57	296	P	Pn	01 08 54.2	+1.0
	42µm32µm668nm,2.2s						
KMSI	Cibinong	15.01	283	P	Pn	01 08 58.8	-0.3
SOEI	Soe	15.87	243	P	Pn	01 09 07.6	-2.8
SOEI	Soe	15.87	243	Pn	Pn	01 09 08.8	-1.7
SOEI	Soe	15.87	243	P	Pn	01 09 12.2	+1.8
SOEI	Soe	15.87	243	P	Pn	01 09 08.3	-2.1
SOEI	Soe	15.87	243	⇓P	Pn	01 09 08.0	-2.5
LUWI	Luwuk	15.94	276	P	Pn	01 09 07.9	-3.3
LUWI	Luwuk	15.94	276	Pn	Pn	01 09 10.4	-0.8
LUWI	Luwuk	15.94	276	P	Pn	01 09 12.3	+1.1
LUWI	Luwuk	15.94	276	P	Pn	01 09 10.1	-1.1
LUWI	Luwuk	15.94	276	⇓P	Pn	01 09 10.2	-1.0
KNRA	Kununurra	16.11	217	Pn	Pn	01 09 11.4	-1.9
KNRA				IAmb	IAmb	01 09 21.4	
	comp=Z,622nm,0.7s						
BBSI	Bau Bau	16.25	260	P	Pn	01 09 15.6	+0.5
	comp=Z,53µmcomp=Z,34µmcomp=Z,796nm,1.1s						
MTSU	Mount Surprise	16.27	160	P	P	01 09 17.5	-0.7
DAV	Davao City (W)	16.27	307	Pn	Pn	01 09 13.9	-1.5
DAV	Davao City (W)	16.27	307	Pn	Pn	01 09 15.3	-0.2
	comp=Z,22nm,0.3s,baz=75,slow=2.9,SNR=5.8						
DAV				LR	LR	01 16 35.2	
	comp=Z,30µm,18.0s,baz=114,slow=41						
	comp=Z,126nm,0.4s						
DAV	Davao City (W)	16.27	307	P	Pn	01 09 15.1	-0.4
DAV	Davao City (W)	16.27	307	P	Pn	01 09 15.0	-0.5
BATI	Baumata	16.60	243	Pn	Pn	01 09 19.0	-0.7
	comp=Z,20nm,0.3s,baz=132,slow=7.6,SNR=15						
	comp=Z,221nm,0.8s						
BATI	Baumata	16.60	243	P	Pn	01 09 17.6	-2.1
MRSI	Marisa	16.99	281	P	Pn	01 09 22.7	-1.8
	comp=Z,23µmcomp=Z,11µmcomp=Z,587nm,1.1s						
APSI	Ampana	17.07	276	P	Pn	01 09 25.4	-0.1
	comp=Z,30µmcomp=Z,1µm,1.5s						
MMRI	Maumere	17.32	250	Pn	Pn	01 09 26.9	-1.8
MMRI	Maumere	17.32	250	P	Pn	01 09 29.1	+0.5
MMRI	Maumere	17.32	250	P	Pn	01 09 27.6	-1.0
GUMO	Guam	17.38	21		P	01 09 32.0	+1.6
GUMO	Guam	17.38	21	P	Pn	01 09 28.1	-1.2
	comp=Z,15nm,0.3s,baz=179,slow=7.3,SNR=28						
GUMO				LR	LR	01 15 57.2	
	comp=Z,41µm,18.6s,baz=199,slow=36						
	comp=Z,116nm,0.4s						
GUMO	Guam	17.38	21	P	P	01 09 30.1	-0.3
GUMO	Guam	17.38	21	P	P	01 09 32.0	+1.6
GUMO				pmax	pmax		
	comp=Z,2µm,1.2s						
WB0	Warramunga Arr	17.41	193	Pn	Pn	01 09 27.6	-2.1
WB0				IAmb	IAmb	01 09 38.9	
	comp=Z,663nm,0.9s						
WR8	Warramunga Arr	17.57	193	Pn	Pn	01 09 29.4	-2.3
WRAB	Tennant Creek	17.58	193	Pn	Pn	01 09 29.3	-2.5
WRAB				IAmb	IAmb	01 09 40.3	
	comp=Z,713nm,1.1s						
WRAB	Tennant Creek	17.58	193	P	Pn	01 09 29.3	-2.5
WRAB				pmax	pmax		
	comp=Z,713nm,1.1s						
WRA	Warramunga Arr	17.59	193	Pn	Pn	01 09 27.8	-4.2
WRA	Warramunga Arr	17.59	193	P	Pn	01 09 29.6	-2.4
	comp=Z,5.2nm,0.3s,baz=13,slow=12,SNR=83						
WRA				S	Sn	01 12 39.0	-8.2
	comp=Z,73nm,0.7s,baz=11,slow=20,SNR=5.9						
WRA				LR	LR	01 17 14.3	
	comp=Z,71µm,18.6s,baz=8.5,slow=40						
	comp=Z,67nm,0.6s						
QIS	Mount Isa	17.72	177	P	Pn	01 09 33.5	-0.1
EDFI	Ende, Flores	17.87	250	P	Pn	01 09 33.9	-1.6
	comp=Z,46µmcomp=Z,13µmcomp=Z,388nm,2.0s						
TOLI2	Tolitoli	18.25	282	P	Pn	01 09 39.7	-0.4
TOLI2				IAmb	IAmb	01 09 45.9	
	comp=Z,903nm,1.3s						
TOLI2	Tolitoli	18.25	282	P	Pn	01 09 40.0	-0.1
BSSI	Bau Bau, Buton	18.39	259	P	Pn	01 09 43.4	+1.5
	comp=Z,43µmcomp=Z,34µmcomp=Z,515nm,2.1s						
BNSI	Bone	18.56	264	P	Pn	01 09 46.0	+2.1
	comp=Z,46µmcomp=Z,26µmcomp=Z,340nm,1.4s						
CTAO	Charters Tower	18.77	157	P	P	01 09 45.8	0.0
CTAO	Charters Tower	18.77	157	P	Pn	01 09 48.6	+2.2
CTAO	Charters Tower	18.77	157	P	P	01 09 45.8	0.0
CTAO				pmax	pmax		
	comp=Z,166nm,0.9s						
CTAO	Charters Tower	18.77	157	⇑P	P	01 09 45.0	-0.8
TTSI	Tana Toraja	18.79	269	P	Pn	01 09 49.2	+2.5
	comp=Z,40µmcomp=Z,40µmcomp=Z,529nm,2.0s						
SPSI	Sidrap Palu	18.87	266	P	Pn	01 09 49.0	+1.4
PCI	Palu	18.87	275	P	Pn	01 09 50.1	+2.4
	comp=Z,43µmcomp=Z,1µm,1.2s						
KAPI	Kappang	18.97	263	P	Pn	01 09 49.6	+0.8
KAPI	Kappang	18.97	263	P	P	01 09 47.9	-0.1
	comp=Z,3.7nm,0.3s,baz=23,slow=4.6,SNR=10						
	comp=Z,6.8nm,0.3s						
KAPI	Kappang	18.97	263	P	Pn	01 09 54.2	+5.4
KAPI				P	Pn	01 09 54.2	+5.4
KAPI	Kappang	18.97	263	P	Pn	01 09 48.9	0.0
KAPI	Kappang	18.97	263	P	Pn	01 09 49.6	+0.8
KAPI				pmax	pmax		
	comp=Z,166nm,1.3s						
KAPI	Kappang	18.97	263	P	Pn	01 09 48.8	0.0
KAPI	Kappang	18.97	263	⇓P	P	01 09 48.2	+0.2
MPSI	Mapaga	18.98	279	P	Pn	01 09 49.1	+0.2
BASI	Baing, Sumba	19.40	247	P	P	01 09 53.2	+0.5
	comp=Z,39µmcomp=Z,18µmcomp=Z,770nm,1.5s						
WSI	Waingapu	19.47	249	P	P	01 09 53.8	+0.3
FITZ	Fitzroy Crossi	19.87	219	P	P	01 09 57.4	-0.5
FITZ	Fitzroy Crossi	19.87	219	P	P	01 09 58.0	+0.1
	comp=Z,2.5nm,0.3s,baz=40,slow=13,SNR=42						
FITZ				S	S	01 13 36.8	-3.5
	comp=Z,239nm,0.8s,baz=128,slow=12,SNR=6.3						
	comp=Z,18nm,0.4s						
FITZ	Fitzroy Crossi	19.87	219	LR	LR	01 18 27.8	
	comp=Z,89µm,18.7s,baz=40,slow=36						
FITZ	Fitzroy Crossi	19.87	219	P	P	01 09 58.6	+0.8
FITZ	Fitzroy Crossi	19.87	219	⇓P	P	01 09 57.0	-0.8
WBSI	Waikabubak, Su	20.30	249	P	P	01 10 00.6	-2.1
	comp=Z,33µmcomp=Z,10µmcomp=Z,364nm,1.0s						
AS01	Alice Springs	21.28	192	P	P	01 10 13.4	+0.3
AS31	Alice Springs	21.29	192	P	P	01 10 13.0	-0.2
AS31				IAmb	IAmb	01 10 23.1	
	comp=Z,349nm,0.8s						
ASAR	Alice Springs	21.29	192	P	P	01 10 12.4	-0.7
ASAR	Alice Springs	21.29	192	P	P	01 10 12.3	-0.9
	comp=Z,98nm,0.9s,baz=23,slow=9.7,SNR=271						
ASAR				S	S	01 14 08.6	0.0
	comp=Z,100nm,0.8s,baz=13,slow=22,SNR=4.7						
	comp=Z,98nm,0.9s						
ASAR	Alice Springs	21.29	192	P	P	01 10 12.5	-0.7
SMKI	Samarinda	21.53	276	P	P	01 10 19.8	+3.9
	comp=Z,29µmcomp=Z,950nm,1.3s						
PLAI	Plampang	21.60	253	P	P	01 10 17.3	+0.7
PLAI	Plampang	21.60	253	P	P	01 10 15.5	-1.1
	comp=Z,32µmcomp=Z,9µmcomp=Z,360nm,1.6s						
MYLDM	Lahad Datu	21.60	291	P	P	01 10 17.2	+0.6
MYLDM				IAmb	IAmb	01 10 28.9	
	comp=Z,817nm,1.3s						
MYLDM	Lahad Datu	21.60	291	P	P	01 10 18.5	+1.9
MYLDM	Lahad Datu	21.60	291	⇑P	P	01 10 19.2	+2.6
BKB	Balikpapan	21.77	273	P	P	01 10 21.5	+3.1
BKB	Balikpapan	21.77	273	P	P	01 10 20.0	+1.6
BKB	Balikpapan	21.77	273	P	P	01 10 22.1	+3.7
	comp=Z,1µm,1.4s						
TATA	Tatamba Isabel	21.80	106	P	P	01 10 18.0	-0.7
PATS	Pohnpei	21.84	64	P	P	01 10 21.9	+2.8
PATS				IAmb	IAmb	01 10 40.6	
	comp=Z,984nm,1.4s						
PATS				IAMs_20	IAMs_20	01 16 40.9	
	comp=Z,88µm,21.0s						
PATS	Pohnpei	21.84	64	P	P	01 10 21.3	+2.2
SAVO	Savo Central	22.00	108	P	P	01 10 21.2	+0.3
HNR	Honiara	22.20	108	P	P	01 10 23.6	+0.5
HNR				IAmb	IAmb	01 10 40.0	
	comp=Z,631nm,0.9s						
HNR	Honiara	22.20	108	LR	LR	01 20 56.3	
	comp=Z,29µm,19.2s,baz=283,slow=40						
HNR	Honiara	22.20	108	P	P	01 10 24.6	+1.5
HNR	Honiara	22.20	108	P	P	01 10 23.6	+0.5
HNR				pmax	pmax		
	comp=Z,631nm,0.9s						
HNR				MLR	MLR		
	comp=Z,29µm,20.0s						
TWSI	Taliwang, Sumb	22.43	254	P	P	01 10 24.3	-1.3
ALEG	Aligegeo Malai	22.74	106	P	P	01 10 28.7	-0.1
SRBI	Singaraja	23.90	256	P	P	01 10 40.0	-0.3
KKM	Kota Kinabalu	24.03	291	P	P	01 10 42.1	+0.4
KKM				IAmb	IAmb	01 10 55.6	
	comp=Z,328nm,1.1s						
KKM	Kota Kinabalu	24.03	291	P	P	01 10 42.9	+1.2
KKM	Kota Kinabalu	24.03	291	⇑P	P	01 10 41.6	-0.1
GD1S	Gladstone Soft	24.22	151	P	P	01 10 45.4	+2.2
TGY	Tagaytay City	24.25	314	P	P	01 10 43.5	-0.2
	comp=Z,3µm,0.9s,baz=240,slow=3.5,SNR=30						
TGY				LR	LR	01 20 49.6	
	comp=Z,42µm,19.3s,baz=140,slow=38						
QLP	Quilpie	24.30	168	P	P	01 10 44.4	+0.5
QLP	Quilpie	24.30	168	⇑P	P	01 10 44.0	+0.1
HURO	Huro Makira	24.34	109	P	P	01 10 44.3	-0.1
KMMI	Kalianget	24.93	259	P	P	01 10 51.9	+2.1
	comp=Z,36µmcomp=Z,617nm,0.9s						
JAGI	Jajag, Banyuwa	25.00	256	P	P	01 10 48.5	-1.9
JAGI				IAmb	IAmb	01 11 08.6	
	comp=Z,257nm,1.1s						
JAGI	Jajag, Banyuwa	25.00	256	P	P	01 10 49.8	-0.7
JAGI	Jajag, Banyuwa	25.00	256	P	P	01 10 48.2	-2.3
	comp=Z,21µmcomp=Z,7µmcomp=Z,244nm,1.4s						
JAGI	Jajag, Banyuwa	25.00	256	⇑P	P	01 10 48.3	-2.2
EIDS	Eidsvold	25.48	153	P	P	01 10 55.7	+1.1
EIDS				IAmb	IAmb	01 11 07.7	
	comp=Z,490nm,1.4s						
EIDS	Eidsvold	25.48	153	P	P	01 10 56.3	+1.6
EIDS	Eidsvold	25.48	153	⇑P	P	01 10 55.8	+1.1
GMJI	Gumukmas	25.65	257	P	P	01 10 55.0	-1.3
	comp=Z,157nm,1.0s						
MBWA	Marble Bar	25.95	224	P	P	01 10 58.6	-0.4
MBWA				IAmb	IAmb	01 11 12.7	
	comp=Z,226nm,0.9s						
MBWA	Marble Bar	25.95	224	P	P	01 11 00.7	+1.7
MBWA				S	S	01 15 40.6	+13
MBWA	Marble Bar	25.95	224	P	P	01 11 00.6	+1.7
MBWA	Marble Bar	25.95	224	P	P	01 10 58.8	-0.2
MBWA				S	S	01 15 27.4	-0.5
MBWA	Marble Bar	25.95	224	⇓P	P	01 10 59.0	+0.1
PSA00	Pilbara Seismi	26.15	223	P	P	01 10 59.0	-1.8
PSA00	Pilbara Seismi	26.15	223	P	P	01 10 59.7	-1.1
PSA00				IAmb	IAmb	01 11 14.3	
	comp=Z,173nm,0.8s						
PSA00	Pilbara Seismi	26.15	223	P	P	01 11 02.4	+1.6
GRJI	Gresik	26.38	260	P	P	01 11 03.2	+0.3
	comp=Z,23µmcomp=Z,19µmcomp=Z,629nm,1.6s						
TBJI	Tambak Boyo	26.99	260	P	P	01 11 10.5	+2.1
	comp=Z,21µmcomp=Z,14µmcomp=Z,384nm,0.9s						
SZP	Santa	26.99	319	P	P	01 11 10.0	+1.7
STKI	Sintang	27.29	275	P	P	01 11 11.2	+0.1
	comp=Z,14µmcomp=Z,14µmcomp=Z,145nm,1.5s						
NGJI	Ngawi	27.44	259	P	P	01 11 14.1	+1.6
	comp=Z,24µmcomp=Z,9µmcomp=Z,90nm,0.9s						
PCJI	Pacitan	27.85	258	P	P	01 11 14.4	-1.7
	comp=Z,12µmcomp=Z,121nm,1.0s						
WOJI	Wonogiri, Jawa	28.04	259	P	P	01 11 16.4	-1.4
	comp=Z,13µmcomp=Z,4µmcomp=Z,125nm,0.8s						
LUES	Luesalemba Tem	28.19	107	P	P	01 11 19.1	-0.1
SMRI	Semarang	28.40	260	P	P	01 11 21.4	+0.3
SMRI	Semarang	28.40	260	P	P	01 11 22.7	+1.6
SMRI	Semarang	28.40	260	P	P	01 11 21.3	+0.2
	comp=Z,5µmcomp=Z,151nm,0.9s						
UGM	Wanagama	28.44	259	P	P	01 11 17.3	-4.2
	comp=Z,5µmcomp=Z,87nm,1.0s						
KSM	Kuching	28.62	278	P	P	01 11 22.6	-0.5
KSM	Kuching	28.62	278	P	P	01 11 24.8	+1.7
STKA	Stephens Creek	29.10	175	P	P	01 11 26.5	-0.6
STKA	Stephens Creek	29.10	175	P	P	01 11 27.7	+0.6
	comp=Z,23nm,0.7s,baz=343,slow=9.0,SNR=30						
	comp=Z,23nm,0.7s						
STKA	Stephens Creek	29.10	175	P	P	01 11 28.2	+1.1
STKA	Stephens Creek	29.10	175	⇓eP	P	01 11 28.2	+1.1
CMSA	Cobar Meteorol	29.40	168	P	P	01 11 32.0	+2.3
BBOO	Buckleboo	30.00	184	P	P	01 11 34.3	-0.8
BBOO	Buckleboo	30.00	184	P	P	01 11 35.3	+0.3
WHYH	Whyalla	30.14	182	P	P	01 11 36.7	+0.5
ARMA	Armidale	30.14	157	P	P	01 11 37.9	+1.4
ARMA				IAMs_20	IAMs_20	01 24 24.4	
	comp=Z,66µm,20.0s						
ARMA	Armidale	30.14	157	P	P	01 11 39.3	+2.8
ARMA	Armidale	30.14	157	⇑P	P	01 11 38.5	+2.1
CMJI	Cimerak	30.45	259	P	P	01 11 36.3	-3.0
	comp=Z,3µmcomp=Z,89nm,1.0s						
HTT	Hallett	30.52	180	P	P	01 11 40.6	+0.9
HTT	Hallett	30.52	180	⇑P	P	01 11 39.7	0.0
MEEK	Meekatharra	30.54	217	P	P	01 11 41.7	+1.8
KOUNC	Koumac, New Ca	30.64	127	P	P	01 11 43.3	+2.5
SANVU	Saraoutou	30.85	116	P	P	01 11 42.8	+0.1
SANVU	Saraoutou	30.85	116	P	P	01 11 45.2	+2.5
TPI	Tanjungpandan	30.94	269	P	P	01 11 44.6	+1.0
	comp=Z,12µmcomp=Z,4µmcomp=Z,111nm,1.6s						
YULB	Yu-li	30.99	328	P	P	01 11 44.7	+0.7
JOW	Kunigami	31.07	342	IAmb	IAmb	01 11 47.1	
	comp=Z,501nm,1.7s						
JOW	Kunigami	31.07	342	LR	LR	01 21 55.1	
	comp=Z,40µm,21.1s,baz=160,slow=32						
JOW	Kunigami	31.07	342	P	P	01 11 45.3	+0.8
LEM	Lembang	31.16	261	P	P	01 11 44.2	-1.5
	comp=Z,4µmcomp=Z,47nm,1.1s						
BBJI	Bungbulang	31.20	260	P	P	01 11 46.7	+0.7
TPUB	Ta-pu	31.28	327	IAmb	IAmb	01 11 46.5	
	comp=Z,545nm,1.9s						
TPUB	Ta-pu	31.28	327	P	P	01 11 46.1	-0.4
VLAKA	Lakatoro	31.28	117	P	P	01 11 49.2	+2.6
NACB	Ninganchiao	31.48	329	P	P	01 11 49.0	+0.8
SSLB	Suanglung	31.50	328	IAmb	IAmb	01 11 50.6	
	comp=Z,287nm,1.6s						
SSLB	Suanglung	31.50	328	P	P	01 11 48.6	+0.2
CNJI	Cibinong	31.69	261	P	P	01 11 47.8	-2.4
	comp=Z,46nm,1.0s						
DBJI	Dramaga	31.99	262	P	P	01 11 51.1	-1.8
	comp=Z,13µmcomp=Z,94nm,1.1s						
YHNB	Yeheng	32.00	329	IAMs_20	IAMs_20	01 22 03.5	
	comp=Z,48µm,21.0s						
YHNB	Yeheng	32.00	329	P	P	01 11 54.8	+1.9
TATO	Taipei	32.20	330	P	P	01 11 54.9	+0.4
TATO	Taipei	32.20	330	P	P	01 11 53.5	-1.0
TATO				P	P	01 11 53.5	-1.0
TATO	Taipei	32.20	330	P	P	01 11 56.3	+1.8
SYDH	Sydney Hard Ro	32.86	161	P	P	01 12 02.5	+2.3
CGJI	Cibinong	33.04	262	P	P	01 11 59.4	-2.7
	comp=Z,7µmcomp=Z,96nm,1.0s						
DZM	Mont Dzumac	33.14	128	P	P	01 12 02.9	-0.1
DZM	Mont Dzumac	33.14	128	eP	P	01 12 02.4	-0.6
	comp=Z,91nm,1.2s						
DZM				eS	S	01 17 18.2	-2.8
	comp=Z,10µm,29.6s						
DZM				eLR	LR	01 20 51.6	
	comp=Z,86µm,25.8s						
DZM	Mont Dzumac	33.14	128	P	P	01 12 05.1	+2.1
DZM	Mont Dzumac	33.14	128	⇑P	P	01 12 03.6	+0.6
DLV	Lat	33.33	297	P	P	01 12 05.2	+0.4
YATNC	Mamie plateau,	33.49	127	P	P	01 12 07.8	+1.9
WOLH	Wollongong Har	33.50	161	P	P	01 12 07.9	+2.1
QZH	Quanzhou	33.71	326	⇑iP	P	01 12 07.5	-0.2
QZH				PP	PnPn	01 13 20.8	+0.5
QZH				S	S	01 17 30.8	+1.3
QZH				SS	SnSn	01 19 33.4	-1.5
QZH				pmax	pmax		
	comp=Z,300nm,1.1s						
QZH				pmax	pmax		
	comp=Z,7µm,3.6s						
QZH				LR	LR		
	comp=Z,20µm,23.0s						
QZH				LR	LR		
	comp=Z,19µm,21.7s						
QZH				LR	LR		
	comp=Z,38µm,23.1s						
CAN	Canberra	33.80	165	IAMs_20	IAMs_20	01 26 46.8	
	comp=Z,41µm,19.0s						
CAN	Canberra	33.80	165	P	P	01 12 11.3	+2.8
CAN	Canberra	33.80	165	⇑P	P	01 12 10.9	+2.4
PMBI	Palembang	33.82	269	P	P	01 12 10.9	+2.0
PMBI	Palembang	33.82	269	P	P	01 12 10.8	+2.0
PMBI	Palembang	33.82	269	P	P	01 12 11.1	+2.3
MORW	Morawa	33.86	217	P	P	01 12 11.3	+2.3
MORW	Morawa	33.86	217	⇑P	P	01 12 09.0	-0.1
CNB	Canberra Magne	33.90	164	P	P	01 12 12.1	+2.8
MDSI	Maura Dua	34.42	266	P	P	01 12 13.6	-0.5
	comp=Z,10µmcomp=Z,8µmcomp=Z,301nm,1.9s						
HKPS	Hong Kong Po S	34.51	317	P	P	01 12 15.1	+0.3
LWLI	Liwa	34.56	265	P	P	01 12 13.5	-1.9
	comp=Z,179nm,0.7s						
BLDU	Ballidu	34.61	215	P	P	01 12 17.7	+2.2
KLBR	Kellerberrin	34.78	212	P	P	01 12 17.6	+0.6
MYKOM	Kota Tinggi	35.06	277	P	P	01 12 20.8	+1.2
TOO	Toolangi	35.22	171	⇓P	P	01 12 22.2	+1.5
GZH	Guangzhou	35.60	317	P	P	01 12 25.4	+1.3
GZH				PP	PP	01 13 48.1	+2.8
GZH				S	S	01 18 00.1	+1.4
GZH				pmax	pmax		
	comp=Z,4µm,3.3s						
GZH				LR	LR		
	comp=Z,15µm,18.4s						
GZH				LR	LR		
	comp=Z,18µm,16.1s						
GZH				LR	LR		
	comp=Z,27µm,18.1s						
QIZ	Qiongzhong	35.64	309	IAmb	IAmb	01 12 29.1	
	comp=Z,162nm,1.1s						
QIZ	Qiongzhong	35.64	309	P	P	01 12 23.4	-1.1
QIZ				pP	pP	01 12 28.5	-4.3
QIZ				PP	PP	01 13 45.6	-0.2
QIZ				S	S	01 18 02.8	+3.4
QIZ				pmax	pmax		
	comp=Z,100nm,1.8s						
QIZ				pmax	pmax		
	comp=Z,3µm,4.0s						
QIZ				LR	LR		
	comp=Z,13µm,20.2s						
QIZ				LR	LR		
	comp=Z,22µm,19.3s						
QIZ	Qiongzhong	35.64	309	P	P	01 12 25.1	+0.6
MUN	Mundaring	35.92	214	P	P	01 12 29.0	+2.2
KSI	Kapahiang	35.99	268	P	P	01 12 25.5	-2.2
	comp=Z,9µmcomp=Z,204nm,2.2s						
NWAO	Narrogin (SRO)	36.10	211	P	P	01 12 29.0	+0.7
NWAO				IAmb	IAmb	01 13 46.6	
	comp=Z,453nm,1.8s						
NWAO	Narrogin (SRO)	36.10	211	P	P	01 12 28.2	-0.1
	comp=Z,19nm,0.7s,baz=50,slow=8.6,SNR=11						
	comp=Z,19nm,0.7s						
NWAO	Narrogin (SRO)	36.10	211	P	P	01 12 31.1	+2.8
NWAO				P	P	01 12 31.1	+2.8
NWAO	Narrogin (SRO)	36.10	211	P	P	01 12 31.1	+2.8
NWAO	Narrogin (SRO)	36.10	211	P	P	01 12 30.8	+2.5
NWAO	Narrogin (SRO)	36.10	211	P	P	01 12 29.0	+0.7
NWAO				pmax	pmax		
	comp=Z,453nm,1.8s						
NWAO				MLR	MLR		
	comp=Z,86µm,18.0s						
JNU	Nakatsue	36.43	349	IAmb	IAmb	01 12 34.9	
	comp=Z,223nm,1.1s						
JNU	Nakatsue	36.43	349	LR	LR	01 26 56.2	
	comp=Z,26µm,18.6s,baz=166,slow=36						
JNU	Nakatsue	36.43	349	P	P	01 12 31.4	+0.3
JNU	Nakatsue	36.43	349	P	P	01 12 29.6	-1.5
JNU	Nakatsue	36.43	349	⇑P	P	01 12 30.6	-0.4
JMN	Monobe	36.56	353	IAmb	IAmb	01 12 36.4	
	comp=Z,253nm,1.2s						
JMN				IAMs_20	IAMs_20	01 24 15.4	
	comp=Z,45µm,21.0s						
JMN	Monobe	36.56	353	P	P	01 12 34.3	+2.1
JMN	Monobe	36.56	353	P	P	01 12 33.0	+0.7
JMN	Monobe	36.56	353	⇑P	P	01 12 32.5	+0.3
SSE	Sheshan	37.54	335	P	P	01 12 41.1	+0.6
SSE				S	S	01 18 29.8	+1.7
SSE				pmax	pmax		
	comp=Z,65nm,1.0s						
SSE				pmax	pmax		
	comp=Z,2µm,3.2s						
SSE				LR	LR		
	comp=Z,8µm,21.8s						
SSE				LR	LR		
	comp=Z,4µm,21.6s						
BKNI	Bangkinang	37.70	274	P	P	01 12 42.1	-0.1
BKNI	Bangkinang	37.70	274	P	P	01 12 42.1	-0.1
BKNI	Bangkinang	37.70	274	P	P	01 12 43.3	+1.1
BKNI	Bangkinang	37.70	274	P	P	01 12 42.5	+0.3
JAD	Aida	37.73	354	P	P	01 12 41.9	-0.2
JHS	Saijyo	37.91	353	P	P	01 12 44.0	+0.4
INU	Inuyama	37.93	358	P	P	01 12 44.6	+0.8
INU				IAmb	IAmb	01 12 47.1	
	comp=Z,300nm,1.8s						
INU	Inuyama	37.93	358	P	P	01 12 45.5	+1.7
JWT	Wachi	37.96	356	P	P	01 12 43.8	-0.2
JTU	Tsushima	38.08	348	P	P	01 12 47.1	+2.0
JGF	Kuroka	38.17	358	P	P	01 12 46.5	+0.6
JGF	Kuroka	38.17	358	P	P	01 12 45.6	-0.3
JGF	Kuroka	38.17	358	⇑P	P	01 12 44.6	-1.2
IPM	Ipoh	38.26	281	IAmb	IAmb	01 12 50.1	
	comp=Z,235nm,1.3s						
IPM	Ipoh	38.26	281	P	P	01 12 47.5	+0.6
IPM	Ipoh	38.26	281	⇑P	P	01 12 47.4	+0.5
PPI	Padang Panjang	38.28	273	P	P	01 12 46.6	-0.5
	comp=Z,9µmcomp=Z,9µmcomp=Z,177nm,1.2s						
JRY	Ryogami san	38.57	0	P	P	01 12 48.5	-0.7
KULM	Kulim	38.77	282	IAmb	IAmb	01 12 54.2	
	comp=Z,238nm,1.3s						
KULM	Kulim	38.77	282	P	P	01 12 51.5	+0.3
KULM	Kulim	38.77	282	⇑P	P	01 12 51.5	+0.3

JGN	Niukaw	38.79	358	P	P	01 12 49.9	-1.2
GLAD	Gladstone	38.99	169	P	P	01 12 54.3	+1.7
GULI	GuiLin	39.09	317	P	P	01 12 55.8	+2.1
GULI				PP	PnPn	01 14 26.9	+0.6
GULI				S	S	01 18 58.9	+7.1
GULI				pmax	pmax		
	comp=Z,100nm,1.8s						
GULI				LR	LR		
	comp=Z,6µm,18.8s						
GULI				LR	LR		
	comp=Z,12µm,19.2s						
GULI				LR	LR		
	comp=Z,15µm,19.9s						
MJAR	Matsushiro Arr	39.09	359	P	P	01 12 52.0	-1.5
	comp=Z,9.1nm,0.6s,baz=179,slow=8.2,SNR=17						
MJAR				PcP	PcP	01 15 03.9	+0.8
	comp=Z,5.2nm,0.7s,baz=162,slow=2.4,SNR=4.5						
MJAR				ScP	S	01 18 52.2	+0.7
	comp=Z,4.1nm,0.9s,baz=167,slow=3.6,SNR=5.2						
	comp=Z,9.1nm,0.6s						
MJAR	Matsushiro Arr	39.09	359	LR	LR	01 27 19.7	
	comp=Z,26µm,20.0s,baz=163,slow=32						
MAJO	Matsushiro	39.09	359	P	P	01 12 52.8	-0.8
MAJO	Matsushiro	39.09	359	P	P	01 12 54.0	+0.4
MAJO	Matsushiro	39.09	359	P	P	01 12 52.8	-0.8
MAJO				pmax	pmax		
	comp=Z,199nm,1.6s						
MAJO	Matsushiro	39.09	359	P	P	01 12 51.0	-2.6
MAJO	Matsushiro	39.09	359	⇑P	P	01 12 52.0	-1.6
MAT	Matsushiro	39.09	359	P	P	01 12 52.6	-1.0
MNSI	Mandailing Nat	39.20	275	P	P	01 12 53.8	-1.0
CORO	Coronation Par	39.28	170	P	P	01 12 57.5	+2.5
NJ2	Nanjing	39.38	333	⇑P	P	01 12 56.3	+0.3
NJ2				sP	sP	01 13 08.6	+0.9
NJ2				S	S	01 18 55.0	-0.9
NJ2				pmax	pmax		
	comp=Z,170nm,2.5s						
NJ2				pmax	pmax		
	comp=Z,5µm,5.8s						
NJ2				LR	LR		
	comp=Z,14µm,17.5s						
NJ2				LR	LR		
	comp=Z,14µm,17.5s						
NJ2				LR	LR		
	comp=Z,28µm,20.5s						
CNSH	ChangSha	39.45	323	P	P	01 12 57.6	+0.9
CNSH				S	S	01 19 00.8	+3.7
CNSH				pmax	pmax		
	comp=Z,230nm,2.0s						
CNSH				LR	LR		
	comp=Z,9µm,17.8s						
CNSH				LR	LR		
	comp=Z,15µm,20.0s						
CNSH				LR	LR		
	comp=Z,19µm,23.4s						
SISI	Saibi	39.54	271	P	P	01 12 56.5	-1.1
	comp=Z,7µmcomp=Z,192nm,1.3s						
RPSI	Rantau Prapat	40.06	277	IAmb	IAmb	01 13 04.6	
	comp=Z,284nm,1.3s						
PSI	Prapat	40.07	278	P	P	01 13 01.4	-0.8
	comp=Z,152nm,1.1s,baz=110,slow=6.1,SNR=38						
	comp=Z,152nm,1.1s						
PSI	Prapat	40.07	278	LR	LR	01 32 12.3	
	comp=Z,6µm,19.6s,baz=118,slow=38						
PSI	Prapat	40.07	278	P	P	01 13 01.8	-0.4
MOO	Moorlands	40.25	170	P	P	01 13 05.7	+2.6
MOO	Moorlands	40.25	170	P	P	01 13 04.3	+1.2
TJN	Taejon	40.32	346	P	P	01 13 04.3	+0.5
TJN	Taejon	40.32	346	*c i*P	P	01 13 03.3	-0.5
WHN	Wuhan	40.41	327	P	P	01 13 05.6	+1.0
WHN				PP	PnPn	01 14 44.4	+2.5
WHN				S	S	01 19 15.8	+4.4
WHN				sS	sS	01 19 29.3	+4.1
WHN				pmax	pmax		
	comp=Z,2µm,1.7s						
WHN				pmax	pmax		
	comp=Z,13µm,3.6s						
WHN				LR	LR		
	comp=Z,16µm,16.3s						
WHN				LR	LR		
	comp=Z,18µm,14.5s						
WHN				LR	LR		
	comp=Z,42µm,17.0s						
JMM	Marumori	40.46	3	P	P	01 13 04.4	-0.5
JMM				IAmb	IAmb	01 13 25.6	
	comp=Z,226nm,1.3s						
JMM	Marumori	40.46	3	P	P	01 13 05.0	+0.1
JMM	Marumori	40.46	3	P	P	01 13 04.9	0.0
JMM	Marumori	40.46	3	⇑P	P	01 13 04.3	-0.5
SRIT	Nakonsritamara	40.51	287	P	P	01 13 06.1	+0.4
SRIT	Nakonsritamara	40.51	287	P	P	01 13 06.3	+0.6
TSI	Tuntungan	40.52	279	P	P	01 13 06.2	+0.4
	comp=Z,12µmcomp=Z,273nm,1.1s						
JSD	Sado	40.59	360	IAmb	IAmb	01 13 10.2	
	comp=Z,600nm,2.0s						
JSD	Sado	40.59	360	P	P	01 13 06.0	+0.1
JSD	Sado	40.59	360	P	P	01 13 05.3	-0.6
JSD	Sado	40.59	360	⇑P	P	01 13 05.0	-0.9
TAU	Tasmania Unive	40.73	170	P	P	01 13 07.4	+0.4
TAU	Tasmania Unive	40.73	170	P	P	01 13 08.7	+1.7
TAU	Tasmania Unive	40.73	170	P	P	01 13 07.4	+0.4
TAU				pmax	pmax		
	comp=Z,252nm,1.6s						
TAU				MLR	MLR		
	comp=Z,76µm,20.0s						
TAU	Tasmania Unive	40.73	170	⇓P	P	01 13 09.4	+2.4
FUNA	Funafuti	40.75	100	P	P	01 13 08.7	+1.0
FUNA				IAmb	IAmb	01 13 26.5	
	comp=Z,363nm,1.4s						
FUNA	Funafuti	40.75	100	P	P	01 13 09.3	+1.6
JYA	Atsumi	41.15	1	P	P	01 13 11.2	+0.7
KSAR	Wonju Array Be	41.22	347	P	P	01 13 11.4	+0.3
KSAR	Wonju Array Be	41.22	347	P	P	01 13 11.4	+0.3
KSRS	Korea Array	41.22	347	P	P	01 13 10.4	-0.7
	comp=Z,23nm,0.9s,baz=166,slow=9.8,SNR=41						
KSRS				PcP	PcP	01 15 10.6	+0.7
	comp=Z,6.9nm,1.0s,baz=163,slow=4.4,SNR=5.0						
KSRS				LR	LR	01 29 54.6	
	comp=Z,9734µm,19.1s,baz=165,slow=36						
	comp=Z,23nm,0.9s						
GSI	Gunungsitoli	41.24	275	P	P	01 13 11.0	-0.8
GSI				IAmb	IAmb	01 13 13.4	
	comp=Z,306nm,1.3s						
GSI	Gunungsitoli	41.24	275	P	P	01 13 11.1	-0.6
GSI	Gunungsitoli	41.24	275	P	P	01 13 10.0	-1.7
	comp=Z,238nm,1.3s						
GSI	Gunungsitoli	41.24	275	⇑P	P	01 13 11.0	-0.8
KS19	Wonju Array Si	41.28	347	P	P	01 13 11.9	+0.3
KS19				IAmb	IAmb	01 13 15.4	
	comp=Z,381nm,1.9s						
MSVF	Nonsavu	41.42	114	P	P	01 13 14.4	+1.2
MSVF	Nonsavu	41.42	114	P	P	01 13 15.6	+2.4
MSVF	Nonsavu	41.42	114	*c i*P	P	01 13 15.3	+2.1
MSVF				pmax	pmax		
	comp=Z,167nm,1.7s						
MSVF				MLR	MLR		
	comp=Z,10µm,15.0s						
MSVF	Nonsavu	41.42	114	⇑P	P	01 13 14.9	+1.6
INCN	Inchon	41.55	346	P	P	01 13 14.7	+0.8
INCN				IAmb	IAmb	01 13 19.1	
	comp=Z,580nm,1.6s						
INCN	Inchon	41.55	346	IAMs_20	IAMs_20	01 30 08.1	
	comp=Z,27µm,19.0s						
INCN	Inchon	41.55	346	P	P	01 13 11.7	-2.3
INCN				P	P	01 13 11.7	-2.3
INCN	Inchon	41.55	346	P	P	01 13 15.1	+1.2
INCN	Inchon	41.55	346	P	P	01 13 14.7	+0.8
INCN				pmax	pmax		
	comp=Z,580nm,1.7s						
INCN				MLR	MLR		
	comp=Z,27µm,19.0s						
SLVN	Son La	41.57	307	P	P	01 13 14.3	-0.1
SLVN				IAmb	IAmb	01 13 20.1	
	comp=Z,357nm,1.9s						
SLVN	Son La	41.57	307	P	P	01 13 15.3	+0.9
HJU	Haeju	42.31	345	P	P	01 13 20.2	+0.1
HJU				S	S	01 19 40.9	+1.5
HJU				AmB			
	comp=Z,5µm,2.9s						
HJU				AMS	AMS		
	comp=Z,26µm,18.0s						
LHMI	Lhok Sumawe	42.39	281	IAmb	IAmb	01 13 34.8	
	comp=Z,328nm,0.9s						
LHMI	Lhok Sumawe	42.39	281	P	P	01 13 22.6	+1.5
LHMI	Lhok Sumawe	42.39	281	P	P	01 13 21.2	+0.1
GYA	Guiyang	42.40	315	⇓P	P	01 13 22.6	+1.5
GYA				S	S	01 19 43.1	+1.8
GYA				pmax	pmax		
	comp=Z,69nm,1.8s						
GYA				pmax	pmax		
	comp=Z,4µm,5.8s						
GYA				LR	LR		
	comp=Z,12µm,18.5s						
GYA				LR	LR		
	comp=Z,10µm,19.6s						
GYA				LR	LR		
	comp=Z,19µm,21.5s						
COCO	West Island	42.43	255	P	P	01 13 24.3	+2.9
COCO				S	S	01 19 50.3	+8.6
DGTI	Dogotuki	42.60	111	P	P	01 13 23.6	+0.8
TAVE	Taveuni	43.03	112	P	P	01 13 28.5	+2.2
ENH	Enshi	43.05	322	IAmb	IAmb	01 13 28.7	
	comp=Z,578nm,1.8s						
ENH	Enshi	43.05	322	P	P	01 13 27.0	+0.8
ENH	Enshi	43.05	322	P	P	01 13 26.3	0.0
JTM	Tenmabayashi	43.39	3	IAmb	IAmb	01 13 32.5	
	comp=Z,197nm,1.2s						
JTM	Tenmabayashi	43.39	3	P	P	01 13 30.5	+1.7
JTM	Tenmabayashi	43.39	3	P	P	01 13 29.4	+0.6
JTM	Tenmabayashi	43.39	3	⇑P	P	01 13 28.4	-0.4
TIA	Tai'an	43.66	335	P	P	01 13 30.3	-0.7
TIA				PP	PcP	01 15 17.3	-0.8
TIA				S	S	01 19 58.8	-0.4
TIA				pmax	pmax		
	comp=Z,84nm,1.0s						
TIA				pmax	pmax		
	comp=Z,4µm,3.5s						
TIA				LR	LR		
	comp=Z,15µm,18.5s						
TIA				LR	LR		
	comp=Z,6µm,17.2s						
TIA				LR	LR		
	comp=Z,30µm,18.5s						
HHU	Hamhung	43.68	348	P	P	01 13 29.6	-1.5
HHU				S	S	01 20 01.2	+1.8
HHU				AmB			
	comp=Z,6µm,3.1s						
HHU				AMS	AMS		
	comp=Z,14µm,17.7s						
JOT	Ohata	43.98	3	P	P	01 13 33.8	+0.3
FUTU	Fugatoga	44.19	108	P	P	01 13 38.4	+2.7
DL2	Dalian	44.32	341	P	P	01 13 37.3	+1.0
DL2				S	S	01 20 12.8	+4.0
DL2				pmax	pmax		
	comp=Z,210nm,2.0s						
DL2				pmax	pmax		
	comp=Z,3µm,9.8s						
DL2				LR	LR		
	comp=Z,16µm,21.1s						
DL2				LR	LR		
	comp=Z,13µm,18.2s						
DL2				LR	LR		
	comp=Z,14µm,22.2s						
CM31	Chiang Mai Arr	44.39	300	P	P	01 13 38.0	+0.8
	SNR=34						
CM31				P	P	01 13 38.0	+0.8
	SNR=34						
CM31				S	S	01 20 12.7	+2.3
CM31				S	S	01 20 12.7	+2.3
CMAR	Chiang Mai Arr	44.39	300	P	P	01 13 36.5	-0.7
CMAR	Chiang Mai Arr	44.39	300	P	P	01 13 36.9	-0.4
	comp=Z,45nm,1.0s,baz=118,slow=6.5,SNR=62						
	comp=Z,45nm,1.0s						
CMAR	Chiang Mai Arr	44.39	300	P	P	01 13 36.5	-0.7
LKBA	Tubou, Lakemba	44.43	113	P	P	01 13 38.3	+0.8
KMI	Kunming	44.49	311	⇑P	P	01 13 38.4	+0.2
KMI				PP	PP	01 15 22.3	0.0
KMI				S	S	01 20 15.8	+3.7
KMI				pmax	pmax		
	comp=Z,58nm,1.6s						
KMI				pmax	pmax		
	comp=Z,2µm,6.0s						
KMI				LR	LR		
	comp=Z,9µm,20.1s						
KMI				LR	LR		
	comp=Z,11µm,20.9s						
KMI				LR	LR		
	comp=Z,18µm,22.0s						
KMI	Kunming	44.49	311	P	P	01 13 38.7	+0.5
LYN	LuoYang	44.52	329	⇑P	P	01 13 38.3	+0.4
LYN				sP	pP	01 13 46.6	+0.2
LYN				S	S	01 20 14.1	+2.3
LYN				sS	sS	01 20 29.3	+3.6
LYN				pmax	pmax		
	comp=Z,270nm,2.0s						
LYN				pmax	pmax		
	comp=Z,6µm,5.6s						
LYN				LR	LR		
	comp=Z,8µm,14.8s						
LYN				LR	LR		
	comp=Z,8µm,17.2s						
LYN				LR	LR		
	comp=Z,17µm,21.6s						
CHTO	Chiang Mai	44.53	300	P	P	01 13 37.7	-0.7
CHTO				IAmb	IAmb	01 13 43.9	
	comp=Z,419nm,2.0s						
CHTO	Chiang Mai	44.53	300	P	P	01 13 39.3	+1.0
CHTO				P	P	01 13 39.3	+1.0
CHTO	Chiang Mai	44.53	300	P	P	01 13 38.8	+0.4
CHTO	Chiang Mai	44.53	300	P	P	01 13 37.7	-0.7
CHTO				pmax	pmax		
	comp=Z,419nm,2.0s						
CHTO	Chiang Mai	44.53	300	P	P	01 13 37.8	-0.6
CHTO				S	S	01 20 13.4	+0.8
CHTO	Chiang Mai	44.53	300	⇑P	P	01 13 37.7	-0.7
CHTO	Chiang Mai	44.53	300	P	P	01 13 38.3	-0.1
SUJ	Sinuiju	44.58	345	P	P	01 13 38.9	+0.6
SUJ				S	S	01 20 14.2	+1.8
SUJ				AmB			
	comp=Z,7µm,3.0s						
SUJ				AMS	AMS		
	comp=Z,12µm,17.6s						
ERM	Erimo	44.75	5	*c i*P	P	01 13 39.7	0.0
ERM				pmax	pmax		
	comp=Z,84nm,1.1s						
ERM	Erimo	44.75	5	P	P	01 13 39.6	0.0
JSH	Shimam	45.20	1	P	P	01 13 43.3	0.0
MSHR	Mys Shultsa	45.63	352	*ce*P	P	01 13 46.2	-0.4
MSHR				pmax	pmax		
	comp=Z,282nm,2.7s						
MSHR				MLR	MLR		
	comp=Z,11µm,17.0s						
HNS	HongShan	45.71	333	⇑P	P	01 13 46.9	-0.5
HNS				S	S	01 20 24.3	-4.6
HNS				sS	sS	01 20 42.3	-0.6
HNS				pmax	pmax		
	comp=Z,110nm,1.4s						
HNS				pmax	pmax		
	comp=Z,4µm,4.8s						
HNS				LR	LR		
	comp=Z,20µm,21.7s						
HNS				LR	LR		
	comp=Z,12µm,22.5s						
HNS				LR	LR		
	comp=Z,27µm,21.8s						
PSTR	Posyet	45.75	352	*d i*P	P	01 13 48.8	+1.3
OUZ	Omahuta	45.77	139	P	P	01 13 50.5	+2.7
OUZ	Omahuta	45.77	139	⇑P	P	01 13 50.6	+2.7
PZH	PanZhiHua	45.99	312	P	P	01 13 49.1	-0.9
PZH				PP	PP	01 15 40.8	+2.6
PZH				S	S	01 20 32.4	-1.3
PZH				sS	sS	01 20 48.8	+1.0
PZH				pmax	pmax		
	comp=Z,50nm,1.7s						
PZH				pmax	pmax		
	comp=Z,2µm,7.5s						
PZH				LR	LR		
	comp=Z,8µm,20.4s						
PZH				LR	LR		
	comp=Z,12µm,22.8s						
PZH				LR	LR		
	comp=Z,18µm,20.2s						
XAN	Xi'an	46.06	325	⇓P	P	01 13 49.3	-1.0
XAN				pP	pP	01 13 56.8	-2.0
XAN				sP	sP	01 14 01.9	-0.3
XAN				S	S	01 20 31.3	-3.0
XAN				pmax	pmax		
	comp=Z,380nm,1.1s						
XAN				pmax	pmax		
	comp=Z,7µm,4.9s						
XAN				LR	LR		
	comp=Z,15µm,22.4s						
XAN				LR	LR		
	comp=Z,19µm,21.3s						
XAN				LR	LR		
	comp=Z,32µm,17.9s						
VLA	Vladivostok	46.07	353	*d i*P	P	01 13 51.2	+1.1
VLA				pmax	pmax		
	comp=Z,279nm,1.5s						
VLA				MLR	MLR		
	comp=Z,7µm,16.0s						
SNY	Shenyang	46.43	344	⇑P	P	01 13 53.0	0.0
SNY				S	S	01 20 39.9	+0.7
SNY				pmax	pmax		
	comp=Z,170nm,2.2s						
SNY				pmax	pmax		
	comp=Z,3µm,5.3s						
SNY				LR	LR		
	comp=Z,12µm,18.2s						
SNY				LR	LR		
	comp=Z,9µm,19.0s						
SNY				LR	LR		
	comp=Z,16µm,17.8s						
WCZ	Waipu Caves	46.68	139	P	P	01 13 57.4	+2.3
JMP	Maruseppu	46.74	5	P	P	01 13 56.1	+0.7
JKA	Kamikawa-asahi	46.79	4	IAmb	IAmb	01 14 00.8	
	comp=Z,147nm,1.1s						
ASAJ	Asahikawa	46.80	4	P	P	01 13 56.5	+0.7
TIY	Taiyuan	47.02	331	*e*P	P	01 13 58.8	+1.0
TIY				PP	PP	01 15 47.5	-1.2
TIY				S	S	01 20 51.6	+3.7
TIY				sS	sS	01 21 06.0	+4.1
TIY				pmax	pmax		
	comp=Z,64nm,1.2s						
TIY				pmax	pmax		
	comp=Z,2µm,4.7s						
TIY				LR	LR		
	comp=Z,16µm,19.9s						
TIY				LR	LR		
	comp=Z,12µm,19.9s						
TIY				LR	LR		
	comp=Z,21µm,19.2s						
YUK	Yuzh-Kuril'sk	47.03	7	*e*P	P	01 13 56.0	-1.6
YUK				*i*		01 15 51.9	
YUK				*i* S	S	01 20 46.5	-1.1
YUK				pmax	pmax		
	comp=Z,468nm,2.7s						
YUK				pmax	pmax		
	comp=Z,308nm,0.9s						
YUK				pmax	pmax		
	comp=N,74nm,0.5s						
YUK				pmax	pmax		
	comp=E,155nm,0.8s						
USA0B	Ussuriysk Arra	47.12	353	*c i*P	P	01 13 58.5	+0.2
USRK	Ussuriysk Ar.	47.12	353		P	01 13 58.0	-0.3
USRK	Ussuriysk Ar.	47.12	353	P	P	01 13 58.3	0.0
	comp=E,46nm,1.0s,baz=177,slow=5.2,SNR=60						
	comp=E,46nm,1.0s						
CD2	Chengdu	47.16	318	P	P	01 13 59.8	+0.8
CD2				sP	sP	01 14 12.8	+2.0
CD2				PP	PP	01 15 50.1	-0.1
CD2				S	S	01 20 51.4	+1.3
CD2				pmax	pmax		
	comp=E,110nm,0.9s						
CD2				pmax	pmax		
	comp=E,5µm,5.0s						
CD2				LR	LR		
	comp=E,14µm,16.3s						
CD2				LR	LR		
	comp=E,24µm,20.2s						
CD2				LR	LR		
	comp=E,21µm,19.8s						
BJT	Baijiatuau	47.29	336	P	P	01 14 00.0	+0.3
BJT	Baijiatuau	47.29	336	P	P	01 13 59.7	0.0
BJT				pP	pP	01 14 08.3	-0.2
BJI	Beijing	47.30	336	P	P	01 13 59.5	-0.3
BJI				pP	pP	01 14 06.6	-2.0
BJI				sP	sP	01 14 10.4	-1.2
BJI				PP	PP	01 15 49.5	-1.8
BJI				S	S	01 20 51.0	-0.7
BJI				pmax	pmax		
	comp=E,55nm,2.1s						
BJI				pmax	pmax		
	comp=E,2µm,5.8s						
BJI				LR	LR		
	comp=E,6µm,18.0s						
BJI				LR	LR		
	comp=E,4µm,18.8s						
BJI				LR	LR		
	comp=E,10µm,18.0s						
GRZ	Great Barrier	47.59	139	P	P	01 14 04.6	+2.4
TEY	Ternei	47.61	358	⇓*e*P	P	01 13 59.9	-2.2
TEY				pmax	pmax		
	comp=N,200nm,3.8s						
TEY				pmax	pmax		
	comp=Z,400nm,3.9s						
TEY				pmax	pmax		
	comp=Z,30nm,1.5s						
TEY				pmax	pmax		
	comp=N,20nm,1.4s						
TNCH	TengChong	47.70	308	⇑P	P	01 14 03.3	-0.2
TNCH				sP	pP	01 14 12.9	+1.0
TNCH				S	S	01 20 59.4	+1.1
TNCH				sS	sS	01 21 10.4	-1.8
TNCH				SS	SS	01 24 22.1	-4.9
TNCH				pmax	pmax		
	comp=N,150nm,2.3s						
TNCH				pmax	pmax		
	comp=N,3µm,4.1s						
TNCH				LR	LR		
	comp=N,3µm,17.6s						
TNCH				LR	LR		
	comp=N,5µm,19.6s						
TNCH				LR	LR		
	comp=N,12µm,22.6s						
CN2	Changchun	47.84	347	⇑P	P	01 14 03.6	-0.3
CN2				*e*pP	pP	01 14 13.5	+0.9
CN2				*e*S	S	01 20 58.3	-0.9
CN2				pmax	pmax		
	comp=N,120nm,1.1s						
CN2				pmax	pmax		
	comp=N,3µm,4.0s						
CN2				LR	LR		
	comp=N,5µm,18.0s						
CN2				LR	LR		
	comp=N,3µm,18.0s						
CN2				LR	LR		
	comp=N,7µm,18.0s						
MDJ	Mudanjiang	47.85	351	P	P	01 14 04.0	0.0
MDJ				S	S	01 21 02.8	+3.5
MDJ				sS	sS	01 21 16.8	+3.2
MDJ				pmax	pmax		
	comp=N,140nm,2.2s						
MDJ				pmax	pmax		
	comp=N,5µm,6.0s						
MDJ				LR	LR		
	comp=N,16µm,19.8s						
MDJ				LR	LR		
	comp=N,7µm,21.2s						
MDJ				LR	LR		
	comp=N,26µm,20.1s						
MDJ	Mudanjiang	47.85	351	P	P	01 14 04.7	+0.7
MDJ	Mudanjiang	47.85	351	P	P	01 14 04.5	+0.6
MDJ				pP	pP	01 14 12.8	+0.1
KUZ	Kuaotunu	48.06	139	P	P	01 14 08.0	+2.2
KUZ	Kuaotunu	48.06	139	P	P	01 14 07.7	+2.0
KUR	Kuril'sk	48.48	9	P	P	01 14 07.9	-0.9
KUR						01 16 01.3	
KUR				S	S	01 21 13.4	+5.2
KUR				*e*SSS	SSS	01 25 56.9	
KUR				pmax	pmax		
	comp=Z,3µm,5.0s						
KUR				MLR	MLR		
	comp=Z,5µm,18.0s						
KUR				MLR	MLR		
	comp=E,7µm,19.0s						
TOZ	Tahuroa Road	48.50	141	P	P	01 14 11.0	+1.8
TOZ				IAmb	IAmb	01 14 15.1	
	comp=Z,184nm,1.1s						
TOZ	Tahuroa Road	48.50	141	P	P	01 14 11.8	+2.7
HIZ	Hauiti	48.57	142	IAMs_20	IAMs_20	01 33 58.9	
	comp=Z,34µm,21.0s						
QRZ	Quartz Range	48.68	146	IAmb	IAmb	01 14 16.4	
	comp=Z,162nm,1.1s						
QRZ				IAMs_20	IAMs_20	01 36 12.7	
	comp=Z,37µm,18.0s						

QRZ	**Quartz Range**	**48.68**	**146**	P	**P**	**01 14 13.0**	**+2.4**
VRZ	**Vera Road**	**48.89**	**143**	P	**P**	**01 14 15.9**	**+3.8**
DSZ	**Denniston Nort**	**48.91**	**147**	IAMs_20	IAMs_20	01 32 54.5	
	comp=Z,36µm,22.0s						
DSZ	**Denniston Nort**	**48.91**	**147**	P	**P**	**01 14 13.5**	**+1.2**
RAO	**Raoul Island**	**48.94**	**127**	LR	LR	01 33 11.4	
	comp=Z,9µm,21.9s,baz=263,slow=33						
JCZ	**Jackson Bay**	**49.03**	**151**	P	**P**	**01 14 15.7**	**+2.3**
JCZ	**Jackson Bay**	**49.03**	**151**	P	**P**	**01 14 15.6**	**+2.3**
TKNZ	**Takaka Hill**	**49.06**	**146**	P	**P**	**01 14 14.3**	**+0.8**
FOZ	**Fox Glacier**	**49.14**	**150**	IAMs_20	IAMs_20	01 35 33.5	
	comp=Z,23µm,19.0s						
TWVZ	**Taurewa**	**49.27**	**142**	P	**P**	**01 14 17.5**	**+2.3**
WVZ	**Waitaha Valley**	**49.27**	**149**	P	**P**	**01 14 15.9**	**+0.9**
BNX	**BinXian**	**49.30**	**350**	⇑P	**P**	**01 14 14.9**	**-0.3**
BNX				pP	**pP**	**01 14 25.3**	**+1.4**
BNX				sP	**sP**	**01 14 28.9**	**+1.9**
BNX				PcP	**PcP**	**01 15 37.9**	**+0.2**
BNX				S	**S**	**01 21 22.3**	**+2.5**
BNX				pmax	pmax		
	comp=Z,140nm,1.0s						
BNX				pmax	pmax		
	comp=Z,3µm,8.8s						
BNX				LR	LR		
	comp=Z,12µm,18.6s						
BNX				LR	LR		
	comp=Z,5µm,22.6s						
BNX				LR	LR		
	comp=Z,19µm,18.9s						
DCZ	**Deep Cove**	**49.34**	**154**	P	**P**	**01 14 18.0**	**+2.5**
KATZ	**Kakaramea**	**49.37**	**142**	P	**P**	**01 14 18.9**	**+2.9**
WTVZ	**West Tongariro**	**49.39**	**142**	P	**P**	**01 14 18.7**	**+2.5**
INZ	**Inchbonnie**	**49.39**	**148**	IAMs_20	IAMs_20	01 36 25.4	
	comp=Z,22µm,18.0s						
KRVZ	**Karewarewa**	**49.41**	**142**	P	**P**	**01 14 19.1**	**+2.8**
NNVZ	**North Ngauruho**	**49.42**	**142**	P	**P**	**01 14 18.6**	**+2.2**
NNZ	**Nelson**	**49.42**	**146**	IAmb	IAmb	01 14 28.2	
	comp=Z,151nm,1.3s						
NNZ				IAMs_20	IAMs_20	01 34 07.3	
	comp=Z,39µm,22.0s						
NNZ	**Nelson**	**49.42**	**146**	P	**P**	**01 14 18.4**	**+2.2**
NTVZ	**North Tongarir**	**49.43**	**142**	P	**P**	**01 14 19.1**	**+2.6**
NGZ	**Ngauruhoe**	**49.44**	**142**	P	**P**	**01 14 19.1**	**+2.6**
FWVZ	**Far West T-bar**	**49.45**	**142**	P	**P**	**01 14 19.0**	**+2.2**
TMVZ	**Te Maari**	**49.46**	**142**	P	**P**	**01 14 19.0**	**+2.3**
SNVZ	**South Ngauruho**	**49.47**	**142**	P	**P**	**01 14 19.8**	**+3.0**
TRVZ	**Turoa**	**49.48**	**142**	P	**P**	**01 14 19.1**	**+2.2**
WHVZ	**Whangaehu Hut**	**49.49**	**142**	P	**P**	**01 14 19.2**	**+2.2**
THZ	**Tophouse**	**49.52**	**146**	P	**P**	**01 14 18.8**	**+1.8**
WNVZ	**Wahianoa**	**49.53**	**142**	P	**P**	**01 14 19.6**	**+2.3**
YSS	**Yuzhno-Sakhali**	**49.63**	**4**	α*e*P	**P**	**01 14 16.8**	**-0.8**
YSS				e*SP	**pP**	**01 14 27.4**	**+1.1**
YSS				*e*		01 15 38.3	
YSS				*e*		01 16 06.9	
YSS				*e*S	**S**	**01 21 16.0**	**-8.3**
YSS				pmax	pmax		
	comp=Z,90nm,0.7s						
YSS				pmax	pmax		
	comp=Z,1µm,5.4s						
YSS				pmax	pmax		
	comp=N,800nm,3.5s						
YSS				pmax	pmax		
	comp=E,700nm,4.5s						
YSS				smax	smax		
	comp=N,1µm,10.9s						
YSS				smax	smax		
	comp=E,1µm,7.7s						
YSS				MLR	MLR		
	comp=Z,5µm,16.0s						
YSS				MLR	MLR		
	comp=N,3µm,17.0s						
YSS				MLR	MLR		
	comp=E,2µm,15.0s						
YSS	**Yuzhno-Sakhali**	**49.63**	**4**	P	**P**	**01 14 17.1**	**-0.5**
MOVZ	**Moawhango**	**49.67**	**142**	P	**P**	**01 14 19.3**	**+1.1**
MLZ	**Mavora Lakes**	**49.70**	**153**	P	**P**	**01 14 19.6**	**+1.3**
MLZ				IAmb	IAmb	01 14 23.7	
	comp=Z,366nm,1.8s						
MLZ				IAMs_20	IAMs_20	01 34 04.2	
	comp=Z,21µm,18.0s						
MLZ	**Mavora Lakes**	**49.70**	**153**	P	**P**	**01 14 20.6**	**+2.3**
URZ	**Urewera**	**49.84**	**140**	P	**P**	**01 14 20.6**	**+1.2**
URZ	**Urewera**	**49.84**	**140**	⇑P	**P**	**01 14 20.6**	**+1.2**
LTZ	**Lake Taylor**	**49.87**	**148**	IAMs_20	IAMs_20	01 34 23.0	
	comp=Z,28µm,22.0s						
LTZ	**Lake Taylor**	**49.87**	**148**	P	**P**	**01 14 20.4**	**+0.8**
TUWZ	**Tuamarina**	**49.88**	**145**	P	**P**	**01 14 19.9**	**+0.2**
RPZ	**Rata Peaks**	**49.89**	**149**	P	**P**	**01 14 21.2**	**+1.4**
HHC	**Hu-ho-hao-te**	**49.93**	**333**	⇑*i*P	**P**	**01 14 20.3**	**+0.1**
HHC				sP	sP	01 14 31.3	-0.8
HHC				PP	**PP**	**01 16 15.3**	**-0.1**
HHC				S	**S**	**01 21 30.0**	**+0.9**
HHC				pmax	pmax		
	comp=Z,2µm,6.7s						
HHC				LR	LR		
	comp=Z,18µm,19.7s						
HHC				LR	LR		
	comp=Z,12µm,18.7s						
HHC				LR	LR		
	comp=Z,26µm,19.9s						
LBZ	**Lake Benmore**	**49.94**	**151**	IAmb	IAmb	01 14 24.8	
	comp=Z,185nm,1.4s						
LBZ				IAMs_20	IAMs_20	01 36 09.8	
	comp=Z,25µm,20.0s						
LBZ	**Lake Benmore**	**49.94**	**151**	P	**P**	**01 14 21.4**	**+1.2**
RTZ	**Ruatahuna**	**49.96**	**141**	IAMs_20	IAMs_20	01 34 44.8	
	comp=Z,34µm,21.0s						
RTZ	**Ruatahuna**	**49.96**	**141**	P	**P**	**01 14 21.5**	**+1.0**
BKZ	**Black Stump Fm**	**49.98**	**141**	IAmb	IAmb	01 14 25.1	
	comp=Z,96nm,0.9s						
BKZ				IAMs_20	IAMs_20	01 34 33.3	
	comp=Z,30µm,22.0s						
BKZ	**Black Stump Fm**	**49.98**	**141**	P	**P**	**01 14 21.8**	**+1.2**
BKZ	**Black Stump Fm**	**49.98**	**141**	P	**P**	**01 14 21.6**	**+1.0**
MTHZ	**Maungataniwha**	**50.01**	**141**	P	**P**	**01 14 22.1**	**+1.3**
RUGZ	**Raukumara Rang**	**50.03**	**139**	P	**P**	**01 14 22.3**	**+1.2**
OXZ	**Oxford**	**50.13**	**148**	P	**P**	**01 14 21.0**	**-0.6**
OXZ				IAMs_20	IAMs_20	01 36 55.7	
	comp=Z,22µm,19.0s						
OXZ	**Oxford**	**50.13**	**148**	P	**P**	**01 14 24.5**	**+2.9**
MWZ	**Matawai**	**50.15**	**140**	P	**P**	**01 14 23.2**	**+1.3**
RAGZ	**Rawiri**	**50.17**	**140**	P	**P**	**01 14 23.5**	**+1.4**
KRHZ	**Kereru**	**50.19**	**142**	P	**P**	**01 14 23.3**	**+1.2**
TSZ	**Takapari Road**	**50.20**	**143**	P	**P**	**01 14 23.3**	**+1.2**
AFI	**Afiamalu**	**50.20**	**106**	IAMs_20	IAMs_20	01 35 04.0	
	comp=Z,21µm,20.0s						
AFI	**Afiamalu**	**50.20**	**106**	P	**P**	**01 14 25.0**	**+2.4**
RAHZ	**Arahi**	**50.20**	**141**	P	**P**	**01 14 23.9**	**+1.7**
MXZ	**Matakaoa Point**	**50.22**	**139**	IAMs_20	IAMs_20	01 37 14.7	
	comp=Z,24µm,18.0s						
MXZ	**Matakaoa Point**	**50.22**	**139**	P	**P**	**01 14 25.1**	**+2.8**
PKGZ	**Pakihiroa**	**50.24**	**139**	P	**P**	**01 14 24.3**	**+1.8**
SNZO	**South Karori**	**50.24**	**145**	IAMs_20	IAMs_20	01 34 55.9	
	comp=Z,27µm,20.0s						
SNZO	**South Karori**	**50.24**	**145**	P	**P**	**01 14 24.4**	**+2.0**
SNGZ	**Shannon Statio**	**50.29**	**141**	P	**P**	**01 14 24.0**	**+1.2**
KHZ	**Kahutara**	**50.31**	**147**	P	**P**	**01 14 23.3**	**+0.4**
KHZ	**Kahutara**	**50.31**	**147**	P	**P**	**01 14 23.4**	**+0.4**
KHZ	**Kahutara**	**50.31**	**147**	⇓P	**P**	**01 14 23.3**	**+0.4**
MRZ	**Mangatainoka R**	**50.34**	**144**	P	**P**	**01 14 23.7**	**+0.5**
TMZ	**Timaru**	**50.35**	**150**	P	**P**	**01 14 26.0**	**+2.8**
TWGZ	**Tauwhareparae**	**50.35**	**140**	P	**P**	**01 14 25.0**	**+1.7**
BHW	**Baring Head**	**50.40**	**145**	IAmb	IAmb	01 14 26.8	
	comp=Z,198nm,1.4s						
GVZ	**Greta Valley S**	**50.41**	**147**	P	**P**	**01 14 24.5**	**+0.8**
GVZ				IAmb	IAmb	01 14 28.2	
	comp=Z,235nm,1.2s						
GVZ				IAMs_20	IAMs_20	01 33 52.2	
	comp=Z,33µm,22.0s						
GVZ	**Greta Valley S**	**50.41**	**147**	P	**P**	**01 14 25.1**	**+1.4**
BTO	**Baotou**	**50.45**	**332**	*e*P	**P**	**01 14 25.8**	**+1.6**
BTO				pP	**sP**	**01 14 35.6**	**-0.4**
BTO				PP	**PP**	**01 16 18.3**	**-1.8**
BTO				S	**S**	**01 21 41.6**	**+5.3**
BTO				pmax	pmax		
	comp=Z,150nm,1.0s						
BTO				pmax	pmax		
	comp=Z,2µm,6.6s						
BTO				LR	LR		
	comp=Z,45µm,19.4s						
BTO				LR	LR		
	comp=Z,23µm,18.4s						
BTO				LR	LR		
	comp=Z,58µm,18.5s						
LZH	**Lanzhou**	**50.47**	**323**	⇑P	**P**	**01 14 25.3**	**+0.9**
LZH				sP	sP	01 14 36.1	-0.2
LZH				S	**S**	**01 21 34.8**	**-2.0**
LZH				sS	sS	01 21 53.4	+2.5
LZH				SS	**SS**	**01 25 11.4**	**+0.3**
LZH				pmax	pmax		
	comp=Z,200nm,1.5s						
LZH				pmax	pmax		
	comp=Z,5µm,3.6s						
LZH				LR	LR		
	comp=Z,11µm,17.5s						
LZH				LR	LR		
	comp=Z,15µm,17.5s						
LZH				LR	LR		
	comp=Z,30µm,18.2s						
PUZ	**Puketiti**	**50.47**	**139**	P	**P**	**01 14 25.6**	**+1.3**
KAHZ	**Kahuranaki**	**50.59**	**142**	P	**P**	**01 14 26.6**	**+1.4**
MSWZ	**Moikau Station**	**50.62**	**145**	P	**P**	**01 14 24.9**	**-0.4**
XLT	**XiLinHaoTe**	**50.66**	**339**	*e*P	**P**	**01 14 24.9**	**-0.8**
XLT				pP	pP	01 14 34.0	-0.5
XLT				sP	sP	01 14 37.3	-0.2
XLT				PP	**PP**	**01 16 22.3**	**+0.4**
XLT				S	**S**	**01 21 37.8**	**-1.3**
XLT				sS	sS	01 21 55.4	+1.9
XLT				pmax	pmax		
	comp=Z,85nm,1.1s						
XLT				LR	LR		
	comp=Z,1µm,20.8s						
XLT				LR	LR		
	comp=Z,8µm,19.1s						
XLT				LR	LR		
	comp=Z,13µm,22.0s						
MQZ	**McQueen's Vall**	**50.71**	**148**	IAmb	IAmb	01 14 32.9	
	comp=Z,120nm,1.0s						
MQZ	**McQueen's Vall**	**50.71**	**148**	P	**P**	**01 14 27.3**	**+1.4**
PXZ	**Pawanui**	**50.73**	**142**	P	**P**	**01 14 27.3**	**+1.2**
BFZ	**Birch Farm**	**50.75**	**143**	IAmb	IAmb	01 14 30.1	
	comp=Z,192nm,1.0s						
BFZ				IAMs_20	IAMs_20	01 37 28.5	
	comp=Z,24µm,18.0s						
BFZ	**Birch Farm**	**50.75**	**143**	P	**P**	**01 14 27.0**	**+0.7**
BFZ	**Birch Farm**	**50.75**	**143**	P	**P**	**01 14 26.8**	**+0.5**
APZ	**The Paps**	**50.77**	**154**	P	**P**	**01 14 28.6**	**+2.2**
TUZ	**Tuapeka**	**50.84**	**152**	P	**P**	**01 14 30.6**	**+3.7**
IMP	**Imphal**	**51.29**	**305**	*e*P	P	01 14 25.4	-5.4
IMP				IAmb	IAmb	01 14 35.2	
	comp=Z,856nm,0.8s						
KOHI	**KOHIMA**	**51.55**	**306**	*e*P	P	01 14 27.3	-5.5
KOHI				IAML		01 14 37.6	
	comp=Z,392nm,1.3s						
UGL	**Uglegorsk**	**51.71**	**3**	*c* *i*P	P	01 14 25.5	-7.8
UGL				*e*S	**S**	**01 21 46.8**	**-6.3**
UGL				pmax	pmax		
	comp=Z,4µm,3.6s						
UGL				pmax	pmax		
	comp=Z,200nm,1.5s						
UGL				smax	smax		
	comp=N,4µm,10.0s						
UGL				smax	smax		
	comp=E,3µm,10.0s						
UGL				MLR	MLR		
	comp=N,5µm,20.0s						
UGL				MLR	MLR		
	comp=E,3µm,20.0s						
UGL				MLR	MLR		
	comp=Z,7µm,19.0s						
KLR	**Kul'dur**	**52.12**	**354**	P	**P**	**01 14 36.7**	**+0.3**
	comp=Z,38nm,0.6s,baz=174,slow=5.8,SNR=52						
	comp=Z,38nm,0.6s						
MIDW	**Midway**	**52.29**	**51**	IAMs_20	IAMs_20	01 32 01.9	
	comp=Z,22µm,21.0s						
ZIRO	**ZIRO**	**52.58**	**308**	*e*P	P	01 14 35.1	-5.3
TEZP	**TEZPUR**	**53.00**	**306**	*e*P	P	01 14 38.0	-5.3
GRNR	**Gornyy**	**53.35**	**358**	⇑*i*P	**P**	**01 14 45.9**	**+0.5**
GRNR				pmax	pmax		
	comp=Z,30nm,1.0s						
TYV	**Tymovskoe**	**53.52**	**3**	*e*P	**P**	**01 14 46.9**	**+0.2**
TYV				*e*S	**S**	**01 22 15.4**	**-2.4**
TYV				pmax	pmax		
	comp=Z,100nm,1.5s						
TYV				pmax	pmax		
	comp=Z,700nm,3.8s						
TYV				smax	smax		
	comp=N,2µm,4.1s						
TYV				smax	smax		
	comp=E,2µm,4.1s						
HEH	**HeiHe**	**53.67**	**351**	*e*P	**P**	**01 14 47.1**	**-0.7**
HEH				sP	**pP**	**01 14 56.1**	**-0.5**
HEH				PP	**PP**	**01 16 52.0**	**+3.1**
HEH				S	**S**	**01 22 20.5**	**+0.6**
HEH				pmax	pmax		
	comp=E,190nm,1.5s						
HEH				pmax	pmax		
	comp=E,3µm,10.8s						
HEH				LR	LR		
	comp=E,11µm,19.3s						
HEH				LR	LR		
	comp=E,12µm,19.8s						
HEH				LR	LR		
	comp=E,21µm,19.5s						
TAWA	**Tawang**	**54.18**	**307**	*e*P	P	01 14 46.1	-6.2
TAWA				IAML		01 14 59.0	
	comp=Z,124nm,1.5s						
HIA	**Hailar**	**54.34**	**345**	IAmb	IAmb	01 14 58.1	
	comp=Z,154nm,1.3s						
HIA	**Hailar**	**54.34**	**345**	P	**P**	**01 14 53.7**	**+1.0**
HIA	**Hailar**	**54.34**	**345**	P	**P**	**01 14 53.0**	**+0.3**
HIA				sP	**sP**	**01 15 04.9**	**+0.3**
JOHN	**Johnston Islan**	**54.71**	**67**	P	**P**	**01 14 57.2**	**+1.3**
JOHN	**Johnston Islan**	**54.71**	**67**	P	**P**	**01 14 58.5**	**+2.5**
GTA	**Gaotai**	**55.06**	**324**	⇑P	**P**	**01 14 58.9**	**+0.6**
GTA				pP	pP	01 15 07.3	+0.5
GTA				S	**S**	**01 22 42.6**	**+3.3**
GTA				pmax	pmax		
	comp=Z,82nm,2.1s						
GTA				pmax	pmax		
	comp=Z,4µm,7.6s						
GTA				LR	LR		
	comp=Z,9µm,21.5s						
GTA				LR	LR		
	comp=Z,9µm,22.7s						
SKR	**Severo-Kuril's**	**55.30**	**13**	*e*P	**P**	**01 14 59.4**	**-0.2**
SKR				*e*		01 15 56.0	
SKR				*e*S	**S**	**01 22 47.3**	**+5.5**
SKR				pmax	pmax		
	comp=Z,4µm,4.0s						
SKR				MLR	MLR		
	comp=Z,7µm,19.0s						
LSA	**Lhasa**	**55.68**	**309**	P	**P**	**01 15 03.2**	**-0.1**
LSA				IAmb	IAmb	01 15 09.6	
	comp=Z,185nm,1.6s						
LSA	**Lhasa**	**55.68**	**309**	P	**P**	**01 15 02.8**	**-0.5**
LSA				S	**S**	**01 22 50.6**	**+2.0**
LSA				LR	LR		
	comp=Z,4µm,19.4s						
LSA				LR	LR		
	comp=Z,8µm,18.3s						
LSA	**Lhasa**	**55.68**	**309**	P	**P**	**01 15 03.3**	**-0.1**
LSA				P	**P**	**01 15 03.3**	**-0.1**
LSA	**Lhasa**	**55.68**	**309**	P	**P**	**01 15 03.2**	**-0.1**
LSA				pmax	pmax		
	comp=Z,185nm,1.6s						
LSA				MLR	MLR		
	comp=Z,8µm,19.0s						
NKL	**Nikolayevsk**	**55.73**	**1**	*e*P	**P**	**01 15 00.2**	**-2.4**
NKL				*e*S	**S**	**01 22 45.8**	**-1.6**
NKL				pmax	pmax		
	comp=E,133nm,1.2s						
NKL				pmax	pmax		
	comp=N,149nm,1.3s						
NKL				pmax	pmax		
	comp=Z,496nm,1.3s						
NKL				smax	smax		
	comp=N,746nm,6.9s						
NKL				smax	smax		
	comp=E,490nm,6.9s						
NKL				MLR	MLR		
	comp=E,28µm,21.0s						
NKL				MLR	MLR		
	comp=N,9µm,14.0s						
NKL				MLR	MLR		
	comp=Z,28µm,18.0s						
JPG	**JALPAIGURI**	**56.29**	**305**	*e*P	P	01 15 02.2	-5.0
GOMU	**GeErMu**	**56.29**	**318**	P	**P**	**01 15 07.8**	**+0.3**
GOMU				pP	pP	01 15 16.9	+0.8
GOMU				sP	sP	01 15 23.3	+3.8
GOMU				S	**S**	**01 22 58.9**	**+2.5**
GOMU				ScS	**ScS**	**01 24 54.1**	**-1.4**
GOMU				pmax	pmax		
	comp=Z,46nm,2.8s						
GOMU				LR	LR		
	comp=Z,4µm,19.1s						
GOMU				LR	LR		
	comp=Z,9µm,18.9s						
GOMU				LR	LR		
	comp=Z,12µm,18.5s						
CTZ	**Chatham Island**	**56.84**	**142**	P	**P**	**01 15 13.8**	**+3.0**
ZEA	**Zeya**	**57.09**	**352**	*e*P	**P**	**01 15 12.8**	**+0.5**
ZEA				*e*		01 15 21.3	
ZEA				*e*		01 17 16.8	
ZEA				*e*S	**S**	**01 23 10.0**	**+4.5**
ZEA				*e*		01 23 24.3	
ZEA				pmax	pmax		
	comp=E,300nm,2.9s						
ZEA				pmax	pmax		
	comp=N,800nm,4.0s						
ZEA				pmax	pmax		
	comp=Z,2µm,4.0s						
ZEA				pmax	pmax		
	comp=N,70nm,1.5s						
ZEA				pmax	pmax		
	comp=Z,150nm,1.6s						
ZEA				smax	smax		
	comp=E,1µm,7.1s						
ULN	**Ulaanbaatar**	**57.47**	**335**	P	**P**	**01 15 15.3**	**-0.1**
ULN	**Ulaanbaatar**	**57.47**	**335**	IAMs_20	IAMs_20	01 38 33.6	
	comp=Z,21µm,21.0s						
ULN	**Ulaanbaatar**	**57.47**	**335**	P	**P**	**01 15 14.3**	**-1.0**
ULN				P	**P**	**01 15 14.3**	**-1.0**
ULN	**Ulaanbaatar**	**57.47**	**335**	P	**P**	**01 15 15.3**	**-0.1**
ULN				pmax	pmax		
	comp=Z,88nm,1.5s						
ULN	**Ulaanbaatar**	**57.47**	**335**	⇑P	**P**	**01 15 15.8**	**+0.4**
ULN	**Ulaanbaatar**	**57.47**	**335**	P	**P**	**01 15 15.8**	**+0.4**
ULN				pP	**pP**	**01 15 24.3**	**-0.1**
SONM	**Songino Array**	**57.72**	**335**	P	**P**	**01 15 16.3**	**-0.8**
SONM	**Songino Array**	**57.72**	**335**	P	**P**	**01 15 16.9**	**-0.2**
	comp=Z,15nm,0.8s,baz=156,slow=7.7,SNR=48						
SONM				PKPPKP	**P'P'df**	**01 45 08.4**	**+7.2**
	comp=Z,1.9nm,0.9s,baz=236,slow=2.1,SNR=10						
	comp=Z,15nm,0.8s						
PEA0B	**Petropavlovsk-**	**57.92**	**13**	*c* *i*P	**P**	**01 15 18.2**	**0.0**
PETK	**Petropavlovsk-**	**57.92**	**13**	P	**P**	**01 15 17.6**	**-0.6**
PETK	**Petropavlovsk-**	**57.92**	**13**	P	**P**	**01 15 18.2**	**0.0**
	comp=Z,28nm,0.6s,baz=144,slow=5.1,SNR=76						
	comp=Z,28nm,0.6s						
KNTI	**KHUNTI**	**57.95**	**299**	*e*P	**P**	**01 15 14.8**	**-4.3**
KNTI				IAmb	IAmb	01 15 23.3	
	comp=Z,345nm,0.8s						
PET	**Petropavlovsk**	**58.07**	**14**	P	**P**	**01 15 20.2**	**+0.9**
PET	**Petropavlovsk**	**58.07**	**14**	P	**P**	**01 15 21.3**	**+2.1**
PET	**Petropavlovsk**	**58.07**	**14**	*ce*P	**P**	**01 15 19.7**	**+0.5**
PET				*e*S	**S**	**01 23 20.5**	**+2.2**
PET				pmax	pmax		
	comp=Z,2µm,19.7s						
PET				pmax	pmax		
	comp=Z,71nm,1.5s						
PET				MLR	MLR		
	comp=Z,7µm,17.0s						
PET				MLR	MLR		
	comp=Z,6µm,17.0s						
PET	**Petropavlovsk**	**58.07**	**14**	P	**P**	**01 15 19.4**	**+0.2**
EVN	**Everest**	**58.40**	**305**	IAmb	IAmb	01 15 29.4	
	comp=Z,97nm,1.1s						
RAGD	**RAYAGADA**	**58.44**	**294**	*e*P	**P**	**01 15 21.7**	**-0.8**
CIT	**Chita**	**58.56**	**342**	*e*P	**P**	**01 15 23.4**	**+0.6**
CIT				*e*		01 15 37.4	
CIT				*e*S	**S**	**01 23 30.2**	**+5.2**
CIT				*e*		01 25 10.0	
CIT				pmax	pmax		
	comp=Z,1µm,2.9s						
PALK	**Pallekele**	**58.66**	**280**	P	**P**	**01 15 24.1**	**-0.1**
PALK	**Pallekele**	**58.66**	**280**	P	**P**	**01 15 26.0**	**+1.9**
PALK	**Pallekele**	**58.66**	**280**	P	**P**	**01 15 24.1**	**-0.1**
PALK				pmax	pmax		
	comp=Z,42nm,0.9s						
PALK	**Pallekele**	**58.66**	**280**	P	**P**	**01 15 24.0**	**-0.1**
MALK	**Mahakanadarawa**	**58.97**	**281**	P	**P**	**01 15 26.1**	**-0.2**
MALK	**Mahakanadarawa**	**58.97**	**281**	⇑P	**P**	**01 15 26.4**	**+0.1**
BLSP	**Bilaspur**	**60.44**	**297**	*e*P	P	01 15 30.7	-5.6
BLSP				IAmb	IAmb	01 15 39.1	
	comp=Z,564nm,0.9s						
ZAK	**Zakamensk**	**60.99**	**335**	*e*P	**P**	**01 15 39.3**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,100nm,2.3s						
ALBI	**Allahabad**	**61.67**	**301**	*e*P	P	01 15 39.6	-4.9
ALBI				IAmb	IAmb	01 15 47.5	
	comp=Z,65nm,1.1s						
KOD	**Kodaikanal**	**62.24**	**283**	*e*P	P	01 15 41.1	-7.9
KOD				IAmb	IAmb	01 15 53.4	
	comp=Z,181nm,1.2s						
HYB	**Hyderabad**	**62.52**	**291**	*e*P	**P**	**01 15 50.4**	**0.0**
HYB				*e*pP	**pP**	**01 15 58.9**	**-0.2**
HYB				*e*PP	**PP**	**01 18 07.7**	**-0.5**
HYB				*e*S	**S**	**01 24 16.2**	**-0.5**
SMY	**Shemya**	**62.82**	**23**	P	**P**	**01 15 52.7**	**+1.0**
MA2	**Magadan**	**62.88**	**7**	P	**P**	**01 15 51.5**	**-0.5**
MA2	**Magadan**	**62.88**	**7**	P	**P**	**01 15 51.7**	**-0.3**
	comp=Z,125nm,0.9s,baz=175,slow=5.5,SNR=28						
	comp=Z,125nm,0.9s						
MA2	**Magadan**	**62.88**	**7**	P	**P**	**01 15 52.0**	**0.0**
MA2	**Magadan**	**62.88**	**7**	⇑P	**P**	**01 15 52.0**	**0.0**
MA2	**Magadan**	**62.88**	**7**	P	**P**	**01 15 52.2**	**+0.2**
MOY	**Mondy**	**62.92**	**335**	*e*P	**P**	**01 15 52.9**	**+0.3**
MOY				pmax	pmax		
	comp=Z,551nm,3.5s						
BOD	**Bodaibo**	**63.54**	**346**	*e*P	**P**	**01 15 56.0**	**-0.4**
BOD				pmax	pmax		
	comp=Z,255nm,2.3s						
XMAS	**Kiritimati**	**64.08**	**86**	IAMs_20	IAMs_20	01 39 22.1	
	comp=Z,17µm,22.0s						
LGTI	**Lohaghat**	**64.32**	**304**	*e*P	**P**	**01 15 58.4**	**-3.7**
LGTI				IAmb	IAmb	01 16 05.6	
	comp=Z,650nm,3.5s						
PTH	**Pithoragarh**	**64.38**	**305**	*e*P	P	01 15 57.8	-5.0
PTH				IAmb	IAmb	01 16 05.4	
	comp=Z,482nm,2.9s						
JHNI	**Jhansi**	**64.54**	**300**	*e*P	P	01 15 58.4	-5.3
JHNI				IAmb	IAmb	01 16 05.2	
	comp=Z,106nm,1.5s						
BHPL	**Bhopal**	**64.92**	**297**	*e*P	P	01 16 01.1	-5.1
BHPL				IAmb	IAmb	01 16 08.8	
	comp=Z,126nm,1.8s						
YAK	**Yakutsk**	**64.97**	**355**	P	**P**	**01 16 05.7**	**+0.1**
YAK	**Yakutsk**	**64.97**	**355**	IAMs_20	IAMs_20	01 42 29.9	
	comp=Z,18µm,21.0s						
YAK	**Yakutsk**	**64.97**	**355**	P	**P**	**01 16 05.8**	**+0.1**
	comp=Z,358nm,0.6s,baz=153,slow=2.1,SNR=55						
YAK	**Yakutsk**	**64.97**	**355**	P	**P**	**01 16 05.3**	**-0.4**
WMQ	**Urumqi**	**64.99**	**322**	⇑P	**P**	**01 16 07.3**	**+1.0**
WMQ				sP	sP	01 16 20.8	+2.4
WMQ				PP	**PP**	**01 18 31.4**	**+1.8**
WMQ				S	**S**	**01 24 49.4**	**+2.6**
WMQ				pmax	pmax		
	comp=Z,73nm,2.1s						
WMQ				pmax	pmax		
	comp=Z,3µm,4.3s						
WMQ				LR	LR		
	comp=Z,10µm,24.7s						
WMQ				LR	LR		
	comp=Z,4µm,18.5s						
WMQ				LR	LR		
	comp=Z,4µm,20.1s						
NRDN	**NARMADA NAGAR**	**65.02**	**297**	*e*P	P	01 16 01.7	-5.1
NRDN				IAmb	IAmb	01 16 12.6	
	comp=Z,121nm,0.8s						
JOSI	**Joshimath**	**65.25**	**305**	*e*P	P	01 16 03.6	-4.8
JOSI				IAmb	IAmb	01 16 14.0	
	comp=Z,758nm,0.9s						
GUNA	**GUNA**	**65.37**	**299**	*e*P	P	01 16 04.1	-5.0
GUNA				IAmb	IAmb	01 16 14.3	
	comp=Z,837nm,0.7s						
ADK	**Adak**	**66.25**	**28**	P	**P**	**01 16 13.8**	**-0.3**
ADK	**Adak**	**66.25**	**28**	P	**P**	**01 16 15.9**	**+1.8**
ADK	**Adak**	**66.25**	**28**	P	**P**	**01 16 13.8**	**-0.3**
ADK				pmax	pmax		
	comp=Z,269nm,1.2s						
ADK	**Adak**	**66.25**	**28**	⇑P	**P**	**01 16 14.4**	**+0.3**
SEY	**Seymchan**	**66.33**	**7**	P	**P**	**01 16 14.2**	**-0.2**
	comp=Z,67nm,0.8s,baz=180,slow=5.6,SNR=67						

	comp=Z,67nm,0.8s						
DDI	Dehra Dun	66.40	305	*e*P	P	01 16 11.2	-4.4
DDI				IAmb	IAmb	01 16 21.8	
	comp=Z,118nm,0.9s						
CASY	Casey	66.42	192	P	P	01 16 14.9	0.0
CASY	Casey	66.42	192	IAMs_20	IAMs_20	01 44 48.9	
	comp=Z,15µm,20.0s						
CASY	Casey	66.42	192	⇑P	P	01 16 16.1	+1.1
KIP	Kipapa	66.42	65	P	P	01 16 16.2	+0.3
KIP	Kipapa	66.42	65	P	P	01 16 17.6	+1.7
KIP	Kipapa	66.42	65*c*	*e*P	P	01 16 17.2	+1.3
KIP				pmax	pmax		
	comp=Z,240nm,1.0s						
HNLY	HANLEY	66.46	308	*e*P	P	01 16 11.8	-4.8
HNLY				IAmb	IAmb	01 16 20.1	
	comp=Z,194nm,1.9s						
LDR	Lodi Road	66.57	303	*e*P	P	01 16 12.2	-4.5
KAD	Karad	66.58	290	*e*P	P	01 16 11.6	-5.4
KAD				IAmb	IAmb	01 16 16.5	
	comp=Z,170nm,1.9s						
NDI	New Delhi	66.60	303	*e*P	P	01 16 12.6	-4.4
AYAN	Aya Nagar	66.62	303	*e*P	P	01 16 12.5	-4.5
AYAN				IAmb	IAmb	01 16 16.9	
	comp=Z,30µm,4.0s						
KLP	Kalpa	66.63	306	*e*P	P	01 16 12.8	-4.6
KLP				IAML		01 16 23.1	
	comp=Z,186nm,1.5s						
KUDL	Kundal	67.06	302	*e*P	P	01 16 15.4	-4.4
KUDL				IAML		01 16 22.1	
	comp=Z,234nm,1.7s						
POO	Poona	67.12	291	*e*P	P	01 16 14.5	-6.0
POO				IAmb	IAmb	01 16 23.4	
	comp=Z,143nm,0.9s						
SMLA	Simla	67.38	305	*e*P	P	01 16 17.6	-4.2
SMLA				IAML		01 16 22.8	
	comp=Z,172nm,2.9s						
ATKA	Atka Island	67.65	29	IAMs_20	IAMs_20	01 40 19.4	
	comp=Z,17µm,21.0s						
ATKA	Atka Island	67.65	29	P	P	01 16 24.8	+1.8
BHK	Bhakra	68.08	305	*e*P	P	01 16 19.3	-6.9
BHK				IAmb	IAmb	01 16 29.4	
	comp=Z,3µm,3.7s						
POHA	Pohakuloa	68.34	68	P	P	01 16 30.1	+1.8
POHA	Pohakuloa	68.34	68	P	P	01 16 30.4	+2.0
DHRM	DHARAMSHALA	68.43	306	*e*P	P	01 16 24.1	-4.6
DHRM				IAmb	IAmb	01 16 33.8	
	comp=Z,130nm,1.2s						
ZSN	Zaisan	68.55	324	*e*P	P	01 16 27.9	-1.0
ZSN				*e*S	S	01 25 28.7	-0.8
ZSN				pmax	pmax		
	comp=Z,152nm,2.2s						
ZSN	Zaisan	68.55	324	*e*P	P	01 16 27.9	-1.0
	comp=Z,152nm,2.2s						
ZSN				*e*S	S	01 25 28.8	-0.8
PUH	Pauahi	68.56	68	IAmb	IAmb	01 16 32.9	
	comp=Z,74nm,0.6s						
STCH	Steam Cracks	68.65	68	IAmb	IAmb	01 16 32.9	
	comp=Z,103nm,0.7s						
JOKA	Jonika Flow	68.77	68	IAmb	IAmb	01 16 34.5	
	comp=Z,144nm,1.1s						
JMU	Jammu	69.69	306	*e*P	P	01 16 32.8	-3.4
JMU				IAmb	IAmb	01 16 42.5	
	comp=Z,127nm,1.1s						
BKNR	BIKANER	69.76	301	*e*P	P	01 16 32.6	-4.1
MK31	Makanchi Array	69.77	322*c*	*i*P	P	01 16 36.0	-0.5
MKAR	Makanchi Array	69.77	322	P	P	01 16 35.6	-0.9
MKAR	Makanchi Array	69.77	322	P	P	01 16 36.3	-0.2
	comp=Z,27nm,0.8s,baz=106,slow=8.0,SNR=66						
MKAR				PKPPKP	P'P'df	01 44 45.0	+2.7
	comp=Z,0.9nm,0.8s,baz=309,slow=3.9,SNR=4.3						
	comp=Z,27nm,0.8s						
MKAR	Makanchi Array	69.77	322	*i* P	P	01 16 36.2	-0.3
MKAR				pmax	pmax		
	comp=Z,28nm,0.8s						
MKAR	Makanchi Array	69.77	322	LR	LR	01 48 55.9	
	comp=Z,8µm,20.1s,baz=102,slow=36						
MAKZ	Makanchi	69.97	322	P	P	01 16 36.7	-1.0
MAKZ	Makanchi	69.97	322	P	P	01 16 36.7	-1.0
MAKZ				pmax	pmax		
	comp=Z,281nm,1.6s						
MAKZ				MLR	MLR		
	comp=Z,9µm,20.0s						
MAKZ	Makanchi	69.97	322	P	P	01 16 37.4	-0.4
MAKZ				pP	pP	01 16 45.8	-0.7
SHLS	Shalkode	70.00	318	*e*P	P	01 16 35.1	-2.9
SHLS				*e*S	S	01 25 42.4	-4.5
SHLS				pmax	pmax		
	comp=Z,205nm,2.0s						
SHLS	Shalkode	70.00	318	*e*P	P	01 16 35.2	-2.9
	comp=Z,205nm,2.0s						
SHLS				*e*S	S	01 25 42.5	-4.5
PDGK	Podgornoye	70.05	318	P	P	01 16 37.5	-0.9
UZB	Uzynbulak	70.28	318	*e*P	P	01 16 38.6	-1.2
UZB				*e*S	S	01 25 49.0	-1.4
UZB	Uzynbulak	70.28	318	*e*P	P	01 16 38.6	-1.2
UZB				*e*S	S	01 25 49.1	-1.4
TARG	Taragay, Kyrgy	70.56	316	IAmb	IAmb	01 16 48.0	
	comp=Z,157nm,1.6s						
KPKS	Kokpek	70.64	318	*e*P	P	01 16 40.7	-1.2
KPKS				*e*S	S	01 25 53.2	-1.2
KPKS				pmax	pmax		
	comp=Z,124nm,2.4s						
KPKS	Kokpek	70.64	318	*e*P	P	01 16 40.7	-1.2
	comp=Z,124nm,2.4s						
KPKS				*e*S	S	01 25 53.3	-1.2
SATY	Saty	70.66	318	*e*P	P	01 16 40.9	-1.2
SATY				*e*S	S	01 25 53.5	-1.3
SATY	Saty	70.66	318	*e*P	P	01 16 40.9	-1.2
SATY				*e*S	S	01 25 53.5	-1.3
NIKH	Nikolski High	70.75	31	P	P	01 16 41.5	-0.8
	baz=237						
KSH	Kashi	71.06	313	P	P	01 16 45.8	+1.2
KSH				pP	pP	01 16 55.0	+1.6
KSH				S	S	01 26 03.5	+4.0
KSH				pmax	pmax		
	comp=Z,3µm,5.4s						
KSH				LR	LR		
	comp=Z,6µm,20.3s						
KSH				LR	LR		
	comp=Z,10µm,21.3s						
KSH				LR	LR		
	comp=Z,15µm,22.7s						
NIL	Nilore	71.29	307	P	P	01 16 45.3	-0.7
NIL				IAmb	IAmb	01 16 52.2	
	comp=Z,87nm,1.1s						
NIL	Nilore	71.29	307	P	P	01 16 46.3	+0.2
NIL				P	P	01 16 46.3	+0.2
NIL	Nilore	71.29	307	P	P	01 16 45.3	-0.7
NIL				pmax	pmax		
	comp=Z,87nm,1.1s						
NIL	Nilore	71.29	307	P	P	01 16 45.8	-0.2
NIL				sP	sP	01 16 58.1	0.0
TDK	Taldyqorghan	71.44	319	*e*P	P	01 16 45.6	-1.1
TDK				pmax	pmax		
	comp=Z,119nm,2.2s						
TDK				MLR	MLR		
	comp=Z,4µm,20.0s						
TDK	Taldyqorghan	71.44	319	*e*P	P	01 16 45.6	-1.1
	comp=Z,119nm,2.2s						
TDK				LR	LR	01 48 39.3	
	comp=Z,4µm,19.9s						
ARXS	Arharly	71.50	319	*e*P	P	01 16 46.6	-0.6
MDOK	Medeo	71.62	317	*e*P	P	01 16 46.6	-1.3
MDOK				*e*S	S	01 26 04.5	-1.4
MDOK				MLR	MLR		
	comp=Z,3µm,17.0s						
MDOK	Medeo	71.62	317	*e*P	P	01 16 46.7	-1.3
MDOK				*e*S	S	01 26 04.6	-1.4
MDOK				LR	LR	01 48 47.8	
	comp=Z,3µm,17.3s						
AAA	Alma-Ata	71.73	317	*e*P	P	01 16 47.4	-1.1
AAA				MLR	MLR		
	comp=Z,9µm,19.0s						
AAA	Alma-Ata	71.73	317	*e*P	P	01 16 47.4	-1.1
	comp=Z,13µm,23.7s						
AAA				LR	LR	01 48 51.2	
	comp=Z,9µm,19.2s						
PAE	Paea	71.82	108	*e*PKIKP	P	01 16 52.5	+3.1
	comp=Z,241nm,23.2s						
PAE				*e*S	S	01 26 10.4	+1.6
	comp=Z,439nm,22.8s						
PAE	Paea	71.82	108	*e*LR	LR	01 38 49.5	
	comp=Z,2µm,21.9s						
PPT2	Papeete2	71.82	108	*e*PKIKP	P	01 16 44.3	-5.3
	comp=Z,2µm,25.5s						
PPT2	Papeete2	71.82	108	*e*PP	PP	01 19 26.2	-3.1
	comp=Z,466nm,23.2s						
PPT2				*e*S	S	01 26 07.2	-1.7
	comp=Z,3µm,24.0s						
PPT2				*e*SS	SS	01 30 39.9	-5.7
	comp=Z,3µm,25.0s						
PPT2				*e*LQ	LQ	01 35 46.8	
	comp=Z,9µm,28.8s						
PPT2				*e*LR	LR	01 38 46.1	
	comp=Z,9µm,22.2s						
PPT2				*e*LR	LR	01 38 49.8	
	comp=Z,8µm,27.2s						
ZALV	Zalesovo Beam	71.93	330	P	P	01 16 48.2	-1.2
	comp=Z,22nm,0.6s,baz=109,slow=5.3,SNR=63						
	comp=Z,22nm,0.6s						
ZALV	Zalesovo Beam	71.93	330	*i* P	P	01 16 48.5	-0.9
ZALV				pmax	pmax		
	comp=Z,22nm,0.6s						
BOOM	Boomskoye usch	72.13	316	IAmb	IAmb	01 16 56.9	
	comp=Z,169nm,1.5s						
TVO	Taravao	72.14	108	*e*LR	LR	01 38 59.0	
	comp=Z,2µm,22.3s						
TBI	Tubuai	72.31	114	*e*PKP1	P	01 16 51.7	-0.6
	comp=Z,6µm,26.8s						
TBI	Tubuai	72.31	114	*e*PP	PP	01 19 32.7	-0.6
	comp=Z,2µm,26.2s						
TBI				*e*S	S	01 26 13.3	-0.9
	comp=Z,9µm,26.0s						
TBI				*e*SS	SS	01 30 50.7	-2.0
	comp=Z,18µm,30.2s						
TBI				*e*LQ	LQ	01 36 03.4	
	comp=Z,57µm,38.0s						
TBI				*e*LR	LR	01 38 56.9	
	comp=Z,11µm,22.1s						
TBI				*e*LR	LR	01 39 00.9	
	comp=Z,52µm,24.2s						
TBI				*e*LR	LR	01 39 03.4	
	comp=Z,13µm,24.0s						
KUU	Kurty	72.37	318	*e*P	P	01 16 51.2	-1.1
KUU				pmax	pmax		
	comp=Z,91nm,1.4s						
KUU	Kurty	72.37	318	*e*P	P	01 16 51.3	-1.1
	comp=Z,91nm,1.4s						
KUU				LR	LR	01 49 13.2	
	comp=Z,7µm,21.1s						
UNV	Unalaska Valle	72.41	31	IAmb	IAmb	01 16 58.5	
	comp=Z,128nm,0.9s						
UNV				IAMs_20	IAMs_20	01 44 40.4	
	comp=Z,18µm,20.0s						
UNV	Unalaska Valle	72.41	31	P	P	01 16 52.6	+0.4
UNV	Unalaska Valle	72.41	31	P	P	01 16 51.9	-0.3
	baz=239,SNR=21						
P08K	Saint George I	72.44	27	P	P	01 16 54.3	+2.0
P08K				IAMs_20	IAMs_20	01 44 37.0	
	comp=Z,13µm,21.0s						
P08K	Saint George I	72.44	27	P	P	01 16 52.9	+0.6
	baz=235						
SPIA	Saint Paul Isl	72.46	26	P	P	01 16 52.7	+0.3
	baz=235						
TKM2	Tokmak 2	72.52	317	P	P	01 16 53.5	0.0
	SNR=42						
TKM2	Tokmak 2	72.52	317	P	P	01 16 53.2	-0.3
LVA	Lava Point	72.81	30	P	P	01 16 54.0	-0.6
KBK	Karagaybulak	72.87	316	P	P	01 16 56.2	+0.7
	SNR=17						
AKUT	Akutan	72.93	31	P	P	01 16 56.9	+1.6
UCH	Uchtor	73.03	316	P	P	01 17 01.0	+4.2
	SNR=11						
CHMS	Chumysh	73.13	317	P	P	01 17 00.3	+3.4
	SNR=21						
AAK	Ala-Archa	73.18	316	P	P	01 16 58.4	+1.1
	SNR=23						
AAK	Ala-Archa	73.18	316	P	P	01 16 57.4	0.0
AAK	Ala-Archa	73.18	316	P	P	01 16 57.3	0.0
AAK				P	P	01 16 57.3	0.0
AAK	Ala-Archa	73.18	316	P	P	01 16 57.4	0.0
AAK				pmax	pmax		
	comp=Z,104nm,1.4s						
AAK				MLR	MLR		
	comp=Z,7µm,20.0s						
AAK	Ala-Archa	73.18	316	*i* P	P	01 16 57.3	0.0
	SNR=39						
AAK	Ala-Archa	73.18	316	P	P	01 16 56.3	-1.0
AAK				S	S	01 26 24.6	+0.7
BILL	Bilibino	73.22	11*c*	*e*P	P	01 16 56.4	-0.4
BILL				pmax	pmax		
	comp=Z,187nm,1.6s						
BILL				MLR	MLR		
	comp=Z,8µm,19.0s						
PMOR	Pomariorio Ree	73.33	105	*e*S	S	01 26 21.8	-4.3
	comp=Z,3µm,25.3s						
PMOR	Pomariorio Ree	73.33	105	*e*LR	LR	01 39 34.4	
	comp=Z,14µm,22.1s						
SGDS	Sogindy	73.37	317	*e*P	P	01 16 57.2	-1.1
	comp=Z,242nm,2.8s						
USP	Ospenovka	73.39	317	P	P	01 16 58.4	0.0
	SNR=59						
AML	Almayashu	73.57	315	P	P	01 17 01.2	+1.3
	SNR=61						
VAH	Vaihoa	73.60	105	*e*LR	LR	01 39 35.3	
	comp=Z,10µm,22.3s						
EKS2	Erkin-Say	73.69	316	P	P	01 17 01.7	+1.5
	SNR=22						
KURK	Kurchatov	73.70	325	P	P	01 17 00.3	+0.3
KURK				P	P	01 17 00.3	+0.3
KURK	Kurchatov	73.70	325*c*	*i*P	P	01 16 59.3	-0.7
KURK				pmax	pmax		
	comp=Z,246nm,2.5s						
KURK				MLR	MLR		
	comp=Z,8µm,18.0s						
KURBB	Kurchatov Arra	73.72	325	P	P	01 16 59.8	-0.2
	comp=Z,38nm,0.8s,baz=118,slow=5.4,SNR=70						
KURBB				PP	PP	01 19 46.3	+1.6
	comp=Z,4.9nm,1.0s,baz=112,slow=9.6,SNR=4.7						
	comp=Z,38nm,0.8s						
KURBB	Kurchatov Arra	73.72	325	P	P	01 16 58.2	-1.9
ARSB	Arslanbob	73.81	314	IAmb	IAmb	01 17 05.1	
	comp=Z,112nm,1.1s						
BTLS	Baital	74.32	318	*e*P	P	01 17 02.7	-1.0
BTLS				pmax	pmax		
	comp=Z,429nm,3.4s						
BTLS	Baital	74.32	318	*e*P	P	01 17 02.8	-1.0
	comp=Z,429nm,3.4s						
FALS	False Pass	74.48	31	IAMs_20	IAMs_20	01 45 41.2	
	comp=Z,15µm,20.0s						
FALS	False Pass	74.48	31	P	P	01 17 06.0	+1.6
FALS	False Pass	74.48	31	P	P	01 17 04.4	0.0
	baz=242						
TIXI	Tiksi	74.54	357	P	P	01 17 04.3	-0.1
TIXI	Tiksi	74.54	357	IAMs_20	IAMs_20	01 48 34.6	
	comp=Z,13µm,20.0s						
TIXI	Tiksi	74.54	357	P	P	01 17 03.0	-1.4
	comp=Z,16nm,0.4s,baz=167,slow=6.7,SNR=39						
	comp=Z,16nm,0.4s						
TIXI	Tiksi	74.54	357	P	P	01 17 04.3	-0.1
TIXI				pmax	pmax		
	comp=Z,57nm,0.9s						
KBU	Kabul Universi	74.81	307	P	P	01 17 06.1	-1.0
KBL	Kabul	74.89	307	P	P	01 17 06.8	-0.8
KBL	Kabul	74.89	307	P	P	01 17 07.6	+0.1
	SNR=17						
KBL				P	P	01 17 07.6	+0.1
	SNR=17						
KBL	Kabul	74.89	307	P	P	01 17 06.8	-0.8
KBL				pmax	pmax		
	comp=Z,41nm,1.2s						
BTK	Batken	74.99	313	IAmb	IAmb	01 17 30.7	
	comp=Z,145nm,1.5s						
DZA	Taraz	75.47	316	*e*P	P	01 17 09.3	-1.1
DZA	Taraz	75.47	316	*e*P	P	01 17 09.4	-1.1
S12K	Black Hills	75.57	30	IAMs_20	IAMs_20	01 46 27.9	
	comp=Z,12µm,20.0s						
S12K	Black Hills	75.57	30	P	P	01 17 10.0	-0.7
	baz=242,SNR=55						
VNDA	Vanda	75.74	175	P	P	01 17 10.9	-0.5
VNDA				IAmb	IAmb	01 17 27.3	
	comp=Z,189nm,1.9s						
VNDA	Vanda	75.74	175	P	P	01 17 10.8	-0.5
	comp=Z,34nm,0.7s,baz=326,slow=6.8,SNR=106						
	comp=Z,34nm,0.7s						
VNDA	Vanda	75.74	175	LR	LR	01 53 17.8	
	comp=Z,25µm,18.4s,baz=352,slow=37						
GAMB	Gambell	75.85	20	P	P	01 17 12.8	+0.7
	baz=232						
SIMJ	Simiganj	75.96	311	P	P	01 17 12.9	-0.5
M11K	Mekoryuk	76.00	25	P	P	01 17 14.5	+1.5
M11K				IAmb	IAmb	01 17 18.5	
	comp=Z,158nm,1.4s						
M11K				IAMs_20	IAMs_20	01 46 01.9	
	comp=Z,16µm,20.0s						
M11K	Mekoryuk	76.00	25	P	P	01 17 13.8	+0.8
	baz=238						
KK31	Karatay Array	76.10	316	IAmb	IAmb	01 17 19.5	
	comp=Z,233nm,1.8s						
KK31	Karatay Array	76.10	316	*i* P	P	01 17 13.3	-0.8
KKAR	Karatay Array	76.10	316	P	P	01 17 12.6	-1.5
KKAR	Karatay Array	76.10	316	P	P	01 17 12.6	-1.5
IUG	Iuzhnay	76.16	315	*e*P	P	01 17 13.3	-1.2
IUG				*e*S	S	01 26 55.6	-1.5
IUG				pmax	pmax		
	comp=Z,443nm,2.7s						
IUG	Iuzhnay	76.16	315	*e*P	P	01 17 13.3	-1.2
	comp=Z,443nm,2.7s						
IUG				*e*S	S	01 26 55.7	-1.5
SDPT	Sand Point	76.21	31	P	P	01 17 13.9	-0.5
SDPT	Sand Point	76.21	31	P	P	01 17 15.1	+0.8
SDPT	Sand Point	76.21	31	P	P	01 17 14.1	-0.3
	baz=244,SNR=12						
CNBA	Chernabura Isl	76.44	32	IAMs_20	IAMs_20	01 47 09.2	
	comp=Z,12µm,20.0s						
CHNA	Chernabura Isl	76.45	32	P	P	01 17 16.6	+0.9
CHNA	Chernabura Isl	76.45	32	P	P	01 17 15.6	-0.1
	baz=245,SNR=11						
SBA	Scott Base	76.51	174	P	P	01 17 17.4	+1.7
SBA	Scott Base	76.51	174	IAMs_20	IAMs_20	01 53 31.7	
	comp=Z,12µm,18.0s						
SBA	Scott Base	76.51	174	P	P	01 17 17.4	+1.7
SBA				pmax	pmax		
	comp=Z,472nm,1.9s						
SBA				MLR	MLR		
	comp=Z,12µm,18.0s						
CHM	Chimkent	76.52	315	*e*P	P	01 17 15.4	-1.0
CHM				MLR	MLR		
	comp=Z,3µm,19.0s						
CHM	Chimkent	76.52	315	*e*P	P	01 17 15.4	-1.0
CHM				LR	LR	01 51 49.5	
	comp=Z,3µm,18.8s						
OTUK	Ortayu	76.53	321	P	P	01 17 15.5	-0.9
BRLS	Borolday	76.56	315	*e*P	P	01 17 15.8	-0.8
BRLS				pmax	pmax		
	comp=Z,337nm,2.9s						
BRLS	Borolday	76.56	315	*e*P	P	01 17 15.8	-0.8
	comp=Z,337nm,2.9s						
BRZS	Berezniki	76.92	323	*e*P	P	01 17 17.7	-0.8
BRZS				*e*S	S	01 27 04.3	-0.5
BRZS	Berezniki	76.92	323	*e*P	P	01 17 17.8	-0.8
BRZS				*e*S	S	01 27 04.3	-0.5
S14K	Fog Glacier	77.09	30	P	P	01 17 19.9	+0.5
	baz=245,SNR=19						
M13K	Dall Lake	77.23	26	IAMs_20	IAMs_20	01 49 28.7	
	comp=Z,15µm,20.0s						
M13K	Dall Lake	77.23	26	P	P	01 17 21.0	+1.1
	baz=240,SNR=30						
K13K	Kusilvak Mount	77.45	24	IAmb	IAmb	01 17 25.7	
	comp=Z,189nm,1.1s						
K13K	Kusilvak Mount	77.45	24	P	P	01 17 21.9	+0.7
	baz=239,SNR=76						
O14K	Tigyukauivet M	77.59	27	IAmb	IAmb	01 17 27.0	
	comp=Z,169nm,1.2s						
O14K	Tigyukauivet M	77.59	27	P	P	01 17 22.6	+0.6
	baz=242,SNR=22						
N14K	Kuskokwak Cree	77.72	26	IAmb	IAmb	01 17 26.7	
	comp=Z,259nm,1.3s						
N14K				IAMs_20	IAMs_20	01 47 28.7	
	comp=Z,18µm,21.0s						
N14K	Kuskokwak Cree	77.72	26	P	P	01 17 23.2	+0.5
	baz=242,SNR=18						
L14K	Kuka Creek	77.97	25	IAMs_20	IAMs_20	01 47 02.3	
	comp=Z,13µm,21.0s						
L14K	Kuka Creek	77.97	25	P	P	01 17 24.8	+0.7
	baz=241,SNR=183						
M14K	Bethel	77.99	26	IAMs_20	IAMs_20	01 50 31.9	
	comp=Z,12µm,20.0s						
M14K	Bethel	77.99	26	P	P	01 17 24.8	+0.6
	baz=242,SNR=120						
O15K	Ungalikthiuk R	78.22	28	IAmb	IAmb	01 17 30.6	
	comp=Z,123nm,1.2s						
O15K	Ungalikthiuk R	78.22	28	P	P	01 17 26.2	+0.6
	baz=244,SNR=18						
TNA	Tin City	78.22	20	IAmb	IAmb	01 17 28.4	
	comp=Z,287nm,1.9s						
TNA	Tin City	78.22	20	P	P	01 17 25.8	+0.4
	baz=235						
J14K	Nanvaranak Lak	78.31	23	P	P	01 17 27.2	+1.2
	baz=240,SNR=31						
M15K	Kasigluk River	78.52	26	P	P	01 17 27.6	+0.5
	baz=243,SNR=64						
N15K	Kwethluk River	78.54	27	IAmb	IAmb	01 17 32.6	
	comp=Z,168nm,1.1s						
N15K	Kwethluk River	78.54	27	P	P	01 17 28.2	+0.8
	baz=243,SNR=65						
ANM	Nome	78.57	21	IAMs_20	IAMs_20	01 48 26.9	
	comp=Z,13µm,20.0s						
ANM	Nome	78.57	21	P	P	01 17 28.0	+0.6
	baz=238						
L15K	Ungalak Mounta	78.63	25	P	P	01 17 28.2	+0.4
	baz=242,SNR=56						
F14K	Arctic Creek	78.72	20	P	P	01 17 29.2	+1.0
	baz=237						
K15K	Wolf Creek Mou	78.91	24	IAmb	IAmb	01 17 33.8	
	comp=Z,186nm,1.1s						
K15K				IAMs_20	IAMs_20	01 49 42.1	
	comp=Z,11µm,20.0s						
K15K	Wolf Creek Mou	78.91	24	P	P	01 17 30.3	+1.0
	baz=242,SNR=83						
CHIR	Chirikof Islan	78.92	32	IAmb	IAmb	01 17 33.3	
	comp=Z,104nm,0.9s						
CHIR				IAMs_20	IAMs_20	01 47 29.9	
	comp=Z,14µm,21.0s						
CHIR	Chirikof Islan	78.92	32	P	P	01 17 30.2	+0.7
	baz=248						
P16K	Nushagak River	79.01	28	IAMs_20	IAMs_20	01 46 29.1	
	comp=Z,15µm,22.0s						
P16K	Nushagak River	79.01	28	P	P	01 17 30.4	+0.5
	baz=246,SNR=12						
O16K	Kokwok River B	79.20	28	P	P	01 17 31.6	+0.6
	baz=245,SNR=53						
N16K	Nishlik Lake	79.27	27	P	P	01 17 32.3	+1.0
	baz=244,SNR=74						
G15K	Niukluk	79.28	21	P	P	01 17 31.6	+0.4
	baz=239,SNR=16						
BVA0	Borovoye Array	79.30	325	*i* P	P	01 17 31.3	-0.4
BVAR	Borovoye Array	79.30	325	P	P	01 17 30.6	-1.0
	comp=Z,82nm,1.0s,baz=114,slow=7.0,SNR=121						
	comp=Z,82nm,1.0s						
BRVK	Borovoye	79.37	325	P	P	01 17 30.8	-1.2
BRVK				IAmb	IAmb	01 17 37.2	
	comp=Z,185nm,1.4s						
BRVK	Borovoye	79.37	325	P	P	01 17 31.5	-0.6
BRVK				P	P	01 17 31.5	-0.6
BRVK	Borovoye	79.37	325*c*	*i*P	P	01 17 31.6	-0.4
BRVK				pmax	pmax		
	comp=Z,90nm,0.9s						
BRVK				MLR	MLR		
	comp=Z,7µm,20.0s						
M16K	Timber Creek	79.42	26	IAmb	IAmb	01 17 36.9	
	comp=Z,143nm,0.9s						
M16K				IAMs_20	IAMs_20	01 48 31.7	
	comp=Z,13µm,21.0s						
M16K	Timber Creek	79.42	26	P	P	01 17 32.9	+0.8
	baz=244,SNR=92						
F15K	North Star Dit	79.44	21	P	P	01 17 33.5	+1.4
	baz=238,SNR=14						
L16K	Owhat River	79.50	25	IAmb	IAmb	01 17 36.6	
	comp=Z,147nm,1.1s						
L16K				IAMs_20	IAMs_20	01 50 48.8	
	comp=Z,15µm,20.0s						
L16K	Owhat River	79.50	25	P	P	01 17 33.0	+0.5
	baz=244,SNR=63						
Q16K	King Salmon	79.50	29	P	P	01 17 31.9	-0.7
	baz=247						
Q17K	Contact Creek	79.71	29	P	P	01 17 32.9	-1.0
	baz=248,SNR=45						
O17K	Koliganek Bris	79.73	28	P	P	01 17 34.3	+0.4
	baz=246,SNR=98						
J16K	Anvik River	79.75	24	IAmb	IAmb	01 17 38.6	
	comp=Z,113nm,1.1s						
J16K				IAMs_20	IAMs_20	01 48 25.3	
	comp=Z,17µm,21.0s						
J16K	Anvik River	79.75	24	P	P	01 17 35.1	+1.2
	baz=242,SNR=34						
H16K	Elim	79.77	22	P	P	01 17 34.6	+0.7
	baz=241						
P17K	Kvichak River	79.81	28	P	P	01 17 33.7	-0.6

	baz=247,SNR=9.5						
SII	**Sitkinak Islan**	**79.94**	**31**	IAMs_20	IAMs_20	01 51 23.8	
	comp=Z,13µm,20.0s						
SII	**Sitkinak Islan**	**79.94**	**31**	P	**P**	**01 17 36.2**	**+1.1**
SII	**Sitkinak Islan**	**79.94**	**31**	P	**P**	**01 17 35.7**	**+0.7**
	baz=249,SNR=7.4						
ACHA	**Angle Creek He**	**79.97**	**29**	IAmb	IAmb	01 17 37.1	
	comp=Z,343nm,1.8s						
I17K	**Unalakleet**	**80.00**	**23**	IAmb	IAmb	01 17 42.0	
	comp=Z,173nm,1.3s						
I17K	**Unalakleet**	**80.00**	**23**	P	**P**	**01 17 36.4**	**+1.2**
	baz=242,SNR=7.3						
N17K	**Nushagak Hills**	**80.00**	**27**	IAmb	IAmb	01 17 39.9	
	comp=Z,135nm,1.1s						
N17K				IAMs_20	IAMs_20	01 49 11.1	
	comp=Z,14µm,21.0s						
N17K	**Nushagak Hills**	**80.00**	**27**	P	**P**	**01 17 36.1**	**+0.8**
	baz=246,SNR=80						
G16K	**Koyuk River**	**80.10**	**21**	IAmb	IAmb	01 17 38.7	
	comp=Z,288nm,1.9s						
G16K				IAMs_20	IAMs_20	01 50 14.3	
	comp=Z,12µm,20.0s						
G16K	**Koyuk River**	**80.10**	**21**	P	**P**	**01 17 36.2**	**+0.6**
	baz=240						
R18K	**Karluk**	**80.16**	**30**	P	**P**	**01 17 36.3**	**+0.1**
	baz=249						
L17K	**Donlin**	**80.19**	**25**	P	**P**	**01 17 37.5**	**+1.3**
	baz=245,SNR=51						
M17K	**Holitna River**	**80.25**	**26**	IAmb	IAmb	01 17 42.3	
	comp=Z,180nm,1.0s						
M17K				IAMs_20	IAMs_20	01 49 07.6	
	comp=Z,13µm,20.0s						
M17K	**Holitna River**	**80.25**	**26**	P	**P**	**01 17 37.7**	**+1.1**
	baz=246,SNR=87						
Q18K	**Katmai Hardscr**	**80.29**	**29**	P	**P**	**01 17 35.9**	**-1.1**
	baz=248,SNR=35						
J17K	**VABM Dome**	**80.42**	**24**	IAMs_20	IAMs_20	01 48 12.9	
	comp=Z,12µm,22.0s						
J17K	**VABM Dome**	**80.42**	**24**	P	**P**	**01 17 38.5**	**+1.1**
	baz=244,SNR=42						
K17K	**Iditarod**	**80.44**	**25**	IAmb	IAmb	01 17 43.1	
	comp=Z,150nm,0.9s						
K17K				IAMs_20	IAMs_20	01 49 09.5	
	comp=Z,12µm,21.0s						
K17K	**Iditarod**	**80.44**	**25**	P	**P**	**01 17 38.4**	**+0.8**
	baz=245,SNR=74						
P18K	**Big Mountain,**	**80.46**	**28**	P	**P**	**01 17 37.0**	**-0.8**
	baz=248,SNR=15						
C16K	**Lisburne Hills**	**80.59**	**18**	P	**P**	**01 17 38.6**	**+0.4**
	baz=237,SNR=6.5						
OHAK	**Old Harbor**	**80.63**	**31**	IAmb	IAmb	01 17 44.7	
	comp=Z,119nm,0.7s						
OHAK	**Old Harbor**	**80.63**	**31**	P	**P**	**01 17 38.8**	**+0.1**
OHAK	**Old Harbor**	**80.63**	**31**	P	**P**	**01 17 38.8**	**+0.1**
	baz=250,SNR=33						
O18K	**Koktuh Hills**	**80.64**	**28**	IAmb	IAmb	01 17 43.2	
	comp=Z,130nm,1.4s						
O18K				IAMs_20	IAMs_20	01 47 30.2	
	comp=Z,13µm,21.0s						
O18K	**Koktuh Hills**	**80.64**	**28**	P	**P**	**01 17 38.8**	**0.0**
	baz=248,SNR=16						
N18K	**Kilae Creek**	**80.65**	**27**	IAmb	IAmb	01 17 42.3	
	comp=Z,389nm,1.9s						
N18K				IAMs_20	IAMs_20	01 50 35.2	
	comp=Z,14µm,20.0s						
N18K	**Kilae Creek**	**80.65**	**27**	P	**P**	**01 17 39.7**	**+0.9**
	baz=247,SNR=43						
G17K	**Kiwalik Mounta**	**80.77**	**22**	P	**P**	**01 17 40.1**	**+0.8**
	baz=242,SNR=32						
H17K	**Granite Mounta**	**80.79**	**22**	IAmb	IAmb	01 17 48.5	
	comp=Z,121nm,1.3s						
H17K				IAMs_20	IAMs_20	01 49 35.6	
	comp=Z,16µm,20.0s						
H17K	**Granite Mounta**	**80.79**	**22**	P	**P**	**01 17 40.2**	**+0.8**
	baz=243,SNR=28						
L18K	**Granite Mounta**	**80.91**	**25**	IAmb	IAmb	01 17 44.6	
	comp=Z,99nm,1.1s						
L18K				IAMs_20	IAMs_20	01 49 06.0	
	comp=Z,17µm,21.0s						
L18K	**Granite Mounta**	**80.91**	**25**	P	**P**	**01 17 41.0**	**+0.9**
	baz=246,SNR=56						
TAOE	**Nuku Hiva Isla**	**80.91**	**98**	*e*PKIKP	**P**	**01 17 41.8**	**+0.5**
	comp=Z,1µm,26.3s						
TAOE	**Nuku Hiva Isla**	**80.91**	**98**	*e*PP	PP	01 20 36.9	-9.2
	comp=Z,360nm,24.5s						
TAOE				*e*S	**S**	**01 27 46.2**	**-2.8**
	comp=Z,1µm,24.2s						
TAOE				*e*SS	**SS**	**01 33 05.2**	**+1.7**
	comp=Z,3µm,27.2s						
TAOE				*e*LQ	LQ	01 39 32.0	
	comp=Z,8µm,40.5s						
TAOE				*e*LR	LR	01 43 01.5	
	comp=Z,16µm,24.7s						
M18K	**Stony River**	**81.00**	**26**	P	**P**	**01 17 41.2**	**+0.6**
	baz=247,SNR=69						
F17K	**Baldwin Pennin**	**81.01**	**21**	P	**P**	**01 17 41.0**	**+0.4**
	baz=241						
D17K	**Noatak River**	**81.01**	**19**	P	**P**	**01 17 41.1**	**+0.6**
	baz=239,SNR=31						
Q19K	**Cape Douglas,**	**81.05**	**29**	IAmb	IAmb	01 17 48.9	
	comp=Z,112nm,0.8s						
Q19K	**Cape Douglas,**	**81.05**	**29**	P	**P**	**01 17 40.4**	**-0.6**
	baz=249,SNR=6.9						
JLN	**Jalan Bani Buh**	**81.06**	**293**	P	**P**	**01 17 42.5**	**+0.6**
JLN				P	**P**	**01 17 42.5**	**+0.6**
E17K	**Hotham Inlet**	**81.12**	**20**	P	**P**	**01 17 41.9**	**+0.8**
	baz=241,SNR=7.2						
KDAK	**Kodiak Island**	**81.18**	**30**	P	**P**	**01 17 41.1**	**-0.6**
KDAK				IAmb	IAmb	01 17 45.3	
	comp=Z,134nm,0.9s						
KDAK	**Kodiak Island**	**81.18**	**30*c***	*i*P	**P**	**01 17 41.8**	**+0.2**
KDAK				pmax	pmax		
	comp=Z,439nm,2.0s						
KDAK	**Kodiak Island**	**81.18**	**30**	P	**P**	**01 17 42.0**	**+0.4**
	baz=250						
O19K	**Port Alsworth**	**81.19**	**28**	IAMs_20	IAMs_20	01 49 05.5	
	comp=Z,12µm,21.0s						
O19K	**Port Alsworth**	**81.19**	**28**	P	**P**	**01 17 41.1**	**-0.5**
	baz=249						
RDOG	**Red Dog Mine**	**81.25**	**19**	P	**P**	**01 17 41.9**	**+0.1**
	baz=240,SNR=8.0						
N19K	**Bonanza Creek**	**81.34**	**27**	IAmb	IAmb	01 17 46.7	
	comp=Z,176nm,1.1s						
N19K				IAMs_20	IAMs_20	01 49 53.5	
	comp=Z,14µm,21.0s						
N19K	**Bonanza Creek**	**81.34**	**27**	P	**P**	**01 17 42.9**	**+0.4**
	baz=248,SNR=78						
C17K	**DeLong Mountai**	**81.38**	**18**	P	**P**	**01 17 43.1**	**+0.6**
	baz=239,SNR=31						
J18K	**Innoko River**	**81.41**	**24**	IAmb	IAmb	01 17 45.6	
	comp=Z,268nm,1.9s						
J18K	**Innoko River**	**81.41**	**24**	P	**P**	**01 17 42.8**	**0.0**
	baz=246,SNR=60						
H18K	**Honhosa River**	**81.47**	**22**	IAmb	IAmb	01 17 45.8	
	comp=Z,229nm,1.9s						
H18K				IAMs_20	IAMs_20	01 49 36.7	
	comp=Z,16µm,21.0s						
H18K	**Honhosa River**	**81.47**	**22**	P	**P**	**01 17 43.3**	**+0.2**
	baz=244,SNR=16						
P19K	**Oil Pt**	**81.50**	**28**	IAmb	IAmb	01 17 46.3	
	comp=Z,116nm,0.8s						
P19K	**Oil Pt**	**81.50**	**28**	P	**P**	**01 17 42.7**	**-0.7**
	baz=250,SNR=21						
Q20K	**Shuyak Island**	**81.55**	**30**	P	**P**	**01 17 43.6**	**0.0**
	baz=250						
F18K	**Selawik**	**81.65**	**21**	P	**P**	**01 17 43.9**	**0.0**
	baz=243						
ILSW	**Iliamna Southw**	**81.66**	**28**	IAmb	IAmb	01 17 46.6	
	comp=Z,180nm,1.7s						
L19K	**White Mountain**	**81.69**	**26**	IAmb	IAmb	01 17 48.9	
	comp=Z,77nm,0.8s						
L19K				IAMs_20	IAMs_20	01 49 41.6	
	comp=Z,17µm,21.0s						
L19K	**White Mountain**	**81.69**	**26**	P	**P**	**01 17 45.0**	**+0.7**
	baz=248,SNR=86						
G18K	**Tagagawik**	**81.69**	**22**	P	**P**	**01 17 44.6**	**+0.3**
	baz=244,SNR=53						
E18K	**Tukpahlearik C**	**81.70**	**20**	IAmb	IAmb	01 17 48.7	
	comp=Z,74nm,0.8s						
E18K	**Tukpahlearik C**	**81.70**	**20**	P	**P**	**01 17 45.1**	**+0.8**
	baz=242,SNR=59						
M19K	**Big River Lodg**	**81.78**	**26**	IAMs_20	IAMs_20	01 49 46.2	
	comp=Z,14µm,21.0s						
M19K	**Big River Lodg**	**81.78**	**26**	P	**P**	**01 17 45.3**	**+0.5**
	baz=248,SNR=45						
GCSA	**Galena City Sc**	**81.87**	**23**	P	**P**	**01 17 45.4**	**+0.3**
	baz=246,SNR=23						
WSAR	**Wadi Sarin**	**81.90**	**294**	P	**P**	**01 17 46.5**	**+0.2**
	SNR=6.2						
O20K	**Slope Mountain**	**81.94**	**28**	P	**P**	**01 17 45.1**	**-0.7**
	baz=250						
RED	**Redoubt Volcan**	**81.99**	**28**	IAmb	IAmb	01 17 48.4	
	comp=Z,157nm,1.6s						
MAW	**Mawson**	**82.06**	**202**	P	**P**	**01 17 45.8**	**-0.3**
	comp=Z,22nm,1.0s,baz=82,slow=6.8,SNR=18						
	comp=Z,22nm,1.0s						
J19K	**Poorman**	**82.07**	**24**	IAmb	IAmb	01 17 49.4	
	comp=Z,300nm,1.8s						
J19K	**Poorman**	**82.07**	**24**	P	**P**	**01 17 46.7**	**+0.5**
	baz=247,SNR=76						
C18K	**Utukok River**	**82.09**	**19**	P	**P**	**01 17 46.4**	**+0.1**
	baz=241,SNR=38						
L20K	**Farewell, AK**	**82.22**	**26**	P	**P**	**01 17 47.5**	**+0.4**
	baz=249,SNR=61						
B18K	**Kokolik River**	**82.26**	**18**	P	**P**	**01 17 48.0**	**+0.8**
	baz=240,SNR=27						
HOM	**Homer**	**82.26**	**29**	IAMs_20	IAMs_20	01 50 44.0	
	comp=Z,12µm,20.0s						
HOM	**Homer**	**82.26**	**29**	P	**P**	**01 17 47.1**	**-0.3**
	baz=251,SNR=6.4						
MHTO	**MHTO**	**82.27**	**291**	P	**P**	**01 17 49.0**	**+0.8**
MHTO				P	**P**	**01 17 49.0**	**+0.8**
JMDO	**Jabal Madar**	**82.29**	**293**	P	**P**	**01 17 48.9**	**+0.6**
JMDO				P	**P**	**01 17 48.9**	**+0.6**
M20K	**Styx River**	**82.33**	**26**	IAmb	IAmb	01 17 51.8	
	comp=Z,141nm,1.1s						
M20K				IAMs_20	IAMs_20	01 50 13.7	
	comp=Z,13µm,20.0s						
M20K	**Styx River**	**82.33**	**26**	P	**P**	**01 17 48.0**	**+0.2**
	baz=249,SNR=88						
H19K	**Roundabout Mou**	**82.36**	**22**	IAmb	IAmb	01 17 54.3	
	comp=Z,210nm,1.6s						
H19K				IAMs_20	IAMs_20	01 50 15.1	
	comp=Z,15µm,20.0s						
H19K	**Roundabout Mou**	**82.36**	**22**	P	**P**	**01 17 48.3**	**+0.6**
	baz=246,SNR=50						
G19K	**Purcell Mounta**	**82.37**	**22**	IAMs_20	IAMs_20	01 51 34.5	
	comp=Z,11µm,20.0s						
G19K	**Purcell Mounta**	**82.37**	**22**	P	**P**	**01 17 48.0**	**+0.2**
	baz=245,SNR=43						
BIDO	**Bidbid**	**82.39**	**294**	P	**P**	**01 17 49.9**	**+1.1**
	SNR=6.0						
BIDO				P	**P**	**01 17 49.9**	**+1.1**
	SNR=6.0						
SMDO	**Samad**	**82.42**	**294**	P	**P**	**01 17 50.3**	**+1.2**
SMDO				P	**P**	**01 17 50.3**	**+1.2**
CNPM	**China Poot**	**82.42**	**29**	IAmb	IAmb	01 17 51.4	
	comp=Z,142nm,0.9s						
CNPM				IAMs_20	IAMs_20	01 50 51.1	
	comp=Z,17µm,20.0s						
F19K	**Shaleruckik Mo**	**82.42**	**21**	IAMs_20	IAMs_20	01 52 44.6	
	comp=Z,10µm,20.0s						
F19K	**Shaleruckik Mo**	**82.42**	**21**	P	**P**	**01 17 47.9**	**-0.1**
	baz=244						
K20K	**Telida**	**82.46**	**25**	IAmb	IAmb	01 17 52.5	
	comp=Z,100nm,1.1s						
K20K				IAMs_20	IAMs_20	01 52 51.0	
	comp=Z,13µm,20.0s						
K20K	**Telida**	**82.46**	**25**	P	**P**	**01 17 49.0**	**+0.7**
	baz=248,SNR=86						
N20K	**Mount Spurr**	**82.51**	**27**	P	**P**	**01 17 48.0**	**-0.7**
	baz=250						
SPCR	**Spurr Chakacha**	**82.51**	**27**	P	**P**	**01 17 47.8**	**-0.9**
	baz=250						
DQM	**DQM**	**82.57**	**290**	P	**P**	**01 17 50.7**	**+0.9**
BRLK	**Bradley Lake**	**82.66**	**29**	IAmb	IAmb	01 17 55.2	
	comp=Z,78nm,1.0s						
BRLK				IAMs_20	IAMs_20	01 48 44.2	
	comp=Z,14µm,22.0s						
BRSE	**Bradley Lake S**	**82.72**	**29**	P	**P**	**01 17 49.4**	**-0.4**
	baz=252,SNR=9.3						
J20K	**Nowinta River**	**82.73**	**24**	IAmb	IAmb	01 17 53.9	
	comp=Z,118nm,1.2s						
J20K	**Nowinta River**	**82.73**	**24**	P	**P**	**01 17 50.7**	**+1.0**
	baz=248,SNR=74						
STLK	**Strandline Lak**	**82.78**	**27**	P	**P**	**01 17 49.1**	**-1.0**
C19K	**Lookout Ridge**	**82.83**	**19**	IAmb	IAmb	01 17 54.6	
	comp=Z,104nm,1.1s						
C19K	**Lookout Ridge**	**82.83**	**19**	P	**P**	**01 17 51.1**	**+1.0**
	baz=243,SNR=74						
I20K	**Naaghedeneel**	**82.83**	**23**	IAmb	IAmb	01 19 00.2	
	comp=Z,161nm,1.5s						
I20K	**Naaghedeneel**	**82.83**	**23**	P	**P**	**01 17 50.6**	**+0.4**
	baz=248						
CAPN	**Captain Cook N**	**82.86**	**28**	IAMs_20	IAMs_20	01 49 55.6	
	comp=Z,15µm,21.0s						
CAPN	**Captain Cook N**	**82.86**	**28**	P	**P**	**01 17 50.4**	**0.0**
	baz=251						
E19K	**Redstone River**	**82.88**	**20**	IAmb	IAmb	01 17 58.2	
	comp=Z,163nm,1.2s						
E19K	**Redstone River**	**82.88**	**20**	P	**P**	**01 17 50.9**	**+0.5**
	baz=245,SNR=94						
A19K	**Wainwright**	**82.89**	**17**	P	**P**	**01 17 51.6**	**+1.3**
	baz=241,SNR=26						
H20K	**Anotleneega Mo**	**82.94**	**23**	P	**P**	**01 17 51.1**	**+0.3**
	baz=247,SNR=36						
MSEY	**Mahe Island**	**82.96**	**266**	P	**P**	**01 17 54.3**	**+2.3**
D19K	**Kuna River**	**83.03**	**19**	IAmb	IAmb	01 17 55.8	
	comp=Z,75nm,0.8s						
D19K				IAMs_20	IAMs_20	01 51 32.6	
	comp=Z,10µm,21.0s						
D19K	**Kuna River**	**83.03**	**19**	P	**P**	**01 17 51.7**	**+0.5**
	baz=244,SNR=80						
SKT	**Skwentna**	**83.08**	**27**	IAMs_20	IAMs_20	01 50 38.4	
	comp=Z,13µm,20.0s						
SKT	**Skwentna**	**83.08**	**27**	P	**P**	**01 17 50.3**	**-1.3**
	baz=251,SNR=30						
PPLA	**Purkeypile**	**83.10**	**26**	IAMs_20	IAMs_20	01 50 45.9	
	comp=Z,16µm,21.0s						
PPLA	**Purkeypile**	**83.10**	**26**	P	**P**	**01 17 51.6**	**-0.2**
	baz=250						
HOQ	**Hoqain**	**83.15**	**294**	P	**P**	**01 17 54.0**	**+1.2**
	SNR=6.1						
HOQ				P	**P**	**01 17 54.0**	**+1.2**
	SNR=6.1						
BSY	**Bisya**	**83.16**	**293**	P	**P**	**01 17 53.1**	**+0.2**
BSY				P	**P**	**01 17 53.1**	**+0.2**
SLKM	**Skilak Lake**	**83.21**	**28**	IAmb	IAmb	01 17 55.0	
	comp=Z,136nm,1.0s						
F20K	**Avaraart Lake**	**83.24**	**21**	IAmb	IAmb	01 17 55.7	
	comp=Z,236nm,1.6s						
F20K				IAMs_20	IAMs_20	01 53 30.4	
	comp=Z,9µm,20.0s						
F20K	**Avaraart Lake**	**83.24**	**21**	P	**P**	**01 17 52.9**	**+0.7**
	baz=246,SNR=97						
SUA	**Susitna One**	**83.27**	**27**	IAmb	IAmb	01 17 55.1	
	comp=Z,63nm,1.0s						
SUA				IAMs_20	IAMs_20	01 51 15.4	
	comp=Z,13µm,21.0s						
SUA	**Susitna One**	**83.27**	**27**	P	**P**	**01 17 51.6**	**-1.1**
	baz=252,SNR=46						
CAST	**Castle Rocks**	**83.32**	**25**	IAmb	IAmb	01 17 55.0	
	comp=Z,208nm,1.8s						
CAST				IAMs_20	IAMs_20	01 53 26.7	
	comp=Z,11µm,20.0s						
CAST	**Castle Rocks**	**83.32**	**25**	P	**P**	**01 17 52.8**	**0.0**
	baz=250						
CHUM	**Lake Minchumin**	**83.38**	**25**	P	**P**	**01 17 53.8**	**+0.7**
	baz=250						
O22K	**Cooper Landing**	**83.44**	**28**	IAMs_20	IAMs_20	01 53 30.0	
	comp=Z,14µm,20.0s						
O22K	**Cooper Landing**	**83.44**	**28**	P	**P**	**01 17 53.4**	**0.0**
	baz=253						
SEW	**Seward**	**83.45**	**29**	IAmb	IAmb	01 17 57.1	
	comp=Z,82nm,1.0s						
SEW	**Seward**	**83.45**	**29**	P	**P**	**01 17 53.1**	**-0.4**
	baz=253,SNR=10						
E20K	**Nigu River**	**83.57**	**20**	P	**P**	**01 17 54.5**	**+0.4**
	baz=246,SNR=102						
RC01	**Rabbit Creek A**	**83.61**	**28**	IAmb	IAmb	01 17 57.5	
	comp=Z,106nm,0.9s						
RC01	**Rabbit Creek A**	**83.61**	**28**	P	**P**	**01 17 53.8**	**-0.5**
	baz=253,SNR=57						
D20K	**Etivluk River**	**83.62**	**19**	IAmb	IAmb	01 18 01.2	
	comp=Z,49nm,0.8s						
D20K	**Etivluk River**	**83.62**	**19**	P	**P**	**01 17 54.8**	**+0.6**
	baz=245,SNR=79						
M22K	**Willow**	**83.64**	**27**	IAMs_20	IAMs_20	01 53 58.3	
	comp=Z,10µm,20.0s						
M22K	**Willow**	**83.64**	**27**	P	**P**	**01 17 53.5**	**-0.9**
	baz=252,SNR=24						
CUT	**Chulitna**	**83.78**	**26**	IAmb	IAmb	01 17 58.1	
	comp=Z,88nm,1.0s						
CUT				IAMs_20	IAMs_20	01 51 09.9	
	comp=Z,15µm,21.0s						
CUT	**Chulitna**	**83.78**	**26**	P	**P**	**01 17 54.2**	**-0.9**
	baz=252						
H21K	**Melozitna Rive**	**83.81**	**23**	P	**P**	**01 17 54.8**	**-0.5**
H21K				IAmb	IAmb	01 18 00.2	
	comp=Z,150nm,1.6s						
H21K	**Melozitna Rive**	**83.81**	**23**	P	**P**	**01 17 55.5**	**+0.3**
	baz=249,SNR=55						
ARQ	**Araqi**	**83.84**	**294**	P	**P**	**01 17 56.7**	**+0.3**
ARQ				P	**P**	**01 17 56.7**	**+0.3**
G21K	**Allakaket**	**83.85**	**22**	IAmb	IAmb	01 18 00.2	
	comp=Z,136nm,1.6s						
G21K	**Allakaket**	**83.85**	**22**	P	**P**	**01 17 55.6**	**+0.1**
	baz=249,SNR=32						
KTH	**Kantishna Hill**	**83.86**	**25**	IAmb	IAmb	01 17 58.8	
	comp=Z,64nm,1.0s						
KTH				IAMs_20	IAMs_20	01 53 52.9	
	comp=Z,10µm,20.0s						
SOHO	**SOHO**	**83.91**	**294**	P	**P**	**01 17 56.9**	**+0.3**
SOHO	**SOHO**	**83.91**	**294**	*i* P	**P**	**01 17 55.8**	**-0.8**
	SNR=9.5						
B20K	**Meade River**	**83.99**	**18**	P	**P**	**01 17 56.5**	**+0.4**
	baz=245,SNR=44						
BPAW	**Bear Paw Mtn.**	**84.01**	**25**	IAmb	IAmb	01 18 01.8	
	comp=Z,140nm,1.8s						
BPAW				IAMs_20	IAMs_20	01 53 08.8	
	comp=Z,11µm,20.0s						
BPAW	**Bear Paw Mtn.**	**84.01**	**25**	P	**P**	**01 17 55.8**	**-0.5**
	baz=251,SNR=35						
PMR	**Palmer**	**84.04**	**27**	IAmb	IAmb	01 17 59.7	
	comp=Z,80nm,0.9s						
PMR	**Palmer**	**84.04**	**27**	P	**P**	**01 17 56.2**	**-0.3**
PMR	**Palmer**	**84.04**	**27**	P	**P**	**01 17 55.4**	**-1.0**
	baz=253,SNR=54						
TRF	**Thorofare Moun**	**84.09**	**25**	P	**P**	**01 17 56.1**	**-0.8**
	baz=252						
F21K	**Alatna River**	**84.12**	**21**	IAMs_20	IAMs_20	01 54 54.6	
	comp=Z,9µm,20.0s						
F21K	**Alatna River**	**84.12**	**21**	P	**P**	**01 17 57.0**	**+0.2**
	baz=248,SNR=13						
GHO	**Glory Hole Cre**	**84.19**	**27**	IAmb	IAmb	01 18 00.8	
	comp=Z,83nm,1.2s						
PWL	**Port Wells**	**84.20**	**28**	IAMs_20	IAMs_20	01 55 11.2	
	comp=Z,13µm,20.0s						
PWL	**Port Wells**	**84.20**	**28**	P	**P**	**01 17 57.1**	**-0.2**
	baz=254,SNR=34						
UOSS	**Minazif**	**84.29**	**295**	P	**P**	**01 17 58.5**	**0.0**
UOSS	**Minazif**	**84.29**	**295**	*i* P	**P**	**01 17 57.4**	**-1.2**
	SNR=6.1						
UOSS	**Minazif**	**84.29**	**295**	P	**P**	**01 17 56.8**	**-1.8**
UOSS				S	**SKSac**	**01 28 18.2**	**-2.7**
KNK	**Knik Glacier**	**84.30**	**28**	IAMs_20	IAMs_20	01 51 01.8	
	comp=Z,17µm,21.0s						
KNK	**Knik Glacier**	**84.30**	**28**	P	**P**	**01 17 57.5**	**-0.4**
	baz=254,SNR=36						
HATD	**Hatta, Dubai**	**84.34**	**295**	P	**P**	**01 17 59.6**	**+0.7**
HATD	**Hatta, Dubai**	**84.34**	**295**	*i* P	**P**	**01 17 58.0**	**-0.8**
	SNR=8.2						
MSFE	**Esma-Masafi**	**84.37**	**296**	*i* P	**P**	**01 17 58.1**	**-0.9**
	SNR=7.1						
MASF	**Masafi**	**84.37**	**296**	P	**P**	**01 17 59.0**	**0.0**
ASHO	**Ashiyiah**	**84.39**	**295**	P	**P**	**01 17 59.4**	**+0.2**
ASHO	**Ashiyiah**	**84.39**	**295**	*i* P	**P**	**01 17 58.5**	**-0.7**
	SNR=6.4						
E21K	**Killik River**	**84.40**	**20**	P	**P**	**01 17 58.6**	**+0.3**
	baz=248						
C21K	**Knifeblade Rid**	**84.41**	**19**	P	**P**	**01 17 58.9**	**+0.7**
	baz=247,SNR=66						
MLY	**Manley**	**84.41**	**24**	IAmb	IAmb	01 18 03.9	
	comp=Z,66nm,0.9s						
MLY				IAMs_20	IAMs_20	01 50 47.4	
	comp=Z,15µm,22.0s						
MLY	**Manley**	**84.41**	**24**	P	**P**	**01 17 58.4**	**0.0**
	baz=251,SNR=116						
P23K	**Montague Islan**	**84.41**	**29**	IAmb	IAmb	01 18 02.9	
	comp=Z,140nm,1.1s						
P23K				IAMs_20	IAMs_20	01 51 50.9	
	comp=Z,15µm,20.0s						
P23K	**Montague Islan**	**84.41**	**29**	P	**P**	**01 17 58.4**	**0.0**
	baz=255,SNR=39						
H22K	**Ishtalitna Cre**	**84.44**	**23**	P	**P**	**01 17 59.2**	**+0.7**
	baz=251,SNR=42						
SHME	**Shamm**	**84.45**	**296**	P	**P**	**01 18 00.3**	**+0.9**
SHME				P	**P**	**01 18 00.3**	**+0.9**
SHME	**Shamm**	**84.45**	**296**	P	**P**	**01 17 59.0**	**-0.4**
SML	**Sawmill**	**84.47**	**27**	P	**P**	**01 17 58.1**	**-0.7**
	baz=254,SNR=90						
ALNE	**Al Ain**	**84.61**	**294**	P	**P**	**01 18 01.4**	**+1.1**
	SNR=7.0						
ALNE				P	**P**	**01 18 01.4**	**+1.1**
	SNR=7.0						
ALNE	**Al Ain**	**84.61**	**294**	*i* P	**P**	**01 17 59.1**	**-1.2**
	SNR=12						
B21K	**Ikpikpuk River**	**84.64**	**19**	P	**P**	**01 17 59.9**	**+0.5**
	baz=247						
WAT1	**Susitna Watana**	**84.66**	**26**	P	**P**	**01 17 59.2**	**-0.5**
	baz=254						
BWN	**Browne**	**84.66**	**25**	IAMs_20	IAMs_20	01 53 10.1	
	comp=Z,9µm,20.0s						
F22K	**John River**	**84.69**	**21**	P	**P**	**01 18 00.4**	**+0.6**
	baz=250						
RND	**Reindeer**	**84.70**	**26**	IAMs_20	IAMs_20	01 51 56.0	
	comp=Z,14µm,21.0s						
AB31	**Akbulak array**	**84.70**	**320**	IAmb	IAmb	01 18 18.3	
	comp=Z,222nm,1.8s						
AB31	**Akbulak array**	**84.70**	**320**	*i* P	**P**	**01 17 59.3**	**-0.8**
ABKAR	**Akbulak array**	**84.70**	**320**	P	**P**	**01 17 58.9**	**-1.2**
ABKAR				IAmb	IAmb	01 18 18.3	
	comp=Z,223nm,1.8s						
A21K	**Barrow**	**84.72**	**17**	P	**P**	**01 17 59.4**	**-0.2**
	baz=245						
G22K	**Bettles**	**84.74**	**22**	P	**P**	**01 18 00.0**	**+0.1**
	baz=250						
M23K	**Glacier View**	**84.74**	**27**	P	**P**	**01 17 59.4**	**-0.7**
	baz=254,SNR=22						
MCK	**McKinley**	**84.76**	**25**	P	**P**	**01 17 59.1**	**-1.0**
	baz=253						
Q23K	**Middleton Isla**	**84.78**	**30**	IAmb	IAmb	01 18 03.9	
	comp=Z,100nm,0.8s						
Q23K				IAMs_20	IAMs_20	01 48 59.8	
	comp=Z,11µm,22.0s						
Q23K	**Middleton Isla**	**84.78**	**30**	P	**P**	**01 18 00.4**	**+0.1**
	baz=256						
NAZ	**Nazwa, Dubai**	**84.78**	**295**	P	**P**	**01 18 01.8**	**+0.7**
NAZ	**Nazwa, Dubai**	**84.78**	**295**	*i* P	**P**	**01 17 60.0**	**-1.1**
	SNR=5.3						
GLI	**Glacier Island**	**84.79**	**28**	IAmb	IAmb	01 18 03.9	
	comp=Z,111nm,0.8s						
GLI	**Glacier Island**	**84.79**	**28**	P	**P**	**01 17 59.6**	**-0.7**
	baz=255,SNR=57						
DMTO	**DMTO**	**84.82**	**288**	P	**P**	**01 18 01.0**	**-0.4**
FAQ	**Al Faqa, Dubai**	**84.82**	**295**	*i* P	**P**	**01 18 00.2**	**-1.1**
	SNR=8.0						
SCM	**Sheep Creek Mo**	**84.93**	**27**	IAMs_20	IAMs_20	01 54 35.5	
	comp=Z,13µm,20.0s						
SCM	**Sheep Creek Mo**	**84.93**	**27**	P	**P**	**01 18 01.5**	**+0.4**
	baz=255,SNR=70						
HIN	**Hinchinbrook I**	**84.95**	**29**	IAmb	IAmb	01 18 04.9	
	comp=Z,102nm,1.0s						
WAT6	**Susitna Watana**	**84.95**	**26**	P	**P**	**01 18 00.7**	**-0.6**
	baz=254,SNR=62						
NEA2	**Nenana**	**84.95**	**24**	IAmb	IAmb	01 18 04.7	
	comp=Z,140nm,1.4s						
NEA2				IAMs_20	IAMs_20	01 53 57.9	
	comp=Z,9µm,20.0s						
NEA2	**Nenana**	**84.95**	**24**	P	**P**	**01 18 00.4**	**-0.6**
	baz=253,SNR=65						
I23K	**Minto, Yukon-K**	**85.00**	**24**	IAmb	IAmb	01 18 05.7	
	comp=Z,110nm,1.1s						
I23K				IAMs_20	IAMs_20	01 51 16.1	
	comp=Z,14µm,22.0s						
I23K	**Minto, Yukon-K**	**85.00**	**24**	P	**P**	**01 18 01.4**	**+0.2**
	baz=252,SNR=110						
D22K	**Ayikyak River**	**85.00**	**20**	P	**P**	**01 18 02.0**	**+0.8**
	baz=249,SNR=66						
UMZA	**Um Al Zommool**	**85.03**	**293**	P	**P**	**01 18 03.8**	**+1.4**
UMZA				P	**P**	**01 18 03.8**	**+1.4**
E22K	**Anaktuvuk Pass**	**85.04**	**21**	IAmb	IAmb	01 18 05.8	
	comp=Z,100nm,1.1s						
E22K				IAMs_20	IAMs_20	01 55 00.9	
	comp=Z,9µm,20.0s						
E22K	**Anaktuvuk Pass**	**85.04**	**21**	P	**P**	**01 18 02.3**	**+0.8**
	baz=250,SNR=94						
FID	**Port Fidalgo**	**85.05**	**28**	IAmb	IAmb	01 18 05.2	
	comp=Z,67nm,0.9s						
ASUD	**Al Ashush, Dub**	**85.05**	**295**	P	**P**	**01 18 03.0**	**+0.6**
ASUD				P	**P**	**01 18 03.0**	**+0.6**
ASUD	**Al Ashush, Dub**	**85.05**	**295**	*i* P	**P**	**01 18 01.7**	**-0.7**
	SNR=5.2						

A22K	Sinclair Lake	85.07	18	P	P	01 18 02.0	+0.5
	baz=247,SNR=32						
H23K	Yukon River	85.14	23	IAmb	IAmb	01 18 06.7	
	comp=Z,118nm,1.3s						
H23K	Yukon River	85.14	23	P	P	01 18 02.3	+0.4
	baz=252,SNR=48						
G23K	Bananza Creek	85.22	22	IAmb	IAmb	01 18 09.1	
	comp=Z,95nm,1.4s						
G23K				IAMs_20	IAMs_20	01 53 25.9	
	comp=Z,14µm,21.0s						
G23K	Bananza Creek	85.22	22	P	P	01 18 02.9	+0.5
	baz=252,SNR=64						
DHY	Denali Highway	85.25	26	P	P	01 18 01.5	-1.3
DHY	Denali Highway	85.25	26	P	P	01 18 02.5	-0.2
	baz=254,SNR=138						
B22K	Teshekpuk Lake	85.30	18	P	P	01 18 02.8	+0.1
	baz=248,SNR=52						
COLD	Coldfoot	85.32	22	P	P	01 18 04.0	+1.1
	baz=252,SNR=20						
WRH	Wood River Hil	85.32	25	IAmb	IAmb	01 18 06.3	
	comp=Z,133nm,1.1s						
EYAK	Cordova Ski Ar	85.35	29	P	P	01 18 03.1	0.0
EYAK	Cordova Ski Ar	85.35	29	P	P	01 18 02.8	-0.2
	baz=256,SNR=22						
AJN	Ajban	85.36	295	P	P	01 18 05.2	+1.3
AJN	Ajban	85.36	295	*i* P	P	01 18 03.1	-0.8
	SNR=6.2						
CCB	Clear Creek Bu	85.49	24	IAmb	IAmb	01 18 06.9	
	comp=Z,92nm,0.9s						
KLU	Klutina	85.50	28	IAmb	IAmb	01 18 07.5	
	comp=Z,83nm,1.2s						
KLU	Klutina	85.50	28	P	P	01 18 03.8	-0.1
	baz=256,SNR=33						
M24K	Tolsona, Glenn	85.53	27	IAMs_20	IAMs_20	01 54 54.3	
	comp=Z,12µm,20.0s						
M24K	Tolsona, Glenn	85.53	27	P	P	01 18 04.4	+0.3
	baz=256,SNR=22						
COLA	College	85.53	24	P	P	01 18 04.1	+0.2
COLA				IAmb	IAmb	01 18 07.7	
	comp=Z,43nm,0.8s						
COLA	College	85.53	24	P	P	01 18 03.2	-0.7
COLA	College	85.53	24	P	P	01 18 04.1	+0.2
COLA				pmax	pmax		
	comp=Z,43nm,0.8s						
COLA	College	85.53	24	P	P	01 18 03.2	-0.7
	baz=254						
COLA	College	85.53	24	P	P	01 18 02.6	-1.3
DOK	Doka	85.66	289	P	P	01 18 05.8	+0.2
DOK				P	P	01 18 05.8	+0.2
D23K	Nanushuk River	85.71	20	P	P	01 18 05.7	+0.9
	baz=251,SNR=179						
SVE	Sverdlovsk	85.73	327	*de*P	P	01 18 04.1	-1.0
SVE				*e*		01 21 20.8	
SVE				*e*S	SKSac	01 28 27.2	-1.5
SVE				*e*SS	SS	01 34 13.4	+0.5
SVE				pmax	pmax		
	comp=Z,51nm,1.4s						
SVE				MLR	MLR		
	comp=Z,6µm,23.0s						
SVE				MLR	MLR		
	comp=E,4µm,20.0s						
HDA	Harding Lake	85.78	25	IAmb	IAmb	01 18 09.1	
	comp=Z,59nm,0.9s						
HDA	Harding Lake	85.78	25	P	P	01 18 04.1	-1.1
	baz=255,SNR=37						
H24K	Noodor Dome	85.79	23	P	P	01 18 05.3	+0.1
	baz=254,SNR=69						
E23K	Chandalar	85.80	21	P	P	01 18 06.0	+0.7
	baz=252,SNR=114						
RAGM	Ragged Mountai	85.83	29	IAmb	IAmb	01 18 09.2	
	comp=Z,66nm,1.0s						
KAIM	Kayak Island	85.85	29	IAMs_20	IAMs_20	01 49 32.0	
	comp=Z,15µm,22.0s						
KAIM	Kayak Island	85.85	29	P	P	01 18 05.9	+0.3
	baz=257,SNR=22						
ILAR	Eielson Array	85.91	24	P	P	01 18 04.2	-1.6
	comp=Z,34nm,0.7s,baz=260,slow=4.2,SNR=181						
	comp=Z,34nm,0.7s						
WHFO	Wadi Hawf	85.95	288	P	P	01 18 07.2	+0.1
TOLK	Toolik Lake Re	85.99	20	IAMs_20	IAMs_20	01 56 01.0	
	comp=Z,10µm,20.0s						
TOLK	Toolik Lake Re	85.99	20	P	P	01 18 07.0	+0.7
	baz=252,SNR=48						
BMRM	Bremner River	85.99	28	IAmb	IAmb	01 18 10.8	
	comp=Z,94nm,1.1s						
BMRM	Bremner River	85.99	28	P	P	01 18 06.1	-0.3
	baz=257,SNR=23						
HMT	Hamilton	86.02	29	IAmb	IAmb	01 18 10.1	
	comp=Z,74nm,0.8s						
C23K	Itkillik River	86.02	19	P	P	01 18 06.3	+0.1
	baz=251,SNR=57						
PAX	Paxson	86.06	26	P	P	01 18 06.7	0.0
	baz=256,SNR=27						
HARP	HAARP	86.06	27	P	P	01 18 06.6	-0.1
	baz=256						
K24K	Donnelly Dome	86.13	26	IAmb	IAmb	01 18 16.6	
	comp=Z,58nm,0.8s						
K24K				IAMs_20	IAMs_20	01 52 31.9	
	comp=Z,12µm,21.0s						
K24K	Donnelly Dome	86.13	26	P	P	01 18 06.7	-0.3
	baz=256,SNR=24						
AKTO	Aktyubinsk	86.13	321	P	P	01 18 05.6	-1.6
	comp=Z,21nm,1.0s,baz=104,slow=5.7,SNR=23						
	comp=Z,21nm,1.0s						
AKTO	Aktyubinsk	86.13	321	LR	LR	01 59 50.2	
	comp=Z,6µm,18.8s,baz=88,slow=37						
N25K	Chitina, Valde	86.14	28	P	P	01 18 07.4	+0.3
	baz=257,SNR=23						
G24K	Hadweenzic Riv	86.19	23	IAmb	IAmb	01 18 11.3	
	comp=Z,160nm,1.3s						
G24K				IAMs_20	IAMs_20	01 51 52.4	
	comp=Z,15µm,21.0s						
G24K	Hadweenzic Riv	86.19	23	P	P	01 18 07.8	+0.6
	baz=254,SNR=83						
SUCK	Suckling Hills	86.20	29	IAmb	IAmb	01 18 11.5	
	comp=Z,128nm,1.2s						
SUCK				IAMs_20	IAMs_20	01 49 54.1	
	comp=Z,17µm,22.0s						
E24K	Your Creek	86.20	21	IAmb	IAmb	01 18 22.9	
	comp=Z,144nm,1.8s						
E24K	Your Creek	86.20	21	P	P	01 18 07.8	+0.5
	baz=253,SNR=38						
F24K	Squaw Lake	86.26	22	IAMs_20	IAMs_20	01 54 10.3	
	comp=Z,11µm,20.0s						
F24K	Squaw Lake	86.26	22	P	P	01 18 08.6	+1.0
	baz=254,SNR=115						
MZWR	Madinat Zayed	86.29	294	P	P	01 18 09.1	+0.5
BERG	Berg Lake	86.30	29	IAmb	IAmb	01 18 11.6	
	comp=Z,128nm,1.1s						
BERG				IAMs_20	IAMs_20	01 50 56.9	
	comp=Z,11µm,22.0s						
ABTO	Aybut	86.36	287	P	P	01 18 09.9	+0.7
ABTO				P	P	01 18 09.9	+0.7
D24K	Happy Valley	86.41	20	IAMs_20	IAMs_20	01 56 37.9	
	comp=Z,11µm,20.0s						
D24K	Happy Valley	86.41	20	P	P	01 18 09.3	+1.1
	baz=253,SNR=60						
BGLC	Bering Glacier	86.45	29	P	P	01 18 08.9	+0.4
	baz=258						
GLB	Gilahina Butte	86.47	28	IAmb	IAmb	01 18 12.6	
	comp=Z,66nm,0.8s						
GLB				IAMs_20	IAMs_20	01 52 08.2	
	comp=Z,11µm,22.0s						
J25K	Salcha River,	86.50	25	P	P	01 18 08.0	-0.8
	baz=256,SNR=54						
RIDG	Independent Ri	86.51	26	IAmb	IAmb	01 18 15.2	
	comp=Z,60nm,0.8s						
RIDG	Independent Ri	86.51	26	P	P	01 18 08.3	-0.6
	baz=257,SNR=58						
MZR	Muzera	86.60	293	P	P	01 18 11.1	+0.9
	SNR=6.1						
MZR				P	P	01 18 11.1	+0.9
	SNR=6.1						
MZR	Muzera	86.60	293	*i* P	P	01 18 09.2	-1.0
	SNR=6.6						
C24K	Franklin Bluff	86.62	19	P	P	01 18 08.8	-0.4
	baz=253						
CRQM	Cirque	86.65	29	IAmb	IAmb	01 18 19.6	
	comp=Z,84nm,0.8s						
PRP	Porcupine Dome	86.65	24	IAMs_20	IAMs_20	01 55 41.7	
	comp=Z,9µm,20.0s						
PRP	Porcupine Dome	86.65	24	P	P	01 18 07.8	-1.8
	baz=256,SNR=8.3						
CRQE	Cirque	86.67	29	P	P	01 18 09.9	+0.1
	baz=258,SNR=36						
H25L	Birch Creek	86.72	23	P	P	01 18 10.5	+0.8
	baz=256,SNR=52						
WAX	Waxell Ridge	86.72	29	IAmb	IAmb	01 18 13.9	
	comp=Z,131nm,1.2s						
WAX				IAMs_20	IAMs_20	01 56 49.0	
	comp=Z,12µm,20.0s						
G25K	Bearman Lake	86.73	23	P	P	01 18 10.7	+0.9
	baz=255,SNR=61						
TGL	Tana Glacier	86.80	29	IAmb	IAmb	01 18 14.0	
	comp=Z,108nm,1.0s						
TGL				IAMs_20	IAMs_20	01 51 25.9	
	comp=Z,16µm,22.0s						
MCARA	McCarthy VSAT	86.83	28	IAMs_20	IAMs_20	01 54 02.7	
	comp=Z,13µm,20.0s						
MCARA	McCarthy VSAT	86.83	28	P	P	01 18 10.4	0.0
	baz=258,SNR=8.4						
MENT	Mentasta	86.83	27	P	P	01 18 11.1	+0.7
DOT	Dot Lake	86.83	26	IAmb	IAmb	01 18 13.7	
	comp=Z,96nm,1.2s						
DOT				IAMs_20	IAMs_20	01 55 27.6	
	comp=Z,14µm,20.0s						
ARTI	Arti	86.88	327	P	P	01 18 09.4	-1.3
ARTI	Arti	86.88	327	P	P	01 18 09.2	-1.5
	comp=Z,19nm,0.7s,baz=72,slow=2.2,SNR=21						
ARTI				PP	PP	01 21 35.7	+2.0
	comp=Z,2.1nm,0.3s,baz=86,slow=6.6,SNR=6.3						
ARTI				LR	LR	01 58 11.6	
	comp=Z,7µm,21.3s,baz=98,slow=36						
	comp=Z,19nm,0.7s						
ARTI	Arti	86.88	327	*c i*P	P	01 18 08.8	-1.9
ARTI						01 21 31.5	
ARTI				S	SKSac	01 28 34.1	-1.7
ARTI				SS	SS	01 34 30.4	+0.8
ARTI				SSS	SSS	01 37 59.8	
ARTI				pmax	pmax		
	comp=Z,120nm,4.3s						
ARTI				MLR	MLR		
	comp=Z,8µm,21.0s						
SCRK	Sand Creek	86.94	26	IAMs_20	IAMs_20	01 54 54.3	
	comp=Z,13µm,20.0s						
SCRK	Sand Creek	86.94	26	P	P	01 18 10.7	-0.3
	baz=258,SNR=46						
ISLE	Juniper Island	87.00	29	IAmb	IAmb	01 18 15.0	
	comp=Z,125nm,1.2s						
ISLE				IAMs_20	IAMs_20	01 57 08.4	
	comp=Z,10µm,19.0s						
L26K	Log Cabin Wild	87.02	27	P	P	01 18 11.4	+0.1
	baz=258,SNR=12						
FYU	Fort Yukon	87.02	23	IAMs_20	IAMs_20	01 53 30.4	
	comp=Z,14µm,20.0s						
M26K	Nabesna, AK	87.05	27	P	P	01 18 11.6	+0.1
	baz=258,SNR=22						
F25K	Christian Rive	87.11	22	IAmb	IAmb	01 18 16.4	
	comp=Z,113nm,1.3s						
F25K				IAMs_20	IAMs_20	01 54 15.8	
	comp=Z,11µm,20.0s						
F25K	Christian Rive	87.11	22	P	P	01 18 12.7	+0.9
	baz=256,SNR=91						
MESA	MESA	87.11	29	IAMs_20	IAMs_20	01 55 32.4	
	comp=Z,14µm,20.0s						
MESA	MESA	87.11	29	P	P	01 18 12.4	+0.3
	baz=260,SNR=7.2						
QSPA	South Pole Qui	87.19	180	P	P	01 18 12.2	-0.1
QSPA	South Pole Qui	87.19	180	P	P	01 18 11.0	-1.2
	comp=Z,74nm,0.9s,baz=319,slow=1.2,SNR=100						
	comp=Z,74nm,0.9s						
QSPA	South Pole Qui	87.19	180	LR	LR	01 59 41.2	
	comp=Z,21µm,19.4s,baz=6.5,slow=37						
J26L	Joseph Creek	87.23	25	IAmb	IAmb	01 18 16.0	
	comp=Z,154nm,1.4s						
J26L				IAMs_20	IAMs_20	01 53 42.1	
	comp=Z,9µm,20.0s						
J26L	Joseph Creek	87.23	25	P	P	01 18 12.4	-0.1
	baz=258,SNR=94						
YAH	Yahtse	87.25	29	IAmb	IAmb	01 18 21.5	
	comp=Z,203nm,1.8s						
YAH				IAMs_20	IAMs_20	01 55 37.8	
	comp=Z,15µm,20.0s						
E25K	Arctic Village	87.27	21	P	P	01 18 13.1	+0.6
	baz=256,SNR=106						
D25K	Kavik River	87.29	20	P	P	01 18 12.6	+0.1
	baz=255,SNR=28						
GRNC	Granite Creek	87.31	29	IAmb	IAmb	01 18 16.8	
	comp=Z,104nm,1.1s						
GRNC				IAMs_20	IAMs_20	01 57 08.5	
	comp=Z,11µm,20.0s						
JRN	Qarnain Island	87.32	295	P	P	01 18 14.2	+0.6
JRN				P	P	01 18 14.2	+0.6
BARN	Barnard Glacie	87.42	29	IAMs_20	IAMs_20	01 51 23.2	
	comp=Z,15µm,22.0s						
BMAR	Burnt Mountain	87.47	22	P	P	01 18 12.9	-0.5
M27K	Edge Creek, AK	87.55	27	IAmb	IAmb	01 18 18.0	
	comp=Z,113nm,1.2s						
M27K	Edge Creek, AK	87.55	27	P	P	01 18 14.5	+0.5
	baz=260,SNR=78						
CTG	Chitna Glacier	87.55	29	P	P	01 18 14.7	+0.6
	baz=260,SNR=50						
CTGM	Chitina Glacie	87.56	29	IAMs_20	IAMs_20	01 54 02.9	
	comp=Z,9µm,21.0s						
TABL	Table Mountain	87.56	29	IAmb	IAmb	01 18 17.9	
	comp=Z,96nm,0.9s						
TABL				IAMs_20	IAMs_20	01 55 38.0	
	comp=Z,14µm,20.0s						
I26K	Coal Creek Min	87.57	24	IAmb	IAmb	01 18 17.0	
	comp=Z,88nm,1.4s						
I26K	Coal Creek Min	87.57	24	P	P	01 18 13.5	-0.4
	baz=258,SNR=50						
G26K	Porcupine Rive	87.67	23	IAMs_20	IAMs_20	01 54 39.5	
	comp=Z,11µm,20.0s						
G26K	Porcupine Rive	87.67	23	P	P	01 18 15.4	+1.1
	baz=258,SNR=160						
LOGN	Logan Glacier	87.69	29	IAmb	IAmb	01 18 18.6	
	comp=Z,81nm,1.0s						
LOGN				IAMs_20	IAMs_20	01 57 19.5	
	comp=Z,10µm,19.0s						
F26K	Sheenjek River	87.69	22	IAMs_20	IAMs_20	01 52 40.1	
	comp=Z,14µm,22.0s						
F26K	Sheenjek River	87.69	22	P	P	01 18 15.4	+0.9
	baz=257,SNR=134						
L27K	Beaver Creek,	87.70	27	P	P	01 18 15.2	+0.5
	baz=260,SNR=54						
BCAR	Beaver Creek A	87.72	27	P	P	01 18 14.2	-0.5
K27K	Chicken	87.77	26	IAMs_20	IAMs_20	01 56 06.5	
	comp=Z,12µm,20.0s						
K27K	Chicken	87.77	26	P	P	01 18 15.8	+0.9
	baz=259,SNR=148						
PCA	Pinnacle	87.94	30	IAmb	IAmb	01 18 19.5	
	comp=Z,73nm,0.9s						
PCA				IAMs_20	IAMs_20	01 54 06.2	
	comp=Z,11µm,20.0s						
C26K	Camden Bay	87.94	20	P	P	01 18 16.9	+1.4
	baz=256						
PINM	Pinnacle	87.94	30	P	P	01 18 15.9	+0.1
	baz=261,SNR=18						
BVCY	Beaver Creek	88.03	27	P	P	01 18 16.6	+0.4
	baz=260,SNR=33						
O28M	Mount Upton	88.08	29	IAMs_20	IAMs_20	01 56 23.7	
	comp=Z,12µm,20.0s						
O28M	Mount Upton	88.08	29	P	P	01 18 17.1	+0.4
	baz=261,SNR=29						
YUK3	Moose Creek	88.11	28	P	P	01 18 17.3	+0.5
	baz=261,SNR=56						
BCPM	Bancas Point	88.22	30	IAMs_20	IAMs_20	01 53 52.7	
	comp=Z,11µm,20.0s						
I27K	Kandik River	88.26	24	P	P	01 18 17.6	+0.3
	baz=260,SNR=174						
C27K	Jago River	88.28	20	IAMs_20	IAMs_20	01 55 59.4	
	comp=Z,8µm,20.0s						
C27K	Jago River	88.28	20	P	P	01 18 17.6	+0.4
	baz=258						
PNL	Peninsula	88.30	30	P	P	01 18 18.3	+0.8
PNL	Peninsula	88.30	30	P	P	01 18 17.8	+0.3
	baz=262,SNR=17						
SLWR	Sila	88.31	294	P	P	01 18 18.9	+0.5
SLWR				P	P	01 18 18.9	+0.5
YUK8	Steele Glacier	88.36	29	P	P	01 18 18.8	+0.7
	baz=261,SNR=14						
H27K	Steamboat Moun	88.41	24	IAMs_20	IAMs_20	01 53 22.1	
	comp=Z,16µm,21.0s						
H27K	Steamboat Moun	88.41	24	P	P	01 18 18.9	+1.0
	baz=260,SNR=139						
G27K	Doyon Strip	88.46	23	IAmb	IAmb	01 18 22.7	
	comp=Z,94nm,1.4s						
G27K	Doyon Strip	88.46	23	P	P	01 18 18.9	+0.8
	baz=260,SNR=56						
E27K	Coleen River	88.74	22	IAmb	IAmb	01 18 24.2	
	comp=Z,94nm,1.4s						
E27K				IAMs_20	IAMs_20	01 55 07.7	
	comp=Z,10µm,20.0s						
E27K	Coleen River	88.74	22	P	P	01 18 19.8	+0.3
	baz=260,SNR=33						
TRNA	Turayna	88.79	295	P	P	01 18 21.1	+0.5
O29M	Mount Kennedy	88.80	30	IAmb	IAmb	01 18 24.1	
	comp=Z,87nm,1.2s						
O29M	Mount Kennedy	88.80	30	P	P	01 18 20.6	+0.6
	baz=262,SNR=30						
YUK4	Talbot Arm	88.90	29	P	P	01 18 21.8	+1.2
	baz=262,SNR=60						
I28M	Miner Creek	88.92	24	P	P	01 18 21.1	+0.6
	baz=261,SNR=100						
DAWY	Dawson	88.94	26	P	P	01 18 20.9	+0.3
DAWY	Dawson	88.94	26	P	P	01 18 21.2	+0.7
	baz=262,SNR=148						
YUK6	Outpost Mounta	88.98	29	P	P	01 18 21.4	+0.4
	baz=263,SNR=17						
P29M	Windy Craggy	89.13	30	IAmb	IAmb	01 18 25.6	
	comp=Z,80nm,0.9s						
P29M	Windy Craggy	89.13	30	P	P	01 18 22.0	+0.6
	baz=263,SNR=38						
M29M	Somme Creek	89.13	27	IAmb	IAmb	01 18 25.7	
	comp=Z,137nm,1.5s						
M29M	Somme Creek	89.13	27	P	P	01 18 21.9	+0.3
	baz=262,SNR=68						
SMRA	Abu-Samra	89.15	295	P	P	01 18 23.3	+1.0
D27M	Malcolm River	89.15	21	IAMs_20	IAMs_20	01 56 17.6	
	comp=Z,10µm,20.0s						
D27M	Malcolm River	89.15	21	P	P	01 18 21.3	-0.2
	baz=260						
F28M	Old Crow	89.28	22	IAMs_20	IAMs_20	01 53 27.2	
	comp=Z,13µm,22.0s						
F28M	Old Crow	89.28	22	P	P	01 18 22.1	+0.1
	baz=261,SNR=32						
L29M	L29M	89.37	27	IAmb	IAmb	01 18 26.9	
	comp=Z,74nm,1.0s						
L29M	L29M	89.37	27	P	P	01 18 23.3	+0.7
	baz=263,SNR=87						
HYT	Haines Junctio	89.39	29	P	P	01 18 23.2	+0.4
	baz=263,SNR=51						
J29N	Klondike Camp	89.50	26	IAmb	IAmb	01 18 27.6	
	comp=Z,127nm,1.4s						
J29N				IAMs_20	IAMs_20	01 57 29.3	
	comp=Z,14µm,20.0s						
J29N	Klondike Camp	89.50	26	P	P	01 18 24.0	+0.9
	baz=263						
E28M	Babbage River	89.56	21	IAmb	IAmb	01 18 25.9	
	comp=Z,96nm,1.6s						
E28M				IAMs_20	IAMs_20	01 54 34.4	
	comp=Z,11µm,21.0s						
E28M	Babbage River	89.56	21	P	P	01 18 23.3	0.0
	baz=262,SNR=38						
P30M	Million Dollar	89.58	30	P	P	01 18 24.1	+0.5
	baz=264,SNR=30						
I29M	Ogilvie Camp,	89.58	25	IAMs_20	IAMs_20	01 54 20.3	
	comp=Z,13µm,21.0s						
I29M	Ogilvie Camp,	89.58	25	P	P	01 18 23.6	+0.2
	baz=263,SNR=61						
N30M	Aishikik Lake	89.66	29	P	P	01 18 24.4	+0.4
	baz=264,SNR=32						
H29M	Whitestone	89.67	24	IAmb	IAmb	01 18 37.9	
	comp=Z,66nm,1.3s						
H29M				IAMs_20	IAMs_20	01 57 45.5	
	comp=Z,10µm,20.0s						
H29M	Whitestone	89.67	24	P	P	01 18 24.7	+0.9
	baz=263,SNR=20						
S31K	Pelican	89.73	32	IAmb	IAmb	01 18 34.0	
	comp=Z,142nm,1.9s						
S31K	Pelican	89.73	32	P	P	01 18 24.3	+0.1
	baz=264						
K29M	Barlow Dome	89.73	26	IAmb	IAmb	01 18 33.4	
	comp=Z,56nm,0.9s						
K29M				IAMs_20	IAMs_20	01 57 04.3	
	comp=Z,8µm,20.0s						
K29M	Barlow Dome	89.73	26	P	P	01 18 24.7	+0.3
	baz=263,SNR=90						
PLBC	Pleasant Camp	89.81	31	P	P	01 18 24.8	+0.2
	baz=264,SNR=28						
G29M	Pine Creek	89.90	23	IAmb	IAmb	01 18 27.4	
	comp=Z,175nm,1.8s						
G29M				IAMs_20	IAMs_20	01 54 28.4	
	comp=Z,14µm,21.0s						
G29M	Pine Creek	89.90	23	P	P	01 18 24.8	-0.1
	baz=263,SNR=27						
D28M	Stokes Point	89.95	21	P	P	01 18 25.1	+0.1
	baz=262						
R31K	City Hall, Gus	90.03	32	P	P	01 18 25.7	+0.1
	baz=265						
O30N	Mendenhall	90.07	29	IAmb	IAmb	01 18 29.6	
	comp=Z,80nm,1.4s						
O30N				IAMs_20	IAMs_20	01 57 46.5	
	comp=Z,14µm,20.0s						
O30N	Mendenhall	90.07	29	P	P	01 18 25.9	0.0
	baz=265,SNR=24						
E29M	Blow River	90.13	22	IAMs_20	IAMs_20	01 54 07.4	
	comp=Z,10µm,22.0s						
E29M	Blow River	90.13	22	P	P	01 18 25.4	-0.5
	baz=263,SNR=20						
SIT	Sitka	90.13	33	P	P	01 18 26.4	+0.3
	baz=265						
N31M	Braeburn, Yuko	90.29	29	P	P	01 18 27.0	+0.1
N31M				IAmb	IAmb	01 18 30.8	
	comp=Z,70nm,1.1s						
N31M				IAMs_20	IAMs_20	01 53 20.2	
	comp=Z,11µm,22.0s						
N31M	Braeburn, Yuko	90.29	29	P	P	01 18 27.3	+0.5
	baz=265,SNR=14						
J30M	Hart River	90.33	25	IAmb	IAmb	01 18 33.3	
	comp=Z,52nm,0.9s						
J30M				IAMs_20	IAMs_20	01 57 54.1	
	comp=Z,11µm,20.0s						
J30M	Hart River	90.33	25	P	P	01 18 27.6	+0.5
	baz=264,SNR=55						
SKAG	Skagway	90.33	31	IAmb	IAmb	01 18 31.6	
	comp=Z,99nm,1.2s						
SKAG	Skagway	90.33	31	P	P	01 18 28.4	+1.4
SKAG	Skagway	90.33	31	P	P	01 18 27.7	+0.7
	baz=265,SNR=8.4						
EPYK	Eagle Plains	90.35	24	IAmb	IAmb	01 18 30.6	
	comp=Z,124nm,1.8s						
EPYK				IAMs_20	IAMs_20	01 58 06.5	
	comp=Z,10µm,20.0s						
EPYK	Eagle Plains	90.35	24	P	P	01 18 26.6	-0.5
	baz=264,SNR=11						
I30M	Mount Dempster	90.37	25	P	P	01 18 27.5	+0.2
	baz=264,SNR=34						
MAYO	Mayo, Yukon	90.43	26	P	P	01 18 28.3	+0.9
	baz=265						
S32K	Killisnoo	90.57	33	IAMs_20	IAMs_20	01 55 27.0	
	comp=Z,9µm,20.0s						
S32K	Killisnoo	90.57	33	P	P	01 18 28.9	+0.7
	baz=266						
G30M	tAoh Zraii Nji	90.61	23	P	P	01 18 27.6	-0.6
	baz=264,SNR=35						
WHY	Whitehorse	90.65	29	IAmb	IAmb	01 18 34.6	
	comp=Z,68nm,0.8s						
WHY	Whitehorse	90.65	29	P	P	01 18 28.8	+0.1
	baz=266,SNR=43						
R32K	Eaglecrest	90.66	32	IAMs_20	IAMs_20	01 55 44.3	
	comp=Z,10µm,20.0s						
R32K	Eaglecrest	90.66	32	P	P	01 18 29.1	+0.5
	baz=266						
SYO	Syowa Base	90.69	201	⇑*i*P	P	01 18 28.0	-0.5
VOI	Vohitsoka	90.69	248	P	P	01 18 32.2	+2.4
JIS	Juneau Island	90.73	32	P	P	01 18 30.2	+1.3
F30M	Barrier River	90.84	22	IAmb	IAmb	01 18 31.2	
	comp=Z,85nm,1.6s						
F30M				IAMs_20	IAMs_20	01 54 16.2	
	comp=Z,10µm,22.0s						
F30M	Barrier River	90.84	22	P	P	01 18 28.3	-1.0
	baz=265,SNR=17						
M31M	Drury Creek, Y	91.00	28	IAMs_20	IAMs_20	01 54 14.0	
	comp=Z,15µm,22.0s						
M31M	Drury Creek, Y	91.00	28	P	P	01 18 29.8	-0.3
	baz=266,SNR=6.2						
P32M	Atlin	91.16	31	P	P	01 18 30.9	0.0
	baz=267,SNR=21						
CRAG	Craig	91.25	35	P	P	01 18 31.7	+0.3
	baz=267						
H31M	Peel River	91.27	24	IAMs_20	IAMs_20	01 55 08.7	
	comp=Z,10µm,21.0s						
H31M	Peel River	91.27	24	P	P	01 18 30.8	-0.5
	baz=266,SNR=9.3						
U33K	Whale Pass	91.28	34	IAmb	IAmb	01 18 35.1	
	comp=Z,142nm,1.9s						
U33K				IAMs_20	IAMs_20	01 50 44.0	
	comp=Z,13µm,22.0s						
U33K	Whale Pass	91.28	34	P	P	01 18 30.8	-0.7
	baz=267						
G31M	Satah River	91.37	23	P	P	01 18 30.3	-1.3
G31M				IAMs_20	IAMs_20	01 56 33.4	

	comp=Z,10μm,20.0s						
G31M	**Satah River**	**91.37**	**23**	P	**P**	**01 18 31.0**	**-0.7**
	baz=266,SNR=18						
T33K	**Petersburg**	**91.41**	**33**	P	**P**	**01 18 32.3**	**+0.3**
	baz=267						
FARO	**Faro, Yukon**	**91.49**	**28**	P	**P**	**01 18 32.2**	**-0.2**
	baz=267,SNR=37						
DIB	**Dawson Inlet,**	**91.52**	**37**	IAmb	IAmb	01 18 36.2	
	comp=Z,35nm,0.9s						
N32M	**Quiet Lake**	**91.56**	**29**	IAmb	IAmb	01 18 45.8	
	comp=Z,75nm,1.0s						
N32M	**Quiet Lake**	**91.56**	**29**	P	**P**	**01 18 33.1**	**+0.3**
	baz=267						
F31M	**Tsiigehtchic**	**91.61**	**23**	P	**P**	**01 18 32.2**	**-0.6**
	baz=267						
P33M	**Teslin, Yukon**	**91.65**	**30**	P	**P**	**01 18 32.8**	**-0.4**
	baz=267,SNR=18						
WRAK	**Wrangell Islan**	**91.73**	**34**	IAMs_20	IAMs_20	01 50 23.8	
	comp=Z,12μm,22.0s						
WRAK	**Wrangell Islan**	**91.73**	**34**	P	**P**	**01 18 33.9**	**+0.3**
	baz=268						
INK	**Inuvik**	**91.74**	**22**	IAmb	IAmb	01 18 34.8	
	comp=Z,60nm,1.6s						
INK	**Inuvik**	**91.74**	**22**	P	**P**	**01 18 32.4**	**-0.9**
	baz=267,SNR=22						
Q32M	**Nakina River**	**91.87**	**31**	P	**P**	**01 18 34.4**	**0.0**
	baz=268						
KIRV	**Kirov**	**91.92**	**328**	P	**P**	**01 18 32.5**	**-1.8**
	comp=Z,12nm,0.5s,baz=59,slow=2.9,SNR=6.7						
KIRV				PP	**PP**	**01 22 13.5**	**-0.3**
	comp=Z,7.1nm,0.6s,baz=109,slow=7.2,SNR=5.2						
	comp=Z,12nm,0.5s						
V35K	**Ketchikan**	**92.10**	**35**	IAMs_20	IAMs_20	01 51 17.8	
	comp=Z,14μm,22.0s						
V35K	**Ketchikan**	**92.10**	**35**	P	**P**	**01 18 35.4**	**+0.1**
	baz=268						
S34M	**Telegraph Cree**	**92.44**	**32**	IAMs_20	IAMs_20	01 56 46.4	
	comp=Z,10μm,20.0s						
S34M	**Telegraph Cree**	**92.44**	**32**	P	**P**	**01 18 37.1**	**+0.3**
	baz=269						
MMPY	**Sheldon Lake,**	**92.47**	**28**	IAmb	IAmb	01 18 40.9	
	comp=Z,56nm,1.5s						
MMPY	**Sheldon Lake,**	**92.47**	**28**	P	**P**	**01 18 37.1**	**+0.1**
	baz=269,SNR=16						
AKT	**Akhty**	**92.48**	**311**	*ce*P	**P**	**01 18 34.9**	**-2.7**
AKT				*e*		01 22 15.0	
AKT				pmax	pmax		
	comp=Z,20nm,1.4s						
AKT				MLR	MLR		
	comp=Z,4μm,20.0s						
R33M	**Jennings River**	**92.56**	**31**	P	**P**	**01 18 37.8**	**+0.2**
	baz=269,SNR=14						
MAK	**Makhachkala**	**92.68**	**313**	*e*P	**P**	**01 18 35.2**	**-3.1**
MAK				*e*PPP	PPP	01 24 21.3	
MAK				*e*		01 29 05.0	
MAK				*e*SS	SS	01 35 53.4	-1.0
MAK				*e*SSS	SSS	01 39 29.5	
MAK				pmax	pmax		
	comp=Z,146nm,1.4s						
BELG	**Belogornoye**	**92.78**	**322**	P	**P**	**01 18 37.1**	**-1.4**
	comp=Z,87nm,1.0s,baz=153,slow=1.0,SNR=18						
	comp=Z,87nm,1.0s						
T35M	**Bob Quinn**	**92.90**	**33**	IAMs_20	IAMs_20	01 51 24.7	
	comp=Z,11μm,22.0s						
T35M	**Bob Quinn**	**92.90**	**33**	P	**P**	**01 18 39.4**	**+0.3**
	baz=270						
U35K	**Hyder**	**93.02**	**34**	IAMs_20	IAMs_20	01 51 12.8	
	comp=Z,16μm,22.0s						
U35K	**Hyder**	**93.02**	**34**	P	**P**	**01 18 39.2**	**-0.3**
	baz=270						
WTLY	**Watson Lake, Y**	**93.66**	**30**	IAmb	IAmb	01 18 48.8	
	comp=Z,36nm,1.0s						
WTLY	**Watson Lake, Y**	**93.66**	**30**	P	**P**	**01 18 42.6**	**+0.1**
	baz=271						
TGTN	**Hyland Airport**	**93.88**	**29**	P	**P**	**01 18 44.1**	**+0.5**
	baz=272						
RAYN	**Ar Rayn**	**93.95**	**293**	P	**P**	**01 18 43.7**	**-1.0**
RAYN	**Ar Rayn**	**93.95**	**293**	P	**P**	**01 18 44.7**	**+0.1**
RAYN	**Ar Rayn**	**93.95**	**293**	P	**P**	**01 18 43.7**	**-1.0**
RAYN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
RAYN	**Ar Rayn**	**93.95**	**293**	*i* P	**P**	**01 18 43.0**	**-1.7**
	SNR=8.6						
A36M	**Sachs Harbour**	**94.50**	**18**	IAmb	IAmb	01 18 49.6	
	comp=Z,46nm,0.9s						
A36M	**Sachs Harbour**	**94.50**	**18**	P	**P**	**01 18 45.3**	**-0.7**
	baz=275						
GNI	**Garni**	**94.74**	**310**	LR	LR	02 04 56.9	
	comp=Z,3μm,21.3s,baz=78,slow=38						
GNI	**Garni**	**94.74**	**310**	*c i*P	**P**	**01 18 46.0**	**-2.0**
GNI				pmax	pmax		
	comp=Z,27nm,2.5s						
GNI				MLR	MLR		
	comp=Z,3μm,20.0s						
GNI	**Garni**	**94.74**	**310**	P	**P**	**01 18 46.1**	**-2.0**
LIRD	**Liard River Hi**	**95.05**	**31**	P	**P**	**01 18 48.1**	**-0.7**
	baz=273						
BEAVL	**Fort Liard**	**95.52**	**30**	P	**P**	**01 18 51.1**	**+0.2**
	baz=274						
TOAD	**Toad River Com**	**95.52**	**31**	P	**P**	**01 18 50.4**	**-0.7**
	baz=274						
NCK	**Nalchik**	**95.54**	**313**	*ce*P	**P**	**01 18 49.5**	**-2.0**
NCK				pmax	pmax		
	comp=Z,53nm,3.2s						
NCK				MLR	MLR		
	comp=Z,2μm,20.0s						
GOF	**Gofitskoye**	**95.89**	**315**	*ce*P	**P**	**01 18 50.7**	**-2.3**
KARS	**Kars**	**96.00**	**310**	IAmb	IAmb	01 19 08.8	
	comp=Z,83nm,1.1s						
WRGLY	**Wrigley**	**96.02**	**27**	P	**P**	**01 18 52.8**	**-0.3**
	baz=276						
KOTAN	**Kotaneelee Air**	**96.03**	**30**	P	**P**	**01 18 53.2**	**-0.1**
	baz=275						
KBZ	**Khabaz**	**96.04**	**314**	P	**P**	**01 18 52.7**	**-0.9**
	comp=Z,0.9nm,0.6s,baz=81,slow=6.8,SNR=6.8						
KBZ				PP	**PP**	**01 22 50.2**	**+3.8**
	comp=Z,2.5nm,0.7s,baz=78,slow=12,SNR=4.5						
	comp=Z,0.9nm,0.6s						
KIV	**Kislovodsk**	**96.18**	**314**	*e*P	**P**	**01 18 52.1**	**-2.4**
KIV				*e*		01 22 43.6	
KIV				*e*PPP	PPP	01 24 47.2	
KIV				*e*		01 29 27.1	
KIV				*e*SS	SS	01 36 41.7	-2.7
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV	**Kislovodsk**	**96.18**	**314**	*i* P	**P**	**01 18 51.1**	**-3.4**
	SNR=6.6						
KIV	**Kislovodsk**	**96.18**	**314**	P	**P**	**01 18 52.4**	**-2.1**
SHA1	**Shidzhatmaz**	**96.21**	**314**	*c i*P	**P**	**01 18 51.5**	**-3.3**
VRH	**Novokhopyorsk**	**96.47**	**321**	*e*P	**P**	**01 18 54.1**	**-1.3**
VRH				pmax	pmax		
	comp=Z,40nm,1.0s						
VRH				MLR	MLR		
	comp=Z,6μm,21.0s						
KLMR	**Klimovskoe**	**96.84**	**331**	*e*P	**P**	**01 18 53.7**	**-3.2**
KLMR				S	**SKSac**	**01 29 28.8**	**-3.1**
KLMR				SS	**SS**	**01 36 44.8**	**-7.7**
KLMR				pmax	pmax		
	comp=Z,33nm,1.8s						
NLWA	**Neilton Lookou**	**97.10**	**43**	IAMs_20	IAMs_20	01 56 44.6	
	comp=Z,10μm,21.0s						
JCC	**Jacoby Creek,**	**97.35**	**49**	IAMs_20	IAMs_20	01 55 00.8	
	comp=Z,9μm,20.0s						
LABN	**Labinsk**	**97.56**	**314**	*e*P	**P**	**01 18 57.8**	**-2.8**
LABN				*e*		01 22 56.4	
LABN				pmax	pmax		
	comp=Z,26nm,0.7s						
LABN				MLR	MLR		
	comp=Z,9μm,21.0s						
ERBR	**Yeremizino-Bor**	**97.66**	**316**	*e*P	**P**	**01 18 56.9**	**-4.1**
ERBR				*e*		01 22 58.7	
ERBR				*e*PPP	PPP	01 25 04.8	
ERBR				pmax	pmax		
	comp=Z,27nm,1.3s						
ERBR				MLR	MLR		
	comp=Z,5μm,24.0s						
COR	**Corvallis**	**97.67**	**46**	IAMs_20	IAMs_20	01 59 19.0	
	comp=Z,9μm,20.0s						
VORR	**Voronezh**	**98.00**	**322**	*e*P	**P**	**01 19 01.4**	**-1.0**
VORR				pmax	pmax		
	comp=Z,20nm,0.6s						
VORR				MLR	MLR		
	comp=Z,4μm,18.0s						
VORD	**Divnogorie**	**98.02**	**321**	*e*P	**P**	**01 19 01.0**	**-1.4**
VORD				pmax	pmax		
	comp=Z,30nm,1.0s						
VSR	**Storozhevoye**	**98.07**	**321**	*e*P	**P**	**01 19 00.1**	**-2.6**
VSR				pmax	pmax		
	comp=Z,20nm,1.0s						
VSR				MLR	MLR		
	comp=Z,6μm,21.0s						
LPSR	**Galich'ya Gora**	**98.08**	**323**	*e*P	**P**	**01 18 59.9**	**-2.8**
LPSR				pmax	pmax		
	comp=Z,40nm,1.2s						
LPSR				MLR	MLR		
	comp=Z,3μm,19.0s						
HOPS	**Hopland Field**	**98.18**	**51**	IAMs_20	IAMs_20	01 58 44.9	
	comp=Z,9μm,20.0s						
YBH	**Yreka Blue Hor**	**98.29**	**48**	IAmb	IAmb	01 19 06.9	
	comp=Z,64nm,1.9s						
APA	**Apatity**	**98.32**	**338**	⇓*i*P	**P**	**01 19 00.8**	**-2.7**
APA				*i*		01 23 04.0	
APA				*i* PPP	PPP	01 25 11.0	
APA				*i* S	**S**	**01 30 24.0**	**-5.4**
APA				*i* PS	**PS**	**01 31 52.0**	**-5.2**
APA				*i* SS	SS	01 37 24.0	+11
APA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,8μm,23.0s						
O02D	**Mt. Diablo Mer**	**98.33**	**50**	IAmb	IAmb	01 19 09.1	
	comp=Z,31nm,1.0s						
O02D				IAMs_20	IAMs_20	02 04 01.8	
	comp=Z,12μm,19.0s						
SOC	**Sochi**	**98.35**	**313**	*c i*P	**P**	**01 19 00.9**	**-3.2**
SOC				*e*S	**SKSac**	**01 29 37.4**	**-3.0**
SOC				*e*SS	**SS**	**01 37 17.6**	**+2.8**
SOC				*e*SSS	SSS	01 40 55.7	
SOC				pmax	pmax		
	comp=Z,20nm,0.8s						
SOC				MLR	MLR		
	comp=Z,3μm,20.0s						
MCCM	**Marconi Confer**	**98.37**	**52**	IAMs_20	IAMs_20	02 02 54.8	
	comp=Z,8μm,19.0s						
D05A	**Enumclaw**	**98.39**	**43**	IAmb	IAmb	01 19 10.9	
	comp=Z,68nm,1.9s						
MOS	**Moscow**	**98.46**	**326**	*e*P	**P**	**01 19 01.2**	**-3.1**
MOS				*e*		01 23 01.7	
MOS				pmax	pmax		
	comp=Z,32nm,1.6s						
MOS				MLR	MLR		
	comp=Z,9μm,22.0s						
SPITS	**Spitsbergen Ar**	**99.01**	**350**	P	**Pdif**	**01 19 05.4**	**-1.0**
	comp=Z,5.9nm,0.9s,baz=94,slow=11,SNR=4.6						
	comp=Z,5.9nm,0.9s						
OBN	**Obninsk**	**99.15**	**325**	P	**Pdif**	**01 19 06.5**	**-0.9**
	comp=Z,10nm,0.7s,baz=213,slow=1.9,SNR=4.9						
	comp=Z,10nm,0.7s						
OBN	**Obninsk**	**99.15**	**325**	*ce*P	**Pdif**	**01 19 05.1**	**-2.3**
OBN				*i*		01 23 10.3	
OBN				*i* SS	SS	01 37 30.1	+4.9
OBN				pmax	pmax		
	comp=Z,43nm,1.6s						
OBN				MLR	MLR		
	comp=Z,8μm,20.0s						
PINE	**Pine Mountain**	**99.43**	**46**	IAmb	IAmb	01 19 13.0	
	comp=Z,51nm,1.7s						
SAO	**San Andreas Ge**	**99.59**	**53**	IAMs_20	IAMs_20	01 56 36.2	
	comp=Z,9μm,20.0s						
HSPB	**Hornsund (broa**	**99.78**	**349**	*e*PP	**PP**	**01 23 14.4**	**+0.3**
HSPB				*e*SP	SP	01 32 09.5	+1.0
HSPB				*e*L	L	02 02 58.7	
	comp=Z,10μm,22.9s						
ANN	**Anapa**	**99.88**	**315**	*e*P	**Pdif**	**01 19 07.9**	**-3.0**
ANN				*e**PP	**pP**	**01 19 15.3**	**-4.7**
ANN				*e*		01 23 11.3	
ANN				*e*PPP	PPP	01 25 19.9	
ANN				*e*S	**SKSac**	**01 29 45.3**	**-2.6**
ANN				*e*SS	**SS**	**01 37 29.6**	**-6.5**
ANN				*e*SSS	SSS	01 41 20.1	
ANN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ANN				MLR	MLR		
	comp=Z,5μm,22.0s						
KEV	**Kevo**	**99.95**	**341**	P	**Pdif**	**01 19 09.0**	**-1.7**
YKAW3	**Yellowknife Wh**	**100.12**	**27**		**Pdif**	**01 19 12.3**	**+0.8**
YKA	**Yellowknife Ar**	**100.14**	**27**	P	**Pdif**	**01 19 10.9**	**-0.8**
	comp=Z,4.1nm,0.8s,baz=293,slow=5.2,SNR=14						
YKA				PKKPbc	**PKKPbc**	**01 35 32.3**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=94,slow=2.4,SNR=6.6						
YKA	**Yellowknife Ar**	**100.14**	**27**	*i* P	**Pdif**	**01 19 13.5**	**+1.8**
YKA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HAWA	**Hanford**	**100.15**	**43**	IAMs_20	IAMs_20	02 01 16.8	
	comp=Z,8μm,19.0s						
TROLL	**Troll, Antarti**	**100.27**	**193**	⇓P	**Pdif**	**01 19 13.6**	**+1.3**
	comp=Z,418nm,1.1s						
CMB	**Columbia Colle**	**100.34**	**52**	IAMs_20	IAMs_20	02 12 01.9	
	comp=Z,6μm,18.0s						
KIBK	**Kibwezi**	**100.45**	**267**	P	**Pdif**	**01 19 14.3**	**0.0**
ARCES	**ARCESS Array B**	**100.52**	**341**	P	**Pdif**	**01 19 11.8**	**-1.5**
	comp=Z,8.3nm,0.8s,baz=74,slow=7.1,SNR=32						
ARCES				PKiKP	**PKiKP**	**01 23 39.7**	**0.0**
	comp=Z,1.6nm,0.6s,baz=119,slow=1.5,SNR=9.9						
WVOR	**Wild Horse Val**	**101.25**	**47**	IAMs_20	IAMs_20	02 00 16.8	
	comp=Z,9μm,20.0s						
NEW	**Newport**	**101.52**	**41**	IAMs_20	IAMs_20	01 58 25.5	
	comp=Z,11μm,21.0s						
SNAA	**Sanae**	**101.65**	**192**	⇓P	**Pdif**	**01 19 19.4**	**+1.0**
	comp=Z,30nm,0.9s						
SNAA	**Sanae**	**101.65**	**192**	P	**Pdif**	**01 19 18.6**	**+0.2**
	comp=Z,3.9nm,1.0s,baz=156,slow=4.5,SNR=8.7						
SNAA	**Sanae**	**101.65**	**192**	*c i*P	**Pdif**	**01 19 19.7**	**+1.3**
SNAA				pmax	pmax		
	comp=Z,18nm,1.7s						
NVAR	**Mina Array Bea**	**101.94**	**51**	P	**Pdif**	**01 19 20.6**	**0.0**
	comp=Z,6.4nm,0.9s,baz=257,slow=6.2,SNR=24						
NVAR				PP	**PP**	**01 23 34.3**	**+2.4**
	comp=Z,1.7nm,0.9s,baz=264,slow=6.4,SNR=5.0						
PASC	**Pasadena Art C**	**102.45**	**56**	IAMs_20	IAMs_20	01 56 55.1	
	comp=Z,12μm,21.0s						
PLID	**Pearl Lake**	**102.78**	**44**	IAMs_20	IAMs_20	02 02 23.5	
	comp=Z,9μm,20.0s						
FINES	**FINESS Array B**	**103.06**	**333**	Pdiff	**Pdif**	**01 19 23.3**	**-1.4**
	comp=Z,1.0nm,0.5s,baz=64,slow=4.6,SNR=13						
FINES				PP	**PP**	**01 23 40.5**	**+1.3**
	comp=Z,7.2nm,1.0s,baz=54,slow=7.5,SNR=7.4						
VNA2	**Neumayer--Watz**	**103.14**	**191**	⇓P	**Pdif**	**01 19 27.9**	**+3.0**
	comp=Z,5.0nm,0.7s,baz=266,slow=1.6						
MFID	**Camas Ranch**	**103.16**	**46**	IAMs_20	IAMs_20	01 59 18.8	
	comp=Z,7μm,21.0s						
BRTR	**Keskin Array B**	**103.28**	**310**	Pdiff	**Pdif**	**01 19 25.7**	**-0.7**
	comp=Z,1.0nm,0.9s,baz=157,slow=4.0,SNR=5.8						
BRTR				PP	**PKiKP**	**01 23 46.9**	**+1.1**
	comp=Z,1.8nm,1.0s,baz=111,slow=6.8,SNR=4.1						
VNA3	**Neumayer Olymp**	**103.28**	**190**	⇓P	**Pdif**	**01 19 27.1**	**+1.5**
	comp=Z,4.4nm,0.7s						
VNA1	**Neumayer--Stat**	**103.53**	**191**	⇓P	**Pdif**	**01 19 26.0**	**-0.6**
	comp=Z,4.7nm,0.8s						
TPNV	**Topopah Spring**	**103.73**	**53**	IAMs_20	IAMs_20	02 05 28.6	
	comp=Z,6μm,19.0s						
MSO	**Missoula**	**103.89**	**42**	IAMs_20	IAMs_20	01 59 18.7	
	comp=Z,10μm,20.0s						
ELK	**Elko**	**104.00**	**49**	IAMs_20	IAMs_20	01 59 35.7	
	comp=Z,9μm,21.0s						
HLID	**Hailey**	**104.15**	**46**	IAMs_20	IAMs_20	02 03 51.6	
	comp=Z,8μm,19.0s						
MNK	**Minsk**	**104.19**	**326**	*i* P	**Pdif**	**01 19 26.4**	**-3.4**
	comp=E,6.0nm,0.9s						
MNK				*i* P	**Pdif**	**01 19 26.4**	**-3.4**
	comp=N,6.0nm,0.8s						
MNK				*i* P	**Pdif**	**01 19 26.4**	**-3.4**
	comp=Z,4.0nm,0.8s,baz=75						
MNK				*i* PP	**PKiKP**	**01 23 44.2**	**-2.5**
MNK				*i* PPP	PPP	01 25 55.8	
MNK				*i* SKS		01 30 54.3	
MNK				*i* PS	**PS**	**01 32 56.8**	**-3.5**
MNK				*i* SS	**SS**	**01 38 33.1**	**-2.0**
MNK				*i* SSS	SSS	01 42 29.2	
MNK				*i* LQ	LQ	01 59 10.9	
MNK	**Minsk**	**104.19**	**326**	*i* P	**Pdif**	**01 19 26.4**	**-3.4**
MNK				*i*		01 23 44.2	
MNK				*i*		01 30 54.3	
MNK				*i* PS	**PS**	**01 32 56.7**	**-3.5**
MNK				*i* SS	SS	01 38 33.0	-2.0
MNK				*i* SSS	SSS	01 42 29.1	
MNK				pmax	pmax		
	comp=N,6.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,6.0nm,0.9s						
MNK				MLR	MLR		
	comp=E,3μm,22.0s						
AKASG	**Malin Array Be**	**104.35**	**322**	Pdiff	**Pdif**	**01 19 30.1**	**-0.6**
	comp=E,4.4nm,1.0s,baz=65,slow=4.6,SNR=11						
AKASG				PKiKP	**PKiKP**	**01 23 47.2**	**+0.1**
	comp=E,1.0nm,0.6s,baz=68,slow=2.1,SNR=6.9						
AKASG				PKKPbc	**PKKPbc**	**01 35 18.6**	**-0.8**
	comp=E,2.0nm,0.8s,baz=269,slow=3.4,SNR=8.8						
NACGM	**Naroch**	**104.69**	**326**	⇓*i*Pdif	**Pdif**	**01 19 32.2**	**+0.1**
	comp=Z,5.0nm,0.9s,baz=73						
DAG	**Danmarks Havn**	**104.99**	**355**	P	**Pdif**	**01 19 33.3**	**+0.3**
DAG	**Danmarks Havn**	**104.99**	**355**	*i* P	**PKiKP**	**01 23 51.0**	**+3.4**
DLMT	**Dillon**	**105.10**	**44**	IAMs_20	IAMs_20	02 00 58.7	
	comp=Z,9μm,20.0s						
MILM	**Milestii Mici**	**105.48**	**318**	*e*P	**Pdif**	**01 19 33.0**	**-2.8**
	comp=Z,460nm,7.2s						
MILM	**Milestii Mici**	**105.48**	**318**	*e*PP	**PP**	**01 24 00.0**	**+2.3**
MILM				*e*L	L	02 06 10.0	
MILM				LRM	MLR	02 09 22.0	
	comp=Z,3μm,21.0s						
MILM	**Milestii Mici**	**105.48**	**318**	*e*P	**Pdif**	**01 19 33.0**	**-2.8**
MILM				*e*		01 24 00.0	
MILM				MLR	MLR		
	comp=Z,4μm,22.0s						
BOZ	**Bozeman (W)**	**105.72**	**43**	IAMs_20	IAMs_20	02 00 17.6	
	comp=Z,9μm,20.0s						
DUG	**Dugway, Tooele**	**105.91**	**49**	IAMs_20	IAMs_20	02 03 31.0	
	comp=Z,8μm,20.0s						
TIRR	**Tirgusor**	**106.29**	**316**	IAMs_20	IAMs_20	02 11 00.6	
	comp=Z,8μm,22.0s						
EGMT	**Eagleton**	**106.40**	**41**	IAMs_20	IAMs_20	02 01 50.5	
	comp=Z,11μm,20.0s						
FXWY	**Fox Creek**	**106.55**	**45**	IAMs_20	IAMs_20	02 00 47.4	
	comp=Z,9μm,20.0s						
HWUT	**Hardware Ranch**	**106.58**	**47**	IAMs_20	IAMs_20	02 02 40.9	
	comp=Z,11μm,20.0s						
TPAW	**Teton Pass**	**106.64**	**45**	IAMs_20	IAMs_20	02 00 59.6	
	comp=Z,9μm,20.0s						
AHID	**Auburn Hatcher**	**106.69**	**46**	IAMs_20	IAMs_20	02 00 15.6	
	comp=Z,7μm,21.0s						
SNOW	**Snow King Moun**	**106.78**	**45**	IAMs_20	IAMs_20	02 01 04.6	
	comp=Z,9μm,20.0s						
LOHW	**Long Hollow**	**106.86**	**45**	IAMs_20	IAMs_20	02 00 58.1	
	comp=Z,10μm,20.0s						
SUW	**Suwalki**	**106.97**	**326**	*e*Pdif	**Pdif**	**01 19 40.1**	**-2.2**
SUW				*e*PP	**PP**	**01 24 07.0**	**-1.3**
SUW				*e*PPP	PPP	01 26 24.0	
SUW				*e*SP	SP	01 33 28.5	+3.6
SUW				*e*L	L	02 09 28.9	
	comp=Z,8μm,25.4s						
SUW	**Suwalki**	**106.97**	**326**	IAMs_20	IAMs_20	02 13 53.1	
	comp=Z,10μm,18.0s						
RLMT	**Red Lodge**	**107.44**	**43**	IAMs_20	IAMs_20	02 01 33.8	
	comp=Z,10μm,21.0s						
BW06	**Boulder Array**	**107.79**	**46**	IAMs_20	IAMs_20	02 01 01.9	
	comp=Z,7μm,22.0s						
PDAR	**Pinedale Array**	**107.79**	**46**	Pdiff	**Pdif**	**01 19 47.8**	**+1.3**
	comp=Z,1.0nm,0.6s,baz=226,slow=2.6,SNR=11						
PDAR				PKiKP	**PKiKP**	**01 23 54.2**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=301,slow=0.9,SNR=6.7						
PDAR				PP	**PP**	**01 24 17.1**	**+2.0**
	comp=Z,0.8nm,0.8s,baz=289,slow=4.5,SNR=3.7						
PDAR				PKKPbc	**PKKPbc**	**01 35 10.8**	**+1.9**
	comp=Z,1.3nm,0.9s,baz=108,slow=4.8,SNR=5.9						
WUAZ	**Wupatki**	**107.83**	**54**	IAMs_20	IAMs_20	02 06 45.7	
	comp=Z,8μm,19.0s						
TUC	**Tucson**	**108.83**	**57**	IAMs_20	IAMs_20	01 59 55.2	
	comp=Z,11μm,21.0s						
LAO	**LASA Array**	**109.08**	**41**	IAMs_20	IAMs_20	02 04 24.3	
	comp=Z,9μm,20.0s						
HFS	**Hagfors**	**109.12**	**334**	Pdiff	**Pdif**	**01 19 51.0**	**-0.7**
	comp=Z,1.9nm,0.8s,baz=262,slow=1.0,SNR=4.9						
HFS				PKiKP	**PKiKP**	**01 23 54.7**	**-1.0**
	comp=Z,0.8nm,0.6s,baz=341,slow=3.1,SNR=4.7						
HFS				PP	**PP**	**01 24 26.9**	**+3.1**
	comp=Z,3.7nm,0.9s,baz=63,slow=10,SNR=5.1						
HFS				PKKPbc	**PKKPab**	**01 35 11.6**	**-3.9**
	comp=Z,1.6nm,0.8s,baz=180,slow=0.9,SNR=4.1						
O20A	**White River Ci**	**109.36**	**48**	IAMs_20	IAMs_20	02 03 10.0	
	comp=Z,9μm,21.0s						
NOA	**NORSAR Array B**	**109.70**	**336**	Pdiff	**Pdif**	**01 19 55.5**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=59,slow=4.3,SNR=4.0						
NOA				PKiKP	**PKiKP**	**01 23 56.8**	**0.0**
	comp=Z,0.3nm,0.6s,baz=52,slow=2.1,SNR=3.6						
NOA				PP	**PP**	**01 24 31.6**	**+3.5**
	comp=Z,1.7nm,1.0s,baz=50,slow=7.1,SNR=4.9						
MVCO	**Mesa Verde**	**109.80**	**51**	IAMs_20	IAMs_20	02 16 18.7	
	comp=Z,8μm,18.0s						
K22A	**Casper**	**109.99**	**45**	IAMs_20	IAMs_20	02 00 44.9	
	comp=Z,9μm,22.0s						
NIE	**Niedzica**	**110.22**	**322**	*e*Pdif	**Pdif**	**01 19 56.7**	**-0.2**
NIE				*e*PKiKP	**PKiKP**	**01 24 02.6**	**+4.5**
NIE				*e*PP	**PP**	**01 24 33.0**	**+0.7**
NIE				*e*SP	SP	01 33 56.7	-1.6
NIE				*e*L	L	02 13 28.6	
	comp=Z,4μm,23.2s						
OJC	**Ojcow**	**110.24**	**323**	*e*Pdif	**Pdif**	**01 19 55.2**	**-1.7**
OJC				*e*SP	SP	01 33 54.0	-4.3
OJC				*e*L	L	02 11 04.4	
	comp=Z,5μm,24.8s						
GKP	**Gorka Klasztor**	**110.53**	**327**	*e*PP	**PP**	**01 24 34.7**	**+0.4**
GKP				*e*PPP	PPP	01 26 56.1	
GKP				*e*SP	SP	01 34 02.8	+2.1
GKP				*e*L	L	02 14 27.9	
	comp=Z,11μm,19.6s						
SLBS	**Sierra La Lagu**	**110.71**	**66**	IAMs_20	IAMs_20	02 01 09.8	
	comp=Z,9μm,20.0s						
PSZ	**Piszkesteto**	**111.00**	**321**	IAMs_20	IAMs_20	02 14 43.9	
	comp=Z,6μm,20.0s						
RSSD	**Black Hills**	**111.31**	**43**	IAMs_20	IAMs_20	02 13 33.7	
	comp=Z,7μm,19.0s						
OKC	**Ostrava-Krasne**	**111.37**	**323**	AMS	AMS	02 16 10.0	
	comp=Z,5μm,19.4s						
ISCO	**Idaho Springs**	**111.40**	**48**	IAMs_20	IAMs_20	02 12 33.0	
	comp=Z,9μm,19.0s						
STEB	**Steborice**	**111.56**	**323**	*e*PKP	**PKiKP**	**01 24 00.5**	**-0.1**
MORC	**Moravsky Berou**	**111.76**	**323**	*e*PDIFF	**Pdif**	**01 20 03.9**	**+0.2**
MORC				*e*PKIKP	**PKiKP**	**01 24 00.4**	**-0.7**
MORC				*e*		01 34 17.6	
ANMO	**Albuquerque**	**111.89**	**53**	IAMs_20	IAMs_20	02 02 28.8	
	comp=Z,8μm,22.0s						
ANMO	**Albuquerque**	**111.89**	**53**	IAMs_20	IAMs_20	02 02 29.8	
	comp=Z,8μm,21.0s						
ANMO	**Albuquerque**	**111.89**	**53**	IAMs_20	IAMs_20	02 02 28.8	
	comp=Z,8μm,21.0s						
ANMO	**Albuquerque**	**111.89**	**53**	*d i*PKIKP	**PKiKP**	**01 24 02.5**	**+0.5**
SDCO	**Great Sand Dun**	**112.00**	**50**	IAMs_20	IAMs_20	02 03 15.6	
	comp=Z,9μm,21.0s						
RGN	**Rugen**	**112.03**	**329**	IAMs_20	IAMs_20	02 12 44.7	
	comp=Z,8μm,21.0s						
JAVC	**Velka Javorina**	**112.03**	**322**	*e*PDIFF	**Pdif**	**01 20 05.9**	**+0.9**
JAVC				*e*PKIKP	**PKiKP**	**01 24 04.2**	**+2.6**
JAVC				*e*		01 34 21.3	
KSP	**Ksiaz**	**112.06**	**325**	*e*PKiKP	**PKiKP**	**01 24 00.4**	**-1.1**
KSP				*e*PP	**PP**	**01 24 46.6**	**+1.3**
KSP				*e*SP	SP	01 34 19.2	+4.2
KSP				*e*L	L	02 13 20.7	
	comp=Z,8μm,22.2s						
KRLC	**Kraliky**	**112.09**	**324**	*e*PKP	**PKiKP**	**01 24 01.2**	**-0.5**
KRLC				AMS	AMS	02 15 20.0	
	comp=Z,5μm,19.4s						
KRLC	**Kraliky**	**112.09**	**324**	*e*PKIKP	**PKiKP**	**01 24 01.2**	**-0.5**
KRLC				MLR	MLR		
	comp=Z,5μm,19.4s						
OSTC	**Ostas**	**112.23**	**324**	*e*PKP	**PKiKP**	**01 24 02.1**	**+0.2**
OSTC				AMS	AMS	02 14 20.0	
	comp=Z,8μm,20.8s						
OSTC	**Ostas**	**112.23**	**324**	*e*PKIKP	**PKiKP**	**01 24 02.1**	**+0.2**
OSTC				MLR	MLR		
	comp=Z,8μm,20.8s						
DPC	**Dobruska-Polom**	**112.25**	**324**	*e*PKP	**PKiKP**	**01 24 01.9**	**-0.1**
DPC				AMS	AMS	02 14 20.0	
	comp=Z,7μm,23.5s						
DPC	**Dobruska-Polom**	**112.25**	**324**	*e*PKIKP	**PKiKP**	**01 24 01.9**	**-0.1**
DPC				MLR	MLR		
	comp=Z,7μm,23.5s						
CHVC	**Chvalec**	**112.31**	**325**	AMS	AMS	02 14 20.0	
	comp=Z,8μm,21.5s						
UPC	**Upice**	**112.36**	**324**	AMS	AMS	02 14 40.0	
	comp=Z,8μm,20.5s						
MODS	**Modra-Piesok**	**112.46**	**322**	*e*PP	**PP**	**01 24 49.2**	**+0.9**
EPT	**El Paso**	**112.50**	**57**	IAMs_20	IAMs_20	02 01 49.6	
	comp=Z,11μm,21.0s						
VRAC	**Vranov**	**112.51**	**323**	*e*PDIFF	**Pdif**	**01 20 07.4**	**+0.3**
VRAC				*e*PKIKP	**PKiKP**	**01 24 02.9**	**+0.4**
VRAC				*e*		01 34 24.2	
E28A	**Huff**	**112.71**	**40**	IAMs_20	IAMs_20	02 03 09.4	

	comp=Z,9µm,22.0s						
KRUC	Moravsky	112.73	323	ePDIFF	Pdif	01 20 07.3	-0.7
KRUC				ePKIKP	PKiKP	01 24 02.4	-0.5
KRUC				e		01 34 27.1	
T25A	Trinidad	112.99	51	IAMs_20	IAMs_20	02 07 05.5	
	comp=Z,7µm,20.0s						
TIR	Tirane	113.16	314	IAMs_20	IAMs_20	02 15 36.5	
	comp=Z,9µm,22.0s						
TREC	Trest	113.18	323	eSP	SP	01 34 27.6	+2.3
TREC				AMS	AMS	02 12 30.0	
	comp=Z,6µm,22.8s						
PVCC	Panska Ves	113.19	325	AMS	AMS	02 15 40.0	
	comp=Z,8µm,19.7s						
GOPC	GO Pecny, Ondr	113.33	324	ePKP	PKiKP	01 24 03.5	-0.5
GOPC				AMS	AMS	02 16 50.0	
	comp=Z,7µm,19.3s						
GOPC	GO Pecny, Ondr	113.33	324	ePKIKP	PKiKP	01 24 03.5	-0.5
GOPC				MLR	MLR		
	comp=Z,7µm,19.3s						
RONA	Rosalia, Austr	113.33	322	ePKiKP	PKiKP	01 24 04.6	+0.5
	comp=Z,2.0nm,0.7s						
BRG	Berggiesshubel	113.39	325	P	PKiKP	01 24 07.9	+3.9
BRG				Amp		01 24 08.7	
	comp=Z,3.9nm,0.8s						
BRG	Berggiesshubel	113.39	325	PS	PS	01 34 40.0	+8.6
PRU	Pruhonice	113.44	324	ePKP	PKiKP	01 24 03.6	-0.6
PRU				ePP	PP	01 24 50.2	-5.0
PRU				AMS	AMS	02 14 30.0	
	comp=Z,8µm,21.2s						
PRU	Pruhonice	113.44	324	ePKIKP	PKiKP	01 24 03.6	-0.6
PRU				MLR	MLR		
	comp=Z,8µm,21.2s						
RICC	Richard	113.45	325	AMS	AMS	02 18 30.0	
	comp=Z,8µm,17.7s						
MNTX	Cornudas Mount	113.45	57	IAMs_20	IAMs_20	02 02 19.7	
	comp=Z,11µm,22.0s						
PRA	Prague	113.47	324	ePP	PP	01 24 57.5	+2.1
PRA				AMS	AMS	02 14 40.0	
	comp=Z,9µm,20.7s						
CONA	Conrad Observa	113.51	322	i PKiKP	PKiKP	01 24 04.0	-0.5
	comp=Z,3.2nm,1.3s						
OGNE	Ogallala	113.69	46	IAMs_20	IAMs_20	02 04 18.5	
	comp=Z,9µm,22.0s						
CLL	Collm	113.73	326	eP	Pdif	01 20 12.0	-0.4
CLL				e		01 24 05.0	
CLL				i		01 24 56.8	
CLL				pmax	pmax		
	comp=Z,350nm,3.9s						
CLL				pmax	pmax		
	comp=Z,15µm,19.3s						
CLL	Collm	113.73	326	ePdif	Pdif	01 20 12.0	-0.4
CLL				ePKiKP	PKiKP	01 24 05.0	+0.3
CLL				i PP	PP	01 24 56.8	-0.3
	comp=Z,350nm,3.9s						
CLL				ePPP	PPP	01 27 27.0	
CLL				eSKSac	SKSac	01 30 54.0	+5.4
CLL				eSdif	Sdif	01 32 41.0	+2.2
CLL				ex	x	01 33 38.0	
CLL				ex	x	01 34 05.0	
CLL				ePS	PS	01 34 33.0	-1.4
CLL				ePKKPbc	PKKPbc	01 34 51.0	+1.6
CLL				esPKKPbc		01 34 58.0	
CLL				ex	x	01 35 04.0	
CLL				ex	x	01 35 16.0	
CLL				ePPS	PPS	01 35 42.0	
CLL				ex	x	01 36 01.0	
CLL				ex	x	01 36 59.0	
CLL				eSKKPdf	SKKPdf	01 38 42.0	-2.6
CLL				ex	x	01 39 45.0	
CLL				eSS	SS	01 40 49.0	+5.6
CLL				ePPPrev		01 42 40.0	
CLL				eSSS	SSS	01 44 36.0	
CLL				eSSSS		01 48 24.0	
CLL				AMS	AMS	02 16 00.0	
	comp=N,8µm,19.3s						
CLL				AMS	AMS	02 16 00.0	
	comp=E,7µm,19.7s						
CLL				AMS	AMS	02 16 00.0	
	comp=Z,15µm,19.3s						
CLL				AMS	AMS	02 16 00.0	
KSCO	Kaye Shedlock’	113.84	48	IAMs_20	IAMs_20	02 08 09.6	
	comp=Z,9µm,20.0s						
ZVC	Zvikov	113.88	324	ePKP	PKiKP	01 24 04.0	-1.1
ZVC				AMS	AMS	02 17 20.0	
	comp=Z,6µm,19.6s						
ARSA	Arzberg	113.99	321	ePKP	PKiKP	01 24 04.2	-1.2
	comp=Z,1.7nm,0.8s						
CKRC	Cesky Krumlov	114.08	323	ePKP	PKPdf	01 24 05.4	-0.1
CKRC				AMS	AMS	02 14 10.0	
	comp=Z,6µm,21.2s						
CKRC	Cesky Krumlov	114.08	323	ePKIKP	PKPdf	01 24 05.4	-0.1
CKRC				MLR	MLR		
	comp=Z,6µm,21.2s						
ULM	Lac du Bonnet	114.14	35	PKP	PKPdf	01 24 03.9	-1.6
	comp=Z,1.7nm,0.6s,baz=344,slow=3.9,SNR=4.8						
KHC	Kasperske Hory	114.38	324	ePKP	PKPdf	01 24 06.1	0.0
KHC				ePP	PP	01 24 58.1	-3.8
KHC				eSP	SP	01 34 30.8	-5.5
KHC				AMS	AMS	02 15 30.0	
	comp=Z,8µm,21.8s						
KHC	Kasperske Hory	114.38	324	ePKIKP	PKPdf	01 24 06.1	0.0
KHC				e		01 24 58.1	
KHC				eSP	SP	01 34 30.8	-5.5
KHC				MLR	MLR		
	comp=Z,8µm,21.8s						
GERES	GERESS Array B	114.43	323	PKP	PKiKP	01 24 05.0	-1.3
	comp=Z,3.1nm,0.5s,baz=81,slow=1.7,SNR=38						
GERES	GERESS Array B	114.43	323	PKIKP	PKiKP	01 24 05.0	-1.3
MOA	Molln	114.52	322	i PKP	PKiKP	01 24 05.3	-1.1
	comp=Z,1.6nm,0.5s						
SOKA	Soboth	114.53	321	ePKP	PKiKP	01 24 05.8	-0.7
	comp=Z,2.6nm,0.6s						
SUSD	Miller	114.63	42	IAMs_20	IAMs_20	02 06 10.4	
	comp=Z,10µm,20.0s						
MOX	Moxa	114.81	326	eL	L	02 18 05.6	
	comp=Z,14µm,18.3s						
OBKA	Obir	114.90	321	ePKiKP	PKPdf	01 24 08.1	+0.8
	comp=Z,0.8nm,0.5s						
BIOA	Bad Ischl, Aus	114.97	322	ePKP	PKiKP	01 24 07.0	-0.2
	comp=Z,2.7nm,0.6s						
TXAR	Lajitas Array	115.39	59	PKPdf	PKiKP	01 24 08.0	-0.7
TXAR	Lajitas Array	115.39	59	PKP	PKiKP	01 24 07.7	-1.0
	comp=Z,1.5nm,0.8s,baz=177,slow=2.2,SNR=14						
TXAR				PP	PP	01 25 12.2	+2.3
	comp=Z,2.1nm,0.9s,baz=243,slow=5.2,SNR=4.4						
TXAR				PKKPbc	PKKPab	01 34 47.5	-0.7
	comp=Z,2.9nm,0.9s,baz=120,slow=7.4,SNR=7.7						
TXAR	Lajitas Array	115.39	59	PKIKP	PKiKP	01 24 08.0	-0.7
MYKA	Terra Mystica	115.42	321	i PKP	PKiKP	01 24 07.7	-0.5
	comp=Z,1.9nm,0.5s						
GRA1	Grafenberg Arr	115.49	325	IAMs_20	IAMs_20	02 17 16.2	
	comp=Z,9µm,20.0s						
GRF	Grafenberg Arr	115.49	325	ePP	PP	01 25 01.1	-8.5
	baz=62,slow=5.6						
GRF				eSP	SP	01 34 47.1	+0.7
	baz=63,slow=8.9						
GRF				eL	L	02 17 07.1	
	comp=Z,8µm,19.5s						
GRFO	Grafenberg	115.49	325	IAMs_20	IAMs_20	02 17 16.2	
	comp=Z,9µm,20.0s						
SFJD	Kangerlussuaq	115.55	4	IAmb	IAmb	01 25 05.1	
	comp=Z,7.7nm,0.8s						
SFJD	Kangerlussuaq	115.55	4	i P	PP	01 25 04.1	-5.2
LESA	Schwarzleotal	115.67	322	i PKP	PKiKP	01 24 07.5	-1.2
	comp=Z,4.2nm,0.5s,SNR=11						
AMTX	Amarillo	115.72	52	IAMs_20	IAMs_20	02 08 13.9	
	comp=Z,10µm,20.0s						
F33A	5 Mile Ranch,	115.81	39	IAMs_20	IAMs_20	02 11 34.3	
	comp=Z,9µm,20.0s						
CBKS	Cedar Bluff	116.04	48	IAMs_20	IAMs_20	02 05 04.9	
	comp=Z,9µm,22.0s						
ABTA	Abfaltersbach	116.07	322	i PKP	PKiKP	01 24 08.3	-1.2
	comp=Z,4.6nm,0.6s						
WTTA	Wattenberg	116.38	323	i PKP	PKPdf	01 24 09.4	-0.8
	comp=Z,5.1nm,0.5s						
WATA	Walderalm	116.38	323	i PKP	PKPdf	01 24 09.0	-1.1
	comp=Z,1.6nm,0.4s						
SQTA	Sankt Quirin	116.66	323	ePKP	PKPdf	01 24 10.4	-0.3
	comp=Z,3.1nm,0.5s						
MOTA	Moosalm	116.66	323	i PKP	PKPdf	01 24 09.7	-1.0
	comp=Z,2.5nm,0.5s						
RETA	Reutte	116.80	323	ePKP	PKPdf	01 24 09.9	-0.9
	comp=Z,1.8nm,0.6s						
R32A	Long Quarter,	116.93	48	IAMs_20	IAMs_20	02 16 24.9	
	comp=Z,6µm,18.0s						
FETA	Feichten	117.04	323	ePKP	PKPdf	01 24 10.9	-0.5
	comp=Z,2.3nm,0.6s						
ANGG	Ammassalik, Gr	117.21	358	i P	PP	01 25 11.4	-9.4
ISOG	Isortoq, Green	117.31	359	i P	PP	01 25 14.1	-7.5
L34A	Svendsen Farm,	117.32	43	IAMs_20	IAMs_20	02 15 16.8	
	comp=Z,7µm,20.0s						
APMT	Aspermont	117.38	54		PKPdf	01 24 11.7	-0.6
DAVA	Damuels	117.42	323	i PKP	PKPdf	01 24 11.2	-1.0
	comp=Z,11nm,0.6s						
FUORN	Ofenpass-Fuorn	117.51	322	IAMs_20	IAMs_20	02 19 17.7	
	comp=Z,7µm,21.0s						
OK038	West end E0370	117.54	50	IAMs_20	IAMs_20	02 08 23.2	
	comp=Z,9µm,20.0s						
WIN	Windhoek	117.69	243	IAMs_20	IAMs_20	02 14 56.1	
	comp=Z,6µm,20.0s						
BTNL	Ternell	117.83	328	dPKPdf	PKPdf	01 24 12.4	-0.3
BTNL				dPP	PP	01 25 27.5	+1.6
MEM	Membach	117.89	328	dPP	PP	01 25 26.9	+0.7
ABTX	Abilene, Hawle	117.96	54	IAMs_20	IAMs_20	02 05 44.6	
	comp=Z,8µm,22.0s						
WMOK	Wichita Mounta	118.04	52	IAMs_20	IAMs_20	02 11 59.8	
	comp=Z,6µm,20.0s						
BSTI	Sart Tilman	118.14	328	dPP	PP	01 25 27.8	-0.1
TUE	Stuetta	118.14	323	IAMs_20	IAMs_20	02 21 10.7	
	comp=Z,6µm,20.0s						
KSU1	Kansas State U	118.24	47	IAMs_20	IAMs_20	02 07 21.8	
	comp=Z,8µm,22.0s						
N35A	Tabor	118.26	44	IAMs_20	IAMs_20	02 15 23.7	
	comp=Z,6µm,20.0s						
SPMN	Marine on St.	118.28	39	IAMs_20	IAMs_20	02 08 36.6	
	comp=Z,9µm,20.0s						
WLF	Walferdange	118.33	327	IAMs_20	IAMs_20	02 22 06.6	
	comp=Z,7µm,19.0s						
BCLA	Clavier	118.37	328	dPKPdf	PKiKP	01 24 13.7	0.0
BCLA				dPP	PP	01 25 30.2	+0.6
JCT	Junction City	118.39	57	IAMs_20	IAMs_20	02 10 19.6	
	comp=Z,6µm,20.0s						
BGES	Gesves	118.50	328	dPP	PP	01 25 30.7	+0.2
MG01	Puerto William	118.56	163	IAMs_20	IAMs_20	02 10 42.6	
	comp=Z,6µm,20.0s						
UCC	Uccle	118.64	329	dPKPdf	PKiKP	01 24 14.3	+0.1
UCC				dpPKPdf	pPKPdf	01 24 23.9	+0.5
BMRD	Maredsous	118.72	328	dPKPdf	PKPdf	01 24 14.3	0.0
OK029	Liberty Lake	118.74	50	IAMs_20	IAMs_20	02 09 22.2	
	comp=Z,8µm,21.0s						
X34A	Smith Ranch, M	118.83	52		PKiKP	01 24 15.2	+0.1
BRDY	Brady	118.85	56		PKPdf	01 24 14.4	-0.8
DOU	Dourbes	118.92	328	dPKPdf	PKiKP	01 24 15.0	+0.2
OK048	Pawnee Station	118.93	49	IAMs_20	IAMs_20	02 07 01.0	
	comp=Z,6µm,22.0s						
OK051	E0350 and S346	118.98	49	IAMs_20	IAMs_20	02 07 25.3	
	comp=Z,6µm,22.0s						
T35A	Sooner Cattle	119.08	49	IAMs_20	IAMs_20	02 15 28.6	
	comp=Z,6µm,19.0s						
OK031	S. Brethren Rd	119.16	50	IAMs_20	IAMs_20	02 09 33.7	
	comp=Z,8µm,20.0s						
OK052	Battle Ridge R	119.18	50	IAMs_20	IAMs_20	02 09 33.2	
	comp=Z,8µm,20.0s						
EKA	Eskdalemuir Ar	119.18	336	PKP	PKPdf	01 24 14.2	-0.9
	comp=Z,0.8nm,0.5s,baz=36,slow=2.3,SNR=7.9						
EKA				PP	PP	01 25 38.1	+3.2
	comp=Z,3.3nm,0.8s,baz=21,slow=5.4,SNR=5.2						
EKA				PKKPbc	PKKPab	01 34 34.8	+3.8
	comp=Z,1.8nm,0.8s,baz=216,slow=4.1,SNR=4.6						
SENIN	Lac Senin/Sane	119.42	323	IAMs_20	IAMs_20	02 20 31.6	
	comp=Z,8µm,20.0s						
SCIA	State Center	119.50	42	IAMs_20	IAMs_20	02 09 30.5	
	comp=Z,9µm,21.0s						
WHTX	Lake Whitney,	119.92	54	IAMs_20	IAMs_20	02 11 27.7	
	comp=Z,8µm,20.0s						
N38A	Joes South For	119.96	44	IAMs_20	IAMs_20	02 17 01.5	
	comp=Z,7µm,19.0s						
TUL3	Leonard	119.98	50	IAMs_20	IAMs_20	02 14 59.8	
	comp=Z,7µm,19.0s						
P38A	Dawn	120.23	45	IAMs_20	IAMs_20	02 09 34.0	
	comp=Z,7µm,20.0s						
BNI	Bardonecchia	120.46	322	PKPdf	PKPdf	01 24 17.2	-0.8
BNI				IAMs_20	IAMs_20	02 20 29.9	
	comp=Z,9µm,20.0s						
BNI	Bardonecchia	120.46	322	PKIKP	PKPdf	01 24 17.2	-0.8
U38A	Gravette	120.85	49	IAMs_20	IAMs_20	02 17 08.8	
	comp=Z,7µm,19.0s						
S39A	Bolivar	121.16	47	IAMs_20	IAMs_20	02 12 40.6	
	comp=Z,7µm,20.0s						
UNM	Universidad Na	121.21	69	IAMs_20	IAMs_20	02 05 46.4	
	comp=Z,7µm,21.0s						
VSL	Villasalto	121.28	315	PKPdf	PKPdf	01 24 18.7	-0.9
P40A	Paris	121.32	44	IAMs_20	IAMs_20	02 11 08.6	
	comp=Z,6µm,21.0s						
CLF	Chambon-Foret	121.38	327	IAMs_20	IAMs_20	02 21 11.9	
	comp=Z,9µm,22.0s						
IVI	Ivigtut	121.46	4	IAMs_20	IAMs_20	02 15 56.2	
	comp=Z,8µm,21.0s						
N41A	Harden Midland	121.62	43	IAMs_20	IAMs_20	02 11 58.8	
	comp=Z,9µm,20.0s						
R40A	Maddies Statio	121.68	46	IAMs_20	IAMs_20	02 13 38.8	
	comp=Z,7µm,20.0s						
HKT	Hockley	121.84	56	IAMs_20	IAMs_20	02 16 08.7	
	comp=Z,8µm,19.0s						
DSB	Dublin	122.00	336	IAMs_20	IAMs_20	02 19 59.2	
	comp=Z,9µm,20.0s						
NATX	Nacogdoches	122.25	54	IAMs_20	IAMs_20	02 15 12.1	
	comp=Z,8µm,20.0s						
CCM	Cathedral Cave	122.51	46		PKPdf	01 24 20.3	-1.7
CCM	Cathedral Cave	122.51	46	IAMs_20	IAMs_20	02 13 07.8	
	comp=Z,6µm,20.0s						
CCM	Cathedral Cave	122.51	46	PKIKP	PKPdf	01 24 20.3	-1.7
E46A	Sault Ste Mari	122.74	34	IAMs_20	IAMs_20	02 13 20.9	
	comp=Z,7µm,20.0s						
HDIL	Hopedale	122.75	42	IAMs_20	IAMs_20	02 12 10.1	
	comp=Z,7µm,20.0s						
KEST	Kesra	122.84	311	PKP	PKPdf	01 24 22.9	0.0
	comp=Z,3.5nm,0.6s,baz=186,slow=3.2,SNR=6.3						
P43A	Skaggs, Pawnee	123.02	43	IAMs_20	IAMs_20	02 11 40.8	
	comp=Z,9µm,21.0s						
T42A	Van Buren	123.05	47	IAMs_20	IAMs_20	02 10 39.8	
	comp=Z,9µm,21.0s						
Q44A	Meyer Farm, Va	123.70	44	IAMs_20	IAMs_20	02 20 25.7	
	comp=Z,7µm,19.0s						
441A	DeRidder	123.77	54	IAMs_20	IAMs_20	02 15 15.7	
	comp=Z,7µm,20.0s						
L46A	Eue Claire	123.98	39	IAMs_20	IAMs_20	02 17 10.4	
	comp=Z,7µm,19.0s						
S44A	Carbondale	124.09	45		PKPdf	01 24 24.5	-0.6
S44A				IAMs_20	IAMs_20	02 17 02.0	
	comp=Z,7µm,19.0s						
SCHQ	Schefferville	124.10	17	PKP	PKPdf	01 24 23.8	-0.8
	comp=Z,5.2nm,0.6s,baz=257,slow=2.1,SNR=6.6						
143A	Socs Landing,	124.51	52	IAMs_20	IAMs_20	02 13 40.8	
	comp=Z,8µm,20.0s						
MAHO	Mahon	124.60	318	PP	PP	01 26 13.4	+1.1
MAHO	Mahon	124.60	318	IAMs_20	IAMs_20	02 25 24.9	
	comp=Z,6µm,19.0s						
P46A	Rosedale	124.60	42	IAMs_20	IAMs_20	02 13 39.6	
	comp=Z,8µm,20.0s						
COYC	Coyhaique	124.70	154	IAMs_20	IAMs_20	02 10 44.1	
	comp=Z,6µm,22.0s						
T45A	Paducah	124.82	46	IAMs_20	IAMs_20	02 11 02.6	
	comp=Z,9µm,21.0s						
OXF	Oxford	125.34	49	IAMs_20	IAMs_20	02 18 25.7	
	comp=Z,6µm,20.0s						
Y45A	Yeager Farm, C	125.50	50	IAMs_20	IAMs_20	02 18 54.6	
	comp=Z,6µm,19.0s						
WVT	Waverly	125.81	46	PKPdf	PKPdf	01 24 27.1	-1.3
WVT	Waverly	125.81	46	IAMs_20	IAMs_20	02 12 45.7	
	comp=Z,7µm,21.0s						
WVT	Waverly	125.81	46	PKIKP	PKPdf	01 24 27.1	-1.3
P48A	Milroy	125.87	42	IAMs_20	IAMs_20	02 14 44.7	
	comp=Z,8µm,20.0s						
N49A	Columbus Grove	125.90	39	IAMs_20	IAMs_20	02 19 06.3	
	comp=Z,8µm,20.0s						
WCI	Wyandotte Cave	125.90	43		PKPdf	01 24 27.3	-1.2
WCI	Wyandotte Cave	125.90	43	IAMs_20	IAMs_20	02 14 18.8	
	comp=Z,8µm,20.0s						
WCI	Wyandotte Cave	125.90	43	PKIKP	PKPdf	01 24 27.3	-1.2
T47A	Sharon Grove	125.93	45	IAMs_20	IAMs_20	02 18 45.8	
	comp=Z,7µm,20.0s						
PLAL	Pickwick Lake	126.14	48	IAMs_20	IAMs_20	02 20 19.6	
	comp=Z,8µm,20.0s						
V48A	Smith Brothers	126.71	46	IAMs_20	IAMs_20	02 13 13.7	
	comp=Z,9µm,21.0s						
Z47A	Carrollton	126.90	50	IAMs_20	IAMs_20	02 20 32.6	
	comp=Z,8µm,21.0s						
N51A	Ashland	127.04	39	IAMs_20	IAMs_20	02 11 55.3	
	comp=Z,9µm,22.0s						
ACSO	Alum Creek Sta	127.04	40	IAMs_20	IAMs_20	02 19 13.6	
	comp=Z,6µm,20.0s						
U49A	Red Boiling Sp	127.09	45	IAMs_20	IAMs_20	02 14 35.6	
	comp=Z,8µm,20.0s						
X48A	Hartselle	127.13	48	IAMs_20	IAMs_20	02 12 36.9	
	comp=Z,7µm,22.0s						
ERPA	Erie	127.77	36	IAMs_20	IAMs_20	02 14 15.4	
	comp=Z,8µm,20.0s						
LRAL	Lakeview Retre	127.78	49		PKPdf	01 24 30.8	-1.5
LRAL				IAMs_20	IAMs_20	02 13 59.9	
	comp=Z,7µm,21.0s						
O52A	Adamsville	127.83	39	IAMs_20	IAMs_20	02 20 02.8	
	comp=Z,7µm,20.0s						
J55A	Hilton	128.28	34	IAMs_20	IAMs_20	02 26 40.5	
	comp=Z,6µm,18.0s						
BRAL	Brewton	128.52	52	IAMs_20	IAMs_20	02 17 01.8	
	comp=Z,6µm,20.0s						
TZTN	Tazewell	128.64	44	IAMs_20	IAMs_20	02 16 20.7	
	comp=Z,8µm,20.0s						
X51A	Calhoun	128.68	47	IAMs_20	IAMs_20	02 19 45.9	
	comp=Z,5µm,21.0s						
UCM	Universidad Co	129.17	322	PKP	PKiKP	01 24 35.9	+0.5
J57A	Williamstown	129.17	32		PKPdf	01 24 34.6	0.0
PLCA	Paso Flores	129.18	151	PKP	PKiKP	01 24 35.5	0.0
	comp=Z,4.4nm,0.7s,baz=239,slow=3.0,SNR=13						
CART	Cartagena	129.31	318	PP	PP	01 26 41.7	-1.8
K57A	Scipio Center	129.35	33	IAMs_20	IAMs_20	02 19 23.7	
	comp=Z,8µm,22.0s						
S54A	Dingess, Beckl	129.48	41	IAMs_20	IAMs_20	02 18 11.2	
	comp=Z,6µm,20.0s						
Y52A	Lilburn	129.59	47	IAMs_20	IAMs_20	02 21 39.6	
	comp=Z,5µm,20.0s						
V53A	Saluda	129.60	44	IAMs_20	IAMs_20	02 17 00.8	
	comp=Z,7µm,21.0s						
D62A	Allapoint, All	129.74	24	IAMs_20	IAMs_20	02 16 06.0	
	comp=Z,8µm,22.0s						
451A	Vernon	129.77	52	IAMs_20	IAMs_20	02 17 12.9	
	comp=Z,6µm,21.0s						
J59A	Piesco	129.92	31	IAMs_20	IAMs_20	02 15 57.6	
	comp=Z,9µm,21.0s						
SSPA	Standing Stone	129.93	36		PKPdf	01 24 36.1	0.0
ESDC	Sonseca Array	129.99	322		PKPdf	01 24 36.2	-0.1
ESDC	Sonseca Array	129.99	322	PKP	PKPdf	01 24 36.6	+0.3
	comp=Z,1.9nm,1.0s,baz=15,slow=2.5,SNR=26						
ESDC				PP	PP	01 26 51.4	+3.5
	comp=Z,2.4nm,1.1s,baz=59,slow=6.2,SNR=4.9						
352A	Blakely	130.03	50	IAMs_20	IAMs_20	02 17 46.8	
	comp=Z,6µm,20.0s						
Q56A	Snyder Ridge,	130.12	39	IAMs_20	IAMs_20	02 14 12.9	
	comp=Z,9µm,22.0s						
PBRG	Braganca	130.25	326	ePKPdf	PKiKP	01 24 42.9	+5.3
PBRG				ePP	PP	01 26 51.1	+1.6
PAB	San Pablo	130.31	322	IAMs_20	IAMs_20	02 28 34.8	
	comp=Z,8µm,20.0s						
BLA	Blacksburg	130.39	41	IAMs_20	IAMs_20	02 16 13.4	
	comp=Z,7µm,21.0s						
L59A	Walton	130.52	33	IAMs_20	IAMs_20	02 19 41.6	
	comp=Z,9µm,22.0s						
MVO	Moncorvo	130.84	326	ePKPdf	PKPdf	01 24 38.0	+0.1
MVO				ePP	PP	01 26 58.3	+4.9
MVO				eSS	SS	01 44 59.2	+38
MVO				eLQ	LQ	02 08 30.3	
MVO				eLR	LR	02 17 48.2	
MVO				i AMs_20		02 24 21.4	
	comp=Z,6µm,22.0s						
TRY	Troy	130.87	31	IAMs_20	IAMs_20	02 16 36.8	
	comp=Z,8µm,21.0s						
154A	Montrose	130.89	48	IAMs_20	IAMs_20	02 23 25.6	
	comp=Z,7µm,19.0s						
KMSC	Kings Mountain	130.90	44	IAMs_20	IAMs_20	02 18 01.7	
	comp=Z,7µm,21.0s						
553A	Crawfordville	130.98	52	IAMs_20	IAMs_20	02 15 07.9	
	comp=Z,7µm,22.0s						
PAYG	Puerto Ayora	130.98	93	IAMs_20	IAMs_20	02 15 14.7	
	comp=Z,6µm,19.0s						
PGAV	Gavieira, Arco	130.98	327	ePKPdf	PKiKP	01 24 38.8	-0.3
PGAV				ePP	PP	01 26 56.3	+2.1
PGAV				eSS	SS	01 44 50.0	+27
PGAV				eLQ	LQ	02 06 18.3	
PGAV				eLR	LR	02 20 02.8	
PGAV				i AMs_20		02 25 53.5	
	comp=Z,7µm,22.0s						
PCAB	Cabril	131.03	327	ePKPdf	PKiKP	01 24 39.1	0.0
POLO	Lamas de Olo	131.13	326	ePKPdf	PKiKP	01 24 39.3	-0.1
POLO				ePP	PP	01 26 57.5	+2.3
PVRL	Vila Real	131.15	326	ePKPdf	PKiKP	01 24 39.0	-0.4
PVRL				ePP	PP	01 26 54.8	-0.4
I63A	Otisfield	131.43	28	IAMs_20	IAMs_20	02 22 40.1	
	comp=Z,7µm,21.0s						
PVIS	Viseu	131.63	326	ePKPdf	PKiKP	01 24 40.5	0.0
PVIS				ePP	PP	01 26 56.6	-1.8
MTE	Manteigas	131.64	325	IAMs_20	IAMs_20	02 29 38.6	
	comp=Z,8µm,19.0s						
MTE	Manteigas	131.64	325	ePKPdf	PKiKP	01 24 40.1	-0.4
MTE				ePP	PP	01 27 03.6	+5.1
MTE				eSS	SS	01 45 03.8	+33
MTE				eLQ	LQ	02 08 38.2	
MTE				eLR	LR	02 18 21.5	
MTE				i AMs_20		02 30 02.6	
	comp=Z,7µm,20.0s						
WMELI	Melilla	131.87	317	PP	PP	01 26 59.9	-0.4
PCBR	Castelo Branco	131.98	325	ePKPdf	PKiKP	01 24 40.6	-0.4
PCBR				ePP	PP	01 27 06.1	+5.5
EMAL	Malaga-Limoner	132.03	319	PKP	PKPdf	01 24 40.0	-0.2
PMRV	Marv??o	132.20	324	ePKPdf	PKiKP	01 24 41.3	-0.2
PMRV				ePP	PP	01 27 04.9	+2.8
PMRV				eLQ	LQ	02 10 40.7	
PMRV				eLR	LR	02 17 41.3	
PMRV				i AMs_20		02 30 26.7	
	comp=Z,6µm,20.0s						
N62A	Caumsett State	132.24	33	IAMs_20	IAMs_20	02 24 05.2	
	comp=Z,7µm,20.0s						
COI	Coimbra	132.26	326	IAMs_20	IAMs_20	02 24 51.0	
	comp=Z,8µm,22.0s						
COI	Coimbra	132.26	326	ePKPdf	PKiKP	01 24 41.1	-0.5
COI				ePP	PP	01 27 06.5	+4.1
EMIJ	Mijas	132.37	319	PKP	PKPdf	01 24 39.9	-1.0
PCAS	Casmilo, Conde	132.42	326	ePKPdf	PKiKP	01 24 42.0	+0.1
PCAS				ePP	PP	01 27 08.4	+5.0
PSARD	Sardoal	132.53	325	ePKPdf	PKiKP	01 24 42.1	-0.1
PSARD				ePP	PP	01 27 01.6	-2.5
X58A	Rowland	132.60	44	IAMs_20	IAMs_20	02 24 10.5	
	comp=Z,7µm,20.0s						
PESTR	Estremoz	132.68	324	ePKPdf	PKiKP	01 24 42.4	-0.1
PESTR				ePP	PP	01 26 57.7	-7.5
257A	Skidaway Islan	132.74	48	IAMs_20	IAMs_20	02 15 57.5	
	comp=Z,8µm,22.0s						
PBAR	Barrancos	132.80	323	PKP	PKiKP	01 24 42.8	0.0
PBAR	Barrancos	132.80	323	ePKPdf	PKiKP	01 24 42.3	-0.5
PBAR				ePP	PP	01 27 08.0	+2.0
656A	Willston	132.82	52	IAMs_20	IAMs_20	02 17 46.6	
	comp=Z,7µm,20.0s						
EMIN	Mina Concepcio	132.84	322	PKP	PKiKP	01 24 43.2	+0.4
W59A	Clinton	132.87	42	IAMs_20	IAMs_20	02 15 00.1	
	comp=Z,7µm,22.0s						
ESPR	Espera	132.88	321	PKP	PKPdf	01 24 42.1	+0.3
PMTG	Montargil	132.92	324	ePKPdf	PKiKP	01 24 42.4	-0.5
PMTG				ePP	PP	01 27 09.1	+2.4
PSBE	So Bento	132.95	325	ePKPdf	PKiKP	01 24 42.7	-0.4
EVO	Evora	133.15	324	PKP	PKPdf	01 24 42.2	-0.1
EVO	Evora	133.15	324	ePKPdf	PKiKP	01 24 43.5	0.0
EVO				ePP	PP	01 27 12.5	+4.4
CNIL	Conil	133.31	320	PKP	PKiKP	01 24 44.4	+0.5
PBEJ	Beja	133.40	323	ePKPdf	PKiKP	01 24 44.0	0.0
Y60A	Bolivia	133.68	44	IAMs_20	IAMs_20	02 24 32.7	
	comp=Z,6µm,20.0s						
LIS	Lisbon	133.69	325	ePKPdf	PKPdf	01 24 43.2	0.0
LIS				ePP	PP	01 27 12.7	+1.1
LIS				IAMs_20	IAMs_20	02 22 38.7	
	comp=Z,8µm,25.1s						
PVAQ	Vaqueiros	133.71	322	ePKPdf	PKPdf	01 24 43.6	+0.3
PVAQ				ePP	PP	01 27 12.4	+0.6
PVAQ				eLR	LR	02 17 19.1	
PVAQ				i AMs_20		02 29 38.5	
	comp=Z,6µm,20.0s						
MESJ	Messejana	133.73	323	ePKPdf	PKPdf	01 24 43.4	-0.1
MESJ				ePP	PP	01 27 13.0	+1.1
MESJ				IAMs_20	IAMs_20	02 29 21.4	
	comp=Z,9µm,34.5s						
MESJ	Messejana	133.73	323	ePKPdf	PKPdf	01 24 43.3	-0.1
MESJ				ePP	PP	01 27 13.7	+1.8
MESJ	Messejana	133.73	323	ePKIKP	PKPdf	01 24 43.3	-0.1
MESJ				e		01 27 13.0	
PCVE	Castro Verde	133.76	323	PKP	PKiKP	01 24 44.7	0.0
PCVE	Castro Verde	133.76	323	ePKPdf	PKiKP	01 24 44.6	0.0
PCVE				ePP	PP	01 27 13.1	+1.0
PBDV	Barranco-do-Ve	133.94	322	ePKPdf	PKiKP	01 24 44.9	-0.3

PBDV				ePP	PP	01 27 14.7	+1.4
DWPF	Disney Wildern	134.24	53	IAMs_20	IAMs_20	02 23 38.2	
	comp=Z,5µm,22.0s						
MORF	Marmelete	134.34	323	ePKPdf	PKPdf	01 24 44.3	-0.3
MORF				ePP	PP	01 27 16.8	+1.0
MORF				IAMs_20	IAMs_20	02 29 45.7	
	comp=Z,8µm,20.8s						
MORF	Marmelete	134.34	323	ePKPdf	PKiKP	01 24 45.5	-0.4
PFVI	Vila Bisbo	134.56	323	ePKPdf	PKPdf	01 24 43.3	-1.6
PFVI				ePP	PP	01 27 21.5	+4.3
PEL	Peldehue	134.81	145	IAMs_20	IAMs_20	02 18 25.4	
	comp=Z,4µm,20.0s						
BOAB	BOACO BROADBAN	135.12	75	PKP	PKiKP	01 24 47.7	-0.4
BOAB	BOACO BROADBAN	135.12	75	IAMs_20	IAMs_20	02 14 39.2	
	comp=Z,8µm,22.0s						
TRQA	Tornquist	135.13	157	IAMs_20	IAMs_20	02 22 40.0	
	comp=Z,7µm,20.0s						
060A	Indiantown	135.56	53	IAMs_20	IAMs_20	02 21 32.7	
	comp=Z,5µm,20.0s						
061Z	Ochoppi	135.62	55	IAMs_20	IAMs_20	02 19 13.8	
	comp=Z,6µm,20.0s						
AVE	Averroes	136.05	318	PKP	PKPdf	01 24 47.0	-0.8
TORD	Torodi Ar. Bea	136.19	286		PKPpre	01 24 37.6	
TORD	Torodi Ar. Bea	136.19	286	PKP	PKPdf	01 24 48.0	-0.6
	comp=Z,6.8nm,0.8s,baz=47,slow=2.8,SNR=7.2						
HDC	Heredia	136.95	78	IAMs_20	IAMs_20	02 14 58.0	
	comp=Z,5µm,20.0s						
TIO	Tiouine	137.32	315	PKP	PKPdf	01 24 50.0	-0.5
BCIP	Isla Barro Col	141.24	79	IAMs_20	IAMs_20	02 15 23.6	
	comp=Z,8µm,22.0s						
MTDJ	Mount Denham	141.38	64	IAMs_20	IAMs_20	02 31 29.2	
	comp=Z,4µm,21.0s						
PMPST	Porto Santo, M	141.79	325	ePKPdf	PKPdf	01 24 53.6	-4.8
PMPST				ePP	PP	01 28 03.4	+1.4
NNA	Nana	141.82	113	PKP	PKPdf	01 24 58.1	-0.9
	comp=Z,9.8nm,0.8s,baz=251,slow=11,SNR=3.6						
PAGU	Agualva, Azore	141.89	342	ePKP	PKPdf	01 24 56.8	-1.6
PAGU				ePP	PP	01 28 05.1	+3.2
PAGU	Agualva, Azore	141.89	342	ePKP	PKPdf	01 24 56.8	-1.6
PAGU				ePP	PP	01 28 05.1	+3.2
PSCM	Serra do Cume	141.93	342	ePKP	PKPdf	01 24 51.3	-7.2
PSCM				ePP	PP	01 28 06.5	+4.2
PSCM	Serra do Cume	141.93	342	ePKP	PKPdf	01 24 51.3	-7.2
PSCM				ePP	PP	01 28 06.5	+4.2
BART	Pico Bartolome	142.11	339	ePKP	PKPdf	01 24 54.4	-4.5
BART				ePP	PP	01 28 06.9	+3.4
BART	Pico Bartolome	142.11	339	ePKP	PKPdf	01 24 54.4	-4.5
BART				ePP	PP	01 28 06.9	+3.4
PGRON	Lagoa das Cont	142.19	339	ePKP	PKPdf	01 24 57.1	-1.9
PGRON	Lagoa das Cont	142.19	339	ePKP	PKPdf	01 24 57.1	-1.9
CMLA	Cha da Macela	142.25	339	ePKP	PKPdf	01 24 52.7	-6.4
CMLA				ePP	PP	01 28 03.8	-0.5
CMLA	Cha da Macela	142.25	339	ePKP	PKPdf	01 24 52.7	-6.4
CMLA				ePP	PP	01 28 03.8	-0.5
ROSA	Rosais	142.25	343	ePKP	PKPdf	01 24 56.0	-3.0
ROSA				ePP	PP	01 28 04.7	+0.5
ROSA	Rosais	142.25	343	ePKP	PKPdf	01 24 56.0	-3.0
ROSA				ePP	PP	01 28 04.7	+0.5
PMAN	Manadas	142.28	343	ePKP	PKPdf	01 24 54.5	-4.5
PMAN	Manadas	142.28	343	ePKP	PKPdf	01 24 54.5	-4.5
PMAR	Madeira	142.38	325	ePKPdf	PKPdf	01 24 59.9	+0.2
FUL	Funchal	142.43	325	ePKPdf	PKiKP	01 25 03.5	+1.0
FUL				ePP	PP	01 28 08.0	+2.2
PCED	Cedros	142.46	344	ePKP	PKiKP	01 25 01.6	-0.8
PCED	Cedros	142.46	344	ePKP	PKiKP	01 25 01.6	-0.8
PID	Ribeirinha	142.47	343	ePKP	PKPdf	01 25 00.5	+1.1
PID	Ribeirinha	142.47	343	ePKP	PKPdf	01 25 00.5	+1.1
PMOZ	Porto Moniz, M	142.47	326	ePKPdf	PKPdf	01 24 56.6	-3.1
PMOZ				ePP	PP	01 28 06.4	+0.2
PMOZ				eLR	LR	02 19 54.6	
PMOZ				i AMs_20		02 34 44.1	
	comp=Z,2µm,20.0s						
PPNO	Prainha do Nor	142.48	343	ePKP	PKPdf	01 25 00.1	+0.6
PPNO	Prainha do Nor	142.48	343	ePKP	PKPdf	01 25 00.1	+0.6
PICO	Pico	142.50	343	ePKP	PKPdf	01 24 57.5	-2.0
PICO				ePP	PP	01 28 04.7	-1.1
PICO	Pico	142.50	343	ePKP	PKPdf	01 24 57.5	-2.0
PICO				ePP	PP	01 28 04.7	-1.1
CALA	Caldeira	142.51	344	ePKP	PKPdf	01 24 57.9	-1.7
CALA				ePP	PP	01 28 06.9	+1.1
CALA	Caldeira	142.51	344	ePKP	PKPdf	01 24 57.9	-1.7
CALA				ePP	PP	01 28 06.9	+1.1
PCAN	Candelaria	142.56	343	ePKP	PKiKP	01 25 02.4	-0.3
PCAN	Candelaria	142.56	343	ePKP	PKiKP	01 25 02.4	-0.3
PSMN	Pico do Norte,	142.76	338	ePKP	PKPdf	01 24 55.7	-4.3
PSMN				ePP	PP	01 28 09.6	+2.3
PSMN	Pico do Norte,	142.76	338	ePKP	PKPdf	01 24 55.7	-4.3
PSMN				ePP	PP	01 28 09.6	+2.3
PSMA	Santa Maria	142.79	338	ePKP	PKPdf	01 24 53.5	-6.5
PSMA				ePP	PP	01 28 09.6	+2.1
PSMA	Santa Maria	142.79	338	ePKP	PKPdf	01 24 53.5	-6.5
PSMA				ePP	PP	01 28 09.6	+2.1
OTAV	Otavalo	142.85	93	PKPdf	PKPdf	01 24 58.4	-3.0
OTAV	Otavalo	142.85	93	IAMs_20	IAMs_20	02 17 16.3	
	comp=Z,5µm,22.0s						
OTAV	Otavalo	142.85	93	PKIKP	PKPdf	01 24 58.4	-3.0
OTAV	Otavalo	142.85	93	PKP	PKPdf	01 24 56.7	-4.7
GTBY	Guantanamo Bay	142.91	60	IAMs_20	IAMs_20	02 25 24.3	
	comp=Z,4µm,21.0s						
DBIC	Dimbokro	143.41	277	PKPdf	PKPbc	01 24 59.5	+0.6
DBIC	Dimbokro	143.41	277	PKP	PKPbc	01 24 58.8	-0.1
	comp=Z,12nm,0.6s,baz=102,slow=3.3,SNR=19						
DBIC	Dimbokro	143.41	277	PKIKP	PKPbc	01 24 59.5	+0.6
DBIC	Dimbokro	143.41	277	PKP	PKPab	01 24 57.7	-0.1
PLTB	Pedras Altas	143.76	162	PKP	PKPbc	01 25 00.3	+0.8
PLTB	Pedras Altas	143.76	162	eP	PKPbc	01 25 00.2	+0.8
HMBC	Humberstone	143.85	131	IAMs_20	IAMs_20	02 19 08.2	
	comp=Z,6µm,22.0s						
ITQB	Itaqui	144.61	157	PKP	PKPbc	01 25 02.6	+0.5
EOSO	Osorio	144.78	318	PKP	PKPdf	01 25 03.4	-0.5
CPSB	Cacapava Do Su	145.07	162	PKP	PKPdf	01 25 04.8	+0.5
CPSB	Cacapava Do Su	145.07	162	eP	PKPbc	01 25 01.6	-2.0
MACI	Morro de la Ar	145.29	319		PKPbc	01 25 03.0	-1.6
GRTK	Grand Turk	145.57	55	IAMs_20	IAMs_20	02 31 60.0	
	comp=Z,4µm,20.0s						
SDDR	Presa de Saban	146.58	59	IAMs_20	IAMs_20	02 27 40.6	
	comp=Z,6µm,20.0s						
CNLB	Canela	146.84	165	PKP	PKPbc	01 25 08.9	-0.3
CZSB	Cruzeiro do Su	147.05	109	PKP	PKPdf	01 25 08.1	0.0
ROSC	El Rosal	147.06	85	PKPbc	PKPdf	01 25 09.1	+0.6
	comp=Z,52nm,0.6s,baz=123,slow=7.2,SNR=18						
CPUP	Villa Florida	147.23	153		PKPbc	01 25 09.1	-1.1
CPUP	Villa Florida	147.23	153	PKPbc	PKPbc	01 25 10.9	+0.7
	comp=Z,25nm,0.9s,baz=90,slow=1.9,SNR=33						
CPUP	Villa Florida	147.23	153	PKP	PKPdf	01 25 08.5	+0.5
LPAZ	La Paz	147.48	126	PKP	PKPdf	01 25 10.2	+0.7
	comp=Z,21nm,0.8s,baz=260,slow=1.2,SNR=40						
LPAZ				PKPbc	PKPbc	01 25 12.5	+0.6
	comp=Z,62nm,0.9s,baz=292,slow=2.2,SNR=51						
LPAZ	La Paz	147.48	126	PKP	PKPdf	01 25 10.1	+0.7
ITAB	Concordia	148.43	161	PKP	PKPdf	01 25 11.6	+1.6
ITAB	Concordia	148.43	161	eP	PKPdf	01 25 09.1	-0.9
SDV	Santo Domingo	150.27	77		PKPdf	01 25 12.2	-1.3
SDV				IAMs_20	IAMs_20	02 23 04.9	
	comp=Z,5µm,21.0s						
SDV	Santo Domingo	150.27	77	PKP	PKPdf	01 25 12.2	-1.3
	comp=Z,35nm,0.9s,baz=284,slow=2.5,SNR=19						
SDV				PKPbc	PKPbc	01 25 17.8	-0.9
	comp=Z,62nm,0.8s,baz=267,slow=5.0,SNR=10.0						
SDV	Santo Domingo	150.27	77	PKP	PKPdf	01 25 12.9	-0.6
SDV	Santo Domingo	150.27	77	eP	PKPdf	01 25 12.0	-1.5
TBTG	Tabatinga, AM	150.66	103	PKP	PKPdf	01 25 13.4	-0.4
PTGB	Pitanga	150.79	160	PKP	PKPdf	01 25 14.4	+0.5
PTGB	Pitanga	150.79	160	eP	PKPdf	01 25 09.5	-4.4
TIJ01	Guaruva-PR	151.12	166	PKP	PKPdf	01 25 14.9	+0.4
SJG	San Juan	151.31	56	IAMs_20	IAMs_20	02 34 52.6	
	comp=Z,4µm,21.0s						
LDASE	Londrina, Braz	152.33	160	eP	PKPdf	01 25 17.7	+1.5
PET01	Itanhaem-SP	152.51	168	PKP	PKPdf	01 25 17.4	+1.0
BAUV	El Baul	152.78	76		PKPdf	01 25 15.3	-1.7
BAUV					PKPbc	01 25 21.6	-2.6
BAUV					sPKPbc	01 25 36.6	-0.1
FRTB	Fartura	152.86	163	PKP	PKPdf	01 25 17.6	+0.6
AQDB	Aquidauana	152.97	149	PKP	PKPdf	01 25 17.9	+0.7
LABB	L¡brea	152.97	117	PKP	PKPdf	01 25 17.0	-0.4
SIV	San Ignacio	153.05	134	PKP	PKPdf	01 25 16.8	-0.6
	comp=Z,1.4nm,0.6s,baz=269,slow=3.1,SNR=14						
SIV				PKPbc	PKPbc	01 25 24.1	-0.6
	comp=Z,10nm,0.8s,baz=259,slow=1.3,SNR=19						
SIV				PKPab	PKPab	01 25 35.7	-0.4
	comp=Z,13nm,0.9s,baz=256,slow=4.8,SNR=8.3						
SPB	Sao Paulo	153.16	168	PKPbc	PKPbc	01 25 21.3	-3.4
SPB				IAMs_20	IAMs_20	02 34 37.9	
	comp=Z,6µm,19.0s						
PARB	Paraibuna	153.74	171	PKP	PKPdf	01 25 19.1	+0.8
SLP01	Ubatuba-SP	153.82	172	PKP	PKPdf	01 25 19.4	+0.9
VABB	Valinhos	153.83	168	PKP	PKPdf	01 25 18.8	+0.3
PCMB	Pacaembu	153.93	159	PKP	PKPdf	01 25 19.1	+0.5
PCMB	Pacaembu	153.93	159	eP	PKPdf	01 25 17.7	-0.9
SABA	Saba	153.94	54	IAMs_20	IAMs_20	02 34 14.7	
	comp=Z,5µm,22.0s						
SEUS	St. Eustatius	154.22	54	IAMs_20	IAMs_20	02 30 52.0	
	comp=Z,5µm,22.0s						
SGC2	Sao Gabriel da	154.24	96	PKP	PKPdf	01 25 18.1	-1.0
MAN01	Angra dos Reis	154.41	174	PKP	PKPdf	01 25 20.7	+1.4
PTLB	Pontes e Lacer	154.78	136	PKP	PKPdf	01 25 19.8	0.0
VAS01	Vassouras-RJ	155.04	175	PKP	PKPdf	01 25 21.4	+1.3
DUB01	Friburgo-RJ	155.30	178	PKP	PKPdf	01 25 21.3	+0.8
CAM01	Campos-RJ	155.57	179	PKP	PKPdf	01 25 22.0	+1.2
VILB	Vilhena	155.65	130	PKP	PKPdf	01 25 21.6	+0.5
PCRV	Puerto La Cruz	155.75	71	PKP	PKPdf	01 25 20.9	-0.3
	comp=Z,4.4nm,0.9s,baz=356,slow=2.4,SNR=3.2						
PCRV				PKPab	PKPab	01 25 47.5	-0.3
	comp=Z,15nm,0.9s,baz=42,slow=4.3,SNR=5.0						
C2SB	Chapadao do Su	155.82	153	PKP	PKPdf	01 25 22.5	+1.4
TEFE	Tefe	155.93	105	PKP	PKPdf	01 25 21.2	-0.3
ABD	La Joyeuse, An	155.97	54	IAMs_20	IAMs_20	02 34 53.4	
	comp=Z,5µm,21.0s						
ITRB	Iturama	156.00	159	PKP	PKPdf	01 25 22.2	+0.8
CBE	Ff, Capester	156.09	55	IAMs_20	IAMs_20	02 28 09.6	
	comp=Z,7µm,22.0s						
GDSD	La Dsirade Is	156.40	54	IAMs_20	IAMs_20	02 35 14.0	
	comp=Z,6µm,21.0s						
MAGL	Barre de l'ile	156.42	55	IAMs_20	IAMs_20	02 28 28.6	
	comp=Z,6µm,22.0s						
CANS	Sao Roque de M	156.58	168	PKP	PKPdf	01 25 23.4	+1.1
SALV	Santo Antonio	156.67	143	PKP	PKPdf	01 25 23.6	+1.3
SVN	Savane Anatole	157.07	57	IAMs_20	IAMs_20	02 38 32.2	
	comp=Z,5µm,20.0s						
FDF	Fort de France	157.14	57	IAMs_20	IAMs_20	02 38 24.0	
	comp=Z,4µm,20.0s						
BIM	Bigot	157.31	58	IAMs_20	IAMs_20	02 33 07.7	
	comp=Z,4µm,21.0s						
ILAM	Ilet Lapin Mar	157.35	57	IAMs_20	IAMs_20	02 30 51.5	
	comp=Z,5µm,21.0s						
MAS01	UHE Manso	157.37	141	PKP	PKPdf	01 25 24.2	+1.0
MPOM	Morne Pois Mar	157.53	58	IAMs_20	IAMs_20	02 33 00.2	
	comp=Z,5µm,21.0s						
GRGR	Grenville	157.85	64	IAMs_20	IAMs_20	02 35 57.8	
	comp=Z,5µm,20.0s						
ITU3	Corumbazu	157.89	161	PKP	PKPdf	01 25 24.8	+0.9
RIB01	Linhares ES	158.05	182	PKP	PKPdf	01 25 25.0	+1.0
PMNB	Patos De Minas	158.26	167	PKP	PKPdf	01 25 25.2	+0.7
IPMB	Ipameri, GO	158.32	162	PKP	PKPdf	01 25 24.9	+0.4
SFA1	Serra Facao	158.48	163	PKP	PKPdf	01 25 25.5	+0.8
SJMB	Sao Joao De Ma	158.68	180	PKP	PKPdf	01 25 25.4	+0.6
ARAG	Araguaiana, MT	158.95	151	PKP	PKPdf	01 25 25.8	+0.7
ARAG	Araguaiana, MT	158.95	151	eP	PKPdf	01 25 20.3	-4.8
BAT3	Ipameri	159.07	163	PKP	PKPdf	01 25 25.9	+0.6
PDRB	Porto dos Gac	159.10	133	PKP	PKPdf	01 25 25.9	+0.5
MACA	Manacapuru-AM	159.82	107	PKP	PKPdf	01 25 26.1	-0.1
JQT1	Jequitai-MG	159.92	172	PKP	PKPdf	01 25 26.6	+0.2
CLDB	Colider	160.27	134	PKP	PKPdf	01 25 26.9	+0.2
CAR01	Carai MG	160.31	180	PKP	PKPdf	01 25 27.2	+0.4
BDFB	Brasilia	160.58	160	PKP	PKPdf	01 25 26.4	-0.8
	comp=Z,4.1nm,0.8s,baz=30,slow=2.9,SNR=7.2						
BDFB				PKPab	PKPab	01 26 08.3	0.0
	comp=Z,6.6nm,0.7s,baz=165,slow=3.4,SNR=4.7						
GUA01	Guaratinga, BA	160.72	185	PKP	PKPdf	01 25 27.5	+0.3
BOAV	Boa Vista	160.86	91	PKP	PKPdf	01 25 27.1	-0.3
BOAV	Boa Vista	160.86	91	eP	PKPdf	01 25 25.9	-1.5
CMC01	Camacan, BA	161.91	186	PKP	PKPdf	01 25 28.5	+0.1
JANB	Januaria	162.07	171	PKP	PKPdf	01 25 28.7	0.0
SNDB	Serra Nova Dou	162.35	146	PKP	PKPdf	01 25 29.4	+0.5
ANA01	Lindo Horizont	162.82	182	PKP	PKPdf	01 25 29.7	+0.3
NPGB	Novo Progresso	162.98	125	PKP	PKPdf	01 25 29.6	0.0
NPGB	Novo Progresso	162.98	125	eP	PKPdf	01 25 17.6	-12
SSV2	Sao Salvador	163.07	156	PKP	PKPdf	01 25 30.1	+0.5
ITTB	Itaituba	164.00	116	PKP	PKPdf	01 25 30.3	-0.2
ITTB	Itaituba	164.00	116	eP	PKPdf	01 25 26.1	-4.4
SDBA	SAO DESIDERIO	164.53	167	PKP	PKPdf	01 25 30.8	-0.2
NBLA	Lagarto - SE	165.89	195	PKP	PKPdf	01 25 32.3	+0.1
MAL2	Monte Alegre,	166.34	110	PKP	PKPdf	01 25 32.6	+0.1
NBAN	Anadia - AL	166.66	202	PKP	PKPdf	01 25 33.1	+0.3
SMTB	Santa Maria do	166.90	152	PKP	PKPdf	01 25 33.1	+0.1
ATM1	UHE Belo Monte	167.60	119	PKP	PKPdf	01 25 33.4	-0.1
PRPB	Parauapebas	167.76	136	PKP	PKPdf	01 25 33.5	-0.1
BMO2	UHE Belo Monte	167.78	120	PKP	PKPdf	01 25 33.4	-0.2
NBCA	Caruaru-PE	167.85	206	PKP	PKPdf	01 25 33.6	-0.1
BMO1	UHE Belo Monte	168.07	119	PKP	PKPdf	01 25 33.7	-0.1
MDP	Montagnes des	168.52	78	PKPab	PKPab	01 26 43.6	0.0
	comp=Z,30nm,1.1s,baz=221,slow=2.8,SNR=3.8						
PAL01	Palmeiras do T	168.81	147	PKP	PKPdf	01 25 34.3	0.0
PAL2	UHE Estreito -	168.84	148	PKP	PKPdf	01 25 34.2	-0.1
NBPV	Pedro Velho	169.05	214	PKP	PKPdf	01 25 34.3	-0.1
NBMA	Muriti-CE	169.62	194	PKP	PKPdf	01 25 34.9	+0.1
RCBR	Riachuelo	169.88	213	PKP	PKPdf	01 25 35.2	+0.2
NBPA	Parau_RN	170.54	207	PKP	PKPdf	01 25 35.6	+0.3
NBBC	Barra do Corda	170.90	155	PKP	PKPdf	01 25 35.2	-0.3
NBPB	Pedra_Branca-C	171.57	192	PKP	PKPdf	01 25 35.8	-0.1
TMAB	Tom-Au,PA,Br	171.57	127	PKP	PKPdf	01 25 35.5	-0.3
NBCL	Cascavel-CE	172.42	204	PKP	PKPdf	01 25 35.9	-0.3
NBPS	Pedro II - PI	172.90	179	PKP	PKPdf	01 25 35.3	-1.2
SBBR	Sobral	173.45	190	PKP	PKPdf	01 25 35.6	-1.1
NBMO	Morrinhos-CE	173.83	192	PKP	PKPdf	01 25 35.7	-1.1

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*IDC **24** 01:06:27.7±1.2, 2°.78S×138°.89E, h0^{km}, mb5.2/6, mbtmp5.2/6, MS6.0/10, Error ellipse: s-maj=69.9km s-min=29.5km az=81.0*

ISC 24 01:06:34.5±1.1**, 2°.8S**±0°.2×**138°.9E**±0°.5**, h46^{km}, n7,** σ**0^{s}.76**/7**, mb5.2**/6**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	69.91	322	P	P	01 17 41.6	+0.7
	11nm,0.6s,baz=112,slow=7.3,SNR=1.6						
	11nm,0.6s						
KURBB	Kurchatov Arra	73.85	325	P	P	01 18 04.9	+0.6
	7.9nm,0.6s,baz=118,slow=4.7,SNR=4.0						
	7.9nm,0.6s						
VNDA	Vanda	75.72	175	P	P	01 18 15.2	+0.5
	17nm,0.8s,baz=327,slow=1.6,SNR=3.7						
	17nm,0.8s						
BVAR	Borovoye Array	79.43	325	P	P	01 18 35.2	-0.7
	33nm,0.9s,baz=114,slow=7.2,SNR=1.5						
	33nm,0.9s						
MAW	Mawson	82.13	202	P	P	01 18 49.5	-0.5
	28nm,0.9s,baz=45,slow=4.6,SNR=5.1						
	28nm,0.9s						
ILAR	Eielson Array	85.82	24	P	P	01 19 08.7	-0.2
	23nm,0.9s,baz=257,slow=5.0,SNR=5.4						
	23nm,0.9s						
ARCES	ARCESS Array B	100.60	341	P	Pdif	01 20 17.7	+0.6
	3.1nm,0.7s,baz=70,slow=7.1,SNR=1.8						

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*JMA **24** 01:13:34.5±0.1, 45°N±2°×14°2E±°, h269^{km}, MV2.5/12, SOYA REGION*

ISC 24 01:13:36.4±1.7**, 45°.11N**±0°.09×**142°.1E**±0°.1**, h250^{km}, n8,** σ**0^{s}.87**/11**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JWK2	Keihoku	0.25	325	eP	Pn	01 14 08.9	+0.2
JTKR	Abashiri--Toko	1.72	131	eP	Pn	01 14 17.3	+0.8
YSS	Yuzhno-Sakhali	1.90	14	P	Pn	01 14 17.7	-0.2
JAR	Ashorobuto	2.17	146	eP	Pn	01 14 21.0	+0.5
JCH	Churui	2.65	159	eP	Pn	01 14 23.7	-1.6
JCH				eS	S	01 15 03.2	-0.6
JAK	Akkeshi	2.82	138	eP	Pn	01 14 27.8	+0.8
JNBK	Urakawa-nobuka	2.87	170	eP	Pn	01 14 27.5	0.0
JNBK				eS	S	01 15 09.0	+1.1
NEM2	Nemuro 2	3.14	122	eP	Pn	01 14 30.2	-0.3
NEM2				eS	S	01 15 12.7	-0.5

IDC 24 01:18:56.0±2.0**, 2°.62S**×**138°.99E, h0^{km}, mb3.8**/3**, mbtmp3.9**/4**, ML3.8**/1**, Error ellipse: s-maj=209.9km s-min=30.5km az=106.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	17.81	194	P	Pn	01 23 04.7	-0.8
	0.4nm,0.3s,baz=16,slow=12,SNR=1.4						
	1.2nm,0.4s						
ASAR	Alice Springs	21.50	193	P	P	01 23 46.9	+0.3
	1.5nm,0.5s,baz=23,slow=11,SNR=4.4						
	1.5nm,0.5s						
ILAR	Eielson Array	85.63	24	P	P	01 31 36.1	-0.2
	0.4nm,0.6s,baz=258,slow=4.5,SNR=6.0						
	0.4nm,0.6s						
QSPA	South Pole Qui	87.33	180	P	P	01 31 45.0	+0.3
	0.8nm,0.7s,baz=329,slow=10,SNR=1.6						
	0.8nm,0.7s						

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*MOS **24** 01:22:44.6±1.2, 2°.66S×138°.50E, h10^{km}, mb4.9/16, Error ellipse: s-maj=12.5km s-min=7.2km az=102.1*

*IDC **24** 01:22:44.2±0.5, 2°.67S×138°.63E, h0^{km}, mb4.5/17, mbtmp4.5/21, ML4.6/4, Error ellipse: s-maj=13.5km s-min=12.0km az=73.0*

*BJI **24** 01:22:45.0, 2°.91S×138°.67E, h23^{km}, mb4.7/27, Ms5.4/1, Ms7 5.4/2*

*NEIC **24** 01:22:46.8±1.7, 2°.67S±0°.08×138°.61E±0°.06, h10^{km}±1^{km}, mb5.0/114, Error ellipse: s-maj=12.8km s-min=11.0km az=183.0*

*DJA **24** 01:22:49.6±0.7, 3°S±4°×13°9E±°, h20^{km}±6^{km}, M4.8/12, mb5.0/12, MLv4.7/7*

ISC 24 01:22:49.5±0.3**, 2°.67S**±0°.05×**138°.59E**±0°.05**, h32^{km}, n399,** σ**1^{s}.16**/353**, mb4.9**/92**, 9C-10D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.68	10	P	Pb	01 23 01.0	-2.1
GENI	Genyem	1.58	87	P	Pb	01 23 16.2	-1.9
JAY	Jayapura	2.12	86	Pn	Pn	01 23 22.1	-0.7
	90nm,0.3s,baz=232,slow=8.6,SNR=57						
JAY				Lg	Lg	01 23 50.7	
	43nm,0.3s,baz=130,slow=22,SNR=6.2						
	364nm,0.5s						
JAY	Jayapura	2.12	86	P	Pn	01 23 22.3	-0.5
SRPI	Serui, Papua	2.48	289	P	Pn	01 23 28.6	+0.9
BAKI	Biak	2.88	301	P	Pn	01 23 35.8	+2.5
RKPI	Ransiki, Papua	4.56	285	P	Pn	01 23 58.0	+1.7
FAKI	Fak Fak	6.34	268	Pn	Pn	01 24 21.5	+0.7
MANU	Manus Island	8.79	86		Pn	01 24 58.2	+3.7
COEN	Coen	12.10	158	Pn	Pn	01 25 39.3	-0.5
MTN	Manton Dam	12.52	216	Pn	Pn	01 25 44.9	-0.7
SOEI	Soe	15.88	243	P	Pn	01 26 33.9	+2.9
SOEI				IAmb	IAmb	01 26 37.4	
	comp=Z,119nm,0.9s						
SOEI	Soe	15.88	243	P	P	01 26 36.1	+1.7
LUWI	Luwuk	15.89	276	Pn	Pn	01 26 31.1	+0.1
LUWI				IAmb	IAmb	01 26 37.4	
	comp=Z,134nm,1.2s						
LUWI	Luwuk	15.89	276	P	P	01 26 36.8	+2.4
	comp=Z,78nm,1.3s						
BATI	Baumata	16.61	243	Pn	Pn	01 26 39.8	-0.4
	comp=Z,8.7nm,0.3s,baz=143,slow=1.3,SNR=9.5						
	comp=Z,75nm,0.8s						
BATI	Baumata	16.61	243	P	P	01 26 45.1	+2.7
	comp=Z,124nm,0.7s						
APSI	Ampana	17.02	276	P	P	01 27 01.1	+14
WB0	Warramunga Arr	17.48	193	Pn	Pn	01 26 49.2	-1.8
WR8	Warramunga Arr	17.64	193	Pn	Pn	01 26 50.6	-2.4
WRAB	Tennant Creek	17.65	193		Pn	01 26 52.9	-0.2
WRAB	Tennant Creek	17.65	193	⇑eP	P	01 26 54.5	+0.6
WRAB				pmax	pmax		
	comp=Z,47nm,0.7s						
WRA	Warramunga Arr	17.66	193	Pn	Pn	01 26 49.9	-3.4
WRA	Warramunga Arr	17.66	193	P	Pn	01 26 50.5	-2.8
	comp=Z,1.9nm,0.3s,baz=17,slow=12,SNR=22						
WRA				S	Sn	01 30 11.9	+2.6
	comp=Z,13nm,0.9s,baz=7.0,slow=22,SNR=4.7						
	comp=Z,25nm,0.7s						
WRA	Warramunga Arr	17.66	193	P	Pn	01 26 49.9	-3.4
WRA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
TOLI2	Tolitoli	18.20	282	P	P	01 26 59.5	-0.4
FITZ	Fitzroy Crossi	19.91	219	P	P	01 27 17.5	-1.2
	comp=Z,1.0nm,0.3s,baz=59,slow=11,SNR=10						
	comp=Z,5.3nm,0.7s						
AS31	Alice Springs	21.36	192	P	P	01 27 32.9	-1.5
ASAR	Alice Springs	21.36	192	P	P	01 27 32.9	-1.5
ASAR	Alice Springs	21.36	192	P	P	01 27 33.4	-1.0
	comp=Z,22nm,0.6s,baz=21,slow=11,SNR=38						
ASAR				S	S	01 31 31.2	+1.2
	comp=Z,3.4nm,0.8s,baz=5.9,slow=28,SNR=2.8						
	comp=Z,22nm,0.6s						
TGY	Tagaytay City	24.16	314	P	P	01 28 03.4	+0.2
	comp=Z,129nm,0.3s,baz=281,slow=5.7,SNR=5.4						
JAGI	Jajag, Banyuwa	24.99	256	P	P	01 28 10.5	-0.1
JAGI				IAmb	IAmb	01 28 11.3	
	comp=Z,28nm,1.0s						
STKA	Stephens Creek	29.19	175	P	P	01 28 48.5	+0.3
	comp=Z,2.7nm,0.7s,baz=352,slow=16,SNR=4.4						
	comp=Z,2.7nm,0.7s						
BKNI	Bangkinang	37.66	274	P	P	01 30 02.0	-0.2
MNSI	Mandailing Nat	39.15	275	P	P	01 30 21.3	+6.6
NJ2	Nanjing	39.28	333	eP	P	01 30 15.8	+0.3
NJ2				pmax	pmax		
	comp=Z,15nm,0.8s						
RPSI	Rantau Prapat	40.01	277	P	P	01 30 20.9	-0.9
PSI	Prapat	40.02	278	P	P	01 30 20.9	-1.2
PSI				pmax	pmax		
	comp=Z,19nm,1.0s						
SRIT	Nakonsritamara	40.45	286	P	P	01 30 24.4	-1.1
SRIT				IAmb	IAmb	01 30 27.4	
	comp=Z,60nm,1.6s						
KSRS	Korea Array	41.13	347	P	P	01 30 31.0	+0.3
	comp=Z,2.0nm,0.7s,baz=157,slow=8.6,SNR=7.0						
KSRS				PcP	PcP	01 32 29.9	+0.1
	comp=Z,0.7nm,0.5s,baz=182,slow=5.3,SNR=4.8						
	comp=Z,2.0nm,0.7s						
TIA	Tai'an	43.56	335	P	P	01 30 43.1	-7.5
TIA				pmax	pmax		
	comp=Z,15nm,0.8s						
CMAR	Chiang Mai Arr	44.31	300	P	P	01 30 56.2	-0.7
CMAR	Chiang Mai Arr	44.31	300	P	P	01 30 57.1	+0.2
	comp=Z,1.9nm,0.7s,baz=124,slow=6.2,SNR=7.1						
	comp=Z,1.9nm,0.7s						
LYN	LuoYang	44.42	329	P	P	01 30 58.3	+0.8
LYN				pmax	pmax		
	comp=Z,23nm,1.2s						
MSHR	Mys Shultsa	45.54	352	⇑eP	P	01 31 04.5	-1.7
MSHR				pmax	pmax		
	comp=Z,16nm,1.4s						
PZH	PanZhiHua	45.91	312	P	P	01 31 11.3	+1.7
USRK	Ussuriysk Ar.	47.03	354	P	P	01 31 17.9	-0.1
	comp=Z,2.3nm,0.8s,baz=182,slow=5.7,SNR=4.0						
	comp=Z,2.3nm,0.8s						
TKNZ	Takaka Hill	49.16	146	P	P	01 31 35.7	+1.1
BNX	BinXian	49.21	350	⇓P	P	01 31 35.4	+0.6
BNX				pmax	pmax		
	comp=Z,18nm,1.3s						
YSS	Yuzhno-Sakhali	49.55	4	P	P	01 31 37.5	+0.2
YSS	Yuzhno-Sakhali	49.55	4	eP	P	01 31 37.8	+0.5
YSS				pmax	pmax		
	comp=Z,20nm,0.3s						
HHC	Hu-ho-hao-te	49.84	333	eP	P	01 31 41.8	+2.0
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TUWZ	Tuamarina	49.97	145	P	P	01 31 40.6	-0.1
RTZ	Ruatahuna	50.05	141	P	P	01 31 41.4	-0.1
BTO	Baotou	50.36	332	eP	P	01 31 49.4	+5.6
BTO				PP	PP	01 33 38.3	-1.3
BTO				S	S	01 39 04.3	+9.4
BTO				pmax	pmax		
	comp=Z,21nm,0.7s						
BTO				LR	LR		
	comp=Z,3µm,14.2s						
KLR	Kul'dur	52.03	354	⇑eP	P	01 31 56.7	+0.7
KLR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ZEA	Zeya	57.00	352	eP	P	01 32 32.6	+0.6
ZEA				pmax	pmax		
	comp=Z,20nm,0.4s						
ULN	Ulaanbaatar	57.38	335	⇓iP	P	01 32 36.2	+1.2
ULN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SONM	Songino Array	57.63	335	P	P	01 32 36.9	+0.1
	comp=Z,2.1nm,0.9s,baz=155,slow=7.9,SNR=6.7						
	comp=Z,2.1nm,0.9s						
SONM	Songino Array	57.63	335	eP	P	01 32 38.7	+1.9
SONM				pmax	pmax		
	comp=Z,2.0nm,0.6s						
PEA0B	Petropavlovsk-	57.85	13	⇓eP	P	01 32 41.0	+3.0
PETK	Petropavlovsk-	57.85	13	P	P	01 32 38.4	+0.4
PETK	Petropavlovsk-	57.85	13	P	P	01 32 37.8	-0.2

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      comp=Z,7.1nm,1.0s,baz=131,slow=4.1,SNR=10.0
      comp=Z,7.1nm,1.0s
PETK  Petropavlovsk-    57.85  13  P     P      01 32 38.4 +0.4
ZAK   Zakamensk         60.90 335 eP     P      01 32 59.6 +0.3
ZAK                                pmax  pmax
      comp=Z,8.0nm,1.4s
MA2   Magadan           62.80   7  P     P      01 33 10.9 -0.8
      comp=Z,13nm,0.8s,baz=162,slow=4.8,SNR=6.5
      comp=Z,13nm,0.8s
MA2   Magadan           62.80   7ceP     P      01 33 12.3 +0.6
MA2                                pmax  pmax
      comp=Z,20nm,1.0s
YAK   Yakutsk           64.88 355  P     P      01 33 25.7 +0.4
YAK   Yakutsk           64.88 355 eP     P      01 33 26.0 +0.6
YAK                                pmax  pmax
      comp=Z,41nm,1.0s
YAK                                pmax  pmax
      comp=N,18nm,1.1s
YAK                                pmax  pmax
      comp=E,4.0nm,1.1s
WMQ   Urumqi            64.90 322 eP     P      01 33 26.8 +0.8
SEY   Seymchan          66.25   7  P     P      01 33 33.1 -1.2
      comp=E,1.8nm,0.4s,baz=178,slow=6.6,SNR=5.4
      comp=E,1.8nm,0.4s
SEY   Seymchan          66.25   7⇓iP     P      01 33 35.5 +1.3
SEY                                pmax  pmax
      comp=Z,8.0nm,0.9s
MK31  Makanchi Array    69.68 322⇓eP     P      01 33 56.7 +0.5
MKAR  Makanchi Array    69.68 322        P      01 33 55.6 -0.6
MKAR  Makanchi Array    69.68 322  P     P      01 33 56.4 +0.1
      comp=Z,3.7nm,0.6s,baz=114,slow=8.6,SNR=15
      comp=Z,3.7nm,0.6s
MAKZ  Makanchi          69.88 322  P     P      01 33 57.2 -0.2
MAKZ                               IAmb  IAmb   01 34 02.4
      comp=Z,7.3nm,0.6s
MAKZ  Makanchi          69.88 322  P     P      01 33 57.2 -0.2
MAKZ                               pmax  pmax
      comp=Z,7.0nm,0.6s
NIKH  Nikolski High     70.70  31  P     P      01 34 02.4 +0.2
      baz=237
KSH   Kashi             70.97 313  P     P      01 34 05.8 +1.4
KSH                                sP    pP     01 34 14.8 +0.3
KSH                                pmax  pmax
      comp=Z,5.0nm,0.7s
KDJ   Kajisay           71.05 316  P     P      01 34 04.6 -0.3
KDJ   Kajisay           71.05 316  P     P      01 34 04.6 -0.3
KDJ                                pmax  pmax
      comp=Z,4.0nm,0.8s
NIL   Nilore            71.21 307  P     P      01 34 05.5 -0.3
NIL                                IAmb  IAmb   01 34 12.2
      comp=Z,7.5nm,0.8s
NIL   Nilore            71.21 307  P     P      01 34 05.5 -0.3
NIL                                pmax  pmax
      comp=Z,8.0nm,0.8s
ZAA0  Zalesovo Array    71.84 330  P     P      01 34 08.1 -1.1
ZALV  Zalesovo Beam     71.84 330  P     P      01 34 08.5 -0.6
      comp=Z,2.6nm,0.5s,baz=104,slow=6.3,SNR=11
      comp=Z,2.6nm,0.5s
ZALV  Zalesovo Beam     71.84 330 eP     P      01 34 09.1  0.0
ZALV                               pmax  pmax
      comp=Z,3.0nm,0.5s
UNV   Unalaska Valle    72.36  31  P     P      01 34 12.5 +0.3
      baz=239
SPIA  Saint Paul Isl    72.40  26  P     P      01 34 12.8 +0.4
      baz=235
AAK   Ala-Archa         73.09 316⇑eP     P      01 34 18.3 +1.2
AAK                                pmax  pmax
      comp=Z,6.0nm,1.5s
BILL  Bilibino          73.15  11  P     P      01 34 17.4 +0.8
BILL                               IAmb  IAmb   01 34 18.6
      comp=Z,12nm,1.2s
BILL  Bilibino          73.15  11⇓iP     P      01 34 17.3 +0.7
BILL                               pmax  pmax
      comp=Z,10.0nm,1.3s
KURK  Kurchatov         73.61 325  P     P      01 34 19.5 -0.2
KURK  Kurchatov         73.61 325deP     P      01 34 19.8 +0.1
KURK                               pmax  pmax
      comp=Z,5.0nm,0.9s
KURBB Kurchatov Arra    73.62 325  P     P      01 34 19.5 -0.3
      comp=Z,3.0nm,0.7s,baz=116,slow=5.4,SNR=15
      comp=Z,3.0nm,0.7s
ARSB  Arslanbob         73.72 314  IAmb  IAmb   01 34 33.6
      comp=Z,17nm,1.4s
TIXI  Tiksi             74.45 357  P     P      01 34 23.4 -0.8
TIXI                               IAmb  IAmb   01 34 28.7
      comp=Z,7.1nm,0.6s
TIXI  Tiksi             74.45 357⇓eP     P      01 34 23.4 -0.8
TIXI                               pmax  pmax
      comp=Z,6.0nm,0.6s
S12K  Black Hills       75.51  30  P     P      01 34 31.5 +0.9
      baz=242,SNR=6.7
VNDA  Vanda             75.83 175  P     P      01 34 31.9 -0.2
VNDA                               IAmb  IAmb   01 34 33.3
      comp=Z,24nm,1.7s
VNDA  Vanda             75.83 175  P     P      01 34 32.7 +0.6
      comp=Z,3.8nm,0.6s,baz=324,slow=6.5,SNR=24
      comp=Z,3.8nm,0.6s
SIMJ  Simiganj          75.87 311  P     P      01 34 32.5 -0.8
M11K  Mekoryuk          75.94  25  P     P      01 34 34.8 +1.9
      baz=238
KKAR  Karatay Array     76.02 316  P     P      01 34 32.8 -1.0
KKAR  Karatay Array     76.02 316  P     P      01 34 32.8 -1.0
SDPT  Sand Point        76.16  31  P     P      01 34 35.1 +0.8
      baz=244
CHNA  Chernabura Isl    76.39  32  P     P      01 34 36.2 +0.6
      baz=245
S14K  Fog Glacier       77.03  30  P     P      01 34 40.3 +0.9
      baz=245
M13K  Dall Lake         77.17  26  P     P      01 34 40.8 +0.9
      baz=240
K13K  Kusilvak Mount    77.39  24  IAmb  IAmb   01 34 43.5
      comp=Z,19nm,1.1s
K13K  Kusilvak Mount    77.39  24  P     P      01 34 42.4 +1.3
      baz=239,SNR=6.6
O14K  Tigyukauivet M    77.54  27  P     P      01 34 43.3 +1.3
      baz=242
N14K  Kuskokwak Cree    77.66  26  P     P      01 34 43.4 +0.8
      baz=242
L14K  Kuka Creek        77.91  25  P     P      01 34 45.3 +1.3
      baz=241,SNR=13
M14K  Bethel            77.93  26  P     P      01 34 45.6 +1.5
      baz=242,SNR=5.5
O15K  Ungalikthiuk R    78.16  28  P     P      01 34 46.8 +1.3
      baz=244
J14K  Nanvaranak Lak    78.25  23  P     P      01 34 47.2 +1.3
      baz=240
M15K  Kasigluk River    78.46  26  P     P      01 34 48.4 +1.3
      baz=243
N15K  Kwethluk River    78.48  27  P     P      01 34 48.3 +1.0
      baz=243
ANM   Nome              78.50  21  P     P      01 34 48.7 +1.4
      baz=238
L15K  Ungalak Mounta    78.57  25  P     P      01 34 48.9 +1.2
      baz=242
F14K  Arctic Creek      78.66  20  P     P      01 34 49.4 +1.3
      baz=237
K15K  Wolf Creek Mou    78.85  24  IAmb  IAmb   01 34 51.5
      comp=Z,14nm,1.1s
K15K  Wolf Creek Mou    78.85  24  P     P      01 34 50.4 +1.2
      baz=242
O16K  Kokwok River B    79.14  28  P     P      01 34 52.0 +1.2
      baz=245
N16K  Nishlik Lake      79.21  27  P     P      01 34 52.5 +1.2
      baz=245
BVAR  Borovoye Array    79.21 325  P     P      01 34 51.1 -0.3
      comp=Z,6.0nm,0.7s,baz=111,slow=7.8,SNR=21
      comp=Z,6.0nm,0.7s
G15K  Niukluk           79.22  21  P     P      01 34 52.5 +1.3
      baz=239
BRVK  Borovoye          79.28 325  P     P      01 34 51.5 -0.3
BRVK  Borovoye          79.28 325⇑eP     P      01 34 51.8  0.0
BRVK                               pmax  pmax
      comp=Z,34nm,3.5s
M16K  Timber Creek      79.36  26  IAmb  IAmb   01 34 54.7
      comp=Z,18nm,1.1s
M16K  Timber Creek      79.36  26  P     P      01 34 53.2 +1.1
      baz=244,SNR=6.3
F15K  North Star Dit    79.37  21  P     P      01 34 53.0 +0.9
      baz=238
L16K  Owhat River       79.44  25  IAmb  IAmb   01 34 54.3
      comp=Z,18nm,1.3s
L16K  Owhat River       79.44  25  P     P      01 34 53.6 +1.1
      baz=244,SNR=6.0
Q16K  King Salmon       79.45  29  P     P      01 34 53.2 +0.7
      baz=247
Q17K  Contact Creek     79.66  29  P     P      01 34 54.0 +0.1
      baz=248
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O17K  Koliganek Bris    79.68  28  P     P      01 34 55.0 +1.3
      baz=246
J16K  Anvik River       79.69  24  P     P      01 34 55.1 +1.3
      baz=242
N17K  Nushagak Hills    79.94  27  P     P      01 34 55.9 +0.6
N17K  Nushagak Hills    79.94  27  P     P      01 34 56.5 +1.2
      baz=246,SNR=6.2
G16K  Koyuk River       80.03  21  P     P      01 34 57.2 +1.6
      baz=240
L17K  Donlin            80.13  25  P     P      01 34 57.6 +1.4
      baz=245
M17K  Holitna River     80.19  26  P     P      01 34 57.9 +1.4
      baz=246
Q18K  Katmai Hardscr    80.23  29  P     P      01 34 57.0  0.0
      baz=248
J17K  VABM Dome         80.35  24  IAmb  IAmb   01 34 59.9
      comp=Z,16nm,1.2s
J17K  VABM Dome         80.35  24  P     P      01 34 58.2 +0.8
      baz=244
K17K  Iditarod          80.38  25  IAmb  IAmb   01 34 59.9
      comp=Z,17nm,1.0s
K17K  Iditarod          80.38  25  P     P      01 34 58.5 +0.9
      baz=245,SNR=6.2
P18K  Big Mountain,     80.40  28  P     P      01 34 58.1 +0.3
      baz=248
C16K  Lisburne Hills    80.52  18  P     P      01 34 59.5 +1.3
      baz=237
OHAK  Old Harbor        80.58  31  P     P      01 34 59.4 +0.7
      baz=250
O18K  Koktuh Hills      80.59  28  P     P      01 34 59.6 +0.8
      baz=248
N18K  Kilae Creek       80.59  27  P     P      01 34 59.7 +1.0
N18K                               IAmb  IAmb   01 35 01.0
      comp=Z,16nm,1.2s
N18K  Kilae Creek       80.59  27  P     P      01 34 59.6 +0.8
      baz=247
G17K  Kiwalik Mounta    80.71  22  P     P      01 35 00.1 +0.9
      baz=242
H17K  Granite Mounta    80.72  22  P     P      01 35 00.4 +1.1
      baz=243
L18K  Granite Mounta    80.85  25  IAmb  IAmb   01 35 02.3
      comp=Z,13nm,1.1s
L18K  Granite Mounta    80.85  25  P     P      01 35 01.6 +1.5
      baz=246,SNR=6.5
M18K  Stony River       80.94  26  P     P      01 35 02.1 +1.6
      baz=247,SNR=7.1
D17K  Noatak River      80.94  19  P     P      01 35 01.6 +1.2
      baz=239
F17K  Baldwin Pennin    80.94  21  P     P      01 35 02.1 +1.6
      baz=241
KDAK  Kodiak Island     81.13  30  P     P      01 35 02.4 +0.8
      baz=250
N19K  Bonanza Creek     81.28  27  IAmb  IAmb   01 35 04.4
      comp=Z,17nm,1.1s
N19K  Bonanza Creek     81.28  27  P     P      01 35 03.5 +0.9
      baz=248,SNR=5.5
C17K  DeLong Mountai    81.31  19  P     P      01 35 03.4 +1.0
      baz=239
J18K  Innoko River      81.34  24  P     P      01 35 03.6 +0.9
      baz=246
H18K  Honhosa River     81.41  22  P     P      01 35 04.1 +1.0
      baz=244
P19K  Oil Pt            81.45  28  P     P      01 35 04.2 +0.9
      baz=250
Q20K  Shuyak Island     81.50  30  P     P      01 35 04.6 +1.0
      baz=250
L19K  White Mountain    81.63  26  IAmb  IAmb   01 35 06.2
      comp=Z,14nm,1.1s
L19K  White Mountain    81.63  26  P     P      01 35 05.1 +0.9
      baz=248,SNR=8.5
E18K  Tukpahlearik C    81.63  20  IAmb  IAmb   01 35 07.9
      comp=Z,22nm,1.6s
E18K  Tukpahlearik C    81.63  20  P     P      01 35 05.6 +1.5
      baz=242
M19K  Big River Lodg    81.72  26  P     P      01 35 06.2 +1.4
      baz=248
GCSA  Galena City Sc    81.81  23  P     P      01 35 06.7 +1.7
      baz=246
J19K  Poorman           82.00  24  P     P      01 35 07.1 +0.9
      baz=247
C18K  Utukok River      82.03  19  P     P      01 35 07.0 +0.7
      baz=241
MAW   Mawson            82.12 202  P     P      01 35 06.3 -0.4
      comp=Z,3.6nm,0.8s,baz=97,slow=7.2,SNR=4.0
      comp=Z,3.6nm,0.8s
L20K  Farewell, AK      82.16  26  P     P      01 35 08.0 +0.9
      baz=249
B18K  Kokolik River     82.19  18  P     P      01 35 08.0 +1.0
      baz=240
M20K  Styx River        82.27  26  IAmb  IAmb   01 35 10.1
      comp=Z,9.7nm,0.9s
M20K  Styx River        82.27  26  P     P      01 35 08.9 +1.2
      baz=249,SNR=5.8
H19K  Roundabout Mou    82.29  22  P     P      01 35 08.8 +1.2
      baz=246
G19K  Purcell Mounta    82.31  22  IAmb  IAmb   01 35 11.8
      comp=Z,12nm,1.0s
G19K  Purcell Mounta    82.31  22  P     P      01 35 08.9 +1.2
      baz=245
F19K  Shaleruckik Mo    82.36  21  P     P      01 35 09.0 +1.1
      baz=245
K20K  Telida            82.40  25  IAmb  IAmb   01 35 10.3
      comp=Z,11nm,1.2s
K20K  Telida            82.40  25  P     P      01 35 09.7 +1.4
      baz=248
J20K  Nowinta River     82.67  24  IAmb  IAmb   01 35 14.9
      comp=Z,6.6nm,0.8s
J20K  Nowinta River     82.67  24  P     P      01 35 11.0 +1.3
      baz=248
C19K  Lookout Ridge     82.76  19  IAmb  IAmb   01 35 12.3
      comp=Z,11nm,1.1s
C19K  Lookout Ridge     82.76  19  P     P      01 35 11.3 +1.3
      baz=243
E19K  Redstone River    82.81  20  IAmb  IAmb   01 35 13.2
      comp=Z,9.7nm,0.8s
E19K  Redstone River    82.81  20  P     P      01 35 11.5 +1.2
      baz=245,SNR=8.8
A19K  Wainwright        82.82  17  P     P      01 35 11.2 +0.9
      baz=241
H20K  Anotleneega Mo    82.88  23  P     P      01 35 11.4 +0.6
      baz=247
D19K  Kuna River        82.96  19  IAmb  IAmb   01 35 12.6
      comp=Z,12nm,1.2s
D19K  Kuna River        82.96  19  P     P      01 35 11.8 +0.7
      baz=244
SKT   Skwentna          83.02  27  P     P      01 35 11.9 +0.3
      baz=251
PPLA  Purkeypile        83.04  26  P     P      01 35 12.4 +0.6
      baz=250
F20K  Avaraart Lake     83.18  21  IAmb  IAmb   01 35 15.8
      comp=Z,9.6nm,0.9s
F20K  Avaraart Lake     83.18  21  P     P      01 35 13.6 +1.4
      baz=246,SNR=8.2
SUA   Susitna One       83.21  27  P     P      01 35 12.9 +0.3
      baz=252
CAST  Castle Rocks      83.26  25  P     P      01 35 13.3 +0.6
      baz=250
SEW   Seward            83.40  29  P     P      01 35 14.0 +0.6
      baz=253
IMAR  Indian Mountai    83.50  22  P     P      01 35 14.1 +0.2
E20K  Nigu River        83.51  20  P     P      01 35 15.1 +1.1
      baz=246
D20K  Etivluk River     83.55  19  P     P      01 35 14.8 +0.7
      baz=245
RC01  Rabbit Creek A    83.56  28  IAmb  IAmb   01 35 14.8
      comp=Z,14nm,1.0s
RC01  Rabbit Creek A    83.56  28  P     P      01 35 14.8 +0.5
      baz=253
M22K  Willow            83.58  27  P     P      01 35 14.7 +0.4
      baz=252
CUT   Chulitna          83.72  26  P     P      01 35 16.0 +1.0
      baz=252
H21K  Melozitna Rive    83.74  23  P     P      01 35 16.5 +1.3
      baz=249
G21K  Allakaket         83.79  22  P     P      01 35 16.9 +1.6
      baz=249
KTH   Kantishna Hill    83.80  25  IAmb  IAmb   01 35 18.1
      comp=Z,19nm,1.4s
B20K  Meade River       83.92  18  P     P      01 35 17.1 +1.1
      baz=245
BPAW  Bear Paw Mtn.     83.95  25  P     P      01 35 16.8 +0.6
      baz=251
PMR   Palmer            83.98  27  P     P      01 35 15.4 -1.0
PMR                                IAmb  IAmb   01 35 17.5
      comp=Z,14nm,1.1s
PMR   Palmer            83.98  27  P     P      01 35 15.4 -1.0
PMR                                pmax  pmax
      comp=Z,15nm,1.1s
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PMR   Palmer            83.98  27  P     P      01 35 16.7 +0.2
      baz=253
TRF   Thorofare Moun    84.03  25  P     P      01 35 16.9  0.0
      baz=252
PWL   Port Wells        84.14  28  P     P      01 35 18.0 +0.7
      baz=254
KNK   Knik Glacier      84.24  28  P     P      01 35 18.5 +0.7
      baz=254
E21K  Killik River      84.34  20  IAmb  IAmb   01 35 20.0
      comp=Z,12nm,1.3s
E21K  Killik River      84.34  20  P     P      01 35 19.2 +1.1
      baz=248
C21K  Knifeblade Rid    84.34  19  P     P      01 35 19.8 +1.7
      baz=247,SNR=7.0
MLY   Manley            84.35  24  IAmb  IAmb   01 35 20.9
      comp=Z,13nm,1.3s
MLY   Manley            84.35  24  P     P      01 35 19.5 +1.2
      baz=251
P23K  Montague Islan    84.36  29  P     P      01 35 19.0 +0.6
      baz=255
H22K  Ishtalitna Cre    84.38  23  P     P      01 35 19.5 +1.0
      baz=251
SML   Sawmill           84.41  27  IAmb  IAmb   01 35 20.3
      comp=Z,28nm,1.1s
SML   Sawmill           84.41  27  P     P      01 35 19.0 +0.3
      baz=254,SNR=6.5
B21K  Ikpikpuk River    84.57  19  P     P      01 35 20.3 +1.1
      baz=247
WAT1  Susitna Watana    84.60  26  P     P      01 35 20.5 +0.8
      baz=254
AB31  Akbulak array     84.61 320  P     P      01 35 18.6 -1.3
ABKAR Akbulak array     84.61 320  P     P      01 35 19.5 -0.4
M23K  Glacier View      84.68  27  P     P      01 35 20.5 +0.5
      baz=254
MCK   McKinley          84.70  25  P     P      01 35 20.2 +0.2
      baz=253
GLI   Glacier Island    84.73  28  P     P      01 35 20.5 +0.3
      baz=255,SNR=6.4
SCM   Sheep Creek Mo    84.88  27  IAmb  IAmb   01 35 22.3
      comp=Z,28nm,1.3s
SCM   Sheep Creek Mo    84.88  27  P     P      01 35 21.9 +0.9
      baz=255,SNR=5.7
WAT6  Susitna Watana    84.89  26  P     P      01 35 21.3 +0.1
      baz=254,SNR=5.5
NEA2  Nenana            84.89  24  P     P      01 35 22.0 +1.0
      baz=253
D22K  Ayikyak River     84.94  20  IAmb  IAmb   01 35 23.4
      comp=Z,12nm,1.1s
D22K  Ayikyak River     84.94  20  P     P      01 35 22.0 +0.9
      baz=249
I23K  Minto, Yukon-K    84.94  24  IAmb  IAmb   01 35 23.6
      comp=Z,16nm,1.3s
I23K  Minto, Yukon-K    84.94  24  P     P      01 35 22.0 +0.8
      baz=252
E22K  Anaktuvuk Pass    84.97  21  IAmb  IAmb   01 35 23.5
      comp=Z,8.9nm,1.0s
E22K  Anaktuvuk Pass    84.97  21  P     P      01 35 22.1 +0.7
      baz=250,SNR=6.1
FID   Port Fidalgo      84.99  28  IAmb  IAmb   01 35 23.1
      comp=Z,11nm,1.0s
A22K  Sinclair Lake     85.00  18  P     P      01 35 22.4 +1.0
      baz=247
H23K  Yukon River       85.07  23  IAmb  IAmb   01 35 25.1
      comp=Z,10nm,1.3s
H23K  Yukon River       85.07  23  P     P      01 35 22.6 +0.7
      baz=252
G23K  Bananza Creek     85.16  22  P     P      01 35 23.0 +0.7
      baz=252
DHY   Denali Highway    85.19  26  P     P      01 35 22.1 -0.6
DHY   Denali Highway    85.19  26  P     P      01 35 23.0 +0.3
      baz=254,SNR=10
B22K  Teshekpuk Lake    85.23  18  P     P      01 35 23.4 +0.8
      baz=248
COLD  Coldfoot          85.26  22  P     P      01 35 23.8 +1.1
      baz=252
EYAK  Cordova Ski Ar    85.29  29  P     P      01 35 23.5 +0.5
      baz=256
CCB   Clear Creek Bu    85.43  24  IAmb  IAmb   01 35 24.7
      comp=Z,9.9nm,1.0s
KLU   Klutina           85.44  28  P     P      01 35 24.7 +0.8
      baz=256
M24K  Tolsona, Glenn    85.47  27  P     P      01 35 25.0 +1.0
      baz=256
COLA  College           85.47  24  P     P      01 35 25.1 +1.3
      baz=254
D23K  Nanushuk River    85.65  20  P     P      01 35 26.4 +1.8
      baz=251,SNR=14
HDA   Harding Lake      85.72  25  P     P      01 35 25.2 +0.1
      baz=255
E23K  Chandalar         85.73  21  P     P      01 35 26.8 +1.5
      baz=252,SNR=11
H24K  Noodor Dome       85.73  23  P     P      01 35 25.7 +0.5
      baz=254
KAIM  Kayak Island      85.80  29  P     P      01 35 26.0 +0.4
      baz=257
ILAR  Eielson Array     85.84  24  P     P      01 35 23.9 -1.9
ILAR  Eielson Array     85.84  24  P     P      01 35 24.3 -1.5
      comp=Z,3.1nm,0.7s,baz=260,slow=4.8,SNR=19
      comp=Z,3.1nm,0.7s
TOLK  Toolik Lake Re    85.93  20  IAmb  IAmb   01 35 28.2
      comp=Z,19nm,1.2s
TOLK  Toolik Lake Re    85.93  20  P     P      01 35 27.5 +1.4
      baz=252,SNR=6.3
BMRM  Bremner River     85.94  28  P     P      01 35 26.8 +0.5
      baz=257
C23K  Itkillik River    85.95  19  IAmb  IAmb   01 35 30.8
      comp=Z,16nm,1.1s
C23K  Itkillik River    85.95  19  P     P      01 35 27.1 +0.9
      baz=251
PAX   Paxson            86.00  26  P     P      01 35 27.3 +0.6
      baz=256
K24K  Donnelly Dome     86.07  26  P     P      01 35 27.9 +1.0
      baz=256
N25K  Chitina, Valde    86.08  28  P     P      01 35 28.4 +1.2
      baz=257
G24K  Hadweenzic Riv    86.13  23  IAmb  IAmb   01 35 29.8
      comp=Z,12nm,1.2s
G24K  Hadweenzic Riv    86.13  23  P     P      01 35 28.8 +1.7
      baz=254
E24K  Your Creek        86.14  21  P     P      01 35 28.4 +1.2
      baz=253
F24K  Squaw Lake        86.20  22  P     P      01 35 28.8 +1.3
      baz=254,SNR=9.3
D24K  Happy Valley      86.34  20  P     P      01 35 29.4 +1.3
      baz=253,SNR=5.5
BGLC  Bering Glacier    86.39  29  P     P      01 35 29.6 +1.2
      baz=258
J25K  Salcha River,     86.44  25  P     P      01 35 29.0 +0.2
      baz=256
RIDG  Independent Ri    86.45  26  P     P      01 35 28.7 -0.2
      baz=257
C24K  Franklin Bluff    86.55  19  P     P      01 35 30.2 +1.1
      baz=253
CRQE  Cirque            86.61  29  P     P      01 35 30.6 +0.8
      baz=258
H25L  Birch Creek       86.66  23  P     P      01 35 30.8 +1.1
      baz=256
G25K  Bearman Lake      86.67  23  P     P      01 35 30.9 +1.2
      baz=255
MCARA McCarthy VSAT     86.77  28  P     P      01 35 31.2 +0.8
      baz=258
DOT   Dot Lake          86.77  26  IAmb  IAmb   01 38 22.6
      comp=Z,18nm,1.4s
ARTI  Arti              86.78 327diP     P      01 35 29.0 -1.5
ARTI                               S     SKSac  01 45 53.6 -1.4
ARTI                               pmax  pmax
      comp=Z,6.0nm,1.3s
SCRK  Sand Creek        86.88  26  P     P      01 35 31.7 +0.6
      baz=258
L26K  Log Cabin Wild    86.96  27  P     P      01 35 32.1 +0.8
      baz=258
M26K  Nabesna, AK       86.99  27  P     P      01 35 32.2 +0.7
      baz=258
F25K  Christian Rive    87.05  22  IAmb  IAmb   01 35 34.0
      comp=Z,9.5nm,1.2s
F25K  Christian Rive    87.05  22  P     P      01 35 32.6 +0.9
      baz=256,SNR=5.4
J26L  Joseph Creek      87.17  25  P     P      01 35 33.0 +0.6
      baz=258
E25K  Arctic Village    87.21  21  IAmb  IAmb   01 35 35.5
      comp=Z,16nm,1.4s
E25K  Arctic Village    87.21  21  P     P      01 35 33.5 +1.1
      baz=256,SNR=6.0
D25K  Kavik River       87.22  20  P     P      01 35 33.8 +1.3
      baz=255
QSPA  South Pole Qui    87.28 180  P     P      01 35 32.3 -0.6
QSPA  South Pole Qui    87.28 180  P     P      01 35 32.8 -0.1
      comp=Z,7.9nm,0.7s,baz=328,slow=1.9,SNR=24
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Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,7.9nm,0.7s						
BMAR	Burnt Mountain	87.41	22	P	P	01 35 34.2	+0.8
M27K	Edge Creek, AK	87.49	27	IAmb	IAmb	01 35 36.5	
	comp=Z,10.0nm,1.1s						
M27K	Edge Creek, AK	87.49	27	P	P	01 35 35.2	+1.1
	baz=260,SNR=6.5						
CTG	Chitna Glacier	87.50	29	P	P	01 35 35.1	+1.0
	baz=260						
I26K	Coal Creek Min	87.51	24	P	P	01 35 34.8	+0.9
	baz=258						
G26K	Porcupine Rive	87.60	23	P	P	01 35 35.6	+1.4
	baz=258,SNR=12						
F26K	Sheenjek River	87.63	22	P	P	01 35 35.7	+1.3
	baz=257,SNR=11						
LOGN	Logan Glacier	87.64	29	IAmb	IAmb	01 35 39.5	
	comp=Z,7.8nm,0.8s						
L27K	Beaver Creek,	87.64	27	IAmb	IAmb	01 35 36.4	
	comp=Z,7.7nm,1.1s						
L27K	Beaver Creek,	87.64	27	P	P	01 35 35.6	+0.9
	baz=260						
BCAR	Beaver Creek A	87.66	27	P	P	01 35 35.2	+0.5
K27K	Chicken	87.71	26	P	P	01 35 36.5	+1.6
	baz=259						
C26K	Camden Bay	87.87	20	P	P	01 35 37.2	+1.7
	baz=256						
PINM	Pinnacle	87.88	30	P	P	01 35 37.1	+1.3
	baz=261						
BVCY	Beaver Creek	87.97	27	P	P	01 35 37.6	+1.4
	baz=260						
O28M	Mount Upton	88.02	29	P	P	01 35 37.8	+1.0
	baz=261						
YUK3	Moose Creek	88.05	28	P	P	01 35 37.5	+0.7
	baz=261,SNR=5.7						
I27K	Kandik River	88.20	24	P	P	01 35 38.3	+1.0
	baz=260,SNR=15						
C27K	Jago River	88.21	20	P	P	01 35 38.7	+1.6
	baz=258						
PNL	Peninsula	88.25	30	P	P	01 35 38.5	+1.0
	baz=262						
YUK8	Steele Glacier	88.30	29	P	P	01 35 39.0	+0.9
	baz=261						
H27K	Steamboat Moun	88.35	24	P	P	01 35 39.5	+1.6
	baz=260,SNR=13						
G27K	Doyon Strip	88.40	23	P	P	01 35 39.1	+1.0
	baz=260						
E27K	Coleen River	88.67	22	P	P	01 35 40.5	+1.1
	baz=260						
O29M	Mount Kennedy	88.74	30	P	P	01 35 41.0	+0.9
	baz=262						
YUK4	Talbot Arm	88.85	29	P	P	01 35 41.6	+1.0
	baz=262						
I28M	Miner Creek	88.86	24	IAmb	IAmb	01 35 42.2	
	comp=Z,13nm,1.2s						
I28M	Miner Creek	88.86	24	P	P	01 35 41.2	+0.8
	baz=261,SNR=7.3						
DAWY	Dawson	88.89	26	IAmb	IAmb	01 35 42.2	
	comp=Z,17nm,1.1s						
DAWY	Dawson	88.89	26	P	P	01 35 41.4	+0.9
	baz=262,SNR=12						
YUK6	Outpost Mounta	88.93	29	P	P	01 35 41.7	+0.7
	baz=263						
P29M	Windy Craggy	89.08	30	IAmb	IAmb	01 35 48.0	
	comp=Z,9.5nm,0.9s						
P29M	Windy Craggy	89.08	30	P	P	01 35 42.2	+0.7
	baz=263						
M29M	Somme Creek	89.08	27	P	P	01 35 41.5	0.0
M29M				IAmb	IAmb	01 35 43.4	
	comp=Z,6.6nm,1.1s						
M29M	Somme Creek	89.08	27	P	P	01 35 42.7	+1.2
	baz=262,SNR=5.8						
F28M	Old Crow	89.22	22	P	P	01 35 43.1	+1.1
	baz=261						
L29M	L29M	89.31	27	IAmb	IAmb	01 35 47.9	
	comp=Z,6.2nm,0.9s						
L29M	L29M	89.31	27	P	P	01 35 43.5	+1.0
	baz=263						
HYT	Haines Junctio	89.33	29	IAmb	IAmb	01 35 44.4	
	comp=Z,13nm,1.2s						
HYT	Haines Junctio	89.33	29	P	P	01 35 43.6	+0.8
	baz=263						
E28M	Babbage River	89.50	21	IAmb	IAmb	01 35 46.2	
	comp=Z,14nm,1.7s						
E28M	Babbage River	89.50	21	P	P	01 35 44.3	+1.0
	baz=262						
P30M	Million Dollar	89.52	30	P	P	01 35 44.4	+0.8
	baz=264						
I29M	Ogilvie Camp,	89.52	25	IAmb	IAmb	01 35 44.9	
	comp=Z,16nm,1.3s						
I29M	Ogilvie Camp,	89.52	25	P	P	01 35 44.4	+0.9
	baz=263						
N30M	Aishikik Lake	89.60	29	P	P	01 35 44.6	+0.7
	baz=264						
H29M	Whitestone	89.61	24	P	P	01 35 45.0	+1.2
	baz=263						
K29M	Barlow Dome	89.67	26	IAmb	IAmb	01 35 46.9	
	comp=Z,11nm,1.3s						
K29M	Barlow Dome	89.67	26	P	P	01 35 45.2	+0.9
	baz=263,SNR=5.9						
S31K	Pelican	89.68	32	P	P	01 35 45.0	+0.8
	baz=264						
PLBC	Pleasant Camp	89.75	31	P	P	01 35 45.4	+0.9
	baz=264						
G29M	Pine Creek	89.83	23	P	P	01 35 45.6	+0.7
	baz=263						
D28M	Stokes Point	89.88	21	P	P	01 35 45.9	+1.0
	baz=262						
O30N	Mendenhall	90.02	29	P	P	01 35 46.3	+0.5
	baz=265						
E29M	Blow River	90.06	22	P	P	01 35 46.5	+0.7
	baz=263						
SIT	Sitka	90.08	33	P	P	01 35 46.6	+0.5
	baz=265						
N31M	Braeburn, Yuko	90.23	29	P	P	01 35 47.4	+0.6
	baz=265						
J30M	Hart River	90.27	25	P	P	01 35 47.6	+0.5
	baz=264						
SKAG	Skagway	90.28	31	P	P	01 35 47.7	+0.6
	baz=265						
EPYK	Eagle Plains	90.29	24	P	P	01 35 47.6	+0.6
	baz=264						
I30M	Mount Dempster	90.31	25	P	P	01 35 47.7	+0.4
	baz=264						
S32K	Killisnoo	90.52	33	P	P	01 35 48.5	+0.4
	baz=266						
G30M	tAoh Zraii Nji	90.55	23	P	P	01 35 48.8	+0.6
	baz=264						
WHY	Whitehorse	90.60	29	P	P	01 35 49.2	+0.5
WHY				IAmb	IAmb	01 35 50.1	
	comp=Z,14nm,1.2s						
WHY	Whitehorse	90.60	29	P	P	01 35 49.6	+0.9
	baz=266						
SYO	Syowa Base	90.75	201	⇑eP	P	01 35 50.6	+1.5
SYO	Syowa Base	90.75	201	⇑epP	P	01 35 53.8	+4.7
SYO	Syowa Base	90.75	201	⇑esP	P	01 35 56.4	+7.3
F30M	Barrier River	90.77	22	P	P	01 35 49.9	+0.7
	baz=265						
M31M	Drury Creek, Y	90.94	28	P	P	01 35 51.1	+0.9
	baz=266						
P32M	Atlin	91.11	31	P	P	01 35 51.8	+0.8
	baz=267						
CRAG	Craig	91.20	35	P	P	01 35 51.8	+0.4
	baz=267						
G31M	Satah River	91.31	23	P	P	01 35 52.4	+0.8
	baz=266						
FARO	Faro, Yukon	91.43	28	P	P	01 35 53.0	+0.6
	baz=267						
P33M	Teslin, Yukon	91.59	30	P	P	01 35 53.3	0.0
	baz=268						
INK	Inuvik	91.67	22	P	P	01 35 53.6	+0.3
	baz=267						
KBZ	Khabaz	95.95	314	⇓eP	P	01 36 12.8	-0.7
MNK	Minsk	104.10	326	i P	Pdif	01 36 46.9	-2.9
	comp=E,5.0nm,0.8s						
MNK				i P	Pdif	01 36 46.9	-2.9
	comp=N,9.0nm,1.0s						
MNK				i P	Pdif	01 36 46.9	-2.9
	comp=Z,5.0nm,0.9s,baz=74						
MNK				i PP	PKiKP	01 41 05.0	-1.8
MNK				i PPP	PPP	01 43 16.7	
MNK				i SKS		01 48 14.4	
MNK				i SS	SS	01 55 54.6	+0.9
MNK				i SSS	SSS	01 59 50.9	
MNK				i LQ	LQ	02 17 27.3	
MNK				i LRM	MLR	02 23 55.5	
	comp=Z,3µm,17.3s						
MNK				i LRM	MLR	02 23 56.5	
	comp=N,2µm,17.4s						
MNK				i LRM	MLR	02 24 08.0	
	comp=E,966nm,18.4s						
MNK	Minsk	104.10	326	i P	Pdif	01 36 46.8	-2.9
MNK				i		01 41 04.9	
MNK				i PPP	PPP	01 43 16.6	
MNK				i		01 48 14.4	
MNK				i SS	SS	01 55 54.5	+0.8
MNK				i SSS	SSS	01 59 50.8	
MNK				pmax	pmax		
	comp=E,5.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,9.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MNK				MLR	MLR		
	comp=Z,3µm,17.0s						
MNK				MLR	MLR		
	comp=N,2µm,17.0s						
MNK				MLR	MLR		
	comp=E,966nm,18.0s						
TXAR	Lajitas Array	115.38	59	PKiKP	PKPdf	01 41 27.6	-1.3
TXAR	Lajitas Array	115.38	59	PKP	PKPdf	01 41 28.4	-0.6
	comp=E,0.1nm,0.6s,baz=142,slow=2.0,SNR=3.9						
FUORN	Ofenpass-Fuorn	117.42	322	PKPdf	PKPdf	01 41 32.2	-0.3
CCM	Cathedral Cave	122.48	46	PKPdf	PKPdf	01 41 41.2	-1.0
CCM	Cathedral Cave	122.48	46	PKIKP	PKPdf	01 41 41.2	-1.0
TORD	Torodi Ar. Bea	136.13	286	PKPdf	PKPdf	01 42 08.3	-0.4
PB11	IPOC Station P	144.41	130	PKPdf	PKPbc	01 42 22.4	+0.1
GO01	Chusmiza	144.82	130	PKPdf	PKPab	01 42 23.9	+0.1
ROSC	El Rosal	147.09	85	PKPbc	PKPbc	01 42 30.1	-0.8
	comp=E,4.6nm,0.4s,baz=316,slow=10,SNR=3.7						
CPUP	Villa Florida	147.32	153	PKPbc	PKPdf	01 42 29.7	+1.3
	comp=E,4.6nm,1.0s,baz=81,slow=3.7,SNR=18						
LPAZ	La Paz	147.56	126	PKPbc	PKPbc	01 42 31.5	-0.9
LPAZ	La Paz	147.56	126	PKPbc	PKPdf	01 42 30.4	+0.6
	comp=E,5.6nm,0.9s,baz=297,slow=0.9,SNR=23						
LPAZ	La Paz	147.56	126	PKP2	PKPbc	01 42 31.5	-0.9
RUSC	La Rusia	148.26	83	PKPbc	PKPdf	01 42 32.5	+1.6
CELP	Cerrillos	150.96	56	PKPbc	PKPbc	01 42 39.5	-0.6
PDPR	Patillas Dam,	151.45	56	PKPbc	PKPbc	01 42 40.0	-1.3

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*IDC **24** 01:23:13.1±1.0, 28°.28N×104°.78E, h0^{km}, mb4.2/19, mbtmp4.2/20, ML4.5/1, Error ellipse: s-maj=26.2km s-min=17.0km az=15.0*

*MOS **24** 01:23:14.0±1.1, 28°.42N×104°.78E, h11^{km}, mb4.6/25, Error ellipse: s-maj=8.4km s-min=6.2km az=100.4*

*NEIC **24** 01:23:16.6±2.3, 28°.49N±0°.09×104°.8E±0°.1, h10^{km}±1^{km}, mb4.6/77, Error ellipse: s-maj=16.9km s-min=12.3km az=133.0*

*BJI **24** 01:23:16.2, 28°.45N×104°.79E, h8^{km}, mb4.4/36, ML4.4/23*

ISC 24 01:23:17.3±0.3**, 28°.44N**±0°.03×**104°.80E**±0°.04**, h19^{km}, n370,** σ**1^{s}.07**/373**, mb4.5**/85**, 4C-1D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GYA	Guiyang	2.58	140	⇑Pn	Pn	01 24 00.1	+2.0
GYA				Sn	Sb	01 24 32.3	-2.0
GYA				smax	smax		
	comp=N,2µm,0.7s						
GYA				smax	smax		
	comp=E,2µm,1.0s						
CD2	Chengdu	2.62	340	Pn	Pn	01 24 00.1	+1.3
CD2				Pg	Pg	01 24 05.8	-1.9
CD2				Sn	Sb	01 24 34.3	-1.4
CD2				Sg	Sg	01 24 38.9	-2.9
CD2				smax	smax		
	comp=N,4µm,0.7s						
CD2				smax	smax		
	comp=E,8µm,0.7s						
PZH	PanZhiHua	3.33	235	Pn	Pn	01 24 11.3	+2.8
PZH				Pg	Pg	01 24 19.8	-1.4
PZH				Sg	Sg	01 25 02.3	-2.1
PZH				smax	smax		
	comp=N,380nm,1.0s						
PZH				smax	smax		
	comp=E,440nm,1.0s						
KMI	Kunming	3.78	210	Pn	Pn	01 24 17.8	+3.0
KMI				Sg	Sg	01 25 20.3	+1.5
ENH	Enshi	4.48	65		Pn	01 24 25.8	+1.5
GULI	GuiLin	5.88	121	Pn	Pn	01 24 45.3	+1.9
GULI				Sn	Sn	01 25 54.1	+3.8
GULI				smax	smax		
	comp=N,310nm,1.0s						
GULI				smax	smax		
	comp=E,290nm,1.2s						
TNCH	TengChong	6.56	240	Pg	Pg	01 25 22.1	-0.9
TNCH				Sg	Sg	01 26 48.3	+0.3
TNCH				smax	smax		
	comp=N,200nm,1.1s						
TNCH				smax	smax		
	comp=E,190nm,1.5s						
TNCH				LR	LR		
	comp=N,2µm,13.2s						
TNCH				LR	LR		
	comp=E,2µm,15.1s						
TNCH				LR	LR		
	comp=Z,3µm,17.9s						
XAN	Xi'an	6.61	31	Pn	Pn	01 24 53.5	0.0
XAN				Pg	Pg	01 25 18.1	-5.7
XAN				Sg	Sg	01 26 45.0	-4.3
XAN				smax	smax		
	comp=Z,950nm,0.8s						
XAN				smax	smax		
	comp=Z,1µm,1.1s						
SLVN	Son La	7.12	187	Pn	Pn	01 25 02.5	+1.9
CNSH	ChangSha	7.17	90	Pn	Pn	01 25 00.8	-0.4
CNSH				Sn	Sn	01 26 18.1	-4.1
CNSH				smax	smax		
	comp=Z,260nm,1.1s						
CNSH				smax	smax		
	comp=Z,200nm,0.7s						
LZH	Lanzhou	7.67	354	Pg	Pb	01 25 31.4	+1.6
LZH				Sg	Sb	01 27 15.1	+14
LZH				smax	smax		
	comp=Z,190nm,1.3s						
LZH				smax	smax		
	comp=Z,260nm,1.7s						
WHN	Wuhan	8.58	74	P	Pn	01 25 21.3	+0.7
WHN				pP		01 25 23.3	
LYN	LuoYang	8.94	45	⇑P	Pn	01 25 24.6	-0.9
LYN				S	Sn	01 27 08.4	+2.7
LYN				smax	smax		
	comp=Z,140nm,1.4s						
LYN				smax	smax		
	comp=Z,170nm,1.1s						
GZH	Guangzhou	9.36	123	P	Pn	01 25 29.8	-1.5
GZH				S	Sn	01 27 14.1	-2.0
GZH				smax	smax		
	comp=Z,230nm,1.0s						
GZH				smax	smax		
	comp=Z,140nm,0.9s						
QIZ	Qiongzhong	10.44	153	P	Pn	01 25 47.6	+1.5
QIZ				S	Sn	01 27 43.5	+0.9
CM31	Chiang Mai Arr	11.29	210	Pn	Pn	01 25 57.9	+0.1
CMAR	Chiang Mai Arr	11.29	210	Pn	Pn	01 25 59.5	+1.7
CMAR	Chiang Mai Arr	11.29	210	Pn	Pn	01 25 59.0	+1.2
	comp=Z,1.9nm,0.3s,baz=24,slow=11,SNR=6.2						
CMAR	Chiang Mai Arr	11.29	210	P	Pn	01 25 59.5	+1.7
GTA	Gaotai	11.70	341	eP	Pn	01 26 06.6	+3.3
GTA				pP		01 26 11.0	
GTA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HNS	HongShan	12.20	40	⇑P	Pn	01 26 12.8	+2.7
HNS				S	Sn	01 28 29.5	+3.9
NJ2	Nanjing	12.67	70	eP	Pn	01 26 16.0	-0.6
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BTO	Baotou	12.87	18	eP	Pn	01 26 23.5	+4.1
BTO				S	Sn	01 28 51.8	+10
BTO				pmax	pmax		
	comp=Z,15nm,0.5s						
TIA	Tai'an	12.98	50	P	Pn	01 26 17.9	-2.9
HHC	Hu-ho-hao-te	13.57	22	eP	Pn	01 26 30.8	+1.9
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BJT	Baijiatuau	14.88	36	Pn	Pn	01 26 46.8	+0.1
BJT	Baijiatuau	14.88	36	P	Pn	01 26 46.8	+0.1
BJI	Beijing	14.90	36	P	Pn	01 26 46.5	-0.4
BJI				sP	P	01 26 53.4	+1.0
BJI				pmax	pmax		
	comp=Z,5.0nm,1.4s						
EVN	Everest	15.87	273	Pn	Pn	01 27 01.3	+1.0
DL2	Dalian	17.44	49	P	P	01 27 22.3	+1.6
DL2				pmax	pmax		
	comp=Z,25nm,0.9s						
XLT	XiLinHaoTe	17.89	27	eP	P	01 27 28.3	+2.6
XLT				sP	sP	01 27 36.4	+2.6
XLT				pmax	pmax		
	comp=Z,17nm,0.8s						
SONM	Songino Array	19.41	3	P	Pn	01 27 44.0	+0.4
SONM	Songino Array	19.41	3	P	Pn	01 27 43.4	-0.2
	comp=Z,1.3nm,0.3s,baz=187,slow=12,SNR=25						
	comp=Z,5.7nm,0.6s						
ULN	Ulaanbaatar	19.48	5		P	01 27 43.7	+0.5
ULN	Ulaanbaatar	19.48	5	P	P	01 27 43.7	+0.5
ULN				pmax	pmax		
	comp=Z,6.0nm,0.5s						
INCN	Inchon	20.38	58	P	P	01 27 52.5	-0.4
INCN				IAmb	IAmb	01 27 57.2	
	comp=Z,26nm,0.5s						
INCN	Inchon	20.38	58	P	P	01 27 52.6	-0.4
INCN				pmax	pmax		
	comp=Z,26nm,0.5s						
WMQ	Urumqi	20.59	323	eP	Pn	01 27 59.9	+2.4
WMQ				pmax	pmax		
	comp=Z,26nm,0.7s						
TJN	Taejon	20.60	62	i P	P	01 27 56.2	+0.9
KSAR	Wonju Array Be	21.31	59	P	P	01 28 02.4	-0.6
KSAR	Wonju Array Be	21.31	59	P	P	01 28 02.4	-0.6
KS19	Wonju Array Si	21.32	59	P	P	01 28 02.5	-0.6
KS19				IAmb	IAmb	01 28 05.4	
	comp=Z,15nm,0.7s						
KSRS	Korea Array	21.34	59	P	P	01 28 03.0	-0.3
	comp=Z,12nm,0.7s,baz=246,slow=9.4,SNR=38						
	comp=Z,12nm,0.7s						
ZAK	Zakamensk	21.95	357	eP	P	01 28 09.5	-0.3
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HIA	Hailar	23.75	25	P	P	01 28 29.6	+1.2
HIA	Hailar	23.75	25	P	P	01 28 29.6	+1.2
HIA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BNX	BinXian	24.83	40	⇓P	P	01 28 39.8	+1.4
BNX				sP	pP	01 28 43.8	-0.5
BNX				S	S	01 33 06.4	+6.3
BNX				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MK31	Makanchi Array	25.42	322	i P	P	01 28 45.1	+1.4
MKAR	Makanchi Array	25.42	322	P	P	01 28 43.9	+0.2
MKAR	Makanchi Array	25.42	322	P	P	01 28 44.2	+0.5
	comp=Z,10nm,0.7s,baz=131,slow=11,SNR=35						
	comp=Z,10nm,0.7s						
MKAR	Makanchi Array	25.42	322	P	P	01 28 43.9	+0.2
MAKZ	Makanchi	25.60	322	P	P	01 28 45.8	+0.5
MAKZ				IAmb	IAmb	01 28 49.9	
	comp=Z,12nm,0.8s						
MAKZ	Makanchi	25.60	322	P	P	01 28 45.8	+0.5
MAKZ				pmax	pmax		
	comp=Z,12nm,0.9s						
TARG	Taragay, Kyrgy	25.64	308	P	P	01 28 45.7	-0.5
TARG				IAmb	IAmb	01 28 52.9	
	comp=Z,8.9nm,0.8s						
TARG	Taragay, Kyrgy	25.64	308	P	P	01 28 45.7	-0.5
TARG				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KDJ	Kajisay	26.23	309	P	P	01 28 52.8	+1.5
KDJ	Kajisay	26.23	309	P	P	01 28 52.8	+1.5
KDJ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KSH	Kashi	26.23	302	P	P	01 28 54.6	+3.3
KSH				pmax	pmax		
	comp=Z,5.0nm,1.2s						
NRN	Naryn	26.80	307	P	P	01 28 56.2	-0.4
NRN	Naryn	26.80	307	P	P	01 28 56.2	-0.4
NRN				pmax	pmax		
	comp=Z,9.0nm,1.3s						
USA0B	Ussuriysk Arra	26.80	47	P	P	01 28 55.5	-0.7
USA0B				IAmb	IAmb	01 28 58.2	
	comp=Z,12nm,0.7s						
USA0B	Ussuriysk Arra	26.80	47	P	P	01 28 55.5	-0.7
USA0B				pmax	pmax		
	comp=Z,12nm,0.7s						
USRK	Ussuriysk Ar.	26.80	47	P	P	01 28 55.9	-0.3
	comp=Z,10nm,0.6s,baz=248,slow=6.8,SNR=19						
	comp=Z,10nm,0.6s						
HEH	HeiHe	27.73	32	eP	P	01 29 05.8	+1.3
HEH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KLR	Kul'dur	29.27	37	P	P	01 29 18.1	-0.1
	comp=Z,1.3nm,0.6s,baz=271,slow=8.6,SNR=4.8						
	comp=Z,1.3nm,0.6s						
KLR	Kul'dur	29.27	37	i P	P	01 29 19.6	+1.4
KLR				pmax	pmax		
	comp=Z,5.0nm,2.0s						
ZAA0	Zalesovo Array	29.39	336	P	P	01 29 19.0	-0.2
ZALV	Zalesovo Beam	29.39	336	P	P	01 29 18.3	-0.8
ZALV	Zalesovo Beam	29.39	336	P	P	01 29 19.0	-0.1
	comp=Z,4.1nm,0.7s,baz=132,slow=8.5,SNR=14						
	comp=Z,4.1nm,0.7s						
ZALV	Zalesovo Beam	29.39	336	P	P	01 29 18.3	-0.8
KURBB	Kurchatov Arra	29.75	325	P	P	01 29 21.8	-0.6
	comp=Z,3.9nm,0.8s,baz=133,slow=9.3,SNR=24						
	comp=Z,3.9nm,0.8s						
KURK	Kurchatov	29.76	326	P	P	01 29 23.2	+0.7
KURK				IAmb	IAmb	01 29 26.3	
	comp=Z,7.0nm,0.9s						
KURK	Kurchatov	29.76	326	P	P	01 29 21.8	-0.7
KK31	Karatay Array	31.19	307	P	P	01 29 35.1	-0.2
KK31				IAmb	IAmb	01 29 39.7	
	comp=Z,10.0nm,1.5s						
KK31	Karatay Array	31.19	307	P	P	01 29 35.1	-0.2
KK31				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KKAR	Karatay Array	31.19	307	P	P	01 29 34.9	-0.4
KKAR	Karatay Array	31.19	307	P	P	01 29 34.9	-0.4
BVAR	Borovoye Array	35.27	324	P	P	01 30 10.9	+0.1
	comp=Z,1.7nm,0.7s,baz=122,slow=9.4,SNR=8.2						
	comp=Z,1.7nm,0.7s						
BRVK	Borovoye	35.34	324	P	P	01 30 11.2	-0.2
BRVK	Borovoye	35.34	324	P	P	01 30 11.2	-0.2
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
YAK	Yakutsk	37.40	19	i P	P	01 30 29.9	+1.2
YAK				pmax	pmax		
	comp=Z,14nm,0.5s						
AB31	Akbulak array	39.92	314	P	P	01 30 50.2	+0.1
ABKAR	Akbulak array	39.92	314	P	P	01 30 49.8	-0.3
AKTO	Aktyubinsk	41.42	315	P	P	01 31 02.4	-0.2
	comp=Z,4.1nm,0.7s,baz=83,slow=10,SNR=15						
	comp=Z,4.1nm,0.7s						
ARTI	Arti	43.00	324	c iP	P	01 31 16.1	+0.8
ARTI				S	S	01 37 41.6	+2.0
ARTI				SS	SS	01 40 40.0	-12
ARTI				pmax	pmax		
	comp=Z,12nm,1.7s						
TIXI	Tiksi	45.25	10	P	P	01 31 31.9	-1.2
TIXI				IAmb	IAmb	01 31 34.2	
	comp=Z,4.8nm,0.6s						
TIXI	Tiksi	45.25	10	i P	P	01 31 33.7	+0.7
TIXI				pmax	pmax		
	comp=Z,14nm,1.5s						
PEA0B	Petropavlovsk-	45.71	42	P	P	01 31 36.1	-1.0
PEA0B				IAmb	IAmb	01 31 39.8	
	comp=Z,10.0nm,1.4s						
PEA0B	Petropavlovsk-	45.71	42	P	P	01 31 36.1	-1.0
PEA0B				pmax	pmax		
	comp=Z,10.0nm,1.4s						
PETK	Petropavlovsk-	45.71	42	P	P	01 31 37.0	-0.1
PETK	Petropavlovsk-	45.71	42	P	P	01 31 37.0	-0.1
AKT	Akhty	47.75	302	eP	P	01 31 52.9	-0.4
AKT				e		01 33 22.2	
AKT				e		01 33 44.5	
AKT				ePPP	PPP	01 34 30.9	
AKT				pmax	pmax		
	comp=Z,16nm,1.5s						
KBZ	Khabaz	51.17	305	P	P	01 32 18.6	-0.6
	comp=Z,1.3nm,0.7s,baz=129,slow=7.6,SNR=3.7						
	comp=Z,1.3nm,0.7s						
KIV	Kislovodsk	51.31	305	P	P	01 32 20.9	+0.6
KIV	Kislovodsk	51.31	305	eP	P	01 32 21.0	+0.6
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
SHA1	Shidzhatmaz	51.34	305	i P	P	01 32 21.7	+0.9
MBWA	Marble Bar	51.37	162	P	P	01 32 20.4	-0.5
PSA00	Pilbara Seismi	51.80	162	P	P	01 32 25.6	+1.6
GURO	Guroymak-BITLI	52.41	298	P	P	01 32 28.5	-0.2
GURO				IAmb	IAmb	01 32 33.1	
	comp=Z,9.1nm,1.3s						

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RAYN  Ar Rayn          53.08 279   P      P      01 32 32.5 -1.3
RAYN                               IAmb   IAmb   01 32 36.9
      comp=Z,9.5nm,1.0s
RAYN  Ar Rayn          53.08 279   P      P      01 32 32.5 -1.3
RAYN                               pmax   pmax
      comp=Z,9.0nm,1.0s
BILL  Bilibino         53.33  24   P      P      01 32 36.0 +1.1
BILL                               IAmb   IAmb   01 33 04.7
      comp=Z,5.2nm,0.4s
BILL  Bilibino         53.33  24 i P      P      01 32 36.2 +1.3
BILL                               pmax   pmax
      comp=Z,7.0nm,1.5s
KLMR  Klimovskoe       53.60 326 eP       P      01 32 35.4 -1.6
KLMR                               pmax   pmax
      comp=Z,17nm,1.4s
BR131 Keskin Array S   58.61 301   P      P      01 33 13.7 +0.4
BR131                              IAmb   IAmb   01 33 51.1
      comp=Z,6.0nm,1.4s
BR131 Keskin Array S   58.61 301   P      P      01 33 13.7 +0.4
BR131                              pmax   pmax
      comp=Z,6.0nm,1.5s
BRTR  Keskin Array B   58.61 301   P      P      01 33 12.2 -1.1
BRTR  Keskin Array B   58.61 301   P      P      01 33 12.8 -0.6
      comp=Z,0.8nm,0.7s,baz=111,slow=6.8,SNR=5.6
      comp=Z,0.8nm,0.7s
BRTR  Keskin Array B   58.61 301 i P      P      01 33 14.3 +1.0
BRTR                               pmax   pmax
      comp=Z,1.0nm,0.6s
ASAR  Alice Springs    58.91 149   P      P      01 33 13.2 -2.2
      comp=Z,2.5nm,0.5s,baz=335,slow=6.7,SNR=5.9
      comp=Z,2.5nm,0.5s
AKASG Malin Array Be   59.66 314   P      P      01 33 19.5 -0.7
      comp=Z,1.0nm,0.6s,baz=70,slow=7.1,SNR=6.5
      comp=Z,1.0nm,0.6s
AKASG Malin Array Be   59.66 314 i P      P      01 33 22.7 +2.5
AKASG                              pmax   pmax
      comp=Z,2.0nm,0.6s
AKBB  Malin Array Si   59.66 314   P      P      01 33 18.6 -1.6
AKBB                               IAmb   IAmb   01 33 23.7
      comp=Z,6.0nm,1.4s
AKBB  Malin Array Si   59.66 314   P      P      01 33 18.6 -1.6
AKBB                               pmax   pmax
      comp=Z,6.0nm,1.4s
KIEV  Kiev             59.67 314   P      P      01 33 19.6 -0.7
KIEV                               IAmb   IAmb   01 33 23.7
      comp=Z,5.4nm,1.4s
KIEV  Kiev             59.67 314   P      P      01 33 19.6 -0.7
KIEV                               pmax   pmax
      comp=Z,5.0nm,1.4s
ARCES ARCESS Array B   59.93 336   P      P      01 33 21.2 -0.6
ARCES ARCESS Array B   59.93 336   P      P      01 33 21.2 -0.6
      comp=Z,2.1nm,0.8s,baz=90,slow=8.5,SNR=6.3
      comp=Z,2.1nm,0.8s
ARCES ARCESS Array B   59.93 336   P      P      01 33 21.2 -0.6
ARCES                              pmax   pmax
      comp=Z,14nm,1.5s
FINES FINESS Array B   60.12 327   P      P      01 33 22.5 -0.7
FINES FINESS Array B   60.12 327   P      P      01 33 22.6 -0.5
      comp=Z,2.5nm,0.9s,baz=87,slow=7.4,SNR=8.7
      comp=Z,2.5nm,0.9s
FINES FINESS Array B   60.12 327 i P      P      01 33 23.6 +0.4
FINES                              pmax   pmax
      comp=Z,1.0nm,0.6s
BORA  Eskisehir        60.96 302   P      P      01 33 28.4 -1.1
GAMB  Gambell          62.05  30   P      P      01 33 35.9 -0.3
      baz=278
BURAR Bucovina Array   62.83 312   P      P      01 33 42.0 +0.1
BUR08 Bucovina Ar. S   62.84 312   P      P      01 33 41.1 -0.8
MLR   Muntele Rosu     62.84 309   P      P      01 33 41.1 -1.0
MLR                                IAmb   IAmb   01 33 48.9
      comp=Z,3.1nm,0.7s
MLR   Muntele Rosu     62.84 309   P      P      01 33 41.1 -1.0
MLR                                pmax   pmax
      comp=Z,3.0nm,0.7s
C16K  Lisburne Hills   63.86  25   P      P      01 33 47.2 -1.0
C16K  Lisburne Hills   63.86  25   P      P      01 33 48.5 +0.3
      baz=281
F14K  Arctic Creek     64.04  28   P      P      01 33 49.9 +0.5
      baz=282
C17K  DeLong Mountai   64.61  24   P      P      01 33 53.5 +0.3
      baz=283
D17K  Noatak River     64.82  25   P      P      01 33 55.0 +0.5
      baz=284
B18K  Kokolik River    64.88  23   P      P      01 33 55.7 +0.8
      baz=284
A19K  Wainwright       64.93  22   P      P      01 33 56.2 +1.1
      baz=284
M11K  Mekoryuk         65.24  33   P      P      01 33 56.3 -1.0
      baz=284
C18K  Utukok River     65.27  24   P      P      01 33 57.1 -0.4
C18K                               IAmb   IAmb   01 33 59.4
      comp=Z,2.9nm,0.7s
C18K  Utukok River     65.27  24   P      P      01 33 58.2 +0.6
      baz=285
E17K  Hotham Inlet     65.44  25   P      P      01 33 58.5 -0.1
      baz=285
K13K  Kusilvak Mount   65.58  31   P      P      01 33 60.0 +0.4
      baz=285
G16K  Koyuk River      65.67  27   P      P      01 34 00.1  0.0
      baz=285
C19K  Lookout Ridge    65.71  23   P      P      01 34 00.8 +0.4
      baz=286,SNR=9.2
E18K  Tukpahlearik C   65.81  25   P      P      01 34 01.4 +0.5
      baz=286
F17K  Baldwin Pennin   65.83  26   P      P      01 34 01.4 +0.4
      baz=286
J14K  Nanvaranak Lak   65.86  30   P      P      01 34 01.8 +0.5
      baz=285
H16K  Elim             65.92  28   P      P      01 34 02.0 +0.3
      baz=286
B20K  Meade River      66.27  22   P      P      01 34 04.2 +0.4
      baz=288,SNR=13
HFS   Hagfors          66.32 327   P      P      01 34 03.5 -0.9
      comp=Z,1.0nm,0.4s,baz=103,slow=6.4,SNR=13
      comp=Z,1.0nm,0.4s
D19K  Kuna River       66.40  24   P      P      01 34 05.0 +0.2
      baz=288,SNR=8.1
M13K  Dall Lake        66.60  33   P      P      01 34 06.1  0.0
      baz=286
A22K  Sinclair Lake    66.65  21   P      P      01 34 06.4 +0.2
      baz=289
L14K  Kuka Creek       66.65  32   IAmb   IAmb   01 34 46.2
      comp=Z,22nm,0.9s
L14K  Kuka Creek       66.65  32   P      P      01 34 06.8 +0.5
      baz=287
H17K  Granite Mounta   66.79  27   P      P      01 34 07.5 +0.2
      baz=288
D20K  Etivluk River    66.86  23   P      P      01 34 08.0 +0.3
      baz=289,SNR=15
K15K  Wolf Creek Mou   66.89  30   P      P      01 34 08.3 +0.3
      baz=287
G18K  Tagagawik        67.00  26   P      P      01 34 08.6 -0.1
      baz=288
J16K  Anvik River      67.00  29   P      P      01 34 09.2 +0.5
      baz=288
F19K  Shaleruckik Mo   67.04  25   P      P      01 34 09.2 +0.3
      baz=289
E19K  Redstone River   67.04  24   P      P      01 34 09.3 +0.4
      baz=289
E20K  Nigu River       67.16  24   P      P      01 34 10.0 +0.4
      baz=289,SNR=8.1
M14K  Bethel           67.16  32   P      P      01 34 09.9 +0.3
      baz=288
B21K  Ikpikpuk River   67.23  22   P      P      01 34 10.6 +0.6
      baz=290
NB2   NORSAR Subarra   67.23 328   P      P      01 34 09.0 -1.2
      comp=Z,1.7nm,0.8s,baz=73,slow=6.2
NOA   NORSAR Array B   67.23 328   P      P      01 34 09.2 -1.0
      comp=Z,0.8nm,0.7s,baz=74,slow=6.5,SNR=7.1
      comp=Z,0.8nm,0.7s
C21K  Knifeblade Rid   67.33  22   P      P      01 34 11.2 +0.5
      baz=290
H18K  Honhosa River    67.35  27   P      P      01 34 11.4 +0.5
      baz=289
B22K  Teshekpuk Lake   67.36  21   P      P      01 34 11.0 +0.3
      baz=291,SNR=6.2
J17K  VABM Dome        67.62  29   P      P      01 34 13.0 +0.4
      baz=289
F20K  Avaraart Lake    67.73  25   P      P      01 34 13.6 +0.5
      baz=290
M15K  Kasigluk River   67.77  32   P      P      01 34 14.3 +0.8
      baz=289
E21K  Killik River     67.86  23   IAmb   IAmb   01 34 17.6
      comp=Z,8.1nm,1.1s
E21K  Killik River     67.86  23   P      P      01 34 14.8 +0.7
      baz=291
O14K  Tigyukauivet M   67.95  34   P      P      01 34 14.7  0.0
      baz=289
H19K  Roundabout Mou   67.98  26   P      P      01 34 15.1 +0.3
      baz=290
L16K  Owhat River      68.00  31   P      P      01 34 15.7 +0.8
      baz=289
D22K  Ayikyak River    68.14  22   P      P      01 34 16.3 +0.5
      baz=292,SNR=7.8
K17K  Iditarod         68.18  30   P      P      01 34 16.6 +0.5
      baz=290
N15K  Kwethluk River   68.22  32   P      P      01 34 16.8 +0.4
      baz=289
L17K  Donlin           68.38  30   P      P      01 34 17.7 +0.4
      baz=290
C23K  Itkillik River   68.44  21   IAmb   IAmb   01 34 21.1
      comp=Z,5.9nm,0.8s
C23K  Itkillik River   68.44  21   P      P      01 34 18.2 +0.6
      baz=294
M16K  Timber Creek     68.46  31   P      P      01 34 18.4 +0.5
      baz=290
F21K  Alatna River     68.49  24   P      P      01 34 18.5 +0.5
      baz=292
J18K  Innoko River     68.60  28   P      P      01 34 19.1 +0.4
      baz=291
RONA  Rosalia, Austr   68.60 314 eP       P      01 34 18.4 -0.6
      comp=Z,1.0nm,0.7s
H20K  Anotleneega Mo   68.61  26   P      P      01 34 19.0 +0.3
      baz=292
O15K  Ungalikthiuk R   68.68  33   P      P      01 34 19.6 +0.4
      baz=290
E22K  Anaktuvuk Pass   68.72  23   IAmb   IAmb   01 34 22.7
      comp=Z,9.6nm,1.4s
E22K  Anaktuvuk Pass   68.72  23   P      P      01 34 19.9 +0.5
      baz=293
N16K  Nishlik Lake     68.73  32   P      P      01 34 20.2 +0.6
      baz=290
G21K  Allakaket        68.75  25   P      P      01 34 20.2 +0.6
      baz=292
D23K  Nanushuk River   68.77  22   P      P      01 34 20.9 +1.2
D23K  Nanushuk River   68.77  22   P      P      01 34 20.5 +0.8
      baz=294,SNR=5.6
CONA  Conrad Observa   68.80 314 i P      P      01 34 20.8 +0.4
      comp=Z,3.3nm,1.2s
F22K  John River       68.84  24   P      P      01 34 20.4 +0.2
      baz=293
J19K  Poorman          68.86  28   P      P      01 34 20.8 +0.5
      baz=292
M17K  Holitna River    69.02  31   P      P      01 34 21.7 +0.4
      baz=291
L18K  Granite Mounta   69.06  30   P      P      01 34 21.5 -0.1
      baz=291
C24K  Franklin Bluff   69.10  21   P      P      01 34 22.0 +0.3
      baz=295
ARSA  Arzberg          69.25 313 i P      P      01 34 24.0 +0.9
      comp=Z,2.1nm,1.0s
TOLK  Toolik Lake Re   69.27  22   P      P      01 34 23.1 +0.2
      baz=295
D24K  Happy Valley     69.30  22   P      P      01 34 23.4 +0.4
      baz=296
G22K  Bettles          69.32  24   P      P      01 34 23.6 +0.5
      baz=294
H21K  Melozitna Rive   69.34  26   P      P      01 34 23.7 +0.4
      baz=293
O16K  Kokwok River B   69.36  33   P      P      01 34 24.2 +0.7
      baz=291
J20K  Nowinta River    69.39  27   IAmb   IAmb   01 34 27.4
      comp=Z,2.7nm,0.7s
J20K  Nowinta River    69.39  27   P      P      01 34 24.1 +0.5
      baz=293
N17K  Nushagak Hills   69.45  32   P      P      01 34 24.5 +0.5
      baz=291
E23K  Chandalar        69.51  23   IAmb   IAmb   01 34 27.7
      comp=Z,3.0nm,0.8s
E23K  Chandalar        69.51  23   P      P      01 34 25.1 +0.7
      baz=295
COLD  Coldfoot         69.66  24   P      P      01 34 26.1 +0.9
      baz=295
SDPT  Sand Point       69.67  37   P      P      01 34 26.3 +0.9
      baz=291
M18K  Stony River      69.71  30   P      P      01 34 26.4 +0.8
      baz=292
K20K  Telida           69.74  28   P      P      01 34 26.5 +0.7
      baz=293
SOKA  Soboth           69.76 313 eP       P      01 34 26.5 +0.2
      comp=Z,2.9nm,1.1s
O17K  Koliganek Bris   69.77  32   P      P      01 34 26.5 +0.5
      baz=292
H22K  Ishtalitna Cre   69.79  25   P      P      01 34 26.5 +0.5
      baz=294
S14K  Fog Glacier      69.82  36   P      P      01 34 26.1 -0.4
      baz=291
MOA   Molln            69.84 314 eP       P      01 34 27.0 +0.3
      comp=Z,3.0nm,1.0s
GERES GERESS Array B   69.85 315   P      P      01 34 26.3 -0.5
      comp=Z,1.0nm,0.6s,baz=73,slow=4.6,SNR=9.4
      comp=Z,1.0nm,0.6s
L19K  White Mountain   69.87  29   P      P      01 34 27.3 +0.7
      baz=293
E24K  Your Creek       69.88  23   IAmb   IAmb   01 34 28.9
      comp=Z,3.8nm,0.7s
E24K  Your Creek       69.88  23   P      P      01 34 27.3 +0.7
      baz=296
G23K  Bananza Creek    69.94  24   P      P      01 34 27.8 +0.8
      baz=295
N18K  Kilae Creek      69.99  31   P      P      01 34 28.1 +0.7
      baz=292
D25K  Kavik River      70.01  21   P      P      01 34 27.6 +0.2
      baz=298
OBKA  Obir             70.13 313 eP       P      01 34 29.3 +0.7
      comp=Z,5.4nm,1.2s
L20K  Farewell, AK     70.17  29   P      P      01 34 28.7 +0.2
      baz=293
C26K  Camden Bay       70.18  20   P      P      01 34 28.3  0.0
      baz=299
M19K  Big River Lodg   70.18  30   P      P      01 34 29.2 +0.7
      baz=293
BIOA  Bad Ischl, Aus   70.29 314 eP       P      01 34 29.4 -0.1
      comp=Z,1.8nm,0.5s
P17K  Kvichak River    70.30  33   P      P      01 34 29.5 +0.3
      baz=292
CHNA  Chernabura Isl   70.33  38   P      P      01 34 29.3 -0.2
      baz=292
F24K  Squaw Lake       70.34  23   P      P      01 34 30.3 +0.9
      baz=297
MLY   Manley           70.39  26   P      P      01 34 29.9 +0.1
MLY                                IAmb   IAmb   01 34 32.6
      comp=Z,7.3nm,1.3s
MLY   Manley           70.39  26   P      P      01 34 30.6 +0.8
      baz=295,SNR=5.3
Q16K  King Salmon      70.39  33   P      P      01 34 30.8 +1.0
      baz=292
H23K  Yukon River      70.50  25   P      P      01 34 31.0 +0.6
H23K  Yukon River      70.50  25   P      P      01 34 31.0 +0.6
      baz=296
CAST  Castle Rocks     70.54  28   P      P      01 34 31.3 +0.6
      baz=295
N19K  Bonanza Creek    70.57  31   P      P      01 34 31.7 +0.7
      baz=294
O18K  Koktuh Hills     70.62  32   P      P      01 34 31.6 +0.3
      baz=293
MYKA  Terra Mystica    70.67 313 eP       P      01 34 31.4 -0.5
      comp=Z,3.1nm,1.0s
C27K  Jago River       70.69  20   P      P      01 34 31.7 +0.2
      baz=300
BPAW  Bear Paw Mtn.    70.69  27   P      P      01 34 31.6  0.0
BPAW                               IAmb   IAmb   01 34 36.0
      comp=Z,4.0nm,0.9s
BPAW  Bear Paw Mtn.    70.69  27   P      P      01 34 32.3 +0.7
      baz=295
PPLA  Purkeypile       70.71  28   P      P      01 34 32.0 +0.1
      baz=295
M20K  Styx River       70.73  29   P      P      01 34 32.5 +0.5
      baz=294
P18K  Big Mountain,    70.79  32   P      P      01 34 32.3  0.0
      baz=293
E25K  Arctic Village   70.83  22   P      P      01 34 33.3 +0.8
      baz=299
G24K  Hadweenzic Riv   70.85  24   IAmb   IAmb   01 34 35.3
      comp=Z,8.0nm,1.4s
G24K  Hadweenzic Riv   70.85  24   P      P      01 34 33.4 +0.8
      baz=297
I23K  Minto, Yukon-K   70.87  25   P      P      01 34 33.4 +0.8
      baz=296
KMBO  Kilima Mbogo     70.91 258   P      P      01 34 32.5 -1.6
KMBO                               IAmb   IAmb   01 34 35.2
      comp=Z,4.1nm,0.8s
KMBO  Kilima Mbogo     70.91 258   P      P      01 34 32.5 -1.6
KMBO                               pmax   pmax
      comp=Z,4.0nm,0.9s
Q17K  Contact Creek    70.92  33   P      P      01 34 33.9 +0.7
      baz=293
LESA  Schwarzleotal    71.00 314 eP       P      01 34 33.3 -0.6
      comp=Z,3.0nm,0.9s
F25K  Christian Rive   71.06  22   P      P      01 34 34.7 +0.8
      baz=299
H24K  Noodor Dome      71.11  25   P      P      01 34 33.7 -0.5
H24K                               IAmb   IAmb   01 34 37.9
      comp=Z,7.0nm,1.4s
H24K  Noodor Dome      71.11  25   P      P      01 34 34.8 +0.7
      baz=297
Q18K  Katmai Hardscr   71.19  33   P      P      01 34 34.3 -0.6
      baz=294
NEA2  Nenana           71.23  26   IAmb   IAmb   01 34 37.4
      comp=Z,4.5nm,0.6s
NEA2  Nenana           71.23  26   P      P      01 34 35.6 +0.7
      baz=297,SNR=5.3
TRF   Thorofare Moun   71.25  27   P      P      01 34 35.3  0.0
      baz=296
G25K  Bearman Lake     71.31  23   P      P      01 34 35.7 +0.4
      baz=299
ABTA  Abfaltersbach    71.35 314 eP       P      01 34 34.9 -1.1
      comp=Z,2.0nm,0.7s
SKT   Skwentna         71.38  29   P      P      01 34 36.1 +0.2
      baz=296
SPCR  Spurr Chakacha   71.42  30   P      P      01 34 36.2  0.0
      baz=295
BMAR  Burnt Mountain   71.50  22   P      P      01 34 37.0 +0.5
F26K  Sheenjek River   71.51  22   P      P      01 34 37.4 +0.8
      baz=300
COLA  College          71.56  25 i P      P      01 34 38.8 +2.0
COLA                               pmax   pmax
      comp=Z,5.0nm,0.8s
WTTA  Wattenberg       71.71 314 eP       P      01 34 37.6 -0.8
      comp=Z,2.4nm,0.7s
WATA  Walderalm        71.72 314 eP       P      01 34 39.0 +0.7
      comp=Z,0.8nm,0.6s
R18K  Karluk           71.91  34   P      P      01 34 39.7 +0.7
      baz=295
SUA   Susitna One      71.94  29   IAmb   IAmb   01 34 41.5
      comp=Z,5.9nm,0.8s
SUA   Susitna One      71.94  29   P      P      01 34 39.9 +0.5
      baz=296
ILAR  Eielson Array    71.97  25   P      P      01 34 38.4 -1.0
      comp=Z,0.9nm,0.8s,baz=304,slow=4.1,SNR=8.4
      comp=Z,0.9nm,0.8s
SQTA  Sankt Quirin     72.00 314 eP       P      01 34 39.2 -0.8
      comp=Z,2.2nm,0.5s
G26K  Porcupine Rive   72.01  23   IAmb   IAmb   01 34 42.1
      comp=Z,2.7nm,0.6s
G26K  Porcupine Rive   72.01  23   P      P      01 34 39.9 +0.4
      baz=300
MOTA  Moosalm          72.02 314 eP       P      01 34 39.8 -0.3
      comp=Z,2.3nm,0.7s
PRP   Porcupine Dome   72.12  24   P      P      01 34 41.2 +0.9
      baz=299,SNR=5.1
RETA  Reutte           72.18 315 eP       P      01 34 40.0 -0.9
      comp=Z,3.0nm,1.5s
WAT1  Susitna Watana   72.24  28   P      P      01 34 41.4 +0.4
      baz=298
FETA  Feichten         72.38 314 eP       P      01 34 40.4 -1.9
      comp=Z,2.8nm,0.8s
E28M  Babbage River    72.50  20   P      P      01 34 42.6 +0.1
      baz=304
RC01  Rabbit Creek A   72.55  29   P      P      01 34 43.2 +0.3
      baz=297
PMR   Palmer           72.57  29   P      P      01 34 41.6 -1.4
PMR   Palmer           72.57  29   P      P      01 34 41.6 -1.4
PMR                                pmax   pmax
      comp=Z,15nm,1.1s
PMR   Palmer           72.57  29   P      P      01 34 43.1 +0.2
      baz=298
DHY   Denali Highway   72.60  27   P      P      01 34 43.4 +0.2
      baz=299
J25K  Salcha River,    72.62  25   P      P      01 34 44.0 +0.7
      baz=300
WAT6  Susitna Watana   72.69  28   P      P      01 34 44.4 +0.6
      baz=298
G27K  Doyon Strip      72.80  22   P      P      01 34 44.8 +0.5
      baz=302
DAVA  Damuels          72.81 315 eP       P      01 34 43.3 -1.6
      comp=Z,2.6nm,1.0s
SML   Sawmill          72.81  28   P      P      01 34 45.0 +0.5
      baz=298
FUORN Ofenpass-Fuorn   72.83 314   P      P      01 34 45.0 -0.1
FUORN                              IAmb   IAmb   01 34 52.5
      comp=Z,7.9nm,1.2s
K24K  Donnelly Dome    72.87  26   IAmb   IAmb   01 34 46.3
      comp=Z,9.0nm,0.9s
K24K  Donnelly Dome    72.87  26   P      P      01 34 45.4 +0.6
      baz=300
F28M  Old Crow         72.94  21   P      P      01 34 45.6 +0.5
      baz=304
I26K  Coal Creek Min   73.08  24   P      P      01 34 46.3 +0.4
      baz=302
E29M  Blow River       73.12  20   P      P      01 34 46.1  0.0
      baz=305
SEW   Seward           73.12  30   P      P      01 34 46.6 +0.4
      baz=298
H27K  Steamboat Moun   73.16  23   IAmb   IAmb   01 34 50.1
      comp=Z,7.4nm,1.3s
H27K  Steamboat Moun   73.16  23   P      P      01 34 47.1 +0.6
      baz=303
SCM   Sheep Creek Mo   73.22  28   P      P      01 34 47.1 +0.2
      baz=299
RIDG  Independent Ri   73.26  26   P      P      01 34 46.9 -0.2
      baz=300
J26L  Joseph Creek     73.35  25   IAmb   IAmb   01 34 49.4
      comp=Z,4.6nm,0.9s
J26L  Joseph Creek     73.35  25   P      P      01 34 47.5 -0.1
      baz=301,SNR=8.3
PAX   Paxson           73.41  27   P      P      01 34 48.0  0.0
      baz=300
I27K  Kandik River     73.47  23   P      P      01 34 48.5 +0.3
      baz=303
SCRK  Sand Creek       73.47  25   P      P      01 34 48.7 +0.3
      baz=301
M24K  Tolsona, Glenn   73.56  28   P      P      01 34 48.9  0.0
      baz=300
G29M  Pine Creek       73.94  21   P      P      01 34 51.2 +0.2
      baz=305
KLU   Klutina          73.97  28   P      P      01 34 52.7 +1.3
KLU                                IAmb   IAmb   01 34 54.6
      comp=Z,12nm,1.3s
KLU   Klutina          73.97  28   P      P      01 34 51.0 -0.3
      baz=300
P23K  Montague Islan   74.08  30   P      P      01 34 52.0 +0.1
      baz=299
A36M  Sachs Harbour    74.08  14   P      P      01 34 51.6  0.0
      baz=315
I28M  Miner Creek      74.14  23   P      P      01 34 52.2  0.0
      baz=304
K27K  Chicken          74.15  25   P      P      01 34 52.2  0.0
      baz=303
L26K  Log Cabin Wild   74.21  26   P      P      01 34 53.0 +0.4
      baz=302
F30M  Barrier River    74.22  20   P      P      01 34 52.8 +0.2
      baz=307
H29M  Whitestone       74.23  22   P      P      01 34 52.9 +0.2
      baz=305
N25K  Chitina, Valde   74.46  28   P      P      01 34 54.8 +0.7
      baz=301
INK   Inuvik           74.46  19   P      P      01 34 54.2 +0.3
      baz=309
G30M  tAoh Zraii Nji   74.47  21   P      P      01 34 54.6 +0.5
      baz=307
EPYK  Eagle Plains     74.68  22   P      P      01 34 55.7 +0.4
      baz=307
M26K  Nabesna, AK      74.68  27   P      P      01 34 56.0 +0.6
      baz=302
I29M  Ogilvie Camp,    74.75  23   P      P      01 34 56.8 +1.1
      baz=306
L27K  Beaver Creek,    74.77  26   P      P      01 34 56.8 +0.8
      baz=303
BMRM  Bremner River    74.78  28   P      P      01 34 56.6 +0.6
      baz=301
BCAR  Beaver Creek A   74.79  26   P      P      01 34 56.6 +0.6
Q23K  Middleton Isla   74.83  30   P      P      01 34 57.2 +1.0
      baz=300
F31M  Tsiigehtchic     74.95  20   P      P      01 34 57.5 +0.7
      baz=309
G31M  Satah River      75.11  20   P      P      01 34 58.4 +0.7
      baz=309
DAWY  Dawson           75.11  24   P      P      01 34 58.6 +0.7
      baz=305
M27K  Edge Creek, AK   75.14  26   P      P      01 34 58.6 +0.4
      baz=303
MCARA McCarthy VSAT    75.22  27   P      P      01 34 59.3 +0.9
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	baz=303						
I30M	Mount Dempster	75.48	22	P	P	01 35 00.4	+0.3
	baz=307						
H31M	Peel River	75.79	21	P	P	01 35 02.6	+0.9
	baz=309						
J30M	Hart River	75.89	23	P	P	01 35 03.2	+0.7
	baz=307						
K29M	Barlow Dome	75.92	24	IAmb	IAmb	01 35 46.2	
	comp=Z,6.7nm,1.1s						
K29M	Barlow Dome	75.92	24	P	P	01 35 03.3	+0.7
	baz=307,SNR=5.4						
L29M	L29M	76.13	25	P	P	01 35 04.7	+0.9
	baz=306						
M29M	Somme Creek	76.40	25	P	P	01 35 05.6	+0.3
	baz=306						
YUK8	Steele Glacier	76.58	27	P	P	01 35 07.0	+0.4
	baz=305						
O28M	Mount Upton	76.70	27	P	P	01 35 07.0	-0.3
	baz=305						
N30M	Aishikik Lake	77.51	26	P	P	01 35 11.9	+0.3
	baz=307						
O29M	Mount Kennedy	77.62	27	P	P	01 35 12.5	+0.2
	baz=306						
HYT	Haines Junctio	77.74	26	P	P	01 35 13.2	+0.2
	baz=307						
N31M	Braeburn, Yuko	77.99	25	P	P	01 35 14.5	+0.3
	baz=308						
M31M	Drury Creek, Y	78.05	24	P	P	01 35 15.4	+0.8
	baz=309						
O30N	Mendenhall	78.32	26	P	P	01 35 16.5	+0.5
	baz=308						
P30M	Million Dollar	78.38	27	P	P	01 35 16.4	0.0
	baz=308						
FARO	Faro, Yukon	78.41	24	P	P	01 35 16.5	0.0
	baz=310						
WHY	Whitehorse	78.85	26	P	P	01 35 19.3	+0.3
	baz=309						
MMPY	Sheldon Lake,	78.89	23	P	P	01 35 19.1	0.0
	baz=312						
PLBC	Pleasant Camp	79.03	27	P	P	01 35 20.3	+0.4
	baz=308						
P32M	Atlin	79.99	26	P	P	01 35 25.4	+0.2
	baz=310						
S32K	Killisnoo	81.01	28	P	P	01 35 30.6	0.0
	baz=310						
WRAK	Wrangell Islan	82.62	28	P	P	01 35 37.6	-1.5
	baz=312						
YKA	Yellowknife Ar	84.05	17	P	P	01 35 46.6	+0.2
	comp=Z,1.1nm,0.8s,baz=330,slow=5.9,SNR=6.3						
	comp=Z,1.1nm,0.8s						
TXAR	Lajitas Array	116.43	28	PKPdf	PKPdf	01 41 59.8	-0.6
TXAR	Lajitas Array	116.43	28	PKIKP	PKPdf	01 41 59.8	-0.6
SNAA	Sanae	122.26	201	PKPdf	PKPdf	01 42 09.2	-1.0
SNAA	Sanae	122.26	201	PKIKP	PKPdf	01 42 09.2	-1.0
RUSC	La Rusia	145.81	356	PKPbc	PKPdf	01 42 55.9	-0.3
ROSC	El Rosal	146.90	358	PKPbc	PKPbc	01 43 00.2	+0.5
	comp=Z,14nm,0.7s,baz=138,slow=22,SNR=4.3						
MACA	Manacapuru-AM	151.31	329	PKPbc	PKPbc	01 43 09.4	-1.1

RSNC 24 01:24:20.3±0.0,7°N±1°×7°3W±°,h146^{km}±2^{km},M2.7,ML2.8, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.25	187	P	Pn	01 24 40.0	-0.6
BARC				S	Sn	01 24 55.2	-0.7
BRJC	Barrancabermej	0.60	283	P	Pn	01 24 41.5	-0.3
BRJC				S	Sn	01 24 58.4	+0.3
PAMC	Pamplona, Colo	0.67	42	P	Pn	01 24 42.7	-0.1
PAMC				S	Sn	01 24 59.6	-0.2
RUSC	La Rusia	0.94	176	P	Pn	01 24 44.2	-0.6
RUSC				S	Sn	01 25 03.6	+0.2
PTBC	PUERTO BERRIO,	1.33	257	P	Pn	01 24 46.6	-1.2
PTBC				S	Sn	01 25 07.6	-1.2
OCAC	Ocana	1.40	353	P	Pn	01 24 48.1	-0.6
OCAC				S	Sn	01 25 09.4	-1.0
TAMC	Tame, Arauca	1.41	107	P	Pn	01 24 48.3	-0.3
TAMC				S	Sn	01 25 09.8	-0.5
SPBC	San Pablo de B	1.49	218	P	Pn	01 24 49.1	-0.5
SPBC				S	Sn	01 25 10.6	-1.4
ZARC	Zaragoza, Cauc	1.81	291	P	Pn	01 24 53.6	+0.5
ZARC				S	Sn	01 25 18.1	-0.1
NORC	Norcasia	2.13	234	P	Pn	01 24 55.9	-0.9
NORC				S	Sn	01 25 23.9	-0.9
HELC	Santa Helena	2.45	255	P	Pn	01 25 02.0	+1.0
HELC				S	Sn	01 25 31.7	-0.5
GUY2C	Guyana, Caldas	2.73	234	P	Pn	01 25 05.2	+0.7
GUY2C				S	Sn	01 25 38.4	-0.1
PTGC	Puerto Gaitan,	2.81	159	P	Pn	01 25 03.5	-1.7
PTGC				S	Sn	01 25 37.3	-2.5
ARGC	Ariguani, Magd	3.19	340	P	Pn	01 25 10.2	+0.2
ARGC				S	Sn	01 25 48.2	-0.2
SJCC	San Jacinto, C	3.64	327	P	Pn	01 25 13.5	-2.4
SJCC				S	Sn	01 25 55.2	-3.7

SDD 24 01:26:51.0±2.2,18°.04N×69°.08W,h113^{km}±28^{km},MD3.4, ML2.2,MW2.9,12C-3D,Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HIDR	Higuey Centro	0.65	32	⇑*e*Pg	Pn	01 27 07.0	-2.2
HIDR				IAML		01 27 53.1	
	comp=N,26nm,0.2s						
HIDR	Higuey Centro	0.65	32	*e*Pg	Pn	01 27 12.6	+3.4
HIDR				⇑*e*Sg	Sn	01 27 27.4	+4.4
HATOM	Hato Mayor del	0.80	339	⇑*e*Pg	Pn	01 27 09.7	-0.8
HATOM				IAML		01 27 30.3	
	comp=N,27nm,2.3s						
HATOM	Hato Mayor del	0.80	339	⇓*e*Sg	Sn	01 27 19.4	-5.9
HATOM				IAML		01 27 29.1	
	comp=N,27nm,2.5s						
MIDR	Miches	0.94	2	⇑*e*Pg	Pn	01 27 12.7	+0.8
MIDR				⇑*e*Sg	Sn	01 27 25.0	-2.5
MIDR				IAML		01 27 25.5	
	comp=N,24nm,0.9s						
MIDR	Miches	0.94	2	IAML		01 27 30.4	
	comp=N,23nm,3.8s						
BANI	BANI	1.26	286	⇑*e*Pg	Pn	01 27 14.1	-1.3
BANI				⇑*e*Sg	Sn	01 27 32.0	-1.8
BANI				IAML		01 27 33.3	
	comp=N,67nm,1.2s						
BANI	BANI	1.26	286	⇑*e*Pg	Pn	01 27 07.8	-7.6
BANI				⇓*e*Sg	Sn	01 27 19.8	-14
NADR	Nagua	1.50	331	⇑*e*Pg	Pn	01 27 12.4	-5.5
NADR				⇑*e*Sg	Sn	01 27 28.4	-10
NADR				IAML		01 28 02.2	
	comp=N,160nm,1.9s						
ABDR	Alto Bandera	1.66	298	⇓*e*Pg	Pn	01 27 11.4	-8.8
ABDR				*e*Sg	Sn	01 27 26.8	-16
REDR	Restauracion	2.46	297	⇑*e*Pg	Pn	01 27 32.4	+2.4
REDR				⇑*e*Sg	Sn	01 28 02.7	+2.7
REDR				IAML		01 28 31.9	
	comp=N,16nm,3.4s						

BJI ***24*** *01:28:34.2,2°.82S×138°.96E,h22^{km},mb4.9/66,Ms5.4/4, Ms7 5.3/4*

IDC ***24*** *01:28:34.8±0.5,2°.71S×138°.55E,h0^{km},mb4.8/17, mbtmp4.9/24,ML4.5/5,MS4.8/2,Error ellipse: s-maj=12.5km s-min=11.0km az=61.0*

MOS ***24*** *01:28:34.6±0.8,2°.65S×138°.56E,h9^{km},mb5.2/32,Error ellipse: s-maj=9.7km s-min=5.7km az=102.8*

NEIC ***24*** *01:28:37.3,2°.70S×138°.47E,h22^{km}*

NEIC ***24*** *01:28:37.3,2°.80S×138°.47E,h22^{km},Moment Tensor Solution. Duration: 1s6 Moment tensor: Scale 10^{16}Nm; M$_{rr}$6.11; M$_{\theta\theta}$-1.97; M$_{\phi\phi}$-4.14; M$_{r\theta}$2.36; M$_{\theta\phi}$1.61; M$_{\phi r}$-0.15; Fault plane solution: M$_0$6.11000×10^{16} NP1: ϕ_s343.83000°,δ39.99000°,λ111.76000°. NP2: ϕ_s136.30000°,δ53.36000°,λ72.73000°. Principal axes: T 6.7545, Plg75.0000°, Azm354.0000°; N -1.6114, Plg14.0000°, Azm147.0000°; P -5.1431, Plg7.0000°, Azm239.0000°;*

NEIC ***24*** *01:28:37.0±1.7,2°.66S±0°.07×138°.58E±0°.05,h10^{km}±1^{km}, mb5.3/225,Mww5.1/9 Error ellipse: s-maj=12.4km s-min=7.5km az=326.0*

DJA ***24*** *01:28:39.1±0.2,3°S±2°×13°9E±°,h28^{km}±2^{km},M5.5/65, mb5.3/65,mB6.0/9,MLv5.3/10,Mw(mB)5.7/9,MwMwp6.5/2, Mwp6.4/2*

GCMT ***24*** *01:28:41.0±0.3,2°.65S±0°.02×138°.49E±0°.02,h28^{km}±1^{km}, MW5.2/80,Moment Tensor Solution. s11,c15; s80,c112; Duration: 1s0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.71±.07; M$_{\theta\theta}$-0.20±.04; M$_{\phi\phi}$-0.50±.04; M$_{r\theta}$0.18±.06; M$_{\theta\phi}$0.44±.02; M$_{\phi r}$-0.23±.05; Best double couple: M$_0$0.81400×10^{17} NP1:ϕ_s326.00000°,δ35.00000°, λ92.00000°. NP2:ϕ_s143.00000°,δ55.00000°,λ88.00000°. Principal axes: T 0.7590, Plg80.0000°, Azm47.0000°; N 0.1100, Plg1.0000°, Azm144.0000°; P -0.8690, Plg10.0000°, Azm234.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 01:28:40.2±0.3,2°.77S±0°.04×138°.53E±0°.04,h35^{km},n645, σ1s14/569,mb5.2/184,11C-10D,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.80	13	P	Pn	01 28 50.9	-4.1
GENI	Genyem	1.65	84	S	Sn	01 29 31.2	+4.5
GENI	Genyem	1.65	84	P	Pn	01 29 04.7	-2.0
JAY	Jayapura	2.19	83	Pn	Pn	01 29 12.8	-1.3
	144nm,0.3s,baz=243,slow=11,SNR=78						
JAY				Lg	Lg	01 29 42.9	
	132nm,0.3s,baz=99,slow=20,SNR=7.7						
	790nm,0.5s						
JAY	Jayapura	2.19	83	P	Pn	01 29 11.7	-2.5
SRPI	Serui, Papua	2.45	291	P	Pn	01 29 17.7	0.0
BAKI	Biak	2.88	303	P	Pn	01 29 24.9	+1.2
RKPI	Ransiki, Papua	4.52	286	P	Pn	01 29 46.8	+0.6
KMPI	Kaimana, Papua	4.89	259	P	Pn	01 29 53.6	+2.3
FAKI	Fak Fak	6.27	269		Pn	01 30 12.4	+2.1
FAKI	Fak Fak	6.27	269	P	Pn	01 30 12.3	+2.1
FAKI	Fak Fak	6.27	269	P	Pn	01 30 12.1	+1.8
	1.3nm344nm,1.2s						
SWI	Sorong	7.51	285	P	Pn	01 30 28.4	+1.2
	0.8nm263nm,1.1s						
MANU	Manus Island	8.86	86	Pn	Pn	01 30 48.0	+2.1
MSAI	Masohi	9.60	266	P	Pn	01 30 58.4	+2.4
AAI	Ambon	10.36	265	P	Pn	01 31 07.4	+1.1
	285nm,1.4s						
PMG	Port Moresby	10.82	128	Pn	Pn	01 31 18.1	+5.4
PMG	Port Moresby	10.82	128	Pn	Pn	01 31 12.3	-0.4
	9.1nm,0.5s,baz=341,slow=5.4,SNR=15						
PMG	Port Moresby	10.82	128	P	Pn	01 31 17.9	+5.2
PMG	Port Moresby	10.82	128	P	Pn	01 31 18.1	+5.4
NLAI	Namlea	11.42	267	P	Pn	01 31 22.5	+1.6
KDU	Kakadu	11.53	211	P	Pn	01 31 22.5	+0.1
	comp=Z,261nm,1.1s						
TNTI	Ternate	11.70	287	Pn	Pn	01 31 26.0	+1.3
TNTI	Ternate	11.70	287	P	Pn	01 31 28.2	+3.5
TNTI	Ternate	11.70	287	P	Pn	01 31 27.8	+3.1
	comp=Z,87nm,1.7s						
COEN	Coen	12.03	158	Pn	Pn	01 31 29.2	0.0
COEN	Coen	12.03	158	P	Pn	01 31 28.6	-0.6
	comp=Z,88nm,0.7s						
MTN	Manton Dam	12.40	216	Pn	Pn	01 31 34.1	-0.2
MTN	Manton Dam	12.40	216	P	Pn	01 31 33.6	-0.7
	comp=Z,237nm,1.1s						
SANI	Sanana	12.55	273	P	Pn	01 31 37.9	+1.6
SANI	Sanana	12.55	273	P	Pn	01 31 35.8	-0.5
	comp=Z,114nm,0.8s						
RABL	Rabaul	13.69	96	Pn	Pn	01 31 51.9	0.0
KMSI	Cibinong	14.92	283	P	Pn	01 32 08.8	+0.2
SOEI	Soe	15.77	243	P	P	01 32 23.5	0.0
SOEI	Soe	15.77	243	P	P	01 32 22.5	-1.0
SOEI	Soe	15.77	243	P	P	01 32 23.7	+0.2
LUWI	Luwuk	15.84	276	Pn	Pn	01 32 20.2	-0.5
LUWI	Luwuk	15.84	276	P	P	01 32 22.1	-2.0
LUWI	Luwuk	15.84	276	P	Pn	01 32 20.8	+0.1
KNRA	Kununurra	16.03	216		Pn	01 32 22.6	-0.5
KNRA	Kununurra	16.03	216	P	Pn	01 32 20.4	-2.7
BBSI	Bau Bau	16.14	260	P	P	01 32 26.3	-1.2
	comp=Z,267nm,1.3s						
MTSU	Mount Surprise	16.29	160	P	P	01 32 32.9	+3.8
BATI	Baumata	16.50	243	Pn	Pn	01 32 29.4	+0.3
	comp=Z,2.1nm,0.3s,baz=176,slow=8.0,SNR=5.3						
	comp=Z,294nm,1.0s						
BATI	Baumata	16.50	243	P	Pn	01 32 28.4	-0.8
MRSI	Marisa	16.89	281	P	P	01 32 36.4	+0.6
	comp=Z,179nm,1.2s						
APSI	Ampana	16.97	276	P	P	01 32 36.1	-0.5
	comp=Z,5μmcomp=Z,451nm,1.4s						
MMRI	Maumere	17.22	250	Pn	Pn	01 32 37.3	-0.7
MMRI	Maumere	17.22	250	P	Pn	01 32 37.4	-0.7
	comp=Z,79nm,1.0s						
WB0	Warramunga Arr	17.37	193		P	01 32 41.0	0.0
WB0				IAmb	IAmb	01 32 47.3	
	comp=Z,146nm,0.9s						
GUMO	Guam	17.43	21	P	Pn	01 32 39.2	-1.6
	comp=Z,62nm,0.3s,baz=224,slow=3.6,SNR=5.7						
GUMO				LR	LR	01 40 10.5	
	comp=Z,2μm,18.1s,baz=220,slow=40						
GUMO	Guam	17.43	21	P	P	01 32 42.5	+0.8
WR8	Warramunga Arr	17.52	193	Pn	Pn	01 32 41.5	-0.4
WRAB	Tennant Creek	17.54	193		P	01 32 43.7	+0.8
WRAB	Tennant Creek	17.54	193	P	P	01 32 43.7	+0.8
WRAB				pmax	pmax		
	comp=Z,110nm,0.8s						
WRA	Warramunga Arr	17.55	193	Pn	Pn	01 32 41.3	-0.9
WRA	Warramunga Arr	17.55	193	P	Pn	01 32 41.0	-1.2
	comp=Z,3.2nm,0.3s,baz=16,slow=13,SNR=24						
WRA				S	Sn	01 35 48.2	-8.5
	comp=Z,40nm,1.0s,baz=12,slow=22,SNR=6.8						
	comp=Z,27nm,0.7s						
WRA	Warramunga Arr	17.55	193	*e*P	Pn	01 32 41.7	-0.5
WRA				pmax	pmax		
	comp=Z,3.0nm,0.3s						
QIS	Mount Isa	17.71	177	P	Pn	01 32 42.7	-1.5
EDFI	Ende, Flores	17.77	250	P	P	01 32 45.9	+0.3
TOLI2	Tolitoli	18.15	282	P	Pn	01 32 49.3	-0.4
TOLI2				IAmb	IAmb	01 32 53.8	
	comp=Z,250nm,1.3s						
TOLI2	Tolitoli	18.15	282	P	P	01 32 50.9	+1.2
BNSI	Bone	18.45	264	P	Pn	01 32 56.5	+3.2
	comp=Z,93nm,1.1s						
TTSI	Tana Toraja	18.68	269	P	Pn	01 32 58.3	+2.1
	comp=Z,159nm,1.3s						
SPSI	Sidrap Palu	18.76	266	P	Pn	01 32 58.7	+1.6
PCI	Palu	18.77	275	P	Pn	01 32 59.8	+2.6
	comp=Z,351nm,1.2s						
CTAO	Charters Tower	18.79	157	P	Pn	01 32 57.9	+0.5
CTAO	Charters Tower	18.79	157	P	Pn	01 33 00.2	+2.8
CTAO	Charters Tower	18.79	157	P	Pn	01 32 57.9	+0.5
CTAO				pmax	pmax		
	comp=Z,42nm,0.9s						
KAPI	Kappang	18.86	263	P	Pn	01 32 59.0	+0.7
KAPI	Kappang	18.86	263	P	P	01 32 57.4	-0.2
	comp=Z,0.7nm,0.3s,baz=77,slow=8.9,SNR=4.4						
	comp=Z,3.3nm,0.3s						
KAPI	Kappang	18.86	263	P	Pn	01 32 59.7	+1.4
KAPI	Kappang	18.86	263	*ce*P	Pn	01 32 59.9	+1.6
KAPI				pmax	pmax		
	comp=Z,74nm,1.3s						
MPSI	Mapaga	18.88	279	P	Pn	01 32 59.0	+0.5
	comp=Z,108nm,1.4s						
FITZ	Fitzroy Crossi	19.79	219	P	P	01 33 06.9	-0.8
	comp=Z,21nm,1.6s						
FITZ	Fitzroy Crossi	19.79	219	P	P	01 33 06.8	-0.8
	comp=Z,0.6nm,0.3s,baz=28,slow=12,SNR=6.0						
FITZ				S	S	01 36 47.0	-1.8
	comp=Z,43nm,1.0s,baz=224,slow=18,SNR=3.9						
	comp=Z,46nm,1.0s						
FITZ	Fitzroy Crossi	19.79	219	P	Pn	01 33 10.5	+1.2
WBSI	Waikabubak, Su	20.20	249	P	P	01 33 10.8	-1.4
	comp=Z,98nm,1.1s						
AS01	Alice Springs	21.24	192	P	P	01 33 25.1	+1.8
AS31	Alice Springs	21.25	192	P	P	01 33 22.6	-0.8
AS31				IAmb	IAmb	01 33 30.7	
	comp=Z,73nm,0.8s						
AS31	Alice Springs	21.25	192	P	P	01 33 23.9	+0.5
	comp=Z,103nm,0.8s						
ASAR	Alice Springs	21.25	192	P	P	01 33 22.5	-1.0
ASAR	Alice Springs	21.25	192	P	P	01 33 23.3	-0.1
	comp=Z,109nm,0.9s,baz=22,slow=11,SNR=36						
ASAR				S	S	01 37 18.2	+0.4
	comp=Z,17nm,0.8s,baz=12,slow=25,SNR=5.0						
	comp=Z,109nm,0.9s						
SMKI	Samarinda	21.43	276	P	P	01 33 27.9	+2.4
PLAI	Plampang	21.49	253	P	P	01 33 27.5	+1.4
PLAI	Plampang	21.49	253	P	P	01 33 26.3	+0.2
	comp=Z,72nm,1.1s						
MYLDM	Lahad Datu	21.51	292	P	P	01 33 28.2	+1.9
MYLDM	Lahad Datu	21.51	292	P	P	01 33 27.5	+1.2
BKB	Balikpapan	21.67	274	P	P	01 33 30.8	+2.8
BKB	Balikpapan	21.67	274	P	P	01 33 29.4	+1.4
BKB	Balikpapan	21.67	274	P	P	01 33 31.5	+3.5
	comp=Z,430nm,1.4s						
TATA	Tatamba Isabel	21.89	106	P	P	01 33 30.5	+0.1
SAVO	Savo Central	22.09	108	P	P	01 33 35.3	+2.7
HNR	Honiara	22.29	108	P	P	01 33 34.9	+0.2
	comp=Z,140nm,0.6s,baz=198,slow=4.0,SNR=4.0						
	comp=Z,140nm,0.6s						
ALEG	Aligegeo Malai	22.83	106	P	P	01 33 41.3	+0.8
SRBI	Singaraja	23.79	256	P	P	01 33 50.3	+0.4
	comp=Z,113nm,1.5s						
KKM	Kota Kinabalu	23.94	291	P	P	01 33 51.0	-0.4
KKM	Kota Kinabalu	23.94	291	P	P	01 33 52.7	+1.3
TGY	Tagaytay City	24.19	314	P	P	01 33 54.6	+1.0
	comp=Z,233nm,0.3s,baz=311,slow=14,SNR=9.3						
WRKA	Warakurna	24.23	203	P	P	01 33 53.3	-0.6
	comp=Z,79nm,1.2s						
QLP	Quilpie	24.30	167	P	P	01 33 57.0	+2.5
QLP	Quilpie	24.30	167	P	P	01 33 58.8	+4.3
KMMI	Kalianget	24.83	259	P	P	01 34 01.4	+1.9
	comp=Z,121nm,1.1s						
JAGI	Jajag, Banyuwa	24.90	256	P	P	01 33 58.1	-2.0
JAGI	Jajag, Banyuwa	24.90	256	P	P	01 34 01.6	+1.5
JAGI	Jajag, Banyuwa	24.90	256	P	P	01 33 58.4	-1.7
EIDS	Eidsvold	25.51	153	P	P	01 34 06.1	+0.5
EIDS				IAmb	IAmb	01 34 13.8	
	comp=Z,110nm,1.5s						
EIDS	Eidsvold	25.51	153	P	P	01 34 06.0	+0.5
	comp=Z,41nm,0.8s						
EIDS	Eidsvold	25.51	153	P	P	01 34 07.7	+2.2
MBWA	Marble Bar	25.86	224	P	P	01 34 09.4	+0.7
MBWA	Marble Bar	25.86	224	P	P	01 34 08.3	-0.5
	comp=Z,85nm,1.5s						
MBWA	Marble Bar	25.86	224	P	P	01 34 11.3	+2.5
PSA00	Pilbara Seismi	26.06	223	P	P	01 34 09.9	-0.7
PSA00				IAmb	IAmb	01 34 13.4	
	comp=Z,63nm,1.1s						
PSA00	Pilbara Seismi	26.06	223	P	P	01 34 10.3	-0.3
	comp=Z,70nm,1.0s						
PSA00	Pilbara Seismi	26.06	223	P	P	01 34 13.0	+2.4
STKI	Sintang	27.18	276	P	P	01 34 21.1	+0.3
	comp=Z,29nm,0.6s						
KSM	Kuching	28.52	278	P	P	01 34 34.3	+1.5
STKA	Stephens Creek	29.09	175	P	P	01 34 38.7	+1.1
STKA	Stephens Creek	29.09	175	P	P	01 34 37.8	+0.2
	comp=Z,4.3nm,0.6s,baz=320,slow=6.0,SNR=5.4						
STKA				LR	LR	01 47 10.5	
	comp=Z,3μm,19.7s,baz=349,slow=38						
	comp=Z,4.3nm,0.6s						
STKA	Stephens Creek	29.09	175	P	P	01 34 38.7	+1.1
STKA				pmax	pmax		
	comp=Z,148nm,1.0s						
CMSA	Cobar Meteorol	29.40	167	P	P	01 34 39.5	-0.8
	comp=Z,22nm,2.5s						
CMSA	Cobar Meteorol	29.40	167	P	P	01 34 42.5	+2.2
BBOO	Buckleboo	29.97	184	P	P	01 34 44.0	-1.3
BBOO				IAmb	IAmb	01 35 34.3	
	comp=Z,50nm,1.1s						
TPI	Tanjungpandan	30.84	269	P	P	01 34 54.1	+0.8
	comp=Z,48nm,1.5s						
NACB	Ninganchiao	31.44	329	P	P	01 34 58.8	+0.4
PMBI	Palembang	33.71	269	P	P	01 35 20.7	+2.2
MORW	Morawa	33.78	217	P	P	01 35 18.6	-0.3
	comp=Z,42nm,1.1s						
MORW	Morawa	33.78	217	P	P	01 35 21.2	+2.3
MDSI	Maura Dua	34.32	266	P	P	01 35 23.8	0.0
	comp=Z,88nm,1.3s						
BLDU	Ballidu	34.53	214	P	P	01 35 32.4	+7.0
BLDU	Ballidu	34.53	214	P	P	01 35 28.9	+3.5
MYKOM	Kota Tinggi	34.96	277	P	P	01 35 29.3	0.0
MYKOM	Kota Tinggi	34.96	277	P	P	01 35 30.5	+1.2
TOO	Toolangi	35.22	170	P	P	01 35 30.1	-1.2
	comp=Z,8.6nm,1.7s						
QIZ	Qiongzhong	35.57	309	P	P	01 35 34.1	-0.4
QIZ				S	S	01 41 10.6	+2.3
QIZ				pmax	pmax		
	comp=Z,51nm,1.5s						
QIZ	Qiongzhong	35.57	309	P	P	01 35 35.1	+0.6
JNU	Nakatsue	36.42	349	P	P	01 35 41.9	+0.3
JMN	Monobe	36.57	353	P	P	01 35 43.5	+0.6
BKNI	Bangkinang	37.60	274	P	P	01 35 53.0	+1.1
IPM	Ipoh	38.16	281	P	P	01 35 56.3	-0.3
IPM				IAmb	IAmb	01 36 09.6	
	comp=Z,68nm,1.4s						
IPM	Ipoh	38.16	281	P	P	01 35 57.7	+1.1
PPI	Padang Panjang	38.18	273	P	P	01 35 56.9	+0.1
	comp=Z,77nm,1.4s						
KULM	Kulim	38.67	282	P	P	01 36 00.3	-0.7
KULM				IAmb	IAmb	01 36 02.7	
	comp=Z,47nm,1.1s						
KULM	Kulim	38.67	282	P	P	01 36 01.8	+0.9
MJAR	Matsushiro Arr	39.11	360	P	P	01 36 04.1	-0.2
	comp=Z,2.2nm,0.7s,baz=182,slow=8.2,SNR=4.8						
	comp=Z,2.2nm,0.7s						
MAJO	Matsushiro	39.11	360	⇑*e*P	P	01 36 03.8	-0.5
MAJO				pmax	pmax		
	comp=Z,28nm,1.5s						
NJ2	Nanjing	39.35	333	*e*P	P	01 36 06.9	+0.6
NJ2				pmax	pmax		
	comp=Z,11nm,1.3s						
RPSI	Rantau Prapat	39.96	277	P	P	01 36 11.6	-0.1
RPSI				IAmb	IAmb	01 36 13.2	
	comp=Z,105nm,1.2s						
PSI	Prapat	39.97	278	P	P	01 36 12.7	+0.8
PSI	Prapat	39.97	278	P	P	01 36 11.6	-0.3
PSI				pmax	pmax		
	comp=Z,105nm,1.2s						
TJN	Taejon	40.32	346	P	P	01 36 14.9	+0.6
SRIT	Nakonsritamara	40.42	287	P	P	01 36 15.9	+0.5
SRIT				IAmb	IAmb	01 36 16.9	
	comp=Z,58nm,1.2s						
SRIT	Nakonsritamara	40.42	287	P	P	01 36 16.8	+1.3
TSI	Tuntungan	40.42	279	P	P	01 36 15.5	0.0
JSD	Sado	40.60	360	P	P	01 36 16.2	-0.4
GSI	Gunungsitoli	41.14	275	P	P	01 36 20.0	-1.5
GSI				IAmb	IAmb	01 36 21.9	
	comp=Z,121nm,1.4s						
GSI	Gunungsitoli	41.14	275	P	P	01 36 22.7	+1.2
GSI	Gunungsitoli	41.14	275	P	P	01 36 20.8	-0.7
	comp=Z,36nm,0.7s						
KSAR	Wonju Array Be	41.21	347	P	P	01 36 20.2	-1.5
KSAR	Wonju Array Be	41.21	347	P	P	01 36 20.2	-1.5
KSRS	Korea Array	41.22	347	P	P	01 36 20.8	-0.9
	comp=Z,3.9nm,1.0s,baz=174,slow=11,SNR=12						
	comp=Z,3.9nm,1.0s						
SLVN	Son La	41.50	307	P	P	01 36 24.4	0.0
SLVN	Son La	41.50	307	P	P	01 36 24.8	+0.4
GYA	Guiyang	42.34	315	P	P	01 36 30.3	-0.9
GYA				pmax	pmax		
	comp=Z,27nm,1.2s						
ENH	Enshi	43.00	322	P	P	01 36 37.3	+0.9
TIA	Tai'an	43.63	335	P	P	01 36 41.0	-0.4
TIA				pmax	pmax		
	comp=Z,11nm,0.8s						
DL2	Dalian	44.30	341	P	P	01 36 46.3	-0.4
DL2				pmax	pmax		
	comp=Z,24nm,1.6s						
CM31	Chiang Mai Arr	44.31	300	P	P	01 36 45.5	-1.6
CMAR	Chiang Mai Arr	44.31	300	P	P	01 36 47.2	+0.1
CMAR	Chiang Mai Arr	44.31	300	P	P	01 36 46.5	-0.6
	comp=Z,10nm,1.1s,baz=119,slow=6.3,SNR=21						
	comp=Z,10nm,1.1s						
CMAR	Chiang Mai Arr	44.31	300	P	P	01 36 47.2	+0.1
KMI	Kunming	44.42	311	P	P	01 36 49.3	+1.1
KMI				pmax	pmax		
	comp=Z,20nm,1.7s						
CHTO	Chiang Mai	44.45	300	P	P	01 36 47.5	-0.8
CHTO	Chiang Mai	44.45	300	P	P	01 36 49.2	+0.9
CHTO	Chiang Mai	44.45	300	P	P	01 36 47.5	-0.8
CHTO				pmax	pmax		
	comp=Z,21nm,1.2s						
LYN	LuoYang	44.48	329	P	P	01 36 48.6	+0.4
LYN				pmax	pmax		
	comp=Z,43nm,0.9s						
MSHR	Mys Shultsa	45.63	352	⇓*e*P	P	01 36 55.8	-1.4
MSHR				pmax	pmax		
	comp=Z,13nm,1.1s						
HNS	HongShan	45.68	333	⇑P	P	01 36 57.1	-0.6
HNS				pmax	pmax		
	comp=Z,18nm,1.4s						
PZH	PanZhiHua	45.93	312	P	P	01 37 00.5	+0.5
PZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VLA	Vladivostok	46.07	353	⇓*e*P	P	01 37 00.0	-0.7
VLA				pmax	pmax		
	comp=Z,29nm,0.7s						

CD2	Chengdu	47.10	318	P	P	01 37 09.8	+0.7
CD2				pmax	pmax		
	comp=Z,30nm,0.7s						
USA0B	Ussuriysk Arra	47.13	354	P	P	01 37 08.0	-0.9
USA0B				IAmb	IAmb	01 37 10.3	
	comp=Z,36nm,1.4s						
USA0B	Ussuriysk Arra	47.13	354⇑	eP	P	01 37 08.7	-0.2
USRK	Ussuriysk Ar.	47.13	354	P	P	01 37 07.8	-1.1
USRK	Ussuriysk Ar.	47.13	354	P	P	01 37 07.6	-1.3
	comp=Z,6.8nm,1.0s,baz=164,slow=7.5,SNR=19						
	comp=Z,6.8nm,1.0s						
USRK	Ussuriysk Ar.	47.13	354	P	P	01 37 07.8	-1.1
BJT	Baijiatuau	47.26	337	P	P	01 37 09.3	-0.7
BJT				IAmb	IAmb	01 37 11.0	
	comp=Z,58nm,1.5s						
BJT	Baijiatuau	47.26	337	P	P	01 37 10.8	+0.7
BJT	Baijiatuau	47.26	337	P	P	01 37 09.3	-0.7
BJT				pmax	pmax		
	comp=Z,58nm,1.5s						
BJI	Beijing	47.28	337	P	P	01 37 10.0	-0.2
BJI				pmax	pmax		
	comp=Z,12nm,1.4s						
CN2	Changchun	47.83	347	eP	P	01 37 13.1	-1.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MDJ	Mudanjiang	47.85	351	P	P	01 37 14.3	-0.2
MDJ				pmax	pmax		
	comp=Z,24nm,1.3s						
MDJ	Mudanjiang	47.85	351	P	P	01 37 15.3	+0.8
YSS	Yuzhno-Sakhali	49.66	4	P	P	01 37 29.3	+1.0
YSS	Yuzhno-Sakhali	49.66	4	eP	P	01 37 27.1	-1.2
YSS				pmax	pmax		
	comp=Z,30nm,1.1s						
HHC	Hu-ho-hao-te	49.91	333⇓	iP	P	01 37 31.3	+0.8
HHC				pmax	pmax		
	comp=Z,26nm,1.2s						
TUWZ	Tuamarina	49.92	145	P	P	01 37 31.1	+0.5
RPZ	Rata Peaks	49.93	149	P	P	01 37 31.6	+1.0
RPZ	Rata Peaks	49.93	149	P	P	01 37 32.9	+2.3
TCW	Tory Channel	49.97	145	P	P	01 37 31.8	+0.9
BTO	Baotou	50.42	332	eP	P	01 37 35.0	+0.6
BTO				S	S	01 44 51.1	+5.4
BTO				pmax	pmax		
	comp=Z,26nm,1.3s						
BTO				LR	LR		
	comp=Z,3µm,15.1s						
BTO				LR	LR		
	comp=Z,4µm,17.0s						
BTO				LR	LR		
	comp=Z,6µm,16.7s						
LZH	Lanzhou	50.42	323	eP	P	01 37 36.1	+1.5
LZH				sP	pP	01 37 45.0	-0.2
LZH				pmax	pmax		
	comp=Z,51nm,1.4s						
XLT	XiLinHaoTe	50.64	339	eP	P	01 37 34.5	-1.5
XLT				pP	pP	01 37 39.0	-7.6
KLR	Kul'dur	52.13	354d	eP	P	01 37 45.9	-1.0
KLR				pmax	pmax		
	comp=Z,49nm,1.5s						
HEH	HeiHe	53.68	351	eP	P	01 37 57.4	-0.9
HEH				pmax	pmax		
	comp=Z,35nm,1.4s						
HIA	Hailar	54.33	345	IAmb	IAmb	01 38 05.3	
	comp=Z,100nm,1.9s						
HIA	Hailar	54.33	345	P	P	01 38 04.2	+1.0
GTA	Gaotai	55.01	324	eP	P	01 38 09.5	+1.0
GTA				sP	pP	01 38 16.8	-2.4
GTA				pmax	pmax		
	comp=Z,14nm,1.4s						
ZEA	Zeya	57.09	352	eP	P	01 38 22.7	-0.2
ZEA				pmax	pmax		
	comp=N,20nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.4s						
ULN	Ulaanbaatar	57.45	335	P	P	01 38 25.6	-0.1
ULN				IAmb	IAmb	01 38 27.5	
	comp=Z,28nm,1.6s						
ULN	Ulaanbaatar	57.45	335	P	P	01 38 25.6	-0.1
ULN				pmax	pmax		
	comp=Z,28nm,1.6s						
SONM	Songino Array	57.70	335	P	P	01 38 27.6	+0.1
SONM	Songino Array	57.70	335	P	P	01 38 27.0	-0.5
	comp=Z,2.9nm,0.8s,baz=145,slow=7.5,SNR=16						
	comp=Z,2.9nm,0.8s						
SONM	Songino Array	57.70	335	P	P	01 38 27.6	+0.1
SONM				pmax	pmax		
	comp=Z,13nm,1.3s						
PEA0B	Petropavlovsk-	57.96	14	P	P	01 38 28.6	-0.4
PEA0B	Petropavlovsk-	57.96	14⇑	eP	P	01 38 28.9	-0.1
PETK	Petropavlovsk-	57.96	14	P	P	01 38 28.1	-1.0
PETK	Petropavlovsk-	57.96	14	P	P	01 38 28.5	-0.5
	comp=Z,8.9nm,1.0s,baz=148,slow=5.2,SNR=19						
	comp=Z,8.9nm,1.0s						
EVN	Everest	58.33	305	P	P	01 38 32.3	-0.5
EVN				IAmb	IAmb	01 38 47.8	
	comp=Z,32nm,1.3s						
CIT	Chita	58.55	342	eP	P	01 38 33.8	+0.6
CIT				e		01 47 01.2	
CIT				e		01 48 26.2	
CIT				pmax	pmax		
	comp=Z,127nm,1.6s						
ZAK	Zakamensk	60.97	335	eP	P	01 38 49.4	-0.6
ZAK				pmax	pmax		
	comp=Z,26nm,1.5s						
HYB	Hyderabad	62.42	291	eP	P	01 39 00.5	+0.2
MOY	Mondy	62.89	335	eP	P	01 39 03.2	+0.3
MOY				pmax	pmax		
	comp=Z,49nm,1.6s						
MA2	Magadan	62.91	7	P	P	01 39 01.9	-0.8
MA2	Magadan	62.91	7	P	P	01 39 03.1	+0.4
MA2	Magadan	62.91	7c	iP	P	01 39 02.4	-0.3
MA2				pmax	pmax		
	comp=Z,47nm,1.3s						
WMQ	Urumqi	64.94	322	eP	P	01 39 18.3	+1.8
WMQ				sP	pP	01 39 25.4	-1.9
WMQ				pmax	pmax		
	comp=Z,31nm,1.3s						
YAK	Yakutsk	64.98	355	P	P	01 39 15.7	-0.5
YAK	Yakutsk	64.98	355	eP	P	01 39 16.3	+0.1
YAK				pmax	pmax		
	comp=Z,95nm,1.1s						
YAK				pmax	pmax		
	comp=N,52nm,1.3s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.3s						
SEY	Seymchan	66.36	7⇑	iP	P	01 39 25.2	0.0
SEY				pmax	pmax		
	comp=Z,40nm,1.7s						
MK31	Makanchi Array	69.73	322	P	P	01 39 46.3	-0.4
MK31	Makanchi Array	69.73	322d	iP	P	01 39 47.0	+0.3
MKAR	Makanchi Array	69.73	322	P	P	01 39 46.8	+0.2
MKAR	Makanchi Array	69.73	322	P	P	01 39 46.2	-0.5
	comp=Z,12nm,1.0s,baz=117,slow=7.3,SNR=28						
	comp=Z,12nm,1.0s						
MKAR	Makanchi Array	69.73	322	eP	P	01 39 47.0	+0.3
MKAR				pmax	pmax		
	comp=Z,11nm,0.9s						
MAKZ	Makanchi	69.92	322	P	P	01 39 47.6	-0.3
MAKZ				IAmb	IAmb	01 39 52.3	
	comp=Z,24nm,1.1s						
MAKZ	Makanchi	69.92	322	P	P	01 39 47.6	-0.3
MAKZ				pmax	pmax		
	comp=Z,24nm,1.2s						
PRZ	Przheval'sk	70.39	317	P	P	01 39 52.2	+1.2
PRZ				IAmb	IAmb	01 39 56.7	
	comp=Z,36nm,1.2s						
PRZ	Przheval'sk	70.39	317	P	P	01 39 52.2	+1.2
PRZ				pmax	pmax		
	comp=Z,36nm,1.2s						
TARG	Taragay, Kyrgy	70.50	316	P	P	01 39 50.8	-1.2
TARG	Taragay, Kyrgy	70.50	316	P	P	01 39 50.8	-1.2
TARG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NIKH	Nikolski High	70.82	31	P	P	01 39 53.6	+0.5
	baz=237						
KSH	Kashi	70.99	313	P	P	01 39 56.6	+1.9
KSH				sP	sP	01 40 07.8	-1.9
KSH				pmax	pmax		
	comp=Z,12nm,1.2s						
NRN	Naryn	71.65	315	P	P	01 39 58.6	-0.3
NRN	Naryn	71.65	315	P	P	01 39 58.6	-0.3
NRN				pmax	pmax		
	comp=Z,11nm,1.2s						
ZAA0	Zalesovo Array	71.90	330	P	P	01 39 58.1	-1.6
ZALV	Zalesovo Beam	71.90	330	P	P	01 39 57.5	-2.2
ZALV	Zalesovo Beam	71.90	330	P	P	01 39 58.9	-0.8
	comp=Z,2.5nm,0.6s,baz=117,slow=5.2,SNR=8.7						
	comp=Z,2.5nm,0.6s						
BOOM	Boomskoye usch	72.07	316	P	P	01 40 01.7	+0.5
BOOM	Boomskoye usch	72.07	316	P	P	01 40 01.7	+0.5
BOOM				pmax	pmax		
	comp=Z,19nm,1.2s						
UNV	Unalaska Valle	72.48	31	P	P	01 40 02.8	-0.3
UNV	Unalaska Valle	72.48	31	P	P	01 40 03.6	+0.5
	baz=239						
P08K	Saint George I	72.50	27	P	P	01 40 03.8	+0.6
	baz=236						
AAK	Ala-Archa	73.12	316	P	P	01 40 07.5	0.0
AAK	Ala-Archa	73.12	316⇓	iP	P	01 40 08.3	+0.8
AAK				pmax	pmax		
	comp=Z,12nm,1.4s						
BILL	Bilibino	73.26	11	P	P	01 40 06.4	-1.1
BILL				IAmb	IAmb	01 40 08.2	
	comp=Z,32nm,1.4s						
BILL	Bilibino	73.26	11c	iP	P	01 40 06.9	-0.6
BILL				pmax	pmax		
	comp=Z,25nm,1.4s						
KURK	Kurchatov	73.66	325	P	P	01 40 09.6	-0.6
KURK				IAmb	IAmb	01 40 19.1	
	comp=Z,28nm,1.2s						
KURK	Kurchatov	73.66	325	P	P	01 40 10.1	-0.1
KURBB	Kurchatov Arra	73.67	325	P	P	01 40 10.1	-0.2
	comp=Z,12nm,1.0s,baz=113,slow=5.5,SNR=28						
KURBB				PP	PP	01 42 57.0	+2.1
	comp=Z,2.3nm,1.1s,baz=117,slow=10,SNR=4.4						
	comp=Z,12nm,1.0s						
ARSB	Arslanbob	73.75	314	P	P	01 40 11.7	+0.5
ARSB				IAmb	IAmb	01 40 16.1	
	comp=Z,37nm,1.4s						
ARSB	Arslanbob	73.75	314	P	P	01 40 11.7	+0.5
ARSB				pmax	pmax		
	comp=Z,37nm,1.4s						
TIXI	Tiksi	74.55	357	P	P	01 40 13.0	-2.0
TIXI				IAmb	IAmb	01 40 19.5	
	comp=Z,44nm,1.7s						
TIXI	Tiksi	74.55	357⇓	eP	P	01 40 13.2	-1.8
TIXI				pmax	pmax		
	comp=Z,29nm,1.7s						
BTK	Batken	74.93	313	P	P	01 40 17.1	-0.9
BTK				IAmb	IAmb	01 40 31.6	
	comp=Z,54nm,1.9s						
BTK	Batken	74.93	313	P	P	01 40 17.1	-0.9
BTK				pmax	pmax		
	comp=Z,55nm,1.9s						
S12K	Black Hills	75.64	30	P	P	01 40 21.1	-0.5
	baz=243,SNR=11						
VNDA	Vanda	75.73	175	P	P	01 40 22.3	+0.6
VNDA				IAmb	IAmb	01 40 24.0	
	comp=Z,15nm,0.8s						
VNDA	Vanda	75.73	175	P	P	01 40 22.6	+0.8
	comp=Z,12nm,0.7s,baz=327,slow=6.6,SNR=52						
	comp=Z,12nm,0.7s						
SIMJ	Simiganj	75.89	311	P	P	01 40 23.0	-0.6
SIMJ				IAmb	IAmb	01 40 28.1	
	comp=Z,29nm,1.5s						
GAMB	Gambell	75.90	20	P	P	01 40 23.2	+0.3
	baz=232						
KK31	Karatay Array	76.05	316	P	P	01 40 23.9	-0.3
KK31	Karatay Array	76.05	316	P	P	01 40 23.9	-0.3
KK31				pmax	pmax		
	comp=Z,14nm,1.2s						
KKAR	Karatay Array	76.05	316	P	P	01 40 23.9	-0.4
KKAR	Karatay Array	76.05	316	P	P	01 40 23.8	-0.4
KKAR	Karatay Array	76.05	316	P	P	01 40 23.9	-0.4
KKAR				pmax	pmax		
	comp=Z,15nm,1.2s						
M11K	Mekoryuk	76.06	25	P	P	01 40 23.7	-0.1
	baz=238						
SDPT	Sand Point	76.28	31	P	P	01 40 24.7	-0.5
	baz=244						
SBA	Scott Base	76.50	174	P	P	01 40 26.9	+0.8
SBA				IAmb	IAmb	01 40 56.1	
	comp=Z,49nm,1.4s						
SBA	Scott Base	76.50	174	P	P	01 40 27.0	+0.8
SBA				pmax	pmax		
	comp=Z,49nm,1.4s						
CHNA	Chernabura Isl	76.52	32	P	P	01 40 26.4	-0.1
	baz=245						
S14K	Fog Glacier	77.16	30	P	P	01 40 30.2	-0.1
	baz=245						
M13K	Dall Lake	77.29	26	P	P	01 40 31.0	+0.2
M13K	Dall Lake	77.29	26	P	P	01 40 31.5	+0.7
	baz=240						
K13K	Kusilvak Mount	77.51	24	P	P	01 40 32.7	+0.7
	baz=239						
O14K	Tigyukauivet M	77.66	27	P	P	01 40 32.9	0.0
	baz=243						
N14K	Kuskokwak Cree	77.78	26	P	P	01 40 33.6	+0.1
	baz=242						
L14K	Kuka Creek	78.03	25	P	P	01 40 35.3	+0.4
	baz=241,SNR=24						
M14K	Bethel	78.05	26	IAmb	IAmb	01 40 36.4	
	comp=Z,29nm,0.8s						
M14K	Bethel	78.05	26	P	P	01 40 35.3	+0.3
	baz=242,SNR=12						
O15K	Ungalikthiuk R	78.28	28	P	P	01 40 36.4	0.0
	baz=244						
J14K	Nanvaranak Lak	78.37	23	P	P	01 40 37.1	+0.3
	baz=240						
M15K	Kasigluk River	78.58	26	P	P	01 40 38.0	0.0
	baz=243,SNR=6.1						
N15K	Kwethluk River	78.60	27	IAmb	IAmb	01 40 39.5	
	comp=Z,33nm,1.1s						
N15K	Kwethluk River	78.60	27	P	P	01 40 38.3	+0.1
	baz=244,SNR=7.2						
L15K	Ungalak Mounta	78.69	25	P	P	01 40 38.4	-0.1
	baz=242,SNR=6.8						
F14K	Arctic Creek	78.78	20	P	P	01 40 39.2	+0.2
	baz=237						
K15K	Wolf Creek Mou	78.97	24	P	P	01 40 40.1	0.0
K15K				IAmb	IAmb	01 40 41.7	
	comp=Z,37nm,1.2s						
K15K	Wolf Creek Mou	78.97	24	P	P	01 40 40.6	+0.5
	baz=242,SNR=11						
CHIR	Chirikof Islan	78.99	32	P	P	01 40 40.4	+0.1
	baz=248						
P16K	Nushagak River	79.08	28	P	P	01 40 40.8	+0.1
	baz=246						
BVAR	Borovoye Array	79.26	325	P	P	01 40 42.5	+0.6
	comp=Z,17nm,0.9s,baz=112,slow=7.5,SNR=24						
	comp=Z,17nm,0.9s						
O16K	Kokwok River B	79.26	28	IAmb	IAmb	01 40 43.0	
	comp=Z,26nm,1.1s						
O16K	Kokwok River B	79.26	28	P	P	01 40 41.9	+0.1
	baz=245,SNR=7.6						
BRVK	Borovoye	79.33	325	P	P	01 40 41.5	-0.8
BRVK	Borovoye	79.33	325c	iP	P	01 40 41.7	-0.6
BRVK				pmax	pmax		
	comp=Z,20nm,1.1s						
N16K	Nishlik Lake	79.33	27	P	P	01 40 42.6	+0.4
	baz=245,SNR=9.9						
M16K	Timber Creek	79.48	26	IAmb	IAmb	01 40 44.3	
	comp=Z,34nm,1.1s						
M16K	Timber Creek	79.48	26	P	P	01 40 43.3	+0.4
	baz=244,SNR=9.3						
F15K	North Star Dit	79.49	21	P	P	01 40 43.1	+0.2
	baz=238						
L16K	Owhat River	79.56	25	IAmb	IAmb	01 40 44.6	
	comp=Z,54nm,1.6s						
L16K	Owhat River	79.56	25	P	P	01 40 43.5	+0.1
	baz=244,SNR=11						
Q16K	King Salmon	79.57	29	P	P	01 40 43.2	-0.2
	baz=247						
Q17K	Contact Creek	79.78	29	P	P	01 40 44.5	-0.2
	baz=248						
O17K	Koliganek Bris	79.80	28	P	P	01 40 44.8	+0.1
	baz=246,SNR=20						
J16K	Anvik River	79.81	24	IAmb	IAmb	01 40 46.5	
	comp=Z,30nm,1.2s						
J16K	Anvik River	79.81	24	P	P	01 40 45.0	+0.4
	baz=242,SNR=7.4						
H16K	Elim	79.82	22	P	P	01 40 44.7	0.0
	baz=241						
P17K	Kvichak River	79.88	28	P	P	01 40 45.2	+0.1
	baz=247						
SII	Sitkinak Islan	80.01	31	P	P	01 40 45.9	0.0
	baz=249						
I17K	Unalakleet	80.06	23	IAmb	IAmb	01 40 47.9	
	comp=Z,43nm,1.2s						
I17K	Unalakleet	80.06	23	P	P	01 40 46.3	+0.3
	baz=242						
N17K	Nushagak Hills	80.06	27	IAmb	IAmb	01 40 47.8	
	comp=Z,37nm,1.4s						
N17K	Nushagak Hills	80.06	27	P	P	01 40 46.3	+0.2
	baz=246,SNR=10						
G16K	Koyuk River	80.15	21	P	P	01 40 46.6	+0.2
	baz=240						
R18K	Karluk	80.23	30	P	P	01 40 47.1	+0.1
	baz=249						
L17K	Donlin	80.25	25	P	P	01 40 47.5	+0.4
	baz=245,SNR=9.6						
M17K	Holitna River	80.31	26	IAmb	IAmb	01 40 49.3	
	comp=Z,29nm,1.0s						
M17K	Holitna River	80.31	26	P	P	01 40 48.2	+0.8
	baz=246,SNR=12						
Q18K	Katmai Hardscr	80.35	29	P	P	01 40 47.2	-0.7
	baz=248,SNR=5.4						
J17K	VABM Dome	80.47	24	IAmb	IAmb	01 40 52.4	
	comp=Z,42nm,1.4s						
J17K	VABM Dome	80.47	24	P	P	01 40 48.4	+0.1
	baz=244,SNR=9.4						
K17K	Iditarod	80.50	25	IAmb	IAmb	01 40 50.1	
	comp=Z,37nm,1.1s						
K17K	Iditarod	80.50	25	P	P	01 40 48.5	+0.2
	baz=245,SNR=20						
P18K	Big Mountain,	80.53	28	P	P	01 40 47.7	-0.9
	baz=248						
C16K	Lisburne Hills	80.64	18	P	P	01 40 48.5	-0.5
	baz=237						
OHAK	Old Harbor	80.70	31	P	P	01 40 48.8	-0.7
OHAK				IAmb	IAmb	01 40 52.2	
	comp=Z,28nm,0.9s						
OHAK	Old Harbor	80.70	31	P	P	01 40 50.6	+1.0
OHAK	Old Harbor	80.70	31	P	P	01 40 49.2	-0.4
	baz=250						
O18K	Koktuh Hills	80.71	28	P	P	01 40 49.1	-0.5
	baz=248						
N18K	Kilae Creek	80.71	27	IAmb	IAmb	01 40 53.6	
	comp=Z,52nm,1.6s						
N18K	Kilae Creek	80.71	27	P	P	01 40 49.6	0.0
	baz=247,SNR=9.4						
G17K	Kiwalik Mounta	80.83	22	P	P	01 40 50.4	+0.3
	baz=242						
H17K	Granite Mounta	80.84	22	P	P	01 40 50.5	+0.3
	baz=243						
L18K	Granite Mounta	80.97	25	IAmb	IAmb	01 40 52.5	
	comp=Z,29nm,1.3s						
L18K	Granite Mounta	80.97	25	P	P	01 40 51.3	+0.3
	baz=246,SNR=11						
M18K	Stony River	81.06	26	P	P	01 40 51.6	+0.2
	baz=247,SNR=15						
D17K	Noatak River	81.06	19	P	P	01 40 51.6	+0.3
	baz=240,SNR=8.9						
E17K	Hotham Inlet	81.17	20	P	P	01 40 52.0	+0.1
	baz=241						
KDAK	Kodiak Island	81.25	30	P	P	01 40 52.2	-0.3
KDAK				IAmb	IAmb	01 40 55.1	
	comp=Z,26nm,0.8s						
KDAK	Kodiak Island	81.25	30	P	P	01 40 52.2	-0.3
KDAK				pmax	pmax		
	comp=Z,26nm,0.9s						
KDAK	Kodiak Island	81.25	30	P	P	01 40 52.0	-0.4
	baz=251						
N19K	Bonanza Creek	81.40	27	IAmb	IAmb	01 40 54.6	
	comp=Z,33nm,1.1s						
N19K	Bonanza Creek	81.40	27	P	P	01 40 53.4	0.0
	baz=248,SNR=10						
C17K	DeLong Mountai	81.43	19	P	P	01 40 53.4	+0.1
	baz=239						
J18K	Innoko River	81.47	24	P	P	01 40 53.5	-0.1
	baz=246,SNR=9.4						
H18K	Honhosa River	81.53	22	P	P	01 40 53.8	0.0
	baz=244						
P19K	Oil Pt	81.57	28	IAmb	IAmb	01 40 56.5	
	comp=Z,25nm,1.1s						
P19K	Oil Pt	81.57	28	P	P	01 40 54.0	-0.2
	baz=250						
Q20K	Shuyak Island	81.62	30	P	P	01 40 54.2	-0.3
	baz=251						
F18K	Selawik	81.70	21	P	P	01 40 54.7	+0.1
	baz=243						
G18K	Tagagawik	81.75	22	P	P	01 40 54.7	-0.3
	baz=244,SNR=11						
L19K	White Mountain	81.75	26	IAmb	IAmb	01 40 56.3	
	comp=Z,23nm,1.0s						
L19K	White Mountain	81.75	26	P	P	01 40 55.2	+0.1
	baz=248,SNR=17						
E18K	Tukpahlearik C	81.75	20	P	P	01 40 55.2	+0.2
	baz=242,SNR=6.4						
M19K	Big River Lodg	81.85	26	P	P	01 40 55.7	+0.1
	baz=248						
GCSA	Galena City Sc	81.93	23	P	P	01 40 55.5	-0.4
	baz=246						
MAW	Mawson	82.00	202	P	P	01 40 57.0	+0.7
	comp=Z,14nm,1.1s,baz=76,slow=7.7,SNR=11						
	comp=Z,14nm,1.1s						
MAW	Mawson	82.00	202	P	P	01 40 57.0	+0.7
O20K	Slope Mountain	82.00	28	P	P	01 40 56.0	-0.5
	baz=250						
J19K	Poorman	82.12	24	IAmb	IAmb	01 40 58.3	
	comp=Z,23nm,1.3s						
J19K	Poorman	82.12	24	P	P	01 40 56.8	-0.2
	baz=247,SNR=13						
C18K	Utukok River	82.15	19	P	P	01 40 56.7	-0.4
	baz=241,SNR=5.3						
L20K	Farewell, AK	82.28	26	P	P	01 40 57.9	0.0
	baz=249,SNR=11						
B18K	Kokolik River	82.31	18	P	P	01 40 57.9	+0.1
	baz=240						
HOM	Homer	82.33	29	P	P	01 40 57.8	-0.3
	baz=251						
M20K	Styx River	82.40	26	IAmb	IAmb	01 40 59.8	
	comp=Z,34nm,1.4s						
M20K	Styx River	82.40	26	P	P	01 40 58.6	0.0
	baz=250,SNR=11						
H19K	Roundabout Mou	82.42	22	IAmb	IAmb	01 41 04.0	
	comp=Z,61nm,1.8s						
H19K	Roundabout Mou	82.42	22	P	P	01 40 58.5	+0.1
	baz=246,SNR=13						
G19K	Purcell Mounta	82.43	22	IAmb	IAmb	01 41 01.5	
	comp=Z,21nm,0.9s						
G19K	Purcell Mounta	82.43	22	P	P	01 40 58.7	+0.1
	baz=245,SNR=5.5						
F19K	Shaleruckik Mo	82.47	21	P	P	01 40 57.9	-0.8
F19K				IAmb	IAmb	01 41 01.5	
	comp=Z,36nm,1.9s						
F19K	Shaleruckik Mo	82.47	21	P	P	01 40 58.5	-0.2
	baz=245						
K20K	Telida	82.52	25	IAmb	IAmb	01 41 00.6	
	comp=Z,41nm,1.4s						
K20K	Telida	82.52	25	P	P	01 40 59.0	-0.1
	baz=248,SNR=16						
BRLK	Bradley Lake	82.73	29	IAmb	IAmb	01 41 02.8	
	comp=Z,16nm,0.9s						
BRSE	Bradley Lake S	82.79	29	P	P	01 40 60.0	-0.6
	baz=252						
J20K	Nowinta River	82.79	24	P	P	01 41 00.5	0.0
	baz=248,SNR=16						
C19K	Lookout Ridge	82.88	19	IAmb	IAmb	01 41 02.5	
	comp=Z,34nm,1.4s						
C19K	Lookout Ridge	82.88	19	P	P	01 41 01.2	+0.3
	baz=243,SNR=12						
I20K	Naaghedeneel	82.89	23	P	P	01 41 01.1	+0.1
	baz=248						
E19K	Redstone River	82.93	20	IAmb	IAmb	01 41 06.3	
	comp=Z,41nm,1.4s						
E19K	Redstone River	82.93	20	P	P	01 41 01.3	+0.1
	baz=245,SNR=24						
H20K	Anotleneega Mo	83.00	23	P	P	01 41 01.4	-0.2
	baz=248,SNR=7.8						
D19K	Kuna River	83.08	19	P	P	01 41 01.8	-0.2
	baz=244,SNR=6.4						
SKT	Skwentna	83.14	27	IAmb	IAmb	01 41 03.4	
	comp=Z,18nm,1.3s						
SKT	Skwentna	83.14	27	P	P	01 41 01.8	-0.6
	baz=251						
PPLA	Purkeypile	83.16	26	P	P	01 41 01.7	-0.8
	baz=250						
F20K	Avaraart Lake	83.30	21	IAmb	IAmb	01 41 08.5	
	comp=Z,20nm,1.2s						
F20K	Avaraart Lake	83.30	21	P	P	01 41 02.9	-0.1
	baz=246,SNR=12						
SUA	Susitna One	83.33	27	IAmb	IAmb	01 41 06.8	
	comp=Z,13nm,1.0s						
SUA	Susitna One	83.33	27	P	P	01 41 02.1	-1.4
	baz=252						
CAST	Castle Rocks	83.38	25	IAmb	IAmb	01 41 06.4	
	comp=Z,34nm,1.7s						
CAST	Castle Rocks	83.38	25	P	P	01 41 02.9	-0.6
	baz=250						

CHUM	Lake Minchumin	83.44	25	P	P	01 41 03.8	0.0
	baz=250						
SEW	Seward	83.52	29	P	P	01 41 03.6	-0.7
	baz=253						
IMAR	Indian Mountai	83.62	22	P	P	01 41 03.8	-0.9
E20K	Nigu River	83.63	20	P	P	01 41 04.3	-0.5
	baz=246,SNR=11						
D20K	Etivluk River	83.67	19	IAmb	IAmb	01 41 06.2	
	comp=Z,32nm,1.5s						
D20K	Etivluk River	83.67	19	P	P	01 41 04.7	-0.3
	baz=246,SNR=15						
RC01	Rabbit Creek A	83.68	28	IAmb	IAmb	01 41 06.8	
	comp=Z,18nm,0.8s						
RC01	Rabbit Creek A	83.68	28	P	P	01 41 03.9	-1.2
	baz=253,SNR=8.3						
M22K	Willow	83.70	27	P	P	01 41 04.5	-0.7
	baz=252						
CUT	Chulitna	83.84	26	P	P	01 41 05.3	-0.6
	baz=252						
H21K	Melozitna Rive	83.86	23	IAmb	IAmb	01 41 09.5	
	comp=Z,43nm,1.9s						
H21K	Melozitna Rive	83.86	23	P	P	01 41 05.8	-0.2
	baz=249,SNR=8.4						
G21K	Allakaket	83.91	22	P	P	01 41 05.9	-0.3
	baz=249						
KTH	Kantishna Hill	83.92	25	IAmb	IAmb	01 41 07.8	
	comp=Z,30nm,1.3s						
B20K	Meade River	84.04	18	P	P	01 41 06.6	-0.2
	baz=245,SNR=8.4						
BPAW	Bear Paw Mtn.	84.07	25	IAmb	IAmb	01 41 09.9	
	comp=Z,28nm,1.7s						
BPAW	Bear Paw Mtn.	84.07	25	P	P	01 41 06.2	-0.9
	baz=251						
PMR	Palmer	84.11	27	P	P	01 41 04.6	-2.6
PMR				IAmb	IAmb	01 41 07.1	
	comp=Z,24nm,1.2s						
PMR	Palmer	84.11	27	P	P	01 41 06.9	-0.3
PMR	Palmer	84.11	27	P	P	01 41 04.6	-2.6
PMR				pmax	pmax		
	comp=Z,24nm,1.2s						
PMR	Palmer	84.11	27	P	P	01 41 06.1	-1.1
	baz=253,SNR=10.0						
TRF	Thorofare Moun	84.16	25	IAmb	IAmb	01 41 10.0	
	comp=Z,29nm,1.6s						
TRF	Thorofare Moun	84.16	25	P	P	01 41 06.6	-1.2
	baz=252						
F21K	Alatna River	84.17	21	P	P	01 41 07.1	-0.4
	baz=249						
PWL	Port Wells	84.27	28	P	P	01 41 07.5	-0.6
	baz=254						
KNK	Knik Glacier	84.36	28	P	P	01 41 08.0	-0.7
	baz=254,SNR=6.4						
E21K	Killik River	84.46	20	IAmb	IAmb	01 41 10.3	
	comp=Z,34nm,1.5s						
E21K	Killik River	84.46	20	P	P	01 41 08.7	-0.3
	baz=248						
C21K	Knifeblade Rid	84.46	19	P	P	01 41 08.9	-0.1
	baz=247,SNR=13						
MLY	Manley	84.47	24	IAmb	IAmb	01 41 11.2	
	comp=Z,34nm,1.5s						
MLY	Manley	84.47	24	P	P	01 41 08.6	-0.5
	baz=251,SNR=17						
P23K	Montague Islan	84.48	29	P	P	01 41 08.6	-0.6
	baz=255						
H22K	Ishtalitna Cre	84.50	23	P	P	01 41 09.0	-0.2
	baz=251,SNR=5.2						
SML	Sawmill	84.53	27	P	P	01 41 08.7	-0.8
	baz=254,SNR=13						
ABKAR	Akbulak array	84.65	320	P	P	01 41 09.4	-0.9
B21K	Ikpikpuk River	84.69	19	P	P	01 41 09.8	-0.3
	baz=247						
WAT1	Susitna Watana	84.72	26	P	P	01 41 09.4	-1.0
	baz=254						
RND	Reindeer	84.76	26	IAmb	IAmb	01 41 10.2	
	comp=Z,27nm,1.2s						
G22K	Bettles	84.79	22	P	P	01 41 10.2	-0.4
	baz=250						
M23K	Glacier View	84.81	27	P	P	01 41 10.3	-0.5
	baz=254						
MCK	McKinley	84.82	25	IAmb	IAmb	01 41 10.7	
	comp=Z,23nm,1.2s						
Q23K	Middleton Isla	84.85	30	P	P	01 41 10.4	-0.6
	baz=256						
GLI	Glacier Island	84.86	28	IAmb	IAmb	01 41 11.3	
	comp=Z,23nm,1.0s						
GLI	Glacier Island	84.86	28	P	P	01 41 10.4	-0.7
	baz=255,SNR=5.1						
SCM	Sheep Creek Mo	85.00	27	P	P	01 41 11.5	-0.4
	baz=255,SNR=11						
WAT6	Susitna Watana	85.01	26	P	P	01 41 11.4	-0.7
	baz=254,SNR=9.4						
NEA2	Nenana	85.01	24	P	P	01 41 11.5	-0.3
	baz=253,SNR=10						
D22K	Ayikyak River	85.06	20	IAmb	IAmb	01 41 13.7	
	comp=Z,36nm,1.4s						
D22K	Ayikyak River	85.06	20	P	P	01 41 12.0	0.0
	baz=249,SNR=13						
I23K	Minto, Yukon-K	85.06	24	IAmb	IAmb	01 41 12.7	
	comp=Z,16nm,1.1s						
I23K	Minto, Yukon-K	85.06	24	P	P	01 41 11.7	-0.3
	baz=253,SNR=15						
E22K	Anaktuvuk Pass	85.09	21	IAmb	IAmb	01 41 13.8	
	comp=Z,26nm,1.2s						
E22K	Anaktuvuk Pass	85.09	21	P	P	01 41 12.2	-0.1
	baz=250,SNR=14						
FID	Port Fidalgo	85.11	28	IAmb	IAmb	01 41 15.1	
	comp=Z,31nm,1.3s						
A22K	Sinclair Lake	85.12	18	P	P	01 41 12.0	-0.2
	baz=247						
H23K	Yukon River	85.19	23	P	P	01 41 12.5	-0.3
	baz=252,SNR=7.9						
G23K	Bananza Creek	85.28	22	P	P	01 41 12.9	-0.2
	baz=252,SNR=11						
DHY	Denali Highway	85.31	26	IAmb	IAmb	01 41 13.9	
	comp=Z,22nm,1.1s						
DHY	Denali Highway	85.31	26	P	P	01 41 12.8	-0.7
	baz=255,SNR=11						
B22K	Teshekpuk Lake	85.35	18	P	P	01 41 13.0	-0.3
	baz=248,SNR=10						
COLD	Coldfoot	85.38	22	P	P	01 41 13.2	-0.4
COLD				IAmb	IAmb	01 41 15.3	
	comp=Z,21nm,1.4s						
COLD	Coldfoot	85.38	22	P	P	01 41 13.6	0.0
	baz=252						
WRH	Wood River Hil	85.39	25	IAmb	IAmb	01 41 13.3	
	comp=Z,19nm,1.1s						
EYAK	Cordova Ski Ar	85.41	29	P	P	01 41 13.6	-0.3
	baz=256						
CCB	Clear Creek Bu	85.55	24	IAmb	IAmb	01 41 17.8	
	comp=Z,17nm,1.0s						
KLU	Klutina	85.56	28	IAmb	IAmb	01 41 15.5	
	comp=Z,17nm,1.1s						
KLU	Klutina	85.56	28	P	P	01 41 14.4	-0.3
	baz=256						
COLA	College	85.59	24	P	P	01 41 15.5	+0.8
COLA	College	85.59	24	⇑eP	P	01 41 12.8	-1.9
COLA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SVE	Sverdlovsk	85.69	327	eP	P	01 41 16.1	+0.7
D23K	Nanushuk River	85.77	20	P	P	01 41 15.6	+0.1
	baz=251,SNR=32						
HDA	Harding Lake	85.84	25	P	P	01 41 15.1	-0.8
	baz=255,SNR=6.4						
E23K	Chandalar	85.85	21	P	P	01 41 16.0	0.0
	baz=252,SNR=22						
H24K	Noodor Dome	85.85	23	IAmb	IAmb	01 41 18.1	
	comp=Z,28nm,1.6s						
H24K	Noodor Dome	85.85	23	P	P	01 41 15.7	-0.4
	baz=254,SNR=11						
RAGM	Ragged Mountai	85.89	29	IAmb	IAmb	01 41 19.6	
	comp=Z,28nm,1.4s						
KAIM	Kayak Island	85.92	29	IAmb	IAmb	01 41 19.8	
	comp=Z,21nm,0.9s						
KAIM	Kayak Island	85.92	29	P	P	01 41 16.2	-0.2
	baz=257						
ILAR	Eielson Array	85.97	24	P	P	01 41 13.6	-2.9
ILAR	Eielson Array	85.97	24	P	P	01 41 14.6	-2.0
	comp=Z,6.2nm,0.8s,baz=262,slow=4.9,SNR=49						
	comp=Z,6.2nm,0.8s						
TOLK	Toolik Lake Re	86.05	20	P	P	01 41 17.2	+0.3
	baz=252,SNR=14						
BMRM	Bremner River	86.06	28	P	P	01 41 16.7	-0.5
	baz=257						
C23K	Itkillik River	86.07	19	P	P	01 41 16.9	-0.1
	baz=251,SNR=14						
HMT	Hamilton	86.08	29	IAmb	IAmb	01 41 17.4	
	comp=Z,15nm,1.0s						
PAX	Paxson	86.12	26	P	P	01 41 16.9	-0.6
	baz=256						
HARP	HAARP	86.13	27	P	P	01 41 17.0	-0.5
	baz=257						
K24K	Donnelly Dome	86.19	26	P	P	01 41 17.1	-0.7
	baz=256						
N25K	Chitina, Valde	86.20	28	P	P	01 41 17.0	-0.9
N25K	Chitina, Valde	86.20	28	P	P	01 41 17.5	-0.4
	baz=257						
G24K	Hadweenzic Riv	86.25	23	IAmb	IAmb	01 41 19.4	
	comp=Z,37nm,1.4s						
G24K	Hadweenzic Riv	86.25	23	P	P	01 41 18.1	+0.1
	baz=254,SNR=20						
E24K	Your Creek	86.26	21	P	P	01 41 18.2	+0.2
	baz=253,SNR=8.5						
F24K	Squaw Lake	86.32	22	P	P	01 41 18.5	+0.1
	baz=254,SNR=20						
BERG	Berg Lake	86.37	29	IAmb	IAmb	01 41 21.3	
	comp=Z,31nm,1.2s						
D24K	Happy Valley	86.46	20	P	P	01 41 19.2	+0.3
	baz=253,SNR=8.9						
GLB	Gilahina Butte	86.54	28	P	P	01 41 18.1	-1.4
J25K	Salcha River,	86.56	25	IAmb	IAmb	01 41 19.6	
	comp=Z,44nm,1.9s						
J25K	Salcha River,	86.56	25	P	P	01 41 18.6	-1.0
	baz=256,SNR=6.5						
RIDG	Independent Ri	86.58	26	IAmb	IAmb	01 41 21.3	
	comp=Z,50nm,1.9s						
RIDG	Independent Ri	86.58	26	P	P	01 41 19.2	-0.5
	baz=257						
C24K	Franklin Bluff	86.67	19	P	P	01 41 19.8	-0.1
	baz=253						
PRP	Porcupine Dome	86.71	24	P	P	01 41 20.0	-0.3
	baz=256						
CRQM	Cirque	86.72	29	IAmb	IAmb	01 41 21.3	
	comp=Z,21nm,1.0s						
CRQE	Cirque	86.74	29	P	P	01 41 20.3	-0.3
	baz=259						
H25L	Birch Creek	86.78	23	P	P	01 41 20.6	+0.1
	baz=256,SNR=8.5						
G25K	Bearman Lake	86.79	23	P	P	01 41 21.0	+0.4
	baz=256,SNR=11						
ARTI	Arti	86.84	327	P	P	01 41 18.7	-2.3
ARTI	Arti	86.84	327	c iP	P	01 41 19.4	-1.6
ARTI						01 44 40.8	
ARTI				S	SKSac	01 51 44.4	-0.8
ARTI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MCARA	McCarthy VSAT	86.89	28	P	P	01 41 21.1	-0.1
	baz=259						
DOT	Dot Lake	86.90	26	IAmb	IAmb	01 41 21.9	
	comp=Z,40nm,1.8s						
SCRK	Sand Creek	87.00	26	P	P	01 41 21.5	-0.3
	baz=258,SNR=6.3						
L26K	Log Cabin Wild	87.08	27	P	P	01 41 21.8	-0.2
	baz=258						
M26K	Nabesna, AK	87.11	27	P	P	01 41 22.1	-0.2
	baz=259						
F25K	Christian Rive	87.17	22	IAmb	IAmb	01 41 24.3	
	comp=Z,30nm,1.6s						
F25K	Christian Rive	87.17	22	P	P	01 41 22.5	0.0
	baz=256,SNR=11						
QSPA	South Pole Qui	87.17	180	P	P	01 41 22.7	0.0
QSPA	South Pole Qui	87.17	180	P	P	01 41 21.9	-0.7
	comp=Z,36nm,1.0s,baz=316,slow=1.6,SNR=55						
	comp=Z,36nm,1.0s						
MESA	MESA	87.18	29	P	P	01 41 22.8	-0.1
	baz=260						
J26L	Joseph Creek	87.29	25	IAmb	IAmb	01 41 24.1	
	comp=Z,26nm,1.4s						
J26L	Joseph Creek	87.29	25	P	P	01 41 22.8	-0.4
	baz=258,SNR=17						
E25K	Arctic Village	87.33	21	P	P	01 41 23.2	0.0
	baz=256,SNR=23						
D25K	Kavik River	87.34	20	P	P	01 41 23.2	0.0
	baz=255						
BMAR	Burnt Mountain	87.53	22	P	P	01 41 24.2	0.0
M27K	Edge Creek, AK	87.61	27	P	P	01 41 24.6	-0.2
	baz=260,SNR=11						
CTG	Chitna Glacier	87.62	29	P	P	01 41 24.9	0.0
	baz=260,SNR=6.8						
I26K	Coal Creek Min	87.63	24	IAmb	IAmb	01 41 25.1	
	comp=Z,19nm,1.4s						
I26K	Coal Creek Min	87.63	24	P	P	01 41 23.9	-0.7
	baz=258,SNR=8.5						
G26K	Porcupine Rive	87.72	23	P	P	01 41 25.2	+0.2
	baz=258,SNR=37						
F26K	Sheenjek River	87.75	22	P	P	01 41 25.8	+0.5
	baz=257,SNR=24						
L27K	Beaver Creek,	87.77	27	IAmb	IAmb	01 41 26.6	
	comp=Z,18nm,1.2s						
L27K	Beaver Creek,	87.77	27	P	P	01 41 25.4	0.0
	baz=260,SNR=7.1						
BCAR	Beaver Creek A	87.78	27	P	P	01 41 25.0	-0.5
K27K	Chicken	87.83	26	P	P	01 41 25.9	+0.2
	baz=259						
C26K	Camden Bay	87.99	20	P	P	01 41 26.1	-0.1
	baz=256						
PINM	Pinnacle	88.01	30	P	P	01 41 26.4	-0.3
	baz=261						
BVCY	Beaver Creek	88.09	27	P	P	01 41 26.8	-0.2
	baz=260						
O28M	Mount Upton	88.14	29	IAmb	IAmb	01 41 28.6	
	comp=Z,18nm,1.2s						
O28M	Mount Upton	88.14	29	P	P	01 41 27.2	-0.3
	baz=261						
YUK3	Moose Creek	88.17	28	P	P	01 41 27.4	-0.2
	baz=261,SNR=13						
I27K	Kandik River	88.32	24	P	P	01 41 28.1	+0.1
	baz=260,SNR=28						
C27K	Jago River	88.33	20	P	P	01 41 28.0	+0.1
	baz=258						
PNL	Peninsula	88.37	30	P	P	01 41 29.1	+0.8
PNL	Peninsula	88.37	30	P	P	01 41 28.2	-0.1
	baz=262						
H27K	Steamboat Moun	88.47	24	P	P	01 41 29.2	+0.5
	baz=260,SNR=29						
G27K	Doyon Strip	88.52	23	IAmb	IAmb	01 41 31.6	
	comp=Z,30nm,1.7s						
G27K	Doyon Strip	88.52	23	P	P	01 41 29.1	+0.2
	baz=260,SNR=9.1						
E27K	Coleen River	88.79	22	P	P	01 41 30.6	+0.4
	baz=260						
O29M	Mount Kennedy	88.86	30	IAmb	IAmb	01 41 32.1	
	comp=Z,20nm,1.4s						
O29M	Mount Kennedy	88.86	30	P	P	01 41 30.7	-0.1
	baz=262						
YUK4	Talbot Arm	88.97	29	P	P	01 41 31.5	+0.2
	baz=262,SNR=11						
I28M	Miner Creek	88.98	24	P	P	01 41 31.2	0.0
	baz=261,SNR=19						
DAWY	Dawson	89.01	26	IAmb	IAmb	01 41 32.5	
	comp=Z,23nm,1.1s						
DAWY	Dawson	89.01	26	P	P	01 41 31.2	-0.1
	baz=262,SNR=19						
YUK6	Outpost Mounta	89.05	29	P	P	01 41 31.6	-0.1
	baz=263						
P29M	Windy Craggy	89.20	30	IAmb	IAmb	01 41 37.7	
	comp=Z,16nm,1.1s						
P29M	Windy Craggy	89.20	30	P	P	01 41 32.3	+0.1
	baz=263						
M29M	Somme Creek	89.20	27	IAmb	IAmb	01 41 33.6	
	comp=Z,29nm,1.6s						
M29M	Somme Creek	89.20	27	P	P	01 41 32.5	+0.2
	baz=263,SNR=11						
D27M	Malcolm River	89.21	21	P	P	01 41 32.2	+0.1
	baz=260						
F28M	Old Crow	89.34	22	P	P	01 41 32.6	-0.1
	baz=261						
L29M	L29M	89.44	27	P	P	01 41 33.3	0.0
	baz=263,SNR=12						
HYT	Haines Junctio	89.45	29	IAmb	IAmb	01 41 34.6	
	comp=Z,22nm,1.3s						
HYT	Haines Junctio	89.45	29	P	P	01 41 33.5	0.0
	baz=263,SNR=7.7						
E28M	Babbage River	89.62	21	P	P	01 41 34.1	+0.1
	baz=262						
P30M	Million Dollar	89.64	30	P	P	01 41 34.4	0.0
	baz=264						
I29M	Ogilvie Camp,	89.64	25	P	P	01 41 33.1	-1.1
I29M				IAmb	IAmb	01 41 35.2	
	comp=Z,39nm,1.5s						
I29M	Ogilvie Camp,	89.64	25	P	P	01 41 34.3	+0.1
	baz=263,SNR=13						
N30M	Aishikik Lake	89.73	29	IAmb	IAmb	01 41 35.9	
	comp=Z,17nm,1.4s						
N30M	Aishikik Lake	89.73	29	P	P	01 41 34.5	-0.2
	baz=264,SNR=6.2						
H29M	Whitestone	89.73	24	P	P	01 41 34.6	0.0
	baz=263						
K29M	Barlow Dome	89.80	26	IAmb	IAmb	01 41 38.1	
	comp=Z,30nm,1.4s						
K29M	Barlow Dome	89.80	26	P	P	01 41 35.1	0.0
	baz=263,SNR=17						
S31K	Pelican	89.80	32	P	P	01 41 35.0	0.0
	baz=265						
PLBC	Pleasant Camp	89.88	31	P	P	01 41 35.2	-0.2
	baz=264						
G29M	Pine Creek	89.96	23	IAmb	IAmb	01 42 16.6	
	comp=Z,20nm,1.4s						
G29M	Pine Creek	89.96	23	P	P	01 41 35.4	-0.2
	baz=263						
O30N	Mendenhall	90.14	29	IAmb	IAmb	01 41 38.6	
	comp=Z,39nm,2.0s						
O30N	Mendenhall	90.14	29	P	P	01 41 36.5	-0.2
	baz=265,SNR=5.6						
E29M	Blow River	90.19	22	P	P	01 41 36.7	+0.1
	baz=263						
N31M	Braeburn, Yuko	90.35	29	P	P	01 41 37.6	0.0
	baz=265						
J30M	Hart River	90.39	25	IAmb	IAmb	01 41 40.8	
	comp=Z,26nm,1.5s						
J30M	Hart River	90.39	25	P	P	01 41 37.8	-0.1
	baz=264,SNR=10.0						
SKAG	Skagway	90.40	31	P	P	01 41 37.7	-0.1
	baz=265						
EPYK	Eagle Plains	90.41	24	IAmb	IAmb	01 43 21.0	
	comp=Z,34nm,1.9s						
EPYK	Eagle Plains	90.41	24	P	P	01 41 37.6	-0.2
	baz=264						
I30M	Mount Dempster	90.44	25	P	P	01 41 37.5	-0.5
	baz=264						
SYO	Syowa Base	90.63	201	⇓eP	P	01 41 40.0	+1.3
SYO	Syowa Base	90.63	201	⇓esP	P	01 41 45.4	+6.7
S32K	Killisnoo	90.64	33	P	P	01 41 38.4	-0.5
	baz=266						
G30M	tAoh Zraii Nji	90.67	23	P	P	01 41 38.3	-0.7
	baz=265						
WHY	Whitehorse	90.72	29	IAmb	IAmb	01 41 52.1	
	comp=Z,28nm,1.3s						
WHY	Whitehorse	90.72	29	P	P	01 41 39.1	-0.3
	baz=266,SNR=5.7						
F30M	Barrier River	90.89	22	P	P	01 41 40.0	+0.1
	baz=265						
M31M	Drury Creek, Y	91.07	28	P	P	01 41 40.6	-0.3
	baz=266						
P32M	Atlin	91.23	31	IAmb	IAmb	01 41 53.4	
	comp=Z,37nm,2.0s						
P32M	Atlin	91.23	31	P	P	01 41 41.3	-0.4
	baz=267						
CRAG	Craig	91.33	35	P	P	01 41 41.9	-0.3
	baz=267						
H31M	Peel River	91.33	24	P	P	01 41 42.0	0.0
	baz=266						
U33K	Whale Pass	91.36	34	P	P	01 41 42.0	-0.3
	baz=267						
G31M	Satah River	91.43	23	P	P	01 41 42.1	-0.2
	baz=266						
FARO	Faro, Yukon	91.56	28	IAmb	IAmb	01 41 43.8	
	comp=Z,17nm,1.4s						
FARO	Faro, Yukon	91.56	28	P	P	01 41 42.6	-0.6
	baz=267						
P33M	Teslin, Yukon	91.72	30	P	P	01 41 43.4	-0.7
	baz=268						
INK	Inuvik	91.79	22	P	P	01 41 43.5	-0.6
	baz=267						
WRAK	Wrangell Islan	91.81	34	P	P	01 41 44.0	-0.3
	baz=268						
Q32M	Nakina River	91.94	31	P	P	01 41 44.7	-0.6
	baz=268						
MMPY	Sheldon Lake,	92.54	28	IAmb	IAmb	01 41 49.1	
	comp=Z,20nm,1.8s						
MMPY	Sheldon Lake,	92.54	28	P	P	01 41 47.5	-0.2
	baz=269						
R33M	Jennings River	92.62	31	IAmb	IAmb	01 42 42.7	
	comp=Z,20nm,1.7s						
R33M	Jennings River	92.62	31	P	P	01 41 47.8	-0.5
	baz=269						
BELG	Belogornoye	92.73	322	⇓eP	P	01 41 47.3	-1.4
BELG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
T35M	Bob Quinn	92.97	33	P	P	01 41 49.5	-0.3
	baz=270						
BELA	Belgrano 2	99.36	181	P	Pdif	01 42 18.4	-0.1
BELA				IAmb	IAmb	01 42 20.1	
	comp=Z,7.5nm,1.1s						
YKA	Yellowknife Ar	100.20	27	P	Pdif	01 42 21.9	-0.4
	comp=Z,0.4nm,0.8s,baz=282,slow=3.8,SNR=4.2						
YKA	Yellowknife Ar	100.20	27	i P	Pdif	01 42 22.0	-0.4
ARCES	ARCESS Array B	100.51	341	P	Pdif	01 42 22.5	-1.2
	comp=Z,1.3nm,0.7s,baz=67,slow=6.7,SNR=5.0						
SNAA	Sanae	101.61	192	P	Pdif	01 42 28.8	+0.1
	comp=Z,2.3nm,0.9s,baz=146,slow=6.8,SNR=4.5						
NVAR	Mina Array Bea	102.03	51	P	Pdif	01 42 30.8	-0.6
	comp=Z,0.9nm,0.7s,baz=254,slow=6.7,SNR=6.3						
MNK	Minsk	104.15	326	i P	Pdif	01 42 36.8	-3.4
	comp=E,5.0nm,0.7s						
MNK				i P	Pdif	01 42 36.8	-3.4
	comp=N,11nm,0.7s						
MNK				i P	Pdif	01 42 36.8	-3.4
	comp=Z,3.0nm,0.6s,baz=74						
MNK				i PP	PKiKP	01 46 55.1	-1.9
MNK				i PPP	PPP	01 49 06.9	
MNK				i SKS		01 54 04.2	
MNK				i SS	SS	02 01 45.1	+0.8
MNK				i SSS	SSS	02 05 41.5	
MNK				i LR	LR	02 30 53.8	
MNK	Minsk	104.15	326	i P	Pdif	01 42 36.7	-3.4
MNK				i		01 46 55.0	
MNK				i PPP	PPP	01 49 06.8	
MNK				i		01 54 04.1	
MNK				i SS	SS	02 01 45.1	+0.8
MNK				i SSS	SSS	02 05 41.5	
MNK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MNK				pmax	pmax		
	comp=E,5.0nm,0.7s						
MNK				pmax	pmax		
	comp=N,11nm,0.7s						
AK09	Malin Array Si	104.28	322	P	Pdif	01 42 39.8	-1.0
AK10	Malin Array Si	104.31	322	P	Pdif	01 42 39.8	-1.1
RNPP9	Sopachiv	106.15	323	P	Pdif	01 42 48.2	-0.9
KMPD	K-Podol'skiy	106.57	320	P	Pdif	01 42 49.9	-1.1
TXAR	Lajitas Array	115.49	59	PKKPbc	PKKPbc	01 57 57.5	+4.3
	comp=N,1.0nm,0.9s,baz=131,slow=4.5,SNR=7.4						
Y52A	Lilburn	129.68	47	PKPdf	PKPdf	01 47 45.1	-1.2
PB11	IPOC Station P	144.40	130	PKPdf	PKPbc	01 48 12.2	-0.2
GO01	Chusmiza	144.80	130	PKPdf	PKPdf	01 48 14.6	-0.4
ROSC	El Rosal	147.16	85	PKPbc	PKPbc	01 48 21.5	+0.2
	comp=N,8.0nm,0.4s,baz=20,slow=1.9,SNR=4.1						
CPUP	Villa Florida	147.26	153		PKPbc	01 48 20.6	-0.1
CPUP	Villa Florida	147.26	153	PKPbc	PKPbc	01 48 20.4	-0.3
	comp=N,6.7nm,1.0s,baz=83,slow=3.6,SNR=11						
CPUP	Villa Florida	147.26	153	PKP2	PKPbc	01 48 20.6	-0.1
LPAZ	La Paz	147.56	127	PKPbc	PKPbc	01 48 22.8	+0.2
	comp=N,7.3nm,0.9s,baz=304,slow=1.3,SNR=17						
RUSC	La Rusia	148.33	83		PKPbc	01 48 22.8	-1.8
SDV	Santo Domingo	150.38	77	PKPdf	PKPdf	01 48 21.5	-2.5
CELP	Cerrillos	151.07	57	PKPbc	PKPbc	01 48 28.6	-2.0
SJG	San Juan	151.41	56	PKPbc	PKPbc	01 48 29.1	-2.2
SJG	San Juan	151.41	56	PKIKP	PKPbc	01 48 29.1	-2.2
PDPR	Patillas Dam,	151.56	56	PKPbc	PKPbc	01 48 29.9	-1.8
HUMP	Col San Antoni	151.64	56	PKPbc	PKPbc	01 48 29.9	-2.0

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*IDC **24** 01:45:39.7±0.6, 2°.59S×138°.50E, h0km, mb4.2/12, mbtmp4.3/16, ML4.3/4, Error ellipse: s-maj=15.7km s-min=13.9km az=39.0*

*NEIC **24** 01:45:42.6±1.9, 2°.67S±0°.09×138°.60E±0°.06, h10km, mb4.8/65, Error ellipse: s-maj=15.1km s-min=10.9km az=353.0*

*DJA **24** 01:45:43.3±0.3, 3°S±3°×13°9E±°, h10km, M4.6/8, mb4.7/6, MLv4.5/8*

ISC 24 01:45:45.3±0.4**, 2°.82S**±0°.05×**138°.54E**±0°.06**, h35km, n272, σ1s.16**/252**, mb4.7**/47**, 1C, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.84	12	P	Pn	01 45 54.4	-6.2
GENI	Genyem	1.64	82	P	Pn	01 46 11.8	+0.1
JAY	Jayapura	2.19	82	Pn	Pn	01 46 18.1	-1.1
	71nm,0.3s,baz=246,slow=8.4,SNR=27						
JAY				Lg	Lg	01 46 50.1	
	48nm,0.3s,baz=31,slow=21,SNR=4.9						

	214nm,0.4s						
JAY	Jayapura	2.19	82	P	Pn	01 46 18.3	-0.9
SRPI	Serui, Papua	2.48	292	P	Pn	01 46 23.8	+0.6
BAKI	Biak	2.92	304	P	Pn	01 46 29.9	+0.7
RKPI	Ransiki, Papua	4.54	286	P	Pn	01 46 53.0	+1.3
FAKI	Fak Fak	6.28	269	Pn	Pn	01 47 16.8	+1.3
FAKI	Fak Fak	6.28	269	P	Pn	01 47 16.7	+1.1
	0.3nm46nm,1.1s						
SWI	Sorong	7.53	285	P	Pn	01 47 33.0	+0.3
	0.2nm30nm,0.6s						
COEN	Coen	11.98	158	Pn	Pn	01 48 35.1	+1.3
MTN	Manton Dam	12.37	216	Pn	Pn	01 48 40.3	+1.3
SOEI	Soe	15.76	243	P	P	01 49 27.7	-0.9
SOEI				IAmb	IAmb	01 49 32.5	
	comp=Z,90nm,1.1s						
SOEI	Soe	15.76	243	P	P	01 49 27.6	-0.9
KNRA	Kununurra	16.00	216	Pn	Pn	01 49 28.0	+0.1
KNRA				IAmb	IAmb	01 49 37.1	
	comp=Z,81nm,1.2s						
BATI	Baumata	16.49	243	Pn	Pn	01 49 34.6	+0.4
	comp=Z,9.1nm,0.3s,baz=128,slow=0.9,SNR=6.3						
	comp=Z,68nm,1.1s						
WB0	Warramunga Arr	17.33	193	Pn	Pn	01 49 44.4	-0.3
WR8	Warramunga Arr	17.49	193	Pn	Pn	01 49 45.9	-0.7
WRAB	Tennant Creek	17.50	193	Pn	P	01 49 47.5	-0.1
WRA	Warramunga Arr	17.51	193	Pn	Pn	01 49 47.0	+0.1
WRA	Warramunga Arr	17.51	193	P	Pn	01 49 46.4	-0.4
	comp=Z,1.1nm,0.3s,baz=16,slow=12,SNR=25						
WRA				S	Sn	01 52 52.8	-8.1
	comp=Z,2.6nm,0.5s,baz=15,slow=23,SNR=3.3						
	comp=Z,6.9nm,0.6s						
FITZ	Fitzroy Crossi	19.76	219	P	Pn	01 50 14.8	+0.6
FITZ	Fitzroy Crossi	19.76	219	P	Pn	01 50 13.4	-0.8
	comp=Z,0.2nm,0.3s,baz=41,slow=13,SNR=3.0						
	comp=Z,5.0nm,0.9s						
AS31	Alice Springs	21.21	192	P	P	01 50 28.9	+0.8
ASAR	Alice Springs	21.21	192	P	P	01 50 28.6	+0.4
ASAR	Alice Springs	21.21	192	P	P	01 50 29.1	+0.9
	comp=Z,15nm,0.8s,baz=20,slow=9.4,SNR=24						
ASAR				S	S	01 54 16.4	-5.8
	comp=Z,4.0nm,0.8s,baz=15,slow=25,SNR=4.3						
	comp=Z,15nm,0.8s						
MYLDM	Lahad Datu	21.54	292	P	P	01 50 31.3	-0.4
MYLDM				IAmb	IAmb	01 50 40.4	
	comp=Z,45nm,1.2s						
BBOO	Buckleboo	29.93	184	P	P	01 51 52.6	+2.5
MORW	Morawa	33.76	217	P	P	01 52 25.6	+1.8
NJ2	Nanjing	39.39	333	*e*P	P	01 53 13.1	+1.3
NJ2				pmax	pmax		
	comp=Z,9.0nm,1.6s						
TAU	Tasmania Unive	40.68	170	P	P	01 53 23.4	+1.0
TAU				IAmb	IAmb	01 53 30.7	
	comp=Z,23nm,0.8s						
KSRS	Korea Array	41.26	347	P	P	01 53 25.2	-2.0
	comp=Z,0.7nm,0.5s,baz=166,slow=7.7,SNR=4.4						
	comp=Z,0.7nm,0.5s						
CMAR	Chiang Mai Arr	44.34	300	P	P	01 53 52.3	-0.2
	comp=Z,0.7nm,0.3s,baz=127,slow=6.7,SNR=6.4						
	comp=Z,0.7nm,0.3s						
LYN	LuoYang	44.52	329	P	P	01 54 01.8	+8.1
LYN				pmax	pmax		
	comp=Z,21nm,1.0s						
PZH	PanZhiHua	45.97	312	P	P	01 54 07.3	+1.9
USRK	Ussuriysk Ar.	47.17	354	P	P	01 54 11.3	-3.1
	comp=Z,0.8nm,0.5s,baz=253,slow=5.8,SNR=4.6						
	comp=Z,0.8nm,0.5s						
BNX	BinXian	49.34	350	⇑P	P	01 54 30.3	-0.9
BNX				pP	pP	01 54 35.4	-6.3
BNX				pmax	pmax		
	comp=Z,5.0nm,1.7s						
TCW	Tory Channel	49.93	145	P	P	01 54 38.1	+2.3
HHC	Hu-ho-hao-te	49.95	333	*e*P	P	01 54 37.8	+1.8
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
RTZ	Ruatahuna	49.97	140	P	P	01 54 37.5	+1.3
BKZ	Black Stump Fm	49.99	141	P	P	01 54 37.3	+1.0
SONM	Songino Array	57.74	335	P	P	01 55 32.7	-0.2
SONM	Songino Array	57.74	335	P	P	01 55 31.2	-1.7
	comp=Z,1.2nm,0.6s,baz=154,slow=6.8,SNR=6.5						
	comp=Z,1.2nm,0.6s						
HMH	Humu‘ula Sheep	68.47	68	P	P	01 56 45.1	+0.2
PUH	Pauahi	68.67	68	P	P	01 56 44.4	-1.5
MKAR	Makanchi Array	69.77	322	P	P	01 56 51.3	-0.7
MKAR	Makanchi Array	69.77	322	P	P	01 56 50.5	-1.6
	comp=Z,1.1nm,0.4s,baz=117,slow=6.9,SNR=12						
	comp=Z,1.1nm,0.4s						
MAKZ	Makanchi	69.96	322	P	P	01 56 52.8	-0.5
MAKZ				IAmb	IAmb	01 57 00.6	
	comp=Z,5.7nm,1.0s						
KSH	Kashi	71.03	313	P	P	01 57 00.3	+0.2
KSH				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ZALV	Zalesovo Beam	71.94	330	P	P	01 57 04.5	-0.6
ZALV	Zalesovo Beam	71.94	330	P	P	01 57 02.9	-2.2
	comp=Z,1.1nm,0.6s,baz=119,slow=8.6,SNR=4.2						
	comp=Z,1.1nm,0.6s						
BOOM	Boomskoye usch	72.11	316	P	P	01 57 06.0	-0.6
KURBB	Kurchatov Arra	73.71	325	P	P	01 57 14.2	-1.5
	comp=Z,1.0nm,0.5s,baz=118,slow=5.0,SNR=9.9						
	comp=Z,1.0nm,0.5s						
S12K	Black Hills	75.67	30	P	P	01 57 26.8	-0.1
S12K	Black Hills	75.67	30	P	P	01 57 28.0	+1.1
	baz=242						
VNDA	Vanda	75.69	175	P	P	01 57 27.8	+1.2
VNDA	Vanda	75.69	175	P	P	01 57 27.9	+1.2
	comp=Z,2.4nm,0.8s,baz=322,slow=6.9,SNR=11						
	comp=Z,2.4nm,0.8s						
CHNA	Chernabura Isl	76.55	32	P	P	01 57 33.2	+1.3
	baz=245						
K13K	Kusilvak Mount	77.55	24	P	P	01 57 38.6	+1.3
	baz=239						
L14K	Kuka Creek	78.06	25	P	P	01 57 40.7	+0.5
	baz=241						
M14K	Bethel	78.09	26	P	P	01 57 40.8	+0.4
M14K	Bethel	78.09	26	P	P	01 57 41.4	+1.0
	baz=242						
J14K	Nanvaranak Lak	78.41	23	P	P	01 57 43.4	+1.3
	baz=240						
M15K	Kasigluk River	78.61	26	P	P	01 57 44.3	+1.0
	baz=243						
L15K	Ungalak Mounta	78.73	25	P	P	01 57 44.9	+1.0
	baz=242						
F14K	Arctic Creek	78.81	20	P	P	01 57 46.0	+1.6
	baz=237						
K15K	Wolf Creek Mou	79.00	24	P	P	01 57 45.6	+0.2
K15K				IAmb	IAmb	01 57 56.8	
	comp=Z,7.7nm,1.0s						
K15K	Wolf Creek Mou	79.00	24	P	P	01 57 46.8	+1.4
	baz=242						
O16K	Kokwok River B	79.30	28	P	P	01 57 47.6	+0.6
O16K				IAmb	IAmb	01 57 49.1	
	comp=Z,6.6nm,0.9s						
O16K	Kokwok River B	79.30	28	P	P	01 57 48.2	+1.1
	baz=245						
BVAR	Borovoye Array	79.30	325	P	P	01 57 46.4	-0.9
	comp=Z,2.7nm,0.6s,baz=112,slow=7.7,SNR=9.3						
	comp=Z,2.7nm,0.6s						
N16K	Nishlik Lake	79.36	27	P	P	01 57 48.5	+1.0
	baz=244						
M16K	Timber Creek	79.52	26	P	P	01 57 48.9	+0.5
M16K				IAmb	IAmb	01 57 59.4	
	comp=Z,11nm,1.1s						
M16K	Timber Creek	79.52	26	P	P	01 57 48.8	+0.5
	baz=244						
L16K	Owhat River	79.60	25	P	P	01 57 49.4	+0.7
	baz=244						
Q16K	King Salmon	79.60	29	P	P	01 57 48.9	+0.2
	baz=247						
Q17K	Contact Creek	79.81	29	P	P	01 57 49.9	-0.2
	baz=248						
O17K	Koliganek Bris	79.83	28	P	P	01 57 49.9	-0.1
	baz=246						
J16K	Anvik River	79.85	24	P	P	01 57 50.6	+0.6
	baz=242						
I17K	Unalakleet	80.09	23	P	P	01 57 52.0	+0.7
	baz=242						
N17K	Nushagak Hills	80.10	27	P	P	01 57 52.4	+0.9
N17K				IAmb	IAmb	01 58 38.9	
	comp=Z,11nm,1.4s						
N17K	Nushagak Hills	80.10	27	P	P	01 57 52.0	+0.6
	baz=246						
G16K	Koyuk River	80.19	21	P	P	01 57 52.1	+0.4
	baz=240						
L17K	Donlin	80.28	25	P	P	01 57 53.2	+0.8
	baz=245						
M17K	Holitna River	80.34	26	P	P	01 57 53.9	+1.2
M17K				IAmb	IAmb	01 57 55.5	
	comp=Z,6.8nm,0.8s						
M17K	Holitna River	80.34	26	P	P	01 57 53.3	+0.6
	baz=246						
Q18K	Katmai Hardscr	80.39	29	P	P	01 57 53.0	-0.1
	baz=248						
J17K	VABM Dome	80.51	24	P	P	01 57 54.5	+1.0
	baz=244						
K17K	Iditarod	80.53	25	IAmb	IAmb	01 57 56.2	
	comp=Z,7.4nm,0.8s						
K17K	Iditarod	80.53	25	P	P	01 57 54.1	+0.4
	baz=245						
OHAK	Old Harbor	80.73	31	P	P	01 57 54.5	-0.4
OHAK	Old Harbor	80.73	31	P	P	01 57 55.1	+0.3
	baz=250						
O18K	Koktuh Hills	80.74	28	P	P	01 57 55.9	+0.9
	baz=248						
N18K	Kilae Creek	80.75	27	P	P	01 57 55.4	+0.5
	baz=247						
G17K	Kiwalik Mounta	80.86	22	P	P	01 57 55.9	+0.4
	baz=242						
H17K	Granite Mounta	80.88	22	P	P	01 57 56.4	+0.9
	baz=243						
L18K	Granite Mounta	81.00	25	P	P	01 57 56.8	+0.6
	baz=246						
M18K	Stony River	81.09	26	P	P	01 57 57.7	+1.0
	baz=247						
F17K	Baldwin Pennin	81.10	21	P	P	01 57 57.4	+0.8
	baz=241						
KDAK	Kodiak Island	81.28	30	P	P	01 57 58.3	+0.5
	baz=250						
N19K	Bonanza Creek	81.44	27	IAmb	IAmb	01 58 01.2	
	comp=Z,11nm,1.1s						
N19K	Bonanza Creek	81.44	27	P	P	01 57 59.4	+0.7
	baz=248						
C17K	DeLong Mountai	81.47	19	P	P	01 57 59.5	+0.9
	baz=239						
J18K	Innoko River	81.50	24	P	P	01 57 59.3	+0.4
	baz=246						
P19K	Oil Pt	81.60	28	P	P	01 57 59.6	+0.1
	baz=250						
G18K	Tagagawik	81.78	22	P	P	01 58 00.5	+0.2
	baz=244						
L19K	White Mountain	81.78	26	IAmb	IAmb	01 58 02.5	
	comp=Z,5.4nm,0.8s						
L19K	White Mountain	81.78	26	P	P	01 58 00.6	+0.2
	baz=248						
E18K	Tukpahlearik C	81.79	20	P	P	01 58 01.0	+0.7
	baz=242						
M19K	Big River Lodg	81.88	26	P	P	01 58 02.0	+1.1
	baz=248						
J19K	Poorman	82.16	24	P	P	01 58 02.7	+0.4
	baz=247						
C18K	Utukok River	82.18	19	P	P	01 58 02.9	+0.5
	baz=241						
L20K	Farewell, AK	82.31	26	P	P	01 58 03.7	+0.5
	baz=249						
M20K	Styx River	82.43	26	P	P	01 58 04.1	+0.2
	baz=249						
H19K	Roundabout Mou	82.45	22	P	P	01 58 05.0	+1.2
	baz=246						
G19K	Purcell Mounta	82.47	22	P	P	01 58 04.4	+0.5
	baz=245						
F19K	Shaleruckik Mo	82.51	21	P	P	01 58 05.4	+1.4
	baz=244						
K20K	Telida	82.56	25	P	P	01 58 05.1	+0.7
	baz=248						
BRSE	Bradley Lake S	82.82	29	P	P	01 58 06.6	+0.7
	baz=252						
J20K	Nowinta River	82.83	24	P	P	01 58 06.0	+0.3
	baz=248						
C19K	Lookout Ridge	82.91	19	P	P	01 58 07.4	+1.2
	baz=243						
E19K	Redstone River	82.97	20	IAmb	IAmb	01 58 10.1	
	comp=Z,9.2nm,1.0s						
E19K	Redstone River	82.97	20	P	P	01 58 08.1	+1.7
	baz=245,SNR=6.6						
A19K	Wainwright	82.98	17	P	P	01 58 08.1	+1.7
	baz=241						
H20K	Anotleneega Mo	83.04	23	P	P	01 58 08.0	+1.1
	baz=247						
D19K	Kuna River	83.12	19	IAmb	IAmb	01 58 09.0	
	comp=Z,4.1nm,0.8s						
D19K	Kuna River	83.12	19	P	P	01 58 08.3	+1.1
	baz=244						
SKT	Skwentna	83.17	27	P	P	01 58 08.0	+0.4
	baz=251						
PPLA	Purkeypile	83.19	26	P	P	01 58 08.2	+0.3
	baz=250						
F20K	Avaraart Lake	83.33	21	P	P	01 58 09.4	+1.1
F20K				IAmb	IAmb	01 58 12.2	
	comp=Z,7.3nm,1.1s						
F20K	Avaraart Lake	83.33	21	P	P	01 58 09.4	+1.1
	baz=246						
SUA	Susitna One	83.36	27	P	P	01 58 09.0	+0.2
	baz=252						
CAST	Castle Rocks	83.42	25	P	P	01 58 09.4	+0.5
	baz=250						
SEW	Seward	83.55	29	P	P	01 58 11.0	+1.4
	baz=253						
E20K	Nigu River	83.66	20	P	P	01 58 11.5	+1.4
	baz=246,SNR=5.9						
D20K	Etivluk River	83.71	19	P	P	01 58 10.9	+0.6
	baz=245						
RC01	Rabbit Creek A	83.71	28	P	P	01 58 10.6	+0.2
	baz=253						
H21K	Melozitna Rive	83.90	23	P	P	01 58 12.3	+1.0
	baz=249						
G21K	Allakaket	83.94	22	P	P	01 58 11.6	+0.1
	baz=249						
B20K	Meade River	84.08	18	P	P	01 58 13.2	+1.2
	baz=245						
BPAW	Bear Paw Mtn.	84.10	25	P	P	01 58 12.9	+0.5
	baz=251						
PMR	Palmer	84.14	27	P	P	01 58 12.6	+0.1
	baz=253						
TRF	Thorofare Moun	84.19	25	P	P	01 58 13.8	+0.7
	baz=252						
F21K	Alatna River	84.21	21	P	P	01 58 14.0	+1.1
	baz=248						
PWL	Port Wells	84.30	28	P	P	01 58 14.2	+0.8
	baz=254						
KNK	Knik Glacier	84.40	28	P	P	01 58 14.5	+0.5
	baz=254						
E21K	Killik River	84.49	20	P	P	01 58 14.4	+0.1
	baz=248						
C21K	Knifeblade Rid	84.49	19	P	P	01 58 14.6	+0.4
	baz=247						
MLY	Manley	84.50	24	IAmb	IAmb	01 58 17.8	
	comp=Z,9.5nm,1.4s						
MLY	Manley	84.50	24	P	P	01 58 14.4	0.0
	baz=251						
P23K	Montague Islan	84.51	29	P	P	01 58 14.6	+0.1
	baz=255						
H22K	Ishtalitna Cre	84.53	23	P	P	01 58 14.7	+0.2
	baz=251						
SML	Sawmill	84.56	27	P	P	01 58 14.2	-0.6
	baz=254						
AB31	Akbulak array	84.69	320	P	P	01 58 15.0	-0.7
ABKAR	Akbulak array	84.69	320	P	P	01 58 15.3	-0.3
B21K	Ikpikpuk River	84.73	19	P	P	01 58 15.5	+0.1
	baz=247						
WAT1	Susitna Watana	84.76	26	P	P	01 58 15.5	-0.3
	baz=254						
MCK	McKinley	84.85	25	P	P	01 58 15.8	-0.3
	baz=253						
Q23K	Middleton Isla	84.88	30	P	P	01 58 15.6	-0.8
	baz=256						
GLI	Glacier Island	84.89	28	P	P	01 58 15.8	-0.6
	baz=255						
SCM	Sheep Creek Mo	85.03	27	P	P	01 58 17.3	+0.1
	baz=255						
WAT6	Susitna Watana	85.05	26	P	P	01 58 17.4	0.0
	baz=254						
NEA2	Nenana	85.05	24	P	P	01 58 17.5	+0.4
	baz=253						
D22K	Ayikyak River	85.09	20	P	P	01 58 17.9	+0.6
	baz=249						
I23K	Minto, Yukon-K	85.09	24	P	P	01 58 17.4	+0.1
	baz=252						
E22K	Anaktuvuk Pass	85.13	21	P	P	01 58 18.1	+0.5
	baz=250,SNR=5.4						
A22K	Sinclair Lake	85.16	18	P	P	01 58 17.5	0.0
	baz=247						
H23K	Yukon River	85.23	23	IAmb	IAmb	01 58 20.8	
	comp=Z,7.0nm,1.2s						
H23K	Yukon River	85.23	23	P	P	01 58 18.5	+0.5
	baz=252						
G23K	Bananza Creek	85.32	22	IAmb	IAmb	01 58 29.3	
	comp=Z,5.0nm,1.1s						
G23K	Bananza Creek	85.32	22	P	P	01 58 18.8	+0.3
	baz=252						
DHY	Denali Highway	85.34	26	IAmb	IAmb	01 58 20.6	
	comp=Z,7.0nm,1.0s						
DHY	Denali Highway	85.34	26	P	P	01 58 19.0	+0.2
	baz=254						
B22K	Teshekpuk Lake	85.38	18	P	P	01 58 19.2	+0.6
	baz=248						
COLD	Coldfoot	85.41	22	P	P	01 58 19.2	+0.3
	baz=252						
CCB	Clear Creek Bu	85.59	24	IAmb	IAmb	01 58 21.0	
	comp=Z,6.2nm,0.9s						
KLU	Klutina	85.59	28	P	P	01 58 20.0	-0.1
	baz=256						
D23K	Nanushuk River	85.80	20	P	P	01 58 21.7	+0.9
	baz=251,SNR=11						
HDA	Harding Lake	85.88	25	IAmb	IAmb	01 58 22.8	
	comp=Z,5.1nm,1.0s						
HDA	Harding Lake	85.88	25	P	P	01 58 21.5	+0.2
	baz=255						
E23K	Chandalar	85.89	21	IAmb	IAmb	01 58 24.5	
	comp=Z,10nm,1.0s						
E23K	Chandalar	85.89	21	P	P	01 58 22.5	+1.1
	baz=252,SNR=7.7						
H24K	Noodor Dome	85.89	23	IAmb	IAmb	01 58 32.4	
	comp=Z,15nm,1.9s						
H24K	Noodor Dome	85.89	23	P	P	01 58 21.9	+0.6
	baz=254						
KAIM	Kayak Island	85.95	29	P	P	01 58 22.2	+0.5
	baz=257						
ILAR	Eielson Array	86.00	24	P	P	01 58 19.8	-2.1
ILAR	Eielson Array	86.00	24	P	P	01 58 19.9	-1.9
	comp=Z,2.7nm,0.7s,baz=260,slow=4.7,SNR=26						
	comp=Z,2.7nm,0.7s						
TOLK	Toolik Lake Re	86.08	20	P	P	01 58 22.6	+0.4
	baz=252						
BMRM	Bremner River	86.09	28	P	P	01 58 23.1	+0.7
	baz=257						
C23K	Itkillik River	86.11	19	P	P	01 58 23.5	+1.2
	baz=251						
PAX	Paxson	86.16	26	P	P	01 58 23.9	+1.1
	baz=256						
HARP	HAARP	86.16	27	P	P	01 58 23.8	+1.1
	baz=256						
K24K	Donnelly Dome	86.22	26	P	P	01 58 23.9	+0.9
	baz=256						
N25K	Chitina, Valde	86.24	28	P	P	01 58 24.1	+0.9
	baz=257						
G24K	Hadweenzic Riv	86.28	23	P	P	01 58 24.1	+0.8
	baz=254						
E24K	Your Creek	86.30	21	P	P	01 58 23.7	+0.4
	baz=253						
F24K	Squaw Lake	86.36	22	IAmb	IAmb	01 58 26.1	
	comp=Z,9.5nm,1.2s						
F24K	Squaw Lake	86.36	22	P	P	01 58 24.3	+0.7
	baz=254,SNR=6.9						
D24K	Happy Valley	86.50	20	P	P	01 58 25.1	+0.9
	baz=253						
J25K	Salcha River,	86.59	25	P	P	01 58 24.9	0.0
	baz=256						
RIDG	Independent Ri	86.61	26	P	P	01 58 25.6	+0.6
	baz=257						
C24K	Franklin Bluff	86.70	19	P	P	01 58 26.0	+0.8
	baz=253						
CRQE	Cirque	86.77	29	P	P	01 58 26.8	+0.9
	baz=258						
H25L	Birch Creek	86.81	23	P	P	01 58 26.7	+0.9
	baz=256						
G25K	Bearman Lake	86.83	23	P	P	01 58 26.1	+0.3
	baz=255						
MCARA	McCarthy VSAT	86.93	28	P	P	01 58 27.1	+0.6
	baz=258						
SCRK	Sand Creek	87.03	26	P	P	01 58 27.7	+0.6
	baz=258						
FYU	Fort Yukon	87.11	23	P	P	01 58 28.4	+1.2
QSPA	South Pole Qui	87.13	180	P	P	01 58 28.0	+0.4
QSPA				IAmb	IAmb	01 58 40.9	
	comp=Z,9.1nm,1.1s						
QSPA	South Pole Qui	87.13	180	P	P	01 58 27.9	+0.4
	comp=Z,3.1nm,0.7s,baz=222,slow=1.1,SNR=17						
	comp=Z,3.1nm,0.7s						
F25K	Christian Rive	87.21	22	IAmb	IAmb	01 58 30.4	
	comp=Z,5.5nm,1.1s						
F25K	Christian Rive	87.21	22	P	P	01 58 28.7	+0.9
	baz=256						
J26L	Joseph Creek	87.33	25	IAmb	IAmb	01 58 32.0	
	comp=Z,3.9nm,0.9s						
J26L	Joseph Creek	87.33	25	P	P	01 58 28.5	0.0
	baz=258						
E25K	Arctic Village	87.36	21	IAmb	IAmb	01 58 32.5	
	comp=Z,8.2nm,1.3s						
E25K	Arctic Village	87.36	21	P	P	01 58 29.6	+1.0
	baz=256						
D25K	Kavik River	87.38	20	P	P	01 58 28.8	+0.3
	baz=255						
BMAR	Burnt Mountain	87.56	22	P	P	01 58 29.8	+0.3
M27K	Edge Creek, AK	87.65	27	IAmb	IAmb	01 58 32.7	
	comp=Z,4.9nm,1.1s						
M27K	Edge Creek, AK	87.65	27	P	P	01 58 31.6	+1.4
	baz=260						
CTG	Chitna Glacier	87.65	29	P	P	01 58 30.5	+0.4
	baz=260						
I26K	Coal Creek Min	87.67	24	P	P	01 58 31.0	+1.0
	baz=258						
G26K	Porcupine Rive	87.76	23	P	P	01 58 31.1	+0.7
	baz=258,SNR=10						
F26K	Sheenjek River	87.79	22	IAmb	IAmb	01 58 33.9	
	comp=Z,5.9nm,1.1s						
F26K	Sheenjek River	87.79	22	P	P	01 58 31.3	+0.7
	baz=257,SNR=6.7						
L27K	Beaver Creek,	87.80	27	P	P	01 58 31.4	+0.7
	baz=260						
BCAR	Beaver Creek A	87.82	27	P	P	01 58 30.9	0.0
K27K	Chicken	87.87	26	P	P	01 58 31.6	+0.6
	baz=259						
BVCY	Beaver Creek	88.12	27	P	P	01 58 32.9	+0.7
	baz=260						
O28M	Mount Upton	88.17	29	P	P	01 58 33.4	+0.5
	baz=261						
YUK3	Moose Creek	88.20	28	P	P	01 58 33.3	+0.4
	baz=261						
I27K	Kandik River	88.35	24	P	P	01 58 33.7	+0.4
	baz=260,SNR=14						
H27K	Steamboat Moun	88.50	24	P	P	01 58 34.8	+0.8
	baz=260,SNR=11						
G27K	Doyon Strip	88.56	23	P	P	01 58 35.0	+0.8
	baz=260						
E27K	Coleen River	88.83	22	P	P	01 58 36.1	+0.7
	baz=260						
YUK4	Talbot Arm	89.00	29	P	P	01 58 37.6	+1.0
	baz=262						
I28M	Miner Creek	89.02	24	P	P	01 58 37.2	+0.7
	baz=261,SNR=5.6						
DAWY	Dawson	89.04	26	IAmb	IAmb	01 58 38.7	
	comp=Z,5.8nm,0.9s						
DAWY	Dawson	89.04	26	P	P	01 58 37.4	+0.9
	baz=262,SNR=10						
P29M	Windy Craggy	89.23	30	P	P	01 58 38.2	+0.7
	baz=263						
M29M	Somme Creek	89.23	27	P	P	01 58 38.3	+0.8
	baz=262						
D27M	Malcolm River	89.24	21	P	P	01 58 38.3	+0.9
	baz=260						
F28M	Old Crow	89.38	22	P	P	01 58 39.0	+1.0
	baz=261						
L29M	L29M	89.47	27	IAmb	IAmb	01 58 50.8	
	comp=Z,13nm,1.6s						
L29M	L29M	89.47	27	P	P	01 58 39.1	+0.5
	baz=263						
HYT	Haines Junctio	89.49	29	P	P	01 58 39.7	+0.9
	baz=263						
E28M	Babbage River	89.65	21	P	P	01 58 40.2	+0.9
	baz=261						
P30M	Million Dollar	89.67	30	P	P	01 58 40.7	+1.1
	baz=264						
N30M	Aishikik Lake	89.76	29	P	P	01 58 41.1	+1.1
	baz=264						
H29M	Whitestone	89.77	24	P	P	01 58 40.8	+1.0
	baz=263						
S31K	Pelican	89.83	32	P	P	01 58 41.3	+1.1
	baz=264						
K29M	Barlow Dome	89.83	26	P	P	01 58 41.4	+1.0
	baz=263						
G29M	Pine Creek	89.99	23	P	P	01 58 42.0	+1.1
	baz=263						
O30N	Mendenhall	90.17	29	P	P	01 58 42.6	+0.7
	baz=265						

J30M	**Hart River**	**90.43**	**25**	P	**P**	**01 58 43.6**	**+0.4**
	baz=264						
SKAG	**Skagway**	**90.43**	**31**	P	**P**	**01 58 43.5**	**+0.4**
	baz=265						
EPYK	**Eagle Plains**	**90.44**	**24**	P	**P**	**01 58 43.5**	**+0.4**
	baz=264						
I30M	**Mount Dempster**	**90.47**	**25**	P	**P**	**01 58 44.0**	**+0.7**
	baz=264						
G30M	**tAoh Zraii Nji**	**90.70**	**23**	P	**P**	**01 58 44.9**	**+0.7**
	baz=264						
WHY	**Whitehorse**	**90.75**	**29**	P	**P**	**01 58 45.3**	**+0.6**
	baz=266						
R32K	**Eaglecrest**	**90.76**	**32**	P	**P**	**01 58 45.3**	**+0.7**
	baz=266						
P32M	**Atlin**	**91.26**	**31**	P	**P**	**01 58 47.5**	**+0.5**
	baz=267						
H31M	**Peel River**	**91.36**	**24**	P	**P**	**01 58 47.9**	**+0.5**
	baz=266						
FARO	**Faro, Yukon**	**91.59**	**28**	P	**P**	**01 58 48.5**	**+0.1**
FARO	**Faro, Yukon**	**91.59**	**28**	P	**P**	**01 58 49.1**	**+0.7**
	baz=267						
INK	**Inuvik**	**91.83**	**22**	P	**P**	**01 58 50.2**	**+0.9**
	baz=267						
TXAR	**Lajitas Array**	**115.50**	**59**	PKPdf	**PKiKP**	**02 04 24.4**	**-0.1**
PB11	**IPOC Station P**	**144.36**	**130**	PKPdf	**PKPdf**	**02 05 18.0**	**-1.0**
CPUP	**Villa Florida**	**147.21**	**153**	PKPbc	**PKPab**	**02 05 26.6**	**-0.7**
	comp=Z,1.0nm,0.9s,baz=230,slow=4.9,SNR=6.3						
LPAZ	**La Paz**	**147.52**	**127**	PKPbc	**PKPbc**	**02 05 28.3**	**+0.7**
	comp=Z,4.5nm,0.9s,baz=254,slow=3.1,SNR=13						
RUSC	**La Rusia**	**148.33**	**83**	PKPbc	**PKPdf**	**02 05 27.4**	**+1.0**
OBIP	**Obispado Ponce**	**151.08**	**57**	PKPbc	**PKiKP**	**02 05 36.1**	**-0.2**

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*IDC **24** 01:50:01.0±1.0, 2.°39S×138.°64E, h0^{km}, mb3.9/4, mbtmp4.0/6, ML3.8/2, Error ellipse: s-maj=26.6km s-min=24.4km az=48.0*

ISC 24 01:50:06.1±1.0**, 2.°5S**±0.°1×**138.°6E**±0.°1**, h35^{km}, n8,** σ**1.^{s}30**/9**,**
mb3.9/4**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**2.12**	**92**	Pn	**Pn**	**01 50 38.8**	**-0.4**
	17nm,0.3s,baz=228,slow=6.9,SNR=5.0						
JAY				Sn	**Sn**	**01 51 05.5**	**+1.2**
	4.7nm,0.3s,baz=114,slow=20,SNR=2.4						
	43nm,0.4s						
WRA	**Warramunga Arr**	**17.88**	**193**	P	**Pn**	**01 54 11.9**	**-0.3**
	0.4nm,0.3s,baz=15,slow=12,SNR=3.1						
	5.4nm,0.8s						
ASAR	**Alice Springs**	**21.58**	**192**	P	**P**	**01 54 53.9**	**+1.0**
	12nm,0.8s,baz=15,slow=12,SNR=12						
	12nm,0.8s						
MKAR	**Makanchi Array**	**69.50**	**322**	P	**P**	**02 01 12.1**	**+0.8**
	0.9nm,0.9s,baz=119,slow=10.0,SNR=4.2						
	0.9nm,0.9s						
KURBB	**Kurchatov Arra**	**73.44**	**325**	P	**P**	**02 01 36.6**	**+1.7**
	0.7nm,0.8s,baz=110,slow=5.3,SNR=3.3						
	0.7nm,0.8s						
ILAR	**Eielson Array**	**85.65**	**24**	P	**P**	**02 02 39.6**	**-1.3**
	0.6nm,0.6s,baz=262,slow=4.3,SNR=9.5						
	0.6nm,0.6s						
CPUP	**Villa Florida**	**147.52**	**153**	PKPbc	**PKPbc**	**02 09 46.5**	**-0.9**
	0.5nm,0.8s,baz=172,slow=2.6,SNR=3.4						
LPAZ	**La Paz**	**147.70**	**126**	PKPbc	**PKPbc**	**02 09 47.8**	**-1.1**
	0.5nm,0.7s,baz=207,slow=3.5,SNR=4.0						

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*IDC **24** 01:51:57.3±1.3, 2.°43S×138.°44E, h0^{km}, mb3.8/3, mbtmp3.9/5, ML3.7/2, Error ellipse: s-maj=28.3km s-min=18.2km az=4.0*

*DJA **24** 01:52:04.2±0.4, 2°S±6°×13°9E±°, h10^{km}, M3.9/6, MLv3.9/6*

ISC 24 01:52:02.0±1.0**, 2.°5S**±0.°1×**138.°7E**±0.°1**, h35^{km}, n10,**
σ**1.^{s}12**/8**, mb3.8**/3**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**0.53**	**5**	P	**Pn**	**01 52 13.2**	**+0.1**
GENI	**Genyem**	**1.50**	**93**	P	**Pn**	**01 52 26.2**	**-0.3**
JAY	**Jayapura**	**2.04**	**90**	Pn	**Pn**	**01 52 34.4**	**+0.5**
	7.4nm,0.3s,baz=288,slow=12,SNR=2.3						
JAY				Lg	Lg	01 53 10.8	
	6.7nm,0.3s,baz=103,slow=21,SNR=1.8						
	49nm,0.7s						
JAY	**Jayapura**	**2.04**	**90**	P	**Pn**	**01 52 33.7**	**-0.2**
SRPI	**Serui, Papua**	**2.51**	**285**	P	Pn	01 52 49.8	+10
BAKI	**Biak**	**2.88**	**297**	P	Pn	01 52 53.7	+8.3
WRA	**Warramunga Arr**	**17.82**	**193**	P	**Pn**	**01 56 07.5**	**+0.2**
	0.4nm,0.3s,baz=16,slow=12,SNR=3.7						
	6.1nm,0.9s						
ASAR	**Alice Springs**	**21.52**	**192**	P	**P**	**01 56 48.1**	**0.0**
	9.7nm,0.9s,baz=20,slow=11,SNR=7.2						
	9.7nm,0.9s						
MKAR	**Makanchi Array**	**69.61**	**322**	P	**P**	**02 03 06.0**	**-1.8**
	0.4nm,0.8s,baz=111,slow=8.0,SNR=2.7						
	0.4nm,0.8s						
BVAR	**Borovoye Array**	**79.13**	**325**	P	**P**	**02 04 04.7**	**+1.6**
	0.5nm,0.4s,baz=104,slow=6.1,SNR=2.0						
	0.5nm,0.4s						

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*IDC **24** 01:58:56.3±1.4, 2.°54S×138.°51E, h0^{km}, mb3.5/3, mbtmp3.6/5, ML3.6/2, Error ellipse: s-maj=28.8km s-min=18.0km az=173.0*

*DJA **24** 01:59:02.2±0.9, 2°S±8°×13°9E±°, h21^{km}±10^{km}, M3.8/5, mb4.5/1, MLv3.5/5*

ISC 24 01:59:01.5±1.0**, 2.°6S**±0.°1×**138.°73E**±0.°08**, h35^{km}, n9,**
σ**1.^{s}41**/9**, mb3.6**/3**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**0.56**	**358**	P	**Pn**	**01 59 12.6**	**-0.4**
GENI	**Genyem**	**1.44**	**92**	P	**Pn**	**01 59 26.1**	**+1.0**
JAY	**Jayapura**	**1.98**	**89**	Pn	**Pn**	**01 59 33.7**	**+1.2**
	5.4nm,0.3s,baz=237,slow=7.4,SNR=14						
JAY				Lg	Lg	02 00 06.8	
	8.0nm,0.3s,baz=127,slow=19,SNR=4.4						
	18nm,0.5s						
JAY	**Jayapura**	**1.98**	**89**	P	**Pn**	**01 59 33.8**	**+1.2**
BAKI	**Biak**	**2.95**	**297**	P	**Pn**	**01 59 47.9**	**+2.0**
WRA	**Warramunga Arr**	**17.81**	**194**	P	**Pn**	**02 03 05.0**	**-1.7**
	0.4nm,0.3s,baz=15,slow=12,SNR=8.9						
	1.9nm,0.7s						
ASAR	**Alice Springs**	**21.50**	**192**	P	**P**	**02 03 46.8**	**-0.8**
	1.6nm,0.6s,baz=20,slow=9.5,SNR=12						
	1.6nm,0.6s						
MKAR	**Makanchi Array**	**69.68**	**322**	P	**P**	**02 10 07.7**	**0.0**
	0.2nm,0.6s,baz=117,slow=5.0,SNR=1.8						
	0.2nm,0.6s						
ILAR	**Eielson Array**	**85.68**	**24**	P	**P**	**02 11 36.5**	**0.0**
	0.3nm,0.8s,baz=262,slow=5.9,SNR=3.0						
	0.3nm,0.8s						

IDC 24 02:02:21.5±1.4**, 2.°51S**×**138.°52E, h0^{km}, mb3.7**/3**,**
mbtmp3.7/5**, ML4.0**/1**, Error ellipse: s-maj=34.9km**
s-min=27.0km az=107.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**2.18**	**90**	Pn	Pn	02 03 00.3	+1.2
	25nm,0.4s,baz=90,slow=0.0						
WRA	**Warramunga Arr**	**17.80**	**193**	P	Pn	02 06 29.3	-1.6
	0.5nm,0.3s,baz=16,slow=12,SNR=7.7						
	0.9nm,0.4s						
ASAR	**Alice Springs**	**21.50**	**192**	P	P	02 07 12.4	+0.2
	5.9nm,0.8s,baz=20,slow=12,SNR=18						
	5.9nm,0.8s						
MKAR	**Makanchi Array**	**69.52**	**322**	P	P	02 13 33.2	+1.2
	0.4nm,0.6s,baz=108,slow=9.3,SNR=2.9						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**85.73**	**24**	P	P	02 15 00.8	-1.4
	0.3nm,0.6s,baz=272,slow=4.7,SNR=4.3						
	0.3nm,0.6s						

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*IDC **24** 02:03:08.9±0.6, 2.°65S×138.°49E, h0^{km}, mb4.2/14, mbtmp4.2/18, ML4.5/4, MS4.4/1, Error ellipse: s-maj=14.9km s-min=13.6km az=71.0*

*NEIC **24** 02:03:11.9±1.2, 2.°71S±0.°09×138.°60E±0.°07, h14^{km}±4^{km}, mb4.7/44, Error ellipse: s-maj=12.8km s-min=9.7km az=175.0*

*DJA **24** 02:03:13.6±0.4, 3°S±5°×13°9E±°, h10^{km}, M4.6/6, mb4.5/1, MLv4.6/6*

ISC 24 02:03:14.2±0.4**, 2.°79S**±0.°05×**138.°64E**±0.°05**, h35^{km}, n261,**
σ**0.^{s}94**/257**, mb4.5**/39**, 1D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**0.80**	**5**	P	**Pn**	**02 03 26.6**	**-2.3**
GENI	**Genyem**	**1.54**	**83**	P	**Pn**	**02 03 40.9**	**+1.7**
JAY	**Jayapura**	**2.08**	**83**	Pn	**Pn**	**02 03 47.4**	**+0.7**
	29nm,0.3s,baz=232,slow=9.9,SNR=9.7						
JAY				Lg	Lg	02 04 18.7	
	32nm,0.3s,baz=100,slow=18,SNR=3.9						
	166nm,0.5s						
JAY	**Jayapura**	**2.08**	**83**	P	**Pn**	**02 03 47.4**	**+0.7**
SRPI	**Serui, Papua**	**2.56**	**291**	P	**Pn**	**02 03 55.6**	**+2.3**
BAKI	**Biak**	**2.99**	**302**	P	**Pn**	**02 04 01.7**	**+2.6**
RKPI	**Ransiki, Papua**	**4.64**	**286**	P	Pn	02 04 25.8	+4.0
FAKI	**Fak Fak**	**6.38**	**269**	Pn	**Pn**	**02 04 47.3**	**+1.5**
FAKI	**Fak Fak**	**6.38**	**269**	P	**Pn**	**02 04 47.8**	**+1.9**
COEN	**Coen**	**11.97**	**158**	Pn	**Pn**	**02 06 02.7**	**+0.3**
MTN	**Manton Dam**	**12.45**	**216**	Pn	**Pn**	**02 06 09.5**	**+0.5**
SOEI	**Soe**	**15.87**	**243**	P	**P**	**02 06 58.0**	**-0.5**
LUWI	**Luwuk**	**15.95**	**276**		**P**	**02 06 57.4**	**-2.0**
LUWI				IAmb	IAmb	02 07 04.2	
	comp=Z,38nm,0.7s						
KNRA	**Kununurra**	**16.08**	**217**		**P**	**02 06 59.6**	**-1.2**
KNRA				IAmb	IAmb	02 07 10.6	
	comp=Z,24nm,0.7s						
BATI	**Baumata**	**16.60**	**243**	Pn	**Pn**	**02 07 01.3**	**-3.1**
	comp=Z,16nm,0.3s,baz=35,slow=0.6,SNR=7.6						
	comp=Z,13nm,0.3s						
WB0	**Warramunga Arr**	**17.38**	**194**	Pn	**Pn**	**02 07 14.2**	**+0.1**
WR8	**Warramunga Arr**	**17.54**	**193**	Pn	**Pn**	**02 07 15.4**	**-0.7**
WRAB	**Tennant Creek**	**17.55**	**193**		**Pn**	**02 07 16.0**	**-0.2**
WRA	**Warramunga Arr**	**17.56**	**194**	Pn	**Pn**	**02 07 15.3**	**-1.1**
WRA	**Warramunga Arr**	**17.56**	**194**	P	**Pn**	**02 07 15.3**	**-1.1**
	comp=Z,1.7nm,0.3s,baz=18,slow=12,SNR=16						
WRA				S	**Sn**	**02 10 24.7**	**-6.3**
	comp=Z,10nm,1.0s,baz=10.0,slow=22,SNR=5.0						
	comp=Z,8.6nm,0.8s						
TOLI2	**Tolitoli**	**18.27**	**282**	P	**Pn**	**02 07 23.5**	**-1.6**
FITZ	**Fitzroy Crossi**	**19.85**	**219**	P	**P**	**02 07 41.8**	**-0.5**
FITZ	**Fitzroy Crossi**	**19.85**	**219**	P	**P**	**02 07 41.8**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=57,slow=8.0,SNR=7.4						
	comp=Z,2.7nm,0.7s						
AS31	**Alice Springs**	**21.25**	**192**	P	**P**	**02 07 58.2**	**+0.7**
ASAR	**Alice Springs**	**21.26**	**192**	P	**P**	**02 07 57.0**	**-0.5**
ASAR	**Alice Springs**	**21.26**	**192**	P	**P**	**02 07 58.6**	**+1.0**
	comp=Z,5.2nm,0.6s,baz=20,slow=11,SNR=20						
ASAR				LR	LR	02 16 45.7	
	comp=Z,1µm,20.6s,baz=38,slow=38						
	comp=Z,5.2nm,0.6s						
STKA	**Stephens Creek**	**29.07**	**175**	P	**P**	**02 09 13.8**	**+2.4**
	comp=Z,2.2nm,0.8s,baz=352,slow=20,SNR=2.8						
	comp=Z,2.2nm,0.8s						
NJ2	**Nanjing**	**39.41**	**333**	*e*P	**P**	**02 10 42.3**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KSRS	**Korea Array**	**41.26**	**347**	P	**P**	**02 10 55.5**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=150,slow=9.9,SNR=2.1						
	comp=Z,0.5nm,0.3s						
CM31	**Chiang Mai Arr**	**44.41**	**300**	P	**P**	**02 11 21.3**	**-0.7**
CM31				IAmb	IAmb	02 11 50.1	
	comp=Z,7.5nm,0.4s						
CMAR	**Chiang Mai Arr**	**44.41**	**300**	P	**P**	**02 11 21.3**	**-0.7**
CMAR	**Chiang Mai Arr**	**44.41**	**300**	P	**P**	**02 11 21.1**	**-0.8**
	comp=Z,1.7nm,0.3s,baz=113,slow=5.9,SNR=5.8						
	comp=Z,1.7nm,0.3s						
PZH	**PanZhiHua**	**46.02**	**312**	P	**P**	**02 11 36.0**	**+1.2**
USRK	**Ussuriysk Ar.**	**47.16**	**353**	P	**P**	**02 11 42.1**	**-1.1**
USRK	**Ussuriysk Ar.**	**47.16**	**353**	P	**P**	**02 11 42.9**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=202,slow=6.8,SNR=4.3						
	comp=Z,1.0nm,0.7s						
BNX	**BinXian**	**49.34**	**350**	⇓P	**P**	**02 12 00.0**	**0.0**
BNX				pmax	pmax		
	comp=Z,15nm,0.9s						
YSS	**Yuzhno-Sakhali**	**49.66**	**4**	P	**P**	**02 12 01.9**	**-0.5**
RTZ	**Ruatahuna**	**49.93**	**141**	P	**P**	**02 12 06.0**	**+1.2**
BKZ	**Black Stump Fm**	**49.95**	**141**	P	**P**	**02 12 05.8**	**+0.9**
HHC	**Hu-ho-hao-te**	**49.97**	**333**	*e*P	**P**	**02 12 06.8**	**+1.8**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
XLT	**XiLinHaoTe**	**50.70**	**339**	*e*P	**P**	**02 12 13.9**	**+3.4**
XLT				sP	pP	02 12 21.3	-0.1
XLT				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HEH	**HeiHe**	**53.71**	**351**	*e*P	**P**	**02 12 32.0**	**-0.6**
HEH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GTA	**Gaotai**	**55.09**	**324**	*e*P	**P**	**02 12 44.5**	**+1.4**
GTA				pP	pP	02 12 49.8	-3.9
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ULN	**Ulaanbaatar**	**57.51**	**335**	P	**P**	**02 12 60.0**	**-0.2**
SONM	**Songino Array**	**57.76**	**335**	P	**P**	**02 13 01.3**	**-0.6**
SONM	**Songino Array**	**57.76**	**335**	P	**P**	**02 13 01.2**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=159,slow=5.5,SNR=5.0						
	comp=Z,1.4nm,0.8s						
PEA0B	**Petropavlovsk-**	**57.95**	**13**	P	**P**	**02 13 03.2**	**+0.2**
PEA0B				IAmb	IAmb	02 13 06.5	
	comp=Z,14nm,1.1s						
PETK	**Petropavlovsk-**	**57.95**	**13**	P	**P**	**02 13 02.6**	**-0.4**
PETK	**Petropavlovsk-**	**57.95**	**13**	P	**P**	**02 13 02.8**	**-0.2**
	comp=Z,1.9nm,0.5s,baz=132,slow=5.5,SNR=9.2						
	comp=Z,1.9nm,0.5s						
EVN	**Everest**	**58.43**	**305**	P	**P**	**02 13 08.0**	**+0.5**
YAK	**Yakutsk**	**65.00**	**355**	P	**P**	**02 13 50.3**	**-0.1**
KIWB	**Kanaga Island**	**66.03**	**28**	P	**P**	**02 13 58.3**	**+1.0**
ADK	**Adak**	**66.28**	**28**	P	**P**	**02 13 58.6**	**-0.2**
MKAR	**Makanchi Array**	**69.81**	**322**	P	**P**	**02 14 20.7**	**-0.5**
MKAR	**Makanchi Array**	**69.81**	**322**	P	**P**	**02 14 19.7**	**-1.5**
	comp=Z,1.3nm,0.7s,baz=115,slow=7.6,SNR=9.0						
	comp=Z,1.3nm,0.7s						
MAKZ	**Makanchi**	**70.00**	**322**	P	**P**	**02 14 21.1**	**-1.3**
MAKZ				IAmb	IAmb	02 14 26.0	
	comp=Z,3.4nm,0.8s						
ZALV	**Zalesovo Beam**	**71.97**	**330**	P	**P**	**02 14 34.0**	**-0.1**
ZALV	**Zalesovo Beam**	**71.97**	**330**	P	**P**	**02 14 31.9**	**-2.2**
	comp=Z,1.0nm,0.6s,baz=117,slow=5.2,SNR=3.8						
	comp=Z,1.0nm,0.6s						
BILL	**Bilibino**	**73.26**	**10**	P	**P**	**02 14 41.3**	**-0.2**
BILL				IAmb	IAmb	02 14 42.3	
	comp=Z,3.1nm,0.6s						
KURBB	**Kurchatov Arra**	**73.75**	**325**	P	**P**	**02 14 42.5**	**-2.2**
	comp=Z,1.0nm,0.8s,baz=116,slow=5.1,SNR=4.6						
	comp=Z,1.0nm,0.8s						
FALS	**False Pass**	**74.51**	**31**	P	**P**	**02 14 49.1**	**0.0**
	baz=241						
S12K	**Black Hills**	**75.59**	**30**	P	**P**	**02 14 55.1**	**-0.2**
S12K	**Black Hills**	**75.59**	**30**	P	**P**	**02 14 55.4**	**+0.1**
	baz=242						
VNDA	**Vanda**	**75.71**	**175**	P	**P**	**02 14 56.8**	**+1.2**
VNDA	**Vanda**	**75.71**	**175**	P	**P**	**02 14 56.8**	**+1.2**
	comp=Z,1.8nm,0.6s,baz=322,slow=7.0,SNR=11						
	comp=Z,1.8nm,0.6s						
KKAR	**Karatay Array**	**76.14**	**316**	P	**P**	**02 14 58.4**	**-0.4**
K13K	**Kusilvak Mount**	**77.48**	**24**	P	**P**	**02 15 07.4**	**+1.5**
K13K				IAmb	IAmb	02 15 07.7	
	comp=Z,5.4nm,0.8s						
K13K	**Kusilvak Mount**	**77.48**	**24**	P	**P**	**02 15 06.7**	**+0.8**
	baz=239						
O14K	**Tigyukauivet M**	**77.62**	**27**	P	**P**	**02 15 07.8**	**+1.1**
	baz=242						
L14K	**Kuka Creek**	**78.00**	**25**	P	**P**	**02 15 10.1**	**+1.4**
	baz=241						
M14K	**Bethel**	**78.02**	**26**	P	**P**	**02 15 09.3**	**+0.5**
M14K	**Bethel**	**78.02**	**26**	P	**P**	**02 15 09.8**	**+0.9**
	baz=242						
M15K	**Kasigluk River**	**78.54**	**26**	P	**P**	**02 15 12.9**	**+1.1**
	baz=243						
N15K	**Kwethluk River**	**78.57**	**27**	P	**P**	**02 15 12.7**	**+0.7**
	baz=243						
ANM	**Nome**	**78.60**	**21**	P	**P**	**02 15 12.6**	**+0.6**
	baz=238						
L15K	**Ungalak Mounta**	**78.66**	**25**	P	**P**	**02 15 12.8**	**+0.4**
	baz=242						
F14K	**Arctic Creek**	**78.75**	**20**	P	**P**	**02 15 13.8**	**+1.0**
	baz=236						
K15K	**Wolf Creek Mou**	**78.94**	**24**	P	**P**	**02 15 14.4**	**+0.5**
K15K				IAmb	IAmb	02 15 15.7	
	comp=Z,6.8nm,0.8s						
K15K	**Wolf Creek Mou**	**78.94**	**24**	P	**P**	**02 15 15.0**	**+1.1**
	baz=242						
P16K	**Nushagak River**	**79.04**	**28**	P	**P**	**02 15 15.7**	**+1.2**
	baz=245						
O16K	**Kokwok River B**	**79.22**	**28**	P	**P**	**02 15 16.1**	**+0.6**
	baz=245						
N16K	**Nishlik Lake**	**79.29**	**27**	P	**P**	**02 15 16.7**	**+0.8**
	baz=244						
G15K	**Niukluk**	**79.31**	**21**	P	**P**	**02 15 17.0**	**+1.1**
	baz=239						
BVAR	**Borovoye Array**	**79.33**	**325**	P	**P**	**02 15 15.9**	**-0.5**
	comp=Z,3.0nm,0.7s,baz=120,slow=7.5,SNR=9.7						
	comp=Z,3.0nm,0.7s						
M16K	**Timber Creek**	**79.45**	**26**	IAmb	IAmb	02 15 18.8	
	comp=Z,8.0nm,0.9s						
M16K	**Timber Creek**	**79.45**	**26**	P	**P**	**02 15 17.8**	**+1.0**
	baz=244						
F15K	**North Star Dit**	**79.47**	**21**	P	**P**	**02 15 17.4**	**+0.6**
	baz=238						
L16K	**Owhat River**	**79.53**	**25**	P	**P**	**02 15 17.4**	**+0.2**
L16K				IAmb	IAmb	02 15 18.6	
	comp=Z,4.7nm,0.9s						
L16K	**Owhat River**	**79.53**	**25**	P	**P**	**02 15 18.0**	**+0.9**
	baz=244						
O17K	**Koliganek Bris**	**79.76**	**28**	P	**P**	**02 15 19.0**	**+0.6**
	baz=246						
J16K	**Anvik River**	**79.78**	**24**	P	**P**	**02 15 19.5**	**+1.0**
	baz=242						
P17K	**Kvichak River**	**79.84**	**28**	P	**P**	**02 15 19.6**	**+0.7**
	baz=247						
SII	**Sitkinak Islan**	**79.96**	**31**	P	**P**	**02 15 20.2**	**+0.5**
	baz=249						
I17K	**Unalakleet**	**80.02**	**23**	P	**P**	**02 15 20.3**	**+0.5**
	baz=242						
N17K	**Nushagak Hills**	**80.03**	**27**	P	**P**	**02 15 20.7**	**+0.8**
	baz=246						
G16K	**Koyuk River**	**80.13**	**21**	P	**P**	**02 15 20.7**	**+0.4**
	baz=240						
R18K	**Karluk**	**80.19**	**30**	P	**P**	**02 15 21.2**	**+0.4**
	baz=249						
L17K	**Donlin**	**80.22**	**25**	P	**P**	**02 15 22.0**	**+1.1**
	baz=245						
M17K	**Holitna River**	**80.28**	**26**	P	**P**	**02 15 22.4**	**+1.1**
M17K				IAmb	IAmb	02 15 23.4	
	comp=Z,6.4nm,0.8s						
M17K	**Holitna River**	**80.28**	**26**	P	**P**	**02 15 22.0**	**+0.8**
	baz=246						
J17K	**VABM Dome**	**80.44**	**24**	P	**P**	**02 15 22.8**	**+0.7**
	baz=244						
K17K	**Iditarod**	**80.46**	**25**	P	**P**	**02 15 23.2**	**+1.0**
	baz=244						
P18K	**Big Mountain,**	**80.48**	**28**	P	**P**	**02 15 23.0**	**+0.6**
	baz=248						
OHAK	**Old Harbor**	**80.66**	**31**	P	**P**	**02 15 23.2**	**-0.1**
OHAK				IAmb	IAmb	02 15 24.5	
	comp=Z,8.4nm,0.8s						
OHAK	**Old Harbor**	**80.66**	**31**	P	**P**	**02 15 23.7**	**+0.4**
	baz=250						
O18K	**Koktuh Hills**	**80.67**	**28**	P	**P**	**02 15 23.9**	**+0.5**
	baz=248						
N18K	**Kilae Creek**	**80.67**	**27**	P	**P**	**02 15 24.3**	**+0.9**
	baz=247						
G17K	**Kiwalik Mounta**	**80.80**	**22**	P	**P**	**02 15 24.4**	**+0.4**
	baz=242						
H17K	**Granite Mounta**	**80.81**	**22**	P	**P**	**02 15 25.2**	**+1.1**
	baz=243						
L18K	**Granite Mounta**	**80.94**	**25**	P	**P**	**02 15 25.7**	**+0.9**
	baz=246						
M18K	**Stony River**	**81.02**	**26**	P	**P**	**02 15 26.1**	**+0.9**
	baz=247						
F17K	**Baldwin Pennin**	**81.03**	**21**	P	**P**	**02 15 26.1**	**+1.0**
	baz=241						
KDAK	**Kodiak Island**	**81.20**	**30**	P	**P**	**02 15 26.6**	**+0.3**
KDAK	**Kodiak Island**	**81.20**	**30**	P	**P**	**02 15 26.5**	**+0.3**
	baz=250						
N19K	**Bonanza Creek**	**81.36**	**27**	P	**P**	**02 15 27.7**	**+0.5**
	baz=248						
C17K	**DeLong Mountai**	**81.41**	**18**	P	**P**	**02 15 27.9**	**+0.7**
	baz=239						
J18K	**Innoko River**	**81.43**	**24**	P	**P**	**02 15 27.8**	**+0.3**
	baz=246						
P19K	**Oil Pt**	**81.53**	**28**	P	**P**	**02 15 27.9**	**-0.1**
	baz=250						
L19K	**White Mountain**	**81.71**	**26**	P	**P**	**02 15 29.6**	**+0.6**
L19K				IAmb	IAmb	02 15 30.4	
	comp=Z,6.5nm,0.9s						
L19K	**White Mountain**	**81.71**	**26**	P	**P**	**02 15 29.6**	**+0.6**
	baz=248						
G18K	**Tagagawik**	**81.72**	**22**	P	**P**	**02 15 29.5**	**+0.6**
	baz=244						
E18K	**Tukpahlearik C**	**81.73**	**20**	P	**P**	**02 15 29.4**	**+0.6**
	baz=242						
M19K	**Big River Lodg**	**81.81**	**26**	P	**P**	**02 15 30.3**	**+0.9**
	baz=248						
GCSA	**Galena City Sc**	**81.90**	**23**	P	**P**	**02 15 30.5**	**+0.8**
	baz=246						
O20K	**Slope Mountain**	**81.97**	**28**	P	**P**	**02 15 30.9**	**+0.5**
	baz=250						
J19K	**Poorman**	**82.09**	**24**	P	**P**	**02 15 31.4**	**+0.6**
	baz=247						
C18K	**Utukok River**	**82.12**	**19**	P	**P**	**02 15 31.6**	**+0.6**
	baz=241						
L20K	**Farewell, AK**	**82.25**	**26**	P	**P**	**02 15 32.3**	**+0.6**
	baz=249						
M20K	**Styx River**	**82.36**	**26**	P	**P**	**02 15 32.8**	**+0.4**
	baz=249						
H19K	**Roundabout Mou**	**82.39**	**22**	P	**P**	**02 15 33.0**	**+0.7**
	baz=246						
G19K	**Purcell Mounta**	**82.40**	**22**	P	**P**	**02 15 32.5**	**+0.1**
	baz=245						
F19K	**Shaleruckik Mo**	**82.45**	**21**	P	**P**	**02 15 33.6**	**+1.0**
	baz=244						
K20K	**Telida**	**82.49**	**25**	P	**P**	**02 15 33.6**	**+0.6**
	baz=248						
J20K	**Nowinta River**	**82.76**	**24**	P	**P**	**02 15 34.9**	**+0.6**
	baz=248						
C19K	**Lookout Ridge**	**82.86**	**19**	P	**P**	**02 15 35.3**	**+0.5**
	baz=242						
E19K	**Redstone River**	**82.91**	**20**	P	**P**	**02 15 35.5**	**+0.5**
E19K				IAmb	IAmb	02 15 37.5	
	comp=Z,5.0nm,0.9s						
E19K	**Redstone River**	**82.91**	**20**	P	**P**	**02 15 35.7**	**+0.6**
	baz=245						
D19K	**Kuna River**	**83.06**	**19**	P	**P**	**02 15 36.3**	**+0.5**
	baz=244						
SKT	**Skwentna**	**83.10**	**27**	P	**P**	**02 15 35.5**	**-0.7**
	baz=251						
PPLA	**Purkeypile**	**83.12**	**26**	P	**P**	**02 15 36.8**	**+0.3**
	baz=250						
F20K	**Avaraart Lake**	**83.27**	**21**	P	**P**	**02 15 37.5**	**+0.7**
	baz=246						
SUA	**Susitna One**	**83.29**	**27**	P	**P**	**02 15 36.4**	**-0.9**
	baz=252						
CAST	**Castle Rocks**	**83.35**	**25**	P	**P**	**02 15 36.7**	**-0.8**
	baz=250						
E20K	**Nigu River**	**83.60**	**20**	P	**P**	**02 15 38.9**	**+0.2**
	baz=246,SNR=5.1						
RC01	**Rabbit Creek A**	**83.64**	**28**	P	**P**	**02 15 38.9**	**0.0**
	baz=252						
D20K	**Etivluk River**	**83.65**	**19**	P	**P**	**02 15 38.5**	**-0.3**
D20K				IAmb	IAmb	02 15 41.1	
	comp=Z,4.7nm,1.2s						
H21K	**Melozitna Rive**	**83.83**	**23**	P	**P**	**02 15 39.8**	**0.0**
	baz=249						
G21K	**Allakaket**	**83.88**	**22**	P	**P**	**02 15 40.0**	**-0.1**
	baz=248						
B20K	**Meade River**	**84.02**	**18**	P	**P**	**02 15 40.9**	**+0.2**
	baz=245						
BPAW	**Bear Paw Mtn.**	**84.03**	**25**	P	**P**	**02 15 40.8**	**-0.1**
	baz=251						
PMR	**Palmer**	**84.07**	**27**	P	**P**	**02 15 41.1**	**+0.1**
	baz=253						
TRF	**Thorofare Moun**	**84.12**	**25**	P	**P**	**02 15 41.2**	**-0.4**
	baz=252						
F21K	**Alatna River**	**84.15**	**21**	P	**P**	**02 15 41.4**	**0.0**
	baz=248						
E21K	**Killik River**	**84.43**	**20**	P	**P**	**02 15 43.4**	**+0.6**
	baz=248						
C21K	**Knifeblade Rid**	**84.43**	**19**	P	**P**	**02 15 43.8**	**+1.0**
	baz=247						
P23K	**Montague Islan**	**84.44**	**29**	P	**P**	**02 15 42.6**	**-0.4**
	baz=255						
MLY	**Manley**	**84.44**	**24**	P	**P**	**02 15 43.0**	**0.0**
	baz=251						
SML	**Sawmill**	**84.49**	**27**	P	**P**	**02 15 43.3**	**-0.1**
	baz=254						
B21K	**Ikpikpuk River**	**84.67**	**19**	P	**P**	**02 15 44.0**	**0.0**
	baz=247						
WAT1	**Susitna Watana**	**84.69**	**26**	P	**P**	**02 15 44.0**	**-0.3**
	baz=253						
ABKAR	**Akbulak array**	**84.73**	**320**	P	**P**	**02 15 43.8**	**-0.9**
A21K	**Barrow**	**84.75**	**17**	P	**P**	**02 15 44.0**	**-0.3**
	baz=245						
G22K	**Bettles**	**84.77**	**22**	P	**P**	**02 15 44.7**	**+0.1**
	baz=250						
MCK	**McKinley**	**84.78**	**25**	P	**P**	**02 15 44.6**	**-0.1**
	baz=253						

Q23K	Middleton Isla	84.81	30	P	P	02 15 45.1	+0.3
	baz=256						
GLI	Glacier Island	84.81	28	P	P	02 15 44.5	-0.4
	baz=255						
SCM	Sheep Creek Mo	84.96	27	P	P	02 15 45.8	+0.1
	baz=255						
HIN	Hinchinbrook I	84.97	29	P	P	02 15 45.5	-0.2
WAT6	Susitna Watana	84.98	26	P	P	02 15 45.8	-0.1
	baz=254						
I23K	Minto, Yukon-K	85.03	24	P	P	02 15 46.1	+0.2
I23K				IAmb	IAmb	02 15 46.8	
	comp=Z,3.2nm,0.9s						
I23K	Minto, Yukon-K	85.03	24	P	P	02 15 46.3	+0.4
	baz=252						
D22K	Ayikyak River	85.03	20	P	P	02 15 45.9	0.0
D22K				IAmb	IAmb	02 15 47.8	
	comp=Z,8.2nm,1.2s						
D22K	Ayikyak River	85.03	20	P	P	02 15 46.9	+1.0
	baz=249,SNR=5.4						
E22K	Anaktuvuk Pass	85.07	21	P	P	02 15 46.8	+0.7
E22K				IAmb	IAmb	02 15 47.9	
	comp=Z,6.6nm,1.1s						
E22K	Anaktuvuk Pass	85.07	21	P	P	02 15 47.0	+0.9
	baz=250,SNR=6.5						
A22K	Sinclair Lake	85.10	18	P	P	02 15 46.7	+0.6
	baz=247						
H23K	Yukon River	85.16	23	P	P	02 15 47.0	+0.4
	baz=252						
G23K	Bananza Creek	85.25	22	P	P	02 15 47.5	+0.5
	baz=252						
DHY	Denali Highway	85.27	26	P	P	02 15 47.4	0.0
	baz=254						
B22K	Teshekpuk Lake	85.33	18	P	P	02 15 47.7	+0.4
	baz=248						
COLD	Coldfoot	85.35	22	P	P	02 15 48.0	+0.6
	baz=252						
WRH	Wood River Hil	85.35	25	IAmb	IAmb	02 15 47.8	
	comp=Z,6.5nm,1.0s						
KLU	Klutina	85.52	28	P	P	02 15 48.5	0.0
	baz=256						
M24K	Tolsona, Glenn	85.56	27	P	P	02 15 48.7	0.0
	baz=256						
D23K	Nanushuk River	85.74	20	P	P	02 15 50.1	+0.7
	baz=251,SNR=7.1						
HDA	Harding Lake	85.81	25	P	P	02 15 48.8	-1.0
	baz=255						
H24K	Noodor Dome	85.82	23	P	P	02 15 50.1	+0.2
	baz=254						
E23K	Chandalar	85.82	21	P	P	02 15 50.0	+0.1
	baz=252,SNR=6.1						
KAIM	Kayak Island	85.88	29	P	P	02 15 50.7	+0.5
	baz=257						
ILAR	Eielson Array	85.93	24	P	P	02 15 48.9	-1.5
	comp=Z,2.1nm,0.8s,baz=261,slow=5.0,SNR=20						
	comp=Z,2.1nm,0.8s						
TOLK	Toolik Lake Re	86.02	20	P	P	02 15 51.1	+0.3
	baz=252						
C23K	Itkillik River	86.05	19	P	P	02 15 51.7	+0.8
	baz=251						
K24K	Donnelly Dome	86.15	26	P	P	02 15 51.9	+0.3
	baz=256						
G24K	Hadweenzic Riv	86.22	23	P	P	02 15 52.4	+0.6
	baz=254						
E24K	Your Creek	86.23	21	P	P	02 15 52.4	+0.5
	baz=253						
F24K	Squaw Lake	86.29	22	IAmb	IAmb	02 15 53.5	
	comp=Z,4.2nm,0.9s						
F24K	Squaw Lake	86.29	22	P	P	02 15 52.9	+0.7
	baz=254						
D24K	Happy Valley	86.44	20	P	P	02 15 53.5	+0.7
	baz=253						
J25K	Salcha River,	86.52	25	P	P	02 15 53.3	-0.1
	baz=256						
C24K	Franklin Bluff	86.64	19	P	P	02 15 53.7	-0.1
	baz=253						
H25L	Birch Creek	86.75	23	P	P	02 15 55.2	+0.9
	baz=256						
G25K	Bearman Lake	86.76	23	P	P	02 15 55.4	+1.0
	baz=255						
SCRK	Sand Creek	86.97	26	P	P	02 15 56.7	+1.1
	baz=257						
L26K	Log Cabin Wild	87.04	27	P	P	02 15 56.6	+0.7
	baz=258						
F25K	Christian Rive	87.14	22	P	P	02 15 57.4	+1.0
	baz=256						
QSPA	South Pole Qui	87.16	180	P	P	02 15 56.2	-0.3
QSPA				IAmb	IAmb	02 15 58.1	
	comp=Z,6.8nm,0.8s						
QSPA	South Pole Qui	87.16	180	P	P	02 15 56.3	-0.3
	comp=Z,5.5nm,0.8s,baz=290,slow=1.0,SNR=24						
	comp=Z,5.5nm,0.8s						
J26L	Joseph Creek	87.26	25	P	P	02 15 57.9	+0.9
	baz=258						
E25K	Arctic Village	87.30	21	P	P	02 15 58.1	+1.0
	baz=256						
BMAR	Burnt Mountain	87.50	22	P	P	02 15 59.3	+1.2
M27K	Edge Creek, AK	87.58	27	P	P	02 15 59.0	+0.3
	baz=259						
CTG	Chitna Glacier	87.58	29	P	P	02 15 59.0	+0.3
	baz=260						
I26K	Coal Creek Min	87.60	24	P	P	02 15 58.5	0.0
	baz=258						
G26K	Porcupine Rive	87.69	23	P	P	02 16 00.2	+1.3
	baz=258,SNR=8.2						
F26K	Sheenjek River	87.72	22	P	P	02 16 00.0	+0.9
	baz=257						
L27K	Beaver Creek,	87.73	27	P	P	02 15 59.7	+0.5
	baz=259						
K27K	Chicken	87.80	26	P	P	02 16 00.5	+1.0
	baz=259						
O28M	Mount Upton	88.10	29	P	P	02 16 01.6	+0.2
	baz=261						
YUK3	Moose Creek	88.13	28	P	P	02 16 01.5	+0.1
	baz=261						
I27K	Kandik River	88.29	24	P	P	02 16 02.8	+0.9
	baz=260,SNR=8.7						
C27K	Jago River	88.31	20	P	P	02 16 02.3	+0.5
	baz=257						
PNL	Peninsula	88.32	30	P	P	02 16 02.0	-0.1
	baz=262						
H27K	Steamboat Moun	88.44	24	P	P	02 16 03.9	+1.3
	baz=260,SNR=8.6						
G27K	Doyon Strip	88.49	23	P	P	02 16 03.3	+0.5
	baz=259						
E27K	Coleen River	88.77	22	P	P	02 16 04.6	+0.5
	baz=260						
O29M	Mount Kennedy	88.82	30	P	P	02 16 04.8	+0.2
	baz=262						
I28M	Miner Creek	88.95	24	P	P	02 16 05.3	+0.3
	baz=261						
DAWY	Dawson	88.97	26	P	P	02 16 05.5	+0.4
	baz=262,SNR=7.4						
YUK6	Outpost Mounta	89.01	29	P	P	02 16 05.7	+0.1
	baz=262						
P29M	Windy Craggy	89.15	30	P	P	02 16 06.2	+0.1
	baz=263						
M29M	Somme Creek	89.16	27	P	P	02 16 06.3	+0.2
	baz=262						
D27M	Malcolm River	89.18	21	P	P	02 16 06.3	+0.3
	baz=260						
F28M	Old Crow	89.31	22	P	P	02 16 06.9	+0.3
	baz=261						
L29M	L29M	89.40	27	P	P	02 16 08.9	+1.8
L29M				IAmb	IAmb	02 16 08.9	
	comp=Z,7.6nm,1.4s						
L29M	L29M	89.40	27	P	P	02 16 07.9	+0.7
	baz=263						
HYT	Haines Junctio	89.41	29	P	P	02 16 07.9	+0.6
	baz=263						
E28M	Babbage River	89.59	21	P	P	02 16 08.8	+0.9
	baz=261						
P30M	Million Dollar	89.60	30	P	P	02 16 08.9	+0.8
	baz=264						
I29M	Ogilvie Camp,	89.61	25	P	P	02 16 09.0	+0.9
	baz=262						
N30M	Aishikik Lake	89.69	29	P	P	02 16 09.3	+0.8
	baz=264						
K29M	Barlow Dome	89.76	26	P	P	02 16 09.8	+0.8
	baz=263,SNR=5.1						
G29M	Pine Creek	89.92	23	P	P	02 16 10.1	+0.6
	baz=263						
SIT	Sitka	90.16	33	P	P	02 16 11.6	+0.9
	baz=265						
E29M	Blow River	90.16	22	P	P	02 16 11.1	+0.6
	baz=263						
J30M	Hart River	90.36	25	P	P	02 16 10.9	-0.8
	baz=264						
SKAG	Skagway	90.36	31	P	P	02 16 11.1	-0.5
	baz=265						
G30M	tAoh Zraii Nji	90.64	23	P	P	02 16 12.8	0.0
	baz=264						
WHY	Whitehorse	90.68	29	P	P	02 16 13.2	0.0
	baz=266						
R32K	Eaglecrest	90.68	32	P	P	02 16 13.2	0.0
	baz=266						
F30M	Barrier River	90.86	22	P	P	02 16 14.1	+0.3
	baz=265						
P32M	Atlin	91.19	31	P	P	02 16 15.7	+0.2
	baz=267						
U33K	Whale Pass	91.31	34	P	P	02 16 16.3	+0.2
	baz=267						
FARO	Faro, Yukon	91.52	28	P	P	02 16 17.2	+0.2
	baz=267						
P33M	Teslin, Yukon	91.67	30	P	P	02 16 17.8	0.0
	baz=267						
INK	Inuvik	91.77	22	P	P	02 16 17.8	-0.1
	baz=267						
S34M	Telegraph Cree	92.46	32	P	P	02 16 21.6	+0.2
	baz=269						
STAL	STALIGIAL	116.19	321	PKPdf	PKPdf	02 21 53.3	-0.8
PB11	IPOC Station P	144.30	130	PKPdf	PKPbc	02 22 46.7	+0.6
PB16	IPOC Station P	145.23	128		PKPdf	02 22 50.9	+0.9
CPUP	Villa Florida	147.19	153	PKPbc	PKPab	02 22 55.5	-0.7
	comp=Z,3.3nm,1.2s,baz=76,slow=3.8,SNR=9.2						
LPAZ	La Paz	147.46	126	PKPbc	PKPab	02 22 57.3	-1.0
	comp=Z,3.1nm,0.9s,baz=339,slow=2.4,SNR=9.6						

*IDC **24** 02:07:02.5±0.8, 2°.55S×138°.61E, h0^{km}, mb3.9/8, mbtmp3.9/10, ML3.8/2, Error ellipse: s-maj=21.4km s-min=15.5km az=8.0*

*DJA **24** 02:07:07.4±0.7, 2°S±5°×13°9E±°, h23^{km}±8^{km}, M4.2/6, mb4.4/1, MLv4.0/6*

ISC 24 02:07:07.6±0.8**, 2°.51S**±0°.09×**138°.68E**±0°.05**, h35^{km}, n17, σ0^{s}.97**/18**, mb3.9**/8**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.51	3	P	Pn	02 07 17.3	-1.2
GENI	Genyem	1.49	93	P	Pn	02 07 32.6	+0.7
JAY	Jayapura	2.02	90	Pn	Pn	02 07 39.6	+0.3
	6.7nm,0.3s,baz=156,slow=4.7,SNR=9.5						
JAY				Lg	Lg	02 08 09.4	
	9.2nm,0.3s,baz=78,slow=20,SNR=4.3						
	66nm,0.5s						
JAY	Jayapura	2.02	90	P	Pn	02 07 40.0	+0.7
SRPI	Serui, Papua	2.52	284	P	Pn	02 07 46.2	+0.1
SRPI				S	Sn	02 08 17.9	+2.3
BAKI	Biak	2.89	297	P	Pn	02 07 51.4	+0.3
FAKI	Fak Fak	6.44	266	P	Pn	02 08 40.2	+0.2
BATI	Baumata	16.76	242	Pn	Pn	02 10 59.2	-0.7
	11nm,0.3s,baz=112,slow=3.9,SNR=3.7						
WRA	Warramunga Arr	17.84	193	P	Pn	02 11 12.0	-1.3
	0.7nm,0.3s,baz=17,slow=12,SNR=4.9						
	3.9nm,0.5s						
ASAR	Alice Springs	21.54	192	P	P	02 11 52.5	-1.5
	5.0nm,0.8s,baz=25,slow=10,SNR=6.8						
	5.0nm,0.8s						
SONM	Songino Array	57.52	335	P	P	02 16 54.2	+0.5
	0.4nm,0.9s,baz=163,slow=5.6,SNR=1.9						
	0.4nm,0.9s						
MKAR	Makanchi Array	69.61	322	P	P	02 18 13.2	-0.2
	1.1nm,0.9s,baz=128,slow=8.0,SNR=5.7						
	1.1nm,0.9s						
ZALV	Zalesovo Beam	71.75	330	P	P	02 18 26.1	-0.1
	0.3nm,0.4s,baz=134,slow=8.3,SNR=1.7						
	0.3nm,0.4s						
KURBB	Kurchatov Arra	73.55	325	P	P	02 18 38.0	+1.0
	0.9nm,0.8s,baz=114,slow=5.0,SNR=7.2						
	0.9nm,0.8s						
BVAR	Borovoye Array	79.13	325	P	P	02 19 09.4	+0.8
	1.0nm,0.6s,baz=98,slow=6.1,SNR=5.4						
	1.0nm,0.6s						
ILAR	Eielson Array	85.66	24	P	P	02 19 42.2	-0.2
	0.4nm,0.6s,baz=259,slow=4.4,SNR=4.7						
	0.4nm,0.6s						
QSPA	South Pole Qui	87.44	180	P	P	02 19 51.3	0.0
	2.2nm,0.9s,baz=345,slow=2.3,SNR=6.5						
	2.2nm,0.9s						

*IDC **24** 02:16:26.1±0.7, 2°.66S×138°.56E, h0^{km}, mb4.0/10, mbtmp4.0/13, ML4.2/3, MS4.0/1, Error ellipse: s-maj=17.9km s-min=14.6km az=177.0*

*NEIC **24** 02:16:29.1±2.1, 2°.62S±0°.08×138°.63E±0°.05, h10^{km}±1^{km}, mb4.4/17, Error ellipse: s-maj=14.7km s-min=5.9km az=209.0*

*DJA **24** 02:16:30.3±0.3, 3°S±3°×13°8E±°, h10^{km}, M4.3/6, mb4.3/1, MLv4.3/6*

ISC 24 02:16:31.6±0.5**, 2°.69S**±0°.06×**138°.52E**±0°.04**, h32^{km}, n50, σ1^{s}.57**/52**, mb4.2**/18**, 1D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.72	15	P	Pn	02 16 44.2	-1.4
GENI	Genyem	1.65	87	P	Pn	02 16 59.3	+1.0
GENI				S	Sb	02 17 23.7	+2.0
JAY	Jayapura	2.19	85	Pn	Pn	02 17 04.2	-1.6
	40nm,0.3s,baz=225,slow=11,SNR=30						
JAY				Lg	Lg	02 17 36.2	
	23nm,0.3s,baz=303,slow=23,SNR=6.3						
	61nm,0.3s						
JAY	Jayapura	2.19	85	P	Pn	02 17 06.0	+0.2
SRPI	Serui, Papua	2.42	290	P	Pn	02 17 08.2	-0.8
BAKI	Biak	2.84	302	P	Pn	02 17 15.3	+0.6
BAKI				S	Sn	02 17 49.3	+1.5
RKPI	Ransiki, Papua	4.50	285	P	Pn	02 17 36.0	-1.6
KMPI	Kaimana, Papua	4.91	259	P	Pn	02 17 33.7	-9.5
FAKI	Fak Fak	6.27	268	Pn	Pn	02 18 03.7	+1.8
FAKI	Fak Fak	6.27	268	P	Pn	02 18 02.9	+0.9
COEN	Coen	12.10	158	Pn	Pn	02 19 22.3	+0.4
MTN	Manton Dam	12.46	216	Pn	Pn	02 19 27.9	+1.1
SOEI	Soe	15.81	243	P	P	02 20 15.9	+0.3
KNRA	Kununurra	16.09	216	Pn	Pn	02 20 15.4	-0.2
BATI	Baumata	16.54	242	Pn	Pn	02 20 20.9	-0.4
	16nm,0.3s,baz=120,slow=2.9,SNR=5.1						
GUMO	Guam	17.36	21	LR	LR	02 25 47.7	
	comp=Z,455nm,20.0s,baz=111,slow=32						
WB0	Warramunga Arr	17.45	193	Pn	Pn	02 20 31.5	-1.2
WB0				IAmb	IAmb	02 20 44.9	
	comp=Z,16nm,0.8s						
WR8	Warramunga Arr	17.60	193	Pn	Pn	02 20 34.5	-0.1
WRAB	Tennant Creek	17.61	193		Pn	02 20 35.0	+0.2
WRAB				IAmb	IAmb	02 20 55.2	
	comp=Z,30nm,1.1s						
WRA	Warramunga Arr	17.63	193		Pn	02 20 34.3	-0.6
WRA	Warramunga Arr	17.63	193	P	Pn	02 20 34.5	-0.4
	comp=Z,1.1nm,0.3s,baz=17,slow=12,SNR=14						
WRA				S	Sn	02 23 42.3	-8.1
	comp=Z,3.4nm,0.8s,baz=11,slow=23,SNR=4.8						
	comp=Z,3.5nm,0.5s						
FITZ	Fitzroy Crossi	19.85	219	P	Pn	02 21 01.2	-0.6
FITZ	Fitzroy Crossi	19.85	219	P	Pn	02 21 01.1	-0.7
	comp=Z,0.6nm,0.3s,baz=44,slow=14,SNR=9.0						
	comp=Z,2.5nm,0.6s						
AS31	Alice Springs	21.32	192	P	P	02 21 17.5	+1.5
AS31				IAmb	IAmb	02 21 27.8	
	comp=Z,8.9nm,0.7s						
ASAR	Alice Springs	21.33	192	P	P	02 21 16.3	+0.3
	comp=Z,6.0nm,0.7s,baz=23,slow=9.6,SNR=12						
ASAR				S	S	02 25 15.6	+4.2
	comp=Z,2.9nm,0.9s,baz=13,slow=26,SNR=4.2						
	comp=Z,6.0nm,0.7s						
CMAR	Chiang Mai Arr	44.27	300	P	P	02 24 39.1	+0.6
	comp=Z,0.8nm,0.3s,baz=111,slow=7.6,SNR=1.9						
	comp=Z,0.8nm,0.3s						
BNX	BinXian	49.22	350	⇓P	P	02 25 17.4	+0.5
BNX				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TUWZ	Tuamarina	49.99	145	P	P	02 25 23.5	+0.7
SONM	Songino Array	57.62	335	P	P	02 26 18.9	+0.1
	comp=Z,0.5nm,0.6s,baz=145,slow=5.4,SNR=2.0						
	comp=Z,0.5nm,0.6s						
PETK	Petropavlovsk-	57.89	14	P	P	02 26 19.8	-0.5
	comp=Z,1.2nm,0.7s,baz=228,slow=8.1,SNR=2.3						
	comp=Z,1.2nm,0.7s						
MKAR	Makanchi Array	69.66	322	P	P	02 27 37.9	-0.2
MKAR	Makanchi Array	69.66	322	P	P	02 27 38.1	0.0
	comp=Z,0.5nm,0.5s,baz=124,slow=7.9,SNR=5.8						
	comp=Z,0.5nm,0.5s						
ZALV	Zalesovo Beam	71.83	330	P	P	02 27 50.5	-0.6
	comp=Z,0.5nm,0.5s,baz=90,slow=4.3,SNR=2.2						
	comp=Z,0.5nm,0.5s						
KURBB	Kurchatov Arra	73.61	325	P	P	02 28 01.1	-0.6
	comp=Z,0.6nm,0.8s,baz=115,slow=5.8,SNR=5.1						
	comp=Z,0.6nm,0.8s						
L14K	Kuka Creek	77.96	25	P	P	02 28 26.5	+0.1
L14K				IAmb	IAmb	02 28 32.6	
	comp=Z,5.2nm,0.8s						
M14K	Bethel	77.98	26	P	P	02 28 27.7	+1.2
K15K	Wolf Creek Mou	78.90	24	P	P	02 28 32.1	+0.6
BVAR	Borovoye Array	79.19	325	P	P	02 28 32.4	-1.0
	comp=Z,0.8nm,0.5s,baz=108,slow=8.3,SNR=6.1						
	comp=Z,0.8nm,0.5s						
MLY	Manley	84.40	24	P	P	02 28 59.5	-1.1
MLY				IAmb	IAmb	02 29 05.5	
	comp=Z,1.5nm,0.8s						
E22K	Anaktuvuk Pass	85.02	21	P	P	02 29 04.0	+0.3
E22K				IAmb	IAmb	02 29 10.4	
	comp=Z,1.3nm,0.7s						
CCB	Clear Creek Bu	85.48	24	P	P	02 29 04.7	-1.2
CCB				IAmb	IAmb	02 29 09.5	
	comp=Z,2.8nm,0.9s						
ILAR	Eielson Array	85.89	24	P	P	02 29 06.8	-1.3
	comp=Z,1.5nm,0.8s,baz=259,slow=5.1,SNR=16						
	comp=Z,1.5nm,0.8s						
J26L	Joseph Creek	87.22	25	P	P	02 29 14.6	-0.1
J26L				IAmb	IAmb	02 29 55.2	
	comp=Z,5.2nm,1.5s						
QSPA	South Pole Qui	87.25	180	P	P	02 29 14.7	-0.2
QSPA	South Pole Qui	87.25	180	P	P	02 29 14.0	-0.9
	comp=Z,1.7nm,0.9s,baz=259,slow=1.3,SNR=6.0						
	comp=Z,1.7nm,0.9s						
BMAR	Burnt Mountain	87.45	22	P	P	02 29 16.9	+1.2
H27K	Steamboat Moun	88.39	24	P	P	02 29 20.7	+0.5
H27K				IAmb	IAmb	02 29 22.3	
	comp=Z,3.8nm,1.1s						
PB11	IPOC Station P	144.45	130	PKPdf	PKPab	02 36 03.7	-0.4
CPUP	Villa Florida	147.33	153	PKPbc	PKPdf	02 36 10.4	0.0
	comp=Z,0.5nm,0.7s,baz=70,slow=3.9,SNR=4.5						
LPAZ	La Paz	147.60	126	PKPbc	PKPdf	02 36 11.6	-0.3
	comp=Z,1.4nm,1.0s,baz=87,slow=0.3,SNR=5.6						

IDC 24 02:24:45.4±1.9**, 2°.44S**×**138°.57E, h0^{km}, mb3.5**/2**, mbtmp3.5**/4**, ML3.6**/2**, MS4.2**/1**, Error ellipse: s-maj=33.7km s-min=19.1km az=164.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.13	92	Pn	Pn	02 25 21.9	-0.4
	7.1nm,0.3s,baz=238,slow=12,SNR=9.3						
JAY				Lg	Lg	02 25 53.3	
	4.6nm,0.3s,baz=128,slow=16,SNR=4.1						
	11nm,0.3s						
WRA	Warramunga Arr	17.88	193	P	P	02 28 56.2	-0.3
	0.3nm,0.3s,baz=15,slow=12,SNR=7.8						
	1.1nm,0.6s						
ASAR	Alice Springs	21.58	192	P	P	02 29 36.2	-0.6
	1.6nm,0.9s,baz=18,slow=11,SNR=10						
	1.6nm,0.9s						
DZM	Mont Dzumac	33.38	128	LR	LR	02 45 08.1	
	comp=Z,336nm,18.0s,baz=338,slow=37						
ILAR	Eielson Array	85.64	24	P	P	02 37 26.1	+0.4
	0.3nm,0.7s,baz=270,slow=4.3,SNR=4.2						
	0.3nm,0.7s						

*IDC **24** 02:26:52.3±0.5, 2°.76S×138°.60E, h0^{km}, mb4.5/15, mbtmp4.5/20, ML4.2/3, Error ellipse: s-maj=13.8km s-min=12.3km az=65.0*

*NEIC **24** 02:26:54.7±1.6, 2°.77S±0°.07×138°.60E±0°.06, h10^{km}±1^{km}, mb4.7/89, Error ellipse: s-maj=12.4km s-min=8.9km az=217.0*

*DJA **24** 02:26:55.3±0.7, 3°S±4°×13°9E±°, h13^{km}±7^{km}, M4.7/12, mb4.9/12, mB5.2/5, MLv4.7/9, Mw(mB)4.5/5*

ISC 24 02:26:57.7±0.3**, 2°.82S**±0°.05×**138°.66E**±0°.05**, h35^{km}, n323, σ1^{s}.13**/295**, mb4.7**/66**, 2C, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.82	4	P	Pn	02 27 07.0	-5.9
GENI	Genyem	1.52	82	P	Pn	02 27 22.7	+0.2
GENI	Genyem	1.52	82	P	Pn	02 27 21.4	-1.1
JAY	Jayapura	2.07	82	Pn	Pn	02 27 29.5	-0.5
	18nm,0.3s,baz=241,slow=11,SNR=24						
JAY				Lg	Lg	02 27 58.9	
	26nm,0.3s,baz=99,slow=16,SNR=6.7						
	102nm,0.5s						
JAY	Jayapura	2.07	82	P	Pn	02 27 29.1	-0.9
SRPI	Serui, Papua	2.59	291	P	Pn	02 27 35.6	-1.6
BAKI	Biak	3.02	302	P	Pn	02 27 42.2	-0.9
RKPI	Ransiki, Papua	4.66	286	P	Pn	02 28 04.2	-1.5
KMPI	Kaimana, Papua	5.02	260	P	Pn	02 28 11.9	+1.4
	1.4nm355nm,0.8s						
FAKI	Fak Fak	6.40	269		Pn	02 28 30.1	+0.4
FAKI	Fak Fak	6.40	269	P	Pn	02 28 31.2	+1.6
FAKI	Fak Fak	6.40	269	P	Pn	02 28 30.5	+0.9
	0.3nm84nm,0.9s						
SWI	Sorong	7.64	285	P	Pn	02 28 47.7	+1.0
	0.3nm81nm,0.7s						
PMG	Port Moresby	10.69	128	Pn	Pn	02 29 35.5	+7.0
PMG	Port Moresby	10.69	128	Pn	Pn	02 29 30.0	+1.5
	3.1nm,0.4s,baz=297,slow=12,SNR=5.6						
I39PW	PALAU INFRASON	11.07	338	I	I	03 33 30.0	
	baz=159,slow=314,SNR=1.1						
NLAI	Namlea	11.55	268	P	Pn	02 29 39.1	-1.1
	72nm,0.7s						
KDU	Kakadu	11.56	212	P	Pn	02 29 40.1	-0.2
COEN	Coen	11.93	158		Pn	02 29 46.5	+1.0
COEN	Coen	11.93	158	P	Pn	02 29 46.9	+1.4
MTN	Manton Dam	12.44	216	Pn	Pn	02 29 51.0	-1.4
MTN	Manton Dam	12.44	216	P	Pn	02 29 52.4	0.0
SOEI	Soe	15.87	244	P	Pn	02 30 40.6	+1.8
SOEI	Soe	15.87	244	P	Pn	02 30 40.2	+1.5
SOEI	Soe	15.87	244	P	P	02 30 41.4	-0.7
LUWI	Luwuk	15.97	276	Pn	Pn	02 30 35.4	-4.6
KNRA	Kununurra	16.07	217	Pn	Pn	02 30 39.9	-1.3
KNRA				IAmb	IAmb	02 30 58.6	
	comp=Z,63nm,1.1s						
MTSU	Mount Surprise	16.20	160	P	Pn	02 30 44.0	+1.1
BATI	Baumata	16.60	243	Pn	Pn	02 30 47.1	-0.9
	comp=Z,143nm,0.9s,baz=181,slow=1.1,SNR=21						
BATI	Baumata	16.60	243	P	P	02 30 50.5	+0.4
WB0	Warramunga Arr	17.35	194		Pn	02 30 57.5	+0.2
WB0				IAmb	IAmb	02 31 05.6	
	comp=Z,49nm,1.0s						
WR8	Warramunga Arr	17.51	193	Pn	Pn	02 30 57.2	-2.1
WR8				IAmb	IAmb	02 31 06.9	
	comp=Z,61nm,1.2s						
WRAB	Tennant Creek	17.52	194		Pn	02 30 59.7	+0.3
WRAB				IAmb	IAmb	02 31 23.9	
	comp=Z,51nm,0.8s						
WRA	Warramunga Arr	17.53	194	Pn	Pn	02 30 57.9	-1.7
WRA	Warramunga Arr	17.53	194	P	Pn	02 30 58.0	-1.5
	comp=Z,1.8nm,0.3s,baz=16,slow=12,SNR=16						
WRA				S	Sn	02 34 08.4	-5.5
	comp=Z,16nm,1.1s,baz=9.1,slow=21,SNR=5.9						
	comp=Z,9.8nm,0.7s						
QIS	Mount Isa	17.66	177	P	Pn	02 31 01.2	+0.1
TOLI2	Tolitoli	18.29	282	Pn	P	02 31 05.6	-3.2
TOLI2				IAmb	IAmb	02 31 13.1	
	comp=Z,69nm,1.4s						
TOLI2	Tolitoli	18.29	282	P	Pn	02 31 10.9	+2.0
CTAO	Charters Tower	18.70	157	P	Pn	02 31 15.6	+1.7
CTAO	Charters Tower	18.70	157	P	Pn	02 31 14.3	+0.5
TTSI	Tana Toraja	18.82	269	P	Pn	02 31 15.0	-0.3
	comp=Z,1μmcomp=Z,33nm,1.2s						
MPSI	Mapaga	19.01	279	P	Pn	02 31 18.4	+0.7
FITZ	Fitzroy Crossi	19.84	219	P	P	02 31 25.4	-0.3
FITZ	Fitzroy Crossi	19.84	219	P	P	02 31 24.7	-1.0
	comp=Z,0.7nm,0.3s,baz=37,slow=12,SNR=8.1						
	comp=Z,12nm,1.0s						
AS01	Alice Springs	21.22	192	P	P	02 31 41.9	+1.2
AS31	Alice Springs	21.23	192	P	P	02 31 41.5	+0.7
ASAR	Alice Springs	21.23	192	P	P	02 31 40.4	-0.4
ASAR	Alice Springs	21.23	192	P	P	02 31 40.8	-0.1
	comp=Z,30nm,0.9s,baz=22,slow=9.8,SNR=32						
ASAR				S	S	02 35 35.2	+0.1
	comp=Z,4.5nm,0.9s,baz=12,slow=24,SNR=4.3						
	comp=Z,30nm,0.9s						
MYLDM	Lahad Datu	21.65	292	P	P	02 31 44.8	-0.6
MYLDM	Lahad Datu	21.65	292	P	P	02 31 46.1	+0.8
TATA	Tatamba Isabel	21.75	106	P	P	02 31 48.5	+2.0
SAVO	Savo Central	21.95	108	P	P	02 31 50.9	+2.3
KKM	Kota Kinabalu	24.08	291	P	P	02 32 08.6	-1.7
KKM	Kota Kinabalu	24.08	291	P	P	02 32 13.3	+3.0
MBWA	Marble Bar	25.92	224	P	P	02 32 28.0	+1.2
PSA00	Pilbara Seismi	26.12	223	P	P	02 32 28.8	+0.1

PSA00	Pilbara Seismi	26.12	223	P	P	02 32 30.5	+1.9
STKA	Stephens Creek	29.04	175	P	P	02 32 54.0	-0.7
	comp=Z,3.0nm,0.7s,baz=344,slow=5.9,SNR=3.9						
	comp=Z,3.0nm,0.7s						
NJ2	Nanjing	39.45	333	*e*P	P	02 34 24.0	-0.7
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSRS	Korea Array	41.29	347	P	P	02 34 38.8	-1.0
	comp=Z,1.7nm,0.7s,baz=157,slow=9.1,SNR=9.4						
	comp=Z,1.7nm,0.7s						
SLVN	Son La	41.63	307	P	P	02 34 42.5	-0.5
ENH	Enshi	43.12	322	P	P	02 34 54.6	-0.3
ENH				IAmb	IAmb	02 34 56.2	
	comp=Z,17nm,0.8s						
TIA	Tai'an	43.73	335	P	P	02 34 58.9	-0.8
TIA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CM31	Chiang Mai Arr	44.45	300	P	P	02 35 04.2	-1.6
CM31				IAmb	IAmb	02 35 06.4	
	comp=Z,21nm,1.5s						
CMAR	Chiang Mai Arr	44.45	300	P	P	02 35 05.3	-0.4
CMAR	Chiang Mai Arr	44.45	300	P	P	02 35 05.0	-0.8
	comp=Z,3.2nm,0.3s,baz=120,slow=6.1,SNR=14						
	comp=Z,3.2nm,0.3s						
KMI	Kunming	44.55	311	P	P	02 35 07.5	+0.7
KMI				pmax	pmax		
	comp=Z,13nm,1.0s						
LYN	LuoYang	44.59	329	P	P	02 35 06.0	-0.6
LYN				pmax	pmax		
	comp=Z,26nm,1.1s						
HNS	HongShan	45.78	333	⇑P	P	02 35 15.4	-0.6
HNS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH	PanZhiHua	46.06	312	P	P	02 35 18.6	0.0
USRK	Ussuriysk Ar.	47.19	353	P	P	02 35 26.6	-0.3
	comp=Z,1.3nm,0.8s,baz=123,slow=7.0,SNR=4.4						
	comp=Z,1.3nm,0.8s						
BJI	Beijing	47.37	336	P	P	02 35 28.9	+0.4
BJI				sP	pP	02 35 35.8	-3.2
BJI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MDJ	Mudanjiang	47.92	351	P	P	02 35 32.8	+0.2
BNX	BinXian	49.37	350	⇑P	P	02 35 43.9	+0.1
BNX				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TUWZ	Tuamarina	49.81	145	P	P	02 35 48.0	+0.8
HHC	Hu-ho-hao-te	50.01	333	*e*P	P	02 35 49.8	+0.9
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LZH	Lanzhou	50.54	323	*e*P	P	02 35 54.3	+1.3
LZH				pP	pP	02 36 01.5	-2.1
LZH				pmax	pmax		
	comp=Z,22nm,1.5s						
GTA	Gaotai	55.13	324	*e*P	P	02 36 27.8	+1.0
GTA				pP	pP	02 36 32.3	-5.2
GTA				pmax	pmax		
	comp=Z,12nm,1.0s						
ULN	Ulaanbaatar	57.54	335	P	P	02 36 44.6	+0.7
ULN				IAmb	IAmb	02 36 45.3	
	comp=Z,8.2nm,1.0s						
SONM	Songino Array	57.80	335	P	P	02 36 44.7	-1.0
SONM	Songino Array	57.80	335	P	P	02 36 45.9	+0.2
	comp=Z,3.2nm,0.9s,baz=148,slow=7.4,SNR=9.2						
	comp=Z,3.2nm,0.9s						
PETK	Petropavlovsk-	57.98	13	P	P	02 36 46.6	-0.1
	comp=Z,1.4nm,0.8s,baz=148,slow=4.5,SNR=4.0						
	comp=Z,1.4nm,0.8s						
YAK	Yakutsk	65.04	355	P	P	02 37 34.2	+0.1
WMQ	Urumqi	65.06	322	*e*P	P	02 37 36.3	+1.5
WMQ				pmax	pmax		
	comp=Z,20nm,0.7s						
MKAR	Makanchi Array	69.84	322	P	P	02 38 05.2	+0.3
MKAR	Makanchi Array	69.84	322	P	P	02 38 04.5	-0.5
	comp=Z,8.4nm,0.9s,baz=116,slow=8.2,SNR=45						
	comp=Z,8.4nm,0.9s						
MAKZ	Makanchi	70.04	322	P	P	02 38 05.9	-0.3
KSH	Kashi	71.12	313	P	P	02 38 15.3	+2.3
KSH				pmax	pmax		
	comp=Z,6.0nm,1.4s						
NRN	Naryn	71.78	315	P	P	02 38 16.3	-0.9
ZAA0	Zalesovo Array	72.00	330	P	P	02 38 16.3	-1.6
ZAA0				IAmb	IAmb	02 38 17.9	
	comp=Z,6.1nm,0.9s						
ZALV	Zalesovo Beam	72.00	330	P	P	02 38 16.4	-1.5
ZALV	Zalesovo Beam	72.00	330	P	P	02 38 17.1	-0.8
	comp=Z,3.7nm,0.7s,baz=101,slow=4.7,SNR=16						
	comp=Z,3.7nm,0.7s						
KURK	Kurchatov	73.78	325	P	P	02 38 27.9	-0.5
KURK				IAmb	IAmb	02 38 29.8	
	comp=Z,9.4nm,0.9s						
KURBB	Kurchatov Arra	73.79	325	P	P	02 38 27.9	-0.6
	comp=Z,6.7nm,0.9s,baz=113,slow=5.6,SNR=34						
	comp=Z,6.7nm,0.9s						
TIXI	Tiksi	74.61	357	P	P	02 38 32.1	-0.8
KBL	Kabul	74.95	307	P	P	02 38 34.7	-1.3
S12K	Black Hills	75.61	30	P	P	02 38 39.4	+0.4
S12K	Black Hills	75.61	30	P	P	02 38 40.0	+1.1
	baz=242						
VNDA	Vanda	75.68	175	P	P	02 38 40.1	+1.1
VNDA				IAmb	IAmb	02 38 42.2	
	comp=Z,6.3nm,0.7s						
VNDA	Vanda	75.68	175	P	P	02 38 39.2	+0.3
	comp=Z,6.9nm,0.8s,baz=320,slow=5.9,SNR=24						
	comp=Z,6.9nm,0.8s						
GAMB	Gambell	75.90	20	P	P	02 38 42.0	+1.6
	baz=232						
SIMJ	Simiganj	76.02	311	P	P	02 38 41.9	0.0
SIMJ				IAmb	IAmb	02 38 46.2	
	comp=Z,4.9nm,0.8s						
KK31	Karatay Array	76.17	316	P	P	02 38 41.9	-0.5
KKAR	Karatay Array	76.17	316	P	P	02 38 42.1	-0.4
KKAR	Karatay Array	76.17	316	P	P	02 38 41.7	-0.8
KKAR				IAmb	IAmb	02 38 44.6	
	comp=Z,4.8nm,1.1s						
S14K	Fog Glacier	77.13	30	P	P	02 38 48.7	+1.0
	baz=245						
M13K	Dall Lake	77.27	26	P	P	02 38 49.4	+1.2
	baz=240						
K13K	Kusilvak Mount	77.50	24	IAmb	IAmb	02 38 53.2	
	comp=Z,6.5nm,0.8s						
K13K	Kusilvak Mount	77.50	24	P	P	02 38 51.0	+1.5
	baz=239						
O14K	Tigyukauivet M	77.64	27	P	P	02 38 51.4	+1.1
	baz=242						
L14K	Kuka Creek	78.02	25	P	P	02 38 53.9	+1.5
	baz=241						
M14K	Bethel	78.04	26	P	P	02 38 53.5	+1.0
	baz=242						
J14K	Nanvaranak Lak	78.36	23	P	P	02 38 55.6	+1.4
	baz=240						
M15K	Kasigluk River	78.56	26	P	P	02 38 56.8	+1.3
	baz=243						
N15K	Kwethluk River	78.59	27	P	P	02 38 56.9	+1.3
	baz=243						
L15K	Ungalak Mounta	78.68	25	P	P	02 38 57.4	+1.3
	baz=242						
F14K	Arctic Creek	78.78	20	P	P	02 38 57.9	+1.3
	baz=237						
K15K	Wolf Creek Mou	78.96	24	P	P	02 38 58.8	+1.2
K15K				IAmb	IAmb	02 39 02.3	
	comp=Z,7.8nm,0.9s						
K15K	Wolf Creek Mou	78.96	24	P	P	02 38 59.2	+1.6
	baz=242						
O16K	Kokwok River B	79.25	28	P	P	02 39 00.1	+0.9
	baz=245						
N16K	Nishlik Lake	79.31	27	P	P	02 39 00.5	+0.9
	baz=245						
G15K	Niukluk	79.33	21	P	P	02 39 00.8	+1.2
	baz=239						
BVAR	Borovoye Array	79.37	325	P	P	02 38 59.5	-0.6
	comp=Z,6.7nm,0.8s,baz=112,slow=6.9,SNR=26						
	comp=Z,6.7nm,0.8s						
BRVK	Borovoye	79.44	325	P	P	02 39 00.4	0.0
BRVK				IAmb	IAmb	02 39 02.1	
	comp=Z,8.2nm,0.9s						
M16K	Timber Creek	79.47	26	IAmb	IAmb	02 39 04.7	
	comp=Z,8.9nm,1.1s						
M16K	Timber Creek	79.47	26	P	P	02 39 01.9	+1.5
	baz=244						
L16K	Owhat River	79.55	25	IAmb	IAmb	02 39 10.7	
	comp=Z,8.0nm,1.1s						
L16K	Owhat River	79.55	25	P	P	02 39 01.5	+0.7
	baz=244						
Q17K	Contact Creek	79.76	29	P	P	02 39 02.9	+0.8
	baz=248						
O17K	Koliganek Bris	79.78	28	P	P	02 39 03.7	+1.6
	baz=246						
J16K	Anvik River	79.80	24	P	P	02 39 03.3	+1.2
	baz=242						
H16K	Elim	79.82	22	P	P	02 39 02.8	+0.6
	baz=241						
P17K	Kvichak River	79.86	28	P	P	02 39 03.2	+0.7
	baz=247						
N17K	Nushagak Hills	80.05	27	P	P	02 39 04.8	+1.2
	baz=246						
R18K	Karluk	80.21	30	P	P	02 39 05.7	+1.3
	baz=249						
M17K	Holitna River	80.30	26	IAmb	IAmb	02 39 07.5	
	comp=Z,12nm,1.2s						
M17K	Holitna River	80.30	26	P	P	02 39 06.0	+1.2
	baz=246						
Q18K	Katmai Hardscr	80.33	29	P	P	02 39 06.1	+0.8
	baz=248						
J17K	VABM Dome	80.47	24	P	P	02 39 06.8	+1.0
	baz=244						
K17K	Iditarod	80.48	25	IAmb	IAmb	02 39 15.8	
	comp=Z,7.3nm,1.0s						
K17K	Iditarod	80.48	25	P	P	02 39 07.1	+1.3
	baz=245						
C16K	Lisburne Hills	80.64	18	P	P	02 39 08.1	+1.6
	baz=237						
OHAK	Old Harbor	80.67	31	P	P	02 39 07.8	+0.9
	baz=250						
O18K	Koktuh Hills	80.69	28	P	P	02 39 08.5	+1.4
	baz=248						
N18K	Kilae Creek	80.69	27	P	P	02 39 07.9	+0.9
	baz=247						
G17K	Kiwalik Mounta	80.82	22	P	P	02 39 08.2	+0.6
	baz=242						
H17K	Granite Mounta	80.84	22	P	P	02 39 08.6	+0.9
	baz=243						
L18K	Granite Mounta	80.96	25	P	P	02 39 09.1	+0.7
	baz=246						
M18K	Stony River	81.04	26	P	P	02 39 09.3	+0.4
	baz=247						
KDAK	Kodiak Island	81.22	30	P	P	02 39 10.4	+0.5
	baz=250						
N19K	Bonanza Creek	81.38	27	P	P	02 39 11.9	+1.1
	baz=248						
J18K	Innoko River	81.45	24	P	P	02 39 12.7	+1.7
	baz=246						
H18K	Honhosa River	81.52	22	P	P	02 39 12.9	+1.6
	baz=244						
Q20K	Shuyak Island	81.59	30	P	P	02 39 13.4	+1.6
	baz=251						
F18K	Selawik	81.70	21	P	P	02 39 13.9	+1.7
	baz=243						
L19K	White Mountain	81.73	26	P	P	02 39 13.9	+1.3
	baz=248						
G18K	Tagagawik	81.74	22	P	P	02 39 13.6	+1.1
	baz=244						
E18K	Tukpahlearik C	81.75	20	P	P	02 39 13.9	+1.4
	baz=242						
M19K	Big River Lodg	81.83	26	P	P	02 39 14.6	+1.5
	baz=248						
O20K	Slope Mountain	81.98	28	P	P	02 39 14.2	+0.2
	baz=250						
MAW	Mawson	82.00	202	P	P	02 39 13.5	-0.4
	comp=Z,5.2nm,0.9s,baz=80,slow=5.4,SNR=6.3						
	comp=Z,5.2nm,0.9s						
J19K	Poorman	82.11	24	P	P	02 39 15.3	+0.8
	baz=247						
C18K	Utukok River	82.15	19	P	P	02 39 15.5	+0.8
	baz=241						
L20K	Farewell, AK	82.27	26	P	P	02 39 16.2	+0.8
	baz=249						
HOM	Homer	82.31	29	P	P	02 39 16.2	+0.6
	baz=251						
B18K	Kokolik River	82.31	18	P	P	02 39 17.1	+1.7
	baz=240						
M20K	Styx River	82.38	26	P	P	02 39 16.9	+0.8
	baz=250						
H19K	Roundabout Mou	82.41	22	P	P	02 39 17.0	+1.0
	baz=246						
F19K	Shaleruckik Mo	82.47	21	P	P	02 39 16.7	+0.5
	baz=245						
K20K	Telida	82.51	25	IAmb	IAmb	02 39 29.4	
	comp=Z,9.5nm,1.5s						
K20K	Telida	82.51	25	P	P	02 39 17.7	+1.1
	baz=248						
BRSE	Bradley Lake S	82.77	29	P	P	02 39 19.0	+1.0
	baz=252						
J20K	Nowinta River	82.78	24	P	P	02 39 19.4	+1.4
	baz=248						
C19K	Lookout Ridge	82.88	19	P	P	02 39 19.5	+1.1
	baz=243						
E19K	Redstone River	82.93	20	P	P	02 39 19.1	+0.4
E19K				IAmb	IAmb	02 39 22.2	
	comp=Z,6.9nm,0.8s						
E19K	Redstone River	82.93	20	P	P	02 39 19.8	+1.1
	baz=245,SNR=7.3						
A19K	Wainwright	82.95	17	P	P	02 39 19.8	+1.2
	baz=241						
H20K	Anotleneega Mo	82.99	23	P	P	02 39 20.3	+1.2
	baz=247						
D19K	Kuna River	83.08	19	IAmb	IAmb	02 39 22.7	
	comp=Z,5.4nm,1.0s						
D19K	Kuna River	83.08	19	P	P	02 39 20.6	+1.1
	baz=244						
F20K	Avaraart Lake	83.29	21	IAmb	IAmb	02 39 24.8	
	comp=Z,7.7nm,1.1s						
F20K	Avaraart Lake	83.29	21	P	P	02 39 21.4	+0.9
	baz=246						
SUA	Susitna One	83.31	27	P	P	02 39 21.5	+0.6
	baz=252						
CAST	Castle Rocks	83.37	25	P	P	02 39 21.5	+0.5
	baz=250						
E20K	Nigu River	83.62	20	P	P	02 39 23.2	+0.9
	baz=246						
RC01	Rabbit Creek A	83.66	28	IAmb	IAmb	02 39 23.3	
	comp=Z,5.5nm,0.8s						
RC01	Rabbit Creek A	83.66	28	P	P	02 39 23.3	+0.8
	baz=253						
D20K	Etivluk River	83.67	19	IAmb	IAmb	02 39 26.5	
	comp=Z,8.1nm,1.4s						
D20K	Etivluk River	83.67	19	P	P	02 39 23.0	+0.5
	baz=246						
H21K	Melozitna Rive	83.86	23	P	P	02 39 24.3	+0.8
	baz=249						
G21K	Allakaket	83.90	22	P	P	02 39 24.1	+0.4
	baz=249						
B20K	Meade River	84.05	18	P	P	02 39 25.4	+1.0
	baz=245						
BPAW	Bear Paw Mtn.	84.05	25	P	P	02 39 24.9	+0.3
	baz=251						
PMR	Palmer	84.09	27	P	P	02 39 24.9	+0.2
	baz=253						
F21K	Alatna River	84.17	21	P	P	02 39 25.9	+0.8
	baz=249						
PWL	Port Wells	84.25	28	P	P	02 39 26.0	+0.4
	baz=254						
KNK	Knik Glacier	84.34	28	P	P	02 39 26.2	+0.1
	baz=254						
E21K	Killik River	84.45	20	P	P	02 39 27.2	+0.7
	baz=248						
P23K	Montague Islan	84.45	29	P	P	02 39 27.6	+1.0
	baz=255						
C21K	Knifeblade Rid	84.46	19	P	P	02 39 26.6	+0.1
	baz=247						
MLY	Manley	84.46	24	P	P	02 39 27.2	+0.6
MLY	Manley	84.46	24	P	P	02 39 27.2	+0.6
	baz=251						
H22K	Ishtalitna Cre	84.49	23	P	P	02 39 27.5	+0.8
	baz=251						
SML	Sawmill	84.51	27	P	P	02 39 27.6	+0.6
	baz=254						
B21K	Ikpikpuk River	84.69	19	P	P	02 39 28.6	+1.0
	baz=247						
WAT1	Susitna Watana	84.71	26	P	P	02 39 28.5	+0.6
	baz=254						
AB31	Akbulak array	84.77	320	IAmb	IAmb	02 39 29.0	
	comp=Z,7.0nm,1.4s						
ABKAR	Akbulak array	84.77	320	P	P	02 39 28.0	-0.4
ABKAR	Akbulak array	84.77	320	IAmb	IAmb	02 39 29.0	
	comp=Z,7.1nm,1.4s						
MCK	McKinley	84.80	25	P	P	02 39 28.8	+0.4
	baz=253						
Q23K	Middleton Isla	84.82	30	P	P	02 39 29.5	+1.1
	baz=256						
GLI	Glacier Island	84.83	28	P	P	02 39 29.4	+0.8
	baz=255						
SCM	Sheep Creek Mo	84.98	27	P	P	02 39 29.9	+0.5
	baz=255						
WAT6	Susitna Watana	85.00	26	P	P	02 39 30.0	+0.4
	baz=254						
NEA2	Nenana	85.00	24	P	P	02 39 30.0	+0.7
	baz=253						
I23K	Minto, Yukon-K	85.05	24	IAmb	IAmb	02 39 32.6	
	comp=Z,3.3nm,0.8s						
I23K	Minto, Yukon-K	85.05	24	P	P	02 39 30.6	+1.1
	baz=253						
D22K	Ayikyak River	85.06	20	IAmb	IAmb	02 39 31.9	
	comp=Z,8.9nm,1.4s						
D22K	Ayikyak River	85.06	20	P	P	02 39 30.2	+0.7
	baz=249						
E22K	Anaktuvuk Pass	85.09	21	IAmb	IAmb	02 39 32.6	
	comp=Z,5.7nm,1.0s						
E22K	Anaktuvuk Pass	85.09	21	P	P	02 39 30.9	+1.2
	baz=250,SNR=6.4						
A22K	Sinclair Lake	85.13	18	P	P	02 39 30.0	+0.2
	baz=247						
H23K	Yukon River	85.18	23	P	P	02 39 31.4	+1.2
	baz=252						
G23K	Bananza Creek	85.27	22	P	P	02 39 31.2	+0.5
	baz=252						
DHY	Denali Highway	85.29	26	IAmb	IAmb	02 39 33.9	
	comp=Z,5.6nm,0.9s						
DHY	Denali Highway	85.29	26	P	P	02 39 31.3	+0.3
	baz=254						
WRH	Wood River Hil	85.37	25	IAmb	IAmb	02 39 33.9	
	comp=Z,7.9nm,1.2s						
D23K	Nanushuk River	85.77	20	P	P	02 39 34.1	+1.0
	baz=251,SNR=10						
HDA	Harding Lake	85.83	25	P	P	02 39 33.5	+0.1
	baz=255						
H24K	Noodor Dome	85.84	23	P	P	02 39 34.1	+0.6
	baz=254						
E23K	Chandalar	85.85	21	P	P	02 39 34.7	+1.2
	baz=252,SNR=6.3						
KAIM	Kayak Island	85.89	29	P	P	02 39 34.8	+1.0
	baz=257						
ILAR	Eielson Array	85.95	24	P	P	02 39 32.4	-1.7
	comp=Z,1.6nm,0.6s,baz=264,slow=4.1,SNR=29						
	comp=Z,1.6nm,0.6s						
TOLK	Toolik Lake Re	86.04	20	IAmb	IAmb	02 39 36.5	
	comp=Z,8.2nm,1.2s						
TOLK	Toolik Lake Re	86.04	20	P	P	02 39 35.4	+1.0
	baz=252						
C23K	Itkillik River	86.07	19	P	P	02 39 35.9	+1.4
	baz=251						
K24K	Donnelly Dome	86.17	26	P	P	02 39 35.6	+0.4
	baz=256						
N25K	Chitina, Valde	86.18	28	P	P	02 39 36.1	+0.7
	baz=257						
G24K	Hadweenzic Riv	86.24	23	IAmb	IAmb	02 39 38.3	
	comp=Z,6.8nm,1.1s						
G24K	Hadweenzic Riv	86.24	23	P	P	02 39 36.5	+1.1
	baz=254						
E24K	Your Creek	86.26	21	P	P	02 39 36.8	+1.3
	baz=253						
F24K	Squaw Lake	86.31	22	IAmb	IAmb	02 39 48.3	
	comp=Z,5.2nm,1.0s						
F24K	Squaw Lake	86.31	22	P	P	02 39 37.4	+1.5
	baz=254,SNR=5.7						
D24K	Happy Valley	86.46	20	P	P	02 39 37.9	+1.5
	baz=253						
RIDG	Independent Ri	86.56	26	P	P	02 39 38.1	+1.0
	baz=257						
CRQE	Cirque	86.71	29	P	P	02 39 39.3	+1.2
	baz=258						
H25L	Birch Creek	86.77	23	P	P	02 39 39.2	+1.2
	baz=256						
G25K	Bearman Lake	86.78	23	P	P	02 39 39.3	+1.3
	baz=256						
SCRK	Sand Creek	86.98	26	P	P	02 39 39.8	+0.6
	baz=258						
L26K	Log Cabin Wild	87.06	27	P	P	02 39 40.0	+0.4
	baz=258						
M26K	Nabesna, AK	87.09	27	P	P	02 39 40.7	+1.0
	baz=258						
QSPA	South Pole Qui	87.13	180	P	P	02 39 40.1	+0.1
QSPA	South Pole Qui	87.13	180	P	P	02 39 39.8	-0.2
	comp=Z,13nm,0.9s,baz=313,slow=1.8,SNR=38						
	comp=Z,13nm,0.9s						
MESA	MESA	87.16	29	P	P	02 39 41.2	+0.9
	baz=260						
F25K	Christian Rive	87.17	22	P	P	02 39 41.1	+1.1
	baz=256						
J26L	Joseph Creek	87.28	25	P	P	02 39 41.2	+0.6
J26L				IAmb	IAmb	02 39 42.9	
	comp=Z,5.2nm,1.1s						
J26L	Joseph Creek	87.28	25	P	P	02 39 41.3	+0.6
	baz=258						
E25K	Arctic Village	87.32	21	IAmb	IAmb	02 39 44.0	
	comp=Z,7.7nm,1.1s						
E25K	Arctic Village	87.32	21	P	P	02 39 41.8	+1.0
	baz=256						
D25K	Kavik River	87.34	20	P	P	02 39 41.7	+0.9
	baz=255						
BMAR	Burnt Mountain	87.52	22	P	P	02 39 42.1	+0.4
M27K	Edge Creek, AK	87.59	27	IAmb	IAmb	02 39 54.8	
	comp=Z,7.2nm,1.3s						
M27K	Edge Creek, AK	87.59	27	P	P	02 39 43.0	+0.7
	baz=260						
CTG	Chitna Glacier	87.60	29	P	P	02 39 43.0	+0.7
	baz=260						
I26K	Coal Creek Min	87.62	24	P	P	02 39 42.8	+0.6
	baz=258						
G26K	Porcupine Rive	87.72	23	IAmb	IAmb	02 39 57.2	
	comp=Z,6.0nm,1.1s						
G26K	Porcupine Rive	87.72	23	P	P	02 39 43.8	+1.2
	baz=258,SNR=7.0						
F26K	Sheenjek River	87.75	22	P	P	02 39 44.0	+1.2
	baz=257,SNR=5.1						
L27K	Beaver Creek,	87.75	27	P	P	02 39 44.0	+1.1
	baz=260						
K27K	Chicken	87.82	26	P	P	02 39 44.2	+1.0
	baz=259						
PINM	Pinnacle	87.98	30	P	P	02 39 45.7	+1.6
	baz=261						
BVCY	Beaver Creek	88.07	27	P	P	02 39 46.1	+1.6
	baz=260						
O28M	Mount Upton	88.12	29	P	P	02 39 46.4	+1.4
	baz=261						
YUK3	Moose Creek	88.15	28	P	P	02 39 46.6	+1.5
	baz=261						
I27K	Kandik River	88.31	24	P	P	02 39 46.9	+1.4
	baz=260,SNR=6.5						
PNL	Peninsula	88.34	30	P	P	02 39 46.6	+0.8
	baz=262						
H27K	Steamboat Moun	88.46	24	IAmb	IAmb	02 39 48.5	
	comp=Z,6.2nm,1.0s						
H27K	Steamboat Moun	88.46	24	P	P	02 39 47.3	+1.1
	baz=260,SNR=11						
G27K	Doyon Strip	88.51	23	P	P	02 39 47.6	+1.2
	baz=260						
E27K	Coleen River	88.79	22	P	P	02 39 49.3	+1.6
	baz=260						
O29M	Mount Kennedy	88.84	30	P	P	02 39 49.1	+0.9
	baz=262						
YUK4	Talbot Arm	88.95	29	P	P	02 39 50.1	+1.3
	baz=262						
I28M	Miner Creek	88.97	24	IAmb	IAmb	02 39 50.6	
	comp=Z,5.7nm,1.1s						
I28M	Miner Creek	88.97	24	P	P	02 39 50.0	+1.3
	baz=261,SNR=6.7						
DAWY	Dawson	88.99	26	IAmb	IAmb	02 39 53.7	
	comp=Z,6.8nm,1.1s						
DAWY	Dawson	88.99	26	P	P	02 39 49.5	+0.7
	baz=262,SNR=8.0						
YUK6	Outpost Mounta	89.03	29	P	P	02 39 50.0	+0.8
	baz=263						
P29M	Windy Craggy	89.17	30	P	P	02 39 50.8	+1.1
	baz=263						
M29M	Somme Creek	89.18	27	IAmb	IAmb	02 39 54.3	
	comp=Z,4.4nm,1.1s						
M29M	Somme Creek	89.18	27	P	P	02 39 50.9	+1.2
	baz=262						
D27M	Malcolm River	89.20	21	P	P	02 39 51.1	+1.4
	baz=260						
F28M	Old Crow	89.33	22	P	P	02 39 51.5	+1.2
	baz=261						
L29M	L29M	89.42	27	P	P	02 39 51.9	+1.1
	baz=263						
HYT	Haines Junctio	89.43	29	P	P	02 39 51.7	+0.7
	baz=263						
E28M	Babbage River	89.61	21	P	P	02 39 51.8	+0.3
	baz=262						
P30M	Million Dollar	89.62	30	P	P	02 39 52.4	+0.6
	baz=264						
I29M	Ogilvie Camp,	89.63	25	IAmb	IAmb	02 40 03.1	
	comp=Z,6.4nm,1.3s						
I29M	Ogilvie Camp,	89.63	25	P	P	02 39 52.5	+0.8

	baz=263						
H29M	Whitestone	89.72	24	P	P	02 39 53.3	+1.2
	baz=263						
K29M	Barlow Dome	89.78	26	P	P	02 39 53.5	+1.0
K29M				IAmb	IAmb	02 39 56.1	
	comp=Z,7.3nm,1.4s						
K29M	Barlow Dome	89.78	26	P	P	02 39 53.7	+1.2
	baz=263						
PLBC	Pleasant Camp	89.85	31	P	P	02 39 53.8	+1.1
	baz=264						
D28M	Stokes Point	90.00	21	P	P	02 39 54.6	+1.3
	baz=262						
O30N	Mendenhall	90.11	29	P	P	02 39 54.8	+0.8
	baz=265						
E29M	Blow River	90.18	22	P	P	02 39 55.2	+1.0
	baz=263						
SKAG	Skagway	90.38	31	P	P	02 39 56.3	+1.1
	baz=265						
EPYK	Eagle Plains	90.40	24	P	P	02 39 56.1	+0.8
	baz=264						
I30M	Mount Dempster	90.42	25	P	P	02 39 56.2	+0.7
	baz=264						
G30M	tAoh Zraii Nji	90.66	23	P	P	02 39 56.9	+0.5
	baz=265						
WHY	Whitehorse	90.70	29	P	P	02 39 57.6	+0.8
	baz=266						
G31M	Satah River	91.42	23	P	P	02 40 00.7	+0.8
	baz=266						
FARO	Faro, Yukon	91.53	28	P	P	02 40 01.1	+0.5
	baz=267						
WRAK	Wrangell Islan	91.77	34	P	P	02 40 01.7	0.0
	baz=268						
INK	Inuvik	91.79	22	P	P	02 40 01.3	-0.3
	baz=267						
R33M	Jennings River	92.60	31	P	P	02 40 05.8	+0.1
	baz=269						
A36M	Sachs Harbour	94.56	18	P	P	02 40 14.6	+0.3
	baz=275						
TOAD	Toad River Com	95.57	31	P	P	02 40 19.8	+0.5
	baz=274						
TXAR	Lajitas Array	115.40	59	PKP	PKiKP	02 45 36.6	0.0
	comp=Z,0.4nm,0.9s,baz=276,slow=1.1,SNR=3.6						
PB11	IPOC Station P	144.27	130	PKPdf	PKPdf	02 46 30.4	-0.8
CPUP	Villa Florida	147.16	153	PKPbc	PKPab	02 46 39.4	-0.2
	comp=Z,2.0nm,1.0s,baz=68,slow=4.2,SNR=9.1						
LPAZ	La Paz	147.42	126	PKPbc	PKPab	02 46 40.7	-1.0
	comp=Z,4.3nm,0.9s,baz=342,slow=1.2,SNR=14						
RUSC	La Rusia	148.21	83	PKPbc	PKPbc	02 46 41.9	0.0
SJG	San Juan	151.33	56	PKPbc	PKiKP	02 46 49.6	+0.4

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*VIE **24** 02:37:44.9±0.2, 47°.90N×17°.25E, h12^{km}±2^{km}, mb1.2/2, ml1.5/4, Error ellipse: s-maj=2.0km s-min=1.2km az=157.0 16 km NE of Sankt Johann*

*PRU **24** 02:37:47.7, 47°.94N×17°.24E, h1^{km}*

IPEC 24 02:37:44.5±0.3**, 47°.86N×17°.31E, h18**^{km}±1^{km}**, ML1.2**/6**, Error ellipse: s-maj=3.5km s-min=1.3km az=117.0, Hungary**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MODS	Modra-Piesok	0.51	358	*e*PG	Pb	02 37 55.1	+0.1
MODS				*e*SG	Sn	02 38 05.6	+0.3
SRO	Srobarova	0.68	94	*e*PG	Pg	02 37 58.5	+0.6
SRO				*e*SG	Sn	02 38 08.3	-1.0
SRO				*e*LG	Lg	02 38 09.5	
RONA	Rosalia, Austr	0.70	257	*i* Pg	Pb	02 37 58.1	-0.1
	0.8nm,0.1s						
RONA				*e*Sg	Sg	02 38 07.9	+0.3
	1.3nm,0.1s						
CONA	Conrad Observa	0.97	275	*e*Pg	Pb	02 38 03.1	+0.2
	0.5nm,0.2s						
CONA				*e*Sg	Sg	02 38 16.0	-0.3
	0.3nm,0.1s						
JAVC	Velka Javorina	1.03	14	*e*Pg	Pb	02 38 03.7	-0.1
	baz=194						
VYHS	Vyhne	1.20	58	*e*PG	Pb	02 38 07.2	+0.4
VYHS				*e*SG	Sn	02 38 22.3	0.0
KRUC	Moravsky	1.35	334	*e*Pg	Pb	02 38 09.0	-0.2
	baz=153						
KRUC				*e*Sg	Sb	02 38 26.7	+0.6
	2.4nm,0.2s,baz=153						
ARSA	Arzberg	1.35	244	*e*Sn	Sg	02 38 28.3	0.0
	1.1nm,0.2s						
VRAC	Vranov	1.52	342	*e*Sg	Sb	02 38 32.4	+1.2
	1.7nm,0.4s,baz=162						
KHC	Kasperske Hory	2.79	299	*e*SG	Sg	02 39 13.8	-0.2

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*IDC **24** 02:42:22.1±0.7, 2°.65S×138°.44E, h0^{km}, mb4.0/10, mbtmp4.1/14, ML4.1/4, Error ellipse: s-maj=18.2km s-min=15.1km az=2.0*

*NEIC **24** 02:42:25.1±2.0, 2°.7S±0°.1×138°.63E±0°.07, h10^{km}±1^{km}, mb4.4/21, Error ellipse: s-maj=17.1km s-min=12.1km az=168.0*

*DJA **24** 02:42:25.8±0.4, 3°S±5°×13°9E±°, h10^{km}, M4.6/6, MLv4.6/6*

ISC 24 02:42:27.2±0.5**, 2°.59S**±0°.07×**138°.57E**±0°.05**, h32**^{km}**, n51, σ1s.48**/51**, mb4.3**/19**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.61	13	P	Pn	02 42 37.2	-2.5
GENI	Genyem	1.59	90	P	Pn	02 42 55.0	+1.8
JAY	Jayapura	2.13	88	Pn	Pn	02 43 00.9	+0.3
	38nm,0.3s,baz=239,slow=10,SNR=47						
JAY				Lg	Lg	02 43 35.9	
	20nm,0.3s,baz=90,slow=14,SNR=6.8						
	103nm,0.4s						
JAY	Jayapura	2.13	88	P	Pn	02 43 01.3	+0.7
SRPI	Serui, Papua	2.44	287	P	Pn	02 43 04.3	-0.5
BAKI	Biak	2.83	299	P	Pn	02 43 11.3	+1.1
FAKI	Fak Fak	6.32	267	Pn	Pn	02 44 00.5	+2.3
COEN	Coen	12.17	158	Pn	Pn	02 45 17.8	-0.7
MTN	Manton Dam	12.57	215	Pn	Pn	02 45 24.4	+0.6
KNRA	Kununurra	16.20	216	Pn	Pn	02 46 11.6	-0.9
KNRA				IAmb	IAmb	02 46 24.0	
	comp=Z,36nm,1.2s						
BATI	Baumata	16.62	242	Pn	Pn	02 46 14.8	-3.2
	comp=Z,3.3nm,0.3s,baz=126,slow=23,SNR=1.1						
	comp=Z,17nm,0.4s						
WB0	Warramunga Arr	17.55	193	Pn	Pn	02 46 27.0	-2.5
WR8	Warramunga Arr	17.71	193	Pn	Pn	02 46 29.0	-2.5
WRAB	Tennant Creek	17.72	193		P	02 46 31.5	-0.8
WRAB				IAmb	IAmb	02 46 40.6	
	comp=Z,15nm,0.7s						
WRA	Warramunga Arr	17.73	193		Pn	02 46 31.0	-0.8
WRA	Warramunga Arr	17.73	193	P	Pn	02 46 29.5	-2.3
	comp=Z,0.7nm,0.3s,baz=17,slow=12,SNR=17						
	comp=Z,3.2nm,0.7s						
FITZ	Fitzroy Crossi	19.96	219	P	Pn	02 46 57.6	-1.0
FITZ	Fitzroy Crossi	19.96	219	P	P	02 46 56.0	-0.8
	comp=Z,0.1nm,0.3s,baz=106,slow=19,SNR=2.8						
	comp=Z,5.0nm,1.0s						
AS31	Alice Springs	21.43	192	P	P	02 47 12.0	-0.8
AS31				IAmb	IAmb	02 47 25.3	
	comp=Z,8.2nm,0.8s						
ASAR	Alice Springs	21.43	192	P	P	02 47 11.3	-1.5
ASAR	Alice Springs	21.43	192	P	P	02 47 11.1	-1.7
	comp=Z,2.4nm,0.5s,baz=21,slow=10,SNR=12						
	comp=Z,2.4nm,0.5s						
CMAR	Chiang Mai Arr	44.26	300	P	P	02 50 34.9	+0.8
	comp=Z,0.9nm,0.4s,baz=110,slow=9.6,SNR=1.3						
	comp=Z,0.9nm,0.4s						
KLR	Kul'dur	51.95	354	P	P	02 51 34.0	+0.9
	comp=Z,0.7nm,0.6s,baz=149,slow=6.4,SNR=2.6						
	comp=Z,0.7nm,0.6s						
SONM	Songino Array	57.55	335	P	P	02 52 15.6	+1.7
SONM	Songino Array	57.55	335	P	P	02 52 14.3	+0.5
	comp=Z,0.3nm,0.5s,baz=142,slow=7.3,SNR=2.0						
	comp=Z,0.3nm,0.5s						
MKAR	Makanchi Array	69.61	322	P	P	02 53 33.6	+0.2
MKAR	Makanchi Array	69.61	322	P	P	02 53 33.1	-0.3
	comp=Z,0.5nm,0.6s,baz=116,slow=6.4,SNR=5.0						
	comp=Z,0.5nm,0.6s						
ZALV	Zalesovo Beam	71.77	330	P	P	02 53 45.9	-0.4
	comp=Z,0.6nm,0.4s,baz=150,slow=9.9,SNR=2.0						
	comp=Z,0.6nm,0.4s						
KURBB	Kurchatov Arra	73.55	325	P	P	02 53 56.8	-0.2
	comp=Z,2.0nm,0.2s,baz=110,slow=4.9,SNR=1.9						
	comp=Z,2.0nm,0.2s						
VNDA	Vanda	75.91	175	P	P	02 54 11.7	+1.5
VNDA				IAmb	IAmb	02 54 46.6	
	comp=Z,5.9nm,1.4s						
L14K	Kuka Creek	77.85	25	P	P	02 54 23.0	+1.7
L14K				IAmb	IAmb	02 54 25.0	
	comp=Z,4.0nm,0.8s						
M14K	Bethel	77.87	26	P	P	02 54 23.2	+1.7
BVAR	Borovoye Array	79.14	325	P	P	02 54 27.7	-1.0
	comp=Z,0.7nm,0.4s,baz=113,slow=11,SNR=2.5						
	comp=Z,0.7nm,0.4s						
C19K	Lookout Ridge	82.69	19	P	P	02 54 49.6	+2.2
C19K				IAmb	IAmb	02 54 59.1	
	comp=Z,3.3nm,1.0s						
D19K	Kuna River	82.90	19	P	P	02 54 49.5	+1.1
D19K				IAmb	IAmb	02 55 01.9	
	comp=Z,5.3nm,1.4s						
E22K	Anaktuvuk Pass	84.91	21	P	P	02 54 59.8	+1.1
E22K				IAmb	IAmb	02 55 10.4	
	comp=Z,2.2nm,1.1s						
DHY	Denali Highway	85.13	26	P	P	02 55 03.0	+3.0
CCB	Clear Creek Bu	85.37	24	P	P	02 55 01.4	+0.4
CCB				IAmb	IAmb	02 55 10.8	
	comp=Z,3.0nm,1.0s						
ILAR	Eielson Array	85.78	24	P	P	02 55 02.1	-1.0
ILAR	Eielson Array	85.78	24	P	P	02 55 01.8	-1.3
	comp=Z,1.2nm,0.8s,baz=260,slow=4.7,SNR=14						
	comp=Z,1.2nm,0.8s						
C23K	Itkillik River	85.89	19	P	P	02 55 05.0	+1.5
BMAR	Burnt Mountain	87.35	22	P	P	02 55 12.4	+1.6
QSPA	South Pole Qui	87.35	180	P	P	02 55 10.8	-0.1
QSPA	South Pole Qui	87.35	180	P	P	02 55 09.1	-1.8
	comp=Z,2.0nm,1.0s,baz=313,slow=2.7,SNR=5.4						
	comp=Z,2.0nm,1.0s						
H27K	Steamboat Moun	88.29	24	P	P	02 55 16.9	+1.6
I28M	Miner Creek	88.80	24	P	P	02 55 19.3	+1.5
I28M				IAmb	IAmb	02 55 21.5	
	comp=Z,3.2nm,1.1s						
DAWY	Dawson	88.83	26	P	P	02 55 19.3	+1.5
DAWY				IAmb	IAmb	02 55 22.1	
	comp=Z,2.9nm,1.0s						
FDMO	Fiordimonte	117.11	318	PKPdf	PKPdf	03 01 08.8	-0.6
PB11	IPOC Station P	144.48	130	PKPdf	PKPab	03 02 00.7	+0.8
CPUP	Villa Florida	147.40	153	PKPbc	PKPbc	03 02 09.2	+0.7
	comp=Z,0.2nm,0.6s,baz=79,slow=6.7,SNR=4.0						
LPAZ	La Paz	147.62	126	PKPbc	PKPbc	03 02 09.9	-0.3
	comp=Z,1.7nm,0.8s,baz=226,slow=2.7,SNR=4.2						

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*MOS **24** 02:43:52.5±0.9, 2°.72S×138°.47E, h12^{km}, mb5.3/30, Error ellipse: s-maj=9.3km s-min=5.6km az=102.4*

*IDC **24** 02:43:52.4±0.4, 2°.71S×138°.59E, h0^{km}, mb4.9/20, mbtmp4.8/25, ML4.6/4, Error ellipse: s-maj=12.6km s-min=10.3km az=85.0*

*BJI **24** 02:43:54.1, 3°.01S×138°.94E, h42^{km}, mB5.3/13, mb5.2/75*

*NEIC **24** 02:43:55.2±2.1, 2°.65S±0°.08×138°.50E±0°.06, h10^{km}±1^{km}, mb5.3/269, Error ellipse: s-maj=13.2km s-min=9.7km az=182.0*

*DJA **24** 02:43:57.7±0.5, 3°S±2°×13°9E±°, h28^{km}±4^{km}, M5.2/48, mb5.3/48, mB5.6/24, MLv5.3/11, Mw(mB)5.1/24*

ISC 24 02:43:57.8±0.2**, 2°.67S**±0°.03×**138°.59E**±0°.04**, h32**^{km}**, n752, σ1s.28**/674**, mb5.3**/202**, 17C-9D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.69	10	P	Pn	02 44 09.4	-2.0
SMPI				S	Sb	02 44 20.6	-0.1
GENI	Genyem	1.58	87	P	Pb	02 44 25.4	-1.1
GENI	Genyem	1.58	87	P	Pn	02 44 23.6	-0.1
GENI				S	Sn	02 44 41.6	-1.5
JAY	Jayapura	2.12	86	Pn	Pn	02 44 30.6	-0.6
	128nm,0.3s,baz=260,slow=8.6,SNR=22						
JAY				Lg	Lg	02 45 00.7	
	195nm,0.3s,baz=119,slow=22,SNR=6.7						
	982nm,0.7s						
JAY	Jayapura	2.12	86	P	Pn	02 44 30.7	-0.5
SRPI	Serui, Papua	2.47	289	P	Pn	02 44 36.7	+0.8
BAKI	Biak	2.88	301	P	Pn	02 44 42.0	+0.5
RKPI	Ransiki, Papua	4.55	285	P	Pn	02 45 04.7	+0.1
KMPI	Kaimana, Papua	4.97	258	P	Pn	02 45 11.8	+1.5
MMPI	Merauke	6.03	163	P	Pn	02 45 27.5	+2.6
FAKI	Fak Fak	6.33	268		Pn	02 45 29.8	+0.7
FAKI	Fak Fak	6.33	268	P	Pn	02 45 31.8	+2.8
FAKI	Fak Fak	6.33	268	S	Sn	02 46 41.6	+1.2
FAKI	Fak Fak	6.33	268	P	Pn	02 45 30.3	+1.3
	0.9nm180nm,0.9s						
SWI	Sorong	7.54	284	P	Pn	02 45 46.6	+1.0
	0.8nm2µm238nm,0.6s						
MANU	Manus Island	8.80	86	Pn	Pn	02 46 07.0	+4.1
MSAI	Masohi	9.67	266	P	Pn	02 46 16.1	+1.3
AAI	Ambon	10.42	264	P	Pn	02 46 26.7	+1.5
	157nm,0.9s						
PMG	Port Moresby	10.84	129	Pn	Pn	02 46 33.3	+2.5
PMG	Port Moresby	10.84	129	Pn	Pn	02 46 29.9	-0.9
	5.0nm,0.2s,baz=268,slow=16,SNR=1.3						
PMG	Port Moresby	10.84	129	P	Pn	02 46 34.9	+4.1
I39PW	PALAU INFRASON	10.91	338	I	I	03 48 30.0	
	baz=160,slow=312,SNR=1.9						
NLAI	Namlea	11.48	267	P	Pn	02 46 40.9	+1.2
	2µm138nm,1.5s						
KDU	Kakadu	11.65	211	P	Pn	02 46 40.6	-1.3
TNTI	Ternate	11.72	287		Pn	02 46 40.5	-2.6
COEN	Coen	12.10	158	Pn	Pn	02 46 47.2	-0.9
COEN	Coen	12.10	158	P	Pn	02 46 47.5	-0.6
MTN	Manton Dam	12.51	216	Pn	Pn	02 46 52.0	-1.8
MTN	Manton Dam	12.51	216	P	Pn	02 46 52.9	-0.9
MTN	Manton Dam	12.51	216	P	Pn	02 46 57.6	+3.8
MTN	Manton Dam	12.51	216	S	Sn	02 49 15.3	+3.2
SANI	Sanana	12.60	273	P	Pn	02 46 54.5	-0.5
	66nm,0.7s						
RABL	Rabaul	13.64	97	Pn	Pn	02 47 09.2	-0.1
KMSI	Cibinong	14.95	282	P	Pn	02 47 29.2	+2.2
SOEI	Soe	15.87	243	Pn	Pn	02 47 38.4	-0.8
SOEI				IAmb	IAmb	02 47 45.8	
	comp=Z,144nm,0.8s						
SOEI	Soe	15.87	243	P	P	02 47 41.9	-0.7
SOEI	Soe	15.87	243	P	P	02 47 43.0	+0.4
LUWI	Luwuk	15.89	276	Pn	Pn	02 47 38.4	-0.8
LUWI				IAmb	IAmb	02 47 45.1	
	comp=Z,197nm,0.9s						
LUWI	Luwuk	15.89	276	P	Pn	02 47 40.7	+1.5
LUWI	Luwuk	15.89	276	P	Pn	02 47 39.9	+0.7
	comp=Z,5µmcomp=Z,242nm,0.8s						
KNRA	Kununurra	16.14	216	Pn	Pn	02 47 40.9	-1.6
KNRA	Kununurra	16.14	216	P	Pn	02 47 41.1	-1.4
BBSI	Bau Bau	16.21	260	P	P	02 47 45.0	-1.3
	comp=Z,3µmcomp=Z,190nm,1.1s						
MTSU	Mount Surprise	16.36	160	P	Pn	02 47 46.3	+0.9
	comp=Z,69nm,0.9s						
MTSU	Mount Surprise	16.36	160	P	P	02 47 47.4	-0.5
BATI	Baumata	16.60	243	Pn	Pn	02 47 48.5	+0.1
	comp=Z,17nm,0.3s,baz=140,slow=1.4,SNR=28						
BATI	Baumata	16.60	243	P	P	02 47 50.7	+0.1
MRSI	Marisa	16.93	280	P	P	02 47 53.7	-0.5
	comp=Z,1µmcomp=Z,132nm,0.9s						
APSI	Ampana	17.02	276	P	P	02 47 54.6	-0.6
	comp=Z,3µmcomp=Z,355nm,1.3s						
GUMO	Guam	17.32	21	P	Pn	02 47 57.5	+0.2
	comp=Z,90nm,0.2s,baz=202,slow=5.9,SNR=3.8						
WB0	Warramunga Arr	17.48	193	Pn	Pn	02 47 58.4	-0.9
WB0				IAmb	IAmb	02 48 05.6	
	comp=Z,162nm,0.9s						
WR8	Warramunga Arr	17.64	193	Pn	Pn	02 47 58.6	-2.7
WRAB	Tennant Creek	17.65	193	Pn	Pn	02 47 59.7	-1.7
WRAB	Tennant Creek	17.65	193	P	Pn	02 47 59.7	-1.7
WRAB				pmax	pmax		
	comp=Z,131nm,0.9s						
WRA	Warramunga Arr	17.66	193	Pn	Pn	02 47 58.9	-2.7
WRA	Warramunga Arr	17.66	193	P	Pn	02 47 59.1	-2.5
	comp=Z,5.2nm,0.3s,baz=16,slow=13,SNR=17						
WRA				S	Sn	02 51 17.1	-0.4
	comp=Z,87nm,1.2s,baz=12,slow=23,SNR=6.0						
	comp=Z,7.7nm,0.6s						
WRA	Warramunga Arr	17.66	193	P	Pn	02 47 58.9	-2.7
WRA				pmax	pmax		
	comp=Z,18nm,0.9s						
QIS	Mount Isa	17.81	177	P	Pn	02 48 00.2	-3.2
EDFI	Ende, Flores	17.86	250	P	P	02 48 05.4	+0.8
TOLI2	Tolitoli	18.19	282		Pn	02 48 07.3	-0.8
TOLI2	Tolitoli	18.19	282	P	Pn	02 48 08.0	-0.1
TV1H	Townsville Har	18.34	155	P	Pn	02 48 11.5	+1.6
TTSI	Tana Toraja	18.75	268	P	Pn	02 48 17.3	+2.4
	comp=Z,1µmcomp=Z,89nm,1.2s						
PCI	Palu	18.82	275	P	Pn	02 48 17.8	+2.0
	comp=Z,245nm,1.0s						
SPSI	Sidrap Palu	18.83	266	P	Pn	02 48 16.9	+1.0
CTAO	Charters Tower	18.86	157	P	Pn	02 48 16.1	-0.1
CTAO	Charters Tower	18.86	157	P	Pn	02 48 18.6	+2.4
CTAO	Charters Tower	18.86	157	P	Pn	02 48 16.1	-0.1
CTAO				pmax	pmax		
	comp=Z,39nm,0.9s						
MPSI	Mapaga	18.92	279	P	P	02 48 16.6	+0.4
KAPI	Kappang	18.93	262	P	P	02 48 15.7	-0.7
	comp=Z,0.4nm,0.3s,baz=164,slow=9.1,SNR=1.8						
	comp=Z,3.7nm,0.4s						
KAPI	Kappang	18.93	262	P	Pn	02 48 17.1	-0.1
FITZ	Fitzroy Crossi	19.90	219	P	P	02 48 25.4	-1.5
FITZ	Fitzroy Crossi	19.90	219	P	P	02 48 26.2	-0.7
	comp=Z,1.0nm,0.3s,baz=48,slow=12,SNR=6.9						
FITZ				S	S	02 52 01.1	-8.3
	comp=Z,73nm,0.9s,baz=173,slow=8.2,SNR=6.3						
	comp=Z,26nm,1.0s						
AS01	Alice Springs	21.35	192	P	P	02 48 45.4	+2.9
AS31	Alice Springs	21.36	192	P	P	02 48 41.7	-1.0
AS31				IAmb	IAmb	02 48 50.3	
	comp=Z,74nm,0.7s						
AS31	Alice Springs	21.36	192	P	P	02 48 41.5	-1.1
ASAR	Alice Springs	21.36	192	P	P	02 48 41.4	-1.2
ASAR	Alice Springs	21.36	192	P	P	02 48 42.8	+0.2
	comp=Z,61nm,0.8s,baz=20,slow=10,SNR=26						
	comp=Z,61nm,0.8s						
ASAR	Alice Springs	21.36	192	P	P	02 48 41.4	-1.2
SMKI	Samarinda	21.48	276	P	P	02 48 46.5	+2.5
	comp=Z,247nm,1.2s						
MYLDM	Lahad Datu	21.53	291	P	P	02 48 43.5	-1.0
MYLDM				IAmb	IAmb	02 48 51.1	
	comp=Z,257nm,1.3s						
MYLDM	Lahad Datu	21.53	291	P	P	02 48 46.1	+1.6
TATA	Tatamba Isabel	21.86	106	P	P	02 48 51.1	+3.0
SAVO	Savo Central	22.06	108	P	P	02 48 52.7	+2.4
TWSI	Taliwang, Sumb	22.41	254	P	P	02 48 52.9	-1.1
	comp=Z,35nm,0.8s						
ALEG	Aligegeo Malai	22.81	106	P	P	02 49 00.9	+2.7
KKM	Kota Kinabalu	23.96	291	P	P	02 49 09.3	-0.4
KKM	Kota Kinabalu	23.96	291	P	P	02 49 10.8	+1.1
WRKA	Warakurna	24.35	203	P	P	02 49 11.2	-1.9
QLP	Quilpie	24.39	168	P	P	02 49 17.3	+3.9
QLP	Quilpie	24.39	168	P	P	02 49 16.1	+2.8
KMMI	Kalianget	24.91	259	P	P	02 49 19.5	+1.3
	comp=Z,138nm,0.8s						
JAGI	Jajag, Banyuwa	24.98	256	P	P	02 49 20.3	+1.4
EIDS	Eidsvold	25.57	153	P	P	02 49 25.1	+1.0
EIDS	Eidsvold	25.57	153	P	P	02 49 25.2	+1.1
	comp=Z,41nm,0.8s						
EIDS	Eidsvold	25.57	153	P	P	02 49 26.9	+2.8
MBWA	Marble Bar	25.98	224	P	P	02 49 27.9	+0.1
MBWA				IAmb	IAmb	02 49 39.0	
	comp=Z,90nm,1.2s						
MBWA	Marble Bar	25.98	224	P	P	02 49 35.9	+8.1
MBWA	Marble Bar	25.98	224	P	P	02 49 26.9	-1.0
MBWA	Marble Bar	25.98	224	P	P	02 49 30.0	+2.2
PSA00	Pilbara Seismi	26.18	223	P	P	02 49 27.5	-2.2
PSA00				IAmb	IAmb	02 49 42.0	
	comp=Z,50nm,0.8s						
PSA00	Pilbara Seismi	26.18	223	P	P	02 49 34.2	+4.6
PSA00	Pilbara Seismi	26.18	223	P	P	02 49 32.2	+2.5
KSM	Kuching	28.57	278	P	P	02 49 52.2	+1.0
STKA	Stephens Creek	29.19	175	P	P	02 49 54.6	-1.9
	comp=Z,4.7nm,0.8s,baz=350,slow=6.6,SNR=4.5						
	comp=Z,4.7nm,0.8s						
CMSA	Cobar Meteorol	29.48	168	P	P	02 50 01.7	+2.6
YULB	Yu-li	30.90	328	P	P	02 50 11.4	-0.3
YULB	Yu-li	30.90	328	P	P	02 50 12.3	+0.5
NACB	Ninganchiao	31.39	329	P	P	02 50 15.1	-0.9
NACB	Ninganchiao	31.39	329	P	P	02 50 16.8	+0.8
MORW	Morawa	33.90	217	P	P	02 50 36.6	-1.3
MORW				IAmb	IAmb	02 50 47.3	
	comp=Z,69nm,1.2s						
MORW	Morawa	33.90	217	P	P	02 50 45.8	+7.8
MORW	Morawa	33.90	217	P	P	02 50 40.3	+2.3
MDSI	Maura Dua	34.38	266	P	P	02 50 41.8	-0.6
	comp=Z,53nm,1.1s						
BLDU	Ballidu	34.65	214	P	P	02 50 52.2	+7.7
BLDU	Ballidu	34.65	214	P	P	02 50 47.0	+2.5
KLBR	Kellerberrin	34.83	212	P	P	02 50 52.9	+6.9
KLBR	Kellerberrin	34.83	212	P	P	02 50 47.3	+1.3
MYKOM	Kota Tinggi	35.01	277	P	P	02 50 47.6	-0.1
MYKOM				IAmb	IAmb	02 50 49.4	
	comp=Z,58nm,1.2s						
MYKOM	Kota Tinggi	35.01	277	P	P	02 50 48.5	+0.7
QIZ	Qiongzhong	35.55	309	IAmb	IAmb	02 50 53.1	
	comp=Z,51nm,1.0s						
QIZ	Qiongzhong	35.55	309	P	P	02 50 52.4	0.0
QIZ				S	S	02 56 29.3	+3.0
QIZ				pmax	pmax		
	comp=Z,50nm,1.1s						
QIZ	Qiongzhong	35.55	309	P	P	02 50 52.3	-0.1
NWAO	Narrogin (SRO)	36.15	211	P	P	02 50 55.7	-1.6
	comp=Z,13nm,0.9s,baz=3.7,slow=7.7,SNR=3.6						
	comp=Z,13nm,0.9s						
JNU	Nakatsue	36.34	349	P	P	02 50 58.9	0.0
JNU				IAmb	IAmb	02 51 00.2	
	comp=Z,40nm,1.0s						
JNU	Nakatsue	36.34	349	P	P	02 50 57.6	-1.3
	comp=Z,29nm,1.0s,baz=147,slow=4.5,SNR=10.0						
	comp=Z,29nm,1.0s						
JNU	Nakatsue	36.34	349	P	P	02 50 59.4	+0.5
JMN	Monobe	36.48	353	P	P	02 50 59.8	-0.3
JMN				IAmb	IAmb	02 51 03.4	
	comp=Z,122nm,1.8s						
JMN	Monobe	36.48	353	P	P	02 51 00.7	+0.6
BKNI	Bangkinang	37.65	274	P	P	02 51 10.3	-0.1
IPM	Ipoh	38.20	281	IAmb	IAmb	02 51 16.2	
	comp=Z,126nm,1.7s						
IPM	Ipoh	38.20	281	P	P	02 51 15.6	+0.6
PPI	Padang Panjang	38.23	273	P	P	02 51 15.0	-0.3
	comp=Z,60nm,1.3s						
KULM	Kulim	38.71	282	P	P	02 51 18.9	-0.4
KULM				IAmb	IAmb	02 51 20.4	
	comp=Z,57nm,1.1s						
KULM	Kulim	38.71	282	P	P	02 51 19.7	+0.4
MJAR	Matsushiro Arr	39.01	360	P	P	02 51 20.4	-1.1
	comp=Z,2.3nm,0.7s,baz=179,slow=8.3,SNR=4.6						
MJAR				PcP	PcP	02 53 30.9	-0.5
	comp=Z,5.0nm,0.9s,baz=186,slow=2.7,SNR=6.7						
	comp=Z,2.3nm,0.7s						
GLAD	Gladstone	39.08	169	P	P	02 51 24.7	+2.7
NJ2	Nanjing	39.28	333	⇓P	P	02 51 25.1	+1.3
NJ2				pmax	pmax		
	comp=Z,27nm,0.7s						
CNSH	ChangSha	39.36	323	P	P	02 51 25.3	+0.8
CNSH				pmax	pmax		
	comp=Z,85nm,1.2s						
RPSI	Rantau Prapat	40.00	277	P	P	02 51 28.8	-1.3
RPSI				IAmb	IAmb	02 51 30.8	
	comp=Z,82nm,1.1s						
PSI	Prapat	40.02	278	P	P	02 51 31.3	+0.9
PSI	Prapat	40.02	278	P	P	02 51 28.8	-1.6
PSI				pmax	pmax		
	comp=Z,82nm,1.1s						
TJN	Taejon	40.23	346	P	P	02 51 31.8	+0.2
TJN	Taejon	40.23	346	⇑*e*P	P	02 51 31.6	0.0
WHN	Wuhan	40.32	327	P	P	02 51 34.3	+1.9
WHN				pmax	pmax		
	comp=Z,230nm,1.2s						
JMM	Marumori	40.38	3	P	P	02 51 33.7	+0.9
JMM	Marumori	40.38	3	P	P	02 51 33.8	+0.9
SRIT	Nakonsritamara	40.45	286	P	P	02 51 33.5	-0.2
SRIT				IAmb	IAmb	02 51 35.1	
	comp=Z,95nm,1.2s						
SRIT	Nakonsritamara	40.45	286	P	P	02 51 34.5	+0.7
JSD	Sado	40.51	360	P	P	02 51 33.9	0.0
JSD	Sado	40.51	360	P	P	02 51 33.6	-0.3
KSAR	Wonju Array Be	41.13	347	P	P	02 51 39.4	+0.4
KSAR	Wonju Array Be	41.13	347	P	P	02 51 39.4	+0.4
KSRS	Korea Array	41.13	347	P	P	02 51 38.9	-0.1
	comp=Z,7.0nm,0.8s,baz=162,slow=9.2,SNR=13						
KSRS				PcP	PcP	02 53 38.6	+0.5
	comp=Z,4.7nm,0.9s,baz=178,slow=4.1,SNR=7.0						
	comp=Z,7.0nm,0.8s						
GSI	Gunungsitoli	41.19	275	P	P	02 51 38.0	-1.9
GSI	Gunungsitoli	41.19	275	P	P	02 51 40.6	+0.7
INCN	Inchon	41.46	346	P	P	02 51 42.0	+0.2
INCN				IAmb	IAmb	02 51 43.6	
	comp=Z,64nm,1.4s						
INCN	Inchon	41.46	346	P	P	02 51 43.0	+1.2
INCN	Inchon	41.46	346	P	P	02 51 42.0	+0.2
INCN				pmax	pmax		
	comp=Z,64nm,1.4s						
SLVN	Son La	41.49	307	P	P	02 51 40.7	-1.6
SLVN	Son La	41.49	307	P	P	02 51 42.6	+0.3
GYA	Guiyang	42.31	315	⇓P	P	02 51 50.3	+1.3
GYA				pmax	pmax		
	comp=Z,37nm,0.9s						

LHMI	Lhok Sumawe	42.33	281	P	P	02 51 49.4	+0.2
ENH	Enshi	42.95	322	IAmb	IAmb	02 51 55.5	
	comp=Z,47nm,0.8s						
ENH	Enshi	42.95	322	P	P	02 51 54.8	+0.7
TIA	Tai'an	43.56	335	P	P	02 51 57.6	-1.3
TIA				pmax	pmax		
	comp=Z,30nm,0.9s						
DL2	Dalian	44.23	341	P	P	02 52 02.0	-2.1
DL2				pmax	pmax		
	comp=Z,40nm,1.0s						
CM31	Chiang Mai Arr	44.31	300	P	P	02 52 05.3	+0.1
CM31				IAmb	IAmb	02 52 06.6	
	comp=Z,62nm,1.6s						
CM31	Chiang Mai Arr	44.31	300	P	P	02 52 05.8	+0.6
CMAR	Chiang Mai Arr	44.31	300	P	P	02 52 04.4	-0.8
CMAR	Chiang Mai Arr	44.31	300	P	P	02 52 05.5	+0.3
	comp=Z,9.2nm,0.8s,baz=122,slow=6.3,SNR=32						
	comp=Z,9.2nm,0.8s						
CMAR	Chiang Mai Arr	44.31	300	P	P	02 52 04.4	-0.8
KMI	Kunming	44.40	311	P	P	02 52 06.8	+0.7
KMI				pmax	pmax		
	comp=Z,20nm,1.4s						
LYN	LuoYang	44.42	329	P	P	02 52 06.3	+0.5
LYN				pP	pP	02 52 16.8	+1.1
LYN				pmax	pmax		
	comp=Z,92nm,1.0s						
CHTO	Chiang Mai	44.45	300	P	P	02 52 05.7	-0.7
CHTO	Chiang Mai	44.45	300	P	P	02 52 06.7	+0.3
CHTO				P	P	02 52 06.7	+0.3
CHTO	Chiang Mai	44.45	300	P	P	02 52 06.6	+0.3
CHTO	Chiang Mai	44.45	300	P	P	02 52 05.7	-0.7
CHTO				pmax	pmax		
	comp=Z,11nm,0.9s						
MSHR	Mys Shultsa	45.54	352	*ce*P	P	02 52 15.4	+0.9
MSHR				pmax	pmax		
	comp=Z,13nm,0.8s						
HNS	HongShan	45.62	333	⇑P	P	02 52 15.4	+0.2
HNS				pmax	pmax		
	comp=Z,42nm,1.1s						
PZH	PanZhiHua	45.91	312	P	P	02 52 17.9	0.0
PZH				pmax	pmax		
	comp=Z,20nm,1.3s						
JKA	Kamikawa-asahi	46.72	4	P	P	02 52 24.5	+0.7
JKA				IAmb	IAmb	02 52 43.4	
	comp=Z,21nm,1.0s						
ASAJ	Asahikawa	46.72	4	P	P	02 52 23.4	-0.4
	comp=Z,14nm,1.1s,baz=241,slow=17,SNR=4.8						
	comp=Z,14nm,1.1s						
USA0B	Ussuriysk Arra	47.03	354	P	P	02 52 27.0	+0.7
USA0B				IAmb	IAmb	02 52 28.4	
	comp=Z,36nm,1.2s						
USA0B	Ussuriysk Arra	47.03	354	*c i*P	P	02 52 26.7	+0.4
USRK	Ussuriysk Ar.	47.03	354	P	P	02 52 26.3	0.0
USRK	Ussuriysk Ar.	47.03	354	P	P	02 52 26.1	-0.2
	comp=Z,12nm,1.0s,baz=178,slow=8.2,SNR=27						
	comp=Z,12nm,1.0s						
BJT	Baijiatuau	47.19	336	IAmb	IAmb	02 52 28.9	
	comp=Z,48nm,1.2s						
BJT	Baijiatuau	47.19	336	P	P	02 52 28.2	+0.6
BJI	Beijing	47.21	336	P	P	02 52 27.5	-0.2
BJI				pmax	pmax		
	comp=Z,16nm,1.4s						
CN2	Changchun	47.74	347	*e*P	P	02 52 35.9	+4.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MDJ	Mudanjiang	47.76	351	P	P	02 52 32.5	+0.6
MDJ				S	S	02 59 30.6	+4.3
MDJ				pmax	pmax		
	comp=Z,37nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,380nm,6.6s						
MDJ	Mudanjiang	47.76	351	P	P	02 52 32.8	+0.9
HIZ	Hauiti	48.66	142	P	P	02 52 41.1	+2.1
JCZ	Jackson Bay	49.13	151	P	P	02 52 44.7	+2.1
TKNZ	Takaka Hill	49.16	146	P	P	02 52 43.5	+0.7
BNX	BinXian	49.21	350	⇑P	P	02 52 43.3	+0.2
BNX				sP	sP	02 52 58.1	+1.5
BNX				pmax	pmax		
	comp=Z,77nm,1.1s						
YSS	Yuzhno-Sakhali	49.55	4	P	P	02 52 45.5	-0.1
YSS				IAmb	IAmb	02 52 46.6	
	comp=Z,50nm,1.3s						
YSS	Yuzhno-Sakhali	49.55	4	P	P	02 52 46.4	+0.8
YSS	Yuzhno-Sakhali	49.55	4	*ce*P	P	02 52 45.5	-0.1
YSS				pmax	pmax		
	comp=Z,38nm,1.2s						
HHC	Hu-ho-hao-te	49.84	333	⇑*i*P	P	02 52 48.9	+0.8
HHC				pmax	pmax		
	comp=Z,29nm,1.2s						
HHC				pmax	pmax		
	comp=Z,200nm,5.4s						
TUWZ	Tuamarina	49.98	145	P	P	02 52 48.2	-0.7
TCW	Tory Channel	50.02	145	P	P	02 52 48.7	-0.6
BTO	Baotou	50.36	332	*e*P	P	02 52 53.1	+1.1
BTO				pP	sP	02 53 04.8	-0.9
BTO				sP	pP	02 53 12.9	+11
BTO				PP	PP	02 54 49.8	+1.9
BTO				S	S	03 00 04.0	+0.8
BTO				pmax	pmax		
	comp=Z,58nm,1.0s						
BTO				pmax	pmax		
	comp=Z,690nm,6.3s						
LZH	Lanzhou	50.38	323	*e*P	P	02 52 53.8	+1.5
LZH				pP	sP	02 53 04.8	-1.2
LZH				pmax	pmax		
	comp=Z,88nm,1.3s						
MRZ	Mangatainoka R	50.43	144	P	P	02 52 51.7	-0.8
XLT	XiLinHaoTe	50.57	339	*e*P	P	02 52 53.8	+0.2
XLT				pP	pP	02 53 04.4	+0.9
XLT				sP	sP	02 53 09.3	+2.1
XLT				pmax	pmax		
	comp=Z,22nm,0.7s						
KLR	Kul'dur	52.03	354	P	P	02 53 04.5	+0.3
	comp=Z,16nm,0.8s,baz=198,slow=3.3,SNR=46						
	comp=Z,16nm,0.8s						
HEH	HeiHe	53.59	351	*e*P	P	02 53 15.6	-0.2
HEH				pmax	pmax		
	comp=Z,52nm,1.1s						
HIA	Hailar	54.25	345	IAmb	IAmb	02 53 23.9	
	comp=Z,20nm,0.8s						
HIA	Hailar	54.25	345	P	P	02 53 21.5	+0.8
GTA	Gaotai	54.96	324	P	P	02 53 27.3	+1.1
GTA				pmax	pmax		
	comp=Z,26nm,1.0s						
LSA	Lhasa	55.59	309	P	P	02 53 31.7	+0.4
ZEA	Zeya	57.00	352	*e*P	P	02 53 40.9	+0.6
ZEA				*e*		02 54 35.8	
ZEA				pmax	pmax		
	comp=Z,100nm,1.7s						
ZEA				pmax	pmax		
	comp=N,30nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,50nm,1.1s						
ULN	Ulaanbaatar	57.38	335	P	P	02 53 43.2	-0.1
ULN	Ulaanbaatar	57.38	335	P	P	02 53 43.9	+0.6
ULN				P	P	02 53 43.9	+0.6
ULN	Ulaanbaatar	57.38	335	P	P	02 53 43.2	-0.1
ULN				pmax	pmax		
	comp=Z,15nm,0.8s						
SONM	Songino Array	57.63	335	P	P	02 53 45.4	+0.3
SONM				IAmb	IAmb	02 53 47.0	
	comp=Z,48nm,1.9s						
SONM	Songino Array	57.63	335	P	P	02 53 45.6	+0.5
	comp=Z,7.5nm,0.7s,baz=153,slow=8.0,SNR=23						
	comp=Z,7.5nm,0.7s						
SONM	Songino Array	57.63	335	P	P	02 53 45.4	+0.3
SONM				pmax	pmax		
	comp=Z,48nm,1.9s						
PEA0B	Petropavlovsk-	57.85	13	*c i*P	P	02 53 46.6	+0.3
PETK	Petropavlovsk-	57.85	13	P	P	02 53 46.4	0.0
PETK	Petropavlovsk-	57.85	13	P	P	02 53 47.3	+0.9
	comp=Z,15nm,0.9s,baz=153,slow=5.3,SNR=25						
PETK				PcP	PcP	02 54 37.6	-1.0
	comp=Z,6.0nm,0.9s,baz=187,slow=5.2,SNR=4.0						
	comp=Z,15nm,0.9s						
EVN	Everest	58.31	305	IAmb	IAmb	02 53 52.1	
	comp=Z,16nm,0.8s						
CIT	Chita	58.47	342	*e*P	P	02 53 51.6	+0.8
CIT				*e*		02 54 00.0	
CIT				pmax	pmax		
	comp=Z,120nm,1.4s						
PALK	Pallekele	58.60	280	P	P	02 53 52.2	-0.1
ZAK	Zakamensk	60.90	335	*e*P	P	02 54 07.3	-0.3
ZAK				pmax	pmax		
	comp=Z,30nm,1.4s						
HYB	Hyderabad	62.44	291	*e*P	P	02 54 17.9	-0.6
MA2	Magadan	62.80	7	P	P	02 54 20.3	+0.3
MA2	Magadan	62.80	7	P	P	02 54 20.8	+0.8
MA2	Magadan	62.80	7	*c i*P	P	02 54 20.3	+0.3
MA2				pmax	pmax		
	comp=Z,55nm,0.9s						
MOY	Mondy	62.82	335	*e*P	P	02 54 21.4	+0.9
MOY				pmax	pmax		
	comp=Z,49nm,1.7s						
YAK	Yakutsk	64.88	355	P	P	02 54 34.0	+0.4
YAK	Yakutsk	64.88	355	*c i*P	P	02 54 34.1	+0.4
YAK				pmax	pmax		
	comp=Z,217nm,0.8s						
WMQ	Urumqi	64.90	322	*e*P	P	02 54 35.4	+1.1
WMQ				PP	PP	02 57 04.5	+7.1
WMQ				pmax	pmax		
	comp=Z,40nm,1.3s						
KIWB	Kanaga Island	65.96	28	P	P	02 54 41.4	+0.5
SEY	Seymchan	66.26	7	*ce*P	P	02 54 43.2	+0.6
SEY				pmax	pmax		
	comp=Z,30nm,0.9s						
MHA	Mahukona	68.10	67	P	P	02 54 56.0	+1.0
MHA	Mahukona	68.10	67	P	P	02 54 56.0	+1.0
POHA	Pohakuloa	68.35	68	P	P	02 54 56.4	-0.7
MLH	Mauna Loa	68.44	68	P	P	02 54 57.7	+0.1
STCH	Steam Cracks	68.66	68	P	P	02 54 59.5	+0.8
MK31	Makanchi Array	69.68	322	*c i*P	P	02 55 04.5	0.0
MKAR	Makanchi Array	69.68	322	P	P	02 55 04.3	-0.2
MKAR	Makanchi Array	69.68	322	P	P	02 55 04.7	+0.2
	comp=Z,8.2nm,0.8s,baz=113,slow=7.9,SNR=39						
	comp=Z,8.2nm,0.8s						
MKAR	Makanchi Array	69.68	322	P	P	02 55 04.3	-0.2
MAKZ	Makanchi	69.88	322	P	P	02 55 05.4	-0.3
MAKZ	Makanchi	69.88	322	P	P	02 55 05.4	-0.3
MAKZ				pmax	pmax		
	comp=Z,96nm,1.8s						
NIKH	Nikolski High	70.71	31	P	P	02 55 10.1	-0.4
	baz=237						
KSH	Kashi	70.97	313	P	P	02 55 13.8	+1.2
KSH				sP	sP	02 55 25.9	-0.7
KSH				pmax	pmax		
	comp=Z,13nm,0.9s						
KDJ	Kajisay	71.05	316	IAmb	IAmb	02 55 14.7	
	comp=Z,14nm,0.8s						
NIL	Nilore	71.20	307	P	P	02 55 13.5	-0.6
NIL	Nilore	71.20	307	P	P	02 55 14.2	+0.1
NIL				P	P	02 55 14.2	+0.1
NIL	Nilore	71.20	307	P	P	02 55 13.5	-0.6
NIL				pmax	pmax		
	comp=Z,11nm,0.8s						
ZAA0	Zalesovo Array	71.84	330	IAmb	IAmb	02 55 17.8	
	comp=Z,43nm,1.8s						
ZALV	Zalesovo Beam	71.84	330	P	P	02 55 15.7	-1.7
ZALV	Zalesovo Beam	71.84	330	P	P	02 55 16.5	-0.9
	comp=Z,6.8nm,0.7s,baz=106,slow=5.4,SNR=17						
	comp=Z,6.8nm,0.7s						
ZALV	Zalesovo Beam	71.84	330	P	P	02 55 15.7	-1.7
BOOM	Boomskoye usch	72.04	316	IAmb	IAmb	02 55 20.5	
	comp=Z,15nm,0.7s						
UNV	Unalaska Valle	72.36	31	P	P	02 55 20.1	-0.4
UNV				IAmb	IAmb	02 55 21.6	
	comp=Z,32nm,1.1s						
UNV	Unalaska Valle	72.36	31	P	P	02 55 21.6	+1.1
UNV	Unalaska Valle	72.36	31	P	P	02 55 20.5	0.0
	baz=239						
P08K	Saint George I	72.39	27	P	P	02 55 20.8	+0.2
	baz=236						
SPIA	Saint Paul Isl	72.40	26	P	P	02 55 21.2	+0.5
SPIA	Saint Paul Isl	72.40	26	P	P	02 55 20.9	+0.2
	baz=235						
LVA	Lava Point	72.76	30	P	P	02 55 23.1	+0.1
AKUT	Akutan	72.88	31	P	P	02 55 24.9	+1.4
AAK	Ala-Archa	73.09	316	P	P	02 55 24.6	-0.7
AAK	Ala-Archa	73.09	316	P	P	02 55 25.8	+0.5
AAK	Ala-Archa	73.09	316	P	P	02 55 24.7	-0.7
AAK				pmax	pmax		
	comp=Z,15nm,1.3s						
BILL	Bilibino	73.15	11	P	P	02 55 24.5	-0.5
BILL				IAmb	IAmb	02 55 26.2	
	comp=Z,20nm,0.9s						
BILL	Bilibino	73.15	11	*c i*P	P	02 55 25.1	+0.1
BILL				pmax	pmax		
	comp=Z,30nm,1.3s						
KURK	Kurchatov	73.61	325	P	P	02 55 27.5	-0.5
KURK	Kurchatov	73.61	325	P	P	02 55 28.3	+0.3
KURK	Kurchatov	73.61	325	P	P	02 55 27.5	-0.5
KURK				pmax	pmax		
	comp=Z,21nm,1.2s						
KURBB	Kurchatov Arra	73.62	325	P	P	02 55 27.8	-0.3
	comp=Z,8.5nm,0.7s,baz=116,slow=5.2,SNR=26						
KURBB				PP	PP	02 58 13.9	+1.4
	comp=Z,0.3nm,0.2s,baz=125,slow=7.4,SNR=4.7						
	comp=Z,8.5nm,0.7s						
ARSB	Arslanbob	73.72	314	IAmb	IAmb	02 55 30.5	
	comp=Z,23nm,0.9s						
FALS	False Pass	74.44	31	P	P	02 55 32.4	-0.2
FALS	False Pass	74.44	31	P	P	02 55 33.9	+1.2
FALS	False Pass	74.44	31	P	P	02 55 33.0	+0.3
	baz=242						
TIXI	Tiksi	74.46	357	P	P	02 55 30.8	-1.7
TIXI	Tiksi	74.46	357	P	P	02 55 30.8	-1.7
TIXI				pmax	pmax		
	comp=Z,12nm,0.9s						
KBL	Kabul	74.81	307	P	P	02 55 33.9	-1.7
KBL	Kabul	74.81	307	P	P	02 55 33.9	-1.7
KBL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
S12K	Black Hills	75.52	30	P	P	02 55 39.1	+0.2
	baz=243,SNR=14						
GAMB	Gambell	75.79	20	P	P	02 55 41.1	+0.8
	baz=232						
VNDA	Vanda	75.83	175	P	P	02 55 40.2	-0.2
VNDA	Vanda	75.83	175	P	P	02 55 40.5	+0.1
	comp=Z,8.2nm,0.7s,baz=328,slow=6.9,SNR=18						
	comp=Z,8.2nm,0.7s						
VNDA	Vanda	75.83	175	P	P	02 55 40.2	-0.2
VNDA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SIMJ	Simiganj	75.87	311	P	P	02 55 40.7	-0.9
KK31	Karatay Array	76.01	316	P	P	02 55 41.6	-0.5
KK31	Karatay Array	76.01	316	P	P	02 55 41.6	-0.5
KK31				pmax	pmax		
	comp=Z,11nm,1.0s						
KKAR	Karatay Array	76.01	316	P	P	02 55 41.3	-0.8
KKAR	Karatay Array	76.01	316	P	P	02 55 41.3	-0.8
SDPT	Sand Point	76.16	31	P	P	02 55 43.5	+0.9
SDPT	Sand Point	76.16	31	P	P	02 55 42.7	+0.1
	baz=244						
CHNA	Chernabura Isl	76.40	32	P	P	02 55 44.0	+0.1
	baz=245						
S14K	Fog Glacier	77.04	30	P	P	02 55 47.4	-0.3
	baz=245						
M13K	Dall Lake	77.17	26	P	P	02 55 48.7	+0.5
	baz=240,SNR=6.4						
K13K	Kusilvak Mount	77.40	24	P	P	02 55 50.7	+1.2
	baz=239,SNR=16						
O14K	Tigyukauivet M	77.54	27	P	P	02 55 51.1	+0.8
	baz=242						
N14K	Kuskokwak Cree	77.67	26	P	P	02 55 51.8	+0.8
	baz=242						
L14K	Kuka Creek	77.91	25	P	P	02 55 53.4	+1.1
	baz=241						
M14K	Bethel	77.94	26	P	P	02 55 53.6	+1.1
	baz=242,SNR=28						
TNA	Tin City	78.16	20	P	P	02 55 54.3	+0.7
	baz=235						
O15K	Ungalikthiuk R	78.17	28	P	P	02 55 54.7	+0.8
	baz=244						
J14K	Nanvaranak Lak	78.26	23	IAmb	IAmb	02 55 56.4	
	comp=Z,20nm,1.1s						
J14K	Nanvaranak Lak	78.26	23	P	P	02 55 55.3	+1.1
	baz=240,SNR=5.9						
M15K	Kasigluk River	78.46	26	P	P	02 55 55.8	+0.4
	baz=243,SNR=13						
N15K	Kwethluk River	78.49	27	IAmb	IAmb	02 55 57.6	
	comp=Z,32nm,0.9s						
N15K	Kwethluk River	78.49	27	P	P	02 55 56.4	+0.8
	baz=243,SNR=11						
L15K	Ungalak Mounta	78.58	25	P	P	02 55 56.5	+0.5
	baz=242,SNR=11						
F14K	Arctic Creek	78.66	20	P	P	02 55 57.4	+0.9
	baz=237						
K15K	Wolf Creek Mou	78.85	24	IAmb	IAmb	02 55 59.7	
	comp=Z,34nm,0.9s						
K15K	Wolf Creek Mou	78.85	24	P	P	02 55 58.8	+1.2
	baz=242,SNR=17						
P16K	Nushagak River	78.96	28	P	P	02 55 58.9	+0.7
	baz=246						
O16K	Kokwok River B	79.15	28	IAmb	IAmb	02 56 01.0	
	comp=Z,30nm,1.1s						
O16K	Kokwok River B	79.15	28	P	P	02 56 00.2	+1.0
	baz=245,SNR=10						
BVAR	Borovoye Array	79.21	325	P	P	02 55 59.6	-0.1
	comp=Z,21nm,0.8s,baz=111,slow=6.5,SNR=54						
	comp=Z,21nm,0.8s						
N16K	Nishlik Lake	79.22	27	P	P	02 56 00.9	+1.3
	baz=245,SNR=17						
G15K	Niukluk	79.22	21	P	P	02 56 00.0	+0.5
	baz=239						
BRVK	Borovoye	79.28	325	P	P	02 55 59.5	-0.6
BRVK				IAmb	IAmb	02 56 01.1	
	comp=Z,22nm,0.9s						
BRVK	Borovoye	79.28	325	P	P	02 56 00.5	+0.4
BRVK				P	P	02 56 00.5	+0.4
BRVK	Borovoye	79.28	325	P	P	02 55 59.5	-0.6
BRVK				pmax	pmax		
	comp=Z,22nm,0.9s						
M16K	Timber Creek	79.37	26	IAmb	IAmb	02 56 02.4	
	comp=Z,40nm,0.9s						
M16K	Timber Creek	79.37	26	P	P	02 56 01.3	+0.9
	baz=244,SNR=25						
F15K	North Star Dit	79.38	21	P	P	02 56 01.2	+0.8
	baz=238,SNR=6.1						
L16K	Owhat River	79.45	25	IAmb	IAmb	02 56 02.6	
	comp=Z,24nm,0.9s						
L16K	Owhat River	79.45	25	P	P	02 56 01.4	+0.6
	baz=244,SNR=17						
Q16K	King Salmon	79.45	29	P	P	02 56 00.3	-0.6
	baz=247						
Q17K	Contact Creek	79.66	29	P	P	02 56 01.4	-0.8
	baz=248,SNR=11						
O17K	Koliganek Bris	79.68	28	P	P	02 56 03.0	+0.9
	baz=246,SNR=34						
J16K	Anvik River	79.70	24	IAmb	IAmb	02 56 04.5	
	comp=Z,22nm,0.9s						
J16K	Anvik River	79.70	24	P	P	02 56 03.4	+1.3
	baz=242,SNR=9.4						
H16K	Elim	79.71	22	P	P	02 56 02.7	+0.5
	baz=241						
P17K	Kvichak River	79.76	28	P	P	02 56 03.0	+0.5
	baz=247						
SII	Sitkinak Islan	79.89	31	P	P	02 56 04.0	+0.6
	baz=249						
I17K	Unalakleet	79.94	23	P	P	02 56 03.3	-0.1
I17K				IAmb	IAmb	02 56 05.9	
	comp=Z,33nm,1.1s						
I17K	Unalakleet	79.94	23	P	P	02 56 04.7	+1.3
	baz=242						
N17K	Nushagak Hills	79.95	27	IAmb	IAmb	02 56 05.8	
	comp=Z,24nm,0.9s						
N17K	Nushagak Hills	79.95	27	P	P	02 56 04.9	+1.3
	baz=246,SNR=14						
G16K	Koyuk River	80.04	21	P	P	02 56 04.7	+0.8
	baz=240						
L17K	Donlin	80.13	25	P	P	02 56 05.8	+1.3
	baz=245,SNR=13						
M17K	Holitna River	80.20	26	IAmb	IAmb	02 56 07.4	
	comp=Z,44nm,0.9s						
M17K	Holitna River	80.20	26	P	P	02 56 06.4	+1.5
	baz=246,SNR=25						
Q18K	Katmai Hardscr	80.24	29	P	P	02 56 04.7	-0.6
	baz=248,SNR=9.8						
J17K	VABM Dome	80.36	24	IAmb	IAmb	02 56 08.0	
	comp=Z,26nm,0.9s						
J17K	VABM Dome	80.36	24	P	P	02 56 07.0	+1.2
	baz=244,SNR=11						
K17K	Iditarod	80.38	25	P	P	02 56 07.0	+1.2
	baz=245,SNR=30						
P18K	Big Mountain,	80.41	28	P	P	02 56 05.5	-0.7
	baz=248,SNR=5.1						
C16K	Lisburne Hills	80.53	18	P	P	02 56 06.6	+0.1
	baz=237						
OHAK	Old Harbor	80.58	31	P	P	02 56 08.2	+1.2
OHAK	Old Harbor	80.58	31	P	P	02 56 07.7	+0.6
	baz=250,SNR=9.3						
O18K	Koktuh Hills	80.59	28	P	P	02 56 07.0	0.0
	baz=248						
N18K	Kilae Creek	80.60	27	IAmb	IAmb	02 56 09.2	
	comp=Z,22nm,1.0s						
N18K	Kilae Creek	80.60	27	P	P	02 56 08.0	+0.9
	baz=247,SNR=9.3						
G17K	Kiwalik Mounta	80.71	22	P	P	02 56 08.6	+1.0
	baz=242,SNR=14						
H17K	Granite Mounta	80.73	22	P	P	02 56 08.7	+1.0
	baz=243,SNR=5.1						
L18K	Granite Mounta	80.86	25	IAmb	IAmb	02 56 10.6	
	comp=Z,21nm,0.8s						
L18K	Granite Mounta	80.86	25	P	P	02 56 09.4	+1.0
	baz=246,SNR=22						
M18K	Stony River	80.94	26	P	P	02 56 10.1	+1.2
	baz=247,SNR=19						
D17K	Noatak River	80.95	19	P	P	02 56 09.5	+0.8
	baz=239,SNR=9.6						
F17K	Baldwin Pennin	80.95	21	P	P	02 56 09.4	+0.6
	baz=241						
Q19K	Cape Douglas,	81.00	29	P	P	02 56 08.8	-0.5
	baz=249						
E17K	Hotham Inlet	81.06	20	P	P	02 56 10.3	+0.9
	baz=241						
KDAK	Kodiak Island	81.13	30	P	P	02 56 09.9	-0.1
KDAK				IAmb	IAmb	02 56 11.3	
	comp=Z,34nm,0.8s						
KDAK	Kodiak Island	81.13	30	P	P	02 56 09.9	-0.1
KDAK				pmax	pmax		
	comp=Z,34nm,0.8s						
KDAK	Kodiak Island	81.13	30	P	P	02 56 10.4	+0.5
	baz=250						
O19K	Port Alsworth	81.13	28	P	P	02 56 10.0	+0.1
	baz=249						
RDOG	Red Dog Mine	81.18	19	P	P	02 56 10.6	+0.5
	baz=240						
N19K	Bonanza Creek	81.29	27	IAmb	IAmb	02 56 12.7	
	comp=Z,36nm,0.9s						
N19K	Bonanza Creek	81.29	27	P	P	02 56 11.5	+0.7
	baz=248,SNR=20						
C17K	DeLong Mountai	81.31	19	P	P	02 56 11.4	+0.7
	baz=239,SNR=9.0						
J18K	Innoko River	81.35	24	P	P	02 56 11.5	+0.5
	baz=246,SNR=13						
H18K	Honhosa River	81.41	22	P	P	02 56 11.5	+0.1
	baz=244						
WBK	Wadi Bani Khal	81.45	293	P	P	02 56 11.6	-0.8
P19K	Oil Pt	81.45	28	IAmb	IAmb	02 56 12.2	
	comp=Z,27nm,0.8s						
P19K	Oil Pt	81.45	28	P	P	02 56 11.3	-0.4
	baz=250,SNR=6.6						
Q20K	Shuyak Island	81.50	30	P	P	02 56 11.9	0.0
	baz=251						
F18K	Selawik	81.59	21	P	P	02 56 12.4	+0.3
	baz=243						
G18K	Tagagawik	81.63	22	IAmb	IAmb	02 56 15.8	
	comp=Z,15nm,0.8s						
G18K	Tagagawik	81.63	22	P	P	02 56 12.7	+0.2
	baz=244,SNR=16						
L19K	White Mountain	81.63	26	IAmb	IAmb	02 56 14.4	
	comp=Z,30nm,0.8s						
L19K	White Mountain	81.63	26	P	P	02 56 13.3	+0.7
	baz=248,SNR=27						
E18K	Tukpahlearik C	81.64	20	IAmb	IAmb	02 56 16.2	
	comp=Z,20nm,0.8s						
E18K	Tukpahlearik C	81.64	20	P	P	02 56 13.3	+0.9
	baz=242,SNR=14						
M19K	Big River Lodg	81.73	26	P	P	02 56 14.1	+1.0
	baz=248,SNR=12						
GCSA	Galena City Sc	81.81	23	P	P	02 56 13.9	+0.6
	baz=246,SNR=6.1						
WSAR	Wadi Sarin	81.83	294	P	P	02 56 13.8	-0.6
O20K	Slope Mountain	81.89	28	P	P	02 56 14.6	+0.5
	baz=250						
J19K	Poorman	82.01	24	IAmb	IAmb	02 56 16.3	
	comp=Z,21nm,1.0s						
J19K	Poorman	82.01	24	P	P	02 56 15.3	+0.8
	baz=247,SNR=18						
C18K	Utukok River	82.03	19	P	P	02 56 14.9	+0.3
	baz=241,SNR=11						
MAW	Mawson	82.11	202	P	P	02 56 15.7	+0.7
	comp=Z,3.4nm,1.2s						
MAW	Mawson	82.11	202	P	P	02 56 13.8	-1.1
	comp=Z,6.9nm,1.0s,baz=70,slow=6.2,SNR=5.7						
	comp=Z,6.9nm,1.0s						
L20K	Farewell, AK	82.17	26	P	P	02 56 16.2	+0.8
	baz=249,SNR=26						
B18K	Kokolik River	82.19	18	P	P	02 56 15.9	+0.6

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          baz=240
MHTO  MHTO              82.20 291  P      P       02 56 15.5  -0.9
HOM   Homer             82.22  29  P      P       02 56 16.1  +0.5
          baz=251
M20K  Styx River        82.28  26  IAmb   IAmb    02 56 17.8
          comp=Z,24nm,0.9s
M20K  Styx River        82.28  26  P      P       02 56 16.6  +0.5
          baz=250,SNR=19
H19K  Roundabout Mou    82.30  22  P      P       02 56 16.7  +0.8
          baz=246,SNR=11
G19K  Purcell Mounta    82.32  22  IAmb   IAmb    02 56 19.6
          comp=Z,33nm,0.9s
G19K  Purcell Mounta    82.32  22  P      P       02 56 16.7  +0.6
          baz=245,SNR=18
BIDO  Bidbid            82.32 294  P      P       02 56 16.8  -0.2
SMDO  Samad             82.34 294  P      P       02 56 16.5  -0.7
F19K  Shaleruckik Mo    82.36  21  P      P       02 56 16.8  +0.6
          baz=245
RER   Riviere de l'E    82.37 249  P      P       02 56 17.3  -0.1
CNPM  China Poot        82.37  29  P      P       02 56 16.0  -0.5
CNPM                               IAmb   IAmb    02 56 25.5
          comp=Z,30nm,1.1s
K20K  Telida            82.41  25  IAmb   IAmb    02 56 18.6
          comp=Z,24nm,0.9s
K20K  Telida            82.41  25  P      P       02 56 17.3  +0.7
          baz=248,SNR=22
N20K  Mount Spurr       82.46  27  P      P       02 56 16.1  -0.9
          baz=250
SPCR  Spurr Chakacha    82.46  27  P      P       02 56 17.7  +0.7
          baz=250
DQM   DQM               82.50 290  P      P       02 56 17.0  -0.9
BRLK  Bradley Lake      82.61  29  IAmb   IAmb    02 56 20.8
          comp=Z,19nm,1.0s
BRSE  Bradley Lake S    82.67  29  P      P       02 56 17.6  -0.4
          baz=252
J20K  Nowinta River     82.68  24  IAmb   IAmb    02 56 19.9
          comp=Z,23nm,1.0s
J20K  Nowinta River     82.68  24  P      P       02 56 18.9  +1.0
          baz=248,SNR=23
C19K  Lookout Ridge     82.76  19  IAmb   IAmb    02 56 20.5
          comp=Z,22nm,1.0s
C19K  Lookout Ridge     82.76  19  P      P       02 56 19.4  +1.0
          baz=243,SNR=14
I20K  Naaghedeneel      82.78  23  P      P       02 56 19.3  +0.9
          baz=248
E19K  Redstone River    82.82  20  IAmb   IAmb    02 56 21.5
          comp=Z,24nm,0.8s
E19K  Redstone River    82.82  20  P      P       02 56 19.3  +0.7
          baz=245,SNR=32
A19K  Wainwright        82.83  17  P      P       02 56 19.7  +1.1
          baz=241,SNR=7.3
H20K  Anotleneega Mo    82.89  23  P      P       02 56 19.6  +0.6
          baz=247,SNR=8.6
D19K  Kuna River        82.97  19  IAmb   IAmb    02 56 20.9
          comp=Z,16nm,0.8s
D19K  Kuna River        82.97  19  P      P       02 56 19.9  +0.4
          baz=244,SNR=21
SKT   Skwentna          83.03  27  P      P       02 56 18.7  -1.2
          baz=251,SNR=8.1
PPLA  Purkeypile        83.04  26  IAmb   IAmb    02 56 21.0
          comp=Z,46nm,1.6s
PPLA  Purkeypile        83.04  26  P      P       02 56 19.9  -0.2
          baz=250
HOQ   Hoqain            83.07 294  P      P       02 56 20.0  -1.0
BSY   Bisya             83.09 293  P      P       02 56 20.4  -0.7
F20K  Avaraart Lake     83.18  21  IAmb   IAmb    02 56 23.5
          comp=Z,22nm,0.9s
F20K  Avaraart Lake     83.18  21  P      P       02 56 21.5  +1.0
          baz=246,SNR=24
SUA   Susitna One       83.21  27  IAmb   IAmb    02 56 21.1
          comp=Z,14nm,0.8s
SUA   Susitna One       83.21  27  P      P       02 56 20.1  -0.9
          baz=252,SNR=7.9
CAST  Castle Rocks      83.27  25  P      P       02 56 20.9  -0.2
          baz=250
CHUM  Lake Minchumin    83.33  25  P      P       02 56 21.9  +0.6
          baz=250
SEW   Seward            83.40  29  P      P       02 56 21.6  -0.2
          baz=253
IMAR  Indian Mountai    83.50  22  P      P       02 56 21.7  -0.5
E20K  Nigu River        83.51  20  P      P       02 56 22.9  +0.6
          baz=246,SNR=28
D20K  Etivluk River     83.56  19  IAmb   IAmb    02 56 25.1
          comp=Z,24nm,1.2s
D20K  Etivluk River     83.56  19  P      P       02 56 22.9  +0.5
          baz=246,SNR=15
RC01  Rabbit Creek A    83.56  28  P      P       02 56 22.1  -0.5
          baz=253,SNR=17
M22K  Willow            83.59  27  P      P       02 56 22.2  -0.4
          baz=252,SNR=6.7
CUT   Chulitna          83.72  26  P      P       02 56 22.7  -0.7
          baz=252
H21K  Melozitna Rive    83.75  23  P      P       02 56 24.1  +0.6
          baz=249,SNR=14
ARQ   Araqi             83.77 294  P      P       02 56 23.8  -0.7
G21K  Allakaket         83.79  22  P      P       02 56 24.2  +0.6
          baz=249,SNR=11
KTH   Kantishna Hill    83.80  25  IAmb   IAmb    02 56 25.8
          comp=Z,23nm,1.1s
B20K  Meade River       83.93  18  IAmb   IAmb    02 56 26.1
          comp=Z,31nm,1.1s
B20K  Meade River       83.93  18  P      P       02 56 25.0  +0.7
          baz=245,SNR=9.2
BPAW  Bear Paw Mtn.     83.95  25  P      P       02 56 24.0  -0.6
BPAW                               IAmb   IAmb    02 56 25.5
          comp=Z,38nm,2.0s
BPAW  Bear Paw Mtn.     83.95  25  P      P       02 56 24.4  -0.2
          baz=251,SNR=7.2
PMR   Palmer            83.99  27  IAmb   IAmb    02 56 25.2
          comp=Z,26nm,1.0s
PMR   Palmer            83.99  27  P      P       02 56 24.7   0.0
PMR   Palmer            83.99  27  P      P       02 56 24.2  -0.6
          baz=253,SNR=18
TRF   Thorofare Moun    84.04  25  P      P       02 56 24.4  -0.9
          baz=252
F21K  Alatna River      84.06  21  P      P       02 56 25.3  +0.3
          baz=249
GHO   Glory Hole Cre    84.14  27  IAmb   IAmb    02 56 26.3
          comp=Z,21nm,1.0s
PWL   Port Wells        84.15  28  P      P       02 56 25.5  -0.1
          baz=254,SNR=9.3
KNK   Knik Glacier      84.25  28  P      P       02 56 26.1  -0.1
          baz=254,SNR=9.3
MASF  Masafi            84.30 296  P      P       02 56 26.4  -0.8
ASHO  Ashiyiah          84.32 295  P      P       02 56 26.8  -0.5
E21K  Killik River      84.34  20  IAmb   IAmb    02 56 28.3
          comp=Z,29nm,1.3s
E21K  Killik River      84.34  20  P      P       02 56 27.0  +0.5
          baz=248
C21K  Knifeblade Rid    84.34  19  P      P       02 56 27.3  +0.9
          baz=247,SNR=18
MLY   Manley            84.35  24  IAmb   IAmb    02 56 29.2
          comp=Z,17nm,0.8s
MLY   Manley            84.35  24  P      P       02 56 26.8  +0.2
          baz=251,SNR=26
P23K  Montague Islan    84.36  29  P      P       02 56 26.9  +0.2
          baz=255,SNR=8.1
SHME  Shamm             84.38 296  P      P       02 56 26.7  -0.8
H22K  Ishtalitna Cre    84.38  23  P      P       02 56 27.3  +0.6
          baz=251,SNR=9.9
SML   Sawmill           84.42  27  P      P       02 56 26.9  -0.1
          baz=254,SNR=25
ALNE  Al Ain            84.54 294  P      P       02 56 27.7  -0.7
B21K  Ikpikpuk River    84.58  19  P      P       02 56 28.0  +0.5
          baz=247
WAT1  Susitna Watana    84.61  26  P      P       02 56 27.5  -0.5
          baz=254
ABKAR Akbulak array     84.61 320  P      P       02 56 27.1  -1.1
F22K  John River        84.63  21  P      P       02 56 28.7  +0.7
          baz=250
A21K  Barrow            84.65  17  P      P       02 56 28.5  +0.6
          baz=245
G22K  Bettles           84.68  22  P      P       02 56 28.9  +0.7
          baz=250,SNR=5.6
M23K  Glacier View      84.69  27  P      P       02 56 28.2  -0.1
          baz=254
MCK   McKinley          84.70  25  IAmb   IAmb    02 56 28.7
          comp=Z,26nm,1.0s
MCK   McKinley          84.70  25  P      P       02 56 27.6  -0.7
          baz=253
Q23K  Middleton Isla    84.73  30  P      P       02 56 28.7  +0.2
          baz=256
GLI   Glacier Island    84.74  28  P      P       02 56 28.5  -0.1
          baz=255,SNR=10
SCM   Sheep Creek Mo    84.88  27  P      P       02 56 29.3  -0.1
          baz=255,SNR=18
WAT6  Susitna Watana    84.90  26  P      P       02 56 29.3  -0.3
          baz=254,SNR=12
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NEA2  Nenana            84.90  24  IAmb   IAmb    02 56 31.5
          comp=Z,15nm,1.0s
NEA2  Nenana            84.90  24  P      P       02 56 29.7  +0.4
          baz=253,SNR=12
D22K  Ayikyak River     84.94  20  P      P       02 56 30.5  +1.0
          baz=249
I23K  Minto, Yukon-K    84.94  24  P      P       02 56 29.4  -0.1
I23K                               IAmb   IAmb    02 56 30.8
          comp=Z,22nm,0.9s
I23K  Minto, Yukon-K    84.94  24  P      P       02 56 29.7  +0.2
          baz=253,SNR=26
UMZA  Um Al Zommool     84.96 293  P      P       02 56 29.8  -0.7
E22K  Anaktuvuk Pass    84.98  21  IAmb   IAmb    02 56 31.9
          comp=Z,22nm,0.9s
E22K  Anaktuvuk Pass    84.98  21  P      P       02 56 30.5  +0.8
          baz=250,SNR=29
FID   Port Fidalgo      85.00  28  IAmb   IAmb    02 56 30.7
          comp=Z,22nm,0.9s
A22K  Sinclair Lake     85.01  18  P      P       02 56 30.2  +0.5
          baz=247,SNR=9.4
H23K  Yukon River       85.08  23  P      P       02 56 30.6  +0.4
          baz=252,SNR=23
G23K  Bananza Creek     85.17  22  P      P       02 56 31.4  +0.8
          baz=252,SNR=21
DHY   Denali Highway    85.19  26  P      P       02 56 30.9  -0.2
          baz=255,SNR=36
B22K  Teshekpuk Lake    85.23  18  IAmb   IAmb    02 56 32.2
          comp=Z,21nm,0.8s
B22K  Teshekpuk Lake    85.23  18  P      P       02 56 31.1  +0.3
          baz=248,SNR=16
COLD  Coldfoot          85.26  22  P      P       02 56 32.0  +0.9
          baz=252,SNR=10
WRH   Wood River Hil    85.27  25  IAmb   IAmb    02 56 31.9
          comp=Z,29nm,1.0s
EYAK  Cordova Ski Ar    85.30  29  P      P       02 56 32.8  +1.4
EYAK  Cordova Ski Ar    85.30  29  P      P       02 56 31.3   0.0
          baz=256
CCB   Clear Creek Bu    85.44  24  IAmb   IAmb    02 56 32.4
          comp=Z,26nm,0.9s
KLU   Klutina           85.44  28  IAmb   IAmb    02 56 33.5
          comp=Z,18nm,1.0s
KLU   Klutina           85.44  28  P      P       02 56 32.4  +0.2
          baz=256,SNR=8.6
M24K  Tolsona, Glenn    85.48  27  P      P       02 56 32.7  +0.4
          baz=256,SNR=6.8
COLA  College           85.48  24  P      P       02 56 31.7  -0.5
COLA                               IAmb   IAmb    02 56 33.1
          comp=Z,19nm,0.8s
COLA  College           85.48  24  P      P       02 56 33.2  +1.0
COLA  College           85.48  24ceP      P       02 56 31.0  -1.2
COLA                               pmax   pmax
          comp=Z,13nm,0.8s
COLA  College           85.48  24  P      P       02 56 32.3  +0.2
          baz=254
DOK   Doka              85.59 289  P      P       02 56 33.0  -0.7
SVE   Sverdlovsk        85.64 327 eP      P       02 56 32.4  -0.8
D23K  Nanushuk River    85.65  20  P      P       02 56 34.3  +1.3
          baz=251,SNR=34
HDA   Harding Lake      85.73  25  IAmb   IAmb    02 56 34.1
          comp=Z,20nm,0.9s
HDA   Harding Lake      85.73  25  P      P       02 56 32.2  -1.3
          baz=255,SNR=20
E23K  Chandalar         85.73  21  P      P       02 56 34.6  +1.1
          baz=252,SNR=33
H24K  Noodor Dome       85.74  23  IAmb   IAmb    02 56 36.1
          comp=Z,19nm,1.1s
H24K  Noodor Dome       85.74  23  P      P       02 56 33.9  +0.3
          baz=254,SNR=18
RAGM  Ragged Mountai    85.78  29  IAmb   IAmb    02 56 35.2
          comp=Z,38nm,1.3s
KAIM  Kayak Island      85.80  29  P      P       02 56 34.5  +0.5
          baz=257,SNR=5.8
IL31                    85.85  24  IAmb   IAmb    02 56 33.5
          comp=Z,15nm,0.8s
ILAR  Eielson Array     85.85  24  P      P       02 56 32.5  -1.6
          comp=Z,16nm,0.9s,baz=263,slow=4.5,SNR=98
          comp=Z,16nm,0.9s
WHFO  Wadi Hawf         85.88 288  P      P       02 56 34.4  -0.9
TOLK  Toolik Lake Re    85.93  20  P      P       02 56 35.2  +0.7
          baz=252,SNR=25
BMRM  Bremner River     85.94  28  IAmb   IAmb    02 56 35.8
          comp=Z,30nm,1.0s
BMRM  Bremner River     85.94  28  P      P       02 56 34.8  +0.1
          baz=257,SNR=5.2
C23K  Itkillik River    85.96  19  P      P       02 56 35.1  +0.6
          baz=251,SNR=17
HMT   Hamilton          85.97  29  IAmb   IAmb    02 56 36.0
          comp=Z,36nm,1.1s
PAX   Paxson            86.01  26  P      P       02 56 34.9  -0.1
          baz=256,SNR=7.4
HARP  HAARP             86.01  27  P      P       02 56 35.0  +0.1
          baz=257
K24K  Donnelly Dome     86.07  26  IAmb   IAmb    02 56 36.5
          comp=Z,15nm,0.8s
K24K  Donnelly Dome     86.07  26  P      P       02 56 35.0  -0.3
          baz=256,SNR=8.5
N25K  Chitina, Valde    86.09  28  IAmb   IAmb    02 56 36.8
          comp=Z,55nm,1.9s
N25K  Chitina, Valde    86.09  28  P      P       02 56 35.8  +0.4
          baz=257,SNR=5.7
G24K  Hadweenzic Riv    86.13  23  IAmb   IAmb    02 56 38.2
          comp=Z,27nm,1.1s
G24K  Hadweenzic Riv    86.13  23  P      P       02 56 36.2  +0.8
          baz=254,SNR=17
E24K  Your Creek        86.14  21  P      P       02 56 36.1  +0.6
          baz=253,SNR=13
F24K  Squaw Lake        86.20  22  IAmb   IAmb    02 56 38.0
          comp=Z,25nm,0.9s
F24K  Squaw Lake        86.20  22  P      P       02 56 36.8  +0.9
          baz=254,SNR=30
D24K  Happy Valley      86.34  20  P      P       02 56 37.5  +1.1
          baz=253,SNR=16
GLB   Gilahina Butte    86.42  28  IAmb   IAmb    02 56 38.1
          comp=Z,14nm,0.9s
J25K  Salcha River,     86.44  25  IAmb   IAmb    02 56 38.5
          comp=Z,18nm,1.2s
J25K  Salcha River,     86.44  25  P      P       02 56 36.3  -0.8
          baz=256,SNR=14
RIDG  Independent Ri    86.46  26  IAmb   IAmb    02 56 37.9
          comp=Z,14nm,0.8s
RIDG  Independent Ri    86.46  26  P      P       02 56 37.0  -0.2
          baz=257,SNR=15
MZR   Muzera            86.53 293  P      P       02 56 37.4  -0.9
C24K  Franklin Bluff    86.56  19  IAmb   IAmb    02 56 39.2
          comp=Z,26nm,1.0s
C24K  Franklin Bluff    86.56  19  P      P       02 56 38.1  +0.7
          baz=253
CRQE  Cirque            86.62  29  P      P       02 56 38.4  +0.3
          baz=258,SNR=9.1
H25L  Birch Creek       86.66  23  P      P       02 56 38.8  +0.8
          baz=256,SNR=12
G25K  Bearman Lake      86.68  23  P      P       02 56 39.0  +0.9
          baz=256,SNR=13
WAX   Waxell Ridge      86.68  29  IAmb   IAmb    02 56 39.8
          comp=Z,24nm,1.1s
TGL   Tana Glacier      86.75  29  IAmb   IAmb    02 56 40.0
          comp=Z,22nm,1.0s
MCARA McCarthy VSAT     86.78  28  P      P       02 56 39.2  +0.4
          baz=259
MENT  Mentasta          86.78  27  IAmb   IAmb    02 56 40.0
          comp=Z,44nm,1.8s
MENT  Mentasta          86.78  27  P      P       02 56 39.3  +0.6
ARTI  Arti              86.78 327  P      P       02 56 36.6  -2.2
ARTI  Arti              86.78 327c iP     P       02 56 37.0  -1.8
ARTI                               S      SKSac   03 07 01.4  -1.9
ARTI                               pmax   pmax
          comp=Z,12nm,1.0s
SCRK  Sand Creek        86.88  26  P      P       02 56 39.1  -0.2
          baz=258,SNR=9.8
L26K  Log Cabin Wild    86.96  27  IAmb   IAmb    02 56 41.0
          comp=Z,32nm,1.7s
L26K  Log Cabin Wild    86.96  27  P      P       02 56 39.9  +0.3
          baz=258,SNR=6.5
M26K  Nabesna, AK       87.00  27  P      P       02 56 40.1  +0.3
          baz=258
F25K  Christian Rive    87.06  22  IAmb   IAmb    02 56 42.2
          comp=Z,26nm,1.2s
F25K  Christian Rive    87.06  22  P      P       02 56 41.1  +1.1
          baz=256,SNR=22
MESA  MESA              87.07  29  P      P       02 56 40.7  +0.3
          baz=260
J26L  Joseph Creek      87.18  25  P      P       02 56 40.8  +0.1
          baz=258,SNR=21
E25K  Arctic Village    87.21  21  IAmb   IAmb    02 56 43.8
          comp=Z,34nm,1.2s
E25K  Arctic Village    87.21  21  P      P       02 56 41.6  +0.9
          baz=256,SNR=18
D25K  Kavik River       87.23  20  IAmb   IAmb    02 56 42.2
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          comp=Z,25nm,1.7s
D25K  Kavik River       87.23  20  P      P       02 56 41.0  +0.2
          baz=255,SNR=6.0
QSPA  South Pole Qui    87.27 180  P      P       02 56 40.5  -0.7
QSPA  South Pole Qui    87.27 180  P      P       02 56 40.9  -0.3
          comp=Z,40nm,1.0s,baz=338,slow=1.6,SNR=47
          comp=Z,40nm,1.0s
BMAR  Burnt Mountain    87.41  22  P      P       02 56 42.0  +0.3
M27K  Edge Creek, AK    87.50  27  IAmb   IAmb    02 56 44.0
          comp=Z,24nm,1.1s
M27K  Edge Creek, AK    87.50  27  P      P       02 56 42.8  +0.5
          baz=260
CTG   Chitna Glacier    87.50  29  P      P       02 56 43.1  +0.7
          baz=260,SNR=12
TABL  Table Mountain    87.51  29  IAmb   IAmb    02 56 43.9
          comp=Z,22nm,0.9s
I26K  Coal Creek Min    87.52  24  IAmb   IAmb    02 56 43.1
          comp=Z,23nm,1.5s
I26K  Coal Creek Min    87.52  24  P      P       02 56 41.7  -0.4
          baz=258,SNR=9.5
G26K  Porcupine Rive    87.61  23  P      P       02 56 43.8  +1.2
          baz=258,SNR=44
F26K  Sheenjek River    87.64  22  P      P       02 56 44.0  +1.2
          baz=257,SNR=23
LOGN  Logan Glacier     87.64  29  IAmb   IAmb    02 56 44.6
          comp=Z,33nm,1.4s
L27K  Beaver Creek,     87.65  27  IAmb   IAmb    02 56 44.7
          comp=Z,18nm,1.1s
L27K  Beaver Creek,     87.65  27  P      P       02 56 43.5  +0.5
          baz=260,SNR=17
BCAR  Beaver Creek A    87.67  27  P      P       02 56 43.8  +0.7
K27K  Chicken           87.72  26  P      P       02 56 44.4  +1.2
          baz=259
C26K  Camden Bay        87.88  20  P      P       02 56 44.7  +0.9
          baz=256
PCA   Pinnacle          87.89  30  IAmb   IAmb    02 56 46.9
          comp=Z,18nm,1.0s
PINM  Pinnacle          87.89  30  P      P       02 56 44.5  +0.3
          baz=261
BVCY  Beaver Creek      87.97  27  P      P       02 56 45.4  +0.9
          baz=260,SNR=9.7
O28M  Mount Upton       88.03  29  IAmb   IAmb    02 56 46.7
          comp=Z,22nm,1.1s
O28M  Mount Upton       88.03  29  P      P       02 56 45.6  +0.5
          baz=261,SNR=11
YUK3  Moose Creek       88.06  28  P      P       02 56 45.6  +0.4
          baz=261,SNR=17
I27K  Kandik River      88.20  24  P      P       02 56 46.3  +0.7
          baz=260,SNR=55
C27K  Jago River        88.22  20  P      P       02 56 45.8  +0.3
          baz=258
PNL   Peninsula         88.25  30  P      P       02 56 46.3  +0.4
          baz=262
YUK8  Steele Glacier    88.31  29  P      P       02 56 47.1  +0.7
          baz=261
H27K  Steamboat Moun    88.35  24  P      P       02 56 47.1  +0.9
          baz=260,SNR=53
G27K  Doyon Strip       88.41  23  IAmb   IAmb    02 57 00.1
          comp=Z,32nm,1.7s
G27K  Doyon Strip       88.41  23  P      P       02 56 47.4  +0.9
          baz=260,SNR=9.4
E27K  Coleen River      88.68  22  P      P       02 56 48.1  +0.4
          baz=260,SNR=8.4
O29M  Mount Kennedy     88.75  30  IAmb   IAmb    02 56 50.1
          comp=Z,18nm,1.1s
O29M  Mount Kennedy     88.75  30  P      P       02 56 49.1  +0.8
          baz=262,SNR=8.2
YUK4  Talbot Arm        88.85  29  P      P       02 56 50.0  +1.1
          baz=262,SNR=9.0
I28M  Miner Creek       88.87  24  IAmb   IAmb    02 56 50.5
          comp=Z,26nm,1.1s
I28M  Miner Creek       88.87  24  P      P       02 56 49.4  +0.7
          baz=261,SNR=20
DAWY  Dawson            88.89  26  P      P       02 56 49.3  +0.5
DAWY  Dawson            88.89  26  P      P       02 56 49.4  +0.6
          baz=262,SNR=29
YUK6  Outpost Mounta    88.94  29  P      P       02 56 50.0  +0.6
          baz=263
P29M  Windy Craggy      89.08  30  IAmb   IAmb    02 56 55.7
          comp=Z,33nm,1.3s
P29M  Windy Craggy      89.08  30  P      P       02 56 50.5  +0.7
          baz=263,SNR=7.7
M29M  Somme Creek       89.08  27  IAmb   IAmb    02 56 51.6
          comp=Z,14nm,0.9s
M29M  Somme Creek       89.08  27  P      P       02 56 50.6  +0.8
          baz=263,SNR=15
F28M  Old Crow          89.23  22  P      P       02 56 50.5  +0.3
          baz=261,SNR=8.3
L29M  L29M              89.32  27  IAmb   IAmb    02 56 52.9
          comp=Z,22nm,1.1s
L29M  L29M              89.32  27  P      P       02 56 51.8  +0.9
          baz=263,SNR=14
HYT   Haines Junctio    89.34  29  IAmb   IAmb    02 56 52.7
          comp=Z,20nm,0.9s
HYT   Haines Junctio    89.34  29  P      P       02 56 51.7  +0.6
          baz=263,SNR=14
J29N  Klondike Camp     89.45  26  P      P       02 56 52.4  +0.9
          baz=263
E28M  Babbage River     89.50  21  IAmb   IAmb    02 56 52.6
          comp=Z,20nm,1.5s
E28M  Babbage River     89.50  21  P      P       02 56 51.7  +0.2
          baz=262,SNR=8.5
P30M  Million Dollar    89.53  30  P      P       02 56 52.6  +0.7
          baz=264
I29M  Ogilvie Camp,     89.53  25  IAmb   IAmb    02 56 53.2
          comp=Z,27nm,1.1s
I29M  Ogilvie Camp,     89.53  25  P      P       02 56 52.1  +0.4
          baz=263,SNR=24
N30M  Aishikik Lake     89.61  29  P      P       02 56 53.0  +0.7
          baz=264,SNR=8.0
H29M  Whitestone        89.61  24  IAmb   IAmb    02 57 39.0
          comp=Z,20nm,1.5s
H29M  Whitestone        89.61  24  P      P       02 56 53.1  +1.0
          baz=263
K29M  Barlow Dome       89.68  26  IAmb   IAmb    02 56 54.5
          comp=Z,22nm,1.1s
K29M  Barlow Dome       89.68  26  P      P       02 56 53.4  +0.8
          baz=263,SNR=14
S31K  Pelican           89.68  32  P      P       02 56 53.0  +0.4
          baz=264
PLBC  Pleasant Camp     89.76  31  P      P       02 56 53.2  +0.3
          baz=264,SNR=7.1
G29M  Pine Creek        89.84  23  IAmb   IAmb    02 56 54.4
          comp=Z,11nm,0.8s
G29M  Pine Creek        89.84  23  P      P       02 56 53.5  +0.3
          baz=263,SNR=11
D28M  Stokes Point      89.89  21  P      P       02 56 53.4  +0.1
          baz=262
O30N  Mendenhall        90.02  29  IAmb   IAmb    02 56 55.7
          comp=Z,27nm,1.4s
O30N  Mendenhall        90.02  29  P      P       02 56 54.5  +0.3
          baz=265,SNR=9.7
E29M  Blow River        90.07  22  P      P       02 56 54.9  +0.7
          baz=263
N31M  Braeburn, Yuko    90.24  29  IAmb   IAmb    02 56 56.7
          comp=Z,17nm,0.9s
N31M  Braeburn, Yuko    90.24  29  P      P       02 56 55.7  +0.5
          baz=265,SNR=7.9
J30M  Hart River        90.28  25  IAmb   IAmb    02 56 57.2
          comp=Z,16nm,1.0s
J30M  Hart River        90.28  25  P      P       02 56 55.9  +0.5
          baz=264,SNR=14
SKAG  Skagway           90.29  31  IAmb   IAmb    02 56 57.0
          comp=Z,20nm,1.1s
SKAG  Skagway           90.29  31  P      P       02 56 56.4  +1.1
SKAG  Skagway           90.29  31  P      P       02 56 55.8  +0.4
          baz=265
EPYK  Eagle Plains      90.30  24  IAmb   IAmb    02 57 24.4
          comp=Z,41nm,1.9s
EPYK  Eagle Plains      90.30  24  P      P       02 56 55.8  +0.5
          baz=264
I30M  Mount Dempster    90.32  25  P      P       02 56 55.7  +0.1
I30M  Mount Dempster    90.32  25  P      P       02 56 55.7  +0.1
          baz=264,SNR=6.7
G30M  tAoh Zraii Nji    90.55  23  IAmb   IAmb    02 56 57.0
          comp=Z,14nm,1.0s
G30M  tAoh Zraii Nji    90.55  23  P      P       02 56 56.0  -0.5
          baz=265,SNR=11
WHY   Whitehorse        90.61  29  IAmb   IAmb    02 56 58.3
          comp=Z,22nm,0.9s
WHY   Whitehorse        90.61  29  P      P       02 56 57.3  +0.3
          baz=266,SNR=10
R32K  Eaglecrest        90.61  32  P      P       02 56 57.5  +0.6
          baz=266
SYO   Syowa Base        90.75 201⇓eP      P       02 56 58.5  +1.2
SYO   Syowa Base        90.75 201⇓epP     P       02 57 00.6  +3.3
F30M  Barrier River     90.78  22  IAmb   IAmb    02 56 58.2
          comp=Z,11nm,1.0s
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F30M  Barrier River      90.78  22    P       P        02 56 57.3 -0.2
      baz=265,SNR=5.6
M31M  Drury Creek, Y     90.95  28    P       P        02 56 58.7 +0.3
      baz=266
P32M  Atlin              91.12  31    P       P        02 56 59.5 +0.2
      baz=267
CRAG  Craig              91.21  35    P       P        02 56 59.1 -0.6
      baz=267
H31M  Peel River         91.21  24    P       P        02 56 59.9 +0.3
      baz=266
U33K  Whale Pass         91.24  34    P       P        02 56 59.7 -0.1
      baz=267
G31M  Satah River        91.31  23    P       P        02 57 00.3 +0.3
      baz=266,SNR=7.7
FARO  Faro, Yukon        91.44  28    IAmb    IAmb     02 57 01.8
      comp=Z,14nm,1.1s
FARO  Faro, Yukon        91.44  28    P       P        02 57 00.8 +0.1
      baz=267,SNR=12
N32M  Quiet Lake         91.51  29    P       P        02 57 01.3 +0.2
      baz=267,SNR=6.3
F31M  Tsiigehtchic       91.55  23    P       P        02 57 00.5 -0.6
      baz=267
P33M  Teslin, Yukon      91.60  30    P       P        02 57 01.2 -0.3
      baz=268
INK   Inuvik             91.68  22    P       P        02 57 00.8 -0.8
INK                                   IAmb    IAmb     02 57 01.7
      comp=Z,11nm,1.1s
INK   Inuvik             91.68  22    P       P        02 57 00.8 -0.8
INK                                   pmax    pmax
      comp=Z,11nm,1.2s
INK   Inuvik             91.68  22    P       P        02 57 00.6 -1.0
      baz=267,SNR=7.1
WRAK  Wrangell Islan     91.69  34    P       P        02 57 02.2 +0.3
      baz=268
KIRV  Kirov              91.83 328c iP       P        02 57 00.1 -2.4
V35K  Ketchikan          92.06  35    P       P        02 57 03.7 +0.1
      baz=268
S34M  Telegraph Cree     92.39  32    P       P        02 57 05.3 +0.1
      baz=269
MMPY  Sheldon Lake,      92.42  28    P       P        02 57 05.3  0.0
      baz=269
R33M  Jennings River     92.51  31    P       P        02 57 05.7 -0.2
      baz=269
BELG  Belogornoye        92.69 322c iP       P        02 57 04.3 -2.3
BELG                                  pmax    pmax
      comp=Z,6.0nm,1.1s
WTLY  Watson Lake, Y     93.61  30    P       P        02 57 11.3 +0.5
      baz=271
A36M  Sachs Harbour      94.44  18    P       P        02 57 13.3 -1.0
      baz=275
KBZ   Khabaz             95.95 314⇓eP       P        02 57 19.4 -2.4
KBZ                                   pmax    pmax
      comp=Z,4.0nm,1.4s
VRH   Novokhopyorsk      96.38 321  eP       P        02 57 19.8 -3.8
VRH                                   pmax    pmax
      comp=Z,10.0nm,1.0s
VORD  Divnogorie         97.92 321  eP       P        02 57 27.0 -3.6
VORD                                  pmax    pmax
      comp=Z,10.0nm,0.9s
VSR   Storozhevoye       97.98 321  eP       P        02 57 27.0 -3.8
VSR                                   pmax    pmax
      comp=Z,7.0nm,1.0s
LPSR  Galich'ya Gora     97.98 323  eP       P        02 57 27.5 -3.3
LPSR                                  pmax    pmax
      comp=Z,9.0nm,0.9s
BELA  Belgrano 2         99.47 181    P       Pdif     02 57 36.4 -0.7
BELA                                  IAmb    IAmb     02 57 38.2
      comp=Z,6.0nm,0.9s
YKA   Yellowknife Ar    100.09  27    P       Pdif     02 57 39.0 -1.0
      comp=Z,1.4nm,0.8s,baz=298,slow=5.1,SNR=8.2
YKA   Yellowknife Ar    100.09  27  i P       Pdif     02 57 40.5 +0.5
YKA                                   pmax    pmax
      comp=Z,1.0nm,0.8s
ARCES ARCESS Array B    100.43 341    P       Pdif     02 57 40.0 -1.4
      comp=Z,5.5nm,0.8s,baz=77,slow=5.4,SNR=11
ARCES ARCESS Array B    100.43 341    P       Pdif     02 57 40.0 -1.4
NVAR  Mina Array Bea    101.92  51    P       Pdif     02 57 49.2 +0.1
      comp=Z,1.7nm,0.8s,baz=256,slow=6.8,SNR=7.4
NVAR                                  PP      PP       03 02 02.1 +1.7
      comp=Z,0.2nm,0.4s,baz=240,slow=5.0,SNR=5.0
FINES FINESS Array B    102.96 333    P       Pdif     02 57 50.5 -2.3
      comp=Z,1.4nm,0.7s,baz=32,slow=11,SNR=5.5
FINES FINESS Array B    102.96 333  i P       Pdif     02 57 51.5 -1.3
FINES                                 pmax    pmax
      comp=Z,1.0nm,0.7s
BRTR  Keskin Array B    103.19 310    PP      PKiKP    03 02 15.3 +1.2
      comp=Z,0.8nm,0.9s,baz=94,slow=5.1,SNR=4.4
ELK   Elko              103.98  49            Pdif     02 57 58.1 -0.1
ELK   Elko              103.98  49    P       Pdif     02 57 58.1 -0.1
MNK   Minsk             104.10 326  i P       Pdif     02 57 55.8 -2.2
      comp=E,8.0nm,0.8s
MNK                                 i P       Pdif     02 57 55.8 -2.2
      comp=N,7.0nm,0.8s
MNK                                 i P       Pdif     02 57 55.8 -2.2
      comp=Z,11nm,0.8s,baz=75
MNK                                 i PP      PKiKP    03 02 13.4 -1.7
MNK                                 i PPP     PPP      03 04 24.8
MNK                                 i SKS              03 09 23.8
MNK                                 i PS      PS       03 11 22.2 -5.7
MNK                                 i SS      SS       03 17 01.9 -0.1
MNK                                 i SSS     SSS      03 20 57.8
MNK                                 i LQ      LQ       03 38 59.6
MNK                                 i LR      LR       03 46 54.1
MNK   Minsk             104.10 326  i P       Pdif     02 57 55.7 -2.2
MNK                                 i                  03 02 13.3
MNK                                 i PPP     PPP      03 04 24.8
MNK                                 i                  03 09 23.8
MNK                                 i PS      PS       03 11 22.2 -5.7
MNK                                 i SS      SS       03 17 01.8 -0.2
MNK                                 i SSS     SSS      03 20 57.8
MNK                                   pmax    pmax
      comp=Z,11nm,0.8s
MNK                                   pmax    pmax
      comp=N,7.0nm,0.8s
MNK                                   pmax    pmax
      comp=E,8.0nm,0.8s
AKASG Malin Array Be    104.26 322    PP      PKiKP    03 02 13.2 -2.2
      comp=E,0.1nm,0.3s,baz=63,slow=6.2,SNR=4.8
PDAR  Pinedale Array    107.77  46    Pdiff   Pdif     02 58 16.0 +1.0
      comp=E,0.2nm,0.4s,baz=197,slow=1.5,SNR=3.8
CONA  Conrad Observa    113.42 322  ePKiKP   PKiKP    03 02 31.9 -1.0
      comp=E,0.7nm,0.5s
CLL   Collm             113.63 326  i PKIKP   PKiKP    03 02 32.4 -0.6
CLL                                   pmax    pmax
      comp=Z,4.0nm,0.9s
CLL   Collm             113.63 326  i PKiKP   PKiKP    03 02 32.4 -0.6
      comp=Z,4.0nm,0.9s
CLL                                 ePP      PP       03 03 29.0 +3.9
GERES GERESS Array B    114.34 324    PKP     PKPdf    03 02 33.3 -1.3
      comp=Z,1.0nm,0.5s,baz=72,slow=2.0,SNR=14
OBKA  Obir              114.81 321  ePKP     PKiKP    03 02 34.2 -1.4
      comp=Z,5.2nm,1.3s
MYKA  Terra Mystica     115.33 321  ePKP     PKiKP    03 02 35.4 -1.1
      comp=Z,3.6nm,1.1s
TXAR  Lajitas Array     115.38  59    PKP     PKPdf    03 02 36.7 -0.5
      comp=Z,1.0nm,0.8s,baz=215,slow=1.3,SNR=9.8
LESA  Schwarzleotal     115.58 322  i PKP     PKiKP    03 02 35.3 -1.8
      comp=Z,1.4nm,0.6s
ABTA  Abfaltersbach     115.98 322  ePKP     PKiKP    03 02 36.2 -1.7
      comp=Z,2.1nm,0.6s
STAL  STALIGIAL         116.07 321            PKiKP    03 02 34.9 -3.0
CIMO  Cimolais          116.22 321    PKPdf   PKPdf    03 02 36.7 -1.5
WTTA  Wattenberg        116.29 323  i PKP     PKPdf    03 02 37.7 -0.8
      comp=Z,4.9nm,0.7s
WATA  Walderalm         116.29 323  ePKP     PKPdf    03 02 36.3 -2.2
      comp=Z,2.6nm,0.7s
SQTA  Sankt Quirin      116.56 323  i PKP     PKPdf    03 02 38.3 -0.6
      comp=Z,2.2nm,0.5s
MOTA  Moosalm           116.57 323  ePKP     PKPdf    03 02 37.8 -1.3
      comp=Z,6.2nm,1.2s
RETA  Reutte            116.71 323  ePKiKP   PKiKP    03 02 39.8 +0.6
      comp=Z,0.5nm,0.4s
FETA  Feichten          116.95 323  ePKP     PKPdf    03 02 38.3 -1.5
      comp=Z,2.9nm,1.3s
DAVA  Damuels           117.33 323  i PKP     PKPdf    03 02 39.1 -1.4
      comp=Z,2.7nm,0.9s
BTNL  Ternell           117.74 328  dPKPdf   PKPdf    03 02 38.2 -2.8
MEM   Membach           117.79 328  dPKPdf   PKPdf    03 02 40.2 -0.9
ZCCA  Zocca             118.01 320    PKPdf   PKPdf    03 02 40.9 -0.9
BCLA  Clavier           118.27 328  dPKPdf   PKPdf    03 02 41.0 -1.0
BCLA                                dpPKPdf  PKiKP    03 02 44.8 +2.8
EKA   Eskdalemuir Ar    119.09 336    PKP     PKPdf    03 02 42.8 -0.6
      comp=Z,0.3nm,0.4s,baz=36,slow=2.8,SNR=3.7
MIAR  Mount Ida         122.14  50    PKPdf   PKPdf    03 02 48.8 -1.1
MIAR  Mount Ida         122.14  50    PKIKP   PKPdf    03 02 48.8 -1.1
CCM   Cathedral Cave    122.49  46    PKPdf   PKPdf    03 02 48.8 -1.7
CCM   Cathedral Cave    122.49  46    PKIKP   PKPdf    03 02 48.8 -1.7
WVT   Waverly           125.78  46    PKPdf   PKPdf    03 02 55.2 -1.6
WVT   Waverly           125.78  46    PKIKP   PKPdf    03 02 55.2 -1.6
W50A  Signal Mountai    128.03  46    PKPdf   PKPdf    03 03 00.5 -0.8
PLCA  Paso Flores       129.27 151    PKP     PKiKP    03 03 04.4 +0.1
      comp=Z,2.8nm,0.9s,baz=187,slow=4.4,SNR=4.2
ESDC  Sonseca Array     129.90 322    PKP     PKPdf    03 03 04.2 -0.6
      comp=Z,0.6nm,0.7s,baz=360,slow=2.0,SNR=6.8
TORD  Torodi Ar. Bea    136.12 286    PKP     PKPdf    03 03 15.6 -1.4
      comp=Z,1.8nm,0.4s,baz=47,slow=3.5,SNR=7.5
DBIC  Dimbokro          143.36 278    PKP     PKPbc    03 03 27.9 +0.6
      comp=Z,5.8nm,0.7s,baz=82,slow=6.3,SNR=5.4
GO01  Chusmiza          144.82 130    PKPdf   PKPab    03 03 31.9 -0.3
ROSC  El Rosal          147.10  85    PKPbc   PKPdf    03 03 36.9 -0.2
      comp=Z,16nm,0.7s,baz=170,slow=8.3,SNR=7.6
CZSB  Cruzeiro do Su    147.12 109    PKPdf   PKPdf    03 03 35.0 -1.7
CPUP  Villa Florida     147.32 153    PKPbc   PKPbc    03 03 38.6 -0.3
CPUP  Villa Florida     147.32 153    PKPbc   PKPdf    03 03 37.5 +0.9
      comp=Z,5.9nm,0.9s,baz=86,slow=3.2,SNR=22
CPUP  Villa Florida     147.32 153    PKP2    PKPbc    03 03 38.7 -0.3
LPAZ  La Paz            147.57 126    PKPbc   PKPdf    03 03 38.9 +0.8
      comp=Z,13nm,0.8s,baz=340,slow=1.0,SNR=36
SDV   Santo Domingo     150.30  77    PKPdf   PKPdf    03 03 40.7 -1.3
SDV                                   PKPbc   PKPbc    03 03 46.3 -1.0
SDV                                           pPKPdf   03 03 52.9 -0.2
TBTG  Tabatinga, AM     150.72 103    PKPdf   PKPdf    03 03 40.2 -2.3
TBTG                                          PKPbc    03 03 46.6 -1.4
CELP  Cerrillos         150.97  56    PKPbc   PKPbc    03 03 46.5 -2.0
SJG   San Juan          151.31  56    PKPbc   PKPbc    03 03 47.7 -1.5
SJG   San Juan          151.31  56    PKIKP   PKPbc    03 03 47.7 -1.5
PTLB  Pontes e Lacer    154.87 136    PKPdf   PKPdf    03 03 47.0 -1.5
BDFB  Brasilia          160.67 160    PKP     PKPdf    03 03 55.6 -0.2
      comp=Z,0.8nm,0.6s,baz=174,slow=22,SNR=4.2
BDFB                                  PKPab   PKPab    03 04 36.7 -0.6
      comp=Z,3.6nm,0.9s,baz=202,slow=6.7,SNR=4.2
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MOS ***24*** *02:48:03.7±0.9, 2°.64S×138°.44E, h10^{km}, mb5.2/23, Error ellipse: s-maj=11.5km s-min=6.0km az=98.5*

IDC ***24*** *02:48:03.7±0.5, 2°.64S×138°.53E, h0^{km}, mb4.7/18, mbtmp4.8/22, ML5.2/4, Error ellipse: s-maj=14.5km s-min=12.3km az=76.0*

BJI ***24*** *02:48:04.3, 2°.69S×138°.90E, h23^{km}, mB5.3/6, mb4.8/54*

NEIC ***24*** *02:48:05.9±2.3, 2°.67S±0°.08×138°.47E±0°.06, h10^{km}±1^{km}, mb5.1/205, Error ellipse: s-maj=14.4km s-min=10.0km az=181.0*

DJA ***24*** *02:48:07.0±0.2, 3°S±3°×13°9E±°, h10^{km}, M5.0/19, mb5.3/19, mB5.5/10, MLv4.9/10, Mw(mB)5.0/10, MwMwp3.5/1, Mwp4.1/1*

ISC 24 02:48:09.0±0.3**, 2°.61S**±0°.05×**138°.52E**±0°.04**, h32**^{km}**, n549,** σ1ˢ11/481**, mb5.1**/148**, 11C-8D, Irian Jaya**

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Code  Station Name        Δ°   AZ°    Phase ID          Time       Res
                                      Op      ISC       h  m  s    ISC
SMPI  Sarmi               0.64  17    P       Pn       02 48 18.1 -3.8
GENI  Genyem              1.64  89    P       Pn       02 48 36.4 +0.8
GENI  Genyem              1.64  89    P       Pn       02 48 35.8 +0.2
JAY   Jayapura            2.18  88    Pn      Pn       02 48 42.7 -0.4
      195nm,0.3s,baz=228,slow=9.2,SNR=47
JAY                                   Lg      Lg       02 49 12.6
      138nm,0.3s,baz=335,slow=20,SNR=3.7
      1μm,0.6s
JAY   Jayapura            2.18  88    P       Pn       02 48 43.2 +0.1
SRPI  Serui, Papua        2.40 288    P       Pn       02 48 45.5 -0.5
BAKI  Biak                2.80 300    P       Pb       02 48 56.2 -2.1
RKPI  Ransiki, Papua      4.48 284    P       Pn       02 49 15.8 +1.1
KMPI  Kaimana, Papua      4.92 258    P       Pn       02 49 22.9 +2.1
      2.5nm816nm,0.9s
FAKI  Fak Fak             6.27 267    Pn      Pn       02 49 40.0 +0.7
FAKI  Fak Fak             6.27 267    P       Pn       02 49 41.8 +2.4
FAKI  Fak Fak             6.27 267    P       Pn       02 49 40.5 +1.1
      0.7nm201nm,1.2s
SWI   Sorong              7.46 283    P       Pn       02 49 56.8 +1.1
      0.9nm211nm,0.6s
MANU  Manus Island        8.85  87    Pn      Pn       02 50 16.7 +1.9
MSAI  Masohi              9.61 265    P       Pn       02 50 26.7 +1.5
AAI   Ambon              10.37 264    P       Pn       02 50 36.8 +1.2
      202nm,0.7s
LBMI  Labuha             11.19 280    P       Pn       02 50 46.3 -0.5
NLAI  Namlea             11.43 267    P       Pn       02 50 51.1 +1.1
      2μm264nm,1.2s
MTN   Manton Dam         12.53 215    Pn      Pn       02 51 03.7 -1.4
SANI  Sanana             12.54 272    P       Pn       02 51 07.9 +2.6
SANI  Sanana             12.54 272    P       Pn       02 51 04.7 -0.6
RABL  Rabaul             13.71  97    Pn      Pn       02 51 21.2  0.0
SGSI  Sangihe            14.41 296    P       Pn       02 51 32.0 +1.1
LUWI  Luwuk              15.82 275    Pn      Pn       02 51 49.4 -0.2
LUWI  Luwuk              15.82 275    P       P        02 51 54.6 +1.6
LUWI  Luwuk              15.82 275    P       Pn       02 51 49.3 -0.2
SOEI  Soe                15.84 243            Pn       02 51 50.1 +0.2
SOEI  Soe                15.84 243    P       P        02 51 53.5 +0.1
SOEI  Soe                15.84 243    P       P        02 51 52.8 -0.6
BBSI  Bau Bau            16.17 259    P       P        02 51 58.3 +1.4
BATI  Baumata            16.57 242    Pn      Pn       02 51 57.8 -1.4
      46nm,0.3s,baz=108,slow=2.8,SNR=14
      143nm,0.7s
BATI  Baumata            16.57 242    P       P        02 52 01.7 +0.3
MRSI  Marisa             16.86 280    P       P        02 52 05.3 +0.8
      1μm116nm,0.7s
APSI  Ampana             16.95 275    P       Pn       02 52 04.7 +0.8
      3μm246nm,1.5s
GUMO  Guam               17.28  21            P        02 52 09.8 +0.6
GUMO  Guam               17.28  21    P       Pn       02 52 06.7 -1.3
      18nm,0.3s,baz=165,slow=8.1,SNR=5.5
      62nm,0.3s
GUMO  Guam               17.28  21    P       P        02 52 10.5 +1.3
GUMO  Guam               17.28  21    P       P        02 52 09.8 +0.6
GUMO                                  pmax    pmax
      comp=Z,514nm,1.4s
WRAB  Tennant Creek      17.69 193            Pn       02 52 13.0 -0.1
WRAB                                  IAmb    IAmb     02 52 19.1
      comp=Z,203nm,0.9s
WRAB  Tennant Creek      17.69 193⇓eP       Pn       02 52 12.8 -0.3
WRAB                                  pmax    pmax
      comp=Z,250nm,1.0s
WRA   Warramunga Arr     17.70 193    P       Pn       02 52 11.0 -2.2
      comp=Z,6.1nm,0.3s,baz=16,slow=13,SNR=7.2
      comp=Z,47nm,0.9s
QIS   Mount Isa          17.87 177    P       P        02 52 19.0 +3.3
TOLI2 Tolitoli           18.12 282            Pn       02 52 18.1 -0.2
TOLI2 Tolitoli           18.12 282    P       P        02 52 22.8 +4.3
BSSI  Bau Bau, Buton     18.32 258    P       Pn       02 52 23.1 +2.3
BNSI  Bone               18.47 264    P       Pn       02 52 23.5 +0.9
TTSI  Tana Toraja        18.69 268    P       Pn       02 52 25.5 +0.2
PCI   Palu               18.75 275    P       Pn       02 52 28.0 +1.9
SPSI  Sidrap Palu        18.77 265    P       Pn       02 52 27.2 +0.9
MPSI  Mapaga             18.85 279    P       Pn       02 52 28.4 +1.2
KAPI  Kappang            18.88 262    P       Pn       02 52 32.0 +4.4
CTAO  Charters Tower     18.94 157    P       Pn       02 52 27.7 -0.6
CTAO  Charters Tower     18.94 157    P       Pn       02 52 30.0 +1.7
CTAO  Charters Tower     18.94 157    P       Pn       02 52 27.7 -0.6
CTAO                                  pmax    pmax
      comp=Z,34nm,0.9s
AS01  Alice Springs      21.39 192    P       P        02 52 56.4 +2.3
AS31  Alice Springs      21.40 192    P       P        02 52 54.4 +0.1
AS31                                  IAmb    IAmb     02 53 07.7
      comp=Z,48nm,0.8s
ASAR  Alice Springs      21.40 192    P       P        02 52 53.7 -0.6
ASAR  Alice Springs      21.40 192    P       P        02 52 52.6 -1.6
      comp=Z,50nm,0.7s,baz=17,slow=9.7,SNR=16
      comp=Z,50nm,0.7s
ASAR  Alice Springs      21.40 192    P       P        02 52 53.7 -0.6
SMKI  Samarinda          21.41 275    P       P        02 52 57.9 +3.5
      comp=Z,234nm,0.8s
MYLDM Lahad Datu         21.45 291    P       P        02 52 55.6 +0.8
MYLDM                                 IAmb    IAmb     02 52 59.0
      comp=Z,77nm,1.2s
MYLDM Lahad Datu         21.45 291    P       P        02 52 59.3 +4.5
TATA  Tatamba Isabel     21.94 106    P       P        02 53 02.0 +1.9
SAVO  Savo Central       22.14 108    P       P        02 53 03.9 +1.6
ALEG  Aligegeo Malai     22.88 106    P       P        02 53 12.4 +2.3
ALEG  Aligegeo Malai     22.88 106    S       S        02 57 20.1 +2.2
KKM   Kota Kinabalu      23.88 291    P       P        02 53 19.4 -0.6
KKM                                   IAmb    IAmb     02 53 22.1
      comp=Z,65nm,1.3s
QLP   Quilpie            24.46 168    P       P        02 53 28.0 +2.9
EIDS  Eidsvold           25.66 153    P       P        02 53 35.4 -0.6
EIDS  Eidsvold           25.66 153    P       P        02 53 38.5 +2.5
MBWA  Marble Bar         25.98 223    P       P        02 53 37.3 -1.7
MBWA                                  IAmb    IAmb     02 53 41.1
      comp=Z,80nm,1.3s
MBWA  Marble Bar         25.98 223    P       P        02 53 40.0 +1.0
PSA00 Pilbara Seismi     26.18 222    P       P        02 53 38.8 -2.0
PSA00                                 IAmb    IAmb     02 53 42.8
      comp=Z,29nm,0.8s
PSA00 Pilbara Seismi     26.18 222    P       P        02 53 43.7 +2.9
PWJI  Pagerwojo          27.13 258    P       P        02 53 49.0 -0.5
KSM   Kuching            28.50 278    P       P        02 54 05.3 +3.6
STKA  Stephens Creek     29.25 175    P       P        02 54 05.9 -2.3
STKA  Stephens Creek     29.25 175    P       P        02 54 05.9 -2.3
STKA                                  pmax    pmax
      comp=Z,60nm,0.9s
ARMA  Armidale           30.32 157    P       P        02 54 17.8 +0.1
ARMA                                  IAmb    IAmb     02 54 25.9
      comp=Z,55nm,1.5s
MORW  Morawa             33.91 217    P       P        02 54 47.7 -1.5
MORW                                  IAmb    IAmb     02 55 13.2
      comp=Z,44nm,1.2s
MYKOM Kota Tinggi        34.94 277    P       P        02 55 01.9 +3.6
JNU   Nakatsue           36.27 349    P       P        02 55 08.9 -0.6
JNU                                   IAmb    IAmb     02 55 10.8
      comp=Z,37nm,1.1s
JNU   Nakatsue           36.27 349    P       P        02 55 08.1 -1.4
      comp=Z,28nm,1.1s,baz=127,slow=4.4,SNR=6.1
      comp=Z,28nm,1.1s
JNU   Nakatsue           36.27 349    P       P        02 55 12.2 +2.7
BKNI  Bangkinang         37.59 274    P       P        02 55 21.1 +0.1
MJAR  Matsushiro Arr     38.95 360    P       P        02 55 30.1 -2.0
      comp=Z,0.8nm,0.3s,baz=184,slow=8.6,SNR=4.3
      comp=Z,0.8nm,0.3s
NJ2   Nanjing            39.20 333  eP       P        02 55 35.6 +1.4
NJ2                                   pmax    pmax
      comp=Z,14nm,0.6s
RPSI  Rantau Prapat      39.93 277    P       P        02 55 39.9 -0.7
RPSI                                  IAmb    IAmb     02 55 41.8
      comp=Z,40nm,1.1s
PSI   Prapat             39.95 277    P       P        02 55 44.3 +3.4
PSI   Prapat             39.95 277    P       P        02 55 39.9 -1.0
PSI                                   pmax    pmax
      comp=Z,40nm,1.1s
TJN   Taejon             40.16 346⇓eP       P        02 55 42.8 +0.7
WHN   Wuhan              40.23 327    P       P        02 55 44.9 +2.0
JMM   Marumori           40.33   3    P       P        02 55 43.8 +0.3
JMM                                   IAmb    IAmb     02 55 46.7
      comp=Z,52nm,1.1s
JMM   Marumori           40.33   3    P       P        02 55 46.2 +2.7
SRIT  Nakonsritamara     40.37 286    P       P        02 55 44.1 -0.2
JSD   Sado               40.44 360    P       P        02 55 43.5 -1.0
JSD   Sado               40.44 360    P       P        02 55 47.3 +2.8
KSRS  Korea Array        41.06 347    P       P        02 55 49.1 -0.4
      comp=Z,2.7nm,0.8s,baz=167,slow=9.8,SNR=7.6
KSRS                                  PcP     PcP      02 57 48.9 -0.1
      comp=Z,2.6nm,1.0s,baz=178,slow=3.7,SNR=6.3
      comp=Z,2.7nm,0.8s
GSI   Gunungsitoli       41.12 275    P       P        02 55 49.1 -1.4
GSI                                   IAmb    IAmb     02 55 52.8
      comp=Z,80nm,1.3s
SLVN  Son La             41.40 307    P       P        02 55 55.9 +3.2
MSVF  Nonsavu            41.58 114⇓eP       P        02 55 55.1 +0.8
MSVF                                  pmax    pmax
      comp=Z,33nm,1.6s
ENH   Enshi              42.87 322    P       P        02 56 04.7 +0.1
TIA   Tai'an             43.48 335    P       P        02 56 09.6 +0.2
TIA                                   pmax    pmax
      comp=Z,10.0nm,1.0s
DL2   Dalian             44.15 341    P       P        02 56 15.4 +0.7
DL2                                   pmax    pmax
      comp=Z,20nm,1.3s
CM31  Chiang Mai Arr     44.23 300    P       P        02 56 16.4 +0.8
CMAR  Chiang Mai Arr     44.23 300    P       P        02 56 15.3 -0.3
CMAR  Chiang Mai Arr     44.23 300    P       P        02 56 15.4 -0.2
      comp=Z,2.5nm,0.4s,baz=116,slow=6.4,SNR=7.0
      comp=Z,2.5nm,0.4s
CMAR  Chiang Mai Arr     44.23 300  i P       P        02 56 16.3 +0.7
CMAR                                  pmax    pmax
      comp=Z,3.0nm,0.4s
KMI   Kunming            44.31 311    P       P        02 56 17.1 +0.6
KMI                                   pmax    pmax
      comp=Z,13nm,0.6s
LYN   LuoYang            44.34 329    P       P        02 56 16.8 +0.5
LYN                                   pP      pP       02 56 24.8 -1.2
LYN                                   pmax    pmax
      comp=Z,37nm,1.3s
CHTO  Chiang Mai         44.37 300    P       P        02 56 15.6 -1.2
CHTO  Chiang Mai         44.37 300    P       P        02 56 15.6 -1.2
CHTO                                  pmax    pmax
      comp=Z,16nm,1.3s
MSHR  Mys Shultsa        45.47 352⇑eP       P        02 56 27.3 +2.2
MSHR                                  pmax    pmax
      comp=Z,10.0nm,1.0s
HNS   HongShan           45.53 333 ⇑P       P        02 56 25.8 +0.1
HNS                                   pmax    pmax
      comp=Z,16nm,1.1s
PZH   PanZhiHua          45.82 312    P       P        02 56 30.4 +2.1
ASAJ  Asahikawa          46.66   4    P       P        02 56 34.8 +0.3
      comp=Z,16nm,1.1s,baz=256,slow=15,SNR=4.5
      comp=Z,16nm,1.1s
ASAJ  Asahikawa          46.66   4    P       P        02 56 35.0 +0.5
ASAJ                                  pmax    pmax
      comp=Z,26nm,1.3s
JKA   Kamikawa-asahi     46.66   4    P       P        02 56 35.0 +0.5
JKA                                   IAmb    IAmb     02 56 37.8
      comp=Z,26nm,1.3s
USA0B Ussuriysk Arra     46.97 354    P       P        02 56 36.7 -0.1
USA0B                                 IAmb    IAmb     02 56 38.9
      comp=Z,20nm,1.4s
USA0B Ussuriysk Arra     46.97 354c iP       P        02 56 37.3 +0.4
USRK  Ussuriysk Ar.      46.97 354    P       P        02 56 37.0 +0.1
      comp=Z,5.4nm,0.9s,baz=165,slow=7.9,SNR=9.0
      comp=Z,5.4nm,0.9s
USRK  Ussuriysk Ar.      46.97 354    P       P        02 56 37.0 +0.1
BJT   Baijiatuau         47.11 337    P       P        02 56 37.8 -0.3
BJT                                   IAmb    IAmb     02 56 39.6
      comp=Z,28nm,1.4s
BJT   Baijiatuau         47.11 337    P       P        02 56 38.9 +0.8
BJT   Baijiatuau         47.11 337    P       P        02 56 37.8 -0.3
BJT                                   pmax    pmax
      comp=Z,29nm,1.4s
BJI   Beijing            47.13 337    P       P        02 56 38.4 +0.2
BJI                                   sP      pP       02 56 45.3 -2.7
BJI                                   pmax    pmax
      comp=Z,8.0nm,1.3s
BNX   BinXian            49.14 350 ⇑P       P        02 56 53.8 +0.1
BNX                                   pmax    pmax
      comp=Z,27nm,1.1s
YSS   Yuzhno-Sakhali     49.49   4⇓eP       P        02 56 56.5 +0.2
YSS                                   pmax    pmax
      comp=Z,21nm,1.1s
HHC   Hu-ho-hao-te       49.76 333  eP       P        02 56 59.9 +1.3
HHC                                   pmax    pmax
      comp=Z,15nm,0.8s
TUWZ  Tuamarina          50.06 145    P       P        02 57 00.0 -0.7
RPZ   Rata Peaks         50.07 149    P       P        02 57 01.2 +0.4
BTO   Baotou             50.28 332  eP       P        02 57 04.8 +2.2
BTO                                   S       S        03 04 19.8 +6.6
BTO                                   pmax    pmax
      comp=Z,16nm,0.6s
BTO                                   pmax    pmax
      comp=Z,290nm,5.6s
LZH   Lanzhou            50.29 323  eP       P        02 57 04.1 +1.3
LZH                                   sP      pP       02 57 14.4 +1.8
LZH                                   pmax    pmax
      comp=Z,39nm,0.7s
KLR   Kul'dur            51.97 354    P       P        02 57 15.6 +0.7
      comp=Z,8.3nm,1.0s,baz=176,slow=6.4,SNR=14
      comp=Z,8.3nm,1.0s
TYV   Tymovskoe          53.38   3  eP       P        02 57 25.2 -0.2
TYV                                   pmax    pmax
      comp=Z,11nm,1.0s
TYV                                   pmax    pmax
      comp=Z,100nm,3.3s
HIA   Hailar             54.17 345    P       P        02 57 31.3 +0.1
HIA                                   IAmb    IAmb     02 57 33.9
      comp=Z,41nm,1.6s
HIA   Hailar             54.17 345    P       P        02 57 31.3 +0.1
HIA                                   pmax    pmax
      comp=Z,41nm,1.6s
GTA   Gaotai             54.88 324  eP       P        02 57 38.0 +1.3
GTA                                   pP      pP       02 57 46.1 -0.5
GTA                                   pmax    pmax
      comp=Z,10.0nm,1.3s
ZEA   Zeya               56.93 352  eP       P        02 57 51.0 +0.1
ZEA                                   pmax    pmax
      comp=N,20nm,1.1s
ZEA                                   pmax    pmax
      comp=Z,20nm,0.8s
ULN   Ulaanbaatar        57.30 335    P       P        02 57 53.2 -0.7
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ULN   Ulaanbaatar      57.30 335⇓iP    P      02 57 55.0 +1.1
ULN                              pmax  pmax
      comp=Z,12nm,1.2s
SONM  Songino Array    57.55 335  P    P      02 57 55.4 -0.3
SONM  Songino Array    57.55 335  P    P      02 57 56.2 +0.6
      comp=Z,2.7nm,0.7s,baz=154,slow=6.8,SNR=7.6
      comp=Z,2.7nm,0.7s
PEA0B Petropavlovsk-   57.81  14  P    P      02 57 57.5 +0.4
PEA0B                            IAmb  IAmb   02 57 59.1
      comp=Z,54nm,1.8s
PEA0B Petropavlovsk-   57.81  14⇓eP    P      02 57 57.5 +0.4
PETK  Petropavlovsk-   57.81  14  P    P      02 57 56.5 -0.6
PETK  Petropavlovsk-   57.81  14  P    P      02 57 58.0 +0.9
      comp=Z,2.7nm,0.7s,baz=142,slow=4.4,SNR=8.1
      comp=Z,2.7nm,0.7s
PETK  Petropavlovsk-   57.81  14  P    P      02 57 56.5 -0.6
EVN   Everest          58.23 305  P    P      02 58 01.0 -0.3
CIT   Chita            58.40 342 eP    P      02 58 02.2 +0.8
CIT                              e            02 58 06.8
CIT                              pmax  pmax
      comp=Z,74nm,1.6s
ZAK   Zakamensk        60.82 335 eP    P      02 58 18.4 +0.2
ZAK                              pmax  pmax
      comp=Z,16nm,1.5s
HYB   Hyderabad        62.36 291 eP    P      02 58 29.8 +0.6
HYB                              ePcP  PcP    02 59 09.3 +0.7
MOY   Mondy            62.74 335 eP    P      02 58 31.9 +0.8
MOY                              pmax  pmax
      comp=Z,24nm,2.1s
MA2   Magadan          62.75   7  P    P      02 58 30.4 -0.4
MA2   Magadan          62.75   7  P    P      02 58 32.4 +1.6
MA2   Magadan          62.75   7⇑eP    P      02 58 31.1 +0.3
MA2                              pmax  pmax
      comp=Z,34nm,1.1s
WMQ   Urumqi           64.82 322 eP    P      02 58 49.9 +5.0
WMQ                              pmax  pmax
      comp=Z,23nm,1.1s
YAK   Yakutsk          64.82 355  P    P      02 58 44.5 +0.1
YAK   Yakutsk          64.82 355c iP   P      02 58 44.8 +0.4
YAK                              pmax  pmax
      comp=Z,48nm,0.6s
SEY   Seymchan         66.20   7⇑iP    P      02 58 54.0 +0.7
SEY                              pmax  pmax
      comp=Z,20nm,1.2s
MK31  Makanchi Array   69.60 322⇑eP    P      02 59 15.4 +0.3
MKAR  Makanchi Array   69.60 322  P    P      02 59 14.5 -0.6
MKAR  Makanchi Array   69.60 322  P    P      02 59 15.3 +0.2
      comp=Z,5.7nm,0.9s,baz=97,slow=9.4,SNR=8.9
      comp=Z,5.7nm,0.9s
MAKZ  Makanchi         69.79 322  P    P      02 59 15.7 -0.6
MAKZ                             IAmb  IAmb   02 59 30.0
      comp=Z,9.3nm,0.7s
MAKZ  Makanchi         69.79 322  P    P      02 59 15.7 -0.6
MAKZ                             pmax  pmax
      comp=Z,9.0nm,0.7s
KSH   Kashi            70.88 313  P    P      02 59 29.6 +6.4
KSH                              pmax  pmax
      comp=Z,8.0nm,1.1s
ZALV  Zalesovo Beam    71.76 330  P    P      02 59 26.4 -1.6
ZALV  Zalesovo Beam    71.76 330  P    P      02 59 27.8 -0.2
      comp=Z,2.2nm,0.5s,baz=111,slow=6.5,SNR=5.6
      comp=Z,2.2nm,0.5s
BOOM  Boomskoye usch   71.95 316  P    P      02 59 28.6 -1.1
BOOM  Boomskoye usch   71.95 316  P    P      02 59 28.6 -1.1
BOOM                             pmax  pmax
      comp=Z,5.0nm,0.8s
UNV   Unalaska Valle   72.34  31  P    P      02 59 31.1 -0.4
      baz=239
P08K  Saint George I   72.36  27  P    P      02 59 31.2 -0.3
      baz=236
SPIA  Saint Paul Isl   72.38  26  P    P      02 59 31.4 -0.2
      baz=235
BILL  Bilibino         73.10  11  P    P      02 59 35.0 -0.8
BILL                             IAmb  IAmb   02 59 37.2
      comp=Z,31nm,1.6s
BILL  Bilibino         73.10  11⇑eP    P      02 59 35.8  0.0
BILL                             pmax  pmax
      comp=Z,17nm,1.4s
KURK  Kurchatov        73.53 325  P    P      02 59 38.6  0.0
KURK  Kurchatov        73.53 325⇓iP    P      02 59 38.8 +0.2
KURK                             pmax  pmax
      comp=Z,20nm,1.3s
KURBB Kurchatov Arra   73.54 325  P    P      02 59 38.2 -0.5
      comp=Z,8.8nm,1.0s,baz=113,slow=5.5,SNR=11
      comp=Z,8.8nm,1.0s
TIXI  Tiksi            74.39 357  P    P      02 59 42.7 -0.6
TIXI                             IAmb  IAmb   02 59 48.3
      comp=Z,14nm,0.8s
TIXI  Tiksi            74.39 357  P    P      02 59 42.7 -0.6
TIXI                             pmax  pmax
      comp=Z,14nm,0.8s
S12K  Black Hills      75.50  30  P    P      02 59 50.3 +0.3
      baz=243,SNR=16
GAMB  Gambell          75.75  20  P    P      02 59 51.5 +0.3
      baz=232
SIMJ  Simiganj         75.78 311  P    P      02 59 51.1 -1.1
SIMJ                             IAmb  IAmb   02 59 58.0
      comp=Z,13nm,0.8s
VNDA  Vanda            75.89 175  P    P      02 59 51.7 -0.2
VNDA                             IAmb  IAmb   02 59 56.0
      comp=Z,8.9nm,0.7s
VNDA  Vanda            75.89 175  P    P      02 59 52.1 +0.3
      comp=Z,7.4nm,0.6s,baz=324,slow=6.4,SNR=20
      comp=Z,7.4nm,0.6s
M11K  Mekoryuk         75.91  25  P    P      02 59 52.4 +0.2
      baz=238
KKAR  Karatay Array    75.93 316  P    P      02 59 52.3 -0.5
KKAR  Karatay Array    75.93 316  P    P      02 59 52.3 -0.5
SDPT  Sand Point       76.14  31  P    P      02 59 53.5 -0.2
      baz=244
CHNA  Chernabura Isl   76.38  32  P    P      02 59 54.5 -0.5
      baz=245
S14K  Fog Glacier      77.02  30  P    P      02 59 58.4 -0.3
      baz=245
M13K  Dall Lake        77.14  26  P    P      02 59 59.5 +0.3
      baz=240
K13K  Kusilvak Mount   77.37  24 IAmb  IAmb   03 00 05.7
      comp=Z,20nm,0.8s
K13K  Kusilvak Mount   77.37  24  P    P      03 00 00.6 +0.2
      baz=239
O14K  Tigyukauivet M   77.52  27 IAmb  IAmb   03 00 05.9
      comp=Z,17nm,0.7s
O14K  Tigyukauivet M   77.52  27  P    P      03 00 01.8 +0.5
      baz=243
N14K  Kuskokwak Cree   77.64  26  P    P      03 00 02.4 +0.5
      baz=242
L14K  Kuka Creek       77.89  25  P    P      03 00 04.0 +0.7
      baz=241
M14K  Bethel           77.91  26  P    P      03 00 04.3 +0.8
      baz=242,SNR=36
TNA   Tin City         78.12  20  P    P      03 00 04.5 -0.1
      baz=235
O15K  Ungalikthiuk R   78.14  28  P    P      03 00 04.9 +0.1
      baz=244
J14K  Nanvaranak Lak   78.23  23  P    P      03 00 05.7 +0.5
      baz=240
M15K  Kasigluk River   78.44  26  P    P      03 00 06.6 +0.2
      baz=243,SNR=8.0
N15K  Kwethluk River   78.46  27 IAmb  IAmb   03 00 08.5
      comp=Z,31nm,1.4s
N15K  Kwethluk River   78.46  27  P    P      03 00 06.7 +0.2
      baz=244
L15K  Ungalak Mounta   78.55  25  P    P      03 00 07.2 +0.2
      baz=242
F14K  Arctic Creek     78.63  20  P    P      03 00 08.4 +1.0
      baz=237
K15K  Wolf Creek Mou   78.82  24 IAmb  IAmb   03 00 13.0
      comp=Z,12nm,0.7s
K15K  Wolf Creek Mou   78.82  24  P    P      03 00 09.4 +0.9
      baz=242
O16K  Kokwok River B   79.12  28  P    P      03 00 10.6 +0.4
      baz=245,SNR=5.4
BVAR  Borovoye Array   79.12 325  P    P      03 00 10.2 -0.1
      comp=Z,13nm,0.6s,baz=112,slow=7.8,SNR=10
      comp=Z,13nm,0.6s
G15K  Niukluk          79.19  21  P    P      03 00 10.8 +0.4
      baz=239
N16K  Nishlik Lake     79.19  27  P    P      03 00 11.0 +0.4
      baz=245
BRVK  Borovoye         79.19 325  P    P      03 00 09.8 -1.0
BRVK                             IAmb  IAmb   03 00 16.2
      comp=Z,13nm,0.8s
BRVK  Borovoye         79.19 325c iP   P      03 00 10.6 -0.2
BRVK                             pmax  pmax
      comp=Z,13nm,0.7s
M16K  Timber Creek     79.34  26 IAmb  IAmb   03 00 16.4
      comp=Z,14nm,0.8s
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M16K  Timber Creek     79.34  26  P    P      03 00 12.3 +0.9
      baz=244,SNR=9.7
F15K  North Star Dit   79.34  21  P    P      03 00 12.4 +1.1
      baz=238
L16K  Owhat River      79.42  25  P    P      03 00 12.3 +0.5
      baz=244,SNR=8.1
Q17K  Contact Creek    79.64  29  P    P      03 00 13.4 +0.2
      baz=248
O17K  Koliganek Bris   79.66  28  P    P      03 00 13.9 +0.8
      baz=246,SNR=12
J16K  Anvik River      79.67  24 IAmb  IAmb   03 00 15.5
      comp=Z,25nm,1.4s
J16K  Anvik River      79.67  24  P    P      03 00 13.9 +0.8
      baz=242
H16K  Elim             79.67  22  P    P      03 00 13.5 +0.4
      baz=241
P17K  Kvichak River    79.74  28  P    P      03 00 13.4 -0.1
      baz=247
I17K  Unalakleet       79.91  23  P    P      03 00 14.4  0.0
      baz=242
N17K  Nushagak Hills   79.92  27  P    P      03 00 15.3 +0.8
      baz=246
G16K  Koyuk River      80.00  21  P    P      03 00 14.8 -0.1
      baz=240
R18K  Karluk           80.09  30  P    P      03 00 15.5  0.0
      baz=249
L17K  Donlin           80.11  25  P    P      03 00 16.4 +0.9
      baz=245,SNR=9.0
M17K  Holitna River    80.17  26 IAmb  IAmb   03 00 21.4
      comp=Z,18nm,0.8s
M17K  Holitna River    80.17  26  P    P      03 00 15.8 -0.1
      baz=246,SNR=11
Q18K  Katmai Hardscr   80.21  29  P    P      03 00 15.9 -0.4
      baz=248,SNR=5.6
J17K  VABM Dome        80.33  24  P    P      03 00 17.0 +0.3
      baz=244,SNR=10
K17K  Iditarod         80.35  25 IAmb  IAmb   03 00 22.2
      comp=Z,18nm,0.8s
K17K  Iditarod         80.35  25  P    P      03 00 17.4 +0.6
      baz=245,SNR=11
P18K  Big Mountain,    80.39  28  P    P      03 00 16.7 -0.4
      baz=248
C16K  Lisburne Hills   80.49  18  P    P      03 00 17.6 +0.2
      baz=237
OHAK  Old Harbor       80.56  31  P    P      03 00 20.2 +2.2
OHAK  Old Harbor       80.56  31  P    P      03 00 18.3 +0.3
      baz=250
O18K  Koktuh Hills     80.57  28  P    P      03 00 18.2 +0.2
      baz=248
N18K  Kilae Creek      80.57  27  P    P      03 00 18.2 +0.2
      baz=247
G17K  Kiwalik Mounta   80.68  22  P    P      03 00 18.9 +0.3
      baz=242
H17K  Granite Mounta   80.69  22  P    P      03 00 19.0 +0.4
      baz=243
L18K  Granite Mounta   80.83  25  P    P      03 00 19.4  0.0
      baz=246,SNR=14
D17K  Noatak River     80.91  19  P    P      03 00 20.3 +0.6
      baz=240
F17K  Baldwin Pennin   80.91  21  P    P      03 00 20.8 +1.1
      baz=241
M18K  Stony River      80.92  26  P    P      03 00 20.2 +0.3
      baz=247,SNR=10
Q19K  Cape Douglas,    80.98  29  P    P      03 00 20.4 +0.1
      baz=250
E17K  Hotham Inlet     81.02  20  P    P      03 00 20.8 +0.5
      baz=241
KDAK  Kodiak Island    81.11  30  P    P      03 00 21.0 +0.1
KDAK                             IAmb  IAmb   03 00 26.7
      comp=Z,21nm,0.8s
KDAK  Kodiak Island    81.11  30  P    P      03 00 21.0 +0.1
KDAK                             pmax  pmax
      comp=Z,21nm,0.8s
KDAK  Kodiak Island    81.11  30  P    P      03 00 20.8 -0.2
      baz=251
RDOG  Red Dog Mine     81.15  19  P    P      03 00 21.3 +0.3
      baz=240
N19K  Bonanza Creek    81.26  27 IAmb  IAmb   03 00 26.9
      comp=Z,37nm,1.4s
N19K  Bonanza Creek    81.26  27  P    P      03 00 21.7 -0.2
      baz=248,SNR=10.0
C17K  DeLong Mountai   81.28  19  P    P      03 00 22.0 +0.3
      baz=239,SNR=5.4
J18K  Innoko River     81.32  24  P    P      03 00 21.8 -0.2
      baz=246,SNR=8.5
H18K  Honhosa River    81.38  22 IAmb  IAmb   03 01 05.1
      comp=Z,24nm,1.6s
H18K  Honhosa River    81.38  22  P    P      03 00 23.1 +0.8
      baz=244
P19K  Oil Pt           81.43  28  P    P      03 00 21.9 -0.7
      baz=250
Q20K  Shuyak Island    81.48  30  P    P      03 00 23.0 +0.1
      baz=251
F18K  Selawik          81.55  21  P    P      03 00 23.0 -0.1
      baz=243
G18K  Tagagawik        81.60  22  P    P      03 00 23.6 +0.2
      baz=244,SNR=7.4
E18K  Tukpahlearik C   81.60  20 IAmb  IAmb   03 00 28.5
      comp=Z,10nm,0.7s
E18K  Tukpahlearik C   81.60  20  P    P      03 00 23.6 +0.2
      baz=242,SNR=7.1
L19K  White Mountain   81.61  26 IAmb  IAmb   03 00 28.1
      comp=Z,14nm,0.7s
L19K  White Mountain   81.61  26  P    P      03 00 24.1 +0.5
      baz=248,SNR=18
M19K  Big River Lodg   81.70  26  P    P      03 00 24.0  0.0
      baz=248
GCSA  Galena City Sc   81.78  23  P    P      03 00 24.9 +0.6
      baz=246
O20K  Slope Mountain   81.86  28  P    P      03 00 24.0 -1.1
      baz=250
J19K  Poorman          81.98  24 IAmb  IAmb   03 00 30.0
      comp=Z,44nm,1.8s
J19K  Poorman          81.98  24  P    P      03 00 25.0 -0.5
      baz=247,SNR=12
C18K  Utukok River     82.00  19  P    P      03 00 25.3 -0.2
      baz=241
L20K  Farewell, AK     82.14  26  P    P      03 00 26.4  0.0
      baz=249,SNR=12
MAW   Mawson           82.15 202  P    P      03 00 26.4 +0.2
      comp=Z,11nm,1.0s,baz=48,slow=6.3,SNR=8.1
      comp=Z,11nm,1.0s
B18K  Kokolik River    82.15  18  P    P      03 00 26.9 +0.7
      baz=240
HOM   Homer            82.19  29  P    P      03 00 26.9 +0.2
      baz=251
M20K  Styx River       82.25  26  P    P      03 00 27.0 -0.1
      baz=250,SNR=18
H19K  Roundabout Mou   82.27  22 IAmb  IAmb   03 00 32.8
      comp=Z,9.8nm,0.8s
H19K  Roundabout Mou   82.27  22  P    P      03 00 27.2 +0.3
      baz=246
G19K  Purcell Mounta   82.28  22 IAmb  IAmb   03 00 33.5
      comp=Z,16nm,0.8s
G19K  Purcell Mounta   82.28  22  P    P      03 00 27.1 +0.1
      baz=245
F19K  Shaleruckik Mo   82.33  21  P    P      03 00 28.1 +0.9
      baz=245
K20K  Telida           82.38  25 IAmb  IAmb   03 00 32.3
      comp=Z,10nm,0.8s
K20K  Telida           82.38  25  P    P      03 00 28.2 +0.6
      baz=248,SNR=14
BRLK  Bradley Lake     82.59  29 IAmb  IAmb   03 00 36.1
      comp=Z,14nm,0.8s
J20K  Nowinta River    82.65  24  P    P      03 00 28.8 -0.2
J20K                             IAmb  IAmb   03 00 34.5
      comp=Z,12nm,0.7s
J20K  Nowinta River    82.65  24  P    P      03 00 28.9  0.0
      baz=248,SNR=20
BRSE  Bradley Lake S   82.65  29  P    P      03 00 27.9 -1.1
      baz=252
C19K  Lookout Ridge    82.72  19  P    P      03 00 29.3  0.0
      baz=243,SNR=11
I20K  Naaghedeneel     82.75  23  P    P      03 00 29.5 +0.1
      baz=248
E19K  Redstone River   82.78  20  P    P      03 00 29.9 +0.3
      baz=245,SNR=25
A19K  Wainwright       82.79  17  P    P      03 00 30.3 +0.8
      baz=241
H20K  Anotleneega Mo   82.85  23  P    P      03 00 30.3 +0.3
      baz=248
D19K  Kuna River       82.93  19 IAmb  IAmb   03 00 42.8
      comp=Z,11nm,0.8s
D19K  Kuna River       82.93  19  P    P      03 00 30.8 +0.5
      baz=244,SNR=8.0
SKT   Skwentna         83.00  27  P    P      03 00 30.6 -0.2
      baz=251
PPLA  Purkeypile       83.02  26 IAmb  IAmb   03 00 35.4
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      comp=Z,8.1nm,0.8s
PPLA  Purkeypile       83.02  26  P    P      03 00 30.7 -0.3
      baz=250
F20K  Avaraart Lake    83.15  21 IAmb  IAmb   03 00 37.5
      comp=Z,9.8nm,0.8s
F20K  Avaraart Lake    83.15  21  P    P      03 00 31.7 +0.3
      baz=246,SNR=11
SUA   Susitna One      83.19  27 IAmb  IAmb   03 00 34.8
      comp=Z,12nm,0.7s
SUA   Susitna One      83.19  27  P    P      03 00 30.7 -1.3
      baz=252,SNR=5.0
CAST  Castle Rocks     83.24  25  P    P      03 00 31.6 -0.4
      baz=250
SEW   Seward           83.38  29  P    P      03 00 32.2 -0.6
      baz=253
IMAR  Indian Mountai   83.47  22  P    P      03 00 32.9 -0.3
E20K  Nigu River       83.48  20  P    P      03 00 33.3 +0.1
      baz=246,SNR=22
D20K  Etivluk River    83.52  19 IAmb  IAmb   03 00 35.2
      comp=Z,20nm,1.4s
D20K  Etivluk River    83.52  19  P    P      03 00 33.1 -0.3
      baz=246,SNR=11
RC01  Rabbit Creek A   83.54  28  P    P      03 00 32.8 -0.8
      baz=253,SNR=18
M22K  Willow           83.56  27  P    P      03 00 32.6 -1.1
      baz=252
CUT   Chulitna         83.69  26  P    P      03 00 33.6 -0.8
      baz=252
H21K  Melozitna Rive   83.72  23  P    P      03 00 34.3 -0.2
      baz=249
G21K  Allakaket        83.76  22  P    P      03 00 34.7 +0.1
      baz=249
KTH   Kantishna Hill   83.77  25 IAmb  IAmb   03 00 39.0
      comp=Z,8.5nm,0.8s
B20K  Meade River      83.89  18 IAmb  IAmb   03 00 37.0
      comp=Z,29nm,1.5s
B20K  Meade River      83.89  18  P    P      03 00 35.1 -0.1
      baz=245
BPAW  Bear Paw Mtn.    83.92  25  P    P      03 00 34.8 -0.8
BPAW                             IAmb  IAmb   03 00 58.4
      comp=Z,24nm,1.9s
BPAW  Bear Paw Mtn.    83.92  25  P    P      03 00 34.7 -0.8
      baz=251
PMR   Palmer           83.96  27 IAmb  IAmb   03 00 39.0
      comp=Z,11nm,0.7s
PMR   Palmer           83.96  27  P    P      03 00 38.0 +2.3
PMR   Palmer           83.96  27  P    P      03 00 35.0 -0.7
      baz=253,SNR=9.9
TRF   Thorofare Moun   84.01  25 IAmb  IAmb   03 00 38.9
      comp=Z,37nm,1.9s
TRF   Thorofare Moun   84.01  25  P    P      03 00 35.4 -0.8
      baz=252
F21K  Alatna River     84.03  21  P    P      03 00 36.0 -0.1
      baz=249
GHO   Glory Hole Cre   84.11  27 IAmb  IAmb   03 00 54.0
      comp=Z,8.9nm,0.8s
PWL   Port Wells       84.13  28  P    P      03 00 36.0 -0.6
      baz=254
KNK   Knik Glacier     84.22  28  P    P      03 00 36.6 -0.5
      baz=254
E21K  Killik River     84.31  20 IAmb  IAmb   03 00 39.2
      comp=Z,19nm,1.5s
E21K  Killik River     84.31  20  P    P      03 00 37.7 +0.3
      baz=248
C21K  Knifeblade Rid   84.31  19  P    P      03 00 37.3 -0.1
      baz=247,SNR=7.9
MLY   Manley           84.32  24 IAmb  IAmb   03 00 40.8
      comp=Z,9.5nm,0.7s
MLY   Manley           84.32  24  P    P      03 00 37.3 -0.3
      baz=251,SNR=21
P23K  Montague Islan   84.34  29 IAmb  IAmb   03 00 49.6
      comp=Z,13nm,0.9s
P23K  Montague Islan   84.34  29  P    P      03 00 37.3 -0.4
      baz=255
H22K  Ishtalitna Cre   84.35  23  P    P      03 00 37.3 -0.4
      baz=251
SML   Sawmill          84.39  27  P    P      03 00 37.3 -0.7
      baz=254,SNR=10
AB31  Akbulak array    84.52 320 IAmb  IAmb   03 00 44.1
      comp=Z,8.8nm,0.8s
ABKAR Akbulak array    84.52 320 IAmb  IAmb   03 00 44.1
      comp=Z,8.9nm,0.8s
B21K  Ikpikpuk River   84.54  19 IAmb  IAmb   03 00 40.3
      comp=Z,29nm,1.5s
B21K  Ikpikpuk River   84.54  19  P    P      03 00 38.9 +0.4
      baz=247
WAT1  Susitna Watana   84.58  26  P    P      03 00 38.1 -0.9
      baz=254
F22K  John River       84.60  21  P    P      03 00 39.0  0.0
      baz=250
A21K  Barrow           84.61  17  P    P      03 00 39.5 +0.7
      baz=245
G22K  Bettles          84.65  22  P    P      03 00 38.8 -0.3
      baz=250
M23K  Glacier View     84.66  27  P    P      03 00 39.0 -0.4
      baz=254
MCK   McKinley         84.67  25 IAmb  IAmb   03 00 40.2
      comp=Z,12nm,1.0s
MCK   McKinley         84.67  25  P    P      03 00 38.7 -0.7
      baz=253
Q23K  Middleton Isla   84.71  30  P    P      03 00 39.2 -0.4
      baz=256
GLI   Glacier Island   84.72  28  P    P      03 00 38.8 -0.8
GLI   Glacier Island   84.72  28  P    P      03 00 39.0 -0.7
      baz=255,SNR=6.8
SCM   Sheep Creek Mo   84.86  27  P    P      03 00 40.3 -0.1
      baz=255,SNR=11
NEA2  Nenana           84.87  24  P    P      03 00 39.3 -1.0
      baz=253,SNR=9.1
WAT6  Susitna Watana   84.87  26  P    P      03 00 39.8 -0.7
      baz=254
D22K  Ayikyak River    84.91  20 IAmb  IAmb   03 00 42.6
      comp=Z,16nm,1.2s
D22K  Ayikyak River    84.91  20  P    P      03 00 40.5 +0.1
      baz=249
I23K  Minto, Yukon-K   84.92  24 IAmb  IAmb   03 00 44.1
      comp=Z,11nm,0.8s
I23K  Minto, Yukon-K   84.92  24  P    P      03 00 40.1 -0.4
      baz=253,SNR=22
E22K  Anaktuvuk Pass   84.94  21 IAmb  IAmb   03 00 45.4
      comp=Z,9.6nm,0.8s
E22K  Anaktuvuk Pass   84.94  21  P    P      03 00 41.3 +0.6
      baz=250,SNR=14
A22K  Sinclair Lake    84.97  18  P    P      03 00 40.6 -0.1
      baz=247,SNR=5.3
FID   Port Fidalgo     84.97  28 IAmb  IAmb   03 00 44.4
      comp=Z,12nm,0.7s
H23K  Yukon River      85.05  23  P    P      03 00 41.1 -0.1
      baz=252
G23K  Bananza Creek    85.13  22  P    P      03 00 42.1 +0.4
      baz=252,SNR=7.2
DHY   Denali Highway   85.16  26  P    P      03 00 41.2 -0.8
      baz=255,SNR=20
B22K  Teshekpuk Lake   85.19  18  P    P      03 00 41.6 -0.2
      baz=248,SNR=6.5
COLD  Coldfoot         85.23  22  P    P      03 00 43.1 +1.0
      baz=252
WRH   Wood River Hil   85.24  25 IAmb  IAmb   03 00 44.7
      comp=Z,9.6nm,0.8s
EYAK  Cordova Ski Ar   85.27  29  P    P      03 00 41.7 -0.6
      baz=256
CCB   Clear Creek Bu   85.41  24 IAmb  IAmb   03 00 45.4
      comp=Z,11nm,0.8s
KLU   Klutina          85.42  28 IAmb  IAmb   03 01 07.5
      comp=Z,13nm,1.2s
KLU   Klutina          85.42  28  P    P      03 00 42.8 -0.4
      baz=256
COLA  College          85.45  24  P    P      03 00 42.3 -0.9
COLA                             IAmb  IAmb   03 00 48.8
      comp=Z,13nm,0.9s
COLA  College          85.45  24  P    P      03 00 45.6 +2.4
COLA  College          85.45  24  P    P      03 00 42.3 -0.9
COLA                             pmax  pmax
      comp=Z,13nm,0.9s
COLA  College          85.45  24  P    P      03 00 43.2  0.0
      baz=254
M24K  Tolsona, Glenn   85.45  27  P    P      03 00 43.4 +0.1
      baz=256
D23K  Nanushuk River   85.62  20  P    P      03 00 44.2 +0.3
      baz=251,SNR=17
HDA   Harding Lake     85.70  25  P    P      03 00 43.5 -0.9
      baz=255
E23K  Chandalar        85.70  21  P    P      03 00 44.7 +0.1
      baz=252,SNR=13
H24K  Noodor Dome      85.71  23  P    P      03 00 44.1 -0.4
      baz=254,SNR=10
RAGM  Ragged Mountai   85.75  29 IAmb  IAmb   03 00 56.2
      comp=Z,11nm,0.9s
```

KAIM	Kayak Island	85.78	29	P	P	03 00 44.1	-0.8
	baz=258,SNR=5.4						
IL31		85.82	24	IAmb	IAmb	03 00 47.4	
	comp=Z,13nm,0.7s						
ILAR	Eielson Array	85.82	24	P	P	03 00 43.2	-1.8
ILAR	Eielson Array	85.82	24	P	P	03 00 43.6	-1.4
	comp=Z,10nm,0.7s,baz=262,slow=4.6,SNR=41						
	comp=Z,10nm,0.7s						
TOLK	Toolik Lake Re	85.89	20	P	P	03 00 45.5	+0.1
	baz=252,SNR=7.9						
BMRM	Bremner River	85.92	28	IAmb	IAmb	03 00 49.5	
	comp=Z,11nm,0.6s						
BMRM	Bremner River	85.92	28	P	P	03 00 45.2	-0.5
	baz=257						
C23K	Itkillik River	85.92	19	P	P	03 00 45.1	-0.4
	baz=251,SNR=8.1						
HMT	Hamilton	85.94	29	IAmb	IAmb	03 00 49.8	
	comp=Z,15nm,0.7s						
PAX	Paxson	85.98	26	IAmb	IAmb	03 01 05.5	
	comp=Z,22nm,1.8s						
PAX	Paxson	85.98	26	P	P	03 00 45.5	-0.5
	baz=256						
HARP	HAARP	85.99	27	P	P	03 00 45.3	-0.7
	baz=257						
K24K	Donnelly Dome	86.04	26	IAmb	IAmb	03 01 19.6	
	comp=Z,8.5nm,0.8s						
N25K	Chitina, Valde	86.06	28	P	P	03 00 45.7	-0.8
	baz=257						
G24K	Hadweenzic Riv	86.10	23	IAmb	IAmb	03 00 48.4	
	comp=Z,21nm,1.3s						
G24K	Hadweenzic Riv	86.10	23	P	P	03 00 46.6	+0.2
	baz=254,SNR=12						
E24K	Your Creek	86.11	21	IAmb	IAmb	03 01 00.8	
	comp=Z,20nm,1.9s						
E24K	Your Creek	86.11	21	P	P	03 00 46.8	+0.3
	baz=253						
F24K	Squaw Lake	86.17	22	P	P	03 00 47.0	+0.2
	baz=254,SNR=15						
BERG	Berg Lake	86.23	29	P	P	03 00 46.5	-0.7
BERG				IAmb	IAmb	03 00 51.3	
	comp=Z,9.7nm,0.7s						
D24K	Happy Valley	86.31	20	P	P	03 00 48.4	+1.0
	baz=253,SNR=8.2						
GLB	Gilahina Butte	86.40	28	IAmb	IAmb	03 00 52.9	
	comp=Z,11nm,0.7s						
J25K	Salcha River,	86.41	25	IAmb	IAmb	03 00 48.5	
	comp=Z,23nm,1.6s						
J25K	Salcha River,	86.41	25	P	P	03 00 47.0	-1.1
	baz=256,SNR=7.8						
RIDG	Independent Ri	86.43	26	IAmb	IAmb	03 00 51.7	
	comp=Z,8.7nm,0.7s						
RIDG	Independent Ri	86.43	26	P	P	03 00 47.5	-0.6
	baz=257,SNR=7.0						
C24K	Franklin Bluff	86.52	19	P	P	03 00 48.0	-0.4
	baz=253						
PRP	Porcupine Dome	86.56	24	P	P	03 00 49.0	+0.1
	baz=256						
CRQE	Cirque	86.60	29	P	P	03 00 48.8	-0.3
	baz=259,SNR=5.8						
H25L	Birch Creek	86.63	23	P	P	03 00 49.6	+0.6
	baz=256						
G25K	Bearman Lake	86.64	23	P	P	03 00 49.5	+0.5
	baz=256,SNR=6.8						
WAX	Waxell Ridge	86.65	29	IAmb	IAmb	03 00 54.2	
	comp=Z,13nm,0.7s						
ARTI	Arti	86.70	327	P	P	03 00 47.4	-2.1
ARTI				IAmb	IAmb	03 00 53.2	
	comp=Z,8.2nm,0.6s						
ARTI	Arti	86.70	327	*c i*P	P	03 00 49.7	+0.1
ARTI						03 04 06.6	
ARTI				S	SKSac	03 11 13.9	0.0
ARTI				SS	SS	03 17 02.5	-3.9
ARTI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TGL	Tana Glacier	86.72	29	IAmb	IAmb	03 00 53.7	
	comp=Z,12nm,0.7s						
DOT	Dot Lake	86.75	26	IAmb	IAmb	03 00 54.0	
	comp=Z,6.8nm,0.7s						
MENT	Mentasta	86.75	27	IAmb	IAmb	03 00 54.6	
	comp=Z,8.6nm,0.7s						
MENT	Mentasta	86.75	27	P	P	03 00 52.1	+2.4
MCARA	McCarthy VSAT	86.75	28	P	P	03 00 48.9	-0.9
	baz=259						
SCRK	Sand Creek	86.86	26	P	P	03 00 50.0	-0.3
	baz=258						
L26K	Log Cabin Wild	86.94	27	P	P	03 00 50.5	-0.1
	baz=258						
M26K	Nabesna, AK	86.97	27	P	P	03 00 50.4	-0.5
	baz=259						
F25K	Christian Rive	87.02	22	P	P	03 00 51.5	+0.6
	baz=256,SNR=9.6						
MESA	MESA	87.04	29	P	P	03 00 51.1	-0.3
	baz=260						
J26L	Joseph Creek	87.15	25	IAmb	IAmb	03 00 53.0	
	comp=Z,19nm,1.4s						
J26L	Joseph Creek	87.15	25	P	P	03 00 51.5	-0.1
	baz=258,SNR=14						
E25K	Arctic Village	87.18	21	P	P	03 00 52.0	+0.3
	baz=256,SNR=8.0						
D25K	Kavik River	87.19	20	P	P	03 00 51.7	-0.1
	baz=255,SNR=5.2						
GRNC	Granite Creek	87.24	29	IAmb	IAmb	03 00 57.2	
	comp=Z,9.3nm,0.7s						
QSPA	South Pole Qui	87.33	180	P	P	03 00 51.3	-1.3
QSPA				IAmb	IAmb	03 00 53.5	
	comp=Z,16nm,0.8s						
QSPA	South Pole Qui	87.33	180	P	P	03 00 52.1	-0.5
	comp=Z,15nm,0.9s,baz=201,slow=0.5,SNR=34						
	comp=Z,15nm,0.9s						
BMAR	Burnt Mountain	87.38	22	P	P	03 00 52.9	+0.2
M27K	Edge Creek, AK	87.47	27	P	P	03 00 53.4	0.0
	baz=260,SNR=7.1						
CTG	Chitna Glacier	87.48	29	P	P	03 00 53.6	+0.2
	baz=260,SNR=10						
I26K	Coal Creek Min	87.48	24	P	P	03 00 52.5	-0.7
	baz=258,SNR=6.4						
G26K	Porcupine Rive	87.58	23	IAmb	IAmb	03 00 58.0	
	comp=Z,15nm,0.9s						
G26K	Porcupine Rive	87.58	23	P	P	03 00 54.6	+1.0
	baz=258,SNR=20						
F26K	Sheenjek River	87.60	22	P	P	03 00 54.2	+0.5
F26K	Sheenjek River	87.60	22	P	P	03 00 54.6	+0.9
	baz=257,SNR=16						
LOGN	Logan Glacier	87.62	29	IAmb	IAmb	03 00 58.0	
	comp=Z,11nm,0.9s						
L27K	Beaver Creek,	87.62	27	IAmb	IAmb	03 00 55.6	
	comp=Z,16nm,1.4s						
L27K	Beaver Creek,	87.62	27	P	P	03 00 54.2	+0.3
	baz=260,SNR=7.0						
BCAR	Beaver Creek A	87.64	27	P	P	03 00 53.8	-0.3
K27K	Chicken	87.69	26	P	P	03 00 54.7	+0.5
	baz=259						
PCA	Pinnacle	87.86	30	IAmb	IAmb	03 00 58.5	
	comp=Z,11nm,0.8s						
PINM	Pinnacle	87.87	30	P	P	03 00 55.2	0.0
	baz=261						
BVCY	Beaver Creek	87.95	27	P	P	03 00 55.9	+0.4
	baz=260						
O28M	Mount Upton	88.00	29	IAmb	IAmb	03 01 00.5	
	comp=Z,8.2nm,0.8s						
O28M	Mount Upton	88.00	29	P	P	03 00 56.2	+0.1
	baz=261						
YUK3	Moose Creek	88.03	28	P	P	03 00 56.2	0.0
	baz=261						
I27K	Kandik River	88.17	24	P	P	03 00 56.5	0.0
	baz=260,SNR=23						
C27K	Jago River	88.18	20	IAmb	IAmb	03 01 03.2	
	comp=Z,7.0nm,0.9s						
C27K	Jago River	88.18	20	P	P	03 00 56.7	+0.3
	baz=258						
PNL	Peninsula	88.23	30	P	P	03 00 57.1	+0.3
	baz=262						
YUK8	Steele Glacier	88.28	29	P	P	03 00 57.9	+0.4
	baz=262						
H27K	Steamboat Moun	88.32	24	P	P	03 00 58.1	+0.9
	baz=260,SNR=18						
G27K	Doyon Strip	88.37	23	IAmb	IAmb	03 00 59.6	
	comp=Z,30nm,1.9s						
G27K	Doyon Strip	88.37	23	P	P	03 00 58.1	+0.6
	baz=260,SNR=6.9						
E27K	Coleen River	88.65	22	P	P	03 00 59.1	+0.4
	baz=260						
O29M	Mount Kennedy	88.73	30	P	P	03 00 59.2	-0.1
	baz=263						
YUK4	Talbot Arm	88.83	29	P	P	03 01 00.7	+0.8
	baz=263,SNR=7.9						
I28M	Miner Creek	88.84	24	P	P	03 00 60.0	+0.3
	baz=261,SNR=14						
DAWY	Dawson	88.86	26	P	P	03 00 59.5	-0.3
DAWY				IAmb	IAmb	03 01 04.0	
	comp=Z,12nm,0.8s						
DAWY	Dawson	88.86	26	P	P	03 01 00.3	+0.5
	baz=262,SNR=24						
YUK6	Outpost Mounta	88.91	29	P	P	03 01 00.2	-0.1
	baz=263						
M29M	Somme Creek	89.06	27	P	P	03 01 00.7	-0.2
	baz=263,SNR=11						
D27M	Malcolm River	89.06	21	P	P	03 01 00.1	-0.5
	baz=260						
P29M	Windy Craggy	89.06	30	IAmb	IAmb	03 01 06.0	
	comp=Z,12nm,0.8s						
P29M	Windy Craggy	89.06	30	P	P	03 01 01.0	+0.2
	baz=263,SNR=5.3						
F28M	Old Crow	89.19	22	P	P	03 01 01.7	+0.4
	baz=261						
L29M	L29M	89.29	27	IAmb	IAmb	03 01 14.0	
	comp=Z,14nm,1.2s						
L29M	L29M	89.29	27	P	P	03 01 01.9	0.0
	baz=263,SNR=10						
HYT	Haines Junctio	89.31	29	IAmb	IAmb	03 01 06.1	
	comp=Z,8.9nm,0.7s						
HYT	Haines Junctio	89.31	29	P	P	03 01 02.1	0.0
	baz=264,SNR=8.9						
J29N	Klondike Camp	89.42	26	P	P	03 01 02.5	0.0
	baz=263						
E28M	Babbage River	89.47	21	P	P	03 01 02.9	+0.4
	baz=262						
I29M	Ogilvie Camp,	89.50	25	P	P	03 01 02.9	+0.1
	baz=263						
P30M	Million Dollar	89.51	30	P	P	03 01 02.9	0.0
	baz=264						
H29M	Whitestone	89.58	24	P	P	03 01 03.3	+0.1
	baz=263						
N30M	Aishikik Lake	89.58	29	P	P	03 01 03.6	+0.3
	baz=264						
K29M	Barlow Dome	89.65	26	IAmb	IAmb	03 01 10.3	
	comp=Z,9.9nm,0.8s						
K29M	Barlow Dome	89.65	26	P	P	03 01 03.7	+0.1
	baz=263,SNR=13						
S31K	Pelican	89.66	32	P	P	03 01 02.4	-1.2
	baz=265						
PLBC	Pleasant Camp	89.74	31	P	P	03 01 03.8	-0.2
	baz=264						
G29M	Pine Creek	89.81	23	P	P	03 01 04.0	-0.2
	baz=263						
D28M	Stokes Point	89.86	21	P	P	03 01 04.6	+0.4
	baz=262						
O30N	Mendenhall	90.00	29	P	P	03 01 04.7	-0.5
	baz=265						
E29M	Blow River	90.04	22	P	P	03 01 05.9	+0.8
	baz=263						
SIT	Sitka	90.07	33	P	P	03 01 05.5	0.0
	baz=265						
N31M	Braeburn, Yuko	90.21	29	IAmb	IAmb	03 01 10.5	
	comp=Z,7.9nm,0.8s						
N31M	Braeburn, Yuko	90.21	29	P	P	03 01 06.7	+0.6
	baz=265						
J30M	Hart River	90.25	25	P	P	03 01 06.7	+0.3
	baz=264						
EPYK	Eagle Plains	90.26	24	P	P	03 01 07.0	+0.7
	baz=264						
SKAG	Skagway	90.27	31	P	P	03 01 06.7	+0.3
	baz=265						
I30M	Mount Dempster	90.29	25	P	P	03 01 06.3	-0.3
	baz=264						
MAYO	Mayo, Yukon	90.35	26	P	P	03 01 06.8	+0.1
	baz=265						
S32K	Killisnoo	90.51	33	P	P	03 01 06.8	-0.7
	baz=266						
G30M	tAoh Zraii Nji	90.52	23	P	P	03 01 06.8	-0.7
	baz=265						
WHY	Whitehorse	90.58	29	P	P	03 01 07.9	-0.1
WHY				IAmb	IAmb	03 01 11.7	
	comp=Z,13nm,0.8s						
WHY	Whitehorse	90.58	29	P	P	03 01 08.1	+0.1
	baz=266						
R32K	Eaglecrest	90.60	32	P	P	03 01 07.8	-0.2
	baz=266						
F30M	Barrier River	90.75	22	P	P	03 01 09.0	+0.5
	baz=265						
SYO	Syowa Base	90.78	201	⇓*e*P	P	03 01 10.0	+1.4
M31M	Drury Creek, Y	90.93	28	P	P	03 01 09.9	+0.5
	baz=266						
P32M	Atlin	91.09	31	P	P	03 01 10.4	0.0
	baz=267						
H31M	Peel River	91.18	24	P	P	03 01 10.5	-0.1
	baz=266						
U33K	Whale Pass	91.23	34	P	P	03 01 11.0	+0.1
	baz=267						
FARO	Faro, Yukon	91.42	28	P	P	03 01 11.8	+0.1
	baz=267						
N32M	Quiet Lake	91.49	29	P	P	03 01 11.7	-0.4
	baz=267						
F31M	Tsiigehtchic	91.52	23	P	P	03 01 12.4	+0.4
	baz=267						
P33M	Teslin, Yukon	91.58	30	P	P	03 01 13.0	+0.4
	baz=268						
INK	Inuvik	91.65	22	P	P	03 01 12.9	+0.3
	baz=267						
WRAK	Wrangell Islan	91.67	34	P	P	03 01 12.7	-0.3
	baz=268						
Q32M	Nakina River	91.81	31	P	P	03 01 13.1	-0.7
	baz=268						
S34M	Telegraph Cree	92.38	32	P	P	03 01 15.6	-0.7
	baz=269						
MMPY	Sheldon Lake,	92.40	28	IAmb	IAmb	03 03 18.1	
	comp=Z,20nm,1.9s						
MMPY	Sheldon Lake,	92.40	28	P	P	03 01 16.2	-0.1
	baz=269						
R33M	Jennings River	92.49	31	P	P	03 01 16.8	-0.1
	baz=269						
A36M	Sachs Harbour	94.40	18	P	P	03 01 25.6	+0.3
	baz=275						
YKA	Yellowknife Ar	100.06	27	P	Pdif	03 01 50.5	-0.5
	comp=Z,0.9nm,0.8s,baz=289,slow=5.6,SNR=4.6						
YKA	Yellowknife Ar	100.06	27	*i* P	Pdif	03 01 52.4	+1.4
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARCES	ARCESS Array B	100.35	341	P	Pdif	03 01 51.0	-1.2
	comp=Z,2.7nm,0.7s,baz=76,slow=5.5,SNR=7.2						
ARCES	ARCESS Array B	100.35	341	P	Pdif	03 01 51.0	-1.2
GERES	GERESS Array B	114.25	324	PKP	PKPdf	03 06 45.1	-0.5
	comp=Z,0.3nm,0.6s,baz=199,slow=2.8,SNR=3.9						
TXAR	Lajitas Array	115.41	59	PKP	PKPdf	03 06 46.9	-1.5
	comp=Z,0.4nm,0.6s,baz=222,slow=2.3,SNR=5.7						
JCT	Junction City	118.40	57		PKPdf	03 06 52.4	-1.6
JCT	Junction City	118.40	57	PKIKP	PKPdf	03 06 52.4	-1.6
BRDY	Brady	118.86	56	PKPdf	PKPdf	03 06 53.6	-1.2
P38A	Dawn	120.21	45	PKPdf	PKPdf	03 06 55.1	-2.1
CCM	Cathedral Cave	122.49	46	PKPdf	PKPdf	03 06 59.4	-2.2
CCM	Cathedral Cave	122.49	46	PKIKP	PKPdf	03 06 59.4	-2.2
MEDO	Medina	127.93	34	PKPdf	PKPdf	03 07 10.0	-1.9
PB11	IPOC Station P	144.50	130	PKPdf	PKPab	03 07 40.7	-1.0
GO01	Chusmiza	144.91	130	PKPdf	PKPab	03 07 42.5	-1.1
FLOC	Florencia	145.83	91	PKPdf	PKPdf	03 07 44.2	-1.5
ROSC	El Rosal	147.16	85	PKPbc	PKPbc	03 07 49.6	-0.9
	comp=Z,10.0nm,0.6s,baz=198,slow=23,SNR=5.4						
CZSB	Cruzeiro do Su	147.20	108	PKPdf	PKPdf	03 07 46.5	-1.4
CPUP	Villa Florida	147.40	153	PKPbc	PKPbc	03 07 49.3	-1.1
	comp=Z,2.4nm,0.7s,baz=160,slow=1.0,SNR=10						
LPAZ	La Paz	147.65	126	PKPbc	PKPdf	03 07 50.1	+0.7
LPAZ	La Paz	147.65	126	PKPbc	PKPbc	03 07 51.1	-0.9
	comp=Z,5.0nm,0.8s,baz=255,slow=2.5,SNR=10						
LPAZ	La Paz	147.65	126	PKP2	PKPdf	03 07 50.1	+0.7
TBTG	Tabatinga, AM	150.80	103	PKPdf	PKPdf	03 07 51.7	-2.0
OBIP	Obispado Ponce	150.98	56	PKPbc	PKPbc	03 07 57.9	-1.6
SJG	San Juan	151.32	56	PKPbc	PKPbc	03 07 59.2	-1.2
SJG	San Juan	151.32	56	PKIKP	PKPbc	03 07 59.2	-1.2
HUMP	Col San Antoni	151.56	55	PKPbc	PKPbc	03 07 59.3	-1.6

DJA **24** *02:53:33.3±0.1, 6°S±1°×12°9E±°, h204^{km}±1^{km}, M7.1/154, mB7.1/154, mb7.0/1, MLv7.5/19, Mw7.3/175, Mw(mB)7.1/154, MwMwp7.0/151, Mwp6.8/151*

BJI **24** *02:53:36.9, 6°.35S×129°.25E, h210^{km}, mB7.1/82, mb6.3/92*

MOS **24** *02:53:37.9±1.6, 6°.39S×129°.24E, h217^{km}, mb6.8/62, MS6.8/6, Error ellipse: s-maj=15.0km s-min=7.0km az=127.0*

NEIC **24** *02:53:39.9, 6°.38S×129°.16E, h213^{km}*

NEIC **24** *02:53:39.8±2.2, 6°.41S±0°.04×129°.17E±0°.06, h212^{km}±1^{km}, mb6.7/359, Mwb7.3/70, Mww7.3/48, Error ellipse: s-maj=9.5km s-min=6.5km az=260.0, Moment Tensor Solution. Moment tensor: Scale 10^{20}Nm; M_{rr}0.32; $M_{\theta\theta}$-0.76; $M_{\phi\phi}$0.43; $M_{r\theta}$-0.47; $M_{\theta\phi}$0.72; $M_{\phi r}$0.20; Fault plane solution: $M_0$1.10000×10^{20} NP1:ϕ_s161.91000°, δ75.13000°, λ-169.53000°. NP2:ϕ_s69.19000°, δ79.89000°, λ-15.11000°. Principal axes: T 0.7724, Plg3.0000°, Azm116.0000°; N 0.4816, Plg72.0000°, Azm216.0000°; P -1.2540, Plg18.0000°, Azm25.0000°;*

PPT **24** *02:53:40.2±0.2, 6°.35S×129°.20E, h210^{km}±2^{km}, mb6.6/12, MLv7.5/6 Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

PMR **24** *02:53:40.0, 6°.56S×129°.13E, h222^{km}*

IDC **24** *02:53:40.6±0.7, 6°.35S×129°.26E, h222^{km}±6^{km}, mb6.3/30, mbtmp6.8/33, Error ellipse: s-maj=9.1km s-min=6.2km az=84.0*

IPGP **24** *02:53:40.0, 6°.39S×129°.22E, h224^{km}, Mw7.2, Fault plane solution: NP1:ϕ_s164.00000°, δ29.00000°, λ147.00000°. NP2:ϕ_s284.00000°, δ75.00000°, λ65.00000°.*

NEIC **24** *02:53:40.2, 6°.39S×129°.22E, h200^{km}*

NEIC **24** *02:53:40.2, 6°.59S×129°.52E, h200^{km}, Moment Tensor Solution. Duration: 22^{s}4 Moment tensor: Scale 10^{20}Nm; M_{rr}0.34; $M_{\theta\theta}$-0.78; $M_{\phi\phi}$0.44; $M_{r\theta}$-0.30; $M_{\theta\phi}$0.69; $M_{\phi r}$0.12; Fault plane solution: $M_0$1.02000×10^{20} NP1: ϕ_s159.99000°, δ79.78000°, λ-172.97000°. NP2: ϕ_s68.74000°, δ83.08000°, λ-10.30000°. Principal axes: T 0.7450, Plg2.0000°, Azm115.0000°; N 0.4132, Plg78.0000°, Azm215.0000°; P -1.1583, Plg12.0000°, Azm24.0000°;*

GCMT **24** *02:53:42.8±0.1, 6°.51S×129°.17E, h220^{km}, MW7.3/179, Moment Tensor Solution. s178,c510; s179,c938; Duration: 10^{s}4 Moment tensor: Scale 10^{20}Nm; M_{rr}0.32±.00; $M_{\theta\theta}$-0.77±.00; $M_{\phi\phi}$0.45±.00; $M_{r\theta}$-0.43±.00; $M_{\theta\phi}$0.67±.00; $M_{\phi r}$0.15±.00; Best double couple: $M_0$0.97500×10^{20} NP1:ϕ_s160.00000°, δ74.00000°, λ-172.00000°. NP2:ϕ_s68.00000°, δ82.00000°, λ-16.00000°. Principal axes: T 0.7490, Plg6.0000°, Azm115.0000°; N 0.4520, Plg72.0000°, Azm224.0000°; P -1.2010, Plg17.0000°, Azm23.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 24 02:53:39.9±0.2**, 6°.39S**±0°.02×**129°.25E**±0°.02**, h221^{km}**±1^{km}**, h221^{km}:pP-P, n2416,** σ**1^{s}98**/3280**, mb6.7**/325**, 141C-162D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	1.97	19	P	Pn	02 54 21.4	+1.6
BNDI	Bandanaira	1.97	19	P	Pn	02 54 12.2	-7.6
BNDI				S	S	02 54 44.0	-6.8
BNDI	Bandanaira	1.97	19	⇓P	Pn	02 54 21.7	+1.9
SAUI	Saumlaki	2.58	128		Pn	02 54 26.6	+0.5
SAUI				Sn	S	02 54 59.4	-2.5
SAUI	Saumlaki	2.58	128	P	Pn	02 54 27.8	+1.8
SAUI	Saumlaki	2.58	128	P	Pn	02 54 16.8	-9.2
SAUI	Saumlaki	2.58	128	⇑P	Pn	02 54 26.8	+0.8
AAI	Ambon	2.88	339	P	Pn	02 54 22.4	-7.0
MSAI	Masohi	3.04	354	P	Pn	02 54 23.0	-8.2
NLAI	Namlea	3.79	326	P	Pn	02 54 33.5	-6.5
FAKI	Fak Fak	4.56	41		Pn	02 54 49.6	+0.1
FAKI				Sn	S	02 55 40.6	-3.7
FAKI	Fak Fak	4.56	41	P	Pn	02 54 49.4	-0.1
FAKI	Fak Fak	4.56	41	P	Pn	02 54 39.2	-10
FAKI	Fak Fak	4.56	41	⇓P	Pn	02 54 48.3	-1.2
KMPI	Kaimana, Papua	5.20	59	P	Pn	02 54 50.7	-6.7
SANI	Sanana	5.40	323	P	Pn	02 55 01.3	+1.3
SANI				S	S	02 56 04.1	+0.8
SANI	Sanana	5.40	323	P	Pn	02 55 02.0	+2.1
SANI	Sanana	5.40	323	P	Pn	02 54 51.1	-8.8
SANI	Sanana	5.40	323	⇑P	Pn	02 55 00.9	+1.0
SWI	Sorong	5.84	20	P	Pn	02 54 55.3	-10
SOEI	Soe	5.96	236	P	Pn	02 55 06.3	-0.8
SOEI				S	S	02 56 12.0	-4.3
SOEI	Soe	5.96	236		Pn	02 55 06.8	-0.3
SOEI	Soe	5.96	236	P	Pn	02 55 06.7	-0.4
SOEI	Soe	5.96	236	S	S	02 56 15.8	-0.5
SOEI	Soe	5.96	236	P	Pn	02 54 56.5	-11
SOEI	Soe	5.96	236	⇓P	Pn	02 55 05.3	-1.8
MTN	Manton Dam	6.68	164	Pn	Pn	02 55 15.2	-1.0
MTN	Manton Dam	6.68	164	P	Pn	02 55 15.5	-0.7
MTN	Manton Dam	6.68	164	⇓P	Pn	02 55 14.7	-1.5
BATI	Baumata	6.70	235	P	Pn	02 55 15.9	-0.6
	89μm,0.6s,baz=117,slow=1.3,SNR=756						
BATI				S	S	02 56 27.2	-6.3
	82μm,0.4s,baz=174,slow=2.0,SNR=12						
BATI	Baumata	6.70	235	P	Pn	02 55 05.9	-11
BBSI	Bau Bau	6.70	277	P	Pn	02 55 10.0	-6.6
RKPI	Ransiki, Papua	6.90	46	P	Pn	02 55 10.4	-8.8
KDU	Kakadu	7.02	153	P	Pn	02 55 20.3	-0.3
KDU	Kakadu	7.02	153	⇓P	Pn	02 55 19.1	-1.5
KDI	Kendari	7.03	290	P	Pn	02 55 15.6	-5.2
MMRI	Maumere	7.30	252		Pn	02 55 23.5	-0.7
MMRI	Maumere	7.30	252	P	Pn	02 55 25.9	+1.7
MMRI	Maumere	7.30	252	S	S	02 56 48.6	+1.1
MMRI	Maumere	7.30	252	P	Pn	02 55 14.5	-10
MMRI	Maumere	7.30	252	⇓P	Pn	02 55 23.4	-0.9
TNTI	Ternate	7.36	345		Pn	02 55 25.9	+0.9
TNTI	Ternate	7.36	345	P	Pn	02 55 25.3	+0.3
TNTI	Ternate	7.36	345	P	Pn	02 55 16.7	-8.3
TNTI	Ternate	7.36	345	⇓P	Pn	02 55 25.9	+0.9
EDFI	Ende, Flores	7.85	252	P	Pn	02 55 21.8	-10
SRPI	Serui, Papua	8.29	58	P	Pn	02 55 30.4	-6.6
LUWI	Luwuk	8.36	309	P	Pn	02 55 36.1	-1.8
LUWI	Luwuk	8.36	309		Pn	02 55 39.5	+1.6
LUWI	Luwuk	8.36	309	P	Pn	02 55 40.6	+2.7
LUWI	Luwuk	8.36	309	P	Pn	02 55 30.8	-7.1
LUWI	Luwuk	8.36	309	⇑P	Pn	02 55 39.8	+1.8
BAKI	Biak	8.57	53	P	Pn	02 55 33.8	-6.8
KMSI	Cibinong	8.69	323	P	Pn	02 55 36.3	-5.8
BSSI	Bau Bau, Buton	8.71	271	P	Pn	02 55 32.4	-10
KNRA	Kununurra	9.24	183	Pn	Pn	02 55 47.9	-1.3
BNSI	Bone	9.31	282	P	Pn	02 55 42.0	-8.1
APSI	Ampana	9.33	305	P	Pn	02 55 43.6	-6.8
BASI	Baing, Sumba	9.38	246	P	Pn	02 55 40.7	-10
WSI	Waingapu	9.44	249	P	Pn	02 55 41.3	-10
KAPI	Kappang	9.55	278		Pn	02 55 53.8	+0.7
KAPI	Kappang	9.55	278	P	Pn	02 55 53.7	+0.5
	2μm,1.1s,baz=98,slow=11,SNR=274						
KAPI				S	S	02 57 38.5	-2.0
	996nm,0.9s,baz=46,slow=23,SNR=0.8						
KAPI	Kappang	9.55	278	P	Pn	02 55 53.9	+0.7
KAPI				P	Pn	02 55 53.9	+0.7
KAPI				P	P	02 55 54.1	-6.8
KAPI				P	P	02 55 54.1	-6.8
KAPI	Kappang	9.55	278	P	Pn	02 55 54.3	+1.1
KAPI	Kappang	9.55	278	P	Pn	02 55 53.8	+0.7
KAPI	Kappang	9.55	278	P	Pn	02 55 53.5	+0.3
KAPI				S	S	02 57 39.9	-0.6
SPSI	Sidrap Palu	9.74	284	P	Pn	02 55 47.0	-8.6
TTSI	Tana Toraja	9.96	289	P	Pn	02 55 50.9	-7.6
MRSI	Marisa	9.98	313	P	Pn	02 55 51.6	-7.2
WBSI	Waikabubak, Su	10.28	251	P	Pn	02 55 56.5	-6.1
SMPI	Sarmi	10.40	66	P	Pn	02 56 00.3	-3.7
SGSI	Sangihe	10.68	340	P	Pn	02 55 57.8	-10
PCI	Palu	10.85	300	P	Pn	02 56 04.2	-5.7
MMPI	Merauke	11.23	101	P	Pn	02 56 07.4	-7.3
TOLI2	Tolitoli	11.27	311		Pn	02 56 16.2	+1.1
TOLI2	Tolitoli	11.27	311	P	Pn	02 56 16.7	+1.6
MPSI	Mapaga	11.48	305	P	Pn	02 56 13.0	-4.8
GENI	Genyem	11.52	71	⇓P	P	02 56 20.9	-2.1
PLAI	Plampang	11.62	257	P	Pn	02 56 18.8	-0.8
PLAI	Plampang	11.62	257	P	Pn	02 56 12.3	-7.3
JAY	Jayapura	12.05	72	P	Pn	02 56 24.6	-0.5
	662nm,0.9s,baz=262,slow=7.4,SNR=56						
JAY				S	S	02 58 38.3	-0.1
	6μm,1.1s,baz=107,slow=24,SNR=4.8						
JAY	Jayapura	12.05	72	P	Pn	02 56 20.7	-4.4
FITZ	Fitzroy Crossi	12.16	197	Pn	Pn	02 56 23.0	-3.3
FITZ	Fitzroy Crossi	12.16	197	P	Pn	02 56 22.9	-3.3
	17μm,0.3s,baz=26,slow=11						
FITZ				S	S	02 58 35.6	-5.2
	17μm,0.4s,baz=176,slow=1.1,SNR=8.4						
TWSI	Taliwang, Sumb	12.48	258	P	Pn	02 56 23.0	-7.3
BKB	Balikpapan	13.33	292	P	P	02 56 44.6	+1.5
BKB	Balikpapan	13.33	292	P	P	02 56 44.0	+0.9
BKB	Balikpapan	13.33	292	P	Pn	02 56 35.8	-5.2
SMKI	Samarinda	13.38	296	P	Pn	02 56 35.9	-5.7
DAV	Davao City (W)	13.86	345	Pn	Pn	02 56 46.7	-0.8
DAV	Davao City (W)	13.86	345	P	Pn	02 56 48.1	+0.6
	2μm,0.5s,baz=155,slow=3.0,SNR=103						
DAV	Davao City (W)	13.86	345	P	P	02 56 48.3	-0.7

DAV				P	P	02 56 48.3	-0.7
DAV				P	Pn	02 56 48.7	+1.2
DAV				P	Pn	02 56 48.7	+1.2
DAV	Davao City (W)	13.86	345	P	P	02 56 50.5	+1.5
DAV	Davao City (W)	13.86	345	P	Pn	02 56 48.0	+0.6
DAV	Davao City (W)	13.86	345	⇓P	Pn	02 56 48.0	+0.5
DAV	Davao City (W)	13.86	345	P	Pn	02 56 48.0	+0.5
SRBI	Singaraja	14.03	262	P	Pn	02 56 43.9	-5.6
WB0	Warramunga Arr	14.21	160	Pn	Pn	02 56 49.5	-2.2
I07AU	WARRAMUNGA INF	14.34	160	P	P	02 56 54.1	-0.2
	baz=327,slow=21,SNR=7.2						
WRAB	Tennant Creek	14.35	160	Pn	Pn	02 56 50.9	-2.5
WRAB	Tennant Creek	14.35	160	P	Pn	02 56 50.9	-2.5
WRA	Warramunga Arr	14.35	160	P	Pn	02 56 50.5	-2.9
	9µm,0.9s,baz=334,slow=13,SNR=86						
WRA				S	S	02 59 24.6	-7.8
	4µm,0.8s,baz=341,slow=21,SNR=9.6						
WR8	Warramunga Arr	14.42	160	Pn	Pn	02 56 52.1	-2.2
I39PW	PALAU INFRASON	14.81	21	P	P	02 57 00.0	+0.5
	baz=208,slow=14,SNR=13						
ABJI	Asem Bagus	14.96	264	P	Pn	02 56 54.3	-6.7
JAGI	Jajag, Banyuwa	15.11	261	Pn	Pn	02 56 59.6	-3.1
JAGI	Jajag, Banyuwa	15.11	261	P	P	02 57 03.0	+0.1
JAGI	Jajag, Banyuwa	15.11	261	P	Pn	02 56 55.6	-7.2
JAGI	Jajag, Banyuwa	15.11	261	⇑P	Pn	02 56 58.7	-4.1
KMMI	Kalianget	15.19	267	P	Pn	02 56 58.3	-5.4
COEN	Coen	15.63	120	P	Pn	02 57 09.3	+0.3
COEN	Coen	15.63	120	P	Pn	02 57 09.1	+0.1
COEN	Coen	15.63	120	⇑P	P	02 57 08.8	+0.2
MYLDM	Lahad Datu	15.72	317	P	Pn	02 57 11.7	+1.6
MYLDM	Lahad Datu	15.72	317	P	P	02 57 09.6	0.0
MYLDM	Lahad Datu	15.72	317	⇓P	Pn	02 57 12.0	+1.9
GMJI	Gumukmas	15.79	262	P	P	02 57 05.9	-4.4
BWJI	Bawean	16.50	271	P	P	02 57 13.1	-5.1
GRJI	Gresik	16.66	267	P	P	02 57 14.1	-5.8
TBJI	Tambak Boyo	17.29	268	P	P	02 57 22.0	-4.8
QIS	Mount Isa	17.30	145	P	P	02 57 27.0	+0.1
QIS	Mount Isa	17.30	145	S	S	03 00 33.7	-1.8
MBWA	Marble Bar	17.34	211	P	P	02 57 25.9	-1.3
MBWA	Marble Bar	17.34	211	P	P	02 57 28.1	+0.9
MBWA				P	P	02 57 28.1	+0.9
MBWA	Marble Bar	17.34	211	P	P	02 57 26.4	-0.8
MBWA	Marble Bar	17.34	211	S	S	03 00 33.8	-2.3
MBWA	Marble Bar	17.34	211	P	P	02 57 26.7	-0.5
MBWA				S	S	03 00 27.8	-8.3
MBWA	Marble Bar	17.34	211	⇓P	P	02 57 26.6	-0.6
PSA00	Pilbara Seismi	17.62	210	P	P	02 57 29.4	-0.9
PSA00	Pilbara Seismi	17.62	210	P	P	02 57 29.1	-1.3
PSA00	Pilbara Seismi	17.62	210	P	P	02 57 30.1	-0.2
PSA00	Pilbara Seismi	17.62	210	S	S	03 00 39.5	-2.3
NGJI	Ngawi	17.68	266	P	P	02 57 28.4	-2.7
AS31	Alice Springs	17.75	166	P	P	02 57 32.3	+0.5
ASAR	Alice Springs	17.75	166	P	P	02 57 32.6	+0.9
	22µm,0.6s,baz=345,slow=10,SNR=2805						
ASAR				S	S	03 00 37.9	-6.6
	3µm,0.7s,baz=349,slow=17,SNR=9.2						
ASAR				P3KPbc		03 32 05.9	
	5.3nm,0.7s,baz=160,slow=3.7,SNR=12						
AS01	Alice Springs	17.76	166	P	Pn	02 57 33.5	-0.7
KKM	Kota Kinabalu	17.94	313	P	P	02 57 34.4	+0.4
KKM	Kota Kinabalu	17.94	313	P	Pn	02 57 36.0	-0.4
KKM	Kota Kinabalu	17.94	313	S	S	03 00 49.7	+1.3
KKM	Kota Kinabalu	17.94	313	⇑P	P	02 57 34.7	+0.8
PMG	Port Moresby	17.99	101	P	P	02 57 35.3	+0.9
PMG	Port Moresby	17.99	101	c iP	P	02 57 33.8	-0.6
PMG	Port Moresby	17.99	101	⇑P	P	02 57 32.9	-1.6
PCJI	Pacitan	18.01	263	P	P	02 57 26.2	-8.5
WOJI	Wonogiri, Jawa	18.24	264	P	P	02 57 31.2	-5.9
MANU	Manus Island	18.57	77	P	Pn	02 57 42.5	-1.4
MANU	Manus Island	18.57	77	⇑P	Pn	02 57 43.3	-0.5
UGM	Wanagama	18.64	264	P	P	02 57 39.5	-2.0
UGM	Wanagama	18.64	264	P	P	02 57 41.0	-0.5
UGM	Wanagama	18.64	264	P	P	02 57 35.2	-6.3
SMRI	Semarang	18.69	267	P	P	02 57 41.9	-0.1
SMRI	Semarang	18.69	267	P	Pn	02 57 44.4	-0.8
SMRI	Semarang	18.69	267	S	S	03 01 04.2	+1.0
SMRI	Semarang	18.69	267	P	P	02 57 34.5	-7.5
SMRI	Semarang	18.69	267	⇑P	P	02 57 39.1	-2.9
MTSU	Mount Surprise	18.77	130	P	Pn	02 57 44.9	-1.2
MTSU	Mount Surprise	18.77	130	S	S	03 01 06.5	+1.8
STKI	Sintang	18.86	289	P	P	02 57 35.1	-8.7
YOGI	Yogyakarta	18.86	265	P	P	02 57 36.8	-7.1
KSM	Kuching	20.46	292	P	P	02 58 00.6	-0.3
KSM				PcP	PcP	03 02 06.6	+3.2
KSM	Kuching	20.46	292	P	P	02 58 03.6	+2.6
KSM	Kuching	20.46	292	S	S	03 01 38.5	+1.1
KSM	Kuching	20.46	292	⇑P	P	02 57 59.2	-1.7
CMJI	Cimerak	20.69	265	P	P	02 57 54.3	-9.1
JCJI	Jatiwangi	20.85	269	P	P	02 57 56.2	-8.9
TV1H	Townsville Har	21.33	128	P	P	02 58 11.3	+1.3
CTAO	Charters Tower	21.40	131	P	P	02 58 11.4	+0.7
CTAO	Charters Tower	21.40	131	P	P	02 58 11.7	+1.0
CTAO	Charters Tower	21.40	131	⇑P	P	02 58 11.8	+1.0
BBJI	Bungbulang	21.47	266	P	P	02 58 10.8	-0.7
BBJI	Bungbulang	21.47	266	S	S	03 01 54.9	-0.1
LEM	Lembang	21.49	268	P	P	02 58 13.1	+1.3
	7µm,0.7s,baz=56,slow=9.4,SNR=78						
LEM				S	S	03 01 50.4	-5.2
	1µm,0.9s,baz=242,slow=23,SNR=4.6						
	7µm,0.7s						
LEM	Lembang	21.49	268	P	P	02 58 03.3	-8.5
GIRL	Giralia	21.70	220	P	P	02 58 13.1	-0.5
GIRL	Giralia	21.70	220	P	P	02 58 13.8	+0.2
GIRL	Giralia	21.70	220	⇓P	P	02 58 13.4	-0.2
TPI	Tanjungpandan	21.82	279	P	P	02 58 10.4	-4.5
TGY	Tagaytay City	21.96	338	P	P	02 58 16.4	+0.1
	50µm,0.7s,baz=194,slow=2.9,SNR=362						
TGY				ScP	ScP	03 05 22.9	+0.2
	2µm,1.1s,baz=285,slow=8.9,SNR=4.0						
CBJI	Citeko	22.26	269	P	P	02 58 12.0	-7.0
DBJI	Dramaga	22.36	268	P	P	02 58 13.3	-6.6
TNG	Tangerang	22.47	269	P	P	02 58 13.6	-7.3
TNG				P	P	02 58 14.2	-6.7
MEEK	Meekatharra	22.54	206	P	P	02 58 21.0	-0.5
SKJI	Sukabumi	22.54	267	P	P	02 58 16.1	-5.5
RABL	Rabaul	22.92	86	P	P	02 58 25.8	+0.8
RABL	Rabaul	22.92	86	⇑P	P	02 58 24.1	-0.9
SBJI	Serang	22.98	269	P	P	02 58 16.8	-8.7
CGJI	Cibinong	23.40	268	P	P	02 58 20.6	-8.7
XMI	Christmas Isla	23.64	259	P	P	02 58 31.6	0.0
XMI	Christmas Isla	23.64	259	⇑P	P	02 58 29.1	-2.4
KLI	Kotabumi	24.32	272	P	P	02 58 31.4	-6.3
KASI	Kota Agung	24.63	271	P	P	02 58 32.5	-8.0
PMBI	Palembang	24.63	277	P	P	02 58 42.9	+2.4
PMBI	Palembang	24.63	277	P	P	02 58 42.0	+1.5
PMBI	Palembang	24.63	277	P	P	02 58 38.1	-2.4
PMBI	Palembang	24.63	277	⇑P	P	02 58 40.4	-0.1
QLP	Quilpie	24.64	146	P	P	02 58 40.6	+0.2
QLP	Quilpie	24.64	146	⇑P	P	02 58 40.9	+0.4
MDSI	Maura Dua	25.03	273	P	P	02 58 38.9	-5.2
LWLI	Liwa	25.10	272	P	P	02 58 38.1	-6.8
GUMO	Guam	25.19	38	P	P	02 58 45.7	+0.2
GUMO	Guam	25.19	38	P	P	02 58 46.0	+0.5
	12µm,0.8s,baz=201,slow=3.5,SNR=59						
GUMO				S	S	03 02 50.2	-4.0
	345nm,0.6s,baz=90,slow=24,SNR=49						
	12µm,0.8s						
GUMO	Guam	25.19	38	P	P	02 58 47.2	+1.7
GUMO	Guam	25.19	38	⇓P	P	02 58 45.4	-0.1
SZP	Santa	25.32	340	P	P	02 58 47.8	+1.2
MORW	Morawa	25.78	207	P	P	02 58 49.2	-1.5
MORW	Morawa	25.78	207	P	P	02 58 49.5	-1.2
MORW	Morawa	25.78	207	⇑P	P	02 58 49.6	-1.1
MNAI	Manna	26.25	273	P	P	02 58 55.0	-0.1
MNAI	Manna	26.25	273	P	P	02 58 55.7	+0.6
MNAI	Manna	26.25	273	P	P	02 58 51.8	-3.3
MNAI	Manna	26.25	273	⇑P	P	02 58 51.3	-3.8
RK1H	Rockhampton Ha	26.52	132	P	P	02 58 58.3	+0.9
MYKOM	Kota Tinggi	26.62	287	P	P	02 59 00.7	+2.3
MYKOM	Kota Tinggi	26.62	287	⇑P	P	02 58 58.1	-0.3
KSI	Kapahiang	26.69	275	P	P	02 58 54.6	-4.5
BLDU	Ballidu	26.82	205	P	P	02 58 59.7	-0.3
BBOO	Buckleboo	27.04	167	P	P	02 59 01.3	-0.6
BBOO	Buckleboo	27.04	167	P	P	02 59 02.3	+0.4
KLBR	Kellerberrin	27.28	202	P	P	02 59 04.1	0.0
RMQ	Roma	27.30	139	P	P	02 59 05.1	+0.8
DLV	Lat	27.53	311	⇑P	P	02 59 06.4	-0.3
WHYH	Whyalla	27.62	165	P	P	02 59 06.8	-0.2
STKA	Stephens Creek	27.86	157	P	P	02 59 09.3	+0.1
	603nm,0.4s,baz=330,slow=9.2,SNR=444						
	603nm,0.4s						
STKA	Stephens Creek	27.86	157	P	P	02 59 09.0	-0.2
STKA	Stephens Creek	27.86	157	c iP	P	02 59 09.5	+0.3
PTPS	Port Pirie	27.86	164	P	P	02 59 10.0	+0.9
EIDS	Eidsvold	28.15	135	P	P	02 59 11.5	-0.3
EIDS	Eidsvold	28.15	135	⇑P	P	02 59 11.6	-0.3
MUN	Mundaring	28.22	204	P	P	02 59 11.6	-0.8
MTKN	Mount Kenneth	28.36	205	P	P	02 59 16.1	+2.5
HTT	Hallett	28.37	163	P	P	02 59 13.5	-0.2
HTT	Hallett	28.37	163	⇑P	P	02 59 13.8	+0.1
NWAO	Narrogin (SRO)	28.67	201	P	P	02 59 15.5	-0.9
NWAO	Narrogin (SRO)	28.67	201	P	P	02 59 16.1	-0.2
	577nm,0.5s,baz=40,slow=7.6,SNR=151						
NWAO				S	S	03 03 46.1	-2.6
	871nm,0.8s,baz=105,slow=6.2,SNR=3.6						
	577nm,0.5s						
NWAO	Narrogin (SRO)	28.67	201	P	P	02 59 16.9	+0.6
NWAO				P	P	02 59 16.9	+0.6
NWAO				S	S	03 03 56.4	+7.7
NWAO				S	S	03 03 56.4	+7.7
NWAO	Narrogin (SRO)	28.67	201	P	P	02 59 15.5	-0.9
BKNI	Bangkinang	28.93	282	P	P	02 59 18.4	-0.5
BKNI	Bangkinang	28.93	282	P	P	02 59 21.1	+2.2
BKNI	Bangkinang	28.93	282	P	P	02 59 15.3	-3.6
BKNI	Bangkinang	28.93	282	⇑P	P	02 59 17.7	-1.2
CMSA	Cobar Meteorol	29.37	150	P	P	02 59 23.0	+0.4
PPI	Padang Panjang	29.38	280	P	P	02 59 17.8	-5.1
GHSS	Government Hou	29.67	164	P	P	02 59 25.8	+0.7
TWGBT	Beinan	30.11	345	P	P	02 59 28.9	-0.2
IPM	Ipoh	30.17	290	IAmb	IAmb	02 59 38.0	
	comp=Z,2µm,0.9s						
IPM	Ipoh	30.17	290	P	P	02 59 31.0	+1.1
IPM	Ipoh	30.17	290	⇑P	P	02 59 29.0	-0.9
TATA	Tatamba Isabel	30.36	96	P	P	02 59 31.5	0.0
SAVO	Savo Central	30.40	97	P	P	02 59 31.1	-0.8
MNSI	Mandailing Nat	30.46	283	P	P	02 59 26.9	-5.5
SISI	Saibi	30.50	278	P	P	02 59 28.6	-4.1
HNR	Honiara	30.55	98	P	P	02 59 33.6	+0.5
HNR	Honiara	30.55	98	P	P	02 59 32.7	-0.5
	comp=Z,5µm,1.0s,baz=203,slow=4.1,SNR=30						
	comp=Z,5µm,1.0s						
HNR	Honiara	30.55	98	P	P	02 59 34.0	+0.8
HNR	Honiara	30.55	98	⇑P	P	02 59 33.6	+0.5
YULB	Yu-li	30.60	346	P	P	02 59 33.0	-0.5
YULB				IAmb	IAmb	02 59 34.9	
	comp=Z,2µm,1.6s						
YULB				PcP	PcP	03 02 28.1	+1.7
YULB	Yu-li	30.60	346	P	P	02 59 34.0	+0.5
TPUB	Ta-pu	30.69	344	P	P	02 59 32.7	-1.5
KULM	Kulim	30.81	291	P	P	02 59 34.7	-0.8
KULM	Kulim	30.81	291	P	P	02 59 35.7	+0.2
KULM	Kulim	30.81	291	⇑P	P	02 59 34.3	-1.2
NGOA	Tingoa Renbel	30.85	102	P	P	02 59 36.6	+0.8
SSLB	Suanglung	31.07	345	P	P	02 59 35.8	-1.8
JMJ	Miyako jima 2	31.25	353	P	P	02 59 39.5	+0.4
ALEG	Aligegeo Malai	31.26	96	P	P	02 59 39.1	-0.3
YOJ	Yonaguni jima	31.26	349	P	P	02 59 38.9	-0.3
YOJ	Yonaguni jima	31.26	349	P	P	02 59 39.7	+0.5
YOJ	Yonaguni jima	31.26	349	⇓P	P	02 59 38.3	-0.9
NACB	Ninganchiao	31.28	346	P	P	02 59 37.6	-1.8
PBSI	Pulau Batu	31.54	280	P	P	02 59 38.1	-3.7
RPSI	Rantau Prapat	31.59	286	P	P	02 59 41.8	-0.5
H01W3	Cape Leeuwin H	31.60	204	P	P	02 59 43.9	+2.1
	baz=43,slow=6.7,SNR=566						
H01W1	Cape Leeuwin H	31.60	204	P	P	02 59 43.9	+2.1
	baz=43,slow=6.7,SNR=411						
H01W2	Cape Leeuwin H	31.61	204	P	P	02 59 44.5	+2.6
	baz=43,slow=6.7,SNR=553						
PSI	Prapat	31.62	286	P	P	02 59 42.8	+0.1
PSI	Prapat	31.62	286	P	P	02 59 41.8	-0.9
PSI				pmax	pmax		
	comp=Z,6µm,1.0s						
QIZ	Qiongzhong	31.68	323	IAmb	IAmb	02 59 50.4	
	comp=Z,2µm,1.4s						
QIZ	Qiongzhong	31.68	323	P	P	02 59 42.8	-0.2
QIZ				pP	pP	03 00 26.0	-0.4
QIZ				S	S	03 04 31.3	-4.7
QIZ				ScP	ScP	03 05 51.9	+0.2
QIZ				ScS	ScS	03 09 50.8	+0.4
QIZ				pmax	pmax		
	comp=Z,640nm,1.5s						
QIZ				pmax	pmax		
	comp=Z,29µm,6.3s						
QIZ				LR	LR		
	comp=Z,176µm,19.6s						
QIZ	Qiongzhong	31.68	323	P	P	02 59 43.2	+0.2
YHNB	Yeheng	31.81	346	P	P	02 59 42.4	-1.7
ARMA	Armidale	31.84	141	IAmb	IAmb	02 59 48.1	
	comp=Z,3µm,1.4s						
ARMA	Armidale	31.84	141	P	P	02 59 44.9	+0.5
ARMA	Armidale	31.84	141	⇑P	P	02 59 45.5	+1.1
PATS	Pohnpei	31.84	66	P	P	02 59 45.7	+1.3
PATS				IAmb	IAmb	02 59 51.9	
	comp=Z,3µm,1.0s						
PATS	Pohnpei	31.84	66	P	P	02 59 45.9	+1.5
JMZ	Minamidaito 2	32.07	3	P	P	02 59 46.8	+0.5
JMZ	Minamidaito 2	32.07	3	P	P	02 59 47.4	+1.1
JMZ	Minamidaito 2	32.07	3	P	P	02 59 46.8	+0.5
JMZ	Minamidaito 2	32.07	3	⇑P	P	02 59 47.0	+0.7
TATO	Taipei	32.08	347	P	P	02 59 44.5	-1.8
TATO				IAmb	IAmb	02 59 49.1	
	comp=Z,5µm,1.9s						
TATO	Taipei	32.08	347	P	P	02 59 45.8	-0.5
TATO				P	P	02 59 45.8	-0.5
TATO				S	S	03 04 44.7	+2.7
TATO				S	S	03 04 44.7	+2.7
TATO	Taipei	32.08	347	P	P	02 59 45.1	-1.2
HKPS	Hong Kong Po S	32.10	333	P	P	02 59 45.7	-0.9
TSI	Tuntungan	32.17	287	P	P	02 59 42.3	-5.1
KNMB	Chin-men Tao	32.44	341	P	P	02 59 48.1	-1.4
COCO	West Island	32.48	257	P	P	02 59 50.0	0.0
COCO				IAmb	IAmb	03 01 00.9	
	comp=Z,3µm,1.6s						
COCO	West Island	32.48	257	P	P	02 59 51.2	+1.1
COCO				P	P	02 59 51.2	+1.1
GSI	Gunungsitoli	32.53	283	P	P	02 59 50.1	-0.4
GSI	Gunungsitoli	32.53	283	P	P	02 59 44.6	-5.9
GSI	Gunungsitoli	32.53	283	⇑P	P	02 59 48.4	-2.0
HURO	Huro Makira	32.54	99	P	P	02 59 51.0	+0.4
QZH	Quanzhou	32.83	342	⇓iP	P	02 59 52.5	-0.3
QZH				sP	sP	03 01 04.4	+3.2
QZH				PP	PP	03 01 14.8	+2.8
QZH				S	S	03 04 50.9	-2.6
QZH				ScP	ScP	03 05 56.4	+1.0
QZH				sS	sS	03 06 13.8	+1.9
QZH				ScS	ScS	03 09 56.5	+0.5
QZH				pmax	pmax		
	comp=Z,4µm,1.0s						
QZH				pmax	pmax		
	comp=Z,38µm,4.1s						
QZH				LR	LR		
	comp=Z,118µm,20.6s						
QZH				LR	LR		
	comp=Z,107µm,19.6s						
QZH				LR	LR		
	comp=Z,159µm,22.2s						
JOW	Kunigami	33.04	358	P	P	02 59 54.0	-0.7
JOW	Kunigami	33.04	358	P	P	02 59 55.4	+0.7
	comp=Z,3µm,0.9s,baz=198,slow=7.7,SNR=182						
JOW				S	S	03 04 54.5	-2.3
	comp=Z,146nm,1.1s,baz=42,slow=27,SNR=5.8						
JOW				ScP	ScP	03 05 56.1	0.0
	comp=Z,990nm,1.0s,baz=143,slow=2.3,SNR=8.5						
	comp=Z,3µm,0.9s						
JOW	Kunigami	33.04	358	P	P	02 59 55.0	+0.3
JOW	Kunigami	33.04	358	⇓P	P	02 59 55.3	+0.6
SRIT	Nakonsritamara	33.09	296	IAmb	IAmb	03 00 06.2	
	comp=Z,4µm,1.3s						
SRIT	Nakonsritamara	33.09	296	P	P	02 59 55.7	+0.4
GZH	Guangzhou	33.17	333	P	P	02 59 58.3	+2.5
GZH				pP	pwP	03 00 44.3	-0.7
GZH				PP	PP	03 01 22.3	+6.5
GZH				S	S	03 05 01.5	+2.7
GZH				ScP	ScP	03 05 58.4	+1.7
GZH				pmax	pmax		
	comp=Z,40µm,5.6s						
MGCD	Mangrove Creek	33.53	146	P	P	03 00 00.6	+1.7
NTLH	Newcastle Hard	33.64	145	P	P	03 00 01.8	+2.0
SYDH	Sydney Hard Ro	33.74	147	P	P	03 00 02.4	+1.7
RIV	Riverview	34.02	146	P	P	03 00 05.5	+2.4
RIV	Riverview	34.02	146	⇑P	P	03 00 05.0	+1.9
CAN	Canberra	34.05	150	P	P	03 00 04.6	+1.2
CAN	Canberra	34.05	150	⇑P	P	03 00 04.8	+1.4
CAN	Canberra	34.05	150	P	P	03 00 05.0	+1.7
CAN				sP	sP	03 01 12.9	-1.0
CNB	Canberra Magne	34.23	150	P	P	03 00 05.8	+0.9
LHMI	Lhok Sumawe	34.25	289	P	P	03 00 06.0	+0.7
LHMI	Lhok Sumawe	34.25	289	P	P	03 00 01.0	-4.3
LHMI	Lhok Sumawe	34.25	289	⇑P	P	03 00 03.8	-1.5
WOLH	Wollongong Har	34.30	147	P	P	03 00 07.5	+2.0
TOO	Toolangi	34.38	157	P	P	03 00 07.2	+1.0
TOO				IAmb	IAmb	03 00 10.6	
	comp=Z,2µm,0.9s						
TOO	Toolangi	34.38	157	⇑P	P	03 00 08.1	+1.9
GEXS	Deakin Univers	34.48	159	P	P	03 00 09.3	+2.3
JAM	Amami Oshima	34.60	1	P	P	03 00 08.6	+0.5
MILA	Mila	35.52	152	⇑P	P	03 00 17.6	+1.6
CBIJ	Chichi jima	35.57	20	P	P	03 00 15.7	-0.7
CBIJ				S	S	03 05 32.5	-3.1
JCJ	Chichijima	35.57	20	P	P	03 00 15.9	-0.4
JCJ	Chichijima	35.57	20	P	P	03 00 14.9	-1.4
	comp=Z,2µm,0.5s,baz=180,slow=0.0						
	comp=Z,2µm,0.5s						
JCJ	Chichijima	35.57	20	P	P	03 00 16.5	+0.2
JCJ	Chichijima	35.57	20	⇓P	P	03 00 14.7	-1.7
GULI	GuiLin	36.45	330	P	P	03 00 26.3	+2.4
GULI				pP	pwP	03 01 12.3	-1.0
GULI				S	S	03 05 49.8	+0.6
GULI				pmax	pmax		
	comp=Z,1µm,1.9s						
GULI				pmax	pmax		
	comp=Z,40µm,8.7s						
GULI				LR	LR		
	comp=Z,159µm,17.8s						
GULI				LR	LR		
	comp=Z,214µm,18.8s						
GULI				LR	LR		
	comp=Z,110µm,22.1s						
LUES	Luesalemba Tem	36.49	99	P	P	03 00 25.4	+1.0
KOUNC	Koumac, New Ca	36.76	116	P	P	03 00 27.0	+0.4
KOUNC	Koumac, New Ca	36.76	116	⇑P	P	03 00 27.3	+0.7
SLVN	Son La	37.11	319	IAmb	IAmb	03 00 37.7	
	comp=Z,3µm,1.4s						
SLVN	Son La	37.11	319	P	P	03 00 30.6	+1.0
LHI	Lord Howe Isla	37.45	136	P	P	03 00 32.3	+0.1
LHI	Lord Howe Isla	37.45	136	⇑P	P	03 00 32.5	+0.4
CMBY	CAMPBELL BAY	37.67	290	eP	P	03 00 35.7	+1.4
CMBY				IAmb	IAmb	03 00 40.5	
	comp=Z,7µm,1.2s						
JSU	Suzuyama	37.70	2	P	P	03 00 34.4	+0.1
JSU				S	S	03 06 06.5	-1.3
CNSH	ChangSha	37.81	336	P	P	03 00 35.3	+0.1
CNSH				S	S	03 06 07.3	-2.2
CNSH				pmax	pmax		
	comp=Z,1µm,2.3s						
CNSH				LR	LR		
	comp=Z,137µm,26.0s						
CNSH				LR	LR		
	comp=Z,234µm,22.1s						
CNSH				LR	LR		
	comp=Z,107µm,19.1s						
SSE	Sheshan	38.06	349	P	P	03 00 38.6	+1.3
SSE				S	S	03 06 12.1	-1.1
SSE				pmax	pmax		
	comp=Z,1µm,1.5s						
SSE				LR	LR		
	comp=Z,9µm,18.9s						
SANVU	Saraoutou	38.28	107	P	P	03 00 40.5	+1.0
SANVU	Saraoutou	38.28	107	P	P	03 00 40.4	+1.0
SANVU	Saraoutou	38.28	107	⇑P	P	03 00 40.7	+1.3
SANVU	Saraoutou	38.28	107	P	P	03 00 40.8	+1.4
GLAD	Gladstone	38.31	157	P	P	03 00 39.8	+0.5
VLAKA	Lakatoro	38.60	108	P	P	03 00 42.5	+0.5
CM31	Chiang Mai Arr	38.77	310	P	P	03 00 43.5	+0.1
CM31				PcP	PcP	03 02 55.3	+5.0
CM31	Chiang Mai Arr	38.77	310	P	P	03 00 44.7	+1.3
	SNR=1447						
CM31				P	P	03 00 44.7	+1.3
	SNR=1447						
CM31				S	S	03 06 26.8	+2.6
CM31				S	S	03 06 26.8	+2.6
CMAR	Chiang Mai Arr	38.77	310	P	P	03 00 43.0	-0.4
CMAR	Chiang Mai Arr	38.77	310	P	P	03 00 43.6	+0.2
	comp=Z,564nm,0.9s,baz=140,slow=6.7,SNR=228						
CMAR				PcP	PcP	03 02 51.4	+1.1
	comp=Z,308nm,0.7s,baz=154,slow=2.8,SNR=10						
CMAR				ScP	ScP	03 06 18.1	+0.7
	comp=Z,356nm,1.1s,baz=163,slow=3.1,SNR=11						
CMAR				PKiKP	PKiKP	03 10 04.8	+1.2
	comp=Z,11nm,0.7s,baz=213,slow=1.4,SNR=4.6						
CMAR				P3KPbc		03 30 47.6	
	comp=Z,2.0nm,0.3s,baz=308,slow=5.5,SNR=11						
CMAR				PKPPKP	P'P'df	03 33 14.0	-2.0
	comp=Z,1.0nm,0.3s,baz=315,slow=2.9,SNR=4.2						
	comp=Z,564nm,0.9s						
JFU	Fukue jima 2	38.83	359	P	P	03 00 44.0	+0.4
JFU				S	S	03 06 19.7	-5.0
CHTO	Chiang Mai	38.98	311	P	P	03 00 44.8	-0.4
CHTO	Chiang Mai	38.98	311	P	P	03 00 46.0	+0.8
CHTO				P	P	03 00 46.0	+0.8
CHTO	Chiang Mai	38.98	311	P	P	03 00 45.0	-0.2
CHTO	Chiang Mai	38.98	311	P	P	03 00 45.3	+0.1
CHTO				S	S	03 06 24.7	-2.6
CHTO	Chiang Mai	38.98	311	⇑P	P	03 00 44.4	-0.8
NOUC	Port Laguerre	39.02	117	P	P	03 00 46.4	+0.9
NOUC				pP	pP	03 01 30.7	0.0
DZM	Mont Dzumac	39.13	117	IAmb	IAmb	03 00 53.4	
	comp=Z,2µm,1.0s						
DZM	Mont Dzumac	39.13	117	eP	P	03 00 47.5	+1.0
	comp=Z,6µm,1.4s						
DZM				epP	pP	03 01 32.8	+1.0
	comp=Z,3µm,1.3s						
DZM				eS	S	03 06 32.5	+2.6
	comp=Z,167µm,28.4s						
DZM				eSS	SS	03 09 34.3	+1.9
	comp=Z,284µm,30.2s						
DZM				eLR	LR	03 11 48.4	
	comp=Z,230µm,23.8s						
DZM	Mont Dzumac	39.13	117	P	P	03 00 46.7	+0.2
DZM	Mont Dzumac	39.13	117	⇑P	P	03 00 47.4	+0.8
ONTNC	Ouen Toro	39.22	118	P	P	03 00 45.8	-1.3
ONTNC	Ouen Toro	39.22	118	⇑P	P	03 00 45.8	-1.3
MOO	Moorlands	39.27	159	P	P	03 00 48.0	+0.8
MOO	Moorlands	39.27	159	P	P	03 00 49.4	+2.2
GYA	Guiyang	39.32	327	⇓P	P	03 00 48.8	+0.8
GYA				pP	pP	03 01 32.9	-0.3
GYA				PcP	PcP	03 02 56.8	+4.8
GYA				ScP	ScP	03 06 20.1	+0.6
GYA				S	S	03 06 28.5	-3.9
GYA				sS	sS	03 07 53.1	+0.7
GYA				SS	SS	03 09 27.8	-8.3
GYA				ScS	ScS	03 10 31.0	-1.3
GYA				pmax	pmax		
	comp=Z,900nm,1.4s						
GYA				pmax	pmax		
	comp=Z,38µm,9.8s						
JNU	Nakatsue	39.32	2	P	P	03 00 47.5	-0.3
	comp=Z,2µm,0.9s,baz=179,slow=6.0,SNR=214						
JNU				ScP	ScP	03 06 17.8	-1.5
	comp=Z,220nm,1.1s,baz=114,slow=3.8,SNR=4.8						
	comp=Z,2µm,0.9s						
JNU	Nakatsue	39.32	2	P	P	03 00 47.6	-0.3
JNU	Nakatsue	39.32	2	P	P	03 00 47.6	-0.3
JNU	Nakatsue	39.32	2	⇓P	P	03 00 47.5	-0.3
WHN	Wuhan	39.40	340	⇓iP	P	03 00 48.9	+0.5
WHN				PP	PnPn	03 02 30.3	+1.0
WHN				ScP	ScP	03 06 19.6	0.0
WHN				S	S	03 06 31.1	-2.2
WHN				sS	sS	03 07 54.3	+1.1
WHN				pmax	pmax		
	comp=Z,107µm,5.8s						
NJ2	Nanjing	39.49	346	⇓P	P	03 00 49.8	+0.7
NJ2				sP	sP	03 01 58.8	+0.5
NJ2				ScP	ScP	03 06 19.9	0.0
NJ2				S	S	03 06 40.6	+6.1
NJ2				ScS	ScS	03 10 34.3	+1.5
NJ2				pmax	pmax		
	comp=Z,3µm,1.4s						
NJ2				pmax	pmax		
	comp=Z,62µm,4.4s						
YATNC	Mamie plateau,	39.53	117	P	P	03 00 50.6	+0.9
OUENC	Ouen Island, N	39.59	118	P	P	03 00 51.2	+1.0
DVP	Devils Point	39.62	110	P	P	03 00 52.1	+1.6
TAU	Tasmania Unive	39.72	159	P	P	03 00 52.3	+1.4
JMN	Monobe	40.14	6	P	P	03 00 54.8	+0.3
JMN				IAmb	IAmb	03 01 02.7	
	comp=Z,3µm,0.9s						

PINNC	Pines Island,	40.18	118	P	P	03 00 55.8	+0.8
PINNC				IAmb	IAmb	03 01 02.2	
	comp=Z,3µm,1.1s						
MARNC	Mare, Loyalty	40.38	116	P	P	03 00 57.2	+0.6
MARNC	Mare, Loyalty	40.38	116	⇑P	P	03 00 57.2	+0.6
JHJ2	Mitsune	40.55	14	P	P	03 00 57.1	-0.7
JHJ2	Mitsune	40.55	14	P	P	03 00 57.0	-0.8
JHJ2	Mitsune	40.55	14	⇓P	P	03 00 56.8	-1.0
KMI	Kunming	40.58	322	⇓P	P	03 00 59.0	+0.5
KMI				ScP	ScP	03 06 24.8	+0.2
KMI				PcS	PcS	03 06 49.4	+1.8
KMI				S	S	03 06 55.9	+4.5
KMI				ScS	ScS	03 10 38.4	-1.7
KMI				pmax	pmax		
	comp=Z,900nm,1.9s						
KMI				pmax	pmax		
	comp=Z,33µm,8.4s						
KMI				LR	LR		
	comp=Z,106µm,18.9s						
KMI				LR	LR		
	comp=Z,84µm,21.1s						
KMI				LR	LR		
	comp=Z,151µm,20.5s						
JTU	Tsushima	40.69	0	P	P	03 00 59.5	+0.6
JTU	Tsushima	40.69	0	P	P	03 00 59.1	+0.1
JTU	Tsushima	40.69	0	⇓P	P	03 00 59.0	+0.1
DGPR	DIGLIPUR	40.98	298	*e*P	P	03 01 01.0	-0.6
DGPR				IAmb	IAmb	03 01 24.9	
	comp=Z,1µm,1.2s						
INH	Isangel	41.02	112	P	P	03 01 02.7	+0.8
ENH	Enshi	41.09	334	IAmb	IAmb	03 01 04.6	
	comp=Z,8µm,2.0s						
ENH	Enshi	41.09	334	P	P	03 01 02.0	-0.3
ENH	Enshi	41.09	334	P	P	03 01 01.9	-0.4
ENH				pP	pP	03 01 47.7	+0.2
JIE	Ise	41.17	9	P	P	03 01 03.3	+0.4
JHS	Saijyo	41.33	5	P	P	03 01 04.6	+0.4
JAD	Aida	41.37	6	P	P	03 01 04.5	0.0
JSG	Sagara	41.70	11	IAmb	IAmb	03 01 14.9	
	comp=Z,1µm,0.7s						
JSG	Sagara	41.70	11	P	P	03 01 08.5	+1.3
JSG	Sagara	41.70	11	P	P	03 01 08.4	+1.3
JSG	Sagara	41.70	11	⇓P	P	03 01 07.3	+0.1
JWT	Wachi	41.85	8	P	P	03 01 08.8	+0.4
INU	Inuyama	42.16	9	P	P	03 01 10.2	-0.6
INU	Inuyama	42.16	9	P	P	03 01 10.9	+0.1
INU	Inuyama	42.16	9	⇑P	P	03 01 10.6	-0.2
INU	Inuyama	42.16	9	P	P	03 01 11.2	+0.4
INU				pP	pP	03 01 57.0	+0.9
INU				sP	sP	03 02 20.9	+0.3
PZH	PanZhiHua	42.19	322	P	P	03 01 12.0	+0.5
PZH				ScP	ScP	03 06 31.1	+0.2
PZH				S	S	03 07 11.3	-3.6
PZH				sS	sS	03 08 38.3	+2.6
PZH				ScS	ScS	03 10 48.8	-0.9
PZH				pmax	pmax		
	comp=Z,970nm,1.3s						
PZH				pmax	pmax		
	comp=Z,28µm,8.4s						
PZH				LR	LR		
	comp=Z,33µm,18.6s						
PZH				LR	LR		
	comp=Z,43µm,18.1s						
PZH				LR	LR		
	comp=Z,56µm,17.7s						
JOD2	Odawara 2	42.45	12	P	P	03 01 12.3	-0.9
JGF	Kuroka	42.46	10	P	P	03 01 13.1	-0.2
JGF	Kuroka	42.46	10	P	P	03 01 12.9	-0.4
JGF	Kuroka	42.46	10	⇓P	P	03 01 12.8	-0.5
TJN	Taejon	42.58	358	P	P	03 01 14.5	+0.3
TJN	Taejon	42.58	358	P	P	03 01 14.8	+0.6
TJN	Taejon	42.58	358	*d i*P	P	03 01 14.7	+0.6
NFK	Norfolk Island	42.89	126	⇑P	P	03 01 17.9	+1.0
JGN	Niukaw	43.06	10	P	P	03 01 17.6	-0.6
JRY	Ryogami san	43.15	11	P	P	03 01 19.7	+0.9
TNCH	TengChong	43.24	317	⇓P	P	03 01 19.8	-0.1
TNCH				pP	pP	03 02 05.9	-0.4
TNCH				sP	sP	03 02 29.4	-1.7
TNCH				PP	PP	03 03 06.3	+1.0
TNCH				ScP	ScP	03 06 36.3	+1.1
TNCH				S	S	03 07 30.3	0.0
TNCH				sS	sS	03 08 51.1	-0.3
TNCH				ScS	ScS	03 10 55.8	-0.6
TNCH				pmax	pmax		
	comp=Z,3µm,1.9s						
TNCH				pmax	pmax		
	comp=Z,36µm,8.1s						
TNCH				LR	LR		
	comp=Z,70µm,20.1s						
TNCH				LR	LR		
	comp=Z,62µm,18.0s						
TNCH				LR	LR		
	comp=Z,122µm,19.5s						
MAJO	Matsushiro	43.52	10	P	P	03 01 20.6	-1.2
MAJO				IAmb	IAmb	03 01 24.5	
	comp=Z,3µm,0.8s						
MAJO	Matsushiro	43.52	10	P	P	03 01 20.9	-0.9
MAJO	Matsushiro	43.52	10	*d i*P	P	03 01 20.7	-1.2
MAJO				pmax	pmax		
	comp=Z,2µm,0.8s						
MAJO	Matsushiro	43.52	10	P	P	03 01 20.8	-1.0
MAJO				S	S	03 07 29.8	-4.0
MAT	Matsushiro	43.52	10	P	P	03 01 20.7	-1.1
MJAR	Matsushiro Arr	43.52	10	P	P	03 01 20.7	-1.1
	comp=Z,2µm,0.9s,baz=183,slow=8.2,SNR=266						
MJAR				ScP	ScP	03 06 35.3	-0.7
	comp=Z,128nm,0.9s,baz=178,slow=5.2,SNR=8.1						
MJAR				S	S	03 07 30.5	-3.3
	comp=Z,153nm,1.3s,baz=198,slow=16,SNR=6.5						
MJAR				PKPPKP	P'P'df	03 32 58.7	-11
	comp=Z,6.7nm,1.0s,baz=82,slow=2.5,SNR=4.8						
	comp=Z,2µm,0.9s						
MJB9	Matsu-Tunnel	43.53	10	P	P	03 01 21.6	-0.2
MJB9				IAmb	IAmb	03 01 25.4	
	comp=Z,2µm,0.8s						
JYT	Yasato	43.62	13	P	P	03 01 22.9	+0.3
KSAR	Wonju Array Be	43.62	358	P	P	03 01 22.9	+0.4
KSAR	Wonju Array Be	43.62	358	P	P	03 01 23.0	+0.4
KSRS	Korea Array	43.63	358	P	P	03 01 23.4	+0.7
	comp=Z,524nm,0.6s,baz=174,slow=8.7,SNR=360						
KSRS				PcP	PcP	03 03 06.0	+0.1
	comp=Z,141nm,0.7s,baz=185,slow=3.5,SNR=7.4						
KSRS				ScP	ScP	03 06 36.0	-0.2
	comp=Z,317nm,1.1s,baz=180,slow=3.6,SNR=11						
KSRS				S	S	03 07 40.4	+5.2
	comp=Z,114nm,1.3s,baz=184,slow=8.7,SNR=4.2						
KSRS				P3KPbc		03 30 24.6	
	comp=Z,1.1nm,0.8s,baz=341,slow=4.2,SNR=4.1						
KSRS				PKPPKP	P'P'df	03 33 04.4	-4.6
	comp=Z,6.1nm,1.0s,baz=312,slow=2.8,SNR=5.2						
KSRS				P4KPbc		03 39 15.3	
	comp=Z,1.3nm,0.5s,baz=177,slow=4.0,SNR=5.1						
	comp=Z,524nm,0.6s						
KS19	Wonju Array Si	43.68	358	P	P	03 01 22.9	-0.2
LYN	LuoYang	43.70	340	⇓P	P	03 01 23.0	-0.2
LYN				sP	sP	03 02 30.4	-2.7
LYN				PP	PP	03 03 13.1	+3.2
LYN				ScP	ScP	03 06 36.6	0.0
LYN				S	S	03 07 33.3	-3.0
LYN				sS	sS	03 08 59.0	+1.5
LYN				pmax	pmax		
	comp=Z,3µm,1.8s						
LYN				pmax	pmax		
	comp=Z,74µm,8.5s						
INCN	Inchon	43.71	357	P	P	03 01 23.5	+0.2
INCN				IAmb	IAmb	03 01 26.0	
	comp=Z,6µm,1.9s						
INCN	Inchon	43.71	357	P	P	03 01 23.3	0.0
INCN				P	P	03 01 23.3	0.0
INCN				S	S	03 07 40.8	+4.3
INCN				S	S	03 07 40.8	+4.3
INCN	Inchon	43.71	357	P	P	03 01 24.3	+1.0
INCN	Inchon	43.71	357	P	P	03 01 23.5	+0.2
INCN				pmax	pmax		
	comp=Z,6µm,1.9s						
INCN	Inchon	43.71	357	⇓P	P	03 01 24.0	+0.7
TIA	Tai'an	43.88	346	P	P	03 01 23.9	-0.7
TIA				PcP	PP	03 03 12.0	+0.2
TIA				ScP	ScP	03 06 37.6	+0.2
TIA				S	S	03 07 34.0	-4.9
TIA				pmax	pmax		
	comp=Z,1µm,1.4s						
TIA				pmax	pmax		
	comp=Z,58µm,4.5s						
TIA				LR	LR		
	comp=Z,46µm,12.0s						
TIA				LR	LR		
	comp=Z,39µm,10.7s						
TIA				LR	LR		
	comp=Z,97µm,14.8s						
CD2	Chengdu	44.39	328	P	P	03 01 29.0	+0.1
CD2				pP	pP	03 02 14.5	-0.6
CD2				sP	sP	03 02 37.3	-2.3
CD2				PP	PP	03 03 19.5	+2.1
CD2				S	S	03 07 41.8	-4.8
CD2				pmax	pmax		
	comp=Z,980nm,0.7s						
CD2				pmax	pmax		
	comp=Z,46µm,8.0s						
CD2				LR	LR		
	comp=Z,200µm,24.5s						
CD2				LR	LR		
	comp=Z,256µm,22.0s						
CD2				LR	LR		
	comp=Z,168µm,19.1s						
XAN	Xi'an	44.58	336	⇓P	P	03 01 30.5	+0.2
XAN				sP	sP	03 02 38.0	-2.2
XAN				S	S	03 07 44.3	-4.8
XAN				pmax	pmax		
	comp=Z,3µm,0.8s						
XAN				pmax	pmax		
	comp=Z,62µm,9.0s						
XAN				LR	LR		
	comp=Z,224µm,24.7s						
XAN				LR	LR		
	comp=Z,249µm,22.7s						
XAN				LR	LR		
	comp=Z,182µm,17.9s						
XAN	Xi'an	44.58	336	P	P	03 01 29.4	-0.9
XAN				sP	sP	03 02 38.9	-1.3
JSD	Sado	44.99	10	P	P	03 01 32.8	-0.6
JSD	Sado	44.99	10	P	P	03 01 33.2	-0.1
JSD	Sado	44.99	10	P	P	03 01 32.9	-0.4
JSD	Sado	44.99	10	⇑P	P	03 01 33.0	-0.4
JMM	Marumori	45.32	13	IAmb	IAmb	03 01 43.6	
	comp=Z,4µm,0.8s						
JMM	Marumori	45.32	13	P	P	03 01 36.3	+0.3
JMM	Marumori	45.32	13	P	P	03 01 36.2	+0.2
JMM				S	S	03 08 01.5	+1.9
JMM	Marumori	45.32	13	⇓P	P	03 01 36.0	+0.1
DL2	Dalian	45.62	352	P	P	03 01 38.3	+0.1
DL2				PcP	PcP	03 03 13.3	+0.6
DL2				PP	PP	03 03 26.5	-2.8
DL2				ScP	ScP	03 06 43.9	-0.5
DL2				S	S	03 08 02.1	-1.6
DL2				pmax	pmax		
	comp=Z,2µm,1.4s						
DL2				pmax	pmax		
	comp=Z,35µm,10.8s						
HNS	HongShan	45.63	344	⇓P	P	03 01 38.3	-0.1
HNS				pP	pwP	03 02 27.6	-2.6
HNS				sP	sP	03 02 48.8	+0.1
HNS				PcP	PcP	03 03 16.3	+3.6
HNS				PP	PP	03 03 30.5	+1.0
HNS				ScP	ScP	03 06 45.1	+0.6
HNS				S	S	03 08 00.3	-3.7
HNS				sS	sS	03 09 24.6	-1.1
HNS				ScS	ScS	03 11 11.4	+0.7
HNS				pmax	pmax		
	comp=Z,4µm,1.2s						
HNS				pmax	pmax		
	comp=Z,57µm,8.6s						
HNS				LR	LR		
	comp=Z,75µm,20.3s						
HNS				LR	LR		
	comp=Z,57µm,18.3s						
HNS				LR	LR		
	comp=Z,101µm,21.6s						
JYA	Atsumi	45.80	11	P	P	03 01 40.6	+0.9
IMP	Imphal	46.30	313	*e*P	P	03 01 43.5	-0.5
IMP				IAMb		03 01 50.1	
	comp=Z,1µm,0.5s						
AZL	Aizawl	46.58	311	*e*P	P	03 01 46.9	+0.7
AZL				IAmb	IAmb	03 01 53.3	
	comp=Z,5µm,1.0s						
TIY	Taiyuan	46.59	342	*e*P	P	03 01 45.8	-0.2
TIY				sP	sP	03 02 59.4	+3.1
TIY				PP	PP	03 03 39.9	+1.5
TIY				S	S	03 08 14.6	-3.3
TIY				sS	sS	03 09 41.3	+1.4
TIY				pmax	pmax		
	comp=Z,2µm,0.7s						
TIY				pmax	pmax		
	comp=Z,41µm,10.8s						
KOHI	KOHIMA	46.73	315	*e*P	P	03 01 46.8	-0.5
KOHI				IAmb	IAmb	03 01 53.8	
	comp=Z,4µm,0.8s						
JOM	Ohasama	46.97	13	P	P	03 01 49.1	+0.3
BJT	Baijiatuau	47.73	346	P	P	03 01 54.3	-0.3
BJI	Beijing	47.75	346	P	P	03 01 54.8	+0.1
BJI				pP	pP	03 02 39.6	-1.7
BJI				ScP	ScP	03 06 52.9	-0.4
BJI				S	S	03 08 28.3	-5.6
BJI				ScS	ScS	03 11 24.3	-0.3
BJI				pmax	pmax		
	comp=Z,2µm,1.1s						
BJI				pmax	pmax		
	comp=Z,26µm,10.2s						
BJI				LR	LR		
	comp=Z,18µm,17.6s						
BJI				LR	LR		
	comp=Z,43µm,29.4s						
BJI				LR	LR		
	comp=Z,32µm,23.3s						
JTM	Tenmabayashi	48.19	12	IAmb	IAmb	03 02 06.0	
	comp=Z,4µm,0.8s						
JTM	Tenmabayashi	48.19	12	P	P	03 01 57.9	-0.2
JTM	Tenmabayashi	48.19	12	P	P	03 01 58.4	+0.3
JTM	Tenmabayashi	48.19	12	⇓P	P	03 01 58.4	+0.3
SNY	Shenyang	48.26	354	⇓P	P	03 01 58.4	-0.2
SNY				pP	pP	03 02 45.3	+0.2
SNY				S	S	03 08 39.9	-1.2
SNY				pmax	pmax		
	comp=Z,320nm,1.3s						
SNY				pmax	pmax		
	comp=Z,46µm,8.8s						
SNY				LR	LR		
	comp=Z,51µm,18.9s						
SNY				LR	LR		
	comp=Z,36µm,21.7s						
SNY				LR	LR		
	comp=Z,85µm,22.6s						
LZH	Lanzhou	48.52	332	⇓P	P	03 02 01.3	+0.4
LZH				pP	pP	03 02 50.0	+2.5
LZH				sP	sP	03 03 10.6	-1.1
LZH				PcP	PcP	03 03 27.9	+4.6
LZH				ScP	ScP	03 06 58.0	+1.0
LZH				S	S	03 08 41.8	-3.5
LZH				sS	sS	03 10 04.8	-3.1
LZH				ScS	ScS	03 11 32.6	+2.2
LZH				pmax	pmax		
	comp=Z,3µm,1.7s						
LZH				pmax	pmax		
	comp=Z,51µm,4.7s						
LZH				LR	LR		
	comp=Z,192µm,15.2s						
LZH				LR	LR		
	comp=Z,205µm,15.6s						
LZH				LR	LR		
	comp=Z,171µm,18.1s						
JOT	Ohata	48.75	12	P	P	03 02 02.8	+0.4
MSHR	Mys Shultsa	48.77	2	*d i*P	P	03 02 02.3	-0.2
MSHR				pmax	pmax		
	comp=Z,3µm,0.9s						
PSTR	Posyet	48.83	2	*d i*P	P	03 02 03.5	+0.6
MSVF	Nonsavu	48.90	108	P	P	03 02 05.2	+1.1
MSVF	Nonsavu	48.90	108	P	P	03 02 05.8	+1.7
MSVF	Nonsavu	48.90	108	*c i*P	P	03 02 06.2	+2.1
MSVF				pmax	pmax		
	comp=Z,1µm,1.0s						
MSVF	Nonsavu	48.90	108	⇑P	P	03 02 05.7	+1.7
VLA	Vladivostok	49.33	3	*c i*P	P	03 02 07.6	+0.9
VLA				pmax	pmax		
	comp=Z,3µm,0.9s						
TAWA	Tawang	49.46	315	*e*P	P	03 02 09.9	+1.5
TAWA				IAmb	IAmb	03 02 14.3	
	comp=Z,2µm,0.9s						
FUNA	Funafuti	49.55	96	P	P	03 02 10.5	+1.6
FUNA				IAmb	IAmb	03 02 15.5	
	comp=Z,2µm,1.2s						
FUNA	Funafuti	49.55	96	⇑P	P	03 02 10.1	+1.2
FUNA	Funafuti	49.55	96	P	P	03 02 10.2	+1.2
HHC	Hu-ho-hao-te	49.74	342	⇓*i*P	P	03 02 10.1	+0.1
HHC				pP	pwP	03 03 01.5	-0.9
HHC				PP	PP	03 04 06.9	-0.1
HHC				S	S	03 09 01.8	-0.1
HHC				pmax	pmax		
	comp=Z,2µm,1.6s						
HHC				pmax	pmax		
	comp=Z,37µm,6.3s						
JSH	Shimam	49.78	10	P	P	03 02 10.7	+0.5
OUZ	Omahuta	49.81	131	P	P	03 02 12.0	+1.5
OUZ	Omahuta	49.81	131	P	P	03 02 13.3	+2.8
OUZ	Omahuta	49.81	131	⇑P	P	03 02 12.6	+2.1
ERM	Erimo	49.82	14	P	P	03 02 11.2	+0.8
ERM	Erimo	49.82	14	P	P	03 02 11.7	+1.3
ERM	Erimo	49.82	14	P	P	03 02 11.1	+0.7
ERM				S	S	03 09 01.5	-1.3
ERM	Erimo	49.82	14	⇓P	P	03 02 11.0	+0.5
JEM	Erimo	49.82	14	P	P	03 02 11.7	+1.3
JEM	Erimo	49.82	14	P	P	03 02 12.0	+1.6
BTO	Baotou	50.00	341	*e*P	P	03 02 13.8	+1.8
BTO				pP	pP	03 03 01.0	+2.2
BTO				PP	PP	03 04 09.6	+0.2
BTO				S	S	03 09 09.8	+4.3
BTO				pmax	pmax		
	comp=Z,2µm,1.6s						
BTO				pmax	pmax		
	comp=Z,65µm,8.9s						
BTO				LR	LR		
	comp=Z,76µm,22.0s						
BTO				LR	LR		
	comp=Z,112µm,18.2s						
BTO				LR	LR		
	comp=Z,101µm,22.2s						
CN2	Changchun	50.07	356	⇓P	P	03 02 12.9	+0.6
CN2				*e*pP	pP	03 02 59.0	-0.2
CN2				*e*S	S	03 09 08.3	+2.1
CN2				pmax	pmax		
	comp=Z,22µm,4.0s						
JEW	Eniwo	50.24	12	P	P	03 02 14.2	+0.6
PALK	Pallekele	50.29	285	P	P	03 02 14.5	-0.1
PALK	Pallekele	50.29	285	P	P	03 02 15.4	+0.8
PALK				P	P	03 02 15.4	+0.8
PALK				P	P	03 02 15.6	+1.0
PALK				P	P	03 02 15.6	+1.0
PALK				S	S	03 09 13.2	+2.8
PALK				S	S	03 09 13.2	+2.8
PALK	Pallekele	50.29	285	P	P	03 02 14.5	-0.1
PALK				pmax	pmax		
	comp=Z,1µm,1.2s						
PALK	Pallekele	50.29	285	P	P	03 02 13.1	-1.5
PALK				S	S	03 09 06.3	-4.1
DGTI	Dogotuki	50.35	106	P	P	03 02 16.3	+1.3
USA0B	Ussuriysk Arra	50.41	3	P	P	03 02 14.9	0.0
USA0B				IAmb	IAmb	03 02 22.8	
	comp=Z,1µm,0.8s						
USA0B	Ussuriysk Arra	50.41	3	*d i*P	P	03 02 15.2	+0.3
USRK	Ussuriysk Ar.	50.41	3	P	P	03 02 14.8	-0.1
USRK	Ussuriysk Ar.	50.41	3	P	P	03 02 15.2	+0.4
	comp=Z,772nm,0.6s,baz=184,slow=5.9,SNR=430						
USRK				ScP	ScP	03 07 03.3	-1.4
	comp=Z,176nm,1.1s,baz=174,slow=3.8,SNR=7.3						
USRK				S	S	03 09 10.0	-0.9
	comp=Z,206nm,1.1s,baz=187,slow=14,SNR=7.9						
USRK				PKPPKP	P'P'df	03 32 52.6	-7.7
	comp=Z,7.4nm,0.9s,baz=95,slow=2.1,SNR=7.1						
	comp=Z,772nm,0.6s						
WCZ	Waipu Caves	50.66	132	P	P	03 02 19.3	+2.4
TAVE	Taveuni	50.73	106	P	P	03 02 19.6	+1.8
MALK	Mahakanadarawa	50.73	286	P	P	03 02 17.9	+0.1
MALK	Mahakanadarawa	50.73	286	⇓P	P	03 02 17.3	-0.6
MDJ	Mudanjiang	50.77	0	P	P	03 02 18.3	+0.8
MDJ				ScP	ScP	03 07 06.5	+0.3
MDJ				S	S	03 09 17.3	+1.5
MDJ				ScS	ScS	03 11 43.3	-1.7
MDJ				pmax	pmax		
	comp=Z,2µm,1.3s						
MDJ				pmax	pmax		
	comp=Z,74µm,10.1s						
MDJ	Mudanjiang	50.77	0	P	P	03 02 17.8	+0.3
MSZ	Milford Sound	50.87	145	P	P	03 02 20.8	+2.4
DCZ	Deep Cove	50.92	146	P	P	03 02 20.5	+1.8
JCZ	Jackson Bay	51.02	144	P	P	03 02 20.9	+1.3
JCZ	Jackson Bay	51.02	144	P	P	03 02 21.7	+2.1
PYZ	Puysegur Point	51.10	147	P	P	03 02 21.5	+1.4
PYZ	Puysegur Point	51.10	147	P	P	03 02 21.4	+1.4
LSA	Lhasa	51.24	316	IAmb	IAmb	03 02 29.3	
	comp=Z,3µm,1.2s						
LSA	Lhasa	51.24	316	P	P	03 02 23.4	+1.5
LSA				S	S	03 09 20.8	-3.0
LSA				pmax	pmax		
	comp=Z,1µm,2.0s						
LSA				LR	LR		
	comp=Z,100µm,23.7s						
LSA				LR	LR		
	comp=Z,36µm,27.3s						
LSA	Lhasa	51.24	316	P	P	03 02 23.2	+1.3
LSA				P	P	03 02 23.2	+1.3
LSA	Lhasa	51.24	316	P	P	03 02 23.4	+1.5
FOZ	Fox Glacier	51.32	143	IAmb	IAmb	03 02 24.9	
	comp=Z,5µm,1.8s						
FOZ	Fox Glacier	51.32	143	P	P	03 02 22.9	+1.2
AWAZ	Awhitu Peninsu	51.35	133	P	P	03 02 24.5	+2.4
MLZ	Mavora Lakes	51.40	146	P	P	03 02 23.8	+1.5
XLT	XiLinHaoTe	51.45	348	*e*P	P	03 02 23.0	+0.3
XLT				pP	pP	03 03 10.6	+0.5
XLT				sP	PcP	03 03 32.4	-1.5
XLT				S	S	03 09 21.3	-4.1
XLT				sS	sS	03 10 43.6	-5.3
XLT				ScS	ScS	03 11 46.3	-3.6
XLT				pmax	pmax		
	comp=Z,3µm,1.6s						
XLT				pmax	pmax		
	comp=Z,47µm,7.4s						
WKZ	Wanaka	51.59	144	P	P	03 02 25.1	+1.3
DSZ	Denniston Nort	51.60	140	P	P	03 02 25.8	+1.9
DSZ				IAmb	IAmb	03 02 30.8	
	comp=Z,2µm,1.1s						
DSZ				PcP	sP	03 03 36.4	-0.2
DSZ	Denniston Nort	51.60	140	P	P	03 02 25.4	+1.5
QRZ	Quartz Range	51.61	138	P	P	03 02 24.4	+0.5
QRZ				IAmb	IAmb	03 02 30.3	
	comp=Z,3µm,1.2s						
QRZ	Quartz Range	51.61	138	P	P	03 02 25.7	+1.9
QRZ	Quartz Range	51.61	138	P	P	03 02 25.8	+1.9
GRZ	Great Barrier	51.61	132	P	P	03 02 25.9	+1.9
TEY	Ternei	51.62	7	⇓*e*P	P	03 02 22.7	-1.1
TEY				pmax	pmax		
	comp=Z,690nm,1.7s						
TEY				pmax	pmax		
	comp=N,360nm,1.7s						
TEY				pmax	pmax		
	comp=N,2µm,7.6s						
TEY				pmax	pmax		
	comp=E,300nm,7.1s						
WHZ	Wether Hill Ro	51.62	146	IAmb	IAmb	03 02 26.8	
	comp=Z,2µm,0.8s						
WHZ	Wether Hill Ro	51.62	146	P	P	03 02 24.7	+0.8
WVZ	Waitaha Valley	51.63	142	P	P	03 02 25.2	+1.2
GTK	Tadong	51.65	312	*e*P	P	03 02 25.0	+0.4
GTK				IAMb		03 02 32.2	
	comp=Z,3µm,0.4s						
ASAJ	Asahikawa	51.70	12	P	P	03 02 24.9	+0.5
	comp=Z,1µm,0.5s,baz=228,slow=9.9,SNR=242						
	comp=Z,1µm,0.5s						
ASAJ	Asahikawa	51.70	12	P	P	03 02 24.9	+0.5
JKA	Kamikawa-asahi	51.70	12	IAmb	IAmb	03 02 32.4	
	comp=Z,2µm,1.0s						
MKAZ	Moumakai	51.74	133	P	P	03 02 27.3	+2.4
JMP	Maruseppu	51.76	13	P	P	03 02 25.5	+0.6
NBEZ	Newall Road No	51.77	136	P	P	03 02 27.2	+2.1
RAGD	RAYAGADA	51.79	300	*e*P	P	03 02 26.5	+0.9
PKE	Pukeiti	51.82	136	P	P	03 02 27.6	+2.1
NMEZ	Namu Road	51.84	136	P	P	03 02 28.7	+3.0
INZ	Inchbonnie	51.88	141	P	P	03 02 25.7	-0.2
INZ	Inchbonnie	51.88	141	P	P	03 02 27.5	+1.6
KHEZ	Kahui Hut	51.88	136	P	P	03 02 28.6	+2.6
KHEZ	Kahui Hut	51.88	136	P	P	03 02 28.7	+2.6
BNX	BinXian	51.92	358	⇓P	P	03 02 26.8	+0.8
BNX				pP	pP	03 03 13.8	+0.6

BNX				sS	**sS**	**03 10 55.6**	**+0.5**
BNX				pmax	pmax		
	comp=Z,1µm,1.9s						
BNX				LR	LR		
	comp=Z,40µm,21.8s						
BNX				LR	LR		
	comp=Z,38µm,22.0s						
BNX				LR	LR		
	comp=Z,91µm,19.4s						
LKBA	**Tubou, Lakemba**	**51.92**	**108**	P	**P**	**03 02 27.7**	**+1.1**
NEZ	**North Egmont**	**51.93**	**136**	P	**P**	**03 02 28.7**	**+2.3**
DREZ	**Durham Road**	**51.96**	**136**	P	**P**	**03 02 28.9**	**+2.3**
KNTI	**KHUNTI**	**51.99**	**306**	*e*P	**P**	**03 02 27.4**	**+0.4**
KNTI				IAmb	IAmb	03 02 33.1	
	comp=Z,3µm,1.2s						
EAZ	**Earnscleugh**	**51.99**	**145**	P	**P**	**03 02 27.1**	**+0.4**
KUZ	**Kuaotunu**	**52.00**	**132**	P	**P**	**03 02 28.3**	**+1.4**
KUZ	**Kuaotunu**	**52.00**	**132**	P	**P**	**03 02 28.8**	**+1.9**
PREZ	**Palmer Road**	**52.00**	**136**	P	**P**	**03 02 29.8**	**+2.9**
LBZ	**Lake Benmore**	**52.02**	**143**	P	**P**	**03 02 28.0**	**+1.1**
HIZ	**Hauiti**	**52.12**	**135**	P	**P**	**03 02 28.9**	**+1.1**
HIZ	**Hauiti**	**52.12**	**135**	P	**P**	**03 02 29.5**	**+1.8**
HIZ	**Hauiti**	**52.12**	**135**	P	**P**	**03 02 30.0**	**+2.3**
RPZ	**Rata Peaks**	**52.17**	**142**	P	**P**	**03 02 29.1**	**+1.1**
RPZ	**Rata Peaks**	**52.17**	**142**	P	**P**	**03 02 29.7**	**+1.7**
APZ	**The Paps**	**52.22**	**147**	P	**P**	**03 02 29.6**	**+1.2**
LREZ	**Lake Rotokare**	**52.23**	**136**	P	**P**	**03 02 31.5**	**+3.0**
TOZ	**Tahuroa Road**	**52.25**	**134**	P	**P**	**03 02 31.0**	**+2.3**
FUTU	**Fugatoga**	**52.27**	**103**	IAmb	IAmb	03 02 37.2	
	comp=Z,2µm,1.1s						
FUTU	**Fugatoga**	**52.27**	**103**	P	**P**	**03 02 30.8**	**+1.6**
FUTU	**Fugatoga**	**52.27**	**103**	P	**P**	**03 02 32.0**	**+2.8**
THZ	**Tophouse**	**52.32**	**139**	IAmb	IAmb	03 02 42.1	
	comp=Z,3µm,1.7s						
THZ	**Tophouse**	**52.32**	**139**	P	**P**	**03 02 30.1**	**+1.0**
VRZ	**Vera Road**	**52.32**	**135**	P	**P**	**03 02 31.3**	**+2.1**
NNZ	**Nelson**	**52.36**	**138**	P	**P**	**03 02 29.5**	**+0.1**
NNZ	**Nelson**	**52.36**	**138**	P	**P**	**03 02 30.0**	**+0.6**
MDRS	**Chennai**	**52.37**	**292**	*e*P	**P**	**03 02 30.9**	**+1.0**
MDRS				IAmb	IAmb	03 02 36.8	
	comp=Z,5µm,1.4s						
YUK	**Yuzh-Kuril'sk**	**52.39**	**15**	*e*P	**P**	**03 02 29.6**	**+0.1**
YUK				*i* *PP	**pwP**	**03 03 19.9**	**-3.1**
YUK				*i* S	**S**	**03 09 36.3**	**-1.5**
YUK				*i*		03 11 55.3	
YUK				pmax	pmax		
	comp=Z,6µm,1.1s						
YUK				pmax	pmax		
	comp=N,777nm,0.9s						
YUK				pmax	pmax		
	comp=E,2µm,1.2s						
YUK				pmax	pmax		
	comp=Z,10µm,2.0s						
LTZ	**Lake Taylor**	**52.43**	**141**	P	**P**	**03 02 31.2**	**+1.2**
TMZ	**Timaru**	**52.51**	**143**	P	**P**	**03 02 31.5**	**+1.0**
TLZ	**Tolley Road**	**52.53**	**134**	P	**P**	**03 02 33.0**	**+2.3**
OXZ	**Oxford**	**52.57**	**141**	P	**P**	**03 02 31.6**	**+0.7**
MYRZ	**Mayor Island**	**52.60**	**133**	P	**P**	**03 02 33.6**	**+2.4**
TUZ	**Tuapeka**	**52.60**	**145**	P	**P**	**03 02 32.1**	**+1.0**
KMRZ	**Kaimai**	**52.61**	**134**	P	**P**	**03 02 33.1**	**+1.7**
ODZ	**Otahua Downs**	**52.66**	**144**	P	**P**	**03 02 31.5**	**-0.1**
ODZ	**Otahua Downs**	**52.66**	**144**	P	**P**	**03 02 32.5**	**+0.9**
ODZ	**Otahua Downs**	**52.66**	**144**	⇑P	**P**	**03 02 32.0**	**+0.4**
SYZ	**Scrubby Hill**	**52.67**	**146**	P	**P**	**03 02 32.8**	**+1.2**
SYZ	**Scrubby Hill**	**52.67**	**146**	P	**P**	**03 02 32.4**	**+0.8**
JWK2	**Keihoku**	**52.71**	**11**	P	**P**	**03 02 32.4**	**+0.6**
WAZ	**Wanganui**	**52.76**	**136**	P	**P**	**03 02 34.4**	**+2.0**
TWVZ	**Taurewa**	**52.77**	**135**	P	**P**	**03 02 34.0**	**+1.3**
TGRZ	**Tauranga**	**52.80**	**133**	P	**P**	**03 02 34.7**	**+2.0**
KUTZ	**Kaahu Road**	**52.80**	**134**	P	**P**	**03 02 35.1**	**+2.4**
PKVZ	**Pokaka**	**52.80**	**135**	P	**P**	**03 02 34.3**	**+1.5**
WATZ	**Wairara**	**52.83**	**135**	P	**P**	**03 02 35.4**	**+2.4**
TUWZ	**Tuamarina**	**52.83**	**138**	P	**P**	**03 02 32.7**	**-0.1**
AMCZ	**Amberley**	**52.87**	**141**	P	**P**	**03 02 33.3**	**+0.1**
WTVZ	**West Tongariro**	**52.90**	**135**	P	**P**	**03 02 35.6**	**+2.0**
KARZ	**Kaharoa**	**52.90**	**134**	P	**P**	**03 02 35.7**	**+2.3**
COVZ	**Chateau Observ**	**52.90**	**135**	P	**P**	**03 02 35.5**	**+1.9**
KATZ	**Kakaramea**	**52.91**	**135**	P	**P**	**03 02 35.9**	**+2.2**
RATZ	**Rangitukua**	**52.92**	**135**	P	**P**	**03 02 35.9**	**+2.3**
NNVZ	**North Ngauruho**	**52.92**	**135**	P	**P**	**03 02 35.9**	**+2.1**
KRVZ	**Karewarewa**	**52.93**	**135**	P	**P**	**03 02 35.9**	**+2.1**
UTU	**Utuhina**	**52.93**	**134**	P	**P**	**03 02 36.5**	**+2.8**
MTVZ	**Mangateitei**	**52.93**	**135**	P	**P**	**03 02 35.9**	**+2.1**
NGZ	**Ngauruhoe**	**52.93**	**135**	P	**P**	**03 02 35.8**	**+2.0**
GRRZ	**Galatos Road**	**52.94**	**134**	P	**P**	**03 02 36.1**	**+2.3**
TRVZ	**Turoa**	**52.95**	**135**	P	**P**	**03 02 35.8**	**+1.8**
TCW	**Tory Channel**	**52.95**	**138**	P	**P**	**03 02 33.4**	**-0.4**
NTVZ	**North Tongarir**	**52.95**	**135**	P	**P**	**03 02 35.6**	**+1.6**
SNVZ	**South Ngauruho**	**52.97**	**135**	P	**P**	**03 02 36.1**	**+2.0**
WHTZ	**Whakaora**	**52.97**	**134**	P	**P**	**03 02 36.3**	**+2.3**
WHVZ	**Whangaehu Hut**	**52.97**	**135**	P	**P**	**03 02 36.4**	**+2.2**
OTVZ	**Oturere**	**52.97**	**135**	P	**P**	**03 02 36.3**	**+2.1**
TMVZ	**Te Maari**	**52.98**	**135**	P	**P**	**03 02 36.4**	**+2.2**
ETVZ	**East Tongariro**	**52.99**	**135**	P	**P**	**03 02 36.4**	**+2.1**
WNVZ	**Wahianoa**	**53.00**	**135**	P	**P**	**03 02 35.7**	**+1.4**
GVZ	**Greta Valley S**	**53.01**	**141**	P	**P**	**03 02 35.0**	**+0.9**
GVZ				IAmb	IAmb	03 02 41.3	
	comp=Z,5µm,1.6s						
GVZ	**Greta Valley S**	**53.01**	**141**	P	**P**	**03 02 35.5**	**+1.3**
TUVZ	**Tukino**	**53.01**	**135**	P	**P**	**03 02 36.5**	**+2.1**
HSRZ	**Hossack Road**	**53.02**	**134**	P	**P**	**03 02 37.1**	**+2.7**
OMRZ	**Omania**	**53.03**	**134**	P	**P**	**03 02 36.6**	**+2.2**
RITZ	**Rihia Road**	**53.03**	**135**	P	**P**	**03 02 36.9**	**+2.5**
KHZ	**Kahutara**	**53.05**	**140**	IAmb	IAmb	03 02 39.6	
	comp=Z,2µm,1.0s						
KHZ	**Kahutara**	**53.05**	**140**	P	**P**	**03 02 35.7**	**+1.3**
KHZ	**Kahutara**	**53.05**	**140**	P	**P**	**03 02 35.3**	**+0.9**
KHZ	**Kahutara**	**53.05**	**140**	⇑P	**P**	**03 02 34.6**	**+0.2**
WPRZ	**Whakapapatarin**	**53.05**	**134**	P	**P**	**03 02 36.7**	**+2.1**
OPRZ	**Ohinepanea**	**53.05**	**133**	P	**P**	**03 02 36.1**	**+1.6**
HLRZ	**Highlands Stat**	**53.08**	**134**	P	**P**	**03 02 37.4**	**+2.6**
GTA	**Gaotai**	**53.08**	**332**	⇓P	**P**	**03 02 35.8**	**+0.9**
GTA				pP	pP	03 03 21.8	-0.5
GTA				ScP	**ScP**	**03 07 17.8**	**+1.3**
GTA				S	**S**	**03 09 45.4**	**-2.4**
GTA				sS	sS	03 11 13.8	+2.1
GTA				ScS	**ScS**	**03 12 01.3**	**-0.4**
GTA				pmax	pmax		
	comp=Z,1µm,1.4s						
GTA				pmax	pmax		
	comp=Z,42µm,10.8s						
GTA				LR	LR		
	comp=Z,148µm,21.9s						
GTA				LR	LR		
	comp=Z,137µm,19.9s						
GTA				LR	LR		
	comp=Z,125µm,23.1s						
HRRZ	**Handcock Road**	**53.08**	**134**	P	**P**	**03 02 37.3**	**+2.5**
MKRZ	**Makatiti**	**53.11**	**134**	P	**P**	**03 02 37.5**	**+2.4**
HHSZ	**Highcliff Hill**	**53.11**	**145**	P	**P**	**03 02 37.0**	**+2.1**
MOVZ	**Moawhango**	**53.14**	**135**	P	**P**	**03 02 36.3**	**+1.0**
MQZ	**McQueen's Vall**	**53.15**	**141**	IAmb	IAmb	03 02 38.3	
	comp=Z,5µm,1.9s						
MQZ	**McQueen's Vall**	**53.15**	**141**	P	**P**	**03 02 36.5**	**+1.4**
HATZ	**Hinemaiaia**	**53.16**	**135**	P	**P**	**03 02 37.2**	**+1.9**
TARZ	**Mount Tarawera**	**53.18**	**134**	P	**P**	**03 02 38.2**	**+2.6**
VJD	**Vijayawada**	**53.18**	**296**	*e*P	**P**	**03 02 37.2**	**+1.4**
OHWZ	**Ohakea**	**53.19**	**136**	P	**P**	**03 02 37.9**	**+2.5**
ALRZ	**Allen Road**	**53.20**	**134**	P	**P**	**03 02 38.1**	**+2.4**
MARZ	**Manawahe**	**53.20**	**133**	P	**P**	**03 02 38.4**	**+2.7**
GOMU	**GeErMu**	**53.27**	**325**	P	**P**	**03 02 37.4**	**+0.8**
GOMU				PcP	**PcP**	**03 03 43.8**	**+2.5**
GOMU				S	**S**	**03 09 42.8**	**-8.1**
GOMU				pmax	pmax		
	comp=Z,380nm,1.7s						
GOMU				LR	LR		
	comp=Z,120µm,21.2s						
GOMU				LR	LR		
	comp=Z,69µm,21.6s						
GOMU				LR	LR		
	comp=Z,24µm,17.5s						
SNZO	**South Karori**	**53.28**	**138**	P	**P**	**03 02 35.6**	**-0.5**
SNZO				IAmb	IAmb	03 02 40.5	
	comp=Z,2µm,1.1s						
SNZO	**South Karori**	**53.28**	**138**	P	**P**	**03 02 36.7**	**+0.6**
SNZO	**South Karori**	**53.28**	**138**	P	**P**	**03 02 36.0**	**-0.1**
SNZO	**South Karori**	**53.28**	**138**	⇑P	**P**	**03 02 35.8**	**-0.4**
EDRZ	**Edgecumbe**	**53.29**	**134**	P	**P**	**03 02 38.9**	**+2.5**
MNZS	**Menzies Bay Ba**	**53.31**	**141**	P	**P**	**03 02 38.1**	**+1.7**
WEL	**Wellington**	**53.31**	**138**	P	**P**	**03 02 36.7**	**+0.3**
MRHZ	**Matea Rd**	**53.36**	**134**	P	**P**	**03 02 38.1**	**+1.2**
WHRZ	**Whale Island**	**53.36**	**133**	P	**P**	**03 02 39.2**	**+2.3**
WIZ	**White Island**	**53.39**	**133**	P	**P**	**03 02 38.6**	**+1.6**
BHW	**Baring Head**	**53.44**	**138**	P	**P**	**03 02 37.3**	**0.0**
MUGZ	**Murupara**	**53.47**	**134**	P	**P**	**03 02 38.9**	**+1.3**
BKZ	**Black Stump Fm**	**53.55**	**135**	IAmb	IAmb	03 02 43.6	
	comp=Z,5µm,1.7s						
BKZ	**Black Stump Fm**	**53.55**	**135**	P	**P**	**03 02 39.0**	**+0.7**
BKZ	**Black Stump Fm**	**53.55**	**135**	P	**P**	**03 02 39.2**	**+0.9**
TSZ	**Takapari Road**	**53.57**	**136**	P	**P**	**03 02 38.9**	**+0.5**
MRZ	**Mangatainoka R**	**53.57**	**137**	IAmb	IAmb	03 02 42.6	
	comp=Z,2µm,1.2s						
MRZ	**Mangatainoka R**	**53.57**	**137**	P	**P**	**03 02 38.7**	**+0.4**
POWZ	**Post Office Ro**	**53.58**	**136**	P	**P**	**03 02 38.9**	**+0.6**
KWHZ	**Kaweka Forest**	**53.62**	**135**	P	**P**	**03 02 39.7**	**+1.0**
URZ	**Urewera**	**53.62**	**134**	P	**P**	**03 02 39.4**	**+0.7**
URZ	**Urewera**	**53.62**	**134**	P	**P**	**03 02 38.8**	**+0.1**
URZ	**Urewera**	**53.62**	**134**	⇑P	**P**	**03 02 38.7**	**+0.1**
HOWZ	**Holdsworth Sta**	**53.63**	**137**	P	**P**	**03 02 38.8**	**+0.1**
PNHZ	**Pukenui**	**53.67**	**136**	P	**P**	**03 02 39.4**	**+0.3**
KRHZ	**Kereru**	**53.67**	**135**	P	**P**	**03 02 40.0**	**+0.9**
RTZ	**Ruatahuna**	**53.67**	**134**	IAmb	IAmb	03 02 47.5	
	comp=Z,2µm,0.7s						
RTZ	**Ruatahuna**	**53.67**	**134**	P	**P**	**03 02 40.1**	**+1.0**
NMHZ	**Naumai**	**53.75**	**135**	P	**P**	**03 02 41.5**	**+1.8**
PRWZ	**Pori Road**	**53.79**	**137**	P	**P**	**03 02 40.4**	**+0.5**
DVHZ	**Dannevirke**	**53.81**	**136**	P	**P**	**03 02 40.6**	**+0.5**
TIWZ	**Tintock**	**53.83**	**137**	P	**P**	**03 02 40.6**	**+0.3**
WPHZ	**Waipukurau**	**53.90**	**136**	P	**P**	**03 02 41.6**	**+0.9**
HAZ	**Te Kaha**	**53.91**	**133**	P	**P**	**03 02 41.2**	**+0.4**
RUGZ	**Raukumara Rang**	**53.92**	**133**	P	**P**	**03 02 41.1**	**+0.1**
ARHZ	**Aropaoanui**	**53.95**	**135**	P	**P**	**03 02 42.5**	**+1.4**
MWZ	**Matawai**	**53.95**	**133**	P	**P**	**03 02 42.0**	**+0.8**
KUR	**Kuril'sk**	**54.03**	**16**	*d* *i*P	**P**	**03 02 40.4**	**-1.0**
KUR				*e*		03 03 37.3	
KUR				*e*		03 04 44.0	
KUR				*i* S	**S**	**03 09 58.2**	**-1.8**
KUR				*i*		03 12 07.8	
KUR				SS	**SS**	**03 13 47.2**	**+2.1**
KUR				*e*SSS	SSS	03 15 54.4	
KUR				pmax	pmax		
	comp=Z,66µm,9.0s						
KUR				pmax	pmax		
	comp=Z,6µm,1.3s						
KUR				MLR	MLR		
	comp=N,26µm,18.0s						
KUR				MLR	MLR		
	comp=E,54µm,18.0s						
KUR				MLR	MLR		
	comp=Z,73µm,18.0s						
BFZ	**Birch Farm**	**54.04**	**137**	P	**P**	**03 02 42.6**	**+0.9**
BFZ	**Birch Farm**	**54.04**	**137**	P	**P**	**03 02 41.9**	**+0.3**
CPWZ	**Castlepoint**	**54.11**	**137**	P	**P**	**03 02 43.8**	**+1.7**
PRHZ	**Porangahau**	**54.12**	**136**	P	**P**	**03 02 43.0**	**+0.7**
BLSP	**Bilaspur**	**54.15**	**303**	*e*P	**P**	**03 02 42.3**	**-0.5**
KOD	**Kodaikanal**	**54.15**	**287**	*e*P	**P**	**03 02 43.9**	**+0.6**
KOD				IAmb	IAmb	03 02 52.2	
	comp=Z,904nm,0.8s						
PWZ	**Pawanui**	**54.18**	**136**	P	**P**	**03 02 44.3**	**+1.6**
PXZ	**Pawanui**	**54.18**	**136**	P	**P**	**03 02 43.3**	**+0.6**
MXZ	**Matakaoa Point**	**54.22**	**132**	P	**P**	**03 02 44.5**	**+1.5**
MXZ	**Matakaoa Point**	**54.22**	**132**	P	**P**	**03 02 44.3**	**+1.3**
KNZ	**Kokohu**	**54.33**	**134**	P	**P**	**03 02 44.2**	**+0.4**
PUZ	**Puketiti**	**54.38**	**133**	P	**P**	**03 02 44.8**	**+0.6**
YSS	**Yuzhno-Sakhali**	**54.45**	**11**	P	**P**	**03 02 44.3**	**-0.1**
YSS				IAmb	IAmb	03 02 52.1	
	comp=Z,2µm,1.2s						
YSS	**Yuzhno-Sakhali**	**54.45**	**11**	P	**P**	**03 02 45.8**	**+1.4**
YSS	**Yuzhno-Sakhali**	**54.45**	**11**	κ *i*P	**P**	**03 02 44.6**	**+0.3**
YSS				*e**PP	**pP**	**03 03 32.6**	**+0.6**
YSS				*e*		03 03 47.4	
YSS				*e**SP	**sP**	**03 03 56.0**	**+0.2**
YSS				*e*		03 04 52.9	
YSS				*e*PPP	PPP	03 06 08.7	
YSS				*e*S	**S**	**03 10 03.7**	**-1.8**
YSS				*e**SS	**sS**	**03 11 23.9**	**-5.9**
YSS				*e*		03 12 09.9	
YSS				*e*SS	**SS**	**03 13 48.3**	**-3.2**
YSS				*e*SSS	SSS	03 16 05.5	
YSS				pmax	pmax		
	comp=Z,48µm,6.8s						
YSS				pmax	pmax		
	comp=N,20µm,6.4s						
YSS				pmax	pmax		
	comp=E,12µm,5.7s						
YSS				pmax	pmax		
	comp=E,780nm,1.1s						
YSS				pmax	pmax		
	comp=Z,2µm,1.1s						
YSS				smax	smax		
	comp=N,84µm,11.3s						
YSS				smax	smax		
	comp=E,33µm,7.8s						
YSS				MLR	MLR		
	comp=N,26µm,17.0s						
YSS				MLR	MLR		
	comp=E,24µm,17.0s						
YSS				MLR	MLR		
	comp=Z,32µm,17.0s						
YSS	**Yuzhno-Sakhali**	**54.45**	**11**	⇓P	**P**	**03 02 44.6**	**+0.3**
RIZ	**Raoul Island**	**54.65**	**121**	P	**P**	**03 02 46.3**	**0.0**
HYB	**Hyderabad**	**55.38**	**296**	*e*P	**P**	**03 02 51.6**	**-0.1**
HYB				*e*pP	**pP**	**03 03 39.0**	**-0.3**
HYB				*e*PcP	**PcP**	**03 03 49.3**	**0.0**
HYB				*e*sP	**sP**	**03 04 02.9**	**-0.2**
HYB				*e*PP	**PP**	**03 04 57.6**	**-0.5**
HYB				*e*ScP	**ScP**	**03 07 27.2**	**+0.2**
HYB				*e*S	**S**	**03 10 19.2**	**+0.3**
HYB				*e*ScS	**ScS**	**03 12 18.7**	**0.0**
KLR	**Kul'dur**	**55.43**	**2**	P	**P**	**03 02 51.8**	**+0.4**
	comp=Z,846nm,0.9s,baz=199,slow=5.5,SNR=511						
KLR				ScP	**ScP**	**03 07 25.5**	**-0.9**
	comp=Z,274nm,1.1s,baz=160,slow=4.1,SNR=4.4						
	comp=Z,846nm,0.9s						
ALBI	**Allahabad**	**55.84**	**306**	*e*P	**P**	**03 02 54.3**	**-0.5**
AIS	**Amsterdam Isla**	**56.24**	**228**	⇑P	**P**	**03 03 00.1**	**+2.7**
H08S2	**Diego Garcia H**	**56.31**	**265**	P	**P**	**03 02 59.6**	**+1.6**
	baz=49,slow=8.7,SNR=173						
H08S3	**Diego Garcia H**	**56.32**	**265**	P	**P**	**03 02 59.6**	**+1.5**
	baz=49,slow=8.7,SNR=322						
H08S1	**Diego Carcia H**	**56.33**	**265**	P	**P**	**03 02 59.9**	**+1.7**
	baz=49,slow=8.7,SNR=291						
NGP	**Nagpur**	**56.34**	**301**	*e*P	**P**	**03 02 58.5**	**+0.1**
NGP				IAmb	IAmb	03 03 05.3	
	comp=Z,5µm,1.7s						
UGL	**Uglegorsk**	**56.36**	**10**	*d* *i*P	P	03 02 51.4	-6.6
UGL				*e*		03 05 13.9	
UGL				pmax	pmax		
	comp=Z,65µm,7.8s						
HEH	**HeiHe**	**56.43**	**359**	*e*P	**P**	**03 02 57.9**	**-0.6**
HEH				pP	**pP**	**03 03 45.0**	**-1.4**
HEH				PP	**PP**	**03 05 05.0**	**-1.8**
HEH				ScP	**ScP**	**03 07 30.3**	**-0.5**
HEH				S	**S**	**03 10 29.5**	**-2.2**
HEH				sS	**sS**	**03 11 51.6**	**-5.3**
HEH				ScS	**ScS**	**03 12 21.5**	**-3.4**
HEH				pmax	pmax		
	comp=Z,3µm,1.5s						
HEH				pmax	pmax		
	comp=Z,62µm,8.0s						
KAAM	**Kaadhehdhoo**	**56.55**	**275**	P	**P**	**03 03 01.1**	**+1.0**
KAAM	**Kaadhehdhoo**	**56.55**	**275**	P	**P**	**03 03 01.5**	**+1.4**
	SNR=28						
KAAM				P	**P**	**03 03 02.1**	**+2.0**
	SNR=28						
GRNR	**Gornyy**	**57.26**	**5**	⇓*i*P	**P**	**03 03 05.2**	**+0.9**
GRNR				pmax	pmax		
	comp=N,350nm,1.2s						
GRNR				pmax	pmax		
	comp=Z,800nm,1.2s						
MNGI	**Mangalore**	**57.38**	**290**	*e*P	**P**	**03 03 06.7**	**+0.9**
MNGI				IAmb	IAmb	03 03 15.9	
	comp=Z,1µm,0.8s						
HMDM	**Hanimaadhoo**	**57.45**	**282**	P	**P**	**03 03 07.1**	**+0.8**
HMDM	**Hanimaadhoo**	**57.45**	**282**	P	**P**	**03 03 08.3**	**+2.0**
HMDM	**Hanimaadhoo**	**57.45**	**282**	⇑P	**P**	**03 03 06.9**	**+0.6**
ULN	**Ulaanbaatar**	**57.46**	**342**	P	**P**	**03 03 06.6**	**+0.7**
ULN				IAmb	IAmb	03 03 09.1	
	comp=Z,1µm,0.8s						
ULN	**Ulaanbaatar**	**57.46**	**342**	P	**P**	**03 03 06.8**	**+0.9**
ULN				P	**P**	**03 03 06.8**	**+0.9**
ULN	**Ulaanbaatar**	**57.46**	**342**	P	**P**	**03 03 06.6**	**+0.7**
ULN				pmax	pmax		
	comp=Z,1µm,0.8s						
ULN	**Ulaanbaatar**	**57.46**	**342**	P	**P**	**03 03 06.9**	**+0.9**
SONM	**Songino Array**	**57.63**	**342**	P	**P**	**03 03 07.3**	**+0.2**
SONM	**Songino Array**	**57.63**	**342**	P	**P**	**03 03 07.8**	**+0.7**
	comp=Z,411nm,0.6s,baz=163,slow=4.2,SNR=488						
SONM				ScP	**ScP**	**03 07 35.0**	**-1.3**
	comp=Z,176nm,1.1s,baz=176,slow=5.9,SNR=3.9						
SONM				S	**S**	**03 10 43.4**	**-4.3**
	comp=Z,37nm,1.1s,baz=155,slow=10,SNR=5.0						
SONM				PKKP	**PKKPdf**	**03 24 30.6**	**-2.1**
	comp=Z,3.1nm,0.9s,baz=0.0,slow=0.4,SNR=3.5						
SONM				PKPPKP	**P'P'df**	**03 32 54.0**	**+3.9**
	comp=Z,11nm,0.8s,baz=267,slow=2.5,SNR=6.7						
SONM				P4KPbc		03 40 16.0	
	comp=Z,5.5nm,1.0s,baz=157,slow=3.4,SNR=5.2						
	comp=Z,411nm,0.6s						
TYV	**Tymovskoe**	**58.19**	**10**	*e*P	**P**	**03 03 13.1**	**+2.4**
TYV				*e*S	**S**	**03 11 01.0**	**+6.5**
TYV				pmax	pmax		
	comp=Z,26µm,2.6s						
TYV				pmax	pmax		
	comp=Z,506nm,0.7s						
TYV				smax	smax		
	comp=N,20µm,4.8s						
TYV				smax	smax		
	comp=E,21µm,4.8s						
AFI	**Afiamalu**	**58.41**	**102**	P	**P**	**03 03 14.4**	**+1.3**
AFI				IAmb	IAmb	03 03 21.9	
	comp=Z,2µm,1.1s						
AFI	**Afiamalu**	**58.41**	**102**	P	**P**	**03 03 15.5**	**+2.4**
AFI	**Afiamalu**	**58.41**	**102**	P	**P**	**03 03 14.6**	**+1.5**
AFI	**Afiamalu**	**58.41**	**102**	⇑P	**P**	**03 03 14.9**	**+1.9**
AFI	**Afiamalu**	**58.41**	**102**	P	**P**	**03 03 14.8**	**+1.7**
JHNI	**Jhansi**	**58.55**	**305**	*e*P	**P**	**03 03 12.3**	**-1.5**
BHPL	**Bhopal**	**58.56**	**302**	*e*P	**P**	**03 03 13.3**	**-0.6**
NRDN	**NARMADA NAGAR**	**58.57**	**301**	*e*P	**P**	**03 03 15.8**	**+1.8**
NRDN				IAmb	IAmb	03 03 21.4	
	comp=Z,2µm,0.5s						
LGTI	**Lohaghat**	**59.03**	**310**	*e*P	**P**	**03 03 16.8**	**-0.1**
LGTI				IAmb	IAmb	03 03 23.9	
	comp=Z,4µm,1.5s						
PTH	**Pithoragarh**	**59.10**	**310**	*e*P	**P**	**03 03 16.6**	**-1.0**
PTH				IAmb	IAmb	03 03 22.6	
	comp=Z,5µm,1.5s						
GUNA	**GUNA**	**59.20**	**304**	*e*P	**P**	**03 03 17.7**	**-0.6**
GUNA				IAmb	IAmb	03 03 23.4	
	comp=Z,6µm,1.4s						
KAD	**Karad**	**59.27**	**294**	*e*P	**P**	**03 03 18.8**	**-0.1**
KAD				IAmb	IAmb	03 03 25.1	
	comp=Z,6µm,1.4s						
CIT	**Chita**	**59.71**	**349**	*e*P	**P**	**03 03 22.0**	**+0.8**
CIT				*e*		03 04 10.4	
CIT				*e*		03 04 37.8	
CIT				*e*S	**S**	**03 11 10.0**	**-4.2**
CIT				*e*		03 12 47.6	
CIT				pmax	pmax		
	comp=Z,8µm,2.4s						
ZEA	**Zeya**	**59.92**	**359**	*e*P	**P**	**03 03 23.1**	**+0.5**
ZEA				*e**PP	**PcP**	**03 04 08.6**	**+2.2**
ZEA				*e*S	**S**	**03 11 20.4**	**+3.7**
ZEA				*e**SS	**ScS**	**03 12 53.2**	**+2.7**
ZEA				pmax	pmax		
	comp=N,16µm,6.4s						
ZEA				pmax	pmax		
	comp=Z,27µm,6.9s						
ZEA				pmax	pmax		
	comp=E,160nm,0.7s						
ZEA				pmax	pmax		
	comp=N,870nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,2µm,0.9s						
ZEA				smax	smax		
	comp=N,34µm,16.0s						
POO	**Poona**	**59.96**	**296**	*e*P	**P**	**03 03 23.9**	**+0.4**
POO				IAmb	IAmb	03 03 29.7	
	comp=Z,6µm,1.6s						
JOSI	**Joshimath**	**60.09**	**311**	*e*P	**P**	**03 03 24.6**	**+0.2**
JOSI				IAmb	IAmb	03 03 31.1	
	comp=Z,5µm,0.6s						
NKL	**Nikolayevsk**	**60.10**	**8**	*e*P	**P**	**03 03 22.0**	**-1.7**
NKL				*e*S	**S**	**03 11 16.2**	**-2.7**
NKL				pmax	pmax		
	comp=N,4µm,1.2s						
NKL				pmax	pmax		
	comp=E,3µm,1.2s						
NKL				pmax	pmax		
	comp=Z,13µm,1.3s						
NKL				smax	smax		
	comp=E,25µm,4.0s						
NKL				smax	smax		
	comp=N,24µm,10.0s						
NKL				MLR	MLR		
	comp=N,111µm,19.0s						
NKL				MLR	MLR		
	comp=E,119µm,18.0s						
NKL				MLR	MLR		
	comp=Z,185µm,18.0s						
CTZ	**Chatham Island**	**60.12**	**137**	P	**P**	**03 03 24.4**	**+0.2**
CTZ				IAmb	IAmb	03 03 28.9	
	comp=Z,1µm,1.0s						
CTZ	**Chatham Island**	**60.12**	**137**	P	**P**	**03 03 24.7**	**+0.6**
CTZ	**Chatham Island**	**60.12**	**137**	P	**P**	**03 03 25.5**	**+1.4**
NIUE	**Niue**	**60.39**	**108**	P	**P**	**03 03 29.6**	**+3.2**
NIUE	**Niue**	**60.39**	**108**	P	**P**	**03 03 28.2**	**+1.8**
ZAK	**Zakamensk**	**60.85**	**341**	*e*P	**P**	**03 03 29.4**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,2µm,2.3s						
SONA	**Sohna**	**60.94**	**307**	*e*P	**P**	**03 03 29.3**	**-0.6**
LDR	**Lodi Road**	**60.98**	**308**	IAmb	IAmb	03 03 34.7	
	comp=Z,1µm,1.0s						
AYAN	**Aya Nagar**	**61.00**	**307**	*e*P	**P**	**03 03 29.4**	**-0.9**
NDI	**New Delhi**	**61.02**	**308**	*e*P	**P**	**03 03 29.0**	**-1.5**
NDI				IAmb	IAmb	03 03 34.7	
	comp=Z,4µm,1.4s						
NPLP	**NPLP New Delhi**	**61.04**	**308**	*e*P	**P**	**03 03 29.4**	**-1.2**
NPLP				IAmb	IAmb	03 03 34.2	
	comp=Z,2µm,0.4s						
DDI	**Dehra Dun**	**61.12**	**310**	*e*P	**P**	**03 03 31.4**	**+0.3**
DDI				IAmb	IAmb	03 03 37.0	
	comp=Z,1µm,0.8s						
CASY	**Casey**	**61.19**	**189**	P	**P**	**03 03 30.3**	**-0.6**
CASY	**Casey**	**61.19**	**189**	P	**P**	**03 03 31.7**	**+0.7**
CASY				PcP	**PcP**	**03 04 13.7**	**+2.3**
KUDL	**Kundal**	**61.36**	**307**	*e*P	**P**	**03 03 31.9**	**-0.9**
KUDL				IAmb	IAmb	03 03 37.4	
	comp=Z,4µm,1.1s						
SKR	**Severo-Kuril's**	**61.40**	**19**	*d* *i*P	**P**	**03 03 33.2**	**+0.7**
SKR				*e**PP	**pP**	**03 04 20.1**	**-1.3**
SKR				*i* S	**S**	**03 11 35.8**	**+0.3**
SKR				*e**SS	**SKKSac**	**03 13 01.2**	**-0.4**
SKR				pmax	pmax		
	comp=Z,2µm,1.8s						
SKR				pmax	pmax		
	comp=Z,24µm,9.5s						
SKR				smax	smax		
	comp=N,103µm,10.7s						
SKR				smax	smax		
	comp=E,137µm,10.1s						
KLP	**Kalpa**	**61.54**	**311**	*e*P	**P**	**03 03 35.1**	**+0.8**
HNLY	**HANLEY**	**61.61**	**313**	*e*P	**P**	**03 03 35.6**	**+0.6**
HNLY				IAMb		03 03 45.3	
	comp=Z,2µm,1.4s						
MIDW	**Midway**	**61.89**	**53**	P	**P**	**03 03 37.4**	**+1.2**
MIDW				IAmb	IAmb	03 03 43.7	
	comp=Z,1µm,1.1s						
MIDW	**Midway**	**61.89**	**53**	P	**P**	**03 03 38.2**	**+1.9**
MIDW	**Midway**	**61.89**	**53**	⇓P	**P**	**03 03 37.9**	**+1.6**
AJM	**Ajmer**	**62.16**	**304**	*e*P	**P**	**03 03 37.8**	**-0.4**
SMLA	**Simla**	**62.17**	**310**	*e*P	**P**	**03 03 38.5**	**+0.4**
SMLA				IAmb	IAmb	03 03 45.6	
	comp=Z,3µm,0.7s						
WMQ	**Urumqi**	**62.48**	**327**	⇓P	**P**	**03 03 41.6**	**+1.6**
WMQ				ScP	**ScP**	**03 07 58.9**	**+1.0**
WMQ				S	**S**	**03 11 47.6**	**-1.9**
WMQ				ScS	**SKSac**	**03 13 08.3**	**-2.1**
WMQ				pmax	pmax		
	comp=Z,1µm,1.7s						
WMQ				pmax	pmax		
	comp=Z,27µm,5.3s						
WMQ				LR	LR		
	comp=Z,81µm,17.5s						
WMQ				LR	LR		
	comp=Z,70µm,22.3s						
WMQ				LR	LR		
	comp=Z,48µm,24.1s						
WMQ	**Urumqi**	**62.48**	**327**	P	**P**	**03 03 40.5**	**+0.5**
WMQ				pP	**pP**	**03 04 28.2**	**-0.8**

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MOY   Mondy            62.69 341 eP     P       03 03 42.8 +1.5
MOY                              pmax   pmax
      comp=Z,7µm,1.9s
BHK   Bhakra           62.87 310 eP     P       03 03 44.1 +1.4
BHK                              IAmb   IAmb    03 03 49.0
      comp=Z,8µm,1.4s
DHRM  DHARAMSHALA      63.34 311 eP     P       03 03 46.3 +0.2
DHRM                             IAmb   IAmb    03 03 52.6
      comp=Z,3µm,0.5s
PEA0B Petropavlovsk-   63.98  19 i P    P       03 03 50.2 +0.6
PETK  Petropavlovsk-   63.98  19  P     P       03 03 49.6  0.0
      comp=Z,739nm,0.5s,baz=116,slow=3.4,SNR=312
PETK                             PKPPKP P'P'df  03 32 32.7 -7.2
      comp=Z,13nm,1.0s,baz=81,slow=11,SNR=9.0
PETK                             P4KPbc         03 40 42.2
      comp=Z,13nm,1.2s,baz=184,slow=8.7,SNR=4.6
      comp=Z,739nm,0.5s
I44RU PETROPAVLOVSK63.99  19  P     P       03 03 51.2 +1.6
      baz=171,slow=3.4,SNR=6.2
PET   Petropavlovsk    64.22  19  P     P       03 03 51.7 +0.6
PET   Petropavlovsk    64.22  19deP     P       03 03 51.9 +0.9
PET                              eS     S       03 12 07.8 -2.6
PET                              e              03 13 20.1
PET                              eSS    SS      03 16 24.3 -0.2
PET                              pmax   pmax
      comp=Z,42µm,7.0s
PET                              pmax   pmax
      comp=Z,37µm,16.2s
PET                              pmax   pmax
      comp=Z,3µm,1.3s
PET                              smax   smax
      comp=E,82µm,8.8s
PET                              smax   smax
      comp=N,68µm,12.6s
PET                              smax   smax
      comp=N,60µm,16.6s
PET   Petropavlovsk    64.22  19  P     P       03 03 52.0 +0.9
      comp=N,64µmcomp=N,3µm,2.0s
JMU   Jammu            64.60 311 eP     P       03 03 55.8 +1.8
JMU                              IAmb   IAmb    03 04 03.2
      comp=Z,2µm,0.7s
JOHN  Johnston Islan   64.73  68  P     P       03 03 57.4 +2.3
BOD   Bodaibo          65.18 351 eP     P       03 03 57.6 +0.4
BOD                              pmax   pmax
      comp=Z,3µm,1.9s
BHUJ  Bhuj             65.21 299 eP     P       03 03 58.1  0.0
BHUJ                             IAmb   IAmb    03 04 03.1
      comp=Z,4µm,2.0s
PAF   Port-aux-Franc   65.29 218  P     P       03 04 00.5 +2.3
PAF                              IAmb   IAmb    03 04 05.4
      comp=Z,2µm,1.3s
JASL  Jaisalmer        65.42 303 eP     P       03 04 00.1 +0.7
JASL                             IAmb   IAmb    03 04 05.6
      comp=Z,1µm,1.1s
NIL   Nilore           66.25 311  P     P       03 04 04.0 -0.6
NIL                              IAmb   IAmb    03 04 13.3
      comp=Z,827nm,0.8s
NIL   Nilore           66.25 311  P     P       03 04 05.8 +1.2
NIL                               P     P       03 04 06.2 +1.6
NIL   Nilore           66.25 311  P     P       03 04 04.0 -0.6
NIL                              pmax   pmax
      comp=Z,827nm,0.8s
SHLS  Shalkode         66.78 323 eP     P       03 04 06.4 -1.5
SHLS                             eS     S       03 12 39.7 -2.5
SHLS                             pmax   pmax
      comp=Z,2µm,2.0s
SHLS  Shalkode         66.78 323 eP     P       03 04 06.4 -1.5
      comp=Z,2µm,2.0s
SHLS                             eS     S       03 12 39.7 -2.5
PDGK  Podgornoye       66.86 323  P     P       03 04 07.8 -0.6
UZB   Uzynbulak        67.04 322 eP     P       03 04 09.7 +0.1
UZB                              eS     S       03 12 45.9 +0.5
UZB   Uzynbulak        67.04 322 eP     P       03 04 09.7 +0.1
UZB                              eS     S       03 12 46.0 +0.5
PRZ   Przheval'sk      67.06 321  P     P       03 04 11.4 +1.7
PRZ                              IAmb   IAmb    03 04 31.8
      comp=Z,3µm,1.2s
PRZ                              PcP    PcP     03 04 38.8 +2.5
KSH   Kashi            67.07 318  P     P       03 04 10.5 +0.7
KSH                              PcP    PcP     03 04 41.9 +5.6
KSH                              S      S       03 12 45.6 -0.2
KSH                              ScS    ScS     03 13 46.4 +0.3
KSH                              pmax   pmax
      comp=Z,570nm,1.3s
KSH                              pmax   pmax
      comp=Z,22µm,7.2s
KSH                              LR     LR
      comp=Z,111µm,24.0s
KSH                              LR     LR
      comp=Z,39µm,17.5s
KSH                              LR     LR
      comp=Z,68µm,22.7s
MK31  Makanchi Array   67.31 327  P     P       03 04 11.4 +0.4
MKAR  Makanchi Array   67.31 327  P     P       03 04 11.2 +0.1
MKAR  Makanchi Array   67.31 327  P     P       03 04 11.3 +0.3
      comp=Z,587nm,0.5s,baz=122,slow=7.9,SNR=396
MKAR                             S      S       03 12 46.1 -2.1
      comp=Z,103nm,1.0s,baz=148,slow=9.5,SNR=7.7
MKAR                             PKPPKP P'P'df  03 32 24.1  -11
      comp=Z,7.2nm,0.9s,baz=304,slow=3.7,SNR=7.6
MKAR                             P4KPbc         03 40 58.4
      comp=Z,7.5nm,0.7s,baz=126,slow=4.3,SNR=12
      comp=Z,587nm,0.5s
KPKS  Kokpek           67.42 322 eP     P       03 04 12.0 +0.1
KPKS                             eS     S       03 12 50.3 +0.4
KPKS  Kokpek           67.42 322 eP     P       03 04 12.1 +0.1
KPKS                             eS     S       03 12 50.3 +0.4
KDJ   Kajisay          67.63 321  IAmb  IAmb    03 04 17.0
      comp=Z,2µm,1.5s
MA2   Magadan          67.95  12  P     P       03 04 15.5 +0.8
MA2   Magadan          67.95  12  P     P       03 04 16.3 +1.6
MA2   Magadan          67.95  12d iP    P       03 04 15.5 +0.8
MA2                              pmax   pmax
      comp=Z,4µm,1.2s
MA2   Magadan          67.95  12  P     P       03 04 15.4 +0.8
      comp=Z,88µmcomp=Z,4µm,1.8s
YAK   Yakutsk          68.22   0  P     P       03 04 15.8 -0.5
YAK   Yakutsk          68.22   0d iP    P       03 04 16.4 +0.1
YAK                              pmax   pmax
      comp=Z,4µm,0.7s
YAK   Yakutsk          68.22   0  P     P       03 04 16.6 +0.3
MDOK  Medeo            68.26 322 eP     P       03 04 17.3 +0.1
MDOK                             eS     S       03 13 00.3 +0.4
MDOK  Medeo            68.26 322 eP     P       03 04 17.3 +0.1
MDOK                             eS     S       03 13 00.4 +0.4
ULHL  Ulahol           68.28 320  P     P       03 04 17.8 +0.3
      SNR=140
KNDC  Almaty           68.34 322  P     P       03 04 18.5 +0.9
ARXS  Arharly          68.36 323 i P    P       03 04 17.7  0.0
AAA   Alma-Ata         68.37 321 i P    P       03 04 19.6 +1.8
TDK   Taldyqorghan     68.45 324 eP     P       03 04 18.4 +0.3
TDK                              eS     S       03 13 02.6 +0.9
TDK                              pmax   pmax
      comp=Z,7µm,2.1s
TDK   Taldyqorghan     68.45 324 eP     P       03 04 18.4 +0.3
      comp=Z,7µm,2.1s
TDK                              eS     S       03 13 02.6 +0.9
BOOM  Boomskoye usch   68.60 320  IAmb  IAmb    03 04 26.7
      comp=Z,3µm,1.4s
KRAR  Krasnoyarsk      69.03 339d iP    P       03 04 22.4 +1.0
TKM2  Tokmak 2         69.04 321  P     P       03 04 22.3 +0.2
      SNR=423
TKM2  Tokmak 2         69.04 321  P     P       03 04 22.6 +0.5
KBK   Karagaybulak     69.32 320  P     P       03 04 25.3 +1.6
      SNR=30
UCH   Uchtor           69.38 320  P     P       03 04 25.9 +1.4
      SNR=115
AAK   Ala-Archa        69.60 320  P     P       03 04 27.6 +2.2
      SNR=9.8
AAK   Ala-Archa        69.60 320  P     P       03 04 26.1 +0.6
AAK                              IAmb   IAmb    03 04 33.6
      comp=Z,2µm,1.4s
AAK   Ala-Archa        69.60 320  P     P       03 04 26.6 +1.2
AAK                               P     P       03 04 26.6 +1.2
AAK                               P     P       03 04 27.3 +1.8
AAK                               P     P       03 04 27.3 +1.8
AAK   Ala-Archa        69.60 320  P     P       03 04 26.1 +0.6
AAK                              pmax   pmax
      comp=Z,2µm,1.4s
AAK   Ala-Archa        69.60 320 i P    P       03 04 26.2 +0.8
      SNR=446
AAK   Ala-Archa        69.60 320  P     P       03 04 26.0 +0.6
AAK                               S     S       03 13 11.2 -4.4
FRU1  Bishkek          69.60 320  P     P       03 04 26.7 +1.4
FRU1                             IAmb   IAmb    03 04 57.2
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      comp=Z,3µm,1.8s
FRU1  Bishkek          69.60 320  P     P       03 04 26.7 +1.4
FRU1                             pmax   pmax
      comp=Z,3µm,1.8s
CHMS  Chumysh          69.61 320  P     P       03 04 26.3 +0.9
      SNR=93
KBU   Kabul Universi   69.72 310  P     P       03 04 27.0 +0.6
KBL   Kabul            69.80 310  P     P       03 04 26.3 -0.6
KBL   Kabul            69.80 310  P     P       03 04 27.8 +0.9
      SNR=580
KBL                               P     P       03 04 27.8 +0.9
      SNR=580
KBL                               P     P       03 04 28.5 +1.6
      SNR=580
KBL                               P     P       03 04 28.5 +1.6
      SNR=580
KBL   Kabul            69.80 310  P     P       03 04 26.3 -0.6
KBL                              pmax   pmax
      comp=Z,1µm,1.3s
AML   Almayashu        69.86 319  P     P       03 04 29.4 +2.1
      SNR=31
DRK   Karamyk          69.89 316  IAmb  IAmb    03 04 34.5
      comp=Z,1µm,1.1s
USP   Ospenovka        69.91 321  P     P       03 04 28.9 +1.7
      SNR=40
SGDS  Sogindy          69.92 321 eP     P       03 04 27.4 +0.1
RAR   Rarotonga        70.00 110  P     P       03 04 29.3 +1.2
RAR                              IAmb   IAmb    03 04 36.2
      comp=Z,3µm,1.5s
RAR   Rarotonga        70.00 110  P     P       03 04 30.1 +2.0
RAR   Rarotonga        70.00 110  P     P       03 04 29.3 +1.2
RAR                              pmax   pmax
      comp=Z,3µm,1.5s
RAR   Rarotonga        70.00 110  P     P       03 04 27.6 -0.6
RAR   Rarotonga        70.00 110  P     P       03 04 28.4 +0.3
EKS2  Erkin-Say        70.07 320  P     P       03 04 30.5 +2.2
      SNR=12
SMY   Shemya           70.08  27  P     P       03 04 30.0 +2.1
ZALV  Zalesovo Beam    70.71 334  P     P       03 04 30.5 -1.2
ZALV  Zalesovo Beam    70.71 334  P     P       03 04 31.1 -0.5
      comp=Z,468nm,0.6s,baz=130,slow=5.5,SNR=417
ZALV                             S      S       03 13 24.4 -3.3
      comp=Z,94nm,0.9s,baz=142,slow=7.4,SNR=7.9
ZALV                             PKPPKP P'P'df  03 32 27.4 -1.2
      comp=Z,42nm,0.9s,baz=306,slow=5.3,SNR=14
      comp=Z,468nm,0.6s
BTLS  Baital           71.08 322 eP     P       03 04 34.4 +0.2
BTLS  Baital           71.08 322 eP     P       03 04 34.5 +0.2
SEY   Seymchan         71.35  11d iP    P       03 04 36.4 +1.1
SEY                              pmax   pmax
      comp=Z,4µm,1.0s
SIMJ  Simiganj         71.49 314  P     P       03 04 36.8 -0.1
SIMJ                             IAmb   IAmb    03 04 43.4
      comp=Z,3µm,1.3s
KURBB Kurchatov Arra   71.60 329  P     P       03 04 37.2 +0.1
      comp=Z,608nm,0.7s,baz=131,slow=5.0,SNR=599
KURBB                            S      S       03 13 31.6 -6.4
      comp=Z,25nm,1.0s,baz=124,slow=12,SNR=4.6
KURBB                            PKPPKP P'P'df  03 32 23.5 -3.7
      comp=Z,4.5nm,0.8s,baz=288,slow=3.3,SNR=6.1
KURBB                            P4KPbc         03 41 15.2
      comp=Z,4.8nm,1.1s,baz=135,slow=3.5,SNR=7.2
      comp=Z,608nm,0.7s
KURBB Kurchatov Arra   71.60 329  P     P       03 04 36.5 -0.6
KURK  Kurchatov        71.61 329  P     P       03 04 36.8 -0.4
KURK  Kurchatov        71.61 329  P     P       03 04 38.0 +0.8
KURK  Kurchatov        71.61 329  P     P       03 04 37.2  0.0
KURK  Kurchatov        71.61 329  P     P       03 04 37.5 +0.4
KURK                             PcP    PcP     03 04 56.1 +1.0
KURK                             pP     pP      03 05 27.2 -0.3
KURK                             sP     sP      03 05 51.1 +0.5
DZA   Taraz            71.76 319 eP     P       03 04 38.4 +0.1
DZA   Taraz            71.76 319 eP     P       03 04 38.5 +0.1
IUG   Iuzhnay          72.28 318 eP     P       03 04 41.5  0.0
IUG                              pmax   pmax
      comp=Z,3µm,1.9s
IUG   Iuzhnay          72.28 318 eP     P       03 04 41.6  0.0
      comp=Z,3µm,1.9s
KK31  Karatay Array    72.39 319  IAmb  IAmb    03 04 49.5
      comp=Z,4µm,1.9s
KK31  Karatay Array    72.39 319 i P    P       03 04 42.3 +0.3
KKAR  Karatay Array    72.39 319  P     P       03 04 42.3 +0.3
KKAR  Karatay Array    72.39 319  IAmb  IAmb    03 04 49.5
      comp=Z,4µm,1.9s
KKAR  Karatay Array    72.39 319  P     P       03 04 42.3 +0.3
VNDA  Vanda            73.14 173  P     P       03 04 45.7 -0.1
      comp=Z,583nm,0.8s,baz=320,slow=6.3,SNR=347
VNDA                             S      SKiKP   03 13 52.4 -2.2
      comp=Z,125nm,1.2s,baz=91,slow=18,SNR=15
VNDA                             PKPPKP P'P'df  03 32 21.9 -3.2
      comp=Z,7.6nm,1.1s,baz=23,slow=0.6,SNR=4.6
      comp=Z,583nm,0.8s
NGCH  Negor - Chabah   73.25 299  P     P       03 04 49.0 +1.6
      SNR=61
NGCH                              P     P       03 04 49.4 +2.0
      SNR=61
MSEY  Mahe Island      73.39 267  P     P       03 04 49.7 +1.2
MSEY                             IAmb   IAmb    03 04 55.1
      comp=Z,3µm,1.8s
MSEY  Mahe Island      73.39 267  P     P       03 04 50.3 +1.7
MSEY  Mahe Island      73.39 267  P     P       03 04 49.7 +1.2
MSEY                             pmax   pmax
      comp=Z,3µm,1.8s
MSEY  Mahe Island      73.39 267 i P    P       03 04 49.0 +0.5
      SNR=30
XMAS  Kiritimati       73.66  86  P     P       03 04 53.2 +3.2
OTUK  Ortayu           73.71 324  P     P       03 04 50.2 +0.5
KIWB  Kanaga Island    73.80  31  P     P       03 04 50.3 +0.3
JLN   Jalan Bani Buh   73.97 295  P     P       03 04 53.1 +1.5
      SNR=206
SBA   Scott Base       74.04 172  P     P       03 04 51.9 +0.9
SBA                              IAmb   IAmb    03 05 02.7
      comp=Z,3µm,1.6s
SBA   Scott Base       74.04 172  P     P       03 04 51.9 +0.9
SBA                              pmax   pmax
      comp=Z,3µm,1.6s
ADK   Adak             74.05  31  P     P       03 04 52.2 +0.7
ADK                              IAmb   IAmb    03 04 59.1
      comp=Z,3µm,1.4s
ADK   Adak             74.05  31  P     P       03 04 52.6 +1.1
ADK   Adak             74.05  31  P     P       03 04 52.2 +0.7
ADK                              pmax   pmax
      comp=Z,3µm,1.5s
BRZS  Berezniki        74.39 326 eP     P       03 04 53.9 +0.4
BRZS  Berezniki        74.39 326 eP     P       03 04 53.9 +0.4
WBK   Wadi Bani Khal   74.47 295  P     P       03 04 56.1 +1.5
      SNR=152
WBK                               P     P       03 04 56.6 +2.0
      SNR=152
WSAR  Wadi Sarin       74.93 296  P     P       03 04 58.5 +1.3
      SNR=593
MHTO  MHTO             75.01 294  P     P       03 04 58.0 +0.4
      SNR=222
DQM   DQM              75.17 292  P     P       03 04 59.8 +1.2
      SNR=124
DQM                               P     P       03 05 00.4 +1.8
      SNR=124
JMDO  Jabal Madar      75.20 295  P     P       03 05 00.3 +1.6
      SNR=174
MAW   Mawson           75.24 201  P     P       03 04 58.5 +0.4
      comp=Z,642nm,0.9s,baz=65,slow=6.9,SNR=202
MAW                              S      S       03 14 16.0 -2.3
      comp=Z,129nm,1.2s,baz=186,slow=19,SNR=6.2
MAW                              PKKPbc PKKPbc  03 24 21.3 +0.1
      comp=Z,5.5nm,0.7s,baz=302,slow=2.8,SNR=4.1
MAW                              PKPPKP P'P'df  03 32 15.6 -6.0
      comp=Z,10nm,1.0s,baz=242,slow=5.8,SNR=4.8
      comp=Z,642nm,0.9s
SMDO  Samad            75.41 296  P     P       03 05 01.2 +1.2
      SNR=224
BIDO  Bidbid           75.44 296  P     P       03 05 01.7 +1.6
      SNR=854
ATKA  Atka Island      75.53  32  P     P       03 05 00.7 +0.8
BSY   Bisya            76.10 295  P     P       03 05 05.1 +1.3
      SNR=212
HOQ   Hoqain           76.19 296  P     P       03 05 06.0 +1.7
      SNR=599
HOQ                               P     P       03 05 06.1 +1.7
      SNR=599
HON   Honolulu         76.42  66  IAmb  IAmb    03 05 13.8
      comp=Z,2µm,0.8s
KIP   Kipapa           76.43  66  P     P       03 05 08.1 +2.4
H04N2 CROZET ISLANDS76.72 224  P     P       03 05 09.4 +2.8
      baz=25,slow=4.4,SNR=29
H04N3 CROZET ISLANDS76.74 224  P     P       03 05 08.2 +1.5
      baz=230,slow=76,SNR=16
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H04N1 CROZET ISLANDS76.74 224  P     P       03 05 07.8 +1.1
      baz=25,slow=4.4,SNR=19
ARQ   Araqi            76.84 296  P     P       03 05 09.7 +1.7
      SNR=186
ARQ                               P     P       03 05 10.0 +2.0
      SNR=186
SOHO  SOHO             77.00 296  P     P       03 05 10.5 +1.7
SOHO                              P     P       03 05 10.6 +1.8
SOHO  SOHO             77.00 296 i P    P       03 05 09.6 +0.7
      SNR=317
DMTO  DMTO             77.12 290  P     P       03 05 11.3 +1.7
      SNR=22
DMTO                              P     P       03 05 11.4 +1.8
      SNR=22
BVA0  Borovoye Array   77.15 328 i P    P       03 05 09.2 +0.1
BVAR  Borovoye Array   77.15 328  P     P       03 05 08.9 -0.2
      comp=Z,488nm,0.8s,baz=126,slow=7.5,SNR=248
BVAR                             S      S       03 14 35.0 -4.6
      comp=Z,71nm,1.1s,baz=109,slow=8.2,SNR=6.5
BVAR                             PKPPKP P'P'df  03 32 15.0 -2.5
      comp=Z,10nm,1.1s,baz=304,slow=2.9,SNR=6.1
BVAR                             P4KPbc         03 41 38.3
      comp=Z,3.2nm,0.9s,baz=134,slow=4.3,SNR=3.9
      comp=Z,488nm,0.8s
BRVK  Borovoye         77.22 328  P     P       03 05 09.1 -0.3
BRVK                             IAmb   IAmb    03 05 16.7
      comp=Z,2µm,1.2s
BRVK  Borovoye         77.22 328c iP    P       03 05 09.1 -0.3
BRVK                             pmax   pmax
      comp=Z,2µm,1.2s
MDH   Madha            77.48 298  P     P       03 05 12.6 +1.1
      SNR=57
MDH                               P     P       03 05 13.0 +1.5
      SNR=57
MDH   Madha            77.48 298 i P    P       03 05 11.2 -0.3
      SNR=106
UOSS  Minazif          77.48 297  P     P       03 05 11.1 -0.4
UOSS                             IAmb   IAmb    03 05 19.8
      comp=Z,2µm,1.3s
UOSS  Minazif          77.48 297  P     P       03 05 13.5 +2.0
UOSS                              P     P       03 05 13.6 +2.1
UOSS  Minazif          77.48 297 i P    P       03 05 11.3 -0.2
      SNR=142
UOSS  Minazif          77.48 297  P     P       03 05 10.5 -1.0
UOSS                              S     S       03 14 38.9 -5.3
HATD  Hatta, Dubai     77.52 297  P     P       03 05 13.8 +2.1
      SNR=224
HATD  Hatta, Dubai     77.52 297 i P    P       03 05 12.2 +0.5
      SNR=275
ASHO  Ashiyiah         77.55 297  P     P       03 05 13.7 +1.8
      SNR=189
ASHO  Ashiyiah         77.55 297 i P    P       03 05 12.6 +0.7
      SNR=212
MSFE  Esma-Masafi      77.61 298 i P    P       03 05 12.9 +0.6
      SNR=369
MASF  Masafi           77.62 298  P     P       03 05 14.1 +1.8
      SNR=247
MASF                              P     P       03 05 14.2 +1.9
      SNR=247
ALNE  Al Ain           77.69 296  P     P       03 05 14.5 +1.8
      SNR=276
ALNE  Al Ain           77.69 296 i P    P       03 05 13.1 +0.4
      SNR=178
RBK   Rabkut           77.78 289  P     P       03 05 15.0 +1.7
SHME  Shamm            77.79 298  P     P       03 05 15.1 +1.9
      SNR=142
SHME  Shamm            77.79 298 i P    P       03 05 13.6 +0.5
      SNR=284
TIXI  Tiksi            77.88 360  P     P       03 05 11.5 -1.2
TIXI                             IAmb   IAmb    03 05 20.0
      comp=Z,1µm,0.9s
TIXI  Tiksi            77.88 360  P     P       03 05 11.5 -1.2
TIXI                             pmax   pmax
      comp=Z,1µm,1.0s
UMZA  Um Al Zommool    77.93 295  P     P       03 05 15.6 +1.6
NAZ   Nazwa, Dubai     77.97 297  P     P       03 05 15.9 +1.7
      SNR=152
NAZ   Nazwa, Dubai     77.97 297 i P    P       03 05 14.7 +0.5
      SNR=198
FAQ   Al Faqa, Dubai   77.98 297  P     P       03 05 15.9 +1.7
      SNR=178
FAQ   Al Faqa, Dubai   77.98 297 i P    P       03 05 15.0 +0.8
      SNR=253
DOK   Doka             78.06 290  P     P       03 05 16.1 +1.3
      SNR=88
HUH   Hualalai         78.07  68  IAmb  IAmb    03 05 23.0
      comp=Z,1µm,1.2s
UMQ   Umm Al-Quwin     78.09 298  P     P       03 05 17.0 +2.2
      SNR=36
UMQ   Umm Al-Quwin     78.09 298 i P    P       03 05 15.9 +1.1
      SNR=46
ASUD  Al Ashush, Dub   78.19 297  P     P       03 05 17.1 +1.7
      SNR=129
ASUD                              P     P       03 05 17.3 +1.9
      SNR=129
ASUD  Al Ashush, Dub   78.19 297 i P    P       03 05 16.2 +0.9
      SNR=178
SBV   Sambava          78.19 258  P     P       03 05 17.8 +2.2
      SNR=56
WHFO  Wadi Hawf        78.26 290  P     P       03 05 17.1 +1.1
      SNR=79
WHFO                              P     P       03 05 17.6 +1.6
      SNR=79
AIN   Ainahou          78.36  69  IAmb  IAmb    03 06 29.9
      comp=Z,2µm,1.5s
POHA  Pohakuloa        78.37  68  P     P       03 05 18.1 +1.4
POHA  Pohakuloa        78.37  68  P     P       03 05 19.7 +2.9
HMH   Humu‘ula Sheep   78.38  69  IAmb  IAmb    03 05 25.9
      comp=Z,3µm,1.1s
MLH   Mauna Loa        78.45  69  IAmb  IAmb    03 05 25.8
      comp=Z,2µm,1.0s
AJN   Ajban            78.48 297  P     P       03 05 18.2 +1.2
      SNR=123
AJN                               P     P       03 05 18.6 +1.6
      SNR=123
AJN   Ajban            78.48 297 i P    P       03 05 17.6 +0.7
      SNR=154
UWE   Uwekahuna        78.52  69  IAmb  IAmb    03 05 25.1
      comp=Z,2µm,1.2s
ABTO  Aybut            78.60 289  P     P       03 05 19.1 +1.2
      SNR=71
BILL  Bilibino         78.69  13d iP    P       03 05 16.6 -0.6
BILL                             pmax   pmax
      comp=Z,373nm,0.9s
NIKH  Nikolski High    78.75  33  P     P       03 05 18.7 +0.9
NIKH  Nikolski High    78.75  33  P     P       03 05 19.0 +1.2
      baz=243,SNR=56
NIKH                              S     S       03 14 56.7  0.0
      baz=243
MZR   Muzera           79.50 295  P     P       03 05 24.1 +1.5
      SNR=245
MZR   Muzera           79.50 295 i P    P       03 05 23.4 +0.8
      SNR=251
TBI   Tubuai           79.52 112 eP     P       03 05 26.3 +3.6
      comp=Z,2µm,0.9s
TBI   Tubuai           79.52 112 eP     P       03 05 24.7 +2.0
      comp=Z,2µm,0.9s
TBI                              epP    pP      03 06 13.1 -1.0
      comp=Z,950nm,1.2s
TBI                              eS     S       03 15 06.9 +0.9
      comp=Z,361µm,28.8s
TBI                              eSS    SS      03 20 20.4 +1.3
      comp=Z,114µm,32.5s
TBI                              eLQ    LQ      03 27 08.1
      comp=Z,268µm,29.8s
TBI                              eLR    LR      03 30 29.6
      comp=Z,202µm,26.5s
TBI                              eLR    LR      03 30 34.0
      comp=Z,48µm,25.8s
PAE   Paea             79.70 107 eP     P       03 05 27.9 +4.2
      comp=Z,652nm,1.5s
PAE   Paea             79.70 107 eP     P       03 05 27.2 +3.5
      comp=Z,652nm,1.5s
PAE                              epP    pP      03 06 16.5 +1.6
      comp=Z,256nm,1.2s
PAE                              eS     S       03 14 56.2  -12
      comp=Z,5µm,23.0s
PAE                              eSS    SS      03 20 12.1  -10
      comp=Z,3µm,22.9s
PAE                              eLQ    LQ      03 27 08.0
      comp=Z,9µm,27.2s
PAE                              eLR    LR      03 30 28.5
      comp=Z,6µm,21.3s
PPT2  Papeete2         79.71 107 eP     P       03 05 27.5 +3.6
      comp=Z,1µm,1.2s
PPT2                             epP    pP      03 06 13.2 -1.9
      comp=Z,707nm,1.2s
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PPT2				*e*S	**S**	**03 15 05.7**	**-2.6**
	comp=Z,85µm,30.8s						
PPT2				*e*SS	**SS**	**03 20 19.7**	**-2.6**
	comp=Z,24µm,25.5s						
PPT2				*e*LQ	LQ	03 27 06.5	
	comp=Z,217µm,29.8s						
PPT2				*e*LR	LR	03 30 29.6	
	comp=Z,36µm,26.8s						
PPT2				*e*LR	LR	03 30 41.6	
	comp=Z,38µm,22.5s						
PPT	**Papeete**	**79.71**	**107**	P	**P**	**03 05 23.8**	**0.0**
	comp=Z,170nm,0.8s,baz=310,slow=9.0,SNR=19						
	comp=Z,170nm,0.8s						
PPTF	**Pamatai, Papee**	**79.72**	**107**	P	**P**	**03 05 27.6**	**+3.6**
SPIA	**Saint Paul Isl**	**79.99**	**29**	P	**P**	**03 05 25.4**	**+1.0**
	baz=241						
SPIA				S	**S**	**03 15 11.9**	**+2.4**
	baz=241						
TVO	**Taravao**	**80.01**	**107**	*e*P	**P**	**03 05 29.9**	**+4.4**
	comp=Z,743nm,1.4s						
TVO	**Taravao**	**80.01**	**107**	*e*P	**P**	**03 05 28.9**	**+3.4**
	comp=Z,743nm,1.4s						
TVO				*e*pP	**pP**	**03 06 11.1**	**-6.0**
	comp=Z,500nm,1.4s						
TVO				*e*S	**S**	**03 15 06.1**	**-5.3**
	comp=Z,12µm,28.9s						
TVO				*e*SS	**SS**	**03 20 21.9**	**-4.8**
	comp=Z,4µm,23.0s						
TVO				*e*LQ	LQ	03 27 15.1	
	comp=Z,8µm,26.3s						
TVO				*e*LR	LR	03 30 38.2	
	comp=Z,8µm,21.9s						
P08K	**Saint George I**	**80.06**	**29**	P	**P**	**03 05 26.1**	**+1.3**
	baz=242						
P08K				S	**S**	**03 15 12.2**	**+2.0**
	baz=242						
FOMA	**Nahampoana Res**	**80.34**	**246**	IAmb	IAmb	03 05 33.8	
	comp=Z,3µm,1.5s						
UNV	**Unalaska Valle**	**80.40**	**33**	P	**P**	**03 05 27.7**	**+1.1**
UNV	**Unalaska Valle**	**80.40**	**33**	P	**P**	**03 05 27.4**	**+0.8**
	baz=245,SNR=166						
UNV				S	**S**	**03 15 15.7**	**+1.8**
	baz=245						
ABPO	**Ambohimpanom**	**80.42**	**252**	P	**P**	**03 05 27.9**	**+0.1**
ABPO				IAmb	IAmb	03 05 34.2	
	comp=Z,2µm,1.7s						
ABPO	**Ambohimpanom**	**80.42**	**252**	P	**P**	**03 05 27.9**	**+0.1**
ABPO				pmax	pmax		
	comp=Z,2µm,1.7s						
JRN	**Qarnain Island**	**80.45**	**297**	P	**P**	**03 05 28.8**	**+1.2**
	SNR=139						
JRN				P	**P**	**03 05 29.0**	**+1.4**
	SNR=139						
VOI	**Vohitsoka**	**80.67**	**249**	IAmb	IAmb	03 05 35.3	
	comp=Z,3µm,1.4s						
VOI	**Vohitsoka**	**80.67**	**249**	P	**P**	**03 05 30.9**	**+1.9**
AKUT	**Akutan**	**80.91**	**33**	P	**P**	**03 05 30.4**	**+1.0**
SLWR	**Sila**	**81.32**	**295**	P	**P**	**03 05 34.0**	**+1.8**
PMOR	**Pomariorio Ree**	**81.50**	**104**	*e*P	**P**	**03 05 37.6**	**+4.3**
	comp=Z,2µm,1.1s						
PMOR	**Pomariorio Ree**	**81.50**	**104**	*e*P	**P**	**03 05 36.0**	**+2.7**
	comp=Z,2µm,1.1s						
PMOR				*e*pP	**pP**	**03 06 22.4**	**-2.6**
	comp=Z,855nm,1.1s						
PMOR				*e*S	**S**	**03 15 25.9**	**-0.8**
	comp=Z,63µm,25.3s						
PMOR				*e*SS	**SS**	**03 20 40.4**	**-8.4**
	comp=Z,15µm,24.2s						
PMOR				*e*LQ	LQ	03 27 43.4	
	comp=Z,29µm,25.8s						
PMOR				*e*LR	LR	03 31 17.2	
	comp=Z,41µm,22.7s						
AB31	**Akbulak array**	**81.57**	**322**	IAmb	IAmb	03 05 40.7	
	comp=Z,1µm,0.9s						
AB31	**Akbulak array**	**81.57**	**322**	*i* P	**P**	**03 05 32.9**	**-0.1**
ABKAR	**Akbulak array**	**81.57**	**322**	P	**P**	**03 05 32.4**	**-0.6**
ABKAR				IAmb	IAmb	03 05 40.7	
	comp=Z,1µm,0.9s						
VAH	**Vaihoa**	**81.74**	**104**	*e*P	**P**	**03 05 38.6**	**+4.1**
	comp=Z,2µm,1.4s						
VAH	**Vaihoa**	**81.74**	**104**	*e*P	**P**	**03 05 36.8**	**+2.3**
	comp=Z,2µm,1.4s						
VAH				*e*pP	**pP**	**03 06 22.9**	**-3.4**
	comp=Z,739nm,1.2s						
VAH				*e*S	**S**	**03 15 22.6**	**-6.6**
	comp=Z,50µm,24.5s						
VAH				*e*SS	**SS**	**03 20 46.8**	**-5.5**
	comp=Z,15µm,24.1s						
VAH				*e*LQ	LQ	03 27 43.1	
	comp=Z,13µm,23.1s						
VAH				*e*LR	LR	03 31 23.1	
	comp=Z,25µm,22.7s						
TRNA	**Turayna**	**81.87**	**296**	P	**P**	**03 05 36.6**	**+1.6**
	SNR=306						
SMRA	**Abu-Samra**	**82.22**	**296**	P	**P**	**03 05 38.0**	**+1.1**
	SNR=416						
SHMA	**Al-Shehemyia**	**82.31**	**297**	P	**P**	**03 05 38.7**	**+1.4**
	SNR=351						
FALS	**False Pass**	**82.46**	**33**	IAmb	IAmb	03 05 43.8	
	comp=Z,2µm,0.7s						
FALS	**False Pass**	**82.46**	**33**	P	**P**	**03 05 38.4**	**+1.0**
FALS	**False Pass**	**82.46**	**33**	P	**P**	**03 05 38.7**	**+1.3**
	baz=248,SNR=87						
FALS				S	**S**	**03 15 35.6**	**+0.7**
	baz=248						
GAMB	**Gambell**	**82.64**	**23**	IAmb	IAmb	03 05 46.4	
	comp=Z,3µm,1.4s						
GAMB	**Gambell**	**82.64**	**23**	P	**P**	**03 05 39.7**	**+1.6**
	baz=239,SNR=110						
GAMB				S	**S**	**03 15 37.1**	**+0.7**
	baz=239						
AKTO	**Aktyubinsk**	**83.14**	**322**	P	**P**	**03 05 41.0**	**-0.1**
M11K	**Mekoryuk**	**83.33**	**27**	P	**P**	**03 05 42.9**	**+1.2**
	baz=245						
M11K				S	**SKSac**	**03 15 44.9**	**+2.5**
	baz=245						
S12K	**Black Hills**	**83.49**	**32**	P	**P**	**03 05 42.8**	**0.0**
	baz=249,SNR=473						
S12K				S	**SKSac**	**03 15 46.2**	**+2.4**
	baz=249						
QSPA	**South Pole Qui**	**83.58**	**180**	P	**P**	**03 05 42.6**	**-0.6**
	comp=Z,860nm,0.7s,baz=311,slow=0.5,SNR=774						
QSPA				S	S	03 15 36.1	-10
	comp=Z,43nm,0.9s,baz=350,slow=9.3,SNR=3.3						
QSPA				PKKPbc	**PKKPbc**	**03 24 01.7**	**-1.6**
	comp=Z,23nm,0.6s,baz=79,slow=2.1,SNR=11						
QSPA				PKPPKP	**P'P'df**	**03 32 04.7**	**-2.0**
	comp=Z,27nm,1.0s,baz=214,slow=1.2,SNR=6.6						
	comp=Z,860nm,0.7s						
SVE	**Sverdlovsk**	**83.86**	**329**	*ce*P	**P**	**03 05 44.6**	**0.0**
SVE				*e*		03 08 59.8	
SVE				*e*S	**SKSac**	**03 15 41.6**	**-4.5**
SVE				*e*		03 17 07.7	
SVE				pmax	pmax		
	comp=Z,9µm,7.8s						
SVE				pmax	pmax		
	comp=Z,5µm,1.5s						
SYO	**Syowa Base**	**83.96**	**201**	⇑*i*P	**P**	**03 05 45.0**	**+0.1**
SDPT	**Sand Point**	**84.21**	**33**	P	**P**	**03 05 46.6**	**+0.2**
SDPT	**Sand Point**	**84.21**	**33**	P	**P**	**03 05 46.4**	**0.0**
	baz=250,SNR=125						
SDPT				S	**S**	**03 15 52.7**	**+0.2**
	baz=250						
CNBA	**Chernabura Isl**	**84.52**	**33**	IAmb	IAmb	03 05 54.8	
	comp=Z,2µm,1.1s						
CHNA	**Chernabura Isl**	**84.52**	**33**	P	**P**	**03 05 48.9**	**+1.0**
CHNA	**Chernabura Isl**	**84.52**	**33**	P	**P**	**03 05 48.6**	**+0.7**
	baz=251,SNR=128						
CHNA				S	**S**	**03 15 56.7**	**+1.1**
	baz=251						
M13K	**Dall Lake**	**84.63**	**27**	P	**P**	**03 05 49.0**	**+0.6**
	baz=247,SNR=142						
M13K				S	**S**	**03 16 00.4**	**+4.0**
	baz=247						
K13K	**Kusilvak Mount**	**84.66**	**26**	P	**P**	**03 05 49.6**	**+1.1**
	baz=246,SNR=1000						
K13K				S	**S**	**03 15 59.3**	**+2.7**
	baz=246						
ARTI	**Arti**	**84.88**	**328**	P	**P**	**03 05 48.8**	**-0.9**
ARTI				IAmb	IAmb	03 05 56.3	
	comp=Z,2µm,0.9s						
ARTI	**Arti**	**84.88**	**328**	*d i*P	**P**	**03 05 48.5**	**-1.2**
ARTI				*PP	**pP**	**03 06 41.7**	**0.0**
ARTI						03 09 03.4	
ARTI				S	**SKSac**	**03 15 50.4**	**-2.2**
ARTI				*SS	**sS**	**03 17 26.0**	**-4.3**
ARTI				pmax	pmax		
	comp=Z,2µm,1.2s						
TNA	**Tin City**	**84.93**	**22**	P	**P**	**03 05 50.9**	**+1.2**
	baz=243,SNR=64						
TNA				S	**S**	**03 16 01.7**	**+2.5**
	baz=243						
S14K	**Fog Glacier**	**85.02**	**32**	P	**P**	**03 05 51.3**	**+0.8**
	baz=251,SNR=141						
S14K				S	**S**	**03 16 01.8**	**+1.1**
	baz=251						
O14K	**Tigyukauivet M**	**85.18**	**29**	IAmb	IAmb	03 05 58.7	
	comp=Z,2µm,1.1s						
O14K	**Tigyukauivet M**	**85.18**	**29**	P	**P**	**03 05 52.3**	**+1.2**
	baz=249,SNR=136						
O14K				S	**S**	**03 16 03.3**	**+1.5**
	baz=249						
N14K	**Kuskokwak Cree**	**85.22**	**28**	IAmb	IAmb	03 05 59.0	
	comp=Z,2µm,1.2s						
N14K	**Kuskokwak Cree**	**85.22**	**28**	P	**P**	**03 05 52.2**	**+1.0**
	baz=249,SNR=118						
N14K				S	**S**	**03 16 04.8**	**+2.6**
	baz=249						
L14K	**Kuka Creek**	**85.29**	**27**	P	**P**	**03 05 52.7**	**+1.1**
	baz=248						
L14K				S	**S**	**03 16 04.9**	**+2.0**
	baz=248						
M14K	**Bethel**	**85.40**	**27**	P	**P**	**03 05 53.2**	**+1.1**
	baz=248,SNR=1000						
M14K				S	**S**	**03 16 06.6**	**+2.7**
	baz=248						
J14K	**Nanvaranak Lak**	**85.46**	**25**	IAmb	IAmb	03 06 00.5	
	comp=Z,2µm,1.1s						
J14K	**Nanvaranak Lak**	**85.46**	**25**	P	**P**	**03 05 53.5**	**+1.2**
	baz=247,SNR=408						
J14K				S	**S**	**03 16 07.9**	**+3.4**
	baz=247						
ANM	**Nome**	**85.46**	**23**	P	**P**	**03 05 53.5**	**+1.1**
	baz=245,SNR=37						
ANM				S	**S**	**03 16 07.9**	**+3.4**
	baz=245						
F14K	**Arctic Creek**	**85.49**	**22**	P	**P**	**03 05 53.4**	**+0.8**
	baz=244						
F14K				S	**S**	**03 16 07.8**	**+3.1**
	baz=244						
CHGN	**Chignik**	**85.62**	**32**	S	**S**	**03 16 06.5**	**+0.2**
	baz=252						
O15K	**Ungalikthiuk R**	**85.84**	**29**	IAmb	IAmb	03 06 02.0	
	comp=Z,901nm,0.9s						
O15K	**Ungalikthiuk R**	**85.84**	**29**	P	**P**	**03 05 55.2**	**+0.8**
	baz=250,SNR=172						
O15K				S	**S**	**03 16 11.0**	**+2.6**
	baz=250						
L15K	**Ungalak Mounta**	**85.95**	**27**	P	**P**	**03 05 55.5**	**+0.6**
	baz=249,SNR=506						
L15K				S	**S**	**03 16 11.2**	**+1.9**
	baz=249						
M15K	**Kasigluk River**	**85.96**	**28**	P	**P**	**03 05 55.6**	**+0.7**
	baz=250,SNR=432						
M15K				S	**S**	**03 16 11.0**	**+1.6**
	baz=250						
N15K	**Kwethluk River**	**86.05**	**28**	P	**P**	**03 05 56.5**	**+1.1**
	baz=250,SNR=573						
N15K				S	**S**	**03 16 12.2**	**+1.8**
	baz=250						
K15K	**Wolf Creek Mou**	**86.16**	**26**	P	**P**	**03 05 57.0**	**+1.2**
	baz=249,SNR=790						
K15K				S	**S**	**03 16 14.4**	**+3.1**
	baz=249						
G15K	**Niukluk**	**86.16**	**23**	P	**P**	**03 05 56.3**	**+0.5**
	baz=246,SNR=103						
G15K				S	**S**	**03 16 12.3**	**+1.0**
	baz=246						
F15K	**North Star Dit**	**86.22**	**22**	P	**P**	**03 05 56.9**	**+0.8**
	baz=246,SNR=111						
F15K				S	**S**	**03 16 14.0**	**+2.2**
	baz=246						
P16K	**Nushagak River**	**86.69**	**30**	P	**P**	**03 06 00.3**	**+1.8**
	baz=252,SNR=98						
P16K				S	**S**	**03 16 17.7**	**+1.2**
	baz=252						
H16K	**Elim**	**86.73**	**24**	P	**P**	**03 05 60.0**	**+1.4**
	baz=248						
H16K				S	**S**	**03 16 19.1**	**+2.4**
	baz=248						
N16K	**Nishlik Lake**	**86.78**	**28**	P	**P**	**03 06 00.3**	**+1.3**
	baz=251,SNR=845						
N16K				S	**S**	**03 16 20.3**	**+2.9**
	baz=251						
RAYN	**Ar Rayn**	**86.82**	**294**	P	**P**	**03 06 00.2**	**+0.2**
RAYN				IAmb	IAmb	03 06 06.5	
	comp=Z,843nm,0.8s						
RAYN	**Ar Rayn**	**86.82**	**294**	P	**P**	**03 06 01.4**	**+1.4**
RAYN	**Ar Rayn**	**86.82**	**294**	P	**P**	**03 06 00.2**	**+0.2**
RAYN				pmax	pmax		
	comp=Z,843nm,0.8s						
RAYN	**Ar Rayn**	**86.82**	**294**	*i* P	**P**	**03 06 00.7**	**+0.7**
	SNR=310						
O16K	**Kokwok River B**	**86.82**	**29**	IAmb	IAmb	03 06 06.7	
	comp=Z,1µm,1.1s						
O16K	**Kokwok River B**	**86.82**	**29**	P	**P**	**03 05 59.9**	**+0.7**
	baz=252,SNR=408						
O16K				S	**S**	**03 16 19.8**	**+2.0**
	baz=252						
L16K	**Owhat River**	**86.86**	**27**	IAmb	IAmb	03 06 07.0	
	comp=Z,2µm,1.4s						
L16K	**Owhat River**	**86.86**	**27**	P	**P**	**03 05 59.8**	**+0.5**
	baz=250,SNR=379						
L16K				S	**S**	**03 16 20.2**	**+2.1**
	baz=250						
M16K	**Timber Creek**	**86.87**	**28**	P	**P**	**03 06 00.3**	**+1.0**
	baz=251,SNR=545						
M16K				S	**S**	**03 16 20.7**	**+2.5**
	baz=251						
J16K	**Anvik River**	**86.91**	**25**	IAmb	IAmb	03 06 08.0	
	comp=Z,958nm,0.9s						
J16K	**Anvik River**	**86.91**	**25**	P	**P**	**03 06 00.4**	**+0.9**
	baz=249,SNR=586						
J16K				S	**S**	**03 16 22.2**	**+3.6**
	baz=249						
G16K	**Koyuk River**	**86.97**	**23**	P	**P**	**03 06 00.5**	**+0.8**
	baz=248						
G16K				S	**S**	**03 16 20.5**	**+1.5**
	baz=248						
CHIR	**Chirikof Islan**	**86.98**	**33**	IAmb	IAmb	03 06 07.2	
	comp=Z,2µm,1.2s						
CHIR	**Chirikof Islan**	**86.98**	**33**	P	**P**	**03 06 01.2**	**+1.3**
CHIR	**Chirikof Islan**	**86.98**	**33**	P	**P**	**03 06 01.3**	**+1.3**
	baz=254,SNR=33						
CHIR				S	**S**	**03 16 20.0**	**+0.6**
	baz=254						
C16K	**Lisburne Hills**	**87.06**	**20**	IAmb	IAmb	03 06 06.9	
	comp=Z,1µm,1.1s						
C16K	**Lisburne Hills**	**87.06**	**20**	P	**P**	**03 06 00.2**	**+0.2**
	baz=245,SNR=182						
C16K				S	**S**	**03 16 20.7**	**+1.0**
	baz=245						
I17K	**Unalakleet**	**87.08**	**25**	IAmb	IAmb	03 06 07.4	
	comp=Z,996nm,1.1s						
I17K	**Unalakleet**	**87.08**	**25**	P	**P**	**03 06 01.6**	**+1.3**
	baz=249,SNR=185						
I17K				S	**S**	**03 16 23.0**	**+2.9**
	baz=249						
Q16K	**King Salmon**	**87.25**	**30**	P	**P**	**03 06 01.5**	**+0.3**
	baz=253,SNR=28						
Q16K				S	**S**	**03 16 20.8**	**-1.0**
	baz=253						
O17K	**Koliganek Bris**	**87.36**	**29**	P	**P**	**03 06 02.4**	**+0.7**
	baz=253,SNR=369						
O17K				S	**S**	**03 16 25.0**	**+2.1**
	baz=253						
P17K	**Kvichak River**	**87.51**	**30**	P	**P**	**03 06 02.4**	**0.0**
	baz=253,SNR=61						
P17K				S	**S**	**03 16 23.7**	**-0.6**
	baz=253						
Q17K	**Contact Creek**	**87.52**	**31**	P	**P**	**03 06 02.0**	**-0.6**
	baz=254,SNR=213						
Q17K				S	**S**	**03 16 21.8**	**-2.9**
	baz=254						
L17K	**Donlin**	**87.53**	**27**	P	**P**	**03 06 03.3**	**+0.8**
	baz=252,SNR=246						
L17K				S	**S**	**03 16 27.2**	**+2.8**
	baz=252						
N17K	**Nushagak Hills**	**87.54**	**28**	P	**P**	**03 06 03.8**	**+1.3**
	baz=253,SNR=263						
N17K				S	**S**	**03 16 27.8**	**+3.2**
	baz=253						
J17K	**VABM Dome**	**87.59**	**25**	IAmb	IAmb	03 06 10.7	
	comp=Z,2µm,0.9s						
J17K	**VABM Dome**	**87.59**	**25**	P	**P**	**03 06 03.5**	**+0.7**
	baz=251,SNR=500						
J17K				S	**S**	**03 16 27.1**	**+2.0**
	baz=251						
D17K	**Noatak River**	**87.60**	**21**	P	**P**	**03 06 03.4**	**+0.7**
	baz=247,SNR=570						
D17K				S	**S**	**03 16 25.6**	**+0.8**
	baz=247						
G17K	**Kiwalik Mounta**	**87.67**	**23**	P	**P**	**03 06 03.6**	**+0.5**
	baz=249,SNR=394						
G17K				S	**S**	**03 16 27.2**	**+1.5**
	baz=249						
M17K	**Holitna River**	**87.69**	**27**	P	**P**	**03 06 04.5**	**+1.2**
	baz=252,SNR=139						
M17K				S	**S**	**03 16 29.7**	**+3.7**
	baz=252						
K17K	**Iditarod**	**87.71**	**26**	IAmb	IAmb	03 06 10.3	
	comp=Z,2µm,1.1s						
K17K	**Iditarod**	**87.71**	**26**	P	**P**	**03 06 04.2**	**+0.9**
	baz=252,SNR=638						
K17K				S	**S**	**03 16 28.6**	**+2.4**
	baz=252						
ATD	**Arta Tunnel**	**87.75**	**282**	P	**P**	**03 06 07.6**	**+3.0**
	SNR=160						
H17K	**Granite Mounta**	**87.77**	**24**	IAmb	IAmb	03 06 10.8	
	comp=Z,1µm,1.3s						
H17K	**Granite Mounta**	**87.77**	**24**	P	**P**	**03 06 04.0**	**+0.4**
	baz=250,SNR=311						
H17K				S	**S**	**03 16 27.9**	**+1.2**
	baz=250						
F17K	**Baldwin Pennin**	**87.78**	**22**	P	**P**	**03 06 04.2**	**+0.7**
	baz=249						
F17K				S	**S**	**03 16 27.7**	**+1.1**
	baz=249						
ACHA	**Angle Creek He**	**87.79**	**31**	IAmb	IAmb	03 06 09.7	
	comp=Z,1µm,1.5s						
RDOG	**Red Dog Mine**	**87.80**	**20**	P	**P**	**03 06 04.5**	**+0.8**
	baz=247,SNR=101						
RDOG				S	**S**	**03 16 25.6**	**-1.2**
	baz=247						
E17K	**Hotham Inlet**	**87.81**	**21**	P	**P**	**03 06 04.5**	**+0.9**
	baz=248,SNR=80						
E17K				S	**S**	**03 16 27.8**	**+0.9**
	baz=248						
AKT	**Akhty**	**87.87**	**312**	*e*P	**P**	**03 06 02.2**	**-2.5**
AKT				*e**PP	**pP**	**03 06 56.1**	**-1.0**
AKT				*e**SP	**sP**	**03 07 19.2**	**-0.4**
AKT				*e*		03 09 33.2	
AKT				*e*S	**SKSac**	**03 16 08.0**	**-4.0**
AKT				pmax	pmax		
	comp=Z,7µm,1.7s						
AKT				pmax	pmax		
	comp=Z,3µm,1.6s						
AKT				pmax	pmax		
	comp=N,975nm,0.8s						
AKT				pmax	pmax		
	comp=E,1µm,1.1s						
AKT				smax	smax		
	comp=N,25µm,4.1s						
AKT				smax	smax		
	comp=E,44µm,7.1s						
C17K	**DeLong Mountai**	**87.87**	**20**	P	**P**	**03 06 04.2**	**+0.2**
	baz=247,SNR=410						
C17K				S	**S**	**03 16 26.7**	**-0.9**
	baz=247						
SII	**Sitkinak Islan**	**87.95**	**33**	IAmb	IAmb	03 06 13.7	
	comp=Z,1µm,1.0s						
SII	**Sitkinak Islan**	**87.95**	**33**	P	**P**	**03 06 06.0**	**+1.4**
SII	**Sitkinak Islan**	**87.95**	**33**	P	**P**	**03 06 05.1**	**+0.5**
	baz=255,SNR=50						
SII				S	**S**	**03 16 29.5**	**+0.7**
	baz=255						
Q18K	**Katmai Hardscr**	**88.07**	**30**	P	**P**	**03 06 05.5**	**+0.3**
	baz=254,SNR=121						
Q18K				S	**S**	**03 16 27.1**	**-2.9**
	baz=254						
R18K	**Karluk**	**88.07**	**32**	P	**P**	**03 06 05.3**	**+0.3**
	baz=255						
R18K				S	**S**	**03 16 29.0**	**-0.6**
	baz=255						
P18K	**Big Mountain,**	**88.16**	**30**	P	**P**	**03 06 06.0**	**+0.4**
	baz=254,SNR=71						
P18K				S	**S**	**03 16 29.2**	**-1.4**
	baz=254						
N18K	**Kilae Creek**	**88.19**	**28**	P	**P**	**03 06 06.4**	**+0.7**
	baz=254,SNR=192						
N18K				S	**S**	**03 16 33.0**	**+2.2**
	baz=254						
L18K	**Granite Mounta**	**88.27**	**27**	P	**P**	**03 06 06.8**	**+0.8**
	baz=253,SNR=396						
L18K				S	**S**	**03 16 32.4**	**+1.0**
	baz=253						
O18K	**Koktuh Hills**	**88.29**	**29**	P	**P**	**03 06 07.0**	**+0.9**
	baz=254,SNR=67						
O18K				S	**S**	**03 16 32.8**	**+0.9**
	baz=254						
MAK	**Makhachkala**	**88.30**	**313**	*d i*P	**P**	**03 06 04.9**	**-1.6**
MAK				*e**PP	**pP**	**03 06 58.1**	**-0.8**
MAK				*e**SP	**sP**	**03 07 21.8**	**+0.3**
MAK				*e*SS	SS	03 22 29.4	+1.8
MAK				*e*SSS	SSS	03 26 07.2	
MAK				pmax	pmax		
	comp=Z,2µm,1.3s						
MAK				pmax	pmax		
	comp=Z,23µm,5.5s						
E18K	**Tukpahlearik C**	**88.38**	**21**	P	**P**	**03 06 06.6**	**+0.2**
	baz=249,SNR=308						
E18K				S	**S**	**03 16 32.4**	**+0.2**
	baz=249						
F18K	**Selawik**	**88.44**	**22**	P	**P**	**03 06 07.4**	**+0.8**
	baz=250,SNR=52						
F18K				S	**S**	**03 16 32.7**	**-0.1**
	baz=250						
M18K	**Stony River**	**88.45**	**28**	P	**P**	**03 06 07.4**	**+0.6**
	baz=254,SNR=409						
M18K				S	**S**	**03 16 35.2**	**+2.0**
	baz=254						
H18K	**Honhosa River**	**88.46**	**24**	P	**P**	**03 06 06.7**	**-0.1**
	baz=251,SNR=301						
H18K				S	**S**	**03 16 34.3**	**+1.1**
	baz=251						
G18K	**Tagagawik**	**88.59**	**23**	P	**P**	**03 06 07.2**	**-0.3**
	baz=251,SNR=195						
G18K				S	**S**	**03 16 34.4**	**+0.1**
	baz=251						
OHAK	**Old Harbor**	**88.59**	**32**	IAmb	IAmb	03 06 14.8	
	comp=Z,1µm,1.2s						
OHAK	**Old Harbor**	**88.59**	**32**	P	**P**	**03 06 08.4**	**+0.9**
OHAK	**Old Harbor**	**88.59**	**32**	P	**P**	**03 06 08.2**	**+0.6**
	baz=256,SNR=167						
OHAK				S	**S**	**03 16 33.9**	**-0.7**
	baz=256						
C18K	**Utukok River**	**88.61**	**20**	P	**P**	**03 06 07.4**	**-0.1**
	baz=249,SNR=229						
C18K				S	**S**	**03 16 33.5**	**-1.0**
	baz=249						
J18K	**Innoko River**	**88.62**	**26**	IAmb	IAmb	03 06 14.6	
	comp=Z,709nm,0.9s						
J18K	**Innoko River**	**88.62**	**26**	P	**P**	**03 06 07.9**	**+0.2**
	baz=253,SNR=874						
J18K				S	**S**	**03 16 35.8**	**+1.0**
	baz=253						
B18K	**Kokolik River**	**88.67**	**19**	P	**P**	**03 06 08.2**	**+0.6**
	baz=248,SNR=218						
B18K				S	**S**	**03 16 33.8**	**-1.1**
	baz=248						
O19K	**Port Alsworth**	**88.81**	**29**	P	**P**	**03 06 09.3**	**+0.8**
	baz=255,SNR=23						
O19K				S	**S**	**03 16 36.2**	**-0.4**
	baz=255						
Q19K	**Cape Douglas,**	**88.83**	**30**	IAmb	IAmb	03 06 17.3	
	comp=Z,2µm,1.4s						
Q19K	**Cape Douglas,**	**88.83**	**30**	P	**P**	**03 06 09.1**	**+0.4**
	baz=256,SNR=34						
Q19K				S	**S**	**03 16 36.0**	**-0.9**
	baz=256						
N19K	**Bonanza Creek**	**88.89**	**28**	P	**P**	**03 06 09.6**	**+0.5**
	baz=255,SNR=449						
N19K				S	**S**	**03 16 38.5**	**+0.9**
	baz=255						
GCSA	**Galena City Sc**	**88.94**	**24**	P	**P**	**03 06 09.3**	**+0.3**
	baz=253,SNR=174						
GCSA				S	**S**	**03 16 38.7**	**+1.2**
	baz=253						
L19K	**White Mountain**	**89.08**	**27**	IAmb	IAmb	03 06 17.3	
	comp=Z,1µm,1.1s						
L19K	**White Mountain**	**89.08**	**27**	P	**P**	**03 06 10.4**	**+0.6**
	baz=255,SNR=394						
L19K				S	**S**	**03 16 40.8**	**+1.7**

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      baz=255
KDAK  Kodiak Island   89.09  32   P       P        03 06 10.2 +0.3
KDAK                              IAmb    IAmb     03 06 17.8
      comp=Z,969nm,1.1s
KDAK  Kodiak Island   89.09  32   P       P        03 06 10.2 +0.3
KDAK                              pmax    pmax
      comp=Z,969nm,1.1s
KDAK  Kodiak Island   89.09  32   P       P        03 06 10.4 +0.5
      baz=257
KDAK                              S       S        03 16 39.4 +0.1
      baz=257
P19K  Oil Pt          89.21  30   P       P        03 06 10.5  0.0
      baz=256,SNR=44
P19K                              S       S        03 16 38.0 -2.4
      baz=256
A19K  Wainwright      89.22  19   P       P        03 06 10.9 +0.7
      baz=249,SNR=508
A19K                              S       S        03 16 39.0 -0.9
      baz=249
F19K  Shaleruckik Mo  89.22  22   P       P        03 06 10.5 +0.2
      baz=252
F19K                              S       S        03 16 38.6 -1.6
      baz=252
M19K  Big River Lodg  89.22  27   P       P        03 06 11.3 +0.8
      baz=255,SNR=314
M19K                              S       S        03 16 41.2 +0.8
      baz=255
J19K  Poorman         89.24  25   P       P        03 06 10.9 +0.4
      baz=254,SNR=317
J19K                              S       S        03 16 40.9 +0.4
      baz=254
G19K  Purcell Mounta  89.27  23   IAmb    IAmb     03 06 17.7
      comp=Z,891nm,1.1s
G19K  Purcell Mounta  89.27  23   P       P        03 06 10.8 +0.2
      baz=252,SNR=284
G19K                              S       S        03 16 40.3 -0.4
      baz=252
C19K  Lookout Ridge   89.32  20   P       P        03 06 11.4 +0.6
      baz=250,SNR=1000
C19K                              S       S        03 16 40.0 -1.1
      baz=250
H19K  Roundabout Mou  89.34  24   IAmb    IAmb     03 06 18.1
      comp=Z,1µm,1.2s
H19K  Roundabout Mou  89.34  24   P       P        03 06 11.2 +0.3
      baz=253,SNR=490
H19K                              S       S        03 16 40.6 -0.7
      baz=253
Q20K  Shuyak Island   89.38  31   P       P        03 06 12.2 +1.0
      baz=257,SNR=16
Q20K                              S       S        03 16 40.5 -1.4
      baz=257
L20K  Farewell, AK    89.60  27   P       P        03 06 12.8 +0.6
      baz=255,SNR=453
L20K                              S       S        03 16 44.2 +0.3
      baz=255
O20K  Slope Mountain  89.61  29   P       P        03 06 12.5 +0.1
      baz=257,SNR=20
O20K                              S       S        03 16 41.6 -2.6
      baz=257
E19K  Redstone River  89.62  22   IAmb    IAmb     03 06 18.5
      comp=Z,679nm,0.8s
E19K  Redstone River  89.62  22   P       P        03 06 13.3 +1.1
      baz=252,SNR=962
E19K                              S       S        03 16 42.6 -1.3
      baz=252
D19K  Kuna River      89.62  21   IAmb    IAmb     03 06 19.0
      comp=Z,1µm,1.1s
D19K  Kuna River      89.62  21   P       P        03 06 12.3  0.0
      baz=252,SNR=701
D19K                              S       S        03 16 42.1 -1.8
      baz=252
TAOE  Nuku Hiva Isla  89.62  99⇑iP      P        03 06 18.3 +4.8
      comp=Z,2µm,1.0s
TAOE  Nuku Hiva Isla  89.62  99  eP       P        03 06 16.5 +3.0
      comp=Z,2µm,1.0s
TAOE  Nuku Hiva Isla  89.62  99  eS       S        03 16 37.7 -8.5
      comp=Z,31µm,28.4s
TAOE                             eSS      SS       03 22 36.1  -12
      comp=Z,80µm,26.8s
TAOE                             eLQ      LQ       03 31 15.8
      comp=Z,63µm,27.5s
TAOE                             eLR      LR       03 35 00.5
      comp=Z,39µm,23.3s
TAOE  Nuku Hiva Isla  89.62  99   P       P        03 06 14.3 +0.8
K20K  Telida          89.74  26   P       P        03 06 13.5 +0.6
      baz=255,SNR=495
K20K                              S       S        03 16 46.1 +0.9
      baz=255
M20K  Styx River      89.79  28   P       P        03 06 13.6 +0.3
      baz=256,SNR=402
M20K                              S       S        03 16 46.3 +0.5
      baz=256
GNI   Garni           89.89 310   P       P        03 06 15.3 +1.0
GNI   Garni           89.89 310   P       P        03 06 16.3 +2.0
GNI   Garni           89.89 310   P       P        03 06 15.3 +1.0
GNI                               pmax    pmax
      comp=Z,447nm,0.9s
GNI   Garni           89.89 310   P       P        03 06 15.1 +0.8
GNI   Garni           89.89 310   P       P        03 06 15.5 +1.2
      comp=Z,15µmcomp=Z,534nm,1.5s
J20K  Nowinta River   89.92  25   P       P        03 06 14.3 +0.7
      baz=255,SNR=512
J20K                              S       S        03 16 46.4 -0.3
      baz=255
BELG  Belogornoye     89.92 323d iP       P        03 06 12.0 -1.9
BELG                              pmax    pmax
      comp=Z,215nm,1.1s
I20K  Naaghedeneel    89.94  25   IAmb    IAmb     03 06 23.2
      comp=Z,631nm,0.9s
I20K  Naaghedeneel    89.94  25   P       P        03 06 14.5 +0.8
      baz=255,SNR=55
I20K                              S       S        03 16 47.2 +0.4
      baz=255
H20K  Anotleneega Mo  89.96  24   P       P        03 06 13.7 -0.1
      baz=255,SNR=152
H20K                              S       S        03 16 47.3 +0.3
      baz=255
HOM   Homer           90.00  30   P       P        03 06 14.0 -0.1
      baz=257
HOM                               S       S        03 16 46.7 -0.8
      baz=257
F20K  Avaraart Lake   90.06  22   P       P        03 06 14.5 +0.3
      baz=254,SNR=423
F20K                              S       S        03 16 46.8 -1.0
      baz=254
N20K  Mount Spurr     90.06  28   P       P        03 06 13.8 -0.7
      baz=257
N20K                              S       S        03 16 46.3 -2.0
      baz=257
SPCR  Spurr Chakacha  90.06  28   P       P        03 06 14.6 +0.1
      baz=257,SNR=45
SPCR                              S       S        03 16 45.9 -2.5
      baz=257
KIRV  Kirov           90.13 329d iP       P        03 06 13.0 -1.7
CNPM  China Poot      90.17  30   IAmb    IAmb     03 06 17.9
      comp=Z,2µm,2.0s
D20K  Etivluk River   90.21  21   IAmb    IAmb     03 06 21.8
      comp=Z,916nm,1.1s
D20K  Etivluk River   90.21  21   P       P        03 06 15.0 +0.1
      baz=253,SNR=665
D20K                              S       S        03 16 47.3 -2.0
      baz=253
E20K  Nigu River      90.23  21   P       P        03 06 15.3 +0.2
      baz=253,SNR=889
E20K                              S       S        03 16 47.1 -2.5
      baz=253
B20K  Meade River     90.42  19   IAmb    IAmb     03 06 22.7
      comp=Z,688nm,0.9s
B20K  Meade River     90.42  19   P       P        03 06 16.1 +0.3
      baz=252,SNR=313
B20K                              S       S        03 16 48.9 -2.0
      baz=252
BRSE  Bradley Lake S  90.46  30   P       P        03 06 16.3  0.0
      baz=258,SNR=34
BRSE                              S       S        03 16 49.1 -2.7
      baz=258
PPLA  Purkeypile      90.46  27   P       P        03 06 16.3 -0.1
      baz=257
PPLA                              S       S        03 16 49.1 -2.9
      baz=257
CAPN  Captain Cook N  90.47  29   P       P        03 06 16.5 +0.3
      baz=258
CAPN                              S       S        03 16 51.9 +0.1
      baz=258
IMAR  Indian Mountai  90.54  24   P       P        03 06 15.8 -0.7
SKT   Skwentna        90.55  28   P       P        03 06 15.5 -1.2
      baz=258,SNR=243
SKT                               S       S        03 16 50.1 -2.6
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      baz=258
CAST  Castle Rocks    90.62  26   P       P        03 06 16.5 -0.5
      baz=257
CAST                              S       S        03 16 51.8 -1.4
      baz=257
CHUM  Lake Minchumin  90.63  26   P       P        03 06 17.0 +0.1
      baz=257
CHUM                              S       S        03 16 52.1 -1.0
      baz=257
G21K  Allakaket       90.77  23   P       P        03 06 17.4 -0.1
      baz=256,SNR=237
G21K                              S       S        03 16 52.3 -2.1
      baz=256
SUA   Susitna One     90.81  28   P       P        03 06 17.6 -0.4
      baz=258,SNR=316
SUA                               S       S        03 16 52.0 -3.2
      baz=258
H21K  Melozitna Rive  90.84  24   P       P        03 06 18.0 +0.1
      baz=256,SNR=213
H21K                              S       S        03 16 53.8 -1.3
      baz=256
GEVA  Gevas           90.93 308   IAmb    IAmb     03 06 25.9
      comp=Z,904nm,1.0s
KIBK  Kibwezi         90.94 268   P       P        03 06 20.9 +1.3
KIBK  Kibwezi         90.94 268   P       P        03 06 21.3 +1.7
      SNR=98
F21K  Alatna River    90.95  22   P       P        03 06 18.8 +0.4
      baz=256,SNR=124
F21K                              S       S        03 16 54.8 -1.2
      baz=256
C21K  Knifeblade Rid  90.97  20   P       P        03 06 19.1 +0.6
      baz=255,SNR=268
C21K                              S       S        03 16 53.9 -2.2
      baz=255
A21K  Barrow          90.98  18   P       P        03 06 18.7 +0.3
      baz=253,SNR=18
A21K                              S       S        03 16 54.0 -2.1
      baz=253
E21K  Killik River    91.07  21   P       P        03 06 19.0  0.0
      baz=255
E21K                              S       S        03 16 54.4 -2.8
      baz=255
O22K  Cooper Landing  91.11  29   P       P        03 06 18.8 -0.4
      baz=259
O22K                              S       S        03 16 54.5 -3.0
      baz=259
B21K  Ikpikpuk River  91.15  20   IAmb    IAmb     03 06 26.2
      comp=Z,601nm,0.8s
B21K  Ikpikpuk River  91.15  20   P       P        03 06 19.6 +0.4
      baz=255
B21K                              S       S        03 16 55.2 -2.4
      baz=255
M22K  Willow          91.16  28   P       P        03 06 19.1 -0.3
      baz=259,SNR=113
M22K                              S       S        03 16 54.3 -3.7
      baz=259
SEW   Seward          91.17  30   P       P        03 06 19.4 -0.1
      baz=259,SNR=62
SEW                               S       S        03 16 54.1 -4.0
      baz=259
NCK   Nalchik         91.20 313d iP       P        03 06 20.1  0.0
NCK                               pmax    pmax
      comp=Z,828nm,1.7s
RC01  Rabbit Creek A  91.22  29   P       P        03 06 19.5 -0.2
      baz=259,SNR=262
RC01                              S       S        03 16 54.3 -4.3
      baz=259
CUT   Chulitna        91.22  27   IAmb    IAmb     03 06 25.5
      comp=Z,1µm,1.2s
CUT   Chulitna        91.22  27   P       P        03 06 19.3 -0.4
      baz=259,SNR=33
CUT                               S       S        03 16 54.6 -4.0
      baz=259
BPAW  Bear Paw Mtn.   91.25  26   P       P        03 06 19.5 -0.3
      baz=258,SNR=312
BPAW                              S       S        03 16 54.0 -4.9
      baz=258
A22K  Sinclair Lake   91.40  19   P       P        03 06 20.7 +0.3
      baz=255,SNR=452
A22K                              S       S        03 16 55.4 -4.4
      baz=255
TRF   Thorofare Moun  91.42  26   P       P        03 06 20.1 -0.8
      baz=259
TRF                               S       S        03 16 57.7 -3.0
      baz=259
H22K  Ishtalitna Cre  91.46  24   P       P        03 06 21.1 +0.3
      baz=258,SNR=223
H22K                              S       S        03 16 59.3 -1.4
      baz=258
F22K  John River      91.51  22   P       P        03 06 21.1 +0.2
      baz=257
F22K                              S       S        03 16 57.8 -3.2
      baz=257
MLY   Manley          91.54  25   IAmb    IAmb     03 06 29.0
      comp=Z,670nm,1.0s
MLY   Manley          91.54  25   P       P        03 06 21.1 -0.1
      baz=258,SNR=684
MLY                               S       S        03 16 58.0 -3.5
      baz=258
PMR   Palmer          91.59  28   P       P        03 06 21.1 -0.4
PMR   Palmer          91.59  28   P       P        03 06 21.0 -0.4
      baz=260,SNR=235
PMR                               S       S        03 16 59.0 -2.9
      baz=260
G22K  Bettles         91.63  23   P       P        03 06 21.4 -0.1
      baz=258,SNR=174
G22K                              S       S        03 16 58.2 -3.9
      baz=258
D22K  Ayikyak River   91.64  21   IAmb    IAmb     03 06 26.0
      comp=Z,1µm,1.8s
D22K  Ayikyak River   91.64  21   P       P        03 06 22.0 +0.5
      baz=257
D22K                              S       S        03 16 58.4 -3.7
      baz=257
B22K  Teshekpuk Lake  91.73  19   IAmb    IAmb     03 06 28.6
      comp=Z,1µm,1.1s
B22K  Teshekpuk Lake  91.73  19   P       P        03 06 21.6 -0.3
      baz=256,SNR=459
B22K                              S       S        03 16 59.4 -3.5
      baz=256
KBZ   Khabaz          91.73 314   P       P        03 06 23.1 +0.6
      comp=Z,137nm,0.8s,baz=81,slow=3.2,SNR=78
KBZ                               PP      PP       03 10 06.9 +2.4
      comp=Z,107nm,1.1s,baz=56,slow=4.7,SNR=3.6
KBZ                               S       SKSac    03 16 31.1 -2.9
      comp=Z,40nm,1.1s,baz=278,slow=22,SNR=6.9
KBZ                               PKKPbc  PKKPbc   03 23 42.4 +0.4
      comp=Z,16nm,0.9s,baz=175,slow=6.0,SNR=5.4
KBZ                               PKPPKP  P'P'df   03 31 53.4 +2.2
      comp=Z,7.1nm,0.9s,baz=58,slow=0.7,SNR=5.5
      comp=Z,137nm,0.8s
GURO  Guroymak-BITLI  91.76 308   IAmb    IAmb     03 06 30.4
      comp=Z,895nm,1.1s
E22K  Anaktuvuk Pass  91.78  22   IAmb    IAmb     03 06 30.2
      comp=Z,885nm,1.3s
E22K  Anaktuvuk Pass  91.78  22   P       P        03 06 22.2 -0.1
      baz=257,SNR=446
E22K                              S       S        03 16 59.6 -4.0
      baz=257
GOF   Gofitskoye      91.80 315d iP       P        03 06 23.2 +0.4
GOF                              eS       SKSac    03 16 30.2 -4.2
PWL   Port Wells      91.85  29   P       P        03 06 22.4 -0.2
      baz=260,SNR=67
PWL                               S       S        03 17 01.6 -2.7
      baz=260
KMBO  Kilima Mbogo    91.86 269   P       P        03 06 24.7 +0.6
KMBO                              IAmb    IAmb     03 06 31.0
      comp=Z,966nm,1.6s
KMBO  Kilima Mbogo    91.86 269   P       P        03 06 26.0 +1.9
KMBO  Kilima Mbogo    91.86 269   P       P        03 06 24.7 +0.6
KMBO                              pmax    pmax
      comp=Z,966nm,1.7s
KMBO  Kilima Mbogo    91.86 269 i P       P        03 06 24.6 +0.6
      SNR=218
KNK   Knik Glacier    91.88  28   P       P        03 06 23.0 +0.1
      baz=260,SNR=181
KNK                               S       S        03 17 02.2 -2.4
      baz=260
SHA1  Shidzhatmaz     91.91 314d iP       P        03 06 23.8 +0.1
KIV   Kislovodsk      91.91 314   P       P        03 06 23.2 -0.2
KIV   Kislovodsk      91.91 314   P       P        03 06 25.1 +1.6
KIV   Kislovodsk      91.91 314 ⇑P       P        03 06 24.3 +0.8
KIV   Kislovodsk      91.91 314 eP       P        03 06 22.6 -0.9
KIV                             e*PP     pP       03 07 15.9 -0.1
KIV                             e*SP     sP       03 07 40.2 +1.7
KIV                             e                 03 10 05.3
KIV                             ePPP     PPP      03 12 04.2
KIV                             e                 03 16 33.7
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KIV                              eSS      SS       03 23 20.3 +0.4
KIV                               pmax    pmax
      comp=Z,2µm,4.2s
KIV                               pmax    pmax
      comp=Z,213nm,1.1s
KIV                               MLR     MLR
      comp=Z,22µm,20.0s
KIV   Kislovodsk      91.91 314 i P       P        03 06 23.5  0.0
      SNR=53
KIV   Kislovodsk      91.91 314   P       P        03 06 22.9 -0.5
KIV                               S       S        03 17 01.4 -4.4
KIV   Kislovodsk      91.91 314   P       P        03 06 24.0 +0.5
      comp=Z,7µmcomp=Z,174nm,1.6s
SML   Sawmill         92.01  28   P       P        03 06 23.5  0.0
      baz=260,SNR=564
SML                               S       S        03 17 03.5 -2.3
      baz=260
MCK   McKinley        92.07  26   P       P        03 06 22.8 -0.8
      baz=260
MCK                               S       S        03 17 02.1 -4.1
      baz=260
WAT1  Susitna Watana  92.08  27   P       P        03 06 23.3 -0.5
      baz=260
WAT1                              S       S        03 17 02.4 -4.0
      baz=260
I23K  Minto, Yukon-K  92.14  25   IAmb    IAmb     03 06 30.7
      comp=Z,1µm,1.0s
I23K  Minto, Yukon-K  92.14  25   P       P        03 06 23.8 -0.1
      baz=260,SNR=946
I23K                              S       S        03 17 02.2 -4.5
      baz=260
NEA2  Nenana          92.16  25   P       P        03 06 23.5 -0.6
      baz=260,SNR=345
NEA2                              S       S        03 17 04.0 -3.0
      baz=260
P23K  Montague Islan  92.16  30   IAmb    IAmb     03 06 30.9
      comp=Z,952nm,1.4s
P23K  Montague Islan  92.16  30   P       P        03 06 24.3 +0.2
      baz=261,SNR=127
P23K                              S       S        03 17 05.7 -1.4
      baz=261
G23K  Bananza Creek   92.16  23   IAmb    IAmb     03 06 31.2
      comp=Z,1µm,1.1s
G23K  Bananza Creek   92.16  23   P       P        03 06 24.5 +0.5
      baz=259,SNR=1000
G23K                              S       S        03 17 05.7 -1.3
      baz=259
H23K  Yukon River     92.19  24   IAmb    IAmb     03 06 31.2
      comp=Z,633nm,1.1s
H23K  Yukon River     92.19  24   P       P        03 06 24.4 +0.2
      baz=259,SNR=491
H23K                              S       S        03 17 05.1 -2.1
      baz=259
COLD  Coldfoot        92.19  23   IAmb    IAmb     03 06 31.2
      comp=Z,582nm,0.9s
COLD  Coldfoot        92.19  23   P       P        03 06 24.6 +0.5
      baz=259,SNR=291
COLD                              S       S        03 17 06.1 -1.0
      baz=259
M23K  Glacier View    92.29  28   P       P        03 06 24.4 -0.3
      baz=261,SNR=193
M23K                              S       S        03 17 05.1 -3.2
      baz=261
D23K  Nanushuk River  92.36  21   IAmb    IAmb     03 06 32.4
      comp=Z,985nm,1.1s
D23K  Nanushuk River  92.36  21   P       P        03 06 25.2 +0.3
      baz=258,SNR=608
D23K                              S       S        03 17 06.1 -2.4
      baz=258
WAT6  Susitna Watana  92.41  27   P       P        03 06 24.8 -0.6
      baz=261,SNR=443
WAT6                              S       S        03 17 06.3 -3.2
      baz=261
GLI   Glacier Island  92.45  29   P       P        03 06 25.2 -0.2
      baz=261,SNR=174
GLI                               S       S        03 17 07.7 -1.9
      baz=261
SCM   Sheep Creek Mo  92.48  28   P       P        03 06 25.5 -0.2
      baz=261,SNR=328
SCM                               S       S        03 17 08.1 -1.9
      baz=261
C23K  Itkillik River  92.56  20   IAmb    IAmb     03 06 32.5
      comp=Z,629nm,0.9s
C23K  Itkillik River  92.56  20   P       P        03 06 25.8 +0.1
      baz=259,SNR=210
C23K                              S       S        03 17 06.1 -4.2
      baz=259
E23K  Chandalar       92.57  22   IAmb    IAmb     03 06 33.2
      comp=Z,572nm,0.9s
E23K  Chandalar       92.57  22   P       P        03 06 26.4 +0.4
      baz=259,SNR=405
E23K                              S       S        03 17 08.1 -2.6
      baz=259
Q23K  Middleton Isla  92.61  31   IAmb    IAmb     03 06 33.1
      comp=Z,468nm,0.9s
Q23K  Middleton Isla  92.61  31   P       P        03 06 26.4 +0.2
      baz=262,SNR=21
Q23K                              S       S        03 17 11.2 +0.2
      baz=262
DHY   Denali Highway  92.65  27   IAmb    IAmb     03 06 33.1
      comp=Z,770nm,0.8s
DHY   Denali Highway  92.65  27   P       P        03 06 26.2 -0.3
      baz=261,SNR=678
DHY                               S       S        03 17 08.7 -3.0
      baz=261
TOLK  Toolik Lake Re  92.70  21   IAmb    IAmb     03 06 33.6
      comp=Z,769nm,1.2s
TOLK  Toolik Lake Re  92.70  21   P       P        03 06 26.6 +0.1
      baz=260,SNR=202
TOLK                              S       S        03 17 08.1 -3.5
      baz=260
NVL   N'lazarevskaya  92.71 197  eP       P        03 06 28.0 +1.5
NVL                              eS       SKSac    03 16 38.6 +0.1
NVL                               pmax    pmax
      comp=Z,44nm,0.5s
NVL                               smax    smax
      comp=N,19µm,14.7s
COLA  College         92.72  25   P       P        03 06 25.5 -1.1
COLA  College         92.72  25   P       P        03 06 25.9 -0.7
COLA  College         92.72  25 ⇓P       P        03 06 26.2 -0.3
COLA  College         92.72  25   P       P        03 06 26.3 -0.3
      baz=261
COLA                              S       S        03 17 09.0 -2.8
      baz=261
COLA  College         92.72  25   P       P        03 06 25.2 -1.4
FID   Port Fidalgo    92.73  29   IAmb    IAmb     03 06 33.2
      comp=Z,532nm,1.1s
H24K  Noodor Dome     92.87  24   IAmb    IAmb     03 06 34.3
      comp=Z,1µm,1.1s
H24K  Noodor Dome     92.87  24   P       P        03 06 27.4 +0.1
      baz=261,SNR=905
H24K                              S       S        03 17 11.6 -1.6
      baz=261
E24K  Your Creek      92.99  22   P       P        03 06 27.9  0.0
      baz=260,SNR=147
E24K                              S       S        03 17 11.2 -3.1
      baz=260
HDA   Harding Lake    93.04  26   IAmb    IAmb     03 06 32.7
      comp=Z,708nm,1.1s
HDA   Harding Lake    93.04  26   P       P        03 06 26.7 -1.4
      baz=262,SNR=393
HDA                               S       S        03 17 09.9 -4.7
      baz=262
D24K  Happy Valley    93.05  21   IAmb    IAmb     03 06 35.3
      comp=Z,1µm,1.2s
D24K  Happy Valley    93.05  21   P       P        03 06 29.0 +0.9
      baz=260,SNR=175
D24K                              S       S        03 17 11.0 -3.6
      baz=260
EYAK  Cordova Ski Ar  93.06  30   P       P        03 06 29.0 +0.8
EYAK  Cordova Ski Ar  93.06  30   P       P        03 06 29.0 +0.8
      baz=262,SNR=59
EYAK                              S       S        03 17 13.2 -1.7
      baz=262
M24K  Tolsona, Glenn  93.06  28   P       P        03 06 28.8 +0.5
      baz=262,SNR=256
M24K                              S       S        03 17 14.4 -0.7
      baz=262
KLU   Klutina         93.10  29   P       P        03 06 29.5 +1.0
      baz=262,SNR=163
KLU                               S       S        03 17 14.4 -1.1
      baz=262
KOPT  Kop Dagi        93.10 310   IAmb    IAmb     03 06 38.0
      comp=Z,749nm,1.2s
IL31                  93.12  25   IAmb    IAmb     03 06 33.4
      comp=Z,637nm,1.2s
ILAR  Eielson Array   93.12  25   P       P        03 06 26.2 -2.2
ILAR  Eielson Array   93.12  25   P       P        03 06 27.4 -1.1
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          comp=Z,199nm,1.0s,baz=248,slow=2.3,SNR=260
ILAR                                 PP       PP      03 10 12.3  -2.5
          comp=Z,263nm,1.2s,baz=257,slow=6.0,SNR=11
ILAR                                 PKKPbc   PKKPbc  03 23 38.4  -1.0
          comp=Z,25nm,0.8s,baz=34,slow=0.2,SNR=22
ILAR                                 SKKPbc   SKKPbc  03 26 55.1  -3.3
          comp=Z,6.9nm,1.0s,baz=129,slow=4.1,SNR=5.4
ILAR                                 PKPPKP   P'P'df  03 31 49.3  +1.6
          comp=Z,2.9nm,1.0s,baz=10,slow=3.0,SNR=4.7
          comp=Z,199nm,1.0s
F24K  Squaw Lake          93.13  22  IAmb     IAmb    03 06 35.8
          comp=Z,956nm,1.1s
F24K  Squaw Lake          93.13  22  P        P       03 06 29.0  +0.5
          baz=261,SNR=416
F24K                                 S        S       03 17 12.8  -2.7
          baz=261
G24K  Hadweenzic Riv      93.16  23  IAmb     IAmb    03 06 35.8
          comp=Z,597nm,0.9s
G24K  Hadweenzic Riv      93.16  23  P        P       03 06 28.9  +0.3
          baz=261,SNR=437
G24K                                 S        S       03 17 12.0  -3.7
          baz=261
C24K  Franklin Bluff      93.19  20  P        P       03 06 28.5  -0.2
          baz=260
C24K                                 S        S       03 17 12.1  -3.7
          baz=260
VRH   Novokhopyorsk       93.38 321  eP       P       03 06 28.5  -1.4
VRH                                  e*PP     pP      03 07 21.9  -0.6
VRH                                  e                03 16 38.1
VRH                                  eS       S       03 17 14.3  -3.8
VRH                                  pmax     pmax
          comp=Z,470nm,0.7s
VRH                                  smax     smax
          comp=N,60µm,14.2s
LABN  Labinsk             93.39 314d iP       P       03 06 29.9  -0.2
LABN                                 e*PP     pP      03 07 20.4  -2.3
LABN                                 e                03 10 18.1
LABN                                 eS       SKSac   03 16 43.7  +0.5
LABN                                 eSS      SS      03 23 36.3  -4.4
LABN                                 pmax     pmax
          comp=Z,327nm,1.3s
LABN                                 pmax     pmax
          comp=N,80nm,1.7s
LABN                                 pmax     pmax
          comp=E,11nm,1.0s
LABN                                 pmax     pmax
          comp=Z,4µm,2.7s
LABN                                 pmax     pmax
          comp=N,719nm,2.1s
LABN                                 pmax     pmax
          comp=E,166nm,1.9s
LABN                                 smax     smax
          comp=N,141µm,7.3s
LABN                                 smax     smax
          comp=E,6µm,5.3s
K24K  Donnelly Dome       93.46  26  P        P       03 06 30.1   0.0
          baz=263,SNR=230
K24K                                 S        S       03 17 15.5  -3.0
          baz=263
PAX   Paxson              93.50  27  IAmb     IAmb    03 06 37.1
          comp=Z,904nm,1.1s
PAX   Paxson              93.50  27  P        P       03 06 30.2  -0.2
          baz=263,SNR=774
PAX                                  S        S       03 17 16.2  -2.8
          baz=263
RAGM  Ragged Mountai      93.56  30  IAmb     IAmb    03 06 37.7
          comp=Z,558nm,1.1s
HARP  HAARP               93.57  28  P        P       03 06 30.8  +0.2
          baz=263,SNR=76
HARP                                 S        S       03 17 17.7  -1.7
          baz=263
KAIM  Kayak Island        93.64  30  IAmb     IAmb    03 06 38.2
          comp=Z,1µm,1.1s
KAIM  Kayak Island        93.64  30  P        P       03 06 31.1  +0.1
          baz=264,SNR=122
KAIM                                 S        S       03 17 19.7  -0.4
          baz=264
ERBR  Yeremizino-Bor      93.66 315d iP       P       03 06 29.8  -1.6
ERBR                                 i *PP    pP      03 07 22.3  -1.7
ERBR                                 i                03 10 18.9
ERBR                                 eS       SKSac   03 16 43.6  -1.0
ERBR                                 pmax     pmax
          comp=Z,5µm,4.1s
ERBR                                 pmax     pmax
          comp=E,800nm,2.7s
ERBR                                 pmax     pmax
          comp=N,361nm,2.5s
ERBR                                 pmax     pmax
          comp=N,26nm,1.1s
ERBR                                 pmax     pmax
          comp=Z,411nm,1.0s
ERBR                                 smax     smax
          comp=N,26µm,8.4s
ERBR                                 smax     smax
          comp=E,116µm,7.6s
BMRM  Bremner River       93.67  29  P        P       03 06 31.1   0.0
          baz=264,SNR=122
BMRM                                 S        S       03 17 19.1  -1.3
          baz=264
G25K  Bearman Lake        93.71  23  P        P       03 06 32.1  +1.0
          baz=263,SNR=144
G25K                                 S        S       03 17 22.7  +2.3
          baz=263
N25K  Chitina, Valde      93.74  29  P        P       03 06 31.7  +0.2
          baz=264,SNR=234
N25K                                 S        S       03 17 17.5  -3.6
          baz=264
J25K  Salcha River,       93.74  26  P        P       03 06 30.3  -1.1
          baz=263,SNR=450
J25K                                 S        S       03 17 18.3  -2.7
          baz=263
H25L  Birch Creek         93.76  24  P        P       03 06 31.8  +0.5
          baz=263,SNR=937
H25L                                 S        S       03 17 19.6  -1.3
          baz=263
HMT   Hamilton            93.76  30  IAmb     IAmb    03 06 37.8
          comp=Z,500nm,1.1s
VSLR  Vesyoloye           93.78 313d iP       P       03 06 32.2  +0.2
VSLR                                 pmax     pmax
          comp=Z,686nm,1.2s
PRP   Porcupine Dome      93.79  25  P        P       03 06 30.8  -0.9
          baz=263,SNR=90
PRP                                  S        S       03 17 18.7  -2.8
          baz=263
RIDG  Independent Ri      93.87  26  P        P       03 06 31.5  -0.5
          baz=264,SNR=955
RIDG                                 S        S       03 17 18.8  -3.3
          baz=264
D25K  Kavik River         93.94  21  P        P       03 06 31.9  -0.3
          baz=262,SNR=121
D25K                                 S        S       03 17 20.1  -2.4
          baz=262
F25K  Christian Rive      93.99  23  P        P       03 06 33.0  +0.5
          baz=263,SNR=470
F25K                                 S        S       03 17 21.6  -1.5
          baz=263
SOC   Sochi               94.02 313  eP       P       03 06 31.9  -1.1
SOC                                  e                03 10 20.3
SOC                                  eS       SKSac   03 16 44.9  -1.7
SOC                                  eSS      SS      03 23 45.2  -4.5
SOC                                  eSSS     SSS     03 27 27.0
SOC                                  pmax     pmax
          comp=Z,90nm,0.8s
BERG  Berg Lake           94.05  30  IAmb     IAmb    03 06 39.9
          comp=Z,988nm,1.1s
E25K  Arctic Village      94.08  22  IAmb     IAmb    03 06 40.1
          comp=Z,830nm,1.3s
E25K  Arctic Village      94.08  22  P        P       03 06 33.2  +0.3
          baz=263,SNR=393
E25K                                 S        S       03 17 22.2  -1.5
          baz=263
DOT   Dot Lake            94.20  27  IAmb     IAmb    03 06 40.0
          comp=Z,749nm,1.0s
BGLC  Bering Glacier      94.23  30  P        P       03 06 34.9  +1.3
          baz=265
BGLC                                 S        S       03 17 25.8  +0.7
          baz=265
LODK  Lodwar              94.23 273  P        P       03 06 36.2  +1.4
LODK                                 P        PcP     03 06 36.5  +1.4
SCRK  Sand Creek          94.27  26  P        P       03 06 33.7  -0.2
          baz=264,SNR=426
SCRK                                 S        S       03 17 22.4  -3.4
          baz=264
BMAR  Burnt Mountain      94.38  23  P        P       03 06 34.5  +0.3
CRQE  Cirque              94.38  29  P        P       03 06 34.8  +0.3
          baz=265,SNR=228
CRQE                                 S        S       03 17 25.3  -1.5
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          baz=265
L26K  Log Cabin Wild      94.47  27  IAmb     IAmb    03 06 42.1
          comp=Z,372nm,1.0s
L26K  Log Cabin Wild      94.47  27  P        P       03 06 34.8  +0.1
          baz=265,SNR=260
L26K                                 S        S       03 17 26.2  -1.1
          baz=265
MCARA McCarthy VSAT       94.47  29  P        P       03 06 34.9  +0.2
          baz=265,SNR=102
MCARA                                S        S       03 17 25.9  -1.4
          baz=265
WAX   Waxell Ridge        94.47  30  IAmb     IAmb    03 06 41.4
          comp=Z,818nm,1.3s
J26L  Joseph Creek        94.51  26  IAmb     IAmb    03 06 41.5
          comp=Z,1µm,1.2s
J26L  Joseph Creek        94.51  26  P        P       03 06 34.9  -0.1
          baz=265,SNR=832
J26L                                 S        S       03 17 25.6  -2.1
          baz=265
C26K  Camden Bay          94.52  20  P        P       03 06 35.1  +0.4
          baz=264
C26K                                 S        S       03 17 24.5  -2.9
          baz=264
TROLL Troll, Antarti      94.56 194 ⇓P        P       03 06 35.8  +0.6
          comp=Z,16µm,0.8s
TROLL                                pP       pP      03 07 26.6  -2.1
TROLL                                PKiKP    PKiKP   03 11 14.3  -2.4
TROLL                               ⇑SKSac    SKSac   03 16 47.7  -1.2
TROLL                               ⇓ScS      S       03 17 26.2  -2.0
TROLL                               ⇓PKKPdf   PKKPdf  03 23 33.6  -0.3
          comp=Z,408nm,0.6s
TROLL Troll, Antarti      94.56 194  PS       PS      03 19 17.8  +4.3
M26K  Nabesna, AK         94.57  28  P        P       03 06 35.7  +0.5
          baz=265,SNR=152
M26K                                 S        S       03 17 26.6  -1.6
          baz=265
F26K  Sheenjek River      94.57  22  IAmb     IAmb    03 06 42.6
          comp=Z,523nm,1.2s
F26K  Sheenjek River      94.57  22  P        P       03 06 35.7  +0.6
          baz=264,SNR=198
F26K                                 S        S       03 17 25.7  -2.4
          baz=264
MOPA  Mopani              94.63 246 i P       P       03 06 36.8  +0.4
G26K  Porcupine Rive      94.64  23  P        P       03 06 36.1  +0.7
          baz=265,SNR=949
G26K                                 S        S       03 17 25.5  -3.0
          baz=265
ISLE  Juniper Island      94.74  30  IAmb     IAmb    03 06 43.9
          comp=Z,956nm,1.4s
I26K  Coal Creek Min      94.75  25  IAmb     IAmb    03 06 42.3
          comp=Z,526nm,1.2s
I26K  Coal Creek Min      94.75  25  P        P       03 06 35.5  -0.5
          baz=265,SNR=294
I26K                                 S        S       03 17 25.3  -4.3
          baz=265
VORD  Divnogorie          94.88 321  eP       P       03 06 35.4  -1.4
VORD                                 e*PP     pP      03 07 29.5   0.0
VORD                                 e                03 16 42.9
VORD                                 eS       S       03 17 22.9  -8.3
VORD                                 eSP      SP      03 18 43.8  -5.2
VORD                                 eSS      SS      03 23 56.2  -5.3
VORD                                 pmax     pmax
          comp=Z,770nm,0.9s
VORD                                 smax     smax
          comp=E,3µm,6.1s
MESA  MESA                94.90  30  IAmb     IAmb    03 06 43.5
          comp=Z,516nm,1.3s
MESA  MESA                94.90  30  P        P       03 06 37.1  +0.1
          baz=266,SNR=56
MESA                                 S        S       03 17 29.3  -2.1
          baz=266
C27K  Jago River          94.91  21  IAmb     IAmb    03 06 40.0
          comp=Z,525nm,1.2s
C27K  Jago River          94.91  21  P        P       03 06 36.9  +0.3
          baz=265,SNR=129
C27K                                 S        S       03 17 26.0  -4.9
          baz=265
VSR   Storozhevoye        94.98 321  eP       P       03 06 35.6  -1.7
VSR                                  e*PP     pP      03 07 26.7  -3.2
VSR                                  e                03 16 47.6
VSR                                  eS       S       03 17 22.9  -9.2
VSR                                  eSP      SP      03 18 46.7  -3.4
VSR                                  pmax     pmax
          comp=Z,700nm,1.2s
VSR                                  smax     smax
          comp=N,51µm,17.8s
VORR  Voronezh            94.99 321  eP       P       03 06 37.0  -0.3
VORR                                 e*PP     pP      03 07 27.6  -2.3
VORR                                 e                03 16 48.6
VORR                                 eS       S       03 17 26.7  -5.4
VORR                                 pmax     pmax
          comp=Z,760nm,1.1s
M27K  Edge Creek, AK      95.09  28  IAmb     IAmb    03 06 44.8
          comp=Z,515nm,1.1s
M27K  Edge Creek, AK      95.09  28  P        P       03 06 38.0  +0.3
          baz=266,SNR=264
M27K                                 S        S       03 17 31.6  -1.3
          baz=266
K27K  Chicken             95.11  26  P        P       03 06 38.3  +0.7
          baz=266
K27K                                 S        S       03 17 31.5  -1.3
          baz=266
L27K  Beaver Creek,       95.16  27  P        P       03 06 38.4  +0.5
          baz=266,SNR=831
L27K                                 S        S       03 17 32.9  -0.4
          baz=266
BCAR  Beaver Creek A      95.18  27  P        P       03 06 38.2  +0.2
LPSR  Galich'ya Gora      95.22 322  eP       P       03 06 36.9  -1.4
LPSR                                 e*PP     pP      03 07 29.5  -1.5
LPSR                                 e                03 16 49.5
LPSR                                 eS       S       03 17 21.9   -12
LPSR                                 pmax     pmax
          comp=Z,620nm,1.0s
LPSR                                 smax     smax
          comp=N,37µm,15.7s
CTG   Chitna Glacier      95.25  29  P        P       03 06 38.9  +0.4
          baz=266,SNR=139
CTG                                  S        S       03 17 33.8  -0.6
          baz=266
ASF   Jabal al Asfar      95.34 302  PKKPbc   PKKPbc  03 23 32.6  +0.4
          comp=N,20nm,1.0s,baz=226,slow=1.6,SNR=5.0
BELA  Belgrano 2          95.38 183  IAmb     IAmb    03 06 41.2
          comp=Z,439nm,0.7s
KLMR  Klimovskoe          95.40 331  eP       P       03 06 34.7  -4.2
KLMR                                 e*PP     pP      03 07 29.4  -2.2
KLMR                                 e*SP     sP      03 07 53.7  -0.5
KLMR                                 e                03 10 29.0
KLMR                                 S        SKSac   03 16 47.9  -5.3
KLMR                                 SS       SS      03 24 05.4  -2.9
KLMR                                 pmax     pmax
          comp=Z,1µm,1.5s
I27K  Kandik River        95.41  25  P        P       03 06 39.5  +0.5
          baz=267,SNR=923
I27K                                 S        S       03 17 34.1  -1.4
          baz=267
GAZ   Gaziantep           95.44 307  IAmb     IAmb    03 06 46.5
          comp=Z,1µm,1.7s
G27K  Doyon Strip         95.47  23  IAmb     IAmb    03 06 46.6
          comp=Z,523nm,1.4s
G27K  Doyon Strip         95.47  23  P        P       03 06 39.7  +0.5
          baz=267,SNR=444
G27K                                 S        S       03 17 33.6  -2.2
          baz=267
H27K  Steamboat Moun      95.49  24  IAmb     IAmb    03 06 46.8
          comp=Z,660nm,1.1s
H27K  Steamboat Moun      95.49  24  P        P       03 06 40.0  +0.7
          baz=267,SNR=416
H27K                                 S        S       03 17 35.4  -0.7
          baz=267
BVCY  Beaver Creek        95.56  28  P        P       03 06 40.4  +0.6
          baz=267,SNR=176
BVCY                                 S        S       03 17 36.5  -0.4
          baz=267
E27K  Coleen River        95.57  22  IAmb     IAmb    03 06 46.0
          comp=Z,686nm,1.2s
E27K  Coleen River        95.57  22  P        P       03 06 39.9  +0.3
          baz=267,SNR=304
E27K                                 S        S       03 17 33.1  -3.6
          baz=267
YUK3  Moose Creek         95.72  29  P        P       03 06 41.8  +1.1
          baz=267,SNR=171
YUK3                                 S        S       03 17 37.6  -0.9
          baz=267
PCA   Pinnacle            95.74  30  IAmb     IAmb    03 06 50.5
          comp=Z,401nm,1.1s
PINM  Pinnacle            95.74  30  P        P       03 06 41.5  +0.9
          baz=267,SNR=64
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PINM                                 S        S       03 17 38.5   0.0
          baz=267
ANN   Anapa               95.74 314  eP       P       03 06 38.8  -2.0
ANN                                  i *PP    pP      03 07 31.2  -2.3
ANN                                  e                03 10 32.8
ANN                                  eS       SKSac   03 16 53.4  -2.3
ANN                                  pmax     pmax
          comp=Z,395nm,0.8s
ANN                                  pmax     pmax
          comp=N,110nm,0.9s
ANN                                  pmax     pmax
          comp=E,49nm,0.7s
ANN                                  pmax     pmax
          comp=N,786nm,2.4s
ANN                                  pmax     pmax
          comp=E,489nm,2.8s
ANN                                  pmax     pmax
          comp=Z,5µm,5.4s
ANN                                  smax     smax
          comp=N,3µm,3.1s
ANN                                  smax     smax
          comp=E,47µm,7.7s
O28M  Mount Upton         95.80  30  P        P       03 06 41.6  +0.4
          baz=267,SNR=128
O28M                                 S        S       03 17 39.0  -0.5
          baz=267
D27M  Malcolm River       95.85  21  P        P       03 06 41.4  +0.4
          baz=268,SNR=96
D27M                                 S        S       03 17 37.0  -2.1
          baz=268
YUK8  Steele Glacier      96.03  29  P        P       03 06 42.9  +0.7
          baz=268,SNR=80
YUK8                                 S        S       03 17 40.7  -0.6
          baz=268
SNAA  Sanae               96.08 194 ⇓P        P       03 06 42.4  +0.4
          comp=Z,3µm,0.7s
SNAA                                 pP       pP      03 07 33.5  -2.0
SNAA                                 PP       PP      03 10 37.5  +0.3
SNAA                                ⇑PKiKP    PKiKP   03 11 17.8  -1.4
SNAA                                ⇑SKSac    SKSac   03 16 54.0  -2.8
SNAA                                ⇓ScS      S       03 17 37.2  -3.9
SNAA                                ⇓PKKPdf   PKKPdf  03 23 26.7  -4.4
          comp=Z,430nm,0.7s
SNAA  Sanae               96.08 194  IAmb     IAmb    03 06 45.6
          comp=Z,559nm,1.2s
SNAA  Sanae               96.08 194  P        P       03 06 42.6  +0.6
          comp=Z,342nm,1.1s,baz=220,slow=6.4,SNR=230
SNAA                                 S        SKSac   03 16 55.2  -1.6
          comp=Z,44nm,1.0s,baz=341,slow=22,SNR=20
SNAA                                 PKKPbc   PKKPdf  03 23 29.8  -1.2
          comp=Z,28nm,1.0s,baz=193,slow=5.9,SNR=7.3
SNAA                                 PKPPKP   P'P'df  03 31 43.3  +0.3
          comp=Z,4.8nm,0.8s,baz=295,slow=5.0,SNR=3.8
          comp=Z,342nm,1.1s
BEIL  Beino               96.10 304  eP       P       03 06 43.5  +0.6
I28M  Miner Creek         96.11  25  P        P       03 06 42.4  +0.2
          baz=268,SNR=685
I28M                                 S        S       03 17 38.9  -2.6
          baz=268
MOS   Moscow              96.15 325  eP       P       03 06 40.3  -2.1
MOS                                  e*PP     pP      03 07 34.6  -0.6
MOS                                  e                03 10 42.3
MOS                                  eS       SKSac   03 16 55.7  -1.6
MOS                                  eSS      SS      03 24 18.7  -0.4
MOS                                  pmax     pmax
          comp=Z,500nm,0.6s
MOS                                  pmax     pmax
          comp=Z,530nm,0.7s
MOS                                  MLR      MLR
          comp=Z,42µm,21.0s
PNL   Peninsula           96.15  31  P        P       03 06 43.1  +0.7
PNL   Peninsula           96.15  31  P        P       03 06 43.2  +0.8
          baz=268,SNR=30
PNL                                  S        S       03 17 41.3  -0.7
          baz=268
F28M  Old Crow            96.20  23  IAmb     IAmb    03 06 49.3
          comp=Z,545nm,1.1s
F28M  Old Crow            96.20  23  P        P       03 06 42.7  +0.2
          baz=268,SNR=403
F28M                                 S        S       03 17 39.3  -2.8
          baz=268
MUSN  Musina, Limpop      96.23 247 i P       P       03 06 46.1  +2.4
HWQ   Hawqa               96.28 304  eP       P       03 06 44.0  +0.3
DAWY  Dawson              96.30  26  P        P       03 06 42.6  -0.4
DAWY  Dawson              96.30  26  P        P       03 06 43.2  +0.2
          baz=268,SNR=479
DAWY                                 S        S       03 17 40.4  -2.6
          baz=268
ZAHL  Zahle               96.30 303  eP       P       03 06 44.6  +0.7
RCY   Rachaya             96.32 303  eP       P       03 06 44.6  +0.6
E28M  Babbage River       96.35  22  IAmb     IAmb    03 06 49.3
          comp=Z,537nm,1.3s
E28M  Babbage River       96.35  22  P        P       03 06 43.2  +0.1
          baz=269,SNR=219
E28M                                 S        S       03 17 41.2  -2.1
          baz=269
SHBL  Chebaa              96.39 303  eP       P       03 06 45.1  +0.8
GHAJ  Ghor Haditha        96.42 301  IAmb     IAmb    03 06 50.8
          comp=Z,381nm,1.1s
QRWL  Qaraoun             96.45 303  eP       P       03 06 45.0  +0.5
BHL   Bhannes             96.50 303  eP       P       03 06 45.0  +0.3
DQRL  Deir Qamar          96.56 303  eP       P       03 06 45.5  +0.5
YUK4  Talbot Arm          96.57  29  P        P       03 06 45.1  +0.6
          baz=269,SNR=103
YUK4                                 S        S       03 17 47.8  +1.9
          baz=269
O29M  Mount Kennedy       96.58  30  P        P       03 06 45.6  +1.1
          baz=269,SNR=76
O29M                                 S        S       03 17 46.1  +0.3
          baz=269
BNN   Bunyan              96.61 308  IAmb     IAmb    03 06 50.6
          comp=Z,402nm,1.2s
D28M  Stokes Point        96.65  21  P        P       03 06 45.2  +0.8
          baz=270,SNR=23
D28M                                 S        S       03 17 45.9  +0.2
          baz=270
MMAI  Mount Meron Ar      96.66 302  P        P       03 06 45.3  -0.1
          comp=Z,146nm,1.0s,baz=94,slow=5.9,SNR=36
MMAI                                 PP       PP      03 10 43.0  -0.2
          comp=Z,72nm,1.1s,baz=102,slow=8.0,SNR=6.2
MMAI                                 PKiKP    PKiKP   03 11 23.9  +2.6
          comp=Z,6.1nm,0.5s,baz=139,slow=1.7,SNR=11
MMAI                                 PKKPbc   PKKPdf  03 23 30.3  +0.4
          comp=Z,15nm,0.9s,baz=20,slow=2.7,SNR=4.9
          comp=Z,146nm,1.0s
M29M  Somme Creek         96.68  28  IAmb     IAmb    03 06 52.3
          comp=Z,371nm,1.1s
M29M  Somme Creek         96.68  28  P        P       03 06 45.5  +0.6
          baz=269,SNR=368
M29M                                 S        S       03 17 47.3  +0.7
          baz=269
YUK6  Outpost Mounta      96.70  29  P        P       03 06 45.7  +0.5
          baz=269,SNR=42
YUK6                                 S        S       03 17 46.4  -0.7
          baz=269
OBN   Obninsk             96.73 325  P        P       03 06 44.8  -0.2
OBN   Obninsk             96.73 325 ⇑P        P       03 06 44.7  -0.4
OBN   Obninsk             96.73 325d iP       P       03 06 44.3  -0.8
OBN                                  e*PP     pP      03 07 39.9  +2.1
OBN                                  i                03 10 41.6
OBN                                  ePPP     PPP     03 12 55.1
OBN                                  i S      SKSac   03 16 54.0  -6.4
OBN                                  pmax     pmax
          comp=Z,1µm,1.7s
H29M  Whitestone          96.77  24  IAmb     IAmb    03 07 35.0
          comp=Z,459nm,1.5s
H29M  Whitestone          96.77  24  P        P       03 06 45.4  +0.3
          baz=270,SNR=64
H29M                                 S        S       03 17 43.3  -3.7
          baz=270
I29M  Ogilvie Camp,       96.78  25  P        P       03 06 45.2   0.0
          baz=270,SNR=310
I29M                                 S        S       03 17 44.3  -2.8
          baz=270
J29N  Klondike Camp       96.82  26  IAmb     IAmb    03 06 53.0
          comp=Z,604nm,1.1s
J29N  Klondike Camp       96.82  26  P        P       03 06 46.6  +1.2
          baz=270,SNR=37
J29N                                 S        S       03 17 45.9  -1.6
          baz=270
L29M  L29M                96.84  27  IAmb     IAmb    03 06 53.2
          comp=Z,628nm,1.1s
L29M  L29M                96.84  27  P        P       03 06 46.4  +0.8
          baz=270,SNR=266
L29M                                 S        S       03 17 47.0  -0.8
          baz=270
EIL   Elat                96.85 299  PKKPbc   PKKPbc  03 23 30.7  +2.7
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	comp=Z,24nm,0.6s,baz=302,slow=2.4,SNR=16						
G29M	Pine Creek	96.91	23	P	P	03 06 45.7	0.0
	baz=270,SNR=349						
G29M				S	S	03 17 44.4	-3.8
	baz=270						
E29M	Blow River	96.95	22	IAmb	IAmb	03 06 52.3	
	comp=Z,479nm,1.5s						
E29M	Blow River	96.95	22	P	P	03 06 46.2	+0.4
	baz=270,SNR=192						
E29M				S	S	03 17 43.4	-5.0
	baz=270						
P29M	Windy Craggy	96.99	31	IAmb	IAmb	03 06 53.0	
	comp=Z,402nm,1.4s						
P29M	Windy Craggy	96.99	31	P	P	03 06 47.0	+0.7
	baz=269,SNR=76						
P29M				S	S	03 17 48.9	-0.3
	baz=269						
K29M	Barlow Dome	97.12	26	P	Pdif	03 06 47.4	+0.5
	baz=270,SNR=405						
K29M				S	S	03 17 48.5	-1.8
	baz=270						
HYT	Haines Junctio	97.12	30	P	Pdif	03 06 47.4	+0.4
	baz=270,SNR=172						
HYT				S	S	03 17 49.2	-1.2
	baz=270						
DIKM	Dikmen	97.18	311	⇑P	Pdif	03 06 50.9	+3.4
DIKM	Dikmen	97.18	311	P	Pdif	03 06 50.0	+2.5
KRI	Karoi	97.32	252	*i* P	P	03 06 48.3	-0.6
N30M	Aishikik Lake	97.32	29	P	Pdif	03 06 48.7	+0.9
	baz=270,SNR=56						
N30M				S	S	03 17 51.8	-0.2
	baz=270						
P30M	Million Dollar	97.39	30	P	Pdif	03 06 49.3	+1.2
	baz=270						
P30M				S	S	03 17 51.4	-1.2
	baz=270						
EPYK	Eagle Plains	97.43	24	P	Pdif	03 06 48.7	+0.6
	baz=271,SNR=138						
EPYK				S	S	03 17 48.4	-4.3
	baz=271						
I30M	Mount Dempster	97.60	25	IAmb	IAmb	03 10 48.3	
	comp=Z,704nm,1.8s						
I30M	Mount Dempster	97.60	25	Pdiff	P	03 06 48.9	0.0
	baz=271						
I30M				S	S	03 17 50.4	-3.9
	baz=271						
LVZ	Lovozero	97.61	338	P	P	03 06 47.7	-1.1
LVZ				IAmb	IAmb	03 06 53.4	
	comp=Z,630nm,1.6s						
LVZ	Lovozero	97.61	338	⇓P	Pdif	03 06 49.1	+0.2
LVZ	Lovozero	97.61	338	P	P	03 06 48.2	-0.7
	comp=Z,7µmcomp=Z,327nm,1.7s						
G30M	tAoh Zraii Nji	97.61	23	IAmb	IAmb	03 06 54.9	
	comp=Z,523nm,1.1s						
G30M	tAoh Zraii Nji	97.61	23	Pdiff	Pdif	03 06 48.9	0.0
	baz=272						
G30M				S	S	03 17 50.9	-3.3
	baz=272						
J30M	Hart River	97.63	26	IAmb	IAmb	03 06 57.2	
	comp=Z,813nm,1.6s						
J30M	Hart River	97.63	26	Pdiff	Pdif	03 06 49.7	+0.5
	baz=271						
J30M				S	S	03 17 52.5	-2.2
	baz=271						
VNA2	Neumayer--Watz	97.65	193	⇓P	Pdif	03 06 49.4	+0.3
	comp=Z,106nm,0.7s,baz=126,slow=3.9						
VNA2				pP	pP	03 07 40.0	-3.1
VNA2				PP	PP	03 10 48.6	-0.6
VNA2				⇑PKiKP	PKiKP	03 11 37.8	+16
	baz=141,slow=5.4						
VNA2				⇓SKSac	SKSac	03 17 00.5	-4.3
	baz=123,slow=0.3						
VNA2				⇓ScS	S	03 17 51.8	-2.6
	baz=161,slow=8.5						
VNA2				⇓PKKPdf	PKKPbc	03 23 23.4	-3.8
	comp=Z,40nm,0.6s,baz=325,slow=1.8						
VNA2	Neumayer--Watz	97.65	193	PS	PS	03 20 21.0	+34
PLBC	Pleasant Camp	97.69	31	Pdiff	Pdif	03 06 49.9	+0.5
	baz=270						
PLBC				S	S	03 17 54.2	-0.8
	baz=270						
BLWY	Bulawayo	97.73	249	*i* P	Pdif	03 06 51.9	+1.3
F30M	Barrier River	97.76	23	IAmb	IAmb	03 06 55.4	
	comp=Z,400nm,1.1s						
F30M	Barrier River	97.76	23	Pdiff	Pdif	03 06 49.7	+0.1
	baz=272						
F30M				S	S	03 17 52.8	-2.6
	baz=272						
S31K	Pelican	97.78	32	Pdiff	Pdif	03 06 50.3	+0.6
	baz=270						
S31K				S	S	03 17 55.5	-0.2
	baz=270						
MATP	Matopo	97.79	248	PKKPbc	PKKPbc	03 23 27.4	+2.2
	comp=Z,9.4nm,0.9s,baz=336,slow=2.6,SNR=8.4						
O30N	Mendenhall	97.81	30	Pdiff	Pdif	03 06 50.6	+0.6
	baz=271						
O30N				S	S	03 17 55.2	-0.9
	baz=271						
MAYO	Mayo, Yukon	97.85	27	IAmb	IAmb	03 06 57.3	
	comp=Z,456nm,0.9s						
MAYO	Mayo, Yukon	97.85	27	Pdiff	Pdif	03 06 50.8	+0.8
	baz=272						
MAYO				S	S	03 17 55.1	-1.1
	baz=272						
VNA3	Neumayer Olymp	97.92	192	⇓P	Pdif	03 06 50.4	+0.2
	comp=Z,164nm,0.8s						
VNA3				pP	pP	03 07 41.3	-3.0
VNA3				⇑PKiKP	PKiKP	03 11 39.2	+17
VNA3				⇓SKSac	SKSac	03 17 02.5	-3.6
VNA3				⇑ScS	S	03 17 50.0	-6.7
VNA3				⇓PKKPdf	PKKPbc	03 23 22.4	-4.1
	comp=Z,38nm,0.8s						
VNA3	Neumayer Olymp	97.92	192	PS	PS	03 20 24.7	+35
N31M	Braeburn, Yuko	97.95	29	Pdiff	Pdif	03 06 51.2	+0.7
	baz=271						
N31M				S	S	03 17 56.6	-0.7
	baz=271						
R31K	City Hall, Gus	98.03	32	Pdiff	Pdif	03 06 51.8	+1.0
	baz=271						
R31K				S	S	03 17 57.9	0.0
	baz=271						
VNA1	Neumayer--Stat	98.05	193	⇓P	Pdif	03 06 51.3	+0.5
	comp=Z,152nm,0.8s						
VNA1				⇓PKKPdf	PKKPbc	03 23 23.8	-2.3
	comp=Z,71nm,0.9s						
APA	Apatity	98.10	337	⇓*i*P	P	03 06 48.5	-2.5
APA				*i* *PP	pP	03 07 42.0	-1.9
APA				*i*		03 10 51.0	
APA				*i*		03 17 05.0	
APA				*i* S	S	03 17 51.0	-7.1
APA				pmax	pmax		
	comp=Z,60nm,1.2s						
SIM	Simferopol'	98.10	314	*e*P	P	03 06 49.7	-1.8
SIM				*e*		03 10 51.4	
SIM				*e*		03 17 07.9	
SIM				pmax	pmax		
	comp=Z,239nm,0.9s						
KIRS	Kirsehir-Merke	98.12	309	⇑P	Pdif	03 06 52.1	+0.2
BZK	Bozkurt	98.13	311	⇑P	Pdif	03 06 53.8	+2.1
BZK	Bozkurt	98.13	311	P	Pdif	03 06 52.9	+1.2
	comp=Z,5µmcomp=Z,130nm,0.9s						
SKAG	Skagway	98.22	31	IAmb	IAmb	03 06 58.3	
	comp=Z,266nm,1.0s						
SKAG	Skagway	98.22	31	P	Pdif	03 06 52.6	+0.9
SKAG	Skagway	98.22	31	Pdiff	Pdif	03 06 52.8	+1.1
	baz=271						
SKAG				S	S	03 17 59.0	-0.5
	baz=271						
SIT	Sitka	98.28	33	P	Pdif	03 06 53.6	+1.6
SIT	Sitka	98.28	33	Pdiff	Pdif	03 06 52.7	+0.8
	baz=271						
BR131	Keskin Array S	98.35	309	P	P	03 06 52.6	-0.4
	SNR=60						
BR131	Keskin Array S	98.35	309	*d i*P	P	03 06 52.2	-0.8
BRTR	Keskin Array B	98.35	309	P	P	03 06 51.7	-1.3
BRTR	Keskin Array B	98.35	309	P	P	03 06 52.4	-0.6
	comp=Z,35nm,0.7s,baz=126,slow=4.2,SNR=63						
BRTR				PP	PP	03 10 56.8	+0.8
	comp=Z,65nm,1.1s,baz=128,slow=4.8,SNR=4.9						
BRTR				S	SKSac	03 17 11.3	+1.6
	comp=Z,24nm,1.2s,baz=102,slow=12,SNR=5.4						
BRTR				PKKPbc	PKKPbc	03 23 25.2	+0.7
	comp=Z,7.3nm,0.9s,baz=237,slow=3.7,SNR=7.5						
	comp=Z,35nm,0.7s						
BR105	Keskin Array S	98.37	309	P	P	03 06 52.8	-0.3
	comp=Z,570nmcomp=Z,63nm,1.1s						
BR106	Keskin Array S	98.37	309	P	P	03 06 52.6	-0.4
	comp=Z,479nmcomp=Z,57nm,0.7s						
MREMI	Moremi	98.38	246	IAmb	IAmb	03 06 58.3	
	comp=Z,332nm,0.9s						
MREMI	Moremi	98.38	246	*i* P	Pdif	03 06 54.7	+1.3
G31M	Satah River	98.39	23	IAmb	IAmb	03 06 58.4	
	comp=Z,497nm,1.2s						
G31M	Satah River	98.39	23	Pdiff	Pdif	03 06 52.8	+0.5
	baz=274						
MBAR	Mbarara	98.39	268	P	Pdif	03 06 54.2	+0.4
MBAR	Mbarara	98.39	268	P	Pdif	03 06 54.8	+1.0
MBAR	Mbarara	98.39	268	P	Pdif	03 06 54.2	+0.4
MBAR				pmax	pmax		
	comp=Z,279nm,1.8s						
WHY	Whitehorse	98.41	30	Pdiff	Pdif	03 06 52.9	+0.2
	baz=272						
H31M	Peel River	98.42	24	IAmb	IAmb	03 06 59.0	
	comp=Z,410nm,1.2s						
H31M	Peel River	98.42	24	Pdiff	Pdif	03 06 52.9	+0.4
	baz=273						
CSS	Mathiatis	98.47	304	IAmb	IAmb	03 06 58.5	
	comp=Z,240nm,1.1s						
CSS	Mathiatis	98.47	304	P	Pdif	03 06 53.8	+0.4
	comp=Z,4µmcomp=Z,219nm,1.1s						
F31M	Tsiigehtchic	98.56	23	IAmb	IAmb	03 06 59.1	
	comp=Z,415nm,1.1s						
F31M	Tsiigehtchic	98.56	23	Pdiff	Pdif	03 06 53.2	+0.2
	baz=274						
INK	Inuvik	98.58	22	IAmb	IAmb	03 06 59.2	
	comp=Z,339nm,1.1s						
INK	Inuvik	98.58	22	Pdiff	Pdif	03 06 53.2	+0.2
	baz=274						
M31M	Drury Creek, Y	98.58	28	Pdiff	Pdif	03 06 54.1	+0.8
	baz=273						
S32K	Killisnoo	98.67	33	Pdiff	P	03 06 54.7	+0.9
	baz=272						
R32K	Eaglecrest	98.68	32	Pdiff	P	03 06 54.9	+1.1
	baz=272						
BROLN	Tlhalogang	98.74	248	*i* P	P	03 06 55.5	+0.4
JIS	Juneau Island	98.75	32	P	P	03 06 55.3	+1.3
CIDE	Kastamonu/Cide	98.92	311	⇑P	Pdif	03 06 53.6	-1.6
LSZ	Lusaka	98.92	253	P	Pdif	03 06 55.9	-0.1
LSZ	Lusaka	98.92	253	PKKPbc	PKKPbc	03 23 24.3	+2.3
	comp=Z,17nm,1.1s,baz=265,slow=2.9,SNR=6.0						
LSZ	Lusaka	98.92	253	P	P	03 06 57.4	+1.4
LSZ	Lusaka	98.92	253	P	Pdif	03 06 55.9	-0.1
LSZ				pmax	pmax		
	comp=Z,240nm,1.2s						
LSZ	Lusaka	98.92	253	*i* P	P	03 06 57.7	+1.7
ANTO	Ankara	99.01	309	P	Pdif	03 06 55.2	-0.6
ANTO	Ankara	99.01	309	P	Pdif	03 06 57.2	+1.4
ANTO	Ankara	99.01	309	⇑P	Pdif	03 06 56.1	+0.3
ANTO	Ankara	99.01	309	⇑P	Pdif	03 06 56.1	+0.3
ANTO	Ankara	99.01	309	P	Pdif	03 06 54.2	-1.6
ANTO	Ankara	99.01	309	P	Pdif	03 06 55.9	+0.1
	comp=Z,2µmcomp=Z,48nm,2.0s						
P32M	Atlin	99.04	31	Pdiff	Pdif	03 06 56.0	+0.6
	baz=273						
FARO	Faro, Yukon	99.07	28	Pdiff	Pdif	03 06 56.2	+0.7
	baz=274						
BOSA	Boshof	99.13	240	P	Pdif	03 06 57.0	+0.3
	comp=Z,102nm,0.8s,baz=110,slow=3.4,SNR=57						
BOSA				PKKPbc	PKKPdf	03 23 23.9	-1.2
	comp=Z,6.1nm,0.7s,baz=295,slow=1.9,SNR=4.1						
	comp=Z,102nm,0.8s						
BOSA	Boshof	99.13	240	P	Pdif	03 06 57.0	+0.3
BOSA	Boshof	99.13	240	P	Pdif	03 06 57.0	+0.3
N32M	Quiet Lake	99.27	29	Pdiff	Pdif	03 06 57.4	+0.9
	baz=274						
VADS	Vadso	99.34	340	*e*Pdif	Pdif	03 06 55.9	-0.5
VADS				IVmB_BB		03 07 01.4	
	comp=Z,3µm,1.9s						
VADS				*e*PP	PP	03 11 05.6	+3.2
VADS				*e*SKSac	SKSac	03 17 12.3	-0.7
VADS				*e*SP	SP	03 19 42.7	+6.4
VADS				*e*		03 23 17.2	
VADS				*e*SS	SS	03 25 07.3	+4.2
P33M	Teslin, Yukon	99.46	30	Pdiff	Pdif	03 06 57.8	+0.4
	baz=274						
HOPEN	Hopen	99.49	347	*e*Pdif	Pdif	03 06 57.5	+0.5
HOPEN				IVmB_BB		03 06 58.0	
	comp=Z,5µm,2.6s						
HOPEN				*e*PP	PP	03 11 04.6	+1.3
HOPEN				*e*SKSac	SKSac	03 17 16.6	+3.0
HOPEN				*e*SP	SP	03 19 40.7	+2.9
HOPEN				*e*		03 23 20.2	
HOPEN				*e*SS	SS	03 25 10.4	+5.5
HOPEN				IVMs_BB	IVMs_BB	03 47 22.0	
	comp=Z,11µm,19.8s						
U33K	Whale Pass	99.53	34	Pdiff	Pdif	03 06 58.1	+0.5
	baz=273						
CRAG	Craig	99.56	35	P	Pdif	03 06 58.9	+1.2
CRAG	Craig	99.56	35	Pdiff	Pdif	03 06 58.2	+0.5
	baz=273						
LBTB	Lobatse	99.57	243	PKKPbc	PKKPbc	03 23 22.5	+2.1
	comp=Z,17nm,0.9s,baz=263,slow=4.3,SNR=5.5						
LBTB	Lobatse	99.57	243	*i* P	Pdif	03 07 01.8	+3.1
T33K	Petersburg	99.58	34	Pdiff	Pdif	03 06 58.3	+0.5
	baz=273						
LPHEP	Lephephe	99.67	245	*i* P	Pdif	03 07 00.7	+1.5
Q32M	Nakina River	99.82	31	Pdiff	Pdif	03 07 00.4	+1.3
	baz=274						
SOOWA	Sowa	99.87	248	*i* P	Pdif	03 07 01.9	+1.8
WRAK	Wrangell Islan	99.94	34	Pdiff	Pdif	03 07 00.5	+1.1
	baz=274						
PUL	Pulkovo	99.98	330	⇑*e*P	Pdif	03 06 59.4	-0.1
PUL				pmax	pmax		
	comp=Z,91nm,0.9s						
MMPY	Sheldon Lake,	100.01	28	Pdiff	Pdif	03 07 01.1	+1.4
	baz=276						
H02S1	DAWSON INLET T	100.04	37	P	Pdif	03 07 00.5	+0.6
	SNR=25						
MAKGR	Makgori	100.11	242	*i* P	Pdif	03 07 02.4	+1.2
KEV	Kevo	100.19	340	P	Pdif	03 06 58.8	-1.5
V35K	Ketchikan	100.42	35	Pdiff	Pdif	03 07 02.7	+1.2
	baz=274						
R33M	Jennings River	100.45	31	Pdiff	Pdif	03 07 02.9	+1.0
	baz=275						
S34M	Telegraph Cree	100.50	32	Pdiff	Pdif	03 07 03.2	+1.4
	baz=275						
KDWAN	Kaudwane	100.74	245	*i* P	Pdif	03 07 05.6	+1.6
ARA0	ARCESS Array S	100.75	340	*e*Pdif	Pdif	03 07 02.6	-0.2
ARA0				IVmB_BB		03 07 03.4	
	comp=Z,4µm,2.4s						
ARA0				*e*Pdif	Pdif	03 07 03.6	+0.8
ARA0				*e*PP	PP	03 11 15.1	+2.1
ARA0				*e*SKSac	SKSac	03 17 19.3	-0.7
ARA0				*e*		03 23 17.9	
ARA0				*e*SS	SS	03 25 26.5	+3.8
ARA0				IVMs_BB	IVMs_BB	03 57 29.8	
	comp=Z,15µm,19.1s						
ARCES	ARCESS Array B	100.75	340	P	Pdif	03 07 02.3	-0.5
	comp=Z,136nm,0.7s,baz=83,slow=6.3,SNR=200						
ARCES				PKiKP	PKiKP	03 11 30.3	+2.9
	comp=Z,8.5nm,0.4s,baz=97,slow=1.7,SNR=14						
ARCES				S	SKSac	03 17 17.8	-2.2
	comp=Z,15nm,0.8s,baz=105,slow=4.6,SNR=4.3						
ARCES				PKKPbc	PKKPbc	03 23 17.3	-1.3
	comp=Z,12nm,0.5s,baz=257,slow=2.7,SNR=18						
ARCES				SKKPbc	SKKPbc	03 26 36.0	-3.3
	comp=Z,6.8nm,0.6s,baz=261,slow=2.7,SNR=7.0						
A36M	Sachs Harbour	100.82	18	Pdiff	Pdif	03 07 03.5	+0.5
	baz=283						
SPA0	Spitsbergen Ar	100.83	349	*e*Pdif	Pdif	03 07 03.5	+0.6
SPA0				IVmB_BB		03 07 05.3	
	comp=Z,4µm,2.5s						
SPA0				*e*PP	PP	03 11 15.8	+2.4
SPA0				*e*SKSac	SKSac	03 17 19.8	-0.3
SPA0				*e*SS	SS	03 25 27.9	+4.5
SPITS	Spitsbergen Ar	100.83	349	P	Pdif	03 07 02.4	-0.6
	comp=Z,53nm,0.7s,baz=96,slow=7.7,SNR=58						
SPITS				PP	PP	03 11 12.3	-1.1
	comp=Z,134nm,1.0s,baz=90,slow=18,SNR=7.0						
SPITS				PKKPbc	PKKPbc	03 23 16.8	-1.8
	comp=Z,18nm,0.8s,baz=133,slow=3.5,SNR=7.8						
SPITS				SKKPbc	SKKPbc	03 26 37.0	-2.4
	comp=Z,23nm,0.9s,baz=155,slow=6.4,SNR=4.5						
T35M	Bob Quinn	101.05	33	Pdiff	Pdif	03 07 05.8	+1.4
	baz=275						
PURM	Purcari	101.06	316	⇓P	Pdif	03 07 05.8	+1.2
PURM	Purcari	101.06	316	P	Pdif	03 07 08.4	+3.8
HAMF	Hammerfest	101.14	341	*e*Pdif	Pdif	03 07 04.7	+0.3
HAMF				IVmB_BB		03 07 06.1	
	comp=Z,3µm,1.9s						
HAMF				*e*PP	PP	03 11 17.8	+1.9
HAMF				*e*SKSac	SKSac	03 17 23.8	+2.1
HAMF				*e*		03 23 13.0	
HAMF				*e*SS	SS	03 25 33.1	+5.2
HAMF				IVMs_BB	IVMs_BB	04 00 23.1	
	comp=Z,13µm,22.1s						
SKOMA	Sekoma	101.16	244	*i* P	Pdif	03 07 07.2	+1.4
SKOMA	Sekoma	101.16	244	*i* P	PP	03 11 20.0	+2.6
AKASG	Malin Array Be	101.26	320	P	Pdif	03 07 04.3	-1.2
	comp=Z,75nm,0.8s,baz=72,slow=4.8,SNR=65						
AKASG				PP	PP	03 11 17.7	+0.3
	comp=Z,35nm,0.9s,baz=83,slow=6.3,SNR=6.0						
AKASG				PKiKP	PKiKP	03 11 32.6	+3.7
	comp=Z,22nm,0.7s,baz=64,slow=2.5,SNR=9.7						
AKASG				S	SKSac	03 17 20.5	-2.7
	comp=Z,17nm,0.9s,baz=68,slow=6.5,SNR=5.1						
AKASG				PKKPbc	PKKPbc	03 23 11.5	-5.0
	comp=Z,2.6nm,0.4s,baz=272,slow=2.9,SNR=8.6						
AKASG				SKKPbc	SKKPbc	03 26 37.9	+0.8
	comp=Z,1.9nm,0.6s,baz=276,slow=3.5,SNR=4.1						
AKBB	Malin Array Si	101.26	320	*d i*P	Pdif	03 07 03.5	-1.9
AKBB				pmax	pmax		
	comp=Z,222nm,1.5s						
KIEV	Kiev	101.27	320	⇓P	Pdif	03 07 04.8	-0.7
KIEV	Kiev	101.27	320	⇓P	Pdif	03 07 04.8	-0.7
KIEV	Kiev	101.27	320	*i* P	Pdif	03 07 04.3	-1.2
	SNR=57						
KIEV	Kiev	101.27	320	P	Pdif	03 07 04.3	-1.2
U35K	Hyder	101.27	34	Pdiff	Pdif	03 07 06.1	+0.7
	baz=275						
KBS	Kingsbay	101.34	350	*e*Pdif	Pdif	03 07 05.2	-0.1
KBS				IVmB_BB		03 07 08.0	
	comp=Z,2µm,3.9s						
KBS				*e*PP	PP	03 11 21.1	+3.9
KBS				*e*SKSac	SKSac	03 17 26.4	+3.9
KBS				*e*SP	SP	03 20 02.7	+5.4
KBS				*e*		03 23 16.0	
KBS				*e*		03 23 16.3	
KBS				IVMs_BB	IVMs_BB	03 48 08.5	
	comp=Z,12µm,24.5s						
KBS	Kingsbay	101.34	350	*i* P	Pdif	03 07 04.8	-0.4
KSANE	Kasane	101.35	250	*i* P	Pdif	03 07 08.1	+1.3
SILT	Sile	101.40	311	⇓P	Pdif	03 07 08.7	+2.4
HSPB	Hornsund (broa	101.43	348	*e*Pdif	Pdif	03 07 05.7	+0.1
HSPB				*e*PP	PP	03 11 18.1	+0.1
HSPB				*e*SKS	SKSac	03 17 21.1	-1.8
HSPB				*e*SKS	SKSac	03 17 21.9	-1.0
HSPB				*e*SS	SS	03 25 32.5	+0.8
HSPB				*e*L	L	03 55 21.3	
	comp=Z,64µm,22.1s						
HSPB	Hornsund (broa	101.43	348	*e*		03 23 15.9	
WTLY	Watson Lake, Y	101.47	30	Pdiff	Pdif	03 07 07.3	+1.1
	baz=277						
PHDHD	Phuduhudu	101.48	248	*i* P	Pdif	03 07 09.0	+1.7
TGTN	Hyland Airport	101.53	29	Pdiff	Pdif	03 07 07.6	+1.1
	baz=278						
YLV	Yalova	101.62	310	P	Pdif	03 07 08.1	+0.7
	comp=Z,3µmcomp=Z,100nm,0.8s						
KIS	Kishinev	101.76	317	*e*P	Pdif	03 07 06.0	-1.7
	comp=Z,640nm,4.1s						
KIS				*e*pP	pP	03 08 03.0	+2.4
KIS	Kishinev	101.76	317	*i* PP	PKiKP	03 11 26.0	-3.9
KIS				*i* SKS	SKSac	03 17 24.0	-1.7
	comp=Z,8µm,4.2s						
KIS				*i* S	Sdif	03 18 25.0	-4.6
KIS				*e*L	L	04 00 11.0	
	comp=Z,6µm,21.5s						
KIS	Kishinev	101.76	317	*e*P	Pdif	03 07 06.0	-1.7
KIS				*i*		03 11 26.0	
KIS				*i*		03 17 24.0	
KIS				*i* S	Sdif	03 18 25.0	-4.6
KIS				pmax	pmax		
	comp=Z,640nm,4.1s						
KIS				pmax	pmax		
	comp=E,8µm,4.2s						
MILM	Milestii Mici	101.76	316	*i* P	Pdif	03 07 06.0	-1.8
	comp=E,2µm,4.5s						
MILM				*e*pP	pP	03 08 03.0	+2.3
MILM	Milestii Mici	101.76	316	*e*PP	PP	03 11 24.0	+2.7
MILM	Milestii Mici	101.76	316	⇑P	Pdif	03 07 09.1	+1.4
MILM	Milestii Mici	101.76	316	*i* P	Pdif	03 07 06.0	-1.8
MILM				*e*		03 11 24.0	
MILM				*e*PPP	PPP	03 13 35.0	
MILM				*i*		03 17 24.0	
MILM				*i* S	Sdif	03 18 23.0	-6.6
MILM				pmax	pmax		
	comp=Z,2µm,4.5s						
MILM				pmax	pmax		
	comp=E,28µm,6.0s						
MILM				pmax	pmax		
	comp=N,13µm,6.2s						
MNK	Minsk	101.77	324	*i* P	Pdif	03 07 07.7	0.0
	comp=E,96nm,1.0s						
MNK				*i* P	Pdif	03 07 07.7	0.0
	comp=N,88nm,0.9s						
MNK				*i* P	Pdif	03 07 07.7	0.0
	comp=Z,378nm,0.8s,baz=84						
MNK				*i* pP	pP	03 08 01.8	+1.2
MNK				*i* PP	PP	03 11 21.5	+0.4
MNK				*i* PPP	PPP	03 13 32.2	
MNK				*i* S	SKSac	03 17 25.4	-0.1
MNK				*i* sS	pS	03 19 05.6	-34
MNK				*i* PS	PS	03 20 41.0	+10
MNK				*i* SS	SS	03 25 40.0	+2.5
MNK				*i* SSS	SSS	03 29 35.0	
MNK				*i* LR	LR	03 54 48.3	
MNK	Minsk	101.77	324	*i* P	Pdif	03 07 07.6	0.0
MNK				*i*		03 11 21.4	
MNK				*i* PPP	PPP	03 13 32.2	
MNK				*i* S	SKSac	03 17 25.3	-0.1
MNK				*i* SS	SS	03 25 40.0	+2.5
MNK				*i* SSS	SSS	03 29 35.0	
MNK				pmax	pmax		
	comp=Z,378nm,0.8s						
MNK				pmax	pmax		
	comp=N,88nm,0.9s						
MNK				pmax	pmax		
	comp=E,96nm,1.0s						
MNK				MLR	MLR		
	comp=E,35µm,23.0s						
MNK				MLR	MLR		
	comp=N,41µm,22.0s						
MNK				MLR	MLR		
	comp=Z,26µm,18.0s						
JURR	Jurilovca	101.83	314	⇑P	Pdif	03 07 08.4	+0.3
KLYT	Kilyos	101.85	311	⇑P	Pdif	03 07 11.3	+3.0
KLYT	Kilyos	101.85	311	P	Pdif	03 07 12.4	+4.1
TLCR		101.86	315	⇓P	Pdif	03 07 08.4	+0.2
TLCR		101.86	315	⇓P	Pdif	03 07 08.4	+0.2
FINES	FINESS Array B	101.87	331	P	Pdif	03 07 06.9	-1.0
	comp=Z,34nm,0.6s,baz=68,slow=4.2,SNR=96						
FINES				PKiKP	PKiKP	03 11 30.7	+1.0
	comp=Z,47nm,0.6s,baz=100,slow=3.5,SNR=14						
FINES				S	SKSac	03 17 22.2	-3.4
	comp=Z,64nm,1.1s,baz=286,slow=5.1,SNR=5.8						
FINES				PKKPbc	PKKPbc	03 23 13.5	-1.6
	comp=Z,4.6nm,0.4s,baz=212,slow=0.6,SNR=8.8						
PHPEN	Phepeng	101.90	242	*i* P	Pdif	03 07 10.0	+0.9
FETY	Fethiye	101.93	306	P	Pdif	03 07 08.4	-0.4
SUR	Sutherland	101.95	235	P	Pdif	03 07 12.1	+2.8
VSU	Vasula	101.96	328	*i* P	Pdif	03 07 05.9	-2.4
VSU				pmax	pmax		
	comp=Z,86nm,0.8s						
SORM	Soroca	102.00	318	⇑P	Pdif	03 07 08.7	-0.1
SORM	Soroca	102.00	318	⇑P	Pdif	03 07 08.7	-0.1
SORM	Soroca	102.00	318	P	Pdif	03 07 08.6	-0.2
	comp=Z,4µmcomp=Z,196nm,1.6s						
EFOR	EFORIE	102.04	314	⇓P	Pdif	03 07 11.5	+2.5
TPGR	Topolog	102.15	314	⇓P	Pdif	03 07 09.7	+0.1
TIRR	Tirgusor	102.18	314	⇑P	Pdif	03 07 10.0	+0.4
TIRR	Tirgusor	102.18	314	⇑P	Pdif	03 07 10.0	+0.4
TIRR	Tirgusor	102.18	314	P	Pdif	03 07 09.8	+0.1
	comp=Z,3µmcomp=Z,153nm,1.0s						
MFTR	Murfatlar	102.19	314	⇓P	Pdif	03 07 11.0	+1.3
VLDR	Vladesti	102.33	315	⇑P	Pdif	03 07 12.9	+2.6
CFR	Carcaliu	102.33	315	⇓P	Pdif	03 07 10.3	0.0
CFR	Carcaliu	102.33	315	⇓P	Pdif	03 07 10.3	0.0
NACGM	Naroch	102.36	325	⇓*i*Pdif	Pdif	03 07 10.1	-0.2
	comp=Z,242nm,1.0s,baz=83						
SCTR	Scanteiesti	102.40	315	⇓P	Pdif	03 07 13.9	+3.3
CTYL	Yalikoy Yolu	102.41	311	⇑P	Pdif	03 07 13.2	+2.4
CTYL	Yalikoy Yolu	102.41	311	P	Pdif	03 07 09.8	-1.0
	comp=Z,4µmcomp=Z,184nm,1.6s						
PSN	Preselentsi	102.42	313	⇓*i*P	Pdif	03 07 10.8	0.0
TLBR	Topalu	102.44	314	⇑P	Pdif	03 07 11.4	+0.6
JETT	Jettan, Norway	102.49	340	*e*Pdif	Pdif	03 07 10.4	-0.2

JETT				IVmB_BB		03 07 16.2	
	comp=Z,5µm,0.5s						
JETT				ePP	PP	03 11 27.1	+1.0
JETT				eSKSac	SKSac	03 17 26.4	-1.9
JETT				eSKSac	SKSac	03 17 29.1	+0.7
JETT				eSP	SP	03 20 10.5	+0.7
JETT				e		03 23 09.9	
JETT				eSS	SS	03 25 50.6	+3.9
VARL	Varlezi	102.49	315	⇑P	Pdif	03 07 13.7	+2.7
HARR	Harsova	102.51	314	⇓P	Pdif	03 07 12.0	+0.9
HARR	Harsova	102.51	314	⇓P	Pdif	03 07 12.0	+0.9
SCHL	Schela	102.53	315	⇓P	Pdif	03 07 14.4	+3.3
SCHLR	Schela	102.53	315	⇑P	Pdif	03 07 13.8	+2.6
BAND	Balkesir-Ban	102.60	310	⇓P	Pdif	03 07 12.5	+0.9
TUDR		102.64	315	⇓P	Pdif	03 07 15.3	+3.7
ARG	Arkhangelos	102.71	306	P	Pdif	03 07 12.4	+0.2
COSR	Cosmesti PH	102.87	315	⇑P	Pdif	03 07 15.6	+2.9
LIRD	Liard River Hi	102.92	31	Pdiff	Pdif	03 07 13.5	+0.9
	baz=279						
TRO	Tromso	102.97	340	ePdif	Pdif	03 07 12.2	-0.4
TRO				IVmB_BB		03 07 14.1	
	comp=Z,2µm,2.4s						
TRO				ePP	PP	03 11 30.3	+0.8
TRO				eSKSac	SKSac	03 17 30.4	0.0
TRO				eSS	SS	03 26 02.5	+9.4
TRO				IVMs_BB	IVMs_BB	04 00 59.8	
	comp=Z,18µm,19.0s						
PRD	Provadia	102.97	313	⇓iP	Pdif	03 07 13.5	+0.3
PHSR	Pinarhisar	102.98	311	⇓P	Pdif	03 07 16.2	+2.9
ODBI	Odobesti	103.05	315	⇑P	Pdif	03 07 17.3	+3.8
ODBI	Odobesti	103.05	315	P	Pdif	03 07 19.5	+6.0
KGCAE	Kacgae	103.06	245	i P	Pdif	03 07 15.9	+1.7
GRER		103.14	315	⇓P	Pdif	03 07 18.5	+4.5
VRI	Vrincioaia	103.28	316	⇑P	Pdif	03 07 15.7	+1.1
VRI	Vrincioaia	103.28	316	⇑P	Pdif	03 07 15.7	+1.1
VRI	Vrincioaia	103.28	316	P	Pdif	03 07 16.4	+1.8
TESR	Tescani	103.28	316	⇑P	Pdif	03 07 15.4	+0.8
TESR	Tescani	103.28	316	P	Pdif	03 07 15.1	+0.6
BEAVL	Fort Liard	103.30	30	Pdiff	Pdif	03 07 15.5	+1.2
	baz=280						
NOR	Nord	103.32	355	i P	Pdif	03 07 14.6	+0.6
NOR				IAmb	IAmb	03 07 16.8	
	comp=Z,73nm,0.9s						
PLOR	Plostina	103.33	315	⇑P	Pdif	03 07 15.9	+1.1
PLOR	Plostina	103.33	315	⇑P	Pdif	03 07 15.9	+1.1
WRGLY	Wrigley	103.44	26	Pdiff	Pdif	03 07 15.7	+0.9
	baz=283						
TOAD	Toad River Com	103.45	31	Pdiff	Pdif	03 07 15.5	+0.4
	baz=280						
ISR	Istrita	103.46	315	P	Pdif	03 07 23.1	+7.6
ONER	Baraj Valea Uz	103.47	316	⇑P	Pdif	03 07 16.6	+1.2
PRAR	RASCA	103.49	317	⇓P	Pdif	03 07 16.6	+1.2
BLCB	Balcova	103.50	308	P	Pdif	03 07 15.8	+0.1
KARP	Karpathos	103.51	305	P	Pdif	03 07 16.2	+0.3
KARP	Karpathos	103.51	305	P	Pdif	03 07 17.3	+1.4
NEHR	Nehoiu	103.61	315	⇑P	Pdif	03 07 17.3	+1.2
JMB	Yambol	103.66	312	⇓iP	Pdif	03 07 16.7	+0.4
JMB	Yambol	103.66	312	P	Pdif	03 07 16.3	-0.1
SMG	Samos	103.69	307	P	Pdif	03 07 16.5	-0.1
TURR	Turia	103.75	316	⇑P	Pdif	03 07 18.1	+1.4
KOTAN	Kotaneelee Air	103.81	30	Pdiff	Pdif	03 07 17.2	+0.6
	baz=281						
GMARE	Gumare	103.84	248	i P	Pdif	03 07 19.7	+2.0
MLR	Muntele Rosu	103.85	315	⇑P	Pdif	03 07 18.0	+0.7
MLR	Muntele Rosu	103.85	315	⇑P	Pdif	03 07 18.0	+0.7
MLR	Muntele Rosu	103.85	315	P	Pdif	03 07 18.2	+0.9
OZUR		103.91	316	⇑P	Pdif	03 07 18.2	+0.8
EZN	Ezine	103.99	309	P	Pdif	03 07 17.6	-0.2
EZN	Ezine	103.99	309	⇑P	Pdif	03 07 18.0	+0.2
EZN	Ezine	103.99	309	⇑P	Pdif	03 07 18.0	+0.2
EZN	Ezine	103.99	309	P	Pdif	03 07 22.4	+4.6
SZH	Strazhitsa	104.01	313	⇓iP	Pdif	03 07 18.1	+0.2
PRK	Paraskevi	104.06	309	P	Pdif	03 07 17.7	-0.4
ALN	Alexandroupoli	104.13	310	P	Pdif	03 07 18.0	-0.5
BURAR	Bucovina Array	104.15	317	⇑P	Pdif	03 07 19.7	+1.2
BURAR	Bucovina Array	104.15	317	⇑P	Pdif	03 07 19.7	+1.2
CHOS	Chios island	104.28	308	P	Pdif	03 07 19.0	-0.3
GRTLG	Ghanzi	104.28	246	i P	Pdif	03 07 21.2	+1.5
GRTLG	Ghanzi	104.28	246	i P	PKiKP	03 11 37.8	+2.4
GADA	Gvkgeada	104.29	310	P	Pdif	03 07 18.7	-0.4
SIGR	SIGRI	104.39	309	P	Pdif	03 07 19.2	-0.4
DIM	Dimitrovgrad	104.40	312	⇓iP	Pdif	03 07 19.6	0.0
DIM	Dimitrovgrad	104.40	312	P	Pdif	03 07 19.6	0.0
VOIR		104.48	315	⇑P	Pdif	03 07 22.3	+2.3
VOIR		104.48	315	⇑P	Pdif	03 07 22.3	+2.3
VOIR		104.48	315	P	Pdif	03 07 23.0	+3.0
MTUR	Matau	104.50	315	⇓P	Pdif	03 07 23.4	+3.3
MTUR	Matau	104.50	315	⇓P	Pdif	03 07 23.4	+3.3
RDO	Rodhopi	104.50	311	P	Pdif	03 07 19.5	-0.5
SUW	Suwalki	104.57	324	ePdif	Pdif	03 07 19.9	-0.2
SUW				ePP	PP	03 11 40.9	-1.0
SUW				eSKS	SKSac	03 17 38.3	-0.1
SUW				eSKS	SKSac	03 17 39.0	+0.6
SUW				eSP	SP	03 20 25.5	-6.8
SUW				eSS	SKKPbc	03 26 25.4	-3.0
PVL	Pavlikeni	104.61	313	⇓iP	Pdif	03 07 20.8	+0.3
QNGWA	Qangwa	104.72	248	i P	Pdif	03 07 23.3	+1.6
QNGWA	Qangwa	104.72	248	i P	PKiKP	03 11 39.2	+2.9
APE	Apeiranthos	104.77	307	P	Pdif	03 07 20.2	-1.3
STEI	Steigen	104.78	339	ePdif	Pdif	03 07 20.1	-0.6
STEI				IVmB_BB		03 07 21.1	
	comp=Z,3µm,2.2s						
STEI				ePP	PP	03 11 44.9	+1.9
STEI				eSKSac	SKSac	03 17 39.2	+0.5
STEI				eSKSac	SKSac	03 17 39.2	+0.5
STEI				IVMs_BB	IVMs_BB	04 03 51.9	
	comp=Z,16µm,19.8s						
ARR	Arges	104.78	315	⇓P	Pdif	03 07 22.1	+0.7
ARCR	ARCALIA	104.79	317	⇑P	Pdif	03 07 23.8	+2.5
KOOLE	Kule	104.83	244	i P	Pdif	03 07 23.7	+1.5
KOOLE	Kule	104.83	244	i P	PKiKP	03 11 39.4	+2.9
THERA	Ancient Thera,	104.85	306	P	Pdif	03 07 20.8	-0.9
LIA	Limnos Island	104.86	309	P	Pdif	03 07 20.8	-0.9
MDB	Medias	104.88	316	⇑P	Pdif	03 07 22.2	+0.5
MDB	Medias	104.88	316	⇑P	Pdif	03 07 22.2	+0.5
SNT5	Nea Kammeni, S	104.91	306	P	Pdif	03 07 21.1	-0.9
THR9	Santorini-Faro	104.94	306	P	Pdif	03 07 19.5	-2.6
SAP3	Santorini-Thir	104.95	306	P	Pdif	03 07 22.4	+0.2
FAUS	Fauske	104.95	339	ePdif	Pdif	03 07 20.8	-0.7
FAUS				IVmB_BB		03 07 22.9	
	comp=Z,3µm,2.0s						
FAUS				i		03 11 50.1	
FAUS				eSKSac	SKSac	03 17 40.3	+0.8
FAUS				eSP	SP	03 20 38.2	+2.7
FAUS				eSS	SKKPbc	03 26 25.3	-2.7
FAUS				IVMs_BB	IVMs_BB	03 58 45.7	
	comp=Z,14µm,19.4s						
TNR	Turnu Rosu	105.01	315	⇓P	Pdif	03 07 25.2	+2.9
TNR	Turnu Rosu	105.01	315	⇓P	Pdif	03 07 25.2	+2.9
PLD	Plovdiv	105.01	312	⇓iP	Pdif	03 07 22.1	-0.2
PLD	Plovdiv	105.01	312	P	Pdif	03 07 22.2	-0.2
RZN	Rozhen	105.05	311	P	Pdif	03 07 22.6	-0.2
THAS	Thassos island	105.16	310	P	Pdif	03 07 22.6	-0.4
KAVA	Kavala	105.28	311	P	Pdif	03 07 23.8	+0.3
BMR	Baia Mare	105.30	318	⇑P	Pdif	03 07 24.9	+1.4
BMR	Baia Mare	105.30	318	⇑P	Pdif	03 07 24.9	+1.4
LOF	Lofoten	105.31	340	ePdif	Pdif	03 07 23.1	+0.1
LOF				IVmB_BB		03 07 23.1	
	comp=Z,3µm,2.6s						
LOF				ePP	PP	03 11 48.6	+1.8
LOF				eSKSac	SKSac	03 17 44.0	+2.9
LOF				eSP	SP	03 20 38.4	-0.8
LOF				e		03 23 02.4	
CBBR	Cluj-Babes-Bol	105.37	317	⇓P	Pdif	03 07 25.0	+1.2
IDI	Anoyia	105.38	305	P	Pdif	03 07 24.6	+0.4
IDI	Anoyia	105.38	305	P	Pdif	03 07 24.4	+0.1
IDI	Anoyia	105.38	305	Sdiff		03 17 41.0	
	comp=Z,106nm,1.0s,baz=347,slow=18,SNR=11						
IDI				PKKPbc	PKKPbc	03 23 04.3	+0.6
	comp=Z,58nm,0.8s,baz=317,slow=6.4,SNR=14						
LOT	Lotru	105.38	315	⇑P	Pdif	03 07 26.9	+2.8
SKY	Skiros Island	105.42	308	P	Pdif	03 07 23.8	-0.4
KARY	Karystos	105.57	308	P	Pdif	03 07 24.4	-0.6
MPEP	Malo Peshtene	105.63	313	⇓iP	Pdif	03 07 25.3	+0.2
MOR8	Moi Rana	105.69	337	ePdif	Pdif	03 07 23.4	-1.4
MOR8				IVmB_BB		03 07 28.5	
	comp=Z,2µm,1.9s						
MOR8				ePP	PP	03 11 50.1	+0.3
MOR8				eSKSac	SKSac	03 17 37.8	-5.2
MOR8				e		03 23 01.5	
MOR8				eSS	SS	03 26 31.6	+1.2
MOR8				IVMs_BB	IVMs_BB	04 03 25.1	
	comp=Z,15µm,19.5s						
MHLO	Agia Marina, M	105.69	306	P	Pdif	03 07 24.7	-0.8
OUR	Ouranopolis	105.74	310	P	Pdif	03 07 24.9	-0.7
KYMI	Kymi, Euboea I	105.79	308	P	Pdif	03 07 24.4	-1.5
MMB	Musomishta	105.81	311	⇓iP	Pdif	03 07 25.4	-0.6
MMB	Musomishta	105.81	311	P	Pdif	03 07 25.2	-0.8
SRE	Strehaia	105.87	315	⇑P	Pdif	03 07 30.1	+4.0
SRE	Strehaia	105.87	315	⇑P	Pdif	03 07 30.1	+4.0
AOS	Alonnisos	105.92	309	P	Pdif	03 07 25.7	-0.7
VAGH	Vaagaholmen	105.93	338	ePdif	Pdif	03 07 25.1	-0.7
VAGH				IVmB_BB		03 07 27.4	
	comp=Z,2µm,2.7s						
VAGH				ePP	PP	03 11 52.8	+1.3
VAGH				eSKSac	SKSac	03 17 47.1	+3.2
VAGH				eSP	SP	03 20 49.0	+3.4
VAGH				IVMs_BB	IVMs_BB	04 04 45.2	
	comp=Z,14µm,20.8s						
KOLS	Kolonicke sedl	105.93	319	i P	Pdif	03 07 27.7	+1.4
KOLS				e		03 17 46.4	
KOLS	Kolonicke sedl	105.93	319	ePDIFF	Pdif	03 07 27.4	+1.1
DEV	Deva	105.93	316	⇑P	Pdif	03 07 29.5	+3.2
DEV	Deva	105.93	316	⇑P	Pdif	03 07 29.5	+3.2
DRGR		105.94	317	⇓P	Pdif	03 07 27.0	+0.5
DRGR		105.94	317	⇓P	Pdif	03 07 27.0	+0.5
PLNA	Plana	105.95	312	⇓iP	Pdif	03 07 27.0	+0.3
SRS	Serrai	105.97	311	P	Pdif	03 07 25.5	-1.1
PAIG	Paliouri	106.01	310	P	Pdif	03 07 25.8	-1.0
PTL	Penteli	106.02	308	P	Pdif	03 07 25.9	-1.1
GVD	Gavdhos	106.06	304	P	Pdif	03 07 27.3	+0.2
KONS	Konsvik	106.07	338	ePdif	Pdif	03 07 26.3	-0.2
KONS				ePP	PP	03 11 52.2	-0.3
KONS				eSKSac	SKSac	03 17 45.8	+1.2
KONS				e		03 23 03.1	
KONS				eSS	SS	03 26 42.1	+6.7
VTS	Vitosha	106.08	312	⇓iP	Pdif	03 07 27.3	0.0
VTS	Vitosha	106.08	312	P	Pdif	03 07 27.3	0.0
GZR	Gura Zlata	106.08	315	⇑P	Pdif	03 07 28.2	+1.1
GZR	Gura Zlata	106.08	315	⇑P	Pdif	03 07 28.2	+1.1
ATHU	Athens Univers	106.09	308	P	Pdif	03 07 26.0	-1.3
R9F13	Warsaw-Wawer	106.09	323	eP	Pdif	03 07 28.2	+1.3
R9F13				e		03 10 46.4	
R9F13				e		03 11 06.9	
R9F13				ePP	PP	03 11 52.3	-0.9
R9F13				eSKS	SKSac	03 17 46.0	+0.7
R9F13				eSKKS	SKKSac	03 18 33.0	-1.5
R9F13				eSP	SP	03 20 50.2	+2.1
IMMV	Iera Moni Meta	106.11	305	P	Pdif	03 07 27.8	+0.4
ATH	Athens Observa	106.14	308	P	Pdif	03 07 26.4	-1.1
PLG	Polygyros	106.15	310	P	Pdif	03 07 26.6	-0.9
STOK	Stokkvaagen	106.17	338	ePdif	Pdif	03 07 25.4	-1.5
STOK				IVmB_BB		03 07 31.7	
	comp=Z,2µm,2.4s						
STOK				ePP	PP	03 11 53.9	+0.7
STOK				eSKSac	SKSac	03 17 45.9	+0.9
STOK				eSP	SP	03 20 50.2	+2.1
STOK				eSS	SS	03 26 40.9	+4.1
STOK				IVMs_BB	IVMs_BB	04 01 26.9	
	comp=Z,14µm,21.0s						
SOH	Sokhos	106.17	311	P	Pdif	03 07 26.6	-1.0
LEIR	Leirfjorden	106.21	338	ePdif	Pdif	03 07 27.1	0.0
LEIR				IVmB_BB		03 07 32.1	
	comp=Z,2µm,1.6s						
LEIR				ePP	PP	03 11 55.3	+1.7
LEIR				eSP	SP	03 20 51.6	+3.1
LEIR				e		03 23 00.0	
LEIR				eSS	SS	03 26 39.6	+2.2
LEIR				IVMs_BB	IVMs_BB	03 59 41.2	
	comp=Z,16µm,20.2s						
KKB	Krupnik	106.24	312	⇓iP	Pdif	03 07 27.4	-0.4
KKB	Krupnik	106.24	312	P	Pdif	03 07 27.3	-0.6
DJES	Djerdap	106.35	315	⇑P	Pdif	03 07 31.1	+2.8
BEL	Belsk	106.38	322	ePdif	Pdif	03 07 28.5	+0.4
BEL				ePP	PP	03 11 55.4	+0.2
BEL				eSKS	SKSac	03 17 46.6	0.0
BEL				eSKS	SKSac	03 17 47.4	+0.8
BEL				eSP	SP	03 20 44.7	-6.3
BEL				eSS	SS	03 26 42.9	+2.4
HORT	Hortiatis	106.39	310	P	Pdif	03 07 27.3	-1.3
HERR	Herculane	106.40	315	⇑P	Pdif	03 07 29.3	+0.9
NEO	Neokhori	106.42	309	P	Pdif	03 07 27.4	-1.3
PEHC	Pehcevo	106.42	312	i P	Pdif	03 07 35.8	+7.1
VILL	Villia	106.45	308	P	Pdif	03 07 26.8	-2.1
KNT	Kendrikon	106.48	311	P	Pdif	03 07 28.2	-0.7
THE	Thessaloniki	106.49	310	P	Pdif	03 07 27.8	-1.1
SURR	Surduc	106.49	316	⇑P	Pdif	03 07 29.6	+0.8
STHS	Stebnicka Huta	106.52	320	i P	Pdif	03 07 29.8	+0.9
STHS				e		03 11 59.8	
STHS	Stebnicka Huta	106.52	320	ePDIFF	Pdif	03 07 29.5	+0.6
ANKY	Antikythira Is	106.64	305	P	Pdif	03 07 29.5	-0.2
LKR	Lokris	106.65	308	P	Pdif	03 07 28.1	-1.6
VAY	Valandovo	106.71	311	i P	Pdif	03 07 29.3	-0.6
LTK	Loutraki	106.73	308	P	Pdif	03 07 28.6	-1.5
SIRR	Siria	106.73	316	⇓P	Pdif	03 07 30.6	+0.6
KTHA	Kythira Island	106.80	306	P	Pdif	03 07 30.2	-0.2
BZS	Buzias	106.86	316	⇑P	Pdif	03 07 31.0	+0.5
BZS	Buzias	106.86	316	⇑P	Pdif	03 07 31.0	+0.5
VLI	Veliai	106.86	306	P	Pdif	03 07 29.6	-1.1
LIT	Litokhoron	106.90	310	P	Pdif	03 07 29.6	-1.2
AXAR	Agios Charalam	106.90	308	P	Pdif	03 07 29.5	-1.4
MDVR	Moldovita	106.91	315	⇑P	Pdif	03 07 31.8	+1.0
BOVS	Bovan	107.07	314	⇑P	Pdif	03 07 32.0	+0.6
NIE	Niedzica	107.13	320	ePdif	Pdif	03 07 32.9	+1.3
NIE				ePP	PP	03 11 59.2	-1.7
NIE				eSKS	SKSac	03 17 51.1	+1.0
NIE				eSP	SP	03 20 55.7	-3.2
NIE				eSS	SS	03 26 53.2	+2.3
NIE	Niedzica	107.13	320	P	Pdif	03 07 33.0	+1.3
AGG	Agios Georgios	107.13	309	P	Pdif	03 07 30.2	-1.8
TYRN	Tyrnavos	107.14	309	P	Pdif	03 07 30.3	-1.6
KTI	Kastanea	107.15	310	P	Pdif	03 07 31.7	-0.4
KECS	Kecovo	107.17	319	i P	Pdif	03 07 32.3	+0.5
KECS				e		03 17 50.2	
KECS	Kecovo	107.17	319	ePDIFF	Pdif	03 07 32.3	+0.5
BANR	Banloc	107.23	315	⇓P	Pdif	03 07 36.0	+3.9
GUR	Goura	107.23	308	P	Pdif	03 07 31.3	-1.1
VLX	Vlachokerasia	107.25	307	P	Pdif	03 07 31.7	-0.8
NSS	Namsos	107.26	336	ePdif	Pdif	03 07 31.4	-0.4
NSS				IVmB_BB		03 07 33.4	
	comp=Z,1µm,2.8s						
NSS				ePP	PP	03 12 00.0	-1.2
NSS				eSKSac	SKSac	03 17 49.2	-0.6
NSS				eSP	SP	03 21 01.3	+2.0
NSS				e		03 22 56.8	
NSS				eSS	SS	03 26 54.0	+2.4
NSS				IVMs_BB	IVMs_BB	03 59 59.4	
	comp=Z,12µm,23.7s						
MAKR	Makrakomi, Fth	107.29	309	P	Pdif	03 07 30.3	-2.3
OJC	Ojcow	107.30	321	ePdif	Pdif	03 07 32.8	+0.5
OJC				ePP	PP	03 11 59.7	-2.3
OJC				eSKS	SKSac	03 17 50.0	-0.7
OJC				eSP	SP	03 20 56.6	-3.9
OJC	Ojcow	107.30	321	P	Pdif	03 07 33.1	+0.8
THL	Klokotos Trika	107.32	309	P	Pdif	03 07 30.9	-1.7
KALE	Kalithea	107.34	308	P	Pdif	03 07 31.3	-1.6
KLV	Kalavryta, Ach	107.37	308	P	Pdif	03 07 32.2	-0.8
SERG	Sergoula	107.41	308	P	Pdif	03 07 32.0	-1.1
KZN	Kozani	107.43	310	P	Pdif	03 07 31.7	-1.5
SKO	Skopje	107.48	312	i P	Pdif	03 07 33.2	-0.2
ANX	Ano Chora	107.50	308	P	Pdif	03 07 32.7	-0.9
EFP	Efpalio	107.52	308	P	Pdif	03 07 33.1	-0.5
YKA	Yellowknife Ar	107.53	26	Pdiff	Pdif	03 07 33.1	0.0
	comp=Z,8.4nm,0.8s,baz=299,slow=5.3,SNR=26						
YKA				PKiKP	PKiKP	03 11 41.2	+1.2
	comp=Z,16nm,0.6s,baz=308,slow=2.4,SNR=38						
YKA				PP	PP	03 12 02.7	-0.7
	comp=Z,9.1nm,0.7s,baz=80,slow=9.2,SNR=5.2						
YKA				PKKPbc	PKKPbc	03 22 54.5	-3.5
	comp=Z,29nm,0.5s,baz=103,slow=2.6,SNR=6.8						
YKA				SKKPbc	SKKPbc	03 26 16.2	-4.4
	comp=Z,17nm,0.9s,baz=92,slow=2.8,SNR=6.8						
DAG	Danmarks Havn	107.55	353	i P	Pdif	03 07 32.6	-0.3
DAG				IAmb	IAmb	03 07 38.3	
	comp=Z,59nm,0.6s						
EVR	Evrytania	107.55	309	P	Pdif	03 07 34.2	+0.4
ITM	Ithomi	107.63	307	P	Pdif	03 07 32.0	-2.1
PSZ	Piszkesteto	107.66	318	⇑P	Pdif	03 07 35.0	+0.9
PSZ	Piszkesteto	107.66	318	⇑P	Pdif	03 07 35.0	+0.9
LANS	Liptovska Anna	107.71	320	i P	Pdif	03 07 36.3	+2.1
LANS				e		03 12 12.8	
LANS	Liptovska Anna	107.71	320	ePDIFF	Pdif	03 07 36.3	+2.1
LANS				ePP	PP	03 12 12.8	+7.6
DRO	Drossia	107.72	308	P	Pdif	03 07 34.8	+0.3
KPRO	Kipourio	107.78	310	P	Pdif	03 07 33.2	-1.6
PVO	Paravola	107.80	308	P	Pdif	03 07 34.8	0.0
PYL	PYLOS	107.80	307	P	Pdif	03 07 34.1	-0.7
RLS	Riolos of Patr	107.91	308	P	Pdif	03 07 34.7	-0.6
TETR	Tetrakomo, Epi	107.92	309	P	Pdif	03 07 34.7	-0.8
AXS	Araxos	107.96	308	P	Pdif	03 07 35.6	0.0
AMPL	Ampelaki	108.01	309	P	Pdif	03 07 35.3	-0.4
OHR	Ohrid	108.06	311	i P	Pdif	03 07 36.0	0.0
HFS	Hagfors	108.08	332	Pdiff	Pdif	03 07 33.9	-1.6
	comp=Z,21nm,0.8s,baz=103,slow=4.7,SNR=100						
HFS				PKiKP	PKiKP	03 11 43.0	+1.9
	comp=Z,39nm,0.6s,baz=128,slow=4.0,SNR=7.0						
HFS				PP	PP	03 12 07.2	-0.1
	comp=Z,37nm,0.8s,baz=84,slow=5.2,SNR=4.0						
HFS				Sdiff		03 17 49.8	
	comp=Z,24nm,1.0s,baz=320,slow=3.9,SNR=5.0						
HFS				PKKPbc	PKKPbc	03 22 54.0	-2.3
	comp=Z,16nm,0.6s,baz=204,slow=3.3,SNR=16						
HFS				SKKPbc	SKKPbc	03 26 16.6	-2.4
	comp=Z,8.6nm,0.7s,baz=225,slow=3.1,SNR=3.8						
BLEU	Blekinge	108.18	327	i P	Pdif	03 07 34.9	-1.2
GKP	Gorka Klasztor	108.19	324	ePdif	Pdif	03 07 36.7	+0.5
GKP				ePP	PP	03 12 11.0	+2.7
GKP				eSKS	SKSac	03 17 53.4	-0.9
GKP				eSKS	SKSac	03 17 54.2	-0.1
GKP				eSP	SP	03 21 04.9	-4.5
GKP				eSS	SS	03 27 11.6	+6.8
GKP				eL	L	03 54 31.0	
	comp=Z,54µm,26.4s						
FRGS	Fruska Gora	108.19	315	eP	PKiKP	03 11 43.5	+1.7
JAN	Janina	108.20	310	P	Pdif	03 07 36.4	-0.2
VYHS	Vyhne	108.25	319	i P	Pdif	03 07 37.5	+0.8
VYHS				e		03 12 12.3	
VYHS				e		03 17 55.2	
VYHS	Vyhne	108.25	319	ePDIFF	Pdif	03 07 37.4	+0.8
VYHS	Vyhne	108.25	319	ePP	PP	03 12 12.3	+3.2
SJES	Sjenica	108.37	313	eP	PKiKP	03 11 46.3	+3.9
OKC	Ostrava-Krasne	108.42	320	ePKP	PKiKP	03 11 45.1	+3.0
LTHK	Lithakia	108.44	308	P	Pdif	03 07 37.1	-0.6
RTZL	Ratzakli, Kefa	108.45	308	P	Pdif	03 07 37.5	-0.2
LKD2	Lefkada island	108.46	309	P	Pdif	03 07 36.8	-0.9
TEKS	Tekeris	108.48	315	eP	PKiKP	03 11 43.3	+0.9
PSDA	Pessada-Kefalo	108.59	308	P	Pdif	03 07 38.5	+0.1
IGT	Igoumenitsa	108.62	309	P	Pdif	03 07 37.8	-0.7
BBLS	Lazi&#263i	108.68	314	eP	PKiKP	03 11 47.2	+4.3
MAUC	Maruska	108.72	320	ePDIFF	Pdif	03 07 39.8	+1.1
MAUC				ePKP	PKiKP	03 11 47.0	+4.3
MAUC				eSKS	SKSac	03 17 57.5	+0.6
MAUC				ePKKP	PKKPbc	03 22 53.2	-0.7
MAUC				ePKKS		03 50 30.0	
SRO	Srobarova	108.72	318	i P	Pdif	03 07 43.4	+4.7
SRO				e		03 12 18.3	
SRO	Srobarova	108.72	318	ePDIFF	Pdif	03 07 39.4	+0.7
SRO	Srobarova	108.72	318	ePP	PP	03 12 18.3	+5.8
TIR	Tirane	108.73	311	⇑P	Pdif	03 07 41.3	+2.4
TIR	Tirane	108.73	311	⇑P	Pdif	03 07 41.3	+2.4
RUDO	Rudo	108.75	314	⇑iP	PKiKP	03 11 45.9	+3.0
MORH	Mrgy, Hungar	108.81	317	⇓P	Pdif	03 07 40.8	+1.6
MORC	Moravsky Berou	108.81	320	ePDIFF	Pdif	03 07 40.4	+1.3
MORC				ePKIKP	PKiKP	03 11 45.2	+2.3
MORC				e		03 12 16.5	
MORC				eSKS	SKSac	03 17 58.2	+0.9
MORC				ePKKP	PKKPbc	03 22 53.9	+0.2
MORC	Moravsky Berou	108.81	320	⇑P	Pdif	03 07 40.5	+1.4
MORC	Moravsky Berou	108.81	320	⇑P	Pdif	03 07 40.5	+1.4
NC602	NORSAR Array S	108.86	333	ePdif	Pdif	03 07 38.2	-0.8
NC602				IVmB_BB		03 07 40.4	
	comp=Z,784nm,2.7s						
NC602				ePP	PP	03 12 13.4	+0.4
NC602				eSKSac	SKSac	03 17 58.6	+1.7
NC602				eSP	SP	03 21 15.4	-0.4
NC602				i		03 22 49.4	
NC602				e		03 22 52.6	
NC602				eSS	SS	03 27 11.9	-1.5
NC602				IVMs_BB	IVMs_BB	03 58 33.8	
	comp=Z,18µm,19.8s						
NB2	NORSAR Subarra	108.90	333	P	Pdif	03 07 37.9	-1.4
	comp=Z,483nm,2.5s,baz=66,slow=4.6						
NB2				PKPdf	PKiKP	03 11 45.2	+2.5
	comp=Z,22nm,0.7s,baz=68,slow=1.9						
NB2				PKKP	PKKPbc	03 22 53.3	-0.5
	comp=Z,60nm,1.2s,baz=232,slow=3.8						
NB2				SKKP	SKKPbc	03 26 12.6	-4.1
	comp=Z,3.2nm,0.7s,baz=240,slow=2.5						
NOA	NORSAR Array B	108.90	333	Pdiff	Pdif	03 07 38.1	-1.1
	comp=Z,19nm,0.9s,baz=68,slow=4.5,SNR=65						
NOA				PKiKP	PKiKP	03 11 43.2	+0.5
	comp=Z,35nm,0.7s,baz=262,slow=3.2,SNR=17						
NOA				PP	PP	03 12 13.7	+0.3
	comp=Z,9.6nm,0.7s,baz=71,slow=9.3,SNR=3.6						
NOA				PKKPbc	PKKPbc	03 22 52.3	-1.5
	comp=Z,16nm,0.9s,baz=232,slow=3.8,SNR=27						
NOA				SKKPbc	SKKPbc	03 26 14.1	-2.6
	comp=Z,10nm,0.9s,baz=66,slow=2.7,SNR=5.0						
JAVC	Velka Javorina	108.93	320	ePDIFF	Pdif	03 07 41.4	+1.7
JAVC				e		03 12 17.6	
JAVC				ePKKP	PKKPbc	03 22 52.9	-0.4
NEEM	North Greenlan	108.98	0	i P	Pdif	03 07 40.6	+1.0
NEEM				IAmb	IAmb	03 07 43.4	
	comp=Z,187nm,1.3s						
DRME	Dracevica, Mon	109.11	312	eP	PKiKP	03 11 45.2	+1.6
UPM	Unac-Piva	109.15	313	eP	PKiKP	03 11 45.0	+1.1
DEL	Delary	109.17	328	i P	Pdif	03 07 40.0	-0.5
TULEG	Thule	109.20	4	i P	Pdif	03 07 40.8	+0.6
TULEG				IAmb	IAmb	03 07 42.2	
	comp=Z,25nm,0.9s						
KRLC	Kraliky	109.22	321	ePDIFF	Pdif	03 07 42.1	+1.1
KRLC				ePKKP	PKKPbc	03 22 51.8	-0.6
KRLC	Kraliky	109.22	321	i P	Pdif	03 07 42.1	+1.1
KRLC				e		03 22 51.8	
MODS	Modra-Piesok	109.29	319	i P	Pdif	03 07 41.0	-0.3
MODS				e		03 12 19.6	
MODS				e		03 17 57.9	
MODS	Modra-Piesok	109.29	319	ePDIFF	Pdif	03 07 40.9	-0.3
MODS	Modra-Piesok	109.29	319	ePP	PP	03 12 19.6	+3.0
KSP	Ksiaz	109.34	322	ePdif	Pdif	03 07 42.5	+1.1
KSP				ePP	PP	03 12 18.0	+1.2
KSP				eSKS	SKSac	03 17 59.0	-0.4
KSP				eSP	SP	03 21 17.7	-3.4
KSP				eSS	SS	03 27 28.6	+8.1
KSP				eL	L	04 03 48.8	
	comp=Z,34µm,22.3s						
KSP	Ksiaz	109.34	322	P	Pdif	03 07 42.5	+1.1
BORU	Boraas	109.36	329	i P	Pdif	03 07 39.7	-1.6
MPLH	Magyarpolny	109.37	318	P	Pdif	03 07 42.7	+1.1
DPC	Dobruska-Polom	109.44	321	ePDIFF	Pdif	03 07 43.3	+1.3
DPC				ePKP	PKiKP	03 11 46.3	+2.2
DPC				eSKS	SKSac	03 17 58.8	-1.2
DPC				ePKKP	PKKPbc	03 22 53.0	+1.3
DPC	Dobruska-Polom	109.44	321	eP	Pdif	03 07 43.3	+1.3
DPC				e		03 17 58.8	
DPC				e		03 22 53.0	
DPC	Dobruska-Polom	109.44	321	P	Pdif	03 07 43.2	+1.3
DOMB	Dombas	109.45	334	ePdif	Pdif	03 07 42.0	+0.3
DOMB				IVmB_BB		03 07 43.6	
	comp=Z,1µm,2.0s						
DOMB				ePP	PP	03 12 13.8	-3.4
DOMB				eSKSac	SKSac	03 18 02.0	+2.6
DOMB				eSP	SP	03 21 20.8	-0.7
DOMB				e		03 22 52.1	
DOMB				IVMs_BB	IVMs_BB	04 00 35.8	
	comp=Z,18µm,19.8s						
OSTC	Ostas	109.46	321	ePKP	PKiKP	03 11 47.9	+3.8
OSTC				eSKS	SKSac	03 17 56.5	-3.5
BRY	Bratogost	109.47	313	eP	PKiKP	03 11 46.8	+2.3
VRAC	Vranov	109.52	320	PKKPbc	PKKPbc	03 22 51.8	+0.5
	comp=Z,4.2nm,0.7s,baz=105,slow=1.2,SNR=3.7						
VRAC	Vranov	109.52	320	ePDIFF	Pdif	03 07 43.9	+1.7
VRAC				ePKIKP	PKiKP	03 11 47.0	+2.8
VRAC				e		03 12 18.5	
VRAC				eSKS	SKSac	03 18 01.1	+0.9
VRAC				ePKKP	PKKPbc	03 22 53.1	+1.8
VRAC	Vranov	109.52	320	⇑P	Pdif	03 07 44.2	+2.0
VRAC	Vranov	109.52	320	⇑P	Pdif	03 07 44.2	+2.0
OSL	Oslo	109.54	332	ePdif	Pdif	03 07 41.6	-0.4
OSL				IVmB_BB		03 07 43.8	
	comp=Z,1µm,2.5s						
OSL				ePP	PP	03 12 16.4	-1.5
OSL				eSKSac	SKSac	03 17 59.6	-0.1
OSL				eSS	SS	03 27 28.3	+5.9

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OSL                                    IVMs_BB  IVMs_BB  03 58 55.8
       comp=Z,14µm,20.3s
CHVC   Chvalec           109.55 322   ePDIFF    Pdif     03 07 43.9 +1.5
CHVC                                  ePKP      PKiKP    03 11 46.9 +2.7
CHVC                                  ePKKP     PKKPbc   03 22 51.2 -0.1
CHVC   Chvalec           109.55 322   i P       Pdif     03 07 43.9 +1.5
CHVC                                  e                  03 22 51.2
HCY    Herceg Novi       109.57 313   eP        PKiKP    03 11 46.7 +2.2
FABU   Falkenberg        109.60 329   i P       Pdif     03 07 41.7 -0.6
UPC    Upice             109.60 321   ePDIFF    Pdif     03 07 44.1 +1.5
UPC                                   ePKKP     PKKPbc   03 22 52.2 +1.1
UPC    Upice             109.60 321   eP        Pdif     03 07 44.1 +1.5
TREB   Trebinje          109.63 313   eP        PKiKP    03 11 46.4 +1.8
LUNU   Lund              109.66 327   i P       Pdif     03 07 41.6 -1.1
STRU   Stroemstad        109.66 331   i P       Pdif     03 07 41.6 -1.0
KRUC   Moravsky          109.70 320   ePDIFF    Pdif     03 07 44.3 +1.3
KRUC                                  ePKIKP    PKiKP    03 11 46.5 +2.0
KRUC                                  e                  03 12 18.4
KRUC                                  eSKS      SKSac    03 18 01.8 +0.8
KRUC                                  ePKKP     PKKPbc   03 22 52.0 +1.3
BJUU   Bjuv              109.74 328   i P       Pdif     03 07 42.6 -0.4
DBG    Daneborg          109.84 352   i P       Pdif     03 07 43.3 +0.2
DBG                                    IAmb     IAmb     03 07 45.2
       comp=Z,113nm,1.8s
MOL    Molde             109.87 335   ePdif     Pdif     03 07 43.8 +0.4
MOL                                    IVmB_BB           03 07 44.7
       comp=Z,2µm,2.0s
MOL                                   ePP       PP       03 12 14.8 -5.4
MOL                                   eSKSac    SKSac    03 18 02.6 +1.7
MOL                                   eSP       SP       03 21 25.9 +0.7
MOL                                   e                  03 22 49.3
MOL                                    IVMs_BB  IVMs_BB  04 00 50.0
       comp=Z,17µm,20.5s
ONAU   Onsala            109.88 329   i P       Pdif     03 07 42.1 -1.4
SLATY  Slatina           110.00 315   eP        PKiKP    03 11 46.0 +0.8
RGN    Rugen             110.06 326   ePdiff    Pdif     03 07 44.9 +0.5
       baz=72,slow=4.4
RGN                                   ePKiKP    PKiKP    03 11 49.4 +4.4
       baz=74,slow=1.9
RGN                                   eSKS      SKSac    03 18 03.7 +1.6
       baz=74,slow=4.0
RGN                                   eX                 03 19 00.5
       baz=74,slow=7.1
RGN                                   eSdiff    Sdif     03 19 35.9 -2.6
       baz=70,slow=8.2
RGN                                   eSP       SP       03 21 22.8 -4.7
       baz=66,slow=9.6
STON   Ston              110.08 313⇑iP        PKiKP    03 11 46.6 +1.2
RONA   Rosalia, Austr    110.08 319   ePdiff    Pdif     03 07 46.0 +1.1
       comp=Z,10nm,1.6s
RONA                                  ePKiKP    PKiKP    03 11 48.1 +2.7
       comp=Z,39nm,0.9s
RONA                                  i PKKP    PKKPbc   03 22 49.8 +0.2
       comp=Z,29nm,1.2s
BLY    Banja Luka        110.09 315⇑iP        PKiKP    03 11 47.6 +2.2
JNE    Jan Mayen East    110.17 346   ePdif     Pdif     03 07 46.5 +1.9
JNE                                   ePP       PP       03 12 24.6 +2.5
JNE                                   eSKSac    SKSac    03 18 05.5 +3.5
JNE                                   eSP       SP       03 21 32.5 +4.9
JNW    Jan Mayen West    110.17 346   ePdif     Pdif     03 07 47.0 +2.3
JNW                                   ePP       PP       03 12 24.9 +2.9
JNW                                   eSP       SP       03 21 31.3 +3.7
KONO   Kongsberg         110.18 332             Pdif     03 07 44.4 -0.5
KONO   Kongsberg         110.18 332   ⇑P        Pdif     03 07 44.6 -0.3
KONO   Kongsberg         110.18 332   ePdif     Pdif     03 07 44.0 -0.9
KONO                                   IVmB_BB           03 07 46.5
       comp=Z,791nm,2.7s
KONO                                  ePP       PP       03 12 19.6 -2.9
KONO                                  eSKSac    SKSac    03 18 03.2 +0.7
KONO                                  eSP       SP       03 21 27.4 -0.9
KONO                                  e                  03 22 49.5
KONO                                  i                  03 23 03.9
KONO                                  eSS       SS       03 27 30.4 -0.5
KONO                                   IVMs_BB  IVMs_BB  03 59 26.1
       comp=Z,16µm,19.2s
COP    Copenhagen        110.18 327   i P       Pdif     03 07 45.0 +0.1
JMIC   Jan Mayen         110.22 346   ePdif     Pdif     03 07 46.4 +1.6
JMIC                                  ePP       PP       03 12 25.2 +2.8
JMIC                                  eSKSac    SKSac    03 18 05.7 +3.5
JMIC                                  eSP       SP       03 21 32.3 +4.3
JMIC                                  eSS       SS       03 27 35.4 +4.5
TREC   Trest             110.23 320   ePKP      PKiKP    03 11 47.0 +1.5
TREC                                  ePKKP     PKKPbc   03 22 49.4 +0.3
TREC   Trest             110.23 320   ePKIKP    PKiKP    03 11 47.0 +1.5
A051A  Mrakovica         110.24 316   eP        PKiKP    03 11 47.6 +1.8
AKN    Aaknes            110.27 335   ePdif     Pdif     03 07 46.4 +1.1
AKN                                    IVmB_BB           03 07 51.2
       comp=Z,2µm,1.5s
AKN                                   ePP       PP       03 12 27.9 +4.8
AKN                                   eSKSac    SKSac    03 18 04.8 +2.0
AKN                                   eSP       SP       03 21 31.7 +2.7
AKN                                   e                  03 22 48.8
AKN                                   eSS       SS       03 27 36.0 +3.8
AKN                                    IVMs_BB  IVMs_BB  04 01 02.0
       comp=Z,24µm,18.7s
JMI    Jan Mayen         110.31 346   ePdif     Pdif     03 07 46.9 +1.7
JMI                                   ePP       PP       03 12 25.8 +2.8
JMI                                   eSKSac    SKSac    03 18 04.8 +2.3
JMI                                   eSP       SP       03 21 30.8 +1.9
CONA   Conrad Observa    110.31 319   i Pdiff   Pdif     03 07 47.9 +2.0
       comp=Z,12nm,1.9s,SNR=11
CONA                                  i PKiKP   PKiKP    03 11 50.0 +4.1
       comp=Z,22nm,0.6s
CONA                                  i PKKP    PKKPbc   03 22 48.6 -0.2
       comp=Z,49nm,1.1s
SKAR   Skarslia          110.35 333   ePdif     Pdif     03 07 45.7  0.0
SKAR                                   IVmB_BB           03 07 48.5
       comp=Z,1µm,3.2s
SKAR                                  ePP       PP       03 12 25.5 +1.7
SKAR                                  eSKSac    SKSac    03 18 05.5 +2.2
SKAR                                  eSP       SP       03 21 28.2 -1.7
SKAR                                  e                  03 22 49.1
SKAR                                  eSS       SS       03 27 36.7 +3.3
SKAR                                   IVMs_BB  IVMs_BB  03 58 59.6
       comp=Z,17µm,23.4s
KOGS   Kog               110.39 317   ePdiff    Pdif     03 07 46.2 +0.1
RUE    Ruedersdorf       110.42 324   ePdiff    Pdif     03 07 47.3 +1.2
       baz=72,slow=4.4
RUE                                   ePKiKP    PKiKP    03 11 47.7 +2.0
       baz=74,slow=1.9
RUE                                   eSKS      SKSac    03 18 03.1 -0.6
       baz=74,slow=4.0
RUE                                   eX                 03 19 01.4
       baz=74,slow=7.1
RUE                                   eSdiff    Sdif     03 19 40.5 -1.1
       baz=70,slow=8.2
RUE                                   eSP       SP       03 21 26.4 -4.5
       baz=66,slow=9.6
GOPC   GO Pecny, Ondr    110.51 321   ePKP      PKiKP    03 11 47.9 +1.8
GOPC                                  eSKS      SKSac    03 18 08.4 +4.1
GOPC   GO Pecny, Ondr    110.51 321   ePKIKP    PKiKP    03 11 47.9 +1.8
GOPC                                  e                  03 18 08.4
A050A  Klekovaca         110.61 315   eP        PKiKP    03 11 47.8 +1.3
PRU    Pruhonice         110.64 321   ePDIFF    Pdif     03 07 50.3 +3.1
PRU                                   ePKP      PKiKP    03 11 48.2 +1.9
PRU                                   eSKS      SKSac    03 18 02.7 -2.1
PRU                                   ePKKP     PKKPbc   03 22 47.4 -0.3
PRU                                    AMS      AMS      04 02 50.0
       comp=Z,41µm,20.0s
PRU    Pruhonice         110.64 321   eP        Pdif     03 07 50.3 +3.1
PRU                                   e                  03 18 02.7
PRU                                   e                  03 22 47.4
PRU                                    MLR      MLR
       comp=Z,41µm,20.0s
PRA    Prague            110.69 321   ePKP      PKiKP    03 11 49.2 +2.9
PRA                                   eSDIF              03 19 42.9
PRA                                    AMS      AMS      04 03 00.0
PRA    Prague            110.69 321   ePKIKP    PKiKP    03 11 49.2 +2.9
ARSA   Arzberg           110.69 318   i Pdiff   Pdif     03 07 48.6 +1.1
       comp=Z,11nm,1.4s
ARSA                                  i PKiKP   PKiKP    03 11 49.2 +2.7
       comp=Z,45nm,1.1s
ARSA                                  i PKKP    PKKPbc   03 22 48.4 +0.9
       comp=Z,38nm,0.9s
OVD    Ostervraa, Den    110.77 330   i P       Pdif     03 07 47.2 -0.4
OVD                                    IAmb     IAmb     03 07 49.6
       comp=Z,26nm,0.5s
BRG    Berggiesshubel    110.77 322   ePdiff    Pdif     03 07 48.7 +1.0
       baz=72,slow=4.4
BRG                                   ePKiKP    PKiKP    03 11 49.0 +2.5
       baz=74,slow=1.9
BRG                                   eSKS      SKSac    03 18 03.7 -1.6
       baz=74,slow=4.0
BRG                                   eX                 03 19 02.7
       baz=74,slow=7.1
BRG                                   eSdiff    Sdif     03 19 43.9 -0.8
       baz=70,slow=8.2
BRG    Berggiesshubel    110.77 322⇓ePif               03 07 48.7
BRG                                    Amp               03 07 54.7
       comp=Z,30nm,0.9s
BRG    Berggiesshubel    110.77 322    PP       PP       03 12 33.0 +5.9
BRG    Berggiesshubel    110.77 322    SP       SP       03 21 31.0 -3.3
BRG                                    PKKP              03 22 48.3
BRG                                    Amp               03 22 49.8
       comp=Z,47nm,1.2s
GCIS   Gornji Cirnik     110.94 317   i Pdiff   Pdif     03 07 46.7 -1.9
GCIS                                  eSKSac    SKSac    03 18 05.9 -0.3
GCIS                                  e                  03 19 45.9
ZVC    Zvikov            111.01 321   ePDIFF    Pdif     03 07 51.0 +2.2
ZVC                                   eSKS      SKSac    03 18 06.3  0.0
ZVC                                   ePKKP     PKKPbc   03 22 46.9 +0.4
CRES   Cresnjevec Ost    111.06 317⇑iP        PKiKP    03 11 49.1 +1.9
HYA    Hoyanger          111.07 334   ePdif     Pdif     03 07 49.1 +0.3
HYA                                    IVmB_BB           03 07 49.7
       comp=Z,1µm,2.5s
HYA                                   ePP       PP       03 12 30.9 +2.1
HYA                                   eSKSac    SKSac    03 18 07.9 +1.9
HYA                                   eSP       SP       03 21 37.8 +1.4
HYA                                   e                  03 22 46.3
HYA                                   eSS       SS       03 27 50.3 +7.6
HYA                                    IVMs_BB  IVMs_BB  04 04 59.2
       comp=Z,17µm,20.5s
CKRC   Cesky Krumlov     111.09 320   ePDIFF    Pdif     03 07 50.5 +1.2
CKRC                                  ex        x        03 19 45.4
CKRC                                  ePKKP     PKKPbc   03 22 44.6 -1.6
CKRC   Cesky Krumlov     111.09 320   i P       Pdif     03 07 50.5 +1.2
CKRC                                  e                  03 22 44.6
PERS   Pernice           111.11 318   ePdiff    Pdif     03 07 49.7 +0.3
SOKA   Soboth            111.15 318   i Pdiff   Pdif     03 07 51.3 +1.6
       comp=Z,10nm,1.4s,SNR=8.5
SOKA                                  ePKiKP    PKiKP    03 11 50.1 +2.6
       comp=Z,88nm,1.0s
SOKA                                  i PKKP    PKKPbc   03 22 47.0 +0.9
       comp=Z,24nm,0.8s,SNR=8.3
SOKA   Soboth            111.15 318   eP        PKKPbc   03 22 47.0 +0.9
       comp=Z,24nm,0.8s,SNR=8.3
CLL    Collm             111.22 323   i P       Pdif     03 07 50.1 +0.4
CLL                                   i                  03 18 05.5
CLL                                    pmax     pmax
       comp=Z,63nm,1.8s
CLL    Collm             111.22 323   ePdiff    Pdif     03 07 49.8 +0.1
       baz=72,slow=4.4
CLL                                   ePKiKP    PKiKP    03 11 48.9 +1.6
       baz=74,slow=1.9
CLL                                   eSKS      SKSac    03 18 05.6 -1.5
       baz=74,slow=4.0
CLL                                   eX                 03 19 06.1
       baz=74,slow=7.1
CLL                                   eSdiff    Sdif     03 19 46.7 -1.6
       baz=70,slow=8.2
CLL                                   eSP       SP       03 21 34.8 -3.5
       baz=66,slow=9.6
CLL    Collm             111.22 323   i Pdif    Pdif     03 07 50.1 +0.4
       comp=Z,63nm,1.8s
CLL                                   i x       x        03 07 54.8
       comp=Z,97nm,1.8s
CLL                                   epPdif    pPdif    03 08 44.0 +1.4
CLL                                   i PKiKP   PKiKP    03 11 50.2 +2.9
       comp=Z,80nm,0.7s
CLL                                   ex        x        03 12 22.0
CLL                                   i PP      PP       03 12 27.9 -2.4
CLL                                   i PPmax            03 12 37.6
       comp=Z,350nm,1.7s
CLL                                   epPP               03 13 19.0
CLL                                   epPPlp             03 13 28.0
CLL                                   esPP               03 13 43.0
CLL                                   esPPlp             03 13 54.0
CLL                                   ePPP      PPP      03 14 50.0
CLL                                   ex        x        03 16 16.0
CLL                                   ePPPP              03 16 41.0
CLL                                   i SKSac   SKSac    03 18 05.5 -1.5
CLL                                   i SKSac(2)         03 18 08.8
CLL                                   eSKKSac   SKKSac   03 19 11.0 +0.9
CLL                                   esSKSac   sSKSac   03 19 42.0 -3.2
CLL                                   eSdif     Sdif     03 19 49.0 +0.6
CLL                                   eSP       SP       03 21 36.0 -2.4
CLL                                   ePS       PS       03 21 59.0 -6.0
CLL                                   ex        x        03 22 19.0
CLL                                   ex        x        03 22 30.0
CLL                                   i PKKPab  PKKPab   03 22 56.9 +2.4
       comp=Z,107nm,1.1s
CLL                                   ePPS      PPS      03 23 11.0
CLL                                   ex        x        03 23 58.0
CLL                                   esPKKPbc           03 24 02.0
CLL                                   esPPS              03 24 14.0
CLL                                   i SKKPbc  SKKPbc   03 26 09.3 -0.2
       comp=Z,113nm,1.7s
CLL                                   e(SKKPdf)          03 26 20.0
CLL                                   eSS       SS       03 27 45.0 -0.4
CLL                                   esSS               03 29 12.0
CLL                                   eSSS      SSS      03 30 00.0
CLL                                   ex        x        03 30 26.0
CLL                                   ePKPPKPdP'P'df     03 31 14.0 +0.3
CLL                                   esSSS              03 33 24.0
CLL                                   ex        x        03 34 12.0
CLL                                   eSSSS              03 35 36.0
CLL                                   ex        x        03 38 42.0
CLL                                   ex        x        03 40 30.0
CLL                                   i S5KP             03 50 28.1
       comp=Z,46nm,1.9s
CLL                                   i S5KP(2)          03 50 31.8
       comp=Z,72nm,1.9s
CLL                                   e3PKPab            03 54 25.0
       comp=Z,62nm,2.5s
CLL                                    AMS      AMS      04 05 00.0
       comp=Z,28µm,21.6s
CLL                                    R2                04 35 00.0
CLL                                    R2                05 06 00.0
       comp=N,4µm,19.8s
CLL                                    R2                05 06 00.0
       comp=E,5µm,20.9s
CLL                                    R2                05 06 00.0
       comp=Z,9µm,20.2s
CLL                                    R3                06 14 00.0
HOMB   Homborsund        111.24 331   ePdif     Pdif     03 07 49.5 -0.2
HOMB                                   IVmB_BB           03 07 53.2
       comp=Z,578nm,5.0s
HOMB                                  ePP       PP       03 12 30.6 +0.4
HOMB                                  eSKSac    SKSac    03 18 06.6 -0.2
HOMB                                  eSP       SP       03 21 35.0 -3.2
HOMB                                  e                  03 22 46.6
HOMB                                   IVMs_BB  IVMs_BB  03 59 04.8
       comp=Z,13µm,18.5s
HOMB   Homborsund        111.24 331   i P       Pdif     03 07 48.8 -0.8
BOJS   Bojanci           111.27 316⇑iP        PKiKP    03 11 48.4 +0.8
FOO    Floro             111.36 335   ePP       PP       03 12 33.5 +2.6
FOO                                   eSKSac    SKSac    03 18 09.5 +2.4
FOO                                   eSP       SP       03 21 40.6 +1.6
FOO                                   eSS       SS       03 27 45.3 -1.2
FOO                                    IVMs_BB  IVMs_BB  03 57 44.0
       comp=Z,13µm,21.3s
MOA    Molln             111.37 319   ePdiff    Pdif     03 07 51.3 +0.8
       comp=Z,6.8nm,1.0s,SNR=16
MOA                                   i PKiKP   PKiKP    03 11 50.5 +2.7
       comp=Z,72nm,1.2s
MOA                                   ePKKP     PKKPbc   03 22 45.8 +0.5
       comp=Z,34nm,0.6s
ODD1   Odda              111.43 333   ePdif     Pdif     03 07 50.4 -0.2
ODD1                                   IVmB_BB           03 07 52.8
       comp=Z,744nm,2.7s
ODD1                                  ePP       PP       03 12 33.8 +2.3
ODD1                                  eSKSac    SKSac    03 18 11.4 +3.7
ODD1                                  e                  03 22 46.0
ODD1                                   IVMs_BB  IVMs_BB  03 59 18.0
       comp=Z,16µm,23.5s
GEC2   GERESS Array S    111.48 320   ePdiff    Pdif     03 07 51.5 +0.4
       baz=72,slow=4.4
GEC2                                  ePKiKP    PKiKP    03 11 49.6 +1.6
       baz=74,slow=1.9
GEC2                                  ePP       PP       03 12 34.5 +2.2
       baz=63,slow=6.5
GEC2                                  eX                 03 19 08.7
       baz=74,slow=7.1
GEC2                                  eSdiff             03 19 50.9
       baz=70,slow=8.2
GERES  GERESS Array B    111.48 320    Pdiff    Pdif     03 07 51.4 +0.3
       comp=Z,6.2nm,0.8s,baz=94,slow=1.9,SNR=23
GERES                                  PKiKP    PKiKP    03 11 49.0 +0.9
       comp=Z,106nm,0.6s,baz=65,slow=1.6,SNR=77
GERES                                  PP       PP       03 12 32.9 +0.5
       comp=Z,123nm,1.2s,baz=93,slow=2.8,SNR=6.5
GERES                                  SKiKP    SKiKP    03 15 04.4 +1.9
       comp=Z,21nm,0.7s,baz=54,slow=2.3,SNR=4.5
GERES                                  PKKPbc   PKKPbc   03 22 44.9 -0.3
       comp=Z,10nm,0.8s,baz=258,slow=1.6,SNR=14
GERES                                  SKKPbc   SKKPbc   03 26 08.0 -0.8
       comp=Z,6.3nm,1.1s,baz=248,slow=1.4,SNR=3.7
GERES  GERESS Array B    111.48 320   i PKIKP   PKiKP    03 11 49.0 +0.9
KHC    Kasperske Hory    111.48 320   ePDIFF    Pdif     03 07 52.8 +1.8
KHC                                   ePKP      PKiKP    03 11 49.4 +1.5
KHC                                   ex        x        03 12 24.0
KHC                                   eSKS      SKSac    03 18 05.3 -3.1
KHC                                   ePKKP     PKKPbc   03 22 44.6 -0.4
KHC                                    AMS      AMS      04 02 20.0
       comp=Z,39µm,21.5s
KHC    Kasperske Hory    111.48 320   i P       Pdif     03 07 52.8 +1.8
KHC                                   e                  03 11 49.4
KHC                                   e                  03 18 05.3
KHC                                   e                  03 22 44.6
KHC                                    MLR      MLR
       comp=Z,39µm,21.5s
VISS   Visnje            111.49 317   i Pdiff   Pdif     03 07 51.1 +0.1
VISS                                  epPdiff   pPdif    03 08 43.0 -0.8
VISS                                  ePP       PP       03 12 27.8 -4.7
VISS                                  e                  03 13 22.8
NVAR   Mina Array Bea    111.50  51    Pdiff    Pdif     03 07 53.0 +1.4
       comp=Z,11nm,0.9s,baz=259,slow=5.4,SNR=16
NVAR                                   PKiKP    PKiKP    03 11 50.5 +2.0
       comp=Z,21nm,0.8s,baz=274,slow=2.7,SNR=8.3
NVAR                                   PP       PP       03 12 31.9 -1.2
       comp=Z,21nm,1.0s,baz=263,slow=4.9,SNR=6.2
NVAR                                   SKiKP    SKiKP    03 15 06.3 +3.3
       comp=Z,20nm,1.0s,baz=249,slow=2.8,SNR=3.6
NVAR                                   PKKPbc   PKKPbc   03 22 46.4 +1.6
       comp=Z,13nm,0.7s,baz=111,slow=4.5,SNR=9.3
OBKA   Obir              111.52 318   eP        PKiKP    03 11 50.1 +1.9
OBKA   Obir              111.52 318   i Pdiff   Pdif     03 07 53.5 +2.2
       comp=Z,6.3nm,1.1s
OBKA                                  ePKiKP    PKiKP    03 11 52.2 +4.1
       comp=Z,44nm,0.8s
OBKA                                  i PKKP    PKKPbc   03 22 45.4 +0.6
       comp=Z,54nm,0.9s
LJU    Ljubljana         111.64 317   ePdiff    Pdif     03 07 52.5 +0.7
LJU                                   i pPdiff  pPdif    03 08 44.8 +0.3
LJU                                   ePKiKP    PKiKP    03 11 50.4 +2.0
LJU                                   e                  03 13 24.2
LJU                                   eSKSac    SKSac    03 18 08.2 -0.9
LJU                                   eSKKSac   SKKSac   03 19 09.9 -3.4
LJU                                   e                  03 19 49.9
LJU                                   e                  03 38 53.5
GORT1  Trebel            111.69 325   ePdiff    Pdif     03 07 52.4 +0.7
       baz=72,slow=4.4
GORT1                                 ePKiKP    PKiKP    03 11 49.4 +1.3
       baz=74,slow=1.9
GORT1                                 eSP       SP       03 21 39.6 -2.9
       baz=66,slow=9.6
BLS5   Blasjo            111.73 332   ePdif     Pdif     03 07 52.3 +0.5
BLS5                                   IVmB_BB           03 07 57.4
       comp=Z,885nm,2.4s
BLS5                                  ePP       PP       03 12 35.7 +2.1
BLS5                                  eSKSac    SKSac    03 18 11.6 +2.7
BLS5                                  e                  03 22 45.0
BLS5                                  eSS       SS       03 27 54.4 +2.8
BLS5                                   IVMs_BB  IVMs_BB  04 03 21.6
       comp=Z,19µm,20.5s
SUE    Sulen             111.73 334   ePdif     Pdif     03 07 51.7 -0.1
SUE                                    IVmB_BB           03 07 52.9
       comp=Z,2µm,2.4s
SUE                                   ePP       PP       03 12 38.4 +4.9
SUE                                   e                  03 22 44.3
SUE                                    IVMs_BB  IVMs_BB  04 03 34.2
       comp=Z,14µm,19.5s
SSRD   Sdr. Stenderup    111.75 328   i P       Pdif     03 07 52.5 +0.6
KULLO  Kullorsuaq        111.76   2   i P       Pdif     03 07 51.5 -0.1
BER    Bergen            111.80 334   ePdif     Pdif     03 07 52.1  0.0
BER                                   ePdif     Pdif     03 07 53.5 +1.4
BER                                    IVmB_BB           03 07 54.6
       comp=Z,1µm,3.2s
BER                                   ePP       PP       03 12 36.3 +2.3
BER                                   eSKSac    SKSac    03 18 13.2 +4.2
BER                                   eSP       SP       03 21 45.3 +2.2
BER                                   e                  03 22 44.7
BER                                   eSS       SS       03 27 55.5 +3.1
BER                                    IVMs_BB  IVMs_BB  04 06 15.7
       comp=Z,15µm,21.1s
TANN   Tannenbergstha    111.81 322   ePdiff    Pdif     03 07 52.5 +0.1
       baz=72,slow=4.4
TANN                                  ePKiKP    PKiKP    03 11 51.8 +3.3
       baz=74,slow=1.9
TANN                                  eSKS      SKSac    03 18 08.6 -1.1
       baz=74,slow=4.0
TANN                                  eX                 03 19 10.2
       baz=74,slow=7.1
TANN                                  eSdiff    Sdif     03 19 54.0 +0.5
       baz=70,slow=8.2
TANN                                  eSP       SP       03 21 42.9 -1.1
       baz=66,slow=9.6
ASK    Askoy             111.82 334   ePdif     Pdif     03 07 52.6 +0.5
ASK                                    IVmB_BB           03 07 54.7
       comp=Z,1µm,3.0s
ASK                                   ePP       PP       03 12 37.3 +3.2
ASK                                   eSKSac    SKSac    03 18 10.1 +1.1
ASK                                   eSP       SP       03 21 45.4 +2.1
ASK                                   e                  03 22 44.7
ASK                                    IVMs_BB  IVMs_BB  03 57 37.2
       comp=Z,15µm,22.7s
BIOA   Bad Ischl, Aus    111.82 319   ePdiff    Pdif     03 07 53.7 +1.1
       comp=Z,14nm,1.4s
BIOA                                  i PKiKP   PKiKP    03 11 51.3 +2.7
       comp=Z,55nm,0.7s
BIOA                                  i PKKP    PKKPbc   03 22 44.1 +0.3
       comp=Z,25nm,0.6s,SNR=13
SNART  Snartemo          111.84 331   ePdif     Pdif     03 07 51.5 -0.7
SNART                                 ePP       PP       03 12 36.6 +2.2
SNART                                 eSKSac    SKSac    03 18 11.2 +1.9
SNART                                 e                  03 22 45.1
SNART  Snartemo          111.84 331   i P       Pdif     03 07 52.0 -0.3
WET    Wettzell          111.92 321   ePdiff    Pdif     03 07 53.2 +0.2
       baz=72,slow=4.4
WET                                   ePKiKP    PKiKP    03 11 51.2 +2.5
       baz=74,slow=1.9
WET                                   ePP       PP       03 12 39.7 +4.4
       baz=63,slow=6.5
WET                                   eSKS      SKSac    03 18 09.7 -0.4
       baz=74,slow=4.0
WET                                   eX                 03 19 11.6
       baz=74,slow=7.1
WET                                   eSdiff    Sdif     03 19 55.4 +1.1
       baz=70,slow=8.2
WET                                   eSP       SP       03 21 45.2 +0.2
       baz=66,slow=9.6
BSEG   Bad Segeberg      111.93 326   ePdiff    Pdif     03 07 53.2 +0.4
       baz=72,slow=4.4
BSEG                                  ePKiKP    PKiKP    03 11 50.9 +2.3
       baz=74,slow=1.9
BSEG                                  eSKS      SKSac    03 18 09.7 -0.1
       baz=74,slow=4.0
BSEG                                  eX                 03 19 12.0
       baz=74,slow=7.1
BSEG                                  eSdiff    Sdif     03 19 53.7 -0.4
       baz=70,slow=8.2
BSEG                                  eSP       SP       03 21 41.9 -2.8
       baz=66,slow=9.6
FLTG   Flechtingen       111.94 324   ePdiff    Pdif     03 07 53.0 +0.1
       baz=72,slow=4.4
FLTG                                  ePKiKP    PKiKP    03 11 49.4 +0.8
       baz=74,slow=1.9
FLTG                                  ePP       PP       03 12 33.9 -1.5
       baz=63,slow=6.5
FLTG                                  eSKS      SKSac    03 18 09.2 -0.8
       baz=74,slow=4.0
FLTG                                  eX                 03 19 12.0
       baz=74,slow=7.1
FLTG                                  eSdiff    Sdif     03 19 52.0 -2.4
       baz=70,slow=8.2
FLTG                                  eSP       SP       03 21 40.4 -4.5
       baz=66,slow=9.6
NEUB   Neuenburg         111.98 323   ePdiff    Pdif     03 07 53.9 +0.8
       baz=72,slow=4.4
NEUB                                  ePKiKP    PKiKP    03 11 49.8 +1.0
       baz=74,slow=1.9
NEUB                                  eSKS      SKSac    03 18 09.4 -0.8
       baz=74,slow=4.0
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NEUB				*e*X		03 19 12.0	
	baz=74,slow=7.1						
NEUB				*e*Sdiff	**Sdif**	**03 19 53.7**	**-1.0**
	baz=70,slow=8.2						
NEUB				*e*SP	**SP**	**03 21 43.1**	**-2.3**
	baz=66,slow=9.6						
MYKA	**Terra Mystica**	**112.09**	**318**	*i* Pdiff	**Pdif**	**03 07 56.1**	**+2.3**
	comp=Z,1.9nm,0.5s						
MYKA				*e*PKiKP	**PKiKP**	**03 11 50.4**	**+1.2**
	comp=Z,40nm,0.6s						
MYKA				*e*PKKP	**PKKPbc**	**03 22 44.0**	**+1.0**
	comp=Z,23nm,0.5s,SNR=7.3						
MYKA	**Terra Mystica**	**112.09**	**318**	*e*P	**PKKPbc**	**03 22 44.0**	**+1.0**
	comp=Z,23nm,0.5s,SNR=7.3						
SKDS	**Skadanscina**	**112.11**	**317**⇑	*i*P	**PKiKP**	**03 11 50.3**	**+1.1**
MANZ	**Manzenberg**	**112.15**	**322**	*e*Pdiff	**Pdif**	**03 07 54.2**	**+0.3**
	baz=72,slow=4.4						
MANZ				*e*PKiKP	**PKiKP**	**03 11 50.6**	**+1.4**
	baz=74,slow=1.9						
MANZ				*e*SKS	**SKSac**	**03 18 11.5**	**+0.5**
	baz=74,slow=4.0						
MANZ				*e*X		03 19 14.3	
	baz=74,slow=7.1						
MANZ				*e*Sdiff	**Sdif**	**03 19 56.5**	**+0.2**
	baz=70,slow=8.2						
MANZ				*e*SP	**SP**	**03 21 48.0**	**+0.9**
	baz=66,slow=9.6						
ROTZ	**Rotzenmuhle**	**112.16**	**321**	*e*Pdiff	**Pdif**	**03 07 54.3**	**+0.4**
	baz=72,slow=4.4						
ROTZ				*e*SKS	**SKSac**	**03 18 12.0**	**+1.1**
	baz=74,slow=4.0						
ROTZ				*e*X		03 19 13.6	
	baz=74,slow=7.1						
ROTZ				*e*Sdiff	**Sdif**	**03 19 56.6**	**+0.3**
	baz=70,slow=8.2						
MOX	**Moxa**	**112.25**	**322**	*e*Pdiff	**Pdif**	**03 07 54.9**	**+0.6**
	baz=72,slow=4.4						
MOX				*e*PKiKP	**PKiKP**	**03 11 50.0**	**+0.6**
	baz=74,slow=1.9						
MOX				*e*SKS	**SKSac**	**03 18 10.6**	**-0.7**
	baz=74,slow=4.0						
MOX				*e*X		03 19 13.6	
	baz=74,slow=7.1						
MOX				*e*Sdiff	**Sdif**	**03 19 57.3**	**+0.2**
	baz=70,slow=8.2						
ASSE	**Asse, Remlinge**	**112.34**	**324**	*e*Pdiff	**Pdif**	**03 07 55.3**	**+0.7**
	baz=72,slow=4.4						
ASSE				*e*PKiKP	**PKiKP**	**03 11 50.1**	**+0.8**
	baz=74,slow=1.9						
ASSE				*e*SKS	**SKSac**	**03 18 11.9**	**+0.5**
	baz=74,slow=4.0						
ASSE				*e*X		03 19 14.8	
	baz=74,slow=7.1						
ASSE				*e*Sdiff	**Sdif**	**03 19 55.2**	**-2.3**
	baz=70,slow=8.2						
ASSE				*e*SP	**SP**	**03 21 45.7**	**-2.8**
	baz=66,slow=9.6						
RJOB	**Jochberg**	**112.36**	**319**	*e*Pdiff	**Pdif**	**03 07 54.9**	**0.0**
	baz=72,slow=4.4						
RJOB				*e*PKiKP	**PKiKP**	**03 11 50.2**	**+0.5**
	baz=74,slow=1.9						
RJOB				*e*SKS	**SKSac**	**03 18 09.3**	**-2.7**
	baz=74,slow=4.0						
RJOB				*e*X		03 19 12.1	
	baz=74,slow=7.1						
RJOB				*e*Sdiff	**Sdif**	**03 19 56.9**	**-1.3**
	baz=70,slow=8.2						
RJOB				*e*SP	**SP**	**03 21 51.0**	**+1.9**
	baz=66,slow=9.6						
KMY	**Karmoy**	**112.38**	**333**	*e*Pdif	**Pdif**	**03 07 54.8**	**+0.1**
KMY				*e*PP	**PP**	**03 12 41.1**	**+3.0**
KMY				*e*SKSac	**SKSac**	**03 18 13.1**	**+1.7**
KMY				*e*SP	**SP**	**03 21 48.0**	**-0.4**
KMY				*e*		03 22 42.2	
KMY				*i*		03 23 33.1	
KMY				*e*SS	**SS**	**03 28 02.6**	**+2.6**
KMY				IVMs_BB	IVMs_BB	04 02 10.2	
	comp=Z,13µm,19.8s						
LESA	**Schwarzleotal**	**112.52**	**319**	*i* Pdiff	**Pdif**	**03 07 57.1**	**+1.4**
	comp=Z,12nm,1.3s						
LESA				*i* PKiKP	**PKiKP**	**03 11 51.2**	**+1.2**
	comp=Z,63nm,0.6s,SNR=7.2						
LESA				*e*PKKP	**PKKPbc**	**03 22 41.6**	**0.0**
	comp=Z,45nm,0.8s,SNR=10						
NRDL	**Niedersach Rie**	**112.54**	**325**	*e*Pdiff	**Pdif**	**03 07 56.7**	**+1.2**
	baz=72,slow=4.4						
NRDL				*e*PKiKP	**PKiKP**	**03 11 51.7**	**+2.0**
	baz=74,slow=1.9						
NRDL				*e*SKS	**SKSac**	**03 18 13.0**	**+0.8**
	baz=74,slow=4.0						
NRDL				*e*X		03 19 17.1	
	baz=74,slow=7.1						
NRDL				*e*Sdiff	**Sdif**	**03 19 59.7**	**+0.5**
	baz=70,slow=8.2						
NRDL				*e*SP	**SP**	**03 21 48.2**	**-2.1**
	baz=66,slow=9.6						
CLZ	**Clausthal**	**112.61**	**324**	*e*Pdiff	**Pdif**	**03 07 56.6**	**+0.7**
	baz=72,slow=4.4						
CLZ				*e*PKiKP	**PKiKP**	**03 11 51.9**	**+1.9**
	baz=74,slow=1.9						
CLZ				*e*SKS	**SKSac**	**03 18 12.7**	**-0.1**
	baz=74,slow=4.0						
CLZ				*e*X		03 19 16.8	
	baz=74,slow=7.1						
CLZ				*e*Sdiff	**Sdif**	**03 19 59.4**	**-0.7**
	baz=70,slow=8.2						
CLZ				*e*SP	**SP**	**03 21 48.6**	**-2.6**
	baz=66,slow=9.6						
GRF	**Grafenberg Arr**	**112.79**	**322**	*e*Pdiff	**Pdif**	**03 07 57.7**	**+0.9**
	baz=72,slow=4.4						
GRF				*e*PKiKP	**PKiKP**	**03 11 53.5**	**+3.1**
	baz=74,slow=1.9						
GRF				*e*PP	**PP**	**03 12 46.5**	**+5.0**
	baz=63,slow=6.5						
GRF				*e*SKPdf	**SKPdf**	**03 15 04.4**	**-0.4**
GRF				*e*SKS	**SKSac**	**03 18 13.3**	**-0.2**
	baz=74,slow=4.0						
GRF				*e*X		03 19 18.7	
	baz=74,slow=7.1						
GRF				*e*SP	**SP**	**03 21 53.2**	**+0.2**
	baz=66,slow=9.6						
GRF				*e*PKKP	**PKKPab**	**03 22 50.9**	**+3.3**
	baz=248,slow=5.2						
ABTA	**Abfaltersbach**	**112.81**	**318**	*i* Pdiff	**Pdif**	**03 07 57.7**	**+0.7**
	comp=Z,8.9nm,1.7s						
ABTA				*i* PKiKP	**PKiKP**	**03 11 51.8**	**+1.1**
	comp=Z,183nm,0.8s,SNR=14						
ABTA				*e*PKKP	**PKKPbc**	**03 22 40.9**	**+0.3**
	comp=Z,60nm,1.0s						
RETH	**Rethem/Aller,**	**112.89**	**325**	*e*Pdiff	**Pdif**	**03 07 58.1**	**+1.1**
	baz=72,slow=4.4						
RETH				*e*SP	SP	03 21 49.8	-3.7
	baz=66,slow=9.6						
GTTG	**Gottingen**	**112.95**	**324**	*e*Pdiff	**Pdif**	**03 07 58.1**	**+0.7**
	baz=72,slow=4.4						
GTTG				*e*PKiKP	**PKiKP**	**03 11 52.6**	**+2.0**
	baz=74,slow=1.9						
GTTG				*e*SKS	**SKSac**	**03 18 13.7**	**-0.3**
	baz=74,slow=4.0						
GTTG				*e*X		03 19 19.1	
	baz=74,slow=7.1						
GTTG				*e*Sdiff	**Sdif**	**03 20 01.6**	**-1.2**
	baz=70,slow=8.2						
GTTG				*e*SP	**SP**	**03 21 49.9**	**-4.3**
	baz=66,slow=9.6						
HLG	**Helgoland**	**113.17**	**327**	*e*SKS	**SKSac**	**03 18 15.1**	**+0.4**
	baz=74,slow=4.0						
HLG				*e*X		03 19 21.3	
	baz=74,slow=7.1						
HLG				*e*SP	**SP**	**03 21 53.5**	**-2.5**
	baz=66,slow=9.6						
UBBA	**Unterbreizbach**	**113.17**	**323**	*e*Pdiff	**Pdif**	**03 07 58.5**	**+0.2**
	baz=72,slow=4.4						
UBBA				*e*PKiKP	**PKiKP**	**03 11 52.7**	**+1.8**
	baz=74,slow=1.9						
UBBA				*e*SKS	**SKSac**	**03 18 14.6**	**-0.1**
	baz=74,slow=4.0						
UBBA				*e*X		03 19 20.0	
	baz=74,slow=7.1						
UBBA				*e*Sdiff	**Sdif**	**03 20 02.1**	**-2.4**
	baz=70,slow=8.2						
UBBA				*e*SP	**SP**	**03 21 53.3**	**-2.9**
	baz=66,slow=9.6						
FUR	**Furstenfeldbru**	**113.22**	**320**	*e*PKiKP	**PKiKP**	**03 11 52.6**	**+1.3**
	baz=74,slow=1.9						
FUR				*e*SKS	**SKSac**	**03 18 14.7**	**-0.6**
	baz=74,slow=4.0						
FUR				*e*Sdiff	**Sdif**	**03 20 05.3**	**+0.1**
	baz=70,slow=8.2						
FUR				*e*SP	**SP**	**03 21 58.3**	**+1.3**
	baz=66,slow=9.6						
WTTA	**Wattenberg**	**113.25**	**319**	*i* Pdiff	**Pdif**	**03 07 59.8**	**+0.7**
	comp=Z,13nm,1.0s,SNR=11						
WTTA				*i* PKiKP	**PKiKP**	**03 11 52.6**	**+1.0**
	comp=Z,453nm,0.6s,SNR=32						
WTTA				*i* PKKP	**PKKPbc**	**03 22 41.4**	**+2.1**
	comp=Z,75nm,0.9s,SNR=5.2						
WATA	**Walderalm**	**113.26**	**319**	*e*Pdiff	**Pdif**	**03 07 59.8**	**+0.7**
	comp=Z,16nm,1.2s,SNR=8.6						
WATA				*i* PKiKP	**PKiKP**	**03 11 52.6**	**+1.1**
	comp=Z,135nm,0.5s,SNR=7.4						
WATA				*i* PKKP	**PKKPbc**	**03 22 40.4**	**+1.3**
	comp=Z,64nm,1.2s,SNR=6.6						
AQU	**L'Aquila**	**113.29**	**313**	P	**Pdif**	**03 08 00.1**	**+0.9**
SCO	**Scoresbysund**	**113.38**	**350**	*i* P	**Pdif**	**03 07 59.2**	**+0.3**
SUMG	**Summit**	**113.45**	**356**	P	**Pdif**	**03 08 01.2**	**+1.4**
SUMG	**Summit**	**113.45**	**356**	Pdif	**Pdif**	**03 08 00.3**	**+0.6**
SUMG	**Summit**	**113.45**	**356**	*i* P	**Pdif**	**03 08 00.3**	**+0.6**
SUMG	**Summit**	**113.45**	**356**	*i* P	**Pdif**	**03 08 01.1**	**+1.4**
SQTA	**Sankt Quirin**	**113.54**	**319**	*i* Pdiff	**Pdif**	**03 08 01.7**	**+1.3**
	comp=Z,14nm,1.2s,SNR=11						
SQTA				*i* PKiKP	**PKiKP**	**03 11 53.1**	**+1.1**
	comp=Z,85nm,0.6s,SNR=6.7						
SQTA				*e*PKKP	**PKKPbc**	**03 22 39.0**	**+0.8**
	comp=Z,72nm,1.0s						
MOTA	**Moosalm**	**113.57**	**319**	*i* Pdiff	**Pdif**	**03 08 01.7**	**+1.2**
	comp=Z,12nm,1.2s,SNR=9.1						
MOTA				*i* PKP	**PKiKP**	**03 11 53.2**	**+1.1**
	comp=Z,132nm,0.6s,SNR=13						
MOTA				*i* PKKP	**PKKPbc**	**03 22 39.1**	**+0.9**
	comp=Z,69nm,1.0s						
UPNV	**Upernavik**	**113.59**	**2**	*i* P	**Pdif**	**03 08 00.5**	**+0.7**
RETA	**Reutte**	**113.75**	**319**	*i* Pdiff	**Pdif**	**03 08 00.6**	**-0.6**
	comp=Z,13nm,1.6s						
RETA				*e*PKP	**PKiKP**	**03 11 53.5**	**+1.2**
	comp=Z,76nm,0.7s,SNR=6.6						
RETA				*i* PKKP	**PKKPbc**	**03 22 38.5**	**+1.0**
	comp=Z,34nm,1.2s						
ILON	**Igloolik, Nuna**	**113.89**	**12**	Pdif	**Pdif**	**03 08 01.7**	**+0.5**
FETA	**Feichten**	**113.91**	**319**	*i* Pdiff	**Pdif**	**03 08 02.7**	**+0.7**
	comp=Z,14nm,2.1s,SNR=10						
FETA				*i* PKP	**PKiKP**	**03 11 53.8**	**+1.0**
	comp=Z,83nm,0.6s,SNR=10.0						
FETA				*i* PKKP	**PKKPbc**	**03 22 38.8**	**+1.8**
	comp=Z,70nm,1.3s						
IBBN	**Ibbenburen**	**113.95**	**325**	*e*Pdiff	**Pdif**	**03 08 02.6**	**+0.7**
	baz=72,slow=4.4						
IBBN				*e*PKiKP	**PKiKP**	**03 11 54.0**	**+1.6**
	baz=74,slow=1.9						
IBBN				*e*SKS	**SKSac**	**03 18 17.5**	**-0.4**
	baz=74,slow=4.0						
IBBN				*e*X		03 19 27.3	
	baz=74,slow=7.1						
IBBN				*e*Sdiff	**Sdif**	**03 20 09.2**	**-1.9**
	baz=70,slow=8.2						
IBBN				*e*SP	**SP**	**03 22 01.1**	**-2.2**
	baz=66,slow=9.6						
KASTN	**Kahler Asten**	**113.98**	**324**	*e*Pdiff	**Pdif**	**03 08 02.6**	**+0.5**
	baz=72,slow=4.4						
KASTN				*e*PKiKP	**PKiKP**	**03 11 54.1**	**+1.5**
	baz=74,slow=1.9						
KASTN				*e*SKS	**SKSac**	**03 18 18.2**	**+0.1**
	baz=74,slow=4.0						
KASTN				*e*X		03 19 27.9	
	baz=74,slow=7.1						
KASTN				*e*Sdiff	**Sdif**	**03 20 09.9**	**-1.6**
	baz=70,slow=8.2						
KASTN				*e*SP	**SP**	**03 22 02.2**	**-1.5**
	baz=66,slow=9.6						
UBR	**Ueberruh**	**114.11**	**320**	*e*Pdiff	**Pdif**	**03 08 03.0**	**+0.2**
	baz=72,slow=4.4						
UBR				*e*PKiKP	**PKiKP**	**03 11 53.8**	**+0.8**
	baz=74,slow=1.9						
UBR				*e*PP	**PP**	**03 12 51.7**	**+0.7**
	baz=63,slow=6.5						
UBR				*e*SKS	**SKSac**	**03 18 17.3**	**-1.6**
	baz=74,slow=4.0						
UBR				*e*X		03 19 27.6	
	baz=74,slow=7.1						
UBR				*e*Sdiff	**Sdif**	**03 20 10.1**	**-2.7**
	baz=70,slow=8.2						
UBR				*e*SP	**SP**	**03 22 06.7**	**+1.5**
	baz=66,slow=9.6						
TNS	**Taunus Mts**	**114.31**	**323**	*e*Pdiff	**Pdif**	**03 08 03.8**	**+0.2**
	baz=72,slow=4.4						
TNS				*e*PKiKP	**PKiKP**	**03 11 54.8**	**+1.5**
	baz=74,slow=1.9						
TNS				*e*SKS	**SKSac**	**03 18 20.0**	**+0.5**
	baz=74,slow=4.0						
TNS				*e*X		03 19 30.2	
	baz=74,slow=7.1						
TNS				*e*Sdiff	**Sdif**	**03 20 12.8**	**-1.6**
	baz=70,slow=8.2						
TNS				*e*SP	**SP**	**03 22 05.2**	**-1.6**
	baz=66,slow=9.6						
STU	**Stuttgart**	**114.34**	**321**	*e*Pdiff	**Pdif**	**03 08 04.2**	**+0.6**
	baz=72,slow=4.4						
STU				*e*PKiKP	**PKiKP**	**03 11 55.2**	**+1.8**
	baz=74,slow=1.9						
STU				*e*PP	**PP**	**03 12 53.8**	**+1.3**
	baz=63,slow=6.5						
STU				*e*SKS	**SKSac**	**03 18 17.7**	**-1.9**
	baz=74,slow=4.0						
STU				*e*X		03 19 27.5	
	baz=74,slow=7.1						
STU				*e*Sdiff	**Sdif**	**03 20 12.7**	**-1.9**
	baz=70,slow=8.2						
STU				*e*SP	**SP**	**03 22 07.6**	**+0.4**
	baz=66,slow=9.6						
DAVA	**Damuels**	**114.38**	**319**	*i* Pdiff	**Pdif**	**03 08 03.0**	**-1.1**
	comp=Z,13nm,1.9s						
DAVA				*i* PKP	**PKiKP**	**03 11 54.7**	**+1.0**
	comp=Z,333nm,0.8s,SNR=24						
DAVA				*i* PKKP	**PKKPbc**	**03 22 37.1**	**+1.7**
	comp=Z,56nm,1.1s						
DAVOX	**Davos/Dischmat**	**114.54**	**319**	PKKPbc	PKKPbc	03 22 34.1	-0.8
	comp=Z,63nm,0.7s,baz=278,slow=7.1,SNR=22						
BUG	**Bochum--Univer**	**114.56**	**324**	*e*Pdiff	**Pdif**	**03 08 04.4**	**-0.1**
	baz=72,slow=4.4						
BUG				*e*PKiKP	**PKiKP**	**03 11 56.8**	**+3.1**
	baz=74,slow=1.9						
BUG				*e*SKS	**SKSac**	**03 18 20.0**	**-0.2**
	baz=74,slow=4.0						
BUG				*e*X		03 19 29.0	
	baz=74,slow=7.1						
BUG				*e*Sdiff	**Sdif**	**03 20 15.7**	**-0.5**
	baz=70,slow=8.2						
BUG				*e*SP	**SP**	**03 22 07.7**	**-1.2**
	baz=66,slow=9.6						
LRW	**Lerwick**	**114.72**	**335**	*e*P	**PKiKP**	**03 11 54.8**	**+1.0**
LRW				IAMs_20	IAMs_20	04 03 53.2	
	comp=Z,46µm,20.6s						
NUUG	**Nuugaatsiaq**	**114.91**	**1**	*i* P	**Pdif**	**03 08 06.4**	**+0.8**
BFO	**Black Forest**	**115.03**	**321**	*e*Pdiff	**Pdif**	**03 08 06.6**	**-0.3**
	baz=72,slow=4.4						
BFO				*e*PKiKP	**PKPdf**	**03 11 57.4**	**+2.6**
	baz=74,slow=1.9						
BFO				*e*SKS	**SKSac**	**03 18 21.1**	**-1.2**
	baz=74,slow=4.0						
BFO				*e*SP	**SP**	**03 22 13.7**	**+0.2**
	baz=66,slow=9.6						
BTNL	**Ternell**	**115.55**	**324**	*d*Pdif	**Pdif**	**03 08 10.2**	**+1.2**
BTNL				*d*x	x	03 08 13.8	
BTNL				*d*PKPdf	**PKiKP**	**03 11 57.0**	**+1.3**
MEM	**Membach**	**115.61**	**324**	*d*Pdif	**Pdif**	**03 08 10.2**	**+0.9**
MEM				*d*x	x	03 08 58.8	
MEM				*d*PKPdf	**PKiKP**	**03 11 57.0**	**+1.3**
BHOU	**Houvegnez**	**115.72**	**324**	*d*Pdif	**Pdif**	**03 08 11.0**	**+1.2**
BHOU				*d*PKPdf	**PKiKP**	**03 11 57.9**	**+1.9**
BEBN	**Eben Emael**	**115.73**	**324**	*d*Pdif	**Pdif**	**03 08 10.7**	**+0.9**
BEBN				*d*PKPdf	**PKiKP**	**03 11 57.6**	**+1.7**
UMMG	**Uummannaq**	**115.78**	**1**	*i* P	**Pdif**	**03 08 08.2**	**-1.4**
ECH	**Echery**	**115.81**	**321**		**PKiKP**	**03 11 57.2**	**+1.0**
ECH	**Echery**	**115.81**	**321**	PKIKP	**PKiKP**	**03 11 57.2**	**+1.0**
BSTI	**Sart Tilman**	**115.88**	**324**	*d*Pdif	**Pdif**	**03 08 11.8**	**+1.3**
BSTI				*d*PKPdf	**PKiKP**	**03 11 57.1**	**+0.9**
HWUT	**Hardware Ranch**	**115.89**	**47**	PKPdf	**PKiKP**	**03 11 57.6**	**+0.7**
WLF	**Walferdange**	**115.89**	**323**	*d*Pdif	**Pdif**	**03 08 11.6**	**+1.1**
WLF				*d*PKPdf	**PKiKP**	**03 11 59.0**	**+2.6**
WLF	**Walferdange**	**115.89**	**323**	*e*PKiKP	**PKiKP**	**03 11 57.9**	**+1.6**
	baz=74,slow=1.9						
WLF				*e*SKS	**SKSac**	**03 18 25.9**	**+0.5**
	baz=74,slow=4.0						
WLF				*e*SP	**SP**	**03 22 19.5**	**-1.6**
	baz=66,slow=9.6						
BCLA	**Clavier**	**116.10**	**324**	*d*Pdif	**Pdif**	**03 08 11.6**	**+0.1**
BCLA				*d*PKPdf	**PKiKP**	**03 11 57.1**	**+0.4**
BGES	**Gesves**	**116.24**	**324**	*d*Pdif	**Pdif**	**03 08 13.3**	**+1.2**
BGES				*d*PKPdf	**PKiKP**	**03 11 58.3**	**+1.3**
BMRD	**Maredsous**	**116.46**	**324**	*d*Pdif	**Pdif**	**03 08 13.5**	**+0.4**
BMRD				*d*PKPdf	**PKiKP**	**03 11 58.7**	**+1.3**
UCC	**Uccle**	**116.50**	**324**	*d*PKPdf	**PKiKP**	**03 11 58.9**	**+1.5**
DOU	**Dourbes**	**116.65**	**324**	*d*Pdif	**Pdif**	**03 08 15.5**	**+1.6**
DOU				*d*x	x	03 08 18.1	
DOU				*d*PKPdf	**PKiKP**	**03 11 58.5**	**+0.7**
BIGH	**Upper Bighouse**	**116.81**	**335**	*e*P	**PKiKP**	**03 11 58.9**	**+1.1**
FFC	**Flin Flon**	**116.81**	**30**	PKPdf	**PKiKP**	**03 11 58.0**	**0.0**
FFC	**Flin Flon**	**116.81**	**30**	PKIKP	**PKiKP**	**03 11 58.0**	**0.0**
SOEG	**Soedalen**	**116.92**	**352**	*i* P	**Pdif**	**03 08 14.7**	**0.0**
ICESG	**Greenland Ices**	**116.95**	**356**	*i* P	**Pdif**	**03 08 15.6**	**+0.3**
PDAR	**Pinedale Array**	**116.99**	**45**	Pdiff	**Pdif**	**03 08 19.2**	**+3.3**
	comp=Z,1.8nm,0.7s,baz=132,slow=2.2,SNR=6.7						
PDAR				PKP	**PKiKP**	**03 12 00.0**	**+1.0**
	comp=Z,24nm,0.6s,baz=268,slow=1.1,SNR=24						
PDAR				PP	**PP**	**03 13 10.6**	**-1.0**
	comp=Z,19nm,0.8s,baz=232,slow=1.7,SNR=3.5						
PDAR				SKP		03 15 13.7	
	comp=Z,24nm,0.9s,baz=202,slow=0.8,SNR=4.3						
PDAR				PKKPbc	**PKKPbc**	**03 22 25.9**	**-0.5**
	comp=Z,2.6nm,0.5s,baz=101,slow=4.9,SNR=10						
PDAR				SKKPbc	SKKPbc	03 25 51.1	-0.8
	comp=Z,6.1nm,0.6s,baz=114,slow=5.0,SNR=8.7						
DRUM	**Mains of Drumt**	**117.08**	**333**	*e*P	**PKiKP**	**03 11 59.4**	**+1.0**
DRUM				IAMs_20	IAMs_20	04 05 20.5	
	comp=Z,54µm,20.9s						
USHA	**Ushuaia**	**117.24**	**169**	Pdiff	**Pdif**	**03 08 21.7**	**+5.2**
	comp=Z,8.0nm,0.8s,baz=115,slow=7.3,SNR=3.7						
USHA				PKP	**PKiKP**	**03 12 00.6**	**+1.8**
	comp=Z,84nm,0.6s,baz=247,slow=1.4,SNR=46						
USHA				PP	**PP**	**03 13 14.2**	**+2.5**
	comp=Z,32nm,0.9s,baz=194,slow=13,SNR=3.6						
USHA				SKP		03 15 13.0	
	comp=Z,84nm,1.0s,baz=185,slow=3.8,SNR=6.2						
ILULI	**Ilulissat**	**117.26**	**0**	*i* P	**Pdif**	**03 08 15.8**	**-0.4**
LINV	**Loch Inver, As**	**117.57**	**335**	*e*P	**PKiKP**	**03 11 59.8**	**+0.6**
ESY	**Stoneypath**	**117.69**	**332**	*e*P	**PKiKP**	**03 12 00.5**	**+0.9**
ELMS	**Elmsett, Ipswi**	**117.82**	**327**	*e*P	**PKiKP**	**03 12 01.3**	**+1.4**
KEST	**Kesra**	**117.86**	**307**	Pdiff	**Pdif**	**03 08 22.6**	**+2.9**
	comp=Z,2.8nm,0.8s,baz=136,slow=4.4,SNR=4.0						
KEST				PKP	**PKiKP**	**03 12 01.8**	**+1.1**
	comp=Z,93nm,0.5s,baz=159,slow=1.7,SNR=86						
KEST				PP	**PP**	**03 13 17.2**	**-0.4**
	comp=Z,344nm,1.1s,baz=36,slow=2.2,SNR=11						
KEST				PKKPbc	**PKKPbc**	**03 22 22.8**	**0.0**
	comp=Z,10nm,1.0s,baz=331,slow=1.3,SNR=5.7						
EDI	**Edinburgh**	**117.96**	**332**	*e*P	**PKiKP**	**03 12 01.3**	**+1.2**
EDI				IAMs_20	IAMs_20	04 02 59.5	
	comp=Z,43µm,24.3s						
EDMD	**Edmundbyers**	**117.97**	**330**	*e*P	**PKiKP**	**03 12 00.8**	**+0.6**
EDMD				IAMs_20	IAMs_20	04 04 26.1	
	comp=Z,31µm,20.8s						
INVG	**Invergeldie, C**	**118.07**	**333**	*e*P	**PKiKP**	**03 12 00.8**	**+0.5**
KPL	**Plockton**	**118.25**	**334**	*e*P	**PKiKP**	**03 12 01.5**	**+0.9**
KPL				IAMs_20	IAMs_20	04 03 22.4	
	comp=Z,46µm,22.2s						
HPK	**Haverah Park**	**118.26**	**330**	*e*P	**PKiKP**	**03 12 01.8**	**+1.0**
HPK				IAMs_20	IAMs_20	04 09 37.2	
	comp=Z,31µm,18.8s						
LEWI	**Lewis, Hebride**	**118.27**	**335**	*e*P	**PKiKP**	**03 12 01.8**	**+1.1**
EKA	**Eskdalemuir Ar**	**118.28**	**331**	Pdiff	**Pdif**	**03 08 22.6**	**+1.6**
	comp=Z,1.7nm,0.6s,baz=28,slow=3.8,SNR=8.5						
EKA				PKhKP	PKPpre	03 11 45.6	
	comp=Z,3.2nm,0.7s,baz=55,slow=7.2,SNR=3.6						
EKA				PKP	**PKiKP**	**03 12 01.7**	**+0.9**
	comp=Z,42nm,0.4s,baz=32,slow=3.8,SNR=97						
EKA				SKP		03 15 14.8	
	comp=Z,68nm,1.1s,baz=26,slow=2.3,SNR=6.8						
EKA				PKKPbc	**PKKPbc**	**03 22 20.6**	**-1.3**
	comp=Z,20nm,0.7s,baz=237,slow=3.1,SNR=32						
EKA				SKKPbc	SKKPbc	03 25 44.3	-3.9
	comp=Z,2.8nm,0.5s,baz=242,slow=3.1,SNR=7.6						
ESK	**Eskdalemuir**	**118.31**	**331**	*e*P	**PKiKP**	**03 12 01.6**	**+0.8**
ESK				IAMs_20	IAMs_20	04 07 41.2	
	comp=Z,43µm,20.6s						
LBWR	**Ladybower, Pea**	**118.60**	**329**	*e*P	**PKiKP**	**03 12 02.6**	**+1.1**
LBWR				IAMs_20	IAMs_20	04 05 09.3	
	comp=Z,40µm,21.9s						
KESW	**Keswick, Cumbr**	**118.66**	**331**	*e*P	**PKiKP**	**03 12 02.3**	**+0.7**
HMNX	**Herstmonceux**	**118.76**	**326**	*e*P	**PKiKP**	**03 12 03.6**	**+1.9**
LAWE	**Loch Awe, Argy**	**118.78**	**333**	*e*P	**PKiKP**	**03 12 01.7**	**0.0**
LAWE				IAMs_20	IAMs_20	04 05 33.6	
	comp=Z,39µm,20.1s						
NEWG	**New Galloway**	**118.90**	**332**	*e*P	**PKiKP**	**03 12 03.2**	**+1.2**
NEWG				IAMs_20	IAMs_20	04 03 27.7	
	comp=Z,43µm,22.6s						
STNC	**Stoke**	**119.01**	**329**	*e*P	**PKiKP**	**03 12 03.5**	**+1.2**
STNC				IAMs_20	IAMs_20	04 05 32.7	
	comp=Z,44µm,24.1s						
GAL1	**Galloway**	**119.28**	**332**	*e*P	**PKiKP**	**03 12 03.3**	**+0.6**
GAL1				IAMs_20	IAMs_20	04 02 02.3	
	comp=Z,36µm,27.3s						
WOL	**Wolverton**	**119.40**	**327**	*e*P	**PKiKP**	**03 12 03.9**	**+0.9**
SFJD	**Kangerlussuaq**	**119.49**	**360**	*i* P	**Pdif**	**03 08 26.0**	**-0.2**
IOMK	**Kirk Michael**	**119.55**	**331**	*e*P	**PKiKP**	**03 12 03.8**	**+0.6**
IOMK				IAMs_20	IAMs_20	04 06 51.7	
	comp=Z,21µm,21.6s						
SWN1	**Swindon**	**119.61**	**327**	*e*P	**PKiKP**	**03 12 04.6**	**+1.1**
SWN1				IAMs_20	IAMs_20	04 08 18.1	
	comp=Z,34µm,20.6s						
FOEL	**Foel Wylfa**	**119.63**	**329**	*e*P	**PKiKP**	**03 12 04.3**	**+0.8**
FOEL				IAMs_20	IAMs_20	04 06 03.4	
	comp=Z,42µm,25.8s						
STRD	**Stroud**	**119.67**	**328**	*e*P	**PKiKP**	**03 12 04.7**	**+1.1**
STRD				IAMs_20	IAMs_20	04 06 53.0	
	comp=Z,29µm,20.9s						
CLGH	**Cloghs, Cushen**	**119.80**	**332**	*e*P	**PKiKP**	**03 12 04.6**	**+0.8**
CLGH				IAMs_20	IAMs_20	04 07 01.9	
	comp=Z,312nm,19.6s						
LLW	**Llanuwychllyn**	**119.89**	**329**	*e*P	**PKiKP**	**03 12 04.2**	**+0.2**
MCH1	**Michaelchurch**	**120.00**	**328**	*e*P	**PKiKP**	**03 12 04.8**	**+0.5**
MCH1				IAMs_20	IAMs_20	04 06 06.0	
	comp=Z,42µm,19.7s						
WPS	**Cemaes, Angles**	**120.00**	**330**	*e*P	**PKPdf**	**03 12 04.1**	**0.0**
WPS				IAMs_20	IAMs_20	04 05 37.0	
	comp=Z,39µm,21.3s						
WLF1	**Llynfaes**	**120.01**	**330**	*e*P	**PKiKP**	**03 12 04.5**	**+0.3**
WLF1				IAMs_20	IAMs_20	04 05 49.9	
	comp=Z,87µm,22.8s						
RSSD	**Black Hills**	**120.31**	**42**	PKPdf	**PKPdf**	**03 12 05.1**	**-0.2**
RSSD	**Black Hills**	**120.31**	**42**	PKIKP	**PKPdf**	**03 12 05.1**	**-0.2**
IDGL	**Inch Island, C**	**120.45**	**333**	PKPdf	**PKiKP**	**03 12 06.7**	**+1.7**
ILTH	**Belurgan, Co L**	**120.54**	**331**	PKPdf	**PKiKP**	**03 12 05.6**	**+0.4**
MAHO	**Mahon**	**120.60**	**313**	PKP	**PKiKP**	**03 12 07.8**	**+2.1**
EJON	**La Jonquera**	**120.69**	**316**	PKP	**PKiKP**	**03 12 07.4**	**+1.4**
SET	**Setif**	**120.85**	**309**	P	**PKiKP**	**03 12 11.0**	**+4.5**
RSBS	**Rosebush, Pemb**	**120.93**	**329**	*e*P	**PKiKP**	**03 12 06.5**	**+0.4**
JSA	**Saint Aubin**	**120.98**	**325**	*e*P	**PKiKP**	**03 12 07.2**	**+1.0**
JSA				IAMs_20	IAMs_20	04 04 04.0	
	comp=Z,37µm,23.8s						
DSB	**Dublin**	**121.02**	**331**	PKPdf	**PKiKP**	**03 12 07.6**	**+1.4**
HTL	**Hartland**	**121.32**	**328**	*e*P	**PKiKP**	**03 12 07.7**	**+0.8**
DYA	**Yadsworthy**	**121.33**	**327**	*e*P	**PKiKP**	**03 12 07.5**	**+0.6**
DYA				IAMs_20	IAMs_20	04 06 53.2	
	comp=Z,30µm,20.4s						
Y22D	**IRIS PASSCAL I**	**121.40**	**54**	PKiKP	**PKPdf**	**03 12 06.9**	**-0.7**
	baz=285						
ETOS	**Mallorca**	**121.69**	**313**	PKP	**PKiKP**	**03 12 10.3**	**+2.3**
IWEX	**Carrickbyrne,**	**121.72**	**330**	PKPdf	**PKiKP**	**03 12 08.4**	**+0.8**
CGAR	**Garraf**	**121.79**	**315**	*e*PKiKP	**PKiKP**	**03 12 08.5**	**+0.4**
CGAR				*e*PP	**PP**	**03 13 45.3**	**+1.2**
CGAR				*e*SKP		03 14 44.0	
CGAR				*e*SKS	**SKSac**	**03 18 45.5**	**-1.2**
CGAR				*e*SKKS	**SKKSac**	**03 20 18.1**	**-3.0**
CGAR				*e*SP	**SP**	**03 23 18.2**	**+3.5**
CGAR				*e*SS	**SS**	**03 30 02.8**	**-0.5**
EFI	**East Falkland**	**121.83**	**175**	PKPdf	**PKPdf**	**03 12 07.1**	**-0.6**
EFI	**East Falkland**	**121.83**	**175**	PKIKP	**PKPdf**	**03 12 07.1**	**-0.6**
CSOR	**Sort**	**121.92**	**317**	*e*PKiKP	**PKiKP**	**03 12 10.3**	**+1.8**
CSOR				*e*PP	**PP**	**03 13 45.2**	**+0.2**
CSOR				*e*SKP		03 14 37.2	
CSOR				*e*SKS	**SKSac**	**03 18 48.4**	**+1.1**
CSOR				*e*SKKS	**SKKSac**	**03 20 18.1**	**-4.0**
CSOR				*e*SP	**SP**	**03 23 20.7**	**+4.9**
CSOR				*e*PS	**PS**	**03 23 44.9**	**+2.6**
CSOR				*e*SS	**SS**	**03 30 06.3**	**+1.2**
CARA	**Val d'Aran**	**122.01**	**317**	*e*PKiKP	**PKiKP**	**03 12 10.9**	**+2.2**
CARA				*e*PP	**PP**	**03 13 48.2**	**+2.6**
CARA				*e*SKP		03 15 02.4	
CARA				*e*SKS	**SKSac**	**03 18 48.3**	**+0.5**

CARA				eSKKS	SKKSac	03 20 19.3	-3.5
CARA				eSP	SP	03 23 11.3	-5.2
CARA				eSS	SS	03 30 00.6	-5.6
CCA1	Carnmenellis	122.16	327	eP	PKiKP	03 12 09.1	+0.6
CCA1				IAMs_20	IAMs_20	04 07 36.4	
	comp=Z,31µm,18.7s						
CTRE	Tremp	122.19	317	ePKiKP	PKiKP	03 12 10.3	+1.3
CTRE				ePP	PP	03 13 50.2	+3.3
CTRE				eSKP		03 14 33.8	
CTRE				eSKS	SKSac	03 18 51.4	+3.1
CTRE				eSKKS	SKKSac	03 20 23.2	-0.6
CTRE				eSP	SP	03 23 23.0	+4.9
CTRE				ePS	PS	03 23 52.7	+8.1
CTRE				eSS	SS	03 30 10.2	+1.7
NUUK	Nuuk	122.31	1	i P	Pdif	03 08 38.4	-0.4
IGLA	Glengowla, Co	122.34	332	PKPdf	PKiKP	03 12 09.2	+0.4
ULM	Lac du Bonnet	122.34	33	Pdiff	Pdif	03 08 41.9	+2.7
	comp=Z,3.8nm,1.1s,baz=42,slow=3.5,SNR=3.8						
ULM				PKP	PKPdf	03 12 08.5	-0.2
	comp=Z,115nm,0.7s,baz=309,slow=2.0,SNR=70						
ULM				PP	PP	03 13 47.1	-0.2
	comp=Z,40nm,0.8s,baz=323,slow=8.2,SNR=1.7						
ULM				SKP		03 15 21.9	
	comp=Z,42nm,0.7s,baz=281,slow=2.2,SNR=4.7						
ULM				PKKPbc	PKKPab	03 22 05.3	-0.2
	comp=Z,51nm,0.7s,baz=93,slow=3.7,SNR=20						
ULM				SKKPbc	SKKPbc	03 25 36.0	+1.1
	comp=Z,18nm,0.9s,baz=127,slow=0.6,SNR=3.6						
CAVN	Les Avellanes	122.38	316	ePKiKP	PKiKP	03 12 10.9	+1.6
CAVN				ePP	PP	03 13 51.5	+3.4
CAVN				eSKP		03 14 35.6	
CAVN				eSKS	SKSac	03 18 48.8	+0.1
CAVN				eSKKS	SKKSac	03 20 24.1	-0.7
CAVN				eSP	SP	03 23 12.1	-7.6
CAVN				ePS	PS	03 23 49.7	+3.6
CAVN				eSS	SS	03 30 13.2	+2.5
EIBI	Ibiza	123.02	313	PKP	PKiKP	03 12 12.1	+1.5
VAL	Valentia	123.68	331	PKP	PKiKP	03 12 13.3	+1.8
VAL	Valentia	123.68	331	PKPdf	PKiKP	03 12 12.3	+0.8
ECHE	Chera	124.47	314	PKP	PKiKP	03 12 15.8	+2.3
OKGL	Djebel Kef Gue	124.57	310	P	PKiKP	03 12 18.0	+4.2
OJGS	Djebel Guires	124.66	309	P	PKiKP	03 12 15.0	+0.9
OJBR	Djebel Berber	124.94	309	P	PKiKP	03 12 16.0	+1.4
TXAR	Lajitas Array	125.25	59	PKPdf	PKPdf	03 12 15.2	+0.2
TXAR	Lajitas Array	125.25	59	Pdiff	Pdif	03 08 56.7	+3.9
	comp=Z,0.2nm,0.7s,baz=255,slow=1.9,SNR=3.7						
TXAR				PKhKP	PKPpre	03 11 50.9	
	comp=Z,0.6nm,0.5s,baz=296,slow=3.5,SNR=3.7						
TXAR				PKP	PKiKP	03 12 16.1	+0.6
	comp=Z,71nm,0.9s,baz=203,slow=3.2,SNR=44						
TXAR				PKKPbc	PKKPbc	03 21 55.3	+0.5
	comp=Z,20nm,0.7s,baz=107,slow=5.9,SNR=22						
TXAR				SKKPbc	SKKPbc	03 25 22.7	-1.6
	comp=Z,3.5nm,0.5s,baz=110,slow=5.4,SNR=9.0						
CART	Cartagena	125.26	312	PKP	PKiKP	03 12 16.5	+1.4
ODJA	Bouhanifia	125.41	309	P	PKPdf	03 12 13.0	-2.1
UCM	Universidad Co	125.78	316	PKP	PKiKP	03 12 17.7	+1.6
ENIJ	Nijar	126.38	312	PKP	PKiKP	03 12 18.0	+0.6
ENIJ	Nijar	126.38	312	P	PKiKP	03 12 19.4	+2.0
ESDC	Sonseca Array	126.55	316	PKPdf	PKiKP	03 12 17.6	-0.1
ESDC	Sonseca Array	126.55	316	Pdiff	Pdif	03 09 02.0	+3.7
	comp=Z,0.8nm,0.9s,baz=46,slow=6.5,SNR=6.7						
ESDC				PKhKP	PKPpre	03 12 09.3	
	comp=Z,1.4nm,0.6s,baz=40,slow=2.9,SNR=5.5						
ESDC				PKP	PKiKP	03 12 17.9	+0.2
	comp=Z,126nm,1.2s,baz=35,slow=3.5,SNR=9.8						
ESDC				PP	PP	03 14 10.2	-5.6
	comp=Z,33nm,1.0s,baz=54,slow=5.3,SNR=4.8						
ESDC				PKKPbc	PKKPbc	03 21 53.5	+3.1
	comp=Z,2.0nm,0.6s,baz=267,slow=3.9,SNR=7.6						
ESDC				SKKPbc	SKKPbc	03 25 27.8	+7.4
	comp=Z,14nm,1.1s,baz=241,slow=5.6,SNR=5.0						
EQTA	Presa de Quent	127.20	313	PKP	PKiKP	03 12 19.6	+0.5
ECAL	Calabor	127.36	319	PKP	PKiKP	03 12 20.5	+1.3
EALB	Alboran	127.39	311	PKP	PKiKP	03 12 20.6	+1.2
PBRG	Braganca	127.43	319	ePKPdf	PKiKP	03 12 20.7	+1.3
PBRG				ePP	PP	03 14 24.3	+2.7
PBRG				eSKP		03 15 15.6	
ELGU	Los Guajares,	127.47	312	PKP	PKiKP	03 12 20.1	+0.4
ELGU	Los Guajares,	127.47	312	P	PKiKP	03 12 20.4	+0.8
WMELI	Melilla	127.56	310	PKP	PKiKP	03 12 21.0	+1.3
WMELI	Melilla	127.56	310	P	PKiKP	03 12 24.4	+4.6
EMLI	Melilla	127.56	310	PKP	PKiKP	03 12 20.6	+0.9
EADA	Adamuz	127.62	314	PKP	PKiKP	03 12 20.9	+1.0
EADA	Adamuz	127.62	314	P	PKiKP	03 12 22.5	+2.6
EGOR	Sierra Gorda,	127.73	313	PKP	PKiKP	03 12 20.2	0.0
EGOR	Sierra Gorda,	127.73	313	P	PKiKP	03 12 20.3	0.0
MVO	Moncorvo	127.94	319	ePKPdf	PKiKP	03 12 21.2	+0.8
MVO				ePP	PP	03 14 26.6	+1.7
MVO				eSKP		03 15 17.0	
MVO				eSS	SS	03 31 19.2	-0.9
TORD	Torodi Ar. Bea	127.96	282	PKhKP	PKPpre	03 12 03.4	
	comp=Z,3.9nm,0.7s,baz=69,slow=3.5,SNR=5.4						
TORD				PKP	PKiKP	03 12 21.2	+0.1
	comp=Z,231nm,0.6s,baz=36,slow=2.8,SNR=22						
TORD				SKPbc	SKiKP	03 15 14.9	-21
	comp=Z,185nm,0.8s,baz=56,slow=4.6,SNR=17						
TORD				SKKPbc	SKKPbc	03 25 11.8	-2.5
	comp=Z,14nm,0.8s,baz=278,slow=3.3,SNR=3.8						
EMAL	Malaga-Limoner	128.10	312	PKP	PKiKP	03 12 22.0	+1.2
ECAB	El Cabril	128.26	314	PKP	PKiKP	03 12 21.9	+0.8
ECAB	El Cabril	128.26	314	P	PKiKP	03 12 23.4	+2.3
PCAB	Cabril	128.31	320	ePKPdf	PKiKP	03 12 22.6	+1.5
PCAB				ePP	PP	03 14 31.9	+4.6
PCAB				eSKP		03 15 19.4	
PVRL	Vila Real	128.33	319	ePKPdf	PKiKP	03 12 22.1	+0.9
PVRL				ePP	PP	03 14 31.6	+4.1
PVRL				eSKP		03 15 19.2	
POLO	Lamas de Olo	128.33	319	ePKPdf	PKiKP	03 12 22.3	+1.0
POLO				ePP	PP	03 14 30.4	+2.9
POLO				eSKP		03 15 18.4	
PGAV	Gavieira, Arco	128.34	320	ePKPdf	PKiKP	03 12 21.9	+0.7
PGAV				ePP	PP	03 14 30.0	+2.5
PGAV				eSKP		03 15 18.8	
PGAV				eSS	SS	03 31 30.7	+5.7
OKCSW	OKLAHOMA CITY	128.37	49		PKiKP	03 12 21.4	0.0
EMIJ	Mijas	128.43	312	PKP	PKiKP	03 12 21.5	0.0
EMIJ	Mijas	128.43	312	P	PKiKP	03 12 23.4	+1.9
MTE	Manteigas	128.65	318	ePKPdf	PKiKP	03 12 22.7	+0.9
MTE				ePP	PP	03 14 32.1	+2.5
MTE				eSKP		03 15 20.2	
MTE				eSS	SS	03 31 34.9	+5.9
PVIS	Viseu	128.73	318	ePKPdf	PKiKP	03 12 23.2	+1.2
PVIS				ePP	PP	03 14 32.5	+2.4
PVIS				eSKP		03 15 20.4	
PCBR	Castelo Branco	128.88	317	ePKPdf	PKiKP	03 12 23.1	+0.9
PCBR				ePP	PP	03 14 34.4	+3.4
PCBR				eSKP		03 15 21.9	
PTO	Porto	128.98	319	ePKPdf	PKiKP	03 12 22.8	+0.4
PTO				eSKP		03 15 20.0	
PMRV	Marv??o	129.02	317	ePKPdf	PKiKP	03 12 23.2	+0.6
PMRV				ePP	PP	03 14 34.3	+2.3
PMRV				eSKP		03 15 21.6	
PMRV				eSS	SS	03 31 39.9	+6.4
EBAD	Badajoz	129.08	316	PKP	PKiKP	03 12 23.2	+0.6
ESPR	Espera	129.10	313	PKP	PKiKP	03 12 23.8	+1.1
ESPR	Espera	129.10	313	P	SKPbc	03 15 22.8	+0.7
ECEU	Ceuta	129.15	312	PKP	PKiKP	03 12 24.0	+1.1
EMIN	Mina Concepcio	129.29	315	PKP	PKiKP	03 12 24.3	+1.1
COI	Coimbra	129.32	318	ePKPdf	PKiKP	03 12 24.1	+0.9
COI				ePP	PP	03 14 35.9	+2.1
COI				eSKP		03 15 22.6	
PBAR	Barrancos	129.36	315	PKP	PKiKP	03 12 24.3	+1.0
PBAR	Barrancos	129.36	315	P	PKiKP	03 12 26.7	+3.4
PBAR	Barrancos	129.36	315	P	SKPbc	03 15 23.3	+0.2
PBAR	Barrancos	129.36	315	ePKPdf	PKiKP	03 12 23.9	+0.6
PBAR				ePP	PP	03 14 36.9	+2.7
PBAR				eSKP		03 15 23.0	
PESTR	Estremoz	129.42	316	PKP	PKiKP	03 12 24.2	+0.8
PESTR	Estremoz	129.42	316	P	SKPbc	03 15 23.3	0.0
PESTR	Estremoz	129.42	316	ePKPdf	PKiKP	03 12 24.3	+0.8
PESTR				ePP	PP	03 14 36.3	+1.7
PESTR				eSKP		03 15 22.6	
CNIL	Conil	129.45	313	PKP	PKiKP	03 12 25.3	+1.8
PSARD	Sardoal	129.46	317	ePKPdf	PKiKP	03 12 24.3	+0.8
PSARD				ePP	PP	03 14 36.9	+2.1
PSARD				eSKP		03 15 23.7	
PCAS	Casmilo, Conde	129.46	318	ePKPdf	PKiKP	03 12 24.7	+1.3
PCAS				ePP	PP	03 14 36.6	+1.9
PCAS				eSKP		03 15 23.2	
SFS	San Fernando	129.52	313	PKP	PKiKP	03 12 25.1	+1.5
ARNO	Arenosillo	129.63	314	PKP	PKiKP	03 12 25.6	+1.8
PLCA	Paso Flores	129.70	160	PKhKP	PKPpre	03 12 06.5	
	comp=Z,3.1nm,0.7s,baz=239,slow=6.2,SNR=5.8						
PLCA				PKP	PKiKP	03 12 24.1	0.0
	comp=Z,183nm,1.0s,baz=229,slow=2.7,SNR=50						
PLCA				SKPbc	SKPab	03 15 22.9	-1.5
	comp=Z,674nm,1.0s,baz=207,slow=4.6,SNR=23						
PLCA	Paso Flores	129.70	160	PKP	PKPdf	03 12 23.3	+0.1
PLCA	Paso Flores	129.70	160	eP	PKPdf	03 12 22.9	-0.3
PMTG	Montargil	129.76	317	ePKPdf	PKiKP	03 12 24.7	+0.6
PMTG				ePP	PP	03 14 39.3	+2.6
PMTG				eSKP		03 15 24.1	
EVO	Evora	129.87	316	PKP	PKiKP	03 12 25.5	+1.2
EVO	Evora	129.87	316	ePKPdf	PKiKP	03 12 25.1	+0.8
EVO				ePP	PP	03 14 40.6	+3.1
EVO				eSKP		03 15 25.5	
PSBE	So Bento	129.93	318	ePKPdf	PKiKP	03 12 25.7	+1.3
PSBE				ePP	PP	03 14 41.2	+3.4
PSBE				eSKP		03 15 25.5	
EGRO	El Granado	129.97	315	PKP	PKiKP	03 12 25.8	+1.3
EGRO	El Granado	129.97	315	P	SKPbc	03 15 25.9	+0.5
SCHQ	Schefferville	129.99	12	PKhKP	PKPpre	03 12 12.2	
	comp=Z,6.7nm,0.6s,baz=336,slow=6.0,SNR=5.0						
SCHQ				PKP	PKiKP	03 12 24.2	+0.1
	comp=Z,36nm,0.4s,baz=312,slow=3.3,SNR=16						
SCHQ				SKPbc	SKPbc	03 15 23.4	-1.6
	comp=Z,181nm,0.5s,baz=8.6,slow=4.2,SNR=20						
SCHQ				SKKPbc	SKKPbc	03 25 05.5	-3.6
	comp=Z,54nm,0.8s,baz=140,slow=3.9,SNR=11						
PBEJ	Beja	130.01	315	ePKPdf	PKiKP	03 12 25.5	+0.9
PBEJ				ePP	PP	03 14 42.3	+3.9
PBEJ				eSKP		03 15 25.9	
PVAQ	Vaqueiros	130.19	315	PKP	PKiKP	03 12 26.2	+1.2
PVAQ	Vaqueiros	130.19	315	P	SKPbc	03 15 26.5	+0.2
PVAQ	Vaqueiros	130.19	315	ePKPdf	PKiKP	03 12 25.8	+0.8
PVAQ				ePP	PP	03 14 43.2	+3.6
PVAQ				eSKP		03 15 26.4	
PCVE	Castro Verde	130.31	315	PKP	PKiKP	03 12 26.5	+1.3
PCVE	Castro Verde	130.31	315	P	SKPbc	03 15 26.9	+0.2
PCVE	Castro Verde	130.31	315	ePKPdf	PKiKP	03 12 26.8	+1.6
PCVE				ePP	PP	03 14 42.8	+2.3
PCVE				eSKP		03 15 27.2	
MESJ	Messejana	130.34	315	ePKPdf	PKPdf	03 12 24.8	+0.4
MESJ				ePP	PP	03 14 41.4	+0.8
MESJ				eSKPab	SKPab	03 15 27.4	+0.4
MESJ	Messejana	130.34	315	ePKPdf	PKiKP	03 12 26.3	+1.0
MESJ				ePP	PP	03 14 42.9	+2.3
MESJ				eSKP		03 15 27.3	
PBDV	Barranco-do-Ve	130.42	315	ePKPdf	PKiKP	03 12 26.9	+1.5
PBDV				ePP	PP	03 14 43.2	+2.0
PBDV				eSKP		03 15 28.1	
PMAFR	Mafra	130.53	317	PKP	PKiKP	03 12 27.0	+1.4
LIS	Lisbon	130.56	317	ePKPdf	PKPdf	03 12 25.1	+0.4
LIS				ePP	PP	03 14 42.7	+0.8
LIS				eSKPab	SKPab	03 15 28.2	+0.4
LIS	Lisbon	130.56	317	ePKPdf	PKiKP	03 12 27.2	+1.5
LIS				ePP	PP	03 14 44.4	+2.5
LIS				eSKP		03 15 27.8	
PTEO	Sao Teotonio	130.84	315	ePKPdf	PKiKP	03 12 27.6	+1.4
PTEO				ePP	PP	03 14 45.5	+1.8
PTEO				eSKP		03 15 29.4	
MORF	Marmelete	130.90	315	ePKPdf	PKPdf	03 12 25.8	+0.3
MORF				ePP	PP	03 14 44.9	+0.7
MORF				eSKPab	SKPab	03 15 29.7	+0.3
MORF	Marmelete	130.90	315	ePKPdf	PKiKP	03 12 27.8	+1.4
MORF				ePP	PP	03 14 46.2	+2.0
MORF				eSKP		03 15 29.7	
RTC	Rabat Centre	131.04	310	PKP	PKiKP	03 12 28.4	+1.6
PFVI	Vila Bisbo	131.10	315	PKP	PKiKP	03 12 27.9	+1.1
PFVI	Vila Bisbo	131.10	315	P	SKPbc	03 15 29.7	0.0
PFVI	Vila Bisbo	131.10	315	ePKPdf	PKiKP	03 12 27.8	+0.9
PFVI				ePP	PP	03 14 47.9	+2.4
PFVI				eSKP		03 15 30.2	
HKT	Hockley	131.60	55	PKPdf	PKiKP	03 12 27.9	0.0
HKT	Hockley	131.60	55	PKIKP	PKiKP	03 12 27.9	0.0
CCM	Cathedral Cave	131.65	43		PKPpre	03 12 14.6	
CCM				PKPdf	PKiKP	03 12 28.0	+0.1
CCM	Cathedral Cave	131.65	43	PKIKP	PKiKP	03 12 28.0	+0.1
AVE	Averroes	131.74	310	PKP	PKiKP	03 12 29.1	+0.9
TIO	Tiouine	132.54	307	PKP	PKiKP	03 12 31.0	+0.9
BI02	San Fabin de	133.06	157	PKPpre	PKPpre	03 12 18.0	
DBIC	Dimbokro	134.41	273	PKPpre	PKPpre	03 12 19.5	
DBIC	Dimbokro	134.41	273	PKhKP	PKPpre	03 12 18.9	
	comp=Z,20nm,0.5s,baz=96,slow=3.7,SNR=26						
DBIC				PKP	PKiKP	03 12 34.4	+0.2
	comp=Z,325nm,0.6s,baz=106,slow=1.4,SNR=28						
DBIC				PP	PP	03 15 08.8	+1.1
	comp=Z,38nm,0.8s,baz=110,slow=8.4,SNR=4.8						
DBIC				SKPbc	SKPbc	03 15 38.8	-2.9
	comp=Z,623nm,0.7s,baz=117,slow=3.7,SNR=25						
DBIC	Dimbokro	134.41	273	PKP	PKPdf	03 12 33.0	+0.3
TRQA	Tornquist	134.56	168	PKPpre	PKPpre	03 12 17.1	
TRQA				PKPdf	PKiKP	03 12 33.3	-0.6
TRQA	Tornquist	134.56	168	PKIKP	PKiKP	03 12 33.3	-0.6
TRQA	Tornquist	134.56	168	PKP	PKPdf	03 12 32.6	+0.2
WCI	Wyandotte Cave	134.83	40	PKPpre	PKPpre	03 12 18.5	
WCI	Wyandotte Cave	134.83	40	PKHKP	PKPpre	03 12 18.5	
WVT	Waverly	134.98	44	PKPpre	PKPpre	03 12 20.8	
WVT				PKPdf	PKPdf	03 12 33.5	+0.3
WVT	Waverly	134.98	44	PKIKP	PKPdf	03 12 33.5	+0.3
SWET	Sewanee	136.77	44	PKPpre	PKPpre	03 12 24.2	
SWET				PKPdf	PKiKP	03 12 38.8	+0.4
VT1	Waterbury	137.59	23	PKPpre	PKPpre	03 12 29.8	
SSPA	Standing Stone	138.14	31	PKPpre	PKPpre	03 12 28.6	
SSPA				PKPdf	PKPdf	03 12 38.4	-0.5
PMPST	Porto Santo, M	138.45	314	ePKPdf	PKPdf	03 12 39.4	-0.3
PMPST				eSKP		03 15 53.5	
PMPS	Porto Santo	138.46	314	ePKPdf	PKPdf	03 12 39.6	-0.1
PMPS				eSKP		03 15 53.9	
CFA	Coronel Fontan	138.69	157	PKhKP	PKPpre	03 12 31.2	
	comp=Z,30nm,0.4s,baz=249,slow=5.8,SNR=12						
CFA				PKP	PKiKP	03 12 42.3	-0.2
	comp=Z,108nm,0.5s,baz=247,slow=2.7,SNR=11						
CFA				PP	PP	03 15 34.1	+1.7
	comp=Z,23nm,0.7s,baz=214,slow=5.8,SNR=4.0						
CFA				SKPbc	SKPbc	03 15 53.7	-0.4
	comp=Z,114nm,0.6s,baz=211,slow=3.2,SNR=11						
CFA				SKKPbc	SKKPbc	03 24 36.9	+1.6
	comp=Z,88nm,1.1s,baz=7.7,slow=4.2,SNR=9.5						
PMAR	Madeira	139.05	314	ePKPdf	PKPdf	03 12 38.2	-2.9
PMAR				eSKP		03 15 56.1	
FUL	Funchal	139.08	314	ePKPdf	PKPdf	03 12 40.3	-0.6
FUL				eSKP		03 15 56.4	
PMOZ	Porto Moniz, M	139.20	315	PKP	PKPdf	03 12 38.5	-2.7
PMOZ	Porto Moniz, M	139.20	315	ePKPdf	PKPdf	03 12 37.9	-3.3
PMOZ				eSKP		03 15 56.4	
PMOZ				eSS	SS	03 33 42.4	+6.3
HRV	Adam Dziewonsk	139.59	24	PKPpre	PKPpre	03 12 33.5	
HRV	Adam Dziewonsk	139.59	24	PKHKP	PKPpre	03 12 33.5	
PAYG	Puerto Ayora	139.92	99	PKPdf	PKPdf	03 12 40.4	-2.5
EOSO	Osorio	140.30	307	PKP	PKPdf	03 12 40.7	-2.6
M65A	Busby, Falmout	140.75	24	PKiKP	PKPdf	03 12 43.3	-0.3
	baz=328						
MACI	Morro de la Ar	140.97	308	PKPdf	PKPdf	03 12 41.6	-3.0
ASCN	Ascension	141.02	249	PKPdf	PKPdf	03 12 41.9	-3.0
BART	Pico Bartolome	141.06	327	ePKP	PKPdf	03 12 40.2	-4.2
BART				i tx	tx	03 16 00.5	
BART	Pico Bartolome	141.06	327	ePKP	PKPdf	03 12 40.2	-4.2
BART				i tx	tx	03 16 00.5	
TEIG	Tepich	141.10	66	PKPpre	PKPpre	03 12 40.1	
H10N1	ASCENSION HYDR	141.16	249	PKP	PKPdf	03 12 43.5	-1.2
	baz=118,slow=3.3,SNR=12						
H10N2	ASCENSION HYDR	141.17	249	PKP	PKPdf	03 12 42.8	-2.0
	baz=118,slow=3.3,SNR=20						
PGRON	Lagoa das Cont	141.17	327	ePKP	PKPdf	03 12 41.1	-3.4
PGRON				i tx	tx	03 16 00.5	
PGRON	Lagoa das Cont	141.17	327	ePKP	PKPdf	03 12 41.1	-3.4
PGRON				i tx	tx	03 16 00.5	
H10N3	ASCENSION HYDR	141.18	249	PKP	PKPdf	03 12 43.4	-1.4
	baz=118,slow=3.3,SNR=20						
PCALD	Caldeiras da R	141.21	327	ePKP	PKPdf	03 12 40.9	-3.6
PCALD				etx	tx	03 13 59.2	
PCALD				i tx	tx	03 15 59.6	
PCALD	Caldeiras da R	141.21	327	ePKP	PKPdf	03 12 40.9	-3.6
PCALD				etx	tx	03 13 59.2	
PCALD				i tx	tx	03 15 59.6	
CMLA	Cha da Macela	141.26	327	ePKP	PKPdf	03 12 39.3	-5.4
CMLA				etx	tx	03 14 06.0	
CMLA				i tx	tx	03 16 00.9	
CMLA	Cha da Macela	141.26	327	PKPdf	PKPdf	03 12 42.6	-2.1
CMLA	Cha da Macela	141.26	327	PKIKP	PKPdf	03 12 42.6	-2.1
CMLA	Cha da Macela	141.26	327	ePKP	PKPdf	03 12 39.3	-5.4
CMLA				etx	tx	03 14 06.0	
CMLA				i tx	tx	03 16 00.9	
PAGU	Agualva, Azore	141.36	330	ePKP	PKPdf	03 12 40.6	-4.2
PAGU				etx	tx	03 14 03.3	
PAGU				i tx	tx	03 16 00.5	
PAGU	Agualva, Azore	141.36	330	ePKP	PKPdf	03 12 40.6	-4.2
PAGU				etx	tx	03 14 03.3	
PAGU				i tx	tx	03 16 00.5	
PSCM	Serra do Cume	141.38	330	ePKP	PKPdf	03 12 40.0	-4.8
PSCM				etx	tx	03 14 08.2	
PSCM				i tx	tx	03 16 01.4	
PSCM	Serra do Cume	141.38	330	ePKP	PKPdf	03 12 40.0	-4.8
PSCM				etx	tx	03 14 08.2	
PSCM				i tx	tx	03 16 01.4	
PSMN	Pico do Norte,	141.56	326	ePKP	PKPdf	03 12 40.4	-4.8
PSMN				etx	tx	03 14 03.7	
PSMN				i tx	tx	03 16 00.5	
PSMN	Pico do Norte,	141.56	326	ePKP	PKPdf	03 12 40.4	-4.8
PSMN				etx	tx	03 14 03.7	
PSMN				i tx	tx	03 16 00.5	
PSMA	Santa Maria	141.60	326	ePKP	PKPdf	03 12 40.5	-4.8
PSMA				etx	tx	03 13 50.3	
PSMA				i tx	tx	03 16 00.9	
PSMA	Santa Maria	141.60	326	ePKP	PKPdf	03 12 40.5	-4.8
PSMA				etx	tx	03 13 50.3	
PSMA				i tx	tx	03 16 00.9	
PMAN	Manadas	141.91	331	ePKP	PKPdf	03 12 42.4	-3.4
PMAN				etx	tx	03 14 11.8	
PMAN				i tx	tx	03 16 02.7	
PMAN	Manadas	141.91	331	ePKP	PKPdf	03 12 42.4	-3.4
PMAN				etx	tx	03 14 11.8	
PMAN				i tx	tx	03 16 02.7	
ROSA	Rosais	141.91	331	ePKP	PKPdf	03 12 42.7	-3.1
ROSA				etx	tx	03 14 05.9	
ROSA				i tx	tx	03 16 02.7	
ROSA	Rosais	141.91	331	ePKP	PKPdf	03 12 42.7	-3.1
ROSA				etx	tx	03 14 05.9	
ROSA				i tx	tx	03 16 02.7	
PLTB	Pedras Altas	141.96	176	PKP	PKPdf	03 12 40.0	-6.2
PLTB	Pedras Altas	141.96	176	eP	PKPdf	03 12 42.4	-3.8
PID	Ribeirinha	142.07	331	ePKP	PKPdf	03 12 42.7	-3.4
PID				etx	tx	03 14 10.0	
PID				i tx	tx	03 16 00.5	
PID	Ribeirinha	142.07	331	ePKP	PKPdf	03 12 42.7	-3.4
PID				etx	tx	03 14 10.0	
PID				i tx	tx	03 16 00.5	
PPNO	Prainha do Nor	142.12	331	ePKP	PKPdf	03 12 43.1	-3.1
PPNO				i tx	tx	03 16 02.3	
PPNO	Prainha do Nor	142.12	331	ePKP	PKPdf	03 12 43.1	-3.1
PPNO				i tx	tx	03 16 02.3	
PICO	Pico	142.18	331	ePKP	PKPdf	03 12 43.3	-3.1
PICO				etx	tx	03 14 01.0	
PICO				i tx	tx	03 15 59.2	
PICO	Pico	142.18	331	ePKP	PKPdf	03 12 43.3	-3.1
PICO				etx	tx	03 14 01.0	
PICO				i tx	tx	03 15 59.2	
PCED	Cedros	142.21	331	ePKP	PKPdf	03 12 41.1	-5.2
PCED				etx	tx	03 13 53.0	
PCED				i tx	tx	03 16 00.1	
PCED	Cedros	142.21	331	ePKP	PKPdf	03 12 41.1	-5.2
PCED				etx	tx	03 13 53.0	
PCED				i tx	tx	03 16 00.1	
PCAN	Candelaria	142.23	331	ePKP	PKPdf	03 12 44.7	-1.7
PCAN				etx	tx	03 13 50.7	
PCAN				i tx	tx	03 16 00.5	
PCAN	Candelaria	142.23	331	ePKP	PKPdf	03 12 44.7	-1.7
PCAN				etx	tx	03 13 50.7	
PCAN				i tx	tx	03 16 00.5	
CALA	Caldeira	142.25	331	ePKP	PKPdf	03 12 44.0	-2.5
CALA				etx	tx	03 13 57.5	
CALA				i tx	tx	03 16 00.1	
CALA	Caldeira	142.25	331	ePKP	PKPdf	03 12 44.0	-2.5
CALA				etx	tx	03 13 57.5	
CALA				i tx	tx	03 16 00.1	
HOR	Horta	142.25	331	i tx	tx	03 16 02.7	
HOR	Horta	142.25	331	i tx	tx	03 16 02.7	
PFCBR	Castelo Branco	142.30	331	ePKP	PKPdf	03 12 46.8	+0.3
PFCBR				i tx	tx	03 16 02.7	
PFCBR	Castelo Branco	142.30	331	ePKP	PKPdf	03 12 46.8	+0.3
PFCBR				i tx	tx	03 16 02.7	
H07S1	FLORES T-PHASE	142.73	335	PKP	PKPdf	03 12 45.7	-1.6
	SNR=258						
CPSB	Cacapava Do Su	143.32	176	PKP	PKPab	03 12 44.4	-0.5
CPSB	Cacapava Do Su	143.32	176	eP	PKPbc	03 12 47.3	+1.0
ITQB	Itaqui	143.71	171	PKP	PKPab	03 12 46.6	+0.2
ITQB	Itaqui	143.71	171	eP	PKPdf	03 12 49.1	-0.1
PB14	IPOC Station P	143.71	149	PKP	PKPdf	03 12 49.1	-0.7
CNLB	Canela	144.50	180	PKP	PKPbc	03 12 49.8	0.0
CNLB	Canela	144.50	180	eP	PKPbc	03 12 49.8	-0.1
SOR	Soroa	144.91	59	eP	PKPdf	03 12 52.2	+0.7
BOAB	BOACO BROADB	146.06	77	PKP	PKPab	03 12 53.0	+0.9
JTS	Las Juntas de	145.95	81	PKPbc	PKPab	03 12 55.3	-0.2
	comp=Z,928nm,0.6s,baz=324,slow=2.0,SNR=178						
CAMR	Camarioca	146.18	57	eP	PKPab	03 12 55.6	-0.5
ITAB	Concordia	146.55	178	PKP	PKPbc	03 12 55.4	-0.6
ITAB	Concordia	146.55	178	eP	PKPdf	03 12 54.5	+0.3
HDC	Heredia	146.80	82	eP	PKPdf	03 12 55.9	+0.8
CPUP	Villa Florida	146.85	169		PKPbc	03 12 56.9	0.0
CPUP	Villa Florida	146.85	169	PKPbc	PKPbc	03 12 56.6	-0.2
	comp=Z,547nm,0.8s,baz=67,slow=1.6,SNR=237						
CPUP				SKPbc	SKPbc	03 16 14.4	+0.1
	comp=Z,177nm,1.1s,baz=82,slow=0.9,SNR=5.9						
CPUP	Villa Florida	146.85	169	PKP	PKPdf	03 12 55.4	+0.7
CPUP	Villa Florida	146.85	169	eP	PKPdf	03 12 55.5	+0.7
FSCY	Frank Sound, G	147.74	64	eP	PKPdf	03 12 55.7	-0.6
PB08	IPOC Station P	148.02	146	PKP	PKPbc	03 12 59.1	-1.5
BRU2	Volcan	148.26	84		PKPbc	03 12 59.9	-1.3
NNA	Nana	148.28	125	PKPbc	PKPdf	03 12 58.8	+1.4
NNA	Nana	148.28	125	PKIKP	PKPdf	03 12 58.8	+1.4
SJPY	San Joaquin	148.37	171	eP	PKPdf	03 12 57.7	+0.4
TIJ01	Guaruva-PR	148.43	183	PKP	PKPdf	03 12 57.3	-0.2
PTGB	Pitanga	149.06	178	PKP	PKPdf	03 12 59.4	+0.9
PTGB	Pitanga	149.06	178	eP	PKPdf	03 12 58.6	0.0
PET01	Itanhaem-SP	149.32	186	PKP	PKPdf	03 12 59.8	+1.0
PET01	Itanhaem-SP	149.32	186	eP	PKPdf	03 12 58.8	-0.1
ATAH	Atahualpa	149.32	116	PKPbc	PKiKP	03 13 06.3	+1.1
	comp=Z,1µm,1.0s,baz=305,slow=3.3,SNR=40						
SLP01	Ubatuba-SP	149.97	190	PKP	PKPdf	03 13 00.8	+0.8
SLP01	Ubatuba-SP	149.97	190	eP	PKPdf	03 12 59.6	-0.5
SPB	Sao Paulo	150.03	186	eP	PKPdf	03 13 01.2	+1.3
PARB	Paraibuna	150.03	189	PKP	PKPdf	03 13 00.9	+0.8
PARB	Paraibuna	150.03	189	eP	PKPdf	03 13 00.2	+0.1
MAN01	Angra dos Reis	150.18	193	PKP	PKPdf	03 13 01.9	+1.7
MAN01	Angra dos Reis	150.18	193	eP	PKPdf	03 13 00.4	+0.1
LDASE	Londrina, Braz	150.40	179	eP	PKPdf	03 13 00.2	-0.4
FRTB	Fartura	150.43	182	PKP	PKPdf	03 13 01.7	+1.0
FRTB	Fartura	150.43	182	eP	PKPdf	03 13 01.4	+0.8
DUB01	Friburgo-RJ	150.54	196	PKP	PKPdf	03 13 01.9	+1.1
DUB01	Friburgo-RJ	150.54	196	eP	PKPdf	03 13 01.2	+0.4
VAO	Valinhos	150.56	187	eP	PKPdf	03 13 02.5	+1.5
VABB	Valinhos	150.56	187	PKP	PKPdf	03 13 01.3	+0.4
CAM01	Campos-RJ	150.58	197	PKP	PKPdf	03 13 01.6	+0.8
CAM01	Campos-RJ	150.58	197	eP	PKPdf	03 13 00.8	0.0
VAS01	Vassouras-RJ	150.62	194	PKP	PKPdf	03 13 02.2	+1.2
VAS01	Vassouras-RJ	150.62	194	eP	PKPdf	03 13 00.8	-0.1
SIM2	UHE Simplicio	150.81	195	PKP	PKPdf	03 13 01.0	-0.2
PILO	Pilon	150.84	60	eP	PKPdf	03 13 01.6	+0.2
TRCB	Terra Rica	150.94	176	PKP	PKPdf	03 13 02.4	+0.9
TRCB	Terra Rica	150.94	176	eP	PKPdf	03 13 01.6	+0.2
BBSR	BB Station	151.06	25	PKPdf	PKPdf	03 13 00.4	-0.8
BBSR					PKPbc	03 13 06.0	-1.3
LMGC	Las Mercedes	151.12	59	eP	PKPdf	03 13 02.4	+0.7
MURT	Porto Murtinho	151.33	167	eP	PKPdf	03 13 01.2	-0.8
MTDJ	Mount Denham	151.36	63	eP	PKPdf	03 13 01.1	-1.1
YAR	Yar	151.54	58	eP	PKPdf	03 13 04.0	+1.7
HLGC	Holguin	151.56	57	eP	PKPdf	03 13 03.3	+0.9
LPAZ	La Paz	151.66	143	PKP	PKPdf	03 13 04.4	+1.0
	comp=Z,134nm,0.9s,baz=352,slow=0.1,SNR=125						
LPAZ				PKPbc	PKiKP	03 13 11.2	+1.0
	comp=Z,226nm,0.4s,baz=8.5,slow=0.5,SNR=33						
LPAZ				PKPab	PKPab	03 13 20.0	+0.7
	comp=Z,874nm,0.7s,baz=152,slow=3.3,SNR=34						
LPAZ	La Paz	151.66	143	PKP	PKPdf	03 13 04.5	+1.1
LPAZ	La Paz	151.66	143	eP	PKPdf	03 13 04.5	+1.1
OTAV	Otavalo	151.69	101	PKP	PKPdf	03 13 04.2	+0.9
OTAV	Otavalo	151.69	101	eP	PKPdf	03 13 03.5	+0.1
PINC	Pinares de May	151.97	58	eP	PKPdf	03 13 03.9	+1.0
SACV	Santiago Islan	152.03	290	PKPdf	PKPdf	03 13 02.9	-0.3
MARVS	Santiago de Cu	152.09	59	eP	PKPdf	03 13 03.7	+0.5
BSCB	Bom Sucesso	152.16	192	PKP	PKPdf	03 13 04.3	+0.9

BSCB	Bom Sucesso	152.16	192	eP	PKPdf	03 13 03.3	-0.1
PCMB	Pacaembu	152.17	179	PKP	PKPdf	03 13 04.1	+0.8
PCMB	Pacaembu	152.17	179	eP	PKPdf	03 13 03.7	+0.4
RCC	Rio Carpintero	152.26	58	eP	PKPdf	03 13 03.8	+0.4
RIB01	Linhares ES	152.50	202	PKP	PKPdf	03 13 04.1	+0.3
RIB01	Linhares ES	152.50	202	eP	PKPdf	03 13 03.9	+0.1
NMDO	Nuevo Mundo	152.61	57	eP	PKPdf	03 13 04.5	+0.6
BDQN	Bodoquena, MS	152.69	168	eP	PKPdf	03 13 00.8	-3.2
GTBY	Guantanamo Bay	152.79	58	eP	PKPdf	03 13 03.5	-0.7
AQDB	Aquidauana	152.86	170	PKP	PKPdf	03 13 04.7	+0.4
AQDB	Aquidauana	152.86	170	eP	PKPdf	03 13 05.1	+0.8
QMBU	Quimbuelo	152.92	57	eP	PKPdf	03 13 03.7	-0.7
RPRD	Ribas do Rio P	153.14	174	eP	PKPdf	03 13 03.5	-1.3
CANS	Sao Roque de M	153.14	189	PKP	PKPdf	03 13 05.1	+0.2
SJMB	Sao Joao De Ma	153.34	201	PKP	PKPdf	03 13 05.3	+0.3
SJMB	Sao Joao De Ma	153.34	201	eP	PKPdf	03 13 04.7	-0.3
MASC	Masc	153.41	57	eP	PKPdf	03 13 06.0	+0.9
CZSB	Cruzeiro do Su	154.00	122	PKP	PKPdf	03 13 06.7	+0.5
CZSB	Cruzeiro do Su	154.00	122	eP	PKPdf	03 13 05.9	-0.2
ITRB	Iturama	154.07	181	PKP	PKPdf	03 13 06.8	+0.7
ITRB	Iturama	154.07	181	eP	PKPdf	03 13 05.9	-0.2
BBSD	Serra de San D	154.63	158	eP	PKPdf	03 13 07.8	+0.9
GUA01	Guaratinga, BA	154.74	205	PKP	PKPdf	03 13 07.5	+0.4
GUA01	Guaratinga, BA	154.74	205	eP	PKPdf	03 13 06.3	-0.7
PMNB	Patos De Minas	154.87	190	PKP	PKPdf	03 13 07.4	+0.1
PMNB	Patos De Minas	154.87	190	eP	PKPdf	03 13 07.0	-0.4
CAR01	Carai MG	154.91	202	PKP	PKPdf	03 13 07.1	-0.3
C2SB	Chapadao do Su	154.92	175	PKP	PKPdf	03 13 08.6	+1.3
C2SB	Chapadao do Su	154.92	175	eP	PKPdf	03 13 08.0	+0.7
ITU3	Corumbazu	155.48	184	PKP	PKPdf	03 13 08.4	+0.3
SIV	San Ignacio	155.53	155	PKP	PKPdf	03 13 09.6	+1.4
	comp=Z,105nm,0.9s,baz=207,slow=1.6,SNR=132						
SIV				PKPab	PKPab	03 13 35.3	+0.4
	comp=Z,532nm,0.7s,baz=224,slow=4.3,SNR=9.8						
SFA1	Serra Facao	155.61	187	PKP	PKPdf	03 13 08.5	+0.2
IPMB	Ipameri, GO	155.65	186	PKP	PKPdf	03 13 08.2	-0.1
IPMB	Ipameri, GO	155.65	186	eP	PKPdf	03 13 08.2	-0.1
JQT1	Jequitai-MG	155.69	195	PKP	PKPdf	03 13 08.9	+0.5
CMC01	Camacan, BA	155.69	207	PKP	PKPdf	03 13 08.8	+0.5
CMC01	Camacan, BA	155.69	207	eP	PKPdf	03 13 08.0	-0.4
MC01	Montes Claros	156.08	196	PKP	PKPdf	03 13 08.9	0.0
BAT3	Ipameri	156.15	188	PKP	PKPdf	03 13 08.8	-0.3
BAT2	UHE Batalha	156.18	188	PKP	PKPdf	03 13 09.5	+0.4
ROSC	El Rosal	156.50	93	PKP	PKPdf	03 13 11.2	+1.2
	comp=Z,105nm,0.8s,baz=146,slow=22,SNR=37						
ROSC				PKPab	PKPab	03 13 39.6	-0.2
	comp=Z,144nm,0.7s,baz=117,slow=18,SNR=7.1						
PTLB	Pontes e Lacer	156.77	159	PKP	PKPdf	03 13 10.3	+0.6
PTLB	Pontes e Lacer	156.77	159	eP	PKPdf	03 13 09.6	-0.1
ANA01	Lindo Horizont	156.97	205	PKP	PKPdf	03 13 10.1	0.0
GDU01	Guandu, BA	157.15	209	eP	PKPdf	03 13 10.0	-0.2
SALV	Santo Antonio	157.32	168	PKP	PKPdf	03 13 10.8	+0.4
SALV	Santo Antonio	157.32	168	eP	PKPdf	03 13 10.2	-0.2
JANB	Januaria	157.75	197	PKP	PKPdf	03 13 10.1	-1.0
JANB	Januaria	157.75	197	eP	PKPdf	03 13 10.2	-0.9
BDFB	Brasilia	157.94	187	PKP	PKPdf	03 13 12.1	+0.7
	comp=Z,92nm,0.9s,baz=114,slow=1.3,SNR=53						
BDFB				PKPab	PKPab	03 13 45.5	+0.2
	comp=Z,119nm,1.0s,baz=100,slow=12,SNR=3.4						
BDFB				PP	PP	03 17 25.4	+1.4
	comp=Z,169nm,1.1s,baz=71,slow=5.0,SNR=4.3						
BDFB	Brasilia	157.94	187	PKP	PKPdf	03 13 11.4	0.0
ARAG	Araguaiana, MT	158.02	177	PKP	PKPdf	03 13 11.8	+0.5
ARAG	Araguaiana, MT	158.02	177	eP	PKPdf	03 13 10.8	-0.5
TBTG	Tabatinga, AM	158.18	118	PKP	PKPdf	03 13 11.7	+0.1
TBTG	Tabatinga, AM	158.18	118	eP	PKPdf	03 13 11.9	+0.3
MAS01	UHE Manso	158.27	167	PKP	PKPdf	03 13 12.5	+0.8
NBLA	Lagarto - SE	158.44	217	PKP	PKPdf	03 13 12.1	+0.2
LABB	L¡brea	158.45	136	PKP	PKPdf	03 13 11.9	0.0
NBAN	Anadia - AL	158.49	222	PKP	PKPdf	03 13 12.0	+0.1
NBAN	Anadia - AL	158.49	222	eP	PKPdf	03 13 12.1	+0.1
VILB	Vilhena	158.61	154	PKP	PKPdf	03 13 12.9	+0.8
VILB	Vilhena	158.61	154	eP	PKPdf	03 13 11.9	-0.2
NBCA	Caruaru-PE	159.34	226	PKP	PKPdf	03 13 13.5	+0.5
NBPV	Pedro Velho	160.00	231	PKP	PKPdf	03 13 14.2	+0.5
AGPR	Aguadilla, PR	160.04	52		PKPab	03 13 54.9	+0.5
SDV	Santo Domingo	160.14	82	PKP	PKPdf	03 13 13.7	-0.4
	comp=Z,245nm,1.0s,baz=223,slow=0.4,SNR=75						
SDV				PKPab	PKPab	03 13 55.5	+0.1
	comp=Z,156nm,0.8s,baz=274,slow=4.5,SNR=9.2						
SDV	Santo Domingo	160.14	82	PKP	PKPdf	03 13 14.0	0.0
SDV	Santo Domingo	160.14	82	eP	PKPdf	03 13 14.1	0.0
SDBA	SAO DESIDERIO	160.44	197	PKP	PKPdf	03 13 14.3	0.0
SDBA	SAO DESIDERIO	160.44	197	eP	PKPdf	03 13 13.9	-0.3
CAN3	Cana Brava	160.49	187	PKP	PKPdf	03 13 14.2	0.0
SSV2	Sao Salvador	160.72	188	PKP	PKPdf	03 13 14.3	-0.2
RCBR	Riachuelo	160.84	231	PKP	PKPdf	03 13 15.1	+0.4
	comp=Z,25nm,0.8s,baz=160,slow=4.7,SNR=19						
RCBR				PKPab	PKPab	03 13 59.8	+1.7
	comp=Z,229nm,1.1s,baz=131,slow=11,SNR=20						
RCBR				PP	PP	03 17 40.9	-0.2
	comp=Z,30nm,1.1s,baz=138,slow=14,SNR=4.2						
RCBR	Riachuelo	160.84	231	PKP	PKPdf	03 13 15.0	+0.3
RCBR	Riachuelo	160.84	231	eP	PKPdf	03 13 14.7	0.0
SJG	San Juan	160.99	51	PKP	PKPdf	03 13 13.9	-0.7
	comp=Z,104nm,0.9s,baz=93,slow=6.1,SNR=28						
SJG				PKPab	PKPab	03 13 59.6	+1.0
	comp=Z,442nm,0.8s,baz=322,slow=6.8,SNR=8.0						
SJG	San Juan	160.99	51	e	PKPdf	03 13 15.1	+0.5
PDRB	Porto dos Gac	161.15	162	PKP	PKPdf	03 13 15.3	+0.3
PDRB	Porto dos Gac	161.15	162	eP	PKPdf	03 13 14.5	-0.4
HUMP	Col San Antoni	161.20	50	PKPdf	PKPdf	03 13 14.6	-0.3
SNDB	Serra Nova Dou	161.75	178	PKP	PKPdf	03 13 15.9	+0.3
SNDB	Serra Nova Dou	161.75	178	eP	PKPdf	03 13 15.8	+0.2
NBPA	Parau_RN	161.81	229	PKP	PKPdf	03 13 16.0	+0.3
NBMA	Muriti-CE	161.84	221	PKP	PKPdf	03 13 15.9	+0.1
CLDB	Colider	162.13	164	PKP	PKPdf	03 13 16.2	+0.3
CLDB	Colider	162.13	164	eP	PKPdf	03 13 15.8	-0.2
SGC2	Sao Gabriel da	162.55	111	PKP	PKPdf	03 13 16.5	0.0
TEFE	Tefe	163.01	125	PKP	PKPdf	03 13 16.9	+0.1
TEFE	Tefe	163.01	125	eP	PKPdf	03 13 17.0	+0.1
LAJE	UHE Lajeado	163.56	188	PKP	PKPdf	03 13 17.3	-0.1
NBCL	Cascavel-CE	163.69	230	PKP	PKPdf	03 13 17.4	-0.1
NBCL	Cascavel-CE	163.69	230	eP	PKPdf	03 13 17.2	-0.3
NBPB	Pedra_Branca-C	163.73	223	PKP	PKPdf	03 13 16.9	-0.7
NBPB	Pedra_Branca-C	163.73	223	eP	PKPdf	03 13 16.0	-1.6
SKI	Saint Kitts	164.01	46	e	PKPdf	03 13 18.9	+1.2
ANWB	Willy Bob	164.45	43	e	PKPdf	03 13 14.9	-3.1
SMTB	Santa Maria do	164.53	192	PKP	PKPdf	03 13 18.0	-0.2
SMTB	Santa Maria do	164.53	192	eP	PKPdf	03 13 18.4	+0.2
MBFL	Flemmings, Mon	164.78	46	e	PKPdf	03 13 18.8	+0.4
SBBR	Sobral	165.48	226	PKP	PKPdf	03 13 18.6	-0.5
NBMO	Morrinhos-CE	165.60	228	PKP	PKPdf	03 13 18.8	-0.3
CBE	Ff, Capester	165.66	47	PKPdf	PKPdf	03 13 19.5	+0.4
CBE				PKPab	PKPab	03 14 19.9	+0.7
PCRV	Puerto La Cruz	165.76	74	PKP	PKPdf	03 13 18.4	-0.9
	comp=Z,28nm,1.0s,baz=220,slow=0.5,SNR=14						
PCRV				PKPab	PKPab	03 14 20.5	+0.6
	comp=Z,57nm,0.8s,baz=328,slow=4.1,SNR=3.5						
NBPS	Pedro II - PI	165.82	221	PKP	PKPdf	03 13 18.9	-0.6
NPGB	Novo Progresso	165.89	161	PKP	PKPdf	03 13 19.8	+0.4
NPGB	Novo Progresso	165.89	161	eP	PKPdf	03 13 19.0	-0.4
MAGL	Barre de l’ile	165.97	46	e	PKPdf	03 13 20.2	+0.9
DWS	Wesley	166.20	48	eP	PKPdf	03 13 20.0	+0.5
DSLB	Salisbury	166.20	48	e	PKPdf	03 13 20.3	+0.7
MACA	Manacapuru-AM	166.28	133	PKP	PKPdf	03 13 19.6	-0.1
MACA	Manacapuru-AM	166.28	133	eP	PKPdf	03 13 19.4	-0.2
MDN	Morne-Daniel	166.30	49	e	PKPdf	03 13 21.2	+1.6
DLPL	La Plaine	166.40	48	e	PKPdf	03 13 21.1	+1.4
PAL2	UHE Estreito -	166.51	195	PKP	PKPdf	03 13 20.3	+0.4
PAL01	Palmeiras do T	166.67	194	PKP	PKPdf	03 13 19.9	-0.2
SVN	Savane Anatole	166.76	50	e	PKPdf	03 13 20.1	+0.1
NBBC	Barra do Corda	166.97	205	PKP	PKPdf	03 13 20.2	0.0
ILAM	Ilet Lapin Mar	167.03	49	e	PKPdf	03 13 21.8	+1.6
BIM	Bigot	167.04	51	e	PKPdf	03 13 19.5	-0.7
SLBI	Saint Lucia, B	167.41	52	e	PKPdf	03 13 20.9	+0.5
PRPB	Parauapebas	167.49	184	PKP	PKPdf	03 13 20.6	0.0
PRPB	Parauapebas	167.49	184	eP	PKPdf	03 13 20.9	+0.3
SVB	Belmont	167.60	56	e	PKPdf	03 13 19.8	-0.8
GRSS	Sisters	167.78	60	e	PKPdf	03 13 24.9	+4.2
GRW	Mount Saint Ca	167.81	61	e	PKPdf	03 13 21.3	+0.4
GRGR	Grenville	167.82	61	e	PKPdf	03 13 17.9	-2.8
GCMP	Grenada, Carri	167.86	59	e	PKPdf	03 13 20.2	-0.6
ITTB	Itaituba	168.21	155	PKP	PKPdf	03 13 20.8	-0.3
ITTB	Itaituba	168.21	155	eP	PKPdf	03 13 21.3	+0.2
TRN	Trinidad (W)	168.65	67	eP	PKPdf	03 13 22.9	+1.6
BOAV	Boa Vista	169.48	112	PKP	PKPdf	03 13 21.7	-0.2
BOAV	Boa Vista	169.48	112	eP	PKPdf	03 13 21.9	0.0
BMO2	UHE Belo Monte	170.25	173	PKP	PKPdf	03 13 22.1	-0.3
ATM1	UHE Belo Monte	170.28	171	PKP	PKPdf	03 13 22.1	-0.3
BMO1	UHE Belo Monte	170.47	174	PKP	PKPdf	03 13 22.1	-0.3
TMAB	Tom-Au,PA,Br	170.90	197	PKP	PKPdf	03 13 22.4	-0.3
TMAB	Tom-Au,PA,Br	170.90	197	eP	PKPdf	03 13 23.1	+0.4
MAL2	Monte Alegre,	170.97	158	PKP	PKPdf	03 13 23.1	+0.3
MDP	Montagnes des	177.73	124	PKP	PKPdf	03 13 24.5	-0.4
	comp=Z,184nm,0.9s,baz=17,slow=0.0,SNR=32						
MDP				PKPab	PKPab	03 15 13.6	+0.7
	comp=Z,34nm,0.9s,baz=225,slow=3.6,SNR=5.9						
MDP				PP	PP	03 19 05.8	-0.2
	comp=Z,32nm,0.8s,baz=214,slow=4.3,SNR=6.0						

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*SJA **24** 03:11:02.0±0.7, 30°.13S×72°.55W, h29^{km}±5^{km}, ML4.1, MW4.5*

*GUC **24** 03:11:06.4±0.8, 30°.20S×72°.06W, h34^{km}±4^{km}, ML3.6*

ISC 24 03:11:03.3±2.0**, 30°.14S**±0°.03×**72°.28W**±0°.07**, h4**^{km}±11^{km}**, n36, σ1^{s}43**/51**, 1C-4D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.77	134	⇓eP	Pg	03 11 18.7	+0.6
CO06				eS	Sg	03 11 27.8	-0.3
CO06				IAML		03 11 32.3	
	comp=N,3μm,0.1s						
CO05	La Serena	0.93	76	⇑eP	Pb	03 11 21.9	0.0
CO05				eS	Sg	03 11 33.2	0.0
CO05				IAML		03 11 37.7	
	comp=E,4μm,0.5s						
GO04	Tololo Observa	1.28	92	eP	Pg	03 11 27.3	-0.6
GO04				eS	Sg	03 11 43.3	-1.3
GO04				IAML		03 11 48.8	
	comp=N,3μm,0.5s						
GO04	Tololo Observa	1.28	92	i P	Pg	03 11 27.5	-0.4
CO02	Combarbal	1.53	134	eP	Pn	03 11 31.1	-0.4
CO02				i S	Sn	03 11 50.4	-1.5
CO02				IAML		03 11 54.5	
	comp=N,3μm,0.2s						
CO02	Combarbal	1.53	134	i P	Pb	03 11 32.0	-0.3
CO02				i S	Sg	03 11 54.5	+2.0
CO03	El Pedregal	1.54	117	⇓eP	Pn	03 11 30.9	-0.8
CO03				eS	Sn	03 11 49.5	-2.6
CO03				IAML		03 11 53.9	
	comp=N,1μm,0.3s						
CO03	El Pedregal	1.54	117	i P	Pn	03 11 31.1	-0.5
CO03				i S	Sg	03 11 54.1	+1.3
LCO	Las Campanas	1.78	51	eP	Pn	03 11 35.5	+0.5
LCO	Las Campanas	1.78	51	i P	Pn	03 11 35.8	+0.7
LCO				i S	Sg	03 12 01.1	+0.6
LCO				IAML		03 12 06.7	
	comp=Z,1μm,0.6s						
CO01	Juntas del Tor	1.90	86	eP	Pn	03 11 37.3	+0.6
CO01	Juntas del Tor	1.90	86	i P	Pb	03 11 38.0	-0.7
CO01				i S	Sg	03 12 04.8	+0.3
AC04	Llanos de Chal	2.20	29	i P	Pn	03 11 40.6	0.0
AC04				i S	Sn	03 12 08.9	+0.7
AROD	Rodeo	2.43	91	i P	Pb	03 11 46.7	-1.1
ACDV	Cuesta del Vie	2.74	91	i P	Pb	03 11 50.6	-2.3
ACDV				IAML		03 12 48.7	
	comp=Z,312nm,2.5s						
ACCO	Cerro Coronel	2.81	100	i P	Pb	03 11 52.7	-1.6
ACCO				i S	Sb	03 12 29.2	-0.1
VA03	San Esteban	3.00	151	i P	Pn	03 11 52.8	+1.0
VA03				i S	Sn	03 12 29.5	+1.3
VA03				IAML		03 12 42.8	
	comp=Z,455nm,1.4s						
RTLS	Leoncito	3.05	124	⇓iP	Pn	03 11 55.0	+2.5
RTLS				i S	Sb	03 12 33.7	-2.3
RTLS				IAML		03 12 47.0	
	comp=Z,703nm,0.7s						
GO03	Copiapo	3.11	36	i P	Pn	03 11 54.0	+0.9
MT02	Curacav	3.26	163	i P	Pn	03 11 55.4	+0.2
MT02				i S	Sn	03 12 35.2	+0.8
MT02				IAML		03 12 39.8	
	comp=Z,245nm,1.1s						
AGUA	GUANDACOL	3.36	80	i P	Pn	03 11 58.8	+2.2
AGUA				IAML		03 12 58.7	
	comp=Z,311nm,0.6s						
MT05	Renca	3.50	158	⇓iP	Pn	03 11 59.3	+0.7
MT04	Ro Olivares	3.73	151	i P	Pn	03 12 02.6	+0.7
MT04				i S	Sn	03 12 47.3	+0.9
CFA	Coronel Fontan	3.77	114	i P	Pn	03 12 04.6	+2.4
MT01	Popeta	3.81	167	i P	Pn	03 12 02.9	+0.1
MT01				IAML		03 13 51.9	
	comp=Z,151nm,1.9s						
MT08	Bocatoma Ro	3.82	150	i P	Pn	03 12 04.1	+1.1
VCA	Vinchina	3.82	70	i P	Pn	03 12 05.5	+2.4
VCA				IAML		03 13 35.1	
	comp=Z,302nm,0.9s						
LMEL	Las Melosas	4.09	155	i P	Pn	03 12 08.1	+1.2
AVFE	Valle Fertil	4.20	98	i P	Pn	03 12 10.8	+2.5
AVFE				IAML		03 13 49.4	
	comp=Z,168nm,0.9s						
AC01	Pan de Azucar	4.25	21	i P	Pn	03 12 09.4	+0.7
AC01				IAML		03 13 28.2	
	comp=Z,174nm,2.2s						
AC02	Maricunga	4.31	41	i P	Pn	03 12 11.2	+1.2
AC02				IAML		03 13 28.9	
	comp=Z,131nm,1.5s						
BO01	Tunca	4.36	167	i P	Pn	03 12 10.4	+0.1
BO01				IAML		03 13 51.0	
	comp=Z,121nm,2.5s						
ACLC	CERRO LA CRUZ	4.69	83	i P	Pn	03 12 17.7	+2.7
ACLC				IAML		03 14 05.8	
	comp=Z,108nm,1.5s						
BO02	Sierra Bellavi	4.81	165	i P	Pn	03 12 17.2	+0.7
BO02				IAML		03 13 51.9	
	comp=Z,154nm,2.8s						
ACAN	Cantantal	4.85	117	i P	Pn	03 12 19.3	+2.1
ACAN				IAML		03 13 59.8	
	comp=Z,874nm,1.8s						
ACHE	Chepes	4.95	103	i P	Pn	03 12 21.4	+2.9

IDC 24 03:16:40.5±2.0**, 2°.52S**×**138°.54E, h0**^{km}**, mb3.9**/2**, mbtmp4.0**/4**, ML3.8**/2**, Error ellipse: s-maj=36.2km s-min=19.2km az=161.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.17	90	Pn	Pn	03 17 19.1	+1.2
	12nm,0.3s,baz=237,slow=11,SNR=11						
JAY				Lg	Lg	03 17 48.8	
	6.3nm,0.3s,baz=1.2,slow=4.6,SNR=3.7						
	22nm,0.3s						
WRA	Warramunga Arr	17.79	193	P	Pn	03 20 49.2	-0.6
	0.5nm,0.3s,baz=16,slow=12,SNR=5.9						
	11nm,1.1s						
ASAR	Alice Springs	21.49	192	P	P	03 21 30.8	-0.3
	2.3nm,0.5s,baz=19,slow=10,SNR=12						
	2.3nm,0.5s						
ILAR	Eielson Array	85.74	24	P	P	03 29 21.3	0.0
	1.3nm,0.9s,baz=260,slow=3.1,SNR=1.9						
	1.3nm,0.9s						

IDC 24 03:20:59.3±6.8**, 7°.10S**×**129°.13E, h196**^{km}±72^{km}**, mb3.3**/1**, mbtmp4.5**/5**, Error ellipse: s-maj=65.5km s-min=22.5km az=45.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.22	240	P	Pn	03 22 28.6	-0.9
	109nm,0.7s,baz=89,slow=3.9,SNR=8.1						
BATI				S	Sn	03 23 42.4	+1.6
	30nm,0.3s,baz=2.6,slow=23,SNR=1.7						
FITZ	Fitzroy Crossi	11.45	197	P	Pn	03 23 37.8	+0.5
	10nm,0.5s,baz=17,slow=10,SNR=24						
FITZ				S	Sn	03 25 43.2	-1.7
	5.0nm,0.3s,baz=148,slow=23,SNR=6.2						
WRA	Warramunga Arr	13.73	159	P	Pn	03 24 05.6	-0.6
	3.1nm,0.4s,baz=333,slow=13,SNR=15						
WRA				S	S	03 26 39.7	-0.1
	1.0nm,0.3s,baz=338,slow=22,SNR=5.2						
ASAR	Alice Springs	17.09	165	P	Pn	03 24 46.4	-0.7
	22nm,0.4s,baz=344,slow=11,SNR=79						
MKAR	Makanchi Array	67.84	327	P	P	03 31 36.4	0.0
	0.6nm,0.6s,baz=116,slow=7.4,SNR=1.3						
	0.6nm,0.6s						

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*NNC **24** 03:21:20.3±6.1, 36°.66N×70°.23E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=49.9km s-min=44.1km az=138.0*

*IDC **24** 03:21:37.2±19.0, 37°.18N×70°.08E, h249^{km}±165^{km}, mb2.7/1, mbtmp3.9/5, Error ellipse: s-maj=187.0km s-min=82.4km az=173.0*

ISC 24 03:21:10.6±2.4**, 36°.0N**±0°.2×**69°.8E**±0°.2**, h35**^{km}**, n8, σ2^{s}38**/11**, 3C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	7.13	4	⇓P	Pn	03 22 55.9	+3.5
	4.0nm,0.3s,baz=176,slow=12,SNR=24						
KK31				⇓S	Sn	03 24 10.7	-1.5
	19nm,0.7s,baz=180,slow=22,SNR=16						
AAK	Ala-Archa	7.58	27	⇑P	Pn	03 23 02.5	+3.8
	1.8nm,0.8s						
AAK				S	Sn	03 24 21.9	-1.4
	20nm,1.1s						
CHMS	Chumysh	7.99	27	⇑P	Pn	03 23 06.4	+2.2
	18nm,0.8s						
CHMS				⇑S	Sn	03 24 32.1	-1.1
	15nm,1.0s						
MKAR	Makanchi Array	14.29	37	P	P	03 24 35.3	-1.7
	2.0nm,0.6s,baz=213,slow=11,SNR=4.3						
KURBB	Kurchatov Arra	15.94	21	P	P	03 24 53.9	-1.4
	2.0nm,0.4s,baz=208,slow=11,SNR=7.3						
BVAR	Borovoye Array	17.05	1	P	Pn	03 25 05.7	-0.3
	2.3nm,0.6s,baz=170,slow=8.0,SNR=1.7						
ZALV	Zalesovo Beam	20.80	26	P	P	03 25 47.2	-1.4
	3.2nm,0.4s,baz=216,slow=9.9,SNR=7.4						
NOA	NORSAR Array B	44.21	323	P	P	03 29 15.0	-1.0
	0.3nm,0.6s,baz=97,slow=8.0,SNR=1.6						
	0.3nm,0.6s						

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*JMA **24** 03:22:37.3±0.3, 25°N±1°×122°1E±0°.6, h91^{km}±3^{km}, MV2.4/14, TAIWAN REGION*

*TAP **24** 03:22:37.3, 24°.79N×122°.12E, h91^{km}, ML3.5, B*

ISC 24 03:22:37.6±1.4**, 24°.79N**±0°.04×**122°.14E**±0°.02**, h91**^{km}±6^{km}**, n106, σ0^{s}80**/163**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		0.20	287	eP	Pn	03 22 50.9	+0.2
TWB1	Santiao Chiao	0.26	328	i P	Pn	03 22 50.9	-0.1
TWB1				i S	Sn	03 23 00.5	-0.4
TWC	Suao	0.32	236	i P	Pn	03 22 50.9	-0.3
TWC				eS	Sn	03 23 00.7	-0.7
TIPB	Shuangxi	0.34	303	P	Pn	03 22 51.2	-0.2
TIPB				S	Sn	03 23 00.9	-0.8
ESAO	Su ao	0.34	231	i P	Pn	03 22 51.1	-0.3
ESAO				S	Sn	03 23 01.1	-0.6
ILA	Ilan	0.35	266	eS	Sn	03 23 02.0	+0.2
EOS2	EOS2	0.38	167	i P	Pn	03 22 52.3	+0.8
EOS2				i S	Sn	03 23 03.6	+1.8
SXI1	Grass Mountain	0.39	322	P	Pn	03 22 51.5	-0.3
SXI1				eS	Sn	03 23 01.8	-0.5
NDS	Dongshan	0.41	248	eP	Pn	03 22 51.2	-0.7
TWE	Neicheng	0.43	261	i P	Pn	03 22 52.0	+0.1
TWE				eS	Sn	03 23 02.6	-0.1
EWUT	Wuta	0.47	224	i P	Pn	03 22 52.5	+0.2
EWUT				eS	Sn	03 23 03.3	+0.1
TNOU	National Taiwa	0.49	317	eP	Pn	03 22 52.4	0.0
FUSB	Fushanzhiwuyua	0.50	267	P	Pn	03 22 52.4	-0.2
ENA	Nanau	0.51	225	eP	Pn	03 22 52.8	+0.2
ENA				eS	Sn	03 23 04.0	+0.3
EOS3	EOS3	0.53	162	eP	Pn	03 22 53.4	+0.9
EOS3				eS	Sn	03 23 05.6	+2.0
TWA	Mucha	0.54	291	eP	Pn	03 22 52.5	-0.3
TWA				i S	Sn	03 23 03.2	-0.9
ENTT	Nioudou	0.54	254	P	Pn	03 22 53.0	+0.2
ENTT				eS	Sn	03 23 04.9	+0.7
NWLT	Wulai	0.58	269	eP	Pn	03 22 53.0	-0.2
NHDH	Xindian Distri	0.58	287	eP	Pn	03 22 52.9	-0.3
NHDH				eS	Sn	03 23 03.9	-0.8
EAHA	Aohua	0.58	218	eP	Pn	03 22 53.1	-0.1
EAHA				eS	Sn	03 23 05.7	+0.9
LATG	Datong	0.61	246	i P	Pn	03 22 53.9	+0.4
LATG				S	Sn	03 23 06.2	+0.8
YM01	YM01	0.63	305	P	Pn	03 22 53.2	-0.4
YM01				S	Sn	03 23 04.6	-0.9
YM08	YM08	0.64	309	eS	Sn	03 23 04.3	-1.4
ZUZH	Zhuzihu	0.65	305	eP	Pn	03 22 53.5	-0.3
ZUZH				S	Sn	03 23 04.8	-1.2
EOS4	EOS4	0.69	166	P	Pn	03 22 53.8	+0.1
EOS4				eS	Sn	03 23 06.8	+1.0
TWY	Chenhua	0.69	315	eS	Sn	03 23 06.4	0.0
YHNB	Yeheng	0.70	260	i P	Pn	03 22 54.2	-0.1
YHNB				eS	Sn	03 23 06.6	-0.3
NSK	Sanguang	0.72	261	i P	Pn	03 22 54.5	0.0
NSK				i S	Sn	03 23 06.9	-0.2
TWS1	Kuangyinshan	0.72	296	eP	Pn	03 22 54.4	0.0
TWS1				S	Sn	03 23 06.7	-0.4
NTST	Danshui	0.73	301	eS	Sn	03 23 06.6	-0.5
NNSB	Datong	0.78	243	i P	Pn	03 22 55.4	+0.3
NNSB				S	Sn	03 23 08.4	+0.2
NNS	Nan Shan	0.78	244	i P	Pn	03 22 55.5	+0.3
NNS				i S	Sn	03 23 08.6	+0.4
ETL	Fush Village	0.78	217	eP	Pn	03 22 54.6	-0.5
NACB	Ninganchiao	0.79	219	P	Pn	03 22 54.5	-0.7
JYNG	Yonagunijimaku	0.81	114	P	Pn	03 22 55.2	0.0
JYNG				eS	Sn	03 23 08.7	+0.2
ETLH	Xiulin Townshi	0.83	226	eP	Pn	03 22 55.3	-0.4
ETLH				eS	Sn	03 23 08.9	-0.3
PCYT	Pengchaiyu	0.84	356	eP	Pn	03 22 55.8	+0.1
YOJ	Yonaguni jima	0.86	112	eP	Pn	03 22 55.9	0.0
YOJ				eS	Sn	03 23 09.6	+0.1
YOJ	Yonaguni jima	0.86	112	i P	Pn	03 22 55.9	0.0
YOJ				eS	Sn	03 23 09.7	+0.2
TWD	Chiawan	0.86	215	i P	Pn	03 22 55.5	-0.3
TWD				eS	Sn	03 23 09.3	-0.3
KSHI	Guanxi Townshi	0.87	269	eP	Pn	03 22 56.3	+0.3
KSHI				S	Sn	03 23 10.6	+0.8
NCUH	Zhongli	0.88	282	eS	Sn	03 23 10.5	+0.6
NFF	Wufeng Townshi	0.94	261	P	Pn	03 22 56.6	-0.2
NFF				i S	Sn	03 23 10.8	-0.4
FUSS	Fushou	0.98	237	P	Pn	03 22 57.6	+0.3
FUSS				eS	Sn	03 23 12.7	+0.5
ETM	Tongmen	1.01	216	P	Pn	03 22 56.7	-0.8
LXIB	Xiulin Townshi	1.01	221	i P	Pn	03 22 56.8	-0.9
WHF	Hehuan Shan	1.02	231	i P	Pn	03 22 58.2	+0.1
WHF				i S	Sn	03 23 13.6	+0.1
LIOB	Emei	1.03	262	P	Pn	03 22 57.8	0.0
LIOB				S	Sn	03 23 12.7	-0.2
TDCB	Techi	1.04	239	P	Pn	03 22 58.6	+0.6
TDCB				S	Sn	03 23 13.5	+0.2
TEYL	Yanliau Villag	1.04	208	P	Pn	03 22 57.5	-0.4
TEYL				eS	Sn	03 23 12.9	-0.2
NSTT	Nanjuang	1.04	262	i P	Pn	03 22 57.8	-0.1
NSTT				i S	Sn	03 23 12.7	-0.5
SHUL	Shoufeng	1.13	208	eP	Pn	03 22 58.5	-0.3
SHUL				eS	Sn	03 23 15.2	+0.4
ESL	Shilin	1.17	214	eP	Pn	03 22 58.0	-1.3
WHP	Taichung City	1.20	245	P	Pn	03 23 00.4	+0.6
WHP				i S	Sn	03 23 17.0	+0.5
TEGC	Jichi Village	1.21	207	eP	Pn	03 22 59.9	+0.1
OWD	Renai	1.21	227	eP	Pn	03 22 60.0	0.0
OWD				eS	Sn	03 23 16.4	-0.4
WUSB	Renai	1.22	230	i P	Pn	03 23 00.3	+0.2
NMLH	Miaoli	1.25	259	eS	Sn	03 23 17.8	+0.3
WARBT	Fenglin Townsh	1.27	213	P	Pn	03 22 59.2	-1.3
NSY	Sanyi	1.31	254	eP	Pn	03 23 01.9	+0.9
WCS	Beigang Elemen	1.33	237	eP	Pn	03 23 01.7	+0.4
WCS				eS	Sn	03 23 19.8	+0.5
VWDT	VWDT	1.38	222	P	Pn	03 23 01.9	0.0
SMLT	Sun Moon Lake	1.45	232	eP	Pn	03 23 03.7	+0.9
HGSD	Ruisui	1.45	207	eP	Pn	03 23 02.4	-0.4
TYC	Yuchr	1.46	233	eP	Pn	03 23 03.5	+0.5
TYC				eS	Sn	03 23 22.9	+0.8
SSLB	Suanglung	1.47	228	eP	Pn	03 23 03.6	+0.5
SSLB				eS	Sn	03 23 23.2	+0.9
EHY	Hungye	1.48	210	eP	Pn	03 23 03.1	-0.1
IRIF	Iriomote-Funau	1.52	107	eP	Pn	03 23 03.8	+0.1
IRIF				eS	Sn	03 23 23.2	-0.1
YULB	Yu-li	1.59	209	P	Pn	03 23 02.9	-1.7
YULB				eS	Sn	03 23 22.8	-2.2
WHYT	Xinyi Township	1.60	227	i P	Pn	03 23 06.0	+1.3
WHYT				S	Sn	03 23 27.1	+1.8
WJS	Zhushan	1.61	233	eS	Sn	03 23 26.7	+1.4
WNT	Mingjian	1.61	236	eP	Pn	03 23 04.9	+0.2
TWF1	Yuli	1.62	208	P	Pn	03 23 04.0	-1.0
CHKH	Chenggong	1.73	203	eS	Sn	03 23 26.4	-1.7
ALS	Alishan	1.76	224	P	Pn	03 23 08.0	+0.9
ALS				S	Sn	03 23 30.8	+1.4
FULB	Fuli	1.76	206	eP	Pn	03 23 06.6	-0.3
FULB				eS	Sn	03 23 28.5	-0.5

CHN5	Tsauling	1.79	229	*e*P	Pn	03 23 07.9	+0.8
CHN5				*e*S	Sn	03 23 30.6	+1.0
JKRS	Kuro-shima	1.79	107	*e*P	Pn	03 23 07.6	+0.5
JKRS				*e*S	Sn	03 23 29.9	+0.3
CHKT	Chengkung	1.82	203	*e*P	Pn	03 23 07.0	-0.6
WDLH	Douliu	1.82	233	*e*S	Sn	03 23 31.7	+1.3
EHD	Haiduan	1.84	208	*e*S	Sn	03 23 29.1	-1.8
JIJ	Ishigaki jima	1.88	103	*e*P	Pn	03 23 08.2	0.0
JIJ				*e*S	Sn	03 23 30.7	-0.8
ELDTW	Lidau	1.89	213	*e*P	Pn	03 23 08.8	+0.2
WTK	Tuku	1.94	236	*e*S	Sn	03 23 33.0	0.0
WCKO	Fanlu	1.94	226	*e*P	Pn	03 23 10.3	+1.1
WCKO				*e*S	Sn	03 23 34.7	+1.5
EDH	Donghe	1.96	203	*e*P	Pn	03 23 08.5	-0.9
EDH				*e*S	Sn	03 23 31.7	-1.9
JISG	Ishigakijimahi	1.99	95	*e*P	Pn	03 23 10.0	+0.4
JISG				*e*S	Sn	03 23 34.1	0.0
TPUB	Ta-pu	2.02	223	*e*P	Pn	03 23 10.8	+0.6
TPUB				*e*S	Sn	03 23 36.1	+1.0
CHY	Chiayi	2.03	231	*e*S	Sn	03 23 35.5	+0.5
STYH	Taoyuan	2.04	218	*e*S	Sn	03 23 36.7	+1.4
WTP	Ta-pu	2.07	223	*e*P	Pn	03 23 11.6	+0.7
LONT	Longtian	2.09	206	*e*P	Pn	03 23 10.2	-0.9
LONT				*e*S	Sn	03 23 35.0	-1.6
WSF	Szhu	2.09	237	*e*S	Sn	03 23 36.7	+0.2
TWK	Hsinying	2.14	225	*e*P	Pn	03 23 12.4	+0.7
WSL	Shuilin Townsh	2.15	235	*e*S	Sn	03 23 38.2	+0.2
SNST	Tainan City	2.17	224	*e*S	Sn	03 23 38.5	+0.1
CHN1	Nanshi	2.17	223	*e*S	Sn	03 23 39.6	+1.1
TWG	Pinlang	2.19	207	*e*S	Sn	03 23 36.6	-2.3
TWGBT	Beinan	2.19	206	*e*P	Pn	03 23 11.8	-0.6
TWGBT				*e*S	Sn	03 23 36.7	-2.2
JTJ	Tarama	2.34	93	*e*P	Pn	03 23 14.6	+0.3
JTJ				*e*S	Sn	03 23 43.3	+0.9
ECL	Taimali	2.44	207	*e*P	Pn	03 23 16.3	+0.7
VWUC	VWUC	2.45	275	*e*P	Pn	03 23 15.7	0.0
MASBT	Mashibuluo	2.57	213	*e*P	Pn	03 23 18.1	+0.7
EAST	Anshuo	2.67	207	*e*P	Pn	03 23 19.5	+0.7
LAY	Lan-yu	2.79	191	*e*P	Pn	03 23 19.1	-1.3
LYUB	Lan-yu	2.82	190	*e*P	Pn	03 23 18.9	-1.9

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*NEIC **24** 03:28:25.2±2.0, 6°.42S±0°.07×129°.18E±0°.07, h206^{km}±5^{km}, mb5.2/28, Error ellipse: s-maj=10.4km s-min=9.6km az=123.0*

*DJA **24** 03:28:25.9±0.2, 6°S±2°×12°9E±°, h216^{km}±4^{km}, M5.3/27, mb5.0/27, mB5.8/3, MLv5.4/19, Mw(mB)5.4/3*

*IDC **24** 03:28:25.7±1.5, 6°.43S×129°.07E, h219^{km}±15^{km}, mb3.8/13, mbtmp4.4/16, Error ellipse: s-maj=14.7km s-min=9.1km az=84.0*

ISC 24 03:28:24.8±0.4**, 6°.52S**±0°.04×**129°.18E**±0°.04**, h209**^{km}±4^{km}**, h209**^{km}**:pP-P, n228,** σ**1^{s}49**/243**, mb5.0**/30**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	2.11	20	P	Pn	03 29 06.7	+1.6
BNDI	Bandanaira	2.11	20	P	Pn	03 29 06.9	+1.8
SAUI	Saumlaki	2.56	125		Pn	03 29 12.1	+2.2
SAUI	Saumlaki	2.56	125	P	Pn	03 29 11.7	+1.8
SAUI	Saumlaki	2.56	125	P	Pn	03 29 11.5	+1.6
AAI	Ambon	2.98	341	P	Pn	03 29 16.4	+1.7
MSAI	Masohi	3.16	356	P	Pn	03 29 18.5	+1.7
NLAI	Namlea	3.86	327	P	Pn	03 29 27.0	+1.8
FAKI	Fak Fak	4.71	41	Pn	Pn	03 29 34.5	-1.3
FAKI	Fak Fak	4.71	41	P	Pn	03 29 34.6	-1.2
KMPI	Kaimana, Papua	5.33	58	P	Pn	03 29 43.8	+0.2
SANI	Sanana	5.46	324	P	Pn	03 29 46.9	+1.6
SANI	Sanana	5.46	324	S	S	03 30 50.8	+2.1
SANI	Sanana	5.46	324	P	Pn	03 29 46.7	+1.4
	0.6nm147nm,0.8s						
SOEI	Soe	5.83	236	Pn	Pn	03 29 51.8	+1.7
SOEI	Soe	5.83	236	P	Pn	03 29 49.6	-0.5
SOEI	Soe	5.83	236	S	S	03 30 57.1	-0.3
SOEI	Soe	5.83	236	P	Pn	03 29 52.1	+2.0
	4.6nm294nm,0.8s						
SWI	Sorong	5.99	20	P	Pn	03 29 53.6	+1.5
BATI	Baumata	6.57	236	P	Pn	03 30 00.8	+1.2
	268nm,0.4s,baz=73,slow=0.5,SNR=36						
BATI				S	S	03 31 14.5	-0.2
	844nm,0.6s,baz=90,slow=22,SNR=20						
BATI	Baumata	6.57	236	P	Pn	03 30 00.5	+0.9
	4.1nm450nm,0.8s						
MTN	Manton Dam	6.58	163	Pn	Pn	03 30 00.2	+0.5
MTN	Manton Dam	6.58	163	P	Pn	03 29 59.0	-0.6
	comp=Z,574nm,0.4s						
MTN	Manton Dam	6.58	163	P	Pn	03 29 59.8	+0.2
BBSI	Bau Bau	6.65	278	P	Pn	03 30 04.0	+3.4
	comp=Z,1.6nmcomp=Z,448nm,1.1s						
KDU	Kakadu	6.94	152	P	Pn	03 30 04.2	-0.1
KDU	Kakadu	6.94	152	P	Pn	03 30 05.0	+0.7
RKPI	Ransiki, Papua	7.04	45	P	Pn	03 30 04.7	-1.0
MMRI	Maumere	7.19	253	Pn	Pn	03 30 09.6	+1.9
MMRI	Maumere	7.19	253	P	Pn	03 30 10.4	+2.8
	comp=Z,0.8nmcomp=Z,143nm,0.5s						
TNTI	Ternate	7.46	346	Pn	Pn	03 30 10.0	-1.1
TNTI	Ternate	7.46	346	P	Pn	03 30 11.9	+0.8
	comp=Z,0.8nmcomp=Z,199nm,0.9s						
EDFI	Ende, Flores	7.74	253	P	Pn	03 30 17.6	+2.7
	comp=Z,0.5nmcomp=Z,81nm,0.5s						
SRPI	Serui, Papua	8.42	57	P	Pn	03 30 20.9	-2.7
BAKI	Biak	8.71	53	P	Pn	03 30 25.9	-1.4
KMSI	Cibinong	8.75	323	P	Pn	03 30 28.4	+0.6
	comp=Z,166nm,0.6s						
KNRA	Kununurra	9.11	183	Pn	Pn	03 30 32.5	0.0
KNRA	Kununurra	9.11	183	P	Pn	03 30 32.0	-0.5
	comp=Z,680nm,0.6s						
BASI	Baing, Sumba	9.27	246	P	Pn	03 30 34.8	+0.3
	comp=Z,244nm,1.0s						
WSI	Waingapu	9.33	250	P	Pn	03 30 35.8	+0.5
APSI	Ampana	9.35	306	P	Pn	03 30 38.0	+2.4
	comp=Z,79nm,1.0s						
KAPI	Kappang	9.49	279	P	Pn	03 30 38.0	+0.6
	comp=Z,12nm,0.8s,baz=123,slow=8.6,SNR=4.6						
SPSI	Sidrap Palu	9.70	285	P	P	03 30 45.5	-2.6
TTSI	Tana Toraja	9.94	290	P	Pn	03 30 45.8	+2.6
	comp=Z,45nm,1.1s						
MRSI	Marisa	10.02	314	P	Pn	03 30 46.0	+1.8
	comp=Z,93nm,1.0s						
WBSI	Waikabubak, Su	10.17	252	P	Pn	03 30 46.8	+0.6
	comp=Z,76nm,0.5s						
SMPI	Sarmi	10.52	65	P	Pn	03 30 50.8	+0.2
SGSI	Sangihe	10.77	340	P	Pn	03 30 53.6	-0.3
TOLI2	Tolitoli	11.30	312	Pn	Pn	03 31 02.3	+1.7
MPSI	Mapaga	11.49	306	P	Pn	03 31 04.5	+1.4
PLAI	Plampang	11.53	258	P	Pn	03 31 03.2	-0.3
PLAI	Plampang	11.53	258	P	P	03 31 07.8	-0.9
FITZ	Fitzroy Crossi	12.02	196	Pn	Pn	03 31 08.3	-1.4
FITZ	Fitzroy Crossi	12.02	196	P	Pn	03 31 08.2	-1.5
FITZ	Fitzroy Crossi	12.02	196	P	Pn	03 31 08.4	-1.2
	comp=Z,122nm,0.5s,baz=24,slow=10,SNR=98						
FITZ				S	S	03 33 19.0	-3.9
	comp=Z,53nm,0.5s,baz=62,slow=19,SNR=4.6						
FITZ	Fitzroy Crossi	12.02	196	P	Pn	03 31 09.4	-0.3
JAY	Jayapura	12.16	71	P	Pn	03 31 12.4	+0.8
	comp=Z,14nm,0.9s,baz=184,slow=12,SNR=4.7						
WB0	Warramunga Arr	14.11	159	Pn	Pn	03 31 35.9	0.0
WRAB	Tennant Creek	14.25	160	Pn	Pn	03 31 37.3	-0.3
WRA	Warramunga Arr	14.26	160		P	03 31 39.4	+0.4
WRA	Warramunga Arr	14.26	160	P	Pn	03 31 36.6	-1.1
	comp=Z,15nm,0.6s,baz=339,slow=12,SNR=24						
WRA				S	S	03 34 10.9	-4.8
	comp=Z,24nm,0.5s,baz=335,slow=22,SNR=6.6						
WR8	Warramunga Arr	14.32	159	Pn	Pn	03 31 37.6	-0.8
JAGI	Jajag, Banyuwa	15.02	262	Pn	Pn	03 31 45.3	-1.8
JAGI	Jajag, Banyuwa	15.02	262	P	P	03 31 47.3	-0.2
JAGI	Jajag, Banyuwa	15.02	262	P	P	03 31 47.2	-0.2
	comp=Z,45nm,0.7s						
COEN	Coen	15.63	119		Pn	03 31 55.3	+0.9
COEN	Coen	15.63	119	P	Pn	03 31 54.9	+0.5
	comp=Z,260nm,1.0s						
COEN	Coen	15.63	119	P	Pn	03 31 55.9	+1.5
MBWA	Marble Bar	17.19	211	P	Pn	03 32 12.1	-0.9
MBWA	Marble Bar	17.19	211	P	P	03 32 11.8	+0.6
MBWA	Marble Bar	17.19	211	P	Pn	03 32 13.0	+0.1
QIS	Mount Isa	17.24	145	P	Pn	03 32 12.9	-0.6
	comp=Z,94nm,0.4s						
QIS	Mount Isa	17.24	145	P	Pn	03 32 13.9	+0.4
PSA00	Pilbara Seismi	17.48	210	P	P	03 32 14.0	-0.4
PSA00	Pilbara Seismi	17.48	210	P	P	03 32 14.9	+0.6
	comp=Z,113nm,1.5s						
PSA00	Pilbara Seismi	17.48	210	P	P	03 32 15.0	+0.6
AS31	Alice Springs	17.65	166	P	Pn	03 32 18.1	-0.3
AS31	Alice Springs	17.65	166	P	Pn	03 32 17.9	-0.5
	comp=Z,119nm,0.7s						
ASAR	Alice Springs	17.65	166	P	P	03 32 17.1	+0.8
	comp=Z,202nm,0.6s,baz=340,slow=8.8,SNR=119						
ASAR				S	S	03 35 24.3	-4.5
	comp=Z,31nm,0.9s,baz=346,slow=23,SNR=14						
ASAR				ScP	ScP	03 39 58.2	-2.0
	comp=Z,4.8nm,0.7s,baz=0.4,slow=1.7,SNR=4.1						
AS01	Alice Springs	17.66	165	P	P	03 32 17.3	+0.9
PCJI	Pacitan	17.93	264	P	Pn	03 32 21.0	-0.7
	comp=Z,59nm,1.5s						
PMG	Port Moresby	18.04	100	P	Pn	03 32 25.9	+2.9
PMG	Port Moresby	18.04	100	P	Pn	03 32 23.4	+0.4
	comp=Z,109nm,0.7s,baz=335,slow=7.0,SNR=16						
PMG	Port Moresby	18.04	100	P	Pn	03 32 22.4	-0.6
PMG	Port Moresby	18.04	100	P	Pn	03 32 23.1	+0.1
WRKA	Warakurna	18.43	183	P	P	03 32 26.0	+1.1
	comp=Z,108nm,0.9s						
UGM	Wanagama	18.56	265	P	P	03 32 27.5	+1.2
MTSU	Mount Surprise	18.75	129	P	P	03 32 29.4	+1.1
MTSU	Mount Surprise	18.75	129	S	S	03 35 53.8	+3.2
CTAO	Charters Tower	21.37	131	P	P	03 32 57.4	+1.2
CTAO	Charters Tower	21.37	131	P	P	03 32 57.8	+1.6
BBJI	Bungbulang	21.39	266	P	P	03 32 56.9	+0.4
GIRL	Giralia	21.55	220	P	P	03 32 59.3	+1.3
GIRL	Giralia	21.55	220	P	P	03 32 58.8	+0.8
TGY	Tagaytay City	22.06	338	P	P	03 33 02.6	-0.4
	comp=Z,161nm,0.4s,baz=196,slow=5.5,SNR=5.7						
MEEK	Meekatharra	22.40	206	P	P	03 33 06.6	+0.5
MORW	Morawa	25.63	207	P	P	03 33 35.6	+0.4
MORW				IAmb	IAmb	03 34 16.0	
	comp=Z,137nm,1.9s						
MORW	Morawa	25.63	207	P	P	03 33 35.8	+0.5
BLDU	Ballidu	26.68	204	P	P	03 33 45.3	+0.7
BBOO	Buckleboo	26.93	167	P	P	03 33 47.4	+0.5
BBOO				IAmb	IAmb	03 34 28.7	
	comp=Z,52nm,1.3s						
BBOO	Buckleboo	26.93	167	P	P	03 33 47.3	+0.4
STKA	Stephens Creek	27.77	157	P	P	03 33 54.2	-0.2
STKA	Stephens Creek	27.77	157	P	P	03 33 54.7	+0.4
	comp=Z,2.7nm,0.3s,baz=344,slow=9.1,SNR=7.4						
	comp=Z,2.7nm,0.3s						
STKA	Stephens Creek	27.77	157	P	P	03 33 56.2	+1.9
EIDS	Eidsvold	28.11	134	P	P	03 33 58.0	+0.5
EIDS				IAmb	IAmb	03 34 23.0	
	comp=Z,78nm,1.9s						
HTT	Hallett	28.27	163	P	P	03 33 59.4	+0.6
NWAO	Narrogin (SRO)	28.53	201	P	P	03 34 01.6	+0.5
NWAO				IAmb	IAmb	03 35 04.3	
	comp=Z,107nm,1.6s						
NWAO	Narrogin (SRO)	28.53	201	P	P	03 34 01.2	+0.1
	comp=Z,6.0nm,0.4s,baz=46,slow=7.5,SNR=14						
	comp=Z,6.0nm,0.4s						
NWAO	Narrogin (SRO)	28.53	201	P	P	03 34 01.9	+0.9
NWAO	Narrogin (SRO)	28.53	201	P	P	03 34 02.1	+1.1
CMSA	Cobar Meteorol	29.30	150	P	P	03 34 08.4	+0.5
CMSA	Cobar Meteorol	29.30	150	P	P	03 34 09.2	+1.3
ARMA	Armidale	31.78	141	P	P	03 34 31.6	+1.8
ARMA	Armidale	31.78	141	P	P	03 34 32.4	+2.5
CAN	Canberra	33.98	150	P	P	03 34 50.8	+2.1
CAN				IAmb	IAmb	03 35 14.3	
	comp=Z,88nm,1.6s						
CAN	Canberra	33.98	150	P	P	03 34 45.7	-3.0
CAN	Canberra	33.98	150	P	P	03 34 50.9	+2.1
CAN	Canberra	33.98	150	P	P	03 34 50.8	+2.1
CAN				pP	pP	03 35 32.7	+1.2
CAN				sP	sP	03 35 54.8	-0.6
TOO	Toolangi	34.29	157	P	P	03 34 53.7	+2.3
SANVU	Saraoutou	38.31	107	P	P	03 35 25.7	0.0
SANVU				IAmb	IAmb	03 35 27.3	
	comp=Z,64nm,0.9s						
SANVU	Saraoutou	38.31	107	P	P	03 35 28.9	+3.2
SANVU	Saraoutou	38.31	107	P	P	03 35 26.2	+0.5
DZM	Mont Dzumac	39.14	117	P	P	03 35 33.0	+0.4
DZM				IAmb	IAmb	03 35 48.4	
	comp=Z,146nm,1.9s						
DZM	Mont Dzumac	39.14	117	P	P	03 35 33.5	+0.9
MOO	Moorlands	39.17	159	P	P	03 35 34.2	+1.7
MOO	Moorlands	39.17	159	P	P	03 35 34.2	+1.7
ONTNC	Ouen Toro	39.22	117	P	P	03 35 32.0	-1.1
YATNC	Mamie plateau,	39.53	117	P	P	03 35 38.0	+2.3
NJ2	Nanjing	39.60	346	*e*P	P	03 35 37.8	+1.8
NJ2				pmax	pmax		
	comp=Z,15nm,1.3s						
OUENC	Ouen Island, N	39.60	117	P	P	03 35 37.7	+1.5
JMN	Monobe	40.27	6	P	P	03 35 41.0	-0.6
JMN				IAmb	IAmb	03 35 47.7	
	comp=Z,140nm,1.9s						
PZH	PanZhiHua	42.25	322	P	P	03 35 59.3	+1.4
MJAR	Matsushiro Arr	43.66	11	P	P	03 36 06.2	-2.7
	comp=Z,4.5nm,0.7s,baz=191,slow=9.4,SNR=9.3						
	comp=Z,4.5nm,0.7s						
MAJO	Matsushiro	43.66	11	P	P	03 36 06.0	-3.0
MAJO				pP	pP	03 36 49.9	-2.4
KSRS	Korea Array	43.76	359	P	P	03 36 09.3	-0.3
	comp=Z,2.1nm,0.6s,baz=174,slow=8.6,SNR=7.0						
	comp=Z,2.1nm,0.6s						
BJT	Baijiatuau	47.84	347	P	P	03 36 40.2	-1.3
BJT				pP	pP	03 37 23.4	-2.3
OUZ	Omahuta	49.78	131	P	P	03 36 58.5	+2.1
HHC	Hu-ho-hao-te	49.84	343	*e*P	P	03 36 59.4	+2.6
ERM	Erimo	49.96	14	P	P	03 36 57.1	-0.4
ERM				PcP	PcP	03 38 15.1	+0.6
BTO	Baotou	50.09	341	*e*P	P	03 37 02.1	+3.3
BTO				PP	PP	03 38 47.8	-8.4
BTO				S	S	03 43 59.4	+5.4
BTO				pmax	pmax		
	comp=Z,32nm,0.6s						
BTO				pmax	pmax		
	comp=Z,21µm,8.6s						
BTO				LR	LR		
	comp=N,12µm,18.6s						
BTO				LR	LR		
	comp=E,17µm,16.7s						
BTO				LR	LR		
	comp=Z,14µm,16.1s						
CN2	Changchun	50.20	356	*e*P	P	03 37 04.0	+4.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USRK	Ussuriysk Ar.	50.55	3	P	P	03 37 01.3	-0.6
USRK	Ussuriysk Ar.	50.55	3	P	P	03 37 01.0	-0.9
	comp=Z,5.8nm,0.7s,baz=67,slow=20,SNR=13						
	comp=Z,5.8nm,0.7s						
USA0B	Ussuriysk Arra	50.55	3	P	P	03 37 00.7	-1.2
MSZ	Milford Sound	50.81	145	P	P	03 37 06.0	+2.1
DCZ	Deep Cove	50.85	146	P	P	03 37 05.7	+1.4
DCZ				IAmb	IAmb	03 37 52.7	
	comp=Z,176nm,1.8s						
DCZ	Deep Cove	50.85	146	P	P	03 37 05.7	+1.4
JCZ	Jackson Bay	50.96	144	P	P	03 37 07.1	+1.9
FOZ	Fox Glacier	51.26	143	P	P	03 37 06.7	-0.7
FOZ				IAmb	IAmb	03 38 31.3	
	comp=Z,126nm,1.5s						
FOZ	Fox Glacier	51.26	143	P	P	03 37 08.1	+0.7
WKZ	Wanaka	51.53	144	P	P	03 37 09.9	+0.6
DSZ	Denniston Nort	51.55	140	P	P	03 37 09.8	+0.3
WHZ	Wether Hill Ro	51.56	146	P	P	03 37 10.1	+0.6
WHZ	Wether Hill Ro	51.56	146	P	P	03 37 10.4	+0.8
QRZ	Quartz Range	51.56	138	P	P	03 37 11.0	+1.4
QRZ				IAmb	IAmb	03 37 37.1	
	comp=Z,165nm,1.7s						
QRZ	Quartz Range	51.56	138	P	P	03 37 10.6	+1.0
JKA	Kamikawa-asahi	51.84	12	P	P	03 37 10.5	-1.0
EAZ	Earnscleugh	51.93	145	P	P	03 37 13.1	+0.7
LBZ	Lake Benmore	51.96	143	P	P	03 37 13.2	+0.7
LBZ				IAmb	IAmb	03 38 47.9	
	comp=Z,174nm,1.9s						
LBZ	Lake Benmore	51.96	143	P	P	03 37 13.4	+0.8
RPZ	Rata Peaks	52.12	142	P	P	03 37 14.9	+1.2
RPZ	Rata Peaks	52.12	142	P	P	03 37 14.8	+1.1
APZ	The Paps	52.15	147	P	P	03 37 15.2	+1.2
THZ	Tophouse	52.27	139	P	P	03 37 15.6	+0.6
NNZ	Nelson	52.31	138	P	P	03 37 15.4	+0.3
NNZ	Nelson	52.31	138	P	P	03 37 15.4	+0.3
OXZ	Oxford	52.51	141	P	P	03 37 18.1	+1.5
TUZ	Tuapeka	52.54	145	P	P	03 37 17.5	+0.8
TUWZ	Tuamarina	52.79	138	P	P	03 37 19.0	+0.4
NGZ	Ngauruhoe	52.89	135	P	P	03 37 21.3	+1.6
GVZ	Greta Valley S	52.95	140	P	P	03 37 21.1	+1.3
KHZ	Kahutara	53.00	140	P	P	03 37 20.7	+0.5
SNZO	South Karori	53.24	138	P	P	03 37 21.6	-0.3
SNZO				pP	pP	03 38 05.8	-1.6
EVN	Everest	53.35	312	P	P	03 37 22.3	-1.4
BKZ	Black Stump Fm	53.52	135	P	P	03 37 25.1	+1.0
TSZ	Takapari Road	53.53	136	P	P	03 37 24.6	+0.4
URZ	Urewera	53.59	133	P	P	03 37 25.3	+0.8
URZ	Urewera	53.59	133	P	P	03 37 24.5	0.0
RTZ	Ruatahuna	53.64	134	P	P	03 37 25.3	+0.3
RTZ				IAmb	IAmb	03 38 14.7	
	comp=Z,113nm,1.7s						
RTZ	Ruatahuna	53.64	134	P	P	03 37 25.6	+0.6
HAZ	Te Kaha	53.88	133	P	P	03 37 27.1	+0.5
MWZ	Matawai	53.92	133	P	P	03 37 27.5	+0.5
BFZ	Birch Farm	53.99	136	P	P	03 37 27.3	-0.2
BFZ	Birch Farm	53.99	136	P	P	03 37 27.3	-0.2
MXZ	Matakaoa Point	54.19	132	P	P	03 37 29.3	+0.4
MXZ	Matakaoa Point	54.19	132	P	P	03 37 30.5	+1.6
MXZ	Matakaoa Point	54.19	132	P	P	03 37 29.3	+0.4
HYB	Hyderabad	55.37	296	*e*P	P	03 37 38.9	+1.2
HYB				*e*pP	pP	03 38 26.4	+3.4
HYB				*e*PP	PP	03 39 44.2	+0.3
HYB				*e*S	S	03 45 05.7	-0.3
ULN	Ulaanbaatar	57.56	343	P	P	03 37 52.2	-0.5
SONM	Songino Array	57.73	342	P	P	03 37 53.6	-0.3
SONM	Songino Array	57.73	342	P	P	03 37 53.2	-0.7
	comp=Z,1.7nm,0.6s,baz=156,slow=7.3,SNR=1.7						
	comp=Z,1.7nm,0.6s						
WMQ	Urumqi	62.55	327	*e*P	P	03 38 27.6	+1.0
WMQ				LR	LR		
	comp=N,5µm,15.1s						
WMQ				LR	LR		
	comp=E,7µm,19.5s						
WMQ				LR	LR		
	comp=Z,5µm,18.3s						
PEA0B	Petropavlovsk-	64.13	19	P	P	03 38 35.8	-0.9
PEA0B				IAmb	IAmb	03 39 44.1	
	comp=Z,59nm,1.7s						
PETK	Petropavlovsk-	64.13	19	P	P	03 38 35.3	-1.3
PETK	Petropavlovsk-	64.13	19	P	P	03 38 36.0	-0.7
	comp=Z,5.2nm,0.7s,baz=170,slow=4.3,SNR=8.1						
	comp=Z,5.2nm,0.7s						
MKAR	Makanchi Array	67.38	327	P	P	03 38 57.1	-0.5
	comp=Z,0.8nm,0.3s,baz=113,slow=8.5,SNR=12						
	comp=Z,0.8nm,0.3s						
ZALV	Zalesovo Beam	70.79	334	P	P	03 39 16.9	-1.5
	comp=Z,1.5nm,0.5s,baz=150,slow=6.0,SNR=2.8						
	comp=Z,1.5nm,0.5s						
KURBB	Kurchatov Arra	71.67	329	P	P	03 39 22.1	-1.6
	comp=Z,1.2nm,0.6s,baz=130,slow=5.1,SNR=9.6						
	comp=Z,1.2nm,0.6s						
KURK	Kurchatov	71.68	329	P	P	03 39 23.9	+0.1
KURK				sP	sP	03 40 32.0	-1.2
VNDA	Vanda	73.02	173	P	P	03 39 31.5	+0.1
VNDA	Vanda	73.02	173	P	P	03 39 31.4	+0.1
	comp=Z,1.1nm,0.5s,baz=348,slow=5.5,SNR=6.8						
	comp=Z,1.1nm,0.5s						
TIXI	Tiksi	78.01	360	P	P	03 39 58.2	-1.4
ILAR	Eielson Array	93.26	25	P	P	03 41 13.5	-1.9
	comp=Z,0.2nm,0.6s,baz=260,slow=5.1,SNR=2.1						
	comp=Z,0.2nm,0.6s						
SNAA	Sanae	95.94	194	P	P	03 41 27.5	-0.2
	comp=Z,2.2nm,1.2s,baz=199,slow=9.5,SNR=1.8						
	comp=Z,2.2nm,1.2s						
PV17	East Wray Mesa	118.84	50	PKPdf	PKPdf	03 46 47.8	-1.2
PV11	David Mesa, Pa	118.90	50	PKPdf	PKPdf	03 46 49.0	-0.1
PV01	Paradox Valley	119.18	50	PKPdf	PKiKP	03 46 49.9	+0.1
EPLO	Experimental L	123.96	32	PKPdf	PKPdf	03 46 56.4	-1.8
TXAR	Lajitas Array	125.38	59	PKPdf	PKPdf	03 47 01.3	-0.3
TORD	Torodi Ar. Bea	127.91	282	PKPdf	PKPdf	03 47 06.0	-0.7
P38A	Dawn	129.46	43	PKPdf	PKPdf	03 47 08.7	-0.3
BO02	Sierra Bellavi	134.80	157	PKPdf	PKPdf	03 47 18.2	-1.2
CO01	Juntas del Tor	139.27	154	PKPdf	PKPdf	03 47 24.7	-3.3
AC01	Pan de Azucar	142.28	150	PKPdf	PKPdf	03 47 29.2	-4.0
GO02	Mina Guanaco	143.60	151	PKPdf	PKPbc	03 47 34.3	+0.4
PB14	IPOC Station P	143.64	149	PKPdf	PKPbc	03 47 34.0	0.0
PB05	IPOC Station P	145.19	148	PKPbc	PKPab	03 47 38.9	+0.1
PB06	IPOC Station P	145.65	148	PKPbc	PKPab	03 47 40.7	+0.1
JTS	Las Juntas de	146.04	81	PKPbc	PKPbc	03 47 41.1	-0.2
PB03	IPOC Station P	146.09	147	PKPbc	PKPab	03 47 41.8	-0.5
CPUP	Villa Florida	146.74	169	PKPbc	PKPbc	03 47 42.8	-0.1
CPUP	Villa Florida	146.74	169	PKPbc	PKPbc	03 47 42.6	-0.3
	comp=Z,0.7nm,0.4s,baz=58,slow=2.2,SNR=10.0						
PB01	IPOC Station P	147.05	147	PKPbc	PKPbc	03 47 44.6	+0.6
PB08	IPOC Station P	147.96	146	PKPbc	PKPbc	03 47 45.9	-0.9
PB11	IPOC Station P	147.98	145	PKPbc	PKPbc	03 47 46.5	-0.1
GO01	Chusmiza	148.31	146	PKPbc	PKPbc	03 47 48.1	+0.2
LPAZ	La Paz	151.60	143	PKPbc	PKiKP	03 47 56.4	0.0
LPAZ	La Paz	151.60	143	PKPbc	PKPbc	03 47 55.9	-0.2
	comp=Z,1.7nm,0.4s,baz=22,slow=2.4,SNR=27						
LPAZ				PKPab	PKPab	03 48 06.2	+1.0
	comp=Z,3.3nm,0.5s,baz=199,slow=3.1,SNR=19						

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*SOME **24** 03:37:03.1, 42°.50N×68°.50E*

*NNC **24** 03:37:04.5±2.3, 42°.54N×68°.49E, h2^{km}±10^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=15.0km s-min=13.5km az=132.0, Suspected Mining explosion.*

*IDC **24** 03:37:07.1±1.9, 42°.50N×68°.72E, h0^{km}, mb3.6/3, mbtmp3.5/6, ML3.1/2, Error ellipse: s-maj=46.2km s-min=11.5km az=10.0*

ISC 24 03:37:07.9±1.0**, 42°.74N**±0°.08×**68°.80E**±0°.06**, h0**^{km}**, n19,** σ**1^{s}93**/17**, mb3.6**/3**, 4C-4D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRLS	Borolday	0.82	69	P	Pg	03 37 20.9	-2.7
	34nm,0.3s						
BRLS				S	Sb	03 37 35.8	-0.8
	60nm,0.3s						
IUG	Iuzhnay	1.09	123	P	Pg	03 37 26.2	-2.6
	284nm,0.2s						
IUG				S	Sb	03 37 44.7	+0.3
	219nm,0.4s						
KK31	Karatay Array	1.31	73	⇑P	Pn	03 37 34.3	+0.8
	14nm,0.2s,baz=244,slow=16,SNR=192						
KK31				⇓S	Sn	03 37 54.5	+2.8
	37nm,0.6s,baz=243,slow=26,SNR=6.8						
MRKS	Merke	3.26	88	Pg	Pg	03 38 08.5	-1.9
	8.5nm,0.6s						
MRKS				Lg	Lg	03 38 57.5	
	19nm,0.8s						
AAK	Ala-Archa	4.20	89	Pn	Pn	03 38 14.1	+0.8
	0.4nm,0.3s,baz=306,slow=8.7,SNR=1.4						
AAK				Pg	Pg	03 38 26.3	-2.1
	2.0nm,0.3s,baz=270,slow=6.1,SNR=7.5						
AAK				Lg	Lg	03 39 24.7	
	0.4nm,0.3s,baz=188,slow=20,SNR=1.8						
	1.1nm,0.3s						
AAK	Ala-Archa	4.20	89	⇓Pg	Pb	03 38 24.8	+2.0
	2.9nm,0.7s						
AAK				⇓Lg	Lg	03 39 23.9	
	2.5nm,0.8s						
CHMS	Chumysh	4.38	85	⇑Pg	Pg	03 38 28.9	-3.0
	3.9nm,0.6s						
CHMS				⇑Lg	Lg	03 39 28.6	
	7.7nm,0.8s						
TKM2	Tokmak 2	5.00	86	⇑Pg	Pg	03 38 41.0	-2.8
	12nm,1.1s						
TKM2				⇓Lg	Lg	03 39 47.2	
	4.4nm,0.4s						
MKAR	Makanchi Array	10.41	62	Pn	Pn	03 39 38.4	-0.1
	0.4nm,0.5s,baz=242,slow=14,SNR=1.3						
I31KZ	AKTYUBINSK INF	10.65	320	I	I	04 40 48.2	
	1.2nm,0.8s,baz=136,slow=313,SNR=7.8						
AKTO	Aktyubinsk	10.68	320	Pn	Pn	03 39 42.0	-0.1
	0.4nm,0.3s,baz=146,slow=11,SNR=1.8						
	1.2nm,0.4s						
I46RU	ZALESOVO INFRA	15.43	38	I	I	05 20 39.8	
	baz=230,slow=279,SNR=4.0						
I43RU	DUBNA INFRASON	24.47	316	I	I	05 56 20.7	
	0.3nm,1.1s,baz=115,slow=315,SNR=29						
BRTR	Keskin Array B	26.50	275	P	P	03 42 46.5	-0.6
	0.6nm,0.7s,baz=73,slow=8.4,SNR=4.2						
	0.6nm,0.7s						
FINES	FINESS Array B	31.45	321	P	P	03 43 31.1	+0.5
	0.5nm,0.5s,baz=112,slow=8.1,SNR=3.8						
	0.5nm,0.5s						
I37NO	I37NO	36.82	333	I	I	07 17 37.1	
	0.1nm,1.2s,baz=113,slow=316,SNR=5.2						
HFS	Hagfors	37.22	317	P	P	03 44 21.0	+0.4
	0.9nm,0.7s,baz=58,slow=9.3,SNR=1.9						
	0.9nm,0.7s						
I26DE	FREYUNG INFRAS	38.17	299	I	I	07 21 50.8	
	0.1nm,1.1s,baz=79,slow=314,SNR=4.7						
I48TN	KESRA INFRASON	45.73	282	I	I	08 06 29.1	
	baz=63,slow=308,SNR=4.4						

SOME ***24*** *03:41:37.9,42°.53N×68°.47E*

NNC 24 03:41:40.2±4.8,**42°.48N×68°.57E,h2^{km}**±20^{km}**,mb4.0, mpv3.6,1C-1D,Error ellipse: s-maj=30.8km s-min=22.2km az=74.0,Suspected Mining explosion., Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRLS	Borolday	1.08	59	P	Pg	03 41 55.9	-5.1
	5.3nm,0.3s						
BRLS				S	Sg	03 42 09.9	-5.2
	53nm,0.3s						
IUG	Iuzhnay	1.13	106	P	Pg	03 42 01.1	-0.8
	138nm,0.2s						
IUG				S	Sn	03 42 19.0	-0.3
	89nm,0.5s						
KK31	Karatay Array	1.56	66	⇓P	Pn	03 42 09.2	+0.2
	12nm,0.3s,baz=244,slow=18,SNR=72						
KK31				⇑S	Sn	03 42 29.4	-0.4
	5.8nm,0.2s,baz=245,slow=26,SNR=6.7						

IDC ***24*** *03:42:27.1±2.0,2°.67S×138°.52E,h0^{km},mb3.9/2, mbtmp3.9/4,ML3.7/2,Error ellipse: s-maj=38.1km s-min=18.8km az=158.0*

DJA ***24*** *03:42:31.4±0.8,3°S±6°×13°9E±°,h13^{km}±8^{km},M4.0/6, MLv4.0/6*

ISC 24 03:42:31.6±1.0,**2°.64S**±0°.10×**138°.63E**±0°.06,**h32^{km},n10, σ1.^{s}70**/10,**Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.65	7	P	Pb	03 42 43.2	-1.4
GENI	Genyem	1.54	88	P	Pn	03 42 58.1	+1.3
JAY	Jayapura	2.08	87	Pn	Pn	03 43 06.0	+1.6
	11nm,0.3s,baz=229,slow=11,SNR=23						
JAY				Lg	Lg	03 43 36.2	
	5.8nm,0.3s,baz=96,slow=21,SNR=5.9						
	18nm,0.3s						
JAY	Jayapura	2.08	87	P	Pn	03 43 05.9	+1.6
SRPI	Serui, Papua	2.50	288	P	Pn	03 43 11.5	+1.4
BAKI	Biak	2.90	300	P	Pn	03 43 16.7	+1.1
FAKI	Fak Fak	6.38	267	P	Pn	03 44 05.3	+1.9
WRA	Warramunga Arr	17.70	193	P	Pn	03 46 33.9	-1.9
	0.4nm,0.3s,baz=16,slow=13,SNR=5.0						
	1.9nm,0.6s						
ASAR	Alice Springs	21.39	192	P	P	03 47 16.1	-0.7
	3.0nm,0.8s,baz=23,slow=9.1,SNR=8.0						
	3.0nm,0.8s						
ILAR	Eielson Array	85.81	24	P	P	03 55 08.2	+0.6
	2.0nm,1.2s,baz=267,slow=5.3,SNR=2.7						
	2.0nm,1.2s						

SOME ***24*** *03:45:05.9,42°.48N×68°.32E*

NNC ***24*** *03:45:06.5±3.5,42°.48N×68°.36E,h0^{km},mb4.2,mpv4.2, Error ellipse: s-maj=23.0km s-min=20.8km az=120.0, Suspected Mining explosion.*

IDC ***24*** *03:45:12.0±1.5,42°.56N×68°.83E,h0^{km},mb3.7/3, mbtmp3.4/6,ML2.8/3,Error ellipse: s-maj=32.6km s-min=11.4km az=7.0*

ISC 24 03:45:12.2±1.0,**42°.69N**±0°.08×**68°.89E**±0°.07,**h0^{km},n10, σ0.^{s}91**/13,**mb3.7**/4,**Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRLS	Borolday	0.77	64	P	Pg	03 45 25.8	-1.3
	39nm,0.1s						
BRLS				S	Sb	03 45 40.3	+0.6
	60nm,0.3s						
IUG	Iuzhnay	1.00	122	P	Pg	03 45 30.5	-0.9
	244nm,0.2s						
IUG				S	Sn	03 45 48.2	-0.3
	142nm,0.4s						
MRKS	Merke	3.19	88	Pg	Pg	03 46 13.9	+0.4
	5.6nm,0.4s						
MRKS				Lg	Lg	03 47 02.5	
	10nm,0.5s						
AAK	Ala-Archa	4.13	89	Pn	Pn	03 46 18.2	+1.4
	0.3nm,0.3s,baz=233,slow=5.1,SNR=1.6						
AAK				Pg	Pg	03 46 29.8	-1.6
	1.7nm,0.3s,baz=254,slow=11,SNR=6.5						
AAK				Lg	Lg	03 47 25.2	
	0.7nm,0.3s,baz=344,slow=20,SNR=1.9						
	1.1nm,0.4s						
MKAR	Makanchi Array	10.38	62	Pn	Pn	03 47 42.2	0.0
	0.2nm,0.3s,baz=239,slow=13,SNR=5.7						
	0.5nm,0.5s						
BVAR	Borovoye Array	10.39	5	Pn	Pn	03 47 42.7	+0.3
	baz=189,slow=17,SNR=2.4						
	0.7nm,0.6s						
BRTR	Keskin Array B	26.57	276	P	P	03 50 51.6	-0.4
	0.6nm,0.8s,baz=72,slow=9.5,SNR=2.5						
	0.6nm,0.8s						
FINES	FINESS Array B	31.53	321	P	P	03 51 35.6	-0.1
	1.2nm,0.9s,baz=96,slow=7.2,SNR=4.3						
	1.2nm,0.9s						
HFS	Hagfors	37.30	317	P	P	03 52 25.4	-0.3
	1.0nm,0.8s,baz=104,slow=9.2,SNR=2.0						
	1.0nm,0.8s						
GERES	GERESS Array B	38.26	299	P	P	03 52 34.5	+0.4
	1.7nm,0.4s,baz=78,slow=11,SNR=21						

IDC 24 03:45:47.6±999.0,**45°.10N×64°.32E,h0^{km},Error ellipse: s-maj=1147.0km s-min=138.4km az=141.0,Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	6.79	324	I	I	04 30 00.0	
	0.3nm,0.7s,baz=136,slow=314,SNR=11						
I43RU	DUBNA INFRASON	20.52	314	I	I	05 43 25.0	
	0.1nm,1.2s,baz=116,slow=309,SNR=7.4						
I37NO	I37NO	33.23	332	I	I	07 07 30.0	
	baz=114,slow=314,SNR=3.5						
I26DE	FREYUNG INFRAS	34.22	295	I	I	07 14 40.0	
	baz=79,slow=312,SNR=1.5						

IDC ***24*** *03:45:54.9±1.1,2°.59S×138°.55E,h0^{km},mb3.8/5, mbtmp3.8/7,ML3.9/2,Error ellipse: s-maj=25.2km s-min=16.7km az=1.0*

NEIC ***24*** *03:45:56.8±1.3,2°.66S±0°.09×138°.60E±0°.07,h10^{km}±1^{km}, mb4.1/7,Error ellipse: s-maj=15.3km s-min=11.3km az=329.0*

DJA ***24*** *03:45:58.7±0.4,3°S±5°×13°9E±°,h10^{km},M4.0/7,MLv4.0/7*

ISC 24 03:45:59.4±0.8,**2°.63S**±0°.08×**138°.60E**±0°.07,**h32^{km},n25, σ1.^{s}18**/25,**mb3.8**/7,**Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.65	10	P	Pn	03 46 10.2	-2.1
GENI	Genyem	1.56	89	P	Pn	03 46 25.3	+0.4
JAY	Jayapura	2.10	87	Pn	Pn	03 46 32.5	0.0
	13nm,0.3s,baz=230,slow=12,SNR=18						
JAY				Lg	Lg	03 47 03.8	
	12nm,0.3s,baz=136,slow=22,SNR=4.3						
	34nm,0.4s						
JAY	Jayapura	2.10	87	P	Pn	03 46 32.7	+0.3
SRPI	Serui, Papua	2.48	288	P	Pn	03 46 40.1	+2.6
BAKI	Biak	2.87	300	P	Pn	03 46 45.3	+2.3
FAKI	Fak Fak	6.35	267	Pn	Pn	03 47 31.5	+0.7
SAUI	Saumlaki	9.01	234	Pn	Pn	03 48 05.9	-1.4
COEN	Coen	12.13	158	Pn	Pn	03 48 49.2	-0.9
KNRA	Kununurra	16.19	216	P	Pn	03 49 44.5	-0.1
KNRA				IAmb	IAmb	03 50 03.8	
	comp=Z,33nm,1.2s						
WB0	Warramunga Arr	17.52	193	P	Pn	03 50 01.2	-0.2
WB0				IAmb	IAmb	03 50 13.0	
	comp=Z,19nm,1.2s						
WR8	Warramunga Arr	17.68	193	P	P	03 50 03.8	-0.2
WR8				IAmb	IAmb	03 50 23.6	
	comp=Z,8.1nm,0.9s						
WRA	Warramunga Arr	17.70	193	P	P	03 50 04.0	-0.3
	comp=Z,0.7nm,0.3s,baz=15,slow=12,SNR=9.5						
	comp=Z,1.0nm,0.4s						
FITZ	Fitzroy Crossi	19.95	219	P	Pn	03 50 31.2	+0.5
AS31	Alice Springs	21.40	192		P	03 50 43.6	-1.0
AS31				IAmb	IAmb	03 50 51.9	
	comp=Z,3.3nm,0.8s						
ASAR	Alice Springs	21.40	192	P	P	03 50 43.9	-0.7
	comp=Z,2.6nm,0.8s,baz=22,slow=9.7,SNR=14						
	comp=Z,2.6nm,0.8s						
MKAR	Makanchi Array	69.66	322	P	P	03 57 07.2	+1.4
	comp=Z,0.7nm,0.7s,baz=116,slow=5.0,SNR=3.3						
	comp=Z,0.7nm,0.7s						
KURBB	Kurchatov Arra	73.60	325	P	P	03 57 29.8	+0.3
	comp=Z,0.8nm,0.9s,baz=101,slow=4.8,SNR=2.7						
	comp=Z,0.8nm,0.9s						
BVAR	Borovoye Array	79.19	325	P	P	03 58 01.6	+0.5
	comp=Z,1.0nm,0.7s,baz=101,slow=12,SNR=3.1						
	comp=Z,1.0nm,0.7s						
E19K	Redstone River	82.77	20	P	P	03 58 21.1	+1.2
D20K	Etivluk River	83.51	19	P	P	03 58 23.4	-0.4
D20K				IAmb	IAmb	03 58 52.0	
	comp=Z,2.4nm,1.4s						
ILAR	Eielson Array	85.81	24	P	P	03 58 34.0	-1.3
ILAR	Eielson Array	85.81	24	P	P	03 58 34.7	-0.7
	comp=Z,0.5nm,0.6s,baz=264,slow=4.2,SNR=7.1						
	comp=Z,0.5nm,0.6s						
BMAR	Burnt Mountain	87.37	22	P	P	03 58 44.5	+1.4
HOPE	Hope Point	123.14	183	PKPdf	PKPdf	04 04 51.7	-1.1

SOME ***24*** *03:56:26.3,42°.52N×68°.62E*

NNC 24 03:56:26.8±0.8,**42°.40N×68°.60E,h5^{km}**±3^{km}**,mb4.0, mpv3.8,4C,Error ellipse: s-maj=5.1km s-min=3.6km az=77.0,Suspected Mining explosion.,Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	1.09	103	P	Pg	03 56 47.5	-0.3
	62nm,0.4s						
IUG				P	Pb	03 56 47.5	-0.7
	64nm,0.4s						
IUG				S	Sb	03 57 02.8	-0.1
	82nm,0.4s						
IUG				S	Sn	03 57 03.2	-1.2
	82nm,0.4s						
BRLS	Borolday	1.10	55	P	Pg	03 56 43.7	-4.3
	26nm,0.2s						
BRLS				P	Pb	03 56 43.8	-4.6
	26nm,0.2s						
BRLS				S	Sg	03 56 56.4	-5.9
	65nm,0.2s						
BRLS				S	Sb	03 56 56.8	-6.3
	65nm,0.2s						
KK31	Karatay Array	1.57	63	⇑P	Pn	03 56 55.4	0.0
	13nm,0.3s,baz=244,slow=18,SNR=58						
KK31				⇑S	Sn	03 57 16.1	0.0
	6.5nm,0.2s,baz=244,slow=26,SNR=5.5						
KK31	Karatay Array	1.57	63	⇑P	Pg	03 57 26.8	+30
	14nm,0.3s,baz=243,slow=18,SNR=5.1						
KK31				⇑S	Sg	03 57 47.0	+30
	13nm,0.3s,baz=246,slow=26,SNR=4.8						

GCG ***24*** *04:09:41.5±0.6,14°.38N×92°.93W,h32^{km}±25^{km},MD4.3, ML2.7,MW3.4*

MEX ***24*** *04:09:41.4±0.8,14°.37N×93°.00W,h9^{km}±22^{km},MD4.0*

ISC 24 04:09:37.1±2.0,**14°.31N**±0°.09×**93°.04W**±0°.05,**h8^{km}**±12^{km}, **n17,σ2.^{s}10**/25,**Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.95	52	*e*P	Pg	04 09 56.3	+0.8
THIG				*e*S	Sg	04 10 07.7	-0.2
THIG		0.95	52	*e*P	Pg	04 09 56.6	+1.1
THIG				IAML		04 10 16.7	
	comp=E,269nm,0.4s						
SMCA	Catarina	1.08	60	*e*P	Pg	04 09 58.4	+0.5
SMCA				*i* P		04 09 58.5	
SMCA				IAML		04 10 14.9	
	comp=E,188nm,0.1s						
PATR	El Naranjo	1.12	44	*e*P	Pg	04 09 58.5	-0.1
PATR				*i* S	Sg	04 10 11.9	-1.2
PAVE	Pavencul	1.21	43	*e*P	Pg	04 10 00.1	-0.3
PAVE				*i* S	Sg	04 10 13.9	-2.2
RTAL	Retalhuleu	1.32	81	*e*P	Pn	04 10 01.6	-0.2
RTAL				*e*S	Sg	04 10 17.6	-2.0
PCIG		1.40	353	*e*P	Pn	04 10 02.1	-0.8
PCIG				*e*S	Sn	04 10 16.0	-5.4
HUEH	Huehuetenango	1.79	56	*e*P	Pn	04 10 10.1	+1.6
HUEH				*i* S	Sn	04 10 28.5	-3.1
CCIG	Comitan	2.14	24	*e*P	Pn	04 10 15.7	+2.4
CCIG				*e*S	Sn	04 10 41.6	+1.4
FG16	Alotenango, Sa	2.45	91	*e*P	Pn	04 10 13.9	-3.7
TGIG		2.45	358	*e*P	Pn	04 10 18.8	+1.3
TGIG				*e*S	Sn	04 10 46.9	-0.9
TGIG		2.45	358	*e*P	Pn	04 10 18.8	+1.3
TGIG				*e*S	Sn	04 10 48.1	+0.4
TGIG				*i* S		04 10 48.3	
TGIG				IAML		04 10 52.2	
	comp=E,30nm,0.2s						
PETF	Flores	4.00	49	*e*P	Pn	04 10 42.2	+3.4
PETF				*e*S	Sn	04 11 20.6	-5.4
PEIG	Puerto Escondi	4.31	293	*e*P	Pn	04 10 43.3	+0.3
PEIG				*i* S	Sn	04 11 27.4	-6.0
PNIG	Pinotepa	5.33	293	*e*P	Pn	04 10 59.0	+1.9
TOIG	Toxpalan	5.39	315	*e*P	Pn	04 10 58.6	+0.6
TOIG				*e*S	Sn	04 11 55.8	-4.7
FTIG	Fresnillo de T	6.06	307	*e*P	Pn	04 11 11.5	+4.3

GCG 24 04:15:38.6±0.3,**15°.46N×92°.15W,h134^{km}**±5^{km}**,MD3.6, ML2.4,Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMCA	Catarina	0.60	173	*e*P	Pn	04 15 57.1	-1.7
HUEH	Huehuetenango	0.64	103	*e*S	Sn	04 16 16.5	+1.7
CCIG	Comitan	0.82	1	*e*P	Pn	04 16 01.1	+0.6
CCIG				*e*S	Sn	04 16 18.6	+1.5
CCIG				IAML		04 16 23.5	
	comp=N,54nm,0.5s						
STG8	El Palmar, Qui	1.27	142	*e*P	Pn	04 16 01.9	-2.9
STG0	El Palmar, Qui	1.29	143	*i* P	Pn	04 16 03.9	-1.0
ESSG	Sabana Grande	1.67	130	*e*S	Sn	04 16 30.0	-2.1

NEIC ***24*** *04:26:59.2±2.5,6°.50S±0°.09×129°.3E±0°.1,h239^{km}±10^{km}, mb4.1/5,Error ellipse: s-maj=17.1km s-min=8.3km az=127.0*

DJA ***24*** *04:26:59.4±0.5,7°S±4°×12°9E±°,h257^{km}±11^{km},M4.7/13, mB5.6/2,mb4.7/7,MLv4.7/13,Mw(mB)5.1/2*

IDC ***24*** *04:27:00.2±4.4,6°.66S×128°.93E,h224^{km}±44^{km},mb3.3/3, mbtmp4.4/6,Error ellipse: s-maj=62.7km s-min=17.0km az=69.0*

ISC 24 04:27:00.1±0.6,**6°.61S**±0°.06×**129°.15E**±0°.07,**h250^{km},n36, σ1.^{s}97**/39,**mb3.6**/4,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	2.20	20	P	Pn	04 27 43.4	-1.1
SAUI	Saumlaki	2.53	123	Pn	Pn	04 27 46.9	-0.8
SAUI	Saumlaki	2.53	123	P	Pn	04 27 46.7	-1.0
AAI	Ambon	3.05	342	P	Pn	04 27 53.3	+0.1
MSAI	Masohi	3.25	356	P	Pn	04 27 54.6	-0.8
NLAI	Namlea	3.92	328	P	Pn	04 28 03.0	0.0
FAKI	Fak Fak	4.79	40	Pn	Pn	04 28 09.9	-3.6
FAKI	Fak Fak	4.79	40	P	Pn	04 28 10.8	-2.6
KMPI	Kaimana, Papua	5.40	57	P	Pn	04 28 18.3	-2.5
	2.2nm265nm,0.9s						
SANI	Sanana	5.52	325	P	Pn	04 28 22.3	0.0
	0.3nm59nm,0.9s						
SOEI	Soe	5.76	237	Pn	Pn	04 28 26.1	+0.6
SOEI	Soe	5.76	237	P	Pn	04 28 26.3	+0.9
	0.6nm33nm,0.6s						
SWI	Sorong	6.08	20	P	Pn	04 28 26.3	-3.0
	0.8nm121nm,0.5s						
MTN	Manton Dam	6.50	163	Pn	Pn	04 28 34.0	-0.5
BATI	Baumata	6.50	236	S	S	04 29 45.6	-4.7
	148nm,0.5s,baz=123,slow=4.9,SNR=10						
RKPI	Ransiki, Papua	7.12	45	P	Pn	04 28 40.6	-1.8
	13µm137nm,0.6s						
EDFI	Ende, Flores	7.70	253	P	Pn	04 28 51.1	+1.3
SRPI	Serui, Papua	8.49	57	P	Pn	04 28 57.9	-1.8
KNRA	Kununurra	9.02	182	Pn	Pn	04 29 06.5	0.0
FITZ	Fitzroy Crossi	11.93	196	P	Pn	04 29 42.8	0.0
	14nm,0.4s,baz=31,slow=12,SNR=52						
FITZ				S	S	04 31 50.9	-5.1
	7.2nm,0.3s,baz=141,slow=20,SNR=6.0						
WB0	Warramunga Arr	14.04	159		Pn	04 30 08.6	-0.2
WRA	Warramunga Arr	14.18	160		Pn	04 30 09.6	-1.0
WRA	Warramunga Arr	14.18	160	P	P	04 30 10.6	-0.4
	4.1nm,0.7s,baz=336,slow=12,SNR=21						
WRA				S	S	04 32 48.2	+0.5
	7.9nm,0.8s,baz=334,slow=21,SNR=12						
WR8	Warramunga Arr	14.25	159		Pn	04 30 10.7	-0.7
COEN	Coen	15.61	119	P	Pn	04 30 29.2	+1.5
MBWA	Marble Bar	17.10	211	P	Pn	04 30 45.2	0.0
MBWA				IAmb	IAmb	04 30 56.1	
	comp=Z,12nm,1.1s						
PSA00	Pilbara Seismi	17.39	210	P	Pn	04 30 48.6	0.0
PSA00				IAmb	IAmb	04 31 09.4	
	comp=Z,5.4nm,0.9s						
ASAR	Alice Springs	17.57	165	P	Pn	04 30 51.0	+0.3
	comp=Z,48nm,0.5s,baz=337,slow=8.9,SNR=85						
ASAR				S	S	04 34 00.4	+2.7
	comp=Z,2.9nm,0.7s,baz=346,slow=20,SNR=8.4						
KSAR	Wonju Array Be	43.84	359	P	P	04 34 39.8	-1.9
SONM	Songino Array	57.81	342	P	P	04 36 27.9	+2.3
	comp=Z,0.5nm,0.4s,baz=164,slow=5.3,SNR=2.5						
	comp=Z,0.5nm,0.4s						
MKAR	Makanchi Array	67.44	327	P	P	04 37 31.1	+2.1
MKAR	Makanchi Array	67.44	327	P	P	04 37 31.4	+2.4
	comp=Z,0.4nm,0.3s,baz=124,slow=7.7,SNR=7.6						
	comp=Z,0.4nm,0.3s						
MAKZ	Makanchi	67.62	327	P	P	04 37 30.6	+0.4
KURBB	Kurchatov Arra	71.74	329	P	P	04 37 57.4	+2.3
	comp=Z,0.9nm,0.6s,baz=132,slow=5.1,SNR=7.3						
	comp=Z,0.9nm,0.6s						
QSPA	South Pole Qui	83.37	180	P	P	04 39 01.4	+2.2
D19K	Kuna River	89.86	21	P	P	04 39 29.2	-1.2
D19K				IAmb	IAmb	04 39 44.3	
	comp=Z,2.6nm,1.1s						

IDC ***24*** *04:35:17.9±1.0,2°.79S×138°.61E,h0^{km},mb3.8/5, mbtmp3.9/7,ML3.7/2,Error ellipse: s-maj=25.5km s-min=16.9km az=167.0*

DJA ***24*** *04:35:20.4±0.4,3°S±5°×13°9E±°,h10^{km},M3.7/6,MLv3.7/6*

ISC 24 04:35:22.6±0.9,**2°.61S**±0°.10×**138°.60E**±0°.06,**h35^{km},n12, σ1.^{s}77**/12,**mb3.9**/5,**Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.63	10	P	Pn	04 35 32.5	-2.5
GENI	Genyem	1.57	89	P	Pn	04 35 48.6	+0.6
JAY	Jayapura	2.11	87	Pn	Pn	04 35 54.6	-0.8
	14nm,0.3s,baz=230,slow=11,SNR=38						
JAY				Lg	Lg	04 36 25.6	
	8.4nm,0.3s,baz=131,slow=20,SNR=4.1						
	31nm,0.3s						
JAY	Jayapura	2.11	87	P	Pn	04 35 56.0	+0.6
SRPI	Serui, Papua	2.47	287	P	Pn	04 36 00.2	-0.1
BAKI	Biak	2.86	300	P	Pn	04 36 06.2	+0.5
WRA	Warramunga Arr	17.72	193	P	Pn	04 39 24.0	-2.7
	0.3nm,0.3s,baz=12,slow=12,SNR=8.9						
	2.2nm,0.6s						
ASAR	Alice Springs	21.42	192	P	P	04 40 06.0	-1.6
	3.1nm,0.8s,baz=21,slow=10,SNR=15						
	3.1nm,0.8s						
KURBB	Kurchatov Arra	73.58	325	P	P	04 46 54.1	+2.0
	0.3nm,0.6s,baz=119,slow=7.0,SNR=2.3						
	0.3nm,0.6s						
BVAR	Borovoye Array	79.17	325	P	P	04 47 26.2	+2.4
	1.2nm,0.8s,baz=103,slow=6.7,SNR=4.6						
	1.2nm,0.8s						
ILAR	Eielson Array	85.79	24	P	P	04 47 58.8	+0.7
	0.5nm,0.7s,baz=252,slow=4.6,SNR=6.3						
	0.5nm,0.7s						
QSPA	South Pole Qui	87.33	180	P	P	04 48 05.7	-0.1
	1.2nm,1.0s,baz=68,slow=12,SNR=1.6						
	1.2nm,1.0s						

IDC 24 04:37:03.1±999.0,**43°.62N×66°.27E,h0^{km},Error ellipse: s-maj=325.8km s-min=168.2km az=144.0,Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	8.82	323	I	I	05 34 00.0	
	1.0nm,0.7s,baz=135,slow=314,SNR=13						
I43RU	DUBNA INFRASON	22.56	316	I	I	06 53 30.5	
	0.2nm,1.0s,baz=115,slow=316,SNR=16						
I37NO	I37NO	35.19	333	I	I	08 10 25.0	
	baz=114,slow=318,SNR=3.5						
I26DE	FREYUNG INFRAS	36.12	297	I	I	08 16 20.0	
	baz=78,slow=312,SNR=0.9						

JMA ***24*** *04:41:02.0±0.2,35°.8N±0°.5×140°.1E±0°.7,h63^{km}±1^{km}, MV3.2/37,NORTHERN CHIBA PREF*

JMA Felt I J1 at NORTHERN CHIBA PREF .

IDC ***24*** *04:41:03.5±3.2,35°.65N×140°.02E,h85^{km}±24^{km},mb3.3/8, mbtmp3.7/8,Error ellipse: s-maj=36.3km s-min=23.4km az=73.0*

ISC 24 04:41:02.1±0.8,**35°.75N**±0°.04×**140°.11E**±0°.04,**h68^{km}**±6^{km}, **n31,σ0.^{s}99**/37,**mb3.8**/8,**7D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOK	Tokyo	0.29	258	P	Pn	04 41 13.6	+0.6
TOK				*e*S	Sn	04 41 22.9	+1.9
JSMT	Sammumatsuo	0.29	110	*e*P	Pn	04 41 13.3	+0.3
JSMT				*e*S	Sn	04 41 22.9	+1.9
JIHU	Itakohorinouch	0.40	57	P	Pn	04 41 13.4	-0.4
JIHU				*e*S	Sn	04 41 22.6	+0.1
JYT	Yasato	0.49	8	P	Pn	04 41 13.5	-1.1
JYT				*e*S	Sn	04 41 22.1	-1.7
JAG	Ashikaga	0.86	322	⇓P	Pn	04 41 18.1	-0.6
JOD2	Odawara 2	0.96	240	⇓P	Pn	04 41 19.4	-0.6
JOD2				⇓*e*S	Sn	04 41 32.0	-1.3
BSO3	Boso 3	1.00	161	*i* P	Pn	04 41 19.7	-0.5
BSO3				*e*S	Sn	04 41 34.2	+0.6
JRY	Ryogami san	1.02	286	⇓P	Pn	04 41 20.9	+0.1
JRY				⇓*e*S	Sn	04 41 34.9	+0.3
JKT	Katashina	1.23	326	*e*S	Sn	04 41 39.3	-0.4
JYN	Shimob	1.30	259	⇓P	Pn	04 41 24.1	-0.3
JYN				⇓*e*S	Sn	04 41 40.3	-0.8
MJAR	Matsushiro Arr	1.73	298	P	Pn	04 41 29.7	-0.4
	48nm,0.5s,baz=102,slow=14,SNR=86						
MJAR				S	Sn	04 41 53.2	+1.9
	24nm,0.4s,baz=308,slow=6.8,SNR=3.5						
MAJO	Matsushiro	1.73	298	P	Pn	04 41 30.4	+0.3
MAJO	Matsushiro	1.73	298	S	Sn	04 41 53.6	+2.3
JMM	Marumori	2.19	14	P	Pn	04 41 36.8	+0.6
JMM	Marumori	2.19	14	S	Sn	04 42 03.2	+1.0
JGF	Kuroka	2.25	267	P	Pn	04 41 37.9	+0.9
INU	Inuyama	2.55	262	P	Pn	04 41 42.0	+0.9
JHJ2	Mitsune	2.64	185	P	Pn	04 41 43.1	+0.8
JSD	Sado	2.73	328	P	Pn	04 41 43.5	0.0
JTM	Tenmabayashi	5.09	8	P	Pn	04 42 16.7	+1.0
H11N2	WAKE ISLAND Hy	28.45	117	T	T	05 16 29.1	
	baz=308,slow=75,SNR=6.4						
H11N1	WAKE ISLAND Hy	28.46	117	T	T	05 16 52.6	
	baz=308,slow=75,SNR=8.7						
H11N3	WAKE ISLAND Hy	28.47	117	T	T	05 16 25.5	
	baz=308,slow=75,SNR=6.6						
MKAR	Makanchi Array	43.92	303	P	P	04 49 01.6	-0.4
	0.3nm,0.6s,baz=85,slow=10.0,SNR=2.5						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	45.98	309	P	P	04 49 17.6	-0.5
	0.6nm,0.5s,baz=84,slow=7.9,SNR=5.5						
	0.6nm,0.5s						
ILAR	Eielson Array	51.14	32	P	P	04 49 58.8	+1.1
	0.2nm,0.6s,baz=278,slow=8.0,SNR=4.1						
	0.2nm,0.6s						
WRA	Warramunga Arr	55.65	187	P	P	04 50 30.3	-0.8
	0.8nm,0.4s,baz=0.0,slow=7.6,SNR=7.2						
	0.8nm,0.4s						
ARCES	ARCESS Array B	64.83	339	P	P	04 51 33.2	-0.1
	1.8nm,0.9s,baz=56,slow=5.6,SNR=2.1						
	1.8nm,0.9s						
FINES	FINESS Array B	69.46	332	P	P	04 52 02.3	-0.3
	0.8nm,0.7s,baz=30,slow=5.9,SNR=2.0						
	0.8nm,0.7s						
AKASG	Malin Array Be	74.67	322	P	P	04 52 33.5	-0.5
	0.5nm,0.3s,baz=50,slow=6.0,SNR=8.6						
	0.5nm,0.3s						
NOA	NORSAR Array B	74.96	337	P	P	04 52 35.4	-0.2
	0.3nm,0.7s,baz=56,slow=6.7,SNR=1.1						
	0.3nm,0.7s						

IDC ***24*** *04:42:37.8±0.9,38°.59S×73°.33W,h0^{km},mb4.1/9, mbtmp4.0/11,ML3.9/2,Error ellipse: s-maj=31.3km s-min=17.2km az=86.0*

SJA ***24*** *04:42:38.6±0.6,38°.63S×73°.59W,h28^{km}±4^{km},ML4.3,* *MW4.3*

*NEIC **24** 04:42:42.0±2.0, 38°.64S±0°.05×73°.4W±0°.1, h26^{km}±5^{km}, mb4.6/21, Mwr4.5(GUC), Error ellipse: s-maj=11.6km s-min=6.6km az=91.0*

*VAO **24** 04:42:43.2±0.7, 38°.34S×72°.94W, h10^{km}, mb4.1*

*GUC **24** 04:42:43.9±0.7, 38°.67S×73°.18W, h35^{km}±2^{km}, ML4.4*

ISC 24 04:42:41.9±1.5**, 38°.66S**±0°.03×**73°.25W**±0°.04**, h26**^{km}±11^{km}**, n125, σ1^{s}26**/144**, mb4.4**/19**, 9C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BI04	Isla Mocha	0.56	296	⇓eP	Pn	04 42 55.5	+1.3
BI04				eS	Sn	04 43 04.2	+1.6
BI04				IAML		04 43 08.5	
	comp=N,51µm,0.3s						
LC01	Cunco	1.10	103	⇓eP	Pn	04 43 01.7	0.0
LC01				eS	Sn	04 43 15.8	-0.2
LC01				IAML		04 43 17.9	
	comp=E,10µm,0.4s						
LR02	Universidad Au	1.15	180	⇑eP	Pn	04 43 03.0	+0.7
LR02				eS	Sn	04 43 17.8	+0.6
LR03	Panguipulli	1.20	145	Pn	Pn	04 43 03.9	+0.9
LR03	Panguipulli	1.20	145	eP	Pn	04 43 04.0	+0.9
LR03				eS	Sn	04 43 19.0	+0.5
LR03				IAML		04 43 21.8	
	comp=E,27µm,0.6s						
LR03	Panguipulli	1.20	145	i P	Pn	04 43 04.0	+0.9
LR03				i S	Sb	04 43 22.7	+3.6
LR03				IAML		04 43 22.7	
	comp=Z,13µm,0.5s						
LR04	Corral	1.23	186		Pn	04 43 01.9	-1.5
LR04	Corral	1.23	186	⇑eP	Pn	04 43 02.4	-1.1
LR04				eS	Sn	04 43 17.8	-1.4
LR04				IAML		04 43 24.9	
	comp=N,20µm,0.3s						
LR04	Corral	1.23	186	i P	Pn	04 43 02.2	-1.3
LR04				i S	Sn	04 43 19.1	-0.1
LR04				IAML		04 43 24.9	
	comp=Z,5µm,0.2s						
GO06	Curarrehue	1.66	124	⇓eP	Pn	04 43 10.9	+1.4
GO06				⇑e		04 43 20.3	
GO06				eS	Sn	04 43 31.7	+1.6
GO06				IAML		04 43 34.5	
	comp=N,2µm,0.5s						
LR05	Currie	1.84	149	Pn	Pn	04 43 13.5	+1.6
LR05	Currie	1.84	149	⇑eP	Pn	04 43 13.8	+1.9
LR05				eS	Sn	04 43 36.1	+1.8
LR05				IAML		04 43 42.5	
	comp=E,8µm,0.4s						
LR05	Currie	1.84	149	i P	Pn	04 43 13.2	+1.4
LR05				i S	Sb	04 43 38.7	+1.2
LR05				IAML		04 43 44.6	
	comp=Z,4µm,0.7s						
CANA	Caviahue	1.88	67	i P	Pb	04 43 14.8	-1.0
CANA				i S	Sb	04 43 41.7	+2.8
CANA				IAML		04 43 54.3	
	comp=Z,1µm,1.0s						
BI05	Punta Hualpn	1.91	1	Pn	Pn	04 43 13.3	+0.5
BI05	Punta Hualpn	1.91	1	eP	Pn	04 43 13.4	+0.6
BI05				eS	Sn	04 43 35.4	-0.6
BI05				IAML		04 43 46.2	
	comp=E,2µm,0.5s						
BI05	Punta Hualpn	1.91	1	i P	Pn	04 43 11.4	-1.4
BI05				i S	Sn	04 43 35.9	0.0
BI05				IAML		04 43 46.5	
	comp=Z,1µm,0.6s						
BI02	San Fabin de	2.53	39	Pn	Pn	04 43 22.1	+0.6
BI02	San Fabin de	2.53	39	eP	Pn	04 43 22.8	+1.3
BI02				eS	Sn	04 43 53.4	+1.8
BI02	San Fabin de	2.53	39	i P	Pn	04 43 22.4	+0.9
BI02				i S	Sb	04 43 55.3	-2.3
BI02				IAML		04 44 02.9	
	comp=Z,565nm,0.7s						
LL03	Petrohue	2.56	166	Pn	Pn	04 43 22.2	+0.4
LL05	Los Muermos	2.75	184	Pn	Pn	04 43 23.7	-0.7
PLCA	Paso Flores	2.94	136	Pn	Pn	04 43 28.4	+1.4
PLCA	Paso Flores	2.94	136	Pn	Pn	04 43 28.5	+1.5
	comp=Z,4.6nm,0.3s,baz=322,slow=15,SNR=48						
PLCA				Sn	Sb	04 44 09.0	0.0
	comp=Z,36nm,0.3s,baz=239,slow=22,SNR=10						
	comp=Z,20nm,0.4s						
PLCA	Paso Flores	2.94	136	eP	Pn	04 43 30.9	+3.9
PLCA	Paso Flores	2.94	136	i P	Pn	04 43 29.0	+2.0
PLCA				i S	Sb	04 44 06.4	-2.6
PLCA				IAML		04 44 17.2	
	comp=Z,646nm,0.9s						
ML02	Panimavida	3.24	27	Pn	Pn	04 43 30.9	-0.2
LL06	Loncomilla	3.56	185	Pn	Pn	04 43 35.2	-0.4
LL01	San Ignacio de	3.77	171	Pn	Pn	04 43 39.2	+0.8
LL07	Hotel Espejo d	4.17	182	Pn	Pn	04 43 43.6	-0.3
BO02	Sierra Bellavi	4.34	28	Pn	Pn	04 43 46.7	+0.4
BO02	Sierra Bellavi	4.34	28	i P	Pn	04 43 47.3	+1.1
BO02				i S	Sn	04 44 39.1	+3.1
BO02				IAML		04 44 57.0	
	comp=Z,322nm,0.5s						
GO07	Milladeo Hill,	4.46	184	Pn	Pn	04 43 47.1	-0.8
GO07	Milladeo Hill,	4.46	184	i P	Pn	04 43 47.1	-0.8
BO01	Tunca	4.60	23	Pn	Pn	04 43 49.2	-0.6
BO01	Tunca	4.60	23	i P	Pn	04 43 50.9	+1.1
BO01				i S	Sn	04 44 44.5	+2.0
BO01				IAML		04 45 09.5	
	comp=Z,247nm,0.8s						
LL02	Futaleuf	4.65	167	Pn	Pn	04 43 51.3	+0.8
LL02	Futaleuf	4.65	167	i P	Pn	04 43 52.2	+1.7
LL02				IAML		04 45 27.7	
	comp=Z,92nm,1.8s						
MT01	Popeta	5.05	19	Pn	Pn	04 43 55.1	-0.9
MT01	Popeta	5.05	19	i P	Pn	04 43 55.3	-0.7
MT01				i S	Sn	04 44 54.8	+1.3
MT01				IAML		04 45 16.9	
	comp=Z,298nm,0.6s						
BO04	La Punta	5.12	25	Pn	Pn	04 43 57.2	+0.1
VA05	Santo Domingo	5.16	15	Pn	Pn	04 43 56.9	-0.7
MT09	Talagante	5.20	21	Pn	Pn	04 43 56.7	-1.5
LMEL	Las Melosas	5.39	28	Pn	Pn	04 44 01.0	+0.1
MT05	Renca	5.63	22	Pn	Pn	04 44 03.3	-0.8
MT02	Curacav	5.65	18	Pn	Pn	04 44 02.9	-1.4
MT16	CCHEN	5.67	24	Pn	Pn	04 44 04.6	0.0
MT08	Bocatoma Ro	5.82	28	Pn	Pn	04 44 07.1	+0.2
PEL	Peldehue	5.88	21	Pn	Pn	04 44 05.8	-1.7
VA03	San Esteban	6.28	21	Pn	Pn	04 44 11.6	-1.4
VA06	Catapilco	6.29	15	Pn	Pn	04 44 11.6	-1.4
H03S1	Juan Fernandez	6.63	315	Pn	Pn	04 44 18.8	+1.3
	baz=103,slow=9.9						
H03S1				T	T	04 50 33.7	
	baz=134,slow=76,SNR=160						
H03S3	Juan Fernandez	6.65	315	Pn	Pn	04 44 18.6	+1.0
	baz=103,slow=9.9						
H03S3				T	T	04 50 35.8	
	baz=134,slow=76,SNR=137						
H03S2	Juan Fernandez	6.65	315	Pn	Pn	04 44 18.6	+0.9
	baz=103,slow=9.9						
H03S2				T	T	04 50 34.9	
	baz=134,slow=76,SNR=175						
H03N3	Juan Fernandez	6.93	317	Pn	Pn	04 44 23.6	+1.9
	baz=200,slow=78						
H03N1	Juan Fernandez	6.94	317	Pn	Pn	04 44 23.2	+1.6
	baz=200,slow=78						
H03N2	Juan Fernandez	6.95	317	Pn	Pn	04 44 23.7	+1.9
	baz=200,slow=78						
COYC	Coyhaique	6.96	173	Pn	Pn	04 44 21.9	-0.4
CO02	Combarbal	7.66	15	Pn	Pn	04 44 30.7	-1.3
ZON	Zonda	8.02	29	Pn	Pn	04 44 37.0	+0.2
CO06	Fray Jorge	8.07	10	Pn	Pn	04 44 35.3	-2.3
CO03	El Pedregal	8.08	16	Pn	Pn	04 44 36.6	-1.1
AY03	Cochrane	8.60	177	Pn	Pn	04 44 46.6	+1.9
GO04	Tololo Observa	8.70	14	Pn	Pn	04 44 45.6	-0.8
TRQA	Tornquist	8.87	90	Pn	Pn	04 44 50.6	+2.1
CO05	La Serena	8.88	11	Pn	Pn	04 44 48.4	-0.2
LCO	Las Campanas	9.85	13	Pn	Pn	04 45 00.3	-1.8
AC02	Maricunga	12.29	18	Pn	Pn	04 45 31.6	-4.1
AF01	San Pedro de A	16.25	17	P	P	04 46 30.6	-0.9
AF01				IAmb	IAmb	04 46 59.2	
	comp=Z,47nm,1.1s						
PLTB	Pedras Altas	17.45	73	eP	Pn	04 46 42.9	-0.6
CPUP	Villa Florida	18.17	52	P	Pn	04 46 52.0	-0.4
	comp=Z,0.1nm,0.3s,baz=81,slow=7.6,SNR=4.6						
	comp=Z,0.2nm,0.4s						
CPUP	Villa Florida	18.17	52	eP	Pn	04 46 51.1	-1.3
CPSB	Cacapava Do Su	18.25	69	eP	P	04 46 53.0	-0.5
SJPY	San Joaquin	19.89	52	eP	P	04 47 11.6	+0.1
PB16	IPOC Station P	20.51	10	P	Pn	04 47 21.5	+0.5
ITAB	Concordia	21.01	63	eP	P	04 47 22.8	-0.8
PB18	Visviri	21.25	10	P	P	04 47 26.7	0.0
PB18				IAmb	IAmb	04 47 55.6	
	comp=Z,15nm,1.0s						
MURT	Porto Murtinho	21.62	43	eP	P	04 47 29.2	-0.9
PTGB	Pitanga	22.69	58	eP	P	04 47 40.7	-1.0
LPAZ	La Paz	22.73	13	P	P	04 47 45.0	+2.3
LPAZ	La Paz	22.73	13	P	P	04 47 42.7	0.0
	comp=Z,6.3nm,1.0s,baz=159,slow=7.4,SNR=18						
	comp=Z,6.3nm,1.0s						
LPAZ	La Paz	22.73	13	eP	P	04 47 41.6	-1.1
BDQN	Bodoquena, MS	23.07	43	eP	P	04 47 44.3	-1.2
AQDB	Aquidauana	23.62	45	eP	P	04 47 50.6	-0.4
TRCB	Terra Rica	23.66	54	eP	P	04 47 51.7	+0.2
BBSD	Serra de San D	24.08	31	eP	P	04 47 53.8	-1.5
SIV	San Ignacio	24.99	29	P	P	04 48 02.5	-1.1
	comp=Z,2.3nm,0.8s,baz=218,slow=9.8,SNR=12						
	comp=Z,2.3nm,0.8s						
PTLB	Pontes e Lacer	26.25	32	P	P	04 48 13.3	-1.7
PTLB				IAmb	IAmb	04 48 31.4	
	comp=Z,6.7nm,1.0s						
PTLB	Pontes e Lacer	26.25	32	eP	P	04 48 14.1	-0.9
PDRB	Porto dos Gac	30.70	33	eP	P	04 48 53.9	-0.8
BDFB	Brasilia	31.89	51	P	P	04 49 06.0	+0.6
	comp=Z,1.5nm,0.7s,baz=207,slow=14,SNR=2.4						
	comp=Z,1.5nm,0.7s						
TBTG	Tabatinga, AM	34.45	6	P	P	04 49 27.5	0.0
TBTG	Tabatinga, AM	34.45	6	eP	P	04 49 28.1	+0.6
NPGB	Novo Progresso	35.38	32	eP	P	04 49 37.0	+1.4
COHC	Cochancay	36.44	350		P	04 49 46.0	+1.4
COHC				IAmb	IAmb	04 49 47.6	
	comp=Z,4.3nm,0.9s						
OTAV	Otavalo	39.00	352	eP	P	04 50 08.2	+1.4
BELA	Belgrano 2	42.49	169	P	P	04 50 35.0	+0.5
VNA3	Neumayer Olymp	45.46	156	⇑P	P	04 50 58.8	+0.4
	comp=Z,3.0nm,0.7s						
VNA1	Neumayer--Stat	45.82	155	⇑P	P	04 51 00.7	-0.4
	comp=Z,4.3nm,0.8s						
VNA2	Neumayer--Watz	46.15	155	⇑P	P	04 51 04.3	+0.5
	comp=Z,4.7nm,0.8s,baz=277,slow=8.8						
SNAA	Sanae	47.68	156	⇑P	P	04 51 16.2	+0.4
	comp=Z,131nm,0.8s						
SNAA	Sanae	47.68	156	P	P	04 51 15.9	0.0
SNAA				IAmb	IAmb	04 51 17.5	
	comp=Z,9.7nm,1.0s						
SNAA	Sanae	47.68	156	P	P	04 51 16.0	+0.2
	comp=Z,5.6nm,0.8s,baz=287,slow=7.0,SNR=18						
	comp=Z,5.6nm,0.8s						
TROLL	Troll, Antarti	49.38	157	⇑P	P	04 51 29.4	+0.5
	comp=Z,356nm,0.8s						
QSPA	South Pole Qui	51.59	180	P	P	04 51 46.3	+0.6
QSPA				IAmb	IAmb	04 52 02.6	
	comp=Z,18nm,1.5s						
QSPA	South Pole Qui	51.59	180	P	P	04 51 46.6	+0.9
	comp=Z,3.6nm,0.8s,baz=162,slow=1.5,SNR=17						
	comp=Z,3.6nm,0.8s						
Z47A	Carrollton	72.81	347	P	P	04 54 07.6	-0.4
Z47A				IAmb	IAmb	04 54 09.0	
	comp=Z,9.9nm,0.9s						
TXAR	Lajitas Array	73.36	333	P	P	04 54 11.0	-0.5
	comp=Z,0.5nm,0.8s,baz=162,slow=8.2,SNR=5.6						
	comp=Z,0.5nm,0.8s						
SWET	Sewanee	74.44	349	P	P	04 54 17.4	-0.2
V48A	Smith Brothers	75.09	349	P	P	04 54 20.8	-0.5
V48A				IAmb	IAmb	04 54 22.1	
	comp=Z,4.4nm,0.7s						
R40A	Maddies Statio	78.55	345	P	P	04 54 41.0	+0.3
R40A				IAmb	IAmb	04 54 42.5	
	comp=Z,6.4nm,1.2s						
BOSA	Boshof	78.78	118	P	P	04 54 42.2	-0.5
	comp=Z,4.1nm,1.1s,baz=58,slow=4.0,SNR=3.4						
	comp=Z,4.1nm,1.1s						
P40A	Paris	79.70	345	P	P	04 54 46.7	-0.3
N38A	Joes South For	81.16	345	P	P	04 54 54.3	-0.5
ECSD	EROS Data Cent	84.70	343	P	P	04 55 13.1	-0.1
GMN	Gold Mountain	85.78	326	P	P	04 55 19.2	+0.2
SPR3	Spring Creek 3	85.99	329	P	P	04 55 19.6	-0.5
SPR3				IAmb	IAmb	04 55 22.1	
	comp=Z,4.0nm,1.0s						
TORD	Torodi Ar. Bea	86.70	70	P	P	04 55 22.7	-1.1
	comp=Z,0.9nm,0.7s,baz=235,slow=4.1,SNR=4.8						
	comp=Z,0.9nm,0.7s						
HWUT	Hardware Ranch	87.19	332	P	P	04 55 25.7	0.0
HWUT				IAmb	IAmb	04 55 27.4	
	comp=Z,3.7nm,0.9s						
PDAR	Pinedale Array	87.50	334	P	P	04 55 26.6	-0.6
	comp=Z,0.3nm,0.4s,baz=129,slow=6.6,SNR=7.6						
	comp=Z,0.3nm,0.4s						
ELK	Elko	87.84	329	P	P	04 55 29.3	+0.4
TIXI	Tiksi	145.07	348		PKPbc	05 02 14.5	-0.7
AB31	Akbulak array	145.19	57		PKPbc	05 02 16.1	-0.2
ABKAR	Akbulak array	145.19	57		PKPbc	05 02 15.9	-0.3
PZH	PanZhiHua	167.17	159	PKP	PKPdf	05 02 45.3	-0.5

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*IDC **24** 04:45:35.5±1.9, 2°.24S×138°.36E, h0^{km}, mb3.4/2, mbtmp3.5/4, ML3.6/2, Error ellipse: s-maj=31.9km s-min=20.2km az=168.0*

*DJA **24** 04:45:43.2±0.8, 2°S±7°×13°9E±°, h16^{km}±7^{km}, M4.8/5, MLv4.8/5*

ISC 24 04:45:40.6±0.9**, 2°.4S**±0°.1×**138°.50E**±0°.05**, h32**^{km}**, n9, σ1^{s}60**/10**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	Sarmi	0.47	27	P	Pn	04 45 53.2	+2.0
GENI	Genyem	1.68	96	P	Pb	04 46 10.8	-0.2
JAY	Jayapura	2.21	93	Pn	Pn	04 46 17.4	+2.3
	8.5nm,0.3s,baz=239,slow=12,SNR=24						
JAY				Lg	Lg	04 46 49.5	
	6.3nm,0.3s,baz=148,slow=16,SNR=4.6						
	24nm,0.4s						
JAY	Jayapura	2.21	93	P	Pb	04 46 18.4	-1.6
JAY				S	Sb	04 46 45.4	-1.6
SRPI	Serui, Papua	2.32	283	P	Pb	04 46 21.6	-0.2
BAKI	Biak	2.68	297	P	Pb	04 46 26.4	-1.5
WRA	Warramunga Arr	17.89	193	P	Pn	04 49 46.6	-0.6
	0.3nm,0.3s,baz=18,slow=12,SNR=6.1						
	0.4nm,0.4s						
ASAR	Alice Springs	21.59	192	P	P	04 50 28.6	+0.7
	0.7nm,0.4s,baz=21,slow=9.0,SNR=9.0						
	0.7nm,0.4s						
ILAR	Eielson Array	85.65	24	P	P	04 58 15.2	-0.7
	0.2nm,0.6s,baz=275,slow=4.7,SNR=4.5						
	0.2nm,0.6s						

IDC 24 04:45:49.0±13.0**, 6°.43S**×**128°.79E, h184**^{km}±152^{km}**, mb3.1**/1**, mbtmp3.6**/4**, ML3.3**/3**, Error ellipse: s-maj=96.1km s-min=52.7km az=35.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.00	195	P	Pn	04 48 35.8	+1.3
	0.1nm,0.3s,baz=22,slow=15,SNR=2.0						
FITZ				S	Sn	04 50 46.2	-1.6
	4.1nm,0.8s,baz=237,slow=20,SNR=2.6						
	2.6nm,0.8s						
WRA	Warramunga Arr	14.48	159	P	Pn	04 49 05.5	-0.2
	0.1nm,0.3s,baz=341,slow=13,SNR=4.7						
	0.8nm,1.1s						
ASAR	Alice Springs	17.83	165	P	P	04 49 44.2	-0.1
	0.3nm,0.3s,baz=345,slow=11,SNR=14						
	1.3nm,0.5s						
MKAR	Makanchi Array	67.09	327	P	P	04 56 22.6	-0.1
	0.3nm,0.6s,baz=122,slow=7.0,SNR=1.8						
	0.3nm,0.6s						

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*BJI **24** 04:47:00.7, 2°.91S×138°.98E, h10^{km}, mB5.8/15, mb5.4/89, Ms5.5/37, Ms7 5.4/37*

*IDC **24** 04:47:04.3±0.4, 2°.63S×138°.48E, h0^{km}, mb5.3/28, mbtmp5.3/33, ML4.9/6, MS5.5/11, Error ellipse: s-maj=12.3km s-min=9.5km az=72.0*

*MOS **24** 04:47:06.1±0.9, 2°.66S×138°.41E, h23^{km}, mb5.6/39, Error ellipse: s-maj=8.5km s-min=5.0km az=111.3*

*DJA **24** 04:47:06.9±0.2, 3°S±2°×13°9E±°, h10^{km}, M5.5/48, mb5.5/48, mB5.9/44, MLv5.5/10, Mw(mB)5.5/44, MwMwp7.1/1, Mwp6.9/1*

*NEIC **24** 04:47:08.6±1.8, 2°.62S±0°.08×138°.54E±0°.06, h22^{km}±1^{km}, mb5.6/338, Ms_20 5.6/70, Error ellipse: s-maj=11.0km s-min=8.2km az=179.0*

ISC 24 04:47:08.1±0.4**, 2°.70S**±0°.04×**138°.55E**±0°.04**, h21**^{km}±5^{km}**, h21**^{km}**:pP-P, n973, σ1^{s}49**/853**, mb5.5**/266**, MS5.5**/59**, 22C-5D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	Genyem	1.62	86	P	Pn	04 47 36.2	+0.8
GENI	Genyem	1.62	86	P	Pn	04 47 31.5	-3.9
JAY	Jayapura	2.17	85	Pn	Pn	04 47 42.5	-0.5
	186nm,0.3s,baz=249,slow=7.6,SNR=114						
JAY				Lg	Lg	04 48 14.8	
	407nm,0.3s,baz=72,slow=18,SNR=5.5						
JAY				LR	LR	04 48 30.8	
	comp=Z,43µm,21.9s,baz=302,slow=39						
	1µm,0.5s						
JAY	Jayapura	2.17	85	P	Pn	04 47 39.7	-3.2
SRPI	Serui, Papua	2.45	290	P	Pn	04 47 45.1	-1.7
BAKI	Biak	2.86	302	P	Pn	04 47 53.5	+1.0
RKPI	Ransiki, Papua	4.52	285	P	Pn	04 48 16.5	+1.1
KMPI	Kaimana, Papua	4.93	259	P	Pn	04 48 23.1	+2.2
MMPI	Merauke	6.01	162	P	Pn	04 48 37.5	+1.7
FAKI	Fak Fak	6.29	268		Pn	04 48 41.2	+1.5
FAKI	Fak Fak	6.29	268	P	Pn	04 48 41.5	+1.7
FAKI	Fak Fak	6.29	268	P	Pn	04 48 41.4	+1.7
	2.1nm7µm471nm,1.2s						
SWI	Sorong	7.51	284	P	Pn	04 48 57.6	+1.2
MANU	Manus Island	8.84	86	Pn	Pn	04 49 17.7	+3.0
MSAI	Masohi	9.62	266	P	Pn	04 49 28.9	+3.4
AAI	Ambon	10.38	264	P	Pn	04 49 37.6	+1.8
	247nm,0.8s						
PMG	Port Moresby	10.85	128	Pn	Pn	04 49 45.6	+3.4
PMG	Port Moresby	10.85	128	ceP	Pn	04 49 47.1	+4.9
PMG				pmax	pmax		
	comp=Z,293nm,1.3s						
I39PW	PALAU INFRASON	10.93	339	I	I	05 49 10.0	
	baz=160,slow=313,SNR=2.7						
NLAI	Namlea	11.44	267	P	Pn	04 49 52.4	+2.0
KDU	Kakadu	11.60	211	P	Pn	04 49 51.2	-1.3
	comp=Z,568nm,0.9s						
TNTI	Ternate	11.70	287	Pn	Pn	04 49 54.9	+1.0
TNTI	Ternate	11.70	287	P	Pn	04 49 57.7	+3.9
COEN	Coen	12.08	158	Pn	Pn	04 49 59.1	0.0
COEN	Coen	12.08	158	P	Pn	04 49 59.1	0.0
	comp=Z,263nm,0.8s						
COEN	Coen	12.08	158	P	Pn	04 49 59.5	+0.4
DRS	Darwin Rock St	12.28	218	P	Pn	04 50 02.9	+1.1
MTN	Manton Dam	12.46	216	Pn	Pn	04 50 03.6	-0.8
MTN	Manton Dam	12.46	216	P	Pn	04 50 02.9	-1.5
	comp=Z,453nm,0.9s						
SANI	Sanana	12.56	273	P	Pn	04 50 05.8	+0.1
SANI	Sanana	12.56	273	P	Pn	04 50 05.1	-0.6
RABL	Rabaul	13.67	97	Pn	Pn	04 50 20.5	-0.4
SGSI	Sangihe	14.47	296	P	Pn	04 50 33.4	+1.5
KMSI	Cibinong	14.92	282	P	Pn	04 50 37.7	-0.2
SOEI	Soe	15.82	243	Pn	Pn	04 50 49.3	-0.6
SOEI	Soe	15.82	243	P	Pn	04 50 50.7	+0.9
SOEI	Soe	15.82	243	P	P	04 50 51.7	-1.8
LUWI	Luwuk	15.85	276	Pn	Pn	04 50 50.0	-0.1
LUWI	Luwuk	15.85	276	P	Pn	04 50 48.1	-2.0
KNRA	Kununurra	16.10	216	Pn	Pn	04 50 51.6	-1.6
KNRA	Kununurra	16.10	216	P	Pn	04 50 50.0	-3.2
BBSI	Bau Bau	16.17	260	P	P	04 50 56.8	-0.5
MTSU	Mount Surprise	16.35	160	P	Pn	04 50 57.3	+0.9
	comp=Z,206nm,1.0s						
MTSU	Mount Surprise	16.35	160	P	P	04 50 58.6	-0.6
BATI	Baumata	16.55	243	Pn	Pn	04 50 59.5	+0.4
	comp=Z,5.5nm,0.3s,baz=81,slow=10.0,SNR=8.5						
	comp=Z,252nm,1.0s						
BATI	Baumata	16.55	243	P	P	04 51 02.9	+1.4
MRSI	Marisa	16.90	281	P	P	04 51 05.2	-0.1
	comp=Z,3µmcomp=Z,254nm,1.2s						
APSI	Ampana	16.98	276	P	Pn	04 51 04.1	-0.4
MMRI	Maumere	17.26	249	Pn	Pn	04 51 07.3	-0.6
MMRI	Maumere	17.26	249	P	P	04 51 09.7	+0.3
GUMO	Guam	17.36	21		P	04 51 10.5	+0.1
GUMO	Guam	17.36	21	P	Pn	04 51 07.3	-1.8
	comp=Z,21nm,0.3s,baz=206,slow=2.3,SNR=9.1						
GUMO				LR	LR	04 58 10.2	
	comp=Z,5µm,18.4s,baz=210,slow=38						
	comp=Z,73nm,0.3s						
GUMO	Guam	17.36	21	P	P	04 51 10.5	+0.1
GUMO				pmax	pmax		
	comp=Z,1µm,1.6s						
WB0	Warramunga Arr	17.44	193	Pn	Pn	04 51 07.2	-2.9
WB0				IAmb	IAmb	04 51 19.7	
	comp=Z,490nm,1.1s						
WR8	Warramunga Arr	17.60	193	Pn	Pn	04 51 09.2	-2.9
WR8				IAmb	IAmb	04 51 21.1	
	comp=Z,859nm,1.8s						
WRAB	Tennant Creek	17.61	193	Pn	Pn	04 51 10.7	-1.6
WRAB				IAmb	IAmb	04 51 21.2	
	comp=Z,344nm,1.0s						
WRAB	Tennant Creek	17.61	193	P	Pn	04 51 10.7	-1.6
WRAB				pmax	pmax		
	comp=Z,344nm,1.0s						
WRA	Warramunga Arr	17.62	193	Pn	Pn	04 51 09.2	-3.2
WRA	Warramunga Arr	17.62	193	P	Pn	04 51 10.9	-1.6
	comp=Z,5.3nm,0.3s,baz=17,slow=12,SNR=53						
WRA				S	Sn	04 54 20.1	-8.1
	comp=Z,37nm,0.8s,baz=9.8,slow=22,SNR=4.8						
WRA				LR	LR	04 58 23.1	
	comp=Z,20µm,18.6s,baz=14,slow=38						
	comp=Z,40nm,0.5s						
QIS	Mount Isa	17.78	177	P	Pn	04 51 12.3	-2.1
QIS	Mount Isa	17.78	177	P	Pn	04 51 13.3	-1.1
EDFI	Ende, Flores	17.81	250	P	P	04 51 18.3	+2.8
TOLI2	Tolitoli	18.16	282		Pn	04 51 18.7	-0.4
TOLI2	Tolitoli	18.16	282	P	P	04 51 20.7	+1.4
BSSI	Bau Bau, Buton	18.32	259	P	Pn	04 51 23.9	+2.8
	comp=Z,6µmcomp=Z,209nm,1.4s						
BNSI	Bone	18.48	264	P	Pn	04 51 25.6	+2.6
	comp=Z,7µmcomp=Z,190nm,1.4s						
TTSI	Tana Toraja	18.71	268	P	Pn	04 51 28.8	+3.0
	comp=Z,7µmcomp=Z,260nm,1.3s						
PCI	Palu	18.78	275	P	Pn	04 51 28.9	+2.2
	comp=Z,9µmcomp=Z,380nm,1.3s						
SPSI	Sidrap Palu	18.79	266	P	Pn	04 51 28.3	+1.5
	comp=Z,7µmcomp=Z,180nm,1.2s						
CTAO	Charters Tower	18.85	157	P	P	04 51 26.8	0.0
CTAO	Charters Tower	18.85	157	P	Pn	04 51 28.9	+1.4
CTAO	Charters Tower	18.85	157	P	P	04 51 26.8	0.0
CTAO				pmax	pmax		
	comp=Z,93nm,0.9s						
MPSI	Mapaga	18.89	279	P	Pn	04 51 29.1	+1.2
KAPI	Kappang	18.89	262	P	P	04 51 25.2	-2.1
	comp=Z,0.5nm,0.3s,baz=71,slow=9.7,SNR=6.2						
KAPI	Kappang	18.89	262	P	Pn	04 51 29.7	+1.7
BASI	Baing, Sumba	19.34	246	P	Pn	04 51 35.3	+1.9
	comp=Z,262nm,1.3s						
WSI	Waingapu	19.41	248	P	Pn	04 51 34.5	+0.3
	comp=Z,488nm,1.0s						
FITZ	Fitzroy Crossi	19.86	219	P	P	04 51 38.4	+0.5
FITZ	Fitzroy Crossi	19.86	219	P	P	04 51 37.1	-0.7
	comp=Z,2.1nm,0.3s,baz=51,slow=12,SNR=19						
FITZ				LR	LR	05 00 18.1	
	comp=Z,18µm,18.6s,baz=58,slow=40						
	comp=Z,80nm,1.0s						
WBSI	Waikabubak, Su	20.24	249	P	Pn	04 51 43.9	-0.3
	comp=Z,4µmcomp=Z,233nm,1.0s						
AS01	Alice Springs	21.31	192	P	P	04 51 55.1	+1.5
AS31	Alice Springs	21.32	192	P	P	04 51 53.1	-0.7
AS31	Alice Springs	21.32	192	P	P	04 51 53.7	-0.1
	comp=Z,198nm,0.8s						
ASAR	Alice Springs	21.32	192	P	P	04 51 53.1	-0.7
ASAR	Alice Springs	21.32	192	P	P	04 51 52.9	-0.8
	comp=Z,147nm,0.7s,baz=24,slow=9.9,SNR=84						
ASAR				S	S	04 55 46.3	-3.4
	comp=Z,50nm,0.9s,baz=12,slow=25,SNR=5.0						
	comp=Z,147nm,0.7s						
ASAR	Alice Springs	21.32	192	P	P	04 51 53.1	-0.7
SMKI	Samarinda	21.45	276	P	P	04 51 56.7	+1.5
MYLDM	Lahad Datu	21.50	291	P	P	04 51 58.4	+2.7
PLAI	Plampang	21.53	253	P	P	04 51 57.6	+1.5
PLAI	Plampang	21.53	253	P	P	04 51 59.3	+3.2
BKB	Balikpapan	21.68	273	P	P	04 52 01.3	+3.6
BKB	Balikpapan	21.68	273	P	P	04 51 58.4	+0.7
PATS	Pohnpei	21.89	64	P	P	04 52 01.6	+1.8
TATA	Tatamba Isabel	21.89	106	P	P	04 52 00.0	+0.1
HNR	Honiara	22.30	108	P	P	04 52 04.0	-0.3
HNR	Honiara	22.30	108	P	P	04 52 03.8	-0.5
	comp=Z,565nm,0.8s,baz=219,slow=3.2,SNR=7.6						
	comp=Z,565nm,0.8s						
HNR	Honiara	22.30	108	P	P	04 52 04.0	-0.3
HNR				pmax	pmax		
	comp=Z,594nm,0.9s						
HNR				MLR	MLR		

	comp=Z,8µm,19.0s						
TWSI	**Taliwang, Sumb**	**22.36**	**254**	P	**P**	**04 52 08.3**	**+3.3**
ALEG	**Aligegeo Malai**	**22.83**	**106**	P	**P**	**04 52 11.1**	**+1.1**
NGOA	**Tingoa Renbel**	**23.07**	**113**	P	**P**	**04 52 14.1**	**+1.7**
SRBI	**Singaraja**	**23.83**	**256**	P	**P**	**04 52 19.2**	**-0.7**
KKM	**Kota Kinabalu**	**23.93**	**291**	P	**P**	**04 52 19.9**	**-1.1**
KKM				IAmb	IAmb	04 52 43.7	
	comp=Z,292nm,1.1s						
WRKA	**Warakurna**	**24.30**	**203**	P	**P**	**04 52 23.9**	**-0.4**
	comp=Z,140nm,1.0s						
QLP	**Quilpie**	**24.36**	**168**	P	**P**	**04 52 29.4**	**+4.7**
ABJI	**Asem Bagus**	**24.73**	**257**	P	**P**	**04 52 28.8**	**+0.6**
KMMI	**Kalianget**	**24.86**	**259**	P	**P**	**04 52 29.5**	**+0.1**
JAGI	**Jajag, Banyuwa**	**24.93**	**256**	P	**P**	**04 52 28.1**	**-2.1**
EIDS	**Eidsvold**	**25.57**	**153**	P	**P**	**04 52 36.7**	**+1.0**
EIDS				IAmb	IAmb	04 52 43.8	
	comp=Z,91nm,0.8s						
EIDS	**Eidsvold**	**25.57**	**153**	P	**P**	**04 52 37.5**	**+1.8**
	comp=Z,133nm,0.9s						
EIDS	**Eidsvold**	**25.57**	**153**	P	**P**	**04 52 38.0**	**+2.3**
GMJI	**Gumukmas**	**25.58**	**256**	P	**P**	**04 52 37.9**	**+1.9**
MBWA	**Marble Bar**	**25.93**	**224**	P	**P**	**04 52 39.2**	**+0.1**
MBWA				IAmb	IAmb	04 53 04.9	
	comp=Z,193nm,1.3s						
MBWA	**Marble Bar**	**25.93**	**224**	P	**P**	**04 52 38.5**	**-0.5**
	comp=Z,117nm,1.5s						
MBWA	**Marble Bar**	**25.93**	**224**	P	**P**	**04 52 38.3**	**-0.7**
PSA00	**Pilbara Seismi**	**26.13**	**223**	P	**P**	**04 52 40.3**	**-0.6**
PSA00	**Pilbara Seismi**	**26.13**	**223**	P	**P**	**04 52 40.9**	**0.0**
	comp=Z,103nm,1.2s						
PSA00	**Pilbara Seismi**	**26.13**	**223**	P	**P**	**04 52 40.4**	**-0.5**
GRJI	**Gresik**	**26.30**	**260**	P	**P**	**04 52 44.8**	**+2.3**
STKI	**Sintang**	**27.20**	**275**	P	**P**	**04 52 52.3**	**+1.7**
KSM	**Kuching**	**28.53**	**278**	P	**P**	**04 53 02.7**	**+0.2**
STKA	**Stephens Creek**	**29.16**	**175**	P	**P**	**04 53 07.7**	**-0.2**
STKA	**Stephens Creek**	**29.16**	**175**	P	**P**	**04 53 09.3**	**+1.4**
	comp=Z,163nm,0.9s						
STKA	**Stephens Creek**	**29.16**	**175**	P	**P**	**04 53 08.3**	**+0.4**
	comp=Z,6.5nm,0.5s,baz=342,slow=9.2,SNR=12						
	comp=Z,6.5nm,0.5s						
CMSA	**Cobar Meteorol**	**29.46**	**168**	P	**P**	**04 53 11.4**	**+0.8**
	comp=Z,44nm,1.3s						
CMSA	**Cobar Meteorol**	**29.46**	**168**	P	**P**	**04 53 13.2**	**+2.6**
BBOO	**Buckleboo**	**30.04**	**184**	P	**P**	**04 53 18.6**	**+2.9**
BBOO	**Buckleboo**	**30.04**	**184**	P	**P**	**04 53 16.7**	**+1.0**
ARMA	**Armidale**	**30.22**	**157**	P	**P**	**04 53 17.8**	**+0.3**
ARMA				IAMs_20	IAMs_20	05 06 15.7	
	comp=Z,19µm,19.0s						
ARMA	**Armidale**	**30.22**	**157**	P	**P**	**04 53 19.8**	**+2.3**
	comp=Z,45nm,1.6s						
ARMA	**Armidale**	**30.22**	**157**	P	**P**	**04 53 19.3**	**+1.8**
MEEK	**Meekatharra**	**30.52**	**217**	P	**P**	**04 53 19.2**	**-0.9**
	comp=Z,37nm,1.9s						
MEEK	**Meekatharra**	**30.52**	**217**	P	**P**	**04 53 20.7**	**+0.6**
HTT	**Hallett**	**30.57**	**179**	P	**P**	**04 53 20.8**	**+0.3**
	comp=Z,9.3nm,1.2s						
HTT	**Hallett**	**30.57**	**179**	P	**P**	**04 53 20.8**	**+0.3**
GIRL	**Giralia**	**30.80**	**228**	P	**P**	**04 53 24.3**	**+1.7**
TPI	**Tanjungpandan**	**30.86**	**269**	P	**P**	**04 53 22.6**	**-0.6**
YULB	**Yu-li**	**30.91**	**328**	P	**P**	**04 53 22.0**	**-1.4**
YULB	**Yu-li**	**30.91**	**328**	P	**P**	**04 53 23.1**	**-0.4**
YOJ	**Yonaguni jima**	**30.94**	**332**	P	**P**	**04 53 24.0**	**+0.3**
YOJ				IAmb	IAmb	04 54 17.9	
	comp=Z,152nm,1.5s						
YOJ	**Yonaguni jima**	**30.94**	**332**	P	**P**	**04 53 24.0**	**+0.3**
YOJ				pmax	pmax		
	comp=Z,152nm,1.5s						
SANVU	**Saraoutou**	**30.94**	**116**	P	**P**	**04 53 23.4**	**-0.5**
JOW	**Kunigami**	**30.99**	**342**	P	**P**	**04 53 23.2**	**-0.9**
JOW				IAmb	IAmb	04 53 26.2	
	comp=Z,83nm,1.0s						
JOW	**Kunigami**	**30.99**	**342**	P	**P**	**04 53 22.5**	**-1.6**
	comp=Z,54nm,0.9s,baz=154,slow=13,SNR=6.3						
JOW				LR	LR	05 06 25.1	
	comp=Z,6µm,18.4s,baz=125,slow=38						
	comp=Z,54nm,0.9s						
BBJI	**Bungbulang**	**31.12**	**260**	P	**P**	**04 53 24.5**	**-1.1**
NACB	**Ninganchiao**	**31.39**	**329**	P	**P**	**04 53 26.6**	**-1.1**
NACB				IAmb	IAmb	04 53 30.8	
	comp=Z,108nm,1.0s						
YHNB	**Yeheng**	**31.91**	**329**	IAMs_20	IAMs_20	05 04 03.9	
	comp=Z,9µm,21.0s						
YHNB	**Yeheng**	**31.91**	**329**	P	**P**	**04 53 33.0**	**+0.6**
GHSS	**Government Hou**	**32.05**	**180**	P	**P**	**04 53 34.4**	**+1.0**
PPBI	**Pangkal Pinang**	**32.38**	**270**	P	**P**	**04 53 38.1**	**+1.5**
DLV	**Lat**	**33.23**	**297**	P	**P**	**04 53 43.0**	**-1.2**
DLV				IAmb	IAmb	04 53 46.0	
	comp=Z,77nm,1.2s						
DZM	**Mont Dzumac**	**33.24**	**128**	P	**P**	**04 53 44.1**	**+0.1**
DZM				IAMs_20	IAMs_20	05 07 48.5	
	comp=Z,9µm,20.0s						
DZM	**Mont Dzumac**	**33.24**	**128**	*e*P	**P**	**04 53 45.2**	**+1.1**
	comp=Z,85nm,1.4s						
DZM				*e*LR	LR	05 02 33.6	
	comp=Z,15µm,24.4s						
DZM	**Mont Dzumac**	**33.24**	**128**	LR	LR	05 07 58.7	
	comp=Z,8µm,20.6s,baz=298,slow=38						
DZM	**Mont Dzumac**	**33.24**	**128**	P	**P**	**04 53 46.9**	**+2.8**
MORW	**Morawa**	**33.85**	**217**	P	**P**	**04 53 49.4**	**+0.2**
MORW				IAmb	IAmb	04 54 11.1	
	comp=Z,112nm,1.1s						
MORW	**Morawa**	**33.85**	**217**	P	**P**	**04 53 49.4**	**+0.2**
	comp=Z,94nm,1.3s						
MORW	**Morawa**	**33.85**	**217**	P	**P**	**04 53 49.8**	**+0.6**
CAN	**Canberra**	**33.88**	**165**	IAMs_20	IAMs_20	05 09 01.8	
	comp=Z,14µm,20.0s						
CAN	**Canberra**	**33.88**	**165**	P	**P**	**04 53 50.9**	**+1.5**
	comp=Z,47nm,1.2s						
CNB	**Canberra Magne**	**33.97**	**164**	P	**P**	**04 53 53.3**	**+3.1**
KASI	**Kota Agung**	**34.07**	**264**	P	**P**	**04 53 51.1**	**-0.2**
PINNC	**Pines Island,**	**34.31**	**128**	IAMs_20	IAMs_20	05 07 43.9	
	comp=Z,9µm,21.0s						
MDSI	**Maura Dua**	**34.34**	**266**	P	**P**	**04 53 52.0**	**-1.7**
LWLI	**Liwa**	**34.48**	**265**	P	**P**	**04 53 55.6**	**+0.6**
	comp=Z,133nm,1.6s						
LHI	**Lord Howe Isla**	**34.58**	**148**	IAMs_20	IAMs_20	05 08 43.0	
	comp=Z,7µm,19.0s						
BLDU	**Ballidu**	**34.60**	**214**	P	**P**	**04 53 55.6**	**-0.1**
	comp=Z,94nm,1.0s						
BLDU	**Ballidu**	**34.60**	**214**	P	**P**	**04 53 56.6**	**+0.9**
KLBR	**Kellerberrin**	**34.78**	**212**	P	**P**	**04 53 58.5**	**+1.3**
	comp=Z,139nm,0.9s						
KLBR	**Kellerberrin**	**34.78**	**212**	P	**P**	**04 53 58.6**	**+1.3**
MYKOM	**Kota Tinggi**	**34.97**	**277**	P	**P**	**04 53 58.9**	**-0.2**
MYKOM				IAmb	IAmb	04 54 02.1	
	comp=Z,106nm,1.2s						
TOO	**Toolangi**	**35.28**	**170**	P	**P**	**04 54 03.3**	**+1.7**
TOO	**Toolangi**	**35.28**	**170**	P	**P**	**04 54 03.9**	**+2.4**
	comp=Z,15nm,1.4s						
TOO	**Toolangi**	**35.28**	**170**	P	**P**	**04 54 03.3**	**+1.7**
TOO				pmax	pmax		
	comp=Z,23nm,1.3s						
QIZ	**Qiongzhong**	**35.54**	**309**	IAmb	IAmb	04 54 05.6	
	comp=Z,139nm,1.1s						
QIZ	**Qiongzhong**	**35.54**	**309**	P	**P**	**04 54 03.4**	**-0.6**
QIZ				S	**S**	**04 59 39.3**	**+0.5**
QIZ				pmax	pmax		
	comp=Z,110nm,1.1s						
QIZ				LR	LR		
	comp=Z,2µm,21.1s						
QIZ				LR	LR		
	comp=Z,6µm,19.3s						
MUN	**Mundaring**	**35.91**	**213**	P	P	04 54 00.3	-6.7
MUN	**Mundaring**	**35.91**	**213**	P	**P**	**04 54 10.1**	**+3.1**
NWAO	**Narrogin (SRO)**	**36.10**	**211**	IAMs_20	IAMs_20	05 11 40.8	
	comp=Z,9µm,19.0s						
NWAO	**Narrogin (SRO)**	**36.10**	**211**	LR	LR	05 10 04.6	
	comp=Z,32µm,18.0s,baz=356,slow=38						
NWAO	**Narrogin (SRO)**	**36.10**	**211**	P	**P**	**04 54 10.7**	**+2.1**
JNU	**Nakatsue**	**36.36**	**349**	P	**P**	**04 54 09.3**	**-1.5**
JNU				IAmb	IAmb	04 54 13.1	
	comp=Z,75nm,1.0s						
JNU	**Nakatsue**	**36.36**	**349**	P	**P**	**04 54 09.9**	**-0.9**
	comp=Z,74nm,1.0s,baz=152,slow=3.3,SNR=28						
JNU				LR	LR	05 08 42.8	
	comp=Z,6µm,19.0s,baz=43,slow=36						
	comp=Z,74nm,1.0s						
JMN	**Monobe**	**36.50**	**353**	P	**P**	**04 54 11.7**	**-0.3**
JMN				IAmb	IAmb	04 54 19.8	
	comp=Z,96nm,1.2s						
JMN				IAMs_20	IAMs_20	05 07 26.3	
	comp=Z,7µm,19.0s						
BKNI	**Bangkinang**	**37.61**	**274**	P	**P**	**04 54 21.8**	**0.0**
IPM	**Ipoh**	**38.16**	**281**	P	**P**	**04 54 24.4**	**-2.0**
PPI	**Padang Panjang**	**38.20**	**273**	P	**P**	**04 54 27.3**	**+0.6**
	comp=Z,111nm,0.9s						
KULM	**Kulim**	**38.68**	**282**	P	**P**	**04 54 30.6**	**-0.1**
GULI	**GuiLin**	**39.00**	**317**	P	**P**	**04 54 34.8**	**+1.6**
GULI				S	**S**	**05 00 28.8**	**-2.4**
GULI				pmax	pmax		
	comp=Z,90nm,1.1s						
GULI				pmax	pmax		
	comp=Z,2µm,14.1s						
GULI				LR	LR		
	comp=Z,2µm,15.3s						
GULI				LR	LR		
	comp=Z,2µm,17.3s						
GULI				LR	LR		
	comp=Z,4µm,16.5s						
MJAR	**Matsushiro Arr**	**39.04**	**360**	P	**P**	**04 54 30.3**	**-3.1**
	comp=Z,3.6nm,0.7s,baz=193,slow=10,SNR=5.6						
MJAR				PcP	**PcP**	**04 56 42.7**	**-0.7**
	comp=Z,6.2nm,0.9s,baz=163,slow=3.0,SNR=4.7						
GLAD	**Gladstone**	**39.05**	**169**	P	**P**	**04 54 34.9**	**+1.5**
MNSI	**Mandailing Nat**	**39.11**	**275**	P	**P**	**04 54 37.5**	**+3.2**
	comp=Z,2µmcomp=Z,37nm,0.9s						
NJ2	**Nanjing**	**39.30**	**333**	*e*P	**P**	**04 54 35.5**	**-0.1**
NJ2				sP	**pP**	**04 54 40.8**	**-1.5**
NJ2				pmax	pmax		
	comp=Z,46nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,1µm,8.8s						
NJ2				LR	LR		
	comp=Z,3µm,23.4s						
NJ2				LR	LR		
	comp=Z,2µm,17.5s						
NJ2				LR	LR		
	comp=Z,5µm,16.6s						
CNSH	**ChangSha**	**39.36**	**323**	P	**P**	**04 54 35.9**	**-0.3**
CNSH				pmax	pmax		
	comp=Z,55nm,1.1s						
SISI	**Saibi**	**39.45**	**271**	P	**P**	**04 54 38.8**	**+1.6**
RPSI	**Rantau Prapat**	**39.97**	**277**	P	**P**	**04 54 39.7**	**-1.8**
RPSI				IAmb	IAmb	04 54 43.6	
	comp=Z,150nm,1.1s						
PSI	**Prapat**	**39.98**	**278**	P	**P**	**04 54 39.7**	**-2.1**
PSI				pmax	pmax		
	comp=Z,150nm,1.1s						
TJN	**Taejon**	**40.26**	**346**	P	**P**	**04 54 42.6**	**-0.9**
TJN				IAmb	IAmb	04 54 45.8	
	comp=Z,188nm,1.1s						
TJN	**Taejon**	**40.26**	**346**	P	**P**	**04 54 42.6**	**-0.9**
TJN				pmax	pmax		
	comp=Z,188nm,1.1s						
MOO	**Moorlands**	**40.31**	**170**	P	**P**	**04 54 46.2**	**+2.3**
WHN	**Wuhan**	**40.32**	**327**	P	**P**	**04 54 44.8**	**+0.6**
WHN				sP	**sP**	**04 54 54.6**	**+1.1**
WHN				S	**S**	**05 00 52.6**	**+1.7**
WHN				pmax	pmax		
	comp=Z,410nm,1.5s						
WHN				LR	LR		
	comp=Z,5µm,18.3s						
WHN				LR	LR		
	comp=Z,5µm,14.6s						
WHN				LR	LR		
	comp=Z,11µm,18.3s						
SRIT	**Nakonsritamara**	**40.42**	**287**	P	**P**	**04 54 44.4**	**-0.8**
SRIT				IAmb	IAmb	04 54 48.0	
	comp=Z,194nm,1.3s						
JMM	**Marumori**	**40.42**	**3**	P	**P**	**04 54 43.2**	**-1.6**
JSD	**Sado**	**40.54**	**360**	P	**P**	**04 54 44.5**	**-1.3**
TAU	**Tasmania Unive**	**40.79**	**170**	P	**P**	**04 54 49.2**	**+1.3**
TAU	**Tasmania Unive**	**40.79**	**170**	P	**P**	**04 54 51.0**	**+3.1**
TAU	**Tasmania Unive**	**40.79**	**170**	P	**P**	**04 54 49.2**	**+1.3**
TAU				pmax	pmax		
	comp=Z,106nm,1.4s						
KSAR	**Wonju Array Be**	**41.15**	**347**	P	**P**	**04 54 50.0**	**-0.9**
KSAR	**Wonju Array Be**	**41.15**	**347**	P	**P**	**04 54 50.0**	**-0.9**
GSI	**Gunungsitoli**	**41.15**	**275**	P	**P**	**04 54 50.2**	**-1.1**
GSI				IAmb	IAmb	04 54 52.4	
	comp=Z,189nm,1.3s						
GSI	**Gunungsitoli**	**41.15**	**275**	P	**P**	**04 54 51.4**	**+0.1**
	comp=Z,82nm,1.3s						
KSRS	**Korea Array**	**41.15**	**347**	P	**P**	**04 54 49.8**	**-1.1**
	comp=Z,18nm,0.9s,baz=163,slow=9.3,SNR=52						
KSRS				PcP	**PcP**	**04 56 49.8**	**-0.2**
	comp=Z,4.0nm,0.9s,baz=180,slow=3.8,SNR=5.3						
KSRS				LR	LR	05 11 31.2	
	comp=Z,2361µm,19.1s,baz=30,slow=36						
	comp=Z,18nm,0.9s						
SLVN	**Son La**	**41.47**	**307**	P	**P**	**04 54 52.9**	**-1.0**
INCN	**Inchon**	**41.48**	**346**	P	**P**	**04 54 51.7**	**-2.0**
INCN	**Inchon**	**41.48**	**346**	P	**P**	**04 54 51.7**	**-2.0**
INCN				pmax	pmax		
	comp=Z,64nm,1.2s						
INCN				MLR	MLR		
	comp=Z,5µm,19.0s						
MSVF	**Nonsavu**	**41.52**	**114**	P	**P**	**04 54 54.3**	**0.0**
MSVF	**Nonsavu**	**41.52**	**114**	P	**P**	**04 54 56.8**	**+2.5**
MSVF	**Nonsavu**	**41.52**	**114**	P	**P**	**04 54 54.3**	**0.0**
MSVF				pmax	pmax		
	comp=Z,51nm,1.2s						
GYA	**Guiyang**	**42.30**	**315**	⇑P	**P**	**04 55 00.9**	**+0.2**
GYA				pmax	pmax		
	comp=Z,29nm,1.0s						
MLSI	**Meulaboh, Aceh**	**42.68**	**279**	P	**P**	**04 55 04.0**	**+0.2**
ENH	**Enshi**	**42.95**	**322**	IAmb	IAmb	04 55 08.7	
	comp=Z,151nm,1.2s						
TIA	**Tai'an**	**43.57**	**335**	P	**P**	**04 55 09.5**	**-1.2**
TIA				pmax	pmax		
	comp=Z,49nm,0.7s						
DL2	**Dalian**	**44.25**	**341**	P	**P**	**04 55 15.1**	**-0.9**
DL2				S	**S**	**05 01 51.0**	**+2.5**
DL2				pmax	pmax		
	comp=Z,47nm,1.4s						
DL2				pmax	pmax		
	comp=Z,940nm,6.9s						
DL2				LR	LR		
	comp=Z,3µm,18.8s						
DL2				LR	LR		
	comp=Z,3µm,18.2s						
DL2				LR	LR		
	comp=Z,4µm,24.1s						
CM31	**Chiang Mai Arr**	**44.29**	**300**	P	**P**	**04 55 15.8**	**-0.9**
CMAR	**Chiang Mai Arr**	**44.29**	**300**	P	**P**	**04 55 15.7**	**-1.1**
CMAR	**Chiang Mai Arr**	**44.29**	**300**	P	**P**	**04 55 16.5**	**-0.2**
	comp=Z,21nm,0.9s,baz=121,slow=6.4,SNR=66						
	comp=Z,21nm,0.9s						
KMI	**Kunming**	**44.39**	**311**	P	**P**	**04 55 17.8**	**+0.1**
KMI				pmax	pmax		
	comp=Z,72nm,1.2s						
KMI				LR	LR		
	comp=Z,2µm,22.3s						
KMI				LR	LR		
	comp=Z,2µm,18.9s						
KMI				LR	LR		
	comp=Z,4µm,20.1s						
LYN	**LuoYang**	**44.43**	**329**	⇑P	**P**	**04 55 17.1**	**-0.5**
LYN				sP	sP	04 55 27.0	0.0
LYN				pmax	pmax		
	comp=Z,150nm,1.2s						
LYN				LR	LR		
	comp=Z,3µm,18.6s						
LYN				LR	LR		
	comp=Z,3µm,21.3s						
LYN				LR	LR		
	comp=Z,6µm,22.0s						
CHTO	**Chiang Mai**	**44.44**	**300**	P	**P**	**04 55 16.9**	**-1.0**
CHTO	**Chiang Mai**	**44.44**	**300**	P	**P**	**04 55 16.9**	**-1.0**
CHTO				pmax	pmax		
	comp=Z,41nm,1.1s						
MSHR	**Mys Shultsa**	**45.57**	**352**	*ce*P	**P**	**04 55 26.2**	**-0.2**
MSHR				pmax	pmax		
	comp=Z,20nm,1.0s						
HNS	**HongShan**	**45.63**	**333**	⇑P	**P**	**04 55 26.3**	**-0.7**
HNS				pmax	pmax		
	comp=Z,78nm,1.0s						
HNS				LR	LR		
	comp=Z,3µm,22.4s						
HNS				LR	LR		
	comp=Z,4µm,23.3s						
HNS				LR	LR		
	comp=Z,7µm,23.1s						
OUZ	**Omahuta**	**45.86**	**139**	P	**P**	**04 55 31.8**	**+2.9**
OUZ	**Omahuta**	**45.86**	**139**	P	**P**	**04 55 30.7**	**+1.8**
PZH	**PanZhiHua**	**45.90**	**312**	P	**P**	**04 55 28.9**	**-0.6**
PZH				pmax	pmax		
	comp=Z,50nm,1.1s						
XAN	**Xi'an**	**45.98**	**325**	⇑P	**P**	**04 55 29.1**	**-0.8**
XAN				pP	pP	04 55 35.5	-1.1
XAN				pmax	pmax		
	comp=Z,110nm,1.0s						
SNY	**Shenyang**	**46.36**	**345**	⇓P	**P**	**04 55 32.6**	**-0.1**
SNY				S	**S**	**05 02 26.3**	**+7.3**
SNY				pmax	pmax		
	comp=Z,37nm,1.0s						
SNY				pmax	pmax		
	comp=Z,660nm,5.6s						
SNY				LR	LR		
	comp=Z,2µm,18.4s						
SNY				LR	LR		
	comp=Z,2µm,19.4s						
SNY				LR	LR		
	comp=Z,4µm,18.1s						
ASAJ	**Asahikawa**	**46.75**	**4**	P	**P**	**04 55 35.2**	**-0.5**
	comp=Z,19nm,0.9s,baz=230,slow=14,SNR=13						
	comp=Z,19nm,0.9s						
JKA	**Kamikawa-asahi**	**46.75**	**4**	P	**P**	**04 55 34.5**	**-1.2**
USA0B	**Ussuriysk Arra**	**47.06**	**354**	*i* P	**P**	**04 55 37.0**	**-1.2**
USRK	**Ussuriysk Ar.**	**47.06**	**354**	P	**P**	**04 55 37.4**	**-0.8**
	comp=Z,11nm,0.8s,baz=185,slow=8.2,SNR=18						
	comp=Z,11nm,0.8s						
CD2	**Chengdu**	**47.07**	**318**	P	**P**	**04 55 38.9**	**+0.4**
CD2				pmax	pmax		
	comp=Z,200nm,0.9s						
BJT	**Baijiatuau**	**47.21**	**337**	IAmb	IAmb	04 55 42.1	
	comp=Z,61nm,1.2s						
BJI	**Beijing**	**47.22**	**337**	P	**P**	**04 55 38.6**	**-0.9**
BJI				pP	**pP**	**04 55 43.8**	**-2.5**
BJI				pmax	pmax		
	comp=Z,22nm,1.3s						
BJI				LR	LR		
	comp=Z,2µm,20.1s						
BJI				LR	LR		
	comp=Z,960nm,19.2s						
BJI				LR	LR		
	comp=Z,2µm,22.0s						
TNCH	**TengChong**	**47.61**	**308**	*e*P	**P**	**04 55 44.5**	**+1.5**
TNCH				pmax	pmax		
	comp=Z,100nm,1.1s						
CN2	**Changchun**	**47.77**	**347**	*e*P	**P**	**04 55 42.4**	**-1.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MDJ	**Mudanjiang**	**47.78**	**351**	P	**P**	**04 55 43.4**	**-0.4**
MDJ				S	**S**	**05 02 38.1**	**-1.2**
MDJ				pmax	pmax		
	comp=Z,22nm,1.1s						
TOZ	**Tahuroa Road**	**48.59**	**141**	P	**P**	**04 55 52.2**	**+2.0**
HIZ	**Hauiti**	**48.66**	**142**	P	**P**	**04 55 52.2**	**+1.5**
HIZ				IAmb	IAmb	04 55 58.6	
	comp=Z,105nm,1.1s						
HIZ				IAMs_20	IAMs_20	05 15 50.8	
	comp=Z,8µm,20.0s						
HIZ	**Hauiti**	**48.66**	**142**	P	**P**	**04 55 52.9**	**+2.1**
QRZ	**Quartz Range**	**48.77**	**146**	IAMs_20	IAMs_20	05 17 37.7	
	comp=Z,8µm,18.0s						
QRZ	**Quartz Range**	**48.77**	**146**	P	**P**	**04 55 53.5**	**+2.0**
QRZ	**Quartz Range**	**48.77**	**146**	P	**P**	**04 55 53.9**	**+2.4**
VRZ	**Vera Road**	**48.98**	**142**	P	P	04 55 59.9	+6.8
DSZ	**Denniston Nort**	**48.99**	**147**	IAMs_20	IAMs_20	05 15 52.6	
	comp=Z,9µm,20.0s						
DSZ	**Denniston Nort**	**48.99**	**147**	P	**P**	**04 55 55.4**	**+2.1**
RAO	**Raoul Island**	**49.04**	**127**	LR	LR	05 15 16.0	
	comp=Z,3µm,21.1s,baz=347,slow=34						
TKNZ	**Takaka Hill**	**49.15**	**146**	P	**P**	**04 55 55.5**	**+1.0**
FOZ	**Fox Glacier**	**49.22**	**150**	P	**P**	**04 55 56.4**	**+1.5**
DCZ	**Deep Cove**	**49.43**	**154**	P	**P**	**04 55 58.8**	**+2.3**
KATZ	**Kakaramea**	**49.46**	**142**	P	**P**	**04 56 01.0**	**+4.0**
INZ	**Inchbonnie**	**49.48**	**148**	IAmb	IAmb	04 56 14.5	
	comp=Z,51nm,1.2s						
INZ	**Inchbonnie**	**49.48**	**148**	P	**P**	**04 55 58.4**	**+1.4**
WTVZ	**West Tongariro**	**49.48**	**142**	P	**P**	**04 56 00.2**	**+3.1**
NNVZ	**North Ngauruho**	**49.51**	**142**	P	**P**	**04 55 60.0**	**+2.6**
NNZ	**Nelson**	**49.51**	**145**	IAmb	IAmb	04 56 03.6	
	comp=Z,70nm,1.0s						
NNZ				IAMs_20	IAMs_20	05 18 27.3	
	comp=Z,8µm,18.0s						
NNZ	**Nelson**	**49.51**	**145**	P	**P**	**04 55 58.2**	**+1.0**
FWVZ	**Far West T-bar**	**49.55**	**142**	P	**P**	**04 56 02.0**	**+4.2**
SNVZ	**South Ngauruho**	**49.56**	**142**	P	**P**	**04 56 00.3**	**+2.5**
OTVZ	**Oturere**	**49.56**	**142**	P	P	04 56 03.0	+5.2
YSS	**Yuzhno-Sakhali**	**49.59**	**4**	P	**P**	**04 55 56.2**	**-1.4**
YSS				IAmb	IAmb	04 55 59.0	
	comp=Z,56nm,1.2s						
YSS	**Yuzhno-Sakhali**	**49.59**	**4**	*ce*P	**P**	**04 55 57.0**	**-0.6**
YSS				pmax	pmax		
	comp=Z,31nm,0.8s						
THZ	**Tophouse**	**49.61**	**146**	P	**P**	**04 55 58.4**	**+0.4**
THZ				IAmb	IAmb	04 56 11.4	
	comp=Z,35nm,0.8s						
THZ	**Tophouse**	**49.61**	**146**	P	**P**	**04 56 00.3**	**+2.3**
WNVZ	**Wahianoa**	**49.62**	**142**	P	**P**	**04 56 02.3**	**+4.0**
MLZ	**Mavora Lakes**	**49.78**	**153**	P	P	04 56 05.4	+6.1
MUGZ	**Murupara**	**49.84**	**141**	P	**P**	**04 56 04.0**	**+4.2**
HHC	**Hu-ho-hao-te**	**49.85**	**333**	⇓*i*P	**P**	**04 56 00.3**	**+0.4**
HHC				sP	pP	04 56 06.4	-0.4
HHC				S	**S**	**05 03 15.0**	**+6.2**
HHC				pmax	pmax		
	comp=Z,42nm,1.1s						
HHC				LR	LR		
	comp=Z,4µm,19.9s						
HHC				LR	LR		
	comp=Z,3µm,18.5s						
HHC				LR	LR		
	comp=Z,5µm,21.4s						
URZ	**Urewera**	**49.93**	**140**	P	**P**	**04 56 02.6**	**+2.2**
URZ	**Urewera**	**49.93**	**140**	P	**P**	**04 56 01.6**	**+1.1**
LTZ	**Lake Taylor**	**49.96**	**148**	IAmb	IAmb	04 56 08.2	
	comp=Z,82nm,1.0s						
LTZ	**Lake Taylor**	**49.96**	**148**	P	**P**	**04 56 01.6**	**+1.0**
TUWZ	**Tuamarina**	**49.97**	**145**	P	**P**	**04 56 01.2**	**+0.6**
RPZ	**Rata Peaks**	**49.98**	**149**	P	**P**	**04 56 01.3**	**+0.5**
RPZ				IAMs_20	IAMs_20	05 19 20.6	
	comp=Z,9µm,20.0s						
RPZ	**Rata Peaks**	**49.98**	**149**	P	**P**	**04 56 02.7**	**+2.0**
RPZ	**Rata Peaks**	**49.98**	**149**	P	**P**	**04 56 02.1**	**+1.3**
TCW	**Tory Channel**	**50.02**	**145**	P	**P**	**04 56 01.4**	**+0.3**
LBZ	**Lake Benmore**	**50.03**	**151**	P	**P**	**04 56 02.9**	**+1.8**
RTZ	**Ruatahuna**	**50.05**	**141**	IAMs_20	IAMs_20	05 18 13.7	
	comp=Z,8µm,18.0s						
BKZ	**Black Stump Fm**	**50.07**	**141**	IAmb	IAmb	04 56 17.1	
	comp=Z,45nm,0.9s						
BKZ	**Black Stump Fm**	**50.07**	**141**	P	**P**	**04 56 02.4**	**+0.8**
HAZ	**Te Kaha**	**50.08**	**139**	P	**P**	**04 56 02.8**	**+1.3**
MTHZ	**Maungataniwha**	**50.10**	**141**	P	**P**	**04 56 03.4**	**+1.6**
RUGZ	**Raukumara Rang**	**50.12**	**139**	P	**P**	**04 56 02.5**	**+0.5**
KWHZ	**Kaweka Forest**	**50.18**	**142**	P	**P**	**04 56 04.0**	**+1.5**
OXZ	**Oxford**	**50.21**	**148**	P	**P**	**04 56 02.7**	**+0.2**
OXZ				IAmb	IAmb	04 56 10.2	
	comp=Z,52nm,0.8s						
NMHZ	**Naumai**	**50.23**	**141**	P	**P**	**04 56 05.1**	**+2.3**
MWZ	**Matawai**	**50.24**	**140**	P	**P**	**04 56 07.1**	**+4.3**
KRHZ	**Kereru**	**50.28**	**142**	P	**P**	**04 56 04.6**	**+1.4**
TSZ	**Takapari Road**	**50.29**	**143**	P	**P**	**04 56 03.8**	**+0.6**
RAHZ	**Arahi**	**50.30**	**141**	P	**P**	**04 56 04.4**	**+1.2**
SNZO	**South Karori**	**50.33**	**145**	IAMs_20	IAMs_20	05 16 47.0	
	comp=Z,7µm,20.0s						
SNZO	**South Karori**	**50.33**	**145**	P	**P**	**04 56 05.4**	**+2.0**
PKGZ	**Pakihiroa**	**50.33**	**139**	P	**P**	**04 56 05.5**	**+1.9**
PNHZ	**Pukenui**	**50.34**	**142**	P	**P**	**04 56 04.4**	**+0.8**
MCHZ	**McNeill Hill**	**50.37**	**142**	P	**P**	**04 56 07.3**	**+3.6**
BTO	**Baotou**	**50.37**	**332**	*e*P	**P**	**04 56 04.8**	**+1.0**
BTO				pP	**pP**	**04 56 11.6**	**+0.9**
BTO				sP	**sP**	**04 56 13.9**	**+0.6**
BTO				PP	**PP**	**04 57 58.8**	**-0.8**
BTO				S	**S**	**05 03 19.5**	**+3.5**
BTO				pmax	pmax		
	comp=Z,38nm,0.9s						
BTO				pmax	pmax		
	comp=Z,6µm,11.1s						
BTO				LR	LR		
	comp=Z,9µm,19.6s						
BTO				LR	LR		
	comp=Z,7µm,20.8s						
BTO				LR	LR		
	comp=Z,10µm,17.1s						
LZH	**Lanzhou**	**50.38**	**323**	*e*P	**P**	**04 56 04.6**	**+0.5**
LZH				pP	pP	04 56 10.4	-0.4
LZH				sP	sP	04 56 13.8	+0.2
LZH				pmax	pmax		
	comp=Z,200nm,1.3s						
SNGZ	**Shannon Statio**	**50.38**	**141**	P	**P**	**04 56 04.4**	**+0.5**
KHZ	**Kahutara**	**50.40**	**147**	P	**P**	**04 56 05.0**	**+1.1**
KHZ	**Kahutara**	**50.40**	**147**	P	**P**	**04 56 04.4**	**+0.5**
MRZ	**Mangatainoka R**	**50.43**	**144**	P	**P**	**04 56 03.4**	**-0.8**

MRZ				IAmb	IAmb	04 56 11.6	
	comp=Z,91nm,0.8s						
MRZ	**Mangatainoka R**	**50.43**	**144**	P	**P**	**04 56 04.1**	**-0.1**
TMZ	**Timaru**	**50.43**	**150**	P	**P**	**04 56 05.9**	**+1.8**
TWGZ	**Tauwhareparae**	**50.44**	**140**	P	**P**	**04 56 08.8**	**+4.4**
BHW	**Baring Head**	**50.49**	**145**	IAMs_20	IAMs_20	05 17 03.2	
	comp=Z,4µm,19.0s						
GVZ	**Greta Valley S**	**50.49**	**147**	P	**P**	**04 56 06.3**	**+1.7**
TKGZ	**Te Karaka**	**50.51**	**140**	P	**P**	**04 56 05.5**	**+0.7**
WMGZ	**Waiomatatini S**	**50.52**	**139**	P	**P**	**04 56 06.2**	**+1.2**
DVHZ	**Dannevirke**	**50.56**	**143**	P	**P**	**04 56 05.2**	**0.0**
XLT	**XiLinHaoTe**	**50.59**	**339**	*e*P	**P**	**04 56 04.3**	**-1.1**
XLT				pP	pP	04 56 08.3	-3.9
XLT				pmax	pmax		
	comp=Z,31nm,0.9s						
RIGZ	**Rimuhau**	**50.60**	**140**	P	**P**	**04 56 06.4**	**+0.8**
KAHZ	**Kahuranaki**	**50.69**	**142**	P	**P**	**04 56 09.4**	**+3.2**
PLWZ	**Palliser**	**50.81**	**145**	P	**P**	**04 56 07.3**	**+0.1**
PXZ	**Pawanui**	**50.82**	**142**	P	**P**	**04 56 09.4**	**+2.3**
BFZ	**Birch Farm**	**50.84**	**143**	IAmb	IAmb	04 56 08.2	
	comp=Z,63nm,0.8s						
BFZ	**Birch Farm**	**50.84**	**143**	P	**P**	**04 56 07.4**	**+0.1**
KLR	**Kul'dur**	**52.06**	**354**	P	**P**	**04 56 14.8**	**-1.5**
	comp=Z,12nm,0.6s,baz=192,slow=3.9,SNR=34						
	comp=Z,12nm,0.6s						
KLR	**Kul'dur**	**52.06**	**354**	*ce*P	**P**	**04 56 15.6**	**-0.6**
KLR				pmax	pmax		
	comp=Z,79nm,2.3s						
TYV	**Tymovskoe**	**53.48**	**3**	*e*P	**P**	**04 56 26.3**	**-0.3**
TYV				*e*S	**S**	**05 04 03.4**	**+5.3**
TYV				pmax	pmax		
	comp=Z,15nm,1.0s						
TYV				pmax	pmax		
	comp=Z,300nm,4.8s						
TYV				smax	smax		
	comp=N,500nm,6.6s						
TYV				smax	smax		
	comp=E,400nm,6.6s						
HEH	**HeiHe**	**53.61**	**351**	*e*P	**P**	**04 56 26.4**	**-1.3**
HEH				pmax	pmax		
	comp=E,42nm,1.0s						
HIA	**Hailar**	**54.27**	**345**	IAmb	IAmb	04 56 39.4	
	comp=Z,67nm,1.2s						
JOHN	**Johnston Islan**	**54.77**	**67**	P	**P**	**04 56 36.5**	**-0.1**
GTA	**Gaotai**	**54.97**	**324**	P	**P**	**04 56 38.4**	**+0.5**
GTA				sP	pP	04 56 46.1	+1.2
GTA				pmax	pmax		
	comp=Z,30nm,1.1s						
GTA				LR	LR		
	comp=Z,2µm,20.7s						
GTA				LR	LR		
	comp=Z,2µm,21.1s						
GTA				LR	LR		
	comp=Z,4µm,23.9s						
LSA	**Lhasa**	**55.58**	**309**	P	**P**	**04 56 42.3**	**-0.7**
LSA				pmax	pmax		
	comp=Z,37nm,1.2s						
GOMU	**GeErMu**	**56.20**	**318**	P	**P**	**04 56 48.4**	**+1.2**
GOMU				pP	pP	04 56 53.3	-0.7
GOMU				sP	sP	04 56 56.5	-0.3
GOMU				pmax	pmax		
	comp=Z,23nm,1.0s						
ZEA	**Zeya**	**57.03**	**352**	*e*P	**P**	**04 56 52.0**	**-0.2**
ZEA				pmax	pmax		
	comp=N,30nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,40nm,1.2s						
ULN	**Ulaanbaatar**	**57.39**	**335**	P	**P**	**04 56 54.8**	**-0.4**
ULN				IAmb	IAmb	04 56 57.8	
	comp=Z,74nm,1.3s						
ULN	**Ulaanbaatar**	**57.39**	**335**	*ce*P	**P**	**04 56 55.1**	**0.0**
ULN				pmax	pmax		
	comp=Z,81nm,1.7s						
SONM	**Songino Array**	**57.64**	**335**	P	**P**	**04 56 55.9**	**-0.9**
SONM	**Songino Array**	**57.64**	**335**	P	**P**	**04 56 56.6**	**-0.3**
	comp=Z,19nm,0.9s,baz=152,slow=6.4,SNR=48						
	comp=Z,19nm,0.9s						
PEA0B	**Petropavlovsk-**	**57.89**	**14**	IAmb	IAmb	04 57 02.7	
	comp=Z,67nm,1.2s						
PEA0B	**Petropavlovsk-**	**57.89**	**14**	*i* P	**P**	**04 56 58.0**	**-0.3**
PETK	**Petropavlovsk-**	**57.89**	**14**	P	**P**	**04 56 57.6**	**-0.7**
PETK	**Petropavlovsk-**	**57.89**	**14**	P	**P**	**04 56 58.1**	**-0.3**
	comp=Z,8.8nm,0.6s,baz=166,slow=5.7,SNR=26						
	comp=Z,8.8nm,0.6s						
PET	**Petropavlovsk**	**58.04**	**14**	IAMs_20	IAMs_20	05 25 57.8	
	comp=Z,4µm,22.0s						
CIT	**Chita**	**58.49**	**342**	*e*P	**P**	**04 57 02.0**	**-0.6**
CIT				*e*		04 57 13.2	
CIT				*e*		04 57 54.2	
CIT				*e*		04 59 10.2	
CIT				*e*		05 05 19.0	
CIT				pmax	pmax		
	comp=Z,229nm,1.8s						
ZAK	**Zakamensk**	**60.91**	**335**	*e*P	**P**	**04 57 18.7**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,82nm,1.2s						
HYB	**Hyderabad**	**62.42**	**291**	*e*P	**P**	**04 57 30.4**	**+0.3**
HYB				*e*pP	**pP**	**04 57 36.6**	**-0.4**
HYB				*e*S	**S**	**05 05 56.7**	**+0.3**
MA2	**Magadan**	**62.84**	**7**	P	**P**	**04 57 30.9**	**-1.2**
MA2				IAmb	IAmb	04 57 34.3	
	comp=Z,41nm,0.9s						
MA2	**Magadan**	**62.84**	**7**	P	**P**	**04 57 31.7**	**-0.3**
	comp=Z,32nm,0.8s,baz=168,slow=5.0,SNR=12						
	comp=Z,32nm,0.8s						
MA2	**Magadan**	**62.84**	**7**	P	**P**	**04 57 31.6**	**-0.4**
	comp=Z,48nm,0.9s						
WMQ	**Urumqi**	**64.90**	**322**	*e*P	**P**	**04 57 46.3**	**+0.2**
WMQ				pmax	pmax		
	comp=Z,120nm,1.1s						
WMQ				LR	LR		
	comp=Z,3µm,18.7s						
WMQ				LR	LR		
	comp=Z,2µm,18.7s						
WMQ				LR	LR		
	comp=Z,3µm,22.9s						
YAK	**Yakutsk**	**64.91**	**355**	P	**P**	**04 57 44.6**	**-1.0**
YAK	**Yakutsk**	**64.91**	**355**	P	**P**	**04 57 45.4**	**-0.2**
	comp=Z,183nm,0.7s,baz=154,slow=3.5,SNR=26						
	comp=Z,183nm,0.7s						
YAK	**Yakutsk**	**64.91**	**355**	*ce*P	**P**	**04 57 45.6**	**0.0**
YAK				pmax	pmax		
	comp=Z,251nm,1.0s						
KIWB	**Kanaga Island**	**66.00**	**28**	P	**P**	**04 57 52.8**	**-0.1**
ADK	**Adak**	**66.25**	**28**	P	**P**	**04 57 54.6**	**+0.1**
SEY	**Seymchan**	**66.29**	**7**	P	**P**	**04 57 54.7**	**+0.2**
	comp=Z,21nm,0.7s,baz=181,slow=5.3,SNR=54						
	comp=Z,21nm,0.7s						
CASY	**Casey**	**66.45**	**192**	P	**P**	**04 57 57.8**	**+2.3**
CASY				IAmb	IAmb	04 58 09.4	
	comp=Z,53nm,1.1s						
KIP	**Kipapa**	**66.47**	**65**	P	**P**	**04 57 56.9**	**+0.3**
KIP	**Kipapa**	**66.47**	**65**	P	**P**	**04 57 56.9**	**+0.3**
KIP				pmax	pmax		
	comp=Z,207nm,1.5s						
ATKA	**Atka Island**	**67.65**	**29**	P	**P**	**04 58 02.7**	**-0.6**
ATKA	**Atka Island**	**67.65**	**29**	P	**P**	**04 58 03.0**	**-0.4**
KHU	**Kahuku**	**68.23**	**68**	P	**P**	**04 58 08.3**	**+0.3**
KHU	**Kahuku**	**68.23**	**68**	P	**P**	**04 58 08.3**	**+0.3**
KHU				pmax	pmax		
	comp=Z,701nm,2.0s						
MWH	**Mokuaweoweo**	**68.29**	**68**	IAMs_20	IAMs_20	05 22 27.0	
	comp=Z,4µm,18.0s						
POHA	**Pohakuloa**	**68.40**	**68**	P	**P**	**04 58 09.5**	**+0.5**
POHA	**Pohakuloa**	**68.40**	**68**	P	**P**	**04 58 09.6**	**+0.5**
HMH	**Humu‘ula Sheep**	**68.42**	**68**	IAMs_20	IAMs_20	05 28 01.4	
	comp=Z,4µm,19.0s						
ZSN	**Zaisan**	**68.46**	**324**	*e*P	**P**	**04 58 07.7**	**-0.9**
ZSN				pmax	pmax		
	comp=Z,19nm,0.7s						
ZSN	**Zaisan**	**68.46**	**324**	*e*P	**P**	**04 58 07.8**	**-0.9**
	comp=Z,19nm,0.7s						
MLH	**Mauna Loa**	**68.49**	**68**	P	**P**	**04 58 10.4**	**+0.8**
HATHI	**Halema‘uma‘u T**	**68.59**	**68**	IAMs_20	IAMs_20	05 26 47.0	
	comp=Z,3µm,20.0s						
KNHH	**Kane Nui o Ham**	**68.67**	**68**	P	**P**	**04 58 10.8**	**+0.3**
JOKA	**Jonika Flow**	**68.83**	**68**	P	**P**	**04 58 10.5**	**-1.0**
JOKA				IAmb	IAmb	04 58 14.3	
	comp=Z,46nm,0.7s						
MK31	**Makanchi Array**	**69.68**	**322**	*ce*P	**P**	**04 58 16.0**	**-0.3**
MKAR	**Makanchi Array**	**69.68**	**322**	P	**P**	**04 58 15.9**	**-0.3**
MKAR	**Makanchi Array**	**69.68**	**322**	P	**P**	**04 58 15.8**	**-0.4**
	comp=Z,52nm,0.9s,baz=108,slow=7.8,SNR=117						
MKAR				PKPPKP	**P'P'df**	**05 26 23.8**	**+1.0**
	comp=Z,1.0nm,0.8s,baz=278,slow=4.5,SNR=5.9						
	comp=Z,52nm,0.9s						
MKAR	**Makanchi Array**	**69.68**	**322**	P	**P**	**04 58 16.0**	**-0.3**
MAKZ	**Makanchi**	**69.88**	**322**	P	**P**	**04 58 16.1**	**-1.4**
MAKZ	**Makanchi**	**69.88**	**322**	P	**P**	**04 58 16.1**	**-1.4**
MAKZ				pmax	pmax		
	comp=Z,129nm,1.2s						
SHLS	**Shalkode**	**69.90**	**318**	*e*P	**P**	**04 58 15.2**	**-2.6**
SHLS				pmax	pmax		
	comp=Z,30nm,0.9s						
SHLS	**Shalkode**	**69.90**	**318**	*e*P	**P**	**04 58 15.2**	**-2.6**
	comp=Z,30nm,0.9s						
UZB	**Uzynbulak**	**70.19**	**318**	*e*P	**P**	**04 58 18.8**	**-0.8**
UZB				pmax	pmax		
	comp=Z,30nm,0.9s						
UZB	**Uzynbulak**	**70.19**	**318**	*e*P	**P**	**04 58 18.8**	**-0.8**
	comp=Z,30nm,0.9s						
TARG	**Taragay, Kyrgy**	**70.47**	**316**	IAmb	IAmb	04 58 33.1	
	comp=Z,32nm,0.9s						
KPKS	**Kokpek**	**70.55**	**318**	*e*P	**P**	**04 58 21.0**	**-0.7**
KPKS	**Kokpek**	**70.55**	**318**	*e*P	**P**	**04 58 21.0**	**-0.7**
SATY	**Saty**	**70.57**	**318**	*e*P	**P**	**04 58 21.1**	**-0.8**
SATY				pmax	pmax		
	comp=Z,42nm,1.0s						
SATY	**Saty**	**70.57**	**318**	*e*P	**P**	**04 58 21.1**	**-0.8**
	comp=Z,42nm,1.0s						
KSH	**Kashi**	**70.96**	**313**	P	**P**	**04 58 25.4**	**+1.0**
KSH				pmax	pmax		
	comp=Z,48nm,1.2s						
KSH				LR	LR		
	comp=Z,2µm,16.5s						
KSH				LR	LR		
	comp=Z,2µm,21.0s						
KSH				LR	LR		
	comp=Z,5µm,22.3s						
KDJ	**Kajisay**	**71.05**	**316**	IAmb	IAmb	04 58 27.7	
	comp=Z,46nm,1.0s						
NIL	**Nilore**	**71.19**	**307**	P	**P**	**04 58 24.5**	**-1.3**
NIL				IAmb	IAmb	04 58 29.3	
	comp=Z,30nm,0.8s						
NIL	**Nilore**	**71.19**	**307**	P	**P**	**04 58 24.5**	**-1.3**
NIL				pmax	pmax		
	comp=Z,30nm,0.8s						
TDK	**Taldyqorghan**	**71.35**	**320**	*e*P	**P**	**04 58 25.8**	**-0.7**
TDK	**Taldyqorghan**	**71.35**	**320**	*e*P	**P**	**04 58 25.9**	**-0.6**
ARXS	**Arharly**	**71.41**	**319**	*i* P	**P**	**04 58 27.4**	**+0.4**
MDOK	**Medeo**	**71.53**	**317**	*e*P	**P**	**04 58 26.9**	**-0.8**
MDOK	**Medeo**	**71.53**	**317**	*e*P	**P**	**04 58 27.0**	**-0.8**
ULHL	**Ulahol**	**71.74**	**316**	P	**P**	**04 58 31.7**	**+2.5**
	SNR=8.4						
ZALV	**Zalesovo Beam**	**71.85**	**330**		**P**	**04 58 27.8**	**-1.4**
ZALV	**Zalesovo Beam**	**71.85**	**330**	P	**P**	**04 58 28.3**	**-0.9**
	comp=Z,13nm,0.7s,baz=107,slow=5.1,SNR=33						
	comp=Z,13nm,0.7s						
BOOM	**Boomskoye usch**	**72.04**	**316**	IAmb	IAmb	04 58 33.6	
	comp=Z,76nm,1.2s						
KUU	**Kurty**	**72.28**	**318**	*e*P	**P**	**04 58 31.4**	**-0.7**
KUU	**Kurty**	**72.28**	**318**	*e*P	**P**	**04 58 31.4**	**-0.7**
TBI	**Tubuai**	**72.41**	**114**	*e*LR	LR	05 20 39.1	
	comp=Z,16µm,27.2s						
TBI				*e*LR	LR	05 20 42.8	
	comp=Z,4µm,28.8s						
UNV	**Unalaska Valle**	**72.41**	**31**	P	**P**	**04 58 31.8**	**-0.8**
UNV				IAmb	IAmb	04 58 35.7	
	comp=Z,79nm,1.1s						
UNV	**Unalaska Valle**	**72.41**	**31**	P	**P**	**04 58 32.6**	**0.0**
	baz=239						
TKM2	**Tokmak 2**	**72.43**	**317**	P	**P**	**04 58 33.3**	**+0.1**
	SNR=31						
P08K	**Saint George I**	**72.43**	**27**	P	**P**	**04 58 33.0**	**+0.3**
	baz=236						
SPIA	**Saint Paul Isl**	**72.45**	**26**	P	**P**	**04 58 32.8**	**+0.1**
	baz=235						
AKUT	**Akutan**	**72.93**	**31**	P	**P**	**04 58 35.1**	**-0.6**
AKUT	**Akutan**	**72.93**	**31**	P	**P**	**04 58 35.9**	**+0.2**
UCH	**Uchtor**	**72.93**	**316**	P	**P**	**04 58 39.5**	**+2.9**
	SNR=8.9						
CHMS	**Chumysh**	**73.03**	**317**	P	**P**	**04 58 38.4**	**+1.8**
	SNR=7.8						
AAK	**Ala-Archa**	**73.09**	**316**	P	**P**	**04 58 39.1**	**+2.0**
	SNR=13						
AAK	**Ala-Archa**	**73.09**	**316**	P	**P**	**04 58 36.5**	**-0.6**
AAK	**Ala-Archa**	**73.09**	**316**	P	**P**	**04 58 36.2**	**-0.9**
	comp=Z,23nm,1.1s,baz=120,slow=4.9,SNR=28						
AAK				LR	LR	05 35 03.9	
	comp=Z,2µm,19.5s,baz=323,slow=40						
	comp=Z,23nm,1.1s						
AAK	**Ala-Archa**	**73.09**	**316**	*ce*P	**P**	**04 58 38.2**	**+1.1**
AAK				pmax	pmax		
	comp=Z,42nm,1.3s						
BILL	**Bilibino**	**73.19**	**11**	P	**P**	**04 58 35.4**	**-1.5**
BILL	**Bilibino**	**73.19**	**11**	*ce*P	**P**	**04 58 36.6**	**-0.4**
BILL				pmax	pmax		
	comp=Z,30nm,1.0s						
SGDS	**Sogindy**	**73.28**	**317**	*e*P	**P**	**04 58 37.3**	**-0.8**
USP	**Ospenovka**	**73.30**	**317**	P	**P**	**04 58 38.3**	**0.0**
	SNR=56						
AML	**Almayashu**	**73.47**	**315**	P	**P**	**04 58 42.5**	**+2.9**
	SNR=40						
EKS2	**Erkin-Say**	**73.59**	**316**	P	**P**	**04 58 42.8**	**+2.8**
	SNR=30						
KURK	**Kurchatov**	**73.62**	**325**	P	**P**	**04 58 39.1**	**-0.7**
KURK				IAmb	IAmb	04 58 41.8	
	comp=Z,45nm,1.0s						
KURK	**Kurchatov**	**73.62**	**325**	*ce*P	**P**	**04 58 39.4**	**-0.4**
KURK				pmax	pmax		
	comp=Z,54nm,1.0s						
KURBB	**Kurchatov Arra**	**73.63**	**325**	P	**P**	**04 58 38.8**	**-1.1**
	comp=Z,27nm,0.9s,baz=114,slow=5.7,SNR=72						
	comp=Z,27nm,0.9s						
ARSB	**Arslanbob**	**73.71**	**314**	IAmb	IAmb	04 58 44.2	
	comp=Z,125nm,1.4s						
DRK	**Karamyk**	**74.00**	**312**	IAmb	IAmb	04 58 46.2	
	comp=Z,56nm,1.2s						
BTLS	**Baital**	**74.22**	**318**	*e*P	**P**	**04 58 42.8**	**-0.7**
BTLS				*e*S	**S**	**05 08 16.5**	**+0.4**
BTLS				pmax	pmax		
	comp=Z,28nm,1.3s						
BTLS	**Baital**	**74.22**	**318**	*e*P	**P**	**04 58 42.9**	**-0.7**
	comp=Z,28nm,1.3s						
BTLS				*e*S	**S**	**05 08 16.6**	**+0.4**
FALS	**False Pass**	**74.48**	**31**	P	**P**	**04 58 45.2**	**+0.4**
	baz=242						
TIXI	**Tiksi**	**74.49**	**357**	P	**P**	**04 58 42.7**	**-1.8**
TIXI				IAmb	IAmb	04 58 51.4	
	comp=Z,66nm,1.2s						
TIXI	**Tiksi**	**74.49**	**357**	P	**P**	**04 58 42.5**	**-2.0**
	comp=Z,44nm,1.0s,baz=178,slow=3.1,SNR=33						
	comp=Z,44nm,1.0s						
TIXI	**Tiksi**	**74.49**	**357**	*ce*P	**P**	**04 58 43.0**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,39nm,1.0s						
KBL	**Kabul**	**74.79**	**307**	P	**P**	**04 58 46.2**	**-1.1**
KBL	**Kabul**	**74.79**	**307**	P	**P**	**04 58 46.2**	**-1.1**
KBL				pmax	pmax		
	comp=Z,18nm,0.9s						
DZA	**Taraz**	**75.37**	**316**	*e*P	**P**	**04 58 49.5**	**-0.8**
DZA				pmax	pmax		
	comp=Z,17nm,0.8s						
DZA	**Taraz**	**75.37**	**316**	*e*P	**P**	**04 58 49.5**	**-0.8**
	comp=Z,17nm,0.8s						
S12K	**Black Hills**	**75.56**	**30**	P	**P**	**04 58 50.4**	**-0.6**
	baz=243,SNR=36						
VNDA	**Vanda**	**75.80**	**175**	P	**P**	**04 58 52.0**	**-0.1**
VNDA	**Vanda**	**75.80**	**175**	P	**P**	**04 58 52.4**	**+0.3**
	comp=Z,29nm,0.8s,baz=322,slow=6.0,SNR=60						
	comp=Z,29nm,0.8s						
GAMB	**Gambell**	**75.83**	**20**	P	**P**	**04 58 52.0**	**-0.3**
	baz=232						
SIMJ	**Simiganj**	**75.86**	**311**	P	**P**	**04 58 51.7**	**-1.6**
SIMJ				IAmb	IAmb	04 58 56.7	
	comp=Z,35nm,0.8s						
M11K	**Mekoryuk**	**75.99**	**25**	P	**P**	**04 58 53.5**	**+0.2**
	baz=238						
KKAR	**Karatay Array**	**76.01**	**316**	P	**P**	**04 58 52.6**	**-1.3**
KKAR	**Karatay Array**	**76.01**	**316**	P	**P**	**04 58 52.6**	**-1.3**
IUG	**Iuzhnay**	**76.07**	**315**	*e*P	**P**	**04 58 53.5**	**-0.8**
IUG				pmax	pmax		
	comp=Z,45nm,1.1s						
IUG	**Iuzhnay**	**76.07**	**315**	*e*P	**P**	**04 58 53.5**	**-0.8**
	comp=Z,45nm,1.1s						
SDPT	**Sand Point**	**76.21**	**31**	P	**P**	**04 58 55.6**	**+0.9**
SDPT	**Sand Point**	**76.21**	**31**	P	**P**	**04 58 55.1**	**+0.4**
	baz=244						
CHM	**Chimkent**	**76.42**	**315**	*e*P	**P**	**04 58 55.6**	**-0.6**
CHM				pmax	pmax		
	comp=Z,51nm,1.6s						
CHM	**Chimkent**	**76.42**	**315**	*e*P	**P**	**04 58 55.7**	**-0.6**
	comp=Z,51nm,1.6s						
CNBA	**Chernabura Isl**	**76.44**	**32**	IAmb	IAmb	04 58 58.8	
	comp=Z,39nm,0.9s						
CHNA	**Chernabura Isl**	**76.45**	**32**	P	**P**	**04 58 58.8**	**+2.8**
CHNA	**Chernabura Isl**	**76.45**	**32**	P	**P**	**04 58 56.8**	**+0.7**
	baz=245						
BRLS	**Borolday**	**76.46**	**315**	*e*P	**P**	**04 58 56.0**	**-0.4**
BRLS	**Borolday**	**76.46**	**315**	*e*P	**P**	**04 58 56.1**	**-0.4**
SBA	**Scott Base**	**76.57**	**174**	P	**P**	**04 58 58.0**	**+1.6**
SBA	**Scott Base**	**76.57**	**174**	P	**P**	**04 58 58.0**	**+1.6**
SBA				pmax	pmax		
	comp=Z,268nm,2.0s						
S14K	**Fog Glacier**	**77.09**	**30**	P	**P**	**04 58 59.8**	**0.0**
	baz=245,SNR=5.8						
M13K	**Dall Lake**	**77.22**	**26**	P	**P**	**04 59 00.8**	**+0.5**
	baz=240,SNR=13						
K13K	**Kusilvak Mount**	**77.44**	**24**	P	**P**	**04 59 01.4**	**-0.1**
K13K	**Kusilvak Mount**	**77.44**	**24**	P	**P**	**04 59 01.7**	**+0.2**
	baz=239,SNR=40						
O14K	**Tigyukauivet M**	**77.59**	**27**	IAmb	IAmb	04 59 07.2	
	comp=Z,44nm,0.8s						
O14K	**Tigyukauivet M**	**77.59**	**27**	P	**P**	**04 59 02.5**	**+0.1**
	baz=243,SNR=5.6						
N14K	**Kuskokwak Cree**	**77.71**	**26**	P	**P**	**04 59 02.5**	**-0.6**
	baz=242						
L14K	**Kuka Creek**	**77.96**	**25**	P	**P**	**04 59 04.5**	**+0.1**
L14K	**Kuka Creek**	**77.96**	**25**	P	**P**	**04 59 04.7**	**+0.3**
	baz=241,SNR=74						
M14K	**Bethel**	**77.98**	**26**	P	**P**	**04 59 04.7**	**+0.2**
	baz=242,SNR=38						
TNA	**Tin City**	**78.20**	**20**	IAmb	IAmb	04 59 16.7	
	comp=Z,125nm,1.6s						
TNA	**Tin City**	**78.20**	**20**	P	**P**	**04 59 05.5**	**-0.1**
	baz=235						
O15K	**Ungalikthiuk R**	**78.21**	**28**	P	**P**	**04 59 05.6**	**-0.3**
	baz=244,SNR=5.9						
J14K	**Nanvaranak Lak**	**78.30**	**23**	IAmb	IAmb	04 59 13.9	
	comp=Z,55nm,1.3s						
J14K	**Nanvaranak Lak**	**78.30**	**23**	P	**P**	**04 59 06.1**	**-0.2**
	baz=240,SNR=13						
M15K	**Kasigluk River**	**78.51**	**26**	P	**P**	**04 59 07.7**	**+0.2**
	baz=243,SNR=27						
N15K	**Kwethluk River**	**78.53**	**27**	IAmb	IAmb	04 59 18.9	
	comp=Z,84nm,1.1s						
N15K	**Kwethluk River**	**78.53**	**27**	P	**P**	**04 59 07.8**	**+0.1**
	baz=244,SNR=26						
ANM	**Nome**	**78.55**	**21**	P	**P**	**04 59 08.5**	**+0.8**
	baz=238						
L15K	**Ungalak Mounta**	**78.62**	**25**	P	**P**	**04 59 07.8**	**-0.3**
	baz=242,SNR=23						
F14K	**Arctic Creek**	**78.71**	**20**	P	**P**	**04 59 08.9**	**+0.4**
	baz=237						
K15K	**Wolf Creek Mou**	**78.90**	**24**	P	**P**	**04 59 08.7**	**-0.9**
K15K				IAmb	IAmb	04 59 20.3	
	comp=Z,95nm,1.2s						
K15K	**Wolf Creek Mou**	**78.90**	**24**	P	**P**	**04 59 09.9**	**+0.3**
	baz=242,SNR=31						
CHIR	**Chirikof Islan**	**78.92**	**32**	P	**P**	**04 59 09.6**	**-0.3**
	baz=248						
P16K	**Nushagak River**	**79.01**	**28**	P	**P**	**04 59 09.7**	**-0.5**
	baz=246						
O16K	**Kokwok River B**	**79.19**	**28**	P	**P**	**04 59 11.1**	**-0.2**
	baz=245,SNR=23						
BVAR	**Borovoye Array**	**79.21**	**325**	P	**P**	**04 59 11.1**	**-0.4**
	comp=Z,38nm,0.8s,baz=114,slow=7.3,SNR=65						
	comp=Z,38nm,0.8s						
N16K	**Nishlik Lake**	**79.26**	**27**	P	**P**	**04 59 12.1**	**+0.4**
	baz=245,SNR=33						
G15K	**Niukluk**	**79.27**	**21**	P	**P**	**04 59 12.2**	**+0.7**
	baz=239						
BRVK	**Borovoye**	**79.28**	**325**	P	**P**	**04 59 10.8**	**-1.1**
BRVK				IAmb	IAmb	04 59 18.4	
	comp=Z,41nm,0.9s						
BRVK	**Borovoye**	**79.28**	**325**	*ce*P	**P**	**04 59 10.8**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,59nm,1.1s						
M16K	**Timber Creek**	**79.41**	**26**	IAmb	IAmb	04 59 17.1	
	comp=Z,61nm,0.9s						
M16K	**Timber Creek**	**79.41**	**26**	P	**P**	**04 59 13.0**	**+0.6**
	baz=244,SNR=36						
F15K	**North Star Dit**	**79.42**	**21**	IAmb	IAmb	04 59 23.8	
	comp=Z,139nm,1.6s						
F15K	**North Star Dit**	**79.42**	**21**	P	**P**	**04 59 12.5**	**+0.1**
	baz=238,SNR=11						
L16K	**Owhat River**	**79.49**	**25**	P	**P**	**04 59 12.7**	**-0.2**
	baz=244,SNR=30						
Q16K	**King Salmon**	**79.50**	**29**	P	**P**	**04 59 13.3**	**+0.4**
	baz=247						
Q17K	**Contact Creek**	**79.71**	**29**	P	**P**	**04 59 14.1**	**-0.2**
	baz=248,SNR=21						
O17K	**Koliganek Bris**	**79.73**	**28**	P	**P**	**04 59 14.7**	**+0.5**
	baz=246,SNR=72						
J16K	**Anvik River**	**79.74**	**24**	P	**P**	**04 59 14.8**	**+0.7**
	baz=242,SNR=24						
H16K	**Elim**	**79.75**	**22**	P	**P**	**04 59 14.5**	**+0.3**
	baz=241						
P17K	**Kvichak River**	**79.81**	**28**	P	**P**	**04 59 14.7**	**+0.1**
	baz=247						
SII	**Sitkinak Islan**	**79.94**	**31**	P	**P**	**04 59 16.2**	**+0.8**
SII	**Sitkinak Islan**	**79.94**	**31**	P	**P**	**04 59 15.0**	**-0.4**
	baz=249						
I17K	**Unalakleet**	**79.98**	**23**	P	**P**	**04 59 15.8**	**+0.3**
	baz=242,SNR=11						
N17K	**Nushagak Hills**	**79.99**	**27**	IAmb	IAmb	04 59 29.0	
	comp=Z,52nm,1.0s						
N17K	**Nushagak Hills**	**79.99**	**27**	P	**P**	**04 59 15.9**	**+0.3**
	baz=246,SNR=29						
G16K	**Koyuk River**	**80.08**	**21**	P	**P**	**04 59 15.6**	**-0.3**
G16K				IAmb	IAmb	04 59 27.2	
	comp=Z,193nm,1.9s						
G16K	**Koyuk River**	**80.08**	**21**	P	**P**	**04 59 15.7**	**-0.3**
	baz=240						
R18K	**Karluk**	**80.16**	**30**	P	**P**	**04 59 16.2**	**-0.4**
	baz=249						
L17K	**Donlin**	**80.18**	**25**	P	**P**	**04 59 16.8**	**+0.3**
	baz=245,SNR=17						
M17K	**Holitna River**	**80.24**	**26**	IAmb	IAmb	04 59 30.4	
	comp=Z,100nm,1.1s						
M17K	**Holitna River**	**80.24**	**26**	P	**P**	**04 59 16.4**	**-0.6**
	baz=246,SNR=42						
Q18K	**Katmai Hardscr**	**80.28**	**29**	P	**P**	**04 59 16.3**	**-1.1**
	baz=248,SNR=24						
J17K	**VABM Dome**	**80.40**	**24**	IAmb	IAmb	04 59 25.5	
	comp=Z,66nm,1.1s						
J17K	**VABM Dome**	**80.40**	**24**	P	**P**	**04 59 18.1**	**+0.3**
	baz=244,SNR=31						
K17K	**Iditarod**	**80.43**	**25**	P	**P**	**04 59 18.3**	**+0.4**
	baz=245,SNR=46						
P18K	**Big Mountain,**	**80.45**	**28**	P	**P**	**04 59 18.1**	**-0.1**
	baz=248						
C16K	**Lisburne Hills**	**80.57**	**18**	IAmb	IAmb	04 59 28.5	
	comp=Z,75nm,1.6s						
C16K	**Lisburne Hills**	**80.57**	**18**	P	**P**	**04 59 18.7**	**+0.2**
	baz=237						
OHAK	**Old Harbor**	**80.63**	**31**	IAmb	IAmb	04 59 22.2	
	comp=Z,55nm,0.8s						
OHAK	**Old Harbor**	**80.63**	**31**	P	**P**	**04 59 19.8**	**+0.7**
OHAK	**Old Harbor**	**80.63**	**31**	P	**P**	**04 59 18.9**	**-0.2**
	baz=250,SNR=21						
O18K	**Koktuh Hills**	**80.64**	**28**	IAmb	IAmb	04 59 28.9	
	comp=Z,56nm,1.3s						
O18K	**Koktuh Hills**	**80.64**	**28**	P	**P**	**04 59 18.8**	**-0.3**
	baz=248						
N18K	**Kilae Creek**	**80.64**	**27**	IAmb	IAmb	04 59 30.7	
	comp=Z,113nm,1.6s						
N18K	**Kilae Creek**	**80.64**	**27**	P	**P**	**04 59 19.5**	**+0.4**
	baz=247,SNR=17						
G17K	**Kiwalik Mounta**	**80.76**	**22**	P	**P**	**04 59 20.2**	**+0.6**
	baz=242,SNR=22						
H17K	**Granite Mounta**	**80.77**	**22**	P	**P**	**04 59 19.6**	**-0.1**
	baz=243,SNR=13						
L18K	**Granite Mounta**	**80.90**	**25**	IAmb	IAmb	04 59 31.3	
	comp=Z,101nm,1.4s						
L18K	**Granite Mounta**	**80.90**	**25**	P	**P**	**04 59 20.7**	**+0.2**
	baz=246,SNR=32						
M18K	**Stony River**	**80.99**	**26**	P	**P**	**04 59 21.4**	**+0.5**
	baz=247,SNR=37						
D17K	**Noatak River**	**80.99**	**19**	P	**P**	**04 59 21.5**	**+0.7**
	baz=240,SNR=16						
F17K	**Baldwin Pennin**	**80.99**	**21**	P	**P**	**04 59 21.0**	**+0.2**
	baz=241						
Q19K	**Cape Douglas,**	**81.05**	**29**	P	**P**	**04 59 21.3**	**0.0**
	baz=250						
E17K	**Hotham Inlet**	**81.10**	**20**	P	**P**	**04 59 22.0**	**+0.6**
	baz=241						
KDAK	**Kodiak Island**	**81.18**	**30**	P	**P**	**04 59 21.8**	**-0.2**
KDAK	**Kodiak Island**	**81.18**	**30**	P	**P**	**04 59 21.8**	**-0.2**

KDAK				pmax	pmax		
	comp=Z,127nm,1.2s						
KDAK	Kodiak Island	81.18	30	P	P	04 59 22.2	+0.2
	baz=251						
O19K	Port Alsworth	81.18	28	IAmb	IAmb	04 59 31.4	
	comp=Z,63nm,1.4s						
O19K	Port Alsworth	81.18	28	P	P	04 59 22.2	+0.2
	baz=249						
RDOG	Red Dog Mine	81.23	19	IAmb	IAmb	04 59 29.1	
	comp=Z,52nm,1.0s						
RDOG	Red Dog Mine	81.23	19	P	P	04 59 22.6	+0.5
	baz=240						
N19K	Bonanza Creek	81.33	27	IAmb	IAmb	04 59 33.4	
	comp=Z,96nm,1.2s						
N19K	Bonanza Creek	81.33	27	P	P	04 59 22.9	-0.1
	baz=248,SNR=31						
C17K	DeLong Mountai	81.36	19	P	P	04 59 23.0	+0.2
	baz=239,SNR=15						
J18K	Innoko River	81.39	24	IAmb	IAmb	04 59 33.2	
	comp=Z,61nm,1.4s						
J18K	Innoko River	81.39	24	P	P	04 59 23.2	+0.1
	baz=246,SNR=23						
H18K	Honhosa River	81.46	22	IAmb	IAmb	04 59 33.2	
	comp=Z,96nm,1.9s						
H18K	Honhosa River	81.46	22	P	P	04 59 23.5	+0.1
	baz=244,SNR=7.7						
P19K	Oil Pt	81.50	28	IAmb	IAmb	04 59 33.0	
	comp=Z,60nm,1.1s						
P19K	Oil Pt	81.50	28	P	P	04 59 23.8	+0.1
	baz=250,SNR=6.3						
Q20K	Shuyak Island	81.55	30	P	P	04 59 24.5	+0.5
	baz=251						
SYI	Shuyak Island	81.55	30	IAmb	IAmb	04 59 26.7	
	comp=Z,67nm,1.1s						
F18K	Selawik	81.63	21	P	P	04 59 23.9	-0.2
	baz=243						
ILSW	Iliamna Southw	81.66	28	IAmb	IAmb	04 59 34.2	
	comp=Z,74nm,1.5s						
G18K	Tagagawik	81.67	22	P	P	04 59 24.0	-0.5
	baz=244,SNR=29						
L19K	White Mountain	81.68	26	P	P	04 59 24.2	-0.4
L19K				IAmb	IAmb	04 59 28.1	
	comp=Z,63nm,1.0s						
L19K	White Mountain	81.68	26	P	P	04 59 24.6	0.0
	baz=248,SNR=57						
E18K	Tukpahlearik C	81.68	20	P	P	04 59 24.1	-0.4
	baz=242,SNR=23						
M19K	Big River Lodg	81.78	26	IAmb	IAmb	04 59 35.8	
	comp=Z,60nm,1.2s						
M19K	Big River Lodg	81.78	26	P	P	04 59 25.2	+0.1
	baz=248,SNR=27						
GCSA	Galena City Sc	81.86	23	P	P	04 59 25.4	-0.1
	baz=246						
O20K	Slope Mountain	81.93	28	P	P	04 59 25.2	-0.9
	baz=250						
RED	Redoubt Volcan	81.98	28	IAmb	IAmb	04 59 35.9	
	comp=Z,71nm,1.4s						
J19K	Poorman	82.05	24	IAmb	IAmb	04 59 30.1	
	comp=Z,50nm,1.1s						
J19K	Poorman	82.05	24	P	P	04 59 26.1	-0.5
	baz=247,SNR=47						
C18K	Utukok River	82.07	19	IAmb	IAmb	04 59 36.5	
	comp=Z,131nm,2.0s						
C18K	Utukok River	82.07	19	P	P	04 59 26.1	-0.5
	baz=241,SNR=17						
L20K	Farewell, AK	82.21	26	P	P	04 59 27.5	+0.1
	baz=249,SNR=42						
B18K	Kokolik River	82.23	18	P	P	04 59 27.2	-0.1
	baz=240,SNR=13						
HOM	Homer	82.26	29	P	P	04 59 27.7	0.0
	baz=251						
M20K	Styx River	82.33	26	IAmb	IAmb	04 59 43.4	
	comp=Z,93nm,1.1s						
M20K	Styx River	82.33	26	P	P	04 59 28.3	+0.2
	baz=250						
H19K	Roundabout Mou	82.34	22	IAmb	IAmb	04 59 35.4	
	comp=Z,62nm,1.3s						
H19K	Roundabout Mou	82.34	22	P	P	04 59 28.0	0.0
	baz=246,SNR=29						
G19K	Purcell Mounta	82.36	22	P	P	04 59 28.1	0.0
	baz=245,SNR=26						
F19K	Shaleruckik Mo	82.40	21	P	P	04 59 28.5	+0.3
	baz=245						
CNPM	China Poot	82.41	29	P	P	04 59 27.9	-0.6
CNPM				IAmb	IAmb	04 59 33.2	
	comp=Z,47nm,0.8s						
K20K	Telida	82.45	25	IAmb	IAmb	04 59 32.2	
	comp=Z,49nm,0.9s						
K20K	Telida	82.45	25	P	P	04 59 28.6	0.0
	baz=248,SNR=54						
N20K	Mount Spurr	82.50	27	P	P	04 59 27.8	-1.2
	baz=250						
SPCR	Spurr Chakacha	82.50	27	P	P	04 59 28.0	-1.1
	baz=250						
BRLK	Bradley Lake	82.66	29	IAmb	IAmb	04 59 35.0	
	comp=Z,56nm,1.1s						
BRSE	Bradley Lake S	82.72	29	P	P	04 59 28.8	-1.3
	baz=252						
J20K	Nowinta River	82.72	24	IAmb	IAmb	04 59 33.6	
	comp=Z,59nm,1.1s						
J20K	Nowinta River	82.72	24	P	P	04 59 29.9	-0.1
	baz=248,SNR=76						
C19K	Lookout Ridge	82.80	19	IAmb	IAmb	04 59 41.1	
	comp=Z,87nm,1.2s						
C19K	Lookout Ridge	82.80	19	P	P	04 59 30.6	+0.2
	baz=243,SNR=29						
I20K	Naaghedeneel	82.82	23	P	P	04 59 30.6	+0.1
	baz=248						
E19K	Redstone River	82.86	20	IAmb	IAmb	04 59 33.6	
	comp=Z,33nm,0.8s						
E19K	Redstone River	82.86	20	P	P	04 59 30.9	+0.2
	baz=245,SNR=48						
H20K	Anotleneega Mo	82.93	23	P	P	04 59 30.9	-0.2
	baz=248,SNR=19						
D19K	Kuna River	83.01	19	IAmb	IAmb	04 59 41.5	
	comp=Z,56nm,1.1s						
D19K	Kuna River	83.01	19	P	P	04 59 31.2	-0.3
	baz=244,SNR=34						
SKT	Skwentna	83.07	27	IAmb	IAmb	04 59 41.2	
	comp=Z,53nm,1.4s						
SKT	Skwentna	83.07	27	P	P	04 59 31.2	-0.7
	baz=251,SNR=17						
PPLA	Purkeypile	83.09	26	P	P	04 59 31.9	-0.3
	baz=250						
SLKM	Skilak Lake	83.20	28	IAmb	IAmb	04 59 34.8	
	comp=Z,63nm,0.9s						
F20K	Avaraart Lake	83.23	21	IAmb	IAmb	04 59 37.2	
	comp=Z,47nm,1.0s						
F20K	Avaraart Lake	83.23	21	P	P	04 59 32.6	0.0
	baz=247						
SUA	Susitna One	83.26	27	P	P	04 59 32.4	-0.6
	baz=252						
CAST	Castle Rocks	83.31	25	IAmb	IAmb	04 59 42.8	
	comp=Z,92nm,1.6s						
CAST	Castle Rocks	83.31	25	P	P	04 59 32.3	-0.8
	baz=250						
CHUM	Lake Minchumin	83.37	25	P	P	04 59 33.3	0.0
	baz=250						
O22K	Cooper Landing	83.43	28	P	P	04 59 33.1	-0.7
	baz=253						
IMAR	Indian Mountai	83.55	22	P	P	04 59 33.8	-0.5
E20K	Nigu River	83.55	20	P	P	04 59 34.0	-0.3
	baz=246,SNR=45						
D20K	Etivluk River	83.60	19	IAmb	IAmb	04 59 45.7	
	comp=Z,51nm,1.1s						
D20K	Etivluk River	83.60	19	P	P	04 59 34.1	-0.4
	baz=246,SNR=39						
RC01	Rabbit Creek A	83.61	28	P	P	04 59 33.2	-1.5
	baz=253,SNR=20						
M22K	Willow	83.63	27	P	P	04 59 33.1	-1.7
	baz=252,SNR=19						
CUT	Chulitna	83.77	26	P	P	04 59 34.2	-1.2
	baz=252						
H21K	Melozitna Rive	83.79	23	P	P	04 59 35.0	-0.5
	baz=249,SNR=33						
G21K	Allakaket	83.83	22	IAmb	IAmb	04 59 46.0	
	comp=Z,50nm,1.6s						
G21K	Allakaket	83.83	22	P	P	04 59 35.4	-0.4
	baz=249,SNR=16						
KTH	Kantishna Hill	83.85	25	IAmb	IAmb	04 59 45.9	
	comp=Z,38nm,1.0s						
B20K	Meade River	83.97	18	IAmb	IAmb	04 59 39.7	
	comp=Z,46nm,1.1s						
B20K	Meade River	83.97	18	P	P	04 59 35.9	-0.4
	baz=245						
BPAW	Bear Paw Mtn.	84.00	25	IAmb	IAmb	04 59 46.2	
	comp=Z,94nm,2.0s						
BPAW	Bear Paw Mtn.	84.00	25	P	P	04 59 35.6	-1.0
	baz=251,SNR=19						
PMR	Palmer	84.03	27	P	P	04 59 38.0	+1.2
PMR	Palmer	84.03	27	P	P	04 59 35.3	-1.5
	baz=253,SNR=39						
TRF	Thorofare Moun	84.08	25	IAmb	IAmb	04 59 47.1	
	comp=Z,111nm,1.9s						
TRF	Thorofare Moun	84.08	25	P	P	04 59 36.0	-1.2
	baz=252						
F21K	Alatna River	84.10	21	P	P	04 59 36.6	-0.5
	baz=249,SNR=16						
GHO	Glory Hole Cre	84.18	27	IAmb	IAmb	04 59 42.2	
	comp=Z,33nm,0.9s						
PWL	Port Wells	84.20	28	P	P	04 59 36.8	-0.9
	baz=254,SNR=20						
KNK	Knik Glacier	84.29	28	P	P	04 59 37.3	-0.9
KNK	Knik Glacier	84.29	28	P	P	04 59 37.7	-0.5
	baz=254,SNR=28						
E21K	Killik River	84.38	20	IAmb	IAmb	04 59 44.8	
	comp=Z,69nm,1.5s						
E21K	Killik River	84.38	20	P	P	04 59 38.2	-0.3
	baz=248						
C21K	Knifeblade Rid	84.39	19	P	P	04 59 38.5	0.0
	baz=247,SNR=29						
MLY	Manley	84.40	24	IAmb	IAmb	04 59 43.6	
	comp=Z,53nm,1.2s						
MLY	Manley	84.40	24	P	P	04 59 37.8	-0.9
	baz=251,SNR=40						
P23K	Montague Islan	84.41	29	P	P	04 59 37.9	-0.8
	baz=255,SNR=18						
H22K	Ishtalitna Cre	84.43	23	P	P	04 59 38.2	-0.6
	baz=251,SNR=21						
SML	Sawmill	84.46	27	P	P	04 59 38.2	-0.9
	baz=254,SNR=52						
B21K	Ikpikpuk River	84.62	19	IAmb	IAmb	04 59 43.0	
	comp=Z,59nm,1.1s						
B21K	Ikpikpuk River	84.62	19	P	P	04 59 39.5	-0.1
	baz=247,SNR=17						
WAT1	Susitna Watana	84.65	26	P	P	04 59 38.8	-1.2
	baz=254						
F22K	John River	84.68	21	P	P	04 59 40.0	0.0
	baz=250						
A21K	Barrow	84.69	17	P	P	04 59 40.1	+0.2
	baz=245						
G22K	Bettles	84.72	22	P	P	04 59 39.6	-0.6
	baz=250						
M23K	Glacier View	84.73	27	P	P	04 59 39.8	-0.6
	baz=254						
MCK	McKinley	84.75	25	P	P	04 59 38.6	-1.9
	baz=253,SNR=20						
GLI	Glacier Island	84.78	28	P	P	04 59 40.0	-0.6
	baz=255,SNR=22						
SCM	Sheep Creek Mo	84.93	27	P	P	04 59 40.6	-0.9
SCM	Sheep Creek Mo	84.93	27	P	P	04 59 40.6	-0.9
SCM				pmax	pmax		
	comp=Z,98nm,1.1s						
SCM	Sheep Creek Mo	84.93	27	P	P	04 59 40.0	-1.4
	baz=255,SNR=50						
NEA2	Nenana	84.94	24	P	P	04 59 40.4	-1.0
	baz=253,SNR=40						
WAT6	Susitna Watana	84.94	26	P	P	04 59 40.4	-1.2
	baz=254,SNR=33						
D22K	Ayikyak River	84.98	20	IAmb	IAmb	04 59 49.1	
	comp=Z,84nm,1.4s						
D22K	Ayikyak River	84.98	20	P	P	04 59 41.6	+0.1
	baz=249,SNR=34						
I23K	Minto, Yukon-K	84.99	24	IAmb	IAmb	04 59 51.5	
	comp=Z,48nm,1.1s						
I23K	Minto, Yukon-K	84.99	24	P	P	04 59 40.8	-0.7
	baz=253,SNR=53						
E22K	Anaktuvuk Pass	85.02	21	P	P	04 59 41.1	-0.7
	baz=250,SNR=48						
FID	Port Fidalgo	85.05	28	IAmb	IAmb	04 59 45.0	
	comp=Z,62nm,1.0s						
A22K	Sinclair Lake	85.05	18	P	P	04 59 41.2	-0.5
	baz=247						
H23K	Yukon River	85.12	23	IAmb	IAmb	04 59 52.5	
	comp=Z,28nm,1.0s						
H23K	Yukon River	85.12	23	P	P	04 59 42.0	-0.3
	baz=252,SNR=29						
G23K	Bananza Creek	85.21	22	IAmb	IAmb	04 59 47.6	
	comp=Z,36nm,1.1s						
G23K	Bananza Creek	85.21	22	P	P	04 59 42.6	-0.2
	baz=252,SNR=56						
DHY	Denali Highway	85.24	26	IAmb	IAmb	04 59 45.7	
	comp=Z,53nm,1.0s						
DHY	Denali Highway	85.24	26	P	P	04 59 42.1	-1.0
	baz=255,SNR=74						
B22K	Teshekpuk Lake	85.27	18	IAmb	IAmb	04 59 53.0	
	comp=Z,82nm,1.3s						
B22K	Teshekpuk Lake	85.27	18	P	P	04 59 42.5	-0.4
	baz=248,SNR=28						
COLD	Coldfoot	85.31	22	IAmb	IAmb	04 59 49.7	
	comp=Z,33nm,1.1s						
COLD	Coldfoot	85.31	22	P	P	04 59 43.3	+0.1
	baz=252						
WRH	Wood River Hil	85.31	25	IAmb	IAmb	04 59 45.1	
	comp=Z,48nm,1.0s						
EYAK	Cordova Ski Ar	85.34	29	IAmb	IAmb	04 59 53.3	
	comp=Z,32nm,1.1s						
EYAK	Cordova Ski Ar	85.34	29	P	P	04 59 42.1	-1.3
	baz=256,SNR=5.9						
CCB	Clear Creek Bu	85.48	24	IAmb	IAmb	04 59 45.7	
	comp=Z,52nm,1.0s						
KLU	Klutina	85.49	28	IAmb	IAmb	04 59 47.2	
	comp=Z,50nm,1.1s						
KLU	Klutina	85.49	28	P	P	04 59 43.0	-1.3
	baz=256,SNR=29						
COLA	College	85.52	24	P	P	04 59 42.7	-1.5
COLA				IAmb	IAmb	04 59 46.8	
	comp=Z,24nm,0.8s						
COLA	College	85.52	24	P	P	04 59 45.5	+1.3
COLA	College	85.52	24	i P	P	04 59 45.0	+0.8
COLA				pmax	pmax		
	comp=Z,21nm,0.9s						
M24K	Tolsona, Glenn	85.52	27	P	P	04 59 43.5	-0.9
	baz=256,SNR=23						
SVE	Sverdlovsk	85.65	327	eP	P	04 59 45.3	+0.3
SVE				pmax	pmax		
	comp=Z,28nm,0.8s						
D23K	Nanushuk River	85.69	20	P	P	04 59 44.8	-0.2
	baz=251,SNR=77						
HDA	Harding Lake	85.77	25	IAmb	IAmb	04 59 48.4	
	comp=Z,32nm,1.0s						
HDA	Harding Lake	85.77	25	P	P	04 59 44.5	-1.1
	baz=255,SNR=33						
E23K	Chandalar	85.78	21	P	P	04 59 45.4	-0.2
	baz=252,SNR=78						
H24K	Noodor Dome	85.78	23	IAmb	IAmb	04 59 55.6	
	comp=Z,68nm,1.4s						
H24K	Noodor Dome	85.78	23	P	P	04 59 44.9	-0.7
	baz=254,SNR=32						
RAGM	Ragged Mountai	85.83	29	IAmb	IAmb	04 59 48.9	
	comp=Z,52nm,1.1s						
KAIM	Kayak Island	85.85	29	P	P	04 59 45.4	-0.6
	baz=258,SNR=14						
ILAR	Eielson Array	85.89	24	P	P	04 59 43.5	-2.6
ILAR	Eielson Array	85.89	24	P	P	04 59 43.7	-2.4
	comp=Z,17nm,0.7s,baz=262,slow=4.1,SNR=90						
	comp=Z,17nm,0.7s						
TOLK	Toolik Lake Re	85.97	20	P	P	04 59 46.5	+0.1
	baz=252,SNR=54						
BMRM	Bremner River	85.99	28	IAmb	IAmb	04 59 49.5	
	comp=Z,57nm,1.2s						
BMRM	Bremner River	85.99	28	P	P	04 59 45.7	-1.0
	baz=257,SNR=14						
C23K	Itkillik River	86.00	19	P	P	04 59 46.0	-0.5
	baz=251,SNR=26						
HMT	Hamilton	86.01	29	IAmb	IAmb	04 59 49.8	
	comp=Z,55nm,1.0s						
AKTO	Aktyubinsk	86.04	321	P	P	04 59 44.7	-2.4
	comp=Z,5.1nm,0.9s,baz=96,slow=4.5,SNR=11						
	comp=Z,5.1nm,0.9s						
PAX	Paxson	86.05	26	IAmb	IAmb	04 59 56.9	
	comp=Z,60nm,1.4s						
PAX	Paxson	86.05	26	P	P	04 59 46.2	-0.9
	baz=256,SNR=15						
HARP	HAARP	86.06	27	P	P	04 59 46.9	-0.1
	baz=257						
K24K	Donnelly Dome	86.12	26	IAmb	IAmb	04 59 56.8	
	comp=Z,54nm,1.1s						
K24K	Donnelly Dome	86.12	26	P	P	04 59 47.0	-0.3
	baz=256,SNR=22						
N25K	Chitina, Valde	86.13	28	P	P	04 59 47.4	-0.1
	baz=257,SNR=14						
G24K	Hadweenzic Riv	86.18	23	IAmb	IAmb	04 59 51.1	
	comp=Z,62nm,1.4s						
G24K	Hadweenzic Riv	86.18	23	P	P	04 59 47.4	-0.1
	baz=254,SNR=32						
E24K	Your Creek	86.19	21	P	P	04 59 47.5	-0.1
	baz=253						
SUCK	Suckling Hills	86.19	29	IAmb	IAmb	04 59 58.3	
	comp=Z,66nm,1.2s						
F24K	Squaw Lake	86.25	22	IAmb	IAmb	04 59 51.8	
	comp=Z,55nm,1.1s						
F24K	Squaw Lake	86.25	22	P	P	04 59 48.2	+0.3
	baz=254,SNR=51						
BERG	Berg Lake	86.30	29	P	P	04 59 47.8	-0.5
BERG				IAmb	IAmb	04 59 51.4	
	comp=Z,72nm,1.1s						
D24K	Happy Valley	86.39	20	P	P	04 59 48.2	-0.2
	baz=253,SNR=28						
GLB	Gilahina Butte	86.47	28	IAmb	IAmb	04 59 52.5	
	comp=Z,37nm,1.1s						
J25K	Salcha River,	86.49	25	IAmb	IAmb	04 59 54.2	
	comp=Z,38nm,1.1s						
J25K	Salcha River,	86.49	25	P	P	04 59 48.4	-0.7
	baz=256,SNR=56						
RIDG	Independent Ri	86.50	26	IAmb	IAmb	04 59 58.8	
	comp=Z,55nm,1.1s						
RIDG	Independent Ri	86.50	26	P	P	04 59 48.6	-0.6
	baz=257,SNR=25						
C24K	Franklin Bluff	86.60	19	P	P	04 59 48.9	-0.5
	baz=253						
PRP	Porcupine Dome	86.64	24	P	P	04 59 49.7	-0.2
	baz=256						
CRQM	Cirque	86.64	29	IAmb	IAmb	04 59 54.2	
	comp=Z,56nm,0.9s						
CRQE	Cirque	86.67	29	P	P	04 59 49.5	-0.6
	baz=259,SNR=25						
H25L	Birch Creek	86.70	23	P	P	04 59 50.3	+0.2
	baz=256,SNR=18						
G25K	Bearman Lake	86.72	23	P	P	04 59 50.4	+0.3
	baz=256,SNR=14						
WAX	Waxell Ridge	86.72	29	IAmb	IAmb	04 59 53.6	
	comp=Z,38nm,1.0s						
ARTI	Arti	86.79	327	P	P	04 59 48.8	-1.9
ARTI				IAmb	IAmb	05 00 00.8	
	comp=Z,14nm,0.5s						
ARTI	Arti	86.79	327	P	P	04 59 48.6	-2.1
	comp=Z,7.1nm,0.5s,baz=130,slow=2.5,SNR=9.4						
ARTI				PP	PP	05 03 16.2	+2.9
	comp=Z,1.1nm,0.3s,baz=97,slow=6.0,SNR=3.6						
	comp=Z,7.1nm,0.5s						
ARTI	Arti	86.79	327	d iP	P	04 59 48.0	-2.7
ARTI						05 03 08.3	
ARTI				S	SKSac	05 10 13.4	-2.9
ARTI				pmax	pmax		
	comp=Z,19nm,1.3s						
MCARA	McCarthy VSAT	86.82	28	IAmb	IAmb	05 00 10.8	
	comp=Z,42nm,1.2s						
MCARA	McCarthy VSAT	86.82	28	P	P	04 59 50.7	0.0
	baz=259						
MENT	Mentasta	86.82	27	IAmb	IAmb	05 00 03.4	
	comp=Z,53nm,1.4s						
DOT	Dot Lake	86.83	26	IAmb	IAmb	05 00 00.3	
	comp=Z,114nm,1.9s						
SCRK	Sand Creek	86.93	26	IAmb	IAmb	05 00 01.2	
	comp=Z,83nm,2.0s						
SCRK	Sand Creek	86.93	26	P	P	04 59 51.1	-0.2
	baz=258,SNR=10						
ISLE	Juniper Island	87.00	29	IAmb	IAmb	05 00 04.2	
	comp=Z,68nm,1.2s						
L26K	Log Cabin Wild	87.01	27	P	P	04 59 51.6	0.0
	baz=258,SNR=6.4						
M26K	Nabesna, AK	87.04	27	P	P	04 59 51.8	-0.1
	baz=259						
F25K	Christian Rive	87.10	22	IAmb	IAmb	05 00 03.0	
	comp=Z,42nm,1.2s						
F25K	Christian Rive	87.10	22	P	P	04 59 52.2	+0.2
	baz=256,SNR=51						
MESA	MESA	87.11	29	P	P	04 59 51.8	-0.6
	baz=260						
J26L	Joseph Creek	87.22	25	P	P	04 59 51.9	-0.8
	baz=258,SNR=36						
QSPA	South Pole Qui	87.24	180	P	P	04 59 52.1	-0.8
QSPA	South Pole Qui	87.24	180	P	P	04 59 51.9	-0.9
	comp=Z,60nm,1.0s,baz=337,slow=1.7,SNR=88						
QSPA				LR	LR	05 39 39.0	
	comp=Z,5µm,18.9s,baz=130,slow=36						
	comp=Z,60nm,1.0s						
YAH	Yahtse	87.25	29	IAmb	IAmb	05 00 05.9	
	comp=Z,67nm,1.4s						
E25K	Arctic Village	87.26	21	IAmb	IAmb	04 59 57.5	
	comp=Z,60nm,1.2s						
E25K	Arctic Village	87.26	21	P	P	04 59 52.8	0.0
	baz=256,SNR=55						
D25K	Kavik River	87.27	20	P	P	04 59 52.5	-0.3
	baz=255						
BARN	Barnard Glacie	87.41	29	IAmb	IAmb	04 59 57.3	
	comp=Z,55nm,1.0s						
BMAR	Burnt Mountain	87.46	22	P	P	04 59 54.1	+0.3
M27K	Edge Creek, AK	87.54	27	IAmb	IAmb	04 59 57.8	
	comp=Z,46nm,1.1s						
M27K	Edge Creek, AK	87.54	27	P	P	04 59 54.1	-0.3
	baz=260,SNR=35						
CTG	Chitna Glacier	87.55	29	P	P	04 59 54.1	-0.3
	baz=260,SNR=37						
I26K	Coal Creek Min	87.56	24	IAmb	IAmb	04 59 56.8	
	comp=Z,38nm,1.4s						
I26K	Coal Creek Min	87.56	24	P	P	04 59 54.3	0.0
	baz=258,SNR=16						
G26K	Porcupine Rive	87.65	23	P	P	04 59 55.0	+0.3
	baz=258,SNR=66						
F26K	Sheenjek River	87.68	22	P	P	04 59 54.7	-0.1
	baz=257,SNR=52						
LOGN	Logan Glacier	87.69	29	IAmb	IAmb	04 59 58.5	
	comp=Z,52nm,1.0s						
L27K	Beaver Creek,	87.69	27	IAmb	IAmb	04 59 58.4	
	comp=Z,36nm,1.1s						
L27K	Beaver Creek,	87.69	27	P	P	04 59 54.7	-0.3
	baz=260,SNR=39						
BCAR	Beaver Creek A	87.71	27	P	P	04 59 54.2	-0.9
K27K	Chicken	87.76	26	P	P	04 59 55.5	+0.2
	baz=259						
PCA	Pinnacle	87.93	30	IAmb	IAmb	05 00 10.8	
	comp=Z,47nm,1.1s						
PINM	Pinnacle	87.94	30	P	P	04 59 55.9	-0.3
	baz=261,SNR=9.2						
BVCY	Beaver Creek	88.02	27	P	P	04 59 56.7	+0.1
	baz=260,SNR=27						
O28M	Mount Upton	88.07	29	IAmb	IAmb	05 00 00.4	
	comp=Z,37nm,1.1s						
O28M	Mount Upton	88.07	29	P	P	04 59 57.0	-0.1
	baz=261,SNR=27						
YUK3	Moose Creek	88.10	28	P	P	04 59 56.9	-0.3
	baz=261,SNR=48						
I27K	Kandik River	88.25	24	P	P	04 59 57.6	0.0
	baz=260,SNR=79						
C27K	Jago River	88.26	20	P	P	04 59 57.8	+0.3
	baz=258						
PNL	Peninsula	88.30	30	P	P	04 59 59.1	+1.2
PNL	Peninsula	88.30	30	P	P	04 59 57.5	-0.4
	baz=262,SNR=6.8						
YUK8	Steele Glacier	88.36	29	P	P	04 59 58.3	-0.2
	baz=262,SNR=15						
H27K	Steamboat Moun	88.40	24	P	P	04 59 58.5	+0.3
	baz=260,SNR=78						
G27K	Doyon Strip	88.45	23	IAmb	IAmb	05 00 11.9	
	comp=Z,53nm,1.6s						
G27K	Doyon Strip	88.45	23	P	P	04 59 58.5	+0.1
	baz=260,SNR=23						
E27K	Coleen River	88.72	22	P	P	04 59 59.9	+0.1
	baz=260,SNR=15						
O29M	Mount Kennedy	88.79	30	IAmb	IAmb	05 00 03.9	
	comp=Z,45nm,1.1s						
O29M	Mount Kennedy	88.79	30	P	P	05 00 00.1	-0.3
	baz=263,SNR=25						
YUK4	Talbot Arm	88.90	29	P	P	05 00 00.6	-0.3
	baz=263,SNR=33						
I28M	Miner Creek	88.91	24	IAmb	IAmb	05 00 07.3	
	comp=Z,51nm,1.1s						
I28M	Miner Creek	88.91	24	P	P	05 00 00.6	-0.2
	baz=261,SNR=52						
DAWY	Dawson	88.94	26	P	P	05 00 00.5	-0.4
	baz=262,SNR=83						
YUK6	Outpost Mounta	88.98	29	P	P	05 00 01.0	-0.4
	baz=263,SNR=10						
M29M	Somme Creek	89.13	27	IAmb	IAmb	05 00 12.5	
	comp=Z,36nm,1.1s						
M29M	Somme Creek	89.13	27	P	P	05 00 01.6	-0.2
	baz=263,SNR=37						
P29M	Windy Craggy	89.13	30	IAmb	IAmb	05 00 08.9	
	comp=Z,64nm,1.4s						
P29M	Windy Craggy	89.13	30	P	P	05 00 01.6	-0.2
	baz=263,SNR=9.4						
D27M	Malcolm River	89.14	21	P	P	05 00 01.2	-0.5

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      baz=260
F28M  Old Crow           89.27  22  P         P         05 00 02.1 -0.2
      baz=261,SNR=22
L29M  L29M               89.36  27  IAmb      IAmb      05 00 13.7
      comp=Z,35nm,1.1s
L29M  L29M               89.36  27  P         P         05 00 03.0 +0.1
      baz=263,SNR=39
HYT   Haines Junctio     89.38  29  P         P         05 00 02.3 -0.8
HYT                                 IAmb      IAmb      05 00 06.5
      comp=Z,32nm,1.0s
HYT   Haines Junctio     89.38  29  P         P         05 00 03.0 -0.2
      baz=264,SNR=30
J29N  Klondike Camp      89.50  26  P         P         05 00 03.1 -0.4
J29N                                IAmb      IAmb      05 00 08.0
      comp=Z,30nm,1.0s
J29N  Klondike Camp      89.50  26  P         P         05 00 03.9 +0.4
      baz=263
E28M  Babbage River      89.54  21  P         P         05 00 03.3 -0.2
      baz=262,SNR=11
I29M  Ogilvie Camp,      89.57  25  IAmb      IAmb      05 00 07.6
      comp=Z,51nm,1.2s
I29M  Ogilvie Camp,      89.57  25  P         P         05 00 03.3 -0.5
      baz=263,SNR=48
P30M  Million Dollar     89.57  30  P         P         05 00 04.3 +0.3
      baz=264
N30M  Aishikik Lake      89.66  29  P         P         05 00 04.5 +0.2
      baz=264,SNR=22
H29M  Whitestone         89.66  24  P         P         05 00 03.8 -0.4
      baz=263
K29M  Barlow Dome        89.72  26  IAmb      IAmb      05 00 12.0
      comp=Z,42nm,1.1s
K29M  Barlow Dome        89.72  26  P         P         05 00 04.6  0.0
      baz=263,SNR=36
S31K  Pelican            89.73  32  P         P         05 00 04.5 -0.1
      baz=265
PLBC  Pleasant Camp      89.81  31  P         P         05 00 05.1 +0.2
      baz=264,SNR=9.2
G29M  Pine Creek         89.88  23  P         P         05 00 05.0 -0.2
      baz=263,SNR=18
O30N  Mendenhall         90.07  29  P         P         05 00 06.3 +0.1
      baz=265,SNR=23
E29M  Blow River         90.11  22  P         P         05 00 05.4 -0.8
      baz=263,SNR=12
SIT   Sitka              90.14  33  P         P         05 00 06.7 +0.2
      baz=265
N31M  Braeburn, Yuko     90.28  29  IAmb      IAmb      05 00 17.5
      comp=Z,64nm,1.6s
N31M  Braeburn, Yuko     90.28  29  P         P         05 00 06.8 -0.4
      baz=265,SNR=11
J30M  Hart River         90.32  25  IAmb      IAmb      05 00 18.8
      comp=Z,42nm,1.4s
J30M  Hart River         90.32  25  P         P         05 00 07.2 -0.3
      baz=264,SNR=23
SKAG  Skagway            90.33  31  IAmb      IAmb      05 00 18.5
      comp=Z,56nm,1.4s
SKAG  Skagway            90.33  31  P         P         05 00 06.7 -0.7
      baz=265
EPYK  Eagle Plains       90.34  24  P         P         05 00 06.8 -0.6
      baz=264
I30M  Mount Dempster     90.36  25  P         P         05 00 07.3 -0.4
      baz=264,SNR=19
MAYO  Mayo, Yukon        90.42  26  P         P         05 00 07.4 -0.4
      baz=265
G30M  tAoh Zraii Nji     90.60  23  P         P         05 00 07.6 -1.0
      baz=265,SNR=13
WHY   Whitehorse         90.65  29  IAmb      IAmb      05 00 12.1
      comp=Z,32nm,0.9s
R32K  Eaglecrest         90.66  32  P         P         05 00 08.0 -1.0
      baz=266
SYO   Syowa Base         90.71 201⇑iPcP     PcP       05 00 13.2 +3.2
SYO   Syowa Base         90.71 201⇓ipP      pP        05 00 17.1 +1.0
F30M  Barrier River      90.82  22  IAmb      IAmb      05 00 11.9
      comp=Z,34nm,1.4s
F30M  Barrier River      90.82  22  P         P         05 00 08.5 -1.1
      baz=265,SNR=6.8
M31M  Drury Creek, Y     91.00  28  P         P         05 00 09.5 -1.0
      baz=266
P32M  Atlin              91.16  31  IAmb      IAmb      05 00 15.0
      comp=Z,39nm,1.6s
P32M  Atlin              91.16  31  P         P         05 00 11.0 -0.4
      baz=267
H31M  Peel River         91.26  24  IAmb      IAmb      05 00 22.3
      comp=Z,48nm,1.9s
H31M  Peel River         91.26  24  P         P         05 00 11.3 -0.4
      baz=266
U33K  Whale Pass         91.29  34  P         P         05 00 11.6 -0.3
      baz=267
G31M  Satah River        91.36  23  P         P         05 00 11.8 -0.2
      baz=266
FARO  Faro, Yukon        91.48  28  P         P         05 00 11.3 -1.5
FARO  Faro, Yukon        91.48  28  P         P         05 00 12.7 -0.1
      baz=267
N32M  Quiet Lake         91.56  29  IAmb      IAmb      05 00 16.7
      comp=Z,38nm,1.1s
N32M  Quiet Lake         91.56  29  P         P         05 00 13.2 +0.1
      baz=267
F31M  Tsiigehtchic       91.59  23  P         P         05 00 13.4 +0.3
      baz=267
P33M  Teslin, Yukon      91.64  30  P         P         05 00 13.6  0.0
      baz=268
INK   Inuvik             91.72  22  P         P         05 00 14.4 +0.8
      baz=267
WRAK  Wrangell Islan     91.74  34  IAmb      IAmb      05 00 20.1
      comp=Z,42nm,1.4s
WRAK  Wrangell Islan     91.74  34  P         P         05 00 13.9 -0.1
      baz=268
Q32M  Nakina River       91.87  31  P         P         05 00 14.6 -0.3
      baz=268
AKT   Akhty              92.38 311  eP        P         05 00 12.8 -4.7
AKT                                 e                   05 03 51.5
AKT                                 pmax      pmax
      comp=Z,11nm,1.0s
S34M  Telegraph Cree     92.44  32  P         P         05 00 17.2  0.0
      baz=269
MMPY  Sheldon Lake,      92.47  28  IAmb      IAmb      05 00 30.2
      comp=Z,38nm,1.7s
MMPY  Sheldon Lake,      92.47  28  P         P         05 00 17.3 -0.1
      baz=269
R33M  Jennings River     92.56  31  P         P         05 00 17.8 -0.1
      baz=269
BELG  Belogornoye        92.69 322  P         P         05 00 16.5 -2.0
      comp=Z,31nm,1.1s,baz=7.4,slow=2.3,SNR=12
BELG                                PP        PP        05 04 04.5 +4.1
      comp=Z,6.3nm,0.6s,baz=265,slow=7.7,SNR=3.9
      comp=Z,31nm,1.1s
T35M  Bob Quinn          92.91  33  P         P         05 00 19.4  0.0
      baz=270
WTLY  Watson Lake, Y     93.65  30  P         P         05 00 23.2 +0.3
      baz=271
RAYN  Ar Rayn            93.86 293  P         P         05 00 22.4 -2.1
RAYN  Ar Rayn            93.86 293  P         P         05 00 22.5 -2.1
RAYN                                pmax      pmax
      comp=Z,3.0nm,0.9s
A36M  Sachs Harbour      94.48  18  IAmb      IAmb      05 00 30.4
      comp=Z,26nm,1.1s
A36M  Sachs Harbour      94.48  18  P         P         05 00 26.4 +0.1
      baz=275
KBZ   Khabaz             95.94 314  PP        PP        05 04 30.8 +4.8
      comp=Z,4.6nm,1.0s,baz=348,slow=0.4,SNR=3.8
KIV   Kislovodsk         96.09 314  eP        P         05 00 35.3 +0.9
KIV                                 pmax      pmax
      comp=Z,4.0nm,1.0s
VRH   Novokhopyorsk      96.38 321  eP        P         05 00 33.3 -2.1
VRH                                 pmax      pmax
      comp=Z,24nm,1.5s
KLMR  Klimovskoe         96.75 331  eP        P         05 00 33.6 -3.3
KLMR                                e                   05 04 28.3
KLMR                                pmax      pmax
      comp=Z,15nm,1.4s
VORR  Voronezh           97.91 322  eP        P         05 00 40.3 -2.0
VORR                                pmax      pmax
      comp=Z,19nm,1.6s
LPSR  Galich'ya Gora     97.98 323  eP        P         05 00 40.5 -2.1
LPSR                                pmax      pmax
      comp=Z,18nm,1.6s
APA   Apatity            98.24 338⇓iP       P         05 00 41.0 -2.5
APA                                 pmax      pmax
      comp=Z,2.0nm,21.0s
YBH   Yreka Blue Hor     98.32  48  LR        LR        05 36 14.8
      comp=Z,156nm,21.6s,baz=282,slow=30
O02D  Mt. Diablo Mer     98.36  50  IAmb      IAmb      05 00 56.1
      comp=Z,29nm,1.3s
MOS   Moscow             98.38 326  eP        P         05 00 42.8 -1.5
MOS                                 e                   05 04 43.3
OBN   Obninsk            99.06 325  P         Pdif      05 00 45.9 -1.5
      comp=Z,11nm,0.5s,baz=44,slow=9.5,SNR=4.2
OBN                                 PP        PP        05 04 51.3 +1.8
      comp=Z,9.6nm,0.4s,baz=6.9,slow=10,SNR=8.0
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      comp=Z,11nm,0.5s
OBN   Obninsk            99.06 325⇑eP       Pdif      05 00 47.1 -0.3
OBN                                 e                   05 04 49.8
OBN                                 pmax      pmax
      comp=Z,11nm,1.4s
OBN                                 MLR       MLR
      comp=Z,3µm,20.0s
YKA   Yellowknife Ar    100.13  27  P         Pdif      05 00 50.8 -1.2
      comp=Z,1.0nm,0.7s,baz=296,slow=5.5,SNR=4.2
YKA   Yellowknife Ar    100.13  27 i P        Pdif      05 00 55.0 +3.0
YKA                                 pmax      pmax
      comp=Z,1.0nm,0.7s
TROLL Troll, Antarti    100.30 193 ⇑P         Pdif      05 00 54.0 +1.2
      comp=Z,317nm,0.9s
ARCES ARCESS Array B    100.45 341  P         Pdif      05 00 51.0 -2.3
      comp=Z,3.6nm,0.8s,baz=84,slow=6.4,SNR=7.3
ARCES                               PP        PP        05 05 09.8  +10
      comp=Z,0.8nm,0.7s,baz=79,slow=4.8,SNR=4.6
ARCES                               PKiKP     PKiKP     05 05 19.4 -0.5
      comp=Z,1.9nm,0.9s,baz=75,slow=1.4,SNR=4.7
ARCES ARCESS Array B    100.45 341  P         Pdif      05 00 51.0 -2.3
SNAA  Sanae             101.68 192 ⇑P         Pdif      05 01 00.9 +2.0
      comp=Z,86nm,0.9s
SNAA  Sanae             101.68 192  P         Pdif      05 00 58.4 -0.5
      comp=Z,4.5nm,1.0s,baz=150,slow=3.8,SNR=8.8
NVAR  Mina Array Bea    101.97  51  P         Pdif      05 01 00.7 -0.5
      comp=Z,2.1nm,0.8s,baz=251,slow=5.7,SNR=9.3
NVAR                                PP        PKiKP     05 05 19.5 -4.4
      comp=Z,1.4nm,1.0s,baz=289,slow=8.9,SNR=5.7
GMN   Gold Mountain     102.92  52  IAMs_20   IAMs_20   05 46 13.8
      comp=Z,2µm,20.0s
FINES FINESS Array B    102.97 333  P         Pdif      05 01 04.1 -0.6
      comp=Z,3.4nm,1.1s,baz=57,slow=7.0,SNR=3.9
FINES                               PP        PP        05 05 20.7 +1.8
      comp=Z,2.8nm,1.0s,baz=72,slow=12,SNR=5.0
FINES FINESS Array B    102.97 333 i P        Pdif      05 01 05.3 +0.6
FINES                               pmax      pmax
      comp=Z,3.0nm,1.1s
VNA2  Neumayer--Watz    103.17 191 ⇑P         Pdif      05 01 07.4 +2.0
      comp=Z,1.1nm,0.6s,baz=132,slow=4.1
BRTR  Keskin Array B    103.18 310  Pdiff     Pdif      05 01 07.8 +1.4
      comp=Z,0.8nm,0.9s,baz=138,slow=5.8,SNR=3.9
BRTR                                PP        PP        05 05 23.2 +1.8
      comp=Z,1.5nm,1.0s,baz=76,slow=5.2,SNR=3.6
VNA3  Neumayer Olymp    103.32 190 ⇑P         Pdif      05 01 06.9 +0.8
      comp=Z,1.7nm,1.0s
GWY   Greenwater Val    103.52  54  IAMs_20   IAMs_20   05 32 57.8
      comp=Z,2µm,18.0s
MNK   Minsk             104.10 326 i P        Pdif      05 01 06.6 -3.3
      comp=E,7.0nm,0.5s
MNK                                i P        Pdif      05 01 06.6 -3.3
      comp=N,8.0nm,0.6s
MNK                                i P        Pdif      05 01 06.6 -3.3
      comp=Z,6.0nm,0.5s,baz=74
MNK                                i PP       PKiKP     05 05 24.1 -2.8
MNK                                i PPP      PPP       05 07 35.6
MNK                                i SKS                05 12 35.9
MNK                                i PS       PS        05 14 36.4 -3.2
MNK                                i SS       SS        05 20 13.8 -0.9
MNK                                i SSS      SSS       05 24 09.8
MNK                                i LQ       LQ        05 42 08.6
MNK                                i LR       LR        05 49 35.0
MNK   Minsk             104.10 326 i P        Pdif      05 01 06.5 -3.3
MNK                                i                    05 05 24.1
MNK                                i PPP      PPP       05 07 35.6
MNK                                i                    05 12 35.8
MNK                                i PS       PS        05 14 36.3 -3.2
MNK                                i SS       SS        05 20 13.8 -0.9
MNK                                i SSS      SSS       05 24 09.8
MNK                                 pmax      pmax
      comp=Z,6.0nm,0.5s
MNK                                 pmax      pmax
      comp=N,8.0nm,0.6s
MNK                                 pmax      pmax
      comp=E,7.0nm,0.5s
MNK                                 MLR       MLR
      comp=E,843nm,18.0s
MNK                                 MLR       MLR
      comp=N,2µm,19.0s
AKASG Malin Array Be    104.26 322  Pdiff     Pdif      05 01 09.8 -0.8
      comp=N,1.7nm,0.9s,baz=62,slow=4.3,SNR=5.9
AKASG                               PP        PKiKP     05 05 25.5 -1.8
      comp=N,0.3nm,0.3s,baz=68,slow=5.8,SNR=7.3
AKBB  Malin Array Si    104.26 322  P         Pdif      05 01 09.9 -0.7
KIEV  Kiev              104.27 322  P         Pdif      05 01 09.9 -0.8
NACGM Naroch            104.60 326 ePKiKP     PKiKP     05 05 27.5 -0.3
      comp=Z,4.0nm,0.8s,baz=73
LUBAR Lubar, Ukraine    105.36 321  P         Pdif      05 01 15.0 -0.6
PDAR  Pinedale Array    107.82  46  Pdiff     Pdif      05 01 26.6 -0.5
      comp=Z,0.5nm,0.7s,baz=248,slow=1.6,SNR=5.1
PDAR                                PKiKP     PKiKP     05 05 34.8 +0.2
      comp=Z,0.7nm,0.8s,baz=180,slow=1.5,SNR=3.9
PDAR                                PP        PP        05 05 57.1 +1.5
      comp=Z,0.9nm,0.9s,baz=318,slow=4.2,SNR=4.3
PDAR                                PKKPbc    PKKPbc    05 16 50.0 +0.8
      comp=Z,0.5nm,0.8s,baz=103,slow=4.7,SNR=4.7
HFS   Hagfors           109.04 334  PP        PP        05 06 06.1 +2.6
      comp=Z,3.0nm,0.9s,baz=330,slow=7.5,SNR=4.7
NOA   NORSAR Array B    109.62 336  PP        PP        05 06 05.6 -2.2
      comp=Z,0.6nm,0.6s,baz=46,slow=7.9,SNR=3.5
RONA  Rosalia, Austr    113.24 322 ePKiKP     PKiKP     05 05 42.8 -1.6
      comp=Z,1.2nm,0.6s
CLL   Collm             113.64 326 ePKIKP     PKiKP     05 05 48.0 +3.1
CLL                                 pmax      pmax
      comp=Z,3µm,20.5s
CLL   Collm             113.64 326 ePKiKP     PKiKP     05 05 48.0 +3.1
CLL                                ePP        PP        05 06 35.0 -1.8
CLL                                 AMS       AMS       05 56 00.0
      comp=Z,3µm,20.5s
ARSA  Arzberg           113.90 321 ePKiKP     PKiKP     05 05 45.3 -0.4
      comp=Z,1.8nm,0.7s
ULM   Lac du Bonnet     114.14  35  PKKPbc    PKKPbc    05 16 29.4 +1.1
      comp=Z,1.4nm,0.8s,baz=55,slow=4.7,SNR=3.2
GERES GERESS Array B    114.34 323  PKP       PKPdf     05 05 44.9 -1.6
      comp=Z,0.6nm,0.4s,baz=77,slow=2.9,SNR=6.5
GERES                               PP        PP        05 06 45.6 +3.6
      comp=Z,0.5nm,0.7s,baz=26,slow=7.4,SNR=4.1
MOA   Molln             114.43 322 ePKP       PKiKP     05 05 46.0 -0.6
      comp=Z,1.1nm,0.6s
SOKA  Soboth            114.44 321 ePKP       PKPdf     05 05 42.0 -4.7
      comp=Z,0.7nm,0.5s
OBKA  Obir              114.81 321 ePKP       PKiKP     05 05 46.2 -1.3
      comp=Z,6.1nm,1.3s
BIOA  Bad Ischl, Aus    114.88 322 epPKP      PKPdf     05 05 50.5 +3.0
      comp=Z,1.8nm,0.7s
MYKA  Terra Mystica     115.33 321 ePKP       PKiKP     05 05 46.7 -1.7
      comp=Z,1.3nm,0.5s
TX31  Lajitas Ar. Si    115.43  59            PKPdf     05 05 48.0 -1.2
TXAR  Lajitas Array     115.43  59  PKP       PKPdf     05 05 48.5 -0.7
      comp=Z,0.7nm,0.6s,baz=285,slow=1.4,SNR=10
TXAR                                PKKPbc    PKKPbc    05 16 25.3 +1.8
      comp=Z,1.2nm,1.0s,baz=120,slow=6.4,SNR=3.8
LESA  Schwarzleotal     115.58 322 ePKP       PKiKP     05 05 44.7 -4.2
      comp=Z,1.3nm,0.4s
ABTA  Abfaltersbach     115.98 322 ePKP       PKiKP     05 05 48.6 -1.1
      comp=Z,1.7nm,0.6s
STAL  STALIGIAL         116.07 321  PKPdf     PKiKP     05 05 47.9 -1.9
CIMO  Cimolais          116.22 321  PKPdf     PKPdf     05 05 48.8 -1.3
WTTA  Wattenberg        116.29 323 i PKP      PKPdf     05 05 48.9 -1.5
      comp=Z,1.2nm,0.4s
WATA  Walderalm         116.29 323 ePKP       PKPdf     05 05 49.7 -0.7
      comp=Z,4.0nm,0.7s
SQTA  Sankt Quirin      116.57 323 ePKP       PKPdf     05 05 48.9 -1.9
      comp=Z,1.9nm,0.5s
MOTA  Moosalm           116.57 323 i PKP      PKPdf     05 05 49.6 -1.4
      comp=Z,3.5nm,0.7s
RETA  Reutte            116.71 323 i PKiKP    PKiKP     05 05 51.4 +0.4
      comp=Z,2.5nm,0.7s
SMWD  Samnorwood        116.82  52  PKPdf     PKPdf     05 05 50.3 -1.3
FETA  Feichten          116.95 323 ePKP       PKPdf     05 05 50.5 -1.2
      comp=Z,4.9nm,1.2s
R32A  Long Quarter,     116.96  48  IAMs_20   IAMs_20   05 42 43.9
      comp=Z,2µm,22.0s
ELIS  Ellis County      117.18  51  IAMs_20   IAMs_20   05 43 10.1
      comp=Z,1µm,19.0s
DAVA  Damuels           117.33 323 ePKP       PKPdf     05 05 51.1 -1.3
      comp=Z,1.0nm,0.4s
OK038 West end E0370    117.57  50  IAMs_20   IAMs_20   05 45 51.3
      comp=Z,1µm,21.0s
WMOK  Wichita Mounta    118.08  52  PKPdf     PKPdf     05 05 52.9 -1.1
WMOK  Wichita Mounta    118.08  52  PKIKP     PKPdf     05 05 52.9 -1.1
EKA   Eskdalemuir Ar    119.10 336  PKP       PKPdf     05 05 54.6 -0.7
      comp=Z,0.4nm,0.5s,baz=22,slow=3.7,SNR=3.8
EKA                                 PP        PP        05 07 21.5 +6.8
      comp=Z,1.5nm,0.7s,baz=40,slow=12,SNR=3.9
CCM   Cathedral Cave    122.54  46  PKPdf     PKPdf     05 06 00.4 -2.1
CCM   Cathedral Cave    122.54  46  PKIKP     PKPdf     05 06 00.4 -2.1
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USIN  University of     125.10  44  IAMs_20   IAMs_20   05 55 33.7
      comp=Z,2µm,22.0s
WVT   Waverly           125.83  46  PKPdf     PKPdf     05 06 07.4 -1.4
WVT   Waverly           125.83  46  PKIKP     PKPdf     05 06 07.4 -1.4
LL01  San Ignacio de    127.10 151  IAMs_20   IAMs_20   05 55 30.1
      comp=Z,2µm,22.0s
P52A  Corning           127.94  40  PKPdf     PKPdf     05 06 11.6 -1.2
PLCA  Paso Flores       129.26 151  PKP       PKiKP     05 06 16.7 +0.6
      comp=Z,6.7nm,1.1s,baz=319,slow=1.5,SNR=6.3
ESDC  Sonseca Array     129.90 322  PKPdf     PKPdf     05 06 15.8 -0.8
ESDC  Sonseca Array     129.90 322  PKP       PKPdf     05 06 16.4 -0.2
      comp=Z,0.5nm,0.8s,baz=17,slow=2.0,SNR=4.4
ESDC                                PP        PP        05 08 30.9 +3.2
      comp=Z,1.3nm,1.1s,baz=38,slow=6.8,SNR=4.6
PBRG  Braganca          130.17 326 ePKPdf     PKPdf     05 06 17.1 +0.1
MVO   Moncorvo          130.75 326 ePKPdf     PKiKP     05 06 19.3 +0.2
PGAV  Gavieira, Arco    130.89 327 ePKPdf     PKPdf     05 06 18.9 +0.5
POLO  Lamas de Olo      131.04 326 ePKPdf     PKiKP     05 06 19.8 +0.1
PVRL  Vila Real         131.06 326 ePKPdf     PKPdf     05 06 18.9 +0.2
PVIS  Viseu             131.54 326 ePKPdf     PKiKP     05 06 20.2 -0.4
MTE   Manteigas         131.56 325 ePKPdf     PKiKP     05 06 21.9 +1.2
PCBR  Castelo Branco    131.89 325 ePKPdf     PKiKP     05 06 20.9 -0.4
CPNY  Central Park      132.07  33  IAMs_20   IAMs_20   06 01 04.7
      comp=Z,2µm,20.0s
PMRV  Marv??o           132.11 324 ePKPdf     PKiKP     05 06 26.2 +4.4
PCAS  Casmilo, Conde    132.33 326 ePKPdf     PKPdf     05 06 20.0 -1.1
PSARD Sardoal           132.44 325 ePKPdf     PKPdf     05 06 20.1 -1.2
PBAR  Barrancos         132.71 323 ePKPdf     PKPdf     05 06 22.2 +0.4
PMTG  Montargil         132.83 324 ePKPdf     PKiKP     05 06 23.0 -0.2
EVO   Evora             133.06 324 ePKPdf     PKiKP     05 06 24.2 +0.5
MESJ  Messejana         133.64 323 ePKPdf     PKiKP     05 06 28.7 +3.8
PCVE  Castro Verde      133.66 323 ePKPdf     PKiKP     05 06 25.1 +0.2
PBDV  Barranco-do-Ve    133.85 322 ePKPdf     PKiKP     05 06 27.7 +2.3
HERN  Volcan Telica     134.04  75  IAMs_20   IAMs_20   05 48 35.5
      comp=Z,795nm,19.0s
PTEO  Sao Teotonio      134.13 323 ePKPdf     PKPdf     05 06 24.5 -0.1
MORF  Marmelete         134.25 323 ePKPdf     PKiKP     05 06 25.9 -0.3
VA01  Torpederas        134.42 144  IAMs_20   IAMs_20   06 01 37.9
      comp=Z,2µm,21.0s
TORD  Torodi Ar. Bea    136.10 286  PKP       PKPdf     05 06 27.8 -1.1
      comp=Z,3.0nm,0.8s,baz=38,slow=3.1,SNR=11
ATAH  Atahualpa         141.86 105  PKP       PKPdf     05 06 39.4 -0.6
      comp=Z,5.8nm,0.8s,baz=42,slow=11,SNR=3.6
OTAV  Otavalo           142.94  93  PKPdf     PKPdf     05 06 37.2 -4.7
OTAV  Otavalo           142.94  93  PKIKP     PKPdf     05 06 37.2 -4.7
DBIC  Dimbokro          143.32 277  PKP       PKPbc     05 06 39.7 +0.6
      comp=Z,7.9nm,0.6s,baz=130,slow=1.1,SNR=8.9
MACI  Morro de la Ar    145.19 319  PKPdf     PKPbc     05 06 44.1 -0.6
ROSC  El Rosal          147.14  85  PKPbc     PKPdf     05 06 49.2 +0.1
      comp=Z,46nm,0.7s,baz=122,slow=9.0,SNR=17
CPUP  Villa Florida     147.31 153  PKPbc     PKPdf     05 06 49.6 +1.1
      comp=Z,6.3nm,0.8s,baz=101,slow=2.3,SNR=35
CPUP                                PKKPbc              05 14 07.8
      comp=Z,0.5nm,0.9s,baz=350,slow=5.7,SNR=3.2
LPAZ  La Paz            147.58 126  PKPbc     PKPbc     05 06 53.2 +0.6
      comp=Z,20nm,0.9s,baz=329,slow=1.9,SNR=44
LPAZ                                PKKPbc              05 14 10.7
      comp=Z,2.4nm,0.9s,baz=168,slow=1.1,SNR=6.0
SDV   Santo Domingo     150.34  77  PKPdf     PKPdf     05 06 51.9 -2.1
EMPR  Esperanza - Ma    150.86  56  IAMs_20   IAMs_20   06 23 25.8
      comp=Z,633nm,19.0s
OBIP  Obispado Ponce    151.01  57            PKPbc     05 06 59.6 -0.8
GCPR  Guaynabo City     151.31  56  PKPbc     PKPbc     05 06 59.9 -1.2
SJG   San Juan          151.35  56  PKPbc     PKPbc     05 06 59.4 -1.8
SJG   San Juan          151.35  56  PKIKP     PKPbc     05 06 59.4 -1.8
SIV   San Ignacio       153.14 134  PKP       PKPdf     05 06 58.5 +0.6
      comp=Z,3.6nm,0.8s,baz=200,slow=2.1,SNR=4.7
SIV                                 PKPbc     pPKPdf    05 07 05.8 +0.5
      comp=Z,4.4nm,0.8s,baz=195,slow=1.0,SNR=16
SIV                                 PKPab     PKPab     05 07 17.6 +0.8
      comp=Z,6.1nm,0.9s,baz=224,slow=4.6,SNR=8.4
SMRT  St. Maarten       153.88  53  IAMs_20   IAMs_20   06 09 51.4
      comp=Z,1µm,20.0s
PTLB  Pontes e Lacer    154.87 136  PKPdf     PKPdf     05 06 59.3 -1.0
VILB  Vilhena           155.75 130  PKPdf     PKPdf     05 07 01.6  0.0
BDFB  Brasilia          160.65 161  PKP       PKPdf     05 07 08.9 +1.3
      comp=Z,4.0nm,0.9s,baz=162,slow=4.1,SNR=4.4
BDFB                                PKPab     PKPab     05 07 49.8 +0.7
      comp=Z,3.7nm,0.7s,baz=176,slow=5.4,SNR=4.3
BDFB  Brasilia          160.65 161  PKIKP     PKPdf     05 07 09.0 +1.3
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IDC **24** *04:54:21.1±0.9, 2.°67S×138.°61E, h0km, mb4.1/6, mbtmp4.2/8, ML3.8/2, Error ellipse: s-maj=30.3km s-min=23.9km az=82.0*

NEIC **24** *04:54:23.4±1.2, 2.°7S±0.°2×138.°60E±0.°03, h10km±1km, mb4.7/13, Error ellipse: s-maj=31.1km s-min=4.9km az=176.0*

ISC 24 04:54:26.1±0.7**, 2.°7S**±0.°1×**138.°62E**±0.°08**, h32km, n27, σ0.s85**/26**, mb4.4**/13**, 1C, Irian Jaya**

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Code  Station Name       Δ°    AZ°  Phase ID            Time       Res
                                    Op        ISC       h  m  s    ISC
JAY   Jayapura            2.09  84  Pn        Pn        04 54 59.0  0.0
      21nm,0.3s,baz=220,slow=7.6,SNR=9.6
      67nm,0.5s
FAKI  Fak Fak             6.37 268  Pn        Pn        04 55 57.1 -0.7
WRA   Warramunga Arr     17.61 193  P         Pn        04 58 28.9 -0.3
      0.5nm,0.3s,baz=15,slow=12,SNR=1.6
      17nm,1.0s
ASAR  Alice Springs      21.30 192  P         P         04 59 10.9 +0.5
      7.6nm,0.8s,baz=12,slow=12,SNR=1.7
      7.6nm,0.8s
JAGI  Jajag, Banyuwa     25.00 256  P         P         04 59 49.3 +1.9
TUWZ  Tuamarina          49.90 145  P         P         05 03 16.7  0.0
MKAR  Makanchi Array     69.75 322  P         P         05 05 33.9 +0.6
MKAR  Makanchi Array     69.75 322  P         P         05 05 33.7 +0.5
      0.4nm,0.3s,baz=101,slow=7.5,SNR=9.7
      0.4nm,0.3s
ZALV  Zalesovo Beam      71.91 330  P         P         05 05 46.0 -0.2
      0.8nm,0.6s,baz=120,slow=2.3,SNR=2.4
      0.8nm,0.6s
S12K  Black Hills        75.55  30  P         P         05 06 05.7 -1.8
K13K  Kusilvak Mount     77.44  24  P         P         05 06 18.9 +0.9
K13K                                IAmb      IAmb      05 06 19.8
      comp=Z,5.0nm,0.9s
L14K  Kuka Creek         77.95  25  P         P         05 06 20.9  0.0
M14K  Bethel             77.98  26  P         P         05 06 21.1 +0.1
M14K                                IAmb      IAmb      05 06 22.6
      comp=Z,8.4nm,0.8s
K15K  Wolf Creek Mou     78.89  24  P         P         05 06 26.2 +0.1
K15K                                IAmb      IAmb      05 06 28.3
      comp=Z,8.2nm,1.2s
BVAR  Borovoye Array     79.28 325  P         P         05 06 28.3 -0.1
      comp=Z,1.1nm,0.5s,baz=106,slow=4.8,SNR=4.1
      comp=Z,1.1nm,0.5s
M16K  Timber Creek       79.41  26  P         P         05 06 29.1 +0.2
M16K                                IAmb      IAmb      05 07 07.9
      comp=Z,12nm,1.4s
K17K  Iditarod           80.42  25  P         P         05 06 35.0 +0.6
K17K                                IAmb      IAmb      05 06 36.3
      comp=Z,5.8nm,0.8s
L18K  Granite Mounta     80.90  25  P         P         05 06 37.1 +0.1
L19K  White Mountain     81.67  26  P         P         05 06 40.6 -0.5
L19K                                IAmb      IAmb      05 06 42.6
      comp=Z,3.3nm,0.8s
J20K  Nowinta River      82.72  24  P         P         05 06 46.5  0.0
E19K  Redstone River     82.86  20  P         P         05 06 47.9 +0.7
ILAR  Eielson Array      85.89  24  P         P         05 07 01.0 -1.6
ILAR  Eielson Array      85.89  24  P         P         05 07 01.0 -1.6
      comp=Z,1.5nm,0.8s,baz=267,slow=5.0,SNR=9.5
      comp=Z,1.5nm,0.8s
C23K  Itkillik River     86.01  19  P         P         05 07 02.1 -1.0
C23K                                IAmb      IAmb      05 07 25.5
      comp=Z,11nm,1.4s
QSPA  South Pole Qui     87.21 180  P         P         05 07 08.9 -0.3
      comp=Z,1.1nm,0.8s,baz=258,slow=0.9,SNR=5.6
      comp=Z,1.1nm,0.8s
SYO   Syowa Base         90.70 201⇑eP       P         05 07 25.0 -0.4
PB11  IPOC Station P    144.35 130            PKPbc     05 13 58.7  0.0
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IDC **24** *04:56:59.3±0.7, 2.°64S×138.°62E, h0km, mb4.0/8, mbtmp4.2/11, ML4.7/3, Error ellipse: s-maj=19.5km s-min=15.7km az=179.0*

DJA **24** *04:57:00.9±1.1, 3°S±7°×13°9E±°, h21km±12km, M4.3/6, MLv4.3/6*

NEIC **24** *04:57:01.2±2.2, 2.°64S±0.°06×138.°73E±0.°07, h10km±1km, mb4.6/8, Error ellipse: s-maj=13.6km s-min=7.8km az=46.0*

ISC 24 04:57:03.6±0.6**, 2.°61S**±0.°07×**138.°66E**±0.°06**, h32km, n35, σ1.s43**/33**, mb4.1**/9**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.62	5	P	Pn	04 57 13.3	-2.9
GENI	Genyem	1.50	89	P	Pn	04 57 28.7	+0.3
JAY	Jayapura	2.04	87	Pn	Pn	04 57 35.0	-0.9
	50nm,0.3s,baz=240,slow=9.1,SNR=18						
JAY				Lg	Lg	04 58 06.8	
	21nm,0.3s,baz=93,slow=21,SNR=4.4						
	72nm,0.5s						
JAY	Jayapura	2.04	87	P	Pn	04 57 35.9	0.0
SRPI	Serui, Papua	2.53	287	P	Pn	04 57 36.6	-5.9
BAKI	Biak	2.92	299	P	Pn	04 57 45.7	-2.1
RKPI	Ransiki, Papua	4.61	284	P	Pn	04 58 07.0	-4.2
FAKI	Fak Fak	6.41	267	Pn	Pn	04 58 37.5	+1.6
COEN	Coen	12.12	159	Pn	Pn	04 59 53.6	-0.7
SOEI	Soe	15.96	243	Pn	Pn	05 00 45.4	-0.8
KNRA	Kununurra	16.24	216	Pn	Pn	05 00 47.7	-1.8
KNRA				IAmb	IAmb	05 00 47.8	
	comp=Z,99nm,1.3s						
BATI	Baumata	16.70	242	Pn	Pn	05 00 55.2	-0.2
	comp=Z,17nm,0.3s,baz=133,slow=1.6,SNR=10.0						
	comp=Z,26nm,0.3s						
WB0	Warramunga Arr	17.55	193	Pn	Pn	05 01 04.5	-1.6
WR8	Warramunga Arr	17.71	193	Pn	Pn	05 01 06.3	-1.6
WR8				IAmb	IAmb	05 01 33.5	
	comp=Z,62nm,1.2s						
WRA	Warramunga Arr	17.73	193	P	Pn	05 01 06.6	-1.7
WRA	Warramunga Arr	17.73	193	P	Pn	05 01 06.6	-1.7
	comp=Z,2.1nm,0.3s,baz=17,slow=12,SNR=13						
	comp=Z,4.2nm,0.4s						
AS31	Alice Springs	21.43	192	P	P	05 01 47.2	-2.0
ASAR	Alice Springs	21.43	192	P	P	05 01 49.2	-0.1
ASAR	Alice Springs	21.43	192	P	P	05 01 48.6	-0.6
	comp=Z,11nm,0.8s,baz=18,slow=9.7,SNR=14						
	comp=Z,11nm,0.8s						
SONM	Songino Array	57.61	335	P	P	05 06 52.8	+2.1
	comp=Z,0.5nm,0.6s,baz=148,slow=7.3,SNR=2.9						
	comp=Z,0.5nm,0.6s						
MKAR	Makanchi Array	69.68	322	P	P	05 08 10.3	0.0
MKAR	Makanchi Array	69.68	322	P	P	05 08 11.1	+0.8
	comp=Z,0.4nm,0.6s,baz=105,slow=7.9,SNR=3.5						
	comp=Z,0.4nm,0.6s						
ZALV	Zalesovo Beam	71.83	330	P	P	05 08 24.0	+0.9
	comp=Z,0.7nm,0.5s,baz=100,slow=6.3,SNR=1.5						
	comp=Z,0.7nm,0.5s						
VNDA	Vanda	75.88	175	P	P	05 08 47.3	+0.8
	comp=Z,1.3nm,0.8s,baz=303,slow=4.9,SNR=3.7						
	comp=Z,1.3nm,0.8s						
BVAR	Borovoye Array	79.20	325	P	P	05 09 05.7	+0.2
	comp=Z,1.3nm,0.6s,baz=110,slow=8.1,SNR=4.9						
	comp=Z,1.3nm,0.6s						
ABKAR	Akbulak array	84.61	320	P	P	05 09 34.9	+0.9
ILAR	Eielson Array	85.76	24	P	P	05 09 40.6	+1.1
ILAR	Eielson Array	85.76	24	P	P	05 09 39.0	-0.5
	comp=Z,0.9nm,0.7s,baz=261,slow=4.3,SNR=15						
	comp=Z,0.9nm,0.7s						
BMAR	Burnt Mountain	87.33	22	P	P	05 09 49.9	+2.8
QSPA	South Pole Qui	87.33	180	P	P	05 09 47.4	+0.2
QSPA				IAmb	IAmb	05 09 53.9	
	comp=Z,4.2nm,0.9s						
QSPA	South Pole Qui	87.33	180	P	P	05 09 47.5	+0.2
	comp=Z,2.0nm,0.7s,baz=334,slow=0.5,SNR=8.5						
	comp=Z,2.0nm,0.7s						
H27K	Steamboat Moun	88.27	24	P	P	05 09 53.2	+1.6
H27K				IAmb	IAmb	05 09 57.0	
	comp=Z,1.7nm,0.9s						
T42A	Van Buren	122.93	47	PKPdf	PKPdf	05 15 54.7	-2.4
CPUP	Villa Florida	147.34	153	PKPbc	PKPab	05 16 46.4	-0.2
	comp=Z,0.1nm,0.4s,baz=78,slow=2.8,SNR=2.9						
LPAZ	La Paz	147.54	126	PKPbc	PKPbc	05 16 46.6	+0.2
	comp=Z,0.6nm,0.7s,baz=264,slow=3.3,SNR=3.5						

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*IDC **24** 04:59:03.4±1.1, 2°.70S×138°.55E, h0^{km}, mb3.8/5, mbtmp3.9/7, ML4.0/2, Error ellipse: s-maj=25.0km s-min=17.6km az=173.0*

*DJA **24** 04:59:07.4±0.9, 3°S±7°×13°9E±°, h11^{km}±8^{km}, M3.8/5, MLv3.8/5*

ISC 24 04:59:07.8±0.8**, 2°.63S**±0°.09×**138°.61E**±0°.07**, h32**^{km}**, n11,** σ**1^{s}.54**/11**, mb3.9**/5**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.64	9	P	Pb	04 59 18.3	-2.3
GENI	Genyem	1.55	89	P	Pn	04 59 34.7	+1.5
JAY	Jayapura	2.09	87	Pn	Pn	04 59 40.7	0.0
	14nm,0.3s,baz=248,slow=9.1,SNR=8.8						
JAY				Lg	Lg	05 00 12.4	
	10nm,0.3s,baz=118,slow=23,SNR=1.9						
	29nm,0.3s						
JAY	Jayapura	2.09	87	P	Pn	04 59 42.1	+1.4
BAKI	Biak	2.88	300	P	Pn	04 59 52.5	+1.0
WRA	Warramunga Arr	17.71	193	P	Pn	05 03 09.8	-2.3
	0.9nm,0.3s,baz=15,slow=13,SNR=5.8						
	2.1nm,0.4s						
ASAR	Alice Springs	21.41	192	P	P	05 03 52.8	-0.3
	4.1nm,0.7s,baz=17,slow=9.8,SNR=6.0						
	4.1nm,0.7s						
SONM	Songino Array	57.60	335	P	P	05 08 55.7	+0.9
	0.3nm,0.4s,baz=156,slow=4.7,SNR=3.0						
	0.3nm,0.4s						
MKAR	Makanchi Array	69.66	322	P	P	05 10 15.7	+1.4
	0.4nm,0.6s,baz=105,slow=6.7,SNR=3.3						
	0.4nm,0.6s						
ILAR	Eielson Array	85.80	24	P	P	05 11 43.9	+0.1
	0.6nm,0.7s,baz=266,slow=5.0,SNR=4.7						
	0.6nm,0.7s						
QSPA	South Pole Qui	87.32	180	P	P	05 11 51.6	+0.2
	1.0nm,0.7s,baz=297,slow=12,SNR=2.2						
	1.0nm,0.7s						

IDC 24 05:00:24.9±2.2**, 2°.44S**×**138°.22E, h0**^{km}**, mb3.5**/2**, mbtmp3.6**/4**, ML3.4**/2**, Error ellipse: s-maj=53.8km s-min=31.3km az=121.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.48	92	Pn	Pn	05 01 05.0	-1.7
	3.5nm,0.3s,baz=99,slow=23,SNR=0.9						
	12nm,0.3s						
WRA	Warramunga Arr	17.80	192	P	Pn	05 04 33.9	-0.5
	0.2nm,0.3s,baz=4.9,slow=13,SNR=1.4						
	1.9nm,0.9s						
ASAR	Alice Springs	21.51	191	P	P	05 05 16.4	+0.8
	1.5nm,0.7s,baz=20,slow=9.5,SNR=1.1						
	1.5nm,0.7s						
ILAR	Eielson Array	85.79	25	P	P	05 13 06.4	+0.4
	0.3nm,0.7s,baz=265,slow=6.2,SNR=2.3						
	0.3nm,0.7s						

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*IDC **24** 05:12:11.4±1.6, 2°.62S×138°.59E, h0^{km}, mb3.9/3, mbtmp3.9/5, ML3.6/2, Error ellipse: s-maj=34.2km s-min=18.0km az=158.0*

*DJA **24** 05:12:15.3±0.4, 3°S±5°×13°9E±°, h10^{km}, M4.0/6, MLv4.0/6*

ISC 24 05:12:16.1±0.9**, 2°.61S**±0°.10×**138°.68E**±0°.06**, h32**^{km}**, n11,** σ**1^{s}.45**/11**, mb3.8**/3**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.62	3	P	Pb	05 12 27.0	-1.5
GENI	Genyem	1.49	89	P	Pn	05 12 42.1	+1.5
JAY	Jayapura	2.03	87	Pn	Pn	05 12 49.0	+1.0
	7.5nm,0.3s,baz=223,slow=11,SNR=12						
JAY				Lg	Lg	05 13 18.5	
	4.2nm,0.3s,baz=76,slow=13,SNR=3.6						
	19nm,0.3s						
JAY	Jayapura	2.03	87	P	Pn	05 12 49.5	+1.4
SRPI	Serui, Papua	2.54	287	P	Pn	05 12 56.5	+1.4
BAKI	Biak	2.93	299	P	Pn	05 13 01.8	+1.3
RKPI	Ransiki, Papua	4.63	284	P	Pn	05 13 25.2	+1.4
WRA	Warramunga Arr	17.74	194	P	Pn	05 16 18.9	-1.8
	0.3nm,0.3s,baz=19,slow=13,SNR=8.1						
	2.5nm,0.8s						
ASAR	Alice Springs	21.43	192	P	P	05 17 01.4	-0.3
	2.8nm,0.7s,baz=20,slow=11,SNR=12						
	2.8nm,0.7s						
ILAR	Eielson Array	85.76	24	P	P	05 24 52.4	+0.6
	0.4nm,0.7s,baz=262,slow=4.8,SNR=6.6						
	0.4nm,0.7s						
QSPA	South Pole Qui	87.33	180	P	P	05 24 59.9	+0.2
	1.4nm,0.9s,baz=340,slow=0.8,SNR=6.4						
	1.4nm,0.9s						

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*IDC **24** 05:15:46.1±0.4, 2°.71S×138°.54E, h0^{km}, mb4.9/17, mbtmp4.9/23, ML4.6/3, MS4.7/3, Error ellipse: s-maj=12.9km s-min=11.1km az=67.0*

*MOS **24** 05:15:46.3±0.8, 2°.69S×138°.48E, h11^{km}, mb5.3/45, Error ellipse: s-maj=8.5km s-min=5.1km az=113.2*

*BJI **24** 05:15:47.0, 2°.70S×138°.50E, h10^{km}, mB5.6/5, mb4.9/75, Ms5.4/12, Ms7 5.3/12*

*NEIC **24** 05:15:48.7±1.2, 2°.65S±0°.07×138°.52E±0°.06, h10^{km}±1^{km}, mb5.3/259, Error ellipse: s-maj=12.1km s-min=9.6km az=180.0*

*DJA **24** 05:15:49.1±0.6, 3°S±2°×13°9E±°, h16^{km}±4^{km}, M5.4/71, mb5.2/71, mB5.9/30, MLv5.3/11, Mw(mB)5.5/30, MwMwp6.6/1, Mwp6.5/1*

ISC 24 05:15:51.4±0.2**, 2°.75S**±0°.03×**138°.55E**±0°.04**, h32**^{km}**, n862,** σ**1^{s}.20**/851**, mb5.2**/206**, MS5.2**/9**, 13C-7D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.77	12	P	Pn	05 15 59.3	-6.7
GENI	Genyem	1.62	85	P	Pn	05 16 17.2	-0.5
GENI	Genyem	1.62	85	P	Pn	05 16 15.5	-2.2
JAY	Jayapura	2.17	84	Pn	Pn	05 16 22.9	-2.3
	75nm,0.3s,baz=246,slow=11,SNR=62						
JAY				Lg	Lg	05 16 55.9	
	58nm,0.3s,baz=74,slow=13,SNR=8.1						
JAY				LR	LR	05 17 11.7	
	comp=Z,7µm,19.9s,baz=313,slow=40						
	485nm,0.5s						
JAY	Jayapura	2.17	84	P	Pn	05 16 22.9	-2.3
JAY	Jayapura	2.17	84	P	Pn	05 16 23.0	-2.3
SRPI	Serui, Papua	2.47	291	P	Pn	05 16 28.6	-0.8
BAKI	Biak	2.89	302	P	Pn	05 16 35.1	-0.1
RKPI	Ransiki, Papua	4.54	286	P	Pn	05 16 57.9	0.0
KMPI	Kaimana, Papua	4.92	259	P	Pn	05 17 04.8	+1.6
	4.0nm15µm876nm,1.7s						
MMPI	Merauke	5.96	162	P	Pn	05 17 20.8	+3.3
FAKI	Fak Fak	6.30	268	Pn	Pn	05 17 20.2	-1.8
FAKI	Fak Fak	6.30	268	P	Pn	05 17 23.4	+1.3
FAKI	Fak Fak	6.30	268	P	Pn	05 17 22.9	+0.8
	0.9nm200nm,0.8s						
SWI	Sorong	7.52	284	P	Pn	05 17 39.6	+0.7
	0.5nm138nm,1.0s						
SAUI	Saumlaki	8.89	234	Pn	Pn	05 17 54.9	-2.8
MSAI	Masohi	9.63	266	P	Pn	05 18 08.8	+1.0
AAI	Ambon	10.38	265	P	Pn	05 18 18.5	+0.4
	4µm155nm,1.5s						
PMG	Port Moresby	10.81	128		Pn	05 18 22.6	-1.4
PMG	Port Moresby	10.81	128	Pn	Pn	05 18 22.8	-1.2
	4.9nm,0.3s,baz=298,slow=7.8,SNR=6.3						
PMG	Port Moresby	10.81	128	P	Pn	05 18 24.7	+0.7
PMG	Port Moresby	10.81	128	P	Pn	05 18 25.0	+0.9
PMG	Port Moresby	10.81	128	*i* P	Pn	05 18 24.6	+0.6
I39PW	PALAU INFRASON	10.97	339	I	I	06 18 40.0	
	baz=160,slow=313,SNR=4.8						
NLAI	Namlea	11.45	267	P	Pn	05 18 33.9	+1.2
KDU	Kakadu	11.56	211	P	Pn	05 18 33.4	-0.9
	comp=Z,170nm,1.0s						
KDU	Kakadu	11.56	211	P	Pn	05 18 34.1	-0.2
TNTI	Ternate	11.71	287	Pn	Pn	05 18 33.6	-2.8
TNTI	Ternate	11.71	287	P	Pn	05 18 37.8	+1.4
	comp=Z,65nm,1.0s						
COEN	Coen	12.04	158		Pn	05 18 41.0	+0.2
COEN	Coen	12.04	158	P	Pn	05 18 40.6	-0.2
	comp=Z,78nm,0.6s						
COEN	Coen	12.04	158	P	Pn	05 18 41.3	+0.5
DRS	Darwin Rock St	12.24	218	P	Pn	05 18 44.9	+1.3
MTN	Manton Dam	12.43	216		Pn	05 18 45.0	-1.2
MTN	Manton Dam	12.43	216	P	Pn	05 18 45.7	-0.5
	comp=Z,202nm,1.3s						
MTN	Manton Dam	12.43	216	P	Pn	05 18 46.2	0.0
SANI	Sanana	12.57	273	P	Pn	05 18 48.1	0.0
SANI	Sanana	12.57	273	P	Pn	05 18 47.1	-1.0
	comp=Z,2µmcomp=Z,114nm,0.9s						
SGSI	Sangihe	14.50	296	P	Pn	05 19 14.6	+0.1
	comp=Z,4µmcomp=Z,230nm,2.0s						
KMSI	Cibinong	14.94	283	P	Pn	05 19 21.5	+1.2
SOEI	Soe	15.80	243	Pn	Pn	05 19 30.4	-1.5
SOEI	Soe	15.80	243	P	P	05 19 33.8	-1.6
SOEI	Soe	15.80	243	P	P	05 19 35.3	-0.1
LUWI	Luwuk	15.86	276	Pn	Pn	05 19 30.3	-2.1
LUWI	Luwuk	15.86	276	P	Pn	05 19 32.1	-0.3
LUWI	Luwuk	15.86	276	P	Pn	05 19 32.4	0.0
	comp=Z,5µmcomp=Z,337nm,1.2s						
KNRA	Kununurra	16.06	216		Pn	05 19 34.5	-0.5
KNRA	Kununurra	16.06	216	P	Pn	05 19 33.3	-1.6
	comp=Z,140nm,0.8s						
BBSI	Bau Bau	16.17	260	P	P	05 19 38.3	-1.0
	comp=Z,4µmcomp=Z,193nm,1.1s						
MTSU	Mount Surprise	16.30	160	P	Pn	05 19 39.3	+1.2
	comp=Z,31nm,0.6s						
MTSU	Mount Surprise	16.30	160	P	Pn	05 19 39.1	+1.0
BATI	Baumata	16.54	243	Pn	Pn	05 19 41.2	+0.2
	comp=Z,168nm,0.9s,baz=142,slow=1.6,SNR=15						
BATI	Baumata	16.54	243	P	P	05 19 44.6	+1.2
MRSI	Marisa	16.91	281	P	Pn	05 19 46.2	+0.4
	comp=Z,162nm,1.3s						
APSI	Ampana	16.99	276	P	Pn	05 19 47.1	+0.3
	comp=Z,6µmcomp=Z,423nm,1.6s						
MMRI	Maumere	17.25	250	Pn	Pn	05 19 49.0	-1.0
MMRI	Maumere	17.25	250	P	P	05 19 52.2	+0.9
	comp=Z,50nm,0.6s						
WB0	Warramunga Arr	17.39	193		Pn	05 19 49.3	-2.5
GUMO	Guam	17.40	21		Pn	05 19 51.8	-0.1
GUMO	Guam	17.40	21	P	Pn	05 19 50.3	-1.6
	comp=Z,63nm,0.2s,baz=187,slow=8.6,SNR=5.8						
GUMO	Guam	17.40	21	P	P	05 19 54.3	+1.4
GUMO	Guam	17.40	21	P	Pn	05 19 51.8	-0.1
GUMO				pmax	pmax		
	comp=Z,513nm,1.3s						
WR0	Warramunga Arr	17.55	193	Pn	Pn	05 19 51.3	-2.4
WR0				IAmb	IAmb	05 20 02.3	
	comp=Z,209nm,1.2s						
WR8	Warramunga Arr	17.55	193		Pn	05 19 52.4	-1.3
WR8				IAmb	IAmb	05 20 04.5	
	comp=Z,529nm,1.7s						
WRAB	Tennant Creek	17.56	193		Pn	05 19 51.7	-2.2
WRAB				IAmb	IAmb	05 20 04.7	
	comp=Z,425nm,1.6s						
WRAB	Tennant Creek	17.56	193	*i* P	Pn	05 19 52.6	-1.3
WRAB				pmax	pmax		
	comp=Z,203nm,1.4s						
WB2	Warramunga Arr	17.57	193	Pn	Pn	05 19 51.3	-2.7
WB2				IAmb	IAmb	05 20 02.6	
	comp=Z,337nm,1.5s						
WRA	Warramunga Arr	17.58	193		Pn	05 19 50.3	-3.8
WRA	Warramunga Arr	17.58	193	P	Pn	05 19 52.6	-1.4
	comp=Z,3.2nm,0.3s,baz=18,slow=12,SNR=42						
WRA				S	Sn	05 23 06.0	-3.0
	comp=Z,37nm,1.1s,baz=9.2,slow=22,SNR=4.7						
WRA				LR	LR	05 26 52.1	
	comp=Z,5µm,21.4s,baz=302,slow=38						
	comp=Z,32nm,0.7s						
WB1	Warramunga Ar.	17.59	193	P	Pn	05 19 52.8	-1.4
QIS	Mount Isa	17.73	177	P	Pn	05 19 53.6	-2.4
QIS	Mount Isa	17.73	177	P	Pn	05 19 54.4	-1.5
EDFI	Ende, Flores	17.80	250	P	Pn	05 19 57.1	+0.2
TOLI2	Tolitoli	18.17	282		Pn	05 19 57.4	-4.0
TOLI2	Tolitoli	18.17	282	P	Pn	05 20 00.8	-0.6
BSSI	Bau Bau, Buton	18.32	259	P	Pn	05 20 05.3	+2.1
	comp=Z,125nm,1.0s						
BNSI	Bone	18.48	264	P	Pn	05 20 07.9	+2.7
	comp=Z,81nm,1.3s						
TTSI	Tana Toraja	18.71	269	P	Pn	05 20 09.3	+1.3
	comp=Z,5µmcomp=Z,146nm,2.0s						
SPSI	Sidrap Palu	18.79	266	P	Pn	05 20 10.0	+1.1
	comp=Z,3µmcomp=Z,61nm,0.9s						
PCI	Palu	18.79	275	P	Pn	05 20 10.4	+1.4
	comp=Z,6µmcomp=Z,198nm,1.3s						
CTAO	Charters Tower	18.80	157	P	P	05 20 08.2	-0.2
CTAO	Charters Tower	18.80	157	P	Pn	05 20 10.0	+1.0
CTAO	Charters Tower	18.80	157	P	P	05 20 08.2	-0.2
CTAO				pmax	pmax		
	comp=Z,47nm,0.9s						
KAPI	Kappang	18.89	263	P	P	05 20 07.4	-2.0
KAPI	Kappang	18.89	263	P	Pn	05 20 11.8	+1.7
KAPI	Kappang	18.89	263	P	P	05 20 07.4	-2.0
KAPI				pmax	pmax		
	comp=Z,29nm,1.4s						
MPSI	Mapaga	18.90	279	P	Pn	05 20 10.3	+0.1
FITZ	Fitzroy Crossi	19.82	219		P	05 20 19.2	-0.3
FITZ	Fitzroy Crossi	19.82	219	P	P	05 20 20.0	+0.4
FITZ	Fitzroy Crossi	19.82	219	P	P	05 20 19.0	-0.5
	comp=Z,1.0nm,0.3s,baz=46,slow=16,SNR=13						
FITZ				S	S	05 23 55.3	-5.9
	comp=Z,35nm,1.0s,baz=146,slow=8.4,SNR=3.1						
	comp=Z,25nm,0.9s						
FITZ	Fitzroy Crossi	19.82	219	P	P	05 20 19.2	-0.3
WBSI	Waikabubak, Su	20.23	249	P	Pn	05 20 25.8	-0.3
	comp=Z,87nm,0.9s						
AS01	Alice Springs	21.26	192	P	P	05 20 35.5	+0.4
AS31	Alice Springs	21.27	192		P	05 20 35.8	+0.5
ASAR	Alice Springs	21.27	192	P	P	05 20 35.5	+0.3
ASAR	Alice Springs	21.27	192	P	P	05 20 35.0	-0.3
	comp=Z,93nm,1.0s,baz=23,slow=9.7,SNR=61						
ASAR				S	S	05 24 31.0	+0.9
	comp=Z,32nm,1.0s,baz=12,slow=26,SNR=5.8						
ASAR				LR	LR	05 28 56.3	
	comp=Z,3µm,21.0s,baz=346,slow=37						
	comp=Z,93nm,1.0s						
ASAR	Alice Springs	21.27	192	P	P	05 20 35.5	+0.3
SMKI	Samarinda	21.45	276	P	P	05 20 39.5	+2.2
MYLDM	Lahad Datu	21.52	291	P	P	05 20 37.0	-1.0
MYLDM				IAmb	IAmb	05 20 49.8	
	comp=Z,222nm,1.3s						
MYLDM	Lahad Datu	21.52	291	P	P	05 20 39.6	+1.6
PLAI	Plampang	21.52	253	P	P	05 20 37.2	-0.8
BKB	Balikpapan	21.69	273	P	P	05 20 37.4	-2.4
BKB	Balikpapan	21.69	273	P	P	05 20 40.9	+1.1
BKB	Balikpapan	21.69	273	P	P	05 20 41.1	+1.3
	comp=Z,6µmcomp=Z,453nm,1.7s						
TATA	Tatamba Isabel	21.87	106	P	P	05 20 40.9	-0.8
SAVO	Savo Central	22.07	108	P	P	05 20 45.9	+2.0
HNR	Honiara	22.28	108	P	P	05 20 46.0	0.0
	comp=Z,390nm,0.8s,baz=248,slow=5.7,SNR=5.1						
	comp=Z,390nm,0.8s						
TWSI	Taliwang, Sumb	22.36	254	P	P	05 20 46.3	-0.6
ALEG	Aligegeo Malai	22.82	106	P	P	05 20 52.3	+0.5
KKM	Kota Kinabalu	23.95	291		P	05 21 02.3	-0.9
QLP	Quilpie	24.32	168	P	P	05 21 06.5	+0.3
KMMI	Kalianget	24.86	259	P	P	05 21 13.6	+2.3
	comp=Z,119µmcomp=Z,107nm,1.0s						
JAGI	Jajag, Banyuwa	24.93	256	P	P	05 21 10.2	-1.8
JAGI	Jajag, Banyuwa	24.93	256	P	P	05 21 13.2	+1.3
EIDS	Eidsvold	25.52	153	P	P	05 21 18.2	+1.1
EIDS				IAmb	IAmb	05 21 23.9	
	comp=Z,54nm,0.8s						
EIDS	Eidsvold	25.52	153	P	P	05 21 19.0	+1.9
	comp=Z,82nm,0.8s						
EIDS	Eidsvold	25.52	153	P	P	05 21 18.7	+1.5
MBWA	Marble Bar	25.89	224	P	P	05 21 20.5	-0.1
MBWA	Marble Bar	25.89	224	P	P	05 21 20.6	-0.1
PSA00	Pilbara Seismi	26.10	223	P	P	05 21 22.5	0.0
PSA00				IAmb	IAmb	05 21 25.0	
	comp=Z,73nm,1.4s						
PSA00	Pilbara Seismi	26.10	223	P	P	05 21 20.0	-2.5
PSA00	Pilbara Seismi	26.10	223	P	P	05 21 22.6	+0.1
PSAD3	Pilbara Seismi	26.19	223	P	P	05 21 23.8	+0.5
	comp=Z,40nm,1.1s						
GRJI	Gresik	26.30	260	P	P	05 21 28.0	+3.6
STKI	Sintang	27.21	275	P	P	05 21 33.3	+0.7
LUES	Luesalemba Tem	28.27	107	P	P	05 21 43.1	+1.1
KSM	Kuching	28.54	278	P	P	05 21 45.1	+0.6
KSM	Kuching	28.54	278	P	P	05 21 45.4	+0.9
STKA	Stephens Creek	29.11	175	P	P	05 21 49.5	+0.2
STKA	Stephens Creek	29.11	175	P	P	05 21 49.6	+0.2
	comp=Z,73nm,2.2s						
STKA	Stephens Creek	29.11	175	P	P	05 21 49.0	-0.4
	comp=Z,2.2nm,0.4s,baz=343,slow=12,SNR=6.2						
	comp=Z,2.2nm,0.4s						
STKA	Stephens Creek	29.11	175	P	P	05 21 49.5	+0.2
STKA				pmax	pmax		
	comp=Z,369nm,1.7s						
CMSA	Cobar Meteorol	29.42	168	P	P	05 21 53.8	+1.8
	comp=Z,22nm,1.1s						
CMSA	Cobar Meteorol	29.42	168	P	P	05 21 53.6	+1.6
JCJ	Chichijima	29.88	7	P	P	05 21 55.2	-1.0
BBOO	Buckleboo	30.00	184	P	P	05 21 58.5	+1.4
BBOO				IAmb	IAmb	05 22 55.2	
	comp=Z,69nm,1.4s						
BBOO	Buckleboo	30.00	184	P	P	05 21 58.5	+1.4
	comp=Z,46nm,2.5s						
ARMA	Armidale	30.18	157	P	P	05 21 60.0	+1.0
	comp=Z,24nm,2.2s						
MEEK	Meekatharra	30.49	217	P	P	05 21 59.5	-2.1
SANVU	Saraoutou	30.92	116	P	P	05 22 06.8	+1.2
SANVU				IAmb	IAmb	05 22 07.9	
	comp=Z,38nm,0.9s						
NACB	Ninganchiao	31.44	329	P	P	05 22 08.4	-1.6
DLV	Lat	33.26	297	P	P	05 22 25.3	-1.0
MORW	Morawa	33.81	217	P	P	05 22 31.6	+0.8
MDSI	Maura Dua	34.34	266	P	P	05 22 35.2	-0.4
	comp=Z,74nm,1.4s						
KLBR	Kellerberrin	34.74	212	P	P	05 22 39.5	+0.7
TOO	Toolangi	35.24	170	P	P	05 22 44.2	+1.2
TOO	Toolangi	35.24	170	P	P	05 22 44.2	+1.2
TOO				pmax	pmax		
	comp=Z,15nm,1.4s						
QIZ	Qiongzhong	35.58	309	P	P	05 22 45.6	-0.5
QIZ	Qiongzhong	35.58	309	P	P	05 22 45.5	-0.6
QIZ				S	S	05 28 26.4	+6.2
QIZ				pmax	pmax		
	comp=Z,35nm,1.7s						
JNU	Nakatsue	36.41	349	P	P	05 22 52.0	-1.1
JNU				IAmb	IAmb	05 23 02.4	
	comp=Z,63nm,1.2s						
JNU	Nakatsue	36.41	349	P	P	05 22 52.7	-0.4
JMN	Monobe	36.55	353	P	P	05 22 54.3	0.0
JMN	Monobe	36.55	353	P	P	05 22 54.9	+0.6
IPM	Ipoh	38.18	281	P	P	05 23 06.2	-2.1
PPI	Padang Panjang	38.20	273	P	P	05 23 08.4	-0.2
	comp=Z,2µmcomp=Z,62nm,1.7s						
KULM	Kulim	38.69	282	P	P	05 23 11.9	-0.7
KULM	Kulim	38.69	282	P	P	05 23 12.8	+0.1
MJAR	Matsushiro Arr	39.09	360	P	P	05 23 14.5	-1.1
	comp=Z,2.0nm,0.7s,baz=169,slow=7.4,SNR=4.1						
	comp=Z,2.0nm,0.7s						
NJ2	Nanjing	39.34	333	*e*P	P	05 23 18.3	+0.5
NJ2				pmax	pmax		
	comp=Z,14nm,0.9s						
CNSH	ChangSha	39.40	323	P	P	05 23 20.9	+2.5
CNSH				pmax	pmax		
	comp=Z,19nm,1.2s						
SISI	Saibi	39.46	271	P	P	05 23 18.4	-0.7
	comp=Z,79nm,1.0s						
RPSI	Rantau Prapat	39.98	277		P	05 23 22.8	-0.7
RPSI				IAmb	IAmb	05 23 23.9	
	comp=Z,64nm,1.1s						
PSI	Prapat	39.99	278	P	P	05 23 22.6	-1.1
PSI	Prapat	39.99	278	P	P	05 23 22.8	-0.9
PSI				pmax	pmax		
	comp=Z,64nm,1.1s						
MOO	Moorlands	40.27	170	P	P	05 23 28.3	+2.9
TJN	Taejon	40.30	346	P	P	05 23 25.1	-0.6
TJN	Taejon	40.30	346	P	P	05 23 26.4	+0.7
TJN	Taejon	40.30	346	P	P	05 23 25.1	-0.6
TJN				pmax	pmax		
	comp=Z,92nm,1.0s						
WHN	Wuhan	40.37	327	P	P	05 23 29.0	+2.7
WHN				pmax	pmax		
	comp=Z,64nm,1.1s						
SRIT	Nakonsritamara	40.44	287		P	05 23 26.5	-0.7
SRIT				IAmb	IAmb	05 23 37.9	
	comp=Z,61nm,1.0s						
SRIT	Nakonsritamara	40.44	287	P	P	05 23 27.3	+0.1
JMM	Marumori	40.47	3	P	P	05 23 26.4	-0.6
JMM	Marumori	40.47	3	P	P	05 23 29.5	+2.5
JSD	Sado	40.58	360		P	05 23 27.5	-0.6
JSD	Sado	40.58	360	P	P	05 23 28.6	+0.6
TAU	Tasmania Unive	40.74	170	P	P	05 23 31.2	+1.9
TAU				IAmb	IAmb	05 23 43.7	
	comp=Z,81nm,1.6s						
TAU	Tasmania Unive	40.74	170	P	P	05 23 31.2	+1.9
TAU				pmax	pmax		
	comp=Z,81nm,1.6s						
GSI	Gunungsitoli	41.16	275	P	P	05 23 31.9	-1.3
GSI				IAmb	IAmb	05 23 32.6	
	comp=Z,62nm,1.2s						
GSI	Gunungsitoli	41.16	275	P	P	05 23 32.4	-0.8
KSAR	Wonju Array Be	41.20	347		P	05 23 32.8	-0.3
KSAR	Wonju Array Be	41.20	347	P	P	05 23 32.8	-0.3
KSRS	Korea Array	41.20	347	P	P	05 23 32.8	-0.3
	comp=Z,5.6nm,0.9s,baz=164,slow=9.6,SNR=22						
KSRS				PcP	PcP	05 25 32.0	+0.2
	comp=Z,1.4nm,0.7s,baz=176,slow=3.1,SNR=5.8						
	comp=Z,5.6nm,0.9s						
KS19	Wonju Array Si	41.26	347	P	P	05 23 33.2	-0.4
MSVF	Nonsavu	41.49	114	P	P	05 23 36.5	+0.5

MSVF	Nonsavu	41.49	114	P	P	05 23 37.6	+1.6
MSVF	Nonsavu	41.49	114	P	P	05 23 36.5	+0.5
MSVF				pmax	pmax		
	comp=Z,24nm,1.1s						
SLVN	Son La	41.51	307		P	05 23 35.9	-0.1
SLVN	Son La	41.51	307	P	P	05 23 35.6	-0.4
GYA	Guiyang	42.34	315	⇓P	P	05 23 42.6	-0.2
GYA				pmax	pmax		
	comp=Z,21nm,0.5s						
DGTI	Dogotuki	42.68	111	P	P	05 23 45.7	+0.1
MLSI	Meulaboh, Aceh	42.69	279	P	P	05 23 44.2	-1.5
ENH	Enshi	42.99	322	P	P	05 23 47.8	-0.2
ENH	Enshi	42.99	322	P	P	05 23 49.4	+1.4
TIA	Tai'an	43.62	335	P	P	05 23 52.5	-0.4
TIA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
DL2	Dalian	44.29	341	P	P	05 23 57.8	-0.4
DL2				S	S	05 30 35.1	+5.0
DL2				pmax	pmax		
	comp=Z,23nm,1.0s						
DL2				pmax	pmax		
	comp=Z,680nm,11.8s						
DL2				LR	LR		
	comp=Z,4µm,21.6s						
DL2				LR	LR		
	comp=Z,1µm,19.6s						
DL2				LR	LR		
	comp=Z,5µm,23.5s						
CM31	Chiang Mai Arr	44.32	300	P	P	05 23 58.7	-0.1
CMAR	Chiang Mai Arr	44.32	300		P	05 23 58.6	-0.1
CMAR	Chiang Mai Arr	44.32	300	P	P	05 23 58.9	+0.1
	comp=Z,12nm,1.1s,baz=119,slow=6.5,SNR=44						
	comp=Z,12nm,1.1s						
KMI	Kunming	44.42	311	P	P	05 24 00.3	+0.5
KMI				pmax	pmax		
	comp=Z,16nm,0.7s						
CHTO	Chiang Mai	44.47	300	P	P	05 23 59.6	-0.3
CHTO	Chiang Mai	44.47	300	P	P	05 23 59.4	-0.5
CHTO	Chiang Mai	44.47	300	P	P	05 23 59.6	-0.3
CHTO				pmax	pmax		
	comp=Z,38nm,1.5s						
LYN	LuoYang	44.47	329	P	P	05 23 59.8	+0.1
LYN				pmax	pmax		
	comp=Z,26nm,1.0s						
MSHR	Mys Shultsa	45.61	352	*i* P	P	05 24 07.3	-1.3
MSHR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HNS	HongShan	45.67	333	⇑P	P	05 24 08.1	-1.1
HNS				pmax	pmax		
	comp=Z,12nm,1.2s						
OUZ	Omahuta	45.82	139	P	P	05 24 14.8	+4.3
PZH	PanZhiHua	45.93	312	P	P	05 24 11.0	-0.6
PZH				pmax	pmax		
	comp=Z,20nm,1.1s						
XAN	Xi'an	46.02	325	⇓P	P	05 24 11.8	-0.3
XAN				pP	pP	05 24 17.6	-4.1
XAN				pmax	pmax		
	comp=Z,40nm,0.8s						
CD2	Chengdu	47.10	318	P	P	05 24 21.0	+0.3
CD2				pmax	pmax		
	comp=Z,50nm,0.6s						
USA0B	Ussuriysk Arra	47.11	354	P	P	05 24 19.6	-0.8
USA0B				IAmb	IAmb	05 24 30.0	
	comp=Z,51nm,1.7s						
USA0B	Ussuriysk Arra	47.11	354	*d i*P	P	05 24 20.4	0.0
USRK	Ussuriysk Ar.	47.11	354	P	P	05 24 20.2	-0.2
USRK	Ussuriysk Ar.	47.11	354	P	P	05 24 19.8	-0.6
	comp=Z,5.0nm,0.8s,baz=168,slow=7.1,SNR=9.7						
	comp=Z,5.0nm,0.8s						
USRK	Ussuriysk Ar.	47.11	354	P	P	05 24 20.2	-0.2
BJT	Baijiatuau	47.25	337	P	P	05 24 21.4	-0.2
BJT	Baijiatuau	47.25	337	P	P	05 24 21.9	+0.3
BJT	Baijiatuau	47.25	337	P	P	05 24 21.4	-0.2
BJT				pmax	pmax		
	comp=Z,95nm,2.0s						
BJI	Beijing	47.27	337	P	P	05 24 25.0	+3.3
BJI				pP	pP	05 24 29.3	-2.0
BJI				sP	sP	05 24 32.3	-2.9
BJI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BJI				LR	LR		
	comp=Z,1µm,24.6s						
BJI				LR	LR		
	comp=Z,940nm,18.9s						
BJI				LR	LR		
	comp=Z,2µm,26.9s						
CN2	Changchun	47.81	347	*e*P	P	05 24 29.1	+3.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MDJ	Mudanjiang	47.83	351	P	P	05 24 25.9	-0.1
MDJ	Mudanjiang	47.83	351	P	P	05 24 26.3	+0.3
MDJ				pmax	pmax		
	comp=Z,11nm,0.9s						
MDJ	Mudanjiang	47.83	351	P	P	05 24 26.5	+0.5
TOZ	Tahuroa Road	48.55	141		P	05 24 32.6	+0.9
HIZ	Hauiti	48.62	142	P	P	05 24 35.6	+3.4
QRZ	Quartz Range	48.73	146	P	P	05 24 35.2	+2.2
DSZ	Denniston Nort	48.95	147	P	P	05 24 36.8	+2.0
JCZ	Jackson Bay	49.08	151	P	P	05 24 36.5	+0.8
JCZ	Jackson Bay	49.08	151	P	P	05 24 39.7	+3.9
TKNZ	Takaka Hill	49.11	146	P	P	05 24 37.8	+1.8
BNX	BinXian	49.28	350	⇓P	P	05 24 36.8	-0.3
BNX				S	S	05 31 45.8	+4.6
BNX				pmax	pmax		
	comp=Z,16nm,0.9s						
BNX				LR	LR		
	comp=Z,2µm,25.0s						
BNX				LR	LR		
	comp=Z,2µm,23.5s						
BNX				LR	LR		
	comp=Z,4µm,26.1s						
WVZ	Waitaha Valley	49.32	149	P	P	05 24 39.9	+2.4
NNZ	Nelson	49.47	145	P	P	05 24 40.2	+1.5
THZ	Tophouse	49.57	146	P	P	05 24 42.6	+3.1
YSS	Yuzhno-Sakhali	49.63	4	⇑*e*P	P	05 24 39.0	-0.8
YSS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
URZ	Urewera	49.89	140	P	P	05 24 44.2	+2.3
HHC	Hu-ho-hao-te	49.90	333	*e*P	P	05 24 44.8	+2.7
HHC				sP	sP	05 24 54.1	-1.5
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
LTZ	Lake Taylor	49.92	148		P	05 24 42.8	+0.7
LTZ	Lake Taylor	49.92	148	P	P	05 24 45.2	+3.1
TUWZ	Tuamarina	49.93	145	P	P	05 24 42.9	+0.8
RPZ	Rata Peaks	49.94	149		P	05 24 44.7	+2.5
RPZ	Rata Peaks	49.94	149	P	P	05 24 44.5	+2.3
TCW	Tory Channel	49.98	145	P	P	05 24 43.4	+0.9
LBZ	Lake Benmore	49.98	151	P	P	05 24 44.4	+1.8
LBZ	Lake Benmore	49.98	151	P	P	05 24 45.1	+2.5
BKZ	Black Stump Fm	50.03	141	P	P	05 24 45.1	+2.0
HAZ	Te Kaha	50.04	139	P	P	05 24 45.8	+2.7
MWZ	Matawai	50.20	140	P	P	05 24 48.9	+4.6
TSZ	Takapari Road	50.25	143	P	P	05 24 45.4	+0.7
KHZ	Kahutara	50.36	147	P	P	05 24 46.1	+0.7
KHZ	Kahutara	50.36	147	P	P	05 24 46.8	+1.5
MRZ	Mangatainoka R	50.39	144		P	05 24 45.9	+0.2
MRZ	Mangatainoka R	50.39	144	P	P	05 24 45.8	+0.1
LZH	Lanzhou	50.42	323	*e*P	P	05 24 47.1	+0.9
LZH				sP	sP	05 24 58.4	-1.4
LZH				pmax	pmax		
	comp=Z,52nm,1.2s						
GVZ	Greta Valley S	50.45	147	P	P	05 24 46.1	0.0
GVZ	Greta Valley S	50.45	147	P	P	05 24 48.2	+2.0
XLT	XiLinHaoTe	50.63	339	*e*P	P	05 24 46.8	-0.7
XLT				sP	pP	05 24 54.0	-3.4
PXZ	Pawanui	50.78	142	P	P	05 24 51.2	+2.6
BFZ	Birch Farm	50.80	143	P	P	05 24 49.4	+0.6
KLR	Kul'dur	52.11	354	*ce*P	P	05 24 57.4	-1.0
KLR				pmax	pmax		
	comp=Z,30nm,1.5s						
NIUE	Niue	52.90	112	P	P	05 25 05.0	+0.2
HEH	HeiHe	53.66	351	*e*P	P	05 25 08.4	-1.4
HEH				pmax	pmax		
	comp=Z,11nm,1.4s						
HIA	Hailar	54.31	345	P	P	05 25 14.6	-0.1
HIA	Hailar	54.31	345	P	P	05 25 14.6	-0.1
HIA				pmax	pmax		
	comp=Z,25nm,1.2s						
GTA	Gaotai	55.01	324	P	P	05 25 20.6	+0.6
GTA				sP	sP	05 25 32.0	-1.7
GTA				pmax	pmax		
	comp=Z,23nm,1.0s						
LSA	Lhasa	55.62	309	P	P	05 25 23.8	-1.2
LSA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GOMU	GeErMu	56.24	318	P	P	05 25 30.6	+1.4
GOMU				pP	pP	05 25 35.8	-3.3
GOMU				sP	sP	05 25 38.1	-4.7
GOMU				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GOMU				LR	LR		
	comp=Z,2µm,20.2s						
GOMU				LR	LR		
	comp=Z,2µm,21.0s						
GOMU				LR	LR		
	comp=Z,3µm,20.2s						
ZEA	Zeya	57.08	352	*e*P	P	05 25 40.1	+5.8
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ULN	Ulaanbaatar	57.44	335		P	05 25 37.4	+0.2
ULN				IAmb	IAmb	05 25 50.5	
	comp=Z,29nm,1.2s						
ULN	Ulaanbaatar	57.44	335	P	P	05 25 37.4	+0.2
ULN				pmax	pmax		
	comp=Z,29nm,1.3s						
SONM	Songino Array	57.69	335	P	P	05 25 38.2	-0.8
SONM				IAmb	IAmb	05 25 52.3	
	comp=Z,50nm,2.0s						
SONM	Songino Array	57.69	335	P	P	05 25 38.1	-0.8
	comp=Z,9.9nm,0.9s,baz=145,slow=7.9,SNR=22						
	comp=Z,9.9nm,0.9s						
SONM	Songino Array	57.69	335	P	P	05 25 38.2	-0.8
SONM				pmax	pmax		
	comp=Z,50nm,2.0s						
PEA0B	Petropavlovsk-	57.94	13	P	P	05 25 40.5	+0.1
PEA0B				IAmb	IAmb	05 25 52.6	
	comp=Z,28nm,1.1s						
PEA0B	Petropavlovsk-	57.94	13	P	P	05 25 40.5	+0.1
PEA0B				pmax	pmax		
	comp=Z,28nm,1.2s						
PETK	Petropavlovsk-	57.94	13		P	05 25 40.5	+0.1
PETK	Petropavlovsk-	57.94	13	P	P	05 25 40.1	-0.3
	comp=Z,7.7nm,0.9s,baz=168,slow=4.8,SNR=14						
	comp=Z,7.7nm,0.9s						
PETK	Petropavlovsk-	57.94	13	P	P	05 25 40.5	+0.1
EVN	Everest	58.33	305		P	05 25 43.3	-1.2
EVN				IAmb	IAmb	05 25 57.5	
	comp=Z,38nm,1.2s						
CIT	Chita	58.54	342	*e*P	P	05 25 45.0	+0.3
CIT				*e*		05 26 29.0	
CIT				pmax	pmax		
	comp=Z,141nm,2.2s						
PALK	Pallekele	58.58	280	P	P	05 25 45.1	-0.6
PALK				IAmb	IAmb	05 26 08.8	
	comp=Z,44nm,1.4s						
PALK	Pallekele	58.58	280	P	P	05 25 45.1	-0.6
PALK				pmax	pmax		
	comp=Z,44nm,1.4s						
ZAK	Zakamensk	60.96	335	*e*P	P	05 26 00.9	-0.6
ZAK				pmax	pmax		
	comp=Z,25nm,1.8s						
HYB	Hyderabad	62.44	291	*e*P	P	05 26 12.0	0.0
HYB				*e*PcP	PcP	05 26 51.9	+0.6
HYB				*e*PP	PP	05 28 28.7	-1.0
HYB				*e*S	S	05 34 39.3	+1.9
SMY	Shemya	62.84	23	P	P	05 26 15.0	+1.0
SMY	Shemya	62.84	23	P	P	05 26 15.0	+1.0
SMY				pmax	pmax		
	comp=Z,392nm,1.7s						
MA2	Magadan	62.88	7	P	P	05 26 14.1	0.0
MA2				IAmb	IAmb	05 26 22.8	
	comp=Z,12nm,0.8s						
MA2	Magadan	62.88	7	P	P	05 26 14.1	0.0
MA2				pmax	pmax		
	comp=Z,12nm,0.8s						
WMQ	Urumqi	64.94	322	*e*P	P	05 26 30.3	+2.2
WMQ				pmax	pmax		
	comp=Z,34nm,0.9s						
WMQ				LR	LR		
	comp=Z,2µm,16.1s						
WMQ				LR	LR		
	comp=Z,2µm,15.5s						
WMQ				LR	LR		
	comp=Z,2µm,17.9s						
YAK	Yakutsk	64.96	355	P	P	05 26 27.9	+0.2
YAK	Yakutsk	64.96	355	*e*P	P	05 26 27.4	-0.3
YAK				*e*		05 26 58.8	
YAK				*e*S	S	05 35 06.9	-0.2
YAK				*e**SS	sS	05 35 26.4	+2.8
YAK				*e*		05 36 18.3	
YAK				*e*SS	SS	05 39 24.8	+5.4
YAK				pmax	pmax		
	comp=Z,86nm,0.9s						
YAK				pmax	pmax		
	comp=N,23nm,1.1s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.0s						
YAK				smax	smax		
	comp=E,224nm,3.5s						
YAK				smax	smax		
	comp=N,114nm,3.9s						
SEY	Seymchan	66.34	7	⇑*e*P	P	05 26 35.5	-1.1
SEY				pmax	pmax		
	comp=Z,12nm,0.8s						
CASY	Casey	66.40	192	P	P	05 26 37.5	+0.5
KIP	Kipapa	66.49	65	⇑*e*P	P	05 26 39.9	+1.5
KIP				pmax	pmax		
	comp=Z,55nm,1.3s						
ZSN	Zaisan	68.50	324	*e*P	P	05 26 49.8	-0.9
ZSN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ZSN	Zaisan	68.50	324	*e*P	P	05 26 49.9	-0.8
	comp=Z,9.4nm,1.2s						
STCH	Steam Cracks	68.72	68	P	P	05 26 52.9	+0.2
MK31	Makanchi Array	69.72	322	P	P	05 26 58.2	-0.1
MK31				IAmb	IAmb	05 27 05.8	
	comp=Z,40nm,1.3s						
MK31	Makanchi Array	69.72	322	P	P	05 26 58.2	-0.1
MK31				pmax	pmax		
	comp=Z,40nm,1.3s						
MKAR	Makanchi Array	69.72	322		P	05 26 57.9	-0.3
MKAR	Makanchi Array	69.72	322	P	P	05 26 58.2	-0.1
	comp=Z,21nm,1.0s,baz=115,slow=8.1,SNR=72						
	comp=Z,21nm,1.0s						
MAKZ	Makanchi	69.92	322		P	05 26 59.5	0.0
MAKZ				IAmb	IAmb	05 27 00.5	
	comp=Z,25nm,0.8s						
MAKZ	Makanchi	69.92	322	P	P	05 26 59.5	0.0
MAKZ				pmax	pmax		
	comp=Z,25nm,0.9s						
SHLS	Shalkode	69.94	318	*e*P	P	05 26 56.9	-2.9
SHLS				pmax	pmax		
	comp=Z,13nm,1.0s						
SHLS	Shalkode	69.94	318	*e*P	P	05 26 56.9	-2.9
	comp=Z,13nm,1.0s						
UZB	Uzynbulak	70.23	318	*e*P	P	05 27 00.5	-1.1
UZB				pmax	pmax		
	comp=Z,13nm,1.0s						
UZB	Uzynbulak	70.23	318	*e*P	P	05 27 00.6	-1.1
	comp=Z,13nm,1.0s						
TARG	Taragay, Kyrgy	70.50	316		P	05 27 02.8	-0.8
TARG	Taragay, Kyrgy	70.50	316	P	P	05 27 02.8	-0.8
TARG				pmax	pmax		
	comp=Z,72nm,1.9s						
KPKS	Kokpek	70.58	318	*e*P	P	05 27 02.7	-1.0
KPKS	Kokpek	70.58	318	*e*P	P	05 27 02.7	-1.0
SATY	Saty	70.61	318	*e*P	P	05 27 02.8	-1.1
SATY				pmax	pmax		
	comp=Z,11nm,0.9s						
SATY	Saty	70.61	318	*e*P	P	05 27 02.9	-1.0
	comp=Z,11nm,0.9s						
KSH	Kashi	71.00	313	P	P	05 27 07.5	+1.2
KSH				pP	pP	05 27 14.6	-1.8
KSH				pmax	pmax		
	comp=Z,11nm,1.3s						
KSH				LR	LR		
	comp=Z,1µm,18.2s						
KSH				LR	LR		
	comp=Z,2µm,17.9s						
KSH				LR	LR		
	comp=Z,2µm,20.6s						
KDJ	Kajisay	71.08	316		P	05 27 06.7	-0.2
KDJ	Kajisay	71.08	316	P	P	05 27 06.7	-0.2
KDJ				pmax	pmax		
	comp=Z,13nm,0.9s						
NIL	Nilore	71.22	307	P	P	05 27 08.0	+0.3
NIL				IAmb	IAmb	05 27 28.3	
	comp=Z,16nm,0.8s						
NIL	Nilore	71.22	307	P	P	05 27 08.0	+0.3
NIL				pmax	pmax		
	comp=Z,16nm,0.9s						
TDK	Taldyqorghan	71.39	320	*e*P	P	05 27 07.4	-1.0
TDK				pmax	pmax		
	comp=Z,9.0nm,0.5s						
TDK	Taldyqorghan	71.39	320	*e*P	P	05 27 07.5	-1.0
	comp=Z,8.6nm,0.5s						
MDOK	Medeo	71.56	317	*e*P	P	05 27 08.7	-1.0
MDOK	Medeo	71.56	317	*e*P	P	05 27 08.8	-1.0
AAA	Alma-Ata	71.67	317	*e*P	P	05 27 09.3	-1.0
AAA	Alma-Ata	71.67	317	*e*P	P	05 27 09.3	-1.0
ZAA0	Zalesovo Array	71.89	330		P	05 27 10.3	-0.9
ZALV	Zalesovo Beam	71.89	330		P	05 27 09.8	-1.4
ZALV	Zalesovo Beam	71.89	330	P	P	05 27 10.2	-1.1
	comp=Z,8.3nm,0.8s,baz=104,slow=6.3,SNR=26						
	comp=Z,8.3nm,0.8s						
BOOM	Boomskoye usch	72.07	316		P	05 27 12.3	-0.5
BOOM				IAmb	IAmb	05 27 20.6	
	comp=Z,41nm,1.5s						
BOOM	Boomskoye usch	72.07	316	P	P	05 27 12.4	-0.5
BOOM				pmax	pmax		
	comp=Z,41nm,1.5s						
KUU	Kurty	72.32	318	*e*P	P	05 27 13.3	-0.8
KUU	Kurty	72.32	318	*e*P	P	05 27 13.3	-0.8
UNV	Unalaska Valle	72.45	31	P	P	05 27 14.1	-0.5
UNV				IAmb	IAmb	05 27 15.7	
	comp=Z,27nm,0.9s						
UNV	Unalaska Valle	72.45	31	P	P	05 27 15.1	+0.6
UNV	Unalaska Valle	72.45	31	P	P	05 27 14.9	+0.3
	baz=239						
AKUT	Akutan	72.97	31	P	P	05 27 17.4	-0.2
AAK	Ala-Archa	73.12	316		P	05 27 19.3	+0.2
AAK	Ala-Archa	73.12	316	P	P	05 27 19.3	+0.2
AAK				pmax	pmax		
	comp=Z,24nm,1.4s						
BILL	Bilibino	73.24	11	⇓*i*P	P	05 27 18.5	-0.5
BILL				pmax	pmax		
	comp=Z,13nm,0.9s						
SGDS	Sogindy	73.31	317	*e*P	P	05 27 19.1	-1.0
KURK	Kurchatov	73.66	325		P	05 27 21.2	-0.6
KURK				IAmb	IAmb	05 27 22.4	
	comp=Z,19nm,0.9s						
KURK	Kurchatov	73.66	325	P	P	05 27 21.2	-0.6
KURBB	Kurchatov Arra	73.67	325	P	P	05 27 21.2	-0.6
	comp=Z,13nm,0.9s,baz=113,slow=5.6,SNR=67						
	comp=Z,13nm,0.9s						
ARSB	Arslanbob	73.75	314	P	P	05 27 22.7	-0.1
ARSB	Arslanbob	73.75	314	P	P	05 27 22.7	-0.1
ARSB				pmax	pmax		
	comp=Z,57nm,1.4s						
BTLS	Baital	74.26	318	*e*P	P	05 27 24.8	-0.7
BTLS	Baital	74.26	318	*e*P	P	05 27 24.8	-0.7
FALS	False Pass	74.52	31	P	P	05 27 27.1	+0.4
FALS	False Pass	74.52	31	P	P	05 27 27.3	+0.6
FALS	False Pass	74.52	31	P	P	05 27 27.5	+0.8
	baz=242						
TIXI	Tiksi	74.53	357	P	P	05 27 25.2	-1.3
TIXI	Tiksi	74.53	357	P	P	05 27 25.2	-1.3
TIXI				pmax	pmax		
	comp=Z,22nm,1.1s						
KBL	Kabul	74.83	307	P	P	05 27 28.2	-1.0
KBL	Kabul	74.83	307	P	P	05 27 28.2	-1.0
KBL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BTK	Batken	74.93	313	P	P	05 27 29.4	-0.2
BTK				IAmb	IAmb	05 27 51.3	
	comp=Z,30nm,1.3s						
BTK	Batken	74.93	313	P	P	05 27 29.4	-0.2
BTK				pmax	pmax		
	comp=Z,29nm,1.3s						
DZA	Taraz	75.41	316	*e*P	P	05 27 31.3	-0.9
DZA	Taraz	75.41	316	*e*P	P	05 27 31.3	-0.9
S12K	Black Hills	75.60	30		P	05 27 32.8	-0.2
S12K	Black Hills	75.60	30	P	P	05 27 33.2	+0.2
	baz=243,SNR=23						
VNDA	Vanda	75.75	175		P	05 27 34.3	+0.8
VNDA	Vanda	75.75	175	P	P	05 27 33.4	-0.1
	comp=Z,9.4nm,0.8s,baz=321,slow=6.2,SNR=34						
	comp=Z,9.4nm,0.8s						
VNDA	Vanda	75.75	175	P	P	05 27 34.3	+0.8
VNDA				pmax	pmax		
	comp=Z,18nm,1.0s						
GAMB	Gambell	75.87	20	P	P	05 27 35.2	+0.9
	baz=232						
SIMJ	Simiganj	75.90	311	P	P	05 27 34.4	-0.9
SIMJ				IAmb	IAmb	05 27 43.3	
	comp=Z,21nm,1.1s						
M11K	Mekoryuk	76.03	25	P	P	05 27 36.4	+1.2
	baz=238						
KK31	Karatay Array	76.05	316		P	05 27 35.6	-0.2
KK31				IAmb	IAmb	05 27 44.2	
	comp=Z,47nm,1.6s						
KK31	Karatay Array	76.05	316	P	P	05 27 35.6	-0.2
KK31				pmax	pmax		
	comp=Z,47nm,1.6s						
KKAR	Karatay Array	76.05	316		P	05 27 35.3	-0.5
KKAR	Karatay Array	76.05	316	P	P	05 27 35.3	-0.5
IUG	Iuzhnay	76.11	315	*e*P	P	05 27 35.1	-1.2
IUG	Iuzhnay	76.11	315	*e*P	P	05 27 35.2	-1.2
SDPT	Sand Point	76.25	31	P	P	05 27 36.5	-0.2
SDPT	Sand Point	76.25	31	P	P	05 27 37.8	+1.2
	baz=244						
CHNA	Chernabura Isl	76.48	32	P	P	05 27 38.7	+0.7
	baz=245						
BRLS	Borolday	76.50	315	*e*P	P	05 27 37.7	-0.7
BRLS	Borolday	76.50	315	*e*P	P	05 27 37.7	-0.7
BRZS	Berezniki	76.87	323	*e*P	P	05 27 39.7	-0.6
BRZS	Berezniki	76.87	323	*e*P	P	05 27 39.8	-0.6
S14K	Fog Glacier	77.12	30	P	P	05 27 43.3	+1.6
	baz=245						
M13K	Dall Lake	77.26	26	P	P	05 27 43.7	+1.5
	baz=240,SNR=5.3						
K13K	Kusilvak Mount	77.48	24	P	P	05 27 43.9	+0.5
K13K				IAmb	IAmb	05 27 46.0	
	comp=Z,25nm,0.9s						
K13K	Kusilvak Mount	77.48	24	P	P	05 27 44.5	+1.1
	baz=239,SNR=11						
O14K	Tigyukauivet M	77.63	27	P	P	05 27 45.8	+1.4
	baz=243						
N14K	Kuskokwak Cree	77.75	26	P	P	05 27 46.0	+1.0
	baz=242						
L14K	Kuka Creek	78.00	25	P	P	05 27 46.6	+0.3
	baz=241,SNR=28						
M14K	Bethel	78.02	26	P	P	05 27 46.6	+0.1
	baz=242,SNR=18						
TNA	Tin City	78.25	20	P	P	05 27 48.2	+0.6
	baz=235						
O15K	Ungalikthiuk R	78.25	28	P	P	05 27 48.8	+0.9
	baz=244						
J14K	Nanvaranak Lak	78.34	23		P	05 27 48.7	+0.5
J14K				IAmb	IAmb	05 28 01.0	
	comp=Z,28nm,1.4s						
J14K	Nanvaranak Lak	78.34	23	P	P	05 27 49.3	+1.1
	baz=240						
M15K	Kasigluk River	78.55	26	P	P	05 27 50.0	+0.6
	baz=243,SNR=8.7						
N15K	Kwethluk River	78.57	27	IAmb	IAmb	05 27 51.8	
	comp=Z,29nm,1.1s						
N15K	Kwethluk River	78.57	27	P	P	05 27 50.5	+0.9
	baz=244,SNR=6.7						
ANM	Nome	78.59	21	P	P	05 27 50.3	+0.6
	baz=238						
L15K	Ungalak Mounta	78.66	25	P	P	05 27 50.5	+0.4
	baz=242,SNR=9.4						
F14K	Arctic Creek	78.75	20	P	P	05 27 50.4	0.0
	baz=237						
K15K	Wolf Creek Mou	78.94	24	IAmb	IAmb	05 27 53.3	
	comp=Z,43nm,1.4s						
K15K	Wolf Creek Mou	78.94	24	P	P	05 27 52.8	+1.2
	baz=242,SNR=8.3						
CHIR	Chirikof Islan	78.96	32	P	P	05 27 52.1	+0.3
	baz=248						
P16K	Nushagak River	79.05	28	P	P	05 27 53.4	+1.3
P16K	Nushagak River	79.05	28	P	P	05 27 52.9	+0.7
	baz=246						
O16K	Kokwok River B	79.23	28	IAmb	IAmb	05 27 55.3	
	comp=Z,41nm,1.3s						
O16K	Kokwok River B	79.23	28	P	P	05 27 54.5	+1.3
	baz=245,SNR=10						
BVAR	Borovoye Array	79.25	325	P	P	05 27 53.0	-0.4
	comp=Z,23nm,0.9s,baz=114,slow=6.6,SNR=55						
	comp=Z,23nm,0.9s						
N16K	Nishlik Lake	79.30	27	P	P	05 27 54.6	+1.0
	baz=245						

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G15K  Niukluk           79.31  21  P       P       05 27 53.3  -0.2
      baz=239
BRVK  Borovoye          79.33 325          P       05 27 53.6  -0.2
BRVK                               IAmb    IAmb    05 28 00.5
      comp=Z,31nm,1.1s
BRVK  Borovoye          79.33 325  P       P       05 27 53.6  -0.2
BRVK                               pmax    pmax
      comp=Z,31nm,1.1s
M16K  Timber Creek      79.45  26          P       05 27 54.8 +0.4
M16K                               IAmb    IAmb    05 27 56.6
      comp=Z,22nm,0.9s
M16K  Timber Creek      79.45  26  P       P       05 27 54.5 +0.1
      baz=244,SNR=14
F15K  North Star Dit    79.46  21          P       05 27 54.8 +0.5
F15K                               IAmb    IAmb    05 28 03.7
      comp=Z,52nm,1.8s
F15K  North Star Dit    79.46  21  P       P       05 27 54.6 +0.3
      baz=238
L16K  Owhat River       79.53  25          P       05 27 55.0 +0.3
L16K                               IAmb    IAmb    05 27 56.2
      comp=Z,32nm,1.4s
L16K  Owhat River       79.53  25  P       P       05 27 54.9 +0.1
      baz=244,SNR=10
Q16K  King Salmon       79.54  29  P       P       05 27 54.9   0.0
      baz=247
Q17K  Contact Creek     79.75  29  P       P       05 27 56.0  -0.2
      baz=248,SNR=6.8
O17K  Koliganek Bris    79.77  28  P       P       05 27 57.0 +1.0
      baz=246,SNR=24
J16K  Anvik River       79.78  24  P       P       05 27 56.7 +0.6
J16K                               IAmb    IAmb    05 27 58.2
      comp=Z,38nm,1.4s
J16K  Anvik River       79.78  24  P       P       05 27 57.5 +1.4
      baz=242,SNR=9.1
H16K  Elim              79.79  22  P       P       05 27 57.0 +0.9
      baz=241
P17K  Kvichak River     79.84  28  P       P       05 27 57.3 +0.8
      baz=247
SII   Sitkinak Islan    79.98  31  P       P       05 27 58.0 +0.7
      baz=249
ACHA  Angle Creek He    80.00  29  P       P       05 27 57.6   0.0
I17K  Unalakleet        80.03  23  P       P       05 27 57.9 +0.5
I17K                               IAmb    IAmb    05 28 07.2
      comp=Z,40nm,1.4s
I17K  Unalakleet        80.03  23  P       P       05 27 58.2 +0.9
      baz=242
N17K  Nushagak Hills    80.03  27          P       05 27 58.1 +0.6
N17K                               IAmb    IAmb    05 27 59.5
      comp=Z,38nm,1.4s
N17K  Nushagak Hills    80.03  27  P       P       05 27 58.2 +0.7
      baz=246,SNR=11
G16K  Koyuk River       80.12  21  P       P       05 27 58.6 +0.7
      baz=241
R18K  Karluk            80.20  30  P       P       05 27 59.2 +0.8
      baz=249
L17K  Donlin            80.22  25  P       P       05 27 59.7 +1.2
      baz=245,SNR=8.6
M17K  Holitna River     80.28  26          P       05 27 59.7 +0.8
M17K                               IAmb    IAmb    05 28 01.6
      comp=Z,30nm,1.1s
M17K  Holitna River     80.28  26  P       P       05 27 59.8 +1.0
      baz=246,SNR=15
Q18K  Katmai Hardscr    80.32  29  P       P       05 27 59.2  -0.1
      baz=248,SNR=7.5
J17K  VABM Dome         80.44  24          P       05 28 00.3 +0.6
J17K                               IAmb    IAmb    05 28 06.8
      comp=Z,43nm,1.4s
J17K  VABM Dome         80.44  24  P       P       05 28 00.8 +1.1
      baz=244,SNR=13
K17K  Iditarod          80.47  25          P       05 28 00.3 +0.5
K17K                               IAmb    IAmb    05 28 01.7
      comp=Z,37nm,1.2s
K17K  Iditarod          80.47  25  P       P       05 28 00.1 +0.3
      baz=245,SNR=14
P18K  Big Mountain,     80.49  28  P       P       05 28 00.2 +0.1
      baz=248
C16K  Lisburne Hills    80.61  18  P       P       05 28 00.9 +0.4
      baz=237
OHAK  Old Harbor        80.67  31          P       05 28 00.9  -0.1
OHAK                               IAmb    IAmb    05 28 02.8
      comp=Z,23nm,0.7s
OHAK  Old Harbor        80.67  31  P       P       05 28 02.1 +1.1
OHAK  Old Harbor        80.67  31  P       P       05 28 01.8 +0.8
      baz=250,SNR=8.1
O18K  Koktuh Hills      80.68  28  P       P       05 28 00.9  -0.2
      baz=248
N18K  Kilae Creek       80.68  27          P       05 28 01.6 +0.5
N18K                               IAmb    IAmb    05 28 02.9
      comp=Z,32nm,1.4s
N18K  Kilae Creek       80.68  27  P       P       05 28 02.1 +1.0
      baz=247,SNR=5.9
G17K  Kiwalik Mounta    80.80  22  P       P       05 28 02.1 +0.6
      baz=242
H17K  Granite Mounta    80.81  22          P       05 28 02.1 +0.5
H17K                               IAmb    IAmb    05 28 11.2
      comp=Z,58nm,1.6s
H17K  Granite Mounta    80.81  22  P       P       05 28 02.1 +0.5
      baz=243
L18K  Granite Mounta    80.94  25  IAmb    IAmb    05 28 11.9
      comp=Z,55nm,1.6s
L18K  Granite Mounta    80.94  25  P       P       05 28 02.6 +0.3
      baz=246,SNR=12
M18K  Stony River       81.03  26  P       P       05 28 04.0 +1.1
      baz=247,SNR=13
D17K  Noatak River      81.03  19  P       P       05 28 03.6 +0.9
      baz=240
F17K  Baldwin Pennin    81.03  21  P       P       05 28 03.6 +0.9
      baz=241
KDAK  Kodiak Island     81.22  30          P       05 28 03.5  -0.3
KDAK  Kodiak Island     81.22  30  P       P       05 28 03.6  -0.3
KDAK                               pmax    pmax
      comp=Z,74nm,1.5s
KDAK  Kodiak Island     81.22  30  P       P       05 28 04.6 +0.7
      baz=251
O19K  Port Alsworth     81.22  28  P       P       05 28 03.7  -0.2
O19K                               IAmb    IAmb    05 28 15.2
      comp=Z,49nm,1.8s
O19K  Port Alsworth     81.22  28  P       P       05 28 04.9 +1.0
      baz=249
RDOG  Red Dog Mine      81.27  19  P       P       05 28 04.4 +0.4
RDOG                               IAmb    IAmb    05 28 43.5
      comp=Z,15nm,0.6s
RDOG  Red Dog Mine      81.27  19  P       P       05 28 05.0 +0.9
      baz=240
N19K  Bonanza Creek     81.37  27  IAmb    IAmb    05 28 17.2
      comp=Z,48nm,1.4s
N19K  Bonanza Creek     81.37  27  P       P       05 28 04.7  -0.2
      baz=248,SNR=8.7
C17K  DeLong Mountai    81.40  19  P       P       05 28 05.2 +0.5
      baz=239
J18K  Innoko River      81.44  24          P       05 28 04.9  -0.1
J18K  Innoko River      81.44  24  P       P       05 28 05.3 +0.3
      baz=246,SNR=9.3
H18K  Honhosa River     81.50  22  P       P       05 28 05.4 +0.1
      baz=244
P19K  Oil Pt            81.54  28  P       P       05 28 04.8  -0.8
P19K  Oil Pt            81.54  28  P       P       05 28 05.5  -0.1
      baz=250
Q20K  Shuyak Island     81.59  30  P       P       05 28 05.7  -0.2
      baz=251
G18K  Tagagawik         81.72  22  P       P       05 28 06.2  -0.3
      baz=244,SNR=15
L19K  White Mountain    81.72  26          P       05 28 06.9 +0.4
L19K  White Mountain    81.72  26  P       P       05 28 06.6 +0.1
      baz=248,SNR=12
E18K  Tukpahlearik C    81.72  20          P       05 28 06.6 +0.1
E18K  Tukpahlearik C    81.72  20  P       P       05 28 06.7 +0.2
      baz=242,SNR=7.9
M19K  Big River Lodg    81.82  26  IAmb    IAmb    05 28 16.4
      comp=Z,38nm,1.6s
M19K  Big River Lodg    81.82  26  P       P       05 28 07.3 +0.3
      baz=248,SNR=7.4
GCSA  Galena City Sc    81.90  23  P       P       05 28 07.6 +0.2
      baz=246
MAW   Mawson            82.03 202  P       P       05 28 07.4  -0.6
      comp=Z,12nm,0.9s,baz=92,slow=7.8,SNR=12
      comp=Z,12nm,0.9s
J19K  Poorman           82.09  24          P       05 28 08.6 +0.2
J19K                               IAmb    IAmb    05 28 20.9
      comp=Z,34nm,1.6s
J19K  Poorman           82.09  24  P       P       05 28 08.7 +0.2
      baz=247,SNR=11
C18K  Utukok River      82.12  19  P       P       05 28 08.1  -0.4
      baz=241
L20K  Farewell, AK      82.25  26  P       P       05 28 09.3   0.0
      baz=249,SNR=10
B18K  Kokolik River     82.28  18  P       P       05 28 09.5 +0.2
      baz=241
HOM   Homer             82.30  29  P       P       05 28 09.6   0.0
      baz=251
M20K  Styx River        82.36  26  P       P       05 28 09.9  -0.1
      baz=250
H19K  Roundabout Mou    82.39  22  IAmb    IAmb    05 28 23.3
      comp=Z,31nm,1.4s
H19K  Roundabout Mou    82.39  22  P       P       05 28 10.5 +0.6
      baz=246,SNR=7.9
G19K  Purcell Mounta    82.40  22  IAmb    IAmb    05 28 13.1
      comp=Z,18nm,0.9s
G19K  Purcell Mounta    82.40  22  P       P       05 28 10.2 +0.2
      baz=245,SNR=13
F19K  Shaleruckik Mo    82.44  21  P       P       05 28 09.8  -0.4
F19K  Shaleruckik Mo    82.44  21  P       P       05 28 10.2   0.0
      baz=245
CNPM  China Poot        82.45  29  P       P       05 28 09.8  -0.7
K20K  Telida            82.49  25          P       05 28 11.0 +0.5
K20K  Telida            82.49  25  P       P       05 28 11.5 +1.0
      baz=249,SNR=11
BRSE  Bradley Lake S    82.76  29  P       P       05 28 12.2 +0.2
      baz=252
J20K  Nowinta River     82.76  24          P       05 28 12.2 +0.2
J20K                               IAmb    IAmb    05 28 21.4
      comp=Z,45nm,1.6s
J20K  Nowinta River     82.76  24  P       P       05 28 11.9   0.0
      baz=248,SNR=16
C19K  Lookout Ridge     82.85  19  P       P       05 28 12.7 +0.4
C19K                               IAmb    IAmb    05 28 19.3
      comp=Z,38nm,1.4s
C19K  Lookout Ridge     82.85  19  P       P       05 28 12.8 +0.4
      baz=243,SNR=11
I20K  Naaghedeneel      82.86  23  P       P       05 28 13.2 +0.8
      baz=248
E19K  Redstone River    82.90  20  P       P       05 28 12.6   0.0
E19K  Redstone River    82.90  20  P       P       05 28 12.5   0.0
      baz=245,SNR=34
A19K  Wainwright        82.91  17  P       P       05 28 13.5 +0.9
      baz=241
H20K  Anotleneega Mo    82.97  23  P       P       05 28 13.0   0.0
      baz=248,SNR=5.2
D19K  Kuna River        83.05  19          P       05 28 13.2  -0.2
D19K                               IAmb    IAmb    05 28 22.3
      comp=Z,27nm,1.2s
D19K  Kuna River        83.05  19  P       P       05 28 13.0  -0.4
      baz=244,SNR=14
SKT   Skwentna          83.11  27          P       05 28 13.1  -0.7
SKT                                IAmb    IAmb    05 28 25.2
      comp=Z,42nm,1.9s
SKT   Skwentna          83.11  27  P       P       05 28 12.7  -1.1
      baz=251,SNR=5.7
PPLA  Purkeypile        83.13  26  P       P       05 28 13.9  -0.2
      baz=250
SLKM  Skilak Lake       83.24  28          P       05 28 13.4  -1.1
SLKM                               IAmb    IAmb    05 28 15.4
      comp=Z,21nm,0.9s
F20K  Avaraart Lake     83.27  21  P       P       05 28 15.1 +0.7
      baz=247
SUA   Susitna One       83.30  27  P       P       05 28 14.9   0.0
      baz=252
CAST  Castle Rocks      83.35  25  P       P       05 28 15.4 +0.3
      baz=250
CHUM  Lake Minchumin    83.41  25  P       P       05 28 15.8 +0.5
      baz=250
O22K  Cooper Landing    83.47  28  P       P       05 28 16.1 +0.5
      baz=253
SEW   Seward            83.49  29  P       P       05 28 16.2 +0.5
      baz=253
IMAR  Indian Mountai    83.59  22  P       P       05 28 15.8  -0.3
E20K  Nigu River        83.60  20  P       P       05 28 16.3   0.0
      baz=246,SNR=18
D20K  Etivluk River     83.64  19  P       P       05 28 16.0  -0.4
D20K                               IAmb    IAmb    05 28 22.0
      comp=Z,26nm,1.4s
D20K  Etivluk River     83.64  19  P       P       05 28 16.4  -0.1
      baz=246,SNR=12
RC01  Rabbit Creek A    83.65  28  P       P       05 28 15.4  -1.2
RC01                               IAmb    IAmb    05 28 22.0
      comp=Z,15nm,0.8s
RC01  Rabbit Creek A    83.65  28  P       P       05 28 16.2  -0.4
      baz=253
M22K  Willow            83.67  27  P       P       05 28 15.8  -0.8
M22K  Willow            83.67  27  P       P       05 28 15.4  -1.3
      baz=252,SNR=8.7
CUT   Chulitna          83.81  26  P       P       05 28 17.4   0.0
      baz=252
H21K  Melozitna Rive    83.83  23  P       P       05 28 17.3  -0.2
H21K  Melozitna Rive    83.83  23  P       P       05 28 17.9 +0.4
      baz=250,SNR=12
G21K  Allakaket         83.88  22  P       P       05 28 17.8 +0.1
G21K  Allakaket         83.88  22  P       P       05 28 17.9 +0.3
      baz=249,SNR=7.9
B20K  Meade River       84.01  18  P       P       05 28 18.2   0.0
B20K                               IAmb    IAmb    05 28 19.6
      comp=Z,20nm,1.1s
B20K  Meade River       84.01  18  P       P       05 28 18.7 +0.4
      baz=245
BPAW  Bear Paw Mtn.     84.04  25          P       05 28 18.2  -0.4
BPAW                               IAmb    IAmb    05 28 30.0
      comp=Z,25nm,1.6s
BPAW  Bear Paw Mtn.     84.04  25  P       P       05 28 18.7 +0.2
      baz=251
PMR   Palmer            84.08  27  IAmb    IAmb    05 28 19.5
      comp=Z,15nm,1.0s
PMR   Palmer            84.08  27  P       P       05 28 17.9  -0.8
PMR   Palmer            84.08  27  P       P       05 28 18.6  -0.1
      baz=253,SNR=11
TRF   Thorofare Moun    84.12  25  P       P       05 28 18.8  -0.4
TRF                                IAmb    IAmb    05 28 30.9
      comp=Z,36nm,1.7s
TRF   Thorofare Moun    84.12  25  P       P       05 28 19.1  -0.1
      baz=252
F21K  Alatna River      84.14  21  P       P       05 28 18.1  -1.0
F21K  Alatna River      84.14  21  P       P       05 28 19.4 +0.3
      baz=249
GHO   Glory Hole Cre    84.22  27  IAmb    IAmb    05 30 33.0
      comp=Z,11nm,0.8s
PWL   Port Wells        84.23  28  P       P       05 28 19.5  -0.1
PWL                                IAmb    IAmb    05 28 23.5
      comp=Z,24nm,1.0s
PWL   Port Wells        84.23  28  P       P       05 28 19.6   0.0
      baz=254,SNR=7.0
KNK   Knik Glacier      84.33  28  P       P       05 28 19.6  -0.4
      baz=254,SNR=6.2
E21K  Killik River      84.43  20  P       P       05 28 20.9 +0.4
      baz=248
C21K  Knifeblade Rid    84.43  19  P       P       05 28 20.8 +0.4
      baz=247,SNR=12
MLY   Manley            84.44  24          P       05 28 19.8  -0.7
MLY   Manley            84.44  24  P       P       05 28 19.9  -0.7
      baz=251,SNR=18
P23K  Montague Islan    84.45  29  P       P       05 28 20.9 +0.3
      baz=255
H22K  Ishtalitna Cre    84.47  23  P       P       05 28 21.2 +0.5
      baz=251,SNR=8.7
SML   Sawmill           84.50  27  P       P       05 28 20.4  -0.6
SML   Sawmill           84.50  27  P       P       05 28 20.4  -0.6
      baz=254,SNR=8.5
AB31  Akbulak array     84.65 320          P       05 28 21.6  -0.3
AB31                               IAmb    IAmb    05 28 29.6
      comp=Z,14nm,1.1s
ABKAR Akbulak array     84.65 320          P       05 28 21.4  -0.5
B21K  Ikpikpuk River    84.66  19  IAmb    IAmb    05 28 22.9
      comp=Z,20nm,1.1s
B21K  Ikpikpuk River    84.66  19  P       P       05 28 21.8 +0.3
      baz=247,SNR=6.2
WAT1  Susitna Watana    84.69  26  P       P       05 28 21.9   0.0
      baz=254
F22K  John River        84.72  21  P       P       05 28 22.1 +0.2
      baz=250
RND   Reindeer          84.73  26          P       05 28 20.6  -1.5
RND                                IAmb    IAmb    05 28 22.5
      comp=Z,26nm,1.2s
RND   Reindeer          84.73  26  P       P       05 28 20.6  -1.5
RND                                pmax    pmax
      comp=Z,26nm,1.2s
A21K  Barrow            84.74  17  P       P       05 28 21.8   0.0
      baz=245
G22K  Bettles           84.76  22  P       P       05 28 22.0  -0.1
      baz=250
M23K  Glacier View      84.77  27  P       P       05 28 22.0  -0.3
      baz=254
MCK   McKinley          84.79  25  P       P       05 28 21.6  -0.7
      baz=253,SNR=6.7
Q23K  Middleton Isla    84.82  30  P       P       05 28 22.8 +0.3
      baz=256
GLI   Glacier Island    84.82  28  IAmb    IAmb    05 28 26.9
      comp=Z,14nm,0.8s
GLI   Glacier Island    84.82  28  P       P       05 28 22.7 +0.2
      baz=255
SCM   Sheep Creek Mo    84.97  27  P       P       05 28 23.5 +0.1
      baz=255,SNR=12
WAT6  Susitna Watana    84.98  26  P       P       05 28 23.1  -0.4
      baz=254,SNR=12
NEA2  Nenana            84.98  24  P       P       05 28 23.2  -0.1
      baz=253,SNR=10
HIN   Hinchinbrook I    84.98  29  IAmb    IAmb    05 28 25.8
      comp=Z,20nm,1.0s
D22K  Ayikyak River     85.03  20          P       05 28 23.6 +0.2
D22K  Ayikyak River     85.03  20  P       P       05 28 24.0 +0.6
      baz=249,SNR=12
I23K  Minto, Yukon-K    85.03  24  P       P       05 28 23.2  -0.3
      baz=253,SNR=14
E22K  Anaktuvuk Pass    85.07  21  IAmb    IAmb    05 28 25.4
      comp=Z,20nm,1.1s
E22K  Anaktuvuk Pass    85.07  21  P       P       05 28 24.6 +0.9
      baz=250,SNR=16
A22K  Sinclair Lake     85.09  18  P       P       05 28 24.1 +0.4
      baz=247
H23K  Yukon River       85.16  23  IAmb    IAmb    05 28 32.5
      comp=Z,43nm,1.9s
H23K  Yukon River       85.16  23  P       P       05 28 23.9  -0.3
      baz=252,SNR=6.8
G23K  Bananza Creek     85.25  22  P       P       05 28 24.8 +0.2
      baz=252,SNR=11
DHY   Denali Highway    85.28  26  IAmb    IAmb    05 28 26.2
      comp=Z,25nm,1.3s
DHY   Denali Highway    85.28  26  P       P       05 28 24.4  -0.6
      baz=255,SNR=16
B22K  Teshekpuk Lake    85.32  18          P       05 28 24.4  -0.4
B22K                               IAmb    IAmb    05 28 25.7
      comp=Z,29nm,1.3s
B22K  Teshekpuk Lake    85.32  18  P       P       05 28 24.8   0.0
      baz=248,SNR=6.5
COLD  Coldfoot          85.35  22  IAmb    IAmb    05 28 28.8
      comp=Z,14nm,1.0s
COLD  Coldfoot          85.35  22  P       P       05 28 26.6 +1.6
      baz=252,SNR=7.5
EYAK  Cordova Ski Ar    85.38  29  P       P       05 28 24.6  -0.7
EYAK  Cordova Ski Ar    85.38  29  P       P       05 28 25.0  -0.3
      baz=256
CCB   Clear Creek Bu    85.52  24  IAmb    IAmb    05 28 28.9
      comp=Z,16nm,1.0s
KLU   Klutina           85.53  28  P       P       05 28 26.0  -0.2
KLU                                IAmb    IAmb    05 28 38.2
      comp=Z,39nm,1.7s
KLU   Klutina           85.53  28  P       P       05 28 26.2   0.0
      baz=256
M24K  Tolsona, Glenn    85.56  27  IAmb    IAmb    05 28 44.0
      comp=Z,17nm,0.9s
M24K  Tolsona, Glenn    85.56  27  P       P       05 28 26.9 +0.6
      baz=256
COLA  College           85.56  24  P       P       05 28 25.3  -0.8
COLA  College           85.56  24⇑eP       P       05 28 24.7  -1.4
COLA                               pmax    pmax
      comp=Z,15nm,1.5s
COLA  College           85.56  24  P       P       05 28 26.2 +0.1
      baz=254
D23K  Nanushuk River    85.74  20          P       05 28 27.4 +0.5
D23K  Nanushuk River    85.74  20  P       P       05 28 27.9 +0.9
      baz=251,SNR=27
HDA   Harding Lake      85.81  25  P       P       05 28 27.2  -0.2
      baz=255,SNR=8.8
E23K  Chandalar         85.82  21  P       P       05 28 27.8 +0.3
      baz=252,SNR=27
H24K  Noodor Dome       85.82  23          P       05 28 27.6 +0.1
H24K                               IAmb    IAmb    05 28 39.6
      comp=Z,19nm,1.2s
H24K  Noodor Dome       85.82  23  P       P       05 28 27.7 +0.2
      baz=254,SNR=9.1
RAGM  Ragged Mountai    85.86  29  IAmb    IAmb    05 28 34.2
      comp=Z,29nm,1.4s
KAIM  Kayak Island      85.89  29          P       05 28 27.5  -0.3
KAIM                               IAmb    IAmb    05 28 30.3
      comp=Z,26nm,1.0s
KAIM  Kayak Island      85.89  29  P       P       05 28 28.3 +0.5
      baz=258
ILAR  Eielson Array     85.94  24  P       P       05 28 25.8  -2.3
      comp=Z,6.2nm,0.7s,baz=260,slow=3.7,SNR=43
      comp=Z,6.2nm,0.7s
TOLK  Toolik Lake Re    86.02  20  P       P       05 28 28.7 +0.3
TOLK                               IAmb    IAmb    05 28 30.0
      comp=Z,28nm,1.2s
TOLK  Toolik Lake Re    86.02  20  P       P       05 28 28.8 +0.3
      baz=252,SNR=17
BMRM  Bremner River     86.03  28  IAmb    IAmb    05 28 37.1
      comp=Z,42nm,1.5s
BMRM  Bremner River     86.03  28  P       P       05 28 29.2 +0.6
      baz=257
C23K  Itkillik River    86.04  19          P       05 28 28.5 +0.1
C23K  Itkillik River    86.04  19  P       P       05 28 29.5 +1.1
      baz=251,SNR=12
HMT   Hamilton          86.05  29  P       P       05 28 28.4  -0.3
HMT                                IAmb    IAmb    05 28 31.8
      comp=Z,18nm,1.0s
PAX   Paxson            86.09  26  IAmb    IAmb    05 28 36.7
      comp=Z,27nm,1.6s
PAX   Paxson            86.09  26  P       P       05 28 28.7  -0.2
      baz=256
HARP  HAARP             86.10  27  P       P       05 28 28.7  -0.2
      baz=257
K24K  Donnelly Dome     86.16  26  P       P       05 28 28.9  -0.3
K24K  Donnelly Dome     86.16  26  P       P       05 28 28.9  -0.3
      baz=256
N25K  Chitina, Valde    86.17  28  IAmb    IAmb    05 28 42.5
      comp=Z,35nm,1.8s
N25K  Chitina, Valde    86.17  28  P       P       05 28 29.3  -0.1
      baz=257
G24K  Hadweenzic Riv    86.22  23          P       05 28 29.4   0.0
G24K                               IAmb    IAmb    05 28 31.0
      comp=Z,28nm,1.4s
G24K  Hadweenzic Riv    86.22  23  P       P       05 28 30.0 +0.6
      baz=254,SNR=14
E24K  Your Creek        86.23  21  P       P       05 28 29.6 +0.1
E24K                               IAmb    IAmb    05 28 42.0
      comp=Z,26nm,1.5s
E24K  Your Creek        86.23  21  P       P       05 28 29.9 +0.5
      baz=253
F24K  Squaw Lake        86.29  22          P       05 28 29.8   0.0
F24K  Squaw Lake        86.29  22  P       P       05 28 30.1 +0.3
      baz=254,SNR=17
BERG  Berg Lake         86.34  29  P       P       05 28 30.4 +0.4
BERG                               IAmb    IAmb    05 28 36.6
      comp=Z,21nm,1.1s
D24K  Happy Valley      86.43  20  IAmb    IAmb    05 28 32.2
      comp=Z,34nm,1.2s
D24K  Happy Valley      86.43  20  P       P       05 28 30.9 +0.5
      baz=253,SNR=9.3
GLB   Gilahina Butte    86.51  28          P       05 28 30.3  -0.7
J25K  Salcha River,     86.53  25          P       05 28 30.0  -1.0
J25K  Salcha River,     86.53  25  P       P       05 28 30.2  -0.8
      baz=256,SNR=9.7
RIDG  Independent Ri    86.55  26          P       05 28 30.3  -0.8
RIDG                               IAmb    IAmb    05 28 42.9
      comp=Z,22nm,1.2s
RIDG  Independent Ri    86.55  26  P       P       05 28 31.3 +0.2
      baz=257
VRDI  Verde Repeater    86.63  28          P       05 28 31.1  -0.7
C24K  Franklin Bluff    86.64  19  P       P       05 28 31.4 +0.1
C24K                               IAmb    IAmb    05 28 37.9
      comp=Z,24nm,1.2s
C24K  Franklin Bluff    86.64  19  P       P       05 28 31.9 +0.6
      baz=253
PRP   Porcupine Dome    86.68  24  P       P       05 28 31.9 +0.1
      baz=256
CRQM  Cirque            86.68  29  P       P       05 28 31.8  -0.2
CRQM                               IAmb    IAmb    05 28 35.6
      comp=Z,19nm,0.8s
CRQE  Cirque            86.70  29  P       P       05 28 32.4 +0.4
      baz=259,SNR=5.3
H25L  Birch Creek       86.75  23  P       P       05 28 33.4 +1.5
      baz=256,SNR=9.5
G25K  Bearman Lake      86.76  23  P       P       05 28 32.9 +0.9
      baz=256,SNR=9.8
WAX   Waxell Ridge      86.76  29  P       P       05 28 32.5 +0.2
WAX                                IAmb    IAmb    05 28 38.8
      comp=Z,16nm,1.0s
ARTI  Arti              86.83 327d iP      P       05 28 30.1  -2.5
ARTI                                               05 31 50.0
ARTI                               S       SKSac   05 38 56.2  -0.9
ARTI                               pmax    pmax
      comp=Z,8.0nm,1.1s
TGL   Tana Glacier      86.83  29  P       P       05 28 33.0 +0.3
TGL                                IAmb    IAmb    05 28 35.8
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         comp=Z,16nm,0.9s
MCARA McCarthy VSAT   86.86  28  P        P         05 28 33.2 +0.6
         baz=259
MENT  Mentasta        86.86  27  P        P         05 28 32.3 -0.3
MENT                             IAmb     IAmb      05 30 48.9
         comp=Z,23nm,1.2s
MENT  Mentasta        86.86  27  P        P         05 28 33.2 +0.5
SCRK  Sand Creek      86.97  26           P         05 28 32.5 -0.7
SCRK  Sand Creek      86.97  26  P        P         05 28 33.0 -0.3
         baz=258
FYU   Fort Yukon      87.05  23  P        P         05 28 34.0 +0.6
M26K  Nabesna, AK     87.08  27  P        P         05 28 34.6 +0.8
         baz=259
F25K  Christian Rive  87.14  22           P         05 28 34.2 +0.2
F25K                             IAmb     IAmb      05 28 47.0
         comp=Z,39nm,1.6s
F25K  Christian Rive  87.14  22  P        P         05 28 34.2 +0.2
         baz=256,SNR=12
QSPA  South Pole Qui  87.20 180  P        P         05 28 34.4 +0.1
QSPA  South Pole Qui  87.20 180  P        P         05 28 34.5 +0.1
         comp=Z,19nm,1.0s,baz=296,slow=1.0,SNR=41
         comp=Z,19nm,1.0s
J26L  Joseph Creek    87.26  25           P         05 28 34.5 -0.1
J26L                             IAmb     IAmb      05 28 46.6
         comp=Z,29nm,1.5s
J26L  Joseph Creek    87.26  25  P        P         05 28 34.2 -0.4
         baz=258,SNR=13
YAH   Yahtse          87.28  29  P        P         05 28 34.8 -0.2
YAH                              IAmb     IAmb      05 28 36.4
         comp=Z,37nm,1.6s
E25K  Arctic Village  87.30  21  P        P         05 28 35.2 +0.5
E25K  Arctic Village  87.30  21  P        P         05 28 35.4 +0.7
         baz=256,SNR=16
D25K  Kavik River     87.32  20  P        P         05 28 35.8 +1.0
         baz=255
GRNC  Granite Creek   87.35  29  IAmb     IAmb      05 28 37.3
         comp=Z,26nm,1.2s
BARN  Barnard Glacie  87.45  29  IAmb     IAmb      05 28 38.0
         comp=Z,19nm,1.0s
BMAR  Burnt Mountain  87.50  22           P         05 28 36.1 +0.4
M27K  Edge Creek, AK  87.58  27  P        P         05 28 36.1 -0.2
         baz=260,SNR=6.8
CTG   Chitna Glacier  87.59  29  P        P         05 28 36.5 +0.1
         baz=260,SNR=11
CTGM  Chitina Glacie  87.59  29  P        P         05 28 35.7 -0.7
TABL  Table Mountain  87.59  29  IAmb     IAmb      05 28 38.8
         comp=Z,17nm,0.9s
I26K  Coal Creek Min  87.60  24  IAmb     IAmb      05 28 48.7
         comp=Z,28nm,1.7s
I26K  Coal Creek Min  87.60  24  P        P         05 28 35.9 -0.3
         baz=258,SNR=7.2
G26K  Porcupine Rive  87.69  23  P        P         05 28 37.0 +0.5
         baz=258,SNR=22
F26K  Sheenjek River  87.72  22  P        P         05 28 37.9 +1.2
         baz=257,SNR=28
LOGN  Logan Glacier   87.73  29  P        P         05 28 37.0  0.0
LOGN                             IAmb     IAmb      05 28 38.3
         comp=Z,33nm,1.5s
L27K  Beaver Creek,   87.73  27           P         05 28 37.0 +0.1
L27K                             IAmb     IAmb      05 28 38.2
         comp=Z,15nm,1.2s
L27K  Beaver Creek,   87.73  27  P        P         05 28 37.5 +0.6
         baz=260,SNR=8.6
BCAR  Beaver Creek A  87.75  27           P         05 28 37.0 +0.1
K27K  Chicken         87.80  26  P        P         05 28 37.7 +0.6
         baz=259
PCA   Pinnacle        87.97  30  P        P         05 28 38.5 +0.4
PINM  Pinnacle        87.97  30  P        P         05 28 39.4 +1.3
         baz=261
BVCY  Beaver Creek    88.06  27  P        P         05 28 39.1 +0.7
         baz=260
O28M  Mount Upton     88.11  29  P        P         05 28 38.8 -0.3
O28M                             IAmb     IAmb      05 28 51.2
         comp=Z,15nm,1.2s
O28M  Mount Upton     88.11  29  P        P         05 28 39.4 +0.4
         baz=261
YUK3  Moose Creek     88.14  28  P        P         05 28 39.1 +0.1
         baz=261,SNR=14
I27K  Kandik River    88.29  24  P        P         05 28 39.5  0.0
         baz=260,SNR=26
C27K  Jago River      88.30  20  P        P         05 28 40.1 +0.7
         baz=258
PNL   Peninsula       88.34  30  P        P         05 28 40.3 +0.6
         baz=262
YUK8  Steele Glacier  88.39  29  P        P         05 28 40.7 +0.4
         baz=262
H27K  Steamboat Moun  88.44  24           P         05 28 40.5 +0.3
H27K  Steamboat Moun  88.44  24  P        P         05 28 40.5 +0.3
         baz=260,SNR=30
G27K  Doyon Strip     88.49  23  P        P         05 28 40.4  0.0
G27K  Doyon Strip     88.49  23  P        P         05 28 40.9 +0.5
         baz=260,SNR=9.9
E27K  Coleen River    88.77  22           P         05 28 41.5 -0.1
E27K  Coleen River    88.77  22  P        P         05 28 41.6  0.0
         baz=260,SNR=5.5
O29M  Mount Kennedy   88.83  30  IAmb     IAmb      05 29 27.4
         comp=Z,8.4nm,0.7s
O29M  Mount Kennedy   88.83  30  P        P         05 28 43.1 +0.9
         baz=263,SNR=6.5
YUK4  Talbot Arm      88.94  29  P        P         05 28 43.5 +0.7
         baz=263,SNR=11
I28M  Miner Creek     88.95  24           P         05 28 42.0 -0.6
I28M  Miner Creek     88.95  24  P        P         05 28 42.9 +0.2
         baz=261,SNR=16
DAWY  Dawson          88.97  26  P        P         05 28 42.6 -0.1
DAWY                             IAmb     IAmb      05 28 52.2
         comp=Z,23nm,1.2s
DAWY  Dawson          88.97  26  P        P         05 28 42.6 -0.1
         baz=262,SNR=21
YUK6  Outpost Mounta  89.02  29  P        P         05 28 43.5 +0.3
         baz=263
P29M  Windy Craggy    89.17  30  IAmb     IAmb      05 28 57.2
         comp=Z,29nm,1.4s
P29M  Windy Craggy    89.17  30  P        P         05 28 43.5 -0.2
         baz=263
M29M  Somme Creek     89.17  27  P        P         05 28 43.9 +0.1
M29M  Somme Creek     89.17  27  P        P         05 28 44.0 +0.3
         baz=263,SNR=15
D27M  Malcolm River   89.18  21  P        P         05 28 43.7 +0.1
         baz=260
F28M  Old Crow        89.31  22  P        P         05 28 43.9 -0.3
         baz=261
L29M  L29M            89.41  27           P         05 28 44.7 -0.1
L29M                             IAmb     IAmb      05 28 48.0
         comp=Z,12nm,0.9s
L29M  L29M            89.41  27  P        P         05 28 45.2 +0.5
         baz=263,SNR=12
HYT   Haines Junctio  89.42  29  P        P         05 28 44.9 -0.1
         baz=264,SNR=13
E28M  Babbage River   89.59  21  P        P         05 28 45.7 +0.2
E28M                             IAmb     IAmb      05 28 55.9
         comp=Z,26nm,1.9s
E28M  Babbage River   89.59  21  P        P         05 28 46.2 +0.7
         baz=262
P30M  Million Dollar  89.61  30  P        P         05 28 46.6 +0.8
         baz=264
I29M  Ogilvie Camp,   89.61  25  P        P         05 28 45.7  0.0
I29M  Ogilvie Camp,   89.61  25  P        P         05 28 46.0 +0.3
         baz=263,SNR=12
N30M  Aishikik Lake   89.69  29  P        P         05 28 46.2  0.0
N30M                             IAmb     IAmb      05 28 59.6
         comp=Z,21nm,1.5s
N30M  Aishikik Lake   89.69  29  P        P         05 28 46.3 +0.1
         baz=264,SNR=7.1
H29M  Whitestone      89.70  24           P         05 28 45.7 -0.4
H29M                             IAmb     IAmb      05 28 56.4
         comp=Z,37nm,1.8s
H29M  Whitestone      89.70  24  P        P         05 28 46.9 +0.8
         baz=263
K29M  Barlow Dome     89.77  26           P         05 28 46.8 +0.2
K29M                             IAmb     IAmb      05 29 00.1
         comp=Z,19nm,1.2s
K29M  Barlow Dome     89.77  26  P        P         05 28 46.9 +0.3
         baz=264,SNR=12
PLBC  Pleasant Camp   89.84  31  P        P         05 28 46.9 +0.1
         baz=264
G29M  Pine Creek      89.93  23  P        P         05 28 46.7 -0.4
G29M  Pine Creek      89.93  23  P        P         05 28 47.5 +0.4
         baz=263,SNR=6.2
O30N  Mendenhall      90.11  29  P        P         05 28 48.0 -0.1
O30N  Mendenhall      90.11  29  P        P         05 28 48.7 +0.6
         baz=265,SNR=6.4
E29M  Blow River      90.16  22  P        P         05 28 47.9 -0.2
         baz=263
N31M  Braeburn, Yuko  90.32  29  P        P         05 28 48.6 -0.5
N31M                             IAmb     IAmb      05 28 58.5
         comp=Z,44nm,1.9s
N31M  Braeburn, Yuko  90.32  29  P        P         05 28 49.1  0.0
         baz=265
J30M  Hart River      90.36  25           P         05 28 49.5 +0.2
J30M  Hart River      90.36  25  P        P         05 28 49.6 +0.3
         baz=265,SNR=10
SKAG  Skagway         90.37  31  P        P         05 28 49.5 +0.3
SKAG                             IAmb     IAmb      05 28 50.6
         comp=Z,25nm,1.4s
SKAG  Skagway         90.37  31  P        P         05 28 49.8 +0.6
SKAG  Skagway         90.37  31  P        P         05 28 49.9 +0.7
         baz=265
EPYK  Eagle Plains    90.38  24  IAmb     IAmb      05 29 02.1
         comp=Z,44nm,1.9s
EPYK  Eagle Plains    90.38  24  P        P         05 28 48.9 -0.4
         baz=264
I30M  Mount Dempster  90.41  25           P         05 28 49.4 -0.1
I30M                             IAmb     IAmb      05 29 02.6
         comp=Z,24nm,1.6s
I30M  Mount Dempster  90.41  25  P        P         05 28 50.0 +0.5
         baz=264
MAYO  Mayo, Yukon     90.46  26  P        P         05 28 50.1 +0.4
         baz=265
G30M  tAoh Zraii Nji  90.64  23           P         05 28 49.8 -0.7
G30M  tAoh Zraii Nji  90.64  23  P        P         05 28 50.4  0.0
         baz=265
SYO   Syowa Base      90.66 201⇓eP       P         05 28 52.5 +2.1
SYO   Syowa Base      90.66 201⇑ePcP     PcP       05 28 53.5 +2.0
WHY   Whitehorse      90.69  29           P         05 28 50.8 -0.2
WHY                              IAmb     IAmb      05 29 10.5
         comp=Z,30nm,1.5s
WHY   Whitehorse      90.69  29  P        P         05 28 50.7 -0.2
         baz=266
R32K  Eaglecrest      90.70  32  P        P         05 28 51.0 +0.2
         baz=266
F30M  Barrier River   90.86  22  P        P         05 28 51.6 +0.1
         baz=265
M31M  Drury Creek, Y  91.03  28  P        P         05 28 52.6 +0.2
M31M                             IAmb     IAmb      05 28 58.5
         comp=Z,25nm,1.9s
M31M  Drury Creek, Y  91.03  28  P        P         05 28 52.5 +0.2
         baz=266
P32M  Atlin           91.20  31  P        P         05 28 53.1 -0.1
         baz=267
CRAG  Craig           91.29  35  P        P         05 28 53.4 -0.2
         baz=267
H31M  Peel River      91.30  24  P        P         05 28 53.5  0.0
         baz=266
U33K  Whale Pass      91.33  34  P        P         05 28 53.9 +0.2
         baz=267
G31M  Satah River     91.40  23  P        P         05 28 53.2 -0.6
         baz=266
FARO  Faro, Yukon     91.53  28  P        P         05 28 54.2 -0.5
FARO                             IAmb     IAmb      05 29 00.9
         comp=Z,19nm,1.7s
FARO  Faro, Yukon     91.53  28  P        P         05 28 54.4 -0.2
         baz=267
N32M  Quiet Lake      91.60  29  P        P         05 28 54.9 -0.1
N32M                             IAmb     IAmb      05 29 04.2
         comp=Z,13nm,1.1s
N32M  Quiet Lake      91.60  29  P        P         05 28 54.9 -0.1
         baz=267
F31M  Tsiigehtchic    91.64  23  P        P         05 28 54.0 -1.0
         baz=267
P33M  Teslin, Yukon   91.68  30           P         05 28 55.3 -0.1
P33M  Teslin, Yukon   91.68  30  P        P         05 28 55.4 -0.1
         baz=268
INK   Inuvik          91.76  22  P        P         05 28 54.8 -0.7
         baz=267
WRAK  Wrangell Islan  91.77  34  P        P         05 28 55.8 -0.1
         baz=268
KIRV  Kirov           91.87 328⇑eP       P         05 28 54.6 -1.6
Q32M  Nakina River    91.91  31  P        P         05 28 56.7  0.0
         baz=268
V35K  Ketchikan       92.15  35  P        P         05 28 57.8 +0.3
         baz=268
S34M  Telegraph Cree  92.48  32  P        P         05 28 59.6 +0.5
         baz=269
MMPY  Sheldon Lake,   92.51  28  P        P         05 28 58.7 -0.5
MMPY                             IAmb     IAmb      05 29 12.6
         comp=Z,29nm,1.8s
MMPY  Sheldon Lake,   92.51  28  P        P         05 28 59.3 +0.1
         baz=269
R33M  Jennings River  92.59  31  P        P         05 28 59.4 -0.4
         baz=269
T35M  Bob Quinn       92.94  33  P        P         05 29 00.8 -0.5
         baz=270
WTLY  Watson Lake, Y  93.69  30  P        P         05 29 04.4 -0.3
         baz=271
A36M  Sachs Harbour   94.52  18  P        P         05 29 07.6 -0.6
         baz=275
KIV   Kislovodsk      96.12 314 eP        P         05 29 14.8 -1.5
KIV                               pmax    pmax
         comp=Z,5.0nm,1.0s
KLMR  Klimovskoe      96.80 331 eP        P         05 29 14.5 -4.3
KLMR                              pmax    pmax
         comp=Z,20nm,1.6s
OBN   Obninsk         99.10 325⇑eP       Pdif      05 29 27.7 -1.5
OBN                             i                   05 33 33.4
OBN                             ePPP      PPP       05 35 34.4
OBN                               pmax    pmax
         comp=Z,5.0nm,0.9s
OBN                               MLR     MLR
         comp=Z,425nm,19.0s
BELA  Belgrano 2      99.39 181  P        Pdif      05 29 30.5 +0.3
BELA                             IAmb     IAmb      05 29 31.4
         comp=Z,18nm,1.7s
TROLL Troll, Antarti 100.26 193 ⇑P        Pdif      05 29 37.8 +3.4
ARCES ARCESS Array B 100.49 341  P        Pdif      05 29 33.9 -1.3
         comp=Z,3.0nm,0.9s,baz=75,slow=6.4,SNR=7.9
SNAA  Sanae          101.64 192 ⇑P        Pdif      05 29 41.8 +1.4
         comp=Z,28nm,1.1s
SNAA  Sanae          101.64 192  P        Pdif      05 29 40.2 -0.2
         comp=Z,1.2nm,0.8s,baz=171,slow=1.3,SNR=5.5
NVAR  Mina Array Bea 102.00  51  P        Pdif      05 29 43.4 +0.5
         comp=Z,0.5nm,0.7s,baz=259,slow=5.8,SNR=5.6
VNA2  Neumayer--Watz 103.12 191 ⇑P        Pdif      05 29 50.9 +4.0
         comp=Z,0.8nm,0.6s,baz=134,slow=5.0
VNA3  Neumayer Olymp 103.27 190 ⇑P        Pdif      05 29 50.3 +2.7
         comp=Z,1.1nm,0.7s
MNK   Minsk          104.14 326 i P       Pdif      05 29 47.5 -4.3
         comp=E,8.0nm,0.8s
MNK                             i P       Pdif      05 29 47.5 -4.3
         comp=N,12nm,0.8s
MNK                             i P       Pdif      05 29 47.5 -4.3
         comp=Z,8.0nm,0.6s,baz=74
MNK                             i PP      PKiKP     05 34 05.4 -3.2
MNK                             i PPP     PPP       05 36 17.1
MNK                             i SKS               05 41 16.4
MNK                             i PS      PS        05 43 18.0 -3.9
MNK                             i SS      SS        05 48 55.9 -0.2
MNK                             i SSS     SSS       05 52 52.2
MNK                             i LQ      LQ        06 10 32.5
MNK                             i LRM     MLR       06 15 36.0
         comp=E,351nm,17.1s
MNK                             i LRM     MLR       06 17 15.5
         comp=N,236nm,17.2s
MNK                             i LRM     MLR       06 17 15.5
         comp=Z,511nm,19.3s
MNK   Minsk          104.14 326 i P       Pdif      05 29 47.4 -4.3
MNK                             i                   05 34 05.4
MNK                             i                   05 41 16.3
MNK                             i PS      PS        05 43 18.0 -3.9
MNK                             i SS      SS        05 48 55.9 -0.2
MNK                             i SSS     SSS       05 52 52.1
MNK                               pmax    pmax
         comp=Z,8.0nm,0.6s
MNK                               pmax    pmax
         comp=N,12nm,0.8s
MNK                               pmax    pmax
         comp=E,8.0nm,0.8s
MNK                               MLR     MLR
         comp=E,351nm,17.0s
MNK                               MLR     MLR
         comp=Z,511nm,19.0s
MNK                               MLR     MLR
         comp=N,236nm,17.0s
NACGM Naroch         104.64 326 ePKiKP    PKiKP     05 34 10.1 +0.6
         comp=Z,6.0nm,0.8s,baz=74
CLL   Collm          113.68 326 ePKIKP    PKiKP     05 34 27.0 +0.4
CLL   Collm          113.68 326 ePKiKP    PKiKP     05 34 27.0 +0.4
CLL                             ePP       PP        05 35 22.0 +3.1
GERES GERESS Array B 114.38 323  PKP      PKPdf     05 34 27.1 -1.2
         comp=Z,0.2nm,0.3s,baz=83,slow=5.6,SNR=3.6
TXAR  Lajitas Array  115.45  59  PKPdf    PKPdf     05 34 30.4 -0.5
TXAR  Lajitas Array  115.45  59  PKP      PKPdf     05 34 29.9 -1.0
         comp=Z,0.4nm,0.7s,baz=181,slow=2.6,SNR=7.1
TXAR                             PKKPbc   PKKPbc    05 45 06.3 +1.3
         comp=Z,0.3nm,0.7s,baz=123,slow=4.6,SNR=5.3
TXAR  Lajitas Array  115.45  59  PKIKP    PKPdf     05 34 30.4 -0.5
BRDY  Brady          118.91  56           PKPdf     05 34 36.8 -0.6
P38A  Dawn           120.29  45           PKPdf     05 34 38.8 -0.9
U38A  Gravette       120.91  49           PKPdf     05 34 40.1 -0.9
T42A  Van Buren      123.11  47           PKPdf     05 34 44.3 -0.9
TKL   Tuckaleechee C 128.98  45           PKPdf     05 34 56.7 +0.2
TKL   Tuckaleechee C 128.98  45  PKIKP    PKPdf     05 34 56.7 +0.2
PLCA  Paso Flores    129.22 152  PKP      PKiKP     05 34 57.9 +0.2
         comp=Z,1.6nm,0.9s,baz=128,slow=3.8,SNR=3.2
152A  Waverly Hall   129.72  49           PKPdf     05 34 58.1 +0.1
ESDC  Sonseca Array  129.94 322  PP       PP        05 37 13.3 +3.6
         comp=Z,0.2nm,0.3s,baz=60,slow=5.3,SNR=4.2
TORD  Torodi Ar. Bea 136.11 286  PKPdf    PKPdf     05 35 09.7 -0.8
TORD  Torodi Ar. Bea 136.11 286  PKP      PKPdf     05 35 11.0 +0.5
         comp=Z,1.2nm,0.7s,baz=34,slow=2.9,SNR=6.4
OTAV  Otavalo        142.93  93           PKPdf     05 35 24.3 +0.7
OTAV  Otavalo        142.93  93  PKIKP    PKPdf     05 35 24.3 +0.7
DBIC  Dimbokro       143.33 277  PKPdf    PKPdf     05 35 24.1 +0.4
DBIC  Dimbokro       143.33 277  PKIKP    PKPdf     05 35 24.1 +0.4
CMBC  Cumbal         143.60  92  P        PKPab     05 35 21.4 +0.1
PB11  IPOC Station P 144.39 130           PKPbc     05 35 24.7 +0.7
CRUC  La Cruz        144.50  91  P        PKPbc     05 35 24.8  0.0
PB08  IPOC Station P 144.55 131           PKPdf     05 35 25.5 -0.6
GO01  Chusmiza       144.80 130           PKPdf     05 35 26.4 -0.2
POPC  Popayan, Colom 144.81  89  P        PKPab     05 35 24.1 -1.4
JAMC  Jamundi, Valle 144.82  88  P        PKPab     05 35 25.0 -0.6
DBBC  Dabeiba        145.12  82  P        PKPbc     05 35 26.2 -0.2
PLMC  San Jos del P  145.18  85  P        PKPbc     05 35 26.5 -0.1
MACI  Morro de la Ar 145.23 319           PKPbc     05 35 25.2 -1.3
UREC  San Jos de Ur  145.71  80  P        PKPdf     05 35 26.9 -0.9
FLOC  Florencia      145.80  91           PKPdf     05 35 26.9 -1.1
FLOC  Florencia      145.80  91  P        PKPbc     05 35 28.6 +0.1
GARC  Garzon, Huila  145.98  90  P        PKPdf     05 35 28.4 -0.2
BETC  Betania        146.05  89  P        PKPdf     05 35 28.7 +0.2
ANIL  Santa Ana      146.07  86  P        PKPbc     05 35 29.3 -0.4
GUY2C Guyana, Caldas 146.08  85  P        PKPdf     05 35 29.3 +0.3
ORTC  Ortega, Tolima 146.24  87  P        PKPdf     05 35 28.9 +0.1
SMRC  Santa Marta, M 146.44  74           PKPdf     05 35 29.4 +0.4
NORC  Norcasia       146.56  84  P        PKPdf     05 35 29.0 -0.3
PRAC  Prado          146.60  87  P        PKPdf     05 35 28.4 -1.0
PTBC  PUERTO BERRIO,146.89  82  P        PKPdf     05 35 28.9 -0.9
SC01  Santiago de lo 146.93  58  PKPbc    PKPbc     05 35 31.0 -0.6
URMC  La Uribe, Meta 147.11  88  P        PKPdf     05 35 30.2 -0.1
CZSB  Cruzeiro do Su 147.13 109  PKPdf    PKPdf     05 35 29.6 -0.6
CZSB  Cruzeiro do Su 147.13 109  P        PKPdf     05 35 29.3 -0.9
ROSC  El Rosal       147.14  85  PKPbc    PKPbc     05 35 32.0 -0.9
         comp=Z,19nm,0.8s,baz=100,slow=11,SNR=12
CPUP  Villa Florida  147.26 153  PKPbc    PKPbc     05 35 33.2 +0.8
CPUP  Villa Florida  147.26 153  PKPbc    PKPbc     05 35 32.1 -0.3
         comp=Z,3.3nm,0.9s,baz=89,slow=2.0,SNR=11
CPUP  Villa Florida  147.26 153  PKP2     PKPbc     05 35 33.2 +0.8
SPBC  San Pablo de B 147.34  84  P        PKPdf     05 35 28.1 -2.6
CVER  Cruz Verde, Cu 147.40  86  P        PKPbc     05 35 33.8 +0.1
LPAZ  La Paz         147.55 127  PKPbc    PKPbc     05 35 33.5 -0.6
LPAZ  La Paz         147.55 127  PKP      PKPdf     05 35 30.1 -1.5
         comp=Z,1.4nm,0.5s,baz=263,slow=3.5,SNR=21
LPAZ                             PKPbc    PKPbc     05 35 34.6 +0.4
         comp=Z,19nm,1.0s,baz=294,slow=1.8,SNR=24
BRJC  Barrancabermej 147.56  81  P        PKPdf     05 35 30.7 -0.2
MACC  Macarena, Meta 147.63  90  P        PKPdf     05 35 30.8 -0.3
CRJC  Cerrejon, Guaj 147.76  74  P        PKPdf     05 35 31.6 +0.3
VILC  Villavicencio, 147.79  87  P        PKPdf     05 35 32.9 +1.4
OCAC  Ocana          147.82  79  P        PKPdf     05 35 29.8 -1.7
BARC  Barichara      148.15  82  P        PKPbc     05 35 34.0 -1.4
RUSC  La Rusia       148.31  83  PKPbc    PKPbc     05 35 35.1 -1.1
RUSC  La Rusia       148.31  83  P        PKPbc     05 35 34.6 -1.6
PAMC  Pamplona, Colo 148.55  80  P        PKPdf     05 35 33.8 +0.7
GUVC  San Jose del G 148.85  90  P        PKPdf     05 35 31.6 -1.5
SDV   Santo Domingo  150.35  77  PKPdf    PKPdf     05 35 33.2 -2.4
SDV                              PKPbc    PKPbc     05 35 40.0 -0.9
SDV   Santo Domingo  150.35  77  P        PKPdf     05 35 34.9 -0.7
TBTG  Tabatinga, AM  150.74 104  PKPbc    PKPbc     05 35 40.8 -0.8
TBTG  Tabatinga, AM  150.74 104  P        PKPdf     05 35 35.9 -0.1
AOPR  Arecibo Observ 150.76  56  PKPdf    PKPdf     05 35 34.2 -1.7
AOPR                             PKPbc    PKiKP     05 35 42.5 +0.3
AOPR                                      sPKPdf    05 35 49.5 -0.8
CELP  Cerrillos      151.04  57           PKPbc     05 35 40.4 -1.7
GCPR  Guaynabo City  151.34  56           PKPbc     05 35 41.8 -1.0
SJG   San Juan       151.38  56           PKPbc     05 35 41.6 -1.3
SJG   San Juan       151.38  56  PKIKP    PKPbc     05 35 41.6 -1.3
HUMP  Col San Antoni 151.61  56           PKPbc     05 35 41.2 -2.2
```

IDC ***24*** *05:22:38.9±0.8, 2.°56S×138.°53E, h0km, mb3.9/7, mbtmp4.0/9, ML3.9/2, Error ellipse: s-maj=21.9km s-min=16.1km az=10.0*

DJA ***24*** *05:22:42.2±0.3, 2°S±5°×13°9E±°, h10km, M4.3/7, mb4.5/1, MLv4.2/7*

ISC 24 05:22:43.4±0.7**, 2.°52S**±0.°09×**138.°62E**±0.°05**, h32**km**, n17, σ1§14**/17**, mb4.0**/7**, Irian Jaya**

```
Code  Station Name      Δ°   AZ°   Phase ID          Time      Res
                                 Op       ISC       h  m  s    ISC
SMPI  Sarmi             0.53  10 P        Pb        05 22 53.0 -1.5
GENI  Genyem            1.55  93 P        Pn        05 23 09.7 +0.9
JAY   Jayapura          2.08  90 Pn       Pn        05 23 17.0 +0.8
      24nm,0.3s,baz=241,slow=10,SNR=35
JAY                              Lg       Lg        05 23 48.5
      19nm,0.3s,baz=356,slow=17,SNR=5.5
      59nm,0.3s
JAY   Jayapura          2.08  90 P        Pn        05 23 17.5 +1.3
SRPI  Serui, Papua      2.46 285 P        Pn        05 23 21.8 +0.5
BAKI  Biak              2.83 298 P        Pn        05 23 27.4 +0.9
RKPI  Ransiki, Papua    4.55 283 P        Pn        05 23 51.0 +0.9
FAKI  Fak Fak           6.37 266 P        Pn        05 24 16.1 +0.9
WRA   Warramunga Arr   17.82 193 P        Pn        05 26 47.1 -1.9
      0.6nm,0.3s,baz=15,slow=12,SNR=6.5
      2.7nm,0.4s
ASAR  Alice Springs    21.51 192 P        P         05 27 30.4 +0.5
      5.0nm,0.7s,baz=17,slow=9.6,SNR=7.3
      5.0nm,0.7s
SONM  Songino Array    57.51 335 P        P         05 32 29.8 +0.1
      0.3nm,0.5s,baz=123,slow=5.3,SNR=1.8
      0.3nm,0.5s
MKAR  Makanchi Array   69.58 322 P        P         05 33 51.4 +2.0
      0.7nm,0.7s,baz=111,slow=6.6,SNR=4.9
      0.7nm,0.7s
KURBB Kurchatov Arra   73.52 325 P        P         05 34 12.9 -0.1
      0.3nm,0.7s,baz=115,slow=5.4,SNR=5.0
      0.3nm,0.7s
BVAR  Borovoye Array   79.10 325 P        P         05 34 46.0 +1.3
      0.7nm,0.5s,baz=111,slow=8.1,SNR=3.8
      0.7nm,0.5s
ILAR  Eielson Array    85.70  24 P        P         05 35 18.7 -0.2
      0.7nm,0.7s,baz=266,slow=4.2,SNR=12
      0.7nm,0.7s
QSPA  South Pole Qui   87.43 180 P        P         05 35 27.0 -0.4
      3.4nm,1.1s,baz=235,slow=1.2,SNR=8.7
      3.4nm,1.1s
LPAZ  La Paz          147.63 126 PKPbc    PKPbc     05 42 26.1 -0.4
      1.1nm,0.8s,baz=304,slow=3.6,SNR=4.7
```

ATH ***24*** *05:31:56.5, 40.°62N×20.°86E, h6km, ML2.7/8, Manual Solution by K.Orfanogiannaki First location: 2019/06/24 05:33:00, This location: 2020/10/04 19:09:54 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

TIR ***24*** *05:31:57.3, 40.°48N×20.°83E, h2km±2km, Ml2.9/4*

SKO ***24*** *05:31:58.2, 40.°64N×20.°88E, h38km, ML2.6*

THE ***24*** *05:31:59.5, 40°N±3°×2°1E±°, h6km±2km, M2.5/10, MLh2.5/10*

ISC 24 05:31:57.3±0.9**, 40.°53N**±0.°02×**20.°84E**±0.°02**, h8**km±6km**, n40, σ1§26**/64**, Greece-Albania border region**

```
Code  Station Name      Δ°   AZ°   Phase ID          Time      Res
                                 Op       ISC       h  m  s    ISC
KBN   Korca             0.10 336 Pg       Pg        05 31 59.5 -0.3
KBN                              Sg       Sg        05 32 02.0 +0.3
KBN                              AML      AML       05 32 05.4
      11nm,0.4s
NEST  Nestorio          0.19 126 Pg       Pg        05 32 01.7 +0.4
NEST                             Sg       Sg        05 32 04.1 +0.1
NEST                             AML      AML       05 32 06.3
      12nm,0.3s
NEST  Nestorio          0.19 126 P        Pg        05 32 01.7 +0.4
NEST                             S        Sg        05 32 04.1 +0.1
NEST  Nestorio          0.19 126 P        Pg        05 32 01.8 +0.4
NEST                             S        Sg        05 32 05.3 +1.3
```

PENT	Pentalofos	0.40	146	P	Pg	05 32 04.9	-0.3
PENT				S	Sg	05 32 09.0	-1.4
PENT	Pentalofos	0.40	146	P	Pg	05 32 04.9	-0.3
PENT				S	Sg	05 32 11.8	+1.4
OHR	Ohrid	0.58	357	*i* Pg	Pb	05 32 09.4	-0.4
OHR				*i* Sg	Sn	05 32 18.9	-2.8
OHR				*e*Lg	Lg	05 32 19.7	
	comp=E,442nm,0.6s						
OHR				*e*Lg	Lg	05 32 21.8	
	comp=N,292nm,0.9s						
KPRO	Kipourio	0.70	145	P	Pg	05 32 10.0	-0.7
KPRO	Kipourio	0.70	145	P	Pg	05 32 09.8	-1.0
KPRO				S	Sb	05 32 21.3	-0.2
KZN	Kozani	0.74	107	P	Pg	05 32 11.6	0.0
KZN				S	Sb	05 32 22.1	-0.6
JAN	Janina	0.87	180	P	Pg	05 32 13.8	-0.2
SRN	Sarande	0.92	225	Pg	Pg	05 32 14.1	-0.8
SRN				Sg	Sn	05 32 28.9	-0.7
SRN				AML	AML	05 32 31.3	
	comp=N,0.6nm,0.5s						
KTI	Kastanea	0.98	98	P	Pb	05 32 16.2	-0.4
IGT	Igoumenitsa	1.07	202	Pg	Pb	05 32 18.1	+0.1
IGT				Sg	Sn	05 32 33.1	-0.5
IGT	Igoumenitsa	1.07	202	P	Pb	05 32 18.0	0.0
IGT	Igoumenitsa	1.07	202	*e*Pg	Pb	05 32 17.6	-0.4
IGT				*i* Sg	Sn	05 32 35.8	+2.3
IGT	Igoumenitsa	1.07	202	P	Pb	05 32 17.0	-1.0
IGT				S	Sn	05 32 33.7	+0.1
TIR	Tirane	1.10	318	*i* Pg	Pg	05 32 18.0	-0.5
TIR				*e*Sg	Sn	05 32 33.9	-0.6
TIR	Tirane	1.10	318	P	Pb	05 32 16.7	-1.9
KEK	Kerkira	1.14	225	P	Pg	05 32 20.1	+0.9
KEK				S	Sn	05 32 35.9	+0.5
TETR	Tetrakomo, Epi	1.23	164	P	Pn	05 32 20.5	-0.3
TETR	Tetrakomo, Epi	1.23	164	P	Pn	05 32 19.9	-0.8
TETR				S	Sn	05 32 39.9	+2.3
THL	Klokotos Trika	1.32	137	P	Pb	05 32 21.9	-0.3
THL	Klokotos Trika	1.32	137	P	Pb	05 32 21.9	-0.3
LIT	Litokhoron	1.33	108	P	Pg	05 32 22.4	-0.4
LIT	Litokhoron	1.33	108	*i* Pg	Pg	05 32 23.4	+0.6
LIT				*i* Sg	Sg	05 32 43.1	+3.1
LIT	Litokhoron	1.33	108	P	Pb	05 32 22.1	-0.4
LIT				S	Sg	05 32 39.8	-0.2
TYRN	Tyrnavos	1.34	127	P	Pg	05 32 22.6	-0.4
TYRN				S	Sg	05 32 41.9	+1.4
VAY	Valandovo	1.53	58	*i* Pg	Pb	05 32 24.5	-1.4
VAY				*i* Sg	Sg	05 32 49.3	+2.9
VAY				*e*Lg	Lg	05 32 51.0	
	comp=E,74nm,0.7s						
VAY				*e*Lg	Lg	05 32 51.6	
	comp=N,90nm,0.8s						
THE	Thessaloniki	1.62	86	*i* Pg	Pg	05 32 28.6	+0.2
THE				*i* Sg	Sg	05 32 49.3	0.0
PUK	Puka	1.67	335	Pn	Pg	05 32 30.5	+1.1
PUK				Sn	Sg	05 32 55.2	+4.1
PUK				AML	AML	05 33 00.0	
	comp=N,0.4nm,0.4s						
KNT	Kendrikon	1.68	67	P	Pb	05 32 28.0	-0.5
KNT				S	Sg	05 32 50.9	-0.5
KNT	Kendrikon	1.68	67	*i* Pg	Pb	05 32 28.1	-0.4
KNT				*i* Sg	Sg	05 32 54.0	+2.7
HORT	Hortiatis	1.72	87	P	Pb	05 32 28.0	-1.1
NYDR	Nydri-Lefkada	1.82	184	P	Pn	05 32 29.3	+0.6
ULC	Ulcinj	1.87	320	*i* Pn	Pg	05 32 32.3	-0.9
AGG	Agios Georgios	1.89	142	P	Pb	05 32 30.7	-1.3
PLG	Polygyros	1.99	94	P	Pb	05 32 32.4	-1.3
PAIG	Paliouri	2.25	105	P	Pb	05 32 36.0	-2.2
BARS	Barje	2.40	17	*i* Pn	Pn	05 32 37.6	+0.7

IDC 24 05:39:25.9±1.8**, 2°.44S**×**138°.50E, h0km, mb3.5**/2**, mbtmp3.6**/4**, ML3.4**/2**, Error ellipse: s-maj=33.0km s-min=19.8km az=165.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	2.21	92	Pn	Pb	05 40 05.5	-1.3
	7.5nm,0.3s,baz=222,slow=13,SNR=11						
JAY				Lg	Lg	05 40 35.1	
	5.6nm,0.3s,baz=176,slow=22,SNR=3.6						
	30nm,0.4s						
WRA	Warramunga Arr	17.86	193	P	P	05 43 36.6	-0.1
	0.2nm,0.3s,baz=15,slow=12,SNR=5.7						
	1.8nm,0.8s						
ASAR	Alice Springs	21.56	192	P	P	05 44 16.7	-0.5
	0.9nm,0.7s,baz=23,slow=12,SNR=4.6						
	0.9nm,0.7s						
ILAR	Eielson Array	85.68	24	P	P	05 52 06.0	-0.3
	0.5nm,0.8s,baz=246,slow=5.4,SNR=6.4						
	0.5nm,0.8s						

IDC ***24*** *05:40:07.0±3.2, 54°.23N×87°.29E, h0km, mbtmp2.9/2, ML2.7/2, Error ellipse: s-maj=28.1km s-min=19.5km az=54.0*

ASRS 24 05:40:05.0±0.5**, 54°.14N**×**87°.19E, h0km, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.41	263	I	I	05 49 09.2	
	baz=79,slow=322,SNR=2.9						
ZALV	Zalesovo Beam	1.41	263	Pg	Pb	05 40 32.8	+0.6
	4.7nm,0.3s,baz=76,slow=17,SNR=42						
ZALV				Lg	Lg	05 40 53.9	
	2.6nm,0.3s,baz=79,slow=26,SNR=5.3						
KURBB	Kurchatov Arra	6.36	240	Pn	Pn	05 41 44.5	+4.6
	0.1nm,0.3s,baz=54,slow=13,SNR=5.8						
KURBB				Lg	Lg	05 43 33.7	
	baz=56,slow=31,SNR=4.8						
	0.6nm,0.3s						
MKAR	Makanchi Array	7.99	205	Pn	Pn	05 42 06.8	+4.5
	0.1nm,0.3s,baz=24,slow=12,SNR=1.8						
	0.2nm,0.5s						

IDC 24 05:40:17.0±999.0**, 44°.34N**×**65°.55E, h0km, Error ellipse: s-maj=1522.0km s-min=165.3km az=140.0, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	7.92	323	I	I	06 28 40.0	
	0.3nm,0.6s,baz=136,slow=313,SNR=12						
I43RU	DUBNA INFRASON	21.67	315	I	I	07 46 35.0	
	0.1nm,1.0s,baz=115,slow=315,SNR=3.1						
I26DE	FREYUNG INFRAS	35.33	296	I	I	09 16 25.3	
	baz=78,slow=312						

IDC ***24*** *05:40:21.8±0.7, 2°.56S×138°.47E, h0km, mb4.2/11, mbtmp4.3/16, ML4.4/3, Error ellipse: s-maj=16.4km s-min=14.2km az=20.0*

NEIC ***24*** *05:40:23.9±2.0, 2°.81S±0°.04×138°.61E±0°.06, h10km±1km, mb4.6/64, Error ellipse: s-maj=11.3km s-min=5.3km az=298.0*

DJA ***24*** *05:40:25.7±1.0, 3°S±5°×13°9E±°, h23km±11km, M4.6/8, mB5.9/1, mb4.8/6, MLv4.6/8, Mw(mB)5.5/1*

ISC 24 05:40:26.7±0.4**, 2°.78S**±0°.05×**138°.59E**±0°.06**, h35km, n98, σ1s.19**/85**, mb4.6**/45**, 1D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	Sarmi	0.79	9	P	Pn	05 40 38.4	-3.0
GENI	Genyem	1.59	83	P	Pn	05 40 51.3	-1.0
JAY	Jayapura	2.13	83	Pn	Pn	05 41 00.8	+1.0
	58nm,0.3s,baz=219,slow=8.1,SNR=22						
JAY				Lg	Lg	05 41 33.6	
	33nm,0.3s,baz=127,slow=17,SNR=4.6						
	151nm,0.4s						
JAY	Jayapura	2.13	83	P	Pn	05 40 59.9	+0.1
SRPI	Serui, Papua	2.52	291	P	Pn	05 41 04.7	-0.4
BAKI	Biak	2.94	302	P	Pn	05 41 09.9	-1.1
RKPI	Ransiki, Papua	4.59	286	P	Pn	05 41 33.4	-0.2
FAKI	Fak Fak	6.34	269	Pn	Pn	05 41 56.2	-1.5
FAKI	Fak Fak	6.34	269	P	Pn	05 41 58.1	+0.4
SWI	Sorong	7.57	284	P	Pn	05 42 14.5	-0.1
	0.2nm53nm,0.5s						
MANU	Manus Island	8.80	85		Pn	05 42 29.0	-2.5
SAUI	Saumlaki	8.91	234	Pn	Pn	05 42 31.6	-1.5
MSAI	Masohi	9.66	266	P	Pn	05 42 44.1	+0.7
PMG	Port Moresby	10.77	128	Pn	Pn	05 42 55.7	-2.8
PMG	Port Moresby	10.77	128	Pn	Pn	05 43 01.4	+2.9
	5.4nm,0.3s,baz=357,slow=3.9,SNR=3.8						
COEN	Coen	12.00	158		Pn	05 43 15.1	-0.3
MTN	Manton Dam	12.43	216	Pn	Pn	05 43 20.9	-0.4
KNRA	Kununurra	16.06	216		Pn	05 44 09.8	-0.3
BATI	Baumata	16.56	243	Pn	Pn	05 44 16.4	0.0
	27nm,0.3s,baz=187,slow=1.0,SNR=7.3						
WB0	Warramunga Arr	17.38	193		Pn	05 44 26.1	-0.5
WR8	Warramunga Arr	17.54	193		P	05 44 28.8	-0.6
WRAB	Tennant Creek	17.55	193		Pn	05 44 28.6	-0.2
WRA	Warramunga Arr	17.56	193		Pn	05 44 26.6	-2.3
WRA	Warramunga Arr	17.56	193	P	P	05 44 30.1	+0.3
	1.3nm,0.3s,baz=18,slow=12,SNR=13						
WRA				S	Sn	05 47 39.5	-4.0
	3.6nm,0.8s,baz=0.1,slow=24,SNR=4.6						
	8.3nm,0.8s						
TOLI2	Tolitoli	18.22	282	P	Pn	05 44 38.7	+1.7
CTAO	Charters Tower	18.76	157	P	P	05 44 41.6	-1.3
KAPI	Kappang	18.93	263	P	Pn	05 44 45.5	-0.1
FITZ	Fitzroy Crossi	19.83	219	P	P	05 44 54.5	0.0
FITZ	Fitzroy Crossi	19.83	219	P	Pn	05 44 56.3	0.0
	1.2nm,0.3s,baz=46,slow=13,SNR=11						
	3.6nm,0.6s						
AS31	Alice Springs	21.26	192		P	05 45 10.6	+0.5
ASAR	Alice Springs	21.26	192		P	05 45 10.0	-0.1
ASAR	Alice Springs	21.26	192	P	P	05 45 11.7	+1.6
	14nm,0.8s,baz=19,slow=11,SNR=14						
ASAR				S	S	05 49 07.7	+3.0
	4.3nm,0.8s,baz=14,slow=25,SNR=5.3						
	14nm,0.8s						
EIDS	Eidsvold	25.48	153	P	P	05 45 51.4	-0.3
EIDS				IAmb	IAmb	05 46 03.8	
	comp=Z,9.5nm,0.9s						
MBWA	Marble Bar	25.90	224	P	P	05 45 55.8	+0.1
MBWA				IAmb	IAmb	05 46 00.3	
	comp=Z,9.0nm,0.9s						
PSA00	Pilbara Seismi	26.11	223	P	P	05 45 57.1	-0.4
PSA00				IAmb	IAmb	05 46 42.4	
	comp=Z,30nm,1.5s						
UGM	Wanagama	28.40	259	P	P	05 46 18.6	+0.3
KSRS	Korea Array	41.23	347	P	P	05 48 05.5	-2.9
	comp=Z,1.0nm,0.6s,baz=155,slow=8.3,SNR=5.4						
	comp=Z,1.0nm,0.6s						
CMAR	Chiang Mai Arr	44.37	300	P	P	05 48 34.5	+0.4
CMAR	Chiang Mai Arr	44.37	300	P	P	05 48 33.2	-0.9
	comp=Z,1.9nm,0.3s,baz=124,slow=6.3,SNR=5.9						
	comp=Z,1.9nm,0.3s						
USRK	Ussuriysk Ar.	47.14	354	P	P	05 48 56.2	+0.6
USA0B	Ussuriysk Arra	47.14	354	P	P	05 48 56.8	+1.3
USA0B				IAmb	IAmb	05 49 00.7	
	comp=Z,5.4nm,0.8s						
BNX	BinXian	49.32	350	⇓P	P	05 49 12.3	0.0
BNX				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MRZ	Mangatainoka R	50.34	144	P	P	05 49 21.2	+0.8
NIUE	Niue	52.85	112	P	P	05 49 39.8	+0.4
GTA	Gaotai	55.05	324	*e*P	P	05 49 55.8	+0.5
GTA				pP	pP	05 50 02.8	-3.3
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ULN	Ulaanbaatar	57.48	335	P	P	05 50 13.1	+0.6
SONM	Songino Array	57.73	335	P	P	05 50 14.1	-0.1
SONM	Songino Array	57.73	335	P	P	05 50 13.5	-0.7
	comp=Z,1.1nm,0.6s,baz=151,slow=7.3,SNR=5.8						
	comp=Z,1.1nm,0.6s						
PETK	Petropavlovsk-	57.95	13	P	P	05 50 16.2	+0.7
PETK	Petropavlovsk-	57.95	13	P	P	05 50 15.3	-0.2
	comp=Z,1.0nm,0.6s,baz=145,slow=5.4,SNR=3.6						
	comp=Z,1.0nm,0.6s						
EVN	Everest	58.38	305	P	P	05 50 19.6	-0.2
EVN				IAmb	IAmb	05 50 32.9	
	comp=Z,3.1nm,0.7s						
KIWB	Kanaga Island	66.05	28	P	P	05 51 10.8	+0.9
MKAR	Makanchi Array	69.77	322	P	P	05 51 33.5	0.0
MKAR	Makanchi Array	69.77	322	P	P	05 51 33.1	-0.4
	comp=Z,1.0nm,0.6s,baz=108,slow=8.2,SNR=7.0						
	comp=Z,1.0nm,0.6s						
ZALV	Zalesovo Beam	71.93	330	P	P	05 51 45.0	-1.5
	comp=Z,1.1nm,0.7s,baz=116,slow=3.4,SNR=4.3						
	comp=Z,1.1nm,0.7s						
KURBB	Kurchatov Arra	73.71	325	P	P	05 51 56.0	-1.1
	comp=Z,0.9nm,0.7s,baz=112,slow=5.7,SNR=8.3						
	comp=Z,0.9nm,0.7s						
S12K	Black Hills	75.61	30	P	P	05 52 08.6	+0.7
L14K	Kuka Creek	78.01	25		P	05 52 22.5	+1.2
M14K	Bethel	78.03	26	P	P	05 52 22.4	+1.0
BVAR	Borovoye Array	79.30	325	P	P	05 52 28.3	-0.4
	comp=Z,3.8nm,0.6s,baz=108,slow=6.6,SNR=11						
	comp=Z,3.8nm,0.6s						
M16K	Timber Creek	79.46	26		P	05 52 30.4	+1.1
M16K				IAmb	IAmb	05 52 31.0	
	comp=Z,11nm,1.1s						
L16K	Owhat River	79.54	25	P	P	05 52 29.7	0.0
N17K	Nushagak Hills	80.04	27	P	P	05 52 33.3	+0.8
N17K				IAmb	IAmb	05 52 37.1	
	comp=Z,4.4nm,0.8s						
M17K	Holitna River	80.29	26		P	05 52 33.9	+0.1
M17K				IAmb	IAmb	05 52 38.9	
	comp=Z,7.3nm,0.8s						
K17K	Iditarod	80.47	25	P	P	05 52 35.7	+0.9
K17K				IAmb	IAmb	05 52 40.7	
	comp=Z,7.5nm,0.9s						
L18K	Granite Mounta	80.95	25	IAmb	IAmb	05 52 38.7	
	comp=Z,5.8nm,1.1s						
J19K	Poorman	82.10	24	IAmb	IAmb	05 52 45.0	
	comp=Z,8.3nm,1.5s						
G19K	Purcell Mounta	82.41	22	P	P	05 52 45.3	+0.3
G19K				IAmb	IAmb	05 52 48.6	
	comp=Z,4.7nm,0.7s						
E19K	Redstone River	82.91	20	IAmb	IAmb	05 52 53.4	
	comp=Z,4.1nm,0.8s						
D20K	Etivluk River	83.65	19	IAmb	IAmb	05 52 55.9	
	comp=Z,3.7nm,0.9s						
PMR	Palmer	84.08	27	IAmb	IAmb	05 52 53.9	
	comp=Z,4.9nm,1.0s						
MLY	Manley	84.45	24	IAmb	IAmb	05 53 00.5	
	comp=Z,2.9nm,0.8s						
AB31	Akbulak array	84.69	320	P	P	05 52 57.2	+0.2
AB31				IAmb	IAmb	05 53 10.3	
	comp=Z,2.8nm,0.8s						
ABKAR	Akbulak array	84.69	320	P	P	05 52 57.1	0.0
SCM	Sheep Creek Mo	84.97	27	P	P	05 52 58.8	+0.5
I23K	Minto, Yukon-K	85.04	24	IAmb	IAmb	05 53 02.0	
	comp=Z,3.9nm,0.8s						
CCB	Clear Creek Bu	85.53	24	IAmb	IAmb	05 53 03.7	
	comp=Z,4.3nm,0.8s						
D23K	Nanushuk River	85.75	20		P	05 53 02.4	+0.4
HDA	Harding Lake	85.82	25	IAmb	IAmb	05 53 05.4	
	comp=Z,3.8nm,1.0s						
IL31		85.94	24	IAmb	IAmb	05 53 05.6	
	comp=Z,3.6nm,0.8s						
ILAR	Eielson Array	85.94	24	P	P	05 53 01.7	-1.3
ILAR	Eielson Array	85.94	24	P	P	05 53 01.1	-1.9
	comp=Z,3.0nm,0.7s,baz=260,slow=4.7,SNR=23						
	comp=Z,3.0nm,0.7s						
TOLK	Toolik Lake Re	86.03	20	P	P	05 53 04.3	+1.0
TOLK				IAmb	IAmb	05 53 05.1	
	comp=Z,5.7nm,1.0s						
C23K	Itkillik River	86.06	19		P	05 53 03.7	+0.3
GLB	Gilahina Butte	86.51	28	IAmb	IAmb	05 53 09.8	
	comp=Z,4.0nm,0.7s						
RIDG	Independent Ri	86.55	26		P	05 53 05.4	-0.6
RIDG				IAmb	IAmb	05 53 13.8	
	comp=Z,3.6nm,0.9s						
QSPA	South Pole Qui	87.17	180	P	P	05 53 09.8	+0.7
	comp=Z,2.2nm,0.8s,baz=12,slow=1.5,SNR=13						
	comp=Z,2.2nm,0.8s						
J26L	Joseph Creek	87.27	25	IAmb	IAmb	05 53 11.3	
	comp=Z,3.8nm,1.1s						
E25K	Arctic Village	87.31	21	IAmb	IAmb	05 53 21.6	
	comp=Z,5.6nm,1.4s						
BMAR	Burnt Mountain	87.51	22		P	05 53 11.7	+1.1
G26K	Porcupine Rive	87.70	23		P	05 53 12.5	+1.0
F26K	Sheenjek River	87.73	22	P	P	05 53 12.9	+1.2
F26K				IAmb	IAmb	05 53 14.0	
	comp=Z,4.8nm,1.2s						
L27K	Beaver Creek,	87.74	27		P	05 53 12.1	+0.2
L27K				IAmb	IAmb	05 53 13.3	
	comp=Z,5.0nm,1.4s						
K27K	Chicken	87.81	26	IAmb	IAmb	05 53 14.1	
	comp=Z,5.3nm,1.2s						
DAWY	Dawson	88.98	26	P	P	05 53 17.6	-0.1
DAWY				IAmb	IAmb	05 53 19.2	
	comp=Z,4.5nm,0.9s						
L29M	L29M	89.41	27	IAmb	IAmb	05 53 23.6	
	comp=Z,6.7nm,1.4s						
K29M	Barlow Dome	89.77	26	P	P	05 53 22.2	+0.7
K29M				IAmb	IAmb	05 53 25.4	
	comp=Z,2.5nm,0.8s						
CPUP	Villa Florida	147.22	153	PKPbc	PKPab	06 00 08.0	-0.9
	comp=Z,1.1nm,0.9s,baz=118,slow=2.1,SNR=6.0						

GCG ***24*** *05:50:31.2±1.1, 14°.92N×93°.70W, h35km±61km, MD4.3, ML3.4*

MEX ***24*** *05:50:32.2±0.7, 14°.94N×93°.75W, h25km±36km, MD4.1*

ISC 24 05:50:29.0±1.8**, 14°.91N**±0°.07×**93°.78W**±0°.03**, h29km**±15km**, n30, σ2s.24**/50**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		0.96	35	*e*P	Pb	05 50 46.8	-0.2
PCIG				*i* S	Sb	05 50 58.1	-1.2
THIG		1.47	90	*e*P	Pn	05 50 54.1	+0.6
THIG				*i* S	Sn	05 51 10.7	-1.1
THIG		1.47	90	*i* P	Pn	05 50 54.1	+0.6
THIG				IAML		05 51 13.1	
	comp=N,344nm,0.2s						
PATR	El Naranjo	1.51	82	*e*P	Pn	05 50 54.4	0.0
PATR				*e*S	Sn	05 51 11.8	-1.4
PAVE	Pavencul	1.58	80	*e*P	Pn	05 50 55.8	+0.5
PAVE				*e*S	Sn	05 51 14.1	-0.7
SMCA	Catarina	1.65	92	*i* P	Pn	05 50 56.7	+0.5
SMCA				*e*S	Sn	05 51 16.0	-0.4
SMCA				IAML		05 51 18.9	
	comp=E,514nm,0.2s						
TGIG		1.96	19	*e*P	Pn	05 51 01.3	+0.9
TGIG				*e*S	Sn	05 51 23.3	-0.8
TGIG		1.96	19	*i* P	Pn	05 51 01.3	+0.9
TGIG				IAML		05 51 34.3	
	comp=N,130nm,0.3s						
RTAL	Retalhuleu	2.06	101	*e*P	Pn	05 51 02.9	+1.2
RTAL				*e*S	Sn	05 51 26.2	-0.3
CCIG	Comitan	2.09	49	*e*P	Pn	05 51 03.7	+1.4
CCIG				*i* S	Sn	05 51 26.9	-0.5
CCIG	Comitan	2.09	49	*i* P	Pn	05 51 04.0	+1.8
CCIG				*i* S	Sn	05 51 29.5	+2.1
CCIG				IAML		05 51 34.9	
	comp=N,259nm,0.4s						
HUEH	Huehuetenango	2.24	79	*i* P	Pn	05 51 06.6	+2.3
HUEH				*e*S	Sn	05 51 31.8	+0.5
HUIG	Huatulco	2.40	291	*e*P	Pn	05 51 07.2	+0.9
HUIG				*e*S	Sn	05 51 32.1	-2.7
STG0	El Palmar, Qui	2.41	101	*e*P	Pn	05 51 03.9	-2.8
STG0				IAML		05 51 30.8	
	comp=E,1μm,0.2s						
PEIG	Puerto Escondi	3.42	289	*e*P	Pn	05 51 21.8	+1.4
PEIG				*e*S	Sn	05 51 55.2	-4.8
VHO	Vista Hermosa	3.56	308	*e*P	Pn	05 51 25.5	+3.0
VHO				*e*S	Sn	05 52 04.3	+0.6
YOIG	Yosondua	4.10	299	*e*P	Pn	05 51 33.1	+3.1
YOIG				*e*S	Sn	05 52 14.9	-2.4
PETF	Flores	4.26	62	*e*P	Pn	05 51 30.6	-1.4
PETF				*e*S	Sn	05 52 17.7	-3.1
PETF	Flores	4.26	62	*i* P	Pn	05 51 33.4	+1.4
PNIG	Pinotepa	4.43	290	*e*P	Pn	05 51 36.4	+2.0
PNIG				*e*S	Sn	05 52 21.2	-3.9
TOIG	Toxpalan	4.46	316	*e*P	Pn	05 51 38.0	+3.1
TOIG				*e*S	Sn	05 52 27.1	+1.1
TXIG	Tlaxiaco	4.48	302	*e*P	Pn	05 51 38.0	+2.7
TXIG				*e*S	Sn	05 52 22.5	-4.1
HLIG	Huajuapan de L	4.83	307	*e*P	Pn	05 51 40.3	+0.4
HLIG				*e*S	Sn	05 52 33.8	-1.2
FTIG	Fresnillo de T	5.13	306	*e*P	Pn	05 51 48.0	+3.9
FTIG				*e*S	Sn	05 52 40.5	-1.8
MGIG	Malinaltepec	5.20	297	*e*P	Pn	05 51 48.1	+3.0
MGIG				*e*S	Sn	05 52 40.9	-3.3
JAUV	Jalcomulco	5.29	327	*e*P	Pn	05 51 46.1	0.0
JAUV				*e*S	Sn	05 52 43.0	-3.1
CRIG	Cruz Grande	5.46	290	*e*P	Pn	05 51 49.8	+1.4
CRIG				*e*S	Sn	05 52 42.6	-7.7
MEIG	Mezcala	6.35	299	*e*P	Pn	05 52 05.4	+4.6
YAIG	Yautepec	6.40	309	*e*P	Pn	05 52 04.9	+3.3
ARIG	Puente Sto Nin	7.13	299	*e*P	Pn	05 52 15.8	+4.4

SOME ***24*** *05:51:58.4, 42°.52N×68°.58E*

NNC ***24*** *05:52:00.1±3.4, 42°.48N×68°.65E, h0km, mb3.7, mpv3.6, Error ellipse: s-maj=20.1km s-min=13.7km az=77.0, Suspected Mining explosion.*

IDC ***24*** *05:52:01.7±2.5, 42°.57N×68°.75E, h0km, mb3.7/3, mbtmp3.5/5, ML2.6/2, Error ellipse: s-maj=44.1km s-min=21.9km az=167.0*

ISC 24 05:52:02.0±1.1**, 42°.72N**±0°.08×**68°.85E**±0°.07**, h0km, n14, σ1s.86**/13**, mb3.6**/3**, 4C, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRLS	Borolday	0.79	66	P	Pg	05 52 14.0	-3.1
	3.9nm,0.1s						
BRLS				S	Sg	05 52 26.6	-0.7
	74nm,0.3s						
IUG	Iuzhnay	1.04	123	P	Pg	05 52 20.1	-1.8
	124nm,0.2s						
IUG				S	Sb	05 52 37.6	+0.4
	173nm,0.5s						
KK31	Karatay Array	1.28	72	⇑P	Pn	05 52 28.2	+1.1
	9.9nm,0.2s,baz=244,slow=18,SNR=198						
KK31				⇑S	Sn	05 52 48.6	+3.6
	39nm,0.6s,baz=243,slow=25,SNR=7.6						
MRKS	Merke	3.22	88	Pg	Pg	05 53 02.5	-1.3
	6.5nm,0.3s						
MRKS				Lg	Lg	05 53 49.8	
	9.0nm,0.4s						
TKM2	Tokmak 2	4.96	85	⇑Pg	Pg	05 53 35.1	-2.0
	3.4nm,0.6s						
TKM2				⇑Lg	Lg	05 54 41.2	
	2.8nm,0.2s						
BVAR	Borovoye Array	10.37	5	Pn	Pn	05 54 32.8	+0.9
	baz=185,slow=14,SNR=2.8						
	0.7nm,0.6s						
MKAR	Makanchi Array	10.39	62	Pn	Pn	05 54 32.1	-0.1
	0.1nm,0.3s,baz=248,slow=13,SNR=2.4						
	0.2nm,0.5s						
I31KZ	AKTYUBINSK INF	10.70	320	I	I	06 50 40.0	
	0.3nm,0.6s,baz=136,slow=315,SNR=27						
I43RU	DUBNA INFRASON	24.52	316	I	I	08 11 45.0	
	baz=115,slow=317,SNR=9.0						
BRTR	Keskin Array B	26.54	276	P	P	05 57 41.2	-0.3
	0.6nm,0.7s,baz=79,slow=7.5,SNR=2.8						
	0.6nm,0.7s						
FINES	FINESS Array B	31.50	321	P	P	05 58 24.8	-0.4
	1.3nm,0.9s,baz=110,slow=11,SNR=3.5						
	1.3nm,0.9s						
I37NO	I37NO	36.86	333	I	I	09 35 00.0	
	baz=113,slow=321,SNR=1.3						
HFS	Hagfors	37.26	317	P	P	05 59 15.1	0.0
	0.5nm,0.4s,baz=80,slow=10,SNR=1.5						
	0.5nm,0.4s						
I26DE	FREYUNG INFRAS	38.21	299	I	I	09 41 11.8	
	baz=77,slow=312,SNR=1.3						

IDC ***24*** *05:53:06.6±0.8, 2°.60S×138°.45E, h0km, mb3.9/7, mbtmp4.0/10, ML3.8/3, Error ellipse: s-maj=19.6km s-min=16.3km az=172.0*

DJA ***24*** *05:53:11.5±0.7, 3°S±4°×13°9E±°, h14km±7km, M4.3/7, mB5.5/1, mb4.4/1, MLv4.3/7, Mw(mB)5.0/1*

ISC 24 05:53:10.7±0.6**, 2°.66S**±0°.06×**138°.54E**±0°.05**, h32km, n19, σ2s.68**/22**, mb3.9**/7**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	Sarmi	0.69	14	P	Pn	05 53 23.1	-1.2
SMPI				S	Sb	05 53 33.0	-0.7
GENI	Genyem	1.63	88	P	Pn	05 53 39.0	+1.8
JAY	Jayapura	2.17	86	Pn	Pn	05 53 45.9	+1.2
	73nm,0.3s,baz=244,slow=8.4,SNR=83						
JAY				Lg	Lg	05 54 18.7	
	37nm,0.3s,baz=310,slow=23,SNR=6.6						
	158nm,0.3s						
JAY	Jayapura	2.17	86	P	Pn	05 53 45.9	+1.2
SRPI	Serui, Papua	2.43	289	P	Pn	05 53 48.4	+0.2
BAKI	Biak	2.84	301	P	Pb	05 53 58.0	-2.7
RKPI	Ransiki, Papua	4.50	285	P	Pn	05 54 19.1	+2.3
FAKI	Fak Fak	6.29	268	P	Pn	05 54 45.3	+4.0
WRA	Warramunga Arr	17.66	193	P	Pn	05 57 14.9	+0.5
	0.5nm,0.3s,baz=18,slow=12,SNR=18						
WRA				S	Sn	06 00 21.7	-8.6

	2.7nm,0.8s,baz=21,slow=23,SNR=4.6						
	2.9nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.88**	**219**	P	**P**	**05 57 39.4**	**-0.2**
	0.1nm,0.3s,baz=93,slow=17,SNR=2.0						
	2.4nm,0.8s						
ASAR	**Alice Springs**	**21.36**	**192**	P	**P**	**05 57 56.1**	**+0.7**
	3.1nm,0.6s,baz=22,slow=10,SNR=22						
ASAR				S	**S**	**06 01 47.1**	**-4.0**
	1.7nm,0.8s,baz=9.8,slow=26,SNR=5.7						
	3.1nm,0.6s						
SONM	**Songino Array**	**57.60**	**335**	P	**P**	**06 02 58.8**	**+1.1**
	0.4nm,0.6s,baz=159,slow=4.5,SNR=2.2						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**73.59**	**325**	P	**P**	**06 04 41.6**	**+0.9**
	0.2nm,0.3s,baz=113,slow=6.2,SNR=2.9						
	0.2nm,0.3s						
VNDA	**Vanda**	**75.84**	**175**	P	**P**	**06 04 55.4**	**+2.1**
	0.8nm,0.7s,baz=341,slow=4.8,SNR=3.8						
	0.8nm,0.7s						
BVAR	**Borovoye Array**	**79.18**	**325**	P	**P**	**06 05 13.3**	**+0.8**
	1.3nm,0.7s,baz=116,slow=6.8,SNR=7.1						
	1.3nm,0.7s						
ILAR	**Eielson Array**	**85.86**	**24**	P	**P**	**06 05 46.0**	**-1.0**
	1.3nm,0.7s,baz=263,slow=4.5,SNR=18						
	1.3nm,0.7s						
QSPA	**South Pole Qui**	**87.28**	**180**	P	**P**	**06 05 54.5**	**+0.4**
	1.4nm,0.8s,baz=49,slow=1.0,SNR=7.4						
	1.4nm,0.8s						
CPUP	**Villa Florida**	**147.35**	**153**	PKPbc	**PKPbc**	**06 12 53.0**	**+1.1**
	0.5nm,0.8s,baz=115,slow=8.1,SNR=3.4						
LPAZ	**La Paz**	**147.61**	**126**	PKPbc	**PKPbc**	**06 12 54.6**	**+0.9**
	1.6nm,0.9s,baz=10,slow=3.5,SNR=6.2						

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*ISK **24** 05:56:52.9, 37°.64N×27°.04E, h3^{km}, ML2.9/32*

*THE **24** 05:56:53.9, 38°N±1°×2°7E±°, h3^{km}±1^{km}, M2.9/14, MLh2.9/14*

*AFAD **24** 05:56:53.5, 37°.62N×27°.04E, h7^{km}±2^{km}, ML2.8*

*ATH **24** 05:56:53.4, 37°.64N×27°.08E, h7^{km}±1^{km}, ML3.0/6, Manual Solution by K.Orfanogiannaki First location: 2019/06/24 05:58:10, This location: 2020/10/04 19:11:11 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*

ISC 24 05:56:53.9±0.8**, 37°.63N**±0°.01×**27°.04E**±0°.02**, h11**^{km}±6^{km}**, n75, σ0^{s}.58**/108**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.17**	**66**	Pg	**Pg**	**05 56 57.4**	**-0.1**
GCAM				Sg	**Sg**	**05 57 00.1**	**0.0**
GCAM	**G?zelcaml?**	**0.17**	**66**	P	**Pg**	**05 56 57.6**	**+0.1**
GCAM				S	**Sg**	**05 57 00.2**	**+0.1**
SMG	**Samos**	**0.18**	**295**	P	**Pg**	**05 56 57.7**	**-0.1**
SMG				S	**Sg**	**05 57 00.1**	**-0.4**
SMG	**Samos**	**0.18**	**295**	P	**Pg**	**05 56 57.6**	**-0.1**
SMG				S	**Sg**	**05 56 60.0**	**-0.4**
DDIM	**Aydin, Didim**	**0.24**	**138**	P	**Pg**	**05 56 58.9**	**+0.2**
DDIM				S	**Sg**	**05 57 02.2**	**+0.2**
DDIM				*i* IAML		05 57 03.0	
	comp=E,2μm,0.3s						
DDIM				*i* IAML		05 57 04.0	
	comp=N,1μm,0.3s						
DIDI	**Didim-Aydin**	**0.30**	**148**	Pg	**Pg**	**05 56 59.9**	**0.0**
DIDI				Sg	**Sg**	**05 57 04.9**	**+0.9**
DGB	**zmir**	**0.44**	**343**	P	**Pg**	**05 57 02.4**	**-0.1**
DGB				S	**Sg**	**05 57 08.0**	**-0.2**
DGB				*i* IAML		05 57 09.0	
	comp=E,600nm,0.3s						
DGB				*i* IAML		05 57 11.0	
	comp=N,556nm,0.3s						
GMLD	**Gumuldur**	**0.45**	**347**	Pg	**Pg**	**05 57 02.8**	**0.0**
YKAV	**Yalikavak-Bodr**	**0.54**	**159**	Pg	**Pg**	**05 57 04.3**	**-0.1**
YKAV				Sg	**Sb**	**05 57 12.8**	**-0.4**
BODT	**Bodrum**	**0.61**	**159**	Pg	**Pg**	**05 57 05.3**	**-0.4**
BODT				Sg	**Sb**	**05 57 14.9**	**-0.3**
BODT	**Bodrum**	**0.61**	**159**	P	**Pg**	**05 57 05.4**	**-0.4**
BODT				S	**Sg**	**05 57 13.8**	**+0.1**
BDRM	**Kayabasi**	**0.65**	**150**	P	**Pg**	**05 57 06.0**	**-0.5**
BDRM				S	**Sg**	**05 57 15.5**	**+0.4**
BDRM				*i* IAML		05 57 19.0	
	comp=E,525nm,0.5s						
MLSB	**Milas**	**0.68**	**120**	Pg	**Pg**	**05 57 06.3**	**-0.7**
KLNA	**Kalymnos**	**0.68**	**185**	P	**Pg**	**05 57 06.2**	**-0.7**
KLNA				S	**Sg**	**05 57 15.6**	**-0.2**
ZEYE	**Izmir, Urla-Ze**	**0.74**	**325**	P	**Pg**	**05 57 08.0**	**-0.2**
ZEYE				S	**Sb**	**05 57 19.0**	**+0.1**
ZEYE				*i* IAML		05 57 21.0	
	comp=E,830nm,0.5s						
AYDB	**Zeytinkoy-Aydi**	**0.74**	**65**	Pg	**Pg**	**05 57 08.0**	**-0.3**
BLCB	**Balcova**	**0.75**	**0**	Pg	**Pg**	**05 57 08.1**	**-0.3**
BLCB	**Balcova**	**0.75**	**0**	P	**Pg**	**05 57 08.0**	**-0.4**
BLCB				S	**Sg**	**05 57 17.6**	**-0.6**
URLA	**Izmir**	**0.81**	**334**	Pg	**Pg**	**05 57 09.0**	**-0.4**
URLA				Sg	**Sb**	**05 57 21.3**	**+0.4**
URLA	**Izmir**	**0.81**	**334**	P	**Pg**	**05 57 09.1**	**-0.4**
URLA				S	**Sb**	**05 57 21.5**	**+0.5**
IZMR	**zmir-demi**	**0.88**	**55**	P	**Pg**	**05 57 10.2**	**-0.6**
IZMR				S	**Sg**	**05 57 21.3**	**-1.0**
IZMR				*i* IAML		05 57 27.0	
	comp=E,243nm,0.5s						
CESE	**eme**	**0.91**	**320**	Pg	**Pb**	**05 57 11.6**	**-0.1**
DAT	**Datca**	**1.00**	**154**	Pg	**Pb**	**05 57 13.0**	**-0.3**
DAT	**Datca**	**1.00**	**154**	P	**Pb**	**05 57 13.5**	**+0.2**
YAZI	**Mula-Dat§a-**	**1.01**	**161**	P	**Pg**	**05 57 12.7**	**-0.5**
ODEM	**Odemis-Izmir**	**1.04**	**52**	Pg	**Pg**	**05 57 13.4**	**-0.5**
NAZL	**Nazilli-Aydin**	**1.04**	**71**	Pg	**Pg**	**05 57 13.7**	**-0.3**
CHOS	**Chios island**	**1.08**	**314**	Pn	**Pb**	**05 57 14.5**	**-0.2**
CHOS	**Chios island**	**1.08**	**314**	P	**Pg**	**05 57 14.3**	**-0.4**
CHOS				S	**Sb**	**05 57 29.6**	**+0.7**
CHOS	**Chios island**	**1.08**	**314**	P	**Pg**	**05 57 14.0**	**-0.7**
CHOS				S	**Sb**	**05 57 28.8**	**-0.1**
MULA	**Mugla, Merkez-**	**1.09**	**110**	P	**Pg**	**05 57 14.5**	**-0.3**
MULA				S	**Sn**	**05 57 30.2**	**-0.1**
MULA				*i* IAML		05 57 31.0	
	comp=N,132nm,0.6s						
MULA				*i* IAML		05 57 35.0	
	comp=E,148nm,0.3s						
FOCM	**Foa**	**1.10**	**347**	Pn	**Pb**	**05 57 14.9**	**-0.1**
KARB	**zmir-Karabur**	**1.14**	**334**	P	**Pg**	**05 57 14.8**	**-1.0**
KARB				S	**Sn**	**05 57 32.5**	**+0.9**
KARB				*i* IAML		05 57 33.0	
	comp=N,296nm,0.6s						
KARB				*i* IAML		05 57 34.0	
	comp=E,367nm,0.5s						
EAG2	**Marmaro, Chios**	**1.17**	**321**	P	**Pn**	**05 57 16.1**	**-0.1**
EAG2				S	**Sn**	**05 57 31.9**	**-0.2**
KIRA	**zmir-Kiraz**	**1.21**	**62**	P	**Pg**	**05 57 16.4**	**-0.8**
KIRA				S	**Sn**	**05 57 33.2**	**-0.2**
KIRA				*i* IAML		05 57 36.0	
	comp=N,213nm,0.6s						
KIRA				*i* IAML		05 57 37.0	
	comp=E,131nm,0.6s						
AMGA	**Amorgos Island**	**1.22**	**229**	P	**Pg**	**05 57 16.3**	**-0.9**
AMGA				S	**Sb**	**05 57 33.1**	**+0.5**
GOMA	**Golmarmara-Man**	**1.28**	**33**	Pn	**Pg**	**05 57 18.3**	**-0.1**
TURN	**Turunc**	**1.29**	**131**	Pn	**Pg**	**05 57 18.5**	**-0.1**
APE	**Apeiranthos**	**1.33**	**245**	Pn	**Pg**	**05 57 19.2**	**-0.2**
APE	**Apeiranthos**	**1.33**	**245**	P	**Pg**	**05 57 19.2**	**-0.2**
APE				S	**Sn**	**05 57 36.9**	**+0.7**
APE	**Apeiranthos**	**1.33**	**245**	P	**Pb**	**05 57 18.7**	**-0.1**
APE				S	**Sn**	**05 57 37.2**	**+1.0**
DKL	**Dikili**	**1.44**	**356**	Pn	**Pn**	**05 57 19.8**	**-0.1**
DKL	**Dikili**	**1.44**	**356**	P	**Pn**	**05 57 19.1**	**-0.8**
DKL				S	**Sb**	**05 57 39.1**	**0.0**
DALY	**Dalyan (Mula)**	**1.52**	**122**	Pn	**Pb**	**05 57 22.1**	**0.0**
KULA	**Kula-Manisa**	**1.55**	**55**	Pn	**Pb**	**05 57 22.5**	**-0.2**
GORD	**Gordes-Manisa**	**1.56**	**35**	Pn	**Pb**	**05 57 22.6**	**-0.2**
SOMA	**Soma-Manisa**	**1.57**	**14**	Pn	**Pb**	**05 57 22.7**	**-0.3**
ARG	**Arkhangelos**	**1.66**	**148**	Pn	**Pb**	**05 57 24.0**	**-0.5**
ARG	**Arkhangelos**	**1.66**	**148**	P	**Pb**	**05 57 23.8**	**-0.7**
ARG				S	**Sn**	**05 57 44.9**	**+0.6**
ARG	**Arkhangelos**	**1.66**	**148**	P	**Pn**	**05 57 22.7**	**-0.3**
PRK	**Paraskevi**	**1.72**	**340**	P	**Pn**	**05 57 24.2**	**+0.5**
PRK				S	**Sb**	**05 57 47.4**	**+0.3**
PRK	**Paraskevi**	**1.72**	**340**	P	**Pn**	**05 57 23.7**	**0.0**
PRK				S	**Sn**	**05 57 46.5**	**+0.7**
CMBO	**Columbo, Santo**	**1.75**	**229**	S	**Sb**	**05 57 48.9**	**+1.0**
THERA	**Ancient Thera,**	**1.78**	**225**	P	**Pn**	**05 57 24.6**	**0.0**
THERA				S	**Sb**	**05 57 49.0**	**+0.1**
THR3	**Thira Island,**	**1.79**	**228**	P	**Pb**	**05 57 25.9**	**-0.9**
APMY	**Acipayam-Deniz**	**1.80**	**94**	Pn	**Pb**	**05 57 26.1**	**-0.9**
SIGR	**SIGRI**	**1.83**	**330**	Pn	**Pb**	**05 57 26.3**	**-1.1**
SIGR	**SIGRI**	**1.83**	**330**	P	**Pn**	**05 57 26.1**	**+0.8**
SIGR				S	**Sb**	**05 57 50.8**	**+0.5**
THR6	**Thira Island,**	**1.83**	**226**	P	**Pn**	**05 57 25.9**	**+0.6**
THR9	**Santorini-Faro**	**1.85**	**227**	P	**Pn**	**05 57 26.7**	**+1.1**
FETY	**Fethiye**	**1.91**	**121**	Pn	**Pb**	**05 57 27.7**	**-1.1**
FETY	**Fethiye**	**1.91**	**121**	P	**Pn**	**05 57 26.9**	**+0.4**
FETY				S	**Sb**	**05 57 52.0**	**-0.7**
CAME	**Cameli-Denizli**	**1.93**	**110**	Pn	**Pn**	**05 57 27.8**	**+1.0**
KARP	**Karpathos**	**2.08**	**177**	Pn	**Pn**	**05 57 30.0**	**+1.2**
KARP	**Karpathos**	**2.08**	**177**	P	**Pn**	**05 57 28.4**	**-0.4**
KARP	**Karpathos**	**2.08**	**177**	P	**Pn**	**05 57 28.4**	**-0.4**
KARY	**Karystos**	**2.10**	**282**	P	**Pn**	**05 57 28.6**	**-0.4**
KARY	**Karystos**	**2.10**	**282**	P	**Pn**	**05 57 28.4**	**-0.6**
SIMA	**Simav-Kutahya**	**2.10**	**46**	Pn	**Pn**	**05 57 30.2**	**+1.0**
EZN	**Ezine**	**2.26**	**346**	Pn	**Pn**	**05 57 32.5**	**+1.3**
EZN	**Ezine**	**2.26**	**346**	P	**Pn**	**05 57 31.9**	**+0.7**
YENI	**Yenice-Canakka**	**2.31**	**4**	Pn	**Pn**	**05 57 33.1**	**+1.2**
GEDZ	**Gediz**	**2.34**	**52**	Pn	**Pn**	**05 57 33.6**	**+1.2**
ZKR	**Zakros**	**2.60**	**195**	P	**Pn**	**05 57 36.6**	**+0.7**
LIA	**Limnos Island**	**2.69**	**328**	P	**Pn**	**05 57 37.6**	**+0.5**

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*ASRS **24** 05:59:49.0±0.8, 53°.95N×86°.60E, h0^{km}, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 24 05:59:35.0±3.0**, 54°.21N×86°.36E, h0**^{km}**, mbtmp2.8**/2**, ML2.3**/2**, Error ellipse: s-maj=22.8km s-min=13.7km az=57.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.94**	**255**	I	I	06 05 35.4	
	baz=74,slow=334,SNR=3.2						
ZALV	**Zalesovo Beam**	**0.94**	**254**	Pg	Pg	05 59 51.5	-1.5
	0.5nm,0.3s,baz=75,slow=18,SNR=6.9						
ZALV				Lg	Lg	06 00 06.9	
	1.5nm,0.3s,baz=73,slow=28,SNR=14						
KURBB	**Kurchatov Arra**	**5.99**	**236**	Pn	Pn	06 01 05.8	+1.0
	baz=54,slow=13,SNR=1.0						
	0.5nm,0.2s						
MKAR	**Makanchi Array**	**7.86**	**201**	Pn	Pn	06 01 31.8	+1.2
	0.1nm,0.3s,baz=25,slow=14,SNR=2.1						
	0.1nm,0.4s						

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*IDC **24** 06:05:29.7±0.7, 2°.64S×138°.52E, h0^{km}, mb4.0/10, mbtmp4.0/13, ML4.0/3, Error ellipse: s-maj=17.1km s-min=15.1km az=19.0*

*NEIC **24** 06:05:30.7±1.9, 2°.6S±0°.1×138°.36E±0°.04, h10^{km}±1^{km}, mb4.5/16, Error ellipse: s-maj=17.6km s-min=7.3km az=173.0*

*DJA **24** 06:05:34.6±0.4, 2°S±3°×13°9E±°, h10^{km}, M4.2/7, MLv4.2/7*

ISC 24 06:05:33.4±0.5**, 2°.66S**±0°.05×**138°.44E**±0°.06**, h32**^{km}**, n41, σ1^{s}.74**/44**, mb4.1**/16**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.72**	**22**	P	**Pn**	**06 05 46.1**	**-1.2**
SMPI				S	**Sb**	**06 05 51.3**	**-5.8**
GENI	**Genyem**	**1.73**	**88**	P	**Pn**	**06 06 02.0**	**+0.8**
JAY	**Jayapura**	**2.27**	**86**	Pn	**Pn**	**06 06 08.8**	**+0.1**
	35nm,0.3s,baz=236,slow=10.0,SNR=82						
JAY				Lg	Lg	06 06 39.2	
	16nm,0.3s,baz=290,slow=23,SNR=3.9						
	98nm,0.4s						
JAY	**Jayapura**	**2.27**	**86**	P	**Pn**	**06 06 08.8**	**+0.1**
SRPI	**Serui, Papua**	**2.33**	**290**	P	**Pb**	**06 06 15.4**	**+0.7**
BAKI	**Biak**	**2.75**	**302**	P	**Pb**	**06 06 20.7**	**-1.1**
FAKI	**Fak Fak**	**6.18**	**267**	Pn	**Pn**	**06 07 00.8**	**-1.7**
SAUI	**Saumlaki**	**8.85**	**233**	Pn	**Pn**	**06 07 38.1**	**-1.1**
PMG	**Port Moresby**	**10.96**	**128**	Pn	**Pn**	**06 08 07.0**	**-1.0**
COEN	**Coen**	**12.16**	**158**	Pn	**Pn**	**06 08 25.4**	**+0.9**
KNRA	**Kununurra**	**16.07**	**216**	Pn	**Pn**	**06 09 17.2**	**+0.1**
KNRA				IAmb	IAmb	06 09 34.9	
	comp=Z,47nm,1.5s						
WB0	**Warramunga Arr**	**17.45**	**193**	Pn	**Pn**	**06 09 33.9**	**-0.7**
WR8	**Warramunga Arr**	**17.61**	**192**		**Pn**	**06 09 36.0**	**-0.6**
WRAB	**Tennant Creek**	**17.62**	**193**		**Pn**	**06 09 36.0**	**-0.7**
WRAB				IAmb	IAmb	06 09 57.9	
	comp=Z,17nm,0.9s						
WRA	**Warramunga Arr**	**17.64**	**193**		**Pn**	**06 09 36.3**	**-0.5**
WRA	**Warramunga Arr**	**17.64**	**193**	P	**Pn**	**06 09 36.3**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=17,slow=13,SNR=12						
WRA				S	**Sn**	**06 12 46.7**	**-5.8**
	comp=Z,6.6nm,1.1s,baz=13,slow=20,SNR=5.1						
	comp=Z,3.5nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.82**	**218**	P	**P**	**06 10 01.0**	**-0.5**
FITZ	**Fitzroy Crossi**	**19.82**	**218**	P	**Pn**	**06 10 03.9**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=27,slow=12,SNR=4.1						
	comp=Z,5.2nm,1.0s						
AS31	**Alice Springs**	**21.34**	**191**		**P**	**06 10 18.5**	**+0.6**
AS31				IAmb	IAmb	06 10 27.2	
	comp=Z,9.9nm,0.9s						
ASAR	**Alice Springs**	**21.34**	**191**		**P**	**06 10 17.4**	**-0.6**
ASAR	**Alice Springs**	**21.34**	**191**	P	**P**	**06 10 19.1**	**+1.2**
	comp=Z,3.7nm,0.6s,baz=21,slow=9.6,SNR=26						
ASAR				S	**S**	**06 14 10.1**	**-3.3**
	comp=Z,2.6nm,0.9s,baz=15,slow=26,SNR=4.8						
	comp=Z,3.7nm,0.6s						
EIDS	**Eidsvold**	**25.65**	**153**	P	**P**	**06 11 00.8**	**+0.5**
EIDS				IAmb	IAmb	06 11 20.2	
	comp=Z,29nm,1.4s						
KSRS	**Korea Array**	**41.09**	**347**	P	**P**	**06 13 14.1**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=157,slow=7.7,SNR=5.2						
	comp=Z,0.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**44.17**	**300**	P	**P**	**06 13 41.4**	**+1.7**
	comp=Z,0.8nm,0.3s,baz=116,slow=8.0,SNR=4.8						
	comp=Z,0.8nm,0.3s						
SONM	**Songino Array**	**57.56**	**335**	P	**P**	**06 15 21.6**	**+1.5**
	comp=Z,0.5nm,0.5s,baz=178,slow=6.7,SNR=3.6						
	comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**69.58**	**322**	P	**P**	**06 16 41.7**	**+2.3**
	comp=Z,1.2nm,0.8s,baz=115,slow=8.1,SNR=8.7						
	comp=Z,1.2nm,0.8s						
KURBB	**Kurchatov Arra**	**73.53**	**325**	P	**P**	**06 17 04.8**	**+1.8**
	comp=Z,0.9nm,0.9s,baz=115,slow=5.2,SNR=3.9						
	comp=Z,0.9nm,0.9s						
VNDA	**Vanda**	**75.85**	**175**	P	**P**	**06 17 16.0**	**0.0**
	comp=Z,0.6nm,0.6s,baz=317,slow=4.0,SNR=2.1						
	comp=Z,0.6nm,0.6s						
L14K	**Kuka Creek**	**77.97**	**25**	P	**P**	**06 17 30.0**	**+1.9**
L14K				IAmb	IAmb	06 17 34.3	
	comp=Z,5.7nm,0.8s						
M14K	**Bethel**	**77.99**	**26**	P	**P**	**06 17 30.1**	**+1.9**
K15K	**Wolf Creek Mou**	**78.91**	**24**	P	**P**	**06 17 34.1**	**+0.8**
K15K				IAmb	IAmb	06 17 43.8	
	comp=Z,13nm,1.5s						
BVAR	**Borovoye Array**	**79.11**	**325**	P	**P**	**06 17 36.5**	**+1.8**
	comp=Z,1.0nm,0.6s,baz=111,slow=8.1,SNR=6.7						
	comp=Z,1.0nm,0.6s						
J16K	**Anvik River**	**79.75**	**24**	P	**P**	**06 17 36.8**	**-1.1**
J16K				IAmb	IAmb	06 17 45.5	
	comp=Z,3.6nm,1.1s						
J17K	**VABM Dome**	**80.41**	**24**	P	**P**	**06 17 41.9**	**+0.4**
J17K				IAmb	IAmb	06 17 45.6	
	comp=Z,5.6nm,1.2s						
OHAK	**Old Harbor**	**80.65**	**31**	P	**P**	**06 17 42.2**	**-0.7**
SLKM	**Skilak Lake**	**83.22**	**28**	P	**P**	**06 17 56.9**	**+0.5**
ILAR	**Eielson Array**	**85.90**	**24**	P	**P**	**06 18 10.0**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=261,slow=4.4,SNR=18						
	comp=Z,1.2nm,0.7s						
QSPA	**South Pole Qui**	**87.28**	**180**	P	**P**	**06 18 18.5**	**+1.7**
QSPA	**South Pole Qui**	**87.28**	**180**	P	**P**	**06 18 18.0**	**+1.2**
	comp=Z,2.6nm,0.8s,baz=300,slow=1.4,SNR=11						
	comp=Z,2.6nm,0.8s						
CPUP	**Villa Florida**	**147.40**	**153**	PKPbc	**PKiKP**	**06 25 17.0**	**0.0**
	comp=Z,1.0nm,1.0s,baz=92,slow=7.5,SNR=4.6						
LPAZ	**La Paz**	**147.69**	**127**	PKPbc	**PKiKP**	**06 25 18.1**	**-0.6**
	comp=Z,3.6nm,1.1s,baz=306,slow=4.9,SNR=7.8						

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*IDC **24** 06:27:10.2±0.6, 2°.66S×138°.46E, h0^{km}, mb4.2/13, mbtmp4.2/15, ML4.1/2, Error ellipse: s-maj=16.8km s-min=14.5km az=51.0*

*NEIC **24** 06:27:10.8±1.5, 2°.71S±0°.04×138°.32E±0°.07, h10^{km}±1^{km}, mb4.6/88, Error ellipse: s-maj=12.0km s-min=6.2km az=257.0*

*DJA **24** 06:27:12.8±0.3, 3°S±2°×13°9E±°, h10^{km}, M4.5/7, MLv4.5/7*

ISC 24 06:27:10.7±0.4**, 2°.76S**±0°.05×**138°.38E**±0°.05**, h10**^{km}**, n295, σ1^{s}.34**/292**, mb4.6**/64**, 3C-2D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.83**	**23**	P	**Pg**	**06 27 24.6**	**-2.1**
SMPI				S	**Sg**	**06 27 33.6**	**-4.0**
GENI	**Genyem**	**1.79**	**85**	P	**Pn**	**06 27 42.0**	**+0.4**
JAY	**Jayapura**	**2.33**	**84**	Pn	**Pn**	**06 27 49.7**	**+0.5**
	19nm,0.3s,baz=221,slow=11,SNR=23						
JAY				Lg	Lg	06 28 20.9	
	33nm,0.3s,baz=85,slow=22,SNR=6.2						
	140nm,0.5s						
JAY	**Jayapura**	**2.33**	**84**	P	**Pn**	**06 27 48.8**	**-0.3**
JAY				S	**Sn**	**06 28 14.2**	**-3.7**
BAKI	**Biak**	**2.76**	**304**	P	**Pb**	**06 27 58.5**	**-1.6**
RKPI	**Ransiki, Papua**	**4.38**	**286**	P	Pb	06 28 21.7	-6.1
FAKI	**Fak Fak**	**6.13**	**268**	Pn	**Pn**	**06 28 40.2**	**-1.2**
SOEI	**Soe**	**15.65**	**243**	Pn	**Pn**	**06 30 51.1**	**-0.5**
SOEI				IAmb	IAmb	06 31 18.2	
	comp=Z,67nm,1.1s						
KNRA	**Kununurra**	**15.96**	**216**	Pn	**Pn**	**06 30 54.6**	**-0.8**
WB0	**Warramunga Arr**	**17.35**	**193**		**P**	**06 31 14.7**	**+0.2**
WR0	**Warramunga Arr**	**17.50**	**192**	P	**P**	**06 31 16.4**	**+0.2**
WR8	**Warramunga Arr**	**17.51**	**192**		**Pn**	**06 31 16.1**	**+1.1**
WRAB	**Tennant Creek**	**17.52**	**193**		**Pn**	**06 31 16.0**	**+0.8**
WRAB				IAmb	IAmb	06 31 26.7	
	comp=Z,43nm,1.2s						
WB2	**Warramunga Arr**	**17.53**	**193**		**P**	**06 31 17.5**	**+1.1**
WRA	**Warramunga Arr**	**17.53**	**193**	P	**Pn**	**06 31 14.6**	**-0.7**
WRA	**Warramunga Arr**	**17.53**	**193**	P	**P**	**06 31 17.4**	**+0.9**
	comp=Z,1.0nm,0.3s,baz=16,slow=12,SNR=18						
WRA				S	**Sn**	**06 34 25.2**	**-5.5**
	comp=Z,4.1nm,0.8s,baz=15,slow=22,SNR=5.9						
	comp=Z,3.4nm,0.6s						
TOLI2	**Tolitoli**	**18.01**	**282**	P	**Pn**	**06 31 19.8**	**-1.5**
FITZ	**Fitzroy Crossi**	**19.71**	**218**	P	**Pn**	**06 31 41.8**	**-0.1**
AS31	**Alice Springs**	**21.23**	**191**	P	**P**	**06 31 55.6**	**-1.3**
ASAR	**Alice Springs**	**21.23**	**191**		**P**	**06 31 56.8**	**-0.2**
ASAR	**Alice Springs**	**21.23**	**191**	P	**P**	**06 31 58.9**	**+1.9**
	comp=Z,4.5nm,0.7s,baz=23,slow=9.7,SNR=14						
ASAR				S	**S**	**06 35 51.9**	**-1.2**
	comp=Z,3.0nm,0.9s,baz=19,slow=24,SNR=6.2						
	comp=Z,4.5nm,0.7s						
EIDS	**Eidsvold**	**25.59**	**153**	P	**P**	**06 32 38.8**	**-1.4**
EIDS				IAmb	IAmb	06 32 51.8	
	comp=Z,6.8nm,0.7s						
JNU	**Nakatsue**	**36.39**	**349**	P	**P**	**06 34 15.1**	**-0.3**
	comp=Z,7.2nm,0.8s,baz=171,slow=5.5,SNR=3.7						
	comp=Z,7.2nm,0.8s						
NJ2	**Nanjing**	**39.27**	**333**	*e*P	**P**	**06 34 41.9**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,12nm,0.8s						
KSRS	**Korea Array**	**41.17**	**347**	P	**P**	**06 34 56.5**	**+1.1**
	comp=Z,2.6nm,0.9s,baz=164,slow=10,SNR=10						
	comp=Z,2.6nm,0.9s						
HNS	**HongShan**	**45.61**	**333**	⇓P	**P**	**06 35 32.6**	**+1.4**
HNS				pmax	pmax		
	comp=Z,8.0nm,0.6s						
XAN	**Xi'an**	**45.93**	**325**	⇑P	**P**	**06 35 35.3**	**+1.4**
XAN				pP	sP	06 35 40.3	+1.9
XAN				pmax	pmax		
	comp=Z,19nm,1.1s						
BNX	**BinXian**	**49.26**	**350**	⇑P	**P**	**06 36 00.9**	**+1.4**
BNX				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HHC	**Hu-ho-hao-te**	**49.83**	**333**	*e*P	**P**	**06 36 08.3**	**+4.2**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
LZH	**Lanzhou**	**50.33**	**323**	*e*P	**P**	**06 36 10.3**	**+2.3**
LZH				pP	sP	06 36 18.3	+5.8
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
KLR	**Kul'dur**	**52.10**	**354**	P	**P**	**06 36 20.9**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=206,slow=6.3,SNR=7.3						
	comp=Z,1.8nm,0.6s						
GTA	**Gaotai**	**54.92**	**324**	*e*P	**P**	**06 36 44.5**	**+2.5**
GTA				pP	sP	06 36 52.0	+5.5
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SONM	**Songino Array**	**57.63**	**335**	P	**P**	**06 37 02.2**	**+1.1**
	comp=Z,1.7nm,0.7s,baz=165,slow=6.2,SNR=5.5						
	comp=Z,1.7nm,0.7s						
PEA0B	**Petropavlovsk-**	**57.98**	**14**	P	**P**	**06 37 03.6**	**+0.3**
PEA0B				IAmb	IAmb	06 37 17.0	
	comp=Z,11nm,1.4s						
PETK	**Petropavlovsk-**	**57.98**	**14**	P	**P**	**06 37 04.1**	**+0.7**
PETK	**Petropavlovsk-**	**57.98**	**14**	P	**P**	**06 37 04.3**	**+0.9**
	comp=Z,1.2nm,0.6s,baz=156,slow=4.0,SNR=5.2						
	comp=Z,1.2nm,0.6s						
MKAR	**Makanchi Array**	**69.63**	**323**		**P**	**06 38 19.2**	**-1.1**
MKAR	**Makanchi Array**	**69.63**	**323**	P	**P**	**06 38 21.7**	**+1.4**
	comp=Z,5.0nm,1.0s,baz=100,slow=8.7,SNR=7.3						
	comp=Z,5.0nm,1.0s						
MAKZ	**Makanchi**	**69.83**	**322**		**P**	**06 38 20.0**	**-1.6**
TARG	**Taragay, Kyrgy**	**70.39**	**316**	P	**P**	**06 38 24.8**	**-0.9**
NIKH	**Nikolski High**	**70.89**	**31**	P	**P**	**06 38 25.7**	**-2.1**
ZAA0	**Zalesovo Array**	**71.82**	**330**	P	**P**	**06 38 32.2**	**-1.2**
ZAA0				IAmb	IAmb	06 38 35.2	
	comp=Z,7.2nm,1.4s						
ZALV	**Zalesovo Beam**	**71.82**	**330**	P	**P**	**06 38 32.0**	**-1.5**
ZALV	**Zalesovo Beam**	**71.82**	**330**	P	**P**	**06 38 33.5**	**0.0**
	comp=Z,1.1nm,0.6s,baz=96,slow=5.4,SNR=4.7						
	comp=Z,1.1nm,0.6s						
UNV	**Unalaska Valle**	**72.54**	**31**	P	**P**	**06 38 39.0**	**+1.2**
	baz=239						
KURBB	**Kurchatov Arra**	**73.58**	**325**	P	**P**	**06 38 45.0**	**+1.0**
	comp=Z,1.2nm,0.7s,baz=113,slow=5.9,SNR=8.7						
	comp=Z,1.2nm,0.7s						
TIXI	**Tiksi**	**74.53**	**357**		**P**	**06 38 49.3**	**+0.1**
TIXI				IAmb	IAmb	06 38 51.2	
	comp=Z,6.6nm,1.2s						
S12K	**Black Hills**	**75.70**	**30**		**P**	**06 38 56.4**	**+0.2**
VNDA	**Vanda**	**75.76**	**175**	P	**P**	**06 38 54.9**	**-1.4**
VNDA	**Vanda**	**75.76**	**175**	P	**P**	**06 38 57.5**	**+1.3**
	comp=Z,1.5nm,0.8s,baz=307,slow=5.0,SNR=5.4						
	comp=Z,1.5nm,0.8s						
SIMJ	**Simiganj**	**75.78**	**311**	P	**P**	**06 38 55.0**	**-2.3**
KKAR	**Karatay Array**	**75.94**	**316**	P	**P**	**06 38 55.8**	**-2.1**
GAMB	**Gambell**	**75.94**	**21**	P	**P**	**06 38 58.8**	**+1.4**
	baz=232						
SDPT	**Sand Point**	**76.34**	**31**	P	**P**	**06 38 58.2**	**-1.7**
SDPT	**Sand Point**	**76.34**	**31**	P	**P**	**06 39 00.2**	**+0.4**
	baz=244						
K13K	**Kusilvak Mount**	**77.56**	**24**	P	**P**	**06 39 06.1**	**-0.5**
K13K				IAmb	IAmb	06 39 08.9	
	comp=Z,5.9nm,0.9s						
K13K	**Kusilvak Mount**	**77.56**	**24**	P	**P**	**06 39 07.8**	**+1.2**
	baz=239						
N14K	**Kuskokwak Cree**	**77.83**	**26**	P	**P**	**06 39 09.8**	**+1.7**
	baz=242						
L14K	**Kuka Creek**	**78.08**	**25**	P	**P**	**06 39 08.8**	**-0.7**
L14K	**Kuka Creek**	**78.08**	**25**	P	**P**	**06 39 10.6**	**+1.1**
	baz=241,SNR=6.9						
M14K	**Bethel**	**78.10**	**26**		**P**	**06 39 08.6**	**-1.0**
M14K	**Bethel**	**78.10**	**26**	P	**P**	**06 39 11.0**	**+1.4**
	baz=242						
J14K	**Nanvaranak Lak**	**78.42**	**24**	P	**P**	**06 39 12.7**	**+1.4**
	baz=240						
M15K	**Kasigluk River**	**78.63**	**26**	P	**P**	**06 39 13.5**	**+1.0**
	baz=243						
N15K	**Kwethluk River**	**78.66**	**27**		**P**	**06 39 11.4**	**-1.3**
N15K	**Kwethluk River**	**78.66**	**27**	P	**P**	**06 39 14.5**	**+1.7**
	baz=243						
ANM	**Nome**	**78.67**	**21**	P	**P**	**06 39 14.8**	**+2.1**
	baz=238						
L15K	**Ungalak Mounta**	**78.74**	**25**	P	**P**	**06 39 14.9**	**+1.7**
	baz=242						
K15K	**Wolf Creek Mou**	**79.02**	**24**	P	**P**	**06 39 14.1**	**-0.6**
K15K				IAmb	IAmb	06 39 19.1	
	comp=Z,5.3nm,1.0s						
K15K	**Wolf Creek Mou**	**79.02**	**24**	P	**P**	**06 39 16.3**	**+1.6**
	baz=242						
BVA0	**Borovoye Array**	**79.17**	**325**	Pn	**P**	**06 39 16.5**	**+0.8**
	comp=Z,4.7nm,1.1s,baz=108,slow=6.8,SNR=10						
BVA0				Lg	Lg	06 40 12.9	
	comp=Z,7.7nm,1.1s,baz=180,slow=27,SNR=11						
BVAR	**Borovoye Array**	**79.17**	**325**	P	**P**	**06 39 16.8**	**+1.1**
	comp=Z,1.7nm,0.6s,baz=114,slow=8.1,SNR=10.0						
	comp=Z,1.7nm,0.6s						
BRVK	**Borovoye**	**79.24**	**325**	⇑Pn	**P**	**06 39 16.5**	**+0.4**
	comp=Z,4.0nm,1.2s						
BRVK				⇓Lg	Lg	06 40 13.5	
	comp=Z,4.0nm,1.0s						
O16K	**Kokwok River B**	**79.32**	**28**	P	**P**	**06 39 18.3**	**+1.9**
	baz=245						
G15K	**Niukluk**	**79.38**	**21**	P	**P**	**06 39 18.8**	**+2.2**
	baz=239						
N16K	**Nishlik Lake**	**79.38**	**27**	P	**P**	**06 39 18.5**	**+1.8**
	baz=244						
F15K	**North Star Dit**	**79.53**	**21**	P	**P**	**06 39 18.1**	**+0.7**

	baz=238						
M16K	Timber Creek	79.53	26		P	06 39 16.8	-0.8
M16K				IAmb	IAmb	06 39 19.5	
	comp=Z,10nm,1.1s						
M16K	Timber Creek	79.53	26	P	P	06 39 19.5	+1.9
	baz=244						
L16K	Owhat River	79.61	25	P	P	06 39 18.6	+0.6
	baz=244						
Q16K	King Salmon	79.63	29	P	P	06 39 19.5	+1.4
	baz=247						
Q17K	Contact Creek	79.84	29	P	P	06 39 19.5	+0.1
	baz=247						
O17K	Koliganek Bris	79.86	28	P	P	06 39 20.6	+1.4
	baz=246,SNR=5.6						
J16K	Anvik River	79.86	24	P	P	06 39 20.6	+1.4
	baz=242						
H16K	Elim	79.86	22	P	P	06 39 21.0	+1.8
	baz=241						
SII	Sitkinak Islan	80.07	31	P	P	06 39 21.9	+1.3
	baz=249						
ACHA	Angle Creek He	80.09	29	P	P	06 39 20.3	-0.4
ACHA				IAmb	IAmb	06 39 41.5	
	comp=Z,14nm,1.5s						
N17K	Nushagak Hills	80.12	27		P	06 39 19.9	-0.8
N17K				IAmb	IAmb	06 39 44.9	
	comp=Z,9.7nm,1.3s						
N17K	Nushagak Hills	80.12	27	P	P	06 39 22.4	+1.7
	baz=246						
L17K	Donlin	80.30	25	P	P	06 39 23.1	+1.4
	baz=245						
M17K	Holitna River	80.36	26	P	P	06 39 22.9	+0.9
M17K				IAmb	IAmb	06 39 26.3	
	comp=Z,12nm,1.2s						
M17K	Holitna River	80.36	26	P	P	06 39 23.5	+1.5
	baz=246						
Q18K	Katmai Hardscr	80.41	29	P	P	06 39 23.4	+1.0
	baz=248						
J17K	VABM Dome	80.52	24	P	P	06 39 24.2	+1.3
	baz=244						
K17K	Iditarod	80.55	25	P	P	06 39 22.9	0.0
K17K				IAmb	IAmb	06 39 25.2	
	comp=Z,8.3nm,1.1s						
K17K	Iditarod	80.55	25	P	P	06 39 24.3	+1.3
	baz=245						
P18K	Big Mountain,	80.58	28	P	P	06 39 23.7	+0.4
	baz=248						
C16K	Lisburne Hills	80.67	18	P	P	06 39 24.9	+1.4
	baz=237						
OHAK	Old Harbor	80.76	31	P	P	06 39 24.2	0.0
OHAK	Old Harbor	80.76	31	P	P	06 39 24.6	+0.4
	baz=250						
G17K	Kiwalik Mounta	80.87	22	P	P	06 39 26.3	+1.6
	baz=242						
H17K	Granite Mounta	80.89	22	P	P	06 39 26.3	+1.5
	baz=243						
L18K	Granite Mounta	81.02	25	P	P	06 39 24.9	-0.6
L18K				IAmb	IAmb	06 39 29.0	
	comp=Z,5.0nm,1.1s						
L18K	Granite Mounta	81.02	25	P	P	06 39 26.8	+1.3
	baz=246						
M18K	Stony River	81.11	26	P	P	06 39 27.2	+1.2
	baz=247						
E17K	Hotham Inlet	81.21	20	P	P	06 39 27.6	+1.2
	baz=241						
KDAK	Kodiak Island	81.31	30	P	P	06 39 28.1	+1.0
	baz=250						
N19K	Bonanza Creek	81.46	27		P	06 39 27.9	-0.1
N19K				IAmb	IAmb	06 39 29.4	
	comp=Z,7.0nm,1.1s						
N19K	Bonanza Creek	81.46	27	P	P	06 39 28.9	+0.9
	baz=248						
C17K	DeLong Mountai	81.46	19	P	P	06 39 29.2	+1.4
	baz=239						
J18K	Innoko River	81.51	24	P	P	06 39 29.1	+0.9
	baz=246						
P19K	Oil Pt	81.63	28	P	P	06 39 29.3	+0.5
	baz=250						
Q20K	Shuyak Island	81.68	30	P	P	06 39 29.8	+0.7
	baz=250						
F18K	Selawik	81.74	21	P	P	06 39 30.8	+1.6
	baz=243						
G18K	Tagagawik	81.79	22	P	P	06 39 29.4	-0.1
G18K	Tagagawik	81.79	22	P	P	06 39 30.9	+1.4
	baz=244						
E18K	Tukpahlearik C	81.79	20	P	P	06 39 29.6	+0.1
E18K				IAmb	IAmb	06 39 34.2	
	comp=Z,3.3nm,0.8s						
E18K	Tukpahlearik C	81.79	20	P	P	06 39 30.9	+1.4
	baz=242						
L19K	White Mountain	81.80	26	P	P	06 39 29.5	-0.2
L19K				IAmb	IAmb	06 39 32.9	
	comp=Z,4.3nm,0.9s						
L19K	White Mountain	81.80	26	P	P	06 39 30.8	+1.1
	baz=248						
J19K	Poorman	82.17	24		P	06 39 32.4	+0.8
J19K	Poorman	82.17	24	P	P	06 39 32.9	+1.3
	baz=247						
C18K	Utukok River	82.18	19	P	P	06 39 32.5	+0.8
C18K				IAmb	IAmb	06 39 34.1	
	comp=Z,4.9nm,1.1s						
C18K	Utukok River	82.18	19	P	P	06 39 32.8	+1.2
	baz=241						
L20K	Farewell, AK	82.33	26	P	P	06 39 33.2	+0.7
	baz=249						
B18K	Kokolik River	82.34	18	P	P	06 39 33.4	+1.1
	baz=240						
HOM	Homer	82.39	29	P	P	06 39 33.6	+0.9
	baz=251						
M20K	Styx River	82.45	26	P	P	06 39 33.8	+0.6
M20K				IAmb	IAmb	06 39 36.2	
	comp=Z,6.9nm,1.1s						
M20K	Styx River	82.45	26	P	P	06 39 34.2	+1.1
	baz=249						
H19K	Roundabout Mou	82.46	22	P	P	06 39 33.8	+0.7
H19K	Roundabout Mou	82.46	22	P	P	06 39 34.4	+1.4
	baz=246						
G19K	Purcell Mounta	82.47	22	P	P	06 39 33.8	+0.7
G19K	Purcell Mounta	82.47	22	P	P	06 39 34.2	+1.1
	baz=245						
F19K	Shaleruckik Mo	82.51	21	P	P	06 39 34.5	+1.2
	baz=244						
K20K	Telida	82.57	25	P	P	06 39 34.6	+0.9
	baz=248						
J20K	Nowinta River	82.84	24	P	P	06 39 35.2	+0.1
J20K				IAmb	IAmb	06 39 37.9	
	comp=Z,4.9nm,1.0s						
J20K	Nowinta River	82.84	24	P	P	06 39 36.4	+1.4
	baz=248						
BRSE	Bradley Lake S	82.85	29	P	P	06 39 35.2	0.0
	baz=252						
C19K	Lookout Ridge	82.91	19	P	P	06 39 36.8	+1.4
	baz=242						
I20K	Naaghedeneel	82.94	23	P	P	06 39 36.1	+0.5
	baz=248						
E19K	Redstone River	82.97	21	P	P	06 39 36.6	+0.9
E19K				IAmb	IAmb	06 39 38.6	
	comp=Z,4.4nm,0.8s						
E19K	Redstone River	82.97	21	P	P	06 39 37.1	+1.4
	baz=245						
H20K	Anotleneega Mo	83.05	23	P	P	06 39 37.2	+1.1
	baz=247						
D19K	Kuna River	83.11	19	P	P	06 39 36.4	-0.1
D19K				IAmb	IAmb	06 39 39.4	
	comp=Z,2.5nm,0.7s						
D19K	Kuna River	83.11	19	P	P	06 39 37.7	+1.3
	baz=244						
SLKM	Skilak Lake	83.33	28	P	P	06 39 37.5	-0.3
F20K	Avaraart Lake	83.34	21	P	P	06 39 39.1	+1.5
	baz=246						
SUA	Susitna One	83.38	27	P	P	06 39 39.0	+1.0
	baz=252						
CAST	Castle Rocks	83.43	25	P	P	06 39 39.1	+0.9
	baz=250						
CHUM	Lake Minchumin	83.49	25	P	P	06 39 39.7	+1.2
	baz=250						
SEW	Seward	83.58	29	P	P	06 39 40.0	+1.1
	baz=253						
E20K	Nigu River	83.66	20	P	P	06 39 40.6	+1.3
	baz=246						
D20K	Etivluk River	83.71	19	P	P	06 39 40.9	+1.4
	baz=245						
M22K	Willow	83.76	27	P	P	06 39 40.7	+0.9
	baz=252						
G21K	Allakaket	83.95	22	P	P	06 39 42.5	+1.8
	baz=248						
KTH	Kantishna Hill	83.97	25	P	P	06 39 40.5	-0.5
KTH				IAmb	IAmb	06 39 44.8	
	comp=Z,7.5nm,1.3s						
B20K	Meade River	84.08	18	P	P	06 39 40.8	-0.5
B20K	Meade River	84.08	18	P	P	06 39 42.2	+0.9
	baz=245						
BPAW	Bear Paw Mtn.	84.11	25	P	P	06 39 42.5	+0.8
	baz=251						
PMR	Palmer	84.16	27	P	P	06 39 42.2	+0.3
PMR				IAmb	IAmb	06 39 43.6	
	comp=Z,4.2nm,1.0s						
PMR	Palmer	84.16	27	P	P	06 39 42.4	+0.6
	baz=253						
TRF	Thorofare Moun	84.20	25	P	P	06 39 42.8	+0.5
	baz=252						
GHO	Glory Hole Cre	84.31	27	P	P	06 39 42.2	-0.6
PWL	Port Wells	84.32	28	P	P	06 39 43.9	+1.1
	baz=254						
KNK	Knik Glacier	84.42	28	P	P	06 39 44.7	+1.5
	baz=254						
C21K	Knifeblade Rid	84.49	19	P	P	06 39 44.8	+1.4
	baz=247						
E21K	Killik River	84.49	20	P	P	06 39 44.9	+1.4
	baz=248						
MLY	Manley	84.52	24		P	06 39 43.1	-0.6
MLY				IAmb	IAmb	06 39 45.9	
	comp=Z,3.4nm,1.0s						
MLY	Manley	84.52	24	P	P	06 39 45.0	+1.3
	baz=251						
P23K	Montague Islan	84.54	29	P	P	06 39 45.2	+1.4
	baz=255						
H22K	Ishtalitna Cre	84.54	23	P	P	06 39 46.0	+2.2
	baz=251						
AB31	Akbulak array	84.55	320	P	P	06 39 43.8	-0.3
ABKAR	Akbulak array	84.55	320	P	P	06 39 43.9	-0.2
ABKAR	Akbulak array	84.55	320	P	P	06 39 44.2	+0.1
B21K	Ikpikpuk River	84.73	19	P	P	06 39 46.5	+1.9
	baz=247						
WAT1	Susitna Watana	84.78	26	P	P	06 39 46.6	+1.5
	baz=253						
M23K	Glacier View	84.86	27	P	P	06 39 46.5	+1.0
	baz=254						
MCK	McKinley	84.87	25	P	P	06 39 44.9	-0.6
MCK				IAmb	IAmb	06 39 45.9	
	comp=Z,7.1nm,1.3s						
MCK	McKinley	84.87	25	P	P	06 39 46.4	+0.9
	baz=253						
Q23K	Middleton Isla	84.91	30	P	P	06 39 46.3	+0.6
	baz=256						
GLI	Glacier Island	84.91	28	P	P	06 39 46.6	+0.9
	baz=255						
SCM	Sheep Creek Mo	85.05	27	P	P	06 39 46.0	-0.5
SCM	Sheep Creek Mo	85.05	27	P	P	06 39 47.6	+1.1
	baz=255						
NEA2	Nenana	85.06	24	P	P	06 39 47.5	+1.1
NEA2				IAmb	IAmb	06 39 48.8	
	comp=Z,8.0nm,1.4s						
NEA2	Nenana	85.06	24	P	P	06 39 47.7	+1.3
	baz=253						
WAT6	Susitna Watana	85.06	27	P	P	06 39 47.7	+1.0
	baz=254						
D22K	Ayikyak River	85.09	20	P	P	06 39 48.1	+1.6
	baz=249						
I23K	Minto, Yukon-K	85.11	24	P	P	06 39 47.3	+0.7
I23K				IAmb	IAmb	06 39 49.7	
	comp=Z,3.1nm,0.8s						
I23K	Minto, Yukon-K	85.11	24	P	P	06 39 47.9	+1.4
	baz=252						
E22K	Anaktuvuk Pass	85.13	21	IAmb	IAmb	06 39 48.9	
	comp=Z,2.6nm,0.8s						
E22K	Anaktuvuk Pass	85.13	21	P	P	06 39 48.2	+1.5
	baz=250						
A22K	Sinclair Lake	85.15	18	P	P	06 39 48.5	+1.8
	baz=247						
H23K	Yukon River	85.24	23	P	P	06 39 48.9	+1.6
	baz=252						
G23K	Bananza Creek	85.32	22	IAmb	IAmb	06 39 53.0	
	comp=Z,3.7nm,1.1s						
G23K	Bananza Creek	85.32	22	P	P	06 39 49.5	+1.8
	baz=252						
DHY	Denali Highway	85.36	26	P	P	06 39 47.4	-0.7
DHY				IAmb	IAmb	06 39 51.0	
	comp=Z,6.2nm,1.1s						
DHY	Denali Highway	85.36	26	P	P	06 39 49.6	+1.5
	baz=254						
B22K	Teshekpuk Lake	85.38	18	P	P	06 39 49.7	+1.9
	baz=248						
COLD	Coldfoot	85.42	22	P	P	06 39 49.5	+1.4
	baz=252						
WRH	Wood River Hil	85.43	25	P	P	06 39 48.2	0.0
WRH				IAmb	IAmb	06 39 50.4	
	comp=Z,8.8nm,1.3s						
EYAK	Cordova Ski Ar	85.47	29	P	P	06 39 49.1	+0.6
	baz=256						
M24K	Tolsona, Glenn	85.65	27	P	P	06 39 50.8	+1.3
	baz=256						
D23K	Nanushuk River	85.80	20	P	P	06 39 52.0	+2.0
	baz=251,SNR=8.7						
E23K	Chandalar	85.89	21	P	P	06 39 52.1	+1.5
	baz=252						
HDA	Harding Lake	85.89	25	P	P	06 39 52.0	+1.5
	baz=255						
H24K	Noodor Dome	85.90	23	P	P	06 39 51.9	+1.2
	baz=254						
KAIM	Kayak Island	85.98	29	P	P	06 39 52.3	+1.3
	baz=257						
IL31		86.01	24	P	P	06 39 50.1	-0.9
ILAR	Eielson Array	86.01	24	P	P	06 39 50.2	-1.0
ILAR	Eielson Array	86.01	24	P	P	06 39 49.9	-1.2
	comp=Z,1.4nm,0.6s,baz=259,slow=4.6,SNR=5.6						
	comp=Z,1.4nm,0.6s						
TOLK	Toolik Lake Re	86.08	20	P	P	06 39 52.4	+0.9
TOLK				IAmb	IAmb	06 39 53.6	
	comp=Z,5.3nm,1.0s						
TOLK	Toolik Lake Re	86.08	20	P	P	06 39 53.0	+1.5
	baz=252,SNR=5.5						
C23K	Itkillik River	86.11	19	P	P	06 39 52.9	+1.4
	baz=251						
BMRM	Bremner River	86.11	28	P	P	06 39 53.5	+1.7
	baz=257						
PAX	Paxson	86.17	26	P	P	06 39 53.2	+1.0
	baz=256						
N25K	Chitina, Valde	86.26	28	P	P	06 39 53.8	+1.2
	baz=257						
G24K	Hadweenzic Riv	86.29	23	P	P	06 39 54.1	+1.6
	baz=254						
F24K	Squaw Lake	86.36	22	IAmb	IAmb	06 39 56.0	
	comp=Z,4.1nm,0.9s						
F24K	Squaw Lake	86.36	22	P	P	06 39 54.3	+1.4
	baz=254						
D24K	Happy Valley	86.50	20	P	P	06 39 55.3	+1.9
	baz=253						
J25K	Salcha River,	86.61	25	P	P	06 39 54.7	+0.6
	baz=256						
RIDG	Independent Ri	86.63	26	P	P	06 39 55.7	+1.4
	baz=257						
C24K	Franklin Bluff	86.70	20	P	P	06 39 56.6	+2.1
	baz=253						
CRQE	Cirque	86.79	29	P	P	06 39 56.8	+1.6
	baz=258						
H25L	Birch Creek	86.82	23	P	P	06 39 56.8	+1.8
	baz=256						
G25K	Bearman Lake	86.83	23	P	P	06 39 56.8	+1.7
	baz=255						
MCARA	McCarthy VSAT	86.95	28	P	P	06 39 57.5	+1.6
	baz=258						
SCRK	Sand Creek	87.05	26	P	P	06 39 56.9	+0.4
	baz=257						
L26K	Log Cabin Wild	87.13	27	P	P	06 39 57.9	+1.2
	baz=258						
QSPA	South Pole Qui	87.19	180	P	P	06 39 58.6	+1.6
	comp=Z,2.0nm,0.8s,baz=269,slow=0.2,SNR=18						
	comp=Z,2.0nm,0.8s						
F25K	Christian Rive	87.21	22	P	P	06 39 58.2	+1.1
	baz=256						
J26L	Joseph Creek	87.34	25	P	P	06 39 58.7	+1.0
	baz=258						
E25K	Arctic Village	87.37	21	P	P	06 40 00.5	+2.8
	baz=256,SNR=7.5						
D25K	Kavik River	87.38	20	P	P	06 39 59.7	+1.9
	baz=255						
BMAR	Burnt Mountain	87.57	22		P	06 39 59.8	+1.0
M27K	Edge Creek, AK	87.67	27	P	P	06 39 58.9	-0.6
M27K				IAmb	IAmb	06 40 02.0	
	comp=Z,4.3nm,1.1s						
M27K	Edge Creek, AK	87.67	27	P	P	06 40 01.0	+1.6
	baz=259						
CTG	Chitna Glacier	87.68	29	P	P	06 40 01.2	+1.6
	baz=260						
I26K	Coal Creek Min	87.68	24	P	P	06 39 58.8	-0.5
I26K				IAmb	IAmb	06 40 38.3	
	comp=Z,3.3nm,1.3s						
I26K	Coal Creek Min	87.68	24	P	P	06 40 01.0	+1.8
	baz=258						
CTGM	Chitina Glacie	87.68	29	P	P	06 39 59.9	+0.3
G26K	Porcupine Rive	87.77	23	P	P	06 40 01.5	+1.9
	baz=258						
F26K	Sheenjek River	87.79	22	IAmb	IAmb	06 40 04.4	
	comp=Z,5.3nm,1.1s						
F26K	Sheenjek River	87.79	22	P	P	06 40 02.0	+2.2
	baz=257,SNR=8.5						
L27K	Beaver Creek,	87.82	27	P	P	06 40 01.4	+1.4
	baz=259						
K27K	Chicken	87.89	26	P	P	06 40 02.1	+1.8
	baz=259						
YUK3	Moose Creek	88.23	28	P	P	06 40 03.4	+1.2
	baz=261						
I27K	Kandik River	88.36	24	P	P	06 40 04.0	+1.4
	baz=260,SNR=8.1						
PNL	Peninsula	88.43	30	P	P	06 40 04.6	+1.6
	baz=262						
H27K	Steamboat Moun	88.51	24	P	P	06 40 05.0	+1.7
	baz=260,SNR=7.4						
G27K	Doyon Strip	88.56	23	P	P	06 40 05.6	+2.1
	baz=260						
E27K	Coleen River	88.83	22	P	P	06 40 06.4	+1.7
	baz=260						
O29M	Mount Kennedy	88.92	30	P	P	06 40 06.8	+1.4
	baz=262						
YUK4	Talbot Arm	89.03	29	P	P	06 40 07.6	+1.6
	baz=262						
I28M	Miner Creek	89.03	24		P	06 40 06.4	+0.6
I28M				IAmb	IAmb	06 40 08.4	
	comp=Z,5.6nm,1.2s						
I28M	Miner Creek	89.03	24	P	P	06 40 07.0	+1.3
	baz=261						
DAWY	Dawson	89.06	26	IAmb	IAmb	06 40 09.0	
	comp=Z,6.2nm,1.1s						
DAWY	Dawson	89.06	26	P	P	06 40 07.2	+1.3
	baz=262,SNR=6.2						
YUK6	Outpost Mounta	89.11	29	P	P	06 40 07.4	+1.0
	baz=263						
M29M	Somme Creek	89.25	28	IAmb	IAmb	06 40 10.8	
	comp=Z,5.5nm,1.4s						
M29M	Somme Creek	89.25	28	P	P	06 40 08.3	+1.3
	baz=262						
P29M	Windy Craggy	89.26	30	P	P	06 40 08.3	+1.4
	baz=263						
F28M	Old Crow	89.38	22	P	P	06 40 07.5	+0.2
F28M	Old Crow	89.38	22	P	P	06 40 09.3	+2.0
	baz=261						
L29M	L29M	89.49	27		P	06 40 07.2	-0.7
L29M				IAmb	IAmb	06 40 09.9	
	comp=Z,5.2nm,1.3s						
L29M	L29M	89.49	27	P	P	06 40 09.4	+1.4
	baz=263						
HYT	Haines Junctio	89.51	29		P	06 40 08.8	+0.6
HYT	Haines Junctio	89.51	29	P	P	06 40 09.4	+1.2
	baz=263						
E28M	Babbage River	89.66	21	P	P	06 40 08.2	-0.4
E28M	Babbage River	89.66	21	P	P	06 40 10.2	+1.7
	baz=261						
I29M	Ogilvie Camp,	89.69	25	P	P	06 40 08.7	-0.1
I29M				IAmb	IAmb	06 40 12.4	
	comp=Z,3.0nm,0.9s						
I29M	Ogilvie Camp,	89.69	25	P	P	06 40 10.2	+1.4
	baz=263						
P30M	Million Dollar	89.70	30	P	P	06 40 10.3	+1.3
	baz=264						
N30M	Aishikik Lake	89.78	29	P	P	06 40 09.3	-0.1
N30M	Aishikik Lake	89.78	29	P	P	06 40 10.4	+1.0
	baz=264						
K29M	Barlow Dome	89.85	26	P	P	06 40 09.4	-0.2
K29M				IAmb	IAmb	06 40 13.8	
	comp=Z,4.4nm,1.1s						
K29M	Barlow Dome	89.85	26	P	P	06 40 11.2	+1.5
	baz=263						
PLBC	Pleasant Camp	89.94	31	P	P	06 40 11.4	+1.4
	baz=264						
G29M	Pine Creek	90.00	23	P	P	06 40 10.9	+0.7
	baz=263						
E29M	Blow River	90.23	22	P	P	06 40 13.2	+2.0
	baz=263						
N31M	Braeburn, Yuko	90.41	29	P	P	06 40 13.9	+1.7
	baz=265						
J30M	Hart River	90.44	25	P	P	06 40 13.6	+1.1
	baz=264						
EPYK	Eagle Plains	90.46	24	P	P	06 40 13.1	+0.7
	baz=264						
SKAG	Skagway	90.46	31	P	P	06 40 13.5	+1.0
	baz=265						
I30M	Mount Dempster	90.48	25	P	P	06 40 13.2	+0.6
	baz=264						
WHY	Whitehorse	90.78	29	P	P	06 40 15.1	+1.0
	baz=266						
M31M	Drury Creek, Y	91.12	28	P	P	06 40 16.8	+1.3
	baz=266						
CRAG	Craig	91.40	35	P	P	06 40 17.9	+1.1
	baz=267						
G31M	Satah River	91.47	23	P	P	06 40 16.2	-0.8
G31M				IAmb	IAmb	06 40 21.7	
	comp=Z,2.7nm,1.0s						
FARO	Faro, Yukon	91.61	28	P	P	06 40 19.3	+1.5
	baz=267						
P33M	Teslin, Yukon	91.78	30	P	P	06 40 20.7	+2.0
	baz=267						
MMPY	Sheldon Lake,	92.59	28	P	P	06 40 23.0	+0.6
	baz=269						
R33M	Jennings River	92.69	31	P	P	06 40 23.9	+1.0
	baz=269						
CPUP	Villa Florida	147.33	153	PKPbc	PKPab	06 46 57.7	+0.6
	comp=Z,0.4nm,0.6s,baz=29,slow=7.2,SNR=3.4						
LPAZ	La Paz	147.68	127	PKPbc	PKPbc	06 46 58.5	+1.1
	comp=Z,2.3nm,0.8s,baz=319,slow=1.0,SNR=11						

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*IDC **24** 06:29:49.2±3.5, 53.°82N×88.°21E, h0^{km}, mbtmp2.6/3, ML2.1/3, Error ellipse: s-maj=32.7km s-min=21.0km az=42.0*

ASRS 24 06:29:46.0±0.9**, 53.°79N×88.°24E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	2.03	276	I	I	06 42 17.6	
	0.1nm,0.8s,baz=91,slow=326,SNR=8.0						
ZALV	Zalesovo Beam	2.03	276	Pn	Pg	06 30 24.8	-0.1
	1.2nm,0.3s,baz=92,slow=16,SNR=9.0						
ZALV				Lg	Lg	06 30 52.9	
	2.4nm,0.3s,baz=90,slow=26,SNR=21						
	2.4nm,0.4s						
KURBB	Kurchatov Arra	6.76	246	Pn	Pn	06 31 30.3	+4.0
	0.1nm,0.3s,baz=65,slow=15,SNR=2.3						
KURBB				Lg	Lg	06 33 22.6	
	baz=60,slow=30,SNR=5.2						
	0.3nm,0.3s						
MKAR	Makanchi Array	7.97	211	Pn	Pn	06 31 47.1	+4.1
	baz=22,slow=16,SNR=2.2						
	0.1nm,0.4s						

IDC 24 06:32:58.7±3.5**, 31.°09S×177.°77W, h0^{km}, mb3.7**/2**, mbtmp3.7**/2**, Error ellipse: s-maj=76.8km s-min=29.3km az=113.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.84	356	Pn	Pb	06 33 33.2	+0.1
	28nm,0.3s,baz=104,slow=21,SNR=1.1						
RAO				Sn	Sn	06 33 54.7	-0.7
	108nm,0.3s,baz=232,slow=23,SNR=3.1						
ASAR	Alice Springs	43.27	268	P	P	06 41 02.7	+0.4
	0.4nm,0.5s,baz=107,slow=7.5,SNR=4.2						
	0.4nm,0.5s						
WRA	Warramunga Arr	44.33	273	P	P	06 41 10.2	-0.5
	0.7nm,0.4s,baz=112,slow=8.0,SNR=5.6						
	0.7nm,0.4s						
FINES	FINESS Array B	145.86	340	PKPbc	PKPdf	06 52 37.7	-1.0
	0.9nm,0.7s,baz=51,slow=5.5,SNR=5.5						

IDC 24 06:36:27.1±999.0**, 43.°36N×66.°43E, h0^{km}, Error ellipse: s-maj=387.1km s-min=172.1km az=143.0, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC

I31KZ	AKTYUBINSK INF	9.09	324	I	I	07 27 10.0	
	0.4nm,0.7s,baz=135,slow=315,SNR=18						
I43RU	DUBNA INFRASON	22.82	316	I	I	08 55 25.0	
	baz=114,slow=317,SNR=4.2						
I37NO	I37NO	35.47	333	I	I	10 18 25.0	
	baz=113,slow=323,SNR=2.5						
I26DE	FREYUNG INFRAS	36.34	298	I	I	10 16 50.0	
	baz=78,slow=314,SNR=1.3						

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*IDC **24** 06:39:10.2±3.5, 53°.60N×87°.98E, h0^{km}, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=33.6km s-min=19.5km az=54.0*

ASRS 24 06:39:07.0±1.2, 53°.61N×87°.92E, h0^{km}, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.87	282	I	I	06 51 00.0	
	0.2nm,0.8s,baz=98,slow=328,SNR=4.7						
ZALV	Zalesovo Beam	1.87	282	Pn	Pg	06 39 44.1	+1.3
	0.7nm,0.3s,baz=97,slow=16,SNR=4.5						
ZALV				Lg	Lg	06 40 10.7	
	1.8nm,0.3s,baz=102,slow=27,SNR=9.9						
KURBB	Kurchatov Arra	6.51	246	Pn	Pn	06 40 48.3	+4.4
	baz=60,slow=13,SNR=1.6						
	0.3nm,0.3s						
MKAR	Makanchi Array	7.72	210	Pn	Pn	06 41 04.9	+4.3
	0.1nm,0.3s,baz=28,slow=13,SNR=1.9						
	0.1nm,0.3s						

NEIC 24 06:43:19.3±0.4, 39°.10N±0°.03×99°.09W±0°.03, h1^{km}±7^{km}, mb_Lg2.6/34, Error ellipse: s-maj=4.3km s-min=3.0km az=180.0, Kansas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBKS	Cedar Bluff	0.58	241	Pg	Pg	06 43 29.6	-0.8
CBKS				Sg	Sg	06 43 37.0	-0.8
R32A	Long Quarter,	0.74	156	Pg	Pg	06 43 32.7	-0.7
R32A				Sg	Sg	06 43 42.2	-0.8
KSU1	Kansas State U	1.93	89	Pn	Pn	06 43 52.6	-0.7
KSU1					Sn	06 44 18.1	-0.2
KAN12	Harper NE Stat	1.99	154	Pn	Pn	06 43 53.9	-0.2
KAN08	Anthony NE Sta	2.07	154	Pn	Pn	06 43 54.8	-0.4
KAN05	Bluff City Nor	2.21	154	Pn	Pn	06 43 56.7	-0.4
KAN01	Argonia South	2.21	151	Pn	Pn	06 43 56.6	-0.5
KAN09	Caldwell North	2.28	149	Pn	Pn	06 43 57.6	-0.5
KAN17	Caldwell West	2.30	152	Pn	Pn	06 43 58.1	-0.4
KAN14	Manchester OK	2.32	157	Pn	Pn	06 43 58.2	-0.4
BGNE	Belgrade	2.42	17	Pn	Pn	06 43 59.5	-0.6
BGNE				IAmb_Lg		06 44 36.0	
	comp=Z,17nm,0.7s						
KAN13	South Haven SW	2.44	148	Pn	Pn	06 44 00.1	-0.2
KAN13				IAmb_Lg		06 44 35.6	
	comp=Z,42nm,0.7s						
GC02	Grant County #	2.44	156	Pn	Pn	06 44 00.3	0.0
OK038	West end E0370	2.63	174	Pn	Pn	06 44 02.4	-0.5
CROK	Carrier	2.73	161	Pn	Pn	06 44 04.1	-0.3
KSCO	Kaye Shedlock'	2.75	269	Pn	Pn	06 44 04.2	-0.6
KSCO				IAmb_Lg		06 44 53.1	
	comp=Z,14nm,0.7s						
OGNE	Ogallala	2.92	310	Pn	Pn	06 44 06.2	-0.7
T35A	Sooner Cattle	2.98	136	Pn	Pn	06 44 08.2	+0.4
ELIS	Ellis County	3.04	185	Pn	Pn	06 44 07.7	-0.9
OK051	E0350 and S346	3.15	145	Pn	Pn	06 44 10.9	+0.9
OK048	Pawnee Station	3.17	147	Pn	Pn	06 44 11.5	+1.1
N35A	Tabor	3.18	55	Pn	Pn	06 44 11.3	+0.8
CSTR	Hydro, Custer	3.46	175	Pn	Pn	06 44 15.2	+0.9
QUOK	Quay	3.48	146	Pn	Pn	06 44 15.6	+1.0
L34A	Svendsen Farm,	3.54	35	Pn	Pn	06 44 15.5	+0.1
OK052	Battle Ridge R	3.59	149	Pn	Pn	06 44 17.2	+1.1
OK052				IAmb_Lg		06 45 12.1	
	comp=Z,9.5nm,0.9s						
K30B	Basset	3.59	354	Pn	Pn	06 44 16.6	+0.4
K30B				IAmb_Lg		06 45 18.0	
	comp=Z,23nm,0.8s						
OK031	S. Brethren Rd	3.61	150	Pn	Pn	06 44 17.4	+0.9
DEOK	Depew	3.85	147	Pn	Pn	06 44 20.3	+0.6
RTBA	Rita Blanca	3.92	229	Pn	Pn	06 44 20.9	+0.1
RTBA				IAmb_Lg		06 45 23.0	
	comp=Z,12nm,0.7s						
SMWD	Samnorwood	4.09	193	Pn	Pn	06 44 23.8	+0.7
TUL3	Leonard	4.12	139	Pn	Pn	06 44 24.6	+1.2
TUL3				IAmb_Lg		06 45 34.7	
	comp=Z,18nm,0.8s						
P38A	Dawn	4.34	81	Pn	Pn	06 44 27.7	+1.3
P38A				IAmb_Lg		06 45 41.9	
	comp=Z,17nm,0.9s						
WMOK	Wichita Mounta	4.36	177	Pn	Pn	06 44 25.9	-0.9
RLO	Rose Lookout	4.36	131	IAmb_Lg		06 45 35.9	
	comp=Z,14nm,0.7s						
U38A	Gravette	4.58	124	IAmb_Lg		06 45 55.7	
	comp=Z,11nm,0.8s						
X34A	Smith Ranch, M	4.60	167	Pn	Pn	06 44 30.8	+0.8
T25A	Trinidad	4.63	247	Pn	Pn	06 44 29.4	-1.1
AMTX	Amarillo	4.69	207	Pn	Pn	06 44 31.4	+0.1
HHAR	Hobbs	4.96	123	Pn	Pn	06 44 35.4	+0.4
ECSD	EROS Data Cent	4.99	21	Pn	Pn	06 44 35.5	+0.1
ISCO	Idaho Springs	5.10	280	Pn	Pn	06 44 37.0	-0.1
SDCO	Great Sand Dun	5.21	257	Pn	Pn	06 44 38.7	+0.1
SCIA	State Center	5.29	56	IAmb_Lg		06 46 09.0	
	comp=Z,15nm,0.7s						
SUSD	Miller	5.34	1	IAmb_Lg		06 46 09.7	
	comp=Z,10nm,0.8s						
WTFS	Witchita Falls	5.34	174	IAmb_Lg		06 46 09.2	
	comp=Z,6.1nm,1.0s						
P40A	Paris	5.48	83	Pn	Pn	06 44 41.9	-0.2
DKNS	Dickens	5.62	196	Pn	Pn	06 44 44.5	+0.5
APMT	Aspermont	5.82	189	Pn	Pn	06 44 47.7	+0.9
MSTX	Muleshoe	5.91	211	Pn	Pn	06 44 48.6	+0.5
MSTX				IAmb_Lg		06 46 25.5	
	comp=Z,6.6nm,0.8s						
Z35A	Perchaven, San	5.94	165	Pn	Pn	06 44 49.1	+0.6
SN07	Snyder 07	6.17	194	Pn	Pn	06 44 52.7	+1.1
RSSD	Black Hills	6.24	325	Pn	Pn	06 44 53.1	+0.4
POST	Post	6.33	199	Pn	Pn	06 44 54.7	+0.9
FW07	Weatherford	6.47	170	Pn	Pn	06 44 56.8	+1.1

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*SDD **24** 06:52:24.5±1.6, 19°.23N×66°.53W, h22^{km}±85^{km}, MD3.5*

*NEIC **24** 06:52:24.9±1.0, 19°.20N±0°.05×66°.55W±0°.04, h26^{km}±12^{km}, ML2.2/22, Md2.7/14(RSPR), Error ellipse: s-maj=7.8km s-min=5.4km az=190.0*

*OSPL **24** 06:52:26.2±0.4, 19°.18N×66°.63W, h12^{km}±4^{km}, ML1.9*

*RSPR **24** 06:52:27.5, 19°.12N×66°.54W, h11^{km}±2^{km}, MD2.7/14*

ISC 24 06:52:23.6±1.8, 19°.23N±0°.08×66°.55W±0°.04, h22^{km}±9^{km}, n53, σ0^s.60/71, 21C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMPR	Esperanza - Ma	0.75	179		Pn	06 52 39.2	+0.3
EMPR					Sb	06 52 48.4	+0.6
EMPR				IAML		06 52 52.0	
	comp=N,151nm,0.8s						
EMPR	Esperanza - Ma	0.75	179	⇑eP	Pn	06 52 39.1	+0.3
EMPR	Esperanza - Ma	0.75	179	eS	Sb	06 52 47.9	+0.1
AOPR	Arecibo Observ	0.90	193		Pn	06 52 41.2	+0.2
AOPR					Sb	06 52 52.7	+0.4
AOPR	Arecibo Observ	0.90	193	⇑eP	Pn	06 52 41.3	+0.2
AOPR	Arecibo Observ	0.90	193	eS	Sb	06 52 52.7	+0.4
AOPR	Arecibo Observ	0.90	193	⇑ePg	Pn	06 52 41.1	+0.2
AOPR				⇑eSg	Sb	06 52 52.6	+0.3
AGPR	Aguadilla, PR	0.93	215		Pb	06 52 41.1	+0.1
AGPR					Sb	06 52 53.4	+0.4
AGPR				IAML		06 52 56.5	
	comp=E,78nm,0.5s						
AGPR				IAML		06 52 59.3	
	comp=N,60nm,0.8s						
AGPR	Aguadilla, PR	0.93	215	⇑eP	Pb	06 52 41.2	+0.2
AGPR	Aguadilla, PR	0.93	215	eS	Sb	06 52 53.4	+0.4
AGPR	Aguadilla, PR	0.93	215	⇓ePg	Pb	06 52 41.1	+0.1
AGPR				eSg	Sb	06 52 53.0	0.0
AGPR	Aguadilla, PR	0.93	215	i P	Pb	06 52 41.1	+0.1
AGPR				eS	Sb	06 52 52.0	-1.0
AGPR				IAML		06 52 53.9	
	comp=Z,37nm,0.6s						
UUPR	Utuado, UPR, P	0.99	190		Pn	06 52 42.2	0.0
UUPR					Sb	06 52 54.6	-0.1
UUPR	Utuado, UPR, P	0.99	190	⇑eP	Pn	06 52 42.8	+0.6
UUPR	Utuado, UPR, P	0.99	190	eS	Sb	06 52 54.7	-0.1
GCPR	Guaynabo City	1.02	154		Pn	06 52 43.0	+0.4
GCPR					Sb	06 52 55.0	-0.5
GCPR	Guaynabo City	1.02	154	⇑eP	Pn	06 52 43.2	+0.7
GCPR	Guaynabo City	1.02	154	eS	Sb	06 52 55.0	-0.5
CELP	Cerrillos	1.15	182		Pb	06 52 45.1	+0.2
CELP					Sn	06 52 59.7	+0.2
CELP	Cerrillos	1.15	182	⇑eP	Pb	06 52 45.2	+0.2
CELP	Cerrillos	1.15	182	eS	Sb	06 52 58.6	-0.8
CELP	Cerrillos	1.15	182	⇓ePg	Pb	06 52 45.1	+0.2
CELP				⇑eSg	Sb	06 52 59.1	-0.3
PRSN	Puerto Rico Se	1.16	209		Pb	06 52 45.2	+0.3
PRSN					Sb	06 52 59.2	-0.4
PRSN	Puerto Rico Se	1.16	209	⇑eP	Pb	06 52 45.2	+0.3
PRSN	Puerto Rico Se	1.16	209	eS	Sb	06 52 59.2	-0.4
LSP	Las Mesas	1.17	206		Pb	06 52 45.4	+0.3
LSP					Sb	06 52 59.6	-0.3
LSP	Las Mesas	1.17	206	⇑eP	Pb	06 52 45.4	+0.3
LSP	Las Mesas	1.17	206	eS	Sb	06 52 59.6	-0.3
SJG	San Juan	1.18	161		Pb	06 52 47.0	+1.7
SJG				IAML		06 53 09.8	
	comp=Z,48nm,0.5s						
SJG	San Juan	1.18	161	i P	Pb	06 52 46.3	+1.0
SJG				IAML		06 53 01.4	
	comp=Z,20nm,0.3s						
OBIP	Obispado Ponce	1.19	183		Pb	06 52 45.3	-0.2
OBIP				IAML		06 53 03.0	
	comp=E,36nm,0.3s						
OBIP				IAML		06 53 08.5	
	comp=N,41nm,0.4s						
OBIP	Obispado Ponce	1.19	183	⇑eP	Pb	06 52 45.5	+0.1
OBIP	Obispado Ponce	1.19	183	eS	Sb	06 52 59.4	-0.9
IDE	Isla Desecheo	1.22	226		Pb	06 52 46.0	+0.1
IDE					Sn	06 53 01.3	+0.2
IDE	Isla Desecheo	1.22	226	⇑eP	Pb	06 52 46.0	+0.1
IDE	Isla Desecheo	1.22	226	eS	Sn	06 53 01.3	+0.2
HUMP	Col San Antoni	1.27	149		Pb	06 52 47.5	+0.6
HUMP					Sn	06 53 01.4	-1.0
HUMP				IAML		06 53 03.6	
	comp=E,60nm,0.2s						
HUMP				IAML		06 53 09.5	
	comp=N,37nm,0.2s						
HUMP	Col San Antoni	1.27	149	⇑eP	Pb	06 52 47.5	+0.6
HUMP	Col San Antoni	1.27	149	eS	Sn	06 53 01.5	-1.0
PDPR	Patillas Dam,	1.31	158		Pb	06 52 47.2	-0.2
PDPR				IAML		06 53 03.4	
	comp=E,32nm,0.1s						
PDPR				IAML		06 53 07.7	
	comp=N,53nm,0.1s						
PDPR	Patillas Dam,	1.31	158	⇑eP	Pb	06 52 47.4	-0.1
PDPR	Patillas Dam,	1.31	158	eS	Sn	06 53 02.7	-0.6
IGPR	InterUniversit	1.33	162		Pb	06 52 47.7	-0.2
IGPR					Sn	06 53 03.1	-0.8
IGPR	InterUniversit	1.33	162	⇑eP	Pb	06 52 47.7	-0.2
IGPR	InterUniversit	1.33	162	eS	Sn	06 53 03.1	-0.8
CRPR	Cabo Rojo, PR	1.33	204	Pn	Pb	06 52 47.6	-0.3
CRPR				IAML		06 53 11.0	
	comp=E,39nm,0.6s						
CRPR				IAML		06 53 17.8	
	comp=N,40nm,1.8s						
CRPR	Cabo Rojo, PR	1.33	204	⇓ePg	Pb	06 52 47.5	-0.3
CRPR				⇑eSg	Sn	06 53 04.2	+0.3
CRPR	Cabo Rojo, PR	1.33	204	i P	Pb	06 52 47.6	-0.3
CRPR				eS	Sn	06 53 03.7	-0.3
CRPR				IAML		06 53 08.8	
	comp=Z,56nm,0.3s						
MLPR	Magueyes Islan	1.34	201	⇑eP	Pb	06 52 47.9	-0.2
MLPR	Magueyes Islan	1.34	201	eS	Sn	06 53 04.5	+0.3
MLPR	Magueyes Islan	1.34	201	⇑ePg	Pb	06 52 47.7	-0.4
MLPR				eSg	Sn	06 53 04.6	+0.3
MIDR	Miches	2.38	264	⇑eSg	Sb	06 53 36.9	+2.2
HATOM	Hato Mayor del	2.72	261	⇑ePg	Pb	06 53 09.8	-1.8

IDC 24 06:54:56.2±3.4, 53°.51N×87°.74E, h0^{km}, mbtmp2.6/2, ML2.5/1, Error ellipse: s-maj=34.5km s-min=18.2km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.79	286	I	I	07 05 20.0	
	0.1nm,0.7s,baz=105,slow=324,SNR=8.3						
ZALV	Zalesovo Beam	1.79	285	Pn	Pn	06 55 27.6	-0.7
	1.0nm,0.3s,baz=102,slow=21,SNR=9.6						
ZALV				Lg	Lg	06 55 53.0	
	0.9nm,0.3s,baz=100,slow=24,SNR=3.5						
KURBB	Kurchatov Arra	6.37	247	Pn	Pn	06 56 32.1	+0.9
	0.2nm,0.3s,baz=60,slow=14,SNR=1.1						
MKAR	Makanchi Array	7.57	210	Pn	Pn	06 56 49.0	+1.1
	0.1nm,0.3s,baz=28,slow=14,SNR=6.4						
	0.1nm,0.3s						

IDC 24 07:01:03.1±1.9, 2°.38S×138°.47E, h0^{km}, mb3.2/2, mbtmp3.3/4, ML3.3/2, Error ellipse: s-maj=33.4km s-min=19.8km az=165.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	2.24	93	Pn	Pb	07 01 43.1	-1.5
	5.3nm,0.3s,baz=244,slow=10,SNR=11						
JAY				Lg	Lg	07 02 13.6	
	2.3nm,0.3s,baz=103,slow=15,SNR=3.7						
	12nm,0.3s						
WRA	Warramunga Arr	17.91	193	P	P	07 05 14.7	+0.1
	0.1nm,0.3s,baz=17,slow=12,SNR=5.4						
	0.5nm,0.5s						
ASAR	Alice Springs	21.61	191	P	P	07 05 54.0	-1.0
	0.4nm,0.5s,baz=22,slow=9.8,SNR=8.8						
	0.4nm,0.5s						
ILAR	Eielson Array	85.64	24	P	P	07 13 43.4	-0.1
	0.2nm,0.7s,baz=258,slow=4.0,SNR=4.2						
	0.2nm,0.7s						

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*IDC **24** 07:10:03.5±3.3, 54°.17N×87°.23E, h0^{km}, mbtmp3.3/2, ML2.6/2, Error ellipse: s-maj=30.5km s-min=18.6km az=56.0*

ASRS 24 07:10:02.0±0.8, 54°.15N×87°.11E, h0^{km}, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.37	262	I	I	07 18 50.0	
	baz=79,slow=323,SNR=9.8						
ZALV	Zalesovo Beam	1.37	262	Pg	Pb	07 10 29.9	+1.5
	1.4nm,0.3s,baz=83,slow=19,SNR=14						
ZALV				Lg	Lg	07 10 48.5	
	0.8nm,0.3s,baz=76,slow=28,SNR=5.2						
KURBB	Kurchatov Arra	6.33	240	Pn	Pn	07 11 41.4	+4.9
	0.1nm,0.3s,baz=55,slow=13,SNR=2.5						
	4.0nm,0.2s						
MKAR	Makanchi Array	7.98	205	Pn	Pn	07 12 01.4	+2.3
	0.2nm,0.3s,baz=18,slow=14,SNR=5.1						
	0.1nm,0.3s						

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*IDC **24** 07:11:46.2±2.7, 4°.72S×130°.95E, h0^{km}, mb3.6/1, mbtmp3.7/4, ML3.8/3, Error ellipse: s-maj=123.8km s-min=30.0km az=76.0*

*DJA **24** 07:11:53.9±0.8, 4°S±7°×13°1E±°, h11^{km}±8^{km}, M4.2/10, mb4.4/2, MLv4.0/10*

ISC 24 07:11:52.2±0.8, 4°.69S±0°.07×131°.01E±0°.05, h35^{km}, n22, σ2^s.15/24, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	1.12	279	P	Pn	07 12 14.2	+2.9
BNDI	Bandanaira	1.12	279	P	Pn	07 12 13.4	+2.1
BNDI				S	Sn	07 12 29.2	+3.7
FAKI	Fak Fak	2.15	35	P	Pn	07 12 27.1	+1.4
FAKI	Fak Fak	2.15	35	S	Sn	07 12 51.6	+0.5
FAKI	Fak Fak	2.15	35	P	Pn	07 12 27.0	+1.4
MSAI	Masohi	2.47	303	P	Pn	07 12 31.5	+1.5
MSAI				S	Sn	07 12 59.7	+0.7
KMPI	Kaimana, Papua	2.88	69	P	Pn	07 12 39.6	+4.1
AAI	Ambon	2.98	289	P	Pn	07 12 39.1	+2.1
SWI	Sorong	3.81	4	P	Pn	07 12 48.6	+0.1
SANI	Sanana	5.66	297	P	Pn	07 13 14.2	+0.3
SANI	Sanana	5.66	297	P	Pn	07 13 13.2	-0.7
	0.1nm35nm,0.8s						
DRS	Darwin Rock St	7.69	181	P	Pn	07 13 44.6	+2.9
KDU	Kakadu	8.07	170	P	Pn	07 13 47.3	+0.3
MTN	Manton Dam	8.10	179	P	Pn	07 13 48.9	+1.5
FITZ	Fitzroy Crossi	14.32	201	Pn	Pn	07 15 08.9	-3.7
	0.3nm,0.3s,baz=21,slow=12,SNR=18						
FITZ				Sn	Sn	07 17 39.2	-11
	0.8nm,0.3s,baz=259,slow=19,SNR=5.6						
	0.7nm,0.3s						
COEN	Coen	15.12	128	P	Pn	07 15 23.4	+0.1
WRA	Warramunga Arr	15.50	168	Pn	Pn	07 15 24.2	-4.0
	0.5nm,0.3s,baz=351,slow=13,SNR=9.7						
WRA				Sn	Sn	07 18 05.8	-13
	0.8nm,0.3s,baz=345,slow=23,SNR=7.8						
	0.5nm,0.3s						
QIS	Mount Isa	17.85	153	P	P	07 15 58.7	+0.4
ASAR	Alice Springs	19.07	172	P	P	07 16 11.2	-0.5
	0.3nm,0.3s,baz=350,slow=10.0,SNR=21						
ASAR				S	Sn	07 19 33.7	-12
	0.4nm,0.4s,baz=357,slow=23,SNR=6.3						
	2.2nm,0.7s						
AS01	Alice Springs	19.07	172	P	Pn	07 16 12.9	+0.1
PSA00	Pilbara Seismi	19.97	212	P	P	07 16 20.4	-1.2
MKAR	Makanchi Array	66.88	326	P	P	07 22 40.1	-0.7
	0.3nm,0.5s,baz=116,slow=7.5,SNR=2.5						
	0.3nm,0.5s						

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*IDC **24** 07:19:42.8±0.5, 2°.67S×138°.62E, h0^{km}, mb4.6/20, mbtmp4.6/24, ML4.4/4, MS4.2/11, Error ellipse: s-maj=13.2km s-min=11.6km az=64.0*

*BJI **24** 07:19:43.0, 2°.70S×138°.60E, h10^{km}, mB5.1/9, mb4.8/67, Ms4.6/19, Ms7 4.4/16*

*MOS **24** 07:19:43.7±0.7, 2°.73S×138°.63E, h17^{km}, mb5.1/44, Error ellipse: s-maj=10.1km s-min=5.4km az=112.3*

*NEIC **24** 07:19:45.6±1.3, 2°.66S±0°.08×138°.64E±0°.06, h10^{km}±1^{km}, mb5.0/193, Error ellipse: s-maj=13.2km s-min=10.0km az=176.0*

*DJA **24** 07:19:46.0±0.2, 3°S±2°×13°9E±°, h10^{km}, M4.8/33, mb4.9/33, mB5.3/11, MLv4.9/9, Mw(mB)4.7/11*

ISC 24 07:19:45.8±0.5, 2°.67S±0°.04×138°.63E±0°.04, h16^{km}±2^{km}, h16^{km}:pP-P, n595, σ1^s.03/567, mb5.0/164, MS4.2/15, 9C-2D, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.68	7	P	Pg	07 19 56.4	-2.8
SMPI				S	Sg	07 20 04.7	-3.5
GENI	Genyem	1.54	87	P	Pn	07 20 13.1	+0.5
GENI	Genyem	1.54	87	P	Pn	07 20 12.0	-0.6
GENI				S	Sg	07 20 34.4	-1.0
JAY	Jayapura	2.08	86	Pn	Pn	07 20 18.4	-1.7
	55nm,0.3s,baz=243,slow=10,SNR=129						
JAY				Lg	Lg	07 20 50.2	
	87nm,0.3s,baz=320,slow=20,SNR=6.3						
	227nm,0.5s						
JAY	Jayapura	2.08	86	P	Pn	07 20 19.6	-0.5
JAY				S	Sn	07 20 47.0	+1.3
SRPI	Serui, Papua	2.52	288	P	Pn	07 20 25.6	-0.5
BAKI	Biak	2.92	300	P	Pn	07 20 32.0	+0.4
RKPI	Ransiki, Papua	4.60	284	P	Pn	07 20 54.6	-0.1
KMPI	Kaimana, Papua	5.02	259	P	Pn	07 21 04.7	+4.2
FAKI	Fak Fak	6.38	268	Pn	Pn	07 21 19.9	+0.6
FAKI	Fak Fak	6.38	268	P	Pn	07 21 20.9	+1.7
	0.4nm2µm101nm,1.2s						
SWI	Sorong	7.58	284	P	Pn	07 21 34.4	-1.4
	0.3nm928nm65nm,0.6s						
MANU	Manus Island	8.75	86		Pn	07 21 51.8	0.0
SAUI	Saumlaki	9.01	234	Pn	Pn	07 21 55.0	-0.3
PMG	Port Moresby	10.80	129	Pn	Pn	07 22 19.8	-0.1
PMG	Port Moresby	10.80	129	P	Pn	07 22 19.8	-0.1
I39PW	PALAU INFRASON	10.93	338	I	I	08 24 00.0	
	baz=158,slow=316,SNR=1.3						
NLAI	Namlea	11.53	267	P	Pn	07 22 29.2	-0.7
	104nm,1.0s						
KDU	Kakadu	11.67	211	P	Pn	07 22 32.2	+0.4
TNTI	Ternate	11.77	287	Pn	Pn	07 22 32.2	-0.9
COEN	Coen	12.08	158		Pn	07 22 37.9	+0.5
COEN	Coen	12.08	158	P	Pn	07 22 37.3	-0.2
MTN	Manton Dam	12.54	216		Pn	07 22 43.9	+0.1
MTN	Manton Dam	12.54	216	P	Pn	07 22 44.4	+0.7
SANI	Sanana	12.65	273	P	Pn	07 22 44.2	-1.0
	48nm,1.1s						
RABL	Rabaul	13.59	97	Pn	Pn	07 22 58.0	-0.2
SOEI	Soe	15.91	243	Pn	Pn	07 23 27.7	-1.7
SOEI				IAmb	IAmb	07 23 36.1	
	comp=Z,97nm,0.9s						
SOEI	Soe	15.91	243	P	Pn	07 23 31.7	+2.3
LUWI	Luwuk	15.93	276	Pn	Pn	07 23 28.1	-1.4
LUWI	Luwuk	15.93	276	P	Pn	07 23 29.1	-0.4
	comp=Z,156nm,1.2s						
KNRA	Kununurra	16.17	216		Pn	07 23 32.0	-0.6
BATI	Baumata	16.64	243	Pn	Pn	07 23 36.0	-2.7
	comp=Z,13nm,0.3s,baz=141,slow=5.4,SNR=6.8						
	comp=Z,35nm,0.3s						
BATI	Baumata	16.64	243	P	P	07 23 42.7	+1.7
MRSI	Marisa	16.98	280	P	P	07 23 44.7	0.0
	comp=Z,811nmcomp=Z,65nm,1.2s						
APSI	Ampana	17.06	276	P	Pn	07 23 44.5	+0.6
	comp=Z,2µmcomp=Z,144nm,1.4s						
WB0	Warramunga Arr	17.49	193		Pn	07 23 47.9	-1.3
WR0	Warramunga Arr	17.64	193	Pn	Pn	07 23 49.4	-1.8
WR8	Warramunga Arr	17.65	193		Pn	07 23 48.6	-2.6
WR8				IAmb	IAmb	07 24 00.1	
	comp=Z,156nm,1.4s						
WRAB	Tennant Creek	17.66	193		Pn	07 23 49.0	-2.4
WRAB	Tennant Creek	17.66	193	P	Pn	07 23 49.0	-2.4
WRAB				pmax	pmax		
	comp=Z,46nm,0.7s						
WRA	Warramunga Arr	17.67	193		Pn	07 23 47.9	-3.6
WRA	Warramunga Arr	17.67	193	P	Pn	07 23 48.7	-2.8
	comp=Z,1.1nm,0.3s,baz=14,slow=12,SNR=28						
WRA				S	Sn	07 27 10.4	+2.2
	comp=Z,23nm,1.0s,baz=8.9,slow=22,SNR=5.5						
WRA				LR	LR	07 30 59.8	
	comp=Z,1µm,21.3s,baz=348,slow=38						
	comp=Z,5.7nm,0.6s						
QIS	Mount Isa	17.80	177	P	Pn	07 23 51.2	-1.9
TOLI2	Tolitoli	18.24	282	Pn	Pn	07 23 55.5	-3.0
TTSI	Tana Toraja	18.79	268	P	Pn	07 24 06.5	+1.2
MPSI	Mapaga	18.96	279	P	P	07 24 06.5	-0.1
KAPI	Kappang	18.98	262	LR	LR	07 32 37.8	
	comp=Z,349nm,21.7s,baz=112,slow=41						
FITZ	Fitzroy Crossi	19.93	219	P	P	07 24 15.0	-2.1
FITZ	Fitzroy Crossi	19.93	219	P	P	07 24 16.8	-0.4
	comp=Z,0.4nm,0.3s,baz=39,slow=15,SNR=9.9						
FITZ				S	S	07 27 58.4	-2.7
	comp=Z,24nm,0.9s,baz=27,slow=7.5,SNR=4.9						
	comp=Z,11nm,0.8s						
AS01	Alice Springs	21.36	192	P	P	07 24 31.8	-0.8
AS31	Alice Springs	21.37	192	P	P	07 24 31.5	-1.2
ASAR	Alice Springs	21.37	192	P	P	07 24 31.1	-1.6
ASAR	Alice Springs	21.37	192	P	P	07 24 32.5	-0.2
	comp=Z,20nm,0.7s,baz=19,slow=9.6,SNR=53						
ASAR				S	S	07 28 34.0	+4.3
	comp=Z,7.1nm,0.9s,baz=16,slow=22,SNR=4.3						
	comp=Z,20nm,0.7s						
MYLDM	Lahad Datu	21.57	291	P	P	07 24 35.2	+0.3
MYLDM				IAmb	IAmb	07 24 43.2	
	comp=Z,93nm,1.2s						
TATA	Tatamba Isabel	21.82	106	P	P	07 24 38.7	+1.1
SAVO	Savo Central	22.02	108	P	P	07 24 40.0	+0.2
KKM	Kota Kinabalu	24.00	291	P	P	07 24 58.6	-1.6
KKM				IAmb	IAmb	07 25 02.8	
	comp=Z,78nm,1.3s						
TGY	Tagaytay City	24.20	314	P	P	07 25 01.1	-0.8
	comp=Z,201nm,0.3s,baz=152,slow=3.9,SNR=5.0						
JAGI	Jajag, Banyuwa	25.02	256	P	P	07 25 07.2	-2.2
JAGI				IAmb	IAmb	07 25 20.4	
	comp=Z,40nm,1.3s						
EIDS	Eidsvold	25.55	153	P	P	07 25 13.2	-0.9
EIDS				IAmb	IAmb	07 25 31.0	
	comp=Z,92nm,1.8s						
MBWA	Marble Bar	26.01	224	P	P	07 25 16.8	-1.5
MBWA				IAmb	IAmb	07 25 22.9	
	comp=Z,32nm,1.1s						
PSA00	Pilbara Seismi	26.21	223	P	P	07 25 18.2	-1.9
PSA00				IAmb	IAmb	07 25 34.5	
	comp=Z,25nm,0.8s						
PSA00	Pilbara Seismi	26.21	223	P	P	07 25 19.2	-0.9
PSA00				IAmb	IAmb	07 25 34.4	
	comp=Z,9.2nm,0.9s						
STKA	Stephens Creek	29.19	175	P	P	07 25 46.4	-0.3
	comp=Z,1.4nm,0.4s,baz=335,slow=11,SNR=4.9						
	comp=Z,1.4nm,0.4s						
BBOO	Buckleboo	30.08	184	P	P	07 25 53.9	-0.6
DZM	Mont Dzumac	33.19	128	eLR	LR	07 35 02.3	
	comp=Z,1µm,27.8s						

MORW	**Morawa**	**33.93**	**217**	P	**P**	**07 26 27.9**	**-0.6**
MORW				IAmb	IAmb	07 27 00.5	
	comp=Z,40nm,1.4s						
MDSI	**Maura Dua**	**34.43**	**266**	P	P	07 26 38.0	+5.0
	comp=Z,24nm,1.2s						
QIZ	**Qiongzhong**	**35.59**	**308**	P	**P**	**07 26 42.3**	**-0.6**
QIZ				S	**S**	**07 32 20.3**	**+1.8**
QIZ				LR	LR		
	comp=Z,320nm,13.9s						
QIZ				LR	LR		
	comp=Z,440nm,20.9s						
NWAO	**Narrogin (SRO)**	**36.17**	**211**	LR	LR	07 42 41.0	
	comp=Z,2µm,18.3s,baz=44,slow=38						
JNU	**Nakatsue**	**36.34**	**349**		**P**	**07 26 49.3**	**+0.1**
JNU				IAmb	IAmb	07 26 51.0	
	comp=Z,31nm,1.1s						
JMN	**Monobe**	**36.48**	**353**	P	**P**	**07 26 49.5**	**-0.8**
JMN				IAmb	IAmb	07 27 41.0	
	comp=Z,15nm,0.7s						
KULM	**Kulim**	**38.76**	**282**	P	**P**	**07 27 09.3**	**-0.6**
KULM				IAmb	IAmb	07 27 20.2	
	comp=Z,81nm,1.7s						
MJAR	**Matsushiro Arr**	**39.01**	**359**	P	**P**	**07 27 10.3**	**-1.4**
	comp=Z,1.0nm,0.3s,baz=180,slow=8.7,SNR=1.9						
	comp=Z,1.0nm,0.3s						
MAJO	**Matsushiro**	**39.01**	**359**	P	**P**	**07 27 11.0**	**-0.7**
MAJO	**Matsushiro**	**39.01**	**359**	P	**P**	**07 27 11.0**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,22nm,1.6s						
MJB9	**Matsu-Tunnel**	**39.02**	**359**	P	**P**	**07 27 11.9**	**+0.2**
NJ2	**Nanjing**	**39.30**	**333**	*e*P	**P**	**07 27 16.4**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
CNSH	**ChangSha**	**39.39**	**323**	P	**P**	**07 27 16.5**	**+1.5**
CNSH				pmax	pmax		
	comp=Z,31nm,1.6s						
RPSI	**Rantau Prapat**	**40.05**	**277**	P	**P**	**07 27 19.1**	**-1.6**
PSI	**Prapat**	**40.06**	**278**	P	**P**	**07 27 20.4**	**-0.5**
	comp=Z,13nm,0.9s,baz=353,slow=2.4,SNR=4.9						
	comp=Z,13nm,0.9s						
WHN	**Wuhan**	**40.34**	**327**	P	P	07 27 31.8	+8.9
WHN				pmax	pmax		
	comp=Z,64nm,0.8s						
JSD	**Sado**	**40.50**	**360**	P	**P**	**07 27 23.7**	**-0.3**
KSAR	**Wonju Array Be**	**41.14**	**347**	P	**P**	**07 27 29.0**	**-0.3**
KSAR	**Wonju Array Be**	**41.14**	**347**	P	**P**	**07 27 29.0**	**-0.3**
KSRS	**Korea Array**	**41.14**	**347**	P	**P**	**07 27 28.1**	**-1.2**
	comp=Z,4.4nm,1.0s,baz=167,slow=10,SNR=16						
KSRS				PcP	**PcP**	**07 29 29.8**	**+1.2**
	comp=Z,2.4nm,1.0s,baz=172,slow=3.3,SNR=6.5						
	comp=Z,4.4nm,1.0s						
SLVN	**Son La**	**41.52**	**307**		**P**	**07 27 32.2**	**-0.6**
ENH	**Enshi**	**42.98**	**322**	P	**P**	**07 27 43.9**	**-0.6**
TIA	**Tai'an**	**43.58**	**335**	P	**P**	**07 27 49.3**	**0.0**
TIA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**44.35**	**300**	P	**P**	**07 27 56.0**	**+0.2**
CMAR	**Chiang Mai Arr**	**44.35**	**300**	P	**P**	**07 27 55.4**	**-0.4**
	comp=Z,1.7nm,0.5s,baz=120,slow=6.5,SNR=12						
	comp=Z,1.7nm,0.5s						
CMAR	**Chiang Mai Arr**	**44.35**	**300**	*i* P	**P**	**07 27 56.0**	**+0.2**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KMI	**Kunming**	**44.44**	**311**	P	**P**	**07 27 57.5**	**+0.9**
KMI				pmax	pmax		
	comp=Z,17nm,1.2s						
LYN	**LuoYang**	**44.45**	**329**	P	**P**	**07 27 57.0**	**+0.8**
LYN				pmax	pmax		
	comp=Z,48nm,1.3s						
CHTO	**Chiang Mai**	**44.49**	**300**	P	**P**	**07 27 56.0**	**-0.9**
CHTO	**Chiang Mai**	**44.49**	**300**	P	**P**	**07 27 56.0**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,25nm,1.7s						
HNS	**HongShan**	**45.64**	**333**	⇓P	**P**	**07 28 05.6**	**0.0**
HNS				pmax	pmax		
	comp=Z,11nm,1.1s						
PZH	**PanZhiHua**	**45.94**	**312**	P	**P**	**07 28 08.6**	**+0.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
XAN	**Xi'an**	**46.00**	**325**	⇑P	**P**	**07 28 09.0**	**+0.4**
XAN				pP	sP	07 28 16.9	+0.8
XAN				pmax	pmax		
	comp=Z,43nm,1.0s						
JKA	**Kamikawa-asahi**	**46.71**	**4**	P	**P**	**07 28 14.3**	**+0.3**
JKA				IAmb	IAmb	07 28 17.2	
	comp=Z,13nm,1.1s						
ASAJ	**Asahikawa**	**46.71**	**4**	LR	LR	07 46 06.7	
	comp=Z,225nm,21.0s,baz=151,slow=34						
ASAJ	**Asahikawa**	**46.71**	**4**	P	**P**	**07 28 14.3**	**+0.3**
ASAJ				pmax	pmax		
	comp=Z,13nm,1.1s						
USA0B	**Ussuriysk Arra**	**47.04**	**353**	P	**P**	**07 28 17.1**	**+0.5**
USA0B	**Ussuriysk Arra**	**47.04**	**353**	P	**P**	**07 28 17.1**	**+0.5**
USA0B				pmax	pmax		
	comp=Z,41nm,1.7s						
USRK	**Ussuriysk Ar.**	**47.04**	**353**	P	**P**	**07 28 17.4**	**+0.8**
	comp=Z,2.9nm,0.8s,baz=165,slow=7.9,SNR=12						
USRK				LR	LR	07 45 53.1	
	comp=Z,209nm,18.8s,baz=167,slow=33						
	comp=Z,2.9nm,0.8s						
CD2	**Chengdu**	**47.10**	**318**	P	**P**	**07 28 17.9**	**+0.6**
CD2				pmax	pmax		
	comp=Z,30nm,0.4s						
BJT	**Baijiatuau**	**47.21**	**336**	P	**P**	**07 28 18.1**	**+0.1**
BJT				IAmb	IAmb	07 28 20.1	
	comp=Z,20nm,1.3s						
BJT	**Baijiatuau**	**47.21**	**336**	P	**P**	**07 28 18.1**	**+0.1**
BJT				pmax	pmax		
	comp=Z,20nm,1.3s						
BJI	**Beijing**	**47.23**	**336**	P	**P**	**07 28 18.5**	**+0.4**
BJI				sP	**sP**	**07 28 25.5**	**0.0**
BJI				S	**S**	**07 35 11.5**	**+1.0**
BJI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BJI				LR	LR		
	comp=Z,190nm,19.6s						
BJI				LR	LR		
	comp=Z,89nm,19.0s						
BJI				LR	LR		
	comp=Z,190nm,22.7s						
MDJ	**Mudanjiang**	**47.77**	**351**	P	**P**	**07 28 22.0**	**-0.2**
MDJ				IAmb	IAmb	07 29 09.3	
	comp=Z,17nm,1.2s						
MDJ	**Mudanjiang**	**47.77**	**351**	P	**P**	**07 28 23.1**	**+0.9**
MDJ				pmax	pmax		
	comp=Z,11nm,1.1s						
RAO	**Raoul Island**	**48.99**	**127**	LR	LR	07 47 28.5	
	comp=Z,234nm,21.1s,baz=334,slow=34						
BNX	**BinXian**	**49.22**	**350**	⇑P	**P**	**07 28 33.8**	**+0.4**
BNX				pmax	pmax		
	comp=Z,23nm,1.0s						
YSS	**Yuzhno-Sakhali**	**49.55**	**4**	*e*P	**P**	**07 28 36.0**	**+0.2**
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
HHC	**Hu-ho-hao-te**	**49.86**	**333**	*e*P	**P**	**07 28 40.8**	**+2.3**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
TUWZ	**Tuamarina**	**49.95**	**145**	P	**P**	**07 28 39.3**	**+0.3**
RPZ	**Rata Peaks**	**49.96**	**149**	P	**P**	**07 28 39.7**	**+0.5**
BTO	**Baotou**	**50.38**	**332**	*e*P	**P**	**07 28 44.4**	**+1.9**
BTO				pP	**sP**	**07 28 49.3**	**-0.6**
BTO				sP	**pP**	**07 28 52.3**	**+4.5**
BTO				PP	**PP**	**07 30 41.3**	**+3.1**
BTO				S	**S**	**07 35 59.3**	**+4.1**
BTO				pmax	pmax		
	comp=Z,24nm,0.6s						
BTO				pmax	pmax		
	comp=Z,190nm,3.9s						
BTO				LR	LR		
	comp=Z,740nm,18.4s						
BTO				LR	LR		
	comp=Z,490nm,17.8s						
BTO				LR	LR		
	comp=Z,900nm,21.4s						
LZH	**Lanzhou**	**50.40**	**323**	*e*P	**P**	**07 28 44.1**	**+1.3**
LZH				sP	sP	07 28 55.3	+5.0
LZH				pmax	pmax		
	comp=Z,50nm,1.3s						
LZH				LR	LR		
	comp=Z,320nm,16.8s						
LZH				LR	LR		
	comp=Z,320nm,15.2s						
LZH				LR	LR		
	comp=Z,580nm,19.4s						
XLT	**XiLinHaoTe**	**50.59**	**339**	*e*P	**P**	**07 28 43.6**	**-0.3**
XLT				sP	sP	07 28 51.3	-0.1
XLT				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KLR	**Kul'dur**	**52.03**	**354**	*ce*P	**P**	**07 28 54.6**	**0.0**
KLR				pmax	pmax		
	comp=Z,14nm,1.3s						
HEH	**HeiHe**	**53.59**	**351**	*e*P	**P**	**07 29 04.8**	**-1.3**
HEH				pmax	pmax		
	comp=Z,16nm,1.3s						
HIA	**Hailar**	**54.26**	**345**	P	**P**	**07 29 12.0**	**+1.0**
HIA				IAmb	IAmb	07 29 13.6	
	comp=Z,12nm,0.9s						
HIA	**Hailar**	**54.26**	**345**	P	**P**	**07 29 12.0**	**+1.0**
HIA				pmax	pmax		
	comp=Z,12nm,0.9s						
GTA	**Gaotai**	**54.99**	**324**	*e*P	**P**	**07 29 17.8**	**+1.1**
GTA				pP	sP	07 29 23.6	-0.6
GTA				pmax	pmax		
	comp=Z,12nm,1.3s						
ZEA	**Zeya**	**57.01**	**352**	*e*P	**P**	**07 29 30.0**	**-0.6**
ZEA				*e*		07 29 41.3	
ZEA				pmax	pmax		
	comp=N,20nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.3s						
ULN	**Ulaanbaatar**	**57.40**	**335**	P	**P**	**07 29 34.7**	**+0.9**
ULN				IAmb	IAmb	07 29 35.9	
	comp=Z,44nm,2.0s						
ULN	**Ulaanbaatar**	**57.40**	**335**	*ce*P	**P**	**07 29 34.8**	**+1.1**
ULN				pmax	pmax		
	comp=Z,18nm,1.7s						
SONM	**Songino Array**	**57.65**	**335**		**P**	**07 29 35.1**	**-0.4**
SONM	**Songino Array**	**57.65**	**335**	P	**P**	**07 29 34.6**	**-0.9**
	comp=Z,1.9nm,0.8s,baz=148,slow=7.8,SNR=14						
	comp=Z,1.9nm,0.8s						
SONM	**Songino Array**	**57.65**	**335**	P	**P**	**07 29 35.1**	**-0.4**
SONM				pmax	pmax		
	comp=Z,20nm,1.7s						
PEA0B	**Petropavlovsk-**	**57.84**	**13**	P	**P**	**07 29 37.4**	**+0.8**
PEA0B				IAmb	IAmb	07 29 41.9	
	comp=Z,22nm,1.3s						
PEA0B	**Petropavlovsk-**	**57.84**	**13**	P	**P**	**07 29 37.4**	**+0.8**
PEA0B				pmax	pmax		
	comp=Z,23nm,1.3s						
PETK	**Petropavlovsk-**	**57.84**	**13**		**P**	**07 29 37.3**	**+0.7**
PETK	**Petropavlovsk-**	**57.84**	**13**	P	**P**	**07 29 36.3**	**-0.3**
	comp=Z,3.9nm,0.9s,baz=177,slow=5.8,SNR=5.8						
PETK				LR	LR	07 51 33.8	
	comp=Z,190nm,21.9s,baz=164,slow=33						
	comp=Z,3.9nm,0.9s						
PETK	**Petropavlovsk-**	**57.84**	**13**	P	**P**	**07 29 37.3**	**+0.7**
EVN	**Everest**	**58.35**	**305**		**P**	**07 29 41.2**	**-0.2**
EVN				IAmb	IAmb	07 29 58.3	
	comp=Z,19nm,1.3s						
CIT	**Chita**	**58.49**	**342**	*e*P	**P**	**07 29 42.0**	**+0.8**
CIT				*e*		07 29 48.8	
CIT				pmax	pmax		
	comp=Z,73nm,2.1s						
ZAK	**Zakamensk**	**60.92**	**335**	*e*P	**P**	**07 29 57.5**	**-0.5**
HYB	**Hyderabad**	**62.49**	**291**	*e*P	**P**	**07 30 09.3**	**+0.1**
MA2	**Magadan**	**62.79**	**7**	P	**P**	**07 30 11.2**	**+0.9**
MA2	**Magadan**	**62.79**	**7**	P	**P**	**07 30 11.2**	**+0.9**
MA2				pmax	pmax		
	comp=Z,20nm,1.1s						
MA2	**Magadan**	**62.79**	**7**	P	**P**	**07 30 11.0**	**+0.7**
	comp=Z,19nm,1.4s						
MOY	**Mondy**	**62.84**	**335**	*e*P	**P**	**07 30 11.2**	**+0.2**
MOY				pmax	pmax		
	comp=Z,35nm,2.7s						
YAK	**Yakutsk**	**64.89**	**355**	P	**P**	**07 30 24.9**	**+0.9**
YAK	**Yakutsk**	**64.89**	**355**	*e*P	**P**	**07 30 24.2**	**+0.2**
YAK				*e**PP	**sP**	**07 30 36.3**	**+4.7**
YAK				*e*		07 31 00.9	
YAK				*e*		07 32 47.2	
YAK				*e*S	**S**	**07 39 03.4**	**-1.1**
YAK				*e**SS	sS	07 39 24.1	+10
YAK				*e*		07 40 15.3	
YAK				*e*SS	**SS**	**07 43 17.1**	**+0.7**
YAK				pmax	pmax		
	comp=Z,67nm,1.2s						
YAK				pmax	pmax		
	comp=N,29nm,1.3s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,133nm,5.0s						
YAK				pmax	pmax		
	comp=N,81nm,4.6s						
YAK				pmax	pmax		
	comp=E,88nm,5.2s						
YAK				smax	smax		
	comp=N,74nm,4.0s						
YAK				smax	smax		
	comp=E,59nm,3.3s						
WMQ	**Urumqi**	**64.93**	**322**	*e*P	**P**	**07 30 25.9**	**+1.1**
WMQ				pmax	pmax		
	comp=E,33nm,1.1s						
SEY	**Seymchan**	**66.25**	**7**	*ce*P	**P**	**07 30 33.3**	**+0.4**
SEY				pmax	pmax		
	comp=Z,29nm,1.3s						
ZSN	**Zaisan**	**68.48**	**324**	*e*P	**P**	**07 30 47.4**	**+0.1**
ZSN				pmax	pmax		
	comp=Z,12nm,1.5s						
ZSN	**Zaisan**	**68.48**	**324**	*e*P	**P**	**07 30 47.5**	**+0.1**
	comp=Z,12nm,1.5s						
MK31	**Makanchi Array**	**69.71**	**322**	*ce*P	**P**	**07 30 54.7**	**-0.3**
MKAR	**Makanchi Array**	**69.71**	**322**		**P**	**07 30 55.0**	**0.0**
MKAR	**Makanchi Array**	**69.71**	**322**	P	**P**	**07 30 55.1**	**+0.1**
	comp=Z,14nm,1.0s,baz=117,slow=7.5,SNR=65						
MKAR				LR	LR	08 03 29.6	
	comp=Z,95nm,19.3s,baz=20,slow=38						
	comp=Z,14nm,1.0s						
MAKZ	**Makanchi**	**69.91**	**322**		**P**	**07 30 56.7**	**+0.5**
MAKZ	**Makanchi**	**69.91**	**322**	P	**P**	**07 30 56.7**	**+0.5**
MAKZ				pmax	pmax		
	comp=Z,26nm,1.1s						
SHLS	**Shalkode**	**69.93**	**318**	*e*P	**P**	**07 30 54.8**	**-1.8**
SHLS				pmax	pmax		
	comp=Z,11nm,1.2s						
SHLS	**Shalkode**	**69.93**	**318**	*e*P	**P**	**07 30 54.9**	**-1.8**
	comp=Z,12nm,1.2s						
UZB	**Uzynbulak**	**70.22**	**318**	*e*P	**P**	**07 30 58.2**	**-0.2**
UZB				pmax	pmax		
	comp=Z,12nm,1.1s						
UZB	**Uzynbulak**	**70.22**	**318**	*e*P	**P**	**07 30 58.2**	**-0.2**
	comp=Z,12nm,1.1s						
PRZ	**Przheval'sk**	**70.38**	**317**	P	**P**	**07 31 00.0**	**+0.6**
PRZ	**Przheval'sk**	**70.38**	**317**	P	**P**	**07 31 00.0**	**+0.6**
PRZ				pmax	pmax		
	comp=Z,36nm,1.2s						
TARG	**Taragay, Kyrgy**	**70.50**	**316**		**P**	**07 31 00.7**	**+0.2**
TARG	**Taragay, Kyrgy**	**70.50**	**316**	P	**P**	**07 31 00.7**	**+0.2**
TARG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KPKS	**Kokpek**	**70.58**	**318**	*e*P	**P**	**07 31 00.3**	**-0.2**
KPKS	**Kokpek**	**70.58**	**318**	*e*P	**P**	**07 31 00.3**	**-0.2**
SATY	**Saty**	**70.60**	**318**	*e*P	**P**	**07 31 00.6**	**-0.1**
SATY				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SATY	**Saty**	**70.60**	**318**	*e*P	**P**	**07 31 00.7**	**-0.1**
	comp=Z,7.4nm,0.8s						
NIKH	**Nikolski High**	**70.68**	**31**	P	**P**	**07 31 01.4**	**+0.7**
KSH	**Kashi**	**71.00**	**313**	P	**P**	**07 31 05.4**	**+2.2**
KSH				pmax	pmax		
	comp=Z,11nm,1.2s						
KSH				LR	LR		
	comp=Z,550nm,23.7s						
KSH				LR	LR		
	comp=Z,420nm,19.2s						
KDJ	**Kajisay**	**71.08**	**316**	P	**P**	**07 31 04.3**	**+0.6**
KDJ	**Kajisay**	**71.08**	**316**	P	**P**	**07 31 04.3**	**+0.6**
KDJ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NIL	**Nilore**	**71.24**	**307**		**P**	**07 31 06.0**	**+1.3**
NIL				IAmb	IAmb	07 31 14.7	
	comp=Z,9.5nm,0.9s						
NIL	**Nilore**	**71.24**	**307**	P	**P**	**07 31 06.0**	**+1.3**
NIL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TDK	**Taldyqorghan**	**71.38**	**319**	*e*P	**P**	**07 31 05.3**	**+0.1**
TDK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TDK	**Taldyqorghan**	**71.38**	**319**	*e*P	**P**	**07 31 05.3**	**+0.1**
	comp=Z,6.2nm,0.6s						
MDOK	**Medeo**	**71.56**	**317**	*e*P	**P**	**07 31 06.5**	**0.0**
MDOK	**Medeo**	**71.56**	**317**	*e*P	**P**	**07 31 06.5**	**0.0**
NRN	**Naryn**	**71.65**	**315**		**P**	**07 31 07.4**	**0.0**
NRN	**Naryn**	**71.65**	**315**	P	**P**	**07 31 07.4**	**0.0**
NRN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
AAA	**Alma-Ata**	**71.67**	**317**	*e*P	**P**	**07 31 07.0**	**-0.1**
AAA	**Alma-Ata**	**71.67**	**317**	*e*P	**P**	**07 31 07.0**	**-0.1**
PPT2	**Papeete2**	**71.84**	**108**	*e*LR	LR	07 53 02.0	
	comp=Z,237nm,23.2s						
ZAA0	**Zalesovo Array**	**71.86**	**330**		**P**	**07 31 07.3**	**-0.6**
ZALV	**Zalesovo Beam**	**71.86**	**330**		**P**	**07 31 08.0**	**+0.1**
ZALV	**Zalesovo Beam**	**71.86**	**330**	P	**P**	**07 31 07.3**	**-0.6**
	comp=Z,5.2nm,0.8s,baz=95,slow=3.7,SNR=18						
	comp=Z,5.2nm,0.8s						
ZALV	**Zalesovo Beam**	**71.86**	**330**	P	**P**	**07 31 08.0**	**+0.1**
BOOM	**Boomskoye usch**	**72.07**	**316**		**P**	**07 31 10.5**	**+0.8**
BOOM				IAmb	IAmb	07 31 11.6	
	comp=Z,22nm,1.4s						
BOOM	**Boomskoye usch**	**72.07**	**316**	P	**P**	**07 31 10.5**	**+0.8**
BOOM				pmax	pmax		
	comp=Z,21nm,1.4s						
UNV	**Unalaska Valle**	**72.34**	**31**	P	**P**	**07 31 11.3**	**+0.5**
	baz=239						
P08K	**Saint George I**	**72.37**	**27**	P	**P**	**07 31 11.7**	**+0.8**
	baz=236						
SPIA	**Saint Paul Isl**	**72.38**	**26**	P	**P**	**07 31 11.8**	**+0.9**
	baz=235						
AAK	**Ala-Archa**	**73.12**	**316**		**P**	**07 31 16.3**	**+0.4**
AAK				IAmb	IAmb	07 31 18.6	
	comp=Z,15nm,1.4s						
AAK	**Ala-Archa**	**73.12**	**316**	P	**P**	**07 31 16.3**	**+0.4**
AAK				pmax	pmax		
	comp=Z,15nm,1.4s						
BILL	**Bilibino**	**73.14**	**11**	P	**P**	**07 31 16.1**	**+0.8**
BILL				IAmb	IAmb	07 32 27.4	
	comp=Z,16nm,1.1s						
BILL	**Bilibino**	**73.14**	**11**	*ce*P	**P**	**07 31 14.6**	**-0.7**
BILL				pmax	pmax		
	comp=Z,17nm,1.3s						
SGDS	**Sogindy**	**73.31**	**317**	*e*P	**P**	**07 31 16.9**	**0.0**
KURK	**Kurchatov**	**73.64**	**325**		**P**	**07 31 18.8**	**+0.2**
KURK				IAmb	IAmb	07 31 20.3	
	comp=Z,16nm,1.0s						
KURK	**Kurchatov**	**73.64**	**325**	P	**P**	**07 31 19.0**	**+0.5**
KURBB	**Kurchatov Arra**	**73.65**	**325**	P	**P**	**07 31 19.0**	**+0.4**
	comp=Z,11nm,1.0s,baz=112,slow=5.7,SNR=35						
KURBB				PP	**PP**	**07 34 03.3**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=116,slow=8.9,SNR=4.7						
	comp=Z,11nm,1.0s						
ARSB	**Arslanbob**	**73.75**	**314**	P	**P**	**07 31 19.9**	**+0.3**
ARSB				IAmb	IAmb	07 31 22.2	
	comp=Z,21nm,1.2s						
ARSB	**Arslanbob**	**73.75**	**314**	P	**P**	**07 31 19.9**	**+0.3**
ARSB				pmax	pmax		
	comp=Z,21nm,1.2s						
BTLS	**Baital**	**74.26**	**318**	*e*P	**P**	**07 31 22.2**	**-0.1**
BTLS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BTLS	**Baital**	**74.26**	**318**	*e*P	**P**	**07 31 22.2**	**-0.1**
	comp=Z,8.6nm,1.1s						
FALS	**False Pass**	**74.41**	**31**	P	**P**	**07 31 23.8**	**+0.9**
TIXI	**Tiksi**	**74.46**	**357**	*i* P	**P**	**07 31 24.6**	**+1.7**
TIXI				pmax	pmax		
	comp=Z,11nm,0.9s						
BTK	**Batken**	**74.94**	**313**		**P**	**07 31 26.4**	**-0.1**
BTK				IAmb	IAmb	07 31 28.2	
	comp=Z,42nm,1.8s						
BTK	**Batken**	**74.94**	**313**	P	**P**	**07 31 26.4**	**-0.1**
BTK				pmax	pmax		
	comp=Z,42nm,1.8s						
DZA	**Taraz**	**75.41**	**316**	*e*P	**P**	**07 31 29.1**	**0.0**
DZA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
DZA	**Taraz**	**75.41**	**316**	*e*P	**P**	**07 31 29.1**	**0.0**
	comp=Z,9.1nm,1.0s						
S12K	**Black Hills**	**75.49**	**30**		**P**	**07 31 28.9**	**-0.3**
S12K	**Black Hills**	**75.49**	**30**	P	**P**	**07 31 29.6**	**+0.4**
	baz=242,SNR=8.4						
GAMB	**Gambell**	**75.77**	**20**	P	**P**	**07 31 31.7**	**+1.2**
	baz=232						
VNDA	**Vanda**	**75.83**	**175**		**P**	**07 31 31.5**	**+0.7**
VNDA	**Vanda**	**75.83**	**175**	P	**P**	**07 31 30.1**	**-0.7**
	comp=Z,6.6nm,0.9s,baz=329,slow=6.8,SNR=25						
	comp=Z,6.6nm,0.9s						
VNDA	**Vanda**	**75.83**	**175**	P	**P**	**07 31 31.5**	**+0.7**
VNDA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SIMJ	**Simiganj**	**75.91**	**311**		**P**	**07 31 31.9**	**-0.2**
SIMJ				IAmb	IAmb	07 31 35.5	
	comp=Z,15nm,1.1s						
M11K	**Mekoryuk**	**75.92**	**25**	P	**P**	**07 31 32.5**	**+1.0**
	baz=238						
KK31	**Karatay Array**	**76.05**	**316**		**P**	**07 31 32.9**	**+0.2**
KK31				IAmb	IAmb	07 31 34.2	
	comp=Z,19nm,1.4s						
KK31	**Karatay Array**	**76.05**	**316**	P	**P**	**07 31 32.9**	**+0.2**
KK31				pmax	pmax		
	comp=Z,19nm,1.4s						
KKAR	**Karatay Array**	**76.05**	**316**		**P**	**07 31 32.2**	**-0.5**
KKAR	**Karatay Array**	**76.05**	**316**	P	**P**	**07 31 32.2**	**-0.5**
IUG	**Iuzhnay**	**76.11**	**314**	*e*P	**P**	**07 31 33.1**	**0.0**
IUG				pmax	pmax		
	comp=Z,14nm,1.0s						
IUG	**Iuzhnay**	**76.11**	**314**	*e*P	**P**	**07 31 33.2**	**0.0**
	comp=Z,14nm,1.0s						
SDPT	**Sand Point**	**76.14**	**31**	P	**P**	**07 31 33.2**	**+0.3**
	baz=244						
CHNA	**Chernabura Isl**	**76.38**	**32**	P	**P**	**07 31 34.1**	**-0.1**
	baz=245						
BRLS	**Borolday**	**76.50**	**315**	*e*P	**P**	**07 31 35.2**	**0.0**
BRLS	**Borolday**	**76.50**	**315**	*e*P	**P**	**07 31 35.3**	**0.0**
BRZS	**Berezniki**	**76.85**	**323**	*e*P	**P**	**07 31 37.2**	**+0.1**
BRZS	**Berezniki**	**76.85**	**323**	*e*P	**P**	**07 31 37.2**	**+0.1**
S14K	**Fog Glacier**	**77.02**	**30**	P	**P**	**07 31 38.7**	**+0.7**
	baz=245						
M13K	**Dall Lake**	**77.15**	**26**		**P**	**07 31 38.9**	**+0.4**
M13K	**Dall Lake**	**77.15**	**26**	P	**P**	**07 31 39.3**	**+0.8**
	baz=240						
K13K	**Kusilvak Mount**	**77.38**	**24**	P	**P**	**07 31 40.5**	**+0.8**
	baz=239						
O14K	**Tigyukauivet M**	**77.52**	**27**	P	**P**	**07 31 41.4**	**+0.8**
	baz=242						
N14K	**Kuskokwak Cree**	**77.64**	**26**	P	**P**	**07 31 42.2**	**+0.9**
	baz=242						
L14K	**Kuka Creek**	**77.89**	**25**		**P**	**07 31 42.6**	**0.0**
L14K	**Kuka Creek**	**77.89**	**25**	P	**P**	**07 31 43.7**	**+1.1**
	baz=241						
M14K	**Bethel**	**77.92**	**26**		**P**	**07 31 43.4**	**+0.7**
M14K	**Bethel**	**77.92**	**26**	P	**P**	**07 31 43.9**	**+1.2**
	baz=242						
TNA	**Tin City**	**78.14**	**20**	P	**P**	**07 31 44.5**	**+0.6**
	baz=235						
O15K	**Ungalikthiuk R**	**78.14**	**28**	IAmb	IAmb	07 31 46.2	
	comp=Z,28nm,1.3s						
O15K	**Ungalikthiuk R**	**78.14**	**28**	P	**P**	**07 31 44.9**	**+0.8**
	baz=244						
J14K	**Nanvaranak Lak**	**78.24**	**23**	P	**P**	**07 31 45.6**	**+1.1**
	baz=240						
M15K	**Kasigluk River**	**78.44**	**26**	P	**P**	**07 31 46.5**	**+0.8**
	baz=243						
N15K	**Kwethluk River**	**78.47**	**27**	IAmb	IAmb	07 31 54.5	
	comp=Z,24nm,1.1s						
N15K	**Kwethluk River**	**78.47**	**27**	P	**P**	**07 31 46.8**	**+0.9**
	baz=243						
L15K	**Ungalak Mounta**	**78.56**	**25**	P	**P**	**07 31 47.2**	**+0.8**
	baz=242						
F14K	**Arctic Creek**	**78.64**	**20**	P	**P**	**07 31 47.7**	**+1.0**
	baz=237						
K15K	**Wolf Creek Mou**	**78.83**	**24**	IAmb	IAmb	07 31 52.2	
	comp=Z,20nm,1.1s						
K15K	**Wolf Creek Mou**	**78.83**	**24**	P	**P**	**07 31 49.1**	**+1.2**
	baz=242						
CHIR	**Chirikof Islan**	**78.85**	**32**	P	**P**	**07 31 49.1**	**+1.0**
	baz=248						
P16K	**Nushagak River**	**78.94**	**28**	P	**P**	**07 31 49.1**	**+0.6**
	baz=246						
O16K	**Kokwok River B**	**79.12**	**28**		**P**	**07 31 50.2**	**+0.8**
O16K				IAmb	IAmb	07 31 51.6	
	comp=Z,18nm,1.1s						
O16K	**Kokwok River B**	**79.12**	**28**	P	**P**	**07 31 50.1**	**+0.6**
	baz=245						
N16K	**Nishlik Lake**	**79.19**	**27**	P	**P**	**07 31 50.8**	**+0.9**
	baz=245,SNR=6.3						
G15K	**Niukluk**	**79.20**	**21**	P	**P**	**07 31 51.1**	**+1.3**
	baz=239						
BVAR	**Borovoye Array**	**79.23**	**325**	P	**P**	**07 31 49.1**	**-1.2**
	comp=Z,19nm,1.0s,baz=109,slow=8.0,SNR=49						

	comp=Z,19nm,1.0s						
BRVK	Borovoye	79.31	325		P	07 31 50.9	+0.3
BRVK				IAmb	IAmb	07 31 52.7	
	comp=Z,20nm,1.1s						
BRVK	Borovoye	79.31	325	P	P	07 31 50.9	+0.3
BRVK				pmax	pmax		
	comp=Z,20nm,1.1s						
M16K	Timber Creek	79.35	26	IAmb	IAmb	07 31 59.4	
	comp=Z,18nm,0.9s						
M16K	Timber Creek	79.35	26	P	P	07 31 51.9	+1.2
	baz=244,SNR=9.4						
F15K	North Star Dit	79.36	21	IAmb	IAmb	07 31 59.4	
	comp=Z,17nm,1.2s						
F15K	North Star Dit	79.36	21	P	P	07 31 51.6	+0.9
	baz=238						
L16K	Owhat River	79.42	25	P	P	07 31 52.0	+1.0
	baz=244,SNR=6.6						
Q16K	King Salmon	79.43	29	P	P	07 31 51.8	+0.7
	baz=247						
Q17K	Contact Creek	79.64	29	P	P	07 31 52.7	+0.3
	baz=248						
O17K	Koliganek Bris	79.66	28	P	P	07 31 52.7	+0.3
	baz=246,SNR=9.9						
J16K	Anvik River	79.67	24	P	P	07 31 53.4	+1.0
J16K				IAmb	IAmb	07 32 02.4	
	comp=Z,27nm,1.5s						
J16K	Anvik River	79.67	24	P	P	07 31 53.4	+1.0
	baz=242,SNR=6.4						
H16K	Elim	79.69	22	P	P	07 31 53.1	+0.7
	baz=241						
P17K	Kvichak River	79.74	28	P	P	07 31 53.3	+0.5
	baz=247						
ACHA	Angle Creek He	79.89	29	P	P	07 31 53.9	+0.1
ACHA				IAmb	IAmb	07 32 03.5	
	comp=Z,20nm,1.3s						
I17K	Unalakleet	79.92	23	P	P	07 31 54.8	+1.1
	baz=242						
N17K	Nushagak Hills	79.93	27	IAmb	IAmb	07 32 02.3	
	comp=Z,18nm,1.1s						
N17K	Nushagak Hills	79.93	27	P	P	07 31 54.6	+0.8
	baz=246,SNR=6.0						
G16K	Koyuk River	80.02	21	P	P	07 31 55.4	+1.1
G16K	Koyuk River	80.02	21	P	P	07 31 55.2	+1.0
	baz=240						
L17K	Donlin	80.11	25	P	P	07 31 56.2	+1.4
	baz=245,SNR=6.2						
M17K	Holitna River	80.17	26		P	07 31 55.6	+0.5
M17K				IAmb	IAmb	07 32 04.4	
	comp=Z,22nm,0.9s						
M17K	Holitna River	80.17	26	P	P	07 31 56.5	+1.3
	baz=246,SNR=8.7						
Q18K	Katmai Hardscr	80.21	29	P	P	07 31 55.2	-0.4
	baz=248,SNR=6.2						
J17K	VABM Dome	80.34	24		P	07 31 56.8	+0.8
J17K				IAmb	IAmb	07 32 09.2	
	comp=Z,32nm,1.4s						
J17K	VABM Dome	80.34	24	P	P	07 31 57.4	+1.4
	baz=244,SNR=6.5						
K17K	Iditarod	80.36	25		P	07 31 57.1	+0.9
K17K	Iditarod	80.36	25	P	P	07 31 57.6	+1.5
	baz=245,SNR=15						
P18K	Big Mountain,	80.39	28	P	P	07 31 57.4	+1.0
	baz=248						
OHAK	Old Harbor	80.56	31	IAmb	IAmb	07 32 05.1	
	comp=Z,18nm,1.0s						
OHAK	Old Harbor	80.56	31	P	P	07 31 57.8	+0.5
	baz=250						
O18K	Koktuh Hills	80.57	28	P	P	07 31 57.6	+0.3
	baz=248						
N18K	Kilae Creek	80.57	27	IAmb	IAmb	07 32 05.8	
	comp=Z,18nm,1.1s						
N18K	Kilae Creek	80.57	27	P	P	07 31 58.3	+1.0
	baz=247						
G17K	Kiwalik Mounta	80.69	22	P	P	07 31 59.2	+1.3
	baz=242						
H17K	Granite Mounta	80.71	22		P	07 31 58.8	+0.8
H17K	Granite Mounta	80.71	22	P	P	07 31 59.1	+1.1
	baz=243,SNR=6.2						
L18K	Granite Mounta	80.83	25	IAmb	IAmb	07 32 08.3	
	comp=Z,37nm,1.6s						
L18K	Granite Mounta	80.83	25	P	P	07 31 59.7	+1.0
	baz=246,SNR=7.8						
M18K	Stony River	80.92	26	P	P	07 32 00.2	+1.1
	baz=247,SNR=7.7						
TAOE	Nuku Hiva Isla	80.92	98	*e*LR	LR	07 57 17.0	
	comp=Z,291nm,28.3s						
D17K	Noatak River	80.93	19	P	P	07 31 59.9	+0.8
	baz=239						
KDAK	Kodiak Island	81.11	30		P	07 32 00.9	+0.7
KDAK				IAmb	IAmb	07 32 08.0	
	comp=Z,16nm,0.9s						
KDAK	Kodiak Island	81.11	30	LR	LR	08 03 33.5	
	comp=Z,296nm,20.9s,baz=188,slow=32						
KDAK	Kodiak Island	81.11	30	P	P	07 32 00.9	+0.7
KDAK				pmax	pmax		
	comp=Z,17nm,0.9s						
KDAK	Kodiak Island	81.11	30	P	P	07 32 00.8	+0.6
	baz=250						
O19K	Port Alsworth	81.11	28	P	P	07 32 00.4	+0.2
O19K				IAmb	IAmb	07 32 37.6	
	comp=Z,30nm,1.6s						
N19K	Bonanza Creek	81.26	27		P	07 32 01.8	+0.6
N19K				IAmb	IAmb	07 32 09.7	
	comp=Z,18nm,1.0s						
N19K	Bonanza Creek	81.26	27	P	P	07 32 02.0	+0.9
	baz=248,SNR=5.5						
C17K	DeLong Mountai	81.30	18	P	P	07 32 01.9	+0.9
	baz=239						
J18K	Innoko River	81.33	24	P	P	07 32 02.0	+0.6
	baz=246,SNR=7.6						
H18K	Honhosa River	81.39	22	P	P	07 32 02.4	+0.7
H18K				IAmb	IAmb	07 32 05.7	
	comp=Z,22nm,1.8s						
H18K	Honhosa River	81.39	22	P	P	07 32 02.3	+0.7
	baz=244						
P19K	Oil Pt	81.43	28	P	P	07 32 01.9	-0.1
	baz=250						
Q20K	Shuyak Island	81.48	30	P	P	07 32 02.8	+0.6
	baz=250						
F18K	Selawik	81.57	21	P	P	07 32 03.3	+0.8
	baz=243						
G18K	Tagagawik	81.61	22	P	P	07 32 03.4	+0.6
	baz=244						
L19K	White Mountain	81.61	26	IAmb	IAmb	07 32 04.9	
	comp=Z,12nm,0.9s						
L19K	White Mountain	81.61	26	P	P	07 32 03.6	+0.7
	baz=248,SNR=11						
E18K	Tukpahlearik C	81.62	20	IAmb	IAmb	07 32 10.8	
	comp=Z,13nm,1.1s						
E18K	Tukpahlearik C	81.62	20	P	P	07 32 03.4	+0.6
	baz=242						
M19K	Big River Lodg	81.71	26	P	P	07 32 04.3	+0.9
	baz=248,SNR=6.0						
GCSA	Galena City Sc	81.79	23	P	P	07 32 04.5	+0.8
	baz=246						
O20K	Slope Mountain	81.86	28	P	P	07 32 05.2	+0.9
	baz=250						
J19K	Poorman	81.99	24	IAmb	IAmb	07 32 15.8	
	comp=Z,16nm,1.2s						
J19K	Poorman	81.99	24	P	P	07 32 05.4	+0.7
	baz=247,SNR=9.0						
C18K	Utukok River	82.02	19	P	P	07 32 05.5	+0.5
	baz=241						
MAW	Mawson	82.13	202	P	P	07 32 05.5	+0.1
	comp=Z,10nm,1.0s,baz=56,slow=5.3,SNR=9.7						
	comp=Z,10nm,1.0s						
L20K	Farewell, AK	82.14	26	P	P	07 32 06.6	+0.9
	baz=249,SNR=7.2						
B18K	Kokolik River	82.18	18	P	P	07 32 06.7	+1.1
	baz=240						
M20K	Styx River	82.26	26	P	P	07 32 06.7	+0.3
	baz=249						
H19K	Roundabout Mou	82.28	22		P	07 32 07.1	+0.9
H19K	Roundabout Mou	82.28	22	P	P	07 32 07.0	+0.7
	baz=246,SNR=6.8						
G19K	Purcell Mounta	82.30	22	IAmb	IAmb	07 32 20.4	
	comp=Z,15nm,1.2s						
G19K	Purcell Mounta	82.30	22	P	P	07 32 06.9	+0.5
	baz=245,SNR=8.6						
F19K	Shaleruckik Mo	82.34	21	P	P	07 32 06.6	+0.1
	baz=245						
K20K	Telida	82.39	25	IAmb	IAmb	07 32 15.2	
	comp=Z,12nm,1.1s						
K20K	Telida	82.39	25	P	P	07 32 08.0	+1.1
	baz=248,SNR=10.0						
BRSE	Bradley Lake S	82.65	29	P	P	07 32 09.7	+1.3
	baz=252						
J20K	Nowinta River	82.66	24	IAmb	IAmb	07 32 16.6	
	comp=Z,14nm,1.1s						
J20K	Nowinta River	82.66	24	P	P	07 32 09.3	+1.1
	baz=248,SNR=16						
C19K	Lookout Ridge	82.75	19	IAmb	IAmb	07 32 10.4	
	comp=Z,17nm,1.1s						
C19K	Lookout Ridge	82.75	19	P	P	07 32 09.9	+1.2
	baz=243,SNR=7.3						
I20K	Naaghedeneel	82.76	23	P	P	07 32 10.0	+1.2
	baz=248						
CAPN	Captain Cook N	82.78	28	P	P	07 32 10.1	+1.2
	baz=251						
E19K	Redstone River	82.80	20	P	P	07 32 09.4	+0.4
E19K				IAmb	IAmb	07 32 12.6	
	comp=Z,16nm,1.1s						
E19K	Redstone River	82.80	20	P	P	07 32 09.7	+0.7
	baz=245,SNR=19						
A19K	Wainwright	82.81	17	P	P	07 32 09.9	+0.9
	baz=241						
H20K	Anotleneega Mo	82.87	23	P	P	07 32 10.1	+0.7
	baz=247						
D19K	Kuna River	82.95	19	P	P	07 32 10.5	+0.8
	baz=244,SNR=7.1						
SKT	Skwentna	83.00	27	IAmb	IAmb	07 32 10.3	
	comp=Z,9.9nm,1.2s						
SKT	Skwentna	83.00	27	P	P	07 32 09.3	-0.8
	baz=251						
PPLA	Purkeypile	83.02	26	P	P	07 32 10.4	0.0
PPLA	Purkeypile	83.02	26	P	P	07 32 10.2	-0.1
	baz=250						
F20K	Avaraart Lake	83.17	21	P	P	07 32 11.5	+0.7
	baz=246						
SUA	Susitna One	83.19	27	IAmb	IAmb	07 32 22.4	
	comp=Z,8.6nm,0.9s						
SUA	Susitna One	83.19	27	P	P	07 32 10.4	-0.8
	baz=252						
CAST	Castle Rocks	83.24	25	P	P	07 32 11.2	-0.2
	baz=250						
CHUM	Lake Minchumin	83.31	25	P	P	07 32 12.2	+0.6
	baz=250						
SEW	Seward	83.38	29	P	P	07 32 12.2	+0.1
	baz=253						
E20K	Nigu River	83.50	20	P	P	07 32 13.1	+0.5
	baz=246,SNR=13						
RC01	Rabbit Creek A	83.54	28	P	P	07 32 13.4	+0.5
	baz=253						
D20K	Etivluk River	83.54	19	P	P	07 32 13.5	+0.7
	baz=245,SNR=5.8						
M22K	Willow	83.56	27	P	P	07 32 12.6	-0.4
	baz=252						
H21K	Melozitna Rive	83.73	23	P	P	07 32 14.3	+0.5
	baz=249,SNR=6.7						
G21K	Allakaket	83.77	22	P	P	07 32 14.8	+0.8
	baz=249						
KTH	Kantishna Hill	83.78	25	IAmb	IAmb	07 32 22.2	
	comp=Z,15nm,1.1s						
B20K	Meade River	83.91	18	P	P	07 32 15.2	+0.6
	baz=245						
BPAW	Bear Paw Mtn.	83.93	25		P	07 32 14.4	-0.5
BPAW	Bear Paw Mtn.	83.93	25	P	P	07 32 14.7	-0.2
	baz=251						
PMR	Palmer	83.97	27		P	07 32 15.0	0.0
PMR				IAmb	IAmb	07 32 22.3	
	comp=Z,15nm,1.0s						
PMR	Palmer	83.97	27	P	P	07 32 15.0	0.0
PMR				pmax	pmax		
	comp=Z,15nm,1.0s						
PMR	Palmer	83.97	27	P	P	07 32 14.6	-0.4
	baz=253						
TRF	Thorofare Moun	84.02	25	P	P	07 32 14.8	-0.7
	baz=252						
F21K	Alatna River	84.04	21	P	P	07 32 16.2	+0.8
	baz=248						
GHO	Glory Hole Cre	84.11	27	IAmb	IAmb	07 32 16.9	
	comp=Z,9.5nm,1.0s						
PWL	Port Wells	84.13	28	P	P	07 32 16.0	0.0
	baz=254						
KNK	Knik Glacier	84.22	28	P	P	07 32 16.5	+0.1
	baz=254						
E21K	Killik River	84.32	20	P	P	07 32 17.4	+0.6
	baz=248						
C21K	Knifeblade Rid	84.33	19	P	P	07 32 17.6	+0.8
	baz=247,SNR=7.3						
MLY	Manley	84.33	24	IAmb	IAmb	07 32 25.8	
	comp=Z,10nm,1.0s						
P23K	Montague Islan	84.34	29	P	P	07 32 17.3	+0.3
	baz=255						
H22K	Ishtalitna Cre	84.36	23	P	P	07 32 17.9	+0.9
	baz=251						
WAT1	Susitna Watana	84.58	26	P	P	07 32 17.7	-0.5
	baz=254						
F22K	John River	84.61	21	P	P	07 32 18.8	+0.6
	baz=250						
RND	Reindeer	84.62	26		P	07 32 18.2	-0.3
RND	Reindeer	84.62	26	P	P	07 32 18.2	-0.3
RND				pmax	pmax		
	comp=Z,19nm,1.0s						
AB31	Akbulak array	84.64	320		P	07 32 18.0	-0.8
AB31				IAmb	IAmb	07 32 20.5	
	comp=Z,11nm,1.3s						
ABKAR	Akbulak array	84.64	320	P	P	07 32 18.1	-0.7
G22K	Bettles	84.66	22	P	P	07 32 18.8	+0.4
	baz=250						
MCK	McKinley	84.68	25	P	P	07 32 18.5	-0.2
MCK				IAmb	IAmb	07 32 30.1	
	comp=Z,17nm,1.2s						
MCK	McKinley	84.68	25	P	P	07 32 18.5	-0.2
MCK				pmax	pmax		
	comp=Z,17nm,1.2s						
MCK	McKinley	84.68	25	P	P	07 32 18.3	-0.4
	baz=253						
Q23K	Middleton Isla	84.71	30	P	P	07 32 18.8	0.0
	baz=256						
GLI	Glacier Island	84.72	28	P	P	07 32 18.9	0.0
	baz=255						
SCM	Sheep Creek Mo	84.86	27	P	P	07 32 19.7	0.0
	baz=255						
WAT6	Susitna Watana	84.88	26	P	P	07 32 19.6	-0.3
	baz=254						
NEA2	Nenana	84.88	24	P	P	07 32 19.9	+0.2
NEA2				IAmb	IAmb	07 32 22.1	
	comp=Z,13nm,1.3s						
NEA2	Nenana	84.88	24	P	P	07 32 20.1	+0.5
	baz=253,SNR=6.9						
D22K	Ayikyak River	84.92	20	IAmb	IAmb	07 32 28.2	
	comp=Z,18nm,1.2s						
D22K	Ayikyak River	84.92	20	P	P	07 32 20.4	+0.6
	baz=249,SNR=8.4						
I23K	Minto, Yukon-K	84.92	24	P	P	07 32 20.2	+0.4
	baz=253,SNR=13						
E22K	Anaktuvuk Pass	84.96	21	P	P	07 32 20.9	+0.8
	baz=250,SNR=12						
H23K	Yukon River	85.06	23	P	P	07 32 21.3	+0.8
H23K	Yukon River	85.06	23	P	P	07 32 21.5	+1.0
	baz=252						
G23K	Bananza Creek	85.15	22	P	P	07 32 21.9	+0.8
	baz=252,SNR=7.4						
DHY	Denali Highway	85.17	26	P	P	07 32 21.5	+0.2
	baz=254						
B22K	Teshekpuk Lake	85.22	18	IAmb	IAmb	07 32 29.4	
	comp=Z,14nm,1.1s						
B22K	Teshekpuk Lake	85.22	18	P	P	07 32 21.6	+0.4
	baz=248						
COLD	Coldfoot	85.24	22	IAmb	IAmb	07 32 24.0	
	comp=Z,12nm,1.3s						
COLD	Coldfoot	85.24	22	P	P	07 32 22.1	+0.7
	baz=252						
WRH	Wood River Hil	85.25	25	P	P	07 32 21.2	-0.3
WRH				IAmb	IAmb	07 32 28.4	
	comp=Z,16nm,1.0s						
EYAK	Cordova Ski Ar	85.27	29	P	P	07 32 21.7	+0.1
EYAK	Cordova Ski Ar	85.27	29	P	P	07 32 22.5	+0.8
	baz=256						
CCB	Clear Creek Bu	85.42	24	IAmb	IAmb	07 32 33.3	
	comp=Z,13nm,1.0s						
KLU	Klutina	85.42	28	IAmb	IAmb	07 32 46.6	
	comp=Z,17nm,1.3s						
KLU	Klutina	85.42	28	P	P	07 32 23.0	+0.4
	baz=256						
M24K	Tolsona, Glenn	85.46	27		P	07 32 23.1	+0.4
M24K	Tolsona, Glenn	85.46	27	P	P	07 32 23.1	+0.4
	baz=256						
COLA	College	85.46	24	*i* P	P	07 32 24.2	+1.7
COLA	College	85.46	24	P	P	07 32 23.2	+0.8
	baz=254						
D23K	Nanushuk River	85.63	20	P	P	07 32 24.3	+0.9
	baz=251,SNR=24						
HDA	Harding Lake	85.71	25	IAmb	IAmb	07 32 24.6	
	comp=Z,9.3nm,1.0s						
HDA	Harding Lake	85.71	25	P	P	07 32 23.2	-0.6
	baz=255,SNR=8.5						
E23K	Chandalar	85.72	21	P	P	07 32 24.5	+0.6
	baz=252,SNR=20						
H24K	Noodor Dome	85.72	23	IAmb	IAmb	07 32 24.8	
	comp=Z,12nm,1.3s						
H24K	Noodor Dome	85.72	23	P	P	07 32 24.0	+0.1
	baz=254,SNR=8.4						
KAIM	Kayak Island	85.78	29	P	P	07 32 25.0	+0.7
	baz=257						
IL31		85.83	24	P	P	07 32 23.2	-1.1
ILAR	Eielson Array	85.83	24	P	P	07 32 23.4	-1.0
ILAR	Eielson Array	85.83	24	P	P	07 32 22.3	-2.1
	comp=Z,5.7nm,0.8s,baz=261,slow=4.9,SNR=58						
ILAR				LR	LR	08 09 02.8	
	comp=Z,88nm,19.1s,baz=172,slow=34						
	comp=Z,5.7nm,0.8s						
ILAR	Eielson Array	85.83	24	P	P	07 32 23.4	-1.0
TOLK	Toolik Lake Re	85.91	20	P	P	07 32 25.6	+0.8
	baz=252,SNR=10						
BMRM	Bremner River	85.92	28	P	P	07 32 25.7	+0.7
BMRM				IAmb	IAmb	07 32 28.2	
	comp=Z,11nm,0.9s						
BMRM	Bremner River	85.92	28	P	P	07 32 25.2	+0.2
	baz=257						
C23K	Itkillik River	85.94	19	P	P	07 32 25.6	+0.7
	baz=251,SNR=9.7						
HMT	Hamilton	85.94	29	IAmb	IAmb	07 32 28.1	
	comp=Z,12nm,0.8s						
PAX	Paxson	85.98	26	IAmb	IAmb	07 32 25.9	
	comp=Z,16nm,1.7s						
PAX	Paxson	85.98	26	P	P	07 32 25.4	+0.1
	baz=256						
HARP	HAARP	85.99	27	P	P	07 32 25.3	0.0
	baz=257						
K24K	Donnelly Dome	86.05	26	P	P	07 32 25.7	+0.2
	baz=256						
N25K	Chitina, Valde	86.06	28	P	P	07 32 26.3	+0.5
	baz=257						
AKTO	Aktyubinsk	86.07	321	P	P	07 32 24.9	-1.0
	comp=Z,3.1nm,1.1s,baz=74,slow=5.1,SNR=5.3						
	comp=Z,3.1nm,1.1s						
G24K	Hadweenzic Riv	86.11	23	P	P	07 32 26.5	+0.8
	baz=254,SNR=11						
E24K	Your Creek	86.13	21	P	P	07 32 26.5	+0.7
	baz=253						
F24K	Squaw Lake	86.19	22	P	P	07 32 27.2	+1.0
	baz=254,SNR=16						
BERG	Berg Lake	86.23	29	IAmb	IAmb	07 32 27.5	
	comp=Z,16nm,1.0s						
D24K	Happy Valley	86.33	20	P	P	07 32 27.6	+0.9
	baz=253,SNR=7.6						
GLB	Gilahina Butte	86.40	28		P	07 32 27.4	+0.1
GLB				IAmb	IAmb	07 32 30.1	
	comp=Z,8.9nm,0.8s						
J25K	Salcha River,	86.42	25	IAmb	IAmb	07 32 27.4	
	comp=Z,14nm,1.4s						
J25K	Salcha River,	86.42	25	P	P	07 32 27.0	-0.4
	baz=256,SNR=7.0						
RIDG	Independent Ri	86.44	26	IAmb	IAmb	07 32 30.7	
	comp=Z,7.9nm,0.8s						
RIDG	Independent Ri	86.44	26	P	P	07 32 27.5	0.0
	baz=257						
C24K	Franklin Bluff	86.54	19	P	P	07 32 28.2	+0.4
	baz=253						
CRQM	Cirque	86.57	29	P	P	07 32 29.3	+0.9
CRQM				IAmb	IAmb	07 32 31.8	
	comp=Z,13nm,0.8s						
PRP	Porcupine Dome	86.58	24	P	P	07 32 29.2	+1.0
	baz=256						
CRQE	Cirque	86.60	29	P	P	07 32 28.6	+0.2
	baz=258						
H25L	Birch Creek	86.64	23	P	P	07 32 28.8	+0.5
	baz=256,SNR=8.8						
G25K	Bearman Lake	86.66	23	P	P	07 32 29.5	+1.1
	baz=255,SNR=8.3						
MCARA	McCarthy VSAT	86.75	28	P	P	07 32 30.0	+0.9
	baz=258						
MENT	Mentasta	86.76	27	P	P	07 32 29.9	+0.8
ARTI	Arti	86.81	327		P	07 32 29.2	-0.2
ARTI	Arti	86.81	327	P	P	07 32 28.6	-0.8
	comp=Z,5.2nm,0.9s,baz=57,slow=21,SNR=5.4						
	comp=Z,5.2nm,0.9s						
ARTI	Arti	86.81	327	*c i*P	P	07 32 28.6	-0.8
ARTI						07 35 48.4	
ARTI				S	SKSac	07 42 54.5	-1.2
ARTI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SCRK	Sand Creek	86.86	26		P	07 32 29.8	+0.2
SCRK				IAmb	IAmb	07 32 30.2	
	comp=Z,26nm,2.0s						
SCRK	Sand Creek	86.86	26	P	P	07 32 29.9	+0.2
	baz=258						
L26K	Log Cabin Wild	86.94	27	P	P	07 32 31.0	+1.0
	baz=258						
FYU	Fort Yukon	86.94	23	P	P	07 32 30.8	+1.0
M26K	Nabesna, AK	86.97	27	P	P	07 32 30.9	+0.7
	baz=258						
F25K	Christian Rive	87.04	22	IAmb	IAmb	07 32 32.1	
	comp=Z,9.2nm,1.1s						
F25K	Christian Rive	87.04	22	P	P	07 32 31.6	+1.2
	baz=256,SNR=11						
MESA	MESA	87.04	29	P	P	07 32 31.8	+1.1
	baz=260						
J26L	Joseph Creek	87.16	25		P	07 32 31.5	+0.5
J26L	Joseph Creek	87.16	25	P	P	07 32 31.4	+0.3
	baz=258,SNR=13						
E25K	Arctic Village	87.19	21	P	P	07 32 32.4	+1.3
	baz=256,SNR=14						
D25K	Kavik River	87.21	20	P	P	07 32 32.8	+1.7
	baz=255						
GRNC	Granite Creek	87.24	29	P	P	07 32 32.1	+0.4
QSPA	South Pole Qui	87.28	180	P	P	07 32 30.8	-0.9
QSPA	South Pole Qui	87.28	180	P	P	07 32 30.6	-1.0
	comp=Z,11nm,1.0s,baz=166,slow=0.8,SNR=17						
	comp=Z,11nm,1.0s						
BARN	Barnard Glacie	87.34	29	IAmb	IAmb	07 32 33.5	
	comp=Z,9.6nm,0.9s						
BMAR	Burnt Mountain	87.39	22		P	07 32 32.5	+0.5
M27K	Edge Creek, AK	87.47	27	P	P	07 32 33.3	+0.6
	baz=260,SNR=10.0						
CTG	Chitna Glacier	87.48	29	P	P	07 32 33.5	+0.8
	baz=260,SNR=7.1						
I26K	Coal Creek Min	87.49	24	IAmb	IAmb	07 32 52.8	
	comp=Z,16nm,1.6s						
I26K	Coal Creek Min	87.49	24	P	P	07 32 33.7	+1.2
	baz=258						
G26K	Porcupine Rive	87.59	23	P	P	07 32 34.3	+1.3
	baz=258,SNR=23						
LOGN	Logan Glacier	87.62	29	P	P	07 32 34.3	+0.9
F26K	Sheenjek River	87.62	22	P	P	07 32 34.4	+1.3
	baz=257,SNR=16						
L27K	Beaver Creek,	87.63	27	IAmb	IAmb	07 32 35.2	
	comp=Z,9.5nm,1.1s						
L27K	Beaver Creek,	87.63	27	P	P	07 32 33.8	+0.6
	baz=260,SNR=10						
BCAR	Beaver Creek A	87.65	27		P	07 32 33.5	+0.1
K27K	Chicken	87.70	26	P	P	07 32 34.7	+1.1
	baz=259						
PINM	Pinnacle	87.86	30	P	P	07 32 35.7	+1.2
	baz=261						
BVCY	Beaver Creek	87.95	27	P	P	07 32 35.8	+0.9
	baz=260						
O28M	Mount Upton	88.00	29	P	P	07 32 35.9	+0.5
	baz=261,SNR=7.1						
YUK3	Moose Creek	88.03	28	P	P	07 32 35.9	+0.4
	baz=261,SNR=12						
I27K	Kandik River	88.18	24	P	P	07 32 36.7	+0.8
	baz=260,SNR=26						
C27K	Jago River	88.20	20	P	P	07 32 36.7	+0.9
	baz=258						
PNL	Peninsula	88.23	30	P	P	07 32 36.7	+0.5
	baz=262						
YUK8	Steele Glacier	88.28	29	P	P	07 32 37.6	+0.9
	baz=261						
H27K	Steamboat Moun	88.33	24	P	P	07 32 37.7	+1.2
	baz=260,SNR=21						
G27K	Doyon Strip	88.39	23	P	P	07 32 37.9	+1.1
	baz=260,SNR=6.8						
E27K	Coleen River	88.66	22		P	07 32 39.0	+1.0
E27K	Coleen River	88.66	22	P	P	07 32 39.2	+1.1
	baz=260						
O29M	Mount Kennedy	88.72	30	P	P	07 32 39.4	+0.7
	baz=262						
YUK4	Talbot Arm	88.83	29	P	P	07 32 40.1	+0.9
	baz=262,SNR=8.1						
I28M	Miner Creek	88.85	24	P	P	07 32 39.8	+0.7
	baz=261,SNR=15						

DAWY	Dawson	88.87	26	P	P	07 32 39.9	+0.8
	baz=262,SNR=21						
YUK6	Outpost Mounta	88.91	29	P	P	07 32 40.2	+0.6
	baz=263						
P29M	Windy Craggy	89.06	30	IAmb	IAmb	07 32 43.5	
	comp=Z,9.0nm,0.8s						
P29M	Windy Craggy	89.06	30	P	P	07 32 41.1	+1.0
	baz=263						
M29M	Somme Creek	89.06	27	P	P	07 32 40.3	+0.2
M29M				IAmb	IAmb	07 32 52.5	
	comp=Z,8.6nm,1.1s						
M29M	Somme Creek	89.06	27	P	P	07 32 41.0	+0.8
	baz=262,SNR=11						
D27M	Malcolm River	89.08	21	P	P	07 32 41.2	+1.2
	baz=260						
F28M	Old Crow	89.21	22	P	P	07 32 41.9	+1.3
	baz=261						
L29M	L29M	89.30	27	IAmb	IAmb	07 32 53.3	
	comp=Z,13nm,1.1s						
L29M	L29M	89.30	27	P	P	07 32 42.3	+1.1
	baz=263,SNR=11						
HYT	Haines Junctio	89.31	29	IAmb	IAmb	07 32 53.0	
	comp=Z,13nm,1.1s						
HYT	Haines Junctio	89.31	29	P	P	07 32 42.0	+0.6
	baz=263,SNR=9.8						
E28M	Babbage River	89.48	21		P	07 32 42.1	+0.2
E28M	Babbage River	89.48	21	P	P	07 32 42.6	+0.7
	baz=262						
P30M	Million Dollar	89.50	30	P	P	07 32 43.2	+0.9
	baz=264						
I29M	Ogilvie Camp,	89.51	25	P	P	07 32 42.9	+0.8
	baz=263,SNR=12						
N30M	Aishikik Lake	89.59	29	P	P	07 32 43.2	+0.6
	baz=264,SNR=5.1						
H29M	Whitestone	89.59	24	P	P	07 32 43.3	+0.8
	baz=263						
S31K	Pelican	89.66	32	P	P	07 32 43.1	+0.3
	baz=264						
K29M	Barlow Dome	89.66	26	P	P	07 32 43.6	+0.7
	baz=263,SNR=14						
PLBC	Pleasant Camp	89.73	31	P	P	07 32 43.5	+0.3
	baz=264						
G29M	Pine Creek	89.82	23	P	P	07 32 44.1	+0.6
	baz=263						
O30N	Mendenhall	90.00	29	P	P	07 32 44.6	+0.1
O30N	Mendenhall	90.00	29	P	P	07 32 45.0	+0.5
	baz=265						
E29M	Blow River	90.05	22	P	P	07 32 45.4	+0.9
	baz=263						
SIT	Sitka	90.06	33	P	P	07 32 45.5	+0.7
	baz=265						
N31M	Braeburn, Yuko	90.21	29	IAmb	IAmb	07 32 46.8	
	comp=Z,7.9nm,1.0s						
N31M	Braeburn, Yuko	90.21	29	P	P	07 32 46.1	+0.6
	baz=265						
J30M	Hart River	90.25	25	IAmb	IAmb	07 32 53.8	
	comp=Z,13nm,1.4s						
J30M	Hart River	90.25	25	P	P	07 32 46.5	+0.8
	baz=264,SNR=10						
SKAG	Skagway	90.26	31	P	P	07 32 46.5	+0.9
SKAG				IAmb	IAmb	07 32 54.2	
	comp=Z,21nm,1.4s						
SKAG	Skagway	90.26	31	P	P	07 32 46.6	+0.9
	baz=265						
EPYK	Eagle Plains	90.28	24	P	P	07 32 46.1	+0.5
	baz=264						
I30M	Mount Dempster	90.30	25	P	P	07 32 46.3	+0.3
	baz=264						
G30M	tAoh Zraii Nji	90.53	23		P	07 32 46.5	-0.3
G30M	tAoh Zraii Nji	90.53	23	P	P	07 32 47.0	+0.1
	baz=264						
WHY	Whitehorse	90.58	29		P	07 32 47.4	+0.1
WHY				IAmb	IAmb	07 32 48.3	
	comp=Z,10nm,0.9s						
WHY	Whitehorse	90.58	29	P	P	07 32 47.6	+0.3
	baz=266,SNR=5.5						
R32K	Eaglecrest	90.59	32	P	P	07 32 47.6	+0.4
	baz=266						
F30M	Barrier River	90.76	22	P	P	07 32 48.4	+0.5
	baz=265						
SYO	Syowa Base	90.77	201	⇓*e*X	P	07 32 45.6	-2.2
M31M	Drury Creek, Y	90.93	28	P	P	07 32 48.5	-0.3
M31M				IAmb	IAmb	07 32 50.2	
	comp=Z,20nm,1.9s						
M31M	Drury Creek, Y	90.93	28	P	P	07 32 48.8	0.0
	baz=266						
P32M	Atlin	91.09	31	IAmb	IAmb	07 33 04.3	
	comp=Z,10nm,1.3s						
P32M	Atlin	91.09	31	P	P	07 32 50.1	+0.5
	baz=267						
H31M	Peel River	91.19	24	P	P	07 32 50.5	+0.6
	baz=266						
G31M	Satah River	91.29	23	P	P	07 32 50.2	-0.1
	baz=266						
FARO	Faro, Yukon	91.42	28	P	P	07 32 51.2	+0.1
FARO	Faro, Yukon	91.42	28	P	P	07 32 51.4	+0.4
	baz=267						
N32M	Quiet Lake	91.49	29	P	P	07 32 51.7	+0.2
	baz=267						
F31M	Tsiigehtchic	91.53	23	P	P	07 32 51.5	+0.1
	baz=267						
P33M	Teslin, Yukon	91.57	30	P	P	07 32 51.8	-0.1
	baz=268						
INK	Inuvik	91.66	22	P	P	07 32 51.2	-0.8
INK				IAmb	IAmb	07 33 03.2	
	comp=Z,7.9nm,1.3s						
INK	Inuvik	91.66	22	P	P	07 32 51.2	-0.8
INK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
INK	Inuvik	91.66	22	P	P	07 32 52.1	+0.1
	baz=267						
WRAK	Wrangell Islan	91.66	34	P	P	07 32 52.2	0.0
	baz=268						
Q32M	Nakina River	91.80	31	P	P	07 32 52.9	-0.3
	baz=268						
V35K	Ketchikan	92.03	35	P	P	07 32 54.3	+0.3
	baz=268						
S34M	Telegraph Cree	92.37	32	P	P	07 32 56.0	+0.5
	baz=269						
MMPY	Sheldon Lake,	92.40	28	P	P	07 32 56.4	+0.7
	baz=269						
R33M	Jennings River	92.48	31	P	P	07 32 56.7	+0.5
	baz=269						
BELG	Belogornoye	92.71	322	P	P	07 32 56.2	-1.0
	comp=Z,14nm,1.0s,baz=24,slow=3.9,SNR=5.1						
	comp=Z,14nm,1.0s						
T35M	Bob Quinn	92.83	33	P	P	07 32 57.8	+0.1
	baz=270						
KIV	Kislovodsk	96.13	314	*e*P	P	07 33 12.8	-0.4
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
OBN	Obninsk	99.08	325	LR	LR	08 19 48.1	
	comp=Z,96nm,21.8s,baz=359,slow=36						
OBN	Obninsk	99.08	325	⇑*e*P	Pdif	07 33 24.9	-1.2
OBN				*e*		07 37 28.0	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,158nm,21.0s						
NVAR	Mina Array Bea	101.89	51	P	Pdif	07 33 39.0	-0.3
	comp=Z,0.6nm,0.8s,baz=262,slow=7.1,SNR=4.1						
MNK	Minsk	104.12	326	*i* P	Pdif	07 33 46.7	-1.9
	comp=E,18nm,0.9s						
MNK				*i* P	Pdif	07 33 46.7	-1.9
	comp=N,13nm,0.7s						
MNK				*i* P	Pdif	07 33 46.7	-1.9
	comp=Z,8.0nm,0.5s,baz=74						
MNK				*i* PP	PKiKP	07 38 04.6	-1.0
MNK				*i* PPP	PPP	07 40 16.3	
MNK				*i* SKS		07 45 15.6	
MNK				*i* PS	PS	07 47 17.2	-1.0
MNK				*i* SS	SS	07 52 55.1	+1.0
MNK				*i* SSS	SSS	07 56 51.4	
MNK				*i* LRM	MLR	08 21 14.6	
	comp=Z,125nm,20.3s						
MNK				*i* LRM	MLR	08 21 51.4	
	comp=N,203nm,21.7s						
MNK				*i* LRM	MLR	08 21 53.3	
	comp=E,233nm,21.2s						
MNK	Minsk	104.12	326	*i* P	Pdif	07 33 46.6	-1.9
MNK				*i*		07 38 04.6	
MNK				*i* PPP	PPP	07 40 16.2	
MNK				*i*		07 45 15.5	
MNK				*i* PS	PS	07 47 17.2	-1.0
MNK				*i* SS	SS	07 52 55.0	+0.9
MNK				*i* SSS	SSS	07 56 51.3	
MNK				pmax	pmax		
	comp=E,18nm,0.9s						
MNK				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MNK				pmax	pmax		
	comp=N,13nm,0.7s						
MNK				MLR	MLR		
	comp=Z,125nm,20.0s						
MNK				MLR	MLR		
	comp=N,203nm,22.0s						
MNK				MLR	MLR		
	comp=E,233nm,21.0s						
NACGM	Naroch	104.62	326	*e*PKiKP	PKiKP	07 38 07.0	+0.5
	comp=Z,4.0nm,0.6s,baz=73						
PB08	IPOC Station P	144.54	131	PKPdf	PKPab	07 39 21.8	+0.4
GO01	Chusmiza	144.79	130	PKPdf	PKPab	07 39 23.2	+0.7
MACI	Morro de la Ar	145.22	319	PKPbc	PKPbc	07 39 21.6	-1.8
PB16	IPOC Station P	145.31	128	PKPbc	PKPbc	07 39 21.3	-3.1
FLOC	Florencia	145.72	91	PKPdf	PKPdf	07 39 22.1	-2.8
SMRC	Santa Marta, M	146.34	74	PKPdf	PKPdf	07 39 24.8	-1.0
SC01	Santiago de lo	146.82	58	PKPbc	PKPdf	07 39 28.1	+1.7
ROSC	El Rosal	147.05	85	PKPbc	PKPdf	07 39 28.2	+0.7
	comp=Z,5.9nm,0.4s,baz=79,slow=16,SNR=4.8						
CZSB	Cruzeiro do Su	147.07	109	PKPbc	PKPbc	07 39 29.2	0.0
CPUP	Villa Florida	147.30	153	PKPbc	PKPbc	07 39 29.6	+0.2
CPUP	Villa Florida	147.30	153	PKPbc	PKPdf	07 39 28.5	+1.4
	comp=Z,1.3nm,0.8s,baz=92,slow=2.9,SNR=11						
CPUP	Villa Florida	147.30	153	PKP2	PKPbc	07 39 29.6	+0.2
LPAZ	La Paz	147.53	126	PKPbc	PKPdf	07 39 30.4	+1.9
LPAZ	La Paz	147.53	126	PKPbc	PKPbc	07 39 30.9	-0.2
	comp=Z,2.9nm,0.8s,baz=294,slow=3.1,SNR=11						
RUSC	La Rusia	148.22	83		PKPdf	07 39 31.1	+1.5
SDV	Santo Domingo	150.25	77	PKPbc	PKPbc	07 39 37.5	-0.1
TBTG	Tabatinga, AM	150.68	103	PKPbc	PKPbc	07 39 38.0	-0.4
UUPR	Utuado, UPR, P	150.72	56	PKPbc	PKPbc	07 39 38.6	+0.3
OBIP	Obispado Ponce	150.92	57	PKPdf	PKPdf	07 39 30.4	-2.7
OBIP					sPKPdf	07 39 38.4	-2.6
OBIP				PKPab	sPKPbc	07 39 45.6	-1.0
CELP	Cerrillos	150.93	56		PKPbc	07 39 38.4	-0.4
SVB	Belmont	157.69	61	*e*P	PKPdf	07 39 45.0	+2.3

ASRS ***24*** *07:20:11.0±1.0, 53.°65N×87.°95E, h0^{km}, M3.1, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC ***24*** *07:20:14.8±3.1, 53.°59N×88.°01E, h0^{km}, mbtmp3.4/2, ML2.5/2, Error ellipse: s-maj=28.1km s-min=17.9km az=55.0*

NNC ***24*** *07:20:17.4±2.7, 53.°62N×87.°87E, h5^{km}±28^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=35.1km s-min=9.5km az=62.0, Suspected Mining explosion.*

ISC 24 07:20:16.4±4.7**, 53.°7N**±0.°1×**87.°9E**±0.°3**, h0**^{km}**, n7,** σ**1.^{s}02**/9**, 4C-4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.86	280	I	I	07 32 00.0	
	0.1nm,1.1s,baz=97,slow=318,SNR=26						
ZAA0	Zalesovo Array	1.86	280	⇑P	Pn	07 20 49.2	-0.3
	1.2nm,0.7s						
ZAA0				⇑S	Sn	07 21 14.0	+0.3
	3.7nm,0.7s						
ZALV	Zalesovo Beam	1.86	280	Pn	Pn	07 20 49.4	-0.1
	2.0nm,0.3s,baz=102,slow=13,SNR=15						
ZALV				Lg	Lg	07 21 15.6	
	5.3nm,0.3s,baz=94,slow=24,SNR=18						
KURBB	Kurchatov Arra	6.52	246	Pn	Pn	07 21 53.5	0.0
	0.1nm,0.3s,baz=62,slow=14,SNR=2.1						
KURBB				Lg	Lg	07 23 41.8	
	baz=64,slow=32						
	2.1nm,0.2s						
MK31	Makanchi Array	7.75	210	⇓Pn	Pn	07 22 10.1	-0.4
	1.0nm,0.8s,baz=29,slow=13,SNR=12						
MK31				⇓Sn	Sn	07 23 37.9	-1.0
	1.5nm,0.8s						
MK31				⇑Lg	Lg	07 24 24.1	
	2.0nm,0.7s,baz=33,slow=31,SNR=4.2						
MKAR	Makanchi Array	7.75	210	Pn	Pn	07 22 09.4	-1.0
	0.1nm,0.3s,baz=26,slow=13,SNR=5.3						
MKAR				Lg	Lg	07 24 19.3	
	0.1nm,0.3s,baz=35,slow=33,SNR=5.4						
	0.3nm,0.2s						
MAKZ	Makanchi	7.83	211	⇓Pn	Pn	07 22 13.5	+1.9
	0.9nm,0.6s						
MAKZ				⇓Sn	Sn	07 23 41.2	+0.3
	1.4nm,0.8s						
MAKZ				⇑Lg	Lg	07 24 22.8	
	4.2nm,0.9s						

IDC ***24*** *07:30:20.4±2.0, 2.°49S×138.°60E, h0^{km}, mb3.2/2, mbtmp3.3/4, ML3.3/2, Error ellipse: s-maj=35.8km s-min=19.0km az=163.0*

DJA ***24*** *07:30:21.6±1.2, 3°S±6°×13°8E±°, h27^{km}±14^{km}, M3.4/5, MLv3.4/5*

ISC 24 07:30:23.7±1.1**, 2.°4S**±0.°1×**138.°42E**±0.°07**, h32**^{km}**, n8,** σ**1.^{s}34**/8**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.51	35	P	Pb	07 30 34.5	+0.1
GENI	Genyem	1.76	96	P	Pn	07 30 50.3	-1.6
JAY	Jayapura	2.29	93	Pn	Pn	07 30 58.2	-1.0
	3.5nm,0.3s,baz=219,slow=12,SNR=12						
JAY				Lg	Lg	07 31 26.8	
	4.4nm,0.3s,baz=136,slow=20,SNR=4.8						
	9.8nm,0.4s						
JAY	Jayapura	2.29	93	P	Pn	07 30 58.4	-0.9
BAKI	Biak	2.61	298	P	Pn	07 31 02.2	-1.4
WRA	Warramunga Arr	17.87	193	P	P	07 34 30.9	+0.5
	0.2nm,0.3s,baz=17,slow=13,SNR=4.6						
	0.4nm,0.4s						
ASAR	Alice Springs	21.57	191	P	P	07 35 11.0	+0.2
	0.4nm,0.5s,baz=16,slow=11,SNR=6.6						
	0.4nm,0.5s						
ILAR	Eielson Array	85.69	24	P	P	07 43 00.6	+1.5
	0.1nm,0.5s,baz=273,slow=5.3,SNR=1.7						
	0.1nm,0.5s						

IDC ***24*** *07:32:24.9±0.6, 30.°64S×177.°21W, h0^{km}, mb4.2/10, mbtmp4.3/12, ML4.2/2, Error ellipse: s-maj=23.2km s-min=15.2km az=86.0*

NEIC ***24*** *07:32:27.8±0.8, 31.°08S±0.°07×177.°3W±0.°2, h10^{km}±2^{km}, mb4.6/15, Error ellipse: s-maj=24.3km s-min=9.2km az=68.0*

ISC 24 07:32:28.5±0.6**, 30.°67S**±0.°07×**177.°2W**±0.°1**, h24**^{km}**, n46,** σ**0.^{s}75**/47**, mb4.5**/21**, 5C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.55	335	Pn	Pn	07 32 54.3	-0.3
	369nm,0.3s,baz=230,slow=4.5,SNR=14						
RAO				Sn	Sb	07 33 15.8	0.0
	428nm,0.3s,baz=121,slow=23,SNR=9.2						
URZ	Urewera	8.92	210	Pn	Pn	07 34 36.6	+0.7
	1.6nm,0.3s,baz=169,slow=1.0,SNR=5.6						
	6.7nm,0.5s						
RTZ	Ruatahuna	9.27	210	Pn	Pn	07 34 35.7	-5.1
RPZ	Rata Peaks	16.03	212	Pn	Pn	07 36 12.8	+0.5
	1.8nm,0.3s,baz=12,slow=2.7,SNR=6.1						
	12nm,0.6s						
DZM	Mont Dzumac	16.98	296	Pn	P	07 36 26.9	+0.6
	0.4nm,0.3s,baz=165,slow=20,SNR=5.6						
EIDS	Eidsvold	28.46	273	P	P	07 38 20.7	-1.1
EIDS				IAmb	IAmb	07 38 53.6	
	comp=Z,11nm,1.1s						
TOO	Toolangi	31.52	247	P	P	07 38 47.6	-1.1
TOO				IAmb	IAmb	07 39 01.3	
	comp=Z,2.9nm,1.0s						
CTAO	Charters Tower	34.55	279	P	P	07 39 15.3	0.0
CTAO				IAmb	IAmb	07 39 19.9	
	comp=Z,7.0nm,0.7s						
STKA	Stephens Creek	35.11	257	P	P	07 39 20.5	+0.4
STKA	Stephens Creek	35.11	257	P	P	07 39 20.2	+0.1
	comp=Z,4.5nm,0.6s,baz=98,slow=13,SNR=8.3						
	comp=Z,4.5nm,0.6s						
PMG	Port Moresby	39.37	295	P	P	07 39 57.5	+1.1
BBOO	Buckleboo	39.58	254	P	P	07 39 57.8	-0.2
BBOO				IAmb	IAmb	07 40 06.6	
	comp=Z,25nm,1.2s						
AS31	Alice Springs	43.81	267	P	P	07 40 32.8	+0.1
ASAR	Alice Springs	43.81	267	P	P	07 40 32.1	-0.6
ASAR	Alice Springs	43.81	267	P	P	07 40 31.8	-0.9
	comp=Z,2.1nm,0.6s,baz=106,slow=7.7,SNR=26						
ASAR				PcP	PcP	07 42 19.3	+0.2
	comp=Z,1.2nm,0.5s,baz=120,slow=3.6,SNR=6.2						
	comp=Z,2.1nm,0.6s						
WR8	Warramunga Arr	44.68	272	P	P	07 40 39.7	0.0
WR8				IAmb	IAmb	07 40 53.6	
	comp=Z,8.3nm,0.9s						
WRAB	Tennant Creek	44.81	272	P	P	07 40 40.6	-0.2
WRAB				IAmb	IAmb	07 40 46.0	
	comp=Z,6.5nm,0.9s						
WRA	Warramunga Arr	44.82	272	P	P	07 40 39.8	-1.1
WRA	Warramunga Arr	44.82	272	P	P	07 40 40.2	-0.7
	comp=Z,3.8nm,0.5s,baz=112,slow=7.9,SNR=19						
	comp=Z,3.8nm,0.5s						
WB0	Warramunga Arr	44.84	272	P	P	07 40 41.0	0.0
WB0				IAmb	IAmb	07 40 52.4	
	comp=Z,8.2nm,0.8s						
VNDA	Vanda	47.90	186	P	P	07 41 02.0	-2.2
VNDA				IAmb	IAmb	07 41 18.6	
	comp=Z,2.0nm,0.8s						
VNDA	Vanda	47.90	186	P	P	07 41 05.8	+1.5
	comp=Z,0.6nm,0.6s,baz=18,slow=3.9,SNR=3.8						
	comp=Z,0.6nm,0.6s						
KNRA	Kununurra	51.44	274	P	P	07 41 32.4	+0.4
FITZ	Fitzroy Crossi	53.07	270	P	P	07 41 44.1	0.0
QSPA	South Pole Qui	59.44	180	P	P	07 42 29.9	+0.8
	comp=Z,6.1nm,0.8s,baz=25,slow=0.9,SNR=58						
	comp=Z,6.1nm,0.8s						
BELA	Belgrano 2	69.42	172	P	P	07 43 33.2	-0.8
BELA				IAmb	IAmb	07 43 45.4	
	comp=Z,4.6nm,0.9s						
TROLL	Troll, Antarti	77.60	180	⇑P	P	07 44 22.0	-0.4
	comp=Z,192nm,0.9s						
SNAA	Sanae	77.87	178	⇑P	P	07 44 23.4	-0.4
	comp=Z,44nm,0.7s						
SNAA	Sanae	77.87	178	P	P	07 44 23.0	-0.8
	comp=Z,2.1nm,0.8s,baz=218,slow=6.0,SNR=9.5						
	comp=Z,2.1nm,0.8s						
VNA3	Neumayer Olymp	77.99	176	⇑P	P	07 44 23.8	-0.5
	comp=Z,5.8nm,0.6s						
VNA2	Neumayer--Watz	78.43	177	⇑P	P	07 44 26.6	-0.2
	comp=Z,4.5nm,0.6s,baz=167,slow=5.7						
VNA1	Neumayer--Stat	78.66	176	⇑P	P	07 44 28.0	0.0
	comp=Z,2.5nm,0.6s						
MJAR	Matsushiro Arr	78.87	325	P	P	07 44 28.9	-0.7
	comp=Z,0.8nm,0.3s,baz=151,slow=5.1,SNR=2.0						
	comp=Z,0.8nm,0.3s						
KSRS	Korea Array	85.02	319	P	P	07 45 02.5	+0.7
	comp=Z,1.3nm,0.8s,baz=154,slow=4.7,SNR=4.9						
	comp=Z,1.3nm,0.8s						
PETK	Petropavlovsk-	86.25	345	P	P	07 45 07.0	-0.7
	comp=Z,1.8nm,0.7s,baz=134,slow=6.4,SNR=4.0						
	comp=Z,1.8nm,0.7s						
NVAR	Mina Array Bea	87.95	42	P	P	07 45 17.6	+1.0
	comp=Z,1.0nm,0.9s,baz=224,slow=9.1,SNR=5.7						
	comp=Z,1.0nm,0.9s						
KURBB	Kurchatov Arra	121.79	313	PKP	PKPdf	07 51 18.9	-1.1
	comp=Z,0.6nm,0.7s,baz=116,slow=1.8,SNR=4.6						
ARCES	ARCESS Array B	139.00	348	PKP	PKPdf	07 51 53.5	+1.4
	comp=Z,1.4nm,0.7s,baz=92,slow=2.8,SNR=4.5						
FINES	FINESS Array B	145.64	340	PKPbc	PKPdf	07 52 04.2	+0.1
	comp=Z,8.7nm,0.7s,baz=56,slow=3.4,SNR=34						
KBZ	Khabaz	145.85	304	PKPbc	PKPab	07 52 06.5	+0.4
	comp=Z,2.1nm,0.8s,baz=218,slow=8.0,SNR=4.1						
NB2	NORSAR Subarra	149.12	352	PKP	PKPbc	07 52 14.2	+0.1
	comp=Z,4.2nm,0.9s,baz=14,slow=4.3						
NOA	NORSAR Array B	149.12	352	PKPbc	PKPbc	07 52 13.3	-0.8
	comp=Z,2.7nm,0.8s,baz=14,slow=4.2,SNR=10						
HFS	Hagfors	149.65	349	PKPbc	PKPbc	07 52 15.3	-0.1
	comp=Z,3.4nm,0.7s,baz=103,slow=2.0,SNR=9.2						
AKASG	Malin Array Be	151.94	323	PKPbc	PKPbc	07 52 20.6	-0.5
	comp=Z,1.8nm,0.6s,baz=50,slow=2.7,SNR=12						
MMAI	Mount Meron Ar	152.29	283	PKPbc	PKPbc	07 52 22.5	-0.1
	comp=Z,0.6nm,0.3s,baz=356,slow=2.2,SNR=1.5						
ESDC	Sonseca Array	169.44	30	PKPab	PKPab	07 53 47.2	+0.5
	comp=Z,0.5nm,0.7s,baz=316,slow=4.8,SNR=4.6						

DJA ***24*** *07:38:10.1±0.4, 3°S±3°×13°9E±°, h10^{km}, M3.9/7, MLv3.9/7*

IDC ***24*** *07:38:18.1±0.8, 2.°55S×138.°60E, h0^{km}, mb3.9/7, mbtmp3.9/9, ML3.7/2, Error ellipse: s-maj=21.3km s-min=16.1km az=4.0*

ISC 24 07:38:11.0±1.0**, 2.°50S**±0.°08×**138.°96E**±0.°06**, h10**^{km}**, n15,** σ**2.^{s}61**/9**, mb4.0**/7**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.56	333	P	Pg	07 38 20.8	-1.2
SMPI				S	Sg	07 38 30.1	+0.7
GENI	Genyem	1.21	95	P	Pg	07 38 34.7	+0.4
GENI				S	Sb	07 38 48.5	-1.2
WAMI	Wamena	1.40	190	P	Pn	07 38 33.9	-2.8
JAY	Jayapura	1.74	91	Pn	Pg	07 38 55.6	+11
	12nm,0.3s,baz=218,slow=9.9,SNR=12						
JAY				Lg	Lg	07 39 24.9	
	5.5nm,0.3s,baz=37,slow=21,SNR=6.0						
	34nm,0.4s						
JAY	Jayapura	1.74	91	P	Pb	07 38 42.7	-0.4
SRPI	Serui, Papua	2.79	283	P	Pn	07 38 53.5	-2.3
BAKI	Biak	3.13	294	P	Pn	07 39 01.5	+1.0
WRA	Warramunga Arr	17.92	194	P	P	07 42 26.0	+4.8
	0.3nm,0.3s,baz=17,slow=12,SNR=4.9						
	1.8nm,0.5s						
ASAR	Alice Springs	21.61	193	P	P	07 43 08.4	+7.1
	4.2nm,0.7s,baz=16,slow=10.0,SNR=10						
	4.2nm,0.7s						
MKAR	Makanchi Array	69.78	322	P	P	07 49 29.5	+7.9
	0.7nm,0.7s,baz=133,slow=6.3,SNR=7.0						
	0.7nm,0.7s						
KURBB	Kurchatov Arra	73.70	325	P	P	07 49 53.3	+8.1
	0.3nm,0.3s,baz=126,slow=6.0,SNR=2.3						
	0.3nm,0.3s						
VNDA	Vanda	75.97	175	P	P	07 50 07.0	+9.2
	0.4nm,0.5s,baz=339,slow=8.8,SNR=1.7						
	0.4nm,0.5s						
BVAR	Borovoye Array	79.28	325	P	P	07 50 25.1	+8.4
	1.2nm,0.6s,baz=140,slow=7.2,SNR=4.5						
	1.2nm,0.6s						
ILAR	Eielson Array	85.54	24	P	P	07 50 57.7	+8.5
	0.8nm,0.7s,baz=254,slow=4.4,SNR=7.2						
	0.8nm,0.7s						
QSPA	South Pole Qui	87.45	180	P	P	07 51 06.8	+8.1
	1.9nm,0.9s,baz=163,slow=1.6,SNR=9.3						
	1.9nm,0.9s						

IDC ***24*** *08:17:06.9±1.8, 0.°09S×124.°33E, h97^{km}±16^{km}, mb4.1/16, mbtmp4.4/17, MS3.7/1, Error ellipse: s-maj=18.7km s-min=11.9km az=80.0*

NEIC ***24*** *08:17:07.2±1.7, 0.°12S±0.°03×124.°43E±0.°06, h87^{km}±6^{km}, mb4.7/84, Error ellipse: s-maj=8.3km s-min=4.4km az=101.0*

DJA ***24*** *08:17:07.5±0.2, 0°S±2°×12°4E±°, h68^{km}±4^{km}, M5.1/26, mB5.5/14, mb5.3/21, MLv5.3/26, Mw(mB)5.0/14*

ISC 24 08:17:05.1±0.4**, 0.°16S**±0.°04×**124.°50E**±0.°04**, h73**^{km}**, n166,** σ**1.^{s}83**/169**, mb4.7**/64**, 1C, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	0.90	325	P	Pn	08 17 24.6	+2.1
KMSI				S	Sn	08 17 37.9	+2.5
LUWI	Luwuk	1.93	243		Pn	08 17 37.4	+1.5
LUWI				Sn	Sn	08 18 08.6	+9.3
LUWI	Luwuk	1.93	243	P	Pn	08 17 41.4	+5.5
LUWI	Luwuk	1.93	243	P	Pn	08 17 37.3	+1.5
SANI	Sanana	2.40	141	P	Pn	08 17 43.0	+0.9
SANI	Sanana	2.40	141	S	Sn	08 18 09.4	-1.1
SANI	Sanana	2.40	141	P	Pn	08 17 43.2	+1.1
MRSI	Marisa	2.63	284	P	Pn	08 17 45.8	+0.5
APSI	Ampana	2.94	255	P	Pn	08 17 51.3	+1.8
TNTI	Ternate	3.02	72		Pn	08 17 53.2	+2.6
TNTI				Sn	Sn	08 18 28.9	+3.2
TNTI	Ternate	3.02	72	P	Pn	08 17 52.7	+2.1
TNTI	Ternate	3.02	72	S	Sn	08 18 28.2	+2.5
TNTI	Ternate	3.02	72	P	Pn	08 17 53.0	+2.4
TOLI2	Tolitoli	3.92	289		Pn	08 18 04.7	+1.7
TOLI2				Sn	Sn	08 18 48.2	+0.4
TOLI2	Tolitoli	3.92	289	P	Pn	08 18 05.3	+2.4
TOLI2	Tolitoli	3.92	289	S	Sn	08 18 53.3	+5.5
SGSI	Sangihe	3.96	15	P	Pn	08 18 06.2	+2.8
NLAI	Namlea	4.01	140	P	Pn	08 18 06.6	+2.4
MPSI	Mapaga	4.62	276	P	Pn	08 18 14.9	+2.4
PCI	Palu	4.72	261	P	Pn	08 18 15.9	+2.1
AAI	Ambon	5.09	133	P	Pn	08 18 22.2	+3.3
	2.8nm9μm634nm,0.5s						
MSAI	Masohi	5.44	126	P	Pn	08 18 27.5	+3.8

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TTSI   Tana Toraja        5.48 238  P      Pn     08 18 26.1 +1.9
       2.3nm5µm375nm,0.5s
BBSI   Bau Bau            5.63 200  P      Pn     08 18 29.3 +3.1
       1.3nm4µm374nm,1.0s
SPSI   Sidrap Palu        6.05 231  P      Pn     08 18 34.8 +2.9
BNSI   Bone               6.08 226  P      Pn     08 18 34.4 +2.0
       1.7nm5µm383nm,0.6s
KAPI   Kappang            6.76 224         Pn     08 18 44.2 +2.5
KAPI                                Sn     Sn     08 19 58.3 +1.1
KAPI   Kappang            6.76 224  P      Pn     08 18 43.8 +2.2
       125nm,0.3s,baz=108,slow=2.6,SNR=75
KAPI                                S      Sn     08 19 58.0 +0.8
       50nm,0.7s,baz=223,slow=23,SNR=5.6
KAPI   Kappang            6.76 224  P      Pn     08 18 44.3 +2.6
KAPI   Kappang            6.76 224  S      Sn     08 19 58.5 +1.3
SWI    Sorong             6.80  96  P      Pn     08 18 45.1 +2.9
       0.6nm178nm,0.8s
BNDI   Bandanaira         6.92 129  P      Pn     08 18 46.5 +2.5
       763nm,1.1s
BSSI   Bau Bau, Buton     7.16 214  P      Pn     08 18 49.7 +2.5
BKB    Balikpapan         7.68 262  Pn     Pn     08 18 52.4 -1.8
MYLDM  Lahad Datu         8.00 312         Pn     08 19 02.4 +3.7
MYLDM  Lahad Datu         8.00 312  P      Pn     08 19 02.5 +3.8
FAKI   Fak Fak            8.22 110         Pn     08 19 02.9 +1.2
FAKI   Fak Fak            8.22 110  P      Pn     08 19 03.0 +1.3
FAKI   Fak Fak            8.22 110  S      Sn     08 20 30.6 -2.5
FAKI   Fak Fak            8.22 110  P      Pn     08 19 02.8 +1.2
       2µm128nm,0.6s
EDFI   Ende, Flores       8.98 198  P      Pn     08 19 14.1 +2.0
       41nm,0.7s
SOEI   Soe                9.53 181  Pn     Pn     08 19 22.1 +2.4
KKM    Kota Kinabalu     10.31 307         Pn     08 19 33.4 +3.0
KKM    Kota Kinabalu     10.31 307  P      Pn     08 19 34.7 +4.4
TWSI   Taliwang, Sumb    11.40 221  P      Pn     08 19 47.9 +2.7
MTN    Manton Dam        14.21 153  Pn     Pn     08 20 24.5 +1.6
PCJI   Pacitan           15.48 239  P      P      08 20 42.9 +0.6
KNRA   Kununurra         15.98 165  Pn     Pn     08 20 46.8 +1.3
PMBI   Palembang         19.90 262  P      P      08 21 31.7 +0.7
DLV     Lat              19.93 308  P      P      08 21 32.0 +0.6
DLV                                 IAmb   IAmb   08 21 34.4
       comp=Z,25nm,0.7s
MYKOM  Kota Tinggi       20.73 275  P      P      08 21 40.3 +0.4
MYKOM                               IAmb   IAmb   08 22 11.6
       comp=Z,24nm,0.9s
MBWA   Marble Bar        21.38 192  P      P      08 21 47.7 +1.0
PSA00  Pilbara Seismi    21.76 192  P      P      08 21 50.8 +0.1
WB0    Warramunga Arr    21.76 154  P      P      08 21 51.5 +0.6
WB0                                 IAmb   IAmb   08 21 58.1
       comp=Z,32nm,1.1s
WRAB   Tennant Creek     21.89 154  P      P      08 21 50.9 -1.4
WRAB                                IAmb   IAmb   08 21 59.1
       comp=Z,21nm,0.8s
WRA    Warramunga Arr    21.89 154  P      P      08 21 50.5 -1.8
WRA    Warramunga Arr    21.89 154  P      P      08 21 52.1 -0.2
       comp=Z,7.0nm,0.5s,baz=335,slow=11,SNR=26
       comp=Z,7.0nm,0.5s
WB2    Warramunga Arr    21.90 154  P      P      08 21 50.5 -1.9
WB2                                 IAmb   IAmb   08 21 59.1
       comp=Z,25nm,0.7s
MNAI   Manna             21.92 259  P      P      08 21 52.1 -0.5
WR8    Warramunga Arr    21.98 154  P      P      08 21 51.0 -2.1
WR0    Warramunga Arr    22.00 154  P      P      08 21 51.2 -2.1
WR0                                 IAmb   IAmb   08 22 00.4
       comp=Z,20nm,0.6s
COEN   Coen              23.02 127  P      P      08 22 04.3 +0.1
COEN                                IAmb   IAmb   08 22 35.1
       comp=Z,22nm,1.0s
YULB   Yu-li             23.62 353  P      P      08 22 08.6 -1.1
TPUB   Ta-pu             23.62 351  P      P      08 22 08.3 -1.5
TPUB                                IAmb   IAmb   08 22 42.8
       comp=Z,25nm,0.9s
SSLB   Suanglung         24.05 352  P      P      08 22 12.7 -0.9
SSLB                                IAmb   IAmb   08 22 47.8
       comp=Z,44nm,1.5s
PMG    Port Moresby      24.36 113  LR     LR     08 34 29.1
       comp=Z,168nm,18.3s,baz=38,slow=42
KULM   Kulim             24.42 283  P      P      08 22 15.0 -2.0
AS31   Alice Springs     25.09 159  P      P      08 22 23.8 +0.7
ASAR   Alice Springs     25.09 159  P      P      08 22 22.3 -0.8
ASAR   Alice Springs     25.09 159  P      P      08 22 24.4 +1.4
       comp=Z,7.0nm,0.7s,baz=336,slow=7.5,SNR=50
ASAR                                PcP    PcP    08 25 55.8 -0.3
       comp=Z,0.6nm,0.4s,baz=354,slow=2.2,SNR=4.0
       comp=Z,7.0nm,0.7s
CMAR   Chiang Mai Arr    31.19 308  P      P      08 23 16.8 -0.8
CMAR   Chiang Mai Arr    31.19 308  P      P      08 23 16.6 -0.9
       comp=Z,3.1nm,0.8s,baz=138,slow=7.5,SNR=16
CMAR                                ScP    ScP    08 29 45.0 -2.9
       comp=Z,0.9nm,0.3s,baz=140,slow=2.2,SNR=5.4
       comp=Z,3.1nm,0.8s
CHTO   Chiang Mai        31.39 308  P      P      08 23 19.0 -0.3
CHTO                                IAmb   IAmb   08 23 19.9
       comp=Z,11nm,0.9s
NJ2    Nanjing           32.48 351 eP      P      08 23 31.3 +2.6
NJ2                                 pmax   pmax
       comp=Z,13nm,0.6s
PZH    PanZhiHua         34.40 322  P      P      08 23 47.6 +1.9
JMN    Monobe            34.85  14  P      P      08 23 49.5 +0.2
STKA   Stephens Creek    35.45 154  P      P      08 23 55.8 +1.3
       comp=Z,3.7nm,0.8s,baz=349,slow=8.4,SNR=4.8
       comp=Z,3.7nm,0.8s
LYN    LuoYang           36.32 343  P      P      08 23 58.6 -3.3
LYN                                 pmax   pmax
       comp=Z,18nm,1.0s
INU    Inuyama           37.21  17  P      P      08 24 09.2 -0.2
JGF    Kuroka            37.55  17  P      P      08 24 10.6 -1.7
JGF                                 IAmb   IAmb   08 24 13.6
       comp=Z,8.6nm,0.7s
KSRS   Korea Array       37.56   4  P      P      08 24 12.8 +0.4
       comp=Z,0.7nm,0.4s,baz=180,slow=9.4,SNR=7.0
       comp=Z,0.7nm,0.4s
KS19   Wonju Array Si    37.61   4  P      P      08 24 10.9 -1.9
KS19                                IAmb   IAmb   08 24 19.0
       comp=Z,11nm,1.3s
HNS    HongShan          38.46 347 ⇑P      P      08 24 21.3 +1.4
HNS                                 pmax   pmax
       comp=Z,5.0nm,0.7s
MAJO   Matsushiro        38.68  18         P      08 24 20.4 -1.4
MAJO                                IAmb   IAmb   08 24 21.8
       comp=Z,8.4nm,0.8s
MJAR   Matsushiro Arr    38.68  18  P      P      08 24 20.4 -1.3
MJAR   Matsushiro Arr    38.68  18  P      P      08 24 20.4 -1.3
       comp=Z,6.6nm,0.7s,baz=196,slow=8.9,SNR=18
       comp=Z,6.6nm,0.7s
MJB9   Matsu-Tunnel      38.68  18         P      08 24 21.2 -0.6
MJB9                                IAmb   IAmb   08 24 22.8
       comp=Z,8.2nm,0.8s
JMM    Marumori          40.72  20  P      P      08 24 38.0 -0.7
HHC    Hu-ho-hao-te      42.48 345 eP      P      08 24 56.4 +3.2
HHC                                 pmax   pmax
       comp=Z,11nm,0.7s
USRK   Ussuriysk Ar.     44.67   8  P      P      08 25 09.9 -0.7
USRK   Ussuriysk Ar.     44.67   8  P      P      08 25 10.4 -0.2
       comp=Z,1.7nm,0.3s,baz=185,slow=7.3,SNR=7.9
       comp=Z,1.7nm,0.3s
MDJ    Mudanjiang        44.82   5  P      P      08 25 11.8 +0.1
GTA    Gaotai            45.40 333  P      P      08 25 17.3 +0.6
GTA                                 pP     pP     08 25 23.6  -10
GTA                                 pmax   pmax
       comp=Z,16nm,0.8s
EVN    Everest           45.67 311  P      P      08 25 18.1 -1.5
EVN                                 IAmb   IAmb   08 25 21.2
       comp=Z,7.1nm,0.6s
JKA    Kamikawa-asahi    46.95  18  P      P      08 25 28.8 +0.3
HEH    HeiHe             50.29   2 eP      P      08 25 53.3 -0.8
HEH                                 pmax   pmax
       comp=Z,5.0nm,0.8s
SONM   Songino Array     50.33 344  P      P      08 25 53.5 -1.2
SONM   Songino Array     50.33 344  P      P      08 25 53.6 -1.1
       comp=Z,3.1nm,0.7s,baz=159,slow=9.3,SNR=13
SONM                                ScP    ScP    08 30 58.4 -3.6
       comp=Z,0.2nm,0.4s,baz=186,slow=3.0,SNR=4.1
       comp=Z,3.1nm,0.7s
WMQ    Urumqi            54.72 328 eP      P      08 26 28.8 +1.8
WMQ                                 pmax   pmax
       comp=Z,25nm,0.7s
MKAR   Makanchi Array    59.54 328  P      P      08 26 59.1 -1.9
MKAR   Makanchi Array    59.54 328  P      P      08 26 58.8 -2.2
       comp=Z,6.5nm,0.5s,baz=121,slow=8.2,SNR=62
MKAR                                ScP    ScP    08 31 36.6 -5.7
       comp=Z,1.1nm,0.8s,baz=129,slow=3.9,SNR=6.2
       comp=Z,6.5nm,0.5s
MAKZ   Makanchi          59.72 327  P      P      08 27 02.0 -0.3
KDJ    Kajisay           59.84 321  P      P      08 27 02.4 -1.0
PEA0B  Petropavlovsk-    59.85  22  P      P      08 27 03.8 +0.8
PETK   Petropavlovsk-    59.85  22  P      P      08 27 03.1 +0.1
PETK   Petropavlovsk-    59.85  22  P      P      08 27 02.4 -0.6
       comp=Z,2.3nm,0.6s,baz=195,slow=3.3,SNR=9.6
       comp=Z,2.3nm,0.6s
NRN    Naryn             60.24 320  P      P      08 27 05.9 -0.3
NRN                                 IAmb   IAmb   08 27 06.5
       comp=Z,3.3nm,0.6s
KBL    Kabul             62.19 310  P      P      08 27 17.6 -1.8
KBL                                 IAmb   IAmb   08 27 19.6
       comp=Z,6.6nm,0.8s
MA2    Magadan           63.00  15  P      P      08 27 24.6 +0.6
ZALV   Zalesovo Beam     63.09 335  P      P      08 27 23.3 -1.4
ZALV   Zalesovo Beam     63.09 335  P      P      08 27 21.5 -3.2
       comp=Z,2.4nm,0.4s,baz=133,slow=6.1,SNR=9.4
       comp=Z,2.4nm,0.4s
KURBB  Kurchatov Arra    63.86 329  P      P      08 27 27.4 -2.4
       comp=Z,5.7nm,0.6s,baz=130,slow=6.0,SNR=50
       comp=Z,5.7nm,0.6s
KURK   Kurchatov         63.87 329  P      P      08 27 27.9 -2.0
KK31   Karatay Array     64.61 319  P      P      08 27 33.2 -1.9
KK31                                IAmb   IAmb   08 27 35.2
       comp=Z,9.9nm,1.4s
KKAR   Karatay Array     64.61 319  P      P      08 27 33.0 -2.0
BVAR   Borovoye Array    69.40 328  P      P      08 28 03.1 -2.1
       comp=Z,2.6nm,0.4s,baz=141,slow=8.4,SNR=13
       comp=Z,2.6nm,0.4s
BRVK   Borovoye          69.47 328  P      P      08 28 05.2 -0.3
TIXI   Tiksi             71.75   1         P      08 28 17.9 -1.1
TIXI                                IAmb   IAmb   08 28 19.7
       comp=Z,5.2nm,0.6s
AB31   Akbulak array     73.78 322  P      P      08 28 29.0 -2.5
ABKAR  Akbulak array     73.78 322         P      08 28 29.0 -2.6
ARTI   Arti              77.12 329  P      P      08 28 48.3 -2.3
ARTI                                IAmb   IAmb   08 28 50.3
       comp=Z,5.7nm,0.6s
UNV    Unalaska Valle    77.87  34  P      P      08 28 54.9 +0.1
VOI    Vohitsoka         78.53 248  P      P      08 28 59.1 -0.2
VOI                                 IAmb   IAmb   08 29 04.2
       comp=Z,10nm,1.0s
SDPT   Sand Point        81.65  34  P      P      08 29 15.6 +0.5
L14K   Kuka Creek        81.96  28  P      P      08 29 16.8 +0.1
M14K   Bethel            82.15  28  P      P      08 29 18.8 +1.2
M14K                                IAmb   IAmb   08 29 19.7
       comp=Z,8.9nm,0.7s
K15K   Wolf Creek Mou    82.73  27  P      P      08 29 22.3 +1.6
K15K                                IAmb   IAmb   08 29 23.7
       comp=Z,14nm,1.1s
O15K   Ungalikthiuk R    82.82  30  P      P      08 29 21.6 +0.3
O15K                                IAmb   IAmb   08 29 29.8
       comp=Z,13nm,1.1s
N15K   Kwethluk River    82.91  29  P      P      08 29 22.8 +1.1
N15K                                IAmb   IAmb   08 29 24.5
       comp=Z,7.7nm,1.0s
G16K   Koyuk River       83.18  24  P      P      08 29 23.5 +0.6
G16K                                IAmb   IAmb   08 29 24.9
       comp=Z,10nm,1.1s
J16K   Anvik River       83.39  26  P      P      08 29 25.2 +1.2
J16K                                IAmb   IAmb   08 29 27.0
       comp=Z,11nm,0.9s
L16K   Owhat River       83.54  28  P      P      08 29 25.8 +0.9
L16K                                IAmb   IAmb   08 29 26.9
       comp=Z,9.6nm,0.8s
M16K   Timber Creek      83.64  28  P      P      08 29 26.3 +0.8
O16K   Kokwok River B    83.78  30  P      P      08 29 27.2 +1.1
O16K                                IAmb   IAmb   08 29 27.9
       comp=Z,8.6nm,0.8s
H17K   Granite Mounta    84.06  25  P      P      08 29 28.7 +1.2
H17K                                IAmb   IAmb   08 29 29.7
       comp=Z,6.8nm,0.9s
K17K   Iditarod          84.29  27  P      P      08 29 30.5 +1.8
K17K                                IAmb   IAmb   08 29 31.6
       comp=Z,5.8nm,0.9s
E18K   Tukpahlearik C    84.38  22  P      P      08 29 29.9 +0.9
E18K                                IAmb   IAmb   08 29 31.1
       comp=Z,5.5nm,0.8s
C19K   Lookout Ridge     85.14  20  P      P      08 29 33.6 +0.6
C19K                                IAmb   IAmb   08 29 34.9
       comp=Z,3.9nm,0.5s
D19K   Kuna River        85.53  21  IAmb   IAmb   08 29 39.3
       comp=Z,11nm,1.4s
H19K   Roundabout Mou    85.61  24  IAmb   IAmb   08 29 36.8
       comp=Z,4.0nm,0.7s
E19K   Redstone River    85.66  22  P      P      08 29 36.1 +0.7
IMAR   Indian Mountai    86.78  24  P      P      08 29 41.2 +0.2
MLY    Manley            87.93  25         P      08 29 46.5 -0.1
G23K   Bananza Creek     88.35  23         P      08 29 48.9 +0.3
ILAR   Eielson Array     89.55  25  P      P      08 29 52.0 -2.3
       comp=Z,0.3nm,0.6s,baz=245,slow=5.5,SNR=6.4
       comp=Z,0.3nm,0.6s
BMAR   Burnt Mountain    90.51  23  P      P      08 29 59.5 +0.8
J26L   Joseph Creek      90.99  26  P      P      08 30 00.1 -0.9
E27K   Coleen River      91.61  22  P      P      08 30 04.2 +0.4
E27K                                IAmb   IAmb   08 30 05.4
       comp=Z,2.7nm,1.1s
K27K   Chicken           91.66  26  P      P      08 30 04.5 +0.5
L27K   Beaver Creek,     91.82  27  P      P      08 30 05.5 +0.6
BCAR   Beaver Creek A    91.84  27  P      P      08 30 05.8 +0.9
F28M   Old Crow          92.31  22  IAmb   IAmb   08 30 08.4
       comp=Z,2.8nm,1.0s
I28M   Miner Creek       92.47  25  P      P      08 30 07.9  0.0
I28M                                IAmb   IAmb   08 30 08.6
       comp=Z,3.1nm,1.1s
I29M   Ogilvie Camp,     93.16  25  P      P      08 30 10.4 -0.5
I29M                                IAmb   IAmb   08 30 11.8
       comp=Z,2.6nm,0.9s
ARCES  ARCESS Array B    93.30 340  P      P      08 30 08.8 -2.7
       comp=Z,1.9nm,0.9s,baz=79,slow=7.5,SNR=6.6
       comp=Z,1.9nm,0.9s
L29M   L29M              93.49  27  IAmb   IAmb   08 30 14.5
       comp=Z,4.5nm,1.1s
EPYK   Eagle Plains      93.68  24  P      P      08 30 13.2 -0.2
SPITS  Spitsbergen Ar    93.84 349  P      P      08 30 13.1 -0.7
       comp=Z,1.6nm,0.5s,baz=92,slow=8.3,SNR=5.4
       comp=Z,1.6nm,0.5s
I30M   Mount Dempster    93.98  25  P      P      08 30 15.1 +0.2
HYT    Haines Junctio    94.05  29  P      P      08 30 16.0 +0.7
J30M   Hart River        94.09  25  P      P      08 30 15.9 +0.5
J30M                                IAmb   IAmb   08 30 16.5
       comp=Z,3.4nm,1.5s
G31M   Satah River       94.55  23  P      P      08 30 16.7 -0.6
G31M                                IAmb   IAmb   08 30 17.5
       comp=Z,3.1nm,0.8s
NACGM  Naroch            94.58 325 eP      P      08 30 20.2 +2.6
       comp=Z,3.0nm,0.7s,baz=84
WHY    Whitehorse        95.35  29  P      P      08 30 20.8 -0.4
FARO   Faro, Yukon       95.80  27  P      P      08 30 23.9 +0.7
N32M   Quiet Lake        96.13  28  P      P      08 30 24.5 -0.1
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FUNV ***24*** *08:23:29.8, 9°.84N×62°.02W, h20^{km}, MW4.4*
TRN ***24*** *08:23:29.7, 9°.65N×61°.85W, h63^{km}, MD3.9, Venezuela. Felt in Trinidad, MMI IV.*
ISC 24 08:23:23.8±2.0**, 9°.35N**±0°.09×**61°.89W**±0°.09**, h87**^{km}±20^{km}**, n33, σ3^{s}.17**/59**, Near coast of Venezuela**

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Code   Station Name         Δ°  AZ°   Phase ID          Time     Res
                                    Op     ISC        h  m  s    ISC
TPP    Pointe-a-Pierr     1.06  24 eP      Pn     08 23 46.1 +2.1
PSKH   Kent House, Po     1.38  15 eP      Pn     08 23 48.6 +0.7
PSKH                               eS      Sn     08 24 02.1 -3.9
TRN    Trinidad (W)       1.38  20 eP      Pn     08 23 49.3 +1.3
TRN                                eS      Sn     08 24 03.6 -2.5
TBH    Brigand Hill       1.40  36 eP      Pn     08 23 49.2 +1.0
TPR    Prospect           2.13  31 eP      Pn     08 24 00.6 +2.8
GRFF   Grenada Fort F     2.69   3 eP      Pn     08 24 06.7 +1.5
GRFF                               eS      Sn     08 24 34.2 -2.7
GRGR   Grenville          2.78   5 eP      Pn     08 24 08.3 +1.9
GRGR                               eS      Sn     08 24 35.7 -3.4
GRW    Mount Saint Ca     2.81   5 eP      Pn     08 24 09.2 +2.4
GRW                                eS      Sn     08 24 35.6 -4.2
PCRV   Puerto La Cruz     2.83 287 eP      Pn     08 24 09.3 +2.3
PCRV                               eS      Sn     08 24 38.6 -1.6
PCRV   Puerto La Cruz     2.83 287 eP      Pn     08 24 09.3 +2.3
PCRV                               eS      Sn     08 24 37.0 -3.3
PCRV   Puerto La Cruz     2.83 287 eP      Pn     08 24 12.5 +5.5
PCRV                               eS      Sn     08 24 45.3 +5.0
GRSS   Sisters            2.95   5 eP      Pn     08 24 10.1 +1.4
GRSS                               eS      Sn     08 24 40.3 -2.8
GCMP   Grenada, Carri     3.15   8 eP      Pn     08 24 12.8 +1.4
GCMP                               eS      Sn     08 24 45.3 -2.8
SVOC   Richmond Hill,     3.84  10 eP      Pn     08 24 23.8 +3.0
SVOC                               eS      Sn     08 25 02.0 -2.8
SVT    Saint Vincent      3.85   9 eP      Pn     08 24 22.6 +1.7
SVT                                eS      Sn     08 25 01.9 -3.2
SVB    Belmont            3.95   9 eP      Pn     08 24 23.4 +1.2
SVB                                eS      Sn     08 25 03.2 -4.4
SLBI   Saint Lucia, B     4.74  11 eP      Pn     08 24 34.6 +1.7
SLBI                               eS      Sn     08 25 23.1 -3.5
CACV   CAICARA DEL OR     4.92 249 eP      Pn     08 24 36.5 +1.0
CACV                               eS      Sn     08 25 25.6 -5.6
CACV   CAICARA DEL OR     4.92 249 eP      Pn     08 24 36.5 +1.0
CACV                               eS      Sn     08 25 24.6 -6.6
FUNV   FUNVISIS           4.97 283 eP      Pn     08 24 39.2 +3.0
FUNV                               eS      Sn     08 25 30.1 -2.4
FUNV   FUNVISIS           4.97 283 eP      Pn     08 24 38.9 +2.7
FUNV                               eS      Sn     08 25 28.8 -3.6
TACV   Tcata              5.12 279 eP      Pn     08 24 41.3 +3.2
TACV                               eS      Sn     08 25 34.4 -1.7
TACV   Tcata              5.12 279 eP      Pn     08 24 41.4 +3.2
TACV                               eS      Sn     08 25 32.9 -3.1
BIM    Bigot              5.20   9 eP      Pn     08 24 42.0 +2.7
BENV   Beln               5.66 277 eP      Pn     08 24 49.0 +3.5
BENV                               eS      Sn     08 25 47.6 -1.7
BENV   Beln               5.66 277 eP      Pn     08 24 48.7 +3.1
BENV                               eS      Sn     08 25 45.8 -3.4
BAUV   El Baul            6.08 267 eP      Pn     08 24 55.1 +3.9
BAUV                               eS      Sn     08 25 59.4 -0.1
BAUV   El Baul            6.08 267 eP      Pn     08 24 55.3 +4.0
BAUV                               eS      Sn     08 25 57.9 -1.6
BAUV   El Baul            6.08 267 eP      Pn     08 24 57.5 +6.3
BAUV                               eS      Sn     08 26 03.3 +3.8
MAGL   Barre de l'ile     6.59   5 eP      Pn     08 24 60.0 +1.8
TEPV   Terepaima          7.22 275 eP      Pn     08 25 10.1 +3.2
TEPV                               eS      Sn     08 26 24.8 -2.6
TEPV   Terepaima          7.22 275 eP      Pn     08 25 09.6 +2.7
TEPV                               eS      Sn     08 26 22.3 -5.1
CAPV   Capacho           10.41 263 eP      Pn     08 25 53.9 +3.4
CAPV                               eS      Sn     08 27 40.0 -5.5
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ASRS 24 08:25:03.0±2.2**, 53°.65N×87°.97E, h0**^{km}**, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

ASRS 24 08:25:11.0±1.4**, 53°.38N×87°.21E, h0**^{km}**, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

IDC ***24*** *08:30:25.2±3.5, 54°.19N×87°.28E, h0^{km}, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=31.8km s-min=20.2km az=50.0*
ASRS 24 08:30:24.0±1.3**, 54°.19N×87°.13E, h0**^{km}**, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

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Code   Station Name         Δ°  AZ°   Phase ID          Time     Res
                                    Op     ISC        h  m  s    ISC
I46RU  ZALESOVO INFRA     1.38 261  I      I      08 39 15.0
       baz=79,slow=322,SNR=0.9
ZALV   Zalesovo Beam      1.38 261  Pg     Pb     08 30 52.0 +1.2
       1.6nm,0.3s,baz=82,slow=15,SNR=15
ZALV                                Lg     Lg     08 31 12.7
       1.3nm,0.3s,baz=82,slow=23,SNR=7.2
KURBB  Kurchatov Arra     6.36 239  Pn     Pn     08 32 00.8 +1.9
       0.1nm,0.3s,baz=56,slow=14,SNR=5.1
       0.3nm,0.3s
MKAR   Makanchi Array     8.02 205  Pn     Pn     08 32 25.6 +3.9
       0.1nm,0.3s,baz=24,slow=15,SNR=2.0
       0.1nm,0.3s
```

IDC ***24*** *08:45:13.0±3.6, 54°.23N×87°.45E, h0^{km}, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=31.3km s-min=21.0km az=38.0*
ASRS 24 08:45:13.0±1.1**, 54°.21N×87°.17E, h0**^{km}**, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

```
Code   Station Name         Δ°  AZ°   Phase ID          Time     Res
                                    Op     ISC        h  m  s    ISC
I46RU  ZALESOVO INFRA     1.41 260  I      I      08 54 05.0
       baz=78,slow=325,SNR=5.2
ZALV   Zalesovo Beam      1.41 260  Pg     Pb     08 45 41.2 +1.1
       0.8nm,0.3s,baz=81,slow=16,SNR=22
ZALV                                Lg     Lg     08 46 03.4
       0.5nm,0.3s,baz=78,slow=21,SNR=4.3
KURBB  Kurchatov Arra     6.39 239  Pn     Pn     08 46 50.7 +2.4
       0.1nm,0.3s,baz=58,slow=12,SNR=4.1
KURBB                               Lg     Lg     08 48 40.4
       baz=59,slow=30
       0.3nm,0.3s
MKAR   Makanchi Array     8.05 205  Pn     Pn     08 47 13.8 +2.7
       baz=29,slow=14,SNR=1.5
       0.1nm,0.2s
```

ASRS ***24*** *08:56:13.0±2.2, 53°.77N×91°.02E, h0^{km}, M2.8, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*
IDC 24 08:56:25.0±5.0**, 53°.40N×90°.35E, h0**^{km}**, mbtmp3.1**/3**, ML2.5**/3**, Error ellipse: s-maj=52.7km s-min=26.1km az=53.0, Southwestern Siberia**

```
Code   Station Name         Δ°  AZ°   Phase ID          Time     Res
                                    Op     ISC        h  m  s    ISC
I46RU  ZALESOVO INFRA     3.33 282  I      I      09 17 18.4
       0.1nm,0.9s,baz=96,slow=320,SNR=3.3
ZALV   Zalesovo Beam      3.33 282  Pn     Pn     08 57 20.0 +1.7
       1.0nm,0.3s,baz=98,slow=16,SNR=7.8
ZALV                                Lg     Lg     08 58 10.5
       1.5nm,0.3s,baz=95,slow=30,SNR=5.8
       3.7nm,0.5s
KURBB  Kurchatov Arra     7.80 254  Pn     Pn     08 58 19.4 -0.3
       0.1nm,0.3s,baz=66,slow=15,SNR=6.1
       0.7nm,0.4s
MKAR   Makanchi Array     8.40 221  Pn     Pn     08 58 28.6 +0.8
       0.1nm,0.3s,baz=39,slow=15,SNR=5.7
       0.4nm,0.6s
```

NEIC ***24*** *09:04:22, 64°.21N×149°.76W, h19^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.12; $M_{\theta\theta}$-0.88; $M_{\phi\phi}$1.00; $M_{r\theta}$-0.66; $M_{\theta\phi}$0.06; $M_{\phi r}$0.66; Fault plane solution: $M_0$1.33000×10^{14} NP1:ϕ_s139.00000°, δ86.00000°, λ-135.00000°. NP2:ϕ_s45.00000°, δ45.00000°, λ-5.00000°. Principal axes: T 1.3330, Plg27.0000°, Azm263.0000°; N 0.0000, Plg45.0000°, Azm142.0000°; P -1.3330, Plg33.0000°, Azm12.0000°;*
NEIC ***24*** *09:04:23.1±1.1, 64°.27N±0°.02×149°.86W±0°.05, h20^{km}±9^{km} Error ellipse: s-maj=3.9km s-min=1.9km az=128.0*
AEIC 24 09:04:23.3±1.1**, 64°.28N**±0°.01×**149°.85W**±0°.06**, h21**^{km}±7^{km}**, ML3.4, ML3.5**/162(NEIC)**, Mwr3.4**/23(SLM)**, Error ellipse: s-maj=3.7km s-min=1.7km az=89.0, Central Alaska**

```
Code   Station Name         Δ°  AZ°   Phase ID          Time     Res
                                    Op     ISC        h  m  s    ISC
BWN    Browne             0.20 122         Pb     09 04 29.4 +0.3
BWN                                        Sb     09 04 33.1  0.0
BWN    Browne             0.20 122  IAML          09 04 33.9
       comp=N,7µm,0.6s
BWN                                 IAML          09 04 36.9
       comp=E,6µm,0.4s
NEA2   Nenana             0.47  47         Pb     09 04 32.4 -0.4
NEA2   Nenana             0.47  47         Sb     09 04 38.9 -0.2
BPAW   Bear Paw Mtn.      0.53 251         Pb     09 04 33.9  0.0
BPAW                                       Sb     09 04 41.1  0.0
BPAW   Bear Paw Mtn.      0.53 251  IAML          09 04 41.2
       comp=N,4µm,0.4s
BPAW                                IAML          09 04 42.7
       comp=E,3µm,0.3s
MCK    McKinley           0.68 143         Pb     09 04 36.4 -0.1
MCK                                        Sb     09 04 45.0 -0.5
MCK    McKinley           0.68 143  IAML          09 04 45.3
       comp=E,2µm,0.5s
MCK                                 IAML          09 04 45.6
       comp=N,2µm,0.4s
WRH    Wood River Hil     0.79  75         Pb     09 04 38.0 -0.3
WRH                                 IAML          09 04 49.8
       comp=E,2µm,0.7s
MLY    Manley             0.85 334  Pn     Pb     09 04 39.7 +0.3
MLY                                 IAML          09 04 52.2
       comp=E,2µm,0.4s
MLY                                 IAML          09 04 52.2
```

	comp=N,1µm,0.3s						
TRF	**Thorofare Moun**	0.85	193		Pb	09 04 39.5	0.0
TRF				IAML		09 04 50.8	
	comp=E,2µm,0.5s						
TRF	**Thorofare Moun**	0.85	193		Sb	09 04 50.2	-0.3
KTH	**Kantishna Hill**	0.87	214		Pb	09 04 39.7	0.0
KTH				IAML		09 04 52.5	
	comp=E,2µm,0.8s						
KTH				IAML		09 04 53.2	
	comp=N,2µm,0.3s						
I23K	**Minto, Yukon-K**	0.90	13		Pb	09 04 40.2	0.0
I23K	**Minto, Yukon-K**	0.90	13	IAML		09 04 53.7	
	comp=N,2µm,0.7s						
CCB	**Clear Creek Bu**	0.96	66		Pb	09 04 40.9	-0.3
CCB					Sb	09 04 53.9	+0.4
CCB	**Clear Creek Bu**	0.96	66	IAML		09 04 54.3	
	comp=N,1µm,0.6s						
CCB				IAML		09 04 55.4	
	comp=E,2µm,0.5s						
RND	**Reindeer**	0.98	153		Pn	09 04 41.9	0.0
COLA	**College**	1.05	54		Pb	09 04 42.8	0.0
CHUM	**Lake Minchumin**	1.15	251		Pn	09 04 44.0	-0.2
HDA	**Harding Lake**	1.27	83		Pn	09 04 45.4	-0.4
HDA	**Harding Lake**	1.27	83	IAML		09 05 06.8	
	comp=E,999nm,0.5s						
I21K	**Tanana**	1.29	316		Pn	09 04 46.0	0.0
I21K	**Tanana**	1.29	316	IAML		09 05 05.0	
	comp=N,808nm,0.9s						
CAST	**Castle Rocks**	1.31	230		Pn	09 04 45.5	-0.9
CAST					Sb	09 05 04.1	+0.6
IL31		1.38	68		Pb	09 04 48.4	+0.1
ILAR	**Eielson Array**	1.38	68		Pn	09 04 46.6	-0.6
WAT7	**Susitna Watana**	1.52	162		Pb	09 04 50.1	-0.7
H23K	**Yukon River**	1.56	5		Pn	09 04 49.8	-0.1
WAT1	**Susitna Watana**	1.57	158		Pn	09 04 50.6	+0.7
DHY	**Denali Highway**	1.64	136		Pn	09 04 51.3	+0.3
DHY	**Denali Highway**	1.64	136	IAML		09 05 14.8	
	comp=E,569nm,0.5s						
DHY				IAML		09 05 16.0	
	comp=N,756nm,0.6s						
PPLA	**Purkeypile**	1.74	218		Pn	09 04 52.0	-0.4
PPLA				IAML		09 05 21.3	
	comp=E,724nm,1.0s						
H22K	**Ishtalitna Cre**	1.75	339		Pn	09 04 52.5	+0.1
H24K	**Noodor Dome**	1.78	27		Pn	09 04 52.2	-0.6
K24K	**Donnelly Dome**	1.85	103		Pn	09 04 54.2	+0.3
H21K	**Melozitna Rive**	1.87	319		Pn	09 04 54.0	-0.1
J20K	**Nowinta River**	1.88	269		Pn	09 04 53.9	-0.2
J20K				IAML		09 05 24.0	
	comp=N,629nm,0.5s						
CUT	**Chulitna**	1.89	186		Pn	09 04 55.6	+1.3
J25K	**Salcha River,**	1.97	78		Pn	09 04 55.8	+0.2
J25K				IAML		09 05 28.0	
	comp=N,465nm,0.6s						
J25K				IAML		09 05 28.8	
	comp=E,325nm,0.6s						
K20K	**Telida**	2.09	246	IAML		09 05 30.2	
	comp=E,294nm,0.6s						
K20K				IAML		09 05 31.0	
	comp=N,390nm,0.7s						
RIDG	**Independent Ri**	2.27	101		Pn	09 04 58.2	-1.4
RIDG	**Independent Ri**	2.27	101	IAML		09 05 36.4	
	comp=N,384nm,0.5s						
RIDG				IAML		09 05 37.6	
	comp=E,342nm,0.5s						
SKT	**Skwentna**	2.43	199		Pn	09 05 02.6	+0.8
SKT				IAML		09 05 40.2	
	comp=N,264nm,0.5s						
SKT				IAML		09 05 40.6	
	comp=E,357nm,0.9s						
G23K	**Bananza Creek**	2.45	358		Pn	09 05 02.1	+0.1
J19K	**Poorman**	2.54	266		Pn	09 05 03.2	-0.1
GHO	**Glory Hole Cre**	2.55	170		Pn	09 05 03.0	-0.5
GHO	**Glory Hole Cre**	2.55	170	IAML		09 05 46.0	
	comp=E,165nm,0.7s						
GHO				IAML		09 05 50.7	
	comp=N,168nm,0.7s						
SCM	**Sheep Creek Mo**	2.71	154		Pb	09 05 08.8	-2.2
SCM				IAML		09 05 54.1	
	comp=N,237nm,0.9s						
SCM				IAML		09 05 56.2	
	comp=E,226nm,0.8s						
PMR	**Palmer**	2.71	173		Pn	09 05 06.4	+0.7
PMR	**Palmer**	2.71	173	IAML		09 05 50.9	
	comp=E,137nm,0.7s						
G21K	**Allakaket**	2.72	327	IAML		09 05 50.7	
	comp=N,144nm,0.4s						
G21K				IAML		09 05 52.3	
	comp=E,227nm,0.7s						
J26L	**Joseph Creek**	2.74	82		Pn	09 05 05.7	-0.4
J26L	**Joseph Creek**	2.74	82	IAML		09 05 52.6	
	comp=N,202nm,0.5s						
J26L				IAML		09 05 54.9	
	comp=E,240nm,0.7s						
M24K	**Tolsona, Glenn**	2.74	141		Pn	09 05 06.2	+0.1
M24K	**Tolsona, Glenn**	2.74	141	IAML		09 05 56.5	
	comp=N,202nm,1.1s						
M24K				IAML		09 06 01.5	
	comp=E,191nm,0.9s						
M20K	**Styx River**	2.83	213	IAML		09 05 55.0	
	comp=N,256nm,0.5s						
SUA	**Susitna One**	2.85	189	IAML		09 05 56.5	
	comp=N,181nm,1.1s						
STLK	**Strandline Lak**	2.93	199	IAML		09 05 55.8	
	comp=E,186nm,0.5s						
STLK				IAML		09 05 55.8	
	comp=N,158nm,0.8s						
COLD	**Coldfoot**	2.97	357		Pn	09 05 09.5	+0.4
FYU	**Fort Yukon**	3.00	38		Pn	09 05 09.4	-0.2
H19K	**Roundabout Mou**	3.08	297		Pn	09 05 10.5	-0.2
H19K	**Roundabout Mou**	3.08	297	IAML		09 06 10.4	
	comp=N,172nm,0.7s						
CKL	**Chakachamna La**	3.30	201		Pn	09 05 14.4	+0.6
F24K	**Squaw Lake**	3.35	13		Pn	09 05 14.9	+0.5
K27K	**Chicken**	3.42	91		Pn	09 05 15.8	+0.5
K27K	**Chicken**	3.42	91	IAML		09 06 16.1	
	comp=E,123nm,0.7s						
K27K				IAML		09 06 19.2	
	comp=N,111nm,0.7s						
PWL	**Port Wells**	3.50	168		Pn	09 05 18.2	+1.7
PWL	**Port Wells**	3.50	168	IAML		09 06 14.4	
	comp=N,103nm,0.5s						
PWL				IAML		09 06 21.0	
	comp=E,94nm,0.7s						
G19K	**Purcell Mounta**	3.58	305	IAML		09 06 19.5	
	comp=E,75nm,0.7s						
G19K				IAML		09 06 21.2	
	comp=N,76nm,0.7s						
F20K	**Avaraart Lake**	3.69	321	IAML		09 06 20.3	
	comp=N,67nm,0.6s						
F20K				IAML		09 06 23.3	
	comp=E,64nm,0.8s						
L18K	**Granite Mounta**	3.72	239		Pn	09 05 19.3	-0.1
L18K				IAML		09 06 27.5	
	comp=E,115nm,0.5s						
H18K	**Honhosa River**	3.76	287		Pn	09 05 20.2	+0.2
H18K	**Honhosa River**	3.76	287	IAML		09 06 27.6	
	comp=E,64nm,0.8s						
L27K	**Beaver Creek,**	3.78	105	IAML		09 06 25.2	
	comp=N,69nm,0.5s						
L27K				IAML		09 06 26.6	
	comp=E,73nm,0.6s						
SLKM	**Skilak Lake**	3.79	183	IAML		09 06 28.4	
	comp=E,54nm,0.9s						
BCAR	**Beaver Creek A**	3.79	105		Pn	09 05 23.9	+3.4
BMAR	**Burnt Mountain**	3.83	32		Pn	09 05 20.6	-0.5
E24K	**Your Creek**	3.85	8	IAML		09 06 31.9	
	comp=N,51nm,0.8s						
E24K				IAML		09 06 32.3	
	comp=E,56nm,0.9s						
FID	**Port Fidalgo**	3.87	155		Pn	09 05 21.6	+0.1
H27K	**Steamboat Moun**	4.01	57	IAML		09 06 35.1	
	comp=N,95nm,1.0s						
G18K	**Tagagawik**	4.06	298		Pn	09 05 25.1	+1.0
G18K				IAML		09 06 32.9	
	comp=N,52nm,1.1s						
K17K	**Iditarod**	4.10	251	IAML		09 06 40.1	
	comp=E,92nm,0.9s						
K17K				IAML		09 06 40.3	
	comp=N,73nm,0.9s						
F26K	**Sheenjek River**	4.15	32	IAML		09 06 35.1	
	comp=E,40nm,0.7s						
F19K	**Shaleruckik Mo**	4.17	311		Pn	09 05 25.4	-0.2
F19K	**Shaleruckik Mo**	4.17	311	IAML		09 06 36.0	
	comp=E,75nm,0.7s						
J17K	**VABM Dome**	4.18	262		Pn	09 05 25.2	-0.6
J17K				IAML		09 06 39.2	
	comp=N,62nm,0.7s						
J17K				IAML		09 06 54.9	
	comp=E,60nm,0.8s						
E25K	**Arctic Village**	4.23	22		Pn	09 05 26.3	-0.2
G27K	**Doyon Strip**	4.25	50		Pn	09 05 26.3	-0.5
G27K				IAML		09 06 43.9	
	comp=E,41nm,1.0s						
H17K	**Granite Mounta**	4.38	283		Pn	09 05 28.3	-0.3
H17K	**Granite Mounta**	4.38	283	IAML		09 06 20.2	
	comp=N,57nm,0.5s						
H17K				IAML		09 06 20.4	
	comp=E,73nm,0.6s						
TOLK	**Toolik Lake Re**	4.38	1	IAML		09 06 54.8	
	comp=E,34nm,1.1s						
I28M	**Miner Creek**	4.39	70		Pn	09 05 28.2	-0.5
I28M	**Miner Creek**	4.39	70	IAML		09 06 49.5	
	comp=N,60nm,1.1s						
I28M				IAML		09 06 54.0	
	comp=E,62nm,0.7s						
E19K	**Redstone River**	4.40	320	IAML		09 06 41.7	
	comp=E,51nm,0.8s						
E21K	**Killik River**	4.50	340	IAML		09 06 48.0	
	comp=E,32nm,0.9s						
E21K				IAML		09 06 53.9	
	comp=N,31nm,0.6s						
M17K	**Holitna River**	4.52	234		Pn	09 05 31.4	+1.0
D23K	**Nanushuk River**	4.72	356		Pn	09 05 34.4	+1.2
D23K	**Nanushuk River**	4.72	356	IAML		09 06 59.8	
	comp=E,31nm,0.9s						
E20K	**Nigu River**	4.75	330		Pn	09 05 34.5	+0.9
D22K	**Ayikyak River**	4.76	348	IAML		09 07 00.3	
	comp=N,32nm,1.0s						
D22K				IAML		09 07 00.4	
	comp=E,39nm,1.0s						
I17K	**Unalakleet**	4.78	270		Pn	09 05 34.2	+0.3
I17K	**Unalakleet**	4.78	270	IAML		09 06 58.5	
	comp=E,45nm,0.8s						
I17K				IAML		09 07 07.4	
	comp=N,35nm,1.2s						
L16K	**Owhat River**	5.08	244		Pn	09 05 36.9	-1.3
C21K	**Knifeblade Rid**	5.28	340		Pn	09 05 40.8	0.0
F28M	**Old Crow**	5.28	46		Pn	09 05 39.9	-0.9
M16K	**Timber Creek**	5.32	236		Pn	09 05 40.5	-0.9
D19K	**Kuna River**	5.38	326		Pn	09 05 43.4	+1.1
E18K	**Tukpahlearik C**	5.42	310		Pn	09 05 43.9	+1.1
M29M	**Somme Creek**	5.45	105		Pn	09 05 43.4	+0.2
G16K	**Koyuk River**	5.45	287		Pn	09 05 43.6	+0.5
G29M	**Pine Creek**	5.57	56		Pn	09 05 45.0	+0.1
K15K	**Wolf Creek Mou**	5.63	255		Pn	09 05 44.5	-1.2
E17K	**Hotham Inlet**	5.69	305		Pn	09 05 47.0	+0.6
J30M	**Hart River**	5.87	81		Pn	09 05 49.6	+0.5
C27K	**Jago River**	5.89	21		Pn	09 05 49.9	+0.8
C19K	**Lookout Ridge**	6.19	326		Pn	09 05 53.9	+0.5
C18K	**Utukok River**	6.31	319		Pn	09 05 55.7	+0.7
E29M	**Blow River**	6.33	44		Pn	09 05 54.9	-0.4

IDC 24 09:16:37.2±4.9**, 5°.30S×153°.50E, h0^{km}, mb3.6**/5**, mbtmp3.6**/5**, MS3.2**/1**, Error ellipse: s-maj=142.5km s-min=29.7km az=110.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	23.65	230	P	P	09 21 52.0	+1.6
	0.4nm,0.4s,baz=57,slow=9.9,SNR=14 0.4nm,0.4s						
ASAR	**Alice Springs**	26.26	224	P	P	09 22 13.4	-1.0
	0.3nm,0.8s,baz=46,slow=9.2,SNR=4.4 0.3nm,0.8s						
FITZ	**Fitzroy Crossi**	30.04	243	P	P	09 22 47.3	-0.8
	2.2nm,0.8s,baz=72,slow=12,SNR=1.5 2.2nm,0.8s						
TGY	**Tagaytay City**	37.62	301	LR	LR	09 39 03.3	
	comp=Z,38nm,20.7s,baz=220,slow=36						
SONM	**Songino Array**	67.12	328	P	P	09 27 34.1	+1.3
	0.3nm,0.4s,baz=121,slow=10,SNR=2.0 0.3nm,0.4s						
MKAR	**Makanchi Array**	81.16	319	P	P	09 28 53.8	-1.0
	0.4nm,0.6s,baz=99,slow=5.9,SNR=5.0 0.4nm,0.6s						

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*IDC **24** 09:19:56.3±3.6, 54°.30N×87°.35E, h0^{km}, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=33.5km s-min=20.4km az=43.0*

ASRS 24 09:19:57.0±0.9**, 54°.19N×86°.99E, h0^{km}, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	1.30	260	I	I	09 28 38.0	
	baz=77,slow=326,SNR=2.9						
ZALV	**Zalesovo Beam**	1.30	260	Pg	Pn	09 20 22.8	+0.3
	1.8nm,0.3s,baz=76,slow=15,SNR=13						
ZALV				Lg	Lg	09 20 45.4	
	1.2nm,0.3s,baz=75,slow=22,SNR=4.4						
KURBB	**Kurchatov Arra**	6.29	239	Pn	Pn	09 21 34.2	+3.3
	0.1nm,0.3s,baz=52,slow=14,SNR=5.7 0.4nm,0.3s						
MKAR	**Makanchi Array**	7.99	204	Pn	Pn	09 21 57.4	+3.1
	0.1nm,0.3s,baz=27,slow=14,SNR=5.3 0.2nm,0.3s						

IDC 24 09:21:08.8±6.9**, 7°.22S×129°.74E, h0^{km}, mb4.1**/1**, mbtmp3.8**/4**, ML3.5**/3**, Error ellipse: s-maj=88.6km s-min=54.1km az=144.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	11.53	200	Pn	Pn	09 23 56.5	+1.7
	0.2nm,0.3s,baz=18,slow=12,SNR=2.2						
FITZ				Sn	Sn	09 26 04.8	+0.4
	0.1nm,0.3s,baz=254,slow=23,SNR=1.2 4.0nm,0.9s						
WRA	**Warramunga Arr**	13.41	161	Pn	Pn	09 24 20.1	-0.5
	0.3nm,0.3s,baz=339,slow=13,SNR=15						
WRA				Sn	Sn	09 26 52.1	+1.5
	0.2nm,0.3s,baz=337,slow=20,SNR=5.5 0.6nm,0.4s						
ASAR	**Alice Springs**	16.83	167	Pn	Pn	09 25 06.3	+0.2
	0.2nm,0.3s,baz=346,slow=9.3,SNR=14 0.6nm,0.7s						
STKA	**Stephens Creek**	26.91	157	P	P	09 26 51.4	-0.4
	2.3nm,0.8s,baz=338,slow=7.3,SNR=2.9 2.3nm,0.8s						

IDC 24 09:29:41.2±2.0**, 2°.62S×138°.68E, h0^{km}, mb3.1**/2**, mbtmp3.1**/4**, ML3.1**/2**, Error ellipse: s-maj=37.4km s-min=18.5km az=159.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	**Jayapura**	2.02	87	Pn	Pn	09 30 16.8	+0.1
	2.6nm,0.3s,baz=226,slow=10,SNR=12						
JAY				Lg	Lg	09 30 45.3	
	1.9nm,0.3s,baz=104,slow=20,SNR=3.6 6.6nm,0.3s						
WRA	**Warramunga Arr**	17.73	194	P	Pn	09 33 48.7	-1.0
	0.1nm,0.3s,baz=15,slow=13,SNR=5.6 0.2nm,0.5s						
ASAR	**Alice Springs**	21.42	192	P	P	09 34 31.3	+0.3
	0.2nm,0.4s,baz=18,slow=9.5,SNR=8.5 0.2nm,0.4s						
ILAR	**Eielson Array**	85.77	24	P	P	09 42 22.3	+0.1
	0.2nm,0.6s,baz=265,slow=6.1,SNR=1.1 0.2nm,0.6s						

IDC 24 09:29:46.0±999.0**, 41°.43N×68°.04E, h0^{km}, Error ellipse: s-maj=1740.0km s-min=222.3km az=142.0, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	11.36	326	I	I	10 36 50.0	
	0.1nm,0.7s,baz=138,slow=314,SNR=5.1						
I43RU	**DUBNA INFRASON**	25.05	318	I	I	12 04 40.0	
	baz=117,slow=324,SNR=1.0						
I26DE	**FREYUNG INFRAS**	38.32	300	I	I	13 22 10.0	
	baz=76,slow=314,SNR=1.8						

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*ASRS **24** 09:30:49.0±1.1, 53°.59N×88°.02E, h0^{km}, M2.9, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*IDC **24** 09:30:51.6±2.8, 53°.58N×87°.86E, h0^{km}, mbtmp3.1/2, ML2.8/2, Error ellipse: s-maj=26.2km s-min=16.8km az=58.0*

*NNC **24** 09:30:52.3±3.3, 53°.46N×87°.84E, h1^{km}±24^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=28.5km s-min=11.9km az=72.0, Suspected Mining explosion.*

ISC 24 09:30:52.9±3.6**, 53°.6N**±0°.1×**87°.7E**±0°.2**, h0^{km}, n9, σ1s.03**/13**, 9C-4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	1.76	284	⇑Pn	**Pn**	**09 31 24.3**	**-0.3**
	0.9nm,0.7s						
ZAA0				⇑Sn	**Sg**	**09 31 50.7**	**+1.3**
	2.6nm,0.3s						
ZALV	**Zalesovo Beam**	1.76	284	Pn	**Pn**	**09 31 24.2**	**-0.4**
	2.9nm,0.3s,baz=97,slow=16,SNR=28						
ZALV				Lg	Lg	09 31 50.8	
	8.1nm,0.3s,baz=101,slow=27,SNR=23						
I46RU	**ZALESOVO INFRA**	1.76	284	I	I	09 42 38.8	
	0.1nm,1.1s,baz=99,slow=325,SNR=17						
KURK	**Kurchatov**	6.28	247	⇑Pn	**Pn**	**09 32 26.9**	**+0.2**
	1.8nm,0.8s						
KURK				⇑Sn	**Sn**	**09 33 39.3**	**+0.1**
	1.4nm,0.9s						
KURK				⇑Lg	Lg	09 34 12.6	
	3.2nm,0.8s						
KURBB	**Kurchatov Arra**	6.38	246	Pn	**Pn**	**09 32 28.3**	**+0.2**
	0.1nm,0.3s,baz=61,slow=14,SNR=6.6						
KURBB				Lg	Lg	09 34 14.4	
	0.1nm,0.3s,baz=63,slow=31,SNR=6.0 1.0nm,0.4s						
KURBB	**Kurchatov Arra**	6.38	246	⇓Pn	**Pn**	**09 32 28.0**	**-0.1**
	0.9nm,0.3s						
KURBB				⇓Sn	**Sn**	**09 33 39.9**	**-1.6**
	6.4nm,0.7s						
KURBB				⇑Lg	Lg	09 34 17.3	
	8.8nm,0.8s						
MK31	**Makanchi Array**	7.62	209	Pn	**Pn**	**09 32 46.0**	**+0.8**
	0.1nm,0.3s,baz=29,slow=14,SNR=7.3						
MK31				⇓Sn	**Sn**	**09 34 12.5**	**+0.4**
	0.2nm,0.4s						
MK31				⇑Lg	Lg	09 34 54.9	
	1.8nm,0.7s,baz=31,slow=32,SNR=4.1						
MKAR	**Makanchi Array**	7.62	209	Pn	**Pn**	**09 32 46.0**	**+0.8**
	0.2nm,0.3s,baz=28,slow=13,SNR=7.3						
MKAR				Lg	Lg	09 34 53.7	
	0.1nm,0.3s,baz=23,slow=29,SNR=6.4 0.3nm,0.3s						
MAKZ	**Makanchi**	7.70	211	⇓Pn	**Pn**	**09 32 46.1**	**-0.1**
	0.2nm,0.3s						
MAKZ				⇑Sn	**Sn**	**09 34 12.0**	**-2.1**
	0.5nm,0.8s						
MAKZ				⇑Lg	Lg	09 34 53.5	
	1.5nm,0.8s						

TAP 24 09:30:59.1, 23°.53N×120°.75E, h14^{km}, ML2.3, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALS	**Alishan**	0.06	114	*i* P	Pg	09 31 03.0	+0.8
ALS				S	Sg	09 31 05.5	+1.3
CHN5	**Tsauling**	0.09	314	*i* P	Pg	09 31 02.5	+0.2
CHN5				S	Sg	09 31 05.1	+0.7
WCKO	**Fanlu**	0.16	235	*e*P	Pb	09 31 03.8	-0.2
WCKO				*i* S	Sb	09 31 07.1	-0.1
WHYT	**Xinyi Township**	0.19	30	P	Pb	09 31 04.2	-0.3
WGK	**Gukeng**	0.23	311	P	Pb	09 31 04.8	-0.3
WDLH	**Douliu**	0.25	309	*e*P	Pb	09 31 05.2	-0.2
WDLH				*e*S	Sb	09 31 09.8	+0.2
CHN2	**Minshiung**	0.25	270	*i* S	Sb	09 31 10.4	+0.7
TPUB	**Ta-pu**	0.26	206	P	Pb	09 31 05.2	-0.4
TPUB	**Ta-pu**	0.26	206	P	Pb	09 31 05.3	-0.3
TPUB				S	Sb	09 31 10.0	+0.1
WJS	**Zhushan**	0.29	356	*e*P	Pb	09 31 06.1	0.0
WJS				*e*S	Sb	09 31 11.1	+0.3
CHY	**Chiayi**	0.30	263	*e*P	Pb	09 31 06.2	-0.1
CHY				S	Sb	09 31 12.0	+0.8
WTP	**Ta-pu**	0.31	204	*i* P	Pb	09 31 06.4	-0.2
WTP				*i* S	Sb	09 31 11.6	+0.1
SSLB	**Suanglung**	0.32	36	P	Pb	09 31 06.3	-0.3
SSLB	**Suanglung**	0.32	36	P	Pb	09 31 06.2	-0.4
SSLB				S	Sb	09 31 11.6	-0.1
TWK	**Hsinying**	0.36	222	P	Pb	09 31 07.1	-0.2
STYH	**Taoyuan**	0.36	176	*e*P	Pb	09 31 07.2	-0.1
STYH				*e*S	Sb	09 31 12.9	0.0
WTK	**Tuku**	0.37	295	*i* P	Pb	09 31 07.2	-0.2
WTK				S	Sb	09 31 13.9	+0.9
SMLT	**Sun Moon Lake**	0.38	21	*e*P	Pb	09 31 07.8	+0.2
SMLT				S	Sb	09 31 14.0	+0.6
SNST	**Tainan City**	0.39	217	*e*P	Pb	09 31 07.8	0.0
SNST				*e*S	Sb	09 31 14.3	+0.7
CHN1	**Nanshi**	0.40	211	P	Pb	09 31 08.0	-0.1
CHN1				S	Sb	09 31 14.6	+0.5
ELDTW	**Lidau**	0.42	144	P	Pb	09 31 08.7	+0.3
ELDTW				S	Sb	09 31 15.1	+0.4
VWDT	**VWDT**	0.42	58	P	Pb	09 31 08.7	+0.3
ICHU	**Yijhu**	0.47	248	*e*P	Pb	09 31 09.3	+0.2
WSL	**Shuilin Townsh**	0.48	269	*e*P	Pb	09 31 09.4	0.0
WSL				S	Sb	09 31 17.6	+1.4
YULB	**Yu-li**	0.52	105	P	Pb	09 31 10.3	+0.2
YULB	**Yu-li**	0.52	105	P	Pb	09 31 10.3	+0.2
YULB				*e*S	Sb	09 31 17.9	+0.4
EHY	**Hungye**	0.53	93	*e*P	Pb	09 31 10.8	+0.7
EHY				*e*S	Sb	09 31 18.5	+0.9
EHY	**Hungye**	0.53	93	*e*P	Pb	09 31 10.9	+0.7
CHN8	**Yiju**	0.53	250	*e*S	Sb	09 31 19.1	+1.4
TWF1	**Yuli**	0.53	110	*i* P	Pb	09 31 10.8	+0.5
TWF1				S	Sb	09 31 18.9	+1.0
WCS	**Beigang Elemen**	0.54	16	*e*P	Pb	09 31 10.4	0.0
EHYH	**Wanrong**	0.55	94	*e*P	Pb	09 31 11.1	+0.6
EHYH				*e*S	Sb	09 31 18.8	+0.6
WUSB	**Renai**	0.57	36	*i* P	Pb	09 31 10.9	-0.1
WUSB				S	Sb	09 31 19.1	+0.1
WCHH	**Zhanghua**	0.57	342	*e*S	Sb	09 31 19.5	+0.6
OWD	**Renai**	0.57	43	*i* P	Pb	09 31 11.2	+0.1
OWD				*e*S	Sb	09 31 19.7	+0.6
OWD	**Renai**	0.57	43	*e*P	Pb	09 31 11.1	+0.1
FULB	**Fuli**	0.60	124	*e*P	Pn	09 31 12.5	-0.8
TCU	**Taichung**	0.61	354	*e*S	Sb	09 31 20.7	+0.4
HGSD	**Ruisui**	0.62	94	*e*P	Pg	09 31 11.1	-0.2
HGSD	**Ruisui**	0.62	94	*e*P	Pg	09 31 10.9	-0.4
CHKH	**Chenggong**	0.68	120	*e*P	Pb	09 31 13.4	+0.5
LONT	**Longtian**	0.71	151	*e*P	Pb	09 31 13.9	+0.5
TWG	**Pinlang**	0.77	157	*e*P	Pn	09 31 15.0	-0.6
TWG				*e*S	Sn	09 31 25.9	-1.0
TWGBT	**Beinan**	0.77	157	*e*P	Pb	09 31 14.9	+0.5
TWGBT				*e*S	Sn	09 31 26.1	-1.0

TAP 24 09:30:59.4, 23°.91N×121°.77E, h45^{km}±1^{km}, ML2.6, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEYL	**Yanliau Villag**	0.16	254	*e*P	Pn	09 31 07.4	+0.5
SHUL	**Shoufeng**	0.23	236	P	Pn	09 31 08.0	+0.6
SHUL				*e*S	Sn	09 31 14.8	+1.8
TWD	**Chiawan**	0.23	317	P	Pn	09 31 07.7	+0.2
TWD				*e*S	Sn	09 31 13.8	+0.7
ETM	**Tongmen**	0.26	282	*e*P	Pn	09 31 08.1	+0.5
ETL	**Fush Village**	0.28	332	*e*P	Pn	09 31 08.2	+0.2
ETL				*e*S	Sn	09 31 14.5	+0.6
TEGC	**Jichi Village**	0.29	226	*e*P	Pn	09 31 08.4	+0.5
NACB	**Ninganchiao**	0.30	329	P	Pn	09 31 08.3	+0.2
NACB				*e*S	Sn	09 31 14.9	+0.6
ESL	**Shilin**	0.32	252	P	Pn	09 31 08.5	+0.2
ESL				*e*S	Sn	09 31 15.2	+0.6
LXIB	**Xiulin Townshi**	0.34	288	*e*P	Pn	09 31 09.0	+0.3
LXIB				*e*S	Sn	09 31 15.7	+0.5
ETLH	**Xiulin Townshi**	0.39	318	*e*P	Pn	09 31 09.5	+0.3
ETLH				*e*S	Sn	09 31 16.8	+0.7
WARBT	**Fenglin Townsh**	0.40	241	P	Pn	09 31 09.1	-0.1
WHF	**Hehuan Shan**	0.52	297	*e*P	Pn	09 31 11.3	+0.3
WHF				*e*S	Sn	09 31 19.6	+0.4
FUSS	**Fushou**	0.58	305	*e*P	Pn	09 31 12.3	+0.6
FUSS				*e*S	Sn	09 31 21.7	+1.2
NNSB	**Datong**	0.62	326	P	Pn	09 31 12.6	+0.6
NNSB				S	Sn	09 31 21.8	+0.7
NNS	**Nan Shan**	0.64	326	P	Pn	09 31 12.9	+0.6

NNS				S	Sn	09 31 22.3	+0.8
YHNB	Yeheng	0.83	335	P	Pn	09 31 15.9	+1.1

*NEIC **24** 09:37:01.7±3.0, 6°.31S±0°.09×129°.11E±0°.04, h215^{km}±15^{km}, mb4.6/10, Error ellipse: s-maj=13.5km s-min=3.1km az=157.0*

*DJA **24** 09:37:02.0±0.3, 6°S±3°×12°9E±°, h251^{km}±7^{km}, M4.8/17, mB5.3/6, mb4.8/12, MLv4.8/17, Mw(mB)4.7/6*

*IDC **24** 09:37:06.8±3.8, 6°.64S×128°.81E, h256^{km}±35^{km}, mb3.3/6, mbtmp4.3/9, Error ellipse: s-maj=42.3km s-min=12.8km az=65.0*

ISC 24 09:37:03.9±0.5**, 6°.48S**±0°.05×**129°.21E**±0°.05**, h250**^{km}**, n64,** σ**2^{s}.63**/71**, mb3.8**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	2.06	20	P	Pn	09 37 44.6	-2.4
SAUI	Saumlaki	2.56	126	Pn	Pn	09 37 49.8	-1.9
SAUI				Sn	S	09 38 23.8	-5.7
SAUI	Saumlaki	2.56	126	P	Pn	09 37 50.0	-1.7
AAI	Ambon	2.95	340	P	Pn	09 37 53.7	-2.2
MSAI	Masohi	3.12	355	P	Pn	09 37 55.4	-2.4
NLAI	Namlea	3.84	327	P	Pn	09 38 06.0	+0.1
FAKI	Fak Fak	4.66	41		Pn	09 38 11.7	-3.8
FAKI				Sn	S	09 39 04.3	-8.3
FAKI	Fak Fak	4.66	41	P	Pn	09 38 11.1	-4.4
KMPI	Kaimana, Papua	5.28	58	P	Pn	09 38 21.0	-2.1
SANI	Sanana	5.45	324	P	Pn	09 38 23.6	-1.6
	40nm,0.6s						
SOEI	Soe	5.88	236	Pn	Pn	09 38 29.0	-1.6
SOEI				Sn	S	09 39 34.0	-6.0
SOEI	Soe	5.88	236	P	Pn	09 38 28.4	-2.3
	1.0nm78nm,0.9s						
SWI	Sorong	5.94	20	P	Pn	09 38 27.6	-3.7
	2.0nm10µm319nm,0.5s						
DRS	Darwin Rock St	6.14	164	P	Pn	09 38 24.9	-8.9
MTN	Manton Dam	6.60	163		Pn	09 38 37.8	-1.7
MTN	Manton Dam	6.60	163	P	Pn	09 38 29.9	-10
BATI	Baumata	6.62	236	P	Pn	09 38 37.5	-2.3
	103nm,0.5s,baz=215,slow=1.0,SNR=9.9						
BATI				S	S	09 39 50.9	-5.9
	100nm,0.2s,baz=5.8,slow=23,SNR=11						
BATI	Baumata	6.62	236	P	Pn	09 38 37.9	-2.0
	0.8nm2µm129nm,0.8s						
KDU	Kakadu	6.96	153	P	Pn	09 38 34.1	-10
RKPI	Ransiki, Papua	6.99	45	P	Pn	09 38 42.2	-2.3
	17µm332nm,0.7s						
TNTI	Ternate	7.43	346	P	Pn	09 38 47.7	-2.4
EDFI	Ende, Flores	7.79	253	P	Pn	09 38 54.8	+0.1
BAKI	Biak	8.65	53	P	Pn	09 39 03.8	-1.7
	71nm,0.6s						
KNRA	Kununurra	9.15	183		Pn	09 39 09.9	-1.9
MRSI	Marisa	10.02	313	P	Pn	09 39 19.3	-3.5
WBSI	Waikabubak, Su	10.22	251	P	Pn	09 39 24.1	-1.2
	47nm,1.0s						
SGSI	Sangihe	10.74	340	P	Pn	09 39 30.7	-1.2
	255nm,0.9s						
FITZ	Fitzroy Crossi	12.06	196		Pn	09 39 46.1	-2.2
FITZ	Fitzroy Crossi	12.06	196	P	Pn	09 39 47.5	-0.7
	29nm,0.5s,baz=24,slow=10,SNR=78						
WB0	Warramunga Arr	14.14	160		Pn	09 40 13.3	-0.5
WRAB	Tennant Creek	14.28	160	Pn	Pn	09 40 14.3	-1.1
WRA	Warramunga Arr	14.28	160	Pn	Pn	09 40 14.6	-1.0
WRA	Warramunga Arr	14.28	160	P	Pn	09 40 14.2	-1.3
	0.2nm,0.3s,baz=343,slow=9.5,SNR=13						
WRA				S	S	09 42 49.0	-4.7
	4.9nm,0.6s,baz=336,slow=22,SNR=6.0						
WR8	Warramunga Arr	14.35	160	Pn	Pn	09 40 15.7	-0.6
COEN	Coen	15.62	120	P	Pn	09 40 32.6	+1.1
COEN				IAmb	IAmb	09 40 34.4	
	comp=Z,31nm,0.7s						
COEN	Coen	15.62	120	P	P	09 40 29.8	-0.8
MBWA	Marble Bar	17.24	211	P	Pn	09 40 49.7	-0.8
MBWA	Marble Bar	17.24	211	P	Pn	09 40 49.8	-0.8
QIS	Mount Isa	17.25	145	P	Pn	09 40 50.7	0.0
PSA00	Pilbara Seismi	17.53	210	P	Pn	09 40 52.9	-1.1
PSA00				IAmb	IAmb	09 40 53.6	
	comp=Z,21nm,0.8s						
PSA00	Pilbara Seismi	17.53	210	P	P	09 40 51.6	+0.1
PSA00				IAmb	IAmb	09 40 56.1	
	comp=Z,20nm,1.4s						
PSA00	Pilbara Seismi	17.53	210	P	Pn	09 40 52.8	-1.1
AS31	Alice Springs	17.68	166		Pn	09 40 55.5	-0.2
AS31				IAmb	IAmb	09 40 59.0	
	comp=Z,17nm,0.7s						
ASAR	Alice Springs	17.68	166	P	Pn	09 40 55.6	-0.1
	comp=Z,44nm,0.6s,baz=338,slow=9.2,SNR=51						
ASAR				S	S	09 44 04.2	+0.7
	comp=Z,3.8nm,0.8s,baz=347,slow=22,SNR=12						
MTSU	Mount Surprise	18.74	130	P	Pn	09 41 07.1	-1.2
CTAO	Charters Tower	21.37	131	P	P	09 41 34.8	+2.6
GIRL	Giralia	21.61	220	P	P	09 41 36.4	+2.1
MEEK	Meekatharra	22.45	206	P	P	09 41 45.6	+3.5
STKA	Stephens Creek	27.79	157	P	P	09 42 32.4	+2.4
STKA	Stephens Creek	27.79	157	P	P	09 42 32.2	+2.1
	comp=Z,0.9nm,0.3s,baz=343,slow=9.3,SNR=9.0						
	comp=Z,0.9nm,0.3s						
EIDS	Eidsvold	28.11	134	P	P	09 42 35.0	+2.0
EIDS				IAmb	IAmb	09 42 59.1	
	comp=Z,23nm,1.4s						
NWAO	Narrogin (SRO)	28.58	201	P	P	09 42 38.5	+1.5
NWAO				IAmb	IAmb	09 43 12.3	
	comp=Z,20nm,1.2s						
CAN	Canberra	33.99	150	P	P	09 43 25.8	+1.5
BTO	Baotou	50.07	341	*e*P	P	09 45 33.3	-0.4
BTO				pP	pwP	09 46 31.3	-1.2
BTO				sP	sP	09 46 57.6	+4.4
BTO				PP	PP	09 47 27.3	-4.3
BTO				S	S	09 52 25.8	+0.4
BTO	Baotou	50.07	341	SS	SS	09 56 04.3	+2.1
BTO				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BTO				pmax	pmax		
	comp=Z,180nm,4.3s						
BTO				LR	LR		
	comp=N,110nm,5.5s						
BTO				LR	LR		
	comp=E,110nm,6.4s						
BTO				LR	LR		
	comp=Z,78nm,4.8s						
CN2	Changchun	50.16	356	*e*P	P	09 45 38.4	+4.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SONM	Songino Array	57.70	342	P	P	09 46 30.6	+1.9
	comp=Z,0.5nm,0.5s,baz=134,slow=4.2,SNR=2.1						
	comp=Z,0.5nm,0.5s						
KSH	Kashi	67.11	318	P	P	09 47 40.3	+9.3
KSH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MKAR	Makanchi Array	67.36	327	P	P	09 47 34.2	+1.9
	comp=Z,0.3nm,0.4s,baz=113,slow=8.4,SNR=6.3						
	comp=Z,0.3nm,0.4s						
KURBB	Kurchatov Arra	71.66	329	P	P	09 48 00.1	+1.7
	comp=Z,0.5nm,0.6s,baz=138,slow=5.0,SNR=5.8						
	comp=Z,0.5nm,0.6s						
VNDA	Vanda	73.06	173	P	P	09 48 07.9	+1.7
	comp=Z,0.4nm,0.3s,baz=314,slow=10,SNR=2.7						
	comp=Z,0.4nm,0.3s						
QSPA	South Pole Qui	83.50	180	P	P	09 49 05.0	+1.4
	comp=Z,0.7nm,0.5s,baz=186,slow=1.0,SNR=16						
	comp=Z,0.7nm,0.5s						
CPUP	Villa Florida	146.78	169	PKPbc	PKPab	09 56 19.1	+0.1
	comp=Z,0.2nm,0.4s,baz=147,slow=0.8,SNR=3.4						
LPAZ	La Paz	151.61	143	PKPbc	PKiKP	09 56 33.0	+2.3
	comp=Z,0.4nm,0.3s,baz=24,slow=4.0,SNR=2.2						
LPAZ				PKPab	PKPab	09 56 41.8	+2.0
	comp=Z,1.2nm,0.6s,baz=191,slow=4.2,SNR=5.8						

KRSC 24 09:45:54.1±4.2**, 49°.77N**×**157°.82E, h50**^{km}±25^{km}**, Ml3.7, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.42	311	*e*P	Pn	09 46 17.4	-0.1
SKR				*e*S	Sn	09 46 35.9	+0.9
PAU	Pauzhetka	1.81	340	*e*P	Pn	09 46 25.6	+2.8
MIPR	Malaya Ipel'ka	2.59	346	*e*P	Pn	09 46 36.9	+3.3
ASAK	Asacha	2.62	1	*e*P	Pn	09 46 36.3	+2.4
MTVR	Mutnovka	2.72	5	*e*P	Pn	09 46 38.2	+2.7
GRL	Gorelyy	2.79	3	*e*P	Pn	09 46 39.4	+3.1
UGLR	Uglovaya	3.50	10	*e*P	Pn	09 46 50.0	+3.9
AVH	Avacha	3.54	9	*e*P	Pn	09 46 51.6	+4.9
SMAR	Somma	3.55	10	*e*P	Pn	09 46 51.5	+4.7
KOK	Koryaka	3.56	8	*e*P	Pn	09 46 51.4	+4.5
SDLR	Sedlovina	3.57	10	*e*P	Pn	09 46 50.2	+3.1
KRX	Arik	3.63	8	*e*P	Pn	09 46 52.4	+4.5
MKZ	Mys Kozlova	5.36	25	*e*P	Pn	09 47 13.6	+2.2

*ASRS **24** 09:50:09.0±1.2, 54°.31N×86°.16E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 24 09:50:11.7±2.4**, 54°.29N**×**86°.01E, h0**^{km}**, mbtmp3.2**/2**, ML2.9**/2**, Error ellipse: s-maj=18.1km s-min=11.0km az=53.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.78	245	I	I	09 55 30.0	
	baz=65,slow=328,SNR=4.9						
ZALV	Zalesovo Beam	0.78	245	Pg	Pg	09 50 25.2	-1.5
	2.3nm,0.3s,baz=60,slow=18,SNR=22						
ZALV				Lg	Lg	09 50 38.0	
	9.9nm,0.3s,baz=65,slow=24,SNR=8.8						
KURBB	Kurchatov Arra	5.86	234	Pn	Pn	09 51 40.6	+0.8
	0.1nm,0.3s,baz=52,slow=14,SNR=14						
KURBB				Lg	Lg	09 53 20.8	
	0.1nm,0.3s,baz=60,slow=37,SNR=6.2						
	1.5nm,0.6s						
MKAR	Makanchi Array	7.87	199	Pn	Pn	09 52 08.4	+1.1
	0.4nm,0.3s,baz=23,slow=13,SNR=14						
MKAR				Sn	Sn	09 53 36.6	-0.4
	0.2nm,0.3s,baz=16,slow=23,SNR=3.0						
MKAR				Lg	Lg	09 54 20.7	
	0.1nm,0.3s,baz=27,slow=30,SNR=3.0						
	0.6nm,0.3s						

*MEX **24** 09:51:14.4±0.6, 14°.76N×93°.82W, h18^{km}±81^{km}, MD4.3*

*GCG **24** 09:51:15.1±1.4, 14°.77N×93°.58W, h21^{km}±17^{km}, ML4.1, MW3.6*

ISC 24 09:51:10.7±2.3**, 14°.61N**±0°.07×**93°.85W**±0°.03**, h33**^{km}±5^{km}**, n35,** σ**2^{s}.74**/59**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.25	29	*e*P	Pn	09 51 31.7	-0.1
PCIG				*e*S	Sn	09 51 45.0	-2.5
THIG		1.56	79	*e*P	Pn	09 51 37.4	+1.3
THIG				*e*S	Sn	09 51 53.9	-1.2
THIG		1.56	79	*e*P	Pn	09 51 37.5	+1.5
THIG				IAML		09 52 00.9	
	comp=N,2µm,0.2s						
PATR	El Naranjo	1.64	72	*e*P	Pn	09 51 38.0	+0.6
PATR				*i* S	Sn	09 51 57.0	-0.5
PAVE	Pavencul	1.71	70	*e*P	Pn	09 51 39.4	+1.0
PAVE				*e*S	Sn	09 51 59.0	-0.4
SMCA	Catarina	1.73	82	*e*P	Pn	09 51 40.1	+1.6
SMCA				IAML		09 52 04.5	
	comp=E,998nm,0.5s						
RTAL	Retalhuleu	2.08	92	*e*P	Pn	09 51 44.6	+1.2
RTAL				*e*S	Sn	09 52 10.0	+1.8
TGIG		2.27	18	*e*P	Pn	09 51 47.8	+1.8
TGIG				*e*S	Sn	09 52 12.4	-0.4
TGIG		2.27	18	*i* P	Pn	09 51 47.8	+1.8
TGIG				IAML		09 52 18.8	
	comp=N,953nm,0.2s						
TGBT	Tuxtla Gutierr	2.28	19	*e*P	Pb	09 51 50.4	-0.8
TGBT				*e*S	Sn	09 52 13.1	+0.2
CCIG	Comitan	2.34	44	*e*P	Pn	09 51 49.8	+2.8
CCIG				*i* S	Sn	09 52 15.6	+0.8
CCIG	Comitan	2.34	44	*e*P	Pn	09 51 49.9	+2.8
CCIG				IAML		09 52 25.8	
	comp=E,576nm,0.3s						
HUEH	Huehuetenango	2.37	72	*e*P	Pn	09 51 50.5	+3.0
HUEH				*e*S	Sn	09 52 19.4	+3.8
HUEH	Huehuetenango	2.37	72	*i* Pg	Pn	09 51 51.0	+3.5
HUEH				IAML		09 52 28.5	
	comp=E,4µm,0.5s						
STG8	El Palmar, Qui	2.42	93	*e*P	Pn	09 51 46.8	-1.4
STG8				*i* S	Sn	09 52 11.9	-4.9
STG8				IAML		09 52 17.0	
	comp=E,3µm,0.2s						
STG0	El Palmar, Qui	2.43	94	*e*P	Pn	09 51 46.8	-1.5
STG0				*e*S	Sn	09 52 13.3	-3.7
STG0				IAML		09 52 19.1	
	comp=E,5µm,0.2s						
HUIG	Huatulco	2.47	298	*e*P	Pn	09 51 50.6	+1.9
HUIG				*e*S	Sn	09 52 17.5	-0.3
FG16	Alotenango, Sa	3.25	95	*i* P	Pn	09 51 57.4	-2.2
FG16				IAML		09 52 45.1	
	comp=N,2µm,0.3s						
PEIG	Puerto Escondi	3.47	294	*e*P	Pn	09 52 04.8	+2.3
PEIG				*e*S	Sn	09 52 37.5	-5.0
VHO	Vista Hermosa	3.71	312	*e*P	Pn	09 52 07.5	+1.6
VHO				*e*S	Sn	09 52 44.5	-4.0
YOIG	Yosondua	4.21	303	*e*P	Pn	09 52 17.6	+4.8
YOIG				*e*S	Sn	09 53 00.4	-0.6
PETF	Flores	4.47	59	*e*P	Pn	09 52 19.5	+3.4
PNIG	Pinotepa	4.49	294	*e*P	Pn	09 52 20.2	+3.6
PNIG				*e*S	Sn	09 53 05.6	-2.1
TXIG	Tlaxiaco	4.60	305	*e*P	Pn	09 52 23.1	+4.9
TXIG				*e*S	Sn	09 53 06.7	-4.0
TOIG	Toxpalan	4.65	319	*e*P	Pn	09 52 21.8	+3.1
TOIG				*e*S	Sn	09 53 11.8	+0.2
HLIG	Huajuapan de L	4.97	311	*e*P	Pn	09 52 23.6	+0.3
HLIG				*e*S	Sn	09 53 17.4	-2.3
TPIG	Tehuac#an	5.07	319	*e*P	Pn	09 52 28.6	+4.0
TPIG				*e*S	Sn	09 53 17.4	-4.8
FTIG	Fresnillo de T	5.27	309	*e*P	Pn	09 52 30.0	+2.7
FTIG				*e*S	Sn	09 53 26.8	-0.1
TLIG	Tlapa	5.41	304	*e*P	Pn	09 52 32.3	+3.1
TLIG				*e*S	Sn	09 53 33.9	+3.5
JAUV	Jalcomulco	5.51	330	*e*P	Pn	09 52 28.1	-2.5
JAUV				*e*S	Sn	09 53 28.2	-4.7
PPM	Popocatepetl	6.37	315	*e*P	Pn	09 52 49.3	+6.5
MEIG	Mezcala	6.45	302	*e*P	Pn	09 52 47.4	+3.9
MEIG				*e*S	Sn	09 53 57.7	+1.6
CXUV	Coxquihui	6.59	328	*e*P	Pn	09 52 42.4	-2.9
CXUV				*e*S	Sn	09 53 57.2	-2.2
PLIG	Platanillo	6.60	306	*e*P	Pn	09 52 49.1	+3.5
PLIG				*e*S	Sn	09 53 56.9	-2.9
ARIG	Puente Sto Nin	7.23	301	*e*P	Pn	09 53 00.7	+6.6
ARIG				*e*S	Sn	09 54 16.0	+0.9

*GCG **24** 09:52:52.1±0.8, 14°.75N×93°.72W, h50^{km}±62^{km}, MD4.2, ML4.0, MW3.6*

*MEX **24** 09:52:54.2±0.7, 14°.80N×93°.62W, h9^{km}±31^{km}, MD4.0*

ISC 24 09:52:49.1±1.4**, 14°.78N**±0°.06×**93°.70W**±0°.04**, h33**^{km}±11^{km}**, n21,** σ**1^{s}.43**/34**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.04	27	*e*P	Pb	09 53 09.5	+0.9
PCIG				*e*S	Sb	09 53 22.4	+0.5
THIG		1.40	84	*e*P	Pb	09 53 15.2	+0.5
THIG				*e*S	Sb	09 53 31.1	-1.1
THIG		1.40	84	*i* P	Pb	09 53 15.2	+0.5
THIG				*i* S	Sb	09 53 33.1	+1.0
THIG				IAML		09 53 34.9	
	comp=N,1µm,0.4s						
PATR	El Naranjo	1.46	76	*e*P	Pb	09 53 16.0	+0.1
PATR				*e*S	Sb	09 53 32.8	-1.4
PAVE	Pavencul	1.53	74	*e*P	Pb	09 53 17.0	-0.1
PAVE				*e*S	Sb	09 53 35.2	-1.1
SMCA	Catarina	1.58	87	*i* P	Pb	09 53 18.0	+0.3
SMCA				*e*S	Sb	09 53 38.0	+0.7
SMCA				IAML		09 53 44.0	
	comp=N,759nm,0.4s						
RTAL	Retalhuleu	1.96	97	*e*P	Pb	09 53 23.2	-1.0
RTAL				*e*S	Sn	09 53 44.9	+1.3
TGIG		2.07	16	*e*P	Pb	09 53 25.4	-0.7
TGIG				*e*S	Sb	09 53 50.2	-1.3
TGIG		2.07	16	*i* P	Pb	09 53 25.4	-0.7
TGIG				*i* S	Sb	09 53 50.8	-0.7
TGIG				IAML		09 53 53.6	
	comp=E,1µm,0.3s						
TGBT	Tuxtla Gutierr	2.08	16	*e*P	Pn	09 53 22.9	+1.2
TGBT				*e*S	Sb	09 53 50.5	-1.1
CCIG	Comitan	2.13	45	*e*P	Pb	09 53 27.6	+0.4
CCIG				*e*S	Sb	09 53 53.7	+0.4
HUEH	Huehuetenango	2.19	75	*e*P	Pb	09 53 28.8	+0.4
HUEH				*e*S	Sn	09 53 51.7	+1.9
STG8	El Palmar, Qui	2.30	98	*i* P	Pn	09 53 24.6	-0.4
STG8				IAML		09 53 51.8	
	comp=E,2µm,0.1s						
STG0	El Palmar, Qui	2.31	98	*e*P	Pn	09 53 25.1	0.0
STG0				IAML		09 53 53.8	
	comp=E,2µm,0.2s						
HUIG	Huatulco	2.52	293	*e*P	Pn	09 53 27.4	-0.5
HUIG				*e*		09 53 54.4	
FG16	Alotenango, Sa	3.13	99	*i* P	Pn	09 53 35.3	-1.1
FG16				IAML		09 54 14.8	
	comp=E,974nm,0.2s						
PEIG	Puerto Escondi	3.54	291	*e*P	Pb	09 53 51.1	+0.1
PEIG				*e*		09 54 18.0	
VHO	Vista Hermosa	3.70	308	*e*P	Pn	09 53 48.8	+4.5
VHO				*e*S	Sn	09 54 26.5	-0.4
PNIG	Pinotepa	4.56	291	*e*P	Pn	09 53 57.6	+1.7
PNIG				*e*		09 54 43.0	
TOIG	Toxpalan	4.62	316	*e*S	Sn	09 54 46.9	-2.4
JAUV	Jalcomulco	5.44	327	*e*S	Sn	09 55 06.5	-3.1

*ASRS **24** 09:55:52.0±1.0, 53°.64N×86°.89E, h0^{km}, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 24 09:55:54.5±2.8**, 53°.71N**×**87°.01E, h0**^{km}**, mbtmp2.8**/2**, ML2.6**/2**, Error ellipse: s-maj=27.3km s-min=15.9km az=65.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.32	281	I	I	10 04 00.0	
	baz=100,slow=318,SNR=4.1						
ZALV	Zalesovo Beam	1.32	281	Pg	Pg	09 56 18.6	-1.1
	1.3nm,0.3s,baz=101,slow=17,SNR=9.8						
ZALV				Lg	Lg	09 56 37.4	
	2.4nm,0.3s,baz=101,slow=35,SNR=12						
KURBB	Kurchatov Arra	6.06	243	Pn	Pn	09 57 25.5	+0.2
	0.1nm,0.3s,baz=56,slow=13,SNR=4.8						
	0.3nm,0.3s						
MKAR	Makanchi Array	7.55	205	Pn	Pn	09 57 47.4	+1.6
	0.2nm,0.3s,baz=28,slow=15,SNR=6.3						
	0.2nm,0.3s						

*IDC **24** 09:56:44.7±0.5, 2°.66S×138°.51E, h0^{km}, mb4.3/15, mbtmp4.4/19, ML4.1/3, MS3.7/7, Error ellipse: s-maj=14.2km s-min=12.9km az=65.0*

*NEIC **24** 09:56:47.0±1.3, 2°.69S±0°.08×138°.56E±0°.06, h10^{km}±1^{km}, mb4.8/118, Error ellipse: s-maj=13.8km s-min=11.0km az=174.0*

*DJA **24** 09:56:47.6±0.6, 3°S±4°×13°9E±°, h10^{km}±6^{km}, M4.5/6, mb4.5/3, MLv4.5/6*

ISC 24 09:56:49.4±0.4**, 2°.70S**±0°.04×**138°.50E**±0°.05**, h35**^{km}**, n326,** σ**1^{s}.58**/268**, mb4.8**/84**, MS3.5**/4**, 1C, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.73	16	P	Pn	09 56 59.9	-3.4
SMPI				S	Sn	09 57 06.6	-6.7
GENI	Genyem	1.67	86	P	Pn	09 57 16.5	+0.3
GENI				S	Sn	09 57 34.8	-1.6
JAY	Jayapura	2.21	85	Pn	Pn	09 57 23.3	-0.4
	28nm,0.3s,baz=224,slow=10,SNR=89						
JAY				Lg	Lg	09 57 54.4	
	29nm,0.3s,baz=129,slow=19,SNR=8.4						
JAY				LR	LR	09 58 09.8	
	comp=Z,919nm,20.0s,baz=274,slow=39						
	120nm,0.4s						
JAY	Jayapura	2.21	85	P	Pn	09 57 23.2	-0.4
SRPI	Serui, Papua	2.41	290	P	Pn	09 57 27.7	+1.4
BAKI	Biak	2.82	302	P	Pn	09 57 34.8	+2.7
RKPI	Ransiki, Papua	4.48	285	P	Pn	09 57 50.5	-4.4
FAKI	Fak Fak	6.25	268	Pn	Pn	09 58 21.5	+2.3
FAKI	Fak Fak	6.25	268	P	Pn	09 58 22.2	+3.0
	0.2nm49nm,0.9s						
MANU	Manus Island	8.88	86		Pn	09 58 55.2	-0.1
COEN	Coen	12.10	158		Pn	09 59 40.0	+0.5
MTN	Manton Dam	12.44	215		Pn	09 59 45.4	+1.2
SOEI	Soe	15.78	243	P	P	10 00 33.2	+0.3
KNRA	Kununurra	16.07	216		Pn	10 00 33.4	+0.5
BATI	Baumata	16.51	242	Pn	Pn	10 00 39.0	+0.4
	15nm,0.4s,baz=117,slow=4.9,SNR=4.8						
WB0	Warramunga Arr	17.43	193		Pn	10 00 49.8	-0.2
WR8	Warramunga Arr	17.59	193		Pn	10 00 50.6	-1.4
WRAB	Tennant Creek	17.60	193	P	P	10 00 53.3	+0.4
WRAB				IAmb	IAmb	10 01 01.0	
	comp=Z,49nm,0.8s						
WRA	Warramunga Arr	17.61	193		Pn	10 00 50.4	-1.8
WRA	Warramunga Arr	17.61	193	P	Pn	10 00 50.8	-1.4
	comp=Z,1.0nm,0.3s,baz=18,slow=13,SNR=36						
WRA				S	Sn	10 04 00.5	-7.1
	comp=Z,4.8nm,0.7s,baz=9.7,slow=21,SNR=4.5						
WRA				LR	LR	10 08 03.2	
	comp=Z,408nm,19.1s,baz=84,slow=38						
	comp=Z,12nm,0.7s						
KAPI	Kappang	18.85	262	LR	LR	10 10 39.7	
	comp=Z,142nm,18.2s,baz=58,slow=44						
CTAO	Charters Tower	18.87	157	P	Pn	10 01 07.1	-0.4
FITZ	Fitzroy Crossi	19.83	219	P	P	10 01 18.1	+0.8
FITZ	Fitzroy Crossi	19.83	219	P	P	10 01 17.4	+0.1
	comp=Z,0.4nm,0.3s,baz=30,slow=9.3,SNR=5.5						
FITZ				S	S	10 04 53.9	-5.0
	comp=Z,11nm,0.9s,baz=202,slow=13,SNR=3.8						
FITZ				LR	LR	10 09 58.1	
	comp=Z,353nm,20.2s,baz=44,slow=40						
	comp=Z,3.1nm,0.7s						
AS31	Alice Springs	21.31	192		P	10 01 33.8	+0.4
ASAR	Alice Springs	21.31	192		P	10 01 33.7	+0.3
ASAR	Alice Springs	21.31	192	P	P	10 01 33.5	0.0
	comp=Z,6.8nm,0.5s,baz=18,slow=8.6,SNR=60						
ASAR				S	S	10 05 26.6	-1.9
	comp=Z,7.3nm,0.8s,baz=18,slow=24,SNR=7.2						
ASAR				LR	LR	10 10 08.9	
	comp=Z,224nm,21.5s,baz=18,slow=38						
	comp=Z,6.8nm,0.5s						
MYLDM	Lahad Datu	21.46	291		P	10 01 38.0	+2.9
MYLDM				IAmb	IAmb	10 01 44.5	
	comp=Z,57nm,1.4s						
KKM	Kota Kinabalu	23.89	291	P	P	10 02 00.4	+0.2
KKM				IAmb	IAmb	10 02 03.4	
	comp=Z,31nm,1.2s						
PSA00	Pilbara Seismi	26.10	223	P	P	10 02 18.7	-1.5
PSA00				IAmb	IAmb	10 02 42.3	
	comp=Z,43nm,1.8s						
STKA	Stephens Creek	29.17	175	P	P	10 02 48.4	+0.8
STKA	Stephens Creek	29.17	175	P	P	10 02 49.0	+1.4
	comp=Z,2.0nm,0.8s,baz=1.5,slow=7.9,SNR=5.0						
	comp=Z,2.0nm,0.8s						
JOW	Kunigami	30.98	342	LR	LR	10 16 21.1	
	comp=Z,102nm,18.1s,baz=344,slow=38						
LEM	Lembang	31.04	261	LR	LR	10 16 36.7	
	comp=Z,88nm,21.4s,baz=336,slow=38						
NJ2	Nanjing	39.27	333	*e*P	P	10 04 17.4	+2.5
NJ2				pmax	pmax		
	comp=Z,12nm,0.9s						
KSRS	Korea Array	41.14	347	P	P	10 04 30.6	+0.4
	comp=Z,2.4nm,0.8s,baz=165,slow=8.9,SNR=12						
	comp=Z,2.4nm,0.8s						
TIA	Tai'an	43.55	335	P	P	10 04 50.4	+0.4
TIA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CMAR	Chiang Mai Arr	44.25	300		P	10 04 56.7	+0.8
CMAR	Chiang Mai Arr	44.25	300	P	P	10 04 57.4	+1.5
	comp=Z,2.5nm,0.5s,baz=124,slow=6.3,SNR=15						
	comp=Z,2.5nm,0.5s						
KMI	Kunming	44.35	311	P	P	10 04 58.4	+1.5
KMI				pmax	pmax		
	comp=Z,11nm,1.3s						
LYN	LuoYang	44.40	329	P	P	10 04 58.1	+1.3
LYN				pmax	pmax		
	comp=Z,34nm,0.9s						
PZH	PanZhiHua	45.86	312	P	P	10 05 10.0	+1.3
USRK	Ussuriysk Ar.	47.05	354	P	P	10 05 18.8	+1.2
	comp=Z,1.9nm,0.8s,baz=164,slow=9.1,SNR=4.6						
	comp=Z,1.9nm,0.8s						
BJI	Beijing	47.20	337	P	P	10 05 19.4	+0.6
BJI				pP	pP	10 05 24.0	-5.5
BJI				sP	sP	10 05 26.5	-7.2
BJI				S	S	10 12 13.0	+3.6
BJI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BJI				LR	LR		
	comp=N,46nm,11.4s						
BJI				LR	LR		

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      comp=E,32nm,9.4s
BJI                          LR      LR
      comp=Z,65nm,14.1s
BNX   BinXian           49.23 350 ⇑P      P       10 05 34.6 +0.2
BNX                              pmax    pmax
      comp=Z,11nm,1.0s
HHC   Hu-ho-hao-te      49.83 333 eP      P       10 05 42.8 +3.6
HHC                              pmax    pmax
      comp=Z,9.0nm,0.5s
LZH   Lanzhou           50.35 323 eP      P       10 05 44.4 +1.1
LZH                              sP      pP      10 05 52.4 -1.6
LZH                              pmax    pmax
      comp=Z,29nm,1.2s
HEH   HeiHe             53.60 351 eP      P       10 06 07.4 +0.4
HEH                              pmax    pmax
      comp=Z,7.0nm,1.0s
GTA   Gaotai            54.94 324 eP      P       10 06 18.9 +1.7
GTA                              pP      pP      10 06 25.8 -2.0
GTA                              pmax    pmax
      comp=Z,10.0nm,1.2s
SONM  Songino Array     57.62 335 P       P       10 06 37.1 +1.0
SONM  Songino Array     57.62 335 P       P       10 06 35.9 -0.2
      comp=Z,1.9nm,0.6s,baz=153,slow=7.1,SNR=10
      comp=Z,1.9nm,0.6s
PETK  Petropavlovsk-    57.90  14 P       P       10 06 38.7 +0.9
PETK  Petropavlovsk-    57.90  14 P       P       10 06 37.9 +0.1
      comp=Z,2.6nm,0.8s,baz=160,slow=4.7,SNR=7.0
      comp=Z,2.6nm,0.8s
EVN   Everest           58.26 305         P       10 06 42.2 +0.6
EVN                              IAmb    IAmb    10 06 43.3
      comp=Z,4.3nm,0.5s
WMQ   Urumqi            64.87 322 eP      P       10 07 28.3 +3.0
MKAR  Makanchi Array    69.65 322         P       10 07 56.1 +0.6
MKAR  Makanchi Array    69.65 322 P       P       10 07 56.0 +0.5
      comp=Z,6.2nm,1.0s,baz=111,slow=6.6,SNR=32
      comp=Z,6.2nm,1.0s
MAKZ  Makanchi          69.85 322         P       10 07 57.8 +1.1
MAKZ                             IAmb    IAmb    10 07 59.4
      comp=Z,12nm,1.1s
KSH   Kashi             70.92 313 P       P       10 08 06.3 +2.8
KSH                              pmax    pmax
      comp=Z,4.0nm,0.6s
ZALV  Zalesovo Beam     71.82 330 P       P       10 08 07.9 -0.6
ZALV  Zalesovo Beam     71.82 330 P       P       10 08 08.4 -0.1
      comp=Z,1.9nm,0.6s,baz=113,slow=3.9,SNR=7.3
      comp=Z,1.9nm,0.6s
BOOM  Boomskoye usch    72.00 316 P       P       10 08 11.5 +1.5
BOOM                             IAmb    IAmb    10 08 12.6
      comp=Z,4.6nm,0.6s
UNV   Unalaska Valle    72.43  31 P       P       10 08 13.6 +1.6
      baz=239
KURK  Kurchatov         73.59 325         P       10 08 19.9 +0.9
KURBB Kurchatov Arra    73.60 325 P       P       10 08 19.1  0.0
      comp=Z,2.2nm,1.0s,baz=122,slow=5.4,SNR=11
      comp=Z,2.2nm,1.0s
ARSB  Arslanbob         73.68 314 IAmb    IAmb    10 08 23.1
      comp=Z,18nm,1.7s
TIXI  Tiksi             74.48 357         P       10 08 23.9 +0.1
S12K  Black Hills       75.58  30         P       10 08 31.3 +0.8
S12K  Black Hills       75.58  30 P       P       10 08 32.6 +2.0
      baz=243
VNDA  Vanda             75.81 175         P       10 08 31.9 +0.5
VNDA                             IAmb    IAmb    10 10 52.9
      comp=Z,17nm,2.0s
VNDA  Vanda             75.81 175 P       P       10 08 32.1 +0.7
      comp=Z,1.4nm,0.6s,baz=328,slow=6.3,SNR=9.4
      comp=Z,1.4nm,0.6s
SIMJ  Simiganj          75.83 311 P       P       10 08 32.2 -0.3
KKAR  Karatay Array     75.98 316         P       10 08 32.9 -0.1
M11K  Mekoryuk          76.00  25 P       P       10 08 34.4 +1.6
      baz=238
SDPT  Sand Point        76.23  31 P       P       10 08 35.3 +1.1
      baz=244
CHNA  Chernabura Isl    76.47  32 P       P       10 08 36.4 +0.9
      baz=245
S14K  Fog Glacier       77.11  30 P       P       10 08 40.1 +0.9
      baz=245
M13K  Dall Lake         77.23  26 P       P       10 08 41.4 +1.7
      baz=240
K13K  Kusilvak Mount    77.46  24 IAmb    IAmb    10 08 44.3
      comp=Z,10nm,1.1s
K13K  Kusilvak Mount    77.46  24 P       P       10 08 42.4 +1.5
      baz=239
O14K  Tigyukauivet M    77.61  27 P       P       10 08 43.6 +1.8
      baz=243
N14K  Kuskokwak Cree    77.73  26 P       P       10 08 44.1 +1.7
      baz=242
M14K  Bethel            78.00  26         P       10 08 45.4 +1.5
M14K                             IAmb    IAmb    10 08 46.3
      comp=Z,12nm,0.9s
M14K  Bethel            78.00  26 P       P       10 08 45.4 +1.5
      baz=242
O15K  Ungalikthiuk R    78.23  28 P       P       10 08 46.9 +1.6
      baz=244
M15K  Kasigluk River    78.53  26 P       P       10 08 48.7 +1.7
      baz=243
N15K  Kwethluk River    78.55  27 P       P       10 08 48.8 +1.7
      baz=244
ANM   Nome              78.57  21 P       P       10 08 48.9 +1.8
      baz=238
L15K  Ungalak Mounta    78.64  25 P       P       10 08 49.2 +1.6
      baz=242
K15K  Wolf Creek Mou    78.91  24 IAmb    IAmb    10 08 52.3
      comp=Z,12nm,1.2s
K15K  Wolf Creek Mou    78.91  24 P       P       10 08 50.9 +1.9
      baz=242,SNR=5.1
CHIR  Chirikof Islan    78.94  32 P       P       10 08 50.1 +0.8
      baz=248
BVAR  Borovoye Array    79.18 325 P       P       10 08 51.1 +0.4
      comp=Z,2.9nm,0.6s,baz=107,slow=9.5,SNR=11
      comp=Z,2.9nm,0.6s
O16K  Kokwok River B    79.21  28 P       P       10 08 52.9 +2.1
      baz=245
N16K  Nishlik Lake      79.28  27 P       P       10 08 52.8 +1.6
      baz=245
G15K  Niukluk           79.28  21 P       P       10 08 52.0 +1.0
      baz=239
M16K  Timber Creek      79.43  26 IAmb    IAmb    10 08 54.2
      comp=Z,18nm,1.2s
M16K  Timber Creek      79.43  26 P       P       10 08 52.7 +0.8
      baz=244
F15K  North Star Dit    79.43  21 P       P       10 08 53.0 +1.2
      baz=238
L16K  Owhat River       79.51  25 IAmb    IAmb    10 08 54.4
      comp=Z,22nm,1.6s
L16K  Owhat River       79.51  25 P       P       10 08 53.8 +1.5
      baz=244
Q16K  King Salmon       79.52  29 P       P       10 08 53.8 +1.5
      baz=247
Q17K  Contact Creek     79.73  29 P       P       10 08 54.6 +0.9
      baz=248
O17K  Koliganek Bris    79.75  28 P       P       10 08 55.2 +1.6
      baz=246
J16K  Anvik River       79.75  24 IAmb    IAmb    10 08 56.4
      comp=Z,18nm,1.5s
J16K  Anvik River       79.75  24 P       P       10 08 55.1 +1.5
      baz=242
I17K  Unalakleet        80.00  23 P       P       10 08 55.8 +1.0
      baz=242
N17K  Nushagak Hills    80.01  27 IAmb    IAmb    10 08 57.7
      comp=Z,16nm,1.4s
N17K  Nushagak Hills    80.01  27 P       P       10 08 56.4 +1.3
      baz=246
G16K  Koyuk River       80.09  21 P       P       10 08 57.5 +2.1
      baz=241
R18K  Karluk            80.18  30 P       P       10 08 57.4 +1.4
      baz=249
L17K  Donlin            80.19  25 P       P       10 08 57.8 +1.8
      baz=245
M17K  Holitna River     80.26  26 P       P       10 08 58.0 +1.7
      baz=246
Q18K  Katmai Hardscr    80.30  29 P       P       10 08 58.0 +1.2
      baz=248
J17K  VABM Dome         80.42  24 P       P       10 08 58.3 +1.1
      baz=244
K17K  Iditarod          80.44  25 IAmb    IAmb    10 09 00.0
      comp=Z,17nm,1.1s
K17K  Iditarod          80.44  25 P       P       10 08 58.7 +1.3
      baz=245
C16K  Lisburne Hills    80.58  18 P       P       10 08 59.7 +1.8
      baz=237
OHAK  Old Harbor        80.65  31 P       P       10 09 00.4 +1.8
      baz=250
O18K  Koktuh Hills      80.66  28 P       P       10 08 59.9 +1.4
      baz=248
N18K  Kilae Creek       80.66  27 P       P       10 09 00.7 +2.2
      baz=247
G17K  Kiwalik Mounta    80.77  22 P       P       10 09 00.9 +1.8
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      baz=242
H17K  Granite Mounta    80.78  22 P       P       10 09 00.7 +1.6
      baz=243
L18K  Granite Mounta    80.92  25 IAmb    IAmb    10 09 02.4
      comp=Z,18nm,1.6s
L18K  Granite Mounta    80.92  25 P       P       10 09 01.0 +1.1
      baz=246
D17K  Noatak River      81.00  19 P       P       10 09 01.7 +1.5
      baz=240
F17K  Baldwin Pennin    81.00  21 P       P       10 09 02.1 +1.9
      baz=242
M18K  Stony River       81.00  26 P       P       10 09 01.9 +1.5
      baz=247
KDAK  Kodiak Island     81.20  30 P       P       10 09 02.5 +1.0
      comp=Z,6.0nm,0.8s,baz=250,slow=8.2,SNR=6.3
      comp=Z,6.0nm,0.8s
KDAK  Kodiak Island     81.20  30 P       P       10 09 03.0 +1.6
      baz=251
N19K  Bonanza Creek     81.35  27 P       P       10 09 03.6 +1.2
      baz=248
C17K  DeLong Mountai    81.37  19 P       P       10 09 03.4 +1.2
      baz=239
J18K  Innoko River      81.41  24 P       P       10 09 03.8 +1.3
      baz=246
H18K  Honhosa River     81.47  22 P       P       10 09 03.8 +1.0
      baz=244
Q20K  Shuyak Island     81.57  30 P       P       10 09 05.0 +1.6
      baz=251
F18K  Selawik           81.64  21 P       P       10 09 05.1 +1.5
      baz=243
G18K  Tagagawik         81.69  22 P       P       10 09 05.4 +1.4
      baz=244
E18K  Tukpahlearik C    81.69  20 IAmb    IAmb    10 09 07.5
      comp=Z,8.3nm,1.1s
E18K  Tukpahlearik C    81.69  20 P       P       10 09 05.8 +1.9
      baz=242
L19K  White Mountain    81.69  26 IAmb    IAmb    10 09 06.3
      comp=Z,8.8nm,1.2s
L19K  White Mountain    81.69  26 P       P       10 09 05.7 +1.7
      baz=248
M19K  Big River Lodg    81.79  26 P       P       10 09 05.9 +1.4
      baz=248
J19K  Poorman           82.07  24 P       P       10 09 07.4 +1.4
      baz=247
C18K  Utukok River      82.09  19 IAmb    IAmb    10 09 08.1
      comp=Z,18nm,1.9s
C18K  Utukok River      82.09  19 P       P       10 09 06.9 +0.8
      baz=241
L20K  Farewell, AK      82.23  26 P       P       10 09 07.7 +0.9
      baz=249
B18K  Kokolik River     82.25  18 P       P       10 09 07.9 +1.2
      baz=241
M20K  Styx River        82.34  26 P       P       10 09 08.2 +0.7
      baz=250
H19K  Roundabout Mou    82.36  22 IAmb    IAmb    10 09 09.8
      comp=Z,18nm,1.8s
H19K  Roundabout Mou    82.36  22 P       P       10 09 09.1 +1.7
      baz=246
G19K  Purcell Mounta    82.37  22 P       P       10 09 08.8 +1.3
      baz=245
F19K  Shaleruckik Mo    82.42  21 P       P       10 09 08.9 +1.2
      baz=245
K20K  Telida            82.47  25 IAmb    IAmb    10 09 09.9
      comp=Z,7.3nm,1.1s
K20K  Telida            82.47  25 P       P       10 09 08.7 +0.7
      baz=249
J20K  Nowinta River     82.74  24 P       P       10 09 10.4 +0.9
      baz=248
BRSE  Bradley Lake S    82.74  29 P       P       10 09 10.6 +1.0
      baz=252
C19K  Lookout Ridge     82.82  19 P       P       10 09 11.1 +1.3
      baz=243
E19K  Redstone River    82.87  20 IAmb    IAmb    10 09 13.3
      comp=Z,4.3nm,0.8s
E19K  Redstone River    82.87  20 P       P       10 09 11.7 +1.6
      baz=245
A19K  Wainwright        82.88  17 P       P       10 09 11.6 +1.6
      baz=241
H20K  Anotleneega Mo    82.94  23 P       P       10 09 11.7 +1.1
      baz=248
D19K  Kuna River        83.02  19 P       P       10 09 11.8 +0.9
      baz=244
SKT   Skwentna          83.09  27 IAmb    IAmb    10 09 12.2
      comp=Z,7.5nm,1.2s
SKT   Skwentna          83.09  27 P       P       10 09 11.9 +0.6
      baz=251
F20K  Avaraart Lake     83.24  21 IAmb    IAmb    10 09 14.9
      comp=Z,5.3nm,0.9s
F20K  Avaraart Lake     83.24  21 P       P       10 09 12.9 +1.0
      baz=247
CAST  Castle Rocks      83.33  25 P       P       10 09 13.5 +1.0
      baz=250
CHUM  Lake Minchumin    83.39  25 P       P       10 09 14.0 +1.3
      baz=250
SEW   Seward            83.47  29 P       P       10 09 15.0 +1.8
      baz=253
E20K  Nigu River        83.57  20 P       P       10 09 15.7 +2.0
      baz=246
D20K  Etivluk River     83.61  19 IAmb    IAmb    10 09 16.8
      comp=Z,12nm,1.3s
D20K  Etivluk River     83.61  19 P       P       10 09 15.4 +1.5
      baz=246,SNR=5.0
RC01  Rabbit Creek A    83.62  28 P       P       10 09 15.5 +1.4
      baz=253
M22K  Willow            83.65  27 P       P       10 09 15.2 +1.0
      baz=252
H21K  Melozitna Rive    83.81  23 IAmb    IAmb    10 09 18.2
      comp=Z,7.2nm,1.5s
H21K  Melozitna Rive    83.81  23 P       P       10 09 16.6 +1.7
      baz=250
G21K  Allakaket         83.85  22 P       P       10 09 16.5 +1.4
      baz=249
KTH   Kantishna Hill    83.86  25 IAmb    IAmb    10 09 17.5
      comp=Z,13nm,1.4s
I21K  Tanana            83.97  23 IAmb    IAmb    10 09 24.1
      comp=Z,14nm,1.8s
I21K  Tanana            83.97  23 P       P       10 09 17.4 +1.7
      baz=250
B20K  Meade River       83.98  18 P       P       10 09 17.3 +1.6
      baz=245
BPAW  Bear Paw Mtn.     84.01  25 P       P       10 09 17.0 +0.9
      baz=251
PMR   Palmer            84.05  27 IAmb    IAmb    10 09 17.1
      comp=Z,13nm,1.4s
PMR   Palmer            84.05  27 P       P       10 09 16.4 +0.2
      baz=253,SNR=6.7
TRF   Thorofare Moun    84.10  25 IAmb    IAmb    10 12 25.4
      comp=Z,14nm,1.7s
TRF   Thorofare Moun    84.10  25 P       P       10 09 17.0 +0.3
      baz=252
F21K  Alatna River      84.12  21 P       P       10 09 17.4 +0.9
      baz=249
PWL   Port Wells        84.21  28 P       P       10 09 17.8 +0.7
      baz=254
KNK   Knik Glacier      84.31  28 P       P       10 09 18.2 +0.5
      baz=254
C21K  Knifeblade Rid    84.40  19 P       P       10 09 19.2 +1.4
      baz=247,SNR=5.3
E21K  Killik River      84.40  20 P       P       10 09 18.9 +1.0
      baz=248
MLY   Manley            84.41  24 IAmb    IAmb    10 09 22.5
      comp=Z,5.3nm,1.0s
MLY   Manley            84.41  24 P       P       10 09 18.6 +0.6
      baz=251
P23K  Montague Islan    84.43  29 P       P       10 09 18.1 -0.1
      baz=255
H22K  Ishtalitna Cre    84.44  23 P       P       10 09 18.9 +0.7
      baz=251
AB31  Akbulak array     84.58 320 IAmb    IAmb    10 09 32.0
      comp=Z,12nm,1.9s
ABKAR Akbulak array     84.58 320 P       P       10 09 19.2  0.0
ABKAR Akbulak array     84.58 320 IAmb    IAmb    10 09 32.0
      comp=Z,12nm,1.9s
B21K  Ikpikpuk River    84.63  19 IAmb    IAmb    10 09 21.9
      comp=Z,6.3nm,0.9s
B21K  Ikpikpuk River    84.63  19 P       P       10 09 20.5 +1.5
      baz=247
WAT1  Susitna Watana    84.67  26 P       P       10 09 20.2 +0.8
      baz=254
F22K  John River        84.69  21 P       P       10 09 20.7 +1.3
      baz=250
RND   Reindeer          84.70  26         P       10 09 19.2 -0.4
G22K  Bettles           84.74  22 P       P       10 09 20.5 +0.9
      baz=251
MCK   McKinley          84.76  25 IAmb    IAmb    10 09 22.0
      comp=Z,6.2nm,1.0s
MCK   McKinley          84.76  25 P       P       10 09 20.4 +0.6
      baz=253
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GLI   Glacier Island    84.80  28 P       P       10 09 20.7 +0.7
      baz=255
SCM   Sheep Creek Mo    84.94  27 P       P       10 09 21.4 +0.6
      baz=255
NEA2  Nenana            84.96  24 IAmb    IAmb    10 09 23.5
      comp=Z,8.9nm,1.4s
NEA2  Nenana            84.96  24 P       P       10 09 22.2 +1.4
      baz=253
WAT6  Susitna Watana    84.96  26 P       P       10 09 21.6 +0.6
      baz=254
D22K  Ayikyak River     85.00  20 P       P       10 09 22.0 +1.1
      baz=249
I23K  Minto, Yukon-K    85.00  24 IAmb    IAmb    10 09 24.4
      comp=Z,10nm,1.4s
I23K  Minto, Yukon-K    85.00  24 P       P       10 09 22.0 +1.0
      baz=253
E22K  Anaktuvuk Pass    85.04  21 IAmb    IAmb    10 09 23.6
      comp=Z,5.1nm,0.9s
E22K  Anaktuvuk Pass    85.04  21 P       P       10 09 22.2 +1.0
      baz=250,SNR=6.2
A22K  Sinclair Lake     85.06  18 P       P       10 09 22.4 +1.3
      baz=247
H23K  Yukon River       85.14  23 P       P       10 09 23.2 +1.5
      baz=252
G23K  Bananza Creek     85.22  22 P       P       10 09 22.9 +0.8
      baz=252
DHY   Denali Highway    85.25  26 P       P       10 09 23.1 +0.7
      baz=255,SNR=9.1
B22K  Teshekpuk Lake    85.28  18 P       P       10 09 23.4 +1.2
      baz=248
COLD  Coldfoot          85.32  22 P       P       10 09 24.4 +1.9
      baz=252
WRH   Wood River Hil    85.33  25 IAmb    IAmb    10 09 25.6
      comp=Z,9.1nm,1.1s
CCB   Clear Creek Bu    85.50  24 IAmb    IAmb    10 09 26.1
      comp=Z,7.2nm,1.0s
KLU   Klutina           85.51  28 P       P       10 09 25.0 +1.3
      baz=256
M24K  Tolsona, Glenn    85.54  27 P       P       10 09 25.2 +1.4
      baz=256
D23K  Nanushuk River    85.71  20 P       P       10 09 25.3 +0.9
      baz=251,SNR=13
HDA   Harding Lake      85.79  25 IAmb    IAmb    10 09 26.8
      comp=Z,14nm,1.7s
HDA   Harding Lake      85.79  25 P       P       10 09 25.8 +0.9
      baz=255
E23K  Chandalar         85.79  21 P       P       10 09 25.7 +0.7
      baz=252,SNR=7.3
H24K  Noodor Dome       85.80  23 P       P       10 09 26.1 +1.1
      baz=254
KAIM  Kayak Island      85.87  29 P       P       10 09 26.6 +1.2
      baz=258
ILAR  Eielson Array     85.91  24 P       P       10 09 23.9 -1.6
ILAR  Eielson Array     85.91  24 P       P       10 09 24.6 -0.9
      comp=Z,2.4nm,0.8s,baz=264,slow=4.3,SNR=22
      comp=Z,2.4nm,0.8s
TOLK  Toolik Lake Re    85.99  20 IAmb    IAmb    10 09 29.0
      comp=Z,9.9nm,1.1s
TOLK  Toolik Lake Re    85.99  20 P       P       10 09 26.9 +1.0
      baz=252,SNR=8.9
BMRM  Bremner River     86.01  28 P       P       10 09 27.3 +1.1
      baz=257
C23K  Itkillik River    86.01  19 IAmb    IAmb    10 09 28.7
      comp=Z,8.6nm,1.0s
C23K  Itkillik River    86.01  19 P       P       10 09 27.0 +1.1
      baz=251
PAX   Paxson            86.07  26 P       P       10 09 27.7 +1.2
      baz=256
N25K  Chitina, Valde    86.15  28 P       P       10 09 28.1 +1.2
      baz=257
G24K  Hadweenzic Riv    86.19  23 IAmb    IAmb    10 09 30.0
      comp=Z,14nm,1.4s
G24K  Hadweenzic Riv    86.19  23 P       P       10 09 28.4 +1.5
      baz=254,SNR=6.5
E24K  Your Creek        86.20  21 P       P       10 09 28.5 +1.6
      baz=253
F24K  Squaw Lake        86.26  22 P       P       10 09 28.8 +1.5
      baz=254,SNR=8.6
D24K  Happy Valley      86.40  20 P       P       10 09 29.3 +1.4
      baz=253
GLB   Gilahina Butte    86.48  28 IAmb    IAmb    10 09 31.4
      comp=Z,5.5nm,0.9s
J25K  Salcha River,     86.50  25 P       P       10 09 29.2 +0.7
      baz=256
RIDG  Independent Ri    86.52  26 P       P       10 09 29.3 +0.7
      baz=257
C24K  Franklin Bluff    86.61  19 P       P       10 09 30.1 +1.2
      baz=253
CRQE  Cirque            86.68  29 P       P       10 09 30.8 +1.2
      baz=259
H25L  Birch Creek       86.72  23 P       P       10 09 31.0 +1.5
      baz=256
G25K  Bearman Lake      86.73  23 P       P       10 09 30.9 +1.4
      baz=256
SCRK  Sand Creek        86.94  26 IAmb    IAmb    10 11 07.3
      comp=Z,8.2nm,1.6s
SCRK  Sand Creek        86.94  26 P       P       10 09 31.8 +1.0
      baz=258
L26K  Log Cabin Wild    87.03  27 P       P       10 09 32.4 +1.4
      baz=258
M26K  Nabesna, AK       87.06  27 P       P       10 09 33.1 +1.8
      baz=259
F25K  Christian Rive    87.11  22 IAmb    IAmb    10 09 34.9
      comp=Z,8.9nm,1.4s
F25K  Christian Rive    87.11  22 P       P       10 09 32.8 +1.4
      baz=256,SNR=7.4
MESA  MESA              87.13  29 P       P       10 09 33.1 +1.2
      baz=260
J26L  Joseph Creek      87.24  25 IAmb    IAmb    10 09 34.7
      comp=Z,14nm,1.6s
J26L  Joseph Creek      87.24  25 P       P       10 09 33.3 +1.2
      baz=258,SNR=8.1
QSPA  South Pole Qui    87.25 180 P       P       10 09 33.3 +1.0
QSPA  South Pole Qui    87.25 180 P       P       10 09 32.8 +0.6
      comp=Z,4.8nm,0.9s,baz=257,slow=1.8,SNR=20
      comp=Z,4.8nm,0.9s
E25K  Arctic Village    87.27  21 P       P       10 09 34.0 +1.9
      baz=256,SNR=8.2
D25K  Kavik River       87.28  20 P       P       10 09 33.3 +1.1
      baz=255
GRNC  Granite Creek     87.33  29 IAmb    IAmb    10 09 35.5
      comp=Z,6.7nm,0.9s
BMAR  Burnt Mountain    87.47  22         P       10 09 34.4 +1.2
M27K  Edge Creek, AK    87.56  27 IAmb    IAmb    10 09 37.2
      comp=Z,10.0nm,1.4s
M27K  Edge Creek, AK    87.56  27 P       P       10 09 35.1 +1.3
      baz=260
CTG   Chitna Glacier    87.57  29 P       P       10 09 35.0 +1.2
      baz=260
I26K  Coal Creek Min    87.57  24 IAmb    IAmb    10 09 34.9
      comp=Z,6.8nm,1.4s
I26K  Coal Creek Min    87.57  24 P       P       10 09 34.5 +0.9
      baz=258
G26K  Porcupine Rive    87.67  23 P       P       10 09 35.5 +1.5
      baz=258,SNR=12
F26K  Sheenjek River    87.69  22 P       P       10 09 35.7 +1.5
      baz=257,SNR=11
L27K  Beaver Creek,     87.71  27 IAmb    IAmb    10 09 37.3
      comp=Z,11nm,1.5s
L27K  Beaver Creek,     87.71  27 P       P       10 09 35.6 +1.2
      baz=260,SNR=8.2
BCAR  Beaver Creek A    87.73  27         P       10 09 35.3 +0.8
K27K  Chicken           87.78  26 P       P       10 09 36.2 +1.5
      baz=259
C26K  Camden Bay        87.93  20 P       P       10 09 36.7 +1.5
      baz=257
BVCY  Beaver Creek      88.04  27 P       P       10 09 37.8 +1.9
      baz=260
O28M  Mount Upton       88.09  29 P       P       10 09 38.1 +1.5
      baz=261
YUK3  Moose Creek       88.12  28 P       P       10 09 37.7 +1.1
      baz=261
I27K  Kandik River      88.26  24 P       P       10 09 38.1 +1.2
      baz=260,SNR=11
H27K  Steamboat Moun    88.41  24 P       P       10 09 39.2 +1.6
      baz=260,SNR=16
G27K  Doyon Strip       88.46  23 IAmb    IAmb    10 09 41.4
      comp=Z,6.4nm,1.4s
G27K  Doyon Strip       88.46  23 P       P       10 09 39.6 +1.7
      baz=260,SNR=5.3
E27K  Coleen River      88.74  22 IAmb    IAmb    10 09 43.6
      comp=Z,12nm,1.6s
E27K  Coleen River      88.74  22 P       P       10 09 40.7 +1.6
      baz=260
I28M  Miner Creek       88.93  24 P       P       10 09 41.6 +1.4
      baz=261,SNR=8.8
DAWY  Dawson            88.95  26 P       P       10 09 41.7 +1.5
DAWY  Dawson            88.95  26 P       P       10 09 41.5 +1.2
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	baz=262,SNR=10						
M29M	**Somme Creek**	89.15	27	IAmb	IAmb	10 09 43.7	
	comp=Z,13nm,1.7s						
M29M	**Somme Creek**	89.15	27	P	**P**	**10 09 43.4**	**+2.1**
	baz=263						
P29M	**Windy Craggy**	89.15	30	P	P	10 09 43.4	+2.1
	baz=263						
F28M	**Old Crow**	89.28	22	P	P	10 09 44.0	+2.3
	baz=261						
L29M	**L29M**	89.38	27	IAmb	IAmb	10 09 46.2	
	comp=Z,8.4nm,1.2s						
L29M	**L29M**	89.38	27	P	P	10 09 44.5	+2.2
	baz=263						
HYT	**Haines Junctio**	89.40	29	P	**P**	**10 09 44.0**	**+1.5**
	baz=264						
E28M	**Babbage River**	89.56	21	IAmb	IAmb	10 09 45.9	
	comp=Z,13nm,1.8s						
E28M	**Babbage River**	89.56	21	P	P	10 09 45.2	+2.3
	baz=262						
I29M	**Ogilvie Camp,**	89.59	25	IAmb	IAmb	10 09 46.5	
	comp=Z,12nm,1.4s						
H29M	**Whitestone**	89.67	24	P	P	10 09 45.7	+2.1
	baz=263						
N30M	**Aishikik Lake**	89.67	29	P	**P**	**10 09 45.7**	**+2.0**
	baz=264						
K29M	**Barlow Dome**	89.74	26	P	**P**	**10 09 45.3**	**+1.3**
	baz=264						
G29M	**Pine Creek**	89.90	23	P	**P**	**10 09 45.6**	**+1.0**
	baz=263						
E29M	**Blow River**	90.13	22	P	**P**	**10 09 47.0**	**+1.4**
	baz=263						
N31M	**Braeburn, Yuko**	90.30	29	P	**P**	**10 09 47.8**	**+1.2**
	baz=265						
J30M	**Hart River**	90.34	25		**P**	**10 09 48.2**	**+1.4**
J30M	**Hart River**	90.34	25	P	**P**	**10 09 48.0**	**+1.1**
	baz=265						
SKAG	**Skagway**	90.35	31	P	**P**	**10 09 47.8**	**+1.0**
	baz=265						
EPYK	**Eagle Plains**	90.35	24	P	**P**	**10 09 47.5**	**+0.7**
	baz=264						
I30M	**Mount Dempster**	90.38	25	P	**P**	**10 09 48.4**	**+1.4**
	baz=264						
G30M	**tAoh Zraii Nji**	90.61	23	P	**P**	**10 09 49.0**	**+1.0**
	baz=265						
WHY	**Whitehorse**	90.67	29	P	**P**	**10 09 49.2**	**+0.7**
	baz=266						
F30M	**Barrier River**	90.84	22	P	**P**	**10 09 49.8**	**+0.9**
	baz=265						
M31M	**Drury Creek, Y**	91.01	28	P	**P**	**10 09 50.9**	**+1.0**
	baz=266						
P32M	**Atlin**	91.18	31	P	**P**	**10 09 51.7**	**+0.9**
	baz=267						
G31M	**Satah River**	91.37	23	P	**P**	**10 09 51.9**	**+0.6**
	baz=266						
F31M	**Tsiigehtchic**	91.61	23	P	**P**	**10 09 54.3**	**+1.8**
	baz=267						
P33M	**Teslin, Yukon**	91.67	30	P	**P**	**10 09 54.0**	**+1.0**
	baz=268						
INK	**Inuvik**	91.74	22	P	**P**	**10 09 55.0**	**+1.9**
	baz=267						
MMPY	**Sheldon Lake,**	92.49	28	P	**P**	**10 09 58.4**	**+1.7**
	baz=269						
TORD	**Torodi Ar. Bea**	136.05	286	PKP	**PKiKP**	**10 16 08.8**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=35,slow=3.9,SNR=3.8						
CPUP	**Villa Florida**	147.33	153	PKPbc	**PKiKP**	**10 16 31.6**	**-0.9**
	comp=Z,1.1nm,0.9s,baz=73,slow=3.6,SNR=5.9						
LPAZ	**La Paz**	147.62	127	PKPbc	**PKPab**	**10 16 33.2**	**-1.0**
	comp=Z,4.5nm,0.8s,baz=186,slow=0.2,SNR=9.6						

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*AFAD **24** 10:04:24.2, 37°.20N×44°.96E, h3^{km}±5^{km}, ML2.5*
*TEH **24** 10:04:26.4, 37°.27N×44°.96E, h6^{km}±73^{km}*
*ISN **24** 10:04:27.5±2.9, 37°.28N×44°.98E, h6^{km}, ML2.6*
ISC 24 10:04:26.3±1.3, **37°.27N**±0°.04×**44°.95E**±0°.04, **h3**^{km}±15^{km}, **n13**, σ**1^{s}.46**/20, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOVA	**Hakkari_Yksek**	0.62	302	P	**Pg**	**10 04 38.3**	**+0.1**
YOVA				S	**Sg**	**10 04 46.6**	**+0.4**
YOVA				*i* IAML		10 04 52.0	
	comp=N,138nm,0.5s						
MAHB	**Mahabad**	0.78	129	Pg	**Pg**	**10 04 40.8**	**-0.5**
IAZR	**Azarshahr**	0.92	63	Pg	**Pb**	**10 04 44.6**	**-0.4**
HAKT	**HAKKARI**	1.03	287	P	**Pg**	**10 04 44.6**	**-1.6**
HAKT				S	**Sg**	**10 05 00.1**	**+0.5**
HAKT				*i* IAML		10 05 04.0	
	comp=N,173nm,0.5s						
CUKT	**Cukurca**	1.07	269	P	**Pg**	**10 04 44.1**	**-2.8**
CUKT				S	**Sg**	**10 05 01.5**	**+0.7**
CUKT				*i* IAML		10 05 06.0	
	comp=E,278nm,0.6s						
ISHB	**Shabestar**	1.15	27	Pg	**Pg**	**10 04 47.6**	**-0.7**
ITBZ	**Tabriz**	1.35	44	Pg	**Pn**	**10 04 51.6**	**-0.7**
ITBZ				Sg	**Sn**	**10 05 10.4**	**-0.5**
GEVA	**Gevas**	1.83	305	P	**Pg**	**10 05 01.3**	**-0.1**
GEVA				S	**Sg**	**10 05 28.5**	**+3.4**
GEVA				*i* IAML		10 05 30.0	
	comp=E,42nm,0.6s						
IHSH	**Hashtrud**	1.84	88	Pn	**Pb**	**10 05 00.1**	**-0.8**
IKRK	**Kirkuk**	1.93	195	*e*Pg	**Pn**	**10 05 00.0**	**0.0**
	baz=15						
IKRK				*e*Sg	**Sg**	**10 05 29.0**	**+0.8**
IHRS	**Heris**	1.96	57	Pn	**Pb**	**10 05 02.3**	**-0.5**
PERV	**Siirt/Pervari-**	2.03	290	P	**Pn**	**10 05 02.1**	**+0.5**
PERV				S	**Sg**	**10 05 33.3**	**+1.7**
PERV				*i* IAML		10 05 36.0	
	comp=E,50nm,0.4s						
IDHR	**Dehrash**	2.81	155	Pn	**Pn**	**10 05 14.6**	**+2.2**

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*GCG **24** 10:12:01.7±1.3, 14°.21N×93°.02W, h16^{km}±9^{km}, MD4.9, ML4.8, MW4.3*
*MEX **24** 10:12:04.5±0.6, 14°.36N×93°.08W, h14^{km}±11^{km}, MD4.9*
*SNET **24** 10:12:05.1±1.2, 14°.26N×92°.78W, h15^{km}±146^{km}, ML4.8*
*CATAC **24** 10:12:06.5±1.0, 14°N±5°×9°3W±°, h17^{km}±7^{km}, M4.9/12, MLv4.9/12, Error ellipse: s-maj=15.1km s-min=8.3km az=121.2, confirmed*
*IDC **24** 10:12:07.3±2.2, 14°.81N×92°.61W, h45^{km}±17^{km}, mb4.0/11, mbtmp4.3/14, ML4.5/3, MS4.1/39, Error ellipse: s-maj=35.7km s-min=13.7km az=37.0*
*NEIC **24** 10:12:07.9±2.1, 14°.56N±0°.07×92°.89W±0°.04, h44^{km}±10^{km}, mb4.5/324, Md4.8/89(MEX), Error ellipse: s-maj=9.7km s-min=6.1km az=192.0*
ISC 24 10:12:05.7±0.7, **14°.43N**±0°.05×**92°.96W**±0°.04, **h40**^{km}±7^{km}, **n608**, σ**1^{s}.76**/509, **mb4.5**/141, **MS4.1**/37, **1C-2D**, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.83	55		**Pn**	**10 12 19.6**	**-1.3**
THIG					**Sn**	**10 12 31.4**	**-0.6**
THIG		0.83	55	*i* P	**Pn**	**10 12 19.6**	**-1.3**
THIG				*e*S	**Sn**	**10 12 31.4**	**-0.6**
THIG		0.83	55	*e*P	**Pn**	**10 12 19.6**	**-1.3**
THIG				*i* S	**Sn**	**10 12 32.5**	**+0.6**
THIG				IAML		10 12 36.0	
	comp=E,27µm,0.4s						
SMCA	**Catarina**	0.96	63	*e*P	**Pn**	**10 12 21.3**	**-1.5**
SMCA				*e*S	**Sn**	**10 12 36.6**	**+1.4**
SMCA				IAML		10 12 44.0	
	comp=N,6µm,0.3s						
PATR	**El Naranjo**	0.98	46	*i* P	**Pn**	**10 12 21.9**	**-1.4**
PATR				*e*S	**Sn**	**10 12 36.1**	**0.0**
PAVE	**Pavencul**	1.08	45	*i* P	**Pn**	**10 12 23.4**	**-1.2**
PAVE				*e*S	**Sn**	**10 12 37.7**	**-0.7**
RTAL	**Retalhuleu**	1.23	85		**Pn**	**10 12 25.3**	**-1.2**
RTAL	**Retalhuleu**	1.23	85	*e*P	**Pn**	**10 12 25.1**	**-1.5**
RTAL				*e*S	**Sn**	**10 12 41.1**	**-0.8**
RTAL	**Retalhuleu**	1.23	85	S	**Sn**	**10 12 40.6**	**-1.4**
RTAL	**Retalhuleu**	1.23	85	⇓P	**Pn**	**10 12 25.0**	**-1.5**
PCIG		1.29	349		**Pn**	**10 12 25.4**	**-1.9**
PCIG					**Sn**	**10 12 41.0**	**-2.5**
PCIG		1.29	349	*e*P	**Pn**	**10 12 25.4**	**-1.9**
PCIG				*i* S	**Sn**	**10 12 41.0**	**-2.5**
SOKI	**Kika Raxquin**	1.56	75	*e*P	**Pn**	**10 12 30.9**	**-0.5**
SOKI				IAML		10 12 55.2	
	comp=N,10µm,0.9s						
STG0	**El Palmar, Qui**	1.57	90	*e*P	**Pn**	**10 12 27.0**	**-4.3**
STG0				IAML		10 12 49.4	
	comp=E,32µm,0.2s						
HUEH	**Huehuetenango**	1.67	58		**Pn**	**10 12 33.2**	**+0.5**
HUEH	**Huehuetenango**	1.67	58	*e*P	**Pn**	**10 12 33.1**	**+0.5**
HUEH				*e*S	**Sn**	**10 12 55.1**	**+2.2**
HUEH	**Huehuetenango**	1.67	58	*e*P	**Pn**	**10 12 33.2**	**+0.5**
HUEH				*e*S	**Sn**	**10 12 56.2**	**+3.3**
HUEH				IAML		10 13 07.5	
	comp=Z,10µm,0.6s						
HUEH	**Huehuetenango**	1.67	58	*i* P	**Pn**	**10 12 33.1**	**+0.5**
HUEH				*i* S	**Sn**	**10 12 57.4**	**+4.5**
HUEH				IAML		10 13 07.7	
	comp=E,28µm,0.5s						
HUEH	**Huehuetenango**	1.67	58	S	**Sn**	**10 12 54.5**	**+1.5**
HUEH	**Huehuetenango**	1.67	58	⇓P	**Pn**	**10 12 33.2**	**+0.5**
CCIG	**Comitan**	2.01	23		**Pn**	**10 12 38.7**	**+1.3**
CCIG	**Comitan**	2.01	23	*e*P	**Pn**	**10 12 38.8**	**+1.5**
CCIG				*e*S	**Sn**	**10 13 03.4**	**+2.1**
CCIG	**Comitan**	2.01	23	*e*P	**Pn**	**10 12 38.8**	**+1.5**
CCIG				IAML		10 13 14.0	
	comp=N,5µm,0.4s						
ESSG	**Sabana Grande**	2.07	91	*e*P	**Pn**	**10 12 36.4**	**-1.6**
ESSG				IAML		10 13 04.3	
	comp=E,3µm,0.4s						
TGBT	**Tuxtla Gutierr**	2.34	357		**Pn**	**10 12 42.0**	**+0.3**
TGBT	**Tuxtla Gutierr**	2.34	357	*e*P	**Pn**	**10 12 42.0**	**+0.3**
TGBT				*e*S	**Sn**	**10 13 12.3**	**+3.1**
TGIG		2.34	356		**Pn**	**10 12 42.6**	**+0.8**
TGIG					**Sn**	**10 13 09.2**	**-0.2**
TGIG		2.34	356	*i* P	**Pn**	**10 12 42.6**	**+0.8**
TGIG				*e*S	**Sn**	**10 13 09.2**	**-0.2**
TGIG		2.34	356	*i* P	**Pn**	**10 12 42.6**	**+0.8**
TGIG				IAML		10 13 21.0	
	comp=E,4µm,0.4s						
GCG4	**OSOP**	2.36	86	*i* P	**Pn**	**10 12 42.2**	**+0.1**
GCG4				IAML		10 13 23.2	
	comp=E,4µm,0.8s						
FG16	**Alotenango, Sa**	2.38	93	*e*P	Pn	10 12 36.1	-6.4
FG16				IAML		10 13 07.0	
	comp=N,18µm,0.3s						
LOAL	**Lomas de Alarc**	3.12	97	P	**Pn**	**10 12 52.0**	**-0.4**
NUBE	**Las Nubes**	3.13	99	*e*P	**Pn**	**10 12 51.7**	**-1.0**
NUBE	**Las Nubes**	3.13	99	P	**Pn**	**10 12 51.7**	**-1.0**
CMIG	**Matias Romero**	3.23	325	P	**Pn**	**10 12 52.8**	**-1.1**
	comp=N,91nm,0.3s,baz=172,slow=13,SNR=121						
CMIG				S	**Sn**	**10 13 30.7**	**-0.6**
	comp=N,710nm,0.5s,baz=125,slow=16,SNR=11						
CMIG				LR	LR	10 14 24.5	
	comp=N,2µm,18.7s,baz=147,slow=44						
	comp=N,166nm,0.3s						
CEVE	**Cerro Verde**	3.29	100	*e*P	**Pn**	**10 12 54.5**	**-0.6**
CEVE				*e*S	**Sn**	**10 13 32.2**	**-0.9**
CEVE				IAML		10 13 49.5	
	comp=Z,3µm,0.7s						
CEVE	**Cerro Verde**	3.29	100	P	**Pn**	**10 12 54.4**	**-0.6**
HUIG	**Huatulco**	3.32	294	*e*P	**Pn**	**10 12 53.2**	**-2.0**
HUIG				*e*S	**Sn**	**10 13 26.6**	**-6.8**
HUIG	**Huatulco**	3.32	294	*i* P	**Pn**	**10 12 53.2**	**-2.0**
HUIG				IAML		10 14 19.1	
	comp=N,679nm,0.8s						
UNIC	**Universidad Ca**	3.34	97	P	**Pn**	**10 12 54.9**	**-0.6**
ESQI	**Esquipulas**	3.51	87		**Pn**	**10 12 57.5**	**-0.4**
ESQI	**Esquipulas**	3.51	87	*e*P	**Pn**	**10 12 56.6**	**-1.3**
ESQI	**Esquipulas**	3.51	87	P	**Pn**	**10 12 57.9**	**0.0**
VHSA	**Villahermosa**	3.54	0	*e*P	**Pn**	**10 12 59.3**	**+1.2**
VHSA				*i* S	**Sn**	**10 13 43.0**	**+4.2**
PMON	**Piamonte**	3.61	101	P	**Pn**	**10 12 59.0**	**-0.3**
BOQS	**Boqueron**	3.64	100	*e*P	**Pn**	**10 12 59.0**	**-0.8**
UEES	**Universidad Ev**	3.68	101	P	**Pn**	**10 13 00.7**	**+0.4**
LOMA	**Loma Larga**	3.76	101	*e*P	**Pn**	**10 13 01.1**	**-0.3**
LOMA	**Loma Larga**	3.76	101	P	**Pn**	**10 13 01.8**	**+0.4**
TUIG	**Tuzandepetl**	3.85	339	*e*P	**Pn**	**10 13 01.9**	**-0.6**
TUIG				*i* S	**Sn**	**10 13 44.2**	**-2.3**
MIHL	**Minatitlan**	3.85	337	*e*P	**Pn**	**10 13 01.1**	**-1.4**
MIHL				*e*S	**Sn**	**10 13 47.1**	**+0.6**
LFRS	**El Faro**	3.87	101	*e*P	**Pn**	**10 13 01.1**	**-1.8**
PETF	**Flores**	3.88	50		**Pn**	**10 13 03.7**	**+0.9**
PETF	**Flores**	3.88	50	*e*P	**Pn**	**10 13 03.5**	**+0.6**
PETF				*i* S	**Sn**	**10 13 46.5**	**-0.6**
PETF	**Flores**	3.88	50	*e*P	**Pn**	**10 13 03.7**	**+0.9**
PETF				IAML		10 14 10.0	
	comp=E,2µm,0.6s						
PETF	**Flores**	3.88	50	⇑P	**Pn**	**10 13 03.9**	**+1.1**
PAVA	**Las Pavas**	3.97	100	P	**Pn**	**10 13 03.8**	**-0.4**
PEIG	**Puerto Escondi**	4.33	292	*e*P	**Pn**	**10 13 07.2**	**-1.9**
PEIG				*e*S	**Sn**	**10 13 52.4**	**-6.0**
IZABA	**Izabal, Puerto**	4.42	72	*e*P	**Pn**	**10 13 10.3**	**-0.1**
IZABA				*i* S	**Sn**	**10 14 00.9**	**+0.2**
IZABA	**Izabal, Puerto**	4.42	72	*e*P	**Pn**	**10 13 10.9**	**+0.6**
OXLC	**Oaxaca**	4.46	307	*e*P	**Pn**	**10 13 12.7**	**+1.7**
OXLC				*e*S	**Sn**	**10 14 03.3**	**+1.5**
OXBJ	**Oaxaca**	4.47	306		**Sn**	**10 14 01.9**	**-0.3**
OXBJ	**Oaxaca**	4.47	306	*e*S	**Sn**	**10 14 01.9**	**-0.3**
OXIG	**Oaxaca**	4.48	306		**Pn**	**10 13 13.3**	**+1.9**
OXIG					**Sn**	**10 14 03.1**	**+0.7**
VHO	**Vista Hermosa**	4.48	306	*e*P	**Pn**	**10 13 13.3**	**+1.9**
VHO				*e*S	**Sn**	**10 14 03.1**	**+0.7**
YOIG	**Yosondua**	5.03	299		**Pn**	**10 13 21.2**	**+2.2**
YOIG	**Yosondua**	5.03	299	*e*P	**Pn**	**10 13 21.2**	**+2.2**
YOIG				*e*S	**Sn**	**10 14 11.7**	**-4.4**
LCND	**La Caada**	5.05	102	*e*P	**Pn**	**10 13 17.8**	**-1.2**
PNIG	**Pinotepa**	5.35	292	*e*P	**Pn**	**10 13 22.5**	**-0.6**
PNIG				*i* S	**Sn**	**10 14 19.6**	**-4.0**
TOIG	**Toxpalan**	5.37	313		**Pn**	**10 13 24.4**	**+1.0**
TOIG					**Sn**	**10 14 23.7**	**-0.4**
TOIG	**Toxpalan**	5.37	313	*e*P	**Pn**	**10 13 24.4**	**+1.0**
TOIG				*i* S	**Sn**	**10 14 23.7**	**-0.4**
TXIG	**Tlaxiaco**	5.41	302		**Pn**	**10 13 25.3**	**+1.1**
TXIG	**Tlaxiaco**	5.41	302	*e*P	**Pn**	**10 13 25.3**	**+1.1**
TXIG				*e*S	**Sn**	**10 14 25.5**	**+0.1**
TGUH	**Tegucigalpa,Un**	5.53	93		**Pn**	**10 13 25.4**	**-0.3**
HLIG	**Huajuapan de L**	5.75	307		**Pn**	**10 13 30.9**	**+2.1**
HLIG	**Huajuapan de L**	5.75	307	*e*P	**Pn**	**10 13 30.9**	**+2.1**
HLIG				*e*S	**Sn**	**10 14 37.6**	**+3.9**
TPIG	**Tehuac#an**	5.79	314		**Sn**	**10 14 35.3**	**+0.6**
TPIG	**Tehuac#an**	5.79	314	*e*P	Pn	10 13 23.1	-6.2
TPIG				*i* S	**Sn**	**10 14 35.3**	**+0.6**
THEZ	**Tehuacan**	5.85	314	*e*P	**Pn**	**10 13 30.0**	**-0.1**
THEZ				*e*S	**Sn**	**10 14 39.0**	**+2.9**
FTIG	**Fresnillo de T**	6.05	306		**Pn**	**10 13 35.6**	**+2.7**
FTIG	**Fresnillo de T**	6.05	306	*e*P	**Pn**	**10 13 35.6**	**+2.7**
FTIG				*e*S	**Sn**	**10 14 44.7**	**+3.7**
MGIG	**Malinaltepec**	6.13	298		**Pn**	**10 13 34.9**	**+0.9**
MGIG	**Malinaltepec**	6.13	298	*e*P	**Pn**	**10 13 34.9**	**+0.9**
MGIG				*i* S	**Sn**	**10 14 38.3**	**-4.7**
JAUV	**Jalcomulco**	6.13	324	*e*P	**Pn**	**10 13 31.4**	**-2.5**
JAUV				*e*S	**Sn**	**10 14 40.9**	**-2.0**
TLIG	**Tlapa**	6.23	301		**Pn**	**10 13 37.2**	**+2.0**
TLIG	**Tlapa**	6.23	301	*e*P	**Pn**	**10 13 37.3**	**+2.0**
TLIG				*e*S	**Sn**	**10 14 41.3**	**-3.9**
HERN	**Volcan Telica**	6.23	106		**Pn**	**10 13 37.3**	**+2.0**
CRIG	**Cruz Grande**	6.37	292		**Pn**	**10 13 37.3**	**+0.2**
CRIG	**Cruz Grande**	6.37	292	*e*P	**Pn**	**10 13 37.3**	**+0.2**
CRIG				*i* S	**Sn**	**10 14 44.4**	**-4.3**
CNGN	**Cerro Negro**	6.39	107		**Pn**	**10 13 37.7**	**+0.3**
PHPU	**Puebla**	6.78	313	*e*S	**Sn**	**10 14 58.4**	**-0.7**
DAIG	**Los Arroyos**	6.94	293		**Pn**	**10 13 46.3**	**+1.4**
DAIG	**Los Arroyos**	6.94	293	*e*P	**Pn**	**10 13 46.3**	**+1.4**
DAIG				*i* S	**Sn**	**10 14 55.4**	**-7.2**
PPM	**Popocatepetl**	7.12	311	*e*P	**Pn**	**10 13 51.9**	**+4.0**
PPM				*i* S	**Sn**	**10 15 08.4**	**+0.6**
PPIG	**Popocatepetl**	7.12	311		**Pn**	**10 13 51.9**	**+4.0**
PPIG					**Sn**	**10 15 08.4**	**+0.6**
MYIG	**Merida**	7.18	25	*e*P	**Pn**	**10 13 44.0**	**-4.2**
MYIG				*e*S	**Sn**	**10 15 06.0**	**-2.7**
CXUV	**Coxquihui**	7.22	323	*e*P	**Pn**	**10 13 46.9**	**-2.0**
CXUV				*e*S	**Sn**	**10 15 03.3**	**-6.4**
AMVM	**AMECAMECA**	7.28	311	*e*P	**Pn**	**10 13 51.8**	**+1.9**
AMVM				*i* S	**Sn**	**10 15 12.3**	**+0.8**
MEIG	**Mezcala**	7.28	299		**Pn**	**10 13 51.7**	**+2.0**
MEIG	**Mezcala**	7.28	299	*e*P	**Pn**	**10 13 51.7**	**+2.0**
MEIG				*i* S	**Sn**	**10 15 09.4**	**-1.8**
TEIG	**Tepich**	7.30	37		**Pn**	**10 13 48.6**	**-1.3**
YAIG	**Yautepec**	7.33	308		**Pn**	**10 13 53.1**	**+2.7**
YAIG	**Yautepec**	7.33	308	*e*P	**Pn**	**10 13 53.1**	**+2.7**
YAIG				*i* S	**Sn**	**10 15 04.1**	**-8.3**
BOAB	**BOACO BROADBAN**	7.37	105		**Pn**	**10 13 51.1**	**+0.3**
PLIG	**Platanillo**	7.41	303		**Pn**	**10 13 54.8**	**+3.3**
PLIG					**Sn**	**10 15 14.8**	**+0.5**
PLIG	**Platanillo**	7.41	303	*e*P	**Pn**	**10 13 54.8**	**+3.3**
PLIG				*i* S	**Sn**	**10 15 14.8**	**+0.5**
MPVM	**San Francisco**	7.49	310	*e*P	**Pn**	**10 13 52.6**	**-0.1**
MPVM				*e*S	**Sn**	**10 15 15.7**	**-0.8**
CAIG	**El Cayaco**	7.50	291		**Pn**	**10 13 52.7**	**+0.1**
CAIG	**El Cayaco**	7.50	291	*e*P	**Pn**	**10 13 52.7**	**+0.1**
CAIG				*i* S	**Sn**	**10 15 13.1**	**-3.4**
XCVM	**Xochimilco**	7.60	310	*e*S	**Sn**	**10 15 17.4**	**-1.9**
TLVM	**San Miguel Top**	7.60	310	*e*P	**Pn**	**10 13 54.4**	**+0.1**
TLVM				*e*S	**Sn**	**10 15 13.6**	**-5.8**
VTVM	**Tizayuca**	7.69	315	*e*P	**Pn**	**10 13 58.7**	**+3.2**
VTVM				*e*S	**Sn**	**10 15 17.6**	**-3.9**
UNM	**Universidad Na**	7.69	310	*e*S	**Sn**	**10 15 20.4**	**-1.1**
MAVM	**Malinalco, Edo**	7.71	307	*e*P	**Pn**	**10 13 58.2**	**+2.5**
MAVM				*e*S	**Sn**	**10 15 20.8**	**-1.1**
AOVM	**Tlapan**	7.76	309	*e*P	**Pn**	**10 13 57.9**	**+1.3**
AOVM				*e*S	**Sn**	**10 15 15.7**	**-7.8**
CJVM	**Cuajimalpa**	7.79	310	*e*S	**Sn**	**10 15 16.5**	**-7.5**
INVM	**La Marquesa**	7.82	309	*e*P	**Pn**	**10 14 01.2**	**+3.8**
INVM				*e*S	**Sn**	**10 15 21.7**	**-3.2**
AZVM	**Cuida Lopez Ma**	7.93	311	*e*S	**Sn**	**10 15 24.4**	**-3.0**
ZUVM	**ZUMPANGO**	7.94	313	*e*S	**Sn**	**10 15 27.8**	**+0.2**
ACON	**Acoyapa**	7.97	107		**Pn**	**10 13 59.6**	**+0.6**
ARIG	**Puente Sto Nin**	8.06	299		**Pn**	**10 14 02.8**	**+2.5**
ARIG					**Sn**	**10 15 31.6**	**+1.4**
ARIG	**Puente Sto Nin**	8.06	299	*e*P	**Pn**	**10 14 02.8**	**+2.5**
ARIG				*i* S	**Sn**	**10 15 31.6**	**+1.4**
DHIG	**Demacu**	8.23	316		**Pn**	**10 14 06.2**	**+3.3**
DEIG	**Demacu**	8.23	316	*e*P	**Pn**	**10 14 06.2**	**+3.3**
DEIG				*e*S	**Sn**	**10 15 34.4**	**-0.3**
ACIG	**Acambay**	8.61	311	*e*P	**Pn**	**10 14 08.4**	**+0.3**
ACIG				*e*S	**Sn**	**10 15 39.0**	**-5.0**
CTUV	**Llano Grande**	8.68	325	*e*P	**Pn**	**10 14 05.9**	**-3.0**
CTUV				*e*S	**Sn**	**10 15 42.2**	**-3.3**
ESPN	**Las Esperanzas**	8.72	104		**Pn**	**10 14 10.2**	**+0.8**
ZIIG	**Zihuatanejo**	8.77	292	*e*P	**Pn**	**10 14 08.7**	**-1.3**
ZIIG				*i* S	**Sn**	**10 15 46.1**	**-1.4**
JTS	**Las Juntas de**	8.84	117	Pn	**Pn**	**10 14 13.1**	**+2.1**
JTS	**Las Juntas de**	8.84	117	P	**Pn**	**10 14 11.6**	**+0.6**
	comp=E,1.4nm,0.3s,baz=314,slow=20,SNR=8.7						
	comp=E,4.0nm,0.4s						
MOIG	**Morelia**	9.44	305		**Pn**	**10 14 22.9**	**+3.4**
MOIG	**Morelia**	9.44	305	*e*P	**Pn**	**10 14 24.0**	**+4.5**
MOIG				*e*S	**Sn**	**10 16 05.7**	**+1.2**
JRQG	**Juriquilla Cam**	9.48	312	*e*P	**Pn**	**10 14 19.6**	**-0.4**
JRQG				*e*S	**Sn**	**10 16 11.6**	**+6.2**
LCR2	**La Lucha 2**	9.92	117		**Pn**	**10 14 26.5**	**+0.5**
RPIG	**Rio Verde**	9.97	319		**Pn**	**10 14 29.9**	**+3.2**
RPIG					**Sn**	**10 16 16.3**	**-1.1**
RPIG	**Rio Verde**	9.97	319	*i* P	**Pn**	**10 14 29.9**	**+3.2**
RPIG				*e*S	**Sn**	**10 16 16.3**	**-1.1**
GTIG	**Gomez Farias**	10.41	327		**Pn**	**10 14 33.5**	**+0.9**
GTIG	**Gomez Farias**	10.41	327	*e*P	**Pn**	**10 14 33.5**	**+0.9**
GTIG				*i* S	**Sn**	**10 16 24.2**	**-3.8**
MNGA	**Volcan de Coli**	11.36	298	*e*P	**Pn**	**10 14 46.4**	**+0.6**
MNGA				*i* S	**Sn**	**10 16 49.7**	**-1.9**
INCO	**Volcan de Coli**	11.37	298	*e*P	**Pn**	**10 14 45.5**	**-0.6**
INCO				*i* S	**Sn**	**10 16 50.4**	**-1.7**
SOMAC	**Volcano de Col**	11.39	298	*e*P	**Pn**	**10 14 47.2**	**+0.8**
SOMAC				*e*S	**Sn**	**10 16 50.4**	**-2.2**
CEGR	**Campo Tres**	11.53	297	*e*P	**Pn**	**10 14 47.3**	**-0.8**
CEGR				*e*S	**Sn**	**10 16 54.4**	**-1.4**
AAIG	**Aguscalientes**	11.67	311	*e*P	**Pn**	**10 14 53.4**	**+3.4**
LNIG	**Linares**	12.08	331	*e*P	**Pn**	**10 14 57.4**	**+2.0**
ZAIG	**Zacatecas**	12.31	314	*e*P	**Pn**	**10 14 58.4**	**-0.4**
SOR	**Soroa**	12.57	47		**Pn**	**10 15 01.8**	**-0.3**
CAMR	**Camarioca**	13.93	50	Pn	**Pn**	**10 15 23.1**	**+2.5**
833A	**Chaparral WMA,**	15.06	338		**Pn**	**10 15 36.4**	**+0.5**
PDIG	**Papasquiaro**	15.75	314	*e*P	**P**	**10 15 49.8**	**+1.3**
061Z	**Ochoppi**	16.04	43		**Pn**	**10 15 47.3**	**-1.1**
HNDO	**Hondo**	16.12	340	IAmb	IAmb	10 16 06.8	
	comp=Z,20nm,0.7s						
DRIO	**Del Rio**	16.52	336		**Pn**	**10 15 55.1**	**+0.6**
JCT	**Junction City**	17.17	340		**P**	**10 16 04.5**	**+0.5**
HPIG		17.19	318	P	**P**	**10 16 05.3**	**+0.9**
DWPF	**Disney Wildern**	17.33	36	P	**Pn**	**10 16 05.0**	**+0.4**
DWPF				IAmb	IAmb	10 16 06.3	
	comp=Z,37nm,0.7s						
SAND	**Sanderson**	17.61	333		**P**	**10 16 09.4**	**+0.5**
SAND				IAmb	IAmb	10 16 12.8	
	comp=Z,35nm,0.7s						
BRDY	**Brady**	17.67	343		**P**	**10 16 10.0**	**+0.5**
TXAR	**Lajitas Array**	17.84	328		**P**	**10 16 13.8**	**+2.4**
TXAR	**Lajitas Array**	17.84	328	P	**P**	**10 16 12.0**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=151,slow=13,SNR=52						
TXAR				LR	LR	10 24 09.9	
	comp=Z,204nm,18.7s,baz=128,slow=41						
	comp=Z,6.2nm,0.8s						
OZNA	**Ozona**	18.05	337		**P**	**10 16 14.7**	**+1.0**
FW14	**Alvarado**	18.30	349	P	**P**	**10 16 15.6**	**-0.8**
FW14				IAmb	IAmb	10 16 51.6	
	comp=Z,20nm,0.7s						
352A	**Blakely**	18.50	22	P	**P**	**10 16 17.4**	**-1.2**
352A				IAmb	IAmb	10 16 23.1	
	comp=Z,44nm,0.8s						
Z41A	**Richland Creek**	18.75	0	IAmb	IAmb	10 17 06.8	
	comp=Z,26nm,0.8s						
SGCY	**Sterling City**	18.94	338	IAmb	IAmb	10 16 27.5	
	comp=Z,38nm,0.7s						
CSIG	**Choix**	18.95	313	*e*P	**Pn**	**10 16 24.9**	**+0.4**
ABTX	**Abilene, Hawle**	19.11	343	IAmb	IAmb	10 16 33.2	
	comp=Z,13nm,0.6s						
Z47A	**Carrollton**	19.21	13	IAmb	IAmb	10 16 45.5	
	comp=Z,20nm,0.7s						
LRAL	**Lakeview Retre**	19.30	15	P	**P**	**10 16 27.3**	**-0.1**
152A	**Waverly Hall**	19.65	21	P	**P**	**10 16 31.4**	**+0.2**
152A				IAmb	IAmb	10 16 36.6	
	comp=Z,13nm,0.7s						
SN05	**Snyder 5**	19.73	340	IAmb	IAmb	10 16 39.4	
	comp=Z,20nm,0.6s						
APMT	**Aspermont**	19.91	342	IAmb	IAmb	10 16 42.0	
	comp=Z,22nm,0.8s						
SN07	**Snyder 07**	19.93	340	IAmb	IAmb	10 16 37.1	
	comp=Z,22nm,0.6s						
POST	**Post**	20.12	339	P	**P**	**10 16 36.9**	**+0.5**
POST				IAmb	IAmb	10 16 40.5	
	comp=Z,16nm,0.8s						
154A	**Montrose**	20.21	25	P	**P**	**10 16 35.8**	**-1.4**
UALR	**University of**	20.27	1	IAmb	IAmb	10 17 09.2	
	comp=Z,28nm,1.1s						
DKNS	**Dickens**	20.47	341	P	**P**	**10 16 41.2**	**+1.0**
X34A	**Smith Ranch, M**	20.56	348	IAmb	IAmb	10 17 14.0	
	comp=Z,31nm,1.0s						
ROSC	**El Rosal**	20.68	116	P	**P**	**10 16 43.9**	**+0.9**
	comp=Z,6.9nm,0.4s,baz=4.9,slow=4.0,SNR=9.2						
	comp=Z,6.9nm,0.4s						
GOGA	**Godfrey**	20.77	23		**P**	**10 16 42.5**	**-0.9**
GOGA				IAmb	IAmb	10 16 53.0	
	comp=Z,17nm,1.0s						
WHAR	**Wooly Hollow**	20.78	2	IAmb	IAmb	10 17 27.8	
	comp=Z,20nm,1.2s						
Y52A	**Lilburn**	20.97	21	IAmb	IAmb	10 17 15.3	
	comp=Z,20nm,0.8s						
FLOC	**Florencia**	21.34	125	P	**P**	**10 16 53.5**	**+3.8**
MSTX	**Muleshoe**	21.39	337	IAmb	IAmb	10 16 57.2	
	comp=Z,23nm,0.6s						
TUL3	**Leonard**	21.54	354	IAmb	IAmb	10 17 24.1	
	comp=Z,33nm,1.1s						
SMWD	**Samnorwood**	21.61	344	IAmb	IAmb	10 16 58.6	
	comp=Z,31nm,0.9s						
SWET	**Sewanee**	21.65	16	IAmb	IAmb	10 17 06.1	
	comp=Z,27nm,1.3s						
QUOK	**Quay**	21.91	352	IAmb	IAmb	10 17 33.4	
	comp=Z,28nm,1.0s						
U38A	**Gravette**	21.96	357	IAmb	IAmb	10 17 26.1	
	comp=Z,19nm,1.3s						
HODGE	**Hodges**	21.97	24	IAmb	IAmb	10 17 03.5	
	comp=Z,16nm,1.1s						
HSIG		22.09	314	P	**P**	**10 16 58.5**	**+0.9**
WVT	**Waverly**	22.10	11	P	**P**	**10 16 55.9**	**-1.7**
OK051	**E0350 and S346**	22.26	352	IAmb	IAmb	10 17 00.7	
	comp=Z,22nm,0.9s						
PBMO	**Poplar Bluff**	22.38	5	IAmb	IAmb	10 17 30.2	
	comp=Z,13nm,0.8s						
BG3	**Lake Jocassee**	22.39	22	IAmb	IAmb	10 17 21.1	
	comp=Z,19nm,1.1s						
CROK	**Carrier**	22.44	349	IAmb	IAmb	10 17 02.8	
	comp=Z,20nm,0.6s						
SDV	**Santo Domingo**	22.54	102	LR	LR	10 26 52.1	
	comp=Z,398nm,19.6s,baz=282,slow=40						
319A	**Douglas**	22.55	321	IAmb	IAmb	10 17 25.1	
	comp=Z,31nm,1.3s						
T35A	**Sooner Cattle**	22.62	353	P	**P**	**10 17 01.7**	**-1.4**
T35A				IAmb	IAmb	10 17 45.9	
	comp=Z,18nm,1.0s						
MGMO	**Mountain Grove**	22.64	1	IAmb	IAmb	10 17 28.2	
	comp=Z,20nm,1.1s						
PAULI	**Pauline**	22.66	24	IAmb	IAmb	10 17 24.7	
	comp=Z,13nm,1.0s						
TKL	**Tuckaleechee C**	22.70	20	IAmb	IAmb	10 17 45.9	

	comp=Z,14nm,0.9s						
TKL	Tuckaleechee C	22.70	20	P	P	10 17 01.3	-2.7
	comp=Z,2.2nm,0.4s,baz=180,slow=10.0,SNR=11						
	comp=Z,2.2nm,0.4s						
KAN13	South Haven SW	22.85	351	IAmb	IAmb	10 17 07.1	
	comp=Z,15nm,0.6s						
U49A	Red Boiling Sp	22.91	15	IAmb	IAmb	10 17 24.3	
	comp=Z,15nm,1.1s						
V53A	Saluda	23.03	22	IAmb	IAmb	10 17 28.4	
	comp=Z,40nm,1.4s						
T47A	Sharon Grove	23.07	12	IAmb	IAmb	10 17 27.5	
	comp=Z,12nm,0.8s						
S44A	Carbondale	23.41	7	IAmb	IAmb	10 17 37.4	
	comp=Z,16nm,1.0s						
SIUC	Southern Illin	23.43	7	IAmb	IAmb	10 17 46.5	
	comp=Z,18nm,0.9s						
TZTN	Tazewell	23.58	19	IAmb	IAmb	10 17 49.3	
	comp=Z,21nm,1.2s						
CCM	Cathedral Cave	23.58	3		P	10 17 10.6	-2.2
ANMO	Albuquerque	23.78	332		P	10 17 16.0	+1.1
V55A	Taylorsville	23.80	24	IAmb	IAmb	10 17 33.4	
	comp=Z,23nm,1.4s						
TUC	Tucson	24.11	321		P	10 17 20.1	+2.1
TUC				IAmb	IAmb	10 17 21.8	
	comp=Z,11nm,0.9s						
WCI	Wyandotte Cave	24.43	13		P	10 17 20.5	-0.1
WCI				IAmb	IAmb	10 17 43.0	
	comp=Z,14nm,1.0s						
R32A	Long Quarter,	24.44	349	IAmb	IAmb	10 17 43.5	
	comp=Z,12nm,0.8s						
U56A	King	24.56	25	IAmb	IAmb	10 17 36.9	
	comp=Z,14nm,1.0s						
S51A	Beattyville	24.57	18	IAmb	IAmb	10 17 38.1	
	comp=Z,14nm,0.9s						
V58A	Windy Hill, Pi	24.64	28	IAmb	IAmb	10 17 22.8	
	comp=Z,11nm,0.8s						
KSU1	Kansas State U	24.79	353	IAmb	IAmb	10 17 25.1	
	comp=Z,26nm,1.1s						
P40A	Paris	25.02	2	IAmb	IAmb	10 17 25.5	
	comp=Z,8.8nm,0.7s						
214A	Organ Pipe Nat	25.17	317		P	10 17 28.6	+1.1
X18A	Snowflake	25.22	326	P	P	10 17 28.1	0.0
SDCO	Great Sand Dun	25.76	337	IAmb	IAmb	10 17 35.9	
	comp=Z,23nm,1.3s						
ATAH	Atahualpa	25.84	145	LR	LR	10 26 12.5	
	comp=Z,543nm,18.2s,baz=295,slow=32						
SJG	San Juan	25.99	78	LR	LR	10 27 15.8	
	comp=Z,544nm,21.8s,baz=244,slow=36						
113A	Mohawk Valley,	26.31	318	P	P	10 17 39.9	+2.2
T59A	Double "B" Far	26.32	29	IAmb	IAmb	10 17 38.0	
	comp=Z,9.8nm,0.6s						
MVCO	Mesa Verde	26.58	331	IAmb	IAmb	10 17 44.9	
	comp=Z,14nm,0.8s						
PV13	Radium Mtn., P	27.50	332	IAmb	IAmb	10 17 57.5	
	comp=Z,11nm,1.0s						
PV02	Paradox Valley	27.50	332	IAmb	IAmb	10 17 55.7	
	comp=Z,14nm,0.8s						
PV05	Paradox Valley	27.56	332	IAmb	IAmb	10 17 53.2	
	comp=Z,10.0nm,1.0s						
PV03	Paradox Valley	27.59	332	IAmb	IAmb	10 17 53.5	
	comp=Z,12nm,1.0s						
PV11	David Mesa, Pa	27.64	332	IAmb	IAmb	10 18 02.9	
	comp=Z,14nm,0.8s						
PV07	Paradox Valley	27.65	333	IAmb	IAmb	10 17 55.0	
	comp=Z,9.5nm,0.8s						
PV17	East Wray Mesa	27.66	332	IAmb	IAmb	10 17 54.9	
	comp=Z,13nm,0.8s						
PV16	Nyswonger Mesa	27.66	332	IAmb	IAmb	10 17 54.3	
	comp=Z,9.5nm,0.8s						
PV19	Morning Glory	27.70	332	IAmb	IAmb	10 17 55.1	
	comp=Z,12nm,0.7s						
PV20	West Nyswonger	27.71	332	IAmb	IAmb	10 17 54.6	
	comp=Z,13nm,0.8s						
PV04	Paradox Valley	27.73	332	IAmb	IAmb	10 17 58.0	
	comp=Z,17nm,0.8s						
PV14	Lion Creek, Pa	27.76	332	IAmb	IAmb	10 17 55.0	
	comp=Z,9.3nm,0.9s						
PV10	Paradox Valley	27.77	332	IAmb	IAmb	10 17 55.3	
	comp=Z,14nm,0.9s						
PV22	Blue Mesa, Par	27.79	333	IAmb	IAmb	10 17 55.5	
	comp=Z,13nm,0.7s						
PFO	Pinyon Flats O	28.61	316	LR	LR	10 31 09.3	
	comp=Z,195nm,18.6s,baz=130,slow=40						
K30B	Basset	28.73	350	IAmb	IAmb	10 18 01.8	
	comp=Z,12nm,0.7s						
ECSD	EROS Data Cent	29.37	355	IAmb	IAmb	10 18 07.2	
	comp=Z,5.2nm,0.7s						
BSUT	Blindstream Ca	30.30	333	IAmb	IAmb	10 19 00.2	
	comp=Z,11nm,1.5s						
NNA	Nana	30.72	148	LR	LR	10 28 25.4	
	comp=Z,351nm,19.4s,baz=312,slow=32						
S11A	Rachel	30.72	323	IAmb	IAmb	10 18 25.4	
	comp=Z,8.7nm,1.1s						
TCUT	Toone Canyon	31.06	332	IAmb	IAmb	10 18 29.0	
	comp=Z,12nm,0.9s						
HWUT	Hardware Ranch	31.53	333	IAmb	IAmb	10 18 29.0	
	comp=Z,8.9nm,1.3s						
PDAR	Pinedale Array	31.65	336		P	10 18 25.9	+0.5
PDAR	Pinedale Array	31.65	336	P	P	10 18 25.1	-0.4
	comp=Z,2.0nm,0.8s,baz=128,slow=9.6,SNR=14						
PDAR				PcP	PcP	10 21 16.1	-0.8
	comp=Z,0.3nm,0.4s,baz=132,slow=2.2,SNR=4.2						
PDAR				LR	LR	10 32 39.4	
	comp=Z,91nm,19.3s,baz=146,slow=39						
	comp=Z,2.0nm,0.8s						
TPH	Tonopah	31.88	322	IAmb	IAmb	10 18 30.0	
	comp=Z,10nm,0.9s						
HVU	Hansel Valley	32.21	332	IAmb	IAmb	10 18 32.7	
	comp=Z,8.2nm,1.1s						
AHID	Auburn Hatcher	32.27	335	IAmb	IAmb	10 18 42.0	
	comp=Z,6.5nm,0.8s						
SADO	Sadowa	32.44	18	LR	LR	10 33 53.5	
	comp=Z,340nm,18.1s,baz=224,slow=41						
ELK	Elko	32.63	328	LR	LR	10 33 26.4	
	comp=Z,430nm,19.7s,baz=159,slow=39						
NV11	Mina Array Sit	32.67	322	IAmb	IAmb	10 18 37.5	
	comp=Z,8.0nm,0.8s						
NVAR	Mina Array Bea	32.76	322	P	P	10 18 37.5	+2.4
NVAR	Mina Array Bea	32.76	322	P	P	10 18 36.8	+1.6
	comp=Z,7.6nm,0.7s,baz=135,slow=8.5,SNR=72						
NVAR				PcP	PcP	10 21 20.6	+0.6
	comp=Z,1.4nm,0.7s,baz=119,slow=3.9,SNR=5.6						
NVAR				LR	LR	10 33 35.7	
	comp=Z,693nm,18.6s,baz=136,slow=40						
	comp=Z,7.6nm,0.7s						
LHV	Little Huntoon	32.76	321	IAmb	IAmb	10 18 46.9	
	comp=Z,7.8nm,1.0s						
FXWY	Fox Creek	32.97	336	IAmb	IAmb	10 18 44.3	
	comp=Z,6.6nm,1.0s						
RYN	Ryan	33.02	322	IAmb	IAmb	10 18 41.5	
	comp=Z,6.1nm,1.0s						
RLMT	Red Lodge	33.57	339	IAmb	IAmb	10 18 59.7	
	comp=Z,8.4nm,1.4s						
YNE	Yellowstone No	33.74	338	IAmb	IAmb	10 19 03.7	
	comp=Z,5.9nm,0.8s						
PNTR	Pine Nut	33.96	321	IAmb	IAmb	10 18 49.1	
	comp=Z,6.0nm,0.8s						
YHL	Hebgen Lake	34.04	337	IAmb	IAmb	10 18 49.8	
	comp=Z,4.8nm,0.7s						
MPK	Martis Peak	34.35	321	IAmb	IAmb	10 18 52.2	
	comp=Z,7.9nm,0.9s						
BOZ	Bozeman (W)	34.84	337	IAmb	IAmb	10 18 57.1	
	comp=Z,5.7nm,1.1s						
BEKR	Beckworth	34.90	322	IAmb	IAmb	10 18 56.5	
	comp=Z,4.2nm,0.9s						
WVOR	Wild Horse Val	35.62	327	IAmb	IAmb	10 19 02.6	
	comp=Z,5.1nm,1.0s						
ULM	Lac du Bonnet	35.80	357	P	P	10 18 58.4	-2.8
	comp=Z,2.5nm,0.4s,baz=180,slow=12,SNR=12						
ULM				LR	LR	10 36 14.5	
	comp=Z,236nm,21.2s,baz=184,slow=41						
	comp=Z,2.5nm,0.4s						
PLID	Pearl Lake	36.26	332	IAmb	IAmb	10 19 07.0	
	comp=Z,6.8nm,0.8s						
MSO	Missoula	36.76	336	IAmb	IAmb	10 19 11.1	
	comp=Z,6.2nm,0.9s						
YBH	Yreka Blue Hor	37.46	322	LR	LR	10 36 51.8	
	comp=Z,36nm,18.2s,baz=132,slow=40						
D08A	Wollman Farm,	39.08	332	IAmb	IAmb	10 19 31.5	
	comp=Z,6.8nm,1.2s						
LPAZ	La Paz	39.16	140	LR	LR	10 35 07.6	
	comp=Z,231nm,20.2s,baz=318,slow=35						
NEW	Newport	39.21	334	LR	LR	10 38 04.9	
	comp=Z,337nm,18.9s,baz=146,slow=40						
C09A	Chrisman Ranch	39.34	333	IAmb	IAmb	10 19 47.6	
	comp=Z,5.4nm,0.8s						
LON	Longmire	40.24	329	P	P	10 19 39.9	+1.2
MDP	Montagnes des	40.74	99	LR	LR	10 37 14.8	
	comp=Z,357nm,21.9s,baz=288,slow=37						
LLLB	Lillooet	43.02	333		P	10 20 01.7	+0.4
SCHQ	Schefferville	45.15	21	PcP	PcP	10 21 57.0	-1.2
	comp=Z,6.2nm,0.6s,baz=200,slow=3.1,SNR=6.8						
SCHQ				LR	LR	10 40 40.4	
	comp=Z,468nm,18.2s,baz=208,slow=38						
BBB	Bella Bella	46.94	331	LR	LR	10 43 21.3	
	comp=Z,118nm,19.2s,baz=166,slow=40						
YKAW1	Yellowknife Wh	50.37	347	IAmb	IAmb	10 20 59.7	
	comp=Z,15nm,0.8s						
YKA	Yellowknife Ar	50.40	347	P	P	10 20 58.8	0.0
	comp=Z,5.9nm,0.7s,baz=152,slow=7.0,SNR=34						
YKA				LR	LR	10 46 18.2	
	comp=Z,110nm,19.4s,baz=169,slow=41						
	comp=Z,5.9nm,0.7s						
TOAD	Toad River Com	50.41	339	P	P	10 20 59.6	+0.6
	baz=138						
YKAW3	Yellowknife Wh	50.46	347	IAmb	IAmb	10 21 00.5	
	comp=Z,13nm,0.8s						
BEAVL	Fort Liard	51.35	340	P	P	10 21 07.3	+1.2
	baz=139,SNR=6.8						
FRB	Frobisher Bay	52.11	13	LR	LR	10 46 39.7	
	comp=Z,161nm,18.1s,baz=203,slow=40						
TAOE	Nuku Hiva Isla	52.20	247	*e*S	S	10 28 37.0	+1.4
	comp=Z,156nm,26.4s						
TAOE				*e*SS	SS	10 32 18.8	+5.1
	comp=Z,121nm,27.6s						
TAOE				*e*LR	LR	10 36 13.0	
	comp=Z,196nm,23.3s						
WTLY	Watson Lake, Y	52.58	338	IAmb	IAmb	10 21 17.0	
	comp=Z,9.2nm,1.0s						
WTLY	Watson Lake, Y	52.58	338	P	P	10 21 16.3	+1.1
	baz=134						
R33M	Jennings River	52.89	337	IAmb	IAmb	10 21 38.2	
	comp=Z,9.6nm,1.4s						
R33M	Jennings River	52.89	337	P	P	10 21 19.2	+1.5
	baz=131						
Q32M	Nakina River	53.12	336	IAmb	IAmb	10 21 24.8	
	comp=Z,7.0nm,1.1s						
Q32M	Nakina River	53.12	336	P	P	10 21 20.9	+1.5
	baz=130						
WRGLY	Wrigley	53.22	343	P	P	10 21 20.9	+1.1
	baz=142						
SIT	Sitka	53.24	333	P	P	10 21 21.7	+1.7
	baz=125						
CPUP	Villa Florida	53.31	139	LR	LR	10 45 21.7	
	comp=Z,48nm,18.4s,baz=176,slow=37						
TGTN	Hyland Airport	53.40	340	P	P	10 21 22.5	+1.2
	baz=136						
R32K	Eaglecrest	53.61	334	P	P	10 21 24.5	+1.7
	baz=127						
P32M	Atlin	54.09	336	P	P	10 21 27.5	+1.2
	baz=128						
P33M	Teslin, Yukon	54.13	337	P	P	10 21 27.7	+1.0
	baz=130						
S31K	Pelican	54.16	333	P	P	10 21 27.9	+1.1
	baz=125						
SKAG	Skagway	54.66	335	P	P	10 21 31.3	+0.9
	baz=127						
PLBC	Pleasant Camp	55.09	335	P	P	10 21 34.6	+1.1
	baz=126						
MMPY	Sheldon Lake,	55.17	340	IAmb	IAmb	10 21 36.4	
	comp=Z,6.9nm,0.9s						
MMPY	Sheldon Lake,	55.17	340	P	P	10 21 35.7	+1.5
	baz=133,SNR=9.6						
WHY	Whitehorse	55.21	336	P	P	10 21 35.5	+1.0
	baz=128						
FARO	Faro, Yukon	55.64	338	P	P	10 21 38.8	+1.3
	baz=130						
P30M	Million Dollar	55.72	335	P	P	10 21 39.4	+1.2
	baz=125						
O30N	Mendenhall	55.75	336	IAmb	IAmb	10 21 40.3	
	comp=Z,4.0nm,0.8s						
O30N	Mendenhall	55.75	336	P	P	10 21 39.9	+1.5
	baz=126						
P29M	Windy Craggy	55.76	334	P	P	10 21 39.6	+1.2
	baz=124						
M31M	Drury Creek, Y	56.00	338	P	P	10 21 41.3	+1.3
	baz=129						
N31M	Braeburn, Yuko	56.07	337	IAmb	IAmb	10 21 42.8	
	comp=Z,7.7nm,0.9s						
N31M	Braeburn, Yuko	56.07	337	P	P	10 21 41.9	+1.3
	baz=127,SNR=6.1						
HYT	Haines Junctio	56.35	336	P	P	10 21 44.2	+1.5
	baz=125						
O29M	Mount Kennedy	56.48	335	P	P	10 21 45.2	+1.5
	baz=124						
N30M	Aishikik Lake	56.55	336	IAmb	IAmb	10 21 46.2	
	comp=Z,5.7nm,1.0s						
N30M	Aishikik Lake	56.55	336	P	P	10 21 45.5	+1.4
	baz=126,SNR=5.1						
YUK6	Outpost Mounta	56.76	335	P	P	10 21 47.0	+1.2
	baz=124						
PINM	Pinnacle	57.08	334	P	P	10 21 49.4	+1.6
	baz=122						
YUK4	Talbot Arm	57.10	336	P	P	10 21 49.6	+1.5
	baz=124						
MAYO	Mayo, Yukon	57.41	339	P	P	10 21 51.4	+1.4
	baz=128						
M29M	Somme Creek	57.66	337	P	P	10 21 53.5	+1.5
	baz=125,SNR=22						
NRS	Narsarsuaq	57.75	25	P	P	10 21 50.6	-1.8
MESA	MESA	57.84	334	P	P	10 21 54.6	+1.2
	baz=120						
L29M	L29M	57.92	338	IAmb	IAmb	10 21 55.6	
	comp=Z,4.3nm,0.9s						
L29M	L29M	57.92	338	P	P	10 21 54.6	+1.0
	baz=126,SNR=5.7						
YUK3	Moose Creek	58.06	336	P	P	10 21 55.7	+0.8
	baz=122						
K29M	Barlow Dome	58.14	339	IAmb	IAmb	10 22 06.4	
	comp=Z,6.8nm,1.4s						
K29M	Barlow Dome	58.14	339	P	P	10 21 56.1	+0.8
	baz=127						
J30M	Hart River	58.17	340	IAmb	IAmb	10 21 57.9	
	comp=Z,2.9nm,0.8s						
J30M	Hart River	58.17	340	P	P	10 21 56.2	+0.6
	baz=128,SNR=6.1						
H31M	Peel River	58.32	341	P	P	10 21 56.9	+0.5
	baz=131						
BGLC	Bering Glacier	58.40	333	P	P	10 21 57.8	+0.9
	baz=119						
BVCY	Beaver Creek	58.57	336	P	P	10 21 59.2	+1.0
	baz=122						
I30M	Mount Dempster	58.59	340	IAmb	IAmb	10 21 59.4	
	comp=Z,3.4nm,0.8s						
I30M	Mount Dempster	58.59	340	P	P	10 21 59.0	+0.5
	baz=128,SNR=6.5						
CRQE	Cirque	58.62	334	P	P	10 22 00.2	+1.5
	baz=119						
PLCA	Paso Flores	58.69	160	LR	LR	10 42 36.7	
	comp=Z,248nm,18.3s,baz=338,slow=31						
MCARA	McCarthy VSAT	58.91	334	P	P	10 22 02.5	+1.9
MCARA	McCarthy VSAT	58.91	334	P	P	10 22 02.3	+1.7
	baz=120						
DAWY	Dawson	58.94	338	P	P	10 22 01.4	+0.6
DAWY	Dawson	58.94	338	P	P	10 22 01.3	+0.5
	baz=125						
M27K	Edge Creek, AK	58.94	336	IAmb	IAmb	10 22 02.6	
	comp=Z,8.2nm,1.3s						
M27K	Edge Creek, AK	58.94	336	P	P	10 22 02.0	+1.1
	baz=121						
VRDI	Verde Repeater	59.01	334		P	10 22 03.0	+1.5
VRDI				IAmb	IAmb	10 22 12.6	
	comp=Z,5.0nm,1.0s						
G31M	Satah River	59.04	342		P	10 22 01.6	+0.4
G31M	Satah River	59.04	342	P	P	10 22 01.7	+0.4
	baz=132,SNR=8.5						
F31M	Tsiigehtchic	59.24	343	IAmb	IAmb	10 22 03.4	
	comp=Z,4.6nm,0.8s						
F31M	Tsiigehtchic	59.24	343	P	P	10 22 02.9	+0.2
	baz=132						
BCAR	Beaver Creek A	59.28	337		P	10 22 03.7	+0.5
L27K	Beaver Creek,	59.29	336	IAmb	IAmb	10 22 04.8	
	comp=Z,4.3nm,0.8s						
L27K	Beaver Creek,	59.29	336	P	P	10 22 04.3	+1.1
	baz=122,SNR=9.1						
I29M	Ogilvie Camp,	59.32	340	IAmb	IAmb	10 22 04.5	
	comp=Z,3.1nm,0.8s						
I29M	Ogilvie Camp,	59.32	340	P	P	10 22 03.4	0.0
	baz=126,SNR=5.4						
BMRM	Bremner River	59.38	334	P	P	10 22 05.1	+1.2
	baz=118						
M26K	Nabesna, AK	59.41	336	P	P	10 22 05.0	+0.9
	baz=120						
EPYK	Eagle Plains	59.43	341	P	P	10 22 04.7	+0.6
	baz=129						
Q23K	Middleton Isla	59.46	332	P	P	10 22 05.4	+1.1
	baz=115						
G30M	tAoh Zraii Nji	59.66	342	P	P	10 22 06.0	+0.3
	baz=130						
N25K	Chitina, Valde	59.67	334	P	P	10 22 07.8	+1.8
	baz=118,SNR=7.6						
EYAK	Cordova Ski Ar	59.68	333	P	P	10 22 06.9	+1.1
	baz=116						
INK	Inuvik	59.77	344		P	10 22 06.7	+0.4
INK	Inuvik	59.77	344	LR	LR	10 51 01.0	
	comp=Z,141nm,18.9s,baz=105,slow=39						
INK	Inuvik	59.77	344	P	P	10 22 06.7	+0.4
	baz=133,SNR=7.5						
H29M	Whitestone	59.86	340	IAmb	IAmb	10 22 08.1	
	comp=Z,3.7nm,0.8s						
H29M	Whitestone	59.86	340	P	P	10 22 07.9	+0.9
	baz=127						
L26K	Log Cabin Wild	59.86	336	IAmb	IAmb	10 22 09.5	
	comp=Z,8.9nm,1.4s						
L26K	Log Cabin Wild	59.86	336	P	P	10 22 07.9	+0.8
	baz=120						
K27K	Chicken	59.90	337	IAmb	IAmb	10 22 09.9	
	comp=Z,3.2nm,0.8s						
K27K	Chicken	59.90	337	P	P	10 22 08.1	+0.8
	baz=122						
I28M	Miner Creek	59.92	339	P	P	10 22 08.3	+0.6
	baz=125						
F30M	Barrier River	59.94	342	P	P	10 22 08.2	+0.6
	baz=130						
G29M	Pine Creek	60.17	341	IAmb	IAmb	10 22 20.6	
	comp=Z,6.2nm,1.0s						
G29M	Pine Creek	60.17	341	P	P	10 22 09.6	+0.4
	baz=128						
KLU	Klutina	60.18	334	P	P	10 22 10.7	+1.3
	baz=117						
P23K	Montague Islan	60.19	332	P	P	10 22 10.7	+1.4
	baz=114						
RES	Resolute Bay	60.26	359	LR	LR	10 50 01.3	
	comp=Z,166nm,21.8s,baz=196,slow=38						
HARP	HAARP	60.28	335	P	P	10 22 11.6	+1.6
	baz=118						
M24K	Tolsona, Glenn	60.57	334	P	P	10 22 13.6	+1.5
	baz=117						
I27K	Kandik River	60.59	339	P	P	10 22 13.0	+0.8
	baz=123,SNR=7.8						
SCRK	Sand Creek	60.59	337	IAmb	IAmb	10 22 33.3	
	comp=Z,3.6nm,1.2s						
SCRK	Sand Creek	60.59	337	P	P	10 22 13.4	+1.2
	baz=120,SNR=5.3						
A36M	Sachs Harbour	60.65	349	P	P	10 22 12.6	+0.3
	baz=143						
PAX	Paxson	60.68	335	P	P	10 22 13.5	+0.7
	baz=118,SNR=12						
J26L	Joseph Creek	60.70	337		P	10 22 14.0	+1.1
J26L	Joseph Creek	60.70	337	P	P	10 22 14.1	+1.1
	baz=121,SNR=11						
RIDG	Independent Ri	60.81	336	P	P	10 22 14.7	+1.0
	baz=119,SNR=6.1						
H27K	Steamboat Moun	60.91	340	IAmb	IAmb	10 22 27.8	
	comp=Z,7.0nm,1.2s						
H27K	Steamboat Moun	60.91	340	P	P	10 22 14.9	+0.6
	baz=124,SNR=7.3						
SCM	Sheep Creek Mo	60.94	334	P	P	10 22 15.6	+1.0
	baz=116						
PWL	Port Wells	60.96	333	P	P	10 22 15.6	+0.9
	baz=114						
I26K	Coal Creek Min	60.97	338	IAmb	IAmb	10 22 15.4	
	comp=Z,2.5nm,0.8s						
I26K	Coal Creek Min	60.97	338	P	P	10 22 15.3	+0.7
	baz=122						
E29M	Blow River	61.05	343	IAmb	IAmb	10 22 21.8	
	comp=Z,6.0nm,1.0s						
E29M	Blow River	61.05	343	P	P	10 22 15.8	+0.7
	baz=128,SNR=8.3						
F28M	Old Crow	61.17	341	P	P	10 22 16.8	+0.8
	baz=126,SNR=24						
SEW	Seward	61.17	332	P	P	10 22 16.5	+0.5
	baz=113						
K24K	Donnelly Dome	61.20	336	P	P	10 22 17.3	+1.1
	baz=118						
KNK	Knik Glacier	61.25	333	P	P	10 22 17.4	+0.7
	baz=114						
G27K	Doyon Strip	61.27	340	IAmb	IAmb	10 22 17.5	
	comp=Z,3.7nm,1.1s						
G27K	Doyon Strip	61.27	340	P	P	10 22 17.0	+0.3
	baz=124,SNR=6.1						
J25K	Salcha River,	61.43	337	IAmb	IAmb	10 22 19.1	
	comp=Z,5.7nm,1.1s						
J25K	Salcha River,	61.43	337	P	P	10 22 18.6	+0.7
	baz=119,SNR=5.7						
WAT6	Susitna Watana	61.44	334	P	P	10 22 19.2	+1.1
	baz=116						
DHY	Denali Highway	61.50	335	P	P	10 22 19.1	+0.6
	baz=116						
PMR	Palmer	61.62	333	P	P	10 22 20.2	+1.2
	baz=114						
BRSE	Bradley Lake S	61.63	331	P	P	10 22 20.2	+1.0
	baz=111						
E28M	Babbage River	61.66	342		P	10 22 19.1	-0.1
E28M				IAmb	IAmb	10 22 20.0	
	comp=Z,4.9nm,0.8s						
E28M	Babbage River	61.66	342	P	P	10 22 19.5	+0.3
	baz=127,SNR=7.4						
RC01	Rabbit Creek A	61.68	332	P	P	10 22 20.5	+1.0
	baz=113						
KDAK	Kodiak Island	61.87	328	LR	LR	10 49 41.8	
	comp=Z,144nm,18.9s,baz=172,slow=36						
WAT1	Susitna Watana	61.88	335	P	P	10 22 22.2	+1.3
	baz=115						
PRP	Porcupine Dome	61.93	338	P	P	10 22 21.8	+0.5
	baz=119,SNR=8.8						
HDA	Harding Lake	61.94	337	IAmb	IAmb	10 22 21.9	
	comp=Z,4.6nm,0.8s						
HDA	Harding Lake	61.94	337	P	P	10 22 21.4	+0.2
	baz=117,SNR=5.6						
HOM	Homer	62.03	331	P	P	10 22 22.6	+0.7
	baz=110						
E27K	Coleen River	62.03	341	P	P	10 22 22.6	+0.8
	baz=124,SNR=9.4						
G26K	Porcupine Rive	62.06	340	IAmb	IAmb	10 22 33.0	
	comp=Z,3.5nm,1.1s						
G26K	Porcupine Rive	62.06	340	P	P	10 22 22.5	+0.5
	baz=122						
IL31		62.08	337	P	P	10 22 22.7	+0.6
IL31				IAmb	IAmb	10 22 23.6	
	comp=Z,5.4nm,0.8s						
ILAR	Eielson Array	62.08	337	P	P	10 22 22.4	+0.2
ILAR	Eielson Array	62.08	337	P	P	10 22 22.2	0.0
	comp=Z,3.0nm,0.8s,baz=142,slow=4.5,SNR=35						
ILAR				LR	LR	10 51 33.2	
	comp=Z,204nm,18.7s,baz=120,slow=38						
	comp=Z,3.0nm,0.8s						
M22K	Willow	62.11	333	P	P	10 22 22.7	+0.4
	baz=113						
SUA	Susitna One	62.28	333	P	P	10 22 24.2	+0.5
	baz=112						
CCB	Clear Creek Bu	62.38	337	IAmb	IAmb	10 22 34.5	
	comp=Z,5.8nm,1.3s						
H25L	Birch Creek	62.41	339	P	P	10 22 25.1	+0.8
	baz=119,SNR=6.2						
MCK	McKinley	62.42	335	P	P	10 22 25.3	+0.8
	baz=115						
CUT	Chulitna	62.43	334	P	P	10 22 25.0	+0.5
	baz=113						
D27M	Malcolm River	62.46	343	IAmb	IAmb	10 22 25.9	
	comp=Z,4.4nm,0.8s						
D27M	Malcolm River	62.46	343	P	P	10 22 25.4	+0.7
	baz=126,SNR=6.2						
COLA	College	62.50	337	P	P	10 22 25.6	+0.7
	baz=116						
F26K	Sheenjek River	62.57	340	IAmb	IAmb	10 22 31.4	
	comp=Z,7.3nm,1.4s						
F26K	Sheenjek River	62.57	340	P	P	10 22 26.1	+0.7
	baz=122						
BMAR	Burnt Mountain	62.57	340		P	10 22 26.4	+1.0
O20K	Slope Mountain	62.64	331	P	P	10 22 26.3	+0.2
	baz=110						
G25K	Bearman Lake	62.75	339	P	P	10 22 27.7	+1.1
	baz=119						
SKT	Skwentna	62.82	333	P	P	10 22 28.1	+0.9
	baz=112						
N20K	Mount Spurr	62.84	332	P	P	10 22 27.8	+0.4
	baz=110						
SPCR	Spurr Chakacha	62.84	332	P	P	10 22 28.4	+1.0
	baz=110						
NEA2	Nenana	62.84	336	IAmb	IAmb	10 22 54.7	
	comp=Z,4.6nm,1.1s						
NEA2	Nenana	62.84	336	P	P	10 22 27.7	+0.5
	baz=115						

TRF	Thorofare Moun	62.86	335	P	P	10 22 28.0	+0.5
	baz=113,SNR=8.2						
CHIR	Chirikof Islan	62.90	326	P	P	10 22 28.4	+0.7
	baz=105						
H24K	Noodor Dome	62.94	338	IAmb	IAmb	10 22 29.0	
	comp=Z,5.4nm,0.8s						
H24K	Noodor Dome	62.94	338	P	P	10 22 28.5	+0.5
	baz=117,SNR=10						
F25K	Christian Rive	63.01	340	IAmb	IAmb	10 22 30.1	
	comp=Z,3.9nm,0.8s						
F25K	Christian Rive	63.01	340	P	P	10 22 29.5	+1.2
	baz=120,SNR=8.2						
I23K	Minto, Yukon-K	63.19	337	P	P	10 22 30.2	+0.7
	baz=115,SNR=10						
G24K	Hadweenzic Riv	63.20	339	IAmb	IAmb	10 22 30.9	
	comp=Z,5.7nm,0.9s						
G24K	Hadweenzic Riv	63.20	339	P	P	10 22 30.4	+0.8
	baz=118						
E25K	Arctic Village	63.25	341	IAmb	IAmb	10 22 31.0	
	comp=Z,9.5nm,1.4s						
E25K	Arctic Village	63.25	341	P	P	10 22 30.7	+0.8
	baz=120,SNR=6.1						
Q18K	Katmai Hardscr	63.35	329	P	P	10 22 31.2	+0.4
	baz=107						
BPAW	Bear Paw Mtn.	63.40	335	P	P	10 22 31.1	+0.2
	baz=113,SNR=7.0						
PPLA	Purkeypile	63.44	334	P	P	10 22 32.3	+0.9
	baz=111						
C27K	Jago River	63.48	342	P	P	10 22 32.7	+1.3
	baz=123,SNR=5.5						
O19K	Port Alsworth	63.48	331	P	P	10 22 32.6	+1.1
	baz=108						
M20K	Styx River	63.49	333	IAmb	IAmb	10 22 33.2	
	comp=Z,4.9nm,0.7s						
M20K	Styx River	63.49	333	P	P	10 22 32.3	+0.6
	baz=110						
H23K	Yukon River	63.55	337	P	P	10 22 32.4	+0.5
	baz=115						
CAST	Castle Rocks	63.59	334	P	P	10 22 32.6	+0.4
	baz=112						
MLY	Manley	63.68	336	P	P	10 22 33.2	+0.4
	baz=114,SNR=12						
P18K	Big Mountain,	63.68	330	P	P	10 22 33.4	+0.5
	baz=107						
Q17K	Contact Creek	63.69	328	P	P	10 22 33.6	+0.5
	baz=106						
F24K	Squaw Lake	63.73	339	P	P	10 22 33.6	+0.5
	baz=118						
N19K	Bonanza Creek	63.75	331	P	P	10 22 33.7	+0.3
	baz=108						
O18K	Koktuh Hills	63.80	330	P	P	10 22 34.1	+0.4
	baz=107						
CHUM	Lake Minchumin	63.86	335	P	P	10 22 34.6	+0.6
	baz=112						
C26K	Camden Bay	63.98	342	P	P	10 22 35.2	+0.5
	baz=122						
L20K	Farewell, AK	64.02	333	P	P	10 22 35.2	+0.1
	baz=109,SNR=8.2						
M19K	Big River Lodg	64.06	332	IAmb	IAmb	10 22 36.3	
	comp=Z,5.1nm,0.8s						
G23K	Bananza Creek	64.11	338	IAmb	IAmb	10 22 36.8	
	comp=Z,3.9nm,0.9s						
G23K	Bananza Creek	64.11	338	P	P	10 22 36.3	+0.7
	baz=115,SNR=5.4						
D25K	Kavik River	64.12	342	P	P	10 22 36.6	+1.0
	baz=120,SNR=10						
E24K	Your Creek	64.19	340	P	P	10 22 36.8	+0.6
	baz=117						
Q16K	King Salmon	64.19	329	P	P	10 22 36.8	+0.7
	baz=105						
I21K	Tanana	64.22	336	IAmb	IAmb	10 22 40.2	
	comp=Z,8.8nm,1.4s						
I21K	Tanana	64.22	336	P	P	10 22 36.7	+0.4
	baz=112						
P17K	Kvichak River	64.22	329	P	P	10 22 37.0	+0.7
	baz=106						
PPT	Papeete	64.26	242	LR	LR	10 43 31.0	
	comp=Z,106nm,18.5s,baz=337,slow=29						
PPT2	Papeete2	64.27	242	*e*LR	LR	10 41 31.0	
	comp=Z,143nm,42.5s						
PPT2				*e*LR	LR	10 41 50.5	
	comp=Z,179nm,24.5s						
H22K	Ishtalitna Cre	64.27	337	P	P	10 22 36.4	-0.3
	baz=113,SNR=8.7						
L19K	White Mountain	64.36	333	P	P	10 22 37.8	+0.5
	baz=108						
N18K	Kilae Creek	64.37	331	P	P	10 22 38.0	+0.6
	baz=107						
COLD	Coldfoot	64.40	339	P	P	10 22 38.5	+1.0
	baz=115						
K20K	Telida	64.40	334	P	P	10 22 37.6	0.0
	baz=110,SNR=9.5						
E23K	Chandalar	64.56	340	IAmb	IAmb	10 22 40.5	
	comp=Z,7.9nm,1.0s						
E23K	Chandalar	64.56	340	P	P	10 22 39.9	+1.2
	baz=116,SNR=5.4						
M18K	Stony River	64.58	332	P	P	10 22 38.9	+0.2
	baz=107						
O17K	Koliganek Bris	64.70	330	P	P	10 22 40.0	+0.5
	baz=105						
J20K	Nowinta River	64.72	335	IAmb	IAmb	10 22 40.0	
	comp=Z,4.8nm,0.9s						
J20K	Nowinta River	64.72	335	P	P	10 22 40.0	+0.4
	baz=110						
H21K	Melozitna Rive	64.72	337	IAmb	IAmb	10 22 39.9	
	comp=Z,3.0nm,0.8s						
H21K	Melozitna Rive	64.72	337	P	P	10 22 39.6	0.0
	baz=112						
G22K	Bettles	64.73	338	P	P	10 22 40.3	+0.7
	baz=114						
D24K	Happy Valley	64.80	341	P	P	10 22 40.7	+0.7
	baz=117						
TOLK	Toolik Lake Re	64.81	340	IAmb	IAmb	10 22 41.3	
	comp=Z,5.1nm,0.8s						
TOLK	Toolik Lake Re	64.81	340	P	P	10 22 40.9	+0.7
	baz=116,SNR=6.2						
CHNA	Chernabura Isl	64.89	324	P	P	10 22 41.3	+0.4
	baz=101						
N17K	Nushagak Hills	64.94	331	P	P	10 22 41.7	+0.6
	baz=105						
C24K	Franklin Bluff	65.03	341	P	P	10 22 42.1	+0.6
	baz=118						
I20K	Naaghedeneel	65.07	335	P	P	10 22 42.4	+0.6
	baz=110						
O16K	Kokwok River B	65.14	329	P	P	10 22 42.6	+0.2
	baz=104						
S14K	Fog Glacier	65.16	326	P	P	10 22 43.1	+0.4
	baz=101						
L18K	Granite Mounta	65.19	332	P	P	10 22 43.4	+0.7
	baz=107						
F22K	John River	65.21	339	P	P	10 22 43.9	+1.1
	baz=113						
J19K	Poorman	65.27	334	P	P	10 22 42.9	-0.3
	baz=108,SNR=10						
M17K	Holitna River	65.30	331	P	P	10 22 44.0	+0.6
	baz=106						
G21K	Allakaket	65.31	337	IAmb	IAmb	10 22 44.2	
	comp=Z,4.3nm,0.8s						
G21K	Allakaket	65.31	337	P	P	10 22 44.5	+1.1
	baz=112,SNR=6.7						
D23K	Nanushuk River	65.31	340	P	P	10 22 44.3	+0.9
	baz=116						
E22K	Anaktuvuk Pass	65.34	339	IAmb	IAmb	10 22 49.4	
	comp=Z,8.1nm,1.1s						
E22K	Anaktuvuk Pass	65.34	339	P	P	10 22 44.4	+0.8
	baz=114,SNR=11						
H20K	Anotleneega Mo	65.47	336	P	P	10 22 44.8	+0.3
	baz=110						
F21K	Alatna River	65.56	338	P	P	10 22 46.2	+1.2
	baz=112,SNR=25						
J18K	Innoko River	65.57	334	P	P	10 22 45.8	+0.7
	baz=107						
C23K	Itkillik River	65.67	341	P	P	10 22 46.6	+1.0
	baz=116,SNR=8.0						
N16K	Nishlik Lake	65.69	330	P	P	10 22 46.6	+0.7
	baz=104						
L17K	Donlin	65.89	332	P	P	10 22 47.7	+0.5
	baz=105						
M16K	Timber Creek	65.91	331	P	P	10 22 47.6	+0.2
	baz=104						
D22K	Ayikyak River	65.93	340		P	10 22 47.6	+0.2
D22K	Ayikyak River	65.93	340	P	P	10 22 48.5	+1.0
	baz=113,SNR=9.0						
K17K	Iditarod	66.05	333	P	P	10 22 48.4	+0.2
	baz=105						
H19K	Roundabout Mou	66.09	336	IAmb	IAmb	10 22 49.5	
	comp=Z,6.9nm,1.0s						
H19K	Roundabout Mou	66.09	336	P	P	10 22 48.1	-0.3
	baz=108,SNR=6.1						
E21K	Killik River	66.20	339	IAmb	IAmb	10 22 50.2	
	comp=Z,4.8nm,0.8s						
E21K	Killik River	66.20	339	P	P	10 22 49.3	+0.2
	baz=112						
F20K	Avaraart Lake	66.32	338	P	P	10 22 50.4	+0.6
	baz=110						
L16K	Owhat River	66.32	332	IAmb	IAmb	10 22 51.0	
	comp=Z,4.8nm,0.9s						
L16K	Owhat River	66.32	332	P	P	10 22 50.4	+0.5
	baz=104						
S12K	Black Hills	66.44	325	P	P	10 22 51.3	+0.5
	baz=99						
G19K	Purcell Mounta	66.54	336	IAmb	IAmb	10 22 57.2	
	comp=Z,4.4nm,0.9s						
G19K	Purcell Mounta	66.54	336	P	P	10 22 51.9	+0.6
	baz=108						
J17K	VABM Dome	66.57	333	P	P	10 22 52.2	+0.7
	baz=105						
C21K	Knifeblade Rid	66.74	340	P	P	10 22 53.5	+1.0
	baz=111,SNR=5.7						
H18K	Honhosa River	66.75	335	P	P	10 22 53.3	+0.7
	baz=106						
B22K	Teshekpuk Lake	66.76	341	P	P	10 22 53.5	+0.9
	baz=113						
TBI	Tubuai	66.80	236	*e*LR	LR	10 42 59.3	
	comp=Z,1µm,29.2s						
B21K	Ikpikpuk River	66.86	340	P	P	10 22 53.9	+0.7
	baz=112						
E20K	Nigu River	66.90	339	P	P	10 22 54.0	+0.4
	baz=110,SNR=8.3						
N14K	Kuskokwak Cree	66.99	329	P	P	10 22 55.3	+1.1
	baz=101						
E19K	Redstone River	67.01	338	IAmb	IAmb	10 22 55.1	
	comp=Z,3.5nm,1.0s						
E19K	Redstone River	67.01	338	P	P	10 22 54.8	+0.5
	baz=108						
F19K	Shaleruckik Mo	67.01	337	IAmb	IAmb	10 22 55.2	
	comp=Z,4.2nm,0.8s						
F19K	Shaleruckik Mo	67.01	337	P	P	10 22 54.9	+0.6
	baz=108						
G18K	Tagagawik	67.08	336	IAmb	IAmb	10 22 55.9	
	comp=Z,3.6nm,0.8s						
G18K	Tagagawik	67.08	336	P	P	10 22 55.7	+1.0
	baz=106						
D20K	Etivluk River	67.20	339	P	P	10 22 56.2	+0.7
	baz=110,SNR=9.6						
J16K	Anvik River	67.20	333	IAmb	IAmb	10 22 57.1	
	comp=Z,6.6nm,0.9s						
J16K	Anvik River	67.20	333	P	P	10 22 56.6	+1.0
	baz=103						
L15K	Ungalak Mounta	67.25	331	P	P	10 22 56.7	+0.8
	baz=102						
M14K	Bethel	67.28	330	P	P	10 22 57.5	+1.4
	baz=101						
H17K	Granite Mounta	67.32	335	P	P	10 22 57.6	+1.3
	baz=105						
I17K	Unalakleet	67.39	334	P	P	10 22 57.7	+1.0
	baz=104						
K15K	Wolf Creek Mou	67.40	332	IAmb	IAmb	10 22 58.5	
	comp=Z,5.3nm,0.8s						
K15K	Wolf Creek Mou	67.40	332	P	P	10 22 57.8	+1.0
	baz=102						
A22K	Sinclair Lake	67.49	342	P	P	10 22 58.6	+1.4
	baz=112						
D19K	Kuna River	67.65	339	IAmb	IAmb	10 23 01.4	
	comp=Z,5.5nm,0.8s						
D19K	Kuna River	67.65	339	P	P	10 22 59.5	+1.2
	baz=108						
F18K	Selawik	67.66	337	P	P	10 22 59.5	+1.2
	baz=106						
L14K	Kuka Creek	67.74	331	P	P	10 23 00.1	+1.2
	baz=101						
G17K	Kiwalik Mounta	67.77	335	P	P	10 23 00.3	+1.2
	baz=104						
B20K	Meade River	67.82	340	P	P	10 23 00.4	+1.1
	baz=109						
M13K	Dall Lake	67.89	330	P	P	10 23 01.0	+1.1
	baz=100						
A21K	Barrow	68.11	342	P	P	10 23 02.1	+1.0
	baz=110						
H16K	Elim	68.22	334	P	P	10 23 02.7	+0.8
	baz=102						
E18K	Tukpahlearik C	68.24	337	P	P	10 23 02.9	+0.9
	baz=105						
C19K	Lookout Ridge	68.35	339	P	P	10 23 03.9	+1.1
	baz=107						
J14K	Nanvaranak Lak	68.41	332	P	P	10 23 04.2	+1.0
	baz=100						
G16K	Koyuk River	68.43	335	P	P	10 23 04.0	+0.8
	baz=103						
E17K	Hotham Inlet	68.62	337	P	P	10 23 04.9	+0.5
	baz=104						
UNV	Unalaska Valle	68.77	322	P	P	10 23 06.5	+0.9
	baz=94						
K13K	Kusilvak Mount	68.77	331	P	P	10 23 05.5	+0.1
	baz=99						
C18K	Utukok River	68.78	339	P	P	10 23 05.7	+0.2
	baz=105						
G15K	Niukluk	69.04	334	P	P	10 23 08.1	+1.0
	baz=101						
A19K	Wainwright	69.16	340	P	P	10 23 08.8	+1.1
	baz=106						
B18K	Kokolik River	69.18	339	P	P	10 23 09.0	+1.2
	baz=105						
BORG	Borgarnes	69.23	26	LR	LR	10 53 51.2	
	comp=Z,100nm,18.4s,baz=262,slow=36						
D17K	Noatak River	69.23	337	P	P	10 23 08.9	+0.8
	baz=103						
M11K	Mekoryuk	69.29	329	P	P	10 23 10.2	+1.6
	baz=97						
F15K	North Star Dit	69.43	335	P	P	10 23 10.5	+1.1
	baz=101						
C17K	DeLong Mountai	69.44	338	P	P	10 23 10.3	+0.8
	baz=103						
ANM	Nome	69.53	334	P	P	10 23 11.1	+1.0
	baz=100						
F14K	Arctic Creek	70.08	335	P	P	10 23 13.7	+0.3
	baz=99						
USHA	Ushuaia	72.06	165	LR	LR	10 50 54.9	
	comp=Z,235nm,18.9s,baz=96,slow=32						
BBTS	Babate	73.60	79	LR	LR	10 50 55.9	
	comp=Z,193nm,21.3s,baz=156,slow=32						
EKA	Eskdalemuir Ar	78.17	36	P	P	10 23 57.5	-3.3
	comp=Z,2.1nm,0.7s,baz=275,slow=5.6,SNR=6.0						
	comp=Z,2.1nm,0.7s						
ESDC	Sonseca Array	80.18	52	P	P	10 24 09.1	-3.2
	comp=Z,1.1nm,0.9s,baz=287,slow=6.6,SNR=7.5						
	comp=Z,1.1nm,0.9s						
MDT	Midelt	80.97	58	LR	LR	10 55 52.7	
	comp=Z,110nm,19.6s,baz=256,slow=33						
NOA	NORSAR Array B	84.22	28	LR	LR	11 00 01.5	
	comp=Z,117nm,21.3s,baz=285,slow=34						
HFS	Hagfors	85.68	29	LR	LR	11 00 33.0	
	comp=Z,141nm,21.4s,baz=312,slow=34						
ARCES	ARCESS Array B	86.02	18	P	P	10 24 40.4	-1.4
	comp=Z,0.9nm,0.5s,baz=305,slow=4.3,SNR=8.4						
	comp=Z,0.9nm,0.5s						
DAVOX	Davos/Dischmat	88.17	42	LR	LR	10 59 01.3	
	comp=Z,100nm,21.8s,baz=265,slow=32						
TIXI	Tiksi	89.65	348	LR	LR	11 12 38.4	
	comp=Z,93nm,18.6s,baz=36,slow=41						
FINES	FINESS Array B	90.51	25	P	P	10 25 01.8	-1.4
	comp=Z,0.6nm,0.6s,baz=222,slow=2.6,SNR=5.4						
FINES				LR	LR	11 07 29.3	
	comp=Z,75nm,18.5s,baz=303,slow=37						
	comp=Z,0.6nm,0.6s						
VRAC	Vranov	91.44	38	LR	LR	11 08 22.6	
	comp=Z,68nm,18.4s,baz=278,slow=37						
VAE	Valguarnera	94.60	50	LR	LR	11 04 46.7	
	comp=Z,242nm,19.9s,baz=334,slow=34						
AKASG	Malin Array Be	97.88	33	LR	LR	11 12 56.1	
	comp=Z,50nm,18.2s,baz=258,slow=38						
DZM	Mont Dzumac	104.93	251	*e*LR	LR	11 00 45.0	
	comp=Z,175nm,23.6s						
HHC	Hu-ho-hao-te	120.49	339	*e*P	PKiKP	10 30 55.8	+2.2
NJ2	Nanjing	124.64	327	*e*P	PKiKP	10 31 01.8	-0.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WRA	Warramunga Arr	134.59	256	PKP	PKPdf	10 31 20.3	-0.5
	comp=Z,0.8nm,0.6s,baz=84,slow=2.3,SNR=8.9						
CMAR	Chiang Mai Arr	145.28	340	PKPbc	PKPbc	10 31 39.4	-0.4
	comp=Z,3.3nm,0.7s,baz=341,slow=4.2,SNR=19						

IDC ***24*** *10:17:33.2±0.6, 2°.72S×138°.53E, $h0^{km}$, mb4.2/15, mbtmp4.3/19, ML4.4/4, MS3.9/15, Error ellipse: s-maj=14.5km s-min=13.2km az=81.0*

NEIC ***24*** *10:17:35.7±1.8, 2°.67S±0°.09×138°.47E±0°.07, $h10^{km}\pm 1^{km}$, mb4.7/76, Error ellipse: s-maj=15.4km s-min=11.5km az=176.0*

DJA ***24*** *10:17:36.5±0.6, 3°S±3°×13°9E±°, $h12^{km}\pm 5^{km}$, M4.6/7, mb4.6/3, MLv4.6/7*

ISC 24 10:17:38.2±0.4**, 2°.71S**±0°.05×**138°.54E**±0°.04**, $h32^{km}$, n115,** $\sigma 1^{s}.99$/90**, mb4.6**/61**, MS3.9**/13**, 1C-1D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.73	13	P	Pn	10 17 48.5	-3.8
GENI	Genyem	1.63	86	P	Pn	10 18 05.7	+1.1
GENI				S	Sb	10 18 27.3	-0.5
JAY	Jayapura	2.17	85	Pn	Pn	10 18 12.5	+0.4
	34nm,0.3s,baz=234,slow=11,SNR=66						
JAY				Lg	Lg	10 18 42.8	
	21nm,0.3s,baz=120,slow=21,SNR=5.8						
	93nm,0.3s						
JAY	Jayapura	2.17	85	P	Pn	10 18 12.8	+0.7
JAY				S	Sn	10 18 38.2	+0.3
SRPI	Serui, Papua	2.44	290	P	Pn	10 18 16.4	+0.5
SRPI				S	Sn	10 18 47.0	+2.3
BAKI	Biak	2.86	302	P	Pn	10 18 22.4	+0.8
BAKI				S	Sn	10 18 54.8	-0.2
RKPI	Ransiki, Papua	4.52	285	P	Pn	10 18 45.3	+0.9
FAKI	Fak Fak	6.29	268	Pn	Pn	10 19 04.3	-4.5
FAKI	Fak Fak	6.29	268	P	Pn	10 19 05.6	-3.2
	0.3nm59nm,0.8s						
KDU	Kakadu	11.60	211	P	Pn	10 20 22.9	+1.4
COEN	Coen	12.08	158		Pn	10 20 28.9	+0.7
COEN	Coen	12.08	158	P	Pn	10 20 29.3	+1.1
DRS	Darwin Rock St	12.27	218	P	Pn	10 20 34.2	+3.4
MTN	Manton Dam	12.46	216		Pn	10 20 34.2	+0.9
MTN	Manton Dam	12.46	216	P	Pn	10 20 36.9	+3.5
SOEI	Soe	15.82	243	Pn	Pn	10 21 18.6	-0.2
SOEI	Soe	15.82	243	P	P	10 21 24.8	+2.5
KNRA	Kununurra	16.09	216		Pn	10 21 22.3	+0.1
MTSU	Mount Surprise	16.35	160	P	P	10 21 28.6	+0.5
BATI	Baumata	16.55	243	Pn	Pn	10 21 28.4	+0.3
	10nm,0.3s,baz=36,slow=5.0,SNR=5.8						
	31nm,0.4s						
GUMO	Guam	17.36	21	LR	LR	10 27 55.7	
	comp=Z,206nm,19.5s,baz=214,slow=36						
WB0	Warramunga Arr	17.44	193		Pn	10 21 38.4	-0.7
WB0				IAmb	IAmb	10 22 00.1	
	comp=Z,59nm,1.1s						
WR8	Warramunga Arr	17.59	193		Pn	10 21 39.2	-1.8
WRAB	Tennant Creek	17.61	193	P	Pn	10 21 41.0	-0.2
WRAB				IAmb	IAmb	10 22 02.8	
	comp=Z,47nm,0.9s						
WRA	Warramunga Arr	17.62	193		Pn	10 21 38.5	-2.8
WRA	Warramunga Arr	17.62	193	P	Pn	10 21 39.2	-2.2
	comp=Z,1.5nm,0.3s,baz=19,slow=12,SNR=46						
WRA				S	Sn	10 24 46.7	-10
	comp=Z,3.2nm,0.9s,baz=5.3,slow=23,SNR=2.9						
WRA				LR	LR	10 29 14.6	
	comp=Z,547nm,19.9s,baz=106,slow=40						
	comp=Z,7.2nm,0.6s						
QIS	Mount Isa	17.77	177	P	P	10 21 44.8	+0.9
FITZ	Fitzroy Crossi	19.85	219		P	10 22 06.7	+0.1
FITZ	Fitzroy Crossi	19.85	219	P	P	10 22 06.2	-0.4
	comp=Z,0.5nm,0.3s,baz=36,slow=11,SNR=8.5						
FITZ				LR	LR	10 30 43.6	
	comp=Z,300nm,19.1s,baz=39,slow=40						
	comp=Z,3.8nm,0.6s						
FITZ	Fitzroy Crossi	19.85	219	P	Pn	10 22 10.4	+2.0
AS01	Alice Springs	21.30	192	P	P	10 22 25.2	+2.8
AS31	Alice Springs	21.32	192		P	10 22 22.6	+0.1
AS31				IAmb	IAmb	10 22 30.9	
	comp=Z,24nm,0.8s						
ASAR	Alice Springs	21.32	192	P	P	10 22 22.2	-0.3
	comp=Z,20nm,0.8s,baz=22,slow=10,SNR=101						
ASAR				S	S	10 26 16.1	-1.6
	comp=Z,5.1nm,1.0s,baz=10,slow=26,SNR=4.9						
	comp=Z,20nm,0.8s						
MYLDM	Lahad Datu	21.50	291		P	10 22 25.7	+1.2
MYLDM				IAmb	IAmb	10 22 32.1	
	comp=Z,60nm,1.3s						
KKM	Kota Kinabalu	23.93	291	P	P	10 22 49.8	+0.1
KKM				IAmb	IAmb	10 22 50.9	
	comp=Z,15nm,0.9s						
EIDS	Eidsvold	25.57	153	P	P	10 23 05.1	+0.7
EIDS				IAmb	IAmb	10 23 07.3	
	comp=Z,19nm,1.2s						
RMQ	Roma	25.60	158	P	P	10 23 09.4	+4.7
MBWA	Marble Bar	25.92	224	P	P	10 23 08.4	+0.7
MBWA				IAmb	IAmb	10 23 10.9	
	comp=Z,17nm,1.1s						
MBWA	Marble Bar	25.92	224	P	P	10 23 12.2	+4.5
PSA00	Pilbara Seismi	26.12	223	P	P	10 23 09.4	-0.1
PSA00				IAmb	IAmb	10 23 12.7	
	comp=Z,20nm,1.2s						
STKA	Stephens Creek	29.16	175	P	P	10 23 36.2	-0.3
STKA	Stephens Creek	29.16	175	P	P	10 23 36.5	0.0
	comp=Z,0.8nm,0.4s,baz=348,slow=8.0,SNR=6.3						
STKA				LR	LR	10 36 39.2	
	comp=Z,333nm,18.8s,baz=339,slow=39						
	comp=Z,0.8nm,0.4s						
JOW	Kunigami	30.99	342	LR	LR	10 34 12.2	
	comp=Z,230nm,21.1s,baz=156,slow=32						
NWAO	Narrogin (SRO)	36.10	211	LR	LR	10 40 39.2	
	comp=Z,594nm,20.8s,baz=40,slow=38						
JNU	Nakatsue	36.36	349	LR	LR	10 39 11.9	
	comp=Z,156nm,18.9s,baz=150,slow=36						
NJ2	Nanjing	39.30	333	*e*P	P	10 25 04.6	+0.4
NJ2				pmax	pmax		
	comp=Z,12nm,1.1s						
RPSI	Rantau Prapat	39.97	277	P	P	10 25 09.5	-0.6
RPSI				IAmb	IAmb	10 25 11.2	
	comp=Z,14nm,1.0s						
KSRS	Korea Array	41.16	347	P	P	10 25 19.6	+0.1
	comp=Z,1.7nm,0.8s,baz=161,slow=9.4,SNR=9.6						
	comp=Z,1.7nm,0.8s						
SLVN	Son La	41.47	307	P	P	10 25 22.3	-0.2
TIA	Tai'an	43.57	335	P	P	10 25 39.3	0.0
TIA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
CMAR	Chiang Mai Arr	44.29	300	P	P	10 25 45.4	+0.1
	comp=Z,1.8nm,0.7s,baz=119,slow=6.4,SNR=14						
	comp=Z,1.8nm,0.7s						
KMI	Kunming	44.39	311	P	P	10 25 47.5	+1.2
KMI				pmax	pmax		
	comp=Z,11nm,0.9s						
LYN	LuoYang	44.43	329	P	P	10 25 46.3	+0.1
LYN				pmax	pmax		
	comp=Z,29nm,1.1s						
HNS	HongShan	45.63	333	⇑P	P	10 25 55.8	+0.2
HNS				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ASAJ	Asahikawa	46.75	4	LR	LR	10 42 36.2	
	comp=Z,100nm,21.9s,baz=162,slow=32						
USRK	Ussuriysk Ar.	47.06	354	P	P	10 26 07.4	+0.6
	comp=Z,2.8nm,1.1s,baz=164,slow=9.5,SNR=5.8						
USRK				LR	LR	10 41 57.9	
	comp=Z,130nm,21.1s,baz=175,slow=31						
	comp=Z,2.8nm,1.1s						
BJI	Beijing	47.22	337	P	P	10 26 08.4	+0.3
BJI				pP	pP	10 26 12.8	-5.1
BJI				sP	sP	10 26 15.4	-6.4
BJI				S	S	10 33 01.3	+2.2
BJI				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BJI				pmax	pmax		
	comp=Z,36nm,3.7s						
BJI				LR	LR		
	comp=N,71nm,21.6s						
BJI				LR	LR		
	comp=E,52nm,17.8s						
BJI				LR	LR		
	comp=Z,110nm,20.3s						
BNX	BinXian	49.24	350	⇓P	P	10 26 23.9	+0.3
BNX				pmax	pmax		
	comp=Z,9.0nm,1.3s						
HHC	Hu-ho-hao-te	49.85	333	*e*P	P	10 26 30.8	+2.3
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
URZ	Urewera	49.93	140	LR	LR	10 47 19.4	
	comp=Z,188nm,19.2s,baz=246,slow=36						
LZH	Lanzhou	50.38	323	*e*P	P	10 26 33.8	+1.1
LZH				pP	pP	10 26 37.5	-4.9
LZH				pmax	pmax		
	comp=Z,28nm,1.4s						
KLR	Kul'dur	52.06	354	P	P	10 26 44.8	-0.1
	comp=Z,1.8nm,0.6s,baz=140,slow=7.5,SNR=6.7						
	comp=Z,1.8nm,0.6s						
SONM	Songino Array	57.64	335	P	P	10 27 25.9	+0.5

	comp=Z,1.7nm,0.7s,baz=152,slow=7.5,SNR=7.0						
	comp=Z,1.7nm,0.7s						
PETK	**Petropavlovsk-**	**57.90**	**14**	P	**P**	**10 27 27.4**	**+0.5**
	comp=Z,2.2nm,0.9s,baz=184,slow=5.9,SNR=4.9						
PETK				LR	LR	10 48 10.4	
	comp=Z,102nm,21.6s,baz=189,slow=32						
	comp=Z,2.2nm,0.9s						
WMQ	**Urumqi**	**64.90**	**322**	*e*P	**P**	**10 28 14.5**	**-0.1**
WMQ				pmax	pmax		
	comp=Z,25nm,0.7s						
YAK	**Yakutsk**	**64.91**	**355**	LR	LR	10 53 27.8	
	comp=Z,91nm,21.9s,baz=118,slow=33						
MKAR	**Makanchi Array**	**69.68**	**322**		**P**	**10 28 45.4**	**+0.6**
MKAR	**Makanchi Array**	**69.68**	**322**	P	**P**	**10 28 45.2**	**+0.4**
	comp=Z,1.0nm,0.4s,baz=108,slow=7.8,SNR=19						
	comp=Z,1.0nm,0.4s						
MAKZ	**Makanchi**	**69.88**	**322**		**P**	**10 28 46.5**	**+0.5**
MAKZ				IAmb	IAmb	10 28 47.6	
	comp=Z,9.8nm,1.1s						
KSH	**Kashi**	**70.96**	**313**	P	**P**	**10 28 54.4**	**+1.5**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ZALV	**Zalesovo Beam**	**71.85**	**330**		**P**	**10 28 56.8**	**-0.9**
ZALV	**Zalesovo Beam**	**71.85**	**330**	P	**P**	**10 28 57.4**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=96,slow=4.6,SNR=5.9						
	comp=Z,1.7nm,0.7s						
KURK	**Kurchatov**	**73.62**	**325**		**P**	**10 29 08.2**	**-0.1**
KURK				IAmb	IAmb	10 29 09.6	
	comp=Z,11nm,1.5s						
KURBB	**Kurchatov Arra**	**73.63**	**325**	P	**P**	**10 29 08.0**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=129,slow=4.7,SNR=10						
	comp=Z,0.6nm,0.5s						
TIXI	**Tiksi**	**74.49**	**357**		**P**	**10 29 11.9**	**-1.1**
VNDA	**Vanda**	**75.80**	**175**		**P**	**10 29 21.4**	**+0.9**
VNDA	**Vanda**	**75.80**	**175**	P	**P**	**10 29 20.1**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=316,slow=6.9,SNR=9.6						
	comp=Z,1.2nm,0.6s						
BVAR	**Borovoye Array**	**79.21**	**325**	P	**P**	**10 29 40.1**	**0.0**
	comp=Z,1.0nm,0.4s,baz=113,slow=6.8,SNR=6.0						
	comp=Z,1.0nm,0.4s						
M16K	**Timber Creek**	**79.42**	**26**		**P**	**10 29 41.1**	**+0.1**
M16K				IAmb	IAmb	10 29 43.2	
	comp=Z,8.7nm,1.1s						
M17K	**Holitna River**	**80.25**	**26**		**P**	**10 29 47.5**	**+2.0**
M17K				IAmb	IAmb	10 29 48.1	
	comp=Z,12nm,1.1s						
K17K	**Iditarod**	**80.43**	**25**	IAmb	IAmb	10 29 48.9	
	comp=Z,10nm,1.1s						
L19K	**White Mountain**	**81.68**	**26**	IAmb	IAmb	10 29 54.6	
	comp=Z,6.0nm,1.1s						
M20K	**Styx River**	**82.33**	**26**	IAmb	IAmb	10 30 06.9	
	comp=Z,6.0nm,1.1s						
E19K	**Redstone River**	**82.86**	**20**	IAmb	IAmb	10 30 06.4	
	comp=Z,6.0nm,1.1s						
F20K	**Avaraart Lake**	**83.23**	**21**	IAmb	IAmb	10 30 05.0	
	comp=Z,5.9nm,1.2s						
D20K	**Etivluk River**	**83.60**	**19**	IAmb	IAmb	10 30 10.1	
	comp=Z,8.6nm,1.4s						
KTH	**Kantishna Hill**	**83.85**	**25**	IAmb	IAmb	10 30 06.0	
	comp=Z,5.5nm,1.2s						
PMR	**Palmer**	**84.04**	**27**	IAmb	IAmb	10 30 06.0	
	comp=Z,7.4nm,1.2s						
E21K	**Killik River**	**84.39**	**20**	IAmb	IAmb	10 30 12.8	
	comp=Z,6.7nm,1.4s						
MLY	**Manley**	**84.40**	**24**		**P**	**10 30 07.8**	**+0.6**
ABKAR	**Akbulak array**	**84.61**	**320**		**P**	**10 30 08.3**	**-0.2**
I23K	**Minto, Yukon-K**	**84.99**	**24**	IAmb	IAmb	10 30 16.8	
	comp=Z,4.4nm,1.1s						
E22K	**Anaktuvuk Pass**	**85.03**	**21**	IAmb	IAmb	10 30 12.5	
	comp=Z,7.2nm,1.2s						
DHY	**Denali Highway**	**85.24**	**26**	IAmb	IAmb	10 30 17.6	
	comp=Z,3.8nm,0.9s						
WRH	**Wood River Hil**	**85.32**	**25**	IAmb	IAmb	10 30 16.8	
	comp=Z,9.0nm,1.3s						
CCB	**Clear Creek Bu**	**85.48**	**24**	IAmb	IAmb	10 30 12.7	
	comp=Z,5.2nm,1.0s						
ILAR	**Eielson Array**	**85.90**	**24**	P	**P**	**10 30 13.5**	**-1.1**
	comp=Z,1.4nm,0.7s,baz=263,slow=4.7,SNR=14						
	comp=Z,1.4nm,0.7s						
TOLK	**Toolik Lake Re**	**85.98**	**20**	IAmb	IAmb	10 30 21.0	
	comp=Z,8.0nm,1.2s						
F24K	**Squaw Lake**	**86.25**	**22**	IAmb	IAmb	10 30 19.6	
	comp=Z,8.5nm,1.2s						
J26L	**Joseph Creek**	**87.22**	**25**	IAmb	IAmb	10 30 22.9	
	comp=Z,6.9nm,1.4s						
QSPA	**South Pole Qui**	**87.24**	**180**	P	**P**	**10 30 21.2**	**-0.1**
QSPA				IAmb	IAmb	10 30 34.1	
	comp=Z,6.4nm,0.9s						
QSPA	**South Pole Qui**	**87.24**	**180**	P	**P**	**10 30 21.3**	**-0.1**
	comp=Z,5.5nm,0.8s,baz=138,slow=0.3,SNR=33						
	comp=Z,5.5nm,0.8s						
GRNC	**Granite Creek**	**87.31**	**29**	IAmb	IAmb	10 30 30.2	
	comp=Z,6.8nm,1.2s						
BMAR	**Burnt Mountain**	**87.46**	**22**		**P**	**10 30 23.3**	**+1.0**
M27K	**Edge Creek, AK**	**87.55**	**27**	IAmb	IAmb	10 30 38.1	
	comp=Z,5.2nm,1.2s						
BCAR	**Beaver Creek A**	**87.72**	**27**		**P**	**10 30 24.0**	**+0.4**
DAWY	**Dawson**	**88.94**	**26**	P	**P**	**10 30 29.0**	**-0.4**
DAWY				IAmb	IAmb	10 30 31.2	
	comp=Z,4.6nm,1.0s						
L29M	**L29M**	**89.37**	**27**	IAmb	IAmb	10 30 35.8	
	comp=Z,5.2nm,1.2s						
I29M	**Ogilvie Camp,**	**89.58**	**25**	IAmb	IAmb	10 30 38.2	
	comp=Z,8.9nm,1.5s						
N30M	**Aishikik Lake**	**89.66**	**29**	IAmb	IAmb	10 30 35.6	
	comp=Z,5.6nm,1.3s						
K29M	**Barlow Dome**	**89.73**	**26**	IAmb	IAmb	10 30 39.5	
	comp=Z,6.2nm,1.4s						
J30M	**Hart River**	**90.32**	**25**		**P**	**10 30 37.0**	**+1.0**
KIRV	**Kirov**	**91.83**	**328**	LR	LR	11 12 56.1	
	comp=Z,112nm,20.4s,baz=301,slow=36						
BELG	**Belogornoye**	**92.69**	**322**	LR	LR	11 13 34.6	
	comp=Z,84nm,21.9s,baz=328,slow=36						
GNI	**Garni**	**94.64**	**310**	LR	LR	11 20 14.6	
	comp=Z,21nm,18.1s,baz=332,slow=40						

IDC ***24*** *10:22:37.4±0.9, 34°.96N×139°.12E, h0^{km}, mb3.6/7, mbtmp3.6/10, ML3.5/3, MS3.4/2, Error ellipse: s-maj=23.8km s-min=18.6km az=90.0*

NEIC ***24*** *10:22:39.9±1.8, 34°.99N±0°.03×139°.19E±0°.04, h10^{km}±1^{km}, mb4.3/14, Error ellipse: s-maj=6.3km s-min=3.3km az=226.0*

JMA ***24*** *10:22:39.5±0.2, 35°.1N±0°.6×139°.1E±0°.5, h8^{km}, MD4.1/11, MV4.0/11, E OFF IZU PENINSULA*

JMA Felt IV J1 at E OFF IZU PENINSULA .

NIED ***24*** *10:22:39.5, 35°.07N×139°.10E, h8^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-1.83; M$_{\theta\theta}$-1.96; M$_{\phi\phi}$3.79; M$_{r\theta}$1.16; M$_{\theta\phi}$-5.72; M$_{\phi r}$-2.62; Fault plane solution: M$_0$6.83000×10^{14} NP1: φ$_s$102.00000°, δ74.00000°, λ174.00000°. NP2: φ$_s$194.00000°, δ84.00000°, λ17.00000°.*

ISC 24 10:22:39.4±0.8**, 35°.03N**±0°.03×**139°.12E**±0°.03**, h11**^{km}±4^{km}**, n87,** σ**0^{s}.92**/75**, mb4.2**/16**, 7D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AJI	**Ajiro2**	**0.03**	**307**	P	**Pg**	**10 22 41.0**	**-0.4**
AJI				*e*S	**Sg**	**10 22 42.1**	**-0.7**
KTJ3	**Kamata3**	**0.10**	**205**	*e*P	**Pg**	**10 22 42.8**	**+0.7**
KTJ3				*e*S	**Sg**	**10 22 44.7**	**+0.7**
JHTM	**Izuhatsuma**	**0.12**	**234**	*i* P	**Pg**	**10 22 42.6**	**+0.3**
JHTM	**Izuhatsuma**	**0.12**	**234**	A	A	10 22 42.6	
	comp=N,457nm,0.9s,comp=E,468nm,0.3s						
JOD2	**Odawara 2**	**0.24**	**353**	⇓*i*P	**Pg**	**10 22 44.3**	**-0.1**
JOD2				⇓S	**Sg**	**10 22 47.7**	**0.0**
JOD2	**Odawara 2**	**0.24**	**353**	A	A	10 22 44.3	
	comp=N,60nm,0.3s,comp=E,108nm,0.3s						
JIZS	**Izushimoda**	**0.37**	**213**	P	**Pb**	**10 22 47.0**	**-1.0**
JIZS				*e*S	**Sb**	**10 22 52.2**	**-1.5**
JIZS	**Izushimoda**	**0.37**	**213**	A	A	10 22 47.0	
	comp=N,17nm,5.3s,comp=E,16nm,1.4s						
JFNN	**Fujinakano**	**0.40**	**295**	⇓*i*P	**Pg**	**10 22 47.3**	**0.0**
JFNN				⇓S	**Sg**	**10 22 52.9**	**+0.4**
JFNN	**Fujinakano**	**0.40**	**295**	A	A	10 22 47.3	
	comp=N,22nm,8.0s,comp=E,16nm,1.9s						
JIM2	**Oshima 3**	**0.40**	**140**	⇓*i*P	**Pb**	**10 22 48.0**	**-0.6**
JIM2	**Oshima 3**	**0.40**	**140**	A	A	10 22 48.0	
	comp=N,17nm,0.3s,comp=E,18nm,0.3s						
JYO	**Yokosk**	**0.49**	**66**	A	A	10 22 49.1	
	comp=N,22nm,1.1s,comp=E,26nm,0.4s						
JTHY	**Toshimahigashi**	**0.52**	**165**	A	A	10 22 50.5	
	comp=N,16nm,0.3s,comp=E,12nm,2.4s						
TATJ	**Tateyama 2**	**0.63**	**89**	A	A	10 22 52.0	
	comp=N,20nm,0.8s,comp=E,23nm,0.7s						
JYN	**Shimob**	**0.67**	**315**	⇓*i*P	**Pg**	**10 22 51.9**	**-0.5**
JYN				⇓S	**Sg**	**10 23 00.8**	**-0.4**
JNIO	**Niijimaoohara**	**0.68**	**169**	A	A	10 22 53.4	
	comp=N,12nm,1.4s,comp=E,16nm,0.6s						
JSKK	**Shikinejimakit**	**0.69**	**174**	A	A	10 22 53.6	
	comp=N,7.0nm,0.6s,comp=E,10.0nm,0.7s						
SHZ3	**Shizuoka 3**	**0.75**	**273**	*i* P	**Pg**	**10 22 54.1**	**+0.2**
SHZ3				*e*S	**Sg**	**10 23 04.4**	**+0.7**
SHZ3	**Shizuoka 3**	**0.75**	**273**	A	A	10 22 54.1	
	comp=N,21nm,0.3s,comp=E,9.0nm,0.4s						
TOK	**Tokyo**	**0.84**	**38**	A	A	10 22 55.1	
	comp=N,48nm,0.5s,comp=E,30nm,0.2s						
JSG	**Sagara**	**0.85**	**246**		**Pb**	**10 22 56.5**	**+0.3**
JSG				Sg	**Sn**	**10 23 09.4**	**-0.3**
JSG	**Sagara**	**0.85**	**246**	P	**Pb**	**10 22 56.5**	**+0.3**
JSG	**Sagara**	**0.85**	**246**	S	**Sn**	**10 23 09.5**	**-0.3**
JSG	**Sagara**	**0.85**	**246**	A	A	10 22 55.7	
	comp=N,12nm,0.4s,comp=E,14nm,0.4s						
JNY	**Yasuok**	**1.08**	**288**	A	A	10 22 59.5	
	comp=N,7.0nm,1.0s,comp=E,4.0nm,0.4s						
JGF	**Kuroka**	**1.55**	**292**		**Pn**	**10 23 07.5**	**+0.4**
JGF	**Kuroka**	**1.55**	**292**	P	**Pn**	**10 23 07.5**	**+0.4**
JGF	**Kuroka**	**1.55**	**292**	S	**Sn**	**10 23 27.4**	**+0.1**
MJAR	**Matsushiro Arr**	**1.69**	**334**	Pn	**Pn**	**10 23 09.3**	**+0.4**
MJAR	**Matsushiro Arr**	**1.69**	**334**	Pn	**Pn**	**10 23 08.5**	**-0.4**
	comp=E,19nm,0.3s,baz=160,slow=16,SNR=354						
MJAR				Sn	**Sn**	**10 23 29.0**	**-1.5**
	comp=E,18nm,0.3s,baz=136,slow=41,SNR=4.8						
MJAR				LR	LR	10 23 56.9	
	comp=E,278nm,18.4s,baz=128,slow=45						
MAJO	**Matsushiro**	**1.69**	**334**	Pn	**Pn**	**10 23 09.2**	**+0.2**
MAJO	**Matsushiro**	**1.69**	**334**	P	**Pn**	**10 23 09.5**	**+0.6**
MJB9	**Matsu-Tunnel**	**1.69**	**334**	Pn	**Pn**	**10 23 10.2**	**+1.2**
INU	**Inuyama**	**1.75**	**281**	Pn	**Pn**	**10 23 10.3**	**+0.5**
INU	**Inuyama**	**1.75**	**281**	P	**Pn**	**10 23 10.6**	**+0.8**
INU	**Inuyama**	**1.75**	**281**	S	**Sn**	**10 23 32.8**	**+0.6**
JHJ2	**Mitsune**	**2.00**	**163**	Pn	**Pn**	**10 23 13.5**	**+0.4**
JHJ2	**Mitsune**	**2.00**	**163**	P	**Pn**	**10 23 14.2**	**+1.1**
JHJ2	**Mitsune**	**2.00**	**163**	S	**Sb**	**10 23 40.1**	**-0.5**
JWT	**Wachi**	**3.06**	**276**	P	**Pn**	**10 23 28.7**	**+0.9**
JSD	**Sado**	**3.08**	**347**	Pn	**Pn**	**10 23 29.3**	**+1.2**
JSD	**Sado**	**3.08**	**347**	P	**Pn**	**10 23 29.8**	**+1.7**
JMM	**Marumori**	**3.14**	**25**	Pn	**Pn**	**10 23 29.5**	**+0.7**
JMM	**Marumori**	**3.14**	**25**	P	**Pn**	**10 23 29.5**	**+0.7**
JMM	**Marumori**	**3.14**	**25**	S	**Sn**	**10 24 08.2**	**+1.9**
JMN	**Monobe**	**4.53**	**255**	Pn	**Pn**	**10 23 48.2**	**+0.2**
JMN	**Monobe**	**4.53**	**255**	P	**Pn**	**10 23 48.7**	**+0.7**
JTM	**Tenmabayashi**	**5.95**	**14**	Pn	**Pn**	**10 24 09.6**	**+2.0**
JNU	**Nakatsue**	**7.10**	**257**	Pn	**Pn**	**10 24 24.0**	**+0.6**
JNU	**Nakatsue**	**7.10**	**257**	Pn	**Pn**	**10 24 23.7**	**+0.3**
	comp=E,1.4nm,0.3s,baz=357,slow=0.4,SNR=11						
JNU				LR	LR	10 26 42.2	
	comp=E,87nm,18.6s,baz=80,slow=35						
	comp=E,3.9nm,0.4s						
JNU	**Nakatsue**	**7.10**	**257**	P	**Pn**	**10 24 24.7**	**+1.4**
ERM	**Erimo**	**7.66**	**23**	Pn	**Pn**	**10 24 29.5**	**-1.5**
KSRS	**Korea Array**	**9.37**	**288**	Pn	**Pn**	**10 24 55.0**	**+0.7**
	comp=E,0.2nm,0.3s,baz=103,slow=15,SNR=5.8						
	comp=E,1.3nm,0.7s						
ASAJ	**Asahikawa**	**9.46**	**15**	Pn	**Pn**	**10 24 55.4**	**-0.3**
	comp=E,0.6nm,0.3s,baz=218,slow=9.6,SNR=7.8						
	comp=E,1.2nm,0.3s						
JKA	**Kamikawa-asahi**	**9.46**	**15**	Pn	**Pn**	**10 24 55.7**	**0.0**
XLT	**XiLinHaoTe**	**19.82**	**303**	*e*P	**Pn**	**10 27 13.0**	**+1.2**
XLT				sP	sP	10 27 20.3	+5.6
XLT				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC	**Hu-ho-hao-te**	**22.45**	**293**	*e*P	**P**	**10 27 38.5**	**-0.1**
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
MA2	**Magadan**	**25.72**	**14**	P	**P**	**10 28 08.8**	**-0.8**
MA2				IAmb	IAmb	10 28 10.7	
	comp=Z,5.4nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**28.86**	**115**	T	T	10 58 46.2	
	baz=308,slow=75,SNR=342						
H11N1	**WAKE ISLAND Hy**	**28.87**	**115**	T	T	10 58 46.6	
	baz=308,slow=75,SNR=310						
H11N3	**WAKE ISLAND Hy**	**28.88**	**115**	T	T	10 58 47.4	
	baz=308,slow=75,SNR=669						
H11S3	**WAKE ISLAND Hy**	**29.47**	**117**	T	T	10 59 31.6	
	baz=310,slow=76,SNR=78						
H11S1	**WAKE ISLAND Hy**	**29.48**	**117**	T	T	10 59 31.7	
	baz=310,slow=76,SNR=103						
H11S2	**WAKE ISLAND Hy**	**29.49**	**117**	T	T	10 59 34.1	
	baz=310,slow=76,SNR=127						
MKAR	**Makanchi Array**	**43.64**	**304**	P	**P**	**10 30 44.4**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=75,slow=6.1,SNR=1.8						
	comp=Z,0.3nm,0.6s						
KURK	**Kurchatov**	**45.74**	**309**	P	**P**	**10 31 00.7**	**+0.2**
KURK				IAmb	IAmb	10 31 04.2	
	comp=Z,2.4nm,0.8s						
KURBB	**Kurchatov Arra**	**45.80**	**309**	P	**P**	**10 31 00.1**	**-1.0**
	comp=Z,1.3nm,0.8s,baz=85,slow=7.8,SNR=7.3						
	comp=Z,1.3nm,0.8s						
L16K	**Owhat River**	**46.41**	**35**	P	**P**	**10 31 06.9**	**+1.2**
C18K	**Utukok River**	**46.89**	**26**	P	**P**	**10 31 10.3**	**+0.8**
D19K	**Kuna River**	**47.96**	**26**	P	**P**	**10 31 18.4**	**+0.6**
D19K				IAmb	IAmb	10 32 02.3	
	comp=Z,5.3nm,1.4s						
K20K	**Telida**	**49.03**	**33**	P	**P**	**10 31 26.6**	**+0.6**
K20K				IAmb	IAmb	10 32 09.5	
	comp=Z,4.9nm,1.4s						
D22K	**Ayikyak River**	**49.98**	**26**	P	**P**	**10 31 34.1**	**+0.8**
D22K				IAmb	IAmb	10 31 40.3	
	comp=Z,6.7nm,1.4s						
MLY	**Manley**	**50.53**	**31**	P	**P**	**10 31 39.1**	**+1.6**
ILAR	**Eielson Array**	**52.18**	**31**	P	**P**	**10 31 50.7**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=279,slow=7.7,SNR=3.0						
	comp=Z,0.3nm,0.6s						
F26K	**Sheenjek River**	**53.13**	**28**	P	**P**	**10 31 58.3**	**+1.4**
F26K				IAmb	IAmb	10 31 59.0	
	comp=Z,5.0nm,1.5s						
WR8	**Warramunga Arr**	**54.85**	**185**	P	**P**	**10 32 08.5**	**-1.4**
WRA	**Warramunga Arr**	**54.85**	**186**	P	**P**	**10 32 08.4**	**-1.5**
WRA	**Warramunga Arr**	**54.85**	**186**	P	**P**	**10 32 08.6**	**-1.2**
	comp=Z,0.7nm,0.5s,baz=0.6,slow=7.6,SNR=14						
	comp=Z,0.7nm,0.5s						
I28M	**Miner Creek**	**55.03**	**30**	P	**P**	**10 32 11.2**	**+0.4**
I28M				IAmb	IAmb	10 32 21.5	
	comp=Z,2.7nm,1.2s						
EPYK	**Eagle Plains**	**56.18**	**29**	P	**P**	**10 32 20.6**	**+1.6**
EPYK				IAmb	IAmb	10 32 43.9	
	comp=Z,6.4nm,1.4s						
I30M	**Mount Dempster**	**56.54**	**30**	P	**P**	**10 32 22.1**	**+0.4**
ABKAR	**Akbulak array**	**57.82**	**311**	P	**P**	**10 32 30.1**	**-0.7**
ASAR	**Alice Springs**	**58.58**	**186**	P	**P**	**10 32 35.4**	**-1.0**
	comp=Z,0.6nm,0.8s,baz=19,slow=11,SNR=5.1						
	comp=Z,0.6nm,0.8s						
MSVF	**Nonsavu**	**64.18**	**138**	LR	LR	10 59 28.3	
	comp=Z,69nm,18.3s,baz=120,slow=34						
YKA	**Yellowknife Ar**	**66.47**	**29**	P	**P**	**10 33 27.2**	**-1.4**
	comp=Z,0.6nm,0.8s,baz=304,slow=5.4,SNR=3.1						
	comp=Z,0.6nm,0.8s						
NVAR	**Mina Array Bea**	**77.68**	**52**	P	**P**	**10 34 37.9**	**+1.4**
	comp=Z,0.5nm,0.8s,baz=284,slow=6.0,SNR=3.8						
	comp=Z,0.5nm,0.8s						

IDC ***24*** *10:33:12.7±0.7, 30°.56S×71°.59W, h0^{km}, mb4.2/12, mbtmp4.2/16, ML3.8/4, MS3.4/3, Error ellipse: s-maj=25.1km s-min=16.1km az=88.0*

SJA ***24*** *10:33:12.3±0.6, 30°.50S×71°.91W, h8^{km}±1^{km}, ML4.4, MW4.0*

VAO ***24*** *10:33:17.2±2.7, 30°.73S×71°.71W, h42^{km}±13^{km}, mb4.2*

GUC ***24*** *10:33:17.0±0.5, 30°.59S×71°.60W, h32^{km}±1^{km}, ML4.5*

NEIC ***24*** *10:33:18.4±2.3, 30°.51S±0°.03×71°.69W±0°.09, h35^{km}±2^{km}, mb4.4/6, ML4.5(GUC), Error ellipse: s-maj=13.3km s-min=3.0km az=110.0*

ISC 24 10:33:17.1±0.9**, 30°.51S**±0°.03×**71°.72W**±0°.04**, h28**^{km}±6^{km}**, n122,** σ**1^{s}.74**/134**, mb4.4**/15**, 3C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.17**	**156**	*e*P	**Pb**	**10 33 23.1**	**+0.3**
CO06				*e*S	**Sb**	**10 33 27.0**	**+0.2**
CO06				IAML		10 33 27.9	
	comp=N,151μm,0.2s						
CO05	**La Serena**	**0.72**	**35**		**Pn**	**10 33 31.6**	**+0.2**
CO05	**La Serena**	**0.72**	**35**	*e*P	**Pn**	**10 33 31.3**	**-0.1**
CO05				*e*S	**Sn**	**10 33 41.9**	**+0.4**
CO05				IAML		10 33 46.7	
	comp=E,13μm,0.4s						
GO04	**Tololo Observa**	**0.86**	**67**	Pn	**Pn**	**10 33 33.3**	**-0.3**
GO04	**Tololo Observa**	**0.86**	**67**	⇓*e*P	**Pn**	**10 33 33.2**	**-0.3**
GO04				*e*S	**Sn**	**10 33 43.9**	**-1.4**
GO04				IAML		10 33 48.8	
	comp=N,29μm,0.5s						
GO04	**Tololo Observa**	**0.86**	**67**	*i* P	**Pn**	**10 33 33.0**	**-0.5**
CO02	**Combarbal**	**0.93**	**138**		**Pb**	**10 33 33.2**	**-1.4**
CO02	**Combarbal**	**0.93**	**138**	⇓*e*P	**Pb**	**10 33 33.0**	**-1.6**
CO02				*e*S	**Sb**	**10 33 44.3**	**-2.3**
CO02				IAML		10 33 48.8	
	comp=N,52μm,0.3s						
CO02	**Combarbal**	**0.93**	**138**	*i* P	**Pb**	**10 33 32.9**	**-1.6**
CO02				*i* S	**Sn**	**10 33 47.5**	**+0.8**
CO02				IAML		10 33 48.0	
	comp=Z,15μm,0.3s						
CO03	**El Pedregal**	**0.94**	**110**		**Pb**	**10 33 33.7**	**-1.2**
CO03	**El Pedregal**	**0.94**	**110**	⇓*e*P	**Pb**	**10 33 33.5**	**-1.4**
CO03				*e*S	**Sb**	**10 33 45.6**	**-1.5**
CO03				IAML		10 33 48.6	
	comp=E,20μm,0.4s						
CO03	**El Pedregal**	**0.94**	**110**	*i* P	**Pb**	**10 33 33.4**	**-1.4**
CO03				*i* S	**Sn**	**10 33 48.9**	**+1.8**
CO03				IAML		10 33 49.1	
	comp=Z,8μm,0.3s						
CO01	**Juntas del Tor**	**1.50**	**70**		**Pb**	**10 33 43.2**	**-1.3**
CO01	**Juntas del Tor**	**1.50**	**70**	*i* P	**Pb**	**10 33 43.4**	**-1.0**
CO01				*i* S	**Sb**	**10 34 07.1**	**+3.8**
CO01				IAML		10 34 09.4	
	comp=Z,2μm,0.7s						
LCO	**Las Campanas**	**1.74**	**31**		**Pb**	**10 33 46.8**	**-1.7**
LCO	**Las Campanas**	**1.74**	**31**	*i* P	**Pb**	**10 33 46.2**	**-2.2**
LCO				*i* S	**Sb**	**10 34 11.4**	**+1.4**
LCO				IAML		10 34 13.6	
	comp=Z,5μm,0.5s						
AROD	**Rodeo**	**1.97**	**80**	*i* P	**Pb**	**10 33 51.5**	**-1.0**
AROD				*i* S	**Sb**	**10 34 20.1**	**+3.3**
VA06	**Catapilco**	**2.07**	**170**		**Pn**	**10 33 50.0**	**0.0**
VA06	**Catapilco**	**2.07**	**170**	IAML		10 34 21.6	
	comp=E,8μm,0.6s						
ACDV	**Cuesta del Vie**	**2.27**	**82**	*i* P	**Pb**	**10 33 55.7**	**-1.8**
ACDV				IAML		10 34 30.9	
	comp=Z,1μm,0.5s						
ACCO	**Cerro Coronel**	**2.29**	**93**	*i* P	**Pb**	**10 33 56.8**	**-1.1**
ACCO				*i* S	**Sb**	**10 34 27.7**	**+1.8**
AC04	**Llanos de Chal**	**2.37**	**14**		**Pn**	**10 33 55.3**	**+1.2**
AC04	**Llanos de Chal**	**2.37**	**14**	*i* P	**Pn**	**10 33 54.3**	**+0.2**
AC04				IAML		10 34 36.4	
	comp=Z,1μm,0.9s						
VA03	**San Esteban**	**2.45**	**156**		**Pn**	**10 33 56.2**	**+0.9**
VA03	**San Esteban**	**2.45**	**156**	*e*P	**Pn**	**10 33 56.1**	**+0.8**
VA03				*e*S	**Sn**	**10 34 26.6**	**+2.2**
VA03				IAML		10 34 33.3	
	comp=E,5μm,0.4s						
VA03	**San Esteban**	**2.45**	**156**	*i* P	**Pn**	**10 33 56.3**	**+1.0**
VA03				*i* S	**Sb**	**10 34 28.9**	**-1.6**
VA03				IAML		10 34 40.0	
	comp=Z,2μm,0.6s						
VA01	**Torpederas**	**2.50**	**179**		**Pn**	**10 33 55.7**	**-0.2**
VA01	**Torpederas**	**2.50**	**179**	IAML		10 34 35.5	
	comp=E,1μm,0.5s						
ROCH	**El Roble**	**2.52**	**166**	IAML		10 34 37.0	
	comp=N,6μm,0.3s						
ROCH				IAML		10 34 37.0	
	comp=N,3μm,0.5s						
PEL	**Peldehue**	**2.77**	**162**		**Pn**	**10 34 00.1**	**+0.6**
MT02	**Curacav**	**2.78**	**170**		**Pn**	**10 34 00.8**	**+1.1**
MT02	**Curacav**	**2.78**	**170**	*e*P	**Pn**	**10 34 01.0**	**+1.2**
MT02				IAML		10 34 45.0	
	comp=E,1μm,0.5s						
MT02	**Curacav**	**2.78**	**170**	*i* P	**Pn**	**10 34 00.2**	**+0.5**
MT02				*i* S	**Sn**	**10 34 35.8**	**+3.4**
MT02				IAML		10 34 46.4	
	comp=Z,1μm,0.4s						
ZON	**Zonda**	**2.81**	**112**		**Pb**	**10 34 02.8**	**-3.7**
ZON	**Zonda**	**2.81**	**112**	*i* P	**Pn**	**10 34 02.5**	**+2.4**
ZON				*i* S	**Sb**	**10 34 39.1**	**-1.4**
ZON				IAML		10 34 48.0	
	comp=Z,977nm,0.5s						
AGUA	**GUANDACOL**	**2.98**	**71**	*i* P	**Pb**	**10 34 07.7**	**-1.8**
MT05	**Renca**	**2.99**	**164**		**Pn**	**10 34 03.4**	**+0.8**
MT05	**Renca**	**2.99**	**164**	*i* P	**Pn**	**10 34 03.2**	**+0.6**
MT05				*i* S	**Sn**	**10 34 41.5**	**+4.0**
MT05				IAML		10 34 52.1	
	comp=Z,1μm,0.5s						
MT16	**CCHEN**	**3.08**	**161**		**Pn**	**10 34 05.2**	**+1.4**
VA05	**Santo Domingo**	**3.14**	**178**		**Pn**	**10 34 04.2**	**-0.4**
MT03	**Universidad Ad**	**3.14**	**161**		**Pn**	**10 34 05.6**	**+0.8**
MT03	**Universidad Ad**	**3.14**	**161**	*e*P	**Pn**	**10 34 06.0**	**+1.2**
MT03				IAML		10 34 53.8	
	comp=E,3μm,0.4s						
MT03	**Universidad Ad**	**3.14**	**161**	*i* P	**Pn**	**10 34 05.6**	**+0.8**
MT03				*i* S	**Sn**	**10 34 45.5**	**+4.1**
CFA	**Coronel Fontan**	**3.18**	**111**	LR	LR	10 35 29.8	
	comp=E,247nm,19.4s,baz=247,slow=45						
MT04	**Ro Olivares**	**3.18**	**155**	*i* P	**Pn**	**10 34 06.8**	**+1.4**
MT04				*i* S	**Sn**	**10 34 47.1**	**+4.6**
MT04				IAML		10 34 57.3	
	comp=Z,812nm,0.9s						
GO03	**Copiapo**	**3.19**	**24**		**Pn**	**10 34 06.7**	**+1.3**
GO03	**Copiapo**	**3.19**	**24**	*i* P	**Pn**	**10 34 06.2**	**+0.9**
ASAL	**Salagasta**	**3.22**	**131**	*i* P	**Pn**	**10 34 09.2**	**+3.4**
MT08	**Bocatoma Ro**	**3.26**	**154**		**Pn**	**10 34 09.2**	**+2.7**
MT08	**Bocatoma Ro**	**3.26**	**154**	*i* P	**Pn**	**10 34 08.0**	**+1.5**
MT08				*i* S	**Sn**	**10 34 49.2**	**+4.7**
MT08				IAML		10 35 07.2	
	comp=Z,853nm,0.6s						
ARCO	**CERRO ARCO**	**3.32**	**135**	*i* P	**Pn**	**10 34 09.7**	**+2.4**
ARCO				*i* S	**Sb**	**10 34 51.6**	**-3.8**
AC06	**Mina Casimiro**	**3.36**	**21**		**Pn**	**10 34 08.7**	**+1.0**
MT01	**Popeta**	**3.36**	**173**	*i* P	**Pn**	**10 34 08.4**	**+0.6**
MT01				*i* S	**Sn**	**10 34 50.0**	**+3.3**
MT01				IAML		10 35 00.7	
	comp=Z,746nm,0.6s						
VCA	**Vinchina**	**3.53**	**61**	*i* P	**Pb**	**10 34 14.4**	**-4.6**
AAGR	**Agrelo**	**3.55**	**137**	*i* P	**Pn**	**10 34 12.8**	**+2.4**
AAGR				IAML		10 35 17.7	
	comp=Z,846nm,0.7s						
LMEL	**Las Melosas**	**3.56**	**159**	*i* P	**Pn**	**10 34 11.9**	**+1.3**
LMEL				*i* S	**Sn**	**10 34 56.3**	**+4.4**
AVFE	**Valle Fertil**	**3.68**	**93**	*i* P	**Pn**	**10 34 14.8**	**+2.6**
AVFE				IAML		10 35 18.8	
	comp=Z,751nm,0.8s						
BO01	**Tunca**	**3.90**	**172**		**Pn**	**10 34 14.8**	**-0.4**
BO01	**Tunca**	**3.90**	**172**	*i* P	**Pn**	**10 34 15.9**	**+0.8**
BO01				IAML		10 35 18.8	
	comp=Z,427nm,0.9s						
ACAN	**Cantantal**	**4.25**	**116**	*i* P	**Pn**	**10 34 22.5**	**+2.5**
AC02	**Maricunga**	**4.31**	**32**	*i* P	**Pn**	**10 34 23.0**	**+1.7**
AC02				*i* S	**Sn**	**10 35 15.7**	**+4.8**
AC02				IAML		10 35 32.1	
	comp=Z,329nm,0.5s						
AC01	**Pan de Azucar**	**4.46**	**13**	*i* P	**Pn**	**10 34 22.1**	**-0.7**
AC01				IAML		10 35 40.3	
	comp=Z,320nm,1.1s						
H03N1	**Juan Fernandez**	**6.77**	**243**	T	T	10 41 49.0	
	baz=72,slow=72,SNR=4861						
H03N2	**Juan Fernandez**	**6.79**	**243**	T	T	10 41 49.1	
	baz=72,slow=72,SNR=3574						
H03N3	**Juan Fernandez**	**6.79**	**243**	T	T	10 41 47.2	
	baz=72,slow=72,SNR=2817						
PB10	**IPOC Station P**	**7.05**	**9**	Pn	**Pn**	**10 34 58.3**	**-0.1**
PB05	**IPOC Station P**	**7.75**	**10**		**Pn**	**10 35 05.6**	**-2.5**
PB06	**IPOC Station P**	**8.01**	**14**	Pn	**Pn**	**10 35 10.5**	**-1.2**
PB09	**IPOC Station P**	**8.96**	**15**	Pn	**Pn**	**10 35 23.5**	**-1.3**
PB01	**IPOC Station P**	**9.64**	**13**	Pn	**Pn**	**10 35 32.7**	**-1.4**
PLCA	**Paso Flores**	**10.24**	**175**	Pn	**Pn**	**10 35 41.5**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=323,slow=12,SNR=5.7						
	comp=Z,0.7nm,0.6s						
TRQA	**Tornquist**	**11.02**	**136**		**Pn**	**10 35 53.0**	**+0.2**
ITQB	**Itaqui**	**13.10**	**90**	*e*P	**Pn**	**10 36 19.4**	**-1.9**
CPUP	**Villa Florida**	**13.33**	**75**		**Pn**	**10 36 23.7**	**-0.7**
CPUP	**Villa Florida**	**13.33**	**75**	Pn	**Pn**	**10 36 23.9**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=112,slow=12,SNR=5.6						
	comp=Z,0.6nm,0.6s						
LPAZ	**La Paz**	**14.54**	**14**		**Pn**	**10 36 41.2**	**-0.3**
LPAZ	**La Paz**	**14.54**	**14**	Pn	**Pn**	**10 36 42.5**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=182,slow=9.0,SNR=21						
	comp=Z,4.8nm,0.8s						
LPAZ	**La Paz**	**14.54**	**14**	*e*P	**Pn**	**10 36 43.7**	**+2.2**
SJPY	**San Joaquin**	**14.87**	**72**	*e*P	**Pn**	**10 36 46.0**	**+0.6**
BBSD	**Serra de San D**	**16.69**	**40**	*e*P	**Pn**	**10 37 09.3**	**+0.2**
BDQN	**Bodoquena, MS**	**16.81**	**57**	*e*P	**P**	**10 37 11.5**	**-0.8**
SIV	**San Ignacio**	**17.44**	**36**	P	**Pn**	**10 37 18.5**	**+0.1**

	baz=214,slow=12,SNR=32						
SIV				LR	LR	10 45 07.7	
	comp=Z,111nm,19.8s,baz=290,slow=41						
	comp=Z,8.3nm,0.9s						
ITAB	Concordia	17.46	84	eP	Pn	10 37 18.6	0.0
PTGB	Pitanga	18.34	76	eP	P	10 37 29.6	+0.2
PTLB	Pontes e Lacer	18.92	40	P	Pn	10 37 36.1	-0.4
PTLB	Pontes e Lacer	18.92	40	eP	P	10 37 35.7	0.0
RPRD	Ribas do Rio P	19.06	63	eP	Pn	10 37 37.5	-0.7
LDASE	Londrina, Braz	19.67	74	eP	P	10 37 43.0	-0.9
PCMB	Pacaembu	20.38	69	eP	P	10 37 50.9	-0.7
VILB	Vilhena	20.46	34	P	P	10 37 53.0	+0.4
VILB				IAmb	IAmb	10 37 53.7	
	comp=Z,12nm,0.8s						
VILB	Vilhena	20.46	34	eP	P	10 37 52.8	+0.2
SALV	Santo Antonio	20.66	49	eP	P	10 37 54.6	-0.1
FRTB	Fartura	20.98	75	eP	P	10 37 57.2	-1.1
ITRB	Iturama	22.09	66	eP	P	10 38 10.8	+0.7
CZSB	Cruzeiro do Su	22.69	357	eP	P	10 38 17.8	+1.3
PDRB	Porto dos Gac	23.39	40	eP	P	10 38 23.9	+0.3
BDFB	Brasilia	26.28	61	P	P	10 38 49.7	-0.6
BDFB				IAmb	IAmb	10 38 50.6	
	comp=Z,9.3nm,1.0s						
BDFB	Brasilia	26.28	61	P	P	10 38 49.4	-0.9
	comp=Z,9.6nm,0.9s,baz=233,slow=9.7,SNR=11						
	comp=Z,9.6nm,0.9s						
SNDB	Serra Nova Dou	26.43	50	eP	P	10 38 50.8	-0.7
CELP	Cerrillos	48.56	7	P	P	10 41 58.3	+0.4
SJG	San Juan	48.64	7	P	P	10 41 57.4	-1.1
	comp=Z,7.9nm,0.5s,baz=215,slow=3.3,SNR=3.9						
	comp=Z,7.9nm,0.5s						
VNA3	Neumayer Olymp	52.49	159	⇑P	P	10 42 26.2	-0.9
	comp=Z,1.7nm,0.8s						
VNA2	Neumayer--Watz	53.13	158	⇑P	P	10 42 31.3	-0.5
	comp=Z,1.8nm,0.6s,baz=268,slow=7.4						
SNAA	Sanae	54.72	159	⇑P	P	10 42 42.6	-0.8
	comp=Z,37nm,0.6s						
SNAA	Sanae	54.72	159	P	P	10 42 42.4	-1.0
	comp=Z,1.2nm,0.6s,baz=277,slow=8.6,SNR=14						
	comp=Z,1.2nm,0.6s						
QSPA	South Pole Qui	59.71	180	P	P	10 43 18.7	-0.2
	comp=Z,3.2nm,1.0s,baz=314,slow=1.7,SNR=12						
	comp=Z,3.2nm,1.0s						
TXAR	Lajitas Array	66.85	330	P	P	10 44 07.7	+1.2
	comp=Z,0.4nm,0.6s,baz=139,slow=7.8,SNR=4.1						
	comp=Z,0.4nm,0.6s						
DBIC	Dimbokro	73.83	72	P	P	10 44 49.2	-0.2
	comp=Z,5.4nm,0.5s,baz=238,slow=5.7,SNR=7.5						
	comp=Z,5.4nm,0.5s						
MAW	Mawson	76.44	164	P	P	10 45 03.5	-0.1
	comp=Z,3.1nm,0.5s,baz=219,slow=7.3,SNR=11						
	comp=Z,3.1nm,0.5s						
ECSD	EROS Data Cent	77.33	342	P	P	10 45 09.8	+1.0
ECSD				IAmb	IAmb	10 45 11.2	
	comp=Z,4.2nm,0.9s						
PDAR	Pinedale Array	80.79	333	P	P	10 45 28.7	+0.6
	comp=Z,0.2nm,0.4s,baz=157,slow=5.8,SNR=2.6						
	comp=Z,0.2nm,0.4s						
NVAR	Mina Array Bea	81.19	325	P	P	10 45 31.9	+1.6
	comp=Z,0.4nm,0.6s,baz=140,slow=4.7,SNR=1.5						
	comp=Z,0.4nm,0.6s						
BOSA	Boshof	81.46	118	P	P	10 45 31.1	-0.9
	comp=Z,2.7nm,0.9s,baz=233,slow=3.7,SNR=3.3						
	comp=Z,2.7nm,0.9s						
TORD	Torodi Ar. Bea	82.77	70	P	P	10 45 38.7	-0.2
TORD				IAmb	IAmb	10 45 52.7	
	comp=Z,4.2nm,0.9s						
TORD	Torodi Ar. Bea	82.77	70	P	P	10 45 38.1	-0.7
	comp=Z,1.6nm,0.8s,baz=276,slow=5.8,SNR=10						
	comp=Z,1.6nm,0.8s						
ULM	Lac du Bonnet	83.21	345	P	P	10 45 40.3	0.0
	comp=Z,3.5nm,0.9s,baz=185,slow=4.6,SNR=5.6						
	comp=Z,3.5nm,0.9s						
LBTB	Lobatse	83.53	115	LR	LR	11 20 12.7	
	comp=Z,59nm,20.2s,baz=238,slow=34						
H11S2	WAKE ISLAND Hy	126.02	271	T	T	13 10 57.5	
	baz=115,slow=75,SNR=68						
H11S1	WAKE ISLAND Hy	126.03	272	T	T	13 10 58.3	
	baz=115,slow=75,SNR=78						
H11S3	WAKE ISLAND Hy	126.04	271	T	T	13 10 59.6	
	baz=115,slow=75,SNR=70						
KURBB	Kurchatov Arra	150.08	39	PKPbc	PKPbc	10 53 04.9	+0.3
	comp=Z,2.4nm,0.8s,baz=303,slow=3.3,SNR=7.9						
ZALV	Zalesovo Beam	151.10	29	PKPbc	PKPbc	10 53 07.2	+0.2
	comp=Z,9.5nm,0.8s,baz=308,slow=4.9,SNR=27						

CATAC ***24*** *10:35:26.3±0.8, 15˚N±4˚×9˚3W±˚, h60^{km}±7^{km}, M4.0/6, MLv4.0/6, Error ellipse: s-maj=13.4km s-min=7.6km az=63.1, confirmed*

MEX ***24*** *10:35:26.6±1.0, 14˚.80N×92˚.39W, h99^{km}±8^{km}, MD4.3*

IDC ***24*** *10:35:26.6±8.5, 15˚.39N×91˚.95W, h64^{km}±69^{km}, mb3.6/2, mbtmp3.6/4, ML3.5/2, MS3.3/2, Error ellipse: s-maj=189.4km s-min=58.7km az=31.0*

GCG ***24*** *10:35:27.1±1.2, 14˚.84N×92˚.35W, h84^{km}±5^{km}, MD4.2, ML4.2*

ISC 24 10:35:25.2±1.0**, 14˚.68N**±0˚.06×**92˚.42W**±0˚.04**, h98**^{km}±7^{km}**, n50, σ3ˢ.08**/76**, 1C-3D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.27	34	iP	Pn	10 35 39.1	-0.3
THIG				iS	Sn	10 35 49.5	-0.5
THIG		0.27	34	iP	Pn	10 35 38.9	-0.6
THIG				iS	Sn	10 35 49.2	-0.9
THIG				IAML		10 35 50.1	
	comp=N,28µm,0.2s						
SMCA	Catarina	0.38	63	eP	Pn	10 35 39.3	-0.8
SMCA				eS	Sn	10 35 49.7	-1.4
SMCA				IAML		10 35 52.4	
	comp=N,11µm,0.2s						
PATR	El Naranjo	0.47	23	eP	Pn	10 35 39.6	-1.3
PATR				eS	Sn	10 35 50.2	-2.4
PAVE	Pavencul	0.56	25	eP	Pn	10 35 40.5	-1.1
PAVE				iS	Sn	10 35 52.1	-1.7
RTAL	Retalhuleu	0.72	102	eP	Pn	10 35 42.4	-0.3
RTAL				eS	Sn	10 35 56.1	+0.4
RTAL	Retalhuleu	0.72	102	⇑P	Pn	10 35 43.2	+0.5
STG8	El Palmar, Qui	1.06	102	eP	Pn	10 35 43.4	-3.0
STG8				eS	Sn	10 35 57.0	-5.4
STG8				IAML		10 35 58.9	
	comp=N,8µm,0.2s						
STG0	El Palmar, Qui	1.08	104	iP	Pn	10 35 43.6	-2.9
STG0				eS	Sn	10 35 57.2	-5.4
STG0				IAML		10 36 00.1	
	comp=E,15µm,0.3s						
HUEH	Huehuetenango	1.09	54	iP	Pn	10 35 46.5	-0.3
HUEH				eS	Sn	10 36 01.1	-1.8
HUEH	Huehuetenango	1.09	54	eP	Pn	10 35 46.5	-0.3
HUEH				eS	Sn	10 36 02.5	-0.4
HUEH				IAML		10 36 07.7	
	comp=E,3µm,0.7s						
HUEH	Huehuetenango	1.09	54	⇓P	Pn	10 35 46.5	-0.3
PCIG		1.27	323	eP	Pn	10 35 48.2	-0.5
PCIG				iS	Sn	10 36 04.9	-1.4
ESSG	Sabana Grande	1.57	101	iP	Pn	10 35 54.1	+1.8
ESSG				eS	Sn	10 36 14.2	+1.3
ESSG				IAML		10 36 17.8	
	comp=N,523nm,0.1s						
CCIG	Comitan	1.61	10	eP	Pn	10 35 52.8	-0.2
CCIG				eS	Sn	10 36 10.0	-4.1
CCIG	Comitan	1.61	10	iP	Pn	10 35 53.0	0.0
CCIG				iS	Sn	10 36 12.5	-1.5
CCIG				IAML		10 36 16.2	
	comp=N,719nm,0.4s						
CCIG	Comitan	1.61	10	⇓P	Pn	10 35 53.2	+0.2
FG16	Alotenango, Sa	1.90	102	iP	Pn	10 35 53.3	-3.3
FG16				eS	Sn	10 36 13.8	-6.7
FG16				IAML		10 36 16.1	
	comp=N,4µm,0.2s						
TGIG		2.19	342	eP	Pn	10 35 58.6	-1.7
TGIG				eS	Sn	10 36 21.5	-5.6
NUBE	Las Nubes	2.68	107	iP	Pn	10 36 09.6	+2.8
NUBE	Las Nubes	2.68	107	P	Pn	10 36 09.5	+2.8
PETF	Flores	3.31	48	eP	Pn	10 36 14.6	-0.6
PETF				eS	Sn	10 36 47.6	-6.1
PETF	Flores	3.31	48	iP	Pn	10 36 15.0	-0.2
PETF				IAML		10 36 54.8	
	comp=E,616nm,0.5s						
PETF	Flores	3.31	48	⇓P	Pn	10 36 15.0	-0.2
CMIG	Matias Romero	3.37	316	P	Pn	10 36 16.0	+0.1
	comp=E,6.8nm,0.3s,baz=134,slow=8.2,SNR=66						
CMIG				S	Sn	10 36 53.8	-1.3
	comp=E,20nm,0.3s,baz=344,slow=21,SNR=7.6						
	comp=E,11nm,0.2s						
HUIG	Huatulco	3.72	287	eP	Pn	10 36 19.6	-1.0
HUIG				eS	Sn	10 36 56.7	-6.8
PEIG	Puerto Escondi	4.74	287	eP	Pn	10 36 34.4	-0.1
PEIG				eS	Sn	10 37 20.3	-8.0
VHO	Vista Hermosa	4.78	300	eP	Pn	10 36 36.8	+1.7
VHO				eS	Sn	10 37 31.6	+2.1
YOIG	Yosondua	5.39	294	eP	Pn	10 36 45.2	+1.8
YOIG				eS	Sn	10 37 39.5	-4.8
TOIG	Toxpalan	5.60	308	eP	Pn	10 36 47.5	+1.3
TOIG				eS	Sn	10 37 46.5	-2.9
TXIG	Tlaxiaco	5.74	297	eP	Pn	10 36 49.7	+1.4
TXIG				eS	Sn	10 37 49.1	-3.9
PNIG	Pinotepa	5.76	288	eP	Pn	10 36 49.2	+1.0
PNIG				eS	Sn	10 37 46.3	-6.7
HLIG	Huajuapan de L	6.04	302	eP	Pn	10 36 55.0	+2.6
HLIG				eS	Sn	10 37 55.8	-4.5
JAUV	Jalcomulco	6.26	319	eP	Pn	10 36 49.8	-5.4
JAUV				eS	Sn	10 37 55.8	-10
FTIG	Fresnillo de T	6.35	301	eP	Pn	10 36 58.2	+1.7
FTIG				eS	Sn	10 38 01.3	-6.3
MGIG	Malinaltepec	6.49	294	eP	Pn	10 36 55.8	-2.6
MGIG				eS	Sn	10 38 07.4	-3.7
TLIG	Tlapa	6.56	297	eP	Pn	10 36 59.0	-0.3
TLIG				eS	Sn	10 38 05.8	-7.0
CRIG	Cruz Grande	6.78	288	eP	Pn	10 37 01.7	-0.4
CRIG				eS	Sn	10 38 10.3	-7.5
CXUV	Coxquihui	7.36	319	eP	Pn	10 37 05.6	-4.5
CXUV				eS	Sn	10 38 23.7	-8.3
PPM	Popocatepetl	7.37	307	eP	Pn	10 37 13.9	+3.3
YAIG	Yautepec	7.60	304	eP	Pn	10 37 16.9	+3.4
MEIG	Mezcala	7.63	296	eP	Pn	10 37 14.6	+0.9
MEIG				eS	Sn	10 38 38.8	+0.2
PLIG	Platanillo	7.73	299	eP	Pn	10 37 16.8	+1.6
CAIG	El Cayaco	7.91	288	eP	Pn	10 37 18.4	+0.9
ARIG	Puente Sto Nin	8.40	296	eP	Pn	10 37 27.6	+3.3
ARIG				eS	Sn	10 38 46.7	-11
TXAR	Lajitas Array	17.91	326	P	P	10 39 28.9	+1.6
	baz=132,slow=13,SNR=3.8						
	comp=E,0.4nm,0.8s						
NVAR	Mina Array Bea	32.89	321	P	P	10 41 53.9	+3.7
	comp=E,1.6nm,0.7s,baz=133,slow=8.5,SNR=15						
	comp=E,1.6nm,0.7s						
MDP	Montagnes des	40.27	100	LR	LR	11 00 01.0	
	comp=E,20nm,19.1s,baz=275,slow=37						
BBB	Bella Bella	46.97	331	LR	LR	11 07 20.4	
	comp=E,73nm,18.1s,baz=254,slow=41						
ILAR	Eielson Array	62.05	337	P	P	10 45 35.8	+0.6
	comp=E,0.5nm,0.6s,baz=110,slow=4.8,SNR=7.0						
	comp=E,0.5nm,0.6s						

IDC ***24*** *10:42:50.3±0.8, 2˚.68S×138˚.49E, h0^{km}, mb3.9/8, mbtmp3.9/10, ML4.0/2, Error ellipse: s-maj=20.6km s-min=16.1km az=5.0*

DJA ***24*** *10:42:53.7±0.3, 3˚S±2˚×13˚9E±˚, h10^{km}, M4.0/6, MLv4.0/6*

ISC 24 10:42:55.3±0.7**, 2˚.48S**±0˚.07×**138˚.61E**±0˚.05**, h35**^{km}**, n17, σ1ˢ.91**/19**, mb3.9**/8**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.50	12	P	Pn	10 43 04.4	-1.5
SMPI				S	Sn	10 43 11.5	-1.8
GENI	Genyem	1.56	94	P	Pn	10 43 21.2	+0.6
GENI				S	Sn	10 43 43.4	+3.8
JAY	Jayapura	2.09	91	Pn	Pn	10 43 29.4	+1.4
	18nm,0.3s,baz=226,slow=8.9,SNR=46						
JAY				Lg	Lg	10 44 01.3	
	13nm,0.3s,baz=163,slow=18,SNR=4.2						
	70nm,0.4s						
JAY	Jayapura	2.09	91	P	Pn	10 43 28.6	+0.7
SRPI	Serui, Papua	2.44	284	P	Pn	10 43 33.7	+1.0
BAKI	Biak	2.81	297	P	Pn	10 43 40.4	+2.6
RKPI	Ransiki, Papua	4.53	282	P	Pn	10 44 02.3	+0.8
WRA	Warramunga Arr	17.85	193	P	Pn	10 46 57.7	-3.3
	0.9nm,0.3s,baz=18,slow=12,SNR=16						
	1.8nm,0.4s						
ASAR	Alice Springs	21.55	192	P	P	10 47 39.5	-2.3
	4.2nm,0.8s,baz=20,slow=9.7,SNR=40						
	4.2nm,0.8s						
CMAR	Chiang Mai Arr	44.24	300	P	P	10 51 02.9	+1.2
	0.5nm,0.3s,baz=114,slow=6.4,SNR=4.1						
	0.5nm,0.3s						
SONM	Songino Array	57.47	335	P	P	10 52 43.0	+2.1
	0.5nm,0.4s,baz=132,slow=4.1,SNR=2.3						
	0.5nm,0.4s						
MKAR	Makanchi Array	69.55	322	P	P	10 54 01.5	+0.8
	0.5nm,0.6s,baz=129,slow=3.3,SNR=3.7						
	0.5nm,0.6s						
VNDA	Vanda	76.02	175	P	P	10 54 37.2	-1.2
	1.1nm,0.8s,baz=323,slow=6.4,SNR=4.2						
	1.1nm,0.8s						
BVAR	Borovoye Array	79.07	325	P	P	10 54 56.5	+0.6
	0.6nm,0.4s,baz=133,slow=10,SNR=3.7						
	0.6nm,0.4s						
ILAR	Eielson Array	85.67	24	P	P	10 55 29.9	-0.2
	0.7nm,0.7s,baz=254,slow=4.7,SNR=5.0						
	0.7nm,0.7s						
QSPA	South Pole Qui	87.46	180	P	P	10 55 38.1	-1.0
	1.4nm,0.8s,baz=168,slow=2.3,SNR=6.4						
	1.4nm,0.8s						
LPAZ	La Paz	147.66	126	PKPbc	PKPab	11 02 39.5	-0.8
	1.1nm,0.8s,baz=275,slow=12,SNR=3.9						

AEIC ***24*** *10:51:56.5±0.6, 53˚.22N±0˚.05×164˚.16W±0˚.07, h25^{km}±8^{km}, Error ellipse: s-maj=8.8km s-min=4.7km az=213.0*

NEIC 24 10:51:56.2±0.5**, 53˚.22N**±0˚.06×**164˚.17W**±0˚.07**, h23**^{km}±13^{km}**, ML2.8**/12**, ML2.7**(AEIC)**, Error ellipse: s-maj=9.0km s-min=4.7km az=208.0, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESE	West Dahl East	1.28	349		Pn	10 52 18.3	-0.5
WESP	Westdahl Peak	1.32	346		Pn	10 52 18.4	-0.9
AKUT	Akutan	1.32	315		Pn	10 52 19.0	-0.2
AKUT				IAML		10 52 37.2	
	comp=E,142nm,0.6s						
AKUT				IAML		10 52 40.0	
	comp=N,120nm,0.6s						
AKUT	Akutan	1.32	315		Sn	10 52 35.9	-0.2
AHB	Akutan Harbor	1.33	313		Pn	10 52 18.9	-0.5
AHB					Sn	10 52 36.6	+0.3
AKBBA	Akutan Broad B	1.37	311		Pn	10 52 19.8	-0.1
AKBBA					Sb	10 52 38.4	+0.2
ZRO	Akutan Zero	1.39	310		Pn	10 52 20.1	0.0
ZRO					Sb	10 52 38.3	-0.5
AKMO	Akutan Morgan	1.40	309		Pn	10 52 20.3	-0.1
AKV	Akutan Volcano	1.40	311		Pn	10 52 20.3	-0.1
AKV					Sb	10 52 39.0	-0.2
WEBT	Westdahl Beart	1.42	346		Pn	10 52 20.3	-0.3
AKRB	Akutan Reef Bi	1.45	310		Pn	10 52 20.5	-0.5
AKRB					Sb	10 52 40.0	-0.6
LVA	Lava Point	1.46	311		Pn	10 52 21.1	0.0
LVA				IAML		10 52 46.1	
	comp=E,155nm,0.7s						
AKGG	Akutan Green G	1.46	313		Pn	10 52 21.1	0.0
SSLS	Shishaldin Sou	1.50	4		Pn	10 52 21.8	0.0
SSLS					Sb	10 52 41.4	-0.7
UNV	Unalaska Valle	1.53	295		Pn	10 52 21.9	-0.2
ISLZ	Isanotski Laza	1.54	10		Pn	10 52 21.8	-0.4
ISNN	Isanotski Nort	1.63	8		Pn	10 52 23.8	+0.2
FALS	False Pass	1.70	15		Pn	10 52 24.5	+0.1
FALS					Sn	10 52 45.8	+0.3
MAPS	Pakushin South	1.76	291		Pn	10 52 25.4	+0.2
OKTU	Okmok Mt. Tuli	2.33	276		Pn	10 52 34.3	+1.2
HAG	Hague Volcano	2.49	31		Pn	10 52 36.4	+1.1
S12K	Black Hills	2.78	25		Pn	10 52 39.8	+0.5
S12K	Black Hills	2.78	25	IAML		10 53 12.7	
	comp=E,25nm,0.2s						
SDPT	Sand Point	3.04	44	Pn	Pn	10 52 43.4	+0.6
SDPT				IAML		10 53 19.2	
	comp=N,35nm,0.9s						
SDPT				IAML		10 53 19.6	
	comp=E,40nm,0.3s						

IDC 24 10:54:36.2±9.0**, 30˚.96S**×**177˚.28W, h0**^{km}**, mb3.5**/2**, mbtmp3.5**/2**, MS3.7**/2**, Error ellipse: s-maj=397.8km s-min=58.8km az=156.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.62	211	LR	LR	10 59 41.5	
	comp=Z,195nm,18.3s,baz=93,slow=35						
ASAR	Alice Springs	43.70	267	P	P	11 02 43.0	-0.3
	0.3nm,0.7s,baz=112,slow=8.1,SNR=5.1						
ASAR				LR	LR	11 21 39.6	
	comp=Z,156nm,18.1s,baz=92,slow=37						
	0.3nm,0.7s						
WRA	Warramunga Arr	44.74	272	P	P	11 02 51.6	0.0
	1.0nm,0.7s,baz=112,slow=8.2,SNR=4.5						
	1.0nm,0.7s						
FINES	FINESS Array B	145.88	340	PKPbc	PKPdf	11 14 15.9	-0.3
	0.9nm,0.4s,baz=56,slow=3.6,SNR=6.5						

IDC 24 10:58:21.5±3.2**, 14˚.83S**×**174˚.26W, h0**^{km}**, mb3.7**/4**, mbtmp3.7**/4**, Error ellipse: s-maj=171.4km s-min=27.7km az=145.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	49.17	256	P	P	11 07 11.6	-0.1
	0.7nm,0.8s,baz=91,slow=7.4,SNR=16						
	0.7nm,0.8s						
ASAR	Alice Springs	49.50	251	P	P	11 07 14.0	-0.2
	2.2nm,0.6s,baz=85,slow=8.1,SNR=40						
	2.2nm,0.6s						
NVAR	Mina Array Bea	74.47	42	P	P	11 10 01.9	-0.3
	0.3nm,0.6s,baz=231,slow=5.5,SNR=2.7						
	0.3nm,0.6s						
ILAR	Eielson Array	82.06	11	P	P	11 10 43.6	+0.3
	0.2nm,0.6s,baz=228,slow=6.4,SNR=4.3						
	0.2nm,0.6s						
BRTR	Keskin Array B	145.20	321	PKPbc	PKPbc	11 18 00.5	-0.7
	0.4nm,0.4s,baz=50,slow=6.6,SNR=4.7						

IDC ***24*** *11:07:10.3±1.2, 2˚.52S×138˚.55E, h0^{km}, mb3.5/3, mbtmp3.6/6, ML3.6/3, Error ellipse: s-maj=27.9km s-min=22.6km az=138.0*

DJA ***24*** *11:07:15.5±0.8, 3˚S±6˚×13˚9E±˚, h13^{km}±8^{km}, M3.6/6, MLv3.6/6*

ISC 24 11:07:14.4±0.8**, 2˚.61S**±0˚.10×**138˚.60E**±0˚.05**, h32**^{km}**, n11, σ1ˢ.19**/13**, mb3.6**/3**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.63	10	P	Pn	11 07 28.4	+1.3
GENI	Genyem	1.57	89	P	Pb	11 07 41.6	-1.2
GENI				S	Sn	11 07 58.5	-0.8
JAY	Jayapura	2.11	87	Pn	Pn	11 07 48.9	+1.4
	8.6nm,0.3s,baz=236,slow=13,SNR=24						
JAY				Sn	Sb	11 08 17.3	-0.5
	7.2nm,0.3s,baz=202,slow=19,SNR=4.2						
	27nm,0.4s						
JAY	Jayapura	2.11	87	P	Pn	11 07 48.9	+1.4
SRPI	Serui, Papua	2.47	287	P	Pb	11 07 57.4	-0.7
BAKI	Biak	2.86	300	P	Pb	11 08 03.0	-1.8
WRA	Warramunga Arr	17.72	193	P	Pn	11 11 18.9	+0.1
	0.3nm,0.3s,baz=18,slow=12,SNR=8.0						
	0.6nm,0.4s						
FITZ	Fitzroy Crossi	19.95	219	P	Pn	11 11 45.5	-0.3
	0.1nm,0.3s,baz=38,slow=12,SNR=2.0						
	2.6nm,0.9s						
ASAR	Alice Springs	21.42	192	P	P	11 11 60.0	+0.2
	1.2nm,0.8s,baz=24,slow=10,SNR=14						
	1.2nm,0.8s						
MKAR	Makanchi Array	69.64	322	P	P	11 18 22.2	+1.4
	0.5nm,0.9s,baz=134,slow=6.9,SNR=4.4						
	0.5nm,0.9s						
ILAR	Eielson Array	85.79	24	P	P	11 19 49.6	-0.7
	0.2nm,0.5s,baz=267,slow=5.3,SNR=5.3						
	0.2nm,0.5s						

IDC ***24*** *11:17:33.2±8.7, 38˚.84N×142˚.35E, h62^{km}±48^{km}, mb3.2/2, mbtmp3.4/5, ML2.8/3, Error ellipse: s-maj=98.5km s-min=32.7km az=113.0*

JMA ***24*** *11:17:38.4±0.1, 38˚.7N±0˚.2×141˚.5E±0˚.4, h68^{km}, MV3.3/40, NORTHERN MIYAGI PREF*

JMA Felt I J1 at NORTHERN MIYAGI PREF .

ISC 24 11:17:37.5±1.4**, 38˚.68N**±0˚.05×**141˚.63E**±0˚.09**, h70**^{km}±8^{km}**, n25, σ0ˢ.67**/30**, 2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKMT	Kesennumamotoy	0.18	319	iP	Pn	11 17 48.5	+0.5
JKMT				S	Sn	11 17 55.8	+0.1
JIO	Ouri	0.31	224	iP	Pn	11 17 49.1	+0.4
JIO				S	Sn	11 17 56.7	-0.2
JIKH	Ishinomakikobu	0.39	199	iP	Pn	11 17 49.8	+0.5
JIKH				S	Sn	11 17 57.9	0.0
OFUJ	Ofunato	0.41	5	⇓iP	Pn	11 17 50.1	+0.6
OFUJ				⇓S	Sn	11 17 58.5	+0.3
JMK	Ichinoseki	0.42	311	iP	Pn	11 17 49.6	0.0
JMK				S	Sn	11 17 57.8	-0.6
JOU	Okura	0.81	248	P	Pn	11 17 53.8	0.0
JOU				S	Sn	11 18 05.7	-0.1
JOM	Ohasama	0.84	342	P	Pn	11 17 54.3	+0.3
JOM				S	Sn	11 18 06.0	-0.2
JYK	Kaneyama	1.02	284	P	Pn	11 17 56.1	-0.1
JYK				S	Sn	11 18 09.9	-0.2
JMM	Marumori	1.04	219	iP	Pn	11 17 56.3	-0.2
JMM				S	Sn	11 18 09.9	-0.7
JRG	Rokugo	1.05	313	iP	Pn	11 17 56.9	+0.2
JRG				S	Sn	11 18 11.4	+0.4
JYS	Shirataka	1.31	250	P	Pn	11 18 00.1	+0.2
JFK	Kawauchi	1.44	205	P	Pn	11 18 02.1	+0.4
JFK				S	Sn	11 18 19.8	0.0
JYA	Atsumi	1.50	267	S	Sn	11 18 21.3	+0.1
JOTO	OTAMA OYAMA	1.51	223	P	Pn	11 18 03.4	+0.8
JOTO				S	Sn	11 18 22.3	+0.7
MJAR	Matsushiro Arr	3.45	233	P	Pn	11 18 31.3	+2.4
	0.3nm,0.3s,baz=45,slow=12,SNR=18						
MJAR				S	Sn	11 19 18.4	+10
	1.4nm,0.5s,baz=83,slow=34,SNR=1.7						
	2.5nm,0.4s						
USRK	Ussuriysk Ar.	9.10	310	P	Pn	11 19 46.8	+0.8
	0.1nm,0.3s,baz=134,slow=10,SNR=1.5						
	1.5nm,0.7s						
KSRS	Korea Array	10.87	268	P	Pn	11 20 14.0	+3.8
	0.1nm,0.3s,baz=80,slow=14,SNR=5.0						
	0.8nm,0.6s						
H11N2	WAKE ISLAND Hy	28.88	124	T	T	11 53 52.1	
	baz=317,slow=75,SNR=73						
H11N1	WAKE ISLAND Hy	28.89	124	T	T	11 54 04.3	
	baz=317,slow=75,SNR=94						
H11N3	WAKE ISLAND Hy	28.90	124	T	T	11 54 02.7	
	baz=317,slow=75,SNR=64						
H11S1	WAKE ISLAND Hy	29.64	126	T	T	11 54 50.2	
	baz=318,slow=75,SNR=35						
H11S3	WAKE ISLAND Hy	29.64	126	T	T	11 54 50.4	
	baz=318,slow=75,SNR=51						
H11S2	WAKE ISLAND Hy	29.66	126	T	T	11 54 51.4	
	baz=318,slow=75,SNR=36						
MKAR	Makanchi Array	43.41	301	P	P	11 25 32.1	-1.0
	0.3nm,0.6s,baz=78,slow=9.6,SNR=2.6						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	45.14	307	P	P	11 25 46.4	-0.5
	0.7nm,0.6s,baz=80,slow=8.0,SNR=5.3						
	0.7nm,0.6s						

IDC 24 11:21:49.8±2.3**, 3˚.14N**×**128˚.88E, h0**^{km}**, mb3.4**/4**, mbtmp3.4**/4**, Error ellipse: s-maj=178.1km s-min=23.3km az=70.0, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.56	167	P	P	11 27 02.0	-0.1
	0.2nm,0.5s,baz=345,slow=9.9,SNR=6.3						
	0.2nm,0.5s						
ASAR	Alice Springs	27.09	170	P	P	11 27 32.7	-1.7
	0.3nm,0.7s,baz=356,slow=8.4,SNR=1.9						
	0.3nm,0.7s						
MKAR	Makanchi Array	59.27	325	P	P	11 31 54.3	+1.0
	0.2nm,0.4s,baz=111,slow=7.9,SNR=2.1						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	63.40	327	P	P	11 32 21.4	+0.4
	0.4nm,0.2s,baz=124,slow=6.1,SNR=1.7						
	0.4nm,0.2s						

IDC ***24*** *11:34:05.8±0.3, 30˚.66S×177˚.30W, h0^{km}, mb5.1/30, mbtmp5.0/30, MS5.9/53, Error ellipse: s-maj=12.8km s-min=10.4km az=68.0*

BJI ***24*** *11:34:06.1, 30°.28S×176°.73W, h15^{km}, mB6.1/73, mb5.6/60, Ms6.1/89, Ms7 5.8/87*

MOS ***24*** *11:34:06.7±1.0, 30°.69S×177°.46W, h10^{km}, mb5.9/27, MS6.1/28, Error ellipse: s-maj=11.0km s-min=7.1km az=109.9*

NEIC ***24*** *11:34:08.9, 30°.71S×176°.89W, h14^{km}, Moment Tensor Solution. Duration: 4^{s}6 Moment tensor: Scale 10^{17}Nm; M_{rr}8.71; $M_{\theta\theta}$-0.44; $M_{\phi\phi}$-8.27; $M_{r\theta}$-2.39; $M_{\theta\phi}$-2.59; $M_{\phi r}$2.53; Fault plane solution: $M_0$9.54000×10^{17} NP1: ϕ_s213.30000°, δ42.00000°, λ116.41000°. NP2: ϕ_s359.55000°, δ53.18000°, λ68.17000°. Principal axes: T 9.8315, Plg72.0000°, Azm213.0000°; N -0.6048, Plg17.0000°, Azm13.0000°; P -9.2267, Plg6.0000°, Azm105.0000°;*

ISC-PP ***24*** *11:34:08, 30°.76S×177°.35W, h9^{km}, Mwppsm6.6, Moment Tensor Solution. s24 Moment tensor: Scale 10^{18}Nm; M_{rr}0.09±.09; $M_{\theta\theta}$0.49±.14; $M_{\phi\phi}$-0.61±.15; $M_{r\theta}$0.14±.21; $M_{\theta\phi}$0.29±.15; $M_{\phi r}$0.28±.11; Fault plane solution: $M_0$8.61000×10^{18} NP1:ϕ_s121.60000°, δ61.50000°, λ3.60000°. NP2:ϕ_s29.90000°, δ86.80000°, λ151.40000°.*

NEIC ***24*** *11:34:08.9±1.8, 30°.76S±0°.06×177°.4W±0°.1, h10^{km}±1^{km}, mb5.9/362, Ms_20 6.3/995, Mww5.9/34 Error ellipse: s-maj=16.5km s-min=10.2km az=92.0*

NEIC ***24*** *11:34:08.9, 30°.81S×177°.35W, h14^{km}*

GCMT ***24*** *11:34:11.9±0.1, 30°.76S±0°.01×176°.82W, h12^{km}, MW6.0/173, Moment Tensor Solution. s137, c292; s173, c450; Duration: 2^{s}4 Moment tensor: Scale 10^{18} Nm; M_{rr}0.82±.01; $M_{\theta\theta}$-0.04±.01; $M_{\phi\phi}$-0.78±.01; $M_{r\theta}$0.23±.02; $M_{\theta\phi}$-0.21±.01; $M_{\phi r}$0.77±.01; Best double couple: $M_0$1.15300×10^{18} NP1:ϕ_s193.00000°, δ23.00000°, λ87.00000°. NP2:ϕ_s16.00000°, δ67.00000°, λ91.00000°. Principal axes: T 1.1460, Plg68.0000°, Azm289.0000°; N 0.0140, Plg1.0000°, Azm196.0000°; P -1.1590, Plg22.0000°, Azm105.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NOU ***24*** *11:34:14.1, 31°.43S×176°.98W, h72^{km}, ML5.9/90, Kermadec Islands Region*

ISC 24 11:34:08.0±0.4, **30°.78S**±0°.03×**177°.26W**±0°.03, **h15**^{km}±1^{km}, **h15**^{km}**:pP-P, n1338,** σ**2^{s}11**/971, **mb5.8**/259, **MS6.3**/573, **49C-35D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.62	339	P	Pn	11 34 34.0	-2.0
GLKZ				S	Sg	11 34 59.8	-0.5
RAO	Raoul Island	1.63	339	Pn	Pn	11 34 35.1	-1.0
RAO	Raoul Island	1.63	339	Pn	Pn	11 34 34.8	-1.4
	2µm,0.3s,baz=217,slow=2.4,SNR=75						
RAO				Sn	Sn	11 34 56.1	-0.8
	4µm,0.3s,baz=147,slow=22,SNR=18						
RIZ	Raoul Island	1.64	339	P	Pn	11 34 34.8	-1.5
RIZ				S	Sg	11 34 59.2	-1.7
MXZ	Matakaoa Point	7.70	207	Pn	Pn	11 35 57.6	-1.8
MXZ	Matakaoa Point	7.70	207	P	Pn	11 35 55.2	-4.2
MXZ				S	Sn	11 37 22.9	-3.4
WMGZ	Waiomatatini S	7.88	206	P	Pn	11 35 57.0	-5.0
PKGZ	Pakihiroa	8.05	207	P	Pn	11 36 00.5	-3.8
HAZ	Te Kaha	8.07	209	P	Pn	11 36 01.3	-3.4
HAZ				S	Sn	11 37 34.0	-1.6
PUZ	Puketiti	8.16	206	P	Pn	11 36 00.8	-5.0
PUZ				S	Sn	11 37 33.3	-4.5
GRZ	Great Barrier	8.17	226	P	Pn	11 36 08.1	+2.1
RUGZ	Raukumara Rang	8.30	209	P	Pn	11 36 04.3	-3.6
RUGZ				S	Sn	11 37 38.8	-2.5
KUZ	Kuaotunu	8.34	223	P	Pn	11 36 09.9	+1.6
TWGZ	Tauwhareparae	8.36	207	P	Pn	11 36 02.7	-5.8
TWGZ				S	Sn	11 37 40.7	-2.0
CNGZ	Carnagh Statio	8.54	205	P	Pn	11 36 06.7	-4.4
CNGZ				S	Sn	11 37 45.6	-1.6
TKGZ	Te Karaka	8.63	207	P	Pn	11 36 07.5	-4.9
TKGZ				S	Sn	11 37 46.4	-3.1
MWZ	Matawai	8.67	208	P	Pn	11 36 07.4	-5.5
MWZ				S	Sn	11 37 46.3	-4.1
WCZ	Waipu Caves	8.70	232	P	Pn	11 36 17.2	+3.9
OPRZ	Ohinepanea	8.70	214	P	Pn	11 36 09.5	-3.8
OPRZ				S	Sn	11 37 49.8	-1.3
URZ	Urewera	8.79	210	Pn	Pn	11 36 09.4	-5.0
	4.3nm,0.3s,baz=355,slow=12,SNR=23						
URZ				Sn	Sn	11 37 48.4	-4.7
	24nm,0.3s,baz=307,slow=20,SNR=11						
URZ	Urewera	8.79	210	P	Pn	11 36 11.7	-2.7
URZ	Urewera	8.79	210	P	Pn	11 36 09.3	-5.1
URZ				S	Sn	11 37 48.4	-4.7
URZ	Urewera	8.79	210	⇑P	Pn	11 36 09.2	-5.2
RAGZ	Rawiri	8.86	208	P	Pn	11 36 09.8	-5.7
RAGZ				S	Sn	11 37 51.8	-3.3
OUZ	Omahuta	8.86	238	P	Pn	11 36 19.4	+3.9
OUZ	Omahuta	8.86	238	P	Pn	11 36 19.9	+4.4
RIGZ	Rimuhau	8.90	206	P	Pn	11 36 10.8	-5.3
RIGZ				S	Sn	11 37 52.4	-3.7
MKAZ	Moumakai	8.91	223	P	Pn	11 36 18.1	+2.0
PRGZ	Paritu Road	9.05	205	P	Pn	11 36 13.3	-4.8
MUGZ	Murupara	9.12	211	P	Pn	11 36 15.5	-3.5
SNGZ	Shannon Statio	9.13	208	P	Pn	11 36 14.7	-4.5
RTZ	Ruatahuna	9.14	210	P	Pn	11 36 14.6	-4.8
TOZ	Tahuroa Road	9.16	219	Pn	Pn	11 36 19.5	-0.1
TOZ	Tahuroa Road	9.16	219	P	Pn	11 36 19.1	-0.5
PRRZ	Plateau Road	9.30	212	P	Pn	11 36 18.0	-3.5
RAHZ	Arahi	9.35	208	P	Pn	11 36 18.4	-3.8
MTHZ	Maungataniwha	9.40	209	P	Pn	11 36 18.1	-4.7
NMHZ	Naumai	9.62	209	P	Pn	11 36 22.3	-3.6
BKZ	Black Stump Fm	9.81	210	P	Pn	11 36 26.2	-2.3
BKZ	Black Stump Fm	9.81	210	S	Sn	11 38 11.6	-6.7
BKZ	Black Stump Fm	9.81	210	P	Pn	11 36 21.9	-6.5
MCHZ	McNeill Hill	9.96	208	P	Pn	11 36 26.4	-4.1
HIZ	Hauiti	10.08	218	Pn	Pn	11 36 29.9	-2.3
HIZ	Hauiti	10.08	218	P	Pn	11 36 31.3	-0.8
HIZ	Hauiti	10.08	218	P	Pn	11 36 31.3	-0.8
KAHZ	Kahuranaki	10.19	206	P	Pn	11 36 27.2	-6.4
LKBA	Tubou, Lakemba	12.58	353	P	P	11 37 18.7	+0.8
CTZ	Chatham Island	12.94	178	P	Pn	11 37 08.3	-2.9
CTZ	Chatham Island	12.94	178	S	Sn	11 39 19.4	-15
CTZ	Chatham Island	12.94	178	P	Pn	11 37 07.9	-3.3
NFK	Norfolk Island	12.96	274	P	Pn	11 37 17.4	+5.7
QRZ	Quartz Range	12.99	217	P	Pn	11 37 10.4	-1.6
MRNZ	Matariki Terra	13.31	215		Pn	11 37 12.5	-3.8
MSVF	Nonsavu	13.68	341		Pn	11 37 21.9	+0.4
MSVF	Nonsavu	13.68	341	LR	LR	11 41 15.3	
	comp=Z,24µm,20.3s,baz=163,slow=32						
MSVF	Nonsavu	13.68	341	P	Pn	11 37 21.9	+0.4
KHZ	Kahutara	13.75	210	P	Pn	11 37 20.4	-1.9
KHZ	Kahutara	13.75	210	S	Sn	11 39 43.7	-11
KHZ	Kahutara	13.75	210	⇑P	Pn	11 37 15.6	-6.7
TAVE	Taveuni	14.22	350	P	P	11 37 41.4	+5.2
LTZ	Lake Taylor	14.61	212		Pn	11 37 27.7	-6.4
DGTI	Dogotuki	14.68	349	P	P	11 37 47.0	+5.7
RPZ	Rata Peaks	15.89	212	Pn	Pn	11 37 43.6	-7.5
	6.2nm,0.3s,baz=65,slow=4.4,SNR=24						
RPZ				Sn	Sn	11 40 30.6	-16
	2.7nm,0.3s,baz=114,slow=21,SNR=5.9						
RPZ	Rata Peaks	15.89	212	P	Pn	11 37 49.1	-1.9
PINNC	Pines Island,	15.90	297	Pn	Pn	11 37 52.2	+1.0
PINNC	Pines Island,	15.90	297	P	P	11 38 00.0	+5.2
MARNC	Mare, Loyalty	16.12	302	P	P	11 38 02.9	+5.5
FOZ	Fox Glacier	16.35	215		Pn	11 37 54.8	-2.0
OUENC	Ouen Island, N	16.47	297	P	P	11 38 05.6	+4.4
YATNC	Mamie plateau,	16.63	298	P	P	11 38 08.3	+5.3
LBZ	Lake Benmore	16.81	213		Pn	11 38 00.8	-1.9
ONTNC	Ouen Toro	16.83	296	P	P	11 38 05.2	0.0
ONTNC	Ouen Toro	16.83	296	P	P	11 38 10.8	+5.6
ONTNC	Ouen Toro	16.83	296	⇑P	P	11 38 05.6	+0.4
DZM	Mont Dzumac	16.97	297	*e*Pn	P	11 38 07.0	+0.1
	1µm,1.4s						
DZM				*e*LR	LR	11 41 56.4	
	88µm,25.7s						
DZM	Mont Dzumac	16.97	297	Pn	P	11 38 09.0	+2.2
	1.5nm,0.3s,baz=127,slow=12,SNR=20						
DZM				LR	LR	11 43 38.9	
	comp=Z,65µm,18.1s,baz=146,slow=34						
DZM	Mont Dzumac	16.97	297	P	P	11 38 10.8	+3.9
DZM	Mont Dzumac	16.97	297	⇑P	P	11 38 09.1	+2.2
ODZ	Otahua Downs	17.11	210		Pn	11 38 04.7	-1.8
ODZ	Otahua Downs	17.11	210	P	Pn	11 38 02.2	-4.3
ODZ	Otahua Downs	17.11	210	⇑P	Pn	11 38 01.1	-5.4
JCZ	Jackson Bay	17.25	216	P	Pn	11 38 04.5	-3.9
AFI	Afiamalu	17.54	18	P	P	11 38 21.8	+8.7
RAR	Rarotonga	18.36	63	P	Pn	11 38 19.1	-2.9
RAR	Rarotonga	18.36	63	P	Pn	11 38 16.4	-5.6
	59nm,0.7s,baz=238,slow=7.4,SNR=8.3						
RAR				S	Sn	11 41 20.7	-26
	23nm,0.8s,baz=284,slow=19,SNR=0.9						
RAR				LR	LR	11 44 40.9	
	comp=Z,43µm,18.6s,baz=246,slow=35						
RAR	Rarotonga	18.36	63	P	P	11 38 22.9	+0.8
RAR	Rarotonga	18.36	63	P	Pn	11 38 19.2	-2.9
RAR				pmax	pmax		
	comp=Z,847nm,1.8s						
SYZ	Scrubby Hill	18.94	210	P	P	11 38 24.9	-3.4
WHZ	Wether Hill Ro	18.98	213	P	P	11 38 26.5	-2.3
DCZ	Deep Cove	19.06	215	P	Pn	11 38 33.7	+3.2
KOUNC	Koumac, New Ca	19.48	297	P	Pn	11 38 40.4	+4.7
KOUNC	Koumac, New Ca	19.48	297	⇑P	Pn	11 38 37.5	+1.8
VLAKA	Lakatoro	20.24	313	P	Pn	11 38 49.4	+4.7
LHI	Lord Howe Isla	20.28	262	P	P	11 38 42.4	-0.7
LHI	Lord Howe Isla	20.28	262	P	Pn	11 38 45.9	+0.9
SANVU	Saraoutou	20.87	314	P	P	11 38 49.7	+0.1
SANVU	Saraoutou	20.87	314	P	Pn	11 38 58.0	+5.9
FUNA	Funafuti	22.39	351	IAMs_20	IAMs_20	11 46 40.2	
	comp=Z,84µm,18.0s						
TBI	Tubuai	25.79	80	*e*P	P	11 39 27.7	-11
	comp=Z,7µm,23.2s						
TBI				*e*S	S	11 44 09.5	+2.2
	comp=Z,135µm,25.8s						
TBI				*e*LR	LR	11 45 57.5	
	comp=Z,37µm,20.8s						
TBI				*e*LR	LR	11 46 07.6	
	comp=Z,126µm,21.2s						
ARMA	Armidale	26.75	263	P	P	11 39 47.3	+0.1
ARMA	Armidale	26.75	263	P	P	11 39 47.1	-0.1
	comp=Z,0.0nmcomp=Z,100nm,1.9s						
ARMA	Armidale	26.75	263	P	P	11 39 49.1	+1.9
ARMA	Armidale	26.75	263	⇑P	P	11 39 50.1	+2.9
MGCD	Mangrove Creek	26.89	256	P	P	11 39 51.4	+3.0
CNB	Canberra Magne	28.26	252	P	P	11 39 58.3	-2.4
	comp=Z,0.0nmcomp=Z,65nm,2.8s						
CNB	Canberra Magne	28.26	252	P	P	11 40 01.5	+0.8
PAE	Paea	28.33	69	*e*P	P	11 39 54.7	-6.6
	comp=Z,234nm,22.4s						
PAE				*e*S	S	11 44 48.1	+0.7
	comp=Z,1µm,23.5s						
PAE				*e*LR	LR	11 47 13.6	
	comp=Z,6µm,20.7s						
PPT2	Papeete2	28.37	69	*e*P	P	11 39 58.6	-3.2
	comp=Z,2µm,24.0s						
PPT2				*e*S	S	11 44 49.5	+1.2
	comp=Z,2µm,23.3s						
PPT2				*e*S	S	11 44 51.6	+3.3
	comp=Z,31µm,24.5s						
PPT2				*e*LR	LR	11 47 08.6	
	comp=Z,24µm,21.5s						
PPT2				*e*LR	LR	11 47 14.1	
	comp=Z,28µm,21.0s						
PPT	Papeete	28.38	69	LR	LR	11 49 20.3	
	comp=Z,31µm,19.0s,baz=252,slow=32						
EIDS	Eidsvold	28.40	273	P	P	11 40 02.0	+0.1
EIDS				IAMs_20	IAMs_20	11 50 38.6	
	comp=Z,54µm,18.0s						
EIDS	Eidsvold	28.40	273	P	P	11 40 02.4	+0.4
	comp=Z,0.0nmcomp=Z,59nm,1.3s						
EIDS	Eidsvold	28.40	273	P	P	11 40 03.3	+1.4
EIDS	Eidsvold	28.40	273	⇑P	P	11 40 02.8	+0.9
TVO	Taravao	28.53	70	*e*S	S	11 44 50.5	-0.2
	comp=Z,2µm,24.4s						
TVO				*e*LR	LR	11 47 19.4	
	comp=Z,6µm,20.5s						
CAN	Canberra	28.56	252	P	P	11 40 04.3	+0.9
CAN	Canberra	28.56	252	⇑P	P	11 40 05.3	+1.9
GD1S	Gladstone Soft	28.83	276	P	P	11 40 09.0	+3.2
YNG	Young	29.09	254	P	P	11 40 09.3	+1.3
	comp=Z,30nm,1.5s						
GLAD	Gladstone	29.76	240	P	P	11 40 13.1	-0.7
HNR	Honiara	30.04	310	LR	LR	11 50 05.9	
	comp=Z,10µm,20.6s,baz=152,slow=32						
ALEG	Aligegeo Malai	30.06	312	P	P	11 40 22.0	+5.3
CORO	Coronation Par	30.47	240	P	P	11 40 19.6	-0.5
TAU	Tasmania Unive	30.60	237	P	P	11 40 21.4	+0.1
TAU	Tasmania Unive	30.60	237	P	P	11 40 20.3	-1.0
TAU	Tasmania Unive	30.60	237	P	P	11 40 21.4	+0.1
TAU				pmax	pmax		
	comp=Z,105nm,1.5s						
TAU				MLR	MLR		
	comp=Z,34µm,18.0s						
MOO	Moorlands	30.61	238	P	P	11 40 20.9	-0.5
	comp=Z,89nm,1.2s						
MOO	Moorlands	30.61	238	P	P	11 40 20.1	-1.3
PMOR	Pomariorio Ree	31.15	66	*e*P	P	11 40 22.7	-3.6
	comp=Z,2µm,22.9s						
PMOR				*e*S	S	11 45 33.0	+1.2
	comp=Z,4µm,22.2s						
PMOR				*e*LR	LR	11 48 31.8	
	comp=Z,31µm,20.8s						
VAH	Vaihoa	31.23	67	*e*P	P	11 40 30.0	+3.0
	comp=Z,4µm,26.5s						
VAH				*e*S	S	11 45 33.6	+0.6
	comp=Z,5µm,23.4s						
VAH				*e*LR	LR	11 48 35.0	
	comp=Z,26µm,20.8s						
TOO	Toolangi	31.41	247	P	P	11 40 29.0	+0.5
TOO	Toolangi	31.41	247	P	P	11 40 28.9	+0.4
	comp=Z,34nm,1.6s						
TOO	Toolangi	31.41	247	P	P	11 40 29.0	+0.5
TOO				pmax	pmax		
	comp=Z,67nm,1.5s						
TOO				MLR	MLR		
	comp=Z,22µm,18.0s						
TOO	Toolangi	31.41	247	⇑P	P	11 40 29.6	+1.0
CMSA	Cobar Meteorol	31.62	259	P	P	11 40 30.7	+0.2
	comp=Z,201nm,1.5s						
CMSA	Cobar Meteorol	31.62	259	P	P	11 40 32.6	+2.2
GEXS	Deakin Univers	32.37	246	P	P	11 40 38.5	+1.6
QLP	Quilpie	33.93	267	P	P	11 40 51.0	+0.3
	comp=Z,196nm,2.8s						
QLP	Quilpie	33.93	267	P	P	11 40 52.1	+1.4
QLP	Quilpie	33.93	267	⇑P	P	11 40 50.8	+0.1
CTAO	Charters Tower	34.49	279	P	P	11 40 56.0	+0.4
CTAO				IAmb	IAmb	11 41 00.7	
	comp=Z,338nm,1.7s						
CTAO	Charters Tower	34.49	279	IAMs_20	IAMs_20	11 54 34.1	
	comp=Z,57µm,18.0s						
CTAO	Charters Tower	34.49	279	P	P	11 40 58.0	+2.4
CTAO	Charters Tower	34.49	279	P	P	11 40 56.1	+0.4
CTAO				pmax	pmax		
	comp=Z,338nm,1.7s						
CTAO				MLR	MLR		
	comp=Z,57µm,18.0s						
CTAO	Charters Tower	34.49	279	⇑P	P	11 40 56.2	+0.6
STKA	Stephens Creek	35.02	257	P	P	11 41 01.4	+1.4
STKA	Stephens Creek	35.02	257	P	P	11 41 00.2	+0.1
	comp=Z,954nm,2.1s						
STKA	Stephens Creek	35.02	257	P	P	11 41 01.5	+1.5
	comp=Z,110nm,1.1s,baz=94,slow=11,SNR=2.9						
STKA				S	S	11 46 31.2	-0.5
	comp=Z,4.2nm,1.0s,baz=34,slow=18,SNR=2.0						
STKA				LR	LR	11 55 14.0	
	comp=Z,26µm,18.2s,baz=96,slow=36						
	comp=Z,110nm,1.1s						
STKA	Stephens Creek	35.02	257	P	P	11 41 02.2	+2.1
MTSU	Mount Surprise	37.00	281	P	P	11 41 17.7	+0.5
	comp=Z,41nm,1.0s						
MTSU	Mount Surprise	37.00	281	P	P	11 41 19.4	+2.3
HTT	Hallett	37.01	254	P	P	11 41 16.1	-1.1
	comp=Z,28nm,1.4s						
HTT	Hallett	37.01	254	P	P	11 41 17.3	+0.1
HTT	Hallett	37.01	254	⇑P	P	11 41 17.3	+0.1
XMAS	Kiritimati	37.71	34	P	P	11 41 24.8	+1.7
WHYH	Whyalla	38.19	254	P	P	11 41 27.3	+0.2
RABL	Rabaul	39.11	306	P	P	11 41 34.8	-0.2
QIS	Mount Isa	39.98	274	P	P	11 41 41.7	-0.6
QIS	Mount Isa	39.98	274	P	P	11 41 43.0	+0.8
COEN	Coen	39.99	286	P	P	11 41 43.1	+0.8
COEN	Coen	39.99	286	P	P	11 41 42.5	+0.1
COEN	Coen	39.99	286	P	P	11 41 44.2	+1.9
COEN	Coen	39.99	286	⇑P	P	11 41 42.0	-0.4
TAOE	Nuku Hiva Isla	40.87	66	*e*P	P	11 41 44.1	-5.6
	comp=Z,961nm,22.2s						
TAOE				*e*S	S	11 47 59.7	-1.2
	comp=Z,5µm,23.9s						
TAOE				*e*SS	SS	11 50 58.3	-4.1
	comp=Z,10µm,24.7s						
TAOE				*e*LR	LR	11 53 00.7	
	comp=Z,19µm,21.2s						
AS01	Alice Springs	43.69	267	P	P	11 42 13.1	+0.5
AS31	Alice Springs	43.73	267	P	P	11 42 12.8	-0.1
AS31	Alice Springs	43.73	267	P	P	11 42 11.0	-1.9
	comp=Z,0.0nmcomp=Z,11nm,1.3s						
ASAR	Alice Springs	43.73	267	P	P	11 42 12.5	-0.4
ASAR	Alice Springs	43.73	267	P	P	11 42 12.2	-0.7
	comp=Z,17nm,0.7s,baz=112,slow=8.1,SNR=7.0						
ASAR				PcP	PcP	11 43 59.8	0.0
	comp=Z,5.7nm,0.4s,baz=117,slow=3.9,SNR=8.0						
ASAR				ScP	ScP	11 47 53.6	+2.7
	comp=Z,5.6nm,1.0s,baz=107,slow=4.0,SNR=6.6						
ASAR				S	S	11 48 39.6	-3.2
	comp=Z,3.3nm,1.1s,baz=107,slow=14,SNR=4.3						
ASAR				LR	LR	11 59 57.8	
	comp=Z,20µm,18.2s,baz=120,slow=36						
	comp=Z,17nm,0.7s						
MANU	Manus Island	44.01	304	P	P	11 42 13.1	-2.0
WR0	Warramunga Arr	44.57	272	P	P	11 42 19.4	-0.3
WR8	Warramunga Arr	44.61	272	P	P	11 42 19.9	0.0
WRAB	Tennant Creek	44.75	272	P	P	11 42 20.9	-0.2
WRAB				IAmb	IAmb	11 42 23.9	
	comp=Z,254nm,1.6s						
WRAB				IAMs_20	IAMs_20	12 01 07.9	
	comp=Z,37µm,18.0s						
WRAB	Tennant Creek	44.75	272	P	P	11 42 20.9	-0.2
WRAB				pmax	pmax		
	comp=Z,254nm,1.6s						
WRAB				MLR	MLR		
	comp=Z,36µm,18.0s						
WRA	Warramunga Arr	44.75	272	P	P	11 42 20.8	-0.3
WRA	Warramunga Arr	44.75	272	P	P	11 42 20.2	-0.9
	comp=Z,34nm,0.8s,baz=111,slow=8.0,SNR=72						
WRA				PcP	PcP	11 44 03.1	-0.1
	comp=Z,11nm,0.9s,baz=120,slow=2.8,SNR=2.7						
WRA				ScP	ScP	11 47 57.1	+2.0
	comp=Z,4.6nm,0.9s,baz=117,slow=4.2,SNR=6.0						
WRA				S	S	11 48 47.5	-10
	comp=Z,1.2nm,1.1s,baz=114,slow=13,SNR=1.1						
WRA				LR	LR	12 00 44.0	
	comp=Z,28µm,18.0s,baz=122,slow=36						
	comp=Z,34nm,0.8s						
WB0	Warramunga Arr	44.78	272	P	P	11 42 20.4	-0.9
WB0				IAmb	IAmb	11 42 24.1	
	comp=Z,394nm,1.8s						
SBA	Scott Base	47.70	185	P	P	11 42 45.1	+1.6
SBA	Scott Base	47.70	185	P	P	11 42 45.1	+1.6
SBA				pmax	pmax		
	comp=Z,399nm,1.8s						
SBA				MLR	MLR		
	comp=Z,13µm,18.0s						
VNDA	Vanda	47.78	186	P	P	11 42 46.6	+2.5
VNDA				IAmb	IAmb	11 43 16.2	
	comp=Z,111nm,1.8s						
VNDA	Vanda	47.78	186	P	P	11 42 45.9	+1.8
	comp=Z,8.7nm,0.9s,baz=18,slow=8.1,SNR=19						
VNDA				S	S	11 49 48.1	+8.4
	comp=Z,0.8nm,1.0s,baz=0.0,slow=4.0,SNR=1.2						
VNDA				LR	LR	12 00 42.5	
	comp=Z,13µm,19.5s,baz=26,slow=33						
	comp=Z,8.7nm,0.9s						
VNDA	Vanda	47.78	186	P	P	11 42 46.6	+2.5
VNDA				pmax	pmax		
	comp=Z,111nm,1.8s						
WRKA	Warakurna	48.07	263	P	P	11 42 44.7	-2.4
JAY	Jayapura	48.64	297	P	P	11 42 51.1	-0.5
	comp=Z,28nm,1.0s,baz=130,slow=11,SNR=14						
JAY				S	S	11 49 49.6	-3.9
	comp=Z,4.0nm,0.8s,baz=143,slow=23,SNR=1.8						
JAY				LR	LR	12 01 14.3	
	comp=Z,5µm,19.9s,baz=112,slow=34						
	comp=Z,28nm,1.0s						
JAY	Jayapura	48.64	297	P	P	11 42 52.7	+1.1
GENI	Genyem	49.01	296	P	P	11 42 57.3	+2.9
GENI	Genyem	49.01	296	P	P	11 42 56.1	+1.7
	comp=Z,8µmcomp=Z,131nm,2.9s						
KDU	Kakadu	49.62	280	P	P	11 42 57.2	-1.9
KDU	Kakadu	49.62	280	P	P	11 43 00.3	+1.3
KDU	Kakadu	49.62	280	⇑P	P	11 42 57.8	-1.3
MTN	Manton Dam	50.68	279	IAmb	IAmb	11 43 09.3	
	comp=Z,207nm,1.7s						
MTN	Manton Dam	50.68	279	P	P	11 43 06.0	-1.1
	comp=Z,66nm,1.8s						
MTN	Manton Dam	50.68	279	P	P	11 43 08.7	+1.6
MTN	Manton Dam	50.68	279	⇑P	P	11 43 04.9	-2.2
DRS	Darwin Rock St	51.08	279	P	P	11 43 11.8	+1.7
KNRA	Kununurra	51.37	274	P	P	11 43 11.6	-0.7
KNRA				IAmb	IAmb	11 43 15.5	
	comp=Z,334nm,1.9s						
KNRA				IAMs_20	IAMs_20	12 05 04.8	
	comp=Z,21µm,18.0s						
KNRA	Kununurra	51.37	274	P	P	11 43 10.7	-1.7
	comp=Z,82nm,2.6s						
FITZ	Fitzroy Crossi	53.00	270	P	P	11 43 23.8	-0.6
FITZ	Fitzroy Crossi	53.00	270	P	P	11 43 22.7	-1.7
	comp=Z,15nm,1.6s						
FITZ	Fitzroy Crossi	53.00	270	P	P	11 43 24.0	-0.4
	comp=Z,46nm,1.1s,baz=124,slow=7.6,SNR=14						
FITZ				S	S	11 50 51.4	-2.4
	comp=Z,4.5nm,1.1s,baz=25,slow=23,SNR=1.9						
FITZ				LR	LR	12 06 11.4	
	comp=Z,28µm,18.2s,baz=106,slow=36						
	comp=Z,46nm,1.1s						
FITZ	Fitzroy Crossi	53.00	270	P	P	11 43 24.4	0.0
FITZ	Fitzroy Crossi	53.00	270	⇓P	P	11 43 24.1	-0.3
SAUI	Saumlaki	53.02	284	IAMs_20	IAMs_20	12 06 54.9	
	comp=Z,28µm,18.0s						
BAKI	Biak	53.04	295	P	P	11 43 27.5	+2.8
	comp=Z,6µmcomp=Z,118nm,1.9s						
STCH	Steam Cracks	54.23	26	IAmb	IAmb	11 43 36.1	
	comp=Z,191nm,1.4s						
HMH	Humu‘ula Sheep	54.29	26	P	P	11 43 34.8	+0.7
POHA	Pohakuloa	54.42	25	P	P	11 43 36.6	+1.7
KLBR	Kellerberrin	54.83	251	P	P	11 43 34.2	-3.5
KLBR	Kellerberrin	54.83	251	P	P	11 43 37.1	-0.6
NWAO	Narrogin (SRO)	54.86	249	LR	LR	12 03 38.1	
	comp=Z,9µm,22.0s,baz=98,slow=32						
KIP	Kipapa	55.10	22	P	P	11 43 40.9	+1.4
KIP	Kipapa	55.10	22	P	P	11 43 43.1	+3.6
KIP	Kipapa	55.10	22	P	P	11 43 42.1	+2.6
KIP	Kipapa	55.10	22	P	P	11 43 40.9	+1.4
KIP				pmax	pmax		
	comp=Z,330nm,1.5s						
CASY	Casey	55.10	208	P	P	11 43 39.9	+0.9
CASY				IAmb	IAmb	11 43 41.6	
	comp=Z,104nm,1.2s						
CASY	Casey	55.10	208	⇑P	P	11 43 39.4	+0.4
MEEK	Meekatharra	55.72	257	P	P	11 43 42.3	-1.9
	comp=Z,103nm,1.7s						
MEEK	Meekatharra	55.72	257	P	P	11 43 44.3	+0.1
BLDU	Ballidu	55.98	252	P	P	11 43 45.7	-0.3
PSA00	Pilbara Seismi	56.56	263	P	P	11 43 47.5	-2.7
PSA00	Pilbara Seismi	56.56	263	P	P	11 43 50.5	+0.3
MBWA	Marble Bar	56.82	264	P	P	11 43 52.6	+0.6
MBWA	Marble Bar	56.82	264	IAMs_20	IAMs_20	12 09 20.6	
	comp=Z,27µm,18.0s						
MBWA	Marble Bar	56.82	264	P	P	11 43 50.7	-1.3
	comp=Z,35nm,2.7s						
MBWA	Marble Bar	56.82	264	P	P	11 43 51.9	-0.2
MORW	Morawa	57.04	253	IAmb	IAmb	11 43 54.4	
	comp=Z,116nm,1.6s						
MORW				IAMs_20	IAMs_20	12 09 32.9	
	comp=Z,20µm,18.0s						
MORW	Morawa	57.04	253	P	P	11 43 50.9	-2.7
MORW	Morawa	57.04	253	P	P	11 43 53.2	-0.3
MORW	Morawa	57.04	253	⇑P	P	11 43 52.5	-1.1
GUMO	Guam	57.20	315	S	S	11 51 46.5	-3.5
	comp=Z,62nm,0.9s,baz=198,slow=20,SNR=2.0						
GUMO				LR	LR	12 05 42.0	
	comp=Z,8µm,21.6s,baz=126,slow=33						
SOEI	Soe	58.05	278	P	P	11 44 02.8	+1.9
SOEI	Soe	58.05	278	P	P	11 44 04.0	+3.1
	comp=Z,6µmcomp=Z,105nm,1.8s						
BATI	Baumata	58.34	277	P	P	11 44 02.9	0.0
	comp=Z,24nm,0.7s,baz=122,slow=9.5,SNR=2.4						
BATI				S	S	11 52 09.9	+4.7
	comp=Z,12nm,0.3s,baz=52,slow=19,SNR=1.8						
BATI				LR	LR	12 10 28.2	
	comp=Z,46µm,18.1s,baz=142,slow=37						
	comp=Z,24nm,0.7s						
MIDW	Midway	58.67	360	IAMs_20	IAMs_20	12 07 34.9	
	comp=Z,18µm,20.0s						
QSPA	South Pole Qui	59.33	180	IAMs_20	IAMs_20	12 09 44.0	
	comp=Z,17µm,18.0s						
QSPA	South Pole Qui	59.33	180	P	P	11 44 10.5	+1.4
	comp=Z,108nm,1.1s,baz=47,slow=2.0,SNR=108						
QSPA				S	S	11 52 21.7	+4.8

	comp=Z,1.3nm,1.0s,baz=108,slow=20,SNR=6.7						
QSPA				LR	LR	12 09 28.7	
	comp=Z,13µm,18.0s,baz=39,slow=36						
	comp=Z,108nm,1.1s						
MMRI	Maumere	60.34	278	P	P	11 44 18.1	+1.5
MMRI	Maumere	60.34	278	P	P	11 44 19.0	+2.4
	comp=Z,4µmcomp=Z,132nm,2.1s						
EDFI	Ende, Flores	60.74	277	P	P	11 44 20.6	+1.0
	comp=Z,2µmcomp=Z,66nm,2.7s						
GIRL	Giralia	60.91	260	P	P	11 44 21.0	+0.6
KAPI	Kappang	64.31	280	P	P	11 44 42.5	-0.7
	comp=Z,5.7nm,0.3s,baz=97,slow=7.6,SNR=5.4						
KAPI				S	S	11 53 22.2	+1.1
	comp=Z,4.5nm,0.3s,baz=210,slow=17,SNR=1.4						
KAPI				LR	LR	12 13 23.9	
	comp=Z,9µm,18.1s,baz=112,slow=37						
	comp=Z,5.7nm,0.3s						
KAPI	Kappang	64.31	280	P	P	11 44 44.5	+1.3
BNSI	Bone	64.33	281	P	P	11 44 46.1	+2.7
	comp=Z,3µmcomp=Z,58nm,2.6s						
TWSI	Taliwang, Sumb	64.86	275	P	P	11 44 48.4	+1.5
	comp=Z,3µmcomp=Z,86nm,2.6s						
TTSI	Tana Toraja	65.29	282	P	P	11 44 53.2	+3.6
DAV	Davao City (W)	66.37	294	P	P	11 44 55.2	-1.4
	comp=Z,163nm,0.4s,baz=179,slow=3.4,SNR=2.3						
DAV	Davao City (W)	66.37	294	P	P	11 44 54.0	-2.6
PCI	Palu	66.43	284	P	P	11 45 00.8	+3.8
	comp=Z,5µmcomp=Z,66nm,1.6s						
SRBI	Singaraja	66.62	275	P	P	11 45 00.1	+1.9
	comp=Z,4µmcomp=Z,81nm,1.9s						
MPSI	Mapaga	67.06	285	P	P	11 45 03.0	+2.0
JAGI	Jajag, Banyuwa	67.34	274	P	P	11 45 02.8	0.0
JAGI	Jajag, Banyuwa	67.34	274	P	P	11 45 03.7	+0.9
	comp=Z,71nm,1.6s						
GMJI	Gumukmas	68.05	273	P	P	11 45 08.1	+0.8
BKB	Balikpapan	68.71	282	IAMs_20	IAMs_20	12 20 29.4	
	comp=Z,17µm,18.0s						
SMAI	San Martin Ant	68.83	158	IAmb	IAmb	11 45 14.6	
	comp=Z,157nm,1.3s						
BELA	Belgrano 2	69.32	172	P	P	11 45 15.3	+1.1
JCJ	Chichijima	69.38	322	LR	LR	12 11 04.4	
	comp=Z,2µm,21.4s,baz=135,slow=32						
PCJI	Pacitan	70.03	272	P	P	11 45 21.0	+1.4
WOJI	Wonogiri, Jawa	70.43	272	P	P	11 45 23.6	+1.6
MYLDM	Lahad Datu	70.93	288	P	P	11 45 25.5	+0.4
MYLDM				IAmb	IAmb	11 46 17.5	
	comp=Z,97nm,1.5s						
PMSA	Palmer Station	71.65	155	IAMs_20	IAMs_20	12 12 14.2	
	comp=Z,16µm,20.0s						
PMSA	Palmer Station	71.65	155	LR	LR	12 12 25.3	
	comp=Z,15µm,18.6s,baz=239,slow=32						
MAW	Mawson	72.17	200	P	P	11 45 31.4	-0.3
	comp=Z,12nm,2.8s						
MAW	Mawson	72.17	200	P	P	11 45 32.3	+0.6
	comp=Z,28nm,1.1s,baz=115,slow=7.5,SNR=28						
MAW				S	S	11 54 55.1	+1.8
	comp=Z,1.4nm,1.0s,baz=148,slow=19,SNR=1.5						
MAW				LR	LR	12 17 51.7	
	comp=Z,19µm,18.6s,baz=116,slow=36						
	comp=Z,28nm,1.1s						
KKM	Kota Kinabalu	73.29	288	IAmb	IAmb	11 45 56.8	
	comp=Z,164nm,2.0s						
KKM	Kota Kinabalu	73.29	288	P	P	11 45 41.9	+2.6
LEM	Lembang	73.77	272	P	P	11 45 43.5	+1.2
	comp=Z,15nm,0.3s,baz=162,slow=3.8,SNR=10						
LEM				S	SKiKP	11 55 11.2	-0.3
	comp=Z,8.0nm,0.3s,baz=60,slow=20,SNR=1.6						
LEM				LR	LR	12 20 09.2	
	comp=Z,12µm,18.8s,baz=106,slow=38						
	comp=Z,15nm,0.3s						
STKI	Sintang	73.99	280	P	P	11 45 46.8	+3.4
TGY	Tagaytay City	74.27	297	P	P	11 45 45.6	+0.7
	comp=Z,70nm,0.3s,baz=171,slow=15,SNR=3.5						
TGY				S	S	11 55 16.1	-2.5
	comp=Z,50nm,0.4s,baz=150,slow=15,SNR=0.9						
TGY				LR	LR	12 16 32.5	
	comp=Z,2µm,20.9s,baz=130,slow=34						
DBJI	Dramaga	74.65	271	P	P	11 45 48.5	+1.2
	comp=Z,82nm,1.6s						
MG05	Puerto Natales	74.81	141	P	P	11 45 49.1	+1.6
MG05				IAmb	IAmb	11 45 50.0	
	comp=Z,113nm,1.2s						
JMZ	Minamidaito 2	74.81	313	IAMs_20	IAMs_20	12 15 40.3	
	comp=Z,18µm,20.0s						
USHA	Ushuaia	75.24	146	LR	LR	12 11 53.8	
	comp=Z,8µm,20.0s,baz=226,slow=30						
KSM	Kuching	75.72	280	P	P	11 45 54.0	+0.6
KSM				IAmb	IAmb	11 45 56.2	
	comp=Z,204nm,2.0s						
KSM	Kuching	75.72	280	P	P	11 45 54.3	+0.9
SYO	Syowa Base	76.89	193	⇑iP	P	11 46 00.2	+1.2
SYO	Syowa Base	76.89	193	⇓ipP	pP	11 46 03.7	+1.7
SYO	Syowa Base	76.89	193	⇓iPcP	PcP	11 46 11.0	+0.9
SYO	Syowa Base	76.89	193	⇑ePP	PP	11 48 52.8	+1.4
AY03	Cochrane	77.03	137	IAmb	IAmb	11 46 03.5	
	comp=Z,75nm,1.1s						
AY03				IAMs_20	IAMs_20	12 12 33.5	
	comp=Z,18µm,20.0s						
JOW	Kunigami	77.39	312	LR	LR	12 16 52.8	
	comp=Z,3µm,21.9s,baz=134,slow=33						
TROLL	Troll, Antarti	77.49	180	⇓P	P	11 46 02.6	0.0
	comp=Z,1µm,0.9s						
TROLL				⇑S	S	11 55 52.9	+0.1
SNAA	Sanae	77.75	178	⇓P	P	11 46 04.2	+0.2
	comp=Z,539nm,1.5s						
SNAA				⇑S	S	11 55 57.0	+1.5
SNAA	Sanae	77.75	178	P	P	11 46 05.5	+1.5
SNAA				IAmb	IAmb	11 46 06.8	
	comp=Z,248nm,1.7s						
SNAA				IAMs_20	IAMs_20	12 17 30.2	
	comp=Z,14µm,19.0s						
SNAA	Sanae	77.75	178	P	P	11 46 03.8	-0.2
	comp=Z,43nm,1.2s,baz=190,slow=4.6,SNR=37						
SNAA				S	S	11 55 56.6	+1.0
	comp=Z,1.0nm,1.0s,baz=128,slow=19,SNR=3.7						
SNAA				LR	LR	12 17 31.6	
	comp=Z,12µm,20.0s,baz=198,slow=34						
	comp=Z,43nm,1.2s						
SNAA	Sanae	77.75	178	P	P	11 46 05.5	+1.5
SNAA				pmax	pmax		
	comp=Z,248nm,1.7s						
VNA3	Neumayer Olymp	77.88	176	⇓P	P	11 46 04.0	-0.6
	comp=Z,38nm,1.0s						
VNA3				⇑S	S	11 55 55.9	-0.9
MDSI	Maura Dua	77.90	272	P	P	11 46 04.7	-1.0
	comp=Z,3µmcomp=Z,98nm,2.5s						
COYC	Coyhaique	78.21	136	P	P	11 46 08.2	+1.3
COYC				IAmb	IAmb	11 46 10.2	
	comp=Z,144nm,1.2s						
VNA2	Neumayer--Watz	78.32	177	⇓P	P	11 46 06.9	-0.2
	comp=Z,28nm,1.2s,baz=178,slow=5.1						
VNA2				⇓S	S	11 56 00.9	-0.6
	baz=254,slow=31						
VNA1	Neumayer--Stat	78.55	176	⇓P	P	11 46 08.7	+0.4
	comp=Z,84nm,1.3s						
INU	Inuyama	78.59	323	P	P	11 46 08.6	-0.4
INU	Inuyama	78.59	323	P	P	11 46 09.8	+0.9
JGF	Kuroka	78.61	324	IAmb	IAmb	11 46 10.6	
	comp=Z,124nm,1.8s						
JGF	Kuroka	78.61	324	P	P	11 46 09.6	+0.5
LL07	Hotel Espejo d	78.80	133	IAMs_20	IAMs_20	12 13 14.7	
	comp=Z,17µm,20.0s						
MJAR	Matsushiro Arr	78.92	325	P	P	11 46 09.2	-1.6
	comp=Z,29nm,1.1s,baz=160,slow=5.4,SNR=26						
MJAR				S	S	11 56 05.4	-3.3
	comp=Z,0.5nm,0.4s,baz=168,slow=17,SNR=1.4						
MJAR				LR	LR	12 17 00.6	
	comp=Z,3µm,21.6s,baz=128,slow=33						
	comp=Z,29nm,1.1s						
MAJO	Matsushiro	78.92	325	P	P	11 46 10.2	-0.6
MAJO	Matsushiro	78.92	325	P	P	11 46 12.1	+1.3
MAJO	Matsushiro	78.92	325	P	P	11 46 10.2	-0.6
MAJO				pmax	pmax		
	comp=Z,62nm,1.3s						
JMN	Monobe	79.03	320	P	P	11 46 12.9	+1.5
LL05	Los Muermos	79.55	132	IAMs_20	IAMs_20	12 13 15.7	
	comp=Z,13µm,20.0s						
TWG	Pinlang	79.61	304	P	P	11 46 15.8	+1.0
LL02	Futaleuf	79.62	134	P	P	11 46 16.3	+1.6
LL02				IAmb	IAmb	11 46 17.7	
	comp=Z,102nm,1.1s						
LL01	San Ignacio de	79.71	133	IAMs_20	IAMs_20	12 13 44.7	
	comp=Z,15µm,20.0s						
H03S2	Juan Fernandez	79.72	123	T	T	13 13 52.3	
	baz=239,slow=75,SNR=5.3						
H03S1	Juan Fernandez	79.73	123	T	T	13 13 56.9	
	baz=239,slow=75,SNR=6.0						
H03S3	Juan Fernandez	79.73	123	T	T	13 13 54.7	
	baz=239,slow=75,SNR=8.8						
H03N3	Juan Fernandez	79.91	123	T	T	13 14 14.2	
	baz=236						
H03N2	Juan Fernandez	79.91	123	T	T	13 14 05.1	
	baz=236						
H03N1	Juan Fernandez	79.93	123	T	T	13 14 07.6	
	baz=236						
JSD	Sado	80.08	326	P	P	11 46 19.5	+2.5
TPUB	Ta-pu	80.23	304	IAmb	IAmb	11 46 38.1	
	comp=Z,70nm,0.4s						
TPUB	Ta-pu	80.23	304	P	P	11 46 20.1	+1.9
JNU	Nakatsue	80.27	318	LR	LR	12 19 23.9	
	comp=Z,1µm,19.2s,baz=104,slow=34						
JNU	Nakatsue	80.27	318	P	P	11 46 20.2	+2.0
LL03	Petrohue	80.38	132	IAMs_20	IAMs_20	12 14 13.6	
	comp=Z,11µm,19.0s						
LR04	Corral	80.39	131	IAMs_20	IAMs_20	12 14 18.0	
	comp=Z,13µm,20.0s						
JTM	Tenmabayashi	80.99	329	P	P	11 46 22.9	+1.1
JTM				IAmb	IAmb	11 46 24.6	
	comp=Z,163nm,1.2s						
JTM	Tenmabayashi	80.99	329	P	P	11 46 24.5	+2.7
ERM	Erimo	81.10	331	P	P	11 46 24.2	+1.8
ERM				IAmb	IAmb	11 46 27.2	
	comp=Z,220nm,1.9s						
ERM	Erimo	81.10	331	P	P	11 46 25.5	+3.1
ERM	Erimo	81.10	331	P	P	11 46 24.2	+1.8
ERM				pmax	pmax		
	comp=Z,220nm,1.9s						
JEM	Erimo	81.11	331	P	P	11 46 25.6	+3.2
LR05	Currie	81.12	132	IAmb	IAmb	11 46 26.7	
	comp=Z,230nm,1.6s						
LR05				IAMs_20	IAMs_20	12 14 24.4	
	comp=Z,9µm,19.0s						
LR03	Panguipulli	81.22	131	IAmb	IAmb	11 46 26.6	
	comp=Z,178nm,1.4s						
LR03				IAMs_20	IAMs_20	12 14 56.1	
	comp=Z,12µm,19.0s						
YUK	Yuzh-Kuril'sk	81.74	334	eP	P	11 46 23.8	-1.9
YUK				i S	S	11 56 36.4	-1.4
YUK				SS	SS	12 01 51.8	-4.7
YUK				pmax	pmax		
	comp=Z,331nm,2.4s						
PLCA	Paso Flores	81.78	133	IAmb	IAmb	11 46 29.5	
	comp=Z,98nm,1.3s						
PLCA	Paso Flores	81.78	133	P	P	11 46 27.6	+1.2
	comp=Z,46nm,1.2s,baz=232,slow=6.9,SNR=21						
PLCA				S	S	11 56 40.4	+1.3
	comp=Z,0.8nm,0.8s,baz=229,slow=20,SNR=1.3						
PLCA				LR	LR	12 15 19.9	
	comp=Z,12µm,19.5s,baz=243,slow=30						
	comp=Z,46nm,1.2s						
KUR	Kuril'sk	82.04	336	c iP	P	11 46 26.6	-0.6
KUR				i S	SKSac	11 56 50.3	+3.5
KUR				pmax	pmax		
	comp=Z,271nm,1.1s						
KUR				pmax	pmax		
	comp=Z,4µm,5.5s						
KUR				MLR	MLR		
	comp=Z,9µm,16.0s						
KUR				MLR	MLR		
	comp=N,10µm,17.0s						
KUR				MLR	MLR		
	comp=E,2µm,13.0s						
EFI	East Falkland	82.12	147	P	P	11 46 28.5	+0.6
EFI	East Falkland	82.12	147	ceP	P	11 46 28.6	+0.7
EFI				pmax	pmax		
	comp=Z,440nm,2.5s						
BI05	Punta Hualpn	82.22	128	IAMs_20	IAMs_20	12 15 36.7	
	comp=Z,12µm,19.0s						
ADK	Adak	82.31	0	P	P	11 46 30.2	+1.7
ADK	Adak	82.31	0	P	P	11 46 30.7	+2.2
ADK	Adak	82.31	0	P	P	11 46 30.2	+1.7
ADK				pmax	pmax		
	comp=Z,200nm,1.4s						
ADK				MLR	MLR		
	comp=Z,7µm,20.0s						
QZH	Quanzhou	82.70	305	P	P	11 46 30.8	-0.4
QZH				S	S	11 56 46.0	-2.6
QZH				pmax	pmax		
	comp=Z,2µm,5.4s						
QZH				LR	LR		
	comp=Z,2µm,15.7s						
QZH				LR	LR		
	comp=Z,3µm,16.7s						
QZH				LR	LR		
	comp=Z,3µm,17.2s						
JKA	Kamikawa-asahi	83.08	332	IAmb	IAmb	11 46 36.5	
	comp=Z,160nm,1.5s						
ASAJ	Asahikawa	83.08	332	P	P	11 46 33.2	+0.5
	comp=Z,30nm,1.1s,baz=223,slow=9.5,SNR=18						
ASAJ				S	SKSac	11 56 54.9	+1.0
	comp=Z,2.4nm,0.9s,baz=90,slow=20,SNR=2.0						
ASAJ				LR	LR	12 19 10.2	
	comp=Z,10µm,20.6s,baz=178,slow=33						
	comp=Z,30nm,1.1s						
BI02	San Fabin de	83.56	129	IAmb	IAmb	11 46 38.3	
	comp=Z,50nm,1.0s						
BI02				IAMs_20	IAMs_20	12 17 10.0	
	comp=Z,14µm,19.0s						
ML02	Panimavida	83.95	128	IAMs_20	IAMs_20	12 18 11.7	
	comp=Z,9µm,18.0s						
LPIG	La Paz	84.19	58	LR	LR	12 16 46.8	
	comp=Z,20µm,19.3s,baz=214,slow=30						
SKR	Severo-Kuril's	84.46	343	eP	P	11 46 39.2	-0.4
SKR				eS	S	11 57 08.1	+2.9
SKR				pmax	pmax		
	comp=Z,2µm,3.7s						
TJN	Taejon	84.61	318	IAMs_20	IAMs_20	12 31 13.2	
	comp=Z,14µm,18.0s						
TJN	Taejon	84.61	318	P	P	11 46 42.4	+1.6
TJN	Taejon	84.61	318	c iP	P	11 46 39.1	-1.7
SRIG	Santa Rosalia	84.78	54	IAMs_20	IAMs_20	12 17 38.7	
	comp=Z,14µm,19.0s						
UNV	Unalaska Valle	84.79	6	IAMs_20	IAMs_20	12 23 22.4	
	comp=Z,8µm,19.0s						
SSE	Sheshan	84.84	311	P	P	11 46 43.4	+1.4
SSE				S	S	11 57 12.3	+2.4
SSE				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SSE				pmax	pmax		
	comp=Z,780nm,10.4s						
SSE				LR	LR		
	comp=Z,640nm,23.3s						
SSE				LR	LR		
	comp=Z,920nm,22.2s						
TJX	Tijuana	84.90	47	IAMs_20	IAMs_20	12 24 07.5	
	comp=Z,13µm,18.0s						
BO02	Sierra Bellavi	84.93	128	IAMs_20	IAMs_20	12 18 30.5	
	comp=Z,9µm,18.0s						
BO01	Tunca	84.94	127	IAmb	IAmb	11 46 45.0	
	comp=Z,140nm,1.5s						
BO01				IAMs_20	IAMs_20	12 18 29.0	
	comp=Z,11µm,18.0s						
VTX	Valle De La Tr	84.98	49	IAMs_20	IAMs_20	12 16 04.7	
	comp=Z,13µm,20.0s						
VA05	Santo Domingo	84.98	126	IAMs_20	IAMs_20	12 18 01.2	
	comp=Z,13µm,19.0s						
CBX	Cerro Bola	85.01	48	IAmb	IAmb	11 46 46.3	
	comp=Z,152nm,1.9s						
CBX				IAMs_20	IAMs_20	12 22 12.6	
	comp=Z,13µm,18.0s						
KSRS	Korea Array	85.06	319	P	P	11 46 43.1	+0.2
	comp=Z,6.3nm,0.8s,baz=141,slow=5.1,SNR=28						
KSRS				S	SKSac	11 57 05.6	-1.3
	comp=Z,0.2nm,0.3s,baz=81,slow=14,SNR=1.6						
KSRS				LR	LR	12 19 34.4	
	comp=Z,1746µm,21.8s,baz=130,slow=32						
	comp=Z,6.3nm,0.8s						
KSAR	Wonju Array Be	85.07	319	P	P	11 46 43.5	+0.5
KSAR	Wonju Array Be	85.07	319	P	P	11 46 43.5	+0.5
MT01	Popeta	85.12	127	IAMs_20	IAMs_20	12 18 15.8	
	comp=Z,12µm,19.0s						
PMPB	Monarch Peak	85.12	43	IAMs_20	IAMs_20	12 16 52.4	
	comp=Z,15µm,20.0s						
SAO	San Andreas Ge	85.13	42	IAmb	IAmb	11 46 46.9	
	comp=Z,185nm,1.9s						
SAO				IAMs_20	IAMs_20	12 17 12.5	
	comp=Z,15µm,20.0s						
IPM	Ipoh	85.18	278	P	P	11 46 45.0	+0.8
IPM				IAmb	IAmb	11 46 46.9	
	comp=Z,105nm,1.7s						
TKX	Tecate	85.22	48	IAMs_20	IAMs_20	12 24 17.0	
	comp=Z,12µm,18.0s						
BBGB	Big Mountain B	85.24	42	IAMs_20	IAMs_20	12 17 15.3	
	comp=Z,16µm,20.0s						
ESJX	Sierra Juarez	85.27	48	IAmb	IAmb	11 46 48.1	
	comp=Z,105nm,1.7s						
ESJX				IAMs_20	IAMs_20	12 16 34.5	
	comp=Z,12µm,20.0s						
PASC	Pasadena Art C	85.30	46	IAmb	IAmb	11 46 47.3	
	comp=Z,118nm,1.9s						
MT09	Talagante	85.35	127	IAMs_20	IAMs_20	12 18 22.9	
	comp=Z,11µm,19.0s						
SFX	San Felipe	85.36	50	IAMs_20	IAMs_20	12 25 50.8	
	comp=Z,12µm,19.0s						
YSS	Yuzhno-Sakhali	85.37	334	P	P	11 46 45.6	+1.4
YSS				IAmb	IAmb	11 46 48.0	
	comp=Z,157nm,1.4s						
YSS				IAMs_20	IAMs_20	12 19 41.0	
	comp=Z,11µm,21.0s						
YSS	Yuzhno-Sakhali	85.37	334	P	P	11 46 46.7	+2.4
YSS	Yuzhno-Sakhali	85.37	334	α iP	P	11 46 45.4	+1.1
YSS				eS	S	11 57 15.7	+1.3
YSS				eSS	SS	12 02 45.3	-4.9
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS				pmax	pmax		
	comp=N,20nm,0.9s						
YSS				pmax	pmax		
	comp=E,30nm,1.3s						
YSS				pmax	pmax		
	comp=Z,900nm,4.2s						
YSS				pmax	pmax		
	comp=N,300nm,3.6s						
YSS				pmax	pmax		
	comp=E,300nm,3.4s						
YSS				MLR	MLR		
	comp=Z,3µm,18.0s						
YSS				MLR	MLR		
	comp=N,2µm,17.0s						
YSS				MLR	MLR		
	comp=E,2µm,17.0s						
GZH	Guangzhou	85.40	300	P	P	11 46 46.1	+1.1
GZH				S	SKSac	11 57 14.0	+4.2
GZH				pmax	pmax		
	comp=E,63nm,1.4s						
GZH				LR	LR		
	comp=E,2µm,16.4s						
GZH				LR	LR		
	comp=E,1µm,14.5s						
GZH				LR	LR		
	comp=E,3µm,19.2s						
ELS	Elsinore Mount	85.42	46	IAmb	IAmb	11 46 48.3	
	comp=Z,145nm,1.8s						
BO04	La Punta	85.50	127	IAmb	IAmb	11 47 18.5	
	comp=Z,127nm,1.6s						
BO04				IAMs_20	IAMs_20	12 18 36.6	
	comp=Z,12µm,19.0s						
MT02	Curacav	85.54	126	IAmb	IAmb	11 49 39.0	
	comp=Z,176nm,1.6s						
MT02				IAMs_20	IAMs_20	12 18 00.8	
	comp=Z,14µm,19.0s						
YUH	Yuha Desert	85.71	48	IAmb	IAmb	11 46 49.7	
	comp=Z,120nm,1.9s						
YUH				IAMs_20	IAMs_20	12 22 34.0	
	comp=Z,12µm,19.0s						
QIZ	Qiongzhong	85.74	295	P	P	11 46 46.5	-0.3
QIZ				PP	PP	11 50 04.5	-1.9
QIZ				S	S	11 57 18.1	-1.2
QIZ				pmax	pmax		
	comp=Z,1µm,5.9s						
QIZ				LR	LR		
	comp=Z,830nm,22.6s						
QIZ				LR	LR		
	comp=Z,3µm,40.4s						
MT05	Renca	85.74	126	IAMs_20	IAMs_20	12 18 44.2	
	comp=Z,13µm,19.0s						
GDXM	Geysers	85.81	40	IAmb	IAmb	11 46 51.6	
	comp=Z,158nm,1.7s						
VA06	Catapilco	85.81	126	IAmb	IAmb	11 49 32.3	
	comp=Z,83nm,0.8s						
MT03	Universidad Ad	85.84	127	IAMs_20	IAMs_20	12 18 47.0	
	comp=Z,13µm,18.0s						
LMEL	Las Melosas	85.85	127	IAmb	IAmb	11 46 52.9	
	comp=Z,86nm,1.2s						
LMEL				IAMs_20	IAMs_20	12 18 58.0	
	comp=Z,13µm,19.0s						
MT16	CCHEN	85.87	127	IAmb	IAmb	11 49 54.9	
	comp=Z,76nm,0.7s						
MT16				IAMs_20	IAMs_20	12 18 47.5	
	comp=Z,13µm,18.0s						
KULM	Kulim	85.92	279	P	P	11 46 48.7	+0.8
KULM				IAmb	IAmb	11 46 49.5	
	comp=Z,142nm,1.9s						
KULM	Kulim	85.92	279	P	P	11 46 48.1	+0.2
PEL	Peldehue	85.92	126	IAMs_20	IAMs_20	12 18 22.0	
	comp=Z,13µm,19.0s						
CPBX	Cerro Prieto	85.95	48	IAMs_20	IAMs_20	12 24 48.5	
	comp=Z,10µm,18.0s						
PFO	Pinyon Flats O	86.00	47	P	P	11 46 49.7	+1.8
PFO				IAmb	IAmb	11 46 51.4	
	comp=Z,142nm,1.8s						
PFO	Pinyon Flats O	86.00	47	S	SKSac	11 57 16.6	+3.2
	comp=Z,0.3nm,0.3s,baz=281,slow=6.2,SNR=1.3						
PFO				LR	LR	12 19 57.9	
	comp=Z,9µm,18.0s,baz=236,slow=32						
PFO	Pinyon Flats O	86.00	47	P	P	11 46 49.7	+1.8
PFO				pmax	pmax		
	comp=Z,142nm,1.8s						
PFO				MLR	MLR		
	comp=Z,17µm,18.0s						
CCAC	Calif City Air	86.06	45	IAmb	IAmb	11 46 51.7	
	comp=Z,207nm,1.9s						
PET	Petropavlovsk	86.06	346	P	P	11 46 49.0	+1.4
PET				IAmb	IAmb	11 46 49.9	
	comp=Z,141nm,1.9s						
PET	Petropavlovsk	86.06	346	c iP	P	11 46 48.1	+0.6
PET				e		11 57 14.8	
PET				eS	S	11 57 24.3	+3.4
PET				ePS	PnS	11 58 21.5	+2.0
PET				ePPS	PPS	11 58 43.1	
PET				eSS	SS	12 03 07.4	+7.3
PET				pmax	pmax		
	comp=Z,1µm,4.1s						
PET				pmax	pmax		
	comp=Z,33nm,1.9s						
PET				pmax	pmax		
	comp=Z,1µm,11.9s						
PET				smax	smax		
	comp=N,2µm,11.2s						
PET				smax	smax		
	comp=E,3µm,12.8s						
PET				smax	smax		
	comp=N,2µm,11.5s						
PET				smax	smax		
	comp=E,3µm,11.4s						
PET				MLR	MLR		
	comp=Z,6µm,18.0s						
PET				MLR	MLR		
	comp=Z,6µm,19.0s						
PSI	Prapat	86.11	276	S	SKSac	11 57 13.4	-1.7
	comp=Z,1.7nm,0.4s,baz=144,slow=22,SNR=1.4						
PSI				LR	LR	12 28 50.6	
	comp=Z,6µm,18.0s,baz=132,slow=38						
PSI	Prapat	86.11	276	P	P	11 46 48.7	-0.3
FALS	False Pass	86.12	8	IAMs_20	IAMs_20	12 25 53.6	
	comp=Z,8µm,19.0s						
ISA	Isabella, Lake	86.12	44	IAmb	IAmb	11 46 52.0	
	comp=Z,160nm,1.6s						
ISA				IAMs_20	IAMs_20	12 25 42.9	
	comp=Z,13µm,18.0s						
MT08	Bocatoma Ro	86.21	127	IAmb	IAmb	11 49 57.4	
	comp=Z,46nm,0.7s						
MT08				IAMs_20	IAMs_20	12 18 59.5	
	comp=Z,14µm,20.0s						
VA03	San Esteban	86.22	126	IAMs_20	IAMs_20	12 18 21.0	
	comp=Z,15µm,19.0s						
PEA0B	Petropavlovsk-	86.34	345	P	P	11 46 50.9	+1.9
PEA0B	Petropavlovsk-	86.34	345	P	P	11 46 50.9	+1.9
PEA0B				pmax	pmax		
	comp=Z,221nm,1.8s						
PETK	Petropavlovsk-	86.34	345	P	P	11 46 48.8	-0.2
	comp=Z,12nm,1.0s,baz=126,slow=7.5,SNR=21						
PETK				S	SKSac	11 57 10.4	-4.0
	comp=Z,0.7nm,0.4s,baz=91,slow=7.2,SNR=1.6						
	comp=Z,12nm,1.0s						
TEY	Ternei	86.35	329	⇓eP	P	11 46 46.6	-2.6
TEY				pmax	pmax		
	comp=Z,200nm,5.0s						
TEY				pmax	pmax		
	comp=Z,10.0nm,1.6s						
TEY				pmax	pmax		

	comp=E,100nm,5.6s						
GSI	**Gunungsitoli**	**86.51**	**274**	IAmb	IAmb	11 47 03.5	
	comp=Z,81nm,1.1s						
GSI				IAMs_20	IAMs_20	12 27 53.8	
	comp=Z,12µm,20.0s						
GSI	**Gunungsitoli**	**86.51**	**274**	P	**P**	**11 46 52.9**	**+2.1**
GSI	**Gunungsitoli**	**86.51**	**274**	P	**P**	**11 46 53.4**	**+2.6**
	comp=Z,103nm,2.4s						
CNBA	**Chernabura Isl**	**86.60**	**10**	IAMs_20	IAMs_20	12 25 41.8	
	comp=Z,11µm,20.0s						
CMB	**Columbia Colle**	**86.62**	**41**	IAmb	IAmb	11 46 53.9	
	comp=Z,121nm,1.6s						
CMB				IAMs_20	IAMs_20	12 18 08.9	
	comp=Z,10µm,20.0s						
GLA	**Glamis**	**86.67**	**48**	IAmb	IAmb	11 46 55.0	
	comp=Z,113nm,1.6s						
GLA				IAMs_20	IAMs_20	12 23 14.5	
	comp=Z,11µm,18.0s						
HSIG		**86.73**	**53**	IAMs_20	IAMs_20	12 23 02.1	
	comp=Z,8µm,18.0s						
CO02	**Combarbal**	**86.78**	**125**	IAMs_20	IAMs_20	12 17 48.0	
	comp=Z,12µm,20.0s						
GSC	**Goldstone, Bar**	**86.89**	**45**	IAmb	IAmb	11 46 55.7	
	comp=Z,172nm,1.7s						
NJ2	**Nanjing**	**86.98**	**310**	⇑P	**P**	**11 46 53.1**	**+0.5**
NJ2				sP	**pwP**	**11 47 03.9**	**+0.3**
NJ2				S	**S**	**11 57 35.3**	**+4.5**
NJ2				SS	**SS**	**12 03 14.3**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,25nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,2µm,8.8s						
NJ2				LR	LR		
	comp=Z,3µm,20.5s						
NJ2				LR	LR		
	comp=Z,1µm,17.0s						
NJ2				LR	LR		
	comp=Z,3µm,22.4s						
MSHR	**Mys Shultsa**	**87.04**	**325**	*ce*P	**P**	**11 46 51.6**	**-1.0**
MSHR				pmax	pmax		
	comp=Z,73nm,1.3s						
PAYG	**Puerto Ayora**	**87.05**	**89**	P	**P**	**11 46 54.8**	**+1.3**
PAYG				IAmb	IAmb	11 46 58.0	
	comp=Z,122nm,1.3s						
PAYG				IAMs_20	IAMs_20	12 17 33.2	
	comp=Z,11µm,19.0s						
ORV	**Oroville**	**87.05**	**40**	P	**P**	**11 46 53.7**	**+0.9**
ORV				IAmb	IAmb	11 46 55.9	
	comp=Z,143nm,1.8s						
ORV				IAMs_20	IAMs_20	12 18 52.4	
	comp=Z,10µm,20.0s						
ORV	**Oroville**	**87.05**	**40**	P	**P**	**11 46 53.7**	**+0.9**
ORV				pmax	pmax		
	comp=Z,143nm,1.8s						
VLA	**Vladivostok**	**87.08**	**325**	*d i*P	**P**	**11 46 52.2**	**-0.6**
VLA				pmax	pmax		
	comp=Z,63nm,1.7s						
S12K	**Black Hills**	**87.12**	**9**	IAMs_20	IAMs_20	12 26 45.4	
	comp=Z,9µm,19.0s						
113A	**Mohawk Valley,**	**87.17**	**49**	IAmb	IAmb	11 46 57.1	
	comp=Z,83nm,1.6s						
CO03	**El Pedregal**	**87.21**	**124**	IAMs_20	IAMs_20	12 18 56.2	
	comp=Z,12µm,19.0s						
PSTR	**Posyet**	**87.27**	**324**	*c i*P	**P**	**11 46 56.2**	**+2.5**
214A	**Organ Pipe Nat**	**87.29**	**50**	IAmb	IAmb	11 46 57.8	
	comp=Z,158nm,2.0s						
QSM	**Queen of Sheba**	**87.29**	**45**	IAmb	IAmb	11 46 57.4	
	comp=Z,148nm,1.6s						
BLYC	**Blythe**	**87.31**	**48**	IAmb	IAmb	11 46 58.0	
	comp=Z,171nm,1.9s						
BLYC				IAMs_20	IAMs_20	12 25 32.5	
	comp=Z,11µm,18.0s						
CO05	**La Serena**	**87.33**	**123**	IAMs_20	IAMs_20	12 17 24.6	
	comp=Z,14µm,20.0s						
UGL	**Uglegorsk**	**87.39**	**335**	*c i*P	P	11 46 46.3	-7.9
UGL				*e*S	**SKSac**	**11 57 14.3**	**-6.6**
UGL				pmax	pmax		
	comp=Z,2µm,4.0s						
UGL				smax	smax		
	comp=E,5µm,11.0s						
UGL				smax	smax		
	comp=N,8µm,14.0s						
UGL				MLR	MLR		
	comp=N,4µm,19.0s						
UGL				MLR	MLR		
	comp=E,2µm,19.0s						
UGL				MLR	MLR		
	comp=Z,5µm,19.0s						
WAKR	**Walker**	**87.48**	**42**	IAMs_20	IAMs_20	12 18 36.8	
	comp=Z,13µm,20.0s						
GO04	**Tololo Observa**	**87.50**	**124**	IAMs_20	IAMs_20	12 19 39.1	
	comp=Z,13µm,18.0s						
GWY	**Greenwater Val**	**87.56**	**45**	IAmb	IAmb	11 46 58.8	
	comp=Z,160nm,1.7s						
DSP	**Deep Springs**	**87.57**	**43**	IAmb	IAmb	11 46 58.9	
	comp=Z,128nm,1.7s						
DSP				IAMs_20	IAMs_20	12 18 31.1	
	comp=Z,10µm,20.0s						
L02F	**Cave Junction**	**87.77**	**37**	IAMs_20	IAMs_20	12 17 42.2	
	comp=Z,10µm,20.0s						
PNTR	**Pine Nut**	**87.79**	**41**	IAmb	IAmb	11 46 59.9	
	comp=Z,129nm,1.4s						
PNTR				IAMs_20	IAMs_20	12 18 57.0	
	comp=Z,15µm,20.0s						
USRK	**Ussuriysk Ar.**	**87.83**	**326**	P	**P**	**11 46 56.5**	**+0.1**
	comp=Z,12nm,1.0s,baz=174,slow=3.6,SNR=26						
USRK				S	**SKSac**	**11 57 21.9**	**-2.0**
	comp=Z,0.5nm,0.6s,baz=218,slow=21,SNR=1.1						
USRK				LR	LR	12 23 28.8	
	comp=Z,3µm,19.5s,baz=145,slow=34						
	comp=Z,12nm,1.0s						
USA0B	**Ussuriysk Arra**	**87.84**	**326**	IAmb	IAmb	11 46 59.6	
	comp=Z,135nm,1.6s						
USA0B	**Ussuriysk Arra**	**87.84**	**326**	*c i*P	**P**	**11 46 54.8**	**-1.6**
LHV	**Little Huntoon**	**87.85**	**42**	IAmb	IAmb	11 47 00.2	
	comp=Z,135nm,1.6s						
LHV				IAMs_20	IAMs_20	12 18 50.5	
	comp=Z,15µm,20.0s						
BEKR	**Beckworth**	**87.90**	**40**	IAmb	IAmb	11 47 00.1	
	comp=Z,128nm,1.7s						
BEKR				IAMs_20	IAMs_20	12 18 59.8	
	comp=Z,11µm,20.0s						
YBH	**Yreka Blue Hor**	**87.94**	**38**	IAmb	IAmb	11 47 00.6	
	comp=Z,124nm,1.8s						
YBH				IAMs_20	IAMs_20	12 27 31.8	
	comp=Z,11µm,18.0s						
YBH	**Yreka Blue Hor**	**87.94**	**38**	P	**P**	**11 46 57.4**	**+0.3**
	comp=Z,0.5nm,0.9s,baz=179,slow=3.5,SNR=7.9						
YBH				S	**SKSac**	**11 57 23.1**	**-1.8**
	baz=188,slow=6.1,SNR=6.4						
YBH				LR	LR	12 21 43.7	
	comp=Z,605nm,18.3s,baz=240,slow=32						
GMN	**Gold Mountain**	**87.94**	**44**	IAmb	IAmb	11 47 00.7	
	comp=Z,94nm,1.6s						
WCT	**Wildcat Mounta**	**87.99**	**44**	IAmb	IAmb	11 47 01.0	
	comp=Z,125nm,1.8s						
WCT				IAMs_20	IAMs_20	12 27 11.2	
	comp=Z,14µm,18.0s						
NVAR	**Mina Array Bea**	**88.09**	**42**	P	**P**	**11 46 58.8**	**+0.7**
NVAR	**Mina Array Bea**	**88.09**	**42**	P	**P**	**11 46 58.5**	**+0.4**
	comp=Z,18nm,1.1s,baz=220,slow=6.2,SNR=52						
NVAR				S	**SKSac**	**11 57 30.5**	**+4.2**
	comp=Z,0.1nm,0.3s,baz=185,slow=9.9,SNR=1.3						
NVAR				LR	LR	12 19 11.4	
	comp=Z,13µm,19.9s,baz=230,slow=31						
	comp=Z,18nm,1.1s						
RYN	**Ryan**	**88.09**	**42**	IAmb	IAmb	11 47 01.2	
	comp=Z,146nm,1.7s						
RYN				IAMs_20	IAMs_20	12 18 58.0	
	comp=Z,12µm,20.0s						
CO01	**Juntas del Tor**	**88.12**	**124**	IAMs_20	IAMs_20	12 19 52.4	
	comp=Z,12µm,19.0s						
K02D	**Willamette Mer**	**88.14**	**36**	P	**P**	**11 46 59.0**	**+1.0**
K02D				IAMs_20	IAMs_20	12 27 23.9	
	comp=Z,13µm,18.0s						
NV11	**Mina Array Sit**	**88.17**	**42**	IAmb	IAmb	11 47 01.6	
	comp=Z,127nm,1.6s						
CHIR	**Chirikof Islan**	**88.22**	**12**	IAMs_20	IAMs_20	12 29 34.4	
	comp=Z,14µm,19.0s						
ZON	**Zonda**	**88.22**	**126**	IAmb	IAmb	11 49 48.6	
	comp=Z,35nm,0.7s						
ZON				IAMs_20	IAMs_20	12 19 54.8	
	comp=Z,13µm,19.0s						
LCO	**Las Campanas**	**88.23**	**123**	IAMs_20	IAMs_20	12 19 34.4	
	comp=Z,13µm,19.0s						
PAHR	**Pah Rah Range**	**88.34**	**41**	IAmb	IAmb	11 47 02.2	
	comp=Z,133nm,1.7s						
J01E	**Myrtle Point**	**88.34**	**36**	IAMs_20	IAMs_20	12 24 16.2	
	comp=Z,11µm,19.0s						
V12A	**Nelson**	**88.38**	**46**	IAmb	IAmb	11 47 03.2	
	comp=Z,146nm,1.8s						
Y14A	**Wickenburg**	**88.41**	**49**	IAmb	IAmb	11 47 03.2	
	comp=Z,152nm,1.8s						
AC04	**Llanos de Chal**	**88.41**	**122**	IAMs_20	IAMs_20	12 18 15.3	
	comp=Z,10µm,20.0s						
CFA	**Coronel Fontan**	**88.49**	**126**	LR	LR	12 20 33.4	
	comp=Z,7µm,18.2s,baz=212,slow=32						
L04D	**Klamath Falls**	**88.50**	**37**	IAMs_20	IAMs_20	12 27 49.5	
	comp=Z,13µm,18.0s						
MOIG	**Morelia**	**88.58**	**66**	IAMs_20	IAMs_20	12 18 13.1	
	comp=Z,13µm,20.0s						
W13A	**Hualapai Mount**	**88.58**	**47**	IAmb	IAmb	11 47 04.3	
	comp=Z,110nm,1.7s						
W13A				IAMs_20	IAMs_20	12 26 30.8	
	comp=Z,12µm,18.0s						
TYV	**Tymovskoe**	**88.67**	**336**	*e*P	**P**	**11 47 01.0**	**+0.8**
TYV				*e*S	**S**	**11 57 46.5**	**+0.5**
TYV				pmax	pmax		
	comp=Z,68nm,1.5s						
TYV				pmax	pmax		
	comp=Z,600nm,3.3s						
TYV				smax	smax		
	comp=N,1µm,6.7s						
TYV				smax	smax		
	comp=E,400nm,6.7s						
TYV				smax	smax		
	comp=N,8.0nm,2.2s						
TYV				smax	smax		
	comp=E,8.0nm,2.2s						
TYV				MLR	MLR		
	comp=E,4µm,18.0s						
TYV				MLR	MLR		
	comp=Z,5µm,18.0s						
SHPR	**Sheep Range**	**88.69**	**45**	IAmb	IAmb	11 47 04.8	
	comp=Z,92nm,1.8s						
SHPR				IAMs_20	IAMs_20	12 26 54.9	
	comp=Z,8µm,18.0s						
TRQA	**Tornquist**	**88.71**	**134**	P	**P**	**11 47 02.0**	**+0.9**
TRQA				IAmb	IAmb	11 47 03.5	
	comp=Z,86nm,1.5s						
TRQA				IAMs_20	IAMs_20	12 20 39.8	
	comp=Z,9µm,19.0s						
TRQA	**Tornquist**	**88.71**	**134**	P	**P**	**11 47 02.0**	**+0.9**
TRQA				pmax	pmax		
	comp=Z,86nm,1.5s						
BBOR	**Butler Butte**	**88.78**	**37**	IAmb	IAmb	11 47 04.3	
	comp=Z,135nm,1.9s						
TUC	**Tucson**	**88.85**	**51**	IAMs_20	IAMs_20	12 28 53.4	
	comp=Z,9µm,18.0s						
GULI	**GuiLin**	**88.89**	**300**	P	**P**	**11 47 03.3**	**+1.4**
GULI				S	**S**	**11 57 43.5**	**-5.8**
GULI				pmax	pmax		
	comp=Z,20nm,2.5s						
GULI				pmax	pmax		
	comp=Z,1µm,10.2s						
GULI				LR	LR		
	comp=Z,2µm,18.2s						
GULI				LR	LR		
	comp=Z,2µm,17.8s						
GULI				LR	LR		
	comp=Z,3µm,18.5s						
Q09A	**Carvers**	**89.01**	**43**	IAMs_20	IAMs_20	12 19 38.2	
	comp=Z,13µm,20.0s						
I03D	**Drain, OR**	**89.02**	**36**	IAMs_20	IAMs_20	12 18 42.2	
	comp=Z,10µm,20.0s						
S11A	**Rachel**	**89.07**	**44**	IAmb	IAmb	11 47 08.3	
	comp=Z,149nm,1.6s						
K04D	**Chiloquin, OR**	**89.08**	**37**	IAMs_20	IAMs_20	12 28 09.8	
	comp=Z,12µm,18.0s						
WHN	**Wuhan**	**89.09**	**307**	P	**P**	**11 47 04.4**	**+1.7**
WHN				S	**S**	**11 57 46.5**	**-4.5**
WHN				pmax	pmax		
	comp=Z,350nm,1.9s						
WHN				pmax	pmax		
	comp=Z,4µm,10.0s						
WHN				LR	LR		
	comp=Z,2µm,9.8s						
WHN				LR	LR		
	comp=Z,5µm,18.0s						
WHN				LR	LR		
	comp=Z,7µm,20.1s						
SII	**Sitkinak Islan**	**89.18**	**13**	IAMs_20	IAMs_20	12 29 53.8	
	comp=Z,10µm,19.0s						
ZAIG	**Zacatecas**	**89.21**	**63**	IAmb	IAmb	11 47 07.5	
	comp=Z,89nm,2.0s						
ZAIG				IAMs_20	IAMs_20	12 18 53.0	
	comp=Z,10µm,20.0s						
319A	**Douglas**	**89.30**	**52**	IAmb	IAmb	11 47 07.6	
	comp=Z,104nm,1.7s						
319A				IAMs_20	IAMs_20	12 26 19.3	
	comp=Z,12µm,18.0s						
MDJ	**Mudanjiang**	**89.31**	**325**	IAmb	IAmb	11 47 06.6	
	comp=Z,132nm,1.6s						
MDJ	**Mudanjiang**	**89.31**	**325**	P	**P**	**11 47 03.6**	**+0.2**
MDJ				pP	pP	11 47 06.3	-0.1
MDJ				SKS	**SKSac**	**11 57 32.6**	**-0.1**
MDJ				pmax	pmax		
	comp=Z,60nm,2.4s						
MDJ				pmax	pmax		
	comp=Z,2µm,8.5s						
MDJ				LR	LR		
	comp=Z,3µm,19.2s						
MDJ				LR	LR		
	comp=Z,3µm,21.2s						
MDJ				LR	LR		
	comp=Z,8µm,20.3s						
MDJ	**Mudanjiang**	**89.31**	**325**	P	**P**	**11 47 04.9**	**+1.5**
GO03	**Copiapo**	**89.36**	**122**	IAMs_20	IAMs_20	12 18 43.7	
	comp=Z,10µm,20.0s						
AC06	**Mina Casimiro**	**89.41**	**122**	IAMs_20	IAMs_20	12 19 02.9	
	comp=Z,9µm,20.0s						
TLIG	**Tlapa**	**89.53**	**69**	IAmb	IAmb	11 47 09.2	
	comp=Z,75nm,1.4s						
TLIG				IAMs_20	IAMs_20	12 18 17.4	
	comp=Z,10µm,20.0s						
BUCK	**Buck Mountain**	**89.56**	**36**	IAMs_20	IAMs_20	12 25 05.5	
	comp=Z,12µm,19.0s						
DL2	**Dalian**	**89.67**	**317**	P	**P**	**11 47 05.3**	**+0.1**
DL2				SKS	**SKSac**	**11 57 32.8**	**-2.2**
DL2				S	**ScS**	**11 58 01.8**	**+1.4**
DL2				pmax	pmax		
	comp=Z,64nm,1.3s						
DL2				pmax	pmax		
	comp=Z,3µm,4.9s						
DL2				LR	LR		
	comp=Z,3µm,17.6s						
DL2				LR	LR		
	comp=Z,3µm,17.4s						
DL2				LR	LR		
	comp=Z,5µm,17.6s						
COR	**Corvallis**	**89.68**	**35**	P	**P**	**11 47 05.4**	**+0.3**
COR	**Corvallis**	**89.68**	**35**	P	**P**	**11 47 05.4**	**+0.3**
COR				pmax	pmax		
	comp=Z,441nm,2.0s						
X16A	**Lo Mia Camp, P**	**89.72**	**49**	IAmb	IAmb	11 47 09.9	
	comp=Z,140nm,1.7s						
X16A				IAMs_20	IAMs_20	12 19 01.2	
	comp=Z,11µm,20.0s						
J05D	**Fort Rock, OR**	**89.81**	**37**	IAmb	IAmb	11 47 10.3	
	comp=Z,171nm,1.6s						
J05D				IAMs_20	IAMs_20	12 28 25.2	
	comp=Z,11µm,18.0s						
HEBO	**Mount Hebo**	**89.91**	**35**	IAMs_20	IAMs_20	12 25 12.7	
	comp=Z,13µm,19.0s						
AC01	**Pan de Azucar**	**89.91**	**121**	IAMs_20	IAMs_20	12 20 46.3	
	comp=Z,11µm,19.0s						
UNM	**Universidad Na**	**89.98**	**68**	IAMs_20	IAMs_20	12 18 47.5	
	comp=Z,12µm,20.0s						
G03D	**McMinnville, O**	**90.15**	**35**	IAMs_20	IAMs_20	12 25 21.0	
	comp=Z,12µm,19.0s						
LCMT	**Little Creek M**	**90.19**	**46**	IAmb	IAmb	11 47 11.7	
	comp=Z,109nm,1.6s						
H04A	**Detroit Lake**	**90.31**	**36**	IAMs_20	IAMs_20	12 25 29.3	
	comp=Z,13µm,19.0s						
PINE	**Pine Mountain**	**90.32**	**37**	IAMs_20	IAMs_20	12 19 38.6	
	comp=Z,9µm,20.0s						
U15A	**North Rim**	**90.42**	**47**	IAMs_20	IAMs_20	12 27 31.8	
	comp=Z,11µm,18.0s						
WUAZ	**Wupatki**	**90.44**	**48**	IAmb	IAmb	11 47 13.8	
	comp=Z,119nm,1.5s						
WUAZ				IAMs_20	IAMs_20	12 25 32.3	
	comp=Z,10µm,18.0s						
SNY	**Shenyang**	**90.50**	**320**	⇑P	**P**	**11 47 08.9**	**-0.1**
SNY				pmax	pmax		
	comp=Z,13nm,1.0s						
SNY				pmax	pmax		
	comp=Z,900nm,8.3s						
SNY				LR	LR		
	comp=Z,1µm,21.3s						
SNY				LR	LR		
	comp=Z,1µm,20.2s						
SNY				LR	LR		
	comp=Z,3µm,18.4s						
F03A	**Seaside**	**90.52**	**34**	IAMs_20	IAMs_20	12 20 15.9	
	comp=Z,8µm,20.0s						
AC02	**Maricunga**	**90.61**	**122**	IAmb	IAmb	11 50 14.8	
	comp=Z,46nm,0.8s						
AC02				IAMs_20	IAMs_20	12 19 33.5	
	comp=Z,11µm,20.0s						
WVOR	**Wild Horse Val**	**90.61**	**39**	IAmb	IAmb	11 47 12.8	
	comp=Z,126nm,1.6s						
KDAK	**Kodiak Island**	**90.64**	**13**	S	**SKSac**	**11 57 46.4**	**+6.6**
	comp=Z,3.7nm,0.9s,baz=118,slow=17,SNR=1.8						
KDAK				LR	LR	12 24 53.9	
	comp=Z,6µm,18.5s,baz=207,slow=34						
KDAK	**Kodiak Island**	**90.64**	**13**	*c i*P	**P**	**11 47 09.6**	**+0.4**
KDAK				pmax	pmax		
	comp=Z,88nm,2.3s						
O14K	**Tigyukauivet M**	**90.68**	**8**	IAMs_20	IAMs_20	12 28 47.2	
	comp=Z,9µm,20.0s						
TIA	**Tai'an**	**90.70**	**313**	P	**P**	**11 47 10.1**	**0.0**
TIA				SKS	**SKSac**	**11 57 43.4**	**+2.1**
TIA				pmax	pmax		
	comp=Z,25nm,0.8s						
TIA				pmax	pmax		
	comp=Z,3µm,9.3s						
TIA				LR	LR		
	comp=Z,780nm,18.6s						
TIA				LR	LR		
	comp=Z,2µm,19.9s						
TIA				LR	LR		
	comp=Z,2µm,17.2s						
X18A	**Snowflake**	**90.76**	**50**	IAmb	IAmb	11 47 14.5	
	comp=Z,131nm,1.7s						
X18A				IAMs_20	IAMs_20	12 27 19.8	
	comp=Z,12µm,18.0s						
PSUT	**Pine Spring**	**90.79**	**45**	IAmb	IAmb	11 47 14.2	
	comp=Z,69nm,1.7s						
SPR3	**Spring Creek 3**	**90.80**	**44**	IAmb	IAmb	11 47 13.7	
	comp=Z,72nm,1.6s						
CN2	**Changchun**	**90.84**	**322**	⇑P	**P**	**11 47 10.5**	**0.0**
CN2				*e*sP	sP	11 47 17.0	+2.4
CN2				*e*S	**S**	**11 58 05.8**	**-0.8**
CN2				pmax	pmax		
	comp=Z,100nm,1.0s						
CN2				pmax	pmax		
	comp=Z,900nm,7.0s						
CN2				LR	LR		
	comp=Z,600nm,17.0s						
CN2				LR	LR		
	comp=Z,400nm,17.0s						
CN2				LR	LR		
	comp=Z,900nm,18.0s						
F04D	**Rainier, OR**	**90.90**	**34**	IAMs_20	IAMs_20	12 20 17.8	
	comp=Z,8µm,20.0s						
GRNR	**Gornyy**	**90.92**	**333**	⇑*i*P	**P**	**11 47 11.6**	**+0.8**
GRNR				pmax	pmax		
	comp=Z,20nm,1.0s						
PB14	**IPOC Station P**	**90.92**	**119**	P	**P**	**11 47 13.2**	**+1.2**
PB14				IAmb	IAmb	11 47 14.4	
	comp=Z,79nm,1.3s						
PB14				IAMs_20	IAMs_20	12 19 28.1	
	comp=Z,9µm,20.0s						
E03A	**Lebam**	**90.96**	**34**	IAMs_20	IAMs_20	12 25 50.5	
	comp=Z,10µm,19.0s						
HOOD	**Mount Hood Mea**	**91.03**	**36**	IAmb	IAmb	11 47 14.6	
	comp=Z,105nm,1.4s						
G05A	**Wamic**	**91.14**	**36**	IAmb	IAmb	11 47 29.7	
	comp=Z,100nm,1.2s						
BNX	**BinXian**	**91.19**	**325**	⇓P	**P**	**11 47 12.0**	**-0.1**
BNX				pmax	pmax		
	comp=Z,17nm,1.2s						
BNX				pmax	pmax		
	comp=Z,960nm,8.8s						
BNX				LR	LR		
	comp=Z,2µm,20.1s						
BNX				LR	LR		
	comp=Z,3µm,21.1s						
BNX				LR	LR		
	comp=Z,4µm,20.2s						
GO02	**Mina Guanaco**	**91.22**	**120**	IAmb	IAmb	11 50 51.0	
	comp=Z,33nm,0.8s						
GO02				IAMs_20	IAMs_20	12 20 41.0	
	comp=Z,10µm,19.0s						
NKL	**Nikolayevsk**	**91.25**	**336**	*e*P	**P**	**11 47 13.5**	**+1.3**
NKL				*e*S	**SKSac**	**11 57 42.5**	**-0.9**
NKL				pmax	pmax		
	comp=E,64nm,1.5s						
NKL				pmax	pmax		
	comp=N,23nm,0.6s						
NKL				pmax	pmax		
	comp=Z,167nm,1.6s						
NKL				smax	smax		
	comp=E,2µm,8.7s						
NKL				smax	smax		
	comp=N,2µm,9.4s						
NKL				MLR	MLR		
	comp=N,10µm,18.0s						
NKL				MLR	MLR		
	comp=E,12µm,18.0s						
NKL				MLR	MLR		
	comp=Z,16µm,17.0s						
CRZF	**Crozet Islands**	**91.25**	**212**	IAMs_20	IAMs_20	12 28 24.4	
	comp=Z,8µm,19.0s						
I07A	**Izee**	**91.27**	**38**	IAMs_20	IAMs_20	12 29 32.7	
	comp=Z,11µm,18.0s						
N14K	**Kuskokwak Cree**	**91.28**	**8**	IAMs_20	IAMs_20	12 31 05.5	
	comp=Z,7µm,19.0s						
M11K	**Mekoryuk**	**91.29**	**5**	IAMs_20	IAMs_20	12 29 35.2	
	comp=Z,7µm,19.0s						
ELK	**Elko**	**91.39**	**42**	IAmb	IAmb	11 47 16.5	
	comp=Z,59nm,1.6s						
ELK				IAMs_20	IAMs_20	12 21 14.3	
	comp=Z,14µm,20.0s						
ELK	**Elko**	**91.39**	**42**	P	**P**	**11 47 13.7**	**+0.1**
	comp=Z,8.4nm,1.1s,baz=218,slow=4.9,SNR=14						
ELK				S	**SKSac**	**11 57 48.4**	**+2.9**
	comp=Z,0.2nm,0.4s,baz=151,slow=13,SNR=1.1						
ELK				LR	LR	12 21 24.9	
	comp=Z,13µm,19.9s,baz=239,slow=31						
	comp=Z,8.4nm,1.1s						
NLWA	**Neilton Lookou**	**91.43**	**33**	IAMs_20	IAMs_20	12 20 40.7	
	comp=Z,11µm,20.0s						
EPT	**El Paso**	**91.44**	**54**	IAMs_20	IAMs_20	12 21 46.0	
	comp=Z,9µm,19.0s						
G06A	**Carlson Farm,**	**91.48**	**36**	IAMs_20	IAMs_20	12 26 17.3	
	comp=Z,8µm,19.0s						
Q19K	**Cape Douglas,**	**91.52**	**12**	IAMs_20	IAMs_20	12 31 13.5	
	comp=Z,11µm,19.0s						
M13K	**Dall Lake**	**91.58**	**7**	IAMs_20	IAMs_20	12 27 53.0	
	comp=Z,8µm,20.0s						
SLVN	**Son La**	**91.66**	**294**	P	**P**	**11 47 16.1**	**+1.1**
P18K	**Big Mountain,**	**91.68**	**11**	IAMs_20	IAMs_20	12 28 50.8	
	comp=Z,10µm,20.0s						
KLR	**Kul'dur**	**91.69**	**329**	P	**P**	**11 47 14.6**	**+0.3**
	comp=Z,8.3nm,1.0s,baz=123,slow=3.1,SNR=23						
KLR				S	**SKSac**	**11 57 45.0**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=196,slow=20,SNR=1.2						
KLR				LR	LR	12 23 52.8	
	comp=Z,7µm,20.9s,baz=138,slow=33						
	comp=Z,8.3nm,1.0s						
KLR	**Kul'dur**	**91.69**	**329**	*ce*P	**P**	**11 47 14.8**	**+0.4**
KLR				pmax	pmax		
	comp=Z,47nm,1.6s						
N15K	**Kwethluk River**	**91.72**	**8**	IAmb	IAmb	11 47 17.3	
	comp=Z,74nm,1.8s						
N15K				IAMs_20	IAMs_20	12 29 07.6	
	comp=Z,10µm,20.0s						
MVU	**Marysvale**	**91.77**	**45**	IAmb	IAmb	11 47 19.3	
	comp=Z,56nm,1.6s						
MVU				IAMs_20	IAMs_20	12 29 05.3	
	comp=Z,13µm,18.0s						
OZB	**Mount Ozzard**	**91.83**	**31**	IAMs_20	IAMs_20	12 26 43.3	
	comp=Z,12µm,19.0s						
VHRN	**Van Horn**	**91.94**	**55**	IAmb	IAmb	11 47 19.2	
	comp=Z,72nm,1.8s						
HOLB	**Holberg**	**91.95**	**29**	IAMs_20	IAMs_20	12 21 58.5	
	comp=Z,8µm,20.0s						
LON	**Longmire**	**91.95**	**35**	IAmb	IAmb	11 47 20.7	
	comp=Z,104nm,1.9s						
GNW	**Green Mountain**	**92.05**	**33**	IAmb	IAmb	11 47 19.4	
	comp=Z,112nm,1.7s						
TX31	**Lajitas Ar. Si**	**92.06**	**57**	IAmb	IAmb	11 47 19.8	

	comp=Z,63nm,1.7s						
TXAR	**Lajitas Array**	**92.06**	**57**	P	**P**	**11 47 18.2**	**+1.5**
TXAR	**Lajitas Array**	**92.06**	**57**	P	**P**	**11 47 17.1**	**+0.3**
	comp=Z,4.7nm,1.2s,baz=204,slow=2.7,SNR=25						
TXAR				PKKP	**PKKPdf**	**12 04 25.5**	**-5.9**
	comp=Z,0.1nm,0.3s,baz=324,slow=1.5,SNR=4.1						
TXAR				LR	LR	12 21 34.8	
	comp=Z,7µm,19.2s,baz=224,slow=31						
	comp=Z,4.7nm,1.2s						
TXAR	**Lajitas Array**	**92.06**	**57**	P	**P**	**11 47 18.2**	**+1.5**
PB05	**IPOC Station P**	**92.07**	**118**	IAmb	IAmb	11 47 19.8	
	comp=Z,62nm,1.3s						
O18K	**Koktuh Hills**	**92.12**	**11**	IAMs_20	IAMs_20	12 29 05.5	
	comp=Z,8µm,20.0s						
MNTX	**Cornudas Mount**	**92.18**	**54**	IAmb	IAmb	11 47 20.0	
	comp=Z,70nm,1.9s						
MNTX				IAMs_20	IAMs_20	12 22 20.6	
	comp=Z,7µm,19.0s						
CMIG	**Matias Romero**	**92.26**	**72**	LR	LR	12 20 00.6	
	comp=Z,5µm,19.8s,baz=246,slow=30						
P19K	**Oil Pt**	**92.27**	**12**	IAMs_20	IAMs_20	12 31 37.4	
	comp=Z,7µm,19.0s						
F07A	**Phinny Hill Vi**	**92.30**	**36**	IAmb	IAmb	11 47 20.4	
	comp=Z,119nm,1.7s						
F07A				IAMs_20	IAMs_20	12 26 43.9	
	comp=Z,12µm,19.0s						
GYA	**Guiyang**	**92.30**	**299**	P	**P**	**11 47 19.8**	**+1.9**
GYA				PP	**PP**	**11 50 59.3**	**+0.4**
GYA				SKS	**SKSac**	**11 57 51.9**	**+0.9**
GYA				S	**ScS**	**11 58 23.8**	**+0.6**
GYA				SS	**SS**	**12 04 27.8**	**-4.2**
GYA				pmax	pmax		
	comp=Z,950nm,10.3s						
GYA				LR	LR		
	comp=Z,900nm,18.0s						
GYA				LR	LR		
	comp=Z,1µm,17.5s						
GYA				LR	LR		
	comp=Z,2µm,20.9s						
HMU	**Henry Mountain**	**92.33**	**47**	IAmb	IAmb	11 47 22.0	
	comp=Z,132nm,1.9s						
HMU				IAMs_20	IAMs_20	12 29 08.2	
	comp=Z,9µm,18.0s						
CLRS	**Cowichan Lake**	**92.34**	**32**	IAmb	IAmb	11 47 20.8	
	comp=Z,87nm,1.6s						
CLRS				IAMs_20	IAMs_20	12 28 47.9	
	comp=Z,11µm,19.0s						
DUG	**Dugway, Tooele**	**92.46**	**44**	IAmb	IAmb	11 47 21.2	
	comp=Z,54nm,1.8s						
CNPM	**China Poot**	**92.52**	**13**	IAMs_20	IAMs_20	12 24 57.1	
	comp=Z,11µm,20.0s						
L14K	**Kuka Creek**	**92.56**	**7**	IAMs_20	IAMs_20	12 30 09.9	
	comp=Z,7µm,19.0s						
HOM	**Homer**	**92.57**	**13**	IAMs_20	IAMs_20	12 26 34.2	
	comp=Z,9µm,19.0s						
MXC	**Moxie City**	**92.58**	**35**	IAmb	IAmb	11 47 21.9	
	comp=Z,118nm,1.7s						
O19K	**Port Alsworth**	**92.59**	**11**	IAmb	IAmb	11 47 20.1	
	comp=Z,64nm,1.6s						
O19K				IAMs_20	IAMs_20	12 29 28.9	
	comp=Z,9µm,20.0s						
PB06	**IPOC Station P**	**92.63**	**118**	IAmb	IAmb	11 47 23.2	
	comp=Z,105nm,1.6s						
ALPN	**Alpine**	**92.66**	**56**	IAmb	IAmb	11 47 22.2	
	comp=Z,56nm,1.7s						
Q16A	**Castle Valley**	**92.66**	**46**	IAmb	IAmb	11 47 23.2	
	comp=Z,98nm,1.9s						
Q16A				IAMs_20	IAMs_20	12 29 25.0	
	comp=Z,13µm,18.0s						
CBB	**Campbell River**	**92.68**	**31**	IAmb	IAmb	11 47 22.5	
	comp=Z,102nm,1.9s						
M16K	**Timber Creek**	**92.69**	**9**	IAMs_20	IAMs_20	12 29 47.4	
	comp=Z,8µm,20.0s						
NNA	**Nana**	**92.70**	**106**	LR	LR	12 20 08.9	
	comp=Z,7µm,20.4s,baz=222,slow=30						
NNA	**Nana**	**92.70**	**106**	*ce*P	**P**	**11 47 20.7**	**+0.7**
NNA				pmax	pmax		
	comp=Z,7.0nm,0.2s						
LYN	**LuoYang**	**92.74**	**309**	⇑P	**P**	**11 47 20.3**	**+0.7**
LYN				PP	**PP**	**11 51 05.3**	**+3.2**
LYN				SKS	**SKSac**	**11 57 52.9**	**+0.1**
LYN				S	**S**	**11 58 22.8**	**-1.4**
LYN				sS	sS	11 58 31.8	+2.5
LYN				pmax	pmax		
	comp=Z,65nm,1.3s						
LYN				pmax	pmax		
	comp=Z,2µm,10.3s						
LYN				LR	LR		
	comp=Z,3µm,16.5s						
LYN				LR	LR		
	comp=Z,2µm,17.9s						
LYN				LR	LR		
	comp=Z,5µm,18.6s						
BGU	**Big Grassy Mou**	**92.80**	**43**	IAmb	IAmb	11 47 23.9	
	comp=Z,97nm,2.0s						
BGU				IAMs_20	IAMs_20	12 21 50.4	
	comp=Z,10µm,20.0s						
MFID	**Camas Ranch**	**92.80**	**40**	IAmb	IAmb	11 47 22.8	
	comp=Z,67nm,1.4s						
MFID				IAMs_20	IAMs_20	12 22 38.4	
	comp=Z,8µm,20.0s						
BRLK	**Bradley Lake**	**92.81**	**13**	IAMs_20	IAMs_20	12 25 24.3	
	comp=Z,9µm,20.0s						
HAWA	**Hanford**	**92.84**	**36**	IAmb	IAmb	11 47 23.9	
	comp=Z,103nm,1.5s						
PB03	**IPOC Station P**	**92.87**	**118**	IAmb	IAmb	11 47 24.4	
	comp=Z,94nm,1.4s						
PB03				IAMs_20	IAMs_20	12 21 38.9	
	comp=Z,9µm,19.0s						
TMUT	**Trail Mountain**	**92.87**	**45**	IAmb	IAmb	11 47 24.1	
	comp=Z,84nm,1.6s						
BMO	**Blue Mountains**	**92.95**	**38**	IAmb	IAmb	11 47 23.1	
	comp=Z,86nm,1.7s						
K13K	**Kusilvak Mount**	**92.95**	**6**	IAMs_20	IAMs_20	12 30 35.1	
	comp=Z,8µm,19.0s						
HNS	**HongShan**	**92.96**	**312**	⇑P	**P**	**11 47 21.0**	**+0.5**
HNS				SKS	**SKSac**	**11 57 54.6**	**+0.7**
HNS				S	**ScS**	**11 58 31.3**	**+3.4**
HNS				pmax	pmax		
	comp=Z,35nm,1.7s						
HNS				pmax	pmax		
	comp=Z,1µm,11.5s						
HNS				LR	LR		
	comp=Z,2µm,18.5s						
HNS				LR	LR		
	comp=Z,3µm,19.1s						
HNS				LR	LR		
	comp=Z,4µm,18.5s						
MPU	**Maple Canyon**	**93.06**	**44**	IAmb	IAmb	11 47 24.5	
	comp=Z,50nm,1.7s						
BBB	**Bella Bella**	**93.13**	**28**	LR	LR	12 23 58.7	
	comp=Z,8µm,18.6s,baz=220,slow=32						
E08A	**Dider Farm, El**	**93.14**	**36**	IAmb	IAmb	11 47 24.1	
	comp=Z,92nm,1.8s						
N19K	**Bonanza Creek**	**93.15**	**11**	IAMs_20	IAMs_20	12 29 46.7	
	comp=Z,9µm,20.0s						
SRU	**San Rafael Swe**	**93.18**	**46**	IAmb	IAmb	11 47 24.8	
	comp=Z,72nm,1.6s						
PATCX	**Punta Patache**	**93.26**	**116**	P	**P**	**11 47 23.0**	**+0.4**
PATCX				IAmb	IAmb	11 47 26.0	
	comp=Z,96nm,1.3s						
PATCX				IAMs_20	IAMs_20	12 20 13.5	
	comp=Z,11µm,20.0s						
L16K	**Owhat River**	**93.29**	**8**	IAMs_20	IAMs_20	12 30 17.2	
	comp=Z,8µm,19.0s						
MVCO	**Mesa Verde**	**93.31**	**48**	IAMs_20	IAMs_20	12 27 14.2	
	comp=Z,11µm,18.0s						
ANMO	**Albuquerque**	**93.32**	**51**	P	**P**	**11 47 23.5**	**+1.0**
ANMO				IAmb	IAmb	11 47 25.5	
	comp=Z,66nm,1.9s						
ANMO	**Albuquerque**	**93.32**	**51**	IAMs_20	IAMs_20	12 29 15.6	
	comp=Z,11µm,18.0s						
ANMO	**Albuquerque**	**93.32**	**51**	IAmb	IAmb	11 47 25.5	
	comp=Z,61nm,1.8s						
ANMO				IAMs_20	IAMs_20	12 29 06.6	
	comp=Z,12µm,18.0s						
ANMO	**Albuquerque**	**93.32**	**51**	LR	LR	12 23 56.1	
	comp=Z,9µm,18.3s,baz=330,slow=32						
ANMO	**Albuquerque**	**93.32**	**51**	P	**P**	**11 47 23.5**	**+1.0**
ANMO				pmax	pmax		
	comp=Z,66nm,1.9s						
ANMO				MLR	MLR		
	comp=Z,11µm,18.0s						
TA01	**Diego Aracena**	**93.38**	**116**	P	**P**	**11 47 24.1**	**+1.1**
TA01				IAmb	IAmb	11 47 26.5	
	comp=Z,70nm,1.2s						
TA01				IAMs_20	IAMs_20	12 20 27.6	
	comp=Z,10µm,20.0s						
PB09	**IPOC Station P**	**93.40**	**118**	IAMs_20	IAMs_20	12 22 07.0	
	comp=Z,8µm,20.0s						
SEW	**Seward**	**93.41**	**14**	IAMs_20	IAMs_20	12 32 28.6	
	comp=Z,10µm,19.0s						
Q23K	**Middleton Isla**	**93.46**	**15**	IAMs_20	IAMs_20	12 31 47.1	
	comp=Z,10µm,18.0s						
HVU	**Hansel Valley**	**93.48**	**43**	IAmb	IAmb	11 47 27.0	
	comp=Z,106nm,1.6s						
HVU				IAMs_20	IAMs_20	12 22 50.6	
	comp=Z,11µm,20.0s						
JLU	**Jordanelle**	**93.53**	**44**	IAmb	IAmb	11 47 27.5	
	comp=Z,111nm,2.0s						
AF01	**San Pedro de A**	**93.54**	**119**	IAMs_20	IAMs_20	12 21 02.6	
	comp=Z,9µm,20.0s						
TA02	**Huaiquique**	**93.58**	**116**	IAMs_20	IAMs_20	12 20 42.1	
	comp=Z,11µm,20.0s						
D08A	**Wollman Farm,**	**93.60**	**36**	IAmb	IAmb	11 47 26.4	
	comp=Z,119nm,1.7s						
E09A	**Wood Farm, Sta**	**93.62**	**36**	IAmb	IAmb	11 47 26.9	
	comp=Z,84nm,1.4s						
SLKM	**Skilak Lake**	**93.63**	**13**	IAmb	IAmb	11 47 25.3	
	comp=Z,47nm,1.5s						
PB01	**IPOC Station P**	**93.64**	**117**	IAmb	IAmb	11 47 27.1	
	comp=Z,40nm,1.2s						
PB01				IAMs_20	IAMs_20	12 20 47.5	
	comp=Z,11µm,20.0s						
BJI	**Beijing**	**93.65**	**315**	P	**P**	**11 47 24.3**	**+0.7**
BJI				sP	**pwP**	**11 47 31.3**	**-3.3**
BJI				PP	**PP**	**11 51 07.3**	**-1.8**
BJI				SKS	**SKSac**	**11 57 56.3**	**-1.2**
BJI				sS	**sS**	**11 58 38.8**	**+1.7**
BJI				SS	**SS**	**12 04 48.8**	**-1.8**
BJI				pmax	pmax		
	comp=Z,10.0nm,2.2s						
BJI				pmax	pmax		
	comp=Z,410nm,10.2s						
BJI				LR	LR		
	comp=Z,870nm,20.3s						
BJI				LR	LR		
	comp=Z,900nm,19.9s						
BJI				LR	LR		
	comp=Z,1µm,19.4s						
PV19	**Morning Glory**	**93.66**	**47**	IAmb	IAmb	11 47 26.8	
	comp=Z,92nm,1.6s						
PV10	**Paradox Valley**	**93.66**	**47**	IAmb	IAmb	11 47 26.6	
	comp=Z,89nm,1.6s						
PV18	**Skein Mesa, Pa**	**93.66**	**47**	IAmb	IAmb	11 47 26.8	
	comp=Z,100nm,1.7s						
P18A	**Preston Nutter**	**93.67**	**45**	IAmb	IAmb	11 47 27.2	
	comp=Z,58nm,1.8s						
PV13	**Radium Mtn., P**	**93.67**	**47**	IAmb	IAmb	11 47 26.8	
	comp=Z,55nm,1.7s						
HLID	**Hailey**	**93.68**	**40**	IAmb	IAmb	11 47 27.2	
	comp=Z,58nm,1.6s						
PV20	**West Nyswonger**	**93.69**	**47**	IAmb	IAmb	11 47 26.9	
	comp=Z,79nm,1.6s						
CAPN	**Captain Cook N**	**93.69**	**12**	IAMs_20	IAMs_20	12 27 12.0	
	comp=Z,12µm,19.0s						
O22K	**Cooper Landing**	**93.70**	**13**	IAMs_20	IAMs_20	12 32 31.3	
	comp=Z,11µm,19.0s						
PV16	**Nyswonger Mesa**	**93.70**	**47**	IAmb	IAmb	11 47 27.1	
	comp=Z,68nm,1.8s						
PV03	**Paradox Valley**	**93.71**	**47**	IAmb	IAmb	11 47 26.9	
	comp=Z,57nm,1.8s						
PV11	**David Mesa, Pa**	**93.72**	**47**	IAmb	IAmb	11 47 27.1	
	comp=Z,100nm,1.9s						
PV23	**Carpenter Ridg**	**93.72**	**47**	IAmb	IAmb	11 47 27.3	
	comp=Z,81nm,1.6s						
P23K	**Montague Islan**	**93.74**	**15**	IAMs_20	IAMs_20	12 31 53.7	
	comp=Z,11µm,19.0s						
PV02	**Paradox Valley**	**93.75**	**47**	IAmb	IAmb	11 47 27.2	
	comp=Z,107nm,1.7s						
PV04	**Paradox Valley**	**93.75**	**47**	IAmb	IAmb	11 47 27.4	
	comp=Z,66nm,1.7s						
HMBC	**Humberstone**	**93.77**	**116**	IAMs_20	IAMs_20	12 20 49.2	
	comp=Z,11µm,20.0s						
PV12	**Saucer Basin,**	**93.77**	**47**	IAmb	IAmb	11 47 27.4	
	comp=Z,128nm,1.7s						
MNHN	**Monahans**	**93.83**	**56**	P	**P**	**11 47 26.7**	**+2.0**
MA2	**Magadan**	**93.83**	**344**	P	**P**	**11 47 22.3**	**-1.7**
	comp=Z,1.7nm,0.4s,baz=168,slow=17,SNR=3.8						
MA2				LR	LR	12 29 15.3	
	comp=Z,3µm,18.4s,baz=154,slow=35						
	comp=Z,1.7nm,0.4s						
MA2	**Magadan**	**93.83**	**344**	*ce*P	**P**	**11 47 22.7**	**-1.3**
MA2				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MA2				MLR	MLR		
	comp=Z,5µm,19.0s						
J14K	**Nanvaranak Lak**	**93.86**	**6**	IAMs_20	IAMs_20	12 31 13.1	
	comp=Z,8µm,19.0s						
TCUT	**Toone Canyon**	**93.87**	**44**	IAmb	IAmb	11 47 30.0	
	comp=Z,107nm,1.6s						
TCUT				IAMs_20	IAMs_20	12 26 45.0	
	comp=Z,10µm,19.0s						
BSUT	**Blindstream Ca**	**93.91**	**44**	IAmb	IAmb	11 47 28.4	
	comp=Z,52nm,1.6s						
PV22	**Blue Mesa, Par**	**93.91**	**47**	IAmb	IAmb	11 47 28.0	
	comp=Z,87nm,2.0s						
ATAH	**Atahualpa**	**93.94**	**101**	LR	LR	12 20 50.9	
	comp=Z,6µm,20.2s,baz=235,slow=30						
PV07	**Paradox Valley**	**93.94**	**47**	IAmb	IAmb	11 47 28.1	
	comp=Z,60nm,1.8s						
HWUT	**Hardware Ranch**	**94.08**	**43**	IAMs_20	IAMs_20	12 22 51.5	
	comp=Z,11µm,20.0s						
CMAR	**Chiang Mai Arr**	**94.13**	**289**	P	**P**	**11 47 27.1**	**+0.8**
CMAR	**Chiang Mai Arr**	**94.13**	**289**	P	**P**	**11 47 26.7**	**+0.3**
	comp=Z,1.7nm,0.9s,baz=154,slow=3.0,SNR=19						
CMAR				PP	**PP**	**11 51 13.8**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=135,slow=3.8,SNR=4.7						
CMAR				S	**SKSac**	**11 58 04.2**	**+2.9**
	comp=Z,0.2nm,0.3s,baz=117,slow=6.3,SNR=1.8						
CMAR				PKKP	**PKKPdf**	**12 04 25.0**	**-2.0**
	comp=Z,0.5nm,0.3s,baz=272,slow=3.3,SNR=4.3						
CMAR				LR	LR	12 34 11.8	
	comp=Z,944nm,18.3s,baz=120,slow=38						
	comp=Z,1.7nm,0.9s						
CMAR	**Chiang Mai Arr**	**94.13**	**289**	*i* P	**P**	**11 47 27.2**	**+0.8**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
M19K	**Big River Lodg**	**94.20**	**11**	IAMs_20	IAMs_20	12 30 19.7	
	comp=Z,7µm,20.0s						
PB11	**IPOC Station P**	**94.24**	**116**	IAmb	IAmb	11 47 30.3	
	comp=Z,64nm,1.1s						
PB11				IAMs_20	IAMs_20	12 22 27.4	
	comp=Z,12µm,19.0s						
HIN	**Hinchinbrook I**	**94.29**	**15**	IAMs_20	IAMs_20	12 32 09.1	
	comp=Z,10µm,19.0s						
CHTO	**Chiang Mai**	**94.31**	**289**	P	**P**	**11 47 29.2**	**+2.0**
PWL	**Port Wells**	**94.32**	**14**	IAMs_20	IAMs_20	12 32 44.8	
	comp=Z,8µm,19.0s						
HEH	**HeiHe**	**94.37**	**328**	*e*P	**P**	**11 47 25.6**	**-1.1**
HEH				pP	**pP**	**11 47 28.4**	**-1.3**
HEH				SKS	**SKSac**	**11 58 01.8**	**+0.8**
HEH				S	**S**	**11 58 37.6**	**-0.2**
HEH				sS	**sS**	**11 58 46.6**	**+3.6**
HEH				SS	**SS**	**12 04 55.5**	**-5.1**
HEH				pmax	pmax		
	comp=Z,21nm,1.9s						
HEH				pmax	pmax		
	comp=Z,820nm,7.1s						
HEH				LR	LR		
	comp=Z,3µm,20.0s						
HEH				LR	LR		
	comp=Z,3µm,20.4s						
HEH				LR	LR		
	comp=Z,7µm,21.0s						
M20K	**Styx River**	**94.38**	**11**	IAMs_20	IAMs_20	12 33 51.2	
	comp=Z,11µm,19.0s						
K17K	**Iditarod**	**94.41**	**9**	IAMs_20	IAMs_20	12 30 49.8	
	comp=Z,8µm,20.0s						
SUA	**Susitna One**	**94.41**	**12**	IAMs_20	IAMs_20	12 32 54.4	
	comp=Z,11µm,19.0s						
PB08	**IPOC Station P**	**94.41**	**116**	IAMs_20	IAMs_20	12 21 20.4	
	comp=Z,11µm,20.0s						
C09A	**Chrisman Ranch**	**94.42**	**35**	IAmb	IAmb	11 47 29.7	
	comp=Z,77nm,1.9s						
AP01	**Chacalluta**	**94.49**	**114**	IAMs_20	IAMs_20	12 21 09.2	
	comp=Z,9µm,20.0s						
KMI	**Kunming**	**94.57**	**296**	⇓P	**P**	**11 47 28.1**	**-0.4**
KMI				PP	**PP**	**11 51 14.5**	**-2.3**
KMI				SKS	**SKSac**	**11 58 06.3**	**+2.5**
KMI				SS	**SS**	**12 05 06.1**	**+1.3**
KMI				pmax	pmax		
	comp=Z,14nm,1.1s						
KMI				pmax	pmax		
	comp=Z,620nm,10.6s						
KMI				LR	LR		
	comp=Z,2µm,19.6s						
KMI				LR	LR		
	comp=Z,3µm,19.0s						
KMI				LR	LR		
	comp=Z,4µm,19.1s						
EYAK	**Cordova Ski Ar**	**94.60**	**15**	IAMs_20	IAMs_20	12 32 17.1	
	comp=Z,11µm,19.0s						
GLI	**Glacier Island**	**94.60**	**14**	IAMs_20	IAMs_20	12 32 22.2	
	comp=Z,9µm,20.0s						
TIY	**Taiyuan**	**94.60**	**311**	*e*P	**P**	**11 47 28.6**	**+0.4**
TIY				PP	**PP**	**11 51 18.4**	**+1.7**
TIY				SKS	**SKSac**	**11 58 02.3**	**-0.8**
TIY				S	**ScS**	**11 58 46.4**	**+4.6**
TIY				pmax	pmax		
	comp=Z,720nm,9.8s						
TIY				LR	LR		
	comp=Z,2µm,16.5s						
TIY				LR	LR		
	comp=Z,2µm,20.6s						
TIY				LR	LR		
	comp=Z,2µm,21.3s						
FID	**Port Fidalgo**	**94.62**	**15**	IAMs_20	IAMs_20	12 32 19.4	
	comp=Z,10µm,19.0s						
LLLB	**Lillooet**	**94.64**	**32**	IAMs_20	IAMs_20	12 28 11.8	
	comp=Z,11µm,19.0s						
GO01	**Chusmiza**	**94.65**	**116**	IAmb	IAmb	11 47 33.2	
	comp=Z,61nm,1.6s						
GO01				IAMs_20	IAMs_20	12 23 09.3	
	comp=Z,13µm,19.0s						
SKT	**Skwentna**	**94.75**	**12**	IAMs_20	IAMs_20	12 33 34.9	
	comp=Z,9µm,19.0s						
M22K	**Willow**	**94.79**	**13**	IAMs_20	IAMs_20	12 27 57.2	
	comp=Z,9µm,19.0s						
KNK	**Knik Glacier**	**94.80**	**13**	IAMs_20	IAMs_20	12 33 04.5	
	comp=Z,9µm,19.0s						
XAN	**Xi'an**	**94.86**	**307**	P	**P**	**11 47 28.9**	**-0.5**
XAN				pP	pwP	11 47 38.1	-2.3
XAN				SKS	**SKSac**	**11 58 05.0**	**+0.4**
XAN				S	**S**	**11 58 39.4**	**-3.6**
XAN				SS	**SS**	**12 05 10.3**	**+2.0**
XAN				pmax	pmax		
	comp=Z,23nm,1.1s						
XAN				pmax	pmax		
	comp=Z,1µm,10.2s						
XAN				LR	LR		
	comp=Z,2µm,20.6s						
XAN				LR	LR		
	comp=Z,3µm,19.4s						
XAN				LR	LR		
	comp=Z,5µm,14.7s						
GHO	**Glory Hole Cre**	**95.04**	**13**	IAMs_20	IAMs_20	12 33 21.7	
	comp=Z,8µm,19.0s						
AHID	**Auburn Hatcher**	**95.07**	**43**	IAMs_20	IAMs_20	12 23 12.6	
	comp=Z,10µm,20.0s						
DIV	**Divide**	**95.11**	**15**	IAMs_20	IAMs_20	12 32 45.7	
	comp=Z,7µm,19.0s						
PB16	**IPOC Station P**	**95.16**	**115**	IAMs_20	IAMs_20	12 22 59.0	
	comp=Z,8µm,19.0s						
MESA	**MESA**	**95.17**	**17**	IAMs_20	IAMs_20	12 32 01.3	
	comp=Z,12µm,19.0s						
O20A	**White River Ci**	**95.20**	**46**	IAMs_20	IAMs_20	12 31 03.3	
	comp=Z,7µm,18.0s						
BMRM	**Bremner River**	**95.23**	**15**	IAMs_20	IAMs_20	12 32 27.8	
	comp=Z,11µm,19.0s						
MSTX	**Muleshoe**	**95.27**	**54**	IAmb	IAmb	11 47 33.5	
	comp=Z,46nm,1.7s						
MSTX				IAMs_20	IAMs_20	12 26 27.4	
	comp=Z,8µm,19.0s						
NEW	**Newport**	**95.31**	**36**	P	**P**	**11 47 32.0**	**+0.9**
	comp=Z,2.5nm,0.8s,baz=217,slow=4.5,SNR=7.5						
NEW				LR	LR	12 23 10.4	
	comp=Z,15µm,20.3s,baz=220,slow=31						
	comp=Z,2.5nm,0.8s						
NEW	**Newport**	**95.31**	**36**	P	**P**	**11 47 32.0**	**+0.9**
KVTX	**Kingsville**	**95.35**	**61**	IAMs_20	IAMs_20	12 28 49.6	
	comp=Z,11µm,18.0s						
CUT	**Chulitna**	**95.37**	**12**	IAMs_20	IAMs_20	12 28 07.4	
	comp=Z,10µm,20.0s						
SCM	**Sheep Creek Mo**	**95.42**	**14**	IAmb	IAmb	11 47 33.8	
	comp=Z,52nm,2.0s						
SCM				IAMs_20	IAMs_20	12 33 10.7	
	comp=Z,7µm,19.0s						
ANM	**Nome**	**95.49**	**5**	IAMs_20	IAMs_20	12 32 16.2	
	comp=Z,8µm,19.0s						
PPLA	**Purkeypile**	**95.49**	**11**	IAMs_20	IAMs_20	12 35 03.9	
	comp=Z,12µm,18.0s						
PCA	**Pinnacle**	**95.53**	**18**	IAMs_20	IAMs_20	12 24 57.9	
	comp=Z,9µm,20.0s						
SDCO	**Great Sand Dun**	**95.56**	**49**	IAMs_20	IAMs_20	12 22 29.8	
	comp=Z,7µm,20.0s						
ESQI	**Esquipulas**	**95.56**	**76**	IAMs_20	IAMs_20	12 21 40.2	
	comp=Z,8µm,20.0s						
TABL	**Table Mountain**	**95.60**	**17**	IAMs_20	IAMs_20	12 32 15.7	
	comp=Z,11µm,20.0s						
TPAW	**Teton Pass**	**95.60**	**42**	IAMs_20	IAMs_20	12 23 49.4	
	comp=Z,10µm,20.0s						
PB18	**Visviri**	**95.60**	**114**	IAMs_20	IAMs_20	12 21 47.8	
	comp=Z,8µm,20.0s						
FXWY	**Fox Creek**	**95.64**	**42**	IAmb	IAmb	11 47 36.1	
	comp=Z,58nm,1.8s						
FXWY				IAMs_20	IAMs_20	12 23 50.8	
	comp=Z,11µm,20.0s						
SNOW	**Snow King Moun**	**95.69**	**42**	IAMs_20	IAMs_20	12 23 52.0	
	comp=Z,10µm,20.0s						
GRNC	**Granite Creek**	**95.70**	**17**	IAMs_20	IAMs_20	12 32 18.6	
	comp=Z,11µm,19.0s						
VRDI	**Verde Repeater**	**95.72**	**16**	IAMs_20	IAMs_20	12 32 50.9	
	comp=Z,9µm,20.0s						
N25K	**Chitina, Valde**	**95.80**	**15**	IAMs_20	IAMs_20	12 32 56.8	
	comp=Z,9µm,18.0s						
GLB	**Gilahina Butte**	**95.83**	**15**	IAMs_20	IAMs_20	12 26 12.7	
	comp=Z,8µm,20.0s						
LOHW	**Long Hollow**	**95.87**	**42**	IAMs_20	IAMs_20	12 23 57.8	
	comp=Z,10µm,20.0s						
T25A	**Trinidad**	**95.93**	**50**	IAmb	IAmb	11 47 37.0	
	comp=Z,53nm,1.9s						
T25A				IAMs_20	IAMs_20	12 32 27.7	
	comp=Z,7µm,19.0s						
MCARA	**McCarthy VSAT**	**95.96**	**16**	IAMs_20	IAMs_20	12 33 08.2	
	comp=Z,9µm,19.0s						
LOGN	**Logan Glacier**	**95.96**	**17**	IAMs_20	IAMs_20	12 32 07.7	
	comp=Z,12µm,20.0s						
BW06	**Boulder Array**	**95.97**	**43**	IAMs_20	IAMs_20	12 23 42.5	
	comp=Z,10µm,20.0s						
PDAR	**Pinedale Array**	**95.97**	**43**	P	**P**	**11 47 33.8**	**-0.7**
	comp=Z,1.9nm,1.0s,baz=249,slow=5.1,SNR=13						
PDAR				PP	**PP**	**11 51 25.1**	**-2.4**
	comp=Z,0.4nm,0.8s,baz=246,slow=6.3,SNR=4.4						
PDAR				S	**SKSac**	**11 58 08.6**	**-1.9**
	comp=Z,0.1nm,0.4s,baz=241,slow=7.8,SNR=1.5						
PDAR				PKKP	**PKKPbc**	**12 04 21.5**	**-2.1**
	comp=Z,0.6nm,0.9s,baz=64,slow=3.4,SNR=5.5						
PDAR				LR	LR	12 24 54.0	
	comp=Z,7µm,19.1s,baz=226,slow=32						
	comp=Z,1.9nm,1.0s						
CAST	**Castle Rocks**	**95.99**	**11**	IAMs_20	IAMs_20	12 35 18.9	
	comp=Z,8µm,18.0s						
CTGM	**Chitina Glacie**	**96.00**	**17**	IAMs_20	IAMs_20	12 32 29.3	
	comp=Z,9µm,19.0s						
T35M	**Bob Quinn**	**96.02**	**24**	IAMs_20	IAMs_20	12 29 51.3	
	comp=Z,6µm,18.0s						
MSO	**Missoula**	**96.02**	**38**	IAMs_20	IAMs_20	12 23 13.6	
	comp=Z,13µm,20.0s						
PZH	**PanZhiHua**	**96.05**	**297**	P	**P**	**11 47 34.1**	**-1.1**
PZH				SKS	**SKSac**	**11 58 11.8**	**+0.4**
PZH				S	**ScS**	**11 58 56.3**	**+1.8**
PZH				SS	**SS**	**12 05 28.4**	**+2.7**
PZH				pmax	pmax		
	comp=Z,490nm,9.6s						
PZH				LR	LR		
	comp=Z,2µm,19.1s						
PZH				LR	LR		
	comp=Z,1µm,17.7s						
PZH				LR	LR		
	comp=Z,3µm,20.6s						
XLT	**XiLinHaoTe**	**96.05**	**318**	*e*P	**P**	**11 47 34.6**	**-0.1**
XLT				sP	pwP	11 47 43.5	-2.2
XLT				SKS	**SKSac**	**11 58 09.6**	**-0.9**
XLT				S	**S**	**11 58 51.3**	**-1.7**
XLT				sS	sS	11 59 00.8	+2.7
XLT				pmax	pmax		
	comp=Z,10.0nm,1.3s						
XLT				pmax	pmax		
	comp=Z,580nm,7.7s						
XLT				LR	LR		
	comp=Z,3µm,21.7s						

XLT				LR	LR		
	comp=Z,3µm,23.8s						
735A	**Kenedy**	**96.10**	**60**	IAMs_20	IAMs_20	12 23 14.5	
	comp=Z,10µm,20.0s						
O28M	**Mount Upton**	**96.12**	**17**	IAMs_20	IAMs_20	12 25 29.0	
	comp=Z,11µm,20.0s						
YHB	**Horse Butte**	**96.23**	**41**	IAmb	IAmb	11 47 39.2	
	comp=Z,38nm,1.5s						
YFT	**Old Faithful**	**96.25**	**41**	IAmb	IAmb	11 47 40.0	
	comp=Z,55nm,1.7s						
YHL	**Hebgen Lake**	**96.30**	**41**	IAmb	IAmb	11 47 40.5	
	comp=Z,62nm,1.4s						
YHL				IAMs_20	IAMs_20	12 24 32.0	
	comp=Z,7µm,20.0s						
H17A	**Grant Village**	**96.36**	**41**	IAMs_20	IAMs_20	12 24 25.8	
	comp=Z,11µm,19.0s						
H17K	**Granite Mounta**	**96.36**	**7**	IAMs_20	IAMs_20	12 34 25.4	
	comp=Z,7µm,19.0s						
Q24A	**Divide**	**96.48**	**48**	IAMs_20	IAMs_20	12 29 01.1	
	comp=Z,9µm,18.0s						
YNM	**Yellowstone No**	**96.49**	**41**	IAMs_20	IAMs_20	12 24 30.2	
	comp=Z,9µm,20.0s						
SEY	**Seymchan**	**96.50**	**347**	P	**P**	**11 47 35.1**	**-1.0**
	comp=Z,2.2nm,0.8s,baz=162,slow=4.6,SNR=11						
SEY				S	**SKSac**	**11 58 13.6**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=90,slow=20,SNR=1.8						
SEY				LR	LR	12 30 11.4	
	comp=Z,5µm,18.4s,baz=156,slow=35						
	comp=Z,2.2nm,0.8s						
SEY	**Seymchan**	**96.50**	**347**	*ce*P	**P**	**11 47 35.9**	**-0.2**
SEY				pmax	pmax		
	comp=Z,8.0nm,1.4s						
SEY				MLR	MLR		
	comp=Z,5µm,18.0s						
YNR	**Norris Junctio**	**96.50**	**41**	IAMs_20	IAMs_20	12 24 19.4	
	comp=Z,9µm,20.0s						
BOZ	**Bozeman (W)**	**96.50**	**40**	IAmb	IAmb	11 47 40.8	
	comp=Z,58nm,1.6s						
BOZ				IAMs_20	IAMs_20	12 33 08.5	
	comp=Z,8µm,18.0s						
AMTX	**Amarillo**	**96.53**	**53**	IAMs_20	IAMs_20	12 27 17.5	
	comp=Z,10µm,19.0s						
DHY	**Denali Highway**	**96.53**	**13**	IAMs_20	IAMs_20	12 34 07.2	
	comp=Z,7µm,19.0s						
RND	**Reindeer**	**96.55**	**12**	IAMs_20	IAMs_20	12 27 27.6	
	comp=Z,9µm,20.0s						
CRIN	**San Cristobal**	**96.56**	**79**	IAMs_20	IAMs_20	12 23 30.3	
	comp=Z,7µm,19.0s						
G16K	**Koyuk River**	**96.56**	**6**	IAMs_20	IAMs_20	12 30 59.0	
	comp=Z,9µm,19.0s						
F15K	**North Star Dit**	**96.67**	**5**	IAMs_20	IAMs_20	12 33 02.5	
	comp=Z,7µm,19.0s						
HERN	**Volcan Telica**	**96.70**	**79**	IAMs_20	IAMs_20	12 23 37.4	
	comp=Z,9µm,19.0s						
ABTX	**Abilene, Hawle**	**96.75**	**56**	IAMs_20	IAMs_20	12 24 33.5	
	comp=Z,12µm,20.0s						
H18K	**Honhosa River**	**96.75**	**8**	IAMs_20	IAMs_20	12 32 14.7	
	comp=Z,7µm,20.0s						
BPAW	**Bear Paw Mtn.**	**96.81**	**11**	IAMs_20	IAMs_20	12 31 52.5	
	comp=Z,8µm,20.0s						
MCK	**McKinley**	**96.83**	**12**	IAMs_20	IAMs_20	12 27 46.1	
	comp=Z,10µm,20.0s						
CD2	**Chengdu**	**96.83**	**302**	P	**P**	**11 47 38.8**	**+0.3**
CD2				pmax	pmax		
	comp=Z,920nm,7.8s						
CD2				LR	LR		
	comp=Z,3µm,17.3s						
CD2				LR	LR		
	comp=Z,3µm,18.8s						
M26K	**Nabesna, AK**	**96.86**	**15**	IAMs_20	IAMs_20	12 33 31.9	
	comp=Z,9µm,19.0s						
ZEA	**Zeya**	**96.89**	**330**	*e*P	**P**	**11 47 39.0**	**+0.9**
ZEA				*e*		11 58 17.6	
ZEA				*e*S	**S**	**11 59 03.2**	**+3.7**
ZEA				*e*SP	**SP**	**12 00 22.6**	**+2.0**
ZEA				*e*PS	**PS**	**12 00 26.3**	**+3.4**
ZEA				*e*		12 05 38.6	
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,300nm,8.8s						
ZEA				pmax	pmax		
	comp=Z,400nm,7.7s						
ZEA				smax	smax		
	comp=E,1µm,12.4s						
ZEA				smax	smax		
	comp=N,2µm,14.8s						
HHC	**Hu-ho-hao-te**	**96.96**	**314**	*e*P	**P**	**11 47 40.8**	**+1.9**
HHC				PP	**PP**	**11 51 30.8**	**-4.2**
HHC				SKS	**SKSac**	**11 58 16.9**	**+1.4**
HHC				S	**ScS**	**11 59 04.0**	**+2.6**
HHC				sS	sS	11 59 12.4	+6.2
HHC				pmax	pmax		
	comp=N,12nm,0.7s						
HHC				pmax	pmax		
	comp=N,560nm,8.4s						
HHC				LR	LR		
	comp=N,2µm,17.1s						
HHC				LR	LR		
	comp=N,2µm,18.0s						
HHC				LR	LR		
	comp=N,2µm,17.3s						
TGUH	**Tegucigalpa,Un**	**97.05**	**78**	IAMs_20	IAMs_20	12 22 05.5	
	comp=Z,10µm,20.0s						
YNE	**Yellowstone No**	**97.06**	**41**	IAmb	IAmb	11 47 43.6	
	comp=Z,39nm,1.4s						
M27K	**Edge Creek, AK**	**97.08**	**16**	IAMs_20	IAMs_20	12 33 35.8	
	comp=Z,9µm,19.0s						
JTS	**Las Juntas de**	**97.15**	**82**	IAMs_20	IAMs_20	12 23 39.1	
	comp=Z,8µm,19.0s						
JTS	**Las Juntas de**	**97.15**	**82**	LR	LR	12 24 08.9	
	comp=Z,8µm,18.8s,baz=260,slow=31						
DLBC	**Dease Lake**	**97.22**	**23**	LR	LR	12 22 59.7	
	comp=Z,359nm,21.6s,baz=198,slow=30						
L26K	**Log Cabin Wild**	**97.33**	**15**	IAMs_20	IAMs_20	12 33 49.7	
	comp=Z,10µm,19.0s						
H19K	**Roundabout Mou**	**97.35**	**9**	IAMs_20	IAMs_20	12 30 11.9	
	comp=Z,7µm,20.0s						
LPAZ	**La Paz**	**97.40**	**114**	IAmb	IAmb	11 47 45.1	
	comp=Z,37nm,1.8s						
LPAZ	**La Paz**	**97.40**	**114**	P	**P**	**11 47 42.5**	**+0.3**
	comp=Z,2.2nm,0.7s,baz=266,slow=2.2,SNR=10						
LPAZ				S	**SKSac**	**11 58 21.8**	**+1.7**
	comp=Z,1.1nm,1.0s,baz=162,slow=9.6,SNR=2.1						
LPAZ				LR	LR	12 25 17.9	
	comp=Z,4µm,18.4s,baz=238,slow=32						
	comp=Z,2.2nm,0.7s						
K24K	**Donnelly Dome**	**97.50**	**14**	IAMs_20	IAMs_20	12 34 47.3	
	comp=Z,10µm,19.0s						
RLMT	**Red Lodge**	**97.55**	**41**	IAMs_20	IAMs_20	12 25 03.1	
	comp=Z,9µm,20.0s						
RIDG	**Independent Ri**	**97.64**	**14**	IAMs_20	IAMs_20	12 34 40.5	
	comp=Z,8µm,19.0s						
WRH	**Wood River Hil**	**97.66**	**12**	IAMs_20	IAMs_20	12 32 54.0	
	comp=Z,8µm,19.0s						
OTAV	**Otavalo**	**97.69**	**94**	IAMs_20	IAMs_20	12 25 18.9	
	comp=Z,6µm,18.0s						
L27K	**Beaver Creek,**	**97.70**	**15**	IAMs_20	IAMs_20	12 27 05.2	
	comp=Z,7µm,19.0s						
MLY	**Manley**	**97.72**	**11**	IAMs_20	IAMs_20	12 32 40.3	
	comp=Z,8µm,19.0s						
K22A	**Casper**	**97.72**	**45**	IAmb	IAmb	11 47 45.6	
	comp=Z,33nm,1.5s						
DOT	**Dot Lake**	**97.72**	**14**	IAMs_20	IAMs_20	12 34 11.6	
	comp=Z,9µm,19.0s						
BTO	**Baotou**	**97.79**	**313**	*e*P	Pdif	11 47 46.3	+3.6
BTO				S	**S**	**11 59 12.5**	**+4.4**
BTO				SS	**SS**	**12 05 52.6**	**+2.9**
BTO				pmax	pmax		
	comp=Z,18nm,0.5s						
BTO				pmax	pmax		
	comp=Z,1µm,6.4s						
BTO				LR	LR		
	comp=Z,1µm,11.2s						
BTO				LR	LR		
	comp=Z,4µm,19.0s						
BTO				LR	LR		
	comp=Z,5µm,20.6s						
TNCH	**TengChong**	**97.80**	**294**	*e*P	**P**	**11 47 43.1**	**-0.1**
TNCH				PP	**PP**	**11 51 41.0**	**-0.8**
TNCH				SKS	**SKSac**	**11 58 22.3**	**+1.6**
TNCH				S	**S**	**11 59 09.6**	**+0.6**
TNCH				pmax	pmax		
	comp=Z,26nm,0.5s						
TNCH				pmax	pmax		
	comp=Z,370nm,5.1s						
TNCH				LR	LR		
	comp=Z,650nm,17.6s						
TNCH				LR	LR		
	comp=Z,1µm,16.8s						
TNCH				LR	LR		
	comp=Z,3µm,22.5s						
CCB	**Clear Creek Bu**	**97.87**	**12**	P	Pdif	11 47 43.5	+1.2
CCB				IAMs_20	IAMs_20	12 32 59.6	
	comp=Z,9µm,20.0s						
M29M	**Somme Creek**	**97.98**	**17**	IAMs_20	IAMs_20	12 26 40.1	
	comp=Z,10µm,20.0s						
SCRK	**Sand Creek**	**98.03**	**14**	IAMs_20	IAMs_20	12 34 32.1	
	comp=Z,8µm,19.0s						
COLA	**College**	**98.07**	**12**	IAMs_20	IAMs_20	12 33 14.8	
	comp=Z,9µm,19.0s						
COLA	**College**	**98.07**	**12**	P	Pdif	11 47 44.5	+1.3
COLA	**College**	**98.07**	**12**	*e*P	Pdif	11 47 45.0	+1.8
COLA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HKT	**Hockley**	**98.14**	**60**	IAMs_20	IAMs_20	12 25 46.7	
	comp=Z,10µm,19.0s						
ILAR	**Eielson Array**	**98.16**	**13**	P	**P**	**11 47 42.5**	**-1.1**
	comp=Z,1.1nm,0.9s,baz=228,slow=5.5,SNR=5.7						
ILAR				PKKPbc	**PKKPbc**	**12 04 14.6**	**-3.6**
	comp=Z,0.6nm,1.0s,baz=343,slow=1.4,SNR=4.9						
ILAR				LR	LR	12 28 05.5	
	comp=Z,3µm,19.4s,baz=192,slow=33						
	comp=Z,1.1nm,0.9s						
J25K	**Salcha River,**	**98.31**	**13**	IAMs_20	IAMs_20	12 35 21.5	
	comp=Z,8µm,19.0s						
FW14	**Alvarado**	**98.39**	**57**	IAMs_20	IAMs_20	12 25 20.1	
	comp=Z,10µm,20.0s						
WMOK	**Wichita Mounta**	**98.47**	**55**	IAMs_20	IAMs_20	12 25 55.1	
	comp=Z,7µm,19.0s						
K27K	**Chicken**	**98.48**	**15**	IAMs_20	IAMs_20	12 34 44.3	
	comp=Z,10µm,18.0s						
L29M	**L29M**	**98.63**	**17**	IAMs_20	IAMs_20	12 34 14.1	
	comp=Z,11µm,19.0s						
E18K	**Tukpahlearik C**	**98.71**	**6**	IAMs_20	IAMs_20	12 32 06.3	
	comp=Z,8µm,20.0s						
M31M	**Drury Creek, Y**	**98.87**	**19**	IAMs_20	IAMs_20	12 37 15.6	
	comp=Z,7µm,18.0s						
EGMT	**Eagleton**	**99.00**	**39**	IAmb	IAmb	11 51 51.3	
	comp=Z,33nm,1.8s						
RDOG	**Red Dog Mine**	**99.12**	**5**	IAMs_20	IAMs_20	12 30 44.2	
	comp=Z,8µm,20.0s						
DAWY	**Dawson**	**99.13**	**16**	IAMs_20	IAMs_20	12 34 20.3	
	comp=Z,7µm,19.0s						
C16K	**Lisburne Hills**	**99.16**	**4**	IAMs_20	IAMs_20	12 28 30.1	
	comp=Z,8µm,20.0s						
CPUP	**Villa Florida**	**99.24**	**128**	P	**Pdif**	**11 47 51.9**	**+2.3**
	comp=Z,0.8nm,0.6s,baz=236,slow=8.7,SNR=5.6						
CPUP				S	**SKSac**	**11 58 27.9**	**0.0**
	comp=Z,0.1nm,0.3s,baz=153,slow=4.5,SNR=1.5						
CPUP				LR	LR	12 27 03.7	
	comp=Z,3µm,18.0s,baz=86,slow=32						
	comp=Z,0.8nm,0.6s						
BILL	**Bilibino**	**99.29**	**354**	IAMs_20	IAMs_20	12 34 40.5	
	comp=Z,8µm,20.0s						
BILL	**Bilibino**	**99.29**	**354**	*ce*P	**Pdif**	**11 47 48.9**	**+0.3**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,8µm,18.0s						
I26K	**Coal Creek Min**	**99.37**	**14**	IAMs_20	IAMs_20	12 35 44.6	
	comp=Z,7µm,19.0s						
G23K	**Bananza Creek**	**99.38**	**11**	IAMs_20	IAMs_20	12 33 25.8	
	comp=Z,7µm,19.0s						
K29M	**Barlow Dome**	**99.39**	**17**	IAMs_20	IAMs_20	12 34 28.4	
	comp=Z,10µm,20.0s						
LZH	**Lanzhou**	**99.47**	**306**	*e*P	**Pdif**	**11 47 51.5**	**+1.1**
LZH				pP	sP	11 47 56.3	+1.8
LZH				SKS	**SKSac**	**11 58 28.0**	**-0.5**
LZH				S	**ScS**	**11 59 22.9**	**+0.3**
LZH				pmax	pmax		
	comp=Z,480nm,4.4s						
LZH				LR	LR		
	comp=Z,1µm,19.7s						
LZH				LR	LR		
	comp=Z,3µm,19.7s						
LZH				LR	LR		
	comp=Z,4µm,16.5s						
MAYO	**Mayo, Yukon**	**99.60**	**17**	IAMs_20	IAMs_20	12 27 28.8	
	comp=Z,8µm,20.0s						
FNO	**Franklin**	**99.71**	**55**	IAMs_20	IAMs_20	12 26 27.7	
	comp=Z,11µm,19.0s						
J29N	**Klondike Camp**	**99.73**	**16**	IAMs_20	IAMs_20	12 34 40.3	
	comp=Z,8µm,19.0s						
G24K	**Hadweenzic Riv**	**99.80**	**12**	IAMs_20	IAMs_20	12 36 42.7	
	comp=Z,10µm,19.0s						
C18K	**Utukok River**	**99.85**	**6**	IAMs_20	IAMs_20	12 35 04.4	
	comp=Z,9µm,19.0s						
NATX	**Nacogdoches**	**99.92**	**59**	IAMs_20	IAMs_20	12 26 02.5	
	comp=Z,12µm,20.0s						
CROK	**Carrier**	**99.94**	**53**	IAMs_20	IAMs_20	12 29 35.8	
	comp=Z,8µm,19.0s						
D19K	**Kuna River**	**100.00**	**7**	IAMs_20	IAMs_20	12 36 32.8	
	comp=Z,7µm,20.0s						
FYU	**Fort Yukon**	**100.08**	**12**	IAMs_20	IAMs_20	12 34 27.2	
	comp=Z,8µm,20.0s						
I28M	**Miner Creek**	**100.18**	**15**	IAMs_20	IAMs_20	12 35 37.0	
	comp=Z,9µm,19.0s						
R32A	**Long Quarter,**	**100.42**	**52**	IAMs_20	IAMs_20	12 33 23.6	
	comp=Z,10µm,18.0s						
E21K	**Killik River**	**100.43**	**9**	IAMs_20	IAMs_20	12 38 51.4	
	comp=Z,6µm,19.0s						
E22K	**Anaktuvuk Pass**	**100.43**	**9**	IAMs_20	IAMs_20	12 37 37.5	
	comp=Z,8µm,19.0s						
C19K	**Lookout Ridge**	**100.44**	**6**	IAMs_20	IAMs_20	12 35 14.1	
	comp=Z,9µm,19.0s						
I29M	**Ogilvie Camp,**	**100.47**	**16**	IAMs_20	IAMs_20	12 35 15.9	
	comp=Z,9µm,19.0s						
H27K	**Steamboat Moun**	**100.51**	**14**	IAMs_20	IAMs_20	12 36 02.7	
	comp=Z,8µm,19.0s						
441A	**DeRidder**	**100.52**	**61**	IAMs_20	IAMs_20	12 28 42.3	
	comp=Z,8µm,20.0s						
QUOK	**Quay**	**100.66**	**54**	IAMs_20	IAMs_20	12 29 34.8	
	comp=Z,12µm,20.0s						
E23K	**Chandalar**	**100.69**	**10**	IAMs_20	IAMs_20	12 34 36.2	
	comp=Z,7µm,20.0s						
G26K	**Porcupine Rive**	**100.69**	**13**	IAMs_20	IAMs_20	12 36 57.4	
	comp=Z,8µm,19.0s						
I30M	**Mount Dempster**	**100.81**	**16**	IAMs_20	IAMs_20	12 28 40.9	
	comp=Z,10µm,20.0s						
F25K	**Christian Rive**	**100.92**	**12**	IAMs_20	IAMs_20	12 35 13.4	
	comp=Z,8µm,20.0s						
BCIP	**Isla Barro Col**	**100.97**	**86**	IAMs_20	IAMs_20	12 25 14.3	
	comp=Z,8µm,20.0s						
G27K	**Doyon Strip**	**100.98**	**14**	IAMs_20	IAMs_20	12 31 38.2	
	comp=Z,9µm,20.0s						
D22K	**Ayikyak River**	**101.01**	**9**	IAMs_20	IAMs_20	12 34 50.7	
	comp=Z,9µm,19.0s						
T35A	**Sooner Cattle**	**101.16**	**54**	IAMs_20	IAMs_20	12 30 24.3	
	comp=Z,9µm,19.0s						
TUL3	**Leonard**	**101.17**	**55**	IAMs_20	IAMs_20	12 31 49.4	
	comp=Z,11µm,18.0s						
H29M	**Whitestone**	**101.18**	**15**	IAMs_20	IAMs_20	12 35 58.5	
	comp=Z,7µm,19.0s						
F26K	**Sheenjek River**	**101.28**	**12**	IAMs_20	IAMs_20	12 35 12.9	
	comp=Z,10µm,19.0s						
IMP	**Imphal**	**101.32**	**292**	*e*P	**Pdif**	**11 47 51.3**	**-7.4**
E25K	**Arctic Village**	**101.40**	**12**	IAMs_20	IAMs_20	12 32 06.2	
	comp=Z,8µm,20.0s						
B21K	**Ikpikpuk River**	**101.47**	**8**	IAMs_20	IAMs_20	12 32 46.7	
	comp=Z,6µm,20.0s						
KOHI	**KOHIMA**	**101.61**	**293**	*e*P	**Pdif**	**11 47 52.6**	**-7.6**
H31M	**Peel River**	**101.78**	**17**	IAMs_20	IAMs_20	12 36 22.6	
	comp=Z,10µm,19.0s						
D24K	**Happy Valley**	**101.81**	**10**	IAMs_20	IAMs_20	12 38 35.8	
	comp=Z,8µm,18.0s						
RLO	**Rose Lookout**	**101.83**	**55**	IAMs_20	IAMs_20	12 32 10.0	
	comp=Z,11µm,20.0s						
G29M	**Pine Creek**	**101.83**	**15**	IAMs_20	IAMs_20	12 36 38.8	
	comp=Z,8µm,19.0s						
YAK	**Yakutsk**	**101.85**	**337**	S	**SKSac**	**11 58 36.7**	**-1.7**
	comp=Z,17nm,0.4s,baz=143,slow=3.5,SNR=1.4						
YAK	**Yakutsk**	**101.85**	**337**	*e*P	**Pdif**	**11 48 00.6**	**+0.6**
YAK				*e*		11 52 11.6	
YAK				*e*S	**SKSac**	**11 58 40.1**	**+1.7**
YAK				*e*SP	**SP**	**12 01 07.4**	**-6.1**
YAK				*e*SS	**SS**	**12 06 39.3**	**-5.9**
YAK				pmax	pmax		
	comp=Z,169µm,4.3s						
YAK				pmax	pmax		
	comp=E,34µm,3.5s						
YAK				pmax	pmax		
	comp=N,36µm,3.7s						
YAK				pmax	pmax		
	comp=Z,412nm,4.6s						
YAK				pmax	pmax		
	comp=E,152nm,5.2s						
YAK				pmax	pmax		
	comp=N,32nm,2.7s						
YAK				smax	smax		
	comp=E,793nm,10.2s						
YAK				smax	smax		
	comp=N,722nm,9.6s						
K30B	**Basset**	**102.01**	**47**	IAMs_20	IAMs_20	12 32 40.4	
	comp=Z,11µm,18.0s						
Z41A	**Richland Creek**	**102.02**	**59**	IAMs_20	IAMs_20	12 29 29.1	
	comp=Z,9µm,19.0s						
F28M	**Old Crow**	**102.03**	**14**	IAMs_20	IAMs_20	12 32 11.0	
	comp=Z,10µm,19.0s						
C23K	**Itkillik River**	**102.18**	**9**	IAMs_20	IAMs_20	12 33 38.6	
	comp=Z,8µm,20.0s						
E27K	**Coleen River**	**102.18**	**13**	IAMs_20	IAMs_20	12 37 51.9	
	comp=Z,7µm,19.0s						
C24K	**Franklin Bluff**	**102.34**	**10**	IAMs_20	IAMs_20	12 32 05.9	
	comp=Z,7µm,20.0s						
U38A	**Gravette**	**102.42**	**55**	IAMs_20	IAMs_20	12 27 52.5	
	comp=Z,10µm,20.0s						
HHAR	**Hobbs**	**102.66**	**55**	IAMs_20	IAMs_20	12 35 22.8	
	comp=Z,10µm,18.0s						
ZIRO	**ZIRO**	**102.67**	**294**	*e*P	**Pdif**	**11 47 57.4**	**-7.4**
G31M	**Satah River**	**102.70**	**16**	IAMs_20	IAMs_20	12 36 33.8	
	comp=Z,10µm,19.0s						
143A	**Socs Landing,**	**102.79**	**60**	IAMs_20	IAMs_20	12 28 42.5	
	comp=Z,11µm,20.0s						
F30M	**Barrier River**	**102.91**	**15**	IAMs_20	IAMs_20	12 37 11.2	
	comp=Z,7µm,19.0s						
C27K	**Jago River**	**103.05**	**11**	IAMs_20	IAMs_20	12 31 24.8	
	comp=Z,7µm,20.0s						
TEZP	**TEZPUR**	**103.07**	**293**	*e*P	**Pdif**	**11 47 59.2**	**-7.2**
E29M	**Blow River**	**103.09**	**14**	IAMs_20	IAMs_20	12 37 33.0	
	comp=Z,8µm,20.0s						
D27M	**Malcolm River**	**103.21**	**13**	IAMs_20	IAMs_20	12 39 04.0	
	comp=Z,6µm,18.0s						
VBMS	**Vicksburg**	**103.22**	**60**	IAMs_20	IAMs_20	12 29 47.9	
	comp=Z,9µm,20.0s						
F31M	**Tsiigehtchic**	**103.24**	**16**	IAMs_20	IAMs_20	12 36 60.0	
	comp=Z,8µm,19.0s						
E28A	**Huff**	**103.34**	**44**	IAMs_20	IAMs_20	12 32 48.3	
	comp=Z,8µm,18.0s						
N35A	**Tabor**	**103.69**	**51**	IAMs_20	IAMs_20	12 33 52.0	
	comp=Z,10µm,18.0s						
S39A	**Bolivar**	**103.76**	**54**	IAMs_20	IAMs_20	12 33 38.8	
	comp=Z,10µm,18.0s						
SONM	**Songino Array**	**103.86**	**318**	Pdiff	**Pdif**	**11 48 08.6**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=132,slow=6.9,SNR=1.6						
SONM				PKKPbc	**PKKPbc**	**12 04 01.4**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=236,slow=1.6,SNR=5.0						
PALK	**Pallekele**	**104.02**	**270**	IAMs_20	IAMs_20	12 41 20.8	
	comp=Z,7µm,18.0s						
TAWA	**Tawang**	**104.26**	**294**	*e*P	**Pdif**	**11 48 04.7**	**-7.5**
P38A	**Dawn**	**104.53**	**52**	IAMs_20	IAMs_20	12 29 51.2	
	comp=Z,9µm,19.0s						
MDND	**Maddock**	**104.62**	**43**	IAMs_20	IAMs_20	12 39 11.2	
	comp=Z,9µm,18.0s						
HBAR	**Harrisburg**	**104.67**	**57**	IAMs_20	IAMs_20	12 37 19.1	
	comp=Z,8µm,18.0s						
Y45A	**Yeager Farm, C**	**104.71**	**59**	IAMs_20	IAMs_20	12 31 35.3	
	comp=Z,7µm,19.0s						
SOR	**Soroa**	**104.77**	**72**	IAMs_20	IAMs_20	12 27 35.3	
	comp=Z,7µm,19.0s						
R40A	**Maddies Statio**	**104.78**	**54**	IAMs_20	IAMs_20	12 32 01.0	
	comp=Z,9µm,18.0s						
OXF	**Oxford**	**105.10**	**59**	IAMs_20	IAMs_20	12 29 34.9	
	comp=Z,10µm,20.0s						
CCM	**Cathedral Cave**	**105.39**	**55**	IAMs_20	IAMs_20	12 30 58.1	
	comp=Z,9µm,19.0s						
P40A	**Paris**	**105.50**	**53**	IAMs_20	IAMs_20	12 36 32.0	
	comp=Z,6µm,18.0s						
Z47A	**Carrollton**	**105.50**	**60**	IAMs_20	IAMs_20	12 30 41.4	
	comp=Z,9µm,20.0s						
YKA	**Yellowknife Ar**	**105.51**	**25**	Pdiff	**Pdif**	**11 48 19.3**	**+2.9**
	comp=Z,0.2nm,0.6s,baz=237,slow=2.5,SNR=1.4						
F33A	**5 Mile Ranch,**	**105.64**	**46**	IAMs_20	IAMs_20	12 38 11.4	
	comp=Z,9µm,18.0s						
HALT	**Halls**	**105.78**	**57**	IAMs_20	IAMs_20	12 35 14.7	
	comp=Z,8µm,18.0s						
SCIA	**State Center**	**105.79**	**50**	IAMs_20	IAMs_20	12 36 59.7	
	comp=Z,7µm,18.0s						
LRAL	**Lakeview Retre**	**106.23**	**61**	IAMs_20	IAMs_20	12 32 50.8	
	comp=Z,7µm,19.0s						
CAMR	**Camarioca**	**106.24**	**73**	IAMs_20	IAMs_20	12 30 16.1	
	comp=Z,16µm,19.0s						
JPG	**JALPAIGURI**	**106.29**	**291**	*e*P	**Pdif**	**11 48 13.3**	**-7.4**
I37A	**Lemond, Waseca**	**106.63**	**48**	IAMs_20	IAMs_20	12 35 38.6	
	comp=Z,7µm,19.0s						
GTK	**Tadong**	**106.73**	**292**	*e*P	**Pdif**	**11 48 15.3**	**-7.6**
FFC	**Flin Flon**	**106.73**	**36**	IAMs_20	IAMs_20	12 30 26.7	
	comp=Z,9µm,20.0s						
N41A	**Harden Midland**	**106.84**	**52**	IAMs_20	IAMs_20	12 40 13.6	
	comp=Z,8µm,18.0s						
WVT	**Waverly**	**106.98**	**58**	IAMs_20	IAMs_20	12 36 02.3	
	comp=Z,7µm,18.0s						
Y49A	**Blount Mountai**	**107.03**	**60**	IAMs_20	IAMs_20	12 32 06.0	
	comp=Z,7µm,20.0s						
KAAM	**Kaadhehdhoo**	**107.17**	**260**	IAMs_20	IAMs_20	12 36 47.7	
	comp=Z,10µm,20.0s						
MTDJ	**Mount Denham**	**107.24**	**79**	IAMs_20	IAMs_20	12 27 58.7	
	comp=Z,10µm,20.0s						
P43A	**Skaggs, Pawnee**	**107.30**	**54**	IAMs_20	IAMs_20	12 31 57.6	
	comp=Z,8µm,20.0s						
Q44A	**Meyer Farm, Va**	**107.33**	**55**	IAMs_20	IAMs_20	12 33 48.5	
	comp=Z,9µm,19.0s						
RAGD	**RAYAGADA**	**107.34**	**282**	*e*P	**Pdif**	**11 48 18.0**	**-7.6**
RER	**Riviere de l'E**	**107.50**	**231**	IAMs_20	IAMs_20	12 30 15.1	
	comp=Z,7µm,19.0s						
KNTI	**KHUNTI**	**107.53**	**287**	*e*P	**Pdif**	**11 48 20.2**	**-6.2**
CLTN	**Cedars of Leba**	**108.05**	**58**	IAMs_20	IAMs_20	12 32 53.9	
	comp=Z,6µm,19.0s						
KOD	**Kodaikanal**	**108.25**	**271**	*e*P	**Pdif**	**11 48 22.2**	**-7.9**
I40A	**Norwalk**	**108.38**	**50**	IAMs_20	IAMs_20	12 30 18.1	
	comp=Z,6µm,20.0s						
VJD	**Vijayawada**	**108.47**	**279**	*e*P	**Pdif**	**11 48 21.9**	**-8.7**
A36M	**Sachs Harbour**	**108.61**	**15**	IAMs_20	IAMs_20	12 40 35.0	
	comp=Z,7µm,19.0s						
U49A	**Red Boiling Sp**	**108.64**	**58**	IAMs_20	IAMs_20	12 33 20.3	
	comp=Z,7µm,19.0s						
SDV	**Santo Domingo**	**108.75**	**91**	IAMs_20	IAMs_20	12 32 43.2	
	comp=Z,8µm,19.0s						
TIXI	**Tiksi**	**108.81**	**344**	IAMs_20	IAMs_20	12 42 50.3	
	comp=Z,6µm,19.0s						
Y52A	**Lilburn**	**108.81**	**61**	IAMs_20	IAMs_20	12 31 58.8	
	comp=Z,7µm,20.0s						
P46A	**Rosedale**	**108.91**	**55**	IAMs_20	IAMs_20	12 33 00.2	
	comp=Z,9µm,19.0s						
CHIV	**Chivirico**	**108.98**	**78**	IAMs_20	IAMs_20	12 40 21.6	
	comp=Z,2µm,19.0s						
M44A	**Midewin, Midew**	**109.06**	**53**	IAMs_20	IAMs_20	12 38 34.2	
	comp=Z,7µm,18.0s						
GOGA	**Godfrey**	**109.07**	**62**	IAMs_20	IAMs_20	12 32 22.8	
	comp=Z,7µm,20.0s						
G40A	**Rib Lake**	**109.23**	**48**	IAMs_20	IAMs_20	12 37 12.5	
	comp=Z,8µm,18.0s						
SFIN	**Lafayette**	**109.30**	**54**	IAMs_20	IAMs_20	12 37 08.5	
	comp=Z,8µm,18.0s						
HQIL	**Hanson Quary C**	**109.36**	**52**	IAMs_20	IAMs_20	12 41 42.1	
	comp=Z,8µm,18.0s						
W52A	**Murphy**	**109.42**	**60**	IAMs_20	IAMs_20	12 33 02.0	
	comp=Z,9µm,19.0s						
I42A	**Draeger Farm,**	**109.50**	**50**	IAMs_20	IAMs_20	12 41 38.7	
	comp=Z,7µm,18.0s						
BG3	**Lake Jocassee**	**110.12**	**61**	IAMs_20	IAMs_20	12 35 00.7	
	comp=Z,6µm,19.0s						
FOMA	**Nahampoana Res**	**110.23**	**222**	IAMs_20	IAMs_20	12 34 33.8	
	comp=Z,9µm,18.0s						
COWI	**Conover**	**110.25**	**48**	IAMs_20	IAMs_20	12 33 17.4	
	comp=Z,10µm,20.0s						
HODGE	**Hodges**	**110.32**	**62**	IAMs_20	IAMs_20	12 32 45.1	
	comp=Z,6µm,20.0s						
257A	**Skidaway Islan**	**110.35**	**64**	IAMs_20	IAMs_20	12 39 44.0	
	comp=Z,5µm,18.0s						
VAR	**Varanasi**	**110.37**	**288**	*e*P	**PKiKP**	**11 52 33.0**	**-6.9**
NMDO	**Nuevo Mundo**	**110.44**	**78**	IAMs_20	IAMs_20	12 33 58.6	
	comp=Z,4µm,19.0s						
N47A	**Urbana**	**110.47**	**54**	IAMs_20	IAMs_20	12 35 43.9	
	comp=Z,8µm,19.0s						
H43A	**Windswept, Lux**	**110.49**	**50**	IAMs_20	IAMs_20	12 39 46.8	
	comp=Z,5µm,18.0s						
L46A	**Eue Claire**	**110.51**	**53**	IAMs_20	IAMs_20	12 42 17.5	
	comp=Z,7µm,18.0s						
O48B	**Farmland**	**110.61**	**55**	IAMs_20	IAMs_20	12 34 39.4	
	comp=Z,9µm,19.0s						
HYB	**Hyderabad**	**110.67**	**278**	*e*Pdif	**Pdif**	**11 48 41.6**	**+1.2**
HYB				*e*PKiKP	**PKiKP**	**11 52 43.2**	**+2.5**

HYB				*e*SKSac	**SKSac**	**11 59 20.4**	**+0.7**
S51A	**Beattyville**	**110.69**	**58**	IAMs_20	IAMs_20	12 32 39.8	
	comp=Z,6µm,20.0s						
F42A	**Maple Grove Fa**	**110.76**	**48**	IAMs_20	IAMs_20	12 37 59.0	
	comp=Z,6µm,19.0s						
JSC	**Jenkinsville**	**111.10**	**62**	IAMs_20	IAMs_20	12 33 48.8	
	comp=Z,8µm,20.0s						
I45A	**Fountain**	**111.33**	**51**	IAMs_20	IAMs_20	12 38 54.4	
	comp=Z,8µm,18.0s						
ALBI	**Allahabad**	**111.36**	**287**	*e*P	**PKiKP**	**11 52 34.7**	**-7.1**
KMSC	**Kings Mountain**	**111.38**	**61**	IAMs_20	IAMs_20	12 36 27.2	
	comp=Z,7µm,19.0s						
NHSC	**New Hope**	**111.46**	**64**	IAMs_20	IAMs_20	12 42 23.4	
	comp=Z,5µm,18.0s						
U54A	**Nelsons Funny**	**111.56**	**60**	IAMs_20	IAMs_20	12 33 43.8	
	comp=Z,10µm,20.0s						
Y57A	**Sumter**	**111.66**	**63**	IAMs_20	IAMs_20	12 34 10.5	
	comp=Z,9µm,20.0s						
NGP	**Nagpur**	**111.89**	**282**	*e*P	PKiKP	11 52 35.5	-7.4
J47A	**Sunmer**	**111.98**	**52**	IAMs_20	IAMs_20	12 40 21.7	
	comp=Z,7µm,19.0s						
Y58A	**Scranton**	**112.17**	**63**	IAMs_20	IAMs_20	12 34 08.1	
	comp=Z,7µm,20.0s						
W57A	**Gilead**	**112.40**	**62**	IAMs_20	IAMs_20	12 37 10.2	
	comp=Z,7µm,19.0s						
FCC	**Fort Churchill**	**112.41**	**34**	IAMs_20	IAMs_20	12 33 39.8	
	comp=Z,8µm,20.0s						
AAM	**Ann Arbor**	**112.43**	**53**	IAMs_20	IAMs_20	12 40 47.6	
	comp=Z,8µm,18.0s						
GRHM	**Grahamstown, E**	**112.48**	**201**	IAMs_20	IAMs_20	12 37 14.1	
	comp=Z,7µm,20.0s						
M50A	**Fremont**	**112.53**	**54**	IAMs_20	IAMs_20	12 40 33.1	
	comp=Z,8µm,18.0s						
X58A	**Rowland**	**112.67**	**62**	IAMs_20	IAMs_20	12 34 28.3	
	comp=Z,6µm,20.0s						
VOI	**Vohitsoka**	**112.68**	**224**	IAMs_20	IAMs_20	12 33 22.7	
	comp=Z,7µm,19.0s						
GLMI	**Grayling**	**112.70**	**50**	IAMs_20	IAMs_20	12 38 38.7	
	comp=Z,8µm,18.0s						
K50A	**Casco**	**113.31**	**53**	IAMs_20	IAMs_20	12 41 15.0	
	comp=Z,8µm,18.0s						
Y60A	**Bolivia**	**113.32**	**63**	IAMs_20	IAMs_20	12 35 23.6	
	comp=Z,8µm,20.0s						
E46A	**Sault Ste Mari**	**113.46**	**49**	IAMs_20	IAMs_20	12 43 19.5	
	comp=Z,8µm,18.0s						
W59A	**Clinton**	**113.58**	**62**	IAMs_20	IAMs_20	12 38 08.5	
	comp=Z,5µm,18.0s						
I49A	**Point Hope**	**113.59**	**52**	IAMs_20	IAMs_20	12 41 39.2	
	comp=Z,9µm,18.0s						
WMQ	**Urumqi**	**113.97**	**308**	*e*PKP	**PKiKP**	**11 52 48.3**	**+2.0**
WMQ				LR	LR		
	comp=Z,2µm,18.5s						
WMQ				LR	LR		
	comp=Z,1µm,16.1s						
WMQ				LR	LR		
	comp=Z,1µm,21.3s						
FRKB	**FARRUKHABAD**	**114.05**	**289**	*e*P	PKPdf	11 52 39.4	-7.4
NRDN	**NARMADA NAGAR**	**114.14**	**283**	*e*P	PKPdf	11 52 40.0	-7.2
S57A	**Dark Hollow, R**	**114.14**	**59**	IAMs_20	IAMs_20	12 36 35.3	
	comp=Z,7µm,19.0s						
LGTI	**Lohaghat**	**114.30**	**291**	*e*P	PKPdf	11 52 40.6	-6.6
PTH	**Pithoragarh**	**114.36**	**291**	*e*P	PKPdf	11 52 40.5	-7.2
Q56A	**Snyder Ridge,**	**114.43**	**58**	IAMs_20	IAMs_20	12 39 19.7	
	comp=Z,7µm,19.0s						
ABPO	**Ambohimpanom**	**114.58**	**227**	IAMs_20	IAMs_20	12 36 14.2	
	comp=Z,8µm,18.0s						
GUNA	**GUNA**	**114.79**	**285**	*e*P	PKPdf	11 52 39.5	-8.9
ERPA	**Erie**	**114.91**	**54**	IAMs_20	IAMs_20	12 44 13.4	
	comp=Z,5µm,18.0s						
V61A	**Roper**	**115.22**	**62**	IAMs_20	IAMs_20	12 40 58.0	
	comp=Z,6µm,18.0s						
P57A	**Homestead Farm**	**115.44**	**58**	IAMs_20	IAMs_20	12 38 06.4	
	comp=Z,8µm,20.0s						
CBN	**Corbin Frederi**	**115.47**	**59**	IAMs_20	IAMs_20	12 37 41.3	
	comp=Z,7µm,19.0s						
POGA	**Pongola**	**115.92**	**209**	IAMs_20	IAMs_20	12 37 19.4	
	comp=Z,6µm,19.0s						
JMIU	**JAMIA UNIVERSI**	**116.36**	**289**	*e*P	**PKPdf**	**11 52 44.1**	**-7.1**
NDI	**New Delhi**	**116.46**	**289**	*e*P	**PKPdf**	**11 52 44.4**	**-7.0**
HNLY	**HANLEY**	**116.55**	**294**	*e*P	PKPdf	11 52 44.7	-7.5
S61A	**Accomac**	**116.56**	**60**	IAMs_20	IAMs_20	12 36 20.2	
	comp=Z,8µm,20.0s						
KLP	**Kalpa**	**116.68**	**292**	*e*P	PKPdf	11 52 44.8	-7.4
GNR	**GANAUR**	**116.79**	**289**	*e*P	**PKPdf**	**11 52 45.1**	**-7.0**
MVL	**Millersville**	**116.81**	**58**	IAMs_20	IAMs_20	12 36 50.9	
	comp=Z,9µm,19.0s						
KUDL	**Kundal**	**116.85**	**288**	*e*P	**PKPdf**	**11 52 45.2**	**-7.0**
ZSN	**Zaisan**	**117.01**	**311**	*e*PKIKP	**PKPdf**	**11 52 51.0**	**-0.9**
ZSN	**Zaisan**	**117.01**	**311**	*e*PKP	**PKPdf**	**11 52 51.1**	**-0.9**
R61A	**Willards**	**117.02**	**60**	IAMs_20	IAMs_20	12 42 45.4	
	comp=Z,7µm,18.0s						
BOSA	**Boshof**	**117.15**	**202**	PKP	**PKPdf**	**11 52 52.5**	**-0.6**
	comp=Z,3.6nm,1.1s,baz=162,slow=4.7,SNR=3.0						
WUPA	**West Chester U**	**117.34**	**58**	IAMs_20	IAMs_20	12 44 25.7	
	comp=Z,5µm,18.0s						
RES	**Resolute Bay**	**117.42**	**17**		**PKiKP**	**11 52 53.0**	**+1.1**
RES				IAMs_20	IAMs_20	12 45 52.9	
	comp=Z,8µm,19.0s						
RES	**Resolute Bay**	**117.42**	**17**	PKP	**PKPdf**	**11 52 50.3**	**-1.6**
	comp=Z,6.7nm,1.1s,baz=249,slow=3.3,SNR=8.2						
RES	**Resolute Bay**	**117.42**	**17**	PKIKP	**PKiKP**	**11 52 53.0**	**+1.1**
PECO	**Prince Edward**	**117.57**	**53**	IAMs_20	IAMs_20	12 43 44.7	
	comp=Z,7µm,18.0s						
AJM	**Ajmer**	**117.74**	**286**	*e*P	**PKPdf**	**11 52 46.8**	**-7.2**
BHK	**Bhakra**	**118.10**	**292**	*e*P	PKPdf	11 52 46.2	-8.3
J57A	**Williamstown**	**118.11**	**54**	IAMs_20	IAMs_20	12 43 54.0	
	comp=Z,7µm,18.0s						
MK31	**Makanchi Array**	**118.51**	**310**	*i* PKIKP	**PKPdf**	**11 52 54.8**	**-0.1**
MKAR	**Makanchi Array**	**118.51**	**310**	PKP	**PKPdf**	**11 52 53.7**	**-1.1**
	comp=Z,1.8nm,0.6s,baz=90,slow=2.9,SNR=17						
MSEY	**Mahe Island**	**118.57**	**245**	IAMs_20	IAMs_20	12 40 51.5	
	comp=Z,7µm,18.0s						
MAKZ	**Makanchi**	**118.72**	**310**		**PKPdf**	**11 52 55.7**	**+0.4**
MAKZ	**Makanchi**	**118.72**	**310**	PKIKP	**PKPdf**	**11 52 55.7**	**+0.4**
ZALV	**Zalesovo Beam**	**118.75**	**318**	PKP	**PKPdf**	**11 52 54.5**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=134,slow=4.3,SNR=7.3						
WBO	**Williamsburg**	**119.05**	**53**	IAMs_20	IAMs_20	12 44 04.8	
	comp=Z,7µm,18.0s						
SABA	**Saba**	**119.16**	**86**	IAMs_20	IAMs_20	12 36 09.4	
	comp=Z,7µm,20.0s						
SHLS	**Shalkode**	**119.46**	**305**	*e*PKIKP	**PKPdf**	**11 52 55.2**	**-1.7**
SHLS	**Shalkode**	**119.46**	**305**	*e*PKP	**PKPdf**	**11 52 55.3**	**-1.7**
BIM	**Bigot**	**119.65**	**90**	IAMs_20	IAMs_20	12 44 15.3	
	comp=Z,5µm,19.0s						
FDF	**Fort de France**	**119.68**	**90**	IAMs_20	IAMs_20	12 38 43.1	
	comp=Z,5µm,19.0s						
SVN	**Savane Anatole**	**119.71**	**90**	IAMs_20	IAMs_20	12 39 09.0	
	comp=Z,5µm,19.0s						
ACCN	**Adirondack Com**	**119.73**	**55**	IAMs_20	IAMs_20	12 37 51.9	
	comp=Z,8µm,20.0s						
UZB	**Uzynbulak**	**119.77**	**305**	*e*PKIKP	**PKPdf**	**11 52 56.3**	**-1.3**
UZB	**Uzynbulak**	**119.77**	**305**	*e*PKP	**PKPdf**	**11 52 56.4**	**-1.2**
MPOM	**Morne Pois Mar**	**119.80**	**90**	IAMs_20	IAMs_20	12 39 40.2	
	comp=Z,6µm,19.0s						
TRQ	**Mont Tremblant**	**119.86**	**51**	IAMs_20	IAMs_20	12 43 45.1	
	comp=Z,6µm,19.0s						
CBE	**Ff, Capester**	**119.88**	**88**	IAMs_20	IAMs_20	12 38 20.5	
	comp=Z,5µm,19.0s						
KPKS	**Kokpek**	**120.09**	**305**	*e*PKIKP	**PKPdf**	**11 52 57.0**	**-1.1**
KPKS	**Kokpek**	**120.09**	**305**	*e*PKP	**PKPdf**	**11 52 57.1**	**-1.1**
SATY	**Saty**	**120.18**	**305**	*e*PKIKP	**PKPdf**	**11 52 57.2**	**-1.1**
SATY	**Saty**	**120.18**	**305**	*e*PKP	**PKPdf**	**11 52 57.2**	**-1.1**
MNTQ	**Montreal, Queb**	**120.31**	**52**	IAMs_20	IAMs_20	12 45 18.1	
	comp=Z,8µm,18.0s						
ILON	**Igloolik, Nuna**	**120.34**	**24**	IAMs_20	IAMs_20	12 46 24.4	
	comp=Z,7µm,18.0s						
HNH	**Hanover**	**120.79**	**55**	IAMs_20	IAMs_20	12 38 33.8	
	comp=Z,9µm,20.0s						
KSH	**Kashi**	**120.99**	**300**	PKP	**PKiKP**	**11 53 02.1**	**+2.0**
KSH				PP	**PP**	**11 54 29.4**	**-0.4**
KSH				SKS	**SKSac**	**12 00 04.3**	**+6.4**
KSH				SS	**SS**	**12 11 02.3**	**+0.4**
KSH				AMB	AMB		
	comp=Z,340nm,10.2s						
KSH				LR	LR		
	comp=Z,2µm,19.6s						
KSH				LR	LR		
	comp=Z,2µm,15.1s						
KSH				LR	LR		
	comp=Z,2µm,21.3s						
MDOK	**Medeo**	**121.17**	**305**	*e*PKIKP	**PKPdf**	**11 52 59.0**	**-1.2**
MDOK	**Medeo**	**121.17**	**305**	*e*PKP	**PKPdf**	**11 52 59.1**	**-1.2**
MDOK				LR	LR	12 44 47.1	
	comp=Z,754nm,21.5s						
LBNH	**Lisbon**	**121.17**	**54**	IAMs_20	IAMs_20	12 42 31.0	
	comp=Z,7µm,18.0s						
AAA	**Alma-Ata**	**121.27**	**305**	*e*PKIKP	**PKPdf**	**11 52 59.3**	**-1.0**
AAA	**Alma-Ata**	**121.27**	**305**	*e*PKP	**PKPdf**	**11 52 59.4**	**-1.0**
AAA				LR	LR	12 44 56.4	
KURK	**Kurchatov**	**121.78**	**314**		**PKPdf**	**11 53 00.2**	**-0.7**
KURK	**Kurchatov**	**121.78**	**314**	*c i*PKIKP	**PKPdf**	**11 53 00.5**	**-0.5**
KURK				pmax	pmax		
	comp=Z,25nm,1.7s						
KURBB	**Kurchatov Arra**	**121.82**	**313**	PKP	**PKPdf**	**11 52 59.9**	**-1.2**
	comp=Z,2.0nm,0.2s,baz=106,slow=1.7,SNR=21						
POIN	**Pond Inlet**	**121.84**	**20**		**PKPdf**	**11 53 00.4**	**0.0**
I63A	**Otisfield**	**122.07**	**55**	IAMs_20	IAMs_20	12 39 41.7	
	comp=Z,9µm,20.0s						
KDWAN	**Kaudwane**	**122.19**	**204**		**PKiKP**	**11 53 04.1**	**+1.1**
WVL	**Waterville**	**122.83**	**54**	IAMs_20	IAMs_20	12 44 16.7	
	comp=Z,8µm,18.0s						
AAK	**Ala-Archa**	**122.86**	**303**		**PKiKP**	**11 53 04.4**	**+0.6**
AAK	**Ala-Archa**	**122.86**	**303**	PKIKP	**PKiKP**	**11 53 04.4**	**+0.6**
AAK	**Ala-Archa**	**122.86**	**303**	*i* PKPdf	**PKPdf**	**11 53 02.0**	**-1.6**
	SNR=5.4						
SGDS	**Sogindy**	**122.95**	**304**	*e*PKP	**PKPdf**	**11 53 02.6**	**-1.0**
KGCAE	**Kacgae**	**123.49**	**202**		**PKiKP**	**11 53 06.8**	**+1.2**
BTLS	**Baital**	**123.69**	**306**	*e*PKIKP	**PKPdf**	**11 53 03.9**	**-0.9**
BTLS	**Baital**	**123.69**	**306**	*e*PKP	**PKPdf**	**11 53 04.0**	**-0.9**
KBL	**Kabul**	**124.96**	**293**		**PKiKP**	**11 53 09.7**	**+1.4**
KBL	**Kabul**	**124.96**	**293**	PKIKP	**PKiKP**	**11 53 09.7**	**+1.4**
DZA	**Taraz**	**125.19**	**303**	*e*PKIKP	**PKPdf**	**11 53 06.7**	**-1.1**
DZA	**Taraz**	**125.19**	**303**	*e*PKP	**PKPdf**	**11 53 06.8**	**-1.1**
BRZS	**Berezniki**	**125.42**	**312**	*e*PKIKP	**PKPdf**	**11 53 07.2**	**-0.8**
BRZS	**Berezniki**	**125.42**	**312**	*e*PKP	**PKPdf**	**11 53 07.2**	**-0.8**
KKAR	**Karatay Array**	**125.82**	**303**		**PKPdf**	**11 53 08.6**	**-0.4**
KKAR	**Karatay Array**	**125.82**	**303**	PKIKP	**PKPdf**	**11 53 08.6**	**-0.4**
IUG	**Iuzhnay**	**125.99**	**302**	*e*PKIKP	**PKPdf**	**11 53 08.3**	**-1.2**
IUG	**Iuzhnay**	**125.99**	**302**	*e*PKP	**PKPdf**	**11 53 08.3**	**-1.2**
SIMJ	**Simiganj**	**126.02**	**298**		**PKPdf**	**11 53 09.6**	**-0.1**
BRLS	**Boroldаy**	**126.29**	**303**	*e*PKIKP	**PKPdf**	**11 53 08.8**	**-1.1**
BRLS	**Boroldаy**	**126.29**	**303**	*e*PKP	**PKPdf**	**11 53 08.9**	**-1.0**
BVAR	**Borovoye Array**	**127.13**	**316**	PKP	**PKPdf**	**11 53 10.1**	**-1.1**
	comp=Z,3.0nm,0.6s,baz=101,slow=1.5,SNR=28						
BRVK	**Borovoye**	**127.19**	**316**		**PKPdf**	**11 53 10.8**	**-0.5**
BRVK	**Borovoye**	**127.19**	**316**	*i* PKIKP	**PKPdf**	**11 53 10.9**	**-0.4**
LSZ	**Lusaka**	**128.07**	**212**		**PKPdf**	**11 53 14.3**	**0.0**
LSZ	**Lusaka**	**128.07**	**212**	PKP	**PKPdf**	**11 53 13.8**	**-0.5**
	comp=Z,1.6nm,0.3s,baz=189,slow=3.8,SNR=9.6						
LSZ	**Lusaka**	**128.07**	**212**	PKIKP	**PKPdf**	**11 53 14.4**	**0.0**
LSZ				MLR	MLR		
	comp=Z,11µm,18.0s						
TSUM	**Tsumeb**	**128.29**	**198**		**PKPdf**	**11 53 14.9**	**+0.2**
SPA0	**Spitsbergen Ar**	**132.13**	**356**	*e*PKPdf	**PKiKP**	**11 53 21.8**	**+0.7**
SPITS	**Spitsbergen Ar**	**132.13**	**356**	PKP	**PKPdf**	**11 53 18.5**	**-1.5**
	comp=Z,6.7nm,0.8s,baz=66,slow=1.7,SNR=8.0						
SPB2	**Spitsbergen Ar**	**132.13**	**356**		**PKPdf**	**11 53 20.1**	**+0.1**
SOHO	**SOHO**	**132.19**	**276**	*i* PKPdf	**PKPdf**	**11 53 20.9**	**-0.7**
	SNR=5.4						
HATD	**Hatta, Dubai**	**132.77**	**277**	PKPdf	**PKPdf**	**11 53 22.3**	**-0.4**
SHEL	**Horse Pasture**	**132.81**	**169**	IAMs_20	IAMs_20	12 56 55.4	
	comp=Z,5µm,18.0s						
ALNE	**Al Ain**	**132.83**	**275**	PKPdf	**PKPdf**	**11 53 22.0**	**-1.0**
SUMG	**Summit**	**132.90**	**16**		**PKPdf**	**11 53 22.8**	**+0.7**
SUMG				IAMs_20	IAMs_20	12 55 22.6	
	comp=Z,5µm,18.0s						
SUMG	**Summit**	**132.90**	**16**	PKIKP	**PKPdf**	**11 53 22.8**	**+0.7**
KIBK	**Kibwezi**	**132.93**	**232**	IAMs_20	IAMs_20	12 43 19.7	
	comp=Z,5µm,20.0s						
SHME	**Shamm**	**133.16**	**278**	PKPdf	**PKPdf**	**11 53 22.3**	**-1.2**
FAQ	**Al Faqa, Dubai**	**133.20**	**276**	PKPdf	**PKPdf**	**11 53 22.4**	**-1.1**
ASUD	**Al Ashush, Dub**	**133.39**	**276**	PKPdf	**PKPdf**	**11 53 23.2**	**-0.8**
ABKAR	**Akbulak array**	**133.65**	**310**		**PKiKP**	**11 53 25.2**	**+0.3**
ARTI	**Arti**	**133.90**	**320**		**PKiKP**	**11 53 25.5**	**+0.3**
ARTI				IAMs_20	IAMs_20	12 51 22.4	
	comp=Z,4µm,20.0s						
ARTI	**Arti**	**133.90**	**320**	*i* PKIKP	**PKPdf**	**11 53 23.2**	**-0.7**
ARTI						11 55 49.9	
ARTI				SS	SS	12 13 38.8	-2.4
ARTI				MLR	MLR		
	comp=Z,4µm,20.0s						
KMBO	**Kilima Mbogo**	**134.35**	**232**	*i* PKiKP	**PKPdf**	**11 53 27.3**	**+0.8**
	SNR=7.1						
MZR	**Muzera**	**134.41**	**273**	*i* PKPdf	**PKPdf**	**11 53 26.1**	**+0.2**
	SNR=6.6						
IVI	**Ivigtut**	**135.10**	**32**	IAMs_20	IAMs_20	12 47 57.3	
	comp=Z,7µm,20.0s						
H10S3	**ASCENSION HYDR**	**137.10**	**154**	T	T	14 26 48.2	
	baz=204,slow=74,SNR=4.8						
H10S2	**ASCENSION HYDR**	**137.10**	**154**	T	T	14 26 48.6	
	baz=16,slow=74,SNR=4.8						
ANGG	**Ammassalik, Gr**	**137.35**	**23**	IAMs_20	IAMs_20	12 54 17.9	
	comp=Z,6µm,18.0s						
SCO	**Scoresbysund**	**137.94**	**12**	IAMs_20	IAMs_20	12 51 55.6	
	comp=Z,4µm,20.0s						
ASCN	**Ascension**	**138.16**	**154**	IAMs_20	IAMs_20	12 45 37.4	
	comp=Z,5µm,19.0s						
H10N3	**ASCENSION HYDR**	**138.19**	**154**	T	T	14 28 01.7	
	baz=202,slow=74						
H10N1	**ASCENSION HYDR**	**138.19**	**154**	T	T	14 28 09.1	
	baz=202,slow=74						
H10N2	**ASCENSION HYDR**	**138.20**	**154**	T	T	14 28 07.2	
	baz=202						
KEV	**Kevo**	**138.64**	**348**	IAMs_20	IAMs_20	12 54 55.0	
	comp=Z,5µm,21.0s						
LODK	**Lodwar**	**138.92**	**235**	IAMs_20	IAMs_20	13 03 15.0	
	comp=Z,4µm,18.0s						
APA	**Apatity**	**138.97**	**343**	⇓*i*PKIKP	**PKPdf**	**11 53 32.2**	**-0.8**
APA				*i*		11 56 22.0	
APA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MBAR	**Mbarara**	**138.99**	**226**	IAMs_20	IAMs_20	12 48 22.0	
	comp=Z,7µm,20.0s						
ARA0	**ARCESS Array S**	**139.10**	**348**	*e*P	**PKPdf**	**11 53 27.4**	**-5.8**
ARCES	**ARCESS Array B**	**139.10**	**348**		PKPpre	11 53 27.6	
ARCES	**ARCESS Array B**	**139.10**	**348**	PKhKP	PKPpre	11 53 25.3	
	comp=Z,2.5nm,0.5s,baz=46,slow=2.2,SNR=20						
ARCES	**ARCESS Array B**	**139.10**	**348**	PKIKP	**PKPdf**	**11 53 27.6**	**-5.6**
FURI	**Furi**	**140.07**	**245**	IAMs_20	IAMs_20	12 55 01.2	
	comp=Z,5µm,18.0s						
BELG	**Belogornoye**	**140.91**	**317**	PKP	**PKPdf**	**11 53 35.1**	**-1.8**
	comp=Z,25nm,1.1s,baz=84,slow=1.8,SNR=3.6						
KLMR	**Klimovskoe**	**141.40**	**332**	*e*PKIKP	**PKPdf**	**11 53 35.4**	**-2.2**
KLMR				*e*		11 56 37.2	
KLMR				SS	SS	12 15 04.2	-5.2
KLMR				pmax	pmax		
	comp=Z,36nm,1.5s						
KLMR				MLR	MLR		
	comp=Z,4µm,22.0s						
RAYN	**Ar Rayn**	**141.45**	**270**	IAMs_20	IAMs_20	13 04 10.5	
	comp=Z,5µm,18.0s						
RAYN	**Ar Rayn**	**141.45**	**270**	*i* PKPdf	**PKPdf**	**11 53 38.7**	**-0.2**
	SNR=6.0						
AKT	**Akhty**	**142.51**	**299**	*e*PKHKP	PKPpre	11 53 35.8	
AKT				*e*		11 56 44.9	
AKT				pmax	pmax		
	comp=Z,32nm,1.1s						
MAK	**Makhachkala**	**142.60**	**302**	*e*PKHKP	PKPpre	11 53 34.7	
MAK				*e*		11 56 43.7	
MAK				*e*SS	SS	12 15 24.9	-0.1
MAK				*e*SSS	SSS	12 20 36.9	
MAK				pmax	pmax		
	comp=Z,129nm,1.1s						
BORG	**Borgarnes**	**142.85**	**17**	IAMs_20	IAMs_20	13 04 08.8	
	comp=Z,4µm,18.0s						
LEIR	**Leirfjorden**	**144.08**	**353**	*e*P	**PKPab**	**11 53 39.0**	**-0.7**
VRH	**Novokhopyorsk**	**144.76**	**317**	*i* PKIKP	**PKPab**	**11 53 41.5**	**-1.2**
VRH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GNI	**Garni**	**144.82**	**297**		PKPbc	11 53 44.0	+0.5
GNI	**Garni**	**144.82**	**297**	PKP	**PKPab**	**11 53 43.3**	**-0.2**
	comp=Z,29nm,0.9s,baz=163,slow=2.7,SNR=27						
GNI	**Garni**	**144.82**	**297**	PKIKP	PKPbc	11 53 44.1	+0.5
GNI	**Garni**	**144.82**	**297**	PKPbc	**PKPab**	**11 53 43.2**	**-0.3**
MOS	**Moscow**	**145.01**	**326**	*i* PKIKP	**PKPab**	**11 53 41.9**	**-1.5**
MOS				pmax	pmax		
	comp=Z,262nm,1.6s						
MOS				pmax	pmax		
	comp=Z,2µm,3.1s						
MOS				pmax	pmax		
	comp=N,1µm,3.4s						
GOF	**Gofitskoye**	**145.54**	**306**	*c i*PKIKP	**PKPdf**	**11 53 45.2**	**-0.2**
FINES	**FINESS Array B**	**145.72**	**340**	PKPbc	**PKPdf**	**11 53 44.7**	**-0.4**
	comp=N,59nm,0.7s,baz=58,slow=3.6,SNR=84						
FINES	**FINESS Array B**	**145.72**	**340**	PKIKP	**PKPdf**	**11 53 44.8**	**-0.3**
NSS	**Namsos**	**145.74**	**353**	*e*PKPdf	**PKPdf**	**11 53 44.5**	**-0.6**
LPSR	**Galich'ya Gora**	**145.82**	**320**	*e*PKP2	**PKPdf**	**11 53 44.7**	**-0.9**
LPSR				pmax	pmax		
	comp=Z,644nm,2.0s						
OBN	**Obninsk**	**145.85**	**325**		**PKPdf**	**11 53 45.8**	**+0.3**
OBN				IAMs_20	IAMs_20	13 08 21.3	
	comp=Z,4µm,19.0s						
OBN	**Obninsk**	**145.85**	**325**	PKPbc	**PKPdf**	**11 53 45.4**	**-0.1**
	comp=Z,41nm,0.4s,baz=3.7,slow=3.4,SNR=30						
OBN	**Obninsk**	**145.85**	**325**	*c i*PKIKP	**PKPdf**	**11 53 43.7**	**-1.8**
OBN				*e*		11 57 06.3	
OBN				pmax	pmax		
	comp=Z,126nm,1.1s						
KBZ	**Khabaz**	**145.86**	**304**	PKPbc	**PKPdf**	**11 53 46.3**	**+0.4**
	comp=Z,59nm,1.2s,baz=86,slow=3.8,SNR=39						
KIV	**Kislovodsk**	**145.97**	**304**		**PKPbc**	**11 53 47.3**	**+0.3**
KIV				IAMs_20	IAMs_20	13 02 26.6	
	comp=Z,5µm,20.0s						
KIV	**Kislovodsk**	**145.97**	**304**	*e*PKHKP	PKPpre	11 53 40.6	
KIV				*i*		11 53 45.2	
KIV				*e*		12 00 49.1	
KIV				*e*SSS	SSS	12 21 28.2	
KIV				pmax	pmax		
	comp=Z,50nm,1.0s						
KIV	**Kislovodsk**	**145.97**	**304**	*i* PKPdf	**PKPdf**	**11 53 45.9**	**-0.4**
	SNR=75						
SHA1	**Shidzhatmaz**	**146.03**	**304**	*c i*PKIKP	**PKPdf**	**11 53 45.2**	**-1.4**
VORR	**Voronezh**	**146.05**	**318**	*e*PKP2	**PKPdf**	**11 53 46.8**	**+0.8**
VORR				pmax	pmax		
	comp=Z,311nm,1.6s						
GEVA	**Gevas**	**146.16**	**294**	IAMs_20	IAMs_20	13 06 53.1	
	comp=Z,3µm,20.0s						
VSR	**Storozhevoye**	**146.25**	**318**	*i* PKIKP	**PKPdf**	**11 53 44.3**	**-2.0**
VSR				pmax	pmax		
	comp=Z,70nm,1.0s						
VORD	**Divnogorie**	**146.28**	**317**	*e*PKIKP	**PKPdf**	**11 53 45.6**	**-0.8**
VORD				pmax	pmax		
	comp=Z,80nm,1.3s						
ERBR	**Yeremizino-Bor**	**147.16**	**308**	*i* PKP2	**PKPdf**	**11 53 49.3**	**+1.2**
ERBR				*e*		12 00 49.5	
ERBR				pmax	pmax		
	comp=Z,227nm,1.2s						
ERBR				pmax	pmax		
	comp=Z,6µm,3.6s						
LABN	**Labinsk**	**147.24**	**306**	*i* PKP2	**PKPbc**	**11 53 50.9**	**+0.4**
LABN				pmax	pmax		
	comp=Z,83nm,0.8s						
LABN				pmax	pmax		
	comp=Z,4µm,3.5s						
VSU	**Vasula**	**147.84**	**336**	*i* PKIKP	**PKPdf**	**11 53 47.8**	**-0.9**
VSU				pmax	pmax		
	comp=Z,316nm,1.6s						
SOC	**Sochi**	**148.16**	**304**	*e*PKIKP	**PKPdf**	**11 53 50.4**	**+0.6**
SOC				*e*		11 57 28.2	
SOC				pmax	pmax		
	comp=Z,67nm,1.3s						
DOMB	**Dombas**	**148.46**	**354**	*e*PKPdf	**PKPdf**	**11 53 51.2**	**+1.4**
AKN	**Aaknes**	**148.47**	**356**	*e*PKPdf	**PKPdf**	**11 53 51.9**	**+2.1**
FOO	**Floro**	**149.14**	**358**	*e*PKPdf	**PKPdf**	**11 53 52.2**	**+1.4**
NB2	**NORSAR Subarra**	**149.22**	**352**	PKP	**PKPbc**	**11 53 54.8**	**-0.5**
	comp=Z,1µm,2.5s,baz=13,slow=4.3						
NB2	**NORSAR Subarra**	**149.22**	**352**	PKP	**PKPbc**	**11 53 54.8**	**-0.5**
	baz=13,slow=4.3						
NOA	**NORSAR Array B**	**149.22**	**352**	PKP	**PKPdf**	**11 53 50.9**	**-0.2**
	comp=Z,21nm,1.0s,baz=14,slow=4.2,SNR=20						
NOA				PKPbc	**sPKPdf**	**11 53 54.4**	**-0.9**
	comp=Z,5.9nm,0.8s,baz=59,slow=1.5,SNR=22						
ANN	**Anapa**	**149.48**	**307**	*e*PKHKP	PKPpre	11 53 49.3	
ANN				*e*		11 57 27.3	
ANN				*e*		12 00 56.3	
ANN				pmax	pmax		
	comp=Z,158nm,1.5s						
ANN				pmax	pmax		
	comp=Z,1µm,3.2s						
ANN				MLR	MLR		
	comp=Z,2µm,21.0s						
NC602	**NORSAR Array S**	**149.48**	**351**	*e*PKPdf	**PKPdf**	**11 53 52.2**	**+0.8**
HYA	**Hoyanger**	**149.53**	**357**	*e*PKPdf	**PKPdf**	**11 53 52.6**	**+1.2**
SUE	**Sulen**	**149.69**	**358**	*e*	**PKPdf**	**11 53 51.2**	**-0.5**
HFS	**Hagfors**	**149.74**	**349**	PKP	**PKPdf**	**11 53 52.1**	**+0.3**
	comp=Z,18nm,0.8s,baz=113,slow=3.9,SNR=11						
HFS				PKPbc	**sPKPdf**	**11 53 55.6**	**-0.4**
	comp=Z,14nm,0.7s,baz=53,slow=0.7,SNR=25						
SKAR	**Skarslia**	**149.87**	**355**	*e*PKPdf	**PKPdf**	**11 53 53.8**	**+1.7**
MNK	**Minsk**	**150.24**	**330**	*i* PKiKP	**PKPbc**	**11 53 57.3**	**-0.6**
	comp=E,64nm,0.9s						
MNK				*i* PKiKP	**PKPbc**	**11 53 57.3**	**-0.6**
	comp=N,28nm,1.0s						
MNK				*i* PKiKP	**PKPbc**	**11 53 57.3**	**-0.6**
	comp=Z,64nm,0.9s,baz=48						
MNK				*i* PP	**PP**	**11 57 29.1**	**-3.8**
MNK				*i* PPP	PPP	12 00 53.6	
MNK				*i* SKS	**SKSdf**	**12 00 58.6**	**-1.3**
MNK				*i* SS	**SS**	**12 16 51.6**	**+1.5**
MNK				*i* SSS	SSS	12 22 32.4	
MNK				*i* LRM	MLR	13 11 25.8	
	comp=E,3µm,18.3s						
MNK				*i* LRM	MLR	13 11 37.3	
	comp=N,2µm,18.3s						
MNK				*i* LRM	MLR	13 11 38.7	
	comp=Z,4µm,18.5s						
MNK	**Minsk**	**150.24**	**330**	*i* PKIKP	**PKPbc**	**11 53 57.3**	**-0.6**
MNK				*i*		11 57 29.1	
MNK				*i* PPP	PPP	12 00 53.5	
MNK				*i*		12 00 58.6	
MNK				*i* SS	SS	12 16 51.5	+1.4
MNK				*i* SSS	SSS	12 22 32.3	
MNK				pmax	pmax		
	comp=Z,64nm,0.9s						
MNK				pmax	pmax		
	comp=E,64nm,0.9s						
MNK				pmax	pmax		
	comp=N,28nm,1.0s						
ASK	**Askoy**	**150.25**	**358**	*e*PKPdf	**PKPdf**	**11 53 52.2**	**-0.4**
NACGM	**Naroch**	**150.42**	**332**	⇓*i*PKiKP	**PKiKP**	**11 53 59.8**	**+0.7**
	comp=Z,396nm,16.7s,baz=45						
ODD1	**Odda**	**150.75**	**356**	*e*PKPdf	**PKPdf**	**11 53 54.7**	**+1.2**
KONO	**Kongsberg**	**150.77**	**353**	PKPdf	**PKPdf**	**11 53 55.9**	**+2.5**
KONO	**Kongsberg**	**150.77**	**353**	PKIKP	**PKPdf**	**11 53 55.9**	**+2.5**
KONO	**Kongsberg**	**150.77**	**353**	*e*	**PKPbc**	**11 53 58.7**	**-0.3**
ASF	**Jabal al Asfar**	**150.91**	**282**	PKP	**PKPdf**	**11 53 55.2**	**+0.5**
	comp=Z,5.4nm,0.8s,baz=154,slow=1.2,SNR=4.2						
ASF				PKPbc	**PKPbc**	**11 54 00.5**	**+0.1**
	comp=Z,20nm,0.9s,baz=64,slow=0.3,SNR=14						
PABE	**Paberze**	**151.07**	**335**	IAMs_20	IAMs_20	13 00 54.0	
	comp=Z,5µm,22.0s						
SACV	**Santiago Islan**	**151.17**	**117**	IAMs_20	IAMs_20	12 56 53.4	
	comp=Z,4µm,19.0s						
STRU	**Stroemstad**	**151.17**	**351**	*i* P	**PKPdf**	**11 53 53.2**	**-0.8**
BLS5	**Blasjo**	**151.25**	**356**	*e*PKPdf	**PKPdf**	**11 53 53.2**	**-1.0**
KMY	**Karmoy**	**151.52**	**357**	*e*	**PKPbc**	**11 54 00.9**	**+0.1**
SIM	**Simferopol'**	**151.69**	**309**	*i* PKIKP	PKPdf	11 53 45.5	-10
SIM				pmax	pmax		
	comp=Z,114nm,1.4s						
GHAJ	**Ghor Haditha**	**151.93**	**280**	IAMs_20	IAMs_20	13 05 34.0	
	comp=Z,4µm,18.0s						
AKASG	**Malin Array Be**	**151.99**	**323**		**PKPdf**	**11 53 56.3**	**+0.7**
AKASG	**Malin Array Be**	**151.99**	**323**	PKP	**PKPdf**	**11 53 55.7**	**+0.1**
	comp=Z,7.4nm,1.1s,baz=43,slow=1.2,SNR=14						
AKASG				PKPbc	**PKPbc**	**11 54 01.2**	**-0.9**
	comp=Z,15nm,0.8s,baz=44,slow=2.3,SNR=49						
KIEV	**Kiev**	**152.01**	**323**		**PKPdf**	**11 53 56.4**	**+0.8**
KIEV	**Kiev**	**152.01**	**323**	IAMs_20	IAMs_20	13 02 36.9	
	comp=Z,5µm,22.0s						
KIEV	**Kiev**	**152.01**	**323**	PKIKP	**PKPdf**	**11 53 56.4**	**+0.8**
KIEV	**Kiev**	**152.01**	**323**	*i* PKPdf	**PKPdf**	**11 53 53.9**	**-1.7**
	SNR=14						
EIL	**Elat**	**152.20**	**276**	PKP	**PKPdf**	**11 53 57.1**	**+0.5**
	comp=Z,3.0nm,0.7s,baz=139,slow=5.0,SNR=4.7						
EIL				PKPbc	**PKPbc**	**11 54 03.5**	**+0.2**
	comp=Z,23nm,1.0s,baz=114,slow=1.9,SNR=17						
HOMB	**Homborsund**	**152.23**	**353**	*e*PKPdf	**PKPdf**	**11 53 56.8**	**+1.1**
HOMB	**Homborsund**	**152.23**	**353**	*i* P	**PKPdf**	**11 53 56.4**	**+0.7**
MMAI	**Mount Meron Ar**	**152.24**	**283**	PKPbc	**PKPbc**	**11 54 04.0**	**+0.7**
	comp=Z,4.4nm,0.4s,baz=85,slow=3.0,SNR=22						
BORU	**Boraas**	**152.27**	**348**	*i* P	**PKPdf**	**11 53 55.4**	**-0.4**
SUW	**Suwalki**	**152.51**	**333**	*e*PKPdf	**PKPdf**	**11 53 55.5**	**-0.7**
SUW	**Suwalki**	**152.51**	**333**	IAMs_20	IAMs_20	13 07 48.8	
	comp=Z,3µm,20.0s						
ONAU	**Onsala**	**152.64**	**349**	*i* P	**PKPdf**	**11 53 50.9**	**-5.4**
FABU	**Falkenberg**	**152.88**	**348**	*i* P	**PKPdf**	**11 53 55.4**	**-1.3**
BLEU	**Blekinge**	**152.88**	**344**	*i* P	**PKPdf**	**11 53 55.6**	**-1.1**
OVD	**Ostervraa, Den**	**152.97**	**351**	*i* P	**PKPdf**	**11 53 55.6**	**-1.2**
ILGA	**Ilgaz**	**153.03**	**301**	IAMs_20	IAMs_20	13 18 11.5	
	comp=Z,4µm,18.0s						
DEL	**Delary**	**153.16**	**346**	*i* P	**PKPdf**	**11 53 56.1**	**-1.0**
BRTR	**Keskin Array B**	**153.35**	**298**	PKP	**PKPdf**	**11 53 58.1**	**-0.1**
	comp=Z,2.0nm,1.1s,baz=0.0,slow=0.1,SNR=6.7						
BRTR				PKPbc	**PKiKP**	**11 54 06.8**	**+1.0**
	comp=Z,9.8nm,1.1s,baz=147,slow=2.9,SNR=17						

BJUU	**Bjuv**	153.70	347	*i* P	PKPdf	11 53 56.9	-1.0
ANTO	**Ankara**	153.96	299		PKiKP	11 54 07.8	+0.8
ANTO	**Ankara**	153.96	299	PKIKP	PKiKP	11 54 07.8	+0.8
LUNU	**Lund**	154.03	346	*i* P	PKPdf	11 53 56.8	-1.6
COP	**Copenhagen**	154.18	347	*i* P	PKPdf	11 53 56.8	-1.7
KIS	**Kishinev**	154.21	316	*e*PKIKP	PKPdf	11 53 48.0	-11
MILM	**Milestii Mici**	154.25	316	*e*PKP	PKPdf	11 53 55.0	-4.0
MILM	**Milestii Mici**	154.25	316	*e*PKIKP	PKPdf	11 53 55.0	-4.0
DBIC	**Dimbokro**	154.97	162	PKP	PKPdf	11 54 02.4	+1.4
	comp=Z,2.4nm,0.8s,baz=246,slow=2.8,SNR=1.4						
EKA	**Eskdalemuir Ar**	155.10	8	PKP	PKPdf	11 54 01.0	+1.1
	comp=Z,1.0nm,0.7s,baz=350,slow=3.2,SNR=1.5						
EKA				PKPab	PKPab	11 54 21.1	-3.4
	comp=Z,1.7nm,0.8s,baz=343,slow=2.6,SNR=3.6						
EKA	**Eskdalemuir Ar**	155.10	8	PKIKP	PKPdf	11 54 01.0	+1.1
ESK	**Eskdalemuir**	155.12	8	IAMs_20	IAMs_20	13 03 47.4	
	comp=Z,4µm,20.0s						
TIRR	**Tirgusor**	155.63	311	IAMs_20	IAMs_20	13 08 18.9	
	comp=Z,5µm,21.0s						
CMLA	**Cha da Macela**	155.68	66	IAMs_20	IAMs_20	12 58 37.2	
	comp=Z,5µm,21.0s						
BORA	**Eskisehir**	155.72	300	IAMs_20	IAMs_20	13 13 39.8	
	comp=Z,3µm,19.0s						
KWP	**Kalwaria Pacla**	155.91	327	*e*PKPdf	PKPdf	11 53 59.6	-1.6
BURAR	**Bucovina Array**	155.93	321		PKPdf	11 54 00.6	-0.8
ISP	**Isparta**	156.06	295	IAMs_20	IAMs_20	13 09 02.2	
	comp=Z,4µm,20.0s						
PSN	**Preselentsi**	156.16	310	P	PKPdf	11 54 00.4	-1.3
BSEG	**Bad Segeberg**	156.22	349	*e*PKPdf	PKPdf	11 54 01.5	+0.1
	baz=22,slow=1.1						
BSEG				*e*PKPab	PKPab	11 54 30.3	+1.1
	baz=19,slow=4.2						
BSEG				*e*PP	PP	11 58 05.5	-0.8
DSB	**Dublin**	156.59	14	IAMs_20	IAMs_20	13 01 21.9	
	comp=Z,6µm,20.0s						
MLR	**Muntele Rosu**	156.69	316	IAMs_20	IAMs_20	13 16 07.6	
	comp=Z,4µm,20.0s						
MLR	**Muntele Rosu**	156.69	316	PKP	PKPdf	11 54 03.1	+0.5
	comp=Z,1.9nm,0.6s,baz=27,slow=3.1,SNR=5.3						
MLR				PKPab	PKPab	11 54 31.9	0.0
	comp=Z,5.7nm,0.9s,baz=7.2,slow=3.4,SNR=9.3						
STHS	**Stebnicka Huta**	156.73	328	*e*PKP2	PKPab	11 54 33.6	+1.9
STHS	**Stebnicka Huta**	156.73	328	*e*PKP	PKPab	11 54 33.6	+1.9
OJC	**Ojcow**	156.75	331	*e*PKPdf	PKPdf	11 54 01.4	-0.9
PRD	**Provadia**	156.84	309	P	PKPdf	11 54 01.6	-1.0
RUE	**Ruedersdorf**	156.86	343	*e*PKPdf	PKPdf	11 54 03.3	+1.1
	baz=22,slow=1.1						
RUE				*e*PKPab	PKPab	11 54 33.1	+1.1
	baz=19,slow=4.2						
GORT1	**Trebel**	156.95	347	*e*PKPdf	PKPdf	11 54 02.4	+0.1
	baz=22,slow=1.1						
GORT1				*e*PKPab	PKPab	11 54 33.6	+1.2
	baz=19,slow=4.2						
GORT1				*e*PP	PP	11 58 08.8	-1.5
NIE	**Niedzica**	157.15	330	*e*PKPdf	PKPdf	11 54 01.9	-1.0
NIE				*e*PP	PP	11 58 10.5	-1.5
MANT	**Manisa**	157.46	297	IAMs_20	IAMs_20	13 21 59.0	
	comp=Z,5µm,20.0s						
RETH	**Rethem/Aller,**	157.53	349	*e*PKPdf	PKPdf	11 54 02.9	-0.2
	baz=22,slow=1.1						
RETH				*e*PKPab	PKPab	11 54 35.7	+0.8
	baz=19,slow=4.2						
RETH				*e*PP	PP	11 58 10.0	-3.6
KSP	**Ksiaz**	157.56	337	*e*PKPdf	PKPdf	11 54 02.8	-0.5
FLTG	**Flechtingen**	157.58	346	*e*PKPdf	PKPdf	11 54 02.9	-0.3
	baz=22,slow=1.1						
FLTG				*e*PKPab	PKPab	11 54 35.5	+0.3
	baz=19,slow=4.2						
FLTG				*e*PP	PP	11 58 11.6	-2.3
NRDL	**Niedersach Rie**	157.64	348	*e*PKPdf	PKPdf	11 54 03.3	+0.1
	baz=22,slow=1.1						
NRDL				*e*PKPab	PKPab	11 54 36.4	+1.0
	baz=19,slow=4.2						
NRDL				*e*PP	PP	11 58 11.6	-2.6
JMB	**Yambol**	157.70	308	P	PKPdf	11 54 02.5	-1.2
OKC	**Ostrava-Krasne**	157.72	333	*e*PKPDF	PKPdf	11 54 02.4	-1.1
OKC				AMS	AMS	13 14 30.0	
	comp=Z,3µm,17.9s						
OKC	**Ostrava-Krasne**	157.72	333	*e*PKIKP	PKPdf	11 54 02.4	-1.1
OKC				MLR	MLR		
	comp=Z,3µm,17.9s						
SZH	**Strazhitsa**	157.74	310	P	PKPdf	11 54 01.2	-2.6
OSTC	**Ostas**	157.83	337	AMS	AMS	13 25 40.0	
	comp=Z,3µm,18.5s						
CHVC	**Chvalec**	157.86	337	*e*PKPDF	PKPdf	11 54 02.6	-1.1
CHVC				AMS	AMS	13 18 50.0	
	comp=Z,3µm,18.5s						
CHVC	**Chvalec**	157.86	337	*e*PKIKP	PKPdf	11 54 02.6	-1.1
CHVC				MLR	MLR		
	comp=Z,3µm,18.5s						
ASSE	**Asse, Remlinge**	157.89	347	*e*PKPdf	PKPdf	11 54 03.8	+0.3
	baz=22,slow=1.1						
ASSE				*e*PKPab	PKPab	11 54 36.6	+0.2
	baz=19,slow=4.2						
ASSE				*e*PP	PP	11 58 13.0	-2.5
UPC	**Upice**	157.94	337	AMS	AMS	13 18 50.0	
	comp=Z,4µm,18.5s						
DPC	**Dobruska-Polom**	157.97	336	*e*PKPDF	PKPdf	11 54 03.7	-0.2
DPC				AMS	AMS	13 19 00.0	
	comp=Z,4µm,18.0s						
DPC	**Dobruska-Polom**	157.97	336	*e*PKIKP	PKPdf	11 54 03.7	-0.2
DPC				MLR	MLR		
	comp=Z,4µm,18.0s						
MORC	**Moravsky Berou**	158.00	334	IAMs_20	IAMs_20	13 16 18.2	
	comp=Z,4µm,19.0s						
MORC	**Moravsky Berou**	158.00	334	*e*PKP	PKPdf	11 54 05.3	+1.4
MORC				*e*		11 54 37.9	
MORC				*e*PP	PP	11 58 15.1	-1.5
KRLC	**Kraliky**	158.03	335	AMS	AMS	13 13 40.0	
	comp=Z,3µm,18.8s						
CLL	**Collm**	158.13	343	IAMs_20	IAMs_20	13 12 57.4	
	comp=Z,4µm,19.0s						
CLL	**Collm**	158.13	343	*i* PKIKP	PKPdf	11 54 04.4	+0.5
CLL				*i*		11 54 38.6	
CLL				pmax	pmax		
	comp=Z,115nm,2.4s						
CLL				pmax	pmax		
	comp=Z,232nm,2.7s						
CLL				pmax	pmax		
	comp=Z,4µm,19.1s						
CLL	**Collm**	158.13	343	*e*PKPdf	PKPdf	11 54 04.0	+0.1
	baz=22,slow=1.1						
CLL				*e*PKPab	PKPab	11 54 38.5	+0.9
	baz=19,slow=4.2						
CLL				*e*PP	PP	11 58 12.3	-4.7
CLL	**Collm**	158.13	343	*i* PKPdf	PKPdf	11 54 04.4	+0.5
	comp=Z,115nm,2.4s						
CLL				*e*PKPdif	sPKPdf	11 54 17.0	+8.9
CLL				*i* PKPab	PKPab	11 54 38.6	+1.0
	comp=Z,232nm,2.7s						
CLL				*e*PP	PP	11 58 14.0	-3.0
	comp=Z,118nm,2.7s						
CLL				*e*PPP	PPP	12 02 06.0	
CLL				*e*PPPP		12 04 18.0	
CLL				*e*SKKSac	SKKSac	12 05 08.0	+2.2
CLL				*e*PSKS		12 08 41.0	
CLL				*e*x	x	12 09 12.0	
CLL				*e*PPS	PPS	12 11 33.0	
CLL				*e*SS	SS	12 18 05.0	-10
CLL				*e*x	x	12 19 24.0	
CLL				*e*x	x	12 20 37.0	
CLL				*e*SSS	SSS	12 24 19.0	
CLL				*e*x	x	12 26 48.0	
CLL				*e*SSSS		12 28 31.0	
CLL				AMS	AMS	13 12 00.0	
	comp=N,3µm,20.0s						
CLL				AMS	AMS	13 12 00.0	
	comp=E,2µm,20.0s						
CLL				AMS	AMS	13 12 00.0	
	comp=Z,4µm,19.1s						
CLL				AMS	AMS	13 13 00.0	
IBBN	**Ibbenburen**	158.18	352	*e*PKPdf	PKPdf	11 54 04.7	+0.8
	baz=22,slow=1.1						
IBBN				*e*PKPab	PKPab	11 54 38.2	+0.5
	baz=19,slow=4.2						
IBBN				*e*PP	PP	11 58 13.5	-3.7
CLZ	**Clausthal**	158.22	347	*e*PKPdf	PKPdf	11 54 04.5	+0.4
	baz=22,slow=1.1						
CLZ				*e*PKPab	PKPab	11 54 38.9	+0.9
	baz=19,slow=4.2						
CLZ				*e*PP	PP	11 58 15.3	-2.2
MAUC	**Maruska**	158.22	333	*e*PKPDF	PKPdf	11 54 04.4	+0.2
MAUC				*e*PKPAB	pPKPab	11 54 40.2	-1.0
BRG	**Berggiesshubel**	158.26	341	*e*PKPdf	PKPdf	11 54 03.8	-0.3
	baz=22,slow=1.1						
BRG				*e*PKPab	PKPab	11 54 38.5	+0.3
	baz=19,slow=4.2						
BRG				*e*PP	PP	11 58 15.1	-2.7
PVCC	**Panska Ves**	158.38	339	*e*PKPDF	PKPdf	11 54 02.9	-1.4
PVCC				*e*PKPAB	PKPab	11 54 39.1	+0.4
PVCC				AMS	AMS	13 10 30.0	
	comp=Z,6µm,19.5s						
PVCC	**Panska Ves**	158.38	339	*e*PKIKP	PKPdf	11 54 02.9	-1.4
PVCC				*e*		11 54 39.1	
PVCC				MLR	MLR		
	comp=Z,6µm,19.5s						
PSZ	**Piszkesteto**	158.43	327	IAMs_20	IAMs_20	13 16 53.0	
	comp=Z,5µm,19.0s						
VYHS	**Vyhne**	158.48	330	*e*PKP2	PKPab	11 54 40.6	+1.3
VYHS	**Vyhne**	158.48	330	*e*PKP	PKPab	11 54 40.6	+1.3
RICC	**Richard**	158.51	340	AMS	AMS	13 23 50.0	
	comp=Z,4µm,18.2s						
NEUB	**Neuenburg**	158.52	344	*e*PKPdf	PKPdf	11 54 05.4	+1.0
	baz=22,slow=1.1						
NEUB				*e*PKPab	PKPab	11 54 39.2	-0.1
	baz=19,slow=4.2						
NEUB				*e*PP	PP	11 58 16.5	-2.6
GTTG	**Gottingen**	158.58	348	*e*PKPdf	PKPdf	11 54 04.5	0.0
	baz=22,slow=1.1						
GTTG				*e*PKPab	PKPab	11 54 39.4	-0.1
	baz=19,slow=4.2						
GTTG				*e*PP	PP	11 58 17.4	-2.0
ALN	**Alexandroupoli**	158.64	305	IAMs_20	IAMs_20	13 15 03.9	
	comp=Z,5µm,19.0s						
JAVC	**Velka Javorina**	158.69	332	*e*PKP	PKPdf	11 54 06.9	+2.1
JAVC				*e*		11 54 41.3	
VRAC	**Vranov**	158.74	334	PKP	PKPdf	11 54 05.2	+0.4
	comp=Z,1.2nm,0.3s,baz=55,slow=0.4,SNR=8.8						
VRAC				PKPab	PKPab	11 54 40.3	0.0
	comp=Z,2.2nm,0.4s,baz=33,slow=4.4,SNR=11						
VRAC	**Vranov**	158.74	334	*e*PKP	PKPdf	11 54 05.9	+1.1
VRAC				*e*		11 54 41.3	
VRAC				*e*PP	PP	11 58 19.8	-0.8
PRA	**Prague**	158.83	339	*e*PKPDF	PKPdf	11 54 03.5	-1.3
PRA				*e*PKPAB	pPKPab	11 54 42.4	-1.3
PRA				AMS	AMS	13 10 40.0	
	comp=Z,6µm,20.9s						
PRA	**Prague**	158.83	339	*e*PKIKP	PKPdf	11 54 03.5	-1.3
PRA				MLR	MLR		
	comp=Z,6µm,20.9s						
GOPC	**GO Pecny, Ondr**	158.85	338	AMS	AMS	13 23 10.0	
	comp=Z,4µm,18.7s						
PRU	**Pruhonice**	158.87	339	*e*PKPDF	PKPdf	11 54 03.8	-1.1
PRU				AMS	AMS	13 10 30.0	
	comp=Z,5µm,20.8s						
PRU	**Pruhonice**	158.87	339	*e*PKIKP	PKPdf	11 54 03.8	-1.1
PRU				MLR	MLR		
	comp=Z,5µm,20.8s						
RDO	**Rodhopi**	158.91	306	IAMs_20	IAMs_20	13 19 28.9	
	comp=Z,4µm,19.0s						
KRUC	**Moravsky**	159.01	334	*e*PKP	PKPdf	11 54 06.0	+0.9
KRUC				*e*		11 54 41.3	
KARP	**Karpathos**	159.03	290	IAMs_20	IAMs_20	13 22 54.0	
	comp=Z,4µm,18.0s						
MOX	**Moxa**	159.08	344	*e*PKPdf	PKPdf	11 54 05.7	+0.5
	baz=22,slow=1.1						
MOX				*e*PKPab	PKPab	11 54 42.2	+0.4
	baz=19,slow=4.2						
MOX				*e*PP	PP	11 58 19.5	-2.7
MOX				*e*L	L	13 20 56.7	
	comp=Z,6µm,18.4s						
TANN	**Tannenbergstha**	159.08	342	*e*PKPdf	PKPdf	11 54 05.4	+0.2
	baz=22,slow=1.1						
TANN				*e*PKPab	PKPab	11 54 42.7	+0.8
	baz=19,slow=4.2						
TANN				*e*PP	PP	11 58 17.4	-4.9
BUG	**Bochum--Univer**	159.09	352	*e*PKPdf	PKPdf	11 54 05.4	+0.4
	baz=22,slow=1.1						
BUG				*e*PKPab	PKPab	11 54 41.5	-0.2
	baz=19,slow=4.2						
BUG				*e*PP	PP	11 58 20.2	-1.9
MPEP	**Malo Peshtene**	159.14	313	P	PKPdf	11 54 04.2	-1.2
TREC	**Trest**	159.15	336	AMS	AMS	13 19 00.0	
	comp=Z,6µm,18.0s						
VALD	**Valchedram**	159.16	314	P	PKPab	11 54 44.5	+2.1
KASTN	**Kahler Asten**	159.17	350	*e*PKPdf	PKPdf	11 54 05.4	+0.2
	baz=22,slow=1.1						
KASTN				*e*PKPab	PKPab	11 54 42.4	+0.3
	baz=19,slow=4.2						
KASTN				*e*PP	PP	11 58 20.7	-2.0
MODS	**Modra-Piesok**	159.23	332	*e*PKIKP	PKPdf	11 54 06.2	+0.8
MODS				*e*		11 54 42.7	
MODS	**Modra-Piesok**	159.23	332	*e*PKP	PKPdf	11 54 06.2	+0.8
MODS				*e*		11 54 42.7	
NKC	**Novy Kostel**	159.25	342	*e*PKPDF	PKPdf	11 54 04.8	-0.6
NKC	**Novy Kostel**	159.25	342	*e*PKIKP	PKPdf	11 54 04.8	-0.6
PGB	**Panagyurishte**	159.26	310	P	PKPdf	11 54 02.1	-3.5
UBBA	**Unterbreizbach**	159.27	347	*e*PKPdf	PKPdf	11 54 05.2	0.0
	baz=22,slow=1.1						
UBBA				*e*PKPab	PKPab	11 54 43.4	+1.0
	baz=19,slow=4.2						
UBBA				*e*PP	PP	11 58 22.3	-0.7
ZVC	**Zvikov**	159.46	338	*e*PKPDF	PKPdf	11 54 05.0	-0.6
ZVC				AMS	AMS	13 22 00.0	
	comp=Z,5µm,17.7s						
MANZ	**Manzenberg**	159.57	342	*e*PKPdf	PKPdf	11 54 06.1	+0.4
	baz=22,slow=1.1						
MANZ				*e*PKPab	PKPab	11 54 44.1	+0.1
	baz=19,slow=4.2						
MANZ				*e*PP	PP	11 58 21.8	-3.1
ROTZ	**Rotzenmuhle**	159.74	342	*e*PKPdf	PKPdf	11 54 05.9	0.0
	baz=22,slow=1.1						
ROTZ				*e*PKPab	PKPab	11 54 45.0	+0.3
	baz=19,slow=4.2						
ROTZ				*e*PP	PP	11 58 22.5	-3.3
PLNA	**Plana**	159.77	311	P	PKPdf	11 54 05.5	-0.8
VTS	**Vitosha**	159.82	311	P	PKPdf	11 54 04.6	-1.8
BEBN	**Eben Emael**	159.89	355	*d*PKPdf	PKPdf	11 54 07.2	+1.2
BEBN				*d*pPKPdf	sPKPdf	11 54 10.8	+0.6
KHC	**Kasperske Hory**	159.92	339	*e*PKPDF	PKPdf	11 54 04.0	-2.2
KHC				*e*PKPAB	PKPab	11 54 43.5	-2.0
KHC				AMS	AMS	13 19 30.0	
	comp=Z,6µm,17.7s						
KHC	**Kasperske Hory**	159.92	339	*e*PKIKP	PKPdf	11 54 04.0	-2.2
KHC				*e*		11 54 43.5	
KHC				MLR	MLR		
	comp=Z,6µm,17.7s						
CKRC	**Cesky Krumlov**	159.96	337	AMS	AMS	13 20 50.0	
	comp=Z,5µm,17.5s						
UCC	**Uccle**	159.97	357	IAMs_20	IAMs_20	13 09 43.2	
	comp=Z,5µm,20.0s						
UCC	**Uccle**	159.97	357	*d*PKPdf	PKPdf	11 54 07.6	+1.5
MMB	**Musomishta**	159.98	308	P	PKPdf	11 54 04.6	-1.9
MEM	**Membach**	160.04	354	*d*PKPdf	PKPdf	11 54 07.7	+1.5
BTNL	**Ternell**	160.06	354	*d*PKPdf	PKPdf	11 54 07.3	+1.0
BTNL				*d*PKP	PKPab	11 54 46.6	+0.6
GRA1	**Grafenberg Arr**	160.06	344	IAMs_20	IAMs_20	13 23 43.5	
	comp=Z,5µm,19.0s						
GRF	**Grafenberg Arr**	160.06	344	*e*PKPdf	PKPdf	11 54 06.4	+0.1
	baz=22,slow=1.1						
GRF				*e*PKPab	PKPab	11 54 45.9	-0.1
	baz=19,slow=4.2						
GRF				*e*L	L	13 24 03.7	
	comp=Z,5µm,18.6s						
GRFO	**Grafenberg**	160.06	344		PKPab	11 54 46.7	+0.6
GRFO				IAMs_20	IAMs_20	13 23 44.5	
	comp=Z,5µm,18.0s						
GRFO	**Grafenberg**	160.06	344	PKP2	PKPab	11 54 46.7	+0.6
BSTI	**Sart Tilman**	160.11	355	*d*PKPdf	PKPdf	11 54 07.5	+1.2
BSTI				*d*PKP	PKPab	11 54 46.0	-0.2
TNS	**Taunus Mts**	160.12	349	*e*PKPdf	PKPdf	11 54 06.6	+0.2
	baz=22,slow=1.1						
TNS				*e*PKPab	PKPab	11 54 46.9	+0.5
	baz=19,slow=4.2						
GEC2	**GERESS Array S**	160.13	338	*e*PKPdf	PKPdf	11 54 06.4	-0.2
	baz=22,slow=1.1						
GEC2				*e*PKPab	PKPab	11 54 47.6	+1.0
	baz=19,slow=4.2						
GEC2				*e*PP	PP	11 58 24.4	-3.7
GERES	**GERESS Array B**	160.13	338		PKPdf	11 54 07.4	+0.9
GERES					PKPab	11 54 46.6	+0.1
GERES	**GERESS Array B**	160.13	338	PKP	PKPdf	11 54 05.9	-0.6
	comp=Z,0.4nm,0.4s,baz=55,slow=5.6,SNR=4.8						
GERES				PKPab	PKPab	11 54 46.0	-0.5
	comp=Z,1.4nm,0.7s,baz=28,slow=3.2,SNR=8.0						
GERES	**GERESS Array B**	160.13	338	PKIKP	PKPdf	11 54 07.4	+0.9
GERES						11 54 46.6	
CONA	**Conrad Observa**	160.15	333	*i* PKP	PKPdf	11 54 07.7	+1.2
	comp=Z,9.0nm,1.7s,SNR=5.1						
CONA				*i* PKP	PKPab	11 54 47.8	+1.1
	comp=Z,28nm,1.5s,SNR=5.3						
CONA	**Conrad Observa**	160.15	333	*i* P	PKPab	11 54 47.8	+1.1
	comp=Z,28nm,1.5s,SNR=5.3						
RONA	**Rosalia, Austr**	160.16	332	*i* PKP	PKPdf	11 54 07.6	+1.1
	comp=Z,13nm,1.5s						
RONA				*i* PKP	PKPab	11 54 48.1	+1.4
	comp=Z,31nm,1.5s,SNR=5.8						
RONA	**Rosalia, Austr**	160.16	332	*i* P	PKPab	11 54 48.1	+1.4
	comp=Z,31nm,1.5s,SNR=5.8						
BCLA	**Clavier**	160.29	355	*d*PKPdf	PKPdf	11 54 06.9	+0.4
BCLA				*d*PKP	PKPab	11 54 48.0	+1.0
BHOU	**Houvegnez**	160.30	354	*d*PKPdf	PKPdf	11 54 07.8	+1.2
BHOU				*d*PKP	PKPab	11 54 47.0	-0.1
BGES	**Gesves**	160.34	356	*d*PKPdf	PKPdf	11 54 06.9	+0.4
BGES				*d*PKP	PKPab	11 54 46.0	-1.2
BMRD	**Maredsous**	160.44	356	*d*PKPdf	PKPdf	11 54 06.0	-0.7
BMRD				*d*PKP	PKPab	11 54 47.0	-0.7
DOU	**Dourbes**	160.66	356	*d*PKPdf	PKPdf	11 54 07.5	+0.6
DOU				*d*PKP	PKPab	11 54 49.6	+1.0
MOA	**Molln**	160.81	336	*i* PKP	PKPab	11 54 50.8	+1.4
	comp=Z,20nm,1.5s,SNR=6.7						
MOA	**Molln**	160.81	336	*i* P	PKPab	11 54 50.8	+1.4
	comp=Z,20nm,1.5s,SNR=6.7						
ARSA	**Arzberg**	160.84	333	*e*PKP	PKPdf	11 54 07.9	+0.6
	comp=Z,5.2nm,1.0s						
ARSA				*e*PKP	PKPab	11 54 51.0	+1.5
	comp=Z,27nm,2.1s,SNR=5.2						
ARSA	**Arzberg**	160.84	333	*e*P	PKPab	11 54 51.0	+1.5
	comp=Z,27nm,2.1s,SNR=5.2						
IDI	**Anoyia**	160.91	289	PKP	PKPdf	11 54 07.6	-0.1
	comp=Z,5.4nm,1.0s,baz=138,slow=3.8,SNR=3.3						
IDI				PKPab	PKPab	11 54 50.4	-0.1
	comp=Z,10nm,0.8s,baz=147,slow=1.5,SNR=5.3						
WLF	**Walferdange**	160.97	353	*d*PKPdf	PKPdf	11 54 06.5	-0.7
WLF				*d*PKP	PKPab	11 54 48.9	-1.0
WLF	**Walferdange**	160.97	353	*e*PKPdf	PKPdf	11 54 08.0	+0.7
	baz=22,slow=1.1						
WLF				*e*PKPab	PKPab	11 54 50.6	+0.6
	baz=19,slow=4.2						
BIOA	**Bad Ischl, Aus**	161.16	337	*e*PKP	PKPab	11 54 52.5	+1.6
	comp=Z,16nm,1.0s						
STU	**Stuttgart**	161.38	347	*e*PP	PP	11 58 32.7	-1.9
RJOB	**Jochberg**	161.40	338	*e*PKPdf	PKPdf	11 54 07.5	-0.3
	baz=22,slow=1.1						
RJOB				*e*PKPab	PKPab	11 54 52.2	+0.2
	baz=19,slow=4.2						
SOKA	**Soboth**	161.50	333	*e*PKP	PKPdf	11 54 08.8	+0.8
	comp=Z,10nm,1.4s,SNR=7.8						
SOKA				*i* PKP	PKPab	11 54 53.9	+1.4
	comp=Z,34nm,1.7s,SNR=7.7						
SOKA	**Soboth**	161.50	333	*i* P	PKPab	11 54 53.9	+1.4
	comp=Z,34nm,1.7s,SNR=7.7						
LESA	**Schwarzleotal**	161.71	338	*e*PKP	PKPdf	11 54 09.0	+0.7
	comp=Z,20nm,2.0s,SNR=7.8						
LESA				*e*PKP	PKPab	11 54 54.2	+0.8
	comp=Z,40nm,1.7s						
OBKA	**Obir**	161.83	333	*e*PKP	PKPdf	11 54 09.2	+0.7
	comp=Z,2.5nm,0.9s						
OBKA				*e*PKP	PKPab	11 54 55.3	+1.3
	comp=Z,9.0nm,1.7s						
FNA	**Florina**	161.92	309		PKPab	11 54 54.8	+0.2
FNA	**Florina**	161.92	309	PKP2	PKPab	11 54 54.8	+0.2
BFO	**Black Forest**	161.97	348	PKPdf	PKPdf	11 54 09.1	+0.7
BFO					PKPab	11 54 54.5	+0.1
BFO	**Black Forest**	161.97	348	PKP2	PKPab	11 54 54.5	+0.1
BFO						12 54 09.1	
BFO	**Black Forest**	161.97	348	*e*PKPdf	PKPdf	11 54 07.6	-0.9
	baz=22,slow=1.1						
BFO				*e*PKPab	PKPab	11 54 54.5	+0.1
	baz=19,slow=4.2						
BFO				*e*PP	PP	11 58 33.7	-4.0
PDKS	**Podkum**	162.01	331	*e*PKPdf	PKPdf	11 54 07.3	-1.2
MYKA	**Terra Mystica**	162.07	335	*i* PKP	PKPdf	11 54 09.3	+0.7
	comp=Z,7.6nm,1.4s						
MYKA				*i* PKP	PKPab	11 54 55.6	+0.6
	comp=Z,7.5nm,0.7s						
WATA	**Walderalm**	162.13	340	*e*PKP	PKPdf	11 54 09.6	+0.9
	comp=Z,4.1nm,0.7s						
WATA				*i* PKP	PKPab	11 54 56.7	+1.3
	comp=Z,27nm,1.5s						
WTTA	**Wattenberg**	162.17	340	*i* PKP	PKPdf	11 54 10.2	+1.4
	comp=Z,20nm,1.6s						
WTTA				*e*PKP	PKPab	11 54 55.4	-0.2
	comp=Z,34nm,1.6s						
UBR	**Ueberruh**	162.20	344	*e*PKPdf	PKPdf	11 54 08.9	+0.2
	baz=22,slow=1.1						
UBR				*e*PKPab	PKPab	11 54 54.8	-0.7
	baz=19,slow=4.2						
UBR				*e*PP	PP	11 58 37.4	-1.7
RETA	**Reutte**	162.22	342	*e*PKP	PKPdf	11 54 10.3	+1.6
	comp=Z,1.9nm,0.6s						
RETA				*e*PKP	PKPab	11 54 55.8	+0.2
	comp=Z,15nm,1.1s						
LJU	**Ljubljana**	162.22	332	*e*PKPdf	PKPdf	11 54 07.5	-1.2
LJU				*e*PP	PP	11 58 36.8	-2.6
MOTA	**Moosalm**	162.25	341	*e*PKP	PKPdf	11 54 09.9	+1.0
	comp=Z,7.1nm,1.4s						
MOTA				*i* PKP	PKPab	11 54 56.2	+0.3
	comp=Z,30nm,1.3s,SNR=6.9						
MOTA	**Moosalm**	162.25	341	*i* P	PKPab	11 54 56.2	+0.3
	comp=Z,30nm,1.3s,SNR=6.9						
SQTA	**Sankt Quirin**	162.34	341	*e*PKP	PKPdf	11 54 09.9	+1.0
	comp=Z,3.8nm,0.8s						
SQTA				*e*PKP	PKPab	11 54 57.2	+0.9
	comp=Z,15nm,1.5s						
ABTA	**Abfaltersbach**	162.36	337	*i* PKP	PKPdf	11 54 09.7	+0.8
	comp=Z,14nm,1.6s						
ABTA				*e*PKP	PKPab	11 54 57.2	+0.9
	comp=Z,14nm,1.1s						
TORD	**Torodi Ar. Bea**	162.42	177	PKPdf	PKPdf	11 54 11.2	+1.3
TORD	**Torodi Ar. Bea**	162.42	177	PKP	PKPdf	11 54 09.7	-0.1
	comp=Z,1.2nm,0.4s,baz=119,slow=1.9,SNR=10						
TORD				PKPab	PKPab	11 54 56.5	-0.7
	comp=Z,10nm,1.0s,baz=176,slow=2.1,SNR=12						
JAVS	**Javornik**	162.53	333	*e*PKPdf	PKPdf	11 54 07.5	-1.7
DAVA	**Damuels**	162.63	344	*e*PKP	PKPdf	11 54 10.4	+1.1
	comp=Z,3.4nm,0.6s						
DAVA				*e*PKP	PKPab	11 54 58.7	+1.1
	comp=Z,5.4nm,0.9s						
FETA	**Feichten**	162.65	341	*e*PKP	PKPdf	11 54 10.0	+0.7
	comp=Z,12nm,1.6s,SNR=6.0						
FETA				*e*PKP	pPKPab	11 54 59.8	-0.9
	comp=Z,20nm,1.7s						
CLF	**Chambon-Foret**	162.78	1		PKPdf	11 54 09.3	+0.2
PMOZ	**Porto Moniz, M**	162.93	78	*e*PKPdf	PKPdf	11 54 10.9	+0.9
PMOZ				*e*PKPab	PKPab	11 54 52.2	-7.2
PMOZ				*e*LR	LR	12 55 17.4	
PMOZ				*i* AMs_20		13 07 49.1	
	comp=Z,4µm,18.0s						
DAVOX	**Davos/Dischmat**	163.10	343	PKP	PKPdf	11 54 09.9	+0.1
	comp=Z,2.0nm,0.3s,baz=353,slow=8.1,SNR=8.5						
DAVOX				PKPab	PKPab	11 54 58.2	-1.5
	comp=Z,8.1nm,0.8s,baz=319,slow=2.3,SNR=8.6						
TUE	**Stuetta**	163.52	344		PKPdf	11 54 10.6	+0.4
TUE					PKPab	11 55 02.6	+1.1
PMPST	**Porto Santo, M**	163.64	77	*e*PKPdf	PKPdf	11 54 10.8	+0.3
SENIN	**Lac Senin/Sane**	164.05	348		PKPdf	11 54 11.3	+0.6
SENIN					PKPab	11 55 04.9	+1.1
BNI	**Bardonecchia**	165.43	349		PKPab	11 55 10.6	+0.7
BNI	**Bardonecchia**	165.43	349	PKP2	PKPab	11 55 10.6	+0.7
SSB	**Saint Sauveur**	165.46	355		PKPab	11 55 10.8	+1.0
SSB	**Saint Sauveur**	165.46	355	PKP2	PKPab	11 55 10.9	+1.0
PGAV	**Gavieira, Arco**	165.76	35	*e*PKPdf	PKPdf	11 54 11.9	-0.3
PGAV				*e*LR	LR	12 59 13.3	
PGAV				*i* AMs_20		13 02 31.6	
	comp=Z,6µm,20.0s						
PCAB	**Cabril**	166.07	36	*e*PKPdf	PKPdf	11 54 14.4	+2.0
POLO	**Lamas de Olo**	166.44	36	*e*PKPdf	PKPdf	11 54 13.4	+0.6
PVRL	**Vila Real**	166.55	36	*e*PKPab	PKPab	11 55 16.4	+1.5
PBRG	**Braganca**	166.61	32	*e*PKPdf	PKPdf	11 54 12.8	0.0
PBRG				*e*PKPab	PKPab	11 55 14.9	-0.2
PVIS	**Viseu**	166.86	38	*e*PKPdf	PKPdf	11 54 13.2	+0.1
PVIS				*e*PKPab	PKPab	11 55 15.5	-0.8
MVO	**Moncorvo**	166.97	35	*e*PKPdf	PKPdf	11 54 13.3	+0.2
MVO				*e*PKPab	PKPab	11 55 18.0	+1.2
MVO				*e*LR	LR	12 58 12.6	
MVO				*i* AMs_20		13 13 53.1	
	comp=Z,8µm,18.0s						
PCAS	**Casmilo, Conde**	166.99	42	*e*PKPdf	PKPdf	11 54 12.4	-0.6
PCAS				*e*PKPab	PKPab	11 55 18.1	+1.2
PSBE	**So Bento**	167.16	44	*e*PKPdf	PKPdf	11 54 15.2	+1.9
MTE	**Manteigas**	167.28	38		PKPdf	11 54 13.9	+0.6
MTE	**Manteigas**	167.28	38	*e*PKPdf	PKPdf	11 54 13.6	+0.2
MTE				*e*PKPab	PKPab	11 55 18.6	+0.5
MTE				*e*LR	LR	13 00 14.8	

MTE				*i* AMs_20		13 05 28.6	
	comp=Z,6µm,20.0s						
LIS	Lisbon	167.43	48	*e*PKPdf	PKPdf	11 54 14.6	+1.2
LIS				IAMs_20	IAMs_20	13 06 10.6	
	comp=Z,8µm,19.1s						
PSARD	Sardoal	167.48	42	*e*PKPdf	PKPdf	11 54 13.4	0.0
PSARD				*e*PKPab	PKPab	11 55 19.4	+0.4
PCBR	Castelo Branco	167.71	40	*e*PKPdf	PKPdf	11 54 14.9	+1.3
PCBR				*e*PKPab	PKPab	11 55 21.1	+1.1
PMTG	Montargil	167.79	44	*e*PKPdf	PKPdf	11 54 13.2	-0.5
PMTG				*e*PKPab	PKPab	11 55 21.2	+0.8
PMRV	Marv??o	168.04	41	*e*PKPdf	PKPdf	11 54 14.2	+0.4
PMRV				*e*PKPab	PKPab	11 55 22.2	+0.7
PMRV				*e*LR	LR	12 59 46.5	
PMRV				*i* AMs_20		13 10 16.8	
	comp=Z,8µm,18.0s						
EVO	Evora	168.25	46	*e*PKPdf	PKPdf	11 54 13.0	-1.0
EVO				*e*PKPab	PKPab	11 55 23.6	+1.1
PESTR	Estremoz	168.30	44		PKPab	11 55 22.6	-0.1
PESTR	Estremoz	168.30	44	*e*PKPdf	PKPdf	11 54 13.8	-0.2
PESTR				*e*PKPab	PKPab	11 55 23.6	+1.0
PTEO	Sao Teotonio	168.36	52	*e*PKPdf	PKPdf	11 54 14.1	0.0
PFVI	Vila Bisbo	168.50	54	*e*PKPdf	PKPdf	11 54 14.5	+0.2
PFVI				*e*PKPab	PKPab	11 55 24.8	+1.2
MESJ	Messejana	168.53	49	*e*PKPdf	PKPdf	11 54 15.4	+1.2
MESJ				IAMs_20	IAMs_20	13 11 48.0	
	comp=Z,9µm,18.4s						
MESJ	Messejana	168.53	49	*e*PKPdf	PKPdf	11 54 16.1	+1.9
MESJ	Messejana	168.53	49	*e*PKIKP	PKPdf	11 54 15.4	+1.2
MORF	Marmelete	168.53	52	*e*PKPdf	PKPdf	11 54 15.4	+1.1
MORF				IAMs_20	IAMs_20	13 12 37.0	
	comp=Z,8µm,21.8s						
MORF	Marmelete	168.53	52	*e*PKPdf	PKPdf	11 54 16.6	+2.3
MORF	Marmelete	168.53	52	*e*PKIKP	PKPdf	11 54 15.4	+1.1
PBEJ	Beja	168.65	48	*e*PKPdf	PKPdf	11 54 14.7	+0.3
PCVE	Castro Verde	168.76	50	*e*PKPdf	PKPdf	11 54 15.3	+0.9
PBDV	Barranco-do-Ve	169.05	51	*e*PKPdf	PKPdf	11 54 15.5	+0.9
PBDV				*e*PKPab	pPKPab	11 55 28.1	-0.9
PBAR	Barrancos	169.07	45	*e*PKPdf	PKPdf	11 54 15.1	+0.6
PBAR				*e*PKPab	PKPab	11 55 26.6	+0.5
PVAQ	Vaqueiros	169.10	50	*e*PKPdf	PKPdf	11 54 15.5	+0.9
PVAQ				*e*LR	LR	13 00 57.7	
PVAQ				*i* AMs_20		13 12 33.0	
	comp=Z,6µm,18.0s						
PAB	San Pablo	169.51	32		PKPab	11 55 29.7	+1.7
PAB	San Pablo	169.51	32	PKP2	PKPab	11 55 29.7	+1.7
ESDC	Sonseca Array	169.57	30	PKP	PKPdf	11 54 15.8	+0.9
	comp=Z,4.8nm,1.2s,baz=348,slow=1.2,SNR=22						
ESDC				PKPab	PKPab	11 55 27.8	-0.5
	comp=Z,3.2nm,0.9s,baz=313,slow=4.6,SNR=9.1						

TAP 24 11:38:39.1,23°.64N×120°.80E,h10^{km},ML2.3,2D,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHYT	Xinyi Township	0.08	42	P	Pg	11 38 42.0	+0.5
WHYT				*i* S	Sg	11 38 44.1	+0.9
CHN5	Tsauling	0.11	250	⇓P	Pg	11 38 42.4	+0.5
CHN5				*i* S	Sg	11 38 45.1	+1.1
ALS	Alishan	0.13	176	P	Pg	11 38 43.0	+0.7
WGK	Gukeng	0.22	283	P	Pg	11 38 44.9	+1.3
WGK				S	Sg	11 38 49.4	+2.6
WDLH	Douliu	0.24	282	*i* P	Pg	11 38 45.3	+1.3
WDLH				*i* S	Sg	11 38 49.8	+2.4
WCKO	Fanlu	0.26	222	⇓*e*P	Pg	11 38 43.8	-0.6

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*IDC **24** 11:41:29.5±2.2, 1°.08N×126°.70E, h0^{km}, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=172.3km s-min=28.6km az=66.0*

*DJA **24** 11:41:34.3±1.4, 1°N±3°×12°6E±°, h19^{km}±13^{km}, M3.5/8, MLv3.5/8*

ISC 24 11:41:35.8±1.0,0°.77N±0°.08×126°.10E±0°.07,h35^{km},n8, σ0^{s}.97/9,mb3.7/3,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.27	90	P	Pn	11 41 57.7	+0.6
KMSI	Cibinong	2.13	265	P	Pn	11 42 08.8	-0.1
KMSI				S	Sn	11 42 35.4	+1.3
SANI	Sanana	2.81	182	P	Pn	11 42 17.7	-0.5
SGSI	Sangihe	2.95	349	P	Pn	11 42 19.8	-0.5
PLAI	Plampang	12.64	221	P	P	11 44 44.8	+0.7
	3µm73nm,1.3s						
WRA	Warramunga Arr	22.11	159	P	P	11 46 26.9	-1.5
	1.9nm,0.5s,baz=339,slow=11,SNR=4.7						
	1.9nm,0.5s						
ASAR	Alice Springs	25.45	163	P	P	11 47 00.9	+0.3
	0.9nm,0.4s,baz=341,slow=9.1,SNR=6.9						
	0.9nm,0.4s						
MKAR	Makanchi Array	59.64	327	P	P	11 51 36.0	-0.5
	0.4nm,0.6s,baz=116,slow=6.6,SNR=3.0						
	0.4nm,0.6s						

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*IDC **24** 11:43:27.2±12.0, 23°.44S×179°.96W, h477^{km}±46^{km}, mb3.5/4, mbtmp4.4/5, Error ellipse: s-maj=186.7km s-min=50.8km az=54.0*

ISC 24 11:43:37.2±3.8,24°.3S±0°.2×179°.5E±0°.4,h531^{km},n6, σ1^{s}.67/9,mb4.0/4,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.20	278	P	P	11 46 19.7	+1.7
	2.7nm,0.8s,baz=121,slow=19,SNR=1.3						
URZ	Urewera	14.02	188	P	P	11 46 36.3	-0.3
	17nm,0.9s,baz=354,slow=20,SNR=1.7						
URZ				S	S	11 49 05.1	+0.7
	7.1nm,0.8s,baz=61,slow=20,SNR=5.9						
STKA	Stephens Creek	34.12	249	P	P	11 49 37.7	-0.2
	2.7nm,0.7s,baz=59,slow=5.4,SNR=3.0						
	2.7nm,0.7s						
ASAR	Alice Springs	41.50	261	P	P	11 50 37.1	-1.1
	3.4nm,0.7s,baz=98,slow=7.0,SNR=35						
ASAR				ScP	ScP	11 55 24.6	+1.7
	0.6nm,0.8s,baz=96,slow=3.9,SNR=6.9						
	3.4nm,0.7s						
WRA	Warramunga Arr	41.91	267	P	P	11 50 39.4	-2.1
	5.7nm,0.7s,baz=96,slow=8.4,SNR=128						
WRA				ScP	ScP	11 55 26.2	+1.6
	0.7nm,0.9s,baz=97,slow=3.8,SNR=2.1						
	5.7nm,0.7s						
FITZ	Fitzroy Crossi	50.33	266	P	P	11 51 43.8	-1.6
	1.9nm,0.5s,baz=129,slow=5.8,SNR=15						
	1.9nm,0.5s						

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*IDC **24** 11:58:00.5±4.5, 22°.24S×179°.63W, h582^{km}±51^{km}, mb3.3/14, mbtmp4.2/14, Error ellipse: s-maj=22.1km s-min=16.6km az=66.0*

*NEIC **24** 11:58:01.6±1.2, 22°.4S±0°.2×179°.6W±0°.1, h586^{km}±6^{km}, mb4.4/14, Error ellipse: s-maj=26.7km s-min=14.9km az=157.0*

ISC 24 11:58:00.2±0.6,22°.38S±0°.09×179°.5W±0°.1,h579^{km},n45, σ1^{s}.18/45,mb4.0/21,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.17	333	P	P	11 59 34.2	+0.8
MSVF	Nonsavu	5.17	333	S	S	12 00 50.2	+0.8
	12nm,1.0s,baz=139,slow=20,SNR=2.1						
DZM	Mont Dzumac	13.04	269	P	P	12 00 52.6	+3.0
	5.9nm,0.8s,baz=106,slow=20,SNR=2.0						
TOZ	Tahuroa Road	15.90	195	P	P	12 01 17.0	-0.3
TOZ				IAmb	IAmb	12 01 19.4	
	comp=Z,27nm,0.8s						
URZ	Urewera	16.09	190	P	P	12 01 17.2	-1.9
	comp=Z,16nm,0.4s,baz=318,slow=7.5,SNR=10.0						
TOO	Toolangi	33.69	235	P	P	12 03 54.1	-0.2
TOO				IAmb	IAmb	12 03 55.3	
	comp=Z,5.0nm,0.7s						
STKA	Stephens Creek	35.75	246	P	P	12 04 11.6	+0.1
STKA	Stephens Creek	35.75	246	P	P	12 04 11.2	-0.2
	comp=Z,5.1nm,0.6s,baz=101,slow=11,SNR=10						
	comp=Z,5.1nm,0.6s						
COEN	Coen	36.38	277	P	P	12 04 17.3	+0.5
COEN				IAmb	IAmb	12 04 55.1	
	comp=Z,28nm,1.4s						
AS31	Alice Springs	42.77	259	P	P	12 05 07.8	-0.2
ASAR	Alice Springs	42.77	259	P	P	12 05 07.3	-0.8
ASAR	Alice Springs	42.77	259	P	P	12 05 06.9	-1.1
	comp=Z,5.7nm,0.7s,baz=100,slow=7.5,SNR=75						
	comp=Z,5.7nm,0.7s						
WR8	Warramunga Arr	42.86	264	P	P	12 05 07.5	-1.2
WR8				IAmb	IAmb	12 05 37.6	
	comp=Z,10nm,1.4s						
WB0	Warramunga Arr	42.99	265	P	P	12 05 08.4	-1.4
WRA	Warramunga Arr	43.01	264	P	P	12 05 08.3	-1.6
	comp=Z,4.0nm,0.8s,baz=96,slow=8.2,SNR=58						
	comp=Z,4.0nm,0.8s						
JAY	Jayapura	43.38	291	P	P	12 05 11.6	-1.2
	comp=Z,1.9nm,0.4s,baz=180,slow=6.1,SNR=1.9						
	comp=Z,1.9nm,0.4s						
MTN	Manton Dam	47.84	273	P	P	12 05 45.7	-0.9
FITZ	Fitzroy Crossi	51.44	264	P	P	12 06 12.5	-0.5
	comp=Z,1.7nm,0.4s,baz=86,slow=5.7,SNR=19						
	comp=Z,1.7nm,0.4s						
VNDA	Vanda	55.92	185	P	P	12 06 44.7	+1.1
	comp=Z,1.2nm,0.8s,baz=2.2,slow=9.8,SNR=7.1						
	comp=Z,1.2nm,0.8s						
QSPA	South Pole Qui	67.69	180	P	P	12 08 01.0	+0.7
	comp=Z,3.1nm,0.8s,baz=61,slow=2.7,SNR=14						
	comp=Z,3.1nm,0.8s						
MJAR	Matsushiro Arr	70.93	325	P	P	12 08 18.7	-1.2
	comp=Z,0.7nm,0.5s,baz=161,slow=4.6,SNR=2.7						
	comp=Z,0.7nm,0.5s						
PETK	Petropavlovsk-	77.75	346	P	P	12 08 56.9	-0.9
	comp=Z,2.4nm,0.7s,baz=131,slow=7.0,SNR=11						
	comp=Z,2.4nm,0.7s						
PNTR	Pine Nut	82.89	43		P	12 09 26.5	+1.3
PNTR				IAmb	IAmb	12 09 27.8	
	comp=Z,6.4nm,0.7s						
N14K	Kuskokwak Cree	83.29	9	P	P	12 09 27.5	+1.2
NVAR	Mina Array Bea	83.33	44	P	P	12 09 28.0	+0.6
	comp=Z,1.6nm,0.9s,baz=227,slow=8.4,SNR=9.0						
	comp=Z,1.6nm,0.9s						
J05D	Fort Rock, OR	84.43	39		P	12 09 34.1	+1.5
J05D				IAmb	IAmb	12 09 35.2	
	comp=Z,8.8nm,1.2s						
U15A	North Rim	86.24	48	P	P	12 09 43.1	+1.5
GHO	Glory Hole Cre	87.37	14	P	P	12 09 45.8	-0.3
GHO				IAmb	IAmb	12 09 46.9	
	comp=Z,11nm,0.8s						
MNTX	Cornudas Mount	88.96	55	P	P	12 09 55.4	+1.3
MNTX				IAmb	IAmb	12 09 56.4	
	comp=Z,2.9nm,0.8s						
TXAR	Lajitas Array	89.22	58	P	P	12 09 57.0	+1.5
	comp=Z,1.5nm,0.9s,baz=216,slow=6.0,SNR=15						
	comp=Z,1.5nm,0.9s						
CMAR	Chiang Mai Arr	89.45	290	P	P	12 09 57.2	+0.6
	comp=Z,0.5nm,0.4s,baz=136,slow=3.0,SNR=4.7						
	comp=Z,0.5nm,0.4s						
ILAR	Eielson Array	90.45	13	P	P	12 09 57.7	-2.5
	comp=Z,0.2nm,0.6s,baz=263,slow=5.9,SNR=4.4						
	comp=Z,0.2nm,0.6s						
PDAR	Pinedale Array	91.27	44	P	P	12 10 03.1	-1.8
	comp=Z,0.5nm,0.7s,baz=232,slow=4.9,SNR=4.8						
	comp=Z,0.5nm,0.7s						
MKAR	Makanchi Array	111.48	313	PKiKP	PKiKP	12 15 28.1	-1.1
	comp=Z,0.1nm,0.5s,baz=86,slow=2.2,SNR=2.1						
BVAR	Borovoye Array	119.61	319	PKP	PKPdf	12 15 43.5	-1.1
	comp=Z,0.8nm,0.4s,baz=80,slow=1.8,SNR=3.9						
SPITS	Spitsbergen Ar	123.65	356	PKP	PKPdf	12 15 51.0	-0.8
	comp=Z,2.4nm,0.7s,baz=349,slow=14,SNR=3.0						
HFS	Hagfors	141.15	350	PKhKP	PKPpre	12 16 18.9	
	comp=Z,0.8nm,0.4s,baz=92,slow=5.0,SNR=7.7						
AKASG	Malin Array Be	143.94	329	PKP	PKPbc	12 16 28.4	-1.1
	comp=Z,1.2nm,0.4s,baz=45,slow=4.2,SNR=11						
EKA	Eskdalemuir Ar	146.98	4	PKPbc	PKPbc	12 16 37.5	-0.7
	comp=Z,1.6nm,0.7s,baz=311,slow=1.6,SNR=5.0						
BRTR	Keskin Array B	147.02	309	PKPbc	PKPbc	12 16 38.0	-1.0
	comp=Z,0.8nm,0.5s,baz=129,slow=3.9,SNR=4.7						
MMAI	Mount Meron Ar	147.48	297	PKPbc	PKPdf	12 16 38.5	+1.7
	comp=Z,0.7nm,0.3s,baz=33,slow=16,SNR=1.3						
CLL	Collm	149.54	344		PKPbc	12 16 44.2	-0.4
CLL	Collm	149.54	344	*i* PKPbc	PKPbc	12 16 44.5	-0.1
	comp=Z,9.0nm,0.9s						
CLL				*i* x	x	12 16 50.4	
CLL				*i* PKPab	PKPab	12 16 52.2	+0.1
GERES	GERESS Array B	151.59	342	PKP	PKPdf	12 16 43.1	+0.4
	comp=Z,0.2nm,0.3s,baz=74,slow=1.4,SNR=1.6						
GERES				PKPbc	PKPbc	12 16 49.4	-0.2
	comp=Z,0.4nm,0.4s,baz=40,slow=2.3,SNR=4.4						
CAMP	Campotosto	157.20	335		PKPab	12 17 24.4	-0.9

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*IDC **24** 11:58:28.0±0.5, 30°.70S×177°.28W, h0^{km}, mb4.3/17, mbtmp4.3/17, MS5.1/1, Error ellipse: s-maj=19.4km s-min=14.6km az=78.0*

*NEIC **24** 11:58:30.8±1.5, 30°.80S±0°.06×177°.3W±0°.2, h10^{km}±1^{km}, mb4.9/13, Error ellipse: s-maj=25.8km s-min=10.9km az=92.0*

ISC 24 11:58:32.8±0.5,30°.91S±0°.05×177°.57W±0°.10,h27^{km},n84, σ2^{s}.66/96,mb4.5/25,6C,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.67	349	P	Pn	11 58 57.8	-2.5
GLKZ				S	Sn	11 59 19.2	-1.6
RAO	Raoul Island	1.68	350		Pn	11 58 58.3	-2.1
RAO	Raoul Island	1.68	350	Pn	Pn	11 58 58.2	-2.2
	949nm,0.3s,baz=107,slow=11,SNR=27						
RAO				Sn	Sn	11 59 19.3	-1.7
	797nm,0.3s,baz=107,slow=19,SNR=8.7						
RIZ	Raoul Island	1.68	349	P	Pn	11 58 57.9	-2.6
RIZ				S	Sn	11 59 21.2	0.0
MXZ	Matakaoa Point	7.46	206	Pn	Pn	12 00 21.5	+1.6
MXZ	Matakaoa Point	7.46	206	S	Sn	12 01 44.6	+1.0
WMGZ	Waiomatatini S	7.65	205	P	Pn	12 00 19.9	-2.6
WMGZ				S	Sn	12 01 47.6	-0.7
PKGZ	Pakihiroa	7.82	206	P	Pn	12 00 21.9	-2.9
PKGZ				S	Sn	12 01 53.5	+1.1
HAZ	Te Kaha	7.84	208	P	Pn	12 00 23.0	-2.1
HAZ				S	Sn	12 01 56.2	+3.3
PUZ	Puketiti	7.93	205	P	Pn	12 00 22.5	-3.9
PUZ				S	Sn	12 01 54.0	-1.2
WCZ	Waipu Caves	8.41	231	P	Pn	12 00 38.5	+5.5
URZ	Urewera	8.54	209	Pn	Pn	12 00 31.9	-2.8
	1.6nm,0.3s,baz=42,slow=13,SNR=9.1						
URZ				Sn	Sn	12 02 09.1	-1.1
	4.9nm,0.3s,baz=107,slow=20,SNR=10						
OUZ	Omahuta	8.57	238	P	Pn	12 00 42.5	+7.5
RTZ	Ruatahuna	8.90	209	Pn	Pn	12 00 38.2	-1.5
CAW	Cannon Point	11.79	208	P	Pn	12 01 15.9	-3.3
CAW				S	Sn	12 03 23.5	-6.3
QRZ	Quartz Range	12.73	216	P	Pn	12 01 32.2	0.0
QRZ				S	Sn	12 03 49.2	-3.7
MRNZ	Matariki Terra	13.05	214	Pn	Pn	12 01 38.0	+1.5
MRNZ	Matariki Terra	13.05	214	P	Pn	12 01 37.4	+1.0
MRNZ				S	Sn	12 03 52.3	-8.4
THZ	Tophouse	13.27	213	P	Pn	12 01 37.2	-2.3
THZ				S	Sn	12 03 59.2	-6.9
KHZ	Kahutara	13.51	209	P	Pn	12 01 37.2	-5.5
KHZ				S	Sn	12 04 01.9	-10
MSVF	Nonsavu	13.71	342	Pn	Pn	12 01 45.4	-0.1
	0.4nm,0.3s,baz=98,slow=19,SNR=2.0						
LTZ	Lake Taylor	14.36	212	P	Pn	12 01 48.6	-5.8
LTZ				S	Sn	12 04 20.8	-12
INZ	Inchbonnie	14.70	214	P	Pn	12 01 56.0	-2.9
INZ				S	Sn	12 04 29.0	-12
OXZ	Oxford	14.89	211	P	Pn	12 01 57.0	-4.5
OXZ				S	Sn	12 04 32.5	-13
WVZ	Waitaha Valley	15.30	214	P	Pn	12 02 06.0	-0.9
WVZ				S	Sn	12 04 45.2	-10
RPZ	Rata Peaks	15.64	212	Pn	Pn	12 02 07.4	-4.0
	1.4nm,0.3s,baz=11,slow=13,SNR=8.0						
RPZ				Sn	Sn	12 04 50.9	-13
	0.5nm,0.3s,baz=100,slow=22,SNR=1.1						
RPZ	Rata Peaks	15.64	212	P	Pn	12 02 05.3	-6.1
RPZ				S	Sn	12 04 50.6	-13
ARCZ	Arundel	15.77	211	P	Pn	12 02 09.7	-3.3
ARCZ				S	Sn	12 04 53.6	-13
FOZ	Fox Glacier	16.09	215	P	Pn	12 02 14.8	-2.3
TMZ	Timaru	16.19	211	P	Pn	12 02 14.8	-3.6
TMZ				S	Sn	12 05 05.8	-11
DZM	Mont Dzumac	16.78	298	Pn	P	12 02 32.2	+4.0
	baz=90,slow=20						
STKA	Stephens Creek	34.73	258	P	P	12 05 23.9	+3.2
STKA	Stephens Creek	34.73	258	P	P	12 05 23.5	+2.8
	12nm,0.8s,baz=95,slow=11,SNR=11						
	12nm,0.8s						
AS31	Alice Springs	43.45	267		P	12 06 35.6	+1.8
ASAR	Alice Springs	43.45	267	P	P	12 06 35.3	+1.5
ASAR	Alice Springs	43.45	267	P	P	12 06 34.8	+1.0
	4.1nm,0.7s,baz=105,slow=7.7,SNR=25						
ASAR				PcP	PcP	12 08 21.9	+0.1
	1.2nm,0.8s,baz=117,slow=4.4,SNR=5.3						
ASAR				ScP	ScP	12 12 14.8	+3.4
	0.6nm,1.1s,baz=127,slow=5.9,SNR=1.2						
	4.1nm,0.7s						
WR8	Warramunga Arr	44.34	273		P	12 06 42.4	+1.5
WR8				IAmb	IAmb	12 06 43.3	
	comp=Z,12nm,0.9s						
WRA	Warramunga Arr	44.48	272		P	12 06 43.8	+1.7
WRA	Warramunga Arr	44.48	272	P	P	12 06 43.0	+0.9
	comp=Z,7.5nm,0.8s,baz=111,slow=8.1,SNR=33						
WRA				PcP	PcP	12 08 25.4	+0.1
	comp=Z,2.1nm,0.9s,baz=112,slow=2.9,SNR=4.9						
	comp=Z,7.5nm,0.8s						
WB0	Warramunga Arr	44.51	273		P	12 06 43.4	+1.0
WB0				IAmb	IAmb	12 06 44.5	
	comp=Z,16nm,1.0s						
VNDA	Vanda	47.63	186	P	P	12 07 07.8	+1.7
	comp=Z,0.9nm,0.8s,baz=27,slow=4.5,SNR=2.6						
	comp=Z,0.9nm,0.8s						
KNRA	Kununurra	51.11	274	P	P	12 07 35.0	+1.6
KNRA				IAmb	IAmb	12 08 30.6	
	comp=Z,47nm,1.6s						
FITZ	Fitzroy Crossi	52.73	270	P	P	12 07 45.5	0.0
FITZ	Fitzroy Crossi	52.73	270	P	P	12 07 45.1	-0.4
	comp=Z,4.2nm,0.7s,baz=127,slow=5.3,SNR=3.9						
FITZ				LR	LR	12 29 11.4	
	comp=Z,2µm,20.0s,baz=112,slow=35						
	comp=Z,4.2nm,0.7s						
CASY	Casey	54.87	208	P	P	12 08 01.9	+1.5
QSPA	South Pole Qui	59.21	180	P	P	12 08 33.3	+1.9
QSPA	South Pole Qui	59.21	180	P	P	12 08 32.8	+1.5
	comp=Z,5.2nm,0.9s,baz=342,slow=1.0,SNR=20						
	comp=Z,5.2nm,0.9s						
BELA	Belgrano 2	69.24	172	P	P	12 09 38.4	+1.6
BELA				IAmb	IAmb	12 09 59.8	
	comp=Z,19nm,1.6s						
MAW	Mawson	71.97	201	P	P	12 09 55.8	+2.3
	comp=Z,2.1nm,0.8s,baz=107,slow=11,SNR=3.6						
	comp=Z,2.1nm,0.8s						
SYO	Syowa Base	76.71	193	⇑*i*P	P	12 10 21.2	+0.1
TROLL	Troll, Antarti	77.37	180	⇑P	P	12 10 28.5	+3.6
	comp=Z,142nm,0.8s						
SNAA	Sanae	77.64	178	⇑P	P	12 10 30.3	+3.9
	comp=Z,48nm,0.9s						
SNAA	Sanae	77.64	178	P	P	12 10 27.4	+1.0
SNAA				IAmb	IAmb	12 11 00.8	
	comp=Z,16nm,1.5s						
SNAA	Sanae	77.64	178	P	P	12 10 26.2	-0.2
	comp=Z,2.6nm,1.0s,baz=153,slow=3.9,SNR=5.8						
	comp=Z,2.6nm,1.0s						
VNA3	Neumayer Olymp	77.78	176	⇑P	P	12 10 27.0	-0.1
	comp=Z,2.7nm,0.6s						
VNA2	Neumayer--Watz	78.22	177	⇑P	P	12 10 29.8	+0.3
	comp=Z,1.8nm,0.6s,baz=167,slow=6.3						
VNA1	Neumayer--Stat	78.44	176	⇑P	P	12 10 32.7	+2.0
	comp=Z,5.8nm,1.0s						
MJAR	Matsushiro Arr	78.87	325	P	P	12 10 30.9	-2.6
	comp=Z,4.2nm,1.0s,baz=159,slow=5.2,SNR=6.6						
	comp=Z,4.2nm,1.0s						
PLCA	Paso Flores	81.89	133	P	P	12 10 48.7	-1.3
	comp=Z,1.8nm,0.8s,baz=272,slow=5.9,SNR=4.4						
	comp=Z,1.8nm,0.8s						
KSRS	Korea Array	84.97	319	P	P	12 11 06.3	+0.8
	comp=Z,2.1nm,0.9s,baz=144,slow=5.9,SNR=7.5						
	comp=Z,2.1nm,0.9s						
PETK	Petropavlovsk-	86.39	345	P	P	12 11 12.6	+0.3
PETK	Petropavlovsk-	86.39	345	P	P	12 11 12.0	-0.2
	comp=Z,4.5nm,0.9s,baz=137,slow=6.9,SNR=8.1						
	comp=Z,4.5nm,0.9s						
USRK	Ussuriysk Ar.	87.78	326	P	P	12 11 17.9	-1.3
	comp=Z,2.6nm,0.8s,baz=95,slow=3.6,SNR=4.9						
	comp=Z,2.6nm,0.8s						
NVAR	Mina Array Bea	88.36	42	P	P	12 11 21.3	-1.1
	comp=Z,1.2nm,0.8s,baz=224,slow=6.3,SNR=5.8						
	comp=Z,1.2nm,0.8s						
U15A	North Rim	90.70	47	P	P	12 11 32.7	-0.8
U15A				IAmb	IAmb	12 11 36.4	
	comp=Z,15nm,1.8s						
TXAR	Lajitas Array	92.35	57	P	P	12 11 40.3	-0.8
	comp=Z,0.2nm,0.9s,baz=266,slow=7.7,SNR=1.9						
	comp=Z,0.2nm,0.9s						
CMAR	Chiang Mai Arr	93.91	289	P	P	12 11 50.1	+1.7
	comp=Z,0.3nm,0.5s,baz=167,slow=3.2,SNR=4.1						
	comp=Z,0.3nm,0.5s						
PDAR	Pinedale Array	96.25	43	P	P	12 11 56.5	-2.4
	comp=Z,0.1nm,0.4s,baz=238,slow=4.9,SNR=1.8						
	comp=Z,0.1nm,0.4s						
MKAR	Makanchi Array	118.38	310	PKP	PKPdf	12 17 16.2	-1.4
	comp=Z,0.3nm,0.5s,baz=127,slow=2.2,SNR=4.4						
KURBB	Kurchatov Arra	121.70	313	PKP	PKPdf	12 17 22.9	-0.9
	comp=Z,0.5nm,0.3s,baz=104,slow=2.1,SNR=6.8						
BVAR	Borovoye Array	127.02	315	PKP	PKPdf	12 17 32.2	-1.7
	comp=Z,0.8nm,0.4s,baz=112,slow=2.3,SNR=5.1						
SPITS	Spitsbergen Ar	132.23	356	PKP	PKPdf	12 17 43.3	+0.1
	comp=Z,5.5nm,1.0s,baz=62,slow=11,SNR=3.6						
ARCES	ARCESS Array B	139.16	348	PKhKP	PKPpre	12 17 48.6	
	comp=Z,1.7nm,0.8s,baz=35,slow=2.7,SNR=2.6						
ARCES				PKP	PKPdf	12 17 56.9	+0.7
	comp=Z,1.5nm,0.9s,baz=349,slow=1.2,SNR=3.8						
KBZ	Khabaz	145.70	303	PKPbc	PKPdf	12 18 08.4	-0.1
	comp=Z,4.3nm,1.0s,baz=48,slow=2.8,SNR=9.2						
FINES	FINESS Array B	145.75	340	PKPbc	PKPdf	12 18 07.4	-0.7
	comp=Z,11nm,0.8s,baz=72,slow=2.4,SNR=27						
NOA	NORSAR Array B	149.30	352	PKPbc	PKPdf	12 18 15.8	+1.7
	comp=Z,3.1nm,0.8s,baz=13,slow=4.2,SNR=8.7						
HFS	Hagfors	149.81	349	PKPbc	PKPdf	12 18 16.9	+2.0
	comp=Z,3.8nm,0.7s,baz=40,slow=2.5,SNR=9.8						
AKASG	Malin Array Be	151.92	322	PKPbc	PKPbc	12 18 23.6	-1.3
	comp=Z,1.8nm,0.6s,baz=50,slow=2.8,SNR=12						
MMAI	Mount Meron Ar	152.00	283	PKPbc	PKiKP	12 18 26.8	+0.6
	comp=Z,0.9nm,0.3s,baz=83,slow=6.8,SNR=3.7						
BRTR	Keskin Array B	153.16	298	PKPbc	PKPbc	12 18 27.8	-0.4
	comp=Z,0.3nm,0.5s,baz=130,slow=4.5,SNR=3.2						
CLL	Collm	158.16	342	*i* PKPab	PKPab	12 18 59.8	-0.9
	comp=Z,4.0nm,0.9s						
GERES	GERESS Array B	160.14	338	PKPab	PKPab	12 19 09.2	-0.3
	comp=Z,0.4nm,0.6s,baz=24,slow=7.5,SNR=2.1						
TORD	Torodi Ar. Bea	162.31	178	PKPab	PKPab	12 19 19.2	-0.4
	comp=Z,1.4nm,0.4s,baz=175,slow=1.6,SNR=2.0						
ESDC	Sonseca Array	169.81	29	PKPab	PKPab	12 19 50.5	-1.8
	comp=Z,0.5nm,0.4s,baz=328,slow=4.2,SNR=2.8						

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*IDC **24** 12:34:13.7±3.5, 14°.34N×92°.01W, h0^{km}, mb3.9/6, mbtmp3.9/8, ML3.8/2, Error ellipse: s-maj=103.4km s-min=30.0km az=25.0*

*MEX **24** 12:34:16.3±1.2, 13°.85N×92°.72W, h15^{km}±59^{km}, MD4.3*

*GCG **24** 12:34:18.4±1.5, 14°.07N×92°.54W, h50^{km}±96^{km}, MD4.4, ML4.3*

*CATAC **24** 12:34:18.6±0.9, 14°N±4°×9°3W±°, h14^{km}±4^{km}, M4.3/8, MLv4.3/8, Error ellipse: s-maj=10.8km s-min=6.6km az=54.4, confirmed*

*SNET **24** 12:34:20.9±1.3, 14°.04N×92°.43W, h35^{km}, ML4.0*

*NEIC **24** 12:34:23.3±1.4, 14°.28N±0°.09×92°.42W±0°.08, h58^{km}±11^{km}, mb4.2/33, Error ellipse: s-maj=14.3km s-min=9.6km az=211.0*

ISC 24 12:34:11.4±1.6,13°.86N±0°.05×92°.64W±0°.03,h4^{km}±10^{km}, n95,σ2^{s}.44/111,mb4.3/20,9C-5D,Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.10	19	*e*P	Pn	12 34 33.7	0.0
THIG				*i* S	Sn	12 34 47.5	-1.9
THIG		1.10	19	⇓*i*P	Pn	12 34 33.7	0.0
THIG				⇑*i*S	Sn	12 34 47.4	-1.9
THIG				IAML		12 34 48.5	
	comp=E,4µm,1.7s						
RTAL	Retalhuleu	1.13	54	Pn	Pn	12 34 35.7	+1.6
RTAL	Retalhuleu	1.13	54	*e*P	Pn	12 34 35.8	+1.7
RTAL				*i* S	Sn	12 34 48.6	-1.5
RTAL	Retalhuleu	1.13	54	P	Pn	12 34 36.0	+1.9
RTAL	Retalhuleu	1.13	54	S	Sn	12 34 49.6	-0.5
SMCA	Catarina	1.13	29	⇓*i*P	Pn	12 34 34.5	+0.4
SMCA				IAML		12 34 53.8	
	comp=N,2µm,1.0s						
PATR	El Naranjo	1.31	18	*e*P	Pg	12 34 36.3	-0.3
PATR				*i* S	Sb	12 34 50.4	-3.6
CHUJ	Union Juarez	1.33	23	*e*P	Pg	12 34 37.3	+0.4
CHUJ				*i* S	Sb	12 34 51.0	-3.7
STG0	El Palmar, Qui	1.38	66	*e*P	Pg	12 34 38.0	0.0
STG0				*e*S	Sb	12 34 54.0	-2.1
STG0				IAML		12 34 59.3	
	comp=E,9µm,0.8s						
STG8	El Palmar, Qui	1.38	65	⇑*i*P	Pg	12 34 38.1	+0.1
STG8				⇑*i*S	Sb	12 34 54.5	-1.7
STG8				IAML		12 34 59.5	
	comp=E,7µm,0.4s						

PAVE	Pavencul	1.40	19	eP	Pg	12 34 37.7	-0.6
PAVE				eS	Sb	12 34 52.0	-4.6
SOKI	Kika Raxquin	1.54	51	⇑iP	Pg	12 34 41.9	+1.1
SOKI				IAML		12 35 12.2	
	comp=N,4µm,1.5s						
HUEH	Huehuetenango	1.82	37		Pg	12 34 46.2	-0.2
HUEH	Huehuetenango	1.82	37	eP	Pg	12 34 46.2	-0.2
HUEH				i S	Sn	12 35 05.1	-2.3
HUEH	Huehuetenango	1.82	37	eP	Pg	12 34 46.3	-0.2
HUEH				eS	Sb	12 35 07.7	-1.1
HUEH				IAML		12 35 15.7	
	comp=Z,2µm,0.3s						
HUEH	Huehuetenango	1.82	37	⇑iP	Pg	12 34 46.2	-0.2
HUEH				IAML		12 35 15.4	
	comp=E,6µm,1.4s						
HUEH	Huehuetenango	1.82	37	⇑P	Pg	12 34 46.2	-0.2
ESSG	Sabana Grande	1.83	73	i P	Pg	12 34 45.7	-0.9
ESSG				i S	Sn	12 35 06.7	-0.8
ESSG				IAML		12 35 17.6	
	comp=E,1µm,0.4s						
PCIG		1.92	343	eP	Pn	12 34 44.5	-0.3
PCIG				i S	Sn	12 35 05.8	-3.6
FG16	Alotenango, Sa	2.11	79	⇓iP	Pn	12 34 46.1	-1.6
FG16				i S	Sn	12 35 09.5	-5.1
FG16				IAML		12 35 14.5	
	comp=E,15µm,0.5s						
CCIG	Comitan	2.46	11		Pb	12 34 55.1	-1.1
CCIG	Comitan	2.46	11	eP	Pb	12 34 55.3	-1.0
CCIG				i S	Sn	12 35 22.7	-0.3
CCIG	Comitan	2.46	11	eP	Pb	12 34 55.3	-1.0
CCIG				i S	Sn	12 35 23.0	0.0
CCIG				IAML		12 35 34.2	
	comp=N,1µm,1.2s						
CCIG	Comitan	2.46	11	⇓P	Pb	12 34 55.4	-1.0
NUBE	Las Nubes	2.78	89	eP	Pb	12 35 00.5	-1.3
NUBE				eS	Sn	12 35 30.6	-0.4
NUBE	Las Nubes	2.78	89	⇓iP	Pb	12 34 59.8	-2.0
NUBE				⇑iS	Sn	12 35 31.1	+0.1
NUBE	Las Nubes	2.78	89	P	Pb	12 35 00.1	-1.7
NUBE	Las Nubes	2.78	89	S	Sb	12 35 34.1	-2.2
TGBT	Tuxtla Gutierr	2.93	352	eP	Pn	12 34 58.3	-0.5
TGBT				i S	Sn	12 35 33.3	-1.2
CEVE	Cerro Verde	2.93	90	eP	Pb	12 35 04.0	-0.4
CEVE	Cerro Verde	2.93	90	P	Pb	12 35 04.1	-0.4
CEVE	Cerro Verde	2.93	90	S	Sb	12 35 37.1	-3.7
TGIG		2.94	351	eP	Pn	12 35 00.5	+1.5
TGIG				eS	Sn	12 35 32.4	-2.3
TGIG		2.94	351	⇑iP	Pn	12 35 00.5	+1.5
TGIG				⇑iS	Sn	12 35 32.6	-2.1
TGIG				IAML		12 35 37.0	
	comp=E,909nm,3.3s						
PMON	Piamonte	3.24	92	P	Pb	12 35 08.0	-1.5
ESQI	Esquipulas	3.28	77		Pb	12 35 07.9	-2.3
LOMA	Loma Larga	3.38	93	eP	Pb	12 35 08.6	-3.5
LFRS	El Faro	3.49	93	eP	Pb	12 35 11.6	-2.2
HUIG	Huatulco	3.85	300	eP	Pn	12 35 10.5	-1.0
HUIG				i S	Sn	12 35 51.1	-6.1
CMIG	Matias Romero	3.87	326	Pn	Pn	12 35 12.9	+1.2
	comp=E,6.6nm,0.3s,baz=163,slow=12,SNR=42						
CMIG				Sn	Sn	12 35 57.8	+0.1
	comp=E,20nm,0.3s,baz=52,slow=19,SNR=6.3						
	comp=E,16nm,0.3s						
PETF	Flores	4.05	41	i P	Pn	12 35 16.7	+2.5
PETF				i S	Sb	12 36 10.0	-2.7
CNCH	Conchagua	4.71	97	P	Pb	12 35 28.8	-5.9
PEIG	Puerto Escondi	4.84	297	eP	Pn	12 35 27.6	+2.5
PEIG				i S	Sn	12 36 19.7	-2.1
VHO	Vista Hermosa	5.07	310	eP	Pn	12 35 33.0	+4.6
VHO				i S	Sn	12 36 22.5	-5.2
YOIG	Yosondua	5.59	303	eP	Pn	12 35 38.6	+2.9
YOIG				i S	Sn	12 36 36.6	-3.8
HERN	Volcan Telica	5.79	102	Pn	Pn	12 35 43.9	+5.6
PNIG	Pinotepa	5.86	296	eP	Pn	12 35 41.0	+1.9
PNIG				i S	Sn	12 36 41.7	-5.2
TXIG	Tlaxiaco	5.98	305	eP	Pn	12 35 45.6	+4.6
TXIG				i S	Sn	12 36 52.7	+2.6
TOIG	Toxpalan	5.98	315	eP	Pn	12 35 45.0	+4.1
TOIG				i S	Sn	12 36 51.5	+1.5
HLIG	Huajuapan de L	6.34	309	eP	Pn	12 35 46.4	+0.4
HLIG				i S	Sn	12 36 56.1	-2.9
FTIG	Fresnillo de T	6.64	308	eP	Pn	12 35 53.3	+3.3
FTIG				i S	Sn	12 37 05.4	-0.7
MGIG	Malinaltepec	6.68	301	eP	Pn	12 35 55.0	+4.5
MGIG				eS	Sn	12 37 01.5	-5.7
JAUV	Jalcomulco	6.77	324	eP	Pn	12 35 51.4	-0.3
JAUV				eS	Sn	12 37 08.4	-0.9
CRIG	Cruz Grande	6.88	295	eP	Pn	12 35 56.4	+3.3
CRIG				eS	Sn	12 37 01.8	-10
BOAB	BOACO BROADBAN	6.94	101	Pn	Pn	12 36 02.4	+8.5
DAIG	Los Arroyos	7.45	296	eP	Pn	12 36 05.8	+4.8
DAIG				eS	Sn	12 37 18.5	-7.5
TEIG	Tepich	7.58	33		Pn	12 36 04.1	+1.4
MEIG	Mezcala	7.83	302	eP	Pn	12 36 07.8	+1.5
MEIG				i S	Sn	12 37 34.4	-1.2
CXUV	Coxquihui	7.86	324	eP	Pn	12 36 05.8	-0.8
CXUV				eS	Sn	12 37 35.0	-1.1
YAIG	Yautepec	7.92	310	eP	Pn	12 36 10.8	+3.2
YAIG				i S	Sn	12 37 34.0	-3.7
PLIG	Platanillo	7.98	305	eP	Pn	12 36 12.9	+4.5
PLIG				eS	Sn	12 37 36.1	-3.1
CAIG	El Cayaco	8.00	294	eP	Pn	12 36 11.7	+3.1
ARIG	Puente Sto Nin	8.61	302	eP	Pn	12 36 22.1	+5.2
ARIG				eS	Sn	12 37 49.8	-4.8
TXAR	Lajitas Array	18.48	328	P	Pn	12 38 32.3	+3.8
TXAR	Lajitas Array	18.48	328	P	Pn	12 38 31.6	+3.0
	comp=E,0.1nm,0.3s,baz=152,slow=11,SNR=14						
	comp=E,2.0nm,0.8s						
TX31	Lajitas Ar. Si	18.48	328		Pn	12 38 31.4	+2.8
MNHN	Monahans	19.72	334	P	Pn	12 38 44.9	+1.3
VHRN	Van Horn	20.32	328		Pn	12 38 52.6	+1.9
APMT	Aspermont	20.54	342	P	Pn	12 38 52.9	-0.2
MNTX	Cornudas Mount	21.25	329		P	12 39 01.9	+3.1
SMWD	Samnorwood	22.24	343	P	P	12 39 11.3	+2.1
SMWD				IAmb	IAmb	12 39 13.2	
	comp=Z,11nm,0.8s						
AMTX	Amarillo	22.47	340		P	12 39 12.7	+0.9
AMTX				IAmb	IAmb	12 39 15.4	
	comp=Z,13nm,0.9s						
RTBA	Rita Blanca	24.23	340	IAmb	IAmb	12 39 32.5	
	comp=Z,12nm,0.9s						
MVCO	Mesa Verde	27.22	332		P	12 39 59.1	+2.4
MVCO				IAmb	IAmb	12 40 02.5	
	comp=Z,6.9nm,0.9s						
PV13	Radium Mtn., P	28.14	332	IAmb	IAmb	12 40 10.8	
	comp=Z,4.5nm,0.9s						
PV02	Paradox Valley	28.14	332	IAmb	IAmb	12 40 11.0	
	comp=Z,6.4nm,1.0s						
PV05	Paradox Valley	28.20	332	IAmb	IAmb	12 40 11.5	
	comp=Z,5.2nm,1.0s						
PV03	Paradox Valley	28.23	332	IAmb	IAmb	12 40 11.8	
	comp=Z,4.5nm,0.9s						
PV07	Paradox Valley	28.29	333	IAmb	IAmb	12 40 12.6	
	comp=Z,5.0nm,0.9s						
PV17	East Wray Mesa	28.30	332	IAmb	IAmb	12 40 12.4	
	comp=Z,6.8nm,1.0s						
PV04	Paradox Valley	28.37	332	IAmb	IAmb	12 40 12.8	
	comp=Z,6.0nm,0.9s						
PV22	Blue Mesa, Par	28.43	333	IAmb	IAmb	12 40 13.1	
	comp=Z,6.0nm,1.0s						
PDAR	Pinedale Array	32.29	336	P	P	12 40 42.3	+0.6
	comp=Z,0.4nm,0.6s,baz=153,slow=10.0,SNR=4.8						
	comp=Z,0.4nm,0.6s						
NVAR	Mina Array Bea	33.39	322	P	P	12 40 54.9	+3.6
	comp=Z,1.4nm,0.7s,baz=126,slow=6.4,SNR=16						
	comp=Z,1.4nm,0.7s						
LOHW	Long Hollow	33.42	336	IAmb	IAmb	12 41 09.8	
	comp=Z,3.4nm,1.1s						
TPAW	Teton Pass	33.45	335	IAmb	IAmb	12 40 56.4	
	comp=Z,7.1nm,1.1s						
MCMT	McKenzie Canyo	35.33	335		P	12 41 11.2	+3.1
YKAW1	Yellowknife Wh	50.98	347		P	12 43 15.1	+1.0
YKAW1				IAmb	IAmb	12 43 15.8	
	comp=Z,7.0nm,0.7s						
YKA	Yellowknife Ar	51.02	347	P	P	12 43 15.4	+1.1
	comp=Z,3.2nm,0.7s,baz=152,slow=7.1,SNR=26						
	comp=Z,3.2nm,0.7s						
YKAW3	Yellowknife Wh	51.08	347	P	P	12 43 16.2	+1.5
YKAW3				IAmb	IAmb	12 43 16.7	
	comp=Z,4.7nm,0.7s						
ILAR	Eielson Array	62.72	337	P	P	12 44 38.9	+1.6
	comp=Z,1.6nm,1.0s,baz=132,slow=4.5,SNR=14						
	comp=Z,1.6nm,1.0s						
EKA	Eskdalemuir Ar	78.44	36	P	P	12 46 11.9	-1.5
	comp=Z,1.2nm,0.6s,baz=270,slow=5.8,SNR=5.6						
	comp=Z,1.2nm,0.6s						
ESDC	Sonseca Array	80.29	52	P	P	12 46 22.9	-1.0
	comp=Z,0.2nm,0.4s,baz=283,slow=4.1,SNR=1.8						
	comp=Z,0.2nm,0.4s						
CMAR	Chiang Mai Arr	145.91	340	PKPbc	PKiKP	12 53 54.5	-2.2
	comp=Z,1.5nm,0.7s,baz=337,slow=3.5,SNR=12						

IDC ***24*** *12:47:09.3±0.6, 30.°75S×177.°42W, h0^{km}, mb4.3/11, mbtmp4.3/13, ML4.0/2, MS4.5/2, Error ellipse: s-maj=23.1km s-min=16.6km az=96.0*

NEIC ***24*** *12:47:12.1±1.7, 30.°69S±0.°06×177.°45W±0.°09, h10^{km}±1^{km}, mb4.7/13, Error ellipse: s-maj=14.1km s-min=9.3km az=60.0*

ISC 24 12:47:14.8±0.6**, 30.°71S**±0.°06×**177.°6W**±0.°1**, h33**^{km}**, n49,** σ**1.^{s}43**/56**, mb4.6**/18**, 5D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.49	348	Pn	Pn	12 47 38.2	-1.1
	1µm,0.3s,baz=121,slow=5.4,SNR=36						
RAO				Sn	Sn	12 47 57.2	-0.2
	2µm,0.3s,baz=302,slow=23,SNR=21						
RAO				LR	LR	12 47 57.8	
	comp=Z,678nm,20.7s,baz=151,slow=31						
MXZ	Matakaoa Point	7.65	206	Pn	Pn	12 49 04.2	+0.3
URZ	Urewera	8.72	209	Pn	Pn	12 49 15.6	-3.0
	0.8nm,0.3s,baz=269,slow=3.9,SNR=9.7						
URZ				Sn	Sn	12 50 51.9	-3.9
	4.0nm,0.3s,baz=297,slow=16,SNR=14						
	7.0nm,0.6s						
TOZ	Tahuroa Road	9.06	217	Pn	Pn	12 49 23.0	-0.2
RPZ	Rata Peaks	15.81	212	Pn	Pn	12 50 52.3	-2.7
	1.3nm,0.3s,baz=93,slow=1.7,SNR=7.2						
RPZ				Sn	Sn	12 53 36.1	-13
	0.5nm,0.3s,baz=12,slow=23,SNR=2.2						
	6.3nm,0.6s						
DZM	Mont Dzumac	16.70	297	LR	LR	12 56 08.3	
	comp=Z,959nm,21.5s,baz=165,slow=32						
ODZ	Otahua Downs	17.05	210		P	12 51 12.4	+0.3
ODZ				IAmb	IAmb	12 51 27.4	
	comp=Z,53nm,1.3s						
ARMA	Armidale	26.50	263	P	P	12 52 49.9	+0.6
ARMA				IAmb	IAmb	12 53 31.9	
	comp=Z,23nm,1.2s						
CTAO	Charters Tower	34.22	279	P	P	12 53 59.7	+2.1
STKA	Stephens Creek	34.78	257		P	12 54 04.7	+2.3
STKA	Stephens Creek	34.78	257	P	P	12 54 03.8	+1.4
	comp=Z,15nm,0.9s,baz=94,slow=11,SNR=16						
	comp=Z,15nm,0.9s						
AS31	Alice Springs	43.47	267		P	12 55 16.0	+0.8
ASAR	Alice Springs	43.47	267	P	P	12 55 15.5	+0.4
ASAR	Alice Springs	43.47	267	P	P	12 55 15.1	-0.1
	comp=Z,2.8nm,0.7s,baz=106,slow=7.4,SNR=23						
ASAR				PcP	PcP	12 57 02.6	-0.3
	comp=Z,0.7nm,0.7s,baz=108,slow=3.7,SNR=1.7						
ASAR				ScP	ScP	13 00 56.2	+4.3
	comp=Z,0.7nm,0.8s,baz=111,slow=3.7,SNR=6.3						
	comp=Z,2.8nm,0.7s						
WR8	Warramunga Arr	44.34	272	P	P	12 55 21.5	-0.6
WR8				IAmb	IAmb	12 55 23.5	
	comp=Z,7.5nm,0.8s						
WRA	Warramunga Arr	44.49	272		P	12 55 23.4	+0.1
WRA	Warramunga Arr	44.49	272	P	P	12 55 23.1	-0.2
	comp=Z,11nm,0.9s,baz=112,slow=7.8,SNR=23						
WRA				ScP	ScP	13 01 00.5	+4.4
	comp=Z,0.3nm,0.6s,baz=118,slow=3.9,SNR=1.9						
	comp=Z,11nm,0.9s						
WB0	Warramunga Arr	44.51	272		P	12 55 23.9	+0.4
WB0				IAmb	IAmb	12 55 24.8	
	comp=Z,10.0nm,0.7s						
FITZ	Fitzroy Crossi	52.74	270	P	P	12 56 26.7	-0.1
	comp=Z,2.9nm,0.9s,baz=76,slow=9.9,SNR=1.5						
FITZ				LR	LR	13 17 41.2	
	comp=Z,645nm,18.5s,baz=190,slow=35						
	comp=Z,2.9nm,0.9s						
CASY	Casey	55.05	208	P	P	12 56 43.4	+0.5
CASY				IAmb	IAmb	12 57 03.9	
	comp=Z,17nm,1.4s						
MORW	Morawa	56.81	253	P	P	12 56 55.2	-1.0
QSPA	South Pole Qui	59.40	180	P	P	12 57 15.7	+1.8
QSPA	South Pole Qui	59.40	180	P	P	12 57 13.4	-0.5
	comp=Z,3.7nm,1.0s,baz=27,slow=1.6,SNR=9.6						
	comp=Z,3.7nm,1.0s						
MAW	Mawson	72.15	200	P	P	12 58 36.2	+0.5
	comp=Z,1.8nm,0.9s,baz=163,slow=14,SNR=1.9						
	comp=Z,1.8nm,0.9s						
TROLL	Troll, Antarti	77.56	180	⇓P	P	12 59 07.9	+0.7
	comp=Z,146nm,0.7s						
SNAA	Sanae	77.84	178	⇓P	P	12 59 07.7	-0.9
	comp=Z,40nm,1.0s						
SNAA	Sanae	77.84	178	P	P	12 59 08.8	+0.1
SNAA				IAmb	IAmb	12 59 24.3	
	comp=Z,7.0nm,1.2s						
SNAA	Sanae	77.84	178	P	P	12 59 08.3	-0.3
	comp=Z,3.4nm,1.1s,baz=172,slow=9.0,SNR=6.1						
	comp=Z,3.4nm,1.1s						
VNA3	Neumayer Olymp	77.97	176	⇓P	P	12 59 09.4	+0.1
	comp=Z,9.1nm,0.7s						
VNA2	Neumayer--Watz	78.41	177	⇓P	P	12 59 11.2	-0.5
	comp=Z,5.4nm,0.7s,baz=187,slow=5.7						
VNA1	Neumayer--Stat	78.64	176	⇓P	P	12 59 14.7	+1.7
	comp=Z,7.8nm,1.0s						
KSRS	Korea Array	84.83	319	P	P	12 59 46.5	+0.6
	comp=Z,0.8nm,0.8s,baz=147,slow=4.1,SNR=4.8						
	comp=Z,0.8nm,0.8s						
PETK	Petropavlovsk-	86.21	345	P	P	12 59 52.9	+0.5
	comp=Z,1.2nm,0.6s,baz=288,slow=1.4,SNR=4.4						
	comp=Z,1.2nm,0.6s						
USRK	Ussuriysk Ar.	87.63	326	P	P	12 59 59.1	-0.4
	comp=Z,3.6nm,0.9s,baz=121,slow=2.9,SNR=4.6						
	comp=Z,3.6nm,0.9s						
NVAR	Mina Array Bea	88.21	42	P	P	13 00 02.9	+0.1
	comp=Z,1.4nm,0.8s,baz=221,slow=7.7,SNR=11						
	comp=Z,1.4nm,0.8s						
MKAR	Makanchi Array	118.26	310	PKP	PKPdf	13 05 57.6	-0.8
	comp=Z,0.2nm,0.5s,baz=181,slow=3.5,SNR=2.2						
KURBB	Kurchatov Arra	121.58	313	PKP	PKPdf	13 06 03.4	-1.2
	comp=Z,0.6nm,0.4s,baz=77,slow=1.8,SNR=7.3						
BVAR	Borovoye Array	126.89	316	PKP	PKPdf	13 06 15.0	+0.2
	comp=Z,0.6nm,0.6s,baz=204,slow=3.2,SNR=2.3						
FINES	FINESS Array B	145.56	340	PKPbc	PKPdf	13 06 48.6	-0.3
	comp=Z,11nm,0.7s,baz=77,slow=4.1,SNR=33						
KBZ	Khabaz	145.60	304	PKPbc	PKPab	13 06 50.4	+0.3
	comp=Z,3.7nm,0.9s,baz=106,slow=2.5,SNR=5.4						
NB2	NORSAR Subarra	149.11	352	PKP	PKPbc	13 06 59.4	+0.3
	comp=Z,5.3nm,1.2s,baz=17,slow=2.6						
NOA	NORSAR Array B	149.11	352	PKPbc	PKPbc	13 06 58.5	-0.6
	comp=Z,1.1nm,0.7s,baz=14,slow=4.2,SNR=5.3						
HFS	Hagfors	149.62	349	PKPbc	PKPbc	13 06 59.5	-0.7
	comp=Z,2.0nm,0.6s,baz=3.8,slow=4.5,SNR=6.1						
AKASG	Malin Array Be	151.78	323	PKPbc	PKPbc	13 07 04.7	-1.0
	comp=Z,1.0nm,0.6s,baz=50,slow=2.8,SNR=6.1						
AKASG				PKPab	PKPab	13 07 14.2	-0.4
	comp=Z,4.9nm,0.7s,baz=50,slow=2.5,SNR=9.7						
MMAI	Mount Meron Ar	151.97	283	PKPbc	PKiKP	13 07 07.3	+0.2
	comp=Z,1.0nm,0.4s,baz=154,slow=6.5,SNR=3.8						
MMAI				PKPab	PKPab	13 07 17.7	+1.5
	comp=Z,3.8nm,0.5s,baz=92,slow=2.6,SNR=5.8						
BRTR	Keskin Array B	153.08	298	PKPbc	PKPbc	13 07 09.2	0.0
	comp=Z,0.2nm,0.3s,baz=110,slow=1.5,SNR=3.8						
BRTR				PKPab	PKPab	13 07 19.8	-1.0
	comp=Z,1.0nm,0.6s,baz=62,slow=2.9,SNR=5.4						
CLL	Collm	157.98	342	ePKPab	PKPab	13 07 42.0	+1.0
GERES	GERESS Array B	159.97	338	PKPab	PKPab	13 07 49.8	-0.1
	comp=Z,0.3nm,0.3s,baz=324,slow=4.8,SNR=1.7						
TORD	Torodi Ar. Bea	162.51	178	PKPab	PKPab	13 07 59.5	-2.1
	comp=Z,1.2nm,0.2s,baz=168,slow=3.0,SNR=1.3						

IDC ***24*** *12:47:46.2±1.7, 2.°33S×138.°42E, h0^{km}, mb3.5/3, mbtmp3.6/5, ML3.8/2, Error ellipse: s-maj=32.2km s-min=17.6km az=163.0*

DJA ***24*** *12:47:52.1±0.3, 3°S±2°×13°9E±°, h10^{km}, M3.9/7, mb4.2/1, MLv3.8/7*

ISC 24 12:47:52.3±0.9**, 2.°62S**±0.°07×**138.°55E**±0.°05**, h32**^{km}**, n11,** σ**1.^{s}88**/14**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.65	15	P	Pb	12 48 04.9	-0.3
SMPI				S	Sb	12 48 13.9	-0.1
GENI	Genyem	1.62	89	P	Pn	12 48 20.4	+1.7
GENI				S	Sb	12 48 44.4	+2.7
JAY	Jayapura	2.16	87	Pn	Pn	12 48 27.1	+1.0
	11nm,0.3s,baz=227,slow=11,SNR=34						
JAY				Lg	Lg	12 48 58.1	
	6.8nm,0.3s,baz=97,slow=18,SNR=5.9						
	22nm,0.3s						
JAY	Jayapura	2.16	87	P	Pn	12 48 28.2	+2.1
JAY				S	Sb	12 48 55.9	-1.3
SRPI	Serui, Papua	2.42	288	P	Pn	12 48 31.4	+1.7
BAKI	Biak	2.82	300	P	Pn	12 48 38.1	+2.9
FAKI	Fak Fak	6.30	267	P	Pn	12 49 24.1	+1.0
WRA	Warramunga Arr	17.70	193	P	Pn	12 51 55.4	-1.1
	0.4nm,0.3s,baz=14,slow=13,SNR=19						
	0.7nm,0.4s						
FITZ	Fitzroy Crossi	19.92	219	P	Pn	12 52 22.9	-0.5
	1.3nm,0.7s,baz=26,slow=12,SNR=5.9						
	1.3nm,0.7s						
ASAR	Alice Springs	21.40	192	P	P	12 52 38.2	+0.6
	1.5nm,0.6s,baz=13,slow=10,SNR=25						
	1.5nm,0.6s						
ILAR	Eielson Array	85.82	24	P	P	13 00 25.8	-2.7
	0.2nm,0.7s,baz=252,slow=3.9,SNR=5.8						
	0.2nm,0.7s						

GCG ***24*** *12:52:31.3±1.8, 13.°97N×92.°59W, h4^{km}±18^{km}, MD4.0, ML3.5*

MEX ***24*** *12:52:34.6±0.7, 14.°12N×92.°60W, h6^{km}±27^{km}, MD3.8*

ISC 24 12:52:30.6±2.6**, 14.°06N**±0.°09×**92.°59W**±0.°07**, h7**^{km}±12^{km}**, n14,** σ**1.^{s}06**/26**, 1C-2D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.90	20	eP	Pb	12 52 49.4	+0.7
THIG				i S	Sn	12 53 02.2	-0.8
SMCA	Catarina	0.94	32	i P	Pb	12 52 50.3	+1.0
SMCA				i S	Sn	12 53 03.5	-0.5
RTAL	Retalhuleu	0.98	61	eP	Pg	12 52 50.0	+0.5
RTAL				i S	Sb	12 53 03.8	+0.7
PATR	El Naranjo	1.11	18	eP	Pg	12 52 52.0	0.0
PATR				eS	Sg	12 53 05.7	-0.7
PAVE	Pavencul	1.20	19	eP	Pg	12 52 53.8	+0.1
PAVE				i S	Sg	12 53 08.5	-0.8
STG8	El Palmar, Qui	1.26	72	i P	Pb	12 52 54.1	-0.8
STG8				i S	Sb	12 53 10.7	-0.7
STG8				IAML		12 53 13.6	
	comp=E,990nm,0.4s						
STG0	El Palmar, Qui	1.26	73	i P	Pb	12 52 54.1	-0.7
STG0				i S	Sb	12 53 09.8	-1.6
STG0				IAML		12 53 16.6	
	comp=E,1µm,1.3s						
HUEH	Huehuetenango	1.64	40	i P	Pb	12 53 01.9	+0.7
HUEH				i S	Sg	12 53 23.0	-0.3
PCIG		1.75	340	eP	Pn	12 53 00.9	-0.5
PCIG				i S	Sn	12 53 21.3	-2.7
CCIG	Comitan	2.26	11	eP	Pb	12 53 11.4	-0.5
CCIG				eS	Sb	12 53 40.9	+0.9
CCIG	Comitan	2.26	11	⇑iP	Pb	12 53 11.5	-0.3
CCIG				⇓iS	Sg	12 53 42.3	-0.9
CCIG				IAML		12 53 48.5	
	comp=N,201nm,0.8s						
NUBE	Las Nubes	2.73	93	⇓iP	Pn	12 53 16.3	+1.3
TGIG		2.76	349	eP	Pn	12 53 16.7	+1.4
TGIG				eS	Sn	12 53 50.0	+1.0
TGIG		2.76	349	i P	Pn	12 53 16.7	+1.4
TGIG				IAML		12 53 55.2	
	comp=E,129nm,1.1s						

IDC ***24*** *12:55:43.5±3.9, 14.°19N×92.°14W, h0^{km}, mb3.5/4, mbtmp3.5/6, ML3.4/2, Error ellipse: s-maj=135.6km s-min=54.5km az=41.0*

MEX ***24*** *12:55:46.5±0.7, 14.°03N×92.°79W, h4^{km}±30^{km}, MD4.1*

CATAC ***24*** *12:55:48.5±0.9, 14°N±4°×9°2W±°, h7^{km}±3^{km}, M3.8/6, MLv3.8/6, Error ellipse: s-maj=9.9km s-min=6.4km az=51.3, confirmed*

GCG ***24*** *12:55:49.4±1.4, 14.°13N×92.°48W, h33^{km}±49^{km}, MD4.2, ML3.8*

ISC 24 12:55:44.4±1.8**, 13.°91N**±0.°05×**92.°59W**±0.°03**, h16**^{km}±12^{km}**, n45,** σ**2.^{s}33**/68**, mb3.6**/4**, 2C-1D, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.04	18	eP	Pb	12 56 03.1	-1.0
THIG				eS	Sb	12 56 17.1	-0.4
THIG		1.04	18	⇓iP	Pb	12 56 03.7	-0.4
THIG				i S	Sb	12 56 13.6	-4.0
THIG				IAML		12 56 18.3	
	comp=E,2µm,1.3s						
RTAL	Retalhuleu	1.07	55	eP	Pg	12 56 05.7	+0.6
RTAL				i S	Sn	12 56 21.1	+1.9
RTAL	Retalhuleu	1.07	55	P	Pn	12 56 05.9	+1.2
RTAL				S	Sb	12 56 17.2	-1.0
SMCA	Catarina	1.07	28	i P	Pb	12 56 04.5	-0.1
SMCA				i S	Sb	12 56 17.7	-0.6
SMCA				IAML		12 56 21.1	
	comp=E,864nm,0.8s						
PATR	El Naranjo	1.25	16	eP	Pn	12 56 06.2	-1.3
PATR				i S	Sb	12 56 21.8	-2.0
STG0	El Palmar, Qui	1.32	67	i P	Pn	12 56 08.0	-0.3
STG0				i S	Sb	12 56 23.1	-2.6
STG0				IAML		12 56 30.6	
	comp=E,5µm,0.9s						
STG8	El Palmar, Qui	1.32	66	i P	Pn	12 56 08.1	-0.3
STG8				i S	Sb	12 56 22.3	-3.5
STG8				IAML		12 56 27.7	
	comp=E,2µm,0.7s						
PAVE	Pavencul	1.34	17	eP	Pn	12 56 07.7	-1.0
PAVE				i S	Sb	12 56 24.8	-1.6
SOKI	Kika Raxquin	1.47	52	i P	Pn	12 56 12.0	+1.4
SOKI				i S	Sn	12 56 25.6	-4.1
SOKI				IAML		12 56 41.9	
	comp=N,1µm,1.2s						
HUEH	Huehuetenango	1.76	37	eP	Pn	12 56 16.0	+1.6
HUEH				i S	Sn	12 56 35.3	-1.2
HUEH	Huehuetenango	1.76	37	⇑iP	Pn	12 56 16.2	+1.8
HUEH				⇑iS	Sn	12 56 35.3	-1.2
HUEH				IAML		12 56 46.3	
	comp=E,2µm,2.3s						
PCIG		1.89	341	eP	Pn	12 56 14.5	-1.4
PCIG				eS	Sn	12 56 33.2	-6.2
FG16	Alotenango, Sa	2.05	80	i P	Pn	12 56 15.9	-2.6
FG16				i S	Sn	12 56 39.5	-4.3
FG16				IAML		12 56 43.0	
	comp=N,5µm,0.9s						
CCIG	Comitan	2.40	11	eP	Pn	12 56 25.3	+2.1
CCIG				i S	Sn	12 56 53.4	+1.0
CCIG	Comitan	2.40	11	i P	Pn	12 56 25.1	+1.8
CCIG				i S	Sn	12 56 50.4	-2.0
CCIG				IAML		12 57 04.3	
	comp=N,414nm,1.3s						
CCIG	Comitan	2.40	11	P	Pn	12 56 25.8	+2.5
CCIG	Comitan	2.40	11	S	Sn	12 56 56.3	+3.9
NUBE	Las Nubes	2.73	90	P	Pn	12 56 30.7	+3.0
NUBE	Las Nubes	2.73	90	S	Sn	12 57 00.4	-0.2
TGIG		2.90	350	eP	Pn	12 56 30.4	+0.5
TGIG				i S	Sn	12 57 02.1	-2.4
TGIG		2.90	350	i P	Pn	12 56 30.5	+0.5
TGIG				i S	Sn	12 57 02.5	-2.1
TGIG				IAML		12 57 06.2	
	comp=E,296nm,1.8s						
PMON	Piamonte	3.19	93	P	Pn	12 56 37.7	+3.6
PMON	Piamonte	3.19	93	S	Sn	12 57 14.3	+2.4
CMIG	Matias Romero	3.86	325	Pn	Pn	12 56 43.1	0.0
	comp=E,2.0nm,0.3s,baz=133,slow=12,SNR=7.9						
CMIG				Sn	Sn	12 57 27.0	-1.1
	comp=E,6.3nm,0.3s,baz=130,slow=9.3,SNR=4.9						
	comp=E,7.1nm,0.3s						
HUIG	Huatulco	3.87	299	eP	Pn	12 56 40.3	-3.0
HUIG				eS	Sn	12 57 17.4	-11
PACA	Pacayal	4.17	95	P	Pn	12 56 50.3	+2.8
PEIG	Puerto Escondi	4.87	296	eP	Pn	12 56 56.8	-0.3
PEIG				eS	Sn	12 57 43.2	-10
YOIG	Yosondua	5.60	302	eP	Pn	12 57 08.4	+1.0
YOIG				eS	Sn	12 58 04.1	-7.5
PNIG	Pinotepa	5.89	296	eP	Pn	12 57 11.3	+0.2
PNIG				eS	Sn	12 58 08.5	-10
TOIG	Toxpalan	5.99	315	eP	Pn	12 57 11.5	-0.9
TOIG				eS	Sn	12 58 20.6	-0.1
TXIG	Tlaxiaco	5.99	304	eP	Pn	12 57 14.7	+2.0
TXIG				eS	Sn	12 58 19.7	-1.5
HLIG	Huajuapan de L	6.35	309	eP	Pn	12 57 22.2	+4.7
HLIG				eS	Sn	12 58 29.1	-0.9
FTIG	Fresnillo de T	6.65	307	eP	Pn	12 57 24.0	+2.4
FTIG				eS	Sn	12 58 33.9	-3.2

NADN	Granada	6.75	108	P	Pb	12 57 37.9	-3.6
JAUV	Jalcomulco	6.76	324	eP	Pn	12 57 21.9	-1.2
JAUV				eS	Sn	12 58 33.6	-6.3
CRIG	Cruz Grande	6.91	295	eP	Pn	12 57 25.3	+0.2
CRIG				eS	Sn	12 58 31.8	-11
PPM	Popocatepetl	7.73	312	eP	Pn	12 57 38.9	+2.0
ARIG	Puente Sto Nin	8.63	301	eP	Pn	12 57 48.6	-0.1
TXAR	Lajitas Array	18.46	328	P	Pn	13 00 01.8	+2.0
	baz=135,slow=9.6,SNR=8.5						
	comp=E,0.9nm,0.8s						
PDAR	Pinedale Array	32.27	336	P	P	13 02 14.0	+1.5
	comp=E,0.2nm,0.5s,baz=184,slow=7.2,SNR=1.7						
	comp=E,0.2nm,0.5s						
NVAR	Mina Array Bea	33.38	322	P	P	13 02 25.3	+2.9
	comp=E,0.5nm,0.6s,baz=126,slow=6.4,SNR=6.0						
	comp=E,0.5nm,0.6s						
YKA	Yellowknife Ar	50.98	347	P	P	13 04 45.4	+0.3
	comp=E,1.1nm,0.7s,baz=154,slow=6.9,SNR=8.2						
	comp=E,1.1nm,0.7s						
ILAR	Eielson Array	62.70	337	P	P	13 06 08.4	+0.2
	comp=E,0.3nm,0.7s,baz=127,slow=8.2,SNR=4.5						
	comp=E,0.3nm,0.7s						
CMAR	Chiang Mai Arr	145.89	340	PKPbc	PKPdf	13 15 24.6	+1.2
	comp=E,0.7nm,0.7s,baz=22,slow=2.3,SNR=5.7						

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*NEIC **24** 13:04:01.6±1.6, 6°.51S±0°.02×129°.12E±0°.10, h221km±9km, mb4.1/8, Error ellipse: s-maj=14.0km s-min=3.6km az=89.0*

*IDC **24** 13:04:03.5±3.2, 6°.63S×129°.00E, h237km±25km, mb3.2/2, mbtmp3.8/6, Error ellipse: s-maj=35.1km s-min=18.5km az=61.0*

ISC 24 13:04:01.3±0.6, **6°.63S**±0°.06×**129°.15E**±0°.08, **h221**km, **n25**, σ**1^{s}60**/29, **mb3.8**/5, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.52	122	Pn	Pn	13 04 48.8	+2.0
FAKI	Fak Fak	4.81	40	Pn	Pn	13 05 11.0	-2.9
SOEI	Soe	5.74	237	Pn	Pn	13 05 21.0	-4.7
MTN	Manton Dam	6.48	163	Pn	Pn	13 05 36.5	+1.5
BATI	Baumata	6.48	236	P	Pn	13 05 35.9	+0.7
	8.6nm,0.4s,baz=63,slow=6.8,SNR=1.7						
BATI				S	S	13 06 49.8	0.0
	26nm,0.4s,baz=210,slow=20,SNR=11						
TNTI	Ternate	7.57	346	Pn	Pn	13 05 47.4	-1.6
KNRA	Kununurra	9.00	182	Pn	Pn	13 06 08.7	+1.3
FITZ	Fitzroy Crossi	11.90	196	Pn	Pn	13 06 46.1	+1.7
FITZ	Fitzroy Crossi	11.90	196	P	Pn	13 06 45.8	+1.4
	2.2nm,0.5s,baz=23,slow=13,SNR=24						
FITZ				S	S	13 08 51.5	-4.4
	1.4nm,0.3s,baz=58,slow=19,SNR=2.0						
WB0	Warramunga Arr	14.02	159		Pn	13 07 12.1	+1.3
WRA	Warramunga Arr	14.16	160	P	Pn	13 07 13.3	+0.8
	0.2nm,0.4s,baz=341,slow=12,SNR=9.3						
WRA				S	S	13 09 46.4	-2.9
	0.7nm,0.4s,baz=336,slow=23,SNR=5.3						
WR8	Warramunga Arr	14.23	159		Pn	13 07 14.2	+0.8
COEN	Coen	15.60	119	P	Pn	13 07 31.5	+1.5
COEN				IAmb	IAmb	13 08 02.3	
	comp=Z,19nm,1.4s						
AS31	Alice Springs	17.54	165	Pn	Pn	13 07 54.1	+1.1
ASAR	Alice Springs	17.54	165	Pn	Pn	13 07 54.2	+1.1
ASAR	Alice Springs	17.54	165	P	Pn	13 07 53.8	+0.7
	comp=Z,1.7nm,0.5s,baz=345,slow=11,SNR=67						
ASAR				S	S	13 11 02.1	+0.4
	comp=Z,0.5nm,0.9s,baz=344,slow=19,SNR=2.3						
ASAR				ScP	ScP	13 15 32.0	-1.7
	comp=Z,0.3nm,0.5s,baz=347,slow=2.2,SNR=4.6						
EIDS	Eidsvold	28.05	134	P	P	13 09 32.2	-0.1
SSLB	Suanglung	31.27	345	P	P	13 10 00.9	+0.1
MKAR	Makanchi Array	67.46	327	P	P	13 14 33.4	0.0
	comp=Z,0.2nm,0.4s,baz=119,slow=7.3,SNR=4.5						
	comp=Z,0.2nm,0.4s						
VNDA	Vanda	72.91	173	P	P	13 15 06.9	+1.1
VNDA				IAmb	IAmb	13 15 11.3	
	comp=Z,2.8nm,1.4s						
KIWB	Kanaga Island	74.05	31	P	P	13 15 13.4	+0.5
QSPA	South Pole Qui	83.34	180	P	P	13 16 03.9	+0.5
QSPA	South Pole Qui	83.34	180	P	P	13 16 03.5	+0.1
	comp=Z,1.6nm,1.2s,baz=315,slow=6.1,SNR=1.9						
	comp=Z,1.6nm,1.2s						
L19K	White Mountain	89.35	27	P	P	13 16 32.9	+0.5
L19K				IAmb	IAmb	13 17 03.3	
	comp=Z,3.8nm,1.1s						
H19K	Roundabout Mou	89.60	24	P	P	13 16 33.0	-0.4
H19K				IAmb	IAmb	13 16 56.8	
	comp=Z,3.4nm,1.4s						

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*INMG **24** 13:09:06.0±7.2, 65°.75N×18°.05W, h10km, M4.6, mb4.7, #DIST_RANGE: DISTANT*

*REY **24** 13:09:07.6, 64°.66N×17°.59W, h2km*

*IDC **24** 13:09:09.2±0.6, 64°.66N×17°.48W, h0km, mb4.0/18, mbtmp4.0/21, ML4.4/2, MS4.7/1, Error ellipse: s-maj=20.0km s-min=11.5km az=14.0*

*NEIC **24** 13:09:09.9±2.1, 64°.67N±0°.09×17°.8W±0°.2, h9km±5km, mb4.5/102, Error ellipse: s-maj=13.6km s-min=10.1km az=193.0*

ISC 24 13:09:09.8±0.4, **64°.67N**±0°.02×**17°.50W**±0°.02, **h10**km, **n328**, σ**2^{s}16**/305, **mb4.4**/80, **1C-3D**, **Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKIS	Kista	0.03	281	P	Pg	13 09 08.6	-3.3
IKIS				S	Sg	13 09 09.7	-3.6
IVON	Vonarskard	0.11	272	P	Pg	13 09 10.2	-2.5
IVON				S	Sg	13 09 12.4	-2.3
IDYN	Dyngjuhals	0.14	24	P	Pg	13 09 10.8	-2.3
IDYN				S	Sg	13 09 13.2	-2.1
IDJK	Dyngjujokull	0.20	146	P	Pg	13 09 11.7	-2.4
IDJK				S	Sg	13 09 15.7	-1.3
IGRF	Grimsfjall	0.28	159	P	Pg	13 09 13.6	-1.9
IGRF				S	Sg	13 09 17.0	-2.3
IBJK	Bruarjokull	0.38	122	P	Pg	13 09 14.8	-2.5
IBJK				S	Sg	13 09 20.1	-2.2
ISKR	Skrokkalda	0.40	255	P	Pg	13 09 15.2	-2.5
ISKR				S	Sg	13 09 21.4	-1.6
IVOT	Vottur	0.42	161	P	Pg	13 09 15.5	-2.6
THOR	Thorvaldshraun	0.44	52	P	Pg	13 09 15.9	-2.6
IJOK	Jokulheimar	0.47	222	P	Pg	13 09 16.6	-2.5
IKRE	Kreppuhraun	0.49	76	P	Pg	13 09 16.8	-2.6
IKRE				S	Sg	13 09 24.2	-1.7
IASK	Askja	0.53	43	P	Pg	13 09 17.3	-2.8
IASK				S	Sg	13 09 25.0	-2.1
IMKO	Mokollar	0.58	57	P	Pg	13 09 18.4	-2.8
IMKO				S	Sg	13 09 27.1	-1.8
IIEY	Innrieyrar	0.64	206	P	Pg	13 09 19.2	-3.0
IIEY				S	Sg	13 09 29.2	-1.3
IKSK	Karasker	0.68	138	P	Pg	13 09 19.7	-3.2
IKSK				S	Sg	13 09 29.4	-2.3
ISVA	Svartarkot	0.68	9	P	Pg	13 09 19.9	-3.0
ISVA				S	Sg	13 09 30.3	-1.6
IHAE	Haedir	0.68	161	P	Pg	13 09 19.4	-3.6
IKAL	Kalfafell	0.73	187	P	Pg	13 09 20.7	-3.2
IVSH	V-Sauoahnukur	0.77	79	P	Pg	13 09 21.2	-3.5
IVSH				S	Sg	13 09 32.2	-2.5
IFAL	Falljokull	0.77	157	P	Pg	13 09 21.2	-3.5
IFAL				S	Sg	13 09 32.4	-2.4
SLET	Slettubjorg	0.82	153	P	Pg	13 09 22.4	-3.4
IKVI	Kvisker	0.83	146	P	Pg	13 09 22.1	-3.7
IKVI				S	Sg	13 09 34.1	-2.5
IFAG	Fagurholsmyri	0.88	155	P	Pg	13 09 22.9	-3.8
IADA	Aoalbol	0.89	66	P	Pg	13 09 23.6	-3.4
IADA				S	Sg	13 09 36.0	-2.6
ISTE	Stelbrattur	0.93	283	P	Pg	13 09 23.9	-3.8
IMEL	Melhnausar	0.97	21	P	Pg	13 09 24.7	-3.8
IREN	Reynihlio	1.01	14	P	Pg	13 09 25.4	-3.9
IREN				S	Sg	13 09 39.5	-2.9
ISNB	Snabyli	1.06	208	P	Pg	13 09 26.5	-3.7
ISNB				S	Sg	13 09 41.0	-2.9
IKVO	Krokottuvotn	1.08	14	P	Pg	13 09 26.5	-4.1
IHES	Hestalda	1.09	236	P	Pg	13 09 27.1	-3.7
ISLY	Slysaalda	1.10	221	P	Pb	13 09 27.4	-3.6
IGRS	Grimsstaoir	1.13	30	P	Pb	13 09 27.3	-4.2
IFED	Fedgar	1.15	237	P	Pb	13 09 28.5	-3.3
IRJU	Rjupnafell	1.18	207	P	Pb	13 09 28.6	-3.6
IMJO	Mjoaskard	1.20	233	P	Pb	13 09 29.2	-3.5
ISKI	Skildingahlsh	1.22	9	P	Pn	13 09 28.8	-4.2
IGOD	Go??abunga	1.29	219	P	Pn	13 09 30.6	-3.4
IHED	Heoinshofoi	1.42	3	P	Pn	13 09 31.9	-3.7
IBRE	Brettingsstaoi	1.47	353	P	Pn	13 09 32.9	-3.4
IGIL	Gilhagi	1.49	18	P	Pn	13 09 33.3	-3.3
BORG	Borgarnes	1.65	274		Pn	13 09 35.7	-3.0
BORG	Borgarnes	1.65	274	Pg	Pn	13 09 36.0	-2.8
	42nm,0.3s,baz=96,slow=11,SNR=108						
BORG				Lg	Lg	13 09 59.1	
	26nm,0.3s,baz=174,slow=21,SNR=11						
SCO	Scoresbysund	6.08	346		Pn	13 10 38.4	-1.2
SCO	Scoresbysund	6.08	346	iP	Pn	13 10 38.5	-1.1
SOEG	Soedalen	6.59	309	eP	Pn	13 10 49.8	+3.1
JMIC	Jan Mayen	7.19	24	Pn	Pn	13 10 55.8	+1.0
	3.8nm,0.3s,baz=179,slow=16,SNR=2.1						
	38nm,0.6s						
EKB	Eskdalemuir	11.75	136	Pn	Pn	13 11 56.6	-0.6
EKA	Eskdalemuir Ar	11.76	136	Pn	Pn	13 11 57.0	-0.4
	baz=319,slow=13						
	5.9nm,0.7s						
ESK	Eskdalemuir	11.76	136	Pn	Pn	13 11 57.2	-0.2
NOA	NORSAR Array B	13.53	92	Pn	Pn	13 12 19.3	-2.3
	0.6nm,0.7s,baz=299,slow=13,SNR=4.6						
ARCES	ARCESS Array B	17.12	55	P	Pn	13 13 06.2	-2.5
	2.6nm,0.9s,baz=358,slow=2.9,SNR=5.8						
ARCES				LR	LR	13 18 17.9	
	comp=Z,2µm,19.7s,baz=108,slow=32						
BGES	Gesves	18.59	130	dP	Pn	13 13 28.8	+1.7
MEM	Membach	18.71	128	dP	Pn	13 13 29.6	+1.0
	comp=Z,9.3nm,1.0s						
BTNL	Ternell	18.77	127	dP	Pn	13 13 31.2	+1.9
FIA1	FINESS Array S	19.70	79	P	P	13 13 38.3	-0.6
FIA1				IAmb	IAmb	13 13 39.4	
	comp=Z,29nm,1.1s						
FINES	FINESS Array B	19.70	79	P	P	13 13 38.2	-0.7
FINES	FINESS Array B	19.70	79	P	P	13 13 35.1	-3.8
	comp=Z,3.4nm,1.0s,baz=233,slow=12,SNR=4.9						
CLL	Collm	20.70	116	P	Pn	13 13 50.3	-1.9
CLL	Collm	20.70	116	P	Pn	13 13 51.0	-1.2
	comp=Z,13nm,1.6s						
CLL	Collm	20.70	116	iP	Pn	13 13 50.9	-1.3
	comp=Z,26nm,1.5s						
CLL				ex	x	13 14 03.0	
CLL				ePPP	PPP	13 14 17.0	
ECH	Echery	21.15	129		P	13 13 55.5	+0.7
GRF	Grafenberg Arr	21.33	121	eP	P	13 13 58.8	+2.1
	comp=Z,12nm,1.2s,baz=325,slow=9.3						
BRG	Berggiesshubel	21.41	115	eP	P	13 13 58.7	+1.2
BRG				Amp		13 14 01.4	
	comp=Z,16nm,1.1s						
BRG	Berggiesshubel	21.41	115	P	P	13 14 06.4	+8.9
BRG				Amp		13 14 07.5	
	comp=Z,7.2nm,1.1s						
BFO	Black Forest	21.45	127		P	13 13 55.2	-2.8
KSP	Ksiaz	22.36	112	P	P	13 14 10.8	+3.1
	comp=Z,16nm,1.1s						
KHC	Kasperske Hory	22.67	118	eP	P	13 14 12.2	+1.1
KHC	Kasperske Hory	22.67	118	P	P	13 14 13.8	+2.7
	comp=Z,9.2nm,1.1s						
DPC	Dobruska-Polom	22.76	113	eP	P	13 14 13.9	+1.9
DPC	Dobruska-Polom	22.76	113	P	P	13 14 13.9	+1.9
	comp=Z,11nm,1.2s						
GEC2	GERESS Array S	22.95	119		P	13 14 15.3	+1.2
GERES	GERESS Array B	22.95	119	P	P	13 14 14.6	+0.5
GERES	GERESS Array B	22.95	119	P	P	13 14 14.9	+0.8
	comp=Z,2.3nm,0.8s,baz=323,slow=8.4,SNR=14						
	comp=Z,2.3nm,0.8s						
PGAV	Gavieira, Arco	23.35	162	eP	P	13 14 22.1	+3.9
TUE	Stuetta	23.41	128	P	P	13 14 18.0	-0.8
TUE	Stuetta	23.41	128	P	P	13 14 20.7	+1.9
	comp=Z,26nm,1.1s						
PCAB	Cabril	23.64	162	eP	P	13 14 23.5	+2.6
PCAB				i Amb		13 14 30.8	
	comp=Z,37nm,2.0s						
EUNU	Eureka	23.67	336		P	13 14 21.0	0.0
VRAC	Vranov	23.69	114	eP	P	13 14 22.7	+1.3
MORC	Moravsky Berou	23.70	112	P	P	13 14 22.1	+0.7
MORC				IAmb	IAmb	13 14 25.6	
	comp=Z,18nm,1.5s						
MORC	Moravsky Berou	23.70	112	eP	P	13 14 24.3	+2.8
PBRG	Braganca	23.72	160	eP	P	13 14 25.1	+3.4
PBRG				i Amb		13 14 27.0	
	comp=Z,26nm,1.6s						
BNI	Bardonecchia	23.80	134	P	P	13 14 23.5	+0.9
KRUC	Moravsky	23.81	115	eP	P	13 14 23.5	+1.0
NACGM	Naroch	23.82	93⇑	iP	P	13 14 32.8	+10
POLO	Lamas de Olo	24.00	162	eP	P	13 14 26.9	+2.4
POLO				i Amb		13 14 28.8	
	comp=Z,38nm,1.7s						
PVRL	Vila Real	24.11	162	eP	P	13 14 28.7	+3.3
PVRL				i Amb		13 14 40.2	
	comp=Z,26nm,1.5s						
OJC	Ojcow	24.26	109	P	P	13 14 28.4	+1.7
	comp=Z,4.4nm,0.9s						
MVO	Moncorvo	24.31	161	eP	P	13 14 29.8	+2.4
MVO				i Amb		13 14 33.2	
	comp=Z,20nm,2.2s						
JAVC	Velka Javorina	24.48	113	eP	P	13 14 29.5	+0.7
CIMO	Cimolais	24.62	124	P	P	13 14 29.1	-0.9
PVIS	Viseu	24.63	162	eP	P	13 14 33.3	+3.0
MODS	Modra-Piesok	24.71	115	eP	P	13 14 30.1	-0.8
STAL	STALIGIAL	24.76	124		P	13 14 30.5	-0.8
STAL				IAmb	IAmb	13 14 34.4	
	comp=Z,12nm,1.3s						
PRED	Cave del Predi	24.91	122		P	13 14 34.4	+1.7
PRED				IAmb	IAmb	13 14 37.3	
	comp=Z,9.1nm,1.2s						
MTE	Manteigas	24.99	162	eP	P	13 14 36.2	+2.7
MTE				i Amb		13 14 38.8	
	comp=Z,54nm,1.7s						
NIE	Niedzica	25.09	109	P	P	13 14 36.1	+1.8
	comp=Z,2.8nm,1.2s						
VYHS	Vyhne	25.23	112	eP	P	13 14 36.4	+0.9
PCBR	Castelo Branco	25.55	162	eP	P	13 14 43.0	+4.6
PCBR				i Amb		13 15 00.4	
	comp=Z,19nm,1.5s						
RNPP9	Sopachiv	25.90	100	P	P	13 14 42.1	+0.6
KWP	Kalwaria Pacla	25.91	106	P	P	13 14 43.3	+1.6
	comp=Z,18nm,1.4s						
PMRV	Marv??o	25.96	162	eP	P	13 14 45.7	+3.4
PMRV				i Amb		13 14 56.5	
	comp=Z,23nm,1.6s						
SCHQ	Schefferville	26.04	271	P	P	13 14 43.9	+1.1
	comp=Z,6.4nm,0.8s,baz=53,slow=5.4,SNR=5.0						
	comp=Z,6.4nm,0.8s						
ESDC	Sonseca Array	26.25	156	P	P	13 14 46.2	+1.2
ESDC	Sonseca Array	26.25	156	P	P	13 14 45.8	+0.8
	comp=Z,2.2nm,0.8s,baz=349,slow=9.1,SNR=20						
	comp=Z,2.2nm,0.8s						
BERU	Beregovo	26.98	108	P	P	13 14 53.0	+1.7
PBAR	Barrancos	27.25	162	eP	P	13 14 55.7	+1.9
PBAR				i Amb		13 15 07.8	
	comp=Z,16nm,1.6s						
MI30	MI30,Zelenitsa	27.37	99	P	P	13 14 57.3	+2.5
	comp=Z,9.3nm,0.9s						
AK20	Malin Array Si	27.72	98	P	P	13 14 59.2	+1.3
RAKU	Rahkiv	27.77	107	P	P	13 14 58.7	+0.3
LUBAR	Lubar, Ukraine	27.80	100	P	P	13 15 00.1	+1.4
AKASG	Malin Array Be	27.84	98	P	P	13 14 59.1	+0.1
	comp=Z,0.3nm,0.3s,baz=322,slow=9.8,SNR=7.7						
	comp=Z,0.3nm,0.3s						
AK02	Malin Array Si	27.87	98	P	P	13 14 59.8	+0.6
AK10	Malin Array Si	27.93	98	P	P	13 15 00.1	+0.3
KMPD	K-Podol'skiy	28.30	103	P	P	13 15 05.2	+2.1
VRI	Vrincioaia	30.55	106	P	P	13 15 24.7	+1.6
	comp=Z,5.0nm,1.1s						
RDO	Rodhopi	33.98	113		P	13 15 53.9	+0.7
BR105	Keskin Array S	38.48	105	P	P	13 16 33.4	+1.6
	comp=Z,81nmcomp=Z,5.8nm,0.6s						
BRTR	Keskin Array B	38.48	105	P	P	13 16 32.9	+1.0
	comp=Z,1.0nm,0.8s,baz=300,slow=6.5,SNR=6.4						
	comp=Z,1.0nm,0.8s						
KBZ	Khabaz	39.11	92	P	P	13 16 39.5	+2.6
	comp=Z,4.4nm,0.8s,baz=286,slow=8.0,SNR=8.7						
	comp=Z,4.4nm,0.8s						
YKA	Yellowknife Ar	39.21	313	P	P	13 16 37.7	+0.2
	comp=Z,1.2nm,0.9s,baz=39,slow=8.7,SNR=7.7						
YKA				PcP	PcP	13 18 45.9	-0.4
	comp=Z,0.6nm,0.9s,baz=39,slow=3.9,SNR=3.6						
	comp=Z,1.2nm,0.9s						
INK	Inuvik	39.84	329	P	P	13 16 43.4	+0.7
	baz=37						
AKTO	Aktyubinsk	40.28	73	P	P	13 16 47.4	+0.8
	comp=Z,2.6nm,0.6s,baz=285,slow=8.1,SNR=7.0						
	comp=Z,2.6nm,0.6s						
F31M	Tsiigehtchic	40.59	328	P	P	13 16 49.8	+0.9
F31M	Tsiigehtchic	40.59	328	P	P	13 16 49.5	+0.6
	baz=36,SNR=5.7						
D27M	Malcolm River	40.64	333	P	P	13 16 50.0	+0.6
	baz=34						
E29M	Blow River	40.72	331	P	P	13 16 51.2	+1.1
	baz=35						
E28M	Babbage River	40.88	332	P	P	13 16 52.8	+1.4
	baz=34						
F30M	Barrier River	40.91	329	IAmb	IAmb	13 16 57.3	
	comp=Z,17nm,1.5s						
F30M	Barrier River	40.91	329	P	P	13 16 52.9	+1.4
	baz=36						
G31M	Satah River	41.13	328	IAmb	IAmb	13 16 59.9	
	comp=Z,9.5nm,1.2s						
G31M	Satah River	41.13	328	P	P	13 16 54.7	+1.4
	baz=36						
G30M	tAoh Zraii Nji	41.52	329		P	13 16 57.0	+0.3
G30M	tAoh Zraii Nji	41.52	329	P	P	13 16 57.9	+1.2
	baz=35						
D25K	Kavik River	41.59	335	P	P	13 16 59.0	+1.8
D25K	Kavik River	41.59	335	P	P	13 16 58.8	+1.6
	baz=30,SNR=13						
C24K	Franklin Bluff	41.65	337	IAmb	IAmb	13 17 02.5	
	comp=Z,15nm,1.1s						
C24K	Franklin Bluff	41.65	337	P	P	13 16 59.2	+1.6
	baz=29						
E27K	Coleen River	41.65	332		P	13 16 58.9	+1.2
E27K				IAmb	IAmb	13 17 00.6	
	comp=Z,7.8nm,1.1s						
E27K	Coleen River	41.65	332	P	P	13 16 59.3	+1.6
	baz=32,SNR=5.7						
F28M	Old Crow	41.79	331	P	P	13 17 00.1	+1.3
	baz=33						
B22K	Teshekpuk Lake	41.85	339	P	P	13 17 01.1	+1.9
	baz=27						
C23K	Itkillik River	41.86	338	IAmb	IAmb	13 17 06.3	
	comp=Z,18nm,1.4s						
C23K	Itkillik River	41.86	338	P	P	13 17 01.4	+2.1
	baz=28						
G29M	Pine Creek	41.98	329	IAmb	IAmb	13 17 18.9	
	comp=Z,11nm,1.5s						
G29M	Pine Creek	41.98	329	P	P	13 17 01.8	+1.5
	baz=34						
AB31	Akbulak array	41.99	73		P	13 17 01.7	+1.1
AB31				IAmb	IAmb	13 17 04.7	
	comp=Z,10nm,1.5s						
ABKAR	Akbulak array	41.99	73		P	13 17 01.7	+1.1
ABKAR	Akbulak array	41.99	73	IAmb	IAmb	13 17 04.7	
	comp=Z,10nm,1.5s						
TIXI	Tiksi	42.03	15		P	13 17 01.9	+1.2
TIXI				IAmb	IAmb	13 17 03.9	
	comp=Z,10nm,1.1s						
H31M	Peel River	42.06	327		P	13 17 01.1	0.0
H31M				IAmb	IAmb	13 17 03.4	
	comp=Z,17nm,1.5s						
H31M	Peel River	42.06	327	P	P	13 17 02.3	+1.3
	baz=35						
EPYK	Eagle Plains	42.14	328	P	P	13 17 02.5	+0.8
	baz=34						
D24K	Happy Valley	42.16	336	IAmb	IAmb	13 17 06.1	
	comp=Z,11nm,0.9s						
D24K	Happy Valley	42.16	336	P	P	13 17 03.5	+1.7
	baz=29,SNR=6.1						
E25K	Arctic Village	42.48	334	P	P	13 17 06.0	+1.5
	baz=30,SNR=9.5						
F26K	Sheenjek River	42.58	333	P	P	13 17 07.1	+1.8
	baz=31						
D23K	Nanushuk River	42.65	337	IAmb	IAmb	13 17 09.5	
	comp=Z,7.4nm,1.1s						
D23K	Nanushuk River	42.65	337	P	P	13 17 07.6	+1.8
	baz=28						
B20K	Meade River	42.70	341	P	P	13 17 08.4	+2.2
	baz=24						
TOLK	Toolik Lake Re	42.75	336	IAmb	IAmb	13 17 10.1	
	comp=Z,11nm,1.1s						
TOLK	Toolik Lake Re	42.75	336	P	P	13 17 08.4	+1.7
	baz=28,SNR=7.2						
G27K	Doyon Strip	42.84	331	P	P	13 17 09.0	+1.6
	baz=32						
BMAR	Burnt Mountain	42.89	333	P	P	13 17 09.2	+1.3
F25K	Christian Rive	42.95	334	IAmb	IAmb	13 17 11.8	
	comp=Z,10.0nm,1.1s						
F25K	Christian Rive	42.95	334	P	P	13 17 10.3	+1.9
	baz=30,SNR=11						
I30M	Mount Dempster	43.02	327	P	P	13 17 10.5	+1.5
	baz=34						
D22K	Ayikyak River	43.05	338	P	P	13 17 11.2	+2.1
	baz=26						
E24K	Your Creek	43.06	335	P	P	13 17 11.4	+2.3
	baz=28,SNR=6.7						
C21K	Knifeblade Rid	43.13	339	P	P	13 17 12.2	+2.5
	baz=25						
G26K	Porcupine Rive	43.15	332	P	P	13 17 12.0	+2.2
	baz=31						
BVAR	Borovoye Array	43.20	62	P	P	13 17 11.6	+1.2
	comp=Z,5.5nm,0.9s,baz=320,slow=6.7,SNR=22						
	comp=Z,5.5nm,0.9s						
E23K	Chandalar	43.27	336	IAmb	IAmb	13 17 18.8	
	comp=Z,7.1nm,1.1s						
E23K	Chandalar	43.27	336	P	P	13 17 13.4	+2.5
	baz=28,SNR=7.6						
H27K	Steamboat Moun	43.31	331	P	P	13 17 13.0	+1.8
	baz=31						
F24K	Squaw Lake	43.44	335	P	P	13 17 14.3	+2.1
	baz=29						
J30M	Hart River	43.55	327	P	P	13 17 14.4	+1.1
	baz=33						
E22K	Anaktuvuk Pass	43.58	337	P	P	13 17 15.2	+1.9
	baz=27						
I28M	Miner Creek	43.64	329	P	P	13 17 15.4	+1.4
	baz=32						
E21K	Killik River	43.65	338	P	P	13 17 16.1	+2.1
	baz=26						
G25K	Bearman Lake	43.77	333	P	P	13 17 17.2	+2.4
	baz=29						
D20K	Etivluk River	43.81	340	P	P	13 17 17.1	+1.9
	baz=24						
I27K	Kandik River	43.87	330	P	P	13 17 17.5	+1.7
	baz=31						
C19K	Lookout Ridge	43.87	341	P	P	13 17 17.8	+2.1
	baz=22						
MMPY	Sheldon Lake,	43.92	322	P	P	13 17 17.9	+1.8
	baz=35						
G24K	Hadweenzic Riv	44.09	334	IAmb	IAmb	13 17 21.3	
	comp=Z,9.8nm,1.1s						
G24K	Hadweenzic Riv	44.09	334	P	P	13 17 19.8	+2.4
	baz=28,SNR=8.2						
COLD	Coldfoot	44.12	336	P	P	13 17 19.6	+2.0
	baz=27						
H25L	Birch Creek	44.15	333	P	P	13 17 20.9	+3.0
	baz=29						
E20K	Nigu River	44.17	339	P	P	13 17 20.6	+2.5
	baz=24						
F22K	John River	44.21	337	P	P	13 17 21.0	+2.6
	baz=26						
D19K	Kuna River	44.23	340	P	P	13 17 20.9	+2.3
	baz=23						
I26K	Coal Creek Min	44.45	331	P	P	13 17 22.1	+1.8
	baz=30						
K29M	Barlow Dome	44.45	327	P	P	13 17 21.6	+1.1
	baz=32						
C18K	Utukok River	44.52	342	P	P	13 17 22.5	+1.6
	baz=21						
G23K	Bananza Creek	44.55	335	P	P	13 17 22.7	+1.6
	baz=27						
G22K	Bettles	44.62	336	P	P	13 17 23.7	+2.1
	baz=26						
F21K	Alatna River	44.68	337	IAmb	IAmb	13 17 25.5	
	comp=Z,7.0nm,1.1s						
F21K	Alatna River	44.68	337	P	P	13 17 24.9	+2.7
	baz=25,SNR=9.2						
DAWY	Dawson	44.70	328	P	P	13 17 24.6	+2.2
	baz=31						
PRP	Porcupine Dome	44.75	332	P	P	13 17 24.8	+1.9
	baz=29						
FARO	Faro, Yukon	44.79	323	IAmb	IAmb	13 17 31.3	
	comp=Z,8.1nm,1.5s						
FARO	Faro, Yukon	44.79	323	P	P	13 17 25.3	+2.2
	baz=33						
H24K	Noodor Dome	44.93	334	P	P	13 17 26.0	+1.8
	baz=28						
C17K	DeLong Mountai	44.94	343	P	P	13 17 26.4	+2.2
	baz=20						
E19K	Redstone River	45.06	339	P	P	13 17 27.2	+2.0
	baz=23						
M31M	Drury Creek, Y	45.08	324	P	P	13 17 27.5	+2.1
	baz=33						
F20K	Avaraart Lake	45.20	338	IAmb	IAmb	13 17 34.5	
	comp=Z,8.4nm,1.1s						
F20K	Avaraart Lake	45.20	338	P	P	13 17 28.3	+2.0
	baz=24,SNR=10.0						
L29M	L29M	45.22	327	P	P	13 17 28.1	+1.6

	baz=32						
J26L	Joseph Creek	45.24	330	P	P	13 17 28.6	+1.9
	baz=29						
H23K	Yukon River	45.25	334	IAmb	IAmb	13 17 30.7	
	comp=Z,6.0nm,1.1s						
H23K	Yukon River	45.25	334	P	P	13 17 29.1	+2.4
	baz=27,SNR=5.4						
TOAD	Toad River Com	45.33	316	P	P	13 17 28.8	+1.4
	baz=35						
G21K	Allakaket	45.33	337	P	P	13 17 29.2	+1.8
	baz=25						
K27K	Chicken	45.33	329	P	P	13 17 29.0	+1.7
	baz=30						
J25K	Salcha River,	45.52	332	IAmb	IAmb	13 17 32.1	
	comp=Z,8.2nm,1.3s						
J25K	Salcha River,	45.52	332	P	P	13 17 31.3	+2.4
	baz=28						
H22K	Ishtalitna Cre	45.52	335	P	P	13 17 31.6	+2.7
	baz=26,SNR=6.2						
N32M	Quiet Lake	45.62	322	P	P	13 17 31.6	+1.9
	baz=33						
D17K	Noatak River	45.66	342	P	P	13 17 32.4	+2.5
	baz=20						
ILAR	Eielson Array	45.68	332	P	P	13 17 30.5	+0.4
ILAR	Eielson Array	45.68	332	P	P	13 17 31.9	+1.8
	comp=Z,3.1nm,1.1s,baz=28,slow=6.4,SNR=17						
ILAR				PcP	PcP	13 19 07.8	0.0
	comp=Z,1.1nm,0.9s,baz=19,slow=3.8,SNR=7.0						
	comp=Z,3.1nm,1.1s						
F19K	Shaleruckik Mo	45.72	339	IAmb	IAmb	13 17 38.8	
	comp=Z,5.8nm,1.4s						
F19K	Shaleruckik Mo	45.72	339	P	P	13 17 32.6	+2.2
	baz=23						
COLA	College	45.78	333	P	P	13 17 33.3	+2.4
	baz=27						
SCRK	Sand Creek	45.79	330	P	P	13 17 32.6	+1.5
	baz=29						
IMAR	Indian Mountai	45.86	337	P	P	13 17 33.0	+1.5
M29M	Somme Creek	45.88	326	P	P	13 17 33.7	+1.9
	baz=31						
CCB	Clear Creek Bu	45.98	333	IAmb	IAmb	13 17 35.2	
	comp=Z,5.7nm,1.3s						
H21K	Melozitna Rive	45.99	336	P	P	13 17 35.8	+3.2
	baz=25,SNR=15						
HDA	Harding Lake	46.02	332	P	P	13 17 34.6	+1.8
	baz=28						
BCAR	Beaver Creek A	46.11	329		P	13 17 35.0	+1.5
L27K	Beaver Creek,	46.12	329	IAmb	IAmb	13 17 42.6	
	comp=Z,8.7nm,1.4s						
L27K	Beaver Creek,	46.12	329	P	P	13 17 36.5	+2.9
	baz=30,SNR=7.5						
RIDG	Independent Ri	46.18	331	P	P	13 17 36.9	+2.8
	baz=28						
MLY	Manley	46.19	335	IAmb	IAmb	13 17 37.4	
	comp=Z,5.6nm,1.0s						
MLY	Manley	46.19	335	P	P	13 17 36.8	+2.6
	baz=26,SNR=6.7						
F18K	Selawik	46.22	340	P	P	13 17 36.7	+2.5
	baz=22						
G19K	Purcell Mounta	46.25	339	IAmb	IAmb	13 17 43.5	
	comp=Z,6.0nm,1.2s						
G19K	Purcell Mounta	46.25	339	P	P	13 17 37.0	+2.4
	baz=23						
NEA2	Nenana	46.27	333	P	P	13 17 36.6	+1.8
	baz=27						
I21K	Tanana	46.28	335	P	P	13 17 36.7	+1.9
	baz=25						
K24K	Donnelly Dome	46.32	331	P	P	13 17 37.0	+1.8
	baz=28						
P33M	Teslin, Yukon	46.35	321	P	P	13 17 37.2	+1.7
	baz=33						
L26K	Log Cabin Wild	46.49	329	P	P	13 17 38.3	+1.7
	baz=29						
H20K	Anotleneega Mo	46.50	337	P	P	13 17 39.6	+3.0
	baz=24,SNR=12						
WHY	Whitehorse	46.51	323	P	P	13 17 38.4	+1.6
	baz=32						
R33M	Jennings River	46.53	320	P	P	13 17 38.6	+1.5
	baz=33						
H19K	Roundabout Mou	46.72	338	IAmb	IAmb	13 17 42.7	
	comp=Z,4.4nm,1.1s						
H19K	Roundabout Mou	46.72	338	P	P	13 17 40.9	+2.7
	baz=23						
G18K	Tagagawik	46.73	339	IAmb	IAmb	13 17 41.8	
	comp=Z,7.4nm,1.2s						
G18K	Tagagawik	46.73	339	P	P	13 17 41.2	+2.9
	baz=22						
O30N	Mendenhall	46.73	324	P	P	13 17 40.1	+1.6
	baz=31						
M26K	Nabesna, AK	46.96	329	IAmb	IAmb	13 17 45.5	
	comp=Z,7.5nm,1.4s						
M26K	Nabesna, AK	46.96	329	P	P	13 17 42.5	+2.2
	baz=29						
PAX	Paxson	46.99	330	P	P	13 17 42.7	+2.2
	baz=28						
MCK	McKinley	47.02	333	P	P	13 17 42.5	+1.9
	baz=26						
HYT	Haines Junctio	47.04	325	P	P	13 17 42.7	+1.8
	baz=31						
BPAW	Bear Paw Mtn.	47.08	334	IAmb	IAmb	13 17 43.9	
	comp=Z,4.6nm,1.0s						
BPAW	Bear Paw Mtn.	47.08	334	P	P	13 17 42.9	+1.8
	baz=25						
RND	Reindeer	47.30	333	IAmb	IAmb	13 17 47.3	
	comp=Z,4.7nm,0.9s						
H18K	Honhosa River	47.38	339	P	P	13 17 45.5	+2.1
	baz=22						
G17K	Kiwalik Mounta	47.39	340	P	P	13 17 45.2	+1.6
	baz=21						
GCSA	Galena City Sc	47.52	338	P	P	13 17 46.4	+1.9
	baz=22						
CHUM	Lake Minchumin	47.52	335	P	P	13 17 46.4	+1.8
	baz=24						
J20K	Nowinta River	47.58	336	P	P	13 17 47.6	+2.6
	baz=24,SNR=7.9						
ZALV	Zalesovo Beam	47.63	51		P	13 17 46.4	+0.9
ZALV	Zalesovo Beam	47.63	51	P	P	13 17 46.0	+0.5
	comp=Z,2.2nm,0.9s,baz=347,slow=10,SNR=7.4						
	comp=Z,2.2nm,0.9s						
G16K	Koyuk River	47.74	341	P	P	13 17 48.6	+2.4
	baz=20						
H17K	Granite Mounta	47.81	339	P	P	13 17 49.1	+2.3
	baz=21						
WAT6	Susitna Watana	47.82	332	P	P	13 17 48.9	+1.8
	baz=26						
CAST	Castle Rocks	47.91	334	P	P	13 17 49.6	+2.0
	baz=24						
J19K	Poorman	48.01	337	P	P	13 17 50.6	+2.4
	baz=23						
KURK	Kurchatov	48.11	58		P	13 17 49.5	+0.2
KURBB	Kurchatov Arra	48.15	58	P	P	13 17 50.1	+0.5
	comp=Z,5.7nm,0.9s,baz=323,slow=7.5,SNR=31						
	comp=Z,5.7nm,0.9s						
K20K	Telida	48.32	335	P	P	13 17 52.8	+2.1
	baz=23						
G15K	Niukluk	48.35	342	P	P	13 17 53.1	+2.2
	baz=19						
PPLA	Purkeypile	48.40	334	P	P	13 17 53.6	+2.1
	baz=24						
SCM	Sheep Creek Mo	48.40	331	P	P	13 17 53.5	+2.0
	baz=26						
T47A	Sharon Grove	48.64	270	P	P	13 17 53.6	+0.2
J18K	Innoko River	48.68	337	P	P	13 17 55.3	+1.8
	baz=22						
I17K	Unalakleet	48.92	339	P	P	13 17 58.0	+2.7
	baz=20						
L20K	Farewell, AK	49.10	335	P	P	13 17 58.5	+1.8
	baz=23						
SKT	Skwentna	49.12	333	P	P	13 17 58.4	+1.5
	baz=24						
EYAK	Cordova Ski Ar	49.22	329	P	P	13 18 00.7	+3.1
	baz=27						
J16K	Anvik River	49.48	339	IAmb	IAmb	13 18 04.8	
	comp=Z,7.3nm,1.0s						
J16K	Anvik River	49.48	339	P	P	13 18 02.5	+2.9
	baz=20						
M20K	Styx River	49.51	334	P	P	13 18 01.4	+1.4
	baz=23						
RC01	Rabbit Creek A	49.58	332	P	P	13 18 02.9	+2.5
	baz=25						
L17K	Donlin	50.19	337	P	P	13 18 07.5	+2.5
	baz=21						
K15K	Wolf Creek Mou	50.56	339	P	P	13 18 10.7	+2.9
	baz=19						
M17K	Holitna River	50.73	336	P	P	13 18 11.7	+2.6
	baz=21						
L15K	Ungalak Mounta	51.13	339	P	P	13 18 15.0	+2.9
	baz=19						
KKAR	Karatay Array	51.27	70		P	13 18 14.7	+1.2
K13K	Kusilvak Mount	51.36	341	P	P	13 18 16.5	+2.7
	baz=18						
YNE	Yellowstone No	51.47	295	IAmb	IAmb	13 18 19.1	
	comp=Z,4.8nm,1.1s						
N17K	Nushagak Hills	51.51	336	P	P	13 18 16.8	+1.8
	baz=21						
BOZ	Bozeman (W)	51.61	297	IAmb	IAmb	13 18 20.1	
	comp=Z,8.4nm,1.2s						
L14K	Kuka Creek	51.64	339	P	P	13 18 17.8	+1.9
	baz=18						
M15K	Kasigluk River	51.94	338	P	P	13 18 20.8	+2.6
	baz=19						
M14K	Bethel	52.09	339	P	P	13 18 21.9	+2.7
	baz=19,SNR=5.4						
MKAR	Makanchi Array	52.72	58		P	13 18 24.4	+0.2
MKAR	Makanchi Array	52.72	58	P	P	13 18 24.8	+0.6
	comp=Z,2.1nm,0.9s,baz=328,slow=5.7,SNR=14						
	comp=Z,2.1nm,0.9s						
BW06	Boulder Array	53.18	293	IAmb	IAmb	13 18 35.3	
	comp=Z,4.8nm,1.1s						
PD31	Pinedale Array	53.18	293	IAmb	IAmb	13 18 35.3	
	comp=Z,5.3nm,1.1s						
PDAR	Pinedale Array	53.18	293	P	P	13 18 27.0	-0.9
PDAR	Pinedale Array	53.18	293	P	P	13 18 28.8	+0.9
	comp=Z,2.5nm,0.8s,baz=54,slow=7.5,SNR=20						
	comp=Z,2.5nm,0.8s						
AAK	Ala-Archa	53.26	67		P	13 18 30.3	+2.0
AAK				IAmb	IAmb	13 18 32.8	
	comp=Z,10nm,1.4s						
ARSB	Arslanbob	53.76	69	IAmb	IAmb	13 18 36.0	
	comp=Z,11nm,1.5s						
TARG	Taragay, Kyrgy	55.33	65	IAmb	IAmb	13 18 48.5	
	comp=Z,4.0nm,0.8s						
KSH	Kashi	56.50	68	P	P	13 18 57.1	+5.3
KSH				pmax	pmax		
	comp=Z,11nm,0.9s						
PV01	Paradox Valley	56.72	289	IAmb	IAmb	13 19 00.3	
	comp=Z,5.6nm,1.1s						
PV03	Paradox Valley	56.73	290	IAmb	IAmb	13 18 55.6	
	comp=Z,5.8nm,1.1s						
PV17	East Wray Mesa	56.75	290	IAmb	IAmb	13 19 00.4	
	comp=Z,7.0nm,1.1s						
ABTX	Abilene, Hawle	57.73	279	P	P	13 19 00.3	-0.2
MVU	Marysvale	57.86	293	IAmb	IAmb	13 19 04.6	
	comp=Z,3.0nm,0.8s						
SPR3	Spring Creek 3	58.27	295		P	13 19 04.2	-0.4
SPR3				IAmb	IAmb	13 19 14.1	
	comp=Z,5.5nm,1.4s						
SONM	Songino Array	59.64	40	P	P	13 19 14.6	+0.9
	comp=Z,0.6nm,0.5s,baz=344,slow=8.3,SNR=5.7						
	comp=Z,0.6nm,0.5s						
U15A	North Rim	59.69	291	P	P	13 19 15.1	+0.7
U15A				IAmb	IAmb	13 19 17.3	
	comp=Z,4.0nm,1.1s						
NVAR	Mina Array Bea	60.30	297	P	P	13 19 20.4	+1.9
	comp=Z,0.6nm,0.8s,baz=56,slow=5.4,SNR=5.1						
	comp=Z,0.6nm,0.8s						
NIL	Nilore	60.45	73		P	13 19 19.7	+0.4
GWY	Greenwater Val	61.63	295		P	13 19 26.6	-0.8
GWY				IAmb	IAmb	13 19 30.2	
	comp=Z,3.5nm,1.0s						
TXAR	Lajitas Array	62.28	280	P	P	13 19 32.8	+0.9
	comp=Z,1.3nm,1.0s,baz=50,slow=3.9,SNR=10						
	comp=Z,1.3nm,1.0s						
GTA	Gaotai	65.30	49	*e*P	P	13 19 51.8	+0.1
GTA				pP	sP	13 19 57.8	+1.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
HHC	Hu-ho-hao-te	67.51	40	*e*P	P	13 20 04.8	-1.0
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
CMAR	Chiang Mai Arr	84.13	59	P	P	13 21 41.6	+0.8
	comp=Z,1.3nm,0.9s,baz=320,slow=6.7,SNR=9.2						
	comp=Z,1.3nm,0.9s						
ASAR	Alice Springs	134.96	38	PKP	PKiKP	13 28 29.2	-0.9
	comp=Z,0.9nm,1.1s,baz=48,slow=1.4,SNR=2.4						

CATAC 24 13:19:40.6±0.6**,11°N**±3°×**8°7W**±°**,h11**^{km}±3^{km}**,M3.3**/21**,** **MLv3.3**/21**,8C-3D,Error ellipse: s-maj=8.4km s-min=5.3km az=38.6,confirmed,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	Copaltepe	1.09	17	⇑P	Pb	13 20 01.2	-0.4
SABN	Sabanita	1.11	42	P	Pn	13 20 02.2	0.0
NANN	Nandasmo	1.12	44	P	Pn	13 20 03.5	+1.1
SAPS	Ciudad Sandino	1.15	26	⇑P	Pb	13 20 02.3	-0.2
SAPS	Ciudad Sandino	1.15	26	S	Sn	13 20 19.3	+0.8
UNAN	Cigeo UNAN	1.17	33	P	Pb	13 20 02.7	-0.2
TISN	Laguna Tiscapa	1.19	33	⇓P	Pb	13 20 01.2	-2.1
APQ2	Apoyeque	1.21	29	P	Pn	13 20 02.9	-0.7
WILN	Americas 2	1.25	35	P	Pn	13 20 04.0	-0.1
WILN				S	Sg	13 20 20.9	-0.1
APQ3	Volcan Apoyequ	1.26	26	⇑P	Pn	13 20 03.7	-0.6
JAPN	Al SSO del Vol	1.28	72	P	Pg	13 20 05.2	-0.1
MORN	Al O del Volca	1.32	72	P	Pn	13 20 04.3	-0.8
MOMN	Momotombo	1.32	17	⇑P	Pn	13 20 04.6	-0.6
MOMN				S	Sb	13 20 21.2	-1.3
MOM2	El Cardon	1.37	18	⇑P	Pn	13 20 04.9	-0.8
MOM2				S	Sb	13 20 21.5	-2.3
CNGA	Al SSO del Vol	1.37	9	⇓P	Pn	13 20 05.2	-0.7
CNGN	Cerro Negro	1.38	9	⇑P	Pn	13 20 05.1	-0.8
CARN	Rivas	1.38	88	⇓P	Pb	13 20 06.5	+0.1
PLRN	Geotermica Pol	1.45	6	P	Pn	13 20 05.8	-1.1
ILCN	San Idelfonso	1.45	9	P	Pn	13 20 06.1	-0.8
POLN	Al Sur del Vol	1.51	4	P	Pn	13 20 06.2	-1.6
PKGN	Cerro Pekin	1.53	358	P	Pn	13 20 07.2	-0.7
BOAB	BOACO BROADBAN	1.80	43	⇑P	Pn	13 20 11.0	-0.6
ACON	Acoyapa	1.91	64	P	Pn	13 20 12.5	-0.7
ACON	Acoyapa	1.91	64	S	Sb	13 20 38.6	-0.8
MATN	Matagalpa	2.04	29	P	Pn	13 20 13.3	-1.8
MATN	Matagalpa	2.04	29	S	Sn	13 20 41.0	+0.4
CNCH	Conchagua	2.31	337	P	Pn	13 20 17.3	-1.5
CNCH	Conchagua	2.31	337	S	Sb	13 20 52.1	+1.0
RCPN	Sur Rio San Ju	2.51	19	⇑P	Pn	13 20 20.9	-0.7

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*IDC **24** 13:24:20.3±0.6, 24°.94N×101°.52E, h0^{km}, mb4.3/27, mbtmp4.3/27, MS4.2/6, Error ellipse: s-maj=19.4km s-min=12.1km az=46.0*

*MOS **24** 13:24:20.5±1.1, 25°.00N×101°.53E, h11^{km}, mb4.9/33, Error ellipse: s-maj=9.8km s-min=6.3km az=104.1*

*BJI **24** 13:24:22.4, 24°.93N×101°.64E, h10^{km}, mB5.0/17, mb4.6/61, ML4.9/13, Ms4.8/60, Ms7 4.5/54*

*NEIC **24** 13:24:22.5±2.1, 25°.01N±0°.07×101°.59E±0°.08, h10^{km}±1^{km}, mb4.8/98, Error ellipse: s-maj=12.0km s-min=11.2km az=256.0*

ISC 24 13:24:22.4±0.3**,25°.01N**±0°.03×**101°.62E**±0°.03**,h10**^{km}**,n428,** σ1^{s}**16**/419**,mb4.7**/111**,MS4.4**/13**,22C-3D,Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMI	Kunming	1.03	84	⇑Pg	Pg	13 24 41.9	-0.2
KMI				Sg	Sg	13 24 56.3	+0.8
KMI				smax	smax		
	comp=N,39µm,0.9s						
KMI				smax	smax		
	comp=E,19µm,0.5s						
PZH	PanZhiHua	1.49	4	Pg	Pn	13 24 49.6	+0.3
PZH				Sg	Sg	13 25 10.3	-0.1
PZH				smax	smax		
	comp=N,11µm,0.6s						
PZH				smax	smax		
	comp=E,23µm,0.9s						
TNCH	TengChong	2.81	271	⇑Pn	Pn	13 25 08.9	+1.4
TNCH				Pg	Pg	13 25 16.3	+0.1
TNCH				Sn	Sb	13 25 44.6	-2.7
TNCH				Sg	Sg	13 25 55.5	+2.9
TNCH				smax	smax		
	comp=N,28µm,1.0s						
TNCH				smax	smax		
	comp=E,13µm,1.2s						
SLVN	Son La	4.22	150	Pn	Pn	13 25 25.9	-1.0
GYA	Guiyang	4.78	71	⇑Pn	Pn	13 25 35.8	+1.3
GYA				Sn	Sn	13 26 30.3	+0.3
GYA				smax	smax		
	comp=N,810nm,0.9s						
GYA				smax	smax		
	comp=E,570nm,0.9s						
CD2	Chengdu	6.17	17	Pn	Pn	13 25 55.9	+2.2
CD2				Sn	Sn	13 27 05.0	+0.6
CD2				Sg	Sg	13 27 37.5	-3.1
CD2				smax	smax		
	comp=N,860nm,0.9s						
CD2				smax	smax		
	comp=E,2µm,0.9s						
CD2				LR	LR		
	comp=E,5µm,7.3s						
CD2				LR	LR		
	comp=Z,7µm,8.8s						
CHTO	Chiang Mai	6.65	202	Pn	Pn	13 26 01.5	+1.3
CHTO	Chiang Mai	6.65	202	P	Pn	13 26 01.5	+1.3
CM09	Chiang Mai Arr	6.97	201	P	Pn	13 26 06.2	+1.5
CM31	Chiang Mai Arr	6.98	201		Pn	13 26 05.8	+1.1
CMAR	Chiang Mai Arr	6.98	201		Pn	13 26 06.3	+1.6
CMAR	Chiang Mai Arr	6.98	201	Pn	Pn	13 26 06.1	+1.4
	1.5nm,0.3s,baz=13,slow=12,SNR=22						
CMAR				Lg	Lg	13 28 00.2	
	2.3nm,0.3s,baz=7.9,slow=14,SNR=2.4						
CMAR	Chiang Mai Arr	6.98	201	*i*P	Pn	13 26 06.3	+1.6
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CM15	Chiang Mai Arr	6.99	201	P	Pn	13 26 06.5	+1.6
CM02	Chiang Mai Arr	7.00	201	P	Pn	13 26 06.5	+1.5
CM01	Chiang Mai Arr	7.01	201	P	Pn	13 26 06.9	+1.8
CM04	Chiang Mai Arr	7.02	201	P	Pn	13 26 07.1	+1.8
CM13	Chiang Mai Arr	7.02	202	P	Pn	13 26 06.8	+1.5
CM05	Chiang Mai Arr	7.03	201	P	Pn	13 26 07.1	+1.7
GULI	GuiLin	7.93	86	P	Pn	13 26 18.9	+1.1
GULI				S	Sn	13 27 50.8	+3.1
GULI				smax	smax		
	comp=Z,200nm,1.3s						
GULI				smax	smax		
	comp=Z,200nm,1.2s						
ENH	Enshi	8.73	51		Pn	13 26 29.6	+0.9
QIZ	Qiongzhong	9.68	126	P	Pn	13 26 40.4	-1.3
QIZ				S	Sn	13 28 28.3	-2.3
QIZ				LR	LR		
	comp=Z,3µm,10.5s						
QIZ				LR	LR		
	comp=Z,2µm,7.9s						
LSA	Lhasa	10.41	299		Pn	13 26 51.8	-0.3
LSA	Lhasa	10.41	299	P	Pn	13 26 53.8	+1.7
LSA				pmax	pmax		
	comp=Z,14nm,0.5s						
LSA				LR	LR		
	comp=Z,1µm,15.1s						
LSA				LR	LR		
	comp=Z,800nm,16.2s						
LSA	Lhasa	10.41	299	P	Pn	13 26 51.8	-0.3
CNSH	ChangSha	10.61	70	P	Pn	13 26 55.1	+0.6
CNSH				S	Sn	13 28 50.0	-3.3
CNSH				LR	LR		
	comp=Z,2µm,10.1s						
GZH	Guangzhou	10.89	98	P	Pn	13 26 58.4	+0.1
XAN	Xi'an	11.01	34	⇑P	Pn	13 26 59.3	-0.8
XAN				S	Sn	13 29 03.3	-0.1
XAN				pmax	pmax		
	comp=Z,50nm,0.8s						
XAN				pmax	pmax		
	comp=Z,260nm,8.1s						
XAN				LR	LR		
	comp=Z,5µm,10.0s						
XAN				LR	LR		
	comp=Z,3µm,6.9s						
LZH	Lanzhou	11.21	9	*e*P	Pn	13 27 02.8	0.0
LZH				pmax	pmax		
	comp=Z,22nm,1.0s						
LZH				LR	LR		
	comp=Z,1µm,12.4s						
LZH				LR	LR		
	comp=Z,2µm,10.2s						
LZH				LR	LR		
	comp=Z,2µm,12.7s						
WHN	Wuhan	12.55	61	P	Pn	13 27 21.4	+0.4
WHN				sP		13 27 28.4	
WHN				LR	LR		
	comp=Z,8µm,10.3s						
WHN				LR	LR		
	comp=Z,6µm,17.2s						
GOMU	GeErMu	12.59	334	P	Pn	13 27 22.9	+1.0
GOMU				pP		13 27 28.8	
GOMU				sP		13 27 32.4	
GOMU				pmax	pmax		
	comp=Z,17nm,0.9s						
LYN	LuoYang	13.38	42	⇑P	Pn	13 27 32.4	+0.1
LYN				pP	P	13 27 35.6	-6.3
LYN				S	Sn	13 29 57.4	-3.7
LYN				pmax	pmax		
	comp=Z,67nm,0.6s						
LYN				LR	LR		
	comp=Z,7µm,9.4s						
LYN				LR	LR		
	comp=Z,5µm,11.0s						
EVN	Everest	13.57	286		Pn	13 27 35.8	+0.2
GTA	Gaotai	14.44	354	*e*P	P	13 27 50.9	-2.9
GTA				pP	Pn	13 27 56.1	+9.2
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GTA				LR	LR		
	comp=Z,820nm,10.8s						
GTA				LR	LR		
	comp=Z,2µm,10.8s						
GTA				LR	LR		
	comp=Z,920nm,11.6s						
TIY	Taiyuan	15.66	33	*e*P	Pn	13 28 04.8	+1.6
TIY				PP	sP	13 28 20.8	+8.6
TIY				pmax	pmax		
	comp=Z,33nm,0.9s						
TIY				LR	LR		
	comp=Z,2µm,12.0s						
TIY				LR	LR		
	comp=Z,2µm,10.2s						
TIY				LR	LR		
	comp=Z,1µm,13.2s						
SRIT	Nakonsritamara	16.44	187	Pn	Pn	13 28 13.2	-0.1
HNS	HongShan	16.65	39	⇓P	P	13 28 18.1	-0.1
HNS				PP	PnPn	13 28 36.5	+11
HNS				pmax	pmax		
	comp=Z,23nm,1.1s						
HNS				LR	LR		
	comp=Z,2µm,14.2s						
HNS				LR	LR		
	comp=Z,3µm,16.1s						
HNS				LR	LR		
	comp=Z,2µm,11.4s						
NJ2	Nanjing	16.68	61	*e*P	Pn	13 28 16.0	-0.3
NJ2				pmax	pmax		
	comp=Z,12nm,0.7s						
NJ2				LR	LR		
	comp=Z,2µm,7.4s						
NJ2				LR	LR		
	comp=Z,1µm,7.8s						
BTO	Baotou	17.07	22	*e*P	Pn	13 28 20.3	-0.9
BTO				pP	P	13 28 23.4	+0.5
BTO				sP	pP	13 28 26.8	+0.5
BTO				pmax	pmax		
	comp=Z,40nm,0.8s						
BTO				pmax	pmax		
	comp=Z,580nm,4.2s						
BTO				LR	LR		
	comp=Z,2µm,7.2s						
BTO				LR	LR		
	comp=Z,3µm,8.9s						
TIA	Tai'an	17.38	46	P	Pn	13 28 24.4	-0.6
TIA				S	Sn	13 31 27.8	-11
TIA				LR	LR		
	comp=Z,3µm,15.5s						
TIA				LR	LR		
	comp=Z,2µm,13.4s						
TIA				LR	LR		
	comp=Z,2µm,11.3s						
HHC	Hu-ho-hao-te	17.84	25	*e*P	Pn	13 28 30.8	-0.1
HHC				S	Sn	13 31 44.3	-5.6
HHC				pmax	pmax		
	comp=Z,19nm,1.2s						
HHC				pmax	pmax		
	comp=Z,140nm,5.9s						
HHC				LR	LR		
	comp=Z,2µm,12.3s						
HHC				LR	LR		
	comp=Z,1µm,9.3s						
HHC				LR	LR		
	comp=Z,2µm,12.4s						
BJI	Beijing	19.33	36	P	Pn	13 28 49.9	+1.1
BJI				pP	sP	13 28 53.5	+0.8

BJI				sP	pP	13 28 56.9	+5.8
BJI				pmax	pmax		
	comp=Z,21nm,1.3s						
BJI				pmax	pmax		
	comp=Z,170nm,4.4s						
BJI				LR	LR		
	comp=Z,780nm,17.7s						
BJI				LR	LR		
	comp=Z,1µm,15.4s						
BJI				LR	LR		
	comp=Z,650nm,11.6s						
KULM	Kulim	19.63	183		P	13 28 51.5	+0.3
KULM				IAmb	IAmb	13 28 53.9	
	comp=Z,50nm,1.0s						
IPM	Ipoh	20.42	182	P	P	13 29 00.1	+0.2
IPM				IAmb	IAmb	13 29 01.1	
	comp=Z,55nm,0.9s						
MLSI	Meulaboh, Aceh	21.23	194	P	P	13 29 09.3	+0.8
	comp=Z,187nm,1.2s						
TSI	Tuntungan	21.59	188	P	P	13 29 13.5	+1.1
	comp=Z,7µmcomp=Z,152nm,1.2s						
DL2	Dalian	21.85	46	P	P	13 29 18.8	+3.7
DL2				pmax	pmax		
	comp=Z,50nm,1.1s						
DL2				pmax	pmax		
	comp=Z,470nm,9.0s						
DL2				LR	LR		
	comp=Z,2µm,11.9s						
DL2				LR	LR		
	comp=Z,930nm,12.6s						
DL2				LR	LR		
	comp=Z,720nm,11.8s						
WMQ	Urumqi	21.94	332	eP	P	13 29 18.0	+1.9
WMQ				pmax	pmax		
	comp=Z,39nm,1.3s						
WMQ				LR	LR		
	comp=Z,1µm,21.7s						
WMQ				LR	LR		
	comp=Z,2µm,15.9s						
WMQ				LR	LR		
	comp=Z,550nm,17.5s						
PSI	Prapat	22.23	187	LR	LR	13 39 41.0	
	comp=Z,367nm,20.1s,baz=330,slow=41						
PSI	Prapat	22.23	187	P	P	13 29 19.1	-0.4
PSI				pmax	pmax		
	comp=Z,92nm,1.6s						
XLT	XiLinHaoTe	22.24	28	eP	P	13 29 19.3	0.0
XLT				pP	pP	13 29 23.3	+0.6
XLT				sP	sP	13 29 27.8	+3.5
XLT				PP	PnPn	13 29 48.0	+6.2
XLT				S	S	13 33 25.8	+1.6
XLT				pmax	pmax		
	comp=Z,21nm,1.0s						
XLT				LR	LR		
	comp=Z,1µm,10.2s						
XLT				LR	LR		
	comp=Z,1µm,18.7s						
RPSI	Rantau Prapat	22.34	187		P	13 29 19.1	-1.4
SONM	Songino Array	23.09	8		P	13 29 28.5	+0.2
SONM				IAmb	IAmb	13 29 32.9	
	comp=Z,20nm,0.6s						
SONM	Songino Array	23.09	8	P	P	13 29 28.6	+0.2
	comp=Z,20nm,0.6s,baz=190,slow=10,SNR=32						
SONM				LR	LR	13 39 35.4	
	comp=Z,714nm,18.8s,baz=328,slow=40						
	comp=Z,20nm,0.6s						
MYKOM	Kota Tinggi	23.19	174	P	P	13 29 29.6	+0.2
MYKOM				IAmb	IAmb	13 29 30.6	
	comp=Z,26nm,1.0s						
ULN	Ulaanbaatar	23.21	9		P	13 29 30.0	+0.4
ULN				IAmb	IAmb	13 29 35.8	
	comp=Z,28nm,0.7s						
ULN	Ulaanbaatar	23.21	9	ceP	P	13 29 30.4	+0.8
ULN				pmax	pmax		
	comp=Z,51nm,1.3s						
KKM	Kota Kinabalu	23.48	141		P	13 29 33.0	+0.5
KKM				IAmb	IAmb	13 29 41.0	
	comp=Z,51nm,1.5s						
GSI	Gunungsitoli	23.89	190	P	P	13 29 35.2	-1.1
TJN	Taejon	24.80	57	P	P	13 29 45.0	+0.5
TJN	Taejon	24.80	57	P	P	13 29 45.0	+0.5
TJN				pmax	pmax		
	comp=Z,129nm,1.1s						
KSM	Kuching	24.86	159		P	13 29 44.5	-0.7
KSM				IAmb	IAmb	13 29 47.9	
	comp=Z,24nm,1.0s						
MYLDM	Lahad Datu	25.52	138	P	P	13 29 51.4	+0.1
KS19	Wonju Array Si	25.57	55	P	P	13 29 52.1	+0.6
KSRS	Korea Array	25.59	55	P	P	13 29 51.5	-0.3
	comp=Z,1.3nm,0.6s,baz=244,slow=9.6,SNR=12						
	comp=Z,1.3nm,0.6s						
TARG	Taragay, Kyrgy	25.82	316		P	13 29 54.6	+0.4
TARG				IAmb	IAmb	13 30 14.7	
	comp=Z,16nm,0.8s						
TARG	Taragay, Kyrgy	25.82	316	P	P	13 29 54.7	+0.4
TARG				pmax	pmax		
	comp=Z,16nm,0.8s						
KSH	Kashi	25.95	310	P	P	13 29 58.4	+3.3
KSH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KSH				LR	LR		
	comp=Z,1µm,18.2s						
KSH				LR	LR		
	comp=Z,1µm,14.8s						
KSH				LR	LR		
	comp=Z,1µm,15.8s						
NIL	Nilore	26.12	296	P	P	13 29 55.0	-1.6
NIL	Nilore	26.12	296	P	P	13 29 55.0	-1.6
NIL				pmax	pmax		
	comp=Z,55nm,1.2s						
SISI	Saibi	26.30	186	P	P	13 29 59.0	+0.8
	comp=Z,58nm,1.3s						
KDJ	Kajisay	26.43	316	P	P	13 29 59.6	0.0
KDJ				IAmb	IAmb	13 30 28.1	
	comp=Z,20nm,0.9s						
KDJ	Kajisay	26.43	316	P	P	13 29 59.6	0.0
KDJ				pmax	pmax		
	comp=Z,19nm,0.9s						
MOY	Mondy	26.62	359	eP	P	13 30 05.6	+4.6
MOY				pmax	pmax		
	comp=Z,27nm,1.9s						
MK31	Makanchi Array	26.65	330	ceP	P	13 30 01.8	+0.5
MKAR	Makanchi Array	26.65	330		P	13 30 01.0	-0.3
MKAR	Makanchi Array	26.65	330	P	P	13 30 01.7	+0.4
	comp=Z,10.0nm,0.8s,baz=136,slow=10,SNR=30						
MKAR				ScP	ScP	13 37 07.1	+1.9
	comp=Z,1.1nm,0.8s,baz=95,slow=6.1,SNR=5.8						
	comp=Z,10.0nm,0.8s						
JNU	Nakatsue	26.76	66	P	P	13 30 03.1	+0.6
JNU				IAmb	IAmb	13 30 45.2	
	comp=Z,22nm,1.1s						
MAKZ	Makanchi	26.80	329	P	P	13 30 03.1	+0.4
MAKZ	Makanchi	26.80	329	P	P	13 30 03.1	+0.4
MAKZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NRN	Naryn	26.83	314	IAmb	IAmb	13 30 10.7	
	comp=Z,13nm,0.8s						
AAK	Ala-Archa	28.40	315	iP	P	13 30 17.5	+0.3
AAK				pmax	pmax		
	comp=Z,7.0nm,2.2s						
DAV	Davao City (W)	29.04	124	LR	LR	13 43 32.7	
	comp=Z,291nm,18.8s,baz=338,slow=40						
BNX	BinXian	29.28	39	⇓P	P	13 30 25.9	+1.2
BNX				S	S	13 35 19.4	+1.7
BNX				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BNX				pmax	pmax		
	comp=Z,380nm,17.8s						
BNX				LR	LR		
	comp=Z,540nm,18.4s						
BNX				LR	LR		
	comp=Z,580nm,19.4s						
BNX				LR	LR		
	comp=Z,700nm,20.6s						
KURBB	Kurchatov Arra	31.15	331	P	P	13 30 41.4	+0.2
	comp=Z,4.8nm,0.7s,baz=143,slow=8.9,SNR=22						
KURBB				PcP	PcP	13 33 36.9	+0.7
	comp=Z,1.2nm,0.8s,baz=148,slow=2.8,SNR=4.1						
KURBB				ScP	ScP	13 37 22.0	+2.8
	comp=Z,0.4nm,0.5s,baz=137,slow=3.0,SNR=6.2						
	comp=Z,4.8nm,0.7s						
KURK	Kurchatov	31.18	331		P	13 30 40.7	-0.8
KURK				IAmb	IAmb	13 30 46.5	
	comp=Z,9.8nm,0.8s						
KURK	Kurchatov	31.18	331	ceP	P	13 30 41.2	-0.3
KURK				pmax	pmax		
	comp=Z,20nm,1.3s						
USA0B	Ussuriysk Arra	31.23	45	iP	P	13 30 42.4	+0.4
USRK	Ussuriysk Ar.	31.23	45	P	P	13 30 41.8	-0.2
	comp=Z,4.0nm,0.6s,baz=258,slow=8.9,SNR=11						
	comp=Z,4.0nm,0.6s						
ZALV	Zalesovo Beam	31.51	341	P	P	13 30 42.9	-1.4
ZALV	Zalesovo Beam	31.51	341	P	P	13 30 43.8	-0.6
	comp=Z,6.8nm,0.8s,baz=148,slow=8.7,SNR=12						
	comp=Z,6.8nm,0.8s						
ZALV	Zalesovo Beam	31.51	341	P	P	13 30 42.9	-1.4
HEH	HeiHe	32.14	32	eP	P	13 30 49.8	-0.1
HEH				pmax	pmax		
	comp=Z,12nm,0.7s						
HEH				LR	LR		
	comp=Z,1µm,15.7s						
HEH				LR	LR		
	comp=Z,740nm,14.9s						
HEH				LR	LR		
	comp=Z,1µm,14.1s						
MJAR	Matsushiro Arr	33.29	61	P	P	13 31 00.5	+0.3
	comp=Z,2.2nm,0.9s,baz=263,slow=8.2,SNR=7.0						
	comp=Z,2.2nm,0.9s						
KLR	Kul'dur	33.70	36	ceP	P	13 31 02.7	-0.9
KLR				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ZEA	Zeya	34.49	27	eP	P	13 31 11.0	+0.6
ZEA				e		13 31 13.9	
ZEA				pmax	pmax		
	comp=N,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KAPI	Kappang	34.67	147	LR	LR	13 45 40.4	
	comp=Z,253nm,18.9s,baz=289,slow=37						
BVAR	Borovoye Array	36.51	328	P	P	13 31 27.9	+0.1
	comp=Z,2.3nm,0.5s,baz=127,slow=9.3,SNR=12						
BVAR				PcP	PcP	13 33 51.9	+0.5
	comp=Z,3.8nm,0.6s,baz=145,slow=4.0,SNR=8.5						
	comp=Z,2.3nm,0.5s						
BRVK	Borovoye	36.58	328		P	13 31 28.1	-0.2
BRVK	Borovoye	36.58	328	ceP	P	13 31 28.5	+0.1
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
YSS	Yuzhno-Sakhali	39.25	45	ceP	P	13 31 52.4	+1.4
YSS				pmax	pmax		
	comp=Z,17nm,1.0s						
AB31	Akbulak array	40.39	318		P	13 31 59.9	-0.5
ABKAR	Akbulak array	40.39	318	P	P	13 31 59.9	-0.5
TYV	Tymovskoe	40.63	40	eP	P	13 32 05.8	+3.4
TYV				pmax	pmax		
	comp=Z,200nm,3.6s						
TYV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
YAK	Yakutsk	41.56	20	eP	P	13 32 12.4	+2.5
YAK				e		13 33 47.3	
YAK				e		13 34 09.5	
YAK				eS	S	13 38 26.2	+0.6
YAK				e		13 42 12.1	
YAK				pmax	pmax		
	comp=Z,13nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,155nm,5.1s						
YAK				pmax	pmax		
	comp=N,34nm,3.3s						
YAK				pmax	pmax		
	comp=E,57nm,4.4s						
YAK				smax	smax		
	comp=E,32nm,2.7s						
YAK				smax	smax		
	comp=N,29nm,3.1s						
ARTI	Arti	44.19	327	c iP	P	13 32 31.1	-0.2
ARTI						13 34 11.7	
ARTI				S	S	13 39 06.6	+2.3
ARTI				SS	SS	13 42 19.3	-2.7
ARTI				pmax	pmax		
	comp=Z,6.0nm,1.4s						
JAY	Jayapura	46.75	120	LR	LR	13 54 54.4	
	comp=Z,182nm,18.1s,baz=88,slow=39						
AKT	Akhty	47.21	304	eP	P	13 32 55.0	-0.6
AKT				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MA2	Magadan	48.40	31	P	P	13 33 04.4	0.0
MA2	Magadan	48.40	31	ceP	P	13 33 05.9	+1.5
MA2				pmax	pmax		
	comp=Z,17nm,0.8s						
BELG	Belogornoye	48.77	319	iP	P	13 33 07.5	+0.3
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FITZ	Fitzroy Crossi	48.82	149	P	P	13 33 07.0	-1.1
FITZ	Fitzroy Crossi	48.82	149	P	P	13 33 07.3	-0.8
	comp=Z,7.8nm,1.1s,baz=338,slow=11,SNR=3.8						
	comp=Z,7.8nm,1.1s						
TIXI	Tiksi	49.13	11		P	13 33 09.6	-0.2
TIXI				IAmb	IAmb	13 33 13.4	
	comp=Z,11nm,0.8s						
TIXI	Tiksi	49.13	11	ceP	P	13 33 10.6	+0.8
TIXI				pmax	pmax		
	comp=Z,11nm,0.7s						
MBWA	Marble Bar	49.16	157	P	P	13 33 08.4	-2.2
GNI	Garni	49.45	302	LR	LR	13 56 49.7	
	comp=Z,476nm,19.3s,baz=274,slow=39						
KIRV	Kirov	49.50	327	ceP	P	13 33 12.6	-0.2
PETK	Petropavlovsk-	50.16	41	P	P	13 33 17.7	-0.2
	comp=Z,2.0nm,1.0s,baz=207,slow=3.0,SNR=3.7						
	comp=Z,2.0nm,1.0s						
SEY	Seymchan	50.48	27	iP	P	13 33 20.8	+0.6
SEY				pmax	pmax		
	comp=Z,1.0nm,0.9s						
RAYN	Ar Rayn	50.86	281	P	P	13 33 22.4	-1.4
RAYN	Ar Rayn	50.86	281	P	P	13 33 22.4	-1.4
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KBZ	Khabaz	50.86	307	P	P	13 33 22.2	-1.2
	comp=Z,1.1nm,0.7s,baz=14,slow=13,SNR=2.1						
	comp=Z,1.1nm,0.7s						
KBZ	Khabaz	50.86	307	iP	P	13 33 22.8	-0.6
KBZ				pmax	pmax		
	comp=Z,1.0nm,1.1s						
KIV	Kislovodsk	51.02	307	eP	P	13 33 25.0	+0.3
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
VRH	Novokhopyorsk	52.18	316	eP	P	13 33 28.7	-4.4
VRH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
VORD	Divnogorie	53.69	316	eP	P	13 33 38.9	-5.3
VORD				pmax	pmax		
	comp=Z,4.0nm,0.8s						
VSR	Storozhevoye	53.78	316	eP	P	13 33 41.5	-3.5
VSR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
LPSR	Galich'ya Gora	54.05	318	eP	P	13 33 43.5	-3.3
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WRA	Warramunga Arr	54.86	142	P	P	13 33 52.4	-0.8
	comp=Z,3.4nm,0.8s,baz=331,slow=8.1,SNR=23						
	comp=Z,3.4nm,0.8s						
WRA	Warramunga Arr	54.86	142	iP	P	13 33 52.4	-0.8
WRA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KLMR	Klimovskoe	54.94	328	eP	P	13 33 51.0	-2.2
KLMR				pmax	pmax		
	comp=Z,22nm,1.4s						
OBN	Obninsk	55.66	321	⇑eP	P	13 33 57.6	-0.9
OBN				i		13 34 57.5	
OBN				e		13 36 04.2	
OBN				eS	S	13 42 07.2	+23
OBN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,543nm,17.0s						
BILL	Bilibino	57.61	24	ceP	P	13 34 14.0	+1.8
BILL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ASAR	Alice Springs	57.63	145	P	P	13 34 12.4	-0.5
	comp=Z,1.7nm,0.9s,baz=327,slow=6.8,SNR=19						
	comp=Z,1.7nm,0.9s						
BRTR	Keskin Array B	57.99	303	P	P	13 34 14.2	-1.3
BRTR	Keskin Array B	57.99	303	P	P	13 34 14.3	-1.2
	comp=Z,1.1nm,0.8s,baz=96,slow=5.6,SNR=5.5						
	comp=Z,1.1nm,0.8s						
BRTR	Keskin Array B	57.99	303	P	P	13 34 14.2	-1.3
AKASG	Malin Array Be	60.06	316	P	P	13 34 28.6	-0.9
	comp=Z,3.2nm,0.6s,baz=77,slow=6.7,SNR=16						
	comp=Z,3.2nm,0.6s						
AKASG	Malin Array Be	60.06	316	iP	P	13 34 28.6	-0.9
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AKBB	Malin Array Si	60.06	316	ceP	P	13 34 28.8	-0.7
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KIEV	Kiev	60.07	316	P	P	13 34 27.9	-1.7
KIEV				IAmb	IAmb	13 34 29.1	
	comp=Z,6.9nm,0.7s						
KIEV	Kiev	60.07	316	P	P	13 34 27.9	-1.7
KIEV				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NACGM	Naroch	61.29	321	eP	P	13 34 43.4	+5.6
	comp=Z,8.0nm,0.9s,baz=87						
FINES	FINESS Array B	61.47	328	P	P	13 34 38.2	-0.7
	comp=Z,3.1nm,0.6s,baz=100,slow=9.9,SNR=12						
	comp=Z,3.1nm,0.6s						
FINES	FINESS Array B	61.47	328	iP	P	13 34 38.7	-0.2
FINES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ARCES	ARCESS Array B	61.95	337	P	P	13 34 41.5	-0.6
	comp=Z,1.4nm,0.4s,baz=88,slow=6.9,SNR=18						
	comp=Z,1.4nm,0.4s						
VRI	Vrincioaia	62.22	310	⇓P	P	13 34 44.8	+0.5
PLOR	Plostina	62.28	310	⇑P	P	13 34 45.5	+0.8
ONER	Baraj Valea Uz	62.38	311	⇑P	P	13 34 46.0	+0.6
MLR	Muntele Rosu	62.82	310	P	P	13 34 47.6	-0.8
MLR	Muntele Rosu	62.82	310	⇑P	P	13 34 49.2	+0.8
MLR	Muntele Rosu	62.82	310	P	P	13 34 47.6	-0.8
MLR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
OZUR		62.84	311	⇑P	P	13 34 48.7	+0.3
BURAR	Bucovina Array	63.00	312	P	P	13 34 47.9	-1.6
BUR08	Bucovina Ar. S	63.01	312	P	P	13 34 48.3	-1.3
BUR08				IAmb	IAmb	13 35 40.3	
	comp=Z,14nm,1.8s						
SPITS	Spitsbergen Ar	64.73	347	P	P	13 35 00.3	0.0
	comp=Z,7.0nm,0.8s,baz=93,slow=10,SNR=7.7						
	comp=Z,7.0nm,0.8s						
MORC	Moravsky Berou	67.61	316	eP	P	13 35 19.9	+0.5
HFS	Hagfors	67.64	327	P	P	13 35 18.6	-0.7
	comp=Z,5.1nm,0.5s,baz=120,slow=5.3,SNR=22						
	comp=Z,5.1nm,0.5s						
TNA	Tin City	67.71	27	P	P	13 35 19.8	+0.3
	baz=281						
JAVC	Velka Javorina	67.73	315	eP	P	13 35 21.0	+0.9
C16K	Lisburne Hills	68.14	24	P	P	13 35 23.1	+0.8
	baz=283						
STKA	Stephens Creek	68.25	144	P	P	13 35 23.0	-0.4
	comp=Z,4.2nm,1.1s,baz=331,slow=12,SNR=3.1						
	comp=Z,4.2nm,1.1s						
VRAC	Vranov	68.32	315	eP	P	13 35 23.7	-0.1
F14K	Arctic Creek	68.38	27	P	P	13 35 24.3	+0.5
	baz=283						
NC405	NORSAR Array S	68.39	329	P	P	13 35 22.4	-1.6
NC602	NORSAR Array S	68.55	328	IAmb	IAmb	13 35 28.8	
	comp=Z,6.3nm,0.8s						
NB201	NORSAR Array S	68.60	328	P	P	13 35 23.7	-1.6
NB2	NORSAR Subarra	68.64	328	P	P	13 35 24.2	-1.4
	comp=Z,4.8nm,0.7s,baz=78,slow=6.5						
NOA	NORSAR Array B	68.64	328	P	P	13 35 24.5	-1.1
	comp=Z,2.4nm,0.6s,baz=77,slow=6.4,SNR=27						
	comp=Z,2.4nm,0.6s						
P08K	Saint George I	68.87	36	P	P	13 35 26.5	-0.5
	baz=284						
C17K	DeLong Mountai	68.88	23	P	P	13 35 27.1	+0.2
	baz=284						
D17K	Noatak River	69.11	24	P	P	13 35 28.4	+0.1
	baz=285						
B18K	Kokolik River	69.13	22	P	P	13 35 28.5	+0.1
	baz=285						
G15K	Niukluk	69.43	27	P	P	13 35 31.3	+1.0
	baz=285						
C18K	Utukok River	69.53	23	P	P	13 35 31.1	+0.1
C18K	Utukok River	69.53	23	P	P	13 35 31.6	+0.5
	baz=286						
M11K	Mekoryuk	69.65	32	P	P	13 35 31.7	-0.1
	baz=285						
E17K	Hotham Inlet	69.74	25	P	P	13 35 32.1	-0.2
	baz=286						
C19K	Lookout Ridge	69.96	22	P	P	13 35 34.2	+0.5
	baz=287						
K13K	Kusilvak Mount	69.97	30	P	P	13 35 33.8	0.0
	baz=286						
G16K	Koyuk River	70.00	26	P	P	13 35 34.4	+0.5
	baz=286						
CLL	Collm	70.06	318	eP	P	13 35 35.0	+0.5
CLL				e		13 35 39.0	
CLL	Collm	70.06	318	eP	P	13 35 35.0	+0.5
CLL				ex	x	13 35 39.0	
E18K	Tukpahlearik C	70.10	24	P	P	13 35 34.5	0.0
E18K				IAmb	IAmb	13 35 39.3	
	comp=Z,4.8nm,0.7s						
E18K	Tukpahlearik C	70.10	24	P	P	13 35 35.3	+0.8
	baz=287						
J14K	Nanvaranak Lak	70.24	29	P	P	13 35 35.3	-0.1
	baz=286						
H16K	Elim	70.27	27	P	P	13 35 36.0	+0.4
	baz=287						
GERES	GERESS Array B	70.28	315	P	P	13 35 36.0	-0.1
	comp=Z,1.0nm,0.5s,baz=46,slow=3.9,SNR=7.5						
	comp=Z,1.0nm,0.5s						
B20K	Meade River	70.48	21	P	P	13 35 37.9	+1.2
	baz=289						
G17K	Kiwalik Mounta	70.66	26	P	P	13 35 38.6	+0.7
	baz=288						
D19K	Kuna River	70.66	23	P	P	13 35 38.4	+0.5
	baz=289						
F18K	Selawik	70.70	25	P	P	13 35 39.5	+1.4
	baz=288						
A22K	Sinclair Lake	70.83	20	P	P	13 35 39.1	+0.2
	baz=291						
M13K	Dall Lake	71.00	32	P	P	13 35 39.9	-0.1
	baz=287						
L14K	Kuka Creek	71.04	30	P	P	13 35 41.2	+1.0
	baz=287,SNR=6.6						
D20K	Etivluk River	71.11	22	P	P	13 35 40.7	+0.1
	baz=290						
H17K	Granite Mounta	71.13	26	P	P	13 35 41.2	+0.4
	baz=289						
I17K	Unalakleet	71.14	28	P	P	13 35 41.4	+0.6
	baz=288						
K15K	Wolf Creek Mou	71.27	29	P	P	13 35 41.7	0.0
	baz=288						
UNV	Unalaska Valle	71.27	39	P	P	13 35 41.1	-0.7
	baz=287						
G18K	Tagagawik	71.31	25	P	P	13 35 41.6	-0.3
	baz=289						
E19K	Redstone River	71.32	24	P	P	13 35 42.6	+0.7
	baz=290						
F19K	Shaleruckik Mo	71.33	24	IAmb	IAmb	13 35 46.3	
	comp=Z,6.1nm,0.8s						
F19K	Shaleruckik Mo	71.33	24	P	P	13 35 42.1	+0.2
	baz=290,SNR=6.3						
J16K	Anvik River	71.36	28	P	P	13 35 42.8	+0.5
	baz=288						
E20K	Nigu River	71.41	23	P	P	13 35 42.6	+0.1
	baz=291						
B21K	Ikpikpuk River	71.45	21	P	P	13 35 42.7	+0.1
	baz=292						
L15K	Ungalak Mounta	71.48	30	P	P	13 35 43.6	+0.7
	baz=288						
M14K	Bethel	71.55	31	P	P	13 35 43.9	+0.6
	baz=288						
B22K	Teshekpuk Lake	71.56	20	P	P	13 35 43.1	-0.2
	baz=292						
C21K	Knifeblade Rid	71.56	22	P	P	13 35 43.8	+0.4
	baz=292						
H18K	Honhosa River	71.68	26	P	P	13 35 43.4	-0.7
	baz=290						
G19K	Purcell Mounta	71.83	25	IAmb	IAmb	13 35 49.6	
	comp=Z,5.3nm,0.9s						
G19K	Purcell Mounta	71.83	25	P	P	13 35 44.6	-0.4
	baz=291						
N14K	Kuskokwak Cree	71.94	32	P	P	13 35 45.2	-0.5
	baz=289						
J17K	VABM Dome	71.98	28	P	P	13 35 45.7	-0.3
	baz=290						
F20K	Avaraart Lake	72.01	24	P	P	13 35 46.1	+0.1
	baz=292						
E21K	Killik River	72.11	22	P	P	13 35 47.3	+0.6
	baz=293						
M15K	Kasigluk River	72.16	31	P	P	13 35 47.7	+0.6
	baz=289						
H19K	Roundabout Mou	72.30	25	P	P	13 35 48.6	+0.8
	baz=291,SNR=10						

D22K	Ayikyak River comp=Z,8.8nm,1.1s	72.37	21	IAmb	IAmb	13 35 54.5	
D22K	Ayikyak River baz=294	72.37	21	P	P	13 35 48.9	+0.6
L16K	Owhat River baz=290	72.38	30	P	P	13 35 49.1	+0.8
GCSA	Galena City Sc baz=291	72.41	26	P	P	13 35 49.3	+0.8
K17K	Iditarod baz=291,SNR=12	72.55	28	P	P	13 35 50.6	+1.3
N15K	Kwethluk River baz=290	72.62	31	P	P	13 35 50.2	+0.3
C23K	Itkillik River	72.64	20	P	P	13 35 50.4	+0.7
C23K	comp=Z,5.5nm,0.8s			IAmb	IAmb	13 35 54.3	
C23K	Itkillik River baz=295	72.64	20	P	P	13 35 50.5	+0.7
L17K	Donlin baz=291	72.75	29	P	P	13 35 51.2	+0.6
F21K	Alatna River comp=Z,9.1nm,0.8s	72.76	23	IAmb	IAmb	13 35 57.0	
F21K	Alatna River baz=293,SNR=9.8	72.76	23	P	P	13 35 50.6	+0.1
M16K	Timber Creek baz=291	72.85	30	P	P	13 35 51.6	+0.5
H20K	Anotleneega Mo baz=293,SNR=5.5	72.92	25	P	P	13 35 51.7	+0.2
J18K	Innoko River comp=Z,8.7nm,0.8s	72.95	27	IAmb	IAmb	13 35 56.5	
J18K	Innoko River baz=292	72.95	27	P	P	13 35 52.2	+0.5
E22K	Anaktuvuk Pass	72.97	22	P	P	13 35 51.8	-0.1
E22K	comp=Z,6.8nm,1.1s			IAmb	IAmb	13 36 04.0	
E22K	Anaktuvuk Pass baz=295	72.97	22	P	P	13 35 51.9	+0.1
D23K	Nanushuk River	72.99	21	P	P	13 35 52.4	+0.5
D23K	comp=Z,8.8nm,1.2s			IAmb	IAmb	13 35 58.3	
D23K	Nanushuk River baz=295	72.99	21	P	P	13 35 51.9	0.0
G21K	Allakaket baz=294	73.03	24	P	P	13 35 52.1	0.0
O15K	Ungalikthiuk R baz=290	73.09	32	P	P	13 35 52.8	+0.2
F22K	John River baz=294	73.10	23	P	P	13 35 52.0	-0.6
N16K	Nishlik Lake baz=291,SNR=6.3	73.13	31	P	P	13 35 53.0	+0.2
S12K	Black Hills baz=290	73.14	36	P	P	13 35 53.0	0.0
IMAR	Indian Mountai	73.15	24	P	P	13 35 51.8	-1.1
J19K	Poorman comp=Z,8.0nm,0.9s	73.20	27	IAmb	IAmb	13 35 58.3	
J19K	Poorman baz=292,SNR=7.5	73.20	27	P	P	13 35 53.9	+0.7
C24K	Franklin Bluff baz=297	73.29	20	P	P	13 35 53.2	-0.3
M17K	Holitna River baz=292	73.40	30	P	P	13 35 55.3	+0.9
L18K	Granite Mounta baz=292	73.42	29	P	P	13 35 55.7	+1.1
TOLK	Toolik Lake Re baz=296	73.50	21	P	P	13 35 55.4	+0.5
D24K	Happy Valley baz=297	73.51	21	P	P	13 35 55.5	+0.5
G22K	Bettles baz=295	73.59	23	P	P	13 35 55.5	+0.1
H21K	Melozitna Rive comp=Z,8.5nm,0.9s	73.64	25	IAmb	IAmb	13 36 00.9	
H21K	Melozitna Rive baz=294,SNR=9.1	73.64	25	P	P	13 35 56.8	+1.0
J20K	Nowinta River baz=294,SNR=5.0	73.72	26	P	P	13 35 56.9	+0.6
E23K	Chandalar	73.74	22	P	P	13 35 56.8	+0.4
E23K	Chandalar baz=297	73.74	22	P	P	13 35 56.8	+0.4
O16K	Kokwok River B baz=292	73.77	31	P	P	13 35 56.8	+0.2
N17K	Nushagak Hills baz=292	73.84	30	P	P	13 35 57.3	+0.3
COLD	Coldfoot baz=296,SNR=5.0	73.91	23	P	P	13 35 57.7	+0.4
H22K	Ishtalitna Cre baz=296,SNR=9.8	74.08	24	P	P	13 35 58.5	+0.2
M18K	Stony River baz=293	74.08	29	P	P	13 35 58.6	+0.2
K20K	Telida baz=294,SNR=5.6	74.09	27	P	P	13 35 59.0	+0.6
E24K	Your Creek baz=298,SNR=5.6	74.11	22	P	P	13 35 59.1	+0.6
I21K	Tanana baz=295	74.16	25	P	P	13 35 59.7	+0.9
O17K	Koliganek Bris baz=292	74.17	31	P	P	13 35 59.3	+0.3
D25K	Kavik River baz=299	74.20	20	P	P	13 35 59.4	+0.3
G23K	Bananza Creek baz=297,SNR=8.0	74.21	23	P	P	13 35 59.6	+0.4
L19K	White Mountain baz=294	74.23	28	P	P	13 35 59.6	+0.3
N18K	Kilae Creek baz=293	74.37	30	P	P	13 36 00.6	+0.4
L20K	Farewell, AK baz=294	74.53	28	P	P	13 36 01.5	+0.4
M19K	Big River Lodg baz=294	74.54	28	P	P	13 36 02.1	+1.0
F24K	Squaw Lake baz=298	74.58	22	P	P	13 36 01.7	+0.4
CHUM	Lake Minchumin baz=295,SNR=6.0	74.58	26	P	P	13 36 02.7	+1.4
MLY	Manley baz=296,SNR=14	74.69	25	P	P	13 36 02.6	+0.7
P17K	Kvichak River baz=293	74.70	31	P	P	13 36 02.2	+0.2
CHNA	Chernabura Isl baz=292	74.77	36	P	P	13 36 03.0	+0.5
H23K	Yukon River comp=Z,7.8nm,0.9s	74.78	24	IAmb	IAmb	13 36 07.8	
H23K	Yukon River baz=297,SNR=11	74.78	24	P	P	13 36 03.2	+0.7
Q16K	King Salmon baz=293	74.80	32	P	P	13 36 02.6	0.0
C27K	Jago River baz=301	74.86	19	P	P	13 36 04.0	+1.1
CAST	Castle Rocks comp=Z,8.0nm,0.8s	74.87	27	IAmb	IAmb	13 36 08.1	
CAST	Castle Rocks baz=296,SNR=9.8	74.87	27	P	P	13 36 04.0	+0.9
N19K	Bonanza Creek baz=294	74.95	30	P	P	13 36 04.4	+0.8
BPAW	Bear Paw Mtn. baz=296,SNR=15	75.01	26	P	P	13 36 04.9	+1.1
O18K	Koktuh Hills baz=294	75.01	31	P	P	13 36 04.9	+1.1
E25K	Arctic Village baz=300	75.05	21	P	P	13 36 05.1	+1.1
PPLA	Purkeypile baz=296,SNR=5.2	75.06	27	P	P	13 36 04.2	0.0
M20K	Styx River baz=295	75.10	28	P	P	13 36 04.7	+0.3
G24K	Hadweenzic Riv baz=299	75.11	23	P	P	13 36 04.9	+0.6
I23K	Minto, Yukon-K comp=Z,5.0nm,0.8s	75.16	24	IAmb	IAmb	13 36 09.5	
I23K	Minto, Yukon-K baz=298,SNR=7.2	75.16	24	P	P	13 36 05.5	+0.9
P18K	Big Mountain, baz=294	75.19	31	P	P	13 36 05.3	+0.4
F25K	Christian Rive baz=300,SNR=5.7	75.29	21	P	P	13 36 05.6	+0.1
Q17K	Contact Creek baz=294	75.34	32	P	P	13 36 06.0	+0.2
H24K	Noodor Dome baz=299	75.38	23	P	P	13 36 06.2	+0.3
NEA2	Nenana comp=Z,7.2nm,0.8s	75.53	25	IAmb	IAmb	13 36 13.1	
NEA2	Nenana baz=298,SNR=11	75.53	25	P	P	13 36 07.1	+0.3
G25K	Bearman Lake baz=300	75.55	22	P	P	13 36 07.1	+0.2
TRF	Thorofare Moun baz=297	75.58	26	P	P	13 36 07.6	+0.4
Q18K	Katmai Hardscr baz=294	75.60	32	P	P	13 36 08.2	+0.8
BMAR	Burnt Mountain	75.73	21	P	P	13 36 08.2	+0.3
F26K	Sheenjek River baz=301	75.73	21	P	P	13 36 09.0	+1.1
SKT	Skwentna baz=296,SNR=7.2	75.73	28	P	P	13 36 07.5	-0.5
COLA	College baz=299	75.86	24	P	P	13 36 08.1	-0.4
D27M	Malcolm River baz=304	75.88	19	P	P	13 36 08.5	-0.3
H25L	Birch Creek baz=300	75.90	23	P	P	13 36 09.3	+0.5
MCK	McKinley baz=298	75.99	26	P	P	13 36 09.7	+0.3
Q19K	Cape Douglas, baz=295	76.13	31	P	P	13 36 10.5	+0.2
RND	Reindeer comp=Z,8.1nm,1.0s	76.17	26	IAmb	IAmb	13 36 14.4	
G26K	Porcupine Rive baz=302,SNR=6.3	76.25	22	P	P	13 36 11.1	+0.4
ILAR	Eielson Array	76.27	24	P	P	13 36 08.2	-2.8
ILAR	Eielson Array comp=Z,0.8nm,0.7s,baz=321,slow=3.7,SNR=11 comp=Z,0.8nm,0.7s	76.27	24	P	P	13 36 12.6	+1.6
ILAR	Eielson Array	76.27	24	P	P	13 36 08.2	-2.8
E27K	Coleen River baz=304	76.28	20	P	P	13 36 10.8	-0.2
SUA	Susitna One baz=297	76.30	28	P	P	13 36 11.5	+0.1
PRP	Porcupine Dome comp=Z,9.1nm,0.9s	76.39	23	IAmb	IAmb	13 36 16.5	
PRP	Porcupine Dome baz=301,SNR=10	76.39	23	P	P	13 36 12.1	+0.3
M22K	Willow baz=298	76.43	28	P	P	13 36 12.2	+0.3
CAPN	Captain Cook N baz=297	76.44	29	P	P	13 36 12.7	+0.7
E28M	Babbage River baz=305	76.67	19	P	P	13 36 13.1	-0.1
RC01	Rabbit Creek A comp=Z,12nm,1.1s	76.91	28	IAmb	IAmb	13 36 19.5	
RC01	Rabbit Creek A baz=298	76.91	28	P	P	13 36 14.4	-0.2
J25K	Salcha River, baz=301	76.91	24	P	P	13 36 14.5	-0.2
DHY	Denali Highway	76.92	26	P	P	13 36 14.7	-0.2
DHY	Denali Highway baz=300	76.92	26	P	P	13 36 14.7	-0.2
PMR	Palmer baz=298,SNR=7.9	76.93	28	P	P	13 36 14.8	+0.1
WAT6	Susitna Watana baz=300	77.02	26	P	P	13 36 14.9	-0.6
G27K	Doyon Strip baz=304,SNR=7.0	77.03	21	P	P	13 36 15.1	-0.1
BRSE	Bradley Lake S baz=298	77.10	30	P	P	13 36 15.1	-0.7
KDAK	Kodiak Island comp=Z,6.1nm,0.7s,baz=233,slow=12,SNR=4.1 comp=Z,6.1nm,0.7s	77.13	32	P	P	13 36 17.8	+1.9
KDAK	Kodiak Island baz=296	77.13	32	P	P	13 36 15.7	-0.2
F28M	Old Crow baz=305	77.14	20	P	P	13 36 15.9	0.0
K24K	Donnelly Dome baz=301,SNR=7.5	77.17	25	P	P	13 36 16.0	-0.2
E29M	Blow River comp=Z,5.2nm,0.8s	77.29	19	IAmb	IAmb	13 36 23.4	
E29M	Blow River baz=307,SNR=5.0	77.29	19	P	P	13 36 16.8	+0.2
KNK	Knik Glacier baz=299	77.30	28	P	P	13 36 16.8	0.0
I26K	Coal Creek Min	77.34	23	P	P	13 36 16.5	-0.5
I26K	Coal Creek Min baz=303	77.34	23	P	P	13 36 17.2	+0.2
H27K	Steamboat Moun baz=304,SNR=12	77.39	22	P	P	13 36 18.1	+0.8
M23K	Glacier View baz=300	77.42	27	P	P	13 36 17.9	+0.4
SEW	Seward baz=299	77.50	29	P	P	13 36 18.0	0.0
SCM	Sheep Creek Mo baz=300	77.56	27	P	P	13 36 19.1	+0.7
RIDG	Independent Ri comp=Z,6.4nm,0.8s	77.56	25	IAmb	IAmb	13 36 23.8	
RIDG	Independent Ri baz=302,SNR=6.7	77.56	25	P	P	13 36 17.9	-0.5
PWL	Port Wells baz=299,SNR=6.4	77.62	28	P	P	13 36 18.6	0.0
J26L	Joseph Creek comp=Z,8.3nm,0.8s	77.63	24	IAmb	IAmb	13 36 22.8	
J26L	Joseph Creek baz=303,SNR=12	77.63	24	P	P	13 36 18.5	-0.2
EKA	Eskdalemuir Ar comp=Z,2.5nm,0.7s,baz=67,slow=6.7,SNR=5.6 comp=Z,2.5nm,0.7s	77.71	326	P	P	13 36 19.1	-0.1
I27K	Kandik River baz=304	77.72	22	P	P	13 36 19.1	-0.1
PAX	Paxson baz=301	77.72	26	P	P	13 36 20.0	+0.7
SCRK	Sand Creek baz=302,SNR=7.3	77.76	24	P	P	13 36 19.6	+0.1
M24K	Tolsona, Glenn baz=301,SNR=5.2	77.89	26	P	P	13 36 20.7	+0.4
GLI	Glacier Island baz=300	78.14	28	P	P	13 36 22.3	+0.8
G29M	Pine Creek comp=Z,4.7nm,0.7s	78.14	20	IAmb	IAmb	13 36 27.8	
G29M	Pine Creek baz=307	78.14	20	P	P	13 36 21.5	0.0
HARP	HAARP baz=302	78.15	26	P	P	13 36 21.4	-0.2
KLU	Klutina baz=301,SNR=5.8	78.31	27	P	P	13 36 21.9	-0.6
I28M	Miner Creek comp=Z,6.7nm,0.9s	78.38	22	IAmb	IAmb	13 36 29.9	
I28M	Miner Creek baz=306,SNR=8.5	78.38	22	P	P	13 36 22.7	-0.3
F30M	Barrier River baz=309	78.40	19	P	P	13 36 24.2	+1.3
K27K	Chicken baz=304	78.44	24	P	P	13 36 23.2	+0.1
H29M	Whitestone	78.45	21	P	P	13 36 22.8	-0.3
H29M	Whitestone baz=307	78.45	21	P	P	13 36 23.3	+0.1
P23K	Montague Islan	78.45	29	P	P	13 36 23.8	+0.6
P23K	comp=Z,10nm,0.8s			IAmb	IAmb	13 36 30.2	
P23K	Montague Islan baz=300	78.45	29	P	P	13 36 23.4	+0.1
INK	Inuvik baz=311,SNR=6.9	78.61	18	P	P	13 36 24.3	+0.3
G30M	tAoh Zraii Nji comp=Z,8.0nm,0.8s	78.66	20	IAmb	IAmb	13 36 28.4	
G30M	tAoh Zraii Nji baz=308,SNR=7.0	78.66	20	P	P	13 36 24.3	-0.1
N25K	Chitina, Valde baz=302	78.79	26	P	P	13 36 25.2	0.0
EYAK	Cordova Ski Ar baz=302,SNR=6.7	78.87	28	P	P	13 36 25.7	+0.1
EPYK	Eagle Plains comp=Z,6.3nm,0.8s	78.88	20	IAmb	IAmb	13 36 31.6	
EPYK	Eagle Plains baz=308	78.88	20	P	P	13 36 25.2	-0.4
SUMG	Summit	78.97	349	P	P	13 36 25.0	-1.4
SUMG	Summit	78.97	349	P	P	13 36 25.0	-1.4
SUMG	comp=Z,14nm,1.0s			pmax	pmax		
M26K	Nabesna, AK baz=304	78.99	25	P	P	13 36 26.6	+0.3
L27K	Beaver Creek, baz=304,SNR=6.7	79.07	25	P	P	13 36 27.1	+0.4
BCAR	Beaver Creek A	79.09	24	P	P	13 36 26.5	-0.2
F31M	Tsiigehtchic baz=311	79.11	19	P	P	13 36 26.5	-0.2
BMRM	Bremner River baz=302,SNR=9.1	79.13	27	P	P	13 36 27.1	0.0
Q23K	Middleton Isla baz=301	79.20	29	P	P	13 36 26.7	-0.6
G31M	Satah River baz=310	79.29	19	P	P	13 36 27.4	-0.3
DAWY	Dawson baz=306	79.38	23	P	P	13 36 28.4	0.0
M27K	Edge Creek, AK baz=304	79.45	25	P	P	13 36 28.9	0.0
VRDI	Verde Repeater comp=Z,7.1nm,0.8s	79.46	27	IAmb	IAmb	13 36 36.0	
MCARA	McCarthy VSAT comp=Z,11nm,0.8s	79.55	26	IAmb	IAmb	13 36 36.8	
I30M	Mount Dempster baz=309,SNR=6.2	79.71	21	P	P	13 36 30.2	-0.1
BVCY	Beaver Creek baz=305	79.81	25	P	P	13 36 30.6	-0.1
H31M	Peel River comp=Z,9.6nm,0.9s	79.99	20	IAmb	IAmb	13 36 38.1	
H31M	Peel River baz=310,SNR=6.4	79.99	20	P	P	13 36 31.7	+0.1
J30M	Hart River baz=309	80.13	22	P	P	13 36 32.5	-0.1
K29M	Barlow Dome comp=Z,8.5nm,0.8s	80.18	23	IAmb	IAmb	13 36 40.0	
K29M	Barlow Dome baz=308,SNR=9.2	80.18	23	P	P	13 36 33.1	+0.3
L29M	L29M	80.41	23	P	P	13 36 35.1	+1.2
L29M	comp=Z,9.1nm,1.1s			IAmb	IAmb	13 36 39.2	
L29M	L29M baz=307,SNR=7.2	80.41	23	P	P	13 36 34.0	0.0
CTG	Chitna Glacier baz=305	80.46	26	P	P	13 36 33.9	-0.5
MESA	MESA baz=305	80.66	27	P	P	13 36 35.5	-0.1
O28M	Mount Upton baz=306	81.03	26	P	P	13 36 38.1	+0.5
PINM	Pinnacle baz=306	81.40	27	P	P	13 36 39.5	+0.2
YUK6	Outpost Mounta baz=308	81.64	25	P	P	13 36 40.7	-0.1
N30M	Aishikik Lake baz=308	81.81	24	P	P	13 36 40.9	-0.6
O29M	Mount Kennedy baz=307	81.95	26	P	P	13 36 41.5	-0.8
PNL	Peninsula baz=307	82.00	27	P	P	13 36 42.3	-0.1
HYT	Haines Junctio baz=308	82.05	25	P	P	13 36 42.4	-0.4
N31M	Braeburn, Yuko comp=Z,11nm,0.9s	82.28	24	IAmb	IAmb	13 36 51.3	
N31M	Braeburn, Yuko baz=310	82.28	24	P	P	13 36 44.3	+0.4
M31M	Drury Creek, Y baz=311	82.32	23	P	P	13 36 44.0	-0.1
FARO	Faro, Yukon baz=312	82.67	23	P	P	13 36 45.6	-0.3
P29M	Windy Craggy baz=308	82.69	26	P	P	13 36 46.1	0.0
P30M	Million Dollar baz=309	82.70	26	P	P	13 36 45.9	-0.2
MMPY	Sheldon Lake, comp=Z,3.6nm,0.8s	83.13	22	IAmb	IAmb	13 36 55.3	
MMPY	Sheldon Lake, baz=313	83.13	22	P	P	13 36 48.0	-0.3
N32M	Quiet Lake baz=312	83.49	23	P	P	13 36 50.2	+0.1
SKAG	Skagway baz=310	83.75	26	P	P	13 36 51.2	-0.2
P33M	Teslin, Yukon comp=Z,4.5nm,0.8s	84.22	24	IAmb	IAmb	13 37 01.6	
P33M	Teslin, Yukon baz=312	84.22	24	P	P	13 36 54.4	+0.4
TGTN	Hyland Airport baz=316	84.90	22	P	P	13 36 57.3	-0.1
WRGLY	Wrigley baz=320	85.14	19	P	P	13 36 58.2	-0.3
ESDC	Sonseca Array comp=Z,1.0nm,0.8s,baz=43,slow=4.9,SNR=11 comp=Z,1.0nm,0.8s	85.45	312	P	P	13 36 59.4	-1.2
R33M	Jennings River baz=314	85.46	24	P	P	13 37 00.2	-0.1
WTLY	Watson Lake, Y baz=316	85.73	23	P	P	13 37 01.0	-0.5
T35M	Bob Quinn baz=314	87.42	26	P	P	13 37 09.8	0.0
TOAD	Toad River Com baz=319	87.90	22	P	P	13 37 12.8	+0.6
YKA	Yellowknife Ar comp=Z,0.8nm,0.8s,baz=330,slow=5.3,SNR=10.0 comp=Z,0.8nm,0.8s	88.14	16	P	P	13 37 11.8	-1.3
YKA	Yellowknife Ar	88.14	16	*i* P	P	13 37 16.7	+3.6
YKA	comp=Z,1.0nm,0.7s			pmax	pmax		
TXAR	Lajitas Array comp=Z,0.5nm,0.7s,baz=205,slow=0.2,SNR=6.9	120.76	26	PKP	PKPdf	13 43 14.2	-1.2

IDC ***24*** *13:32:29.9±0.9, 30°.69S×178°.05W, h0^{km}, mb3.9/5, mbtmp3.9/6, ML3.3/1, Error ellipse: s-maj=29.6km s-min=17.7km az=97.0*

NEIC ***24*** *13:32:35.9±0.5, 30°.7S±0°.1×178°.0W±0°.2, h42^{km}±9^{km}, mb4.5/7, Error ellipse: s-maj=23.0km s-min=16.5km az=100.0*

ISC 24 13:32:35.6±0.8**, 30°.68S**±0°.08×**178°.1W**±0°.2**, h46^{km}, n27,** σ1^{s}.14/23**, mb4.2/**7**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.42	5	Pn	Pn	13 32 59.0	0.0
RAO	Raoul Island 211nm,0.3s,baz=64,slow=21,SNR=6.8	1.42	5	Pn	Pn	13 32 59.3	+0.3
RAO	210nm,0.3s,baz=102,slow=21,SNR=5.3			Sn	Sn	13 33 17.3	+0.8
URZ	Urewera 0.4nm,0.3s,baz=19,slow=21,SNR=1.8 5.7nm,0.8s	8.55	207	Pn	Pn	13 34 34.2	-2.6
AFI	Afiamalu	17.66	20	Pn	Pn	13 36 35.5	-2.8
AFI	comp=Z,91nm,1.2s			IAmb	IAmb	13 37 02.5	
STKA	Stephens Creek	34.38	257	P	P	13 39 18.4	+0.1
STKA	Stephens Creek comp=Z,3.5nm,0.8s,baz=82,slow=10,SNR=4.0 comp=Z,3.5nm,0.8s	34.38	257	P	P	13 39 19.4	+1.1
AS31	Alice Springs	43.05	267	P	P	13 40 31.1	0.0
ASAR	Alice Springs	43.05	267	P	P	13 40 30.8	-0.3
ASAR	Alice Springs comp=Z,0.8nm,0.7s,baz=108,slow=7.3,SNR=16	43.05	267	P	P	13 40 31.6	+0.5
ASAR	comp=Z,0.2nm,0.7s,baz=102,slow=3.7,SNR=1.3 comp=Z,0.8nm,0.7s			PcP	PcP	13 42 21.5	+0.8
WR8	Warramunga Arr	43.92	273	P	P	13 40 38.6	+0.4
WR8	comp=Z,9.4nm,1.4s			IAmb	IAmb	13 40 45.9	
WRA	Warramunga Arr	44.06	272	P	P	13 40 39.0	-0.2
WRA	Warramunga Arr comp=Z,0.8nm,0.4s,baz=110,slow=8.1,SNR=14 comp=Z,0.8nm,0.4s	44.06	272	P	P	13 40 39.8	+0.5
WB0	Warramunga Arr	44.09	273	P	P	13 40 39.3	-0.2
WB0	comp=Z,7.2nm,1.2s			IAmb	IAmb	13 41 00.6	
QSPA	South Pole Qui	59.44	180	P	P	13 42 34.7	+1.3
QSPA	comp=Z,5.6nm,1.5s			IAmb	IAmb	13 43 05.9	
QSPA	South Pole Qui comp=Z,0.6nm,0.6s,baz=68,slow=5.4,SNR=13 comp=Z,0.6nm,0.6s	59.44	180	P	P	13 42 35.6	+2.2
SNAA	Sanae	77.88	178	P	P	13 44 28.9	+0.8
SNAA	comp=Z,7.4nm,1.3s			IAmb	IAmb	13 45 07.0	
SNAA	Sanae comp=Z,0.6nm,0.8s,baz=164,slow=18,SNR=1.4 comp=Z,0.6nm,0.8s	77.88	178	P	P	13 44 28.6	+0.5
H03S2	Juan Fernandez baz=238,slow=75,SNR=16	80.35	124	T	T	15 13 45.6	
H03S1	Juan Fernandez baz=238,slow=75,SNR=16	80.36	124	T	T	15 13 45.5	
H03S3	Juan Fernandez baz=238,slow=75,SNR=15	80.37	124	T	T	15 13 45.6	
H03N3	Juan Fernandez baz=241,slow=72,SNR=7.6	80.54	123	T	T	15 13 59.1	
H03N2	Juan Fernandez baz=241,slow=72,SNR=7.0	80.55	123	T	T	15 13 57.4	
H03N1	Juan Fernandez baz=241,slow=72,SNR=10	80.56	123	T	T	15 13 57.8	
FINES	FINESS Array B comp=Z,1.9nm,0.5s,baz=60,slow=4.9,SNR=17	145.39	340	PKPbc	PKPdf	13 52 07.3	-0.4
HFS	Hagfors comp=Z,0.8nm,0.7s,baz=31,slow=3.9,SNR=1.5	149.50	348	PKPbc	PKPbc	13 52 18.5	-0.6
AKASG	Malin Array Be comp=Z,0.2nm,0.3s,baz=53,slow=2.8,SNR=2.4	151.49	322	PKPbc	PKPbc	13 52 24.1	0.0
TORD	Torodi Ar. Bea comp=Z,1.5nm,0.3s,baz=193,slow=2.7,SNR=1.7	162.56	179	PKPab	PKPab	13 53 21.4	+0.4

IDC ***24*** *13:35:12.9±2.4, 20°.89S×178°.41W, h575^{km}±25^{km}, mb2.7/4, mbtmp3.8/7, Error ellipse: s-maj=31.6km s-min=28.8km az=96.0*

NEIC ***24*** *13:35:12.3±2.8, 20°.9S±0°.2×178°.3W±0°.2, h571^{km}±12^{km}, mb4.2/9, Error ellipse: s-maj=28.6km s-min=20.8km az=112.0*

ISC 24 13:35:12.3±0.8**, 20°.9S**±0°.1×**178°.3W**±0°.1**, h579^{km}, n22,**

σ1^{s}43/22,mb3.7/7,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.66	312	P	P	13 36 41.7	+0.3
MSVF	Nonsavu	4.66	312	P	P	13 36 41.6	+0.2
	2.1nm,0.7s,baz=163,slow=16,SNR=1.5						
AFI	Afiamalu	9.33	43	P	P	13 37 21.6	-2.5
DZM	Mont Dzumac	14.25	263	P	P	13 38 12.8	-1.2
	5.8nm,1.0s,baz=108,slow=20,SNR=1.7						
URZ	Urewera	17.76	192	P	P	13 38 45.1	-1.3
	16nm,1.1s,baz=52,slow=21,SNR=2.1						
BKZ	Black Stump Fm	18.75	193	P	P	13 38 53.6	-2.0
BKZ				IAmb	IAmb	13 39 31.2	
	comp=Z,34nm,1.4s						
NNZ	Nelson	21.46	197	P	P	13 39 19.8	-0.1
INZ	Inchbonnie	23.41	199	P	P	13 39 36.1	-1.2
AS31	Alice Springs	44.15	257	P	P	13 42 30.9	+0.1
ASAR	Alice Springs	44.16	257	P	P	13 42 31.4	+0.5
ASAR	Alice Springs	44.16	257	P	P	13 42 31.1	+0.2
	comp=Z,0.8nm,0.7s,baz=89,slow=8.9,SNR=9.3						
	comp=Z,0.8nm,0.7s						
WRAB	Tennant Creek	44.26	263	P	P	13 42 30.2	-1.5
WRAB				IAmb	IAmb	13 43 14.1	
	comp=Z,8.8nm,1.1s						
WRA	Warramunga Arr	44.27	263	P	P	13 42 30.6	-1.2
WRA	Warramunga Arr	44.27	263	P	P	13 42 31.7	-0.1
	comp=Z,0.2nm,0.3s,baz=96,slow=7.4,SNR=12						
	comp=Z,0.2nm,0.3s						
QSPA	South Pole Qui	69.18	180	P	P	13 45 23.4	+2.0
QSPA				IAmb	IAmb	13 45 40.0	
	comp=Z,6.9nm,1.5s						
QSPA	South Pole Qui	69.18	180	P	P	13 45 23.6	+2.2
	comp=Z,1.2nm,1.0s,baz=28,slow=1.4,SNR=2.3						
	comp=Z,1.2nm,1.0s						
PEA0B	Petropavlovsk-	76.58	345	P	P	13 46 04.9	+1.3
PEA0B				IAmb	IAmb	13 46 31.4	
	comp=Z,13nm,1.4s						
PETK	Petropavlovsk-	76.58	345	P	P	13 46 05.5	+1.9
IMAR	Indian Mountai	88.59	10		P	13 47 05.7	+2.0
IL31		88.76	13	P	P	13 47 04.8	+0.4
IL31				IAmb	IAmb	13 47 39.5	
	comp=Z,4.4nm,1.5s						
ILAR	Eielson Array	88.76	13	P	P	13 47 05.7	+1.2
	comp=Z,0.3nm,0.9s,baz=213,slow=6.5,SNR=3.0						
	comp=Z,0.3nm,0.9s						
AKASG	Malin Array Be	143.22	331	PKP	PKPdf	13 53 39.9	-1.1
	comp=Z,0.9nm,0.5s,baz=43,slow=3.9,SNR=6.9						

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*IDC **24** 13:35:37.9±2.9, 30°.64S×177°.54W, h0^{km}, mb3.6/2, mbtmp3.6/2, Error ellipse: s-maj=64.5km s-min=28.1km az=103.0*

ISC 24 13:35:40.9±2.5**, 30°.82S**±0°.09×**177°.5W**±0°.4**, h35^{km}, n6, σ1^{s}71**/8**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.60	346	Pn	Pn	13 36 05.4	-1.4
	158nm,0.3s,baz=254,slow=20,SNR=4.1						
RAO				Sn	Sn	13 36 25.5	-0.8
	114nm,0.3s,baz=300,slow=20,SNR=2.6						
URZ	Urewera	8.65	209	Pn	Pn	13 37 42.5	-1.1
	0.1nm,0.3s,baz=276,slow=21,SNR=1.9						
URZ				Sn	Sn	13 39 19.0	-1.0
	0.5nm,0.3s,baz=174,slow=20,SNR=1.1						
ASAR	Alice Springs	43.53	267	P	P	13 43 43.4	+2.0
	0.3nm,0.6s,baz=105,slow=7.4,SNR=5.4						
	0.3nm,0.6s						
WRA	Warramunga Arr	44.55	272	P	P	13 43 50.9	+1.3
	0.6nm,0.5s,baz=111,slow=8.0,SNR=6.2						
	0.6nm,0.5s						
FINES	FINESS Array B	145.69	340	PKPbc	PKPab	13 55 15.5	-0.1
	1.3nm,0.7s,baz=102,slow=5.8,SNR=2.0						
AKASG	Malin Array Be	151.90	323	PKPab	PKPab	13 55 43.1	+2.1
	0.7nm,0.5s,baz=55,slow=2.6,SNR=4.1						

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*IDC **24** 13:46:46.5±0.8, 2°.24S×138°.67E, h0^{km}, mb3.7/9, mbtmp3.8/11, ML4.0/2, Error ellipse: s-maj=19.5km s-min=14.3km az=20.0*

*NEIC **24** 13:46:47.9±2.2, 2°.2S±0°.1×138°.60E±0°.07, h10^{km}±1^{km}, mb4.3/14, Error ellipse: s-maj=20.1km s-min=12.1km az=175.0*

*DJA **24** 13:46:50.1±0.5, 2°S±4°×13°9E±°, h22^{km}±4^{km}, M4.4/8, mb4.4/6, MLv4.4/8*

ISC 24 13:46:50.2±0.5**, 2°.37S**±0°.06×**138°.57E**±0°.04**, h32^{km}, n35, σ2^{s}04**/41**, mb4.0**/13**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.41	20	P	Pb	13 46 56.3	-3.0
GENI	Genyem	1.61	98	P	Pn	13 47 17.3	+0.9
GENI				S	Sb	13 47 40.0	+0.6
JAY	Jayapura	2.14	94	Pn	Pn	13 47 23.9	+0.1
	21nm,0.3s,baz=281,slow=7.9,SNR=135						
JAY				Lg	Lg	13 47 50.7	
	40nm,0.3s,baz=130,slow=18,SNR=9.0						
	62nm,0.3s						
JAY	Jayapura	2.14	94	P	Pn	13 47 23.7	0.0
JAY				S	Sn	13 47 51.0	+1.8
SRPI	Serui, Papua	2.38	282	P	Pn	13 47 27.1	+0.1
SRPI				S	Sn	13 47 56.0	+0.9
BAKI	Biak	2.73	295	P	Pn	13 47 31.9	+0.1
BAKI				S	Sn	13 48 03.4	-0.3
RKPI	Ransiki, Papua	4.47	281	P	Pn	13 47 57.5	+1.7
FAKI	Fak Fak	6.34	265		Pn	13 48 22.5	+1.1
FAKI	Fak Fak	6.34	265	P	Pn	13 48 23.3	+1.9
	0.2nm35nm,0.5s						
MTN	Manton Dam	12.74	215	Pn	Pn	13 49 50.3	+1.0
KNRA	Kununurra	16.37	216	Pn	Pn	13 50 38.5	+0.8
KNRA				IAmb	IAmb	13 50 43.0	
	comp=Z,36nm,1.4s						
WB0	Warramunga Arr	17.76	193		P	13 50 56.0	+0.3
WB0				IAmb	IAmb	13 51 12.5	
	comp=Z,9.4nm,0.9s						
WR8	Warramunga Arr	17.92	193		P	13 50 57.9	+0.4
WR8				IAmb	IAmb	13 51 16.0	
	comp=Z,15nm,1.2s						
WRA	Warramunga Arr	17.94	193		Pn	13 50 57.9	+0.5
WRA	Warramunga Arr	17.94	193	P	P	13 50 58.3	+0.5
	comp=Z,0.7nm,0.3s,baz=14,slow=12,SNR=18						
WRA				S	Sn	13 54 09.5	-7.2
	comp=Z,2.5nm,0.8s,baz=6.6,slow=23,SNR=5.7						
	comp=Z,2.4nm,0.6s						
FITZ	Fitzroy Crossi	20.12	218	P	P	13 51 22.9	+1.3
FITZ	Fitzroy Crossi	20.12	218	P	Pn	13 51 25.2	+1.6
	comp=Z,2.8nm,0.8s,baz=35,slow=10,SNR=8.6						
FITZ				S	S	13 54 58.9	-7.3
	comp=Z,4.3nm,0.5s,baz=198,slow=15,SNR=7.0						
	comp=Z,2.8nm,0.8s						
AS31	Alice Springs	21.64	192	P	P	13 51 39.5	+1.5
AS31				IAmb	IAmb	13 51 58.2	
	comp=Z,4.4nm,0.7s						
ASAR	Alice Springs	21.64	192	P	P	13 51 39.3	+1.2
ASAR	Alice Springs	21.64	192	P	P	13 51 40.0	+1.9
	comp=Z,2.1nm,0.7s,baz=8.4,slow=12,SNR=24						
ASAR				S	S	13 55 36.9	+0.7
	comp=Z,1.9nm,0.8s,baz=15,slow=23,SNR=4.9						
	comp=Z,2.1nm,0.7s						
PSA00	Pilbara Seismi	26.39	222	P	P	13 52 25.6	+1.7
PSA00				IAmb	IAmb	13 52 52.9	
	comp=Z,4.2nm,0.8s						
SMRI	Semarang	28.41	260	P	P	13 52 42.4	+0.2
UGM	Wanagama	28.46	258	P	P	13 52 42.8	+0.2
JMN	Monobe	36.18	353	P	P	13 53 48.5	-1.4
JMN				IAmb	IAmb	13 54 32.5	
	comp=Z,28nm,1.5s						
INU	Inuyama	37.55	358	P	P	13 54 01.2	-0.3
INU				IAmb	IAmb	13 54 01.9	
	comp=Z,25nm,1.5s						
KSRS	Korea Array	40.84	347	P	P	13 54 29.1	+0.2
	comp=Z,0.3nm,0.3s,baz=156,slow=7.8,SNR=4.2						
	comp=Z,0.3nm,0.3s						
CMAR	Chiang Mai Arr	44.15	300	P	P	13 54 57.2	+1.0
	comp=Z,0.4nm,0.4s,baz=111,slow=5.3,SNR=5.1						
	comp=Z,0.4nm,0.4s						
ULN	Ulaanbaatar	57.10	335	P	P	13 56 32.0	-1.7
ULN				IAmb	IAmb	13 56 33.7	
	comp=Z,2.2nm,0.5s						
SONM	Songino Array	57.36	335	P	P	13 56 34.0	-1.4
MKAR	Makanchi Array	69.44	322	P	P	13 57 56.2	+0.8
	comp=Z,0.5nm,0.7s,baz=110,slow=10,SNR=5.3						
	comp=Z,0.5nm,0.7s						
KURBB	Kurchatov Arra	73.37	325	P	P	13 58 19.5	+0.5
	comp=Z,0.7nm,0.8s,baz=119,slow=6.0,SNR=4.5						
	comp=Z,0.7nm,0.8s						
BVAR	Borovoye Array	78.96	325	P	P	13 58 51.9	+1.2
	comp=Z,1.3nm,0.6s,baz=110,slow=6.6,SNR=8.2						
	comp=Z,1.3nm,0.6s						
SUA	Susitna One	82.96	27	P	P	13 59 11.3	-0.7
ILAR	Eielson Array	85.59	24	P	P	13 59 26.0	+0.9
	comp=Z,0.2nm,0.9s,baz=256,slow=3.6,SNR=2.0						
	comp=Z,0.2nm,0.9s						
QSPA	South Pole Qui	87.57	180	P	P	13 59 37.1	+2.1
	comp=Z,1.1nm,1.0s,baz=293,slow=2.2,SNR=5.1						
	comp=Z,1.1nm,1.0s						

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*REY **24** 13:55:57.8, 64°.67N×17°.39W, h5^{km}*

*IDC **24** 13:55:58.2±0.6, 64°.64N×17°.51W, h0^{km}, mb4.0/18, mbtmp3.9/24, ML3.4/6, MS4.1/4, Error ellipse: s-maj=17.8km s-min=8.5km az=10.0*

*NEIC **24** 13:55:59.9±1.8, 64°.60N±0°.09×17°.8W±0°.2, h10^{km}±1^{km}, mb4.5/73, Error ellipse: s-maj=15.2km s-min=11.2km az=198.0*

ISC 24 13:55:59.3±0.3**, 64°.66N**±0°.02×**17°.39W**±0°.02**, h10^{km}, n359, σ2^{s}05**/370**, mb4.5**/56**, MS4.1**/4**, 3D, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKIS	Kista	0.07	282	P	Pg	13 55 59.5	-2.2
IKIS				S	Sg	13 56 01.0	-2.5
IDYN	Dyngjuhals	0.13	5	P	Pg	13 56 00.5	-2.0
IDYN				S	Sg	13 56 02.7	-2.0
IVON	Vonarskard	0.16	275	P	Pg	13 56 01.0	-1.8
IVON				S	Sg	13 56 03.8	-1.4
IDJK	Dyngjujokull	0.17	156	P	Pg	13 56 01.6	-1.5
IDJK				S	Sg	13 56 05.2	-0.5
IGRF	Grimsfjall	0.26	168	S	Sg	13 56 06.9	-1.2
IGRF				P	Pg	13 56 03.5	-1.1
IBJK	Bruarjokull	0.34	124	P	Pg	13 56 04.0	-2.0
IBJK				S	Sg	13 56 09.5	-1.0
IVOT	Vottur	0.40	167	P	Pg	13 56 05.4	-1.7
IVOT				S	Sg	13 56 11.0	-1.5
THOR	Thorvaldshraun	0.41	48	P	Pg	13 56 05.5	-2.0
THOR				S	Sg	13 56 11.7	-1.2
ISKR	Skrokkalda	0.44	257	P	Pg	13 56 06.2	-1.7
ISKR				S	Sg	13 56 12.3	-1.4
IKRE	Kreppuhraun	0.45	73	P	Pg	13 56 06.0	-2.1
IKRE				S	Sg	13 56 12.7	-1.4
IJOK	Jokulheimar	0.50	227	P	Pg	13 56 06.9	-2.1
IJOK				S	Sg	13 56 14.3	-1.3
IASK	Askja	0.51	39	P	Pg	13 56 07.0	-2.2
IASK				S	Sg	13 56 14.4	-1.5
IMKO	Mokollar	0.55	54	P	Pg	13 56 07.8	-2.3
IKSK	Karasker	0.64	141	P	Pg	13 56 08.8	-2.9
IKSK				S	Sg	13 56 18.6	-1.5
IIEY	Innrieyrar	0.65	210	P	Pg	13 56 09.4	-2.4
IIEY				S	Sg	13 56 18.6	-1.7
IHAE	Haedir	0.66	164	P	Pg	13 56 09.4	-2.6
IHAE				S	Sb	13 56 19.2	-2.8
ISVA	Svartarkot	0.68	5	P	Pg	13 56 09.7	-2.8
IKAL	Kalfafell	0.72	190	P	Pg	13 56 10.7	-2.6
IKAL				S	Sg	13 56 20.5	-2.2
IVSH	V-Sauoahnukur	0.73	77	P	Pg	13 56 10.7	-2.7
IVSH				S	Sg	13 56 20.9	-2.0
IFAL	Falljokull	0.75	160	P	Pg	13 56 11.0	-2.6
SLET	Slettubjorg	0.80	155	P	Pg	13 56 12.0	-2.6
IKVI	Kvisker	0.80	148	P	Pg	13 56 11.6	-3.1
IKVI				S	Sg	13 56 22.9	-2.1
IFAG	Fagurholsmyri	0.85	157	P	Pg	13 56 12.9	-2.7
IADA	Aoalbol	0.86	64	P	Pg	13 56 12.6	-3.2
IADA				S	Sg	13 56 24.5	-2.4
IMEL	Melhnausar	0.97	18	P	Pg	13 56 14.4	-3.4
ISTE	Stelbrattur	0.98	283	P	Pg	13 56 14.7	-3.4
ISTE				S	Sg	13 56 28.6	-2.2
IREN	Reynihlio	1.01	12	P	Pg	13 56 15.3	-3.4
ISNB	Snabyli	1.07	211	P	Pg	13 56 16.9	-2.9
IKVO	Krokottuvotn	1.08	11	P	Pb	13 56 16.3	-3.8
IGRS	Grimsstaoir	1.12	28	P	Pb	13 56 17.1	-3.6
IGRS				S	Sb	13 56 32.7	-2.6
IHES	Hestalda	1.13	238	P	Pb	13 56 17.9	-2.9
ISLY	Slysaalda	1.13	223	P	Pg	13 56 17.8	-3.1
IFED	Fedgar	1.19	239	P	Pb	13 56 18.9	-3.0
IRJU	Rjupnafell	1.19	209	P	Pb	13 56 18.6	-3.2
ISKI	Skildingahlsh	1.23	7	P	Pn	13 56 18.6	-3.8
IGHA	Grjothals	1.23	14	P	Pn	13 56 18.6	-3.9
IMJO	Mjoaskard	1.23	235	P	Pb	13 56 19.6	-3.0
IAUS	Austmannsbunga	1.24	217	P	Pb	13 56 19.8	-3.0
IAUS				S	Sb	13 56 36.2	-2.6
IGYG	Gygjarholskot	1.28	254	P	Pn	13 56 20.3	-2.8
IHVO	Lagu-Hvolar	1.30	210	P	Pn	13 56 21.0	-2.5
IGOD	Go??abunga	1.31	221	P	Pn	13 56 21.1	-2.6
IHAU	Haukadalur	1.32	239	P	Pn	13 56 20.5	-3.2
IHAU				S	Sb	13 56 37.5	-3.4
IDIM	Dimmadalss	1.32	8	P	Pn	13 56 20.1	-3.7
IHED	Heoinshofoi	1.43	1	P	Pn	13 56 21.8	-3.4
IHED				S	Sn	13 56 40.8	-3.2
IESK	Eystri-Skogar	1.45	219	P	Pn	13 56 23.0	-2.5
ISAU	Saurbar	1.48	244	P	Pn	13 56 22.7	-3.1
IBRE	Brettingsstaoi	1.49	352	P	Pn	13 56 22.6	-3.4
IGIL	Gilhagi	1.49	17	P	Pn	13 56 22.6	-3.5
ISIG	Siglufjorour	1.61	337	P	Pn	13 56 24.7	-3.0
ISIG				S	Sn	13 56 46.1	-2.4
IASM	Asmuli	1.63	241	P	Pn	13 56 25.6	-2.4
IASB	sbjarnarstai	1.69	275	P	Pn	13 56 26.2	-2.6
BORG	Borgarnes	1.69	275		Pn	13 56 25.7	-3.1
BORG	Borgarnes	1.69	275	Pg	Pn	13 56 26.2	-2.6
	56nm,0.3s,baz=96,slow=10,SNR=83						
BORG				Lg	Lg	13 56 49.4	
	38nm,0.3s,baz=77,slow=22,SNR=13						
ISOL	Solvholt	1.71	246	P	Pn	13 56 26.9	-2.2
IKRO	Krokur	1.71	253	P	Pn	13 56 26.8	-2.3
ILEI	Leirhofn	1.80	12	P	Pn	13 56 27.5	-2.8
IEDA	Engidalur	1.83	253	P	Pn	13 56 28.4	-2.3
IBJA	Bjarnastaoir	1.85	249	P	Pn	13 56 28.7	-2.3
IHRN	Hraun	1.85	323	P	Pn	13 56 28.4	-2.6
IHRN				S	Sn	13 56 52.2	-2.2
IGRI	Grimsey	1.91	353	P	Pn	13 56 28.9	-2.9
IGRI				S	Sn	13 56 53.7	-2.1
ISAN	Sandskeio	1.92	253	P	Pn	13 56 29.5	-2.4
IMOR	Morastadir	1.92	261	P	Pn	13 56 29.6	-2.4
IKAS	Kald??rsel	2.04	254	P	Pn	13 56 31.4	-2.2
IVOS	Vogsosar	2.05	249	P	Pn	13 56 31.4	-2.3
IKRI	Krysuvik	2.19	251	P	Pn	13 56 33.4	-2.2
SCO	Scoresbysund	6.10	345		Pn	13 57 28.3	-1.1
SCO	Scoresbysund	6.10	345	*i* P	Pn	13 57 30.0	+0.6
SCO				*i* S	Sn	13 58 41.6	+2.5
SOEG	Soedalen	6.63	309	*e*P	Pn	13 57 35.6	-1.0
SOEG				*i* S	Sb	13 59 18.3	+4.6
JMIC	Jan Mayen	7.18	24	Pn	Pn	13 57 43.9	-0.3
	3.2nm,0.3s,baz=196,slow=7.4,SNR=1.8						
	41nm,0.6s						
EKA	Eskdalemuir Ar	11.72	136	Pn	Pn	13 58 45.4	-1.0
	baz=322,slow=13						
	2.6nm,0.6s						
ESK	Eskdalemuir	11.72	136	Pn	Pn	13 58 46.9	+0.5
NC204	NORSAR Array S	13.18	92		Pn	13 59 04.5	-1.9
NOA	NORSAR Array B	13.49	92	Pn	Pn	13 59 08.5	-2.0
	baz=299,slow=13,SNR=3.9						
	0.5nm,0.6s						
HFS	Hagfors	15.00	93	Pn	Pn	13 59 29.4	-1.6
	0.1nm,0.3s,baz=312,slow=6.8,SNR=17						
	1.4nm,0.9s						
SPB2	Spitsbergen Ar	16.86	23	Pn	P	13 59 57.0	0.0
ARCES	ARCESS Array B	17.09	55	P	Pn	13 59 57.0	-0.9
	0.1nm,0.3s,baz=298,slow=9.8,SNR=4.8						
	1.3nm,0.8s						
BGES	Gesves	18.55	130	*d*P	Pn	14 00 16.3	+0.3
BTNL	Ternell	18.73	128	*d*P	Pn	14 00 20.4	+2.2
	comp=Z,9.9nm,1.3s						
WLF	Walferdange	19.53	129	*d*P	Pn	14 00 27.5	-0.3
FINES	FINESS Array B	19.66	79	P	Pn	14 00 30.1	+0.9
FINES	FINESS Array B	19.66	79	P	P	14 00 27.1	-0.8
	comp=Z,0.2nm,0.3s,baz=306,slow=6.4,SNR=5.2						
	comp=Z,2.8nm,0.9s						
CLL	Collm	20.66	116		Pn	14 00 40.4	-0.7
CLL	Collm	20.66	116	*i* P	Pn	14 00 39.9	-1.2
	comp=Z,23nm,1.5s						
CLL				*i* x	x	14 00 47.7	
CLL				*e*PPP	PPP	14 01 07.0	
ECH	Echery	21.11	130		P	14 00 45.5	+1.8
GRF	Grafenberg Arr	21.29	121	*e*P	P	14 00 47.1	+1.4
	comp=Z,36nm,1.8s,baz=325,slow=11						
BRG	Berggiesshubel	21.37	115	*e*P	P	14 00 47.6	+1.1
BRG				Amp		14 00 51.6	
	comp=Z,12nm,1.1s						
BRG	Berggiesshubel	21.37	115	P	P	14 00 55.6	+9.1
BRG				Amp		14 00 59.0	
	comp=Z,9.1nm,1.0s						
BFO	Black Forest	21.41	127		P	14 00 48.2	+1.3
PABE	Paberze	22.16	95	P	P	14 00 55.2	+0.3
PABE				IAmb	IAmb	14 00 58.2	
	comp=Z,25nm,1.1s						
KSP	Ksiaz	22.32	112	*e*P	P	14 00 57.1	+0.4
KHC	Kasperske Hory	22.63	119	*e*P	P	14 01 04.7	+4.6
GEC2	GERESS Array S	22.91	119	P	P	14 01 05.3	+2.2
GERES	GERESS Array B	22.91	119	P	P	14 01 04.6	+1.5
GERES	GERESS Array B	22.91	119	P	P	14 01 04.2	+1.1
	comp=Z,0.9nm,0.7s,baz=312,slow=10,SNR=8.0						
	comp=Z,0.9nm,0.7s						
DAVOX	Davos/Dischmat	23.28	127	P	P	14 01 07.8	+0.9
	comp=Z,1.3nm,0.4s,baz=338,slow=12,SNR=3.7						
DAVOX				LR	LR	14 10 13.4	
	comp=Z,260nm,19.4s,baz=75,slow=37						
	comp=Z,1.3nm,0.4s						
VRAC	Vranov	23.65	114	P	P	14 01 11.5	+1.1
	comp=Z,1.8nm,0.4s,baz=336,slow=11,SNR=8.5						
	comp=Z,1.8nm,0.4s						
VRAC	Vranov	23.65	114	*e*P	P	14 01 11.6	+1.2
MORC	Moravsky Berou	23.65	112		P	14 01 11.7	+1.2
MORC	Moravsky Berou	23.65	112	*e*P	P	14 01 11.8	+1.3
EUNU	Eureka	23.70	336		P	14 01 10.7	0.0
EUNU				IAmb	IAmb	14 01 47.7	
	comp=Z,20nm,1.5s						
KRUC	Moravsky	23.77	115	*e*P	P	14 01 12.0	+0.4
NACGM	Naroch	23.77	93	*e*P	P	14 01 12.3	+0.8
OJC	Ojcow	24.21	109	*e*P	P	14 01 17.7	+1.9
OJC	Ojcow	24.21	109	P	P	14 01 17.5	+1.7
JAVC	Velka Javorina	24.43	113	*e*P	P	14 01 20.5	+2.7
CIMO	Cimolais	24.58	124	P	P	14 01 20.9	+1.7
MODS	Modra-Piesok	24.67	115	*e*P	P	14 01 20.7	+0.8
STAL	STALIGIAL	24.72	124	P	P	14 01 21.5	+1.1
PRED	Cave del Predi	24.87	122		P	14 01 23.0	+1.2
VYHS	Vyhne	25.19	113	*e*P	P	14 01 28.3	+3.7
PSZ	Piszkesteto	26.07	112		P	14 01 33.8	+1.1
PSZ				IAmb	IAmb	14 01 39.1	
	comp=Z,24nm,1.5s						
SCHQ	Schefferville	26.09	271	P	P	14 01 32.4	-0.3
	comp=Z,11nm,1.1s,baz=26,slow=7.3,SNR=4.0						
	comp=Z,11nm,1.1s						
ESDC	Sonseca Array	26.23	156	P	P	14 01 35.3	+1.2
ESDC	Sonseca Array	26.23	156	P	P	14 01 34.5	+0.4
	comp=Z,0.8nm,0.6s,baz=349,slow=9.0,SNR=8.3						
	comp=Z,0.8nm,0.6s						
AKASG	Malin Array Be	27.80	98	P	P	14 01 48.0	-0.1
	comp=Z,0.2nm,0.3s,baz=323,slow=10.0,SNR=7.6						
	comp=Z,0.2nm,0.3s						
PVAQ	Vaqueiros	27.89	163	P	P	14 01 49.8	+0.8
PVAQ				IAmb	IAmb	14 02 29.3	
	comp=Z,12nm,1.4s						
BURAR	Bucovina Array	28.48	106	P	P	14 01 56.1	+1.8
FNA	Florina	32.63	118	P	P	14 02 32.3	+1.3
MDT	Midelt	32.83	160	LR	LR	14 15 46.0	
	comp=Z,281nm,18.7s,baz=240,slow=36						
RDO	Rodhopi	33.94	113		P	14 02 43.5	+1.2
RDO				IAmb	IAmb	14 02 47.1	
	comp=Z,7.6nm,1.0s						
ARTI	Arti	36.00	67	P	P	14 03 01.1	+1.2
ARTI				IAmb	IAmb	14 03 03.3	
	comp=Z,5.9nm,1.0s						
MANT	Manisa	37.41	112	P	P	14 03 12.9	+0.5
BRTR	Keskin Array B	38.43	105	P	P	14 03 21.5	+0.6
BRTR	Keskin Array B	38.43	105	P	P	14 03 21.1	+0.1
	comp=Z,0.9nm,0.7s,baz=349,slow=5.3,SNR=5.9						
	comp=Z,0.9nm,0.7s						
KBZ	Khabaz	39.07	93	P	P	14 03 26.9	+1.0
	comp=Z,3.5nm,0.8s,baz=322,slow=9.3,SNR=6.8						
	comp=Z,3.5nm,0.8s						
YKA	Yellowknife Ar	39.25	313	P	P	14 03 27.1	-0.2
	comp=Z,1.4nm,1.0s,baz=37,slow=9.0,SNR=9.4						
	comp=Z,1.4nm,1.0s						
INK	Inuvik	39.87	329	P	P	14 03 33.0	+0.6
	baz=37						
D28M	Stokes Point	40.15	332	P	P	14 03 35.6	+1.0
	baz=35						
AKTO	Aktyubinsk	40.24	73	LR	LR	14 20 07.0	
	comp=Z,263nm,18.3s,baz=256,slow=36						
F31M	Tsiigehtchic	40.62	328	P	P	14 03 40.1	+1.5
F31M				IAmb	IAmb	14 03 42.8	
	comp=Z,15nm,1.3s						
F31M	Tsiigehtchic	40.62	328	P	P	14 03 39.4	+0.8
	baz=37						
FFC	Flin Flon	40.64	298	P	P	14 03 39.2	+0.3
E29M	Blow River	40.75	331	P	P	14 03 41.2	+1.4
E29M	Blow River	40.75	331	P	P	14 03 40.7	+1.0
	baz=35						
C26K	Camden Bay	40.84	335	P	P	14 03 41.2	+0.8
	baz=32						
C27K	Jago River	40.87	334	P	P	14 03 41.4	+0.7
	baz=32						
E28M	Babbage River	40.91	332	P	P	14 03 42.4	+1.3
E28M	Babbage River	40.91	332	P	P	14 03 41.7	+0.6
	baz=34						
F30M	Barrier River	40.94	329	P	P	14 03 42.9	+1.6
	baz=36						
G31M	Satah River	41.16	328	P	P	14 03 43.9	+0.8
G31M				IAmb	IAmb	14 03 47.1	
	comp=Z,14nm,1.4s						
G31M	Satah River	41.16	328	P	P	14 03 44.3	+1.3
	baz=36						
A21K	Barrow	41.45	341	P	P	14 03 47.0	+1.6
	baz=25						
A22K	Sinclair Lake	41.51	341	P	P	14 03 47.1	+1.3
	baz=26						
G30M	tAoh Zraii Nji	41.55	329	P	P	14 03 48.4	+2.0
	baz=35,SNR=6.8						
D25K	Kavik River	41.61	335	P	P	14 03 47.4	+0.6
D25K	Kavik River	41.61	335	P	P	14 03 48.4	+1.6
	baz=30,SNR=6.7						
C24K	Franklin Bluff	41.67	337	P	P	14 03 49.3	+2.1
	baz=29						
E27K	Coleen River	41.68	332	P	P	14 03 49.0	+1.6
	baz=33						
F28M	Old Crow	41.82	331	P	P	14 03 50.1	+1.6
	baz=33						
B22K	Teshekpuk Lake	41.88	339	P	P	14 03 51.3	+2.4
	baz=27						
C23K	Itkillik River	41.89	338	P	P	14 03 51.6	+2.6
	baz=28						
G29M	Pine Creek	42.01	330	P	P	14 03 51.5	+1.4
	baz=34						
TIXI	Tiksi	42.03	15	P	P	14 03 52.2	+2.1
TIXI				IAmb	IAmb	14 03 53.5	
	comp=Z,12nm,1.1s						
H31M	Peel River	42.09	327	P	P	14 03 52.2	+1.4
H31M				IAmb	IAmb	14 03 55.3	
	comp=Z,12nm,1.3s						
H31M	Peel River	42.09	327	P	P	14 03 52.7	+1.9
	baz=35						
EPYK	Eagle Plains	42.17	328	P	P	14 03 52.5	+1.0
	baz=34						
D24K	Happy Valley	42.19	336	P	P	14 03 53.5	+2.0
	baz=29						
E25K	Arctic Village	42.51	334	P	P	14 03 56.4	+2.3
	baz=30,SNR=7.4						
F26K	Sheenjek River	42.61	333	P	P	14 03 56.4	+1.4
	baz=31						
H29M	Whitestone	42.67	329	P	P	14 03 57.3	+1.9
	baz=33						
D23K	Nanushuk River	42.67	337	IAmb	IAmb	14 03 59.2	
	comp=Z,11nm,1.3s						
D23K	Nanushuk River	42.67	337	P	P	14 03 57.7	+2.2
	baz=28						
B21K	Ikpikpuk River	42.71	339	P	P	14 03 57.9	+2.2
	baz=26						
B20K	Meade River	42.73	341	P	P	14 03 57.7	+1.9
	baz=24						
TOLK	Toolik Lake Re	42.77	336	P	P	14 03 58.0	+1.7
TOLK				IAmb	IAmb	14 04 01.1	
	comp=Z,11nm,1.1s						
TOLK	Toolik Lake Re	42.77	336	P	P	14 03 58.9	+2.6
	baz=28,SNR=6.4						
G27K	Doyon Strip	42.87	331	P	P	14 03 58.5	+1.4
	baz=32						
BMAR	Burnt Mountain	42.92	333	P	P	14 03 57.7	+0.2
F25K	Christian Rive	42.98	334	P	P	14 04 00.3	+2.3
	baz=30,SNR=10						
I30M	Mount Dempster	43.05	327	P	P	14 04 00.1	+1.3
	baz=34						
D22K	Ayikyak River	43.08	338	P	P	14 04 00.7	+2.0
	baz=27						
E24K	Your Creek	43.08	336	P	P	14 04 00.2	+1.4
E24K	Your Creek	43.08	336	P	P	14 04 01.0	+2.2

	baz=29,SNR=7.1						
C21K	Knifeblade Rid	43.16	339	P	P	14 04 01.5	+2.2
	baz=26						
BVAR	Borovoye Array	43.16	62	P	P	14 04 01.2	+1.7
	comp=Z,5.0nm,0.9s,baz=325,slow=7.4,SNR=15						
	comp=Z,5.0nm,0.9s						
G26K	Porcupine Rive	43.18	332	P	P	14 04 00.9	+1.3
	baz=31						
E23K	Chandalar	43.30	336	P	P	14 04 01.9	+1.3
	baz=28						
H27K	Steamboat Moun	43.34	331	P	P	14 04 02.3	+1.4
	baz=32						
I29M	Ogilvie Camp,	43.38	328	P	P	14 04 02.2	+1.0
	baz=33						
F24K	Squaw Lake	43.47	335	P	P	14 04 03.2	+1.3
	baz=29						
J30M	Hart River	43.59	327	P	P	14 04 04.9	+1.9
	baz=33,SNR=7.5						
E22K	Anaktuvuk Pass	43.61	337	P	P	14 04 04.6	+1.6
	baz=27						
I28M	Miner Creek	43.67	329	P	P	14 04 04.9	+1.3
	baz=32						
E21K	Killik River	43.68	338	P	P	14 04 05.8	+2.2
	baz=26						
G25K	Bearman Lake	43.80	333	P	P	14 04 06.8	+2.4
	baz=29						
D20K	Etivluk River	43.84	340	P	P	14 04 07.2	+2.4
	baz=24						
C19K	Lookout Ridge	43.90	342	P	P	14 04 07.2	+1.8
	baz=23						
I27K	Kandik River	43.90	330	P	P	14 04 07.1	+1.7
	baz=31						
MMPY	Sheldon Lake,	43.96	322	P	P	14 04 07.4	+1.5
	baz=35						
G24K	Hadweenzic Riv	44.12	334	P	P	14 04 09.3	+2.2
	baz=28,SNR=8.2						
COLD	Coldfoot	44.14	336	P	P	14 04 09.3	+2.0
	baz=27						
H25L	Birch Creek	44.18	333	P	P	14 04 09.9	+2.3
	baz=29						
E20K	Nigu River	44.19	339	P	P	14 04 09.9	+2.2
	baz=24						
D19K	Kuna River	44.26	340	P	P	14 04 10.0	+1.8
	baz=23						
I26K	Coal Creek Min	44.48	331	P	P	14 04 11.6	+1.6
I26K				IAmb	IAmb	14 04 15.2	
	comp=Z,11nm,1.4s						
I26K	Coal Creek Min	44.48	331	P	P	14 04 11.7	+1.7
	baz=30						
K29M	Barlow Dome	44.49	327	P	P	14 04 11.8	+1.5
	baz=32						
C18K	Utukok River	44.54	342	P	P	14 04 12.3	+1.8
	baz=22						
G23K	Bananza Creek	44.57	335	P	P	14 04 12.8	+2.0
	baz=27						
G22K	Bettles	44.65	336	P	P	14 04 13.3	+2.0
	baz=26						
F21K	Alatna River	44.71	337	P	P	14 04 14.4	+2.6
	baz=25,SNR=6.3						
DAWY	Dawson	44.73	328	P	P	14 04 13.7	+1.6
DAWY				IAmb	IAmb	14 04 16.3	
	comp=Z,11nm,1.3s						
DAWY	Dawson	44.73	328	P	P	14 04 14.6	+2.5
	baz=32,SNR=5.6						
PRP	Porcupine Dome	44.78	332	P	P	14 04 14.8	+2.2
	baz=29						
FARO	Faro, Yukon	44.82	323	P	P	14 04 14.6	+1.8
	baz=34						
H24K	Noodor Dome	44.96	334	P	P	14 04 15.7	+1.8
	baz=28						
C17K	DeLong Mountai	44.96	343	P	P	14 04 16.1	+2.3
	baz=20						
E19K	Redstone River	45.09	339	P	P	14 04 17.3	+2.5
	baz=23						
M31M	Drury Creek, Y	45.11	324	P	P	14 04 17.3	+2.1
	baz=33						
F20K	Avaraart Lake	45.23	338	P	P	14 04 18.4	+2.4
	baz=24,SNR=9.3						
L29M	L29M	45.26	327	P	P	14 04 18.6	+2.3
	baz=32						
J26L	Joseph Creek	45.27	331	P	P	14 04 18.6	+2.2
	baz=30						
H23K	Yukon River	45.28	335	P	P	14 04 19.7	+3.3
	baz=27,SNR=10.0						
G21K	Allakaket	45.36	337	P	P	14 04 19.4	+2.4
	baz=25						
K27K	Chicken	45.36	329	P	P	14 04 19.2	+2.2
	baz=30						
C16K	Lisburne Hills	45.41	344	P	P	14 04 19.9	+2.5
	baz=19						
J25K	Salcha River,	45.55	332	P	P	14 04 20.1	+1.5
J25K				IAmb	IAmb	14 04 23.9	
	comp=Z,10nm,1.2s						
J25K	Salcha River,	45.55	332	P	P	14 04 20.9	+2.4
	baz=29,SNR=7.7						
H22K	Ishtalitna Cre	45.55	336	P	P	14 04 21.0	+2.4
	baz=26,SNR=7.4						
D17K	Noatak River	45.68	343	P	P	14 04 21.1	+1.7
	baz=20						
ILAR	Eielson Array	45.71	332	P	P	14 04 21.1	+1.2
	comp=Z,2.8nm,1.0s,baz=22,slow=6.4,SNR=20						
ILAR				PcP	PcP	14 05 58.6	+1.2
	comp=Z,1.2nm,1.0s,baz=1.8,slow=3.9,SNR=7.2						
	comp=Z,2.8nm,1.0s						
F19K	Shaleruckik Mo	45.74	339	P	P	14 04 22.1	+2.1
	baz=23						
COLA	College	45.81	333	P	P	14 04 22.4	+1.9
	baz=27						
SCRK	Sand Creek	45.82	330	P	P	14 04 22.2	+1.4
	baz=29						
I23K	Minto, Yukon-K	45.85	334	P	P	14 04 23.2	+2.3
	baz=27						
IMAR	Indian Mountai	45.88	337	P	P	14 04 22.8	+1.6
M29M	Somme Creek	45.91	326	P	P	14 04 23.7	+2.2
	baz=31						
H21K	Melozitna Rive	46.02	336	P	P	14 04 25.4	+3.1
	baz=25,SNR=13						
HDA	Harding Lake	46.05	332	P	P	14 04 24.6	+2.1
	baz=28						
N31M	Braeburn, Yuko	46.07	324	P	P	14 04 24.4	+1.7
	baz=32						
E17K	Hotham Inlet	46.10	342	P	P	14 04 25.1	+2.3
	baz=21						
BCAR	Beaver Creek A	46.14	329	P	P	14 04 23.4	+0.2
L27K	Beaver Creek,	46.15	329	P	P	14 04 25.2	+1.9
	baz=30						
RIDG	Independent Ri	46.21	331	P	P	14 04 25.6	+1.8
	baz=28						
MLY	Manley	46.22	335	P	P	14 04 25.4	+1.5
MLY				IAmb	IAmb	14 04 28.6	
	comp=Z,4.8nm,1.0s						
MLY	Manley	46.22	335	P	P	14 04 26.3	+2.5
	baz=26,SNR=7.5						
F18K	Selawik	46.24	340	P	P	14 04 26.3	+2.4
	baz=22						
G19K	Purcell Mounta	46.28	339	P	P	14 04 26.7	+2.4
	baz=23						
NEA2	Nenana	46.30	334	P	P	14 04 26.7	+2.3
	baz=27						
I21K	Tanana	46.31	335	P	P	14 04 26.9	+2.5
	baz=25						
K24K	Donnelly Dome	46.35	331	P	P	14 04 26.8	+2.0
	baz=28						
P33M	Teslin, Yukon	46.38	321	P	P	14 04 27.0	+1.8
	baz=33						
N30M	Aishikik Lake	46.42	325	P	P	14 04 27.7	+2.2
	baz=31						
H20K	Anotleneega Mo	46.52	337	P	P	14 04 29.3	+3.1
	baz=24,SNR=8.0						
WHY	Whitehorse	46.55	323	P	P	14 04 28.6	+2.0
	baz=32						
R33M	Jennings River	46.57	320	P	P	14 04 28.0	+1.2
R33M				IAmb	IAmb	14 04 31.4	
	comp=Z,5.7nm,1.4s						
R33M	Jennings River	46.57	320	P	P	14 04 28.1	+1.3
	baz=33						
H19K	Roundabout Mou	46.75	338	P	P	14 04 30.2	+2.3
	baz=23						
G18K	Tagagawik	46.75	339	P	P	14 04 30.6	+2.6
	baz=22						
O30N	Mendenhall	46.76	324	P	P	14 04 29.9	+1.8
	baz=31						
YUK4	Talbot Arm	46.90	326	P	P	14 04 30.7	+1.3
	baz=31						
YUK3	Moose Creek	46.96	327	P	P	14 04 32.0	+2.1
	baz=30						
M26K	Nabesna, AK	46.99	329	IAmb	IAmb	14 04 35.7	
	comp=Z,8.7nm,1.3s						
M26K	Nabesna, AK	46.99	329	P	P	14 04 32.6	+2.7
	baz=29						
PAX	Paxson	47.02	331	P	P	14 04 32.5	+2.2
	baz=28						
MCK	McKinley	47.05	333	P	P	14 04 32.9	+2.6
	baz=26						
HYT	Haines Junctio	47.07	325	P	P	14 04 32.5	+1.8
	baz=31						
I20K	Naaghedeneel	47.10	337	P	P	14 04 33.1	+2.5
	baz=24						
BPAW	Bear Paw Mtn.	47.11	334	P	P	14 04 33.1	+2.3
	baz=25						
P32M	Atlin	47.15	322	P	P	14 04 34.2	+3.0
	baz=32						
Q32M	Nakina River	47.30	320	P	P	14 04 34.5	+1.9
	baz=32						
DHY	Denali Highway	47.33	332	P	P	14 04 34.7	+2.0
	baz=27						
H18K	Honhosa River	47.40	339	P	P	14 04 36.0	+3.0
	baz=22						
G17K	Kiwalik Mounta	47.42	340	P	P	14 04 36.0	+2.8
	baz=21						
GCSA	Galena City Sc	47.54	338	P	P	14 04 37.4	+3.3
	baz=22						
CHUM	Lake Minchumin	47.55	335	P	P	14 04 36.2	+2.0
	baz=25						
ZAA0	Zalesovo Array	47.60	51	P	P	14 04 36.0	+1.3
ZAA0				IAmb	IAmb	14 04 36.9	
	comp=Z,7.2nm,1.5s						
ZALV	Zalesovo Beam	47.60	51	P	P	14 04 36.0	+1.3
ZALV	Zalesovo Beam	47.60	51	P	P	14 04 35.0	+0.3
	comp=Z,0.6nm,0.4s,baz=336,slow=9.5,SNR=3.8						
	comp=Z,0.6nm,0.4s						
J20K	Nowinta River	47.61	336	P	P	14 04 36.7	+2.0
J20K	Nowinta River	47.61	336	P	P	14 04 37.0	+2.3
	baz=24,SNR=5.3						
G16K	Koyuk River	47.76	341	P	P	14 04 38.8	+2.9
	baz=20						
F15K	North Star Dit	47.77	342	P	P	14 04 38.3	+2.4
	baz=19						
O28M	Mount Upton	47.77	326	P	P	14 04 38.8	+2.4
	baz=30						
WAT1	Susitna Watana	47.79	332	P	P	14 04 38.9	+2.8
	baz=26						
O29M	Mount Kennedy	47.79	325	P	P	14 04 38.1	+1.8
	baz=30						
H17K	Granite Mounta	47.84	340	P	P	14 04 39.2	+2.8
	baz=21						
WAT6	Susitna Watana	47.85	332	P	P	14 04 38.9	+2.1
	baz=26						
CTG	Chitna Glacier	47.88	327	P	P	14 04 39.3	+2.4
	baz=29						
MCARA	McCarthy VSAT	47.90	328	P	P	14 04 38.3	+1.3
	baz=28						
CAST	Castle Rocks	47.93	334	P	P	14 04 39.0	+1.8
	baz=25						
M24K	Tolsona, Glenn	47.95	330	P	P	14 04 39.6	+2.2
	baz=27						
PLBC	Pleasant Camp	47.96	323	P	P	14 04 39.4	+1.9
	baz=31						
J19K	Poorman	48.03	337	P	P	14 04 40.6	+2.7
	baz=23						
N25K	Chitina, Valde	48.05	329	P	P	14 04 40.5	+2.3
	baz=28						
KURBB	Kurchatov Arra	48.12	58	P	P	14 04 39.5	+0.8
	comp=Z,4.1nm,0.9s,baz=324,slow=7.5,SNR=25						
	comp=Z,4.1nm,0.9s						
K20K	Telida	48.35	336	P	P	14 04 42.6	+2.2
	baz=24						
PPLA	Purkeypile	48.43	334	P	P	14 04 43.3	+2.1
	baz=24						
SCM	Sheep Creek Mo	48.43	331	P	P	14 04 42.4	+1.2
SCM	Sheep Creek Mo	48.43	331	P	P	14 04 43.5	+2.3
	baz=26						
KLU	Klutina	48.44	330	P	P	14 04 43.4	+2.2
	baz=27						
CRQE	Cirque	48.47	328	P	P	14 04 43.5	+2.0
	baz=28						
R32K	Eaglecrest	48.50	321	P	P	14 04 43.5	+1.9
	baz=31						
PNL	Peninsula	48.55	325	P	P	14 04 43.7	+1.7
	baz=29						
M23K	Glacier View	48.55	331	P	P	14 04 44.2	+2.2
	baz=26						
BMRM	Bremner River	48.62	329	P	P	14 04 44.3	+1.7
	baz=27						
J18K	Innoko River	48.71	337	P	P	14 04 45.4	+2.2
	baz=22						
I17K	Unalakleet	48.95	339	P	P	14 04 47.8	+2.9
	baz=20						
ANM	Nome	48.96	342	P	P	14 04 47.9	+2.8
	baz=18						
PMR	Palmer	49.02	332	P	P	14 04 47.9	+2.4
	baz=25						
L20K	Farewell, AK	49.13	335	P	P	14 04 48.4	+2.0
	baz=23						
SKT	Skwentna	49.15	333	P	P	14 04 48.2	+1.7
	baz=24						
S32K	Killisnoo	49.21	321	P	P	14 04 48.9	+1.9
	baz=31						
SUA	Susitna One	49.47	333	P	P	14 04 50.0	+0.8
	baz=24						
J16K	Anvik River	49.50	339	P	P	14 04 51.6	+2.4
	baz=20						
PWL	Port Wells	49.52	331	P	P	14 04 50.8	+1.3
PWL	Port Wells	49.52	331	P	P	14 04 51.3	+1.8
	baz=26						
M20K	Styx River	49.54	334	P	P	14 04 51.2	+1.6
	baz=24						
RC01	Rabbit Creek A	49.60	332	P	P	14 04 52.2	+2.1
	baz=25						
K17K	Iditarod	49.67	338	P	P	14 04 52.5	+2.0
	baz=21						
L18K	Granite Mounta	49.87	336	P	P	14 04 53.1	+1.1
	baz=22						
L17K	Donlin	50.22	337	P	P	14 04 56.2	+1.6
	baz=21						
K15K	Wolf Creek Mou	50.58	339	P	P	14 04 59.2	+1.8
	baz=19						
M17K	Holitna River	50.76	336	P	P	14 05 00.1	+1.3
	baz=21						
RED	Redoubt Volcan	50.82	333	P	P	14 04 59.9	+0.5
L15K	Ungalak Mounta	51.16	339	P	P	14 05 03.8	+2.1
	baz=19						
KKAR	Karatay Array	51.24	70	P	P	14 05 03.8	+1.2
M16K	Timber Creek	51.37	337	P	P	14 05 04.9	+1.5
	baz=20						
K13K	Kusilvak Mount	51.38	341	P	P	14 05 05.3	+1.9
	baz=18						
YNE	Yellowstone No	51.52	295	P	P	14 05 05.7	+0.7
YNE				IAmb	IAmb	14 05 13.8	
	comp=Z,11nm,1.4s						
N17K	Nushagak Hills	51.54	336	P	P	14 05 06.0	+1.4
	baz=21						
BOZ	Bozeman (W)	51.65	297	IAmb	IAmb	14 05 09.7	
	comp=Z,7.2nm,1.1s						
L14K	Kuka Creek	51.66	340	P	P	14 05 07.0	+1.5
	baz=18						
O18K	Koktuh Hills	51.81	334	P	P	14 05 08.0	+1.4
	baz=22						
N16K	Nishlik Lake	51.86	337	P	P	14 05 09.0	+1.9
	baz=20						
M15K	Kasigluk River	51.97	338	P	P	14 05 09.9	+2.1
	baz=19						
M14K	Bethel	52.11	339	P	P	14 05 09.6	+0.7
M14K	Bethel	52.11	339	P	P	14 05 11.2	+2.3
	baz=19,SNR=5.8						
O17K	Koliganek Bris	52.23	336	P	P	14 05 11.8	+2.1
	baz=21						
M13K	Dall Lake	52.65	340	P	P	14 05 15.3	+2.4
	baz=18						
MKAR	Makanchi Array	52.69	58	P	P	14 05 14.6	+1.1
MKAR	Makanchi Array	52.69	58	P	P	14 05 14.1	+0.7
	comp=Z,1.7nm,0.9s,baz=335,slow=5.4,SNR=12						
	comp=Z,1.7nm,0.9s						
N14K	Kuskokwak Cree	52.86	338	P	P	14 05 17.1	+2.7
	baz=19						
TORD	Torodi Ar. Bea	53.12	157	P	P	14 05 18.3	+1.4
	comp=Z,1.3nm,0.3s,baz=340,slow=6.9,SNR=1.6						
	comp=Z,1.3nm,0.3s						
BW06	Boulder Array	53.22	293	IAmb	IAmb	14 05 22.0	
	comp=Z,6.0nm,1.0s						
PD31	Pinedale Array	53.22	293	IAmb	IAmb	14 05 22.0	
	comp=Z,5.2nm,0.9s						
PDAR	Pinedale Array	53.22	293	P	P	14 05 17.3	-0.3
PDAR	Pinedale Array	53.22	293	P	P	14 05 18.2	+0.5
	comp=Z,2.1nm,0.8s,baz=54,slow=5.8,SNR=15						
	comp=Z,2.1nm,0.8s						
BOOM	Boomskoye usch	53.92	66	P	P	14 05 23.7	+1.0
BOOM				IAmb	IAmb	14 05 27.4	
	comp=Z,6.9nm,1.2s						
KDJ	Kajisay	54.71	65	P	P	14 05 30.7	+2.2
KDJ				IAmb	IAmb	14 05 32.7	
	comp=Z,6.2nm,1.2s						
HWUT	Hardware Ranch	54.99	294	P	P	14 05 30.7	+0.1
HWUT				IAmb	IAmb	14 05 34.2	
	comp=Z,8.0nm,1.1s						
KSH	Kashi	56.46	68	P	P	14 05 44.3	+3.3
KSH				pmax	pmax		
	comp=Z,4.0nm,0.5s						
PV21	Cone Mtn., Par	56.56	290	IAmb	IAmb	14 05 46.4	
	comp=Z,4.7nm,1.0s						
PV12	Saucer Basin,	56.70	290	IAmb	IAmb	14 05 46.2	
	comp=Z,7.0nm,1.1s						
PV16	Nyswonger Mesa	56.75	290	IAmb	IAmb	14 05 47.4	
	comp=Z,10nm,1.4s						
PV01	Paradox Valley	56.76	290	IAmb	IAmb	14 05 46.9	
	comp=Z,4.8nm,1.1s						
PV17	East Wray Mesa	56.80	290	IAmb	IAmb	14 05 47.0	
	comp=Z,8.8nm,1.2s						
HMU	Henry Mountain	57.81	291	IAmb	IAmb	14 06 22.8	
	comp=Z,8.2nm,1.1s						
MVU	Marysvale	57.91	293	IAmb	IAmb	14 05 55.7	
	comp=Z,4.6nm,1.1s						
BRDY	Brady	58.65	277	P	P	14 05 55.5	-1.0
BRDY				IAmb	IAmb	14 06 00.6	
	comp=Z,5.8nm,1.2s						
R11B	Troy Canyon, C	59.37	295	IAmb	IAmb	14 06 06.5	
	comp=Z,5.0nm,1.4s						
GWY	Greenwater Val	61.67	295	P	P	14 06 17.3	+0.1
TXAR	Lajitas Array	62.33	280	P	P	14 06 22.6	+0.9
	comp=Z,1.0nm,0.9s,baz=67,slow=3.3,SNR=7.8						
	comp=Z,1.0nm,0.9s						
MDP	Montagnes des	64.54	220	LR	LR	14 27 25.3	
	comp=Z,160nm,20.1s,baz=18,slow=29						
GTA	Gaotai	65.27	49	*e*P	P	14 06 41.4	+0.5
GTA				pP	sP	14 06 47.4	+1.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.5s						
HHC	Hu-ho-hao-te	67.49	40	*e*P	P	14 06 55.9	+0.8
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
PZH	PanZhiHua	77.71	53	P	P	14 07 57.0	+0.9
NJ2	Nanjing	77.72	37	*e*P	P	14 07 55.6	-0.3
NJ2				pmax	pmax		
	comp=Z,12nm,1.6s						
CMAR	Chiang Mai Arr	84.10	59	P	P	14 08 30.8	+0.6
	comp=Z,0.5nm,0.5s,baz=320,slow=6.9,SNR=7.4						
	comp=Z,0.5nm,0.5s						

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*IDC **24** 13:57:15.7±0.8, 26°.14S×70°.92E, h0^{km}, mb3.9/9, mbtmp3.9/9, MS4.1/4, Error ellipse: s-maj=28.3km s-min=22.6km az=106.0*

ISC 24 13:57:17.5±0.9**, 26°.2S**±0°.2×**70°.9E**±0°.2**, h11^{km}, n20, σ0^{s}.40**/9**, mb3.8**/9**, MS4.2**/4**, Indian Ocean Triple Junction**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	18.47	5	T	T	14 20 33.3	
	baz=185,slow=76,SNR=63						
H08S2	Diego Garcia H	18.47	5	T	T	14 20 34.4	
	baz=185,slow=76,SNR=40						
H08S3	Diego Garcia H	18.49	5	T	T	14 20 33.1	
	baz=185,slow=76,SNR=67						
H04N2	CROZET ISLANDS	25.11	212	T	T	14 28 45.1	
	baz=44,slow=75,SNR=1944						
H04N1	CROZET ISLANDS	25.12	212	T	T	14 28 53.7	
	baz=44,slow=75,SNR=2585						
H04N3	CROZET ISLANDS	25.13	212	T	T	14 28 49.3	
	baz=44,slow=75,SNR=2533						
PALK	Pallekele	34.56	17	LR	LR	14 15 08.6	
	comp=Z,423nm,18.0s,baz=312,slow=31						
H01W2	Cape Leeuwin H	37.99	114	T	T	14 44 55.4	
	baz=271,slow=74,SNR=28						
H01W3	Cape Leeuwin H	37.99	114	T	T	14 44 50.4	
	baz=271,slow=74,SNR=40						
H01W1	Cape Leeuwin H	38.01	114	T	T	14 44 59.8	
	baz=271,slow=74,SNR=41						
BOSA	Boshof	40.44	256	P	P	14 04 56.4	+0.2
	1.1nm,0.6s,baz=103,slow=7.7,SNR=7.6						
BOSA				LR	LR	14 19 19.8	
	comp=Z,276nm,18.2s,baz=16,slow=33						
	1.1nm,0.6s						
LBTB	Lobatse	40.74	261	LR	LR	14 19 21.7	
	comp=Z,282nm,18.8s,baz=66,slow=33						
CMAR	Chiang Mai Arr	52.04	34	P	P	14 06 27.9	+0.5
	0.3nm,0.4s,baz=217,slow=7.1,SNR=5.2						
CMAR				LR	LR	14 24 41.6	
	comp=Z,92nm,18.9s,baz=255,slow=32						
	0.3nm,0.4s						
ASAR	Alice Springs	56.68	102	P	P	14 07 01.4	0.0
	0.5nm,0.6s,baz=251,slow=7.5,SNR=2.6						
	0.5nm,0.6s						
WRA	Warramunga Arr	58.20	98	P	P	14 07 12.0	0.0
	0.6nm,0.6s,baz=251,slow=7.7,SNR=3.5						
	0.6nm,0.6s						
QSPA	South Pole Qui	63.97	180	P	P	14 07 50.7	0.0
	1.0nm,0.8s,baz=262,slow=1.7,SNR=4.9						
	1.0nm,0.8s						
VNDA	Vanda	64.86	166	P	P	14 07 56.0	-0.1
	1.4nm,0.9s,baz=301,slow=9.5,SNR=3.7						
	1.4nm,0.9s						
MKAR	Makanchi Array	73.34	8	P	P	14 08 48.3	-0.8
	0.8nm,0.6s,baz=196,slow=5.2,SNR=7.5						
	0.8nm,0.6s						
KURBB	Kurchatov Arra	76.74	5	P	P	14 09 08.2	-0.3
	0.7nm,0.3s,baz=201,slow=7.6,SNR=2.6						
	0.7nm,0.3s						
ZALV	Zalesovo Beam	80.68	8	P	P	14 09 30.2	+0.1
	0.3nm,0.3s,baz=210,slow=8.3,SNR=3.5						
	0.3nm,0.3s						

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*NEIC **24** 14:13:23.4±0.7, 36°.81N±0°.03×98°.26W±0°.02, h5^{km}±1^{km}, Error ellipse: s-maj=5.9km s-min=2.8km az=347.0*

NEIC 24 14:13:23.6±0.8**, 36°.80N**±0°.03×**98°.26W**±0°.01**, h5^{km}**±1^{km}**, mb_Lg2.8**/42**, ML2.9**/28**, ML3.0**/12**, Error ellipse: s-maj=5.7km s-min=2.5km az=353.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.32	81		Pg	14 13 30.1	+0.2
CROK	Carrier	0.37	143		Pg	14 13 31.2	+0.5
CROK					Sg	14 13 36.9	+1.4
CROK				IAML		14 13 39.2	
	comp=E,2µm,0.3s						
BLOK	Blackwell	0.84	92		Pg	14 13 39.4	-0.3
BLOK					Sg	14 13 50.8	+0.3
CSTR	Hydro, Custer	1.20	197		Pg	14 13 46.5	-0.2
QUOK	Quay	1.40	116		Pn	14 13 49.4	-0.4
QUOK					Sb	14 14 08.3	0.0
T35A	Sooner Cattle	1.41	85		Pn	14 13 49.1	-0.7
T35A					Sn	14 14 10.0	+1.2
OKCSW	OKLAHOMA CITY	1.54	154		Pn	14 13 51.4	-0.4
FNO	Franklin	1.69	155		Pn	14 13 53.7	-0.1
DEOK	Depew	1.71	123		Pn	14 13 53.5	-0.5
TUL3	Leonard	2.18	113	IAmb_Lg		14 14 33.6	
	comp=Z,52nm,0.8s						
SMWD	Samnorwood	2.34	224		Sb	14 14 35.7	+0.3
SMWD				IAmb_Lg		14 14 41.3	
	comp=Z,29nm,0.7s						
KSU1	Kansas State U	2.64	29	IAmb_Lg		14 14 50.8	
	comp=Z,42nm,1.0s						
LOOK	Love County	2.94	162		Pn	14 14 11.9	+1.0
AMTX	Amarillo	3.38	236	IAmb_Lg		14 15 19.3	
	comp=Z,34nm,1.1s						
HHAR	Hobbs	3.52	97	IAmb_Lg		14 15 23.7	
	comp=Z,22nm,0.7s						
DKNS	Dickens	3.81	216	IAmb_Lg		14 15 29.3	
	comp=Z,17nm,0.8s						
KSCO	Kaye Shedlock’	4.10	304	IAmb_Lg		14 15 34.8	
	comp=Z,24nm,0.8s						
SN07	Snyder 07	4.29	211	IAmb_Lg		14 15 50.0	
	comp=Z,17nm,0.9s						
SN05	Snyder 5	4.47	210	IAmb_Lg		14 15 49.3	
	comp=Z,16nm,0.9s						
POST	Post	4.58	217	IAmb_Lg		14 15 54.3	
	comp=Z,15nm,0.8s						
BGNE	Belgrade	4.60	1	IAmb_Lg		14 16 00.8	
	comp=Z,27nm,0.7s						
P38A	Dawn	4.67	51	IAmb_Lg		14 15 53.7	
	comp=Z,23nm,0.7s						
MGMO	Mountain Grove	4.81	84	IAmb_Lg		14 16 04.5	
	comp=Z,12nm,0.7s						

X40A	Basin Creek Fa	4.98	116	IAmb_Lg		14 16 12.0	
	comp=Z,12nm,0.8s						
R40A	Maddies Statio	4.99	71	IAmb_Lg		14 16 06.9	
	comp=Z,13nm,0.7s						
UALR	University of	5.21	111	IAmb_Lg		14 16 19.2	
	comp=Z,15nm,0.9s						
P40A	Paris	5.60	59	IAmb_Lg		14 16 26.9	
	comp=Z,16nm,0.8s						
CCM	Cathedral Cave	5.72	75	IAmb_Lg		14 16 28.3	
	comp=Z,14nm,1.0s						
PBMO	Poplar Bluff	6.28	88	IAmb_Lg		14 16 43.9	
	comp=Z,15nm,0.7s						
CGM3	Cape Girardeau	6.89	83	IAmb_Lg		14 17 07.4	
	comp=Z,13nm,1.1s						
L42A	Oliver, Polo	8.44	49	IAmb_Lg		14 18 02.3	
	comp=Z,11nm,0.8s						

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*IDC **24** 14:17:02.2±2.4, 30°.87S×177°.68W, h0^{km}, mb3.6/2, mbtmp3.6/2, Error ellipse: s-maj=60.8km s-min=27.7km az=108.0*

ISC 24 14:17:04.1±2.3**, 31°.1S**±0°.1×**177°.6W**±0°.4**, h27^{km}, n6, σ1^{s}.58**/9**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.84	351	Pn	Pn	14 17 31.9	-2.0
	58nm,0.3s,baz=91,slow=21,SNR=2.2						
RAO				Sn	Sn	14 17 55.8	-0.4
	111nm,0.3s,baz=101,slow=20,SNR=4.4						
URZ	Urewera	8.40	210	Pn	Pn	14 19 02.8	-1.2
	0.2nm,0.3s,baz=161,slow=23,SNR=1.6						
URZ				Sn	Sn	14 20 36.8	-1.1
	0.9nm,0.3s,baz=226,slow=20,SNR=6.5						
ASAR	Alice Springs	43.44	267	P	P	14 25 06.5	+1.6
	0.3nm,0.5s,baz=114,slow=8.3,SNR=6.9						
ASAR				PcP	PcP	14 26 53.9	+0.9
	0.3nm,0.9s,baz=98,slow=3.8,SNR=1.5						
	0.3nm,0.5s						
WRA	Warramunga Arr	44.49	273	P	P	14 25 14.7	+1.3
	0.4nm,0.3s,baz=111,slow=8.0,SNR=6.3						
	0.4nm,0.3s						
FINES	FINESS Array B	145.90	340	PKPbc	PKPab	14 36 41.4	+0.6
	0.5nm,0.4s,baz=56,slow=6.1,SNR=9.6						
AKASG	Malin Array Be	152.05	322	PKPab	PKPab	14 37 07.7	+1.7
	0.8nm,0.6s,baz=58,slow=2.3,SNR=5.7						

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*GCG **24** 14:18:47.6±1.3, 14°.63N×93°.74W, h35^{km}±999^{km}, MD4.3, ML3.8*

*MEX **24** 14:18:50.4±0.8, 14°.78N×93°.71W, h20^{km}±10^{km}, MD4.1*

ISC 24 14:18:45.3±2.7**, 14°.61N**±0°.07×**93°.73W**±0°.03**, h30^{km}**±25^{km}**, n22, σ2^{s}.41**/37**, 1C-1D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.20	24	eP	Pn	14 19 05.9	-0.1
PCIG				iS	Sn	14 19 18.8	-2.5
THIG		1.44	78	eP	Pn	14 19 07.7	-1.7
THIG				eS	Sn	14 19 26.0	-1.4
PATR	El Naranjo	1.53	71	eP	Pn	14 19 12.4	+1.6
PATR				iS	Sn	14 19 30.8	+1.0
PAVE	Pavencul	1.61	69	eP	Pn	14 19 13.8	+2.0
PAVE				eS	Sn	14 19 31.9	+0.2
RTAL	Retalhuleu	1.97	92	eP	Pn	14 19 19.1	+2.4
RTAL				eS	Sn	14 19 43.2	+2.8
TGIG		2.23	15	eP	Pn	14 19 22.0	+1.6
TGIG				iS	Sn	14 19 47.1	+0.1
TGIG		2.23	15	iP	Pn	14 19 21.9	+1.5
TGIG				iS	Sn	14 19 47.1	+0.1
TGIG				IAML		14 19 49.8	
	comp=E,424nm,0.5s						
CCIG	Comitan	2.26	42	eP	Pn	14 19 24.3	+3.5
CCIG				iS	Sn	14 19 49.3	+1.4
CCIG	Comitan	2.26	42	⇑iP	Pn	14 19 24.4	+3.5
CCIG				iS	Sn	14 19 51.3	+3.4
CCIG				IAML		14 19 56.9	
	comp=N,331nm,1.0s						
HUEH	Huehuetenango	2.26	72	eP	Pn	14 19 23.0	+2.1
HUEH				iS	Sb	14 19 52.5	-0.8
STG8	El Palmar, Qui	2.31	94	⇓iP	Pn	14 19 20.9	-0.7
STG8				iS	Sn	14 19 45.3	-3.7
STG8				IAML		14 19 48.4	
	comp=E,845nm,1.6s						
STG0	El Palmar, Qui	2.32	94	iP	Pn	14 19 21.0	-0.6
STG0				iS	Sn	14 19 47.3	-1.9
STG0				IAML		14 19 50.2	
	comp=E,2μm,1.1s						
HUIG	Huatulco	2.57	297	eP	Pn	14 19 24.7	-0.3
HUIG				iS	Sn	14 19 54.4	-0.9
PEIG	Puerto Escondi	3.58	293	eP	Pn	14 19 39.4	+0.6
YOIG	Yosondua	4.30	302	eP	Pn	14 19 48.7	-0.4
YOIG				eS	Sn	14 20 43.3	+4.9
PETF	Flores	4.37	58	eP	Pn	14 19 53.1	+3.4
PETF				iS	Sn	14 20 37.6	-2.0
PNIG	Pinotepa	4.60	293	eP	Pn	14 19 53.3	+0.4
TXIG	Tlaxiaco	4.69	305	eP	Pn	14 19 57.0	+2.6
TXIG				eS	Sn	14 20 48.0	-0.1
TOIG	Toxpalan	4.72	318	eP	Pn	14 19 56.7	+2.1
FTIG	Fresnillo de T	5.35	308	eP	Pb	14 20 13.5	-4.8
FTIG				eS	Sn	14 20 59.6	-4.5
MGIG	Malinaltepec	5.39	300	eP	Pn	14 20 05.6	+1.6
MGIG				eS	Sn	14 21 07.4	+2.3
JAUV	Jalcomulco	5.57	329	eP	Pn	14 20 05.7	-0.6
JAUV				eS	Sn	14 21 02.4	-7.0

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*SJA **24** 15:09:03.6±0.8, 19°.40S×69°.40W, h111^{km}±3^{km}, ML3.6, MW3.6*

*GUC **24** 15:09:04.7±0.8, 19°.38S×69°.44W, h100^{km}±3^{km}, ML3.3*

ISC 24 15:09:05.2±1.5**, 19°.42S**±0°.03×**69°.43W**±0°.06**, h106^{km}**±8^{km}**, n31, σ0^{s}.93**/52**, 3C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO01	Chusmiza	0.33	138	iP	Pn	15 09 20.8	-0.4
GO01				eS	Sn	15 09 32.8	-0.4
GO01	Chusmiza	0.33	138	eP	Pn	15 09 20.8	-0.4
GO01				eS	Sn	15 09 33.4	+0.3
PB11	IPOC Station P	0.40	213	⇑iP	Pn	15 09 21.0	-0.2
PB11				eS	Sn	15 09 33.2	0.0
PB11	IPOC Station P	0.40	213	eP	Pn	15 09 20.3	-0.9
PB11				eS	Sn	15 09 33.7	+0.6
PB11				IAML		15 09 36.3	
	comp=Z,2μm,0.2s						
PB08	IPOC Station P	0.76	160	⇓iP	Pn	15 09 24.4	+0.2
PB08				eS	Sn	15 09 39.0	+0.7
PB08	IPOC Station P	0.76	160	eP	Pn	15 09 24.2	+0.1
PB08				eS	Sn	15 09 39.0	+0.7
PB08				IAML		15 09 40.3	
	comp=Z,2μm,0.4s						
PX02	IPOC Station P	0.86	302	eP	Pn	15 09 23.4	-1.3
PX02				eS	Sn	15 09 38.1	-1.3
PX02				IAML		15 09 40.9	
	comp=N,778nm,0.2s						
HMBC	Humberstone	0.95	207	⇑iP	Pn	15 09 25.9	+0.1
HMBC				eS	Sn	15 09 41.9	+0.7
HMBC				IAML		15 09 47.3	
	comp=N,2μm,0.3s						
HMBC	Humberstone	0.95	207	eP	Pn	15 09 25.8	+0.1
HMBC				eS	Sn	15 09 42.4	+1.2
HMBC				IAML		15 09 46.2	
	comp=Z,2μm,0.7s						
PX03	IPOC Station P	0.99	191	eP	Pn	15 09 25.6	-0.5
TA02	Huaiquique	1.07	218	eP	Pn	15 09 27.1	+0.2
TA02	Huaiquique	1.07	218	eP	Pn	15 09 27.0	+0.2
TA02				eS	Sn	15 09 45.5	+2.4
TA02				IAML		15 09 46.2	
	comp=Z,958nm,0.1s						
PB16	IPOC Station P	1.08	356	⇓iP	Pn	15 09 27.3	-0.3
PB16				eS	Sn	15 09 44.1	-0.4
PB16				IAML		15 09 45.9	
	comp=N,661nm,0.3s						
PB16	IPOC Station P	1.08	356	eP	Pn	15 09 26.7	-0.9
PB16				eS	Sn	15 09 44.7	+0.3
PB16				IAML		15 09 45.7	
	comp=Z,334nm,0.6s						
TA01	Diego Aracena	1.34	212	⇑iP	Pn	15 09 29.5	-0.3
TA01				eS	Sn	15 09 48.5	0.0
TA01				IAML		15 09 49.8	
	comp=E,1μm,0.2s						
TA01	Diego Aracena	1.34	212	eP	Pn	15 09 29.7	-0.2
TA01				eS	Sn	15 09 49.7	+1.2
TA01				IAML		15 09 52.6	
	comp=Z,390nm,0.3s						
AP01	Chacalluta	1.36	320	eP	Pn	15 09 29.9	-0.2
AP01	Chacalluta	1.36	320	eP	Pn	15 09 29.9	-0.2
AP01				eS	Sn	15 09 50.9	+1.9
AP01				IAML		15 09 54.3	
	comp=Z,922nm,0.2s						
PATCX	Punta Patache	1.55	206	eP	Pn	15 09 32.4	-0.1
PATCX	Punta Patache	1.55	206	eP	Pn	15 09 32.6	+0.1
PATCX				eS	Sn	15 09 53.6	+0.4
PATCX				IAML		15 09 57.9	
	comp=Z,366nm,0.6s						
PB01	IPOC Station P	1.61	182	eP	Pn	15 09 31.5	-1.7
PB01				eS	Sn	15 09 55.7	+1.1
PB01				IAML		15 10 00.2	
	comp=E,536nm,0.4s						
PB01	IPOC Station P	1.61	182	eS	Sn	15 09 55.6	+1.1
PB01				IAML		15 09 57.1	
	comp=Z,664nm,0.2s						
PB09	IPOC Station P	2.37	176	eP	Pn	15 09 43.9	+0.9
PB09				eS	Sn	15 10 08.6	-3.3
PB09	IPOC Station P	2.37	176	eP	Pn	15 09 43.3	+0.4
PB09				eS	Sn	15 10 12.1	+0.2
PB09				IAML		15 10 19.9	
	comp=Z,206nm,0.4s						
PB03	IPOC Station P	2.63	187	eP	Pn	15 09 46.5	+0.2
PB03				eS	Sn	15 10 17.5	-0.5
PB03				IAML		15 10 27.9	
	comp=Z,192nm,0.5s						
PB06	IPOC Station P	3.27	182	eP	Pn	15 09 55.3	+0.5
PB06	IPOC Station P	3.27	182	eP	Pn	15 09 55.3	+0.5
PB06				eS	Sn	15 10 16.5	-17
PB06				IAML		15 10 58.6	
	comp=Z,88nm,0.7s						
LPAZ	La Paz	3.35	22	eP	Pn	15 09 57.3	+0.9
PB05	IPOC Station P	3.49	192	eP	Pn	15 09 57.7	0.0
PB05				eS	Sn	15 10 22.4	-16
PB05				IAML		15 11 08.4	
	comp=Z,49nm,0.8s						
PB10	IPOC Station P	4.20	194	eP	Pn	15 10 06.6	-0.7
PB10				eS	Sn	15 10 54.2	-1.2
PB14	IPOC Station P	5.26	190	eP	Pn	15 10 20.9	-0.8
PB14				IAML		15 12 01.6	
	comp=Z,19nm,1.1s						

CATAC 24 15:13:20.6±0.4**, 12°N**±4°×**8°7W**±°**, h96^{km}**±3^{km}**, M3.0**/26**, MLv3.0**/26**, 1C-7D, Error ellipse: s-maj=9.9km s-min=3.6km az=42.1, confirmed, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALEN	Leon	0.22	6	P	Pn	15 13 35.0	+0.6
ALEN	Leon	0.22	6	S	Sn	15 13 47.0	+2.3
COPN	Copaltepe	0.30	101	⇓P	Pn	15 13 35.7	+1.0
CNGA	Al SSO del Vol	0.32	36	⇑P	Pn	15 13 36.0	+1.1
BC86	Nagarote	0.32	85	S	Sn	15 13 47.7	+2.2
CNGN	Cerro Negro	0.32	36	P	Pn	15 13 35.8	+0.8
CNGN	Cerro Negro	0.32	36	S	Sn	15 13 48.9	+3.3
PLRN	Geotermica Pol	0.37	19	P	Pn	15 13 35.7	+0.6
PLRN				S	Sn	15 13 48.3	+2.3
MOMN	Momotombo	0.39	63	⇓P	Pn	15 13 36.0	+0.8
MOMN				S	Sn	15 13 48.1	+1.8
ILCN	San Idelfonso	0.39	29	⇓P	Pn	15 13 36.1	+0.9
ILCN				S	Sn	15 13 49.1	+3.0
POLN	Al Sur del Vol	0.42	11	P	Pn	15 13 36.4	+0.9
POLN				S	Sn	15 13 49.3	+2.7
PKGN	Cerro Pekin	0.44	349	⇓P	Pn	15 13 36.6	+1.0
PKGN				S	Sn	15 13 50.0	+3.2
MOM2	El Cardon	0.45	63	⇓P	Pn	15 13 36.6	+1.0
MOM2				S	Sn	15 13 49.3	+2.6
AMTN	Mateare	0.45	90	P	Pn	15 13 36.7	+1.0
AMTN	Mateare	0.45	90	S	Sn	15 13 49.6	+2.8
SAPS	Ciudad Sandino	0.48	98	S	Sn	15 13 50.2	+3.0
SAPS	Ciudad Sandino	0.48	98	P	Pn	15 13 37.0	+1.1
CRIN	San Cristobal	0.49	342	S	Sn	15 13 49.9	+2.4
CRIN	San Cristobal	0.49	342	P	Pn	15 13 37.1	+1.1
APQ3	Volcan Apoyequ	0.51	86	P	Pn	15 13 36.8	+0.7
APQ2	Apoyeque	0.56	94	P	Pn	15 13 36.4	0.0
ABCN	Banco Central	0.58	101	S	Sn	15 13 50.5	+1.9
ALLN	Telcor Managua	0.61	98	S	Sn	15 13 51.8	+2.8
TISN	Laguna Tiscapa	0.62	99	⇓P	Pn	15 13 37.7	+0.7
USIM	UNAN	0.62	101	S	Sn	15 13 52.2	+3.0
UNAN	Cigeo UNAN	0.62	101	S	Sn	15 13 51.4	+2.1
ENAN	Enatrel Managu	0.63	101	S	Sn	15 13 51.5	+2.1
CRUN	El Crucero	0.63	113	P	Pn	15 13 38.3	+1.1
MGAN	Managua	0.64	98	S	Sn	15 13 52.0	+2.6
MGAN				S		15 13 52.1	
MGAN	Managua	0.64	98	P	Pn	15 13 37.9	+0.8
WILN	Americas 2	0.69	96	P	Pn	15 13 38.2	+0.6
WILN				S	Sn	15 13 53.5	+3.2
MAS3	Al N del Volca	0.73	107	P	Pn	15 13 38.6	+0.6
MAS3				S	Sn	15 13 52.9	+1.9
NANN	Nandasmo	0.81	111	P	Pn	15 13 40.7	+1.9
NANN	Nandasmo	0.81	111	S	Sn	15 13 55.9	+3.5
POTN	Potosi Cosigui	0.97	322	P	Pn	15 13 41.0	+0.6
POTN				S	Sn	15 13 56.9	+1.6
NADN	Granada	0.97	120	S	Sn	15 13 56.1	+0.8
MATN	Matagalpa	1.17	54	P	Pn	15 13 42.3	-0.5
BOAB	BOACO BROADBAN	1.22	80	⇓P	Pn	15 13 44.0	+0.8
RCPN	Sur Rio San Ju	1.50	31	P	Pn	15 13 46.9	+0.1
RCVN	Varillal2	1.50	27	P	Pn	15 13 48.0	+1.1
CARN	Rivas	1.70	128	P	Pn	15 13 49.5	+0.3
CARN				S	Sn	15 14 11.5	+0.6
ACON	Acoyapa	1.70	99	P	Pn	15 13 49.3	+0.1
PACA	Pacayal	1.86	311	S	Sn	15 14 16.9	+2.2
PACA	Pacayal	1.86	311	P	Pn	15 13 50.3	-1.0

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*IDC **24** 15:13:19.7±0.6, 2°.78S×138°.74E, h0^{km}, mb4.1/14, mbtmp4.1/16, ML4.2/2, Error ellipse: s-maj=14.4km s-min=13.9km az=59.0*

*NEIC **24** 15:13:22.0±1.7, 2°.79S±0°.03×138°.80E±0°.07, h10^{km}±1^{km}, mb4.4/22, Error ellipse: s-maj=11.2km s-min=5.1km az=258.0*

*DJA **24** 15:13:24.3±0.6, 3°S±3°×13°9E±°, h26^{km}±7^{km}, M4.5/13, mb4.5/13, mB4.8/2, MLv4.5/10, Mw(mB)4.1/2*

ISC 24 15:13:24.6±0.4**, 2°.79S**±0°.05×**138°.81E**±0°.05**, h35^{km}, n63, σ1^{s}.37**/65**, mb4.3**/26**, 1D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.80	353	P	Pn	15 13 35.6	-3.8
SMPI				S	Sn	15 13 47.9	-2.1
GENI	Genyem	1.37	82	P	Pn	15 13 48.7	+1.5
JAY	Jayapura	1.91	82	Pn	Pn	15 13 55.0	+0.3
	16nm,0.3s,baz=231,slow=7.6,SNR=56						
JAY				Lg	Lg	15 14 21.9	
	8.5nm,0.3s,baz=284,slow=16,SNR=4.6						
JAY	Jayapura	1.91	82	P	Pn	15 13 56.0	+1.2
SRPI	Serui, Papua	2.72	289	P	Pn	15 14 04.0	-1.9
SRPI				S	Sn	15 14 35.8	-1.8
BAKI	Biak	3.13	300	P	Pn	15 14 11.4	-0.1
RKPI	Ransiki, Papua	4.80	285	P	Pn	15 14 33.6	-0.9
FAKI	Fak Fak	6.55	269	Pn	Pn	15 14 58.8	+0.2
FAKI	Fak Fak	6.55	269	P	Pn	15 14 59.7	+1.1
	0.2nm47nm,1.2s						
SWI	Sorong	7.78	284	P	Pn	15 15 14.5	-1.0
	0.1nm27nm,0.9s						
COEN	Coen	11.91	159		Pn	15 16 12.7	+0.6
MTN	Manton Dam	12.55	217		Pn	15 16 20.2	-0.7
SOEI	Soe	16.02	244	Pn	Pn	15 17 08.2	+0.6
SOEI	Soe	16.02	244	P	P	15 17 10.0	-0.7
KNRA	Kununurra	16.19	217		Pn	15 17 07.6	-1.9
KNRA				IAmb	IAmb	15 17 23.4	
	comp=Z,19nm,0.8s						
BATI	Baumata	16.75	243	P	P	15 17 19.1	+0.4
WB0	Warramunga Arr	17.42	194	Pn	Pn	15 17 23.6	-1.5
WR8	Warramunga Arr	17.58	194	Pn	Pn	15 17 24.9	-2.1
WR8				IAmb	IAmb	15 17 35.7	
	comp=Z,18nm,0.8s						
WRA	Warramunga Arr	17.60	194	Pn	Pn	15 17 24.4	-2.9
WRA	Warramunga Arr	17.60	194	P	Pn	15 17 25.3	-2.0
	comp=Z,1.1nm,0.3s,baz=16,slow=13,SNR=24						
WRA				S	Sn	15 20 32.3	-10
	comp=Z,5.2nm,0.9s,baz=14,slow=22,SNR=5.0						
	comp=Z,7.1nm,0.7s						
TOLI2	Tolitoli	18.43	282	P	Pn	15 17 38.8	+1.3
FITZ	Fitzroy Crossi	19.96	219	P	P	15 17 54.0	+0.1
FITZ	Fitzroy Crossi	19.96	219	P	P	15 17 53.2	-0.7
	comp=Z,0.4nm,0.3s,baz=27,slow=7.1,SNR=10						
	comp=Z,4.3nm,1.1s						
AS31	Alice Springs	21.29	192		P	15 18 08.1	-0.3
ASAR	Alice Springs	21.30	192		P	15 18 07.9	-0.4
ASAR	Alice Springs	21.30	192	P	P	15 18 07.6	-0.8
	comp=Z,5.9nm,0.6s,baz=23,slow=10,SNR=51						
ASAR				S	S	15 21 59.1	-4.2
	comp=Z,5.3nm,0.9s,baz=17,slow=25,SNR=9.0						
	comp=Z,5.9nm,0.6s						
HNR	Honiara	22.02	108	P	P	15 18 15.0	-1.2
PSA00	Pilbara Seismi	26.25	223	P	P	15 18 56.9	+0.2
PSA00				IAmb	IAmb	15 19 24.5	
	comp=Z,6.2nm,1.1s						
STKA	Stephens Creek	29.06	175	P	P	15 19 22.1	+0.4
	comp=Z,3.1nm,1.0s,baz=8.1,slow=14,SNR=2.5						
	comp=Z,3.1nm,1.0s						
SANVU	Saraoutou	30.67	116	P	P	15 19 34.9	-1.3
KSRS	Korea Array	41.29	347	P	P	15 21 07.2	+0.5
	comp=Z,0.5nm,0.7s,baz=146,slow=6.7,SNR=2.5						
	comp=Z,0.5nm,0.7s						
CMAR	Chiang Mai Arr	44.56	300	P	P	15 21 33.1	-0.4
	comp=Z,1.4nm,0.9s,baz=115,slow=8.1,SNR=8.7						
	comp=Z,1.4nm,0.9s						
PZH	PanZhiHua	46.15	311	P	P	15 21 48.0	+1.8
USRK	Ussuriysk Ar.	47.17	353	P	P	15 21 54.5	+0.8
	comp=Z,1.2nm,0.7s,baz=124,slow=4.4,SNR=4.2						
	comp=Z,1.2nm,0.7s						
BNX	BinXian	49.37	349	⇓P	P	15 22 10.9	+0.3
BNX				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC	Hu-ho-hao-te	50.04	333	eP	P	15 22 19.8	+3.8
HEH	HeiHe	53.73	351	eP	P	15 22 43.8	+0.6
HEH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SONM	Songino Array	57.83	335	P	P	15 23 12.8	0.0
	comp=Z,0.8nm,0.6s,baz=139,slow=9.0,SNR=4.5						
	comp=Z,0.8nm,0.6s						
PEA0B	Petropavlovsk-	57.91	13	P	P	15 23 14.2	+1.1
PEA0B				IAmb	IAmb	15 23 17.7	
	comp=Z,15nm,1.4s						
PETK	Petropavlovsk-	57.91	13	P	P	15 23 14.4	+1.3
	comp=Z,0.7nm,0.6s,baz=178,slow=7.9,SNR=4.9						
	comp=Z,0.7nm,0.6s						
YAK	Yakutsk	65.02	355	P	P	15 24 00.4	-0.5
WMQ	Urumqi	65.13	322	eP	P	15 24 05.0	+2.9
WMQ				pmax	pmax		
	comp=Z,17nm,0.7s						
MKAR	Makanchi Array	69.91	322	P	P	15 24 31.9	-0.4
MKAR	Makanchi Array	69.91	322	P	P	15 24 32.5	+0.3
	comp=Z,3.2nm,0.9s,baz=112,slow=7.0,SNR=14						
	comp=Z,3.2nm,0.9s						
MAKZ	Makanchi	70.11	322	P	P	15 24 33.2	-0.3
MAKZ				IAmb	IAmb	15 24 38.5	
	comp=Z,3.9nm,0.8s						
ZALV	Zalesovo Beam	72.05	330	P	P	15 24 46.5	+1.5
	comp=Z,0.7nm,0.6s,baz=106,slow=4.7,SNR=2.4						
	comp=Z,0.7nm,0.6s						
KURBB	Kurchatov Arra	73.85	325	P	P	15 24 55.1	-0.6
	comp=Z,2.4nm,0.9s,baz=114,slow=5.4,SNR=11						
	comp=Z,2.4nm,0.9s						
VNDA	Vanda	75.70	175	P	P	15 25 06.5	+0.5
VNDA				IAmb	IAmb	15 25 09.2	
	comp=Z,6.9nm,1.5s						
VNDA	Vanda	75.70	175	P	P	15 25 06.3	+0.3
	comp=Z,1.4nm,0.6s,baz=324,slow=6.4,SNR=8.7						
	comp=Z,1.4nm,0.6s						
K13K	Kusilvak Mount	77.41	24	P	P	15 25 16.9	+1.0
K13K				IAmb	IAmb	15 25 20.6	
	comp=Z,6.5nm,1.1s						
K15K	Wolf Creek Mou	78.86	24	P	P	15 25 25.5	+1.6
K15K				IAmb	IAmb	15 25 32.9	
	comp=Z,7.7nm,1.2s						
BVAR	Borovoye Array	79.43	325	P	P	15 25 26.9	-0.4
	comp=Z,1.4nm,0.5s,baz=101,slow=7.5,SNR=8.0						
	comp=Z,1.4nm,0.5s						
OHAK	Old Harbor	80.57	31	P	P	15 25 34.3	+1.0
J20K	Nowinta River	82.69	24	P	P	15 25 46.0	+1.6
J20K				IAmb	IAmb	15 25 55.5	
	comp=Z,2.2nm,1.1s						
CAST	Castle Rocks	83.27	25	P	P	15 25 48.2	+0.8
CAST				IAmb	IAmb	15 25 52.6	
	comp=Z,3.3nm,1.3s						
COLD	Coldfoot	85.28	22	P	P	15 25 59.0	+1.5
COLD				IAmb	IAmb	15 26 01.9	
	comp=Z,2.2nm,1.0s						
ILAR	Eielson Array	85.86	24	P	P	15 25 59.5	-1.0
ILAR	Eielson Array	85.86	24	P	P	15 25 59.6	-0.8
	comp=Z,1.4nm,0.8s,baz=266,slow=4.2,SNR=16						
	comp=Z,1.4nm,0.8s						
QSPA	South Pole Qui	87.16	180	P	P	15 26 08.2	+1.2
	comp=Z,3.5nm,0.7s,baz=136,slow=2.1,SNR=29						
	comp=Z,3.5nm,0.7s						
BMAR	Burnt Mountain	87.43	22	P	P	15 26 09.2	+1.0
HYT	Haines Junctio	89.33	29	P	P	15 26 18.2	+0.8
HYT				IAmb	IAmb	15 26 29.8	
	comp=Z,3.4nm,1.3s						
CPUP	Villa Florida	147.12	153	PKPbc	PKPab	15 33 06.4	+0.1
	comp=Z,0.2nm,0.3s,baz=225,slow=1.4,SNR=1.5						
LPAZ	La Paz	147.32	126	PKPbc	PKPab	15 33 07.3	-0.9
	comp=Z,1.0nm,0.7s,baz=288,slow=3.2,SNR=4.2						

IDC 24 15:13:49.2±9.0**, 2°.62S**×**138°.83E, h0^{km}, mb4.1**/2**, mbtmp4.3**/3**, ML4.3**/1**, MS3.7**/2**, Error ellipse: s-maj=377.4km s-min=32.9km az=86.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	1.87	87	Lg	Lg	15 14 50.1	
	baz=158,slow=19						
JAY				LR	LR	15 15 22.9	
	comp=Z,1μm,19.0s,baz=292,slow=50						
BATI	Baumata	16.84	243	LR	LR	15 26 07.5	
	comp=Z,298nm,19.0s,baz=204,slow=44						
WRA	Warramunga Arr	17.77	194	P	Pn	15 17 58.2	0.0
	1.0nm,0.3s,baz=15,slow=13,SNR=6.5						
	8.3nm,0.6s						
ASAR	Alice Springs	21.46	192	P	P	15 18 39.5	+0.1
	13nm,0.8s,baz=16,slow=11,SNR=6.1						
	13nm,0.8s						
KLR	Kul'dur	52.00	354	LR	LR	15 44 24.3	
	comp=Z,56nm,18.2s,baz=170,slow=35						
MKAR	Makanchi Array	69.79	322	P	P	15 25 01.5	0.0
	0.8nm,0.6s,baz=120,slow=7.3,SNR=2.4						
	0.8nm,0.6s						

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*MOS **24** 15:14:07.7±0.9, 27°.55N×53°.14E, h10^{km}, mb4.6/24, Error ellipse: s-maj=7.8km s-min=5.5km az=85.0*

*TEH **24** 15:14:09.3, 27°.63N×53°.20E, h13^{km}±15^{km}*

*NEIC **24** 15:14:10.0±1.1, 27°.63N±0°.09×53°.14E±0°.04, h10^{km}±1^{km}, mb4.3/23, Error ellipse: s-maj=14.6km s-min=5.6km az=175.0*

*THR **24** 15:14:09.6±0.0, 27°.58N×53°.18E, h20^{km}±1^{km}, ML4.3*

*DSN **24** 15:14:10.9±1.3, 27°.85N×53°.31E, h30^{km}, ML4.0/16, Error ellipse: s-maj=16.2km s-min=7.3km az=6.0*

*IDC **24** 15:14:11.2±4.3, 27°.58N×53°.18E, h20^{km}±27^{km}, mb3.9/23, mbtmp4.0/26, ML3.9/3, MS3.5/20, Error ellipse: s-maj=16.0km s-min=13.1km az=11.0*

*OMAN **24** 15:14:13.2±0.8, 27°.51N×53°.27E, h10^{km}, mb4.8/10, ml4.3/16, Error ellipse: s-maj=8.8km s-min=4.4km az=179.0*

*NAO **24** 15:14:52.5, 31°.58N×49°.93E, h33^{km}, mb3.8*

ISC 24 15:14:11.4±0.4**, 27°.66N**±0°.03×**53°.16E**±0°.03**, h20^{km}, n241, σ1^{s}.60**/237**, mb4.3**/60**, MS3.4**/18**, 8C, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMD1	Lamerd	0.32	180	Pg	Pb	15 14 15.5	-2.9
LMD1	Lamerd	0.32	180	ePgA		15 14 15.4	
LMD1				IAML		15 14 29.3	
	comp=Z,82nm,1.0s						
QIR1	Qir	0.82	353	Pg	Pb	15 14 25.9	-1.1
JHRM	Jahrom	0.92	23	Pg	Pb	15 14 27.0	-1.8
LAR1	LAR	1.08	89	Pg	Pb	15 14 29.1	-2.3
DSBU	Dashti - Bushe	1.82	293	Pn	Pb	15 14 43.2	-0.9
SHI	Shiraz	2.06	344	Pn	Pn	15 14 46.0	+1.0
BNDS	Bandar-Abbas	2.69	95	Pn	Pn	15 14 53.6	-0.1
BNDS	Bandar-Abbas	2.69	95	ePn	Pn	15 14 53.7	0.0
BNDS				IAML		15 16 07.7	
	comp=Z,2.6nm,1.0s						
GENO	Geno	2.69	95	Pn	Pn	15 14 53.6	-0.1
JRN	Qarnain Island	2.72	186	P	Pn	15 14 56.2	+2.2
	SNR=23						
JRN				S	Sn	15 15 28.0	+1.7
	SNR=13						
SAKB	Bahrain	2.88	235	P	Pb	15 15 00.1	-2.0

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SHME  Shamm              3.11 120   P      Pn      15 15 00.5 +1.2
SHME  Shamm              3.11 120 i P      Pn      15 14 58.8 -0.5
      SNR=7.5
TRNA  Turayna            3.40 211   P      Pn      15 15 05.4 +2.1
      SNR=8.7
TRNA                                S      Sn      15 15 46.8 +3.8
NAZ   Nazwa, Dubai       3.48 139   P      Pn      15 15 05.4 +1.0
NAZ   Nazwa, Dubai       3.48 139 i P      Pn      15 15 04.2 -0.2
      SNR=12
AJN   Ajban              3.49 152   P      Pn      15 15 06.2 +1.6
      SNR=9.5
AJN                                 S      Sn      15 15 47.1 +1.7
AJN   Ajban              3.49 152 i P      Pn      15 15 05.3 +0.7
      SNR=9.5
MASF  Masafi             3.52 130   P      Pn      15 15 06.9 +1.8
MSFE  Esma-Masafi        3.53 130   P      Pn      15 15 04.1 -1.0
SMRA  Abu-Samra          3.58 216   P      Pn      15 15 08.4 +2.6
ASUD  Al Ashush, Dub     3.59 147   P      Pn      15 15 07.5 +1.4
      SNR=5.2
ASUD  Al Ashush, Dub     3.59 147   P      Pn      15 15 05.8 -0.2
KLNJ  Kolanjah           3.61 338   Pn     Pn      15 15 07.2 +0.7
KLNJ  Kolanjah           3.61 338  ePn     Pn      15 15 08.1 +1.6
KLNJ                                IAML           15 16 19.6
      comp=Z,1.1nm,1.0s
FAQ   Al Faqa, Dubai     3.63 142   P      Pn      15 15 07.4 +0.9
FAQ   Al Faqa, Dubai     3.63 142 i P      Pn      15 15 06.3 -0.2
      SNR=5.2
MDH   Madha              3.66 129   P      Pn      15 15 08.4 +1.4
MDH                                 S      Sn      15 15 50.3 +0.7
MDH   Madha              3.66 129   P      Pn      15 15 05.9 -1.1
GHWR  Ruwais             3.69 184   P      Pn      15 15 08.7 +1.4
NGRK  Negar Kerman       3.71  57   Pn     Pn      15 15 08.1 +0.2
SLWR  Sila               3.81 201   P      Pn      15 15 10.6 +1.6
UOSS  Minazif            3.84 134          Pn      15 15 08.8 -0.6
UOSS  Minazif            3.84 134   P      Pn      15 15 10.5 +1.1
UOSS                                S      Sn      15 15 53.6 -0.5
UOSS  Minazif            3.84 134   P      Pn      15 15 08.8 -0.6
HATD  Hatta, Dubai       3.88 136   P      Pn      15 15 11.3 +1.3
HATD                                S      Sn      15 15 56.1 +1.0
HATD  Hatta, Dubai       3.88 136   P      Pn      15 15 09.7 -0.3
KRBR  Kerman             3.92  53   Pn     Pn      15 15 11.1 +0.4
KRBR  Kerman             3.92  53  ePnA            15 15 11.6
KRBR                                IAML           15 16 26.7
      comp=Z,1.0nm,1.0s
ASHO  Ashiyiah           3.94 138   P      Pn      15 15 11.4 +0.5
ASHO                                S      Sn      15 15 56.9 +0.3
ASHO  Ashiyiah           3.94 138 i P      Pn      15 15 09.4 -1.5
      SNR=8.1
ASHO                                S      Sn      15 15 56.8 +0.3
KHGB  Koh Gabri          3.97  46   Pn     Pn      15 15 12.2 +0.9
KHNJ  Kahnooj            4.04  85   Pn     Pn      15 15 12.3 +0.2
IRAM  Ramesheh           4.19 351   Pn     Pn      15 15 15.7 +1.2
ISAD  Sadrabad           4.26   6   Pn     Pn      15 15 16.4 +1.0
ALNE  Al Ain             4.28 146   P      Pn      15 15 16.2 +0.8
      SNR=14
ALNE  Al Ain             4.28 146 i P      Pn      15 15 14.0 -1.4
      SNR=11
ZRDN  Zarand Kerman      4.42  41   Pn     Pn      15 15 18.2 +0.7
KRM1  Kerman Provinc     4.58  51   Pn     Pn      15 15 19.9 +0.2
SOHO  SOHO               4.64 138   P      Pn      15 15 20.7 +0.3
SOHO  SOHO               4.64 138 i P      Pn      15 15 18.9 -1.5
      SNR=11
MZR   Muzera             4.65 176 i P      Pn      15 15 20.4 -0.1
      SNR=9.6
ICHK  Chekchek           4.70  13   Pn     Pn      15 15 22.6 +1.2
ZNGN  Zangian            4.87 336   Pn     Pn      15 15 25.3 +1.5
YZKH  Yazd               4.88  14  ePnA            15 15 25.5
YZKH                                IAML           15 16 33.3
      comp=Z,0.1nm,1.0s
KBAM  BAM                4.89  71   Pn     Pn      15 15 24.0 +0.1
JHBN  Jahan bin          5.04 335   Pn     Pn      15 15 27.6 +1.4
ARQ   Araqi              5.27 144   P      Pn      15 15 29.3 +0.3
      SNR=8.0
IZEF  Zefreh             5.27 352   Pn     Pn      15 15 30.1 +0.8
IPIR  Pirpir             5.38 339   Pn     Pn      15 15 32.1 +1.3
HOQ   Hoqain             5.52 136   Pn     Pn      15 15 32.6 +0.1
HOQ   Hoqain             5.52 136   P      Pn      15 15 33.2 +0.7
      SNR=8.5
ANAR  Anarak             5.53   5   Pn     Pn      15 15 33.7 +0.9
IKLH  Kolahrood          5.80 347   Pn     Pn      15 15 37.8 +1.2
BIDO  Bidbid             6.09 131   P      Pn      15 15 41.8 +1.5
BSY   Bisya              6.11 142   P      Pn      15 15 41.1 +0.5
TPRV  Parvadeh(Tabas     6.16  29   Pn     Pn      15 15 42.1 +0.7
QAMS  Qamsar             6.25 346   Pn     Pn      15 15 43.8 +1.1
KRSH  Karshahi           6.35 352   Pn     Pn      15 15 45.0 +0.9
SMDO  Samad              6.37 135   P      Pn      15 15 44.9 +0.7
WSAR  Wadi Sarin         6.62 130   Pn     Pn      15 15 46.2 -1.4
      baz=309,slow=24,SNR=18
WSAR                                Sn     Sn      15 16 60.0 -2.5
      baz=279,slow=24,SNR=6.1
WSAR  Wadi Sarin         6.62 130   P      Pn      15 15 47.8 +0.2
ISFB  Sefidab            6.72 353   Pn     Pn      15 15 49.8 +0.7
TABS  Tabas              6.87  29  ePnA            15 15 51.8
TABS                                IAML           15 18 14.6
      comp=Z,0.1nm,1.0s
JMDO  Jabal Madar        6.92 139   P      Pn      15 15 52.2 +0.5
TNSJ  Nastanj            6.95  24   Pn     Pn      15 15 52.8 +0.6
ZHSF  Zahedan            6.97  72   Pn     Pn      15 15 52.6  0.0
ZHSF  Zahedan            6.97  72  ePnA            15 15 53.5
ZHSF                                IAML           15 18 10.3
      comp=Z,44nm,1.0s
ASAO  Ashtian            7.37 339  ePn     Pn      15 15 59.4 +1.2
ASAO                                IAML           15 17 30.4
      comp=Z,73nm,1.0s
IVRN  Varamin            7.42 351   Pn     Pn      15 15 59.1 +0.6
IKFM  Kafar-mosalman     7.43 323   Pn     Pn      15 15 59.7 +1.0
NGCH  Negor - Chabah     7.50 106   P      Pn      15 15 59.8 +0.1
HSAM  Samen              7.61 330   Pn     Pn      15 16 01.9 +0.5
AFRZ  Afriz              7.65  40   Pn     Pn      15 16 02.8 +0.9
IANJ  Anjilo             7.81   5   Pn     Pn      15 16 05.2 +1.1
JLN   Jalan Bani Buh     7.89 133   P      Pn      15 16 07.1 +2.0
IDMV  Damavand           7.95 353   Pn     Pn      15 16 07.3 +1.2
MHTO  MHTO               7.96 146   P      Pn      15 16 05.8 -0.2
TAPT  Tabas- Tapeh t     7.97  24   Pn     Pn      15 16 07.2 +1.0
DAMV  Damavand           8.01 353  ePnA            15 16 07.8
DAMV                                IAML           15 16 10.9
      comp=Z,60nm,1.0s
RAYN  Ar Rayn            8.05 241          Pn      15 16 05.8 -1.5
RAYN  Ar Rayn            8.05 241   Pn     Pn      15 16 07.9 +0.6
RAYN  Ar Rayn            8.05 241   P      Pn      15 16 05.8 -1.5
RAYN  Ar Rayn            8.05 241 i P      Pn      15 16 07.8 +0.6
      SNR=11
SRVN  Saravan            8.20  90   Pn     Pn      15 16 09.9 +0.4
SRVN  Saravan            8.20  90  ePn     Pn      15 16 10.2 +0.7
CHTH  Charan             8.40 349  ePnA            15 16 13.9
CHTH                                IAML           15 17 05.9
      comp=Z,32nm,1.0s
ILBA  Ilam Banvizeh      8.44 316  ePnA            15 16 12.9
ILBA                                IAML           15 18 23.9
      comp=Z,33nm,1.0s
SHRT  Shahrakht          8.56  44  ePnA            15 16 15.7
SHRT                                IAML           15 18 16.1
      comp=Z,17nm,1.0s
SHRO  Shahrood           8.65  16  ePnA            15 16 17.6
DQM   DQM                8.68 152   P      Pn      15 16 15.1 -0.7
IGLO  Ghaloghah          8.84   4   Pn     Pn      15 16 20.2 +2.0
SNGE  Sanandaj           8.92 328  ePnA            15 16 21.2
KLST  Kelardasht - M     9.01 349   Pn     Pn      15 16 22.4 +1.7
DOK   Doka               9.04 174   P      Pn      15 16 19.5 -1.4
      SNR=19
SBZV  Sabzevar           9.48  22   Pn     Pn      15 16 28.2 +1.1
WHFO  Wadi Hawf          9.71 177   P      Pn      15 16 28.9 -1.2
      SNR=29
DMTO  DMTO              10.03 170   P      Pn      15 16 33.2 -1.2
ABTO  Aybut             10.26 179   P      Pn      15 16 36.1 -1.5
      SNR=11
BJRD  Bojnurd           10.63  19  ePnA            15 16 45.5
SRSL  SARDASHT          10.76 324  ePnA            15 16 46.8
MARD  Mardin            14.20 316          P       15 17 37.0 -1.8
GNI   Garni             14.28 333 i P      Pn      15 17 32.5  0.0
GNI                                 pmax   pmax
      comp=Z,10.0nm,1.2s
ASF   Jabal al Asfar    14.80 292   Pn     Pn      15 17 40.0 +0.3
      comp=Z,0.4nm,0.3s,baz=25,slow=3.9,SNR=2.6
ASF                                 Sn     Sn      15 20 19.2 -3.9
      comp=Z,0.3nm,0.3s,baz=354,slow=19,SNR=3.1
ASF                                 LR     LR      15 24 53.0
      comp=Z,163nm,18.7s,baz=142,slow=43
      comp=Z,1.0nm,0.3s
KBL   Kabul             15.23  59   Pn     Pn      15 17 46.5 +1.1
KBL                                 IAmb   IAmb    15 17 50.0
      comp=Z,29nm,1.4s
KBL   Kabul             15.23  59   P      Pn      15 17 46.6 +1.1
KBL                                 pmax   pmax
      comp=Z,29nm,1.5s
MAK   Makhachkala       15.94 345  eP      Pn      15 17 49.9 -4.6
MAK                                eS      Sn      15 20 46.4 -4.2
MAK                                 pmax   pmax
      comp=Z,99nm,1.0s
MAK                                 MLR    MLR
      comp=Z,140nm,10.0s
EIL   Elat              16.11 281   LR     LR      15 25 10.2
      comp=Z,80nm,20.8s,baz=68,slow=41
MMAI  Mount Meron Ar    16.23 294   Pn     Pn      15 17 59.0 +0.7
      comp=Z,0.8nm,0.3s,baz=129,slow=11,SNR=1.5
MMAI                                LR     LR      15 25 16.7
      comp=Z,88nm,20.0s,baz=107,slow=41
      comp=Z,0.3nm,0.3s
GAZ   Gaziantep         16.45 309   Pn     Pn      15 18 00.3 -0.9
ARPR  Arapgir-MALATY    16.81 316   P      P       15 18 07.0 -0.8
ARPR                                IAmb   IAmb    15 18 24.4
      comp=Z,20nm,1.1s
SIMJ  Simiganj          17.19  46   Pn     Pn      15 18 09.1 -1.4
SIMJ                                IAmb   IAmb    15 18 13.2
      comp=Z,24nm,1.4s
KBZ   Khabaz            18.05 335   Pn     P       15 18 24.7 +3.5
      comp=Z,0.2nm,0.3s,baz=135,slow=8.6,SNR=5.8
KBZ                                 LR     LR      15 26 56.8
      comp=Z,108nm,19.0s,baz=157,slow=42
      comp=Z,3.6nm,0.9s
NIL   Nilore            18.28  66   P      P       15 18 23.7 -0.2
NIL   Nilore            18.28  66   P      P       15 18 23.7 -0.2
NIL                                 pmax   pmax
      comp=Z,101nm,1.3s
KIV   Kislovodsk        18.32 335  eP      P       15 18 25.4 +1.0
KIV                                 pmax   pmax
      comp=Z,10.0nm,1.0s
KIV                                 MLR    MLR
      comp=Z,61nm,14.0s
BTK   Batken            19.14  45   P      Pn      15 18 33.9 -0.4
BTK                                 IAmb   IAmb    15 18 55.4
      comp=Z,15nm,1.1s
BTK   Batken            19.14  45   P      Pn      15 18 33.9 -0.4
BTK                                 pmax   pmax
      comp=Z,15nm,1.2s
SOC   Sochi             19.24 329  eP      P       15 18 34.4  0.0
SOC                                e               15 22 11.7
SOC                                 MLR    MLR
      comp=Z,125nm,16.0s
BR104 Keskin Array S    20.16 312   P      Pn      15 18 46.2 -0.3
      comp=Z,35nmcomp=Z,3.7nm,0.8s
BR131 Keskin Array S    20.17 312   P      P       15 18 42.7 -2.0
BR131 Keskin Array S    20.17 312 i P      P       15 18 45.5 +0.8
BRTR  Keskin Array B    20.17 312   P      Pn      15 18 46.0 -0.6
      comp=Z,1.0nm,0.5s,baz=136,slow=14,SNR=6.0
BRTR                                LR     LR      15 27 43.4
      comp=Z,128nm,21.6s,baz=136,slow=40
      comp=Z,1.0nm,0.5s
BR105 Keskin Array S    20.18 312   P      Pn      15 18 46.4 -0.4
      comp=Z,42nmcomp=Z,4.6nm,0.8s
BR106 Keskin Array S    20.18 312   P      Pn      15 18 47.7 +0.8
      comp=Z,38nmcomp=Z,4.7nm,1.1s
KK31  Karatay Array     20.85  38          P       15 18 51.7 -0.3
KK31                                IAmb   IAmb    15 18 56.0
      comp=Z,13nm,0.9s
KK31  Karatay Array     20.85  38   P      P       15 18 51.7 -0.3
KK31                                pmax   pmax
      comp=Z,13nm,0.9s
KKAR  Karatay Array     20.85  38          P       15 18 51.7 -0.3
KKAR                                IAmb   IAmb    15 18 56.0
      comp=Z,13nm,0.9s
KKAR  Karatay Array     20.85  38   P      P       15 18 51.5 -0.5
KKAR  Karatay Array     20.85  38   P      P       15 18 51.7 -0.3
KKAR                                pmax   pmax
      comp=Z,13nm,0.9s
ARSB  Arslanbob         21.21  45   P      P       15 18 55.3 -0.7
ARSB  Arslanbob         21.21  45   P      P       15 18 55.3 -0.7
ARSB                                pmax   pmax
      comp=Z,26nm,0.8s
AB31  Akbulak array     22.19  12   P      P       15 19 06.4 +0.2
ABKAR Akbulak array     22.19  12   P      P       15 19 06.8 +0.6
ABKAR Akbulak array     22.19  12   IAmb   IAmb    15 19 09.8
      comp=Z,7.3nm,1.0s
KSH   Kashi             22.32  52   P      P       15 19 02.3 -5.6
KSH                                 pP     pP      15 19 05.1 -8.7
KSH                                 pmax   pmax
      comp=Z,5.0nm,0.8s
AAK   Ala-Archa         22.88  44ceP       P       15 19 15.2 +1.4
AAK                                 pmax   pmax
      comp=Z,8.0nm,0.8s
AKTO  Aktyubinsk        23.04   8   P      P       15 19 16.4 +1.1
      comp=Z,8.3nm,0.7s,baz=183,slow=11,SNR=22
AKTO                                LR     LR      15 30 28.9
      comp=Z,166nm,18.0s,baz=213,slow=42
      comp=Z,8.3nm,0.7s
NRN   Naryn             23.21  48   IAmb   IAmb    15 19 21.1
      comp=Z,12nm,1.2s
KARP  Karpathos         23.45 296   P      P       15 19 22.4 +2.8
      comp=Z,19nm,0.9s
BOOM  Boomskoye usch    23.70  45   P      P       15 19 22.2 +0.1
BOOM                                IAmb   IAmb    15 19 24.6
      comp=Z,7.2nm,0.9s
BOOM  Boomskoye usch    23.70  45   P      P       15 19 22.2 +0.1
BOOM                                pmax   pmax
      comp=Z,7.0nm,0.9s
KDJ   Kajisay           24.32  47   IAmb   IAmb    15 19 44.6
      comp=Z,10nm,1.4s
BELG  Belogornoye       25.05 352   LR     LR      15 31 03.2
      comp=Z,64nm,20.9s,baz=133,slow=40
VRH   Novokhopyorsk     25.06 343 i P      P       15 19 35.3 +1.1
VRH                                 pmax   pmax
      comp=Z,20nm,0.8s
VORD  Divnogorie        25.54 339  eP      P       15 19 40.4 +1.8
VORD                                pmax   pmax
      comp=Z,20nm,0.8s
VSR   Storozhevoye      25.80 340  eP      P       15 19 42.3 +1.3
VSR                                 pmax   pmax
      comp=Z,10.0nm,0.8s
LPSR  Galich'ya Gora    27.09 341  eP      P       15 19 51.4 -1.2
LPSR                                pmax   pmax
      comp=Z,8.0nm,0.8s
MLR   Muntele Rosu      27.99 317   LR     LR      15 34 52.4
      comp=Z,181nm,18.5s,baz=110,slow=44
BRVK  Borovoye          28.38  22   P      P       15 20 04.3 +0.2
BRVK  Borovoye          28.38  22ceP       P       15 20 04.6 +0.4
BRVK                                pmax   pmax
      comp=Z,7.0nm,1.3s
BVAR  Borovoye Array    28.39  22   P      P       15 20 04.8 +0.6
      comp=Z,3.0nm,0.4s,baz=219,slow=7.6,SNR=18
BVAR                                PcP    PcP     15 23 16.3  0.0
      comp=Z,0.5nm,0.3s,baz=146,slow=1.0,SNR=4.9
BVAR                                ScP    ScP     15 26 56.2 -0.2
      comp=Z,0.4nm,0.4s,baz=248,slow=1.6,SNR=1.9
BVAR                                LR     LR      15 33 16.8
      comp=Z,73nm,20.6s,baz=202,slow=40
      comp=Z,3.0nm,0.4s
VOIR                    28.51 316   P      P       15 20 08.3 +2.8
      comp=Z,2.4nm,0.8s
ARTI  Arti              28.95   6   LR     LR      15 33 20.6
      comp=Z,68nm,20.1s,baz=188,slow=40
ARTI  Arti              28.95   6   P      P       15 20 10.4 +1.2
ARTI                                               15 20 58.4
ARTI                                S      S       15 25 02.9 +4.1
ARTI                                SS     SnSn    15 26 23.6 +1.6
AK06  Malin Array Si    29.25 328   P      P       15 20 14.4 +2.5
AK08  Malin Array Si    29.26 328   P      P       15 20 13.6 +1.6
AKASG Malin Array Be    29.32 328   P      P       15 20 12.7 +0.1
      comp=Z,1.0nm,0.4s,baz=123,slow=7.0,SNR=10
AKASG                               LR     LR      15 33 24.1
      comp=Z,71nm,18.2s,baz=56,slow=39
      comp=Z,1.0nm,0.4s
AKBB  Malin Array Si    29.32 328   P      P       15 20 12.3 -0.2
AKBB  Malin Array Si    29.32 328   P      P       15 20 12.3 -0.2
AKBB                                pmax   pmax
      comp=Z,5.0nm,0.6s
AKBB  Malin Array Si    29.32 328   P      P       15 20 13.0 +0.5
KIEV  Kiev              29.32 328   P      P       15 20 12.3 -0.3
KIEV                                IAmb   IAmb    15 20 26.5
      comp=Z,4.2nm,0.6s
KIEV  Kiev              29.32 328   P      P       15 20 12.3 -0.3
KIEV                                pmax   pmax
      comp=Z,4.0nm,0.6s
KIEV  Kiev              29.32 328   P      P       15 20 13.0 +0.5
      comp=Z,25nm,0.6s
AK11  Malin Array Si    29.33 328   P      P       15 20 12.9 +0.3
LUBAR Lubar, Ukraine    29.51 326   P      P       15 20 16.9 +2.6
MAKZ  Makanchi          29.61  42   P      P       15 20 14.8 -0.4
MAKZ                                IAmb   IAmb    15 20 17.0
      comp=Z,3.5nm,0.7s
MAKZ  Makanchi          29.61  42   P      P       15 20 14.8 -0.4
MAKZ                                pmax   pmax
      comp=Z,3.0nm,0.7s
HORU  Horodok           29.76 324   P      P       15 20 17.5 +1.0
MK31  Makanchi Array    29.79  42ceP       P       15 20 18.3 +1.5
MKAR  Makanchi Array    29.79  42   P      P       15 20 16.7 -0.1
      comp=Z,1.2nm,0.5s,baz=230,slow=8.7,SNR=18
MKAR                                PcP    PcP     15 23 19.1 -0.9
      comp=Z,0.3nm,0.5s,baz=280,slow=2.8,SNR=1.6
      comp=Z,1.2nm,0.5s
KURBB Kurchatov Arra    29.95  33   P      P       15 20 18.3 +0.2
      comp=Z,0.6nm,0.5s,baz=232,slow=8.7,SNR=8.6
KURBB                               LR     LR      15 33 35.0
      comp=Z,102nm,19.3s,baz=180,slow=39
      comp=Z,0.6nm,0.5s
OBN   Obninsk           29.96 341⇑eP       P       15 20 20.0 +1.9
OBN                                e               15 21 17.7
OBN                                eS      S       15 25 06.6 -8.1
OBN                                 pmax   pmax
      comp=Z,4.0nm,0.9s
OBN                                 MLR    MLR
      comp=Z,50nm,18.0s
KURK  Kurchatov         30.05  33ceP       P       15 20 20.6 +1.6
KURK                                pmax   pmax
      comp=Z,3.0nm,1.3s
MI28  Mi28,Pidlybu      30.21 327   P      P       15 20 22.0 +1.6
STNU  Starunia          30.52 321   P      P       15 20 24.9 +1.7
KIRV  Kirov             31.02 356   LR     LR      15 36 41.9
      comp=Z,62nm,20.1s,baz=158,slow=43
KIRV  Kirov             31.02 356ceP       P       15 20 30.2 +2.7
WMQ   Urumqi            32.06  51  eP      P       15 20 39.5 +2.6
MNK   Minsk             32.55 332 i P      P       15 20 36.5 -4.5
      comp=E,20nm,0.8s
MNK                               i P      P       15 20 36.5 -4.5
      comp=N,9.0nm,0.8s
MNK                               i P      P       15 20 36.5 -4.5
      comp=Z,9.0nm,0.8s,baz=135
MNK                               i PP     PnPn    15 21 43.9 -4.7
MNK                               i PPP    PPP     15 21 53.9
MNK                               i S      S       15 25 52.8 -2.4
MNK                               i SS     SnSn    15 27 48.1 -1.6
MNK                               i SSS    SSS     15 28 03.5
MNK                               i LQ     LQ      15 31 20.1
MNK                               i LR     LR      15 34 24.6
MNK                               i LRM    MLR     15 35 27.7
      comp=N,59nm,19.0s
MNK                               i LRM    MLR     15 35 31.6
      comp=Z,125nm,19.3s
MNK                               i LRM    MLR     15 35 38.2
      comp=E,59nm,18.1s
MNK   Minsk             32.55 332 i P      P       15 20 36.4 -4.5
MNK                               i PPP    PPP     15 21 53.8
MNK                               i S      S       15 25 52.8 -2.4
MNK                               i SS     SnSn    15 27 48.0 -1.6
MNK                                 pmax   pmax
      comp=N,9.0nm,0.8s
MNK                                 pmax   pmax
      comp=E,20nm,0.8s
MNK                                 pmax   pmax
      comp=Z,9.0nm,0.8s
MNK                                 MLR    MLR
      comp=N,59nm,19.0s
MNK                                 MLR    MLR
      comp=Z,125nm,19.0s
MNK                                 MLR    MLR
      comp=E,59nm,18.0s
MPLH  Magyarpolny       33.95 315   P      P       15 20 55.1 +1.8
      comp=E,9.5nm,1.0s
KLMR  Klimovskoe        34.45 348  eP      P       15 20 56.6 -0.8
KLMR                                pmax   pmax
      comp=Z,5.0nm,0.9s
PABE  Paberze           34.89 331   P      P       15 21 01.4 +0.1
ZAA0  Zalesovo Array    35.04  33   IAmb   IAmb    15 21 07.9
      comp=Z,2.7nm,0.6s
ZALV  Zalesovo Beam     35.04  33   P      P       15 21 02.4 -0.2
      comp=Z,2.1nm,0.4s,baz=243,slow=9.4,SNR=11
      comp=Z,2.1nm,0.4s
VRAC  Vranov            35.37 318   LR     LR      15 39 00.2
      comp=Z,69nm,19.3s,baz=104,slow=42
VSU   Vasula            35.87 336 i P      P       15 21 10.7 +1.0
VSU                                 pmax   pmax
      comp=Z,5.0nm,0.8s
GERES GERESS Array B    36.96 316   P      P       15 21 19.7 +0.4
      comp=Z,0.2nm,0.3s,baz=117,slow=10.0,SNR=2.4
GERES                               LR     LR      15 38 47.1
      comp=Z,70nm,19.6s,baz=115,slow=40
      comp=Z,0.2nm,0.3s
ABTA  Abfaltersbach     37.06 312 i pP     P       15 21 23.2 +3.0
      comp=Z,3.2nm,0.9s
LESA  Schwarzleotal     37.15 313 i pP     P       15 21 24.1 +3.2
      comp=Z,2.1nm,0.6s
WTTA  Wattenberg        37.78 313 i pP     P       15 21 27.5 +1.2
      comp=Z,3.4nm,0.7s
SQTA  Sankt Quirin      38.05 312 i P      P       15 21 29.1 +0.6
      comp=Z,4.1nm,0.5s
MOTA  Moosalm           38.15 312 i P      P       15 21 30.2 +0.8
      comp=Z,3.3nm,0.7s
CLL   Collm             38.28 319 i P      P       15 21 31.7 +1.4
CLL                                 pmax   pmax
      comp=Z,4.0nm,1.2s
CLL   Collm             38.28 319 i P      P       15 21 31.7 +1.4
      comp=Z,4.0nm,1.2s
FETA  Feichten          38.31 312 i P      P       15 21 30.9 +0.1
      comp=Z,1.0nm,0.4s
FINES FINESS Array B    38.33 339   P      P       15 21 30.7 +0.2
FINES FINESS Array B    38.33 339   P      P       15 21 30.6  0.0
      comp=Z,3.1nm,0.5s,baz=141,slow=9.5,SNR=32
      comp=Z,3.1nm,0.5s
FINES FINESS Array B    38.33 339   P      P       15 21 30.7 +0.2
DAVA  Damuels           38.94 312 i P      P       15 21 35.9 -0.2
      comp=Z,2.2nm,0.4s
GTA   Gaotai            40.21  61  eP      P       15 21 47.1 +0.3
GTA                                 pP     pP      15 21 53.3 +0.1
GTA                                 pmax   pmax
      comp=Z,7.0nm,0.6s
HFS   Hagfors           42.06 332   P      P       15 22 01.8 +0.3
      comp=Z,1.2nm,0.4s,baz=115,slow=11,SNR=14
HFS                                 LR     LR      15 41 01.7
      comp=Z,90nm,18.4s,baz=130,slow=38
      comp=Z,1.2nm,0.4s
CHTO  Chiang Mai        42.78  92   P      P       15 22 08.0 +0.1
CHTO                                IAmb   IAmb    15 22 09.5
      comp=Z,11nm,1.4s
CHTO  Chiang Mai        42.78  92   P      P       15 22 08.0 +0.1
CHTO                                pmax   pmax
      comp=Z,11nm,1.5s
CMAR  Chiang Mai Arr    42.91  92   P      P       15 22 08.5 -0.4
      comp=Z,1.3nm,0.8s,baz=283,slow=9.6,SNR=8.3
CMAR                                LR     LR      15 43 47.8
      comp=Z,34nm,18.7s,baz=210,slow=41
      comp=Z,1.3nm,0.8s
PZH   PanZhiHua         43.05  80   P      P       15 22 11.0 +0.9
NB2   NORSAR Subarra    43.58 332   P      P       15 22 13.6 -0.2
      comp=Z,1.1nm,0.6s,baz=122,slow=8.6
NOA   NORSAR Array B    43.58 332   P      P       15 22 13.9  0.0
      comp=Z,0.8nm,0.8s,baz=120,slow=8.1,SNR=3.3
NOA                                 LR     LR      15 42 09.2
      comp=Z,65nm,20.9s,baz=115,slow=38
      comp=Z,0.8nm,0.8s
ARCES ARCESS Array B    44.88 347   P      P       15 22 24.3 +0.2
      comp=Z,0.7nm,0.4s,baz=144,slow=10,SNR=12
ARCES                               LR     LR      15 42 49.3
      comp=Z,74nm,18.6s,baz=104,slow=38
      comp=Z,0.7nm,0.4s
SONM  Songino Array     45.66  49   P      P       15 22 31.1 +0.3
      comp=Z,1.2nm,0.7s,baz=266,slow=9.8,SNR=7.7
      comp=Z,1.2nm,0.7s
ULN   Ulaanbaatar       46.10  49ceP       P       15 22 34.5 +0.2
ULN                                 pmax   pmax
      comp=Z,6.0nm,1.7s
ESDC  Sonseca Array     48.30 300   P      P       15 22 51.8 +0.3
      comp=Z,0.5nm,0.5s,baz=76,slow=7.8,SNR=8.1
      comp=Z,0.5nm,0.5s
EKA   Eskdalemuir Ar    48.70 321   P      P       15 22 54.7 +0.5
      comp=Z,0.4nm,0.4s,baz=103,slow=8.6,SNR=6.1
      comp=Z,0.4nm,0.4s
HHC   Hu-ho-hao-te      49.20  59  eP      P       15 22 59.6 +1.2
HHC                                 pmax   pmax
      comp=Z,5.0nm,0.6s
HHC                                 pmax   pmax
      comp=Z,13nm,0.6s
TORD  Torodi Ar. Bea    50.01 264   P      P       15 23 03.9 -0.9
      comp=Z,1.5nm,0.4s,baz=62,slow=9.7,SNR=4.6
      comp=Z,1.5nm,0.4s
SPITS Spitsbergen Ar    53.25 351   P      P       15 23 28.0 -0.1
      comp=Z,0.4nm,0.4s,baz=125,slow=13,SNR=1.4
      comp=Z,0.4nm,0.4s
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TSUM	Tsumeb	57.94	220	LR	LR	15 51 02.9	
	comp=Z,82nm,18.9s,baz=146,slow=38						
DBIC	Dimbokro	58.67	261	P	P	15 24 06.8	-1.1
	comp=Z,3.7nm,0.6s,baz=74,slow=6.8,SNR=4.9						
	comp=Z,3.7nm,0.6s						
LBTB	Lobatse	58.72	209		P	15 24 08.2	+0.2
LBTB	Lobatse	58.72	209	P	P	15 24 08.2	+0.2
LBTB				pmax	pmax		
	comp=Z,9.0nm,1.4s						
BOSA	Boshof	62.02	208	P	P	15 24 30.6	0.0
	comp=Z,1.8nm,0.6s,baz=14,slow=9.0,SNR=4.7						
	comp=Z,1.8nm,0.6s						
KSRS	Korea Array	62.28	60	P	P	15 24 32.2	+0.1
	comp=Z,0.4nm,0.6s,baz=276,slow=6.4,SNR=2.3						
	comp=Z,0.4nm,0.6s						
KLR	Kul'dur	62.37	46	*i* P	P	15 24 33.5	+0.9
KLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
USA0B	Ussuriysk Arra	63.61	52	*i* P	P	15 24 42.5	+1.6
SEY	Seymchan	69.78	29	*ce*P	P	15 25 21.4	+1.5
SEY				pmax	pmax		
	comp=Z,4.0nm,1.7s						
BILL	Bilibino	72.73	21	*i* P	P	15 25 38.8	+1.1
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
YKA	Yellowknife Ar	89.63	354	P	P	15 27 07.5	0.0
	comp=Z,0.5nm,0.8s,baz=6.0,slow=5.1,SNR=7.6						
	comp=Z,0.5nm,0.8s						
WRA	Warramunga Arr	91.64	112	P	P	15 27 17.2	-0.4
	comp=Z,0.7nm,0.8s,baz=304,slow=4.7,SNR=3.1						
	comp=Z,0.7nm,0.8s						
QSPA	South Pole Qui	117.50	180	PKP	PKiKP	15 32 55.3	+0.2
	comp=Z,0.8nm,0.9s,baz=350,slow=4.5,SNR=1.6						

DJA 24 15:18:37.9±0.7**,3°S**±6°×**13°9E**±°**,h31**^{km}±11^{km}**,M3.9**/7**,**
mb4.3/1**,MLv3.6**/7**,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.53	350	P	Pn	15 18 49.5	+0.1
GENI	Genyem	1.37	93	P	Pn	15 18 59.7	-1.2
JAY	Jayapura	1.90	90	P	Pn	15 19 09.5	+1.2
SRPI	Serui, Papua	2.64	284	P	Pn	15 19 17.9	-0.5
SRPI				S	Sn	15 19 48.6	-0.8
BAKI	Biak	3.00	296	P	Pn	15 19 24.9	+1.6
FAKI	Fak Fak	6.56	266	P	Pn	15 20 12.1	-0.2

CATAC 24 15:19:18.7±0.7**,12°N**±3°×**8°8W**±°**,h17**^{km}±5^{km}**,M3.3**/16**,**
MLv3.3/16**,3D,Error ellipse: s-maj=7.8km s-min=4.0km**
az=36.0,confirmed,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIN	San Cristobal	1.01	41	P	Pg	15 19 38.6	+0.3
PKGN	Cerro Pekin	1.04	45	P	Pb	15 19 37.9	-0.3
POTN	Potosi Cosigui	1.08	12	P	Pb	15 19 38.3	-0.6
POTN				S	Sb	15 19 53.0	+0.3
PLRN	Geotermica Pol	1.14	56	P	Pn	15 19 38.6	-1.3
COPN	Copaltepe	1.14	78	⇓P	Pb	15 19 40.0	0.0
POLN	Al Sur del Vol	1.15	52	⇓P	Pn	15 19 39.0	-1.0
POLN				S	Sb	15 19 53.2	-1.5
CNGA	Al SSO del Vol	1.15	61	P	Pn	15 19 39.7	-0.4
CNGA				S	Sg	15 19 55.9	-0.2
CNGN	Cerro Negro	1.16	61	P	Pn	15 19 40.1	-0.1
ILCN	San Idelfonso	1.20	58	P	Pn	15 19 39.9	-0.7
ILCN				S	Sn	15 19 56.5	+0.1
MOMN	Momotombo	1.26	68	P	Pn	15 19 41.1	-0.4
MOMN				S	Sg	15 20 00.1	+0.6
MOM2	El Cardon	1.32	68	P	Pn	15 19 42.1	-0.2
MOM2				S	Sb	15 20 00.1	+0.5
CNCH	Conchagua	1.33	356	P	Pn	15 19 42.0	-0.7
CNCH	Conchagua	1.33	356	S	Sg	15 20 01.5	-0.5
APQ3	Volcan Apoyequ	1.38	76	S	Sn	15 20 01.0	0.0
WILN	Americas 2	1.53	81	S	Sb	15 20 05.5	-0.2
NANN	Nandasmo	1.58	90	P	Pb	15 19 47.9	+0.4
PACA	Pacayal	1.63	339	P	Pn	15 19 46.7	0.0
PACA	Pacayal	1.63	339	S	Sn	15 20 07.2	-0.1
NADN	Granada	1.68	96	S	Sn	15 20 07.2	-1.2
MATN	Matagalpa	2.02	61	P	Pn	15 19 51.0	-1.1
BOAB	BOACO BROADBAN	2.09	76	P	Pn	15 19 53.5	+0.7
BOAB	BOACO BROADBAN	2.09	76	S	Sn	15 20 19.8	+1.3
RCVN	Varillal2	2.22	42	⇓P	Pn	15 19 55.2	+0.3
RCPN	Sur Rio San Ju	2.25	45	P	Pn	15 19 54.8	-0.5

WEL ***24*** *15:28:59.2±0.2, 39°S±1°×17°6E±°, h5^{km}, M3.7/96, ML3.8/49, MLv3.7/96, Error ellipse: s-maj=2.3km s-min=1.7km az=115.2, confirmed*
WEL ***24*** *15:28:59.2, 38.°77S×175.°96E, h3^{km}, ML3.7, Mw3.6, Moment Tensor Solution. s7 Moment tensor: Scale 10^{14} Nm; M_{rr}-2.60; $M_{\theta\theta}$-1.62; $M_{\phi\phi}$4.22; $M_{r\theta}$-0.06; $M_{\theta\phi}$1.07; $M_{\phi r}$-1.31; Fault plane solution: $M_0$3.75000×10^{14} NP1: ϕ_s2.00000°, δ56.00000°, λ-101.00000°. NP2: ϕ_s201.00000°, δ36.00000°, λ-75.00000°. Principal axes: T 4.6400, Plg10.0000°, Azm100.0000°; N -1.7860, Plg9.0000°, Azm8.0000°; P -2.8540, Plg76.0000°, Azm237.0000°; Stations used: OTVZ TLZ BKZ WHVZ VRZ TOZ MKAZ NORMAL FAULTING*
NOU ***24*** *15:29:00.1, 38.°75S×176.°02E, h0^{km}, MLv3.8/11, North Island, New Zealand*
ISC 24 15:29:00.0±0.9**,38.°76S**±0.°01×**175.°99E**±0.°02**,h7**^{km}±9^{km}**,**
n144,σ**0**^{s}**94**/154**,North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WHTZ	Whakaora	0.10	345	P	Pg	15 29 02.4	0.0
HATZ	Hinemaiaia	0.15	148	P	Pg	15 29 02.1	-1.1
RATZ	Rangitukua	0.20	238	P	Pg	15 29 03.5	-0.6
WATZ	Wairara	0.21	285	P	Pg	15 29 03.9	-0.3
RITZ	Rihia Road	0.24	205	P	Pg	15 29 04.2	-0.7
WPRZ	Whakapapatarin	0.28	29	P	Pg	15 29 05.4	-0.1
WPRZ				S	Sg	15 29 09.2	+0.1
KUTZ	Kaahu Road	0.30	334	P	Pg	15 29 05.9	0.0
KUTZ				S	Sg	15 29 10.9	+1.0
KATZ	Kakaramea	0.31	227	P	Pg	15 29 05.3	-1.0
ALRZ	Allen Road	0.34	55	P	Pg	15 29 06.3	-0.4
MRHZ	Matea Rd	0.34	102	P	Pg	15 29 06.1	-0.7
MRHZ				S	Sg	15 29 10.7	-0.6
PRRZ	Plateau Road	0.41	51	P	Pg	15 29 07.7	-0.3
NTVZ	North Tongarir	0.42	216	P	Pg	15 29 07.2	-1.0
TMVZ	Te Maari	0.42	212	P	Pg	15 29 07.3	-1.0
GRRZ	Galatos Road	0.42	13	P	Pg	15 29 08.4	+0.2
KRVZ	Karewarewa	0.43	219	P	Pg	15 29 07.4	-1.0
ETVZ	East Tongariro	0.43	210	P	Pg	15 29 07.6	-0.9
HRRZ	Handcock Road	0.44	32	P	Pg	15 29 08.5	0.0
HRRZ				S	Sg	15 29 14.9	+0.7
NNVZ	North Ngauruho	0.47	218	P	Pg	15 29 08.3	-0.9
WTVZ	West Tongariro	0.47	221	P	Pg	15 29 08.2	-1.0
OTVZ	Oturere	0.47	212	P	Pg	15 29 08.3	-1.0
HSRZ	Hossack Road	0.49	24	P	Pg	15 29 09.8	+0.3
SNVZ	South Ngauruho	0.51	213	P	Pg	15 29 08.8	-1.0
NGZ	Ngauruhoe	0.51	216	P	Pg	15 29 09.1	-0.9
TWVZ	Taurewa	0.53	234	P	Pg	15 29 09.0	-1.3
TLZ	Tolley Road	0.56	320	P	Pg	15 29 10.0	-0.8
TLZ				S	Sg	15 29 17.6	-0.5
COVZ	Chateau Observ	0.56	218	P	Pg	15 29 09.9	-1.0
BKZ	Black Stump Fm	0.56	136	P	Pg	15 29 09.8	-1.1
BKZ	Black Stump Fm	0.56	136	P	Pg	15 29 10.3	-0.6
TUVZ	Tukino	0.57	207	P	Pg	15 29 10.1	-1.0
HLRZ	Highlands Stat	0.58	29	P	Pg	15 29 11.6	+0.3
RRRZ	Republican Roa	0.59	45	P	Pg	15 29 11.2	-0.2
FWVZ	Far West T-bar	0.60	214	P	Pg	15 29 10.5	-1.1
UTU	Utuhina	0.60	15	P	Pb	15 29 12.1	-0.8
MAVZ	Matarangi	0.61	213	P	Pg	15 29 10.8	-1.0
WHVZ	Whangaehu Hut	0.61	211	P	Pg	15 29 10.7	-1.1
TRVZ	Turoa	0.64	212	P	Pg	15 29 11.2	-1.2
WNVZ	Wahianoa	0.64	208	P	Pg	15 29 11.3	-1.2
TARZ	Mount Tarawera	0.66	38	P	Pg	15 29 13.1	+0.3
MOVZ	Moawhango	0.67	196	P	Pg	15 29 11.5	-1.5
MTHZ	Maungataniwha	0.67	98	P	Pg	15 29 12.5	-0.5
MTHZ				S	Sg	15 29 22.4	+0.6
MUGZ	Murupara	0.67	65	P	Pg	15 29 12.3	-0.7
NGRZ	Ngongotaha	0.68	13	P	Pb	15 29 13.6	-0.6
OMRZ	Omania	0.72	25	P	Pb	15 29 14.3	-0.6
NMHZ	Naumai	0.72	118	P	Pg	15 29 14.1	+0.2
MKRZ	Makatiti	0.73	31	P	Pb	15 29 14.7	-0.3
PKVZ	Pokaka	0.73	223	P	Pg	15 29 12.8	-1.3
KWHZ	Kaweka Forest	0.74	153	P	Pg	15 29 13.8	-0.6
MTVZ	Mangateitei	0.74	213	P	Pg	15 29 13.2	-1.1
KARZ	Kaharoa	0.77	15	P	Pg	15 29 14.8	0.0
RTZ	Ruatahuna	0.79	80	P	Pg	15 29 14.6	-0.6
LIRZ	Lichensteins R	0.82	22	P	Pb	15 29 16.0	-0.6
RAHZ	Arahi	0.87	101	P	Pg	15 29 16.9	+0.1
RAHZ				S	Sb	15 29 29.4	0.0
MCHZ	McNeill Hill	0.88	141	P	Pb	15 29 17.5	-0.1
EDRZ	Edgecumbe	0.88	42	P	Pg	15 29 17.0	0.0
KMRZ	Kaimai	0.91	358	P	Pg	15 29 17.0	-0.6
HIZ	Hauiti	0.92	285	P	Pg	15 29 16.4	-1.3
HIZ	Hauiti	0.92	285	P	Pg	15 29 16.8	-0.9
KRHZ	Kereru	0.93	162	P	Pg	15 29 17.1	-0.8
KRHZ				S	Sg	15 29 29.8	-0.1
ARHZ	Aropaoanui	0.93	123	P	Pb	15 29 18.8	+0.3
MARZ	Manawahe	0.94	35	P	Pg	15 29 17.7	-0.5
URZ	Urewera	1.01	61	P	Pg	15 29 18.0	-1.5
URZ	Urewera	1.01	61	P	Pg	15 29 18.4	-1.0
OPRZ	Ohinepanea	1.02	26	P	Pg	15 29 18.4	-1.2
WHHZ	Waihua	1.02	108	P	Pb	15 29 20.2	+0.2
VRZ	Vera Road	1.03	249	P	Pg	15 29 18.3	-1.4
TGRZ	Tauranga	1.05	12	P	Pg	15 29 19.0	-1.2
SNGZ	Shannon Statio	1.06	92	P	Pb	15 29 20.3	-0.3
TOZ	Tahuroa Road	1.10	339	P	Pg	15 29 19.3	-1.8
TOZ				S	Sg	15 29 34.3	-1.0
RAGZ	Rawiri	1.15	77	P	Pg	15 29 21.3	-0.7
PNHZ	Pukenui	1.16	172	P	Pg	15 29 21.1	-1.2
PNHZ				S	Sg	15 29 37.2	-0.3
WHRZ	Whale Island	1.19	41	P	Pn	15 29 25.1	+2.0
CKHZ	Cape Kidnapper	1.23	137	P	Pn	15 29 24.6	+1.0
KAHZ	Kahuranaki	1.24	147	P	Pn	15 29 24.4	+0.5
WAZ	Wanganui	1.26	218	P	Pg	15 29 23.2	-1.1
MWZ	Matawai	1.28	71	P	Pg	15 29 22.6	-1.9
TSZ	Takapari Road	1.30	181	P	Pg	15 29 23.5	-1.4
MHEZ	Mangahewa	1.34	256	P	Pb	15 29 26.6	+1.1
KNZ	Kokohu	1.34	102	P	Pb	15 29 26.2	+0.8
WPHZ	Waipukurau	1.35	165	P	Pb	15 29 25.6	-0.1
RIGZ	Rimuhau	1.39	88	P	Pb	15 29 26.5	+0.2
LREZ	Lake Rotokare	1.42	240	P	Pn	15 29 25.8	-0.5
PXZ	Pawanui	1.44	152	P	Pb	15 29 27.0	-0.1
DREZ	Durham Road	1.46	252	P	Pg	15 29 28.2	+0.2
PRGZ	Paritu Road	1.49	97	P	Pn	15 29 27.4	+0.2
TKGZ	Te Karaka	1.49	78	P	Pb	15 29 27.7	-0.3
OHWZ	Ohakea	1.53	200	P	Pn	15 29 27.7	-0.1
PREZ	Palmer Road	1.54	247	P	Pn	15 29 28.3	+0.4
DVHZ	Dannevirke	1.54	175	P	Pn	15 29 28.3	+0.3
MHGZ	Mahia Peninsul	1.55	105	P	Pg	15 29 30.0	+0.3
RUGZ	Raukumara Rang	1.55	60	P	Pn	15 29 26.6	-1.5
NEZ	North Egmont	1.56	250	P	Pb	15 29 29.0	-0.2
PRHZ	Porangahau	1.58	162	P	Pb	15 29 29.4	-0.2
PKE	Pukeiti	1.62	254	P	Pn	15 29 29.6	+0.5
KHEZ	Kahui Hut	1.63	250	P	Pn	15 29 29.4	+0.3
KHEZ	Kahui Hut	1.63	250	P	Pn	15 29 29.5	+0.3
POWZ	Post Office Ro	1.64	186	P	Pn	15 29 29.6	+0.3
TWGZ	Tauwhareparae	1.67	70	P	Pn	15 29 30.2	+0.5
NBEZ	Newall Road No	1.73	252	P	Pn	15 29 31.2	+0.7
HAZ	Te Kaha	1.73	55	P	Pn	15 29 28.8	-1.7
ANWZ	Angora Road	1.74	168	P	Pn	15 29 30.8	+0.2
CNGZ	Carnagh Statio	1.76	82	P	Pg	15 29 33.0	-0.7
MKAZ	Moumakai	1.78	338	P	Pn	15 29 31.6	+0.4
PRWZ	Pori Road	1.79	180	P	Pb	15 29 33.1	-0.1
PKGZ	Pakihiroa	1.87	62	P	Pn	15 29 32.4	-0.1
PUZ	Puketiti	1.91	70	P	Pb	15 29 34.4	-0.8
MRZ	Mangatainoka R	1.92	189	P	Pn	15 29 33.3	+0.2
BFZ	Birch Farm	1.93	174	P	Pn	15 29 33.6	+0.3
BFZ	Birch Farm	1.93	174	P	Pn	15 29 33.0	-0.3
ETAZ	East Tamaki Re	1.99	335	P	Pn	15 29 34.0	0.0
AWAZ	Awhitu Peninsu	2.00	327	P	Pn	15 29 33.7	-0.5
TIWZ	Tintock	2.01	182	P	Pb	15 29 36.8	-0.2
KUZ	Kuaotunu	2.02	354	P	Pn	15 29 35.5	+1.0
KUZ	Kuaotunu	2.02	354	P	Pb	15 29 37.1	0.0
WIAZ	Waiheke Island	2.08	341	P	Pn	15 29 35.9	+0.6
EPAZ	Eden Park BICE	2.12	332	P	Pg	15 29 39.9	-0.9
WMGZ	Waiomatatini S	2.13	65	P	Pn	15 29 36.8	+0.9
WTAZ	Waiatarua	2.14	328	P	Pn	15 29 36.0	-0.1
OGWZ	Otaki Gorge	2.15	197	P	Pn	15 29 36.8	+0.5
HBAZ	Herne Bay Bore	2.15	332	P	Pn	15 29 37.3	+1.0
CPWZ	Castlepoint	2.15	176	P	Pg	15 29 43.1	+1.8
HOWZ	Holdsworth Sta	2.17	190	P	Pn	15 29 36.2	-0.3
MBAZ	Motutapu North	2.17	336	P	Pn	15 29 36.7	+0.2
MXZ	Matakaoa Point	2.18	57	P	Pb	15 29 38.6	-1.2
MXZ	Matakaoa Point	2.18	57	P	Pn	15 29 37.0	+0.3
KIW	Kapiti Island	2.26	201	P	Pn	15 29 38.4	+0.6
ABAZ	Army Bay	2.34	337	P	Pn	15 29 39.7	+0.8
TMWZ	Te Maipa	2.34	182	P	Pn	15 29 39.2	+0.2
MTW	Mount Morrison	2.42	189	P	Pn	15 29 39.3	-0.7
CAW	Cannon Point	2.45	197	P	Pn	15 29 40.3	-0.1
GRZ	Great Barrier	2.54	350	P	Pg	15 29 47.8	-1.0
DUWZ	D'Urville Isla	2.59	217	P	Pn	15 29 44.2	+1.9
PAWZ	Paruwai Farm	2.65	189	P	Pn	15 29 44.1	+0.9
WEL	Wellington	2.69	200	P	Pn	15 29 45.8	+2.1
MSWZ	Moikau Station	2.71	192	P	Pn	15 29 45.3	+1.3
SNZO	South Karori	2.73	201	P	Pn	15 29 45.8	+1.6
TCW	Tory Channel	2.78	208	P	Pn	15 29 47.0	+2.1
PLWZ	Palliser	2.86	191	P	Pn	15 29 48.2	+2.1
TUWZ	Tuamarina	3.09	210	P	Pn	15 29 50.3	+1.1
TKNZ	Takaka Hill	3.25	225	P	Pn	15 29 53.5	+2.0
QRZ	Quartz Range	3.37	231	P	Pn	15 29 55.5	+2.4
QRZ	Quartz Range	3.37	231	P	Pn	15 29 55.0	+1.9
MRNZ	Matariki Terra	3.62	222	P	Pn	15 29 58.4	+1.9
OUZ	Omahuta	4.02	331	P	Pn	15 30 03.4	+1.4
KHZ	Kahutara	4.10	206	P	Pn	15 30 04.5	+1.4

IDC ***24*** *15:36:45.0±1.0, 5.°60N×78.°41W, h0^{km}, mb3.8/7, mbtmp3.8/8, ML2.1/1, MS3.2/8, Error ellipse: s-maj=37.5km s-min=22.3km az=52.0*
UPA ***24*** *15:36:46.2±1.8, 5.°73N×78.°52W, h0^{km}±46^{km}, MW4.2*
NEIC ***24*** *15:36:47.9±1.5, 5.°44N±0.°10×78.°6W±0.°2, h10^{km}±1^{km}, mb4.4/28, Error ellipse: s-maj=27.7km s-min=14.4km az=72.0*
RSNC ***24*** *15:36:47.4±0.0, 6°N±2°×7°8W±°, h31^{km}±7^{km}, M3.2, mB4.9, mb4.1, ML2.9, Mw(mB)4.1*
ISC 24 15:36:46.3±0.5**,5.°63N**±0.°03×**78.°31W**±0.°03**,h10**^{km}**,n90,**
σ**2**^{s}**71**/112**,mb4.3**/21**,MS3.2**/5**,1C,South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOLC	Bahia Solano	1.08	56	P	Pb	15 37 03.9	-3.1
SOLC				S	Sg	15 37 15.4	-5.6
PTAC	Punta Ardita,	1.59	18	P	Pn	15 37 11.3	-3.3
PTAC				S	Sn	15 37 28.0	-7.2
MALC	Bahia Malaga	1.87	149	P	Pn	15 37 17.1	-1.3
MALC				S	Sn	15 37 35.4	-6.7
PLMC	San Jos del P	2.14	109	P	Pn	15 37 19.2	-3.0
PLMC				S	Sn	15 37 42.9	-6.0
CBOC	Ciudad Bolivar	2.30	84	P	Pn	15 37 21.4	-3.0
CBOC				S	Sn	15 37 46.3	-6.6
DBBC	Dabeiba	2.50	56	P	Pn	15 37 25.8	-1.4
DBBC				S	Sn	15 37 54.3	-3.5
YOTC	Yotoco, Valle	2.55	130	P	Pn	15 37 25.6	-2.2
YOTC				S	Sn	15 37 54.2	-4.8
ACHO3	Achotines, Los	2.57	314	*e*P	Pn	15 37 25.3	-2.7
ACHO3				*e*S	Sn	15 37 55.5	-3.8
GR1C	Gorgona, Isla	2.61	177	P	Pn	15 37 25.8	-2.7
GR1C				S	Sn	15 37 54.8	-5.5
HELC	Santa Helena	2.82	78	P	Pn	15 37 30.3	-1.5
HELC				S	Sn	15 38 01.8	-4.3
APAC	Apartado, Choc	2.84	37	P	Pn	15 37 32.0	+0.3
APAC				S	Sn	15 38 03.1	-2.9
JAMC	Jamundi, Valle	2.90	146	P	Pn	15 37 30.9	-1.8
JAMC				S	Sn	15 38 02.2	-5.5
AZU	Azuero	2.91	318	P	Pn	15 37 30.1	-2.5
AZU				S	Sn	15 38 03.9	-3.8
AZU	Azuero	2.91	318	⇑*i*P	Pn	15 37 30.3	-2.3
AZU				*e*S	Sn	15 38 02.5	-5.1
GUY2C	Guyana, Caldas	2.96	98	P	Pn	15 37 32.3	-1.5
GUY2C				S	Sn	15 38 02.8	-6.8
CACAO	El Cacao, Vera	3.06	304	P	Pn	15 37 32.3	-2.4
CACAO				S	Sn	15 38 07.0	-4.4
CACAO	El Cacao, Vera	3.06	304	*e*P	Pn	15 37 32.4	-2.4
CACAO				*e*S	Sn	15 38 07.3	-4.1
ANIL	Santa Ana	3.11	111	P	Pn	15 37 35.0	-0.7
ANIL				S	Sn	15 38 10.6	-2.4
TABO3	Taboga, Panama	3.38	339	*e*S	Sn	15 38 17.5	-1.9
NORC	Norcasia	3.42	91	P	Pn	15 37 39.5	-0.3
NORC				S	Sn	15 38 18.3	-2.2
POPC	Popayan, Colom	3.47	152	P	Pn	15 37 39.1	-1.5
UREC	San Jos de Ur	3.47	52	P	Pn	15 37 40.2	-0.3
UREC				S	Sn	15 38 19.9	-1.8
ORTC	Ortega, Tolima	3.50	119	P	Pn	15 37 40.7	-0.1
ORTC				S	Sn	15 38 20.7	-1.6
UPA	Univ. de Panam	3.55	340	*e*P	Pn	15 37 39.6	-1.8
UPA				*e*S	Sn	15 38 19.9	-3.7
ARRA3	Arraijan, Pana	3.58	338	*e*P	Pn	15 37 40.3	-1.6
ARRA3				*e*S	Sn	15 38 22.6	-1.6
GMAL	Guarumal, Vera	3.60	306	P	Pn	15 37 41.0	-1.2
GMAL				S	Sn	15 38 23.0	-1.8
GMAL	Guarumal, Vera	3.60	306	*e*P	Pn	15 37 41.3	-0.8
GMAL				*e*S	Sn	15 38 22.0	-2.7
BBAC	Balboa, Cauca	3.73	163	P	Pn	15 37 42.3	-1.9
BBAC				S	Sn	15 38 23.6	-4.8
BCIP	Isla Barro Col	3.83	337		Pn	15 37 43.0	-2.4
ZARC	Zaragoza, Cauc	3.90	61	P	Pn	15 37 45.9	-0.4
ZARC				S	Sn	15 38 28.7	-3.5
PRAC	Prado	3.90	119	P	Pn	15 37 46.6	+0.2
PRAC				S	Sn	15 38 31.1	-1.3
PTBC	PUERTO BERRIO,	3.94	76	P	Pn	15 37 46.9	0.0
ROSC	El Rosal	4.05	101	Pn	Pn	15 37 51.4	+2.7
	2.6nm,0.3s,baz=210,slow=22,SNR=2.4						
	8.1nm,0.5s						
GARC	Garzon, Huila	4.42	140	P	Pn	15 37 55.1	+1.4
GARC				S	Sn	15 38 45.9	+0.4
FLOC	Florencia	4.81	146	P	Pn	15 37 59.7	+0.8
VILC	Villavicencio,	4.84	108	P	Pn	15 38 02.4	+3.0
BARC	Barichara	5.19	79	P	Pn	15 38 05.3	+1.0
RUSC	La Rusia	5.21	87	P	Pn	15 38 05.8	+1.1
RUSC				S	Sn	15 39 05.3	+0.2
OTAV	Otavalo	5.35	182		Pn	15 38 06.1	-0.6
OTAV	Otavalo	5.35	182	P	Pn	15 38 06.3	-0.4
	4.4nm,0.5s						
MACC	Macarena, Meta	5.63	128	P	Pn	15 38 10.1	-0.1
JTS	Las Juntas de	8.05	306	LR	LR	15 41 38.0	
	comp=Z,210nm,20.6s,baz=156,slow=37						
HERN	Volcan Telica	10.90	310	Pn	Pn	15 39 23.5	+0.9
PCRV	Puerto La Cruz	14.28	71	LR	LR	15 47 41.6	
	comp=Z,52nm,22.0s,slow=46						
NMDO	Nuevo Mundo	15.19	12	Pn	P	15 40 26.1	0.0
NMDO				IAmb	IAmb	15 41 07.8	
	comp=Z,15nm,1.2s						
TDBA	Terre de Bas,	19.26	57	P	Pn	15 41 17.1	+5.0
GDHS	Morne Mazeau,	19.37	56	P	Pn	15 41 17.7	+4.2
CMIG	Matias Romero	19.82	306	LR	LR	15 48 47.3	
	comp=Z,105nm,20.4s,baz=183,slow=37						
LPAZ	La Paz	23.99	155		P	15 42 02.6	+0.6
LPAZ	La Paz	23.99	155	P	P	15 42 02.6	+0.6
	comp=Z,1.6nm,0.8s,baz=337,slow=13,SNR=6.9						
LPAZ				LR	LR	15 52 25.9	
	comp=Z,55nm,18.2s,baz=338,slow=39						
	comp=Z,1.6nm,0.8s						
MDP	Montagnes des	25.56	90	LR	LR	15 52 33.3	
	comp=Z,74nm,18.5s,baz=14,slow=37						
R40A	Maddies Statio	34.91	341	P	P	15 43 40.0	+1.9
R40A				IAmb	IAmb	15 43 40.7	
	comp=Z,2.7nm,0.6s						
OK051	E0350 and S346	35.12	334	P	P	15 43 40.7	+0.7
N51A	Ashland	35.33	355	P	P	15 43 44.0	+2.2
CPUP	Villa Florida	37.72	148	LR	LR	16 00 47.9	
	comp=Z,19nm,18.4s,baz=32,slow=38						
SADO	Sadowa	39.00	359	LR	LR	16 04 17.7	
	comp=Z,59nm,18.1s,baz=340,slow=42						
TRQ	Mont Tremblant	40.57	4	P	P	15 44 29.2	+3.1
TRQ				IAmb	IAmb	15 44 29.7	
	comp=Z,8.0nm,1.3s						
PFO	Pinyon Flats O	45.03	313	LR	LR	16 04 30.9	
	comp=Z,35nm,19.0s,baz=204,slow=37						
ULM	Lac du Bonnet	46.86	345	P	P	15 45 15.5	-1.0
	comp=Z,1.5nm,0.6s,baz=195,slow=8.0,SNR=3.6						
	comp=Z,1.5nm,0.6s						
NVAR	Mina Array Bea	48.77	318	P	P	15 45 32.4	+0.6
	comp=Z,0.3nm,0.6s,baz=132,slow=4.8,SNR=1.8						
	comp=Z,0.3nm,0.6s						
YKA	Yellowknife Ar	62.70	342	P	P	15 47 12.3	+1.2
YKA	Yellowknife Ar	62.70	342	P	P	15 47 11.6	+0.5
	comp=Z,2.1nm,0.8s,baz=134,slow=6.2,SNR=25						
	comp=Z,2.1nm,0.8s						
YKAW3	Yellowknife Wh	62.75	342		P	15 47 11.9	+0.4
YKAW3				IAmb	IAmb	15 47 13.0	
	comp=Z,3.6nm,0.9s						
O30N	Mendenhall	69.80	334	P	P	15 47 58.3	+1.5
O30N				IAmb	IAmb	15 47 59.6	
	comp=Z,3.3nm,0.9s						
N30M	Aishikik Lake	70.54	334	P	P	15 48 02.8	+1.5
N30M				IAmb	IAmb	15 48 04.4	
	comp=Z,2.9nm,0.9s						
H31M	Peel River	71.47	339	P	P	15 48 09.2	+2.3
H31M				IAmb	IAmb	15 48 09.7	
	comp=Z,3.0nm,1.0s						
K29M	Barlow Dome	71.76	336		P	15 48 10.4	+1.6
K29M				IAmb	IAmb	15 48 11.2	
	comp=Z,2.5nm,0.8s						
I30M	Mount Dempster	71.93	338	P	P	15 48 11.3	+1.5
I30M				IAmb	IAmb	15 48 12.3	
	comp=Z,2.3nm,0.9s						
G31M	Satah River	72.00	340		P	15 48 11.0	+1.1
F30M	Barrier River	72.85	340		P	15 48 16.5	+1.4
BCAR	Beaver Creek A	73.20	335		P	15 48 19.1	+1.8
L27K	Beaver Creek,	73.21	335		P	15 48 19.4	+2.0
L27K				IAmb	IAmb	15 48 20.4	
	comp=Z,4.0nm,0.9s						
F28M	Old Crow	74.25	340	P	P	15 48 24.0	+0.7
ESDC	Sonseca Array	74.39	51	P	P	15 48 25.2	+0.5
	comp=Z,1.3nm,0.8s,baz=265,slow=5.3,SNR=8.5						
	comp=Z,1.3nm,0.8s						
SCRK	Sand Creek	74.44	335	P	P	15 48 26.2	+1.5
J26L	Joseph Creek	74.45	336		P	15 48 26.3	+1.7
J26L				IAmb	IAmb	15 48 27.6	
	comp=Z,2.6nm,0.8s						
RIDG	Independent Ri	74.72	335		P	15 48 27.8	+1.6
RIDG				IAmb	IAmb	15 48 28.9	
	comp=Z,4.2nm,0.9s						
E27K	Coleen River	75.08	340	P	P	15 48 29.2	+1.1
E27K				IAmb	IAmb	15 48 45.4	
	comp=Z,3.0nm,1.1s						
J25K	Salcha River,	75.22	336	P	P	15 48 30.4	+1.3
BMAR	Burnt Mountain	75.85	339	P	P	15 48 33.9	+1.3
IL31		75.89	336	P	P	15 48 33.9	+1.1
IL31				IAmb	IAmb	15 48 34.1	
	comp=Z,1.8nm,0.8s						
ILAR	Eielson Array	75.89	336	P	P	15 48 33.6	+0.8
	comp=Z,0.8nm,0.6s,baz=114,slow=3.6,SNR=10						
	comp=Z,0.8nm,0.6s						
I23K	Minto, Yukon-K	77.01	336	P	P	15 48 40.2	+1.1
SKT	Skwentna	77.20	332	P	P	15 48 41.8	+1.5
E22K	Anaktuvuk Pass	78.69	339	P	P	15 48 49.7	+1.1
IMAR	Indian Mountai	78.97	336	P	P	15 48 51.0	+0.9
G18K	Tagagawik	80.95	336	P	P	15 49 01.9	+1.1
G18K				IAmb	IAmb	15 49 17.2	
	comp=Z,4.6nm,1.3s						
GERES	GERESS Array B	87.13	41	P	P	15 49 33.7	+0.9
	comp=Z,0.2nm,0.4s,baz=258,slow=5.9,SNR=3.8						
	comp=Z,0.2nm,0.4s						
ASAR	Alice Springs	144.19	237	PKP	PKPbc	15 56 20.9	-0.7
	comp=Z,1.3nm,0.8s,baz=110,slow=3.5,SNR=17						
WRA	Warramunga Arr	145.22	243	PKPbc	PKPdf	15 56 24.2	-1.1
	comp=Z,0.7nm,0.9s,baz=104,slow=2.6,SNR=3.7						

IDC ***24*** *15:37:42.2±0.8, 2.°70S×138.°54E, h0^{km}, mb3.8/8, mbtmp3.8/11, ML3.7/3, MS3.9/2, Error ellipse: s-maj=19.9km s-min=15.4km az=172.0*
NEIC ***24*** *15:37:43.9±2.0, 2.°6S±0.°1×138.°44E±0.°08, h10^{km}±1^{km}, mb4.1/12, Error ellipse: s-maj=20.0km s-min=12.0km az=341.0*
DJA ***24*** *15:37:47.1±0.7, 3°S±3°×13°9E±°, h20^{km}±7^{km}, M4.2/9, mb4.4/6, MLv4.2/9*
ISC 24 15:37:46.9±0.5**,2.°71S**±0.°05×**138.°53E**±0.°05**,h32**^{km}**,n40,**
σ**1**^{s}**47**/44**,mb3.8**/11**,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.74	14	P	Pn	15 37 58.8	-2.3
SMPI				S	Sn	15 38 13.8	+2.5
GENI	Genyem	1.64	86	P	Pn	15 38 14.1	+0.6
JAY	Jayapura	2.18	85	Pn	Pn	15 38 21.6	+0.5
	17nm,0.3s,baz=237,slow=10.0,SNR=83						
JAY				Lg	Lg	15 38 50.3	
	11nm,0.3s,baz=124,slow=18,SNR=5.9						
	46nm,0.4s						
JAY	Jayapura	2.18	85	P	Pn	15 38 20.8	-0.2
SRPI	Serui, Papua	2.44	290	P	Pn	15 38 25.2	+0.7
SRPI				S	Sn	15 38 56.1	+2.9
BAKI	Biak	2.85	302	P	Pn	15 38 32.0	+1.8
BAKI				S	Sb	15 39 08.4	-3.3
RKPI	Ransiki, Papua	4.51	285	P	Pn	15 38 53.4	+0.4

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RKPI                                S       Sn      15 39 48.0 +3.6
FAKI  Fak Fak             6.28 268  Pn      Pn      15 39 19.8 +2.5
FAKI  Fak Fak             6.28 268  P       Pn      15 39 18.6 +1.3
      0.2nm31nm,1.0s
SWI   Sorong              7.50 284  P       Pn      15 39 34.9 +0.8
      0.1nm15nm,0.6s
SAUI  Saumlaki            8.90 234  Pn      Pn      15 39 52.0 -1.4
COEN  Coen               12.08 158  Pn      Pn      15 40 37.5 +0.6
MTN   Manton Dam         12.45 216          Pn      15 40 42.9 +1.0
KNRA  Kununurra          16.08 216  Pn      Pn      15 41 30.8 +0.1
KNRA                                IAmb    IAmb    15 41 56.3
      comp=Z,9.7nm,0.8s
BATI  Baumata            16.53 243  P       P       15 41 38.5 -0.4
MMRI  Maumere            17.24 249          Pn      15 41 45.3 -0.2
WB0   Warramunga Arr     17.43 193  Pn      Pn      15 41 46.9 -0.8
WB0                                 IAmb    IAmb    15 42 04.8
      comp=Z,8.9nm,0.8s
WR8   Warramunga Arr     17.58 193  Pn      Pn      15 41 48.8 -0.9
WR8                                 IAmb    IAmb    15 42 07.2
      comp=Z,9.2nm,1.0s
WRAB  Tennant Creek      17.60 193  Pn      Pn      15 41 48.6 -1.2
WRAB                                IAmb    IAmb    15 42 03.2
      comp=Z,7.5nm,0.7s
WRA   Warramunga Arr     17.61 193          Pn      15 41 50.2 +0.2
WRA   Warramunga Arr     17.61 193  P       Pn      15 41 49.3 -0.6
      comp=Z,0.5nm,0.3s,baz=18,slow=12,SNR=18
WRA                                 S       Sn      15 44 54.1  -11
      comp=Z,0.7nm,0.8s,baz=7.0,slow=22,SNR=1.9
      comp=Z,1.5nm,0.6s
FITZ  Fitzroy Crossi     19.84 219  P       P       15 42 15.7 +0.4
FITZ  Fitzroy Crossi     19.84 219  P       P       15 42 15.3 +0.1
      comp=Z,0.1nm,0.3s,baz=48,slow=14,SNR=1.4
FITZ                                S       S       15 45 45.6  -11
      comp=Z,3.1nm,0.8s,baz=184,slow=19,SNR=2.1
      comp=Z,1.9nm,0.8s
AS31  Alice Springs      21.30 192  P       P       15 42 31.3 +0.2
AS31                                IAmb    IAmb    15 42 58.0
      comp=Z,3.2nm,0.6s
ASAR  Alice Springs      21.31 192  P       P       15 42 31.1  0.0
      comp=Z,1.7nm,0.5s,baz=21,slow=9.0,SNR=53
ASAR                                S       S       15 46 22.5 -3.8
      comp=Z,1.6nm,0.9s,baz=16,slow=23,SNR=4.6
      comp=Z,1.7nm,0.5s
YHNB  Yeheng             31.91 329  P       P       15 44 08.4 -1.4
PSI   Prapat             39.97 278  LR      LR      16 06 19.5
      comp=Z,177nm,18.6s,baz=329,slow=43
GSI   Gunungsitoli       41.14 275  P       P       15 45 27.5 -1.1
GSI                                 IAmb    IAmb    15 45 51.0
      comp=Z,15nm,1.2s
MSVF  Nonsavu            41.53 114  P       P       15 45 32.6 +0.8
MSVF                                IAmb    IAmb    15 45 54.4
      comp=Z,10nm,1.2s
CMAR  Chiang Mai Arr     44.28 300  P       P       15 45 54.2 +0.2
      comp=Z,0.3nm,0.3s,baz=112,slow=5.7,SNR=4.3
      comp=Z,0.3nm,0.3s
SONM  Songino Array      57.65 335  P       P       15 47 33.8 -0.4
      comp=Z,0.4nm,0.4s,baz=129,slow=9.3,SNR=1.7
      comp=Z,0.4nm,0.4s
PETK  Petropavlovsk-     57.91  14  P       P       15 47 37.5 +1.7
      comp=Z,0.6nm,0.9s,baz=187,slow=6.8,SNR=2.1
      comp=Z,0.6nm,0.9s
MKAR  Makanchi Array     69.68 322  P       P       15 48 54.0 +0.5
      comp=Z,0.5nm,0.9s,baz=116,slow=6.6,SNR=4.3
      comp=Z,0.5nm,0.9s
BVAR  Borovoye Array     79.21 325  P       P       15 49 49.3 +0.5
      comp=Z,0.7nm,0.5s,baz=123,slow=5.3,SNR=4.3
      comp=Z,0.7nm,0.5s
ILAR  Eielson Array      85.91  24  P       P       15 50 22.3 -1.2
ILAR  Eielson Array      85.91  24  P       P       15 50 22.0 -1.4
      comp=Z,0.5nm,0.8s,baz=274,slow=5.1,SNR=5.7
      comp=Z,0.5nm,0.8s
QSPA  South Pole Qui     87.23 180  P       P       15 50 30.8 +0.7
QSPA  South Pole Qui     87.23 180  P       P       15 50 30.5 +0.4
      comp=Z,1.8nm,1.1s,baz=41,slow=6.8,SNR=6.1
QSPA                                LR      LR      16 29 36.0
      comp=Z,52nm,19.1s,baz=47,slow=36
      comp=Z,1.8nm,1.1s
BMAR  Burnt Mountain     87.47  22  P       P       15 50 31.1 +0.1
SCHQ  Schefferville     124.09  17  PKP     PKPdf   15 56 42.0 -0.1
      comp=Z,6.7nm,0.8s,baz=270,slow=3.0,SNR=4.1
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*NEIC **24** 15:53:25.9±1.6, 5°.62S±0°.09×110°.34E±0°.09, h550km±8km, mb4.9/131, Error ellipse: s-maj=14.6km s-min=12.0km az=219.0*

*DJA **24** 15:53:25.0±0.1, 6°S±2°×11°0E±°, h535km±1km, M4.7/100, mb4.9/100, mB5.3/43, MLv5.3/30, Mw(mB)4.7/43*

*IDC **24** 15:53:25.2±0.5, 5°.58S×110°.36E, h539km±4km, mb4.4/39, mbtmp5.2/43, Error ellipse: s-maj=9.3km s-min=5.8km az=67.0*

ISC 24 15:53:24.9±0.3**, 5°.66S**±0°.04×**110°.31E**±0°.04**, h540**km±3km**, h542**km**:pP-P, n780,** σ1s.07/795**, mb4.8**/163**, 18C-14D, Java Sea**

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Code  Station Name         Δ°   AZ°  Phase ID         Time        Res
                                    Op      ISC      h  m  s      ISC
SMRI  Semarang            1.39 175  P       P       15 54 32.3 +1.0
SMRI  Semarang            1.39 175  P       P       15 54 32.4 +1.0
SMRI  Semarang            1.39 175  S       S       15 55 27.3 +2.0
SMRI  Semarang            1.39 175  P       P       15 54 32.3 +1.0
SMRI                                S       S       15 55 26.7 +1.4
TBJI  Tambak Boyo         1.91 127  P       P       15 54 34.5 +1.2
TBJI                                S       S       15 55 29.3 +0.4
NGJI  Ngawi               2.05 146  P       P       15 54 35.7 +1.8
YOGI  Yogyakarta          2.15 181  P       P       15 54 34.1 -0.3
YOGI                                S       S       15 55 28.7 -2.2
JCJI  Jatiwangi           2.19 248  P       P       15 54 35.6 +1.0
JCJI                                S       S       15 55 32.1 +0.8
WOJI  Wonogiri, Jawa      2.25 164  P       P       15 54 34.5 -0.4
WOJI                                S       S       15 55 29.9 -1.9
UGM   Wanagama            2.25 175          P       15 54 34.6 -0.4
UGM   Wanagama            2.25 175  P       P       15 54 34.6 -0.4
UGM   Wanagama            2.25 175  P       P       15 54 34.6 -0.4
UGM                                 S       S       15 55 30.0 -1.9
BWJI  Bawean              2.34  95  P       P       15 54 35.3 -0.1
GRJI  Gresik              2.49 120  P       P       15 54 37.2 +1.1
PCJI  Pacitan             2.66 161  P       P       15 54 36.3 -0.8
CMJI  Cimerak             2.81 221  P       P       15 54 36.4 -1.6
LEM   Lembang             2.92 246  P       P       15 54 39.5 +0.7
      2µm,0.7s,baz=44,slow=8.1,SNR=338
LEM                                 S       S       15 55 37.2 -1.7
      899nm,0.8s,baz=344,slow=22,SNR=13
LEM   Lembang             2.92 246  P       P       15 54 39.4 +0.5
CNJI  Cibinong            3.56 242  P       P       15 54 41.7 -1.2
DBJI  Dramaga             3.66 256  P       P       15 54 43.7 +0.1
KMMI  Kalianget           3.88 111  P       P       15 54 46.3 +1.1
TPI   Tanjungpandan       3.92 317  P       P       15 54 46.3 +0.8
SKJI  Sukabumi            3.97 250  P       P       15 54 45.5 -0.4
GMJI  Gumukmas            4.05 130  P       P       15 54 46.1 -0.4
SBJI  Serang              4.19 263  P       P       15 54 46.4 -1.1
CGJI  Cibinong            4.69 258  P       P       15 54 51.0 -0.6
JAGI  Jajag, Banyuwa      4.72 126          P       15 54 51.2 -0.7
JAGI  Jajag, Banyuwa      4.72 126  P       P       15 54 51.2 -0.7
JAGI  Jajag, Banyuwa      4.72 126  S       S       15 56 01.2 -1.6
JAGI  Jajag, Banyuwa      4.72 126  P       P       15 54 51.2 -0.7
PPBI  Pangkal Pinang      5.42 310  P       P       15 54 58.9 +1.0
SRBI  Singaraja           5.43 117  P       P       15 54 59.0 +1.1
STKI  Sintang             5.80  12  P       P       15 55 02.0 +0.7
      2.2nm10µm725nm,1.0s
MDSI  Maura Dua           6.22 280  P       P       15 55 05.5 +0.3
      0.3nm64nm,0.8s
LWLI  Liwa                6.26 276  P       P       15 55 05.6 -0.1
      5.9nm11µm441nm,0.6s
XMI   Christmas Isla      6.61 224  P       P       15 55 09.4 +0.6
KSM   Kuching             7.08 360          P       15 55 14.3 +1.0
KSM   Kuching             7.08 360  P       P       15 55 14.5 +1.1
MNAI  Manna               7.44 280          P       15 55 16.1 -0.7
MNAI  Manna               7.44 280  P       P       15 55 15.9 -1.0
MNAI  Manna               7.44 280  P       P       15 55 16.2 -0.7
BKB   Balikpapan          7.89  57          P       15 55 24.8 +3.5
BKB   Balikpapan          7.89  57  P       P       15 55 24.4 +3.1
BKB   Balikpapan          7.89  57  P       P       15 55 24.7 +3.4
KSI   Kapahiang           7.95 284  P       P       15 55 22.1 +0.1
      160nm,0.8s
PLAI  Plampang            8.04 113  P       P       15 55 21.5 -1.4
PLAI  Plampang            8.04 113  P       P       15 55 21.2 -1.7
      5µm207nm,0.5s
SMKI  Samarinda           8.61  53  P       P       15 55 30.8 +2.2
      10µm586nm,0.9s
KAPI  Kappang             9.42  87          P       15 55 36.9 +0.1
KAPI  Kappang             9.42  87  P       P       15 55 36.5 -0.3
      31nm,0.4s,baz=265,slow=3.3,SNR=10.0
KAPI  Kappang             9.42  87  P       P       15 55 36.9 +0.1
KAPI                                S       S       15 57 24.7 -0.3
KAPI  Kappang             9.42  87  P       P       15 55 37.3 +0.5
SPSI  Sidrap Palu         9.57  80  P       P       15 55 38.5 +0.1
MYKOM Kota Tinggi         9.82 319  P       P       15 55 41.9 +1.0
MYKOM Kota Tinggi         9.82 319  P       P       15 55 42.1 +1.2
TTSI  Tana Toraja         9.82  75  P       P       15 55 42.3 +1.3
      66nm,0.8s
WBSI  Waikabubak, Su      9.83 114  P       P       15 55 38.5 -2.5
      3µm296nm,0.6s
BNSI  Bone                9.83  83  P       P       15 55 42.5 +1.4
      62nm,0.9s
BSSI  Bau Bau, Buton     10.13  93  P       P       15 55 43.5 -0.7
      62nm,1.1s
PCI   Palu               10.61  64  P       P       15 55 50.9 +1.8
      5µm603nm,0.9s
WSI   Waingapu           10.67 113  P       P       15 55 46.7 -2.9
      6µm175nm,0.4s
BKNI  Bangkinang         11.00 302  P       P       15 55 54.2 +1.0
      67nm,0.4s
BASI  Baing, Sumba       11.13 115  P       P       15 55 53.2 -1.2
      163nm,0.8s
PPI   Padang Panjang     11.17 297  P       P       15 55 54.1 -0.8
MPSI  Mapaga             11.27  58  P       P       15 55 56.8 +0.9
      3µm221nm,1.1s
EDFI  Ende, Flores       11.70 106  P       P       15 55 57.8 -2.7
SISI  Saibi              12.00 291  P       P       15 56 01.6 -1.9
      37nm,0.5s
APSI  Ampana             12.26  68  P       P       15 56 05.8 -0.4
      93nm,1.2s
TOLI2 Tolitoli           12.43  58          P       15 56 08.8 +0.9
TOLI2 Tolitoli           12.43  58  P       P       15 56 09.0 +1.0
TOLI2 Tolitoli           12.43  58  S       S       15 58 23.8 +1.6
KKM   Kota Kinabalu      13.03  27          P       15 56 13.8 -0.5
KKM   Kota Kinabalu      13.03  27  P       P       15 56 14.0 -0.3
MRSI  Marisa             13.11  63  P       P       15 56 13.9 -1.2
      1µm78nm,0.6s
PBSI  Pulau Batu         13.24 294  P       P       15 56 15.1 -1.3
      104nm,1.6s
LUWI  Luwuk              13.25  70          P       15 56 16.6 +0.1
LUWI  Luwuk              13.25  70  P       P       15 56 16.5  0.0
LUWI  Luwuk              13.25  70  P       P       15 56 15.7 -0.8
MYLDM Lahad Datu         13.52  37  P       P       15 56 21.2 +2.0
IPM   Ipoh               13.69 317  P       P       15 56 21.7 +0.6
IPM   Ipoh               13.69 317  P       P       15 56 22.0 +0.9
BATI  Baumata            13.97 110  P       P       15 56 22.1 -1.9
      34nm,0.4s,baz=313,slow=1.2,SNR=26
BATI                                S       S       15 58 45.0 -6.6
      97nm,0.5s,baz=295,slow=17,SNR=7.7
BATI  Baumata            13.97 110  P       P       15 56 21.6 -2.4
      59nm,0.4s
RPSI  Rantau Prapat      14.08 306  P       P       15 56 25.1  0.0
RPSI  Rantau Prapat      14.08 306          P       15 56 24.9 -0.2
PSI   Prapat             14.14 306  P       P       15 56 25.1 -0.8
      22nm,0.3s,baz=126,slow=5.5,SNR=16
PSI                                 S       S       15 58 54.8 -0.3
      5.6nm,0.7s,baz=99,slow=18,SNR=8.5
PSI   Prapat             14.14 306  P       P       15 56 26.2 +0.3
SOEI  Soe                14.41 107  P       P       15 56 25.8 -2.9
SOEI  Soe                14.41 107  P       P       15 56 26.1 -2.6
      1µm44nm,1.1s
GSI   Gunungsitoli       14.48 298          P       15 56 26.8 -2.5
GSI   Gunungsitoli       14.48 298  P       P       15 56 28.5 -0.8
GSI   Gunungsitoli       14.48 298  P       P       15 56 26.9 -2.4
      52nm,0.6s
KULM  Kulim              14.54 318          P       15 56 29.6 -0.2
KULM  Kulim              14.54 318  P       P       15 56 29.5 -0.4
TSI   Tuntungan          14.85 308  P       P       15 56 34.3 +1.2
KMSI  Cibinong           14.98  66  P       P       15 56 32.7 -1.8
      3µm199nm,0.6s
SANI  Sanana             16.04  78  P       P       15 56 45.2 -0.1
      127nm,1.0s
NLAI  Namlea             16.91  83  P       P       15 56 55.1 +1.7
      47nm,0.5s
MLSI  Meulaboh, Aceh     17.03 305  P       P       15 56 54.8 +0.3
LHMI  Lhok Sumawe        17.18 309          P       15 56 56.6 +0.7
LHMI  Lhok Sumawe        17.18 309  P       P       15 56 56.8 +0.9
LHMI  Lhok Sumawe        17.18 309  P       P       15 56 56.7 +0.9
GIRL  Giralia            17.31 168          P       15 56 58.1 +1.2
GIRL  Giralia            17.31 168  P       P       15 56 58.9 +2.0
      comp=Z,262nm,0.8s
GIRL  Giralia            17.31 168  P       P       15 56 59.0 +2.1
DLV    Lat               17.58 354          P       15 57 00.1 +0.4
SRIT  Nakonsritamara     17.73 323          P       15 57 01.1 +0.1
SRIT  Nakonsritamara     17.73 323  P       P       15 57 02.2 +1.2
SGSI  Sangihe            17.80  59  P       P       15 57 01.9 +0.3
MBWA  Marble Bar         17.91 150  P       P       15 57 03.2 +0.7
MBWA  Marble Bar         17.91 150  P       P       15 57 03.3 +0.7
      comp=Z,258nm,1.0s
MBWA  Marble Bar         17.91 150  P       P       15 57 03.4 +0.9
MBWA  Marble Bar         17.91 150  P       P       15 57 03.2 +0.7
TNTI  Ternate            18.19  70          P       15 57 04.6 -0.5
TNTI  Ternate            18.19  70  P       P       15 57 05.2 +0.1
TNTI  Ternate            18.19  70  P       P       15 57 06.3 +1.2
      comp=Z,2µmcomp=Z,115nm,0.8s
PSA00 Pilbara Seismi     18.32 151          P       15 57 06.7 +0.5
PSA00 Pilbara Seismi     18.32 151  P       P       15 57 06.5 +0.3
      comp=Z,215nm,0.9s
PSA00 Pilbara Seismi     18.32 151  P       P       15 57 06.9 +0.7
FITZ  Fitzroy Crossi     19.41 131  P       P       15 57 16.9 +0.6
      comp=Z,45nm,0.5s,baz=326,slow=7.7,SNR=119
KNRA  Kununurra          20.66 120          P       15 57 27.3 -0.3
KNRA  Kununurra          20.66 120  P       P       15 57 27.5 -0.1
      comp=Z,28nm,0.7s
DRS   Darwin Rock St     21.40 110  P       P       15 57 35.0 +0.7
MTN   Manton Dam         21.74 111          P       15 57 37.3 -0.1
MTN   Manton Dam         21.74 111  P       P       15 57 39.2 +1.9
      comp=Z,32nm,0.4s
MTN   Manton Dam         21.74 111  P       P       15 57 37.4 +0.1
FAKI  Fak Fak            22.04  84  P       P       15 57 41.2 +1.1
FAKI  Fak Fak            22.04  84  P       P       15 57 40.7 +0.6
MEEK  Meekatharra        22.32 160  P       P       15 57 43.5 +1.1
      comp=Z,108nm,0.7s
MEEK  Meekatharra        22.32 160  P       P       15 57 43.1 +0.7
KDU   Kakadu             22.95 109  P       P       15 57 49.8 +1.7
      comp=Z,12nm,0.8s
KDU   Kakadu             22.95 109  P       P       15 57 48.0 -0.1
MORW  Morawa             23.91 168          P       15 57 57.7 +1.2
MORW  Morawa             23.91 168  P       P       15 57 57.8 +1.2
      comp=Z,109nm,0.8s
MORW  Morawa             23.91 168  P       P       15 57 57.7 +1.2
PBA   Port Blair         24.52 315  P       P       15 58 01.9 -0.2
PBA   Port Blair         24.52 315  P       P       15 58 02.2 +0.1
BLDU  Ballidu            25.55 167  P       P       15 58 11.9 +1.0
      comp=Z,101nm,0.7s
BLDU  Ballidu            25.55 167  P       P       15 58 11.7 +0.7
WRKA  Warakurna          25.86 140  P       P       15 58 14.3 +0.5
      comp=Z,5.9nm,0.9s
CM31  Chiang Mai Arr     26.46 335  P       P       15 58 20.8 +1.6
      SNR=18
CM31                                S       S       16 02 16.5 +1.3
CMAR  Chiang Mai Arr     26.46 335  P       P       15 58 20.5 +1.4
CMAR  Chiang Mai Arr     26.46 335  P       P       15 58 20.8 +1.6
      comp=Z,27nm,0.8s,baz=169,slow=7.9,SNR=233
CMAR                                PcP     PcP     16 01 27.9 +1.4
      comp=Z,5.8nm,0.7s,baz=193,slow=3.1,SNR=13
CMAR                                ScP     ScP     16 04 16.6 +1.1
      comp=Z,1.4nm,0.8s,baz=179,slow=2.6,SNR=7.1
CMAR                                PKiKP   PKiKP   16 09 03.1 -1.3
      comp=Z,0.7nm,0.6s,baz=160,slow=1.7,SNR=6.4
      comp=Z,27nm,0.8s
MTKN  Mount Kenneth      26.64 170  P       P       15 58 23.2 +2.7
      comp=Z,346nm,0.8s
KLBR  Kellerberrin       26.73 166  P       P       15 58 22.5 +1.1
      comp=Z,258nm,0.5s
KLBR  Kellerberrin       26.73 166  P       P       15 58 22.1 +0.7
MUN   Mundaring          26.76 169  P       P       15 58 22.9 +1.3
      comp=Z,99nm,1.0s
MUN   Mundaring          26.76 169  P       P       15 58 22.8 +1.1
CHTO  Chiang Mai         26.77 336          P       15 58 21.9 -0.1
CHTO  Chiang Mai         26.77 336  P       P       15 58 23.2 +1.3
CHTO  Chiang Mai         26.77 336  P       P       15 58 23.3 +1.3
WB0   Warramunga Arr     27.30 123          P       15 58 26.6  0.0
WRA   Warramunga Arr     27.34 123  P       P       15 58 27.4 +0.5
      comp=Z,2.7nm,0.4s,baz=293,slow=7.5,SNR=97
WRA                                 PcP     PcP     16 01 29.1 +0.4
      comp=Z,6.2nm,0.5s,baz=299,slow=2.1,SNR=11
WRA                                 S       S       16 02 24.9 -4.1
      comp=Z,5.6nm,0.6s,baz=295,slow=18,SNR=7.3
WRA                                 ScP     ScP     16 04 18.1 -0.1
      comp=Z,2.3nm,0.8s,baz=331,slow=3.2,SNR=4.7
WRA                                 PKiKP   PKiKP   16 09 03.7 -1.2
      comp=Z,0.4nm,0.5s,baz=309,slow=1.2,SNR=2.2
      comp=Z,2.7nm,0.4s
WR8   Warramunga Arr     27.48 123          P       15 58 28.4 +0.3
NWAO  Narrogin (SRO)     27.89 167          P       15 58 32.6 +1.1
NWAO  Narrogin (SRO)     27.89 167  P       P       15 58 32.6 +1.1
      comp=Z,136nm,0.8s
NWAO  Narrogin (SRO)     27.89 167  P       P       15 58 32.8 +1.3
NWAO  Narrogin (SRO)     27.89 167  P       P       15 58 32.4 +0.9
AS31  Alice Springs      28.92 131          P       15 58 41.0 +0.3
AS31  Alice Springs      28.92 131  P       P       15 58 41.1 +0.4
ASAR  Alice Springs      28.92 131  P       P       15 58 41.2 +0.5
      comp=Z,3.3nm,0.3s,baz=305,slow=8.0,SNR=258
ASAR                                PcP     PcP     16 01 33.2 +0.7
      comp=Z,8.2nm,0.7s,baz=318,slow=2.6,SNR=19
ASAR                                S       S       16 02 51.2 -2.4
      comp=Z,10nm,0.8s,baz=296,slow=16,SNR=14
ASAR                                ScP     ScP     16 04 23.6 +0.5
      comp=Z,5.1nm,0.9s,baz=318,slow=3.6,SNR=8.6
ASAR                                PKiKP   PKiKP   16 09 04.8 -1.1
      comp=Z,0.8nm,0.7s,baz=11,slow=1.6,SNR=4.3
      comp=Z,3.3nm,0.3s
AS01  Alice Springs      28.95 131  P       P       15 58 41.2 +0.2
JAY   Jayapura           30.47  85  P       P       15 58 54.0 -0.3
      comp=Z,478nmcomp=Z,30nm,0.7s
TPUB  Ta-pu              30.49  19  P       P       15 58 55.5 +1.2
YULB  Yu-li              30.80  20  P       P       15 58 56.9  0.0
YULB                                IAmb    IAmb    15 59 00.5
      comp=Z,20nm,0.7s
YULB  Yu-li              30.80  20  P       P       15 58 57.0 +0.1
SSLB  Suanglung          31.05  19          P       15 58 59.6 +0.6
SSLB                                IAmb    IAmb    15 59 00.9
      comp=Z,40nm,0.7s
SSLB  Suanglung          31.05  19  P       P       15 59 00.2 +1.1
KMI   Kunming            31.47 347 ⇓P       P       15 59 05.4 +2.6
KMI                                 pmax    pmax
      comp=Z,19nm,1.3s
NACB  Ninganchiao        31.62  20  P       P       15 59 03.8 -0.1
YHNB  Yeheng             32.01  19  P       P       15 59 07.9 +0.6
QIS   Mount Isa          32.06 120  P       P       15 59 08.0 +0.3
      comp=Z,5.8nm,1.5s
QIS   Mount Isa          32.06 120  P       P       15 59 08.5 +0.8
PALK  Pallekele          32.22 293  P       P       15 59 08.7 -0.5
PALK                                IAmb    IAmb    15 59 10.0
      comp=Z,18nm,0.8s
PALK  Pallekele          32.22 293  P       P       15 59 09.4 +0.2
YOJ   Yonaguni jima      32.39  22  P       P       15 59 10.7 +0.3
TNCH  TengChong          32.59 340 ⇓P       P       15 59 13.9 +1.6
TNCH                                pP      pP      16 00 43.8 +0.5
TNCH                                PP      PP      16 00 49.8 -4.1
TNCH                                S       S       16 03 50.6 +0.4
TNCH                                sS      sS      16 06 38.6 -0.6
TNCH                                pmax    pmax
      comp=Z,84nm,1.0s
TNCH                                pmax    pmax
      comp=Z,150nm,1.3s
PZH   PanZhiHua          33.03 346  P       P       15 59 17.4 +1.4
PZH                                 PcP     PcP     16 01 44.3 +0.5
PZH                                 pmax    pmax
      comp=Z,20nm,0.7s
COEN  Coen               33.38 107  P       P       15 59 18.9 -0.1
MTSU  Mount Surprise     35.43 113  P       P       15 59 36.7 +0.5
      comp=Z,7.6nm,0.6s
MTSU  Mount Surprise     35.43 113  P       P       15 59 37.0 +0.9
KAAM  Kaadhehdhoo        37.76 278  P       P       15 59 56.1 +0.8
HTT   Hallett            38.34 140  P       P       16 00 00.9 +1.0
      comp=Z,4.6nm,0.7s
HTT   Hallett            38.34 140  P       P       16 00 01.0 +1.1
NJ2   Nanjing            38.37  12 eP       P       16 00 01.1 +1.1
NJ2                                 pmax    pmax
      comp=Z,12nm,0.5s
QLP   Quilpie            38.45 127  P       P       16 00 01.5 +0.7
STKA  Stephens Creek     39.19 136  P       P       16 00 07.6 +0.9
      comp=Z,84nm,0.6s
STKA  Stephens Creek     39.19 136  P       P       16 00 07.8 +1.1
      comp=Z,17nm,0.3s,baz=321,slow=7.6,SNR=186
STKA                                S       S       16 05 28.1 -0.2
      comp=Z,11nm,0.6s,baz=117,slow=17,SNR=19
      comp=Z,17nm,0.3s
STKA  Stephens Creek     39.19 136  P       P       16 00 07.8 +1.1
XAN   Xi'an              39.50 358 ⇑P       P       16 00 10.0 +0.8
XAN                                 pP      pP      16 01 46.3 +2.1
XAN                                 pmax    pmax
      comp=Z,83nm,0.7s
XAN                                 pmax    pmax
      comp=Z,130nm,4.4s
XAN   Xi'an              39.50 358  P       P       16 00 09.6 +0.4
LSA   Lhasa              39.68 333  P       P       16 00 12.8 +1.6
LSA                                 pmax    pmax
      comp=Z,84nm,0.8s
LSA   Lhasa              39.68 333  P       P       16 00 12.7 +1.6
LSA   Lhasa              39.68 333  P       P       16 00 12.7 +1.5
LYN   LuoYang            40.04   3  P       P       16 00 14.4 +1.0
LYN                                 pmax    pmax
      comp=Z,43nm,0.7s
EVN   Everest            40.39 327          P       16 00 17.7 +0.7
CMSA  Cobar Meteorol     41.94 132  P       P       16 00 30.2 +1.6
      comp=Z,17nm,0.9s
CMSA  Cobar Meteorol     41.94 132  P       P       16 00 30.3 +1.6
LZH   Lanzhou            41.96 352 eP       P       16 00 30.6 +1.7
LZH                                 pP      PcP     16 02 12.6 +1.0
LZH                                 pmax    pmax
      comp=Z,73nm,1.2s
TIA   Tai'an             42.13   8  P       P       16 00 29.8 -0.2
TIA                                 pmax    pmax
      comp=Z,20nm,0.6s
HNS   HongShan           43.03   5 ⇑P       P       16 00 37.3 +0.3
HNS                                 pmax    pmax
      comp=Z,12nm,1.1s
JNU   Nakatsue           43.22  25  P       P       16 00 38.4 -0.3
      comp=Z,4.3nm,0.7s,baz=232,slow=7.9,SNR=2.4
JNU   Nakatsue           43.22  25  P       P       16 00 38.9 +0.3
JTU   Tsushima           43.84  23  P       P       16 00 43.5 +0.2
GOMU  GeErMu             44.10 342  P       P       16 00 47.3 +1.5
GOMU                                pmax    pmax
      comp=Z,7.0nm,0.8s
JMN   Monobe             45.08  28  P       P       16 00 53.2 +0.2
DL2   Dalian             45.56  12  P       P       16 00 56.0 -0.5
DL2                                 pmax    pmax
      comp=Z,44nm,1.0s
BJT   Baijiatuau         45.77   6  IAmb    IAmb    16 00 59.2
      comp=Z,32nm,1.2s
BJT   Baijiatuau         45.77   6  P       P       16 00 58.6 +0.6
BJT   Baijiatuau         45.77   6  P       P       16 00 58.4 +0.3
BJI   Beijing            45.79   6  P       P       16 00 58.5 +0.3
BJI                                 PcP     PcP     16 02 25.4 +0.9
BJI                                 PP      PP      16 02 54.4 +0.2
BJI                                 S       S       16 07 04.1 +1.7
BJI                                 pmax    pmax
      comp=Z,11nm,0.9s
GTA   Gaotai             45.88 349  P       P       16 01 01.4 +2.3
GTA                                 PcP     PcP     16 02 26.1 +1.1
GTA                                 pmax    pmax
      comp=Z,36nm,0.6s
KSAR  Wonju Array Be     45.90  20  P       P       16 00 59.5 +0.4
KSRS  Korea Array        45.93  20  P       P       16 00 59.5 +0.2
      comp=Z,2.3nm,0.5s,baz=195,slow=8.6,SNR=17
KSRS                                PcP     PcP     16 02 25.7 +0.7
      comp=Z,2.7nm,0.8s,baz=205,slow=3.1,SNR=10
ARMA  Armidale           45.97 128  P       P       16 01 01.9 +1.9
CAN   Canberra           46.24 135  P       P       16 01 03.7 +1.8
HHC   Hu-ho-hao-te       46.29   1 eP       P       16 01 03.3 +1.1
HHC                                 pmax    pmax
      comp=Z,21nm,0.8s
JGF   Kuroka             48.27  30          P       16 01 15.8 -1.3
JGF                                 IAmb    IAmb    16 01 38.1
      comp=Z,60nm,2.0s
JGF   Kuroka             48.27  30  P       P       16 01 16.0 -1.1
TATA  Tatamba Isabel     49.17  96  P       P       16 01 24.8 +0.7
MAJO  Matsushiro         49.44  30  P       P       16 01 23.9 -1.7
MAJO  Matsushiro         49.44  30  P       P       16 01 24.4 -1.2
MJAR  Matsushiro Arr     49.44  30  P       P       16 01 24.1 -1.6
      comp=Z,5.4nm,0.5s,baz=198,slow=8.3,SNR=19
MJAR                                PcP     PcP     16 02 38.6 +0.7
      comp=Z,7.2nm,0.7s,baz=188,slow=4.2,SNR=12
MJAR                                ScP     ScP     16 05 42.7 +0.9
      comp=Z,2.4nm,0.8s,baz=188,slow=5.6,SNR=3.9
      comp=Z,5.4nm,0.5s
XLT   XiLinHaoTe         49.60   5 eP       P       16 01 27.3 +0.5
XLT                                 sP      sP      16 03 59.6 -8.0
XLT                                 pmax    pmax
      comp=Z,18nm,0.8s
XLT                                 pmax    pmax
      comp=Z,83nm,8.1s
ALEG  Aligegeo Malai     50.05  97  P       P       16 01 29.6 -0.9
JSD   Sado               50.65  29  P       P       16 01 33.5 -1.0
JMM   Marumori           51.76  31  P       P       16 01 41.6 -0.9
NIL   Nilore             52.52 321  P       P       16 01 47.0 -1.1
NIL                                 IAmb    IAmb    16 01 48.0
      comp=Z,59nm,0.8s
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NIL    Nilore             52.52 321   P       P       16 01 47.2 -0.9
WMQ    Urumqi             53.32 340  eP       P       16 01 55.4 +1.7
USRK   Ussuriysk Ar.      53.33  19   P       P       16 01 53.2 -0.5
USRK   Ussuriysk Ar.      53.33  19   P       P       16 01 53.4 -0.3
       comp=Z,7.7nm,0.6s,baz=189,slow=7.0,SNR=28
USRK                                 pP      pP       16 03 36.6 -0.5
       comp=Z,2.9nm,0.5s,baz=209,slow=4.9,SNR=2.8
       comp=Z,7.7nm,0.6s
ULN    Ulaanbaatar        53.37 357   P       P       16 01 54.2 +0.2
ULN    Ulaanbaatar        53.37 357   P       P       16 01 54.3 +0.3
ULN    Ulaanbaatar        53.37 357   P       P       16 01 54.4 +0.4
ULN                                   PcP     PcP     16 02 52.4 -0.2
SONM   Songino Array      53.37 357   P       P       16 01 54.2 +0.1
SONM   Songino Array      53.37 357   P       P       16 01 54.5 +0.5
       comp=Z,18nm,0.6s,baz=179,slow=8.1,SNR=111
SONM                                  PcP     PcP     16 02 52.9 +0.3
       comp=Z,7.1nm,0.5s,baz=173,slow=3.3,SNR=12
SONM                                  ScP     ScP     16 05 58.5 -0.3
       comp=Z,1.2nm,0.6s,baz=167,slow=5.3,SNR=3.3
       comp=Z,18nm,0.6s
BNX    BinXian            53.40  15  ⇑P       P       16 01 54.1  0.0
BNX                                   pP      pP      16 03 38.1 +0.5
BNX                                   pmax    pmax
       comp=Z,32nm,0.6s
JTM    Tenmabayashi       54.15  29   IAmb    IAmb    16 02 20.2
       comp=Z,37nm,0.7s
JTM    Tenmabayashi       54.15  29   P       P       16 01 58.8 -0.7
KOUNC  Koumac, New Ca     54.36 111   P       P       16 02 02.7 +1.3
KSH    Kashi              55.00 328   P       P       16 02 04.8 -0.9
KSH                                   PcP     PcP     16 02 59.8 +0.6
KSH                                   pmax    pmax
       comp=Z,39nm,0.6s
KBL    Kabul              55.79 319   P       P       16 02 09.8 -1.6
KBL                                   IAmb    IAmb    16 02 11.2
       comp=Z,30nm,0.8s
KBL    Kabul              55.79 319   P       P       16 02 10.4 -1.0
       SNR=12
PRZ    Przheval'sk        56.01 332   IAmb    IAmb    16 02 14.5
       comp=Z,43nm,0.6s
SHLS   Shalkode           56.05 333  eP       P       16 02 11.7 -1.2
       comp=Z,20nm,0.6s
ERM    Erimo              56.10  29   P       P       16 02 13.1 +0.1
JEM    Erimo              56.10  29   P       P       16 02 13.3 +0.3
UZB    Uzynbulak          56.24 333  eP       P       16 02 14.5 +0.2
       comp=Z,18nm,0.4s
KDJ    Kajisay            56.33 331   IAmb    IAmb    16 02 17.2
       comp=Z,48nm,0.8s
NRN    Naryn              56.39 329   IAmb    IAmb    16 02 16.3
       comp=Z,43nm,1.0s
SATY   Saty               56.45 332  eP       P       16 02 16.0 +0.3
       comp=Z,10nm,0.4s
DZM    Mont Dzumac        56.56 113   P       P       16 02 17.6 +0.8
KPKS   Kokpek             56.64 333  eP       P       16 02 17.2 +0.3
ULHL   Ulahol             56.87 330   P       P       16 02 18.8 +0.1
       SNR=21
JLN    Jalan Bani Buh     56.97 301   P       P       16 02 19.3 -0.2
YATNC  Mamie plateau,     56.97 113   P       P       16 02 21.0 +1.5
OUENC  Ouen Island, N     56.97 113   P       P       16 02 21.1 +1.6
MDOK   Medeo              57.17 331  eP       P       16 02 20.9 +0.3
BOOM   Boomskoye usch     57.20 330   IAmb    IAmb    16 02 21.6
       comp=Z,26nm,0.6s
AAA    Alma-Ata           57.27 331  eP       P       16 02 21.5 +0.3
       comp=Z,14nm,0.6s
ZSN    Zaisan             57.45 340  eP       P       16 02 22.8 +0.5
       comp=Z,13nm,0.5s
HEH    HeiHe              57.62  13⇓iP        P       16 02 23.3  0.0
HEH                                   pmax    pmax
       comp=Z,55nm,0.7s
TKM2   Tokmak 2           57.69 330   P       P       16 02 24.6 +0.3
       SNR=24
UCH    Uchtor             57.73 329   P       P       16 02 25.3 +0.5
       SNR=5.1
KLR    Kul'dur            57.77  16   P       P       16 02 23.9 -0.5
       comp=Z,30nm,0.5s,baz=202,slow=5.2,SNR=152
       comp=Z,30nm,0.5s
DQM    DQM                57.77 298   P       P       16 02 24.8 -0.2
MHTO   MHTO               57.77 299   P       P       16 02 24.3 -0.7
       SNR=5.0
KBK    Karagaybulak       57.82 330   P       P       16 02 25.9 +0.9
       SNR=60
MKAR   Makanchi Array     57.83 338   P       P       16 02 25.0 +0.1
MKAR   Makanchi Array     57.83 338   P       P       16 02 25.1 +0.3
       comp=Z,59nm,0.4s,baz=151,slow=7.4,SNR=1195
MKAR                                  S       S       16 09 43.0 -0.2
       comp=Z,0.8nm,1.0s,baz=159,slow=14,SNR=3.3
       comp=Z,59nm,0.4s
ARSB   Arslanbob          57.89 327   IAmb    IAmb    16 02 26.6
       comp=Z,65nm,1.1s
MAKZ   Makanchi           57.96 337   P       P       16 02 25.5 -0.2
MAKZ   Makanchi           57.96 337   P       P       16 02 25.7  0.0
TDK    Taldyqorghan       57.97 334  eP       P       16 02 26.2 +0.3
       comp=Z,31nm,0.6s
AAK    Ala-Archa          58.03 329   P       P       16 02 27.1 +0.6
       SNR=21
AAK    Ala-Archa          58.03 329   P       P       16 02 26.5  0.0
AAK                                   IAmb    IAmb    16 02 28.0
       comp=Z,60nm,1.4s
AAK    Ala-Archa          58.03 329   P       P       16 02 27.0 +0.5
AAK    Ala-Archa          58.03 329  iP       P       16 02 27.0 +0.5
       SNR=23
AAK    Ala-Archa          58.03 329   P       P       16 02 27.0 +0.5
WSAR   Wadi Sarin         58.05 302   P       P       16 02 26.7 -0.1
       SNR=5.3
AML    Almayashu          58.08 328   P       P       16 02 27.5 +0.4
       SNR=17
FRU1   Bishkek            58.09 330   IAmb    IAmb    16 02 28.1
       comp=Z,51nm,1.0s
CHMS   Chumysh            58.17 330   P       P       16 02 26.9 -0.4
       SNR=9.1
JMDO   Jabal Madar        58.17 301   P       P       16 02 27.4 -0.2
SIMJ   Simiganj           58.37 323   P       P       16 02 26.6 -2.3
SIMJ   Simiganj           58.37 323   P       P       16 02 26.9 -2.0
SIMJ                                  PcP     PcP     16 03 13.0 +0.5
SIMJ                                  pP      pP      16 04 14.6 -0.4
EKS2   Erkin-Say          58.42 329   P       P       16 02 29.9 +0.8
       SNR=19
SMDO   Samad              58.48 301   P       P       16 02 29.6 -0.2
USP    Ospenovka          58.49 330   P       P       16 02 29.5 +0.1
       SNR=29
SGDS   Sogindy            58.56 330  eP       P       16 02 30.0  0.0
       comp=Z,12nm,0.7s
BIDO   Bidbid             58.59 302   P       P       16 02 30.1 -0.3
       SNR=7.7
BSY    Bisya              59.08 301   P       P       16 02 33.5 -0.3
HOQ    Hoqain             59.30 302   P       P       16 02 35.2  0.0
DMTO   DMTO               59.37 294   P       P       16 02 35.6 -0.2
ARQ    Araqi              59.88 301   P       P       16 02 38.8 -0.4
RBK    Rabkut             59.98 294   P       P       16 02 39.8 -0.1
BTLS   Baital             60.01 331  eP       P       16 02 39.2 -0.3
IUG    Iuzhnay            60.06 326  eP       P       16 02 40.0  0.0
       comp=Z,9.4nm,0.4s
SOHO   SOHO               60.17 302   P       P       16 02 40.4 -0.6
DOK    Doka               60.39 295   P       P       16 02 41.8 -0.7
CHM    Chimkent           60.41 326  eP       P       16 02 42.3 +0.1
       comp=Z,21nm,0.7s
KK31   Karatay Array      60.44 327   P       P       16 02 41.6 -0.8
KKAR   Karatay Array      60.44 327   P       P       16 02 41.6 -0.8
KKAR   Karatay Array      60.44 327   IAmb    IAmb    16 02 43.8
       comp=Z,19nm,0.7s
WHFO   Wadi Hawf          60.50 294   P       P       16 02 42.4 -0.9
UOSS   Minazif            60.76 303   P       P       16 02 44.3 -0.5
UOSS   Minazif            60.76 303   P       P       16 02 44.0 -0.9
ABTO   Aybut              60.77 293   P       P       16 02 44.6 -0.5
HATD   Hatta, Dubai       60.77 302   P       P       16 02 44.8 -0.1
HATD   Hatta, Dubai       60.77 302  iP       P       16 02 45.0  0.0
       SNR=9.1
ASHO   Ashiyiah           60.78 302   P       P       16 02 44.9 -0.1
ASHO   Ashiyiah           60.78 302  iP       P       16 02 44.7 -0.4
       SNR=7.3
ALNE   Al Ain             60.80 301   P       P       16 02 45.1 -0.1
ALNE   Al Ain             60.80 301  iP       P       16 02 44.7 -0.5
       SNR=9.0
MDH    Madha              60.81 303   P       P       16 02 44.0 -1.2
MDH    Madha              60.81 303   P       P       16 02 43.7 -1.5
UMZA   Um Al Zommool      60.83 300   P       P       16 02 44.7 -0.6
MASF   Masafi             60.95 303   P       P       16 02 46.1 -0.1
FAQ    Al Faqa, Dubai     61.19 302   P       P       16 02 47.5 -0.2
       SNR=6.5
FAQ    Al Faqa, Dubai     61.19 302  iP       P       16 02 47.3 -0.4
       SNR=12
NAZ    Nazwa, Dubai       61.23 302   P       P       16 02 47.9 -0.1
NAZ    Nazwa, Dubai       61.23 302  iP       P       16 02 47.3 -0.7
       SNR=5.5
SHME   Shamm              61.23 304   P       P       16 02 47.7 -0.2
SHME   Shamm              61.23 304   P       P       16 02 47.5 -0.4
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ASUD   Al Ashush, Dub     61.37 302   P       P       16 02 49.1 +0.2
ASUD   Al Ashush, Dub     61.37 302  iP       P       16 02 48.8 -0.1
       SNR=8.3
AJN    Ajban              61.64 302   P       P       16 02 50.1 -0.6
AJN    Ajban              61.64 302  iP       P       16 02 49.8 -0.8
       SNR=7.5
MZR    Muzera             62.38 299   P       P       16 02 55.3 -0.2
MZR    Muzera             62.38 299  iP       P       16 02 55.0 -0.5
       SNR=16
KURBB  Kurchatov Arra     62.40 338   P       P       16 02 54.9 -0.1
       comp=Z,24nm,0.7s,baz=154,slow=5.6,SNR=135
KURBB                                 PcP     PcP     16 03 28.5 +0.1
       comp=Z,12nm,0.7s,baz=150,slow=3.4,SNR=17
KURBB                                 pP      pP      16 04 44.5 +1.3
       comp=Z,3.1nm,0.9s,baz=150,slow=5.9,SNR=2.2
KURBB                                 S       S       16 10 37.1 -2.7
       comp=Z,0.2nm,0.3s,baz=149,slow=13,SNR=4.8
KURBB                                 PKP2bc          16 31 58.6
       comp=Z,0.2nm,0.3s,baz=309,slow=2.6,SNR=4.8
       comp=Z,24nm,0.7s
KURK   Kurchatov          62.44 338   P       P       16 02 54.9 -0.4
KURK                                  IAmb    IAmb    16 02 56.1
       comp=Z,34nm,0.8s
KURK   Kurchatov          62.44 338   P       P       16 02 55.3 +0.1
KURK   Kurchatov          62.44 338   P       P       16 02 55.1 -0.1
ABPO   Ambohimpanom       62.75 252   P       P       16 02 58.4 +0.2
ABPO   Ambohimpanom       62.75 252   P       P       16 02 58.7 +0.5
ZAA0   Zalesovo Array     63.13 343   IAmb    IAmb    16 03 00.1
       comp=Z,42nm,0.9s
ZALV   Zalesovo Beam      63.13 343   P       P       16 02 59.1 -0.6
ZALV   Zalesovo Beam      63.13 343   P       P       16 02 59.3 -0.3
       comp=Z,34nm,0.3s,baz=151,slow=6.0,SNR=235
ZALV                                  PcP     PcP     16 03 30.3 -1.0
       comp=Z,7.8nm,0.6s,baz=158,slow=4.2,SNR=6.4
ZALV                                  pP      pP      16 04 48.3 +0.2
       comp=Z,2.7nm,0.5s,baz=149,slow=5.5,SNR=2.5
ZALV                                  S       S       16 10 41.0 -7.7
       comp=Z,0.7nm,0.4s,baz=140,slow=11,SNR=5.0
ZALV                                  PKP2bc          16 31 58.1
       comp=Z,1.3nm,0.5s,baz=289,slow=4.4,SNR=6.1
       comp=Z,34nm,0.3s
GHWR   Ruwais             63.23 300   P       P       16 03 00.5 -0.4
VOI    Vohitsoka          63.36 248   P       P       16 03 02.1 +0.2
VOI                                   IAmb    IAmb    16 03 03.4
       comp=Z,30nm,0.9s
JRN    Qarnain Island     63.59 301   P       P       16 03 02.8 -0.4
JCZ    Jackson Bay        63.71 137   P       P       16 03 04.7 +0.9
DRV    Dumont d'Urvil     64.27 167   P       P       16 03 07.4 +0.7
BRZS   Berezniki          64.28 334  eP       P       16 03 07.4 +0.3
SLWR   Sila               64.28 300   P       P       16 03 07.4 -0.3
TRNA   Turayna            64.92 301   P       P       16 03 11.2 -0.4
RPZ    Rata Peaks         65.16 136   P       P       16 03 13.5 +0.6
SMRA   Abu-Samra          65.25 300   P       P       16 03 13.2 -0.5
       SNR=5.7
QRZ    Quartz Range       65.43 132   P       P       16 03 16.0 +1.4
SAKB   Bahrain            65.91 302   P       P       16 03 17.3 -0.5
KHEZ   Kahui Hut          66.18 130   P       P       16 03 21.6 +2.2
HIZ    Hauiti             66.65 130   P       P       16 03 24.1 +1.9
MSVF   Nonsavu            67.11 107   P       P       16 03 27.2 +1.7
SNZO   South Karori       67.14 133   P       P       16 03 25.1 -0.1
BVAR   Borovoye Array     67.48 335   P       P       16 03 26.7 -0.3
       comp=Z,30nm,0.6s,baz=140,slow=8.5,SNR=150
BVAR                                  pP      pP      16 05 17.8 +0.3
       comp=Z,7.2nm,0.8s,baz=135,slow=7.0,SNR=9.5
       comp=Z,30nm,0.6s
BRVK   Borovoye           67.55 335   P       P       16 03 26.8 -0.6
BRVK   Borovoye           67.55 335   P       P       16 03 27.3 -0.1
BRVK   Borovoye           67.55 335   P       P       16 03 27.0 -0.4
BRVK                                  pP      pP      16 05 18.5 +0.6
BKZ    Black Stump Fm     68.03 130   P       P       16 03 30.8  0.0
BKZ    Black Stump Fm     68.03 130   P       P       16 03 30.8  0.0
BFZ    Birch Farm         68.15 132   P       P       16 03 32.0 +0.6
URZ    Urewera            68.34 129   P       P       16 03 32.3 -0.3
YAK    Yakutsk            69.13  10   P       P       16 03 35.9 -0.9
YAK                                   IAmb    IAmb    16 03 37.1
       comp=Z,52nm,0.8s
YAK    Yakutsk            69.13  10   P       P       16 03 36.2 -0.5
       comp=Z,43nm,0.6s,baz=194,slow=1.5,SNR=30
       comp=Z,43nm,0.6s
YAK    Yakutsk            69.13  10   P       P       16 03 36.1 -0.6
YAK                                   pP      pP      16 05 28.7 +0.7
MXZ    Matakaoa Point     69.16 128   P       P       16 03 38.0 +0.5
ATD    Arta Tunnel        69.25 285   P       P       16 03 39.9 +1.4
KBD    Kabd               69.34 304   P       P       16 03 38.4 -0.4
RAYN   Ar Rayn            69.52 298   P       P       16 03 39.1 -0.9
RAYN                                  IAmb    IAmb    16 03 40.2
       comp=Z,43nm,1.1s
RAYN   Ar Rayn            69.52 298   P       P       16 03 39.5 -0.5
RAYN   Ar Rayn            69.52 298  iP       P       16 03 39.5 -0.5
       SNR=32
RAYN   Ar Rayn            69.52 298   P       P       16 03 39.3 -0.7
RAYN                                  pP      pP      16 05 31.9 +0.5
MAW    Mawson             69.61 198   P       P       16 03 41.0 +1.5
       comp=Z,12nm,0.6s,baz=63,slow=5.9,SNR=36
       comp=Z,12nm,0.6s
ABKAR  Akbulak array      70.01 328   P       P       16 03 42.2 -0.1
ABKAR  Akbulak array      70.01 328   IAmb    IAmb    16 03 43.1
       comp=Z,107nm,0.7s
PETK   Petropavlovsk-     70.84  28   P       P       16 03 46.4 -0.8
PETK   Petropavlovsk-     70.84  28   P       P       16 03 46.9 -0.3
       comp=Z,5.9nm,0.6s,baz=193,slow=1.8,SNR=33
       comp=Z,5.9nm,0.6s
PET    Petropavlovsk      71.24  28   P       P       16 03 48.9 -0.6
PET    Petropavlovsk      71.24  28   P       P       16 03 49.8 +0.3
PET    Petropavlovsk      71.24  28   P       P       16 03 49.4  0.0
       comp=Z,16nm,0.9s
PET    Petropavlovsk      71.24  28   P       P       16 03 49.5  0.0
AKTO   Aktyubinsk         71.70 328   P       P       16 03 52.2  0.0
       comp=Z,21nm,0.6s,baz=92,slow=5.9,SNR=40
       comp=Z,21nm,0.6s
KIBK   Kibwezi            72.13 269   IAmb    IAmb    16 03 56.8
       comp=Z,21nm,0.6s
KIBK   Kibwezi            72.13 269   P       P       16 03 56.4 +0.7
MA2    Magadan            72.47  20   P       P       16 03 56.6  0.0
       comp=Z,7.2nm,0.7s,baz=176,slow=6.0,SNR=8.1
       comp=Z,7.2nm,0.7s
MA2    Magadan            72.47  20   P       P       16 03 56.5  0.0
       comp=Z,19nm,0.9s
KMBO   Kilima Mbogo       73.03 271   P       P       16 04 00.3 -0.7
KMBO   Kilima Mbogo       73.03 271   P       P       16 04 01.8 +0.8
KMBO   Kilima Mbogo       73.03 271  iP       P       16 04 01.8 +0.8
       SNR=10.0
ARTI   Arti               74.94 333   P       P       16 04 09.6 -1.0
ARTI                                  IAmb    IAmb    16 04 10.8
       comp=Z,44nm,0.6s
ARTI   Arti               74.94 333   pP      pP      16 06 04.0 -0.2
       comp=Z,5.5nm,0.6s,baz=166,slow=4.5,SNR=4.0
GNI    Garni              75.37 314   P       P       16 04 13.3 -0.3
GNI    Garni              75.37 314   P       P       16 04 13.8 +0.2
       comp=Z,9.8nm,0.5s,baz=167,slow=18,SNR=5.9
       comp=Z,9.8nm,0.5s
GNI    Garni              75.37 314   P       P       16 04 14.1 +0.5
GNI    Garni              75.37 314   P       P       16 04 13.8 +0.2
GNI    Garni              75.37 314   P       P       16 04 13.7 +0.2
       comp=Z,21nm,0.9s
LODK   Lodwar             75.40 275   P       P       16 04 15.1 +1.0
       SNR=5.2
SEY    Seymchan           75.47  18   P       P       16 04 13.4  0.0
       comp=Z,5.0nm,0.7s,baz=197,slow=3.9,SNR=16
SEY                                   pP      pP      16 06 07.8 +0.5
       comp=Z,1.7nm,0.7s,baz=204,slow=8.2,SNR=2.6
       comp=Z,5.0nm,0.7s
CHIPN  CHIPINGE           76.51 251  iP       P       16 04 20.7 +0.5
VNDA   Vanda              76.69 170   P       P       16 04 20.7 +0.8
VNDA   Vanda              76.69 170   P       P       16 04 20.8 +0.8
       comp=Z,6.1nm,0.4s,baz=317,slow=6.3,SNR=48
       comp=Z,6.1nm,0.4s
GURO   Guroymak-BITLI     76.82 312   IAmb    IAmb    16 04 23.0
       comp=Z,33nm,0.9s
POGA   Pongola            77.31 243   IAmb    IAmb    16 04 26.1
       comp=Z,64nm,0.7s
MARD   Mardin             77.39 310   IAmb    IAmb    16 04 25.2
       comp=Z,22nm,0.6s
MOPA   Mopani             77.62 247  iP       P       16 04 26.7 +0.6
SYO    Syowa Base         77.89 200⇓iP        P       16 04 27.6 +1.0
KBZ    Khabaz             77.90 317   P       P       16 04 27.4 +0.2
       comp=Z,20nm,0.9s,baz=119,slow=5.3,SNR=30
       comp=Z,20nm,0.9s
TIXI   Tiksi              78.11   6   P       P       16 04 26.6 -1.1
TIXI                                  IAmb    IAmb    16 04 27.8
       comp=Z,32nm,0.8s
KIV    Kislovodsk         78.12 317   P       P       16 04 28.4 -0.1
KIV                                   IAmb    IAmb    16 04 30.2
       comp=Z,39nm,0.5s
KIV    Kislovodsk         78.12 317   P       P       16 04 28.8 +0.4
KIV    Kislovodsk         78.12 317   P       P       16 04 28.6 +0.1
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KIV    Kislovodsk         78.12 317   P       P       16 04 28.7 +0.2
       comp=Z,28nm,1.1s
BELG   Belogornoye        78.32 326   P       P       16 04 28.9 -0.2
       comp=Z,49nm,0.5s,baz=17,slow=0.5,SNR=30
       comp=Z,49nm,0.5s
KOPT   Kop Dagi           78.41 313   IAmb    IAmb    16 04 33.3
       comp=Z,24nm,0.7s
MUSN   Musina, Limpop     79.06 248  iP       P       16 04 34.6 +0.7
ASF    Jabal al Asfar     79.11 304   P       P       16 04 35.1 +1.1
       comp=Z,40nm,0.8s,baz=124,slow=3.0,SNR=60
       comp=Z,40nm,0.8s
KRI    Karoi              79.50 254  iP       P       16 04 36.7 +0.3
MBAR   Mbarara            79.57 270   P       P       16 04 37.1 +0.2
MBAR                                  IAmb    IAmb    16 04 38.6
       comp=Z,30nm,0.7s
MBAR   Mbarara            79.57 270   P       P       16 04 37.8 +0.9
ARPR   Arapgir-MALATY     79.74 311   IAmb    IAmb    16 04 39.2
       comp=Z,53nm,1.0s
GHAJ   Ghor Haditha       80.01 303   IAmb    IAmb    16 04 40.4
       comp=Z,70nm,0.8s
GAZ    Gaziantep          80.09 309   IAmb    IAmb    16 04 40.7
       comp=Z,42nm,1.0s
EIL    Elat               80.17 301   P       P       16 04 40.1 +0.6
       comp=Z,23nm,0.6s,baz=155,slow=2.2,SNR=28
       comp=Z,23nm,0.6s
BLWY   Bulawayo           80.30 251  iP       P       16 04 41.0 +0.4
MMAI   Mount Meron Ar     80.53 305   P       P       16 04 42.9 +1.5
       comp=Z,20nm,0.6s,baz=100,slow=6.9,SNR=36
       comp=Z,20nm,0.6s
LSZ    Lusaka             80.95 255   P       P       16 04 44.1 +0.1
LSZ                                   IAmb    IAmb    16 04 45.0
       comp=Z,28nm,0.6s
LSZ    Lusaka             80.95 255   P       P       16 04 44.8 +0.7
LSZ    Lusaka             80.95 255  iP       P       16 04 44.7 +0.7
MREMI  Moremi             81.28 248  iP       P       16 04 46.2 +0.6
TOKA   Tokat              81.45 312   IAmb    IAmb    16 04 47.9
       comp=Z,41nm,0.9s
BROLN  Tlhalogang         81.45 250  iP       P       16 04 46.9 +0.5
SOOWA  Sowa               82.53 250  iP       P       16 04 52.8 +0.9
CSS    Mathiatis          82.63 306   P       P       16 04 52.2 +0.2
       comp=Z,892nmcomp=Z,110nm,0.9s
LPHEP  Lephephe           82.70 247   IAmb    IAmb    16 04 54.4
       comp=Z,39nm,0.8s
LPHEP  Lephephe           82.70 247  iP       P       16 04 53.5 +0.7
LBTB   Lobatse            82.86 246   IAmb    IAmb    16 04 54.9
       comp=Z,18nm,0.7s
LBTB   Lobatse            82.86 246  iP       P       16 04 54.1 +0.5
BOSA   Boshof             82.99 242   P       P       16 04 54.6 +0.4
       comp=Z,12nm,0.6s,baz=111,slow=3.9,SNR=48
       comp=Z,12nm,0.6s
BOSA   Boshof             82.99 242  iP       P       16 04 54.7 +0.5
KIRS   Kirsehir-Merke     83.08 310  ⇑P       P       16 04 54.0 -0.3
BILL   Bilibino           83.17  18   P       P       16 04 53.3 -0.7
BR104  Keskin Array S     83.42 311   P       P       16 04 55.9 -0.1
       comp=Z,250nmcomp=Z,32nm,1.0s
BRTR   Keskin Array B     83.42 311   P       P       16 04 55.6 -0.4
BRTR   Keskin Array B     83.42 311   P       P       16 04 55.8 -0.3
       comp=Z,30nm,1.0s,baz=126,slow=6.3,SNR=111
BRTR                                  pP      pP      16 06 51.6 -1.3
       comp=Z,0.6nm,0.6s,baz=125,slow=5.9,SNR=2.4
       comp=Z,30nm,1.0s
BR131  Keskin Array S     83.42 311   IAmb    IAmb    16 04 57.0
       comp=Z,34nm,0.8s
BR105  Keskin Array S     83.44 311   P       P       16 04 56.2 +0.1
       comp=Z,271nmcomp=Z,34nm,1.0s
BZK    Bozkurt            83.66 313  ⇑P       P       16 04 57.7 +0.7
BZK    Bozkurt            83.66 313   P       P       16 04 57.7 +0.7
       comp=Z,1µmcomp=Z,144nm,1.1s
KSANE  Kasane             83.69 253  iP       P       16 04 58.7 +0.9
KDWAN  Kaudwane           83.80 247  iP       P       16 04 59.1 +0.9
ADK    Adak               84.06  37   P       P       16 04 58.4 -0.3
ANTO   Ankara             84.09 311   P       P       16 04 58.9 -0.4
ANTO                                  IAmb    IAmb    16 05 00.6
       comp=Z,40nm,1.2s
ANTO   Ankara             84.09 311   P       P       16 04 59.8 +0.5
ANTO   Ankara             84.09 311  ⇑P       P       16 04 59.7 +0.4
ANTO   Ankara             84.09 311   P       P       16 04 59.5 +0.2
       comp=Z,156nmcomp=Z,15nm,1.1s
PHDHD  Phuduhudu          84.12 250   IAmb    IAmb    16 05 01.4
       comp=Z,41nm,1.1s
QSPA   South Pole Qui     84.32 180   P       P       16 05 00.7 +0.8
       comp=Z,19nm,0.5s,baz=154,slow=0.4,SNR=213
QSPA                                  pP      pP      16 06 57.6 +0.5
       comp=Z,6.9nm,1.1s,baz=331,slow=5.2,SNR=4.5
QSPA                                  S       SKSac   16 14 30.0 -1.8
       comp=Z,2.4nm,1.0s,baz=327,slow=3.6,SNR=34
QSPA                                  PKKPbc  PKKPbc  16 23 08.1 -4.0
       comp=Z,1.3nm,0.6s,baz=196,slow=1.8,SNR=10
       comp=Z,19nm,0.5s
SKOMA  Sekoma             84.40 246  iP       P       16 05 02.1 +0.9
PHPEN  Phepeng            85.31 245   IAmb    IAmb    16 05 06.7
       comp=Z,18nm,0.5s
OBN    Obninsk            85.42 326   P       P       16 05 04.9 -0.4
OBN    Obninsk            85.42 326   P       P       16 05 05.1 -0.2
       comp=Z,54nm,0.5s,baz=240,slow=1.6,SNR=6.1
       comp=Z,54nm,0.5s
OBN    Obninsk            85.42 326   P       P       16 05 05.2  0.0
       comp=Z,1µmcomp=Z,128nm,0.8s
ATKA   Atka Island        85.62  37   P       P       16 05 05.7 -0.6
BORA   Eskisehir          85.86 311   IAmb    IAmb    16 05 08.8
       comp=Z,30nm,0.9s
KGCAE  Kacgae             86.09 248  iP       P       16 05 10.7 +1.3
SUR    Sutherland         86.59 238   P       P       16 05 13.3 +1.6
YLV    Yalova             86.79 311   P       P       16 05 12.2 -0.1
       comp=Z,465nmcomp=Z,45nm,1.0s
MANT   Manisa             87.06 309   IAmb    IAmb    16 05 15.1
       comp=Z,36nm,1.0s
GRTLG  Ghanzi             87.13 249   IAmb    IAmb    16 05 16.0
       comp=Z,23nm,0.8s
GRTLG  Ghanzi             87.13 249  iP       P       16 05 15.3 +1.0
QNGWA  Qangwa             87.33 251  iP       P       16 05 16.2 +1.0
KARP   Karpathos          87.70 306   P       P       16 05 17.0 +0.4
       comp=Z,2µmcomp=Z,212nm,0.9s
TLCR                      88.00 316  ⇑P       P       16 05 17.4 -0.3
TPGR   Topolog            88.22 315  ⇑P       P       16 05 18.9 +0.1
CFR    Carcaliu           88.48 315  ⇑P       P       16 05 19.2 -0.7
HARR   Harsova            88.54 315  ⇓P       P       16 05 20.4 +0.1
VLDR   Vladesti           88.62 316  ⇑P       P       16 05 20.2 -0.3
AK09   Malin Array Si     88.66 321   P       P       16 05 19.8 -0.8
AK10   Malin Array Si     88.68 321   P       P       16 05 19.9 -0.8
AKASG  Malin Array Be     88.71 321   P       P       16 05 19.6 -1.2
AKASG                                 IAmb    IAmb    16 05 20.5
       comp=Z,6.6nm,0.6s
AKASG  Malin Array Be     88.71 321   P       P       16 05 19.9 -0.9
       comp=Z,8.8nm,0.4s,baz=89,slow=4.7,SNR=119
AKASG                                 pP      pP      16 07 17.8 -1.8
       comp=Z,2.8nm,0.7s,baz=86,slow=4.7,SNR=6.5
AKASG                                 PP      PP      16 08 53.3 -6.4
       comp=Z,1.1nm,0.7s,baz=84,slow=6.6,SNR=4.7
       comp=Z,8.8nm,0.4s
AKBB   Malin Array Si     88.71 321   P       P       16 05 19.7 -1.2
AK02   Malin Array Si     88.72 321   P       P       16 05 19.9 -1.0
KIEV   Kiev               88.72 321   P       P       16 05 19.7 -1.2
KIEV   Kiev               88.72 321  ⇑P       P       16 05 20.4 -0.5
KIEV   Kiev               88.72 321  iP       P       16 05 20.0 -0.9
       SNR=21
KIEV   Kiev               88.72 321   P       P       16 05 19.7 -1.2
       comp=Z,153nm,0.7s
NIKH   Nikolski High      88.97  37   P       P       16 05 21.7 -0.3
       baz=259
SPIA   Saint Paul Isl     89.01  32   P       P       16 05 22.1  0.0
       baz=258
P08K   Saint George I     89.27  33   P       P       16 05 23.5 +0.2
       baz=259
MI30   MI30,Zelenitsa     89.37 321   P       P       16 05 22.9 -1.0
       comp=Z,32nm,0.8s
IDI    Anoyia             89.50 305   P       P       16 05 25.2 +0.2
       comp=Z,8.3nm,0.4s,baz=57,slow=5.6,SNR=16
       comp=Z,8.3nm,0.4s
LUBAR  Lubar, Ukraine     89.51 320   P       P       16 05 23.5 -1.1
NDNU   Novodnistrovsk     89.55 319   P       P       16 05 23.8 -1.0
VRI    Vrincioaia         89.56 316  ⇑P       P       16 05 25.4 +0.4
VRI    Vrincioaia         89.56 316   P       P       16 05 25.2 +0.2
       comp=Z,23nm,1.0s
PLOR   Plostina           89.61 316  ⇓P       P       16 05 25.7 +0.4
TESR   Tescani            89.71 317  ⇑P       P       16 05 25.7 +0.1
TESR   Tescani            89.71 317   P       P       16 05 25.3 -0.3
       comp=Z,21nm,0.9s
MI28   Mi28,Pidlybu       89.72 321   P       P       16 05 24.9 -0.7
MLR    Muntele Rosu       90.05 316   IAmb    IAmb    16 05 28.1
       comp=Z,8.6nm,0.9s
MLR    Muntele Rosu       90.05 316   P       P       16 05 27.1 -0.3
       comp=Z,5.9nm,0.8s,baz=24,slow=4.0,SNR=6.4
       comp=Z,5.9nm,0.8s
MLR    Muntele Rosu       90.05 316  ⇓P       P       16 05 26.9 -0.5
MLR    Muntele Rosu       90.05 316   P       P       16 05 27.3 -0.1
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	comp=Z,14nm,1.1s						
TROLL	**Troll, Antarti**	**90.08**	**197**	⇓P	**P**	**16 05 28.5**	**+1.5**
	comp=Z,488nm,0.9s						
TURR	**Turia**	**90.08**	**316**	⇑P	**P**	**16 05 27.6**	**+0.2**
MNK	**Minsk**	**90.18**	**325**	*i* P	**P**	**16 05 25.5**	**-2.0**
	comp=E,14nm,0.8s						
MNK				*i* P	**P**	**16 05 25.5**	**-2.0**
	comp=N,14nm,0.8s						
MNK				*i* P	**P**	**16 05 25.5**	**-2.0**
	comp=Z,16nm,0.6s,baz=99						
MNK				*i* pP	**pP**	**16 07 26.0**	**-0.5**
MNK				*i* PP	**PP**	**16 09 08.9**	**-2.1**
MNK				*i* PPP	PPP	16 11 11.8	
MNK				*i* S	**SKSac**	**16 15 03.4**	**-3.5**
MNK				*i* sS	sS	16 18 51.8	-16
MNK				*i* SS	**SS**	**16 21 49.9**	**-1.2**
MNK				*i* SSS	SSS	16 25 34.3	
MNK				*i* LR	LR	16 48 30.9	
UNV	**Unalaska Valle**	**90.51**	**36**	P	**P**	**16 05 28.9**	**-0.1**
	baz=261						
WIN	**Windhoek**	**90.81**	**247**	IAmb	IAmb	16 05 33.6	
	comp=Z,6.7nm,0.8s						
BURAR	**Bucovina Array**	**90.83**	**318**	P	**P**	**16 05 30.4**	**-0.6**
BURAR				IAmb	IAmb	16 05 32.3	
	comp=Z,6.8nm,0.8s						
BURAR	**Bucovina Array**	**90.83**	**318**	⇓P	**P**	**16 05 31.3**	**+0.4**
BUR08	**Bucovina Ar. S**	**90.85**	**318**	IAmb	IAmb	16 05 32.1	
	comp=Z,8.8nm,1.0s						
NACGM	**Naroch**	**90.87**	**325**	⇑*i*P	P	16 05 25.6	-5.2
	comp=Z,16nm,0.8s,baz=98						
RNPP5	**Staryi Chortor**	**90.88**	**321**	P	**P**	**16 05 30.4**	**-0.5**
RNPP9	**Sopachiv**	**90.90**	**321**	P	**P**	**16 05 30.4**	**-0.6**
LOT	**Lotru**	**91.56**	**315**	⇑P	**P**	**16 05 34.0**	**-0.4**
M11K	**Mekoryuk**	**91.66**	**30**	P	**P**	**16 05 34.7**	**+0.4**
	baz=262						
TNA	**Tin City**	**91.70**	**24**	P	**P**	**16 05 35.0**	**+0.7**
	baz=260						
SNAA	**Sanae**	**91.77**	**197**	⇓P	**P**	**16 05 36.0**	**+1.2**
	comp=Z,163nm,0.8s						
SNAA	**Sanae**	**91.77**	**197**	P	**P**	**16 05 35.9**	**+1.1**
SNAA	**Sanae**	**91.77**	**197**	P	**P**	**16 05 35.9**	**+1.2**
	comp=Z,6.9nm,0.8s,baz=182,slow=3.9,SNR=30						
	comp=Z,6.9nm,0.8s						
FINES	**FINESS Array B**	**92.17**	**331**	P	**P**	**16 05 36.0**	**-0.6**
FINES	**FINESS Array B**	**92.17**	**331**	P	**P**	**16 05 36.4**	**-0.2**
	comp=Z,8.6nm,0.7s,baz=119,slow=6.5,SNR=62						
FINES				PKiKP	**PKiKP**	**16 10 22.1**	**-0.3**
	comp=Z,0.8nm,0.4s,baz=112,slow=3.3,SNR=5.6						
FINES				PKKPbc	**PKKPdf**	**16 22 49.4**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=248,slow=1.5,SNR=6.2						
	comp=Z,8.6nm,0.7s						
F14K	**Arctic Creek**	**92.34**	**25**	P	**P**	**16 05 38.3**	**+0.9**
	baz=262						
K13K	**Kusilvak Mount**	**92.61**	**28**	P	**P**	**16 05 39.1**	**+0.5**
	baz=263						
ANM	**Nome**	**92.62**	**25**	P	**P**	**16 05 39.2**	**+0.6**
	baz=262						
KWP	**Kalwaria Pacla**	**92.72**	**319**	P	**P**	**16 05 39.2**	**-0.2**
	comp=Z,13nm,1.3s						
BOVS	**Bovan**	**92.85**	**313**	⇑P	**P**	**16 05 39.7**	**-0.5**
KOLS	**Kolonicke sedl**	**92.93**	**319**	*e*P	**P**	**16 05 41.0**	**+0.6**
M13K	**Dall Lake**	**93.06**	**30**	P	**P**	**16 05 41.4**	**+0.7**
	baz=264						
F15K	**North Star Dit**	**93.07**	**24**	P	**P**	**16 05 41.3**	**+0.6**
	baz=263						
BZS	**Buzias**	**93.09**	**315**	⇓P	**P**	**16 05 40.5**	**-0.7**
SIRR	**Siria**	**93.11**	**316**	⇑P	**P**	**16 05 41.1**	**-0.2**
C16K	**Lisburne Hills**	**93.11**	**22**	P	**P**	**16 05 41.1**	**+0.3**
	baz=263						
G15K	**Niukluk**	**93.24**	**25**	P	**P**	**16 05 41.7**	**+0.3**
	baz=264						
S12K	**Black Hills**	**93.29**	**35**	P	**P**	**16 05 41.8**	**-0.1**
	baz=265						
VNA2	**Neumayer--Watz**	**93.42**	**197**	⇓P	**P**	**16 05 43.4**	**+1.2**
	comp=Z,6.0nm,0.6s,baz=116,slow=4.2						
ARCES	**ARCESS Array B**	**93.44**	**339**	P	**P**	**16 05 40.8**	**-1.5**
	comp=Z,2.4nm,0.6s,baz=99,slow=7.0,SNR=22						
ARCES				PKiKP	**PKiKP**	**16 10 24.1**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=72,slow=2.2,SNR=7.3						
	comp=Z,2.4nm,0.6s						
L14K	**Kuka Creek**	**93.48**	**29**	IAmb	IAmb	16 05 43.8	
	comp=Z,5.2nm,0.6s						
L14K	**Kuka Creek**	**93.48**	**29**	P	**P**	**16 05 43.0**	**+0.5**
	baz=265						
STHS	**Stebnicka Huta**	**93.65**	**319**	*e*P	**P**	**16 05 43.3**	**-0.4**
M14K	**Bethel**	**93.78**	**29**	IAmb	IAmb	16 05 45.4	
	comp=Z,11nm,0.8s						
M14K	**Bethel**	**93.78**	**29**	P	**P**	**16 05 44.6**	**+0.6**
	baz=265,SNR=5.0						
VNA1	**Neumayer--Stat**	**93.81**	**197**	⇓P	**P**	**16 05 44.3**	**+0.3**
	comp=Z,5.5nm,0.9s						
N14K	**Kuskokwak Cree**	**93.85**	**30**	P	**P**	**16 05 44.6**	**+0.3**
	baz=265						
D17K	**Noatak River**	**93.90**	**22**	P	**P**	**16 05 45.7**	**+1.3**
	baz=265,SNR=9.9						
VNA3	**Neumayer Olymp**	**93.91**	**196**	⇓P	**P**	**16 05 45.5**	**+1.0**
	comp=Z,3.3nm,0.9s						
C17K	**DeLong Mountai**	**93.94**	**22**	P	**P**	**16 05 45.2**	**+0.6**
	baz=265,SNR=5.6						
H16K	**Elim**	**93.97**	**26**	P	**P**	**16 05 45.6**	**+0.8**
	baz=265						
G16K	**Koyuk River**	**93.99**	**25**	P	**P**	**16 05 45.7**	**+0.8**
	baz=265						
L15K	**Ungalak Mounta**	**94.08**	**29**	P	**P**	**16 05 46.4**	**+1.1**
	baz=266						
K15K	**Wolf Creek Mou**	**94.10**	**28**	P	**P**	**16 05 46.4**	**+1.0**
	baz=266						
NIE	**Niedzica**	**94.26**	**319**	P	**P**	**16 05 46.5**	**0.0**
	comp=Z,1.9nm,1.2s						
E17K	**Hotham Inlet**	**94.33**	**23**	P	**P**	**16 05 47.3**	**+0.9**
	baz=266						
BELA	**Belgrano 2**	**94.39**	**187**	P	**P**	**16 05 46.3**	**-0.2**
BELA				IAmb	IAmb	16 05 47.8	
	comp=Z,5.6nm,1.0s						
M15K	**Kasigluk River**	**94.40**	**30**	P	**P**	**16 05 47.1**	**+0.3**
	baz=266						
B18K	**Kokolik River**	**94.50**	**21**	P	**P**	**16 05 48.2**	**+1.1**
	baz=266						
I17K	**Unalakleet**	**94.59**	**26**	P	**P**	**16 05 48.8**	**+1.2**
	baz=267						
J16K	**Anvik River**	**94.60**	**27**	IAmb	IAmb	16 05 49.7	
	comp=Z,10nm,0.8s						
J16K	**Anvik River**	**94.60**	**27**	P	**P**	**16 05 48.8**	**+1.1**
	baz=267,SNR=7.0						
N15K	**Kwethluk River**	**94.66**	**30**	IAmb	IAmb	16 05 50.0	
	comp=Z,9.6nm,0.9s						
N15K	**Kwethluk River**	**94.66**	**30**	P	**P**	**16 05 48.4**	**+0.4**
	baz=267						
C18K	**Utukok River**	**94.67**	**22**	IAmb	IAmb	16 05 49.5	
	comp=Z,8.5nm,0.8s						
C18K	**Utukok River**	**94.67**	**22**	P	**P**	**16 05 48.5**	**+0.5**
	baz=266,SNR=7.4						
G17K	**Kiwalik Mounta**	**94.70**	**25**	P	**P**	**16 05 49.1**	**+1.0**
	baz=267						
O15K	**Ungalikthiuk R**	**94.74**	**31**	P	**P**	**16 05 48.4**	**0.0**
	baz=267						
A19K	**Wainwright**	**94.81**	**20**	P	**P**	**16 05 49.4**	**+1.0**
	baz=267						
E18K	**Tukpahlearik C**	**94.83**	**23**	P	**P**	**16 05 49.6**	**+1.0**
	baz=267						
H17K	**Granite Mounta**	**94.98**	**25**	IAmb	IAmb	16 05 51.4	
	comp=Z,6.6nm,0.8s						
H17K	**Granite Mounta**	**94.98**	**25**	P	**P**	**16 05 50.4**	**+0.9**
	baz=267,SNR=5.8						
L16K	**Owhat River**	**95.04**	**29**	IAmb	IAmb	16 05 51.2	
	comp=Z,6.0nm,0.8s						
L16K	**Owhat River**	**95.04**	**29**	P	**P**	**16 05 50.1**	**+0.4**
	baz=268						
MORH	**Mrgy, Hungar**	**95.20**	**316**	P	**P**	**16 05 49.6**	**-1.2**
	comp=Z,3.2nm,0.9s						
M16K	**Timber Creek**	**95.26**	**29**	P	**P**	**16 05 51.1**	**+0.4**
	baz=268						
C19K	**Lookout Ridge**	**95.28**	**21**	IAmb	IAmb	16 05 52.4	
	comp=Z,7.4nm,0.9s						
C19K	**Lookout Ridge**	**95.28**	**21**	P	**P**	**16 05 51.6**	**+0.9**
	baz=268,SNR=5.6						
J17K	**VABM Dome**	**95.29**	**27**	P	**P**	**16 05 51.6**	**+0.8**
	baz=268						
N16K	**Nishlik Lake**	**95.33**	**30**	P	**P**	**16 05 51.8**	**+0.6**
	baz=268						
G18K	**Tagagawik**	**95.55**	**24**	P	**P**	**16 05 52.6**	**+0.7**
	baz=269						
L17K	**Donlin**	**95.61**	**28**	P	**P**	**16 05 53.2**	**+0.9**
	baz=269						
K17K	**Iditarod**	**95.62**	**28**	IAmb	IAmb	16 05 54.2	
	comp=Z,9.0nm,0.8s						
K17K	**Iditarod**	**95.62**	**28**	P	**P**	**16 05 53.2**	**+0.9**
	baz=269						
O16K	**Kokwok River B**	**95.64**	**31**	P	**P**	**16 05 52.7**	**+0.2**
	baz=268						
H18K	**Honhosa River**	**95.65**	**25**	P	**P**	**16 05 53.8**	**+1.4**
	baz=269						
D19K	**Kuna River**	**95.80**	**22**	P	**P**	**16 05 53.9**	**+0.8**
	baz=269						
MPLH	**Magyarpolny**	**96.00**	**317**	P	**P**	**16 05 53.9**	**-0.5**
M17K	**Holitna River**	**96.00**	**29**	P	**P**	**16 05 55.0**	**+0.9**
	baz=269						
N17K	**Nushagak Hills**	**96.12**	**30**	P	**P**	**16 05 55.2**	**+0.6**
	baz=269						
E19K	**Redstone River**	**96.13**	**23**	P	**P**	**16 05 55.3**	**+0.8**
	baz=270						
B20K	**Meade River**	**96.14**	**20**	P	**P**	**16 05 55.3**	**+0.8**
	baz=270						
O17K	**Koliganek Bris**	**96.16**	**31**	P	**P**	**16 05 55.6**	**+0.9**
	baz=269						
G19K	**Purcell Mounta**	**96.19**	**24**	IAmb	IAmb	16 05 56.2	
	comp=Z,5.1nm,0.6s						
G19K	**Purcell Mounta**	**96.19**	**24**	P	**P**	**16 05 55.6**	**+0.8**
	baz=270,SNR=6.7						
GCSA	**Galena City Sc**	**96.28**	**26**	P	**P**	**16 05 56.1**	**+0.9**
	baz=270						
SPITS	**Spitsbergen Ar**	**96.31**	**348**	P	**P**	**16 05 54.4**	**-0.8**
	comp=Z,15nm,0.6s,baz=104,slow=8.7,SNR=48						
	comp=Z,15nm,0.6s						
D20K	**Etivluk River**	**96.35**	**22**	P	**P**	**16 05 56.2**	**+0.7**
	baz=271						
J18K	**Innoko River**	**96.35**	**27**	IAmb	IAmb	16 05 57.0	
	comp=Z,3.7nm,0.7s						
J18K	**Innoko River**	**96.35**	**27**	P	**P**	**16 05 56.2**	**+0.6**
	baz=270						
L18K	**Granite Mounta**	**96.37**	**28**	IAmb	IAmb	16 05 57.4	
	comp=Z,4.7nm,0.7s						
L18K	**Granite Mounta**	**96.37**	**28**	P	**P**	**16 05 56.6**	**+0.9**
	baz=270,SNR=5.6						
H19K	**Roundabout Mou**	**96.45**	**25**	IAmb	IAmb	16 05 59.0	
	comp=Z,7.7nm,0.8s						
H19K	**Roundabout Mou**	**96.45**	**25**	P	**P**	**16 05 57.1**	**+1.1**
	baz=271,SNR=8.7						
E20K	**Nigu River**	**96.52**	**22**	P	**P**	**16 05 57.1**	**+0.8**
	baz=271						
F20K	**Avaraart Lake**	**96.72**	**23**	P	**P**	**16 05 58.1**	**+0.9**
	baz=271						
N18K	**Kilae Creek**	**96.76**	**30**	P	**P**	**16 05 58.1**	**+0.6**
	baz=270						
Q17K	**Contact Creek**	**96.78**	**32**	P	**P**	**16 05 58.5**	**+0.8**
	baz=270						
M18K	**Stony River**	**96.78**	**29**	P	**P**	**16 05 58.3**	**+0.8**
	baz=271						
J19K	**Poorman**	**96.83**	**26**	P	**P**	**16 05 58.4**	**+0.7**
	baz=271						
A22K	**Sinclair Lake**	**96.85**	**19**	P	**P**	**16 05 58.4**	**+0.8**
	baz=273						
C21K	**Knifeblade Rid**	**97.00**	**21**	P	**P**	**16 05 59.3**	**+0.9**
	baz=273						
B21K	**Ikpikpuk River**	**97.04**	**21**	IAmb	IAmb	16 06 00.2	
	comp=Z,14nm,1.2s						
B21K	**Ikpikpuk River**	**97.04**	**21**	P	Pdif	16 05 59.2	+0.7
	baz=273						
P18K	**Big Mountain,**	**97.11**	**31**	P	Pdif	16 06 00.1	+1.0
	baz=271						
O18K	**Koktuh Hills**	**97.11**	**30**	P	Pdif	16 06 00.0	+0.9
	baz=271						
H20K	**Anotleneega Mo**	**97.11**	**25**	P	**P**	**16 05 59.8**	**+0.8**
	baz=272						
L19K	**White Mountain**	**97.23**	**28**	P	**P**	**16 06 00.3**	**+0.7**
	baz=272						
E21K	**Killik River**	**97.33**	**22**	IAmb	IAmb	16 06 01.3	
	comp=Z,4.6nm,0.7s						
E21K	**Killik River**	**97.33**	**22**	P	**P**	**16 06 00.5**	**+0.5**
	baz=273						
B22K	**Teshekpuk Lake**	**97.41**	**20**	P	**P**	**16 06 00.6**	**+0.4**
	baz=274						
N19K	**Bonanza Creek**	**97.44**	**29**	P	**P**	**16 06 01.4**	**+0.7**
	baz=272						
M19K	**Big River Lodg**	**97.45**	**28**	P	**P**	**16 06 00.9**	**+0.3**
	baz=272						
J20K	**Nowinta River**	**97.47**	**26**	IAmb	IAmb	16 06 03.4	
	comp=Z,9.4nm,1.6s						
J20K	**Nowinta River**	**97.47**	**26**	P	**P**	**16 06 01.4**	**+0.8**
	baz=272						
K20K	**Telida**	**97.54**	**27**	IAmb	IAmb	16 06 02.8	
	comp=Z,3.1nm,0.8s						
K20K	**Telida**	**97.54**	**27**	P	**P**	**16 06 01.5**	**+0.6**
	baz=272						
R18K	**Karluk**	**97.55**	**33**	P	**P**	**16 06 01.6**	**+0.6**
	baz=271						
IMAR	**Indian Mountai**	**97.55**	**24**		**P**	**16 06 01.4**	**+0.4**
F21K	**Alatna River**	**97.59**	**23**	P	**P**	**16 06 01.6**	**+0.5**
	baz=274						
G21K	**Allakaket**	**97.62**	**24**	P	**P**	**16 06 02.0**	**+0.7**
	baz=273						
L20K	**Farewell, AK**	**97.67**	**28**	P	**P**	**16 06 02.3**	**+0.7**
	baz=272						
D22K	**Ayikyak River**	**97.77**	**21**	P	**P**	**16 06 02.6**	**+0.8**
	baz=274						
H21K	**Melozitna Rive**	**97.96**	**25**	P	**P**	**16 06 03.5**	**+0.7**
	baz=274						
M20K	**Styx River**	**98.05**	**28**	P	**P**	**16 06 03.8**	**+0.5**
	baz=273						
F22K	**John River**	**98.07**	**23**	P	**P**	**16 06 03.9**	**+0.7**
	baz=275						
E22K	**Anaktuvuk Pass**	**98.15**	**22**	P	**P**	**16 06 04.4**	**+0.7**
	baz=275						
HFS	**Hagfors**	**98.17**	**330**	P	Pdif	16 06 03.7	-0.1
	comp=Z,9.4nm,0.7s,baz=90,slow=4.4,SNR=25						
HFS				PP	**PP**	**16 10 12.0**	**-0.1**
	comp=Z,1.7nm,0.8s,baz=107,slow=3.5,SNR=4.2						
	comp=Z,9.4nm,0.7s						
OHAK	**Old Harbor**	**98.19**	**33**	P	**P**	**16 06 04.2**	**+0.3**
G22K	**Bettles**	**98.38**	**23**	P	**P**	**16 06 05.3**	**+0.7**
	baz=275						
PPLA	**Purkeypile**	**98.42**	**27**	P	**P**	**16 06 05.5**	**+0.4**
	baz=274						
CAST	**Castle Rocks**	**98.43**	**27**	P	**P**	**16 06 05.8**	**+0.8**
	baz=274						
D23K	**Nanushuk River**	**98.48**	**21**	P	**P**	**16 06 05.8**	**+0.8**
	baz=276						
H22K	**Ishtalitna Cre**	**98.53**	**24**	P	**P**	**16 06 06.3**	**+0.9**
	baz=275						
KDAK	**Kodiak Island**	**98.55**	**33**	P	**P**	**16 06 06.2**	**+0.7**
	baz=273						
GERES	**GERESS Array B**	**98.58**	**318**	P	**P**	**16 06 07.5**	**+1.4**
	comp=Z,0.3nm,0.5s,baz=76,slow=4.7,SNR=3.6						
GERES				PP	**PP**	**16 10 13.8**	**-1.9**
	comp=Z,0.7nm,0.8s,baz=96,slow=8.0,SNR=4.8						
GERES				PKiKP	**PKiKP**	**16 10 34.1**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=78,slow=5.7,SNR=2.7						
	comp=Z,0.3nm,0.5s						
SKT	**Skwentna**	**98.80**	**28**	P	**P**	**16 06 07.1**	**+0.5**
	baz=275						
COLD	**Coldfoot**	**98.86**	**23**	P	**P**	**16 06 07.6**	**+0.8**
	baz=277						
BPAW	**Bear Paw Mtn.**	**98.86**	**26**	P	**P**	**16 06 07.3**	**+0.4**
	baz=275						
MLY	**Manley**	**98.88**	**25**	P	**P**	**16 06 07.6**	**+0.6**
	baz=276						
HOM	**Homer**	**98.92**	**31**	P	**P**	**16 06 08.1**	**+0.9**
	baz=274						
TOLK	**Toolik Lake Re**	**98.92**	**21**	P	**P**	**16 06 07.9**	**+0.8**
	baz=277						
CLL	**Collm**	**98.96**	**321**	*e*Pdif	Pdif	16 06 07.0	-0.5
CLL				*e*x	x	16 06 39.0	
CLL				*e*PP	**PP**	**16 10 17.0**	**-1.2**
E23K	**Chandalar**	**98.98**	**22**	P	**P**	**16 06 08.0**	**+0.6**
	baz=277						
G23K	**Bananza Creek**	**98.99**	**23**	P	**P**	**16 06 08.2**	**+0.7**
	baz=277						
C24K	**Franklin Bluff**	**99.08**	**20**	P	**Pdif**	**16 06 08.8**	**+1.2**
	baz=278						
D24K	**Happy Valley**	**99.12**	**21**	P	**Pdif**	**16 06 09.0**	**+1.2**
	baz=278						
SUA	**Susitna One**	**99.22**	**29**	P	**Pdif**	**16 06 09.3**	**+0.7**
	baz=275						
TRF	**Thorofare Moun**	**99.23**	**27**	P	**Pdif**	**16 06 09.4**	**+0.7**
	baz=276						
H23K	**Yukon River**	**99.29**	**24**	P	**Pdif**	**16 06 09.8**	**+1.2**
	baz=277						
NB2	**NORSAR Subarra**	**99.33**	**331**	P	**Pdif**	**16 06 08.3**	**-0.7**
	comp=Z,2.4nm,0.7s,baz=82,slow=4.8						
NB2	**NORSAR Subarra**	**99.33**	**331**	P	**Pdif**	**16 06 08.3**	**-0.7**
	baz=82,slow=4.8						
NOA	**NORSAR Array B**	**99.33**	**331**	P	**Pdif**	**16 06 08.7**	**-0.3**
	comp=Z,1.8nm,0.6s,baz=82,slow=4.7,SNR=7.1						
	comp=Z,1.8nm,0.6s						
BRSE	**Bradley Lake S**	**99.37**	**30**	P	**Pdif**	**16 06 10.1**	**+1.0**
	baz=275						
E24K	**Your Creek**	**99.40**	**22**	P	**Pdif**	**16 06 10.0**	**+0.9**
	baz=278						
I23K	**Minto, Yukon-K**	**99.45**	**25**	P	**Pdif**	**16 06 10.3**	**+1.0**
	baz=277						
M22K	**Willow**	**99.48**	**28**	P	**Pdif**	**16 06 10.4**	**+0.8**
	baz=276						
NEA2	**Nenana**	**99.64**	**25**	P	**Pdif**	**16 06 11.1**	**+0.8**
	baz=277						
F24K	**Squaw Lake**	**99.71**	**22**	P	**Pdif**	**16 06 11.5**	**+0.9**
	baz=279						
RC01	**Rabbit Creek A**	**99.74**	**29**	P	**Pdif**	**16 06 11.4**	**+0.7**
	baz=276						
MCK	**McKinley**	**99.80**	**26**	P	**Pdif**	**16 06 12.0**	**+1.0**
	baz=277						
D25K	**Kavik River**	**99.96**	**21**	P	**Pdif**	**16 06 12.8**	**+1.2**
	baz=280						
H24K	**Noodor Dome**	**99.97**	**24**	P	**Pdif**	**16 06 12.7**	**+1.0**
	baz=278						
SEW	**Seward**	**99.98**	**30**	P	**Pdif**	**16 06 12.7**	**+0.9**
	baz=276						
G24K	**Hadweenzic Riv**	**99.99**	**23**	P	**Pdif**	**16 06 12.7**	**+1.0**
	baz=279						
KNK	**Knik Glacier**	**100.31**	**29**	P	**Pdif**	**16 06 13.9**	**+0.6**
	baz=277						
PWL	**Port Wells**	**100.44**	**29**	P	**Pdif**	**16 06 14.3**	**+0.4**
	baz=277						
E25K	**Arctic Village**	**100.47**	**22**	P	**Pdif**	**16 06 14.4**	**+0.5**
	baz=281						
WAT6	**Susitna Watana**	**100.50**	**27**	P	**Pdif**	**16 06 14.3**	**0.0**
	baz=278						
ILAR	**Eielson Array**	**100.54**	**25**	P	**Pdif**	**16 06 12.9**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=267,slow=3.3,SNR=5.0						
ILAR				PKKPbc	**PKKPbc**	**16 22 27.1**	**-2.6**
	comp=Z,0.6nm,0.5s,baz=99,slow=1.6,SNR=7.2						
F25K	**Christian Rive**	**100.55**	**22**	P	**Pdif**	**16 06 14.8**	**+0.6**
	baz=281						
HDA	**Harding Lake**	**100.57**	**26**	P	**Pdif**	**16 06 14.1**	**-0.3**
	baz=279						
DHY	**Denali Highway**	**100.59**	**27**	P	**Pdif**	**16 06 15.0**	**+0.3**
	baz=278						
M23K	**Glacier View**	**100.61**	**28**	P	**Pdif**	**16 06 15.0**	**+0.4**
	baz=278						
H25L	**Birch Creek**	**100.72**	**24**	P	**Pdif**	**16 06 15.8**	**+0.9**
	baz=280						
SCM	**Sheep Creek Mo**	**100.79**	**28**	P	**Pdif**	**16 06 15.5**	**0.0**
	baz=278						
C27K	**Jago River**	**100.81**	**20**	P	**Pdif**	**16 06 15.8**	**+0.4**
	baz=283						
P23K	**Montague Islan**	**101.01**	**30**	P	**Pdif**	**16 06 16.7**	**+0.3**
	baz=278						
GLI	**Glacier Island**	**101.04**	**29**	P	**Pdif**	**16 06 17.0**	**+0.5**
	baz=278						
F26K	**Sheenjek River**	**101.08**	**22**	P	**Pdif**	**16 06 17.4**	**+0.8**
	baz=282						
K24K	**Donnelly Dome**	**101.18**	**26**	P	**Pdif**	**16 06 17.8**	**+0.6**
	baz=280						
J25K	**Salcha River,**	**101.21**	**25**	P	**Pdif**	**16 06 17.7**	**+0.3**
	baz=281						
M24K	**Tolsona, Glenn**	**101.29**	**28**	P	**Pdif**	**16 06 17.4**	**-0.3**
	baz=279						
G26K	**Porcupine Rive**	**101.38**	**23**	P	**Pdif**	**16 06 18.2**	**+0.3**
	baz=282						
PAX	**Paxson**	**101.46**	**27**	P	**Pdif**	**16 06 18.6**	**0.0**
	baz=280						
RIDG	**Independent Ri**	**101.60**	**26**	P	**Pdif**	**16 06 19.5**	**+0.5**
	baz=281						
Q23K	**Middleton Isla**	**101.62**	**31**	P	**Pdif**	**16 06 20.1**	**+1.0**
	baz=279						
D27M	**Malcolm River**	**101.85**	**20**	P	**Pdif**	**16 06 21.0**	**+1.0**
	baz=286						
E27K	**Coleen River**	**101.91**	**21**	P	**Pdif**	**16 06 21.1**	**+0.8**
	baz=285						
SCRK	**Sand Creek**	**101.93**	**26**	P	**Pdif**	**16 06 21.3**	**+0.7**
	baz=282						
I26K	**Coal Creek Min**	**101.99**	**24**	P	**Pdif**	**16 06 21.2**	**+0.6**
	baz=283						
J26L	**Joseph Creek**	**102.00**	**25**	P	**Pdif**	**16 06 21.5**	**+0.6**
	baz=282						
N25K	**Chitina, Valde**	**102.11**	**28**	P	**Pdif**	**16 06 22.2**	**+0.8**
	baz=281						
BMRM	**Bremner River**	**102.23**	**29**	P	**Pdif**	**16 06 22.7**	**+0.8**
	baz=280						
G27K	**Doyon Strip**	**102.23**	**23**	P	**Pdif**	**16 06 22.4**	**+0.6**
	baz=284						
L26K	**Log Cabin Wild**	**102.40**	**27**	P	**Pdif**	**16 06 23.4**	**+0.8**
	baz=282						
H27K	**Steamboat Moun**	**102.43**	**23**	P	**Pdif**	**16 06 23.7**	**+1.0**
	baz=284						
KAIM	**Kayak Island**	**102.51**	**30**	P	**Pdif**	**16 06 23.6**	**+0.6**
	baz=280						
E28M	**Babbage River**	**102.53**	**21**	P	**Pdif**	**16 06 24.1**	**+1.1**
	baz=287						
I27K	**Kandik River**	**102.55**	**24**	P	**Pdif**	**16 06 24.6**	**+1.4**
	baz=284						
D28M	**Stokes Point**	**102.58**	**20**	P	**Pdif**	**16 06 24.7**	**+1.6**
	baz=288						
F28M	**Old Crow**	**102.69**	**22**	P	**Pdif**	**16 06 24.4**	**+0.6**
	baz=286						
M26K	**Nabesna, AK**	**102.69**	**27**	P	**Pdif**	**16 06 25.1**	**+1.2**
	baz=282						
MCARA	**McCarthy VSAT**	**102.90**	**28**	P	**Pdif**	**16 06 25.0**	**+0.2**
	baz=282						
L27K	**Beaver Creek,**	**103.07**	**26**	P	**Pdif**	**16 06 26.6**	**+1.0**
	baz=284						
E29M	**Blow River**	**103.17**	**21**	P	**Pdif**	**16 06 26.4**	**+0.6**
	baz=288						
M27K	**Edge Creek, AK**	**103.21**	**27**	P	**Pdif**	**16 06 27.2**	**+0.8**
	baz=283						
I28M	**Miner Creek**	**103.27**	**24**	P	**Pdif**	**16 06 27.2**	**+0.7**
	baz=286						
G29M	**Pine Creek**	**103.58**	**22**	P	**Pdif**	**16 06 28.1**	**+0.4**
	baz=288						
H29M	**Whitestone**	**103.66**	**23**	P	**Pdif**	**16 06 28.7**	**+0.6**
	baz=287						
G30M	**tAoh Zraii Nji**	**104.23**	**22**	P	**Pdif**	**16 06 31.1**	**+0.4**
	baz=290						
INK	**Inuvik**	**104.72**	**20**	P	**Pdif**	**16 06 33.5**	**+0.8**
	baz=293						
K29M	**Barlow Dome**	**104.72**	**25**	P	**Pdif**	**16 06 33.5**	**+0.5**
	baz=288						
I30M	**Mount Dempster**	**104.76**	**24**	P	**Pdif**	**16 06 33.7**	**+0.5**
	baz=289						
F31M	**Tsiigehtchic**	**104.97**	**21**	P	**Pdif**	**16 06 34.3**	**+0.5**
	baz=292						
G31M	**Satah River**	**104.97**	**22**	P	**Pdif**	**16 06 34.1**	**+0.3**
	baz=292						
J30M	**Hart River**	**104.99**	**24**	P	**Pdif**	**16 06 34.8**	**+0.6**
	baz=289						
H31M	**Peel River**	**105.35**	**23**	P	**PKiKP**	**16 10 46.2**	**+0.2**
	baz=291						
PLBC	**Pleasant Camp**	**106.58**	**29**	P	**PKiKP**	**16 10 48.9**	**+0.5**
	baz=288						
MMPY	**Sheldon Lake,**	**107.81**	**25**	P	**PKiKP**	**16 10 51.1**	**+0.4**
	baz=293						
EKA	**Eskdalemuir Ar**	**107.87**	**327**	PKiKP	**PKiKP**	**16 10 50.6**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=43,slow=3.5,SNR=4.1						
R33M	**Jennings River**	**109.19**	**28**	P	**PKiKP**	**16 10 53.1**	**-0.4**
	baz=292						
TORD	**Torodi Ar. Bea**	**109.37**	**282**	PKiKP	**PKiKP**	**16 10 54.5**	**-0.4**
	comp=Z,2.5nm,0.4s,baz=28,slow=2.6,SNR=21						
S34M	**Telegraph Cree**	**109.68**	**30**	P	**PKiKP**	**16 10 54.3**	**+0.1**
	baz=292						
V35K	**Ketchikan**	**110.36**	**33**	P	**PKiKP**	**16 10 56.7**	**+1.2**
	baz=291						
T35M	**Bob Quinn**	**110.47**	**31**	P	**PKiKP**	**16 10 56.9**	**+1.1**
	baz=292						
ESDC	**Sonseca Array**	**112.21**	**311**	PKiKP	**PKiKP**	**16 10 59.5**	**-0.2**
	comp=Z,1.2nm,0.5s,baz=27,slow=2.8,SNR=9.8						
ESDC				PP	**PP**	**16 11 57.1**	**+2.2**
	comp=Z,0.9nm,0.7s,baz=76,slow=6.7,SNR=5.6						
YKA	**Yellowknife Ar**	**114.45**	**21**	PKP	PKPdf	16 11 03.0	-0.2
	comp=Z,1.9nm,0.6s,baz=327,slow=2.6,SNR=26						
YKA				SKP		16 13 47.5	
	comp=Z,0.8nm,0.7s,baz=343,slow=1.8,SNR=7.1						
MTE	**Manteigas**	**114.73**	**312**	*e*PKPdf	PKPdf	16 11 04.5	-0.1
PCBR	**Castelo Branco**	**114.82**	**311**	*e*PKPdf	**PKiKP**	**16 11 05.0**	**+0.3**
PMRV	**Marv??o**	**114.85**	**311**	*e*PKPdf	PKPdf	16 11 04.5	-0.2
PGAV	**Gavieira, Arco**	**114.86**	**314**	*e*PKPdf	**PKiKP**	**16 11 05.4**	**+0.6**
PBAR	**Barrancos**	**114.88**	**310**	*e*PKPdf	**PKiKP**	**16 11 05.4**	**+0.6**
PVIS	**Viseu**	**114.91**	**312**	*e*PKPdf	**PKiKP**	**16 11 04.9**	**0.0**
PESTR	**Estremoz**	**115.14**	**310**	*e*PKPdf	**PKiKP**	**16 11 05.7**	**+0.4**
PTO	**Porto**	**115.32**	**313**	*e*PKPdf	**PKPdf**	**16 11 04.9**	**-0.6**
PSARD	**Sardoal**	**115.39**	**311**	*e*PKPdf	**PKiKP**	**16 11 06.5**	**+0.8**
PVAQ	**Vaqueiros**	**115.57**	**309**	*e*PKPdf	**PKiKP**	**16 11 07.3**	**+1.2**
DBIC	**Dimbokro**	**115.58**	**275**	PKP	**PKPdf**	**16 11 06.3**	**-0.4**
	comp=Z,5.1nm,0.5s,baz=65,slow=1.4,SNR=9.4						
PCVE	**Castro Verde**	**115.77**	**309**	*e*PKPdf	**PKiKP**	**16 11 07.2**	**+0.7**

PBDV	Barranco-do-Ve	115.78	309	ePKPdf	PKiKP	16 11 07.6	+1.0
MESJ	Messejana	115.86	309	ePKPdf	PKiKP	16 11 07.3	+0.6
MORF	Marmelete	116.32	309	ePKPdf	PKPdf	16 11 06.5	-1.1
NVAR	Mina Array Bea	125.26	46	PKP	PKiKP	16 11 26.2	+0.7
	comp=Z,4.3nm,0.8s,baz=248,slow=2.3,SNR=21						
NVAR				PKKPbc	PKKPbc	16 21 06.9	+0.1
	comp=Z,1.1nm,0.7s,baz=114,slow=2.9,SNR=7.5						
PDAR	Pinedale Array	128.95	37	PKP	PKPdf	16 11 32.2	+0.3
	comp=Z,1.9nm,0.6s,baz=328,slow=0.3,SNR=22						
PDAR				SKP		16 14 03.0	
	comp=Z,3.2nm,0.8s,baz=281,slow=3.1,SNR=17						
PDAR				PKKPbc	PKKPdf	16 20 50.7	-49
	comp=Z,0.3nm,0.6s,baz=164,slow=4.6,SNR=3.7						
ULM	Lac du Bonnet	130.42	22	PKP	PKPdf	16 11 33.9	-0.3
	comp=Z,5.3nm,0.7s,baz=295,slow=2.7,SNR=9.1						
ULM				SKPbc	SKPbc	16 14 07.5	0.0
	comp=Z,6.8nm,0.6s,baz=334,slow=7.0,SNR=12						
SCHQ	Schefferville	130.91	358	PKP	PKPdf	16 11 35.2	+0.1
	comp=Z,5.2nm,0.6s,baz=16,slow=3.5,SNR=8.3						
SCHQ				SKPbc	SKPbc	16 14 09.5	+0.3
	comp=Z,10nm,0.8s,baz=8.5,slow=5.7,SNR=7.2						
PV19	Morning Glory	131.78	42		PKPpre	16 11 24.8	
PLCA	Paso Flores	133.83	179	PKP	PKiKP	16 11 42.9	+0.4
	comp=Z,1.3nm,0.6s,baz=333,slow=6.8,SNR=3.7						
F42A	Maple Grove Fa	136.96	19		PKPpre	16 11 35.3	
VHRN	Van Horn	138.49	49		PKPpre	16 11 42.6	
P38A	Dawn	139.93	29		PKPpre	16 11 46.4	
TXAR	Lajitas Array	140.20	50	PKhKP	PKPpre	16 11 47.1	
	comp=Z,1.2nm,0.5s,baz=279,slow=1.0,SNR=16						
TXAR				SKPbc	SKPbc	16 14 39.7	+1.1
	comp=Z,1.4nm,0.6s,baz=336,slow=3.3,SNR=7.4						
RIB01	Linhares ES	141.95	229	eP	PKPdf	16 11 53.7	-2.7
CFA	Coronel Fontan	142.92	182	PKP	PKPdf	16 11 56.4	-1.5
	comp=Z,36nm,0.5s,baz=187,slow=3.1,SNR=127						
GUA01	Guaratinga, BA	143.10	233	eP	PKPab	16 11 56.0	-0.1
VAO	Valinhos	143.88	217	eP	PKPbc	16 11 57.4	-1.6
BSCB	Bom Sucesso	143.95	222	eP	PKPbc	16 11 57.3	-1.9
DIAM	Diamantina, MG	145.00	227	eP	PKPdf	16 11 59.2	-2.7
FRTB	Fartura	145.11	214	eP	PKPdf	16 11 59.1	-2.7
P57A	Homestead Farm	145.49	11	PKPbc	PKPbc	16 12 03.0	-0.2
PMNB	Patos De Minas	146.78	223	eP	PKPdf	16 12 02.0	-2.8
SJPY	San Joaquin	146.79	203	eP	PKPdf	16 12 01.9	-2.7
SWET	Sewanee	146.99	25		PKPbc	16 12 07.4	-0.2
X48A	Hartselle	147.15	27		PKPbc	16 12 07.1	-0.9
BDFB	Brasilia	149.86	225	PKPbc	PKPbc	16 12 15.7	+0.3
	comp=Z,30nm,0.5s,baz=129,slow=2.3,SNR=25						
BDFB				PKPab	PKPab	16 12 24.3	+1.2
	comp=Z,18nm,0.6s,baz=101,slow=5.2,SNR=4.0						
SIV	San Ignacio	156.86	202	PKP	PKPdf	16 12 20.2	+0.5
	comp=Z,4.0nm,1.0s,baz=179,slow=0.7,SNR=12						
SIV				PKPab	PKPab	16 12 53.3	+0.5
	comp=Z,5.4nm,0.7s,baz=144,slow=4.9,SNR=13						
LPAZ	La Paz	158.14	184	PKP	PKPdf	16 12 21.8	-0.2
	comp=Z,2.4nm,1.0s,baz=270,slow=3.0,SNR=5.7						
LPAZ				PKPab	PKPab	16 12 59.7	+0.8
	comp=Z,2.5nm,0.5s,baz=206,slow=3.7,SNR=5.9						
ATAH	Atahualpa	164.61	146	PKP	PKPdf	16 12 29.9	+1.5
	comp=Z,8.0nm,0.9s,baz=16,slow=7.4,SNR=4.8						
ROSC	El Rosal	175.31	100	PKP	PKPdf	16 12 35.3	+0.8
	comp=Z,7.1nm,0.5s,baz=227,slow=19,SNR=2.2						

JMA **24** *16:01:29.4±0.2,43°.7N±0°.7×14°0E±°,h220^{km}±1^{km}, MV3.3/36,ISHIKARI BAY REGION*

SKHL **24** *16:01:30.0±0.6,43°.90N×140°.70E,h206^{km}±6^{km},mb4.7/3, msha4.6/3*

IDC **24** *16:01:31.1±1.3,44°.05N×140°.44E,h217^{km}±13^{km}, mb3.3/11,mbtmp3.8/12,Error ellipse: s-maj=50.2km s-min=15.1km az=170.0*

ISC 24 16:01:29.5±0.7,**43°.72N**±0°.05×**140°.50E**±0°.05,**h225**^{km}±6^{km}, **n39**,σ**0^{s}99**/57,**mb3.5**/10,**Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JISS	Ishikarishitsu	0.80	123	P	Pn	16 02 00.9	+0.2
JISS				eS	S	16 02 24.4	-0.6
JHR	Hokuryu	0.89	88	P	Pn	16 02 01.5	+0.3
JHR				eS	S	16 02 26.2	+0.4
JEW	Eniwo	1.12	141	P	Pn	16 02 02.9	+0.3
JEW				eS	S	16 02 28.8	+0.5
JSH	Shimam	1.12	197	i P	Pn	16 02 02.1	-0.5
JSS	Shosan	1.19	55	P	Pn	16 02 03.3	+0.2
JSS				S	S	16 02 29.3	+0.1
JAB	Ashibetsu	1.27	99	eP	Pn	16 02 04.3	+0.6
JAB				eS	S	16 02 31.3	+1.2
JNB	Noboribetsu	1.31	162	P	Pn	16 02 03.7	-0.3
JHST	Hiyamasetana	1.37	200	P	Pn	16 02 04.1	-0.3
ASAJ	Asahikawa	1.57	74	P	Pn	16 02 05.9	-0.1
	52nm,0.5s,baz=252,slow=8.3,SNR=167						
ASAJ				S	S	16 02 34.9	+0.5
	25nm,0.7s,baz=124,slow=31,SNR=20						
JKK2	Kamakawa 2	1.64	84	i P	Pn	16 02 07.0	+0.4
JKK2				eS	S	16 02 35.1	-0.3
JRBN	Rebuntou	1.75	13	i P	Pn	16 02 06.8	-0.7
JRBN				eS	S	16 02 35.5	-1.8
JOSM	Okushiri--Mats	1.80	205	i P	Pn	16 02 07.6	-0.4
JWK2	Keihoku	1.89	32	P	Pn	16 02 09.3	+0.5
JSE	Soyaes	1.95	50	eP	Pn	16 02 09.5	+0.2
JNBK	Urakawa-nobuka	2.19	130	eP	Pn	16 02 11.9	+0.2
JNBK				eS	S	16 02 44.6	-0.1
JOMM	Oshimamatsumae	2.22	190	P	Pn	16 02 11.9	-0.2
JOMM				eS	S	16 02 44.4	-0.9
JCH	Churui	2.37	117	eP	Pn	16 02 13.0	-0.6
JCH				eS	S	16 02 45.3	-2.6
JOT	Ohata	2.37	170	eP	Pn	16 02 13.1	-0.6
JAR	Ashorobuto	2.42	99	P	Pn	16 02 14.7	+0.6
JAR				eS	S	16 02 50.1	+1.3
JTKR	Abashiri--Toko	2.48	83	P	Pn	16 02 15.3	+0.6
JTKR				eS	S	16 02 50.4	+0.4
JAK	Akkeshi	3.15	102	eP	Pn	16 02 21.5	-0.6
JAK				eS	S	16 03 00.9	-2.3
AKK	Akkeshi	3.24	101	eP	Pn	16 02 22.7	-0.5
YSS	Yuzhno-Sakhali	3.61	25	eP	Pn	16 02 26.8	-0.6
YSS				AMB	AMB	16 02 27.5	
	90nm,0.3s						
YSS				eS	S	16 03 10.8	-2.2
YSS				A	A	16 03 13.2	
	20nm,0.5s						
YSS				A	A	16 03 13.2	
	20nm,0.5s						
NMR	Nemuro--Hokkai	3.82	93	eP	Pn	16 02 28.9	-1.1
NMR				eS	S	16 03 14.6	-2.9
YUK	Yuzh-Kuril'sk	3.89	83	eP	Pn	16 02 31.1	+0.3
YUK				AMB	AMB	16 02 32.3	
	70nm,0.3s						
YUK				eS	S	16 03 18.0	-1.0
YUK				A	A	16 03 19.3	
	30nm,0.5s						
YUK				A	A	16 03 19.3	
	100nm,0.5s						
SHO	Shikotan	4.59	86	eP	Pn	16 02 39.6	+0.3
SHO				AMB	AMB	16 02 42.9	
	30nm,0.4s						
SHO				i S	S	16 03 33.0	-1.4
SHO				A	A	16 03 33.6	
	20nm,0.3s						
SHO				A	A	16 03 33.6	
	20nm,0.3s						
USRK	Ussuriysk Ar.	6.16	277	P	Pn	16 02 58.2	-0.9
	2.3nm,0.5s,baz=84,slow=13,SNR=5.7						
KSRS	Korea Array	11.42	241	P	Pn	16 04 05.8	-0.5
	1.0nm,0.8s,baz=55,slow=11,SNR=4.6						
SEY	Seymchan	20.45	16	P	P	16 05 48.7	-1.0
	2.6nm,0.8s,baz=219,slow=9.9,SNR=4.5 2.6nm,0.8s						
ZALV	Zalesovo Beam	37.14	306	P	P	16 08 19.7	+1.2
	0.5nm,0.3s,baz=89,slow=8.9,SNR=3.3 0.5nm,0.3s						
MKAR	Makanchi Array	40.28	295	P	P	16 08 46.5	+1.9
	0.4nm,0.6s,baz=85,slow=10,SNR=3.8 0.4nm,0.6s						
KURBB	Kurchatov Arra	41.59	302	P	P	16 08 55.9	+0.7
	2.1nm,0.6s,baz=74,slow=9.0,SNR=7.8 2.1nm,0.6s						
ILAR	Eielson Array	44.35	36	P	P	16 09 17.3	+0.2
	0.7nm,0.7s,baz=280,slow=7.6,SNR=9.3 0.7nm,0.7s						
BVAR	Borovoye Array	45.75	308	P	P	16 09 28.7	+0.4
	0.9nm,0.4s 0.9nm,0.4s						
SPITS	Spitsbergen Ar	53.84	348	P	P	16 10 28.2	-0.6
	0.7nm,0.6s,baz=45,slow=4.3,SNR=1.2 0.7nm,0.6s						
FINES	FINESS Array B	62.62	330	P	P	16 11 29.7	+0.2
	0.6nm,0.3s,baz=40,slow=11,SNR=5.7 0.6nm,0.3s						
HFS	Hagfors	67.74	334	P	P	16 12 02.3	-0.2
	0.5nm,0.4s,baz=44,slow=8.7,SNR=5.9 0.5nm,0.4s						
AKASG	Malin Array Be	68.64	320	P	P	16 12 08.3	+0.1
	0.3nm,0.3s,baz=44,slow=6.6,SNR=5.2 0.3nm,0.3s						
PDAR	Pinedale Array	73.52	46	P	P	16 12 39.2	+1.4
	0.8nm,0.7s,baz=306,slow=4.0,SNR=3.6 0.8nm,0.7s						

NEIC **24** *16:14:40.7±2.1,21°.1S±0°.1×178°.97W±0°.09,h634^{km}±8^{km}, mb4.8/189,Error ellipse: s-maj=16.8km s-min=12.2km az=181.0*

IDC **24** *16:14:41.9±0.6,21°.15S×179°.06W,h645^{km}±6^{km},mb4.2/26, mbtmp5.2/27,Error ellipse: s-maj=11.3km s-min=9.5km az=150.0*

NOU **24** *16:14:41.2,21°.20S×179°.07W,h633^{km},mb5.0/96,Fiji Islands Region*

GCMT **24** *16:14:42.7±0.7,21°.02S±0°.06×179°.21W±0°.05, h644^{km}±5^{km},MW5.3/49,Moment Tensor Solution. s49,c59; Duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.41±.05; $M_{\theta\theta}$0.04±.10; $M_{\phi\phi}$0.37±.09; $M_{r\theta}$-0.66±.09; $M_{\theta\phi}$-0.07±.08; $M_{\phi r}$-0.87±.09; Best double couple: $M_0$1.15100×10^{17} NP1:ϕ_s164.00000°,δ12.00000°, λ-139.00000°. NP2:ϕ_s33.00000°,δ82.00000°, λ-81.00000°. Principal axes: T 1.0470, Plg36.0000°, Azm115.0000°; N 0.2070, Plg9.0000°, Azm212.0000°; P -1.2540, Plg52.0000°, Azm314.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

BGR **24** *16:14:42.5,21°.41S×179°.24W,h654^{km}±10^{km}*

ISC 24 16:14:41.5±0.3,**21°.23S**±0°.05×**179°.06W**±0°.05, **h641**^{km}±3^{km},**h642**^{km}**:pP-P,n775,**σ**0^{s}93**/793,**mb4.8**/169, **44C-54D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	2.99	4	P	P	16 16 03.7	-0.5
MSVF	Nonsavu	4.42	321		P	16 16 12.5	-0.6
MSVF	Nonsavu	4.42	321	P	P	16 16 12.5	-0.6
TAVE	Taveuni	4.57	350	P	P	16 16 13.1	-1.0
DGTI	Dogotuki	5.04	347	P	P	16 16 16.2	-1.3
FUTU	Fugatoga	6.95	8		P	16 16 31.4	-1.7
FUTU	Fugatoga	6.95	8	P	P	16 16 32.1	-0.9
RIZ	Raoul Island	8.04	173	P	P	16 16 45.4	+2.8
RIZ				S	S	16 18 19.9	-1.9
RAO	Raoul Island	8.05	173		P	16 16 41.2	-1.5
RAO	Raoul Island	8.05	173	P	P	16 16 40.9	-1.7
	502nm,0.3s,baz=64,slow=14,SNR=8.0						
RAO				S	S	16 18 18.6	-3.4
	393nm,0.4s,baz=273,slow=23,SNR=12						
GLKZ	Green Lake	8.06	173	P	P	16 16 41.0	-1.7
GLKZ				S	S	16 18 19.6	-2.5
NIUE	Niue	8.84	78	P	P	16 16 41.0	-9.2
AFI	Afiamalu	10.06	45		P	16 16 57.8	-4.1
AFI	Afiamalu	10.06	45	P	P	16 16 59.5	-2.5
AFI	Afiamalu	10.06	45	P	P	16 16 58.2	-3.8
INH	Isangel	11.07	277	P	P	16 17 11.3	-0.3
MARNC	Mare, Loyalty	12.03	266	P	P	16 17 20.5	-0.1
PINNC	Pines Island,	12.60	261		P	16 17 25.7	-0.1
PINNC	Pines Island,	12.60	261	P	P	16 17 26.9	+1.1
YATNC	Mamie plateau,	13.09	264	P	P	16 17 30.8	+0.3
OUENC	Ouen Island, N	13.15	262	P	P	16 17 31.0	0.0
ONTNC	Ouen Toro	13.50	263		P	16 17 32.3	-1.9
ONTNC	Ouen Toro	13.50	263	P	P	16 17 33.1	-1.2
DZM	Mont Dzumac	13.51	264		P	16 17 34.2	-0.2
DZM	Mont Dzumac	13.51	264	eP	P	16 17 34.4	0.0
	194nm,0.8s						
DZM				eS	S	16 19 55.9	+0.2
	145nm,1.2s						
DZM	Mont Dzumac	13.51	264	P	P	16 17 33.9	-0.5
	94nm,0.7s,baz=82,slow=18,SNR=90						
DZM				S	S	16 19 55.1	-0.6
	19nm,1.0s,baz=31,slow=9.2,SNR=3.5						
DZM	Mont Dzumac	13.51	264	P	P	16 17 34.8	+0.4
VLAKA	Lakatoro	13.79	289	P	P	16 17 36.8	-0.2
SANVU	Saraoutou	14.25	292		P	16 17 40.5	-0.8
SANVU	Saraoutou	14.25	292	P	P	16 17 42.0	+0.7
OUZ	Omahuta	15.36	203	P	P	16 17 55.0	+3.9
KOUNC	Koumac, New Ca	15.58	270	P	P	16 17 54.9	+1.5
WCZ	Waipu Caves	15.75	200	P	P	16 17 57.9	+3.2
MXZ	Matakaoa Point	16.43	187	P	P	16 18 01.7	+0.8
MKAZ	Moumakai	16.59	196	P	P	16 18 04.9	+2.6
WMGZ	Waiomatatini S	16.67	187	P	P	16 18 04.3	+1.2
HAZ	Te Kaha	16.69	189	P	P	16 18 03.3	+0.1
AWAZ	Awhitu Peninsu	16.70	198	P	P	16 18 06.1	+2.8
PKGZ	Pakihiroa	16.76	188	P	P	16 18 03.3	-0.6
RUGZ	Raukumara Rang	16.91	189	P	P	16 18 05.0	-0.4
PUZ	Puketiti	16.94	187	P	P	16 18 06.0	+0.4
TOZ	Tahuroa Road	17.10	195	P	P	16 18 09.3	+2.3
URZ	Urewera	17.29	190	P	P	16 18 07.2	-1.5
	8.5nm,0.5s,baz=269,slow=2.8,SNR=19						
URZ				S	S	16 20 53.5	-3.3
	8.8nm,0.7s,baz=66,slow=20,SNR=1.6						
URZ	Urewera	17.29	190	P	P	16 18 09.1	+0.4
URZ	Urewera	17.29	190	P	P	16 18 07.2	-1.5
MWZ	Matawai	17.30	189	P	P	16 18 08.3	-0.6
CNGZ	Carnagh Statio	17.35	187	P	P	16 18 09.9	+0.6
TKGZ	Te Karaka	17.35	188	P	P	16 18 09.9	+0.6
BKZ	Black Stump Fm	18.28	191	P	P	16 18 15.0	-2.8
BKZ	Black Stump Fm	18.28	191	P	P	16 18 16.9	-0.9
TSZ	Takapari Road	19.24	192	P	P	16 18 26.7	+0.2
MRZ	Mangatainoka R	19.90	192	P	P	16 18 30.7	-1.6
MRZ	Mangatainoka R	19.90	192	P	P	16 18 31.1	-1.2
QRZ	Quartz Range	20.80	198	P	P	16 18 40.8	+0.4
QRZ	Quartz Range	20.80	198	P	P	16 18 41.5	+1.2
ALEG	Aligegeo Malai	23.12	299	P	P	16 19 01.0	-0.4
TATA	Tatamba Isabel	24.06	299	P	P	16 19 08.9	-0.7
TBI	Tubuai	27.45	100	esS	sS	16 26 41.2	+1.2
	636nm,22.8s						
EIDS	Eidsvold	27.70	256	P	P	16 19 41.5	+0.1
EIDS	Eidsvold	27.70	256	P	P	16 19 41.7	+0.3
PPT2	Papeete2	28.02	88	esS	sS	16 26 46.4	-3.5
	278nm,24.2s						
PPT	Papeete	28.03	88	P	P	16 19 43.9	-0.4
	42nm,0.8s,baz=42,slow=12,SNR=4.1 42nm,0.8s						
SYDH	Sydney Hard Ro	29.44	238	P	P	16 19 56.7	+0.5
CNB	Canberra Magne	31.00	236	P	P	16 20 11.0	+1.4
CAN	Canberra	31.28	236	P	P	16 20 11.0	-1.0
CAN	Canberra	31.28	236	P	P	16 20 13.0	+1.0
CTAO	Charters Tower	32.44	266		P	16 20 22.3	+0.3
CTAO	Charters Tower	32.44	266	P	P	16 20 22.8	+0.8
CTAO	Charters Tower	32.44	266	P	P	16 20 21.8	-0.2
RABL	Rabaul	32.68	297	P	P	16 20 22.1	-2.0
RABL				IAmb	IAmb	16 20 38.8	
	comp=Z,28nm,0.9s						
CMSA	Cobar Meteorol	33.08	245	P	P	16 20 28.0	+0.9
QLP	Quilpie	33.90	254	P	P	16 20 35.5	+1.5
PMG	Port Moresby	34.55	285	P	P	16 20 38.5	-1.1
PMG	Port Moresby	34.55	285	P	P	16 20 39.5	-0.1
PMG	Port Moresby	34.55	285	P	P	16 20 39.6	-0.1
MTSU	Mount Surprise	34.57	269	P	P	16 20 40.8	+1.0
TOO	Toolangi	34.67	234		P	16 20 40.9	+0.6
TAU	Tasmania Unive	35.41	225	P	P	16 20 47.2	+0.9
TAU				IAmb	IAmb	16 20 47.6	
	comp=Z,21nm,0.8s						
STKA	Stephens Creek	36.58	245		P	16 20 56.8	+0.8
STKA	Stephens Creek	36.58	245	P	P	16 20 57.0	+1.0
	comp=Z,31nm,0.7s,baz=92,slow=10,SNR=44 comp=Z,31nm,0.7s						
STKA	Stephens Creek	36.58	245	P	P	16 20 56.8	+0.8
COEN	Coen	36.65	275		P	16 20 57.2	+0.4
COEN	Coen	36.65	275	P	P	16 20 57.2	+0.4
MANU	Manus Island	37.86	296		P	16 21 06.7	+0.1
QIS	Mount Isa	38.55	263	P	P	16 21 11.9	-0.2
HTT	Hallett	39.01	243	P	P	16 21 16.5	+0.8
TAOE	Nuku Hiva Isla	39.42	78	P	P	16 21 20.5	+1.2
TAOE	Nuku Hiva Isla	39.42	78	P	P	16 21 19.3	+0.1
WHYH	Whyalla	40.09	244	P	P	16 21 24.5	+0.4
AS01	Alice Springs	43.35	258	P	P	16 21 50.0	+0.2
JAY	Jayapura	43.35	290	P	P	16 21 50.0	+0.1
	comp=Z,206nm,0.8s,baz=147,slow=4.3,SNR=111 comp=Z,206nm,0.8s						
JAY	Jayapura	43.35	290	P	P	16 21 49.6	-0.3
	comp=Z,2µmcomp=Z,241nm,1.0s						
AS31	Alice Springs	43.39	258	IAmb	IAmb	16 21 51.2	
	comp=Z,24nm,0.7s						
ASAR	Alice Springs	43.39	258		P	16 21 50.3	+0.2
ASAR	Alice Springs	43.39	258	P	P	16 21 50.0	-0.1
	comp=Z,108nm,0.8s,baz=90,slow=7.0,SNR=1056						
ASAR				PcP	PcP	16 23 23.9	+0.3
	comp=Z,7.6nm,0.8s,baz=103,slow=3.2,SNR=6.5						
ASAR				ScP	ScP	16 26 15.6	+0.4
	comp=Z,2.6nm,0.7s,baz=102,slow=4.1,SNR=5.3						
ASAR				S	S	16 27 32.0	-1.9
	comp=Z,16nm,0.9s,baz=96,slow=14,SNR=32 comp=Z,108nm,0.8s						
WB0	Warramunga Arr	43.51	263		P	16 21 50.5	-0.5
WRAB	Tennant Creek	43.52	263	P	P	16 21 50.9	-0.2
WRA	Warramunga Arr	43.52	263	P	P	16 21 50.6	-0.6
	comp=Z,81nm,0.9s,baz=97,slow=7.4,SNR=343						
WRA				PcP	PcP	16 23 24.4	+0.3
	comp=Z,8.4nm,1.0s,baz=93,slow=3.9,SNR=6.6						
WRA				S	S	16 27 31.3	-4.6
	comp=Z,6.5nm,1.1s,baz=96,slow=13,SNR=10 comp=Z,81nm,0.9s						
GENI	Genyem	43.78	289	P	P	16 21 54.3	+1.1
GENI	Genyem	43.78	289	P	P	16 21 52.8	-0.4
SMPI	Sarmi	45.35	289	P	P	16 22 04.4	-0.8
	comp=Z,135nm,1.1s						
KDU	Kakadu	46.98	272	P	P	16 22 17.3	-0.1
SRPI	Serui, Papua	47.59	288	P	P	16 22 21.8	-0.2
	comp=Z,77nm,0.9s						
BAKI	Biak	48.02	289	P	P	16 22 26.5	+1.3
	comp=Z,2µmcomp=Z,183nm,0.9s						
MTN	Manton Dam	48.19	272	P	P	16 22 25.9	-0.5
DRS	Darwin Rock St	48.52	272	P	P	16 22 28.5	-0.4
RKPI	Ransiki, Papua	49.59	287	P	P	16 22 36.2	-0.5
	comp=Z,65nm,0.9s						
FAKI	Fak Fak	50.71	284	P	P	16 22 43.8	-1.0
	comp=Z,74nm,1.1s						
FITZ	Fitzroy Crossi	51.95	263	P	P	16 22 53.9	+0.2
	comp=Z,21nm,0.5s,baz=97,slow=4.2,SNR=128 comp=Z,21nm,0.5s						
FITZ	Fitzroy Crossi	51.95	263	P	P	16 22 54.0	+0.3
DRV	Dumont d'Urvil	52.34	199	P	P	16 22 54.4	-1.1
DRV				sP	sP	16 25 57.4	-2.5
SWI	Sorong	52.49	286	P	P	16 22 57.2	-0.3
AAI	Ambon	54.09	281	P	P	16 23 08.2	-0.6
	comp=Z,84nm,0.9s						
NLAI	Namlea	55.27	281	P	P	16 23 16.6	-0.3
	comp=Z,1µmcomp=Z,106nm,1.1s						
SOEI	Soe	55.54	273	P	P	16 23 21.1	+2.1
SOEI	Soe	55.54	273	P	P	16 23 20.2	+1.2
BATI	Baumata	55.96	272	P	P	16 23 22.8	+1.0
	comp=Z,64nm,0.6s,baz=272,slow=0.5,SNR=13 comp=Z,64nm,0.6s						
BATI	Baumata	55.96	272	P	P	16 23 22.7	+1.0
	comp=Z,87nm,0.8s						
PSA00	Pilbara Seismi	56.54	258	P	P	16 23 25.0	-0.6
PSA00				IAmb	IAmb	16 23 26.4	
	comp=Z,47nm,1.1s						
PSA00	Pilbara Seismi	56.54	258	IAmb	IAmb	16 23 26.3	
	comp=Z,106nm,0.9s						
PSA00	Pilbara Seismi	56.54	258	P	P	16 23 25.3	-0.3
TNTI	Ternate	56.70	286		P	16 23 26.6	-0.2
TNTI	Ternate	56.70	286	P	P	16 23 27.3	+0.6
TNTI	Ternate	56.70	286	P	P	16 23 26.3	-0.4
	comp=Z,1µmcomp=Z,131nm,1.0s						
MBWA	Marble Bar	56.73	258	P	P	16 23 26.5	-0.4
MBWA				IAmb	IAmb	16 23 27.5	
	comp=Z,82nm,0.8s						
MBWA	Marble Bar	56.73	258	P	P	16 23 26.8	-0.1
MBWA	Marble Bar	56.73	258	P	P	16 23 26.3	-0.6
MEEK	Meekatharra	56.74	251	P	P	16 23 26.5	-0.5
SANI	Sanana	56.76	282	P	P	16 23 26.8	-0.4
SANI	Sanana	56.76	282	P	P	16 23 26.2	-1.0
	comp=Z,1µmcomp=Z,91nm,2.0s						
KLBR	Kellerberrin	56.85	245	P	P	16 23 28.0	+0.4
VNDA	Vanda	57.10	185	P	P	16 23 30.7	+2.3
NWAO	Narrogin (SRO)	57.16	244		P	16 23 29.2	-0.5
NWAO	Narrogin (SRO)	57.16	244	P	P	16 23 30.2	+0.6
NWAO	Narrogin (SRO)	57.16	244	P	P	16 23 30.0	+0.4
NWAO	Narrogin (SRO)	57.16	244	P	P	16 23 29.5	-0.1
MMRI	Maumere	57.80	273	IAmb	IAmb	16 23 34.7	
	comp=Z,68nm,0.8s						
MMRI	Maumere	57.80	273	P	P	16 23 33.3	-0.9
	comp=Z,1µmcomp=Z,101nm,0.8s						
BLDU	Ballidu	57.85	246	P	P	16 23 34.5	+0.1
MUN	Mundaring	58.12	245	P	P	16 23 36.6	+0.5
EDFI	Ende, Flores	58.27	273	P	P	16 23 36.4	-1.1
	comp=Z,100nm,1.0s						
MORW	Morawa	58.64	248	IAmb	IAmb	16 23 40.7	
	comp=Z,81nm,1.1s						
MORW	Morawa	58.64	248	P	P	16 23 39.6	0.0
WSI	Waingapu	59.27	271	P	P	16 23 43.4	-0.6
SGSI	Sangihe	59.63	288	P	P	16 23 45.4	-1.0
	comp=Z,1µmcomp=Z,148nm,1.0s						
LUWI	Luwuk	60.10	282	P	P	16 23 49.9	+0.4
LUWI	Luwuk	60.10	282	P	P	16 23 49.3	-0.2
	comp=Z,2µmcomp=Z,137nm,1.0s						
WBSI	Waikabubak, Su	60.12	271	P	P	16 23 49.2	-0.5
	comp=Z,63nm,1.2s						
APSI	Ampana	61.18	281	P	P	16 23 56.6	0.0
	comp=Z,76nm,0.9s						
BNSI	Bone	61.27	277	P	P	16 23 56.5	-0.6
	comp=Z,56nm,1.4s						
GIRL	Giralia	61.40	255		P	16 23 58.9	+1.0
GIRL	Giralia	61.40	255	P	P	16 23 58.2	+0.3
MRSI	Marisa	61.48	283	P	P	16 23 57.4	-1.1
CCD	Concordia, Ant	61.51	194	P	P	16 23 59.7	+1.5
CCD				pP	pwP	16 26 03.8	+0.6
SPSI	Sidrap Palu	61.74	277	P	P	16 23 58.2	-2.0
	comp=Z,41nm,1.2s						
PLAI	Plampang	61.89	271	P	P	16 24 00.9	-0.3
PLAI	Plampang	61.89	271	P	P	16 24 00.6	-0.6
	comp=Z,1µmcomp=Z,149nm,1.0s						
TTSI	Tana Toraja	62.04	278	P	P	16 24 01.6	-0.5
TOLI2	Tolitoli	62.79	283		P	16 24 05.7	-1.2
TOLI2				IAmb	IAmb	16 24 07.5	
	comp=Z,44nm,0.9s						
TOLI2	Tolitoli	62.79	283	P	P	16 24 07.0	0.0
PCI	Palu	62.84	280	P	P	16 24 08.4	+1.1
	comp=Z,2µmcomp=Z,177nm,1.0s						
CASY	Casey	62.88	205	P	P	16 24 07.7	+1.1
CASY				pP	pP	16 26 08.7	-0.2
CASY				sP	sP	16 27 15.8	-0.3
MPSI	Mapaga	63.28	282	P	P	16 24 09.4	-0.7
	comp=Z,62nm,0.9s						
JAGI	Jajag, Banyuwa	65.39	270		P	16 24 21.6	-1.8
JAGI	Jajag, Banyuwa	65.39	270	P	P	16 24 22.4	-1.0
JAGI	Jajag, Banyuwa	65.39	270	P	P	16 24 21.9	-1.5
	comp=Z,75nm,0.9s						
GMJI	Gumukmas	66.12	270	P	P	16 24 27.0	-0.8
MYLDM	Lahad Datu	66.57	286	P	P	16 24 31.0	+0.4
MYLDM				IAmb	IAmb	16 24 54.2	
	comp=Z,48nm,1.2s						
MYLDM	Lahad Datu	66.57	286	P	P	16 24 33.9	+3.3
PCJI	Pacitan	68.26	269	P	P	16 24 40.7	-0.2
WOJI	Wonogiri, Jawa	68.61	270	P	P	16 24 43.0	0.0
	comp=Z,80nm,1.1s						
QSPA	South Pole Qui	68.84	180	P	P	16 24 45.2	+1.6
	comp=Z,8.7nm,0.8s,baz=307,slow=0.6,SNR=33 comp=Z,8.7nm,0.8s						
KKM	Kota Kinabalu	69.00	286	IAmb	IAmb	16 24 46.7	
	comp=Z,65nm,1.2s						
KKM	Kota Kinabalu	69.00	286	P	P	16 24 46.0	+0.6
JOW	Kunigami	69.89	311	P	P	16 24 50.7	+0.4
	comp=Z,41nm,0.9s,baz=220,slow=5.6,SNR=8.7 comp=Z,41nm,0.9s						
JOW	Kunigami	69.89	311	P	P	16 24 50.6	+0.4
JGF	Kuroka	70.00	323	P	P	16 24 50.2	-0.6
JGF	Kuroka	70.00	323	P	P	16 24 51.2	+0.4
INU	Inuyama	70.01	323	P	P	16 24 51.5	+0.7
MAJO	Matsushiro	70.22	324	P	P	16 24 51.9	-0.2
MJB9	Matsu-Tunnel	70.23	324	IAmb	IAmb	16 24 52.7	
	comp=Z,32nm,1.0s						
JMN	Monobe	70.69	320	IAmb	IAmb	16 24 56.6	
	comp=Z,51nm,1.1s						
JMN	Monobe	70.69	320	P	P	16 24 56.1	+1.2
STKI	Sintang	70.92	278	P	P	16 24 52.9	-3.8
JSD	Sado	71.30	326	IAmb	IAmb	16 24 59.6	
	comp=Z,52nm,1.3s						
JSD	Sado	71.30	326	P	P	16 24 59.0	+0.7
LEM	Lembang	72.04	270	P	P	16 25 03.1	-0.2
	comp=Z,104nm,1.0s						
JNU	Nakatsue	72.14	317	IAmb	IAmb	16 25 04.2	
	comp=Z,51nm,1.1s						
JNU	Nakatsue	72.14	317	P	P	16 25 02.4	-0.9
	comp=Z,30nm,1.0s,baz=95,slow=3.9,SNR=14 comp=Z,30nm,1.0s						
JNU	Nakatsue	72.14	317	P	P	16 25 03.7	+0.4

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KSM   Kuching           72.54 279  P       P       16 25 05.8 -0.2
KSM   Kuching           72.54 279  P       P       16 25 06.9 +0.9
TWGBT Beinan            72.94 303  P       P       16 25 07.1 -1.0
DBJI  Dramaga           72.94 270  P       P       16 25 07.7 -0.6
      comp=Z,77nm,0.9s
YULB  Yu-li             73.08 304  IAmb    IAmb    16 25 17.3
      comp=Z,27nm,1.1s
YULB  Yu-li             73.08 304  P       P       16 25 08.5 -0.4
ATKA  Atka Island       73.24   3          P       16 25 08.1 -0.9
ATKA  Atka Island       73.24   3  P       P       16 25 09.1  0.0
NACB  Ninganchiao       73.27 305  P       P       16 25 09.4 -0.5
TPUB  Ta-pu             73.55 304  P       P       16 25 10.8 -0.7
SSLB  Suanglung         73.56 304          P       16 25 10.0 -1.5
SSLB  Suanglung         73.56 304  P       P       16 25 10.8 -0.8
YHNB  Yeheng            73.71 305  P       P       16 25 13.2 +0.7
JKA   Kamikawa-asahi    73.90 332  IAmb    IAmb    16 25 15.6
      comp=Z,43nm,1.0s
ASAJ  Asahikawa         73.91 332  P       P       16 25 14.0 +1.0
      comp=Z,25nm,0.8s,baz=224,slow=7.2,SNR=31
      comp=Z,25nm,0.8s
CGJI  Cibinong          73.91 269  P       P       16 25 12.6 -1.1
      comp=Z,62nm,1.0s
NIKH  Nikolski High     74.42   6  P       P       16 25 15.0 -0.7
NIKH  Nikolski High     74.42   6  P       P       16 25 15.8 +0.1
      baz=190
UNV   Unalaska Valle    75.55   8  P       P       16 25 21.6 -0.3
      baz=192
LWLI  Liwa              75.98 270  P       P       16 25 23.9 -1.5
      comp=Z,76nm,0.8s
MDSI  Maura Dua         76.06 271  P       P       16 25 24.4 -1.3
      comp=Z,60nm,1.1s
YSS   Yuzhno-Sakhali    76.11 334          P       16 25 25.6 +0.4
YSS                                IAmb    IAmb    16 25 27.3
      comp=Z,44nm,1.3s
YSS   Yuzhno-Sakhali    76.11 334  P       P       16 25 26.1 +0.9
PET   Petropavlovsk     76.44 346  P       P       16 25 25.7 -1.0
PET                                IAmb    IAmb    16 25 27.4
      comp=Z,66nm,1.9s
PET   Petropavlovsk     76.44 346  P       P       16 25 25.8 -1.0
      comp=Z,17nm,1.6s
TJN   Taejon            76.44 318  IAmb    IAmb    16 25 29.8
      comp=Z,32nm,0.9s
TJN   Taejon            76.44 318  P       P       16 25 27.6 +0.4
PETK  Petropavlovsk-    76.73 346  P       P       16 25 27.2 -1.2
      comp=Z,31nm,0.9s,baz=128,slow=6.3,SNR=78
PETK                               pP      pP      16 27 40.5 +1.6
      comp=Z,1.0nm,0.7s,baz=182,slow=6.8,SNR=2.4
      comp=Z,31nm,0.9s
KSRS  Korea Array       76.79 319  P       P       16 25 29.3 +0.2
      comp=Z,5.5nm,0.9s,baz=142,slow=6.4,SNR=26
      comp=Z,5.5nm,0.9s
KSAR  Wonju Array Be    76.80 319  P       P       16 25 28.9 -0.2
KS19  Wonju Array Si    76.85 319  IAmb    IAmb    16 25 31.1
      comp=Z,62nm,1.7s
CHNA  Chernabura Isl    77.57  11  P       P       16 25 32.4 -0.4
      baz=198
INCN  Inchon            77.60 319  P       P       16 25 33.9 +0.4
KSI   Kapahiang         77.83 271  P       P       16 25 33.7 -1.7
      comp=Z,166nm,1.0s
SDPT  Sand Point        77.91  11  P       P       16 25 33.9 -0.7
      baz=198
S12K  Black Hills       77.98  10  P       P       16 25 34.3 -0.8
      baz=196
SPIA  Saint Paul Isl    78.46   5  P       P       16 25 37.4 -0.1
      baz=188
MYKOM Kota Tinggi       78.63 276  IAmb    IAmb    16 25 41.2
      comp=Z,50nm,1.0s
MYKOM Kota Tinggi       78.63 276  P       P       16 25 40.0 +0.5
BELA  Belgrano 2        78.96 173  P       P       16 25 40.5 +0.4
S14K  Fog Glacier       78.96  11  P       P       16 25 40.2 -0.1
      baz=198
USA0B Ussuriysk Arra    79.02 326  IAmb    IAmb    16 25 42.9
      comp=Z,58nm,1.1s
USRK  Ussuriysk Ar.     79.02 326  P       P       16 25 41.3 +0.4
USRK  Ussuriysk Ar.     79.02 326  P       P       16 25 41.5 +0.6
      comp=Z,25nm,0.9s,baz=123,slow=3.2,SNR=95
      comp=Z,25nm,0.9s
CHIR  Chirikof Islan    79.29  13  P       P       16 25 41.8 -0.2
      baz=202
NJ2   Nanjing           79.59 310 ⇓P       P       16 25 45.1 +1.0
NJ2                                pmax    pmax
      comp=Z,26nm,0.6s
SII   Sitkinak Islan    80.28  14  P       P       16 25 47.1 -0.1
      baz=203
MAW   Mawson            80.54 200  P       P       16 25 49.5 +1.0
      comp=Z,3.1nm,0.9s,baz=130,slow=6.3,SNR=6.1
      comp=Z,3.1nm,0.9s
MDJ   Mudanjiang        80.56 326  P       P       16 25 49.7 +0.9
OHAK  Old Harbor        81.09  14  P       P       16 25 51.3 +0.1
      baz=204
R18K  Karluk            81.15  13  P       P       16 25 51.1 -0.4
      baz=203
Q17K  Contact Creek     81.51  12  P       P       16 25 53.0 -0.5
      baz=202
O14K  Tigyukauivet M    81.52   9  P       P       16 25 53.0 -0.3
      baz=197
O15K  Ungalikthiuk R    81.67  10  P       P       16 25 53.9 -0.3
      baz=198
Q16K  King Salmon       81.75  12  P       P       16 25 54.6 +0.1
      baz=201
KDAK  Kodiak Island     81.76  14  P       P       16 25 54.6  0.0
      baz=205
P16K  Nushagak River    81.84  11  P       P       16 25 54.9  0.0
      baz=200
M11K  Mekoryuk          82.00   6  P       P       16 25 56.2 +0.4
      baz=192
Q18K  Katmai Hardscr    82.04  12  P       P       16 25 56.0 -0.2
      baz=202,SNR=6.9
WHN   Wuhan             82.09 307  P       P       16 25 57.0 +0.1
WHN                                pmax    pmax
      comp=Z,120nm,1.3s
N14K  Kuskokwak Cree    82.10   9  P       P       16 25 56.9 +0.6
      baz=196,SNR=12
MNSI  Mandailing Nat    82.23 274  P       P       16 25 55.0 -3.1
      comp=Z,69nm,0.9s
NVAR  Mina Array Bea    82.24  44  P       P       16 25 58.9 +1.1
      comp=Z,0.2nm,0.5s,baz=256,slow=5.0,SNR=1.7
NVAR                               pP      pP      16 28 12.3 +1.4
      comp=Z,1.2nm,0.8s,baz=240,slow=7.2,SNR=4.0
IPM   Ipoh              82.25 278  P       P       16 25 59.0 +0.8
P17K  Kvichak River     82.27  12  P       P       16 25 56.8 -0.3
      baz=201,SNR=6.9
O16K  Kokwok River B    82.35  11  P       P       16 25 56.6 -1.0
      baz=200,SNR=5.2
M13K  Dall Lake         82.35   8  IAmb    IAmb    16 25 59.6
      comp=Z,22nm,0.9s
M13K  Dall Lake         82.35   8  P       P       16 25 58.4 +0.9
      baz=195
BNX   BinXian           82.46 325 ⇓P       P       16 25 58.3 -0.2
BNX                                PcP     PcP     16 26 02.4 +0.7
BNX                                pmax    pmax
      comp=Z,32nm,0.9s
N15K  Kwethluk River    82.57   9  P       P       16 25 59.4 +0.7
      baz=198,SNR=15
Q19K  Cape Douglas,     82.58  13  P       P       16 25 59.4 +0.6
      baz=204
KLR   Kul'dur           82.66 330  P       P       16 25 59.9 +0.5
      comp=Z,11nm,0.9s,baz=116,slow=5.1,SNR=28
      comp=Z,11nm,0.9s
P18K  Big Mountain,     82.69  12  P       P       16 25 58.7 -0.7
      baz=202
O17K  Koliganek Bris    82.69  11  P       P       16 25 58.8 -0.5
      baz=200
M14K  Bethel            82.86   8  IAmb    IAmb    16 26 01.7
      comp=Z,53nm,1.4s
M14K  Bethel            82.86   8  P       P       16 26 00.7 +0.6
      baz=196,SNR=5.6
KULM  Kulim             82.89 278  IAmb    IAmb    16 26 03.4
      comp=Z,38nm,1.0s
KULM  Kulim             82.89 278  P       P       16 26 03.6 +2.2
M15K  Kasigluk River    82.99   9  P       P       16 26 01.2 +0.5
      baz=197,SNR=12
TIA   Tai'an            83.04 313  P       P       16 26 02.1 +0.5
TIA                                pmax    pmax
      comp=Z,40nm,1.2s
N16K  Nishlik Lake      83.07  10  P       P       16 26 02.0 +0.7
      baz=199,SNR=14
O18K  Koktuh Hills      83.12  12  IAmb    IAmb    16 26 02.1
      comp=Z,29nm,1.0s
O18K  Koktuh Hills      83.12  12  P       P       16 26 01.3 -0.2
      baz=202,SNR=5.9
P19K  Oil Pt            83.33  13  P       P       16 26 02.8 +0.3
      baz=204
L14K  Kuka Creek        83.34   8  IAmb    IAmb    16 26 04.0
      comp=Z,29nm,1.2s
L14K  Kuka Creek        83.34   8  P       P       16 26 03.0 +0.6
      baz=195,SNR=9.7
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N17K  Nushagak Hills    83.39  11  P       P       16 26 03.7 +1.0
      baz=200
M16K  Timber Creek      83.56  10  P       P       16 26 04.6 +1.0
      baz=199,SNR=6.8
PSI   Prapat            83.57 275  P       P       16 26 04.2 -0.8
      comp=Z,26nm,0.8s,baz=171,slow=4.3,SNR=17
      comp=Z,26nm,0.8s
PSI   Prapat            83.57 275  P       P       16 26 04.7 -0.2
O19K  Port Alsworth     83.61  12  P       P       16 26 03.4 -0.4
      baz=203
CNPM  China Poot        83.64  14  IAmb    IAmb    16 26 05.1
      comp=Z,34nm,1.2s
HOM   Homer             83.67  14  P       P       16 26 04.7 +0.5
      baz=206
K13K  Kusilvak Mount    83.68   7  IAmb    IAmb    16 26 05.9
      comp=Z,23nm,1.2s
K13K  Kusilvak Mount    83.68   7  P       P       16 26 04.8 +0.7
      baz=193,SNR=5.5
N18K  Kilae Creek       83.76  11  P       P       16 26 04.0 -0.6
      baz=202
L15K  Ungalak Mounta    83.82   8  P       P       16 26 05.0 +0.1
      baz=196,SNR=6.0
O20K  Slope Mountain    83.84  13  P       P       16 26 04.4 -0.7
      baz=205
BRLK  Bradley Lake      83.94  14  IAmb    IAmb    16 26 06.3
      comp=Z,25nm,1.0s
BRSE  Bradley Lake S    83.95  14  P       P       16 26 05.7 +0.2
      baz=206,SNR=7.4
RED   Redoubt Volcan    84.12  13  IAmb    IAmb    16 26 06.7
      comp=Z,31nm,1.2s
L16K  Owhat River       84.14   9  IAmb    IAmb    16 26 08.2
      comp=Z,35nm,1.9s
L16K  Owhat River       84.14   9  P       P       16 26 06.7 +0.3
      baz=198
N19K  Bonanza Creek     84.14  12  P       P       16 26 05.7 -0.9
      baz=203
M17K  Holitna River     84.17  10  IAmb    IAmb    16 26 08.6
      comp=Z,17nm,0.9s
M17K  Holitna River     84.17  10  P       P       16 26 07.3 +0.8
      baz=200,SNR=5.8
MA2   Magadan           84.23 345  P       P       16 26 05.8 -1.1
MA2   Magadan           84.23 345  P       P       16 26 06.0 -0.9
      comp=Z,12nm,0.9s,baz=169,slow=6.0,SNR=8.2
      comp=Z,12nm,0.9s
MA2   Magadan           84.23 345  P       P       16 26 06.7 -0.2
MA2   Magadan           84.23 345  P       P       16 26 06.2 -0.7
      comp=Z,25nm,1.1s
GSI   Gunungsitoli      84.28 274  P       P       16 26 10.3 +2.0
GSI   Gunungsitoli      84.28 274  P       P       16 26 07.8 -0.5
      comp=Z,127nm,1.0s
K15K  Wolf Creek Mou    84.41   8  IAmb    IAmb    16 26 10.5
      comp=Z,21nm,1.1s
K15K  Wolf Creek Mou    84.41   8  P       P       16 26 08.4 +0.7
      baz=196,SNR=9.2
M18K  Stony River       84.53  11  P       P       16 26 08.5 +0.2
      baz=202
SEW   Seward            84.57  14  P       P       16 26 08.0 -0.5
      baz=207
J14K  Nanvaranak Lak    84.60   7  P       P       16 26 08.3 -0.2
      baz=194
L17K  Donlin            84.72  10  P       P       16 26 10.0 +0.8
      baz=199,SNR=5.5
Q23K  Middleton Isla    84.73  16  P       P       16 26 09.3  0.0
      baz=210
SLKM  Skilak Lake       84.75  14  IAmb    IAmb    16 26 10.2
      comp=Z,37nm,1.0s
GAMB  Gambell           84.92   3  P       P       16 26 10.4 +0.3
      baz=187
N20K  Mount Spurr       84.95  13  P       P       16 26 09.2 -1.3
      baz=205
SPCR  Spurr Chakacha    84.95  13  P       P       16 26 09.3 -1.2
      baz=205
P23K  Montague Islan    84.96  15  P       P       16 26 09.5 -0.9
      baz=209
L18K  Granite Mounta    85.06  10  P       P       16 26 11.3 +0.5
      baz=201,SNR=8.4
SRIT  Nakonsritamara    85.10 281  P       P       16 26 14.2 +2.0
M19K  Big River Lodg    85.17  11  P       P       16 26 10.9 -0.5
      baz=203
K17K  Iditarod          85.27   9  P       P       16 26 12.1 +0.2
      baz=199
HNS   HongShan          85.32 313 ⇓P       P       16 26 13.4 +0.8
HNS                                pmax    pmax
      comp=Z,23nm,1.1s
L19K  White Mountain    85.34  11  IAmb    IAmb    16 26 13.6
      comp=Z,24nm,1.0s
L19K  White Mountain    85.34  11  P       P       16 26 12.3  0.0
      baz=202,SNR=14
RC01  Rabbit Creek A    85.38  14  IAmb    IAmb    16 26 13.2
      comp=Z,37nm,1.3s
RC01  Rabbit Creek A    85.38  14  P       P       16 26 12.1 -0.3
      baz=207,SNR=6.7
M20K  Styx River        85.39  12  P       P       16 26 11.8 -0.8
      baz=204
HEH   HeiHe             85.42 329 ⇓iP      P       16 26 13.1 +0.3
HEH                                pmax    pmax
      comp=Z,32nm,1.2s
LYN   LuoYang           85.45 310  P       P       16 26 14.8 +1.4
LYN                                pmax    pmax
      comp=Z,42nm,0.8s
J16K  Anvik River       85.48   8  P       P       16 26 12.9 +0.1
      baz=197
SUA   Susitna One       85.49  13  P       P       16 26 12.5 -0.6
      baz=206
PWL   Port Wells        85.50  15  IAmb    IAmb    16 26 13.6
      comp=Z,23nm,1.0s
PWL   Port Wells        85.50  15  P       P       16 26 12.5 -0.5
      baz=208,SNR=5.6
ENH   Enshi             85.64 305  P       P       16 26 15.7 +1.3
KAIM  Kayak Island      85.67  17  P       P       16 26 14.1 +0.3
      baz=212
BJT   Baijiatuau        85.71 316  P       P       16 26 15.8 +1.3
BJI   Beijing           85.72 316  P       P       16 26 15.1 +0.6
BJI                                PP      PP      16 29 44.5 -2.2
BJI                                pmax    pmax
      comp=Z,8.0nm,0.9s
BJI                                pmax    pmax
      comp=Z,78nm,4.6s
CRAG  Craig             85.79  24  P       P       16 26 14.1 -0.3
      baz=222
SYO   Syowa Base        85.79 193⇓ePcP     P       16 26 15.2 +0.8
L20K  Farewell, AK      85.80  11  P       P       16 26 14.0 -0.4
      baz=203,SNR=6.8
SKT   Skwentna          85.80  13  P       P       16 26 12.7 -1.7
      baz=206
J17K  VABM Dome         85.80   9  P       P       16 26 14.4 +0.1
      baz=198
GLI   Glacier Island    85.81  15  IAmb    IAmb    16 26 15.1
      comp=Z,22nm,0.9s
GLI   Glacier Island    85.81  15  P       P       16 26 14.1 -0.4
      baz=210
EYAK  Cordova Ski Ar    85.86  16  P       P       16 26 14.9 +0.3
EYAK  Cordova Ski Ar    85.86  16  P       P       16 26 14.5 -0.1
      baz=211
M22K  Willow            85.89  13  P       P       16 26 14.3 -0.4
      baz=207
KNK   Knik Glacier      85.95  14  IAmb    IAmb    16 26 16.0
      comp=Z,20nm,1.0s
KNK   Knik Glacier      85.95  14  P       P       16 26 14.9 -0.2
      baz=208
PMR   Palmer            85.96  14  IAmb    IAmb    16 26 15.8
      comp=Z,25nm,1.2s
PMR   Palmer            85.96  14  P       P       16 26 15.3 +0.2
PMR   Palmer            85.96  14  P       P       16 26 14.7 -0.4
      baz=208
RAGM  Ragged Mountai    85.99  16  IAmb    IAmb    16 26 16.7
      comp=Z,25nm,1.2s
I17K  Unalakleet        86.05   8  P       P       16 26 14.6 -0.9
      baz=197
GYA   Guiyang           86.16 300 ⇑P       P       16 26 18.1 +1.0
GYA                                pmax    pmax
      comp=Z,27nm,1.3s
SIT   Sitka             86.17  22  P       P       16 26 15.8 -0.4
      baz=220
J18K  Innoko River      86.22  10  IAmb    IAmb    16 26 17.4
      comp=Z,14nm,0.9s
J18K  Innoko River      86.22  10  P       P       16 26 16.4  0.0
      baz=201,SNR=14
U33K  Whale Pass        86.27  24  IAmb    IAmb    16 26 18.9
      comp=Z,22nm,1.2s
U33K  Whale Pass        86.27  24  P       P       16 26 17.8 +1.2
      baz=222
V35K  Ketchikan         86.27  25  P       P       16 26 17.8 +1.1
      baz=223
SLVN  Son La            86.28 294  P       P       16 26 19.9 +2.2
DIV   Divide            86.35  15  IAmb    IAmb    16 26 18.0
      comp=Z,24nm,1.1s
CUT   Chulitna          86.44  13  P       P       16 26 16.9 -0.4
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      baz=207
MLSI  Meulaboh, Aceh    86.45 276  P       P       16 26 19.0 +0.4
      comp=Z,43nm,1.2s
M23K  Glacier View      86.46  14  P       P       16 26 17.6 +0.1
      baz=209
PPLA  Purkeypile        86.50  12  P       P       16 26 16.0 -1.9
      baz=205
BMRM  Bremner River     86.51  16  IAmb    IAmb    16 26 18.9
      comp=Z,17nm,1.0s
BMRM  Bremner River     86.51  16  P       P       16 26 17.8  0.0
      baz=212,SNR=6.3
S31K  Pelican           86.56  21  P       P       16 26 18.8 +0.8
      baz=219
MESA  MESA              86.56  18  P       P       16 26 18.7 +0.4
      baz=214
K20K  Telida            86.57  11  P       P       16 26 17.7 -0.3
      baz=203
H16K  Elim              86.58   7  P       P       16 26 17.8 -0.2
      baz=196
SCM   Sheep Creek Mo    86.58  14  P       P       16 26 18.1 -0.1
      baz=209,SNR=12
KLU   Klutina           86.62  15  IAmb    IAmb    16 26 19.3
      comp=Z,27nm,1.5s
KLU   Klutina           86.62  15  P       P       16 26 18.0 -0.4
      baz=211
CRQM  Cirque            86.72  17  IAmb    IAmb    16 26 20.1
      comp=Z,25nm,1.2s
CRQE  Cirque            86.72  17  P       P       16 26 19.1 +0.2
      baz=213
G15K  Niukluk           86.73   6  P       P       16 26 18.5 -0.2
      baz=194
S32K  Killisnoo         86.75  22  P       P       16 26 19.5 +0.6
      baz=221
YAH   Yahtse            86.77  18  IAmb    IAmb    16 26 20.9
      comp=Z,21nm,1.0s
WRAK  Wrangell Islan    86.78  24  IAmb    IAmb    16 26 21.2
      comp=Z,18nm,1.1s
WRAK  Wrangell Islan    86.78  24  P       P       16 26 20.3 +1.2
      baz=223,SNR=5.0
SEY   Seymchan          86.87 347  P       P       16 26 19.3 -0.1
      comp=Z,21nm,0.9s,baz=148,slow=5.4,SNR=58
      comp=Z,21nm,0.9s
PNL   Peninsula         86.89  19  P       P       16 26 19.8 +0.2
      baz=216
J19K  Poorman           86.89  10  P       P       16 26 19.8 +0.3
      baz=202,SNR=7.0
PINM  Pinnacle          86.98  18  P       P       16 26 20.1  0.0
      baz=216
F14K  Arctic Creek      86.98   5  P       P       16 26 19.7 -0.2
      baz=192
CAST  Castle Rocks      86.99  12  IAmb    IAmb    16 26 19.5
      comp=Z,18nm,0.8s
CAST  Castle Rocks      86.99  12  P       P       16 26 18.6 -1.4
      baz=205,SNR=25
TROLL Troll, Antarti    87.00 180 ⇓P       P       16 26 20.4 +0.2
      comp=Z,117nm,0.4s
TROLL                             ⇓pP      pP      16 28 36.6 +0.9
      comp=Z,878nm,1.1s
TABL  Table Mountain    87.00  18  IAmb    IAmb    16 26 21.6
      comp=Z,17nm,0.8s
VRDI  Verde Repeater    87.03  16  IAmb    IAmb    16 26 21.6
      comp=Z,20nm,1.3s
N25K  Chitina, Valde    87.05  16  IAmb    IAmb    16 26 21.0
      comp=Z,11nm,0.7s
N25K  Chitina, Valde    87.05  16  P       P       16 26 20.6 +0.2
      baz=212,SNR=8.5
GRNC  Granite Creek     87.07  17  IAmb    IAmb    16 26 22.0
      comp=Z,19nm,1.1s
M24K  Tolsona, Glenn    87.09  15  IAmb    IAmb    16 26 22.1
      comp=Z,17nm,1.0s
M24K  Tolsona, Glenn    87.09  15  P       P       16 26 20.6 +0.1
      baz=210
GLB   Gilahina Butte    87.11  16  IAmb    IAmb    16 26 21.6
      comp=Z,46nm,1.8s
WAT6  Susitna Watana    87.15  14  P       P       16 26 20.6 -0.3
      baz=209,SNR=16
H17K  Granite Mounta    87.16   8  P       P       16 26 20.3 -0.4
      baz=198
WAT1  Susitna Watana    87.19  13  P       P       16 26 20.3 -0.6
      baz=208
MCARA McCarthy VSAT     87.27  16  P       P       16 26 21.6 +0.2
      baz=213
G16K  Koyuk River       87.30   7  P       P       16 26 21.2 -0.1
      baz=195
SNAA  Sanae             87.30 179 ⇓P       P       16 26 21.5 -0.2
      comp=Z,36nm,0.6s
SNAA                              ⇓pP      pP      16 28 37.0 -0.3
      comp=Z,110nm,1.0s
SNAA  Sanae             87.30 179  P       P       16 26 21.4 -0.2
      comp=Z,1.0nm,0.5s,baz=206,slow=9.3,SNR=14
SNAA                               pP      pP      16 28 37.2 -0.2
      comp=Z,5.0nm,1.0s,baz=188,slow=4.7,SNR=7.1
      comp=Z,1.0nm,0.5s
J20K  Nowinta River     87.31  11  IAmb    IAmb    16 26 22.4
      comp=Z,23nm,1.4s
J20K  Nowinta River     87.31  11  P       P       16 26 21.4 -0.1
      baz=203,SNR=12
LOGN  Logan Glacier     87.36  18  IAmb    IAmb    16 26 23.2
      comp=Z,17nm,1.0s
BARN  Barnard Glacie    87.37  17  IAmb    IAmb    16 26 23.4
      comp=Z,19nm,0.9s
P29M  Windy Craggy      87.37  20  P       P       16 26 22.9 +1.1
      baz=218,SNR=5.1
CHUM  Lake Minchumin    87.37  12  P       P       16 26 20.6 -1.1
      baz=205,SNR=5.8
TRF   Thorofare Moun    87.37  13  P       P       16 26 20.9 -1.0
      baz=207,SNR=23
CTG   Chitna Glacier    87.38  17  P       P       16 26 22.2 +0.2
      baz=215,SNR=8.5
CTGM  Chitina Glacie    87.38  17  IAmb    IAmb    16 26 23.3
      comp=Z,17nm,1.0s
GCSA  Galena City Sc    87.40   9  P       P       16 26 21.9 +0.1
      baz=200
VNA3  Neumayer Olymp    87.47 177 ⇓P       P       16 26 22.4 +0.1
      comp=Z,10nm,0.7s
VNA3                              ⇓pP      pP      16 28 38.4 +0.3
      comp=Z,5.1nm,0.8s
O28M  Mount Upton       87.55  18  IAmb    IAmb    16 26 24.3
      comp=Z,17nm,0.9s
O28M  Mount Upton       87.55  18  P       P       16 26 23.4 +0.4
      baz=216,SNR=9.4
H18K  Honhosa River     87.57   9  P       P       16 26 21.9 -0.8
      baz=199
HARP  HAARP             87.59  15  P       P       16 26 22.4 -0.4
      baz=211
G17K  Kiwalik Mounta    87.60   8  P       P       16 26 22.7  0.0
      baz=197
O29M  Mount Kennedy     87.65  19  P       P       16 26 23.7 +0.5
      baz=217
DHY   Denali Highway    87.66  14  P       P       16 26 22.9 -0.4
      baz=209,SNR=7.4
PLBC  Pleasant Camp     87.67  20  P       P       16 26 24.0 +0.8
      baz=219
BPAW  Bear Paw Mtn.     87.82  12  P       P       16 26 22.5 -1.4
      baz=206
I20K  Naaghedeneel      87.83  10  P       P       16 26 23.9 +0.1
      baz=203
XLT   XiLinHaoTe        87.84 319 eP       P       16 26 24.4 -0.1
XLT                                pmax    pmax
      comp=Z,9.0nm,1.1s
MCK   McKinley          87.90  13  IAmb    IAmb    16 26 25.2
      comp=Z,18nm,1.0s
MCK   McKinley          87.90  13  P       P       16 26 23.7 -0.6
      baz=208,SNR=8.0
VNA2  Neumayer--Watz    87.90 177 ⇓P       P       16 26 24.3  0.0
      comp=Z,4.9nm,0.7s,baz=182,slow=4.6
VNA2                              ⇓pP      pP      16 28 40.3 -0.1
      comp=Z,5.3nm,0.9s,baz=161,slow=2.5
T35M  Bob Quinn         87.99  24  P       P       16 26 26.2 +1.4
      baz=224
P30M  Million Dollar    88.00  20  P       P       16 26 25.8 +0.9
      baz=219
PAX   Paxson            88.01  15  P       P       16 26 24.1 -0.7
      baz=211,SNR=7.4
YUK8  Steele Glacier    88.09  18  P       P       16 26 25.9 +0.4
      baz=216,SNR=12
M26K  Nabesna, AK       88.13  16  IAmb    IAmb    16 26 26.7
      comp=Z,13nm,1.0s
M26K  Nabesna, AK       88.13  16  P       P       16 26 25.6 +0.3
      baz=213,SNR=11
VNA1  Neumayer--Stat    88.14 177 ⇓P       P       16 26 26.2 +0.9
      comp=Z,5.2nm,0.7s
VNA1                              ⇓x       x       16 28 42.2
      comp=Z,9.7nm,1.0s
H19K  Roundabout Mou    88.20   9  IAmb    IAmb    16 26 26.7
      comp=Z,16nm,1.0s
H19K  Roundabout Mou    88.20   9  P       P       16 26 25.5  0.0
      baz=201,SNR=12
YUK6  Outpost Mounta    88.22  19  P       P       16 26 26.2 +0.1
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       baz=217
G18K   Tagagawik          88.23   8  P         P         16 26 25.3 -0.4
       baz=199,SNR=5.7
TXAR   Lajitas Array      88.28  58  P         P         16 26 27.6 +0.7
       comp=Z,1.9nm,0.8s,baz=221,slow=5.0,SNR=15
TXAR                                 pP        pP        16 28 43.3 +0.7
       comp=Z,3.4nm,1.1s,baz=247,slow=4.2,SNR=9.0
       comp=Z,1.9nm,0.8s
YUK3   Moose Creek        88.29  17  P         P         16 26 26.6 +0.3
       baz=216,SNR=25
S34M   Telegraph Cree     88.33  23  P         P         16 26 27.7 +1.4
       baz=224,SNR=5.4
HYT    Haines Junctio     88.39  19  P         P         16 26 27.3 +0.7
       baz=218,SNR=5.6
M27K   Edge Creek, AK     88.39  16  IAmb      IAmb      16 26 29.0
       comp=Z,31nm,1.2s
M27K   Edge Creek, AK     88.39  16  P         P         16 26 27.3 +0.6
       baz=214,SNR=20
H20K   Anotleneega Mo     88.41  10  P         P         16 26 26.7 +0.2
       baz=202,SNR=16
YUK4   Talbot Arm         88.46  18  P         P         16 26 27.9 +0.8
       baz=217
L26K   Log Cabin Wild     88.57  15  IAmb      IAmb      16 26 28.7
       comp=Z,19nm,1.4s
L26K   Log Cabin Wild     88.57  15  P         P         16 26 27.8 +0.4
       baz=213
NEA2   Nenana             88.64  12  P         P         16 26 26.3 -1.3
       baz=208,SNR=6.6
P32M   Atlin              88.65  21  P         P         16 26 28.7 +0.9
       baz=222
K24K   Donnelly Dome      88.65  14  P         P         16 26 27.8  0.0
       baz=211,SNR=8.2
Q32M   Nakina River       88.68  22  P         P         16 26 28.4 +0.2
       baz=223
G19K   Purcell Mounta     88.69   9  IAmb      IAmb      16 26 28.8
       comp=Z,15nm,1.1s
G19K   Purcell Mounta     88.69   9  P         P         16 26 27.8  0.0
       baz=200,SNR=10
BVCY   Beaver Creek       88.70  17  P         P         16 26 28.4 +0.4
       baz=215,SNR=5.6
MLY    Manley             88.71  12  IAmb      IAmb      16 26 27.9
       comp=Z,15nm,1.2s
MLY    Manley             88.71  12  P         P         16 26 27.0 -1.0
       baz=206,SNR=15
WRH    Wood River Hil     88.73  13  IAmb      IAmb      16 26 28.4
       comp=Z,24nm,1.0s
F18K   Selawik            88.78   8  P         P         16 26 27.4 -0.8
       baz=198
O30N   Mendenhall         88.78  20  P         P         16 26 29.1 +0.7
       baz=219,SNR=5.1
RIDG   Independent Ri     88.81  14  IAmb      IAmb      16 26 29.4
       comp=Z,14nm,1.0s
RIDG   Independent Ri     88.81  14  P         P         16 26 28.1 -0.4
       baz=212,SNR=9.0
H21K   Melozitna Rive     88.90  11  P         P         16 26 28.8 -0.1
       baz=204,SNR=11
HDA    Harding Lake       88.92  13  IAmb      IAmb      16 26 28.8
       comp=Z,7.5nm,0.6s
HDA    Harding Lake       88.92  13  P         P         16 26 28.3 -0.6
       baz=210,SNR=8.7
DOT    Dot Lake           88.92  15  IAmb      IAmb      16 26 29.9
       comp=Z,12nm,1.0s
CCB    Clear Creek Bu     88.95  13  IAmb      IAmb      16 26 29.1
       comp=Z,19nm,1.1s
L27K   Beaver Creek,      88.98  16  P         P         16 26 29.3  0.0
       baz=214,SNR=8.6
E17K   Hotham Inlet       88.99   7  P         P         16 26 29.0 -0.1
       baz=196
BCAR   Beaver Creek A     89.00  16  P         P         16 26 29.3 -0.1
N30M   Aishikik Lake      89.01  19  P         P         16 26 29.7 +0.2
       baz=218
I23K   Minto, Yukon-K     89.08  12  P         P         16 26 28.7 -0.9
       baz=207,SNR=7.4
WHY    Whitehorse         89.08  20  IAmb      IAmb      16 26 31.5
       comp=Z,8.5nm,0.8s
WHY    Whitehorse         89.08  20  P         P         16 26 30.4 +0.5
       baz=220
COLA   College            89.14  13  P         P         16 26 29.8 -0.1
HHC    Hu-ho-hao-te       89.16 315⇓iP         P         16 26 31.4 +0.7
HHC                                  pmax      pmax
       comp=Z,20nm,1.0s
SCRK   Sand Creek         89.22  15  P         P         16 26 30.2 -0.2
       baz=212,SNR=8.6
IL31                      89.25  13  IAmb      IAmb      16 26 30.7
       comp=Z,23nm,1.4s
ILAR   Eielson Array      89.25  13  P         P         16 26 29.5 -0.9
       comp=Z,5.8nm,1.0s,baz=231,slow=5.6,SNR=32
       comp=Z,5.8nm,1.0s
H22K   Ishtalitna Cre     89.37  11  P         P         16 26 30.8 -0.2
       baz=206,SNR=18
M29M   Somme Creek        89.39  18  IAmb      IAmb      16 26 32.7
       comp=Z,9.3nm,0.9s
M29M   Somme Creek        89.39  18  P         P         16 26 31.8 +0.5
       baz=217,SNR=6.6
P33M   Teslin, Yukon      89.42  21  P         P         16 26 32.1 +0.7
       baz=222
N31M   Braeburn, Yuko     89.43  19  P         P         16 26 32.0 +0.6
       baz=220
CMAR   Chiang Mai Arr     89.43 290  P         P         16 26 34.0 +1.6
       comp=Z,18nm,0.9s,baz=129,slow=3.1,SNR=117
CMAR                                 PP        PP        16 30 15.8 -0.4
       comp=Z,1.4nm,0.9s,baz=114,slow=7.1,SNR=4.8
       comp=Z,18nm,0.9s
J25K   Salcha River,      89.44  14  IAmb      IAmb      16 26 32.1
       comp=Z,20nm,1.4s
J25K   Salcha River,      89.44  14  P         P         16 26 31.1 -0.3
       baz=211,SNR=9.3
E18K   Tukpahlearik C     89.45   7  P         P         16 26 31.3  0.0
       baz=197
D17K   Noatak River       89.45   6  P         P         16 26 31.2 -0.1
       baz=195
R33M   Jennings River     89.46  22  P         P         16 26 32.1 +0.5
       baz=224
PLCA   Paso Flores        89.48 134  P         P         16 26 33.6 +1.2
       comp=Z,5.2nm,1.0s,baz=207,slow=5.8,SNR=6.4
       comp=Z,5.2nm,1.0s
CHTO   Chiang Mai         89.56 290  P         P         16 26 34.5 +1.5
G21K   Allakaket          89.58  10  P         P         16 26 31.8 -0.1
       baz=204
H23K   Yukon River        89.64  12  P         P         16 26 32.0 -0.3
       baz=207
BILL   Bilibino           89.67 355            P         16 26 32.2 -0.1
BILL                                 IAmb      IAmb      16 26 33.4
       comp=Z,13nm,1.0s
K27K   Chicken            89.72  15  P         P         16 26 32.9 +0.2
       baz=214
F20K   Avaraart Lake      89.73   9  IAmb      IAmb      16 26 33.6
       comp=Z,12nm,1.1s
F20K   Avaraart Lake      89.73   9  P         P         16 26 32.6 +0.1
       baz=202,SNR=13
J26L   Joseph Creek       89.76  15  P         P         16 26 33.4 +0.5
       baz=213,SNR=29
E19K   Redstone River     89.90   8  P         P         16 26 33.4 -0.1
       baz=200
H24K   Noodor Dome        89.98  12  P         P         16 26 35.3 +1.5
       baz=209
L29M   L29M               90.01  17  IAmb      IAmb      16 26 35.7
       comp=Z,18nm,1.1s
L29M   L29M               90.01  17  P         P         16 26 34.7 +0.7
       baz=218,SNR=8.3
N32M   Quiet Lake         90.03  20  P         P         16 26 34.4 +0.2
       baz=222
PDAR   Pinedale Array     90.17  44  P         P         16 26 35.4 -0.2
       comp=Z,0.3nm,0.7s,baz=258,slow=5.1,SNR=2.8
PDAR                                 pP        pP        16 28 52.8 +1.1
       comp=Z,0.5nm,0.8s,baz=287,slow=5.2,SNR=3.5
PZH    PanZhiHua          90.18 298  P         P         16 26 33.4 -2.4
PZH                                  pmax      pmax
       comp=Z,20nm,1.0s
PRP    Porcupine Dome     90.19  13  P         P         16 26 35.5 +0.6
       baz=211,SNR=6.8
C17K   DeLong Mountai     90.20   6  P         P         16 26 34.7 -0.1
       baz=195
F21K   Alatna River       90.23  10  P         P         16 26 34.7 -0.2
       baz=204,SNR=6.9
G22K   Bettles            90.28  11  P         P         16 26 35.2  0.0
       baz=205
G23K   Bananza Creek      90.35  11  P         P         16 26 35.9 +0.4
       baz=207
M31M   Drury Creek, Y     90.40  19  P         P         16 26 36.1 +0.2
       baz=221
DAWY   Dawson             90.44  16  IAmb      IAmb      16 26 37.2
       comp=Z,13nm,1.2s
DAWY   Dawson             90.44  16  P         P         16 26 36.3 +0.3
       baz=216,SNR=9.5
I26K   Coal Creek Min     90.53  14  IAmb      IAmb      16 26 38.3
       comp=Z,17nm,1.4s
I26K   Coal Creek Min     90.53  14  P         P         16 26 36.4  0.0
       baz=213,SNR=8.9
C18K   Utukok River       90.56   6  IAmb      IAmb      16 26 37.2
       comp=Z,9.7nm,1.1s
C18K   Utukok River       90.56   6  P         P         16 26 36.5  0.0
       baz=196
F22K   John River         90.70  10  P         P         16 26 37.7 +0.6
       baz=205
K29M   Barlow Dome        90.76  17  IAmb      IAmb      16 26 39.1
       comp=Z,9.1nm,1.1s
K29M   Barlow Dome        90.76  17  P         P         16 26 38.0 +0.4
       baz=218,SNR=11
D19K   Kuna River         90.77   8  P         P         16 26 37.3 -0.2
       baz=199
H25L   Birch Creek        90.77  13  P         P         16 26 37.9 +0.5
       baz=211
COLD   Coldfoot           90.78  11  P         P         16 26 37.8 +0.3
       baz=207
E20K   Nigu River         90.80   8  P         P         16 26 37.6  0.0
       baz=201
G24K   Hadweenzic Riv     90.81  12  P         P         16 26 38.1 +0.4
       baz=209
I27K   Kandik River       91.14  15  P         P         16 26 38.9 -0.3
       baz=214
G25K   Bearman Lake       91.14  12  P         P         16 26 39.9 +0.8
       baz=210
D20K   Etivluk River      91.17   8  P         P         16 26 39.3  0.0
       baz=201
C19K   Lookout Ridge      91.18   7  IAmb      IAmb      16 26 40.5
       comp=Z,18nm,1.1s
C19K   Lookout Ridge      91.18   7  P         P         16 26 39.5 +0.2
       baz=198
B18K   Kokolik River      91.19   6  P         P         16 26 39.6 +0.3
       baz=196
TOAD   Toad River Com     91.22  25  P         P         16 26 39.9 +0.1
       baz=229
E21K   Killik River       91.28   9  IAmb      IAmb      16 26 40.5
       comp=Z,14nm,1.4s
E21K   Killik River       91.28   9  P         P         16 26 39.5 -0.3
       baz=203
E22K   Anaktuvuk Pass     91.33  10  IAmb      IAmb      16 26 41.1
       comp=Z,14nm,1.2s
E22K   Anaktuvuk Pass     91.33  10  P         P         16 26 40.0 -0.1
       baz=205
I28M   Miner Creek        91.42  15  P         P         16 26 40.4 -0.2
       baz=216
F24K   Squaw Lake         91.45  11  P         P         16 26 40.8 +0.2
       baz=209
E23K   Chandalar          91.62  11  P         P         16 26 41.7 +0.3
       baz=207
J30M   Hart River         91.66  17  P         P         16 26 41.8 +0.1
       baz=219
H27K   Steamboat Moun     91.68  14  P         P         16 26 42.1 +0.4
       baz=214
MMPY   Sheldon Lake,      91.69  20  IAmb      IAmb      16 28 14.2
       comp=Z,13nm,1.8s
MMPY   Sheldon Lake,      91.69  20  P         P         16 26 42.1 +0.2
       baz=224
I29M   Ogilvie Camp,      91.75  16  P         P         16 26 42.4 +0.4
       baz=217
G26K   Porcupine Rive     91.78  13  IAmb      IAmb      16 26 44.4
       comp=Z,12nm,1.3s
G26K   Porcupine Rive     91.78  13  P         P         16 26 42.5 +0.4
       baz=212
C21K   Knifeblade Rid     91.82   8  P         P         16 26 42.8 +0.6
       baz=202
E24K   Your Creek         91.84  11  P         P         16 26 42.8 +0.4
       baz=208
D22K   Ayikyak River      91.87   9  P         P         16 26 42.8 +0.3
       baz=204
F25K   Christian Rive     91.95  12  P         P         16 26 43.2 +0.3
       baz=211
A19K   Wainwright         92.08   6  P         P         16 26 43.5 +0.1
       baz=197
G27K   Doyon Strip        92.13  14  P         P         16 26 43.8  0.0
       baz=214
I30M   Mount Dempster     92.15  17  P         P         16 26 43.9 -0.1
       baz=219
TOLK   Toolik Lake Re     92.15  10  P         P         16 26 43.8  0.0
       baz=207
D23K   Nanushuk River     92.26  10  IAmb      IAmb      16 26 45.7
       comp=Z,9.6nm,1.2s
D23K   Nanushuk River     92.26  10  P         P         16 26 44.6 +0.4
       baz=206
B21K   Ikpikpuk River     92.28   8  P         P         16 26 44.5 +0.2
       baz=203
B20K   Meade River        92.31   7  P         P         16 26 44.7 +0.3
       baz=200
F26K   Sheenjek River     92.34  13  P         P         16 26 45.0 +0.3
       baz=212
E25K   Arctic Village     92.42  12  P         P         16 26 45.1 +0.1
       baz=211
H29M   Whitestone         92.42  15  P         P         16 26 44.9 -0.2
       baz=217
YAK    Yakutsk            92.42 338  P         P         16 26 44.2 -0.9
YAK    Yakutsk            92.42 338  P         P         16 26 44.3 -0.7
       comp=Z,20nm,0.8s,baz=96,slow=2.9,SNR=12
       comp=Z,20nm,0.8s
LZH    Lanzhou            92.43 308 eP         P         16 26 47.4 +1.4
LZH                                  pP        pwP       16 29 11.3 +4.3
LZH                                  sP        sP        16 30 14.3  +10
LZH                                  pmax      pmax
       comp=Z,22nm,1.5s
EPYK   Eagle Plains       92.95  16  IAmb      IAmb      16 26 48.2
       comp=Z,6.0nm,0.9s
EPYK   Eagle Plains       92.95  16  P         P         16 26 47.1 -0.4
       baz=219
C23K   Itkillik River     93.05  10  P         P         16 26 48.0 +0.2
       baz=206
G29M   Pine Creek         93.06  15  P         P         16 26 47.8 -0.2
       baz=218
B22K   Teshekpuk Lake     93.11   8  P         P         16 26 48.1 +0.1
       baz=204
H31M   Peel River         93.14  17  P         P         16 26 48.6 +0.2
       baz=221
F28M   Old Crow           93.19  14  P         P         16 26 48.4 -0.1
       baz=216
C24K   Franklin Bluff     93.26  10  P         P         16 26 48.4 -0.4
       baz=208
E27K   Coleen River       93.28  13  P         P         16 26 49.3 +0.3
       baz=214
G30M   tAoh Zraii Nji     93.56  16  IAmb      IAmb      16 26 50.9
       comp=Z,7.7nm,1.0s
G30M   tAoh Zraii Nji     93.56  16  P         P         16 26 50.1 -0.2
       baz=219
G31M   Satah River        94.01  16  IAmb      IAmb      16 26 52.9
       comp=Z,10.0nm,1.1s
G31M   Satah River        94.01  16  P         P         16 26 51.8 -0.3
       baz=221
C27K   Jago River         94.06  12  P         P         16 26 52.1 -0.3
       baz=213
E28M   Babbage River      94.06  14  IAmb      IAmb      16 26 53.5
       comp=Z,7.5nm,1.1s
E28M   Babbage River      94.06  14  P         P         16 26 52.4 -0.1
       baz=216
F30M   Barrier River      94.15  15  P         P         16 26 53.5 +0.7
       baz=220
E29M   Blow River         94.26  14  P         P         16 26 52.8 -0.6
       baz=218
F31M   Tsiigehtchic       94.53  16  P         P         16 26 54.3 -0.3
       baz=222
D28M   Stokes Point       94.82  13  P         P         16 26 56.3 +0.5
       baz=217
SONM   Songino Array      95.66 319  P         P         16 26 59.4 -0.9
       comp=Z,0.7nm,0.5s,baz=125,slow=3.0,SNR=6.6
       comp=Z,0.7nm,0.5s
GTA    Gaotai             96.67 310 eP         P         16 27 05.9 +0.8
GTA                                  pP        pwP       16 29 26.0 -0.4
GTA                                  pmax      pmax
       comp=Z,5.0nm,1.4s
A36M   Sachs Harbour      99.84  15  P         Pdif      16 27 18.3 +0.1
       baz=230
WMQ    Urumqi            106.66 311  Pdif      Pdif      16 27 49.9 +0.6
WMQ                                  LR        LR
       comp=Z,230nm,23.1s
MKAR   Makanchi Array    110.98 313  PKiKP     PKiKP     16 32 02.4 -1.2
       comp=Z,0.7nm,0.4s,baz=89,slow=1.5,SNR=18
MKAR                                 PKKPbc    PKKPbc    16 43 02.6 -0.9
       comp=Z,0.3nm,0.4s,baz=132,slow=2.1,SNR=5.5
KURBB  Kurchatov Arra    113.91 317  PKiKP     PKiKP     16 32 07.8 -1.1
       comp=Z,3.2nm,1.0s,baz=90,slow=1.9,SNR=13
KURBB                                PP        PP        16 33 10.8 -5.0
       comp=Z,1.4nm,0.8s,baz=97,slow=6.2,SNR=4.2
KSH    Kashi             114.49 305  PKP       PKPdf     16 32 07.3 -3.3
BVAR   Borovoye Array    119.00 320  PKP       PKPdf     16 32 18.0 -0.7
       comp=Z,4.0nm,0.3s,baz=88,slow=3.0,SNR=26
SPITS  Spitsbergen Ar    122.53 356  PKP       PKPdf     16 32 24.0 -0.8
       comp=Z,6.1nm,0.6s,baz=64,slow=3.4,SNR=13
ARCES  ARCESS Array B    129.46 349  PKhKP     PKPpre    16 32 27.0
       comp=Z,3.1nm,1.1s,baz=102,slow=0.8,SNR=6.2
ARCES                                PKP       PKPdf     16 32 37.6 -0.6
       comp=Z,3.6nm,0.6s,baz=44,slow=2.1,SNR=34
FINES  FINESS Array B    136.19 343  PKhKP     PKPpre    16 32 37.8
       comp=Z,0.8nm,0.5s,baz=27,slow=3.4,SNR=7.6
FINES                                PKP       PKPdf     16 32 50.5 -0.5
       comp=Z,1.4nm,0.4s,baz=49,slow=2.9,SNR=9.9
FINES                                SKP                 16 35 25.4
       comp=Z,1.7nm,0.5s,baz=37,slow=3.5,SNR=10
NC303  NORSAR Array S    139.38 352            PKPpre    16 32 49.0
NB2    NORSAR Subarra    139.58 352  PKP       PKPpre    16 32 49.4
       comp=Z,1.7nm,0.6s,baz=8.8,slow=3.8
NOA    NORSAR Array B    139.58 352  PKhKP     PKPpre    16 32 48.7
       comp=Z,0.4nm,0.4s,baz=50,slow=1.7,SNR=8.5
HFS    Hagfors           140.10 350  PKhKP     PKPpre    16 32 50.6
       comp=Z,3.1nm,0.3s,baz=57,slow=4.4,SNR=57
HFS                                  SKP                 16 35 34.1
       comp=Z,2.9nm,0.9s,baz=90,slow=2.2,SNR=3.8
MNK    Minsk             141.04 335 i PKP      PKPdf     16 32 60.0 -0.1
       comp=E,21nm,0.9s
MNK                                 i PKP      PKPdf     16 32 60.0 -0.1
       comp=N,9.0nm,0.8s
MNK                                 i PKP      PKPdf     16 32 60.0 -0.1
       comp=Z,12nm,0.9s,baz=42
MNK                                 i pPKP     pPKPdf    16 35 26.3  0.0
MNK                                 i PP       PP        16 36 10.9 +0.8
MNK                                 i SKS      SKSdf     16 39 10.3  0.0
MNK                                 i PPP      PPP       16 39 24.4
MNK                                 i SS       SS        16 53 51.1 +2.8
MNK                                 i SSS      SSS       16 59 19.8
NACGM  Naroch            141.16 336⇑iPKP       PKPpre    16 32 55.9
       comp=Z,9.0nm,0.9s,baz=40
STRU   Stroemstad        141.53 352 i P        PKPpre    16 32 56.1
PABE   Paberze           141.68 339            PKPpre    16 32 56.8
HOMB   Homborsund        142.60 353 i P        PKPdf     16 32 59.9 -2.8
BORU   Boraas            142.63 350 i P        PKPpre    16 32 59.1
ONAU   Onsala            142.99 350 i P        PKPpre    16 33 00.3
SUW    Suwalki           143.16 338 ePKP       PKPab     16 33 01.9 -0.2
AKASG  Malin Array Be    143.16 330  PKP       PKPab     16 33 01.4 -0.8
       comp=Z,30nm,0.5s,baz=44,slow=4.4,SNR=148
AKASG                                SKP                 16 35 40.1
       comp=Z,0.9nm,0.5s,baz=43,slow=3.6,SNR=4.1
KIEV   Kiev              143.17 330 ⇑P         PKPab     16 33 01.5 -0.8
FABU   Falkenberg        143.24 349 i P        PKPab     16 33 01.3 -1.0
BLEU   Blekinge          143.28 346 i P        PKPab     16 33 01.2 -1.3
DEL    Delary            143.53 348 i P        PKPbc     16 33 02.7 -0.8
MI28   Mi28,Pidlybu      143.72 331  PKP       PKPbc     16 33 03.5 -0.7
BJUU   Bjuv              144.06 348 i P        PKPbc     16 33 04.3 -0.8
RNPP9  Sopachiv          144.14 333  PKP       PKPbc     16 33 04.6 -0.9
LUBAR  Lubar, Ukraine    144.38 330  PKP       PKPdf     16 33 04.8 -1.3
LUNU   Lund              144.40 348 i P        PKPdf     16 33 05.4 -0.5
BAL3X  Bal3x, Balta      144.78 326  PKP       PKPdf     16 33 06.8  0.0
BZK    Bozkurt           145.39 314 ⇑P         PKPbc     16 33 09.9 +0.4
NDNU   Novodnistrovsk    145.48 329  PKP       PKPdf     16 33 08.5 +0.5
HORU   Horodok           145.50 330  PKP       PKPdf     16 33 08.6 +0.6
IDGL   Inch Island, C    145.62   9  PKPdf     PKPdf     16 33 07.6 -0.4
EKA    Eskdalemuir Ar    145.81   4  PKPbc     PKPbc     16 33 09.7 -0.6
       comp=Z,18nm,0.9s,baz=327,slow=2.3,SNR=28
MILM   Milestii Mici     145.84 325⇓iPKP       PKPdf     16 33 09.0 +0.3
       comp=Z,160nm,1.4s
MILM   Milestii Mici     145.84 325 ⇓P         PKPdf     16 33 09.4 +0.8
KMPD   K-Podol'skiy      145.94 329  PKP       PKPdf     16 33 09.6 +0.8
VASR   Vaslui            146.56 326 ⇓P         PKPbc     16 33 12.8 +0.1
BSEG   Bad Segeberg      146.58 350 ePKPbc     PKPbc     16 33 12.5 +0.1
       baz=19,slow=2.3
BRTR   Keskin Array B    146.58 311  PKPbc     PKPbc     16 33 12.3 -0.9
       comp=Z,9.0nm,0.7s,baz=157,slow=3.1,SNR=41
BRTR                                 SKP                 16 35 41.0
       comp=Z,2.6nm,1.0s,baz=116,slow=3.4,SNR=6.2
BR106  Keskin Array S    146.59 311  PKP       PKPdf     16 33 11.1 +0.7
KIRS   Kirsehir-Merke    146.62 310 ⇓P         PKPbc     16 33 13.0 -0.2
ILTH   Belurgan, Co L    146.79   8  PKPdf     PKPdf     16 33 10.5 +0.5
TLCR                     146.91 323 ⇓P         PKPbc     16 33 13.5 -0.1
IGLA   Glengowla, Co     146.91  11  PKPdf     PKPbc     16 33 11.9 -1.4
VLDR   Vladesti          146.91 324 ⇑P         PKPdf     16 33 08.2 -2.3
SCTR   Scanteiesti       147.06 324 ⇑P         PKPbc     16 33 13.5 -0.5
ANTO   Ankara            147.12 312 ⇑P         PKPbc     16 33 14.9 +0.5
BURAR  Bucovina Array    147.20 329 ⇓P         PKPbc     16 33 14.8 +0.4
TESR   Tescani           147.24 326 ⇓P         PKPbc     16 33 14.5  0.0
RUE    Ruedersdorf       147.27 345 ePKPbc     PKPbc     16 33 14.4 +0.1
       baz=19,slow=2.3
CFR    Carcaliu          147.29 323 ⇓P         PKPbc     16 33 14.8 +0.2
MMAI   Mount Meron Ar    147.30 298  PKPbc     PKPbc     16 33 15.1 -0.1
       comp=Z,11nm,0.5s,baz=69,slow=4.6,SNR=30
GORT1  Trebel            147.31 348 ePKPdf     PKPdf     16 33 10.3 -0.5
       baz=14,slow=1.8
GORT1                               ePKPbc     PKPbc     16 33 14.7 +0.4
       baz=19,slow=2.3
GORT1                               ePKPab     PKPab     16 33 18.1 -0.3
       baz=18,slow=4.3
TPGR   Topolog           147.33 323 ⇓P         PKPbc     16 33 15.0 +0.2
OJC    Ojcow             147.47 337 ePKPbc     PKPbc     16 33 14.9  0.0
OJC                                 ePKPab     PKPab     16 33 19.6 +0.2
ONER   Baraj Valea Uz    147.49 326 ⇓P         PKiKP     16 33 16.0 -0.6
KOLS   Kolonicke sedl    147.54 333 ePKP       PKPbc     16 33 15.8 +0.6
KOLS                                e                    16 33 19.5
STHS   Stebnicka Huta    147.57 335 ePKP       PKPbc     16 33 14.8 -0.4
STHS                                e                    16 33 19.8
VRI    Vrincioaia        147.62 325 ⇓P         PKPbc     16 33 15.3 -0.1
PLOR   Plostina          147.67 325 ⇓P         PKPbc     16 33 15.5 -0.1
HARR   Harsova           147.71 323 ⇑P         PKPdf     16 33 13.6 +1.8
MFTR   Murfatlar         147.73 322 ⇓P         PKPbc     16 33 15.8 +0.1
MANR   Mangalia          147.85 321 ⇓P         PKPbc     16 33 16.7 +0.6
TURR   Turia             147.87 326 ⇓P         PKiKP     16 33 16.9 -0.6
RETH   Rethem/Aller,     147.89 350 ePKPdf     PKPdf     16 33 11.0 -0.8
       baz=14,slow=1.8
RETH                                ePKPbc     PKPbc     16 33 16.1 +0.3
       baz=19,slow=2.3
RETH                                ePKPab     PKPab     16 33 20.5 -0.4
       baz=18,slow=4.3
NIE    Niedzica          147.94 336 ePKPbc     PKiKP     16 33 16.9 -0.6
FLTG   Flechtingen       147.95 348 ePKPdf     PKPdf     16 33 12.0  0.0
       baz=14,slow=1.8
FLTG                                ePKPbc     PKPbc     16 33 15.9 -0.1
       baz=19,slow=2.3
FLTG                                ePKPab     PKPab     16 33 20.7 -0.4
       baz=18,slow=4.3
FLTG                                epPKPbc    pPKPab    16 35 42.9 +2.3
BMR    Baia Mare         147.96 331 ⇑P         PKPdf     16 33 13.5 +1.3
OZUR                     147.96 327 ⇑P         PKiKP     16 33 17.0 -0.6
ARCR   ARCALIA           147.99 329 ⇑P         PKiKP     16 33 17.2 -0.4
NRDL   Niedersach Rie    148.00 349 ePKPdf     PKPdf     16 33 11.8 -0.1
       baz=14,slow=1.8
NRDL                                ePKPbc     PKPbc     16 33 16.3 +0.2
       baz=19,slow=2.3
NRDL                                ePKPab     PKPab     16 33 21.3  0.0
       baz=18,slow=4.3
BOSR   Bodos             148.04 327 ⇑P         PKiKP     16 33 17.2 -0.6
KSP    Ksiaz             148.08 341 ePKPbc     PKPbc     16 33 16.9 +0.5
KSP                                 ePKPab     PKPab     16 33 22.4 +0.6
ISR    Istrita           148.21 325 ⇑P         PKiKP     16 33 17.8 -0.3
ASSE   Asse, Remlinge    148.25 349 ePKPdf     PKPdf     16 33 12.5 +0.1
       baz=14,slow=1.8
ASSE                                ePKPbc     PKPbc     16 33 17.0 +0.3
       baz=19,slow=2.3
ASSE                                epPKPbc    pPKPab    16 35 44.8 +3.0
DOPR   Dopca             148.25 327 ⇑P         PKiKP     16 33 18.0 -0.2
MLR    Muntele Rosu      148.28 326 ⇑P         PKPbc     16 33 17.4 +0.1
IWEX   Carrickbyrne,     148.35   9  PKPdf     PKPbc     16 33 15.4 -1.6
OSTC   Ostas             148.36 341⇑ePKP       PKiKP     16 33 18.2 -0.1
STEB   Steborice         148.41 339⇑ePKP       PKPbc     16 33 17.5 +0.2
STEB                                ePKPAB     PKPab     16 33 23.7 +0.5
UPC    Upice             148.46 341⇑ePKP       PKiKP     16 33 18.0 -0.5
LANS   Liptovska Anna    148.47 336 ePKP       PKiKP     16 33 18.8 +0.2
LANS                                e                    16 33 24.7
DPC    Dobruska-Polom    148.51 341⇑ePKP       PKiKP     16 33 18.3 -0.3
DPC                                 ePKPAB     PKPab     16 33 24.5 +0.8
CLL    Collm             148.53 345 ePKPbc     PKPbc     16 33 17.6 +0.1
       baz=19,slow=2.3
CLL                                 ePKPab     PKPab     16 33 23.3 -0.3
       baz=18,slow=4.3
CLL                                 epPKPbc    pPKPab    16 35 45.5 +2.6
CLL    Collm             148.53 345 ePKPdf     PKPdf     16 33 13.0  0.0
CLL                                ⇓iPKPbc     PKPbc     16 33 17.6 +0.1
       comp=Z,46nm,1.1s
CLL                                 i PKiKP    PKiKP     16 33 20.0 +1.5
       comp=Z,13nm,1.0s
CLL                                ⇑iPKPab     PKPab     16 33 23.5 -0.1
       comp=Z,24nm,1.2s
CLL                                 ex         x         16 33 32.0
CLL                                 epPKPab    pPKPdf    16 35 40.0 +0.5
CLL                                 i SKPdf    SKPdf     16 35 45.3 -1.9
       comp=Z,6.0nm,0.8s
CLL                                 i x        x         16 35 50.1
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	comp=Z,14nm,1.4s						
CLL				eSKPbc	**SKPbc**	**16 35 55.0**	**0.0**
CLL				i x	x	16 36 15.0	
	comp=Z,8.0nm,1.0s						
CLL				ePP	**PP**	**16 36 52.0**	**-1.6**
IBBN	**Ibbenburen**	**148.54**	**352**	ePKPdf	**PKPdf**	**16 33 12.8**	**-0.1**
	baz=14,slow=1.8						
IBBN				ePKPbc	**PKPbc**	**16 33 17.6**	**+0.2**
	baz=19,slow=2.3						
CLZ	**Clausthal**	**148.58**	**349**	ePKPdf	**PKPdf**	**16 33 13.6**	**+0.5**
	baz=14,slow=1.8						
CLZ				ePKPbc	**PKPbc**	**16 33 18.0**	**+0.4**
	baz=19,slow=2.3						
CLZ				epPKPbc	**pPKPab**	**16 35 45.6**	**+2.4**
MESR	**Meseseni**	**148.60**	**331**	⇓P	**PKiKP**	**16 33 18.7**	**-0.1**
CJR	**Cluj-Napoca**	**148.61**	**329**	⇓P	**PKPbc**	**16 33 17.9**	**-0.1**
KECS	**Kecovo**	**148.62**	**335**	ePKP	**PKiKP**	**16 33 18.4**	**-0.4**
KECS				e		16 33 24.6	
MORC	**Moravsky Berou**	**148.62**	**339**	ePKP	**PKPbc**	**16 33 18.2**	**+0.3**
MORC				e		16 33 24.5	
MORC	**Moravsky Berou**	**148.62**	**339**	⇑P	**PKPbc**	**16 33 18.0**	**+0.2**
BRG	**Berggiesshubel**	**148.71**	**344**	ePKPbc	**PKPbc**	**16 33 18.3**	**+0.3**
	baz=19,slow=2.3						
BRG				ePKPab	**PKPab**	**16 33 24.2**	**-0.1**
	baz=18,slow=4.3						
BRG	**Berggiesshubel**	**148.71**	**344**	⇓ePKPf		16 33 14.1	
BRG				Amp		16 33 15.2	
	comp=Z,6.9nm,1.3s						
BRG				⇑PKP	**PKPbc**	**16 33 18.3**	**+0.3**
BRG				Amp		16 33 19.6	
	comp=Z,39nm,1.2s						
BRG				PKPab	**PKPab**	**16 33 24.3**	**0.0**
BRG				Amp		16 33 25.7	
	comp=Z,19nm,1.1s						
VOIR		**148.79**	**326**	⇑P	**PKPbc**	**16 33 18.7**	**+0.3**
PVCC	**Panska Ves**	**148.85**	**343**	⇑ePKP	**PKiKP**	**16 33 19.1**	**-0.1**
MAUC	**Maruska**	**148.88**	**338**	⇑ePKP	**PKiKP**	**16 33 19.2**	**-0.2**
NEUB	**Neuenburg**	**148.90**	**347**	ePKPbc	**PKPbc**	**16 33 18.7**	**+0.3**
	baz=19,slow=2.3						
NEUB				ePKPab	**PKPab**	**16 33 25.1**	**-0.1**
	baz=18,slow=4.3						
PRD	**Provadia**	**148.93**	**321**	eP	**PKiKP**	**16 33 19.2**	**-0.4**
GTTG	**Gottingen**	**148.94**	**349**	ePKPbc	**PKPbc**	**16 33 18.8**	**+0.3**
	baz=19,slow=2.3						
GTTG				ePKPab	**PKPab**	**16 33 25.0**	**-0.3**
	baz=18,slow=4.3						
NEF	**NEVSHA**	**148.94**	**321**	eP	**PKPbc**	**16 33 19.2**	**+0.4**
DRGR		**148.97**	**330**	⇑P	**PKPbc**	**16 33 19.2**	**+0.4**
ARR	**Arges**	**149.05**	**327**	⇑P	**PKiKP**	**16 33 20.2**	**+0.3**
VYHS	**Vyhne**	**149.25**	**336**	ePKP	**PKiKP**	**16 33 19.8**	**-0.4**
VYHS				e		16 33 27.0	
PSZ	**Piszkesteto**	**149.31**	**335**	⇓P	**PKPbc**	**16 33 19.6**	**-0.1**
VRAC	**Vranov**	**149.34**	**340**	ePKP	**PKPbc**	**16 33 19.7**	**+0.1**
VRAC				e		16 33 27.4	
VRAC	**Vranov**	**149.34**	**340**	⇓P	**PKPbc**	**16 33 19.2**	**-0.3**
GOPC	**GO Pecny, Ondr**	**149.35**	**342**	⇑ePKP	**PKPbc**	**16 33 19.9**	**+0.3**
PRU	**Pruhonice**	**149.35**	**343**	⇑ePKP	**PKPbc**	**16 33 19.7**	**+0.2**
JAVC	**Velka Javorina**	**149.36**	**338**	ePKP	**PKiKP**	**16 33 21.1**	**+0.7**
HUMR	**Humele**	**149.43**	**325**	⇓P	**PKPbc**	**16 33 20.1**	**+0.2**
BUG	**Bochum--Univer**	**149.45**	**352**	ePKPbc	**PKPbc**	**16 33 19.6**	**0.0**
	baz=19,slow=2.3						
MOX	**Moxa**	**149.47**	**347**	ePKPdf	**PKPdf**	**16 33 14.6**	**+0.1**
	baz=14,slow=1.8						
MOX				ePKPbc	**PKPbc**	**16 33 20.0**	**+0.2**
	baz=19,slow=2.3						
MOX				ePKPab	**PKPab**	**16 33 27.1**	**-0.4**
	baz=18,slow=4.3						
MOX				epPKPbc	**pPKPab**	**16 35 47.4**	**+0.8**
TANN	**Tannenbergstha**	**149.49**	**345**	ePKPdf	**PKPdf**	**16 33 15.3**	**+0.7**
	baz=14,slow=1.8						
TANN				ePKPbc	**PKPbc**	**16 33 20.1**	**+0.2**
	baz=19,slow=2.3						
TANN				ePKPab	**PKPab**	**16 33 28.0**	**+0.2**
	baz=18,slow=4.3						
KASTN	**Kahler Asten**	**149.52**	**351**	ePKPdf	**PKPdf**	**16 33 15.1**	**+0.5**
	baz=14,slow=1.8						
KASTN				ePKPbc	**PKPbc**	**16 33 20.0**	**+0.1**
	baz=19,slow=2.3						
KASTN				ePKPab	**PKPab**	**16 33 27.6**	**-0.2**
	baz=18,slow=4.3						
KASTN				epPKPbc	**pPKPab**	**16 35 47.4**	**+0.6**
DEV	**Deva**	**149.55**	**329**	⇑P	**PKiKP**	**16 33 20.6**	**-0.2**
KRUC	**Moravsky**	**149.62**	**340**	ePKP	**PKPbc**	**16 33 20.3**	**+0.1**
KRUC				e		16 33 28.4	
UBBA	**Unterbreizbach**	**149.63**	**349**	ePKPbc	**PKPbc**	**16 33 20.2**	**+0.2**
	baz=19,slow=2.3						
UBBA				ePKPab	**PKPab**	**16 33 28.6**	**+0.5**
	baz=18,slow=4.3						
NKC	**Novy Kostel**	**149.66**	**345**	⇑ePKP	**PKiKP**	**16 33 20.9**	**-0.1**
TREC	**Trest**	**149.70**	**341**	⇑ePKP	**PKPbc**	**16 33 20.6**	**+0.2**
SIRR	**Siria**	**149.84**	**331**	⇑P	**PKPbc**	**16 33 21.1**	**+0.2**
MODS	**Modra-Piesok**	**149.91**	**338**	ePKP	**PKPbc**	**16 33 21.0**	**0.0**
MODS				e		16 33 29.4	
ZVC	**Zvikov**	**149.94**	**343**	⇑ePKP	**PKiKP**	**16 33 21.7**	**+0.2**
ZVC				ePKPAB	**PKPab**	**16 33 30.3**	**+0.7**
GZR	**Gura Zlata**	**149.96**	**328**	⇑P	**PKPbc**	**16 33 21.2**	**0.0**
MANZ	**Manzenberg**	**149.97**	**346**	ePKPbc	**PKPbc**	**16 33 21.3**	**+0.2**
	baz=19,slow=2.3						
MANZ				epPKPbc	**pPKPab**	**16 35 48.8**	**+0.2**
SRO	**Srobarova**	**150.01**	**336**	ePKP	**PKPbc**	**16 33 21.4**	**+0.3**
SRO				e		16 33 30.8	
SURR	**Surduc**	**150.01**	**330**	⇑P	**PKPbc**	**16 33 21.1**	**-0.1**
BAND	**Balkesir-Ban**	**150.06**	**316**	⇑P	**PKPbc**	**16 33 20.9**	**-0.6**
ROTZ	**Rotzenmuhle**	**150.16**	**345**	ePKPdf	**PKPdf**	**16 33 15.7**	**+0.1**
	baz=14,slow=1.8						
ROTZ				ePKPbc	**PKPbc**	**16 33 21.6**	**+0.1**
	baz=19,slow=2.3						
ROTZ				ePKPab	**PKPab**	**16 33 30.7**	**+0.2**
	baz=18,slow=4.3						
ROTZ				epPKPbc	**pPKPab**	**16 35 49.0**	**-0.3**
PVL	**Pavlikeni**	**150.24**	**323**	eP	**PKPbc**	**16 33 21.9**	**+0.1**
BEBN	**Eben Emael**	**150.26**	**354**	dPKiKP	**PKPbc**	**16 33 21.3**	**-0.3**
BEBN				dPKP	**PKPab**	**16 33 30.5**	**-0.3**
BZS	**Buzias**	**150.35**	**330**	⇑P	**PKPbc**	**16 33 21.9**	**-0.1**
UCC	**Uccle**	**150.37**	**356**	dPKiKP	**PKPbc**	**16 33 21.7**	**-0.1**
KHC	**Kasperske Hory**	**150.39**	**343**	⇑ePKP	**PKiKP**	**16 33 22.3**	**-0.2**
KHC				ePKPAB	**PKPab**	**16 33 32.1**	**+0.6**
MEM	**Membach**	**150.41**	**353**	dPKiKP	**PKPbc**	**16 33 21.9**	**-0.1**
BTNL	**Ternell**	**150.42**	**353**	dPKiKP	**PKPbc**	**16 33 21.9**	**-0.1**
GRF	**Grafenberg Arr**	**150.45**	**346**	ePKPbc	**PKPbc**	**16 33 22.1**	**-0.1**
	baz=19,slow=2.3						
GRF				ePKPab	**PKPab**	**16 33 32.0**	**+0.2**
	baz=18,slow=4.3						
GRF				epPKPbc	**pPKPab**	**16 35 50.4**	**-0.1**
TNS	**Taunus Mts**	**150.47**	**350**	ePKPdf	**PKPdf**	**16 33 15.8**	**-0.3**
	baz=14,slow=1.8						
TNS				ePKPbc	**PKPbc**	**16 33 22.2**	**0.0**
	baz=19,slow=2.3						
TNS				ePKPab	**PKPab**	**16 33 31.3**	**-0.5**
	baz=18,slow=4.3						
TNS				epPKPbc	**pPKPab**	**16 35 50.1**	**-0.6**
CKRC	**Cesky Krumlov**	**150.47**	**342**	⇑ePKP	**PKiKP**	**16 33 22.6**	**-0.1**
BSTI	**Sart Tilman**	**150.48**	**354**	dPKiKP	**PKPbc**	**16 33 22.2**	**0.0**
HERR	**Herculane**	**150.51**	**328**	⇑P	**PKPbc**	**16 33 22.6**	**+0.2**
GEC2	**GERESS Array S**	**150.62**	**343**	ePKPbc	**PKPbc**	**16 33 22.6**	**-0.1**
	baz=19,slow=2.3						
GEC2				epPKPbc	**pPKPab**	**16 35 49.6**	**-1.7**
GERES	**GERESS Array B**	**150.62**	**343**	PKPbc	**PKPbc**	**16 33 22.6**	**-0.1**
	comp=Z,11nm,0.8s,baz=27,slow=1.5,SNR=54						
GERES				PKPab	**PKPab**	**16 33 32.2**	**-0.3**
	comp=Z,3.8nm,0.9s,baz=62,slow=4.9,SNR=6.7						
GERES				SKP		16 35 48.5	
	comp=Z,0.9nm,0.8s,baz=32,slow=5.2,SNR=3.8						
BHOU	**Houvegnez**	**150.67**	**353**	dPKiKP	**PKiKP**	**16 33 23.1**	**+0.1**
BHOU				dPKP	**PKPab**	**16 33 32.5**	**-0.1**
BCLA	**Clavier**	**150.67**	**354**	dPKP	**PKPab**	**16 33 31.7**	**-0.9**
DIM	**Dimitrovgrad**	**150.68**	**321**	eP	**PKPbc**	**16 33 22.8**	**-0.1**
BGES	**Gesves**	**150.72**	**355**	dPKiKP	**PKPbc**	**16 33 22.4**	**-0.3**
BGES				dPKP	**PKPab**	**16 33 32.0**	**-0.8**
CONA	**Conrad Observa**	**150.78**	**339**	i PKiKP	**PKiKP**	**16 33 23.3**	**-0.2**
	comp=Z,26nm,1.0s,SNR=19						
CONA				i PKP	**PKPab**	**16 33 33.8**	**+0.5**
	comp=Z,18nm,1.1s						
CONA				i pPKP	**pPKPab**	**16 35 51.0**	**-1.1**
	comp=Z,11nm,1.6s						
RONA	**Rosalia, Austr**	**150.83**	**338**	i PKiKP	**PKPbc**	**16 33 23.3**	**+0.2**
	comp=Z,21nm,0.6s,SNR=16						
RONA				i PKP	**PKPab**	**16 33 33.8**	**+0.4**
	comp=Z,18nm,0.9s						
RONA				i pPKP	**pPKPab**	**16 35 51.2**	**-1.1**
	comp=Z,7.1nm,1.5s						
BMRD	**Maredsous**	**150.83**	**355**	dPKiKP	**PKPbc**	**16 33 22.8**	**-0.2**
BMRD				dPKP	**PKPab**	**16 33 32.5**	**-0.7**
MPEP	**Malo Peshtene**	**150.88**	**324**	eP	**PKiKP**	**16 33 23.5**	**-0.2**
MDVR	**Moldovita**	**150.93**	**329**	⇓P	**PKPbc**	**16 33 23.1**	**-0.3**
DOU	**Dourbes**	**151.05**	**355**	dPKP	**PKPbc**	**16 33 23.3**	**-0.1**
MORH	**Mrgy, Hungar**	**151.19**	**334**	⇑P	**PKPbc**	**16 33 23.6**	**-0.3**
WLF	**Walferdange**	**151.33**	**353**	dPKiKP	**PKiKP**	**16 33 24.6**	**+0.2**
WLF	**Walferdange**	**151.33**	**353**	ePKPbc	**PKiKP**	**16 33 24.6**	**+0.2**
	baz=19,slow=2.3						
WLF				ePKPab	**PKPab**	**16 33 35.9**	**+0.5**
	baz=18,slow=4.3						
MOA	**Molln**	**151.35**	**341**	i PKP	**PKPbc**	**16 33 23.8**	**-0.4**
	comp=Z,10nm,1.0s,SNR=5.2						
MOA				i PKP	**PKPab**	**16 33 35.5**	**-0.1**
	comp=Z,18nm,1.2s						
MOA				i pPKP	**pPKPab**	**16 35 52.7**	**-1.5**
	comp=Z,5.2nm,1.3s						
EZN	**Ezine**	**151.50**	**316**	⇑P	**PKPbc**	**16 33 24.6**	**-0.1**
VTS	**Vitosha**	**151.65**	**324**	eP	**PKPbc**	**16 33 25.3**	**0.0**
BIOA	**Bad Ischl, Aus**	**151.68**	**342**	i PKP	**PKPbc**	**16 33 24.4**	**-0.6**
	comp=Z,4.3nm,0.5s						
BIOA				i PKP	**PKPab**	**16 33 37.1**	**+0.1**
	comp=Z,11nm,0.7s						
STU	**Stuttgart**	**151.74**	**348**	ePKPbc	**PKPbc**	**16 33 25.1**	**0.0**
	baz=19,slow=2.3						
BOVS	**Bovan**	**151.76**	**327**	⇑P	**PKPbc**	**16 33 24.8**	**-0.5**
FUR	**Furstenfeldbru**	**151.87**	**345**	ePKPbc	**PKPbc**	**16 33 24.9**	**-0.5**
	baz=19,slow=2.3						
FUR				ePKPab	**PKPab**	**16 33 38.0**	**+0.2**
	baz=18,slow=4.3						
RJOB	**Jochberg**	**151.88**	**343**	ePKPbc	**PKPbc**	**16 33 25.1**	**-0.3**
	baz=19,slow=2.3						
RJOB				ePKPab	**PKPab**	**16 33 38.4**	**+0.5**
	baz=18,slow=4.3						
MMB	**Musomishta**	**152.06**	**322**	eP	**PKPbc**	**16 33 25.5**	**-0.6**
SOKA	**Soboth**	**152.15**	**339**	ePKP	**PKPbc**	**16 33 25.4**	**-0.7**
	comp=Z,15nm,1.2s,SNR=7.0						
SOKA				i PKP	**PKPab**	**16 33 38.7**	**-0.3**
	comp=Z,15nm,1.1s						
SOKA				i pPKiKP	**pPKiKP**	**16 35 53.1**	**+1.1**
	comp=Z,4.7nm,1.2s						
LESA	**Schwarzleotal**	**152.20**	**343**	i PKP	**PKPbc**	**16 33 25.6**	**-0.6**
	comp=Z,8.4nm,0.9s,SNR=5.4						
LESA				i PKP	**PKPab**	**16 33 40.2**	**+0.9**
	comp=Z,14nm,1.1s						
LESA				epPKP	**pPKPbc**	**16 35 54.5**	**+3.1**
	comp=Z,5.3nm,1.6s						
KKB	**Krupnik**	**152.22**	**323**	eP	**PKPbc**	**16 33 25.9**	**-0.5**
BFO	**Black Forest**	**152.32**	**349**	ePKPbc	**PKPbc**	**16 33 26.2**	**-0.2**
	baz=19,slow=2.3						
BFO				ePKPab	**PKPab**	**16 33 39.2**	**-0.4**
	baz=18,slow=4.3						
BFO				epPKPbc	**pPKPab**	**16 35 56.0**	**-2.2**
OBKA	**Obir**	**152.46**	**339**	i PKP	**PKPbc**	**16 33 25.7**	**-1.1**
	comp=Z,2.5nm,0.7s						
OBKA				i PKP	**PKPab**	**16 33 39.5**	**-0.9**
	comp=Z,9.6nm,1.1s						
OBKA				i pPKP	**pPKPbc**	**16 35 54.9**	**+2.9**
	comp=Z,3.3nm,1.0s						
WATA	**Walderalm**	**152.57**	**344**	i PKiKP	**PKPbc**	**16 33 26.6**	**-0.5**
	comp=Z,11nm,1.1s						
WATA				i PKP	**PKPab**	**16 33 40.7**	**-0.3**
	comp=Z,20nm,1.1s						
UBR	**Ueberruh**	**152.59**	**346**	ePKPbc	**PKPbc**	**16 33 26.6**	**-0.4**
	baz=19,slow=2.3						
UBR				epPKPbc	**pPKPab**	**16 35 56.3**	**-3.0**
WTTA	**Wattenberg**	**152.62**	**344**	i PKiKP	**PKPbc**	**16 33 27.0**	**-0.3**
	comp=Z,5.7nm,0.4s,SNR=5.8						
WTTA				i PKP	**PKPab**	**16 33 41.2**	**0.0**
	comp=Z,17nm,1.3s						
WTTA				epPKiKP	**pPKiKP**	**16 35 53.2**	**0.0**
	comp=Z,6.9nm,0.9s						
RETA	**Reutte**	**152.63**	**345**	i PKiKP	**PKPbc**	**16 33 26.8**	**-0.3**
	comp=Z,4.0nm,0.7s						
RETA				i PKP	**PKPab**	**16 33 40.9**	**-0.2**
	comp=Z,12nm,1.1s						
RETA				i pPKiKP	**pPKiKP**	**16 35 54.1**	**+1.1**
	comp=Z,4.4nm,1.4s						
MYKA	**Terra Mystica**	**152.64**	**341**	i PKP	**PKPbc**	**16 33 26.1**	**-1.1**
	comp=Z,4.7nm,0.6s						
MYKA				i PKP	**PKPab**	**16 33 40.3**	**-0.9**
	comp=Z,4.7nm,0.6s						
MYKA				i pPKiKP	**pPKPbc**	**16 35 51.6**	**-1.0**
	comp=Z,2.4nm,0.7s						
MOTA	**Moosalm**	**152.68**	**345**	i PKiKP	**PKPbc**	**16 33 26.8**	**-0.6**
	comp=Z,14nm,0.9s,SNR=6.5						
MOTA				i PKP	**PKPab**	**16 33 41.1**	**-0.3**
	comp=Z,15nm,1.1s						
SQTA	**Sankt Quirin**	**152.77**	**345**	ePKiKP	**PKPbc**	**16 33 27.2**	**-0.3**
	comp=Z,13nm,1.0s,SNR=5.2						
SQTA				i PKP	**PKPab**	**16 33 41.4**	**-0.3**
	comp=Z,8.0nm,1.0s						
SQTA				i pPKP	**pPKPbc**	**16 35 55.9**	**+3.1**
	comp=Z,2.0nm,0.5s						
ABTA	**Abfaltersbach**	**152.86**	**342**	i PKP	**PKPbc**	**16 33 26.8**	**-0.9**
	comp=Z,25nm,1.1s,SNR=7.2						
ABTA				i PKP	**PKPab**	**16 33 42.0**	**-0.2**
	comp=Z,8.5nm,0.7s						
ABTA				i pPKP	**pPKPbc**	**16 35 55.7**	**+2.6**
	comp=Z,9.0nm,1.4s						
DAVA	**Damuels**	**153.02**	**347**	i PKiKP	**PKiKP**	**16 33 28.3**	**+0.1**
	comp=Z,10nm,1.0s						
DAVA				i PKP	**PKPab**	**16 33 42.2**	**-0.7**
	comp=Z,6.2nm,0.7s						
DAVA				i pPKP	**pPKPbc**	**16 35 56.6**	**+3.2**
	comp=Z,2.0nm,0.6s						
FETA	**Feichten**	**153.07**	**345**	i PKiKP	**PKPbc**	**16 33 28.0**	**-0.3**
	comp=Z,13nm,1.2s						
FETA				i PKP	**PKPab**	**16 33 42.4**	**-0.8**
	comp=Z,14nm,1.4s						
FETA				i pPKP	**pPKPbc**	**16 35 56.7**	**+2.9**
	comp=Z,5.0nm,1.1s						
ESDC	**Sonseca Array**	**161.15**	**12**	PKPab	**PKPab**	**16 34 17.8**	**-0.4**
	comp=Z,4.5nm,1.1s,baz=343,slow=4.8,SNR=18						
KEST	**Kesra**	**163.79**	**335**	PKPab	**PKPab**	**16 34 30.1**	**+0.1**
	comp=Z,12nm,0.9s,baz=308,slow=3.3,SNR=10.0						
TORD	**Torodi Ar. Bea**	**171.93**	**185**	PKP	**PKPdf**	**16 33 38.2**	**-0.8**
	comp=Z,1.5nm,0.7s,baz=40,slow=2.7,SNR=3.9						

DJA 24 16:33:49.7±0.7**,6°N**±6°×**12°6E**±°**,h194**^{km}±6^{km}**,M4.2**/6,**mb4.2**/6,**mB4.8**/4,**MLv4.2**/6,**Mw(mB)4.1**/4,**MwMwp5.0**/1,**Mwp5.3**/1**,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**2.19**	**189**	P	Pn	16 34 30.2	+0.4
TNTI	**Ternate**	**5.27**	**163**	P	Pn	16 35 07.3	-0.2
	0.1nm602nm17nm,0.5s						
SANI	**Sanana**	**7.86**	**179**	P	Pn	16 35 38.6	-2.6
	2μm47nm,1.3s						
NLAI	**Namlea**	**9.12**	**172**	P	Pn	16 35 56.2	-1.5
	1μm41nm,0.8s						
AAI	**Ambon**	**9.77**	**166**	P	Pn	16 36 08.6	+2.5

BJI ***24*** *16:53:13.9,3°.04S×138°.90E,h10*^{km}*,mB5.3/38,mb5.0/74,Ms5.1/78,Ms7 5.0/77*

IDC ***24*** *16:53:17.5±0.4,2°.66S×138°.50E,h0*^{km}*,mb4.8/21,mbtmp4.9/26,ML4.5/5,Error ellipse: s-maj=13.1km s-min=10.7km az=80.0*

NEIC ***24*** *16:53:20.0±1.6,2°.68S±0°.08×138°.44E±0°.05,h10*^{km}*±1*^{km}*,mb5.7/257,Error ellipse: s-maj=13.1km s-min=9.1km az=177.0*

ISC-PP ***24*** *16:53:19,2°.68S×138°.44E,h19*^{km}*,Mwppsm6.3,Moment Tensor Solution. s48 Moment tensor: Scale 10*^{18}*Nm;* M_{rr}*-0.01±.05;* $M_{\theta\theta}$*0.66±.14;* $M_{\phi\phi}$*-0.62±.14;* $M_{r\theta}$*0.04±.21;* $M_{\theta\phi}$*0.08±.12;* $M_{\phi r}$*-0.29±.10; Fault plane solution:* M_0*3.27000×10*^{18} *NP1:*ϕ_s*237.30000°,δ86.10000°,λ185.90000°. NP2:*ϕ_s*146.90000°,δ84.10000°,λ-3.90000°.*

DJA ***24*** *16:53:21.1±0.2,3°S±2°×13°9E±°,h21*^{km}*±2*^{km}*,M5.4/104,mb5.5/104,mB5.9/66,MLv5.6/11,Mw(mB)5.4/66,MwMwp5.2/26,Mwp5.5/26*

ISC 24 16:53:20.6±0.2**,2°73S**±0°03×**138°48E**±0°03**,h19**^{km}**,n716,**σ1^{s}**44**/700**,mb5.5**/157**,MS5.0**/32**,10C-4D,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.77**	**17**	P	**Pb**	**16 53 32.5**	**-2.9**
GENI	**Genyem**	**1.69**	**85**	P	**Pb**	**16 53 50.0**	**-1.1**
GENI	**Genyem**	**1.69**	**85**	P	**Pn**	**16 53 48.5**	**-0.7**
JAY	**Jayapura**	**2.23**	**85**	Pn	**Pn**	**16 53 56.4**	**-0.3**
	87nm,0.3s,baz=239,slow=12,SNR=262						
JAY				Sn	**Sb**	**16 54 25.8**	**-1.9**
	59nm,0.3s,baz=162,slow=23,SNR=4.2						
	2μm,0.8s						
JAY	**Jayapura**	**2.23**	**85**	P	**Pn**	**16 53 54.4**	**-2.3**
SRPI	**Serui, Papua**	**2.40**	**291**	P	**Pb**	**16 53 59.8**	**-3.4**
BAKI	**Biak**	**2.82**	**303**	P	**Pn**	**16 54 06.0**	**+1.2**
RKPI	**Ransiki, Papua**	**4.47**	**286**	P	**Pn**	**16 54 28.9**	**+1.5**
KMPI	**Kaimana, Papua**	**4.86**	**259**	P	Pn	16 54 36.7	+3.9
FAKI	**Fak Fak**	**6.23**	**268**		**Pn**	**16 54 52.9**	**+1.2**
FAKI	**Fak Fak**	**6.23**	**268**	P	**Pn**	**16 54 53.6**	**+2.0**
FAKI	**Fak Fak**	**6.23**	**268**	P	**Pn**	**16 54 53.1**	**+1.5**
	2.1nm10μm6μm344nm,0.7s						
SWI	**Sorong**	**7.45**	**284**	P	**Pn**	**16 55 09.7**	**+1.3**
BNDI	**Bandanaira**	**8.74**	**258**	P	**Pn**	**16 55 29.2**	**+3.0**
	8μm501nm,1.0s						
SAUI	**Saumlaki**	**8.85**	**234**	P	Pn	16 55 32.0	+4.4
	11μm389nm,0.9s						
MANU	**Manus Island**	**8.90**	**86**		**Pn**	**16 55 29.6**	**+1.2**
MSAI	**Masohi**	**9.56**	**266**	P	**Pn**	**16 55 40.6**	**+3.2**
AAI	**Ambon**	**10.31**	**264**	P	**Pn**	**16 55 49.9**	**+2.2**
	8μm3μm276nm,1.2s						
PMG	**Port Moresby**	**10.88**	**128**		**Pn**	**16 55 58.0**	**+2.5**
PMG	**Port Moresby**	**10.88**	**128**	Pn	**Pn**	**16 55 58.6**	**+3.1**
	1.2nm,0.3s,baz=313,slow=11,SNR=7.4						
PMG	**Port Moresby**	**10.88**	**128**	P	**Pn**	**16 55 58.2**	**+2.7**
PMG	**Port Moresby**	**10.88**	**128**	P	Pn	16 55 59.4	+3.9
NLAI	**Namlea**	**11.38**	**267**	P	**Pn**	**16 56 04.1**	**+1.8**
KDU	**Kakadu**	**11.54**	**211**	P	**Pn**	**16 56 03.3**	**-1.3**
KDU	**Kakadu**	**11.54**	**211**	P	**Pn**	**16 56 05.7**	**+1.1**
TNTI	**Ternate**	**11.64**	**287**		**Pn**	**16 56 05.6**	**-0.4**
TNTI	**Ternate**	**11.64**	**287**	P	**Pn**	**16 56 08.2**	**+2.3**
TNTI	**Ternate**	**11.64**	**287**	P	**Pn**	**16 56 07.8**	**+1.9**
	98nm,1.1s						
COEN	**Coen**	**12.08**	**158**		**Pn**	**16 56 12.9**	**+1.0**
COEN	**Coen**	**12.08**	**158**	P	**Pn**	**16 56 13.2**	**+1.3**
COEN	**Coen**	**12.08**	**158**	P	**Pn**	**16 56 13.6**	**+1.7**
DRS	**Darwin Rock St**	**12.22**	**218**	P	**Pn**	**16 56 15.0**	**+1.2**
MTN	**Manton Dam**	**12.40**	**216**		**Pn**	**16 56 16.7**	**+0.4**
MTN	**Manton Dam**	**12.40**	**216**	P	**Pn**	**16 56 17.3**	**+1.0**
	comp=Z,0.0nmcomp=Z,311nm,0.9s						
MTN	**Manton Dam**	**12.40**	**216**	P	**Pn**	**16 56 17.9**	**+1.6**
SANI	**Sanana**	**12.50**	**273**	P	**Pn**	**16 56 19.1**	**+1.4**
SANI	**Sanana**	**12.50**	**273**	P	**Pn**	**16 56 17.9**	**+0.2**
	comp=Z,3μmcomp=Z,200nm,0.8s						
RABL	**Rabaul**	**13.73**	**96**		**Pn**	**16 56 35.7**	**+1.1**
SGSI	**Sangihe**	**14.43**	**296**	P	**Pn**	**16 56 44.4**	**+0.3**
	comp=Z,5μmcomp=Z,5μmcomp=Z,338nm,1.0s						
KMSI	**Cibinong**	**14.86**	**283**	P	**Pn**	**16 56 50.3**	**+0.3**
SOEI	**Soe**	**15.75**	**243**		**Pn**	**16 57 01.4**	**-0.3**
SOEI	**Soe**	**15.75**	**243**	P	**P**	**16 57 03.5**	**-2.1**
SOEI	**Soe**	**15.75**	**243**	P	**Pn**	**16 57 02.0**	**+0.2**
LUWI	**Luwuk**	**15.79**	**276**		**Pn**	**16 57 02.0**	**-0.2**
LUWI				IAmb	IAmb	16 57 09.4	
	comp=Z,389nm,0.7s						
LUWI	**Luwuk**	**15.79**	**276**	P	**P**	**16 57 03.6**	**-2.3**
LUWI	**Luwuk**	**15.79**	**276**	P	**Pn**	**16 57 02.1**	**0.0**
KDI	**Kendari**	**15.88**	**265**	P	**P**	**16 57 04.9**	**-2.0**
KNRA	**Kununurra**	**16.04**	**216**		**Pn**	**16 57 05.1**	**-0.2**
KNRA	**Kununurra**	**16.04**	**216**	P	**Pn**	**16 57 05.5**	**+0.2**
BBSI	**Bau Bau**	**16.10**	**260**	P	**P**	**16 57 08.9**	**-0.5**
	comp=Z,5μmcomp=Z,5μmcomp=Z,336nm,1.1s						
MTSU	**Mount Surprise**	**16.34**	**160**	P	**P**	**16 57 12.2**	**+0.1**
	comp=Z,66nm,0.8s						
MTSU	**Mount Surprise**	**16.34**	**160**	P	**P**	**16 57 13.0**	**+0.9**
BATI	**Baumata**	**16.48**	**243**	Pn	**P**	**16 57 12.0**	**-1.6**
	comp=Z,3.9nm,0.3s,baz=270,slow=21,SNR=8.0						
BATI	**Baumata**	**16.48**	**243**	P	**P**	**16 57 11.5**	**-2.1**
	comp=Z,6μmcomp=Z,6μmcomp=Z,442nm,1.0s						
MRSI	**Marisa**	**16.84**	**281**	P	**P**	**16 57 15.9**	**-1.7**
	comp=Z,4μmcomp=Z,3μmcomp=Z,401nm,0.9s						
APSI	**Ampana**	**16.92**	**276**	P	**P**	**16 57 18.0**	**-0.5**
	comp=Z,9μmcomp=Z,747nm,1.6s						
MMRI	**Maumere**	**17.19**	**249**	Pn	**Pn**	**16 57 19.6**	**-0.4**
MMRI	**Maumere**	**17.19**	**249**	P	**P**	**16 57 21.8**	**+0.3**
MMRI	**Maumere**	**17.19**	**249**	P	**P**	**16 57 20.3**	**-1.2**
	comp=Z,5μmcomp=Z,3μmcomp=Z,140nm,1.2s						
WB0	**Warramunga Arr**	**17.40**	**193**	Pn	**Pn**	**16 57 21.0**	**-1.5**
GUMO	**Guam**	**17.41**	**21**		**P**	**16 57 24.0**	**+0.1**
GUMO				IAmb	IAmb	16 57 26.6	
	comp=Z,693nm,1.4s						
GUMO	**Guam**	**17.41**	**21**	P	**P**	**16 57 21.7**	**-2.1**
	comp=Z,1.1nm,0.3s,baz=191,slow=6.7,SNR=6.8						
	comp=Z,335nm,1.2s						
GUMO	**Guam**	**17.41**	**21**	P	**P**	**16 57 25.2**	**+1.4**
WR8	**Warramunga Arr**	**17.56**	**193**	Pn	**Pn**	**16 57 23.2**	**-1.3**
WRAB	**Tennant Creek**	**17.57**	**193**	Pn	**Pn**	**16 57 23.7**	**-1.0**
WRA	**Warramunga Arr**	**17.58**	**193**	Pn	**Pn**	**16 57 22.1**	**-2.7**
WRA	**Warramunga Arr**	**17.58**	**193**	P	**Pn**	**16 57 23.7**	**-1.1**
	comp=Z,2.0nm,0.3s,baz=14,slow=12,SNR=54						
WRA				S	**Sn**	**17 00 33.4**	**-6.8**
	comp=Z,32nm,0.9s,baz=14,slow=24,SNR=2.8						
	comp=Z,39nm,0.7s						
EDFI	**Ende, Flores**	**17.74**	**250**	P	**P**	**16 57 27.8**	**+0.2**
QIS	**Mount Isa**	**17.75**	**177**	P	**P**	**16 57 26.8**	**-0.9**
QIS	**Mount Isa**	**17.75**	**177**	P	**P**	**16 57 27.5**	**-0.2**
TOLI2	**Tolitoli**	**18.10**	**282**	P	**P**	**16 57 31.9**	**+0.3**
TOLI2	**Tolitoli**	**18.10**	**282**	P	**P**	**16 57 32.2**	**+0.7**
BSSI	**Bau Bau, Buton**	**18.25**	**259**	P	**P**	**16 57 35.3**	**+2.1**
	comp=Z,6μmcomp=Z,4μmcomp=Z,151nm,1.6s						
BNSI	**Bone**	**18.41**	**264**	P	**Pn**	**16 57 37.7**	**+2.6**
	comp=Z,5μmcomp=Z,3μmcomp=Z,185nm,1.1s						
TTSI	**Tana Toraja**	**18.64**	**269**	P	**Pn**	**16 57 41.4**	**+3.6**
	comp=Z,5μmcomp=Z,6μmcomp=Z,284nm,1.3s						
SPSI	**Sidrap Palu**	**18.72**	**266**	P	**Pn**	**16 57 40.9**	**+2.1**
	comp=Z,3μmcomp=Z,82nm,0.7s						
PCI	**Palu**	**18.72**	**275**	P	**Pn**	**16 57 41.7**	**+2.8**
	comp=Z,7μmcomp=Z,499nm,1.2s						
KAPI	**Kappang**	**18.82**	**263**	P	**Pn**	**16 57 39.4**	**-0.6**
	comp=Z,20nm,0.8s,baz=108,slow=6.9,SNR=7.4						
KAPI	**Kappang**	**18.82**	**263**	P	**Pn**	**16 57 40.7**	**+0.6**
MPSI	**Mapaga**	**18.82**	**279**	P	**Pn**	**16 57 41.7**	**+1.6**
	comp=Z,5μmcomp=Z,4μmcomp=Z,161nm,1.3s						
CTAO	**Charters Tower**	**18.85**	**157**	P	**Pn**	**16 57 40.1**	**-0.2**
CTAO	**Charters Tower**	**18.85**	**157**	P	**Pn**	**16 57 43.1**	**+2.8**
BASI	**Baing, Sumba**	**19.27**	**246**	P	**Pn**	**16 57 47.4**	**+1.9**
	comp=Z,4μmcomp=Z,305nm,1.1s						
WSI	**Waingapu**	**19.34**	**248**	P	**Pn**	**16 57 47.0**	**+0.8**
	comp=Z,256nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.79**	**219**	P	**P**	**16 57 49.6**	**-0.4**
FITZ	**Fitzroy Crossi**	**19.79**	**219**	P	**Pn**	**16 57 50.9**	**-0.7**
	comp=Z,18nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.79**	**219**	P	**Pn**	**16 57 50.4**	**-1.3**
	comp=Z,0.8nm,0.3s,baz=49,slow=11,SNR=17						
FITZ				S	**S**	**17 01 27.3**	**-5.2**
	comp=Z,41nm,0.8s,baz=184,slow=19,SNR=1.3						
	comp=Z,58nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.79**	**219**	P	**Pn**	**16 57 51.3**	**-0.4**
WBSI	**Waikabubak, Su**	**20.17**	**249**	P	**P**	**16 57 53.0**	**-1.3**
	comp=Z,221nm,0.9s						
AS01	**Alice Springs**	**21.27**	**192**	P	**P**	**16 58 07.4**	**+1.3**
AS31	**Alice Springs**	**21.28**	**192**	P	**P**	**16 58 06.4**	**+0.2**
AS31	**Alice Springs**	**21.28**	**192**	P	**P**	**16 58 07.5**	**+1.3**
	comp=Z,0.0nmcomp=Z,80nm,1.0s						
ASAR	**Alice Springs**	**21.28**	**192**	P	**P**	**16 58 06.2**	**+0.1**
ASAR	**Alice Springs**	**21.28**	**192**	P	**P**	**16 58 06.4**	**+0.2**
	comp=Z,63nm,0.9s,baz=22,slow=10,SNR=213						
ASAR				S	**S**	**17 02 01.7**	**-0.4**
	comp=Z,29nm,0.9s,baz=14,slow=24,SNR=4.9						
	comp=Z,63nm,0.9s						
SMKI	**Samarinda**	**21.38**	**276**	P	**P**	**16 58 11.5**	**+4.1**
MYLDM	**Lahad Datu**	**21.45**	**291**	P	**P**	**16 58 11.0**	**+2.9**
PLAI	**Plampang**	**21.46**	**253**	P	**P**	**16 58 08.8**	**+0.6**
PLAI	**Plampang**	**21.46**	**253**	P	**P**	**16 58 08.3**	**+0.1**
	comp=Z,5μmcomp=Z,98nm,1.0s						
BKB	**Balikpapan**	**21.62**	**273**	P	**P**	**16 58 10.1**	**+0.1**
BKB	**Balikpapan**	**21.62**	**273**	P	**P**	**16 58 10.6**	**+0.7**
BKB	**Balikpapan**	**21.62**	**273**	P	**P**	**16 58 13.3**	**+3.4**
TATA	**Tatamba Isabel**	**21.95**	**106**	P	**P**	**16 58 14.3**	**+0.9**
PATS	**Pohnpei**	**21.96**	**64**	P	**P**	**16 58 15.7**	**+2.2**
SAVO	**Savo Central**	**22.14**	**108**	P	**P**	**16 58 17.7**	**+2.1**
HNR	**Honiara**	**22.35**	**108**	P	**P**	**16 58 18.5**	**+0.7**
HNR	**Honiara**	**22.35**	**108**	P	**P**	**16 58 18.4**	**+0.7**
	comp=Z,504nm,0.8s,baz=199,slow=1.9,SNR=24						
HNR	**Honiara**	**22.35**	**108**	P	**P**	**16 58 19.6**	**+1.9**
ALEG	**Aligegeo Malai**	**22.89**	**106**	P	**P**	**16 58 26.1**	**+2.6**
NGOA	**Tingoa Renbel**	**23.12**	**113**	P	**P**	**16 58 28.1**	**+2.3**
SRBI	**Singaraja**	**23.76**	**256**	P	**P**	**16 58 32.0**	**-0.2**
	comp=Z,80nm,1.4s						
KKM	**Kota Kinabalu**	**23.88**	**291**	P	**P**	**16 58 33.8**	**+0.3**
KKM				IAmb	IAmb	16 58 35.5	
	comp=Z,145nm,0.9s						
KKM	**Kota Kinabalu**	**23.88**	**291**	P	**P**	**16 58 34.9**	**+1.4**
WRKA	**Warakurna**	**24.25**	**203**	P	**P**	**16 58 36.6**	**-0.2**
GD1S	**Gladstone Soft**	**24.31**	**151**	P	**P**	**16 58 38.4**	**+1.2**
QLP	**Quilpie**	**24.35**	**167**	P	**P**	**16 58 39.5**	**+1.9**
HURO	**Huro Makira**	**24.48**	**109**	P	**P**	**16 58 39.7**	**+0.8**
KMMI	**Kalianget**	**24.79**	**259**	P	**P**	**16 58 44.2**	**+2.5**
	comp=Z,4μmcomp=Z,208nm,1.1s						
JAGI	**Jajag, Banyuwa**	**24.87**	**256**	P	**P**	**16 58 40.6**	**-1.8**

JAGI	**Jajag, Banyuwa**	**24.87**	**256**	P	**P**	**16 58 42.7**	**+0.3**
EIDS	**Eidsvold**	**25.57**	**153**	P	**P**	**16 58 49.2**	**+0.6**
EIDS				IAmb	IAmb	16 59 06.1	
	comp=Z,267nm,1.9s						
EIDS	**Eidsvold**	**25.57**	**153**	P	**P**	**16 58 51.0**	**+2.4**
	comp=Z,51nm,0.8s						
EIDS	**Eidsvold**	**25.57**	**153**	P	**P**	**16 58 50.8**	**+2.2**
MBWA	**Marble Bar**	**25.86**	**223**	P	**P**	**16 58 50.9**	**-0.4**
MBWA				IAmb	IAmb	16 58 55.5	
	comp=Z,158nm,1.2s						
MBWA	**Marble Bar**	**25.86**	**223**	P	**P**	**16 58 52.4**	**+1.1**
	comp=Z,124nm,1.3s						
MBWA	**Marble Bar**	**25.86**	**223**	P	**P**	**16 58 52.5**	**+1.2**
PSA00	**Pilbara Seismi**	**26.07**	**223**	P	**P**	**16 58 52.7**	**-0.5**
PSA00	**Pilbara Seismi**	**26.07**	**223**	P	**P**	**16 58 52.7**	**-0.5**
PSA00				IAmb	IAmb	16 58 57.1	
	comp=Z,29nm,0.9s						
PSA00	**Pilbara Seismi**	**26.07**	**223**	P	**P**	**16 58 54.0**	**+0.8**
	comp=Z,91nm,1.3s						
PSA00	**Pilbara Seismi**	**26.07**	**223**	P	**P**	**16 58 54.5**	**+1.3**
GRJI	**Gresik**	**26.23**	**260**	P	**P**	**16 58 55.8**	**+1.0**
	comp=Z,208nm,1.0s						
STKI	**Sintang**	**27.14**	**275**	P	**P**	**16 59 04.5**	**+1.5**
	comp=Z,82nm,1.2s						
NGJI	**Ngawi**	**27.30**	**259**	P	**P**	**16 59 06.2**	**+1.8**
	comp=Z,47nm,0.5s						
WOJI	**Wonogiri, Jawa**	**27.90**	**258**	P	**P**	**16 59 08.9**	**-0.8**
	comp=Z,94nm,1.3s						
SMRI	**Semarang**	**28.26**	**260**	P	**P**	**16 59 14.0**	**+1.0**
KSM	**Kuching**	**28.47**	**278**	IAmb	IAmb	16 59 17.2	
	comp=Z,160nm,1.6s						
KSM	**Kuching**	**28.47**	**278**	P	**P**	**16 59 16.4**	**+1.5**
STKA	**Stephens Creek**	**29.14**	**175**	P	**P**	**16 59 21.1**	**+0.5**
STKA				IAmb	IAmb	17 00 20.3	
	comp=Z,161nm,1.1s						
STKA	**Stephens Creek**	**29.14**	**175**	P	**P**	**16 59 22.4**	**+1.8**
	comp=Z,65nm,0.8s						
STKA	**Stephens Creek**	**29.14**	**175**	P	**P**	**16 59 21.4**	**+0.7**
	comp=Z,8.3nm,1.1s,baz=358,slow=8.7,SNR=9.3						
	comp=Z,8.3nm,1.1s						
CMSA	**Cobar Meteorol**	**29.45**	**167**	P	**P**	**16 59 23.8**	**+0.4**
MEEK	**Meekatharra**	**30.46**	**217**	P	**P**	**16 59 33.4**	**+1.0**
	comp=Z,23nm,1.4s						
MEEK	**Meekatharra**	**30.46**	**217**	P	**P**	**16 59 34.3**	**+1.8**
HTT	**Hallett**	**30.55**	**179**	P	**P**	**16 59 34.0**	**+0.9**
	comp=Z,6.9nm,1.3s						
GIRL	**Giralia**	**30.74**	**228**	P	**P**	**16 59 37.3**	**+2.4**
	comp=Z,180nm,1.3s						
TPI	**Tanjungpandan**	**30.79**	**269**	P	**P**	**16 59 37.0**	**+1.5**
	comp=Z,960nmcomp=Z,70nm,1.2s						
JOW	**Kunigami**	**31.00**	**342**	P	**P**	**16 59 37.6**	**+0.5**
JOW				IAmb	IAmb	17 00 28.4	
	comp=Z,195nm,1.5s						
JOW	**Kunigami**	**31.00**	**342**	P	**P**	**16 59 38.6**	**+1.5**
LEM	**Lembang**	**31.02**	**261**	P	**P**	**16 59 37.3**	**-0.3**
	comp=Z,13nm,0.3s,baz=19,slow=13,SNR=4.3						
	comp=Z,13nm,0.3s						
BBJI	**Bungbulang**	**31.06**	**260**	P	**P**	**16 59 38.9**	**+1.0**
TPUB	**Ta-pu**	**31.18**	**327**	P	**P**	**16 59 40.5**	**+1.7**
NACB	**Ninganchiao**	**31.38**	**329**	P	**P**	**16 59 40.0**	**-0.5**
NACB	**Ninganchiao**	**31.38**	**329**	P	**P**	**16 59 42.4**	**+1.9**
SSLB	**Suanglung**	**31.40**	**328**	P	**P**	**16 59 42.1**	**+1.4**
PPBI	**Pangkal Pinang**	**32.32**	**270**	P	**P**	**16 59 50.8**	**+1.9**
DZM	**Mont Dzumac**	**33.27**	**128**	*e*P	**P**	**16 59 56.6**	**-0.7**
	comp=Z,179nm,23.4s						
DZM				*e*S	**S**	**17 05 13.7**	**-3.3**
	comp=Z,1µm,28.1s						
DZM				*e*LR	LR	17 08 41.3	
	comp=Z,9µm,24.4s						
QZH	**Quanzhou**	**33.61**	**326**	*e*P	**P**	**17 00 00.1**	**+0.1**
QZH				S	**S**	**17 05 21.0**	**-0.8**
QZH				LR	LR		
	comp=Z,2µm,20.9s						
QZH				LR	LR		
	comp=Z,2µm,20.0s						
QZH				LR	LR		
	comp=Z,4µm,23.8s						
PMBI	**Palembang**	**33.67**	**269**	P	**P**	**17 00 03.1**	**+2.4**
PMBI	**Palembang**	**33.67**	**269**	P	**P**	**17 00 03.5**	**+2.8**
MORW	**Morawa**	**33.79**	**217**	P	**P**	**17 00 01.8**	**+0.2**
MORW	**Morawa**	**33.79**	**217**	P	**P**	**17 00 02.7**	**+1.1**
MDSI	**Maura Dua**	**34.28**	**266**	P	**P**	**17 00 06.4**	**+0.4**
	comp=Z,2µmcomp=Z,179nm,1.1s						
LWLI	**Liwa**	**34.41**	**265**	P	**P**	**17 00 08.1**	**+0.7**
	comp=Z,164nm,1.1s						
BLDU	**Ballidu**	**34.55**	**214**	P	**P**	**17 00 08.8**	**+0.7**
KLBR	**Kellerberrin**	**34.72**	**212**	P	**P**	**17 00 09.6**	**-0.1**
KLBR	**Kellerberrin**	**34.72**	**212**	P	**P**	**17 00 10.6**	**+0.9**
MYKOM	**Kota Tinggi**	**34.91**	**277**	IAmb	IAmb	17 00 14.3	
	comp=Z,91nm,1.0s						
MYKOM	**Kota Tinggi**	**34.91**	**277**	P	**P**	**17 00 12.7**	**+1.2**
TOO	**Toolangi**	**35.27**	**170**	P	**P**	**17 00 16.6**	**+2.3**
	comp=Z,9.9nm,1.5s						
QIZ	**Qiongzhong**	**35.51**	**309**	P	**P**	**17 00 16.8**	**+0.2**
QIZ				S	**S**	**17 05 52.1**	**+0.7**
QIZ				pmax	pmax		
	comp=Z,55nm,0.9s						
QIZ				LR	LR		
	comp=Z,1µm,16.8s						
QIZ				LR	LR		
	comp=Z,2µm,17.2s						
QIZ	**Qiongzhong**	**35.51**	**309**	P	**P**	**17 00 17.0**	**+0.4**
KSI	**Kapahiang**	**35.84**	**268**	P	**P**	**17 00 20.1**	**+0.5**
	comp=Z,82nm,1.1s						
NWAO	**Narrogin (SRO)**	**36.04**	**211**	P	**P**	**17 00 20.8**	**-0.2**
	comp=Z,8.6nm,0.8s,baz=34,slow=7.0,SNR=5.9						
	comp=Z,8.6nm,0.8s						
JNU	**Nakatsue**	**36.38**	**349**	P	**P**	**17 00 24.2**	**+0.4**
JMN	**Monobe**	**36.52**	**354**	P	**P**	**17 00 24.7**	**-0.4**
JMN	**Monobe**	**36.52**	**354**	P	**P**	**17 00 27.8**	**+2.7**
SSE	**Sheshan**	**37.46**	**335**	P	**P**	**17 00 33.0**	**0.0**
SSE				S	**S**	**17 06 20.6**	**-0.1**
SSE				pmax	pmax		
	comp=Z,14nm,0.8s						
SSE				LR	LR		
	comp=Z,780nm,17.8s						
SSE				LR	LR		
	comp=Z,470nm,17.7s						
BKNI	**Bangkinang**	**37.55**	**274**	P	**P**	**17 00 36.1**	**+2.0**
BKNI	**Bangkinang**	**37.55**	**274**	P	**P**	**17 00 35.1**	**+1.0**
IPM	**Ipoh**	**38.11**	**281**	P	**P**	**17 00 38.6**	**-0.2**
IPM	**Ipoh**	**38.11**	**281**	P	**P**	**17 00 38.8**	**0.0**
PPI	**Padang Panjang**	**38.13**	**273**	P	**P**	**17 00 39.5**	**+0.5**
	comp=Z,2µmcomp=Z,137nm,1.1s						
KULM	**Kulim**	**38.62**	**282**	P	**P**	**17 00 42.8**	**-0.4**
KULM	**Kulim**	**38.62**	**282**	P	**P**	**17 00 44.8**	**+1.7**
GLAD	**Gladstone**	**39.04**	**169**	P	**P**	**17 00 47.9**	**+1.7**
MNSI	**Mandailing Nat**	**39.05**	**275**	P	**P**	**17 00 46.7**	**0.0**
	comp=Z,58nm,0.8s						
MJAR	**Matsushiro Arr**	**39.07**	**360**	P	**P**	**17 00 44.3**	**-2.3**
	comp=Z,2.3nm,0.9s,baz=176,slow=9.4,SNR=5.1						
	comp=Z,2.3nm,0.9s						
NJ2	**Nanjing**	**39.29**	**333**	*e*P	**P**	**17 00 48.3**	**-0.1**
NJ2				pP	**pP**	**17 00 51.1**	**-3.3**
NJ2				S	**S**	**17 06 47.8**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,2µm,23.4s						
NJ2				LR	LR		
	comp=Z,1µm,20.0s						
NJ2				LR	LR		
	comp=Z,2µm,20.5s						
CNSH	**ChangSha**	**39.35**	**323**	P	**P**	**17 00 50.4**	**+1.4**
CNSH				S	**S**	**17 06 50.5**	**+1.0**
CNSH				pmax	pmax		
	comp=Z,39nm,1.2s						
CNSH				LR	LR		
	comp=Z,760nm,20.6s						
CNSH				LR	LR		
	comp=Z,1µm,22.7s						
CNSH				LR	LR		
	comp=Z,2µm,24.1s						
SISI	**Saibi**	**39.39**	**271**	P	**P**	**17 00 49.3**	**-0.3**
	comp=Z,171nm,1.1s						
RPSI	**Rantau Prapat**	**39.91**	**277**	P	**P**	**17 00 53.5**	**-0.4**
RPSI				IAmb	IAmb	17 00 55.8	
	comp=Z,174nm,1.1s						
PSI	**Prapat**	**39.92**	**278**	P	**P**	**17 00 53.8**	**-0.3**
	comp=Z,103nm,0.9s,baz=109,slow=4.4,SNR=67						
	comp=Z,103nm,0.9s						
PSI	**Prapat**	**39.92**	**278**	P	**P**	**17 00 54.4**	**+0.2**
TJN	**Taejon**	**40.27**	**346**	P	**P**	**17 00 56.1**	**-0.4**
TJN	**Taejon**	**40.27**	**346**	P	**P**	**17 00 57.3**	**+0.8**
MOO	**Moorlands**	**40.30**	**170**	P	**P**	**17 00 58.2**	**+1.5**
WHN	**Wuhan**	**40.31**	**327**	P	**P**	**17 00 59.1**	**+2.1**
WHN				S	**S**	**17 07 09.6**	**+5.8**
WHN				pmax	pmax		
	comp=Z,140nm,1.1s						
WHN				LR	LR		
	comp=Z,2µm,15.5s						
WHN				LR	LR		
	comp=Z,4µm,19.6s						
WHN				LR	LR		
	comp=Z,4µm,17.0s						
SRIT	**Nakonsritamara**	**40.36**	**287**	P	**P**	**17 00 58.9**	**+1.2**
TSI	**Tuntungan**	**40.37**	**279**	P	**P**	**17 00 58.4**	**+0.6**
JMM	**Marumori**	**40.45**	**3**	P	**P**	**17 01 00.6**	**+2.6**
JSD	**Sado**	**40.56**	**360**	P	**P**	**17 01 01.1**	**+2.2**
GSI	**Gunungsitoli**	**41.09**	**275**	P	**P**	**17 01 02.8**	**-0.9**
GSI				IAmb	IAmb	17 01 04.7	
	comp=Z,90nm,0.9s						
GSI	**Gunungsitoli**	**41.09**	**275**	P	**P**	**17 01 04.6**	**+0.9**
GSI	**Gunungsitoli**	**41.09**	**275**	P	**P**	**17 01 03.0**	**-0.7**
	comp=Z,115nm,1.1s						
KSAR	**Wonju Array Be**	**41.16**	**347**	P	**P**	**17 01 03.4**	**-0.5**
KSRS	**Korea Array**	**41.16**	**347**	P	**P**	**17 01 03.5**	**-0.4**
	comp=Z,3.9nm,0.9s,baz=165,slow=9.5,SNR=19						
	comp=Z,3.9nm,0.9s						
SLVN	**Son La**	**41.44**	**307**	P	**P**	**17 01 06.7**	**+0.2**
SLVN	**Son La**	**41.44**	**307**	P	**P**	**17 01 06.8**	**+0.2**
INCN	**Inchon**	**41.49**	**346**	P	**P**	**17 01 07.2**	**+0.5**
INCN	**Inchon**	**41.49**	**346**	P	**P**	**17 01 07.6**	**+1.0**
LHMI	**Lhok Sumawe**	**42.24**	**281**	P	**P**	**17 01 13.3**	**+0.2**
LHMI	**Lhok Sumawe**	**42.24**	**281**	P	**P**	**17 01 13.8**	**+0.7**
GYA	**Guiyang**	**42.27**	**315**	⇑P	**P**	**17 01 14.6**	**+1.3**
GYA				S	**S**	**17 07 34.6**	**+1.2**
GYA				pmax	pmax		
	comp=Z,33nm,0.8s						
GYA				LR	LR		
	comp=Z,1µm,20.9s						
GYA				LR	LR		
	comp=Z,970nm,21.8s						
GYA				LR	LR		
	comp=Z,2µm,20.9s						
MLSI	**Meulaboh, Aceh**	**42.62**	**279**	P	**P**	**17 01 15.7**	**-0.5**
DGTI	**Dogotuki**	**42.75**	**111**	P	**P**	**17 01 18.7**	**+1.5**
ENH	**Enshi**	**42.94**	**322**	P	**P**	**17 01 19.8**	**+1.2**
TIA	**Tai'an**	**43.57**	**335**	P	**P**	**17 01 23.1**	**-0.4**
TIA				S	**S**	**17 07 51.9**	**0.0**
TIA				pmax	pmax		
	comp=Z,12nm,0.9s						
TIA				pmax	pmax		
	comp=Z,380nm,3.5s						
TIA				LR	LR		
	comp=Z,1µm,18.2s						
TIA				LR	LR		
	comp=Z,2µm,18.5s						
TIA				LR	LR		
	comp=Z,3µm,19.9s						
CMAR	**Chiang Mai Arr**	**44.25**	**300**	P	**P**	**17 01 29.6**	**+0.3**
CMAR	**Chiang Mai Arr**	**44.25**	**300**	P	**P**	**17 01 30.0**	**+0.7**
	comp=Z,11nm,0.6s,baz=119,slow=6.5,SNR=120						
	comp=Z,11nm,0.6s						
DL2	**Dalian**	**44.25**	**341**	P	**P**	**17 01 30.3**	**+1.4**
DL2				S	**S**	**17 08 04.3**	**+2.6**
DL2				pmax	pmax		
	comp=Z,47nm,2.0s						
DL2				pmax	pmax		
	comp=Z,180nm,7.2s						
DL2				LR	LR		
	comp=Z,2µm,23.2s						
DL2				LR	LR		
	comp=Z,980nm,18.8s						
DL2				LR	LR		
	comp=Z,2µm,23.1s						
KMI	**Kunming**	**44.36**	**311**	⇑P	**P**	**17 01 31.5**	**+1.2**
KMI				S	**S**	**17 08 09.1**	**+4.9**
KMI				pmax	pmax		
	comp=Z,31nm,1.2s						
KMI				LR	LR		
	comp=Z,600nm,19.2s						
KMI				LR	LR		
	comp=Z,750nm,23.0s						
KMI				LR	LR		
	comp=Z,1µm,20.1s						
CHTO	**Chiang Mai**	**44.40**	**300**	P	**P**	**17 01 30.5**	**+0.1**
CHTO				IAmb	IAmb	17 02 25.7	
	comp=Z,123nm,1.8s						
CHTO	**Chiang Mai**	**44.40**	**300**	P	**P**	**17 01 31.6**	**+1.1**
LYN	**LuoYang**	**44.42**	**329**	P	**P**	**17 01 30.9**	**+0.5**
LYN				S	**S**	**17 08 03.3**	**-1.0**
LYN				pmax	pmax		
	comp=Z,88nm,1.1s						
LYN				pmax	pmax		
	comp=Z,370nm,4.8s						
LYN				LR	LR		
	comp=Z,750nm,18.6s						
LYN				LR	LR		
	comp=Z,1µm,22.7s						
LYN				LR	LR		
	comp=Z,2µm,25.4s						
HNS	**HongShan**	**45.62**	**333**	⇑P	**P**	**17 01 39.9**	**0.0**
HNS				S	**S**	**17 08 19.8**	**-1.9**
HNS				SS	**SS**	**17 11 40.5**	**-5.5**
HNS				pmax	pmax		
	comp=Z,17nm,0.9s						
HNS				LR	LR		
	comp=Z,1µm,21.8s						
HNS				LR	LR		
	comp=Z,2µm,20.6s						
HNS				LR	LR		
	comp=Z,3µm,21.9s						
PZH	**PanZhiHua**	**45.87**	**312**	P	**P**	**17 01 42.5**	**+0.3**
PZH				S	**S**	**17 08 23.8**	**-2.1**
PZH				pmax	pmax		
	comp=Z,20nm,1.0s						
PZH				pmax	pmax		
	comp=Z,160nm,5.5s						
PZH				LR	LR		
	comp=Z,990nm,23.1s						
PZH				LR	LR		
	comp=Z,950nm,24.1s						
PZH				LR	LR		
	comp=Z,2µm,22.8s						
OUZ	**Omahuta**	**45.88**	**139**	P	**P**	**17 01 44.9**	**+2.9**
XAN	**Xi'an**	**45.96**	**325**	⇑P	**P**	**17 01 43.1**	**+0.4**
XAN				S	S	17 08 36.1	+9.3
XAN				pmax	pmax		
	comp=Z,77nm,1.1s						
XAN				pmax	pmax		
	comp=Z,280nm,5.3s						
XAN				LR	LR		
	comp=Z,1µm,24.1s						
XAN				LR	LR		
	comp=Z,1µm,22.7s						
XAN				LR	LR		
	comp=Z,3µm,22.0s						
TIY	**Taiyuan**	**46.93**	**332**	*e*P	**P**	**17 01 51.8**	**+1.5**
TIY				PP	**PP**	**17 03 46.4**	**+5.5**
TIY				S	**S**	**17 08 41.8**	**+1.2**
TIY				pmax	pmax		
	comp=Z,110nm,4.2s						
TIY				LR	LR		
	comp=Z,1µm,17.9s						
TIY				LR	LR		
	comp=Z,930nm,19.9s						
TIY				LR	LR		
	comp=Z,2µm,19.9s						
CD2	**Chengdu**	**47.04**	**318**	P	**P**	**17 01 52.3**	**+1.0**
CD2				PP	**PP**	**17 03 43.0**	**+0.9**
CD2				S	**S**	**17 08 43.6**	**+1.2**
CD2				pmax	pmax		
	comp=Z,50nm,0.7s						
CD2				pmax	pmax		
	comp=Z,140nm,4.0s						
CD2				LR	LR		
	comp=Z,2µm,20.6s						
CD2				LR	LR		
	comp=Z,2µm,17.6s						
USRK	**Ussuriysk Ar.**	**47.08**	**354**	P	**P**	**17 01 51.0**	**-0.3**
USRK	**Ussuriysk Ar.**	**47.08**	**354**	P	**P**	**17 01 50.5**	**-0.7**
	comp=Z,4.2nm,0.9s,baz=161,slow=8.1,SNR=12						
	comp=Z,4.2nm,0.9s						
BJT	**Baijiatuau**	**47.21**	**337**	P	**P**	**17 01 52.9**	**+0.6**
BJI	**Beijing**	**47.22**	**337**	P	**P**	**17 01 52.3**	**-0.1**
BJI				sP	**sP**	**17 01 59.6**	**-1.2**
BJI				S	**S**	**17 08 43.8**	**-0.7**
BJI				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BJI				LR	LR		
	comp=Z,1µm,24.3s						
TNCH	**TengChong**	**47.57**	**308**	⇑P	**P**	**17 01 56.3**	**+0.6**
TNCH				pP	pP	17 01 58.8	-2.9
TNCH				PP	**PP**	**17 03 46.8**	**-0.5**
TNCH				S	**S**	**17 08 52.9**	**+2.5**
TNCH				sS	sS	17 09 00.9	+0.6
TNCH				SS	**SS**	**17 12 13.1**	**-5.6**
TNCH				pmax	pmax		
	comp=Z,32nm,0.9s						
TNCH				pmax	pmax		
	comp=Z,140nm,3.0s						
TNCH				LR	LR		
	comp=Z,640nm,14.9s						
TNCH				LR	LR		
	comp=Z,640nm,16.1s						
TNCH				LR	LR		
	comp=Z,950nm,20.4s						
MDJ	**Mudanjiang**	**47.80**	**351**	P	**P**	**17 01 57.1**	**+0.3**
MDJ				pP	pP	17 01 59.0	-3.9
MDJ				PcP	**PcP**	**17 03 27.4**	**+1.8**
MDJ				S	**S**	**17 08 54.3**	**+1.7**
MDJ				pmax	pmax		
	comp=Z,12nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,270nm,5.3s						
MDJ				LR	LR		
	comp=Z,1µm,16.8s						
MDJ				LR	LR		
	comp=Z,770nm,21.5s						
MDJ				LR	LR		
	comp=Z,2µm,17.3s						
MDJ	**Mudanjiang**	**47.80**	**351**	P	**P**	**17 01 58.3**	**+1.5**
TOZ	**Tahuroa Road**	**48.61**	**140**	P	**P**	**17 02 06.0**	**+2.8**
QRZ	**Quartz Range**	**48.79**	**146**	P	**P**	**17 02 02.9**	**-1.7**
JCZ	**Jackson Bay**	**49.13**	**151**	P	**P**	**17 02 10.2**	**+3.0**
JCZ	**Jackson Bay**	**49.13**	**151**	P	**P**	**17 02 09.9**	**+2.7**
BNX	**BinXian**	**49.25**	**350**	⇓P	**P**	**17 02 08.3**	**+0.3**
BNX				S	**S**	**17 09 13.3**	**+0.2**
BNX				pmax	pmax		
	comp=Z,19nm,0.9s						
BNX				pmax	pmax		
	comp=Z,170nm,6.6s						
BNX				LR	LR		
	comp=Z,1µm,18.6s						
BNX				LR	LR		
	comp=Z,320nm,19.6s						
BNX				LR	LR		
	comp=Z,2µm,18.8s						
WVZ	**Waitaha Valley**	**49.37**	**149**	P	**P**	**17 02 11.5**	**+2.5**
NNZ	**Nelson**	**49.53**	**145**	P	**P**	**17 02 10.7**	**+0.5**
YSS	**Yuzhno-Sakhali**	**49.62**	**4**	P	**P**	**17 02 09.9**	**-0.9**
YSS	**Yuzhno-Sakhali**	**49.62**	**4**	P	**P**	**17 02 10.1**	**-0.6**
THZ	**Tophouse**	**49.62**	**146**	P	**P**	**17 02 12.3**	**+1.3**
MLZ	**Mavora Lakes**	**49.79**	**153**	P	**P**	**17 02 12.3**	**+0.1**
HHC	**Hu-ho-hao-te**	**49.85**	**333**	⇓*i*P	**P**	**17 02 13.9**	**+1.1**
HHC				sP	sP	17 02 23.8	+2.6
HHC				S	**S**	**17 09 24.9**	**+3.1**
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						
HHC				pmax	pmax		
	comp=Z,150nm,6.7s						
HHC				LR	LR		
	comp=Z,1µm,22.5s						
HHC				LR	LR		
	comp=Z,630nm,21.0s						
HHC				LR	LR		
	comp=Z,2µm,21.9s						
URZ	**Urewera**	**49.95**	**140**	P	**P**	**17 02 14.7**	**+1.2**
LTZ	**Lake Taylor**	**49.97**	**148**	P	**P**	**17 02 14.4**	**+0.8**
LTZ				IAmb	IAmb	17 03 06.1	
	comp=Z,81nm,1.2s						
LTZ	**Lake Taylor**	**49.97**	**148**	P	**P**	**17 02 15.6**	**+2.0**
RPZ	**Rata Peaks**	**49.99**	**149**	P	**P**	**17 02 14.8**	**+1.0**
RPZ	**Rata Peaks**	**49.99**	**149**	P	**P**	**17 02 15.1**	**+1.4**
TCW	**Tory Channel**	**50.03**	**145**	P	**P**	**17 02 15.0**	**+0.9**
LBZ	**Lake Benmore**	**50.04**	**151**	P	**P**	**17 02 16.7**	**+2.6**
RTZ	**Ruatahuna**	**50.07**	**141**	P	**P**	**17 02 16.2**	**+1.7**
BKZ	**Black Stump Fm**	**50.09**	**141**	P	**P**	**17 02 16.4**	**+1.8**
BKZ	**Black Stump Fm**	**50.09**	**141**	P	**P**	**17 02 15.6**	**+1.0**
HAZ	**Te Kaha**	**50.10**	**139**	P	**P**	**17 02 16.2**	**+1.6**
WHZ	**Wether Hill Ro**	**50.12**	**153**	P	**P**	**17 02 16.0**	**+1.3**
MWZ	**Matawai**	**50.26**	**140**	P	**P**	**17 02 17.7**	**+1.8**
TSZ	**Takapari Road**	**50.30**	**143**	P	**P**	**17 02 17.7**	**+1.5**
LZH	**Lanzhou**	**50.36**	**323**	*e*P	**P**	**17 02 18.1**	**+1.3**
LZH				sP	sP	17 02 28.3	+3.0
LZH				S	**S**	**17 09 30.5**	**+1.2**
LZH				pmax	pmax		
	comp=Z,64nm,1.6s						
LZH				pmax	pmax		
	comp=Z,310nm,5.1s						
LZH				LR	LR		
	comp=Z,1µm,15.2s						
LZH				LR	LR		
	comp=Z,1µm,19.0s						
LZH				LR	LR		
	comp=Z,3µm,17.1s						
BTO	**Baotou**	**50.36**	**332**	*e*P	**P**	**17 02 18.0**	**+1.3**
BTO				S	**S**	**17 09 30.1**	**+1.1**
BTO				SS	**SS**	**17 12 59.0**	**-4.1**
BTO				pmax	pmax		
	comp=Z,30nm,0.6s						
BTO				pmax	pmax		
	comp=Z,1µm,4.7s						
BTO				LR	LR		
	comp=Z,3µm,19.0s						
BTO				LR	LR		
	comp=Z,2µm,21.5s						
BTO				LR	LR		
	comp=Z,4µm,19.0s						
KHZ	**Kahutara**	**50.41**	**146**	P	**P**	**17 02 18.8**	**+2.0**
MRZ	**Mangatainoka R**	**50.45**	**143**	P	**P**	**17 02 17.9**	**+0.7**
GVZ	**Greta Valley S**	**50.51**	**147**	P	**P**	**17 02 18.6**	**+1.0**
PUZ	**Puketiti**	**50.58**	**139**	P	**P**	**17 02 19.3**	**+1.0**
XLT	**XiLinHaoTe**	**50.59**	**339**	*e*P	**P**	**17 02 18.3**	**0.0**
XLT				pP	sP	17 02 28.0	+1.2
XLT				S	**S**	**17 09 31.1**	**-0.9**
XLT				sS	sS	17 09 47.1	+5.1
XLT				ScS	**ScS**	**17 12 00.6**	**-7.9**
XLT				pmax	pmax		
	comp=Z,12nm,0.9s						
XLT				LR	LR		
	comp=Z,140nm,20.8s						
XLT				LR	LR		
	comp=Z,840nm,20.0s						
XLT				LR	LR		
	comp=Z,1µm,22.5s						
PXZ	**Pawanui**	**50.84**	**142**	P	**P**	**17 02 22.3**	**+2.2**
BFZ	**Birch Farm**	**50.86**	**143**	P	**P**	**17 02 21.0**	**+0.6**
TUZ	**Tuapeka**	**50.93**	**152**	P	**P**	**17 02 23.9**	**+3.2**
IMP	**Imphal**	**51.16**	**305**	*e*P	**P**	**17 02 22.7**	**-0.2**
IMP				IAmb	IAmb	17 02 23.5	
	comp=Z,56nm,0.8s						
TEZP	**TEZPUR**	**52.87**	**307**	*e*P	**P**	**17 02 35.6**	**+0.1**
TEZP				IAmb	IAmb	17 02 36.1	
	comp=Z,42nm,0.7s						
HEH	**HeiHe**	**53.63**	**351**	*e*P	**P**	**17 02 40.1**	**-0.6**
HEH				S	**S**	**17 10 12.3**	**-1.0**
HEH				sS	**sS**	**17 10 28.4**	**+5.1**
HEH				pmax	pmax		
	comp=Z,16nm,1.2s						
HEH				LR	LR		
	comp=Z,1µm,17.1s						
HEH				LR	LR		
	comp=Z,1µm,18.9s						
HEH				LR	LR		
	comp=Z,2µm,18.7s						
TAWA	**Tawang**	**54.04**	**307**	*e*P	**P**	**17 02 43.0**	**-1.6**
TAWA				IAmb	IAmb	17 02 46.4	
	comp=Z,47nm,0.6s						
GTA	**Gaotai**	**54.95**	**324**	P	**P**	**17 02 52.3**	**+1.6**
GTA				sP	sP	17 03 00.0	+0.8
GTA				pmax	pmax		
	comp=Z,18nm,1.1s						
GTA				pmax	pmax		
	comp=Z,170nm,4.8s						
GTA				LR	LR		
	comp=Z,830nm,21.9s						
GTA				LR	LR		
	comp=Z,1µm,21.9s						
GTA				LR	LR		
	comp=Z,1µm,20.7s						
LSA	**Lhasa**	**55.55**	**309**	P	**P**	**17 02 56.4**	**+0.8**
LSA				S	**S**	**17 10 41.3**	**+0.4**
LSA				LR	LR		
	comp=Z,410nm,18.7s						

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LSA                               LR     LR
      comp=Z,730nm,17.6s
GOMU  GeErMu            56.18 318 P      P      17 03 01.3 +1.4
GOMU                              pP     pP     17 03 05.3 -0.8
GOMU                              sP     sP     17 03 07.4 -1.0
GOMU                              PcP    PcP    17 03 50.6 -7.1
GOMU                              S      S      17 10 51.5 +2.7
GOMU                              sS     sS     17 11 08.0 +9.1
GOMU                              pmax   pmax
      comp=Z,5.0nm,0.8s
GOMU                              LR     LR
      comp=Z,330nm,18.5s
GOMU                              LR     LR
      comp=Z,450nm,16.1s
GOMU                              LR     LR
      comp=Z,440nm,16.4s
GTK   Tadong            56.56 305 eP     P      17 03 02.0 -0.6
GTK                               IAmb   IAmb   17 03 03.9
      comp=Z,42nm,0.8s
ULN   Ulaanbaatar       57.39 335 P      P      17 03 08.4 +0.4
SONM  Songino Array     57.64 335 P      P      17 03 10.1 +0.3
SONM  Songino Array     57.64 335 P      P      17 03 10.1 +0.3
      comp=Z,6.3nm,0.7s,baz=152,slow=8.6,SNR=23
      comp=Z,6.3nm,0.7s
PEA0B Petropavlovsk-    57.93  14 P      P      17 03 11.6  0.0
PEA0B                             IAmb   IAmb   17 04 04.2
      comp=Z,130nm,1.4s
PETK  Petropavlovsk-    57.93  14 P      P      17 03 11.1 -0.5
      comp=Z,3.3nm,0.6s,baz=186,slow=6.2,SNR=18
      comp=Z,3.3nm,0.6s
PET   Petropavlovsk     58.08  14 P      P      17 03 13.1 +0.5
EVN   Everest           58.26 305 IAmb   IAmb   17 04 20.8
      comp=Z,159nm,1.8s
RAGD  RAYAGADA          58.30 295 eP     P      17 03 14.1 -0.7
RAGD                              IAmb   IAmb   17 03 16.1
      comp=Z,46nm,0.7s
PALK  Pallekele         58.51 280 P      P      17 03 16.5 +0.2
      comp=Z,13nm,0.8s,baz=61,slow=6.6,SNR=4.5
      comp=Z,13nm,0.8s
VJD   Vijayawada        60.21 291 eP     P      17 03 27.2 -0.8
VJD                               IAmb   IAmb   17 03 41.5
      comp=Z,49nm,1.2s
KOD   Kodaikanal        62.09 283 eP     P      17 03 40.2 -1.0
KOD                               IAmb   IAmb   17 03 42.6
      comp=Z,41nm,1.1s
HYB   Hyderabad         62.37 291 eP     P      17 03 42.6 -0.1
HYB                               ePP    PP     17 06 01.4 +1.3
HYB                               eS     S      17 12 09.9 +1.0
HYB                               eScS   ScS    17 13 34.9 +0.3
MA2   Magadan           62.87   7 P      P      17 03 45.0 -0.1
MA2   Magadan           62.87   7 P      P      17 03 46.8 +1.6
NRDN  NARMADA NAGAR64.88 297 eP     P      17 04 02.1 +2.9
NRDN                              IAmb   IAmb   17 04 02.6
      comp=Z,46nm,0.8s
WMQ   Urumqi            64.88 322 eP     P      17 03 59.0 +0.1
WMQ                               S      S      17 12 42.0 +2.6
WMQ                               pmax   pmax
      comp=Z,36nm,0.7s
WMQ                               pmax   pmax
      comp=Z,150nm,5.1s
WMQ                               LR     LR
      comp=Z,990nm,19.1s
WMQ                               LR     LR
      comp=Z,570nm,16.7s
WMQ                               LR     LR
      comp=Z,620nm,20.7s
YAK   Yakutsk           64.93 355 P      P      17 03 58.7  0.0
CASY  Casey             66.41 192 P      P      17 04 08.9 +0.8
SMLA  Simla             67.24 305 eP     P      17 04 14.6 +0.4
SMLA                              IAmb   IAmb   17 04 27.6
      comp=Z,42nm,1.1s
DHRM  DHARAMSHALA       68.29 306 eP     P      17 04 20.5 -0.6
DHRM                              IAmb   IAmb   17 04 33.8
      comp=Z,42nm,0.9s
ZSN   Zaisan            68.44 324 eP     P      17 04 22.1 +0.7
      comp=Z,8.5nm,0.6s
STCH  Steam Cracks      68.78  68 P      P      17 04 23.8 -0.4
MKAR  Makanchi Array    69.67 322 P      P      17 04 29.3 +0.2
MKAR  Makanchi Array    69.67 322 P      P      17 04 29.1  0.0
      comp=Z,21nm,1.0s,baz=113,slow=8.0,SNR=70
      comp=Z,21nm,1.0s
MAKZ  Makanchi          69.86 322 P      P      17 04 29.9 -0.4
SHLS  Shalkode          69.88 318 eP     P      17 04 29.5 -1.1
      comp=Z,15nm,1.3s
UZB   Uzynbulak         70.17 318 eP     P      17 04 33.0 +0.6
      comp=Z,20nm,1.4s
KPKS  Kokpek            70.52 318 eP     P      17 04 35.1 +0.6
SATY  Saty              70.55 318 eP     P      17 04 35.3 +0.6
      comp=Z,21nm,1.5s
KSH   Kashi             70.93 313 P      P      17 04 38.8 +1.7
KSH                               sP     sP     17 04 46.8 +1.1
KSH                               S      S      17 13 49.5 -2.6
KSH                               pmax   pmax
      comp=Z,12nm,1.2s
KSH                               pmax   pmax
      comp=Z,170nm,5.0s
KSH                               LR     LR
      comp=Z,520nm,21.3s
KSH                               LR     LR
      comp=Z,950nm,19.9s
KSH                               LR     LR
      comp=Z,2µm,23.7s
NIL   Nilore            71.16 307 P      P      17 04 38.4  0.0
TDK   Taldyqorghan      71.33 320 eP     P      17 04 39.9 +0.7
      comp=Z,23nm,1.4s
MDOK  Medeo             71.50 317 eP     P      17 04 41.1 +0.5
AAA   Alma-Ata          71.61 317 eP     P      17 04 41.7 +0.6
      comp=Z,13nm,0.8s
ZALV  Zalesovo Beam     71.84 330 P      P      17 04 41.2 -0.9
ZALV  Zalesovo Beam     71.84 330 P      P      17 04 41.4 -0.7
      comp=Z,7.3nm,0.8s,baz=104,slow=6.3,SNR=13
      comp=Z,7.3nm,0.8s
PPT2  Papeete2          71.97 108 ePKP1  P      17 04 42.5 -1.2
      comp=Z,122nm,25.5s
PPT2                              eS     S      17 14 05.6 +0.9
      comp=Z,384nm,26.2s
PPT2                              eLQ    LQ     17 23 35.5
      comp=Z,939nm,36.8s
PPT2                              eLR    LR     17 26 38.8
      comp=Z,1µm,23.0s
PPT2                              eLR    LR     17 26 39.3
      comp=Z,1µm,23.2s
TBI   Tubuai            72.45 114 eP     P      17 04 47.3 +0.9
      comp=Z,436nm,26.8s
TBI                               eS     S      17 14 07.9 -2.1
      comp=Z,1µm,28.5s
TBI                               eSS    SS     17 18 46.0 -2.9
      comp=Z,2µm,30.8s
TBI                               eLR    LR     17 26 46.7
      comp=Z,7µm,25.0s
TBI                               eLR    LR     17 26 53.3
      comp=Z,2µm,27.8s
UNV   Unalaska Valle    72.47  31 P      P      17 04 46.0 +0.2
      baz=239
P08K  Saint George I    72.49  27 P      P      17 04 46.4 +0.5
      baz=236
AAK   Ala-Archa         73.06 316 P      P      17 04 50.3 +0.5
AAK   Ala-Archa         73.06 316 P      P      17 04 50.0 +0.1
      comp=Z,4.2nm,0.8s,baz=122,slow=6.2,SNR=8.8
      comp=Z,4.2nm,0.8s
BILL  Bilibino          73.23  11 P      P      17 04 49.5 -0.6
KURK  Kurchatov         73.60 325 P      P      17 04 51.9 -0.7
KURBB Kurchatov Arra    73.61 325 P      P      17 04 52.5 -0.3
      comp=Z,7.4nm,1.1s,baz=113,slow=5.8,SNR=30
      comp=Z,7.4nm,1.1s
BTLS  Baital            74.20 318 eP     P      17 04 56.8 +0.4
TIXI  Tiksi             74.51 357 P      P      17 04 56.5 -1.0
TIXI                              IAmb   IAmb   17 05 50.2
      comp=Z,70nm,1.4s
BTK   Batken            74.87 313 IAmb   IAmb   17 06 10.7
      comp=Z,75nm,1.4s
DZA   Taraz             75.35 316 eP     P      17 05 03.6 +0.5
      comp=Z,6.7nm,0.7s
S12K  Black Hills       75.62  30 IAmb   IAmb   17 05 07.8
      comp=Z,77nm,0.8s
S12K  Black Hills       75.62  30 P      P      17 05 04.3  0.0
      baz=243
VNDA  Vanda             75.78 175 P      P      17 05 04.9 +0.1
VNDA  Vanda             75.78 175 P      P      17 05 05.2 +0.4
      comp=Z,11nm,1.0s,baz=316,slow=5.0,SNR=25
      comp=Z,11nm,1.0s
SIMJ  Simiganj          75.83 311 P      P      17 05 05.7 -0.3
GAMB  Gambell           75.88  20 P      P      17 05 06.2 +0.6
      baz=232
KKAR  Karatay Array     75.98 316 P      P      17 05 06.4 -0.3
KKAR  Karatay Array     75.98 316 IAmb   IAmb   17 06 10.6
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      comp=Z,79nm,1.6s
M11K  Mekoryuk          76.04  25 P      P      17 05 07.1 +0.6
      baz=238
IUG   Iuzhnay           76.04 315 eP     P      17 05 07.5 +0.4
      comp=Z,14nm,1.3s
SDPT  Sand Point        76.27  31 P      P      17 05 07.6 -0.4
SDPT  Sand Point        76.27  31 P      P      17 05 10.9 +3.0
SDPT  Sand Point        76.27  31 P      P      17 05 07.9  0.0
      baz=244
CHM   Chimkent          76.39 315 eP     P      17 05 09.5 +0.5
      comp=Z,6.2nm,0.4s
CHNA  Chernabura Isl    76.50  32 P      P      17 05 09.1 -0.2
      baz=245
SBA   Scott Base        76.55 174 P      P      17 05 09.0 -0.2
SBA                               IAmb   IAmb   17 06 03.3
      comp=Z,164nm,1.9s
BRZS  Berezniki         76.81 323 eP     P      17 05 11.4 +0.2
S14K  Fog Glacier       77.14  30 P      P      17 05 13.3 +0.3
      baz=245
M13K  Dall Lake         77.27  26 P      P      17 05 14.5 +1.1
      baz=240
K13K  Kusilvak Mount    77.49  24 P      P      17 05 15.5 +0.8
      baz=239,SNR=16
O14K  Tigyukauivet M    77.64  27 P      P      17 05 16.1 +0.5
      baz=243
N14K  Kuskokwak Cree    77.76  26 P      P      17 05 16.9 +0.6
      baz=242
L14K  Kuka Creek        78.01  25 P      P      17 05 18.2 +0.6
      baz=241,SNR=36
M14K  Bethel            78.03  26 P      P      17 05 18.4 +0.7
      baz=242,SNR=18
TNA   Tin City          78.25  20 P      P      17 05 19.0 +0.1
      baz=235
O15K  Ungalikthiuk R    78.27  28 P      P      17 05 19.4 +0.3
      baz=244
J14K  Nanvaranak Lak    78.35  23 P      P      17 05 20.2 +0.8
      baz=240
M15K  Kasigluk River    78.56  26 P      P      17 05 21.1 +0.5
      baz=243,SNR=17
N15K  Kwethluk River    78.59  27 IAmb   IAmb   17 06 12.8
      comp=Z,112nm,1.6s
N15K  Kwethluk River    78.59  27 P      P      17 05 21.4 +0.5
      baz=244,SNR=9.0
L15K  Ungalak Mounta    78.67  25 P      P      17 05 21.5 +0.2
      baz=242,SNR=11
F14K  Arctic Creek      78.75  20 P      P      17 05 22.4 +0.7
      baz=237
K15K  Wolf Creek Mou    78.95  24 IAmb   IAmb   17 06 15.0
      comp=Z,181nm,1.9s
K15K  Wolf Creek Mou    78.95  24 P      P      17 05 23.7 +0.9
      baz=242,SNR=17
CHIR  Chirikof Islan    78.98  32 P      P      17 05 23.6 +0.5
      baz=248
P16K  Nushagak River    79.06  28 P      P      17 05 23.5 +0.1
      baz=246
BVAR  Borovoye Array    79.20 325 P      P      17 05 24.5 +0.1
      comp=Z,14nm,0.8s,baz=109,slow=8.0,SNR=28
      comp=Z,14nm,0.8s
O16K  Kokwok River B    79.25  28 P      P      17 05 24.8 +0.4
      baz=245,SNR=14
BRVK  Borovoye          79.27 325 P      P      17 05 24.7  0.0
N16K  Nishlik Lake      79.31  27 P      P      17 05 25.6 +0.8
      baz=245,SNR=13
G15K  Niukluk           79.31  21 P      P      17 05 25.0 +0.3
      baz=239
M16K  Timber Creek      79.47  26 IAmb   IAmb   17 05 38.1
      comp=Z,54nm,1.1s
M16K  Timber Creek      79.47  26 P      P      17 05 26.3 +0.6
      baz=244,SNR=12
F15K  North Star Dit    79.47  21 P      P      17 05 26.0 +0.4
      baz=238
L16K  Owhat River       79.54  25 P      P      17 05 26.5 +0.4
      baz=244,SNR=9.1
Q16K  King Salmon       79.55  29 P      P      17 05 26.1 -0.1
      baz=247
Q17K  Contact Creek     79.77  29 P      P      17 05 26.7 -0.8
      baz=248,SNR=7.7
O17K  Koliganek Bris    79.78  28 P      P      17 05 28.1 +0.8
      baz=246,SNR=29
J16K  Anvik River       79.79  24 IAmb   IAmb   17 06 30.1
      comp=Z,133nm,1.6s
J16K  Anvik River       79.79  24 P      P      17 05 28.3 +1.0
      baz=242
H16K  Elim              79.80  22 P      P      17 05 28.0 +0.6
      baz=241
P17K  Kvichak River     79.86  28 P      P      17 05 27.2 -0.6
      baz=247
SII   Sitkinak Islan    80.00  31 P      P      17 05 30.5 +1.8
SII   Sitkinak Islan    80.00  31 P      P      17 05 28.8 +0.2
      baz=249
I17K  Unalakleet        80.03  23 P      P      17 05 29.7 +1.1
      baz=242
N17K  Nushagak Hills    80.05  27 P      P      17 05 29.6 +0.8
      baz=246,SNR=12
G16K  Koyuk River       80.13  21 P      P      17 05 29.6 +0.4
      baz=240
R18K  Karluk            80.22  30 P      P      17 05 29.8  0.0
      baz=249
L17K  Donlin            80.23  25 P      P      17 05 30.7 +0.9
      baz=245,SNR=7.8
M17K  Holitna River     80.29  26 P      P      17 05 31.2 +1.0
      baz=246,SNR=14
Q18K  Katmai Hardscr    80.34  29 P      P      17 05 29.7 -0.9
      baz=248,SNR=9.4
J17K  VABM Dome         80.45  24 IAmb   IAmb   17 06 27.1
      comp=Z,169nm,1.8s
J17K  VABM Dome         80.45  24 P      P      17 05 31.8 +0.9
      baz=244
K17K  Iditarod          80.48  25 IAmb   IAmb   17 05 43.8
      comp=Z,73nm,1.0s
K17K  Iditarod          80.48  25 P      P      17 05 32.0 +1.0
      baz=245
P18K  Big Mountain,     80.51  28 P      P      17 05 32.0 +0.6
      baz=248
C16K  Lisburne Hills    80.61  18 P      P      17 05 32.4 +0.7
      baz=237
OHAK  Old Harbor        80.69  31 P      P      17 05 34.1 +1.8
OHAK  Old Harbor        80.69  31 P      P      17 05 32.6 +0.3
      baz=250,SNR=6.8
O18K  Koktuh Hills      80.69  28 P      P      17 05 33.1 +0.8
      baz=248
N18K  Kilae Creek       80.69  27 IAmb   IAmb   17 06 25.5
      comp=Z,99nm,1.5s
N18K  Kilae Creek       80.69  27 P      P      17 05 33.1 +0.7
      baz=247,SNR=7.9
G17K  Kiwalik Mounta    80.81  22 P      P      17 05 33.6 +0.8
      baz=242
H17K  Granite Mounta    80.82  22 P      P      17 05 33.8 +0.9
      baz=243
L18K  Granite Mounta    80.95  25 IAmb   IAmb   17 06 28.8
      comp=Z,95nm,1.4s
L18K  Granite Mounta    80.95  25 P      P      17 05 34.5 +0.9
      baz=246,SNR=13
D17K  Noatak River      81.03  19 P      P      17 05 34.5 +0.5
      baz=240
M18K  Stony River       81.04  26 P      P      17 05 34.9 +0.8
      baz=247,SNR=12
TAOE  Nuku Hiva Isla    81.06  98 ePKP1  P      17 05 29.9 -5.5
      comp=Z,97nm,25.3s
TAOE  Nuku Hiva Isla    81.06  98 eS     S      17 15 42.9 -1.7
      comp=Z,119nm,26.7s
TAOE                              eSS    SS     17 21 03.0 +3.3
      comp=Z,276nm,27.6s
TAOE                              eLR    LR     17 30 51.5
      comp=Z,1µm,24.5s
Q19K  Cape Douglas,     81.10  29 P      P      17 05 35.3 +0.7
      baz=250
E17K  Hotham Inlet      81.15  20 P      P      17 05 35.4 +0.8
      baz=241
O19K  Port Alsworth     81.23  28 P      P      17 05 35.7 +0.5
      baz=249
KDAK  Kodiak Island     81.23  30 P      P      17 05 35.4 +0.2
KDAK  Kodiak Island     81.23  30 P      P      17 05 35.6 +0.4
      baz=251
RDOG  Red Dog Mine      81.27  19 P      P      17 05 35.8 +0.5
      baz=240
N19K  Bonanza Creek     81.38  27 IAmb   IAmb   17 06 30.8
      comp=Z,126nm,1.4s
N19K  Bonanza Creek     81.38  27 P      P      17 05 36.5 +0.4
      baz=248,SNR=9.5
C17K  DeLong Mountai    81.40  19 P      P      17 05 36.3 +0.3
      baz=239
J18K  Innoko River      81.45  24 P      P      17 05 36.6 +0.3
      baz=246,SNR=10
H18K  Honhosa River     81.50  22 P      P      17 05 36.9 +0.4
      baz=244
P19K  Oil Pt            81.55  28 P      P      17 05 37.6 +0.6
      baz=250
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Q20K  Shuyak Island     81.61  30 P      P      17 05 37.2  0.0
      baz=251
F18K  Selawik           81.68  21 P      P      17 05 37.3 -0.1
      baz=243
G18K  Tagagawik         81.72  22 P      P      17 05 37.9 +0.2
      baz=244
E18K  Tukpahlearik C    81.73  20 P      P      17 05 38.1 +0.5
      baz=242
L19K  White Mountain    81.73  26 IAmb   IAmb   17 06 33.3
      comp=Z,80nm,1.3s
L19K  White Mountain    81.73  26 P      P      17 05 38.3 +0.5
      baz=248,SNR=21
M19K  Big River Lodg    81.83  26 P      P      17 05 38.7 +0.3
      baz=248,SNR=9.2
GCSA  Galena City Sc    81.91  23 P      P      17 05 38.7 +0.1
      baz=246
MAW   Mawson            82.02 202 P      P      17 05 39.8 +0.6
      comp=Z,25nm,1.1s,baz=79,slow=6.5,SNR=26
      comp=Z,25nm,1.1s
J19K  Poorman           82.10  24 P      P      17 05 40.1 +0.4
      baz=247,SNR=14
C18K  Utukok River      82.12  19 P      P      17 05 39.7 -0.1
      baz=241,SNR=7.5
L20K  Farewell, AK      82.26  26 P      P      17 05 40.9 +0.2
      baz=249,SNR=9.1
B18K  Kokolik River     82.28  18 P      P      17 05 41.1 +0.6
      baz=240
HOM   Homer             82.31  29 P      P      17 05 39.4 -1.5
      baz=251
M20K  Styx River        82.38  26 IAmb   IAmb   17 06 40.8
      comp=Z,60nm,1.2s
M20K  Styx River        82.38  26 P      P      17 05 41.6 +0.3
      baz=250,SNR=13
H19K  Roundabout Mou    82.39  22 IAmb   IAmb   17 06 34.9
      comp=Z,103nm,1.6s
H19K  Roundabout Mou    82.39  22 P      P      17 05 41.8 +0.6
      baz=246,SNR=15
G19K  Purcell Mounta    82.41  22 P      P      17 05 41.8 +0.6
      baz=245,SNR=16
K20K  Telida            82.50  25 P      P      17 05 42.7 +0.8
      baz=248
J20K  Nowinta River     82.77  24 IAmb   IAmb   17 06 36.9
      comp=Z,85nm,1.4s
J20K  Nowinta River     82.77  24 P      P      17 05 43.8 +0.6
      baz=248
BRSE  Bradley Lake S    82.78  29 P      P      17 05 44.0 +0.6
      baz=252
C19K  Lookout Ridge     82.85  19 P      P      17 05 44.3 +0.7
      baz=243,SNR=16
I20K  Naaghedeneel      82.87  23 P      P      17 05 44.2 +0.5
      baz=248
E19K  Redstone River    82.91  20 P      P      17 05 44.4 +0.6
      baz=245
A19K  Wainwright        82.91  17 P      P      17 05 44.6 +0.8
      baz=241
H20K  Anotleneega Mo    82.98  23 P      P      17 05 44.6 +0.3
      baz=248,SNR=7.9
D19K  Kuna River        83.05  19 P      P      17 05 44.9 +0.3
      baz=244
SKT   Skwentna          83.12  27 P      P      17 05 43.8 -1.3
      baz=251
PPLA  Purkeypile        83.14  26 P      P      17 05 44.8 -0.5
      baz=250
F20K  Avaraart Lake     83.28  21 P      P      17 05 46.1 +0.4
      baz=247,SNR=25
SUA   Susitna One       83.31  27 P      P      17 05 45.2 -1.0
      baz=252,SNR=5.2
CAST  Castle Rocks      83.36  25 IAmb   IAmb   17 06 37.4
      comp=Z,73nm,1.6s
CAST  Castle Rocks      83.36  25 P      P      17 05 46.0 -0.3
      baz=250
CHUM  Lake Minchumin    83.42  25 P      P      17 05 46.8 +0.2
      baz=250
O22K  Cooper Landing    83.49  28 P      P      17 05 46.7 -0.2
      baz=253
SEW   Seward            83.50  29 P      P      17 05 46.6 -0.4
      baz=253
IMAR  Indian Mountai    83.60  22 P      P      17 05 47.2 -0.2
E20K  Nigu River        83.60  20 P      P      17 05 47.9 +0.4
      baz=246
D20K  Etivluk River     83.65  19 P      P      17 05 48.1 +0.4
      baz=246
RC01  Rabbit Creek A    83.66  28 P      P      17 05 47.3 -0.6
      baz=253,SNR=7.9
M22K  Willow            83.69  27 P      P      17 05 47.5 -0.4
      baz=252
CUT   Chulitna          83.82  26 P      P      17 05 47.8 -0.8
      baz=252
H21K  Melozitna Rive    83.84  23 IAmb   IAmb   17 06 42.6
      comp=Z,49nm,1.4s
H21K  Melozitna Rive    83.84  23 P      P      17 05 48.8  0.0
      baz=249,SNR=10.0
G21K  Allakaket         83.88  22 P      P      17 05 49.2 +0.3
      baz=249
B20K  Meade River       84.02  18 P      P      17 05 49.7 +0.2
      baz=245
BPAW  Bear Paw Mtn.     84.05  25 IAmb   IAmb   17 06 43.9
      comp=Z,48nm,1.5s
BPAW  Bear Paw Mtn.     84.05  25 P      P      17 05 49.5 -0.3
      baz=251
PMR   Palmer            84.09  27 IAmb   IAmb   17 06 00.4
      comp=Z,32nm,0.9s
PMR   Palmer            84.09  27 P      P      17 05 50.9 +0.9
PMR   Palmer            84.09  27 P      P      17 05 49.4 -0.6
      baz=253
TRF   Thorofare Moun    84.14  25 P      P      17 05 50.9 +0.5
      baz=252
F21K  Alatna River      84.15  21 P      P      17 05 50.0 -0.3
      baz=249
GHO   Glory Hole Cre    84.23  27 IAmb   IAmb   17 06 44.7
      comp=Z,76nm,1.5s
PWL   Port Wells        84.25  28 IAmb   IAmb   17 06 02.2
      comp=Z,66nm,1.0s
PWL   Port Wells        84.25  28 P      P      17 05 50.6 -0.3
      baz=254,SNR=6.4
KNK   Knik Glacier      84.35  28 P      P      17 05 51.1 -0.2
      baz=254,SNR=8.6
C21K  Knifeblade Rid    84.43  19 P      P      17 05 52.3 +0.7
      baz=247,SNR=8.2
E21K  Killik River      84.43  20 P      P      17 05 52.1 +0.5
      baz=248,SNR=7.2
MLY   Manley            84.45  24 P      P      17 05 52.2 +0.3
      baz=251,SNR=16
P23K  Montague Islan    84.46  29 P      P      17 05 52.0  0.0
      baz=255
H22K  Ishtalitna Cre    84.48  23 P      P      17 05 52.4 +0.4
      baz=251,SNR=9.1
AB31  Akbulak array     84.59 320 IAmb   IAmb   17 06 56.4
      comp=Z,53nm,1.1s
ABKAR Akbulak array     84.59 320 P      P      17 05 52.1 -0.7
ABKAR Akbulak array     84.59 320 IAmb   IAmb   17 06 56.4
      comp=Z,53nm,1.1s
B21K  Ikpikpuk River    84.67  19 P      P      17 05 52.6 -0.2
      baz=247
WAT1  Susitna Watana    84.70  26 P      P      17 05 52.5 -0.7
      baz=254
F22K  John River        84.72  21 P      P      17 05 53.9 +0.7
      baz=250
A21K  Barrow            84.74  17 P      P      17 05 53.6 +0.5
      baz=245
G22K  Bettles           84.77  22 P      P      17 05 53.4 +0.1
      baz=250
M23K  Glacier View      84.79  27 P      P      17 05 53.1 -0.5
      baz=254
MCK   McKinley          84.80  25 P      P      17 05 52.6 -1.0
      baz=253,SNR=6.2
Q23K  Middleton Isla    84.83  30 P      P      17 05 52.8 -1.0
      baz=256
GLI   Glacier Island    84.84  28 IAmb   IAmb   17 06 05.2
      comp=Z,38nm,0.9s
GLI   Glacier Island    84.84  28 P      P      17 05 53.4 -0.4
      baz=255
SCM   Sheep Creek Mo    84.98  27 P      P      17 05 54.2 -0.4
      baz=255,SNR=13
NEA2  Nenana            84.99  24 P      P      17 05 54.0 -0.6
      baz=253,SNR=12
WAT6  Susitna Watana    85.00  27 P      P      17 05 54.2 -0.6
      baz=254,SNR=15
D22K  Ayikyak River     85.03  20 P      P      17 05 55.3 +0.6
      baz=249,SNR=9.8
I23K  Minto, Yukon-K    85.04  24 IAmb   IAmb   17 06 49.6
      comp=Z,92nm,1.5s
I23K  Minto, Yukon-K    85.04  24 P      P      17 05 54.7  0.0
      baz=253,SNR=17
E22K  Anaktuvuk Pass    85.07  21 P      P      17 05 55.4 +0.4
      baz=250,SNR=12
A22K  Sinclair Lake     85.09  18 P      P      17 05 55.3 +0.4
      baz=247
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H23K  Yukon River       85.17  23  P        P        17 05 55.5 +0.1
      baz=252
G23K  Bananza Creek     85.26  22  P        P        17 05 56.4 +0.5
      baz=252,SNR=26
DHY   Denali Highway    85.29  26  IAmb     IAmb     17 06 50.8
      comp=Z,69nm,1.2s
DHY   Denali Highway    85.29  26  P        P        17 05 55.8  -0.5
      baz=255,SNR=30
B22K  Teshekpuk Lake    85.32  18  P        P        17 05 56.1 +0.1
      baz=248
COLD  Coldfoot          85.35  22  P        P        17 05 56.9 +0.6
      baz=252
WRH   Wood River Hil    85.36  25  IAmb     IAmb     17 06 50.7
      comp=Z,52nm,1.2s
EYAK  Cordova Ski Ar    85.40  29  IAmb     IAmb     17 06 58.4
      comp=Z,41nm,1.3s
EYAK  Cordova Ski Ar    85.40  29  P        P        17 05 58.7 +2.1
EYAK  Cordova Ski Ar    85.40  29  P        P        17 05 56.3  -0.3
      baz=256
CCB   Clear Creek Bu    85.53  24  IAmb     IAmb     17 06 49.9
      comp=Z,80nm,1.6s
KLU   Klutina           85.54  28  IAmb     IAmb     17 06 52.4
      comp=Z,37nm,1.1s
KLU   Klutina           85.54  28  P        P        17 05 57.5   0.0
      baz=256,SNR=11
COLA  College           85.58  24  P        P        17 05 59.1 +1.7
COLA  College           85.58  24  P        P        17 05 56.9  -0.5
      baz=254
M24K  Tolsona, Glenn    85.58  27  P        P        17 05 57.6   0.0
      baz=256
D23K  Nanushuk River    85.74  20  P        P        17 05 59.4 +1.1
      baz=251,SNR=19
HDA   Harding Lake      85.82  25  P        P        17 05 57.8  -0.9
      baz=255,SNR=6.4
E23K  Chandalar         85.83  21  P        P        17 05 59.4 +0.7
      baz=252,SNR=38
H24K  Noodor Dome       85.83  23  IAmb     IAmb     17 06 50.4
      comp=Z,108nm,1.6s
H24K  Noodor Dome       85.83  23  P        P        17 05 59.0 +0.3
      baz=254,SNR=14
KAIM  Kayak Island      85.90  29  P        P        17 05 59.4 +0.3
      baz=258
ILAR  Eielson Array     85.94  24  P        P        17 05 57.6  -1.7
ILAR  Eielson Array     85.94  24  P        P        17 05 57.7  -1.6
      comp=Z,11nm,1.0s,baz=265,slow=4.4,SNR=57
      comp=Z,11nm,1.0s
TOLK  Toolik Lake Re    86.02  20  P        P        17 06 00.5 +0.8
      baz=252,SNR=16
BMRM  Bremner River     86.04  28  IAmb     IAmb     17 06 54.6
      comp=Z,46nm,1.2s
BMRM  Bremner River     86.04  28  P        P        17 05 59.6  -0.3
      baz=257,SNR=10.0
C23K  Itkillik River    86.05  19  P        P        17 05 60.0 +0.3
      baz=251,SNR=8.6
HMT   Hamilton          86.07  29  IAmb     IAmb     17 06 11.3
      comp=Z,42nm,1.0s
PAX   Paxson            86.10  26  P        P        17 05 60.0  -0.2
      baz=256,SNR=7.3
HARP  HAARP             86.11  27  P        P        17 06 00.7 +0.5
      baz=257
K24K  Donnelly Dome     86.17  26  P        P        17 06 01.1 +0.6
      baz=256,SNR=5.3
N25K  Chitina, Valde    86.19  28  IAmb     IAmb     17 06 52.2
      comp=Z,98nm,1.9s
N25K  Chitina, Valde    86.19  28  P        P        17 06 00.7 +0.1
      baz=257
G24K  Hadweenzic Riv    86.22  23  P        P        17 06 01.2 +0.5
      baz=254,SNR=13
E24K  Your Creek        86.24  21  IAmb     IAmb     17 07 16.1
      comp=Z,47nm,1.4s
E24K  Your Creek        86.24  21  P        P        17 06 01.4 +0.7
      baz=253
F24K  Squaw Lake        86.30  22  P        P        17 06 01.9 +0.9
      baz=254,SNR=21
D24K  Happy Valley      86.43  20  P        P        17 06 02.3 +0.7
      baz=253,SNR=12
GLB   Gilahina Butte    86.52  28  IAmb     IAmb     17 06 53.5
      comp=Z,88nm,1.7s
J25K  Salcha River,     86.54  25  IAmb     IAmb     17 06 57.5
      comp=Z,52nm,1.3s
J25K  Salcha River,     86.54  25  P        P        17 06 01.4  -0.9
      baz=256,SNR=19
RIDG  Independent Ri    86.56  26  IAmb     IAmb     17 06 54.4
      comp=Z,105nm,1.7s
RIDG  Independent Ri    86.56  26  P        P        17 06 01.9  -0.5
      baz=257,SNR=15
C24K  Franklin Bluff    86.64  19  P        P        17 06 02.8 +0.2
      baz=253
PRP   Porcupine Dome    86.69  24  P        P        17 06 03.1   0.0
      baz=256
CRQM  Cirque            86.70  29  IAmb     IAmb     17 06 14.6
      comp=Z,46nm,1.0s
CRQE  Cirque            86.72  29  P        P        17 06 03.3   0.0
      baz=259,SNR=5.6
H25L  Birch Creek       86.75  23  P        P        17 06 03.5 +0.3
      baz=256
G25K  Bearman Lake      86.77  23  P        P        17 06 04.0 +0.7
      baz=256,SNR=7.8
MENT  Mentasta          86.88  27  IAmb     IAmb     17 06 55.4
      comp=Z,62nm,1.6s
MENT  Mentasta          86.88  27  P        P        17 06 05.4 +1.4
DOT   Dot Lake          86.88  26  IAmb     IAmb     17 06 55.0
      comp=Z,94nm,1.6s
MCARA McCarthy VSAT     86.88  28  P        P        17 06 03.9   0.0
      baz=259
SCRK  Sand Creek        86.98  26  IAmb     IAmb     17 06 55.8
      comp=Z,57nm,1.6s
SCRK  Sand Creek        86.98  26  P        P        17 06 04.2  -0.3
      baz=258,SNR=8.9
L26K  Log Cabin Wild    87.06  27  P        P        17 06 05.0 +0.2
      baz=258
M26K  Nabesna, AK       87.09  27  P        P        17 06 05.0   0.0
      baz=259
F25K  Christian Rive    87.15  22  IAmb     IAmb     17 06 57.5
      comp=Z,98nm,1.6s
F25K  Christian Rive    87.15  22  P        P        17 06 06.1 +0.9
      baz=256,SNR=15
QSPA  South Pole Qui    87.22 180  P        P        17 06 06.2 +0.5
      comp=Z,38nm,1.0s,baz=324,slow=1.4,SNR=92
      comp=Z,38nm,1.0s
J26L  Joseph Creek      87.27  25  P        P        17 06 05.9   0.0
      baz=258,SNR=16
E25K  Arctic Village    87.30  21  P        P        17 06 06.5 +0.6
      baz=256,SNR=12
D25K  Kavik River       87.32  20  P        P        17 06 06.0   0.0
      baz=255
BMAR  Burnt Mountain    87.51  22  P        P        17 06 07.3 +0.4
M27K  Edge Creek, AK    87.60  27  IAmb     IAmb     17 06 59.4
      comp=Z,73nm,1.4s
M27K  Edge Creek, AK    87.60  27  P        P        17 06 07.9 +0.3
      baz=260,SNR=17
CTG   Chitna Glacier    87.60  29  P        P        17 06 08.1 +0.5
      baz=260,SNR=15
I26K  Coal Creek Min    87.61  24  IAmb     IAmb     17 06 58.3
      comp=Z,60nm,1.5s
I26K  Coal Creek Min    87.61  24  P        P        17 06 07.0  -0.3
      baz=258,SNR=7.4
G26K  Porcupine Rive    87.70  23  P        P        17 06 08.8 +1.0
      baz=258,SNR=21
F26K  Sheenjek River    87.73  22  P        P        17 06 08.9 +0.9
      baz=257,SNR=27
L27K  Beaver Creek,     87.75  27  IAmb     IAmb     17 06 59.9
      comp=Z,86nm,1.6s
L27K  Beaver Creek,     87.75  27  P        P        17 06 08.6 +0.4
      baz=260,SNR=17
BCAR  Beaver Creek A    87.77  27  P        P        17 06 08.1  -0.2
K27K  Chicken           87.82  26  P        P        17 06 09.4 +1.0
      baz=259,SNR=20
C26K  Camden Bay        87.96  20  P        P        17 06 09.4 +0.5
      baz=256
PINM  Pinnacle          87.99  30  P        P        17 06 09.6 +0.2
      baz=261
BVCY  Beaver Creek      88.07  27  P        P        17 06 10.1 +0.4
      baz=260
O28M  Mount Upton       88.13  29  IAmb     IAmb     17 06 21.9
      comp=Z,35nm,1.2s
O28M  Mount Upton       88.13  29  P        P        17 06 10.6 +0.2
      baz=261
YUK3  Moose Creek       88.16  28  P        P        17 06 10.6 +0.2
      baz=261,SNR=28
I27K  Kandik River      88.30  24  P        P        17 06 11.4 +0.6
      baz=260,SNR=54
C27K  Jago River        88.31  20  P        P        17 06 11.5 +0.9
      baz=258
PNL   Peninsula         88.35  30  P        P        17 06 13.5 +2.4
PNL   Peninsula         88.35  30  P        P        17 06 11.4 +0.3
      baz=262
YUK8  Steele Glacier    88.41  29  P        P        17 06 12.2 +0.6
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      baz=262
H27K  Steamboat Moun    88.45  24  P        P        17 06 12.2 +0.7
      baz=260,SNR=33
G27K  Doyon Strip       88.50  23  IAmb     IAmb     17 07 04.9
      comp=Z,84nm,1.8s
G27K  Doyon Strip       88.50  23  P        P        17 06 12.3 +0.7
      baz=260,SNR=5.8
E27K  Coleen River      88.77  22  P        P        17 06 13.6 +0.7
      baz=260
O29M  Mount Kennedy     88.85  30  P        P        17 06 14.1 +0.6
      baz=263,SNR=9.1
YUK4  Talbot Arm        88.95  29  P        P        17 06 14.7 +0.6
      baz=263,SNR=10
I28M  Miner Creek       88.96  24  P        P        17 06 14.5 +0.5
      baz=261,SNR=18
DAWY  Dawson            88.99  26  P        P        17 06 14.7 +0.7
      baz=262,SNR=24
YUK6  Outpost Mounta    89.04  29  P        P        17 06 15.1 +0.5
      baz=263
M29M  Somme Creek       89.18  27  IAmb     IAmb     17 07 08.0
      comp=Z,80nm,1.8s
M29M  Somme Creek       89.18  27  P        P        17 06 15.7 +0.6
      baz=263,SNR=19
D27M  Malcolm River     89.18  21  P        P        17 06 15.2 +0.3
      baz=260
P29M  Windy Craggy      89.18  30  P        P        17 06 15.5 +0.5
      baz=263,SNR=6.7
F28M  Old Crow          89.32  22  P        P        17 06 15.8 +0.3
      baz=261
L29M  L29M              89.42  27  IAmb     IAmb     17 07 11.1
      comp=Z,60nm,1.2s
L29M  L29M              89.42  27  P        P        17 06 16.3 +0.2
      baz=263,SNR=17
HYT   Haines Junctio    89.44  29  P        P        17 06 16.8 +0.5
      baz=264,SNR=18
J29N  Klondike Camp     89.55  26  P        P        17 06 17.0 +0.3
      baz=263
E28M  Babbage River     89.59  21  P        P        17 06 16.9 +0.2
      baz=262
I29M  Ogilvie Camp,     89.62  25  IAmb     IAmb     17 07 12.1
      comp=Z,53nm,1.1s
I29M  Ogilvie Camp,     89.62  25  P        P        17 06 17.5 +0.6
      baz=263,SNR=16
P30M  Million Dollar    89.63  30  P        P        17 06 17.3 +0.2
      baz=264
H29M  Whitestone        89.71  24  P        P        17 06 17.9 +0.5
      baz=263
N30M  Aishikik Lake     89.71  29  P        P        17 06 18.0 +0.5
      baz=264,SNR=13
K29M  Barlow Dome       89.78  26  IAmb     IAmb     17 07 13.3
      comp=Z,52nm,1.2s
K29M  Barlow Dome       89.78  26  P        P        17 06 18.3 +0.5
      baz=263,SNR=27
S31K  Pelican           89.79  32  P        P        17 06 18.2 +0.5
      baz=265
PLBC  Pleasant Camp     89.86  31  P        P        17 06 18.3 +0.1
      baz=264,SNR=8.2
G29M  Pine Creek        89.93  23  P        P        17 06 19.0 +0.6
      baz=263
O30N  Mendenhall        90.12  29  P        P        17 06 19.6 +0.2
      baz=265,SNR=7.5
SIT   Sitka             90.19  33  P        P        17 06 20.9 +1.2
      baz=265
N31M  Braeburn, Yuko    90.34  29  P        P        17 06 20.9 +0.5
      baz=265,SNR=5.5
J30M  Hart River        90.37  25  IAmb     IAmb     17 07 13.3
      comp=Z,103nm,1.9s
J30M  Hart River        90.37  25  P        P        17 06 21.2 +0.6
      baz=264,SNR=10
SKAG  Skagway           90.39  31  P        P        17 06 21.0 +0.4
SKAG  Skagway           90.39  31  P        P        17 06 20.9 +0.4
      baz=265
EPYK  Eagle Plains      90.39  24  P        P        17 06 21.0 +0.4
      baz=264
I30M  Mount Dempster    90.42  25  IAmb     IAmb     17 07 13.2
      comp=Z,75nm,1.9s
I30M  Mount Dempster    90.42  25  P        P        17 06 20.9 +0.1
      baz=264
S32K  Killisnoo         90.63  33  P        P        17 06 21.7   0.0
      baz=266
G30M  tAoh Zraii Nji    90.65  23  P        P        17 06 21.6  -0.1
      baz=265
SYO   Syowa Base        90.66 201⇑ePcP     PcP      17 06 24.5 +1.8
SYO   Syowa Base        90.66 201⇓epP      pP       17 06 26.0  -2.1
WHY   Whitehorse        90.71  29  P        P        17 06 22.4 +0.2
      baz=266,SNR=10
R32K  Eaglecrest        90.72  32  P        P        17 06 22.4 +0.3
      baz=266
F30M  Barrier River     90.87  22  P        P        17 06 23.2 +0.5
      baz=265
M31M  Drury Creek, Y    91.05  28  P        P        17 06 23.7   0.0
      baz=266
P32M  Atlin             91.22  31  P        P        17 06 24.3  -0.2
      baz=267
H31M  Peel River        91.31  24  P        P        17 06 24.7  -0.1
      baz=266
CRAG  Craig             91.31  35  P        P        17 06 24.8  -0.2
      baz=267
U33K  Whale Pass        91.35  34  P        P        17 06 24.8  -0.3
      baz=267
G31M  Satah River       91.41  23  P        P        17 06 24.9  -0.3
      baz=266,SNR=6.2
FARO  Faro, Yukon       91.54  28  P        P        17 06 26.0   0.0
      baz=267
N32M  Quiet Lake        91.61  29  P        P        17 06 26.5 +0.2
      baz=267
F31M  Tsiigehtchic      91.64  23  P        P        17 06 26.5 +0.3
      baz=267
P33M  Teslin, Yukon     91.70  30  P        P        17 06 26.5  -0.3
      baz=268
INK   Inuvik            91.77  22  P        P        17 06 26.4  -0.4
      baz=267
WRAK  Wrangell Islan    91.79  34  P        P        17 06 27.8 +0.7
      baz=268
Q32M  Nakina River      91.93  31  P        P        17 06 28.1 +0.1
      baz=268
V35K  Ketchikan         92.17  35  P        P        17 06 29.4 +0.5
      baz=268
S34M  Telegraph Cree    92.50  32  P        P        17 06 30.8 +0.4
      baz=269
MMPY  Sheldon Lake,     92.52  28  P        P        17 06 31.0 +0.5
      baz=269
R33M  Jennings River    92.61  31  P        P        17 06 31.4 +0.3
      baz=269
T35M  Bob Quinn         92.96  33  P        P        17 06 33.2 +0.5
      baz=270
BEAVL Fort Liard        95.57  30  P        P        17 06 45.0 +0.5
      baz=274
TOAD  Toad River Com    95.58  31  P        P        17 06 44.8 +0.2
      baz=274
YKA   Yellowknife Ar   100.18  27  P        Pdif     17 07 04.2  -1.0
      comp=Z,0.5nm,0.8s,baz=286,slow=5.0,SNR=4.4
TROLL Troll, Antarti   100.26 193 ⇑P        Pdif     17 07 06.4 +0.8
      comp=Z,289nm,0.9s
ARCES ARCESS Array B   100.45 341  P        Pdif     17 07 04.7  -1.6
      comp=Z,3.2nm,0.9s,baz=88,slow=3.9,SNR=4.9
SNAA  Sanae            101.64 192 ⇑P        Pdif     17 07 12.9 +1.2
      comp=Z,57nm,0.9s
SNAA  Sanae            101.64 192  P        Pdif     17 07 12.3 +0.7
      comp=Z,3.5nm,1.1s,baz=131,slow=4.4,SNR=6.2
NVAR  Mina Array Bea   102.04  51  P        Pdif     17 07 14.1  -0.2
      comp=Z,0.7nm,0.7s,baz=271,slow=6.7,SNR=4.2
VNA2  Neumayer--Watz   103.13 191 ⇑P        Pdif     17 07 22.1 +3.9
      comp=Z,0.9nm,0.8s,baz=128,slow=4.5
VNA3  Neumayer Olymp   103.28 190 ⇑P        Pdif     17 07 18.6  -0.3
      comp=Z,1.2nm,0.6s
MNK   Minsk            104.09 326 i P       Pdif     17 07 20.9  -1.8
      comp=E,14nm,1.0s
MNK                               i P       Pdif     17 07 20.9  -1.8
      comp=N,6.0nm,0.7s
MNK                               i P       Pdif     17 07 20.9  -1.8
      comp=Z,6.0nm,0.7s,baz=74
MNK                               i PP      PP       17 11 39.1  -1.2
MNK                               i PPP     PPP      17 13 50.9
MNK                               i SKS              17 18 49.6
MNK                               i PS      PS       17 20 52.0  -0.3
MNK                               i SS      SS       17 26 30.1 +2.5
MNK                               i SSS     SSS      17 30 26.6
MNK                               i LQ      LQ       17 47 52.2
MNK                               i LRM     MLR      17 55 52.7
      comp=E,250nm,21.6s
MNK                               i LRM     MLR      17 56 00.3
      comp=Z,669nm,22.3s
MNK                               i LRM     MLR      17 56 05.1
      comp=N,804nm,21.3s
NACGM Naroch           104.59 326 ePKiKP    PKiKP    17 11 38.7  -2.1
      comp=Z,5.0nm,0.8s,baz=74
STHS  Stebnicka Huta   109.53 322 ePDIFF    Pdif     17 07 37.6   -10
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LANS  Liptovska Anna   110.72 322 ePDIFF    Pdif     17 07 53.2 +0.8
CLL   Collm            113.62 326 ePKiKP    PKiKP    17 11 57.0  -0.8
CLL                               ePP       PP       17 12 53.0 +3.4
CLL                               ex        x        17 13 27.0
CLL                               ex        x        17 13 39.0
      comp=Z,11nm,1.5s
CLL                               ePPP      PPP      17 15 15.0
CLL                               eSdif     Sdif     17 20 36.0 +3.9
CLL                               ex        x        17 22 00.0
CLL                               ePPS      PPS      17 23 30.0
CLL                               eSS       SS       17 28 30.0  -6.1
CLL                               eSSS      SSS      17 32 42.0
CLL                               ex        x        17 34 42.0
CLL                                AMS      AMS      18 05 00.0
      comp=N,600nm,20.5s
CLL                                AMS      AMS      18 05 00.0
      comp=E,600nm,19.9s
CLL                                AMS      AMS      18 05 00.0
      comp=Z,1μm,18.9s
CLL                                AMS      AMS      18 05 00.0
GERES GERESS Array B   114.33 323  PKiKP    PKiKP    17 11 60.0 +0.6
      comp=Z,0.2nm,0.3s,baz=94,slow=1.4,SNR=3.5
TXAR  Lajitas Array    115.50  59  PKP      PKiKP    17 12 01.2  -1.1
      comp=Z,0.7nm,0.8s,baz=186,slow=2.0,SNR=5.8
TXAR                               PKKPab   PKKPab   17 22 40.6  -0.3
      comp=Z,1.6nm,1.1s,baz=86,slow=5.0,SNR=5.2
MEM   Membach          117.79 328 dPP       PP       17 13 17.8  -1.0
CLTN  Cedars of Leba   126.99  46           PKPpre   17 12 13.2
MVO   Moncorvo         130.74 326 eLR       LR       18 07 04.1
MVO   Moncorvo         130.74 326 eLR       LR       18 49 06.1
PGAV  Gavieira, Arco   130.88 327 eLR       LR       18 07 08.4
PGAV  Gavieira, Arco   130.88 327 eLR       LR       18 49 43.8
MTE   Manteigas        131.54 325 eLR       LR       18 07 16.2
MTE   Manteigas        131.54 325 eLR       LR       18 48 58.8
PMRV  Marv??o          132.09 324 eLR       LR       18 08 31.9
PMRV  Marv??o          132.09 324 eLR       LR       18 51 53.3
Y57A  Sumter           132.24  45           PKPpre   17 12 23.9
PVAQ  Vaqueiros        133.60 322 eLR       LR       18 08 22.8
PVAQ  Vaqueiros        133.60 322 eLR       LR       18 49 48.5
TORD  Torodi Ar. Bea   136.04 286  PKP      PKPdf    17 12 40.7  -0.9
      comp=Z,3.1nm,0.8s,baz=48,slow=3.3,SNR=4.2
BBAC  Balboa, Cauca    144.30  90  P        PKPbc    17 12 54.2  -1.0
APAC  Apartado, Choc   144.73  80  P        PKPdf    17 12 56.9  -0.5
POPC  Popayan, Colom   144.88  89  P        PKPbc    17 12 56.0  -1.1
JAMC  Jamundi, Valle   144.89  88  P        PKPdf    17 12 56.7  -1.3
YOTC  Yotoco, Valle    145.21  87  P        PKPdf    17 12 57.1  -1.3
CBOC  Ciudad Bolivar   145.47  84  P        PKPab    17 12 58.5  -0.6
UREC  San Jos de Ur    145.78  80  P        PKPab    17 12 59.8  -0.3
SJCC  San Jacinto, C   145.82  76  P        PKPab    17 12 59.2  -1.1
FLOC  Florencia        145.87  91  P        PKPab    17 12 59.0  -1.5
HELC  Santa Helena     145.93  83  P        PKiKP    17 13 03.5  -0.6
GUY2C Guyana, Caldas   146.15  85  P        PKPab    17 13 00.6  -1.5
ORTC  Ortega, Tolima   146.31  87  P        PKPdf    17 12 59.4  -0.8
ZARC  Zaragoza, Cauc   146.47  81  P        PKiKP    17 13 04.7   0.0
SMRC  Santa Marta, M   146.50  74  P        PKPbc    17 13 00.7  -1.1
NORC  Norcasia         146.62  84  P        PKPbc    17 13 01.2  -1.1
PTLC  Puerto Leguiza   146.64  94  P        PKiKP    17 13 03.4  -1.7
PRAC  Prado            146.67  87  P        PKPab    17 13 01.7  -1.9
PTBC  PUERTO BERRIO,   146.96  82  P        PKPbc    17 13 01.5  -1.7
URMC  La Uribe, Meta   147.18  88  P        PKiKP    17 13 04.7  -1.6
ROSC  El Rosal         147.21  85  PKPbc    PKPbc    17 13 03.0  -1.3
      comp=Z,14nm,0.7s,baz=352,slow=2.9,SNR=6.8
CPUP  Villa Florida    147.31 153  PKPbc    PKPab    17 13 03.9  -1.6
      comp=Z,3.8nm,1.2s,baz=225,slow=4.2,SNR=7.7
LPAZ  La Paz           147.62 127  PKPbc    PKiKP    17 13 05.7  -2.0
      comp=Z,12nm,0.7s,baz=179,slow=1.8,SNR=16
LPAZ  La Paz           147.62 127  P        PKiKP    17 13 05.9  -1.9
VILC  Villavicencio,   147.85  87  P        PKPbc    17 13 05.3  -0.5
OCAC  Ocana            147.89  79  P        PKPab    17 13 08.3  -0.2
BARC  Barichara        148.22  82  P        PKPdf    17 13 02.6  -1.0
RUSC  La Rusia         148.37  83  P        PKPbc    17 13 05.9  -1.7
SIV   San Ignacio      153.17 135  PKPbc    PKiKP    17 13 18.4  -0.1
      comp=Z,3.1nm,0.9s,baz=192,slow=2.3,SNR=11
SIV                                PKPab    PKPab    17 13 28.7  -1.2
      comp=Z,5.8nm,1.0s,baz=230,slow=5.0,SNR=9.5
```

IDC ***24*** *16:54:07.5±0.4, 2.°63S×138.°39E, h0^{km}, mb5.0/21, mbtmp5.0/24, ML4.9/4, MS4.9/9, Error ellipse: s-maj=15.6km s-min=10.8km az=82.0*

MOS ***24*** *16:54:09.1±0.9, 2.°64S×138.°36E, h19^{km}, mb5.8/19, MS5.0/8, Error ellipse: s-maj=11.4km s-min=7.1km az=99.4*

NEIC ***24*** *16:54:11.8, 2.°34S×138.°46E, h26^{km}, Moment Tensor Solution. Duration: 2.^{s}9 Moment tensor: Scale 10^{17}Nm; M_{rr}1.04; $M_{\theta\theta}$-1.16; $M_{\phi\phi}$0.12; $M_{r\theta}$-1.96; $M_{\theta\phi}$0.35; $M_{\phi r}$0.24; Fault plane solution: $M_0$2.29000×10^{17} NP1: ϕ_s113.49000°, δ15.48000°, λ105.22000°. NP2: ϕ_s277.72000°, δ75.08000°, λ85.84000°. Principal axes: T 2.1902, Plg60.0000°, Azm182.0000°; N 0.1949, Plg4.0000°, Azm279.0000°; P -2.3851, Plg30.0000°, Azm11.0000°;*

NEIC ***24*** *16:54:11.8, 2.°64S×138.°46E, h26^{km}*

NEIC ***24*** *16:54:12.0±1.4, 2.°66S±0.°08×138.°41E±0.°07, h20^{km}±5^{km}, mb5.7/169, Ms_20 5.3/484, Mww5.5/17, Error ellipse: s-maj=11.9km s-min=9.3km az=165.0*

GCMT ***24*** *16:54:14.9±0.1, 2.°61S±0.°01×138.°48E±0.°01, h21^{km}, MW5.5/140, Moment Tensor Solution. s140,c255; s131,c249; Duration: 1.^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}1.84±.03; $M_{\theta\theta}$-1.87±.02; $M_{\phi\phi}$0.03±.02; $M_{r\theta}$-0.10±.03; $M_{\theta\phi}$0.38±.01; $M_{\phi r}$0.15±.04; Best double couple: $M_0$1.89900×10^{17} NP1: ϕ_s97.00000°, δ43.00000°, λ84.00000°. NP2: ϕ_s285.00000°, δ47.00000°, λ96.00000°. Principal axes: T 1.8530, Plg85.0000°, Azm257.0000°; N 0.0990, Plg4.0000°, Azm101.0000°; P -1.9450, Plg2.0000°, Azm11.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 16:54:09.8±0.3**, 2.°66S**±0.°05×**138.°43E**±0.°05**, h10^{km}, n485, σ1.^{s}21**/210**, mb5.6**/126**, MS5.3**/252**, 13C-2D, Irian Jaya**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                   Op       ISC       h  m  s    ISC
JAY   Jayapura           2.27  86           Pn       16 54 47.9 +0.4
JAY                                         Sn       16 55 17.4 +1.8
JAY   Jayapura           2.27  86  Pn       Pn       16 54 47.9 +0.4
      150nm,0.3s,baz=304,slow=20,SNR=4.3
JAY                                Sn       Sn       16 55 17.4 +1.8
      152nm,0.3s,baz=108,slow=17,SNR=1.5
JAY                                LR       LR       16 55 34.0
      comp=Z,43μm,19.5s,baz=265,slow=37
      2μm,0.8s
JAY   Jayapura           2.27  86  P        Pn       16 54 47.9 +0.4
JAY                                                  16 55 17.4
FAKI  Fak Fak            6.18 268  Pn       Pn       16 55 44.2 +2.9
MANU  Manus Island       8.95  86  Pn       Pn       16 56 21.1 +1.9
PMG   Port Moresby      10.96 128  Pn       Pn       16 56 50.6 +3.8
      3.7nm,0.3s,baz=304,slow=12,SNR=2.3
COEN  Coen              12.16 158  Pn       Pn       16 57 03.6 +0.4
MTN   Manton Dam        12.43 215  Pn       Pn       16 57 07.8 +0.9
SOEI  Soe               15.74 243  P        P        16 57 56.7 +0.8
SOEI                               IAmb     IAmb     16 58 00.4
      comp=Z,627nm,1.1s
KNRA  Kununurra         16.06 216  Pn       Pn       16 57 56.5 +0.6
DAV   Davao City (W)    16.07 307  LR       LR       17 04 16.2
      comp=Z,2μm,20.3s,baz=84,slow=38
BATI  Baumata           16.47 242  P        Pn       16 58 04.2 +3.0
BATI  Baumata           16.47 242  Pn       Pn       16 58 04.2 +3.0
      comp=Z,59nm,0.3s,baz=103,slow=3.1,SNR=9.6
GUMO  Guam              17.36  21           Pn       16 58 14.0 +1.6
GUMO  Guam              17.36  21  P        Pn       16 58 12.2  -0.2
      comp=Z,3.1nm,0.3s,baz=160,slow=9.1,SNR=10.0
GUMO  Guam              17.36  21  P        Pn       16 58 14.0 +1.6
GUMO                               pmax     pmax
      comp=Z,1μm,1.2s
WB0   Warramunga Arr    17.45 193  Pn       Pn       16 58 13.1  -0.4
WR8   Warramunga Arr    17.61 192           Pn       16 58 15.8 +0.3
WRA   Warramunga Arr    17.63 193           Pn       16 58 16.0 +0.2
WRA   Warramunga Arr    17.63 193  P        Pn       16 58 13.8  -2.0
      comp=Z,13nm,0.3s,baz=18,slow=12,SNR=9.1
WRA                                S        Sn       17 01 19.4   -13
      comp=Z,46nm,0.9s,baz=16,slow=22,SNR=2.5
      comp=Z,85nm,0.7s
WRA   Warramunga Arr    17.63 193  P        Pn       16 58 16.0 +0.2
WRA                                pmax     pmax
      comp=Z,17nm,0.8s
KAPI  Kappang           18.79 262  LR       LR       17 08 24.7
      comp=Z,2μm,19.1s,baz=78,slow=46
FITZ  Fitzroy Crossi    19.82 218  P        P        16 58 41.1 +0.4
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      comp=Z,1.3nm,0.3s,baz=48,slow=12,SNR=3.2
FITZ                                S       S       17 02 15.2 -8.9
      comp=Z,126nm,1.1s,baz=258,slow=22,SNR=3.1
FITZ                                LR      LR      17 07 09.8
      comp=Z,6µm,20.2s,baz=40,slow=40
      comp=Z,43nm,0.9s
AS31  Alice Springs     21.33 191   P       P       16 58 57.5 +0.3
ASAR  Alice Springs     21.33 191   P       P       16 58 57.5 +0.3
ASAR  Alice Springs     21.33 191   P       P       16 58 57.1 -0.1
      comp=Z,129nm,0.8s,baz=18,slow=9.7,SNR=11
ASAR                                S       S       17 02 48.3 -6.1
      comp=Z,20nm,0.8s,baz=12,slow=25,SNR=2.0
ASAR                                LR      LR      17 08 04.8
      comp=Z,12µm,18.1s,baz=12,slow=39
      comp=Z,129nm,0.8s
ASAR  Alice Springs     21.33 191   P       P       16 58 57.5 +0.3
HNR   Honiara           22.41 108   P       P       16 59 09.4 +0.5
HNR                                 IAmb    IAmb    16 59 17.2
      comp=Z,294nm,0.8s
HNR   Honiara           22.41 108   P       P       16 59 09.3 +0.5
      comp=Z,247nm,0.9s,baz=328,slow=4.7,SNR=4.0
      comp=Z,247nm,0.9s
HNR   Honiara           22.41 108   P       P       16 59 09.4 +0.5
HNR                                 pmax    pmax
      comp=Z,294nm,0.9s
HNR                                 MLR     MLR
      comp=Z,3µm,18.0s
EIDS  Eidsvold          25.65 153   P       P       16 59 40.7 +0.8
EIDS                                IAmb    IAmb    16 59 55.6
      comp=Z,126nm,1.1s
MBWA  Marble Bar        25.88 223   P       P       16 59 41.4 -0.6
MBWA                                IAmb    IAmb    17 00 18.7
      comp=Z,294nm,1.5s
MBWA  Marble Bar        25.88 223   IAMs_20 IAMs_20 17 10 44.4
      comp=Z,6µm,20.0s
PSA00 Pilbara Seismi    26.08 222   P       P       16 59 43.5 -0.3
PSA00 Pilbara Seismi    26.08 222   P       P       16 59 43.8 -0.1
PSA00                               IAmb    IAmb    17 00 04.1
      comp=Z,162nm,1.2s
STKA  Stephens Creek    29.21 174   P       P       17 00 11.2 -0.6
      comp=Z,8.8nm,0.5s,baz=351,slow=9.8,SNR=8.3
      comp=Z,8.8nm,0.5s
STKA  Stephens Creek    29.21 174   P       P       17 00 11.2 -0.6
ARMA  Armidale          30.30 157   P       P       17 00 22.6 +1.0
GIRL  Giralia           30.75 228   P       P       17 00 26.2 +0.7
LEM   Lembang           30.98 261   LR      LR      17 16 36.1
      comp=Z,2µm,19.0s,baz=70,slow=44
NACB  Ninganchiao       31.30 329           P       17 00 29.8 -0.5
YHNB  Yeheng            31.82 330   IAMs_20 IAMs_20 17 10 43.3
      comp=Z,4µm,22.0s
DLV    Lat              33.12 297           P       17 00 46.1 -0.6
DLV                                 IAmb    IAmb    17 00 47.9
      comp=Z,126nm,1.4s
DZM   Mont Dzumac       33.35 128   P       P       17 00 49.0 +0.5
DZM   Mont Dzumac       33.35 128   LR      LR      17 14 52.2
      comp=Z,3µm,21.4s,baz=314,slow=37
QZH   Quanzhou          33.53 326⇑iP      P       17 00 49.6 -0.2
QZH                                 pmax    pmax
      comp=Z,120nm,1.3s
MORW  Morawa            33.81 217   P       P       17 00 51.6 -0.7
MORW                                IAmb    IAmb    17 01 25.6
      comp=Z,120nm,1.3s
CAN   Canberra          33.94 164   IAMs_20 IAMs_20 17 15 21.7
      comp=Z,4µm,18.0s
MYKOM Kota Tinggi       34.86 277   P       P       17 01 01.9 +0.3
MYKOM                               IAmb    IAmb    17 01 03.8
      comp=Z,113nm,1.2s
QIZ   Qiongzhong        35.43 309   P       P       17 01 06.3 -0.2
QIZ                                 IAmb    IAmb    17 01 07.5
      comp=Z,198nm,1.3s
NWAO  Narrogin (SRO)    36.08 211   P       P       17 01 10.9 -0.9
      comp=Z,8.0nm,0.5s,baz=38,slow=8.1,SNR=8.2
      comp=Z,8.0nm,0.5s
NWAO  Narrogin (SRO)    36.08 211   P       P       17 01 11.0 -0.9
JMN   Monobe            36.45 354           P       17 01 15.5 +0.4
JMN                                 IAmb    IAmb    17 01 16.9
      comp=Z,94nm,1.2s
IPM   Ipoh              38.05 281   P       P       17 01 29.4 +0.5
KULM  Kulim             38.56 282   P       P       17 01 33.7 +0.5
KULM                                IAmb    IAmb    17 01 34.8
      comp=Z,116nm,1.2s
MJAR  Matsushiro Arr    39.00 360   P       P       17 01 34.3 -2.3
      comp=Z,2.6nm,0.5s,baz=176,slow=8.6,SNR=6.7
MJAR                                PcP     PcP     17 03 46.3 -0.6
      comp=Z,2.8nm,0.7s,baz=182,slow=3.6,SNR=3.3
      comp=Z,2.6nm,0.5s
MJAR  Matsushiro Arr    39.00 360   P       P       17 01 34.3 -2.3
MJAR                                                17 03 46.3
NJ2   Nanjing           39.21 333 ⇑P       P       17 01 38.8 +0.5
NJ2                                 pmax    pmax
      comp=Z,63nm,1.3s
NJ2                                 pmax    pmax
      comp=Z,2µm,3.6s
CNSH  ChangSha          39.27 323   P       P       17 01 39.3 +0.4
CNSH                                pmax    pmax
      comp=Z,200nm,1.3s
RPSI  Rantau Prapat     39.85 277   P       P       17 01 42.8 -1.3
PSI   Prapat            39.87 278   P       P       17 01 42.8 -1.5
      comp=Z,91nm,1.1s,baz=132,slow=4.0,SNR=11
      comp=Z,91nm,1.1s
PSI   Prapat            39.87 278   P       P       17 01 42.8 -1.5
TJN   Taejon            40.19 346           P       17 01 45.9 -0.6
TJN   Taejon            40.19 346   P       P       17 01 45.9 -0.6
TJN                                 pmax    pmax
      comp=Z,316nm,1.2s
WHN   Wuhan             40.23 327   P       P       17 01 47.9 +1.0
WHN                                 pmax    pmax
      comp=Z,750nm,1.3s
JSD   Sado              40.50 360           P       17 01 48.4 -0.6
GSI   Gunungsitoli      41.04 275   P       P       17 01 53.5 -0.4
GSI                                 IAmb    IAmb    17 02 00.1
      comp=Z,181nm,1.3s
KSAR  Wonju Array Be    41.09 347           P       17 01 52.8 -1.0
KSAR  Wonju Array Be    41.09 347   P       P       17 01 52.8 -1.0
KSRS  Korea Array       41.09 347   P       P       17 01 53.2 -0.6
KSRS  Korea Array       41.09 347   P       P       17 01 53.2 -0.6
      comp=Z,9.3nm,0.8s,baz=158,slow=7.8,SNR=12
KSRS                                PcP     PcP     17 03 52.0 -1.5
      comp=Z,7.0nm,1.2s,baz=182,slow=5.1,SNR=4.2
KSRS                                LR      LR      17 18 44.2
      comp=Z,1047µm,19.0s,baz=160,slow=36
      comp=Z,9.3nm,0.8s
KSRS  Korea Array       41.09 347   P       P       17 01 53.3 -0.6
KSRS                                                17 03 52.0
KS19  Wonju Array Si    41.15 347   IAmb    IAmb    17 02 19.2
      comp=Z,30nm,1.1s
INCN  Inchon            41.42 346           P       17 01 56.5 -0.1
INCN                                IAmb    IAmb    17 01 58.0
      comp=Z,178nm,1.4s
INCN  Inchon            41.42 346   IAMs_20 IAMs_20 17 18 58.3
      comp=Z,3µm,19.0s
INCN  Inchon            41.42 346   P       P       17 01 56.5 -0.1
INCN                                pmax    pmax
      comp=Z,179nm,1.5s
INCN                                MLR     MLR
      comp=Z,3µm,19.0s
MSVF  Nonsavu           41.64 114   LR      LR      17 19 38.3
      comp=Z,2µm,19.5s,baz=292,slow=37
LHMI  Lhok Sumawe       42.18 281   P       P       17 02 03.2  0.0
ENH   Enshi             42.86 322   P       P       17 02 08.4 -0.1
ENH                                 IAmb    IAmb    17 02 10.0
      comp=Z,309nm,1.6s
ENH                                 IAMs_20 IAMs_20 17 17 11.7
      comp=Z,2µm,22.0s
CM31  Chiang Mai Arr    44.17 300   P       P       17 02 19.6 +0.3
CM31                                IAmb    IAmb    17 02 21.3
      comp=Z,105nm,1.4s
CMAR  Chiang Mai Arr    44.17 300   P       P       17 02 19.7 +0.4
CMAR  Chiang Mai Arr    44.17 300   P       P       17 02 18.1 -1.1
      comp=Z,14nm,1.0s,baz=124,slow=6.2,SNR=8.4
      comp=Z,14nm,1.0s
CMAR  Chiang Mai Arr    44.17 300   P       P       17 02 19.7 +0.4
KMI   Kunming           44.28 311 ⇑P       P       17 02 21.0 +0.7
KMI                                 pmax    pmax
      comp=Z,82nm,1.3s
LYN   LuoYang           44.34 329 ⇑P       P       17 02 20.3  0.0
LYN                                 pmax    pmax
      comp=Z,250nm,1.3s
LYN                                 pmax    pmax
      comp=Z,640nm,6.0s
HNS   HongShan          45.54 333 ⇑P       P       17 02 29.5 -0.3
HNS                                 pmax    pmax
      comp=Z,59nm,1.6s
HNS                                 LR      LR
      comp=N,2µm,17.2s
HNS                                 LR      LR
      comp=E,930nm,16.9s
HNS                                 LR      LR
      comp=Z,2µm,18.0s
OUZ   Omahuta           45.96 139   IAMs_20 IAMs_20 17 21 14.3
      comp=Z,3µm,20.0s
SNY   Shenyang          46.30 345 ⇑P       P       17 02 35.8 +0.1
SNY                                 S       S       17 09 28.1 +5.4
SNY                                 pmax    pmax
      comp=Z,46nm,1.6s
SNY                                 pmax    pmax
      comp=Z,330nm,6.0s
SNY                                 LR      LR
      comp=N,1µm,18.5s
SNY                                 LR      LR
      comp=E,810nm,18.5s
SNY                                 LR      LR
      comp=Z,1µm,17.8s
ASAJ  Asahikawa         46.72   4   P       P       17 02 38.6 -0.4
ASAJ                                pmax    pmax
      comp=Z,127nm,1.6s
JKA   Kamikawa-asahi    46.72   4           P       17 02 38.6 -0.4
JKA                                 IAmb    IAmb    17 02 40.0
      comp=Z,127nm,1.6s
USA0B Ussuriysk Arra    47.01 354   IAmb    IAmb    17 02 42.9
      comp=Z,90nm,1.4s
USRK  Ussuriysk Ar.     47.01 354   P       P       17 02 40.6 -0.7
      comp=Z,12nm,1.0s,baz=167,slow=9.6,SNR=13
      comp=Z,12nm,1.0s
USRK  Ussuriysk Ar.     47.01 354   P       P       17 02 40.6 -0.7
BJT   Baijiatuau        47.13 337   IAmb    IAmb    17 02 43.5
      comp=Z,157nm,1.4s
BJI   Beijing           47.14 337   P       P       17 02 41.8 -0.6
BJI                                 pmax    pmax
      comp=Z,39nm,1.4s
BJI                                 pmax    pmax
      comp=Z,210nm,4.1s
TEY   Ternei            47.52 358⇓eP      P       17 02 42.0 -3.2
TEY                                 pmax    pmax
      comp=E,10.0nm,1.1s
TEY                                 pmax    pmax
      comp=N,10.0nm,1.2s
TEY                                 pmax    pmax
      comp=Z,10.0nm,1.5s
MDJ   Mudanjiang        47.73 351   IAmb    IAmb    17 02 48.4
      comp=Z,60nm,1.2s
HIZ   Hauiti            48.76 142   IAMs_20 IAMs_20 17 22 54.3
      comp=Z,3µm,20.0s
YSS   Yuzhno-Sakhali    49.55   4           P       17 03 00.2 -0.7
TUWZ  Tuamarina         50.07 145   P       P       17 03 05.0 +0.1
LZH   Lanzhou           50.28 323 ⇑P       P       17 03 07.8 +1.0
LZH                                 sP      sP      17 03 15.9 +4.6
LZH                                 S       S       17 09 49.4  -30
SNZO  South Karori      50.43 145   IAMs_20 IAMs_20 17 23 40.3
      comp=Z,4µm,20.0s
KHZ   Kahutara          50.49 146   P       P       17 03 07.7 -0.4
KHZ                                 IAmb    IAmb    17 03 17.5
      comp=Z,236nm,1.9s
XLT   XiLinHaoTe        50.51 339  eP       P       17 03 07.3 -1.0
XLT                                 pmax    pmax
      comp=Z,37nm,1.6s
XLT                                 pmax    pmax
      comp=Z,280nm,5.0s
MRZ   Mangatainoka R    50.53 143           P       17 03 08.0 -0.4
MRZ                                 IAmb    IAmb    17 03 09.1
      comp=Z,542nm,1.9s
BHW   Baring Head       50.59 145   IAMs_20 IAMs_20 17 23 44.5
      comp=Z,3µm,19.0s
KLR   Kul'dur           52.01 354   P       P       17 03 18.6 -0.8
KLR   Kul'dur           52.01 354   P       P       17 03 18.6 -0.8
      comp=Z,12nm,0.5s,baz=164,slow=8.2,SNR=7.8
      comp=Z,12nm,0.5s
MIDW  Midway            52.39  51   IAMs_20 IAMs_20 17 20 11.5
      comp=Z,2µm,22.0s
GRNR  Gornyy            53.25 358⇑iP      P       17 03 28.2 -0.4
GRNR                                pmax    pmax
      comp=Z,10.0nm,1.1s
HIA   Hailar            54.20 345   IAmb    IAmb    17 03 37.9
      comp=Z,166nm,1.6s
GTA   Gaotai            54.87 324   P       P       17 03 41.6 +0.8
GTA                                 sP      sP      17 03 48.6 +3.3
GTA                                 pmax    pmax
      comp=Z,71nm,1.4s
ULN   Ulaanbaatar       57.31 335           P       17 03 58.3 +0.2
ULN                                 IAmb    IAmb    17 04 00.1
      comp=Z,134nm,1.6s
ULN   Ulaanbaatar       57.31 335   IAMs_20 IAMs_20 17 31 37.9
      comp=Z,2µm,19.0s
ULN   Ulaanbaatar       57.31 335   P       P       17 03 58.3 +0.2
ULN                                 pmax    pmax
      comp=Z,134nm,1.6s
ULN                                 MLR     MLR
      comp=Z,2µm,19.0s
SONM  Songino Array     57.56 335   P       P       17 03 59.7 -0.1
SONM                                IAmb    IAmb    17 04 01.7
      comp=Z,79nm,1.5s
SONM  Songino Array     57.56 335   P       P       17 03 58.8 -1.0
      comp=Z,4.9nm,0.5s,baz=156,slow=7.8,SNR=14
      comp=Z,4.9nm,0.5s
SONM  Songino Array     57.56 335   P       P       17 03 59.7 -0.1
SONM                                pmax    pmax
      comp=Z,79nm,1.5s
PETK  Petropavlovsk-    57.88  14   P       P       17 04 01.4 -0.4
PETK  Petropavlovsk-    57.88  14   P       P       17 04 01.6 -0.1
      comp=Z,17nm,0.9s,baz=154,slow=5.1,SNR=15
      comp=Z,17nm,0.9s
PETK  Petropavlovsk-    57.88  14   P       P       17 04 01.7 -0.1
PET   Petropavlovsk     58.03  14   P       P       17 04 02.2 -0.7
CIT   Chita             58.42 342  eP       P       17 04 06.4 +0.7
CIT                                e                17 04 15.6
CIT                                e                17 06 09.4
CIT                                 pmax    pmax
      comp=Z,376nm,1.7s
ZAK   Zakamensk         60.83 335  eP       P       17 04 22.3 -0.1
ZAK                                 pmax    pmax
      comp=Z,106nm,1.6s
HYB   Hyderabad         62.30 291  eS       S       17 12 58.4 -1.2
HYB   Hyderabad         62.30 291  eP       P       17 04 32.8  0.0
HYB   Hyderabad         62.30 291  esP      sP      17 04 41.6 +4.2
HYB   Hyderabad         62.30 291  ePcP     PcP     17 05 12.1 -0.6
HYB   Hyderabad         62.30 291  ePP      PP      17 06 49.9 -0.1
RAR   Rarotonga         62.80 112   LR      LR      17 30 26.0
      comp=Z,432nm,21.0s,baz=270,slow=35
MA2   Magadan           62.81   7           P       17 04 35.0 -0.4
MA2   Magadan           62.81   7   P       P       17 04 35.0 -0.4
MA2                                 pmax    pmax
      comp=Z,195nm,1.7s
MA2                                 MLR     MLR
      comp=Z,700nm,21.0s
BOD   Bodaibo           63.40 346  eP       P       17 04 38.8 -0.6
BOD                                 pmax    pmax
      comp=Z,144nm,1.7s
YAK   Yakutsk           64.86 355           P       17 04 49.0 +0.1
YAK   Yakutsk           64.86 355   IAMs_20 IAMs_20 17 31 08.6
      comp=Z,2µm,20.0s
KIWB  Kanaga Island     66.03  28           P       17 04 56.8 +0.2
CASY  Casey             66.46 192   P       P       17 04 58.9 -0.3
CASY                                IAmb    IAmb    17 05 21.2
      comp=Z,64nm,1.4s
CASY  Casey             66.46 192   IAMs_20 IAMs_20 17 33 30.9
      comp=Z,2µm,19.0s
ATKA  Atka Island       67.67  29   P       P       17 05 06.4 -0.6
ATKA                                IAMs_20 IAMs_20 17 29 10.2
      comp=Z,2µm,21.0s
KHU   Kahuku            68.32  68   P       P       17 05 11.7 -0.4
KHU   Kahuku            68.32  68   P       P       17 05 11.7 -0.4
KHU                                 pmax    pmax
      comp=Z,148nm,1.3s
HMH   Humu‘ula Sheep    68.51  68   P       P       17 05 13.5 +0.1
MLH   Mauna Loa         68.58  68   P       P       17 05 13.5 -0.2
PUH   Pauahi            68.71  68   P       P       17 05 13.6 -0.8
MKAR  Makanchi Array    69.58 322   P       P       17 05 19.4 +0.2
MKAR  Makanchi Array    69.58 322   P       P       17 05 19.1 -0.1
      comp=Z,14nm,0.8s,baz=115,slow=8.3,SNR=12
      comp=Z,14nm,0.8s
MKAR  Makanchi Array    69.58 322   P       P       17 05 19.4 +0.2
MAKZ  Makanchi          69.78 322   P       P       17 05 20.7 +0.3
MAKZ  Makanchi          69.78 322   P       P       17 05 20.7 +0.3
MAKZ                                pmax    pmax
      comp=Z,132nm,1.3s
MAKZ                                MLR     MLR
      comp=Z,800nm,19.0s
NIKH  Nikolski High     70.78  31   IAMs_20 IAMs_20 17 29 56.6
      comp=Z,1µm,21.0s
KDJ   Kajisay           70.94 316   P       P       17 05 28.2 +0.3
KDJ                                 IAmb    IAmb    17 05 29.7
      comp=Z,59nm,1.3s
KDJ   Kajisay           70.94 316   P       P       17 05 28.2 +0.3
KDJ                                 pmax    pmax
      comp=Z,59nm,1.3s
ZAA0  Zalesovo Array    71.76 330   P       P       17 05 31.4 -0.9
ZAA0                                IAmb    IAmb    17 05 32.6
      comp=Z,96nm,1.7s
ZALV  Zalesovo Beam     71.76 330   P       P       17 05 31.3 -0.9
ZALV  Zalesovo Beam     71.76 330   P       P       17 05 31.4 -0.9
      comp=Z,4.8nm,0.5s,baz=107,slow=6.3,SNR=8.8
      comp=Z,4.8nm,0.5s
ZALV  Zalesovo Beam     71.76 330   P       P       17 05 31.4 -0.9
BOOM  Boomskoye usch    71.93 316   P       P       17 05 34.3 +0.5
BOOM  Boomskoye usch    71.93 316   P       P       17 05 34.3 +0.5
BOOM                                pmax    pmax
      comp=Z,56nm,1.3s
UNV   Unalaska Valle    72.43  31   P       P       17 05 36.2  0.0
UNV                                 IAmb    IAmb    17 05 36.9
      comp=Z,89nm,1.4s
UNV                                 IAMs_20 IAMs_20 17 30 56.4
      comp=Z,1µm,22.0s
P08K  Saint George I    72.45  27   IAMs_20 IAMs_20 17 33 17.6
      comp=Z,1µm,22.0s
SPIA  Saint Paul Isl    72.46  26   P       P       17 05 36.7 +0.3
AAK   Ala-Archa         72.98 316   P       P       17 05 38.3 -1.8
      comp=Z,5.3nm,0.7s,baz=128,slow=4.8,SNR=11
      comp=Z,5.3nm,0.7s
AAK   Ala-Archa         72.98 316   P       P       17 05 38.3 -1.8
BILL  Bilibino          73.17  11   P       P       17 05 40.9 +0.4
BILL                                IAmb    IAmb    17 05 41.4
      comp=Z,118nm,1.7s
KURK  Kurchatov         73.52 325   P       P       17 05 43.1 +0.4
KURK                                IAmb    IAmb    17 05 43.9
      comp=Z,114nm,1.6s
KURK  Kurchatov         73.52 325   P       P       17 05 43.2 +0.4
KURK                                pmax    pmax
      comp=Z,114nm,1.6s
KURBB Kurchatov Arra    73.53 325   P       P       17 05 41.8 -1.1
      comp=Z,17nm,1.1s,baz=125,slow=4.9,SNR=14
KURBB                               PP      PP      17 08 22.4 -4.5
      comp=Z,3.3nm,0.8s,baz=122,slow=8.5,SNR=4.8
      comp=Z,17nm,1.1s
ARSB  Arslanbob         73.61 314   P       P       17 05 43.9 +0.1
ARSB                                IAmb    IAmb    17 06 09.2
      comp=Z,111nm,1.4s
ARSB  Arslanbob         73.61 314   P       P       17 05 43.9 +0.1
ARSB                                pmax    pmax
      comp=Z,111nm,1.4s
TIXI  Tiksi             74.44 357   IAMs_20 IAMs_20 17 38 28.5
      comp=Z,1µm,19.0s
FALS  False Pass        74.51  31   IAMs_20 IAMs_20 17 31 46.2
      comp=Z,1µm,22.0s
S12K  Black Hills       75.59  30   IAMs_20 IAMs_20 17 32 32.8
      comp=Z,1µm,22.0s
GAMB  Gambell           75.83  21   IAMs_20 IAMs_20 17 34 43.8
      comp=Z,1µm,22.0s
VNDA  Vanda             75.85 175   P       P       17 05 55.9  0.0
VNDA                                IAmb    IAmb    17 05 56.5
      comp=Z,96nm,1.8s
VNDA  Vanda             75.85 175   P       P       17 05 54.9 -1.0
      comp=Z,11nm,0.6s,baz=322,slow=6.9,SNR=16
      comp=Z,11nm,0.6s
VNDA  Vanda             75.85 175   P       P       17 05 55.9  0.0
VNDA                                pmax    pmax
      comp=Z,96nm,1.8s
KK31  Karatay Array     75.90 316   P       P       17 05 56.2 -0.7
KK31                                IAmb    IAmb    17 06 10.6
      comp=Z,76nm,1.6s
KK31  Karatay Array     75.90 316   P       P       17 05 56.2 -0.7
KK31                                pmax    pmax
      comp=Z,76nm,1.6s
M11K  Mekoryuk          76.00  25   IAMs_20 IAMs_20 17 34 23.4
      comp=Z,1µm,22.0s
M13K  Dall Lake         77.23  26   IAmb    IAmb    17 06 16.1
      comp=Z,225nm,1.8s
M13K                                IAMs_20 IAMs_20 17 38 30.0
      comp=Z,941nm,20.0s
K13K  Kusilvak Mount    77.45  24   IAmb    IAmb    17 06 07.0
      comp=Z,211nm,1.8s
K13K                                IAMs_20 IAMs_20 17 34 51.7
      comp=Z,1µm,22.0s
O14K  Tigyukauivet M    77.61  27   IAmb    IAmb    17 06 17.6
      comp=Z,147nm,1.7s
O14K                                IAMs_20 IAMs_20 17 35 22.9
      comp=Z,1µm,22.0s
N14K  Kuskokwak Cree    77.73  26   IAmb    IAmb    17 06 11.7
      comp=Z,75nm,1.2s
N14K                                IAMs_20 IAMs_20 17 36 10.1
      comp=Z,1µm,21.0s
O15K  Ungalikthiuk R    78.23  28   IAmb    IAmb    17 06 21.3
      comp=Z,139nm,1.9s
O15K                                IAMs_20 IAMs_20 17 34 56.5
      comp=Z,979nm,22.0s
J14K  Nanvaranak Lak    78.31  23   IAmb    IAmb    17 06 21.9
      comp=Z,156nm,2.0s
N15K  Kwethluk River    78.55  27   IAMs_20 IAMs_20 17 37 07.9
      comp=Z,2µm,21.0s
CHIR  Chirikof Islan    78.95  32   IAMs_20 IAMs_20 17 36 00.7
      comp=Z,1µm,21.0s
P16K  Nushagak River    79.03  28   IAMs_20 IAMs_20 17 34 24.5
      comp=Z,1µm,22.0s
BVAR  Borovoye Array    79.12 325   P       P       17 06 14.4 -0.2
      comp=Z,17nm,0.8s,baz=107,slow=7.2,SNR=7.3
      comp=Z,17nm,0.8s
BVAR  Borovoye Array    79.12 325   P       P       17 06 14.4 -0.2
O16K  Kokwok River B    79.21  28   P       P       17 06 15.6 +0.7
O16K                                IAmb    IAmb    17 06 16.2
      comp=Z,122nm,1.6s
O16K                                IAMs_20 IAMs_20 17 35 28.4
      comp=Z,1µm,22.0s
F15K  North Star Dit    79.42  21   IAmb    IAmb    17 06 20.4
      comp=Z,110nm,1.6s
M16K  Timber Creek      79.43  26   IAMs_20 IAMs_20 17 35 47.0
      comp=Z,1µm,22.0s
L16K  Owhat River       79.50  25   IAmb    IAmb    17 06 17.9
      comp=Z,187nm,1.9s
L16K                                IAMs_20 IAMs_20 17 36 10.1
      comp=Z,962nm,22.0s
J16K  Anvik River       79.75  24   IAMs_20 IAMs_20 17 36 00.4
      comp=Z,2µm,22.0s
ACHA  Angle Creek He    79.99  29   IAmb    IAmb    17 06 29.7
      comp=Z,94nm,1.9s
I17K  Unalakleet        79.99  23   IAmb    IAmb    17 06 24.9
      comp=Z,112nm,1.4s
I17K                                IAMs_20 IAMs_20 17 36 07.8
      comp=Z,2µm,22.0s
N17K  Nushagak Hills    80.01  27   IAMs_20 IAMs_20 17 37 30.5
      comp=Z,1µm,21.0s
G16K  Koyuk River       80.09  21   IAmb    IAmb    17 06 24.6
      comp=Z,82nm,1.4s
M17K  Holitna River     80.25  26   IAMs_20 IAMs_20 17 36 34.9
      comp=Z,1µm,22.0s
J17K  VABM Dome         80.41  24   IAMs_20 IAMs_20 17 36 32.0
      comp=Z,1µm,22.0s
P18K  Big Mountain,     80.47  28   IAMs_20 IAMs_20 17 35 42.9
      comp=Z,1µm,22.0s
C16K  Lisburne Hills    80.56  18   IAMs_20 IAMs_20 17 36 31.7
      comp=Z,942nm,22.0s
OHAK  Old Harbor        80.66  31   IAmb    IAmb    17 06 23.9
      comp=Z,150nm,1.6s
N18K  Kilae Creek       80.66  27   IAMs_20 IAMs_20 17 38 22.6
      comp=Z,1µm,21.0s
O18K  Koktuh Hills      80.66  28   P       P       17 06 22.6 -0.3
O18K                                IAMs_20 IAMs_20 17 36 44.7
      comp=Z,1µm,21.0s
H17K  Granite Mounta    80.78  22   IAMs_20 IAMs_20 17 38 06.6
      comp=Z,1µm,21.0s
L18K  Granite Mounta    80.91  25   IAMs_20 IAMs_20 17 37 26.3
      comp=Z,1µm,22.0s
Q19K  Cape Douglas,     81.07  29   IAMs_20 IAMs_20 17 36 20.6
      comp=Z,1µm,21.0s
O19K  Port Alsworth     81.20  28   IAMs_20 IAMs_20 17 36 50.0
      comp=Z,1µm,22.0s
KDAK  Kodiak Island     81.20  30   P       P       17 06 25.6 -0.1
KDAK                                IAmb    IAmb    17 06 29.5
      comp=Z,134nm,1.5s
KDAK  Kodiak Island     81.20  30   P       P       17 06 25.6 -0.1
KDAK                                pmax    pmax
      comp=Z,134nm,1.5s
RDOG  Red Dog Mine      81.23  19   IAmb    IAmb    17 06 28.5
      comp=Z,82nm,1.6s
N19K  Bonanza Creek     81.35  27   IAMs_20 IAMs_20 17 38 23.9
      comp=Z,1µm,21.0s
H18K  Honhosa River     81.46  22   IAMs_20 IAMs_20 17 38 06.7
      comp=Z,1µm,21.0s
P19K  Oil Pt            81.52  28   IAMs_20 IAMs_20 17 36 02.5
      comp=Z,2µm,22.0s
L19K  White Mountain    81.69  26   IAMs_20 IAMs_20 17 37 38.9
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	comp=Z,1µm,21.0s						
M19K	Big River Lodg	81.79	26	IAMs_20	IAMs_20	17 37 21.5	
	comp=Z,1µm,22.0s						
RED	Redoubt Volcan	82.00	28	IAmb	IAmb	17 06 33.4	
	comp=Z,81nm,1.4s						
MAW	Mawson	82.06	202	P	**P**	**17 06 30.5**	**+0.4**
	comp=Z,11nm,0.9s,baz=69,slow=6.8,SNR=4.6						
	comp=Z,11nm,0.9s						
MAW	Mawson	82.06	202	P	**P**	**17 06 30.5**	**+0.4**
J19K	Poorman	82.06	24	IAMs_20	IAMs_20	17 37 10.6	
	comp=Z,1µm,22.0s						
M20K	Styx River	82.34	26	IAMs_20	IAMs_20	17 37 51.1	
	comp=Z,1µm,22.0s						
H19K	Roundabout Mou	82.35	22	IAMs_20	IAMs_20	17 37 10.1	
	comp=Z,1µm,21.0s						
G19K	Purcell Mounta	82.36	22	P	**P**	**17 06 32.0**	**+0.2**
G19K				IAmb	IAmb	17 06 34.1	
	comp=Z,67nm,1.2s						
G19K				IAMs_20	IAMs_20	17 36 51.5	
	comp=Z,650nm,21.0s						
CNPM	China Poot	82.44	29	IAMs_20	IAMs_20	17 37 05.7	
	comp=Z,1µm,22.0s						
BRLK	Bradley Lake	82.68	29	IAmb	IAmb	17 06 36.5	
	comp=Z,59nm,1.3s						
BRLK				IAMs_20	IAMs_20	17 37 13.8	
	comp=Z,1µm,22.0s						
J20K	Nowinta River	82.73	24	IAMs_20	IAMs_20	17 37 31.3	
	comp=Z,1µm,22.0s						
CAPN	Captain Cook N	82.87	28	IAMs_20	IAMs_20	17 38 37.1	
	comp=Z,2µm,22.0s						
D19K	Kuna River	83.01	19	IAMs_20	IAMs_20	17 40 14.4	
	comp=Z,929nm,21.0s						
SKT	Skwentna	83.09	27	IAMs_20	IAMs_20	17 38 02.8	
	comp=Z,1µm,22.0s						
PPLA	Purkeypile	83.10	26	IAMs_20	IAMs_20	17 39 06.1	
	comp=Z,1µm,22.0s						
SLKM	Skilak Lake	83.22	28	IAMs_20	IAMs_20	17 37 19.5	
	comp=Z,1µm,22.0s						
SUA	Susitna One	83.28	27	IAMs_20	IAMs_20	17 39 56.8	
	comp=Z,937nm,22.0s						
FIS	Fire Island	83.42	28	IAMs_20	IAMs_20	17 39 17.7	
	comp=Z,2µm,21.0s						
O22K	Cooper Landing	83.45	28	IAMs_20	IAMs_20	17 42 59.5	
	comp=Z,842nm,21.0s						
SEW	Seward	83.47	29	IAmb	IAmb	17 06 47.1	
	comp=Z,113nm,1.6s						
CUT	Chulitna	83.78	26	IAMs_20	IAMs_20	17 38 46.3	
	comp=Z,1µm,22.0s						
H21K	Melozitna Rive	83.80	23	IAMs_20	IAMs_20	17 39 40.5	
	comp=Z,2µm,21.0s						
PMR	Palmer	84.05	27	IAmb	IAmb	17 06 40.5	
	comp=Z,30nm,0.9s						
GHO	Glory Hole Cre	84.20	27	IAMs_20	IAMs_20	17 38 56.2	
	comp=Z,2µm,21.0s						
PWL	Port Wells	84.22	28	IAMs_20	IAMs_20	17 39 33.7	
	comp=Z,1µm,22.0s						
KNK	Knik Glacier	84.31	28	IAMs_20	IAMs_20	17 39 33.2	
	comp=Z,2µm,22.0s						
MLY	Manley	84.41	24	P	**P**	**17 06 42.0**	**-0.3**
MLY				IAmb	IAmb	17 06 46.2	
	comp=Z,63nm,1.4s						
MLY				IAMs_20	IAMs_20	17 39 07.5	
	comp=Z,1µm,22.0s						
P23K	Montague Islan	84.43	29	IAmb	IAmb	17 06 46.7	
	comp=Z,90nm,1.3s						
P23K				IAMs_20	IAMs_20	17 40 44.4	
	comp=Z,952nm,21.0s						
RND	Reindeer	84.70	26	IAMs_20	IAMs_20	17 40 27.3	
	comp=Z,903nm,22.0s						
MCK	McKinley	84.76	25	IAmb	IAmb	17 06 47.6	
	comp=Z,73nm,1.2s						
Q23K	Middleton Isla	84.80	30	IAMs_20	IAMs_20	17 37 07.5	
	comp=Z,1µm,22.0s						
GLI	Glacier Island	84.80	28	IAmb	IAmb	17 06 47.6	
	comp=Z,48nm,1.1s						
SCM	Sheep Creek Mo	84.94	27	P	**P**	**17 06 44.7**	**-0.5**
SCM				IAmb	IAmb	17 06 49.4	
	comp=Z,77nm,1.1s						
SCM				IAMs_20	IAMs_20	17 38 50.0	
	comp=Z,1µm,22.0s						
SCM	Sheep Creek Mo	84.94	27	P	**P**	**17 06 44.7**	**-0.5**
SCM				pmax	pmax		
	comp=Z,77nm,1.1s						
SCM				MLR	MLR		
	comp=Z,1µm,22.0s						
NEA2	Nenana	84.95	24	IAmb	IAmb	17 06 50.4	
	comp=Z,50nm,1.4s						
HIN	Hinchinbrook I	84.97	29	IAmb	IAmb	17 06 45.8	
	comp=Z,109nm,1.5s						
HIN				IAMs_20	IAMs_20	17 40 05.6	
	comp=Z,1µm,21.0s						
I23K	Minto, Yukon-K	85.00	24	IAMs_20	IAMs_20	17 39 47.2	
	comp=Z,1µm,21.0s						
FID	Port Fidalgo	85.06	28	IAmb	IAmb	17 06 49.0	
	comp=Z,75nm,1.3s						
H23K	Yukon River	85.13	23	IAMs_20	IAMs_20	17 40 20.6	
	comp=Z,1µm,21.0s						
G23K	Bananza Creek	85.22	22	IAMs_20	IAMs_20	17 38 58.9	
	comp=Z,1µm,22.0s						
DHY	Denali Highway	85.25	26	IAMs_20	IAMs_20	17 39 40.0	
	comp=Z,1µm,22.0s						
B22K	Teshekpuk Lake	85.27	18	IAMs_20	IAMs_20	17 40 06.2	
	comp=Z,845nm,22.0s						
COLD	Coldfoot	85.31	22	IAmb	IAmb	17 06 48.5	
	comp=Z,94nm,1.6s						
COLD				IAMs_20	IAMs_20	17 38 32.3	
	comp=Z,913nm,22.0s						
EYAK	Cordova Ski Ar	85.36	29	IAMs_20	IAMs_20	17 44 02.1	
	comp=Z,1µm,20.0s						
COLA	College	85.53	24	IAMs_20	IAMs_20	17 39 18.3	
	comp=Z,842nm,22.0s						
M24K	Tolsona, Glenn	85.54	27	IAMs_20	IAMs_20	17 39 41.7	
	comp=Z,1µm,22.0s						
H24K	Noodor Dome	85.79	23	IAMs_20	IAMs_20	17 41 13.1	
	comp=Z,1µm,21.0s						
RAGM	Ragged Mountai	85.84	29	P	**P**	**17 06 49.3**	**-0.4**
RAGM				IAmb	IAmb	17 06 53.4	
	comp=Z,95nm,1.6s						
RAGM				IAMs_20	IAMs_20	17 39 02.9	
	comp=Z,2µm,22.0s						
IL31		85.91	24	P	**P**	**17 06 48.0**	**-1.7**
IL31				IAmb	IAmb	17 06 50.0	
	comp=Z,37nm,1.3s						
ILAR	Eielson Array	85.91	24	P	**P**	**17 06 48.0**	**-1.7**
ILAR	Eielson Array	85.91	24	P	**P**	**17 06 47.3**	**-2.5**
	comp=Z,8.8nm,0.6s,baz=263,slow=3.9,SNR=23						
	comp=Z,8.8nm,0.6s						
ILAR	Eielson Array	85.91	24	P	**P**	**17 06 48.1**	**-1.7**
C23K	Itkillik River	86.00	19	IAmb	IAmb	17 06 51.5	
	comp=Z,43nm,0.6s						
C23K				IAMs_20	IAMs_20	17 48 08.4	
	comp=Z,660nm,21.0s						
BMRM	Bremner River	86.01	28	IAMs_20	IAMs_20	17 38 44.1	
	comp=Z,1µm,22.0s						
HMT	Hamilton	86.03	29	IAmb	IAmb	17 06 51.4	
	comp=Z,73nm,1.5s						
HMT				IAMs_20	IAMs_20	17 39 07.9	
	comp=Z,2µm,22.0s						
PAX	Paxson	86.07	26	IAMs_20	IAMs_20	17 40 53.6	
	comp=Z,1µm,21.0s						
K24K	Donnelly Dome	86.13	26	IAMs_20	IAMs_20	17 40 20.2	
	comp=Z,898nm,20.0s						
G24K	Hadweenzic Riv	86.18	23	IAMs_20	IAMs_20	17 39 38.4	
	comp=Z,1µm,22.0s						
BERG	Berg Lake	86.32	29	IAmb	IAmb	17 06 52.9	
	comp=Z,78nm,1.4s						
BERG				IAMs_20	IAMs_20	17 39 29.4	
	comp=Z,1µm,22.0s						
D24K	Happy Valley	86.39	20	IAmb	IAmb	17 06 54.7	
	comp=Z,297nm,1.8s						
D24K				IAMs_20	IAMs_20	17 40 45.7	
	comp=Z,770nm,22.0s						
GLB	Gilahina Butte	86.48	28	IAMs_20	IAMs_20	17 39 12.7	
	comp=Z,1µm,21.0s						
RIDG	Independent Ri	86.52	26	IAMs_20	IAMs_20	17 40 50.5	
	comp=Z,1µm,21.0s						
C24K	Franklin Bluff	86.60	19	IAmb	IAmb	17 06 56.0	
	comp=Z,41nm,1.1s						
PRP	Porcupine Dome	86.65	24	IAMs_20	IAMs_20	17 39 06.8	
	comp=Z,1µm,22.0s						
CRQM	Cirque	86.67	29	IAmb	IAmb	17 06 54.7	
	comp=Z,100nm,1.6s						
WAX	Waxell Ridge	86.74	29	IAmb	IAmb	17 06 55.2	
	comp=Z,60nm,1.3s						
WAX				IAMs_20	IAMs_20	17 39 42.6	
	comp=Z,1µm,22.0s						
TGL	Tana Glacier	86.81	29	IAmb	IAmb	17 06 55.4	
	comp=Z,114nm,1.6s						
DOT	Dot Lake	86.84	26	IAMs_20	IAMs_20	17 44 39.9	
	comp=Z,934nm,20.0s						
SCRK	Sand Creek	86.94	26	IAMs_20	IAMs_20	17 41 12.6	
	comp=Z,888nm,21.0s						
FYU	Fort Yukon	87.02	23	IAMs_20	IAMs_20	17 40 26.4	
	comp=Z,1µm,21.0s						
ISLE	Juniper Island	87.02	29	IAmb	IAmb	17 06 56.4	
	comp=Z,63nm,1.4s						
L26K	Log Cabin Wild	87.02	27	IAmb	IAmb	17 06 56.3	
	comp=Z,53nm,1.6s						
L26K				IAMs_20	IAMs_20	17 41 09.9	
	comp=Z,2µm,21.0s						
M26K	Nabesna, AK	87.06	27	IAmb	IAmb	17 06 56.7	
	comp=Z,76nm,1.8s						
F25K	Christian Rive	87.11	22	IAMs_20	IAMs_20	17 40 31.8	
	comp=Z,1µm,22.0s						
MESA	MESA	87.13	29	IAMs_20	IAMs_20	17 41 51.0	
	comp=Z,878nm,21.0s						
J26L	Joseph Creek	87.23	25	P	**P**	**17 06 56.1**	**-0.3**
J26L				IAmb	IAmb	17 06 57.2	
	comp=Z,100nm,1.4s						
J26L				IAMs_20	IAMs_20	17 40 12.3	
	comp=Z,1µm,22.0s						
YAH	Yahtse	87.27	29	IAmb	IAmb	17 07 47.6	
	comp=Z,64nm,1.2s						
YAH				IAMs_20	IAMs_20	17 46 07.4	
	comp=Z,918nm,19.0s						
QSPA	South Pole Qui	87.28	180	P	**P**	**17 06 55.8**	**-0.9**
	comp=Z,28nm,0.6s,baz=267,slow=3.6,SNR=16						
	comp=Z,28nm,0.6s						
GRNC	Granite Creek	87.33	29	IAmb	IAmb	17 07 02.5	
	comp=Z,92nm,1.4s						
I26K	Coal Creek Min	87.57	24	IAMs_20	IAMs_20	17 41 14.2	
	comp=Z,924nm,22.0s						
G26K	Porcupine Rive	87.66	23	IAMs_20	IAMs_20	17 40 22.5	
	comp=Z,1µm,22.0s						
F26K	Sheenjek River	87.69	22	IAMs_20	IAMs_20	17 40 59.1	
	comp=Z,1µm,22.0s						
LOGN	Logan Glacier	87.71	29	IAmb	IAmb	17 07 03.6	
	comp=Z,71nm,1.5s						
L27K	Beaver Creek,	87.71	27	IAMs_20	IAMs_20	17 46 03.0	
	comp=Z,870nm,20.0s						
PCA	Pinnacle	87.96	30	IAMs_20	IAMs_20	17 40 40.8	
	comp=Z,753nm,20.0s						
O28M	Mount Upton	88.09	29	IAmb	IAmb	17 07 01.9	
	comp=Z,50nm,1.4s						
BCPM	Bancas Point	88.24	30	IAMs_20	IAMs_20	17 42 25.3	
	comp=Z,898nm,21.0s						
H27K	Steamboat Moun	88.41	24	P	**P**	**17 07 02.5**	**+0.6**
H27K				IAmb	IAmb	17 07 06.7	
	comp=Z,119nm,1.3s						
H27K				IAMs_20	IAMs_20	17 41 08.2	
	comp=Z,2µm,22.0s						
G27K	Doyon Strip	88.46	23	IAMs_20	IAMs_20	17 42 22.6	
	comp=Z,1µm,21.0s						
E27K	Coleen River	88.73	22	IAmb	IAmb	17 07 06.2	
	comp=Z,35nm,1.4s						
E27K				IAMs_20	IAMs_20	17 42 15.6	
	comp=Z,859nm,21.0s						
O29M	Mount Kennedy	88.82	30	IAmb	IAmb	17 07 12.4	
	comp=Z,58nm,1.6s						
O29M				IAMs_20	IAMs_20	17 42 55.5	
	comp=Z,1µm,21.0s						
I28M	Miner Creek	88.92	24	IAMs_20	IAMs_20	17 42 10.9	
	comp=Z,1µm,22.0s						
D27M	Malcolm River	89.14	21	IAMs_20	IAMs_20	17 41 36.4	
	comp=Z,960nm,22.0s						
P29M	Windy Craggy	89.15	30	IAmb	IAmb	17 07 10.4	
	comp=Z,76nm,1.4s						
F28M	Old Crow	89.28	22	IAMs_20	IAMs_20	17 42 08.2	
	comp=Z,1µm,22.0s						
L29M	L29M	89.38	27	IAMs_20	IAMs_20	17 42 46.2	
	comp=Z,1µm,21.0s						
HYT	Haines Junctio	89.41	29	P	**P**	**17 07 06.9**	**+0.1**
HYT				IAmb	IAmb	17 07 11.5	
	comp=Z,53nm,1.3s						
J29N	Klondike Camp	89.51	26	IAMs_20	IAMs_20	17 42 18.5	
	comp=Z,1µm,22.0s						
E28M	Babbage River	89.55	21	P	**P**	**17 07 06.8**	**-0.4**
E28M				IAmb	IAmb	17 07 07.9	
	comp=Z,43nm,1.6s						
E28M				IAMs_20	IAMs_20	17 43 15.3	
	comp=Z,815nm,21.0s						
I29M	Ogilvie Camp,	89.59	25	IAMs_20	IAMs_20	17 42 39.5	
	comp=Z,1µm,22.0s						
H29M	Whitestone	89.67	24	IAMs_20	IAMs_20	17 42 07.6	
	comp=Z,987nm,22.0s						
G29M	Pine Creek	89.89	23	P	**P**	**17 07 08.9**	**0.0**
G29M				IAMs_20	IAMs_20	17 41 53.5	
	comp=Z,2µm,22.0s						
O30N	Mendenhall	90.09	29	IAMs_20	IAMs_20	17 40 52.1	
	comp=Z,1µm,22.0s						
E29M	Blow River	90.12	22	IAMs_20	IAMs_20	17 42 03.4	
	comp=Z,946nm,22.0s						
N31M	Braeburn, Yuko	90.30	29	IAMs_20	IAMs_20	17 42 13.7	
	comp=Z,1µm,22.0s						
J30M	Hart River	90.33	25	IAMs_20	IAMs_20	17 41 58.3	
	comp=Z,1µm,22.0s						
SKAG	Skagway	90.36	31	IAmb	IAmb	17 07 15.8	
	comp=Z,36nm,1.1s						
I30M	Mount Dempster	90.38	25	IAMs_20	IAMs_20	17 56 02.4	
	comp=Z,650nm,18.0s						
G30M	tAoh Zraii Nji	90.61	23	IAMs_20	IAMs_20	17 42 25.3	
	comp=Z,1µm,22.0s						
WHY	Whitehorse	90.67	29	IAmb	IAmb	17 07 17.2	
	comp=Z,51nm,1.2s						
SYO	Syowa Base	90.70	201	⇓*i*P	**P**	**17 07 13.0**	**+0.5**
SYO	Syowa Base	90.70	201	⇑*i*pP	pP	17 07 20.1	+4.1
F30M	Barrier River	90.83	22	IAMs_20	IAMs_20	17 42 23.2	
	comp=Z,990nm,22.0s						
M31M	Drury Creek, Y	91.02	28	IAmb	IAmb	17 07 15.8	
	comp=Z,22nm,1.5s						
M31M				IAMs_20	IAMs_20	17 42 10.5	
	comp=Z,2µm,22.0s						
P32M	Atlin	91.19	31	IAmb	IAmb	17 07 18.8	
	comp=Z,21nm,1.2s						
P32M				IAMs_20	IAMs_20	17 43 21.2	
	comp=Z,949nm,22.0s						
H31M	Peel River	91.27	24	IAMs_20	IAMs_20	17 43 16.9	
	comp=Z,1µm,21.0s						
U33K	Whale Pass	91.32	34	IAMs_20	IAMs_20	17 39 03.0	
	comp=Z,1µm,22.0s						
G31M	Satah River	91.37	23	IAmb	IAmb	17 07 17.7	
	comp=Z,48nm,1.7s						
G31M				IAMs_20	IAMs_20	17 42 58.5	
	comp=Z,793nm,21.0s						
N32M	Quiet Lake	91.58	29	IAmb	IAmb	17 07 21.2	
	comp=Z,32nm,0.9s						
N32M				IAMs_20	IAMs_20	17 45 02.5	
	comp=Z,890nm,22.0s						
F31M	Tsiigehtchic	91.60	23	IAMs_20	IAMs_20	17 44 43.7	
	comp=Z,1µm,21.0s						
P33M	Teslin, Yukon	91.67	30	IAmb	IAmb	17 07 23.1	
	comp=Z,15nm,1.1s						
P33M				IAMs_20	IAMs_20	17 40 11.9	
	comp=Z,834nm,22.0s						
INK	Inuvik	91.73	22	IAmb	IAmb	17 07 20.5	
	comp=Z,34nm,1.5s						
WRAK	Wrangell Islan	91.77	34	IAMs_20	IAMs_20	17 39 05.8	
	comp=Z,1µm,22.0s						
V35K	Ketchikan	92.14	35	IAMs_20	IAMs_20	17 39 37.8	
	comp=Z,1µm,22.0s						
S34M	Telegraph Cree	92.47	32	IAMs_20	IAMs_20	17 45 47.3	
	comp=Z,799nm,21.0s						
MMPY	Sheldon Lake,	92.49	28	IAmb	IAmb	17 07 22.2	
	comp=Z,41nm,1.7s						
R33M	Jennings River	92.58	31	IAmb	IAmb	17 07 22.5	
	comp=Z,38nm,1.8s						
R33M				IAMs_20	IAMs_20	17 43 51.1	
	comp=Z,758nm,22.0s						
T35M	Bob Quinn	92.94	33	IAMs_20	IAMs_20	17 40 06.6	
	comp=Z,959nm,22.0s						
U35K	Hyder	93.05	34	IAMs_20	IAMs_20	17 40 05.9	
	comp=Z,1µm,22.0s						
VRH	Novokhopyorsk	96.28	321	*e*P	P	17 07 45.9	+7.3
VRH				pmax	pmax		
	comp=Z,20nm,1.0s						
NLWA	Neilton Lookou	97.17	43	IAMs_20	IAMs_20	17 41 50.4	
	comp=Z,810nm,22.0s						
JCC	Jacoby Creek,	97.44	49	IAMs_20	IAMs_20	17 41 13.1	
	comp=Z,1µm,22.0s						
COR	Corvallis	97.75	46	IAMs_20	IAMs_20	17 44 25.9	
	comp=Z,997nm,21.0s						
VORR	Voronezh	97.81	322	*e*P	Pdif	17 07 53.8	+8.3
VORR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSR	Storozhevoye	97.88	321	*e*P	Pdif	17 07 52.9	+7.0
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LPSR	Galich'ya Gora	97.89	323	*e*P	Pdif	17 07 53.7	+7.8
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HOPS	Hopland Field	98.27	51	IAMs_20	IAMs_20	17 53 46.3	
	comp=Z,1µm,19.0s						
MOS	Moscow	98.28	326	*e*P	P	17 07 44.2	-3.3
MOS				*e*		17 11 44.2	
MOS				MLR	MLR		
	comp=Z,700nm,21.0s						
CVS	Carmenet Viney	98.79	52	IAMs_20	IAMs_20	17 52 51.2	
	comp=Z,1µm,18.0s						
O03E	Paynes Creek	99.17	50	IAMs_20	IAMs_20	17 55 31.9	
	comp=Z,757nm,18.0s						
KBS	Kingsbay	99.22	351	IAMs_20	IAMs_20	17 57 06.4	
	comp=Z,705nm,20.0s						
HATC	Hat Creek Radi	99.39	49	IAMs_20	IAMs_20	17 55 59.5	
	comp=Z,639nm,19.0s						
BELA	Belgrano 2	99.47	181	P	**Pdif**	**17 07 51.6**	**-0.9**
WELL	Weller Preserv	100.14	52	IAMs_20	IAMs_20	17 53 36.0	
	comp=Z,659nm,18.0s						
YKA	Yellowknife Ar	100.15	27	P	**Pdif**	**17 07 53.2**	**-2.5**
	comp=Z,2.5nm,1.0s,baz=289,slow=4.7,SNR=4.8						
YKA	Yellowknife Ar	100.15	27	P	**Pdif**	**17 07 53.2**	**-2.5**
HAWA	Hanford	100.22	43	IAMs_20	IAMs_20	17 53 00.3	
	comp=Z,787nm,20.0s						
TROLL	Troll, Antarti	100.31	193	⇑P	**Pdif**	**17 07 56.5**	**0.0**
	comp=Z,308nm,1.1s						
ARCES	ARCESS Array B	100.38	341	P	**Pdif**	**17 07 53.5**	**-3.1**
	comp=Z,4.4nm,0.9s,baz=74,slow=5.1,SNR=6.3						
ARCES	ARCESS Array B	100.38	341	P	**Pdif**	**17 07 53.5**	**-3.1**
CMB	Columbia Colle	100.44	52	IAMs_20	IAMs_20	17 52 39.8	
	comp=Z,781nm,18.0s						
BUCR	Buckhorn Ranch	100.66	52	IAMs_20	IAMs_20	17 53 21.7	
	comp=Z,939nm,18.0s						
WVOR	Wild Horse Val	101.33	47	IAMs_20	IAMs_20	17 52 55.9	
	comp=Z,606nm,19.0s						
NEW	Newport	101.59	41	IAMs_20	IAMs_20	17 59 37.1	
	comp=Z,673nm,19.0s						
SNAA	Sanae	101.70	192	⇑P	**Pdif**	**17 08 03.2**	**+0.6**
	comp=Z,36nm,0.7s						
SNAA	Sanae	101.70	192	P	**Pdif**	**17 08 01.6**	**-1.0**
	comp=Z,1.5nm,0.7s,baz=133,slow=2.9,SNR=5.0						
SNAA	Sanae	101.70	192	P	**Pdif**	**17 08 01.6**	**-1.0**
BMO	Blue Mountains	101.97	45	IAMs_20	IAMs_20	17 53 36.8	
	comp=Z,701nm,20.0s						
NVAR	Mina Array Bea	102.04	51	P	**Pdif**	**17 08 04.1**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=289,slow=5.3,SNR=4.1						
PASC	Pasadena Art C	102.56	56	IAMs_20	IAMs_20	17 44 54.1	
	comp=Z,1µm,21.0s						
PLID	Pearl Lake	102.86	44	IAMs_20	IAMs_20	17 51 26.0	
	comp=Z,736nm,20.0s						
VNA2	Neumayer--Watz	103.19	191	⇑P	**Pdif**	**17 08 10.4**	**+1.2**
	comp=Z,1.8nm,0.8s,baz=141,slow=4.6						
MFID	Camas Ranch	103.24	46	IAMs_20	IAMs_20	17 57 50.3	
	comp=Z,685nm,19.0s						
VNA3	Neumayer Olymp	103.34	190	⇑P	**Pdif**	**17 08 10.1**	**+0.3**
	comp=Z,2.5nm,0.8s						
CPE	Camp Elliot	103.58	57	IAMs_20	IAMs_20	17 44 38.5	
	comp=Z,1µm,21.0s						
TPNV	Topopah Spring	103.83	53	IAMs_20	IAMs_20	17 55 41.5	
	comp=Z,917nm,18.0s						
MSO	Missoula	103.96	42	IAMs_20	IAMs_20	17 55 37.1	
	comp=Z,865nm,19.0s						
ELK	Elko	104.09	49	IAMs_20	IAMs_20	18 00 16.9	
	comp=Z,673nm,19.0s						
KIEV	Kiev	104.17	322	IAMs_20	IAMs_20	18 02 59.8	
	comp=Z,585nm,21.0s						
HLID	Hailey	104.23	46	IAMs_20	IAMs_20	17 55 29.5	
	comp=Z,1µm,19.0s						
TULEG	Thule	104.65	6	IAMs_20	IAMs_20	17 44 01.9	
	comp=Z,772nm,19.0s						
DLMT	Dillon	105.17	44	IAMs_20	IAMs_20	17 46 32.2	
	comp=Z,822nm,22.0s						
BOZ	Bozeman (W)	105.78	43	IAMs_20	IAMs_20	17 46 38.4	
	comp=Z,944nm,22.0s						
PABE	Paberze	105.86	327	IAMs_20	IAMs_20	18 02 22.2	
	comp=Z,936nm,19.0s						
DUG	Dugway, Tooele	106.00	49	IAMs_20	IAMs_20	17 59 00.6	
	comp=Z,767nm,18.0s						
TIRR	Tirgusor	106.09	316	IAMs_20	IAMs_20	17 59 38.4	
	comp=Z,591nm,21.0s						
EGMT	Eagleton	106.46	41	IAMs_20	IAMs_20	17 47 02.1	
	comp=Z,834nm,21.0s						
FXWY	Fox Creek	106.63	45	IAMs_20	IAMs_20	17 48 34.9	
	comp=Z,863nm,21.0s						
HWUT	Hardware Ranch	106.67	47	IAMs_20	IAMs_20	17 54 39.0	
	comp=Z,779nm,20.0s						
AHID	Auburn Hatcher	106.77	46	IAMs_20	IAMs_20	17 46 54.5	
	comp=Z,561nm,21.0s						
SNOW	Snow King Moun	106.86	45	IAMs_20	IAMs_20	17 48 53.0	
	comp=Z,796nm,20.0s						
LOHW	Long Hollow	106.94	45	IAMs_20	IAMs_20	17 48 45.1	
	comp=Z,723nm,20.0s						
PDAR	Pinedale Array	107.87	46	PKiKP	**PKiKP**	**17 12 37.1**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=289,slow=3.4,SNR=3.7						
PDAR				PKKPbc	**PKKPbc**	**17 23 53.2**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=194,slow=2.2,SNR=3.9						
WUAZ	Wupatki	107.94	54	IAMs_20	IAMs_20	17 55 47.3	
	comp=Z,1µm,19.0s						
TUC	Tucson	108.95	57	IAMs_20	IAMs_20	17 46 57.3	
	comp=Z,975nm,22.0s						
HFS	Hagfors	108.96	334		**PP**	**17 13 06.0**	**-0.5**
HFS	Hagfors	108.96	334	PP	**PP**	**17 13 06.0**	**-0.5**
	comp=Z,4.3nm,1.1s,baz=47,slow=13,SNR=5.1						
LAO	LASA Array	109.14	41	IAMs_20	IAMs_20	17 48 35.9	
	comp=Z,835nm,22.0s						
O20A	White River Ci	109.44	48	IAMs_20	IAMs_20	17 52 33.6	
	comp=Z,675nm,20.0s						
MVCO	Mesa Verde	109.89	51	IAMs_20	IAMs_20	17 58 14.1	
	comp=Z,776nm,19.0s						
K22A	Casper	110.07	45	IAMs_20	IAMs_20	17 49 26.8	
	comp=Z,998nm,22.0s						
RSSD	Black Hills	111.38	43	IAMs_20	IAMs_20	18 02 06.5	
	comp=Z,575nm,18.0s						
ISCO	Idaho Springs	111.48	48	IAMs_20	IAMs_20	18 01 16.6	
	comp=Z,954nm,19.0s						
ANMO	Albuquerque	112.00	53	IAMs_20	IAMs_20	17 56 29.8	
	comp=Z,631nm,20.0s						
ANMO	Albuquerque	112.00	53	IAMs_20	IAMs_20	17 56 29.8	
	comp=Z,636nm,20.0s						
ANMO	Albuquerque	112.00	53	IAMs_20	IAMs_20	17 56 29.8	
	comp=Z,638nm,20.0s						
E28A	Huff	112.77	40	IAMs_20	IAMs_20	18 00 27.9	
	comp=Z,998nm,21.0s						
TIR	Tirane	112.96	314	IAMs_20	IAMs_20	18 04 28.3	
	comp=Z,674nm,22.0s						
T25A	Trinidad	113.08	51	IAMs_20	IAMs_20	18 00 41.3	
	comp=Z,732nm,19.0s						
MNTX	Cornudas Mount	113.57	57	IAMs_20	IAMs_20	17 50 05.7	
	comp=Z,999nm,22.0s						
KSCO	Kaye Shedlock'	113.92	48	IAMs_20	IAMs_20	18 01 55.2	
	comp=Z,768nm,20.0s						
GERES	GERESS Array B	114.24	323	PKiKP	PKPdf	17 12 48.1	-1.9
	comp=Z,0.7nm,0.6s,baz=49,slow=3.0,SNR=4.9						
GERES	GERESS Array B	114.24	323	*i* PKIKP	PKPdf	17 12 48.1	-1.9
GRA1	Grafenberg Arr	115.31	325	IAMs_20	IAMs_20	18 07 03.3	
	comp=Z,794nm,20.0s						
TX31	Lajitas Ar. Si	115.51	59		**PKPdf**	**17 12 51.9**	**-1.1**
TXAR	Lajitas Array	115.51	59	PKP	**PKPdf**	**17 12 51.8**	**-1.2**
	comp=Z,0.7nm,0.5s,baz=323,slow=3.8,SNR=13						
TXAR				PKKPab	**PKKPbc**	**17 23 30.1**	**+3.3**
	comp=Z,0.7nm,0.7s,baz=59,slow=5.8,SNR=3.8						
TXAR	Lajitas Array	115.51	59	PKIKP	**PKPdf**	**17 12 51.8**	**-1.2**
AMTX	Amarillo	115.82	52	IAMs_20	IAMs_20	18 01 00.8	
	comp=Z,782nm,20.0s						
TIP	Timpagrande	115.90	313	IAMs_20	IAMs_20	18 06 02.2	
	comp=Z,552nm,22.0s						
ECSD	EROS Data Cent	116.53	42	IAMs_20	IAMs_20	17 56 28.5	
	comp=Z,939nm,20.0s						
CEL	Celeste	116.84	312	IAMs_20	IAMs_20	18 12 58.1	
	comp=Z,543nm,22.0s						
R32A	Long Quarter,	117.02	48	IAMs_20	IAMs_20	18 05 27.0	
	comp=Z,831nm,19.0s						
FUORN	Ofenpass-Fuorn	117.32	322	IAMs_20	IAMs_20	18 07 47.9	
	comp=Z,718nm,21.0s						
TUE	Stuetta	117.95	323	IAMs_20	IAMs_20	18 09 41.5	
	comp=Z,892nm,20.0s						
ABTX	Abilene, Hawle	118.07	54	IAMs_20	IAMs_20	17 53 31.6	
	comp=Z,964nm,22.0s						
WMOK	Wichita Mounta	118.14	52	IAMs_20	IAMs_20	18 06 11.3	
	comp=Z,625nm,20.0s						
WLF	Walferdange	118.15	327	IAMs_20	IAMs_20	18 10 38.2	
	comp=Z,856nm,19.0s						
N35A	Tabor	118.33	44	IAMs_20	IAMs_20	18 04 26.6	
	comp=Z,825nm,19.0s						
SPMN	Marine on St.	118.34	39	IAMs_20	IAMs_20	18 01 23.1	
	comp=Z,815nm,19.0s						

JCT	Junction City	118.51	57		PKPdf	17 12 57.5	-1.2
JCT				IAMs_20	IAMs_20	17 52 39.5	
	comp=Z,715nm,21.0s						
JCT	Junction City	118.51	57	PKIKP	PKPdf	17 12 57.5	-1.2
JCT				MLR	MLR		
	comp=Z,700nm,21.0s						
SENIN	Lac Senin/Sane	119.23	323	IAMs_20	IAMs_20	18 09 33.4	
	comp=Z,731nm,20.0s						
Z35A	Perchaven, San	119.78	53	IAMs_20	IAMs_20	17 56 06.8	
	comp=Z,826nm,20.0s						
WHTX	Lake Whitney,	120.02	54	IAMs_20	IAMs_20	17 53 44.3	
	comp=Z,807nm,22.0s						
P38A	Dawn	120.31	45	IAMs_20	IAMs_20	18 05 39.0	
	comp=Z,719nm,18.0s						
CLF	Chambon-Foret	121.20	327	IAMs_20	IAMs_20	18 09 40.8	
	comp=Z,876nm,22.0s						
P40A	Paris	121.39	44	IAMs_20	IAMs_20	17 59 42.4	
	comp=Z,681nm,19.0s						
I42A	Draeger Farm,	121.42	39	IAMs_20	IAMs_20	18 04 05.5	
	comp=Z,805nm,20.0s						
SSB	Saint Sauveur	121.44	323	IAMs_20	IAMs_20	18 13 44.9	
	comp=Z,673nm,18.0s						
HQIL	Hanson Quary C	123.15	40	IAMs_20	IAMs_20	17 57 25.5	
	comp=Z,812nm,19.0s						
143A	Socs Landing,	124.61	52	IAMs_20	IAMs_20	18 09 02.6	
	comp=Z,793nm,20.0s						
T45A	Paducah	124.90	46	IAMs_20	IAMs_20	17 59 01.5	
	comp=Z,856nm,21.0s						
PLAL	Pickwick Lake	126.22	48	IAMs_20	IAMs_20	18 08 47.6	
	comp=Z,818nm,20.0s						
Z47A	Carrollton	126.99	50	IAMs_20	IAMs_20	18 09 25.3	
	comp=Z,737nm,20.0s						
U49A	Red Boiling Sp	127.17	45	IAMs_20	IAMs_20	18 08 39.6	
	comp=Z,708nm,20.0s						
X48A	Hartselle	127.22	48	IAMs_20	IAMs_20	18 09 53.0	
	comp=Z,808nm,20.0s						
ERPA	Erie	127.81	36	IAMs_20	IAMs_20	18 02 14.5	
	comp=Z,729nm,20.0s						
TZTN	Tazewell	128.71	44	IAMs_20	IAMs_20	18 06 32.0	
	comp=Z,759nm,20.0s						
250A	Grady	128.88	50	IAMs_20	IAMs_20	18 01 40.5	
	comp=Z,731nm,22.0s						
CART	Cartagena	129.12	318	IAMs_20	IAMs_20	18 15 15.5	
	comp=Z,416nm,20.0s						
PLCA	Paso Flores	129.35	152	PKP	PKPdf	17 13 18.6	-0.5
	comp=Z,3.3nm,1.0s,baz=261,slow=2.4,SNR=4.4						
PLCA	Paso Flores	129.35	152	PKIKP	PKPdf	17 13 18.7	-0.5
Y52A	Lilburn	129.68	47	IAMs_20	IAMs_20	18 09 13.1	
	comp=Z,716nm,20.0s						
ESDC	Sonseca Array	129.80	322	PKP	PKPdf	17 13 19.3	-0.8
	comp=Z,0.3nm,0.8s,baz=79,slow=2.0,SNR=4.2						
PAB	San Pablo	130.12	322	IAMs_20	IAMs_20	18 17 14.6	
	comp=Z,706nm,20.0s						
TEIG	Tepich	131.23	65	IAMs_20	IAMs_20	18 06 21.5	
	comp=Z,405nm,21.0s						
T57A	Hurt	131.34	41	IAMs_20	IAMs_20	18 10 49.5	
	comp=Z,731nm,20.0s						
MTE	Manteigas	131.46	325	IAMs_20	IAMs_20	18 12 55.8	
	comp=Z,757nm,22.0s						
X58A	Rowland	132.67	43	IAMs_20	IAMs_20	18 04 32.0	
	comp=Z,761nm,21.0s						
456A	Hilliard	132.69	49	IAMs_20	IAMs_20	18 04 12.2	
	comp=Z,742nm,20.0s						
656A	Willston	132.91	51	IAMs_20	IAMs_20	18 03 40.4	
	comp=Z,706nm,22.0s						
Y60A	Bolivia	133.75	43	IAMs_20	IAMs_20	18 21 58.5	
	comp=Z,629nm,18.0s						
DWPF	Disney Wildern	134.34	52	IAMs_20	IAMs_20	18 12 31.3	
	comp=Z,651nm,20.0s						
061Z	Ochoppi	135.73	55	IAMs_20	IAMs_20	18 14 02.4	
	comp=Z,501nm,20.0s						
TORD	Torodi Ar. Bea	135.98	286	PKP	PKPdf	17 13 31.4	-0.9
	comp=Z,1.2nm,0.3s,baz=72,slow=3.1,SNR=1.7						
OTAV	Otavalo	143.05	93	IAMs_20	IAMs_20	18 13 41.1	
	comp=Z,504nm,18.0s						
ROSC	El Rosal	147.25	85	PKPbc	PKPdf	17 13 54.1	+1.2
	comp=Z,21nm,0.5s,baz=118,slow=3.9,SNR=6.4						
ROSC	El Rosal	147.25	85	PKP2	PKPdf	17 13 54.1	+1.2
CPUP	Villa Florida	147.39	153	PKPbc	PKPdf	17 13 54.1	+1.8
	comp=Z,20nm,1.1s,baz=76,slow=3.2,SNR=9.2						
CPUP	Villa Florida	147.39	153	PKP2	PKPdf	17 13 54.2	+1.8
LPAZ	La Paz	147.69	127	PKPbc	PKPdf	17 13 55.6	+1.8
	comp=Z,24nm,0.9s,baz=270,slow=1.9,SNR=7.1						
LPAZ	La Paz	147.69	127	PKP2	PKPdf	17 13 55.6	+1.8
SDV	Santo Domingo	150.44	77	IAMs_20	IAMs_20	18 11 47.5	
	comp=Z,344nm,21.0s						
SJG	San Juan	151.43	56	IAMs_20	IAMs_20	18 23 46.3	
	comp=Z,462nm,21.0s						
SIV	San Ignacio	153.25	134	PKPbc	PKPbc	17 14 08.7	-0.6
	comp=Z,5.2nm,0.9s,baz=167,slow=2.8,SNR=3.0						
SMRT	St. Maarten	153.95	53	IAMs_20	IAMs_20	18 21 44.8	
	comp=Z,584nm,20.0s						
SEUS	St. Eustatius	154.33	54	IAMs_20	IAMs_20	18 13 55.9	
	comp=Z,637nm,22.0s						
FDF	Fort de France	157.26	57	IAMs_20	IAMs_20	18 21 43.1	
	comp=Z,456nm,20.0s						

IDC ***24*** *17:02:10.7±1.2, 2°.53S×139°.84E, h0^{km}, mb3.7/6, mbtmp3.8/7, ML3.8/1, Error ellipse: s-maj=62.0km s-min=23.9km az=90.0*

ISC 24 17:02:14.6±1.2,**2°.6S**±0°.1×**139°.9E**±0°.4,**h25^{km},n7,**σ**0^{s}.95**/7, **mb3.8**/6,**Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.09	197	P	Pn	17 06 24.4	-0.1
	0.3nm,0.3s,baz=17,slow=12,SNR=0.9 3.6nm,0.8s						
ASAR	Alice Springs	21.75	195	P	P	17 07 05.5	+0.9
	7.1nm,1.0s,baz=16,slow=9.8,SNR=5.0 7.1nm,1.0s						
MKAR	Makanchi Array	70.39	322	P	P	17 13 26.4	-0.2
	0.3nm,0.5s,baz=103,slow=6.2,SNR=4.1 0.3nm,0.5s						
KURBB	Kurchatov Arra	74.29	325	P	P	17 13 48.7	-1.0
	0.2nm,0.4s,baz=116,slow=5.4,SNR=1.5 0.2nm,0.4s						
BVAR	Borovoye Array	79.86	325	P	P	17 14 21.8	+0.7
	0.7nm,0.7s,baz=90,slow=7.2,SNR=2.5 0.7nm,0.7s						
ILAR	Eielson Array	85.23	24	P	P	17 14 49.3	+0.5
	0.4nm,0.7s,baz=265,slow=5.4,SNR=6.4 0.4nm,0.7s						
QSPA	South Pole Qui	87.38	180	P	P	17 14 58.6	-1.0
	0.7nm,0.6s,baz=338,slow=5.4,SNR=5.5 0.7nm,0.6s						

IDC ***24*** *17:05:27.0±0.6, 2°.68S×138°.41E, h0^{km}, mb4.1/14, mbtmp4.1/17, ML3.9/3, Error ellipse: s-maj=20.7km s-min=14.9km az=79.0*

NEIC ***24*** *17:05:29.6±1.4, 2°.6S±0°.1×138°.46E±0°.08, h10^{km}±1^{km}, mb4.6/39, Error ellipse: s-maj=17.5km s-min=13.5km az=168.0*

DJA ***24*** *17:05:31.3±0.3, 2°S±4°×13°9E±°, h10^{km}, M4.4/8, mb4.5/6, MLv4.3/8*

ISC 24 17:05:32.3±0.4,**2°.70S**±0°.06×**138°.48E**±0°.04,**h32^{km},n75,** σ**1^{s}.42**/69,**mb4.5**/38,**1C,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.74	18	P	Pn	17 05 40.7	-5.9
GENI	Genyem	1.69	87	P	Pn	17 05 59.0	-0.6
GENI				S	Sb	17 06 24.4	+0.7
JAY	Jayapura	2.23	85	Pn	Pn	17 06 07.3	+0.2
	13nm,0.3s,baz=247,slow=9.4,SNR=20						
JAY				Sn	Sn	17 06 34.6	+1.0
	14nm,0.3s,baz=107,slow=17,SNR=6.3 44nm,0.4s						
JAY	Jayapura	2.23	85	P	Pn	17 06 07.5	+0.4
SRPI	Serui, Papua	2.38	290	P	Pn	17 06 09.7	+0.5
SRPI				S	Sb	17 06 40.8	-2.8
BAKI	Biak	2.80	302	P	Pn	17 06 17.4	+2.4
RKPI	Ransiki, Papua	4.46	285	P	Pn	17 06 37.2	-0.5
FAKI	Fak Fak	6.23	268	Pn	Pn	17 07 05.0	+2.9
FAKI	Fak Fak	6.23	268	P	Pn	17 07 04.0	+1.9
	0.2nm46nm,1.7s						
MANU	Manus Island	8.90	86	Pn	Pn	17 07 38.9	+0.1
COEN	Coen	12.11	158	Pn	Pn	17 08 23.1	+0.2
MTN	Manton Dam	12.43	215	Pn	Pn	17 08 30.3	+3.1
SOEI	Soe	15.77	243	P	P	17 09 15.2	-0.7
SOEI				IAmb	IAmb	17 09 39.0	
	comp=Z,59nm,1.0s						
SOEI	Soe	15.77	243	P	P	17 09 16.2	+0.3
KNRA	Kununurra	16.06	216		P	17 09 19.5	+0.5
WRA	Warramunga Arr	17.61	193		Pn	17 09 33.8	-1.7
WRA	Warramunga Arr	17.61	193	P	Pn	17 09 34.2	-1.2
	comp=Z,1.0nm,0.3s,baz=13,slow=12,SNR=13 comp=Z,4.9nm,0.6s						
TOLI2	Tolitoli	18.09	282		P	17 09 41.9	+0.4
FITZ	Fitzroy Crossi	19.82	219	P	P	17 09 58.0	-2.4
	comp=Z,0.1nm,0.3s,baz=48,slow=14,SNR=1.0 comp=Z,5.8nm,0.9s						
AS31	Alice Springs	21.31	192		P	17 10 16.1	-0.5
ASAR	Alice Springs	21.31	192		P	17 10 16.6	0.0
ASAR	Alice Springs	21.31	192	P	P	17 10 16.4	-0.2
	comp=Z,9.1nm,0.8s,baz=14,slow=7.9,SNR=11 comp=Z,9.1nm,0.8s						
MYLDM	Lahad Datu	21.44	291		P	17 10 20.3	+2.3
MYLDM				IAmb	IAmb	17 10 27.4	
	comp=Z,30nm,1.3s						
KKM	Kota Kinabalu	23.87	291		P	17 10 43.3	0.0
KKM				IAmb	IAmb	17 10 45.7	
	comp=Z,17nm,1.2s						
JNU	Nakatsue	36.34	349	P	P	17 12 33.0	-0.5
	comp=Z,12nm,1.0s,baz=129,slow=9.9,SNR=3.7 comp=Z,12nm,1.0s						
KSRS	Korea Array	41.13	347	P	P	17 13 13.3	-0.2
	comp=Z,2.1nm,0.8s,baz=160,slow=9.1,SNR=11 comp=Z,2.1nm,0.8s						
CMAR	Chiang Mai Arr	44.23	300	P	P	17 13 39.4	+0.4
CMAR	Chiang Mai Arr	44.23	300	P	P	17 13 38.6	-0.4
	comp=Z,1.0nm,0.8s,baz=123,slow=6.5,SNR=9.0 comp=Z,1.0nm,0.8s						
LYN	LuoYang	44.39	329	P	P	17 13 41.0	+1.0
LYN				pmax	pmax		
	comp=Z,32nm,1.1s						
BNX	BinXian	49.22	350	⇑P	P	17 14 18.0	+0.4
BNX				sP	pP	17 14 23.5	-4.0
BNX				S	S	17 21 27.3	+6.0
BNX				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BNX				pmax	pmax		
	comp=Z,310nm,22.9s						
BNX				LR	LR		
	comp=N,510nm,15.9s						
BNX				LR	LR		
	comp=E,190nm,15.1s						
BNX				LR	LR		
	comp=Z,680nm,17.9s						
LZH	Lanzhou	50.33	323	*e*P	P	17 14 27.3	+0.8
LZH				sP	pP	17 14 35.8	-0.4
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
KLR	Kul'dur	52.05	354	P	P	17 14 39.0	+0.1
	comp=Z,1.4nm,0.6s,baz=214,slow=5.0,SNR=5.1 comp=Z,1.4nm,0.6s						
GTA	Gaotai	54.92	324	*e*P	P	17 15 01.8	+1.4
GTA				pP	pP	17 15 05.5	-4.7
GTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SONM	Songino Array	57.61	335	P	P	17 15 19.5	+0.1
	comp=Z,1.1nm,0.6s,baz=147,slow=8.3,SNR=5.6 comp=Z,1.1nm,0.6s						
PETK	Petropavlovsk-	57.90	14	P	P	17 15 20.9	-0.3
	comp=Z,0.5nm,0.5s,baz=175,slow=7.2,SNR=1.6 comp=Z,0.5nm,0.5s						
YAK	Yakutsk	64.90	355		P	17 16 07.7	-0.5
MKAR	Makanchi Array	69.64	322		P	17 16 38.2	-0.5
MKAR	Makanchi Array	69.64	322	P	P	17 16 38.5	-0.2
	comp=Z,6.1nm,1.1s,baz=111,slow=6.8,SNR=17 comp=Z,6.1nm,1.1s						
MAKZ	Makanchi	69.84	322		P	17 16 39.9	0.0
MAKZ				IAmb	IAmb	17 16 41.8	
	comp=Z,6.6nm,1.1s						
KSH	Kashi	70.91	313	P	P	17 16 48.4	+1.6
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KDJ	Kajisay	71.00	316		P	17 16 46.1	-1.3
ZAA0	Zalesovo Array	71.81	330	P	P	17 16 51.4	-0.3
ZALV	Zalesovo Beam	71.81	330	P	P	17 16 50.9	-0.9
ZALV	Zalesovo Beam	71.81	330	P	P	17 16 50.5	-1.2
	comp=Z,0.6nm,0.4s,baz=111,slow=8.1,SNR=5.3 comp=Z,0.6nm,0.4s						
BOOM	Boomskoye usch	71.99	316	P	P	17 16 52.8	-0.5
KURBB	Kurchatov Arra	73.58	325	P	P	17 17 00.3	-2.0
	comp=Z,1.8nm,1.0s,baz=113,slow=5.5,SNR=8.1 comp=Z,1.8nm,1.0s						
TIXI	Tiksi	74.48	357		P	17 17 06.4	-0.7
TIXI				IAmb	IAmb	17 17 08.4	
	comp=Z,4.7nm,1.0s						
VNDA	Vanda	75.81	175	P	P	17 17 14.9	+0.1
	comp=Z,0.6nm,0.5s,baz=342,slow=7.2,SNR=3.6 comp=Z,0.6nm,0.5s						
L14K	Kuka Creek	77.98	25		P	17 17 27.3	+0.1
BVAR	Borovoye Array	79.17	325	P	P	17 17 32.4	-1.6
	comp=Z,1.8nm,0.8s,baz=132,slow=6.6,SNR=5.8 comp=Z,1.8nm,0.8s						
M16K	Timber Creek	79.44	26	P	P	17 17 34.7	-0.6
M16K				IAmb	IAmb	17 17 36.3	
	comp=Z,7.7nm,1.1s						
M20K	Styx River	82.35	26	IAmb	IAmb	17 17 54.7	
	comp=Z,9.2nm,1.3s						
K20K	Telida	82.47	25	IAmb	IAmb	17 17 54.2	
	comp=Z,4.7nm,1.1s						
F20K	Avaraart Lake	83.25	21	IAmb	IAmb	17 17 57.9	
	comp=Z,4.6nm,1.1s						
MLY	Manley	84.42	24		P	17 18 01.1	-0.4
MLY				IAmb	IAmb	17 18 04.3	
	comp=Z,3.9nm,1.1s						
ABKAR	Akbulak array	84.56	320	P	P	17 18 02.4	-0.1
RND	Reindeer	84.71	26	IAmb	IAmb	17 18 04.5	
	comp=Z,4.5nm,1.0s						
DHY	Denali Highway	85.26	26	IAmb	IAmb	17 18 07.7	
	comp=Z,4.2nm,0.9s						
WRH	Wood River Hil	85.34	25	IAmb	IAmb	17 18 07.6	
	comp=Z,5.5nm,1.2s						
CCB	Clear Creek Bu	85.50	24	IAmb	IAmb	17 18 08.1	
	comp=Z,2.7nm,0.9s						
ILAR	Eielson Array	85.92	24	P	P	17 18 07.2	-1.7
	comp=Z,1.2nm,0.7s,baz=265,slow=4.1,SNR=8.5 comp=Z,1.2nm,0.7s						
F24K	Squaw Lake	86.27	22	IAmb	IAmb	17 18 13.2	
	comp=Z,2.7nm,0.8s						
J26L	Joseph Creek	87.24	25	IAmb	IAmb	17 18 17.3	
	comp=Z,8.1nm,1.5s						
QSPA	South Pole Qui	87.25	180	P	P	17 18 15.4	-0.2
	comp=Z,1.7nm,0.7s,baz=284,slow=0.6,SNR=8.1 comp=Z,1.7nm,0.7s						
BMAR	Burnt Mountain	87.48	22		P	17 18 16.5	0.0
CTGM	Chitina Glacie	87.58	29	P	P	17 18 16.6	-0.7
F26K	Sheenjek River	87.70	22		P	17 18 18.1	+0.5
BCAR	Beaver Creek A	87.74	27	P	P	17 18 17.9	+0.1
K27K	Chicken	87.79	26	IAmb	IAmb	17 18 21.2	
	comp=Z,4.5nm,1.1s						
I28M	Miner Creek	88.93	24		P	17 18 23.3	-0.2
I28M				IAmb	IAmb	17 18 25.6	
	comp=Z,3.8nm,1.1s						
DAWY	Dawson	88.96	26	P	P	17 18 22.0	-1.6
DAWY				IAmb	IAmb	17 18 26.2	
	comp=Z,4.9nm,1.0s						
L29M	L29M	89.39	27	P	P	17 18 25.4	-0.2
L29M				IAmb	IAmb	17 18 28.8	
	comp=Z,5.1nm,1.1s						
K29M	Barlow Dome	89.75	26		P	17 18 27.3	-0.1
CPUP	Villa Florida	147.34	153	PKPbc	PKPbc	17 25 12.9	-0.7
	comp=Z,0.5nm,0.7s,baz=207,slow=2.3,SNR=3.3						
LPAZ	La Paz	147.64	127	PKPbc	PKPbc	17 25 15.2	-0.2
	comp=Z,1.9nm,0.9s,baz=256,slow=4.2,SNR=5.0						

IDC ***24*** *17:07:27.6±0.7, 2°.68S×138°.51E, h0^{km}, mb4.0/12, mbtmp4.0/14, ML4.1/2, Error ellipse: s-maj=23.0km s-min=17.0km az=65.0*

NEIC ***24*** *17:07:30.1±2.0, 2°.6S±0°.1×138°.50E±0°.05, h10^{km}±1^{km}, mb4.3/11, Error ellipse: s-maj=18.4km s-min=9.0km az=177.0*

ISC 24 17:07:32.3±0.5,**2°.71S**±0°.08×**138°.52E**±0°.05,**h32^{km},n31,** σ**1^{s}.15**/33,**mb4.0**/16,**Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.19	85	Pn	Pn	17 08 07.1	+0.6
	29nm,0.3s,baz=218,slow=11,SNR=8.1						
JAY				Sn	Sn	17 08 34.7	+2.1
	12nm,0.3s,baz=19,slow=18,SNR=2.0 66nm,0.3s						
FAKI	Fak Fak	6.26	268	Pn	Pn	17 09 04.5	+2.0
FAKI				Sn	Sn	17 10 14.6	+1.5
COEN	Coen	12.08	158	Pn	Pn	17 10 22.3	-0.1
MTN	Manton Dam	12.44	216	Pn	Pn	17 10 24.3	-2.9
KNRA	Kununurra	16.07	216	Pn	Pn	17 11 15.8	-0.2
KNRA				IAmb	IAmb	17 11 19.3	
	comp=Z,73nm,1.5s						
WR8	Warramunga Arr	17.58	193		P	17 11 35.5	-0.3
WR8				IAmb	IAmb	17 11 46.9	
	comp=Z,36nm,1.4s						
WRA	Warramunga Arr	17.61	193		P	17 11 36.6	+0.5
WRA	Warramunga Arr	17.61	193	P	Pn	17 11 34.6	-0.7
	comp=Z,1.0nm,0.3s,baz=16,slow=12,SNR=5.1 comp=Z,1.6nm,0.3s						
AS31	Alice Springs	21.30	192	P	P	17 12 17.2	+0.8
AS31				IAmb	IAmb	17 12 24.7	
	comp=Z,12nm,1.4s						
ASAR	Alice Springs	21.30	192	P	P	17 12 17.7	+1.2
ASAR	Alice Springs	21.30	192	P	P	17 12 16.1	-0.4
	comp=Z,5.3nm,0.7s,baz=22,slow=10.0,SNR=4.4 comp=Z,5.3nm,0.7s						
KKM	Kota Kinabalu	23.91	291	P	P	17 12 41.4	-2.3
KKM				IAmb	IAmb	17 13 05.5	
	comp=Z,5.4nm,0.9s						
KSRS	Korea Array	41.16	347	P	P	17 15 13.9	+0.3
	comp=Z,0.9nm,0.8s,baz=164,slow=9.7,SNR=5.0 comp=Z,0.9nm,0.8s						
CMAR	Chiang Mai Arr	44.27	300	P	P	17 15 40.4	+1.1
	comp=Z,1.3nm,0.8s,baz=117,slow=6.8,SNR=11 comp=Z,1.3nm,0.8s						
KLR	Kul'dur	52.07	354	P	P	17 16 39.5	+0.5
	comp=Z,0.8nm,0.5s,baz=180,slow=8.4,SNR=2.9 comp=Z,0.8nm,0.5s						
SONM	Songino Array	57.64	335	P	P	17 17 17.8	-1.7
SONM	Songino Array	57.64	335	P	P	17 17 19.0	-0.6
	comp=Z,0.7nm,0.6s,baz=152,slow=6.4,SNR=3.7 comp=Z,0.7nm,0.6s						
YAK	Yakutsk	64.92	355	P	P	17 18 07.2	-1.1
MK31	Makanchi Array	69.67	322	P	P	17 18 39.5	+0.6
MK31				IAmb	IAmb	17 18 41.2	
	comp=Z,2.5nm,1.1s						
MKAR	Makanchi Array	69.67	322		P	17 18 39.6	+0.8
MKAR	Makanchi Array	69.67	322	P	P	17 18 39.3	+0.4
	comp=Z,1.8nm,0.8s,baz=123,slow=7.6,SNR=9.0 comp=Z,1.8nm,0.8s						
MAKZ	Makanchi	69.87	322		P	17 18 40.5	+0.5
MAKZ				IAmb	IAmb	17 18 41.8	
	comp=Z,3.2nm,0.8s						
ZALV	Zalesovo Beam	71.84	330	P	P	17 18 51.0	-0.8
ZALV	Zalesovo Beam	71.84	330	P	P	17 18 51.3	-0.5
	comp=Z,0.6nm,0.4s,baz=108,slow=9.5,SNR=3.9 comp=Z,0.6nm,0.4s						
KURBB	Kurchatov Arra	73.62	325	P	P	17 19 02.6	+0.2
	comp=Z,1.1nm,0.7s,baz=116,slow=6.0,SNR=6.4 comp=Z,1.1nm,0.7s						
VNDA	Vanda	75.80	175	P	P	17 19 15.5	+0.9
	comp=Z,1.1nm,0.7s,baz=300,slow=7.9,SNR=3.7 comp=Z,1.1nm,0.7s						
L14K	Kuka Creek	77.98	25	P	P	17 19 27.6	+0.4
BVAR	Borovoye Array	79.20	325	P	P	17 19 34.1	0.0
	comp=Z,1.2nm,0.5s,baz=112,slow=6.8,SNR=8.6 comp=Z,1.2nm,0.5s						
ILAR	Eielson Array	85.91	24	P	P	17 20 07.2	-1.6
	comp=Z,0.9nm,0.8s,baz=263,slow=4.5,SNR=7.3 comp=Z,0.9nm,0.8s						
QSPA	South Pole Qui	87.23	180	P	P	17 20 15.9	+0.4
	comp=Z,1.5nm,0.7s,baz=316,slow=1.8,SNR=7.5 comp=Z,1.5nm,0.7s						
LPAZ	La Paz	147.60	127	PKPbc	PKPbc	17 27 15.2	0.0
	comp=Z,1.2nm,0.7s,baz=347,slow=2.6,SNR=4.5						

IDC ***24*** *17:11:09.8±1.0, 2°.67S×138°.53E, h0^{km}, mb3.7/6, mbtmp3.8/9, ML3.7/3, Error ellipse: s-maj=24.8km s-min=21.9km az=118.0*

ISC 24 17:11:14.3±0.9,**2°.7S**±0°.1×**138°.50E**±0°.10,**h32^{km},n9,** σ**0^{s}.78**/10,**mb3.7**/6,**Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.21	84	Pn	Pn	17 11 48.6	-0.3
	7.5nm,0.3s,baz=232,slow=13,SNR=8.9						
JAY				Sn	Sn	17 12 15.5	+0.4
	2.4nm,0.3s,baz=129,slow=19,SNR=2.0 23nm,0.4s						
WRA	Warramunga Arr	17.58	193	P	Pn	17 15 16.2	-0.8
	0.5nm,0.3s,baz=17,slow=13,SNR=5.6 2.3nm,0.7s						
FITZ	Fitzroy Crossi	19.80	219	P	Pn	17 15 44.3	+0.3
	0.1nm,0.3s,baz=49,slow=9.3,SNR=2.2 6.0nm,0.9s						
ASAR	Alice Springs	21.28	192	P	P	17 15 58.2	0.0
	2.6nm,0.6s,baz=17,slow=9.7,SNR=8.5 2.6nm,0.6s						
MKAR	Makanchi Array	69.68	322	P	P	17 22 21.2	+0.2
	0.4nm,0.8s,baz=123,slow=5.3,SNR=3.2 0.4nm,0.8s						
KURBB	Kurchatov Arra	73.63	325	P	P	17 22 46.1	+1.5
	0.3nm,0.5s,baz=113,slow=7.1,SNR=2.5 0.3nm,0.5s						
BVAR	Borovoye Array	79.21	325	P	P	17 23 15.8	-0.4
	0.6nm,0.8s,baz=123,slow=5.3,SNR=2.6 0.6nm,0.8s						
ILAR	Eielson Array	85.94	24	P	P	17 23 50.6	-0.3
	0.5nm,0.8s,baz=254,slow=4.8,SNR=4.6 0.5nm,0.8s						
QSPA	South Pole Qui	87.21	180	P	P	17 23 58.2	+0.8
	0.6nm,0.7s,baz=75,slow=16,SNR=1.6 0.6nm,0.7s						

IDC 24 17:18:44.6±2.1,**3°.17S**×**127°.59E,h0^{km},mb3.1**/2, **mbtmp3.2**/4,**ML3.4**/2,**Error ellipse: s-maj=111.2km s-min=27.1km az=72.0,Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	14.96	187	Pn	Pn	17 22 18.9	+1.4
	0.1nm,0.3s,baz=0.0,slow=13,SNR=0.9						
FITZ				Sn	Sn	17 25 04.8	+0.7
	0.1nm,0.3s,baz=51,slow=14,SNR=1.7 1.4nm,0.7s						
WRA	Warramunga Arr	17.92	159	P	P	17 22 57.0	+0.8
	0.2nm,0.3s,baz=337,slow=9.1,SNR=6.1 0.1nm,0.3s						
ASAR	Alice Springs	21.27	164	P	P	17 23 31.7	-1.1
	0.2nm,0.3s,baz=347,slow=12,SNR=8.1 0.2nm,0.3s						
MKAR	Makanchi Array	63.73	327	P	P	17 29 18.3	0.0
	0.1nm,0.4s,baz=134,slow=6.2,SNR=2.1 0.1nm,0.4s						

DJA 24 17:24:45.8±0.5,**8°S**±4°×**10°9E**±°,**h37^{km}**±8^{km},**M3.9**/16, **mb4.2**/4,**MLv3.8**/16,**Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMJI	Cimerak	0.73	323	P	Pn	17 25 00.0	+0.4
CMJI				S	Sn	17 25 10.9	+1.5
YOGI	Yogyakarta	1.50	69	P	Pn	17 25 09.9	-0.2
YOGI				S	Sn	17 25 27.0	-1.4
UGM	Wanagama	1.68	74	P	Pn	17 25 12.7	0.0
UGM				S	Sn	17 25 31.7	-1.3
LEM	Lembang	1.99	320	P	Pn	17 25 16.8	-0.2
SMRI	Semarang	2.02	50	P	Pn	17 25 18.6	+1.3
CNJI	Cibinong	2.04	301	P	Pn	17 25 18.1	+0.5
CNJI				S	Sn	17 25 41.5	-0.3
WOJI	Wonogiri, Jawa	2.08	75	P	Pn	17 25 17.5	-0.7
PCJI	Pacitan	2.27	86	P	Pn	17 25 21.1	+0.4
PCJI				S	Sn	17 25 46.9	-0.6
SKJI	Sukabumi	2.68	300	P	Pn	17 25 27.2	+0.8
SKJI				S	Sn	17 25 58.3	+0.6
CGJI	Cibinong	3.62	299	P	Pn	17 25 40.1	+0.8
GMJI	Gumukmas	4.51	89	P	Pn	17 25 52.4	+0.9
KMMI	Kalianget	5.20	76	P	Pn	17 26 01.4	+0.3
	62nm,2.1s						
JAGI	Jajag, Banyuwa	5.21	91	P	Pn	17 26 02.1	+0.9
	0.2nm32nm,1.9s						
TPI	Tanjungpandan	5.71	347	P	Pn	17 26 09.6	+1.5
	0.1nm26nm,1.6s						
PLAI	Plampang	8.80	94	P	Pn	17 26 50.9	+0.4

IDC 24 17:32:12.0±1.8,**2°.67S**×**138°.31E,h0^{km},mb3.3**/2, **mbtmp3.4**/4,**ML3.2**/2,**Error ellipse: s-maj=34.1km s-min=25.2km az=170.0,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.40	86	Pn	Pn	17 32 52.2	-0.3
	4.3nm,0.3s,baz=213,slow=12,SNR=20						

JAY				Sn	Sb	17 33 25.0	-1.3
	8.9nm,0.3s,baz=236,slow=13,SNR=8.5						
	26nm,0.6s						
WRA	Warramunga Arr	17.60	192	P	Pn	17 36 18.0	-0.8
	0.1nm,0.3s,baz=16,slow=12,SNR=5.7						
	1.0nm,0.7s						
ASAR	Alice Springs	21.30	191	P	P	17 37 00.8	+0.3
	1.2nm,0.8s,baz=19,slow=11,SNR=9.9						
	1.2nm,0.8s						
CMAR	Chiang Mai Arr	44.07	300	P	P	17 40 22.1	-0.1
	0.1nm,0.4s,baz=114,slow=9.0,SNR=2.1						
	0.1nm,0.4s						

IDC ***24*** *17:32:49.4±1.2, 2°.51S×138°.41E, h0^{km}, mb3.8/4, mbtmp3.9/6, ML3.8/2, Error ellipse: s-maj=27.2km s-min=25.7km az=63.0*

ISC 24 17:32:54.2±1.0**, 2°.6S**±0°.1×**138°.4E**±0°.1**, h32^{km}, n6, σ0^{s}.42**/7**, mb3.9**/4**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	2.30	89	Pn	Pn	17 33 29.6	-0.4
	8.5nm,0.3s,baz=249,slow=14,SNR=3.6						
JAY				Sn	Sn	17 33 57.6	+0.4
	12nm,0.3s,baz=118,slow=20,SNR=6.6						
	29nm,0.4s						
WRA	Warramunga Arr	17.71	193	P	Pn	17 36 58.4	-0.2
	0.6nm,0.3s,baz=16,slow=12,SNR=17						
	1.6nm,0.5s						
ASAR	Alice Springs	21.42	191	P	P	17 37 40.0	+0.4
	4.5nm,0.9s,baz=14,slow=10,SNR=17						
	4.5nm,0.9s						
MKAR	Makanchi Array	69.50	322	P	P	17 44 00.1	+0.3
	0.1nm,0.5s,baz=116,slow=6.6,SNR=1.8						
	0.1nm,0.5s						
BVAR	Borovoye Array	79.03	325	P	P	17 44 54.9	-0.3
	0.5nm,0.4s,baz=113,slow=3.7,SNR=4.2						
	0.5nm,0.4s						
QSPA	South Pole Qui	87.37	180	P	P	17 45 38.1	0.0
	2.5nm,1.0s,baz=350,slow=5.9,SNR=4.4						
	2.5nm,1.0s						

BJI ***24*** *17:35:08.0, 2°.97S×138°.89E, h10^{km}, mB5.5/47, mb5.2/85, Ms5.0/82, Ms7 4.9/80*

IDC ***24*** *17:35:11.3±0.4, 2°.69S×138°.54E, h0^{km}, mb4.9/23, mbtmp4.9/29, ML4.5/6, MS4.9/37, Error ellipse: s-maj=14.2km s-min=11.0km az=84.0*

MOS ***24*** *17:35:12.0±0.8, 2°.70S×138°.42E, h16^{km}, mb5.4/36, MS4.8/16, Error ellipse: s-maj=8.9km s-min=5.3km az=105.1*

NEIC ***24*** *17:35:13.8, 2°.76S×138°.38E, h22^{km}*

NEIC ***24*** *17:35:13.8, 2°.96S×138°.58E, h22^{km}, Moment Tensor Solution. Duration: 2^{s}.5 Moment tensor: Scale 10^{17}Nm; M_{rr}1.76; $M_{\theta\theta}$-1.09; $M_{\phi\phi}$-0.67; $M_{r\theta}$0.62; $M_{\theta\phi}$0.82; $M_{\phi r}$-0.42; Fault plane solution: $M_0$1.90000×10^{17} NP1: ϕ_s309.45000°, δ33.35000°, λ92.53000°. NP2: ϕ_s126.42000°, δ56.68000°, λ88.34000°. Principal axes: T 1.9152, Plg78.0000°, Azm31.0000°; N -0.0322, Plg1.0000°, Azm127.0000°; P -1.8830, Plg12.0000°, Azm218.0000°;*

NEIC ***24*** *17:35:13.6±2.3, 2°.74S±0°.07×138°.43E±0°.05, h10^{km}±1^{km}, mb5.5/283, Ms_20 5.2/380, Mww5.5/26 Error ellipse: s-maj=11.2km s-min=8.8km az=174.0*

DJA ***24*** *17:35:14.1±0.3, 3°S±2°×13°9E±°, h12^{km}±2^{km}, M5.2/87, mb5.3/87, mB5.7/54, MLv5.4/11, Mw(mB)5.2/54, MwMwp5.3/14, Mwp5.5/14*

GCMT ***24*** *17:35:17.6±0.1, 2°.61S±0°.01×138°.46E±0°.01, h17^{km}, MW5.4/145, Moment Tensor Solution. s116,c206; s145,c265; Duration: 1^{s}.2 Moment tensor: Scale 10^{17} Nm; M_{rr}1.42±.03; $M_{\theta\theta}$-1.11±.02; $M_{\phi\phi}$-0.30±.02; $M_{r\theta}$-0.24±.04; $M_{\theta\phi}$0.85±.01; $M_{\phi r}$-0.53±.05; Best double couple: $M_0$1.65500×10^{17} NP1: ϕ_s282.00000°, δ48.00000°, λ59.00000°. NP2: ϕ_s143.00000°, δ51.00000°, λ119.00000°. Principal axes: T 1.6600, Plg68.0000°, Azm119.0000°; N -0.0040, Plg22.0000°, Azm303.0000°; P -1.6500, Plg2.0000°, Azm213.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 17:35:13.9±0.5**, 2°.73S**±0°.03×**138°.48E**±0°.03**, h16^{km}**±2^{km}**, h16^{km}:pP-P, n1009, σ1^{s}.48**/812**, mb5.4**/244**, MS5.1**/266**, 27C-5D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.77	17	P	Pg	17 35 26.3	-2.6
GENI	Genyem	1.69	85	P	Pg	17 35 44.8	-1.6
GENI	Genyem	1.69	85	P	Pn	17 35 41.7	-1.1
JAY	Jayapura	2.23	84	Pn	Pn	17 35 50.4	+0.2
	188nm,0.3s,baz=224,slow=11,SNR=117						
JAY				Sn	Sn	17 36 17.0	-0.5
	70nm,0.3s,baz=65,slow=12,SNR=4.1						
	501nm,0.3s						
JAY	Jayapura	2.23	84	P	Pn	17 35 49.5	-0.7
SRPI	Serui, Papua	2.40	291	P	Pn	17 35 53.1	+0.6
BAKI	Biak	2.83	303	P	Pn	17 35 59.4	+1.0
RKPI	Ransiki, Papua	4.47	286	P	Pn	17 36 21.3	+0.2
KMPI	Kaimana, Papua	4.86	259	P	Pn	17 36 29.0	+2.6
FAKI	Fak Fak	6.23	268		Pn	17 36 46.2	+0.9
FAKI	Fak Fak	6.23	268	P	Pn	17 36 49.7	+4.5
FAKI	Fak Fak	6.23	268	P	Pn	17 36 46.3	+1.1
	1.4nm20μm3μm273nm,1.3s						
SWI	Sorong	7.45	284	P	Pn	17 37 03.6	+1.5
	1.1nm10μm4μm284nm,0.6s						
BNDI	Bandanaira	8.74	258	P	Pn	17 37 23.9	+4.1
BNDI	Bandanaira	8.74	258	P	Pn	17 37 22.2	+2.4
	488nm,1.1s						
SAUI	Saumlaki	8.85	234	Pn	Pn	17 37 19.8	-1.5
SAUI	Saumlaki	8.85	234	P	Pn	17 37 25.0	+3.8
MANU	Manus Island	8.90	86		Pn	17 37 25.7	+3.8
MSAI	Masohi	9.56	266	P	Pn	17 37 31.6	+0.6
	5μm383nm,1.2s						
AAI	Ambon	10.32	264	P	Pn	17 37 44.5	+3.1
	7μm2μm212nm,1.0s						
PMG	Port Moresby	10.88	128	Pn	Pn	17 37 53.3	+4.3
	baz=295,slow=17						
PMG	Port Moresby	10.88	128	P	Pn	17 37 53.1	+4.0
PMG	Port Moresby	10.88	128	P	Pn	17 37 53.0	+4.0
NLAI	Namlea	11.38	267	P	Pn	17 37 57.1	+1.2
	8μm4μm445nm,1.4s						
KDU	Kakadu	11.54	211	P	Pn	17 37 58.9	+0.8
	comp=Z,0.0nmcomp=Z,310nm,1.1s						
KDU	Kakadu	11.54	211	P	Pn	17 37 59.2	+1.1
TNTI	Ternate	11.64	287		Pn	17 38 00.4	+0.9
TNTI	Ternate	11.64	287	P	Pn	17 38 03.9	+4.3
TNTI	Ternate	11.64	287	P	Pn	17 38 01.8	+2.2
	comp=Z,83nm,1.1s						
COEN	Coen	12.08	158		Pn	17 38 06.0	+0.6
COEN	Coen	12.08	158	P	Pn	17 38 07.0	+1.5
	comp=Z,155nm,0.8s						
COEN	Coen	12.08	158	P	Pn	17 38 07.0	+1.5
DRS	Darwin Rock St	12.22	218	P	Pn	17 38 09.9	+2.5
MTN	Manton Dam	12.40	216		Pn	17 38 10.0	+0.1
MTN	Manton Dam	12.40	216	P	Pn	17 38 11.0	+1.0
	comp=Z,0.0nmcomp=Z,439nm,1.3s						
MTN	Manton Dam	12.40	216	P	Pn	17 38 11.2	+1.3
SANI	Sanana	12.50	273	P	Pn	17 38 13.8	+2.5
SANI	Sanana	12.50	273	P	Pn	17 38 13.4	+2.1
	comp=Z,2μmcomp=Z,117nm,0.9s						
RABL	Rabaul	13.73	96		Pn	17 38 30.2	+2.1
SGSI	Sangihe	14.43	296	P	Pn	17 38 39.7	+2.0
	comp=Z,4μmcomp=Z,223nm,1.2s						
KMSI	Cibinong	14.87	283	P	Pn	17 38 45.7	+2.1
	comp=Z,5μmcomp=Z,418nm,1.3s						
SOEI	Soe	15.75	243		Pn	17 38 58.1	+2.7
SOEI				IAmb	IAmb	17 39 02.4	
	comp=Z,298nm,1.2s						
SOEI	Soe	15.75	243	P	P	17 38 59.0	-0.3
SOEI	Soe	15.75	243	P	P	17 38 58.5	-0.8
LUWI	Luwuk	15.79	276		Pn	17 38 56.4	+0.6
LUWI	Luwuk	15.79	276	P	P	17 38 59.4	-0.2
LUWI	Luwuk	15.79	276	P	Pn	17 38 58.2	+2.4
KNRA	Kununurra	16.04	216		Pn	17 38 58.4	-0.5
KNRA	Kununurra	16.04	216	P	Pn	17 38 58.5	-0.4
BBSI	Bau Bau	16.10	260	P	Pn	17 39 02.4	+2.6
	comp=Z,5μmcomp=Z,418nm,1.3s						
DAV	Davao City (W)	16.15	307	Pn	P	17 39 06.3	+2.8
	comp=Z,46nm,0.3s,baz=118,slow=6.1,SNR=7.9						
DAV				LR	LR	17 46 17.8	
	comp=Z,2μm,18.5s,baz=108,slow=41						
MTSU	Mount Surprise	16.34	160	P	P	17 39 05.1	-0.6
	comp=Z,49nm,0.7s						
MTSU	Mount Surprise	16.34	160	P	P	17 39 05.3	-0.4
BATI	Baumata	16.48	243	Pn	Pn	17 39 06.5	+1.9
	comp=Z,2.9nm,0.3s,baz=256,slow=5.6,SNR=4.8						
	comp=Z,271nm,1.0s						
BATI	Baumata	16.48	243	P	Pn	17 39 05.7	+1.0
MRSI	Marisa	16.84	281	P	P	17 39 11.3	0.0
	comp=Z,2μmcomp=Z,196nm,1.1s						
APSI	Ampana	16.92	276	P	P	17 39 13.4	+1.3
MMRI	Maumere	17.19	249		Pn	17 39 12.8	-0.7
MMRI	Maumere	17.19	249	P	P	17 39 16.6	+1.5
MMRI	Maumere	17.19	249	P	P	17 39 15.7	+0.6
	comp=Z,2μmcomp=Z,97nm,1.2s						
WB0	Warramunga Arr	17.39	193		Pn	17 39 14.5	-1.6
GUMO	Guam	17.41	21	P	P	17 39 18.5	+1.0
GUMO				IAmb	IAmb	17 39 20.7	
	comp=Z,660nm,1.3s						
GUMO	Guam	17.41	21	P	Pn	17 39 14.9	-1.4
	comp=Z,1.6nm,0.3s,baz=201,slow=4.7,SNR=7.4						
GUMO				LR	LR	17 45 43.7	
	comp=Z,2μm,18.9s,baz=200,slow=36						
	comp=Z,126nm,1.1s						
GUMO	Guam	17.41	21	P	P	17 39 19.0	+1.5
GUMO	Guam	17.41	21	P	P	17 39 18.5	+1.0
GUMO				pmax	pmax		
	comp=Z,660nm,1.3s						
WR8	Warramunga Arr	17.55	193	P	Pn	17 39 17.0	-1.1
WRA	Warramunga Arr	17.58	193	P	Pn	17 39 16.5	-1.9
WRA	Warramunga Arr	17.58	193	P	Pn	17 39 17.6	-0.8
	comp=Z,2.7nm,0.3s,baz=16,slow=12,SNR=48						
WRA				S	Sn	17 42 25.4	-8.6
	comp=Z,68nm,1.1s,baz=9.6,slow=22,SNR=6.2						
WRA				LR	LR	17 46 53.8	
	comp=Z,10μm,18.9s,baz=6.0,slow=40						
	comp=Z,46nm,0.7s						
EDFI	Ende, Flores	17.74	250	P	Pn	17 39 20.9	+0.4
QIS	Mount Isa	17.75	177	P	Pn	17 39 20.2	-0.3
QIS	Mount Isa	17.75	177	P	Pn	17 39 20.4	-0.1
TOLI2	Tolitoli	18.10	282	P	Pn	17 39 24.1	-0.8
TOLI2	Tolitoli	18.10	282	P	Pn	17 39 25.7	+0.8
BSSI	Bau Bau, Buton	18.25	259	P	P	17 39 29.5	+2.6
	comp=Z,4μmcomp=Z,196nm,1.4s						
BNSI	Bone	18.41	264	P	Pn	17 39 31.2	+2.5
	comp=Z,4μmcomp=Z,106nm,1.4s						
TTSI	Tana Toraja	18.64	269	P	Pn	17 39 34.5	+3.0
	comp=Z,5μmcomp=Z,195nm,1.2s						
SPSI	Sidrap Palu	18.72	266	P	Pn	17 39 34.4	+1.9
	comp=Z,2μmcomp=Z,89nm,1.3s						
PCI	Palu	18.72	275	P	Pn	17 39 34.9	+2.4
	comp=Z,4μmcomp=Z,4μmcomp=Z,260nm,1.2s						
KAPI	Kappang	18.82	263		P	17 39 33.2	0.0
KAPI	Kappang	18.82	263	P	Pn	17 39 35.0	+1.3
	comp=Z,0.6nm,0.3s,baz=88,slow=5.5,SNR=4.9						
	comp=Z,2.5nm,0.2s						
KAPI	Kappang	18.82	263	P	Pn	17 39 35.8	+2.1
MPSI	Mapaga	18.83	279	P	Pn	17 39 36.0	+2.3
CTAO	Charters Tower	18.84	157	P	P	17 39 33.3	0.0
CTAO	Charters Tower	18.84	157	P	Pn	17 39 35.4	+1.5
CTAO	Charters Tower	18.84	157	P	P	17 39 33.3	0.0
CTAO				pmax	pmax		
	comp=Z,34nm,0.9s						
WSI	Waingapu	19.34	248	P	Pn	17 39 41.4	+1.5
	comp=Z,178nm,1.0s						
FITZ	Fitzroy Crossi	19.79	219	P	P	17 39 43.0	-0.8
FITZ	Fitzroy Crossi	19.79	219	P	P	17 39 44.7	+1.0
	comp=Z,25nm,1.1s						
FITZ	Fitzroy Crossi	19.79	219	P	P	17 39 43.5	-0.2
	comp=Z,0.7nm,0.3s,baz=46,slow=13,SNR=17						
FITZ				S	S	17 43 20.2	-6.1
	comp=Z,67nm,1.0s,baz=110,slow=15,SNR=5.4						
FITZ				LR	LR	17 48 14.0	
	comp=Z,6μm,18.4s,baz=40,slow=39						
	comp=Z,43nm,1.2s						
FITZ	Fitzroy Crossi	19.79	219	P	P	17 39 44.3	+0.6
WBSI	Waikabubak, Su	20.17	249	P	P	17 39 49.8	+1.8
	comp=Z,146nm,1.0s						
AS01	Alice Springs	21.27	192	P	P	17 40 01.0	+1.3
AS31	Alice Springs	21.28	192	P	P	17 39 59.9	+0.1
AS31	Alice Springs	21.28	192	P	P	17 40 00.5	+0.6
	comp=Z,90nm,0.7s						
ASAR	Alice Springs	21.28	192	P	P	17 39 59.4	-0.4
ASAR	Alice Springs	21.28	192	P	P	17 40 00.0	+0.2
	comp=Z,42nm,0.7s,baz=21,slow=11,SNR=58						
ASAR				S	S	17 43 54.7	-1.2
	comp=Z,51nm,0.9s,baz=12,slow=26,SNR=8.3						
	comp=Z,42nm,0.7s						
SMKI	Samarinda	21.39	276	P	P	17 40 04.0	+2.9
	comp=Z,6μmcomp=Z,441nm,1.2s						
MYLDM	Lahad Datu	21.45	291	P	P	17 40 03.0	+1.3
MYLDM				IAmb	IAmb	17 40 20.9	
	comp=Z,210nm,1.1s						
MYLDM	Lahad Datu	21.45	291	P	P	17 40 05.0	+3.2
PLAI	Plampang	21.46	253	P	P	17 40 04.8	+2.9
PLAI	Plampang	21.46	253	P	P	17 40 03.6	+1.7
	comp=Z,73nm,1.1s						
BKB	Balikpapan	21.62	273	P	P	17 40 02.0	-1.6
BKB	Balikpapan	21.62	273	P	P	17 40 06.3	+2.7
BKB	Balikpapan	21.62	273	P	P	17 40 05.0	+1.4
	comp=Z,369nm,1.6s						
TATA	Tatamba Isabel	21.94	106	P	P	17 40 07.0	0.0
PATS	Pohnpei	21.96	64	P	P	17 40 08.4	+1.2
PATS				IAMs_20	IAMs_20	17 46 29.1	
	comp=Z,8μm,20.0s						
PATS	Pohnpei	21.96	64	P	P	17 40 09.8	+2.6
	comp=Z,286nm,1.5s						
HNR	Honiara	22.34	108	P	P	17 40 10.3	-1.0
HNR				IAmb	IAmb	17 40 14.7	
	comp=Z,272nm,1.0s						
HNR	Honiara	22.34	108	P	P	17 40 11.1	-0.2
	comp=Z,216nm,0.9s,baz=249,slow=2.7,SNR=14						
HNR				LR	LR	17 50 06.9	
	comp=Z,2μm,18.3s,baz=281,slow=40						
	comp=Z,216nm,0.9s						
HNR	Honiara	22.34	108	P	P	17 40 13.7	+2.3
ALEG	Aligegeo Malai	22.89	106	P	P	17 40 18.5	+1.4
KKM	Kota Kinabalu	23.89	291	IAmb	IAmb	17 40 37.9	
	comp=Z,267nm,1.6s						
KKM	Kota Kinabalu	23.89	291	P	P	17 40 28.1	+0.9
TGY	Tagaytay City	24.13	314	LR	LR	17 50 41.9	
	comp=Z,3μm,19.7s,baz=137,slow=39						
WRKA	Warakurna	24.25	203	P	P	17 40 30.3	-0.1
	comp=Z,105nm,1.4s						
QLP	Quilpie	24.35	167	P	P	17 40 36.6	+5.4
QLP	Quilpie	24.35	167	P	P	17 40 33.7	+2.5
KMMI	Kalianget	24.80	259	P	P	17 40 38.2	+2.8
	comp=Z,128nm,1.1s						
JAGI	Jajag, Banyuwa	24.87	256	P	P	17 40 36.3	+0.2
	comp=Z,46nm,1.1s						
GMJI	Gumukmas	25.51	257	P	P	17 40 43.5	+1.6
EIDS	Eidsvold	25.57	153	P	P	17 40 43.6	+1.3
EIDS				IAmb	IAmb	17 41 05.8	
	comp=Z,155nm,1.5s						
EIDS	Eidsvold	25.57	153	P	P	17 40 44.3	+2.0
	comp=Z,70nm,1.2s						
EIDS	Eidsvold	25.57	153	P	P	17 40 44.1	+1.8
RMQ	Roma	25.59	158	P	P	17 40 44.9	+2.4
	comp=Z,102nm,1.4s						
RMQ	Roma	25.59	158	P	P	17 40 44.9	+2.4
MBWA	Marble Bar	25.86	223	P	P	17 40 44.5	-0.6
MBWA				IAmb	IAmb	17 40 55.4	
	comp=Z,101nm,1.3s						
MBWA	Marble Bar	25.86	223	P	P	17 40 45.8	+0.7
	comp=Z,58nm,1.7s						
MBWA	Marble Bar	25.86	223	P	P	17 40 47.2	+2.2
PSA00	Pilbara Seismi	26.06	223	P	P	17 40 46.3	-0.6
PSA00				IAmb	IAmb	17 41 20.6	
	comp=Z,103nm,1.3s						
PSA00	Pilbara Seismi	26.06	223	P	P	17 40 45.7	-1.2
PSA00				IAmb	IAmb	17 41 22.8	
	comp=Z,52nm,1.4s						
PSA00	Pilbara Seismi	26.06	223	P	P	17 40 49.2	+2.3
	comp=Z,62nm,1.1s						
PSA00	Pilbara Seismi	26.06	223	P	P	17 40 49.0	+2.1
GRJI	Gresik	26.24	260	P	P	17 40 51.4	+2.9
	comp=Z,203nm,1.3s						
TBJI	Tambak Boyo	26.84	260	P	P	17 40 56.3	+2.3
STKI	Sintang	27.14	275	P	P	17 40 58.6	+1.9
	comp=Z,40nm,1.1s						
LUES	Luesalemba Tem	28.34	107	P	P	17 41 08.6	+1.2
KSM	Kuching	28.48	278	P	P	17 41 08.5	-0.1
KSM	Kuching	28.48	278	P	P	17 41 10.2	+1.6
STKA	Stephens Creek	29.14	175	P	P	17 41 14.5	+0.2
STKA				IAmb	IAmb	17 42 04.4	
	comp=Z,129nm,1.1s						
STKA	Stephens Creek	29.14	175	P	P	17 41 14.6	+0.3
	comp=Z,4.3nm,0.6s,baz=322,slow=6.3,SNR=8.9						
STKA				LR	LR	17 54 09.1	
	comp=Z,5μm,18.6s,baz=346,slow=39						
	comp=Z,4.3nm,0.6s						
CMSA	Cobar Meteorol	29.45	167	P	P	17 41 23.5	+6.5
CMSA	Cobar Meteorol	29.45	167	P	P	17 41 19.8	+2.8
MEEK	Meekatharra	30.46	217	P	P	17 41 27.3	+1.1
	comp=Z,14nm,1.8s						
MEEK	Meekatharra	30.46	217	P	P	17 41 28.4	+2.2
HTT	Hallett	30.54	179	P	P	17 41 28.4	+1.6
	comp=Z,7.9nm,1.7s						
HTT	Hallett	30.54	179	P	P	17 41 29.9	+3.1
TPI	Tanjungpandan	30.79	269	P	P	17 41 31.0	+1.8
	comp=Z,35nm,1.8s						
YULB	Yu-li	30.90	328	P	P	17 41 29.5	-0.5
YULB	Yu-li	30.90	328	P	P	17 41 29.9	-0.1
JOW	Kunigami	31.00	342	IAmb	IAmb	17 41 32.5	
	comp=Z,71nm,1.1s						
JOW	Kunigami	31.00	342	LR	LR	17 51 39.8	
	comp=Z,3μm,21.2s,baz=120,slow=32						
JOW	Kunigami	31.00	342	P	P	17 41 31.8	+1.0
LEM	Lembang	31.02	261	LR	LR	17 56 22.6	
	comp=Z,2μm,21.8s,baz=70,slow=41						
TPUB	Ta-pu	31.18	327	P	P	17 41 31.3	-1.2
NACB	Ninganchiao	31.39	329	P	P	17 41 34.5	+0.3
SSLB	Suanglung	31.40	328	P	P	17 41 34.4	0.0
YHNB	Yeheng	31.91	330	IAMs_20	IAMs_20	17 52 09.4	
	comp=Z,4μm,20.0s						
YHNB	Yeheng	31.91	330	P	P	17 41 40.0	+1.1
YNG	Young	32.74	165	P	P	17 41 47.8	+1.8
	comp=Z,36nm,2.0s						
DZM	Mont Dzumac	33.27	128	*e*S	S	17 47 06.4	-4.5
	comp=Z,615nm,27.2s						
DZM				*e*LR	LR	17 50 39.8	
	comp=Z,7μm,25.6s						
DZM	Mont Dzumac	33.27	128	LR	LR	17 55 56.0	
	comp=Z,3μm,21.4s,baz=317,slow=37						
QZH	Quanzhou	33.61	326	*e*P	P	17 41 53.5	-0.2
QZH				S	S	17 47 15.3	-0.6
QZH				LR	LR		
	comp=Z,2μm,25.8s						
QZH				LR	LR		
	comp=Z,2μm,19.9s						
QZH				LR	LR		
	comp=Z,3μm,23.0s						
MORW	Morawa	33.79	217	IAmb	IAmb	17 42 15.9	
	comp=Z,97nm,1.5s						
MORW	Morawa	33.79	217	P	P	17 41 58.1	+2.8
CAN	Canberra	33.86	164	IAMs_20	IAMs_20	17 57 54.1	
	comp=Z,4μm,18.0s						
CNB	Canberra Magne	33.96	164	P	P	17 41 59.9	+3.2
MDSI	Maura Dua	34.28	266	P	P	17 41 59.8	+0.1
	comp=Z,900nmcomp=Z,66nm,1.3s						
BLDU	Ballidu	34.54	214	P	P	17 42 02.6	+0.8
KLBR	Kellerberrin	34.72	212	P	P	17 42 03.4	0.0
MYKOM	Kota Tinggi	34.91	277	P	P	17 42 06.8	+1.6
QIZ	Qiongzhong	35.51	309	IAmb	IAmb	17 42 11.6	
	comp=Z,48nm,1.0s						
QIZ	Qiongzhong	35.51	309	P	P	17 42 10.8	+0.5
QIZ				PcP	PcP	17 44 37.4	-2.2
QIZ				S	S	17 47 48.3	+2.9
QIZ				ScS	ScS	17 52 26.3	-3.7
QIZ				pmax	pmax		
	comp=Z,48nm,0.9s						
QIZ				pmax	pmax		
	comp=Z,410nm,3.6s						
QIZ				LR	LR		
	comp=Z,1μm,17.7s						
QIZ				LR	LR		
	comp=Z,2μm,17.6s						
QIZ	Qiongzhong	35.51	309	P	P	17 42 10.6	+0.3
NWAO	Narrogin (SRO)	36.04	211	IAMs_20	IAMs_20	17 59 40.8	
	comp=Z,4μm,18.0s						
NWAO	Narrogin (SRO)	36.04	211	LR	LR	17 59 51.2	
	comp=Z,4μm,18.9s,baz=32,slow=41						
JNU	Nakatsue	36.38	349	P	P	17 42 17.7	+0.1
JNU				IAmb	IAmb	17 42 18.9	
	comp=Z,103nm,1.1s						
JNU	Nakatsue	36.38	349	LR	LR	17 56 49.6	
	comp=Z,2μm,18.9s,baz=166,slow=36						
JNU	Nakatsue	36.38	349	P	P	17 42 17.9	+0.3
JMN	Monobe	36.52	354	P	P	17 42 18.2	-0.6
JMN				IAmb	IAmb	17 42 20.5	
	comp=Z,93nm,1.3s						
JMN	Monobe	36.52	354	P	P	17 42 19.5	+0.7
SSE	Sheshan	37.46	335	P	P	17 42 27.1	+0.4
SSE				S	S	17 48 11.8	-3.0
SSE				pmax	pmax		
	comp=Z,24nm,0.9s						
SSE				pmax	pmax		
	comp=Z,120nm,3.3s						
SSE				LR	LR		
	comp=Z,630nm,20.8s						
SSE				LR	LR		
	comp=Z,410nm,20.3s						
BKNI	Bangkinang	37.55	274	P	P	17 42 29.4	+1.6
BKNI	Bangkinang	37.55	274	P	P	17 42 29.2	+1.4
IPM	Ipoh	38.11	281	P	P	17 42 32.4	-0.1
IPM	Ipoh	38.11	281	P	P	17 42 33.3	+0.8
PPI	Padang Panjang	38.13	273	P	P	17 42 33.7	+0.9
	comp=Z,2μmcomp=Z,52nm,1.0s						
KULM	Kulim	38.62	282	P	P	17 42 35.0	-1.9
KULM	Kulim	38.62	282	P	P	17 42 37.7	+0.8
GLAD	Gladstone	39.04	169	P	P	17 42 43.2	+3.3
MJAR	Matsushiro Arr	39.07	360	P	P	17 42 38.4	-1.9
	comp=Z,2.3nm,0.6s,baz=194,slow=8.9,SNR=7.5						
MJAR				PcP	PcP	17 44 50.1	0.0
	comp=Z,3.5nm,0.9s,baz=191,slow=1.9,SNR=6.0						
	comp=Z,2.3nm,0.6s						
MAJO	Matsushiro	39.07	360	P	P	17 42 39.2	-1.1
MAJO	Matsushiro	39.07	360	P	P	17 42 39.6	-0.7
MAJO	Matsushiro	39.07	360	P	P	17 42 39.2	-1.1
MAJO				pmax	pmax		
	comp=Z,54nm,1.9s						
MAJO				MLR	MLR		
	comp=Z,2μm,19.0s						
NJ2	Nanjing	39.29	333	⇑P	P	17 42 43.0	+0.8
NJ2				sP	sP	17 42 48.4	-0.8
NJ2				S	S	17 48 48.5	+5.9
NJ2				pmax	pmax		
	comp=Z,38nm,1.4s						
NJ2				pmax	pmax		
	comp=Z,400nm,5.4s						
NJ2				LR	LR		
	comp=Z,1μm,18.5s						
NJ2				LR	LR		
	comp=Z,790nm,16.6s						
NJ2				LR	LR		
	comp=Z,2μm,21.6s						
CNSH	ChangSha	39.35	323	P	P	17 42 44.8	+2.1
CNSH				S	S	17 48 44.0	+0.5
CNSH				pmax	pmax		
	comp=Z,100nm,1.2s						
CNSH				LR	LR		
	comp=Z,670nm,16.7s						
CNSH				LR	LR		
	comp=Z,1μm,21.2s						
CNSH				LR	LR		
	comp=Z,1μm,22.4s						
SISI	Saibi	39.39	271	P	P	17 42 44.0	+0.7
	comp=Z,94nm,1.4s						
RPSI	Rantau Prapat	39.91	277	P	P	17 42 46.6	-1.0
PSI	Prapat	39.92	278	P	P	17 42 48.0	+0.1
PSI	Prapat	39.92	278	P	P	17 42 46.6	-1.3
PSI				pmax	pmax		
	comp=Z,45nm,0.9s						
TJN	Taejon	40.27	346	P	P	17 42 50.5	+0.3
TJN	Taejon	40.27	346 *c*	*i*P	P	17 42 50.6	+0.3
WHN	Wuhan	40.31	327	P	P	17 42 52.4	+1.7
WHN				S	S	17 49 03.5	+5.6
WHN				pmax	pmax		
	comp=Z,370nm,1.3s						
WHN				pmax	pmax		
	comp=Z,1μm,3.0s						
WHN				LR	LR		
	comp=Z,3μm,17.5s						
WHN				LR	LR		
	comp=Z,2μm,14.5s						
WHN				LR	LR		
	comp=Z,3μm,18.0s						
SRIT	Nakonsritamara	40.37	287	P	P	17 42 52.1	+0.7
SRIT				IAmb	IAmb	17 43 02.3	
	comp=Z,76nm,1.0s						
SRIT	Nakonsritamara	40.37	287	P	P	17 42 53.0	+1.6

JMM	Marumori	40.45	3	P	P	17 42 51.3	-0.4
JSD	Sado	40.57	360	P	P	17 42 51.8	-0.8
JSD	Sado	40.57	360	P	P	17 42 52.5	-0.2
GSI	Gunungsitoli	41.09	275	P	P	17 42 56.3	-1.1
GSI	Gunungsitoli	41.09	275	P	P	17 42 57.3	-0.1
KSAR	Wonju Array Be	41.17	347	P	P	17 42 57.4	-0.2
KSAR	Wonju Array Be	41.17	347	P	P	17 42 57.4	-0.2
KSRS	Korea Array	41.17	347	P	P	17 42 57.5	-0.1
	comp=Z,9.4nm,0.9s,baz=168,slow=10.0,SNR=38						
KSRS				PcP	PcP	17 44 57.1	+0.4
	comp=Z,4.3nm,1.0s,baz=170,slow=3.5,SNR=6.2						
	comp=Z,9.4nm,0.9s						
SLVN	Son La	41.44	307	P	P	17 43 00.3	0.0
SLVN	Son La	41.44	307	P	P	17 43 01.2	+1.0
INCN	Inchon	41.50	346	P	P	17 43 00.5	+0.1
INCN				IAmb	IAmb	17 43 02.2	
	comp=Z,123nm,1.5s						
INCN	Inchon	41.50	346	IAMs_20	IAMs_20	18 00 01.0	
	comp=Z,2μm,18.0s						
INCN	Inchon	41.50	346	P	P	17 43 01.6	+1.2
INCN	Inchon	41.50	346	P	P	17 43 00.5	+0.1
INCN				pmax	pmax		
	comp=Z,123nm,1.5s						
INCN				MLR	MLR		
	comp=Z,2μm,18.0s						
MSVF	Nonsavu	41.56	114	P	P	17 43 01.4	+0.1
MSVF	Nonsavu	41.56	114	LR	LR	18 00 24.5	
	comp=Z,2μm,19.7s,baz=297,slow=36						
MSVF	Nonsavu	41.56	114	P	P	17 43 04.3	+3.0
MSVF	Nonsavu	41.56	114	P	P	17 43 01.4	+0.1
MSVF				pmax	pmax		
	comp=Z,62nm,1.5s						
LHMI	Lhok Sumawe	42.24	281	P	P	17 43 07.7	+0.9
LHMI	Lhok Sumawe	42.24	281	P	P	17 43 07.4	+0.6
GYA	Guiyang	42.28	315	⇑P	P	17 43 08.0	+0.9
GYA				pP	sP	17 43 17.4	+3.3
GYA				S	S	17 49 36.9	+9.4
GYA				pmax	pmax		
	comp=Z,44nm,1.0s						
GYA				LR	LR		
	comp=Z,880nm,20.8s						
GYA				LR	LR		
	comp=Z,590nm,22.7s						
GYA				LR	LR		
	comp=Z,1μm,22.7s						
DGTI	Dogotuki	42.75	111	P	P	17 43 12.6	+1.7
ENH	Enshi	42.94	322	IAmb	IAmb	17 43 14.2	
	comp=Z,68nm,1.0s						
ENH	Enshi	42.94	322	P	P	17 43 13.0	+0.7
JTM	Tenmabayashi	43.38	3	P	P	17 43 14.8	-0.8
JTM				IAmb	IAmb	17 43 16.8	
	comp=Z,101nm,1.4s						
TIA	Tai'an	43.57	335	P	P	17 43 17.3	0.0
TIA				S	S	17 49 44.8	-1.2
TIA				pmax	pmax		
	comp=Z,33nm,1.1s						
TIA				pmax	pmax		
	comp=Z,240nm,3.5s						
TIA				LR	LR		
	comp=Z,690nm,14.8s						
TIA				LR	LR		
	comp=Z,970nm,15.1s						
TIA				LR	LR		
	comp=Z,2μm,19.6s						
CMAR	Chiang Mai Arr	44.25	300	P	P	17 43 22.8	-0.2
CMAR	Chiang Mai Arr	44.25	300	P	P	17 43 23.9	+0.8
	comp=Z,6.1nm,0.7s,baz=119,slow=6.5,SNR=53						
	comp=Z,6.1nm,0.7s						
DL2	Dalian	44.25	341	P	P	17 43 22.1	-0.6
DL2				S	S	17 49 56.9	+1.1
DL2				pmax	pmax		
	comp=Z,64nm,1.4s						
DL2				pmax	pmax		
	comp=Z,370nm,7.9s						
DL2				LR	LR		
	comp=Z,1μm,22.9s						
DL2				LR	LR		
	comp=Z,760nm,18.6s						
DL2				LR	LR		
	comp=Z,1μm,19.6s						
KMI	Kunming	44.36	311	⇑P	P	17 43 25.3	+1.2
KMI				pmax	pmax		
	comp=Z,37nm,1.1s						
KMI				pmax	pmax		
	comp=Z,290nm,6.0s						
KMI				LR	LR		
	comp=Z,740nm,20.9s						
KMI				LR	LR		
	comp=Z,500nm,21.0s						
KMI				LR	LR		
	comp=Z,1μm,21.2s						
CHTO	Chiang Mai	44.40	300	P	P	17 43 23.4	-0.8
CHTO	Chiang Mai	44.40	300	P	P	17 43 24.5	+0.3
CHTO	Chiang Mai	44.40	300	P	P	17 43 23.4	-0.8
CHTO				pmax	pmax		
	comp=Z,42nm,1.4s						
CHTO				MLR	MLR		
	comp=Z,900nm,20.0s						
LYN	LuoYang	44.42	329	⇑P	P	17 43 24.8	+0.7
LYN				S	S	17 49 59.0	+0.6
LYN				pmax	pmax		
	comp=Z,190nm,1.1s						
LYN				pmax	pmax		
	comp=Z,430nm,4.5s						
LYN				LR	LR		
	comp=Z,970nm,14.4s						
LYN				LR	LR		
	comp=Z,620nm,16.5s						
LYN				LR	LR		
	comp=Z,1μm,23.4s						
MSHR	Mys Shultsa	45.59	352	*ce*P	P	17 43 32.9	-0.3
MSHR				pmax	pmax		
	comp=Z,14nm,1.1s						
HNS	HongShan	45.63	333	⇑P	P	17 43 33.8	+0.2
HNS				S	S	17 50 14.1	-1.6
HNS				pmax	pmax		
	comp=Z,49nm,1.3s						
HNS				LR	LR		
	comp=Z,1μm,21.9s						
HNS				LR	LR		
	comp=Z,950nm,23.5s						
HNS				LR	LR		
	comp=Z,2μm,22.0s						
PSTR	Posyet	45.70	352	*i* P	P	17 43 34.0	-0.1
PZH	PanZhiHua	45.87	312	P	P	17 43 36.3	+0.4
PZH				S	S	17 50 18.0	-1.9
PZH				pmax	pmax		
	comp=Z,30nm,1.1s						
PZH				pmax	pmax		
	comp=Z,190nm,6.1s						
PZH				LR	LR		
	comp=Z,760nm,23.5s						
PZH				LR	LR		
	comp=Z,920nm,24.1s						
PZH				LR	LR		
	comp=Z,1μm,20.6s						
OUZ	Omahuta	45.88	139	IAMs_20	IAMs_20	18 01 49.7	
	comp=Z,3μm,21.0s						
XAN	Xi'an	45.97	325	⇑P	P	17 43 36.8	+0.3
XAN				pP	pP	17 43 39.8	-1.7
XAN				S	S	17 50 19.5	-1.4
XAN				pmax	pmax		
	comp=Z,140nm,1.1s						
XAN				pmax	pmax		
	comp=Z,620nm,3.8s						
XAN				LR	LR		
	comp=Z,1μm,16.2s						
XAN				LR	LR		
	comp=Z,1μm,18.6s						
XAN				LR	LR		
	comp=Z,2μm,22.0s						
VLA	Vladivostok	46.03	353	*d i*P	P	17 43 37.8	+1.1
SNY	Shenyang	46.37	345	⇑P	P	17 43 39.8	+0.4
SNY				S	S	17 50 31.4	+5.0
SNY				pmax	pmax		
	comp=Z,33nm,1.6s						
SNY				pmax	pmax		
	comp=Z,290nm,4.9s						
SNY				LR	LR		
	comp=Z,790nm,17.7s						
SNY				LR	LR		
	comp=Z,810nm,17.8s						
SNY				LR	LR		
	comp=Z,1μm,17.8s						
JKA	Kamikawa-asahi	46.78	4	P	P	17 43 42.3	-0.3
JKA				IAmb	IAmb	17 43 44.2	
	comp=Z,84nm,1.5s						
ASAJ	Asahikawa	46.78	4	LR	LR	18 01 47.0	
	comp=Z,646nm,21.8s,baz=201,slow=34						
ASAJ	Asahikawa	46.78	4	P	P	17 43 42.3	-0.3
ASAJ				pmax	pmax		
	comp=Z,84nm,1.5s						
TIY	Taiyuan	46.93	332	*e*P	P	17 43 44.5	+0.5
TIY				S	S	17 50 35.5	+0.8
TIY				pmax	pmax		
	comp=Z,29nm,1.0s						
TIY				LR	LR		
	comp=Z,1μm,19.9s						
TIY				LR	LR		
	comp=Z,700nm,19.9s						
TIY				LR	LR		
	comp=Z,2μm,20.6s						
CD2	Chengdu	47.05	318	P	P	17 43 46.1	+1.1
CD2				S	S	17 50 37.4	+0.9
CD2				pmax	pmax		
	comp=Z,110nm,0.8s						
CD2				LR	LR		
	comp=Z,2μm,20.6s						
CD2				LR	LR		
	comp=Z,1μm,18.8s						
USA0B	Ussuriysk Arra	47.08	354	IAmb	IAmb	17 43 47.1	
	comp=Z,48nm,1.3s						
USA0B	Ussuriysk Arra	47.08	354	*c i*P	P	17 43 45.1	+0.1
USRK	Ussuriysk Ar.	47.08	354	P	P	17 43 44.8	-0.2
	comp=Z,7.4nm,0.8s,baz=167,slow=9.0,SNR=35						
USRK				LR	LR	18 01 22.4	
	comp=Z,1μm,19.5s,baz=159,slow=33						
	comp=Z,7.4nm,0.8s						
BJT	Baijiatuau	47.21	337	P	P	17 43 46.2	+0.2
BJI	Beijing	47.23	337	P	P	17 43 46.3	+0.2
BJI				pP	pP	17 43 50.3	-0.9
BJI				sP	sP	17 43 53.3	+0.1
BJI				PP	PP	17 45 35.3	-2.0
BJI				S	S	17 50 39.0	+0.4
BJI				pmax	pmax		
	comp=Z,26nm,1.3s						
BJI				pmax	pmax		
	comp=Z,160nm,3.9s						
BJI				LR	LR		
	comp=Z,550nm,20.9s						
BJI				LR	LR		
	comp=Z,310nm,17.5s						
BJI				LR	LR		
	comp=Z,690nm,24.1s						
TNCH	TengChong	47.58	308	⇑P	P	17 43 50.0	+0.6
TNCH				sP	sP	17 43 55.8	-0.6
TNCH				PP	PP	17 45 42.8	+1.7
TNCH				S	S	17 50 40.8	-3.7
TNCH				pmax	pmax		
	comp=Z,44nm,1.6s						
TNCH				pmax	pmax		
	comp=Z,290nm,3.1s						
TNCH				LR	LR		
	comp=Z,430nm,16.8s						
TNCH				LR	LR		
	comp=Z,330nm,16.8s						
TNCH				LR	LR		
	comp=Z,830nm,19.0s						
TEY	Ternei	47.59	358	⇓*e*P	P	17 43 46.4	-2.5
TEY				pmax	pmax		
	comp=Z,10.0nm,1.5s						
MDJ	Mudanjiang	47.80	351	P	P	17 43 51.0	+0.5
MDJ				pmax	pmax		
	comp=Z,37nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,400nm,4.2s						
MDJ				LR	LR		
	comp=Z,890nm,18.6s						
MDJ				LR	LR		
	comp=Z,620nm,19.3s						
MDJ				LR	LR		
	comp=Z,1μm,18.3s						
MDJ	Mudanjiang	47.80	351	P	P	17 43 51.1	+0.5
TOZ	Tahuroa Road	48.61	140	IAMs_20	IAMs_20	18 03 45.9	
	comp=Z,3μm,19.0s						
HIZ	Hauiti	48.68	142	IAMs_20	IAMs_20	18 03 36.6	
	comp=Z,3μm,21.0s						
RAO	Raoul Island	49.07	127	LR	LR	18 03 12.2	
	comp=Z,1μm,21.8s,baz=300,slow=34						
JCZ	Jackson Bay	49.12	151	P	P	17 44 03.2	+2.3
BNX	BinXian	49.26	350	⇑P	P	17 44 01.9	+0.2
BNX				sP	sP	17 44 07.3	-1.5
BNX				S	S	17 51 07.3	+0.1
BNX				pmax	pmax		
	comp=Z,80nm,1.2s						
BNX				pmax	pmax		
	comp=Z,410nm,5.1s						
BNX				LR	LR		
	comp=Z,910nm,18.6s						
BNX				LR	LR		
	comp=Z,440nm,16.5s						
BNX				LR	LR		
	comp=Z,1μm,18.2s						
KUTZ	Kaahu Road	49.26	141	P	P	17 44 04.2	+2.2
GRRZ	Galatos Road	49.36	141	P	P	17 44 05.7	+2.9
HSRZ	Hossack Road	49.42	141	P	P	17 44 06.0	+2.7
RATZ	Rangitukua	49.46	142	P	P	17 44 06.3	+2.8
HRRZ	Handcock Road	49.49	141	P	P	17 44 06.6	+2.8
WPRZ	Whakapapatarin	49.50	141	P	P	17 44 06.2	+2.4
WTVZ	West Tongariro	49.50	142	P	P	17 44 06.9	+3.0
NNVZ	North Ngauruho	49.52	142	P	P	17 44 07.1	+2.9
TARZ	Mount Tarawera	49.55	140	P	P	17 44 06.7	+2.4
TMVZ	Te Maari	49.57	142	P	P	17 44 06.7	+2.2
SNVZ	South Ngauruho	49.57	142	P	P	17 44 07.8	+3.3
OTVZ	Oturere	49.57	142	P	P	17 44 07.9	+3.4
RRRZ	Republican Roa	49.61	140	P	P	17 44 07.3	+2.6
YSS	Yuzhno-Sakhali	49.62	4	P	P	17 44 03.6	-0.9
YSS				IAmb	IAmb	17 44 05.5	
	comp=Z,109nm,1.8s						
YSS	Yuzhno-Sakhali	49.62	4	P	P	17 44 04.9	+0.4
YSS	Yuzhno-Sakhali	49.62	4	*e*P	P	17 44 04.4	-0.1
YSS				*e*S	S	17 51 10.5	-1.7
YSS				pmax	pmax		
	comp=Z,100nm,2.5s						
YSS				pmax	pmax		
	comp=N,100nm,3.2s						
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
YSS				pmax	pmax		
	comp=N,20nm,0.9s						
YSS				pmax	pmax		
	comp=E,10.0nm,1.1s						
YSS				MLR	MLR		
	comp=Z,400nm,17.0s						
YSS				MLR	MLR		
	comp=N,300nm,15.0s						
PRRZ	Plateau Road	49.63	141	P	P	17 44 06.3	+1.5
HHC	Hu-ho-hao-te	49.85	333	⇑*i*P	P	17 44 07.0	+0.5
HHC				sP	sP	17 44 14.9	+1.3
HHC				S	S	17 51 20.4	+4.5
HHC				pmax	pmax		
	comp=N,38nm,1.4s						
HHC				LR	LR		
	comp=N,1μm,20.2s						
HHC				LR	LR		
	comp=N,1μm,19.7s						
HHC				LR	LR		
	comp=N,2μm,20.4s						
URZ	Urewera	49.95	140	LR	LR	18 04 40.7	
	comp=N,3μm,21.5s,baz=300,slow=35						
LTZ	Lake Taylor	49.97	148	P	P	17 44 07.8	+0.4
LTZ				IAmb	IAmb	17 44 37.1	
	comp=Z,70nm,1.3s						
TUWZ	Tuamarina	49.98	145	P	P	17 44 09.0	+1.6
RPZ	Rata Peaks	49.98	149	P	P	17 44 07.5	+0.1
RPZ	Rata Peaks	49.98	149	LR	LR	18 04 45.3	
	comp=Z,1μm,20.2s,baz=312,slow=36						
TCW	Tory Channel	50.03	145	P	P	17 44 07.9	+0.1
RTZ	Ruatahuna	50.07	141	P	P	17 44 08.9	+0.7
BKZ	Black Stump Fm	50.09	141	IAmb	IAmb	17 44 10.9	
	comp=Z,53nm,0.9s						
BKZ				IAMs_20	IAMs_20	18 04 57.0	
	comp=Z,3μm,20.0s						
BKZ	Black Stump Fm	50.09	141	P	P	17 44 10.3	+2.0
BKZ	Black Stump Fm	50.09	141	P	P	17 44 09.5	+1.2
RUGZ	Raukumara Rang	50.14	139	P	P	17 44 10.4	+1.5
KWHZ	Kaweka Forest	50.20	142	P	P	17 44 10.9	+1.7
MWZ	Matawai	50.26	140	P	P	17 44 11.2	+1.6
KRHZ	Kereru	50.30	142	P	P	17 44 11.3	+1.4
OGWZ	Otaki Gorge	50.30	144	P	P	17 44 10.7	+0.9
TSZ	Takapari Road	50.30	143	P	P	17 44 11.3	+1.4
RAHZ	Arahi	50.31	141	P	P	17 44 11.6	+1.6
MXZ	Matakaoa Point	50.33	139	P	P	17 44 11.8	+1.7
PKGZ	Pakihiroa	50.35	139	P	P	17 44 11.9	+1.6
PNHZ	Pukenui	50.36	142	P	P	17 44 11.7	+1.4
LZH	Lanzhou	50.36	323	*e*P	P	17 44 12.1	+1.5
LZH				sP	sP	17 44 20.1	+2.4
LZH				S	S	17 51 25.1	+1.7
LZH				pmax	pmax		
	comp=Z,140nm,1.0s						
LZH				pmax	pmax		
	comp=Z,380nm,4.1s						
LZH				LR	LR		
	comp=Z,930nm,19.0s						
LZH				LR	LR		
	comp=Z,1μm,18.1s						
LZH				LR	LR		
	comp=Z,2μm,18.4s						
BTO	Baotou	50.37	332	*e*P	P	17 44 12.3	+1.9
BTO				PP	PP	17 46 02.8	-3.3
BTO				S	S	17 51 24.3	+1.2
BTO				SS	SS	17 54 52.3	-4.8
BTO				pmax	pmax		
	comp=Z,61nm,1.2s						
BTO				pmax	pmax		
	comp=Z,340nm,6.1s						
BTO				LR	LR		
	comp=Z,2μm,17.6s						
BTO				LR	LR		
	comp=Z,1μm,16.3s						
BTO				LR	LR		
	comp=Z,2μm,18.8s						
POWZ	Post Office Ro	50.39	143	P	P	17 44 11.2	+0.6
SNGZ	Shannon Statio	50.40	140	P	P	17 44 11.6	+1.0
MRZ	Mangatainoka R	50.44	143	P	P	17 44 11.8	+0.9
TWGZ	Tauwhareparae	50.46	139	P	P	17 44 12.5	+1.4
TKGZ	Te Karaka	50.52	140	P	P	17 44 12.7	+1.2
WMGZ	Waiomatatini S	50.54	139	P	P	17 44 13.1	+1.4
HOWZ	Holdsworth Sta	50.55	144	P	P	17 44 12.2	+0.4
DVHZ	Dannevirke	50.57	143	P	P	17 44 12.4	+0.5
XLT	XiLinHaoTe	50.59	339	*e*P	P	17 44 11.8	-0.3
XLT				pP	sP	17 44 19.4	+0.3
XLT				PcP	PcP	17 45 28.1	-1.6
XLT				PP	PP	17 46 11.0	+2.9
XLT				ScP	ScP	17 49 23.8	-1.6
XLT				S	S	17 51 22.0	-4.1
XLT				sS	sS	17 51 40.8	+6.3
XLT				SS	SS	17 55 00.4	-0.2
XLT				pmax	pmax		
	comp=Z,26nm,1.5s						
XLT				pmax	pmax		
	comp=Z,100nm,5.2s						
XLT				LR	LR		
	comp=Z,86nm,20.8s						
XLT				LR	LR		
	comp=Z,720nm,17.9s						
XLT				LR	LR		
	comp=Z,1μm,17.4s						
WPHZ	Waipukurau	50.60	142	P	P	17 44 13.3	+1.2
PRWZ	Pori Road	50.61	143	P	P	17 44 13.1	+0.9
RIGZ	Rimuhau	50.62	140	P	P	17 44 13.5	+1.2
TIWZ	Tintock	50.70	143	P	P	17 44 13.8	+0.9
CNGZ	Carnagh Statio	50.78	140	P	P	17 44 16.2	+2.7
ANWZ	Angora Road	50.86	143	P	P	17 44 15.2	+1.2
KLR	Kul'dur	52.08	354	LR	LR	18 04 38.6	
	comp=Z,1μm,18.9s,baz=184,slow=34						
KLR	Kul'dur	52.08	354	*ce*P	P	17 44 23.5	+0.5
KLR				pmax	pmax		
	comp=Z,83nm,1.7s						
MIDW	Midway	52.39	51	IAMs_20	IAMs_20	18 01 06.2	
	comp=Z,2μm,21.0s						
GRNR	Gornyy	53.32	358	⇑*i*P	P	17 44 32.6	+0.4
GRNR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GRNR				MLR	MLR		
	comp=E,220nm,16.0s						
GRNR				MLR	MLR		
	comp=N,370nm,19.0s						
GRNR				MLR	MLR		
	comp=Z,440nm,20.0s						
TYV	Tymovskoe	53.51	3	*e*P	P	17 44 34.4	+0.9
TYV				*e*S	S	17 52 08.9	+3.2
TYV				pmax	pmax		
	comp=Z,21nm,1.1s						
TYV				pmax	pmax		
	comp=Z,200nm,3.6s						
TYV				smax	smax		
	comp=N,400nm,6.7s						
TYV				smax	smax		
	comp=E,400nm,6.7s						
HEH	HeiHe	53.63	351	*e*P	P	17 44 34.1	-0.3
HEH				pP	sP	17 44 41.9	+0.4
HEH				S	S	17 52 06.9	-0.5
HEH				SS	SS	17 55 44.6	-3.7
HEH				pmax	pmax		
	comp=E,57nm,1.5s						
HEH				LR	LR		
	comp=E,840nm,19.0s						
HEH				LR	LR		
	comp=E,690nm,18.2s						
HEH				LR	LR		
	comp=E,1μm,17.6s						
HIA	Hailar	54.28	345	IAmb	IAmb	17 44 42.1	
	comp=Z,110nm,1.6s						
HIA	Hailar	54.28	345	P	P	17 44 39.8	+0.5
GTA	Gaotai	54.95	324	P	P	17 44 45.9	+1.4
GTA				pP	sP	17 44 50.9	-0.7
GTA				S	S	17 52 27.4	+1.4
GTA				pmax	pmax		
	comp=Z,48nm,1.1s						
GTA				pmax	pmax		
	comp=Z,320nm,6.4s						
GTA				LR	LR		
	comp=Z,620nm,21.1s						
GTA				LR	LR		
	comp=Z,740nm,22.3s						
GTA				LR	LR		
	comp=Z,1μm,20.3s						
SKR	Severo-Kuril's	55.32	14	*e*P	P	17 44 45.8	-0.9
SKR				*e*S	S	17 52 38.2	+8.2
SKR				pmax	pmax		
	comp=Z,600nm,4.8s						
SKR				MLR	MLR		
	comp=Z,600nm,18.0s						
LSA	Lhasa	55.55	309	IAmb	IAmb	17 45 15.6	
	comp=Z,89nm,1.7s						
LSA	Lhasa	55.55	309	P	P	17 44 50.3	+0.9
LSA				pmax	pmax		
	comp=Z,14nm,1.7s						
LSA				LR	LR		
	comp=Z,330nm,17.6s						
LSA				LR	LR		
	comp=Z,430nm,16.9s						
GOMU	GeErMu	56.18	318	P	P	17 44 54.9	+1.2
GOMU				pP	sP	17 45 00.0	-0.8
GOMU				sP	pP	17 45 03.0	+4.2
GOMU				S	S	17 52 40.1	-2.8
GOMU				sS	sS	17 52 58.4	+7.0
GOMU				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GOMU				LR	LR		
	comp=Z,230nm,15.9s						
GOMU				LR	LR		
	comp=Z,590nm,17.6s						
GOMU				LR	LR		
	comp=Z,840nm,19.4s						
ULN	Ulaanbaatar	57.39	335	P	P	17 45 01.9	+0.2
ULN	Ulaanbaatar	57.39	335	IAMs_20	IAMs_20	18 08 18.3	
	comp=Z,1μm,21.0s						
ULN	Ulaanbaatar	57.39	335	*ce*P	P	17 45 02.1	+0.3
ULN				pmax	pmax		
	comp=Z,66nm,1.7s						
SONM	Songino Array	57.64	335	P	P	17 45 03.4	-0.1
SONM	Songino Array	57.64	335	P	P	17 45 04.3	+0.8
	comp=Z,9.3nm,1.0s,baz=155,slow=6.8,SNR=30						
SONM				LR	LR	18 08 48.9	
	comp=Z,2μm,21.2s,baz=144,slow=35						
	comp=Z,9.3nm,1.0s						
PEA0B	Petropavlovsk-	57.94	14	*i* P	P	17 45 05.5	+0.2
PETK	Petropavlovsk-	57.94	14	P	P	17 45 04.6	-0.7
PETK	Petropavlovsk-	57.94	14	P	P	17 45 05.7	+0.4
	comp=Z,42nm,1.1s,baz=149,slow=3.1,SNR=33						
PETK				LR	LR	18 05 59.9	
	comp=Z,1μm,21.8s,baz=197,slow=32						
	comp=Z,42nm,1.1s						
PET	Petropavlovsk	58.09	14	P	P	17 45 06.0	-0.3

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PET   Petropavlovsk     58.09  14   P         P          17 45 07.3 +1.0
PET   Petropavlovsk     58.09  14  eP         P          17 45 06.3  0.0
PET                                eS         S          17 53 10.0 +3.4
PET                                 pmax      pmax
      comp=Z,26nm,1.2s
PET                                 MLR       MLR
      comp=Z,400nm,13.0s
PET                                 MLR       MLR
      comp=Z,500nm,15.0s
PET   Petropavlovsk     58.09  14   P         P          17 45 06.6 +0.3
      comp=Z,654nmcomp=Z,23nm,1.3s
PET                                 pP        pP         17 45 09.1 -2.4
      comp=Z,654nmcomp=Z,23nm,1.3s
EVN   Everest           58.27 305   IAmb      IAmb       17 45 30.5
      comp=Z,63nm,1.4s
CIT   Chita             58.50 342  eP         P          17 45 10.5 +1.2
CIT                                e                     17 45 18.1
CIT                                e                     17 46 06.8
CIT                                e                     17 47 15.8
CIT                                e                     17 53 29.1
CIT                                 pmax      pmax
      comp=Z,241nm,1.6s
PALK  Pallekele         58.51 280   LR        LR         18 12 15.2
      comp=Z,330nm,21.6s,baz=108,slow=38
ZAK   Zakamensk         60.91 335  eP         P          17 45 26.1  0.0
ZAK                                 pmax      pmax
      comp=Z,59nm,1.5s
HYB   Hyderabad         62.37 291  eP         P          17 45 36.3 -0.1
HYB                                ePP        PP         17 47 53.4 -0.4
HYB                                eS         S          17 54 04.3 +1.3
RAR   Rarotonga         62.73 112   LR        LR         18 11 21.0
      comp=Z,325nm,20.3s,baz=279,slow=35
MOY   Mondy             62.84 335  eP         P          17 45 39.9 +0.9
MOY                                 pmax      pmax
      comp=Z,116nm,2.3s
MA2   Magadan           62.87   7   P         P          17 45 38.6 -0.4
MA2   Magadan           62.87   7   LR        LR         18 11 04.4
      comp=Z,399nm,20.5s,baz=197,slow=34
MA2   Magadan           62.87   7   P         P          17 45 39.8 +0.9
MA2   Magadan           62.87   7ceP          P          17 45 39.4 +0.5
MA2                                 pmax      pmax
      comp=Z,56nm,1.2s
MA2   Magadan           62.87   7   P         P          17 45 39.4 +0.5
      comp=Z,1µmcomp=Z,72nm,1.4s
BOD   Bodaibo           63.48 346  eP         P          17 45 43.0  0.0
BOD                                 pmax      pmax
      comp=Z,91nm,1.6s
WMQ   Urumqi            64.89 322  eP         P          17 45 54.3 +1.7
WMQ                                 S         S          17 54 34.4 +0.8
WMQ                                 pmax      pmax
      comp=Z,68nm,1.1s
WMQ                                 pmax      pmax
      comp=Z,480nm,4.9s
WMQ                                 LR        LR
      comp=Z,810nm,19.3s
WMQ                                 LR        LR
      comp=Z,520nm,18.5s
WMQ                                 LR        LR
      comp=Z,500nm,23.7s
YAK   Yakutsk           64.94 355   P         P          17 45 52.3 -0.1
YAK   Yakutsk           64.94 355   IAMs_20   IAMs_20    18 12 13.6
      comp=Z,1µm,20.0s
YAK   Yakutsk           64.94 355c iP         P          17 45 52.5 +0.1
YAK                                e                     17 46 25.1
YAK                                e                     17 48 15.2
YAK                                eS         S          17 54 31.9 -1.4
YAK                                e*SS       sS         17 54 51.4  +10
YAK                                e                     17 55 42.6
YAK                                eSS        SS         17 58 46.1 +0.8
YAK                                 pmax      pmax
      comp=Z,203nm,1.0s
YAK                                 pmax      pmax
      comp=N,70nm,1.1s
YAK                                 pmax      pmax
      comp=E,9.0nm,1.2s
YAK                                 pmax      pmax
      comp=Z,77nm,2.7s
YAK                                 pmax      pmax
      comp=E,42nm,3.0s
YAK                                 pmax      pmax
      comp=N,66nm,2.8s
YAK                                 smax      smax
      comp=E,199nm,3.3s
YAK                                 smax      smax
      comp=N,78nm,3.3s
YAK                                 MLR       MLR
      comp=Z,1µm,20.0s
KIWB  Kanaga Island     66.06  28   P         P          17 45 57.7 -2.3
ADK   Adak              66.30  29   P         P          17 46 01.2 -0.3
ADK   Adak              66.30  29   P         P          17 46 02.1 +0.6
ADK   Adak              66.30  29   P         P          17 46 01.2 -0.3
ADK                                 pmax      pmax
      comp=Z,211nm,1.5s
SEY   Seymchan          66.33   7   LR        LR         18 13 23.6
      comp=Z,570nm,20.8s,baz=194,slow=35
SEY   Seymchan          66.33   7ceP          P          17 46 02.0 +0.6
SEY                                 pmax      pmax
      comp=Z,91nm,1.7s
CASY  Casey             66.40 192   IAMs_20   IAMs_20    18 14 32.6
      comp=Z,2µm,19.0s
KIP   Kipapa            66.55  65ceP          P          17 46 05.7 +2.1
KIP                                 pmax      pmax
      comp=Z,240nm,2.5s
ATKA  Atka Island       67.70  29   IAMs_20   IAMs_20    18 09 23.6
      comp=Z,1µm,21.0s
ZSN   Zaisan            68.45 324  eP         P          17 46 14.4 -0.8
ZSN                                 pmax      pmax
      comp=Z,15nm,1.2s
ZSN   Zaisan            68.45 324  eP         P          17 46 14.4 -0.8
      comp=Z,15nm,1.2s
HMH   Humuʻula Sheep    68.49  68   P         P          17 46 18.1 +1.7
MK31  Makanchi Array    69.67 322ceP          P          17 46 23.1 +0.3
MKAR  Makanchi Array    69.67 322   P         P          17 46 22.5 -0.3
MKAR  Makanchi Array    69.67 322   P         P          17 46 23.5 +0.7
      comp=Z,18nm,1.0s,baz=114,slow=8.1,SNR=74
MKAR                                LR        LR         18 16 25.4
      comp=Z,482nm,20.7s,baz=90,slow=36
      comp=Z,18nm,1.0s
MAKZ  Makanchi          69.87 322   P         P          17 46 23.2 -0.8
MAKZ                                IAmb      IAmb       17 46 26.0
      comp=Z,61nm,1.2s
MAKZ  Makanchi          69.87 322   P         P          17 46 23.2 -0.8
MAKZ                                pmax      pmax
      comp=Z,61nm,1.2s
MAKZ                                MLR       MLR
      comp=Z,600nm,20.0s
SHLS  Shalkode          69.88 318  eP         P          17 46 21.7 -2.7
SHLS                                pmax      pmax
      comp=Z,14nm,1.2s
SHLS  Shalkode          69.88 318  eP         P          17 46 21.7 -2.7
      comp=Z,14nm,1.2s
UZB   Uzynbulak         70.17 318  eP         P          17 46 25.2 -1.0
UZB                                 pmax      pmax
      comp=Z,27nm,1.3s
UZB   Uzynbulak         70.17 318  eP         P          17 46 25.2 -1.0
      comp=Z,27nm,1.3s
KPKS  Kokpek            70.53 318  eP         P          17 46 27.3 -1.0
KPKS                               eS         S          17 55 41.1 -0.1
KPKS  Kokpek            70.53 318  eP         P          17 46 27.4 -0.9
KPKS                               eS         S          17 55 41.2 -0.1
SATY  Saty              70.55 318  eP         P          17 46 27.6 -0.8
SATY                                pmax      pmax
      comp=Z,14nm,1.1s
SATY  Saty              70.55 318  eP         P          17 46 27.7 -0.8
      comp=Z,14nm,1.1s
NIKH  Nikolski High     70.81  31   IAMs_20   IAMs_20    18 15 51.9
      comp=Z,989nm,19.0s
NIKH  Nikolski High     70.81  31   P         P          17 46 29.3 -0.3
      baz=237
KSH   Kashi             70.94 313   P         P          17 46 32.8 +1.9
KSH                                 sP        sP         17 46 40.8 +2.7
KSH                                 pmax      pmax
      comp=Z,15nm,1.8s
KSH                                 pmax      pmax
      comp=Z,290nm,5.4s
KSH                                 LR        LR
      comp=Z,370nm,23.4s
KSH                                 LR        LR
      comp=Z,670nm,22.3s
KSH                                 LR        LR
      comp=Z,1µm,22.0s
TDK   Taldyqorghan      71.33 320  eP         P          17 46 32.2 -0.8
TDK                                 pmax      pmax
      comp=Z,26nm,1.4s
TDK   Taldyqorghan      71.33 320  eP         P          17 46 32.3 -0.8
      comp=Z,26nm,1.4s
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MDOK  Medeo             71.51 317  eP         P          17 46 33.4 -0.9
MDOK                               eS         S          17 55 52.6 -0.2
MDOK  Medeo             71.51 317  eP         P          17 46 33.4 -0.9
MDOK                               eS         S          17 55 52.7 -0.2
AAA   Alma-Ata          71.61 317  eP         P          17 46 33.8 -1.0
AAA                                 pmax      pmax
      comp=Z,14nm,0.7s
AAA   Alma-Ata          71.61 317  eP         P          17 46 33.9 -1.0
      comp=Z,14nm,0.7s
ZALV  Zalesovo Beam     71.84 330   P         P          17 46 34.3 -1.6
ZALV  Zalesovo Beam     71.84 330   P         P          17 46 35.0 -0.8
      comp=Z,4.3nm,0.6s,baz=116,slow=6.9,SNR=15
      comp=Z,4.3nm,0.6s
PPT   Papeete           71.97 107   LR        LR         18 14 39.9
      comp=Z,504nm,21.7s,baz=265,slow=33
PPT2  Papeete2          71.97 108  eS         S          17 55 56.1 -2.7
      comp=Z,332nm,24.5s
PPT2                               eSS        SS         18 00 33.5 -2.3
      comp=Z,205nm,24.8s
PPT2                               eLQ        LQ         18 05 33.9
      comp=Z,2µm,33.0s
PPT2                               eLR        LR         18 08 32.8
      comp=Z,655nm,22.8s
PPT2                               eLR        LR         18 08 36.1
      comp=Z,796nm,22.2s
BOOM  Boomskoye usch    72.01 316   IAmb      IAmb       17 46 47.1
      comp=Z,73nm,1.8s
TKM2  Tokmak 2          72.41 317   P         P          17 46 40.3 +0.6
      SNR=6.8
TBI   Tubuai            72.45 114  eP         P          17 46 38.8 -1.4
      comp=Z,868nm,28.0s
TBI                                eS         S          17 56 04.6 +0.6
      comp=Z,1µm,26.5s
TBI                                eSS        SS         18 00 40.1 -2.8
      comp=Z,926nm,28.0s
TBI                                eLQ        LQ         18 05 42.0
      comp=Z,4µm,34.5s
TBI                                eLR        LR         18 08 45.1
      comp=Z,4µm,23.5s
TBI                                eLR        LR         18 08 45.4
      comp=Z,1µm,32.0s
UNV   Unalaska Valle    72.47  31   IAMs_20   IAMs_20    18 14 15.8
      comp=Z,1µm,20.0s
UNV   Unalaska Valle    72.47  31   P         P          17 46 39.8 +0.2
      baz=239
P08K  Saint George I    72.49  27   P         P          17 46 40.4 +0.8
      baz=236
SPIA  Saint Paul Isl    72.50  26   P         P          17 46 39.9 +0.2
      baz=235
CHMS  Chumysh           73.01 317   P         P          17 46 43.8 +0.6
      SNR=7.7
AAK   Ala-Archa         73.06 316   P         P          17 46 43.9 +0.2
AAK                                 IAmb      IAmb       17 46 54.5
      comp=Z,71nm,1.9s
AAK   Ala-Archa         73.06 316   P         P          17 46 44.1 +0.5
      comp=Z,2.3nm,0.5s,baz=103,slow=6.1,SNR=13
      comp=Z,2.3nm,0.5s
BILL  Bilibino          73.23  11   P         P          17 46 43.5 -0.4
BILL                                IAmb      IAmb       17 46 45.5
      comp=Z,43nm,1.2s
BILL  Bilibino          73.23  11ceP          P          17 46 43.7 -0.2
BILL                                pmax      pmax
      comp=Z,46nm,1.3s
SGDS  Sogindy           73.25 317  eP         P          17 46 43.8 -0.9
SGDS                               eS         S          17 56 12.9 +0.2
USP   Ospenovka         73.28 317   P         P          17 46 45.2 +0.5
      SNR=17
AML   Almayashu         73.45 315   P         P          17 46 47.3 +1.1
      SNR=17
EKS2  Erkin-Say         73.57 316   P         P          17 46 47.7 +1.1
      SNR=9.4
KURK  Kurchatov         73.61 325   P         P          17 46 46.0 -0.5
KURK                                IAmb      IAmb       17 46 49.0
      comp=Z,95nm,1.8s
KURK  Kurchatov         73.61 325ceP          P          17 46 45.8 -0.6
KURK                                pmax      pmax
      comp=Z,25nm,1.4s
KURBB Kurchatov Arra    73.62 325   P         P          17 46 46.4 -0.1
      comp=Z,5.6nm,1.0s,baz=130,slow=4.9,SNR=45
KURBB                               LR        LR         18 22 22.4
      comp=Z,294nm,18.0s,baz=153,slow=38
      comp=Z,5.6nm,1.0s
ARSB  Arslanbob         73.69 314   IAmb      IAmb       17 46 58.2
      comp=Z,83nm,1.5s
BTLS  Baital            74.21 318  eP         P          17 46 49.5 -0.6
BTLS                                pmax      pmax
      comp=Z,21nm,1.2s
BTLS  Baital            74.21 318  eP         P          17 46 49.5 -0.6
      comp=Z,21nm,1.2s
TIXI  Tiksi             74.51 357   P         P          17 46 50.1 -1.2
TIXI  Tiksi             74.51 357   LR        LR         18 18 48.4
      comp=Z,633nm,18.9s,baz=198,slow=35
TIXI  Tiksi             74.51 357ceP          P          17 46 50.6 -0.7
TIXI                                pmax      pmax
      comp=Z,31nm,1.3s
FALS  False Pass        74.54  31   IAMs_20   IAMs_20    18 20 56.5
      comp=Z,978nm,19.0s
FALS  False Pass        74.54  31   P         P          17 46 51.9 +0.2
      baz=242
BTK   Batken            74.87 313   IAmb      IAmb       17 47 04.7
      comp=Z,80nm,1.9s
DZA   Taraz             75.35 316  eP         P          17 46 55.7 -1.1
DZA                                 pmax      pmax
      comp=Z,22nm,1.9s
DZA   Taraz             75.35 316  eP         P          17 46 55.8 -1.1
      comp=Z,22nm,1.9s
S12K  Black Hills       75.62  30   P         P          17 46 58.3 +0.2
      baz=243,SNR=6.5
VNDA  Vanda             75.78 175   P         P          17 46 58.8 +0.2
VNDA  Vanda             75.78 175   P         P          17 46 59.5 +0.9
      comp=Z,5.9nm,0.8s,baz=319,slow=5.7,SNR=23
VNDA                                LR        LR         18 21 01.6
      comp=Z,2µm,18.3s,baz=352,slow=36
      comp=Z,5.9nm,0.8s
SIMJ  Simiganj          75.83 311   P         P          17 46 59.7 -0.1
GAMB  Gambell           75.88  20   P         P          17 47 00.1 +0.8
      baz=232
KKAR  Karatay Array     75.99 316   P         P          17 46 59.9 -0.5
KKAR  Karatay Array     75.99 316   P         P          17 46 59.9 -0.5
M11K  Mekoryuk          76.04  25   IAMs_20   IAMs_20    18 15 04.8
      comp=Z,1µm,22.0s
M11K  Mekoryuk          76.04  25   P         P          17 47 01.4 +1.2
      baz=238
IUG   Iuzhnay           76.05 315  eP         P          17 47 00.0 -0.9
IUG                                 pmax      pmax
      comp=Z,37nm,1.4s
IUG   Iuzhnay           76.05 315  eP         P          17 47 00.0 -0.9
      comp=Z,36nm,1.4s
SDPT  Sand Point        76.27  31   P         P          17 47 02.8 +1.1
SDPT  Sand Point        76.27  31   P         P          17 47 01.9 +0.3
      baz=244
CNBA  Chernabura Isl    76.50  32   IAMs_20   IAMs_20    18 15 54.6
      comp=Z,829nm,19.0s
CHNA  Chernabura Isl    76.51  32   P         P          17 47 03.3 +0.2
      baz=245
SBA   Scott Base        76.55 174   IAMs_20   IAMs_20    18 23 44.4
      comp=Z,1µm,19.0s
BRZS  Berezniki         76.81 323  eP         P          17 47 04.3 -0.7
BRZS  Berezniki         76.81 323  eP         P          17 47 04.4 -0.6
S14K  Fog Glacier       77.14  30   P         P          17 47 07.5 +0.7
      baz=245,SNR=5.4
M13K  Dall Lake         77.27  26   IAMs_20   IAMs_20    18 19 16.4
      comp=Z,867nm,20.0s
M13K  Dall Lake         77.27  26   P         P          17 47 08.5 +1.2
      baz=240,SNR=9.7
K13K  Kusilvak Mount    77.49  24   IAmb      IAmb       17 47 11.2
      comp=Z,79nm,1.2s
K13K  Kusilvak Mount    77.49  24   P         P          17 47 09.3 +0.9
      baz=239,SNR=20
O14K  Tigyukauivet M    77.64  27   IAmb      IAmb       17 47 11.5
      comp=Z,41nm,1.1s
O14K  Tigyukauivet M    77.64  27   P         P          17 47 10.0 +0.6
      baz=243
N14K  Kuskokwak Cree    77.77  26   IAmb      IAmb       17 47 12.2
      comp=Z,83nm,1.3s
N14K                                IAMs_20   IAMs_20    18 17 13.5
      comp=Z,1µm,22.0s
N14K  Kuskokwak Cree    77.77  26   P         P          17 47 10.7 +0.7
      baz=242,SNR=7.1
L14K  Kuka Creek        78.01  25   IAMs_20   IAMs_20    18 16 48.9
      comp=Z,829nm,20.0s
L14K  Kuka Creek        78.01  25   P         P          17 47 12.3 +1.0
      baz=241,SNR=26
M14K  Bethel            78.04  26   IAmb      IAmb       17 47 13.9
      comp=Z,66nm,0.9s
M14K                                IAMs_20   IAMs_20    18 20 27.6
      comp=Z,822nm,20.0s
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M14K  Bethel            78.04  26   P         P          17 47 12.3 +0.9
      baz=242,SNR=20
TNA   Tin City          78.25  20   P         P          17 47 13.3 +0.7
      baz=235
O15K  Ungalikthiuk R    78.27  28   IAmb      IAmb       17 47 15.1
      comp=Z,63nm,1.5s
O15K  Ungalikthiuk R    78.27  28   P         P          17 47 13.6 +0.8
      baz=244,SNR=5.8
J14K  Nanvaranak Lak    78.35  23   IAmb      IAmb       17 47 15.2
      comp=Z,50nm,1.4s
J14K                                IAMs_20   IAMs_20    18 16 55.8
      comp=Z,1µm,21.0s
J14K  Nanvaranak Lak    78.35  23   P         P          17 47 14.4 +1.2
      baz=240,SNR=10.0
M15K  Kasigluk River    78.56  26   P         P          17 47 15.1 +0.7
      baz=243,SNR=15
N15K  Kwethluk River    78.59  27   IAmb      IAmb       17 47 17.0
      comp=Z,66nm,1.2s
N15K                                IAMs_20   IAMs_20    18 17 51.3
      comp=Z,1µm,22.0s
N15K  Kwethluk River    78.59  27   P         P          17 47 15.7 +1.1
      baz=244,SNR=13
ANM   Nome              78.60  21   IAMs_20   IAMs_20    18 18 34.3
      comp=Z,847nm,20.0s
ANM   Nome              78.60  21   P         P          17 47 15.1 +0.5
      baz=238
L15K  Ungalak Mounta    78.68  25   P         P          17 47 15.5 +0.5
      baz=242,SNR=12
F14K  Arctic Creek      78.76  20   P         P          17 47 16.5 +1.1
      baz=237
K15K  Wolf Creek Mou    78.95  24   IAmb      IAmb       17 47 19.1
      comp=Z,59nm,1.2s
K15K  Wolf Creek Mou    78.95  24   P         P          17 47 17.5 +0.9
      baz=242,SNR=15
CHIR  Chirikof Islan    78.98  32   P         P          17 47 17.4 +0.6
      baz=248
P16K  Nushagak River    79.06  28   IAMs_20   IAMs_20    18 21 28.0
      comp=Z,887nm,20.0s
P16K  Nushagak River    79.06  28   P         P          17 47 17.9 +0.7
      baz=246
BVAR  Borovoye Array    79.20 325   P         P          17 47 17.4 -0.7
      comp=Z,9.3nm,0.6s,baz=116,slow=5.9,SNR=14
BVAR                                LR        LR         18 24 54.7
      comp=Z,376nm,18.7s,baz=94,slow=38
      comp=Z,9.3nm,0.6s
O16K  Kokwok River B    79.25  28   IAmb      IAmb       17 47 20.4
      comp=Z,71nm,1.3s
O16K                                IAMs_20   IAMs_20    18 26 49.8
      comp=Z,761nm,19.0s
O16K  Kokwok River B    79.25  28   P         P          17 47 18.9 +0.6
      baz=246,SNR=17
BRVK  Borovoye          79.27 325 i P         P          17 47 18.5  0.0
BRVK                                pmax      pmax
      comp=Z,54nm,1.8s
N16K  Nishlik Lake      79.31  27   P         P          17 47 19.8 +1.2
      baz=245
G15K  Niukluk           79.32  21   P         P          17 47 18.9 +0.4
      baz=239
M16K  Timber Creek      79.47  26   IAmb      IAmb       17 47 21.8
      comp=Z,61nm,1.1s
M16K  Timber Creek      79.47  26   P         P          17 47 20.2 +0.8
      baz=244,SNR=26
F15K  North Star Dit    79.47  21   IAmb      IAmb       17 47 30.4
      comp=Z,136nm,1.9s
F15K  North Star Dit    79.47  21   P         P          17 47 20.3 +0.9
      baz=238
L16K  Owhat River       79.55  25   IAmb      IAmb       17 47 30.6
      comp=Z,128nm,1.8s
L16K                                IAMs_20   IAMs_20    18 20 45.5
      comp=Z,860nm,20.0s
L16K  Owhat River       79.55  25   P         P          17 47 20.7 +0.9
      baz=244,SNR=21
Q16K  King Salmon       79.56  29   P         P          17 47 19.4 -0.5
      baz=247
Q17K  Contact Creek     79.77  29   P         P          17 47 20.9 -0.4
      baz=248,SNR=10
O17K  Koliganek Bris    79.78  28   P         P          17 47 22.0 +0.8
      baz=246,SNR=30
J16K  Anvik River       79.79  24   IAMs_20   IAMs_20    18 18 10.9
      comp=Z,1µm,21.0s
J16K  Anvik River       79.79  24   P         P          17 47 22.5 +1.3
      baz=243,SNR=12
H16K  Elim              79.80  22   P         P          17 47 21.8 +0.6
      baz=241
P17K  Kvichak River     79.86  28   P         P          17 47 22.5 +1.0
      baz=247
SII   Sitkinak Islan    80.00  31   IAmb      IAmb       17 47 24.5
      comp=Z,81nm,1.0s
SII                                 IAMs_20   IAMs_20    18 20 21.9
      comp=Z,930nm,21.0s
SII   Sitkinak Islan    80.00  31   P         P          17 47 22.8 +0.4
      baz=249
I17K  Unalakleet        80.04  23   IAmb      IAmb       17 47 34.8
      comp=Z,97nm,1.4s
I17K                                IAMs_20   IAMs_20    18 18 08.3
      comp=Z,1µm,21.0s
I17K  Unalakleet        80.04  23   P         P          17 47 23.8 +1.4
      baz=242
N17K  Nushagak Hills    80.05  27   IAmb      IAmb       17 47 25.3
      comp=Z,65nm,1.3s
N17K                                IAMs_20   IAMs_20    18 18 35.9
      comp=Z,960nm,22.0s
N17K  Nushagak Hills    80.05  27   P         P          17 47 24.0 +1.4
      baz=246,SNR=17
G16K  Koyuk River       80.13  21   IAMs_20   IAMs_20    18 19 50.7
      comp=Z,826nm,20.0s
G16K  Koyuk River       80.13  21   P         P          17 47 23.5 +0.6
      baz=241
R18K  Karluk            80.22  30   P         P          17 47 23.4 -0.1
      baz=249
L17K  Donlin            80.23  25   P         P          17 47 24.9 +1.4
      baz=245,SNR=17
M17K  Holitna River     80.30  26   IAmb      IAmb       17 47 26.8
      comp=Z,69nm,1.1s
M17K                                IAMs_20   IAMs_20    18 18 43.4
      comp=Z,788nm,20.0s
M17K  Holitna River     80.30  26   P         P          17 47 25.2 +1.3
      baz=246,SNR=16
Q18K  Katmai Hardscr    80.34  29   P         P          17 47 23.8 -0.5
      baz=248,SNR=8.6
J17K  VABM Dome         80.46  24   IAMs_20   IAMs_20    18 17 48.5
      comp=Z,923nm,22.0s
J17K  VABM Dome         80.46  24   P         P          17 47 26.0 +1.3
      baz=244,SNR=10
K17K  Iditarod          80.48  25   IAmb      IAmb       17 47 27.5
      comp=Z,80nm,1.1s
K17K                                IAMs_20   IAMs_20    18 19 16.1
      comp=Z,806nm,20.0s
K17K  Iditarod          80.48  25   P         P          17 47 26.0 +1.2
      baz=245,SNR=34
P18K  Big Mountain,     80.51  28   IAMs_20   IAMs_20    18 21 14.3
      comp=Z,1µm,20.0s
P18K  Big Mountain,     80.51  28   P         P          17 47 24.7 -0.4
      baz=248
C16K  Lisburne Hills    80.61  18   P         P          17 47 25.8 +0.4
      baz=237
OHAK  Old Harbor        80.69  31   IAmb      IAmb       17 47 28.0
      comp=Z,47nm,1.1s
OHAK  Old Harbor        80.69  31   P         P          17 47 26.9 +0.8
OHAK  Old Harbor        80.69  31   P         P          17 47 26.5 +0.4
      baz=250,SNR=7.8
O18K  Koktuh Hills      80.69  28   IAMs_20   IAMs_20    18 16 34.1
      comp=Z,890nm,22.0s
O18K  Koktuh Hills      80.69  28   P         P          17 47 26.1  0.0
      baz=248
N18K  Kilae Creek       80.70  27   IAmb      IAmb       17 47 28.7
      comp=Z,75nm,1.4s
N18K                                IAMs_20   IAMs_20    18 19 28.1
      comp=Z,892nm,21.0s
N18K  Kilae Creek       80.70  27   P         P          17 47 27.4 +1.3
      baz=247,SNR=10.0
G17K  Kiwalik Mounta    80.81  22   P         P          17 47 27.7 +1.2
      baz=242,SNR=9.2
H17K  Granite Mounta    80.82  22   IAmb      IAmb       17 47 37.9
      comp=Z,84nm,1.6s
H17K                                IAMs_20   IAMs_20    18 19 22.0
      comp=Z,1µm,21.0s
H17K  Granite Mounta    80.82  22   P         P          17 47 27.6 +1.0
      baz=243,SNR=9.1
L18K  Granite Mounta    80.95  25   IAmb      IAmb       17 47 30.0
      comp=Z,52nm,1.3s
L18K                                IAMs_20   IAMs_20    18 18 41.7
      comp=Z,1µm,21.0s
L18K  Granite Mounta    80.95  25   P         P          17 47 28.5 +1.1
      baz=246,SNR=19
D17K  Noatak River      81.04  19   P         P          17 47 28.8 +1.1
      baz=240,SNR=23
M18K  Stony River       81.04  26   P         P          17 47 29.1 +1.2
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	baz=247,SNR=18						
TAOE	Nuku Hiva Isla	81.06	98	*e*LR	LR	18 12 42.4	
	comp=Z,1µm,24.9s						
Q19K	Cape Douglas,	81.10	29	IAMs_20	IAMs_20	18 19 31.0	
	comp=Z,857nm,20.0s						
Q19K	Cape Douglas,	81.10	29	P	P	17 47 28.0	-0.3
	baz=250						
E17K	Hotham Inlet	81.15	20	P	P	17 47 29.4	+1.1
	baz=241,SNR=9.9						
O19K	Port Alsworth	81.24	28	IAMs_20	IAMs_20	18 19 02.4	
	comp=Z,865nm,22.0s						
O19K	Port Alsworth	81.24	28	P	P	17 47 29.1	+0.2
	baz=249						
KDAK	Kodiak Island	81.24	30	P	P	17 47 28.5	-0.5
KDAK				IAmb	IAmb	17 47 39.5	
	comp=Z,91nm,1.4s						
KDAK	Kodiak Island	81.24	30	P	P	17 47 29.2	+0.2
	comp=Z,21nm,0.9s,baz=262,slow=1.7,SNR=15						
KDAK				LR	LR	18 19 35.0	
	comp=Z,1µm,20.3s,baz=240,slow=33						
	comp=Z,21nm,0.9s						
KDAK	Kodiak Island	81.24	30	P	P	17 47 29.4	+0.4
	baz=251						
RDOG	Red Dog Mine	81.28	19	IAmb	IAmb	17 47 32.7	
	comp=Z,37nm,1.1s						
RDOG	Red Dog Mine	81.28	19	P	P	17 47 29.8	+0.8
	baz=240						
N19K	Bonanza Creek	81.39	27	IAmb	IAmb	17 47 32.1	
	comp=Z,83nm,1.3s						
N19K				IAMs_20	IAMs_20	18 19 50.3	
	comp=Z,869nm,20.0s						
N19K	Bonanza Creek	81.39	27	P	P	17 47 30.6	+0.7
	baz=248,SNR=14						
C17K	DeLong Mountai	81.40	19	P	P	17 47 30.4	+0.7
	baz=239,SNR=7.5						
J18K	Innoko River	81.45	24	IAmb	IAmb	17 47 40.7	
	comp=Z,65nm,1.7s						
J18K	Innoko River	81.45	24	P	P	17 47 30.6	+0.6
	baz=246,SNR=13						
H18K	Honhosa River	81.51	22	IAMs_20	IAMs_20	18 19 23.1	
	comp=Z,945nm,21.0s						
H18K	Honhosa River	81.51	22	P	P	17 47 30.7	+0.4
	baz=244						
P19K	Oil Pt	81.56	28	P	P	17 47 30.6	-0.1
	baz=250						
Q20K	Shuyak Island	81.61	30	P	P	17 47 31.0	+0.1
	baz=251						
SYI	Shuyak Island	81.61	30	IAmb	IAmb	17 47 31.8	
	comp=Z,94nm,1.3s						
SYI				IAMs_20	IAMs_20	18 17 32.3	
	comp=Z,1µm,21.0s						
F18K	Selawik	81.68	21	P	P	17 47 31.8	+0.7
	baz=243						
G18K	Tagagawik	81.72	22	P	P	17 47 31.9	+0.4
	baz=244,SNR=9.4						
E18K	Tukpahlearik C	81.73	20	IAmb	IAmb	17 47 35.1	
	comp=Z,33nm,1.0s						
E18K	Tukpahlearik C	81.73	20	P	P	17 47 32.2	+0.7
	baz=242						
L19K	White Mountain	81.73	26	IAmb	IAmb	17 47 33.8	
	comp=Z,38nm,1.1s						
L19K				IAMs_20	IAMs_20	18 19 39.3	
	comp=Z,1µm,21.0s						
L19K	White Mountain	81.73	26	P	P	17 47 32.4	+0.9
	baz=248,SNR=23						
M19K	Big River Lodg	81.83	26	IAmb	IAmb	17 47 43.3	
	comp=Z,59nm,1.6s						
M19K				IAMs_20	IAMs_20	18 19 32.0	
	comp=Z,816nm,20.0s						
M19K	Big River Lodg	81.83	26	P	P	17 47 33.3	+1.2
	baz=248,SNR=10						
GCSA	Galena City Sc	81.91	23	P	P	17 47 32.9	+0.5
	baz=246						
O20K	Slope Mountain	81.99	28	P	P	17 47 33.3	+0.3
	baz=250						
MAW	Mawson	82.02	202	P	P	17 47 33.2	+0.3
	comp=Z,18nm,1.0s,baz=58,slow=6.9,SNR=10						
MAW				LR	LR	18 22 07.7	
	comp=Z,1µm,19.5s,baz=61,slow=34						
	comp=Z,18nm,1.0s						
RED	Redoubt Volcan	82.04	28	IAmb	IAmb	17 47 42.4	
	comp=Z,72nm,1.6s						
J19K	Poorman	82.11	24	IAmb	IAmb	17 47 35.7	
	comp=Z,36nm,1.2s						
J19K	Poorman	82.11	24	P	P	17 47 34.3	+0.9
	baz=247,SNR=18						
C18K	Utukok River	82.12	19	P	P	17 47 34.1	+0.5
	baz=241,SNR=6.5						
L20K	Farewell, AK	82.27	26	P	P	17 47 35.4	+1.1
	baz=249,SNR=15						
B18K	Kokolik River	82.28	18	P	P	17 47 35.0	+0.7
	baz=241						
HOM	Homer	82.32	29	IAMs_20	IAMs_20	18 20 50.9	
	comp=Z,864nm,20.0s						
HOM	Homer	82.32	29	P	P	17 47 35.2	+0.6
	baz=251						
M20K	Styx River	82.38	26	IAmb	IAmb	17 47 37.2	
	comp=Z,75nm,1.4s						
M20K				IAMs_20	IAMs_20	18 19 59.5	
	comp=Z,753nm,20.0s						
M20K	Styx River	82.38	26	P	P	17 47 35.9	+0.9
	baz=250,SNR=17						
H19K	Roundabout Mou	82.39	22	IAmb	IAmb	17 47 39.9	
	comp=Z,70nm,1.5s						
H19K				IAMs_20	IAMs_20	18 20 21.6	
	comp=Z,885nm,20.0s						
H19K	Roundabout Mou	82.39	22	P	P	17 47 35.8	+0.9
	baz=246,SNR=19						
G19K	Purcell Mounta	82.41	22	IAmb	IAmb	17 47 38.8	
	comp=Z,36nm,0.9s						
G19K	Purcell Mounta	82.41	22	P	P	17 47 35.8	+0.7
	baz=245,SNR=28						
CNPM	China Poot	82.47	29	IAMs_20	IAMs_20	18 19 57.1	
	comp=Z,1µm,20.0s						
K20K	Telida	82.50	25	IAMs_20	IAMs_20	18 20 47.7	
	comp=Z,834nm,20.0s						
K20K	Telida	82.50	25	P	P	17 47 36.3	+0.7
	baz=249						
N20K	Mount Spurr	82.56	27	P	P	17 47 35.3	-0.7
	baz=250						
SPCR	Spurr Chakacha	82.56	27	P	P	17 47 35.5	-0.5
	baz=250						
BRLK	Bradley Lake	82.72	29	IAmb	IAmb	17 47 46.5	
	comp=Z,77nm,1.7s						
BRLK				IAMs_20	IAMs_20	18 22 42.2	
	comp=Z,704nm,19.0s						
J20K	Nowinta River	82.78	24	P	P	17 47 38.0	+1.0
	baz=248,SNR=22						
BRSE	Bradley Lake S	82.78	29	P	P	17 47 36.6	-0.5
	baz=252						
C19K	Lookout Ridge	82.85	19	IAmb	IAmb	17 47 40.9	
	comp=Z,64nm,1.3s						
C19K	Lookout Ridge	82.85	19	P	P	17 47 38.5	+1.2
	baz=243,SNR=17						
I20K	Naaghedeneel	82.87	23	IAMs_20	IAMs_20	18 19 35.3	
	comp=Z,1µm,21.0s						
I20K	Naaghedeneel	82.87	23	P	P	17 47 38.2	+0.8
	baz=248						
CAPN	Captain Cook N	82.91	28	IAMs_20	IAMs_20	18 22 51.5	
	comp=Z,1µm,20.0s						
CAPN	Captain Cook N	82.91	28	P	P	17 47 38.5	+0.8
	baz=252						
E19K	Redstone River	82.91	20	IAmb	IAmb	17 47 50.2	
	comp=Z,23nm,1.0s						
E19K				IAMs_20	IAMs_20	18 22 10.1	
	comp=Z,730nm,20.0s						
E19K	Redstone River	82.91	20	P	P	17 47 38.4	+0.8
	baz=245						
A19K	Wainwright	82.92	17	P	P	17 47 38.6	+1.1
	baz=241						
H20K	Anotleneega Mo	82.98	23	P	P	17 47 38.7	+0.6
	baz=248,SNR=11						
D19K	Kuna River	83.06	19	P	P	17 47 39.2	+0.8
	baz=244						
SKT	Skwentna	83.12	27	IAmb	IAmb	17 47 39.1	
	comp=Z,34nm,1.4s						
SKT				IAMs_20	IAMs_20	18 20 24.2	
	comp=Z,758nm,20.0s						
SKT	Skwentna	83.12	27	P	P	17 47 37.9	-1.0
	baz=251,SNR=12						
PPLA	Purkeypile	83.14	26	IAMs_20	IAMs_20	18 20 31.6	
	comp=Z,915nm,20.0s						
PPLA	Purkeypile	83.14	26	P	P	17 47 39.1	0.0
	baz=250,SNR=16						
SLKM	Skilak Lake	83.26	28	IAMs_20	IAMs_20	18 23 48.0	
	comp=Z,987nm,20.0s						
F20K	Avaraart Lake	83.28	21	IAmb	IAmb	17 47 50.6	
	comp=Z,105nm,2.0s						
F20K	Avaraart Lake	83.28	21	P	P	17 47 40.4	+0.9
	baz=247,SNR=24						
SUA	Susitna One	83.31	27	IAmb	IAmb	17 47 44.2	
	comp=Z,20nm,1.0s						
SUA				IAMs_20	IAMs_20	18 21 02.3	
	comp=Z,788nm,21.0s						
SUA	Susitna One	83.31	27	P	P	17 47 39.1	-0.8
	baz=252,SNR=8.5						
CAST	Castle Rocks	83.36	25	IAmb	IAmb	17 47 41.5	
	comp=Z,57nm,1.6s						
CAST				IAMs_20	IAMs_20	18 23 33.4	
	comp=Z,706nm,20.0s						
CAST	Castle Rocks	83.36	25	P	P	17 47 40.1	0.0
	baz=250,SNR=19						
CHUM	Lake Minchumin	83.42	25	P	P	17 47 41.1	+0.7
	baz=250						
FIS	Fire Island	83.46	28	IAMs_20	IAMs_20	18 20 34.1	
	comp=Z,1µm,21.0s						
O22K	Cooper Landing	83.49	28	IAMs_20	IAMs_20	18 24 14.0	
	comp=Z,904nm,20.0s						
O22K	Cooper Landing	83.49	28	P	P	17 47 40.3	-0.4
	baz=253						
SEW	Seward	83.51	29	IAmb	IAmb	17 47 42.0	
	comp=Z,57nm,1.3s						
SEW	Seward	83.51	29	P	P	17 47 40.8	0.0
	baz=253,SNR=8.3						
IMAR	Indian Mountai	83.60	22	P	P	17 47 41.0	-0.2
E20K	Nigu River	83.60	20	P	P	17 47 41.9	+0.7
	baz=246						
D20K	Etivluk River	83.65	19	P	P	17 47 42.1	+0.7
	baz=246						
RC01	Rabbit Creek A	83.66	28	IAmb	IAmb	17 47 42.5	
	comp=Z,51nm,1.2s						
RC01				IAMs_20	IAMs_20	18 20 38.5	
	comp=Z,1µm,21.0s						
RC01	Rabbit Creek A	83.66	28	P	P	17 47 41.3	-0.3
	baz=253,SNR=7.9						
M22K	Willow	83.69	27	P	P	17 47 40.7	-0.9
	baz=252						
CUT	Chulitna	83.82	26	IAMs_20	IAMs_20	18 20 45.7	
	comp=Z,885nm,21.0s						
CUT	Chulitna	83.82	26	P	P	17 47 41.6	-0.7
	baz=252						
H21K	Melozitna Rive	83.84	23	IAmb	IAmb	17 47 44.5	
	comp=Z,31nm,1.5s						
H21K	Melozitna Rive	83.84	23	P	P	17 47 43.2	+0.7
	baz=250,SNR=10						
G21K	Allakaket	83.89	22	P	P	17 47 43.2	+0.5
	baz=249						
KTH	Kantishna Hill	83.90	25	IAmb	IAmb	17 47 45.2	
	comp=Z,43nm,1.2s						
B20K	Meade River	84.02	18	P	P	17 47 44.1	+0.8
	baz=245,SNR=6.5						
BPAW	Bear Paw Mtn.	84.05	25	IAmb	IAmb	17 47 53.8	
	comp=Z,80nm,2.0s						
BPAW				IAMs_20	IAMs_20	18 22 55.5	
	comp=Z,697nm,20.0s						
BPAW	Bear Paw Mtn.	84.05	25	P	P	17 47 43.5	-0.1
	baz=251,SNR=14						
PMR	Palmer	84.09	27	IAmb	IAmb	17 47 44.6	
	comp=Z,42nm,1.2s						
PMR	Palmer	84.09	27	P	P	17 47 44.3	+0.6
PMR	Palmer	84.09	27	P	P	17 47 43.1	-0.7
	baz=253						
TRF	Thorofare Moun	84.14	25	IAmb	IAmb	17 47 47.3	
	comp=Z,50nm,1.5s						
TRF	Thorofare Moun	84.14	25	P	P	17 47 43.5	-0.7
	baz=252,SNR=14						
F21K	Alatna River	84.15	21	IAMs_20	IAMs_20	18 24 51.0	
	comp=Z,675nm,19.0s						
F21K	Alatna River	84.15	21	P	P	17 47 44.3	+0.2
	baz=249						
GHO	Glory Hole Cre	84.24	27	IAmb	IAmb	17 47 45.8	
	comp=Z,52nm,1.4s						
GHO				IAMs_20	IAMs_20	18 21 29.6	
	comp=Z,1µm,20.0s						
PWL	Port Wells	84.25	28	IAMs_20	IAMs_20	18 24 48.2	
	comp=Z,795nm,20.0s						
PWL	Port Wells	84.25	28	P	P	17 47 44.7	+0.1
	baz=254,SNR=11						
KNK	Knik Glacier	84.35	28	IAMs_20	IAMs_20	18 20 48.7	
	comp=Z,1µm,21.0s						
KNK	Knik Glacier	84.35	28	P	P	17 47 45.3	+0.2
	baz=254,SNR=12						
E21K	Killik River	84.43	20	P	P	17 47 46.3	+0.9
	baz=248,SNR=25						
C21K	Knifeblade Rid	84.43	19	P	P	17 47 46.4	+1.0
	baz=247,SNR=16						
MLY	Manley	84.45	24	IAMs_20	IAMs_20	18 20 34.0	
	comp=Z,988nm,21.0s						
MLY	Manley	84.45	24	P	P	17 47 46.1	+0.5
	baz=251,SNR=25						
P23K	Montague Islan	84.47	29	IAMs_20	IAMs_20	18 22 18.8	
	comp=Z,1µm,20.0s						
P23K	Montague Islan	84.47	29	P	P	17 47 45.6	-0.1
	baz=255,SNR=7.8						
H22K	Ishtalitna Cre	84.48	23	P	P	17 47 46.5	+0.8
	baz=251,SNR=9.1						
AB31	Akbulak array	84.59	320	IAmb	IAmb	17 47 59.8	
	comp=Z,60nm,1.7s						
ABKAR	Akbulak array	84.59	320	IAmb	IAmb	17 47 59.8	
	comp=Z,60nm,1.7s						
B21K	Ikpikpuk River	84.67	19	P	P	17 47 47.4	+0.9
	baz=247,SNR=9.9						
WAT1	Susitna Watana	84.71	26	P	P	17 47 46.5	-0.4
	baz=254						
F22K	John River	84.73	21	P	P	17 47 48.2	+1.2
	baz=250,SNR=11						
RND	Reindeer	84.74	26	IAmb	IAmb	17 47 47.7	
	comp=Z,48nm,1.2s						
RND				IAMs_20	IAMs_20	18 21 31.8	
	comp=Z,961nm,21.0s						
G22K	Bettles	84.77	22	P	P	17 47 47.5	+0.4
	baz=251						
M23K	Glacier View	84.79	27	P	P	17 47 47.3	-0.1
	baz=254,SNR=6.0						
MCK	McKinley	84.80	25	IAmb	IAmb	17 47 48.1	
	comp=Z,50nm,1.2s						
MCK	McKinley	84.80	25	P	P	17 47 46.7	-0.6
	baz=253,SNR=10						
Q23K	Middleton Isla	84.84	30	P	P	17 47 47.9	+0.3
	baz=256						
GLI	Glacier Island	84.84	28	IAmb	IAmb	17 47 48.8	
	comp=Z,56nm,1.2s						
GLI				IAMs_20	IAMs_20	18 20 21.7	
	comp=Z,1µm,21.0s						
GLI	Glacier Island	84.84	28	P	P	17 47 47.5	-0.1
	baz=255,SNR=7.0						
SCM	Sheep Creek Mo	84.98	27	IAMs_20	IAMs_20	18 25 20.4	
	comp=Z,870nm,20.0s						
SCM	Sheep Creek Mo	84.98	27	P	P	17 47 48.4	0.0
	baz=255,SNR=19						
NEA2	Nenana	85.00	24	P	P	17 47 47.8	-0.5
	baz=253,SNR=15						
WAT6	Susitna Watana	85.00	26	P	P	17 47 48.3	-0.3
	baz=254,SNR=13						
HIN	Hinchinbrook I	85.00	29	IAmb	IAmb	17 47 49.9	
	comp=Z,56nm,1.2s						
HIN				IAMs_20	IAMs_20	18 22 37.0	
	comp=Z,1µm,20.0s						
D22K	Ayikyak River	85.03	20	P	P	17 47 49.5	+1.1
	baz=249,SNR=18						
I23K	Minto, Yukon-K	85.04	24	IAmb	IAmb	17 47 50.1	
	comp=Z,29nm,1.1s						
I23K				IAMs_20	IAMs_20	18 20 51.7	
	comp=Z,990nm,21.0s						
I23K	Minto, Yukon-K	85.04	24	P	P	17 47 48.8	+0.3
	baz=253,SNR=14						
E22K	Anaktuvuk Pass	85.07	21	P	P	17 47 49.5	+0.8
	baz=250,SNR=36						
A22K	Sinclair Lake	85.10	18	P	P	17 47 49.2	+0.6
	baz=247						
FID	Port Fidalgo	85.10	28	IAmb	IAmb	17 47 52.5	
	comp=Z,58nm,1.4s						
H23K	Yukon River	85.17	23	IAMs_20	IAMs_20	18 21 58.1	
	comp=Z,1µm,20.0s						
H23K	Yukon River	85.17	23	P	P	17 47 49.8	+0.6
	baz=252,SNR=8.8						
G23K	Bananza Creek	85.26	22	IAmb	IAmb	17 48 02.0	
	comp=Z,73nm,1.8s						
G23K				IAMs_20	IAMs_20	18 23 02.3	
	comp=Z,954nm,20.0s						
G23K	Bananza Creek	85.26	22	P	P	17 47 50.5	+0.9
	baz=252,SNR=16						
DHY	Denali Highway	85.29	26	IAmb	IAmb	17 47 51.3	
	comp=Z,36nm,1.0s						
DHY				IAMs_20	IAMs_20	18 21 51.4	
	comp=Z,1µm,21.0s						
DHY	Denali Highway	85.29	26	P	P	17 47 49.9	-0.1
	baz=255,SNR=33						
B22K	Teshekpuk Lake	85.32	18	P	P	17 47 50.1	+0.3
	baz=248						
COLD	Coldfoot	85.36	22	IAmb	IAmb	17 47 52.7	
	comp=Z,55nm,1.5s						
COLD	Coldfoot	85.36	22	P	P	17 47 51.0	+1.0
	baz=252,SNR=21						
WRH	Wood River Hil	85.37	25	IAmb	IAmb	17 47 50.7	
	comp=Z,30nm,1.1s						
EYAK	Cordova Ski Ar	85.40	29	P	P	17 47 50.6	+0.2
EYAK	Cordova Ski Ar	85.40	29	P	P	17 47 50.5	+0.2
	baz=256						
DIV	Divide	85.53	28	IAmb	IAmb	17 47 52.8	
	comp=Z,45nm,1.0s						
CCB	Clear Creek Bu	85.53	24	IAmb	IAmb	17 47 51.3	
	comp=Z,25nm,1.0s						
KLU	Klutina	85.55	28	IAmb	IAmb	17 47 52.9	
	comp=Z,50nm,1.4s						
KLU				IAMs_20	IAMs_20	18 21 51.3	
	comp=Z,1µm,21.0s						
KLU	Klutina	85.55	28	P	P	17 47 51.5	+0.2
	baz=256,SNR=9.6						
COLA	College	85.58	24	P	P	17 47 51.6	+0.4
COLA	College	85.58	24	P	P	17 47 50.5	-0.7
	baz=254						
M24K	Tolsona, Glenn	85.58	27	IAmb	IAmb	17 48 02.1	
	comp=Z,48nm,1.2s						
M24K				IAMs_20	IAMs_20	18 25 39.2	
	comp=Z,1µm,20.0s						
M24K	Tolsona, Glenn	85.58	27	P	P	17 47 51.9	+0.5
	baz=256,SNR=10.0						
D23K	Nanushuk River	85.74	20	P	P	17 47 53.0	+1.1
	baz=251,SNR=33						
HDA	Harding Lake	85.83	25	IAmb	IAmb	17 47 53.4	
	comp=Z,24nm,1.0s						
HDA	Harding Lake	85.83	25	P	P	17 47 51.8	-0.6
	baz=255,SNR=14						
E23K	Chandalar	85.83	21	IAmb	IAmb	17 47 55.1	
	comp=Z,132nm,1.4s						
E23K				IAMs_20	IAMs_20	18 27 45.2	
	comp=Z,597nm,20.0s						
E23K	Chandalar	85.83	21	P	P	17 47 53.5	+1.0
	baz=252,SNR=53						
H24K	Noodor Dome	85.83	23	IAmb	IAmb	17 47 55.4	
	comp=Z,54nm,1.4s						
H24K	Noodor Dome	85.83	23	P	P	17 47 52.6	0.0
	baz=254,SNR=37						
RAGM	Ragged Mountai	85.88	29	IAmb	IAmb	17 47 54.7	
	comp=Z,71nm,1.5s						
RAGM				IAMs_20	IAMs_20	18 20 21.3	
	comp=Z,1µm,22.0s						
KAIM	Kayak Island	85.91	29	IAMs_20	IAMs_20	18 19 32.0	
	comp=Z,1µm,21.0s						
KAIM	Kayak Island	85.91	29	P	P	17 47 53.7	+0.8
	baz=258						
ILAR	Eielson Array	85.95	24	P	P	17 47 50.9	-2.1
ILAR	Eielson Array	85.95	24	P	P	17 47 52.0	-1.0
	comp=Z,7.8nm,0.8s,baz=261,slow=4.9,SNR=64						
	comp=Z,7.8nm,0.8s						
AKTO	Aktyubinsk	86.02	321	P	P	17 47 52.9	-0.9
	comp=Z,1.3nm,0.7s,baz=148,slow=6.7,SNR=7.2						
	comp=Z,1.3nm,0.7s						
TOLK	Toolik Lake Re	86.02	20	IAMs_20	IAMs_20	18 25 47.3	
	comp=Z,722nm,20.0s						
TOLK	Toolik Lake Re	86.02	20	P	P	17 47 54.5	+1.1
	baz=252,SNR=26						
BMRM	Bremner River	86.04	28	IAmb	IAmb	17 47 55.2	
	comp=Z,37nm,1.2s						
BMRM	Bremner River	86.04	28	P	P	17 47 53.6	-0.1
	baz=257,SNR=8.9						
C23K	Itkillik River	86.05	19	IAmb	IAmb	17 47 57.3	
	comp=Z,47nm,1.1s						
C23K	Itkillik River	86.05	19	P	P	17 47 54.1	+0.6
	baz=251,SNR=9.5						
HMT	Hamilton	86.07	29	IAmb	IAmb	17 47 55.5	
	comp=Z,53nm,1.3s						
HMT				IAMs_20	IAMs_20	18 20 26.3	
	comp=Z,1µm,22.0s						
PAX	Paxson	86.11	26	IAmb	IAmb	17 48 04.2	
	comp=Z,48nm,1.6s						
PAX				IAMs_20	IAMs_20	18 23 23.0	
	comp=Z,960nm,20.0s						
PAX	Paxson	86.11	26	P	P	17 47 54.1	+0.1
	baz=256,SNR=9.1						
HARP	HAARP	86.11	27	P	P	17 47 54.1	+0.1
	baz=257						
K24K	Donnelly Dome	86.17	26	IAMs_20	IAMs_20	18 31 27.7	
	comp=Z,696nm,19.0s						
K24K	Donnelly Dome	86.17	26	P	P	17 47 54.2	0.0
	baz=256						
N25K	Chitina, Valde	86.19	28	IAmb	IAmb	17 47 56.4	
	comp=Z,80nm,1.9s						
N25K	Chitina, Valde	86.19	28	P	P	17 47 54.8	+0.4
	baz=257,SNR=8.5						
G24K	Hadweenzic Riv	86.23	23	IAMs_20	IAMs_20	18 23 20.9	
	comp=Z,944nm,20.0s						
G24K	Hadweenzic Riv	86.23	23	P	P	17 47 55.3	+0.9
	baz=254,SNR=33						
E24K	Your Creek	86.24	21	IAmb	IAmb	17 47 57.8	
	comp=Z,30nm,1.4s						
E24K	Your Creek	86.24	21	P	P	17 47 55.2	+0.7
	baz=253,SNR=14						
SUCK	Suckling Hills	86.25	29	IAMs_20	IAMs_20	18 19 42.1	
	comp=Z,1µm,22.0s						
F24K	Squaw Lake	86.30	22	IAMs_20	IAMs_20	18 23 56.7	
	comp=Z,777nm,20.0s						
F24K	Squaw Lake	86.30	22	P	P	17 47 55.8	+1.0
	baz=254,SNR=36						
BERG	Berg Lake	86.36	29	IAMs_20	IAMs_20	18 20 34.8	
	comp=Z,871nm,22.0s						
D24K	Happy Valley	86.44	20	IAMs_20	IAMs_20	18 26 24.2	
	comp=Z,718nm,20.0s						
D24K	Happy Valley	86.44	20	P	P	17 47 56.5	+1.2
	baz=253,SNR=13						
BGLC	Bering Glacier	86.50	29	P	P	17 47 57.2	+1.4
	baz=258						
GLB	Gilahina Butte	86.52	28	IAmb	IAmb	17 47 57.5	
	comp=Z,83nm,1.8s						
J25K	Salcha River,	86.54	25	IAmb	IAmb	17 47 57.9	
	comp=Z,55nm,1.4s						
J25K	Salcha River,	86.54	25	P	P	17 47 55.7	-0.4
	baz=256,SNR=30						
RIDG	Independent Ri	86.56	26	IAmb	IAmb	17 47 58.5	
	comp=Z,44nm,1.2s						
RIDG				IAMs_20	IAMs_20	18 22 48.9	
	comp=Z,992nm,20.0s						
RIDG	Independent Ri	86.56	26	P	P	17 47 56.0	-0.2
	baz=257,SNR=17						
C24K	Franklin Bluff	86.65	19	P	P	17 47 56.9	+0.6
	baz=253						
VRDI	Verde Repeater	86.65	28	IAmb	IAmb	17 48 07.1	
	comp=Z,65nm,1.9s						
VRDI				IAMs_20	IAMs_20	18 23 51.4	
	comp=Z,941nm,20.0s						
PRP	Porcupine Dome	86.69	24	IAMs_20	IAMs_20	18 22 02.3	
	comp=Z,708nm,21.0s						
PRP	Porcupine Dome	86.69	24	P	P	17 47 57.3	+0.4
	baz=256						
CRQM	Cirque	86.70	29	IAmb	IAmb	17 47 58.8	
	comp=Z,61nm,1.3s						
CRQM				IAMs_20	IAMs_20	18 20 47.5	
	comp=Z,1µm,22.0s						
CRQE	Cirque	86.72	29	P	P	17 47 57.5	+0.4
	baz=259,SNR=7.0						
H25L	Birch Creek	86.76	23	P	P	17 47 57.6	+0.6
	baz=256						
G25K	Bearman Lake	86.77	23	P	P	17 47 58.1	+1.1
	baz=256,SNR=18						
WAX	Waxell Ridge	86.78	29	IAMs_20	IAMs_20	18 26 39.0	
	comp=Z,842nm,19.0s						
ARTI	Arti	86.78	327	P	P	17 47 55.5	-1.8
	comp=Z,4.5nm,0.9s,baz=185,slow=3.9,SNR=4.5						
	comp=Z,4.5nm,0.9s						
ARTI	Arti	86.78	327	*d i*P	P	17 47 57.3	0.0
ARTI						17 51 13.9	
ARTI				S	SKSac	17 58 23.4	-0.2
ARTI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ARTI				MLR	MLR		
	comp=Z,442nm,20.0s						
TGL	Tana Glacier	86.85	29	IAMs_20	IAMs_20	18 20 38.9	
	comp=Z,1µm,22.0s						
DOT	Dot Lake	86.88	26	IAMs_20	IAMs_20	18 25 05.3	
	comp=Z,823nm,20.0s						
MENT	Mentasta	86.88	27	IAmb	IAmb	17 47 59.6	
	comp=Z,60nm,1.8s						
MENT	Mentasta	86.88	27	P	P	17 47 58.5	+0.8
MCARA	McCarthy VSAT	86.88	28	IAMs_20	IAMs_20	18 23 48.6	

	comp=Z,814nm,20.0s						
MCARA	**McCarthy VSAT**	**86.88**	**28**	P	**P**	**17 47 58.0**	**+0.3**
	baz=259						
SCRK	**Sand Creek**	**86.98**	**26**	IAmb	IAmb	17 47 59.9	
	comp=Z,27nm,1.3s						
SCRK				IAMs_20	IAMs_20	18 24 51.1	
	comp=Z,801nm,20.0s						
SCRK	**Sand Creek**	**86.98**	**26**	P	**P**	**17 47 58.7**	**+0.3**
	baz=258,SNR=13						
FYU	**Fort Yukon**	**87.06**	**23**	IAMs_20	IAMs_20	18 23 05.9	
	comp=Z,931nm,20.0s						
L26K	**Log Cabin Wild**	**87.06**	**27**	IAmb	IAmb	17 48 00.5	
	comp=Z,63nm,1.8s						
L26K	**Log Cabin Wild**	**87.06**	**27**	P	**P**	**17 47 58.9**	**+0.3**
	baz=258						
M26K	**Nabesna, AK**	**87.10**	**27**	IAmb	IAmb	17 48 00.8	
	comp=Z,52nm,1.8s						
M26K	**Nabesna, AK**	**87.10**	**27**	P	**P**	**17 47 59.2**	**+0.4**
	baz=259,SNR=11						
F25K	**Christian Rive**	**87.15**	**22**	IAMs_20	IAMs_20	18 24 12.2	
	comp=Z,834nm,20.0s						
F25K	**Christian Rive**	**87.15**	**22**	P	**P**	**17 47 60.0**	**+1.0**
	baz=256,SNR=22						
MESA	**MESA**	**87.17**	**29**	IAMs_20	IAMs_20	18 25 28.4	
	comp=Z,972nm,19.0s						
MESA	**MESA**	**87.17**	**29**	P	**P**	**17 47 59.9**	**+0.5**
	baz=260						
QSPA	**South Pole Qui**	**87.21**	**180**		**P**	**17 48 00.3**	**+0.9**
QSPA				IAmb	IAmb	17 48 15.4	
	comp=Z,40nm,1.1s						
QSPA	**South Pole Qui**	**87.21**	**180**	P	**P**	**17 47 59.3**	**-0.1**
	comp=Z,34nm,1.1s,baz=290,slow=1.2,SNR=22						
	comp=Z,34nm,1.1s						
J26L	**Joseph Creek**	**87.28**	**25**	P	**P**	**17 47 59.9**	**+0.2**
	baz=258,SNR=43						
YAH	**Yahtse**	**87.30**	**29**	IAMs_20	IAMs_20	18 27 10.8	
	comp=Z,1µm,19.0s						
E25K	**Arctic Village**	**87.31**	**21**	P	**P**	**17 48 00.8**	**+1.1**
	baz=256,SNR=22						
D25K	**Kavik River**	**87.32**	**20**	P	**P**	**17 47 59.9**	**+0.1**
	baz=255						
BARN	**Barnard Glacie**	**87.47**	**29**	IAMs_20	IAMs_20	18 20 49.2	
	comp=Z,1µm,22.0s						
M27K	**Edge Creek, AK**	**87.60**	**27**	P	**P**	**17 48 01.9**	**+0.5**
	baz=260,SNR=22						
CTG	**Chitna Glacier**	**87.61**	**29**	P	**P**	**17 48 02.1**	**+0.7**
	baz=260,SNR=17						
CTGM	**Chitina Glacie**	**87.61**	**29**	IAMs_20	IAMs_20	18 21 37.8	
	comp=Z,684nm,21.0s						
TABL	**Table Mountain**	**87.61**	**29**	IAMs_20	IAMs_20	18 25 53.0	
	comp=Z,990nm,19.0s						
I26K	**Coal Creek Min**	**87.61**	**24**	IAmb	IAmb	17 48 02.5	
	comp=Z,42nm,1.4s						
I26K	**Coal Creek Min**	**87.61**	**24**	P	**P**	**17 48 00.9**	**-0.3**
	baz=258,SNR=19						
G26K	**Porcupine Rive**	**87.70**	**23**	IAMs_20	IAMs_20	18 24 06.0	
	comp=Z,764nm,20.0s						
G26K	**Porcupine Rive**	**87.70**	**23**	P	**P**	**17 48 02.7**	**+1.2**
	baz=258,SNR=43						
F26K	**Sheenjek River**	**87.73**	**22**	IAMs_20	IAMs_20	18 22 59.6	
	comp=Z,726nm,21.0s						
F26K	**Sheenjek River**	**87.73**	**22**	P	**P**	**17 48 03.1**	**+1.4**
	baz=257,SNR=39						
L27K	**Beaver Creek,**	**87.75**	**27**	IAmb	IAmb	17 48 04.0	
	comp=Z,45nm,1.4s						
L27K				IAMs_20	IAMs_20	18 26 48.5	
	comp=Z,981nm,20.0s						
L27K	**Beaver Creek,**	**87.75**	**27**	P	**P**	**17 48 02.6**	**+0.7**
	baz=260,SNR=29						
K27K	**Chicken**	**87.82**	**26**	IAMs_20	IAMs_20	18 25 14.2	
	comp=Z,701nm,20.0s						
K27K	**Chicken**	**87.82**	**26**	P	**P**	**17 48 03.5**	**+1.3**
	baz=259						
C26K	**Camden Bay**	**87.97**	**20**	P	**P**	**17 48 03.2**	**+0.5**
	baz=257						
PCA	**Pinnacle**	**87.99**	**30**	IAMs_20	IAMs_20	18 23 33.2	
	comp=Z,795nm,20.0s						
PINM	**Pinnacle**	**87.99**	**30**	P	**P**	**17 48 03.5**	**+0.3**
	baz=261,SNR=5.7						
BVCY	**Beaver Creek**	**88.08**	**27**	P	**P**	**17 48 04.0**	**+0.6**
	baz=260,SNR=13						
O28M	**Mount Upton**	**88.13**	**29**	IAmb	IAmb	17 48 06.1	
	comp=Z,43nm,1.3s						
O28M				IAMs_20	IAMs_20	18 26 10.7	
	comp=Z,749nm,20.0s						
O28M	**Mount Upton**	**88.13**	**29**	P	**P**	**17 48 04.6**	**+0.5**
	baz=261,SNR=12						
YUK3	**Moose Creek**	**88.16**	**28**	P	**P**	**17 48 04.8**	**+0.6**
	baz=261,SNR=35						
BCPM	**Bancas Point**	**88.28**	**30**	IAMs_20	IAMs_20	18 23 08.7	
	comp=Z,791nm,20.0s						
I27K	**Kandik River**	**88.30**	**24**	P	**P**	**17 48 05.4**	**+0.9**
	baz=260,SNR=56						
C27K	**Jago River**	**88.31**	**20**	IAMs_20	IAMs_20	18 25 45.7	
	comp=Z,609nm,19.0s						
C27K	**Jago River**	**88.31**	**20**	P	**P**	**17 48 05.5**	**+1.1**
	baz=258						
PNL	**Peninsula**	**88.36**	**30**	P	**P**	**17 48 06.6**	**+1.7**
PNL	**Peninsula**	**88.36**	**30**	P	**P**	**17 48 05.6**	**+0.7**
	baz=262,SNR=6.8						
YUK8	**Steele Glacier**	**88.41**	**29**	P	**P**	**17 48 06.2**	**+0.8**
	baz=262,SNR=11						
H27K	**Steamboat Moun**	**88.45**	**24**	IAMs_20	IAMs_20	18 23 18.7	
	comp=Z,998nm,20.0s						
H27K	**Steamboat Moun**	**88.45**	**24**	P	**P**	**17 48 06.3**	**+1.1**
	baz=260,SNR=54						
G27K	**Doyon Strip**	**88.50**	**23**	IAmb	IAmb	17 48 09.1	
	comp=Z,42nm,1.6s						
G27K				IAMs_20	IAMs_20	18 23 29.0	
	comp=Z,1µm,21.0s						
G27K	**Doyon Strip**	**88.50**	**23**	P	**P**	**17 48 06.6**	**+1.2**
	baz=260,SNR=21						
E27K	**Coleen River**	**88.77**	**22**	IAmb	IAmb	17 48 10.5	
	comp=Z,50nm,1.9s						
E27K				IAMs_20	IAMs_20	18 24 45.1	
	comp=Z,635nm,20.0s						
E27K	**Coleen River**	**88.77**	**22**	P	**P**	**17 48 07.4**	**+0.7**
	baz=260,SNR=6.1						
O29M	**Mount Kennedy**	**88.85**	**30**	IAmb	IAmb	17 48 09.5	
	comp=Z,34nm,1.2s						
O29M				IAMs_20	IAMs_20	18 24 10.9	
	comp=Z,1µm,22.0s						
O29M	**Mount Kennedy**	**88.85**	**30**	P	**P**	**17 48 08.3**	**+1.0**
	baz=263,SNR=6.6						
YUK4	**Talbot Arm**	**88.95**	**29**	P	**P**	**17 48 09.0**	**+1.1**
	baz=263,SNR=17						
I28M	**Miner Creek**	**88.96**	**24**	IAMs_20	IAMs_20	18 24 22.4	
	comp=Z,941nm,20.0s						
I28M	**Miner Creek**	**88.96**	**24**	P	**P**	**17 48 08.3**	**+0.6**
	baz=261,SNR=45						
DAWY	**Dawson**	**88.99**	**26**	P	**P**	**17 48 08.5**	**+0.7**
	baz=262,SNR=39						
YUK6	**Outpost Mounta**	**89.04**	**29**	P	**P**	**17 48 09.1**	**+0.8**
	baz=263,SNR=8.6						
M29M	**Somme Creek**	**89.18**	**27**	IAmb	IAmb	17 48 11.0	
	comp=Z,29nm,1.2s						
M29M	**Somme Creek**	**89.18**	**27**	P	**P**	**17 48 09.5**	**+0.7**
	baz=263,SNR=23						
D27M	**Malcolm River**	**89.19**	**21**	IAMs_20	IAMs_20	18 26 04.9	
	comp=Z,718nm,20.0s						
D27M	**Malcolm River**	**89.19**	**21**	P	**P**	**17 48 08.8**	**+0.2**
	baz=260						
P29M	**Windy Craggy**	**89.19**	**30**	IAmb	IAmb	17 48 10.9	
	comp=Z,55nm,1.4s						
P29M				IAMs_20	IAMs_20	18 20 25.8	
	comp=Z,702nm,22.0s						
P29M	**Windy Craggy**	**89.19**	**30**	P	**P**	**17 48 09.6**	**+0.8**
	baz=263,SNR=11						
F28M	**Old Crow**	**89.32**	**22**	P	**P**	**17 48 09.6**	**+0.3**
	baz=261,SNR=7.6						
L29M	**L29M**	**89.42**	**27**	IAmb	IAmb	17 48 12.3	
	comp=Z,48nm,1.4s						
L29M				IAMs_20	IAMs_20	18 24 33.7	
	comp=Z,986nm,20.0s						
L29M	**L29M**	**89.42**	**27**	P	**P**	**17 48 10.9**	**+1.0**
	baz=263,SNR=25						
HYT	**Haines Junctio**	**89.44**	**29**	IAmb	IAmb	17 48 12.1	
	comp=Z,33nm,1.2s						
HYT	**Haines Junctio**	**89.44**	**29**	P	**P**	**17 48 10.8**	**+0.7**
	baz=264,SNR=24						
J29N	**Klondike Camp**	**89.55**	**26**	IAMs_20	IAMs_20	18 27 17.0	
	comp=Z,880nm,20.0s						
J29N	**Klondike Camp**	**89.55**	**26**	P	**P**	**17 48 11.0**	**+0.6**
	baz=263						
E28M	**Babbage River**	**89.59**	**21**	IAMs_20	IAMs_20	18 24 19.8	
	comp=Z,812nm,21.0s						
E28M	**Babbage River**	**89.59**	**21**	P	**P**	**17 48 10.6**	**+0.1**
	baz=262						
I29M	**Ogilvie Camp,**	**89.63**	**25**	IAmb	IAmb	17 48 12.5	
	comp=Z,56nm,1.4s						
I29M				IAMs_20	IAMs_20	18 24 05.9	
	comp=Z,958nm,21.0s						
I29M	**Ogilvie Camp,**	**89.63**	**25**	P	**P**	**17 48 11.0**	**+0.2**
	baz=263,SNR=36						
P30M	**Million Dollar**	**89.63**	**30**	P	**P**	**17 48 11.5**	**+0.6**
	baz=264						
H29M	**Whitestone**	**89.71**	**24**	IAmb	IAmb	17 48 37.2	
	comp=Z,40nm,1.6s						
H29M				IAMs_20	IAMs_20	18 24 17.1	
	comp=Z,842nm,20.0s						
H29M	**Whitestone**	**89.71**	**24**	P	**P**	**17 48 11.5**	**+0.4**
	baz=263						
N30M	**Aishikik Lake**	**89.71**	**29**	P	**P**	**17 48 11.9**	**+0.6**
	baz=264,SNR=13						
K29M	**Barlow Dome**	**89.78**	**26**	IAmb	IAmb	17 48 13.8	
	comp=Z,51nm,1.4s						
K29M	**Barlow Dome**	**89.78**	**26**	P	**P**	**17 48 12.3**	**+0.8**
	baz=264,SNR=25						
S31K	**Pelican**	**89.79**	**32**	P	**P**	**17 48 11.9**	**+0.4**
	baz=265						
PLBC	**Pleasant Camp**	**89.86**	**31**	P	**P**	**17 48 12.2**	**+0.4**
	baz=264,SNR=8.7						
G29M	**Pine Creek**	**89.94**	**23**	IAMs_20	IAMs_20	18 24 36.0	
	comp=Z,1µm,20.0s						
G29M	**Pine Creek**	**89.94**	**23**	P	**P**	**17 48 12.8**	**+0.7**
	baz=263,SNR=8.8						
O30N	**Mendenhall**	**90.12**	**29**	IAmb	IAmb	17 48 15.1	
	comp=Z,41nm,1.5s						
O30N				IAMs_20	IAMs_20	18 25 23.5	
	comp=Z,804nm,20.0s						
O30N	**Mendenhall**	**90.12**	**29**	P	**P**	**17 48 13.8**	**+0.6**
	baz=265,SNR=11						
E29M	**Blow River**	**90.17**	**22**	P	**P**	**17 48 12.8**	**-0.3**
	baz=263						
SIT	**Sitka**	**90.20**	**33**	P	**P**	**17 48 13.9**	**+0.5**
	baz=265						
ABPO	**Ambohimpanom**	**90.31**	**251**	P	**P**	**17 48 15.1**	**0.0**
ABPO	**Ambohimpanom**	**90.31**	**251**	P	**P**	**17 48 15.1**	**0.0**
ABPO				pmax	pmax		
	comp=Z,11nm,1.1s						
N31M	**Braeburn, Yuko**	**90.34**	**29**	IAMs_20	IAMs_20	18 23 08.1	
	comp=Z,801nm,22.0s						
N31M	**Braeburn, Yuko**	**90.34**	**29**	P	**P**	**17 48 14.8**	**+0.6**
	baz=265,SNR=8.6						
OPO	**Ambohidratompo**	**90.37**	**252**	P	**P**	**17 48 15.6**	**+0.2**
	comp=Z,19nm,0.9s,baz=69,slow=2.5,SNR=15						
	comp=Z,19nm,0.9s						
J30M	**Hart River**	**90.38**	**25**	IAmb	IAmb	17 48 16.5	
	comp=Z,27nm,1.2s						
J30M				IAMs_20	IAMs_20	18 27 50.8	
	comp=Z,720nm,20.0s						
J30M	**Hart River**	**90.38**	**25**	P	**P**	**17 48 15.0**	**+0.6**
	baz=265,SNR=28						
SKAG	**Skagway**	**90.39**	**31**	IAmb	IAmb	17 48 16.4	
	comp=Z,45nm,1.4s						
SKAG	**Skagway**	**90.39**	**31**	P	**P**	**17 48 15.9**	**+1.6**
SKAG	**Skagway**	**90.39**	**31**	P	**P**	**17 48 14.8**	**+0.5**
	baz=265,SNR=6.1						
EPYK	**Eagle Plains**	**90.39**	**24**	IAmb	IAmb	17 48 15.6	
	comp=Z,29nm,1.6s						
EPYK				IAMs_20	IAMs_20	18 24 27.0	
	comp=Z,680nm,21.0s						
EPYK	**Eagle Plains**	**90.39**	**24**	P	**P**	**17 48 14.3**	**0.0**
	baz=264						
I30M	**Mount Dempster**	**90.42**	**25**	P	**P**	**17 48 14.8**	**+0.2**
	baz=264,SNR=13						
MAYO	**Mayo, Yukon**	**90.47**	**26**	P	**P**	**17 48 15.5**	**+0.8**
	baz=265						
S32K	**Killisnoo**	**90.63**	**33**	IAMs_20	IAMs_20	18 25 15.3	
	comp=Z,723nm,20.0s						
S32K	**Killisnoo**	**90.63**	**33**	P	**P**	**17 48 15.8**	**+0.4**
	baz=266						
G30M	**tAoh Zraii Nji**	**90.65**	**23**	IAMs_20	IAMs_20	18 24 46.8	
	comp=Z,1µm,20.0s						
G30M	**tAoh Zraii Nji**	**90.65**	**23**	P	**P**	**17 48 14.9**	**-0.5**
	baz=265						
SYO	**Syowa Base**	**90.66**	**201**	⇓*e*P	**P**	**17 48 15.4**	**0.0**
WHY	**Whitehorse**	**90.71**	**29**	IAmb	IAmb	17 48 17.1	
	comp=Z,39nm,1.2s						
WHY	**Whitehorse**	**90.71**	**29**	P	**P**	**17 48 16.4**	**+0.4**
	baz=266,SNR=11						
R32K	**Eaglecrest**	**90.72**	**32**	P	**P**	**17 48 16.2**	**+0.3**
	baz=266						
F30M	**Barrier River**	**90.87**	**22**	IAmb	IAmb	17 48 16.9	
	comp=Z,23nm,1.4s						
F30M	**Barrier River**	**90.87**	**22**	P	**P**	**17 48 16.3**	**-0.1**
	baz=265						
M31M	**Drury Creek, Y**	**91.05**	**28**	IAmb	IAmb	17 48 18.9	
	comp=Z,26nm,1.6s						
M31M				IAMs_20	IAMs_20	18 23 04.9	
	comp=Z,996nm,22.0s						
M31M	**Drury Creek, Y**	**91.05**	**28**	P	**P**	**17 48 17.8**	**+0.3**
	baz=266,SNR=7.7						
P32M	**Atlin**	**91.22**	**31**	P	**P**	**17 48 18.7**	**+0.4**
	baz=267,SNR=9.6						
H31M	**Peel River**	**91.31**	**24**	IAmb	IAmb	17 48 29.6	
	comp=Z,30nm,1.8s						
H31M				IAMs_20	IAMs_20	18 24 12.4	
	comp=Z,934nm,22.0s						
H31M	**Peel River**	**91.31**	**24**	P	**P**	**17 48 18.7**	**+0.1**
	baz=266						
CRAG	**Craig**	**91.32**	**35**	P	**P**	**17 48 19.0**	**+0.3**
	baz=267						
U33K	**Whale Pass**	**91.35**	**34**	P	**P**	**17 48 19.2**	**+0.3**
	baz=267						
G31M	**Satah River**	**91.41**	**23**	IAMs_20	IAMs_20	18 26 08.9	
	comp=Z,864nm,20.0s						
G31M	**Satah River**	**91.41**	**23**	P	**P**	**17 48 18.7**	**-0.3**
	baz=266						
FARO	**Faro, Yukon**	**91.54**	**28**	P	**P**	**17 48 19.9**	**+0.2**
	baz=267						
N32M	**Quiet Lake**	**91.61**	**29**	P	**P**	**17 48 20.3**	**+0.2**
	baz=267						
F31M	**Tsiigehtchic**	**91.65**	**23**	P	**P**	**17 48 19.4**	**-0.6**
	baz=267						
P33M	**Teslin, Yukon**	**91.70**	**30**	P	**P**	**17 48 20.5**	**-0.1**
	baz=268,SNR=12						
INK	**Inuvik**	**91.77**	**22**	P	**P**	**17 48 19.8**	**-0.8**
	comp=Z,7.4nm,1.0s,baz=299,slow=5.7,SNR=9.0						
	comp=Z,7.4nm,1.0s						
INK	**Inuvik**	**91.77**	**22**	P	**P**	**17 48 19.7**	**-0.8**
	baz=267						
WRAK	**Wrangell Islan**	**91.80**	**34**	IAMs_20	IAMs_20	18 20 12.1	
	comp=Z,938nm,22.0s						
WRAK	**Wrangell Islan**	**91.80**	**34**	P	**P**	**17 48 21.3**	**+0.4**
	baz=268						
Q32M	**Nakina River**	**91.93**	**31**	P	**P**	**17 48 22.3**	**+0.5**
	baz=268						
V35K	**Ketchikan**	**92.17**	**35**	IAMs_20	IAMs_20	18 20 33.2	
	comp=Z,1µm,22.0s						
S34M	**Telegraph Cree**	**92.50**	**32**	IAMs_20	IAMs_20	18 26 31.6	
	comp=Z,816nm,20.0s						
S34M	**Telegraph Cree**	**92.50**	**32**	P	**P**	**17 48 24.9**	**+0.7**
	baz=269						
MMPY	**Sheldon Lake,**	**92.53**	**28**	IAmb	IAmb	17 48 26.2	
	comp=Z,33nm,1.8s						
MMPY	**Sheldon Lake,**	**92.53**	**28**	P	**P**	**17 48 24.9**	**+0.6**
	baz=269						
R33M	**Jennings River**	**92.61**	**31**	IAmb	IAmb	17 48 26.6	
	comp=Z,24nm,1.6s						
R33M	**Jennings River**	**92.61**	**31**	P	**P**	**17 48 25.4**	**+0.6**
	baz=269						
BELG	**Belogornoye**	**92.67**	**322**	LR	LR	18 31 58.2	
	comp=Z,254nm,21.8s,baz=125,slow=37						
BELG	**Belogornoye**	**92.67**	**322**	*i* P	**P**	**17 48 23.1**	**-1.9**
BELG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
T35M	**Bob Quinn**	**92.97**	**33**	IAmb	IAmb	17 48 31.2	
	comp=Z,27nm,1.9s						
T35M				IAMs_20	IAMs_20	18 21 02.0	
	comp=Z,1µm,22.0s						
T35M	**Bob Quinn**	**92.97**	**33**	P	**P**	**17 48 27.0**	**+0.6**
	baz=270						
U35K	**Hyder**	**93.08**	**34**	IAMs_20	IAMs_20	18 21 24.2	
	comp=Z,1µm,22.0s						
DLBC	**Dease Lake**	**93.09**	**32**	P	**P**	**17 48 27.2**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=262,slow=3.3,SNR=7.2						
WTLY	**Watson Lake, Y**	**93.71**	**30**	P	**P**	**17 48 30.6**	**+0.8**
	baz=271						
RAYN	**Ar Rayn**	**93.81**	**293**	P	**P**	**17 48 27.4**	**-3.7**
RAYN	**Ar Rayn**	**93.81**	**293**	P	**P**	**17 48 27.4**	**-3.7**
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BBB	**Bella Bella**	**94.23**	**38**	LR	LR	18 26 28.7	
	comp=Z,682nm,19.1s,baz=268,slow=33						
KIV	**Kislovodsk**	**96.06**	**314**	*e*P	**P**	**17 48 40.3**	**-0.7**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,113nm,20.0s						
KLMR	**Klimovskoe**	**96.75**	**331**	*e*P	**P**	**17 48 40.8**	**-2.7**
KLMR				pmax	pmax		
	comp=Z,13nm,1.6s						
NLWA	**Neilton Lookou**	**97.19**	**43**	IAMs_20	IAMs_20	18 27 00.2	
	comp=Z,898nm,20.0s						
JCC	**Jacoby Creek,**	**97.45**	**49**	IAMs_20	IAMs_20	18 24 58.9	
	comp=Z,860nm,20.0s						
COR	**Corvallis**	**97.77**	**46**	IAMs_20	IAMs_20	18 33 25.8	
	comp=Z,891nm,20.0s						
SOC	**Sochi**	**98.23**	**313**	*e*P	**P**	**17 48 49.2**	**-1.5**
SOC				*e*S	**SKSac**	**17 59 27.2**	**-0.9**
SOC				*e*SS	**SS**	**18 06 59.9**	**-1.2**
SOC				*e*SSS	SSS	18 10 51.9	
SOC				MLR	MLR		
	comp=Z,270nm,21.0s						
O02D	**Mt. Diablo Mer**	**98.43**	**50**	P	**P**	**17 48 51.3**	**-0.5**
O02D				IAmb	IAmb	17 48 54.1	
	comp=Z,17nm,1.2s						
SPITS	**Spitsbergen Ar**	**98.97**	**350**	LR	LR	18 34 47.9	
	comp=Z,453nm,19.6s,baz=12,slow=36						
OBN	**Obninsk**	**99.05**	**325**	LR	LR	18 35 47.0	
	comp=Z,468nm,20.5s,baz=28,slow=37						
OBN	**Obninsk**	**99.05**	**325**	⇑*e*P	**Pdif**	**17 48 51.2**	**-2.8**
OBN				*i*		17 52 55.1	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,579nm,20.0s						
HATC	**Hat Creek Radi**	**99.39**	**49**	IAMs_20	IAMs_20	18 23 07.4	
	comp=Z,677nm,21.0s						
BELA	**Belgrano 2**	**99.40**	**181**	P	**Pdif**	**17 48 55.3**	**0.0**
ORV	**Oroville**	**99.46**	**51**	P	**Pdif**	**17 48 55.3**	**-1.0**
ORV	**Oroville**	**99.46**	**51**	P	**Pdif**	**17 48 55.3**	**-1.0**
ORV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ORV				MLR	MLR		
	comp=Z,500nm,20.0s						
ANN	**Anapa**	**99.76**	**315**	*e*P	**Pdif**	**17 48 53.9**	**-3.5**
ANN				*e*		17 53 02.5	
ANN				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ANN				MLR	MLR		
	comp=Z,520nm,23.0s						
YKA	**Yellowknife Ar**	**100.19**	**27**	P	**Pdif**	**17 48 59.5**	**+0.5**
	comp=Z,1.2nm,0.9s,baz=295,slow=5.0,SNR=11						
YKA				PKKPbc	**PKKPbc**	**18 05 15.7**	**-3.4**
	comp=Z,0.5nm,0.8s,baz=90,slow=3.1,SNR=4.7						
HAWA	**Hanford**	**100.24**	**43**	IAMs_20	IAMs_20	18 31 04.1	
	comp=Z,733nm,19.0s						
TROLL	**Troll, Antarti**	**100.26**	**193**	⇑P	**Pdif**	**17 49 00.4**	**+1.1**
	comp=Z,202nm,0.8s						
CMB	**Columbia Colle**	**100.45**	**52**	IAMs_20	IAMs_20	18 33 33.5	
	comp=Z,686nm,20.0s						
SNAA	**Sanae**	**101.64**	**192**	⇑P	**Pdif**	**17 49 04.8**	**-0.6**
	comp=Z,48nm,1.0s						
SNAA	**Sanae**	**101.64**	**192**	P	**Pdif**	**17 49 06.0**	**+0.7**
	comp=Z,3.0nm,1.1s,baz=109,slow=5.7,SNR=4.9						
NVAR	**Mina Array Bea**	**102.04**	**51**	P	**Pdif**	**17 49 07.9**	**-0.2**
	comp=Z,1.5nm,0.9s,baz=283,slow=5.3,SNR=8.2						
PLID	**Pearl Lake**	**102.87**	**44**	IAMs_20	IAMs_20	18 31 52.8	
	comp=Z,814nm,20.0s						
MFID	**Camas Ranch**	**103.25**	**46**	IAMs_20	IAMs_20	18 29 06.1	
	comp=Z,701nm,21.0s						
TPNV	**Topopah Spring**	**103.83**	**53**	IAMs_20	IAMs_20	18 36 27.2	
	comp=Z,868nm,20.0s						
MSO	**Missoula**	**103.98**	**42**	IAMs_20	IAMs_20	18 28 25.3	
	comp=Z,778nm,21.0s						
MNK	**Minsk**	**104.09**	**326**	*i* P	**Pdif**	**17 49 12.5**	**-4.0**
	comp=E,7.0nm,0.6s						
MNK				*i* P	**Pdif**	**17 49 12.5**	**-4.0**
	comp=N,6.0nm,0.5s						
MNK				*i* P	**Pdif**	**17 49 12.5**	**-4.0**
	comp=Z,14nm,0.5s,baz=75						
MNK				*i* PP	**PKiKP**	**17 53 30.3**	**-3.3**
MNK				*i* PPP	PPP	17 55 41.9	
MNK				*i* SKS		18 00 41.5	
MNK				*i* PS	**PS**	**18 02 49.1**	**+3.1**
MNK				*i* SS	SS	18 08 20.5	-1.3
MNK				*i* SSS	SSS	18 12 16.6	
MNK				*i* LR	LR	18 36 36.1	
MNK	**Minsk**	**104.09**	**326**	*i* P	**Pdif**	**17 49 12.4**	**-4.0**
MNK				*i*		17 53 30.2	
MNK				*i*		18 00 41.5	
MNK				*i* PS	**PS**	**18 02 49.1**	**+3.1**
MNK				*i* SS	SS	18 08 20.4	-1.3
MNK				*i* SSS	SSS	18 12 16.6	
MNK				pmax	pmax		
	comp=E,7.0nm,0.6s						
MNK				pmax	pmax		
	comp=N,6.0nm,0.5s						
MNK				pmax	pmax		
	comp=Z,14nm,0.5s						
MNK				MLR	MLR		
	comp=E,233nm,19.0s						
MNK				MLR	MLR		
	comp=N,536nm,20.0s						
MNK				MLR	MLR		
	comp=Z,550nm,20.0s						
ELK	**Elko**	**104.09**	**49**	IAMs_20	IAMs_20	18 40 02.8	
	comp=Z,720nm,18.0s						
HLID	**Hailey**	**104.25**	**46**	IAMs_20	IAMs_20	18 36 32.3	
	comp=Z,723nm,19.0s						
DLMT	**Dillon**	**105.19**	**44**	IAMs_20	IAMs_20	18 32 12.0	
	comp=Z,758nm,20.0s						
BOZ	**Bozeman (W)**	**105.80**	**43**	IAMs_20	IAMs_20	18 30 06.2	
	comp=Z,734nm,20.0s						
PABE	**Paberze**	**105.95**	**327**	IAMs_20	IAMs_20	18 39 56.2	
	comp=Z,704nm,20.0s						
DUG	**Dugway, Tooele**	**106.01**	**49**	IAMs_20	IAMs_20	18 40 14.5	
	comp=Z,653nm,18.0s						
HWUT	**Hardware Ranch**	**106.67**	**47**	IAMs_20	IAMs_20	18 32 29.8	
	comp=Z,739nm,20.0s						
TPAW	**Teton Pass**	**106.73**	**45**	IAMs_20	IAMs_20	18 30 37.9	
	comp=Z,706nm,20.0s						
AHID	**Auburn Hatcher**	**106.78**	**46**	IAMs_20	IAMs_20	18 37 34.4	
	comp=Z,606nm,20.0s						
LOHW	**Long Hollow**	**106.95**	**45**	IAMs_20	IAMs_20	18 30 24.8	
	comp=Z,884nm,22.0s						
BW06	**Boulder Array**	**107.89**	**46**	IAMs_20	IAMs_20	18 39 25.7	
	comp=Z,622nm,20.0s						
PDAR	**Pinedale Array**	**107.89**	**46**	PKKPbc	PKKPbc	18 04 54.2	-1.4
	comp=Z,0.2nm,0.3s,baz=74,slow=3.2,SNR=4.3						
O20A	**White River Ci**	**109.45**	**48**	IAMs_20	IAMs_20	18 29 24.4	
	comp=Z,773nm,21.0s						
MVCO	**Mesa Verde**	**109.90**	**51**	IAMs_20	IAMs_20	18 40 15.8	
	comp=Z,726nm,18.0s						
RGN	**Rugen**	**111.94**	**329**	IAMs_20	IAMs_20	18 46 05.6	
	comp=Z,620nm,20.0s						
Q24A	**Divide**	**112.06**	**49**	IAMs_20	IAMs_20	18 36 57.5	
	comp=Z,700nm,21.0s						
E28A	**Huff**	**112.79**	**40**	IAMs_20	IAMs_20	18 32 46.1	
	comp=Z,800nm,21.0s						
MNTX	**Cornudas Mount**	**113.57**	**57**	IAMs_20	IAMs_20	18 31 24.3	
	comp=Z,770nm,21.0s						
CLL	**Collm**	**113.63**	**326**	*e*PKIKP	**PKiKP**	**17 53 51.0**	**-0.6**
CLL				*i*		17 54 43.1	
CLL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CLL				MLR	MLR		
	comp=Z,1µm,19.0s						
CLL	**Collm**	**113.63**	**326**	*e*PKiKP	**PKiKP**	**17 53 51.0**	**-0.6**
CLL				*i* PP	**PP**	**17 54 43.1**	**-0.3**
	comp=Z,5.0nm,1.0s						
CLL				AMS	AMS	18 46 00.0	
	comp=N,500nm,19.1s						
CLL				AMS	AMS	18 46 00.0	
	comp=E,400nm,19.2s						
CLL				AMS	AMS	18 46 00.0	
	comp=Z,1µm,19.0s						
CLL				AMS	AMS	18 46 00.0	
KSCO	**Kaye Shedlock’**	**113.93**	**48**	IAMs_20	IAMs_20	18 44 06.0	
	comp=Z,702nm,20.0s						
GERES	**GERESS Array B**	**114.33**	**323**	PKiKP	PKPdf	17 53 52.1	-1.0
	comp=Z,0.3nm,0.6s,baz=20,slow=5.0,SNR=3.6						
GRA1	**Grafenberg Arr**	**115.39**	**325**	IAMs_20	IAMs_20	18 46 40.1	
	comp=Z,626nm,20.0s						
GRFO	**Grafenberg**	**115.39**	**325**	IAMs_20	IAMs_20	18 46 41.1	
	comp=Z,624nm,20.0s						
TXAR	**Lajitas Array**	**115.50**	**59**	PKP	**PKPdf**	**17 53 54.9**	**-1.1**
	comp=Z,0.9nm,0.8s,baz=249,slow=3.6,SNR=6.4						
TXAR				PKKPbc	**PKKPbc**	**18 04 28.9**	**-1.0**
	comp=Z,2.1nm,1.1s,baz=116,slow=5.7,SNR=3.5						
TXAR				PKKPab	**PKKPab**	**18 04 34.9**	**+0.2**

	comp=Z,0.7nm,0.7s,baz=104,slow=6.1,SNR=5.6						
FUORN	Ofenpass-Fuorn	117.40	322	IAMs_20	IAMs_20	18 50 48.5	
	comp=Z,426nm,20.0s						
TUE	Stuetta	118.03	323	IAMs_20	IAMs_20	18 50 36.1	
	comp=Z,657nm,20.0s						
ABTX	Abilene, Hawle	118.07	54	IAMs_20	IAMs_20	18 35 44.2	
	comp=Z,738nm,21.0s						
WMOK	Wichita Mounta	118.15	52	IAMs_20	IAMs_20	18 44 39.0	
	comp=Z,708nm,20.0s						
WLF	Walferdange	118.23	327	IAMs_20	IAMs_20	18 53 08.2	
	comp=Z,607nm,18.0s						
ECH	Echery	118.45	325	IAMs_20	IAMs_20	18 48 46.9	
	comp=Z,614nm,20.0s						
JCT	Junction City	118.50	57		PKPdf	17 54 01.9	+0.2
JCT				IAMs_20	IAMs_20	18 41 18.0	
	comp=Z,635nm,20.0s						
JCT	Junction City	118.50	57	PKIKP	PKPdf	17 54 01.9	+0.2
JCT				MLR	MLR		
	comp=Z,600nm,20.0s						
BMRD	Maredsous	118.62	328	*d*PKPdf	PKPdf	17 54 00.5	-0.7
BRDY	Brady	118.96	56		PKiKP	17 54 02.9	+0.4
SENIN	Lac Senin/Sane	119.32	323	IAMs_20	IAMs_20	18 50 07.1	
	comp=Z,586nm,20.0s						
P38A	Dawn	120.32	45		PKPdf	17 54 04.4	-0.4
BNI	Bardonecchia	120.36	322	IAMs_20	IAMs_20	18 50 14.7	
	comp=Z,623nm,20.0s						
CLF	Chambon-Foret	121.28	327	IAMs_20	IAMs_20	18 47 49.8	
	comp=Z,678nm,21.0s						
SSB	Saint Sauveur	121.53	323	IAMs_20	IAMs_20	18 53 12.6	
	comp=Z,477nm,19.0s						
CART	Cartagena	129.20	318	IAMs_20	IAMs_20	18 58 35.0	
	comp=Z,356nm,19.0s						
TORD	Torodi Ar. Bea	136.04	286		PKPdf	17 54 35.8	+0.4
OTAV	Otavalo	143.00	93		PKiKP	17 54 51.4	-0.6
OTAV	Otavalo	143.00	93	PKIKP	PKiKP	17 54 51.4	-0.6
BBAC	Balboa, Cauca	144.29	90	P	PKPab	17 54 48.6	0.0
ITQB	Itaqui	144.68	157		PKPdf	17 54 51.2	+0.5
APAC	Apartado, Choc	144.73	80	P	PKPdf	17 54 50.9	-0.3
LCBC	Los crdobas,	144.82	79	P	PKPdf	17 54 51.1	-0.2
	comp=Z,208nm,1.6s						
POPC	Popayan, Colom	144.88	89	P	PKPab	17 54 50.2	-0.6
JAMC	Jamundi, Valle	144.89	88	P	PKPab	17 54 51.0	+0.2
YOTC	Yotoco, Valle	145.21	87	P	PKPbc	17 54 51.2	-0.6
PLMC	San Jos del P	145.25	85	P	PKPbc	17 54 50.9	-0.9
CBOC	Ciudad Bolivar	145.47	84	P	PKPbc	17 54 52.6	-0.1
UREC	San Jos de Ur	145.78	80	P	PKPdf	17 54 52.6	-0.4
SJCC	San Jacinto, C	145.82	76	P	PKPbc	17 54 53.8	+0.2
	comp=Z,1μmcomp=Z,66nm,1.7s						
FLOC	Florencia	145.87	91	P	PKPdf	17 54 53.5	+0.3
NIZA	Niza - Manizal	146.05	85	P	PKPdf	17 54 50.4	-3.4
GUY2C	Guyana, Caldas	146.15	85	P	PKPdf	17 54 54.1	-0.1
ORTC	Ortega, Tolima	146.31	87	P	PKPdf	17 54 53.5	-0.4
ZARC	Zaragoza, Cauc	146.47	81	P	PKPdf	17 54 53.9	-0.3
SMRC	Santa Marta, M	146.50	74	P	PKPbc	17 54 55.4	-0.2
	comp=Z,2μmcomp=Z,60nm,1.0s						
NORC	Norcasia	146.62	84	P	PKPdf	17 54 55.2	+0.7
PRAC	Prado	146.67	87	P	PKPdf	17 54 55.2	+0.6
SDDR	Presa de Saban	146.70	59		PKPab	17 54 56.9	-0.3
PTBC	PUERTO BERRIO,	146.96	82	P	PKPdf	17 54 54.9	-0.1
URMC	La Uribe, Meta	147.18	88	P	PKPbc	17 54 57.3	-0.4
ROSC	El Rosal	147.21	85	PKPbc	PKPdf	17 54 56.2	+0.3
	comp=Z,15nm,0.5s,baz=193,slow=5.4,SNR=9.0						
CPUP	Villa Florida	147.31	153		PKPbc	17 54 58.6	+1.1
CPUP	Villa Florida	147.31	153	PKPbc	PKPbc	17 54 56.9	-0.6
	comp=Z,9.1nm,1.1s,baz=180,slow=2.0,SNR=17						
CPUP	Villa Florida	147.31	153	PKP2	PKPbc	17 54 58.6	+1.1
SPBC	San Pablo de B	147.41	84	P	PKPbc	17 54 57.6	-0.7
LPAZ	La Paz	147.61	127	PKPbc	PKPdf	17 54 58.2	+1.4
	comp=Z,26nm,1.1s,baz=336,slow=1.0,SNR=27						
LPAZ	La Paz	147.61	127	PKP2	PKPdf	17 54 58.3	+1.6
MACC	Macarena, Meta	147.69	90	P	PKPbc	17 54 58.6	-0.4
CRJC	Cerrejon, Guaj	147.82	74	P	PKPdf	17 54 57.4	+0.9
BARC	Barichara	148.22	82	P	PKPdf	17 54 59.1	+1.7
RUSC	La Rusia	148.37	83	P	PKPbc	17 55 00.6	-0.8
ITAB	Concordia	148.50	162		PKiKP	17 55 02.9	+0.6
PAMC	Pamplona, Colo	148.61	80	P	PKPbc	17 55 01.7	-0.3
SDV	Santo Domingo	150.41	77		PKPbc	17 55 06.6	+0.6
OBIP	Obispado Ponce	151.08	57		PKPbc	17 55 07.2	0.0

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*IDC **24** 17:35:44.0±0.7, 18°.75S×65°.34E, h0^{km}, mb4.2/15, mbtmp4.2/16, ML4.4/1, MS4.3/8, Error ellipse: s-maj=28.5km s-min=17.8km az=97.0*

*NEIC **24** 17:35:45.0±2.2, 18°.91S±0°.08×65°.3E±0°.1, h10^{km}±1^{km}, mb4.6/17, Error ellipse: s-maj=18.6km s-min=13.8km az=88.0*

*GCMT **24** 17:35:46.0±0.4, 18°.90S±0°.05×65°.39E±0°.04, h22^{km}±1^{km}, MW5.0/75, Moment Tensor Solution. s11,c13; s75,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.75±.34; $M_{\theta\theta}$1.90±.23; $M_{\phi\phi}$2.85±.22; $M_{r\theta}$-0.30±.44; $M_{\theta\phi}$-1.25±.12; $M_{\phi r}$1.10±.36; Best double couple: $M_0$4.37800×10^{16} NP1:ϕ_s322.00000°, δ38.00000°, λ-96.00000°. NP2: ϕ_s149.00000°, δ52.00000°, λ-86.00000°. Principal axes: T 3.8480, Plg7.0000°, Azm236.0000°; N 1.0610, Plg3.0000°, Azm327.0000°; P -4.9080, Plg82.0000°, Azm82.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 17:35:45.1±0.6, **18°.8S**±0°.1×**65°.3E**±0°.1, **h10^{km}, n57, σ1^{s}.35**/44, **mb4.3**/20, **MS4.4**/7, **Mauritius-Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROCAM	Rodrigues Isla	2.02	243		Pn	17 36 17.8	-1.4
RER	Riviere de l'E	9.25	254	Pn	Pn	17 37 58.5	-0.2
H08S1	Diego Carcia H	13.14	33	T	T	17 52 09.5	
	baz=210,slow=75,SNR=26						
H08S2	Diego Garcia H	13.15	33	T	T	17 52 19.8	
	baz=210,slow=75,SNR=30						
H08S3	Diego Garcia H	13.16	33	T	T	17 52 12.7	
	baz=210,slow=75,SNR=60						
ABPO	Ambohimpanom	17.08	266		Pn	17 39 43.4	-0.9
OPO	Ambohidratompo	17.14	268	P	P	17 39 47.5	+0.8
	0.1nm,0.3s,baz=100,slow=9.7,SNR=5.3						
OPO				LR	LR	17 43 52.5	
	comp=Z,431nm,20.8s,baz=242,slow=28						
	1.4nm,0.5s						
H04N2	CROZET ISLANDS	29.44	199	T	T	18 12 45.2	
	baz=28,slow=75,SNR=22						
H04N1	CROZET ISLANDS	29.45	199	T	T	18 12 52.8	
	baz=28,slow=75,SNR=44						
H04N3	CROZET ISLANDS	29.46	199	T	T	18 12 51.7	
	baz=28,slow=75,SNR=47						
PALK	Pallekele	30.07	32	LR	LR	17 51 41.5	
	comp=Z,379nm,18.3s,baz=226,slow=32						
LSZ	Lusaka	35.59	270	LR	LR	17 56 45.2	
	comp=Z,340nm,19.1s,baz=115,slow=35						
LBTB	Lobatse	37.22	253	LR	LR	17 56 25.6	
	comp=Z,613nm,18.8s,baz=86,slow=33						
PSI	Prapat	39.47	61	LR	LR	17 56 07.5	
	comp=Z,434nm,18.1s,baz=156,slow=31						
TSUM	Tsumeb	44.98	261	LR	LR	18 02 14.7	
	comp=Z,431nm,18.1s,baz=112,slow=35						
MAW	Mawson	48.78	181	P	P	17 44 30.6	+0.7
	2.7nm,0.8s,baz=8.6,slow=13,SNR=4.2						
	2.7nm,0.8s						
CMAR	Chiang Mai Arr	49.67	44	P	P	17 44 37.5	+0.1
	1.4nm,0.8s,baz=217,slow=7.8,SNR=6.6						
	1.4nm,0.8s						
TGY	Tagaytay City	63.85	63	LR	LR	18 11 25.2	
	comp=Z,234nm,19.2s,baz=14,slow=34						
BR131	Keskin Array S	65.31	334	P	P	17 46 26.2	-1.3
BR131				IAmb	IAmb	17 46 30.7	
	comp=Z,3.3nm,1.1s						
BRTR	Keskin Array B	65.31	334	P	P	17 46 28.0	+0.5
BRTR	Keskin Array B	65.31	334	P	P	17 46 26.1	-1.3
	comp=Z,0.6nm,0.7s,baz=151,slow=6.6,SNR=6.1						
	comp=Z,0.6nm,0.7s						
SNAA	Sanae	65.41	199	P	P	17 46 29.7	+2.0
	comp=Z,2.0nm,0.9s,baz=165,slow=8.1,SNR=5.4						
	comp=Z,2.0nm,0.9s						
KBZ	Khabaz	65.55	342	P	P	17 46 29.4	+0.7
	comp=Z,1.4nm,0.6s,baz=130,slow=6.0,SNR=3.6						
	comp=Z,1.4nm,0.6s						
KIV	Kislovodsk	65.82	342	P	P	17 46 31.9	+1.3
MDUB	Mudurnu	66.98	332	P	P	17 46 39.4	+1.3
AB31	Akbulak array	67.95	356	P	P	17 46 44.5	+0.5
ABKAR	Akbulak array	67.95	356	P	P	17 46 44.0	+0.1
ABKAR				IAmb	IAmb	17 46 50.9	
	comp=Z,2.0nm,0.8s						
QSPA	South Pole Qui	71.27	180	P	P	17 47 03.9	-0.6
QSPA				IAmb	IAmb	17 47 09.1	
	comp=Z,16nm,1.4s						
QSPA	South Pole Qui	71.27	180	P	P	17 47 04.9	+0.3
	comp=Z,5.3nm,1.0s,baz=281,slow=4.2,SNR=6.8						
	comp=Z,5.3nm,1.0s						
BVAR	Borovoye Array	71.69	3	P	P	17 47 07.7	+0.8
	comp=Z,1.7nm,0.6s,baz=176,slow=6.9,SNR=8.4						
	comp=Z,1.7nm,0.6s						
MLR	Muntele Rosu	73.31	332	P	P	17 47 16.2	-0.7
MLR				IAmb	IAmb	17 47 29.3	
	comp=Z,8.5nm,1.1s						
ARTI	Arti	75.15	356	P	P	17 47 28.3	+1.1
ARTI				IAmb	IAmb	17 48 09.8	
	comp=Z,6.9nm,0.8s						
ARTI	Arti	75.15	356	P	P	17 47 28.1	+0.9
	comp=Z,3.1nm,0.6s,baz=132,slow=4.6,SNR=6.1						
	comp=Z,3.1nm,0.6s						
BURAR	Bucovina Array	75.27	333	P	P	17 47 28.2	0.0
SONM	Songino Array	75.90	27	P	P	17 47 30.9	-1.0
	comp=Z,1.7nm,0.7s,baz=211,slow=5.5,SNR=7.3						
	comp=Z,1.7nm,0.7s						
AKASG	Malin Array Be	76.15	337	P	P	17 47 32.8	-0.3
	comp=Z,2.3nm,0.8s,baz=144,slow=4.9,SNR=10						
	comp=Z,2.3nm,0.8s						
AKBB	Malin Array Si	76.15	337	P	P	17 47 31.5	-1.6
AKBB				IAmb	IAmb	17 47 45.9	
	comp=Z,5.1nm,1.0s						
KIEV	Kiev	76.15	337	P	P	17 47 31.3	-1.8
KIEV				IAmb	IAmb	17 47 45.9	
	comp=Z,4.6nm,1.0s						
MORC	Moravsky Berou	80.29	331	P	P	17 47 55.1	-1.0
STAL	STALIGIAL	80.31	326	P	P	17 47 58.6	+2.3
STAL				IAmb	IAmb	17 48 09.6	
	comp=Z,2.7nm,0.6s						
KSAR	Wonju Array Be	81.22	46	P	P	17 48 00.4	-0.9
KSRS	Korea Array	81.26	46	P	P	17 48 01.7	+0.2
	comp=Z,2.2nm,1.0s,baz=243,slow=5.6,SNR=6.0						
	comp=Z,2.2nm,1.0s						
FINES	FINESS Array B	85.91	342	P	P	17 48 25.6	+0.7
FINES	FINESS Array B	85.91	342	P	P	17 48 25.4	+0.5
	comp=Z,2.4nm,0.9s,baz=150,slow=5.8,SNR=5.4						
	comp=Z,2.4nm,0.9s						
ESDC	Sonseca Array	86.84	314	P	P	17 48 31.5	+1.5
	comp=Z,0.5nm,0.8s,baz=94,slow=4.0,SNR=3.1						
	comp=Z,0.5nm,0.8s						
MJB9	Matsu-Tunnel	88.07	50	P	P	17 48 33.6	-2.4
MAJO	Matsushiro	88.07	50	P	P	17 48 33.4	-2.6
MJAR	Matsushiro Arr	88.07	50	P	P	17 48 32.7	-3.3
MJAR				IAmb	IAmb	17 48 37.9	
	comp=Z,7.9nm,1.2s						
MJAR	Matsushiro Arr	88.07	50	P	P	17 48 36.6	+0.6
	comp=Z,1.9nm,0.8s,baz=228,slow=4.4,SNR=6.0						
	comp=Z,1.9nm,0.8s						
HNR	Honiara	91.37	100	LR	LR	18 29 55.2	
	comp=Z,118nm,18.1s,baz=42,slow=36						
ARCES	ARCESS Array B	92.54	347	P	P	17 48 56.9	+0.8
	comp=Z,3.0nm,0.9s,baz=126,slow=5.7,SNR=6.5						
	comp=Z,3.0nm,0.9s						
GCPR	Guaynabo City	134.00	278	PKPdf	PKPdf	17 55 01.5	-2.0
AOPR	Arecibo Observ	134.64	277	PKPdf	PKPdf	17 55 02.1	-2.7
CRPR	Cabo Rojo, PR	134.92	277	PKPdf	PKPdf	17 55 04.5	-0.7
ULM	Lac du Bonnet	145.23	339	PKPbc	PKPbc	17 55 21.6	-1.0
	comp=Z,2.8nm,0.6s,baz=17,slow=4.2,SNR=6.4						
NVAR	Mina Array Bea	160.22	8	PKPab	PKPab	17 56 25.6	+0.1
	comp=Z,0.9nm,0.8s,baz=347,slow=6.6,SNR=3.7						
TXAR	Lajitas Array	165.47	318	PKPab	PKPab	17 56 49.0	+0.3
	comp=Z,0.1nm,0.3s,baz=51,slow=5.2,SNR=3.6						

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*IDC **24** 17:43:33.7±3.4, 0°.57N×98°.66E, h0^{km}, mb3.8/5, mbtmp3.7/6, ML3.7/1, Error ellipse: s-maj=135.1km s-min=23.5km az=60.0*

*DJA **24** 17:43:47.4±0.4, 1°N±3°×9°9E±°, h73^{km}±6^{km}, M3.6/12, MLv3.6/12*

ISC 24 17:43:46.3±0.9, **0°.94N**±0°.07×**98°.95E**±0°.07, **h86^{km}, n15, σ1^{s}.29**/15, **mb3.8**/5, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBSI	Sibolga	0.61	354	P	Pn	17 44 02.0	+0.4
SBSI				S	Sn	17 44 14.2	+1.2
MNSI	Mandailing Nat	0.64	103	P	Pn	17 44 02.7	+0.8
MNSI				S	Sn	17 44 15.3	+1.8
GSI	Gunungsitoli	1.42	285	P	Pn	17 44 11.8	+0.9
GSI				S	Sn	17 44 30.6	+1.1
PPI	Padang Panjang	2.00	134	P	Pn	17 44 19.7	+1.3
SISI	Saibi	2.26	177	P	Pn	17 44 22.4	+0.6
MLSI	Meulaboh, Aceh	4.17	322	P	Pn	17 44 47.8	+0.2
CMAR	Chiang Mai Arr	17.41	360	P	Pn	17 47 43.6	-0.2
	0.1nm,0.3s,baz=175,slow=11,SNR=2.8						
	0.6nm,0.8s						
H08S2	Diego Garcia H	27.73	252	T	T	18 17 02.7	
	baz=72,slow=75,SNR=5.0						
H08S3	Diego Garcia H	27.74	252	T	T	18 17 06.2	
	baz=72,slow=75,SNR=11						
H08S1	Diego Carcia H	27.75	252	T	T	18 17 06.0	
	baz=72,slow=75,SNR=12						
WRA	Warramunga Arr	40.42	123	P	P	17 51 14.2	-2.2
	1.3nm,1.0s,baz=301,slow=8.1,SNR=1.9						
	1.3nm,1.0s						
ASAR	Alice Springs	41.85	128	P	P	17 51 26.0	-2.2
	0.6nm,0.9s,baz=296,slow=8.6,SNR=1.6						
	0.6nm,0.9s						
SONM	Songino Array	47.15	7	P	P	17 52 10.7	+0.5
	0.9nm,0.4s,baz=187,slow=9.4,SNR=5.6						
	0.9nm,0.4s						
MKAR	Makanchi Array	47.93	345	P	P	17 52 16.2	+0.1
	0.2nm,0.3s,baz=156,slow=7.4,SNR=5.4						
	0.2nm,0.3s						
ZALV	Zalesovo Beam	54.10	350	P	P	17 53 02.1	0.0
	0.9nm,0.4s,baz=154,slow=7.4,SNR=4.4						
	0.9nm,0.4s						

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*IDC **24** 17:48:54.2±1.0, 2°.59S×138°.44E, h0^{km}, mb3.6/6, mbtmp3.6/8, ML3.6/2, Error ellipse: s-maj=26.0km s-min=23.0km az=105.0*

ISC 24 17:48:59.1±0.8, **2°.6S**±0°.1×**138°.57E**±0°.09, **h32^{km}, n9, σ1^{s}.06**/10, **mb3.8**/6, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	2.13	87	Pn	Pn	17 49 33.4	+0.8
	11nm,0.3s,baz=257,slow=12,SNR=20						
JAY				Sn	Sb	17 50 03.1	-0.1
	3.4nm,0.3s,baz=123,slow=17,SNR=1.2						
	17nm,0.3s						
BATI	Baumata	16.61	242	Pn	P	17 52 53.8	+1.9
	1.6nm,0.3s,baz=90,slow=18,SNR=2.2						
WRA	Warramunga Arr	17.69	193	P	Pn	17 53 01.5	-1.7
	0.3nm,0.3s,baz=14,slow=13,SNR=7.7						
	0.4nm,0.3s						
ASAR	Alice Springs	21.39	192	P	P	17 53 44.3	0.0
	0.6nm,0.5s,baz=20,slow=11,SNR=13						
	0.6nm,0.5s						
PETK	Petropavlovsk-	57.82	13	P	P	17 58 46.7	-0.7
	0.9nm,0.9s,baz=213,slow=6.6,SNR=1.8						
	0.9nm,0.9s						
MKAR	Makanchi Array	69.65	322	P	P	18 00 05.3	-0.2
	0.6nm,0.8s,baz=123,slow=5.3,SNR=3.7						
	0.6nm,0.8s						
BVAR	Borovoye Array	79.17	325	P	P	18 01 00.8	0.0
	0.3nm,0.5s,baz=117,slow=5.7,SNR=2.1						
	0.3nm,0.5s						
ILAR	Eielson Array	85.82	24	P	P	18 01 35.0	-0.3
	0.5nm,0.6s,baz=257,slow=5.4,SNR=4.3						
	0.5nm,0.6s						
QSPA	South Pole Qui	87.31	180	P	P	18 01 42.9	+0.3
	0.7nm,0.9s,baz=0.0,slow=0.0,SNR=1.4						
	0.7nm,0.9s						

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*IDC **24** 17:49:32.5±0.6, 31°.59N×69°.99E, h0^{km}, mb4.0/24, mbtmp4.0/26, ML1.6/1, Error ellipse: s-maj=15.8km s-min=13.3km az=32.0*

*MOS **24** 17:49:32.6±1.2, 31°.64N×70°.07E, h11^{km}, mb4.3/12, Error ellipse: s-maj=9.1km s-min=4.9km az=86.7*

*NEIC **24** 17:49:33.8±1.7, 31°.5N±0°.1×70°.04E±0°.08, h10^{km}±1^{km}, mb4.1/24, Error ellipse: s-maj=17.1km s-min=12.2km az=176.0*

*NDI **24** 17:49:36.3±3.1, 31°.51N×69°.99E, h15^{km}, ML4.1, MW4.2, mb4.1(NEIC)*

*BJI **24** 17:49:37.7, 31°.86N×70°.60E, h10^{km}, mB4.5/2, mb4.1/16, ML4.4/1, Ms3.9/5, Ms7 3.9/5*

*NNC **24** 17:49:41.3±3.0, 31°.91N×70°.17E, h44^{km}±24^{km}, mb3.9, Error ellipse: s-maj=27.2km s-min=22.1km az=128.0*

ISC 24 17:49:33.5±0.4, **31°.48N**±0°.04×**70°.06E**±0°.04, **h10^{km}, n161, σ2^{s}.20**/189, **mb4.1**/43, **17C-6D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	3.17	345		Pn	17 50 25.6	+1.9
KBL	Kabul	3.17	345	P	Pn	17 50 25.6	+1.9
NIL	Nilore	3.46	50		Pn	17 50 29.1	+1.7
NIL				Pg	Pb	17 50 37.8	+2.9
JMU	Jammu	4.29	72	*e*P	Pn	17 50 40.6	+1.8
JMU				*e*S	Sn	17 51 30.5	+1.6
JMU				IAML		17 51 31.3	
	comp=E,842nm,0.4s						
JMU				IAML		17 51 31.5	
	comp=N,670nm,0.6s						
BKNR	BIKANER	4.43	140	*e*P	Pn	17 50 43.7	+2.8
BKNR				*e*S	Sn	17 51 31.8	-0.7
BKNR				IAML		17 51 35.9	
	comp=N,562nm,0.1s						
BKNR				IAML		17 51 36.0	
	comp=E,789nm,0.4s						
DHRM	DHARAMSHALA	5.36	80	*e*P	Pn	17 50 55.7	+1.9
DHRM				*e*S	Sn	17 51 57.0	+1.3
DHRM				IAML		17 51 58.2	
	comp=N,925nm,0.7s						
DHRM				IAML		17 51 58.2	
	comp=E,702nm,0.4s						
SMLA	Simla	6.09	91	*e*P	Pn	17 51 06.0	+2.4
SMLA				*e*S	Sn	17 52 12.9	-0.3
SMLA				IAML		17 52 15.1	
	comp=N,511nm,0.3s						
SMLA				IAML		17 52 16.9	
	comp=E,361nm,0.3s						
KUDL	Kundal	6.50	119	*e*P	Pn	17 51 10.4	+1.3
KUDL				*e*S	Sn	17 52 20.0	-3.3
KUDL				IAML		17 52 21.9	
	comp=N,203nm,0.7s						
KUDL				IAML		17 52 22.1	
	comp=E,172nm,0.5s						
NDI	New Delhi	6.79	112	*e*P	Pn	17 51 14.5	+1.2
NDI				*e*S	Sn	17 52 29.4	-1.3
NDI				IAML		17 52 32.6	
	comp=N,133nm,0.3s						
NDI				IAML		17 52 34.5	
	comp=E,95nm,0.4s						
AYAN	Aya Nagar	6.81	114	*e*P	Pn	17 51 14.9	+1.4
AYAN				*e*S	Sn	17 52 29.3	-1.8
DDI	Dehra Dun	6.96	97	*e*P	Pn	17 51 18.6	+2.9
DDI				*e*S	Sn	17 52 34.1	-0.8
DDI				IAmL		17 52 37.2	
	comp=E,364nm,0.7s						
DDI				IAmL		17 52 38.0	
	comp=N,281nm,0.4s						
SIMJ	Simiganj	7.22	353		Pn	17 51 20.2	+1.0
UGON	Onchagaon	7.51	113	*e*P	Pn	17 51 26.2	+3.1
UGON				*e*S	Sn	17 52 44.3	-4.0
DRK	Karamyk	8.11	10		Pn	17 51 32.2	+0.6
DRK	Karamyk	8.11	10	P	Pn	17 51 32.2	+0.6
BHUJ	Bhuj	8.20	183	*e*P	Pn	17 51 34.9	+2.4
BHUJ				*e*S	Sn	17 53 03.0	-2.3
BHUJ				IAmL		17 53 05.8	
	comp=N,103nm,0.7s						
BHUJ				IAmL		17 53 07.2	
	comp=E,152nm,0.8s						
JOSI	Joshimath	8.20	94	*e*P	Pn	17 51 35.9	+3.1
JOSI				⇓*e*S	Sn	17 53 01.5	-4.1
JOSI				IAML		17 53 08.5	
	comp=E,143nm,0.4s						
JOSI				IAML		17 53 09.2	
	comp=N,213nm,0.6s						
BTK	Batken	8.59	4		Pn	17 51 38.5	+0.6
BTK	Batken	8.59	4	P	Pn	17 51 38.5	+0.6
LGTI	Lohaghat	9.02	100	*e*P	Pn	17 51 42.4	-1.4
LGTI				*e*S	Sn	17 53 19.4	-5.9
LGTI				IAML		17 53 21.3	
	comp=N,61nm,0.3s						
LGTI				IAML		17 53 23.5	
	comp=E,32nm,0.2s						
KSH	Kashi	9.36	29	P	Pn	17 51 45.0	-3.5
KSH				S	Sn	17 53 19.3	-15
KSH				smax	smax		
	comp=E,120nm,0.7s						
KSH				smax	smax		
	comp=E,66nm,0.6s						
JHNI	Jhansi	9.56	127	*e*P	Pn	17 51 52.6	+1.4
JHNI				*e*S	Sn	17 53 33.4	-5.4
JHNI				IAML		17 53 37.9	
	comp=N,47nm,0.2s						
JHNI				IAML		17 53 39.9	
	comp=E,34nm,0.2s						
ARSB	Arslanbob	10.11	13		Pn	17 51 58.8	0.0
ARSB	Arslanbob	10.11	13	P	Pn	17 51 58.8	0.0
BHPL	Bhopal	10.49	140	*e*P	Pn	17 52 07.3	+3.4
BHPL				*e*S	Sn	17 53 55.9	-5.7
BHPL				IAML		17 54 00.2	
	comp=E,109nm,0.5s						
BHPL				IAML		17 54 01.1	
	comp=N,87nm,0.5s						
NRDN	NARMADA NAGAR	10.77	142	*e*P	Pn	17 52 09.6	+1.8
NRDN				*e*S	Sn	17 54 00.9	-7.6
NRDN				IAML		17 54 11.1	
	comp=N,45nm,0.2s						
NRDN				IAML		17 54 20.1	
	comp=E,33nm,0.5s						
NRN	Naryn	11.02	24		Pn	17 52 11.2	-0.3
NRN	Naryn	11.02	24	P	Pn	17 52 11.2	-0.3
AML	Almayashu	11.02	14	P	Pn	17 52 11.4	-0.2
	SNR=22						
EKS2	Erkin-Say	11.55	14	P	Pn	17 52 19.2	+0.7
	SNR=7.1						
KK31	Karatay Array	11.61	2		Pn	17 52 18.4	-0.9
KK31	Karatay Array	11.61	2	P	Pn	17 52 18.6	-0.7
	comp=E,2.2nm,0.3s,baz=188,slow=14,SNR=75						
KK31				⇑S	Sn	17 54 22.6	-6.4
	comp=E,7.2nm,0.6s,baz=189,slow=20,SNR=5.0						
KK31	Karatay Array	11.61	2	P	Pn	17 52 18.4	-0.9
KKAR	Karatay Array	11.61	2		Pn	17 52 18.3	-1.0
KKAR	Karatay Array	11.61	2		Pn	17 52 18.3	-1.0
KKAR	Karatay Array	11.61	2	P	Pn	17 52 18.3	-1.0
AAK	Ala-Archa	11.69	16	P	Pn	17 52 20.6	+0.1
	SNR=9.3						
AAK	Ala-Archa	11.69	16		Pn	17 52 20.0	-0.4
AAK	Ala-Archa	11.69	16	Pn	Pn	17 52 19.4	-1.0
	comp=E,5.7nm,0.4s,baz=196,slow=8.1,SNR=18						
AAK				Sn	Sn	17 54 23.3	-7.8
	comp=E,0.5nm,0.3s,baz=329,slow=21,SNR=6.2						
AAK	Ala-Archa	11.69	16	⇑P	Pn	17 52 20.0	-0.4
	comp=E,6.0nm,0.8s						
AAK				⇑S	Sn	17 54 23.4	-7.6
	comp=E,5.3nm,0.8s						
BOOM	Boomskoye usch	11.95	21		Pn	17 52 23.7	-0.4
BOOM	Boomskoye usch	11.95	21	P	Pn	17 52 23.7	-0.4
TARG	Taragay, Kyrgy	11.97	29	Pn	Pn	17 52 23.9	-0.6
TARG	Taragay, Kyrgy	11.97	29	P	Pn	17 52 23.9	-0.6
KDJ	Kajisay	12.06	26		Pn	17 52 25.5	-0.1
KDJ	Kajisay	12.06	26	P	Pn	17 52 25.5	-0.1
CHMS	Chumysh	12.09	17	P	Pn	17 52 25.4	-0.4
	SNR=7.5						
CHMS	Chumysh	12.09	17	⇑P	Pn	17 52 24.9	-0.9
	comp=E,7.7nm,0.7s						
CHMS				⇑S	Sn	17 54 34.8	-5.9
	comp=E,12nm,0.7s						
TKM2	Tokmak 2	12.24	20	P	Pn	17 52 28.4	+0.3
	SNR=8.0						
TKM2	Tokmak 2	12.24	20	⇑P	Pn	17 52 28.0	-0.1
	comp=E,2.0nm,0.5s						
TKM2				⇓S	Sn	17 54 39.0	-5.7
	comp=E,6.1nm,0.8s						
PRZ	Przheval'sk	12.84	29	Pn	Pn	17 52 34.7	-1.6
PRZ	Przheval'sk	12.84	29	P	Pn	17 52 34.7	-1.6
WSAR	Wadi Sarin	13.05	234	Pn	Pn	17 52 40.0	+0.9
	baz=53,slow=20,SNR=1.8						
WSAR				Sn	Sn	17 54 56.0	-8.4
	baz=282,slow=24,SNR=5.7						
PDGK	Podgornoye	13.99	30	⇓P	Pn	17 52 49.7	-2.2
	comp=E,3.7nm,0.7s						
EVN	Everest	14.97	99		Pn	17 53 03.6	-2.2
HYB	Hyderabad	15.98	149	*e*P	Pn	17 53 19.6	+1.1
OTUK	Ortayu	16.84	5	⇑P	Pn	17 53 26.0	-3.3
	comp=E,1.6nm,0.8s						
MAKZ	Makanchi	17.85	28	P	Pn	17 53 38.0	-3.9
MAKZ	Makanchi	17.85	28	⇓P	Pn	17 53 38.9	-3.0
	comp=E,4.0nm,0.7s						
MAKZ	Makanchi	17.85	28	P	Pn	17 53 38.0	-3.9
MAKZ				pmax	pmax		

```
      comp=Z,5.0nm,0.7s
MK31  Makanchi Array   17.96  28 ⇑P     Pn      17 53 42.9 -0.5
      comp=Z,1.2nm,0.6s,baz=205,slow=8.9,SNR=12
MK31  Makanchi Array   17.96  28ceP     Pn      17 53 43.6 +0.3
MKAR  Makanchi Array   17.96  28  P     Pn      17 53 40.3 -3.0
MKAR  Makanchi Array   17.96  28  P     Pn      17 53 42.4 -0.9
      comp=Z,1.1nm,0.5s,baz=208,slow=12,SNR=10
MKAR  Makanchi Array   17.96  28  P     Pn      17 53 40.3 -3.0
LSA   Lhasa            18.24  90  P     Pn      17 53 45.9 -1.4
LSA                               IAmb  IAmb    17 54 06.8
      comp=Z,12nm,0.8s
LSA   Lhasa            18.24  90  P     Pn      17 53 45.9 -1.4
LSA                               pmax  pmax
      comp=Z,12nm,0.8s
WMQ   Urumqi           18.58  43 eP     Pn      17 53 54.9 +4.0
AB31  Akbulak array    19.33 340  P     P       17 53 58.1 -0.7
AB31  Akbulak array    19.33 340 ⇓P     P       17 53 58.7 -0.1
      comp=Z,1.2nm,0.5s,baz=152,slow=11,SNR=23
ABKAR Akbulak array    19.33 340  P     P       17 53 58.6 -0.2
ABKAR Akbulak array    19.33 340  P     P       17 53 58.8  0.0
KURBB Kurchatov Arra   20.14  16  P     P       17 54 06.3 -1.3
      comp=Z,1.1nm,0.5s,baz=207,slow=10,SNR=8.5
      comp=Z,1.1nm,0.5s
KURBB Kurchatov Arra   20.14  16 ⇑P     P       17 54 08.0 +0.4
      comp=Z,3.9nm,0.8s
KURK  Kurchatov        20.25  16  P     P       17 54 07.6 -1.2
KURK                              IAmb  IAmb    17 54 30.8
      comp=Z,4.3nm,0.9s
KURK  Kurchatov        20.25  16 ⇑P     P       17 54 08.2 -0.6
      comp=Z,2.3nm,0.8s
KURK  Kurchatov        20.25  16 i P    P       17 54 09.2 +0.4
KURK                              pmax  pmax
      comp=Z,4.0nm,0.9s
AKT   Akhty            20.50 305 eP     P       17 54 10.9 -0.8
AKT                              ePPP   PPP     17 54 34.9
AKT                               pmax  pmax
      comp=Z,9.0nm,0.6s
AKTO  Aktyubinsk       20.96 338  P     P       17 54 14.7 -1.8
      comp=Z,1.2nm,0.4s,baz=175,slow=9.8,SNR=9.0
      comp=Z,1.2nm,0.4s
AKTO  Aktyubinsk       20.96 338 ⇑P     P       17 54 16.7 +0.1
      comp=Z,4.8nm,0.9s
GOMU  GeErMu           21.07  70  P     P       17 54 21.3 +3.0
GOMU                              pP    sP      17 54 24.8 +2.0
GOMU                              sP    pP      17 54 28.0 +6.6
GOMU                              pmax  pmax
      comp=Z,8.0nm,1.0s
BVA0  Borovoye Array   21.54   1 ⇑P     P       17 54 22.2 -0.5
      comp=Z,7.6nm,1.2s,baz=165,slow=8.3,SNR=17
BVAR  Borovoye Array   21.54   1  P     P       17 54 22.1 -0.6
      comp=Z,2.6nm,0.4s,baz=174,slow=9.7,SNR=20
      comp=Z,2.6nm,0.4s
BRVK  Borovoye         21.57   0  P     P       17 54 22.1 -1.0
BRVK                              IAmb  IAmb    17 54 23.7
      comp=Z,8.7nm,1.1s
BRVK  Borovoye         21.57   0 ⇓P     P       17 54 20.8 -2.2
      comp=Z,6.4nm,0.8s
BRVK  Borovoye         21.57   0ceP     P       17 54 22.5 -0.6
BRVK                              pmax  pmax
      comp=Z,10.0nm,1.1s
GNI   Garni            22.23 300  P     P       17 54 31.6 +1.1
GNI   Garni            22.23 300  P     P       17 54 31.6 +1.1
GNI                               pmax  pmax
      comp=Z,35nm,1.3s
RAYN  Ar Rayn          23.15 256  P     P       17 54 41.4 +1.2
RAYN                              IAmb  IAmb    17 54 48.8
      comp=Z,5.3nm,1.1s
RAYN  Ar Rayn          23.15 256  P     P       17 54 41.4 +1.2
RAYN                              pmax  pmax
      comp=Z,5.0nm,1.1s
ZAA0  Zalesovo Array   24.84  21  P     P       17 54 52.9 -2.9
ZAA0                              IAmb  IAmb    17 55 24.7
      comp=Z,4.0nm,0.8s
ZALV  Zalesovo Beam    24.84  21  P     P       17 54 53.7 -2.1
ZALV  Zalesovo Beam    24.84  21  P     P       17 54 55.4 -0.4
      comp=Z,2.6nm,0.6s,baz=213,slow=11,SNR=9.9
      comp=Z,2.6nm,0.6s
KIV   Kislovodsk       24.86 308 eP     P       17 54 55.9 -0.4
KIV                               pmax  pmax
      comp=Z,4.0nm,1.0s
GTA   Gaotai           25.41  64 eP     P       17 55 03.0 +1.6
GTA                               pP    sP      17 55 07.6 +1.5
GTA                               pmax  pmax
      comp=Z,2.0nm,1.0s
TNCH  TengChong        25.83  97  P     P       17 55 04.8 -0.6
TNCH                              pP    pP      17 55 08.6  0.0
TNCH                              PP    PnPn    17 55 47.3 +5.1
TNCH                              S     S       17 59 34.0 -1.2
TNCH                              pmax  pmax
      comp=Z,9.0nm,1.3s
TNCH                              pmax  pmax
      comp=Z,150nm,5.8s
TNCH                              LR    LR
      comp=Z,430nm,16.7s
TNCH                              LR    LR
      comp=Z,320nm,16.8s
TNCH                              LR    LR
      comp=Z,830nm,19.2s
ARTI  Arti             26.21 345  P     P       17 55 06.4 -1.8
ARTI                              IAmb  IAmb    17 55 48.0
      comp=Z,3.0nm,0.7s
ARTI  Arti             26.21 345  P     P       17 55 08.3  0.0
ARTI                                            17 55 45.5
ARTI                              S     S       17 59 43.7 +3.5
ARTI                              SS    SnSn    18 00 43.6 +4.5
CMAR  Chiang Mai Arr   29.11 110  P     P       17 55 37.7 +3.1
      comp=Z,0.4nm,0.6s,baz=292,slow=11,SNR=7.1
      comp=Z,0.4nm,0.6s
BR104 Keskin Array S   30.57 296  P     P       17 55 48.1 +0.6
      comp=Z,2.3nm,0.7s
BR131 Keskin Array S   30.57 296  P     P       17 55 46.7 -0.9
BR131                             IAmb  IAmb    17 55 52.6
      comp=Z,3.1nm,1.2s
BR131 Keskin Array S   30.57 296  P     P       17 55 46.7 -0.9
BR131                             pmax  pmax
      comp=Z,3.0nm,1.2s
BRTR  Keskin Array B   30.57 296  P     P       17 55 47.3 -0.3
BRTR  Keskin Array B   30.57 296  P     P       17 55 48.3 +0.7
      comp=Z,0.9nm,0.6s,baz=116,slow=9.6,SNR=5.7
      comp=Z,0.9nm,0.6s
BR105 Keskin Array S   30.59 296  P     P       17 55 48.2 +0.5
      comp=Z,2.5nm,0.8s
SLVN  Son La           31.84 100  P     P       17 55 58.0 -0.8
SLVN                              IAmb  IAmb    17 56 40.7
      comp=Z,4.5nm,1.1s
SONM  Songino Array    32.04  49  P     P       17 55 59.9 -0.4
SONM                              IAmb  IAmb    17 56 09.1
      comp=Z,1.6nm,1.0s
SONM  Songino Array    32.04  49  P     P       17 56 01.4 +1.0
      comp=Z,0.6nm,0.5s,baz=260,slow=8.7,SNR=4.2
      comp=Z,0.6nm,0.5s
OBN   Obninsk          33.42 325ceP     P       17 56 11.4 -0.8
OBN                              e              17 57 23.3
OBN                               pmax  pmax
      comp=Z,5.0nm,0.9s
OBN                               MLR   MLR
      comp=Z,229nm,16.0s
ELL   Elmali           33.48 290  P     P       17 56 13.3 +0.2
ELL   Elmali           33.48 290  P     P       17 56 13.4 +0.2
ELL                               pmax  pmax
      comp=Z,68nm,1.4s
AK09  Malin Array Si   35.64 314  P     P       17 56 31.7 +0.2
AK10  Malin Array Si   35.66 314  P     P       17 56 31.8 +0.2
AK08  Malin Array Si   35.66 314  P     P       17 56 31.8 +0.2
AK06  Malin Array Si   35.69 314  P     P       17 56 32.1 +0.3
AKASG Malin Array Be   35.70 315  P     P       17 56 31.3 -0.7
      comp=Z,0.6nm,0.3s,baz=100,slow=7.3,SNR=12
      comp=Z,0.6nm,0.3s
AKASG Malin Array Be   35.70 315ceP     P       17 56 32.0  0.0
AKASG                             pmax  pmax
      comp=Z,2.0nm,0.6s
AKBB  Malin Array Si   35.70 315  P     P       17 56 31.1 -0.9
AKBB  Malin Array Si   35.70 315ceP     P       17 56 31.9 -0.1
AKBB                              pmax  pmax
      comp=Z,4.0nm,0.9s
AKBB  Malin Array Si   35.70 315  P     P       17 56 31.9 -0.1
AK01  Malin Array Si   35.71 315  P     P       17 56 31.8 -0.2
KIEV  Kiev             35.71 315  P     P       17 56 30.9 -1.2
KIEV                              IAmb  IAmb    17 56 32.8
      comp=Z,3.6nm,0.8s
KIEV  Kiev             35.71 315  P     P       17 56 30.9 -1.2
KIEV                              pmax  pmax
      comp=Z,4.0nm,0.8s
KIEV  Kiev             35.71 315  P     P       17 56 32.1 +0.1
      comp=Z,32nm,0.9s
AK16  Malin Array Si   35.77 314  P     P       17 56 32.6 +0.1
AK16                              pP    sP      17 56 40.0 +2.6
KARP  Karpathos        35.80 288        P       17 56 33.1 +0.1
KARP  Karpathos        35.80 288  P     P       17 56 33.5 +0.5
      comp=Z,26nm,1.0s
KARP                              pP    sP      17 56 40.5 +2.6
      comp=Z,26nm,1.0s
EZN   Ezine            36.21 296  P     P       17 56 36.7 +0.2
      comp=Z,11nm,1.3s
NDNU  Novodnistrovsk   36.35 311  P     P       17 56 38.0 +0.5
LUBAR Lubar, Ukraine   36.40 313  P     P       17 56 38.0  0.0
MI28  Mi28,Pidlybu     36.72 314  P     P       17 56 40.6  0.0
MLR   Muntele Rosu     36.80 305  P     P       17 56 42.5 +0.9
      comp=Z,4.8nm,1.5s
HORU  Horodok          37.08 311  P     P       17 56 44.1 +0.3
VOIR                   37.42 305  P     P       17 56 47.2 +0.4
      comp=Z,2.4nm,0.7s
BURAR Bucovina Array   37.58 309  P     P       17 56 48.1 -0.1
RNPP5 Staryi Chortor   37.88 314  P     P       17 56 51.0 +0.5
RNPP9 Sopachiv         37.92 315  P     P       17 56 51.2 +0.3
NIE   Niedzica         41.07 311  P     P       17 57 17.5 +0.3
      comp=Z,2.2nm,1.0s
FINES FINESS Array B   41.32 330  P     P       17 57 19.4 +0.4
      comp=Z,1.3nm,0.5s,baz=115,slow=9.0,SNR=8.6
      comp=Z,1.3nm,0.5s
CUC   Castrocucco      44.26 297  P     P       17 57 42.8 -0.5
GERES GERESS Array B   45.35 309  P     P       17 57 51.3 -0.6
      comp=Z,0.3nm,0.5s,baz=84,slow=5.5,SNR=3.0
      comp=Z,0.3nm,0.5s
ARCES ARCESS Array B   45.53 340  P     P       17 57 54.0 +1.1
ARCES ARCESS Array B   45.53 340  P     P       17 57 53.1 +0.2
      comp=Z,3.6nm,0.5s,baz=120,slow=7.9,SNR=47
      comp=Z,3.6nm,0.5s
ARCES ARCESS Array B   45.53 340  P     P       17 57 54.0 +1.1
ARCES                             pmax  pmax
      comp=Z,10.0nm,1.4s
HFS   Hagfors          46.63 325  P     P       17 58 01.1 -0.6
      comp=Z,1.3nm,0.6s,baz=114,slow=6.6,SNR=6.7
      comp=Z,1.3nm,0.6s
KSRS  Korea Array      47.44  66  P     P       17 58 09.1 +0.7
      comp=Z,0.3nm,0.3s,baz=270,slow=7.3,SNR=6.5
      comp=Z,0.3nm,0.3s
NB2   NORSAR Subarra   48.01 326  P     P       17 58 11.6 -0.9
      comp=Z,1.0nm,0.6s,baz=107,slow=7.9
NOA   NORSAR Array B   48.01 326  P     P       17 58 11.1 -1.4
      comp=Z,0.5nm,0.5s,baz=105,slow=7.9,SNR=7.7
      comp=Z,0.5nm,0.5s
KEST  Kesra            50.05 292  P     P       17 58 29.5 +1.0
      comp=Z,3.0nm,0.4s,baz=73,slow=0.8,SNR=9.0
      comp=Z,3.0nm,0.4s
SPITS Spitsbergen Ar   52.21 348  P     P       17 58 43.8 -0.3
      comp=Z,1.8nm,0.6s,baz=101,slow=8.6,SNR=11
      comp=Z,1.8nm,0.6s
EKA   Eskdalemuir Ar   55.44 318  P     P       17 59 07.3 -0.6
      comp=Z,0.8nm,0.4s,baz=86,slow=6.8,SNR=12
      comp=Z,0.8nm,0.4s
ESDC  Sonseca Array    59.21 300  P     P       17 59 33.9 -1.1
      comp=Z,1.0nm,0.6s,baz=77,slow=7.3,SNR=9.9
      comp=Z,1.0nm,0.6s
BILL  Bilibino         63.47  25 i P    P       18 00 03.0 -0.3
BILL                              pmax  pmax
      comp=Z,2.0nm,1.1s
TORD  Torodi Ar. Bea   64.90 270  P     P       18 00 13.0 -0.5
      comp=Z,2.9nm,0.6s,baz=54,slow=6.2,SNR=4.4
      comp=Z,2.9nm,0.6s
FITZ  Fitzroy Crossi   72.60 125  P     P       18 01 02.2 +0.9
      comp=Z,15nm,1.1s,baz=318,slow=15,SNR=3.3
      comp=Z,15nm,1.1s
BOSA  Boshof           73.42 220  P     P       18 01 07.0 +0.9
      comp=Z,2.2nm,0.6s,baz=11,slow=6.0,SNR=9.1
      comp=Z,2.2nm,0.6s
BOSA  Boshof           73.42 220  P     P       18 01 07.0 +0.9
WRA   Warramunga Arr   80.05 121  P     P       18 01 44.4 +0.8
      comp=Z,1.6nm,0.8s,baz=311,slow=5.8,SNR=4.9
      comp=Z,1.6nm,0.8s
WRA   Warramunga Arr   80.05 121 i P    P       18 01 45.7 +2.0
WRA                               pmax  pmax
      comp=Z,2.0nm,0.8s
ASAR  Alice Springs    82.07 124  P     P       18 01 54.7 +0.3
      comp=Z,1.1nm,0.7s,baz=313,slow=5.4,SNR=5.2
      comp=Z,1.1nm,0.7s
YKA   Yellowknife Ar   86.28   2  P     P       18 02 15.3 +0.2
      comp=Z,0.5nm,0.6s,baz=351,slow=5.2,SNR=11
      comp=Z,0.5nm,0.6s
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*IDC **24** 17:52:54.1±0.6, 2°69S×138°42E, h0^{km}, mb4.0/14, mbtmp4.0/17, ML4.1/3, Error ellipse: s-maj=20.3km s-min=14.1km az=83.0*

*NEIC **24** 17:52:56.7±1.6, 2°64S±0°09×138°44E±0°08, h10^{km}±1^{km}, mb4.7/26, Error ellipse: s-maj=16.0km s-min=12.8km az=336.0*

*DJA **24** 17:52:57.7±0.3, 3°S±3°×13°9E±°, h10^{km}, M4.4/14, mb4.4/14, mB4.7/1, MLv4.5/10, Mw(mB)3.9/1*

ISC 24 17:52:58.7±0.4**, 2°72S**±0°05×**138°61E**±0°04**, h32^{km}, n64, σ1^{s}82**/64**, mb4.4**/27**, 1C, Irian Jaya**

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Code  Station Name      Δ°   AZ°   Phase ID       Time      Res
                                  Op    ISC     h  m  s    ISC
SMPI  Sarmi             0.73   8  P     Pn      17 53 09.4 -3.4
GENI  Genyem            1.56  86  P     Pb      17 53 27.3 +0.3
JAY   Jayapura          2.10  85  Pn    Pn      17 53 34.3 +2.6
      28nm,0.3s,baz=229,slow=10,SNR=34
JAY                               Sn    Sb      17 54 01.5 -0.5
      13nm,0.3s,baz=82,slow=21,SNR=3.9
      91nm,0.5s
JAY   Jayapura          2.10  85  P     Pn      17 53 33.9 +2.2
SRPI  Serui, Papua      2.51 289  P     Pn      17 53 36.9 -0.5
SRPI                              S     Sn      17 54 07.6 +0.7
BAKI  Biak              2.92 301  P     Pn      17 53 43.9 +0.9
RKPI  Ransiki, Papua    4.59 285  P     Pn      17 54 05.8 -0.1
FAKI  Fak Fak           6.36 268  Pn    Pn      17 54 31.6 +1.4
FAKI  Fak Fak           6.36 268  P     Pn      17 54 30.9 +0.6
      0.3nm36nm,0.9s
SWI   Sorong            7.57 284  P     Pn      17 54 47.0  0.0
      0.1nm29nm,0.6s
COEN  Coen             12.05 158  Pn    Pn      17 55 49.1 +0.8
MTN   Manton Dam       12.49 216        Pn      17 55 55.4 +1.0
SOEI  Soe              15.87 243  P     P       17 56 43.4 -0.1
SOEI                              IAmb  IAmb    17 57 07.4
      comp=Z,63nm,0.9s
SOEI  Soe              15.87 243  P     P       17 56 43.6 +0.1
KNRA  Kununurra        16.12 216  P     Pn      17 56 44.3 +1.1
KNRA                              IAmb  IAmb    17 56 49.1
      comp=Z,19nm,0.5s
BATI  Baumata          16.60 243  P     P       17 56 52.9 +1.4
MRSI  Marisa           16.96 281  P     P       17 56 55.2 -0.3
      comp=Z,21nm,1.1s
WB0   Warramunga Arr   17.44 193        Pn      17 56 58.5 -1.3
WB0                               IAmb  IAmb    17 57 20.9
      comp=Z,46nm,1.2s
WB0                                     S       18 00 23.9 +3.4
WR8   Warramunga Arr   17.60 193        Pn      17 57 00.1 -1.6
WRAB  Tennant Creek    17.61 193  P     Pn      17 57 01.9  0.0
WRAB                              IAmb  IAmb    17 57 22.1
      comp=Z,66nm,1.4s
WRA   Warramunga Arr   17.62 193        Pn      17 56 57.8 -4.2
WRA   Warramunga Arr   17.62 193  P     Pn      17 57 00.3 -1.7
      comp=Z,1.2nm,0.3s,baz=20,slow=13,SNR=15
WRA                               S     Sn      18 00 08.3 -9.1
      comp=Z,14nm,1.3s,baz=10,slow=22,SNR=5.0
      comp=Z,2.0nm,0.4s
MPSI  Mapaga           18.95 279  P     Pn      17 57 17.8 -0.4
FITZ  Fitzroy Crossi   19.89 219  P     P       17 57 27.2 -0.4
FITZ  Fitzroy Crossi   19.89 219  P     P       17 57 26.6 -1.0
      comp=Z,0.2nm,0.3s,baz=60,slow=8.7,SNR=3.6
      comp=Z,5.7nm,0.9s
AS31  Alice Springs    21.32 192        P       17 57 42.3 -0.8
ASAR  Alice Springs    21.32 192  P     P       17 57 42.9 -0.2
ASAR  Alice Springs    21.32 192  P     P       17 57 42.8 -0.4
      comp=Z,8.6nm,0.7s,baz=22,slow=10,SNR=25
ASAR                              S     S       18 01 35.0 -3.4
      comp=Z,6.9nm,1.0s,baz=13,slow=25,SNR=8.9
      comp=Z,8.6nm,0.7s
STKA  Stephens Creek   29.14 175        P       17 58 58.0 +1.0
STKA  Stephens Creek   29.14 175  P     P       17 58 57.9 +1.0
      comp=Z,0.7nm,0.4s,baz=11,slow=11,SNR=1.9
      comp=Z,0.7nm,0.4s
KSRS  Korea Array      41.18 347  P     P       18 00 40.7 +0.4
      comp=Z,1.3nm,0.8s,baz=160,slow=8.8,SNR=7.3
      comp=Z,1.3nm,0.8s
CMAR  Chiang Mai Arr   44.35 300  P     P       18 01 06.0 -0.4
      comp=Z,0.6nm,0.7s,baz=117,slow=6.6,SNR=7.3
      comp=Z,0.6nm,0.7s
LYN   LuoYang          44.47 329  P     P       18 01 03.3 -3.8
LYN                               pmax  pmax
      comp=Z,17nm,0.9s
BNX   BinXian          49.26 350 ⇑P     P       18 01 45.6 +1.3
BNX                               pmax  pmax
      comp=Z,7.0nm,0.4s
RTZ   Ruatahuna        50.00 141  P     P       18 01 52.0 +1.7
GTA   Gaotai           55.02 324 eP     P       18 02 28.3 +0.9
GTA                               pP    pP      18 02 32.9 -4.4
GTA                               pmax  pmax
      comp=Z,5.0nm,1.1s
SONM  Songino Array    57.68 335  P     P       18 02 46.3 +0.1
      comp=Z,0.6nm,0.4s,baz=155,slow=4.8,SNR=3.8
      comp=Z,0.6nm,0.4s
PEA0B Petropavlovsk-   57.89  13  P     P       18 02 47.5 +0.1
PEA0B                             IAmb  IAmb    18 02 52.3
      comp=Z,16nm,1.4s
PETK  Petropavlovsk-   57.89  13  P     P       18 02 48.1 +0.7
      comp=Z,0.9nm,0.5s,baz=157,slow=5.7,SNR=10
      comp=Z,0.9nm,0.5s
YAK   Yakutsk          64.93 355  P     P       18 03 35.3 +0.5
SEY   Seymchan         66.30   7  P     P       18 03 44.7 +1.0
      comp=Z,2.2nm,0.7s,baz=184,slow=5.6,SNR=9.1
      comp=Z,2.2nm,0.7s
MKAR  Makanchi Array   69.73 322        P       18 04 04.7 -1.0
MKAR  Makanchi Array   69.73 322  P     P       18 04 05.1 -0.6
      comp=Z,1.5nm,0.7s,baz=116,slow=8.2,SNR=13
      comp=Z,1.5nm,0.7s
MAKZ  Makanchi         69.93 322        P       18 04 06.4 -0.5
MAKZ                              IAmb  IAmb    18 04 08.1
      comp=Z,4.2nm,1.0s
ZALV  Zalesovo Beam    71.89 330  P     P       18 04 17.2 -1.4
ZALV  Zalesovo Beam    71.89 330  P     P       18 04 17.4 -1.2
      comp=Z,0.8nm,0.5s,baz=90,slow=8.9,SNR=3.9
      comp=Z,0.8nm,0.5s
BOOM  Boomskoye usch   72.09 316  P     P       18 04 20.1 -0.2
KURBB Kurchatov Arra   73.67 325  P     P       18 04 28.1 -1.1
      comp=Z,0.8nm,0.8s,baz=112,slow=5.1,SNR=4.9
      comp=Z,0.8nm,0.8s
ARSB  Arslanbob        73.77 314  P     P       18 04 30.1 -0.2
VNDA  Vanda            75.78 175  P     P       18 04 41.5 +0.5
      comp=Z,1.3nm,0.7s,baz=360,slow=3.2,SNR=4.5
      comp=Z,1.3nm,0.7s
L14K  Kuka Creek       77.94  25  P     P       18 04 54.9 +1.6
L14K                              IAmb  IAmb    18 04 55.9
      comp=Z,8.4nm,0.9s
M14K  Bethel           77.97  26  P     P       18 04 54.8 +1.3
M14K                              IAmb  IAmb    18 04 55.6
      comp=Z,6.1nm,0.8s
BVAR  Borovoye Array   79.26 325  P     P       18 05 00.1 -0.8
      comp=Z,1.1nm,0.5s,baz=110,slow=7.6,SNR=9.7
      comp=Z,1.1nm,0.5s
G19K  Purcell Mounta   82.35  22  IAmb  IAmb    18 05 21.0
      comp=Z,4.8nm,0.9s
E19K  Redstone River   82.85  20  IAmb  IAmb    18 05 22.8
      comp=Z,2.8nm,0.8s
CCB   Clear Creek Bu   85.47  24  P     P       18 05 32.6 -0.4
E23K  Chandalar        85.77  21  IAmb  IAmb    18 05 37.3
      comp=Z,5.3nm,1.1s
ILAR  Eielson Array    85.88  24  P     P       18 05 34.4 -0.7
      comp=Z,1.3nm,0.7s,baz=260,slow=4.5,SNR=12
      comp=Z,1.3nm,0.7s
J26L  Joseph Creek     87.20  25  IAmb  IAmb    18 05 44.3
      comp=Z,6.0nm,1.4s
QSPA  South Pole Qui   87.23 180  P     P       18 05 42.6 +0.7
      comp=Z,1.2nm,0.6s,baz=211,slow=1.4,SNR=12
      comp=Z,1.2nm,0.6s
K27K  Chicken          87.75  26  IAmb  IAmb    18 05 47.1
      comp=Z,6.1nm,1.2s
DAWY  Dawson           88.92  26  P     P       18 05 50.4 +0.6
DAWY                              IAmb  IAmb    18 05 52.0
      comp=Z,6.9nm,1.3s
CPUP  Villa Florida   147.27 153  PKPbc PKPbc   18 12 40.8 +1.1
      comp=Z,2.4nm,1.3s,baz=66,slow=5.3,SNR=3.2
LPAZ  La Paz          147.52 126  PKPbc PKPbc   18 12 42.1 +0.6
      comp=Z,1.8nm,0.6s,baz=261,slow=3.4,SNR=5.1
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*ISN **24** 17:58:18.4±0.4, 34°85N×46°10E, h6^{km}±4^{km}, ML2.8*

*TEH **24** 17:58:18.7, 34°84N×46°13E, h7^{km}±15^{km}*

ISC 24 17:58:19.3±0.9**, 34°90N**±0°04×**46°13E**±0°03**, h10^{km}, n16, σ0^{s}80**/19**, Western Iran**

```
Code  Station Name      Δ°   AZ°   Phase ID       Time      Res
                                  Op    ISC     h  m  s    ISC
IDHR  Dehrash           0.29 133  Pg    Pg      17 58 25.0 -0.1
KGS1  Ghasr-e-Shirin    0.59 229  Pg    Pg      17 58 30.3 -0.5
IGHG  Ghaleghazi        0.67 147  Pg    Pg      17 58 32.0 -0.2
ILIN  Lien              0.68  88  Pg    Pb      17 58 33.3 -0.1
GLG1  Gilan-e-Gharb     0.80 193  Pg    Pg      17 58 34.3 -0.4
KCHF  Cheshme Sefid,    0.97 129  Pg    Pb      17 58 37.9 -0.4
SNQR  Sonqor, Kerman    1.23  91  Pg    Pg      17 58 43.2 +0.3
ILBA  Ilam Banvizeh     1.27 177  Pg    Pn      17 58 42.7 -0.5
IBZA  Bozab             1.49 106  Pg    Pg      17 58 47.9  0.0
IKRK  Kirkuk            1.55 289 ePn    Pb      17 58 48.5 +0.4
IKRK                             eSn    Sg      17 59 10.0 +0.8
IKRK                              AML   AML     17 59 14.9
      comp=E,56nm,0.8s
IKRK                              AML   AML     17 59 17.7
      comp=N,69nm,0.6s
MAHB  Mahabad           1.90 350  Pn    Pb      17 58 54.7 +0.6
IKFM  Kafar-mosalman    1.97 133  Pn    Pb      17 58 55.4 +0.1
BHD   Baghdad           2.18 222 ePn    Pn      17 58 56.2 +0.7
BHD                              eSn    Sb      17 59 24.0 -1.8
IHSH  Hashtrud          2.57  21  Pn    Pb      17 59 04.8 -0.9
IAZR  Azarshahr         2.78 358  Pn    Pb      17 59 07.9 -1.3
RAFI  Al-Rafai          3.16 180 ePn    Pn      17 59 10.0 +0.9
RAFI                             eSn    Sn      17 59 48.0 +1.1
RAFI                              AML   AML     17 59 58.1
      comp=E,94nm,0.3s
RAFI                              AML   AML     18 00 13.7
      comp=N,135nm,0.3s
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*IDC **24** 18:00:03.0±0.9, 35°87S×103°82W, h0^{km}, mb3.9/7, mbtmp3.9/7, Error ellipse: s-maj=28.9km s-min=21.9km az=66.0*

ISC 24 18:00:04.3±0.8**, 35°9S**±0°2×**103°8W**±0°2**, h10^{km}, n18, σ0^{s}77**/15**, mb4.0**/11**, 5C, Southeast of Easter Island**

```
Code  Station Name      Δ°   AZ°   Phase ID       Time      Res
                                  Op    ISC     h  m  s    ISC
PLCA  Paso Flores      26.45 111  P     P       18 05 41.4  0.0
      4.7nm,1.1s,baz=289,slow=9.6,SNR=3.3
      4.7nm,1.1s
LPAZ  La Paz           37.24  68  P     P       18 07 17.0 +0.2
      2.4nm,0.8s,baz=228,slow=8.1,SNR=7.6
      2.4nm,0.8s
PPT   Papeete          44.32 282  P     P       18 08 14.3 -0.3
      62nm,0.9s,baz=135,slow=5.7,SNR=2.8
QSPA  South Pole Qui   54.32 180  P     P       18 09 31.9 +1.3
      1.1nm,1.0s,baz=126,slow=3.3,SNR=6.2
      1.1nm,1.0s
VNA3  Neumayer Olymp   57.77 158 ⇑P     P       18 09 54.2 -0.9
      comp=Z,3.4nm,0.8s
VNA1  Neumayer--Stat   58.39 157 ⇑P     P       18 09 59.9 +0.5
      comp=Z,4.0nm,1.0s
VNA2  Neumayer--Watz   58.58 157 ⇑P     P       18 10 00.2 -0.5
      comp=Z,2.0nm,0.6s,baz=270,slow=6.2
SNAA  Sanae            59.69 159 ⇑P     P       18 10 07.7 -0.8
      comp=Z,18nm,0.7s
SNAA  Sanae            59.69 159  P     P       18 10 07.9 -0.6
      comp=Z,0.9nm,0.8s,baz=280,slow=6.3,SNR=4.4
      comp=Z,0.9nm,0.8s
TROLL Troll, Antarti   61.07 160 ⇑P     P       18 10 16.8 -1.3
      comp=Z,50nm,0.6s
TXAR  Lajitas Array    64.88   0  P     P       18 10 44.1 +0.4
      comp=Z,0.3nm,0.5s,baz=202,slow=5.5,SNR=4.5
      comp=Z,0.3nm,0.5s
NVAR  Mina Array Bea   75.16 348  P     P       18 11 47.4 +0.6
      comp=Z,1.1nm,0.7s,baz=186,slow=7.8,SNR=5.9
      comp=Z,1.1nm,0.7s
PDAR  Pinedale Array   78.46 356  P     P       18 12 05.0 -0.4
      comp=Z,1.1nm,0.9s,baz=156,slow=8.0,SNR=6.2
      comp=Z,1.1nm,0.9s
H01W1 Cape Leeuwin H  101.18 211  T     T       20 07 28.3
      baz=148,slow=76,SNR=20
H01W2 Cape Leeuwin H  101.18 211  T     T       20 07 28.6
      baz=148,slow=76,SNR=20
H01W3 Cape Leeuwin H  101.20 211  T     T       20 07 29.5
      baz=148,slow=76,SNR=16
AKASG Malin Array Be  143.40  51  PKP   PKPdf   18 19 37.5 -0.9
      comp=Z,0.1nm,0.3s,baz=282,slow=2.6,SNR=1.4
BRTR  Keskin Array B  146.39  70  PKPbc PKPab   18 19 46.3 -0.1
      comp=Z,0.4nm,0.7s,baz=197,slow=1.3,SNR=3.7
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*IDC **24** 18:02:31.1±1.8, 1°64N×127°01E, h0^{km}, mb3.5/5, mbtmp3.6/5, Error ellipse: s-maj=173.7km s-min=21.5km*

az=66.0

*DJA **24** 18:02:42.7±0.9,2°N±4°×12°7E±°,h113^{km}±10^{km},M3.5/11, mb3.6/3,MLv3.5/11*

ISC 24 18:02:42.5±1.1,**1°.81N**±0°.09×**127°.4E**±0°.1,**h100**^{km}**,n10, σ1^s.51**/11**,mb3.4**/5**,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.03**	**184**	P	**Pn**	**18 03 06.0**	**+2.7**
SGSI	**Sangihe**	**2.66**	**314**	P	**Pn**	**18 03 24.6**	**+0.9**
SGSI				S	**Sn**	**18 03 54.4**	**-1.0**
KMSI	**Cibinong**	**3.66**	**250**	P	**Pn**	**18 03 38.4**	**+1.3**
SANI	**Sanana**	**4.10**	**201**	P	**Pn**	**18 03 42.5**	**-0.5**
MRSI	**Marisa**	**5.65**	**256**	P	**Pn**	**18 04 05.1**	**+1.1**
	0.0nm6.6nm,0.6s						
WRA	**Warramunga Arr**	**22.66**	**163**	P	**P**	**18 07 34.3**	**-1.2**
	1.4nm,0.3s,baz=341,slow=11,SNR=15						
	1.4nm,0.3s						
ASAR	**Alice Springs**	**26.10**	**166**	P	**P**	**18 08 06.0**	**-1.1**
	0.4nm,0.4s,baz=344,slow=7.5,SNR=5.8						
	0.4nm,0.4s						
STKA	**Stephens Creek**	**36.10**	**159**	P	**P**	**18 09 34.1**	**-0.7**
	1.8nm,1.0s,baz=355,slow=11,SNR=1.3						
	1.8nm,1.0s						
MKAR	**Makanchi Array**	**59.52**	**326**	P	**P**	**18 12 34.8**	**-0.6**
	0.2nm,0.6s,baz=123,slow=5.3,SNR=1.9						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**63.72**	**328**	P	**P**	**18 13 05.0**	**+1.6**
	0.1nm,0.4s,baz=127,slow=6.6,SNR=3.2						
	0.1nm,0.4s						

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*SSNC **24** 18:03:30.0±1.4,20°.24N×72°.19W,h5^{km}±15^{km},MD3.2, ML2.2,MW2.3*

*SDD **24** 18:03:31.6±2.2,19°.91N×72°.44W,h9^{km}±136^{km},MD3.2, ML2.4,MW2.7*

*OSPL **24** 18:03:31.0±0.4,20°.30N×72°.13W,h102^{km}±22^{km},ML2.4*

ISC 24 18:03:31.6±1.5,**19°.85N**±0°.07×**72°.42W**±0°.04,**h10**^{km}±12^{km}, **n19,σ0^s.67**/29**,7C-5D,Haiti region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCDR	**Montecristi**	**0.72**	**86**	*e*Pg	**Pg**	**18 03 45.2**	**-0.3**
MCDR				⇑*e*Sg	**Sb**	**18 03 56.7**	**+0.6**
MCDR				IAML		18 03 57.9	
	comp=E,159nm,0.1s						
MCDR				IAML		18 03 59.3	
	comp=N,216nm,0.1s						
MCDR	**Montecristi**	**0.72**	**86**	⇑*e*Pg	**Pb**	**18 03 46.4**	**+0.2**
MCDR				⇓*e*Sg	**Sb**	**18 03 56.6**	**+0.4**
MCDR				IAML		18 03 59.3	
	comp=N,216nm,0.1s						
REDR	**Restauracion**	**1.18**	**125**	⇓*e*Pg	Pb	18 03 48.2	-5.9
REDR				⇓*e*Sg	Sb	18 03 59.9	-10
REDR				IAML		18 04 01.3	
	comp=N,257nm,0.1s						
REDR				IAML		18 04 01.5	
	comp=E,276nm,0.1s						
REDR	**Restauracion**	**1.18**	**125**	⇑*e*Pg	Pb	18 03 48.4	-5.8
REDR				⇓*e*Sg	Sb	18 03 59.5	-10
REDR				IAML		18 04 01.3	
	comp=N,257nm,0.1s						
SDDR	**Presa de Saban**	**1.37**	**129**	*e*P	**Pn**	**18 03 56.4**	**-0.5**
SDDR				*e*S	**Sb**	**18 04 14.7**	**-0.3**
SDDR				IAML		18 04 19.2	
	comp=N,26nm,0.3s						
SDDR				IAML		18 04 20.0	
	comp=N,39nm,0.2s						
SDDR	**Presa de Saban**	**1.37**	**129**	*e*Pg	**Pn**	**18 03 57.0**	**+0.1**
SDDR				*e*Sg	**Sg**	**18 04 16.4**	**+0.6**
SDDR				IAML		18 04 19.1	
	comp=N,26nm,0.3s						
SDDR				IAML		18 04 20.0	
	comp=E,39nm,0.2s						
SDDR	**Presa de Saban**	**1.37**	**129**	⇑*e*Pg	**Pn**	**18 03 55.7**	**-1.2**
SDDR				⇑*e*Sg	**Sb**	**18 04 13.5**	**-1.5**
SDDR				IAML		18 04 19.1	
	comp=N,26nm,0.3s						
SDDR	**Presa de Saban**	**1.37**	**129**	*i* P	**Pn**	**18 03 56.8**	**-0.1**
SDDR				*e*S	**Sn**	**18 04 15.6**	**+0.5**
SDDR				IAML		18 04 21.5	
	comp=Z,19nm,0.2s						
JIDR	**Jimani**	**1.45**	**158**	*e*Sg	**Sg**	**18 04 19.1**	**+0.7**
JIDR				IAML		18 04 42.4	
	comp=N,61nm,3.9s						
MASC	**Masc**	**1.73**	**281**	*e*P	**Pn**	**18 04 01.7**	**-0.1**
MASC				*e*S	**Sb**	**18 04 25.4**	**0.0**
MASC				IAML		18 04 26.8	
	comp=N,16nm,0.3s						
MASC				IAML		18 04 28.6	
	comp=E,14nm,0.4s						
MASC	**Masc**	**1.73**	**281**	⇑*e*Pg	**Pn**	**18 04 02.1**	**+0.3**
MASC				IAML		18 04 29.7	
	comp=N,15nm,0.1s						
MASC				IAML		18 04 31.9	
	comp=N,30nm,1.9s						
MASC	**Masc**	**1.73**	**281**	⇓*e*Pg	**Pn**	**18 04 01.0**	**-0.8**
MASC				IAML		18 04 31.6	
	comp=N,18nm,0.6s						
MASC	**Masc**	**1.73**	**281**	*i* P	**Pn**	**18 04 01.9**	**0.0**
MASC				*e*S	**Sb**	**18 04 25.0**	**-0.4**
MASC				IAML		18 04 28.7	
	comp=Z,23nm,1.5s						
QMBU	**Quimbuelo**	**2.28**	**279**	*e*P	**Pn**	**18 04 08.7**	**-0.6**
QMBU				*e*S	**Sn**	**18 04 37.4**	**-0.1**
QMBU				IAML		18 04 39.9	
	comp=E,14nm,0.2s						
QMBU				IAML		18 04 44.5	
	comp=N,17nm,0.2s						
QMBU	**Quimbuelo**	**2.28**	**279**	⇑*e*Pg	**Pn**	**18 04 08.9**	**-0.4**
QMBU				IAML		18 04 44.4	
	comp=N,19nm,0.2s						
NMDO	**Nuevo Mundo**	**2.51**	**287**	*e*P	**Pn**	**18 04 11.2**	**-1.3**
NMDO				*e*S	**Sn**	**18 04 43.0**	**-0.2**
NMDO				IAML		18 04 45.2	
	comp=N,7.2nm,0.4s						
NMDO				IAML		18 04 46.3	
	comp=E,4.3nm,0.5s						
GTBY	**Guantanamo Bay**	**2.54**	**272**	*e*P	**Pn**	**18 04 12.8**	**0.0**
GTBY				*e*S	**Sn**	**18 04 45.0**	**+1.2**
GTBY				IAML		18 04 46.7	
	comp=E,5.6nm,0.3s						
GTBY				IAML		18 04 47.8	
	comp=E,10nm,0.5s						
GTBY	**Guantanamo Bay**	**2.54**	**272**	*i* P	**Pn**	**18 04 12.8**	**0.0**
GTBY				IAML		18 04 46.9	
	comp=Z,24nm,1.6s						
RCC	**Rio Carpintero**	**3.09**	**273**	*e*P	**Pn**	**18 04 20.2**	**-0.2**
RCC				*e*S	**Sn**	**18 04 58.2**	**+0.8**
RCC				IAML		18 05 03.5	
	comp=E,5.7nm,0.7s						
RCC				IAML		18 05 05.0	
	comp=N,8.8nm,1.4s						

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*IDC **24** 18:09:45.2±1.7,3°.01N×129°.09E,h0^{km},mb3.7/6, mbtmp3.7/6,Error ellipse: s-maj=84.5km s-min=19.6km az=67.0*

*DJA **24** 18:10:09.7±0.8,2°N±7°×12°8E±°,h164^{km}±6^{km},M3.8/6, MLv3.8/6*

ISC 24 18:10:08.1±1.3,**2°.5N**±0°.1×**128°.4E**±0°.2,**h200**^{km}**,n8, σ1^s.28**/8**,mb3.5**/5**,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**3.07**	**292**	P	**Pn**	**18 10 56.9**	**-1.7**
KMSI	**Cibinong**	**4.81**	**246**	P	**Pn**	**18 11 20.1**	**0.0**
FITZ	**Fitzroy Crossi**	**20.68**	**187**	P	**P**	**18 14 31.6**	**-1.2**
	2.7nm,0.9s,baz=9.8,slow=11,SNR=2.0						
	2.7nm,0.9s						
WRA	**Warramunga Arr**	**23.09**	**166**	P	**P**	**18 14 56.9**	**+0.4**
	2.0nm,0.6s,baz=348,slow=10,SNR=6.5						
	2.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**32.89**	**301**	P	**P**	**18 16 25.5**	**+1.8**
	0.2nm,0.3s,baz=112,slow=7.8,SNR=2.5						
	0.2nm,0.3s						
STKA	**Stephens Creek**	**36.45**	**161**	P	**P**	**18 16 53.7**	**-0.2**
	2.5nm,0.9s,baz=347,slow=11,SNR=5.2						
	2.5nm,0.9s						
MKAR	**Makanchi Array**	**59.47**	**325**	P	**P**	**18 19 50.5**	**+0.4**
	0.3nm,0.5s,baz=118,slow=8.9,SNR=7.2						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**63.63**	**327**	P	**P**	**18 20 17.3**	**-0.5**
	0.3nm,0.4s,baz=130,slow=5.9,SNR=4.8						
	0.3nm,0.4s						

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*IDC **24** 18:10:26.1±0.7,2°.61S×138°.47E,h0^{km},mb3.9/9, mbtmp3.9/12,ML3.9/3,Error ellipse: s-maj=18.8km s-min=15.2km az=1.0*

*NEIC **24** 18:10:29.2±1.7,2°.5S±0°.1×138°.49E±0°.07,h10^{km}±1^{km}, mb4.4/23,Error ellipse: s-maj=19.2km s-min=12.2km az=171.0*

*DJA **24** 18:10:30.2±0.7,3°S±4°×13°9E±°,h14^{km}±7^{km},M4.2/8, mb4.4/7,MLv4.1/8*

ISC 24 18:10:31.1±0.5,**2°.73S**±0°.06×**138°.59E**±0°.06,**h35**^{km}**,n51, σ1^s.83**/54**,mb4.2**/20**,1C,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**0.75**	**9**	P	**Pn**	**18 10 41.4**	**-3.8**
GENI	**Genyem**	**1.59**	**85**	P	**Pn**	**18 10 59.4**	**+2.7**
JAY	**Jayapura**	**2.13**	**84**	Pn	**Pn**	**18 11 06.5**	**+2.3**
	24nm,0.3s,baz=231,slow=9.5,SNR=21						
JAY				Lg	Lg	18 11 36.5	
	10nm,0.3s,baz=276,slow=23,SNR=5.6						
	67nm,0.4s						
JAY	**Jayapura**	**2.13**	**84**	P	**Pn**	**18 11 06.0**	**+1.8**
SRPI	**Serui, Papua**	**2.50**	**290**	P	**Pn**	**18 11 08.7**	**-0.5**
SRPI				S	**Sn**	**18 11 39.0**	**+0.5**
BAKI	**Biak**	**2.91**	**302**	P	**Pn**	**18 11 15.2**	**+0.2**
RKPI	**Ransiki, Papua**	**4.57**	**285**	P	**Pn**	**18 11 38.4**	**+0.6**
FAKI	**Fak Fak**	**6.33**	**268**	Pn	**Pn**	**18 12 01.7**	**-0.3**
SWI	**Sorong**	**7.55**	**284**	P	**Pn**	**18 12 19.5**	**+0.7**
	0.1nm18nm,0.8s						
COEN	**Coen**	**12.04**	**158**	Pn	**Pn**	**18 13 22.0**	**+1.8**
MTN	**Manton Dam**	**12.46**	**216**	Pn	**Pn**	**18 13 29.5**	**+3.5**
SOEI	**Soe**	**15.84**	**243**	Pn	**Pn**	**18 14 12.6**	**+0.8**
SOEI				IAmb	IAmb	18 14 32.6	
	comp=Z,32nm,1.0s						
SOEI	**Soe**	**15.84**	**243**	P	**P**	**18 14 14.3**	**-0.9**
KNRA	**Kununurra**	**16.09**	**216**		**Pn**	**18 14 16.6**	**+1.8**
WB0	**Warramunga Arr**	**17.42**	**193**		**Pn**	**18 14 30.5**	**-1.0**
WR8	**Warramunga Arr**	**17.58**	**193**		**Pn**	**18 14 32.2**	**-1.2**
WR8				IAmb	IAmb	18 14 42.0	
	comp=Z,17nm,1.0s						
WRAB	**Tennant Creek**	**17.59**	**193**	P	**P**	**18 14 37.2**	**+2.8**
WRAB				IAmb	IAmb	18 14 46.4	
	comp=Z,18nm,1.1s						
WRA	**Warramunga Arr**	**17.60**	**193**		**Pn**	**18 14 31.2**	**-2.5**
WRA	**Warramunga Arr**	**17.60**	**193**	P	**Pn**	**18 14 33.0**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=16,slow=13,SNR=14						
WRA				S	Sn	18 17 40.0	-8.9
	comp=Z,2.1nm,0.8s,baz=7.7,slow=23,SNR=4.3						
	comp=Z,2.5nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.86**	**219**	P	**Pn**	**18 15 00.8**	**-0.2**
FITZ	**Fitzroy Crossi**	**19.86**	**219**	P	**P**	**18 14 59.9**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=348,slow=13,SNR=6.0						
FITZ				S	**S**	**18 18 33.7**	**-7.4**
	comp=Z,2.9nm,0.9s,baz=355,slow=9.7,SNR=3.0						
	comp=Z,4.9nm,1.2s						
AS31	**Alice Springs**	**21.30**	**192**		**P**	**18 15 14.8**	**0.0**
ASAR	**Alice Springs**	**21.30**	**192**		**P**	**18 15 14.8**	**0.0**
ASAR	**Alice Springs**	**21.30**	**192**	P	**P**	**18 15 15.0**	**+0.1**
	comp=Z,1.9nm,0.6s,baz=16,slow=9.4,SNR=16						
ASAR				S	**S**	**18 19 06.2**	**-3.5**
	comp=Z,2.2nm,0.9s,baz=9.8,slow=17,SNR=5.1						
	comp=Z,1.9nm,0.6s						
CMAR	**Chiang Mai Arr**	**44.34**	**300**	P	**P**	**18 18 38.5**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=128,slow=7.6,SNR=5.4						
	comp=Z,0.4nm,0.3s						
BNX	**BinXian**	**49.27**	**350**	⇑P	**P**	**18 19 18.8**	**+2.4**
BNX				pmax	pmax		
	comp=Z,3.0nm,0.4s						
PEA0B	**Petropavlovsk-**	**57.91**	**13**	P	**P**	**18 20 20.0**	**+0.4**
PEA0B				IAmb	IAmb	18 20 59.3	
	comp=Z,12nm,1.5s						
PETK	**Petropavlovsk-**	**57.91**	**13**	P	**P**	**18 20 18.6**	**-1.0**
PETK	**Petropavlovsk-**	**57.91**	**13**	P	**P**	**18 20 19.0**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=179,slow=6.1,SNR=6.4						
	comp=Z,0.6nm,0.6s						
YAK	**Yakutsk**	**64.95**	**355**	P	**P**	**18 21 06.6**	**-0.3**
MKAR	**Makanchi Array**	**69.73**	**322**	P	**P**	**18 21 37.3**	**-0.3**
MKAR	**Makanchi Array**	**69.73**	**322**	P	**P**	**18 21 37.8**	**+0.2**
	comp=Z,1.6nm,1.0s,baz=105,slow=7.4,SNR=8.0						
	comp=Z,1.6nm,1.0s						
MAKZ	**Makanchi**	**69.93**	**322**	P	**P**	**18 21 38.7**	**-0.2**
MAKZ				IAmb	IAmb	18 21 41.9	
	comp=Z,1.4nm,0.8s						
ZALV	**Zalesovo Beam**	**71.89**	**330**	P	**P**	**18 21 48.5**	**-2.0**
	comp=Z,0.6nm,0.5s,baz=107,slow=5.0,SNR=2.2						
	comp=Z,0.6nm,0.5s						
BOOM	**Boomskoye usch**	**72.09**	**316**	P	**P**	**18 21 52.3**	**+0.1**
BOOM				IAmb	IAmb	18 21 54.9	
	comp=Z,1.9nm,0.8s						
KURBB	**Kurchatov Arra**	**73.68**	**325**	P	**P**	**18 22 00.1**	**-1.1**
	comp=Z,0.4nm,0.8s,baz=108,slow=6.6,SNR=4.8						
	comp=Z,0.4nm,0.8s						
L14K	**Kuka Creek**	**77.97**	**25**	P	**P**	**18 22 27.2**	**+1.8**
L14K				IAmb	IAmb	18 22 28.0	
	comp=Z,3.2nm,0.8s						
M14K	**Bethel**	**77.99**	**26**	P	**P**	**18 22 26.9**	**+1.3**
BVAR	**Borovoye Array**	**79.26**	**325**	P	**P**	**18 22 32.6**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=117,slow=8.0,SNR=6.7						
	comp=Z,1.0nm,0.7s						
M16K	**Timber Creek**	**79.42**	**26**	P	**P**	**18 22 35.2**	**+1.7**
M16K				IAmb	IAmb	18 22 40.1	
	comp=Z,11nm,1.5s						
N17K	**Nushagak Hills**	**80.00**	**27**	P	**P**	**18 22 38.4**	**+1.7**
N17K				IAmb	IAmb	18 23 16.2	
	comp=Z,4.7nm,1.2s						
OHAK	**Old Harbor**	**80.64**	**31**	P	**P**	**18 22 41.4**	**+1.3**
KDAK	**Kodiak Island**	**81.19**	**30**	P	**P**	**18 22 41.8**	**-1.2**
G18K	**Tagagawik**	**81.69**	**22**	P	**P**	**18 22 45.8**	**+0.3**
G18K				IAmb	IAmb	18 23 12.9	
	comp=Z,5.0nm,1.4s						
C18K	**Utukok River**	**82.09**	**19**	P	**P**	**18 22 47.3**	**-0.4**
C18K				IAmb	IAmb	18 23 02.6	
	comp=Z,5.8nm,1.3s						
E19K	**Redstone River**	**82.88**	**20**	P	**P**	**18 22 52.9**	**+1.1**
E19K				IAmb	IAmb	18 23 17.4	
	comp=Z,4.8nm,1.2s						
D19K	**Kuna River**	**83.02**	**19**	P	**P**	**18 22 53.2**	**+0.7**
D19K				IAmb	IAmb	18 23 07.0	
	comp=Z,7.2nm,1.5s						
DIV	**Divide**	**85.48**	**28**	P	**P**	**18 23 03.1**	**-2.1**
ILAR	**Eielson Array**	**85.91**	**24**	P	**P**	**18 23 06.3**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=259,slow=4.7,SNR=8.4						
	comp=Z,0.8nm,0.6s						
QSPA	**South Pole Qui**	**87.21**	**180**	P	**P**	**18 23 14.1**	**+0.4**
	comp=Z,1.2nm,0.6s,baz=288,slow=1.7,SNR=5.4						
	comp=Z,1.2nm,0.6s						
LPAZ	**La Paz**	**147.53**	**126**	PKPbc	**PKPab**	**18 30 15.3**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=304,slow=3.6,SNR=3.6						

IDC 24 18:12:28.5±1.4,**2°.39S**×**138°.38E,h0**^{km}**,mb3.7**/3**, mbtmp3.8**/5**,ML3.2**/2**,Error ellipse: s-maj=38.4km s-min=28.3km az=103.0,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**2.32**	**93**	Pn	Pn	18 13 09.2	+1.1
	5.9nm,0.3s,baz=227,slow=12,SNR=1.3						
JAY				Lg	Lg	18 13 36.6	
	baz=121,slow=21						
	14nm,0.3s						
WRA	**Warramunga Arr**	**17.89**	**192**	P	Pn	18 16 38.9	-0.1
	0.1nm,0.3s,baz=16,slow=12,SNR=5.1						
	2.8nm,0.9s						
ASAR	**Alice Springs**	**21.59**	**191**	P	P	18 17 20.1	0.0
	4.1nm,0.8s,baz=17,slow=12,SNR=4.8						
	4.1nm,0.8s						
BVAR	**Borovoye Array**	**78.87**	**325**	P	P	18 24 34.5	+0.9
	0.2nm,0.4s,baz=102,slow=6.5,SNR=1.9						
	0.2nm,0.4s						
ILAR	**Eielson Array**	**85.68**	**24**	P	P	18 25 07.8	-1.2
	0.5nm,0.7s,baz=266,slow=2.7,SNR=4.3						
	0.5nm,0.7s						

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*FCIAR **24** 18:18:01.0,77°.10N×8°.59E,h10^{km}*

*BER **24** 18:18:02.8±2.6,77°.41N×7°.38E,h10^{km},Mw3.7, ML2.3(NAO),Confirmed Earthquake*

*NAO **24** 18:18:03.5±1.1,77°.37N×7°.90E,h15^{km},ML2.3*

*IDC **24** 18:18:06.9±1.9,77°.11N×9°.74E,h0^{km},mb3.6/4, mbtmp3.6/4,Error ellipse: s-maj=38.0km s-min=13.3km az=121.0*

*DNK **24** 18:18:06.4±1.4,77°.52N×5°.90E,h0^{km}±39^{km},ML1.4*

ISC 24 18:18:00.7±1.7,**77°.44N**±0°.06×**7°.26E**±0°.04,**h8**^{km}±12^{km}, **n28,σ2^s.66**/44**,mb3.3**/4**,1C,Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRBA	**Barentsburg A**	**1.61**	**64**	Pb	**Pb**	**18 18 30.0**	**-0.6**
BRBA				Sb	**Sn**	**18 18 46.8**	**-3.4**
BRBA	**Barentsburg A**	**1.61**	**64**	*e*P	**Pb**	**18 18 29.9**	**-0.7**
BRBA				*e*S	**Sn**	**18 18 46.0**	**-4.3**
BRBA				IAML		18 18 46.4	
	comp=Z,50nm,0.4s						
BRBB	**Barentsburg B**	**1.62**	**63**	Pb	**Pb**	**18 18 30.3**	**-0.5**
BRBB				Sb	**Sn**	**18 18 47.1**	**-3.4**
BRBB	**Barentsburg B**	**1.62**	**63**	*e*P	**Pb**	**18 18 30.0**	**-0.7**
BRBB				*e*Pg	**Pg**	**18 18 32.3**	**+0.6**
BRBB				*e*S	**Sn**	**18 18 47.3**	**-3.2**
KBS	**Kingsbay**	**1.78**	**31**	*e*P	**Pn**	**18 18 32.4**	**+0.7**
KBS				*e*S	**Sn**	**18 18 51.9**	**-2.5**
KBS				IAML		18 18 55.5	
	comp=Z,134nm,0.3s						
HSPB	**Hornsund (broa**	**1.89**	**99**	Pn	**Pn**	**18 18 33.0**	**-0.2**
HSPB				Sn	**Sn**	**18 18 52.6**	**-4.6**
HSPB	**Hornsund (broa**	**1.89**	**99**	*e*P	**Pn**	**18 18 32.2**	**-1.0**
HSPB	**Hornsund (broa**	**1.89**	**99**	*e*P	**Pn**	**18 18 32.9**	**-0.4**
HSPB				Sn	**Sn**	**18 18 52.6**	**-4.6**
SPA0	**Spitsbergen Ar**	**2.07**	**65**	Pn	**Pb**	**18 18 37.4**	**-1.1**
	baz=237,slow=14						
SPA0				Sn	**Sn**	**18 19 00.7**	**-1.0**
	baz=241,slow=28						
SPA0	**Spitsbergen Ar**	**2.07**	**65**	*e*P	**Pn**	**18 18 36.1**	**+0.3**
SPA0				*e*S	**Sn**	**18 18 59.3**	**-2.3**
SPA0	**Spitsbergen Ar**	**2.07**	**65**	⇑*i*P	**Pb**	**18 18 37.4**	**-1.1**
SPA0				*e*S	**Sn**	**18 19 00.6**	**-1.1**
SPA0				IAML		18 19 03.7	
	comp=Z,27nm,0.4s						
SPITS	**Spitsbergen Ar**	**2.07**	**65**	Pn	**Pb**	**18 18 37.4**	**-1.1**
	baz=237,slow=14						
SPITS				Sn	**Sn**	**18 19 00.6**	**-1.0**
	baz=239,slow=25						
HOPEN	**Hopen**	**4.12**	**94**	Pn	**Pn**	**18 19 04.7**	**+1.0**
HOPEN	**Hopen**	**4.12**	**94**	*e*P	Pg	18 19 27.4	+8.0
HOPEN				*e*S	**Sg**	**18 20 10.6**	**-2.0**
HOPEN	**Hopen**	**4.12**	**94**	*e*P	**Pn**	**18 19 04.6**	**+0.8**
DAG	**Danmarks Havn**	**5.81**	**276**	*e*P	**Pn**	**18 19 26.7**	**-0.3**
DAG	**Danmarks Havn**	**5.81**	**276**	*e*P	**Pn**	**18 19 28.5**	**+1.5**
DAG				*e*S	**Sn**	**18 20 28.9**	**-4.7**
DAG				IAML		18 20 31.2	
	comp=Z,5.0nm,0.2s						
NOR	**Nord**	**5.98**	**325**	Pn	**Pn**	**18 19 30.7**	**+1.5**
NOR	**Nord**	**5.98**	**325**	*e*P	**Pn**	**18 19 30.8**	**+1.5**
NOR	**Nord**	**5.98**	**325**	*e*P	**Pn**	**18 19 30.9**	**+1.6**
NOR				*e*S	**Sn**	**18 20 35.6**	**-2.2**
NOR				IAML		18 20 37.6	
	comp=Z,1.0nm,0.3s						
DBG	**Daneborg**	**7.36**	**259**	Pn	**Pn**	**18 19 50.0**	**+1.8**
DBG				Sn	**Sn**	**18 21 06.5**	**-5.2**
DBG	**Daneborg**	**7.36**	**259**	Pn	**Pn**	**18 19 50.0**	**+1.8**
DBG				Sn	**Sn**	**18 21 06.5**	**-5.2**
DBG	**Daneborg**	**7.36**	**259**	*e*P	**Pn**	**18 19 50.4**	**+2.1**
DBG				*e*S	**Sn**	**18 21 06.0**	**-5.7**
DBG				IAML		18 21 10.4	
	comp=Z,0.7nm,0.2s						
OMEGA	**Omega**	**8.18**	**47**	*e*P	Pg	18 20 51.0	+14
OMEGA				*e*S	**Sg**	**18 22 19.9**	**-2.8**
AKASG	**Malin Array Be**	**28.10**	**150**	P	**P**	**18 23 53.1**	**+0.7**
	comp=Z,1.6nm,0.7s,baz=349,slow=9.4,SNR=7.9						
	comp=Z,1.6nm,0.7s						
KURBB	**Kurchatov Arra**	**37.16**	**93**	P	**P**	**18 25 14.7**	**+3.2**
	comp=Z,0.4nm,0.9s,baz=338,slow=7.3,SNR=3.5						
	comp=Z,0.4nm,0.9s						
ESDC	**Sonseca Array**	**38.17**	**194**	P	P	18 25 26.9	+6.6
	comp=Z,0.4nm,0.7s,baz=17,slow=9.4,SNR=4.0						
	comp=Z,0.4nm,0.7s						
BRTR	**Keskin Array B**	**39.43**	**147**	P	**P**	**18 25 33.8**	**+2.8**
	comp=Z,0.6nm,0.7s,baz=0.0,slow=7.2,SNR=3.8						
	comp=Z,0.6nm,0.7s						

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*NAO **24** 18:18:26.5±0.9,74°.18N×10°.78E,h24^{km}±8^{km},ML3.1*

*BER **24** 18:18:26.6±3.0,74°.20N×11°.01E,h10^{km},ML2.4, Confirmed Earthquake*

*IDC **24** 18:18:27.1±1.3,74°.33N×13°.38E,h0^{km},mb3.5/2, mbtmp3.5/7,ML2.7/4,Error ellipse: s-maj=25.8km s-min=10.5km az=82.0*

*KOLA **24** 18:18:29.4,73°.97N×11°.93E,h0^{km},ML2.5,Error ellipse: s-maj=30.7km s-min=19.3km az=140.0,Norwegian sea*

ISC 24 18:18:23.5±0.8,**74°.13N**±0°.05×**11°.18E**±0°.06,**h10**^{km}**,n50, σ3^s.24**/76**,Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRBA	**Barentsburg A**	**4.02**	**9**	Pn	**Pn**	**18 19 25.3**	**+0.4**
BRBA				Sn	**Sn**	**18 20 10.3**	**-1.6**
BRBA	**Barentsburg A**	**4.02**	**9**	Pn	**Pn**	**18 19 25.3**	**+0.4**
BRBB	**Barentsburg B**	**4.05**	**9**	*e*P	**Pn**	**18 19 26.7**	**+1.3**
HOPEN	**Hopen**	**4.25**	**49**	Pn	**Pn**	**18 19 28.9**	**+0.8**
HOPEN				Sn	**Sn**	**18 20 14.7**	**-2.9**
HOPEN	**Hopen**	**4.25**	**49**	*e*P	**Pn**	**18 19 29.0**	**+1.0**
HOPEN				*e*S	**Sn**	**18 20 13.9**	**-3.7**
SPA0	**Spitsbergen Ar**	**4.26**	**15**	Pn	**Pn**	**18 19 28.4**	**+0.2**
	baz=180,slow=16						
SPA0	**Spitsbergen Ar**	**4.26**	**15**	Pn	**Pn**	**18 19 28.4**	**+0.2**
	baz=180,slow=16						
SPA0				*e*S	**Sn**	**18 20 14.7**	**-3.1**
SPITS	**Spitsbergen Ar**	**4.26**	**15**	Pn	**Pn**	**18 19 28.2**	**0.0**
	8.7nm,0.3s,baz=187,slow=10,SNR=1.0						
SPITS				Sn	**Sn**	**18 20 11.7**	**-6.2**
	baz=193,slow=20						
TRO	**Tromso**	**5.12**	**148**	*e*P	**Pn**	**18 19 43.1**	**+3.1**
TRO				*e*S	**Sn**	**18 20 37.7**	**-1.3**
TRO				IAML		18 20 42.0	
	comp=Z,3.7nm,0.5s						
JETT	**Jettan, Norway**	**5.42**	**143**	Pn	**Pn**	**18 19 46.8**	**+2.6**
JETT	**Jettan, Norway**	**5.42**	**143**	*e*P	**Pn**	**18 19 47.3**	**+3.1**
JETT				IAML		18 21 02.6	
	comp=Z,6.6nm,0.6s						
KIF	**Kilpisjarvi**	**5.98**	**145**	Pn	**Pn**	**18 19 55.0**	**+3.2**
KIF				Sn	**Sn**	**18 20 57.6**	**-2.5**
KIF	**Kilpisjarvi**	**5.98**	**145**	*e*P	**Pn**	**18 19 54.5**	**+2.8**
KIF				*e*S	**Sn**	**18 20 58.4**	**-1.8**
LOF	**Lofoten**	**6.08**	**172**	Pn	**Pn**	**18 19 54.6**	**+1.4**
LOF				Sn	**Sn**	**18 20 58.3**	**-4.3**
LOF	**Lofoten**	**6.08**	**172**	*e*P	**Pn**	**18 19 54.0**	**+0.8**
LOF				*e*S	**Sn**	**18 20 57.9**	**-4.8**
LOF				IAML		18 21 00.6	
	comp=Z,12nm,0.5s						
STEI	**Steigen**	**6.37**	**166**	Pn	**Pn**	**18 19 59.2**	**+2.0**
STEI				Sn	**Sn**	**18 21 05.5**	**-4.2**
STEI	**Steigen**	**6.37**	**166**	*e*P	**Pn**	**18 19 59.6**	**+2.4**
STEI				*e*S	**Sn**	**18 21 05.9**	**-3.8**
STEI				IAML		18 21 11.5	
	comp=Z,5.3nm,0.4s						
ARA0	**ARCESS Array S**	**6.41**	**129**	Pn	**Pn**	**18 19 59.1**	**+1.3**
	baz=323,slow=14						
ARA0	**ARCESS Array S**	**6.41**	**129**	*e*P	**Pn**	**18 19 59.9**	**+2.1**
ARA0				*e*S	**Sn**	**18 21 08.3**	**-2.6**
ARCES	**ARCESS Array B**	**6.41**	**129**	Pn	**Pn**	**18 19 59.1**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=327,slow=13,SNR=19						
ARCES				Sn	**Sn**	**18 21 06.1**	**-4.9**
	comp=Z,0.7nm,0.3s,baz=332,slow=18,SNR=8.2						
	comp=Z,0.9nm,0.3s						
ARCES	**ARCESS Array B**	**6.41**	**129**	P	**Pn**	**18 19 59.8**	**+2.0**
ARCES				S	**Sn**	**18 21 08.0**	**-2.9**
KEV	**Kevo**	**6.57**	**124**	Pn	**Pn**	**18 20 02.1**	**+2.2**
KEV				Sn	**Sn**	**18 21 12.3**	**-2.5**
KEV	**Kevo**	**6.57**	**124**	*e*P	**Pn**	**18 20 01.7**	**+1.7**
KEV				*e*S	**Sn**	**18 21 11.9**	**-2.9**
JMIC	**Jan Mayen**	**6.68**	**252**	Pn	**Pn**	**18 20 00.7**	**-0.8**
JMIC	**Jan Mayen**	**6.68**	**252**	Pn	**Pn**	**18 20 00.7**	**-0.8**
VADS	**Vadso**	**6.87**	**117**	Pn	Pb	18 20 14.6	-8.0
VADS				Sn	Sn	18 21 31.5	+9.5
VADS	**Vadso**	**6.87**	**117**	P	**Pn**	**18 20 05.3**	**+1.4**
VADS				S	**Sn**	**18 21 17.5**	**-4.6**
VADS	**Vadso**	**6.87**	**117**	*e*P	**Pn**	**18 20 05.4**	**+1.4**
VADS				*e*S	**Sn**	**18 21 18.3**	**-3.7**
VADS				IAML		18 21 21.3	
	comp=Z,17nm,0.3s						
FAUS	**Fauske**	**6.91**	**167**	S	**Sn**	**18 21 20.3**	**-2.9**
HEF	**Hetta**	**6.99**	**139**	Pn	**Pn**	**18 20 08.6**	**+2.9**
HEF				Sn	**Sn**	**18 21 23.3**	**-1.9**
HEF	**Hetta**	**6.99**	**139**	*e*P	**Pn**	**18 20 08.1**	**+2.4**
VAGH	**Vaagaholmen**	**7.47**	**174**	*e*P	**Pn**	**18 20 13.1**	**+0.9**
VAGH				IAML		18 21 39.3	
	comp=Z,3.9nm,0.4s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KONS	Konsvik	7.70	174	Pn	Pn	18 20 15.4	0.0
KONS				Sn	Sn	18 21 37.5	-5.0
KONS	Konsvik	7.70	174	eP	Pn	18 20 16.6	+1.3
KONS				eS	Sn	18 21 38.0	-4.4
KONS				IAML		18 21 39.8	
	comp=Z,6.4nm,0.7s						
STOK	Stokkvaagen	7.86	175	Pn	Pn	18 20 18.1	+0.5
STOK				Sn	Sn	18 21 40.9	-5.5
STOK	Stokkvaagen	7.86	175	eP	Pn	18 20 19.3	+1.7
STOK				eS	Sn	18 21 40.9	-5.5
MOR8	Moi Rana	8.07	171	eS	Sn	18 21 46.4	-5.3
LEIR	Leirfjorden	8.08	174	eS	Sn	18 21 44.3	-7.6
LEIR				IAML		18 21 50.0	
	comp=Z,5.5nm,0.4s						
TERR	Teriberka	8.95	111	P	Pn	18 20 32.2	-0.4
TERR				S	Sn	18 22 06.0	-7.2
NOR	Nord	9.35	335	Pn	Pn	18 20 36.8	-1.1
NOR	Nord	9.35	335	Pn	Pn	18 20 36.8	-1.1
APA0	Apatity Array	9.63	122	P	Pn	18 20 43.1	+1.3
APA0				S	Sn	18 22 23.1	-6.8
ZFI2	Zemlya Franca-	10.11	33	eP	Pn	18 20 51.0	+2.6
ZFI2				eS	Sn	18 22 19.9	-22
KVDA	Kovda	10.35	125	P	Pn	18 20 53.3	+1.7
KVDA				S	Sn	18 22 41.1	-6.3
NOA	NORSAR Array B	13.15	180	Pn	P	18 21 38.0	-2.2
	baz=356,slow=14,SNR=1.7						
	comp=Z,0.6nm,0.8s						
FINES	FINESS Array B	13.85	149	Pn	Pn	18 21 41.2	+1.8
	comp=Z,0.1nm,0.3s,baz=339,slow=10,SNR=6.5						
	comp=Z,0.9nm,0.6s						
HFS	Hagfors	14.09	175	Pn	P	18 21 47.4	-3.2
	comp=Z,0.2nm,0.3s,baz=1.4,slow=12,SNR=6.7						
	comp=Z,0.7nm,0.6s						
LSH	Leshukonskoye	14.95	110	eP	P	18 22 04.7	+4.6
AKASG	Malin Array Be	24.72	152	P	P	18 23 47.1	+2.7
	comp=Z,0.8nm,0.6s,baz=347,slow=9.3,SNR=6.6						
	comp=Z,0.8nm,0.6s						
BRTR	Keskin Array B	36.09	150	P	P	18 25 28.7	+3.7
	comp=Z,0.4nm,0.6s,baz=354,slow=7.5,SNR=2.9						
	comp=Z,0.4nm,0.6s						

SDD ***24*** *18:28:11.8±2.7, 18°.40N×68°.12W, h192km±16km, MD3.7, ML2.8, MW3.4*
NEIC ***24*** *18:28:11.7±1.4, 18°.1N±0°.4×68°.23W±0°.10, h169km±17km, ML2.7/24, Md3.1/8(RSPR), Error ellipse: s-maj=61.6km s-min=8.7km az=189.0*
RSPR ***24*** *18:28:12.5, 18°.35N×68°.06W, h177km±3km, MD3.1/8*
ISC 24 18:28:10.3±1.8**, 18°.2N**±0°.1×**68°.21W**±0°.04**, h181**km±13km**, n51, σ1ˢ.19**/70**, 25C-5D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HIDR	Higuey Centro	0.61	307	⇑ePg	Pn	18 28 35.6	-0.1
HIDR				⇑eSg	Sn	18 28 55.3	+0.1
HIDR				IAML		18 28 56.5	
	comp=N,129nm,0.2s						
IDE	Isla Desecheo	0.71	77		Pn	18 28 37.2	+1.0
IDE					Sn	18 28 56.5	+0.3
IDE	Isla Desecheo	0.71	77	⇑eP	Pn	18 28 37.2	+1.0
IDE	Isla Desecheo	0.71	77	eS	Sn	18 28 56.5	+0.3
CRPR	Cabo Rojo, PR	1.06	102	Pn	Pn	18 28 38.2	-0.3
CRPR				Sn	Sn	18 28 58.4	-2.0
CRPR				IAML		18 29 04.5	
	comp=E,38nm,2.1s						
AGPR	Aguadilla, PR	1.07	77		Pn	18 28 39.5	+0.9
AGPR					Sn	18 29 00.5	+0.1
AGPR	Aguadilla, PR	1.07	77	IAML		18 29 01.4	
	comp=E,86nm,0.5s						
AGPR				IAML		18 29 03.2	
	comp=N,78nm,0.3s						
AGPR	Aguadilla, PR	1.07	77	⇓eP	Pn	18 28 39.5	+0.9
AGPR	Aguadilla, PR	1.07	77	eS	Sn	18 29 00.5	+0.1
AGPR	Aguadilla, PR	1.07	77	eSg	Sn	18 29 01.1	+0.6
AGPR				IAML		18 29 04.8	
	comp=N,66nm,1.3s						
MIDR	Miches	1.10	313	⇑ePg	Pn	18 28 38.9	+0.1
MIDR				⇑eSg	Sn	18 29 01.2	+0.3
MIDR				IAML		18 29 04.1	
	comp=N,34nm,0.2s						
MLPR	Magueyes Islan	1.13	103	⇑eP	Pn	18 28 39.6	+0.5
MLPR	Magueyes Islan	1.13	103	eS	Sn	18 29 00.9	-0.4
MLPR	Magueyes Islan	1.13	103	⇑ePg	Pn	18 28 39.8	+0.7
MLPR				⇑eSg	Sn	18 29 00.1	-1.2
MLPR				IAML		18 29 07.0	
	comp=N,11nm,0.3s						
HATOM	Hato Mayor del	1.25	297	⇑ePg	Pn	18 28 39.9	-0.1
HATOM				⇑eSg	Sn	18 29 01.5	-1.7
HATOM				IAML		18 29 05.3	
	comp=N,31nm,0.1s						
GBPR	Guanica, Bosqu	1.29	101		Pn	18 28 40.6	+0.2
GBPR	Guanica, Bosqu	1.29	101	⇑eP	Pn	18 28 40.6	+0.2
AOPR	Arecibo Observ	1.38	85		Pn	18 28 41.5	+0.2
AOPR					Sn	18 29 04.0	-1.2
AOPR	Arecibo Observ	1.38	85	⇓eP	Pn	18 28 41.5	+0.2
AOPR	Arecibo Observ	1.38	85	eS	Sn	18 29 04.0	-1.2
AOPR	Arecibo Observ	1.38	85	⇑ePg	Pn	18 28 41.4	+0.2
AOPR				⇑eSg	Sn	18 29 04.3	-1.0
AOPR				IAML		18 29 09.2	
	comp=N,179nm,0.3s						
UUPR	Utuado, UPR, P	1.41	89		Pn	18 28 42.3	+0.8
UUPR	Utuado, UPR, P	1.41	89		Sn	18 29 05.3	-0.4
UUPR	Utuado, UPR, P	1.41	89	eS	Sn	18 29 05.3	-0.4
OBIP	Obispado Ponce	1.53	97		Pn	18 28 43.5	+0.9
OBIP	Obispado Ponce	1.53	97		Sn	18 29 07.7	+0.1
OBIP	Obispado Ponce	1.53	97	⇓eP	Pn	18 28 44.4	+1.8
OBIP	Obispado Ponce	1.53	97	eS	Sn	18 29 07.7	+0.1
CELP	Cerrillos	1.55	95		Pn	18 28 43.7	+0.8
CELP					Sn	18 29 08.9	+0.9
CELP	Cerrillos	1.55	95	IAML		18 29 12.4	
	comp=N,33nm,0.3s						
CELP				IAML		18 29 12.5	
	comp=E,24nm,0.3s						
CELP	Cerrillos	1.55	95	⇓eP	Pn	18 28 43.7	+0.8
CELP	Cerrillos	1.55	95	eS	Sn	18 29 08.9	+0.9
CELP	Cerrillos	1.55	95	⇑ePg	Pn	18 28 43.6	+0.8
CELP				⇑eSg	Sn	18 29 07.3	-0.7
CELP				IAML		18 29 12.3	
	comp=N,34nm,0.3s						
EMPR	Esperanza - Ma	1.61	81		Pn	18 28 44.4	+1.0
EMPR					Sn	18 29 07.8	-1.2
EMPR	Esperanza - Ma	1.61	81	⇑eP	Pn	18 28 44.4	+1.0
EMPR	Esperanza - Ma	1.61	81	eS	Sn	18 29 07.8	-1.2
ECPR	Experimental S	1.75	87	⇑eP	Pn	18 28 44.9	+0.1
ECPR	Experimental S	1.75	87	eS	Sn	18 29 10.0	-1.6
DR08	Loma La Naviza	1.87	293	⇑ePg	Pn	18 28 46.5	+0.4
DR08				⇑eSg	Sn	18 29 14.7	+0.8
DR08				IAML		18 29 18.7	
	comp=N,825nm,0.2s						
SJG	San Juan	1.96	93	Pn	Pn	18 28 47.8	+0.9
SJG				Sn	Sn	18 29 15.8	+0.4
SJG				IAML		18 29 20.4	
	comp=N,54nm,0.3s						
SJG				IAML		18 29 20.5	
	comp=N,46nm,0.2s						
GCPR	Guaynabo City	2.02	87	Pn	Pn	18 28 48.2	+0.6
GCPR				Sn	Sn	18 29 13.4	-3.1
BANI	BANI	2.05	275	Pn	Pn	18 28 47.6	-0.5
BANI				Sn	Sn	18 29 12.6	-4.8
BANI	BANI	2.05	275	⇑ePg	Pn	18 28 50.7	+2.6
BANI				IAML		18 29 31.8	
	comp=N,48nm,1.2s						
PDPR	Patillas Dam,	2.09	95	Pn	Pn	18 28 47.9	-0.4
PDPR				Sn	Sn	18 29 17.8	-0.1
PDPR				IAML		18 29 21.1	
	comp=N,25nm,0.2s						
PDPR	Patillas Dam,	2.09	95	⇓eP	Pn	18 28 48.9	+0.6
PDPR	Patillas Dam,	2.09	95	eS	Sn	18 29 18.8	+0.9
HUMP	Col San Antoni	2.24	92	Pn	Pn	18 28 49.9	-0.2
HUMP				Sn	Sn	18 29 18.4	-2.5
HUMP				IAML		18 29 22.7	
	comp=N,25nm,0.3s						
HUMP				IAML		18 29 23.8	
	comp=E,29nm,0.2s						
ABDR	Alto Bandera	2.37	285	⇑ePg	Pn	18 28 54.6	+2.7
ABDR				⇑eSg	Sn	18 29 23.3	-0.9
ABDR				IAML		18 29 29.3	
	comp=N,30nm,0.7s						
PODR	Polo	2.92	269	⇑ePg	Pn	18 28 59.5	+1.3
PODR				⇑eSg	Sn	18 29 35.8	+0.2
PODR				IAML		18 29 53.7	
	comp=N,34nm,2.2s						
SDDR	Presa de Saban	3.02	285	Pn	Pn	18 28 59.1	-0.2
SDDR				Sn	Sn	18 29 37.0	-0.4
SDDR				IAML		18 29 42.5	
	comp=N,14nm,2.9s						
SDDR				IAML		18 30 23.5	
	comp=N,14nm,2.7s						
SDDR	Presa de Saban	3.02	285	⇑ePg	Pn	18 28 59.5	+0.3
SDDR				IAML		18 29 52.2	
	comp=N,14nm,3.3s						

IDC ***24*** *18:29:32.5±5.2, 6°.70S×128°.77E, h261km±50km, mb2.9/3, mbtmp4.0/6, Error ellipse: s-maj=56.8km s-min=15.6km az=60.0*
ISC 24 18:29:29.6±1.2**, 6°.80S**±0°.09×**129°.1E**±0°.1**, h250**km**, n7, σ3ˢ.28**/11**, mb3.2**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.35	237	P	Pn	18 31 03.7	+1.5
	95nm,0.6s,baz=125,slow=3.3,SNR=18						
BATI				S	S	18 32 14.2	-2.1
	28nm,0.3s,baz=2.6,slow=23,SNR=9.3						
FITZ	Fitzroy Crossi	11.73	196	P	Pn	18 32 11.8	+1.9
	5.5nm,0.6s,baz=26,slow=12,SNR=29						
FITZ				S	S	18 34 17.1	-3.7
	2.2nm,0.7s,baz=144,slow=22,SNR=1.6						
WRA	Warramunga Arr	14.02	159	P	Pn	18 32 37.0	-1.2
	0.2nm,0.3s,baz=344,slow=13,SNR=10.0						
WRA				S	S	18 35 09.7	-3.8
	1.4nm,0.6s,baz=339,slow=22,SNR=4.7						
ASAR	Alice Springs	17.40	165	P	Pn	18 33 20.2	+2.0
	3.7nm,0.6s,baz=338,slow=9.0,SNR=54						
ASAR				S	S	18 36 30.1	+6.3
	0.4nm,0.6s,baz=351,slow=17,SNR=4.6						
CMAR	Chiang Mai Arr	38.92	311	P	P	18 36 31.9	+0.1
	0.5nm,0.5s,baz=128,slow=8.3,SNR=7.6						
	0.5nm,0.5s						
MKAR	Makanchi Array	67.57	327	P	P	18 39 59.8	+0.5
	0.2nm,0.4s,baz=142,slow=7.3,SNR=6.2						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	71.87	329	P	P	18 40 23.8	-1.6
	0.2nm,0.4s,baz=125,slow=5.4,SNR=2.7						
	0.2nm,0.4s						

IDC 24 18:32:37.8±3.2**, 33°.21S**×**178°.33W, h0**km**, mb3.8**/2**, mbtmp3.9**/3**, ML3.0**/1**, Error ellipse: s-maj=77.8km s-min=47.7km az=128.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.25	215	Pn	Pn	18 34 10.2	-1.1
	0.4nm,0.3s,baz=32,slow=19,SNR=2.6						
URZ				Sn	Sn	18 35 17.4	-6.1
	2.5nm,0.3s,baz=154,slow=3.7,SNR=5.2						
	19nm,1.2s						
ASAR	Alice Springs	42.76	270	P	P	18 40 37.5	+0.3
	1.2nm,0.6s,baz=106,slow=8.3,SNR=12						
	1.2nm,0.6s						
WRA	Warramunga Arr	44.00	275	P	P	18 40 46.8	-0.4
	0.8nm,0.6s,baz=114,slow=8.0,SNR=4.9						
	0.8nm,0.6s						
FINES	FINESS Array B	147.66	338	PKPbc	PKPbc	18 52 22.6	-0.8
	1.2nm,0.8s,baz=54,slow=3.3,SNR=5.3						

IDC 24 18:32:38.7±9.6**, 30°.70S**×**179°.40W, h0**km**, mb3.4**/2**, mbtmp3.4**/2**, Error ellipse: s-maj=410.1km s-min=63.3km az=157.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	41.89	268	P	P	18 40 31.1	+0.1
	0.3nm,0.7s,baz=112,slow=8.4,SNR=1.8						
	0.3nm,0.7s						
WRA	Warramunga Arr	42.90	273	P	P	18 40 38.7	-0.6
	0.3nm,0.4s,baz=99,slow=8.2,SNR=5.3						
	0.3nm,0.4s						
FINES	FINESS Array B	145.00	339	PKPbc	PKPbc	18 52 15.9	-0.5
	0.8nm,0.8s,baz=42,slow=4.3,SNR=4.1						

WEL ***24*** *18:33:28.5±1.0, 33°S±6°×17°8W±1°6, h33km, M4.5/13, mB4.8/3, ML4.9/14, MLv4.6/13, Mw(mB)4.1/3, Error ellipse: s-maj=21.5km s-min=4.3km az=107.7, confirmed*
IDC ***24*** *18:33:29.1±1.9, 32°.64S×178°.59W, h0km, mb3.9/3, mbtmp3.9/4, ML3.8/1, Error ellipse: s-maj=46.9km s-min=36.9km az=72.0*
ISC 24 18:33:29.3±1.4**, 32°.88S**±0°.08×**177°.8W**±0°.2**, h34**km**, n24, σ1ˢ.66**/34**, mb3.9**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.61	359	P	Pn	18 34 22.7	-0.1
GLKZ				S	Sn	18 35 00.2	-3.9
WMGZ	Waiomatatini S	5.80	211	P	Pn	18 34 52.3	-0.6
WMGZ				S	Sn	18 35 59.7	+1.4
PKGZ	Pakihiroa	5.99	213	P	Pn	18 34 55.1	-0.4
PKGZ				S	Sn	18 36 02.8	-0.2
HAZ	Te Kaha	6.04	215	P	Pn	18 34 57.8	+1.6
HAZ				S	Sn	18 36 04.8	+0.7
PUZ	Puketiti	6.08	211	P	Pn	18 34 54.3	-2.5
PUZ				S	Sn	18 36 03.8	-1.4
RUGZ	Raukumara Rang	6.26	215	P	Pn	18 34 59.5	+0.2
RUGZ				S	Sn	18 36 09.0	-0.7
TWGZ	Tauwhareparae	6.29	212	P	Pn	18 34 59.6	-0.1
TWGZ				S	Sn	18 36 10.0	-0.4
CNGZ	Carnagh Statio	6.45	209	P	Pn	18 35 01.3	-0.5
TKGZ	Te Karaka	6.57	211	P	Pn	18 35 03.7	+0.3
TKGZ				S	Sn	18 36 15.7	-1.4
MWZ	Matawai	6.62	213	P	Pn	18 35 03.3	-0.9
MWZ				S	Sn	18 36 15.9	-2.7
URZ	Urewera	6.77	216	Pn	Pn	18 35 05.9	-0.2
	1.9nm,0.3s,baz=246,slow=4.3,SNR=15						
URZ				Sn	Sn	18 36 18.5	-3.5
	4.0nm,0.3s,baz=118,slow=20,SNR=7.8						
	4.0nm,0.3s						
URZ	Urewera	6.77	216	P	Pn	18 35 06.9	+0.8
URZ				S	Sn	18 36 20.3	-1.6
SNGZ	Shannon Statio	7.07	212	P	Pn	18 35 11.3	+0.9
SNGZ				S	Sn	18 36 27.8	-1.8
MUGZ	Murupara	7.10	217	P	Pn	18 35 10.1	-0.7
RTZ	Ruatahuna	7.11	215	P	Pn	18 35 11.7	+0.8
WCZ	Waipu Caves	7.15	243	P	Pn	18 35 18.2	+6.9
MTHZ	Maungataniwha	7.36	214	P	Pn	18 35 15.0	+0.6
OUZ	Omahuta	7.49	249	P	Pn	18 35 17.8	+1.7
BKZ	Black Stump Fm	7.78	215	P	Pn	18 35 20.9	+0.8
ASAR	Alice Springs	43.17	269	P	P	18 41 27.0	0.0
	0.9nm,0.7s,baz=108,slow=7.7,SNR=7.0						
	0.9nm,0.7s						
WRA	Warramunga Arr	44.38	275	P	P	18 41 36.4	-0.4
	2.1nm,0.6s,baz=114,slow=8.0,SNR=6.8						
	2.1nm,0.6s						
QSPA	South Pole Qui	57.24	180	P	P	18 43 20.2	+7.2
	1.4nm,1.1s,baz=343,slow=4.8,SNR=2.1						
	1.4nm,1.1s						
FINES	FINESS Array B	147.51	339	PKPbc	PKPab	18 53 11.9	+0.8
	2.0nm,0.5s,baz=39,slow=4.1,SNR=12						
NB2	NORSAR Subarra	151.22	351	PKP	PKiKP	18 53 23.3	+4.5
	comp=Z,0.4nm,0.7s,baz=17,slow=2.6						

IDC ***24*** *18:39:22.4±0.8, 2°.63S×138°.52E, h0km, mb3.7/9, mbtmp3.8/13, ML3.8/4, Error ellipse: s-maj=19.1km s-min=15.6km az=169.0*
DJA ***24*** *18:39:26.5±0.3, 3°S±4°×13°9E±°, h10km, M4.0/8, mb4.2/6, MLv3.9/8*
ISC 24 18:39:26.8±0.7**, 2°.64S**±0°.09×**138°.71E**±0°.06**, h32**km**, n21, σ1ˢ.09**/22**, mb3.7**/9**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.65	360	P	Pn	18 39 38.1	-1.7
GENI	Genyem	1.45	88	P	Pb	18 39 55.0	+1.7
JAY	Jayapura	1.99	86	Pn	Pb	18 40 02.0	-0.5
	9.1nm,0.3s,baz=239,slow=8.7,SNR=28						
JAY				Lg	Lg	18 40 30.7	
	4.4nm,0.3s,baz=144,slow=18,SNR=4.6						
	37nm,0.3s						
JAY	Jayapura	1.99	86	P	Pb	18 40 02.2	-0.3
SRPI	Serui, Papua	2.59	287	P	Pn	18 40 05.5	-1.0
SRPI				S	Sn	18 40 37.3	+0.4
BAKI	Biak	2.98	299	P	Pn	18 40 12.9	+1.0
RKPI	Ransiki, Papua	4.67	284	P	Pn	18 40 34.0	-1.2
FAKI	Fak Fak	6.46	267	P	Pn	18 41 00.5	+0.7
	33nm,1.8s						
SWI	Sorong	7.66	283	P	Pn	18 41 16.2	0.0
	0.1nm12nm,0.8s						
BATI	Baumata	16.73	243	Pn	Pn	18 43 18.1	-0.9
	3.0nm,0.3s,baz=116,slow=4.5,SNR=4.6						
	16nm,0.9s						
WRA	Warramunga Arr	17.72	194	P	P	18 43 30.5	-1.4
	0.3nm,0.3s,baz=16,slow=12,SNR=10						
	1.6nm,0.6s						
FITZ	Fitzroy Crossi	20.01	219	P	P	18 43 55.3	-1.7
	0.1nm,0.3s,baz=34,slow=14,SNR=1.5						
	1.5nm,0.8s						
ASAR	Alice Springs	21.41	192	P	P	18 44 11.5	-0.7
	1.7nm,0.9s,baz=16,slow=9.3,SNR=17						
	1.7nm,0.9s						
SONM	Songino Array	57.66	335	P	P	18 49 14.2	-0.1
	0.4nm,0.5s,baz=134,slow=8.3,SNR=2.0						
	0.4nm,0.5s						
PETK	Petropavlovsk-	57.80	13	P	P	18 49 16.2	+1.3
	1.1nm,0.9s,baz=202,slow=8.7,SNR=2.9						
	1.1nm,0.9s						
YAK	Yakutsk	64.87	355	P	P	18 50 04.0	+1.5
	6.2nm,0.8s,baz=166,slow=0.8,SNR=4.2						
	6.2nm,0.8s						
MKAR	Makanchi Array	69.74	322	P	P	18 50 33.8	0.0
	0.4nm,0.6s,baz=130,slow=4.5,SNR=6.2						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	73.68	325	P	P	18 50 56.7	-0.7
	0.3nm,0.8s,baz=115,slow=4.8,SNR=3.3						
	0.3nm,0.8s						
BVAR	Borovoye Array	79.26	325	P	P	18 51 28.4	-0.6
	0.4nm,0.4s,baz=117,slow=5.9,SNR=2.7						
	0.4nm,0.4s						
ILAR	Eielson Array	85.77	24	P	P	18 52 02.1	-0.6
	0.3nm,0.6s,baz=254,slow=4.6,SNR=3.0						
	0.3nm,0.6s						
QSPA	South Pole Qui	87.30	180	P	P	18 52 11.4	+1.0
	0.6nm,0.6s,baz=129,slow=7.1,SNR=3.4						
	0.6nm,0.6s						

CATAC ***24*** *18:42:03.4±0.7, 13°N±3°×8°9W±°, h22km±4km, M3.7/19, MLv3.7/19, Error ellipse: s-maj=8.2km s-min=5.3km az=37.8, confirmed*
SNET ***24*** *18:42:06.0±1.9, 13°.11N×89°.37W, h42km, ML3.5*
ISC 24 18:42:03.8±2.0**, 13°.00N**±0°.08×**89°.46W**±0°.06**, h28**km±12km**, n61, σ0ˢ.39**/77**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.51	16	eP	Pn	18 42 15.1	-0.1
LALI				eS	Sn	18 42 23.0	0.0
LALI	Alcalda de L	0.51	16	P	Pn	18 42 15.5	+0.3
PANCS	Alcalda de	0.67	24	P	Pn	18 42 17.5	-0.1
PANCS	Alcalda de	0.67	24	S	Sn	18 42 27.1	0.0
ITCA	Escuela Especi	0.70	15	eP	Pn	18 42 18.0	+0.1
ITCA				eS	Sb	18 42 27.3	+0.4
ITCA	Escuela Especi	0.70	15	P	Pb	18 42 17.7	+0.1
LOMA	Loma Larga	0.70	24	eP	Pb	18 42 17.8	+0.1
LOMA				eS	Sn	18 42 28.0	0.0
LOMA	Loma Larga	0.70	24	P	Pn	18 42 18.2	+0.2
LOMA	Loma Larga	0.70	24	S	Sn	18 42 27.9	-0.2
PMON	Piamonte	0.73	11	eP	Pb	18 42 18.2	+0.2
PMON				eS	Sn	18 42 29.1	+0.5
PMON	Piamonte	0.73	11	P	Pb	18 42 18.3	+0.2
LFRS	El Faro	0.74	32	eP	Pn	18 42 18.4	-0.1
LFRS				eS	Sn	18 42 28.4	-0.3
UEES	Universidad Ev	0.75	17	eP	Pb	18 42 18.4	0.0
UEES				eS	Sn	18 42 29.3	+0.2
UEES	Universidad Ev	0.75	17	P	Pn	18 42 19.0	+0.4
UEES	Universidad Ev	0.75	17	S	Sn	18 42 28.9	-0.1
BOQS	Boqueron	0.76	13	eP	Pn	18 42 18.9	0.0
BOQS				eS	Sn	18 42 29.3	-0.1
UESS	Universidad de	0.76	19	eP	Pn	18 42 18.9	+0.1
UESS				eS	Sn	18 42 29.3	-0.1
IGN	Direccin Gen	0.77	22	P	Pn	18 42 19.0	+0.2
IGN	Direccin Gen	0.77	22	S	Sn	18 42 29.3	-0.2
PIC2	El Picacho	0.77	15	eP	Pn	18 42 19.1	0.0
AEIL	Aeropuerto Ilo	0.77	26	eP	Pn	18 42 18.9	0.0
LFU	La Fuente	0.82	24	eP	Pb	18 42 19.9	+0.2
COEG	Centro de Oper	0.84	42	eP	Pn	18 42 19.8	-0.1
COEG				eS	Sn	18 42 31.2	-0.1
COEG	Centro de Oper	0.84	42	P	Pb	18 42 19.9	0.0
CEVE	Cerro Verde	0.84	349	eP	Pn	18 42 19.8	-0.2
CEVE	Cerro Verde	0.84	349	P	Pn	18 42 19.9	-0.2
CEVE	Cerro Verde	0.84	349	S	Sn	18 42 32.9	+1.2
LBRS	Las Brisas	0.84	29	eP	Pb	18 42 20.3	+0.3
SBLS	San Blas	0.85	349	eP	Pn	18 42 20.2	0.0
SBLS				eS	Sb	18 42 31.5	0.0
TECO	Alcaldia de Te	0.85	51	eP	Pn	18 42 19.9	-0.1
TECO				eS	Sb	18 42 31.2	0.0
TECO	Alcaldia de Te	0.85	51	P	Pn	18 42 19.7	-0.3
PAVA	Las Pavas	0.88	36	eP	Pb	18 42 20.7	+0.1
PAVA				eS	Sb	18 42 32.1	+0.1
PAVA	Las Pavas	0.88	36	P	Pb	18 42 20.6	0.0
SNJE	San Jose	0.88	351	eP	Pn	18 42 20.2	-0.3
RTR	El Retiro	0.91	349	eP	Pn	18 42 21.1	+0.1
UESV	Universidad de	0.92	46	eP	Pn	18 42 20.8	-0.1
UESV				eS	Sn	18 42 32.6	-0.4
UESV	Universidad de	0.92	46	P	Pn	18 42 20.8	-0.1
NUBE	Las Nubes	0.95	341	eP	Pn	18 42 21.0	-0.4
NUBE	Las Nubes	0.95	341	P	Pn	18 42 21.1	-0.4
FAME	Alcaldia de Sa	1.00	327	P	Pn	18 42 21.5	-0.4
SCLA	Alcaldia de Sa	1.00	45	eP	Pb	18 42 22.4	-0.2
SCLA	Alcaldia de Sa	1.00	45	P	Pb	18 42 22.5	-0.2
LOAL	Lomas de Alarc	1.04	343	eP	Pn	18 42 22.6	-0.1
TECA	Tecapa	1.06	62	eP	Pn	18 42 22.8	-0.2
SLOZ	Alcaldia de Sa	1.07	343	eP	Pn	18 42 22.8	-0.2
SLOZ	Alcaldia de Sa	1.07	343	P	Pn	18 42 23.1	+0.1
PQSS	Presa 15 de Se	1.08	54	eP	Pb	18 42 23.6	-0.3
PACA	Pacayal	1.20	67	eP	Pn	18 42 25.4	+0.5
PACA	Pacayal	1.20	67	P	Pb	18 42 25.7	-0.4
PACA	Pacayal	1.20	67	S	Sb	18 42 41.1	-0.2
LCY	Lacayo	1.21	69	eP	Pn	18 42 25.4	+0.3
LCY				eS	Sb	18 42 41.1	-0.5
BLLM	Bellamira	1.27	69	eP	Pn	18 42 26.1	+0.3
CAHU	Cacacuatique	1.44	58	eP	Pn	18 42 28.6	+0.4
ESQI	Esquipulas	1.56	4	P	Pn	18 42 30.0	+0.2
ESQI	Esquipulas	1.56	4	S	Sb	18 42 50.6	-0.9
LCND	La Caada	1.56	78	eP	Pn	18 42 30.2	+0.6
LCND	La Caada	1.56	78	P	Pn	18 42 30.3	+0.6
CNCH	Conchagua	1.61	80	eP	Pn	18 42 28.7	-1.8
CNCH				eP	Pn	18 42 30.6	+0.2
CNCH	Conchagua	1.61	80	P	Pn	18 42 30.7	+0.2
POTN	Potosi Cosigui	1.91	90	P	Pn	18 42 34.4	0.0
POTN				S	Sn	18 42 58.6	+1.1
PKGN	Cerro Pekin	2.44	97	P	Pn	18 42 42.0	+0.2

IDC ***24*** *18:43:23.2±0.7, 31°.03S×177°.67W, h0km, mb4.3/7, mbtmp4.3/7, MS3.3/5, Error ellipse: s-maj=25.3km s-min=18.5km az=94.0*
NEIC ***24*** *18:43:24.1±1.4, 31°.1S±0°.1×177°.38W±0°.06, h10km±2km, mb4.1/8, Error ellipse: s-maj=20.4km s-min=8.8km az=177.0*
ISC 24 18:43:27.2±0.7**, 31°.18S**±0°.06×**177°.7W**±0°.1**, h27**km**, n44, σ1ˢ.36**/42**, mb4.4**/10**, MS3.4**/4**, 4D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.93	355		Pn	18 43 56.4	-1.8
RAO	Raoul Island	1.93	355	Pn	Pn	18 43 55.6	-2.6
	180nm,0.3s,baz=44,slow=19,SNR=11						
RAO				Sn	Sn	18 44 18.4	-3.1
	493nm,0.3s,baz=108,slow=21,SNR=8.3						
URZ	Urewera	8.24	210	Pn	Pn	18 45 21.5	-3.4
	1.2nm,0.3s,baz=236,slow=3.0,SNR=8.5						
URZ				Sn	Sn	18 46 53.4	-3.7
	4.8nm,0.3s,baz=190,slow=22,SNR=12						
RTZ	Ruatahuna	8.60	209	Pn	Pn	18 45 27.1	-2.8
BKZ	Black Stump Fm	9.26	209	Pn	Pn	18 45 36.0	-3.0
MSVF	Nonsavu	13.92	343	Pn	Pn	18 46 45.0	+2.1
	0.2nm,0.3s,baz=186,slow=19,SNR=3.5						
MSVF				LR	LR	18 50 43.6	
	comp=Z,112nm,19.0s,baz=140,slow=32						
PPT	Papeete	28.91	69	LR	LR	19 01 22.0	
	comp=Z,59nm,18.5s,baz=188,slow=38						
CTAO	Charters Tower	34.16	280	P	P	18 50 12.2	+2.0
STKA	Stephens Creek	34.53	258	P	P	18 50 15.1	+1.6
STKA	Stephens Creek	34.53	258	P	P	18 50 13.6	+0.1
	1.3nm,0.6s,baz=107,slow=9.6,SNR=5.4						
STKA				LR	LR	19 02 46.4	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,116nm,19.0s,baz=109,slow=34						
	1.3nm,0.6s						
KRVT	Keravat (AS076	39.03	307	LR	LR	19 03 11.2	
	comp=Z,5.6nm,18.8s,baz=157,slow=30						
AS31	Alice Springs	43.30	268		P	18 51 27.7	+0.8
AS31				IAmb	IAmb	18 51 33.1	
	comp=Z,1.6nm,0.8s						
ASAR	Alice Springs	43.30	268	P	P	18 51 27.1	+0.1
ASAR	Alice Springs	43.30	268	P	P	18 51 27.6	+0.7
	comp=Z,3.2nm,0.6s,baz=107,slow=7.6,SNR=32						
ASAR				ScP	ScP	18 57 06.7	+1.5
	comp=Z,1.4nm,0.8s,baz=106,slow=4.2,SNR=6.9						
	comp=Z,3.2nm,0.6s						
WRA	Warramunga Arr	44.36	273		P	18 51 36.4	+0.9
WRA	Warramunga Arr	44.36	273	P	P	18 51 35.8	+0.3
	comp=Z,8.1nm,0.8s,baz=111,slow=8.0,SNR=25						
	comp=Z,8.1nm,0.8s						
WB0	Warramunga Arr	44.39	273		P	18 51 36.3	+0.6
KNRA	Kununurra	51.00	275	P	P	18 52 27.8	+0.8
FITZ	Fitzroy Crossi	52.59	270	P	P	18 52 39.6	+0.7
FITZ				IAmb	IAmb	18 52 46.1	
	comp=Z,4.9nm,1.4s						
FITZ	Fitzroy Crossi	52.59	270	P	P	18 52 39.4	+0.5
	comp=Z,6.7nm,1.1s,baz=146,slow=3.6,SNR=5.4						
	comp=Z,6.7nm,1.1s						
CASY	Casey	54.56	208	P	P	18 52 52.9	+0.3
QSPA	South Pole Qui	58.94	180	P	P	18 53 26.0	+2.2
	comp=Z,3.7nm,0.9s,baz=23,slow=3.7,SNR=6.8						
	comp=Z,3.7nm,0.9s						
KAPI	Kappang	63.97	280	LR	LR	19 19 31.8	
	comp=Z,62nm,21.6s,baz=92,slow=34						
TROLL	Troll, Antarti	77.10	180	⇓P	P	18 55 18.4	+0.6
	comp=Z,165nm,1.1s						
SNAA	Sanae	77.38	178	⇓P	P	18 55 19.9	+0.6
	comp=Z,48nm,1.3s						
SNAA	Sanae	77.38	178	P	P	18 55 19.5	+0.2
	comp=Z,3.0nm,1.1s,baz=279,slow=3.8,SNR=5.1						
	comp=Z,3.0nm,1.1s						
VNA3	Neumayer Olymp	77.52	176	⇓P	P	18 55 20.3	+0.2
	comp=Z,4.8nm,0.7s						
VNA2	Neumayer--Watz	77.95	177	⇓P	P	18 55 23.0	+0.6
	comp=Z,3.7nm,0.8s,baz=178,slow=5.1						
PETK	Petropavlovsk-	86.62	345	P	P	18 56 08.1	+0.4
	comp=Z,2.4nm,0.8s,baz=119,slow=5.5,SNR=7.9						
	comp=Z,2.4nm,0.8s						
YAK	Yakutsk	102.05	337	PKiKP	PKiKP	19 01 41.5	+0.9
	comp=Z,6.2nm,0.6s,baz=87,slow=0.7,SNR=4.2						
MKAR	Makanchi Array	118.45	310	PKP	PKPdf	19 02 11.6	-0.5
	comp=Z,0.6nm,0.7s,baz=210,slow=0.9,SNR=5.2						
KURBB	Kurchatov Arra	121.79	313	PKP	PKPdf	19 02 17.8	-0.5
	comp=Z,1.0nm,0.6s,baz=114,slow=1.9,SNR=15						
BVAR	Borovoye Array	127.12	315	PKP	PKPdf	19 02 28.5	0.0
	comp=Z,1.0nm,0.5s,baz=122,slow=1.9,SNR=7.6						
ARCES	ARCESS Array B	139.40	348	PKP	PKiKP	19 02 52.7	-0.7
	comp=Z,1.7nm,0.8s,baz=28,slow=1.8,SNR=4.3						
OBN	Obninsk	145.94	325	PKPbc	PKPab	19 03 03.7	-0.5
	comp=Z,12nm,0.5s,baz=293,slow=9.7,SNR=3.8						
FINES	FINESS Array B	145.95	340	PKPbc	PKPbc	19 03 03.3	-0.3
	comp=Z,9.7nm,0.7s,baz=52,slow=2.9,SNR=43						
NB2	NORSAR Subarra	149.55	351	PKP	PKPbc	19 03 13.0	-0.4
	comp=Z,3.1nm,1.0s,baz=14,slow=4.3						
NOA	NORSAR Array B	149.55	351	PKPbc	PKPbc	19 03 13.0	-0.4
	comp=Z,0.6nm,0.5s,baz=14,slow=4.1,SNR=6.4						
HFS	Hagfors	150.05	349	PKPbc	PKPbc	19 03 14.0	-0.6
	comp=Z,1.0nm,0.4s,baz=101,slow=1.5,SNR=7.2						
MMAI	Mount Meron Ar	151.93	283	PKPbc	PKiKP	19 03 21.6	+1.2
	comp=Z,2.7nm,0.4s,baz=90,slow=6.7,SNR=17						
AKASG	Malin Array Be	152.05	322	PKPbc	PKPbc	19 03 19.4	-0.2
	comp=Z,2.3nm,0.6s,baz=54,slow=2.4,SNR=16						
BRTR	Keskin Array B	153.16	297	PKPbc	PKPbc	19 03 22.6	-0.1
	comp=Z,0.9nm,0.4s,baz=144,slow=4.5,SNR=6.6						
TORD	Torodi Ar. Bea	162.05	178	PKPab	PKPab	19 04 13.6	+0.7
	comp=Z,1.0nm,0.3s,baz=172,slow=3.4,SNR=1.6						
ESDC	Sonseca Array	170.12	29	PKPab	PKPab	19 04 46.5	-1.6
	comp=Z,0.3nm,0.4s,baz=38,slow=4.7,SNR=1.7						

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*IDC **24** 18:45:45.6±3.3, 16°.17S×176°.01W, h372^{km}±28^{km}, mb3.5/10, mbtmp4.2/11, Error ellipse: s-maj=37.7km s-min=20.4km az=121.0*

ISC 24 18:45:44.1±1.0, **16°.1S**±0°.2×**175°.9W**±0°.2, **h360**^{km}, **n14**, σ**1^s.11**/17, **mb3.6**/10, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.99	254	P	Pn	18 47 17.4	+2.2
	66nm,0.7s,baz=88,slow=11,SNR=21						
MSVF				S	S	18 48 27.8	-1.5
	5.4nm,0.9s,baz=271,slow=21,SNR=0.7						
STKA	Stephens Creek	41.58	240	P	P	18 52 56.9	-1.3
	1.6nm,0.5s,baz=84,slow=6.4,SNR=6.8						
	1.6nm,0.5s						
WRA	Warramunga Arr	47.32	258	P	P	18 53 42.3	-1.0
	6.9nm,0.6s,baz=92,slow=6.8,SNR=39						
WRA				PcP	PcP	18 55 07.1	-0.7
	1.1nm,0.8s,baz=95,slow=3.1,SNR=3.5						
	6.9nm,0.6s						
ASAR	Alice Springs	47.58	253	P	P	18 53 44.5	-0.9
	22nm,0.6s,baz=88,slow=7.7,SNR=140						
ASAR				PcP	PcP	18 55 08.4	-0.4
	0.7nm,0.6s,baz=91,slow=5.7,SNR=1.7						
	22nm,0.6s						
FITZ	Fitzroy Crossi	55.69	259	P	P	18 54 44.8	+0.1
	1.2nm,0.5s,baz=107,slow=7.6,SNR=6.4						
	1.2nm,0.5s						
PETK	Petropavlovsk-	72.61	344	P	P	18 56 32.6	-0.2
	1.5nm,0.8s,baz=164,slow=5.1,SNR=2.3						
	1.5nm,0.8s						
QSPA	South Pole Qui	73.92	180	P	P	18 56 41.0	+0.5
	1.2nm,0.8s,baz=19,slow=6.8,SNR=2.3						
	1.2nm,0.8s						
KSRS	Korea Array	75.01	317	P	P	18 56 48.0	+1.1
	0.9nm,0.9s,baz=122,slow=5.9,SNR=2.0						
	0.9nm,0.9s						
SEY	Seymchan	82.61	346	P	P	18 57 26.8	-0.6
	2.0nm,0.8s,baz=143,slow=8.2,SNR=5.9						
	2.0nm,0.8s						
ILAR	Eielson Array	83.64	12	P	P	18 57 31.2	-1.3
	0.4nm,0.5s,baz=206,slow=4.6,SNR=5.7						
	0.4nm,0.5s						
CMAR	Chiang Mai Arr	90.55	289	P	P	18 58 08.1	+1.4
	0.5nm,0.8s,baz=108,slow=3.7,SNR=5.8						
	0.5nm,0.8s						
BRTR	Keskin Array B	145.14	318	PKPbc	PKPbc	19 04 40.1	+0.1
	2.5nm,0.8s,baz=106,slow=2.6,SNR=9.9						
MLR	Muntele Rosu	145.46	332	PKPbc	PKPbc	19 04 41.1	+0.4
	1.6nm,0.7s,baz=338,slow=5.4,SNR=3.1						
MMAI	Mount Meron Ar	147.10	306	PKPbc	PKPbc	19 04 46.5	+0.8
	1.1nm,0.4s,baz=90,slow=4.6,SNR=2.3						

DJA 24 18:45:49.2±1.2, **5°N**±6°×**12°6E**±°, **h13**^{km}±7^{km}, **M4.0**/8, **mb4.0**/5, **MLv3.9**/8, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	0.85	190	P	Pg	18 46 04.1	-1.6
SGSI				S	Sn	18 46 19.7	+0.5
TNTI	Ternate	4.10	156	P	Pn	18 46 52.1	+0.5
SANI	Sanana	6.54	177	P	Pn	18 47 24.1	-1.1

DJA 24 18:52:49.9±0.7, **3°S**±4°×**13°9E**±°, **h12**^{km}±6^{km}, **M3.8**/7, **mb4.2**/4, **MLv3.6**/7, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.61	6	P	Pb	18 53 02.3	-0.2
GENI	Genyem	1.52	90	P	Pb	18 53 17.8	-0.2
JAY	Jayapura	2.05	88	P	Pn	18 53 23.2	-1.1
SRPI	Serui, Papua	2.52	287	P	Pn	18 53 30.2	-0.4
BAKI	Biak	2.90	299	P	Pn	18 53 35.8	-0.1
BAKI				S	Sn	18 54 13.4	+2.6
RKPI	Ransiki, Papua	4.60	284	P	Pn	18 53 59.0	-0.3
RKPI				S	Sn	18 54 52.2	-0.5
FAKI	Fak Fak	6.40	267	P	Pn	18 54 24.3	+0.2
	52nm,1.6s						

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*ISK **24** 19:00:12.9, 35°.29N×24°.28E, h10^{km}, ML3.7/7*

*IDC **24** 19:00:12.9±0.8, 35°.38N×24°.29E, h0^{km}, mb3.9/15, mbtmp3.8/22, ML3.4/7, Error ellipse: s-maj=17.9km s-min=7.1km az=19.0*

*NEIC **24** 19:00:13.1±2.3, 35°.21N±0°.09×24°.30E±0°.04, h3^{km}±6^{km}, mb4.1/13, Error ellipse: s-maj=12.6km s-min=4.2km az=170.0*

*THE **24** 19:00:13.7, 35°N±2°×24°.3E±1°.0, h5^{km}±1^{km}, M3.4/20, MLh3.4/20*

*ATH **24** 19:00:13.7, 35°.31N×24°.29E, h6^{km}±1^{km}, ML3.4/18, Manual Solution by M.Charalampakis First location: 2019/06/24 19:01:15, This location: 2019/06/24 19:18:26 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

ISC 24 19:00:13.3±1.0, **35°.30N**±0°.03×**24°.30E**±0°.02, **h4**^{km}±7^{km}, **n118**, σ**0^s.78**/141, **mb3.8**/19, **1D**, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRNS	Prines Rethymn	0.17	68	P	Pg	19 00 16.5	-0.2
PRNS				S	Sg	19 00 19.2	+0.2
PRNS	Prines Rethymn	0.17	68	P	Pg	19 00 16.4	-0.3
PRNS				S	Sg	19 00 19.1	0.0
CHAN	Chania	0.30	316	P	Pg	19 00 19.6	+0.4
CHAN	Chania	0.30	316	P	Pg	19 00 19.6	+0.4
CHAN				S	Sg	19 00 22.7	-0.5
IMMV	Iera Moni Meta	0.31	301	Pg	Pg	19 00 19.2	0.0
IMMV				Sg	Sg	19 00 23.9	+0.6
IMMV	Iera Moni Meta	0.31	301	P	Pg	19 00 19.2	0.0
IMMV				S	Sg	19 00 24.1	+0.8
IMMV	Iera Moni Meta	0.31	301	P	Pg	19 00 19.3	0.0
IMMV				S	Sg	19 00 23.5	+0.2
TMBK	Timbaki Herakl	0.44	121	P	Pg	19 00 22.2	+0.5
TMBK				S	Sg	19 00 28.9	+1.3
IDI	Anoyia	0.48	91	Pg	Pg	19 00 22.8	+0.2
IDI				Sg	Sb	19 00 30.5	-1.2
IDI	Anoyia	0.48	91	P	Pg	19 00 22.9	+0.4
IDI				S	Sg	19 00 29.6	+0.9
IDI	Anoyia	0.48	91	Pg	Pg	19 00 22.5	0.0
	123nm,0.3s,baz=287,slow=9.9,SNR=752						
IDI				Lg	Lg	19 00 30.0	
	1µm,0.3s,baz=343,slow=14,SNR=82						
IDI	Anoyia	0.48	91	P	Pg	19 00 22.7	+0.2
IDI				S	Sg	19 00 28.7	-0.1
GVD	Gavdhos	0.49	201	Pg	Pg	19 00 22.6	-0.1
GVD	Gavdhos	0.49	201	P	Pg	19 00 22.8	+0.1
GVD	Gavdhos	0.49	201	P	Pg	19 00 22.7	0.0
GVD				S	Sg	19 00 29.8	+0.6
KNDR	Palaiochora Ch	0.51	263	Pg	Pg	19 00 23.2	+0.2
KNDR				Sg	Sb	19 00 31.7	-0.8
KNDR	Palaiochora Ch	0.51	263	P	Pg	19 00 23.3	+0.2
KNDR				S	Sb	19 00 31.5	-1.0
KNDR	Palaiochora Ch	0.51	263	P	Pg	19 00 23.2	+0.2
KNDR				S	Sb	19 00 31.2	-1.3
ANKY	Antikythira Is	0.99	305	P	Pg	19 00 32.0	-0.2
ANKY				S	Sb	19 00 46.6	+0.2
ANKY	Antikythira Is	0.99	305	P	Pg	19 00 32.1	-0.2
ANKY				S	Sb	19 00 45.5	-1.0
MHLO	Agia Marina, M	1.39	3	P	Pn	19 00 39.0	-0.4
MHLO				S	Sn	19 00 58.3	+0.2
MHLO	Agia Marina, M	1.39	3	P	Pn	19 00 39.0	-0.4
KTHA	Kythira Island	1.39	314	Pn	Pn	19 00 39.3	-0.1
KTHA				Sn	Sn	19 00 58.0	-0.2
KTHA	Kythira Island	1.39	314	P	Pn	19 00 39.3	-0.1
SAP3	Santorini-Thir	1.41	36	P	Pn	19 00 39.0	-0.8
SAP3				S	Sg	19 00 59.3	+0.6
SAP3	Santorini-Thir	1.41	36	P	Pn	19 00 39.1	-0.6
THR3	Thira Island,	1.42	39	P	Pn	19 00 39.7	-0.1
THERA	Ancient Thera,	1.43	41	P	Pn	19 00 39.1	-0.9
THERA				S	Sg	19 01 00.1	+0.9
THR8	Santorini-Mono	1.46	41	P	Pn	19 00 40.0	-0.3
CMBO	Columbo, Santo	1.47	37	P	Pn	19 00 40.4	-0.1
CMBO				S	Sg	19 01 01.7	+1.2
CMBO	Columbo, Santo	1.47	37	P	Pn	19 00 40.6	+0.1
ZKR	Zakros	1.58	96	Pn	Pn	19 00 42.2	+0.2
ZKR	Zakros	1.58	96	P	Pg	19 00 43.5	0.0
ZKR	Zakros	1.58	96	P	Pg	19 00 43.3	-0.2
MNVA	Monemvasia	1.72	324	P	Pb	19 00 45.1	-0.4
VLI	Veliai	1.80	322	P	Pn	19 00 44.6	-0.5
VLI	Veliai	1.80	322	P	Pn	19 00 44.7	-0.3
APE	Apeiranthos	2.02	29	Pn	Pn	19 00 48.3	+0.1
APE	Apeiranthos	2.02	29	P	Pn	19 00 47.1	-1.1
APE				S	Sn	19 01 14.1	+0.1
APE	Apeiranthos	2.02	29	P	Pn	19 00 47.1	-1.1
KARP	Karpathos	2.35	83		Pn	19 00 52.7	+0.1
KARP	Karpathos	2.35	83	P	Pn	19 00 52.2	-0.4
KARP	Karpathos	2.35	83	P	Pn	19 00 52.7	+0.1
MET6	Megalochori,Me	2.41	342	P	Pn	19 00 53.8	+0.4
MET4	Agioi Theodoro	2.43	343	P	Pn	19 00 53.8	+0.1
MET5	Makryloggos,Me	2.44	342	P	Pn	19 00 54.1	+0.2
ITM	Ithomi	2.68	315		Pb	19 00 59.6	-2.3
ITM	Ithomi	2.68	315	P	Pb	19 00 59.6	-2.3
ATHU	Athens Univers	2.69	351	P	Pn	19 00 58.7	+1.4
KARY	Karystos	2.73	2	P	Pn	19 00 58.1	+0.2
KARY	Karystos	2.73	2	P	Pn	19 00 58.7	+0.9
LTK	Loutraki	2.92	339	P	Pn	19 01 00.8	+0.3
LTK	Loutraki	2.92	339	P	Pn	19 01 00.8	+0.3
VILL	Villia	2.97	345	P	Pn	19 01 01.1	-0.1
VIL2	Platees	3.02	344	P	Pn	19 01 01.2	-0.7
GUR	Goura	3.07	330	P	Pn	19 01 02.9	+0.3
GUR	Goura	3.07	330	P	Pn	19 01 02.9	+0.3
SMG	Samos	3.15	40	P	Pn	19 01 04.0	+0.3
SMG	Samos	3.15	40	P	Pn	19 01 03.2	-0.5
KLV	Kalavryta, Ach	3.24	328	P	Pn	19 01 05.2	+0.3
ARG	Arkhangelos	3.24	73		Pn	19 01 05.3	+0.5
KYMI	Kymi, Euboea I	3.33	357	P	Pn	19 01 06.0	0.0
DRO	Drossia	3.37	323	P	Pn	19 01 08.2	+1.6
CHOS	Chios island	3.38	24	P	Pn	19 01 06.1	-0.8
CHOS	Chios island	3.38	24	P	Pn	19 01 06.1	-0.8
KALE	Kalithea	3.54	331	P	Pn	19 01 09.8	+0.8
SERG	Sergoula	3.59	331	P	Pn	19 01 10.6	+0.9
ANX	Ano Chora	3.80	331	P	Pn	19 01 12.9	+0.2
AGG	Agios Georgios	4.04	338	P	Pn	19 01 15.9	+0.1
AKAS	Kas	4.41	76		Pn	19 01 22.3	+1.2
ELL	Elmali	4.77	71		Pn	19 01 25.6	-0.4
FNA	Florina	5.94	338	Pn	Pn	19 01 44.0	+2.0
SCTE	Santa Cesarea	6.64	318	Pn	Pn	19 01 52.3	+0.7
TIP	Timpagrande	7.15	305	Pn	Pn	19 01 58.2	-0.5
CEL	Celeste	7.37	296	Pn	Pn	19 02 00.7	-0.9
CSS	Mathiatis	7.40	90	Pn	Pn	19 02 03.5	+1.4
CUC	Castrocucco	8.20	307		Pn	19 02 14.0	+1.0
BRTR	Keskin Array B	8.63	56	Pn	Pn	19 02 20.6	+1.5
	0.2nm,0.3s,baz=246,slow=12,SNR=7.9						
	0.3nm,0.5s						
SGRT	San Giovanni R	9.30	316	Pn	Pn	19 02 27.8	-0.3
MMAI	Mount Meron Ar	9.48	101	Pn	Pn	19 02 31.0	+0.5
	1.2nm,0.3s,baz=290,slow=11,SNR=1.8						
	0.9nm,0.5s						
GHAJ	Ghor Haditha	10.23	110	Pn	Pn	19 02 40.3	-0.5
EIL	Elat	10.60	119	Pn	Pn	19 02 45.1	-0.8
	0.5nm,0.3s,baz=28,slow=14,SNR=1.9						
	2.5nm,0.7s						
ASF	Jabal al Asfar	10.94	103	Pn	Pn	19 02 52.9	+2.2
	0.2nm,0.3s,baz=302,slow=4.4,SNR=2.5						
	1.0nm,0.4s						
GEC2	GERESS Array S	15.63	333	P	P	19 04 00.5	+1.8
GERES	GERESS Array B	15.63	333	P	P	19 03 59.9	+1.2
GERES	GERESS Array B	15.63	333	Pn	Pn	19 03 56.0	+1.6
	baz=144,slow=12,SNR=12						
	1.3nm,0.7s						
AKASG	Malin Array Be	15.80	12	Pn	Pn	19 03 56.0	-0.4
	1.2nm,0.3s,baz=201,slow=10,SNR=8.0						
	0.2nm,0.3s						
KBZ	Khabaz	16.61	54	Pn	P	19 04 09.9	+0.5
	0.2nm,0.3s,baz=239,slow=9.4,SNR=5.3						
	2.7nm,0.8s						
NACGM	Naroch	19.68	4	⇓*i*P	P	19 04 43.1	0.0
	comp=Z,7.0nm,0.7s,baz=185						
PABE	Paberze	20.21	359	IAmb	IAmb	19 04 51.3	
	comp=Z,34nm,1.4s						
ESDC	Sonseca Array	22.81	289	P	P	19 05 17.5	+0.4
	comp=Z,2.4nm,1.1s,baz=82,slow=9.7,SNR=12						
	comp=Z,2.4nm,1.1s						
HFS	Hagfors	25.79	348	P	P	19 05 44.2	-0.8
	comp=Z,0.7nm,0.5s,baz=151,slow=12,SNR=6.7						
	comp=Z,0.7nm,0.5s						
FINES	FINESS Array B	26.19	2	P	P	19 05 46.3	-2.2
	comp=Z,0.7nm,0.5s,baz=156,slow=12,SNR=5.7						
FINES				PcP	PcP	19 09 15.3	0.0
	comp=Z,2.0nm,1.0s,baz=196,slow=1.0,SNR=3.9						
	comp=Z,0.7nm,0.5s						
NOA	NORSAR Array B	27.09	346	P	P	19 05 56.0	-0.8
	comp=Z,0.5nm,0.6s,baz=157,slow=9.0,SNR=5.3						
	comp=Z,0.5nm,0.6s						
NBO00	NORSAR Array S	27.17	346	P	P	19 05 57.0	-0.4
NBO00				IAmb	IAmb	19 06 23.6	
	comp=Z,4.4nm,1.1s						
NC204	NORSAR Array S	27.39	346	P	P	19 05 59.3	-0.2
EKA	Eskdalemuir Ar	27.52	325	P	P	19 06 01.8	+1.1
	comp=Z,0.4nm,0.4s,baz=128,slow=8.6,SNR=6.7						
	comp=Z,0.4nm,0.4s						
AB31	Akbulak array	29.52	51	P	P	19 06 19.2	+0.6
AB31				IAmb	IAmb	19 06 27.0	
	comp=Z,2.0nm,1.1s						
ABKAR	Akbulak array	29.52	51	P	P	19 06 18.5	-0.1
TORD	Torodi Ar. Bea	30.05	228	P	P	19 06 24.1	+0.5
	comp=Z,1.4nm,0.4s,baz=30,slow=9.0,SNR=1.9						
	comp=Z,1.4nm,0.4s						
ARTI	Arti	31.25	37	P	P	19 06 33.2	-0.6
ARCES	ARCESS Array B	34.30	1	P	P	19 06 59.4	-0.8
ARCES	ARCESS Array B	34.30	1	P	P	19 06 59.5	-0.8
	comp=Z,0.8nm,0.5s,baz=170,slow=7.4,SNR=9.9						
	comp=Z,0.8nm,0.5s						
KK31	Karatay Array	36.27	63	P	P	19 07 17.0	-0.6
KKAR	Karatay Array	36.27	63	P	P	19 07 17.3	-0.3
DBIC	Dimbokro	39.11	230	P	P	19 07 42.0	+0.2
	comp=Z,5.6nm,1.1s,baz=348,slow=8.5,SNR=1.7						
	comp=Z,5.6nm,1.1s						
BOOM	Boomskoye usch	40.30	64		P	19 07 50.4	-1.4
BOOM				IAmb	IAmb	19 08 06.7	
	comp=Z,1.7nm,0.9s						
KDJ	Kajisay	41.26	64	P	P	19 07 59.5	-0.2
KDJ				IAmb	IAmb	19 08 04.1	
	comp=Z,2.3nm,1.2s						
KURBB	Kurchatov Arra	41.58	51	P	P	19 08 01.3	-0.6
	comp=Z,1.0nm,0.5s,baz=273,slow=8.6,SNR=18						
	comp=Z,1.0nm,0.5s						
KURK	Kurchatov	41.64	51	P	P	19 08 02.2	-0.2
MKAR	Makanchi Array	44.28	57	P	P	19 08 23.7	-0.2
	comp=Z,0.8nm,0.5s,baz=267,slow=8.3,SNR=12						
MKAR				PcP	PcP	19 10 08.6	+0.3
	comp=Z,0.3nm,0.6s,baz=262,slow=4.4,SNR=2.5						
	comp=Z,0.8nm,0.5s						
ZAA0	Zalesovo Array	45.41	46	P	P	19 08 31.9	-0.9
ZAA0				IAmb	IAmb	19 08 32.9	
	comp=Z,1.7nm,0.5s						
ZALV	Zalesovo Beam	45.41	46	P	P	19 08 32.0	-0.8
ZALV	Zalesovo Beam	45.41	46	P	P	19 08 31.4	-1.4
	comp=Z,1.1nm,0.4s,baz=273,slow=8.7,SNR=6.7						
	comp=Z,1.1nm,0.4s						
SCHQ	Schefferville	62.62	319	P	P	19 10 39.3	+0.8
	comp=Z,2.4nm,0.7s,baz=63,slow=9.0,SNR=1.5						
	comp=Z,2.4nm,0.7s						
CMAR	Chiang Mai Arr	67.25	83	P	P	19 11 09.4	+0.2
	comp=Z,0.2nm,0.5s,baz=301,slow=5.9,SNR=2.4						
	comp=Z,0.2nm,0.5s						
KSRS	Korea Array	78.75	52	P	P	19 12 17.3	+0.3
	comp=Z,0.9nm,0.5s,baz=315,slow=4.5,SNR=6.9						
	comp=Z,0.9nm,0.5s						
ILAR	Eielson Array	80.02	356	P	P	19 12 22.4	-1.0
	comp=Z,0.3nm,0.6s,baz=20,slow=2.9,SNR=2.5						
	comp=Z,0.3nm,0.6s						

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*IDC **24** 19:05:52.3±0.6, 2°.62S×138°.47E, h0^{km}, mb4.1/12, mbtmp4.2/16, ML4.2/4, MS3.7/8, Error ellipse: s-maj=14.7km s-min=14.0km az=54.0*

*NEIC **24** 19:05:55.0±0.9, 2°.64S±0°.09×138°.38E±0°.07, h10^{km}±1^{km}, mb4.7/67, Error ellipse: s-maj=15.5km s-min=11.3km az=172.0*

*DJA **24** 19:05:56.9±0.7, 3°S±4°×13°9E±°, h17^{km}±7^{km}, M4.6/15, mb4.6/15, mB5.2/1, MLv4.6/11, Mw(mB)4.6/1*

ISC 24 19:05:57.8±0.4, **2°.72S**±0°.05×**138°.48E**±0°.05, **h32**^{km}, **n110**, σ**1^s.58**/93, **mb4.6**/48, **MS3.8**/5, **1D**, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.76	18	P	Pn	19 06 07.3	-5.0
GENI	Genyem	1.69	86	P	Pn	19 06 26.4	+1.3
GENI	Genyem	1.69	86	P	Pn	19 06 25.0	-0.1
JAY	Jayapura	2.23	85	Pn	Pn	19 06 32.3	-0.3
	52nm,0.3s,baz=237,slow=11,SNR=114						
JAY				Lg	Lg	19 07 02.2	
	30nm,0.3s,baz=118,slow=19,SNR=7.7						
JAY				LR	LR	19 07 19.6	
	comp=Z,752nm,21.2s,baz=284,slow=39						
	242nm,0.5s						
JAY	Jayapura	2.23	85	P	Pn	19 06 32.2	-0.3
SRPI	Serui, Papua	2.39	291	P	Pn	19 06 34.7	-0.1
SRPI				S	Sn	19 07 05.4	+2.4
BAKI	Biak	2.82	303	P	Pn	19 06 41.8	+1.2
RKPI	Ransiki, Papua	4.46	286	P	Pn	19 07 03.3	0.0
RKPI				S	Sn	19 07 55.9	+1.7
KMPI	Kaimana, Papua	4.86	259	P	Pn	19 07 13.1	+4.4
FAKI	Fak Fak	6.23	268	Pn	Pn	19 07 28.0	+0.5
FAKI	Fak Fak	6.23	268	P	Pn	19 07 28.1	+0.5
	0.2nm50nm,0.8s						
SWI	Sorong	7.45	284	P	Pn	19 07 45.5	+1.2
	0.1nm40nm,0.6s						
MANU	Manus Island	8.90	86		Pn	19 08 05.2	+0.9
KDU	Kakadu	11.55	211	P	Pn	19 08 42.3	+1.8
COEN	Coen	12.09	158		Pn	19 08 48.4	+0.5
COEN	Coen	12.09	158	P	Pn	19 08 48.8	+0.9
DRS	Darwin Rock St	12.22	217	P	Pn	19 08 54.2	+4.5
MTN	Manton Dam	12.41	215		Pn	19 08 50.8	-1.5
RABL	Rabaul	13.74	96		P	19 09 20.8	+2.1
SOEI	Soe	15.75	243		P	19 09 41.3	+0.1
SOEI				IAmb	IAmb	19 09 54.1	
	comp=Z,65nm,0.8s						
SOEI	Soe	15.75	243	P	P	19 09 44.5	+3.3
SOEI	Soe	15.75	243	P	P	19 09 41.6	+0.4
KNRA	Kununurra	16.04	216		Pn	19 09 42.5	+1.4
BATI	Baumata	16.48	243	Pn	Pn	19 09 45.3	-1.5
	comp=Z,7.1nm,0.3s,baz=65,slow=3.5,SNR=10						
	comp=Z,12nm,0.7s						
BATI	Baumata	16.48	243	P	P	19 09 51.6	+2.4
GUMO	Guam	17.40	21	LR	LR	19 15 04.5	
	comp=Z,114nm,21.8s,baz=196,slow=32						
WB0	Warramunga Arr	17.41	193		Pn	19 09 56.3	-2.1
WR8	Warramunga Arr	17.56	192	P	Pn	19 09 58.7	-1.6
WRAB	Tennant Creek	17.57	193	P	Pn	19 09 59.3	-1.1
WRA	Warramunga Arr	17.59	193	P	Pn	19 09 57.5	-3.1
WRA	Warramunga Arr	17.59	193	P	Pn	19 09 59.5	-1.1
	comp=Z,0.6nm,0.3s,baz=17,slow=12,SNR=16						
WRA				LR	LR	19 17 34.9	
	comp=Z,444nm,19.3s,baz=60,slow=40						
	comp=Z,4.5nm,0.6s						
QIS	Mount Isa	17.76	177	P	P	19 10 04.1	+0.8
MPSI	Mapaga	18.82	279	P	Pn	19 10 16.7	+1.0
	comp=Z,9.6nm,1.0s						
CTAO	Charters Tower	18.86	157	Pn	Pn	19 10 18.2	+2.1
FITZ	Fitzroy Crossi	19.80	219		P	19 10 25.1	-0.6
FITZ	Fitzroy Crossi	19.80	219	P	P	19 10 24.8	-0.9
	comp=Z,0.3nm,0.3s,baz=47,slow=7.9,SNR=8.0						
FITZ				S	S	19 13 58.5	-8.7
	comp=Z,6.2nm,1.0s,baz=212,slow=19,SNR=3.0						
	comp=Z,2.6nm,0.6s						
WBSI	Waikabubak, Su	20.17	249	P	P	19 10 30.2	+0.3
AS01	Alice Springs	21.27	192	P	P	19 10 43.5	+1.8
AS31	Alice Springs	21.29	192		P	19 10 41.5	-0.3
ASAR	Alice Springs	21.29	192		P	19 10 40.8	-1.0
ASAR	Alice Springs	21.29	192	P	P	19 10 41.4	-0.5
	comp=Z,6.4nm,0.8s,baz=19,slow=10,SNR=47						
ASAR				S	S	19 14 36.4	-0.4
	comp=Z,5.2nm,0.9s,baz=13,slow=25,SNR=5.7						
	comp=Z,6.4nm,0.8s						
TATA	Tatamba Isabel	21.95	106	P	P	19 10 51.0	+2.0
HNR	Honiara	22.35	108	LR	LR	19 20 46.2	
	comp=Z,79nm,18.4s,baz=20,slow=40						
TGY	Tagaytay City	24.12	314	LR	LR	19 21 12.1	
	comp=Z,103nm,20.6s,baz=150,slow=38						
STKA	Stephens Creek	29.15	175	P	P	19 11 56.0	0.0
	comp=Z,0.5nm,0.3s,baz=8.7,slow=12,SNR=3.7						
STKA				LR	LR	19 24 51.1	
	comp=Z,213nm,19.1s,baz=333,slow=39						
	comp=Z,0.5nm,0.3s						
DZM	Mont Dzumac	33.28	128	LR	LR	19 25 23.7	
	comp=Z,184nm,21.3s,baz=354,slow=35						
MORW	Morawa	33.79	217	P	P	19 12 35.9	-1.1
NWAO	Narrogin (SRO)	36.05	211	LR	LR	19 29 07.1	
	comp=Z,498nm,20.9s,baz=100,slow=39						
KSRS	Korea Array	41.16	347	P	P	19 13 38.8	-0.4
	comp=Z,2.0nm,0.8s,baz=167,slow=9.8,SNR=9.3						
	comp=Z,2.0nm,0.8s						
CMAR	Chiang Mai Arr	44.24	300	P	P	19 14 04.5	-0.1
	comp=Z,1.1nm,0.7s,baz=118,slow=6.7,SNR=12						
	comp=Z,1.1nm,0.7s						
LYN	LuoYang	44.41	329	P	P	19 14 06.3	+0.7
LYN				pmax	pmax		
	comp=Z,25nm,0.9s						
BNX	BinXian	49.24	350	⇓P	P	19 14 42.9	-0.3
BNX				pmax	pmax		
	comp=Z,8.0nm,0.8s						
RTZ	Ruatahuna	50.08	141	P	P	19 14 51.1	+1.2

LZH	Lanzhou	50.35	323	*e*P	P	19 14 52.8	+0.7
LZH				sP	pP	19 15 02.6	+0.8
LZH				pmax	pmax		
	comp=Z,20nm,1.6s						
GTA	Gaotai	54.94	324	*e*P	P	19 15 26.5	+0.5
GTA				pP	pP	19 15 30.6	-5.2
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SONM	Songino Array	57.63	335	P	P	19 15 43.8	-1.2
	comp=Z,0.8nm,0.5s,baz=157,slow=7.5,SNR=5.4						
	comp=Z,0.8nm,0.5s						
PETK	Petropavlovsk-	57.93	14	P	P	19 15 45.8	-0.9
	comp=Z,2.4nm,0.9s,baz=177,slow=5.6,SNR=6.4						
	comp=Z,2.4nm,0.9s						
YAK	Yakutsk	64.93	355		P	19 16 33.5	-0.3
ZALV	Zalesovo Beam	71.83	330	P	P	19 17 15.2	-2.1
	comp=Z,1.2nm,0.6s,baz=120,slow=8.8,SNR=4.7						
	comp=Z,1.2nm,0.6s						
KURK	Kurchatov	73.59	325		P	19 17 27.4	-0.5
KURK				IAmb	IAmb	19 17 29.1	
	comp=Z,5.8nm,1.2s						
KURBB	Kurchatov Arra	73.61	325	P	P	19 17 26.7	-1.2
	comp=Z,0.6nm,0.6s,baz=106,slow=4.4,SNR=9.9						
	comp=Z,0.6nm,0.6s						
TIXI	Tiksi	74.50	357	P	P	19 17 32.2	-0.5
S12K	Black Hills	75.61	30	P	P	19 17 39.0	-0.5
VNDA	Vanda	75.79	175	P	P	19 17 41.2	+1.1
VNDA	Vanda	75.79	175	P	P	19 17 41.0	+0.9
	comp=Z,1.1nm,0.6s,baz=357,slow=5.1,SNR=7.6						
	comp=Z,1.1nm,0.6s						
O14K	Tigyukauivet M	77.64	27	P	P	19 17 50.7	-0.1
O14K				IAmb	IAmb	19 18 12.5	
	comp=Z,13nm,1.2s						
L14K	Kuka Creek	78.00	25		P	19 17 53.0	+0.2
M14K	Bethel	78.03	26		P	19 17 53.2	+0.3
K15K	Wolf Creek Mou	78.94	24	P	P	19 17 58.1	+0.1
K15K				IAmb	IAmb	19 18 02.5	
	comp=Z,9.4nm,1.2s						
BVAR	Borovoye Array	79.19	325	P	P	19 17 57.7	-1.9
	comp=Z,1.9nm,0.5s,baz=116,slow=8.0,SNR=11						
	comp=Z,1.9nm,0.5s						
M16K	Timber Creek	79.46	26	P	P	19 18 01.0	+0.2
M16K				IAmb	IAmb	19 18 02.2	
	comp=Z,8.9nm,1.0s						
M17K	Holitna River	80.29	26	P	P	19 18 06.0	+0.7
M17K				IAmb	IAmb	19 18 07.1	
	comp=Z,11nm,1.1s						
K17K	Iditarod	80.47	25	P	P	19 18 06.9	+0.7
K17K				IAmb	IAmb	19 18 07.8	
	comp=Z,8.3nm,1.1s						
OHAK	Old Harbor	80.68	31	P	P	19 18 07.6	+0.1
OHAK				IAmb	IAmb	19 18 24.4	
	comp=Z,15nm,1.2s						
KDAK	Kodiak Island	81.23	30	P	P	19 18 10.4	+0.1
KDAK				IAmb	IAmb	19 18 12.0	
	comp=Z,10nm,1.0s						
E18K	Tukpahlearik C	81.72	20	P	P	19 18 13.0	+0.1
C18K	Utukok River	82.11	19	P	P	19 18 14.7	-0.3
C18K				IAmb	IAmb	19 18 16.4	
	comp=Z,11nm,1.5s						
G19K	Purcell Mounta	82.40	22	P	P	19 18 16.7	+0.2
G19K				IAmb	IAmb	19 18 19.2	
	comp=Z,4.2nm,0.9s						
E19K	Redstone River	82.90	20	P	P	19 18 19.3	+0.3
E19K				IAmb	IAmb	19 18 21.2	
	comp=Z,3.8nm,0.8s						
F20K	Avaraart Lake	83.27	21	IAmb	IAmb	19 18 22.8	
	comp=Z,3.9nm,0.9s						
MLY	Manley	84.44	24	P	P	19 18 27.1	+0.1
MLY				IAmb	IAmb	19 18 28.9	
	comp=Z,6.9nm,1.4s						
ABKAR	Akbulak array	84.58	320	P	P	19 18 27.0	-1.0
RND	Reindeer	84.73	26	IAmb	IAmb	19 18 29.3	
	comp=Z,5.0nm,0.7s						
HIN	Hinchinbrook I	85.00	29	P	P	19 18 29.6	-0.2
I23K	Minto, Yukon-K	85.03	24	P	P	19 18 29.8	-0.1
I23K				IAmb	IAmb	19 18 30.4	
	comp=Z,2.6nm,0.7s						
E22K	Anaktuvuk Pass	85.06	21	IAmb	IAmb	19 18 31.5	
	comp=Z,4.4nm,0.8s						
CCB	Clear Creek Bu	85.53	24	P	P	19 18 31.0	-1.4
CCB				IAmb	IAmb	19 18 31.7	
	comp=Z,3.5nm,0.8s						
D23K	Nanushuk River	85.73	20	P	P	19 18 34.2	+0.9
D23K				IAmb	IAmb	19 18 36.0	
	comp=Z,10nm,1.1s						
IL31		85.94	24	IAmb	IAmb	19 18 33.3	
	comp=Z,3.1nm,0.8s						
ILAR	Eielson Array	85.94	24	P	P	19 18 32.6	-1.8
	comp=Z,2.2nm,0.6s,baz=265,slow=4.3,SNR=27						
	comp=Z,2.2nm,0.6s						
TOLK	Toolik Lake Re	86.02	20	IAmb	IAmb	19 18 57.4	
	comp=Z,7.7nm,1.3s						
HMT	Hamilton	86.06	29	P	P	19 18 35.2	0.0
G24K	Hadweenzic Riv	86.22	23	IAmb	IAmb	19 18 37.2	
	comp=Z,5.4nm,1.2s						
F24K	Squaw Lake	86.29	22	IAmb	IAmb	19 18 37.2	
	comp=Z,2.7nm,0.8s						
QSPA	South Pole Qui	87.22	180	P	P	19 18 41.3	+0.4
QSPA				IAmb	IAmb	19 18 43.8	
	comp=Z,3.9nm,0.8s						
QSPA	South Pole Qui	87.22	180	P	P	19 18 41.1	+0.2
	comp=Z,3.2nm,0.7s,baz=264,slow=0.1,SNR=21						
	comp=Z,3.2nm,0.7s						
J26L	Joseph Creek	87.27	25	IAmb	IAmb	19 18 41.9	
	comp=Z,2.7nm,0.7s						
GRNC	Granite Creek	87.36	29	IAmb	IAmb	19 18 43.4	
	comp=Z,6.5nm,1.1s						
BMAR	Burnt Mountain	87.50	22	P	P	19 18 42.9	+0.8
M27K	Edge Creek, AK	87.59	27	P	P	19 18 42.8	0.0
M27K				IAmb	IAmb	19 18 49.8	
	comp=Z,4.9nm,1.3s						
CTGM	Chitina Glacie	87.60	29	P	P	19 18 42.9	0.0
CTGM				IAmb	IAmb	19 18 44.7	
	comp=Z,5.6nm,0.9s						
L27K	Beaver Creek,	87.74	27	IAmb	IAmb	19 18 44.5	
	comp=Z,3.5nm,1.1s						
BCAR	Beaver Creek A	87.76	27	P	P	19 18 43.6	+0.2
H27K	Steamboat Moun	88.44	24	IAmb	IAmb	19 18 48.1	
	comp=Z,4.1nm,0.8s						
I28M	Miner Creek	88.96	24	IAmb	IAmb	19 18 51.9	
	comp=Z,6.2nm,1.3s						
DAWY	Dawson	88.98	26	IAmb	IAmb	19 18 50.2	
	comp=Z,4.4nm,0.7s						
L29M	L29M	89.41	27	IAmb	IAmb	19 18 54.7	
	comp=Z,6.2nm,1.3s						
K29M	Barlow Dome	89.77	26	IAmb	IAmb	19 18 56.4	
	comp=Z,2.8nm,0.8s						
CPUP	Villa Florida	147.32	153	PKPbc	PKPbc	19 25 38.9	-0.1
	comp=Z,1.5nm,1.1s,baz=72,slow=2.1,SNR=4.2						
LPAZ	La Paz	147.62	127	PKPbc	PKPbc	19 25 40.4	-0.4
	comp=Z,2.1nm,0.5s,baz=237,slow=2.1,SNR=5.2						

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*IDC **24** 19:08:39.4±0.8, 2°.55S×138°.60E, h0^{km}, mb4.0/9, mbtmp4.0/12, ML3.7/3, Error ellipse: s-maj=20.7km s-min=15.3km az=7.0*

ISC 24 19:08:43.9±0.7**, 2°.6S**±0°.1×**138°.6E**±0°.1**, h32^{km}, n13, σ0ˢ.56**/13**, mb3.9**/9**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.12	87	Pn	Pn	19 09 17.2	+0.1
	7.7nm,0.3s,baz=235,slow=9.9,SNR=7.3						
JAY				Lg	Lg	19 09 45.6	
	5.5nm,0.3s,baz=332,slow=16,SNR=2.3						
	44nm,0.7s						
BATI	Baumata	16.63	242	Pn	P	19 12 36.4	-0.6
	1.6nm,0.3s,baz=160,slow=18,SNR=2.7						
	22nm,1.0s						
WRA	Warramunga Arr	17.71	193	P	Pn	19 12 48.9	+0.7
	0.2nm,0.3s,baz=17,slow=13,SNR=6.6						
	4.7nm,0.9s						
ASAR	Alice Springs	21.41	192	P	P	19 13 28.5	-0.7
	3.9nm,0.8s,baz=20,slow=11,SNR=4.7						
	3.9nm,0.8s						
CMAR	Chiang Mai Arr	44.28	300	P	P	19 16 51.8	+0.8
	1.0nm,0.7s,baz=119,slow=6.3,SNR=9.0						
	1.0nm,0.7s						
SONM	Songino Array	57.58	335	P	P	19 18 30.6	-0.1
	0.9nm,0.8s,baz=103,slow=6.7,SNR=4.2						
	0.9nm,0.8s						
PETK	Petropavlovsk-	57.80	13	P	P	19 18 32.4	+0.4
	1.0nm,0.8s,baz=174,slow=5.8,SNR=3.4						
	1.0nm,0.8s						
ZALV	Zalesovo Beam	71.79	330	P	P	19 20 02.5	-0.6
	0.7nm,0.6s,baz=112,slow=6.4,SNR=2.4						
	0.7nm,0.6s						
KURBB	Kurchatov Arra	73.58	325	P	P	19 20 13.9	+0.1
	0.8nm,0.7s,baz=122,slow=5.8,SNR=4.4						
	0.8nm,0.7s						
BVAR	Borovoye Array	79.17	325	P	P	19 20 45.4	-0.1
	1.2nm,0.7s,baz=117,slow=8.5,SNR=3.5						
	1.2nm,0.7s						
ILAR	Eielson Array	85.80	24	P	P	19 21 19.4	-0.5
	1.0nm,0.6s,baz=257,slow=3.6,SNR=6.3						
	1.0nm,0.6s						
QSPA	South Pole Qui	87.33	180	P	P	19 21 28.0	+0.5
	2.4nm,0.8s,baz=328,slow=0.6,SNR=5.6						
	2.4nm,0.8s						
LPAZ	La Paz	147.60	126	PKPbc	PKiKP	19 28 28.6	-0.4
	1.2nm,0.7s,baz=236,slow=3.6,SNR=3.0						

CATAC 24 19:08:50.0±0.6**, 11°N**±3°×**8°7W**±°**, h1^{km}, M2.9**/12**, MLv2.9**/12**, Error ellipse: s-maj=10.0km s-min=4.9km az=60.4, confirmed, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	Copaltepe	1.29	22	P	Pg	19 09 14.5	-0.4
MOMN	Momotombo	1.52	20	P	Pn	19 09 17.7	-0.7
MOMN				S	Sn	19 09 36.2	-2.8
CARN	Rivas	1.54	82	P	Pn	19 09 18.7	+0.1
CARN				S	Sn	19 09 39.0	-0.3
CNGN	Cerro Negro	1.57	14	P	Pn	19 09 18.9	-0.1
MOM2	El Cardon	1.57	22	P	Pn	19 09 18.3	-0.7
MOM2				S	Sn	19 09 37.7	-2.4
TEL3	Telica 3	1.61	8	P	Pn	19 09 19.1	-0.5
PLRN	Geotermica Pol	1.63	11	P	Pn	19 09 19.3	-0.6
PKGN	Cerro Pekin	1.69	3	P	Pn	19 09 20.4	-0.3
INDI	Punta indio, G	1.90	125	S	Sn	19 09 45.0	-3.1
INDI	Punta indio, G	1.90	125	P	Pn	19 09 24.0	+0.5
BOAB	BOACO BROADBAN	2.02	43	P	Pn	19 09 23.8	-1.3
ACON	Acoyapa	2.11	62	P	Pb	19 09 28.5	-0.7
ACON	Acoyapa	2.11	62	S	Sb	19 09 56.0	+0.1
RCPN	Sur Rio San Ju	2.72	21	P	Pn	19 09 33.9	-1.1

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*IDC **24** 19:10:20.4±0.8, 34°.59N×87°.69E, h0^{km}, mb3.8/9, mbtmp3.7/14, ML3.3/5, Error ellipse: s-maj=32.1km s-min=15.7km az=53.0*

ISC 24 19:10:25.6±0.8**, 34°.7N**±0°.1×**87°.8E**±0°.2**, h35^{km}, n15, σ0ˢ.78**/15**, mb3.8**/8**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	12.79	343	Pn	Pn	19 13 23.8	-1.2
	0.1nm,0.3s,baz=156,slow=15,SNR=5.4						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	17.30	340	P	Pn	19 14 23.7	-0.5
	0.1nm,0.3s,baz=159,slow=11,SNR=14						
	2.4nm,0.9s						
CMAR	Chiang Mai Arr	18.98	145	P	Pn	19 14 44.7	-0.3
	0.1nm,0.3s,baz=335,slow=11,SNR=15						
	1.8nm,0.8s						
SONM	Songino Array	19.16	41	P	P	19 14 46.9	+0.9
	0.2nm,0.3s,baz=231,slow=9.1,SNR=5.9						
	0.4nm,0.5s						
ZALV	Zalesovo Beam	19.38	355	P	P	19 14 47.7	-0.5
	0.1nm,0.3s,baz=173,slow=13,SNR=6.9						
	1.7nm,0.8s						
BVAR	Borovoye Array	22.11	331	P	P	19 15 19.2	+1.5
	0.5nm,0.4s,baz=132,slow=8.6,SNR=4.7						
	0.5nm,0.4s						
BRTR	Keskin Array B	42.85	293	P	P	19 18 21.5	+1.0
	0.4nm,0.4s,baz=83,slow=12,SNR=2.2						
	0.4nm,0.4s						
FINES	FINESS Array B	46.80	325	P	P	19 18 51.7	+0.3
	0.8nm,0.6s,baz=92,slow=9.5,SNR=6.2						
	0.8nm,0.6s						
NB2	NORSAR Subarra	53.98	324	P	P	19 19 45.5	-0.2
	comp=Z,4.9nm,1.2s,baz=82,slow=7.4						
NOA	NORSAR Array B	53.98	324	P	P	19 19 45.3	-0.4
	comp=Z,1.0nm,0.7s,baz=83,slow=7.3,SNR=6.0						
	comp=Z,1.0nm,0.7s						
GERES	GERESS Array B	54.91	309	P	P	19 19 52.6	-0.2
	comp=Z,0.9nm,0.9s,baz=90,slow=6.7,SNR=8.6						
	comp=Z,0.9nm,0.9s						
WRA	Warramunga Arr	70.07	133	P	P	19 21 34.0	-0.3
	comp=Z,0.6nm,0.6s,baz=325,slow=6.7,SNR=13						
	comp=Z,0.6nm,0.6s						
ASAR	Alice Springs	72.70	136	P	P	19 21 50.1	0.0
	comp=Z,1.0nm,1.0s,baz=325,slow=7.0,SNR=4.8						
	comp=Z,1.0nm,1.0s						
TORD	Torodi Ar. Bea	79.44	279	P	P	19 22 27.9	-0.8
	comp=Z,0.8nm,0.3s,baz=40,slow=4.3,SNR=1.3						
	comp=Z,0.8nm,0.3s						
YKA	Yellowknife Ar	81.51	10	P	P	19 22 39.5	+0.4
	comp=Z,0.5nm,0.8s,baz=336,slow=6.6,SNR=4.3						
	comp=Z,0.5nm,0.8s						

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*IDC **24** 19:14:45.1±1.2, 37°.89N×77°.81E, h0^{km}, mb3.7/9, mbtmp3.7/12, ML3.2/3, MS4.0/1, Error ellipse: s-maj=25.3km s-min=18.2km az=49.0*

*NNC **24** 19:14:49.0±1.6, 37°.89N×77°.72E, h20^{km}±7^{km}, mb4.3, mpv4.1, Error ellipse: s-maj=12.2km s-min=9.7km az=125.0*

ISC 24 19:14:46.8±1.1**, 37°.90N**±0°.09×**77°.80E**±0°.08**, h10^{km}, n43, σ2ˢ.12**/43**, mb3.6**/9**, 10C-7D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	5.17	5	Pg	Pg	19 16 24.2	-1.7
	29nm,0.4s						
SATY				Lg	Lg	19 17 36.4	
	66nm,0.5s						
MDOK	Medeo	5.29	354	Pg	Pg	19 16 25.6	-2.5
	18nm,0.5s						
MDOK				Pg	Pb	19 16 26.1	+6.7
	27nm,0.4s						
MDOK				Lg	Lg	19 17 38.4	
	22nm,0.6s						
MDOK				Lg	Lg	19 17 39.1	
	22nm,0.7s						
TKM2	Tokmak 2	5.29	342	⇓Pg	Pb	19 16 21.8	+2.3
	4.9nm,0.5s						
TKM2				⇑Lg	Lg	19 17 39.6	
	18nm,0.8s						
UZB	Uzynbulak	5.32	10	Pg	Pg	19 16 26.3	-2.5
	10nm,0.3s						
UZB				Lg	Lg	19 17 38.7	
	12nm,0.6s						
KST	Kastek	5.32	345	Pg	Pg	19 16 26.1	-2.6
	5.2nm,0.4s						
KST				Lg	Lg	19 17 38.4	
	32nm,0.5s						
KNDC	Almaty	5.35	353	⇑Pg	Pg	19 16 25.6	-3.6
	19nm,0.6s						
KNDC				⇑Lg	Lg	19 17 40.7	
	112nm,0.9s						
KOTS	Kotyrbulak	5.35	355	Pg	Pg	19 16 27.2	-2.1
	17nm,0.3s						
KOTS				Lg	Lg	19 17 40.3	
	46nm,0.4s						
AAK	Ala-Archa	5.36	333	Pn	Pn	19 16 08.1	+1.1
	0.5nm,0.3s,baz=122,slow=5.4,SNR=5.7						
AAK				Pg	Pb	19 16 23.0	+2.3
	0.7nm,0.3s,baz=355,slow=7.9,SNR=4.9						
AAK				Lg	Lg	19 17 36.0	
	1.0nm,0.3s,baz=112,slow=22,SNR=4.1						
	2.4nm,0.5s						
AAK	Ala-Archa	5.36	333	⇑Pg	Pg	19 16 29.0	-0.5
	2.1nm,0.5s						
AAK				⇑Lg	Lg	19 17 38.9	
	37nm,0.9s						
SHLS	Shalkode	5.40	13	Pg	Pg	19 16 28.6	-1.7
	22nm,0.3s						
SHLS				Lg	Lg	19 17 43.2	
	22nm,0.4s						
PDGK	Podgornoye	5.57	13	⇑Pn	Pn	19 16 12.7	+2.7
	2.5nm,0.3s						
PDGK				⇓Lg	Lg	19 17 45.3	
	40nm,0.9s						
CHMS	Chumysh	5.60	336	⇑Pg	Pb	19 16 28.0	+3.4
	8.1nm,0.6s						
CHMS				⇑Lg	Lg	19 17 45.2	
	20nm,0.8s						
KPKS	Kokpek	5.60	7	Pg	Pg	19 16 31.1	-3.0
	2.5nm,0.5s						
KPKS				Lg	Lg	19 17 46.6	
	36nm,0.4s						
KTBS	Karatobe	5.87	352	Pg	Pg	19 16 35.6	-3.5
	12nm,0.4s						
KTBS				Lg	Lg	19 17 54.5	
	21nm,0.5s						
KRBS	Karabastau	6.01	345	Pg	Pg	19 16 37.8	-4.0
	4.2nm,0.3s						
KRBS				Lg	Lg	19 17 59.0	
	6.2nm,0.7s						
KUU	Kurty	6.09	350	Pg	Pg	19 16 39.1	-4.2
	2.1nm,0.1s						
KUU				Lg	Lg	19 18 00.4	
	28nm,0.5s						
BLB	Baldybastay	6.21	5	Pg	Pg	19 16 42.7	-3.0
	39nm,0.3s						
BLB				Lg	Lg	19 18 07.3	
	18nm,0.6s						
ARXS	Arharly	6.31	0	Pg	Pg	19 16 44.0	-3.6
	9.6nm,0.4s						
ARXS				Lg	Lg	19 18 09.8	
	7.7nm,0.4s						
KNOS	Konyrlen	6.54	9	Pg	Pg	19 16 49.8	-2.2
	6.0nm,0.4s						
KNOS				Lg	Lg	19 18 19.2	
	11nm,0.1s						
DJR	Jarkent	6.60	13	Pg	Pg	19 16 51.5	-1.7
	3.1nm,0.2s						
DJR				Lg	Lg	19 18 22.0	
	11nm,0.4s						
KK31	Karatay Array	7.60	315	⇑Pn	Pn	19 16 38.4	+0.7
	0.4nm,0.6s,baz=122,slow=12,SNR=4.1						
KK31				⇓Lg	Lg	19 18 52.7	
	4.8nm,0.8s						
MAKZ	Makanchi	9.42	18	IAmb	IAmb	19 17 06.3	
	comp=Z,6.8nm,1.0s						
MAKZ	Makanchi	9.42	18	⇓Pn	Pn	19 17 04.6	+2.0
	comp=Z,4.1nm,0.7s						
MAKZ				⇓Sn	Sn	19 18 50.3	+1.8
	comp=Z,1.3nm,0.7s						
MAKZ	Makanchi	9.42	18		Pn	19 17 04.5	+1.9
MK31	Makanchi Array	9.49	19	⇓Pn	Pn	19 17 04.4	+0.9
	comp=Z,1.0nm,0.3s,baz=201,slow=12,SNR=84						
MK31				Sn	Sn	19 18 50.1	-0.1
	comp=Z,2.8nm,0.7s,baz=194,slow=23,SNR=7.3						
MKAR	Makanchi Array	9.49	19		Pn	19 17 04.6	+1.1
MKAR	Makanchi Array	9.49	19	Pn	Pn	19 17 04.2	+0.7
	comp=Z,1.8nm,0.3s,baz=205,slow=13,SNR=87						
MKAR				Sn	Sn	19 18 49.5	-0.7
	comp=Z,0.6nm,0.3s,baz=195,slow=23,SNR=7.5						
	comp=Z,2.8nm,0.3s						
WMQ	Urumqi	9.55	49	P	Pn	19 17 10.3	+6.0
OTUK	Ortayu	11.08	341	⇓Pn	Pn	19 17 26.2	+0.9
	comp=Z,0.6nm,0.5s						
OTUK				⇑Lg	Lg	19 20 38.7	
	comp=Z,11nm,1.1s						
KURBB	Kurchatov Arra	12.73	2	Lg	Lg	19 21 31.8	
	baz=300,slow=19,SNR=1.7						
BVAR	Borovoye Array	15.98	344	Pn	P	19 18 34.5	-0.6
	baz=154,slow=12,SNR=4.1						
BVAR				Lg	Lg	19 23 14.4	
	baz=274,slow=39,SNR=1.8						
ZALV	Zalesovo Beam	16.76	15	Pn	P	19 18 43.1	-0.7
	comp=Z,0.1nm,0.3s,baz=195,slow=10,SNR=2.3						
	comp=Z,0.7nm,0.6s						
SONM	Songino Array	23.07	55	P	P	19 19 52.0	-0.6
	comp=Z,0.7nm,0.6s,baz=260,slow=8.6,SNR=4.4						
	comp=Z,0.7nm,0.6s						
CMAR	Chiang Mai Arr	26.77	131	P	P	19 20 26.4	-0.6
	comp=Z,0.2nm,0.4s,baz=308,slow=11,SNR=4.3						
	comp=Z,0.2nm,0.4s						
FINES	FINESS Array B	39.47	324	P	P	19 22 17.2	+0.3
	comp=Z,0.7nm,0.5s,baz=111,slow=10,SNR=7.1						
	comp=Z,0.7nm,0.5s						
ARCES	ARCESS Array B	42.03	335	P	P	19 22 38.2	+0.2
	comp=Z,1.6nm,0.8s,baz=96,slow=9.2,SNR=1.9						
	comp=Z,1.6nm,0.8s						
JNU	Nakatsue	42.99	80	LR	LR	19 41 48.1	
	comp=Z,210nm,20.4s,baz=48,slow=38						
HFS	Hagfors	45.37	321	P	P	19 23 05.4	+0.3
	comp=Z,1.1nm,0.5s,baz=98,slow=9.1,SNR=6.2						
	comp=Z,1.1nm,0.5s						
GERES	GERESS Array B	46.56	305	P	P	19 23 15.3	+0.6
	comp=Z,0.2nm,0.5s,baz=66,slow=9.8,SNR=2.1						
	comp=Z,0.2nm,0.5s						
NB2	NORSAR Subarra	46.58	322	P	P	19 23 14.5	-0.1
	comp=Z,1.0nm,0.6s,baz=89,slow=7.9						
NOA	NORSAR Array B	46.58	322	P	P	19 23 14.8	+0.2
	comp=Z,1.1nm,0.6s,baz=89,slow=8.0,SNR=7.1						
	comp=Z,1.1nm,0.6s						
EKA	Eskdalemuir Ar	55.03	316	P	P	19 24 18.1	-0.3
	comp=Z,1.5nm,0.8s,baz=68,slow=7.8,SNR=3.6						
	comp=Z,1.5nm,0.8s						
ESDC	Sonseca Array	61.55	300	P	P	19 25 02.7	-1.4
	comp=Z,0.2nm,0.5s,baz=68,slow=6.1,SNR=1.8						
	comp=Z,0.2nm,0.5s						

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*IDC **24** 19:15:38.6±1.0, 24°.06S×180°.00W, h508^{km}±9^{km}, mb3.4/13, mbtmp4.3/15, Error ellipse: s-maj=15.1km s-min=12.0km az=99.0*

*NEIC **24** 19:15:39.6±1.3, 24°.1S±0°.1×180°.0W±0°.1, h515^{km}±8^{km}, mb4.4/23, Error ellipse: s-maj=20.9km s-min=13.2km az=115.0*

*NOU **24** 19:15:41.3, 24°.00S×179°.99W, h476^{km}, ML4.9/5, South of Fiji Islands*

ISC 24 19:15:39.4±0.5**, 24°.14S**±0°.06×**179°.96W**±0°.09**, h518^{km}, n130, σ1ˢ.46**/134**, mb4.2**/25**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.41	161	P	P	19 17 11.4	+0.5
RAO	Raoul Island	5.41	161	P	P	19 17 11.5	+0.6
	815nm,0.2s,baz=83,slow=6.7,SNR=21						
RAO	Raoul Island	5.41	161	P	P	19 17 12.1	+1.2
GLKZ	Green Lake	5.42	161	P	P	19 17 11.8	+0.8
LKBA	Tubou, Lakemba	5.97	11	P	P	19 17 15.1	-1.3
MSVF	Nonsavu	6.64	343		P	19 17 21.5	-1.3
MSVF	Nonsavu	6.64	343	P	P	19 17 21.6	-1.2
	13nm,0.5s,baz=302,slow=23,SNR=26						
MSVF				S	S	19 18 45.0	-2.4
	18nm,1.1s,baz=159,slow=23,SNR=1.7						
MSVF	Nonsavu	6.64	343	P	P	19 17 21.7	-1.2
TAVE	Taveuni	7.39	0	P	P	19 17 29.8	-0.5
DGTI	Dogotuki	7.80	358	P	P	19 17 33.7	-0.7
FUTU	Fugatoga	9.93	10	P	P	19 17 54.9	-1.5
NIUE	Niue	10.60	64	P	P	19 17 56.7	-6.7
PINNC	Pines Island,	11.67	275	P	P	19 18 16.2	+1.8
OUZ	Omahuta	12.38	205	P	P	19 18 24.0	+2.3
DZM	Mont Dzumac	12.68	277	P	P	19 18 25.9	+0.7
	7.3nm,0.8s,baz=50,slow=14,SNR=2.7						
AFI	Afiamalu	12.78	39	P	P	19 18 13.3	-13
MXZ	Matakaoa Point	13.46	186	P	P	19 18 34.2	+1.1
WMGZ	Waiomatatini S	13.71	185	P	P	19 18 36.1	+0.5
HAZ	Te Kaha	13.71	188	P	P	19 18 36.5	+0.9
RUGZ	Raukumara Rang	13.93	188	P	P	19 18 37.1	-1.0
PUZ	Puketiti	13.97	186	P	P	19 18 39.6	+1.2
TOZ	Tahuroa Road	14.09	195	P	P	19 18 40.3	+0.7
TWGZ	Tauwhareparae	14.10	187	P	P	19 18 39.9	+0.1
KMRZ	Kaimai	14.10	193	P	P	19 18 40.6	+0.8
URZ	Urewera	14.29	189	P	P	19 18 39.1	-2.6
	13nm,0.3s,baz=39,slow=2.1,SNR=16						
URZ				S	S	19 21 07.1	-5.1
	36nm,0.9s,baz=159,slow=21,SNR=14						
URZ	Urewera	14.29	189	P	P	19 18 41.0	-0.8
MWZ	Matawai	14.31	188	P	P	19 18 40.8	-1.2
TKGZ	Te Karaka	14.38	187	P	P	19 18 43.2	+0.6
MUGZ	Murupara	14.56	190	P	P	19 18 43.3	-1.2
TLZ	Tolley Road	14.66	194	P	P	19 18 49.2	+3.6
RTZ	Ruatahuna	14.66	190	P	P	19 18 46.5	+0.7
SNGZ	Shannon Statio	14.78	188	P	P	19 18 46.5	-0.4
MTHZ	Maungataniwha	14.92	190	P	P	19 18 48.1	-0.2
RAHZ	Arahi	14.94	189	P	P	19 18 47.7	-0.9
HIZ	Hauiti	14.99	196	P	P	19 18 51.7	+2.7
RATZ	Rangitukua	15.12	193	P	P	19 18 51.0	+0.5
NMHZ	Naumai	15.16	190	P	P	19 18 50.9	0.0
BKZ	Black Stump Fm	15.28	191	P	P	19 18 51.9	-0.2
BKZ					S	19 21 28.5	-2.5
BKZ	Black Stump Fm	15.28	191	P	P	19 18 50.6	-1.5
TMVZ	Te Maari	15.38	193	P	P	19 18 53.1	-0.1
TWVZ	Taurewa	15.39	194	P	P	19 18 52.5	-0.8
ETVZ	East Tongariro	15.39	193	P	P	19 18 52.5	-0.9
WTVZ	West Tongariro	15.40	193	P	P	19 18 53.5	+0.1
NNVZ	North Ngauruho	15.41	193	P	P	19 18 54.9	+1.3
OTVZ	Oturere	15.43	193	P	P	19 18 51.7	-2.1
NGZ	Ngauruhoe	15.46	193	P	P	19 18 54.5	+0.4
SNVZ	South Ngauruho	15.46	193	P	P	19 18 52.5	-1.6
MCHZ	McNeill Hill	15.52	190	P	P	19 18 54.8	+0.2

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TUVZ  Tukino            15.53 193  P        P         19 18 54.5  -0.4
FWVZ  Far West T-bar    15.54 193  P        P         19 18 54.1  -0.9
KWHZ  Kaweka Forest     15.54 191  P        P         19 18 53.2  -1.6
MAVZ  Matarangi         15.55 193  P        P         19 18 55.0  -0.2
WHVZ  Whangaehu Hut     15.56 193  P        P         19 18 54.3  -0.9
TRVZ  Turoa             15.58 193  P        P         19 18 55.3  -0.2
VRZ   Vera Road         15.60 195  P        P         19 18 57.5  +2.1
WNVZ  Wahianoa          15.60 193  P        P         19 18 54.5  -1.1
MOVZ  Moawhango         15.65 192  P        P         19 18 54.5  -1.5
KRHZ  Kereru            15.77 190  P        P         19 18 55.5  -1.6
KAHZ  Kahuranaki        15.84 189  P        P         19 18 57.2  -0.6
PKE   Pukeiti           15.86 197  P        P         19 19 01.5  +3.4
LREZ  Lake Rotokare     16.00 196  P        P         19 19 02.5  +3.0
PNHZ  Pukenui           16.06 191  P        P         19 18 57.1  -3.0
PXZ   Pawanui           16.07 189  P        P         19 18 59.0  -1.1
TSZ   Takapari Road     16.24 191  P        P         19 18 59.3  -2.7
DVHZ  Dannevirke        16.44 191  P        P         19 19 02.6  -1.4
QRZ   Quartz Range      17.79 199  P        P         19 19 16.1  -0.7
TKNZ  Takaka Hill       17.86 198  P        P         19 19 16.3  -1.1
LTZ   Lake Taylor       19.67 197  P        P         19 19 32.9  -1.0
RPZ   Rata Peaks        20.87 199  P        P         19 19 44.7  -0.1
      8.2nm,0.5s,baz=305,slow=2.8,SNR=8.6
      8.2nm,0.5s
ARMA  Armidale          25.97 250  P        P         19 20 31.7  +1.1
ARMA                               IAmb     IAmb      19 20 34.9
      comp=Z,27nm,1.3s
EIDS  Eidsvold          26.31 261  P        P         19 20 34.0  +0.5
EIDS                               IAmb     IAmb      19 20 37.5
      comp=Z,23nm,1.5s
CTAO  Charters Tower    31.51 271  P        P         19 21 18.6  -0.3
CTAO                               IAmb     IAmb      19 21 19.6
      comp=Z,22nm,1.1s
TOO   Toolangi          32.35 237  P        P         19 21 26.1  +0.3
TAU   Tasmania Unive    32.80 227  P        P         19 21 30.5  +1.0
STKA  Stephens Creek    34.67 248  P        P         19 21 46.2  +0.7
STKA                               IAmb     IAmb      19 21 58.1
      comp=Z,26nm,1.2s
STKA  Stephens Creek    34.67 248  P        P         19 21 45.0  -0.4
      comp=Z,1.8nm,0.5s,baz=96,slow=8.2,SNR=9.1
      comp=Z,1.8nm,0.5s
PATS  Pohnpei           37.38 323  P        P         19 22 06.1  -1.9
AS31  Alice Springs     42.03 261           P         19 22 45.1  -0.4
ASAR  Alice Springs     42.03 261  P        P         19 22 45.0  -0.5
ASAR  Alice Springs     42.03 261  P        P         19 22 45.1  -0.3
      comp=Z,2.0nm,0.5s,baz=96,slow=7.0,SNR=71
ASAR                               ScP      ScP       19 27 31.4  +1.8
      comp=Z,2.0nm,0.8s,baz=107,slow=4.1,SNR=7.9
      comp=Z,2.0nm,0.5s
WRA   Warramunga Arr    42.43 266           P         19 22 47.6  -1.0
WRA   Warramunga Arr    42.43 266  P        P         19 22 47.8  -0.8
      comp=Z,4.5nm,0.6s,baz=103,slow=8.4,SNR=38
WRA                                ScP      ScP       19 27 33.8  +2.6
      comp=Z,2.9nm,1.0s,baz=105,slow=3.9,SNR=5.1
      comp=Z,4.5nm,0.6s
FITZ  Fitzroy Crossi    50.85 266  P        P         19 23 52.5  +0.1
      comp=Z,3.0nm,0.6s,baz=153,slow=13,SNR=6.6
      comp=Z,3.0nm,0.6s
NWAO  Narrogin (SRO)    55.17 246  P        P         19 24 21.8  -1.2
NWAO                               IAmb     IAmb      19 25 03.8
      comp=Z,36nm,1.4s
MBWA  Marble Bar        55.37 260  P        P         19 24 23.1  -1.4
MBWA                               IAmb     IAmb      19 24 46.0
      comp=Z,16nm,1.4s
MORW  Morawa            56.83 250  P        P         19 24 33.3  -1.3
MORW                               IAmb     IAmb      19 24 37.2
      comp=Z,19nm,1.2s
CASY  Casey             59.91 206  P        P         19 24 54.5  -0.2
QSPA  South Pole Qui    65.94 180  P        P         19 25 34.9  +1.2
QSPA                               IAmb     IAmb      19 25 35.9
      comp=Z,9.0nm,0.8s
QSPA  South Pole Qui    65.94 180  P        P         19 25 34.9  +1.2
      comp=Z,7.8nm,0.7s,baz=29,slow=1.2,SNR=47
      comp=Z,7.8nm,0.7s
MJAR  Matsushiro Arr    72.11 326  P        P         19 26 10.7  -0.4
      comp=Z,1.5nm,0.8s,baz=167,slow=5.8,SNR=3.1
      comp=Z,1.5nm,0.8s
MAW   Mawson            77.54 200  P        P         19 26 41.7  +0.6
      comp=Z,2.3nm,0.6s,baz=100,slow=9.7,SNR=9.1
      comp=Z,2.3nm,0.6s
PETK  Petropavlovsk-    79.34 347  P        P         19 26 50.8  -0.1
      comp=Z,1.6nm,0.7s,baz=116,slow=6.4,SNR=5.9
      comp=Z,1.6nm,0.7s
NVAR  Mina Array Bea    84.90  44  P        P         19 27 19.0  -0.8
      comp=Z,0.5nm,0.7s,baz=228,slow=7.8,SNR=4.0
      comp=Z,0.5nm,0.7s
MA2   Magadan           86.82 346  P        P         19 27 28.5  +0.4
      comp=Z,8.6nm,1.6s
I07A  Izee              87.55  39  P        P         19 27 32.1   0.0
I07A                               IAmb     IAmb      19 27 34.2
      comp=Z,3.2nm,0.9s
U15A  North Rim         87.74  48           P         19 27 33.6  +0.3
U15A                               IAmb     IAmb      19 27 35.1
      comp=Z,3.7nm,1.0s
G08A  Pilot Rock        88.59  38           P         19 27 37.2  +0.3
G08A                               IAmb     IAmb      19 27 38.4
      comp=Z,4.8nm,1.3s
HMU   Henry Mountain    89.58  48  P        P         19 27 41.8  -0.2
HMU                                IAmb     IAmb      19 27 57.0
      comp=Z,6.4nm,0.8s
CMAR  Chiang Mai Arr    89.64 290  P        P         19 27 41.5  -0.8
      comp=Z,0.3nm,0.5s,baz=110,slow=6.0,SNR=2.3
      comp=Z,0.3nm,0.5s
TMUT  Trail Mountain    89.98  46           P         19 27 44.3  +0.5
TMUT                               IAmb     IAmb      19 27 45.6
      comp=Z,4.6nm,0.8s
TXAR  Lajitas Array     90.53  58  P        P         19 27 47.2  +1.0
      comp=Z,1.6nm,0.7s,baz=217,slow=5.6,SNR=14
      comp=Z,1.6nm,0.7s
HHC   Hu-ho-hao-te      90.61 315 eP        P         19 27 48.3  +1.9
HHC                                pmax     pmax
      comp=Z,11nm,0.7s
PZH   PanZhiHua         90.83 299  P        P         19 27 48.4  +0.7
PDAR  Pinedale Array    92.84  44  P        P         19 27 56.6  -0.2
      comp=Z,0.2nm,0.3s,baz=257,slow=3.8,SNR=2.4
      comp=Z,0.2nm,0.3s
MKAR  Makanchi Array   112.34 313  PKiKP    PKiKP     19 33 15.3  -0.8
      comp=Z,0.2nm,0.6s,baz=105,slow=2.4,SNR=3.5
KURBB Kurchatov Arra   115.44 316  PKP      PKPdf     19 33 20.5  -1.4
      comp=Z,0.2nm,0.3s,baz=89,slow=1.7,SNR=4.4
BVAR  Borovoye Array   120.64 319  PKP      PKPdf     19 33 31.0  -0.8
      comp=Z,0.8nm,0.5s,baz=103,slow=3.3,SNR=5.1
ARCES ARCESS Array B   132.13 348  PKP      PKPdf     19 33 51.9  -1.4
      comp=Z,1.2nm,0.7s,baz=12,slow=1.5,SNR=9.0
FINES FINESS Array B   138.69 341  PKP      PKPdf     19 34 06.7  +1.0
      comp=Z,0.2nm,0.3s,baz=349,slow=2.8,SNR=1.5
FINES                              SKPbc    SKPbc     19 36 52.0  +0.4
      comp=Z,1.5nm,0.8s,baz=122,slow=2.5,SNR=4.8
NOA   NORSAR Array B   142.32 351  PKhKP    PKPpre    19 34 09.2
      comp=Z,0.1nm,0.6s,baz=23,slow=1.7,SNR=0.9
HFS   Hagfors          142.79 349  PKhKP    PKPpre    19 34 09.3
      comp=Z,1.6nm,0.4s,baz=56,slow=3.7,SNR=16
PABE  Paberze          144.05 337           PKPbc     19 34 14.1  -0.6
AKASG Malin Array Be   145.19 327  PKPbc    PKPdf     19 34 17.3  -0.2
      comp=Z,0.3nm,0.3s,baz=45,slow=4.0,SNR=8.4
AKASG                              SKPbc    SKPbc     19 37 09.2  +1.2
      comp=Z,1.6nm,0.6s,baz=52,slow=2.0,SNR=7.3
AKBB  Malin Array Si   145.19 327  PKP      PKPdf     19 34 17.2  -0.3
KIEV  Kiev             145.20 327  PKP      PKPdf     19 34 17.5   0.0
AK04  Malin Array Si   145.21 327  PKP      PKPdf     19 34 17.4  -0.1
AK08  Malin Array Si   145.22 327  PKP      PKPdf     19 34 18.3  +0.7
MI28  Mi28,Pidlybu     145.80 329  PKP      PKPdf     19 34 19.5  +0.9
LUBAR Lubar, Ukraine   146.41 327  PKP      PKPdf     19 34 20.1  +0.5
RNPP5 Staryi Chortor   146.43 330  PKP      PKPdf     19 34 20.9  +1.3
BRTR  Keskin Array B   147.75 307  PKPbc    PKPbc     19 34 25.6  -0.4
      comp=Z,0.9nm,0.6s,baz=140,slow=3.5,SNR=5.4
MMAI  Mount Meron Ar   147.83 294  PKPbc    PKPbc     19 34 26.0  -0.4
      comp=Z,2.9nm,0.5s,baz=64,slow=3.8,SNR=9.1
EKA   Eskdalemuir Ar   148.75   4  PKPbc    PKPdf     19 34 26.5  +3.2
      comp=Z,1.7nm,0.8s,baz=348,slow=2.7,SNR=4.0
BUR08 Bucovina Ar. S   149.18 326           PKPbc     19 34 27.9  -1.3
CSS   Mathiatis        149.23 298           PKPdf     19 34 27.4  +2.7
BORA  Eskisehir        150.00 309           PKPbc     19 34 29.8  -1.6
CLL   Collm            151.09 343           PKPdf     19 34 30.6  +3.5
CLL   Collm            151.09 343 i PKPbc   PKPbc     19 34 33.0  -0.5
      comp=Z,7.0nm,0.8s
CLL                               epPKPbc   pPKPbc    19 36 37.0  +3.0
CLL                               i SKPdf   SKPdf     19 37 07.2  -4.1
GERES GERESS Array B   153.09 340  PKPbc    PKPbc     19 34 37.8  -0.4
      comp=Z,0.3nm,0.8s,baz=75,slow=5.5,SNR=4.4
TORD  Torodi Ar. Bea   168.95 188  PKPab    PKPab     19 36 00.2  -1.9
      comp=Z,1.1nm,0.3s,baz=182,slow=5.1,SNR=1.4
```

IDC ***24*** *19:19:28.8±2.0, 2°.60S×138°.54E, h0km, mb3.5/2, mbtmp3.5/4, ML3.6/2, Error ellipse: s-maj=37.6km s-min=19.5km az=160.0*

DJA ***24*** *19:19:33.7±0.9, 2°S±6°×13°9E±°, h16km±8km, M3.9/7, mb4.3/1, MLv3.7/7*

ISC 24 19:19:33.2±0.9**, 2°.7S**±0°.1×**138°.63E**±0°.06**, h32**km**, n11, σ1s.29**/14**, Irian Jaya**

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Code  Station Name       Δ°   AZ°    Phase ID          Time       Res
                                    Op       ISC      h  m  s     ISC
SMPI  Sarmi              0.68   7   P        Pn       19 19 45.1  -1.5
GENI  Genyem             1.54  87   P        Pb       19 20 02.2  +1.1
JAY   Jayapura           2.08  86   Pn       Pn       19 20 08.1  +2.1
      8.2nm,0.3s,baz=257,slow=8.5,SNR=9.3
JAY                                 Lg       Lg       19 20 36.4
      2.5nm,0.3s,baz=151,slow=19,SNR=1.9
      13nm,0.3s
JAY   Jayapura           2.08  86   P        Pb       19 20 09.2  -1.1
SRPI  Serui, Papua       2.52 288   P        Pn       19 20 11.8  -0.1
SRPI                                S        Sn       19 20 42.2  +0.7
BAKI  Biak               2.92 300   P        Pn       19 20 18.0  +0.5
BAKI                                S        Sn       19 20 53.7  +2.3
RKPI  Ransiki, Papua     4.60 284   P        Pn       19 20 39.8  -0.8
RKPI                                S        Sn       19 21 32.2  -0.7
SWI   Sorong             7.58 284   P        Pn       19 21 20.7  -0.9
WRA   Warramunga Arr    17.67 193   P        Pn       19 23 36.1  -1.0
      0.3nm,0.3s,baz=16,slow=12,SNR=12
      0.8nm,0.7s
ASAR  Alice Springs     21.37 192   P        P        19 24 18.7  +0.5
      1.2nm,0.8s,baz=17,slow=10.0,SNR=4.5
      1.2nm,0.8s
ILAR  Eielson Array     85.83  24   P        P        19 32 09.5  +0.1
      0.3nm,0.6s,baz=252,slow=4.9,SNR=2.5
      0.3nm,0.6s
```

MOS ***24*** *19:21:36.4±0.9, 57°.98S×25°.37W, h37km, mb5.6/17, MS5.1/11, Error ellipse: s-maj=21.7km s-min=10.4km az=101.8*

NEIC ***24*** *19:21:36.1±1.5, 57°.99S±0°.09×25°.4W±0°.2, h26km±1km, mb5.6/135, Ms_20 5.2/490, Mww5.5/18, Error ellipse: s-maj=16.5km s-min=14.3km az=209.0*

NEIC ***24*** *19:21:37.4, 58°.00S×25°.41W, h40km*

NEIC ***24*** *19:21:37.4, 58°.10S×24°.85W, h40km, Moment Tensor Solution. Duration: 2s.8 Moment tensor: Scale 10^{17}Nm; M_{rr}2.29; $M_{\theta\theta}$0.09; $M_{\phi\phi}$-2.38; $M_{r\theta}$0.21; $M_{\theta\phi}$0.30; $M_{\phi r}$0.14; Fault plane solution: $M_0$2.37000×10^{17} NP1: ϕ_s167.28000°, δ43.86000°, λ81.56000°. NP2: ϕ_s358.90000°, δ46.73000°, λ98.02000°. Principal axes: T 2.3143, Plg84.0000°, Azm339.0000°; N 0.1051, Plg6.0000°, Azm173.0000°; P -2.4194, Plg1.0000°, Azm83.0000°;*

IDC ***24*** *19:21:40.5±1.6, 58°.03S×25°.40W, h64km±12km, mb5.0/21, mbtmp5.3/23, MS4.9/38 Error ellipse: s-maj=14.5km s-min=9.9km az=54.0*

GCMT ***24*** *19:21:41.2±0.1, 58°.10S±0°.01×24°.73W±0°.01, h38km, MW5.6/156, Moment Tensor Solution. s143,c259; s156,c296; Duration: 1s.5 Moment tensor: Scale 10^{17} Nm; M_{rr}2.50±.04; $M_{\theta\theta}$0.12±.03; $M_{\phi\phi}$-2.62±.03; $M_{r\theta}$-0.27±.03; $M_{\theta\phi}$0.45±.02; $M_{\phi r}$1.16±.03; Best double couple: $M_0$2.85700×10^{17} NP1: ϕ_s173.00000°, δ33.00000°, λ93.00000°. NP2: ϕ_s349.00000°, δ57.00000°, λ88.00000°. Principal axes: T 2.7620, Plg78.0000°, Azm252.0000°; N 0.1900, Plg2.0000°, Azm350.0000°; P -2.9520, Plg12.0000°, Azm81.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 19:21:39.4±0.6**, 58°.09S**±0°.04×**25°.45W**±0°.05**, h56**km±4km**, n942, σ1s.12**/662**, mb5.5**/96**, MS5.2**/316**, 21C-2D, South Sandwich Islands region**

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Code  Station Name       Δ°   AZ°    Phase ID          Time       Res
                                    Op       ISC      h  m  s     ISC
HOPE  Hope Point         7.24 297            Pn       19 23 25.7  +3.3
HOPE  Hope Point         7.24 297   P        Pn       19 23 25.7  +3.3
VNA1  Neumayer--Stat    14.55 157  ⇑P        Pn       19 25 00.9  -0.8
      comp=Z,93nm,0.3s
VNA3  Neumayer Olymp    14.75 160  ⇑P        Pn       19 25 03.0  -1.4
      comp=Z,181nm,0.7s
VNA2  Neumayer--Watz    14.94 157  ⇑P        Pn       19 25 06.2  -0.7
      comp=Z,131nm,0.5s,baz=320,slow=14
VNA2                               ⇑S        S        19 28 07.2  +1.1
      baz=304,slow=21
ESPZ  Base Esperanza    16.19 238            Pn       19 25 22.5  -0.4
SNAA  Sanae             16.49 155  ⇑P        Pn       19 25 27.3  +0.7
      comp=Z,2µm,0.5s
SNAA                               ⇑S        S        19 28 33.8  -4.0
SNAA  Sanae             16.49 155            Pn       19 25 26.5  -0.2
SNAA                                IAmb     IAmb     19 25 33.7
      comp=Z,860nm,1.8s
SNAA  Sanae             16.49 155   P        Pn       19 25 26.9  +0.3
      comp=Z,81nm,0.5s,baz=315,slow=14,SNR=1018
SNAA                                S        Sn       19 28 16.1  -12
      comp=Z,25nm,0.8s,baz=4.3,slow=20,SNR=4.0
SNAA                                LR       LR       19 30 18.7
      comp=Z,5µm,21.9s,baz=316,slow=31
TROLL Troll, Antarti    18.00 152  ⇑P        P        19 25 45.0  -0.1
      comp=Z,2µm,0.5s
TROLL                              ⇑S        Sn       19 29 06.5  +1.6
PMSA  Palmer Station    19.37 234   P        Pn       19 26 01.2  -0.4
PMSA  Palmer Station    19.37 234   P        Pn       19 26 01.0  -0.6
      comp=Z,43nm,0.7s,baz=155,slow=5.0,SNR=7.2
PMSA                                LR       LR       19 32 24.1
      comp=Z,8µm,21.2s,baz=78,slow=33
EFI   East Falkland     19.69 275            Pn       19 26 05.5   0.0
EFI   East Falkland     19.69 275ceP         Pn       19 26 07.4  +1.9
EFI                                 pmax     pmax
      comp=Z,185nm,1.0s
NVL   N'lazarevskaya    20.04 144  eP        Pn       19 26 10.7  +1.2
NVL                                e                  19 26 22.6
NVL                                ePPP      PPP      19 26 27.6
NVL                                eS        S        19 29 45.9  -3.3
NVL                                 pmax     pmax
      comp=Z,12nm,0.9s
NVL                                 MLR      MLR
      comp=Z,123nm,20.0s
BELA  Belgrano 2        20.12 186            P        19 26 08.6  +0.4
BELA                                IAmb     IAmb     19 26 16.8
      comp=Z,645nm,1.9s
SMAI  San Martin Ant    20.90 224            P        19 26 17.9  +1.3
MG01  Puerto William    23.21 260   P        P        19 26 41.7  +0.6
MG01                                IAmb     IAmb     19 26 44.6
      comp=Z,141nm,1.1s
MG01                                IAMs_20  IAMs_20  19 33 17.1
      comp=Z,10µm,21.0s
USHA  Ushuaia           23.67 259   LR       LR       19 33 52.5
      comp=Z,10µm,21.1s,baz=100,slow=31
MG02  Cerro Sombrero    25.04 263   P        P        19 26 59.6  +1.7
MG05  Puerto Natales    27.34 263            P        19 27 18.9  +0.3
MG05                                IAmb     IAmb     19 27 21.7
      comp=Z,104nm,0.9s
GO09  Cerro Castillo    27.47 264   P        P        19 27 20.1  +0.2
GO09                                IAmb     IAmb     19 27 32.5
      comp=Z,275nm,1.9s
SYO   Syowa Base        29.41 138⇑iP         P        19 27 35.5  -1.4
SYO   Syowa Base        29.41 138⇑esP        P        19 27 45.6  +8.7
COYC  Coyhaique         30.77 273            P        19 27 49.9  +0.7
COYC                                IAmb     IAmb     19 28 22.5
      comp=Z,86nm,1.3s
TRQA  Tornquist         31.01 294            P        19 27 50.4  -1.0
TRQA                                         PcP      19 30 45.6  -0.4
QSPA  South Pole Qui    32.16 180   P        P        19 28 02.7  +1.3
QSPA  South Pole Qui    32.16 180   P        P        19 28 02.8  +1.3
      comp=Z,63nm,0.7s,baz=36,slow=0.8,SNR=270
QSPA                                PcP      PcP      19 30 49.4  +0.7
      comp=Z,19nm,0.9s,baz=321,slow=7.3,SNR=3.0
QSPA                                LR       LR       19 40 50.1
      comp=Z,3µm,19.7s,baz=186,slow=36
      comp=Z,63nm,0.7s
LL02  Futaleuf          32.25 277            P        19 28 02.5  +0.2
LL02                                IAmb     IAmb     19 28 06.0
      comp=Z,64nm,1.1s
PLTB  Pedras Altas      32.57 312  eP        P        19 28 05.2  +0.2
LL01  San Ignacio de    33.12 278   P        P        19 28 10.0  +0.3
LL01                                IAmb     IAmb     19 28 44.7
      comp=Z,40nm,1.0s
LL01                                IAMs_20  IAMs_20  19 42 10.6
      comp=Z,4µm,19.0s
PLCA  Paso Flores       33.32 281   P        P        19 28 11.4  -0.2
PLCA                                IAmb     IAmb     19 28 13.0
      comp=Z,52nm,1.0s
PLCA  Paso Flores       33.32 281   P        P        19 28 11.5  -0.2
      comp=Z,44nm,0.9s,baz=151,slow=7.2,SNR=40
PLCA                                PcP      PcP      19 30 52.9  +0.5
      comp=Z,7.2nm,0.9s,baz=239,slow=3.1,SNR=2.2
PLCA                                LR       LR       19 42 07.1
      comp=Z,2µm,18.0s,baz=124,slow=37
      comp=Z,44nm,0.9s
PLCA  Paso Flores       33.32 281  eP        P        19 28 11.5  -0.2
CPSB  Cacapava Do Su    33.70 313  eP        P        19 28 15.0   0.0
CNLB  Canela            33.72 318  eP        P        19 28 16.2  +1.0
LL03  Petrohue          33.99 279   P        P        19 28 18.0  +0.7
LR05  Currie            34.44 281   IAmb     IAmb     19 28 37.6
      comp=Z,118nm,1.3s
LR04  Corral            35.44 280   IAmb     IAmb     19 28 47.5
      comp=Z,97nm,0.8s
ITQB  Itaqui            35.63 309  eP        P        19 28 30.5  -1.1
ITAB  Concordia         36.07 317  eP        P        19 28 36.4  +1.0
PET01 Itanhaem-SP       37.20 326  eP        P        19 28 45.5  +0.5
SLP01 Ubatuba-SP        37.51 329  eP        P        19 28 48.8  +1.0
ML02  Panimavida        37.51 286   IAMs_20  IAMs_20  19 43 02.7
      comp=Z,3µm,20.0s
PARB  Paraibuna         37.62 329  eP        P        19 28 49.8  +1.2
MAN01 Angra dos Reis    37.63 331  eP        P        19 28 50.1  +1.4
BI05  Punta Hualpn      37.66 283   P        P        19 28 49.4  +0.5
BI05                                IAmb     IAmb     19 28 58.9
      comp=Z,112nm,0.8s
SPB   Sao Paulo         37.90 326   P        P        19 28 51.7  +0.8
SPB                                 IAmb     IAmb     19 28 54.0
      comp=Z,142nm,0.9s
SPB   Sao Paulo         37.90 326  eP        P        19 28 52.4  +1.5
MAW   Mawson            37.95 141   P        P        19 28 51.4  +0.5
      comp=Z,22nm,0.8s,baz=232,slow=8.4,SNR=50
MAW                                 PcP      PcP      19 31 06.1  +0.7
      comp=Z,14nm,1.0s,baz=234,slow=2.7,SNR=4.2
MAW                                 LR       LR       19 42 32.8
      comp=Z,2µm,19.8s,baz=248,slow=33
      comp=Z,22nm,0.8s
DUB01 Friburgo-RJ       38.00 334  eP        P        19 28 53.3  +1.5
VAS01 Vassouras-RJ      38.06 332  eP        P        19 28 53.8  +1.5
VAO   Valinhos          38.32 327  eP        P        19 28 56.0  +1.4
PTGB  Pitanga           38.35 319  eP        P        19 28 54.5  -0.4
BO04  La Punta          38.49 289   P        P        19 28 56.0   0.0
FRTB  Fartura           38.79 323  eP        P        19 28 59.5  +1.0
CPUP  Villa Florida     38.87 311   P        P        19 28 58.0  -1.1
CPUP  Villa Florida     38.87 311   P        P        19 28 58.1  -0.9
      comp=Z,8.1nm,0.9s,baz=12,slow=8.0,SNR=28
CPUP                                PcP      PcP      19 31 09.0  +0.1
      comp=Z,3.9nm,0.8s,baz=42,slow=2.8,SNR=5.6
CPUP                                LR       LR       19 44 31.8
      comp=Z,332nm,19.7s,baz=18,slow=35
      comp=Z,8.1nm,0.9s
CPUP  Villa Florida     38.87 311  eP        P        19 28 58.2  -0.9
PEL   Peldehue          39.21 290   IAmb     IAmb     19 29 20.0
      comp=Z,166nm,1.6s
CFA   Coronel Fontan    39.24 294   LR       LR       19 44 42.5
      comp=Z,1µm,21.6s,baz=172,slow=35
VA05  Santo Domingo     39.27 288   IAmb     IAmb     19 29 18.8
      comp=Z,139nm,1.2s
SJPY  San Joaquin       39.58 313  eP        P        19 29 04.1  -0.9
BSCB  Bom Sucesso       39.63 331  eP        P        19 29 06.7  +1.2
RIB01 Linhares ES       40.25 338  eP        P        19 29 11.8  +1.3
TRCB  Terra Rica        40.32 319  eP        P        19 29 11.3  +0.1
CO02  Combarbal         40.93 291   IAMs_20  IAMs_20  19 45 44.1
      comp=Z,4µm,20.0s
PCMB  Pacaembu          40.96 322  eP        P        19 29 16.8  +0.3
SJMB  Sao Joao De Ma    41.00 337  eP        P        19 29 17.2  +0.4
CO01  Juntas del Tor    41.49 293   IAMs_20  IAMs_20  19 45 38.8
      comp=Z,4µm,21.0s
GO04  Tololo Observa    41.67 292   IAMs_20  IAMs_20  19 46 38.7
      comp=Z,4µm,20.0s
CO06  Fray Jorge        41.68 291   IAMs_20  IAMs_20  19 45 54.9
      comp=Z,3µm,20.0s
DIAM  Diamantina, MG    41.95 334  eP        P        19 29 25.4  +0.7
CO05  La Serena         42.10 292   IAMs_20  IAMs_20  19 46 30.0
      comp=Z,3µm,20.0s
PMNB  Patos De Minas    42.41 330  eP        P        19 29 29.6  +1.1
ITRB  Iturama           42.45 324  eP        P        19 29 29.1  +0.5
LCO   Las Campanas      42.58 293   IAMs_20  IAMs_20  19 46 35.8
      comp=Z,3µm,21.0s
GUA01 Guaratinga, BA    42.79 340  eP        P        19 29 32.0  +0.6
RPRD  Ribas do Rio P    42.83 319  eP        P        19 29 32.2  +0.5
MURT  Porto Murtinho    43.18 314  eP        P        19 29 33.1  -1.4
AC04  Llanos de Chal    43.43 293   IAMs_20  IAMs_20  19 47 02.3
      comp=Z,4µm,21.0s
IPMB  Ipameri, GO       43.43 328  eP        P        19 29 37.4  +0.7
AQDB  Aquidauana        43.54 317  eP        P        19 29 36.5  -0.9
AC02  Maricunga         43.64 297   P        P        19 29 37.7  -1.1
CMC01 Camacan, BA       43.94 340  eP        P        19 29 41.1  +0.5
BDQN  Bodoquena, MS     43.95 315  eP        P        19 29 39.2  -1.5
SBA   Scott Base        44.11 184   P        P        19 29 43.7  +2.4
SBA                                 IAmb     IAmb     19 29 45.5
      comp=Z,87nm,1.1s
SBA   Scott Base        44.11 184   P        P        19 29 43.7  +2.4
SBA                                 pmax     pmax
      comp=Z,87nm,1.1s
C2SB  Chapadao do Su    44.12 321  eP        P        19 29 43.1  +1.0
VNDA  Vanda             44.58 182   P        P        19 29 47.2  +2.1
VNDA                                IAmb     IAmb     19 29 48.2
      comp=Z,54nm,0.8s
VNDA  Vanda             44.58 182   P        P        19 29 47.5  +2.5
      comp=Z,58nm,0.9s,baz=186,slow=6.7,SNR=152
      comp=Z,58nm,0.9s
JANB  Januaria          45.22 334  eP        P        19 29 51.5  +0.6
BDFB  Brasilia          45.60 329   P        P        19 29 54.9  +0.9
BDFB                                IAmb     IAmb     19 29 56.7
      comp=Z,67nm,1.0s
BDFB  Brasilia          45.60 329   P        P        19 29 54.7  +0.7
      comp=Z,75nm,1.1s,baz=150,slow=6.3,SNR=42
BDFB                                LR       LR       19 48 05.7
      comp=Z,2µm,20.2s,baz=155,slow=35
      comp=Z,75nm,1.1s
BDFB  Brasilia          45.60 329   P        P        19 29 54.9  +0.9
BDFB                                pmax     pmax
      comp=Z,67nm,1.0s
BOSA  Boshof            45.62  72   P        P        19 29 53.3  -0.8
BOSA                                IAmb     IAmb     19 30 00.8
      comp=Z,61nm,1.3s
BOSA  Boshof            45.62  72   P        P        19 29 53.6  -0.5
      comp=Z,12nm,0.8s,baz=209,slow=7.6,SNR=23
BOSA                                LR       LR       19 44 52.5
      comp=Z,3µm,21.9s,baz=226,slow=30
      comp=Z,12nm,0.8s
H04S2 CROZET ISLANDS    45.88 111   T        T        20 20 27.8
      baz=226,slow=75,SNR=524
H04S3 CROZET ISLANDS    45.89 111   T        T        20 20 20.9
      baz=226,slow=75,SNR=465
H04S1 CROZET ISLANDS    45.90 111   T        T        20 20 28.9
      baz=226,slow=75,SNR=520
ARAG  Araguaiana, MT    46.66 324  eP        P        19 30 02.8  +0.6
WIN   Windhoek          46.76  59   IAMs_20  IAMs_20  19 44 50.2
      comp=Z,3µm,20.0s
PHPEN Phepeng           47.01  67   IAmb     IAmb     19 30 20.0
      comp=Z,54nm,1.1s
PHPEN Phepeng           47.01  67  i P       P        19 30 04.8  -0.2
MAKGR Makgori           47.69  70  i P       P        19 30 10.3   0.0
SALV  Santo Antonio     47.76 319  eP        P        19 30 11.2  +0.5
KOOLE Kule              47.83  63   IAmb     IAmb     19 30 17.7
      comp=Z,29nm,0.8s
KOOLE Kule              47.83  63  i P       P        19 30 11.1  -0.4
SDBA  SAO DESIDERIO     47.92 334  eP        P        19 30 12.4  +0.4
PB09  IPOC Station P    48.00 300   IAmb     IAmb     19 31 43.8
      comp=Z,41nm,1.1s
SKOMA Sekoma            48.35  68  i P       P        19 30 15.2  -0.1
BBSD  Serra de San D    48.40 313  eP        P        19 30 14.8  -0.9
LBTB  Lobatse           48.75  70   IAmb     IAmb     19 30 35.1
      comp=Z,64nm,1.1s
LBTB  Lobatse           48.75  70   LR       LR       19 47 12.1
      comp=Z,3µm,19.2s,baz=212,slow=31
KGCAE Kacgae            48.91  65  i P       P        19 30 19.6  -0.1
NBAN  Anadia - AL       49.02 346  eP        P        19 30 22.0  +1.6
PTLB  Pontes e Lacer    49.42 315   P        P        19 30 23.0  -0.5
PTLB                                IAmb     IAmb     19 30 50.6
      comp=Z,39nm,0.8s
PTLB  Pontes e Lacer    49.42 315  eP        P        19 30 23.1  -0.4
KDWAN Kaudwane          49.66  68  i P       P        19 30 24.6  -0.8
SIV   San Ignacio       49.66 313   LR       LR       19 51 40.8
      comp=Z,513nm,19.9s,baz=144,slow=36
GRTLG Ghanzi            49.71  63   IAmb     IAmb     19 30 40.9
      comp=Z,58nm,1.4s
GRTLG Ghanzi            49.71  63  i P       P        19 30 25.4  -0.4
H10S2 ASCENSION HYDR49.72  14   T        T        20 24 59.5
      baz=187,slow=74,SNR=170
H10S3 ASCENSION HYDR49.72  14   T        T        20 24 59.8
      baz=33,slow=74,SNR=155
TSUM  Tsumeb            49.91  57   P        P        19 30 27.2  -0.1
TSUM                                IAmb     IAmb     19 30 36.9
      comp=Z,74nm,1.8s
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TSUM	Tsumeb	49.91	57	LR	LR	19 46 32.7	
	comp=Z,2µm,21.9s,baz=214,slow=30						
POGA	Pongola	49.95	77	IAmb	IAmb	19 30 53.6	
	comp=Z,47nm,1.5s						
PB11	IPOC Station P	49.96	301	IAmb	IAmb	19 31 03.1	
	comp=Z,29nm,0.9s						
SNDB	Serra Nova Dou	50.02	326	*e*P	P	19 30 29.1	+1.1
LPHEP	Lephephe	50.26	69	IAmb	IAmb	19 30 47.5	
	comp=Z,81nm,1.1s						
LPHEP	Lephephe	50.26	69	*i* P	P	19 30 30.2	+0.2
H10N1	ASCENSION HYDR	50.83	14	T	T	20 26 16.7	
	baz=181,slow=72,SNR=35						
H10N3	ASCENSION HYDR	50.84	14	T	T	20 26 24.0	
	baz=181,slow=72,SNR=122						
H10N2	ASCENSION HYDR	50.85	14	T	T	20 26 24.9	
	baz=181,slow=72,SNR=70						
QNGWA	Qangwa	51.27	61	*i* P	P	19 30 37.8	+0.2
CASY	Casey	51.66	159	P	P	19 30 40.8	+0.9
CASY				IAmb	IAmb	19 30 42.3	
	comp=Z,56nm,1.2s						
CASY	Casey	51.66	159	IAMs_20	IAMs_20	19 51 40.4	
	comp=Z,3µm,20.0s						
MREMI	Moremi	51.72	70	IAmb	IAmb	19 30 58.2	
	comp=Z,90nm,0.9s						
MREMI	Moremi	51.72	70	*i* P	P	19 30 40.7	-0.2
SMTB	Santa Maria do	51.98	332	*e*P	P	19 30 43.8	+1.0
PDRB	Porto dos Gac	52.10	320	*e*P	P	19 30 43.3	-0.4
VILB	Vilhena	52.11	315	IAmb	IAmb	19 30 44.4	
	comp=Z,75nm,0.9s						
VILB	Vilhena	52.11	315	*e*P	P	19 30 43.2	-0.5
PHDHD	Phuduhudu	52.30	65	IAmb	IAmb	19 30 52.4	
	comp=Z,156nm,1.4s						
PHDHD	Phuduhudu	52.30	65	*i* P	P	19 30 45.2	0.0
LPAZ	La Paz	52.33	305	P	P	19 30 45.6	-0.5
LPAZ	La Paz	52.33	305	P	P	19 30 45.8	-0.3
	comp=Z,14nm,0.4s,baz=71,slow=5.1,SNR=39						
LPAZ				PcP	PcP	19 31 56.4	-0.2
	comp=Z,15nm,0.6s,baz=109,slow=1.8,SNR=1.8						
LPAZ				LR	LR	19 52 29.8	
	comp=Z,458nm,20.7s,baz=182,slow=35						
	comp=Z,14nm,0.4s						
LPAZ	La Paz	52.33	305	*e*P	P	19 30 45.2	-0.9
CLDB	Colider	52.48	321	*e*P	P	19 30 46.2	-0.3
RCBR	Riachuelo	52.76	347	LR	LR	19 50 24.6	
	comp=Z,349nm,19.6s,baz=180,slow=33						
BROLN	Tlhalogang	52.90	69	*i* P	P	19 30 49.2	-0.4
NBPB	Pedra_Branca-C	53.56	342	*e*P	P	19 30 55.1	+0.7
MATP	Matopo	54.04	70	LR	LR	19 50 33.0	
	comp=Z,2µm,19.2s,baz=215,slow=32						
KSANE	Kasane	54.65	65	IAmb	IAmb	19 31 09.7	
	comp=Z,90nm,1.2s						
KSANE	Kasane	54.65	65	*i* P	P	19 31 02.4	-0.1
NBCL	Cascavel-CE	54.65	344	*e*P	P	19 31 03.5	+1.1
PRPB	Parauapebas	55.14	330	*e*P	P	19 31 06.6	+0.7
NPGB	Novo Progresso	55.93	323	*e*P	P	19 31 11.5	0.0
LSZ	Lusaka	58.28	66	P	P	19 31 28.0	-0.3
LSZ				IAmb	IAmb	19 31 46.2	
	comp=Z,93nm,1.4s						
LSZ	Lusaka	58.28	66	LR	LR	19 53 02.9	
	comp=Z,3µm,19.3s,baz=212,slow=32						
LSZ	Lusaka	58.28	66	P	P	19 31 28.0	-0.3
LSZ				pmax	pmax		
	comp=Z,93nm,1.5s						
LSZ				MLR	MLR		
	comp=Z,3µm,20.0s						
TMAB	Tom-Au,PA,Br	58.36	333	*e*P	P	19 31 29.9	+1.3
ITTB	Itaituba	58.57	324	*e*P	P	19 31 30.3	+0.2
FOMA	Nahampoana Res	59.91	89	IAMs_20	IAMs_20	19 51 19.0	
	comp=Z,2µm,20.0s						
NNA	Nana	60.06	298	LR	LR	19 56 03.8	
	comp=Z,1µm,21.9s,baz=150,slow=34						
NNA	Nana	60.06	298	*ce*P	P	19 31 41.9	+1.4
NNA				pmax	pmax		
	comp=Z,64nm,1.8s						
MAL2	Monte Alegre,	60.32	326	P	P	19 31 42.9	+0.6
MACA	Manacapuru-AM	61.34	319	P	P	19 31 47.5	-1.6
MACA	Manacapuru-AM	61.34	319	*e*P	P	19 31 48.3	-0.9
CZSB	Cruzeiro do Su	61.93	304	*e*P	P	19 31 51.8	-1.4
TEFE	Tefe	62.45	315	*e*P	P	19 31 55.9	-0.7
TBTG	Tabatinga, AM	63.92	309	*e*P	P	19 32 05.2	-1.1
ABPO	Ambohimpanom	64.91	86	IAMs_20	IAMs_20	19 56 48.4	
	comp=Z,2µm,19.0s						
ATAH	Atahualpa	65.03	299	P	P	19 32 14.9	+0.8
	comp=Z,26nm,1.1s,baz=156,slow=5.9,SNR=13						
ATAH				LR	LR	20 02 03.8	
	comp=Z,798nm,19.3s,baz=185,slow=37						
	comp=Z,26nm,1.1s						
SGC2	Sao Gabriel da	66.43	314	P	P	19 32 20.9	-1.7
	comp=Z,45nm,1.0s						
BOAV	Boa Vista	66.47	321	P	P	19 32 21.9	-0.9
BOAV	Boa Vista	66.47	321	*e*P	P	19 32 22.3	-0.5
BOAV	Boa Vista	66.47	321	P	P	19 32 22.5	-0.3
	comp=Z,2µmcomp=Z,173nm,0.9s						
DBIC	Dimbokro	66.66	22	P	P	19 32 23.5	-0.5
DBIC				IAmb	IAmb	19 32 25.9	
	comp=Z,57nm,0.9s						
DBIC	Dimbokro	66.66	22	P	P	19 32 24.0	0.0
	comp=Z,67nm,1.0s,baz=210,slow=6.0,SNR=42						
DBIC				LR	LR	19 54 21.9	
	comp=Z,826nm,20.6s,baz=194,slow=30						
	comp=Z,67nm,1.0s						
MDP	Montagnes des	66.68	330	LR	LR	19 58 41.8	
	comp=Z,710nm,21.6s,baz=152,slow=33						
MCRA	Macar, Loja	68.18	299	P	P	19 32 33.2	-0.6
	comp=Z,32nm,1.1s						
COHC	Cochancay	69.54	301	P	P	19 32 42.6	+0.5
	comp=Z,835nmcomp=Z,52nm,1.1s						
PTLC	Puerto Leguiza	69.91	306	P	P	19 32 42.1	-2.3
	comp=Z,1µmcomp=Z,98nm,1.1s						
SLOR	San Lorenzo -	70.73	302	IAmb	IAmb	19 33 13.5	
	comp=Z,21nm,0.8s						
OTAV	Otavalo	71.57	303	P	P	19 32 54.9	-0.2
OTAV				IAmb	IAmb	19 32 58.6	
	comp=Z,51nm,1.1s						
OTAV	Otavalo	71.57	303	IAMs_20	IAMs_20	20 05 02.5	
	comp=Z,986nm,19.0s						
OTAV	Otavalo	71.57	303	P	P	19 32 54.9	-0.2
OTAV				pmax	pmax		
	comp=Z,51nm,1.1s						
OTAV				MLR	MLR		
	comp=Z,1µm,19.0s						
OTAV	Otavalo	71.57	303	*e*P	P	19 32 53.9	-1.1
OTAV	Otavalo	71.57	303	P	P	19 32 55.4	+0.4
	comp=Z,46nm,1.1s						
TULM	Tulcn-Chalpat	71.70	304	P	P	19 32 56.7	+0.9
	comp=Z,126nm,1.0s						
GARC	Garzon, Huila	72.02	306	P	P	19 32 57.1	-0.4
	comp=Z,984nmcomp=Z,83nm,0.7s						
MBAR	Mbarara	72.28	61	*i* P	P	19 33 01.4	+2.5
MBAR				pmax	pmax		
	comp=Z,20nm,1.4s						
BBAC	Balboa, Cauca	72.63	305	P	P	19 33 01.5	+0.5
	comp=Z,2µmcomp=Z,30nm,0.9s						
POPC	Popayan, Colom	72.84	305	P	P	19 33 01.2	-1.1
	comp=Z,43nm,1.0s						
BBTS	Babate	72.85	9	LR	LR	19 58 29.7	
	comp=Z,569nm,21.2s,baz=78,slow=30						
PRAC	Prado	73.13	308	P	P	19 33 02.8	-1.0
	comp=Z,892nmcomp=Z,71nm,1.1s						
ORTC	Ortega, Tolima	73.46	307	P	P	19 33 04.1	-1.6
	comp=Z,1µmcomp=Z,159nm,1.0s						
ROSC	El Rosal	73.91	309	P	P	19 33 09.1	+0.3
	comp=Z,31nm,0.9s,baz=146,slow=4.7,SNR=13						
ROSC				LR	LR	20 05 55.8	
	comp=Z,740nm,21.6s,baz=108,slow=36						
	comp=Z,31nm,0.9s						
TORD	Torodi Ar. Bea	74.40	27	P	P	19 33 11.1	0.0
TORD				IAmb	IAmb	19 33 12.0	
	comp=Z,36nm,0.7s						
TORD	Torodi Ar. Bea	74.40	27	P	P	19 33 11.5	+0.5
	comp=Z,38nm,0.6s,baz=195,slow=4.5,SNR=40						
TORD				LR	LR	19 59 04.8	
	comp=Z,1µm,20.3s,baz=184,slow=30						
	comp=Z,38nm,0.6s						
PLMC	San Jos del P	74.79	307	P	P	19 33 13.2	-0.4
	comp=Z,76nm,1.2s						
PCRV	Puerto La Cruz	75.13	320	P	P	19 33 16.1	+0.7
	comp=Z,120nm,0.5s,baz=158,slow=2.6,SNR=84						
PCRV				LR	LR	20 09 56.4	
	comp=Z,368nm,18.4s,slow=39						
	comp=Z,120nm,0.5s						
WHZ	Wether Hill Ro	75.79	190	P	P	19 33 19.8	+1.0
WHZ				IAmb	IAmb	19 33 21.2	
	comp=Z,64nm,0.9s						
SDV	Santo Domingo	76.12	314	P	P	19 33 20.7	-0.6
SDV				IAmb	IAmb	19 33 22.2	
	comp=Z,41nm,0.9s						
SDV				IAMs_20	IAMs_20	20 08 00.8	
	comp=Z,1µm,20.0s						
SDV	Santo Domingo	76.12	314	P	P	19 33 21.3	0.0
	comp=Z,28nm,0.7s,baz=182,slow=4.2,SNR=15						
SDV				LR	LR	20 08 21.7	
	comp=Z,1µm,20.2s,baz=161,slow=37						
	comp=Z,28nm,0.7s						
SDV	Santo Domingo	76.12	314	*e*P	P	19 33 21.4	+0.2
SDV	Santo Domingo	76.12	314	P	P	19 33 21.4	+0.2
	comp=Z,54nm,1.0s						
DCZ	Deep Cove	76.28	189	IAmb	IAmb	19 33 29.2	
	comp=Z,75nm,1.0s						
MLZ	Mavora Lakes	76.30	190	IAmb	IAmb	19 33 23.7	
	comp=Z,57nm,0.9s						
LBZ	Lake Benmore	77.07	191	IAmb	IAmb	19 33 28.9	
	comp=Z,43nm,0.9s						
APAC	Apartado, Choc	77.61	308	P	P	19 33 30.3	+0.9
	comp=Z,55nm,1.0s						
RPZ	Rata Peaks	77.64	192	LR	LR	20 05 11.9	
	comp=Z,528nm,19.9s,baz=154,slow=34						
LODK	Lodwar	77.97	63	P	P	19 33 32.4	+0.8
LTZ	Lake Taylor	78.41	193	IAmb	IAmb	19 33 37.3	
	comp=Z,74nm,1.0s						
ARGC	Ariguani, Magd	78.42	311	P	P	19 33 33.7	-0.2
	comp=Z,2µmcomp=Z,101nm,1.0s						
INZ	Inchbonnie	78.57	193	IAmb	IAmb	19 33 37.8	
	comp=Z,65nm,0.9s						
TAU	Tasmania Unive	79.19	175	P	P	19 33 38.6	+0.8
TAU				IAmb	IAmb	19 33 57.1	
	comp=Z,97nm,1.2s						
TAU	Tasmania Unive	79.19	175	P	P	19 33 38.6	+0.8
TAU				pmax	pmax		
	comp=Z,97nm,1.3s						
THZ	Tophouse	79.34	194	P	P	19 33 40.2	+1.4
THZ				IAmb	IAmb	19 33 46.1	
	comp=Z,68nm,0.7s						
MOO	Moorlands	79.65	174	P	P	19 33 40.9	+0.5
	comp=Z,59nm,1.6s						
GDSD	La Dsirade Is	79.74	325	IAmb	IAmb	19 33 44.5	
	comp=Z,100nm,1.0s						
MRZ	Mangatainoka R	80.06	196	IAmb	IAmb	19 33 44.9	
	comp=Z,31nm,0.8s						
BKZ	Black Stump Fm	81.38	197	IAmb	IAmb	19 34 14.0	
	comp=Z,80nm,1.3s						
RTZ	Ruatahuna	81.84	198	IAmb	IAmb	19 33 56.2	
	comp=Z,119nm,1.2s						
URZ	Urewera	82.17	198	P	P	19 33 53.8	0.0
	comp=Z,45nm,1.0s,baz=107,slow=5.2,SNR=6.7						
URZ				LR	LR	20 05 32.9	
	comp=Z,525nm,22.0s,baz=164,slow=32						
	comp=Z,45nm,1.0s						
LCR2	La Lucha 2	82.49	302	IAmb	IAmb	19 33 57.4	
	comp=Z,38nm,1.0s						
TOZ	Tahuroa Road	82.94	197	IAmb	IAmb	19 33 59.4	
	comp=Z,31nm,0.9s						
SJG	San Juan	83.04	321	P	P	19 33 56.6	-1.8
SJG				IAmb	IAmb	19 33 59.7	
	comp=Z,61nm,1.1s						
SJG	San Juan	83.04	321	P	P	19 33 57.5	-0.9
	comp=Z,39nm,0.9s,baz=222,slow=2.8,SNR=9.0						
SJG				LR	LR	20 10 03.4	
	comp=Z,296nm,21.9s,baz=148,slow=35						
	comp=Z,39nm,0.9s						
SJG	San Juan	83.04	321	P	P	19 33 57.5	-0.9
	comp=Z,25nm,1.1s						
OBIP	Obispado Ponce	83.13	321	IAmb	IAmb	19 33 59.0	
	comp=Z,59nm,1.1s						
CELP	Cerrillos	83.15	321	IAmb	IAmb	19 33 59.1	
	comp=Z,30nm,0.6s						
GCPR	Guaynabo City	83.20	321	IAmb	IAmb	19 34 00.2	
	comp=Z,51nm,1.1s						
JTS	Las Juntas de	83.40	301	P	P	19 34 00.3	-0.2
JTS				IAmb	IAmb	19 34 02.0	
	comp=Z,28nm,1.1s						
JTS	Las Juntas de	83.40	301	P	P	19 34 00.4	0.0
	comp=Z,16nm,0.8s,baz=213,slow=1.8,SNR=8.4						
	comp=Z,16nm,0.8s						
AOPR	Arecibo Observ	83.46	321	IAmb	IAmb	19 34 06.8	
	comp=Z,69nm,1.2s						
AGPR	Aguadilla, PR	83.69	321	IAMs_20	IAMs_20	20 10 00.4	
	comp=Z,888nm,20.0s						
NWAO	Narrogin (SRO)	84.08	149	LR	LR	20 07 39.6	
	comp=Z,653nm,19.9s,baz=230,slow=33						
TOO	Toolangi	84.40	173	P	P	19 34 05.4	0.0
	comp=Z,9.2nm,1.0s						
TAM	Tamanrasset	84.61	28	P	P	19 34 08.0	+1.5
TAM	Tamanrasset	84.61	28	P	P	19 34 08.0	+1.5
TAM				pmax	pmax		
	comp=Z,101nm,0.2s						
TAM				MLR	MLR		
	comp=Z,800nm,21.0s						
MUN	Mundaring	84.69	148	P	P	19 34 05.7	-1.2
ESPN	Las Esperanzas	84.79	303	IAmb	IAmb	19 34 07.7	
	comp=Z,37nm,1.1s						
ACON	Acoyapa	84.98	302	IAmb	IAmb	19 34 08.7	
	comp=Z,46nm,0.9s						
ACON	Acoyapa	84.98	302	P	P	19 34 06.9	-1.5
KLBR	Kellerberrin	85.49	149	P	P	19 34 11.9	+1.0
	comp=Z,42nm,1.1s						
SDDR	Presa de Saban	85.63	317	IAmb	IAmb	19 34 16.1	
	comp=Z,28nm,1.0s						
BOAB	BOACO BROADBAN	85.63	302	IAmb	IAmb	19 34 15.8	
	comp=Z,71nm,1.1s						
BLDU	Ballidu	86.12	148	P	P	19 34 13.2	-0.9
	comp=Z,35nm,1.3s						
HERN	Volcan Telica	86.30	301	IAMs_20	IAMs_20	20 11 16.9	
	comp=Z,502nm,21.0s						
TBI	Tubuai	86.52	230	*e*P	P	19 34 14.8	-1.3
	comp=Z,986nm,27.8s						
TBI	Tubuai	86.52	230	*e*S	S	19 44 49.9	+1.9
	comp=Z,2µm,27.0s						
TBI	Tubuai	86.52	230	*e*LQ	LQ	19 57 49.2	
	comp=Z,3µm,43.0s						
TBI				*e*LR	LR	20 01 42.8	
	comp=Z,3µm,25.2s						
YNG	Young	87.82	175	P	P	19 34 21.9	-0.4
	comp=Z,17nm,1.6s						
HTT	Hallett	87.89	167	P	P	19 34 24.1	+1.4
	comp=Z,8.2nm,1.5s						
GTBY	Guantanamo Bay	87.91	314	IAMs_20	IAMs_20	20 12 27.6	
	comp=Z,979nm,22.0s						
NMDO	Nuevo Mundo	88.44	315	IAmb	IAmb	19 34 31.5	
	comp=Z,36nm,0.8s						
NMDO				IAMs_20	IAMs_20	20 14 41.5	
	comp=Z,893nm,21.0s						
CHIV	Chivirico	88.46	313	IAmb	IAmb	19 34 27.1	
	comp=Z,51nm,1.0s						
ATD	Arta Tunnel	88.61	66	LR	LR	20 12 20.8	
	comp=Z,109nm,19.1s,baz=192,slow=34						
STKA	Stephens Creek	89.72	169	P	P	19 34 32.0	+0.7
	comp=Z,14nm,0.9s,baz=167,slow=6.7,SNR=15						
	comp=Z,14nm,0.9s						
STKA	Stephens Creek	89.72	169	P	P	19 34 32.0	+0.7
PMAR	Madeira	90.75	7	*e*P	pP	19 34 51.1	+0.4
PMAR				*i* Amb		19 35 00.3	
	comp=Z,91nm,1.5s						
PMOZ	Porto Moniz, M	90.83	7	*e*LR	LR	20 03 21.1	
PMOZ				*i* AMs_20		20 08 33.4	
	comp=Z,288nm,20.0s						
PPT2	Papeete2	91.71	232	*e*P	P	19 34 36.2	-4.5
	comp=Z,192nm,25.0s						
PPT2	Papeete2	91.71	232	*e*PP	PP	19 38 16.6	-2.7
	comp=Z,158nm,24.8s						
PPT2				*e*S	S	19 45 33.9	-3.0
	comp=Z,614nm,30.8s						
PPT2				*e*SS	SS	19 51 26.9	-17
	comp=Z,426nm,31.2s						
PPT2	Papeete2	91.71	232	*e*LR	LR	20 04 02.6	
	comp=Z,2µm,25.0s						
PPT2				*e*LR	LR	20 04 08.6	
	comp=Z,2µm,22.2s						
PPT	Papeete	91.73	232	LR	LR	20 08 22.4	
	comp=Z,1µm,18.7s,baz=157,slow=30						
MDT	Midelt	92.23	17	LR	LR	20 10 53.8	
	comp=Z,777nm,19.8s,baz=202,slow=32						
AVE	Averroes	92.29	15	IAMs_20	IAMs_20	20 12 14.1	
	comp=Z,697nm,20.0s						
RAR	Rarotonga	92.38	222	LR	LR	20 12 55.1	
	comp=Z,439nm,18.1s,baz=183,slow=33						
SOR	Soroa	93.63	309	IAmb	IAmb	19 34 51.4	
	comp=Z,15nm,1.1s						
TEIG	Tepich	93.64	303	P	P	19 34 49.7	+0.4
CMIG	Matias Romero	93.96	296	LR	LR	20 11 50.7	
	comp=Z,354nm,21.3s,baz=174,slow=32						
TAOE	Nuku Hiva Isla	95.15	244	*e*P	P	19 34 52.5	-4.2
	comp=Z,111nm,26.7s						
TAOE	Nuku Hiva Isla	95.15	244	*e*PP	PP	19 38 45.4	-1.1
	comp=Z,164nm,25.9s						
TAOE				*e*S	S	19 46 10.8	+3.4
	comp=Z,270nm,29.5s						
TAOE	Nuku Hiva Isla	95.15	244	*e*LR	LR	20 05 40.0	
	comp=Z,1µm,28.5s						
PFVI	Vila Bisbo	95.88	13	*e*P	P	19 35 02.8	+3.7
PFVI				*i* Amb		19 35 05.8	
	comp=Z,36nm,1.6s						
MORF	Marmelete	96.07	13	*e*P	P	19 35 02.8	+2.7
MORF				*i* Amb		19 35 12.9	
	comp=Z,21nm,1.3s						
PVAQ	Vaqueiros	96.29	14	*e*LR	LR	20 07 18.8	
PVAQ				*i* AMs_20		20 12 42.8	
	comp=Z,368nm,22.0s						
PTEO	Sao Teotonio	96.30	13	*e*pP	pP	19 35 16.1	+0.1
060A	Indiantown	96.36	313	IAMs_20	IAMs_20	20 17 46.4	
	comp=Z,881nm,22.0s						
PCVE	Castro Verde	96.47	14	*e*pP	pP	19 35 13.5	-3.3
MESJ	Messejana	96.65	14	*e*P	P	19 35 07.3	+4.6
MESJ				*i* Amb		19 35 07.9	
	comp=Z,18nm,1.6s						
ASAR	Alice Springs	96.75	161	P	P	19 35 03.1	-0.7
ASAR	Alice Springs	96.75	161	P	P	19 35 03.5	-0.3
	comp=Z,10nm,0.9s,baz=192,slow=4.2,SNR=43						
ASAR				PP	PP	19 38 58.3	+0.1
	comp=Z,1.6nm,1.1s,baz=191,slow=7.8,SNR=4.7						
ASAR				PKiKP	PKiKP	19 39 40.2	0.0
	comp=Z,0.5nm,0.7s,baz=175,slow=1.2,SNR=5.7						
ASAR				PKKPbc	PKKPdf	19 51 43.1	0.0
	comp=Z,0.8nm,0.8s,baz=21,slow=2.9,SNR=4.4						
ASAR				LR	LR	20 16 24.7	
	comp=Z,1µm,19.5s,baz=207,slow=34						
	comp=Z,10nm,0.9s						
EVO	Evora	97.36	14	*e*P	Pdif	19 35 10.3	+4.4
EVO				*i* Amb		19 35 25.4	
	comp=Z,14nm,2.1s						
CART	Cartagena	97.50	19	IAMs_20	IAMs_20	20 12 47.0	
	comp=Z,957nm,22.0s						
DWPF	Disney Wildern	97.74	312	IAMs_20	IAMs_20	20 17 27.5	
	comp=Z,875nm,22.0s						
PESTR	Estremoz	97.75	14	IAMs_20	IAMs_20	20 18 33.6	
	comp=Z,559nm,18.0s						
KEST	Kesra	97.91	28	P	Pdif	19 35 09.4	+0.9
	comp=Z,7.7nm,1.0s,baz=316,slow=5.2,SNR=5.9						
KEST				LR	LR	20 14 39.3	
	comp=Z,798nm,19.7s,baz=208,slow=32						
	comp=Z,7.7nm,1.0s						
PMRV	Marv??o	98.32	14	*e*P	Pdif	19 35 13.2	+3.0
PMRV				*i* Amb		19 35 15.2	
	comp=Z,11nm,1.3s						
PMRV				*e*pP	pP	19 35 22.7	-2.4
PMRV				*e*LR	LR	20 07 55.7	
PMRV				*i* AMs_20		20 15 40.6	
	comp=Z,367nm,20.0s						
COI	Coimbra	98.97	13	IAMs_20	IAMs_20	20 13 15.9	
	comp=Z,836nm,21.0s						
ESDC	Sonseca Array	99.05	17	P	Pdif	19 35 14.2	+0.7
	comp=Z,0.6nm,0.8s,baz=183,slow=5.6,SNR=5.5						
ESDC				LR	LR	20 15 47.5	
	comp=Z,318nm,20.1s,baz=180,slow=33						
	comp=Z,0.6nm,0.8s						
MTE	Manteigas	99.26	14	IAMs_20	IAMs_20	20 14 20.7	
	comp=Z,816nm,21.0s						
MTE	Manteigas	99.26	14	*e*P	Pdif	19 35 17.4	+3.0
MTE				*e*LQ	LQ	20 01 47.1	
MTE				*e*LR	LR	20 08 05.3	
MTE				*i* Amb		20 14 32.8	
	comp=Z,565nm,20.0s						
656A	Willston	99.29	312	IAMs_20	IAMs_20	20 19 26.1	
	comp=Z,746nm,21.0s						
DZM	Mont Dzumac	99.53	191	*e*PP	PP	19 39 10.2	-9.3
	comp=Z,102nm,34.5s						
DZM	Mont Dzumac	99.53	191	*e*SS	SS	19 53 31.5	-2.6
	comp=Z,182nm,23.4s						
DZM	Mont Dzumac	99.53	191	*e*LR	LR	20 07 45.0	
	comp=Z,608nm,23.4s						
MVO	Moncorvo	100.08	14	*e*LQ	LQ	20 03 16.8	
MVO				*e*LR	LR	20 09 21.8	
MVO				*i* AMs_20		20 14 46.5	
	comp=Z,497nm,22.0s						
456A	Hilliard	100.30	313	IAMs_20	IAMs_20	20 19 47.7	
	comp=Z,955nm,21.0s						
WRA	Warramunga Arr	100.47	161	P	Pdif	19 35 19.8	-0.6
	comp=Z,2.5nm,0.8s,baz=196,slow=4.0,SNR=9.7						
WRA				PP	PP	19 39 27.5	+0.9
	comp=Z,1.2nm,0.9s,baz=193,slow=7.0,SNR=4.5						
WRA				PKiKP	PKiKP	19 39 46.1	-0.7
	comp=Z,3.0nm,1.1s,baz=208,slow=1.4,SNR=5.1						
WRA				PKKPbc	PKKPbc	19 51 32.6	-0.1
	comp=Z,0.3nm,0.4s,baz=357,slow=2.8,SNR=6.2						
WRAB	Tennant Creek	100.48	161	*i* P	Pdif	19 35 20.7	+0.2
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PGAV	Gavieira, Arco	100.72	13	*e*LR	LR	20 08 56.4	
PGAV				*i* AMs_20		20 14 41.7	
	comp=Z,581nm,20.0s						
PBRG	Braganca	100.75	14	*e*pP	pP	19 35 37.8	+1.8
257A	Skidaway Islan	101.03	314	IAMs_20	IAMs_20	20 18 49.0	
	comp=Z,754nm,21.0s						
TIGA	Tifton	101.54	312	IAMs_20	IAMs_20	20 21 59.7	
	comp=Z,773nm,20.0s						
154A	Montrose	102.39	313	IAMs_20	IAMs_20	20 20 59.2	
	comp=Z,734nm,22.0s						
250A	Grady	103.09	310	IAMs_20	IAMs_20	20 24 42.7	
	comp=Z,627nm,21.0s						
KARP	Karpathos	103.14	42	IAMs_20	IAMs_20	20 21 12.6	
	comp=Z,828nm,20.0s						
JSC	Jenkinsville	103.17	315	IAMs_20	IAMs_20	20 17 45.7	
	comp=Z,648nm,20.0s						
GOGA	Godfrey	103.24	313	IAMs_20	IAMs_20	20 24 02.6	
	comp=Z,883nm,22.0s						
Y52A	Lilburn	103.87	313	IAMs_20	IAMs_20	20 23 38.3	
	comp=Z,620nm,19.0s						
PAOL	Paolisi	104.26	30	IAMs_20	IAMs_20	20 22 05.0	
	comp=Z,591nm,21.0s						
LRAL	Lakeview Retre	104.31	310	IAMs_20	IAMs_20	20 24 18.1	
	comp=Z,711nm,20.0s						
BG3	Lake Jocassee	104.43	314	IAMs_20	IAMs_20	20 21 37.0	
	comp=Z,717nm,21.0s						
X51A	Calhoun	104.80	313	IAMs_20	IAMs_20	20 21 25.5	
	comp=Z,792nm,20.0s						
CSS	Mathiatis	104.90	47	IAMs_20	IAMs_20	20 20 33.3	
	comp=Z,626nm,22.0s						
W52A	Murphy	104.90	314	IAMs_20	IAMs_20	20 21 08.4	
	comp=Z,591nm,21.0s						
CESX	Cesi	105.22	28	IAMs_20	IAMs_20	20 17 44.6	
	comp=Z,788nm,22.0s						
CAMP	Campotosto	105.36	29	IAMs_20	IAMs_20	20 17 47.3	
	comp=Z,829nm,22.0s						
W50A	Signal Mountai	105.53	313	IAMs_20	IAMs_20	20 21 12.3	
	comp=Z,812nm,21.0s						
FDMO	Fiordimonte	105.75	28	IAMs_20	IAMs_20	20 17 41.6	
	comp=Z,656nm,22.0s						
OSSC	Osservatorio P	105.76	27	IAMs_20	IAMs_20	20 19 27.7	
	comp=Z,660nm,20.0s						
SWET	Sewanee	105.79	312	IAMs_20	IAMs_20	20 22 48.2	
	comp=Z,647nm,21.0s						
GUMA	Gualdo di Mace	105.84	28	IAMs_20	IAMs_20	20 18 20.9	
	comp=Z,773nm,22.0s						
SSB	Saint Sauveur	105.97	22	IAMs_20	IAMs_20	20 18 43.3	
	comp=Z,624nm,20.0s						
Y45A	Yeager Farm, C	106.07	309	IAMs_20	IAMs_20	20 23 59.8	
	comp=Z,606nm,20.0s						
PLAL	Pickwick Lake	106.44	311	IAMs_20	IAMs_20	20 25 10.5	
	comp=Z,854nm,21.0s						
V48A	Smith Brothers	106.60	312	IAMs_20	IAMs_20	20 23 36.6	
	comp=Z,667nm,22.0s						
LUPA	Lehigh Univers	106.79	323	IAMs_20	IAMs_20	20 22 05.1	
	comp=Z,595nm,19.0s						
U49A	Red Boiling Sp	106.86	313	IAMs_20	IAMs_20	20 23 18.6	
	comp=Z,600nm,22.0s						
UCCT	U. Connecticut	106.89	325	IAMs_20	IAMs_20	20 18 53.7	
	comp=Z,664nm,20.0s						
T47A	Sharon Grove	107.80	312	IAMs_20	IAMs_20	20 17 53.3	
	comp=Z,564nm,19.0s						
TUE	Stuetta	108.11	25	IAMs_20	IAMs_20	20 21 23.9	
	comp=Z,513nm,19.0s						
BORA	Eskisehir	108.17	42	IAMs_20	IAMs_20	20 24 53.9	
	comp=Z,614nm,20.0s						
EMMW	East Machias	108.21	330	IAMs_20	IAMs_20	20 15 38.6	
	comp=Z,758nm,19.0s						
T45A	Paducah	108.43	311	IAMs_20	IAMs_20	20 25 09.2	
	comp=Z,704nm,22.0s						
FUORN	Ofenpass-Fuorn	108.45	25	IAMs_20	IAMs_20	20 20 19.0	
	comp=Z,845nm,21.0s						
TXAR	Lajitas Array	108.56	296	PKiKP	PKiKP	19 40 01.1	-0.2
	comp=Z,0.3nm,0.5s,baz=158,slow=1.3,SNR=6.7						
TXAR				PKKPbc	PKKPbc	19 51 08.5	-0.7
	comp=Z,0.2nm,0.7s,baz=350,slow=4.2,SNR=1.9						

BRTR	Keskin Array B	109.20	44	PP	PP	19 40 33.1	+0.7
	comp=Z,0.3nm,0.3s,baz=198,slow=7.6,SNR=2.1						
BRTR				PKKPbc	PKKPbc	19 51 07.0	-0.4
	comp=Z,1.2nm,0.7s,baz=92,slow=3.4,SNR=7.9						
S44A	Carbondale	109.26	311	IAMs_20	IAMs_20	20 25 23.1	
	comp=Z,873nm,22.0s						
ECH	Echery	109.30	22	IAMs_20	IAMs_20	20 22 01.5	
	comp=Z,662nm,19.0s						
STU	Stuttgart	110.26	24	IAMs_20	IAMs_20	20 20 35.7	
	comp=Z,644nm,21.0s						
ARPR	Arapgir-MALATY	110.45	48	IAMs_20	IAMs_20	20 25 50.7	
	comp=Z,622nm,21.0s						
WLF	Walferdange	110.49	21	IAMs_20	IAMs_20	20 25 56.8	
	comp=Z,496nm,18.0s						
TOKA	Tokat	110.79	46	IAMs_20	IAMs_20	20 31 30.3	
	comp=Z,498nm,19.0s						
D62A	Allapoint, All	110.83	330	IAMs_20	IAMs_20	20 23 17.5	
	comp=Z,618nm,20.0s						
MNTX	Cornudas Mount	111.34	296	IAMs_20	IAMs_20	20 22 33.7	
	comp=Z,658nm,20.0s						
GERES	GERESS Array B	111.34	27	PKiKP	PKiKP	19 40 05.5	-0.5
	comp=Z,1.4nm,1.1s,baz=204,slow=2.9,SNR=3.7						
GERES				PP	PP	19 40 45.9	-1.8
	comp=Z,1.4nm,0.9s,baz=209,slow=7.9,SNR=4.3						
CKRC	Cesky Krumlov	111.46	27	AMS	AMS	20 21 30.0	
	comp=Z,1µm,22.5s						
GURO	Guroymak-BITLI	111.49	51	IAMs_20	IAMs_20	20 25 33.8	
	comp=Z,653nm,21.0s						
GRFO	Grafenberg	111.56	25	IAMs_20	IAMs_20	20 22 34.3	
	comp=Z,538nm,20.0s						
GRA1	Grafenberg Arr	111.56	25	IAMs_20	IAMs_20	20 22 34.3	
	comp=Z,535nm,21.0s						
KHC	Kasperske Hory	111.58	26	AMS	AMS	20 24 40.0	
	comp=Z,500nm,19.1s						
EPT	El Paso	111.94	295	IAMs_20	IAMs_20	20 22 16.7	
	comp=Z,646nm,20.0s						
ZVC	Zvikov	112.01	27	AMS	AMS	20 22 10.0	
	comp=Z,700nm,19.5s						
TREC	Trest	112.19	28	AMS	AMS	20 21 50.0	
	comp=Z,1µm,21.4s						
GOPC	GO Pecny, Ondr	112.60	27	AMS	AMS	20 22 50.0	
	comp=Z,500nm,21.6s						
PRU	Pruhonice	112.61	27	AMS	AMS	20 22 30.0	
	comp=Z,500nm,21.2s						
PRA	Prague	112.66	27	AMS	AMS	20 22 30.0	
	comp=Z,600nm,20.7s						
PVCC	Panska Ves	113.11	27	AMS	AMS	20 22 40.0	
	comp=Z,600nm,21.0s						
KRLC	Kraliky	113.23	28	AMS	AMS	20 22 40.0	
	comp=Z,600nm,24.0s						
OKC	Ostrava-Krasne	113.36	29	AMS	AMS	20 24 20.0	
	comp=Z,300nm,20.4s						
DPC	Dobruska-Polom	113.37	28	AMS	AMS	20 22 50.0	
	comp=Z,700nm,20.8s						
UPC	Upice	113.44	27	AMS	AMS	20 23 20.0	
	comp=Z,600nm,20.5s						
CLL	Collm	113.48	25	IAMs_20	IAMs_20	20 23 12.0	
	comp=Z,521nm,20.0s						
CLL	Collm	113.48	25	AMS	AMS	20 22 00.0	
	comp=Z,600nm,21.4s						
CLL	Collm	113.48	25	*e*PP	PP	19 40 53.0	-10
CLL	Collm	113.48	25	*e*PS	PS	19 50 41.0	+2.7
CLL	Collm	113.48	25	*e*x	x	19 52 06.0	
CLL	Collm	113.48	25	*e*SS	SS	19 56 36.0	-9.2
CLL	Collm	113.48	25	*e*SSS	SSS	20 01 12.0	
CLL	Collm	113.48	25	*e*x	x	20 04 18.0	
CHVC	Chvalec	113.53	27	AMS	AMS	20 23 30.0	
	comp=Z,600nm,21.3s						
OSTC	Ostas	113.54	28	AMS	AMS	20 23 20.0	
	comp=Z,600nm,19.2s						
EKA	Eskdalemuir Ar	114.48	14	PKiKP	PKiKP	19 40 13.3	+1.8
	comp=Z,0.3nm,0.5s,baz=188,slow=1.4,SNR=1.4						
EKA				PKKPbc	PKKPbc	19 50 49.4	-0.8
	comp=Z,0.4nm,0.3s,baz=359,slow=2.8,SNR=9.8						
ANMO	Albuquerque	114.52	297	IAMs_20	IAMs_20	20 24 53.8	
	comp=Z,619nm,19.0s						
ANMO	Albuquerque	114.52	297	IAMs_20	IAMs_20	20 24 52.8	
	comp=Z,583nm,19.0s						
ANMO	Albuquerque	114.52	297	IAMs_20	IAMs_20	20 24 52.8	
	comp=Z,589nm,19.0s						
ANMO	Albuquerque	114.52	297*c*	*i*PKIKP	PKiKP	19 40 14.0	+1.4
ANMO				pmax	pmax		
	comp=Z,8.0nm,2.5s						
ANN	Anapa	115.00	44	*i* PKIKP	PKiKP	19 40 13.8	+0.9
ANN				*e*PS	PKKPbc	19 50 49.8	+1.7
ANN				MLR	MLR		
	comp=Z,271nm,15.0s						
L34A	Svendsen Farm,	115.79	308	IAMs_20	IAMs_20	20 29 48.9	
	comp=Z,690nm,20.0s						
X18A	Snowflake	115.85	294	IAMs_20	IAMs_20	20 23 08.3	
	comp=Z,513nm,22.0s						
KBZ	Khabaz	116.20	49	PKP	PKPdf	19 40 14.3	-0.9
	comp=Z,1.6nm,0.6s,baz=176,slow=3.3,SNR=4.7						
KBZ	Khabaz	116.20	49*c*	*i*PKIKP	PKiKP	19 40 15.4	+0.2
KIV	Kislovodsk	116.30	48	*i* PKIKP	PKPdf	19 40 14.8	-0.8
KIV				*e*PS	PS	19 51 02.5	-2.1
KIV				*e*SS	SS	19 57 21.2	-1.5
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,343nm,22.0s						
AKT	Akhty	116.33	53	*i* PKIKP	PKPdf	19 40 15.7	0.0
AKT				MLR	MLR		
	comp=Z,1µm,19.0s						
RGN	Rugen	116.57	24	IAMs_20	IAMs_20	20 24 17.4	
	comp=Z,503nm,21.0s						
TOLI2	Tolitoli	117.25	141		PKPdf	19 40 17.9	-0.4
AKASG	Malin Array Be	117.29	36		PKPdf	19 40 14.2	-2.9
AKASG	Malin Array Be	117.29	36	PKP	PKPdf	19 40 16.0	-1.1
	comp=Z,3.0nm,0.9s,baz=245,slow=1.6,SNR=7.6						
AKASG				PP	PP	19 41 28.6	-1.0
	comp=Z,0.1nm,0.3s,baz=215,slow=6.6,SNR=5.1						
AKBB	Malin Array Si	117.29	36*c*	*i*PKIKP	PKPdf	19 40 16.9	-0.2
RABL	Rabaul	117.89	177	IAMs_20	IAMs_20	20 30 08.9	
	comp=Z,414nm,18.0s						
PFO	Pinyon Flats O	118.34	289		PKiKP	19 40 19.9	0.0
PFO	Pinyon Flats O	118.34	289	PKIKP	PKiKP	19 40 19.9	0.0
HMU	Henry Mountain	118.96	296	IAMs_20	IAMs_20	20 28 04.6	
	comp=Z,533nm,21.0s						
Q16A	Castle Valley	119.95	296	IAMs_20	IAMs_20	20 28 44.6	
	comp=Z,597nm,21.0s						
MVU	Marysvale	120.12	295	IAMs_20	IAMs_20	20 29 43.2	
	comp=Z,471nm,20.0s						
KKM	Kota Kinabalu	120.20	134	IAMs_20	IAMs_20	20 23 35.1	
	comp=Z,579nm,22.0s						
MNK	Minsk	120.21	33	*i* PKP	PKiKP	19 40 22.8	+0.1
	comp=E,9.0nm,1.0s						
MNK				*i* PKP	PKiKP	19 40 22.8	+0.1
	comp=Z,15nm,0.8s,baz=210						
MNK				*i* PP	PP	19 41 47.3	-2.4
MNK				*i* PPP	PPP	19 44 20.0	
MNK				*i* SKS	SKSdf	19 47 32.1	+3.0
MNK				*i* SS	SKKSdf	19 58 07.3	-2.3
MNK				*i* SSS	SSS	20 02 31.2	
MNK	Minsk	120.21	33	*i* PKIKP	PKiKP	19 40 22.7	+0.1
MNK				*i*		19 41 47.3	
MNK				*i* PPP	PPP	19 44 20.0	
MNK				*i*		19 47 32.1	
MNK				*i* SS	SS	19 58 07.2	-5.6
MNK				pmax	pmax		
	comp=Z,15nm,0.8s						
MNK				pmax	pmax		
	comp=E,9.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,7.0nm,0.8s						
MYLDM	Lahad Datu	120.25	137	IAMs_20	IAMs_20	20 28 07.3	
	comp=Z,565nm,19.0s						
RSSD	Black Hills	120.80	305		PKPdf	19 40 24.0	-0.4
RSSD	Black Hills	120.80	305	PKIKP	PKPdf	19 40 24.0	-0.4
VORD	Divnogorie	120.86	42	*e*PKIKP	PKPdf	19 40 22.6	-1.3
VORD				pmax	pmax		
	comp=Z,5.0nm,1.0s						
S11A	Rachel	121.16	292	IAMs_20	IAMs_20	20 28 15.0	
	comp=Z,420nm,18.0s						
VORR	Voronezh	121.42	41	*e*PKIKP	PKPdf	19 40 23.6	-1.4
VORR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
DUG	Dugway, Tooele	121.73	296	IAMs_20	IAMs_20	20 29 30.9	
	comp=Z,435nm,20.0s						
TCUT	Toone Canyon	121.79	298	IAMs_20	IAMs_20	20 29 41.2	
	comp=Z,498nm,20.0s						
HFS	Hagfors	121.82	22	PKP	PKPdf	19 40 23.7	-1.8
	comp=Z,0.8nm,0.3s,baz=169,slow=3.0,SNR=12						
HFS				PKKPbc	PKKPbc	19 50 22.8	-0.9
	comp=Z,2.6nm,0.8s,baz=72,slow=4.8,SNR=6.6						
MDND	Maddock	121.91	310	IAMs_20	IAMs_20	20 34 10.8	
	comp=Z,624nm,20.0s						
VRH	Novokhopyorsk	121.93	43	*e*PKIKP	PKPdf	19 40 25.1	-0.9
VRH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NAO01	NORSAR Array S	121.95	20		PKiKP	19 40 25.9	0.0
LPSR	Galich'ya Gora	122.09	40	*e*PKIKP	PKPdf	19 40 25.5	-0.8
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NB2	NORSAR Subarra	122.19	20	PKPdf	PKPdf	19 40 25.7	-0.6
	comp=Z,6.1nm,1.2s,baz=202,slow=1.9						
NB2				PKKP	PKKPbc	19 50 23.2	+0.8
	comp=Z,2.4nm,0.9s,baz=24,slow=4.3						
NOA	NORSAR Array B	122.19	20	PKP	PKPdf	19 40 26.0	-0.3
	comp=Z,4.9nm,1.0s,baz=201,slow=1.7,SNR=10						
NOA				PKKPbc	PKKPbc	19 50 22.0	-0.3
	comp=Z,1.9nm,0.9s,baz=18,slow=5.1,SNR=8.9						
NOA	NORSAR Array B	122.19	20	PKIKP	PKPdf	19 40 26.0	-0.3
PDAR	Pinedale Array	122.21	300		PKPdf	19 40 25.8	-1.4
PDAR	Pinedale Array	122.21	300	PKP	PKPdf	19 40 26.6	-0.5
	comp=Z,2.5nm,0.4s,baz=120,slow=5.2,SNR=30						
PDAR				PKKPbc	PKKPbc	19 50 22.0	-0.1
	comp=Z,0.1nm,0.3s,baz=321,slow=7.3,SNR=2.0						
NIL	Nilore	122.30	77		PKPdf	19 40 26.4	-1.0
NIL	Nilore	122.30	77	IAMs_20	IAMs_20	20 30 28.9	
	comp=Z,670nm,22.0s						
NIL	Nilore	122.30	77	PKIKP	PKPdf	19 40 26.4	-1.0
NIL				MLR	MLR		
	comp=Z,700nm,22.0s						
ULM	Lac du Bonnet	122.37	314	PKP	PKPdf	19 40 25.9	-1.0
	comp=Z,3.2nm,0.3s,baz=85,slow=1.3,SNR=3.8						
ULM				PP	PP	19 42 02.9	-1.7
	comp=Z,5.9nm,0.8s,baz=152,slow=8.1,SNR=4.0						
ULM				PKKPbc	PKKPbc	19 50 21.1	-0.3
	comp=Z,1.0nm,0.4s,baz=353,slow=13,SNR=3.3						
NVAR	Mina Array Bea	123.04	291		PKiKP	19 40 29.6	+0.5
NVAR	Mina Array Bea	123.04	291	PKP	PKiKP	19 40 30.2	+1.1
	comp=Z,8.4nm,0.9s,baz=156,slow=2.9,SNR=29						
NVAR				PKKPbc	PKKPbc	19 50 18.6	-0.1
	comp=Z,0.4nm,0.8s,baz=306,slow=5.1,SNR=3.6						
VSU	Vasula	123.34	30*c*	*i*PKIKP	PKPdf	19 40 27.8	-0.6
VSU				pmax	pmax		
	comp=Z,19nm,1.0s						
OBN	Obninsk	123.38	37	⇑*i*PKIKP	PKPdf	19 40 26.5	-2.1
OBN				*e*		19 42 18.1	
OBN				*e*		19 47 21.2	
OBN				*e*SSS	SSS	20 03 23.3	
OBN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,268nm,21.0s						
CMAR	Chiang Mai Arr	123.46	110		PKPdf	19 40 29.4	-0.5
CMAR	Chiang Mai Arr	123.46	110	PKP	PKPdf	19 40 30.0	0.0
	comp=Z,15nm,0.9s,baz=234,slow=3.6,SNR=85						
CMAR				PKKPbc	PKKPbc	19 50 16.5	-0.1
	comp=Z,1.0nm,0.8s,baz=14,slow=3.3,SNR=8.0						
CMAR	Chiang Mai Arr	123.46	110	PKIKP	PKPdf	19 40 29.5	-0.5
WAKR	Walker	123.66	290	IAMs_20	IAMs_20	20 26 37.2	
	comp=Z,594nm,21.0s						
CHTO	Chiang Mai	123.77	110	IAMs_20	IAMs_20	20 24 15.9	
	comp=Z,499nm,20.0s						
SIMJ	Simiganj	124.01	70		PKPdf	19 40 30.6	-0.1
SIMJ				IAMs_20	IAMs_20	20 36 11.9	
	comp=Z,537nm,19.0s						
YMP	Mirror Lake Pl	124.02	301	IAMs_20	IAMs_20	20 33 41.1	
	comp=Z,490nm,20.0s						
YNR	Norris Junctio	124.24	301	IAMs_20	IAMs_20	20 30 44.9	
	comp=Z,601nm,20.0s						
MOS	Moscow	124.24	38	*e*PKIKP	PKiKP	19 40 41.5	+11
MOS				*e*		19 42 18.3	
YHL	Hebgen Lake	124.57	301	IAMs_20	IAMs_20	20 31 31.8	
	comp=Z,476nm,22.0s						
AFDM	Forest Hills D	124.77	289	IAMs_20	IAMs_20	20 28 46.5	
	comp=Z,451nm,18.0s						
ORV	Oroville	125.50	289	IAMs_20	IAMs_20	20 29 09.9	
	comp=Z,520nm,18.0s						
FINES	FINESS Array B	125.75	28		PKPdf	19 40 32.4	-0.6
FINES	FINESS Array B	125.75	28	PKP	PKPdf	19 40 32.7	-0.3
	comp=Z,5.8nm,0.5s,baz=156,slow=2.3,SNR=88						
DRK	Karamyk	126.04	72	IAMs_20	IAMs_20	20 36 37.1	
	comp=Z,440nm,19.0s						
PLID	Pearl Lake	126.99	298	IAMs_20	IAMs_20	20 34 58.9	
	comp=Z,460nm,21.0s						
CHM	Chimkent	127.08	68	*e*PKIKP	PKPdf	19 40 35.9	-0.3
CHM	Chimkent	127.08	68	*e*PKP	PKPdf	19 40 35.9	-0.3
BMO	Blue Mountains	127.43	296	IAMs_20	IAMs_20	20 33 13.6	
	comp=Z,454nm,19.0s						
ABKAR	Akbulak array	127.74	56		PKPdf	19 40 36.5	-0.7
YBH	Yreka Blue Hor	127.74	290	PKP	PKPdf	19 40 36.7	-0.9
	comp=Z,0.6nm,1.0s,baz=145,slow=2.8,SNR=9.4						
KKAR	Karatay Array	128.12	68		PKPdf	19 40 37.7	-0.5
KKAR	Karatay Array	128.12	68	PKIKP	PKPdf	19 40 37.7	-0.5
KSH	Kashi	128.19	75	PKP	PKPdf	19 40 38.3	-0.3
KSH				LR	LR		
	comp=Z,400nm,16.1s						
KSH				LR	LR		
	comp=Z,340nm,17.9s						
KSH				LR	LR		
	comp=Z,500nm,22.3s						
FFC	Flin Flon	128.20	314		PKPdf	19 40 38.2	+0.3
FFC	Flin Flon	128.20	314	PKIKP	PKPdf	19 40 38.2	+0.3
SLVN	Son La	128.35	113	IAMs_20	IAMs_20	20 28 28.2	
	comp=Z,507nm,20.0s						
DZA	Taraz	128.36	69	*e*PKIKP	PKPdf	19 40 38.2	-0.5
DZA	Taraz	128.36	69	*e*PKP	PKPdf	19 40 38.2	-0.5
G08A	Pilot Rock	128.54	296		PKiKP	19 40 39.6	-0.1
LSA	Lhasa	128.65	95	PKP	PKiKP	19 40 40.6	-0.3
TNCH	TengChong	128.74	105	PKP	PKPdf	19 40 39.9	-0.3
TNCH				sPKP		19 40 52.9	
TNCH				PP	PP	19 42 52.0	+4.8
TNCH				AMB	AMB		
	comp=Z,240nm,6.3s						
TNCH				LR	LR		
	comp=Z,270nm,22.9s						
TNCH				LR	LR		
	comp=Z,250nm,17.4s						
TNCH				LR	LR		
	comp=Z,350nm,17.2s						
KLMR	Klimovskoe	128.96	35	*e*PKIKP	PKPdf	19 40 38.2	-0.9
KLMR				*e*		19 42 46.4	
KLMR				pmax	pmax		
	comp=Z,34nm,1.1s						
KLMR				MLR	MLR		
	comp=Z,340nm,18.0s						
AML	Almayashu	128.98	71	P	PKiKP	19 40 40.8	-0.3
	SNR=9.6						
QIZ	Qiongzhong	129.18	121	PKP	PKPdf	19 40 41.1	+0.2
QIZ				PP	PP	19 42 54.4	+4.7
QIZ				SS	SS	20 00 11.1	+5.6
QIZ				LR	LR		
	comp=Z,370nm,18.3s						
QIZ				LR	LR		
	comp=Z,630nm,19.6s						
EKS2	Erkin-Say	129.41	70	P	PKPdf	19 40 40.9	0.0
	SNR=17						
AAK	Ala-Archa	129.75	71	P	PKPdf	19 40 41.5	0.0
	SNR=8.7						
AAK	Ala-Archa	129.75	71		PKPdf	19 40 41.4	-0.1
AAK	Ala-Archa	129.75	71*c*	*i*PKIKP	PKPdf	19 40 41.8	+0.3
AAK				pmax	pmax		
	comp=Z,12nm,1.0s						
NEW	Newport	129.85	300	IAMs_20	IAMs_20	20 39 37.4	
	comp=Z,519nm,20.0s						
NEW	Newport	129.85	300	PKP	PKPdf	19 40 39.2	-2.1
	comp=Z,6.1nm,0.9s,baz=129,slow=8.6,SNR=6.3						
KBK	Karagaybulak	129.99	71	P	PKPdf	19 40 42.4	+0.4
	SNR=6.1						
CHMS	Chumysh	130.15	71	P	PKPdf	19 40 42.0	-0.1
	SNR=6.6						
USP	Ospenovka	130.21	70	P	PKPdf	19 40 41.9	-0.3
	SNR=12						
SGDS	Sogindy	130.41	70	*e*PKP	PKPdf	19 40 42.1	-0.5
KIRV	Kirov	130.47	42*c*	*i*PKIKP	PKPdf	19 40 42.2	+0.1
TKM2	Tokmak 2	130.51	72	P	PKPdf	19 40 42.7	-0.3
	SNR=5.4						
SUMG	Summit	130.69	355		PKPdf	19 40 43.1	+0.4
SUMG	Summit	130.69	355	PKIKP	PKPdf	19 40 43.1	+0.4
B08A	Colville Reser	130.94	298	IAMs_20	IAMs_20	20 42 51.5	
	comp=Z,416nm,20.0s						
KMI	Kunming	130.95	109	PKP	PKiKP	19 40 45.3	0.0
KMI				LR	LR		
	comp=Z,280nm,21.7s						
KMI				LR	LR		
	comp=Z,260nm,15.2s						
KMI				LR	LR		
	comp=Z,540nm,21.3s						
BTLS	Baital	131.27	68	*e*PKIKP	PKPdf	19 40 43.7	-0.3
BTLS				*e*		19 43 01.7	
BTLS	Baital	131.27	68	*e*PKP	PKPdf	19 40 43.8	-0.3
BTLS				*e*PP	PP	19 43 01.8	-1.7
MDOK	Medeo	131.42	72	*e*PKIKP	PKPdf	19 40 44.0	-0.6
MDOK	Medeo	131.42	72	*e*PKP	PKPdf	19 40 44.1	-0.6
PZH	PanZhiHua	131.59	107	PKP	PKPdf	19 40 44.3	-1.2
PZH				sPKP		19 40 59.3	
PZH				PP	PP	19 43 07.5	+1.9
PZH				SS	SS	20 00 44.3	+8.7
PZH				AMB	AMB		
	comp=Z,80nm,9.6s						
PZH				LR	LR		
	comp=Z,300nm,21.4s						
PZH				LR	LR		
	comp=Z,260nm,19.8s						
PZH				LR	LR		
	comp=Z,380nm,18.6s						
SATY	Saty	132.04	73	*e*PKIKP	PKPdf	19 40 45.2	-0.6
SATY	Saty	132.04	73	*e*PKP	PKPdf	19 40 45.2	-0.6
ARTI	Arti	132.25	48		PKPdf	19 40 45.4	-0.2
ARTI				IAMs_20	IAMs_20	20 42 29.4	
	comp=Z,552nm,20.0s						
ARTI	Arti	132.25	48	*i* PKIKP	PKiKP	19 40 46.2	-0.4
ARTI						19 43 08.0	
UZB	Uzynbulak	132.41	74	*e*PKIKP	PKPdf	19 40 45.8	-0.7
UZB	Uzynbulak	132.41	74	*e*PKP	PKPdf	19 40 45.9	-0.7
KPKS	Kokpek	132.47	73	*e*PKIKP	PKPdf	19 40 45.9	-0.6
KPKS	Kokpek	132.47	73	*e*PKP	PKPdf	19 40 45.9	-0.6
ARCES	ARCESS Array B	132.49	22		PKPdf	19 40 45.0	-0.7
ARCES	ARCESS Array B	132.49	22	PKP	PKPdf	19 40 44.7	-0.9
	comp=Z,2.3nm,0.4s,baz=217,slow=1.8,SNR=28						
ARCES	ARCESS Array B	132.49	22	PKIKP	PKPdf	19 40 45.0	-0.7
SHLS	Shalkode	132.65	74	*e*PKIKP	PKPdf	19 40 46.6	-0.3
SHLS				*e*		19 43 11.9	
SHLS	Shalkode	132.65	74	*e*PKP	PKPdf	19 40 46.7	-0.2
SHLS				*e*PP	PP	19 43 11.9	-0.6
BLKN	Baker Lake	133.28	326		PKPdf	19 40 46.7	-0.5
TDK	Taldyqorghan	133.42	72	*e*PKIKP	PKPdf	19 40 47.7	-0.4
TDK	Taldyqorghan	133.42	72	*e*PKP	PKPdf	19 40 47.8	-0.4
SVE	Sverdlovsk	133.46	49	*e*PKIKP	PKPdf	19 40 47.7	-0.1
ILON	Igloolik, Nuna	133.47	336		PKPdf	19 40 47.4	0.0
LLLB	Lillooet	133.70	299	IAMs_20	IAMs_20	20 42 39.2	
	comp=Z,504nm,20.0s						
GYA	Guiyang	134.01	112	⇓PKP	PKiKP	19 40 51.0	-0.3
GYA				LR	LR		
	comp=Z,670nm,18.3s						
BRZS	Berezniki	134.07	63	*e*PKIKP	PKPdf	19 40 49.0	-0.2
BRZS				*e*		19 43 19.6	
BRZS	Berezniki	134.07	63	*e*PKP	PKPdf	19 40 49.0	-0.2
BRZS				*e*PP	PP	19 43 19.6	-1.8
BRVK	Borovoye	135.03	58		PKPdf	19 40 51.0	+0.1
BRVK	Borovoye	135.03	58	PKIKP	PKPdf	19 40 51.0	+0.1
BRVK				MLR	MLR		
	comp=Z,700nm,21.0s						
BVAR	Borovoye Array	135.06	58	PKhKP	PKPpre	19 40 37.5	
	comp=Z,2.5nm,0.9s,baz=236,slow=1.6,SNR=8.2						
BVAR				PKP	PKPdf	19 40 49.7	-1.3
	comp=Z,4.8nm,0.4s,baz=229,slow=2.4,SNR=17						
BVAR				PP	PP	19 43 27.7	+0.1
	comp=Z,1.4nm,0.9s,baz=221,slow=5.7,SNR=2.2						
BVAR				SKPbc	SKPbc	19 44 13.8	-2.7
	comp=Z,0.7nm,0.4s,baz=292,slow=0.8,SNR=2.8						
GOMU	GeErMu	135.62	93	PKP	PKPdf	19 40 53.3	+0.2
GOMU				sPKP		19 41 03.9	
CD2	Chengdu	136.19	106	PKP	PKPdf	19 40 54.5	+0.6
MK31	Makanchi Array	136.62	72	*i* PKIKP	PKPdf	19 40 53.0	-1.1
MKAR	Makanchi Array	136.62	72	PKhKP	PKPpre	19 40 40.6	
	comp=Z,1.1nm,0.7s,baz=247,slow=3.0,SNR=3.9						
MKAR				PKP	PKPdf	19 40 53.5	-0.7
	comp=Z,5.9nm,0.8s,baz=236,slow=1.7,SNR=16						
MKAR				SKPbc	SKPbc	19 44 20.2	-1.3
	comp=Z,2.8nm,1.1s,baz=251,slow=3.7,SNR=4.8						
MKAR				PKKP	PKKPdf	19 50 31.4	+0.8
	comp=Z,0.3nm,0.4s,baz=14,slow=0.7,SNR=6.9						
KURBB	Kurchatov Arra	137.29	66	PKhKP	PKPpre	19 40 44.5	
	comp=Z,2.4nm,0.9s,baz=234,slow=3.8,SNR=7.6						
KURBB				PKP	PKPdf	19 40 54.5	-0.6
	comp=Z,6.2nm,0.8s,baz=239,slow=2.6,SNR=13						
KURBB				PP	PP	19 43 42.8	+1.1
	comp=Z,0.3nm,0.2s,baz=233,slow=4.5,SNR=5.4						
KURBB				SKPbc	SKPbc	19 44 21.2	-2.1
	comp=Z,1.7nm,0.9s,baz=232,slow=4.2,SNR=5.0						
WMQ	Urumqi	137.37	79	*e*PKP	PKiKP	19 40 57.0	-0.5
WMQ				LR	LR		
	comp=Z,330nm,19.5s						
WMQ				LR	LR		
	comp=Z,310nm,21.7s						
WMQ				LR	LR		
	comp=Z,430nm,22.1s						
KURK	Kurchatov	137.40	66	IAMs_20	IAMs_20	20 42 41.3	
	comp=Z,440nm,21.0s						
KURK	Kurchatov	137.40	66	PKIKP	PKPdf	19 40 54.6	-0.7
BBB	Bella Bella	137.68	297	PKP	PKPdf	19 40 55.0	-0.8
	comp=Z,26nm,1.2s,baz=131,slow=7.6,SNR=3.0						
YKA	Yellowknife Ar	138.31	316	PKhKP	PKPpre	19 40 47.8	
	comp=Z,0.5nm,0.4s,baz=348,slow=9.2,SNR=12						
YKA				PKP	PKPdf	19 40 57.3	+0.7
	comp=Z,2.9nm,0.3s,baz=303,slow=4.9,SNR=55						
YKA				PP	PP	19 43 42.7	-5.1
	comp=Z,3.1nm,1.0s,baz=116,slow=5.7,SNR=5.0						
YKA				SKPbc	SKPbc	19 44 24.6	-1.2
	comp=Z,1.7nm,0.7s,baz=132,slow=2.9,SNR=5.3						
ZSN	Zaisan	138.36	73	*e*PKIKP	PKPdf	19 40 56.8	-0.5
ZSN	Zaisan	138.36	73	*e*PKP	PKPdf	19 40 56.9	-0.5
SPITS	Spitsbergen Ar	138.37	12	PKhKP	PKPpre	19 40 47.3	
	comp=Z,1.3nm,0.6s,baz=156,slow=6.4,SNR=4.5						
SPITS				PKP	PKPdf	19 40 56.4	0.0
	comp=Z,1.4nm,0.5s,baz=153,slow=7.4,SNR=5.3						
KBS	Kingsbay	138.56	10	IAMs_20	IAMs_20	20 40 14.7	
	comp=Z,362nm,20.0s						
RES	Resolute Bay	140.11	337	PKhKP	PKPpre	19 40 51.4	
	comp=Z,5.8nm,1.0s,baz=11,slow=1.6,SNR=8.5						
RES				SKPbc	SKPbc	19 44 28.9	-1.6
	comp=Z,3.4nm,0.8s,baz=173,slow=0.8,SNR=3.9						
LZH	Lanzhou	140.29	101	PKP	PKPdf	19 41 01.3	-0.1
LZH				sPKP		19 41 14.3	
LZH				LR	LR		
	comp=Z,440nm,16.8s						
LZH				LR	LR		
	comp=Z,400nm,17.8s						
LZH				LR	LR		
	comp=Z,550nm,19.4s						
GTA	Gaotai	140.65	94	PKP	PKPdf	19 40 57.9	-4.0
GTA				LR	LR		
	comp=Z,250nm,18.3s						
GTA				LR	LR		
	comp=Z,300nm,19.1s						
GTA				LR	LR		
	comp=Z,370nm,19.9s						
V35K	Ketchikan	141.24	299	IAMs_20	IAMs_20	20 40 08.6	
	comp=Z,427nm,18.0s						
XAN	Xi'an	141.31	108	PKP	PKPdf	19 40 57.0	-6.1
XAN				pPKP	PKiKP	19 41 05.3	-0.6
T35M	Bob Quinn	141.56	302	IAMs_20	IAMs_20	20 52 24.9	
	comp=Z,452nm,20.0s						
ZALV	Zalesovo Beam	142.39	65	PKhKP	PKPpre	19 40 57.5	
	comp=Z,2.1nm,0.3s,baz=232,slow=3.5,SNR=11						
U33K	Whale Pass	142.39	299	IAMs_20	IAMs_20	20 34 04.0	
	comp=Z,325nm,19.0s						
S34M	Telegraph Cree	142.48	302	IAMs_20	IAMs_20	20 46 47.0	
	comp=Z,512nm,20.0s						
LYN	LuoYang	143.49	112	PKP	PKPbc	19 41 04.8	+0.4
LYN				LR	LR		
	comp=Z,420nm,22.7s						
LYN				LR	LR		
	comp=Z,520nm,19.9s						
LYN				LR	LR		
	comp=Z,1µm,21.3s						
JOW	Kunigami	143.71	138	IAMs_20	IAMs_20	20 44 20.2	
	comp=Z,348nm,20.0s						
S32K	Killisnoo	143.80	300	IAMs_20	IAMs_20	20 46 09.2	
	comp=Z,516nm,21.0s						
SIT	Sitka	143.93	299	IAMs_20	IAMs_20	20 49 46.6	
	comp=Z,379nm,20.0s						
R32K	Eaglecrest	144.19	301	IAMs_20	IAMs_20	20 41 23.5	
	comp=Z,410nm,21.0s						
P33M	Teslin, Yukon	144.41	305		PKPbc	19 41 06.5	0.0
P33M	Teslin, Yukon	144.41	305	P	PKPdf	19 41 07.2	-0.6
	baz=119,SNR=47						
NJ2	Nanjing	144.47	122	⇑PKP	PKPbc	19 41 07.6	+0.2
NJ2				LR	LR		
	comp=Z,340nm,19.5s						
NJ2				LR	LR		
	comp=Z,380nm,17.5s						
NJ2				LR	LR		
	comp=Z,450nm,20.4s						

P32M	Atlin	144.50	304	P	PKPdf	19 41 07.3	-0.6
	baz=120,SNR=16						
SSE	Sheshan	144.69	125	PKP	PKPbc	19 41 08.1	0.0
SSE				PP	PP	19 44 27.0	+0.5
SSE				SS	SS	20 03 17.6	+7.8
SSE				LR	LR		
	comp=Z,270nm,17.8s						
SSE				LR	LR		
	comp=Z,130nm,18.2s						
S31K	Pelican	144.82	300		PKPdf	19 41 08.4	0.0
S31K				IAMs_20	IAMs_20	20 47 40.1	
	comp=Z,451nm,20.0s						
S31K	Pelican	144.82	300	P	PKPdf	19 41 08.7	+0.3
	baz=120						
R31K	City Hall, Gus	144.82	301	P	PKPdf	19 41 08.6	+0.2
	baz=120						
MMPY	Sheldon Lake,	144.90	309		PKPab	19 41 08.2	+0.2
MMPY				IAMs_20	IAMs_20	20 46 58.8	
	comp=Z,458nm,20.0s						
MMPY	Sheldon Lake,	144.90	309	P	PKPdf	19 41 08.6	+0.1
	baz=117						
N32M	Quiet Lake	144.98	306	P	PKPdf	19 41 09.2	+0.5
	baz=118						
SKAG	Skagway	145.15	303	IAMs_20	IAMs_20	20 44 11.8	
	comp=Z,394nm,19.0s						
SKAG	Skagway	145.15	303	P	PKPdf	19 41 09.7	+0.8
	baz=119,SNR=48						
WHY	Whitehorse	145.53	305	P	PKPab	19 41 10.5	+0.1
	baz=118,SNR=80						
FARO	Faro, Yukon	145.59	308	P	PKPab	19 41 10.7	+0.2
	baz=116,SNR=93						
PLBC	Pleasant Camp	145.62	302	P	PKPab	19 41 11.2	+0.7
	baz=118,SNR=34						
TIY	Taiyuan	145.95	108	PKPbc	PKPbc	19 41 11.9	-0.1
TIY				PKPab	PKiKP	19 41 19.0	+3.6
TIY				SKKS		19 51 27.3	
TIY				SS	SS	20 03 25.8	+1.0
TIY				LR	LR		
	comp=Z,280nm,18.6s						
TIY				LR	LR		
	comp=Z,240nm,17.9s						
TIY				LR	LR		
	comp=Z,430nm,19.2s						
M31M	Drury Creek, Y	146.02	308	IAMs_20	IAMs_20	20 48 02.4	
	comp=Z,464nm,20.0s						
M31M	Drury Creek, Y	146.02	308	P	PKPab	19 41 11.9	-0.2
	baz=116,SNR=13						
O30N	Mendenhall	146.11	305	IAMs_20	IAMs_20	20 46 18.9	
	comp=Z,383nm,20.0s						
O30N	Mendenhall	146.11	305	P	PKPab	19 41 12.6	+0.1
	baz=117						
P30M	Million Dollar	146.19	303	P	PKPab	19 41 12.9	0.0
	baz=117						
N31M	Braeburn, Yuko	146.29	306	P	PKPbc	19 41 12.5	+0.3
	baz=116						
P29M	Windy Craggy	146.32	302	IAMs_20	IAMs_20	20 47 41.6	
	comp=Z,363nm,20.0s						
P29M	Windy Craggy	146.32	302	P	PKPab	19 41 13.1	-0.2
	baz=118,SNR=9.9						
A36M	Sachs Harbour	146.44	326		PKPbc	19 41 12.1	-0.2
A36M	Sachs Harbour	146.44	326	P	PKPbc	19 41 12.8	+0.4
	baz=109						
HYT	Haines Junctio	146.75	304	IAMs_20	IAMs_20	20 45 23.0	
	comp=Z,387nm,21.0s						
HYT	Haines Junctio	146.75	304	P	PKPab	19 41 14.8	-0.3
	baz=116,SNR=62						
HNS	HongShan	146.85	111	⇑PKPbc	PKPbc	19 41 14.9	+0.4
HNS				PP	PP	19 44 42.3	+2.9
HNS				LR	LR		
	comp=Z,250nm,19.4s						
HNS				LR	LR		
	comp=Z,200nm,18.2s						
HNS				LR	LR		
	comp=Z,430nm,19.0s						
N30M	Aishikik Lake	146.85	305	IAMs_20	IAMs_20	20 45 15.4	
	comp=Z,348nm,21.0s						
N30M	Aishikik Lake	146.85	305	P	PKPab	19 41 14.8	-0.5
	baz=115,SNR=90						
BTO	Baotou	146.89	102	*e*PKPbc	PKPbc	19 41 15.1	+0.4
BTO				PKPab	PKiKP	19 41 19.6	+2.4
BTO				pPKP	pPKPdf	19 41 24.1	-4.3
BTO				sPKP		19 41 28.1	
BTO				AMB	AMB		
	comp=Z,360nm,7.5s						
BTO				LR	LR		
	comp=Z,480nm,18.4s						
BTO				LR	LR		
	comp=Z,340nm,16.2s						
BTO				LR	LR		
	comp=Z,600nm,21.5s						
O29M	Mount Kennedy	147.00	303	P	PKPbc	19 41 14.8	+0.4
	baz=116						
PNL	Peninsula	147.08	301	P	PKPbc	19 41 15.3	+0.7
	baz=117						
TIA	Tai'an	147.09	115	PKPbc	PKPbc	19 41 15.4	+0.1
YUK6	Outpost Mounta	147.18	304	P	PKPbc	19 41 15.6	+0.6
	baz=115,SNR=23						
MAYO	Mayo, Yukon	147.22	309	P	PKPbc	19 41 15.3	+0.5
	baz=113						
H31M	Peel River	147.44	314	IAMs_20	IAMs_20	20 45 07.6	
	comp=Z,485nm,22.0s						
H31M	Peel River	147.44	314	P	PKPbc	19 41 15.5	+0.2
	baz=111,SNR=124						
YUK4	Talbot Arm	147.48	305	P	PKPbc	19 41 16.6	+0.8
	baz=114,SNR=39						
PINM	Pinnacle	147.66	302	P	PKiKP	19 41 17.3	-0.9
	baz=116						
F31M	Tsiigehtchic	147.78	317	P	PKPbc	19 41 16.4	+0.2
	baz=109,SNR=43						
J30M	Hart River	147.78	311	P	PKPbc	19 41 17.0	+0.6
	baz=111						
G31M	Satah River	147.80	316	P	PKPbc	19 41 16.4	+0.2
	baz=109,SNR=47						
M29M	Somme Creek	147.85	306	P	PKPbc	19 41 17.6	+0.9
	baz=113,SNR=181						
HHC	Hu-ho-hao-te	147.87	103	*e*PKPbc	PKPbc	19 41 17.5	+0.1
HHC				PP	PP	19 44 50.1	+4.4
HHC				LR	LR		
	comp=Z,280nm,19.3s						
HHC				LR	LR		
	comp=Z,180nm,15.1s						
HHC				LR	LR		
	comp=Z,390nm,18.1s						
O28M	Mount Upton	147.92	303	P	PKiKP	19 41 18.1	-0.8
	baz=115,SNR=58						
YUK8	Steele Glacier	147.94	304	P	PKPbc	19 41 18.0	+0.8
	baz=114,SNR=44						
L29M	L29M	147.97	308	IAMs_20	IAMs_20	20 49 07.8	
	comp=Z,336nm,19.0s						
L29M	L29M	147.97	308	P	PKPbc	19 41 17.7	+0.8
	baz=112,SNR=309						
INK	Inuvik	147.97	318	IAMs_20	IAMs_20	20 47 05.3	
	comp=Z,459nm,20.0s						
INK	Inuvik	147.97	318	PKPbc	PKPbc	19 41 16.8	+0.2
	comp=Z,110nm,1.1s,baz=108,slow=2.4,SNR=30						
INK	Inuvik	147.97	318	P	PKPbc	19 41 17.0	+0.3
	baz=108						
K29M	Barlow Dome	147.99	309	IAMs_20	IAMs_20	20 53 04.4	
	comp=Z,352nm,20.0s						
K29M	Barlow Dome	147.99	309	P	PKPbc	19 41 17.5	+0.5
	baz=112,SNR=70						
I30M	Mount Dempster	148.03	312	IAMs_20	IAMs_20	20 47 57.2	
	comp=Z,510nm,22.0s						
I30M	Mount Dempster	148.03	312	P	PKPbc	19 41 17.4	+0.3
	baz=110						
TABL	Table Mountain	148.21	302	IAMs_20	IAMs_20	20 47 59.6	
	comp=Z,390nm,21.0s						
YAH	Yahtse	148.45	302	IAMs_20	IAMs_20	20 46 40.0	
	comp=Z,413nm,20.0s						
YUK3	Moose Creek	148.45	305	P	PKPbc	19 41 18.7	+0.3
	baz=113,SNR=71						
MESA	MESA	148.46	301	IAMs_20	IAMs_20	20 48 55.4	
	comp=Z,377nm,18.0s						
MESA	MESA	148.46	301	P	PKiKP	19 41 19.6	-0.3
	baz=114,SNR=39						
J29N	Klondike Camp	148.50	310	P	PKPbc	19 41 18.9	+0.6
	baz=110,SNR=9.0						
CTGM	Chitina Glacie	148.51	303	IAMs_20	IAMs_20	20 53 51.6	
	comp=Z,352nm,20.0s						
CTG	Chitna Glacier	148.51	303	P	PKiKP	19 41 19.4	-0.6
	baz=114,SNR=47						
EPYK	Eagle Plains	148.54	314	P	PKPbc	19 41 18.6	+0.3
	baz=108						
G30M	tAoh Zraii Nji	148.55	315	P	PKPbc	19 41 18.4	+0.1
	baz=108,SNR=98						
F30M	Barrier River	148.58	316	P	PKPbc	19 41 18.5	+0.2
	baz=107,SNR=40						
GRNC	Granite Creek	148.60	302	IAMs_20	IAMs_20	20 53 59.0	
	comp=Z,322nm,18.0s						
BARN	Barnard Glacie	148.69	303	IAMs_20	IAMs_20	20 50 22.4	
	comp=Z,319nm,19.0s						
ISLE	Juniper Island	148.81	302	IAMs_20	IAMs_20	20 41 37.6	
	comp=Z,376nm,22.0s						
I29M	Ogilvie Camp,	148.84	312	P	PKPbc	19 41 18.9	-0.1
	baz=109,SNR=41						
DAWY	Dawson	148.84	309	P	PKPbc	19 41 19.4	+0.3
	baz=110,SNR=73						
BVCY	Beaver Creek	148.87	306	P	PKPbc	19 41 19.8	+0.6
	baz=112,SNR=24						
WAX	Waxell Ridge	148.98	301	IAMs_20	IAMs_20	20 45 10.2	
	comp=Z,458nm,22.0s						
BGLC	Bering Glacier	149.05	301	P	PKiKP	19 41 20.8	0.0
	baz=114						
TGL	Tana Glacier	149.10	302	IAMs_20	IAMs_20	20 54 38.1	
	comp=Z,358nm,20.0s						
H29M	Whitestone	149.13	313	P	PKPbc	19 41 20.3	+0.5
	baz=107						
G29M	Pine Creek	149.20	315	P	PKPbc	19 41 20.3	+0.4
	baz=106						
CRQE	Cirque	149.21	302	P	PKiKP	19 41 20.9	-0.5
	baz=113,SNR=42						
CRQM	Cirque	149.24	302	IAMs_20	IAMs_20	20 54 33.2	
	comp=Z,306nm,19.0s						
MOY	Mondy	149.25	78	*e*PKP2	PKPbc	19 41 21.0	+0.4
MOY				pmax	pmax		
	comp=Z,244nm,2.0s						
M27K	Edge Creek, AK	149.29	305	IAMs_20	IAMs_20	20 52 58.9	
	comp=Z,351nm,20.0s						
M27K	Edge Creek, AK	149.29	305	P	PKPbc	19 41 20.9	+0.5
	baz=111,SNR=46						
BERG	Berg Lake	149.35	301	IAMs_20	IAMs_20	20 45 39.8	
	comp=Z,462nm,22.0s						
MCARA	McCarthy VSAT	149.43	303	IAMs_20	IAMs_20	20 48 36.8	
	comp=Z,334nm,20.0s						
MCARA	McCarthy VSAT	149.43	303	P	PKiKP	19 41 21.7	0.0
	baz=112,SNR=15						
KAIM	Kayak Island	149.49	300	P	PKiKP	19 41 22.0	+0.2
	baz=114,SNR=11						
I28M	Miner Creek	149.51	311	P	PKPbc	19 41 20.9	+0.2
	baz=108,SNR=59						
L27K	Beaver Creek,	149.52	306	P	PKiKP	19 41 21.6	-0.2
	baz=110						
E29M	Blow River	149.55	317	IAMs_20	IAMs_20	20 46 48.2	
	comp=Z,508nm,22.0s						
E29M	Blow River	149.55	317	P	PKPbc	19 41 20.7	+0.1
	baz=104,SNR=87						
VRDI	Verde Repeater	149.56	303	IAMs_20	IAMs_20	20 43 25.3	
	comp=Z,328nm,19.0s						
HMT	Hamilton	149.58	301	IAMs_20	IAMs_20	20 47 58.0	
	comp=Z,423nm,20.0s						
BJI	Beijing	149.61	110	PKPbc	PKPbc	19 41 22.0	+0.3
BJI				pPKP	pPKPdf	19 41 33.0	+0.3
BJI				sPKP		19 41 36.4	
BJI				PKS	PP	19 44 54.8	-0.8
BJI				AMB	AMB		
	comp=Z,61nm,9.7s						
BJI				LR	LR		
	comp=Z,140nm,22.9s						
BJI				LR	LR		
	comp=Z,99nm,21.9s						
BJI				LR	LR		
	comp=Z,210nm,22.8s						
ZAK	Zakamensk	149.72	82	*e*PKP2	PKPbc	19 41 21.4	-0.4
ZAK				pmax	pmax		
	comp=Z,88nm,1.6s						
M26K	Nabesna, AK	149.79	305	IAMs_20	IAMs_20	20 46 17.2	
	comp=Z,458nm,22.0s						
M26K	Nabesna, AK	149.79	305	P	PKPbc	19 41 21.9	+0.4
	baz=110,SNR=23						
SONM	Songino Array	149.86	89	PKPbc	PKPbc	19 41 22.0	-0.2
	comp=Z,39nm,0.9s,baz=226,slow=3.1,SNR=26						
K27K	Chicken	149.94	308	P	PKiKP	19 41 23.0	+0.3
	baz=108						
BMRM	Bremner River	149.98	302	IAMs_20	IAMs_20	20 49 06.5	
	comp=Z,383nm,20.0s						
BMRM	Bremner River	149.98	302	P	PKiKP	19 41 23.1	+0.3
	baz=112,SNR=23						
D28M	Stokes Point	150.07	319	P	PKiKP	19 41 22.7	0.0
	baz=102						
F28M	Old Crow	150.08	316	P	PKiKP	19 41 22.5	-0.4
	baz=104						
L26K	Log Cabin Wild	150.16	306	IAMs_20	IAMs_20	20 43 51.8	
	comp=Z,410nm,22.0s						
L26K	Log Cabin Wild	150.16	306	P	PKiKP	19 41 23.2	+0.1
	baz=109,SNR=6.0						
Q23K	Middleton Isla	150.19	298	P	PKiKP	19 41 23.2	0.0
	baz=113						
E28M	Babbage River	150.19	318	IAMs_20	IAMs_20	20 49 09.0	
	comp=Z,304nm,20.0s						
E28M	Babbage River	150.19	318	P	PKPbc	19 41 22.2	0.0
	baz=102,SNR=15						
N25K	Chitina, Valde	150.21	303	IAMs_20	IAMs_20	20 47 35.5	
	comp=Z,382nm,21.0s						
N25K	Chitina, Valde	150.21	303	P	PKiKP	19 41 23.7	+0.4
	baz=111,SNR=36						
I27K	Kandik River	150.23	311	P	PKiKP	19 41 23.2	-0.1
	baz=106,SNR=19						
ULN	Ulaanbaatar	150.23	89	IAMs_20	IAMs_20	20 56 24.7	
	comp=Z,462nm,20.0s						
MENT	Mentasta	150.29	306	IAMs_20	IAMs_20	20 49 28.3	
	comp=Z,312nm,20.0s						
EYAK	Cordova Ski Ar	150.34	300	IAMs_20	IAMs_20	20 48 19.2	
	comp=Z,487nm,21.0s						
EYAK	Cordova Ski Ar	150.34	300	P	PKiKP	19 41 24.0	+0.5
	baz=112,SNR=55						
JNU	Nakatsue	150.35	137	PKPbc	PKPbc	19 41 23.6	-0.1
	comp=Z,27nm,0.8s,baz=105,slow=2.9,SNR=23						
H27K	Steamboat Moun	150.36	313	P	PKiKP	19 41 23.5	0.0
	baz=105,SNR=9.5						
G27K	Doyon Strip	150.56	314	P	PKiKP	19 41 23.7	-0.2
	baz=104,SNR=24						
DIV	Divide	150.57	302	IAMs_20	IAMs_20	20 50 44.1	
	comp=Z,344nm,21.0s						
J26L	Joseph Creek	150.71	309	IAMs_20	IAMs_20	20 50 57.2	
	comp=Z,488nm,21.0s						
J26L	Joseph Creek	150.71	309	P	PKiKP	19 41 24.6	+0.2
	baz=107,SNR=25						
SCRK	Sand Creek	150.73	308	P	PKiKP	19 41 24.7	+0.3
	baz=107,SNR=41						
HARP	HAARP	150.73	304	P	PKiKP	19 41 24.6	+0.2
	baz=109						
FID	Port Fidalgo	150.75	301	IAMs_20	IAMs_20	20 48 56.2	
	comp=Z,350nm,20.0s						
I26K	Coal Creek Min	150.76	310	P	PKiKP	19 41 24.4	+0.1
	baz=106,SNR=168						
KLU	Klutina	150.76	302	IAMs_20	IAMs_20	20 47 31.2	
	comp=Z,414nm,20.0s						
KLU	Klutina	150.76	302	P	PKiKP	19 41 25.3	+0.8
	baz=110,SNR=44						
D27M	Malcolm River	150.83	319	IAMs_20	IAMs_20	20 41 56.7	
	comp=Z,396nm,22.0s						
D27M	Malcolm River	150.83	319	P	PKiKP	19 41 24.7	+0.3
	baz=100,SNR=25						
E27K	Coleen River	150.85	316	IAMs_20	IAMs_20	20 47 20.4	
	comp=Z,368nm,22.0s						
E27K	Coleen River	150.85	316	P	PKiKP	19 41 24.3	-0.1
	baz=102						
P23K	Montague Islan	150.90	299	IAMs_20	IAMs_20	20 53 32.0	
	comp=Z,417nm,20.0s						
P23K	Montague Islan	150.90	299	P	PKiKP	19 41 24.9	+0.2
	baz=112,SNR=47						
RIDG	Independent Ri	151.02	307	IAMs_20	IAMs_20	20 51 00.6	
	comp=Z,356nm,19.0s						
RIDG	Independent Ri	151.02	307	P	PKiKP	19 41 25.7	+0.8
	baz=107						
PAX	Paxson	151.05	305	IAMs_20	IAMs_20	20 51 06.6	
	comp=Z,347nm,21.0s						
PAX	Paxson	151.05	305	P	PKiKP	19 41 25.1	0.0
	baz=108						
GLI	Glacier Island	151.08	301	IAMs_20	IAMs_20	20 48 16.6	
	comp=Z,305nm,20.0s						
GLI	Glacier Island	151.08	301	P	PKiKP	19 41 25.4	+0.4
	baz=111,SNR=26						
M24K	Tolsona, Glenn	151.09	303	P	PKiKP	19 41 26.1	+0.9
	baz=109						
DL2	Dalian	151.38	118	PKPbc	PKPbc	19 41 25.9	0.0
DL2				PKPab	pPKPdf	19 41 36.9	+1.4
DL2				PP	PP	19 45 05.0	-0.7
DL2				AMB	AMB		
	comp=Z,280nm,8.2s						
DL2				LR	LR		
	comp=N,480nm,17.7s						
DL2				LR	LR		
	comp=E,410nm,19.6s						
DL2				LR	LR		
	comp=Z,480nm,20.0s						
G26K	Porcupine Rive	151.41	314	P	PKiKP	19 41 25.8	+0.3
	baz=102,SNR=7.4						
K24K	Donnelly Dome	151.44	307	P	PKiKP	19 41 25.9	+0.2
	baz=106						
J25K	Salcha River,	151.49	308	IAMs_20	IAMs_20	20 51 20.8	
	comp=Z,436nm,20.0s						
J25K	Salcha River,	151.49	308	P	PKiKP	19 41 26.1	+0.2
	baz=105						
SCM	Sheep Creek Mo	151.51	302	P	PKiKP	19 41 26.5	+0.5
	baz=109,SNR=45						
PWL	Port Wells	151.64	300	P	PKiKP	19 41 26.4	+0.2
	baz=110,SNR=61						
M23K	Glacier View	151.68	302	P	PKiKP	19 41 26.9	+0.5
	baz=109,SNR=32						
F26K	Sheenjek River	151.70	315	P	PKiKP	19 41 27.0	+0.8
	baz=100,SNR=34						
PRP	Porcupine Dome	151.78	310	P	PKiKP	19 41 26.6	+0.1
	baz=103						
C27K	Jago River	151.85	319	IAMs_20	IAMs_20	20 46 03.6	
	comp=Z,471nm,22.0s						
C27K	Jago River	151.85	319	P	PKiKP	19 41 27.0	+0.6
	baz=97,SNR=6.6						
KNK	Knik Glacier	151.88	301	IAMs_20	IAMs_20	20 59 10.9	
	comp=Z,312nm,20.0s						
KNK	Knik Glacier	151.88	301	P	PKiKP	19 41 27.3	+0.6
	baz=109,SNR=18						
FYU	Fort Yukon	151.89	313	IAMs_20	IAMs_20	20 50 25.3	
	comp=Z,387nm,21.0s						
SEW	Seward	151.90	298	P	PKiKP	19 41 27.1	+0.4
	baz=111,SNR=44						
DHY	Denali Highway	151.91	305	IAMs_20	IAMs_20	20 51 08.4	
	comp=Z,439nm,20.0s						
DHY	Denali Highway	151.91	305	P	PKiKP	19 41 27.7	+0.7
	baz=107						
WAT6	Susitna Watana	151.93	304	P	PKiKP	19 41 27.3	+0.3
	baz=107,SNR=7.8						
H25L	Birch Creek	152.06	312	P	PKiKP	19 41 27.6	+0.7
	baz=102,SNR=6.6						
HDA	Harding Lake	152.09	308	IAMs_20	IAMs_20	20 48 32.9	
	comp=Z,420nm,20.0s						
HDA	Harding Lake	152.09	308	P	PKiKP	19 41 27.0	-0.1
	baz=104						
O22K	Cooper Landing	152.16	299	IAMs_20	IAMs_20	20 50 50.1	
	comp=Z,395nm,21.0s						
O22K	Cooper Landing	152.16	299	P	PKiKP	19 41 27.7	+0.4
	baz=110						
ILAR	Eielson Array	152.16	308	PKPbc	PKiKP	19 41 27.1	0.0
	comp=Z,77nm,0.8s,baz=146,slow=1.9,SNR=224						
F25K	Christian Rive	152.24	315	P	PKiKP	19 41 28.2	+0.8
	baz=100,SNR=20						
PMR	Palmer	152.25	301	IAMs_20	IAMs_20	20 55 13.4	
	comp=Z,359nm,21.0s						
PMR	Palmer	152.25	301	P	PKiKP	19 41 27.8	+0.4
	baz=108,SNR=8.4						
G25K	Bearman Lake	152.27	313	P	PKiKP	19 41 28.3	+1.0
	baz=101,SNR=26						
E25K	Arctic Village	152.30	316	IAMs_20	IAMs_20	20 49 31.8	
	comp=Z,430nm,22.0s						
E25K	Arctic Village	152.30	316	P	PKiKP	19 41 27.9	+0.5
	baz=99,SNR=32						
WAT1	Susitna Watana	152.36	304	P	PKiKP	19 41 27.9	+0.1
	baz=106						
RC01	Rabbit Creek A	152.36	300	P	PKiKP	19 41 28.3	+0.6
	baz=109						
BRSE	Bradley Lake S	152.37	297	P	PKiKP	19 41 28.1	+0.3
	baz=111,SNR=35						
XLT	XiLinHaoTe	152.38	104	*e*PKPbc	PKPdf	19 41 20.8	-0.5
XLT				pPKP	PKPbc	19 41 28.3	+0.1
XLT				sPKP		19 41 35.4	
XLT				PKPab	PKPab	19 41 38.6	0.0
XLT				PP	PP	19 45 09.6	-2.1
XLT				SS	SS	20 04 36.6	-0.1
XLT				AMB	AMB		
	comp=Z,120nm,15.7s						
XLT				LR	LR		
	comp=Z,290nm,17.0s						
XLT				LR	LR		
	comp=Z,400nm,21.3s						
SLKM	Skilak Lake	152.40	299	IAMs_20	IAMs_20	20 50 45.6	
	comp=Z,373nm,21.0s						
BRLK	Bradley Lake	152.45	297	IAMs_20	IAMs_20	20 51 52.2	
	comp=Z,424nm,20.0s						
CCB	Clear Creek Bu	152.51	308	IAMs_20	IAMs_20	20 51 51.9	
	comp=Z,380nm,20.0s						
KDAK	Kodiak Island	152.53	292	IAMs_20	IAMs_20	20 50 20.4	
	comp=Z,451nm,20.0s						
KDAK	Kodiak Island	152.53	292	PKPbc	PKiKP	19 41 28.2	+0.1
	comp=Z,58nm,0.6s,baz=151,slow=0.3,SNR=169						
KDAK	Kodiak Island	152.53	292	P	PKiKP	19 41 28.6	+0.5
	baz=113						
COLA	College	152.58	308	IAMs_20	IAMs_20	20 51 15.9	
	comp=Z,376nm,21.0s						
COLA	College	152.58	308	P	PKPbc	19 41 27.8	+0.1
	baz=103						
WRH	Wood River Hil	152.59	308	IAMs_20	IAMs_20	20 50 20.1	
	comp=Z,479nm,21.0s						
FIS	Fire Island	152.60	300	IAMs_20	IAMs_20	20 50 13.9	
	comp=Z,378nm,22.0s						
OHAK	Old Harbor	152.65	291	IAMs_20	IAMs_20	20 51 09.7	
	comp=Z,324nm,21.0s						
OHAK	Old Harbor	152.65	291	P	PKiKP	19 41 28.8	+0.4
	baz=114						
RND	Reindeer	152.65	305	IAMs_20	IAMs_20	20 45 54.9	
	comp=Z,309nm,20.0s						
D25K	Kavik River	152.74	318	P	PKiKP	19 41 28.4	+0.1
	baz=96,SNR=19						
M22K	Willow	152.75	301	P	PKiKP	19 41 29.1	+0.7
	baz=107,SNR=21						
SYI	Shuyak Island	152.75	294	IAMs_20	IAMs_20	20 51 18.3	
	comp=Z,411nm,20.0s						
Q20K	Shuyak Island	152.75	294	P	PKiKP	19 41 28.9	+0.3
	baz=112,SNR=6.6						
MCK	McKinley	152.77	306	P	PKiKP	19 41 29.0	+0.5
	baz=104						
HOM	Homer	152.77	296	P	PKiKP	19 41 29.2	+0.7
	baz=110						
G24K	Hadweenzic Riv	152.80	312	P	PKiKP	19 41 29.3	+0.9
	baz=100,SNR=32						
H24K	Noodor Dome	152.80	311	P	PKiKP	19 41 28.9	+0.4
	baz=101,SNR=24						
SII	Sitkinak Islan	152.82	289	P	PKiKP	19 41 29.5	+0.7
	baz=115						
SUA	Susitna One	152.94	301	P	PKiKP	19 41 29.6	+0.6
	baz=107,SNR=34						
KSRS	Korea Array	152.99	128	PKP	PKPdf	19 41 20.8	-1.4
	comp=Z,0.5nm,0.5s,baz=11,slow=33,SNR=7.0						
KSRS				PKPbc	PKPbc	19 41 29.4	-0.1
	comp=Z,6.6nm,0.8s,baz=211,slow=2.0,SNR=26						
CUT	Chulitna	153.00	303	IAMs_20	IAMs_20	20 52 23.2	
	comp=Z,442nm,20.0s						
CUT	Chulitna	153.00	303	P	PKiKP	19 41 29.6	+0.7
	baz=106						
NEA2	Nenana	153.03	308	IAMs_20	IAMs_20	20 50 33.7	
	comp=Z,371nm,19.0s						
NEA2	Nenana	153.03	308	P	PKPbc	19 41 28.8	0.0
	baz=103						
F24K	Squaw Lake	153.08	314	P	PKiKP	19 41 29.9	+0.8
	baz=98,SNR=19						
CHIR	Chirikof Islan	153.23	287	P	PKiKP	19 41 30.3	+0.7
	baz=116						
I23K	Minto, Yukon-K	153.27	309	P	PKPbc	19 41 29.4	+0.1
	baz=101,SNR=17						
TRF	Thorofare Moun	153.29	305	IAMs_20	IAMs_20	20 50 06.6	
	comp=Z,407nm,21.0s						
TRF	Thorofare Moun	153.29	305	P	PKiKP	19 41 30.3	+0.5
	baz=104,SNR=16						
R18K	Karluk	153.36	291	P	PKiKP	19 41 30.0	+0.2
	baz=113						
E24K	Your Creek	153.38	315	IAMs_20	IAMs_20	20 50 25.4	
	comp=Z,441nm,21.0s						
E24K	Your Creek	153.38	315	P	PKiKP	19 41 30.2	+0.5
	baz=96,SNR=11						
O20K	Slope Mountain	153.38	297	P	PKiKP	19 41 30.0	+0.1
	baz=109						
SKT	Skwentna	153.45	301	P	PKiKP	19 41 30.4	+0.4
	baz=106,SNR=28						
H23K	Yukon River	153.47	310	IAMs_20	IAMs_20	20 50 41.1	
	comp=Z,421nm,22.0s						
H23K	Yukon River	153.47	310	P	PKiKP	19 41 30.3	+0.4
	baz=100,SNR=10						
Q19K	Cape Douglas,	153.48	294	IAMs_20	IAMs_20	20 43 37.4	
	comp=Z,383nm,20.0s						
Q19K	Cape Douglas,	153.48	294	P	PKiKP	19 41 30.3	+0.2
	baz=111						
P19K	Oil Pt	153.53	296	P	PKiKP	19 41 30.4	+0.2
	baz=110						
N20K	Mount Spurr	153.54	299	P	PKiKP	19 41 30.4	+0.1

	baz=107,SNR=7.1						
SPCR	Spurr Chakacha	153.54	299	P	PKiKP	19 41 30.2	0.0
	baz=107,SNR=5.8						
C24K	Franklin Bluff	153.59	319	P	PKiKP	19 41 30.3	+0.3
	baz=93						
ILSW	Iliamna Southw	153.60	297	IAMs_20	IAMs_20	20 46 22.4	
	comp=Z,371nm,22.0s						
D24K	Happy Valley	153.60	318	P	PKiKP	19 41 30.3	+0.3
	baz=94,SNR=8.7						
BPAW	Bear Paw Mtn.	153.74	306	IAMs_20	IAMs_20	20 49 28.5	
	comp=Z,404nm,20.0s						
BPAW	Bear Paw Mtn.	153.74	306	P	PKiKP	19 41 30.8	+0.3
	baz=102,SNR=42						
E23K	Chandalar	153.80	315	IAMs_20	IAMs_20	20 47 41.5	
	comp=Z,368nm,22.0s						
E23K	Chandalar	153.80	315	P	PKiKP	19 41 31.0	+0.4
	baz=95,SNR=7.8						
G23K	Bananza Creek	153.80	312	P	PKiKP	19 41 31.6	+1.0
	baz=98,SNR=22						
MLY	Manley	153.82	308	IAMs_20	IAMs_20	20 51 53.5	
	comp=Z,424nm,21.0s						
MLY	Manley	153.82	308	P	PKPbc	19 41 30.6	0.0
	baz=100,SNR=14						
TOLK	Toolik Lake Re	153.83	317	IAMs_20	IAMs_20	20 50 44.3	
	comp=Z,443nm,21.0s						
TOLK	Toolik Lake Re	153.83	317	P	PKiKP	19 41 31.1	+0.5
	baz=94,SNR=6.8						
COLD	Coldfoot	153.94	313	IAMs_20	IAMs_20	20 47 58.3	
	comp=Z,431nm,21.0s						
COLD	Coldfoot	153.94	313	P	PKiKP	19 41 31.6	+0.9
	baz=96,SNR=7.9						
PPLA	Purkeypile	153.99	303	P	PKiKP	19 41 31.6	+0.4
	baz=104,SNR=10						
Q18K	Katmai Hardscr	154.04	293	P	PKPbc	19 41 31.3	0.0
	baz=110,SNR=9.1						
CAST	Castle Rocks	154.06	304	P	PKPbc	19 41 31.1	0.0
	baz=103,SNR=26						
M20K	Styx River	154.16	301	IAMs_20	IAMs_20	20 56 08.6	
	comp=Z,376nm,19.0s						
M20K	Styx River	154.16	301	P	PKiKP	19 41 31.5	0.0
	baz=105,SNR=21						
O19K	Port Alsworth	154.22	297	IAMs_20	IAMs_20	20 52 47.0	
	comp=Z,392nm,20.0s						
O19K	Port Alsworth	154.22	297	P	PKPbc	19 41 31.3	-0.2
	baz=108						
H22K	Ishtalitna Cre	154.22	310	P	PKiKP	19 41 32.1	+0.7
	baz=98,SNR=11						
D23K	Nanushuk River	154.26	317	P	PKiKP	19 41 32.1	+0.7
	baz=92,SNR=5.9						
C23K	Itkillik River	154.26	319	IAMs_20	IAMs_20	20 53 28.4	
	comp=Z,330nm,21.0s						
C23K	Itkillik River	154.26	319	P	PKiKP	19 41 32.2	+0.9
	baz=91,SNR=11						
CHUM	Lake Minchumin	154.26	305	P	PKiKP	19 41 31.8	+0.3
	baz=102						
Q17K	Contact Creek	154.34	292	P	PKiKP	19 41 32.3	+0.3
	baz=111						
P18K	Big Mountain,	154.40	294	P	PKPbc	19 41 31.9	-0.1
	baz=109,SNR=6.7						
G22K	Bettles	154.41	312	P	PKiKP	19 41 32.7	+0.9
	baz=96						
N19K	Bonanza Creek	154.49	298	IAMs_20	IAMs_20	20 54 18.8	
	comp=Z,370nm,20.0s						
N19K	Bonanza Creek	154.49	298	P	PKPbc	19 41 32.0	-0.2
	baz=106						
O18K	Koktuh Hills	154.54	296	IAMs_20	IAMs_20	20 56 09.4	
	comp=Z,325nm,20.0s						
O18K	Koktuh Hills	154.54	296	P	PKiKP	19 41 32.3	0.0
	baz=108,SNR=14						
E22K	Anaktuvuk Pass	154.63	315	IAMs_20	IAMs_20	20 48 28.4	
	comp=Z,395nm,20.0s						
E22K	Anaktuvuk Pass	154.63	315	P	PKiKP	19 41 32.6	+0.4
	baz=93,SNR=7.1						
L20K	Farewell, AK	154.65	302	P	PKPbc	19 41 32.4	0.0
	baz=104,SNR=9.1						
F22K	John River	154.72	314	P	PKiKP	19 41 33.2	+0.8
	baz=94						
M19K	Big River Lodg	154.74	300	IAMs_20	IAMs_20	20 51 21.3	
	comp=Z,385nm,20.0s						
M19K	Big River Lodg	154.74	300	P	PKiKP	19 41 32.7	+0.1
	baz=104,SNR=7.6						
H21K	Melozitna Rive	154.78	309	P	PKiKP	19 41 33.0	+0.4
	baz=98,SNR=7.8						
CHNA	Chernabura Isl	154.84	282	P	PKiKP	19 41 33.1	+0.2
	baz=116						
CHGN	Chignik	154.85	286	IAMs_20	IAMs_20	20 47 08.3	
	comp=Z,322nm,21.0s						
Q16K	King Salmon	154.86	292	P	PKiKP	19 41 33.2	+0.4
	baz=110						
K20K	Telida	154.92	304	IAMs_20	IAMs_20	20 53 36.0	
	comp=Z,341nm,20.0s						
K20K	Telida	154.92	304	P	PKiKP	19 41 33.3	+0.4
	baz=102						
P17K	Kvichak River	154.93	294	P	PKiKP	19 41 33.4	+0.3
	baz=109,SNR=8.1						
D22K	Ayikyak River	154.98	317	P	PKiKP	19 41 33.8	+0.9
	baz=91,SNR=10.0						
L19K	White Mountain	155.02	301	IAMs_20	IAMs_20	20 54 43.6	
	comp=Z,330nm,20.0s						
L19K	White Mountain	155.02	301	P	PKPdf	19 41 33.4	+9.1
	baz=104						
N18K	Kilae Creek	155.11	297	IAMs_20	IAMs_20	20 54 15.4	
	comp=Z,363nm,20.0s						
N18K	Kilae Creek	155.11	297	P	PKPdf	19 41 33.8	+9.2
	baz=106						
J20K	Nowinta River	155.11	306	IAMs_20	IAMs_20	20 52 00.8	
	comp=Z,405nm,21.0s						
J20K	Nowinta River	155.11	306	P	PKPdf	19 41 33.9	+10
	baz=100						
G21K	Allakaket	155.16	311	IAMs_20	IAMs_20	20 51 41.6	
	comp=Z,360nm,20.0s						
G21K	Allakaket	155.16	311	P	PKPdf	19 41 34.0	+10
	baz=95						
F21K	Alatna River	155.21	313	IAMs_20	IAMs_20	20 52 49.8	
	comp=Z,392nm,20.0s						
F21K	Alatna River	155.21	313	P	PKPdf	19 41 34.2	+10
	baz=94,SNR=7.9						
B22K	Teshekpuk Lake	155.21	320	IAMs_20	IAMs_20	20 46 47.4	
	comp=Z,449nm,22.0s						
B22K	Teshekpuk Lake	155.21	320	P	PKPdf	19 41 33.9	+10
	baz=87						
M18K	Stony River	155.29	299	P	PKPdf	19 41 34.2	+9.5
	baz=104						
I20K	Naaghedeneel	155.35	307	P	PKPab	19 41 50.9	+0.4
	baz=98						
O17K	Koliganek Bris	155.42	295	P	PKPab	19 41 50.8	-0.1
	baz=107,SNR=9.8						
S14K	Fog Glacier	155.43	286	P	PKPab	19 41 50.7	-0.4
	baz=113						
E21K	Killik River	155.44	316	IAMs_20	IAMs_20	20 51 21.8	
	comp=Z,413nm,20.0s						
E21K	Killik River	155.44	316	P	PKPab	19 41 50.7	-0.2
	baz=91						
SDPT	Sand Point	155.52	283	P	PKPab	19 41 50.8	-0.7
	baz=115						
H20K	Anotleneega Mo	155.61	309	P	PKPab	19 41 51.4	-0.2
	baz=96,SNR=6.8						
P16K	Nushagak River	155.63	293	P	PKPab	19 41 51.8	0.0
	baz=108						
B21K	Ikpikpuk River	155.66	319	IAMs_20	IAMs_20	20 56 13.3	
	comp=Z,425nm,21.0s						
B21K	Ikpikpuk River	155.66	319	P	PKPab	19 41 51.7	0.0
	baz=87						
A22K	Sinclair Lake	155.68	322	P	PKPab	19 41 52.3	+0.6
	baz=84						
N17K	Nushagak Hills	155.68	296	IAMs_20	IAMs_20	20 52 52.6	
	comp=Z,354nm,22.0s						
N17K	Nushagak Hills	155.68	296	P	PKPab	19 41 51.9	-0.2
	baz=106						
J19K	Poorman	155.72	305	P	PKPab	19 41 52.3	+0.2
	baz=99,SNR=6.1						
C21K	Knifeblade Rid	155.73	318	P	PKPab	19 41 52.2	+0.2
	baz=88						
O16K	Kokwok River B	155.85	294	IAMs_20	IAMs_20	20 49 35.2	
	comp=Z,385nm,22.0s						
O16K	Kokwok River B	155.85	294	P	PKPab	19 41 52.1	-0.6
	baz=107						
L18K	Granite Mounta	155.86	301	IAMs_20	IAMs_20	20 54 26.0	
	comp=Z,398nm,20.0s						
L18K	Granite Mounta	155.86	301	P	PKPab	19 41 52.6	-0.2
	baz=102						
MJAR	Matsushiro Arr	155.89	146	PKP	PKPdf	19 41 25.5	-0.9
	comp=Z,1.8nm,0.9s,baz=236,slow=3.1,SNR=5.7						
MJAR				PKPbc	pPKPdf	19 41 35.9	-6.1
	comp=Z,3.1nm,0.9s,baz=152,slow=2.8,SNR=7.4						
MJAR				PKPab	PKPab	19 41 53.4	-0.2
	comp=Z,6.2nm,0.9s,baz=193,slow=3.2,SNR=7.4						
MJAR				PP	PP	19 45 32.1	+1.3
	comp=Z,0.5nm,0.5s,baz=212,slow=4.3,SNR=1.8						
M17K	Holitna River	156.02	298	P	PKPab	19 41 53.2	-0.2
	baz=104						
CIT	Chita	156.04	87	*e*PKIKP	PKPdf	19 41 13.2	-13
CIT				pmax	pmax		
	comp=Z,64nm,3.2s						
F20K	Avaraart Lake	156.07	312	IAMs_20	IAMs_20	20 54 07.7	
	comp=Z,418nm,21.0s						
F20K	Avaraart Lake	156.07	312	P	PKPab	19 41 53.4	-0.1
	baz=92						
J18K	Innoko River	156.11	304	IAMs_20	IAMs_20	20 50 44.4	
	comp=Z,370nm,20.0s						
J18K	Innoko River	156.11	304	P	PKPab	19 41 53.9	+0.1
	baz=99,SNR=11						
A21K	Barrow	156.17	323	P	PKPab	19 41 54.2	+0.4
	baz=82						
E20K	Nigu River	156.26	315	P	PKPab	19 41 55.0	+0.5
	baz=89,SNR=5.7						
H19K	Roundabout Mou	156.26	309	P	PKPab	19 41 54.9	+0.5
	baz=95						
GCSA	Galena City Sc	156.37	307	P	PKPab	19 41 55.3	+0.5
	baz=96,SNR=5.8						
D20K	Etivluk River	156.41	317	IAMs_20	IAMs_20	20 51 43.3	
	comp=Z,373nm,19.0s						
D20K	Etivluk River	156.41	317	P	PKPab	19 41 55.6	+0.7
	baz=88						
N16K	Nishlik Lake	156.42	296	P	PKPab	19 41 55.8	+0.5
	baz=105						
S12K	Black Hills	156.49	283	P	PKPab	19 41 55.0	-0.6
	baz=114						
B20K	Meade River	156.51	320	P	PKPab	19 41 56.0	+0.7
	baz=84,SNR=6.0						
G19K	Purcell Mounta	156.57	310	IAMs_20	IAMs_20	20 52 00.1	
	comp=Z,394nm,21.0s						
G19K	Purcell Mounta	156.57	310	P	PKPab	19 41 55.8	+0.1
	baz=93						
O15K	Ungalikthiuk R	156.58	292	IAMs_20	IAMs_20	20 49 16.4	
	comp=Z,375nm,20.0s						
O15K	Ungalikthiuk R	156.58	292	P	PKPab	19 41 56.1	+0.2
	baz=107						
L17K	Donlin	156.58	300	P	PKPab	19 41 56.2	+0.4
	baz=101						
M16K	Timber Creek	156.65	297	IAMs_20	IAMs_20	20 52 40.1	
	comp=Z,426nm,20.0s						
M16K	Timber Creek	156.65	297	P	PKPab	19 41 56.9	+0.7
	baz=103						
E19K	Redstone River	156.67	313	IAMs_20	IAMs_20	20 53 36.4	
	comp=Z,363nm,20.0s						
E19K	Redstone River	156.67	313	P	PKPab	19 41 56.2	+0.1
	baz=90						
K17K	Iditarod	156.69	301	IAMs_20	IAMs_20	20 53 30.0	
	comp=Z,344nm,20.0s						
K17K	Iditarod	156.69	301	P	PKPab	19 41 56.8	+0.5
	baz=100,SNR=5.3						
D19K	Kuna River	156.97	316	IAMs_20	IAMs_20	20 49 45.2	
	comp=Z,322nm,21.0s						
D19K	Kuna River	156.97	316	P	PKPab	19 41 57.9	+0.5
	baz=86						
N15K	Kwethluk River	156.98	295	IAMs_20	IAMs_20	20 53 01.0	
	comp=Z,380nm,20.0s						
N15K	Kwethluk River	156.98	295	P	PKPab	19 41 58.3	+0.7
	baz=105						
CN2	Changchun	156.99	116	*e*PKP	PKPdf	19 41 25.8	-1.7
H18K	Honhosa River	157.03	308	IAMs_20	IAMs_20	20 58 06.5	
	comp=Z,365nm,20.0s						
H18K	Honhosa River	157.03	308	P	PKPab	19 41 58.3	+0.6
	baz=94,SNR=8.2						
L16K	Owhat River	157.04	299	IAMs_20	IAMs_20	20 52 03.4	
	comp=Z,388nm,22.0s						
L16K	Owhat River	157.04	299	P	PKPab	19 41 58.6	+0.8
	baz=102						
J17K	VABM Dome	157.15	303	IAMs_20	IAMs_20	21 08 40.0	
	comp=Z,390nm,22.0s						
J17K	VABM Dome	157.15	303	P	PKPab	19 41 58.5	+0.2
	baz=98,SNR=6.2						
G18K	Tagagawik	157.20	309	IAMs_20	IAMs_20	20 58 58.7	
	comp=Z,330nm,19.0s						
G18K	Tagagawik	157.20	309	P	PKPab	19 41 58.7	+0.2
	baz=92,SNR=5.9						
O14K	Tigyukauivet M	157.31	292	P	PKPab	19 41 59.4	+0.3
	baz=106						
M15K	Kasigluk River	157.40	296	P	PKPab	19 41 59.0	-0.4
	baz=103						
C19K	Lookout Ridge	157.45	318	P	PKPab	19 41 59.4	-0.1
	baz=84						
F18K	Selawik	157.62	311	P	PKPab	19 42 00.2	0.0
	baz=90,SNR=8.1						
H17K	Granite Mounta	157.67	307	IAMs_20	IAMs_20	20 52 55.5	
	comp=Z,471nm,22.0s						
H17K	Granite Mounta	157.67	307	P	PKPab	19 42 00.6	+0.1
	baz=93						
N14K	Kuskokwak Cree	157.69	293	IAMs_20	IAMs_20	20 41 06.9	
	comp=Z,380nm,20.0s						
N14K	Kuskokwak Cree	157.69	293	P	PKPab	19 42 00.7	+0.1
	baz=104,SNR=7.3						
A19K	Wainwright	157.81	321	P	PKPab	19 42 01.4	+0.5
	baz=79						
J16K	Anvik River	157.82	302	IAMs_20	IAMs_20	20 51 56.6	
	comp=Z,418nm,20.0s						
J16K	Anvik River	157.82	302	P	PKPab	19 42 01.6	+0.5
	baz=97						
I17K	Unalakleet	157.93	304	IAMs_20	IAMs_20	20 46 25.4	
	comp=Z,322nm,20.0s						
I17K	Unalakleet	157.93	304	P	PKPab	19 42 02.1	+0.5
	baz=95						
E18K	Tukpahlearik C	157.97	313	IAMs_20	IAMs_20	21 09 34.7	
	comp=Z,393nm,22.0s						
E18K	Tukpahlearik C	157.97	313	P	PKPab	19 42 01.6	-0.1
	baz=87						
L15K	Ungalak Mounta	157.98	298	P	PKPab	19 42 02.7	+0.8
	baz=100						
G17K	Kiwalik Mounta	158.01	308	P	PKPab	19 42 02.0	0.0
	baz=91,SNR=7.6						
UNV	Unalaska Valle	158.02	276	P	PKPab	19 42 02.9	+0.6
	baz=117						
M14K	Bethel	158.02	295	P	PKPab	19 42 02.4	+0.4
	baz=102,SNR=7.5						
C18K	Utukok River	158.08	317	IAMs_20	IAMs_20	21 09 32.6	
	comp=Z,445nm,21.0s						
C18K	Utukok River	158.08	317	P	PKPab	19 42 03.0	+0.8
	baz=83,SNR=5.8						
K15K	Wolf Creek Mou	158.10	300	IAMs_20	IAMs_20	21 09 56.3	
	comp=Z,426nm,20.0s						
K15K	Wolf Creek Mou	158.10	300	P	PKPab	19 42 03.1	+0.7
	baz=99						
B18K	Kokolik River	158.20	319	P	PKPab	19 42 03.6	+1.0
	baz=81,SNR=14						
E17K	Hotham Inlet	158.46	313	P	PKPab	19 42 04.0	+0.2
	baz=86,SNR=14						
L14K	Kuka Creek	158.48	297	IAMs_20	IAMs_20	20 46 54.5	
	comp=Z,330nm,20.0s						
L14K	Kuka Creek	158.48	297	P	PKPab	19 42 03.9	-0.1
	baz=100						
M13K	Dall Lake	158.62	294	P	PKPab	19 42 04.6	-0.1
	baz=102						
H16K	Elim	158.65	306	P	PKPab	19 42 04.8	+0.1
	baz=92						
G16K	Koyuk River	158.72	308	P	PKPab	19 42 05.2	+0.2
	baz=90						
RDOG	Red Dog Mine	158.79	315	IAMs_20	IAMs_20	20 54 02.1	
	comp=Z,420nm,20.0s						
RDOG	Red Dog Mine	158.79	315	P	PKPab	19 42 05.2	-0.1
	baz=83						
C17K	DeLong Mountai	158.83	317	P	PKPab	19 42 05.8	+0.3
	baz=81,SNR=13						
NIKH	Nikolski High	158.86	272	P	PKPab	19 42 07.2	+1.2
	baz=118						
D17K	Noatak River	158.89	314	P	PKPab	19 42 06.1	+0.4
	baz=84,SNR=13						
J14K	Nanvaranak Lak	159.09	301	IAMs_20	IAMs_20	20 55 41.4	
	comp=Z,373nm,21.0s						
J14K	Nanvaranak Lak	159.09	301	P	PKPab	19 42 07.7	+1.1
	baz=96						
G15K	Niukluk	159.43	307	P	PKPab	19 42 08.8	+0.7
	baz=90,SNR=5.2						
K13K	Kusilvak Mount	159.50	298	P	PKPab	19 42 09.5	+1.0
	baz=97						
MDJ	Mudanjiang	159.55	120	PKP	PKPdf	19 41 28.8	-1.8
MDJ				AMB	AMB		
	comp=Z,220nm,5.8s						
C16K	Lisburne Hills	159.65	316	IAMs_20	IAMs_20	20 49 25.1	
	comp=Z,404nm,20.0s						
C16K	Lisburne Hills	159.65	316	P	PKPab	19 42 09.7	+0.8
	baz=80						
F15K	North Star Dit	159.67	309	IAMs_20	IAMs_20	20 46 37.1	
	comp=Z,438nm,22.0s						
F15K	North Star Dit	159.67	309	P	PKPab	19 42 09.7	+0.6
	baz=87,SNR=7.0						
M11K	Mekoryuk	160.00	293	P	PKPab	19 42 11.1	+0.4
	baz=100						
ANM	Nome	160.00	306	IAMs_20	IAMs_20	20 56 07.8	
	comp=Z,414nm,20.0s						
ANM	Nome	160.00	306	P	PKPab	19 42 10.7	0.0
	baz=90						
USRK	Ussuriysk Ar.	160.30	125	PKPab	PKPab	19 42 12.1	-0.3
	comp=Z,11nm,1.0s,baz=246,slow=3.5,SNR=12						
F14K	Arctic Creek	160.38	308	P	PKPab	19 42 12.8	+0.6
	baz=86						
P08K	Saint George I	160.71	281	P	PKPab	19 42 14.2	+0.3
	baz=109						
TNA	Tin City	161.03	309	P	PKPab	19 42 15.1	0.0
	baz=84						
SPIA	Saint Paul Isl	161.26	282	P	PKPab	19 42 16.4	+0.2
	baz=107						
HEH	HeiHe	162.38	105	PKP	PKPdf	19 41 32.6	-0.8
HEH				PKPab	PKPab	19 42 19.9	-1.5
HEH				AMB	AMB		
	comp=Z,190nm,11.3s						
HEH				LR	LR		
	comp=Z,350nm,19.9s						
HEH				LR	LR		
	comp=Z,400nm,19.4s						
HEH				LR	LR		
	comp=Z,780nm,19.8s						
TIXI	Tiksi	162.79	28	PKPab	PKPab	19 42 22.1	-0.5
	comp=Z,4.8nm,0.8s,baz=352,slow=3.0,SNR=6.1						
TIXI				PP	PP	19 46 07.1	-1.0
	comp=Z,3.4nm,0.9s,baz=332,slow=2.4,SNR=6.0						
KLR	Kul'dur	163.91	114	PKP	PKPdf	19 41 34.0	-1.0
	comp=Z,1.9nm,0.7s,baz=256,slow=4.2,SNR=4.7						
KLR				PKPab	PKPab	19 42 27.7	-0.5
	comp=Z,8.6nm,0.8s,baz=268,slow=3.9,SNR=12						
ZEA	Zeya	164.14	94	*i* PKIKP	PKPdf	19 41 32.8	-2.2
ZEA				*e*		19 46 16.2	
ZEA				*e*		20 13 06.3	
ZEA				pmax	pmax		
	comp=Z,100nm,16.3s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,100nm,6.8s						
YSS	Yuzhno-Sakhali	166.76	142	*i* PKIKP	PKPdf	19 41 35.8	-1.6
YSS				*e*		19 41 50.1	
YSS				*e*		19 42 41.4	
YSS				*e*		19 46 27.0	
YSS				*e*		19 48 40.0	
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YSS				pmax	pmax		
	comp=Z,100nm,5.5s						
YSS				pmax	pmax		
	comp=N,100nm,4.8s						
YSS				pmax	pmax		
	comp=E,100nm,5.1s						
YSS				MLR	MLR		
	comp=Z,400nm,18.0s						
YSS				MLR	MLR		
	comp=N,300nm,20.0s						
YSS				MLR	MLR		
	comp=E,300nm,18.0s						
YAK	Yakutsk	167.00	62	*e*PKP2	PKPab	19 42 42.0	+0.6
YAK				pmax	pmax		
	comp=Z,15nm,0.9s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.2s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.4s						
GRNR	Gornyy	167.18	117	⇓*i*PKP2	PKPab	19 42 42.7	+0.1
GRNR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GRNR				MLR	MLR		
	comp=E,90nm,20.0s						
BILL	Bilibino	168.72	337	*i* PKIKP	PKPdf	19 41 44.5	+6.4
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
PETK	Petropavlovsk-	174.70	201	PKP	PKPdf	19 41 40.4	-1.0
	comp=Z,5.6nm,0.9s,baz=154,slow=3.1,SNR=17						
PETK				PKPab	PKPab	19 43 15.4	-0.3
	comp=Z,6.9nm,0.8s,baz=164,slow=6.2,SNR=10						
PETK				PP	PP	19 47 09.6	+1.2
	comp=Z,2.4nm,0.9s,baz=178,slow=5.5,SNR=4.8						
SEY	Seymchan	175.02	12	PKP	PKPdf	19 41 39.2	-2.0
	comp=Z,3.4nm,1.1s,baz=26,slow=0.7,SNR=5.4						
SEY				PKPab	PKPab	19 43 17.9	+1.0
	comp=Z,2.8nm,0.9s,baz=354,slow=3.7,SNR=3.6						
SEY				PP	PP	19 47 10.4	+0.6
	comp=Z,0.8nm,0.9s,baz=323,slow=4.6,SNR=4.5						
MA2	Magadan	177.53	51	PKPab	PKPab	19 43 29.1	+0.9
	comp=Z,4.8nm,0.8s,baz=154,slow=17,SNR=3.1						

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*IDC **24** 19:25:58.9±1.6, 2°.69S×138°.53E, h0^{km}, mb3.3/2, mbtmp3.5/5, ML3.6/3, Error ellipse: s-maj=31.8km s-min=17.1km az=164.0*

*DJA **24** 19:26:04.3±0.7, 3°S±4°×13°9E±°, h19^{km}±7^{km}, M4.0/9, mB5.0/1, mb4.1/5, MLv4.0/9, Mw(mB)4.3/1*

ISC 24 19:26:03.4±0.9, **2°.64S**±0°.08×**138°.67E**±0°.06, **h32^{km}, n14,** σ1^{s}.47/16, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.64	4	P	Pb	19 26 15.3	-1.0
GENI	Genyem	1.50	88	P	Pb	19 26 31.6	+0.9
JAY	Jayapura	2.04	87	Pn	Pn	19 26 37.7	+2.2
	6.4nm,0.3s,baz=234,slow=9.0,SNR=19						
JAY				Lg	Lg	19 27 07.1	
	3.2nm,0.3s,baz=243,slow=18,SNR=1.9 11nm,0.3s						
JAY	Jayapura	2.04	87	P	Pb	19 26 38.8	-1.0
SRPI	Serui, Papua	2.54	287	P	Pn	19 26 41.9	-0.6
SRPI				S	Sn	19 27 12.7	+0.3
BAKI	Biak	2.94	299	P	Pn	19 26 48.3	+0.4
BAKI				S	Sn	19 27 23.6	+1.5
RKPI	Ransiki, Papua	4.63	284	P	Pn	19 27 11.2	0.0
FAKI	Fak Fak	6.42	267	P	Pn	19 27 37.8	+2.0
	0.2nm31nm,1.4s						
SWI	Sorong	7.61	283	P	Pn	19 27 53.7	+1.5
	0.1nm15nm,0.9s						
BATI	Baumata	16.69	243	P	P	19 29 58.9	+1.7
WRA	Warramunga Arr	17.71	194	P	Pn	19 30 06.6	-1.2
	0.3nm,0.3s,baz=13,slow=12,SNR=8.1 2.0nm,0.8s						
FITZ	Fitzroy Crossi	19.98	219	P	P	19 30 30.9	-2.5
	0.1nm,0.3s,baz=39,slow=14,SNR=2.0 2.7nm,0.8s						
ASAR	Alice Springs	21.41	192	P	P	19 30 47.8	-1.0
	1.6nm,0.7s,baz=21,slow=10.0,SNR=9.4 1.6nm,0.7s						
MKAR	Makanchi Array	69.71	322	P	P	19 37 10.4	+0.1
	0.1nm,0.6s,baz=101,slow=7.5,SNR=2.2 0.1nm,0.6s						

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*ISK **24** 19:33:24.2, 39°.81N×26°.08E, h6^{km}, ML2.6/18*

*AFAD **24** 19:33:25.0, 39°.79N×26°.14E, h10^{km}±1^{km}, ML2.5*

*ATH **24** 19:33:25.7, 39°.77N×26°.06E, h25^{km}±2^{km}, ML2.3/5, Manual Solution by S.Koutrakis First location: 2019/06/24 19:34:33, This location: 2019/06/24 19:42:36 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

ISC 24 19:33:24.7±0.8, **39°.80N**±0°.02×**26°.09E**±0°.02, **h16**^{km}±5^{km}, **n49,** σ**0^{s}.58**/72, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOZC	Bozcaada	0.05	323	P	Pg	19 33 27.7	0.0
BOZC				S	Sg	19 33 29.5	-0.2
BOZC				*i* IAML		19 33 30.0	
	comp=E,1μm,0.1s						
EZN	Ezine	0.18	81	Pg	Pg	19 33 28.6	-0.5
EZN				Sg	Sg	19 33 31.7	-0.4
EZNE	Ezine-Canakkal	0.21	102	Pg	Pg	19 33 29.3	-0.3
EZNE				Sg	Sg	19 33 33.0	0.0
ECEA	Canakkale, Ece	0.25	14	P	Pg	19 33 30.7	+0.4
ECEA				S	Sg	19 33 34.1	0.0
ECEA				*i* IAML		19 33 35.0	
	comp=N,1μm,0.6s						
ECEA				*i* IAML		19 33 35.0	
	comp=E,1μm,0.2s						
KOCA	Canakkale, Ayv	0.30	173	P	Pg	19 33 31.1	0.0
GPNR	Gulpinar-Canak	0.34	175	Pg	Pg	19 33 31.5	-0.3
GPNR				Sg	Sb	19 33 37.4	-0.2
CNKL	anakkale-Mer	0.35	40	P	Pg	19 33 31.8	-0.2

CNKL				P	Pg	19 33 31.8	-0.2
CNKL				S	Sg	19 33 36.5	-0.4
BAYC	CANAKKALE_Bayr	0.35	99	P	Pg	19 33 31.8	-0.2
BAYC				S	Sg	19 33 36.3	-0.7
GOAD	anakkale-G¶	0.39	339	P	Pg	19 33 33.0	+0.4
GOAD				S	Sg	19 33 38.1	0.0
GOAD				*i* IAML		19 33 39.0	
	comp=E,319nm,0.3s						
COMU	Canakkale	0.42	44	Pg	Pg	19 33 32.9	-0.3
COMU				Sg	Sg	19 33 39.2	+0.2
GADA	Gvkgeada	0.42	339	Pg	Pg	19 33 33.2	0.0
PRK	Paraskevi	0.57	166	P	Pg	19 33 35.9	-0.1
PRK				S	Sg	19 33 43.7	+0.2
SIGR	SIGRI	0.61	198	Pg	Pg	19 33 36.6	-0.2
SIGR	SIGRI	0.61	198	P	Pg	19 33 36.6	-0.2
SIGR				S	Sg	19 33 45.3	+0.3
GELI	Tayfur-Gelibol	0.67	26	Pg	Pg	19 33 37.6	-0.2
AYVA	Ayvalik	0.67	137	P	Pg	19 33 37.8	-0.1
AYVA				S	Sg	19 33 45.7	-1.1
AYVA				*i* IAML		19 33 50.0	
	comp=N,309nm,0.2s						
LIA	Limnos Island	0.71	278	P	Pb	19 33 39.0	+0.3
LIA				S	Sb	19 33 48.5	+0.4
CANM	Can-anakkale	0.77	74	Pg	Pg	19 33 39.6	-0.1
LPK	Lapseki	0.77	42	Pg	Pg	19 33 39.2	-0.5
BUHA	Balikesir, Bur	0.81	111	P	Pg	19 33 40.4	-0.2
BUHA				S	Sg	19 33 50.7	-0.6
BUHA				*i* IAML		19 33 54.0	
	comp=E,135nm,0.4s						
CAVK	Edirne/Enez-Ca	0.89	4	P	Pg	19 33 42.1	0.0
CAVK				*i* IAML		19 33 57.0	
	comp=N,122nm,0.2s						
CAVK				*i* IAML		19 33 57.0	
	comp=E,137nm,0.7s						
YENI	Yenice-Canakka	0.89	81	Pg	Pg	19 33 41.9	-0.2
ERIK	Erikli-Kesan	0.93	20	Pg	Pg	19 33 41.9	-0.8
ENEZ	Enez	0.94	3	Pg	Pg	19 33 42.4	-0.5
DKL	Dikili	0.96	139	Pg	Pg	19 33 43.4	+0.1
DKL	Dikili	0.96	139	P	Pb	19 33 43.7	+0.8
DKL				S	Sg	19 33 55.9	0.0
IZMD	zmir-Dikili-	1.04	141	P	Pg	19 33 44.5	-0.3
ALN	Alexandroupoli	1.10	358	Pn	Pb	19 33 45.3	0.0
KRBG	Karabiga-Canak	1.10	57	Pn	Pb	19 33 45.3	0.0
KESN	Edirne-Kesan	1.12	23	P	Pg	19 33 45.9	-0.5
KESN				*i* IAML		19 34 03.0	
	comp=E,178nm,0.3s						
KESN				*i* IAML		19 34 05.0	
	comp=N,123nm,0.2s						
ZEDA	zmir-Bergama	1.13	137	P	Pb	19 33 46.0	+0.2
ZEDA				S	Sb	19 34 01.0	+0.8
ZEDA				*i* IAML		19 34 03.0	
	comp=N,150nm,0.5s						
ZEDA				*i* IAML		19 34 03.0	
	comp=E,146nm,0.3s						
KARB	zmir-Karabur	1.16	168	P	Pb	19 33 46.1	-0.2
KARB				S	Sb	19 34 00.9	-0.3
KARB				*i* IAML		19 34 03.0	
	comp=E,154nm,0.3s						
KARB				*i* IAML		19 34 04.0	
	comp=N,114nm,0.5s						
BALY	Balya	1.18	92	P	Pb	19 33 46.8	+0.2
BALY				S	Sb	19 34 01.1	-0.6
BALY				*i* IAML		19 34 03.0	
	comp=N,143nm,0.7s						
RKY	Sarkoy-Tekirda	1.22	43	Pn	Pn	19 33 47.2	+0.1
GONE	Gonen-Balikesi	1.25	78	Pn	Pn	19 33 48.6	+1.1
STEP	BALIKESIR_Sava	1.32	108	P	Pn	19 33 48.9	+0.4
THAS	Thassos island	1.33	308	P	Pn	19 33 48.7	+0.2
THAS				S	Sb	19 34 05.0	-1.0
CHOS	Chios island	1.41	181	P	Pn	19 33 49.5	-0.2
CHOS				S	Sn	19 34 06.9	-1.2
RDO	Rodhopi	1.41	343	Pn	Pn	19 33 50.1	+0.4
RDO	Rodhopi	1.41	343	P	Pn	19 33 50.0	+0.4
RDO				S	Sn	19 34 07.8	-0.2
BKES	Balkesir-Mer	1.42	92	P	Pn	19 33 50.3	+0.5
BLKS	Balkesir-Sus	1.45	86	P	Pn	19 33 51.5	+1.2
EDC	Edincik	1.46	67	Pn	Pn	19 33 51.8	+1.4
URLA	Izmir	1.49	165	P	Pn	19 33 50.7	-0.1
URLA				*i* IAML		19 34 16.0	
	comp=N,80nm,0.4s						
ZEYE	Izmir, Urla-Ze	1.59	168	P	Pn	19 33 53.0	+0.9
ZEYE				*i* IAML		19 34 17.0	
	comp=N,75nm,0.3s						
ZEYE				*i* IAML		19 34 19.0	
	comp=E,54nm,0.2s						
BLCB	Balcova	1.59	152	Pn	Pn	19 33 53.7	+1.5
TKR	Tekirdag	1.62	42	Pn	Pn	19 33 53.8	+1.2
KAVA	Kavala	1.70	315	P	Pn	19 33 54.5	+0.8
KAVA				S	Sn	19 34 14.4	-0.6
GORD	Gordes-Manisa	1.84	118	Pn	Pn	19 33 57.2	+1.5

*JMA **24** 19:33:51.0±0.4, 30°.1N±0°.6×14°3E±°, h42km, MV3.9/14,*
FAR E OFF IZU ISLANDS
*IDC **24** 19:33:51.4±0.9, 29°.97N×142°.97E, h0km, mb3.8/15,*
mbtmp3.9/18, ML3.2/3, Error ellipse: s-maj=28.7km
s-min=17.3km az=79.0
ISC 24 19:33:55.5±0.7, **30°.01N**±0°.06×**142°.9E**±0°.1, **h30km, n27,**
σ**2ˢ.27**/29, **mb3.9**/14, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.97	192	*e*P	Pn	19 34 39.1	-1.5
JCJ	Chichijima	2.97	192	Pn	Pn	19 34 38.6	-2.0
JCJ				Sn	Sn	19 35 09.8	-5.4
JHJ2	Mitsune	4.05	320	*e*P	Pn	19 34 54.9	-0.6
BSO1	Boso 1	4.90	341	*e*P	Pn	19 35 05.3	-1.4
BSO4	Boso 4	5.41	337	*e*P	Pn	19 35 13.5	-0.5
JOD2	Odawara 2	6.14	330	*e*P	Pn	19 35 23.3	-0.9
JRY	Ryogami san	6.86	332	*e*P	Pn	19 35 34.1	0.0
JFK	Kawauchi	7.53	348	*e*P	Pn	19 35 40.6	-2.6
JFK				*e*S	Sn	19 36 59.6	-7.9
MJAR	Matsushiro Arr	7.60	330	Pn	Pn	19 35 43.7	-0.5
	0.2nm,0.3s,baz=151,slow=10,SNR=26						
MJAR				Sn	Sn	19 37 06.6	-2.8
	0.1nm,0.3s,baz=193,slow=32,SNR=4.2						
	5.5nm,0.7s						
JMK	Ichinoseki	9.03	352	*e*S	Sn	19 37 35.3	-9.0
ASAJ	Asahikawa	14.08	359	Pn	Pn	19 37 11.6	-1.3
	0.2nm,0.3s,baz=168,slow=13,SNR=1.2						
	3.6nm,1.0s						
KSRS	Korea Array	14.49	305	Pn	Pn	19 37 19.2	+0.8
	0.1nm,0.3s,baz=114,slow=13,SNR=13						
	2.8nm,0.8s						
KLR	Kul'dur	20.98	339	P	P	19 38 36.9	+0.7
	1.5nm,0.6s,baz=148,slow=13,SNR=4.3						
	1.5nm,0.6s						
SONM	Songino Array	33.12	313	P	P	19 40 31.2	+2.2
	1.2nm,0.8s,baz=132,slow=8.5,SNR=7.1						
	1.2nm,0.8s						
CMAR	Chiang Mai Arr	41.47	264	P	P	19 41 40.4	+0.5
	0.5nm,0.7s,baz=63,slow=8.4,SNR=1.8						
	0.5nm,0.7s						
MKAR	Makanchi Array	49.15	308	P	P	19 42 41.8	+1.3
	1.3nm,0.8s,baz=89,slow=8.6,SNR=2.9						
	1.3nm,0.8s						
WRA	Warramunga Arr	50.34	190	P	P	19 42 49.8	0.0
	1.1nm,0.9s,baz=8.8,slow=7.9,SNR=5.5						
	1.1nm,0.9s						
KURBB	Kurchatov Arra	51.49	313	P	P	19 42 58.6	+0.6
	1.5nm,0.7s,baz=90,slow=7.9,SNR=4.6						
	1.5nm,0.7s						
ASAR	Alice Springs	54.06	190	P	P	19 43 18.3	+0.9
	0.4nm,0.8s,baz=13,slow=7.8,SNR=2.3						
	0.4nm,0.8s						
BVAR	Borovoye Array	56.35	316	P	P	19 43 35.1	+1.5
	2.4nm,0.7s,baz=82,slow=10,SNR=3.9						
	2.4nm,0.7s						
FINES	FINESS Array B	75.62	334	P	P	19 45 38.1	+0.9
	2.4nm,1.0s,baz=90,slow=5.6,SNR=2.1						
	2.4nm,1.0s						
KBZ	Khabaz	76.49	313	P	P	19 45 44.0	+1.4
	1.7nm,0.9s,baz=214,slow=1.4,SNR=3.6						
	1.7nm,0.9s						
NVAR	Mina Array Bea	78.24	52	P	P	19 45 53.9	+1.1
	0.5nm,0.7s,baz=303,slow=4.5,SNR=2.2						
	0.5nm,0.7s						
AKASG	Malin Array Be	80.64	324	P	P	19 46 06.1	+0.8
	0.2nm,0.4s,baz=49,slow=5.6,SNR=2.4						
	0.2nm,0.4s						
NOA	NORSAR Array B	81.14	338	P	P	19 46 08.2	+0.4
	0.9nm,0.9s,baz=37,slow=5.6,SNR=3.7						
	0.9nm,0.9s						
BRTR	Keskin Array B	84.48	313	P	P	19 46 25.9	+0.2
	0.8nm,0.8s,baz=111,slow=6.8,SNR=5.0						
	0.8nm,0.8s						
TXAR	Lajitas Array	93.37	53	P	P	19 47 08.8	+0.6
	0.4nm,0.7s,baz=288,slow=5.1,SNR=4.3						
	0.4nm,0.7s						

IDC 24 19:55:32.4±3.0, **32°.66S**×**178°.58W, h0km, mb3.4**/2,
mbtmp3.5/3, **ML3.5**/1, **Error ellipse: s-maj=73.2km**
s-min=46.9km az=124.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.60	211	Pn	Pn	19 57 10.1	-0.6
	1.1nm,0.3s,baz=90,slow=21,SNR=1.3						
URZ				Sn	Sn	19 58 22.9	-3.7
	1.9nm,0.3s,baz=91,slow=22,SNR=8.2						
	2.5nm,0.3s						
ASAR	Alice Springs	42.54	270	P	P	20 03 29.5	-0.6
	0.3nm,0.7s,baz=113,slow=8.3,SNR=4.8						
	0.3nm,0.7s						
WRA	Warramunga Arr	43.74	275	P	P	20 03 40.1	+0.4
	0.4nm,0.6s,baz=114,slow=7.9,SNR=7.9						
	0.4nm,0.6s						
FINES	FINESS Array B	147.07	338	PKPbc	PKPbc	20 15 15.7	-0.8
	0.6nm,0.6s,baz=29,slow=4.4,SNR=7.0						

*IDC **24** 20:10:04.2±2.8, 20°.81S×178°.18W, h490km±25km, mb3.1/6,*
mbtmp3.9/7, Error ellipse: s-maj=38.6km s-min=25.8km
az=135.0
ISC 24 20:10:04.7±1.1, **20°.8S**±0°.2×**178°.2W**±0°.2, **h495km, n12,**
σ**0ˢ.97**/11, **mb3.5**/6, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.67	310	P	P	20 11 28.7	0.0
	11nm,0.5s,baz=122,slow=15,SNR=8.4						
ASAR	Alice Springs	44.30	257	P	P	20 17 29.7	-0.4
	1.3nm,0.9s,baz=92,slow=8.0,SNR=7.9						
ASAR				PcP	PcP	20 19 04.5	+0.6
	0.4nm,0.6s,baz=110,slow=3.6,SNR=6.4						
	1.3nm,0.9s						
WRA	Warramunga Arr	44.41	262	P	P	20 17 29.4	-1.6
	0.6nm,0.6s,baz=96,slow=7.6,SNR=7.4						
	0.6nm,0.6s						
FITZ	Fitzroy Crossi	52.83	263	P	P	20 18 33.7	-0.1
	2.3nm,0.9s,baz=59,slow=5.9,SNR=3.0						
	2.3nm,0.9s						
QSPA	South Pole Qui	69.30	180	P	P	20 20 21.6	0.0
	1.6nm,1.1s,baz=147,slow=5.0,SNR=3.0						
	1.6nm,1.1s						
ILAR	Eielson Array	88.61	13	P	P	20 22 02.7	-1.1
	0.4nm,0.6s,baz=202,slow=4.4,SNR=4.8						
	0.4nm,0.6s						
CMAR	Chiang Mai Arr	90.05	290	P	P	20 22 13.3	+1.7
	1.3nm,1.1s,baz=113,slow=3.2,SNR=5.7						
	1.3nm,1.1s						
ARCES	ARCESS Array B	129.15	350	PKP	PKPdf	20 28 15.5	+0.1
	2.1nm,0.9s,baz=45,slow=2.6,SNR=4.3						
HFS	Hagfors	139.78	351	PKhKP	PKPpre	20 28 30.3	
	0.4nm,0.4s,baz=65,slow=7.0,SNR=7.8						
AKASG	Malin Array Be	143.17	331	PKP	PKPab	20 28 39.5	+0.2
	3.0nm,0.5s,baz=45,slow=4.3,SNR=34						
BRTR	Keskin Array B	146.90	312	PKPbc	PKPbc	20 28 51.8	+0.3
	0.5nm,0.7s,baz=108,slow=6.6,SNR=3.6						
GERES	GERESS Array B	150.41	344	PKPbc	PKPbc	20 29 00.1	+0.3
	0.4nm,0.5s,baz=56,slow=3.7,SNR=3.2						

*IDC **24** 20:15:35.1±0.6, 2°.72S×138°.44E, h0km, mb4.0/12,*
mbtmp4.1/16, ML4.4/4, MS4.6/1, Error ellipse:
s-maj=14.9km s-min=14.5km az=58.0
*NEIC **24** 20:15:37.1±1.4, 2°.71S±0°.10×138°.53E±0°.03, h10km±1km,*
mb4.4/13, Error ellipse: s-maj=16.9km s-min=3.3km
az=169.0
*DJA **24** 20:15:38.8±0.7, 3°S±3°×13°9E±°, h19km±7km, M4.4/10,*
mb4.4/10, MLv4.4/9
ISC 24 20:15:39.7±0.5, **2°.72S**±0°.05×**138°.63E**±0°.05, **h35km, n47,**
σ**1ˢ.45**/51, **mb4.1**/16, **1D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.73	6	P	Pn	20 15 49.4	-4.2
GENI	Genyem	1.54	85	P	Pn	20 16 06.1	+1.4
JAY	Jayapura	2.08	84	Pn	Pn	20 16 14.2	+2.0
	75nm,0.3s,baz=241,slow=10,SNR=136						
JAY				Lg	Lg	20 16 47.0	
	31nm,0.3s,baz=92,slow=20,SNR=6.2						
	166nm,0.3s						
JAY	Jayapura	2.08	84	P	Pn	20 16 14.2	+2.0
SRPI	Serui, Papua	2.53	289	P	Pn	20 16 17.3	-1.0
SRPI				S	Sn	20 16 48.2	+0.2
BAKI	Biak	2.94	301	P	Pn	20 16 24.3	+0.3
BAKI				S	Sn	20 16 58.3	+0.2
RKPI	Ransiki, Papua	4.61	285	P	Pn	20 16 46.3	-0.6
FAKI	Fak Fak	6.37	268	Pn	Pn	20 17 11.1	-0.2
FAKI	Fak Fak	6.37	268	P	Pn	20 17 13.1	+1.9
	0.2nm31nm,1.4s						
SWI	Sorong	7.59	284	P	Pn	20 17 28.5	+0.6
	0.1nm15nm,0.6s						
COEN	Coen	12.03	158		Pn	20 18 30.4	+1.6
MTN	Manton Dam	12.50	216		Pn	20 18 34.4	-0.8
SOEI	Soe	15.89	243	P	P	20 19 24.5	+0.2
	58nm,1.5s						
KNRA	Kununurra	16.13	216		Pn	20 19 23.7	-0.2
KNRA				IAmb	IAmb	20 19 36.6	
	comp=Z,52nm,1.5s						
BATI	Baumata	16.62	243	Pn	Pn	20 19 28.8	-1.3
	comp=Z,6.3nm,0.3s,baz=124,slow=6.1,SNR=5.8						
	comp=Z,22nm,0.8s						
BATI	Baumata	16.62	243	P	P	20 19 33.5	+1.2
	comp=Z,38nm,1.2s						
MRSI	Marisa	16.98	281	P	P	20 19 36.1	-0.2
	comp=Z,20nm,0.9s						
WB0	Warramunga Arr	17.44	193		Pn	20 19 39.4	-1.0
WB0				IAmb	IAmb	20 19 52.2	
	comp=Z,18nm,0.8s						
WR8	Warramunga Arr	17.60	193		Pn	20 19 40.4	-2.0
WRAB	Tennant Creek	17.61	193	P	Pn	20 19 42.9	+0.5
WRAB				IAmb	IAmb	20 19 54.3	
	comp=Z,15nm,0.8s						
WRA	Warramunga Arr	17.62	193		Pn	20 19 41.2	-1.4
WRA	Warramunga Arr	17.62	193	P	Pn	20 19 41.5	-1.2
	comp=Z,1.4nm,0.3s,baz=17,slow=12,SNR=25						
WRA				S	Sn	20 22 52.3	-5.7
	comp=Z,2.1nm,0.8s,baz=8.9,slow=23,SNR=4.1						
	comp=Z,5.9nm,0.6s						
FITZ	Fitzroy Crossi	19.89	219	P	P	20 20 07.1	-1.2
	comp=Z,0.3nm,0.3s,baz=20,slow=3.5,SNR=7.8						
	comp=Z,3.9nm,0.8s						
AS31	Alice Springs	21.32	192		P	20 20 23.4	-0.3
ASAR	Alice Springs	21.32	192		P	20 20 22.9	-0.8
ASAR	Alice Springs	21.32	192	P	P	20 20 23.7	0.0
	comp=Z,12nm,0.8s,baz=21,slow=10,SNR=63						
ASAR				S	S	20 24 18.2	-0.6
	comp=Z,1.2nm,0.8s,baz=6.7,slow=28,SNR=3.4						
	comp=Z,12nm,0.8s						
PSA00	Pilbara Seismi	26.17	223	P	P	20 21 11.2	+0.1
PSA00				IAmb	IAmb	20 21 40.7	
	comp=Z,18nm,1.4s						
STKA	Stephens Creek	29.14	175	P	P	20 21 37.8	+0.3
STKA	Stephens Creek	29.14	175	P	P	20 21 38.0	+0.5
	comp=Z,0.7nm,0.5s,baz=348,slow=13,SNR=4.0						
	comp=Z,0.7nm,0.5s						
KSRS	Korea Array	41.19	347	P	P	20 23 21.7	+0.7
	comp=Z,0.4nm,0.4s,baz=159,slow=7.8,SNR=1.8						
	comp=Z,0.4nm,0.4s						
CMAR	Chiang Mai Arr	44.37	300	P	P	20 23 46.1	-1.0
	comp=Z,0.9nm,0.5s,baz=122,slow=6.6,SNR=6.2						
	comp=Z,0.9nm,0.5s						
BNX	BinXian	49.27	350	⇓P	P	20 24 26.3	+1.3
BNX				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SONM	Songino Array	57.70	335	P	P	20 25 27.0	0.0
	comp=Z,0.7nm,0.8s,baz=162,slow=10,SNR=3.6						
	comp=Z,0.7nm,0.8s						
PETK	Petropavlovsk-	57.89	13	P	P	20 25 30.1	+2.0
	comp=Z,0.2nm,0.3s,baz=211,slow=7.6,SNR=5.1						
PETK				LR	LR	20 48 32.6	
	comp=Z,519nm,21.6s,baz=152,slow=34						
	comp=Z,0.2nm,0.3s						
YAK	Yakutsk	64.94	355	P	P	20 26 15.8	+0.3
MKAR	Makanchi Array	69.75	322		P	20 26 46.0	-0.4
MKAR	Makanchi Array	69.75	322	P	P	20 26 46.6	+0.3
	comp=Z,1.7nm,0.8s,baz=108,slow=7.8,SNR=14						
	comp=Z,1.7nm,0.8s						
MAKZ	Makanchi	69.95	322		P	20 26 47.4	-0.1
MAKZ				IAmb	IAmb	20 26 50.1	
	comp=Z,2.5nm,0.8s						
ZALV	Zalesovo Beam	71.91	330	P	P	20 26 58.6	-0.7
	comp=Z,0.8nm,0.6s,baz=111,slow=8.3,SNR=4.5						
	comp=Z,0.8nm,0.6s						
TIXI	Tiksi	74.51	357	P	P	20 27 12.4	-1.8
TIXI				IAmb	IAmb	20 27 16.7	
	comp=Z,2.1nm,0.7s						
VNDA	Vanda	75.78	175	P	P	20 27 22.6	+1.1
	comp=Z,1.1nm,0.6s,baz=320,slow=5.3,SNR=6.7						
	comp=Z,1.1nm,0.6s						
L14K	Kuka Creek	77.94	25	P	P	20 27 36.2	+2.2
BVAR	Borovoye Array	79.28	325	P	P	20 27 41.5	0.0
	comp=Z,1.5nm,0.6s,baz=102,slow=7.3,SNR=11						
	comp=Z,1.5nm,0.6s						
ILAR	Eielson Array	85.88	24	P	P	20 28 15.8	+0.1
	comp=Z,1.0nm,0.7s,baz=259,slow=4.7,SNR=10						
	comp=Z,1.0nm,0.7s						
QSPA	South Pole Qui	87.22	180	P	P	20 28 22.6	+0.2
	comp=Z,1.6nm,0.5s,baz=265,slow=1.2,SNR=20						
	comp=Z,1.6nm,0.5s						
CPUP	Villa Florida	147.25	153	PKPbc	PKPab	20 35 21.6	-0.3
	comp=Z,0.4nm,0.7s,baz=79,slow=2.9,SNR=3.2						
LPAZ	La Paz	147.50	126	PKPbc	PKPab	20 35 23.6	-0.4
	comp=Z,1.4nm,0.8s,baz=50,slow=1.6,SNR=4.3						

*IDC **24** 20:25:19.7±0.8, 30°.90S×177°.41W, h0km, mb4.0/6,*
mbtmp4.1/7, ML4.4/1, MS3.5/4, Error ellipse: s-maj=26.3km
s-min=20.9km az=94.0
*NEIC **24** 20:25:23.1±2.5, 30°.7S±0°.1×177°.49W±0°.06, h10km±1km,*
mb4.5/11, Error ellipse: s-maj=19.8km s-min=8.7km
az=181.0
ISC 24 20:25:24.4±0.6, **30°.90S**±0°.07×**177°.5W**±0°.1, **h27km, n44,**
σ**1ˢ.68**/44, **mb4.3**/16, **4C-1D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.68	348	Pn	Pn	20 25 51.0	-1.1
	288nm,0.3s,baz=274,slow=5.9,SNR=12						
RAO				Sn	Sb	20 26 14.8	-0.7
	617nm,0.3s,baz=250,slow=23,SNR=7.4						
RAO				LR	LR	20 26 15.5	
	comp=Z,332nm,18.1s,baz=128,slow=33						
URZ	Urewera	8.57	210	Pn	Pn	20 27 21.7	-5.0
	1.4nm,0.3s,baz=256,slow=1.7,SNR=7.9						
URZ				Sn	Sn	20 28 56.5	-5.9
	3.9nm,0.3s,baz=279,slow=22,SNR=10						
RPZ	Rata Peaks	15.67	212	LR	LR	20 34 37.9	
	comp=Z,254nm,18.5s,baz=29,slow=36						
DZM	Mont Dzumac	16.83	298	Pn	Pn	20 29 19.0	+0.7
	1.4nm,0.3s,baz=120,slow=14,SNR=76						
	6.5nm,0.7s						
RAR	Rarotonga	18.61	63	LR	LR	20 35 45.0	
	comp=Z,70nm,20.0s,baz=222,slow=34						
EIDS	Eidsvold	28.18	273	P	P	20 31 16.2	+1.4
EIDS				IAmb	IAmb	20 31 43.2	
	comp=Z,12nm,1.1s						
PPT	Papeete	28.63	69	LR	LR	20 41 36.7	
	comp=Z,67nm,18.7s,baz=196,slow=34						
TOO	Toolangi	31.16	248	P	P	20 31 44.5	+3.5
TOO				IAmb	IAmb	20 31 56.2	
	comp=Z,4.5nm,1.1s						
CTAO	Charters Tower	34.30	280	P	P	20 32 09.9	+1.4
STKA	Stephens Creek	34.78	258	P	P	20 32 13.8	+1.1
STKA	Stephens Creek	34.78	258	P	P	20 32 13.3	+0.7
	comp=Z,1.6nm,0.4s,baz=95,slow=9.6,SNR=7.0						
STKA				LR	LR	20 46 35.0	
	comp=Z,150nm,18.1s,baz=21,slow=37						
	comp=Z,1.6nm,0.4s						
ASAR	Alice Springs	43.50	267	P	P	20 33 25.6	-0.1
	comp=Z,1.0nm,0.6s,baz=101,slow=6.9,SNR=12						
ASAR				PcP	PcP	20 35 13.6	+0.1
	comp=Z,0.6nm,0.6s,baz=121,slow=3.6,SNR=2.0						
ASAR				ScP	ScP	20 39 05.5	+2.4
	comp=Z,0.6nm,0.8s,baz=117,slow=4.5,SNR=4.6						
	comp=Z,1.0nm,0.6s						
WR8	Warramunga Arr	44.39	272	P	P	20 33 32.8	-0.1
WR8				IAmb	IAmb	20 33 45.6	
	comp=Z,8.0nm,0.9s						
WRA	Warramunga Arr	44.54	272	P	P	20 33 33.2	-0.8
WRA	Warramunga Arr	44.54	272	P	P	20 33 33.2	-0.8
	comp=Z,2.6nm,0.8s,baz=111,slow=8.1,SNR=9.3						
	comp=Z,2.6nm,0.8s						
WB0	Warramunga Arr	44.56	273	P	P	20 33 33.8	-0.4
WB0				IAmb	IAmb	20 33 46.9	
	comp=Z,13nm,0.8s						
VNDA	Vanda	47.64	186	P	P	20 34 01.5	+3.8
VNDA				IAmb	IAmb	20 34 01.5	
	comp=Z,4.5nm,1.4s						
FITZ	Fitzroy Crossi	52.78	270	P	P	20 34 37.6	+0.2
QSPA	South Pole Qui	59.21	180	P	P	20 35 23.2	+0.3
	comp=Z,2.0nm,1.0s,baz=27,slow=1.7,SNR=6.8						
	comp=Z,2.0nm,1.0s						
TROLL	Troll, Antarti	77.37	180	⇑P	P	20 37 17.7	+1.2
	comp=Z,54nm,0.8s						
SNAA	Sanae	77.64	178	⇑P	P	20 37 16.8	-1.1
	comp=Z,21nm,1.1s						
VNA3	Neumayer Olymp	77.78	176	⇑P	P	20 37 18.0	-0.6
	comp=Z,2.2nm,0.7s						
VNA2	Neumayer--Watz	78.22	177	⇓P	P	20 37 20.7	-0.3
	comp=Z,1.7nm,0.7s,baz=196,slow=3.8						
VNA1	Neumayer--Stat	78.44	176	⇑P	P	20 37 22.6	+0.4
	comp=Z,2.7nm,0.8s						
PETK	Petropavlovsk-	86.40	345	P	P	20 38 05.1	+1.3
	comp=Z,0.9nm,0.7s,baz=121,slow=5.5,SNR=3.9						
	comp=Z,0.9nm,0.7s						
NVAR	Mina Array Bea	88.32	42	P	P	20 38 13.2	-0.5
	comp=Z,0.7nm,0.8s,baz=213,slow=7.9,SNR=4.0						
	comp=Z,0.7nm,0.8s						
U15A	North Rim	90.67	47	P	P	20 38 24.5	-0.3
U15A				IAmb	IAmb	20 38 27.0	
	comp=Z,2.8nm,1.0s						
TX31	Lajitas Ar. Si	92.31	57		P	20 38 32.5	+0.1
TX31				IAmb	IAmb	20 38 39.4	
	comp=Z,3.3nm,0.9s						
TXAR	Lajitas Array	92.31	57	P	P	20 38 32.6	+0.2
MKAR	Makanchi Array	118.42	310	PKP	PKiKP	20 44 09.1	-0.1
	comp=Z,0.2nm,0.7s,baz=204,slow=3.2,SNR=2.1						
KURBB	Kurchatov Arra	121.74	313	PKP	PKPdf	20 44 14.2	-1.2
	comp=Z,0.5nm,0.8s,baz=87,slow=1.8,SNR=4.5						
BVAR	Borovoye Array	127.06	315	PKP	PKPdf	20 44 24.7	-0.8
	comp=Z,0.3nm,0.5s,baz=354,slow=1.4,SNR=1.7						
FINES	FINESS Array B	145.76	340	PKPbc	PKPdf	20 44 59.1	-0.5
	comp=Z,1.7nm,0.3s,baz=50,slow=4.1,SNR=17						
NB2	NORSAR Subarra	149.31	352	PKP	PKiKP	20 45 10.6	-0.5
	comp=Z,3.7nm,1.1s,baz=14,slow=4.4						
NOA	NORSAR Array B	149.31	352	PKPbc	PKPbc	20 45 09.1	-0.9
	comp=Z,0.6nm,0.7s,baz=16,slow=4.2,SNR=4.7						
HFS	Hagfors	149.82	349	PKPbc	PKPbc	20 45 10.5	-0.6
	comp=Z,1.9nm,0.7s,baz=108,slow=4.8,SNR=4.1						
AKASG	Malin Array Be	151.95	323	PKPbc	PKPbc	20 45 14.5	-2.0
	comp=Z,1.2nm,0.7s,baz=56,slow=2.6,SNR=7.9						
AKBB	Malin Array Si	151.95	323	PKP	PKPbc	20 45 14.6	-1.9
KIEV	Kiev	151.97	323	PKP	PKPbc	20 45 14.8	-1.7
AK12	Malin Array Si	152.02	322	PKP	PKPbc	20 45 14.7	-2.0
MMAI	Mount Meron Ar	152.06	283	PKPbc	PKiKP	20 45 17.9	+0.1
	comp=Z,1.1nm,0.5s,baz=164,slow=1.6,SNR=3.6						
LUBAR	Lubar, Ukraine	153.17	322	PKP	PKPbc	20 45 16.7	-2.6
BRTR	Keskin Array B	153.21	298	PKPbc	PKiKP	20 45 21.1	+1.0
	comp=Z,0.5nm,0.6s,baz=150,slow=5.1,SNR=4.1						
BR104	Keskin Array S	153.21	298	PKP	PKPbc	20 45 17.2	-2.7

*IDC **24** 20:28:00.6±1.2, 2°.56S×138°.54E, h0km, mb3.7/4,*
mbtmp3.7/6, ML3.5/2, Error ellipse: s-maj=27.0km
s-min=17.6km az=172.0
*DJA **24** 20:28:03.7±0.4, 3°S±5°×13°9E±°, h10km, M3.6/7, MLv3.6/7*
ISC 24 20:28:05.1±0.8, **2°.56S**±0°.10×**138°.57E**±0°.06, **h32km, n12,**
σ**1ˢ.02**/12, **mb3.7**/4, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.58	14	P	Pb	20 28 15.7	-1.3
GENI	Genyem	1.60	91	P	Pn	20 28 32.1	+1.0
JAY	Jayapura	2.13	89	Pn	Pn	20 28 38.1	-0.5
	6.7nm,0.3s,baz=242,slow=11,SNR=7.2						
JAY				Lg	Lg	20 29 10.0	
	4.0nm,0.3s,baz=140,slow=16,SNR=4.4						
	20nm,0.5s						
JAY	Jayapura	2.13	89	P	Pn	20 28 39.8	+1.2
SRPI	Serui, Papua	2.43	286	P	Pn	20 28 43.3	+0.7
BAKI	Biak	2.81	299	P	Pn	20 28 49.0	+1.1
RKPI	Ransiki, Papua	4.51	283	P	Pn	20 29 11.0	-0.3
WRA	Warramunga Arr	17.76	193	P	Pn	20 32 09.2	-1.0
	0.3nm,0.3s,baz=18,slow=12,SNR=7.1						

	1.0nm,0.6s						
ASAR	Alice Springs	21.46	192	P	P	20 32 50.2	-0.8
	1.4nm,0.7s,baz=18,slow=9.2,SNR=8.3						
	1.4nm,0.7s						
MKAR	Makanchi Array	69.59	322	P	P	20 39 12.2	+1.1
	0.6nm,0.8s,baz=112,slow=7.8,SNR=4.2						
	0.6nm,0.8s						
ILAR	Eielson Array	85.76	24	P	P	20 40 40.8	-0.1
	0.3nm,0.7s,baz=275,slow=5.4,SNR=2.9						
	0.3nm,0.7s						
QSPA	South Pole Qui	87.38	180	P	P	20 40 49.7	+0.7
	1.2nm,1.1s,baz=352,slow=2.7,SNR=1.9						
	1.2nm,1.1s						

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*IDC **24** 20:35:15.3±0.9, 2°.72S×138°.57E, h0^{km}, mb3.9/6, mbtmp3.9/8, ML3.8/2, MS3.8/4, Error ellipse: s-maj=22.8km s-min=16.0km az=179.0*

*DJA **24** 20:35:19.8±0.8, 3°S±5°×13°9E±°, h11^{km}±9^{km}, M4.2/7, mb4.4/4, MLv4.2/7*

ISC 24 20:35:20.2±0.8**, 2°.64S**±0°.09×**138°.75E**±0°.07**, h35^{km}, n16, σ1^s.38**/12**, mb3.9**/6**, MS4.0**/3**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.65	357	P	Pn	20 35 32.5	-0.4
WAMI	Wamena	1.24	182	P	Pn	20 35 48.2	+7.1
GENI	Genyem	1.42	88	P	Pn	20 35 44.1	+0.5
JAY	Jayapura	1.96	86	Pn	Pn	20 35 52.8	+1.7
	24nm,0.3s,baz=240,slow=15,SNR=15						
JAY				Lg	Lg	20 36 24.3	
	21nm,0.3s,baz=130,slow=20,SNR=8.5						
JAY				LR	LR	20 37 03.4	
	comp=Z,573nm,22.0s,baz=262,slow=50						
	50nm,0.4s						
JAY	Jayapura	1.96	86	P	Pn	20 35 52.2	+1.1
BAKI	Biak	3.00	299	P	Pn	20 36 09.8	+4.4
FAKI	Fak Fak	6.50	267	P	Pn	20 36 55.3	+1.9
	0.2nm42nm,1.2s						
WRA	Warramunga Arr	17.73	194	P	Pn	20 39 22.5	-2.0
	0.4nm,0.3s,baz=17,slow=13,SNR=7.9						
	2.8nm,0.5s						
ASAR	Alice Springs	21.42	192	P	P	20 40 03.8	-1.6
	1.7nm,0.5s,baz=19,slow=10,SNR=7.6						
	1.7nm,0.5s						
NWAO	Narrogin (SRO)	36.26	211	LR	LR	20 58 39.5	
	comp=Z,239nm,18.4s,baz=76,slow=39						
MKAR	Makanchi Array	69.75	322	P	P	20 46 27.3	+0.3
	1.1nm,0.8s,baz=124,slow=7.9,SNR=9.3						
MKAR				LR	LR	21 18 24.2	
	comp=Z,143nm,21.5s,baz=20,slow=37						
	1.1nm,0.8s						
AAK	Ala-Archa	73.18	316	LR	LR	21 23 42.5	
	comp=Z,76nm,18.9s,baz=50,slow=40						
KURBB	Kurchatov Arra	73.69	325	P	P	20 46 51.7	+1.2
	0.7nm,0.8s,baz=110,slow=6.2,SNR=5.5						
	0.7nm,0.8s						
BVAR	Borovoye Array	79.27	325	P	P	20 47 22.8	+0.7
	0.8nm,0.6s,baz=109,slow=8.0,SNR=4.5						
	0.8nm,0.6s						
ILAR	Eielson Array	85.75	24	P	P	20 47 55.2	-0.3
	0.5nm,0.7s,baz=260,slow=5.1,SNR=4.7						
	0.5nm,0.7s						
QSPA	South Pole Qui	87.31	180	P	P	20 48 03.4	+0.1
	1.8nm,0.9s,baz=303,slow=1.8,SNR=7.6						
	1.8nm,0.9s						

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*HEL **24** 20:38:18.1±0.2, 59°.80N×27°.47E, h0^{km}, ML2.0, Explosion*

*EST **24** 20:38:18.6±0.1, 59°.81N×27°.39E, h0^{km}, ML2.0(HEL), Explosion*

*IDC **24** 20:38:21.2±1.2, 59°.90N×27°.23E, h0^{km}, mbtmp3.1/4, ML2.4/3, Error ellipse: s-maj=13.9km s-min=7.4km az=85.0*

ISC 24 20:38:17.2±0.8**, 59°.79N**±0°.02×**27°.31E**±0°.04**, h0^{km}, n30, σ0^s.88**/39**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EE04	Vaivara Sinima	0.51	145	*e*P	Pg	20 38 27.5	+0.7
EE04				*e*S	Sg	20 38 33.7	+0.3
VJF	Virojoki	0.76	9	*e*P	Pg	20 38 31.9	+0.1
VJF				MSG		20 38 41.7	
	comp=Z,28nm,0.2s						
VJF				*e*S	Sg	20 38 41.9	+0.2
PVF	Pernaja	1.05	317	*e*P	Pg	20 38 37.5	+0.3
PVF				*e*S	Sg	20 38 51.2	+0.4
PVF				MSG		20 38 51.8	
	comp=Z,9.4nm,0.2s						
EE03	Tooma soojaam,	1.06	210	*e*P	Pb	20 38 38.4	+0.1
EE03				*e*S	Sg	20 38 51.8	+0.6
HEL1	Helsinki	1.28	289	*e*P	Pg	20 38 41.9	+0.3
HEL1				*e*S	Sg	20 38 58.5	+0.2
VSU	Vasula	1.36	193	*e*P	Pg	20 38 42.9	-0.4
VSU	Vasula	1.36	193	*e*P	Pg	20 38 42.8	-0.5
VSU				*e*S	Sg	20 39 00.9	0.0
NUR	Nurmijarvi	1.51	300	*e*P	Pb	20 38 46.2	+0.1
NUR				MSG		20 39 05.6	
	comp=Z,12nm,0.2s						
MEF	Metsahovi	1.52	288	*e*P	Pb	20 38 46.5	+0.3
MEF	Metsahovi	1.52	288	*e*P	Pb	20 38 46.5	+0.3
MEF				MSG		20 39 05.8	
	comp=Z,13nm,0.2s						
EE08	Sarghaua, Vand	1.56	224	*e*P	Pb	20 38 47.1	+0.3
EE08				*e*S	Sb	20 39 07.3	+0.3
FIA0	FINESS Array S	1.77	340	*e*P	Pn	20 38 49.4	+0.4
FIA0				MSG		20 39 11.8	
	comp=Z,10nm,0.2s						
FIA1	FINESS Array S	1.77	340	*e*P	Pn	20 38 49.2	+0.3
FINES	FINESS Array B	1.77	340	Pg	Pn	20 38 49.4	+0.4
	comp=Z,1.4nm,0.3s,baz=158,slow=16,SNR=125						
FINES				Lg	Lg	20 39 13.4	
	comp=Z,3.0nm,0.3s,baz=157,slow=27,SNR=18						
RUF	Ruokolahti	1.83	26	*e*P	Pn	20 38 49.7	-0.1
RUF				MSG		20 39 11.5	
	comp=Z,22nm,0.2s						
RUF				*e*S	Sn	20 39 13.9	+0.2
EE07	Piusa Caves, O	1.96	178	*e*P	Pb	20 38 53.6	0.0
EE07				*e*SG	Sg	20 39 19.9	0.0
TVF	Tvarminne	2.05	273	*e*P	Pb	20 38 55.1	-0.1
TVF				*e*S	Sb	20 39 22.0	+0.8
MTSE	Matsula	2.09	241	*e*P	Pb	20 38 55.2	-0.7
MTSE	Matsula	2.09	241	*e*P	Pb	20 38 56.1	+0.2
MTSE				*e*S	Sb	20 39 22.8	+0.4
KAF	Kangasniemi	2.38	349	*e*P	Pn	20 38 58.7	+1.3
KAF				MSG		20 39 29.1	
	comp=Z,6.0nm,0.2s						
KEF	Keuruu	2.67	335	*e*P	Pn	20 39 02.4	+1.1
KEF	Keuruu	2.67	335	MSG		20 39 37.9	
	comp=Z,4.7nm,0.2s						
SUF	Sumiainen	2.99	350	MSG		20 39 46.8	
	comp=Z,3.0nm,0.2s						
RAF	Rauma	3.02	297	*e*P	Pn	20 39 08.3	+2.2
RAF	Rauma	3.02	297	MSG		20 39 48.8	
	comp=Z,3.9nm,0.2s						
SLIT	Slitere, Latvi	3.40	233	*e*P	Pn	20 39 13.8	+2.4
HFS	Hagfors	6.85	279	Pn	Pn	20 39 58.8	+0.1
	comp=Z,0.1nm,0.3s,baz=90,slow=10,SNR=8.8						
HFS				Sn	Sn	20 41 14.0	-3.2
	comp=Z,0.3nm,0.3s,baz=92,slow=23,SNR=6.4						
HFS				Lg	Lg	20 41 48.9	
	comp=Z,0.5nm,0.3s,baz=73,slow=31,SNR=8.1						
	comp=Z,1.0nm,0.6s						
NOA	NORSAR Array B	8.06	286	Pn	Pn	20 40 15.9	+0.5
	baz=97,slow=12,SNR=12						
	comp=Z,0.1nm,0.2s						
AKASG	Malin Array Be	9.17	172	Pn	Pn	20 40 31.0	+0.4
	comp=Z,0.4nm,0.2s,baz=352,slow=13,SNR=5.9						
ARCES	ARCESS Array B	9.82	356	Pn	Pn	20 40 39.3	-0.1
	comp=Z,0.1nm,0.3s,baz=173,slow=13,SNR=16						
	comp=Z,0.3nm,0.2s						

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*IDC **24** 20:38:53.0±6.5, 5°.34S×151°.58E, h55^{km}±53^{km}, mb3.6/6, mbtmp3.9/6, ML2.6/1, MS4.1/1, Error ellipse: s-maj=51.6km s-min=31.8km az=110.0*

ISC 24 20:38:53.2±1.3**, 5°.4S**±0°.2×**151°.6E**±0°.3**, h57^{km}, n8, σ0^s.75**/8**, mb3.9**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.99	227	P	Pn	20 40 19.7	+0.5
	8.9nm,0.3s,baz=40,slow=6.4,SNR=11						
PMG				S	Sn	20 41 26.2	-0.3
	48nm,0.5s,baz=154,slow=19,SNR=3.9						
WRA	Warramunga Arr	22.21	228	P	P	20 43 44.5	-0.5
	2.1nm,0.6s,baz=52,slow=9.8,SNR=8.2						
	2.1nm,0.6s						
ASAR	Alice Springs	24.96	221	P	P	20 44 11.6	0.0
	3.9nm,0.6s,baz=54,slow=8.8,SNR=32						
	3.9nm,0.6s						
FITZ	Fitzroy Crossi	28.36	241	P	P	20 44 41.4	-0.8
	4.4nm,0.8s,baz=46,slow=11,SNR=6.7						
	4.4nm,0.8s						
ASAJ	Asahikawa	49.91	352	LR	LR	21 09 24.0	
	comp=Z,206nm,18.9s,baz=349,slow=37						
MKAR	Makanchi Array	79.97	319	P	P	20 50 57.3	+0.9
	0.1nm,0.5s,baz=96,slow=8.9,SNR=2.1						
	0.1nm,0.5s						
ILAR	Eielson Array	83.11	22	P	P	20 51 11.8	-0.7
	0.2nm,0.6s,baz=256,slow=5.4,SNR=2.4						
	0.2nm,0.6s						
QSPA	South Pole Qui	84.61	180	P	P	20 51 20.8	+0.4
	0.8nm,0.7s,baz=232,slow=0.4,SNR=8.1						
	0.8nm,0.7s						

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*IDC **24** 20:46:52.2±1.2, 2°.59S×138°.59E, h0^{km}, mb3.5/4, mbtmp3.6/6, ML3.6/2, MS4.1/1, Error ellipse: s-maj=26.6km s-min=16.3km az=179.0*

*DJA **24** 20:46:56.6±0.5, 2°S±5°×13°9E±°, h46^{km}±16^{km}, M3.7/6, MLv3.7/6*

ISC 24 20:46:55.2±0.9**, 2°.6S**±0°.1×**138°.72E**±0°.05**, h32^{km}, n12, σ2^s.20**/12**, mb3.6**/4**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.64	359	P	Pn	20 47 07.9	-0.1
GENI	Genyem	1.45	88	P	Pb	20 47 21.4	-0.1
JAY	Jayapura	1.99	87	Pn	Pb	20 47 28.6	-2.1
	8.2nm,0.3s,baz=264,slow=7.6,SNR=7.2						
JAY				Lg	Lg	20 48 00.9	
	5.6nm,0.3s,baz=22,slow=22,SNR=4.0						
	35nm,0.5s						
JAY	Jayapura	1.99	87	P	Pn	20 47 23.5	-3.1
SRPI	Serui, Papua	2.59	287	P	Pn	20 47 34.8	-0.1
BAKI	Biak	2.98	299	P	Pb	20 47 43.2	-4.4
BAKI				S	Sn	20 48 15.9	+1.0
WRA	Warramunga Arr	17.73	194	P	P	20 51 00.2	-0.2
	0.3nm,0.3s,baz=19,slow=12,SNR=7.9						
	2.3nm,0.9s						
ASAR	Alice Springs	21.42	192	P	P	20 51 42.0	+1.3
	2.9nm,0.8s,baz=21,slow=9.7,SNR=14						
	2.9nm,0.8s						
JNU	Nakatsue	36.33	349	LR	LR	21 08 13.2	
	comp=Z,266nm,18.8s,baz=349,slow=35						
CMAR	Chiang Mai Arr	44.41	300	P	P	20 55 04.3	+1.0
	0.2nm,0.3s,baz=105,slow=6.8,SNR=4.4						
	0.2nm,0.3s						
MKAR	Makanchi Array	69.73	322	P	P	20 58 04.6	+2.5
	0.1nm,0.3s,baz=119,slow=8.4,SNR=2.5						
	0.1nm,0.3s						
ILAR	Eielson Array	85.76	24	P	P	20 59 31.6	+0.6
	0.4nm,0.8s,baz=255,slow=4.5,SNR=3.1						
	0.4nm,0.8s						

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*IDC **24** 20:51:07.2±0.6, 2°.67S×138°.53E, h0^{km}, mb4.1/11, mbtmp4.2/15, ML4.2/4, MS4.1/2, Error ellipse: s-maj=16.6km s-min=14.3km az=9.0*

*NEIC **24** 20:51:09.0±1.6, 2°.7S±0°.1×138°.59E±0°.07, h10^{km}±1^{km}, mb4.5/29, Error ellipse: s-maj=17.2km s-min=11.4km az=172.0*

*DJA **24** 20:51:10.3±0.2, 3°S±3°×13°9E±°, h10^{km}, M4.5/11, mb4.6/11, mB5.0/1, MLv4.5/9, Mw(mB)4.3/1, MwMwp4.9/1, Mwp5.2/1*

ISC 24 20:51:11.8±0.5**, 2°.67S**±0°.06×**138°.62E**±0°.05**, h32^{km}, n72, σ1^s.45**/74**, mb4.3**/27**, 1D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.69	8	P	Pn	20 51 21.5	-3.8
GENI	Genyem	1.55	87	P	Pn	20 51 38.1	+0.8
JAY	Jayapura	2.09	86	Pn	Pn	20 51 44.8	0.0
	32nm,0.3s,baz=230,slow=12,SNR=58						
JAY				Lg	Lg	20 52 17.6	
	12nm,0.3s,baz=298,slow=22,SNR=8.1						
	108nm,0.5s						
JAY	Jayapura	2.09	86	P	Pn	20 51 45.0	+0.2
JAY				S	Sb	20 52 15.1	+0.3
SRPI	Serui, Papua	2.50	289	P	Pn	20 51 49.1	-1.3
SRPI				S	Sn	20 52 20.4	+0.6
BAKI	Biak	2.91	300	P	Pn	20 51 55.7	-0.2
RKPI	Ransiki, Papua	4.58	285	P	Pn	20 52 17.1	-1.9
FAKI	Fak Fak	6.36	268	Pn	Pn	20 52 43.0	-0.5
FAKI	Fak Fak	6.36	268	P	Pn	20 52 42.7	-0.8
	0.2nm47nm,0.9s						
SWI	Sorong	7.57	284	P	Pn	20 52 59.3	-0.7
	954nm67nm,0.7s						
AAI	Ambon	10.45	264	P	Pn	20 53 40.1	+0.5
COEN	Coen	12.08	158	Pn	Pn	20 54 01.3	-0.6
MTN	Manton Dam	12.53	216	Pn	Pn	20 54 07.5	-0.5
SOEI	Soe	15.90	243		P	20 54 56.8	-0.1
SOEI	Soe	15.90	243	P	P	20 54 57.1	+0.2
SOEI	Soe	15.90	243	P	P	20 54 57.2	+0.3
KNRA	Kununurra	16.16	216		Pn	20 54 55.6	-1.1
KNRA				IAmb	IAmb	20 55 05.1	
	comp=Z,55nm,1.5s						
BATI	Baumata	16.63	243	Pn	Pn	20 55 02.2	-0.5
	comp=Z,6.9nm,0.3s,baz=103,slow=3.2,SNR=5.1						
	comp=Z,48nm,0.8s						
WB0	Warramunga Arr	17.48	193		Pn	20 55 11.8	-1.6
WR8	Warramunga Arr	17.64	193		Pn	20 55 13.0	-2.4
WRAB	Tennant Creek	17.65	193	P	Pn	20 55 14.6	-0.9
WRAB				IAmb	IAmb	20 55 23.2	
	comp=Z,26nm,1.0s						
WRA	Warramunga Arr	17.66	193		Pn	20 55 13.2	-2.4
WRA	Warramunga Arr	17.66	193	P	Pn	20 55 13.6	-2.1
	comp=Z,0.9nm,0.3s,baz=18,slow=12,SNR=17						
	comp=Z,5.6nm,0.8s						
QIS	Mount Isa	17.80	177	P	P	20 55 23.1	+5.2
TOLI2	Tolitoli	18.22	282		Pn	20 55 20.7	-1.8
TOLI2	Tolitoli	18.22	282	P	P	20 55 24.4	+1.9
TTSI	Tana Toraja	18.78	268	P	Pn	20 55 30.9	+1.6
	comp=Z,25nm,1.2s						
MPSI	Mapaga	18.95	279	P	Pn	20 55 32.6	+1.3
FITZ	Fitzroy Crossi	19.92	219	P	P	20 55 40.9	-0.2
FITZ	Fitzroy Crossi	19.92	219	P	Pn	20 55 41.4	-1.5
	comp=Z,0.3nm,0.3s,baz=52,slow=10,SNR=5.3						
	comp=Z,12nm,1.1s						
FITZ	Fitzroy Crossi	19.92	219	P	Pn	20 55 45.6	+2.7
AS31	Alice Springs	21.36	192		P	20 55 55.1	-1.6
ASAR	Alice Springs	21.36	192		P	20 55 55.5	-1.2
ASAR	Alice Springs	21.36	192	P	P	20 55 55.8	-1.0
	comp=Z,8.5nm,0.8s,baz=22,slow=10,SNR=34						
ASAR				S	S	20 59 52.0	-0.4
	comp=Z,2.0nm,0.8s,baz=10,slow=25,SNR=5.7						
	comp=Z,8.5nm,0.8s						
MYLDM	Lahad Datu	21.56	291		P	20 55 59.0	+0.2
MYLDM				IAmb	IAmb	20 56 10.4	
	comp=Z,21nm,0.9s						
MYLDM	Lahad Datu	21.56	291	P	P	20 56 00.8	+2.0
KKM	Kota Kinabalu	23.99	291	P	P	20 56 23.1	-0.8
KKM				IAmb	IAmb	20 56 24.2	
	comp=Z,11nm,0.8s						
MBWA	Marble Bar	26.00	224	P	P	20 56 42.1	+0.1
MBWA				IAmb	IAmb	20 56 44.3	
	comp=Z,16nm,1.1s						
NWAO	Narrogin (SRO)	36.16	211	LR	LR	21 14 09.6	
	comp=Z,268nm,18.2s,baz=73,slow=38						
IPM	Ipoh	38.23	281	P	P	20 58 27.7	-1.6
IPM				IAmb	IAmb	20 59 05.0	
	comp=Z,12nm,1.2s						
KULM	Kulim	38.74	282	P	P	20 58 31.7	-1.9
KULM				IAmb	IAmb	20 58 33.5	
	comp=Z,15nm,1.1s						
GSI	Gunungsitoli	41.22	275	P	P	20 58 51.7	-2.5
CMAR	Chiang Mai Arr	44.34	300	P	P	20 59 19.1	-0.3
	comp=Z,1.3nm,0.6s,baz=119,slow=6.6,SNR=13						
	comp=Z,1.3nm,0.6s						
LYN	LuoYang	44.44	329	P	P	20 59 23.9	+3.9
LYN				pmax	pmax		
	comp=Z,22nm,1.1s						
BNX	BinXian	49.22	350	⇓P	P	20 59 58.6	+1.5
BNX				pmax	pmax		
	comp=Z,4.0nm,1.5s						
SONM	Songino Array	57.65	335	P	P	21 00 59.3	+0.2
	comp=Z,0.4nm,0.5s,baz=156,slow=7.4,SNR=3.0						
	comp=Z,0.4nm,0.5s						
EVN	Everest	58.34	305	P	P	21 01 04.5	-0.5
EVN				IAmb	IAmb	21 01 05.5	
	comp=Z,7.3nm,1.4s						
SMY	Shemya	62.75	23		P	21 01 31.7	-2.1
MKAR	Makanchi Array	69.70	322	P	P	21 02 17.9	-0.7
MKAR	Makanchi Array	69.70	322	P	P	21 02 18.6	0.0
	comp=Z,0.8nm,0.6s,baz=112,slow=7.6,SNR=10						
	comp=Z,0.8nm,0.6s						
MAKZ	Makanchi	69.90	322	P	P	21 02 19.2	-0.6
MAKZ				IAmb	IAmb	21 02 31.9	
	comp=Z,3.5nm,1.1s						
KSH	Kashi	70.99	313	P	P	21 02 27.1	+0.3
KSH				pP	pP	21 02 35.8	-1.1
KSH				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KDJ	Kajisay	71.08	316	P	P	21 02 26.4	-0.9
KDJ				IAmb	IAmb	21 02 40.0	
	comp=Z,2.3nm,0.9s						
ZALV	Zalesovo Beam	71.86	330	P	P	21 02 32.4	+0.8
	comp=Z,0.3nm,0.2s,baz=120,slow=5.3,SNR=3.6						
	comp=Z,0.3nm,0.2s						
BOOM	Boomskoye usch	72.06	316	P	P	21 02 32.4	-0.8
BOOM				IAmb	IAmb	21 02 50.2	
	comp=Z,3.9nm,1.3s						
KURBB	Kurchatov Arra	73.64	325	P	P	21 02 43.0	+0.8
	comp=Z,1.4nm,0.3s,baz=112,slow=4.7,SNR=2.3						
	comp=Z,1.4nm,0.3s						
S12K	Black Hills	75.50	30	P	P	21 02 53.7	+0.8
VNDA	Vanda	75.83	175	P	P	21 02 55.0	+0.7
VNDA	Vanda	75.83	175	P	P	21 02 54.6	+0.2
	comp=Z,1.4nm,0.6s,baz=325,slow=7.9,SNR=5.3						
	comp=Z,1.4nm,0.6s						
L14K	Kuka Creek	77.90	25	P	P	21 03 07.5	+1.2
L14K				IAmb	IAmb	21 03 10.8	
	comp=Z,5.4nm,0.9s						
M14K	Bethel	77.92	26	P	P	21 03 06.8	+0.4
BVAR	Borovoye Array	79.23	325	P	P	21 03 13.4	-0.4
	comp=Z,1.6nm,0.6s,baz=112,slow=6.7,SNR=8.8						
	comp=Z,1.6nm,0.6s						
M16K	Timber Creek	79.36	26	P	P	21 03 14.2	-0.2
M16K				IAmb	IAmb	21 03 32.0	
	comp=Z,7.6nm,1.2s						
KDAK	Kodiak Island	81.12	30	P	P	21 03 24.2	+0.4
E18K	Tukpahlearik C	81.63	20	P	P	21 03 27.1	+0.7
MAW	Mawson	82.12	202	P	P	21 03 30.5	+1.5
	comp=Z,1.7nm,0.8s,baz=98,slow=7.7,SNR=3.6						
MAW				LR	LR	21 37 39.7	
	comp=Z,91nm,19.3s,baz=77,slow=34						
	comp=Z,1.7nm,0.8s						
E19K	Redstone River	82.81	20	P	P	21 03 33.2	+0.6
E19K				IAmb	IAmb	21 03 59.9	
	comp=Z,2.8nm,1.1s						
D19K	Kuna River	82.96	19	P	P	21 03 33.8	+0.4
D19K				IAmb	IAmb	21 03 45.9	
	comp=Z,3.2nm,0.9s						
ILAR	Eielson Array	85.84	24	P	P	21 03 47.0	-1.0
	comp=Z,0.7nm,0.7s,baz=264,slow=4.7,SNR=7.7						
	comp=Z,0.7nm,0.7s						
QSPA	South Pole Qui	87.27	180	P	P	21 03 54.8	-0.5
	comp=Z,3.9nm,0.8s,baz=310,slow=1.2,SNR=24						
	comp=Z,3.9nm,0.8s						
CPUP	Villa Florida	147.30	153	PKPbc	PKPab	21 10 53.9	-0.8
	comp=Z,0.9nm,0.9s,baz=94,slow=6.7,SNR=3.7						
LPAZ	La Paz	147.54	126	PKPbc	PKPbc	21 10 55.3	+0.7
	comp=Z,1.6nm,0.8s,baz=274,slow=3.5,SNR=5.8						

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*NEIC **24** 20:55:52.1±0.9, 33°.77N±0°.02×96°.69W±0°.02, h5^{km}±1^{km}, mb_Lg2.8/78, ML2.8/6, ML2.8/10, Error ellipse: s-maj=3.5km s-min=2.9km az=4.0*

*NEIC **24** 20:55:52.3±2.2, 33°.73N±0°.02×96°.64W±0°.02, h4^{km}±5^{km}, Error ellipse: s-maj=3.0km s-min=1.7km az=202.0*

*TXNET **24** 20:55:52.3, 34°N±2°×9°7W±°, h4^{km}±2^{km}, ML3.3/10, Error ellipse: s-maj=2.6km s-min=1.8km az=20.7, final*

ISC 24 20:55:52.0±1.1**, 33°.77N**±0°.02×**96°.68W**±0°.02**, h7^{km}**±10^{km}**, n84, σ0^s.74**/104**, Central Texas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
Z35A	Perchaven, San	0.65	228		Pg	20 56 03.9	-0.5
Z35A				Sg	Sg	20 56 12.8	-0.1
Z35A				IAML		20 56 18.4	
	472nm,0.5s						
FW05	UT at Dallas	0.78	184		Pb	20 56 07.6	-0.3
FW05					Sg	20 56 17.2	+0.1
FW05	UT at Dallas	0.78	184	P	Pb	20 56 07.6	-0.3
FW05				S	Sg	20 56 17.2	+0.1
FW09	Farmers Branch	0.86	193		Sg	20 56 19.9	+0.1
FW09	Farmers Branch	0.86	193	S	Sg	20 56 19.9	+0.1
FW04	University of	0.94	193		Sg	20 56 22.1	-0.1
FW04	University of	0.94	193	S	Sg	20 56 22.1	-0.1
FW02	City of Haslet	0.98	214		Pb	20 56 11.3	-0.1
FW02					Sg	20 56 23.5	-0.1
FW02	City of Haslet	0.98	214	P	Pb	20 56 11.3	-0.1
FW02				S	Sg	20 56 23.5	-0.1
FW06	Azle	1.08	223		Pg	20 56 12.4	-0.3
FW06					Sn	20 56 28.1	-0.7
FW06				IAML		20 56 32.8	
	397nm,0.1s						
FW06	Azle	1.08	223	P	Pb	20 56 13.0	0.0
FW06				S	Sn	20 56 28.1	-0.7
FW01	Dallas Executi	1.09	189		Pb	20 56 12.7	-0.5
FW01					Sg	20 56 27.0	-0.1
FW01	Dallas Executi	1.09	189	P	Pb	20 56 12.7	-0.5
FW01				S	Sg	20 56 27.0	-0.1
TREL	Terrell	1.14	154		Pb	20 56 13.9	-0.2
TREL					Sg	20 56 29.5	+0.7
TREL	Terrell	1.14	154	P	Pb	20 56 13.6	-0.6
TREL				Pg	Pn	20 56 14.4	-0.1
TREL				S	Sg	20 56 29.5	+0.7
FW15	Texas Christia	1.21	209		Sb	20 56 30.3	-0.6
FW15	Texas Christia	1.21	209	S	Sb	20 56 30.3	-0.6
X34A	Smith Ranch, M	1.27	311		Pg	20 56 16.6	+0.2
X34A				IAML		20 56 39.5	
	comp=E,154nm,0.7s						
X34A				IAML		20 56 43.5	
	comp=N,172nm,0.3s						
FW16	Waxahatchie	1.29	188		Pn	20 56 16.1	-0.4
FW16					Sb	20 56 32.7	-0.7
FW16	Waxahatchie	1.29	188	P	Pn	20 56 16.1	-0.4
FW16				S	Sb	20 56 32.7	-0.7
FW12	Venus	1.32	197		Pn	20 56 16.5	-0.4
FW12					Sb	20 56 33.8	-0.5
FW12	Venus	1.32	197	P	Pn	20 56 16.5	-0.4
FW12				S	Sb	20 56 33.8	-0.5
FW03	Perrin-Whitt E	1.36	238		Pb	20 56 17.8	-0.2
FW03				Sg	Sg	20 56 37.4	+1.4
FW03	Perrin-Whitt E	1.36	238	P	Pg	20 56 18.1	-0.1
FW03				S	Sn	20 56 35.6	-0.3
FW03				Sg	Sg	20 56 37.4	+1.4
FW07	Weatherford	1.41	221		Pb	20 56 18.3	-0.3
FW07					Sb	20 56 36.5	-0.2
FW07	Weatherford	1.41	221	P	Pb	20 56 18.3	-0.3
FW07				S	Sb	20 56 36.5	-0.2
FW14	Alvarado	1.43	198		Pn	20 56 18.3	0.0
FW14				Sg	Sb	20 56 37.5	+0.1
FW14	Alvarado	1.43	198	P	Pn	20 56 18.3	0.0
FW14				Pg	Pg	20 56 20.1	+0.7
FW14				Sg	Sb	20 56 37.5	+0.1
WTFS	Witchita Falls	1.49	271		Pb	20 56 19.8	-0.2
WTFS					Sg	20 56 39.8	-0.1
WTFS	Witchita Falls	1.49	271	P	Pb	20 56 19.7	-0.2
WTFS				S	Sg	20 56 39.8	-0.1
Z38A	Mt. Pleasant	1.50	109		Pb	20 56 20.0	-0.3
Z38A					Sb	20 56 39.8	+0.3
Z38A	Mt. Pleasant	1.50	109	P	Pn	20 56 19.2	-0.2
Z38A				S	Sb	20 56 39.8	+0.3
Z38A				Sg	Sg	20 56 41.5	+1.1
FW13	Cleburne	1.54	204		Pb	20 56 20.4	-0.6
FW13				Sg	Sb	20 56 40.7	0.0
FW13	Cleburne	1.54	204	P	Pb	20 56 20.4	-0.6
FW13				Sg	Sb	20 56 40.7	0.0
FNO	Franklin	1.60	338		Pb	20 56 21.7	-0.3
PLPT	Palo Pinto	1.67	236		Pb	20 56 22.3	-0.8
PLPT					Sg	20 56 45.0	-0.6
PLPT	Palo Pinto	1.67	236	P	Pb	20 56 22.6	-0.4
PLPT				Pg	Pg	20 56 24.2	+0.2
PLPT				S	Sg	20 56 45.0	-0.6
OKCSW	OKLAHOMA CITY	1.75	339	IAmb_Lg		20 56 50.8	
	comp=Z,44nm,0.8s						
WHTX	Lake Whitney,	1.89	200		Pn	20 56 25.2	+0.5
WHTX				Sg	Sb	20 56 50.9	+0.3
WHTX	Lake Whitney,	1.89	200	P	Pn	20 56 25.3	+0.6
WHTX				Pg	Pg	20 56 28.9	+0.8

WHTX				Sg	Sb	20 56 50.9	+0.3
237A	Washetta, Mont	1.91	157		Pn	20 56 24.7	-0.2
237A				Sg	Sb	20 56 50.7	-0.4
237A				IAmb_Lg		20 56 53.0	
	comp=Z,45nm,0.8s						
WMOK	Wichita Mounta	1.99	300		Pb	20 56 27.1	-1.6
WMOK					Sb	20 56 54.2	+0.5
WMOK					Sg	20 56 57.6	+1.5
WMOK	Wichita Mounta	1.99	300	IAmb_Lg		20 57 00.2	
	comp=Z,34nm,0.8s						
WMOK	Wichita Mounta	1.99	300	P	Pb	20 56 27.5	-1.1
WMOK				Pg	Pg	20 56 28.9	-1.3
WMOK				S	Sb	20 56 54.2	+0.5
WMOK				Sg	Sg	20 56 57.6	+1.5
DEOK	Depew	2.08	4		Pb	20 56 28.6	-1.4
OK052	Battle Ridge R	2.23	357	Pn	Pn	20 56 30.4	+1.1
OK052				IAmb_Lg		20 57 06.5	
	comp=Z,26nm,0.7s						
TUL3	Leonard	2.26	19		Pn	20 56 31.1	+1.2
TUL3				IAmb_Lg		20 57 06.5	
	comp=Z,48nm,1.0s						
NATX	Nacogdoches	2.62	139		Sn	20 57 07.7	+0.7
NATX				IAmb_Lg		20 57 17.2	
	comp=Z,25nm,0.7s						
NATX	Nacogdoches	2.62	139	S	Sn	20 57 07.6	+0.7
ABTX	Abilene, Hawle	2.73	246	Pg	Pb	20 56 42.5	+1.2
ABTX				Sg	Sb	20 57 16.3	+1.3
ABTX				IAmb_Lg		20 57 20.7	
	comp=Z,34nm,0.8s						
ABTX	Abilene, Hawle	2.73	246	Pg	Pb	20 56 42.5	+1.2
ABTX				Sg	Sb	20 57 16.3	+1.3
RLO	Rose Lookout	2.75	29	IAmb_Lg		20 57 25.6	
	comp=Z,31nm,0.8s						
APMT	Aspermont	2.91	262	IAmb_Lg		20 57 30.1	
	comp=Z,22nm,0.8s						
WLAR	White Oak Lake	2.98	90	Pg	Pb	20 56 44.9	-0.4
WLAR				Sg	Sn	20 57 15.3	-0.3
WLAR				IAmb_Lg		20 57 34.4	
	comp=Z,33nm,0.7s						
WLAR	White Oak Lake	2.98	90	Pg	Pb	20 56 44.9	-0.4
WLAR				Sg	Sn	20 57 15.3	-0.3
ET01	Chireno	3.01	139	P	Pn	20 56 40.1	-0.1
ET01				S	Sn	20 57 16.3	-0.3
T35A	Sooner Cattle	3.15	2	IAmb_Lg		20 57 35.3	
	comp=Z,20nm,0.8s						
BRDY	Brady	3.15	219	IAmb_Lg		20 57 35.8	
	comp=Z,20nm,0.7s						
ELIS	Ellis County	3.21	316	Pg	Pb	20 56 50.6	+1.1
ELIS				IAmb_Lg		20 57 32.3	
	comp=Z,18nm,0.8s						
ELIS				Sg	Sg	20 57 32.8	-2.4
ELIS	Ellis County	3.21	316	Pg	Pb	20 56 50.6	+1.1
ELIS				Sg	Sg	20 57 32.8	-2.4
SMWD	Samnorwood	3.23	295	IAmb_Lg		20 57 38.1	
	comp=Z,28nm,0.8s						
U38A	Gravette	3.27	35	IAmb_Lg		20 57 44.3	
	comp=Z,20nm,0.7s						
KAN13	South Haven SW	3.31	349	IAmb_Lg		20 57 38.5	
	comp=Z,28nm,0.9s						
HHAR	Hobbs	3.37	41	IAmb_Lg		20 57 41.9	
	comp=Z,16nm,0.7s						
KAN17	Caldwell West	3.39	345	IAmb_Lg		20 57 49.2	
	comp=Z,24nm,0.8s						
KAN09	Caldwell North	3.45	347	IAmb_Lg		20 57 49.4	
	comp=Z,19nm,0.8s						
DKNS	Dickens	3.54	270	IAmb_Lg		20 57 50.0	
	comp=Z,35nm,0.8s						
KAN12	Harper NE Stat	3.69	343	IAmb_Lg		20 57 51.3	
	comp=Z,24nm,1.1s						
POST	Post	4.09	262	IAmb_Lg		20 58 08.9	
	comp=Z,25nm,0.8s						
FCAR	Ozark Folk Cen	4.31	59	IAmb_Lg		20 58 14.9	
	comp=Z,16nm,0.8s						
R32A	Long Quarter,	4.93	341	IAmb_Lg		20 58 31.6	
	comp=Z,12nm,0.7s						
MGMO	Mountain Grove	4.94	46	IAmb_Lg		20 58 34.7	
	comp=Z,21nm,0.8s						
MSTX	Muleshoe	5.07	274	IAmb_Lg		20 58 42.3	
	comp=Z,18nm,0.9s						
ODSA	Odessa	5.20	253	IAmb_Lg		20 58 46.9	
	comp=Z,14nm,1.0s						
DRIO	Del Rio	5.48	219	IAmb_Lg		20 58 49.5	
	comp=Z,18nm,0.9s						
SAND	Sanderson	5.99	232	IAmb_Lg		20 59 14.9	
	comp=Z,16nm,0.8s						
CCM	Cathedral Cave	6.15	44	IAmb_Lg		20 59 21.9	
	comp=Z,13nm,1.0s						
CGM3	Cape Girardeau	6.72	56	IAmb_Lg		20 59 36.7	
	comp=Z,13nm,0.9s						
ALPN	Alpine	6.80	242	IAmb_Lg		20 59 40.6	
	comp=Z,9.6nm,0.7s						
KSCO	Kaye Shedlock'	7.10	319	IAmb_Lg		20 59 47.6	
	comp=Z,9.7nm,0.8s						
MNTX	Cornudas Mount	7.62	257	IAmb_Lg		21 00 05.5	
	comp=Z,7.7nm,0.8s						
ANMO	Albuquerque	8.17	281	IAmb_Lg		21 00 16.6	
	comp=Z,13nm,1.1s						
ANMO	Albuquerque	8.17	281	IAmb_Lg		21 00 16.6	
	comp=Z,13nm,1.1s						
ANMO	Albuquerque	8.17	281	IAmb_Lg		21 00 16.6	
	comp=Z,13nm,1.1s						

WEL ***24*** *21:03:26.3±0.5, 38°S±3°×17°7E±°, h3^{km}±3^{km}, M3.5/17, ML3.8/17, MLv3.5/17, Error ellipse: s-maj=4.0km s-min=2.8km az=178.8, confirmed*

NOU ***24*** *21:03:26.4, 37.°94S×176.°92E, h5^{km}, MLv3.2/7, North Island, New Zealand*

ISC 24 21:03:26.2±0.9**, 37.°90S**±0.°02×**176.°95E**±0.°02**, h6**^{km}±8^{km}**, n103, σ0^{s}82**/113**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WHRZ	Whale Island	0.05	27	P	Pg	21 03 27.2	-0.3
MWFS	Matata Watchor	0.22	280	P	Pg	21 03 29.5	-1.1
MWFS				S	Sg	21 03 32.9	-0.7
MARZ	Manawahe	0.23	248	P	Pg	21 03 31.4	+0.7
MARZ				S	Sg	21 03 35.3	+1.5
KAFS	Kawerau Fire S	0.26	226	P	Pg	21 03 30.6	-0.7
KAFS				S	Sg	21 03 35.2	+0.4
EDRZ	Edgecumbe	0.26	218	P	Pg	21 03 32.3	+0.9
EDRZ				S	Sg	21 03 36.5	+1.6
OPCS	Opotiki Colleg	0.29	113	P	Pg	21 03 30.7	-1.3
OPCS				S	Sg	21 03 35.5	-0.3
OPRZ	Ohinepanea	0.32	280	P	Pg	21 03 32.5	+0.2
OPRZ				S	Sg	21 03 37.2	+0.7
URZ	Urewera	0.38	160	P	Pg	21 03 33.5	-0.1
URZ	Urewera	0.38	160	P	Pg	21 03 33.7	+0.1
WIZ	White Island	0.42	27	P	Pg	21 03 34.3	0.0
WSRZ	White Island S	0.42	26	P	Pg	21 03 35.1	+0.7
MKRZ	Makatiti	0.45	238	P	Pb	21 03 36.0	-0.6
LIRZ	Lichensteins R	0.46	257	P	Pb	21 03 36.1	-0.6
LIRZ				S	Sb	21 03 42.6	-1.2
TARZ	Mount Tarawera	0.48	226	P	Pb	21 03 36.7	-0.5
OMRZ	Omania	0.50	245	P	Pg	21 03 36.5	+0.7
OMRZ				S	Sg	21 03 43.7	+1.3
RRRZ	Republican Roa	0.56	218	P	Pb	21 03 38.0	-0.4
KARZ	Kaharoa	0.57	258	P	Pg	21 03 37.8	+0.7
TGRZ	Tauranga	0.57	287	P	Pg	21 03 37.5	+0.4
RUGZ	Raukumara Rang	0.58	97	P	Pg	21 03 37.1	-0.3
RUGZ				S	Sg	21 03 45.2	+0.2
HLRZ	Highlands Stat	0.59	233	P	Pb	21 03 38.8	-0.1
MUGZ	Murupara	0.59	193	P	Pg	21 03 37.5	-0.2
MWZ	Matawai	0.63	134	P	Pg	21 03 38.4	0.0
MWZ				S	Sg	21 03 47.1	+0.5
NGRZ	Ngongotaha	0.63	251	P	Pb	21 03 39.4	-0.3
UTU	Utuhina	0.66	245	P	Pb	21 03 41.0	+0.8
HAZ	Te Kaha	0.68	78	P	Pg	21 03 38.8	-0.4
HSRZ	Hossack Road	0.69	233	P	Pb	21 03 40.8	+0.1
RAGZ	Rawiri	0.70	148	P	Pg	21 03 39.9	+0.2
RTZ	Ruatahuna	0.71	178	P	Pg	21 03 40.0	+0.1
PRRZ	Plateau Road	0.74	216	P	Pb	21 03 41.4	-0.2
KMRZ	Kaimai	0.80	274	P	Pg	21 03 42.0	+0.4
GRRZ	Galatos Road	0.80	235	P	Pb	21 03 42.5	0.0
ALRZ	Allen Road	0.81	216	P	Pg	21 03 42.3	+0.5
MYRZ	Mayor Island	0.83	318	P	Pg	21 03 41.8	-0.4
TWGZ	Tauwhareparae	0.86	109	P	Pb	21 03 43.5	-0.2
WPRZ	Whakapapatarin	0.88	225	P	Pb	21 03 44.5	+0.7
TKGZ	Te Karaka	0.89	127	P	Pb	21 03 44.1	0.0
PKGZ	Pakihiroa	0.90	88	P	Pg	21 03 43.4	0.0
SNGZ	Shannon Statio	0.93	161	P	Pb	21 03 44.6	-0.3
MTHZ	Maungataniwha	0.95	185	P	Pg	21 03 44.6	+0.1
MRHZ	Matea Rd	1.02	204	P	Pg	21 03 45.6	-0.3
RAHZ	Arahi	1.02	174	P	Pb	21 03 46.2	-0.2
PUZ	Puketiti	1.05	100	P	Pb	21 03 46.9	+0.1
KUTZ	Kaahu Road	1.06	236	P	Pg	21 03 45.9	-0.7
MXZ	Matakaoa Point	1.13	73	P	Pn	21 03 49.0	+0.4
MXZ	Matakaoa Point	1.13	73	P	Pg	21 03 48.1	+0.2
CNGZ	Carnagh Statio	1.15	121	P	Pn	21 03 50.5	+1.6
TOZ	Tahuroa Road	1.16	278	P	Pg	21 03 47.8	-0.6
WMGZ	Waiomatatini S	1.17	87	P	Pb	21 03 49.2	+0.5
TLZ	Tolley Road	1.19	248	P	Pg	21 03 48.3	-0.7
WHHZ	Waihua	1.20	169	P	Pn	21 03 50.2	+0.7
NMHZ	Naumai	1.20	185	P	Pg	21 03 49.3	0.0
KNZ	Kokohu	1.26	153	P	Pn	21 03 51.0	+0.6
PRGZ	Paritu Road	1.26	145	P	Pn	21 03 51.9	+1.5
BKZ	Black Stump Fm	1.31	196	P	Pg	21 03 49.8	-1.6
BKZ	Black Stump Fm	1.31	196	P	Pg	21 03 49.8	-1.6
ARHZ	Aropaoanui	1.36	178	P	Pn	21 03 52.1	+0.2
KATZ	Kakaramea	1.46	222	P	Pg	21 03 57.6	+3.5
MHGZ	Mahia Peninsul	1.46	149	P	Pg	21 03 55.0	+0.8
KUZ	Kuaotunu	1.51	319	P	Pn	21 03 52.4	-1.4
KUZ	Kuaotunu	1.51	319	P	Pn	21 03 52.6	-1.3
MCHZ	McNeill Hill	1.56	187	P	Pb	21 03 55.2	-0.3
TMVZ	Te Maari	1.56	218	P	Pn	21 03 54.7	0.0
NTVZ	North Tongarir	1.56	219	P	Pn	21 03 55.1	+0.5
ETVZ	East Tongariro	1.57	218	P	Pn	21 03 54.6	-0.2
KRVZ	Karewarewa	1.57	220	P	Pg	21 03 56.9	+0.5
KWHZ	Kaweka Forest	1.58	195	P	Pn	21 03 54.3	-0.6
OTVZ	Oturere	1.61	218	P	Pn	21 03 55.2	-0.3
NNVZ	North Ngauruho	1.61	220	P	Pn	21 03 55.5	0.0
WTVZ	West Tongariro	1.61	221	P	Pg	21 03 57.0	-0.1
MKAZ	Moumakai	1.63	299	P	Pn	21 03 55.3	-0.1
SNVZ	South Ngauruho	1.64	218	P	Pn	21 03 55.6	-0.2
NGZ	Ngauruhoe	1.65	219	P	Pb	21 03 57.6	+0.4
TWVZ	Taurewa	1.66	225	P	Pg	21 03 57.9	-0.2
TUVZ	Tukino	1.70	216	P	Pb	21 03 57.8	-0.2
COVZ	Chateau Observ	1.70	220	P	Pg	21 04 01.5	+2.6
FWVZ	Far West T-bar	1.74	218	P	Pb	21 03 58.6	-0.2
WHVZ	Whangaehu Hut	1.74	217	P	Pb	21 03 58.4	-0.4
MAVZ	Matarangi	1.75	218	P	Pb	21 03 59.2	+0.4
HIZ	Hauiti	1.76	249	P	Pb	21 03 58.7	-0.2
HIZ	Hauiti	1.76	249	P	Pb	21 03 58.6	-0.3
MOVZ	Moawhango	1.77	211	P	Pn	21 03 57.7	+0.1
WNVZ	Wahianoa	1.77	216	P	Pn	21 03 58.6	+0.9
TRVZ	Turoa	1.78	218	P	Pb	21 03 59.0	-0.3
KRHZ	Kereru	1.80	194	P	Pn	21 03 57.6	-0.2
WIAZ	Waiheke Island	1.82	307	P	Pn	21 03 58.8	+0.8
ETAZ	East Tamaki Re	1.86	300	P	Pb	21 04 00.5	-0.2
PKVZ	Pokaka	1.87	222	P	Pg	21 04 02.4	+0.3
KAHZ	Kahuranaki	1.89	182	P	Pn	21 03 59.4	+0.3
MBAZ	Motutapu North	1.98	304	P	Pn	21 03 59.7	-0.6
AWAZ	Awhitu Peninsu	2.01	294	P	Pb	21 04 03.7	+0.4
GRZ	Great Barrier	2.03	324	P	Pn	21 04 02.4	+1.4
PNHZ	Pukenui	2.09	196	P	Pn	21 04 01.9	0.0
WTAZ	Waiatarua	2.12	296	P	Pg	21 04 07.7	+0.8
PXZ	Pawanui	2.13	182	P	Pn	21 04 01.7	-0.6
TSZ	Takapari Road	2.29	199	P	Pn	21 04 04.5	-0.1
PRHZ	Porangahau	2.38	186	P	Pn	21 04 05.0	-0.8
WAZ	Wanganui	2.40	219	P	Pb	21 04 09.1	-0.8
DVHZ	Dannevirke	2.47	194	P	Pn	21 04 06.2	-0.9
BFZ	Birch Farm	2.83	191	P	Pn	21 04 10.5	-1.6
BFZ	Birch Farm	2.83	191	S	Sn	21 04 46.6	+0.1
BFZ	Birch Farm	2.83	191	P	Pn	21 04 10.4	-1.6
MRZ	Mangatainoka R	2.96	201	P	Pn	21 04 13.3	-0.4
HOWZ	Holdsworth Sta	3.19	200	P	Pb	21 04 21.4	-1.9

DJA 24 21:08:18.5±0.4**, 3°S**±6°×**13°9E**±°**, h10**^{km}**, M4.2**/6**, mb4.3**/1**, MLv4.2**/6**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENI	Genyem	1.61	92	P	Pn	21 08 47.3	+0.3
JAY	Jayapura	2.14	89	P	Pn	21 08 53.4	-1.0
SRPI	Serui, Papua	2.41	286	P	Pn	21 08 56.9	-1.2
BAKI	Biak	2.79	299	P	Pn	21 09 04.5	+1.2
RKPI	Ransiki, Papua	4.50	283	P	Pn	21 09 26.8	0.0

IDC ***24*** *21:08:39.6±0.9, 2.°66S×138.°45E, h0^{km}, mb3.9/6, mbtmp3.9/8, ML4.1/2, Error ellipse: s-maj=23.6km s-min=15.9km az=2.0*

NEIC ***24*** *21:08:42.2±1.9, 2.°7S±0.°1×138.°51E±0.°03, h10^{km}±1^{km}, mb4.2/14, Error ellipse: s-maj=19.5km s-min=3.2km az=169.0*

ISC 24 21:08:44.7±0.7**, 2.°72S**±0.°09×**138.°52E**±0.°08**, h32**^{km}**, n28, σ0^{s}80**/28**, mb4.1**/10**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	2.19	85	Pn	Pn	21 09 19.3	+0.4
	21nm,0.3s,baz=226,slow=11,SNR=16						
JAY				Lg	Lg	21 09 50.8	
	24nm,0.3s,baz=114,slow=22,SNR=6.8						
	46nm,0.3s						
FAKI	Fak Fak	6.27	268	Pn	Pn	21 10 15.3	+0.3
COEN	Coen	12.07	158	Pn	Pn	21 11 35.0	+0.4
MTN	Manton Dam	12.43	216	Pn	Pn	21 11 40.0	+0.4
KNRA	Kununurra	16.07	216	Pn	Pn	21 12 27.7	-0.7
KNRA				IAmb	IAmb	21 12 59.2	
	comp=Z,14nm,1.1s						
WB0	Warramunga Arr	17.41	193	Pn	Pn	21 12 43.4	-1.9
WB0				IAmb	IAmb	21 13 06.5	
	comp=Z,24nm,1.4s						
WR8	Warramunga Arr	17.57	193		P	21 12 49.3	+1.2
WR8				IAmb	IAmb	21 12 58.2	
	comp=Z,12nm,1.0s						
WRAB	Tennant Creek	17.59	193	Pn	Pn	21 12 45.7	-1.7
WRAB				IAmb	IAmb	21 12 51.4	
	comp=Z,16nm,1.1s						
WRA	Warramunga Arr	17.60	193		P	21 12 48.7	+0.3
WRA	Warramunga Arr	17.60	193	P	Pn	21 12 46.9	-0.7
	comp=Z,0.9nm,0.3s,baz=6.5,slow=13,SNR=23						
	comp=Z,4.6nm,0.9s						
FITZ	Fitzroy Crossi	19.83	219	P	P	21 13 13.7	+0.8
AS31	Alice Springs	21.29	192	P	P	21 13 28.3	-0.5
ASAR	Alice Springs	21.30	192	P	P	21 13 29.6	+0.8
ASAR	Alice Springs	21.30	192	P	P	21 13 28.9	+0.2
	comp=Z,6.2nm,0.9s,baz=4.7,slow=12,SNR=6.7						
	comp=Z,6.2nm,0.9s						
CMAR	Chiang Mai Arr	44.28	300	P	P	21 16 51.4	-0.4
	comp=Z,0.4nm,0.5s,baz=120,slow=6.3,SNR=5.8						
	comp=Z,0.4nm,0.5s						
MKAR	Makanchi Array	69.69	322	P	P	21 19 51.8	+0.5
MKAR	Makanchi Array	69.69	322	P	P	21 19 51.6	+0.3
	comp=Z,0.4nm,0.4s,baz=100,slow=8.9,SNR=7.3						
	comp=Z,0.4nm,0.4s						
MAKZ	Makanchi	69.88	322	P	P	21 19 52.5	0.0
MAKZ				IAmb	IAmb	21 19 54.5	
	comp=Z,2.9nm,1.3s						
L14K	Kuka Creek	77.99	25	P	P	21 20 39.9	+0.3
L14K				IAmb	IAmb	21 20 42.0	
	comp=Z,4.3nm,0.9s						
M14K	Bethel	78.01	26	P	P	21 20 40.1	+0.4
BVAR	Borovoye Array	79.22	325	P	P	21 20 46.3	-0.3
	comp=Z,0.4nm,0.5s,baz=115,slow=10.0,SNR=3.5						
	comp=Z,0.4nm,0.5s						
G18K	Tagagawik	81.70	22	P	P	21 20 59.3	-0.4
G18K				IAmb	IAmb	21 21 04.0	
	comp=Z,5.3nm,1.4s						
L19K	White Mountain	81.70	26	P	P	21 21 00.1	+0.3
E18K	Tukpahlearik C	81.71	20	P	P	21 21 00.1	+0.4
E18K				IAmb	IAmb	21 21 05.9	
	comp=Z,3.5nm,1.1s						
ILAR	Eielson Array	85.92	24	P	P	21 21 19.6	-1.7
	comp=Z,0.6nm,0.7s,baz=266,slow=4.4,SNR=5.2						
	comp=Z,0.6nm,0.7s						
QSPA	South Pole Qui	87.22	180	P	P	21 21 27.9	+0.1
QSPA	South Pole Qui	87.22	180	P	P	21 21 27.3	-0.5
	comp=Z,2.0nm,0.9s,baz=303,slow=2.2,SNR=6.2						
	comp=Z,2.0nm,0.9s						
BMAR	Burnt Mountain	87.48	22	P	P	21 21 29.5	+0.6

IDC ***24*** *21:09:32.7±0.6, 2.°63S×138.°53E, h0^{km}, mb4.2/12, mbtmp4.2/15, ML4.4/3, Error ellipse: s-maj=16.7km s-min=14.3km az=30.0*

NEIC ***24*** *21:09:36.0±1.5, 2.°43S±0.°10×138.°53E±0.°06, h10^{km}±1^{km}, mb4.6/44, Error ellipse: s-maj=16.5km s-min=10.9km az=176.0*

ISC 24 21:09:38.2±0.5**, 2.°61S**±0.°06×**138.°47E**±0.°06**, h32**^{km}**, n72, σ1^{s}48**/74**, mb4.5**/33**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	2.23	88	Pn	Pn	21 10 11.8	-1.3
	27nm,0.3s,baz=293,slow=8.5,SNR=7.2						
JAY				Lg	Lg	21 10 42.9	
	26nm,0.3s,baz=61,slow=20,SNR=3.8						
	241nm,0.8s						
FAKI	Fak Fak	6.22	267	Pn	Pn	21 11 08.7	+0.7
COEN	Coen	12.20	158	Pn	Pn	21 12 30.9	+1.0
MTN	Manton Dam	12.49	215	Pn	Pn	21 12 36.4	+2.5
SOEI	Soe	15.80	243		P	21 13 21.9	-0.2
SOEI				IAmb	IAmb	21 13 30.3	
	comp=Z,46nm,0.9s						
KNRA	Kununurra	16.13	216	Pn	Pn	21 13 23.9	+1.2
BATI	Baumata	16.53	242	Pn	Pn	21 13 27.3	-0.6
	comp=Z,7.0nm,0.3s,baz=56,slow=8.9,SNR=4.5						
BATI				Sn	Sn	21 16 23.9	-6.6
	comp=Z,13nm,0.3s,baz=326,slow=23,SNR=10						
	comp=Z,18nm,0.9s						
WB0	Warramunga Arr	17.51	193		P	21 13 42.6	+1.6
WR8	Warramunga Arr	17.67	192		P	21 13 45.6	+2.8
WRAB	Tennant Creek	17.68	193		P	21 13 46.3	+3.4
WRA	Warramunga Arr	17.69	193		P	21 13 46.2	+3.2
WRA	Warramunga Arr	17.69	193	P	Pn	21 13 42.4	0.0
	comp=Z,1.2nm,0.3s,baz=16,slow=12,SNR=9.2						
	comp=Z,3.4nm,0.7s						
TOLI2	Tolitoli	18.07	282		P	21 13 49.0	+1.8
CTAO	Charters Tower	18.96	157	P	Pn	21 14 00.1	+2.3
AS31	Alice Springs	21.39	192	P	P	21 14 24.9	+1.4
ASAR	Alice Springs	21.39	192	P	P	21 14 25.2	+1.8
ASAR	Alice Springs	21.39	192	P	P	21 14 23.4	0.0
	comp=Z,5.5nm,0.7s,baz=21,slow=10,SNR=4.4						
ASAR				S	S	21 18 13.9	-5.5
	comp=Z,1.9nm,0.7s,baz=13,slow=25,SNR=4.6						
	comp=Z,5.5nm,0.7s						
EIDS	Eidsvold	25.68	153	P	P	21 15 07.8	+2.3
EIDS				IAmb	IAmb	21 15 19.4	
	comp=Z,18nm,1.3s						
STKA	Stephens Creek	29.26	175	P	P	21 15 37.0	-0.5
	comp=Z,4.5nm,1.2s,baz=356,slow=11,SNR=3.0						
	comp=Z,4.5nm,1.2s						
CM31	Chiang Mai Arr	44.18	300	P	P	21 17 45.6	+1.1
CMAR	Chiang Mai Arr	44.18	300	P	P	21 17 45.9	+1.3
CMAR	Chiang Mai Arr	44.18	300	P	P	21 17 45.1	+0.6
	comp=Z,1.7nm,0.7s,baz=119,slow=6.6,SNR=15						
	comp=Z,1.7nm,0.7s						
SONM	Songino Array	57.53	335	P	P	21 19 24.5	-0.2
SONM	Songino Array	57.53	335	P	P	21 19 25.1	+0.4
	comp=Z,0.6nm,0.5s,baz=151,slow=6.8,SNR=6.1						
	comp=Z,0.6nm,0.5s						
PEA0B	Petropavlovsk-	57.82	14	P	P	21 19 26.4	-0.1
PETK	Petropavlovsk-	57.82	14	P	P	21 19 26.0	-0.5
PETK	Petropavlovsk-	57.82	14	P	P	21 19 27.4	+0.9
	comp=Z,1.1nm,0.8s,baz=174,slow=2.8,SNR=4.2						
	comp=Z,1.1nm,0.8s						
EVN	Everest	58.19	305	P	P	21 19 29.2	-1.1
EVN				IAmb	IAmb	21 19 31.4	
	comp=Z,3.5nm,0.7s						
MKAR	Makanchi Array	69.56	322	P	P	21 20 43.9	-0.3
MKAR	Makanchi Array	69.56	322	P	P	21 20 44.3	+0.1
	comp=Z,1.6nm,0.6s,baz=119,slow=7.5,SNR=13						
	comp=Z,1.6nm,0.6s						
MAKZ	Makanchi	69.76	322	P	P	21 20 45.2	-0.1
MAKZ				IAmb	IAmb	21 20 46.9	
	comp=Z,5.4nm,1.2s						
ZALV	Zalesovo Beam	71.73	330	P	P	21 20 55.7	-1.5
	comp=Z,0.9nm,0.6s,baz=116,slow=3.4,SNR=3.9						
	comp=Z,0.9nm,0.6s						
BOOM	Boomskoye usch	71.92	316	P	P	21 20 59.3	+0.5
BOOM				IAmb	IAmb	21 20 59.9	
	comp=Z,2.7nm,0.6s						
KURBB	Kurchatov Arra	73.51	325	P	P	21 21 07.1	-0.7
	comp=Z,1.6nm,0.9s,baz=115,slow=5.7,SNR=7.3						
	comp=Z,1.6nm,0.9s						
TIXI	Tiksi	74.39	357	P	P	21 21 12.4	-0.2
KKAR	Karatay Array	75.89	316	P	P	21 21 21.6	-0.2
VNDA	Vanda	75.90	175	P	P	21 21 20.4	-0.8
	comp=Z,1.9nm,1.0s,baz=312,slow=7.5,SNR=4.0						
	comp=Z,1.9nm,1.0s						
L14K	Kuka Creek	77.91	25	P	P	21 21 33.0	+0.3
M14K	Bethel	77.93	26	P	P	21 21 32.8	-0.1
K15K	Wolf Creek Mou	78.84	24	P	P	21 21 37.9	0.0
BVAR	Borovoye Array	79.09	325	P	P	21 21 39.4	-0.1
	comp=Z,2.0nm,0.6s,baz=107,slow=8.5,SNR=8.2						
	comp=Z,2.0nm,0.6s						
M16K	Timber Creek	79.36	26	P	P	21 21 40.1	-0.7
M16K				IAmb	IAmb	21 21 42.5	
	comp=Z,7.3nm,0.9s						
M17K	Holitna River	80.19	26	P	P	21 21 46.1	+0.8
M17K				IAmb	IAmb	21 21 47.5	
	comp=Z,8.1nm,0.9s						
KDAK	Kodiak Island	81.14	30	P	P	21 21 50.0	-0.4
KDAK				IAmb	IAmb	21 21 51.0	
	comp=Z,8.4nm,0.8s						
G18K	Tagagawik	81.62	22	P	P	21 21 52.3	-0.5
G18K				IAmb	IAmb	21 21 55.4	
	comp=Z,3.1nm,0.8s						
L19K	White Mountain	81.63	26	P	P	21 21 52.5	-0.4
L19K				IAmb	IAmb	21 21 54.5	
	comp=Z,4.8nm,0.8s						
C18K	Utukok River	82.01	19	P	P	21 21 54.4	-0.5
C18K				IAmb	IAmb	21 22 15.7	
	comp=Z,3.9nm,1.2s						
J20K	Nowinta River	82.67	24	P	P	21 21 58.6	+0.2
J20K				IAmb	IAmb	21 21 59.4	
	comp=Z,2.7nm,0.9s						
E19K	Redstone River	82.80	20	P	P	21 21 59.1	+0.1
E19K				IAmb	IAmb	21 22 01.5	
	comp=Z,4.1nm,0.8s						
D19K	Kuna River	82.95	19	P	P	21 21 59.3	-0.5
D19K				IAmb	IAmb	21 22 01.4	
	comp=Z,4.0nm,0.8s						
D20K	Etivluk River	83.54	19	P	P	21 22 02.4	-0.4
SCM	Sheep Creek Mo	84.88	27	P	P	21 22 09.7	-0.1
I23K	Minto, Yukon-K	84.94	24	P	P	21 22 09.7	-0.1
I23K				IAmb	IAmb	21 22 10.3	
	comp=Z,2.7nm,0.8s						
G23K	Bananza Creek	85.15	22	P	P	21 22 11.2	+0.1
G23K				IAmb	IAmb	21 22 12.2	
	comp=Z,2.8nm,0.8s						
DHY	Denali Highway	85.19	26	P	P	21 22 10.9	-0.5
DHY				IAmb	IAmb	21 22 12.0	
	comp=Z,3.6nm,0.8s						
CCB	Clear Creek Bu	85.43	24	P	P	21 22 11.2	-1.2
CCB				IAmb	IAmb	21 22 12.4	
	comp=Z,4.4nm,0.8s						
D23K	Nanushuk River	85.63	20	P	P	21 22 14.0	+0.7
E23K	Chandalar	85.72	21	P	P	21 22 13.5	-0.3
ILAR	Eielson Array	85.84	24	P	P	21 22 12.6	-1.8
	comp=Z,2.3nm,0.7s,baz=263,slow=4.9,SNR=17						
	comp=Z,2.3nm,0.7s						
C23K	Itkillik River	85.94	19	P	P	21 22 14.9	+0.1
F24K	Squaw Lake	86.19	22	P	P	21 22 16.8	+0.6
F24K				IAmb	IAmb	21 22 17.6	
	comp=Z,3.2nm,0.8s						
J26L	Joseph Creek	87.17	25	P	P	21 22 20.7	-0.4
J26L				IAmb	IAmb	21 22 22.3	
	comp=Z,4.8nm,1.4s						
QSPA	South Pole Qui	87.33	180	P	P	21 22 21.8	-0.1
QSPA	South Pole Qui	87.33	180	P	P	21 22 21.1	-0.8
	comp=Z,5.4nm,1.0s,baz=169,slow=0.2,SNR=13						
	comp=Z,5.4nm,1.0s						
BMAR	Burnt Mountain	87.40	22	P	P	21 22 22.7	+0.7
H27K	Steamboat Moun	88.34	24	P	P	21 22 27.2	+0.6
I28M	Miner Creek	88.86	24	P	P	21 22 29.6	+0.5
I28M				IAmb	IAmb	21 22 30.1	
	comp=Z,3.6nm,0.9s						
G30M	tAoh Zraii Nji	90.54	23	P	P	21 22 36.5	-0.3
G30M				IAmb	IAmb	21 23 03.4	
	comp=Z,5.7nm,1.4s						
PB16	IPOC Station P	145.47	128	PKPdf	PKPdf	21 29 14.3	-0.6
CPUP	Villa Florida	147.42	153	PKPbc	PKPdf	21 29 16.9	-0.4
	comp=Z,0.2nm,0.3s,baz=286,slow=10,SNR=2.9						
LPAZ	La Paz	147.69	126	PKPbc	PKPbc	21 29 21.5	0.0
LPAZ	La Paz	147.69	126	PKPbc	PKPdf	21 29 18.5	-0.2
	comp=Z,3.9nm,0.9s,baz=288,slow=2.5,SNR=8.9						

IDC 24 21:26:00.1±7.5**, 10.°24N**×**125.°73E, h0**^{km}**, mb3.7**/4**, mbtmp3.7**/4**, Error ellipse: s-maj=207.4km s-min=151.8km az=74.0, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	40.87	340	P	P	21 33 43.8	-0.1
	0.4nm,0.4s,baz=139,slow=7.0,SNR=4.0						

	0.4nm,0.4s						
MKAR	Makanchi Array	51.74	323	P	P	21 35 09.2	-0.2
	0.4nm,0.5s,baz=115,slow=8.1,SNR=6.0						
	0.4nm,0.5s						
KURBB	Kurchatov Arra	55.80	326	P	P	21 35 39.0	0.0
	0.3nm,0.5s,baz=127,slow=6.7,SNR=6.5						
	0.3nm,0.5s						
FINES	FINESS Array B	85.67	332	P	P	21 38 40.6	0.0
	1.2nm,0.9s,baz=84,slow=7.9,SNR=4.3						
	1.2nm,0.9s						

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*IDC **24** 21:28:06.1±0.6, 2°.61S×138°.60E, h0km, mb4.2/15, mbtmp4.2/19, ML4.0/4, MS3.5/2, Error ellipse: s-maj=14.4km s-min=13.7km az=58.0*

*NEIC **24** 21:28:08.4±1.6, 2°.60S±0°.09×138°.65E±0°.07, h10km±1km, mb4.5/30, Error ellipse: s-maj=14.9km s-min=11.5km az=156.0*

*DJA **24** 21:28:10.3±0.6, 2°S±5°×13°9E±°, h22km±7km, M4.3/8, mb4.5/4, MLv4.2/8*

ISC 24 21:28:11.0±0.5, **2°.67S**±0°.06×**138°.59E**±0°.05, **h32km, n70**, σ**0s.80**/70, **mb4.4**/31, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.69	10	P	Pb	21 28 19.5	-5.1
GENI	Genyem	1.58	87	P	Pn	21 28 36.5	-0.3
JAY	Jayapura	2.12	86	Pn	Pn	21 28 43.2	-1.0
	19nm,0.3s,baz=238,slow=11,SNR=25						
JAY				Lg	Lg	21 29 11.9	
	15nm,0.3s,baz=44,slow=19,SNR=4.0						
	96nm,0.6s						
JAY	Jayapura	2.12	86	P	Pn	21 28 44.4	+0.1
SRPI	Serui, Papua	2.48	289	P	Pn	21 28 48.7	-0.5
SRPI				S	Sn	21 29 18.7	+0.2
BAKI	Biak	2.88	301	P	Pn	21 28 54.1	-0.7
RKPI	Ransiki, Papua	4.56	285	P	Pn	21 29 17.1	-0.7
FAKI	Fak Fak	6.34	268	Pn	Pn	21 29 42.9	+0.5
FAKI	Fak Fak	6.34	268	P	Pn	21 29 42.8	+0.5
	0.2nm38nm,1.4s						
COEN	Coen	12.09	158	Pn	Pn	21 31 01.0	-0.3
MTN	Manton Dam	12.52	216	Pn	Pn	21 31 07.5	+0.5
KNRA	Kununurra	16.15	216	Pn	Pn	21 31 56.1	+0.3
DAV	Davao City (W)	16.20	307	LR	LR	21 38 41.3	
	comp=Z,87nm,18.9s,baz=130,slow=39						
BATI	Baumata	16.61	243	Pn	Pn	21 32 00.8	-0.8
	2.7nm,0.3s,baz=45,slow=1.2,SNR=4.7						
	13nm,0.7s						
WB0	Warramunga Arr	17.48	193		P	21 32 14.9	+1.4
WR8	Warramunga Arr	17.64	193	Pn	Pn	21 32 13.5	-1.0
WRAB	Tennant Creek	17.65	193	Pn	Pn	21 32 14.0	-0.6
WRAB				IAmb	IAmb	21 32 30.3	
	comp=Z,23nm,1.1s						
WRA	Warramunga Arr	17.66	193		Pn	21 32 13.9	-0.9
WRA	Warramunga Arr	17.66	193	P	Pn	21 32 13.8	-0.9
	comp=Z,0.5nm,0.3s,baz=15,slow=13,SNR=10						
WRA				S	Sn	21 35 30.6	-0.1
	comp=Z,4.2nm,0.9s,baz=10,slow=22,SNR=4.5						
	comp=Z,2.2nm,0.7s						
FITZ	Fitzroy Crossi	19.91	219	P	P	21 32 40.3	+0.2
FITZ	Fitzroy Crossi	19.91	219	P	P	21 32 39.7	-0.4
	comp=Z,0.3nm,0.3s,baz=66,slow=6.9,SNR=5.5						
	comp=Z,4.0nm,1.0s						
AS31	Alice Springs	21.36	192	P	P	21 32 58.3	+2.5
ASAR	Alice Springs	21.36	192	P	P	21 32 55.9	0.0
ASAR	Alice Springs	21.36	192	P	P	21 32 56.0	+0.2
	comp=Z,4.5nm,0.9s,baz=22,slow=9.8,SNR=16						
ASAR				S	S	21 36 50.1	-1.4
	comp=Z,2.7nm,1.1s,baz=12,slow=27,SNR=4.8						
	comp=Z,4.5nm,0.9s						
STKA	Stephens Creek	29.19	175	P	P	21 34 11.1	+1.4
	comp=Z,2.5nm,0.8s,baz=82,slow=1.9,SNR=3.1						
	comp=Z,2.5nm,0.8s						
NWAO	Narrogin (SRO)	36.15	211	LR	LR	21 51 41.1	
	comp=Z,162nm,20.8s,baz=339,slow=39						
KSRS	Korea Array	41.13	347	P	P	21 35 52.5	+0.3
	comp=Z,0.9nm,0.7s,baz=161,slow=8.7,SNR=4.6						
	comp=Z,0.9nm,0.7s						
CMAR	Chiang Mai Arr	44.32	300	P	P	21 36 18.3	-0.1
	comp=Z,1.5nm,0.7s,baz=117,slow=6.7,SNR=16						
	comp=Z,1.5nm,0.7s						
GTA	Gaotai	54.97	324	eP	P	21 37 40.4	+1.0
GTA				pP	pP	21 37 46.3	-3.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SONM	Songino Array	57.63	335	P	P	21 37 58.4	+0.2
SONM	Songino Array	57.63	335	P	P	21 37 58.0	-0.2
	comp=Z,1.0nm,0.7s,baz=142,slow=7.3,SNR=3.7						
	comp=Z,1.0nm,0.7s						
PETK	Petropavlovsk-	57.85	13	P	P	21 37 59.9	+0.4
PETK	Petropavlovsk-	57.85	13	P	P	21 38 00.5	+1.0
	comp=Z,0.9nm,0.8s,baz=221,slow=6.9,SNR=3.4						
	comp=Z,0.9nm,0.8s						
YAK	Yakutsk	64.89	355	P	P	21 38 47.0	+0.1
	comp=Z,15nm,0.7s,baz=135,slow=0.6,SNR=5.3						
	comp=Z,15nm,0.7s						
MKAR	Makanchi Array	69.69	322	P	P	21 39 17.3	-0.4
	comp=Z,2.2nm,0.9s,baz=108,slow=7.9,SNR=15						
	comp=Z,2.2nm,0.9s						
MAKZ	Makanchi	69.88	322	P	P	21 39 18.4	-0.5
MAKZ				IAmb	IAmb	21 39 20.2	
	comp=Z,3.4nm,0.9s						
BOOM	Boomskoye usch	72.04	316	P	P	21 39 31.7	-0.6
BOOM				IAmb	IAmb	21 39 33.1	
	comp=Z,2.6nm,0.7s						
KURBB	Kurchatov Arra	73.63	325	P	P	21 39 40.7	-0.6
	comp=Z,1.3nm,0.9s,baz=117,slow=5.4,SNR=9.8						
	comp=Z,1.3nm,0.9s						
TIXI	Tiksi	74.46	357	P	P	21 39 45.4	-0.3
	comp=Z,0.8nm,0.3s,baz=199,slow=2.9,SNR=3.9						
	comp=Z,0.8nm,0.3s						
VNDA	Vanda	75.83	175	P	P	21 39 53.5	0.0
	comp=Z,1.4nm,0.7s,baz=293,slow=7.1,SNR=5.3						
	comp=Z,1.4nm,0.7s						
K13K	Kusilvak Mount	77.39	24	P	P	21 40 03.8	+1.1
K13K				IAmb	IAmb	21 40 10.3	
	comp=Z,6.4nm,1.2s						
L14K	Kuka Creek	77.91	25	P	P	21 40 06.1	+0.6
L14K				IAmb	IAmb	21 40 07.4	
	comp=Z,5.5nm,0.8s						
K15K	Wolf Creek Mou	78.85	24	P	P	21 40 11.5	+0.8
BVAR	Borovoye Array	79.21	325	P	P	21 40 12.1	-0.9
	comp=Z,1.7nm,0.7s,baz=116,slow=6.8,SNR=9.5						
	comp=Z,1.7nm,0.7s						
M16K	Timber Creek	79.36	26	P	P	21 40 13.5	-0.1
M16K				IAmb	IAmb	21 40 21.6	
	comp=Z,6.8nm,1.1s						
ACHA	Angle Creek He	79.92	29	P	P	21 40 15.9	-0.8
ACHA				IAmb	IAmb	21 40 52.5	
	comp=Z,4.8nm,1.2s						
OHAK	Old Harbor	80.58	31	P	P	21 40 20.5	+0.3
KDAK	Kodiak Island	81.13	30	P	P	21 40 23.0	-0.1
KDAK	Kodiak Island	81.13	30	P	P	21 40 23.1	-0.1
	comp=Z,4.2nm,0.7s,baz=194,slow=8.7,SNR=6.4						
	comp=Z,4.2nm,0.7s						
E18K	Tukpahlearik C	81.64	20	P	P	21 40 25.8	+0.2
E18K				IAmb	IAmb	21 40 27.4	
	comp=Z,2.7nm,0.7s						
C18K	Utukok River	82.03	19	P	P	21 40 27.4	-0.3
C18K				IAmb	IAmb	21 40 32.7	
	comp=Z,3.2nm,1.1s						
K20K	Telida	82.40	25	P	P	21 40 30.1	+0.3
K20K				IAmb	IAmb	21 40 33.6	
	comp=Z,3.8nm,1.1s						
C19K	Lookout Ridge	82.76	19	P	P	21 40 32.3	+0.7
C19K				IAmb	IAmb	21 40 56.0	
	comp=Z,7.5nm,1.4s						
D19K	Kuna River	82.96	19	P	P	21 40 32.2	-0.4
D19K				IAmb	IAmb	21 40 51.4	
	comp=Z,6.2nm,1.4s						
E22K	Anaktuvuk Pass	84.98	21	P	P	21 40 42.8	-0.1
E22K				IAmb	IAmb	21 40 55.9	
	comp=Z,2.4nm,0.9s						
CCB	Clear Creek Bu	85.43	24	P	P	21 40 44.7	-0.5
CCB				IAmb	IAmb	21 40 45.4	
	comp=Z,3.7nm,0.8s						
IL31		85.85	24	P	P	21 40 45.9	-1.3
IL31				IAmb	IAmb	21 40 46.9	
	comp=Z,2.4nm,0.8s						
ILAR	Eielson Array	85.85	24	P	P	21 40 45.7	-1.5
ILAR	Eielson Array	85.85	24	P	P	21 40 45.9	-1.3
	comp=Z,2.1nm,0.7s,baz=265,slow=4.6,SNR=20						
	comp=Z,2.1nm,0.7s						
C23K	Itkillik River	85.96	19	P	P	21 40 47.2	-0.4
J26L	Joseph Creek	87.17	25	P	P	21 40 54.1	+0.2
J26L				IAmb	IAmb	21 40 57.3	
	comp=Z,1.6nm,0.9s						
QSPA	South Pole Qui	87.28	180	P	P	21 40 52.5	-1.9
QSPA	South Pole Qui	87.28	180	P	P	21 40 54.7	+0.3
	comp=Z,4.3nm,0.8s,baz=304,slow=0.5,SNR=16						
	comp=Z,4.3nm,0.8s						
BMAR	Burnt Mountain	87.41	22	P	P	21 40 55.6	+0.7
F26K	Sheenjek River	87.63	22	P	P	21 40 57.0	+1.0
H27K	Steamboat Moun	88.35	24	P	P	21 41 00.5	+1.1
TORD	Torodi Ar. Bea	136.13	286	PKPdf	PKPdf	21 47 29.2	-1.0
PB11	IPOC Station P	144.41	130	PKPdf	PKPab	21 47 43.9	+0.4
CPUP	Villa Florida	147.32	153	PKPbc	PKPbc	21 47 53.1	+0.9
	comp=Z,0.5nm,0.8s,baz=41,slow=2.7,SNR=3.2						
LPAZ	La Paz	147.56	126	PKPbc	PKPbc	21 47 54.4	+0.5
	comp=Z,4.1nm,0.9s,baz=72,slow=0.8,SNR=10						

IDC 24 21:28:54.6±51.0, **15°.36S**×**174°.15W, h0km, mb4.2**/3, **mbtmp4.2**/3, **Error ellipse: s-maj=973.7km s-min=186.7km az=78.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	43.44	240	P	P	21 36 59.4	-0.2
	3.5nm,0.9s,baz=78,slow=9.3,SNR=2.9						
	3.5nm,0.9s						
WRA	Warramunga Arr	49.15	257	P	P	21 37 44.7	0.0
	0.5nm,0.5s,baz=92,slow=7.2,SNR=7.7						
	0.5nm,0.5s						
ASAR	Alice Springs	49.44	252	P	P	21 37 46.8	-0.2
	4.7nm,0.5s,baz=89,slow=7.7,SNR=45						
	4.7nm,0.5s						

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*FUNV **24** 21:30:23.9, 7°.32N×72°.08W, h5km, MW3.1*

*RSNC **24** 21:30:24.9±0.0, 7°N±2°×7°2W±°, h-2km±3km, M2.1, ML1.9*

ISC 24 21:30:22.1±1.3, **7°.24N**±0°.05×**71°.99W**±0°.03, **h6km**±12km, **n15**, σ**1s.40**/27, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	Capacho	0.70	333	eP	Pg	21 30 35.6	0.0
CAPV				eS	Sg	21 30 43.8	-0.9
PAMC	Pamplona, Colo	0.71	278	P	Pg	21 30 35.1	-0.7
PAMC				S	Sg	21 30 43.9	-1.2
TAMC	Tame, Arauca	0.82	166	P	Pn	21 30 40.5	+0.2
TAMC				S	Sn	21 30 52.7	-0.1
BARC	Barichara	1.35	242	P	Pn	21 30 47.3	-0.4
SOCV	Socops	1.53	47	eP	Pg	21 30 52.1	+0.7
SOCV				eS	Sg	21 31 13.5	+2.2
OCAC	Ocana	1.65	307	P	Pb	21 30 52.4	-0.6
OCAC				S	Sg	21 31 14.6	-0.5
RUSC	La Rusia	1.72	219	P	Pb	21 30 54.6	+0.1
RUSC				S	Sb	21 31 17.3	+0.7
BRJC	Barrancabermej	1.76	261	P	Pb	21 30 54.7	-0.1
BRJC				S	Sg	21 31 20.2	+1.5
SDV	Santo Domingo	2.12	39	P	Pg	21 31 02.1	-0.6
SDV				S	Sg	21 31 30.3	+0.1
PTBC	PUERTO BERRIO,	2.54	254	P	Pn	21 31 05.2	+1.2
PTBC				S	Sn	21 31 36.0	+0.7
ZARC	Zaragoza, Cauc	2.85	275	P	Pn	21 31 10.0	+1.8
BAUV	El Baul	4.26	66	eP	Pn	21 31 29.1	+1.5
BAUV				eS	Sn	21 32 17.5	-0.2
MAPV	Macapo	4.34	53	eP	Pn	21 31 30.9	+2.2
MAPV				eS	Sn	21 32 19.4	-0.3
BENV	Beln	5.12	58	eP	Pn	21 31 40.9	+1.4
BENV				eS	Sn	21 32 37.6	-1.4
CACV	CAICARA DEL OR	5.42	86	eP	Pb	21 31 52.2	-5.0
CACV				eS	Sb	21 32 58.3	-4.2

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*IDC **24** 21:30:57.0±1.1, 1°.44S×69°.30E, h0km, mb4.0/10, mbtmp4.0/11, ML4.4/1, Error ellipse: s-maj=36.1km s-min=24.1km az=76.0*

*NEIC **24** 21:31:01.0±2.1, 1°.45S±0°.09×69°.53E±0°.04, h10km±1km, mb4.3/6, Error ellipse: s-maj=14.7km s-min=7.5km az=172.0*

ISC 24 21:30:59.6±0.7, **1°.40S**±0°.08×**69°.4E**±0°.1, **h11km, n28**, σ**0s.86**/28, **mb4.2**/12, **Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAAM	Kaadhehdhoo	4.03	62		Pn	21 31 59.8	-1.5
H08S3	Diego Garcia H	6.89	154	Pn	Pn	21 32 40.9	+0.5
	baz=335,slow=18						
H08S1	Diego Carcia H	6.90	154	Pn	Pn	21 32 40.5	-0.1
	baz=335,slow=18						
H08S2	Diego Garcia H	6.91	154	Pn	Pn	21 32 40.8	+0.2
	baz=335,slow=18						
HMDM	Hanimaadhoo	8.94	25	Pn	Pn	21 33 09.2	+0.4
PALK	Pallekele	14.17	52	Pn	Pn	21 34 21.0	+0.5
PALK	Pallekele	14.17	52	Pn	Pn	21 34 21.7	+1.2
	1.6nm,0.3s,baz=232,slow=12,SNR=11						
PALK				Sn	Sn	21 36 46.4	-11
	1.3nm,0.3s,baz=162,slow=20,SNR=6.1						
	6.1nm,0.5s						
CMAR	Chiang Mai Arr	35.10	54	P	P	21 37 54.0	+0.8
	0.6nm,0.7s,baz=247,slow=10,SNR=6.6						
	0.6nm,0.7s						
LSZ	Lusaka	42.96	249		P	21 38 59.5	+0.2
MKAR	Makanchi Array	49.31	12	PcP	PcP	21 41 11.3	-0.1
	0.7nm,0.7s,baz=224,slow=4.7,SNR=4.7						
AB31	Akbulak array	51.12	352	P	P	21 40 03.8	+1.4
AB31				IAmb	IAmb	21 40 06.6	
	comp=Z,3.9nm,1.3s						
ABKAR	Akbulak array	51.12	352	P	P	21 40 04.5	+2.1
ABKAR				IAmb	IAmb	21 40 06.6	
	comp=Z,3.9nm,1.3s						
KURBB	Kurchatov Arra	52.41	7	P	P	21 40 11.6	-0.3
	comp=Z,0.8nm,0.9s,baz=211,slow=7.5,SNR=4.8						
	comp=Z,0.8nm,0.9s						
ZALV	Zalesovo Beam	56.62	11	P	P	21 40 41.9	-0.7
	comp=Z,1.2nm,0.5s,baz=218,slow=7.8,SNR=5.3						
	comp=Z,1.2nm,0.5s						
SONM	Songino Array	58.65	28	P	P	21 40 57.1	0.0
	comp=Z,0.5nm,0.5s,baz=240,slow=6.0,SNR=3.6						
	comp=Z,0.5nm,0.5s						
WRA	Warramunga Arr	65.98	111	P	P	21 41 45.8	-0.8
	comp=Z,1.1nm,0.7s,baz=308,slow=6.7,SNR=1.9						
	comp=Z,1.1nm,0.7s						
FINES	FINESS Array B	70.86	340	P	P	21 42 15.2	-1.1
	comp=Z,0.6nm,0.7s,baz=52,slow=3.1,SNR=3.5						
	comp=Z,0.6nm,0.7s						
STKA	Stephens Creek	74.14	123	P	P	21 42 36.0	-0.6
STKA	Stephens Creek	74.14	123	P	P	21 42 35.6	-0.9
	comp=Z,1.8nm,0.7s,baz=282,slow=9.8,SNR=3.7						
	comp=Z,1.8nm,0.7s						
ARCES	ARCESS Array B	76.68	345	P	P	21 42 49.2	-1.2
	comp=Z,0.9nm,0.7s,baz=124,slow=6.0,SNR=5.8						
	comp=Z,0.9nm,0.7s						
TIXI	Tiksi	82.07	16	P	P	21 43 19.3	-0.4
TIXI				IAmb	IAmb	21 43 19.9	
	comp=Z,3.4nm,0.7s						
TIXI	Tiksi	82.07	16	P	P	21 43 19.0	-0.7
	comp=Z,2.1nm,0.4s,baz=224,slow=4.2,SNR=10						
	comp=Z,2.1nm,0.4s						
QSPA	South Pole Qui	88.59	180	P	P	21 43 53.1	+0.6
QSPA				IAmb	IAmb	21 43 53.8	
	comp=Z,2.3nm,0.9s						
QSPA	South Pole Qui	88.59	180	P	P	21 43 52.6	+0.1
	comp=Z,1.6nm,0.8s,baz=229,slow=1.6,SNR=7.9						
	comp=Z,1.6nm,0.8s						
PDAR	Pinedale Array	138.81	359	PKPdf	PKPdf	21 50 27.0	+0.3
PDAR	Pinedale Array	138.81	359	PKP	PKPdf	21 50 26.8	0.0
	comp=Z,0.3nm,0.6s,baz=64,slow=3.4,SNR=5.7						
U15A	North Rim	145.11	2		PKPdf	21 50 38.7	+0.5
QSM	Queen of Sheba	145.12	9		PKPdf	21 50 38.5	+0.6

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*IDC **24** 21:36:06.8±0.7, 2°.68S×138°.47E, h0km, mb4.0/10, mbtmp4.0/14, ML4.1/4, MS3.5/5, Error ellipse: s-maj=17.4km s-min=14.7km az=7.0*

*NEIC **24** 21:36:08.8±1.3, 2°.7S±0°.1×138°.51E±0°.07, h10km±1km, mb4.4/19, Error ellipse: s-maj=17.2km s-min=12.1km az=168.0*

*DJA **24** 21:36:09.5±0.3, 3°S±4°×13°9E±°, h10km, M4.2/8, mB5.3/2, mb4.3/5, MLv4.2/8, Mw(mB)4.7/2*

ISC 24 21:36:11.2±0.5, **2°.72S**±0°.07×**138°.56E**±0°.06, **h32km, n54**, σ**1s.16**/51, **mb4.2**/19, **MS3.5**/5, **1D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.74	12	P	Pn	21 36 20.9	-4.6
GENI	Genyem	1.61	86	P	Pn	21 36 38.2	+0.7
JAY	Jayapura	2.15	85	Pn	Pn	21 36 46.4	+1.4
	22nm,0.3s,baz=237,slow=11,SNR=64						
JAY				Lg	Lg	21 37 17.8	
	14nm,0.3s,baz=281,slow=23,SNR=6.3						
	56nm,0.3s						
JAY	Jayapura	2.15	85	P	Pn	21 36 45.0	0.0
SRPI	Serui, Papua	2.47	290	P	Pn	21 36 49.5	+0.3
SRPI				S	Sn	21 37 19.0	+0.7
BAKI	Biak	2.88	302	P	Pn	21 36 56.1	+1.1
RKPI	Ransiki, Papua	4.54	285	P	Pn	21 37 18.3	+0.5
FAKI	Fak Fak	6.30	268	Pn	Pn	21 37 42.4	+0.3
FAKI	Fak Fak	6.30	268	P	Pn	21 37 42.2	+0.1
	0.2nm32nm,1.4s						
SWI	Sorong	7.52	284	P	Pn	21 37 59.4	+0.6
COEN	Coen	12.06	158	Pn	Pn	21 39 02.5	+1.4
SOEI	Soe	15.82	243	P	P	21 39 57.1	+1.6
SOEI				IAmb	IAmb	21 40 03.4	
	comp=Z,41nm,0.9s						
KNRA	Kununurra	16.09	216	Pn	Pn	21 39 54.6	-0.6
KNRA				IAmb	IAmb	21 40 28.4	
	comp=Z,25nm,1.1s						
BATI	Baumata	16.55	243	Pn	Pn	21 40 00.7	-0.5
	comp=Z,3.6nm,0.3s,baz=158,slow=1.9,SNR=5.5						
	comp=Z,5.4nm,0.3s						
WB0	Warramunga Arr	17.42	193	Pn	Pn	21 40 11.0	-1.0
WB0				IAmb	IAmb	21 40 24.3	
	comp=Z,13nm,0.8s						
WR8	Warramunga Arr	17.58	193	Pn	Pn	21 40 11.8	-2.2
WRA	Warramunga Arr	17.61	193		Pn	21 40 12.8	-1.5
WRA	Warramunga Arr	17.61	193	P	Pn	21 40 12.6	-1.7
	comp=Z,0.6nm,0.3s,baz=14,slow=13,SNR=20						
	comp=Z,2.4nm,0.6s						
FITZ	Fitzroy Crossi	19.85	219	P	P	21 40 39.0	-0.7
FITZ	Fitzroy Crossi	19.85	219	P	Pn	21 40 40.3	-1.1
	comp=Z,0.2nm,0.3s,baz=41,slow=11,SNR=1.7						
	comp=Z,2.8nm,0.8s						
AS31	Alice Springs	21.30	192	P	P	21 40 56.0	+0.6
ASAR	Alice Springs	21.30	192	P	P	21 40 55.0	-0.5
	comp=Z,8.8nm,0.8s,baz=20,slow=11,SNR=21						
	comp=Z,8.8nm,0.8s						
JOW	Kunigami	31.01	342	LR	LR	21 52 36.6	
	comp=Z,73nm,21.8s,baz=24,slow=32						
KSRS	Korea Array	41.17	347	P	P	21 43 53.1	+0.3
	comp=Z,1.7nm,0.8s,baz=161,slow=9.3,SNR=7.0						
	comp=Z,1.7nm,0.8s						
CMAR	Chiang Mai Arr	44.31	300	P	P	21 44 19.0	+0.4
	comp=Z,0.8nm,0.7s,baz=115,slow=6.5,SNR=5.9						
	comp=Z,0.8nm,0.7s						
USRK	Ussuriysk Ar.	47.08	354	LR	LR	22 03 30.6	
	comp=Z,58nm,18.1s,baz=220,slow=35						
BNX	BinXian	49.26	350	⇓P	P	21 44 56.5	-0.3
BNX				sP	pP	21 45 01.3	-5.2
BNX				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KLR	Kul'dur	52.08	354	LR	LR	22 06 39.5	
	comp=Z,33nm,18.5s,baz=180,slow=35						
SONM	Songino Array	57.66	335	P	P	21 45 59.2	+0.5
	comp=Z,0.8nm,0.7s,baz=152,slow=6.2,SNR=3.6						
SONM				LR	LR	22 11 21.1	
	comp=Z,48nm,19.1s,baz=172,slow=37						
	comp=Z,0.8nm,0.7s						
MKAR	Makanchi Array	69.70	322	P	P	21 47 19.6	+1.6
MKAR	Makanchi Array	69.70	322	P	P	21 47 18.4	+0.4
	comp=Z,2.0nm,0.8s,baz=111,slow=7.9,SNR=15						
	comp=Z,2.0nm,0.8s						
MAKZ	Makanchi	69.90	322	P	P	21 47 19.1	-0.1
MAKZ				IAmb	IAmb	21 47 21.1	
	comp=Z,2.6nm,0.7s						
ZALV	Zalesovo Beam	71.87	330	P	P	21 47 30.2	-0.7
	comp=Z,0.5nm,0.6s,baz=112,slow=9.5,SNR=2.0						
	comp=Z,0.5nm,0.6s						
KURBB	Kurchatov Arra	73.65	325	P	P	21 47 40.9	-0.7
	comp=Z,0.7nm,0.8s,baz=115,slow=5.0,SNR=5.3						
	comp=Z,0.7nm,0.8s						
TIXI	Tiksi	74.50	357	P	P	21 47 46.2	0.0
TIXI				IAmb	IAmb	21 47 47.3	
	comp=Z,6.5nm,1.5s						
VNDA	Vanda	75.78	175	P	P	21 47 54.3	+0.8
VNDA				IAmb	IAmb	21 48 12.0	
	comp=Z,4.0nm,1.4s						
L14K	Kuka Creek	77.97	25	P	P	21 48 06.8	+0.8
M14K	Bethel	77.99	26	P	P	21 48 06.9	+0.7
BVAR	Borovoye Array	79.23	325	P	P	21 48 12.9	-0.4
	comp=Z,1.1nm,0.5s,baz=103,slow=6.4,SNR=6.1						
	comp=Z,1.1nm,0.5s						
KDAK	Kodiak Island	81.19	30	P	P	21 48 24.1	+0.5
G18K	Tagagawik	81.69	22	P	P	21 48 26.6	+0.4
G18K				IAmb	IAmb	21 48 46.3	
	comp=Z,8.2nm,1.5s						
E19K	Redstone River	82.87	20	P	P	21 48 33.3	+0.9
E19K				IAmb	IAmb	21 48 35.3	
	comp=Z,2.8nm,0.8s						
DHY	Denali Highway	85.25	26	P	P	21 48 45.3	+0.6
DHY				IAmb	IAmb	21 48 47.0	
	comp=Z,2.1nm,0.8s						
ILAR	Eielson Array	85.91	24	P	P	21 48 46.9	-0.8
ILAR	Eielson Array	85.91	24	P	P	21 48 47.1	-0.6
	comp=Z,0.8nm,0.7s,baz=264,slow=4.3,SNR=8.9						
	comp=Z,0.8nm,0.7s						
QSPA	South Pole Qui	87.22	180	P	P	21 48 54.8	+0.5
QSPA	South Pole Qui	87.22	180	P	P	21 48 54.5	+0.2
	comp=Z,2.3nm,0.8s,baz=265,slow=1.0,SNR=11						
	comp=Z,2.3nm,0.8s						
J26L	Joseph Creek	87.23	25	P	P	21 48 55.0	+0.6
J26L				IAmb	IAmb	21 49 22.3	
	comp=Z,2.3nm,1.2s						
BMAR	Burnt Mountain	87.47	22	P	P	21 48 56.7	+1.3
I28M	Miner Creek	88.92	24	P	P	21 49 03.3	+0.9
I28M				IAmb	IAmb	21 49 42.1	
	comp=Z,2.9nm,1.2s						
KIRV	Kirov	91.85	328	LR	LR	22 32 28.0	
	comp=Z,18nm,18.9s,baz=90,slow=37						
PB11	IPOC Station P	144.41	130	PKPdf	PKPdf	21 55 45.4	-0.1
CPUP	Villa Florida	147.29	153	PKPbc	PKPab	21 55 53.8	-0.3
	comp=Z,0.2nm,0.3s,baz=108,slow=4.4,SNR=2.9						
LPAZ	La Paz	147.56	126	PKPbc	PKPab	21 55 55.5	-0.7
	comp=Z,1.2nm,0.8s,baz=200,slow=10.0,SNR=3.5						

IDC 24 21:51:59.9±2.0, **13°.97N**×**93°.16E, h0km, mb3.4**/3, **mbtmp3.3**/4, **ML3.2**/1, **Error ellipse: s-maj=45.6km s-min=27.9km az=72.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.12	50	Pn	Pn	21 53 46.3	+0.8
	0.1nm,0.3s,baz=237,slow=15,SNR=4.9						
CMAR				Sn	Sn	21 55 05.6	-1.6
	0.4nm,0.3s,baz=239,slow=28,SNR=7.6						
	0.6nm,0.5s						
MKAR	Makanchi Array	33.97	347	P	P	21 58 45.5	+0.4
	0.1nm,0.5s,baz=179,slow=8.6,SNR=2.3						
	0.1nm,0.5s						
WRA	Warramunga Arr	52.70	129	P	P	22 01 16.3	-0.4
	0.5nm,0.7s,baz=305,slow=9.7,SNR=4.8						
	0.5nm,0.7s						
ASAR	Alice Springs	54.65	133	P	P	22 01 30.8	-0.1
	0.4nm,0.5s,baz=310,slow=6.7,SNR=4.5						
	0.4nm,0.5s						

DJA 24 21:54:26.1±0.4, **9°S**±4°×**11°6E**±°, **h10km, M3.9**/11, **mb4.2**/3, **MLv3.7**/11, **South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRBI	Singaraja	1.44	346	P	Pb	21 54 53.0	0.0
SRBI				S	Sb	21 55 11.8	+0.4
JAGI	Jajag, Banyuwa	1.72	306	P	Pn	21 54 55.8	-0.3
JAGI				S	Sn	21 55 16.1	-2.1
PLAI	Plampang	2.29	73	P	Pn	21 55 03.5	-0.4
PLAI				S	Sn	21 55 29.9	-2.2
GMJI	Gumukmas	2.42	300	P	Pn	21 55 06.3	+0.6
GMJI				S	Sn	21 55 34.5	-0.8
KMMI	Kalianget	2.89	327	P	Pn	21 55 14.2	+2.0
WBSI	Waikabubak, Su	3.78	93	P	Pn	21 55 23.3	-1.2
PCJI	Pacitan	4.52	286	P	Pn	21 55 33.7	-0.9
BSSI	Bau Bau, Buton	5.91	56	P	Pn	21 55 52.2	-1.6
	92nm,1.5s						
EDFI	Ende, Flores	6.10	84	P	Pn	21 55 56.8	+0.3
	0.1nm11nm,0.8s						

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*IDC **24** 21:57:52.7±1.4, 2°.55S×138°.51E, h0km, mb3.3/3, mbtmp3.3/5, ML3.3/2, Error ellipse: s-maj=28.8km s-min=18.0km az=174.0*

*DJA **24** 21:57:57.1±0.9, 2°S±8°×13°9E±°, h21km±9km, M3.2/6,* *MLv3.2/6*

ISC 24 21:57:56.2±0.9,**2°.56S**±0°.10×**138°.51E**±0°.05,**h32**^{km},**n10,** σ**1**^{s}**49**/11,**mb3.3**/3,**Irian Jaya**

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Code  Station Name       Δ°   AZ°   Phase ID        Time      Res
                                    Op     ISC      h  m  s   ISC
SMPI  Sarmi              0.60  19   P      Pb       21 58 06.8 -1.6
GENI  Genyem             1.65  91   P      Pb       21 58 24.3 -1.8
JAY   Jayapura           2.19  89   Pn     Pn       21 58 30.4  0.0
      3.2nm,0.3s,baz=264,slow=7.6,SNR=11
JAY                                 Lg     Lg       21 59 03.4
      2.3nm,0.3s,baz=290,slow=18,SNR=5.2
      17nm,0.6s
JAY   Jayapura           2.19  89   P      Pn       21 58 30.6 +0.1
SRPI  Serui, Papua       2.37 287   P      Pb       21 58 36.2 -2.1
SRPI                                S      Sb       21 59 06.4 -0.8
BAKI  Biak               2.76 299   P      Pn       21 58 38.8 +0.5
WRA   Warramunga Arr    17.75 193   P      P        22 02 01.6 -0.1
      0.2nm,0.3s,baz=19,slow=12,SNR=6.5
      0.3nm,0.5s
ASAR  Alice Springs     21.45 192   P      P        22 02 42.5 +0.4
      0.6nm,0.7s,baz=19,slow=10,SNR=5.1
      0.6nm,0.7s
MKAR  Makanchi Array    69.55 322   P      P        22 09 04.6 +2.6
      0.1nm,0.4s,baz=107,slow=8.2,SNR=2.2
      0.1nm,0.4s
ILAR  Eielson Array     85.78  24   P      P        22 10 32.3 +0.2
      0.3nm,0.7s,baz=264,slow=6.2,SNR=2.5
      0.3nm,0.7s
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*NEIC **24** 22:05:01.4±2.2,28°.49N±0°.02×98°.18W±0°.02,h6^{km}±4^{km}, Error ellipse: s-maj=2.4km s-min=2.2km az=146.0*

*TXNET **24** 22:05:01.4,28°N±2°×9°8W±°,h6^{km}±3^{km},ML2.9/15,Error ellipse: s-maj=2.5km s-min=1.6km az=158.5,final*

*NEIC **24** 22:05:03.1±1.8,28°.54N±0°.01×98°.18W±0°.02,h5^{km}±2^{km}, mb_Lg2.8/25,ML2.6/12,Error ellipse: s-maj=3.2km s-min=2.5km az=48.0*

ISC 24 22:05:02.1±0.9,**28°.52N**±0°.03×**98°.16W**±0°.02,**h6**^{km}±6^{km}, **n56,**σ**0**^{s}**97**/75,**2C,Southern Texas**

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Code  Station Name       Δ°   AZ°   Phase ID        Time      Res
                                    Op     ISC      h  m  s   ISC
EF76  Three Rivers       0.03 281  ⇑P      Pg       22 05 02.6 -0.6
EF76                                S      Sg       22 05 05.2 +1.2
EF71  Pawnee             0.15  43  ⇑P      Pg       22 05 04.1 -1.2
EF71                                S      Sg       22 05 06.6 -0.7
EF69  Whitsett           0.16 319   P      Pg       22 05 04.3 -1.0
EF69                                S      Sg       22 05 08.9 +1.4
EF74  Calliham           0.24 252   P      Pg       22 05 06.6 -0.3
EF68  Kenedy             0.30  32   P      Pg       22 05 07.8 -0.1
EF68                                S      Sg       22 05 12.5 +0.7
EF52  Campbellton        0.33 354   P      Pg       22 05 08.5  0.0
EF52                                S      Sg       22 05 14.3 +1.4
EF75  Tulsita            0.34  58   P      Pg       22 05 08.7 -0.1
EF51  Christine          0.40 313   P      Pg       22 05 09.7 -0.2
EF51                                S      Sb       22 05 17.9 -0.3
EF03  Hobson             0.46  20   P      Pg       22 05 11.2 +0.2
EF03                                S      Sg       22 05 18.1 +1.1
735A  Kenedy             0.46  42          Pg       22 05 10.4 -0.6
735A                                       Sg       22 05 17.9 +0.9
735A  Kenedy             0.46  42   P      Pg       22 05 10.5 -0.5
735A                                S      Sg       22 05 18.1 +1.0
EF59  Coughran           0.49 333   P      Pg       22 05 11.1 -0.4
EF73  North Karnes       0.52  27   P      Pb       22 05 12.8 -0.9
EF73                                S      Sb       22 05 20.4 -1.1
EF58  Charlotte          0.59 303   P      Pg       22 05 13.3 -0.1
EF58                                S      Sb       22 05 23.6 +0.2
EF72  Nordheim           0.61  55   P      Pb       22 05 14.7 -0.5
EF53  Gillett            0.62  30   S      Sg       22 05 22.7 +0.5
EF61  Poth               0.63  14   P      Pg       22 05 13.9 -0.3
EF61                                S      Sg       22 05 23.3 +0.9
EF01  Eagle Ford 01      0.64 343          Pg       22 05 14.0 -0.4
EF01                                       Sg       22 05 23.6 +0.8
EF01  Eagle Ford 01      0.64 343   P      Pg       22 05 14.0 -0.4
EF01                                S      Sg       22 05 23.6 +0.8
EF05  Yorktown           0.74  50   S      Sb       22 05 28.4 +0.6
EF04  Eagle Ford 04      0.77  25          Pg       22 05 16.2 -0.6
EF04                                       Sg       22 05 27.4 +0.6
EF04  Eagle Ford 04      0.77  25   P      Pg       22 05 16.2 -0.6
EF04                                S      Sg       22 05 27.4 +0.6
EF54  Nixon              0.79  36   P      Pg       22 05 17.3  0.0
EF54                                S      Sb       22 05 30.2 +0.8
EF67  Cuero              0.93  48   P      Pg       22 05 19.6 -0.4
EF67                                S      Sb       22 05 33.8 +0.6
EF62  Nixon              0.94  26   P      Pg       22 05 19.9 -0.3
EF62                                S      Sg       22 05 33.2 +0.7
EF55  Cheapside          0.99  41   P      Pg       22 05 20.7 -0.5
EF55                                S      Sb       22 05 35.4 +0.3
KVTX  Kingsville         0.99 166   Pg     Pb       22 05 20.9 -0.9
KVTX  Kingsville         0.99 166   S      Sn       22 05 38.8 +1.8
833A  Chaparral WMA,     1.10 260   Pg     Pb       22 05 22.8 -0.8
833A                                Sg     Sn       22 05 39.0 -0.6
833A  Chaparral WMA,     1.10 260   P      Pg       22 05 22.2 -1.0
833A                                S      Sn       22 05 39.5 -0.2
EF66  Yoakum             1.23  47   P      Pn       22 05 25.5 -0.4
EF66                                S      Sg       22 05 41.3 -0.5
HNDO  Hondo              1.41 316          Pn       22 05 26.3 -2.0
HNDO  Hondo              1.41 316   P      Pn       22 05 26.3 -2.0
HNDO                                Sg     Sg       22 05 48.4 +1.1
EF64  Waelder            1.43  31   S      Sn       22 05 45.7 -2.1
435B  Jarrell            2.31  12   Pn     Pn       22 05 40.6 -0.3
435B  Jarrell            2.31  12   Pg     Pg       22 05 46.0 -0.5
435B                                Sg     Sb       22 06 14.5 +1.3
DRIO  Del Rio            2.33 293   Pn     Pn       22 05 41.4 +0.3
DRIO                                IAmb_Lg         22 06 20.3
      comp=Z,32nm,1.2s
DRIO  Del Rio            2.33 293   Pg     Pb       22 05 43.1 -1.5
JCT   Junction City      2.42 324   Pn     Pn       22 05 43.4 +1.0
JCT   Junction City      2.42 324   Pg     Pb       22 05 45.2 -1.0
JCT                                 S      Sn       22 06 12.2 -0.3
BRDY  Brady              2.86 345   Pn     Pn       22 05 48.8 +0.5
BRDY                                IAmb_Lg         22 06 40.1
      comp=Z,33nm,0.7s
WHTX  Lake Whitney,      3.52  10   Pn     Pn       22 05 58.3 +0.9
OZNA  Ozona              3.52 314   Pn     Pn       22 05 59.0 +1.5
OZNA                                IAmb_Lg         22 06 55.2
      comp=Z,28nm,1.1s
SAND  Sanderson          3.75 293   Pn     Pn       22 06 01.6 +1.0
SGCY  Sterling City      4.25 324   IAmb_Lg         22 07 23.1
      comp=Z,23nm,0.8s
PLPT  Palo Pinto         4.29 358   Pn     Pn       22 06 09.1 +1.2
PLPT                                IAmb_Lg         22 07 27.5
      comp=Z,24nm,1.2s
ABTX  Abilene, Hawle     4.29 343   Pn     Pn       22 06 09.9 +1.9
FW03  Perrin-Whitt E     4.51   1   IAmb_Lg         22 07 26.3
      comp=Z,15nm,0.7s
TREL  Terrell            4.57  23   IAmb_Lg         22 07 38.1
      comp=Z,16nm,1.0s
Z35A  Perchaven, San     4.86   9   IAmb_Lg         22 07 47.4
      comp=Z,15nm,0.8s
TX31  Lajitas Ar. Si     4.89 281   Pn     Pn       22 06 17.3 +0.9
TXAR  Lajitas Array      4.89 281   Pn     Pn       22 06 16.7 +0.3
SN05  Snyder 5           4.94 332   IAmb_Lg         22 07 51.2
      comp=Z,16nm,0.9s
SN07  Snyder 07          5.13 333   IAmb_Lg         22 07 50.6
      comp=Z,15nm,0.8s
DKNS  Dickens            5.66 336   Pn     Pn       22 06 29.5 +2.7
DKNS                                IAmb_Lg         22 08 02.7
      comp=Z,14nm,0.8s
WMOK  Wichita Mounta     6.23 355   IAmb_Lg         22 08 18.2
      comp=Z,10.0nm,0.9s
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*IDC **24** 22:06:07.6±1.2,7°.68N×77°.23W,h0^{km},mb3.5/2, mbtmp3.8/4,ML3.0/2,MS3.0/3,Error ellipse: s-maj=34.5km s-min=29.5km az=29.0*

*RSNC **24** 22:06:12.5±0.0,7°N±1°×7°7W±°,h21^{km}±2^{km},M3.6,mb4.5, mB5.2,ML3.2,Mw(mB)4.5*

ISC 24 22:06:11.7±1.2,**7°.51N**±0°.03×**76°.99W**±0°.03,**h24**^{km}±11^{km}, **n49,**σ**1**^{s}**96**/73,**Northern Colombia**

```
Code  Station Name       Δ°   AZ°   Phase ID        Time      Res
                                    Op     ISC      h  m  s   ISC
APAC  Apartado, Choc     0.56  47   P      Pb       22 06 22.5 -0.5
APAC                                S      Sb       22 06 31.3 +0.7
PTAC  Punta Ardita,      0.88 246   P      Pn       22 06 28.2 -0.4
PTAC                                S      Sb       22 06 41.2 +1.5
DBBC  Dabeiba            0.92 122   P      Pn       22 06 27.6 -1.6
DBBC                                S      Sn       22 06 40.8 -0.9
SOLC  Bahia Solano       1.34 198   P      Pn       22 06 35.5 +0.6
SOLC                                S      Sb       22 06 54.7 +1.9
UREC  San Jos de Ur      1.47  80   P      Pn       22 06 36.1 -0.6
UREC                                S      Sn       22 06 55.1 -0.1
LCBC  Los crdobas,       1.48  25   P      Pn       22 06 36.9 +0.1
LCBC                                S      Sb       22 06 57.7 +0.9
CBOC  Ciudad Bolivar     1.90 149   P      Pn       22 06 42.0 -0.8
HELC  Santa Helena       1.96 132   P      Pn       22 06 44.3 +0.5
HELC                                S      Sb       22 07 10.9 -0.1
ZARC  Zaragoza, Cauc     2.12  90   P      Pn       22 06 45.2 -0.5
ZARC                                S      Sn       22 07 11.2 -0.1
PLMC  San Jos del P      2.68 165   P      Pn       22 06 51.3 -2.2
PLMC                                S      Sn       22 07 21.6 -3.7
PTBC  PUERTO BERRIO,     2.70 111   P      Pn       22 06 54.4 +0.8
PTBC                                S      Sn       22 07 27.0 +1.4
GUY2C Guyana, Caldas     2.79 144   P      Pn       22 06 56.7 +1.4
NORC  Norcasia           2.86 132   P      Pn       22 06 59.2 +3.3
NORC                                S      Sb       22 07 35.0 -1.8
SJCC  San Jacinto, C     2.97  37   P      Pn       22 06 57.2 -0.3
SJCC                                S      Sn       22 07 29.0 -3.5
BCIP  Isla Barro Col     3.26 301   P      Pn       22 07 01.8 +0.5
BCIP                                S      Sn       22 07 39.7 +0.3
AZU   Azuero             3.26 275   P      Pn       22 07 02.8 +1.4
AZU                                 S      Sn       22 07 38.1 -1.4
BRJC  Barrancabermej     3.27  99   P      Pn       22 07 03.3 +1.8
BRJC                                S      Sn       22 07 39.4 -0.3
ANIL  Santa Ana          3.39 152   P      Pn       22 07 06.2 +2.8
SPBC  San Pablo de B     3.44 122   P      Pb       22 07 09.6 -2.4
MALC  Bahia Malaga       3.49 186   P      Pn       22 07 08.5 +4.0
YOTC  Yotoco, Valle      3.56 170   P      Pn       22 07 03.9 -1.7
YOTC                                S      Sn       22 07 43.2 -3.9
ARGC  Ariguani, Magd     3.58  49   P      Pn       22 07 09.6 +3.8
ARGC                                S      Sn       22 07 44.8 -2.6
OCAC  Ocana              3.71  78   P      Pn       22 07 08.2 +0.5
OCAC                                S      Sn       22 07 50.7 -0.1
ROSC  El Rosal           3.75 135   Pn     Pn       22 07 12.4 +3.9
      14nm,0.3s,baz=170,slow=16,SNR=15
ROSC                                Sn     Sb       22 07 59.5 -3.3
      4.5nm,0.3s,baz=272,slow=18,SNR=5.5
      35nm,0.6s
BARC  Barichara          3.89 103   P      Pn       22 07 11.8 +1.5
BARC                                S      Sn       22 07 56.1 +0.7
ORTC  Ortega, Tolima     3.98 154   P      Pn       22 07 14.3 +3.0
RUSC  La Rusia           4.20 112   P      Pn       22 07 16.4 +1.6
RUSC                                S      Sn       22 08 05.1 +1.7
PAMC  Pamplona, Colo     4.26  92   P      Pn       22 07 16.7 +1.1
PAMC                                S      Sn       22 08 05.5 +0.6
JAMC  Jamundi, Valle     4.28 176   P      Pn       22 07 15.4 -0.2
PRAC  Prado              4.32 151   P      Pn       22 07 20.3 +4.4
SMRC  Santa Marta, M     4.54  37   P      Pn       22 07 21.2 +2.2
SMRC                                S      Sn       22 08 11.8 +0.6
VILC  Villavicencio,     4.71 136   P      Pb       22 07 27.9 -5.7
POPC  Popayan, Colom     4.95 176   P      Pn       22 07 25.4 +0.6
CRJC  Cerrejon, Guaj     5.35  49   P      Pn       22 07 30.4 +0.2
      2µm31nm,0.5s
CRJC                                S      Sn       22 08 28.8 -2.4
      2µm31nm,0.5s
BBAC  Balboa, Cauca      5.46 183   P      Pn       22 07 35.7 +3.9
BBAC                                P      Pn       22 07 36.5 +4.7
BBAC                                P      Pn       22 07 37.2 +5.4
SDV   Santo Domingo      6.44  77   Pn     Pn       22 07 46.6 +1.3
      4.2nm,0.3s,baz=240,slow=8.1,SNR=5.9
SDV                                 Sn     Sn       22 08 57.0 -1.3
      7.5nm,0.3s,baz=54,slow=22,SNR=5.6
SDV                                 LR     LR       22 10 45.3
      comp=Z,89nm,20.5s,baz=265,slow=42
      9.8nm,0.4s
URIC  Uribia, Colomb     6.46  49   P      Pn       22 07 45.6 +0.3
URIC                                S      Sn       22 08 56.4 -1.9
MTDJ  Mount Denham      10.67 357   eP     Pn       22 08 44.2 +1.0
RCC   Rio Carpintero    12.47   6   eP     Pn       22 09 08.6 +0.8
GTBY  Guantanamo Bay    12.48   8   eP     Pn       22 09 09.4 +1.6
QMBU  Quimbuelo         12.79   9   eP     Pn       22 09 12.5 +0.3
PINC  Pinares de May    12.95   5   eP     Pn       22 09 14.7 +0.3
NMDO  Nuevo Mundo       13.12   8   eP     Pn       22 09 17.8 +1.1
SJG   San Juan          14.92  44   LR     LR       22 15 48.3
      comp=Z,33nm,19.4s,baz=154,slow=39
LPAZ  La Paz            25.22 160   P      P        22 11 37.5 +0.9
      0.5nm,0.6s,baz=354,slow=9.2,SNR=1.9
      0.5nm,0.6s
BORG  Borgarnes         69.08  22   LR     LR       22 44 07.1
      comp=Z,24nm,20.1s,baz=209,slow=33
ESDC  Sonseca Array     72.19  51   P      P        22 17 35.0 +0.1
      0.6nm,0.9s,baz=266,slow=5.6,SNR=5.3
      0.6nm,0.9s
ASAR  Alice Springs    146.30 238   PKPbc  PKPdf    22 25 50.1 -0.1
      1.2nm,0.5s,baz=116,slow=3.9,SNR=11
WRA   Warramunga Arr   147.22 245   PKPbc  PKPbc    22 25 52.9 -1.1
      0.4nm,0.3s,baz=104,slow=3.2,SNR=9.8
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*IDC **24** 22:13:16.1±0.7,2°.65S×138°.51E,h0^{km},mb4.0/8, mbtmp4.1/12,ML4.2/4,MS3.5/4,Error ellipse: s-maj=18.8km s-min=14.8km az=179.0*

*NEIC **24** 22:13:18.6±2.0,2°.68S±0°.06×138°.55E±0°.07,h10^{km}±1^{km}, mb4.2/15,Error ellipse: s-maj=13.9km s-min=7.0km az=306.0*

*DJA **24** 22:13:18.2±0.3,3°S±3°×13°9E±°,h10^{km},M4.4/7,mb4.6/7, mB5.2/1,MLv4.3/7,Mw(mB)4.6/1*

ISC 24 22:13:21.1±0.6,**2°.70S**±0°.07×**138°.56E**±0°.05,**h32**^{km},**n47,** σ**0**^{s}**93**/45,**mb4.1**/12,**MS3.4**/3,**Irian Jaya**

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Code  Station Name       Δ°   AZ°   Phase ID        Time      Res
                                    Op     ISC      h  m  s   ISC
SMPI  Sarmi              0.72  12   P      Pn       22 13 30.2 -4.8
GENI  Genyem             1.61  86   P      Pn       22 13 46.9 -0.3
JAY   Jayapura           2.15  85   Pn     Pn       22 13 55.1 +0.4
      37nm,0.3s,baz=242,slow=9.4,SNR=90
JAY                                 Lg     Lg       22 14 25.7
      55nm,0.3s,baz=143,slow=20,SNR=6.5
      186nm,0.6s
JAY   Jayapura           2.15  85   P      Pn       22 13 54.6 -0.1
SRPI  Serui, Papua       2.46 289   P      Pn       22 13 58.1 -0.9
SRPI                                S      Sn       22 14 28.5 +0.5
BAKI  Biak               2.87 301   P      Pn       22 14 05.1 +0.4
RKPI  Ransiki, Papua     4.54 285   P      Pn       22 14 27.4 -0.2
FAKI  Fak Fak            6.31 268   Pn     Pn       22 14 52.1 +0.2
FAKI  Fak Fak            6.31 268   P      Pn       22 14 52.6 +0.7
      0.2nm38nm,1.2s
COEN  Coen              12.08 158   Pn     Pn       22 16 11.5 +0.4
MTN   Manton Dam        12.48 216   Pn     Pn       22 16 16.7 +0.1
KNRA  Kununurra         16.11 216   Pn     Pn       22 17 04.3 -1.0
KNRA                                IAmb   IAmb     22 17 25.7
      comp=Z,21nm,1.1s
BATI  Baumata           16.57 243   Pn     Pn       22 17 11.2  0.0
      comp=Z,4.7nm,0.3s,baz=119,slow=4.2,SNR=5.7
      comp=Z,25nm,0.9s
BATI  Baumata           16.57 243   P      Pn       22 17 11.7 +0.5
WB0   Warramunga Arr    17.45 193   Pn     Pn       22 17 20.6 -1.6
WB0                                 IAmb   IAmb     22 17 30.2
      comp=Z,20nm,0.9s
WR8   Warramunga Arr    17.61 193   Pn     Pn       22 17 22.1 -2.0
WR8                                 IAmb   IAmb     22 17 33.5
      comp=Z,12nm,0.8s
WRA   Warramunga Arr    17.63 193          Pn       22 17 22.5 -1.9
WRA   Warramunga Arr    17.63 193   P      Pn       22 17 23.4 -1.0
      comp=Z,1.0nm,0.3s,baz=14,slow=12,SNR=20
WRA                                 S      Sn       22 20 42.0 +2.0
      comp=Z,2.1nm,0.8s,baz=12,slow=23,SNR=4.7
WRA                                 LR     LR       22 24 59.3
      comp=Z,157nm,20.5s,baz=48,slow=40
      comp=Z,3.9nm,0.4s
TOLI2 Tolitoli          18.17 282   P      P        22 17 31.9 +0.7
TOLI2                               IAmb   IAmb     22 17 34.8
      comp=Z,10nm,0.8s
FITZ  Fitzroy Crossi    19.87 219   P      P        22 17 48.5 -1.2
FITZ  Fitzroy Crossi    19.87 219   P      P        22 17 48.8 -1.0
      comp=Z,0.2nm,0.3s,baz=48,slow=19,SNR=5.6
      comp=Z,4.0nm,0.7s
AS31  Alice Springs     21.33 192   P      P        22 18 04.9 -0.7
ASAR  Alice Springs     21.33 192   P      P        22 18 06.4 +0.8
ASAR  Alice Springs     21.33 192   P      P        22 18 05.0 -0.6
      comp=Z,8.6nm,0.8s,baz=22,slow=10,SNR=46
      comp=Z,8.6nm,0.8s
STKA  Stephens Creek    29.17 175   LR     LR       22 31 04.5
      comp=Z,91nm,20.6s,baz=2.2,slow=37
JOW   Kunigami          30.99 342   LR     LR       22 30 04.9
      comp=Z,49nm,20.6s,baz=180,slow=33
NWAO  Narrogin (SRO)    36.11 211   LR     LR       22 36 24.0
      comp=Z,176nm,20.0s,baz=90,slow=38
CMAR  Chiang Mai Arr    44.30 300   P      P        22 21 28.1 -0.3
      comp=Z,0.7nm,0.3s,baz=120,slow=6.6,SNR=6.0
      comp=Z,0.7nm,0.3s
MKAR  Makanchi Array    69.69 322   P      P        22 24 27.5 -0.2
MKAR  Makanchi Array    69.69 322   P      P        22 24 28.1 +0.4
      comp=Z,0.5nm,0.6s,baz=110,slow=7.0,SNR=6.7
      comp=Z,0.5nm,0.6s
MAKZ  Makanchi          69.89 322   P      P        22 24 29.0  0.0
KURBB Kurchatov Arra    73.63 325   P      P        22 24 50.9 -0.5
      comp=Z,0.7nm,0.8s,baz=112,slow=5.3,SNR=3.3
      comp=Z,0.7nm,0.8s
VNDA  Vanda             75.81 175   P      P        22 25 04.7 +1.2
VNDA                                IAmb   IAmb     22 25 20.0
      comp=Z,4.2nm,1.4s
VNDA  Vanda             75.81 175   P      P        22 25 04.5 +1.0
      comp=Z,0.8nm,0.5s,baz=323,slow=6.5,SNR=5.3
      comp=Z,0.8nm,0.5s
M14K  Bethel            77.97  26   P      P        22 25 16.9 +1.0
BVAR  Borovoye Array    79.22 325   P      P        22 25 22.4 -0.6
      comp=Z,0.9nm,0.5s,baz=139,slow=12,SNR=8.3
      comp=Z,0.9nm,0.5s
K17K  Iditarod          80.41  25   P      P        22 25 30.8 +1.5
K17K                                IAmb   IAmb     22 25 35.5
      comp=Z,4.0nm,1.1s
L18K  Granite Mounta    80.89  25   P      P        22 25 32.5 +0.7
L18K                                IAmb   IAmb     22 25 36.9
      comp=Z,2.7nm,1.0s
G18K  Tagagawik         81.66  22   P      P        22 25 35.6 -0.2
G18K                                IAmb   IAmb     22 26 14.7
      comp=Z,5.0nm,1.4s
D19K  Kuna River        83.00  19   P      P        22 25 43.1 +0.3
D19K                                IAmb   IAmb     22 25 52.7
      comp=Z,1.7nm,0.8s
ABKAR Akbulak array     84.61 320   P      P        22 25 50.8 -0.6
ILAR  Eielson Array     85.88  24   P      P        22 25 55.9 -1.6
      comp=Z,0.7nm,0.8s,baz=272,slow=4.5,SNR=5.9
      comp=Z,0.7nm,0.8s
QSPA  South Pole Qui    87.25 180   P      P        22 26 04.0 -0.3
QSPA  South Pole Qui    87.25 180   P      P        22 26 03.6 -0.7
      comp=Z,2.5nm,0.8s,baz=148,slow=1.1,SNR=11
      comp=Z,2.5nm,0.8s
BMAR  Burnt Mountain    87.44  22   P      P        22 26 06.4 +1.3
PB11  IPOC Station P   144.42 130   PKPdf  PKPab    22 32 54.0 +0.5
LPAZ  La Paz           147.57 126   PKPbc  PKPbc    22 33 04.8 +0.8
      comp=Z,0.5nm,0.4s,baz=206,slow=2.7,SNR=4.8
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*JMA **24** 22:22:21.6±0.1,23°.8N±0°.8×122°.9E±0°.3,h37^{km}±3^{km}, MV2.6/11,NEAR ISHIGAKIJIMA ISLAND*

ISC 24 22:22:23.0±6.6,**23°.81N**±0°.07×**122°.97E**±0°.04,**h37**^{km}±7^{km}, **n15,**σ**1**^{s}**02**/21,**Taiwan region**

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Code  Station Name       Δ°   AZ°   Phase ID        Time      Res
                                    Op     ISC      h  m  s   ISC
JYNG  Yonagunijimaku     0.64 358   P      Pn       22 22 34.8 -0.8
JYNG                                S      Sn       22 22 44.3 -0.2
YOJ   Yonaguni jima      0.65   3   P      Pn       22 22 35.2 -0.6
YOJ   Yonaguni jima      0.65   3   eP     Pn       22 22 35.2 -0.6
YOJ                                 eS     Sn       22 22 44.9 +0.1
HATJ  Hateruma jima      0.80  72   eP     Pn       22 22 37.4 -0.4
HATJ                                eS     Sn       22 22 48.5  0.0
IRIF  Iriomote-Funau     0.87  53   P      Pn       22 22 38.6 -0.1
IRIF                                eS     Sn       22 22 50.2 +0.1
JKRS  Kuro-shima         1.04  66   eP     Pn       22 22 41.2 +0.2
JKRS                                eS     Sn       22 22 55.5 +1.2
JIJ   Ishigaki jima      1.21  63   P      Pn       22 22 43.4 +0.2
JIJ                                 S      Sn       22 22 59.0 +0.6
NACB  Ninganchiao        1.31 286   P      Pn       22 22 46.3 +1.6
JISG  Ishigakijimahi     1.45  58   eP     Pn       22 22 46.7 +0.1
YULB  Yu-li              1.59 255   P      Pn       22 22 47.2 -1.4
YULB  Yu-li              1.59 255   S      Sn       22 23 06.5 -1.4
YHNB  Yeheng             1.69 301   P      Pn       22 22 51.3 +1.3
SSLB  Suanglung          1.85 270   P      Pn       22 22 54.1 +2.0
SSLB  Suanglung          1.85 270   S      Sn       22 23 12.9 -1.3
TPUB  Ta-pu              2.21 257   P      Pn       22 22 57.8 +0.7
```

BER 24 22:23:02.8±1.8,**71°.12N**×**5°.88W,h6**^{km}±14^{km},**ML2.3, Mw3.6,Confirmed Earthquake,Jan Mayen Island region**

```
Code  Station Name       Δ°   AZ°   Phase ID        Time      Res
                                    Op     ISC      h  m  s   ISC
JNE   Jan Mayen East     0.80 261   eP     Pg       22 23 17.3 -0.8
JNE                                 eS     Sg       22 23 28.1 -0.4
JNE                                  IAML           22 23 31.2
      comp=Z,214nm,0.7s
JNW   Jan Mayen West     0.84 265   eP     Pg       22 23 17.8 -1.0
JNW                                 eS     Sg       22 23 29.0 -0.7
JNW                                  IAML           22 23 32.3
      comp=Z,111nm,0.5s
JMIC  Jan Mayen          0.87 262   eP     Pg       22 23 18.2 -1.2
JMIC                                eS     Sg       22 23 29.6 -1.0
JMIC                                 IAML           22 23 31.8
      comp=Z,82nm,0.4s
JMI   Jan Mayen          0.95 259   eP     Pg       22 23 19.6 -1.5
JMI                                 eS     Sg       22 23 32.5 -0.9
JMI                                  IAML           22 23 36.2
      comp=Z,122nm,0.3s
HSPB  Hornsund (broa     8.27  35   eP     Pn       22 25 01.1 -1.9
KBS   Kingsbay           9.03  22   eP     Pn       22 25 11.9 -1.5
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*HEL **24** 22:29:42.3±0.2,59°.79N×27°.46E,h0^{km},ML2.2,Explosion*

*EST **24** 22:29:42.7±0.1,59°.80N×27°.39E,h0^{km},ML2.0(HEL), Explosion*

*BER **24** 22:29:44.8±1.2,59°.73N×27°.48E,h0^{km},ML2.2(HEL), Suspected explosion*

*IDC **24** 22:29:45.0±1.2,59°.92N×27°.25E,h0^{km},mbtmp2.9/4, ML2.6/4,Error ellipse: s-maj=15.1km s-min=8.1km az=88.0*

*UPP **24** 22:29:53.2±2.7,60°.12N×25°.82E,h0^{km},ML2.0*

ISC 24 22:29:41.0±0.8,**59°.80N**±0°.02×**27°.30E**±0°.03,**h0**^{km},**n51,** σ**1**^{s}**80**/63,**Baltic States-Belarus-Northwestern Russia**

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Code  Station Name       Δ°   AZ°   Phase ID        Time      Res
                                    Op     ISC      h  m  s   ISC
EE04  Vaivara Sinima     0.51 145   eP     Pg       22 29 51.6 +0.7
EE04                                eS     Sg       22 29 57.9 +0.4
VJF   Virojoki           0.76  10   eP     Pg       22 29 55.9 +0.4
VJF                                 eS     Sg       22 30 06.1 +0.8
VJF                                  MSG            22 30 06.7
      comp=Z,46nm,0.1s
PVF   Pernaja            1.04 317   eP     Pg       22 30 01.8 +0.8
PVF                                  MSG            22 30 15.8
      comp=Z,18nm,0.2s
PVF                                 eS     Sg       22 30 15.9 +1.5
EE03  Tooma soojaam,     1.06 210   eP     Pb       22 30 02.5 +0.3
EE03                                eS     Sg       22 30 16.1 +0.9
HEL1  Helsinki           1.27 289   eP     Pg       22 30 06.2 +0.8
HEL1                                eS     Sg       22 30 22.9 +1.0
VSU   Vasula             1.37 193   eP     Pg       22 30 07.0 -0.2
VSU   Vasula             1.37 193   eP     Pg       22 30 06.8 -0.4
VSU                                 eS     Sg       22 30 25.1 +0.2
NUR   Nurmijarvi         1.51 300   eP     Pn       22 30 10.1 +0.9
NUR                                  MSG            22 30 29.6
      comp=Z,13nm,0.2s
NUR                                 eS     Sn       22 30 30.0 +0.5
MEF   Metsahovi          1.52 287   eP     Pb       22 30 10.5 +0.5
MEF   Metsahovi          1.52 287   eP     Pb       22 30 10.5 +0.5
MEF                                  MSG            22 30 29.8
      comp=Z,15nm,0.2s
EE08  Sarghaua, Vand     1.56 224   eP     Pg       22 30 11.3 +0.5
EE08                                eS     Sg       22 30 31.6 +0.7
FIA0  FINESS Array S     1.76 341   eP     Pn       22 30 13.4 +0.7
FIA0                                 MSG            22 30 35.5
      comp=Z,17nm,0.2s
FIA1  FINESS Array S     1.76 341   eP     Pn       22 30 13.5 +0.7
FIA1                                eS     Sb       22 30 37.6 +0.8
FIA1                                 MSG            22 30 40.0
      comp=Z,9.0nm,0.1s
FINES FINESS Array B     1.76 341   Pg     Pn       22 30 13.4 +0.7
      comp=Z,1.1nm,0.3s,baz=157,slow=18,SNR=132
FINES                               Lg     Lg       22 30 37.0
      comp=Z,0.5nm,0.3s,baz=152,slow=18,SNR=7.3
RUF   Ruokolahti         1.83  26   eP     Pn       22 30 13.6 -0.1
RUF                                 eS     Sn       22 30 37.8 +0.3
RUF                                  MSG            22 30 39.1
      comp=Z,9.9nm,0.2s
EE07  Piusa Caves, O     1.96 177   eP     Pb       22 30 17.7 +0.1
EE07                                eSG    Sg       22 30 43.9  0.0
TVF   Tvarminne          2.05 273   eP     Pb       22 30 19.1 +0.1
TVF                                 eS     Sb       22 30 45.9 +1.0
TVF                                  MSG            22 30 48.5
      comp=Z,8.0nm,0.2s
MTSE  Matsula            2.09 240   eP     Pb       22 30 19.9 +0.1
MTSE  Matsula            2.09 240   eP     Pb       22 30 19.8  0.0
MTSE                                eSB    Sb       22 30 47.0 +0.7
```

KAF	Kangasniemi	2.38	349	*e*P	Pn	22 30 23.0	+1.8
KAF				MSG		22 30 52.9	
	comp=Z,6.0nm,0.2s						
KEF	Keuruu	2.66	335	*e*P	Pn	22 30 27.4	+2.3
KEF	Keuruu	2.66	335	MSG		22 31 02.2	
	comp=Z,6.7nm,0.2s						
SUF	Sumiainen	2.99	350	MSG		22 31 10.5	
	comp=Z,3.6nm,0.2s						
RAF	Rauma	3.01	297	*e*P	Pn	22 30 32.5	+2.6
RAF	Rauma	3.01	297	MSG		22 31 16.9	
	comp=Z,5.1nm,0.2s						
KPF	Kankaanpaa	3.28	311	MSG		22 31 32.0	
	comp=Z,3.5nm,0.2s						
SLIT	Slitere, Latvi	3.40	232	*e*P	Pn	22 30 39.1	+3.9
AAL	Aland	3.69	279	P	Pn	22 30 41.0	+1.8
NRTU	Norrtaelje	4.39	272	P	Pn	22 30 50.8	+2.0
NRTU				S	Sn	22 31 34.5	-6.1
GRAU	Graesoe	4.42	281	P	Pn	22 30 50.3	+1.0
GRAU				S	Sn	22 31 33.3	-8.1
FORU	Forsmark	4.61	281	P	Pn	22 30 52.5	+0.7
FLYU	Flymyra	4.74	278	P	Pn	22 30 54.7	+1.0
GOTU	Gotland	5.01	249	P	Pn	22 31 01.7	+4.3
FIBU	Brunna	5.02	276	P	Pn	22 30 58.7	+1.2
IGGU	Iggoen	5.08	287	P	Pn	22 30 59.0	+0.8
OSTU	Oestervaala	5.12	279	P	Pn	22 31 00.1	+1.2
BACU	Backbrunna	5.14	275	P	Pn	22 31 00.7	+1.5
VIKU	Vikbolandet	5.61	261	P	Pn	22 31 07.7	+2.1
FALU	Falun	5.77	282	P	Pn	22 31 08.9	+1.1
HFS	Hagfors	6.84	279	Pn	Pn	22 31 23.1	+0.6
	comp=Z,0.2nm,0.3s,baz=84,slow=14,SNR=9.9						
HFS				Sn	Sn	22 32 38.2	-2.8
	comp=Z,0.2nm,0.3s,baz=87,slow=26,SNR=2.1						
HFS				Lg	Lg	22 33 10.0	
	comp=Z,0.4nm,0.3s,baz=75,slow=29,SNR=6.2						
	comp=Z,0.3nm,0.2s						
NC602	NORSAR Array S	7.89	284	*e*P	Pn	22 31 38.8	+1.9
NOA	NORSAR Array B	8.06	286	Pn	Pn	22 31 39.0	-0.2
	baz=97,slow=12,SNR=11						
	comp=Z,0.1nm,0.3s						
LEIR	Leirfjorden	9.03	321	*e*P	Pn	22 31 53.6	+1.2
AKASG	Malin Array Be	9.18	172	Pn	Pn	22 31 55.2	+0.6
	comp=Z,0.6nm,0.3s,baz=350,slow=13,SNR=4.1						
	comp=Z,0.2nm,0.3s						
KONS	Konsvik	9.27	322	*e*P	Pn	22 31 56.3	+0.5
VAGH	Vaagaholmen	9.38	324	*e*P	Pn	22 31 57.5	+0.3
STEI	Steigen	9.72	332	*e*P	Pn	22 32 02.8	+0.9
ARA0	ARCESS Array S	9.81	356	*e*P	Pn	22 32 02.5	-0.6
ARCES	ARCESS Array B	9.81	356	Pn	Pn	22 32 02.4	-0.8
	comp=Z,0.1nm,0.3s,baz=169,slow=15,SNR=17						
ARCES				Sn	Sn	22 33 46.4	-7.4
	baz=176,slow=24,SNR=1.7						
	comp=Z,0.6nm,0.6s						
TRO	Tromso	10.49	344	*e*P	Pn	22 32 14.3	+1.9
HYA	Hoyanger	10.50	287	*e*P	Pn	22 32 12.3	-0.2

OTT 24 22:33:57.5±0.4**,76°.77N×117°.68W,h18^{km},ML3.5**/4**, 74km northeast from Mould Bay, Nt Sverdrup Seismic Zone.,Queen Elizabeth Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
A36M	Sachs Harbour	5.22	207	PN	Pn	22 35 13.0	-1.4
A36M				SN	Sn	22 36 10.5	-3.5
A36M				Trac		22 36 12.6	
	comp=Z,10nm,0.2s						
RES	Resolute Bay	5.98	99	PN	Pn	22 35 25.1	+0.2
RES				SN	Sn	22 36 28.9	-3.9
RES				Trac		22 36 58.2	
	comp=Z,17nm,0.8s						
EUNU	Eureka	7.01	48	PN	Pn	22 35 39.0	-0.1
EUNU				SN	Sn	22 36 52.8	-5.5
EUNU				Trac		22 37 02.2	
	comp=Z,28nm,1.6s						
KUKN	Kugluktuk,NWT	9.03	174	PN	Pn	22 36 06.4	-0.3
KUKN				SN	Sn	22 37 41.1	-6.5
KUKN				Trac		22 38 00.1	
	comp=Z,2.0nm,0.2s						

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*TEH **24** 22:35:32.5,27°.01N×53°.91E,h12^{km}±41^{km}*

*OMAN **24** 22:35:42.1±0.7,26°.58N×54°.23E,h10^{km},ml2.6/14,Error ellipse: s-maj=7.4km s-min=4.4km az=12.0*

ISC 24 22:35:36.1±1.0**,27°.05N**±0°.04×**54°.07E**±0°.04**,h19^{km},n32,** σ**1ˢ.77**/42**,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAR1	LAR	0.67	23	Pg	Pb	22 35 48.3	-1.0
LMD1	Lamerd	0.86	290	Pg	Pb	22 35 47.6	-4.9
JHRM	Jahrom	1.52	343	Pg	Pn	22 36 02.6	+0.3
QIR1	Qir	1.69	328	Pg	Pn	22 36 04.5	-0.2
BNDS	Bandar-Abbas	1.90	79	Pn	Pn	22 36 09.8	+2.1
GENO	Geno	1.90	79	Pn	Pn	22 36 10.1	+2.4
SHME	Shamm	2.10	118	P	Pn	22 36 11.7	+1.4
SHME				S	Sb	22 36 38.3	-1.0
NAZ	Nazwa, Dubai	2.50	145	P	Pn	22 36 17.6	+1.9
	SNR=6.2						
MASF	Masafi	2.51	131	P	Pn	22 36 18.4	+2.5
MDH	Madha	2.65	131	P	Pn	22 36 18.7	+0.9
ASUD	Al Ashush, Dub	2.66	155	S	Sn	22 36 46.9	-2.9
UOSS	Minazif	2.84	137	P	Pn	22 36 21.9	+1.4
HATD	Hatta, Dubai	2.89	140	P	Pn	22 36 22.7	+1.7
ASHO	Ashiyiah	2.96	142	P	Pn	22 36 24.0	+1.9
	SNR=24						
SHMA	Al-Shehemyia	3.03	248	P	Pb	22 36 31.4	+2.0
SHMA				S	Sb	22 37 08.1	+2.1
ALNE	Al Ain	3.34	153	P	Pn	22 36 28.5	+1.2
ALNE				S	Sn	22 37 04.4	-2.2
NGRK	Negar Kerman	3.49	42	Pn	Pn	22 36 31.6	+1.9
SOHO	SOHO	3.65	142	P	Pn	22 36 32.8	+1.2
KRBR	Kerman	3.76	38	Pn	Pn	22 36 34.4	+1.0
MZR	Muzera	4.06	188	P	Pn	22 36 36.9	-0.3
MZR				S	Sn	22 37 20.2	-4.1
ARQ	Araqi	4.31	149	P	Pn	22 36 42.0	+1.3
	SNR=10						
ARQ				S	Sn	22 37 28.2	-2.2
IMEH	Mehriz	4.35	6	Pn	Pn	22 36 42.6	+1.2
KBAM	BAM	4.39	61	Pn	Pn	22 36 44.3	+2.4
UMZA	Um Al Zommool	4.43	167	P	Pn	22 36 43.3	+1.0
UMZA				S	Sn	22 37 31.2	-2.1
HOQ	Hoqain	4.53	139	P	Pn	22 36 45.6	+1.9
	SNR=7.9						
HOQ				S	Sn	22 37 35.6	-0.2
IRAM	Ramesheh	4.97	343	Pn	Pn	22 36 49.6	-0.3
BSY	Bisya	5.14	146	P	Pn	22 36 53.3	+1.3
BSY				S	Sn	22 37 49.0	-1.9
SMDO	Samad	5.36	137	P	Pn	22 36 56.6	+1.4
	SNR=7.1						
SMDO				S	Sn	22 37 55.8	-0.7
WSAR	Wadi Sarin	5.61	132	P	Pn	22 36 59.6	+1.2
WSAR				S	Sn	22 38 00.3	-2.1
JMDO	Jabal Madar	5.92	141	P	Pn	22 37 03.6	+0.7
JLN	Jalan Bani Buh	6.88	134	P	Pn	22 37 14.9	-1.1
MHTO	MHTO	7.00	149	P	Pn	22 37 18.5	+0.8
MHTO				S	Sn	22 38 35.0	-1.8

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*BJI **24** 22:39:40.0,2°.97S×138°.84E,h10^{km},mB4.9/13,mb4.9/65, Ms4.3/19,Ms7 4.2/22*

*MOS **24** 22:39:42.6±0.7,2°.67S×138°.51E,h9^{km},mb5.0/39, MS4.0/5,Error ellipse: s-maj=10.5km s-min=5.5km az=111.3*

*IDC **24** 22:39:43.0±0.5,2°.71S×138°.54E,h0^{km},mb4.5/16, mbtmp4.6/20,ML4.5/3,MS3.9/38,Error ellipse: s-maj=13.8km s-min=11.9km az=72.0*

*NEIC **24** 22:39:45.2±1.4,2°.64S±0°.08×138°.59E±0°.06,h10^{km}±1^{km}, mb5.0/209,Error ellipse: s-maj=14.2km s-min=10.3km az=180.0*

*DJA **24** 22:39:47.0±0.6,3°S±3°×13°9E±°,h13^{km}±4^{km},M4.9/20, mb5.0/20,mB5.3/12,MLv5.0/11,Mw(mB)4.8/12, MwMwp4.5/2,Mwp4.9/2*

*GCMT **24** 22:39:48.2±0.3,2°.65S±0°.02×138°.52E±0°.03,h21^{km}, MW4.9/80,Moment Tensor Solution. s40,c47; s80,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.70±.16; $M_{\theta\theta}$-2.54±.10; $M_{\phi\phi}$-0.15±.11; $M_{r\theta}$0.09±.15; $M_{\theta\phi}$0.62±.06; $M_{\phi r}$-0.60±.20; Best double couple: $M_0$2.76100×10^{16} NP1:ϕ_s273.00000°,δ44.00000°,λ74.00000°. NP2: ϕ_s115.00000°,δ48.00000°,λ105.00000°. Principal axes: T 2.8200, Plg79.0000°, Azm92.0000°; N -0.1140, Plg11.0000°, Azm285.0000°; P -2.7030, Plg2.0000°, Azm194.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 22:39:44.6±0.3**,2°.72S**±0°.04×**138°.57E**±0°.04**,h10^{km},n626,** σ**1ˢ.07**/574**,mb5.0**/161**,MS4.0**/51**,16C-4D,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.73	11	P	Pg	22 39 58.0	-0.9
GENI	Genyem	1.60	86	P	Pb	22 40 14.1	-0.2
GENI	Genyem	1.60	86	P	Pb	22 40 14.6	+0.3
JAY	Jayapura	2.14	85	Pn	Pn	22 40 20.4	-0.1
	42nm,0.3s,baz=242,slow=8.7,SNR=114						
JAY				Lg	Lg	22 40 52.9	
	51nm,0.3s,baz=350,slow=18,SNR=4.8						
	257nm,0.4s						
JAY	Jayapura	2.14	85	P	Pn	22 40 22.2	+1.7
JAY				S	Sb	22 40 49.8	-0.4
SRPI	Serui, Papua	2.48	290	P	Pn	22 40 26.6	+1.5
SRPI				S	Sn	22 40 55.8	+0.4
BAKI	Biak	2.89	302	P	Pn	22 40 32.8	+2.0
BAKI				S	Sn	22 41 05.6	-0.1
RKPI	Ransiki, Papua	4.55	285	P	Pn	22 40 55.3	+1.7
KMPI	Kaimana, Papua	4.95	259	P	Pn	22 41 02.7	+3.6
FAKI	Fak Fak	6.32	268	Pn	Pn	22 41 20.3	+2.3
FAKI	Fak Fak	6.32	268	P	Pn	22 41 20.4	+2.5
FAKI	Fak Fak	6.32	268	P	Pn	22 41 19.9	+2.0
	0.4nm2µm92nm,0.8s						
SWI	Sorong	7.54	284	P	Pn	22 41 37.6	+2.9
	0.4nm1µm83nm,0.5s						
MANU	Manus Island	8.81	86	Pn	Pn	22 41 57.4	+5.1
PMG	Port Moresby	10.82	128	Pn	Pn	22 42 28.2	+8.5
PMG	Port Moresby	10.82	128	P	Pn	22 42 28.2	+8.5
KDU	Kakadu	11.60	211	P	Pn	22 42 31.5	+1.1
COEN	Coen	12.06	158		Pn	22 42 38.0	+1.2
COEN	Coen	12.06	158	P	Pn	22 42 38.3	+1.6
DRS	Darwin Rock St	12.28	218	P	Pn	22 42 41.6	+1.9
MTN	Manton Dam	12.47	216	Pn	Pn	22 42 42.8	+0.6
MTN	Manton Dam	12.47	216	P	Pn	22 42 44.3	+2.0
SOEI	Soe	15.84	243	P	P	22 43 32.9	+1.1
SOEI				IAmb	IAmb	22 43 36.2	
	comp=Z,86nm,0.8s						
SOEI	Soe	15.84	243	P	P	22 43 31.5	-0.3
SOEI	Soe	15.84	243	P	P	22 43 32.9	+1.1
LUWI	Luwuk	15.88	276	P	P	22 43 32.8	+0.6
LUWI	Luwuk	15.88	276	P	Pn	22 43 30.4	+2.0
	comp=Z,2µmcomp=Z,98nm,0.9s						
KNRA	Kununurra	16.10	216	Pn	Pn	22 43 32.1	+0.9
KNRA				IAmb	IAmb	22 43 40.3	
	comp=Z,72nm,0.8s						
MTSU	Mount Surprise	16.32	160	P	Pn	22 43 35.6	+1.4
BATI	Baumata	16.57	243	Pn	Pn	22 43 37.5	+0.3
	comp=Z,87nm,1.1s,baz=160,slow=1.7,SNR=12						
BATI	Baumata	16.57	243	P	P	22 43 42.0	+2.2
MRSI	Marisa	16.93	281	P	P	22 43 44.9	+1.1
GUMO	Guam	17.36	21	LR	LR	22 50 05.8	
	comp=Z,256nm,19.9s,baz=208,slow=36						
WB0	Warramunga Arr	17.43	193		Pn	22 43 49.2	+1.1
WB0				IAmb	IAmb	22 43 58.2	
	comp=Z,120nm,1.1s						
WR8	Warramunga Arr	17.59	193	Pn	Pn	22 43 48.7	-1.4
WR8				IAmb	IAmb	22 44 00.1	
	comp=Z,81nm,0.8s						
WRAB	Tennant Creek	17.60	193		Pn	22 43 51.0	+0.8
WRAB				IAmb	IAmb	22 44 01.8	
	comp=Z,103nm,0.8s						
WRAB	Tennant Creek	17.60	193	P	Pn	22 43 51.0	+0.8
WRAB				pmax	pmax		
	comp=Z,103nm,0.9s						
WRA	Warramunga Arr	17.61	193		Pn	22 43 49.1	-1.3
WRA	Warramunga Arr	17.61	193	P	Pn	22 43 48.7	-1.7
	comp=Z,2.2nm,0.3s,baz=17,slow=13,SNR=37						
WRA				S	Sn	22 46 59.5	-7.2
	comp=Z,20nm,0.9s,baz=10.0,slow=22,SNR=4.8						
WRA				LR	LR	22 51 00.3	
	comp=Z,854nm,20.9s,baz=354,slow=38						
	comp=Z,9.0nm,0.6s						
WRA	Warramunga Arr	17.61	193	P	Pn	22 43 49.1	-1.3
WRA				pmax	pmax		
	comp=Z,13nm,1.1s						
QIS	Mount Isa	17.76	177	P	Pn	22 43 52.0	-0.2
TOLI2	Tolitoli	18.19	282		Pn	22 43 57.5	0.0
TOLI2	Tolitoli	18.19	282	P	P	22 44 02.2	+4.5
BSSI	Bau Bau, Buton	18.34	259	P	Pn	22 43 59.5	+0.1
	comp=Z,108nm,1.9s						
PCI	Palu	18.81	275	P	Pn	22 44 08.0	+2.9
	comp=Z,2µmcomp=Z,120nm,1.1s						
CTAO	Charters Tower	18.82	157	P	Pn	22 44 06.3	+1.1
CTAO	Charters Tower	18.82	157	P	Pn	22 44 06.3	+1.1
CTAO				pmax	pmax		
	comp=Z,34nm,1.2s						
MPSI	Mapaga	18.91	279	P	P	22 44 05.0	-0.7
	comp=Z,793nmcomp=Z,32nm,0.9s						
FITZ	Fitzroy Crossi	19.86	219	P	P	22 44 15.7	-0.4
FITZ	Fitzroy Crossi	19.86	219	P	P	22 44 15.2	-0.9
	comp=Z,1.2nm,0.3s,baz=40,slow=7.2,SNR=13						
FITZ				S	S	22 47 53.4	-6.4
	comp=Z,26nm,0.7s,baz=166,slow=12,SNR=6.4						
	comp=Z,16nm,1.1s						
AS01	Alice Springs	21.30	192	P	P	22 44 32.3	+0.6
AS31	Alice Springs	21.31	192	P	P	22 44 31.7	-0.1
ASAR	Alice Springs	21.31	192		P	22 44 31.5	-0.3
ASAR	Alice Springs	21.31	192	P	P	22 44 31.6	-0.1
	comp=Z,32nm,0.7s,baz=18,slow=9.2,SNR=82						
ASAR				S	S	22 48 24.1	-4.5
	comp=Z,10nm,0.8s,baz=17,slow=24,SNR=6.9						
	comp=Z,32nm,0.7s						
MYLDM	Lahad Datu	21.53	291	P	P	22 44 35.3	+1.1
MYLDM				IAmb	IAmb	22 44 42.5	
	comp=Z,55nm,1.1s						
PLAI	Plampang	21.55	253	P	P	22 44 38.1	+3.6
TATA	Tatamba Isabel	21.86	106	P	P	22 44 38.6	+0.8
HNR	Honiara	22.27	108	P	P	22 44 44.0	+1.9
HNR	Honiara	22.27	108	P	P	22 44 44.0	+1.9
HNR				pmax	pmax		
	comp=Z,154nm,1.1s						
KKM	Kota Kinabalu	23.96	291		P	22 44 59.0	-0.6
KKM				IAmb	IAmb	22 45 18.7	
	comp=Z,90nm,1.6s						
TGY	Tagaytay City	24.18	314	P	P	22 45 01.8	+0.3
	comp=Z,226nm,0.4s,baz=225,slow=3.4,SNR=8.5						
JAGI	Jajag, Banyuwa	24.96	256	P	P	22 45 08.0	-0.5
JAGI				IAmb	IAmb	22 45 18.1	
	comp=Z,48nm,1.2s						
EIDS	Eidsvold	25.54	153	P	P	22 45 15.7	+2.0
EIDS				IAmb	IAmb	22 45 34.3	
	comp=Z,26nm,1.0s						
MBWA	Marble Bar	25.93	224	P	P	22 45 16.5	-0.8
MBWA				IAmb	IAmb	22 45 26.8	
	comp=Z,33nm,1.1s						
MBWA	Marble Bar	25.93	224	P	P	22 45 19.2	+1.9
PSA00	Pilbara Seismi	26.14	223	P	P	22 45 19.1	-0.1
PSA00				IAmb	IAmb	22 45 28.6	
	comp=Z,25nm,0.8s						
PSA00	Pilbara Seismi	26.14	223	P	P	22 45 21.7	+2.5
STKA	Stephens Creek	29.14	175	P	P	22 45 46.7	+0.7
STKA	Stephens Creek	29.14	175	P	P	22 45 46.7	+0.7
	comp=Z,1.3nm,0.4s,baz=3.9,slow=8.8,SNR=4.5						
STKA				LR	LR	22 58 32.3	
	comp=Z,610nm,19.0s,baz=352,slow=39						
	comp=Z,1.3nm,0.4s						
JOW	Kunigami	31.01	342	P	P	22 46 03.1	+0.5
JOW	Kunigami	31.01	342	LR	LR	22 56 12.0	
	comp=Z,331nm,20.5s,baz=170,slow=32						
TPUB	Ta-pu	31.22	327	P	P	22 46 05.3	+0.9
TPUB				IAmb	IAmb	22 46 24.1	
	comp=Z,25nm,1.0s						
NACB	Ninganchiao	31.42	329	P	P	22 46 04.1	-2.1
SSLB	Suanglung	31.44	328	IAmb	IAmb	22 46 08.5	
	comp=Z,26nm,1.1s						
DZM	Mont Dzumac	33.21	128	*e*S	S	22 51 41.4	-0.9
	comp=Z,137nm,26.9s						
DZM				*e*LR	LR	22 55 10.0	
	comp=Z,623nm,24.5s						
MORW	Morawa	33.85	217	P	P	22 46 27.0	-0.5
MORW				IAmb	IAmb	22 46 36.3	
	comp=Z,35nm,1.4s						
MORW	Morawa	33.85	217	P	P	22 46 28.3	+0.8
BLDU	Ballidu	34.61	214	P	P	22 46 36.9	+2.9
KLBR	Kellerberrin	34.78	212	P	P	22 46 36.0	+0.5
QIZ	Qiongzhong	35.57	309	P	P	22 46 42.0	-0.5
QIZ				IAmb	IAmb	22 46 42.9	
	comp=Z,22nm,0.9s						
QIZ	Qiongzhong	35.57	309	P	P	22 46 42.4	-0.1
QIZ				S	S	22 52 18.6	0.0
QIZ				LR	LR		
	comp=Z,200nm,16.4s						
QIZ				LR	LR		
	comp=Z,260nm,15.6s						
NWAO	Narrogin (SRO)	36.10	211	LR	LR	23 02 42.3	
	comp=Z,1µm,19.0s,baz=353,slow=38						
JNU	Nakatsue	36.38	349	P	P	22 46 49.0	-0.3
JNU				IAmb	IAmb	22 46 50.1	
	comp=Z,29nm,1.0s						
JNU	Nakatsue	36.38	349	LR	LR	23 01 20.7	
	comp=Z,318nm,18.3s,baz=161,slow=36						
JMN	Monobe	36.52	353	P	P	22 46 50.1	-0.3
JMN				IAmb	IAmb	22 46 52.2	
	comp=Z,30nm,1.2s						
KULM	Kulim	38.71	282	P	P	22 47 09.2	0.0
KULM				IAmb	IAmb	22 47 44.5	
	comp=Z,69nm,1.8s						
MJAR	Matsushiro Arr	39.06	360	P	P	22 47 10.2	-1.6
	comp=Z,0.6nm,0.4s,baz=186,slow=8.6,SNR=2.0						
MJAR				LR	LR	23 01 15.0	
	comp=Z,139nm,19.9s,baz=162,slow=33						
	comp=Z,0.6nm,0.4s						
NJ2	Nanjing	39.32	333	⇑P	P	22 47 14.8	+0.7
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
CNSH	ChangSha	39.39	323	P	P	22 47 15.9	+1.2
CNSH				pmax	pmax		
	comp=Z,36nm,1.0s						
RPSI	Rantau Prapat	40.00	277	P	P	22 47 18.8	-1.2
RPSI				IAmb	IAmb	22 47 24.7	
	comp=Z,28nm,1.1s						
PSI	Prapat	40.01	278	P	P	22 47 18.8	-1.5
PSI				pmax	pmax		
	comp=Z,28nm,1.1s						
TJN	Taejon	40.27	346	P	P	22 47 20.9	-1.0
TJN				IAmb	IAmb	22 47 26.5	
	comp=Z,51nm,1.0s						
TJN	Taejon	40.27	346	P	P	22 47 20.9	-1.0
TJN				pmax	pmax		
	comp=Z,51nm,1.0s						
WHN	Wuhan	40.35	327	P	P	22 47 24.3	+1.6
WHN				pmax	pmax		
	comp=Z,52nm,0.7s						
KSAR	Wonju Array Be	41.17	347	P	P	22 47 28.4	-0.9
KSAR	Wonju Array Be	41.17	347	P	P	22 47 28.4	-0.9
KSRS	Korea Array	41.17	347	P	P	22 47 29.0	-0.3
	comp=Z,4.5nm,0.8s,baz=160,slow=9.2,SNR=21						
	comp=Z,4.5nm,0.8s						
MSVF	Nonsavu	41.49	114	LR	LR	23 05 01.6	
	comp=Z,170nm,18.9s,baz=281,slow=37						
SLVN	Son La	41.50	307	P	P	22 47 32.1	-0.3
GYA	Guiyang	42.33	315	⇓P	P	22 47 40.1	+0.9
GYA				pmax	pmax		
	comp=Z,23nm,0.8s						
GYA				LR	LR		
	comp=Z,310nm,20.6s						
ENH	Enshi	42.98	322	P	P	22 47 43.9	-0.4
ENH				IAmb	IAmb	22 47 45.4	
	comp=Z,24nm,0.9s						
TIA	Tai'an	43.60	335	P	P	22 47 48.9	-0.3
TIA				pmax	pmax		
	comp=Z,19nm,0.7s						
CM31	Chiang Mai Arr	44.32	300	P	P	22 47 55.3	0.0
CM31				IAmb	IAmb	22 48 05.0	
	comp=Z,50nm,1.8s						
CMAR	Chiang Mai Arr	44.32	300	P	P	22 47 54.2	-1.0
CMAR	Chiang Mai Arr	44.32	300	P	P	22 47 55.5	+0.2
	comp=Z,2.3nm,0.3s,baz=120,slow=6.5,SNR=17						
CMAR				LR	LR	23 08 00.3	
	comp=Z,82nm,18.3s,baz=120,slow=38						
	comp=Z,2.3nm,0.3s						
KMI	Kunming	44.42	311	P	P	22 47 56.8	+0.6
KMI				pmax	pmax		
	comp=Z,17nm,1.1s						
KMI				LR	LR		
	comp=Z,140nm,18.4s						
KMI				LR	LR		
	comp=Z,160nm,18.2s						
KMI				LR	LR		
	comp=Z,180nm,19.1s						
LYN	LuoYang	44.45	329	⇓P	P	22 47 56.6	+0.5
LYN				pmax	pmax		
	comp=Z,47nm,1.1s						
LYN				LR	LR		
	comp=Z,140nm,15.1s						
LYN				LR	LR		
	comp=Z,120nm,13.4s						
LYN				LR	LR		
	comp=Z,140nm,16.5s						
CHTO	Chiang Mai	44.47	300	P	P	22 47 55.4	-1.0
CHTO	Chiang Mai	44.47	300	P	P	22 47 55.4	-1.0
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HNS	HongShan	45.65	333	⇑P	P	22 48 05.9	+0.4
HNS				S	S	22 54 47.8	-0.6
HNS				LR	LR		
	comp=Z,210nm,18.3s						
HNS				LR	LR		
	comp=Z,140nm,21.2s						
HNS				LR	LR		
	comp=Z,270nm,20.5s						
PZH	PanZhiHua	45.93	312	P	P	22 48 08.0	-0.1
XAN	Xi'an	46.00	325	⇑P	P	22 48 08.3	-0.1
XAN				pP	sP	22 48 13.3	+0.4
XAN				pmax	pmax		
	comp=Z,44nm,1.0s						
VLA	Vladivostok	46.02	353	*i* P	P	22 48 08.1	-0.2
ASAJ	Asahikawa	46.76	4	LR	LR	23 05 44.6	
	comp=Z,93nm,21.8s,baz=176,slow=33						
ASAJ	Asahikawa	46.76	4	P	P	22 48 13.9	-0.3
ASAJ				pmax	pmax		
	comp=Z,28nm,1.4s						
JKA	Kamikawa-asahi	46.76	4	P	P	22 48 13.9	-0.2
JKA				IAmb	IAmb	22 48 16.0	
	comp=Z,28nm,1.4s						
USA0B	Ussuriysk Arra	47.08	354	P	P	22 48 16.7	+0.1
USA0B				IAmb	IAmb	22 48 18.2	
	comp=Z,14nm,1.3s						
USA0B	Ussuriysk Arra	47.08	354	P	P	22 48 16.7	+0.1
USA0B				pmax	pmax		
	comp=Z,14nm,1.3s						
USRK	Ussuriysk Ar.	47.08	354	P	P	22 48 17.2	+0.6
	comp=Z,2.6nm,0.7s,baz=179,slow=7.6,SNR=12						
USRK				LR	LR	23 06 11.9	
	comp=Z,138nm,18.8s,baz=177,slow=34						
	comp=Z,2.6nm,0.7s						
CD2	Chengdu	47.09	318	*e*P	P	22 48 17.0	-0.1
BJT	Baijiatuau	47.23	337	P	P	22 48 17.5	-0.4
BJT	Baijiatuau	47.23	337	P	P	22 48 17.5	-0.4
BJT				pmax	pmax		
	comp=Z,39nm,1.6s						
BJI	Beijing	47.25	337	P	P	22 48 17.8	-0.2
BJI				S	S	22 55 06.6	-4.6
BJI				pmax	pmax		
	comp=Z,7.0nm,1.4s						
BJI				LR	LR		
	comp=Z,66nm,18.0s						
BJI				LR	LR		
	comp=Z,55nm,15.5s						
BJI				LR	LR		
	comp=Z,96nm,16.1s						
CN2	Changchun	47.79	347	*e*P	P	22 48 26.5	+4.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MDJ	Mudanjiang	47.80	351	P	P	22 48 22.2	-0.1
MDJ	Mudanjiang	47.80	351	P	P	22 48 22.6	+0.3
MDJ				pmax	pmax		
	comp=Z,11nm,1.1s						
RAO	Raoul Island	49.01	127	LR	LR	23 07 30.9	
	comp=Z,126nm,21.4s,baz=94,slow=34						
TKNZ	Takaka Hill	49.13	146	P	P	22 48 35.7	+3.1
BNX	BinXian	49.26	350	⇑P	P	22 48 33.3	-0.1
BNX				pP	pP	22 48 36.5	-0.2
BNX				S	S	22 55 39.9	+0.4
BNX				pmax	pmax		
	comp=Z,25nm,0.9s						
BNX				LR	LR		
	comp=Z,130nm,18.6s						
BNX				LR	LR		
	comp=Z,120nm,20.8s						
BNX				LR	LR		
	comp=Z,210nm,15.5s						
YSS	Yuzhno-Sakhali	49.60	4	*e*P	P	22 48 35.5	-0.5
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						

YSS				MLR	MLR		
	comp=Z,100nm,18.0s						
HHC	**Hu-ho-hao-te**	**49.88**	**333**	⇓*i*P	**P**	**22 48 39.0**	**+0.6**
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
URZ	**Urewera**	**49.90**	**140**	LR	LR	23 10 47.7	
	comp=Z,242nm,18.6s,baz=312,slow=37						
TUWZ	**Tuamarina**	**49.94**	**145**	P	**P**	**22 48 41.2**	**+2.4**
RPZ	**Rata Peaks**	**49.95**	**149**	LR	LR	23 09 15.4	
	comp=Z,278nm,18.8s,baz=342,slow=36						
TCW	**Tory Channel**	**49.99**	**145**	P	**P**	**22 48 41.5**	**+2.3**
LZH	**Lanzhou**	**50.40**	**323**	*e*P	**P**	**22 48 43.8**	**+1.2**
LZH				pP	sP	22 48 49.3	+2.2
LZH				pmax	pmax		
	comp=Z,59nm,1.1s						
LZH				LR	LR		
	comp=Z,190nm,16.5s						
LZH				LR	LR		
	comp=Z,200nm,16.8s						
LZH				LR	LR		
	comp=Z,220nm,17.5s						
XLT	**XiLinHaoTe**	**50.61**	**339**	*e*P	**P**	**22 48 42.8**	**-1.1**
XLT				PcP	**PcP**	**22 49 57.6**	**-3.9**
XLT				pmax	pmax		
	comp=Z,10.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,90nm,4.6s						
KLR	**Kul'dur**	**52.08**	**354**	LR	LR	23 09 28.4	
	comp=Z,150nm,18.5s,baz=209,slow=34						
KLR	**Kul'dur**	**52.08**	**354**	*ce*P	**P**	**22 48 54.7**	**0.0**
KLR				pmax	pmax		
	comp=Z,24nm,1.7s						
HEH	**HeiHe**	**53.63**	**351**	*e*P	**P**	**22 49 05.8**	**-0.3**
HEH				pmax	pmax		
	comp=Z,17nm,1.2s						
HEH				LR	LR		
	comp=Z,140nm,18.5s						
HEH				LR	LR		
	comp=Z,97nm,18.5s						
HEH				LR	LR		
	comp=Z,180nm,17.7s						
HIA	**Hailar**	**54.29**	**345**	P	**P**	**22 49 11.5**	**+0.5**
HIA				IAmb	IAmb	22 49 16.4	
	comp=Z,29nm,1.4s						
HIA	**Hailar**	**54.29**	**345**	P	**P**	**22 49 11.5**	**+0.5**
HIA				pmax	pmax		
	comp=Z,29nm,1.4s						
GTA	**Gaotai**	**54.99**	**324**	*e*P	**P**	**22 49 17.4**	**+0.9**
GTA				pP	sP	22 49 22.8	+1.8
GTA				pmax	pmax		
	comp=Z,17nm,1.0s						
LSA	**Lhasa**	**55.61**	**309**	P	**P**	**22 49 21.5**	**0.0**
LSA				IAmb	IAmb	22 49 44.5	
	comp=Z,30nm,1.7s						
LSA	**Lhasa**	**55.61**	**309**	P	**P**	**22 49 21.5**	**0.0**
LSA				pmax	pmax		
	comp=Z,30nm,1.7s						
ZEA	**Zeya**	**57.05**	**352**	*e*P	**P**	**22 49 30.4**	**-0.3**
ZEA				*e*		22 57 43.6	
ZEA				pmax	pmax		
	comp=N,10.0nm,1.5s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.5s						
ULN	**Ulaanbaatar**	**57.41**	**335**	P	**P**	**22 49 33.6**	**-0.1**
ULN	**Ulaanbaatar**	**57.41**	**335**	*ce*P	**P**	**22 49 33.6**	**-0.1**
ULN				pmax	pmax		
	comp=Z,21nm,1.7s						
SONM	**Songino Array**	**57.67**	**335**	P	**P**	**22 49 35.3**	**-0.1**
SONM	**Songino Array**	**57.67**	**335**	P	**P**	**22 49 36.0**	**+0.6**
	comp=Z,4.1nm,0.8s,baz=154,slow=7.8,SNR=21						
SONM				LR	LR	23 13 20.9	
	comp=Z,248nm,20.8s,baz=141,slow=35						
	comp=Z,4.1nm,0.8s						
SONM	**Songino Array**	**57.67**	**335**	P	**P**	**22 49 36.0**	**+0.6**
PEA0B	**Petropavlovsk-**	**57.90**	**13**	P	**P**	**22 49 36.8**	**0.0**
PEA0B	**Petropavlovsk-**	**57.90**	**13**	P	**P**	**22 49 36.8**	**0.0**
PEA0B				pmax	pmax		
	comp=Z,47nm,1.8s						
PETK	**Petropavlovsk-**	**57.90**	**13**	P	**P**	**22 49 36.4**	**-0.4**
PETK	**Petropavlovsk-**	**57.90**	**13**	P	**P**	**22 49 37.3**	**+0.5**
	comp=Z,4.7nm,0.8s,baz=174,slow=6.0,SNR=11						
PETK				LR	LR	23 10 42.2	
	comp=Z,95nm,21.2s,baz=191,slow=32						
	comp=Z,4.7nm,0.8s						
PET	**Petropavlovsk**	**58.05**	**14**	*e*P	P	22 49 45.1	+7.3
PET				*e*S	**S**	**22 57 45.0**	**+6.5**
PET				MLR	MLR		
	comp=Z,100nm,16.0s						
EVN	**Everest**	**58.33**	**305**	P	**P**	**22 49 39.7**	**-1.3**
EVN				IAmb	IAmb	22 49 49.9	
	comp=Z,31nm,1.7s						
ZAK	**Zakamensk**	**60.94**	**335**	*e*P	**P**	**22 49 57.9**	**0.0**
ZAK				pmax	pmax		
	comp=Z,14nm,1.4s						
HYB	**Hyderabad**	**62.45**	**291**	*e*P	**P**	**22 50 08.4**	**-0.3**
RAR	**Rarotonga**	**62.65**	**112**	LR	LR	23 15 36.9	
	comp=Z,55nm,19.8s,baz=98,slow=34						
MA2	**Magadan**	**62.85**	**7**	LR	LR	23 15 35.6	
	comp=Z,26nm,21.7s,baz=154,slow=34						
MA2	**Magadan**	**62.85**	**7**	*ce*P	**P**	**22 50 10.6**	**+0.1**
MA2				pmax	pmax		
	comp=Z,13nm,1.0s						
MA2	**Magadan**	**62.85**	**7**	P	**P**	**22 50 10.7**	**+0.2**
	comp=Z,25nm,1.0s						
YAK	**Yakutsk**	**64.93**	**355**	P	**P**	**22 50 23.9**	**-0.1**
YAK	**Yakutsk**	**64.93**	**355**	LR	LR	23 17 02.3	
	comp=Z,119nm,19.3s,baz=162,slow=34						
YAK	**Yakutsk**	**64.93**	**355**	*e*P	**P**	**22 50 24.0**	**-0.1**
YAK				*e**PP	**pP**	**22 50 27.0**	**-0.4**
YAK				*e*		22 50 57.2	
YAK				*e*		22 52 47.6	
YAK				*e*S	**S**	**22 59 05.3**	**-0.2**
YAK				*e*		23 00 18.7	
YAK				*e*SS	**SS**	**23 03 18.5**	**+1.1**
YAK				pmax	pmax		
	comp=Z,70nm,0.9s						
YAK				pmax	pmax		
	comp=N,17nm,1.0s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,170nm,5.4s						
YAK				pmax	pmax		
	comp=E,24nm,2.8s						
YAK				pmax	pmax		
	comp=N,19nm,2.3s						
YAK				smax	smax		
	comp=E,83nm,3.1s						
YAK				smax	smax		
	comp=N,21nm,2.0s						
WMQ	**Urumqi**	**64.93**	**322**	*e*P	**P**	**22 50 26.3**	**+1.7**
SEY	**Seymchan**	**66.31**	**7**	LR	LR	23 18 06.0	
	comp=N,39nm,20.5s,baz=210,slow=35						
SEY	**Seymchan**	**66.31**	**7**	*ce*P	**P**	**22 50 33.4**	**+0.4**
SEY				pmax	pmax		
	comp=Z,28nm,1.7s						
ZSN	**Zaisan**	**68.49**	**324**	*e*P	**P**	**22 50 47.4**	**+0.2**
ZSN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ZSN	**Zaisan**	**68.49**	**324**	*e*P	**P**	**22 50 47.5**	**+0.2**
	comp=Z,7.1nm,0.7s						
MK31	**Makanchi Array**	**69.71**	**322**	*ce*P	**P**	**22 50 55.1**	**+0.3**
MKAR	**Makanchi Array**	**69.71**	**322**	P	**P**	**22 50 54.5**	**-0.3**
MKAR	**Makanchi Array**	**69.71**	**322**	P	**P**	**22 50 54.6**	**-0.2**
	comp=Z,4.4nm,0.7s,baz=108,slow=7.6,SNR=33						
MKAR				LR	LR	23 23 21.2	
	comp=Z,79nm,19.4s,baz=75,slow=38						
	comp=Z,4.4nm,0.7s						
MAKZ	**Makanchi**	**69.91**	**322**	P	**P**	**22 50 55.5**	**-0.5**
MAKZ				IAmb	IAmb	22 51 05.4	
	comp=Z,12nm,1.0s						
MAKZ	**Makanchi**	**69.91**	**322**	P	**P**	**22 50 55.5**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,12nm,1.0s						
SHLS	**Shalkode**	**69.93**	**318**	*e*P	**P**	**22 50 54.6**	**-1.8**
SHLS	**Shalkode**	**69.93**	**318**	*e*P	**P**	**22 50 54.7**	**-1.7**
UZB	**Uzynbulak**	**70.22**	**318**	*e*P	**P**	**22 50 58.1**	**-0.1**
UZB	**Uzynbulak**	**70.22**	**318**	*e*P	**P**	**22 50 58.1**	**-0.1**
PRZ	**Przheval'sk**	**70.38**	**317**	P	**P**	**22 50 59.1**	**-0.1**
PRZ	**Przheval'sk**	**70.38**	**317**	P	**P**	**22 50 59.1**	**-0.1**
PRZ				pmax	pmax		
	comp=Z,34nm,1.5s						
KPKS	**Kokpek**	**70.57**	**318**	*e*P	**P**	**22 51 00.1**	**-0.1**
KPKS	**Kokpek**	**70.57**	**318**	*e*P	**P**	**22 51 00.2**	**-0.1**
SATY	**Saty**	**70.60**	**318**	*e*P	**P**	**22 51 00.4**	**0.0**
SATY	**Saty**	**70.60**	**318**	*e*P	**P**	**22 51 00.5**	**0.0**
KSH	**Kashi**	**70.99**	**313**	P	**P**	**22 51 04.1**	**+1.2**
KSH				sP	sP	22 51 12.3	+4.8
KSH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KDJ	**Kajisay**	**71.08**	**316**	P	**P**	**22 51 02.8**	**-0.7**
KDJ	**Kajisay**	**71.08**	**316**	P	**P**	**22 51 02.8**	**-0.7**
KDJ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TDK	**Taldyqorghan**	**71.38**	**320**	*e*P	**P**	**22 51 05.0**	**0.0**
TDK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
TDK	**Taldyqorghan**	**71.38**	**320**	*e*P	**P**	**22 51 05.0**	**0.0**
	comp=Z,4.0nm,0.5s						
NRN	**Naryn**	**71.64**	**315**	IAmb	IAmb	22 51 20.6	
	comp=Z,16nm,1.6s						
AAA	**Alma-Ata**	**71.66**	**317**	*e*P	**P**	**22 51 06.9**	**0.0**
AAA				pmax	pmax		
	comp=Z,5.0nm,0.5s						
AAA	**Alma-Ata**	**71.66**	**317**	*e*P	**P**	**22 51 06.9**	**0.0**
	comp=Z,5.2nm,0.5s						
ZALV	**Zalesovo Beam**	**71.87**	**330**	P	**P**	**22 51 06.5**	**-1.3**
	comp=Z,3.1nm,0.6s,baz=106,slow=3.6,SNR=11						
ZALV				LR	LR	23 21 29.7	
	comp=Z,52nm,21.9s,baz=100,slow=35						
	comp=Z,3.1nm,0.6s						
ZALV	**Zalesovo Beam**	**71.87**	**330**	*i* P	**P**	**22 51 07.3**	**-0.5**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.6s						
PPT	**Papeete**	**71.89**	**107**	LR	LR	23 19 40.3	
	comp=Z,53nm,20.6s,baz=272,slow=33						
PPT2	**Papeete2**	**71.89**	**108**	*e*P	**P**	**22 51 06.5**	**-2.2**
	comp=Z,39nm,24.2s						
PPT2	**Papeete2**	**71.89**	**108**	*e*LR	LR	23 13 03.6	
	comp=Z,78nm,22.2s						
PPT2				*e*LR	LR	23 13 05.7	
	comp=Z,154nm,30.2s						
KUU	**Kurty**	**72.31**	**318**	*e*P	**P**	**22 51 10.8**	**+0.2**
KUU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KUU	**Kurty**	**72.31**	**318**	*e*P	**P**	**22 51 10.8**	**+0.2**
	comp=Z,6.4nm,1.0s						
TBI	**Tubuai**	**72.38**	**114**	*e*LR	LR	23 13 15.8	
	comp=Z,532nm,26.5s						
UNV	**Unalaska Valle**	**72.41**	**31**	P	**P**	**22 51 11.9**	**+0.9**
	baz=239						
P08K	**Saint George I**	**72.44**	**27**	P	**P**	**22 51 12.0**	**+1.0**
	baz=236						
SPIA	**Saint Paul Isl**	**72.45**	**26**	P	**P**	**22 51 11.8**	**+0.6**
	baz=235						
AAK	**Ala-Archa**	**73.11**	**316**	P	**P**	**22 51 15.5**	**-0.2**
AAK	**Ala-Archa**	**73.11**	**316**	LR	LR	23 28 16.8	
	comp=Z,47nm,18.1s,baz=130,slow=40						
AAK	**Ala-Archa**	**73.11**	**316**	P	**P**	**22 51 15.5**	**-0.2**
AAK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
BILL	**Bilibino**	**73.20**	**11**	P	**P**	**22 51 14.4**	**-1.0**
BILL	**Bilibino**	**73.20**	**11**	*ce*P	**P**	**22 51 15.1**	**-0.3**
BILL				pmax	pmax		
	comp=Z,16nm,1.7s						
KURK	**Kurchatov**	**73.64**	**325**	P	**P**	**22 51 17.1**	**-1.2**
KURK	**Kurchatov**	**73.64**	**325**	P	**P**	**22 51 18.1**	**-0.3**
KURBB	**Kurchatov Arra**	**73.65**	**325**	P	**P**	**22 51 18.1**	**-0.3**
	comp=Z,4.5nm,0.8s,baz=114,slow=5.6,SNR=20						
	comp=Z,4.5nm,0.8s						
BTLS	**Baital**	**74.25**	**318**	*e*P	**P**	**22 51 21.8**	**-0.3**
BTLS	**Baital**	**74.25**	**318**	*e*P	**P**	**22 51 21.9**	**-0.3**
TIXI	**Tiksi**	**74.50**	**357**	P	**P**	**22 51 21.1**	**-1.8**
TIXI	**Tiksi**	**74.50**	**357**	LR	LR	23 23 56.6	
	comp=Z,105nm,18.3s,baz=194,slow=36						
TIXI	**Tiksi**	**74.50**	**357**	*ce*P	**P**	**22 51 22.4**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,19nm,1.7s						
DZA	**Taraz**	**75.40**	**316**	*e*P	**P**	**22 51 28.6**	**-0.2**
DZA	**Taraz**	**75.40**	**316**	*e*P	**P**	**22 51 28.7**	**-0.2**
S12K	**Black Hills**	**75.56**	**30**	P	**P**	**22 51 29.3**	**-0.1**
	baz=243						
VNDA	**Vanda**	**75.78**	**175**	P	**P**	**22 51 30.6**	**+0.3**
VNDA	**Vanda**	**75.78**	**175**	P	**P**	**22 51 30.3**	**-0.1**
	comp=Z,4.6nm,0.9s,baz=323,slow=5.9,SNR=14						
VNDA				LR	LR	23 24 42.2	
	comp=Z,174nm,18.8s,baz=360,slow=36						
	comp=Z,4.6nm,0.9s						
VNDA	**Vanda**	**75.78**	**175**	P	**P**	**22 51 30.6**	**+0.3**
VNDA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GAMB	**Gambell**	**75.84**	**20**	P	**P**	**22 51 31.3**	**+0.6**
	baz=232						
SIMJ	**Simiganj**	**75.89**	**311**	P	**P**	**22 51 29.9**	**-1.9**
SIMJ				IAmb	IAmb	22 51 45.0	
	comp=Z,10nm,0.9s						
KK31	**Karatay Array**	**76.04**	**316**	P	**P**	**22 51 31.3**	**-1.1**
KK31				IAmb	IAmb	22 51 45.7	
	comp=Z,15nm,1.4s						
KK31	**Karatay Array**	**76.04**	**316**	P	**P**	**22 51 31.3**	**-1.1**
KK31				pmax	pmax		
	comp=Z,15nm,1.5s						
KKAR	**Karatay Array**	**76.04**	**316**	P	**P**	**22 51 31.1**	**-1.3**
KKAR	**Karatay Array**	**76.04**	**316**	IAmb	IAmb	22 51 45.7	
	comp=Z,16nm,1.4s						
KKAR	**Karatay Array**	**76.04**	**316**	P	**P**	**22 51 31.1**	**-1.3**
IUG	**Iuzhnay**	**76.10**	**315**	*e*P	**P**	**22 51 32.9**	**0.0**
IUG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
IUG	**Iuzhnay**	**76.10**	**315**	*e*P	**P**	**22 51 33.0**	**0.0**
	comp=Z,5.2nm,1.0s						
SDPT	**Sand Point**	**76.21**	**31**	P	**P**	**22 51 33.0**	**-0.1**
	baz=244						
CHM	**Chimkent**	**76.45**	**315**	*e*P	**P**	**22 51 34.9**	**+0.1**
CHM				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CHM	**Chimkent**	**76.45**	**315**	*e*P	**P**	**22 51 35.0**	**+0.1**
	comp=Z,7.4nm,0.9s						
BRZS	**Berezniki**	**76.86**	**323**	*e*P	**P**	**22 51 37.0**	**+0.1**
BRZS	**Berezniki**	**76.86**	**323**	*e*P	**P**	**22 51 37.0**	**+0.1**
S14K	**Fog Glacier**	**77.09**	**30**	P	**P**	**22 51 38.1**	**-0.1**
	baz=245						
M13K	**Dall Lake**	**77.22**	**26**	P	**P**	**22 51 38.9**	**+0.2**
	baz=240						
K13K	**Kusilvak Mount**	**77.44**	**24**	P	**P**	**22 51 40.0**	**+0.1**
	baz=239						
O14K	**Tigyukauivet M**	**77.59**	**27**	P	**P**	**22 51 41.3**	**+0.5**
	baz=243						
N14K	**Kuskokwak Cree**	**77.71**	**26**	P	**P**	**22 51 41.9**	**+0.5**
N14K				IAmb	IAmb	22 51 44.2	
	comp=Z,19nm,1.0s						
N14K	**Kuskokwak Cree**	**77.71**	**26**	P	**P**	**22 51 41.8**	**+0.3**
	baz=242						
L14K	**Kuka Creek**	**77.96**	**25**	P	**P**	**22 51 43.0**	**+0.2**
L14K	**Kuka Creek**	**77.96**	**25**	P	**P**	**22 51 43.4**	**+0.6**
	baz=241						
M14K	**Bethel**	**77.98**	**26**	P	**P**	**22 51 43.4**	**+0.4**
	baz=242						
TNA	**Tin City**	**78.21**	**20**	P	**P**	**22 51 44.9**	**+0.8**
	baz=235						
O15K	**Ungalikthiuk R**	**78.22**	**28**	P	**P**	**22 51 45.2**	**+0.9**
O15K				IAmb	IAmb	22 51 47.7	
	comp=Z,26nm,1.4s						
O15K	**Ungalikthiuk R**	**78.22**	**28**	P	**P**	**22 51 44.8**	**+0.5**
	baz=244						
J14K	**Nanvaranak Lak**	**78.30**	**23**	P	**P**	**22 51 45.6**	**+0.9**
	baz=240						
M15K	**Kasigluk River**	**78.51**	**26**	P	**P**	**22 51 46.6**	**+0.8**
	baz=243,SNR=6.2						
N15K	**Kwethluk River**	**78.53**	**27**	IAmb	IAmb	22 51 55.5	
	comp=Z,17nm,1.1s						
N15K	**Kwethluk River**	**78.53**	**27**	P	**P**	**22 51 47.1**	**+1.0**
	baz=244,SNR=6.3						
L15K	**Ungalak Mounta**	**78.63**	**25**	P	**P**	**22 51 47.1**	**+0.6**
	baz=242						
F14K	**Arctic Creek**	**78.71**	**20**	P	**P**	**22 51 47.5**	**+0.6**
	baz=237						
K15K	**Wolf Creek Mou**	**78.90**	**24**	IAmb	IAmb	22 51 59.8	
	comp=Z,15nm,1.1s						
K15K	**Wolf Creek Mou**	**78.90**	**24**	P	**P**	**22 51 48.9**	**+0.8**
	baz=242,SNR=6.1						
P16K	**Nushagak River**	**79.01**	**28**	P	**P**	**22 51 48.9**	**+0.3**
	baz=246						
O16K	**Kokwok River B**	**79.19**	**28**	IAmb	IAmb	22 51 53.0	
	comp=Z,18nm,1.2s						
O16K	**Kokwok River B**	**79.19**	**28**	P	**P**	**22 51 50.5**	**+0.9**
	baz=245,SNR=7.3						
BVAR	**Borovoye Array**	**79.24**	**325**	P	**P**	**22 51 49.9**	**-0.2**
	comp=Z,7.2nm,0.7s,baz=110,slow=8.2,SNR=38						
BVAR				LR	LR	23 29 07.4	
	comp=Z,74nm,18.6s,baz=100,slow=37						
	comp=Z,7.2nm,0.7s						
N16K	**Nishlik Lake**	**79.26**	**27**	P	**P**	**22 51 50.9**	**+0.9**
	baz=245,SNR=9.2						
G15K	**Niukluk**	**79.27**	**21**	P	**P**	**22 51 50.3**	**+0.3**
	baz=239						
BRVK	**Borovoye**	**79.31**	**325**	P	**P**	**22 51 49.4**	**-1.0**
BRVK	**Borovoye**	**79.31**	**325**	*ce*P	**P**	**22 51 50.3**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,21nm,1.7s						
M16K	**Timber Creek**	**79.41**	**26**		**P**	**22 51 51.3**	**+0.5**
M16K				IAmb	IAmb	22 51 52.6	
	comp=Z,15nm,0.9s						
M16K	**Timber Creek**	**79.41**	**26**	P	**P**	**22 51 51.2**	**+0.3**
	baz=244,SNR=9.3						
F15K	**North Star Dit**	**79.42**	**21**	P	**P**	**22 51 51.4**	**+0.5**
	baz=238						
L16K	**Owhat River**	**79.49**	**25**	IAmb	IAmb	22 51 54.0	
	comp=Z,22nm,1.4s						
L16K	**Owhat River**	**79.49**	**25**	P	**P**	**22 51 51.5**	**+0.2**
	baz=244,SNR=7.5						
Q17K	**Contact Creek**	**79.71**	**29**	P	**P**	**22 51 52.2**	**-0.5**
	baz=248,SNR=8.1						
O17K	**Koliganek Bris**	**79.73**	**28**	P	**P**	**22 51 52.7**	**+0.2**
	baz=246,SNR=17						
J16K	**Anvik River**	**79.74**	**24**	P	**P**	**22 51 52.9**	**+0.3**
J16K	**Anvik River**	**79.74**	**24**	P	**P**	**22 51 53.0**	**+0.3**
	baz=242						
H16K	**Elim**	**79.75**	**22**	P	**P**	**22 51 53.0**	**+0.4**
	baz=241						
P17K	**Kvichak River**	**79.81**	**28**	P	**P**	**22 51 53.3**	**+0.3**
	baz=247						
SII	**Sitkinak Islan**	**79.94**	**31**	P	**P**	**22 51 54.2**	**+0.4**
	baz=249						
I17K	**Unalakleet**	**79.99**	**23**	P	**P**	**22 51 54.6**	**+0.7**
	baz=242						
N17K	**Nushagak Hills**	**80.00**	**27**	IAmb	IAmb	22 51 57.3	
	comp=Z,20nm,1.3s						
N17K	**Nushagak Hills**	**80.00**	**27**	P	**P**	**22 51 54.6**	**+0.6**
	baz=246,SNR=7.1						
G16K	**Koyuk River**	**80.08**	**21**	P	**P**	**22 51 54.7**	**+0.3**
	baz=240						
R18K	**Karluk**	**80.16**	**30**	P	**P**	**22 51 54.9**	**-0.1**
	baz=249						
L17K	**Donlin**	**80.18**	**25**	P	**P**	**22 51 55.6**	**+0.6**
	baz=245,SNR=5.7						
M17K	**Holitna River**	**80.24**	**26**	IAmb	IAmb	22 51 57.6	
	comp=Z,15nm,0.9s						
M17K	**Holitna River**	**80.24**	**26**	P	**P**	**22 51 55.8**	**+0.4**
	baz=246,SNR=9.3						
Q18K	**Katmai Hardscr**	**80.28**	**29**	P	**P**	**22 51 55.8**	**0.0**
	baz=248						
J17K	**VABM Dome**	**80.41**	**24**	P	**P**	**22 51 56.8**	**+0.6**
	baz=244						
K17K	**Iditarod**	**80.43**	**25**	P	**P**	**22 51 57.2**	**+0.9**
	baz=245,SNR=14						
P18K	**Big Mountain,**	**80.46**	**28**	P	**P**	**22 51 56.3**	**-0.3**
	baz=248						
C16K	**Lisburne Hills**	**80.57**	**18**	P	**P**	**22 51 57.6**	**+0.7**
	baz=237						
OHAK	**Old Harbor**	**80.63**	**31**	IAmb	IAmb	22 52 00.6	
	comp=Z,16nm,0.8s						
OHAK	**Old Harbor**	**80.63**	**31**	P	**P**	**22 51 57.8**	**+0.4**
	baz=250,SNR=5.7						
O18K	**Koktuh Hills**	**80.64**	**28**	P	**P**	**22 51 57.4**	**-0.1**
	baz=248						
N18K	**Kilae Creek**	**80.64**	**27**	P	**P**	**22 51 58.0**	**+0.4**
	baz=247						
G17K	**Kiwalik Mounta**	**80.76**	**22**	P	**P**	**22 51 58.4**	**+0.4**
	baz=242						
H17K	**Granite Mounta**	**80.78**	**22**	P	**P**	**22 51 58.7**	**+0.5**
	baz=243						
L18K	**Granite Mounta**	**80.90**	**25**		**P**	**22 51 59.1**	**+0.2**
L18K	**Granite Mounta**	**80.90**	**25**	P	**P**	**22 51 59.3**	**+0.4**
	baz=246,SNR=8.2						
TAOE	**Nuku Hiva Isla**	**80.98**	**98**	*e*LR	LR	23 17 18.3	
	comp=Z,213nm,26.2s						
M18K	**Stony River**	**80.99**	**26**	P	**P**	**22 52 00.2**	**+0.9**
	baz=247,SNR=11						
D17K	**Noatak River**	**80.99**	**19**	P	**P**	**22 51 59.7**	**+0.5**
	baz=240						
Q19K	**Cape Douglas,**	**81.05**	**29**	P	**P**	**22 51 59.9**	**+0.1**
	baz=250						
E17K	**Hotham Inlet**	**81.11**	**20**	P	**P**	**22 52 00.3**	**+0.5**
	baz=241						
KDAK	**Kodiak Island**	**81.18**	**30**	P	**P**	**22 52 00.4**	**0.0**
KDAK				IAmb	IAmb	22 52 03.9	
	comp=Z,17nm,0.9s						
KDAK	**Kodiak Island**	**81.18**	**30**	LR	LR	23 23 44.9	
	comp=Z,140nm,20.5s,baz=239,slow=32						
KDAK	**Kodiak Island**	**81.18**	**30**	P	**P**	**22 52 00.4**	**0.0**
KDAK				pmax	pmax		
	comp=Z,17nm,1.0s						
KDAK	**Kodiak Island**	**81.18**	**30**	P	**P**	**22 52 00.6**	**+0.2**
	baz=251						
N19K	**Bonanza Creek**	**81.33**	**27**		**P**	**22 52 01.5**	**+0.2**
N19K				IAmb	IAmb	22 52 04.7	
	comp=Z,16nm,1.1s						
N19K	**Bonanza Creek**	**81.33**	**27**	P	**P**	**22 52 01.6**	**+0.3**
	baz=248,SNR=8.5						
C17K	**DeLong Mountai**	**81.36**	**19**	P	**P**	**22 52 01.4**	**+0.2**
	baz=239						
J18K	**Innoko River**	**81.40**	**24**	IAmb	IAmb	22 52 10.2	
	comp=Z,28nm,2.0s						
J18K	**Innoko River**	**81.40**	**24**	P	**P**	**22 52 01.6**	**+0.1**
	baz=246						
H18K	**Honhosa River**	**81.46**	**22**	P	**P**	**22 52 02.0**	**+0.2**
	baz=244						
P19K	**Oil Pt**	**81.50**	**28**	P	**P**	**22 52 02.1**	**-0.1**
	baz=250						
Q20K	**Shuyak Island**	**81.55**	**30**	P	**P**	**22 52 02.7**	**+0.4**
	baz=251						
F18K	**Selawik**	**81.63**	**21**	P	**P**	**22 52 03.1**	**+0.5**
	baz=243						
G18K	**Tagagawik**	**81.68**	**22**	P	**P**	**22 52 03.4**	**+0.4**
	baz=244,SNR=5.9						
L19K	**White Mountain**	**81.68**	**26**	IAmb	IAmb	22 52 04.6	
	comp=Z,9.8nm,0.8s						
L19K	**White Mountain**	**81.68**	**26**	P	**P**	**22 52 03.5**	**+0.5**
	baz=248,SNR=14						
E18K	**Tukpahlearik C**	**81.69**	**20**	P	**P**	**22 52 03.8**	**+0.9**
	baz=242,SNR=6.9						
M19K	**Big River Lodg**	**81.78**	**26**	IAmb	IAmb	22 52 15.1	
	comp=Z,15nm,1.4s						
M19K	**Big River Lodg**	**81.78**	**26**	P	**P**	**22 52 03.4**	**-0.1**
	baz=248,SNR=7.3						
O20K	**Slope Mountain**	**81.94**	**28**	P	**P**	**22 52 04.7**	**+0.3**
	baz=250						
J19K	**Poorman**	**82.06**	**24**	P	**P**	**22 52 05.3**	**+0.4**
	baz=247,SNR=10						
MAW	**Mawson**	**82.07**	**202**	P	**P**	**22 52 05.0**	**+0.1**
	comp=Z,5.0nm,1.0s,baz=61,slow=4.1,SNR=6.7						
MAW				LR	LR	23 26 39.6	
	comp=Z,136nm,19.1s,baz=58,slow=34						
	comp=Z,5.0nm,1.0s						
MAW	**Mawson**	**82.07**	**202**	P	**P**	**22 52 05.0**	**+0.1**
C18K	**Utukok River**	**82.08**	**19**	P	**P**	**22 52 05.3**	**+0.3**
	baz=241						
L20K	**Farewell, AK**	**82.21**	**26**	P	**P**	**22 52 06.1**	**+0.2**
	baz=249,SNR=8.8						
B18K	**Kokolik River**	**82.24**	**18**	P	**P**	**22 52 06.4**	**+0.6**
	baz=240						
HOM	**Homer**	**82.26**	**29**	P	**P**	**22 52 06.6**	**+0.5**
	baz=251						
M20K	**Styx River**	**82.33**	**26**	P	**P**	**22 52 06.8**	**+0.2**
M20K				IAmb	IAmb	22 52 07.4	
	comp=Z,9.1nm,0.9s						
M20K	**Styx River**	**82.33**	**26**	P	**P**	**22 52 06.5**	**-0.1**
	baz=250,SNR=7.2						
H19K	**Roundabout Mou**	**82.35**	**22**	IAmb	IAmb	22 52 09.7	
	comp=Z,7.3nm,0.8s						
H19K	**Roundabout Mou**	**82.35**	**22**	P	**P**	**22 52 07.1**	**+0.7**
	baz=246						
G19K	**Purcell Mounta**	**82.36**	**22**	IAmb	IAmb	22 52 09.8	
	comp=Z,13nm,0.8s						
G19K	**Purcell Mounta**	**82.36**	**22**	P	**P**	**22 52 06.8**	**+0.3**
	baz=245,SNR=8.9						
K20K	**Telida**	**82.45**	**25**	IAmb	IAmb	22 52 10.7	
	comp=Z,9.8nm,0.9s						
K20K	**Telida**	**82.45**	**25**	P	**P**	**22 52 07.6**	**+0.6**
	baz=248						
BRLK	**Bradley Lake**	**82.66**	**29**	IAmb	IAmb	22 52 11.1	
	comp=Z,14nm,1.1s						
BRSE	**Bradley Lake S**	**82.72**	**29**	P	**P**	**22 52 08.4**	**-0.1**
	baz=252						
J20K	**Nowinta River**	**82.72**	**24**	IAmb	IAmb	22 52 12.0	
	comp=Z,10nm,0.9s						
J20K	**Nowinta River**	**82.72**	**24**	P	**P**	**22 52 09.1**	**+0.7**
	baz=248,SNR=12						
C19K	**Lookout Ridge**	**82.81**	**19**	IAmb	IAmb	22 52 11.9	

	comp=Z,19nm,1.4s						
C19K	Lookout Ridge	82.81	19	P	P	22 52 09.7	+0.8
	baz=243						
E19K	Redstone River	82.87	20	IAmb	IAmb	22 52 12.9	
	comp=Z,14nm,0.9s						
E19K	Redstone River	82.87	20	P	P	22 52 09.3	+0.2
	baz=245,SNR=15						
A19K	Wainwright	82.88	17	P	P	22 52 09.4	+0.4
	baz=241						
H20K	Anotleneega Mo	82.93	23	P	P	22 52 09.7	+0.2
	baz=248						
D19K	Kuna River	83.01	19	P	P	22 52 09.9	0.0
	baz=244,SNR=7.1						
SKT	Skwentna	83.07	27	P	P	22 52 10.1	-0.2
	baz=251						
PPLA	Purkeypile	83.09	26	P	P	22 52 09.2	-1.3
PPLA	Purkeypile	83.09	26	P	P	22 52 10.5	0.0
	baz=250						
F20K	Avaraart Lake	83.23	21	IAmb	IAmb	22 52 16.2	
	comp=Z,9.3nm,1.0s						
F20K	Avaraart Lake	83.23	21	P	P	22 52 11.5	+0.5
	baz=247						
SUA	Susitna One	83.26	27	P	P	22 52 10.7	-0.7
	baz=252						
CAST	Castle Rocks	83.31	25	P	P	22 52 11.1	-0.4
	baz=250,SNR=6.0						
SEW	Seward	83.45	29	P	P	22 52 12.1	-0.1
	baz=253						
IMAR	Indian Mountai	83.55	22	P	P	22 52 12.0	-0.7
E20K	Nigu River	83.56	20	P	P	22 52 12.9	+0.1
	baz=246,SNR=6.5						
D20K	Etivluk River	83.61	19	P	P	22 52 13.1	+0.2
	baz=246						
RC01	Rabbit Creek A	83.61	28	P	P	22 52 12.4	-0.6
	baz=253						
M22K	Willow	83.63	27	P	P	22 52 13.3	+0.1
	baz=252						
H21K	Melozitna Rive	83.80	23	IAmb	IAmb	22 52 17.7	
	comp=Z,23nm,1.7s						
H21K	Melozitna Rive	83.80	23	P	P	22 52 14.0	0.0
	baz=249						
G21K	Allakaket	83.84	22	P	P	22 52 13.9	-0.2
	baz=249						
KTH	Kantishna Hill	83.85	25	IAmb	IAmb	22 52 17.7	
	comp=Z,8.5nm,0.9s						
B20K	Meade River	83.98	18	P	P	22 52 15.2	+0.4
	baz=245						
BPAW	Bear Paw Mtn.	84.00	25	P	P	22 52 15.5	+0.5
BPAW	Bear Paw Mtn.	84.00	25	P	P	22 52 15.0	0.0
	baz=251						
PMR	Palmer	84.04	27	P	P	22 52 14.1	-1.1
PMR				IAmb	IAmb	22 52 18.4	
	comp=Z,10nm,0.9s						
PMR	Palmer	84.04	27	P	P	22 52 14.1	-1.1
PMR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PMR	Palmer	84.04	27	P	P	22 52 14.8	-0.4
	baz=253						
TRF	Thorofare Moun	84.09	25	IAmb	IAmb	22 52 48.0	
	comp=Z,14nm,1.5s						
TRF	Thorofare Moun	84.09	25	P	P	22 52 15.1	-0.6
	baz=252						
F21K	Alatna River	84.11	21		P	22 52 16.1	+0.5
F21K	Alatna River	84.11	21	P	P	22 52 15.1	-0.4
	baz=249						
PWL	Port Wells	84.20	28	P	P	22 52 15.4	-0.7
	baz=254						
KNK	Knik Glacier	84.29	28	P	P	22 52 16.2	-0.4
	baz=254						
E21K	Killik River	84.39	20	P	P	22 52 16.5	-0.5
E21K				IAmb	IAmb	22 52 19.6	
	comp=Z,10.0nm,1.2s						
E21K	Killik River	84.39	20	P	P	22 52 16.7	-0.3
	baz=248						
C21K	Knifeblade Rid	84.39	19	P	P	22 52 17.1	+0.1
	baz=247						
MLY	Manley	84.40	24	IAmb	IAmb	22 52 21.3	
	comp=Z,21nm,1.6s						
MLY	Manley	84.40	24	P	P	22 52 16.7	-0.4
	baz=251,SNR=10						
P23K	Montague Islan	84.41	29	P	P	22 52 17.1	-0.1
P23K	Montague Islan	84.41	29	P	P	22 52 16.9	-0.3
	baz=255						
H22K	Ishtalitna Cre	84.43	23	P	P	22 52 16.7	-0.5
	baz=251						
B21K	Ikpikpuk River	84.63	19	IAmb	IAmb	22 52 21.6	
	comp=Z,16nm,1.1s						
B21K	Ikpikpuk River	84.63	19	P	P	22 52 17.8	-0.3
	baz=247						
ABKAR	Akbulak array	84.64	320	P	P	22 52 16.9	-1.6
WAT1	Susitna Watana	84.65	26	P	P	22 52 18.1	-0.3
	baz=254						
BWN	Browne	84.66	25	P	P	22 52 18.8	+0.4
F22K	John River	84.68	21	P	P	22 52 18.4	0.0
	baz=250						
G22K	Bettles	84.73	22	P	P	22 52 18.5	-0.1
	baz=250						
M23K	Glacier View	84.74	27	P	P	22 52 18.4	-0.5
	baz=254						
MCK	McKinley	84.75	25	P	P	22 52 18.3	-0.6
	baz=253						
Q23K	Middleton Isla	84.78	30	P	P	22 52 18.9	-0.1
	baz=256						
GLI	Glacier Island	84.79	28	P	P	22 52 18.6	-0.4
	baz=255						
SCM	Sheep Creek Mo	84.93	27	P	P	22 52 19.5	-0.4
	baz=255,SNR=11						
WAT6	Susitna Watana	84.94	26	P	P	22 52 19.4	-0.6
	baz=254						
NEA2	Nenana	84.94	24	IAmb	IAmb	22 52 23.6	
	comp=Z,7.3nm,0.9s						
NEA2	Nenana	84.94	24	P	P	22 52 19.2	-0.6
	baz=253						
D22K	Ayikyak River	84.99	20	IAmb	IAmb	22 52 23.8	
	comp=Z,18nm,1.4s						
D22K	Ayikyak River	84.99	20	P	P	22 52 19.4	-0.5
	baz=249						
I23K	Minto, Yukon-K	84.99	24	P	P	22 52 19.9	0.0
	baz=253,SNR=14						
E22K	Anaktuvuk Pass	85.03	21	IAmb	IAmb	22 52 24.5	
	comp=Z,9.8nm,1.1s						
E22K	Anaktuvuk Pass	85.03	21	P	P	22 52 19.9	-0.3
	baz=250,SNR=8.5						
FID	Port Fidalgo	85.05	28	IAmb	IAmb	22 52 27.6	
	comp=Z,11nm,1.0s						
H23K	Yukon River	85.12	23	P	P	22 52 20.2	-0.5
H23K				IAmb	IAmb	22 52 24.2	
	comp=Z,5.7nm,0.6s						
H23K	Yukon River	85.12	23	P	P	22 52 20.5	-0.2
	baz=252						
G23K	Bananza Creek	85.21	22	P	P	22 52 21.5	+0.3
	baz=252,SNR=10.0						
DHY	Denali Highway	85.24	26	P	P	22 52 20.7	-0.8
	baz=255,SNR=21						
B22K	Teshekpuk Lake	85.28	18	P	P	22 52 20.9	-0.4
	baz=248						
COLD	Coldfoot	85.31	22	P	P	22 52 21.8	+0.3
COLD	Coldfoot	85.31	22	P	P	22 52 21.4	-0.2
	baz=252						
EYAK	Cordova Ski Ar	85.34	29	P	P	22 52 21.2	-0.6
	baz=256						
DIV	Divide	85.47	28		P	22 52 22.1	-0.5
CCB	Clear Creek Bu	85.48	24	IAmb	IAmb	22 52 26.1	
	comp=Z,10nm,1.0s						
KLU	Klutina	85.49	28	P	P	22 52 22.2	-0.5
KLU				IAmb	IAmb	22 52 34.1	
	comp=Z,9.9nm,1.1s						
KLU	Klutina	85.49	28	P	P	22 52 22.4	-0.3
	baz=256						
M24K	Tolsona, Glenn	85.53	27	P	P	22 52 22.1	-0.7
M24K				IAmb	IAmb	22 54 31.0	
	comp=Z,12nm,0.8s						
M24K	Tolsona, Glenn	85.53	27	P	P	22 52 22.3	-0.5
	baz=256						
D23K	Nanushuk River	85.70	20		P	22 52 23.2	-0.3
D23K	Nanushuk River	85.70	20	P	P	22 52 24.0	+0.5
	baz=251,SNR=12						
HDA	Harding Lake	85.78	25	IAmb	IAmb	22 52 27.4	
	comp=Z,19nm,1.4s						
HDA	Harding Lake	85.78	25	P	P	22 52 24.2	+0.3
	baz=255						
E23K	Chandalar	85.78	21	P	P	22 52 24.3	+0.3
	baz=252,SNR=24						
H24K	Noodor Dome	85.78	23		P	22 52 23.9	-0.1
H24K	Noodor Dome	85.78	23	P	P	22 52 23.8	-0.3
	baz=254,SNR=5.8						
RAGM	Ragged Mountai	85.83	29	P	P	22 52 24.2	-0.2
RAGM				IAmb	IAmb	22 52 27.3	
	comp=Z,9.6nm,0.9s						
KAIM	Kayak Island	85.85	29	P	P	22 52 24.3	-0.1
	baz=258						
IL31		85.90	24	IAmb	IAmb	22 52 27.7	
	comp=Z,7.4nm,0.9s						
ILAR	Eielson Array	85.90	24	P	P	22 52 22.8	-1.8
ILAR	Eielson Array	85.90	24	P	P	22 52 23.0	-1.5
	comp=Z,4.7nm,0.7s,baz=261,slow=4.6,SNR=40						
ILAR				LR	LR	23 28 33.9	
	comp=Z,49nm,20.0s,baz=234,slow=34						
	comp=Z,4.7nm,0.7s						
TOLK	Toolik Lake Re	85.98	20	P	P	22 52 25.1	+0.1
	baz=252						
BMRM	Bremner River	85.99	28	P	P	22 52 24.4	-0.8
BMRM				IAmb	IAmb	22 52 27.2	
	comp=Z,16nm,1.2s						
BMRM	Bremner River	85.99	28	P	P	22 52 25.2	0.0
	baz=257						
C23K	Itkillik River	86.01	19		P	22 52 24.9	-0.1
C23K	Itkillik River	86.01	19	P	P	22 52 25.1	+0.1
	baz=251						
HMT	Hamilton	86.02	29	IAmb	IAmb	22 52 26.2	
	comp=Z,16nm,1.0s						
PAX	Paxson	86.05	26	P	P	22 52 25.3	-0.2
	baz=256						
HARP	HAARP	86.06	27	P	P	22 52 25.4	0.0
	baz=257						
K24K	Donnelly Dome	86.12	26	P	P	22 52 26.0	+0.3
K24K				IAmb	IAmb	22 52 32.9	
	comp=Z,11nm,1.0s						
K24K	Donnelly Dome	86.12	26	P	P	22 52 25.6	-0.1
	baz=256						
N25K	Chitina, Valde	86.13	28	P	P	22 52 26.1	+0.2
N25K				IAmb	IAmb	22 52 28.3	
	comp=Z,18nm,1.9s						
N25K	Chitina, Valde	86.13	28	P	P	22 52 25.8	-0.1
	baz=257						
G24K	Hadweenzic Riv	86.18	23	IAmb	IAmb	22 52 30.2	
	comp=Z,14nm,1.3s						
G24K	Hadweenzic Riv	86.18	23	P	P	22 52 25.9	0.0
	baz=254						
E24K	Your Creek	86.19	21	P	P	22 52 25.5	-0.5
E24K				IAmb	IAmb	22 52 41.2	
	comp=Z,12nm,1.4s						
E24K	Your Creek	86.19	21	P	P	22 52 26.1	+0.1
	baz=253						
F24K	Squaw Lake	86.25	22	IAmb	IAmb	22 52 30.2	
	comp=Z,13nm,0.9s						
F24K	Squaw Lake	86.25	22	P	P	22 52 26.7	+0.4
	baz=254,SNR=11						
BERG	Berg Lake	86.30	29	P	P	22 52 26.5	-0.1
BERG				IAmb	IAmb	22 52 36.6	
	comp=Z,10nm,0.8s						
D24K	Happy Valley	86.39	20		P	22 52 27.2	+0.3
D24K	Happy Valley	86.39	20	P	P	22 52 27.3	+0.3
	baz=253						
BGLC	Bering Glacier	86.45	29	P	P	22 52 27.6	+0.3
	baz=258						
GLB	Gilahina Butte	86.47	28	P	P	22 52 27.3	-0.2
J25K	Salcha River,	86.49	25	IAmb	IAmb	22 52 28.9	
	comp=Z,26nm,1.7s						
J25K	Salcha River,	86.49	25	P	P	22 52 27.5	0.0
	baz=256,SNR=6.0						
RIDG	Independent Ri	86.51	26	P	P	22 52 27.5	-0.1
	baz=257,SNR=6.2						
VRDI	Verde Repeater	86.59	28	P	P	22 52 27.6	-0.6
C24K	Franklin Bluff	86.60	19	P	P	22 52 28.0	+0.1
	baz=253						
PRP	Porcupine Dome	86.64	24	P	P	22 52 28.7	+0.3
	baz=256						
CRQE	Cirque	86.67	29	P	P	22 52 28.6	0.0
	baz=259						
H25L	Birch Creek	86.71	23	P	P	22 52 28.7	+0.2
	baz=256						
G25K	Bearman Lake	86.72	23	P	P	22 52 28.8	+0.3
	baz=256						
WAX	Waxell Ridge	86.72	29	P	P	22 52 29.0	+0.2
WAX				IAmb	IAmb	22 52 38.4	
	comp=Z,10.0nm,0.9s						
TGL	Tana Glacier	86.79	29	P	P	22 52 29.5	+0.3
TGL				IAmb	IAmb	22 52 42.3	
	comp=Z,18nm,1.2s						
ARTI	Arti	86.82	327	LR	LR	23 34 09.7	
	comp=Z,52nm,18.9s,baz=98,slow=38						
ARTI	Arti	86.82	327	*c i*P	P	22 52 28.3	-0.9
ARTI						22 55 46.9	
ARTI				S	SKSac	23 02 53.9	-2.3
ARTI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
DOT	Dot Lake	86.83	26	P	P	22 52 29.1	-0.1
SCRK	Sand Creek	86.93	26	P	P	22 52 29.6	-0.3
	baz=258						
ISLE	Juniper Island	87.00	29	P	P	22 52 30.2	0.0
ISLE				IAmb	IAmb	22 52 42.8	
	comp=Z,11nm,1.0s						
L26K	Log Cabin Wild	87.01	27	IAmb	IAmb	22 52 33.1	
	comp=Z,7.7nm,1.1s						
L26K	Log Cabin Wild	87.01	27	P	P	22 52 29.8	-0.3
	baz=258						
FYU	Fort Yukon	87.01	23	P	P	22 52 29.8	-0.1
M26K	Nabesna, AK	87.04	27	P	P	22 52 29.3	-1.0
M26K	Nabesna, AK	87.04	27	P	P	22 52 30.3	0.0
	baz=259						
F25K	Christian Rive	87.10	22		P	22 52 30.2	-0.2
F25K				IAmb	IAmb	22 52 42.3	
	comp=Z,9.9nm,1.2s						
F25K	Christian Rive	87.10	22	P	P	22 52 30.5	0.0
	baz=256						
MESA	MESA	87.11	29	P	P	22 52 30.9	0.0
	baz=260						
J26L	Joseph Creek	87.22	25	P	P	22 52 31.1	-0.1
	baz=258,SNR=10						
QSPA	South Pole Qui	87.23	180	P	P	22 52 32.1	+0.9
QSPA				IAmb	IAmb	22 52 41.9	
	comp=Z,13nm,1.0s						
QSPA	South Pole Qui	87.23	180	P	P	22 52 31.1	-0.1
	comp=Z,6.0nm,0.7s,baz=337,slow=2.9,SNR=19						
QSPA				LR	LR	23 31 46.8	
	comp=Z,171nm,20.9s,baz=18,slow=36						
	comp=Z,6.0nm,0.7s						
YAH	Yahtse	87.25	29	P	P	22 52 31.9	+0.3
E25K	Arctic Village	87.26	21	P	P	22 52 31.6	+0.4
E25K	Arctic Village	87.26	21	P	P	22 52 31.4	+0.2
	baz=256						
D25K	Kavik River	87.28	20	P	P	22 52 31.4	+0.1
	baz=255						
GRNC	Granite Creek	87.31	29	P	P	22 52 31.2	-0.7
GRNC				IAmb	IAmb	22 52 34.9	
	comp=Z,7.9nm,0.8s						
BARN	Barnard Glacie	87.41	29	P	P	22 52 32.1	-0.2
BARN				IAmb	IAmb	22 52 37.0	
	comp=Z,11nm,0.9s						
BMAR	Burnt Mountain	87.46	22	P	P	22 52 32.5	+0.2
M27K	Edge Creek, AK	87.55	27	IAmb	IAmb	22 52 36.1	
	comp=Z,6.6nm,0.8s						
M27K	Edge Creek, AK	87.55	27	P	P	22 52 32.7	-0.1
	baz=260,SNR=9.0						
CTG	Chitna Glacier	87.55	29	P	P	22 52 32.7	-0.1
	baz=260						
CTGM	Chitina Glacie	87.55	29	P	P	22 52 32.2	-0.7
TABL	Table Mountain	87.55	29	P	P	22 52 32.7	-0.3
I26K	Coal Creek Min	87.56	24		P	22 52 32.7	0.0
I26K	Coal Creek Min	87.56	24	P	P	22 52 33.4	+0.7
	baz=258						
G26K	Porcupine Rive	87.66	23		P	22 52 33.1	+0.1
G26K	Porcupine Rive	87.66	23	P	P	22 52 33.6	+0.5
	baz=258,SNR=12						
F26K	Sheenjek River	87.68	22	P	P	22 52 33.8	+0.5
	baz=257,SNR=12						
LOGN	Logan Glacier	87.69	29	P	P	22 52 32.9	-0.7
L27K	Beaver Creek,	87.70	27		P	22 52 33.2	-0.2
L27K				IAmb	IAmb	22 52 37.3	
	comp=Z,7.9nm,1.1s						
L27K	Beaver Creek,	87.70	27	P	P	22 52 34.1	+0.7
	baz=260,SNR=9.0						
BCAR	Beaver Creek A	87.72	27	P	P	22 52 33.5	0.0
K27K	Chicken	87.77	26	P	P	22 52 34.2	+0.5
	baz=259						
C26K	Camden Bay	87.92	20	P	P	22 52 35.0	+0.7
	baz=256						
PINM	Pinnacle	87.94	30	P	P	22 52 34.8	+0.2
	baz=261						
BVCY	Beaver Creek	88.02	27	P	P	22 52 35.1	+0.2
	baz=260						
O28M	Mount Upton	88.07	29	P	P	22 52 34.8	-0.8
O28M	Mount Upton	88.07	29	P	P	22 52 35.6	0.0
	baz=261						
YUK3	Moose Creek	88.10	28	P	P	22 52 35.4	-0.2
	baz=261,SNR=12						
I27K	Kandik River	88.25	24	P	P	22 52 36.1	+0.1
	baz=260,SNR=28						
C27K	Jago River	88.26	20	P	P	22 52 36.3	+0.4
	baz=258						
PNL	Peninsula	88.30	30	P	P	22 52 36.4	0.0
	baz=262						
YUK8	Steele Glacier	88.36	29	P	P	22 52 37.0	+0.1
	baz=262						
H27K	Steamboat Moun	88.40	24	P	P	22 52 37.1	+0.4
	baz=260,SNR=19						
G27K	Doyon Strip	88.45	23		P	22 52 36.6	-0.3
G27K	Doyon Strip	88.45	23	P	P	22 52 37.5	+0.6
	baz=260						
E27K	Coleen River	88.73	22	P	P	22 52 38.1	-0.1
	baz=260						
O29M	Mount Kennedy	88.79	30	P	P	22 52 38.6	-0.2
O29M	Mount Kennedy	88.79	30	P	P	22 52 38.6	-0.2
	baz=263						
YUK4	Talbot Arm	88.90	29	P	P	22 52 39.6	+0.3
	baz=263						
I28M	Miner Creek	88.91	24	P	P	22 52 39.1	-0.1
	baz=261,SNR=15						
DAWY	Dawson	88.94	26	P	P	22 52 39.2	-0.1
DAWY	Dawson	88.94	26	P	P	22 52 39.3	0.0
	baz=262,SNR=13						
YUK6	Outpost Mounta	88.98	29	P	P	22 52 39.8	-0.1
	baz=263						
P29M	Windy Craggy	89.13	30	P	P	22 52 40.4	+0.1
P29M				IAmb	IAmb	22 52 42.8	
	comp=Z,11nm,0.9s						
P29M	Windy Craggy	89.13	30	P	P	22 52 40.4	+0.1
	baz=263						
M29M	Somme Creek	89.13	27	IAmb	IAmb	22 52 50.2	
	comp=Z,7.6nm,1.1s						
M29M	Somme Creek	89.13	27	P	P	22 52 40.6	+0.3
	baz=263,SNR=9.2						
D27M	Malcolm River	89.14	21	P	P	22 52 40.5	+0.4
	baz=260						
F28M	Old Crow	89.27	22	P	P	22 52 40.9	+0.1
	baz=261						
L29M	L29M	89.37	27	IAmb	IAmb	22 52 45.5	
	comp=Z,13nm,1.2s						
L29M	L29M	89.37	27	P	P	22 52 41.5	+0.2
	baz=263,SNR=8.0						
HYT	Haines Junctio	89.38	29	P	P	22 52 41.9	+0.3
HYT				IAmb	IAmb	22 52 45.4	
	comp=Z,12nm,1.1s						
HYT	Haines Junctio	89.38	29	P	P	22 52 41.5	0.0
	baz=264,SNR=7.7						
J29N	Klondike Camp	89.50	26	P	P	22 52 41.6	-0.4
	baz=263						
E28M	Babbage River	89.55	21	P	P	22 52 42.2	+0.1
	baz=262						
P30M	Million Dollar	89.57	30	P	P	22 52 42.1	-0.2
	baz=264						
I29M	Ogilvie Camp,	89.58	25	P	P	22 52 41.6	-0.6
I29M	Ogilvie Camp,	89.58	25	P	P	22 52 42.2	0.0
	baz=263,SNR=17						
N30M	Aishikik Lake	89.66	29	P	P	22 52 42.3	-0.4
N30M				IAmb	IAmb	22 52 46.6	
	comp=Z,8.5nm,1.2s						
N30M	Aishikik Lake	89.66	29	P	P	22 52 43.3	+0.6
	baz=264						
H29M	Whitestone	89.66	24	P	P	22 52 42.9	+0.3
H29M				IAmb	IAmb	22 53 41.3	
	comp=Z,20nm,1.8s						
H29M	Whitestone	89.66	24	P	P	22 52 43.3	+0.7
	baz=263						
K29M	Barlow Dome	89.73	26		P	22 52 42.9	-0.2
K29M				IAmb	IAmb	22 52 46.5	
	comp=Z,7.2nm,0.9s						
K29M	Barlow Dome	89.73	26	P	P	22 52 44.0	+0.9
	baz=263,SNR=10						
S31K	Pelican	89.73	32	P	P	22 52 43.3	+0.3
	baz=265						
PLBC	Pleasant Camp	89.80	31	P	P	22 52 43.9	+0.5
	baz=264						
G29M	Pine Creek	89.89	23	P	P	22 52 43.9	+0.3
	baz=263						
O30N	Mendenhall	90.07	29	P	P	22 52 44.5	-0.1
O30N	Mendenhall	90.07	29	P	P	22 52 45.2	+0.5
	baz=265						
E29M	Blow River	90.12	22	P	P	22 52 44.9	+0.3
	baz=263						
SIT	Sitka	90.14	33	P	P	22 52 45.2	+0.3
	baz=265						
N31M	Braeburn, Yuko	90.28	29		P	22 52 45.4	-0.2
N31M	Braeburn, Yuko	90.28	29	P	P	22 52 46.2	+0.6
	baz=265						
J30M	Hart River	90.32	25		P	22 52 45.7	-0.2
J30M	Hart River	90.32	25	P	P	22 52 46.1	+0.3
	baz=264,SNR=8.2						
SKAG	Skagway	90.33	31	P	P	22 52 45.5	-0.3
SKAG				IAmb	IAmb	22 52 49.6	
	comp=Z,15nm,1.3s						
SKAG	Skagway	90.33	31	P	P	22 52 46.0	+0.2
	baz=265						
I30M	Mount Dempster	90.37	25		P	22 52 46.2	+0.1
I30M	Mount Dempster	90.37	25	P	P	22 52 46.1	0.0
	baz=264						
G30M	tAoh Zraii Nji	90.60	23		P	22 52 46.1	-0.9
G30M				IAmb	IAmb	22 52 47.2	
	comp=Z,6.4nm,1.0s						
G30M	tAoh Zraii Nji	90.60	23	P	P	22 52 47.1	0.0
	baz=265						
WHY	Whitehorse	90.65	29	P	P	22 52 46.7	-0.8
WHY				IAmb	IAmb	22 52 51.0	
	comp=Z,8.0nm,0.9s						
WHY	Whitehorse	90.65	29	P	P	22 52 47.8	+0.3
	baz=266						
SYO	Syowa Base	90.70	201	⇓*i*P	P	22 52 48.5	+1.1
SYO	Syowa Base	90.70	201	⇑*e*PcP	PcP	22 52 50.2	+1.8
SYO	Syowa Base	90.70	201	⇑*e*pP	pP	22 52 52.0	+1.2
P32M	Atlin	91.16	31	P	P	22 52 50.0	+0.3
	baz=267						
H31M	Peel River	91.26	24	P	P	22 52 50.3	+0.3
	baz=266						
U33K	Whale Pass	91.29	34	P	P	22 52 50.5	+0.2
	baz=267						
G31M	Satah River	91.36	23	P	P	22 52 50.6	+0.1
	baz=266						
FARO	Faro, Yukon	91.49	28	P	P	22 52 50.4	-0.8
FARO				IAmb	IAmb	22 52 53.3	
	comp=Z,8.2nm,1.2s						
FARO	Faro, Yukon	91.49	28	P	P	22 52 51.5	+0.3
	baz=267						
N32M	Quiet Lake	91.56	29	P	P	22 52 51.9	+0.3
	baz=267						
P33M	Teslin, Yukon	91.64	30	P	P	22 52 52.1	+0.1
	baz=268						
INK	Inuvik	91.73	22	LR	LR	23 31 46.6	
	comp=Z,52nm,19.7s,baz=220,slow=34						
KIRV	Kirov	91.86	328	LR	LR	23 35 58.2	
	comp=Z,102nm,20.4s,baz=79,slow=37						
MMPY	Sheldon Lake,	92.47	28	P	P	22 52 56.1	+0.4
	baz=269						
BELG	Belogornoye	92.71	322	*i* P	P	22 52 56.1	-0.9
BELG				pmax	pmax		
	comp=Z,3.0nm,1.1s						
DLBC	Dease Lake	93.03	32	LR	LR	23 31 45.9	
	comp=Z,5.6nm,19.2s,baz=236,slow=34						
BBB	Bella Bella	94.17	38	LR	LR	23 29 23.7	
	comp=Z,62nm,19.9s,baz=226,slow=32						
KIV	Kislovodsk	96.12	314	*e*P	P	22 53 11.6	-1.4
KIV				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,34nm,20.0s						
YBH	Yreka Blue Hor	98.31	48	LR	LR	23 29 03.2	
	comp=Z,7.0nm,22.0s,baz=292,slow=30						
MOS	Moscow	98.40	326	*e*P	P	22 53 22.1	-0.8
SPITS	Spitsbergen Ar	98.97	350	LR	LR	23 36 43.6	
	comp=Z,47nm,21.8s,baz=16,slow=35						
OBN	Obninsk	99.08	325	*ce*P	Pdif	22 53 23.9	-2.0
OBN				*e*		22 57 28.2	
OBN				*e*S	S	23 04 51.8	-5.2
OBN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,82nm,19.0s						
MNK	Minsk	104.13	326	*i* P	Pdif	22 53 45.7	-2.8
	comp=E,7.0nm,0.9s						
MNK				*i* P	Pdif	22 53 45.7	-2.8
	comp=N,8.0nm,1.1s						

MNK				*i* P	Pdif	22 53 45.7	-2.8
	comp=Z,3.0nm,0.9s,baz=74						
MNK				*i* PP	PP	22 58 07.9	+1.8
MNK				*i* PPP	PPP	23 00 11.2	
MNK				*i* SKS		23 05 14.8	
MNK				*i* PS	PS	23 07 15.8	-2.1
MNK				*i* SS	SS	23 12 53.5	-1.1
MNK				*i* SSS	SSS	23 16 49.6	
MNK	Minsk	104.13	326	*i* P	Pdif	22 53 45.6	-2.8
MNK				*i*		22 58 07.8	
MNK				*i*		23 05 14.7	
MNK				*i* PS	PS	23 07 15.8	-2.1
MNK				*i* SS	SS	23 12 53.4	-1.1
MNK				*i* SSS	SSS	23 16 49.6	
MNK				pmax	pmax		
	comp=E,7.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,8.0nm,1.1s						
MNK				MLR	MLR		
	comp=E,70nm,21.0s						
MNK				MLR	MLR		
	comp=Z,100nm,19.0s						
MNK				MLR	MLR		
	comp=N,57nm,19.0s						
TXAR	Lajitas Array	115.42	59	PKP	PKPdf	22 58 27.1	-0.6
	comp=N,0.4nm,0.8s,baz=242,slow=2.7,SNR=3.6						
P38A	Dawn	120.25	45		PKPdf	22 58 34.7	-1.8
CMLA	Cha da Macela	142.19	339	*i* PKIKP	PKiKP	22 59 21.6	+0.8
HMBC	Humberstone	143.92	131	PKPdf	PKPab	22 59 18.4	-0.3
PB11	IPOC Station P	144.40	130	PKPdf	PKPab	22 59 20.0	-0.5
PB08	IPOC Station P	144.56	131	PKPdf	PKPab	22 59 21.9	+0.6
APAC	Apartado, Choc	144.64	80	P	PKPbc	22 59 22.1	+0.6
POPC	Popayan, Colom	144.79	89	P	PKPab	22 59 20.7	-1.6
JAMC	Jamundi, Valle	144.80	88	P	PKPab	22 59 21.8	-0.5
GO01	Chusmiza	144.80	130	PKPdf	PKPab	22 59 22.9	+0.5
DBBC	Dabeiba	145.09	82	P	PKPdf	22 59 25.5	+1.8
YOTC	Yotoco, Valle	145.12	87	P	PKPbc	22 59 22.0	-1.3
PLMC	San Jos del P	145.16	85	P	PKPbc	22 59 23.7	+0.4
PB16	IPOC Station P	145.33	128	PKPbc	PKPbc	22 59 25.0	+0.7
SJCC	San Jacinto, C	145.73	76	P	PKPab	22 59 25.9	+0.5
	comp=N,22nm,1.3s						
FLOC	Florencia	145.78	91	P	PKPdf	22 59 24.2	-0.6
HELC	Santa Helena	145.84	83	P	PKPdf	22 59 24.8	-0.5
GUY2C	Guyana, Caldas	146.06	85	P	PKPdf	22 59 24.9	-0.9
ORTC	Ortega, Tolima	146.22	87	P	PKPdf	22 59 24.9	-0.7
ZARC	Zaragoza, Cauc	146.38	81	P	PKPdf	22 59 25.8	0.0
SMRC	Santa Marta, M	146.41	74	P	PKPdf	22 59 26.6	+0.8
NORC	Norcasia	146.53	84	P	PKPdf	22 59 25.4	-0.7
PRAC	Prado	146.58	87	P	PKPdf	22 59 26.8	+0.6
PTBC	PUERTO BERRIO,	146.87	82	P	PKPdf	22 59 27.1	+0.5
ROSC	El Rosal	147.12	85	PKPbc	PKPdf	22 59 29.0	+1.5
	comp=N,6.2nm,0.5s,baz=89,slow=6.5,SNR=5.3						
CZSB	Cruzeiro do Su	147.12	109	PKPbc	PKPdf	22 59 28.3	+1.3
CPUP	Villa Florida	147.28	153	PKPbc	PKPbc	22 59 29.3	+0.1
CPUP	Villa Florida	147.28	153	PKPbc	PKPbc	22 59 29.0	-0.2
	comp=N,3.3nm,1.0s,baz=88,slow=3.5,SNR=14						
CPUP	Villa Florida	147.28	153	PKP2	PKPbc	22 59 29.3	+0.1
LPAZ	La Paz	147.55	126	PKPbc	PKPbc	22 59 30.6	-0.4
	comp=N,9.0nm,1.1s,baz=272,slow=1.7,SNR=14						
MACC	Macarena, Meta	147.61	90	P	PKPdf	22 59 28.5	+0.6
RUSC	La Rusia	148.28	83	P	PKPdf	22 59 30.2	+0.6
PAMC	Pamplona, Colo	148.52	80	P	PKPbc	22 59 32.4	-1.1
CELP	Cerrillos	151.00	57	PKPbc	PKPbc	22 59 37.1	-1.7
HUMP	Col San Antoni	151.57	56	PKPbc	PKPbc	22 59 39.5	-0.7

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*GCG **24** 22:49:34.7±1.7, 15°.45N×92°.95W, h99^{km}±23^{km}, MD3.7, ML3.2*

*MEX **24** 22:49:35.2±1.0, 15°.39N×93°.01W, h105^{km}±10^{km}, MD3.8*

ISC 24 22:49:29.2±2.0**, 15°.30N**±0°.07×**92°.97W**±0°.06**, h139^{km}**±14^{km}**, n12, σ2^{s}.56**/23**, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.47	329	*e*P	Pn	22 49 49.9	+0.8
PCIG				*e*S	Sn	22 50 01.0	-3.3
PATR	El Naranjo	0.73	105	*e*P	Pn	22 49 52.7	+1.6
PATR				*e*S	Sn	22 50 06.0	-1.7
PAVE	Pavencul	0.77	98	*e*P	Pn	22 49 53.3	+1.9
PAVE				*e*S	Sn	22 50 07.2	-1.0
THIG		0.79	120	*e*P	Pn	22 49 53.5	+2.3
THIG				*e*S	Sn	22 50 07.6	-0.3
THIG		0.79	120	*i* S	Sn	22 50 08.3	+0.4
CCIG	Comitan	1.26	39	*e*P	Pn	22 49 57.9	+2.2
CCIG				*e*S	Sn	22 50 15.7	-0.1
RTAL	Retalhuleu	1.46	122	*e*P	Pn	22 50 01.0	+3.5
RTAL				*i* S	Sn	22 50 20.7	+1.6
TGIG		1.47	354	*e*P	Pn	22 49 59.2	+1.4
TGIG				*e*S	Sn	22 50 17.1	-2.5
TGIG		1.47	354	*i* P	Pn	22 49 59.7	+1.9
TGIG				*e*S	Sn	22 50 17.5	-2.1
TGIG				IAML		22 50 18.7	
	comp=E,126nm,0.7s						
STG8	El Palmar, Qui	1.78	118	*i* P	Pn	22 50 01.6	+0.2
STG8				*i* S	Sn	22 50 21.3	-4.7
STG8				IAML		22 50 24.4	
	comp=N,370nm,0.9s						
STG0	El Palmar, Qui	1.80	119	*e*P	Pn	22 50 01.9	+0.3
STG0				*i* S	Sn	22 50 20.5	-5.8
STG0				IAML		22 50 26.6	
	comp=E,500nm,0.8s						
HUIG	Huatulco	3.06	279	*e*P	Pn	22 50 18.6	+1.6
HUIG				*e*S	Sn	22 50 52.4	-1.5

JMA 24 22:58:59.5±0.1**, 23°.8N**±0°.6×**122°.9E**±0°.6**, h51^{km}, MV1.6**/8**, NEAR ISHIGAKIJIMA ISLAND, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.64	5	*e*P	Pn	22 59 12.6	+0.1
JYNG				*e*S	Sn	22 59 21.9	+0.1
YOJ	Yonaguni jima	0.65	10	*e*P	Pn	22 59 12.8	+0.1
YOJ				*e*S	Sn	22 59 22.2	0.0
HATJ	Hateruma jima	0.87	74	*e*S	Sn	22 59 27.3	0.0
IRIF	Iriomote-Funau	0.93	56	*e*P	Pn	22 59 16.5	+0.2
IRIF				*e*S	Sn	22 59 29.2	+0.7
JKRS	Kuro-shima	1.11	67	*e*S	Sn	22 59 33.6	+0.7
JIJ	Ishigaki jima	1.27	64	*e*P	Pn	22 59 20.9	0.0

TAP 24 22:59:40.6, 24°.23N×120°.91E, h27^{km}, ML2.7, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHP	Taichung City	0.05	34	*i* P	Pb	22 59 45.7	+0.3
WHP				*e*S	Sb	22 59 49.2	+0.5
TWQ1	Liyutan	0.17	312	*i* P	Pb	22 59 46.5	+0.3
TWQ1				*i* S	Sb	22 59 50.9	+0.9
WCS	Beigang Elemen	0.17	180	P	Pb	22 59 46.5	+0.3
WCS				*e*S	Sb	22 59 50.9	+0.8
TDCB	Techi	0.23	85	P	Pb	22 59 47.4	+0.5
TDCB				*e*S	Sb	22 59 51.6	+0.4
NSY	Sanyi	0.23	323	P	Pn	22 59 48.1	-0.1
TCU	Taichung	0.23	249	*e*P	Pb	22 59 47.2	+0.4
TCU				*e*S	Sb	22 59 52.3	+1.1
TWT	Tachien	0.24	85	P	Pb	22 59 47.5	+0.3
WDJ	Dajia District	0.27	295	P	Pb	22 59 47.9	+0.5
FUSS	Fushou	0.30	87	*i* P	Pb	22 59 48.6	+0.6
FUSS				*e*S	Sb	22 59 53.9	+0.7
WUSB	Renai	0.30	142	*e*P	Pb	22 59 48.4	+0.4
WUSB				*i* S	Sb	22 59 54.0	+1.0
NMLH	Miaoli	0.32	340	P	Pn	22 59 49.0	-0.5
NMLH				S	Sn	22 59 55.1	-0.2
TYC	Yuchr	0.33	189	*e*P	Pb	22 59 48.6	+0.4
TYC				S	Sn	22 59 54.6	-0.8
WHF	Hehuan Shan	0.33	105	P	Pn	22 59 49.7	-0.3
WHF				*i* S	Sn	22 59 55.5	-0.6
SMLT	Sun Moon Lake	0.35	182	*i* P	Pb	22 59 49.0	+0.4
SMLT				*e*S	Sn	22 59 55.3	-0.8
WCHH	Zhanghua	0.36	245	*e*P	Pb	22 59 49.0	+0.4
WCHH				S	Sn	22 59 55.4	-0.7
OWD	Renai	0.37	139	P	Pn	22 59 49.6	-0.6
OWD				S	Sb	22 59 55.4	+0.9
NSTT	Nanjuang	0.40	11	*i* P	Pb	22 59 49.8	+0.4
NSTT				*i* S	Sb	22 59 56.0	+0.7
WNT	Mingjian	0.41	211	*e*P	Pn	22 59 50.2	-0.5
WNT				*e*S	Sn	22 59 56.8	-0.7
LIOB	Emei	0.42	13	P	Pb	22 59 50.1	+0.4
LIOB				*e*S	Sb	22 59 56.7	+0.9
NFF	Wufeng Townshi	0.44	25	*i* P	Pb	22 59 50.4	+0.5
NFF				S	Sb	22 59 56.8	+0.5
WJS	Zhushan	0.44	203	*e*S	Sn	22 59 57.5	-0.8
SSLB	Suanglung	0.45	175	*e*P	Pb	22 59 50.0	-0.1
SSLB				*i* S	Sb	22 59 56.9	+0.5
NNS	Nan Shan	0.47	64	*e*P	Pn	22 59 51.2	-0.4
NNSB	Datong	0.47	65	*e*P	Pb	22 59 50.9	+0.4
LXIB	Xiulin Townshi	0.50	115	P	Pn	22 59 51.6	-0.5
LXIB				*e*S	Sb	22 59 58.6	+0.5
ETLH	Xiulin Townshi	0.52	93	P	Pn	22 59 51.9	-0.4
ETLH				S	Sb	22 59 58.8	+0.2
WHYT	Xinyi Township	0.54	186	*i* P	Pb	22 59 51.8	+0.2
WHYT				*e*S	Sn	22 59 59.9	-0.7
KSHI	Guanxi Townshi	0.59	24	*e*P	Pn	22 59 53.1	-0.1
ETM	Tongmen	0.59	117	*e*P	Pn	22 59 52.9	-0.3
NSK	Sanguang	0.60	43	*e*P	Pn	22 59 53.1	-0.3
NSK				*e*S	Sb	23 00 01.0	+0.2
YHNB	Yeheng	0.61	44	*e*P	Pb	22 59 53.0	+0.3
YHNB				*e*S	Sb	23 00 00.9	0.0
NACB	Ninganchiao	0.62	95	S	Sb	23 00 01.8	+0.4
WGK	Gukeng	0.63	211	*i* S	Sn	23 00 03.1	+0.2
ESL	Shilin	0.63	131	P	Pb	22 59 53.0	0.0
LATG	Datong	0.64	62	*e*P	Pn	22 59 53.8	-0.1
WDLH	Douliu	0.64	212	*e*P	Pb	22 59 53.3	0.0
CHN5	Tsauling	0.67	199	*i* P	Pb	22 59 53.7	-0.1
CHN5				*i* S	Sn	23 00 03.5	-0.4
WARBT	Fenglin Townsh	0.67	140	*i* P	Pn	22 59 54.3	0.0
WARBT				*e*S	Sn	23 00 03.4	-0.5
WTCT	Ta-ch'eng	0.69	238	*e*S	Sn	23 00 04.0	-0.1
ENTT	Nioudou	0.72	56	*e*P	Pn	22 59 55.1	+0.1
ALS	Alishan	0.73	188	P	Pb	22 59 54.9	+0.1
ALS				*i* S	Sn	23 00 05.5	-0.2
EGFH	Guangfu	0.73	140	*e*P	Pn	22 59 55.3	+0.2
SHUL	Shoufeng	0.74	127	*e*P	Pn	22 59 55.6	+0.4
SHUL				*e*S	Sn	23 00 06.2	+0.6
NCUH	Zhongli	0.77	19	*e*S	Sn	23 00 07.0	+0.6
ENA	Nanau	0.78	75	*e*P	Pn	22 59 56.0	+0.3
FUSB	Fushanzhiwuyua	0.81	49	*e*P	Pn	22 59 56.8	+0.5
EHY	Hungye	0.81	153	P	Pn	22 59 56.5	+0.2
EHY				*e*S	Sn	23 00 08.4	+0.9
EWUT	Wuta	0.82	75	*e*S	Sn	23 00 07.7	+0.2
EHYH	Wanrong	0.83	152	P	Pn	22 59 57.0	+0.5
EHYH				S	Sn	23 00 08.0	0.0
WCKO	Fanlu	0.84	200	*e*P	Pn	22 59 56.7	+0.1
WCKO				*e*S	Sn	23 00 08.3	+0.2
CHY	Chiayi	0.86	212	*e*P	Pb	22 59 57.0	+0.1
WSF	Szhu	0.87	227	*e*S	Sn	23 00 09.1	+0.4
HGSD	Ruisui	0.87	148	*e*P	Pb	22 59 57.8	+0.6
YULB	Yu-li	0.91	157	*e*P	Pb	22 59 57.9	+0.2
YULB				S	Sn	23 00 10.4	+0.7
TWC	Suao	0.93	66	*e*P	Pb	22 59 58.4	+0.3
TWF1	Yuli	0.94	158	P	Pb	22 59 58.7	+0.3
TWF1				*e*S	Sn	23 00 11.7	+1.0
WSL	Shuilin Townsh	0.94	222	*e*P	Pn	22 59 58.0	0.0
TPUB	Ta-pu	0.96	196	P	Pn	22 59 58.4	+0.1
TPUB				S	Sn	23 00 11.8	+0.6
WTP	Ta-pu	1.02	196	*e*P	Pn	22 59 59.3	+0.2
TWK	Hsinying	1.04	202	*e*P	Pb	22 59 59.8	-0.2
ELDTW	Lidau	1.04	175	*e*P	Pn	22 59 59.6	+0.1
ICHU	Yijhu	1.04	214	*e*S	Sb	23 00 13.8	+0.4
STYH	Taoyuan	1.06	187	*e*P	Pn	22 59 59.9	+0.2
FULB	Fuli	1.09	161	*e*P	Pb	23 00 01.9	+1.1
FULB				*e*S	Sb	23 00 17.4	+2.8
CHN1	Nanshi	1.10	199	*e*P	Pb	23 00 00.7	-0.3
CHN1				*e*S	Sb	23 00 16.0	+1.0
EHD	Haiduan	1.11	166	*e*P	Pb	23 00 01.4	+0.3
EHD				*e*S	Sb	23 00 16.1	+0.8
CHKH	Chenggong	1.13	157	*e*P	Pb	23 00 01.9	+0.5
CHKH				S	Sb	23 00 18.0	+2.3
CHKT	Chengkung	1.20	160	*e*P	Pb	23 00 03.3	+0.6
EDH	Donghe	1.30	164	*e*P	Pb	23 00 04.3	-0.1

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*IDC **24** 23:21:24.4±1.7, 2°.71S×138°.58E, h0^{km}, mb3.3/2, mbtmp3.4/4, ML3.6/2, Error ellipse: s-maj=32.2km s-min=17.4km az=167.0*

*DJA **24** 23:21:27.1±1.0, 2°S±6°×13°9E±°, h16^{km}±11^{km}, M3.8/6, mb4.2/2, MLv3.6/6*

ISC 24 23:21:27.2±1.0**, 2°.6S**±0°.1×**138°.66E**±0°.08**, h32^{km}, n9, σ1^{s}.53**/9**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.59	5	P	Pn	23 21 38.2	-1.2
GENI	Genyem	1.50	90	P	Pb	23 21 55.9	+1.3
JAY	Jayapura	2.04	88	Pn	Pb	23 22 03.1	-0.6
	11nm,0.3s,baz=250,slow=9.7,SNR=32						
JAY				Lg	Lg	23 22 30.9	
	4.3nm,0.3s,baz=198,slow=20,SNR=6.3						
	26nm,0.3s						
JAY	Jayapura	2.04	88	P	Pb	23 22 03.1	-0.6
BAKI	Biak	2.90	298	P	Pn	23 22 09.9	-1.4
FAKI	Fak Fak	6.41	267	P	Pn	23 22 59.3	-0.3
	27nm,1.4s						
WRA	Warramunga Arr	17.76	193	P	Pn	23 25 30.6	-1.6
	0.3nm,0.3s,baz=15,slow=12,SNR=6.5						
	0.6nm,0.5s						
ASAR	Alice Springs	21.46	192	P	P	23 26 13.3	+0.2
	0.9nm,0.6s,baz=6.7,slow=10,SNR=10						
	0.9nm,0.6s						
MKAR	Makanchi Array	69.66	322	P	P	23 32 36.0	+2.3
	0.2nm,0.6s,baz=121,slow=7.2,SNR=2.7						
	0.2nm,0.6s						

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*IDC **24** 23:37:20.6±4.5, 18°.55S×178°.26W, h617^{km}±24^{km}, mb3.1/4, mbtmp4.1/5, Error ellipse: s-maj=123.6km s-min=37.3km az=138.0*

*NEIC **24** 23:37:21.0±2.1, 18°.7S±0°.1×178°.4W±0°.1, h606^{km}±12^{km}, mb4.6/11, Error ellipse: s-maj=23.6km s-min=13.2km az=142.0*

ISC 24 23:37:19.4±0.8**, 18°.5S**±0°.1×**178°.3W**±0°.1**, h600^{km}, n21, σ1^{s}.24**/21**, mb4.4**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.54	282	P	P	23 38 44.7	+2.8
	26nm,0.5s,baz=130,slow=14,SNR=37						
NIUE	Niue	7.97	95	P	P	23 39 19.7	+1.3
HNR	Honiara	22.92	290	P	P	23 41 40.1	+0.7
KHZ	Kahutara	24.82	194	P	P	23 41 53.7	-2.1
KHZ				IAmb	IAmb	23 41 54.4	
	comp=Z,23nm,0.9s						
ODZ	Otahua Downs	28.02	197	P	P	23 42 23.9	0.0
ODZ				IAmb	IAmb	23 42 34.3	
	comp=Z,12nm,1.1s						
MLZ	Mavora Lakes	29.07	200	P	P	23 42 30.7	-2.2
MLZ				IAmb	IAmb	23 42 32.2	
	comp=Z,14nm,1.1s						
ARMA	Armidale	29.72	241	P	P	23 42 39.1	+0.2
RABL	Rabaul	32.17	293	P	P	23 43 00.1	+0.3
CTAO	Charters Tower	33.44	261	P	P	23 43 10.7	+0.2
CTAO				IAmb	IAmb	23 43 28.5	
	comp=Z,12nm,1.1s						
PATS	Pohnpei	34.14	315	P	P	23 43 14.5	-1.9
PATS				IAmb	IAmb	23 43 24.8	
	comp=Z,95nm,1.1s						
STKA	Stephens Creek	38.42	242	P	P	23 43 51.1	-0.2
STKA				IAmb	IAmb	23 43 52.5	
	comp=Z,24nm,1.1s						
STKA	Stephens Creek	38.42	242	P	P	23 43 52.0	+0.7
	comp=Z,1.5nm,0.5s,baz=84,slow=9.2,SNR=4.5						
	comp=Z,1.5nm,0.5s						
WRA	Warramunga Arr	44.61	260	P	P	23 44 40.5	+0.4
	comp=Z,1.7nm,0.6s,baz=97,slow=8.0,SNR=19						
WRA				PcP	PcP	23 46 08.8	-0.9
	comp=Z,0.2nm,0.4s,baz=88,slow=3.3,SNR=1.2						
	comp=Z,1.7nm,0.6s						
ASAR	Alice Springs	44.72	255	P	P	23 44 41.3	+0.4
	comp=Z,2.5nm,0.5s,baz=94,slow=7.6,SNR=26						
	comp=Z,2.5nm,0.5s						
KNRA	Kununurra	50.52	265	P	P	23 45 23.4	-0.7
FITZ	Fitzroy Crossi	53.02	261	P	P	23 45 42.6	+0.6
FITZ	Fitzroy Crossi	53.02	261	P	P	23 45 42.4	+0.4
	comp=Z,1.0nm,0.4s,baz=127,slow=5.1,SNR=1.4						
	comp=Z,1.0nm,0.4s						
CTGM	Chitina Glacie	84.58	17	P	P	23 48 59.4	+9.1
CTGM				IAmb	IAmb	23 49 02.8	
	comp=Z,10nm,1.2s						
F15K	North Star Dit	84.59	6	P	P	23 48 48.8	-1.3
BRTR	Keskin Array B	145.26	314	PKPbc	PKPdf	23 55 50.2	+0.1
	comp=Z,0.3nm,0.6s,baz=90,slow=2.9,SNR=2.0						
MMAI	Mount Meron Ar	146.54	302	PKPbc	PKPbc	23 55 54.5	-0.6
	comp=Z,1.8nm,0.8s,baz=73,slow=4.8,SNR=2.3						

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*DJA **24** 23:47:04.4±0.5, 6°S±4°×12°9E±°, h265^{km}±12^{km}, M4.5/13, mB5.0/5, mb4.5/6, MLv4.6/13, Mw(mB)4.2/5*

*NEIC **24** 23:47:05.7±2.5, 6°.36S±0°.05×129°.19E±0°.09, h210^{km}±17^{km}, mb4.3/4, Error ellipse: s-maj=13.9km s-min=6.1km az=104.0*

*IDC **24** 23:47:07.2±4.7, 6°.47S×129°.13E, h223^{km}±45^{km}, mb3.0/4, mbtmp4.0/8, Error ellipse: s-maj=60.6km s-min=19.6km az=63.0*

ISC 24 23:47:05.9±0.6**, 6°.48S**±0°.05×**129°.26E**±0°.06**, h223^{km}, n43, σ2^{s}.32**/50**, mb3.2**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	2.05	18	P	Pn	23 47 49.4	+2.7
SAUI	Saumlaki	2.52	126	Pn	Pn	23 47 51.6	+0.2
SAUI				Sn	S	23 48 24.1	-2.9
SAUI	Saumlaki	2.52	126	P	Pn	23 47 52.6	+1.2
MSAI	Masohi	3.13	354	P	Pn	23 47 59.6	+1.3
FAKI	Fak Fak	4.63	40		Pn	23 48 15.0	-1.3
FAKI				Sn	S	23 49 06.4	-5.4
FAKI	Fak Fak	4.63	40	P	Pn	23 48 15.2	-1.1
FAKI	Fak Fak	4.63	40	S	S	23 49 08.1	-3.7
FAKI	Fak Fak	4.63	40	P	Pn	23 48 15.5	-0.8
FAKI				S	S	23 49 07.0	-4.8
KMPI	Kaimana, Papua	5.24	58	P	Pn	23 48 23.7	-0.2
SOEI	Soe	5.92	236	Pn	Pn	23 48 32.5	-0.1
SOEI	Soe	5.92	236	P	Pn	23 48 33.5	+0.9
SOEI	Soe	5.92	236	S	S	23 49 40.6	-0.8
SWI	Sorong	5.93	20	P	Pn	23 48 31.8	-0.9
	0.4nm2μm61nm,0.5s						
DRS	Darwin Rock St	6.13	165	P	Pn	23 48 34.5	-0.7
DRS	Darwin Rock St	6.13	165	S	S	23 49 44.0	-2.2
MTN	Manton Dam	6.59	164		Pn	23 48 41.4	+0.4
BATI	Baumata	6.66	236	P	Pn	23 48 42.4	+0.4
	44nm,0.4s,baz=108,slow=6.4,SNR=7.1						
BATI				S	S	23 49 54.7	-3.8
	39nm,0.3s,baz=29,slow=19,SNR=6.1						
BATI	Baumata	6.66	236	P	Pn	23 48 40.3	-1.7
	0.3nm66nm,0.9s						
KDU	Kakadu	6.93	153	P	Pn	23 48 46.0	+0.5
RKPI	Ransiki, Papua	6.96	45	P	Pn	23 48 44.6	-1.3
	60nm,0.4s						
EDFI	Ende, Flores	7.83	253	P	Pn	23 48 57.9	+0.7
LUWI	Luwuk	8.43	310	P	Pn	23 49 02.9	-1.8
KNRA	Kununurra	9.15	183		Pn	23 49 14.3	+0.3
PLAI	Plampang	11.62	258	P	Pn	23 49 47.0	+1.6
FITZ	Fitzroy Crossi	12.07	197	P	Pn	23 49 51.4	+0.3
	9.6nm,0.5s,baz=22,slow=15,SNR=38						
FITZ				S	S	23 51 56.7	-8.0
	1.8nm,0.4s,baz=18,slow=20,SNR=1.5						
FITZ	Fitzroy Crossi	12.07	197	P	Pn	23 49 51.5	+0.3
WB0	Warramunga Arr	14.12	160	Pn	Pn	23 50 17.6	+1.1
WRA	Warramunga Arr	14.26	160		Pn	23 50 19.4	+1.1
WRA	Warramunga Arr	14.26	160	P	Pn	23 50 18.4	+0.1
	1.7nm,0.3s,baz=342,slow=13,SNR=29						
WRA				S	S	23 52 51.9	-4.2
	4.6nm,0.7s,baz=340,slow=21,SNR=7.3						
WR8	Warramunga Arr	14.33	160		Pn	23 50 20.5	+1.4
COEN	Coen	15.57	120		P	23 50 36.0	+2.1
COEN				IAmb	IAmb	23 50 37.3	
	comp=Z,14nm,1.0s						
COEN	Coen	15.57	120	P	Pn	23 50 36.9	+2.7
QIS	Mount Isa	17.22	145	P	P	23 50 54.6	+2.8
MBWA	Marble Bar	17.26	211		P	23 50 52.2	-0.1
PSA00	Pilbara Seismi	17.55	210		P	23 50 56.1	+0.8
PSA00				IAmb	IAmb	23 50 58.5	
	comp=Z,11nm,1.1s						
AS31	Alice Springs	17.66	166	P	Pn	23 50 59.6	+0.8
ASAR	Alice Springs	17.66	166		Pn	23 50 59.9	+1.0
ASAR	Alice Springs	17.66	166	P	P	23 50 59.5	+2.9
	comp=Z,7.2nm,0.5s,baz=346,slow=10,SNR=99						
ASAR				S	S	23 54 05.5	-2.9
	comp=Z,2.2nm,0.9s,baz=346,slow=21,SNR=8.0						
SONM	Songino Array	57.72	342	P	P	23 56 35.0	+1.5
	comp=Z,0.3nm,0.6s,baz=146,slow=8.6,SNR=2.5						
	comp=Z,0.3nm,0.6s						
MKAR	Makanchi Array	67.39	327	P	P	23 57 38.8	+1.4
	comp=Z,0.2nm,0.4s,baz=120,slow=7.3,SNR=5.6						
	comp=Z,0.2nm,0.4s						
KURBB	Kurchatov Arra	71.69	329	P	P	23 58 02.7	-0.7
	comp=Z,0.1nm,0.4s,baz=128,slow=5.5,SNR=2.3						
	comp=Z,0.1nm,0.4s						
QSPA	South Pole Qui	83.49	180	P	P	23 59 09.6	+1.1
	comp=Z,0.6nm,0.5s,baz=338,slow=5.4,SNR=10.0						
	comp=Z,0.6nm,0.5s						
STLK	Strandline Lak	90.38	28	P	P	23 59 42.1	+0.4

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*IDC **25** 00:06:22.0±1.8, 2°.59S×138°.28E, h0^{km}, mb3.8/3, mbtmp3.8/6, ML3.7/3, MS3.2/2, Error ellipse: s-maj=50.6km s-min=25.7km az=131.0*

ISC 25 00:06:26.9±1.5**, 2°.7S**±0°.2×**138°.4E**±0°.2**, h32^{km}, n8, σ0^{s}.59**/6**, mb3.6**/3**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.34	86	Pn	Pn	00 07 03.1	-0.1
	8.2nm,0.3s,baz=268,slow=13,SNR=16						
	22nm,0.3s						
WRA	Warramunga Arr	17.59	193	P	Pn	00 10 29.2	-0.7
	0.4nm,0.3s,baz=15,slow=12,SNR=7.4						
	1.1nm,0.5s						
FITZ	Fitzroy Crossi	19.75	218	P	P	00 10 54.1	-0.2
	0.2nm,0.3s,baz=45,slow=11,SNR=1.6						
	3.4nm,0.9s						
ASAR	Alice Springs	21.30	191	P	P	00 11 11.6	+0.5
	1.2nm,0.5s,baz=16,slow=9.4,SNR=12						
	1.2nm,0.5s						
HNR	Honiara	22.46	108	LR	LR	00 19 46.1	
	comp=Z,59nm,20.7s,baz=62,slow=36						
ASAJ	Asahikawa	46.75	4	LR	LR	00 32 59.6	
	comp=Z,30nm,19.8s,baz=170,slow=34						
ILAR	Eielson Array	85.96	24	P	P	00 19 03.6	-0.1
	0.3nm,0.7s,baz=268,slow=5.4,SNR=3.4						
	0.3nm,0.7s						
QSPA	South Pole Qui	87.25	180	P	P	00 19 10.7	+0.5
	1.7nm,1.0s,baz=296,slow=6.3,SNR=2.4						
	1.7nm,1.0s						

---

*NEIC **25** 00:06:48.0±1.7, 2°.71S±0°.07×138°.49E±0°.05, h10^{km}±1^{km}, mb4.3/10, Error ellipse: s-maj=13.0km s-min=6.4km az=215.0*

*IDC **25** 00:06:47.1±0.8, 2°.57S×138°.50E, h0^{km}, mb4.0/9, mbtmp4.0/12, ML3.8/3, MS3.0/1, Error ellipse: s-maj=23.7km s-min=17.3km az=80.0*

ISC 25 00:06:50.7±0.6**, 2°.74S**±0°.08×**138°.47E**±0°.07**, h32^{km}, n29, σ1^{s}.33**/29**, mb4.0**/12**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.25	84	Pn	Pn	00 07 24.9	-0.8
	3.8nm,0.3s,baz=326,slow=12,SNR=6.0						
JAY				Sn	Sn	00 07 53.6	+1.2
	25nm,0.3s,baz=104,slow=20,SNR=7.3						
JAY				LR	LR	00 08 12.1	
	comp=Z,363nm,21.3s,baz=304,slow=39						
	91nm,0.3s						
FAKI	Fak Fak	6.21	268	Pn	Pn	00 08 19.6	-0.6
COEN	Coen	12.08	158	Pn	Pn	00 09 40.5	-0.1
KNRA	Kununurra	16.02	216	Pn	Pn	00 10 33.7	0.0
KNRA				IAmb	IAmb	00 11 01.3	
	comp=Z,24nm,1.1s						
WB0	Warramunga Arr	17.38	193		P	00 10 51.6	-0.5
WB0				IAmb	IAmb	00 11 12.9	
	comp=Z,43nm,1.2s						
WR8	Warramunga Arr	17.54	192		Pn	00 10 52.2	-0.8
WR8				IAmb	IAmb	00 11 15.4	
	comp=Z,33nm,1.2s						
WRAB	Tennant Creek	17.55	193		P	00 10 52.7	-1.2
WRAB				IAmb	IAmb	00 11 23.3	
	comp=Z,17nm,0.8s						
WRA	Warramunga Arr	17.57	193		Pn	00 10 50.1	-3.1
WRA	Warramunga Arr	17.57	193	P	P	00 10 56.0	+2.0
	comp=Z,0.8nm,0.3s,baz=16,slow=12,SNR=9.5						
	comp=Z,2.5nm,0.4s						
FITZ	Fitzroy Crossi	19.77	219	P	Pn	00 11 20.6	+0.6
	comp=Z,0.2nm,0.3s,baz=118,slow=9.0,SNR=2.5						
	comp=Z,3.6nm,0.8s						

```
ASAR  Alice Springs     21.27 192  P       P        00 11 42.3 +7.8
ASAR  Alice Springs     21.27 192  P       P        00 11 36.8 +2.3
      comp=Z,8.6nm,0.9s,baz=18,slow=9.6,SNR=5.5
      comp=Z,8.6nm,0.9s
MBWA  Marble Bar        25.84 223  P       P        00 12 18.4 -1.1
MJAR  Matsushiro Arr    39.08 360  P       P        00 14 13.4 -1.5
      comp=Z,1.1nm,0.4s,baz=174,slow=12,SNR=3.2
      comp=Z,1.1nm,0.4s
KLR   Kul'dur           52.09 354  P       P        00 15 57.6  0.0
      comp=Z,1.3nm,0.7s,baz=244,slow=18,SNR=2.1
      comp=Z,1.3nm,0.7s
SONM  Songino Array     57.64 335  P       P        00 16 38.8 +0.8
      comp=Z,0.9nm,0.7s,baz=144,slow=8.1,SNR=4.9
      comp=Z,0.9nm,0.7s
MKAR  Makanchi Array    69.66 323          P        00 17 57.4 +0.2
MKAR  Makanchi Array    69.66 323  P       P        00 17 58.5 +1.3
      comp=Z,0.7nm,0.6s,baz=121,slow=6.6,SNR=9.0
      comp=Z,0.7nm,0.6s
MAKZ  Makanchi          69.86 322          P        00 17 59.3 +0.9
MAKZ                               IAmb    IAmb     00 18 10.5
      comp=Z,2.2nm,0.7s
KURBB Kurchatov Arra    73.61 325  P       P        00 18 21.4 +0.6
      comp=Z,0.3nm,0.5s,baz=115,slow=5.8,SNR=4.1
      comp=Z,0.3nm,0.5s
VNDA  Vanda             75.77 175  P       P        00 18 32.1 -0.7
VNDA  Vanda             75.77 175  P       P        00 18 35.7 +2.8
      comp=Z,0.6nm,0.6s,baz=339,slow=8.4,SNR=3.7
      comp=Z,0.6nm,0.6s
BVAR  Borovoye Array    79.20 325  P       P        00 18 52.8 +0.3
      comp=Z,1.0nm,0.6s,baz=108,slow=5.7,SNR=6.5
      comp=Z,1.0nm,0.6s
ILAR  Eielson Array     85.96  24  P       P        00 19 25.7 -1.8
      comp=Z,0.5nm,0.6s,baz=265,slow=4.6,SNR=5.8
QSPA  South Pole Qui    87.21 180  P       P        00 19 33.3 -0.4
QSPA  South Pole Qui    87.21 180  P       P        00 19 34.6 +0.9
      comp=Z,2.8nm,1.1s,baz=307,slow=2.1,SNR=3.5
      comp=Z,2.8nm,1.1s
J26L  Joseph Creek      87.29  25  P       P        00 19 32.9 -1.2
J26L                               IAmb    IAmb     00 19 35.3
      comp=Z,2.9nm,1.1s
BMAR  Burnt Mountain    87.52  22  P       P        00 19 36.1 +1.0
LPAZ  La Paz           147.62 127  PKPbc   PKPab    00 26 35.9  0.0
      comp=Z,1.7nm,0.8s,baz=349,slow=1.2,SNR=6.6
```

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*CATAC **25** 00:08:18.2±0.8, 11°N±4°×8°7W±°, h15km±10km, M3.7/24, MLv3.7/24, Error ellipse: s-maj=9.4km s-min=7.7km az=29.2, confirmed*

*UCR **25** 00:08:34.6±0.5, 10°.91N×86°.23W, h16km±5km, MW4.0*

ISC 25 00:08:17.4±2.0**, 11°.05N**±0°.07×**87°.04W**±0°.09**, h10km, n39, σ0s.63**/43**, 9C-2D, Near coast of Nicaragua**

```
Code  Station Name        Δ°  AZ°    Phase ID           Time      Res
                                   Op      ISC       h  m  s     ISC
CRUN  El Crucero         1.18  38 ⇑P       Pb       00 08 37.9 -2.1
COPN  Copaltepe          1.21  21 eP       Sb       00 08 57.7 +1.6
COPN  Copaltepe          1.21  21 ⇑P       Pn       00 08 40.5 +0.1
NADN  Granada            1.21  55 ⇑P       Pb       00 08 40.1 -0.3
SABN  Sabanita           1.25  43  P       Pn       00 08 41.1 +0.1
NANN  Nandasmo           1.27  45  P       Pn       00 08 42.0 +0.9
SAPS  Ciudad Sandino     1.28  29  S       Sg       00 08 59.8 +1.2
SAPS  Ciudad Sandino     1.28  29 ⇑P       Pn       00 08 41.2 -0.1
MAS3  Al N del Volca     1.29  41  P       Pn       00 08 40.9 -0.6
MAS3                               S       Sb       00 08 58.3 -0.1
UNAN  Cigeo UNAN         1.30  35  P       Pn       00 08 41.5 -0.2
UNAN                               S       Sb       00 08 59.7 +1.0
TISN  Laguna Tiscapa     1.33  35  P       Pn       00 08 41.7 -0.3
MGAN  Managua            1.34  35  P       Pn       00 08 41.6 -0.6
MGAN  Managua            1.34  35  S       Sb       00 08 59.8 -0.2
R4DEC Barrio San Lui     1.34  35  P       Pn       00 08 41.6 -0.7
R4DEC Barrio San Lui     1.34  35  S       Sb       00 09 00.1 +0.1
APQ3  Volcan Apoyequ     1.39  28 ⇑P       Pn       00 08 42.8  0.0
WILN  Americas 2         1.39  37  P       Pn       00 08 42.6 -0.2
WILN                               S       Sb       00 09 01.1 -0.2
JAPN  Al SSO del Vol     1.42  70  P       Pn       00 08 43.9 +0.6
MOMN  Momotombo          1.44  20 ⇑P       Pn       00 08 43.5 -0.2
MORN  Al O del Volca     1.45  70 ⇓P       Pn       00 08 43.9 +0.2
CNGA  Al SSO del Vol     1.48  13 ⇓P       Pn       00 08 44.2  0.0
CNGN  Cerro Negro        1.48  13 ⇑P       Pn       00 08 44.1 -0.1
MOM2  El Cardon          1.49  21  P       Pn       00 08 44.1 -0.1
MOM2                               S       Sn       00 09 03.5 -0.2
CARN  Rivas              1.50  84  P       Pn       00 08 44.9 +0.6
ILCN  San Idelfonso      1.56  12  P       Pn       00 08 45.2  0.0
POLN  Al Sur del Vol     1.61   8  P       Pn       00 08 46.4 +0.4
PKGN  Cerro Pekin        1.62   2 ⇑P       Pn       00 08 46.4 +0.4
CRIN  San Cristobal      1.65 360  P       Pn       00 08 46.7 +0.3
MESS  Mesas              1.84  99 eP       Pg       00 08 53.5 +0.8
BOAB  BOACO BROADBAN1.94  44  S       Sn       00 09 15.3 +0.5
BOAB  BOACO BROADBAN1.94  44 ⇑P       Pn       00 08 50.0 -0.5
POTN  Potosi Cosigui     2.00 347  P       Pn       00 08 51.9 +0.7
INVE  Universidad In     2.02 106 eP       Pg       00 08 56.9 +0.7
MATN  Matagalpa          2.17  30  P       Pn       00 08 53.4 -0.3
JTS   Las Juntas de      2.18 110 eP       Pg       00 08 59.0 -0.3
ARE1  Arenal 1           2.35 104 eP       Pg       00 09 01.9 -0.6
VARE2 V. Arenal          2.35 104 eP       Pg       00 09 01.9 -0.6
CEDE  Laguna Cedeo       2.36 103 eP       Pg       00 09 02.4 -0.3
RCPN  Sur Rio San Ju     2.63  20  P       Pn       00 08 59.7 -0.4
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*NEIC **25** 00:24:17.0±0.9, 56°.0S±0°.1×27°.9W±0°.2, h107km±9km, mb4.6/8, Error ellipse: s-maj=22.3km s-min=15.0km az=205.0*

*IDC **25** 00:24:18.8±6.9, 55°.96S×27°.83W, h128km±62km, mb4.0/7, mbtmp4.5/8, Error ellipse: s-maj=25.5km s-min=19.2km az=91.0*

ISC 25 00:24:17.8±0.6**, 56°.0S**±0°.1×**28°.04W**±0°.09**, h121km, n26, σ0s.89**/27**, mb4.4**/7**, 5D, South Sandwich Islands region**

```
Code  Station Name        Δ°  AZ°    Phase ID           Time      Res
                                   Op      ISC       h  m  s     ISC
HOPE  Hope Point         5.13 286  Pn      Pn       00 25 32.6 +0.2
HOPE                               Sn      Sn       00 26 28.0 -2.5
VNA1  Neumayer--Stat    17.05 157 ⇓P       P        00 28 07.4 -0.8
      comp=Z,3.9nm,0.4s
VNA3  Neumayer Olymp    17.23 160 ⇓P       P        00 28 09.1 -1.2
      comp=Z,3.5nm,0.4s
VNA2  Neumayer--Watz    17.45 157 ⇓P       P        00 28 11.8 -0.9
      comp=Z,12nm,0.4s,baz=316,slow=12
SNAA  Sanae             19.01 156 ⇓P       P        00 28 29.3 -0.5
      comp=Z,733nm,0.4s
SNAA  Sanae             19.01 156  P       P        00 28 29.3 -0.5
SNAA                               IAmb    IAmb     00 28 30.5
      comp=Z,32nm,0.5s
SNAA  Sanae             19.01 156  P       P        00 28 29.3 -0.5
      comp=Z,31nm,0.5s,baz=312,slow=10,SNR=601
TROLL Troll, Antarti    20.54 153 ⇓P       P        00 28 44.9 -1.4
      comp=Z,715nm,0.5s
BELA  Belgrano 2        22.13 184  P       P        00 29 02.5 -0.5
MG02  Cerro Sombrero    23.95 260  P       P        00 29 21.3 +0.9
MG04  Isla Riesco       25.21 259  P       P        00 29 33.0 +1.1
TRQA  Tornquist         28.85 294  P       P        00 30 04.8 +0.2
QSPA  South Pole Qui    34.28 180  P       P        00 30 52.6 +0.6
QSPA                               IAmb    IAmb     00 30 53.6
      comp=Z,7.7nm,0.7s
QSPA  South Pole Qui    34.28 180  P       P        00 30 52.2 +0.1
      comp=Z,6.0nm,0.6s,baz=223,slow=2.9,SNR=53
      comp=Z,6.0nm,0.6s
MAW   Mawson            40.50 144  P       P        00 31 44.1  0.0
      comp=Z,2.6nm,0.7s,baz=263,slow=8.6,SNR=8.7
      comp=Z,2.6nm,0.7s
BOSA  Boshof            46.41  77  P       P        00 32 31.3 -0.8
      comp=Z,3.8nm,1.1s,baz=160,slow=15,SNR=2.4
      comp=Z,3.8nm,1.1s
VNDA  Vanda             46.63 183  P       P        00 32 34.2 +1.1
VNDA                               IAmb    IAmb     00 32 35.0
      comp=Z,6.1nm,0.8s
VNDA  Vanda             46.63 183  P       P        00 32 33.8 +0.6
      comp=Z,5.6nm,0.8s,baz=184,slow=6.8,SNR=22
      comp=Z,5.6nm,0.8s
LPAZ  La Paz            49.94 306  P       P        00 33 00.9 +1.0
      comp=Z,1.0nm,0.4s,baz=179,slow=6.7,SNR=7.0
      comp=Z,1.0nm,0.4s
DBIC  Dimbokro          65.29  25  P       P        00 34 46.8 +0.2
      comp=Z,6.4nm,1.1s,baz=142,slow=8.5,SNR=4.3
      comp=Z,6.4nm,1.1s
TORD  Torodi Ar. Bea    73.22  30  P       P        00 35 35.9 +0.5
TORD                               IAmb    IAmb     00 35 36.6
      comp=Z,4.3nm,0.6s
TORD  Torodi Ar. Bea    73.22  30  P       P        00 35 35.3  0.0
      comp=Z,6.9nm,0.5s,baz=202,slow=5.7,SNR=14
      comp=Z,6.9nm,0.5s
FINES FINESS Array B   124.53  28  PKP     PKPdf    00 43 00.4 -0.7
      comp=Z,0.3nm,0.5s,baz=205,slow=2.1,SNR=6.5
ARCES ARCESS Array B   131.04  22  PKP     PKPdf    00 43 13.2 -0.2
      comp=Z,1.4nm,0.8s,baz=219,slow=0.8,SNR=4.0
ILAR  Eielson Array    149.70 312  PKPbc   PKPbc    00 43 51.5 -0.2
      comp=Z,1.4nm,0.6s,baz=114,slow=2.9,SNR=15
SONM  Songino Array    151.20  87  PKPbc   PKPbc    00 43 55.6 -0.3
      comp=Z,1.0nm,0.5s,baz=225,slow=2.4,SNR=5.4
```

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*IDC **25** 00:26:12.3±1.0, 2°.76S×138°.69E, h0km, mb3.7/5, mbtmp3.7/8, ML3.8/2, MS2.9/3, Error ellipse: s-maj=30.4km s-min=22.8km az=108.0*

ISC 25 00:26:13.3±0.9**, 2°.8S**±0°.1×**138°.72E**±0°.08**, h10km, n10, σ1s.13**/9**, mb3.8**/5**, Irian Jaya**

```
Code  Station Name        Δ°  AZ°    Phase ID           Time      Res
                                   Op      ISC       h  m  s     ISC
JAY   Jayapura           2.01  81  Pn      Pb       00 26 49.5 -0.5
      29nm,0.3s,baz=209,slow=14
JAY                                Sn      Sg       00 27 18.9 +0.9
      8.0nm,0.3s,baz=126,slow=19,SNR=6.7
KRVT  Keravat (AS076    13.36  97  LR      LR       00 33 47.9
      comp=Z,6.3nm,19.5s,baz=81,slow=34
WRA   Warramunga Arr    17.53 194  P       P        00 30 18.5 -0.6
      0.6nm,0.3s,baz=15,slow=12,SNR=14
      1.5nm,0.5s
FITZ  Fitzroy Crossi    19.86 219  P       Pn       00 30 45.8 -0.5
      0.1nm,0.3s,baz=261,slow=15,SNR=1.6
      2.8nm,1.0s
ASAR  Alice Springs     21.22 192  P       P        00 31 00.9 +1.4
      3.4nm,0.7s,baz=20,slow=10,SNR=19
      3.4nm,0.7s
MKAR  Makanchi Array    69.90 322  P       P        00 37 25.5 +0.8
      0.2nm,0.7s,baz=124,slow=7.2,SNR=2.5
      0.2nm,0.7s
KURBB Kurchatov Arra    73.84 325  P       P        00 37 49.1 +0.9
      0.2nm,0.4s,baz=114,slow=6.7,SNR=1.4
      0.2nm,0.4s
BVAR  Borovoye Array    79.42 325  P       P        00 38 20.3 +0.6
      0.5nm,0.5s,baz=100,slow=6.6,SNR=4.1
      0.5nm,0.5s
KDAK  Kodiak Island     81.21  30  LR      LR       01 10 04.4
      comp=Z,27nm,20.2s,baz=210,slow=32
ILAR  Eielson Array     85.95  24  P       P        00 38 52.0 -1.5
      0.8nm,0.9s,baz=257,slow=5.4,SNR=7.6
ILAR                               LR      LR       01 12 29.1
      comp=Z,15nm,21.4s,baz=274,slow=32
      0.8nm,0.9s
```

WEL 25 00:28:06.0±1.4**, 34°S**±24°×**18°0E**±2°2**, h292km**±35km**, M4.0**/7**, mB5.1**/1**, ML4.4**/12**, MLv4.0**/7**, Mw(mB)4.4**/1**, Error ellipse: s-maj=35.1km s-min=23.7km az=139.0, confirmed, South of Kermadec Islands**

```
Code  Station Name        Δ°  AZ°    Phase ID           Time      Res
                                   Op      ISC       h  m  s     ISC
WMGZ  Waiomatatini S     4.10 197  P       Pn       00 29 11.5 -1.3
WMGZ                               S       S        00 30 07.6 +1.2
HAZ   Te Kaha            4.22 203  P       Pn       00 29 13.2 -1.0
HAZ                                S       S        00 30 10.3 +1.5
PKGZ  Pakihiroa          4.23 200  P       Pn       00 29 14.8 +0.4
PKGZ                               S       S        00 30 10.2 +1.1
PUZ   Puketiti           4.38 197  P       Pn       00 29 18.2 +2.2
PUZ                                S       S        00 30 12.2 +0.1
RUGZ  Raukumara Rang     4.45 203  P       Pn       00 29 15.2 -1.7
RUGZ                               S       S        00 30 13.3 -0.4
TWGZ  Tauwhareparae      4.55 199  P       Pn       00 29 20.0 +2.0
TWGZ                               S       S        00 30 14.2 -1.5
MWZ   Matawai            4.83 203  P       Pn       00 29 19.2 -2.0
MWZ                                S       S        00 30 21.7 +0.1
TKGZ  Te Karaka          4.83 199  P       Pn       00 29 19.1 -2.1
TKGZ                               S       S        00 30 21.5  0.0
URZ   Urewera            4.91 207  P       Pn       00 29 22.3 +0.3
URZ                                S       S        00 30 23.5 +0.4
RAGZ  Rawiri             5.01 203  P       Pn       00 29 23.6 +0.2
RAGZ                               S       S        00 30 26.6 +1.0
MKAZ  Moumakai           5.02 229  P       Pn       00 29 22.2 -1.2
RIGZ  Rimuhau            5.11 199  P       Pn       00 29 23.0 -1.5
MUGZ  Murupara           5.23 208  P       Pn       00 29 25.8  0.0
MTHZ  Maungataniwha      5.53 206  P       Pn       00 29 29.8 +0.4
TLZ   Tolley Road        5.66 217  P       Pn       00 29 32.2 +1.2
NMHZ  Naumai             5.76 205  P       Pn       00 29 32.0 -0.2
BKZ   Black Stump Fm     5.94 207  P       Pn       00 29 33.6 -0.7
HIZ   Hauiti             6.16 220  P       Pn       00 29 38.0 +1.1
KWHZ  Kaweka Forest      6.19 206  P       Pn       00 29 36.9 -0.4
NTVZ  North Tongarir     6.21 212  P       Pn       00 29 37.6  0.0
TMVZ  Te Maari           6.21 212  P       Pn       00 29 37.5 -0.2
ETVZ  East Tongariro     6.23 212  P       Pn       00 29 37.6 -0.3
OTVZ  Oturere            6.27 212  P       Pn       00 29 37.9 -0.5
TWVZ  Taurewa            6.29 214  P       Pn       00 29 38.6 -0.1
SNVZ  South Ngauruho     6.30 212  P       Pn       00 29 38.1 -0.7
KAHZ  Kahuranaki         6.37 201  P       Pn       00 29 39.5  0.0
FWVZ  Far West T-bar     6.39 212  P       Pn       00 29 39.1 -0.9
MAVZ  Matarangi          6.40 212  P       Pn       00 29 39.4 -0.8
WHVZ  Whangaehu Hut      6.40 212  P       Pn       00 29 39.5 -0.6
KRHZ  Kereru             6.40 205  P       Pn       00 29 38.6 -1.3
WNVZ  Wahianoa           6.43 211  P       Pn       00 29 39.4 -1.0
PKVZ  Pokaka             6.51 213  P       Pn       00 29 40.8 -0.5
PXZ   Pawanui            6.59 201  P       Pn       00 29 41.0 -1.1
PNHZ  Pukenui            6.70 205  P       Pn       00 29 41.0 -2.6
PRHZ  Porangahau         6.88 201  P       Pn       00 29 44.9 -0.7
DVHZ  Dannevirke         7.06 204  P       Pn       00 29 46.1 -1.7
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*IDC **25** 00:29:06.4±0.7, 2°.69S×138°.57E, h0km, mb4.0/9, mbtmp4.1/12, ML4.0/2, MS3.5/2, Error ellipse: s-maj=26.4km s-min=17.6km az=88.0*

*NEIC **25** 00:29:09.5±1.6, 2°.7S±0°.1×138°.61E±0°.08, h22km±6km, mb4.3/15, Error ellipse: s-maj=16.3km s-min=9.3km az=150.0*

ISC 25 00:29:08.0±0.6**, 2°.75S**±0°.09×**138°.56E**±0°.08**, h10km, n35, σ1s.15**/36**, mb4.2**/12**, Irian Jaya**

```
Code  Station Name        Δ°  AZ°    Phase ID           Time      Res
                                   Op      ISC       h  m  s     ISC
JAY   Jayapura           2.15  84  Pn      Pn       00 29 43.4 -0.7
      65nm,0.7s,baz=237,slow=8.9
JAY                                Sn      Sg       00 30 16.2 -1.2
      12nm,0.3s,baz=117,slow=18,SNR=4.7
JAY                                LR      LR       00 30 44.0
      comp=Z,717nm,20.3s,baz=347,slow=46
FAKI  Fak Fak            6.31 268  Pn      Pn       00 30 41.9 +0.7
COEN  Coen              12.04 158  Pn      Pn       00 32 01.3 +1.5
MTN   Manton Dam        12.44 216  Pn      Pn       00 32 04.6 -0.6
KNRA  Kununurra         16.07 216  Pn      Pn       00 32 53.1 -1.1
KNRA                               IAmb    IAmb     00 33 32.5
      comp=Z,24nm,1.0s
WB0   Warramunga Arr    17.40 193          Pn       00 33 10.5 -0.6
WB0                                IAmb    IAmb     00 33 30.9
      comp=Z,36nm,1.3s
WR0   Warramunga Arr    17.55 193  P       Pn       00 33 13.4 +0.4
WR0                                IAmb    IAmb     00 33 35.0
      comp=Z,21nm,1.1s
WR8   Warramunga Arr    17.56 193          Pn       00 33 11.6 -1.5
WR8                                IAmb    IAmb     00 33 33.0
      comp=Z,15nm,0.8s
WB2   Warramunga Arr    17.58 193  Pn      Pn       00 33 12.4 -1.0
WB2                                IAmb    IAmb     00 33 35.4
      comp=Z,47nm,1.4s
WRA   Warramunga Arr    17.58 193          Pn       00 33 10.7 -2.7
WRA   Warramunga Arr    17.58 193  P       Pn       00 33 13.6 +0.2
      comp=Z,0.7nm,0.3s,baz=12,slow=12,SNR=9.3
      comp=Z,4.9nm,0.8s
FITZ  Fitzroy Crossi    19.83 219  P       P        00 33 38.6 -0.5
FITZ  Fitzroy Crossi    19.83 219  P       P        00 33 39.1 -0.1
      comp=Z,0.2nm,0.3s,baz=6.9,slow=14,SNR=4.2
      comp=Z,5.5nm,1.1s
ASAR  Alice Springs     21.28 192          P        00 33 54.5 -0.3
ASAR  Alice Springs     21.28 192  P       P        00 33 54.9  0.0
      comp=Z,8.4nm,0.8s,baz=20,slow=11,SNR=14
      comp=Z,8.4nm,0.8s
PSA00 Pilbara Seismi    26.11 223  P       P        00 34 41.6 -0.8
PSA00                              IAmb    IAmb     00 34 45.1
      comp=Z,9.5nm,1.0s
MRNZ  Matariki Terra    49.24 146  P       P        00 37 56.3 -0.6
PETK  Petropavlovsk-    57.93  13  P       P        00 39 01.7 +1.3
      comp=Z,1.5nm,0.9s,baz=210,slow=7.6,SNR=3.1
      comp=Z,1.5nm,0.9s
MKAR  Makanchi Array    69.73 322  P       P        00 40 18.2 -0.2
      comp=Z,1.4nm,0.9s,baz=111,slow=6.6,SNR=9.9
      comp=Z,1.4nm,0.9s
ZALV  Zalesovo Beam     71.89 330  P       P        00 40 30.4 -0.9
      comp=Z,0.2nm,0.3s,baz=127,slow=6.1,SNR=2.1
      comp=Z,0.2nm,0.3s
KURBB Kurchatov Arra    73.67 325  P       P        00 40 41.2 -0.7
      comp=Z,0.7nm,0.6s,baz=114,slow=5.7,SNR=5.6
      comp=Z,0.7nm,0.6s
VNDA  Vanda             75.76 175  P       P        00 40 52.6 -1.0
VNDA                               IAmb    IAmb     00 41 28.2
      comp=Z,2.7nm,1.1s
VNDA  Vanda             75.76 175  P       P        00 40 54.1 +0.6
      comp=Z,1.5nm,0.8s,baz=325,slow=7.1,SNR=4.5
VNDA                               LR      LR       01 14 43.0
      comp=Z,45nm,18.0s,baz=3.5,slow=36
      comp=Z,1.5nm,0.8s
BVAR  Borovoye Array    79.26 325  P       P        00 41 14.2 +0.6
      comp=Z,1.6nm,0.7s,baz=108,slow=6.3,SNR=9.3
      comp=Z,1.6nm,0.7s
ILAR  Eielson Array     85.93  24  P       P        00 41 46.1 -2.0
      comp=Z,1.0nm,0.7s,baz=264,slow=4.5,SNR=11
      comp=Z,1.0nm,0.7s
F24K  Squaw Lake        86.28  22  P       P        00 41 48.3 -1.6
F24K                               IAmb    IAmb     00 42 09.7
      comp=Z,3.8nm,1.2s
QSPA  South Pole Qui    87.20 180  P       P        00 41 53.4 -1.1
QSPA  South Pole Qui    87.20 180  P       P        00 41 55.4 +0.9
      comp=Z,2.9nm,1.0s,baz=263,slow=2.8,SNR=5.6
      comp=Z,2.9nm,1.0s
J26L  Joseph Creek      87.25  25  P       P        00 41 53.4 -1.4
BMAR  Burnt Mountain    87.49  22  P       P        00 41 55.1 -0.6
H27K  Steamboat Moun    88.43  24  P       P        00 42 00.9 +0.6
I28M  Miner Creek       88.95  24  P       P        00 42 03.1 +0.4
I28M                               IAmb    IAmb     00 42 18.3
      comp=Z,2.1nm,1.1s
HYT   Haines Junctio    89.42  29  P       P        00 42 04.7 -0.4
CPUP  Villa Florida    147.26 153  PKPbc   PKPdf    00 48 52.4 +2.1
      comp=Z,1.6nm,1.2s,baz=30,slow=2.8,SNR=3.2
LPAZ  La Paz           147.54 127  PKPbc   PKPdf    00 48 54.0 +2.2
      comp=Z,2.3nm,1.0s,baz=10,slow=3.2,SNR=5.8
```

IDC 25 00:32:25.8±2.0**, 30°.66S**×**177°.24W, h0km, mb3.6**/2**, mbtmp3.6**/2**, Error ellipse: s-maj=49.0km s-min=30.0km az=87.0, Kermadec Islands**

```
Code  Station Name        Δ°  AZ°    Phase ID           Time      Res
                                   Op      ISC       h  m  s     ISC
RAO   Raoul Island       1.52 337  Pn      Pn       00 32 54.6 +0.3
      208nm,0.3s,baz=69,slow=13,SNR=13
RAO                                Sn      Sn       00 33 15.1 +0.3
      234nm,0.3s,baz=109,slow=22,SNR=8.1
ASAR  Alice Springs     43.75 267  P       P        00 40 33.3  0.0
      0.4nm,0.5s,baz=112,slow=7.7,SNR=1.7
      0.4nm,0.5s
WRA   Warramunga Arr    44.76 272  P       P        00 40 41.1 -0.3
      0.5nm,0.4s,baz=111,slow=8.0,SNR=5.0
      0.5nm,0.4s
FINES FINESS Array B   145.61 340  PKPbc   PKPdf    00 52 04.7 -0.6
      0.8nm,0.4s,baz=56,slow=3.5,SNR=21
HFS   Hagfors          149.62 349  PKPbc   PKPbc    00 52 16.1 -0.6
      0.7nm,0.7s,baz=346,slow=3.7,SNR=1.5
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*UCR **25** 00:38:48.4±0.8, 7°.85N×82°.98W, h14km±7km, MW3.7*

*UPA **25** 00:38:49.5±0.8, 7°.95N×82°.96W, h14km±3km, MW3.8*

ISC 25 00:38:48.5±2.2**, 7°.90N**±0°.09×**82°.98W**±0°.05**, h16km**±11km**, n33, σ0s.49**/47**, 2C-3D, South of Panama**

```
Code  Station Name        Δ°  AZ°    Phase ID           Time      Res
                                   Op      ISC       h  m  s     ISC
LMNES Limones            0.23  30 eP       Pb       00 38 55.0 +0.7
LESP3 La Esperanza,      0.54  20⇓iP       Pg       00 38 59.4 +0.2
LESP3                             eS       Sg       00 39 06.7 +0.3
PEDE3 Pedregal, Chir     0.73  49 eP       Pg       00 39 02.9 +0.1
PEDE3                             eS       Sb       00 39 13.4 +0.8
CSTBL De las Acacias     0.73  46 eP       Pg       00 39 02.9  0.0
FITO  Golfito            0.74 346 eP       Pg       00 39 02.1 -0.9
NELY  Ciudad Neily       0.75   2 eP       Pg       00 39 02.9 -0.1
NELY                              eS       Sb       00 39 13.7 +0.7
LOCO3 Loma Colorada,     0.75  48 eP       Pg       00 39 02.7 -0.4
LOCO3                             eS       Sb       00 39 14.2 +1.1
EDAD  Golfito            0.77 346 eP       Pg       00 39 02.6 -0.9
MCANO Manzana, Boque     0.78  31 eP       Pg       00 39 03.7 +0.1
LOMA3 Las Lomas, Chi     0.78  48 eP       Pg       00 39 03.9 +0.1
LOMA3                             eS       Sg       00 39 14.3 +0.1
CHIR3 Chiriqui UPA,      0.81  52 eP       Pg       00 39 04.1 -0.1
CHIR3                             eS       Sg       00 39 14.7 -0.2
MLIR3 Monte Lirio, C     0.90  10 eP       Pg       00 39 06.2 +0.2
MLIR3                             eS       Sg       00 39 18.2 +0.3
CLLRA Cordillera,        0.91  23 eP       Pg       00 39 05.9 -0.3
PTAR3 Potrerillos Ar     0.92  31 eP       Pg       00 39 06.2 -0.2
PTAR3                             eS       Sg       00 39 18.4 -0.1
BRU2  Volcan             0.93  18 eP       Pb       00 39 06.3  0.0
BRU2                              eS       Sg       00 39 19.1 +0.2
BRU2  Volcan             0.93  18⇓iP       Pb       00 39 06.3  0.0
BRU2                              eS       Sg       00 39 19.3 +0.4
TBS2                     0.94  20 eP       Pg       00 39 07.4 +0.6
SCLRA Santa Clara, W     0.95  12 eP       Pb       00 39 06.9 +0.3
BC3P  Paso Ancho         0.98  22⇓iP       Pb       00 39 06.9 -0.3
BC3P                              eS       Sb       00 39 20.3 +0.4
BQTLY Boquete Panama     0.99  31 eP       Pb       00 39 07.0 -0.4
BQSF3 Alto Boquete,      0.99  33⇑eP       Pb       00 39 07.0 -0.4
BQSF3                             eS       Sb       00 39 19.2 -1.1
PSOM3 Paja de Sombre     1.01  40⇑eP       Pb       00 39 07.1 -0.5
PSOM3                             eS       Sb       00 39 20.2 -0.6
ALCO  Alturas Coton,     1.05   8 eP       Pb       00 39 08.0 -0.4
PBNVO Pueblo Nuevo,      1.25  38 eP       Pn       00 39 10.6 -0.7
RBALA Bur                1.27  40 eP       Pn       00 39 11.1 -0.5
DRK0  Durika             1.38 349 eP       Pn       00 39 13.0 -0.2
EDPE  Pejibaye, P        1.38 335 eP       Pn       00 39 13.1  0.0
KKNTU Kakintº            1.49  51 eP       Pn       00 39 14.1 -0.4
GMAL  Guarumal, Vera     1.73  94 eP       Pn       00 39 18.2 +0.3
GMAL                              eS       Sn       00 39 39.6 -0.1
PIEC  Cerro El Cedra     1.97 331 eP       Pn       00 39 22.1 +0.7
LCR2  La Lucha 2         2.09 331 eP       Pn       00 39 23.6 +0.6
PAR1A Puntarenas Pro     2.10 323 eP       Pn       00 39 23.1 +0.1
JTS   Las Juntas de      3.07 321 eP       Pn       00 39 36.3 -0.1
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*PRE **25** 00:44:44.3±0.9, 27°.03S×26°.80E, h2km, ML2.7*

*BUL **25** 00:44:48.1±1.4, 27°.09S×27°.00E, h12km±13km, MD3.5*

*BGSI **25** 00:44:49.3±1.5, 27°.00S×26°.75E, h0km±27km, ML3.1*

ISC 25 00:44:45.6±1.4**, 27°.02S**±0°.03×**26°.79E**±0°.03**, h12km**±11km**, n44, σ1s.82**/83**, South Africa**

```
Code  Station Name        Δ°  AZ°    Phase ID           Time      Res
                                   Op      ISC       h  m  s     ISC
WDLM  Western Deep L     0.82  44 eP       Pg       00 45 00.7 -0.8
WDLM                              eS       Sg       00 45 11.2 -1.1
WDLM                               IAML             00 45 13.9
      comp=Z,458nm,0.2s
SWZ   Schweizer          1.31 263 eP       Pn       00 45 10.1 +0.2
SWZ                               eS       Sb       00 45 27.3 +0.1
SWZ                                IAML             00 45 32.6
      comp=Z,392nm,0.4s
HRAO  HartRAO            1.38  36 eP       Pn       00 45 11.4 +0.5
HRAO                              eS       Sb       00 45 30.6 +1.4
HRAO                               IAML             00 45 32.8
      comp=Z,183nm,0.7s
BOSA  Boshof             2.09 220 eP       Pn       00 45 21.9 +1.2
BOSA                              eS       Sn       00 45 48.5 +1.9
BOSA                               IAML             00 45 53.0
      comp=Z,53nm,0.2s
BOSA  Boshof             2.09 220 i P      Pn       00 45 23.4 +2.8
BOSA                              i S      Sb       00 45 49.9 +0.3
MAKGR Makgori            2.15 304 i P      Pb       00 45 25.1 +0.5
MAKGR                             i S      Sn       00 45 49.8 +1.6
MAKGR                              IAML             00 45 54.8
      comp=E,651nm,0.4s
LBTB  Lobatse            2.27 331 eP       Pn       00 45 24.4 +1.3
LBTB                              eS       Sn       00 45 52.1 +1.1
LBTB                               IAML             00 45 57.0
      comp=Z,176nm,0.2s
LBTB  Lobatse            2.27 331 i P      Pb       00 45 26.1 -0.5
LBTB                              i S      Sb       00 45 56.6 +1.9
NWCL  Newcastle          2.85 105 eP       Pn       00 45 31.7 +0.7
NWCL                              eS       Sn       00 46 05.2 -0.1
NWCL                               IAML             00 46 16.8
      comp=Z,93nm,0.4s
CRLN  Carolina, Mapu     3.07  71 eP       Pn       00 45 34.8 +0.7
CRLN                              eS       Sn       00 46 11.1 +0.3
CRLN                               IAML             00 46 24.7
      comp=Z,18nm,0.5s
SKOMA Sekoma             3.59 313 i P      Pn       00 45 43.5 +2.2
SKOMA                             i S      Sn       00 46 24.6 +1.1
SKOMA                              IAML             00 46 50.3
      comp=N,68nm,0.5s
LPHEP Lephephe           3.74 347 i P      Pn       00 45 45.9 +2.6
LPHEP                             i S      Sn       00 46 27.8 +0.5
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LPHEP				IAML		00 46 44.8	
	comp=Z,45nm,0.8s						
PHPEN	**Phepeng**	3.85	293	*i* P	Pn	00 45 47.1	+2.2
PHPEN				*i* S	Sn	00 46 30.6	+0.5
PILG	**Pilgrimsrest,**	4.09	60	*e*P	Pn	00 45 49.0	+0.7
PILG				*e*S	Sn	00 46 35.9	-0.3
PILG				IAML		00 46 59.1	
	comp=Z,34nm,0.3s						
KDWAN	**Kaudwane**	4.11	331	*i* P	Pn	00 45 50.8	+2.4
KDWAN				*i* S	Sn	00 46 36.2	-0.2
PMBG	**Pietermaritzbu**	4.11	128	*e*P	Pn	00 45 48.6	+0.3
PMBG				*e*S	Sn	00 46 36.0	-0.5
PMBG				IAML		00 46 56.5	
	comp=Z,21nm,0.5s						
KSTD	**Kokstad**	4.21	149	*e*P	Pn	00 45 50.8	+1.0
KSTD				*e*S	Sn	00 46 38.4	-0.6
KSTD				IAML		00 47 01.4	
	comp=Z,27nm,0.4s						
POGA	**Pongola**	4.39	95	*e*P	Pn	00 45 52.0	-0.1
POGA				*e*S	Sn	00 46 42.8	-0.4
POGA				IAML		00 47 03.9	
	comp=Z,26nm,0.5s						
MREMI	**Moremi**	4.47	8	*i* P	Pn	00 45 55.5	+2.2
MREMI				*i* S	Sn	00 46 46.7	+1.3
MREMI				IAML		00 47 07.3	
	comp=E,150nm,0.3s						
ALKP	**Alkanpan, Nort**	4.95	233	*e*P	Pn	00 46 00.2	+0.3
ALKP				*e*S	Sn	00 46 56.2	-0.9
ALKP				IAML		00 47 21.8	
	comp=Z,24nm,0.3s						
UPI	**Upington**	5.09	254	*e*P	Pn	00 46 02.9	+1.0
UPI				*e*S	Sn	00 46 59.9	-0.7
UPI				IAML		00 47 35.1	
	comp=Z,16nm,0.4s						
KEIM	**Keimoes**	5.42	251	*e*P	Pn	00 46 06.8	+0.4
KEIM				*e*S	Sn	00 47 07.0	-1.8
KEIM				IAML		00 47 48.0	
	comp=Z,20nm,0.3s						
MOPA	**Mopani**	5.43	51	*e*P	Pn	00 46 07.1	+0.6
MOPA				*e*S	Sn	00 47 07.3	-1.7
MOPA				IAML		00 47 38.7	
	comp=Z,27nm,0.5s						
MOPA	**Mopani**	5.43	51	*i* P	Pn	00 46 06.8	+0.3
MOPA				*i* S	Sn	00 47 04.5	-4.6
MUSN	**Musina, Limpop**	5.48	31	*e*P	Pn	00 46 08.4	+1.3
MUSN				*e*S	Sn	00 47 08.6	-1.5
MUSN				IAML		00 47 42.0	
	comp=Z,16nm,0.4s						
MUSN	**Musina, Limpop**	5.48	31	*i* P	Pn	00 46 09.4	+2.2
MUSN				*i* S	Sn	00 47 06.7	-3.4
BFON	**Badsfontein, M**	5.48	209	*e*P	Pn	00 46 08.3	+1.1
BFON				*e*S	Sn	00 47 08.6	-1.6
BFON				IAML		00 47 44.4	
	comp=Z,21nm,0.4s						
GRAF	**Camdeboo Natio**	5.61	200	*e*P	Pn	00 46 10.5	+1.5
GRAF				*e*S	Sn	00 47 12.0	-1.4
GRAF				IAML		00 47 47.9	
	comp=Z,13nm,0.7s						
BRAK	**Brakfontein**	5.84	215	*e*P	Pn	00 46 13.2	+1.1
BRAK				*e*S	Sn	00 47 17.0	-1.9
BRAK				IAML		00 47 52.8	
	comp=Z,11nm,0.6s						
KGCAE	**Kacgae**	5.88	314	*i* P	Pn	00 46 15.0	+2.3
KGCAE				*i* S	Sn	00 47 17.3	-2.8
KGCAE				IAML		00 47 51.0	
	comp=N,47nm,0.8s						
BROLN	**Tlhalogang**	5.92	5	*i* P	Pn	00 46 15.1	+1.9
BROLN				IAML		00 47 48.7	
	comp=E,21nm,0.6s						
ROOI	**Rooidraai Farm**	6.14	207	*e*P	Pn	00 46 17.6	+1.3
ROOI				*e*S	Sn	00 47 25.0	-1.5
ROOI				IAML		00 48 01.7	
	comp=Z,8.6nm,0.7s						
GRHM	**Grahamstown, E**	6.25	183	*e*P	Pn	00 46 18.2	+0.6
GRHM				*e*S	Sn	00 47 26.9	-2.1
GRHM				IAML		00 47 28.4	
	comp=Z,4.2nm,0.3s						
SOOWA	**Sowa**	6.45	355	*i* P	Pn	00 46 23.6	+3.1
SOOWA				IAML		00 48 06.0	
	comp=E,66nm,0.5s						
GRAN	**Grantham**	6.62	216	*e*P	Pn	00 46 24.1	+1.2
GRAN				*e*S	Sn	00 47 37.1	-1.3
GRAN				IAML		00 48 29.4	
	comp=Z,9.4nm,0.5s						
FRAZ	**Fraserburg**	6.78	223	*e*P	Pn	00 46 26.6	+1.5
FRAZ				*e*S	Sn	00 47 40.0	-2.3
FRAZ				IAML		00 48 23.8	
	comp=Z,6.5nm,0.5s						
BLWY	**Bulawayo**	7.05	14	*i* P	Pn	00 46 30.4	+1.6
BLWY				*i* S	Sn	00 47 43.9	-5.1
KOOLE	**Kule**	7.20	302	*i* P	Pn	00 46 32.2	+1.2
KOOLE				*i* S	Sn	00 47 49.3	-3.5
KOOLE				IAML		00 48 51.2	
	comp=N,23nm,3.9s						
MERW	**Merweville**	7.26	218	*e*P	Pn	00 46 33.1	+1.5
MERW				*e*S	Sn	00 47 51.4	-2.6
MERW				IAML		00 48 11.7	
	comp=Z,7.6nm,0.5s						
SUR	**Sutherland**	7.45	223	*e*P	Pn	00 46 35.6	+1.2
SUR				*e*S	Sn	00 47 56.4	-2.6
SUR				IAML		00 48 44.7	
	comp=Z,7.6nm,0.5s						
GRTLG	**Ghanzi**	7.59	317	*i* P	Pn	00 46 37.6	+1.3
GRTLG				*i* S	Sn	00 47 57.8	-4.6
GRTLG				IAML		00 48 52.8	
	comp=E,17nm,0.2s						
KOMG	**Komaggas**	8.65	249	*e*P	Pn	00 46 51.5	+0.9
KOMG				*e*S	Sn	00 48 25.3	-2.9
KOMG				IAML		00 48 41.4	
	comp=Z,3.0nm,0.7s						
QNGWA	**Qangwa**	9.07	324	*i* P	Pn	00 46 57.4	+0.9
QNGWA				IAML		00 49 06.4	
	comp=N,13nm,2.7s						
KRI	**Karoi**	10.47	15	*i* P	Pn	00 47 10.6	-5.2
KRI				*i* S	Sn	00 48 52.7	-21

IDC 25 00:49:12.4±2.0, 2°.43S×138°.32E, h0km, mb3.4/2, mbtmp3.4/4, ML3.5/2, Error ellipse: s-maj=39.1km s-min=26.6km az=134.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	2.39	92	Pn	Pn	00 49 53.4	+0.5
	8.9nm,0.3s,baz=262,slow=14,SNR=13						
JAY				Sn	Sn	00 50 22.9	0.0
	1.4nm,0.3s,baz=272,slow=19,SNR=1.3						
	17nm,0.3s						
WRA	**Warramunga Arr**	17.83	192	P	Pn	00 53 21.4	-0.8
	0.2nm,0.3s,baz=15,slow=12,SNR=5.4						
	0.3nm,0.4s						
ASAR	**Alice Springs**	21.54	191	P	P	00 54 04.0	+0.5
	0.6nm,0.6s,baz=20,slow=11,SNR=5.9						
	0.6nm,0.6s						
ILAR	**Eielson Array**	85.74	25	P	P	01 01 53.0	-0.3
	0.4nm,0.7s,baz=270,slow=3.9,SNR=4.3						
	0.4nm,0.7s						

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*IDC **25** 00:53:48.5±10.0, 7°.07S×129°.55E, h118km±109km, mb3.4/1, mbtmp4.3/4, ML4.1/3, Error ellipse: s-maj=68.8km s-min=41.4km az=42.0*

*NEIC **25** 00:53:49.9±0.9, 6°.7S±0°.2×129°.2E±0°.1, h202km±26km, mb4.5/4, Error ellipse: s-maj=24.9km s-min=10.4km az=211.0*

ISC 25 00:53:49.6±1.3, 6°.8S±0°.1×129°.15E±0°.07, h200km, n21, σ1^s.20/23, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	2.42	118	Pn	Pn	00 54 33.7	+1.0
SAUI				Sn	Sn	00 55 06.8	+0.6
SOEI	**Soe**	5.63	239	Pn	Pn	00 55 13.6	+1.2
DRS	**Darwin Rock St**	5.83	163	P	Pn	00 55 16.5	+1.8
MTN	**Manton Dam**	6.29	162		Pn	00 55 21.7	+1.0
MTN	**Manton Dam**	6.29	162	P	Pn	00 55 21.7	+1.0
BATI	**Baumata**	6.38	238	S	Sn	00 56 35.9	+1.0
	29nm,0.3s,baz=26,slow=20,SNR=6.0						
KDU	**Kakadu**	6.68	151	P	Pn	00 55 26.4	+0.6
KNRA	**Kununurra**	8.80	182		Pn	00 55 54.1	+0.7
FITZ	**Fitzroy Crossi**	11.71	197	Pn	Pn	00 56 30.9	0.0
FITZ	**Fitzroy Crossi**	11.71	197	P	Pn	00 56 30.3	-0.6
	1.1nm,0.3s,baz=27,slow=9.4,SNR=17						
FITZ				S	Sn	00 58 39.4	-2.1
	5.0nm,0.8s,baz=114,slow=20,SNR=2.9						
	5.4nm,0.5s						
WB0	**Warramunga Arr**	13.83	159	Pn	Pn	00 56 57.4	-0.2
WRA	**Warramunga Arr**	13.98	159	Pn	Pn	00 56 58.7	-0.7
WRA	**Warramunga Arr**	13.98	159	P	Pn	00 56 57.5	-1.9
	0.7nm,0.3s,baz=339,slow=13,SNR=12						
WRA				S	S	00 59 28.3	-6.8
	0.3nm,0.3s,baz=338,slow=24,SNR=1.7						
	1.1nm,0.3s						
WR8	**Warramunga Arr**	14.05	159	Pn	Pn	00 57 00.0	-0.2
COEN	**Coen**	15.51	118		Pn	00 57 16.8	-1.4
COEN				IAmb	IAmb	00 57 17.9	
	comp=Z,44nm,1.4s						
PSA00	**Pilbara Seismi**	17.19	211	P	P	00 57 37.2	+0.4
ASAR	**Alice Springs**	17.36	165	P	P	00 57 40.4	+1.8
ASAR	**Alice Springs**	17.36	165	P	P	00 57 40.0	+1.4
	comp=Z,1.0nm,0.3s,baz=348,slow=11,SNR=4.5						
ASAR				S	S	01 00 48.2	-0.6
	comp=Z,1.7nm,0.8s,baz=349,slow=24,SNR=6.3						
	comp=Z,19nm,0.6s						
KULM	**Kulim**	30.88	292	P	P	00 59 46.4	-1.2
KULM				IAmb	IAmb	00 59 48.8	
	comp=Z,6.7nm,0.9s						
KHZ	**Kahutara**	52.78	139	P	P	01 02 44.1	-0.2
MKAR	**Makanchi Array**	67.62	327	P	P	01 04 35.2	+10
	comp=Z,0.3nm,0.3s,baz=130,slow=6.7,SNR=4.7						
	comp=Z,0.3nm,0.3s						

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*IDC **25** 00:59:08.3±0.6, 1°.35N×125°.43E, h0km, mb4.2/14, mbtmp4.2/14, MS2.8/1, Error ellipse: s-maj=56.5km s-min=13.4km az=71.0*

*DJA **25** 00:59:12.5±0.2, 2°N±2°×12°6E±°, h10km, M4.5/13, mB4.8/3, mb4.7/7, MLv4.4/13, Mw(mB)4.1/3*

*NEIC **25** 00:59:14.7±1.7, 1°.66N±0°.09×126°.35E±0°.07, h42km±7km, mb4.6/56, Error ellipse: s-maj=14.1km s-min=8.8km az=212.0*

ISC 25 00:59:14.8±0.4, 1°.68N±0°.05×126°.39E±0°.07, h47km, n100, σ1^s.19/101, mb4.5/47, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	1.33	132		Pn	00 59 36.9	0.0
TNTI	**Ternate**	1.33	132	P	Pn	00 59 36.4	-0.5
SGSI	**Sangihe**	2.17	337	P	Pn	00 59 47.6	-0.9
SGSI				S	Sn	01 00 13.5	-0.7
KMSI	**Cibinong**	2.64	246	P	Pn	00 59 55.2	+0.3
SANI	**Sanana**	3.72	186	P	Pn	01 00 11.2	+1.5
LUWI	**Luwuk**	4.51	233	Pn	Pn	01 00 20.4	-0.2
LUWI	**Luwuk**	4.51	233	P	Pn	01 00 22.8	+2.2
MRSI	**Marisa**	4.60	255	P	Pn	01 00 22.7	+0.9
NLAI	**Namlea**	4.93	172	P	Pn	01 00 27.9	+1.5
	0.3nm44nm,0.5s						
APSI	**Ampana**	5.39	242	P	Pn	01 00 33.5	+0.8
DAV	**Davao City (W)**	5.42	351	LR	LR	01 03 00.4	
	comp=Z,97nm,19.4s,baz=148,slow=41						
TOLI2	**Tolitoli**	5.63	264		Pn	01 00 34.5	-1.5
MPSI	**Mapaga**	6.62	258	P	Pn	01 00 49.8	+0.2
	0.1nm35nm,0.7s						
MYLDM	**Lahad Datu**	8.61	294		Pn	01 01 16.0	-0.8
KKM	**Kota Kinabalu**	11.04	293		Pn	01 01 49.1	-1.1
KNRA	**Kununurra**	17.40	172		Pn	01 03 13.6	-0.7
FITZ	**Fitzroy Crossi**	19.66	182	P	P	01 03 39.0	-0.9
FITZ	**Fitzroy Crossi**	19.66	182	P	P	01 03 38.7	-1.2
	1.3nm,0.4s,baz=320,slow=22,SNR=1.8						
YULB	**Yu-li**	22.15	348	P	P	01 04 06.5	-0.2
TPUB	**Ta-pu**	22.21	346	P	P	01 04 08.0	+0.6
TPUB				IAmb	IAmb	01 04 10.6	
	comp=Z,20nm,0.6s						
WB0	**Warramunga Arr**	22.71	160		P	01 04 12.3	-0.5
WB0				IAmb	IAmb	01 04 18.7	
	comp=Z,12nm,0.8s						
COEN	**Coen**	22.76	134	P	P	01 04 12.5	-0.8
COEN				IAmb	IAmb	01 04 16.0	
	comp=Z,34nm,1.4s						
WRAB	**Tennant Creek**	22.85	160	P	P	01 04 12.5	-1.8
WRAB				IAmb	IAmb	01 04 26.0	
	comp=Z,11nm,0.7s						
WRA	**Warramunga Arr**	22.86	160		P	01 04 13.1	-1.1
WRA	**Warramunga Arr**	22.86	160	P	P	01 04 13.2	-1.1
	comp=Z,4.3nm,0.5s,baz=337,slow=10,SNR=20						
WRA				PcP	PcP	01 08 04.6	+0.5
	comp=Z,0.6nm,0.6s,baz=340,slow=1.2,SNR=2.9						
	comp=Z,4.3nm,0.5s						
WR8	**Warramunga Arr**	22.92	160		P	01 04 14.1	-0.9
MBWA	**Marble Bar**	23.61	196	P	P	01 04 20.4	-1.2
MBWA				IAmb	IAmb	01 04 54.7	
	comp=Z,21nm,1.4s						
PSA00	**Pilbara Seismi**	23.97	195	P	P	01 04 24.3	-0.7
ASAR	**Alice Springs**	26.23	164	P	P	01 04 45.8	+0.2
ASAR	**Alice Springs**	26.23	164	P	P	01 04 45.5	-0.1
	comp=Z,2.8nm,0.6s,baz=346,slow=7.4,SNR=30						
ASAR				PcP	PcP	01 08 11.9	+0.4
	comp=Z,1.0nm,0.6s,baz=357,slow=2.9,SNR=6.5						
	comp=Z,2.8nm,0.6s						
GIRL	**Giralia**	26.92	205	P	P	01 04 51.4	-0.3
NJ2	**Nanjing**	31.04	348	*e*P	P	01 05 29.8	+1.6
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MORW	**Morawa**	32.14	197	P	P	01 05 36.6	-1.4
MORW				IAmb	IAmb	01 06 16.9	
	comp=Z,15nm,1.4s						
PZH	**PanZhiHua**	34.21	318	P	P	01 05 56.4	+0.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KSRS	**Korea Array**	35.63	2	P	P	01 06 10.7	+2.5
	comp=Z,1.0nm,0.6s,baz=180,slow=9.4,SNR=4.5						
	comp=Z,1.0nm,0.6s						
STKA	**Stephens Creek**	36.35	158	P	P	01 06 14.9	+0.5
	comp=Z,1.0nm,0.3s,baz=328,slow=7.1,SNR=3.6						
	comp=Z,1.0nm,0.3s						
HHC	**Hu-ho-hao-te**	41.24	343	*e*P	P	01 06 57.8	+2.4
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,94nm,4.6s						
USRK	**Ussuriysk Ar.**	42.63	6	P	P	01 07 10.3	+3.7
	comp=Z,0.9nm,0.5s,baz=200,slow=7.4,SNR=2.2						
	comp=Z,0.9nm,0.5s						
EVN	**Everest**	45.96	308	P	P	01 07 33.9	-0.3
EVN				IAmb	IAmb	01 07 36.5	
	comp=Z,4.8nm,0.8s						
SONM	**Songino Array**	49.13	342	P	P	01 07 58.8	+0.9
SONM	**Songino Array**	49.13	342	P	P	01 07 57.6	-0.3
	comp=Z,1.9nm,0.7s,baz=162,slow=8.6,SNR=9.3						
	comp=Z,1.9nm,0.7s						
MKAR	**Makanchi Array**	59.05	326	P	P	01 09 08.8	-1.3
MKAR	**Makanchi Array**	59.05	326	P	P	01 09 08.4	-1.7
	comp=Z,6.3nm,0.6s,baz=119,slow=7.8,SNR=30						
	comp=Z,6.3nm,0.6s						
MAKZ	**Makanchi**	59.23	326	P	P	01 09 10.4	-0.9
MAKZ				IAmb	IAmb	01 09 13.7	
	comp=Z,5.8nm,0.8s						
NRN	**Naryn**	60.11	318	P	P	01 09 18.6	+0.7
LBZ	**Lake Benmore**	60.19	145	P	P	01 09 17.9	-0.1
TUWZ	**Tuamarina**	60.78	141	P	P	01 09 21.8	-0.3
BKZ	**Black Stump Fm**	61.31	137	P	P	01 09 25.2	-0.5
RTZ	**Ruatahuna**	61.38	136	P	P	01 09 25.7	-0.5
ZAA0	**Zalesovo Array**	62.26	334	P	P	01 09 32.1	+0.3
ZAA0				IAmb	IAmb	01 09 33.6	
	comp=Z,1.8nm,0.6s						
ZALV	**Zalesovo Beam**	62.26	334	P	P	01 09 31.5	-0.2
	comp=Z,1.6nm,0.5s,baz=127,slow=7.5,SNR=8.7						
	comp=Z,1.6nm,0.5s						
KURBB	**Kurchatov Arra**	63.28	328	P	P	01 09 37.1	-1.5
	comp=Z,4.9nm,0.6s,baz=127,slow=6.2,SNR=49						
	comp=Z,4.9nm,0.6s						
KURK	**Kurchatov**	63.29	328		P	01 09 37.3	-1.3
KKAR	**Karatay Array**	64.50	318	P	P	01 09 45.1	-1.8
CASY	**Casey**	68.75	187	P	P	01 10 13.5	+0.1
CASY				IAmb	IAmb	01 10 23.3	
	comp=Z,10nm,1.4s						
BVAR	**Borovoye Array**	68.85	328	P	P	01 10 13.6	-0.8
	comp=Z,1.2nm,0.6s,baz=137,slow=7.6,SNR=7.3						
	comp=Z,1.2nm,0.6s						
AB31	**Akbulak array**	73.52	321		P	01 10 41.4	-1.3
ABKAR	**Akbulak array**	73.52	321		P	01 10 41.4	-1.3
ABKAR	**Akbulak array**	73.52	321	P	P	01 10 42.0	-0.7
ARTI	**Arti**	76.56	328	P	P	01 10 59.3	-0.7
ARTI				IAmb	IAmb	01 11 00.8	
	comp=Z,4.8nm,0.6s						
J16K	**Anvik River**	80.92	26	P	P	01 11 24.8	+1.0
J16K				IAmb	IAmb	01 11 55.5	
	comp=Z,9.9nm,1.4s						
VOI	**Vohitsoka**	80.97	248	P	P	01 11 25.3	+0.2
RAYN	**Ar Rayn**	80.97	293		P	01 11 24.1	-0.9
RAYN				IAmb	IAmb	01 11 27.9	
	comp=Z,4.4nm,0.9s						
L16K	**Owhat River**	81.04	28	P	P	01 11 25.3	+0.8
L16K				IAmb	IAmb	01 11 26.4	
	comp=Z,6.3nm,1.4s						
M16K	**Timber Creek**	81.13	28	P	P	01 11 25.9	+0.9
M16K				IAmb	IAmb	01 11 31.6	
	comp=Z,7.8nm,1.4s						
O16K	**Kokwok River B**	81.25	30	P	P	01 11 27.2	+1.6
VNDA	**Vanda**	81.44	173	P	P	01 11 27.2	+0.9
VNDA	**Vanda**	81.44	173	P	P	01 11 25.3	-1.0
	comp=Z,1.4nm,0.6s,baz=325,slow=7.0,SNR=5.9						
	comp=Z,1.4nm,0.6s						
J17K	**VABM Dome**	81.61	26	P	P	01 11 28.0	+0.5
L18K	**Granite Mounta**	82.44	27	P	P	01 11 33.6	+1.7
L18K				IAmb	IAmb	01 11 34.6	
	comp=Z,3.6nm,0.8s						
J18K	**Innoko River**	82.66	26	P	P	01 11 34.2	+1.1
J18K				IAmb	IAmb	01 11 35.2	
	comp=Z,2.8nm,0.7s						
C19K	**Lookout Ridge**	82.77	20	P	P	01 11 34.9	+1.4
C19K				IAmb	IAmb	01 11 37.5	
	comp=Z,5.1nm,1.2s						
SII	**Sitkinak Islan**	82.78	33	P	P	01 11 32.1	-1.7
D19K	**Kuna River**	83.15	21	P	P	01 11 36.9	+1.4
D19K				IAmb	IAmb	01 11 38.0	
	comp=Z,3.8nm,0.8s						
H19K	**Roundabout Mou**	83.17	24		P	01 11 37.0	+1.4
H19K				IAmb	IAmb	01 11 38.4	
	comp=Z,5.7nm,0.7s						
J19K	**Poorman**	83.24	26		P	01 11 37.2	+1.2
J19K				IAmb	IAmb	01 11 39.1	
	comp=Z,4.9nm,1.1s						
N19K	**Bonanza Creek**	83.24	29	P	P	01 11 38.2	+2.0
N19K				IAmb	IAmb	01 11 39.3	
	comp=Z,4.9nm,0.8s						
E19K	**Redstone River**	83.25	22		P	01 11 35.0	-1.1
E19K				IAmb	IAmb	01 11 39.2	
	comp=Z,5.1nm,0.9s						
L19K	**White Mountain**	83.28	28	P	P	01 11 38.0	+1.7
OHAK	**Old Harbor**	83.35	33	P	P	01 11 38.0	+1.3
D20K	**Etivluk River**	83.73	21	P	P	01 11 39.8	+1.3
D20K				IAmb	IAmb	01 12 00.6	
	comp=Z,6.9nm,1.3s						
J20K	**Nowinta River**	83.91	26	P	P	01 11 41.3	+1.9
SYI	**Shuyak Island**	84.00	31	P	P	01 11 41.0	+1.1
CNPM	**China Poot**	84.69	30	P	P	01 11 43.9	+0.4
SKT	**Skwentna**	84.80	28	P	P	01 11 44.4	+0.4
SKT				IAmb	IAmb	01 11 45.2	
	comp=Z,3.4nm,1.0s						
BRLK	**Bradley Lake**	84.89	30	P	P	01 11 44.1	-0.4
SUA	**Susitna One**	85.12	29	P	P	01 11 46.2	+0.4
SUA				IAmb	IAmb	01 11 47.2	
	comp=Z,3.9nm,0.7s						
D22K	**Ayikyak River**	85.17	21	P	P	01 11 47.9	+2.1
D22K				IAmb	IAmb	01 12 13.3	
	comp=Z,6.4nm,1.2s						
SLKM	**Skilak Lake**	85.29	30	P	P	01 11 46.8	+0.3
SEW	**Seward**	85.64	30	P	P	01 11 48.0	-0.2
KOPT	**Kop Dagi**	85.78	310	P	P	01 11 49.3	-0.4
KOPT				IAmb	IAmb	01 11 56.3	
	comp=Z,4.1nm,0.9s						
BMAR	**Burnt Mountain**	88.09	23	P	P	01 12 00.0	-0.1
MMAI	**Mount Meron Ar**	89.92	303	P	P	01 12 09.4	-0.1
	comp=Z,1.0nm,0.5s,baz=94,slow=4.3,SNR=2.5						
BRTR	**Keskin Array B**	91.06	310	P	P	01 12 12.5	-2.2
	comp=Z,0.5nm,0.7s,baz=97,slow=4.6,SNR=5.4						
	comp=Z,0.5nm,0.7s						
QSPA	**South Pole Qui**	91.59	180	P	P	01 12 15.6	-0.9
	comp=Z,1.1nm,1.0s,baz=36,slow=6.6,SNR=1.8						
	comp=Z,1.1nm,1.0s						
ARCES	**ARCESS Array B**	92.25	340	P	P	01 12 22.3	+2.9
	comp=Z,0.9nm,0.7s,baz=61,slow=4.7,SNR=3.8						
FINES	**FINESS Array B**	93.47	332	P	P	01 12 24.8	-0.3
	comp=Z,0.9nm,0.7s,baz=93,slow=3.8,SNR=6.3						
	comp=Z,0.9nm,0.7s						
H02S1	**DAWSON INLET T**	95.33	36	T	T	02 58 45.8	
BUR08	**Bucovina Ar. S**	96.30	318		P	01 12 38.2	-0.4
TORD	**Torodi Ar. Bea**	123.21	287	PKP	PKPdf	01 18 07.0	-0.5
	comp=Z,0.5nm,0.7s,baz=67,slow=2.0,SNR=3.6						

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*JMA **25** 01:04:54.9±0.3, 23°N±1°×123°.6E±0°.8, h47km±3km, MV3.0/18, NEAR ISHIGAKIJIMA ISLAND*

ISC 25 01:04:54.6±1.8, 23°.41N±0°.08×123°.60E±0°.05, h29km±13km, n19, σ0^s.57/29, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	0.68	17	P	Pb	01 05 08.0	0.0
HATJ				S	Sb	01 05 17.1	+0.1
JKRS	**Kuro-shima**	0.91	25	P	Pn	01 05 11.7	+0.3
JKRS				*e*S	Sb	01 05 23.5	-0.1
IRIF	**Iriomote-Funau**	0.93	8	P	Pn	01 05 11.6	-0.1
IRIF				*e*S	Sb	01 05 23.7	-0.5
JIJ	**Ishigaki jima**	1.08	28	P	Pn	01 05 13.5	-0.2
JIJ				S	Sn	01 05 26.8	-0.9
YOJ	**Yonaguni jima**	1.18	333	P	Pn	01 05 15.2	+0.1
YOJ	**Yonaguni jima**	1.18	333	P	Pn	01 05 15.4	+0.3
YOJ				*e*S	Sn	01 05 30.3	+0.1
JYNG	**Yonagunijimaku**	1.20	330	*e*P	Pn	01 05 15.7	+0.3
JYNG				S	Sn	01 05 30.4	-0.2
JISG	**Ishigakijimahi**	1.34	29	*e*P	Pn	01 05 17.2	-0.2
JISG				*e*S	Sn	01 05 33.9	-0.4
JTJ	**Tarama**	1.59	39	P	Pn	01 05 21.3	+0.5
JTJ				S	Sn	01 05 40.6	+0.2
NACB	**Ninganchiao**	1.98	293	P	Pn	01 05 27.5	+1.3
JIRB	**Irabujima**	2.02	45	*e*P	Pn	01 05 26.7	0.0
JIRB				*e*S	Sn	01 05 50.9	-0.1
JMJ2	**Miyako jima3**	2.07	50	*e*P	Pn	01 05 27.7	+0.4
JMJ2				*e*S	Sn	01 05 52.8	+0.7
YULB	**Yu-li**	2.11	270	P	Pn	01 05 27.3	-0.7
YULB	**Yu-li**	2.11	270	S	Sn	01 05 52.0	-1.2
JOGS	**Gusukube**	2.13	50	P	Pn	01 05 28.4	+0.1
YHNB	**Yeheng**	2.39	302	P	Pn	01 05 32.6	+0.8
TWGBT	**Beinan**	2.39	256	P	Pn	01 05 31.8	0.0
SSLB	**Suanglung**	2.45	279	P	Pn	01 05 32.8	+0.1
TPUB	**Ta-pu**	2.73	268	P	Pn	01 05 37.6	+1.1

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*WEL **25** 01:23:58.3±1.2, 33°S±7°×17°8W±1°8, h33km, M4.4/7, mB4.8/6, ML4.9/10, MLv4.6/7, Mw(mB)4.1/6, Error ellipse: s-maj=24.9km s-min=4.3km az=107.9, confirmed*

*IDC **25** 01:23:59.5±1.4, 32°.85S×178°.25W, h0km, mb4.1/3, mbtmp4.1/4, ML4.0/1, Error ellipse: s-maj=59.6km s-min=30.9km az=152.0*

*NEIC **25** 01:24:01.2±1.1, 33°.07S±0°.08×178°.2W±0°.2, h10km±1km, mb4.4/13, Error ellipse: s-maj=26.0km s-min=12.3km az=104.0*

ISC 25 01:24:03.6±0.7, 32°.90S±0°.06×178°.2W±0°.1, h34km, n51, σ1^s.61/61, mb4.3/10, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	3.63	3	P	Pn	01 24 53.8	-3.6
GLKZ				S	Sn	01 25 33.9	-5.2
RAO	**Raoul Island**	3.65	3	Pn	Pn	01 24 59.9	+2.3
RAO	**Raoul Island**	3.65	3	Sn	Sn	01 25 39.7	+0.4
	47nm,0.3s,baz=282,slow=22,SNR=1.9						
MXZ	**Matakaoa Point**	5.47	211	Pn	Pn	01 25 22.4	-0.3
MXZ	**Matakaoa Point**	5.47	211	P	Pn	01 25 20.6	-2.1
MXZ				S	Sn	01 26 25.9	+1.4
WMGZ	**Waiomatatini S**	5.65	209	P	Pn	01 25 23.0	-2.1
WMGZ				S	Sn	01 26 31.0	+2.2
PKGZ	**Pakihiroa**	5.83	211	P	Pn	01 25 26.0	-1.6
PKGZ				S	Sn	01 26 33.4	+0.2
HAZ	**Te Kaha**	5.87	213	P	Pn	01 25 26.8	-1.3
HAZ				S	Sn	01 26 36.0	+1.8
PUZ	**Puketiti**	5.93	209	P	Pn	01 25 23.8	-5.1
PUZ				S	Sn	01 26 37.0	+1.3
RUGZ	**Raukumara Rang**	6.09	213	P	Pn	01 25 29.0	-2.3
RUGZ				S	Sn	01 26 40.3	+0.6
TWGZ	**Tauwhareparae**	6.13	210	P	Pn	01 25 31.7	-0.1
TWGZ				S	Sn	01 26 40.3	-0.4
TKGZ	**Te Karaka**	6.41	209	P	Pn	01 25 35.1	-0.4
TKGZ				S	Sn	01 26 48.0	+0.5
MWZ	**Matawai**	6.46	212	P	Pn	01 25 33.6	-2.6
MWZ				S	Sn	01 26 50.4	+1.7
URZ	**Urewera**	6.59	214	Pn	Pn	01 25 37.6	-0.3
	3.2nm,0.3s,baz=39,slow=3.6,SNR=12						
URZ				Sn	Sn	01 26 50.5	-1.3

	8.4nm,0.3s,baz=114,slow=23,SNR=8.9						
	8.7nm,0.3s						
WCZ	Waipu Caves	6.89	242	P	Pn	01 25 49.0	+6.8
MUGZ	Murupara	6.92	215	P	Pn	01 25 42.7	+0.1
MUGZ				S	Sn	01 26 59.9	-0.3
RTZ	Ruatahuna	6.94	213	Pn	Pn	01 25 42.0	-0.8
BKZ	Black Stump Fm	7.60	213		Pn	01 25 49.8	-2.2
BFZ	Birch Farm	8.96	208	Pn	Pn	01 26 07.5	-3.1
MRZ	Mangatainoka R	9.23	211	Pn	Pn	01 26 10.5	-3.6
PLWZ	Palliser	10.12	209	Pn	Pn	01 26 24.4	-2.0
GVZ	Greta Valley S	12.21	212	Pn	Pn	01 26 52.1	-2.9
MSVF	Nonsavu	15.49	346	Pn	Pn	01 27 40.5	+1.0
CAN	Canberra	27.23	256	P	P	01 29 43.1	-1.4
CAN				IAmb	IAmb	01 29 43.9	
	comp=Z,24nm,1.5s						
CTAO	Charters Tower	34.15	283	P	P	01 30 47.2	+1.6
CTAO				IAmb	IAmb	01 30 51.0	
	comp=Z,4.1nm,0.8s						
PMG	Port Moresby	39.61	298	P	P	01 31 32.6	+0.6
COEN	Coen	39.89	289	P	P	01 31 35.5	+1.1
COEN				IAmb	IAmb	01 31 38.0	
	comp=Z,9.7nm,1.2s						
ASAR	Alice Springs	42.90	270	P	P	01 31 58.5	-0.5
ASAR	Alice Springs	42.90	270	P	P	01 31 59.5	+0.5
	comp=Z,1.1nm,0.5s,baz=105,slow=7.5,SNR=19						
	comp=Z,1.1nm,0.5s						
WR8	Warramunga Arr	43.97	275	P	P	01 32 06.6	-1.1
WR8				IAmb	IAmb	01 32 13.1	
	comp=Z,7.1nm,1.1s						
WB2	Warramunga Arr	44.10	275	P	P	01 32 08.4	-0.4
WB2				IAmb	IAmb	01 32 15.4	
	comp=Z,7.5nm,1.1s						
WRA	Warramunga Arr	44.11	275	P	P	01 32 08.4	-0.5
WRA	Warramunga Arr	44.11	275	P	P	01 32 08.7	-0.2
	comp=Z,2.5nm,0.6s,baz=116,slow=7.5,SNR=24						
	comp=Z,2.5nm,0.6s						
WB0	Warramunga Arr	44.15	275	P	P	01 32 08.8	-0.3
WB0				IAmb	IAmb	01 32 12.8	
	comp=Z,6.1nm,1.1s						
SBA	Scott Base	45.54	184	P	P	01 32 18.1	-1.3
KNRA	Kununurra	50.80	276	P	P	01 33 01.9	+1.0
FITZ	Fitzroy Crossi	52.26	272	P	P	01 33 11.7	0.0
FITZ	Fitzroy Crossi	52.26	272	P	P	01 33 12.2	+0.5
	comp=Z,1.6nm,0.8s,baz=233,slow=16,SNR=1.3						
	comp=Z,1.6nm,0.8s						
QSPA	South Pole Qui	57.22	180	P	P	01 33 47.6	+0.4
BELA	Belgrano 2	67.33	172	P	P	01 34 55.0	+0.4
BELA				IAmb	IAmb	01 34 56.9	
	comp=Z,2.1nm,1.3s						
MKAR	Makanchi Array	119.26	309	PKP	PKiKP	01 42 49.1	+0.2
	comp=Z,0.2nm,0.6s,baz=106,slow=3.1,SNR=2.1						
RES	Resolute Bay	119.67	18	PKPdf	PKiKP	01 42 50.5	+1.6
KURBB	Kurchatov Arra	122.69	313	PKP	PKiKP	01 42 55.4	0.0
	comp=Z,0.5nm,0.5s,baz=116,slow=2.2,SNR=2.2						
BVAR	Borovoye Array	128.08	314	PKP	PKiKP	01 43 07.3	+1.1
	comp=Z,0.5nm,0.5s,baz=114,slow=2.8,SNR=2.8						
FINES	FINESS Array B	147.43	339		PKPbc	01 43 43.3	+0.3
FINES	FINESS Array B	147.43	339	PKPbc	PKPab	01 43 44.4	-0.7
	comp=Z,3.6nm,0.8s,baz=51,slow=4.0,SNR=20						
NB2	NORSAR Subarra	151.19	351	PKP	PKiKP	01 43 54.1	+1.0
	comp=Z,0.4nm,0.7s,baz=13,slow=2.5						
NOA	NORSAR Array B	151.19	351	PKPbc	PKiKP	01 43 53.1	0.0
	comp=Z,0.6nm,0.7s,baz=14,slow=4.1,SNR=4.3						
HFS	Hagfors	151.66	347	PKPbc	PKiKP	01 43 54.7	+0.7
	comp=Z,1.3nm,0.8s,baz=39,slow=1.8,SNR=4.5						
MMAI	Mount Meron Ar	151.90	279	PKPbc	PKiKP	01 43 57.2	+1.6
	comp=Z,0.5nm,0.4s,baz=111,slow=2.4,SNR=1.9						
BRTR	Keskin Array B	153.58	294	PKPbc	PKiKP	01 43 59.9	+1.0
	comp=Z,0.6nm,0.6s,baz=95,slow=3.4,SNR=4.8						

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*WEL **25** 01:26:03.1±1.1, 33°S±5°×17°7W±1°3, h33km, M4.7/11, mB5.0/6, ML5.3/12, MLv4.9/11, Mw(mB)4.3/6, Error ellipse: s-maj=18.2km s-min=4.4km az=107.8, confirmed*

*IDC **25** 01:26:07.7±6.2, 32°.46S×178°.51W, h0km, mb3.7/2, mbtmp3.7/2, Error ellipse: s-maj=268.3km s-min=60.0km az=159.0*

ISC 25 01:26:03.4±2.0**, 33°.04S**±0°.08×**176°.8W**±0°.2**, h35km, n23, σ1s88**/34**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.89	345	P	Pn	01 26 59.4	-1.2
GLKZ				S	Sn	01 27 46.5	+1.4
WMGZ	Waiomatatini S	6.17	218	P	Pn	01 27 35.3	+3.3
WMGZ				S	Sn	01 28 44.3	+3.0
PKGZ	Pakihiroa	6.38	220	P	Pn	01 27 34.0	-0.9
PKGZ				S	Sn	01 28 48.7	+2.1
HAZ	Te Kaha	6.47	222	P	Pn	01 27 34.6	-1.4
HAZ				S	Sn	01 28 51.1	+2.5
TWGZ	Tauwhareparae	6.67	218	P	Pn	01 27 40.7	+1.9
TWGZ				S	Sn	01 28 57.1	+3.5
RUGZ	Raukumara Rang	6.67	221	P	Pn	01 27 38.8	-0.2
RUGZ				S	Sn	01 28 54.5	+0.6
TKGZ	Te Karaka	6.93	217	P	Pn	01 27 42.7	+0.3
TKGZ				S	Sn	01 29 01.5	+1.4
MWZ	Matawai	7.02	220	P	Pn	01 27 42.6	-1.1
MWZ				S	Sn	01 29 01.7	-0.6
URZ	Urewera	7.20	222	Sn	Sn	01 29 06.1	-0.5
	15nm,0.3s,baz=136,slow=17,SNR=11						
URZ	Urewera	7.20	222	P	Pn	01 27 44.7	-1.3
URZ				S	Sn	01 29 06.4	-0.1
URZ	Urewera	7.20	222				
	10nm,0.7s						
URZ	Urewera	7.20	222	Pn	Pn	01 27 44.8	-1.3
	0.5nm,0.3s,baz=199,slow=21,SNR=0.7						
RAGZ	Rawiri	7.20	219	P	Pn	01 27 45.3	-0.9
RAGZ				S	Sn	01 29 06.8	+0.1
SNGZ	Shannon Statio	7.45	218	P	Pn	01 27 50.3	+0.7
SNGZ				S	Sn	01 29 14.2	+1.3
MUGZ	Murupara	7.54	222	P	Pn	01 27 50.2	-0.6
MUGZ				S	Sn	01 29 11.9	-3.2
RAHZ	Arahi	7.68	219	S	Sn	01 29 16.8	-1.8
MTHZ	Maungataniwha	7.77	220	P	Pn	01 27 53.8	-0.1
MTHZ				S	Sn	01 29 19.3	-1.3
WCZ	Waipu Caves	7.87	246	P	Pn	01 28 02.5	+7.1
NMHZ	Naumai	7.96	219	P	Pn	01 28 02.4	+5.7
NMHZ				S	Sn	01 29 25.7	+0.2
OUZ	Omahuta	8.27	252	P	Pn	01 28 03.0	+2.2
ASAR	Alice Springs	44.05	269	P	P	01 34 05.8	-2.2
	0.5nm,0.6s,baz=110,slow=7.6,SNR=20						
	0.5nm,0.6s						
WRA	Warramunga Arr	45.28	274	P	P	01 34 15.1	-2.7
	0.8nm,0.6s,baz=116,slow=7.4,SNR=5.1						
	0.8nm,0.6s						
FINES	FINESS Array B	147.97	339	PKPbc	PKPab	01 45 50.5	+3.6
	0.6nm,0.4s,baz=59,slow=2.7,SNR=4.3						

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*IDC **25** 01:26:12.2±1.3, 33°.32S×178°.22W, h0km, mb4.4/3, mbtmp4.3/4, ML3.2/1, MS3.3/1, Error ellipse: s-maj=63.7km s-min=29.8km az=156.0*

ISC 25 01:26:18.9±1.0**, 32°.4S**±0°.3×**178°.4W**±0°.3**, h35km, n19, σ0s87**/17**, mb4.4**/6**, 3D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	14.96	347	LR	LR	01 34 47.2	
	comp=Z,111nm,18.4s,baz=157,slow=32						
ASAR	Alice Springs	42.69	269	P	P	01 34 12.6	+0.1
	2.2nm,0.5s,baz=110,slow=7.8,SNR=14						
	2.2nm,0.5s						
WRA	Warramunga Arr	43.86	274	P	P	01 34 22.0	0.0
	4.7nm,0.6s,baz=114,slow=7.7,SNR=20						
	4.7nm,0.6s						
FITZ	Fitzroy Crossi	52.03	272	P	P	01 35 25.1	-0.2
	3.6nm,0.7s,baz=132,slow=10,SNR=5.4						
	3.6nm,0.7s						
SNAA	Sanae	76.16	179	⇓P	P	01 38 05.2	+2.3
	comp=Z,26nm,0.5s						
SNAA	Sanae	76.16	179	P	P	01 38 01.7	-1.3
	comp=Z,1.8nm,0.8s,baz=204,slow=9.1,SNR=8.4						
VNA3	Neumayer Olymp	76.33	176	⇓P	P	01 38 02.3	-1.6
	comp=Z,6.2nm,0.7s						
VNA2	Neumayer--Watz	76.76	177	⇓P	P	01 38 06.9	+0.6
	comp=Z,4.0nm,0.6s,baz=167,slow=5.7						
MKAR	Makanchi Array	118.78	309	PKP	PKPdf	01 45 02.8	-0.3
	comp=Z,0.2nm,0.5s,baz=90,slow=2.3,SNR=3.0						
KURBB	Kurchatov Arra	122.20	313	PKP	PKPdf	01 45 09.2	-0.3
	comp=Z,0.5nm,0.5s,baz=107,slow=1.9,SNR=5.0						
BVAR	Borovoye Array	127.58	315	PKP	PKiKP	01 45 20.4	+0.1
	comp=Z,0.9nm,0.5s,baz=104,slow=2.3,SNR=4.8						
ARCES	ARCESS Array B	140.47	347	PKhKP	PKPpre	01 45 40.0	
	comp=Z,1.6nm,0.9s,baz=28,slow=2.9,SNR=1.8						
FINES	FINESS Array B	146.89	339	PKPbc	PKPab	01 45 57.8	-0.4
	comp=Z,4.0nm,0.4s,baz=43,slow=4.0,SNR=26						
NB2	NORSAR Subarra	150.67	350	PKP	PKiKP	01 46 07.6	+0.4
	comp=Z,6.8nm,1.4s,baz=30,slow=3.5						
NOA	NORSAR Array B	150.67	350	PKPbc	PKiKP	01 46 07.5	+0.4
	comp=Z,1.1nm,0.8s,baz=13,slow=4.1,SNR=7.4						
HFS	Hagfors	151.13	347	PKPbc	PKiKP	01 46 08.2	+0.1
	comp=Z,2.8nm,0.8s,baz=41,slow=2.6,SNR=6.9						
MMAI	Mount Meron Ar	151.61	280	PKPbc	PKiKP	01 46 10.2	+0.2
	comp=Z,2.4nm,0.6s,baz=114,slow=2.8,SNR=6.8						
AKASG	Malin Array Be	152.64	320	PKPbc	PKiKP	01 46 11.8	+0.3
	comp=Z,0.9nm,0.4s,baz=52,slow=3.3,SNR=5.6						
BRTR	Keskin Array B	153.18	295	PKPbc	PKiKP	01 46 13.2	0.0
	comp=Z,1.0nm,0.5s,baz=96,slow=2.6,SNR=8.9						

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*IDC **25** 01:51:57.1±1.2, 32°.93S×178°.30W, h0km, mb4.3/4, mbtmp4.3/5, ML4.2/1, MS3.6/2, Error ellipse: s-maj=50.1km s-min=25.9km az=141.0*

*WEL **25** 01:51:57.3±1.1, 33°S±8°×17°8W±1°9, h127km±40km, mB4.8/6, ML5.2/8, MLv4.9/9, Mw(mB)4.1/6, Error ellipse: s-maj=25.9km s-min=5.3km az=111.0, confirmed*

*NEIC **25** 01:51:59.1±1.4, 32°.94S±0°.05×178°.3W±0°.1, h10km±1km, mb4.4/12, Error ellipse: s-maj=17.6km s-min=7.9km az=262.0*

ISC 25 01:52:00.6±0.7**, 32°.95S**±0°.06×**178°.1W**±0°.1**, h32km, n66, σ2s20**/80**, mb4.4**/11**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.67	2	P	Pn	01 52 52.0	-3.2
GLKZ				S	Sn	01 53 30.6	-6.8
RAO	Raoul Island	3.68	2	Pn	Pn	01 52 55.3	0.0
RAO	Raoul Island	3.68	2	Sn	Sn	01 53 35.3	-2.4
	67nm,0.3s,baz=52,slow=22,SNR=4.2						
MXZ	Matakaoa Point	5.49	212	Pn	Pn	01 53 19.7	-0.4
WMGZ	Waiomatatini S	5.65	210	P	Pn	01 53 21.4	-1.0
WMGZ				S	Sn	01 54 28.0	+1.8
PKGZ	Pakihiroa	5.84	212	P	Pn	01 53 24.5	-0.4
PKGZ				S	Sn	01 54 33.0	+2.3
RUGZ	Raukumara Rang	6.10	214	P	Pn	01 53 27.5	-1.1
RUGZ				S	Sn	01 54 38.8	+1.5
TWGZ	Tauwhareparae	6.14	211	P	Pn	01 53 28.7	-0.4
TWGZ				S	Sn	01 54 39.7	+1.5
TKGZ	Te Karaka	6.42	210	P	Pn	01 53 32.2	-0.6
URZ	Urewera	6.60	215	Pn	Pn	01 53 34.1	-1.3
	5.5nm,0.3s,baz=248,slow=3.7,SNR=30						
URZ				Sn	Sn	01 54 49.4	-0.2
	14nm,0.3s,baz=255,slow=4.9,SNR=14						
	9.3nm,0.3s						
RAGZ	Rawiri	6.65	212	P	Pn	01 53 35.1	-1.1
RAGZ				S	Sn	01 54 50.2	-0.7
SNGZ	Shannon Statio	6.92	211	P	Pn	01 53 39.5	-0.3
SNGZ				S	Sn	01 54 56.4	-1.0
MUGZ	Murupara	6.94	216	P	Pn	01 53 40.7	+0.6
MUGZ				S	Sn	01 54 57.3	-0.6
RTZ	Ruatahuna	6.95	214		Pn	01 53 39.1	-1.2
RTZ					Sn	01 54 57.3	-0.9
WCZ	Waipu Caves	6.95	242	P	Pn	01 53 47.1	+6.9
TOZ	Tahuroa Road	7.11	226	Pn	Pn	01 53 42.2	-0.1
OUZ	Omahuta	7.29	250	P	Pn	01 53 48.0	+3.2
BKZ	Black Stump Fm	7.62	214		Pn	01 53 47.1	-2.2
BKZ	Black Stump Fm	7.62	214	P	Pn	01 53 48.1	-1.3
BKZ				S	Sn	01 55 12.9	-1.7
KWHZ	Kaweka Forest	7.86	213	P	Pn	01 53 52.8	+0.1
KWHZ				S	Sn	01 55 19.2	-1.3
KAHZ	Kahuranaki	7.96	209	P	Pn	01 53 50.6	-3.5
KAHZ				S	Sn	01 55 23.5	+0.4
ETVZ	East Tongariro	7.98	217	P	Pn	01 53 54.8	+0.4
ETVZ				S	Sn	01 55 21.7	-1.9
KRHZ	Kereru	8.06	212	P	Pn	01 53 53.8	-1.6
KRHZ				S	Sn	01 55 22.2	-3.1
PXZ	Pawanui	8.17	209	S	Sn	01 55 23.7	-4.4
PNHZ	Pukenui	8.35	212	P	Pn	01 53 56.8	-2.7
PNHZ				S	Sn	01 55 28.8	-3.9
WPHZ	Waipukurau	8.37	210	S	Sn	01 55 30.1	-3.0
PRHZ	Porangahau	8.46	209	P	Sn	01 55 29.4	-5.9
DVHZ	Dannevirke	8.68	211	P	Pn	01 53 59.3	-4.7
DVHZ				P	Sn	01 55 37.2	-3.6
POWZ	Post Office Ro	8.93	212	P	Sn	01 55 44.4	-2.4
BFZ	Birch Farm	8.97	209	Pn	Pn	01 54 06.1	-1.8
BFZ	Birch Farm	8.97	209	P	Pn	01 54 04.1	-3.8
BFZ				S	Sn	01 55 42.4	-5.4
TIWZ	Tintock	9.20	210	P	Pn	01 54 10.1	-1.0
TIWZ				P	Sn	01 55 48.9	-4.6
MRZ	Mangatainoka R	9.24	212	Pn	Pn	01 54 08.1	-3.5
MSWZ	Moikau Station	10.00	210	Pn	Pn	01 54 20.7	-1.3
TKNZ	Takaka Hill	10.80	219	Pn	Pn	01 54 30.1	-2.9
THZ	Tophouse	11.36	217	Pn	Pn	01 54 38.1	-2.5
RPZ	Rata Peaks	13.72	215	LR	LR	01 59 52.0	
	comp=Z,249nm,19.8s,baz=74,slow=35						
EIDS	Eidsvold	27.92	278	P	P	01 57 46.9	-1.0
EIDS				IAmb	IAmb	01 57 49.9	
	comp=Z,13nm,1.4s						
STKA	Stephens Creek	33.94	261	LR	LR	02 11 02.4	
	comp=Z,95nm,18.5s,baz=31,slow=34						
COEN	Coen	39.99	289	P	P	01 59 32.8	+0.3
COEN				IAmb	IAmb	01 59 42.0	
	comp=Z,6.4nm,0.8s						
ASAR	Alice Springs	42.99	270	P	P	01 59 56.2	-0.8
ASAR	Alice Springs	42.99	270	P	P	01 59 56.8	-0.3
	comp=Z,2.5nm,0.6s,baz=107,slow=7.6,SNR=35						
	comp=Z,2.5nm,0.6s						
WR0	Warramunga Arr	44.03	275	P	P	02 00 04.8	-0.7
WR0				IAmb	IAmb	02 00 06.7	
	comp=Z,8.6nm,1.1s						
WR8	Warramunga Arr	44.06	275	P	P	02 00 05.0	-0.7
WR8				IAmb	IAmb	02 00 06.2	
	comp=Z,4.7nm,0.8s						
WB2	Warramunga Arr	44.20	275	P	P	02 00 06.0	-0.8
WRA	Warramunga Arr	44.20	275		P	02 00 05.8	-1.1
WRA	Warramunga Arr	44.20	275	P	P	02 00 06.3	-0.6
	comp=Z,5.4nm,0.6s,baz=115,slow=7.6,SNR=49						
	comp=Z,5.4nm,0.6s						
WB0	Warramunga Arr	44.24	275		P	02 00 06.5	-0.7
FITZ	Fitzroy Crossi	52.35	272	P	P	02 01 09.3	-0.5
FITZ	Fitzroy Crossi	52.35	272	P	P	02 01 09.2	-0.5
	comp=Z,3.6nm,0.8s,baz=87,slow=22,SNR=2.7						
	comp=Z,3.6nm,0.8s						
CASY	Casey	52.88	209	P	P	02 01 13.6	+0.6
MBWA	Marble Bar	55.94	265	P	P	02 01 34.5	-1.4
MBWA				IAmb	IAmb	02 01 36.4	
	comp=Z,3.7nm,0.9s						
QSPA	South Pole Qui	57.17	180	P	P	02 01 47.6	+3.4
QSPA				IAmb	IAmb	02 01 54.4	
	comp=Z,4.4nm,1.2s						
SNAA	Sanae	75.62	178	P	P	02 03 43.8	+1.8
SNAA	Sanae	75.62	178	P	P	02 03 53.0	+11
	comp=Z,1.6nm,0.9s,baz=146,slow=8.3,SNR=3.6						
PETK	Petropavlovsk-	88.26	346	P	P	02 04 49.7	+1.5
	comp=Z,0.4nm,0.4s,baz=156,slow=5.6,SNR=2.2						
	comp=Z,0.4nm,0.4s						
MKAR	Makanchi Array	119.35	309	PKP	PKiKP	02 10 47.6	+1.2
	comp=Z,0.3nm,0.6s,baz=113,slow=2.2,SNR=4.3						
KURBB	Kurchatov Arra	122.79	313	PKP	PKiKP	02 10 53.4	+0.4
	comp=Z,0.7nm,0.6s,baz=111,slow=1.9,SNR=5.2						
BVAR	Borovoye Array	128.17	314	PKP	PKiKP	02 11 04.4	+0.7
	comp=Z,0.4nm,0.4s,baz=97,slow=2.3,SNR=3.8						
FINES	FINESS Array B	147.50	339	PKPbc	PKPbc	02 11 41.7	+1.1
	comp=Z,6.9nm,0.8s,baz=54,slow=3.7,SNR=34						
NB2	NORSAR Subarra	151.25	351	PKP	PKiKP	02 11 51.6	+1.0
	comp=Z,0.8nm,0.7s,baz=15,slow=2.5						
NOA	NORSAR Array B	151.25	351	PKPbc	PKiKP	02 11 51.4	+0.8
	comp=Z,1.2nm,0.7s,baz=14,slow=4.1,SNR=8.6						
HFS	Hagfors	151.72	348	PKPbc	PKiKP	02 11 52.1	+0.6
	comp=Z,1.3nm,0.8s,baz=32,slow=2.7,SNR=6.3						
MMAI	Mount Meron Ar	152.00	279	PKPbc	PKiKP	02 11 55.0	+1.9
	comp=Z,4.0nm,0.7s,baz=111,slow=2.4,SNR=7.7						
AKASG	Malin Array Be	153.25	320	PKPbc	PKiKP	02 11 56.3	+1.4
	comp=Z,0.9nm,0.6s,baz=51,slow=1.8,SNR=6.9						
BRTR	Keskin Array B	153.68	294	PKPbc	PKiKP	02 11 57.1	+0.7
	comp=Z,1.0nm,0.6s,baz=96,slow=2.6,SNR=8.5						

JMA 25 01:53:38.6±0.2**, 24°.3N**±0°.3×**123°.8E**±0°.4**, h20km**±1km**, MV1.0**/5**, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.10	326	P	Pg	01 53 42.4	-0.1
IRIF				S	Sg	01 53 45.1	0.0
HATJ	Hateruma jima	0.20	176	P	Pg	01 53 43.5	-0.2
HATJ				S	Sg	01 53 46.9	-0.2
JKRS	Kuro-shima	0.20	94	P	Pg	01 53 43.6	-0.1
JKRS				S	Sg	01 53 47.3	+0.1
JIJ	Ishigaki jima	0.34	71	P	Pg	01 53 45.7	-0.3
JIJ				S	Sg	01 53 50.5	-0.5

TAP 25 01:54:22.4, 24°.38N×121°.74E, h7km±1km, ML1.1, 1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	Nanau	0.04	2	⇓*i*P	Pg	01 54 24.6	+0.7
ENA				*i* S	Sg	01 54 25.6	+0.6
EWUT	Wuta	0.07	30	P	Pg	01 54 24.9	+0.6
EWUT				S	Sg	01 54 26.1	+0.6
LATG	Datong	0.25	308	P	Pg	01 54 28.9	+1.5
LATG				*e*S	Sg	01 54 33.0	+2.3
NACB	Ninganchiao	0.25	212	*e*P	Pg	01 54 28.4	+1.0
NACB				*e*S	Sg	01 54 32.2	+1.6
ETL	Fush Village	0.25	205	*e*P	Pg	01 54 28.9	+1.6
ETL				*e*S	Sg	01 54 32.5	+1.9
ETLH	Xiulin Townshi	0.29	233	*e*P	Pb	01 54 29.4	-0.7
ENTT	Nioudou	0.30	328	P	Pb	01 54 29.6	-0.6
ENTT				S	Sb	01 54 34.1	-1.3
NNSB	Datong	0.33	278	*e*P	Pb	01 54 30.1	-0.7
NNSB				*e*S	Sg	01 54 34.1	+0.9
YHNB	Yeheng	0.44	311	*e*P	Pb	01 54 32.6	0.0
YHNB				*e*S	Sb	01 54 39.1	-0.3

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*IDC **25** 01:57:36.5±0.9, 2°.65S×138°.58E, h0km, mb3.9/6, mbtmp3.9/9, ML3.8/3, MS3.2/2, Error ellipse: s-maj=23.8km s-min=21.3km az=113.0*

*DJA **25** 01:57:41.9±0.7, 2°S±5°×13°9E±°, h16km±6km, M4.0/7, MLv4.0/7*

*NEIC **25** 01:57:44.0±1.7, 2°.8S±0°.1×138°.75E±0°.07, h35km±2km, mb4.3/18, Error ellipse: s-maj=19.0km s-min=11.8km az=166.0*

ISC 25 01:57:41.2±0.6**, 2°.59S**±0°.06×**138°.67E**±0°.04**, h32km, n39, σ2s01**/42**, mb4.2**/14**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.59	4	P	Pn	01 57 53.5	0.0
SMPI				S	Sb	01 57 59.7	-1.9
GENI	Genyem	1.50	90	P	Pn	01 58 06.4	+0.5
GENI				S	Sn	01 58 25.2	+0.8
JAY	Jayapura	2.04	88	Pn	Pn	01 58 14.2	+0.8
	16nm,0.3s,baz=235,slow=8.9,SNR=43						
JAY				Sn	Sb	01 58 40.9	-1.8
	25nm,0.3s,baz=115,slow=16,SNR=6.6						
JAY				LR	LR	01 59 21.2	
	comp=Z,215nm,21.9s,baz=27,slow=49						
	48nm,0.4s						
JAY	Jayapura	2.04	88	P	Pn	01 58 13.9	+0.5
SRPI	Serui, Papua	2.53	286	P	Pb	01 58 22.8	-3.1
SRPI				S	Sb	01 58 55.5	-1.1
BAKI	Biak	2.91	298	P	Pb	01 58 29.1	-3.3
FAKI	Fak Fak	6.42	267	Pn	Pn	01 59 16.8	+3.2
COEN	Coen	12.14	159	Pn	Pn	02 00 31.3	-0.8
MTN	Manton Dam	12.63	216	Pn	Pn	02 00 38.8	+0.1
KNRA	Kununurra	16.26	216	Pn	P	02 01 28.7	-1.4
KNRA				IAmb	IAmb	02 01 45.4	
	comp=Z,34nm,1.4s						
BATI	Baumata	16.71	242	LR	LR	02 08 22.5	
	comp=Z,263nm,19.1s,baz=165,slow=39						
WB0	Warramunga Arr	17.58	193		P	02 01 43.9	-0.8
WR8	Warramunga Arr	17.73	193	Pn	Pn	02 01 44.0	-1.8
WB2	Warramunga Arr	17.76	193	Pn	Pn	02 01 44.4	-1.7
WB2				IAmb	IAmb	02 01 54.1	
	comp=Z,17nm,1.2s						
WRA	Warramunga Arr	17.76	193		P	02 01 47.5	+0.7
WRA	Warramunga Arr	17.76	193	P	Pn	02 01 44.1	-2.1
	comp=Z,0.6nm,0.3s,baz=14,slow=12,SNR=15						
	comp=Z,3.7nm,0.6s						
FITZ	Fitzroy Crossi	20.02	219	P	P	02 02 10.9	-0.6
FITZ	Fitzroy Crossi	20.02	219	P	P	02 02 10.3	-1.2
	comp=Z,0.1nm,0.3s,baz=258,slow=11,SNR=1.3						
	comp=Z,1.8nm,0.7s						
ASAR	Alice Springs	21.46	192	P	P	02 02 28.1	+1.0
ASAR	Alice Springs	21.46	192	P	P	02 02 25.8	-1.3
	comp=Z,2.9nm,0.7s,baz=18,slow=9.9,SNR=12						
	comp=Z,2.9nm,0.7s						
MKAR	Makanchi Array	69.67	322	P	P	02 08 49.6	+1.8
MKAR	Makanchi Array	69.67	322	P	P	02 08 47.9	+0.1
	comp=Z,0.5nm,0.8s,baz=119,slow=6.5,SNR=4.3						
	comp=Z,0.5nm,0.8s						
KURBB	Kurchatov Arra	73.60	325	P	P	02 09 11.4	+0.1
	comp=Z,0.3nm,0.2s,baz=116,slow=6.3,SNR=1.2						
	comp=Z,0.3nm,0.2s						
L14K	Kuka Creek	77.80	25	P	P	02 09 37.1	+2.0
L14K				IAmb	IAmb	02 09 42.4	
	comp=Z,3.4nm,1.0s						
M14K	Bethel	77.83	26	P	P	02 09 38.4	+3.1
BVAR	Borovoye Array	79.19	325	P	P	02 09 44.4	+1.5
	comp=Z,0.8nm,0.5s,baz=115,slow=6.0,SNR=4.1						
	comp=Z,0.8nm,0.5s						
M16K	Timber Creek	79.26	26	P	P	02 09 45.8	+2.6
M16K				IAmb	IAmb	02 09 46.6	
	comp=Z,5.5nm,1.2s						
K17K	Iditarod	80.27	25	P	P	02 09 52.1	+3.5
K17K				IAmb	IAmb	02 10 27.2	
	comp=Z,5.0nm,1.2s						
L18K	Granite Mounta	80.75	25	P	P	02 09 54.4	+3.2
L18K				IAmb	IAmb	02 10 36.6	
	comp=Z,5.1nm,1.4s						
G18K	Tagagawik	81.52	22	P	P	02 09 56.2	+1.0
G18K				IAmb	IAmb	02 10 03.9	
	comp=Z,5.0nm,1.4s						
L19K	White Mountain	81.52	26	P	P	02 09 58.4	+3.0
L19K				IAmb	IAmb	02 10 24.1	
	comp=Z,5.3nm,1.4s						
D19K	Kuna River	82.86	19	P	P	02 10 05.2	+2.9
D20K	Etivluk River	83.45	19	P	P	02 10 08.7	+3.4
D20K				IAmb	IAmb	02 10 15.4	
	comp=Z,4.8nm,1.4s						
G21K	Allakaket	83.69	22	P	P	02 10 09.6	+3.1
G21K				IAmb	IAmb	02 10 31.5	
	comp=Z,1.2nm,0.9s						
ABKAR	Akbulak array	84.60	320	P	P	02 10 12.3	+0.8
SCM	Sheep Creek Mo	84.77	27	P	P	02 10 15.2	+3.0
ILAR	Eielson Array	85.74	24	P	P	02 10 17.2	+0.3
	comp=Z,0.5nm,0.6s,baz=262,slow=4.5,SNR=5.3						
	comp=Z,0.5nm,0.6s						
QSPA	South Pole Qui	87.36	180	P	P	02 10 24.9	-0.1
QSPA	South Pole Qui	87.36	180	P	P	02 10 24.9	-0.1
	comp=Z,1.4nm,1.0s,baz=45,slow=1.4,SNR=5.9						
	comp=Z,1.4nm,1.0s						

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*IDC **25** 02:19:45.2±2.1, 2°.31S×138°.31E, h0km, mb3.4/2, mbtmp3.5/4, ML3.5/2, Error ellipse: s-maj=39.9km s-min=26.8km az=138.0*

*DJA **25** 02:19:54.4±0.7, 2°S±10°×13°9E±°, h28km±4km, M3.4/6, MLv3.4/6*

ISC 25 02:19:47.0±1.3**, 2°.41S**±0°.08×**138°.42E**±0°.10**, h10km, n9, σ1s17**/9**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.51	34	P	Pn	02 20 01.6	+1.3
SMPI				S	Sb	02 20 04.6	-0.9
GENI	Genyem	1.75	96	P	Pb	02 20 18.7	-0.6
SRPI	Serui, Papua	2.25	284	P	Pg	02 20 33.3	+3.2
JAY	Jayapura	2.28	93	Pn	Pn	02 20 26.4	+1.5
	5.8nm,0.3s,baz=248,slow=10,SNR=22						
JAY				Sn	Sb	02 20 56.3	-0.4
	5.9nm,0.3s,baz=101,slow=22,SNR=4.6						
	17nm,0.3s						
JAY	Jayapura	2.28	93	P	Pn	02 20 25.7	+0.9
BAKI	Biak	2.61	298	P	Pg	02 20 38.7	+1.6
WRA	Warramunga Arr	17.88	193	P	Pn	02 23 54.8	-1.2
	0.2nm,0.3s,baz=16,slow=12,SNR=8.8						
	0.9nm,0.8s						
ASAR	Alice Springs	21.58	191	P	P	02 24 37.9	+0.8
	1.4nm,0.9s,baz=20,slow=11,SNR=10						
	1.4nm,0.9s						
ILAR	Eielson Array	85.68	24	P	P	02 32 25.5	-0.4
	0.3nm,0.8s,baz=273,slow=5.3,SNR=3.1						
	0.3nm,0.8s						

*NEIC **25** 02:37:45.0±0.9, 12°.3N±0°.1×140°.9E±0°.1, h10^{km}±1^{km}, mb4.7/39, Error ellipse: s-maj=22.9km s-min=17.5km az=118.0*

*IDC **25** 02:37:50.3±3.2, 12°.25N×141°.01E, h60^{km}±30^{km}, mb3.8/18, mbtmp4.1/18, ML4.6/1, MS3.2/11, Error ellipse: s-maj=21.0km s-min=13.6km az=83.0*

ISC 25 02:37:44.3±0.6**, 12°.24N**±0°.09×**140°.9E**±0°.1**, h10^{km}, n71, σ0^s.75**/62**, mb4.7**/38**, MS3.2**/10**, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	4.12	71	P	Pn	02 38 49.4	+2.0
	42nm,0.3s,baz=201,slow=9.6,SNR=9.3						
JAY	Jayapura	14.66	181	LR	LR	02 45 48.0	
	comp=Z,174nm,18.2s,baz=1.5,slow=33						
JNU	Nakatsue	22.70	338	P	P	02 42 46.6	+0.2
	6.0nm,0.8s,baz=157,slow=8.7,SNR=3.7						
JNU				LR	LR	02 49 53.6	
	comp=Z,64nm,20.8s,baz=156,slow=32						
	6.0nm,0.8s						
MYLDM	Lahad Datu	23.18	254	P	P	02 42 53.3	+1.8
MYLDM				IAmb	IAmb	02 43 03.5	
	comp=Z,32nm,1.1s						
MJAR	Matsushiro Arr	24.31	355	LR	LR	02 51 37.2	
	comp=Z,32nm,20.8s,baz=162,slow=34						
H11N1	WAKE ISLAND Hy	26.07	70	T	T	03 10 40.9	
	baz=256						
H11N2	WAKE ISLAND Hy	26.08	70	T	T	03 10 51.0	
	baz=256						
H11N3	WAKE ISLAND Hy	26.09	70	T	T	03 10 45.3	
	baz=256						
KSRS	Korea Array	27.65	337	P	P	02 43 33.0	+0.7
	comp=Z,0.6nm,0.5s,baz=158,slow=10,SNR=4.7						
	comp=Z,0.6nm,0.5s						
KNRA	Kununurra	30.22	204	P	P	02 43 56.9	+1.6
ASAJ	Asahikawa	31.79	2	LR	LR	02 54 57.3	
	comp=Z,29nm,21.9s,baz=109,slow=32						
WB0	Warramunga Arr	32.44	191	P	P	02 44 14.3	-0.6
WB0				IAmb	IAmb	02 44 21.2	
	comp=Z,15nm,1.4s						
WR0	Warramunga Arr	32.60	191	P	P	02 44 16.7	+0.4
WR0				IAmb	IAmb	02 44 24.2	
	comp=Z,9.1nm,1.0s						
WR8	Warramunga Arr	32.61	191	P	P	02 44 15.9	-0.5
WR8				IAmb	IAmb	02 44 28.3	
	comp=Z,18nm,1.4s						
WB2	Warramunga Arr	32.62	191	P	P	02 44 16.4	-0.1
WRA	Warramunga Arr	32.62	191	P	P	02 44 17.1	+0.6
WRA	Warramunga Arr	32.62	191	P	P	02 44 16.1	-0.4
	comp=Z,1.9nm,0.7s,baz=11,slow=9.9,SNR=9.8						
	comp=Z,1.9nm,0.7s						
ASAR	Alice Springs	36.33	191	P	P	02 44 48.6	-0.1
ASAR	Alice Springs	36.33	191	P	P	02 44 49.4	+0.8
	comp=Z,0.5nm,0.6s,baz=16,slow=13,SNR=11						
	comp=Z,0.5nm,0.6s						
KLR	Kul'dur	37.64	350	P	P	02 44 60.0	+0.5
	comp=Z,3.3nm,0.8s,baz=154,slow=7.4,SNR=6.8						
KLR				LR	LR	02 58 40.0	
	comp=Z,39nm,20.6s,baz=181,slow=33						
	comp=Z,3.3nm,0.8s						
CMAR	Chiang Mai Arr	40.83	284	P	P	02 45 26.9	+0.4
	comp=Z,1.1nm,0.3s,baz=86,slow=6.3,SNR=5.6						
	comp=Z,1.1nm,0.3s						
PETK	Petropavlovsk-	42.93	15	LR	LR	03 01 00.5	
	comp=Z,20nm,21.9s,baz=295,slow=32						
STKA	Stephens Creek	43.88	179	P	P	02 45 50.6	-0.4
STKA				IAmb	IAmb	02 46 00.8	
	comp=Z,13nm,0.8s						
STKA	Stephens Creek	43.88	179	P	P	02 45 50.7	-0.4
	comp=Z,1.2nm,0.6s,baz=99,slow=4.7,SNR=3.5						
	comp=Z,1.2nm,0.6s						
SONM	Songino Array	45.68	328	P	P	02 46 05.4	-0.1
	comp=Z,0.5nm,0.5s,baz=134,slow=8.5,SNR=6.4						
SONM				LR	LR	03 08 30.7	
	comp=Z,24nm,18.1s,baz=156,slow=40						
	comp=Z,0.5nm,0.5s						
SEY	Seymchan	51.28	7	P	P	02 46 48.8	+0.6
	comp=Z,2.1nm,0.6s,baz=192,slow=3.4,SNR=10						
	comp=Z,2.1nm,0.6s						
MKAR	Makanchi Array	59.78	317		P	02 47 49.8	0.0
MKAR	Makanchi Array	59.78	317	P	P	02 47 50.8	+1.0
	comp=Z,2.0nm,0.9s,baz=104,slow=7.0,SNR=15						
MKAR				LR	LR	03 13 30.7	
	comp=Z,25nm,20.7s,baz=132,slow=36						
	comp=Z,2.0nm,0.9s						
MAKZ	Makanchi	60.00	317	P	P	02 47 50.9	-0.3
ZAA0	Zalesovo Array	60.48	326	P	P	02 47 54.4	0.0
ZALV	Zalesovo Beam	60.48	326	P	P	02 47 53.9	-0.5
	comp=Z,0.9nm,0.5s,baz=112,slow=6.6,SNR=3.8						
	comp=Z,0.9nm,0.5s						
K13K	Kusilvak Mount	62.98	26	P	P	02 48 09.9	-1.2
K13K				IAmb	IAmb	02 48 10.0	
	comp=Z,7.7nm,1.2s						
KURK	Kurchatov	63.13	321		P	02 48 12.1	-0.2
KURK				IAmb	IAmb	02 48 13.5	
	comp=Z,6.8nm,0.9s						
KURBB	Kurchatov Arra	63.16	321	P	P	02 48 12.8	+0.4
	comp=Z,3.2nm,0.6s,baz=105,slow=7.0,SNR=31						
	comp=Z,3.2nm,0.6s						
O14K	Tigyukauivet M	63.39	29	P	P	02 48 13.5	-0.3
O14K				IAmb	IAmb	02 48 32.8	
	comp=Z,7.3nm,1.1s						
L14K	Kuka Creek	63.57	27	P	P	02 48 15.3	+0.4
M14K	Bethel	63.65	27	P	P	02 48 15.7	+0.2
O15K	Ungalikthiuk R	64.05	30	P	P	02 48 17.8	-0.4
O15K				IAmb	IAmb	02 48 18.6	
	comp=Z,4.7nm,0.8s						
K15K	Wolf Creek Mou	64.46	26	P	P	02 48 21.0	+0.1
F15K	North Star Dit	64.74	22	P	P	02 48 22.8	+0.2
F15K				IAmb	IAmb	02 48 48.3	
	comp=Z,8.7nm,1.3s						
L16K	Owhat River	65.13	27	P	P	02 48 25.0	-0.2
L16K				IAmb	IAmb	02 48 47.0	
	comp=Z,8.0nm,1.5s						
J16K	Anvik River	65.25	25	P	P	02 48 26.5	+0.5
J16K				IAmb	IAmb	02 48 44.7	
	comp=Z,7.6nm,1.4s						
N17K	Nushagak Hills	65.76	29	P	P	02 48 29.3	0.0
N17K				IAmb	IAmb	02 48 51.6	
	comp=Z,6.1nm,1.4s						
E18K	Tukpahlearik C	66.95	21	P	P	02 48 37.2	+0.3
E18K				IAmb	IAmb	02 48 38.2	
	comp=Z,5.1nm,0.9s						
G18K	Tagagawik	67.05	23		P	02 48 37.0	-0.5
G18K				IAmb	IAmb	02 48 38.2	
	comp=Z,4.4nm,0.9s						
G19K	Purcell Mounta	67.73	23		P	02 48 41.9	+0.1
G19K				IAmb	IAmb	02 48 42.7	
	comp=Z,5.7nm,0.8s						
H19K	Roundabout Mou	67.76	24		P	02 48 41.8	-0.1
H19K				IAmb	IAmb	02 48 43.2	
	comp=Z,6.1nm,1.1s						
C19K	Lookout Ridge	68.01	19	P	P	02 48 44.1	+0.6
E19K	Redstone River	68.16	21		P	02 48 45.3	+0.8
E19K				IAmb	IAmb	02 48 45.7	
	comp=Z,4.6nm,0.8s						
D19K	Kuna River	68.25	20	P	P	02 48 45.4	+0.3
D19K				IAmb	IAmb	02 48 46.2	
	comp=Z,5.9nm,0.9s						
J20K	Nowinta River	68.25	25		P	02 48 45.7	+0.6
BVAR	Borovoye Array	68.58	322	P	P	02 48 47.8	+0.4
	comp=Z,5.6nm,0.8s,baz=108,slow=8.0,SNR=18						
BVAR				LR	LR	03 20 09.5	
	comp=Z,16nm,19.1s,baz=85,slow=37						
	comp=Z,5.6nm,0.8s						
D20K	Etivluk River	68.84	20		P	02 48 48.9	+0.1
CAST	Castle Rocks	68.92	26	P	P	02 48 49.1	-0.2
D22K	Ayikyak River	70.25	21		P	02 48 58.0	+0.5
D22K				IAmb	IAmb	02 48 58.9	
	comp=Z,5.6nm,0.7s						
I23K	Minto, Yukon-K	70.50	25	P	P	02 48 59.4	+0.4
E23K	Chandalar	71.10	22		P	02 49 03.3	+0.5
ILAR	Eielson Array	71.45	26	P	P	02 49 03.0	-1.7
	comp=Z,1.2nm,0.8s,baz=253,slow=6.1,SNR=15						
	comp=Z,1.2nm,0.8s						
D24K	Happy Valley	71.66	21	P	P	02 49 06.2	+0.2
AB31	Akbulak array	74.92	318		P	02 49 25.4	-0.2
ABKAR	Akbulak array	74.92	318		P	02 49 25.3	-0.3
ABKAR	Akbulak array	74.92	318	P	P	02 49 25.5	-0.1
ARTI	Arti	75.75	325	LR	LR	03 24 36.7	
	comp=Z,27nm,19.7s,baz=109,slow=37						
KIRV	Kirov	80.42	328	LR	LR	03 28 14.6	
	comp=Z,13nm,18.0s,baz=94,slow=38						
CASY	Casey	81.45	192	P	P	02 50 01.8	+0.5
CASY				IAmb	IAmb	02 50 42.0	
	comp=Z,13nm,1.4s						
EUNU	Eureka	84.71	7	P	P	02 50 18.5	+0.3
YKA	Yellowknife Ar	85.83	27	P	P	02 50 22.2	-1.8
	comp=Z,0.3nm,0.7s,baz=293,slow=6.2,SNR=4.3						
	comp=Z,0.3nm,0.7s						
ARCES	ARCESS Array B	87.14	341	P	P	02 50 29.5	-0.8
	comp=Z,1.5nm,0.7s,baz=58,slow=5.5,SNR=3.5						
	comp=Z,1.5nm,0.7s						
FINES	FINESS Array B	90.70	334	P	P	02 50 45.4	-1.8
	comp=Z,3.4nm,0.7s,baz=66,slow=4.8,SNR=14						
	comp=Z,3.4nm,0.7s						
NVAR	Mina Array Bea	90.79	50	P	P	02 50 47.1	-1.4
	comp=Z,0.4nm,0.6s,baz=278,slow=4.3,SNR=2.6						
	comp=Z,0.4nm,0.6s						
LPAZ	La Paz	151.62	102	PKPbc	PKPbc	02 57 39.9	-0.9
	comp=Z,2.2nm,0.7s,baz=276,slow=1.7,SNR=9.1						

*SJA **25** 02:42:40.2±0.7, 22°.34S×68°.52W, h107^{km}±6^{km}, ML3.4, MW3.5*

*GUC **25** 02:42:41.8±0.8, 22°.26S×68°.68W, h126^{km}±4^{km}, ML3.6*

ISC 25 02:42:41.9±1.3**, 22°.31S**±0°.03×**68°.63W**±0°.04**, h115^{km}**±9^{km}**, n36, σ1^s.30**/56**, 5C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AF01	San Pedro de A	0.76	147	*e*P	Pn	02 43 02.7	+1.1
AF01				IAML		02 43 33.2	
	comp=E,1μm,0.4s						
AF01	San Pedro de A	0.76	147	*e*P	Pn	02 42 59.3	-2.3
AF01				*e*S	Sn	02 43 12.2	-4.2
AF01				IAML		02 43 32.9	
	comp=Z,676nm,0.5s						
PB09	IPOC Station P	0.77	312	⇑*i*P	Pn	02 43 02.2	+0.7
PB09				*e*S	Sn	02 43 17.0	+0.8
PB09				IAML		02 43 21.4	
	comp=E,1μm,0.5s						
PB09	IPOC Station P	0.77	312	*e*P	Pn	02 43 02.2	+0.7
PB09				IAML		02 43 21.2	
	comp=Z,459nm,0.2s						
PB06	IPOC Station P	0.95	246	⇑*i*P	Pn	02 43 03.7	+0.5
PB06				*e*S	Sn	02 43 20.5	+1.2
PB06				IAML		02 43 22.0	
	comp=E,2μm,0.2s						
PB06	IPOC Station P	0.95	246	*e*P	Pn	02 43 03.8	+0.5
PB06				*e*S	Sn	02 43 20.9	+1.6
PB06				IAML		02 43 22.4	
	comp=Z,564nm,0.1s						
PB03	IPOC Station P	1.07	284	⇑*i*P	Pn	02 43 04.8	+0.3
PB03				*e*S	Sn	02 43 21.7	+0.3
PB03				IAML		02 43 22.8	
	comp=E,2μm,0.2s						
PB03	IPOC Station P	1.07	284	*e*P	Pn	02 43 04.6	+0.2
PB03				*e*S	Sn	02 43 22.1	+0.6
PB03				IAML		02 43 23.4	
	comp=Z,2μm,0.2s						
PB01	IPOC Station P	1.50	328	⇑*i*P	Pn	02 43 08.9	-0.2
PB01				*e*S	Sn	02 43 28.8	-0.9
PB01				IAML		02 43 30.6	
	comp=E,815nm,0.1s						
PB01	IPOC Station P	1.50	328	*e*P	Pn	02 43 08.8	-0.2
PB01				IAML		02 43 32.0	
	comp=Z,485nm,0.2s						
PB05	IPOC Station P	1.55	249	⇑*i*P	Pn	02 43 10.0	+0.3
PB05				*e*S	Sn	02 43 30.7	-0.2
PB05				IAML		02 43 31.8	
	comp=N,611nm,0.3s						
PB05	IPOC Station P	1.55	249	*e*P	Pn	02 43 09.4	-0.3
PB05				*e*S	Sn	02 43 31.2	+0.4
PB05				IAML		02 43 35.1	
	comp=Z,299nm,0.4s						
PATCX	Punta Patache	2.05	316	*e*P	Pn	02 43 15.1	-0.8
PATCX				IAML		02 43 47.1	
	comp=E,498nm,0.2s						
PATCX	Punta Patache	2.05	316	*e*P	Pn	02 43 15.5	-0.4
PATCX				*e*S	Sn	02 43 42.1	+0.2
PATCX				IAML		02 43 46.9	
	comp=Z,155nm,0.4s						
PB10	IPOC Station P	2.14	236	*e*P	Pn	02 43 16.8	-0.1
PB10				IAML		02 43 44.6	
	comp=E,231nm,0.2s						
PB10	IPOC Station P	2.14	236	*e*P	Pn	02 43 16.9	0.0
PB10				*e*S	Sn	02 43 43.4	-0.2
PB10				IAML		02 43 43.7	
	comp=Z,145nm,0.4s						
PB08	IPOC Station P	2.22	347	*e*P	Pn	02 43 18.7	+0.5
PB08				*e*S	Sn	02 43 46.3	+0.3
PB08				IAML		02 43 48.2	
	comp=E,285nm,0.2s						
PB08	IPOC Station P	2.22	347	*e*P	Pn	02 43 18.8	+0.5
PB08				*e*S	Sn	02 43 48.0	+2.0
PB08				IAML		02 43 48.0	
	comp=Z,120nm,0.3s						
TA01	Diego Aracena	2.26	320	*e*P	Pn	02 43 17.0	-1.4
TA01	Diego Aracena	2.26	320	*e*P	Pn	02 43 17.8	-0.6
TA01				*e*S	Sn	02 43 46.0	-0.4
TA01				IAML		02 43 48.2	
	comp=Z,119nm,0.4s						
HMBC	Humberstone	2.34	330	*e*P	Pn	02 43 18.2	-1.4
HMBC				IAML		02 43 52.9	
	comp=E,380nm,0.2s						
HMBC	Humberstone	2.34	330	*e*P	Pn	02 43 17.8	-1.8
HMBC				*e*S	Sn	02 43 46.7	-1.8
HMBC				IAML		02 43 50.0	
	comp=Z,343nm,0.2s						
TA02	Huaiquique	2.47	325	*e*S	Sn	02 43 52.3	+1.1
TA02				IAML		02 43 53.8	
	comp=Z,170nm,0.2s						
GO01	Chusmiza	2.68	349	*e*P	Pn	02 43 24.2	-0.2
GO01				IAML		02 43 59.4	
	comp=E,459nm,0.1s						
GO01	Chusmiza	2.68	349	*e*P	Pn	02 43 24.4	0.0
GO01				*e*S	Sn	02 43 57.2	+0.2
PB11	IPOC Station P	2.71	339	*e*P	Pn	02 43 23.3	-1.2
PB11				IAML		02 44 00.3	
	comp=E,256nm,0.2s						
PB11	IPOC Station P	2.71	339	*e*P	Pn	02 43 23.5	-1.0
PB11				*e*S	Sn	02 43 57.5	+0.3
PB11				IAML		02 43 59.8	
	comp=Z,134nm,0.2s						
PB14	IPOC Station P	2.82	215	*e*P	Pn	02 43 25.7	-0.3
PB14	IPOC Station P	2.82	215	*e*P	Pn	02 43 26.0	0.0
PB14				IAML		02 44 03.4	
	comp=Z,124nm,0.3s						
YJA	Yavi	2.89	88	*e*P	Pn	02 43 30.2	+3.2
YJA				*e*S	Sn	02 43 59.0	-2.7
GO02	Mina Guanaco	2.97	197	*e*P	Pn	02 43 28.2	+0.2
GO02	Mina Guanaco	2.97	197	*e*P	Pn	02 43 28.4	+0.4
GO02				*e*S	Sn	02 44 06.3	+2.9
AZAP	Zapla	3.79	121	*e*P	Pn	02 43 40.3	+1.5
PB16	IPOC Station P	4.04	348	*e*P	Pn	02 43 42.4	-0.2
PB16				IAML		02 44 38.2	
	comp=Z,20nm,0.5s						
AC01	Pan de Azucar	4.22	205	*e*P	Pn	02 43 42.9	-1.4
AC01				*e*S	Sn	02 44 20.4	-12
AC01				IAML		02 44 47.5	
	comp=Z,34nm,0.3s						
AC02	Maricunga	4.53	186	*e*P	Pn	02 43 49.3	+0.5
AC02				*e*S	Sn	02 44 38.7	-2.0
AC02				IAML		02 45 08.4	
	comp=Z,13nm,0.6s						

*NEIC **25** 02:54:06.8±1.4, 6°.51S±0°.09×129°.16E±0°.07, h179^{km}±11^{km}, mb4.3/3, Error ellipse: s-maj=13.9km s-min=9.1km az=155.0*

*IDC **25** 02:54:16.1±5.5, 7°.21S×129°.11E, h228^{km}±57^{km}, mb3.0/1, mbtmp4.3/4, Error ellipse: s-maj=57.6km s-min=24.7km az=66.0*

ISC 25 02:54:07.1±1.0**, 6°.68S**±0°.08×**129°.20E**±0°.08**, h200^{km}, n19, σ2^s.35**/21**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.46	122		Pn	02 54 49.6	-0.8
FAKI	Fak Fak	4.81	39	Pn	Pn	02 55 16.5	-2.6
SOEI	Soe	5.76	238	Pn	Pn	02 55 30.9	-0.4
MTN	Manton Dam	6.42	163		Pn	02 55 43.5	+3.7
BATI	Baumata	6.50	237	S	Sn	02 56 56.9	+1.7
	54nm,0.5s,baz=95,slow=16,SNR=6.0						
MMRI	Maumere	7.17	254	Pn	Pn	02 55 49.4	-0.1
KNRA	Kununurra	8.96	183		Pn	02 56 15.5	+2.7
FITZ	Fitzroy Crossi	11.87	197		Pn	02 56 52.0	+1.7
FITZ	Fitzroy Crossi	11.87	197	P	Pn	02 56 51.5	+1.2
	13nm,0.6s,baz=18,slow=10,SNR=42						
FITZ				S	Sn	02 58 59.1	-3.6
	3.6nm,0.4s,baz=285,slow=14,SNR=3.7						
WB0	Warramunga Arr	13.96	159	Pn	Pn	02 57 18.4	+1.8
WRA	Warramunga Arr	14.10	160	Pn	Pn	02 57 20.3	+1.9
WRA	Warramunga Arr	14.10	160	P	Pn	02 57 19.6	+1.2
	1.0nm,0.3s,baz=342,slow=13,SNR=16						
WRA				S	S	02 59 51.9	-3.5
	1.7nm,0.5s,baz=337,slow=22,SNR=4.9						
COEN	Coen	15.53	119	P	Pn	02 57 38.3	+2.4
COEN				IAmb	IAmb	02 57 39.7	
	comp=Z,8.9nm,0.8s						
PSA00	Pilbara Seismi	17.35	210	P	Pn	02 57 58.3	+0.7
PSA00				IAmb	IAmb	02 57 59.1	
	comp=Z,5.5nm,0.7s						
ASAR	Alice Springs	17.49	166		Pn	02 58 01.4	+2.2
ASAR	Alice Springs	17.49	166	P	Pn	02 58 01.2	+2.0
	comp=Z,28nm,0.6s,baz=347,slow=11,SNR=118						
ASAR				S	S	03 01 05.5	-3.4
	comp=Z,1.7nm,0.7s,baz=347,slow=20,SNR=8.5						
MKAR	Makanchi Array	67.52	327	P	P	03 04 50.1	+8.4
	comp=Z,0.3nm,0.5s,baz=111,slow=6.3,SNR=9.3						
	comp=Z,0.3nm,0.5s						
GAMB	Gambell	82.92	23	P	P	03 06 10.5	+1.4
GAMB				IAmb	IAmb	03 06 13.9	
	comp=Z,17nm,1.0s						
QSPA	South Pole Qui	83.30	180	P	P	03 06 10.5	-0.7

*KRSC **25** 02:57:11.9±1.5, 54°.75N×164°.50E, h47^{km}±29^{km}, Ml3.7*

*IDC **25** 02:57:11.1±1.6, 55°.76N×163°.68E, h0^{km}, mb3.5/3, mbtmp3.4/4, ML2.1/1, Error ellipse: s-maj=50.5km s-min=25.3km az=150.0*

ISC 25 02:57:11.3±1.7**, 54°.95N**±0°.07×**164°.34E**±0°.05**, h4^{km}**±14^{km}**, n30, σ1^s.58**/43**, mb3.5**/3**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	0.97	74	*e*P	Pg	02 57 29.9	0.0
BKI				*e*S	Sg	02 57 41.8	-0.7
KBTR	Krutoberegovo	1.53	326	*e*P	Pb	02 57 40.2	0.0
KBTR				*e*S	Sb	02 57 59.4	-0.4
MKZ	Mys Kozlova	1.56	257	*e*P	Pn	02 57 40.4	+0.7
MKZ				*e*S	Sn	02 57 59.3	-1.1
TUMD	Tumrok D	2.28	278	*e*P	Pb	02 57 52.3	-0.6
TUMD				*e*S	Sb	02 58 21.7	+0.3
BZGR	Bezymyannyi-Gr	2.30	297	*e*P	Pb	02 57 53.9	+0.5
BZGR				*e*S	Sb	02 58 21.8	-0.4
SMKR	Semkarok	2.31	316	*e*S	Sg	02 58 23.6	-1.7
LGNR	Loginova	2.37	300	*e*S	Sb	02 58 25.2	+1.0
KMNR	Kamenistaya	2.48	291	*e*P	Pb	02 57 56.3	-0.1
KMNR				*e*S	Sb	02 58 27.5	+0.3
KIRR	Kirishev	2.49	296	*e*P	Pb	02 57 56.8	+0.3
KIRR				*e*S	Sb	02 58 28.0	+0.4
KRSR	Krestovskiy	2.49	302	*e*S	Sb	02 58 26.7	-0.9
KPT	Kopyto	2.56	295	*e*P	Pb	02 57 57.9	+0.2
KPT				*e*S	Sb	02 58 30.5	+1.1
SPN	Mys Shipunski	3.15	236	*e*P	Pn	02 58 01.6	+0.1
SPN				*e*S	Sn	02 58 35.4	-4.1
SDLR	Sedlovina	3.62	245	*e*P	Pn	02 58 09.6	+1.5
SDLR				*e*S	Sn	02 58 50.6	-0.7
SMAR	Somma	3.67	245	*e*P	Pn	02 58 11.1	+2.2
SMAR				*e*S	Sn	02 58 51.3	-1.4
KRER	Koryakskii	3.68	246	*e*P	Pn	02 58 11.3	+2.3
KRER				*e*S	Sn	02 58 51.7	-1.2
UGLR	Uglovaya	3.69	244	*e*P	Pn	02 58 11.4	+2.4
UGLR				*e*S	Sn	02 58 51.9	-1.0
AVH	Avacha	3.70	245	*e*P	Pn	02 58 11.8	+2.6
AVH				*e*S	Sn	02 58 52.7	-0.5
KRX	Arik	3.71	247	*e*P	Pn	02 58 11.7	+2.4
KRX				*e*S	Sn	02 58 51.9	-1.5
KOK	Koryaka	3.74	246	*e*P	Pn	02 58 11.8	+2.0
GNL	Ganaly	3.95	254	*e*P	Pn	02 58 15.7	+3.0
KRMR	Karymshinskiy	4.24	243	*e*S	Sn	02 59 05.4	-1.0
PETK	Petropavlovsk-	4.33	248	Pn	Pn	02 58 20.1	+2.4
	0.5nm,0.3s,baz=71,slow=17,SNR=11						
PETK				Sn	Sn	02 59 08.9	+0.4
	1.3nm,0.3s,baz=304,slow=16,SNR=9.8						
	1.1nm,0.6s						
MTVR	Mutnovka	4.41	238	*e*P	Pn	02 58 20.6	+1.6
MTVR				*e*S	Sn	02 59 08.3	-2.5
ASAK	Asacha	4.61	239	*e*S	Sn	02 59 15.1	-0.5
ILAR	Eielson Array	25.72	48	P	P	03 02 40.5	-1.6
	0.3nm,0.7s,baz=258,slow=8.5,SNR=5.1						
	0.3nm,0.7s						
H11N2	WAKE ISLAND Hy	35.21	176	T	T	03 42 39.8	
	baz=359						
H11N3	WAKE ISLAND Hy	35.23	176	T	T	03 42 47.5	
	baz=359						
H11N1	WAKE ISLAND Hy	35.23	176	T	T	03 42 45.9	
	baz=359						
FINES	FINESS Array B	59.37	338	P	P	03 07 08.0	-5.9
	1.0nm,0.5s,baz=32,slow=6.8,SNR=10						
	1.0nm,0.5s						
TXAR	Lajitas Array	67.63	71	P	P	03 08 10.1	+0.9
	0.2nm,0.5s,baz=323,slow=6.1,SNR=4.2						
	0.2nm,0.5s						

*IDC **25** 03:00:00.5±1.3, 32°.71S×178°.37W, h0^{km}, mb4.0/3, mbtmp4.0/4, ML3.9/1, MS3.3/1, Error ellipse: s-maj=37.8km s-min=33.3km az=120.0*

*WEL **25** 03:00:01.5±0.9, 33°S±6°×17°8W±1°6, h33^{km}, M4.5/11, mB4.9/6, ML4.9/17, MLv4.7/11, Mw(mB)4.2/6, Error ellipse: s-maj=21.7km s-min=4.3km az=108.7, confirmed*

*NEIC **25** 03:00:02.0±2.0, 32°.68S±0°.08×178°.3W±0°.2, h10^{km}±1^{km}, mb4.5/9, Error ellipse: s-maj=28.3km s-min=11.7km az=108.0*

ISC 25 03:00:01.1±0.8**, 32°.82S**±0°.07×**178°.1W**±0°.1**, h10^{km}, n49, σ1^s.72**/54**, mb4.4**/7**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.55	3	P	Pn	03 00 54.8	-1.4
GLKZ				S	Sn	03 01 35.1	-3.2
RAO	Raoul Island	3.56	3	Pn	Pn	03 00 54.8	-1.7
MXZ	Matakaoa Point	5.57	211	Pn	Pn	03 01 23.4	-0.5
MXZ	Matakaoa Point	5.57	211	P	Pn	03 01 23.2	-0.8
WMGZ	Waiomatatini S	5.74	209	P	Pn	03 01 24.6	-1.7
PKGZ	Pakihiroa	5.92	211	P	Pn	03 01 28.3	-0.5
PKGZ				S	Sn	03 02 35.1	-1.6
HAZ	Te Kaha	5.96	213	P	Pn	03 01 27.8	-1.5
HAZ				S	Sn	03 02 37.7	0.0
PUZ	Puketiti	6.02	208	P	Pn	03 01 30.4	+0.2
PUZ				S	Sn	03 02 39.2	0.0
RUGZ	Raukumara Rang	6.18	213	P	Pn	03 01 30.7	-1.8
RUGZ				S	Sn	03 02 43.4	+0.2
TWGZ	Tauwhareparae	6.22	210	P	Pn	03 01 31.3	-1.8
TWGZ				S	Sn	03 02 44.2	-0.1
CNGZ	Carnagh Statio	6.40	207	P	Pn	03 01 33.7	-1.6
TKGZ	Te Karaka	6.50	209	P	Pn	03 01 35.0	-1.8
MWZ	Matawai	6.55	212	P	Pn	03 01 35.2	-2.3
MWZ				S	Sn	03 02 48.7	-3.6
URZ	Urewera	6.68	214	Pn	Pn	03 01 39.0	-0.2
	2.1nm,0.3s,baz=275,slow=2.3,SNR=21						
URZ				Sn	Sn	03 02 52.7	-2.6
	7.7nm,0.3s,baz=269,slow=23,SNR=12						
	4.4nm,0.3s						
URZ	Urewera	6.68	214	P	Pn	03 01 38.3	-0.9
URZ				S	Sn	03 02 51.7	-3.7
RAGZ	Rawiri	6.73	211	P	Pn	03 01 37.6	-2.4
RAGZ				S	Sn	03 02 53.7	-3.1
RIGZ	Rimuhau	6.76	209	P	Pn	03 01 39.8	-0.6
PRGZ	Paritu Road	6.90	207	P	Pn	03 01 39.1	-3.3
SNGZ	Shannon Statio	7.00	211	P	Pn	03 01 43.3	-0.4
MUGZ	Murupara	7.01	215	P	Pn	03 01 42.9	-1.0
MUGZ				S	Sn	03 03 00.7	-3.0
RTZ	Ruatahuna	7.03	213	Pn	Pn	03 01 43.5	-0.6
RTZ	Ruatahuna	7.03	213	P	Pn	03 01 46.8	+2.7
TOZ	Tahuroa Road	7.16	225	P	Pn	03 01 47.2	+1.4
OUZ	Omahuta	7.29	249	P	Pn	03 01 51.0	+3.4
BKZ	Black Stump Fm	7.69	213	Pn	Pn	03 01 52.4	-0.8
BKZ	Black Stump Fm	7.69	213	P	Pn	03 01 52.5	-0.7
NGZ	Ngauruhoe	8.13	217	P	Pn	03 01 58.8	-0.6
TSZ	Takapari Road	8.66	212	P	Pn	03 02 05.2	-1.3
BFZ	Birch Farm	9.06	208	P	Pn	03 02 09.7	-2.1
KHZ	Kahutara	11.64	212	Pn	Pn	03 02 48.1	+1.0
STKA	Stephens Creek	33.91	260	P	P	03 06 44.2	-0.2
STKA	Stephens Creek	33.91	260	LR	LR	03 19 06.9	
	comp=Z,43nm,18.3s,baz=30,slow=34						
CTAO	Charters Tower	34.17	283	P	P	03 06 44.7	-1.9
ASAR	Alice Springs	42.94	270	P	P	03 07 58.6	-1.8
ASAR	Alice Springs	42.94	270	P	P	03 07 59.6	-0.8

	1.2nm,0.5s,baz=110,slow=7.5,SNR=20						
	1.2nm,0.5s						
WR8	Warramunga Arr	44.01	275	P	P	03 08 07.9	-1.1
WR8				IAmb	IAmb	03 08 31.5	
	comp=Z,9.0nm,1.2s						
WRA	Warramunga Arr	44.15	275	P	P	03 08 08.5	-1.6
WRA	Warramunga Arr	44.15	275	P	P	03 08 09.1	-1.0
	comp=Z,1.8nm,0.5s,baz=115,slow=7.8,SNR=24						
	comp=Z,1.8nm,0.5s						
WB0	Warramunga Arr	44.18	275	P	P	03 08 09.4	-1.0
WB0				IAmb	IAmb	03 08 48.0	
	comp=Z,17nm,1.5s						
FITZ	Fitzroy Crossi	52.30	272	P	P	03 09 12.2	-1.0
CASY	Casey	52.97	209	P	P	03 09 18.3	+0.9
CASY				IAmb	IAmb	03 09 26.8	
	comp=Z,6.3nm,1.1s						
RSD	Rainshed	56.39	26	P	P	03 09 41.8	-1.0
QSPA	South Pole Qui	57.30	180	P	P	03 09 50.2	+1.4
QSPA				IAmb	IAmb	03 10 21.5	
	comp=Z,5.7nm,1.4s						
QSPA	South Pole Qui	57.30	180	P	P	03 09 50.6	+1.8
	comp=Z,1.3nm,1.0s,baz=124,slow=3.6,SNR=1.7						
	comp=Z,1.3nm,1.0s						
BELA	Belgrano 2	67.41	172	P	P	03 10 59.3	+3.1
BELA				IAmb	IAmb	03 11 29.5	
	comp=Z,3.6nm,1.3s						
FINES	FINESS Array B	147.37	339	PKPbc	PKPdf	03 19 44.7	+2.9
	comp=Z,1.4nm,0.4s,baz=47,slow=4.1,SNR=29						
NOA	NORSAR Array B	151.12	351	PKPbc	PKPbc	03 19 53.7	-0.1
	comp=Z,0.1nm,0.5s,baz=16,slow=2.5,SNR=1.2						
HFS	Hagfors	151.59	348	PKPbc	PKPbc	03 19 55.4	+0.6
	comp=Z,0.4nm,0.4s,baz=45,slow=0.6,SNR=1.5						
BRTR	Keskin Array B	153.59	294	PKPbc	PKPbc	03 20 00.4	+0.2
	comp=Z,0.6nm,0.5s,baz=66,slow=3.9,SNR=7.1						

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*UCR **25** 03:06:42.8±0.9, 10°.24N×84°.52W, h82km±2km, MW3.8*
*CATAC **25** 03:06:44.5±0.5, 10°N±2°×8°5W±°, h53km±6km, M3.5/11, MLv3.5/11, Error ellipse: s-maj=5.8km s-min=5.0km az=83.4, confirmed*
ISC 25 03:06:42.8±1.4**, 10°.21N**±0°.04×**84°.52W**±0°.03**, h85**km±7km**, n111, σ0s.55**/113**, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRA1	San Ramn	0.13	161	eP	Pn	03 06 54.9	-0.3
RAMO	San Ramon	0.13	155	eP	Pn	03 06 55.0	-0.2
ZARE	Zarcero	0.14	101	eP	Pn	03 06 55.5	+0.1
ZARE				eS	Sn	03 07 05.2	+0.7
QUEU	Ciudad Quesada	0.14	38	eP	Pn	03 06 55.2	+0.1
QUEU				eS	Sn	03 07 04.8	+0.5
VPL1	V. Platanar	0.16	74	eP	Pn	03 06 55.1	-0.3
VPL2	V. Platanar	0.17	56	eP	Pn	03 06 55.4	0.0
PALD	Palmares	0.18	150	eP	Pn	03 06 55.0	-0.3
SARCI	Sarchi	0.21	124	eP	Pn	03 06 55.5	0.0
ARZA	Esparza	0.26	213	eP	Pn	03 06 55.7	+0.2
ATEO	Atenas	0.27	149	eP	Pn	03 06 55.4	-0.3
TCS1	Tacares	0.28	127	eP	Pn	03 06 55.6	-0.1
TCS1	Tacares	0.28	127	P	Pn	03 06 55.7	-0.1
VPS8	V Poas	0.28	96	eP	Pn	03 06 55.8	-0.2
TUNA	La Fortuna	0.28	335	eP	Pn	03 06 55.7	0.0
FORC	Fortuna	0.29	331	eP	Pn	03 06 55.8	+0.1
VACR	Volcan Arenal	0.30	330	eP	Pn	03 06 55.9	+0.1
TRB2	Turrubares	0.30	166	eP	Pn	03 06 55.6	-0.2
CASO	Castillo	0.30	317	eP	Pn	03 06 55.9	0.0
ARE1	Arenal 1	0.32	323	eP	Pn	03 06 56.1	+0.3
ARE1				eS	Sn	03 07 06.3	+0.8
VARE2	V. Arenal	0.32	323	eP	Pn	03 06 56.1	+0.2
MTEVE	Monteverde	0.32	290	eP	Pn	03 06 56.0	0.0
CEDE	Laguna Cedeo	0.33	327	eP	Pn	03 06 56.2	+0.2
ITAL	Pital	0.34	46	eP	Pn	03 06 55.7	-0.3
TABAC	Tabacon	0.37	320	eP	Pn	03 06 56.4	+0.2
BELE	Belen	0.40	125	eP	Pn	03 06 56.3	-0.2
JTS	Las Juntas de	0.43	281	eP	Pn	03 06 56.4	-0.1
VBV1	V. Barva	0.43	103	eP	Pn	03 06 56.7	-0.2
SANTA	Santa Ana	0.43	129	eP	Pn	03 06 56.3	-0.3
JUNT	Juntas	0.43	280	eP	Pn	03 06 57.4	+0.8
HEME	Heredia, Merce	0.44	119	eP	Pn	03 06 56.7	0.0
HDC	Heredia	0.45	117	eP	Pn	03 06 56.6	-0.2
TILA	Tilaran	0.51	300	eP	Pn	03 06 57.4	+0.2
COVE	Coope Vega, Sa	0.52	13	P	Pn	03 06 57.0	-0.3
COVE	Coope Vega, Sa	0.52	13	S	Sn	03 07 06.4	-1.6
LUJA	Lujan	0.53	122	eP	Pn	03 06 57.5	0.0
ACOS	Acosta	0.54	139	eP	Pn	03 06 57.6	0.0
QUEB	Quebradon, Cot	0.55	318	eP	Pn	03 06 57.5	-0.1
SARA	Sarapiqu	0.55	64	eP	Pn	03 06 57.0	-0.5
AMPA	Desamparados	0.55	124	eP	Pn	03 06 57.5	-0.1
CORON	Coronado	0.56	115	eP	Pn	03 06 58.3	+0.5
INVE	Universidad In	0.59	297	eP	Pn	03 06 58.2	+0.3
CNAS	Canas	0.60	292	eP	Pn	03 06 58.3	+0.3
CVIMO	Finca Echandi	0.60	108	eP	Pn	03 06 58.2	0.0
TRIO	Tres Rios	0.60	120	eP	Pn	03 06 58.2	0.0
TIMP	Tierras Morena	0.61	307	eP	Pn	03 06 58.3	+0.1
TENO	El Achiote	0.66	318	eP	Pn	03 06 58.8	+0.1
PAR1A	Puntarenas Pro	0.67	156	eP	Pn	03 06 59.1	+0.5
JCR1	Jicaral	0.68	238	eP	Pn	03 06 58.5	-0.3
ABE2	San Pablo	0.68	137	eP	Pn	03 06 59.1	+0.1
LCR2	La Lucha 2	0.69	132	eP	Pn	03 06 59.0	0.0
LCR2	La Lucha 2	0.69	132	S	Sn	03 07 11.7	+0.6
LCR2	La Lucha 2	0.69	132	P	Pn	03 06 59.0	0.0
PISJ	San Jernim	0.70	145	eP	Pn	03 06 58.9	-0.2
VICA	Volcano Irazu	0.71	108	eP	Pn	03 06 59.2	-0.3
MOTZ	Rio Naranjo	0.72	311	eP	Pn	03 06 59.6	+0.5
REPA	Paraso	0.75	120	eP	Pn	03 06 59.8	+0.3
PCAYA	Pacayas	0.76	112	eP	Pn	03 07 00.1	+0.3
VTLA	Turrialba Volc	0.77	106	eP	Pn	03 06 60.0	0.0
CUI	Cuipilapa	0.77	305	eP	Pn	03 06 59.9	+0.2
CVTQ	Turrialba Volc	0.77	105	eP	Pn	03 07 00.0	0.0
VTR0	Volcan Turrial	0.78	104	eP	Pn	03 07 00.0	-0.1
CVTV	Tajo	0.79	105	eP	Pn	03 07 00.2	0.0
BAGA	Bagaces	0.79	294	eP	Pn	03 07 00.1	+0.3
CARI	Cariari	0.79	79	eP	Pn	03 06 59.9	+0.1
PIEC	Cerro El Cedra	0.81	136	eP	Pn	03 07 00.1	-0.2
HORNC	Hornillas	0.81	308	eP	Pn	03 07 00.4	+0.2
VTCV	VTCV, Calle Va	0.82	106	eP	Pn	03 07 00.5	+0.2
ABRB	Las Abras (San	0.82	104	eP	Pn	03 07 00.5	+0.1
ELVJ	El Viejo (Barb	0.82	287	eP	Pn	03 07 01.9	+1.8
PLVR	Palo Verde	0.82	280	eP	Pn	03 07 00.6	+0.2
VINA	Juan Vinas	0.83	112	eP	Pn	03 07 00.7	+0.3
CBL1	Cabuya	0.83	222	eP	Pn	03 06 59.5	-0.8
UPAL	Upala	0.83	325	eP	Pn	03 07 00.5	+0.1
LCHIL	Los Chiles	0.84	347	eP	Pn	03 07 01.5	+1.0
MESS	Mesas	0.84	309	eP	Pn	03 07 00.8	+0.3
TRT2	Tortugero	0.85	66	eP	Pn	03 07 00.2	-0.3
TRT2	Tortugero	0.85	66	P	Pn	03 07 00.4	-0.1
TRT2	Tortugero	0.85	66	S	Sn	03 07 13.4	-0.2
RESJ	San Isidro (Tu	0.89	102	eP	Pn	03 07 01.2	+0.2
TRT1	Tortuguero	0.90	65	eP	Pn	03 07 00.8	-0.2
CMARA	Lajas Hojancha	0.91	258	eP	Pn	03 07 01.2	0.0
CMARA	Lajas Hojancha	0.91	258	S	Sn	03 07 14.4	-0.5
CMARA	Lajas Hojancha	0.91	258	P	Pn	03 07 01.1	0.0
NICO	Nicoya	0.91	265	eP	Pn	03 07 01.7	+0.5
EGUB	Earth Gu¡pi	0.92	90	eP	Pn	03 07 01.5	+0.3
RVLA	Villa Bonita	0.93	96	eP	Pn	03 07 01.6	+0.3
GPS3	Bodega del ICE	0.99	303	eP	Pn	03 07 02.3	+0.2
VRLE	La Escondida,	1.01	305	eP	Pn	03 07 02.6	+0.2
INDI	Punta indio, G	1.02	251	P	Pn	03 07 02.1	-0.3
INDI	Punta indio, G	1.02	251	S	Sn	03 07 16.2	-1.0
LAPC	Finca la Perla	1.05	302	eP	Pn	03 07 02.9	0.0
PG27	Guanacaste Pro	1.05	306	eP	Pn	03 07 03.5	+0.6
ALIBA	Liberia Airpor	1.07	291	eP	Pn	03 07 03.8	+0.7
SAJE	San Jernim	1.32	131	eP	Pn	03 07 06.1	-0.2
CARN	Rivas	1.38	315	P	Pn	03 07 07.4	+0.5
LCRUZ	La Cruz	1.39	309	eP	Pn	03 07 07.5	+0.6
OCHAL	Ojochal	1.40	142	P	Pn	03 07 08.5	+1.4
EDPE	Pejibaye, P	1.41	138	eP	Pn	03 07 07.8	+0.6
DRK0	Durika	1.57	127	eP	Pn	03 07 09.4	-0.1
JAPN	Al SSO del Vol	1.73	319	P	Pn	03 07 18.8	+7.5
ACON	Acoyapa	1.86	340	eP	Pn	03 07 13.2	+0.2
ACON	Acoyapa	1.86	340	P	Pn	03 07 13.2	+0.2
ACON	Acoyapa	1.86	340	S	Sn	03 07 36.6	+0.6
BLUN	Bluefields	1.93	22	eP	Pn	03 07 13.8	-0.1
ESPN	Las Esperanzas	1.98	6	eP	Pn	03 07 14.9	+0.2
ALCO	Alturas Coton,	2.08	127	eP	Pn	03 07 16.2	0.0
BRU2	Volcan	2.29	128	eP	Pn	03 07 19.2	+0.3
BOAB	BOACO BROADBAN	2.49	333	P	Pn	03 07 21.8	+0.4
APQ2	Apoyeque	2.65	318	P	Pn	03 07 20.1	-3.4
RBALA	Bur	2.69	119	eP	Pn	03 07 23.8	-0.2
COPN	Copaltepe	2.82	314	P	Pn	03 07 26.8	+1.0

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*IDC **25** 03:17:37.3±0.9, 29°.99N×142°.94E, h0km, mb3.8/11, mbtmp3.8/14, ML3.2/2, Error ellipse: s-maj=32.4km s-min=17.6km az=80.0*
*JMA **25** 03:17:38.7±0.3, 30°.0N±0°.7×14°3E±°, h53km, MV4.0/13, NEAR TORISHIMA IS*
*NEIC **25** 03:17:39.1±1.2, 29°.95N±0°.06×142°.89E±0°.08, h10km±1km, mb4.5/19, Error ellipse: s-maj=12.0km s-min=10.5km az=237.0*
ISC 25 03:17:41.5±0.6**, 29°.98N**±0°.04×**142°.80E**±0°.10**, h30**km**, n52, σ1s.76**/57**, mb4.3**/21**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.93	191	eP	Pn	03 18 24.8	-1.2
CBIJ				eS	Sn	03 18 58.1	-2.0
JCJ	Chichijima	2.93	191	Pn	Pn	03 18 24.3	-1.7
JCJ	Chichijima	2.93	191	Pn	Pn	03 18 24.4	-1.6
	34nm,0.2s,baz=0.0,slow=0.0						
JCJ				Sn	Sn	03 18 56.5	-3.7
	baz=0.0,slow=0.0						
JHJ2	Mitsune	4.03	322	eP	Pn	03 18 38.3	-2.9
JHJ2				eS	Sn	03 19 23.5	-3.8
BSO1	Boso 1	4.91	342	eP	Pn	03 18 50.0	-2.8
BSO1				eS	Sn	03 19 44.2	-4.0
BSO3	Boso 3	5.18	339	eP	Pn	03 18 54.7	-2.1
BSO3				eS	Sn	03 19 53.2	-2.1
BSO4	Boso 4	5.41	338	eS	Sn	03 19 58.8	-2.4
JHO	Hitachi	6.87	345	eP	Pn	03 19 17.2	-3.0
JGF	Kuroka	7.24	322	Pn	Pn	03 19 27.6	+2.3
MJAR	Matsushiro Arr	7.59	331	Pn	Pn	03 19 30.3	+0.3
MJAR	Matsushiro Arr	7.59	331	Pn	Pn	03 19 29.1	-1.0
	0.1nm,0.3s,baz=155,slow=11,SNR=14						
MJAR				Sn	Sn	03 20 50.3	-4.7
	0.1nm,0.3s,baz=155,slow=18,SNR=6.7						
	2.6nm,0.6s						
MAJO	Matsushiro	7.59	331		Pn	03 19 29.1	-1.0
MJB9	Matsu-Tunnel	7.59	331		Pn	03 19 29.1	-1.0
JMM	Marumori	8.04	349	Pn	Pn	03 19 35.0	-1.2
JMN	Monobe	8.46	298	Pn	Pn	03 19 42.8	+0.8
JMK	Ichinoseki	9.04	352	eS	Sn	03 21 20.8	-10
ERM	Erimo	12.01	1	Pn	Pn	03 20 28.5	-2.1
KSRS	Korea Array	14.44	305	Pn	Pn	03 21 04.1	+0.3
	0.2nm,0.3s,baz=104,slow=15,SNR=5.2						
	1.5nm,0.7s						
SSLB	Suanglung	20.42	258	P	P	03 22 16.7	+0.3
SSLB				IAmb	IAmb	03 22 22.9	
	comp=Z,14nm,0.8s						
KLR	Kul'dur	20.98	339	P	P	03 22 23.9	+1.7
	comp=Z,0.8nm,0.6s,baz=160,slow=12,SNR=1.7						
	comp=Z,0.8nm,0.6s						
SONM	Songino Array	33.08	313	P	P	03 24 16.4	+1.7
	comp=Z,1.0nm,0.7s,baz=108,slow=7.6,SNR=4.5						
	comp=Z,1.0nm,0.7s						
RABL	Rabaul	35.14	164	P	P	03 24 32.2	-0.5
CNBA	Chernabura Isl	47.59	41	P	P	03 26 14.5	+0.2
MKAR	Makanchi Array	49.10	308	P	P	03 26 26.9	+0.7
MKAR	Makanchi Array	49.10	308	P	P	03 26 27.2	+1.0
	comp=Z,1.1nm,0.8s,baz=89,slow=11,SNR=9.8						
	comp=Z,1.1nm,0.8s						
N17K	Nushagak Hills	49.72	34	P	P	03 26 31.0	+0.4
N17K				IAmb	IAmb	03 26 33.3	
	comp=Z,5.5nm,1.2s						
M17K	Holitna River	49.75	33	P	P	03 26 31.3	+0.4
M17K				IAmb	IAmb	03 26 43.9	
	comp=Z,9.7nm,1.4s						
WB0	Warramunga Arr	50.12	190	P	P	03 26 34.3	+0.2
WB0				IAmb	IAmb	03 26 44.6	
	comp=Z,9.0nm,1.1s						
H18K	Honhosa River	50.18	28	P	P	03 26 35.0	+0.9
C18K	Utukok River	50.19	23	P	P	03 26 33.9	-0.2
WR8	Warramunga Arr	50.29	190	P	P	03 26 35.9	+0.5
WR8				IAmb	IAmb	03 26 45.9	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	50.30	190	P	P	03 26 35.1	-0.4
WRA	Warramunga Arr	50.30	190	P	P	03 26 35.9	+0.4
	comp=Z,1.4nm,0.7s,baz=9.6,slow=8.2,SNR=10.0						
	comp=Z,1.4nm,0.7s						
P18K	Big Mountain,	50.52	36	P	P	03 26 37.1	+0.3
P18K				IAmb	IAmb	03 27 02.9	
	comp=Z,4.5nm,1.1s						
O18K	Koktuh Hills	50.59	35	P	P	03 26 38.5	+1.2
J19K	Poorman	51.07	30	P	P	03 26 40.9	0.0
KURBB	Kurchatov Arra	51.45	313	P	P	03 26 44.0	+0.2
	comp=Z,1.1nm,0.2s,baz=96,slow=7.4,SNR=4.9						
	comp=Z,1.1nm,0.2s						
ASAR	Alice Springs	54.02	190	P	P	03 27 04.8	+1.7
	comp=Z,1.1nm,1.1s,baz=14,slow=7.1,SNR=2.7						
	comp=Z,1.1nm,1.1s						
GLI	Glacier Island	54.68	34	P	P	03 27 07.2	-0.4
GLI				IAmb	IAmb	03 27 29.1	
	comp=Z,4.6nm,1.0s						
ILAR	Eielson Array	54.94	30	P	P	03 27 09.7	+0.4
	comp=Z,0.6nm,1.0s,baz=270,slow=8.4,SNR=4.6						
	comp=Z,0.6nm,1.0s						
BVAR	Borovoye Array	56.31	316	P	P	03 27 23.3	+3.9
	comp=Z,2.0nm,0.6s,baz=94,slow=7.7,SNR=9.9						
SIMJ	Simiganj	60.07	300	P	P	03 27 46.2	+0.2
AB31	Akbulak array	63.49	313	P	P	03 28 09.9	+1.2
AB31				IAmb	IAmb	03 28 14.2	
	comp=Z,1.6nm,0.6s						
ABKAR	Akbulak array	63.49	313	P	P	03 28 09.2	+0.5
ABKAR				IAmb	IAmb	03 28 14.2	
	comp=Z,1.6nm,0.6s						
NWAO	Narrogin (SRO)	67.09	203	P	P	03 28 32.2	+0.1
YKAW1	Yellowknife Wh	69.41	29	P	P	03 28 46.6	+0.3
YKAW1				IAmb	IAmb	03 28 55.8	
	comp=Z,4.0nm,1.2s						
FINES	FINESS Array B	75.61	334	P	P	03 29 23.9	+0.6
	comp=Z,0.9nm,0.9s,baz=62,slow=4.8,SNR=2.1						
	comp=Z,0.9nm,0.9s						
NOA	NORSAR Array B	81.14	338	P	P	03 29 53.4	-0.5
	comp=Z,0.3nm,0.7s,baz=39,slow=5.7,SNR=2.0						
	comp=Z,0.3nm,0.7s						
BRTR	Keskin Array B	84.44	313	P	P	03 30 11.8	+0.2
BRTR	Keskin Array B	84.44	313	P	P	03 30 12.8	+1.2
	comp=Z,0.8nm,0.8s,baz=106,slow=2.7,SNR=5.4						
	comp=Z,0.8nm,0.8s						
RAYN	Ar Rayn	84.48	294	P	P	03 30 10.6	-1.3
RAYN				IAmb	IAmb	03 30 14.0	
	comp=Z,3.3nm,0.9s						
TXAR	Lajitas Array	93.45	53	P	P	03 30 54.1	-0.5
	comp=Z,0.3nm,0.7s,baz=270,slow=1.3,SNR=4.2						
	comp=Z,0.3nm,0.7s						

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*IDC **25** 03:21:19.9±1.1, 30°.13N×138°.61E, h423km±12km, mb3.4/22, mbtmp4.2/26, Error ellipse: s-maj=15.5km s-min=8.5km az=80.0*
*JMA **25** 03:21:20.1±0.2, 30°N±2°×13°9E±°, h458km, MV3.2/34, NEAR TORISHIMA IS*
ISC 25 03:21:21.2±0.5**, 30°.07N**±0°.06×**138°.84E**±0°.10**, h450**km**, n40, σ1s.60**/50**, mb3.7**/22**, 1C, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	Hachijojimakas	3.10	15	eP	P	03 22 29.2	+0.3
JHJ2	Mitsune	3.14	15	P	P	03 22 29.7	+0.5
JHJ2				eS	S	03 23 24.6	0.0
CBIJ	Chichi jima	4.18	134	eP	P	03 22 37.4	-0.6
CBIJ				eS	S	03 23 37.6	-2.9
JCJ	Chichijima	4.18	134	P	P	03 22 35.5	-2.6
	26nm,0.3s,baz=0.0,slow=0.0						
JCJ				S	S	03 23 35.4	-5.1
	baz=0.0,slow=0.0						
JTNC	Tanabenakahech	4.63	325	eP	P	03 22 42.1	+0.1
JIE	Ise	4.67	338	eP	P	03 22 43.2	+0.9
JKN2	Miekihoku	4.69	333	eP	P	03 22 42.9	+0.4
BSO1	Boso 1	4.91	21	eP	P	03 22 43.9	-0.1
BSO1				eS	S	03 23 50.1	-1.6
BSO3	Boso 3	4.92	16	eP	P	03 22 43.5	-0.9
BSO4	Boso 4	5.06	14	eP	P	03 22 45.4	-0.6
BSO4				eS	S	03 23 53.9	-1.2
JOD2	Odawara 2	5.18	2	eP	P	03 22 46.6	-0.6
JNY	Yasuok	5.33	351	P	P	03 22 49.9	+1.1
MJAR	Matsushiro Arr	6.47	356	P	P	03 22 57.3	-3.0
	2.1nm,0.4s,baz=167,slow=10,SNR=8.5						
MJAR				S	S	03 24 15.8	-5.6
	1.3nm,0.4s,baz=160,slow=8.7,SNR=4.0						
KSRS	Korea Array	11.68	312	P	P	03 23 54.7	-1.8
	2.0nm,0.4s,baz=130,slow=11,SNR=9.4						
ASAJ	Asahikawa	14.33	11	P	P	03 24 24.8	-0.2
	3.8nm,0.5s,baz=229,slow=7.2,SNR=6.0						
BNX	BinXian	18.02	333	⇑P	P	03 25 03.3	-0.7
BNX				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PETK	Petropavlovsk-	26.83	26	P	P	03 26 24.8	+1.2
	comp=Z,1.3nm,0.8s,baz=224,slow=8.3,SNR=4.2						
	comp=Z,1.3nm,0.8s						
SONM	Songino Array	30.54	315	P	P	03 26 55.4	-0.9
	comp=Z,0.9nm,0.5s,baz=125,slow=8.8,SNR=6.3						
	comp=Z,0.9nm,0.5s						
CMAR	Chiang Mai Arr	37.98	262	P	P	03 27 58.5	-0.8
	comp=Z,1.7nm,0.3s,baz=43,slow=8.9,SNR=5.4						
	comp=Z,1.7nm,0.3s						
ZALV	Zalesovo Beam	45.31	318	P	P	03 28 56.3	-0.9
	comp=Z,1.7nm,0.4s,baz=99,slow=8.3,SNR=6.9						
	comp=Z,1.7nm,0.4s						
MKAR	Makanchi Array	46.32	308	P	P	03 29 04.5	-0.6
	comp=Z,0.8nm,0.3s,baz=83,slow=10,SNR=13						
MKAR				PcP	PcP	03 30 30.6	-0.9
	comp=Z,0.4nm,0.5s,baz=102,slow=2.4,SNR=5.0						
MKAR				ScP	ScP	03 33 42.7	+1.4
	comp=Z,0.3nm,0.7s,baz=84,slow=5.9,SNR=2.5						
	comp=Z,0.8nm,0.3s						
KURBB	Kurchatov Arra	48.86	313	P	P	03 29 23.5	-0.6
	comp=Z,4.3nm,0.2s,baz=91,slow=8.3,SNR=7.9						
	comp=Z,4.3nm,0.2s						
WRA	Warramunga Arr	49.92	186	P	P	03 29 33.1	+0.8
	comp=Z,3.0nm,0.7s,baz=2.9,slow=7.8,SNR=26						
WRA				PcP	PcP	03 30 46.6	+1.8
	comp=Z,0.3nm,0.4s,baz=358,slow=3.9,SNR=4.7						
	comp=Z,3.0nm,0.7s						
ASAR	Alice Springs	53.64	186	P	P	03 30 00.6	+1.3
	comp=Z,1.5nm,0.6s,baz=16,slow=11,SNR=19						
	comp=Z,1.5nm,0.6s						
BVAR	Borovoye Array	53.87	316	P	P	03 30 00.4	-0.2
	comp=Z,7.3nm,0.4s,baz=95,slow=7.2,SNR=34						
BVAR				PcP	PcP	03 31 00.0	+0.6
	comp=Z,0.8nm,0.5s,baz=69,slow=8.4,SNR=3.6						
	comp=Z,7.3nm,0.4s						
ILAR	Eielson Array	56.55	30	P	P	03 30 20.8	+1.5
	comp=Z,0.5nm,0.6s,baz=247,slow=5.6,SNR=9.8						
	comp=Z,0.5nm,0.6s						
STKA	Stephens Creek	61.67	177	P	P	03 30 55.5	+1.4
	comp=Z,2.1nm,0.6s,baz=343,slow=8.6,SNR=5.8						
	comp=Z,2.1nm,0.6s						
NWAO	Narrogin (SRO)	65.92	200	P	P	03 31 22.1	+0.7
	comp=Z,5.9nm,0.6s,baz=32,slow=5.8,SNR=5.2						
	comp=Z,5.9nm,0.6s						
ARCES	ARCESS Array B	69.76	340	P	P	03 31 45.4	+0.9
	comp=Z,1.4nm,0.4s,baz=71,slow=8.7,SNR=21						
	comp=Z,1.4nm,0.4s						
YKA	Yellowknife Ar	70.92	28	P	P	03 31 54.0	+2.5
	comp=Z,0.4nm,0.8s,baz=294,slow=5.6,SNR=3.9						
	comp=Z,0.4nm,0.8s						
KBZ	Khabaz	73.83	311	P	P	03 32 08.8	0.0
	comp=Z,2.1nm,0.7s,baz=85,slow=6.2,SNR=5.2						
	comp=Z,2.1nm,0.7s						
FINES	FINESS Array B	73.97	333	P	P	03 32 09.5	+0.2
	comp=Z,1.8nm,0.3s,baz=58,slow=5.2,SNR=33						
	comp=Z,1.8nm,0.3s						
AKASG	Malin Array Be	78.48	322	P	P	03 32 34.2	-0.2
	comp=Z,0.5nm,0.3s,baz=58,slow=5.0,SNR=5.1						
	comp=Z,0.5nm,0.3s						
HFS	Hagfors	79.52	335	P	P	03 32 39.9	+0.1
	comp=Z,1.5nm,0.4s,baz=66,slow=7.6,SNR=29						
	comp=Z,1.5nm,0.4s						
NB2	NORSAR Subarra	79.75	337	P	P	03 32 41.3	+0.2
	comp=Z,0.9nm,0.5s,baz=43,slow=5.3						
NOA	NORSAR Array B	79.75	337	P	P	03 32 40.9	-0.1
	comp=Z,1.1nm,0.5s,baz=60,slow=6.2,SNR=9.0						
	comp=Z,1.1nm,0.5s						
BRTR	Keskin Array B	81.83	311	P	P	03 32 52.7	+0.2
	comp=Z,1.6nm,0.9s,baz=94,slow=5.2,SNR=9.6						
	comp=Z,1.6nm,0.9s						
ULM	Lac du Bonnet	86.51	32	P	P	03 33 15.7	+0.4
	comp=Z,0.5nm,0.3s,baz=150,slow=6.2,SNR=3.1						
	comp=Z,0.5nm,0.3s						
GERES	GERESS Array B	87.44	327	P	P	03 33 19.2	-0.6
	comp=Z,0.3nm,0.4s,baz=38,slow=6.1,SNR=1.7						
	comp=Z,0.3nm,0.4s						
QSPA	South Pole Qui	119.84	180	PKP	PKiKP	03 39 19.5	+0.8
	comp=Z,0.5nm,0.5s,baz=179,slow=4.3,SNR=1.9						

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*IDC **25** 03:25:35.5±0.9, 31°.28S×177°.50W, h0km, mb4.0/7, mbtmp4.0/8, ML4.1/1, Error ellipse: s-maj=27.9km s-min=24.6km az=121.0*
*NEIC **25** 03:25:37.9±1.4, 31°.27S±0°.06×177°.7W±0°.2, h10km±1km, mb4.5/9, Error ellipse: s-maj=25.8km s-min=10.5km az=93.0*
ISC 25 03:25:39.7±0.7**, 31°.27S**±0°.06×**177°.7W**±0°.1**, h26**km**, n29, σ1s.13**/32**, mb4.2**/11**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.02	355	Pn	Pn	03 26 10.8	-1.2
RAO					Sn	03 26 37.4	+1.0
RAO	Raoul Island	2.02	355	Pn	Pn	03 26 10.6	-1.4
	68nm,0.3s,baz=158,slow=15,SNR=5.7						
RAO				Sn	Sn	03 26 35.4	-0.9
	165nm,0.3s,baz=60,slow=22,SNR=4.7						
	234nm,0.4s						
URZ	Urewera	8.17	210	Pn	Pn	03 27 33.0	-3.5
	0.3nm,0.3s,baz=73,slow=10,SNR=1.7						
URZ				Sn	Sn	03 29 07.1	-0.9
	0.8nm,0.3s,baz=121,slow=15,SNR=2.0						
RTZ	Ruatahuna	8.52	209	Pn	Pn	03 27 40.7	-0.7
BKZ	Black Stump Fm	9.19	209	Pn	Pn	03 27 49.9	-0.7
MSWZ	Moikau Station	11.60	207	Pn	Pn	03 28 23.5	0.0
ARMA	Armidale	26.29	264	P	P	03 31 11.3	-2.0
ARMA				IAmb	IAmb	03 31 15.3	
	comp=Z,20nm,1.4s						
CTAO	Charters Tower	34.18	280	P	P	03 32 23.1	+0.1
STKA	Stephens Creek	34.52	258	P	P	03 32 26.6	+0.7
STKA	Stephens Creek	34.52	258	P	P	03 32 27.6	+1.6
	comp=Z,1.1nm,0.5s,baz=94,slow=13,SNR=2.0						
	comp=Z,1.1nm,0.5s						
ASAR	Alice Springs	43.31	268	P	P	03 33 39.7	+0.1
ASAR	Alice Springs	43.31	268	P	P	03 33 41.0	+1.4
	comp=Z,0.8nm,0.4s,baz=104,slow=7.5,SNR=13						
	comp=Z,0.8nm,0.4s						
WR8	Warramunga Arr	44.23	273	P	P	03 33 48.2	+1.2
WRA	Warramunga Arr	44.37	273	P	P	03 33 49.4	+1.2
	comp=Z,1.2nm,0.3s,baz=111,slow=8.0,SNR=15						
	comp=Z,1.2nm,0.3s						
WB0	Warramunga Arr	44.40	273	P	P	03 33 49.6	+1.2
WB0				IAmb	IAmb	03 33 54.9	
	comp=Z,12nm,1.4s						
FITZ	Fitzroy Crossi	52.60	270	P	P	03 34 52.6	+1.0
FITZ	Fitzroy Crossi	52.60	270	P	P	03 34 52.1	+0.5
	comp=Z,6.4nm,1.2s,baz=111,slow=18,SNR=1.5						
	comp=Z,6.4nm,1.2s						
CASY	Casey	54.49	208	P	P	03 35 05.4	+0.7
QSPA	South Pole Qui	58.85	180	P	P	03 35 36.6	+0.7
QSPA				IAmb	IAmb	03 35 40.5	
	comp=Z,3.6nm,1.4s						
QSPA	South Pole Qui	58.85	180	P	P	03 35 35.5	-0.4
	comp=Z,0.8nm,0.7s,baz=70,slow=2.8,SNR=5.6						
	comp=Z,0.8nm,0.7s						
PMSA	Palmer Station	71.38	156	P	P	03 36 57.7	+0.7
PMSA				IAmb	IAmb	03 37 03.7	
	comp=Z,2.4nm,0.5s						
SNAA	Sanae	77.28	178	P	P	03 37 31.4	0.0
SNAA				IAmb	IAmb	03 37 37.4	
	comp=Z,5.4nm,1.5s						
PETK	Petropavlovsk-	86.71	345	P	P	03 38 21.2	+0.5
	comp=Z,0.5nm,0.6s,baz=132,slow=2.1,SNR=1.5						
	comp=Z,0.5nm,0.6s						
NVAR	Mina Array Bea	88.71	43	P	P	03 38 30.4	-0.6
	comp=Z,0.2nm,0.4s,baz=247,slow=4.8,SNR=5.8						
	comp=Z,0.2nm,0.4s						
FINES	FINESS Array B	146.04	340	PKPbc	PKPbc	03 45 16.4	-0.1
	comp=Z,1.2nm,0.4s,baz=34,slow=4.2,SNR=21						
HFS	Hagfors	150.14	349	PKPbc	PKPbc	03 45 27.3	-0.1
	comp=Z,0.8nm,0.7s,baz=46,slow=6.2,SNR=1.5						
AKASG	Malin Array Be	152.13	322	PKPbc	PKiKP	03 45 33.0	+0.4
	comp=Z,0.7nm,0.7s,baz=54,slow=1.6,SNR=4.4						
BRTR	Keskin Array B	153.21	297	PKPbc	PKiKP	03 45 35.7	+0.2
	comp=Z,0.2nm,0.4s,baz=84,slow=5.1,SNR=1.9						
TORD	Torodi Ar. Bea	161.96	178	PKPab	PKPab	03 46 24.5	-0.5
	comp=Z,0.5nm,0.3s,baz=159,slow=2.4,SNR=1.4						

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*IDC **25** 03:28:31.6±1.8, 24°.39N×141°.28E, h188km±13km, mb3.4/10, mbtmp3.9/13, Error ellipse: s-maj=20.2km s-min=19.0km az=111.0*
*JMA **25** 03:28:35.1±0.3, 25°N±2°×14°1E±°, h212km, MV4.5/13, IOTO ISLANDS REGION*
*NEIC **25** 03:28:36.1±1.1, 24°.4N±0°.1×141°.1E±0°.2, h217km±9km, mb4.1/38, Error ellipse: s-maj=25.3km s-min=15.2km*

az=87.0

ISC 25 03:28:32.6±0.7,**24°.49N**±0°.07×**141°.0E**±0°.1,**h189**^{km},**n64**,
σ**1^{s}.14**/70,**mb4.2**/29,**Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	2.40	27	P	Pn	03 29 16.2	+1.6
JHH2				eS	Sn	03 29 48.5	+1.0
CBIJ	Chichi jima	2.82	23	eP	Pn	03 29 21.1	+1.6
CBIJ				eS	Sn	03 29 55.7	-0.5
JCJ	Chichijima	2.82	23		Pn	03 29 22.1	+2.6
JCJ	Chichijima	2.82	23	P	Pn	03 29 19.1	-0.3
	41nm,0.4s						
JCJ				S	Sn	03 29 55.3	-0.9
BSO1	Boso 1	10.13	0	eP	Pn	03 30 53.3	+0.2
BSO1				eS	Sn	03 32 42.8	-2.8
BSO3	Boso 3	10.28	358	eP	Pn	03 30 55.1	-0.2
BSO3				eS	Sn	03 32 48.0	-1.7
BSO4	Boso 4	10.48	357	eP	Pn	03 30 58.5	+0.6
BSO4				eS	Sn	03 32 51.6	-3.0
JOD2	Odawara 2	10.86	352	eP	Pn	03 31 04.6	+1.6
JAG	Ashikaga	11.96	354	eP	Pn	03 31 17.2	0.0
JHO	Hitachi	12.08	359	eP	Pn	03 31 17.9	-0.9
JNU	Nakatsue	12.32	317	P	P	03 31 24.4	-2.1
	3.0nm,0.8s,baz=9.3,slow=16,SNR=1.7						
JMM	Marumori	13.33	359	Pn	Pn	03 31 34.1	-0.4
KSRS	Korea Array	17.06	322	P	Pn	03 32 21.4	+1.4
	0.7nm,0.5s,baz=137,slow=12,SNR=12						
USRK	Ussuriysk Ar.	20.98	342	P	P	03 33 02.7	+1.7
	1.6nm,0.5s,baz=146,slow=9.2,SNR=5.9						
	1.6nm,0.5s						
USA0B	Ussuriysk Arra	20.98	342	P	P	03 33 03.6	+2.6
WR8	Warramunga Arr	44.62	189	P	P	03 36 25.6	-0.8
WR8				IAmb	IAmb	03 36 50.5	
	comp=Z,9.1nm,1.4s						
WRA	Warramunga Arr	44.63	189	P	P	03 36 26.2	-0.2
WRA	Warramunga Arr	44.63	189	P	P	03 36 24.9	-1.5
	comp=Z,0.9nm,0.5s,baz=8.1,slow=8.3,SNR=6.7						
	comp=Z,0.9nm,0.5s						
M11K	Mekoryuk	50.87	31	P	P	03 37 15.3	+1.5
MKAR	Makanchi Array	51.31	311	P	P	03 37 19.1	+1.7
MKAR	Makanchi Array	51.31	311	P	P	03 37 18.9	+1.4
	comp=Z,0.5nm,0.6s,baz=91,slow=8.3,SNR=5.9						
	comp=Z,0.5nm,0.6s						
MAKZ	Makanchi	51.53	311	P	P	03 37 19.9	+0.9
TNA	Tin City	52.21	24	P	P	03 37 24.1	+0.4
DZM	Mont Dzumac	52.49	150	P	P	03 37 25.7	-0.8
O14K	Tigyukauivet M	52.90	33	P	P	03 37 29.4	+0.5
O15K	Ungalikthiuk R	53.59	33	P	P	03 37 34.2	+0.2
O15K				IAmb	IAmb	03 38 00.5	
	comp=Z,7.8nm,1.1s						
K15K	Wolf Creek Mou	53.62	29	P	P	03 37 34.6	+0.5
N15K	Kwethluk River	53.70	32	P	P	03 37 35.5	+0.8
N15K				IAmb	IAmb	03 38 15.0	
	comp=Z,11nm,1.4s						
KURBB	Kurchatov Arra	54.09	316	P	P	03 37 38.6	+0.9
	comp=Z,2.5nm,0.2s,baz=97,slow=7.0,SNR=5.0						
	comp=Z,2.5nm,0.2s						
J16K	Anvik River	54.32	28	P	P	03 37 40.2	+1.1
J16K				IAmb	IAmb	03 37 59.1	
	comp=Z,9.7nm,1.4s						
O16K	Kokwok River B	54.55	33	P	P	03 37 41.4	+0.5
O16K				IAmb	IAmb	03 37 57.4	
	comp=Z,10nm,1.4s						
K17K	Iditarod	55.17	29	P	P	03 37 46.3	+1.0
K17K				IAmb	IAmb	03 37 47.6	
	comp=Z,5.2nm,1.0s						
M17K	Holitna River	55.26	31	P	P	03 37 47.0	+1.1
H18K	Honhosa River	55.80	26	P	P	03 37 50.2	+0.5
C18K	Utukok River	55.86	22	P	P	03 37 50.4	+0.2
C18K				IAmb	IAmb	03 38 11.5	
	comp=Z,5.1nm,1.3s						
G18K	Tagagawik	55.89	26	P	P	03 37 50.8	+0.4
G18K				IAmb	IAmb	03 37 51.5	
	comp=Z,3.8nm,1.1s						
O18K	Koktuh Hills	56.04	33	P	P	03 37 52.4	+0.9
O18K				IAmb	IAmb	03 38 11.6	
	comp=Z,6.1nm,1.1s						
J19K	Poorman	56.65	28	P	P	03 37 56.5	+0.8
H19K	Roundabout Mou	56.67	26	P	P	03 37 56.7	+0.9
H19K				IAmb	IAmb	03 37 57.7	
	comp=Z,2.8nm,0.8s						
M19K	Big River Lodg	56.78	31	P	P	03 37 57.3	+0.5
M19K				IAmb	IAmb	03 38 20.8	
	comp=Z,5.9nm,1.4s						
D19K	Kuna River	56.88	23	P	P	03 37 57.8	+0.5
D19K				IAmb	IAmb	03 38 14.1	
	comp=Z,7.7nm,1.4s						
E19K	Redstone River	56.88	24	P	P	03 37 58.4	+1.0
E19K				IAmb	IAmb	03 38 21.4	
	comp=Z,4.3nm,1.4s						
KDAK	Kodiak Island	57.11	36	P	P	03 37 58.6	-0.4
K20K	Telida	57.20	29	P	P	03 37 59.6	0.0
K20K				IAmb	IAmb	03 38 01.3	
	comp=Z,2.5nm,0.6s						
SYI	Shuyak Island	57.30	35	P	P	03 37 59.7	-0.6
J20K	Nowinta River	57.32	28		P	03 38 01.3	+0.9
J20K				IAmb	IAmb	03 38 02.5	
	comp=Z,3.6nm,0.8s						
D20K	Etivluk River	57.47	23	P	P	03 38 01.8	+0.4
D20K				IAmb	IAmb	03 38 03.1	
	comp=Z,2.9nm,0.6s						
IMAR	Indian Mountai	57.86	26	P	P	03 38 04.5	+0.4
CNPM	China Poot	57.99	34	P	P	03 38 04.5	-0.7
G21K	Allakaket	58.07	25	P	P	03 38 06.2	+0.6
CAST	Castle Rocks	58.09	29	P	P	03 38 06.4	+0.6
CAST				IAmb	IAmb	03 38 07.5	
	comp=Z,4.5nm,1.0s						
SKT	Skwentna	58.13	31	P	P	03 38 06.0	-0.2
H21K	Melozitna Rive	58.17	27	P	P	03 38 07.7	+1.3
BVAR	Borovoye Array	59.23	318	P	P	03 38 15.3	+1.5
	comp=Z,0.9nm,0.4s,baz=91,slow=8.0,SNR=4.8						
	comp=Z,0.9nm,0.4s						
NEA2	Nenana	59.57	28	P	P	03 38 16.6	+0.7
NEA2				IAmb	IAmb	03 38 17.8	
	comp=Z,4.3nm,1.0s						
ILAR	Eielson Array	60.52	28	P	P	03 38 21.4	-1.1
	comp=Z,1.5nm,0.8s,baz=254,slow=5.7,SNR=18						
	comp=Z,1.5nm,0.8s						
SCRK	Sand Creek	61.73	29		P	03 38 30.1	-0.6
SCRK				IAmb	IAmb	03 38 31.4	
	comp=Z,3.9nm,0.7s						
J26L	Joseph Creek	61.93	28		P	03 38 31.4	-0.6
J26L				IAmb	IAmb	03 38 32.6	
	comp=Z,2.7nm,0.8s						
ABKAR	Akbulak array	66.13	315	P	P	03 39 00.3	+0.8
M31M	Drury Creek, Y	66.17	31	P	P	03 38 59.9	+0.3
YKA	Yellowknife Ar	74.95	28	P	P	03 39 51.5	-1.1
	comp=Z,0.4nm,0.8s,baz=302,slow=5.8,SNR=9.7						
	comp=Z,0.4nm,0.8s						
FINES	FINESS Array B	79.78	334	P	P	03 40 18.7	-0.7
	comp=Z,0.4nm,0.3s,baz=59,slow=5.7,SNR=7.9						
	comp=Z,0.4nm,0.3s						
NVAR	Mina Array Bea	83.00	51	P	P	03 40 35.9	-1.2
	comp=Z,0.6nm,0.6s,baz=301,slow=6.1,SNR=3.9						
	comp=Z,0.6nm,0.6s						
BRTR	Keskin Array B	86.94	312	P	P	03 40 57.0	+0.4
	comp=Z,0.3nm,0.4s,baz=83,slow=6.0,SNR=2.5						
	comp=Z,0.3nm,0.4s						

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*IDC **25** 03:32:55.6±1.3,2°.71S×138°.53E,h0^{km},mb3.4/3,
mbtmp3.5/6,ML3.4/3,Error ellipse: s-maj=28.3km
s-min=16.4km az=163.0*

*DJA **25** 03:33:02.9±0.5,2°S±9°×13°9E±°,h22^{km}±7^{km},M3.5/5,
MLv3.5/5*

ISC 25 03:33:00.2±1.3,**2°.41S**±0°.10×**138°.71E**±0°.06,**h10**^{km},**n11**,
σ**1^{s}.57**/10,**mb3.5**/3,**Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	Sarmi	0.42	0	P	Pg	03 33 10.2	+1.7
SMPI				S	Sg	03 33 12.9	-1.1
GENI	Genyem	1.47	97	P	Pn	03 33 27.9	+1.1
GENI				S	Sn	03 33 47.2	+1.1
JAY	Jayapura	2.00	93	Pn	Pn	03 33 33.6	-0.5
	6.2nm,0.3s,baz=228,slow=11,SNR=12						
JAY				Lg	Lg	03 34 04.2	
	baz=142,slow=20						
	12nm,0.3s						
JAY	Jayapura	2.00	93	P	Pn	03 33 35.0	+0.9
SRPI	Serui, Papua	2.52	282	P	Pn	03 33 42.8	+1.5
BAKI	Biak	2.87	295	P	Pn	03 33 46.7	+0.6
WRA	Warramunga Arr	17.94	193	P	Pn	03 37 02.4	-7.6
	0.3nm,0.3s,baz=17,slow=12,SNR=6.1						
	0.9nm,0.5s						
FITZ	Fitzroy Crossi	20.18	219	P	P	03 37 26.9	-8.3
	baz=45,slow=8.6,SNR=2.1						
	3.9nm,1.0s						
ASAR	Alice Springs	21.64	192	P	P	03 37 44.5	-6.4
	1.2nm,0.7s,baz=20,slow=9.6,SNR=7.8						
	1.2nm,0.7s						
MKAR	Makanchi Array	69.55	322	P	P	03 44 06.8	-2.7
	0.2nm,0.6s,baz=118,slow=4.5,SNR=2.2						
	0.2nm,0.6s						
ILAR	Eielson Array	85.56	24	P	P	03 45 38.3	-0.2
	0.3nm,0.8s,baz=272,slow=3.4,SNR=2.8						
	0.3nm,0.8s						

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*IDC **25** 03:39:18.2±1.5,52°.30S×13°.23E,h0^{km},mb3.9/4,
mbtmp4.0/4,MS3.5/13,Error ellipse: s-maj=50.9km
s-min=35.3km az=67.0*

*NEIC **25** 03:39:19.4±1.1,52°.3S±0°.1×13°.7E±0°.2,h10^{km}±1^{km},
mb4.4/10,Error ellipse: s-maj=20.9km s-min=15.8km
az=172.0*

ISC 25 03:39:19.2±0.7,**52°.3S**±0°.1×**13°.6E**±0°.2,**h10**^{km},**n39**,
σ**0^{s}.78**/20,**mb4.2**/8,**MS3.4**/13,**4D,Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TROLL	Troll, Antarti	20.41	190	⇓P	P	03 43 56.3	+0.1
	comp=Z,268nm,1.1s						
SUR	Sutherland	20.55	18	P	P	03 43 58.0	-0.1
SUR				IAmb	IAmb	03 44 00.6	
	comp=Z,22nm,1.4s						
SNAA	Sanae	20.80	195	⇓P	P	03 44 00.3	0.0
	comp=Z,113nm,1.1s						
SNAA	Sanae	20.80	195	P	P	03 44 00.1	-0.3
SNAA	Sanae	20.80	195	P	P	03 43 59.9	-0.5
	comp=Z,5.5nm,1.0s,baz=15,slow=11,SNR=9.2						
SNAA				LR	LR	03 49 54.2	
	comp=Z,100nm,21.5s,baz=33,slow=31						
	comp=Z,5.5nm,1.0s						
VNA2	Neumayer--Watz	20.99	199	⇓P	P	03 44 00.8	-1.5
	comp=Z,4.1nm,0.7s,baz=31,slow=14						
VNA3	Neumayer Olymp	21.71	200	⇓P	P	03 44 09.0	-1.1
	comp=Z,6.8nm,1.0s						
BOSA	Boshof	25.17	25	P	P	03 44 45.6	+0.9
BOSA				IAmb	IAmb	03 44 54.5	
	comp=Z,10.0nm,1.4s						
BOSA	Boshof	25.17	25	LR	LR	03 52 49.1	
	comp=Z,88nm,20.2s,baz=189,slow=32						
H04S2	CROZET ISLANDS	25.20	93	T	T	04 11 25.6	
	baz=244,slow=75,SNR=13						
H04S3	CROZET ISLANDS	25.21	93	T	T	04 11 37.3	
	baz=244,slow=75,SNR=12						
H04S1	CROZET ISLANDS	25.22	93	T	T	04 11 24.1	
	baz=244,slow=75,SNR=11						
MAW	Mawson	28.08	142	LR	LR	03 55 27.6	
	comp=Z,85nm,18.7s,baz=291,slow=34						
LBTB	Lobatse	28.70	23	P	P	03 45 15.8	-0.7
LBTB	Lobatse	28.70	23	LR	LR	03 55 16.8	
	comp=Z,76nm,18.8s,baz=183,slow=33						
BELA	Belgrano 2	30.96	198	P	P	03 45 36.4	+0.5
BELA				IAmb	IAmb	03 45 36.7	
	comp=Z,6.3nm,1.5s						
TSUM	Tsumeb	33.14	7	LR	LR	03 57 25.9	
	comp=Z,64nm,19.9s,baz=160,slow=33						
MATP	Matopo	33.83	26	LR	LR	03 57 41.4	
	comp=Z,46nm,21.0s,baz=230,slow=32						
QSPA	South Pole Qui	37.97	180	P	P	03 46 36.7	-0.2
QSPA	South Pole Qui	37.97	180	P	P	03 46 36.8	-0.1
	comp=Z,0.6nm,0.6s,baz=174,slow=9.2,SNR=2.4						
QSPA				LR	LR	04 02 22.7	
	comp=Z,69nm,18.2s,baz=230,slow=36						
	comp=Z,0.6nm,0.6s						
LSZ	Lusaka	38.69	23	LR	LR	04 00 55.9	
	comp=Z,74nm,19.8s,baz=177,slow=33						
ABPO	Ambohimpanom	42.30	51	P	P	03 47 11.9	-1.3
ABPO				IAmb	IAmb	03 47 18.1	
	comp=Z,6.1nm,1.2s						
H10S2	ASCENSION HYDR	48.93	322	T	T	04 40 39.1	
	baz=156						
H10S3	ASCENSION HYDR	48.95	322	T	T	04 40 35.2	
	baz=64						
VNDA	Vanda	48.98	171	LR	LR	04 07 13.1	
	comp=Z,88nm,21.3s,baz=188,slow=34						
ASCN	Ascension	49.77	323	P	P	03 48 12.3	+0.4
BO02	Sierra Bellavi	60.16	251	P	P	03 49 26.8	-0.2
BO02				IAmb	IAmb	03 49 35.8	
	comp=Z,22nm,1.4s						
DBIC	Dimbokro	60.79	339	P	P	03 49 31.9	+0.6
DBIC	Dimbokro	60.79	339	LR	LR	04 11 13.1	
	comp=Z,37nm,19.5s,baz=160,slow=32						
H01W2	Cape Leeuwin H	69.09	120	T	T	05 06 45.7	
	baz=220						
H01W3	Cape Leeuwin H	69.10	120	T	T	05 06 49.4	
	baz=220						
H01W1	Cape Leeuwin H	69.10	120	T	T	05 06 49.1	
	baz=220						
LPAZ	La Paz	72.26	266	P	P	03 50 45.6	+0.1
LPAZ				IAmb	IAmb	03 50 46.9	
	comp=Z,3.4nm,1.0s						
LPAZ	La Paz	72.26	266	P	P	03 50 45.0	-0.5
	comp=Z,2.3nm,0.8s,baz=128,slow=4.3,SNR=6.6						
	comp=Z,2.3nm,0.8s						
EIL	Elat	83.70	19	LR	LR	04 29 19.1	
	comp=Z,22nm,18.2s,baz=247,slow=36						
MDT	Midelt	86.21	345	LR	LR	04 26 26.0	
	comp=Z,17nm,19.9s,baz=208,slow=33						
ASAR	Alice Springs	88.25	128	P	P	03 52 12.4	+1.6
	comp=Z,0.8nm,0.9s,baz=209,slow=4.9,SNR=4.8						
	comp=Z,0.8nm,0.9s						
GNI	Garni	95.94	23	LR	LR	04 36 46.3	
	comp=Z,21nm,19.6s,baz=178,slow=36						
YKA	Yellowknife Ar	151.06	311	PKPbc	PKPbc	03 59 10.8	-0.2
	comp=Z,0.7nm,0.8s,baz=80,slow=2.7,SNR=9.8						

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*IDC **25** 03:41:26.5±2.3,14°.33S×167°.35E,h165^{km}±21^{km},
mb3.6/12,mbtmp4.0/13,Error ellipse: s-maj=24.3km
s-min=17.0km az=117.0*

*NEIC **25** 03:41:28.5±1.4,14°.3S±0°.2×167°.4E±0°.3,h171^{km}±9^{km},
mb4.2/12,Error ellipse: s-maj=39.2km s-min=19.5km
az=117.0*

ISC 25 03:41:27.2±0.5,**14°.33S**±0°.07×**167°.4E**±0°.1,**h170**^{km},**n39**,
σ**0^{s}.93**/42,**mb4.0**/20,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.12	188		Pn	03 41 56.5	+1.7
SANVU				Sn	Sn	03 42 17.9	+1.6
DZM	Mont Dzumac	7.75	186	Pn	Pn	03 43 18.0	+0.8
DZM	Mont Dzumac	7.75	186	P	Pn	03 43 18.4	+1.1
	6.4nm,0.3s,baz=1.9,slow=18,SNR=18						
DZM				S	Sn	03 44 43.8	-0.3
	7.5nm,0.4s,baz=166,slow=22,SNR=6.2						
ONTNC	Ouen Toro	7.98	186	Pn	Pn	03 43 19.5	-0.8
PINNC	Pines Island,	8.23	180	Pn	Pn	03 43 24.1	+0.5
STKA	Stephens Creek	29.32	229	P	P	03 47 15.5	+1.5
STKA	Stephens Creek	29.32	229	P	P	03 47 13.4	-0.5
	1.0nm,0.4s,baz=78,slow=8.4,SNR=6.1						
	1.0nm,0.4s						
WB0	Warramunga Arr	31.95	256	P	P	03 47 36.9	-0.3
WB0				IAmb	IAmb	03 47 41.1	
	comp=Z,2.5nm,0.9s						
WRA	Warramunga Arr	32.02	255	P	P	03 47 36.8	-1.0
	comp=Z,0.3nm,0.4s,baz=84,slow=9.0,SNR=2.1						
	comp=Z,0.3nm,0.4s						
ASAR	Alice Springs	32.91	249	P	P	03 47 45.1	-0.5
	comp=Z,0.4nm,0.3s,baz=74,slow=9.8,SNR=5.7						
	comp=Z,0.4nm,0.3s						
MORW	Morawa	49.53	244	P	P	03 50 00.2	-0.7
MJAR	Matsushiro Arr	57.60	332	P	P	03 50 58.0	-1.4
	comp=Z,0.7nm,0.5s,baz=151,slow=9.1,SNR=4.2						
	comp=Z,0.7nm,0.5s						
MJB9	Matsu-Tunnel	57.61	332	P	P	03 50 59.6	+0.2
MJB9				IAmb	IAmb	03 51 01.7	
	comp=Z,3.7nm,1.0s						
JTM	Tenmabayashi	60.02	337	P	P	03 51 17.2	+1.3
PEA0B	Petropavlovsk-	67.68	354	P	P	03 52 06.2	+0.5
PEA0B				IAmb	IAmb	03 52 08.4	
	comp=Z,5.7nm,0.8s						
PETK	Petropavlovsk-	67.68	354	P	P	03 52 05.4	-0.3
PETK	Petropavlovsk-	67.68	354	P	P	03 52 06.2	+0.4
	comp=Z,5.0nm,0.8s,baz=142,slow=7.5,SNR=11						
	comp=Z,5.0nm,0.8s						
OHAK	Old Harbor	78.39	21	P	P	03 53 08.9	+0.4
OHAK				IAmb	IAmb	03 53 11.3	
	comp=Z,13nm,1.5s						
N15K	Kwethluk River	78.73	16	P	P	03 53 11.1	+0.7
N15K				IAmb	IAmb	03 53 15.7	
	comp=Z,7.7nm,1.4s						
M14K	Bethel	78.75	15	P	P	03 53 11.8	+1.4
L14K	Kuka Creek	79.09	14	P	P	03 53 13.8	+1.5
L14K				IAmb	IAmb	03 53 16.1	
	comp=Z,2.9nm,0.9s						
K13K	Kusilvak Mount	79.16	13	P	P	03 53 13.9	+1.3
K13K				IAmb	IAmb	03 53 14.7	
	comp=Z,2.4nm,0.8s						
M16K	Timber Creek	79.75	16	P	P	03 53 17.2	+1.3
SONM	Songino Array	82.24	324	P	P	03 53 29.7	+0.2
	comp=Z,0.9nm,0.5s,baz=129,slow=4.7,SNR=4.4						
	comp=Z,0.9nm,0.5s						
ILAR	Eielson Array	86.12	18	P	P	03 53 48.0	-0.5
	comp=Z,2.4nm,0.7s,baz=238,slow=5.4,SNR=30						
	comp=Z,2.4nm,0.7s						
NVAR	Mina Array Bea	86.94	49	P	P	03 53 53.9	+0.4
	comp=Z,0.5nm,0.6s,baz=238,slow=9.9,SNR=3.8						
	comp=Z,0.5nm,0.6s						
SNAA	Sanae	93.95	183	P	P	03 54 24.4	-0.9
	comp=Z,7.5nm,0.7s,baz=285,slow=16,SNR=24						
PDAR	Pinedale Array	94.61	47	P	P	03 54 28.1	-1.0
	comp=Z,0.1nm,0.4s,baz=256,slow=4.1,SNR=1.6						
	comp=Z,0.1nm,0.4s						
TXAR	Lajitas Array	96.00	61	P	P	03 54 35.5	-0.1
	comp=Z,0.2nm,0.7s,baz=265,slow=5.0,SNR=2.7						
	comp=Z,0.2nm,0.7s						
MKAR	Makanchi Array	96.99	316	P	P	03 54 39.9	+0.4
	comp=Z,0.6nm,0.6s,baz=86,slow=6.1,SNR=8.6						
	comp=Z,0.6nm,0.6s						
YKA	Yellowknife Ar	97.15	27	P	P	03 54 37.8	-2.0
	comp=Z,0.2nm,0.6s,baz=266,slow=4.5,SNR=5.2						
	comp=Z,0.2nm,0.6s						
ARCES	ARCESS Array B	119.90	345	PKP	PKPdf	03 59 56.1	-0.7
	comp=Z,0.7nm,0.4s,baz=56,slow=1.9,SNR=20						
FINES	FINESS Array B	125.39	338	PKP	PKPdf	04 00 07.5	0.0
	comp=Z,0.4nm,0.3s,baz=83,slow=1.3,SNR=7.0						
NB2	NORSAR Subarra	130.27	345	pPKP		04 03 25.8	
	comp=Z,5.6nm,1.2s,baz=31,slow=4.3						
NOA	NORSAR Array B	130.27	345	PKP	PKPdf	04 00 17.1	+0.2
	comp=Z,0.2nm,0.5s,baz=25,slow=1.8,SNR=1.8						
NOA				SKPbc	SKPab	04 03 24.4	+0.2
	comp=Z,1.4nm,0.9s,baz=32,slow=4.2,SNR=4.1						
AKASG	Malin Array Be	130.46	326	PKP	PKiKP	04 00 19.1	+0.8
	comp=Z,0.2nm,0.3s,baz=90,slow=1.3,SNR=1.8						
BRTR	Keskin Array B	132.32	311	PKP	PKPdf	04 00 22.2	+0.6
	comp=Z,0.3nm,0.6s,baz=85,slow=3.2,SNR=2.2						
KEST	Kesra	150.97	321	PKPbc	PKPbc	04 00 59.5	-0.9
	comp=Z,3.1nm,0.5s,baz=142,slow=3.5,SNR=14						
ESDC	Sonseca Array	153.63	345	PKPbc	PKPbc	04 01 06.1	0.0
	comp=Z,0.4nm,0.9s,baz=30,slow=1.1,SNR=4.8						
ESDC				PKPab	PKPab	04 01 19.8	+0.5
	comp=Z,0.8nm,0.8s,baz=14,slow=4.9,SNR=8.1						

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*IDC **25** 03:42:12.7±1.3,2°.59S×138°.58E,h0^{km},mb3.6/3,
mbtmp3.6/6,ML3.5/3,Error ellipse: s-maj=26.6km
s-min=16.4km az=167.0*

*DJA **25** 03:42:18.0±0.4,2°S±3°×13°9E±°,h10^{km},M3.5/4,MLv3.5/4*

ISC 25 03:42:16.0±0.9,**2°.52S**±0°.08×**138°.67E**±0°.06,**h32**^{km},**n10**,
σ**1^{s}.39**/11,**mb3.7**/3,**Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	Sarmi	0.52	5	P	Pn	03 42 27.5	+0.2
SMPI				S	Sb	03 42 33.0	-1.4
GENI	Genyem	1.50	93	P	Pb	03 42 41.7	-1.6
JAY	Jayapura	2.04	90	Pn	Pb	03 42 51.7	-0.7
	8.1nm,0.3s,baz=232,slow=10,SNR=22						
JAY				Lg	Lg	03 43 19.2	
	6.2nm,0.3s,baz=316,slow=20,SNR=5.8						
	16nm,0.3s						
JAY	Jayapura	2.04	90	P	Pb	03 42 51.7	-0.7
BAKI	Biak	2.88	297	P	Pb	03 43 05.2	-1.5
WRA	Warramunga Arr	17.83	193	P	Pn	03 46 21.2	-0.6
	0.3nm,0.3s,baz=15,slow=12,SNR=8.9						
	1.0nm,0.6s						
FITZ	Fitzroy Crossi	20.07	219	P	P	03 46 46.2	-0.7
	0.1nm,0.3s,baz=32,slow=13,SNR=1.8						
	2.3nm,0.9s						
ASAR	Alice Springs	21.53	192	P	P	03 47 02.6	0.0
	1.3nm,0.6s,baz=20,slow=10,SNR=15						
	1.3nm,0.6s						
MKAR	Makanchi Array	69.61	322	P	P	03 53 24.7	+2.5
	0.6nm,0.9s,baz=103,slow=6.5,SNR=4.0						
	0.6nm,0.9s						
ILAR	Eielson Array	85.67	24	P	P	03 54 52.2	+0.8
	0.4nm,0.7s,baz=255,slow=4.8,SNR=2.6						
	0.4nm,0.7s						

IDC 25 03:53:25.8±4.4,**21°.07S**×**174°.60W**,**h0**^{km},**mb3.6**/3,
mbtmp3.6/3,**MS3.2**/2,**Error ellipse: s-maj=254.7km
s-min=34.3km az=152.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPT	Papeete	23.86	86	LR	LR	04 07 09.9	
	comp=Z,40nm,18.8s,baz=194,slow=34						
ASAR	Alice Springs	47.49	257	P	P	04 02 02.4	-0.6
	0.6nm,0.8s,baz=94,slow=8.2,SNR=5.4						
	0.6nm,0.8s						
WRA	Warramunga Arr	47.67	262	P	P	04 02 04.3	0.0
	0.5nm,0.6s,baz=97,slow=7.8,SNR=2.7						
	0.5nm,0.6s						
ASAJ	Asahikawa	75.79	330	LR	LR	04 31 00.7	
	comp=Z,27nm,21.8s,baz=95,slow=30						
NVAR	Mina Array Bea	79.29	42	P	P	04 05 33.2	-0.3
	0.4nm,0.6s,baz=252,slow=6.7,SNR=3.5						
	0.4nm,0.6s						
AKASG	Malin Array Be	145.00	333	PKPbc	PKPbc	04 13 04.1	0.0
	0.5nm,0.4s,baz=37,slow=4.3,SNR=5.6						

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*NEIC **25** 04:14:00.9±1.7,17°.3S±0°.1×173°.9W±0°.2,h41^{km}±12^{km},
mb4.5/13,Error ellipse: s-maj=23.7km s-min=16.4km
az=65.0*

*IDC **25** 04:14:24.7±7.6,18°.20S×174°.89W,h202^{km}±40^{km},mb3.7/5,
mbtmp4.2/6,MS2.7/1,Error ellipse: s-maj=94.0km
s-min=26.8km az=49.0*

ISC 25 04:14:05.9±1.0,**17°.1S**±0°.1×**173°.3W**±0°.1,**h150**^{km},**n23**,
σ**1^{s}.14**/21,**mb4.2**/12,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	3.47	25	Pn	Pn	04 14 58.8	-0.6
NIUE	Niue	3.76	122	Pn	Pn	04 15 02.4	-0.7
MSVF	Nonsavu	8.29	264	P	Pn	04 16 01.7	-1.6
	16nm,0.7s,baz=94,slow=14,SNR=8.0						
MSVF				LR	LR	04 18 06.9	
	comp=Z,61nm,20.1s,baz=144,slow=33						
URZ	Urewera	22.72	200	P	P	04 18 54.2	-0.8
	10.0nm,1.0s,baz=293,slow=2.6,SNR=6.3						
	10.0nm,1.0s						
PLWZ	Palliser	26.32	200	P	P	04 19 26.5	-1.3
LTZ	Lake Taylor	28.43	203	P	P	04 19 49.1	+2.6
LTZ				IAmb	IAmb	04 19 53.6	
	comp=Z,9.5nm,0.7s						
EIDS	Eidsvold	34.14	250	P	P	04 20 37.3	+0.5
EIDS				IAmb	IAmb	04 20 37.8	
	comp=Z,5.3nm,0.9s						
ARMA	Armidale	34.60	241	P	P	04 20 40.3	-0.5
ARMA				IAmb	IAmb	04 20 47.7	
	comp=Z,12nm,1.1s						
CTAO	Charters Tower	38.40	259	P	P	04 21 13.1	0.0
TOO	Toolangi	41.51	232	P	P	04 21 39.0	+0.5
STKA	Stephens Creek	43.31	241	P	P	04 21 52.4	-0.7
STKA	Stephens Creek	43.31	241	P	P	04 21 52.6	-0.5
	comp=Z,1.0nm,0.4s,baz=76,slow=11,SNR=5.2						
	comp=Z,1.0nm,0.4s						
WR8	Warramunga Arr	49.43	258	P	P	04 22 41.3	+0.2
WR8				IAmb	IAmb	04 22 42.6	
	comp=Z,8.1nm,1.4s						
WB0	Warramunga Arr	49.55	258	P	P	04 22 42.0	+0.1
WB0				IAmb	IAmb	04 22 45.0	
	comp=Z,3.2nm,0.8s						
WB2	Warramunga Arr	49.58	258	P	P	04 22 42.4	+0.2
WB2				IAmb	IAmb	04 22 50.6	
	comp=Z,5.1nm,1.4s						
WRA	Warramunga Arr	49.59	258	P	P	04 22 41.8	-0.4
WRA	Warramunga Arr	49.59	258	P	P	04 22 42.1	-0.1
	comp=Z,0.8nm,0.4s,baz=96,slow=8.2,SNR=20						
	comp=Z,0.8nm,0.4s						
ASAR	Alice Springs	49.71	253	P	P	04 22 42.7	-0.5
ASAR	Alice Springs	49.71	253	P	P	04 22 43.3	+0.1
	comp=Z,8.7nm,0.7s,baz=90,slow=8.4,SNR=74						

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	comp=Z,8.7nm,0.7s						
MORW	**Morawa**	**65.28**	**245**	P	**P**	**04 24 31.1**	**-1.0**
TOLI2	**Tolitoli**	**67.39**	**279**	P	**P**	**04 24 48.4**	**+2.7**
TOLI2				IAmb	IAmb	04 24 56.6	
	comp=Z,3.7nm,0.9s						
QSPA	**South Pole Qui**	**72.98**	**180**	P	P	04 25 24.9	+5.9
QSPA	**South Pole Qui**	**72.98**	**180**	P	P	04 25 25.7	+6.8
	comp=Z,2.1nm,1.0s,baz=30,slow=2.5,SNR=2.8						
	comp=Z,2.1nm,1.0s						

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*IDC **25** 04:42:03.1±1.1, 2°.72S×138°.46E, h0^{km}, mb3.6/4, mbtmp3.6/7, ML3.4/3, MS3.8/1, Error ellipse: s-maj=26.2km s-min=16.5km az=161.0*

*DJA **25** 04:42:06.6±0.5, 2°S±5°×13°8E±°, h29^{km}±5^{km}, M3.7/6, MLv3.7/6*

ISC 25 04:42:04.0±0.8**, 2°.56S**±0°.07×**138°.30E**±0°.05**, h10^{km}, n13, σ1^{s}.27**/15**, mb3.7**/4**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.69**	**36**	P	**Pg**	**04 42 18.2**	**+0.7**
SMPI				S	**Sg**	**04 42 24.4**	**-2.2**
GENI	**Genyem**	**1.86**	**91**	P	**Pn**	**04 42 36.3**	**+0.3**
GENI				S	**Sn**	**04 42 59.7**	**0.0**
SRPI	**Serui, Papua**	**2.17**	**288**	P	**Pn**	**04 42 40.2**	**-0.1**
JAY	**Jayapura**	**2.40**	**89**	Pn	**Pn**	**04 42 42.8**	**-0.6**
	9.9nm,0.3s,baz=259,slow=6.8,SNR=26						
JAY				Lg	Lg	04 43 14.9	
	7.4nm,0.3s,baz=108,slow=22,SNR=6.7						
	45nm,0.5s						
JAY	**Jayapura**	**2.40**	**89**	P	**Pn**	**04 42 44.1**	**+0.6**
JAY				S	**Sn**	**04 43 12.0**	**-1.0**
BAKI	**Biak**	**2.58**	**302**	P	**Pn**	**04 42 44.7**	**-1.2**
WRA	**Warramunga Arr**	**17.71**	**192**	P	**Pn**	**04 46 09.9**	**-1.1**
	0.2nm,0.3s,baz=15,slow=12,SNR=8.1						
	0.7nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.82**	**218**	P	**P**	**04 46 34.9**	**-0.1**
	0.1nm,0.3s,baz=45,slow=10.0,SNR=2.3						
	3.6nm,1.0s						
ASAR	**Alice Springs**	**21.41**	**191**	P	**P**	**04 46 51.7**	**-0.6**
	1.3nm,0.9s,baz=28,slow=9.6,SNR=10						
	1.3nm,0.9s						
NWAO	**Narrogin (SRO)**	**36.10**	**211**	LR	LR	05 05 01.3	
	comp=Z,145nm,18.5s,baz=100,slow=38						
MKAR	**Makanchi Array**	**69.42**	**323**	P	**P**	**04 53 15.4**	**+3.0**
	0.3nm,0.6s,baz=124,slow=7.7,SNR=4.0						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**85.86**	**24**	P	**P**	**04 54 43.8**	**0.0**
	0.4nm,0.7s,baz=260,slow=4.6,SNR=7.1						
	0.4nm,0.7s						
QSPA	**South Pole Qui**	**87.39**	**180**	P	**P**	**04 54 50.9**	**-0.5**
	0.6nm,0.8s,baz=272,slow=10,SNR=1.7						
	0.6nm,0.8s						

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*SJA **25** 04:48:46.7±0.7, 33°.58S×71°.95W, h17^{km}±3^{km}, ML3.4, MW3.6*

*GUC **25** 04:48:50.3±0.9, 33°.65S×71°.72W, h46^{km}±2^{km}, ML3.3*

ISC 25 04:48:49.1±1.5**, 33°.70S**±0°.03×**71°.79W**±0°.05**, h17^{km}**±11^{km}**, n32, σ1^{s}.50**/48**, 3C-18D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA05	**Santo Domingo**	**0.15**	**76**	⇑*i*P	**Pb**	**04 48 57.3**	**+3.9**
VA05				*e*S	**Sb**	**04 49 01.9**	**+5.6**
VA05				IAML		04 49 02.4	
	comp=E,20μm,0.1s						
MT01	**Popeta**	**0.48**	**111**	⇑*e*P	**Pn**	**04 49 00.5**	**-0.8**
MT01				*e*S	**Sn**	**04 49 07.3**	**-1.9**
MT01				IAML		04 49 08.0	
	comp=E,11μm,0.2s						
MT09	**Talagante**	**0.67**	**97**	⇓*e*P	**Pn**	**04 49 02.7**	**-1.3**
MT09				IAML		04 49 12.1	
	comp=N,9μm,0.2s						
VA01	**Torpederas**	**0.68**	**10**	*e*P	**Pn**	**04 49 03.0**	**-1.0**
VA01				*e*S	**Sb**	**04 49 11.4**	**-0.2**
VA01				IAML		04 49 13.1	
	comp=N,2μm,0.2s						
MT02	**Curacav**	**0.69**	**52**	⇑*e*P	**Pg**	**04 49 02.9**	**+0.1**
MT02				*e*S	**Sb**	**04 49 11.5**	**-0.6**
MT02				IAML		04 49 12.1	
	comp=E,1μm,0.5s						
BO03	**Pichilemu**	**0.81**	**190**	⇓*i*P	**Pn**	**04 49 06.1**	**+0.3**
BO03				IAML		04 49 23.3	
	comp=N,293nm,0.3s						
BO01	**Tunca**	**0.91**	**140**	⇓*e*P	**Pn**	**04 49 06.9**	**-0.2**
BO01				IAML		04 49 21.5	
	comp=N,1μm,0.2s						
MT05	**Renca**	**0.93**	**71**	*e*P	**Pb**	**04 49 06.4**	**-0.4**
MT05				*e*S	**Sb**	**04 49 18.4**	**-0.4**
MT05				IAML		04 49 19.8	
	comp=E,2μm,0.3s						
ROCH	**El Roble**	**0.97**	**42**	⇓*e*P	**Pb**	**04 49 07.1**	**-0.5**
ROCH				⇓*e*P	**Pb**	**04 49 07.1**	**-0.5**
ROCH				*e*S	**Sb**	**04 49 19.3**	**-1.0**
ROCH				IAML		04 49 22.7	
	comp=N,1μm,0.5s						
ROCH				IAML		04 49 22.7	
	comp=N,579nm,0.5s						
BO04	**La Punta**	**1.02**	**107**	⇓*e*P	**Pb**	**04 49 08.1**	**-0.4**
BO04				IAML		04 49 22.3	
	comp=N,2μm,0.2s						
MT15	**Las Vizcachas**	**1.07**	**85**	⇓*i*P	**Pb**	**04 49 08.5**	**-0.8**
MT15				IAML		04 49 24.9	
	comp=E,4μm,0.2s						
PEL	**Peldehue**	**1.07**	**60**	*e*P	**Pb**	**04 49 08.7**	**-0.6**
PEL				*e*S	**Sb**	**04 49 22.2**	**-0.8**
PEL				IAML		04 49 24.3	
	comp=N,1μm,0.4s						
MT03	**Universidad Ad**	**1.08**	**80**	⇓*i*P	**Pb**	**04 49 08.8**	**-0.7**
MT03				IAML		04 49 23.1	
	comp=N,4μm,0.2s						
MT14	**Cerro Cal¡n**	**1.09**	**74**	⇓*e*P	**Pn**	**04 49 09.1**	**-0.5**
MT14				IAML		04 49 24.8	
	comp=E,1μm,0.6s						
MT16	**CCHEN**	**1.09**	**76**	⇓*i*P	**Pb**	**04 49 09.0**	**-0.5**
MT16				*e*S	**Sb**	**04 49 22.3**	**-1.2**
MT16				IAML		04 49 24.8	
	comp=N,750nm,0.5s						
MT10	**Hacienda Santa**	**1.13**	**68**	⇓*e*P	**Pn**	**04 49 09.8**	**-0.4**
MT10				*e*S	**Sb**	**04 49 24.0**	**-0.7**
MT10				IAML		04 49 25.5	
	comp=N,3μm,0.3s						
VA06	**Catapilco**	**1.20**	**20**	⇓*e*P	**Pn**	**04 49 10.1**	**-1.1**
VA06				IAML		04 49 30.3	
	comp=E,1μm,0.3s						
FCH	**Farellones**	**1.30**	**74**	⇓*e*P	**Pn**	**04 49 12.2**	**-0.6**
FCH				IAML		04 49 30.3	
	comp=N,1μm,0.2s						
GO05	**Hualane**	**1.32**	**185**	⇓*e*P	**Pb**	**04 49 13.2**	**-0.2**
GO05				IAML		04 49 35.3	
	comp=N,307nm,0.3s						
LMEL	**Las Melosas**	**1.33**	**97**	⇓*e*P	**Pn**	**04 49 12.5**	**-0.5**
LMEL				IAML		04 49 31.4	
	comp=N,1μm,0.2s						
BO02	**Sierra Bellavi**	**1.38**	**143**	⇓*e*P	**Pb**	**04 49 14.3**	**-0.2**
BO02				IAML		04 49 34.7	
	comp=E,3μm,0.4s						
VA03	**San Esteban**	**1.39**	**48**	*i* P	**Pn**	**04 49 13.4**	**-0.5**
VA03				*i* S	**Sg**	**04 49 33.9**	**-0.2**
VA03				IAML		04 49 34.0	
	comp=Z,486nm,0.1s						
MT04	**Ro Olivares**	**1.41**	**79**	⇓*e*P	**Pn**	**04 49 13.7**	**-0.5**
MT04				IAML		04 49 32.3	
	comp=E,1μm,0.2s						
MT08	**Bocatoma Ro**	**1.50**	**81**	⇓*e*P	**Pn**	**04 49 15.1**	**-0.4**
MT08				*e*S	**Sn**	**04 49 33.6**	**-1.2**
MT08				IAML		04 49 37.0	
	comp=E,563nm,0.3s						
ML02	**Panimavida**	**2.08**	**172**	*e*P	**Pn**	**04 49 24.3**	**+1.0**
ML02				IAML		04 50 06.3	
	comp=E,294nm,0.4s						
AUSP	**Uspallata**	**2.50**	**55**	*i* P	**Pn**	**04 49 30.5**	**+1.3**
AUSP				*i* S	**Sb**	**04 50 03.2**	**-1.0**
CO02	**Combarbal**	**2.57**	**15**	*e*P	**Pn**	**04 49 28.9**	**-1.2**
CO02				IAML		04 50 14.8	
	comp=E,491nm,0.3s						
ASAL	**Salagasta**	**2.71**	**67**	*i* P	**Pn**	**04 49 33.9**	**+1.9**
ASAL				*i* S	**Sb**	**04 50 07.8**	**-2.4**
RTLS	**Leoncito**	**2.82**	**49**	*i* P	**Pn**	**04 49 35.2**	**+1.4**
RTLS				*i* S	**Sb**	**04 50 11.1**	**-2.6**
RTLS				IAML		04 50 16.5	
	comp=Z,146nm,0.5s						
CO06	**Fray Jorge**	**3.02**	**2**	IAML		04 50 27.7	
	comp=E,60nm,0.5s						
ACCO	**Cerro Coronel**	**3.86**	**37**	*i* P	**Pn**	**04 49 49.2**	**+1.1**
ACCO				*i* S	**Sn**	**04 50 35.7**	**+2.4**
AROD	**Rodeo**	**4.03**	**30**	*i* P	**Pn**	**04 49 51.8**	**+1.4**
AROD				*i* S	**Sn**	**04 50 39.0**	**+1.6**

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*ISK **25** 04:57:27.1, 36°.62N×27°.06E, h121^{km}±1^{km}, ML2.1/9*

*AFAD **25** 04:57:28.4, 36°.65N×27°.12E, h120^{km}, ML2.2*

*THE **25** 04:57:29.6, 36°N±45°×2°7E±3°3, h127^{km}±31^{km}, MLh2.7/3*

*ATH **25** 04:57:31.7, 36°.23N×27°.35E, h97^{km}±4^{km}, ML2.7/4, Manual Solution by I.Dede First location: 2019/06/25 04:58:53, This location: 2019/06/25 09:15:58 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 8 km; Longitude uncertainty: 4 km*

ISC 25 04:57:26.1±1.9**, 36°.58N**±0°.04×**27°.08E**±0°.06**, h127^{km}**±11^{km}**, n36, σ1^{s}.45**/60**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YAZI	**Mula-Dat§a-**	**0.32**	**71**	P	**Pn**	**04 57 44.8**	**+0.8**
YAZI				S	**Sn**	**04 57 57.3**	**-0.2**
DAT	**Datca**	**0.43**	**70**	Pg	**Pn**	**04 57 45.5**	**+0.8**
DAT				Sg	**Sn**	**04 57 58.4**	**-0.3**
DAT	**Datca**	**0.43**	**70**	P	**Pn**	**04 57 45.4**	**+0.7**
DAT				S	**Sn**	**04 57 58.8**	**+0.2**
DAT				*i* IAML		04 57 59.0	
	comp=N,36nm,0.6s						
DAT				*i* IAML		04 58 00.0	
	comp=E,39nm,0.6s						
BODT	**Bodrum**	**0.52**	**21**	Pg	**Pn**	**04 57 45.7**	**+0.7**
BODT				Sg	**Sn**	**04 57 58.9**	**-0.5**
BDRM	**Kayabasi**	**0.57**	**31**	P	**Pn**	**04 57 46.2**	**+0.8**
BDRM				S	**Sn**	**04 57 59.1**	**-0.7**
BDRM				*i* IAML		04 58 01.0	
	comp=E,33nm,0.9s						
DDIM	**Aydin, Didim**	**0.89**	**8**	P	**Pn**	**04 57 48.5**	**+0.8**
DDIM				S	**Sn**	**04 58 03.1**	**-1.0**
MLSB	**Milas**	**0.91**	**38**	Pg	**Pn**	**04 57 48.7**	**+0.7**
MLSB				Sg	**Sn**	**04 58 04.4**	**-0.2**
ARG	**Arkhangelos**	**0.92**	**113**	Pg	**Pn**	**04 57 49.5**	**+1.5**
ARG				Sg	**Sn**	**04 58 05.5**	**+0.9**
ARG	**Arkhangelos**	**0.92**	**113**	P	**Pn**	**04 57 49.5**	**+1.5**
ARG				S	**Sn**	**04 58 04.9**	**+0.2**
ARG	**Arkhangelos**	**0.92**	**113**	P	**Pn**	**04 57 48.1**	**0.0**
ARG				S	**Sn**	**04 58 00.6**	**-4.0**
TURN	**Turunc**	**0.96**	**78**	P	**Pn**	**04 57 49.1**	**+0.7**
TURN				S	**Sn**	**04 58 05.0**	**-0.2**
KARP	**Karpathos**	**1.03**	**176**	Pg	**Pn**	**04 57 50.3**	**+1.1**
KARP	**Karpathos**	**1.03**	**176**	P	**Pn**	**04 57 50.2**	**+1.1**
KARP				S	**Sn**	**04 58 06.6**	**-0.1**
KARP	**Karpathos**	**1.03**	**176**	P	**Pn**	**04 57 49.9**	**+0.7**
KARP				S	**Sn**	**04 58 01.9**	**-4.8**
MULA	**Mugla, Merkez-**	**1.20**	**56**	P	**Pn**	**04 57 52.2**	**+1.3**
MULA				S	**Sn**	**04 58 08.1**	**-1.6**
MULA				*i* IAML		04 58 13.0	
	comp=E,31nm,0.5s						
DGB	**zmir**	**1.48**	**354**	P	**Pn**	**04 57 54.1**	**+0.4**
AYDB	**Zeytinkoy-Aydi**	**1.51**	**25**	Pn	**Pn**	**04 57 55.0**	**+0.7**
SABU	**Mula-Dalaman**	**1.54**	**80**	P	**Pn**	**04 57 55.7**	**+1.2**
SABU				S	**Sn**	**04 58 15.8**	**-0.4**
SABU				*i* IAML		04 58 18.0	
	comp=E,30nm,0.2s						
SABU				*i* IAML		04 58 20.0	
	comp=N,46nm,0.8s						
ESEN	**Aydn-Nazilli**	**1.58**	**39**	P	**Pn**	**04 57 55.9**	**+1.0**
FETY	**Fethiye**	**1.61**	**87**	Pn	**Pn**	**04 57 56.9**	**+1.5**
FETY	**Fethiye**	**1.61**	**87**	P	**Pn**	**04 57 56.4**	**+1.1**
FETY				S	**Sn**	**04 58 17.7**	**+0.1**
FETY	**Fethiye**	**1.61**	**87**	P	**Pn**	**04 57 58.0**	**+2.6**
ZKR	**Zakros**	**1.62**	**206**	P	**Pn**	**04 57 57.3**	**+1.8**
ZKR				S	**Sn**	**04 58 16.6**	**-1.2**
IZMR	**zmir-demi**	**1.70**	**24**	P	**Pn**	**04 57 57.3**	**+1.0**
DNZT	**Denizli-Tavas-**	**1.71**	**65**	P	**Pn**	**04 57 57.3**	**+0.8**
DNZT				S	**Sn**	**04 58 17.7**	**-2.1**
TAVA	**DENIZLI_Tavas**	**1.71**	**58**	P	**Pn**	**04 57 57.5**	**+0.9**
CAME	**Cameli-Denizli**	**1.82**	**78**	Pn	**Pn**	**04 57 59.2**	**+1.3**
CAEL	**Denizli, Camel**	**1.88**	**73**	P	**Pn**	**04 57 59.1**	**+0.6**
CAEL				S	**Sn**	**04 58 21.8**	**-1.7**
CAEL				*i* IAML		04 58 32.0	
	comp=E,18nm,0.8s						
CAEL				*i* IAML		04 58 35.0	
	comp=N,26nm,0.7s						
DNIZ	**Denizli-Tavas-**	**1.88**	**56**	P	**Pn**	**04 57 59.3**	**+0.7**
DNIZ				*i* IAML		04 58 26.0	
	comp=E,20nm,0.4s						
DNIZ				*i* IAML		04 58 45.0	
	comp=N,17nm,0.7s						
KIRA	**zmir-Kiraz**	**1.93**	**33**	P	**Pn**	**04 57 59.4**	**+0.3**
APMY	**Acipayam-Deniz**	**1.99**	**63**	Pn	**Pn**	**04 58 01.1**	**+1.2**
KNIK	**Mula-Seydike**	**2.02**	**82**	P	**Pn**	**04 58 01.6**	**+1.3**
KNIK				S	**Sn**	**04 58 26.0**	**-0.5**
KNIK				*i* IAML		04 58 28.0	
	comp=N,16nm,0.2s						
KNIK				*i* IAML		04 58 28.0	
	comp=E,17nm,0.3s						
KSL	**Kastellorizon**	**2.07**	**101**	P	**Pn**	**04 58 02.0**	**+1.2**
KSL				S	**Sn**	**04 58 26.1**	**-1.1**
KSL	**Kastellorizon**	**2.07**	**101**	P	**Pn**	**04 58 01.9**	**+1.2**
KSL				S	**Sn**	**04 58 24.2**	**-3.1**
AKAS	**Kas**	**2.07**	**99**	P	**Pn**	**04 58 02.6**	**+1.7**
AKAS				S	**Sn**	**04 58 25.6**	**-1.9**
GOLH	**Golhisar**	**2.10**	**71**	P	**Pn**	**04 58 02.8**	**+1.6**
GOLH				S	**Sn**	**04 58 26.2**	**-1.9**
GOLH				*i* IAML		04 58 30.0	
	comp=N,12nm,0.3s						
GOLH				*i* IAML		04 58 33.0	
	comp=E,12nm,0.4s						

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*IDC **25** 05:00:26.0±1.2, 2°.76S×138°.54E, h0^{km}, mb3.4/4, mbtmp3.5/7, ML3.5/3, Error ellipse: s-maj=28.1km s-min=16.5km az=159.0*

*DJA **25** 05:00:31.5±0.8, 2°S±8°×13°9E±°, h19^{km}±9^{km}, M3.5/6, MLv3.5/6*

ISC 25 05:00:29.9±0.8**, 2°.62S**±0°.07×**138°.65E**±0°.06**, h32^{km}, n12, σ2^{s}.07**/13**, mb3.3**/4**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.62**	**5**	P	**Pb**	**05 00 42.1**	**-0.4**
SMPI				S	**Sb**	**05 00 47.5**	**-3.5**
GENI	**Genyem**	**1.51**	**89**	P	**Pb**	**05 00 57.9**	**+0.5**
JAY	**Jayapura**	**2.05**	**87**	Pn	**Pn**	**05 01 04.3**	**+2.1**
	8.0nm,0.3s,baz=224,slow=12,SNR=18						
JAY				Lg	Lg	05 01 35.5	
	1.0nm,0.3s,baz=121,slow=8.4,SNR=4.0						
	19nm,0.3s						
JAY	**Jayapura**	**2.05**	**87**	P	**Pb**	**05 01 05.1**	**-1.4**
SRPI	**Serui, Papua**	**2.52**	**287**	P	**Pn**	**05 01 10.5**	**+1.8**
BAKI	**Biak**	**2.91**	**299**	P	**Pn**	**05 01 15.4**	**+1.4**
WRA	**Warramunga Arr**	**17.73**	**193**	P	**Pn**	**05 04 32.2**	**-2.3**
	0.4nm,0.3s,baz=16,slow=12,SNR=12						
	0.9nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.99**	**219**	P	**P**	**05 04 58.0**	**-1.8**
	baz=46,slow=12,SNR=2.3						
	4.5nm,1.1s						
ASAR	**Alice Springs**	**21.43**	**192**	P	**P**	**05 05 13.9**	**-1.5**
	0.7nm,0.7s,baz=22,slow=9.8,SNR=8.4						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**69.68**	**322**	P	**P**	**05 11 39.1**	**+2.6**
	0.1nm,0.6s,baz=116,slow=6.7,SNR=1.5						
	0.1nm,0.6s						
ILAR	**Eielson Array**	**85.77**	**24**	P	**P**	**05 13 05.9**	**+0.2**
	0.2nm,0.6s,baz=270,slow=5.1,SNR=2.3						
	0.2nm,0.6s						
QSPA	**South Pole Qui**	**87.33**	**180**	P	**P**	**05 13 14.4**	**+0.9**
	0.4nm,0.7s,baz=97,slow=6.6,SNR=1.3						
	0.4nm,0.7s						

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*IDC **25** 05:01:12.9±2.4, 18°.03S×178°.19W, h589^{km}±22^{km}, mb3.0/3, mbtmp3.9/4, Error ellipse: s-maj=38.1km s-min=30.3km az=36.0*

ISC 25 05:01:12.8±1.7**, 18°.0S**±0°.3×**178°.2W**±0°.3**, h590^{km}, n6, σ0^{s}.17**/6**, mb3.5**/3**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.59**	**273**	P	**P**	**05 02 34.9**	**0.0**
	10nm,0.6s,baz=134,slow=16,SNR=6.3						
WRA	**Warramunga Arr**	**44.83**	**260**	P	**P**	**05 08 35.8**	**0.0**
	0.6nm,0.5s,baz=97,slow=7.1,SNR=10						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**44.98**	**254**	P	**P**	**05 08 37.0**	**+0.1**
	2.4nm,0.7s,baz=87,slow=8.7,SNR=20						
	2.4nm,0.7s						
QSPA	**South Pole Qui**	**72.07**	**180**	P	**P**	**05 11 38.0**	**0.0**
	1.2nm,0.7s,baz=310,slow=0.3,SNR=10						
	1.2nm,0.7s						
BRTR	**Keskin Array B**	**144.99**	**315**	PKPbc	**PKPdf**	**05 19 43.8**	**-0.2**
	0.5nm,0.6s,baz=87,slow=4.9,SNR=2.9						
GERES	**GERESS Array B**	**147.74**	**345**	PKPbc	**PKPbc**	**05 19 52.2**	**+0.2**
	0.3nm,0.3s,baz=17,slow=5.7,SNR=1.9						

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*IDC **25** 05:06:06.1±1.7, 2°.51S×138°.49E, h0^{km}, mb3.6/3, mbtmp3.6/6, ML3.5/3, MS2.5/1, Error ellipse: s-maj=35.8km s-min=17.2km az=160.0*

*DJA **25** 05:06:13.6±0.4, 2°S±8°×13°9E±°, h35^{km}±10^{km}, M3.5/6, MLv3.5/6*

ISC 25 05:06:10.6±0.8**, 2°.56S**±0°.07×**138°.59E**±0°.06**, h32^{km}, n11, σ1^{s}.73**/13**, mb3.5**/3**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.57**	**12**	P	**Pn**	**05 06 24.1**	**+1.5**
SMPI				S	**Sn**	**05 06 29.3**	**-1.7**
GENI	**Genyem**	**1.58**	**91**	P	**Pn**	**05 06 37.7**	**+1.3**
JAY	**Jayapura**	**2.11**	**89**	Pn	**Pn**	**05 06 45.3**	**+1.5**
	7.9nm,0.3s,baz=230,slow=9.0,SNR=19						
JAY				Lg	Lg	05 07 15.7	
	5.2nm,0.3s,baz=122,slow=23,SNR=4.1						
JAY				LR	LR	05 07 44.3	
	comp=Z,105nm,21.5s,baz=12,slow=44						
	22nm,0.4s						
JAY	**Jayapura**	**2.11**	**89**	P	**Pn**	**05 06 44.7**	**+0.9**
SRPI	**Serui, Papua**	**2.44**	**286**	P	**Pb**	**05 06 52.1**	**-1.9**
SRPI				S	**Sb**	**05 07 22.7**	**-1.0**
BAKI	**Biak**	**2.83**	**299**	P	**Pn**	**05 06 56.8**	**+3.2**
WRA	**Warramunga Arr**	**17.77**	**193**	P	**Pn**	**05 10 15.3**	**-0.5**
	0.4nm,0.3s,baz=17,slow=12,SNR=9.3						
	0.6nm,0.5s						
FITZ	**Fitzroy Crossi**	**20.00**	**219**	P	**P**	**05 10 39.4**	**-1.3**
	baz=45,slow=13,SNR=1.4						
	1.9nm,0.8s						
ASAR	**Alice Springs**	**21.47**	**192**	P	**P**	**05 10 56.0**	**-0.7**
	0.9nm,0.7s,baz=20,slow=9.9,SNR=11						
	0.9nm,0.7s						
ILAR	**Eielson Array**	**85.74**	**24**	P	**P**	**05 18 46.8**	**+0.5**
	0.2nm,0.7s,baz=250,slow=5.6,SNR=1.8						
	0.2nm,0.7s						
QSPA	**South Pole Qui**	**87.39**	**180**	P	**P**	**05 18 56.3**	**+1.7**
	1.3nm,1.0s,baz=286,slow=7.4,SNR=2.5						
	1.3nm,1.0s						

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*IDC **25** 05:13:33.2±1.9, 2°.53S×138°.46E, h0^{km}, mb3.5/2, mbtmp3.5/4, ML3.6/2, Error ellipse: s-maj=34.9km s-min=19.2km az=161.0*

*DJA **25** 05:13:42.3±0.4, 2°S±9°×13°9E±°, h30^{km}±6^{km}, M3.3/5, MLv3.3/5*

ISC 25 05:13:42.4±1.3**, 1°.9S**±0°.2×**138°.82E**±0°.07**, h35^{km}, n8, σ0^{s}.42**/8**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.15**	**228**	P	**Pn**	**05 13 49.3**	**+0.4**
SMPI				S	**Sn**	**05 13 52.6**	**-0.6**
GENI	**Genyem**	**1.52**	**118**	P	**Pn**	**05 14 07.1**	**0.0**
GENI				S	**Sn**	**05 14 25.8**	**+0.2**
JAY	**Jayapura**	**1.98**	**108**	Pn	**Pn**	**05 14 13.7**	**+0.1**
	10.0nm,0.3s,baz=234,slow=11,SNR=14						
JAY				Lg	Lg	05 14 43.4	
	6.9nm,0.3s,baz=79,slow=16,SNR=5.3						
	17nm,0.3s						
JAY	**Jayapura**	**1.98**	**108**	P	**Pn**	**05 14 13.8**	**+0.3**
BAKI	**Biak**	**2.80**	**284**	P	**Pn**	**05 14 25.1**	**+0.3**
WRA	**Warramunga Arr**	**18.47**	**193**	P	P	05 17 41.4	-14
	0.3nm,0.3s,baz=17,slow=12,SNR=6.2						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**22.17**	**192**	P	P	05 18 23.1	-13
	1.1nm,0.7s,baz=20,slow=10,SNR=12						
	1.1nm,0.7s						
ILAR	**Eielson Array**	**85.04**	**24**	P	**P**	**05 26 14.0**	**-0.2**
	0.3nm,0.7s,baz=264,slow=6.2,SNR=4.1						
	0.3nm,0.7s						

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*JMA **25** 05:19:16.8±0.1, 31°.8N±0°.3×131°.9E±0°.6, h27^{km}±1^{km}, MD4.0/40, MV4.0/40, HYUGANADA REGION*

JMA Felt I J1 at HYUGANADA REGION .

*NIED **25** 05:19:16.8, 31°.79N×131°.94E, h27^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.57; $M_{\theta\theta}$0.02; $M_{\phi\phi}$-0.59; $M_{r\theta}$0.51; $M_{\theta\phi}$0.03; $M_{\phi r}$0.91; Fault plane solution: $M_0$1.19000×10^{15} NP1: ϕ_s160.00000°, δ18.00000°, λ48.00000°. NP2: ϕ_s24.00000°, δ77.00000°, λ103.00000°.*

*IDC **25** 05:19:17.2±2.1, 31°.57N×131°.81E, h52^{km}±17^{km}, mb3.3/8, mbtmp3.5/12, ML3.1/3, MS3.3/6 Error ellipse: s-maj=22.6km s-min=11.9km az=91.0*

ISC 25 05:19:16.9±1.2**, 31°.75N**±0°.04×**131°.89E**±0°.07**, h41^{km}**±11^{km}**, n40, σ1^{s}.66**/31**, mb3.5**/8**, MS3.4**/4**, 10D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNKG	**Nichinankitago**	**0.44**	**259**	⇓*i*P	**Pn**	**05 19 26.4**	**-0.5**
JNKG				⇓*e*S	**Sn**	**05 19 33.9**	**-0.1**
JNKG	**Nichinankitago**	**0.44**	**259**	A	A	05 19 26.4	
	comp=N,14nm,0.9s,comp=E,8.0nm,0.5s						
JNAR	**Kushima--Naru**	**0.57**	**247**	⇓*i*P	**Pn**	**05 19 29.0**	**+0.4**
JNAR				⇓S	**Sn**	**05 19 37.8**	**+0.9**
JNAR	**Kushima--Naru**	**0.57**	**247**	A	A	05 19 29.0	
	comp=N,9.0nm,1.3s,comp=E,10.0nm,1.4s						
JTSN	**Tsuno**	**0.59**	**327**	⇓*i*P	**Pn**	**05 19 28.2**	**-0.8**
JTSN				⇓*e*S	**Sn**	**05 19 36.0**	**-1.5**
JTZ	**Takazaki**	**0.70**	**283**	*i* P	**Pn**	**05 19 30.6**	**+0.3**
JTZ				S	**Sn**	**05 19 40.2**	**+0.2**
JTZ	**Takazaki**	**0.70**	**283**	A	A	05 19 30.6	
	comp=N,17nm,0.6s,comp=E,14nm,0.6s						
JHHC	**Hyugahichiya**	**0.72**	**343**	⇓*i*P	**Pn**	**05 19 30.3**	**-0.5**
JHHC				⇓S	**Sn**	**05 19 39.6**	**-1.0**
JKIT	**Kitakata**	**0.95**	**337**	A	A	05 19 33.8	
	comp=N,11nm,0.4s,comp=E,8.0nm,1.7s						
JTSR	**Tashiro 2**	**1.01**	**235**	A	A	05 19 35.9	
	comp=N,8.0nm,1.1s,comp=E,9.0nm,0.5s						
JZO	**Okuchi**	**1.16**	**290**	P	**Pn**	**05 19 37.6**	**+0.8**
JZO	**Okuchi**	**1.16**	**290**	A	A	05 19 37.6	
	comp=N,4.0nm,0.7s,comp=E,5.0nm,0.7s						
JIU3	**Izumi3**	**1.21**	**312**	P	**Pn**	**05 19 38.6**	**+1.2**
JTN	**Tanegashima 3**	**1.34**	**216**	⇓P	**Pn**	**05 19 40.3**	**+1.2**
JTN				⇓S	**Sn**	**05 19 58.7**	**+3.0**
JTO	**Tosashimizu**	**1.35**	**35**	P	**Pn**	**05 19 38.4**	**-0.9**
JNU	**Nakatsue**	**1.61**	**328**	P	**Pn**	**05 19 44.4**	**+1.4**
	comp=E,252nm,0.3s,baz=141,slow=5.7,SNR=123						
JNU				S	**Sn**	**05 20 06.4**	**+3.8**
	comp=E,1μm,0.8s,baz=201,slow=16,SNR=9.4						
JOW	**Kunigami**	**5.83**	**214**	P	**Pn**	**05 20 38.5**	**-2.3**
	comp=E,15nm,1.0s,baz=87,slow=26,SNR=1.9						
JOW				S	**Sn**	**05 21 43.1**	**-3.2**
	comp=E,7.4nm,0.5s,baz=96,slow=30,SNR=1.5						
KSRS	**Korea Array**	**6.56**	**331**	P	**Pn**	**05 20 51.9**	**+1.1**
	comp=E,0.4nm,0.3s,baz=154,slow=14,SNR=6.0						
KSRS				S	**Sn**	**05 22 02.0**	**-2.4**
	comp=E,1.6nm,0.6s,baz=148,slow=29,SNR=2.6						
	comp=E,0.7nm,0.3s						
MJAR	**Matsushiro Arr**	**7.09**	**46**	P	**Pn**	**05 21 00.7**	**+2.5**
	comp=E,0.1nm,0.3s,baz=236,slow=15,SNR=2.5						
	comp=E,0.8nm,0.3s						
USRK	**Ussuriysk Ar.**	**12.43**	**0**	LR	LR	05 26 53.5	
	comp=E,96nm,18.3s,baz=160,slow=36						
KLR	**Kul'dur**	**17.46**	**360**	P	**P**	**05 23 20.4**	**+2.4**
	comp=E,0.3nm,0.3s,baz=217,slow=8.1,SNR=5.5						
KLR				LR	LR	05 30 00.8	
	comp=E,51nm,18.6s,baz=72,slow=36						
	comp=E,1.4nm,0.6s						
SONM	**Songino Array**	**25.17**	**317**	P	**P**	**05 24 38.9**	**+0.4**
	comp=E,1.5nm,0.7s,baz=132,slow=8.3,SNR=8.6						
SONM				LR	LR	05 36 06.2	
	comp=E,112nm,19.1s,baz=96,slow=40						
	comp=E,1.5nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**33.59**	**102**	T	T	06 01 34.0	
	baz=298,slow=75,SNR=11						
H11N1	**WAKE ISLAND Hy**	**33.59**	**102**	T	T	06 01 34.3	
	baz=298,slow=75,SNR=8.2						

H11N3	**WAKE ISLAND Hy**	**33.60**	**102**	T	T	06 01 35.3	
	baz=298,slow=75,SNR=9.1						
H11S3	**WAKE ISLAND Hy**	**34.01**	**104**	T	T	06 02 10.7	
	baz=303						
H11S1	**WAKE ISLAND Hy**	**34.01**	**104**	T	T	06 02 10.7	
	baz=303						
H11S2	**WAKE ISLAND Hy**	**34.02**	**104**	T	T	06 02 09.0	
	baz=303						
TIXI	**Tiksi**	**39.99**	**359**	LR	LR	05 44 10.4	
	comp=E,53nm,18.2s,baz=195,slow=37						
MKAR	**Makanchi Array**	**40.55**	**306**	P	**P**	**05 26 51.9**	**-0.3**
	comp=E,0.4nm,0.6s,baz=93,slow=8.9,SNR=1.7						
MKAR				LR	LR	05 45 12.4	
	comp=E,43nm,18.7s,baz=93,slow=38						
	comp=E,0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**43.32**	**312**	P	**P**	**05 27 13.5**	**-1.2**
	comp=E,0.1nm,0.3s,baz=106,slow=9.2,SNR=2.0						
	comp=E,0.1nm,0.3s						
AAK	**Ala-Archa**	**46.20**	**301**	LR	LR	05 49 43.1	
	comp=E,47nm,18.7s,baz=118,slow=40						
BVAR	**Borovoye Array**	**48.48**	**315**	P	**P**	**05 27 54.8**	**-0.5**
	comp=E,0.6nm,0.4s,baz=96,slow=10,SNR=2.3						
	comp=E,0.6nm,0.4s						
ILAR	**Eielson Array**	**58.08**	**30**	P	**P**	**05 29 06.7**	**+1.0**
	comp=E,0.2nm,0.8s,baz=274,slow=7.1,SNR=1.9						
	comp=E,0.2nm,0.8s						
FINES	**FINESS Array B**	**69.65**	**330**	P	**P**	**05 30 21.4**	**-0.4**
	comp=E,0.4nm,0.5s,baz=68,slow=5.9,SNR=1.4						
	comp=E,0.4nm,0.5s						
AKASG	**Malin Array Be**	**73.42**	**320**	P	**P**	**05 30 44.0**	**-0.7**
	comp=E,0.3nm,0.3s,baz=55,slow=8.6,SNR=2.5						
	comp=E,0.3nm,0.3s						
NVAR	**Mina Array Bea**	**84.41**	**48**	P	**P**	**05 31 45.0**	**-0.6**
	comp=E,0.1nm,0.3s,baz=336,slow=6.6,SNR=1.3						
	comp=E,0.1nm,0.3s						
H03N2	**Juan Fernandez**	**154.03**	**102**	T	T	08 32 10.8	
	baz=280						
H03N3	**Juan Fernandez**	**154.03**	**102**	T	T	08 32 06.4	
	baz=280						
H03N1	**Juan Fernandez**	**154.04**	**102**	T	T	08 32 08.5	
	baz=280						

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*IDC **25** 05:23:09.4±0.7, 2°.65S×138°.49E, h0^{km}, mb3.9/9, mbtmp4.0/13, ML3.9/3, MS3.3/8, Error ellipse: s-maj=17.3km s-min=15.5km az=17.0*

*NEIC **25** 05:23:12.4±2.4, 2°.64S±0°.10×138°.64E±0°.05, h10^{km}±2^{km}, mb4.3/9, Error ellipse: s-maj=16.6km s-min=8.4km az=192.0*

*DJA **25** 05:23:15.0±0.6, 2°S±5°×13°9E±°, h21^{km}±6^{km}, M4.3/8, mb4.3/1, MLv4.4/8*

ISC 25 05:23:13.8±0.5**, 2°.66S**±0°.05×**138°.63E**±0°.05**, h32**^{km}**, n42, σ1^s.94**/41**, mb4.1**/10**, MS3.2**/4**, 1D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**0.67**	**7**	P	**Pb**	**05 23 25.4**	**-1.7**
SMPI				S	**Sb**	**05 23 31.7**	**-4.4**
GENI	**Genyem**	**1.54**	**88**	P	**Pb**	**05 23 41.2**	**-0.5**
JAY	**Jayapura**	**2.08**	**86**	Pn	**Pn**	**05 23 47.9**	**+1.4**
	24nm,0.3s,baz=246,slow=8.2,SNR=60						
JAY				Lg	Lg	05 24 18.4	
	17nm,0.3s,baz=140,slow=19,SNR=4.1						
JAY				LR	LR	05 24 46.0	
	comp=Z,577nm,19.9s,baz=326,slow=44						
	76nm,0.4s						
JAY	**Jayapura**	**2.08**	**86**	P	**Pn**	**05 23 47.8**	**+1.3**
SRPI	**Serui, Papua**	**2.51**	**288**	P	**Pn**	**05 23 52.9**	**+0.5**
BAKI	**Biak**	**2.91**	**300**	P	**Pn**	**05 23 59.7**	**+1.8**
BAKI				S	**Sn**	**05 24 33.4**	**+1.6**
RKPI	**Ransiki, Papua**	**4.59**	**284**	P	**Pn**	**05 24 23.3**	**+2.2**
FAKI	**Fak Fak**	**6.38**	**268**	Pn	**Pn**	**05 24 46.3**	**+0.7**
FAKI	**Fak Fak**	**6.38**	**268**	P	**Pn**	**05 24 47.8**	**+2.2**
PMG	**Port Moresby**	**10.81**	**129**	Pn	**Pn**	**05 25 47.5**	**+1.1**
	7.2nm,0.4s,baz=249,slow=20,SNR=1.6						
COEN	**Coen**	**12.09**	**158**		**Pn**	**05 26 05.8**	**+1.8**
MTN	**Manton Dam**	**12.55**	**216**		**Pn**	**05 26 11.2**	**+0.9**
KNRA	**Kununurra**	**16.18**	**216**	Pn	**Pn**	**05 27 00.1**	**+1.1**
KNRA				IAmb	IAmb	05 27 09.8	
	comp=Z,30nm,1.2s						
GUMO	**Guam**	**17.29**	**21**	LR	LR	05 34 00.5	
	comp=Z,40nm,19.0s,baz=88,slow=38						
WB0	**Warramunga Arr**	**17.50**	**193**	Pn	**Pn**	**05 27 16.2**	**+0.7**
WB0				IAmb	IAmb	05 27 23.3	
	comp=Z,26nm,1.1s						
WR8	**Warramunga Arr**	**17.66**	**193**		**Pn**	**05 27 16.0**	**-1.5**
WR8				IAmb	IAmb	05 27 38.4	
	comp=Z,16nm,0.8s						
WRAB	**Tennant Creek**	**17.67**	**193**	P	**Pn**	**05 27 17.7**	**+0.1**
WRAB				IAmb	IAmb	05 27 25.7	
	comp=Z,19nm,0.8s						
WB2	**Warramunga Arr**	**17.68**	**193**		**P**	**05 27 19.5**	**+1.1**
WB2				IAmb	IAmb	05 27 25.8	
	comp=Z,24nm,0.8s						
WRA	**Warramunga Arr**	**17.68**	**193**		**Pn**	**05 27 18.1**	**+0.3**
WRA	**Warramunga Arr**	**17.68**	**193**	P	**Pn**	**05 27 15.7**	**-2.1**
	comp=Z,0.9nm,0.3s,baz=12,slow=13,SNR=21						
WRA				S	**Sn**	**05 30 25.7**	**-8.3**
	comp=Z,2.6nm,0.8s,baz=10,slow=22,SNR=4.9						
WRA				LR	LR	05 34 26.1	
	comp=Z,171nm,22.0s,baz=340,slow=38						
	comp=Z,1.9nm,0.5s						
KAPI	**Kappang**	**18.98**	**262**	LR	LR	05 35 06.0	
	comp=Z,56nm,18.6s,baz=92,slow=38						
FITZ	**Fitzroy Crossi**	**19.94**	**219**	P	**Pn**	**05 27 45.4**	**+0.3**
FITZ	**Fitzroy Crossi**	**19.94**	**219**	P	**P**	**05 27 42.0**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=315,slow=23,SNR=1.6						
FITZ				S	S	05 31 14.9	-11
	comp=Z,3.3nm,0.7s,baz=189,slow=6.8,SNR=2.1						
	comp=Z,4.0nm,1.1s						
ASAR	**Alice Springs**	**21.38**	**192**		**P**	**05 27 58.9**	**+0.1**
ASAR	**Alice Springs**	**21.38**	**192**	P	**P**	**05 27 58.0**	**-0.8**
	comp=Z,6.9nm,0.9s,baz=23,slow=10,SNR=36						
ASAR				S	**S**	**05 31 52.8**	**-1.9**
	comp=Z,2.3nm,0.8s,baz=9.9,slow=23,SNR=5.0						
	comp=Z,6.9nm,0.9s						
EIDS	**Eidsvold**	**25.57**	**153**	P	**P**	**05 28 41.4**	**+1.3**
NWAO	**Narrogin (SRO)**	**36.18**	**211**	LR	LR	05 46 00.1	
	comp=Z,190nm,18.7s,baz=342,slow=38						
JNU	**Nakatsue**	**36.33**	**349**	LR	LR	05 44 38.0	
	comp=Z,59nm,18.1s,baz=162,slow=36						
MJAR	**Matsushiro Arr**	**39.00**	**359**	LR	LR	05 46 23.8	
	comp=Z,26nm,18.0s,baz=163,slow=36						
KSRS	**Korea Array**	**41.13**	**347**	P	**P**	**05 30 55.0**	**0.0**
	comp=Z,0.5nm,0.4s,baz=150,slow=9.9,SNR=2.2						
	comp=Z,0.5nm,0.4s						
BNX	**BinXian**	**49.21**	**350**	⇓P	**P**	**05 32 00.4**	**+1.4**
BNX				pP	**pP**	**05 32 09.4**	**+0.4**
BNX				pmax	pmax		
	comp=Z,7.0nm,1.3s						
RTZ	**Ruatahuna**	**50.03**	**141**	P	**P**	**05 32 05.8**	**+0.3**
SONM	**Songino Array**	**57.64**	**335**	P	**P**	**05 33 00.1**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=132,slow=4.3,SNR=1.2						
	comp=Z,0.3nm,0.4s						
PETK	**Petropavlovsk-**	**57.83**	**13**	LR	LR	05 55 53.1	
	comp=Z,14nm,20.8s,baz=177,slow=34						
SEY	**Seymchan**	**66.24**	**7**	P	**P**	**05 34 00.2**	**+1.9**
	comp=Z,1.2nm,0.6s,baz=244,slow=6.1,SNR=6.8						
	comp=Z,1.2nm,0.6s						
MKAR	**Makanchi Array**	**69.70**	**322**	P	**P**	**05 34 21.3**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=107,slow=7.9,SNR=5.8						
	comp=Z,0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**73.64**	**325**	P	**P**	**05 34 42.9**	**-1.2**
	comp=Z,0.4nm,0.7s,baz=115,slow=5.2,SNR=4.8						
	comp=Z,0.4nm,0.7s						
BVAR	**Borovoye Array**	**79.22**	**325**	P	**P**	**05 35 16.0**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=134,slow=6.2,SNR=3.1						
	comp=Z,0.9nm,0.5s						
ILAR	**Eielson Array**	**85.82**	**24**	P	**P**	**05 35 49.9**	**0.0**
	comp=Z,1.1nm,0.7s,baz=266,slow=4.2,SNR=14						
	comp=Z,1.1nm,0.7s						
QSPA	**South Pole Qui**	**87.29**	**180**	P	**P**	**05 35 57.9**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=305,slow=1.7,SNR=8.1						
	comp=Z,1.1nm,0.6s						
CPUP	**Villa Florida**	**147.31**	**153**	PKPbc	**PKPab**	**05 42 56.6**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=95,slow=2.6,SNR=6.2						
LPAZ	**La Paz**	**147.54**	**126**	PKPbc	**PKPab**	**05 42 58.0**	**-0.6**
	comp=Z,2.0nm,0.8s,baz=266,slow=2.8,SNR=7.6						

IDC 25 05:33:56.8±58.0**, 13°.01S**×**169°.76E, h0**^{km}**, mb4.0**/3**, mbtmp4.0**/3**, Error ellipse: s-maj=995.1km s-min=127.6km az=65.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**31.94**	**229**	P	P	05 40 24.4	0.0
	0.9nm,0.4s,baz=68,slow=11,SNR=3.3						
	0.9nm,0.4s						
WRA	**Warramunga Arr**	**34.61**	**254**	P	P	05 40 48.0	+0.1
	0.8nm,0.5s,baz=85,slow=8.6,SNR=8.6						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**35.55**	**247**	P	P	05 40 55.8	-0.3
	1.3nm,0.5s,baz=77,slow=9.3,SNR=18						
	1.3nm,0.5s						

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*IDC **25** 05:56:48.5±5.6, 15°.13S×167°.51E, h124^{km}±43^{km}, mb3.8/4, mbtmp4.1/5, Error ellipse: s-maj=48.3km s-min=29.1km az=59.0*

*NOU **25** 05:56:50.5, 15°.22S×167°.45E, h111^{km}, MLv4.6/17, Vanuatu Islands*

ISC 25 05:56:49.4±1.1**, 15°.16S**±0°.08×**167°.5E**±0°.2**, h129**^{km}**, n18, σ0^s.98**/19**, mb4.0**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.37**	**221**	P	**Pn**	**05 57 06.8**	**-0.9**
SANVU	**Saraoutou**	**0.37**	**221**	S	**Sn**	**05 57 20.6**	**-0.9**
VLAKA	**Lakatoro**	**0.94**	**182**	P	**Pn**	**05 57 11.1**	**-0.5**
VLAKA	**Lakatoro**	**0.94**	**182**	P	**Sn**	**05 57 29.0**	**+0.5**
DVP	**Devils Point**	**2.64**	**165**	P	**Pn**	**05 57 31.2**	**-0.1**
LUES	**Luesalemba Tem**	**4.72**	**341**	P	**Pn**	**05 58 00.9**	**+2.2**
KOUNC	**Koumac, New Ca**	**6.15**	**209**	P	**Pn**	**05 58 17.9**	**0.0**
YATNC	**Mamie plateau,**	**6.88**	**184**	P	**Pn**	**05 58 27.5**	**-0.2**
DZM	**Mont Dzumac**	**6.94**	**188**	P	**Pn**	**05 58 27.8**	**-0.8**
	5.9nm,0.3s,baz=23,slow=13,SNR=42						
DZM				S	**Sn**	**05 59 47.5**	**+1.3**
	12nm,0.3s,baz=289,slow=23,SNR=15						
DZM	**Mont Dzumac**	**6.94**	**188**	P	**Pn**	**05 58 27.6**	**-1.0**
ONTNC	**Ouen Toro**	**7.17**	**187**	P	**Pn**	**05 58 31.9**	**+0.3**
OUENC	**Ouen Island, N**	**7.24**	**185**	P	**Pn**	**05 58 33.8**	**+1.2**
NGOA	**Tingoa Renbel**	**8.04**	**296**	P	**Pn**	**05 58 45.1**	**+1.7**
ASAR	**Alice Springs**	**32.69**	**250**	P	**P**	**06 03 09.7**	**0.0**
	1.3nm,0.5s,baz=78,slow=9.1,SNR=18						
	1.3nm,0.5s						
QSPA	**South Pole Qui**	**74.87**	**180**	P	**P**	**06 08 15.8**	**+0.1**
	2.6nm,0.8s,baz=318,slow=4.5,SNR=20						
	2.6nm,0.8s						
SONM	**Songino Array**	**82.95**	**324**	P	**P**	**06 08 59.8**	**-0.2**
	1.0nm,0.9s,baz=120,slow=5.2,SNR=4.3						
	1.0nm,0.9s						
SNAA	**Sanae**	**93.13**	**183**	P	**P**	**06 09 47.8**	**-0.7**
	0.5nm,0.5s,baz=194,slow=17,SNR=6.9						
	0.5nm,0.5s						
ARCES	**ARCESS Array B**	**120.71**	**345**	PKP	**PKPdf**	**06 15 25.2**	**-0.2**
	1.7nm,0.6s,baz=28,slow=4.1,SNR=5.3						

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*TRN **25** 05:58:11.2, 12°.66N×61°.31W, h130^{km}, MD3.8*

*IDC **25** 05:58:14.1±2.9, 12°.99N×61°.44W, h152^{km}±18^{km}, mb3.6/4, mbtmp4.0/4, Error ellipse: s-maj=38.3km s-min=24.9km az=44.0*

ISC 25 05:58:11.2±0.8**, 12°.68N**±0°.03×**61°.39W**±0°.06**, h137**^{km}±5^{km}**, n30, σ1^s.00**/54**, mb3.7**/3**, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GCMP	**Grenada, Carri**	**0.20**	**190**	*e*P	**Pn**	**05 58 29.9**	**0.0**
GCMP				*e*S	**Sn**	**05 58 43.5**	**-0.6**
GRSS	**Sisters**	**0.43**	**210**	*e*P	**Pn**	**05 58 30.6**	**-0.1**
GRSS				*e*S	**Sn**	**05 58 45.5**	**-0.1**
SVOC	**Richmond Hill,**	**0.50**	**19**	*e*P	**Pn**	**05 58 31.0**	**-0.1**
SVOC				*e*S	**Sn**	**05 58 45.4**	**-0.8**
SVT	**Saint Vincent**	**0.51**	**17**	*e*P	**Pn**	**05 58 31.0**	**-0.1**
SVT				*e*S	**Sn**	**05 58 45.5**	**-0.8**
GRW	**Mount Saint Ca**	**0.58**	**207**	*e*P	**Pn**	**05 58 33.3**	**+1.6**
GRW				*e*S	**Sn**	**05 58 48.2**	**+1.0**
GRGR	**Grenville**	**0.60**	**205**	*e*P	**Pn**	**05 58 32.1**	**+0.3**
GRGR				*e*S	**Sn**	**05 58 47.3**	**+0.1**
SVB	**Belmont**	**0.60**	**13**	*e*P	**Pn**	**05 58 31.9**	**+0.2**
SVB				*e*S	**Sn**	**05 58 47.3**	**-0.1**
GRFF	**Grenada Fort F**	**0.71**	**208**	*e*P	**Pn**	**05 58 32.7**	**+0.2**
GRFF				*e*S	**Sn**	**05 58 48.4**	**-0.2**
SLBI	**Saint Lucia, B**	**1.40**	**17**	*e*P	**Pn**	**05 58 39.1**	**+0.4**
SLBI				*e*S	**Sn**	**05 58 59.9**	**+0.2**
H05S1	**Guadeloupe/Mar**	**1.82**	**17**	P	**Pn**	**05 58 44.0**	**+0.5**
	SNR=626						
H05S1				S	**Sn**	**05 59 07.7**	**-0.4**
BBGH	**Gun Hill**	**1.84**	**75**	*e*P	**Pn**	**05 58 45.1**	**+1.3**
BBGH				*e*S	**Sn**	**05 59 06.5**	**-2.2**
BIM	**Bigot**	**1.85**	**10**	*e*P	**Pn**	**05 58 44.4**	**+0.5**
BIM				*e*S	**Sn**	**05 59 09.4**	**+0.4**
PSKH	**Kent House, Po**	**1.99**	**184**	*e*P	**Pn**	**05 58 45.8**	**+0.3**
PSKH				*e*S	**Sn**	**05 59 11.3**	**-0.5**
TRN	**Trinidad (W)**	**2.02**	**180**	*e*P	**Pn**	**05 58 46.7**	**+0.8**
TRN				*e*S	**Sn**	**05 59 10.9**	**-1.4**
ILAM	**Ilet Lapin Mar**	**2.14**	**14**	*e*P	**Pn**	**05 58 47.8**	**+0.5**
ILAM				*e*S	**Sn**	**05 59 14.8**	**-0.3**
SVN	**Savane Anatole**	**2.16**	**6**	*e*P	**Pn**	**05 58 48.2**	**+0.6**
SVN				*e*S	**Sn**	**05 59 16.5**	**+1.0**
TBH	**Brigand Hill**	**2.21**	**172**	*e*P	**Pn**	**05 58 49.1**	**+0.9**
MDN	**Morne-Daniel**	**2.62**	**360**	*e*P	**Pn**	**05 58 54.0**	**+0.7**
MDN				*e*S	**Sn**	**05 59 25.5**	**-0.3**
DSLB	**Salisbury**	**2.74**	**359**	*e*P	**Pn**	**05 58 55.3**	**+0.4**
DSLB				*e*S	**Sn**	**05 59 27.5**	**-1.0**
DWS	**Wesley**	**2.87**	**2**	*e*P	**Pn**	**05 58 57.6**	**+1.1**
DWS				*e*S	**Sn**	**05 59 31.0**	**-0.4**
TBG	**Guadaloupe-3**	**3.16**	**356**	*e*P	**Pn**	**05 59 02.5**	**+2.3**
MAGL	**Barre de l'ile**	**3.25**	**2**	*e*P	**Pn**	**05 59 02.3**	**+0.9**
MAGL				*e*S	**Sn**	**05 59 40.3**	**+0.1**
H05N1	**Guadeloupe/Mar**	**3.63**	**5**	P	**Pn**	**05 59 04.8**	**-1.5**
	SNR=26						
H05N1				S	**Sn**	**05 59 46.0**	**-3.0**
PCRV	**Puerto La Cruz**	**4.04**	**232**	*e*P	**Pn**	**05 59 13.0**	**+1.3**
PCRV				*e*S	**Sn**	**05 59 57.0**	**-1.7**
ANWB	**Willy Bob**	**4.97**	**356**	*e*P	**Pn**	**05 59 24.0**	**-0.1**
BAUV	**El Baul**	**7.51**	**241**	*e*P	**Pn**	**05 59 58.8**	**+0.6**
BAUV				*e*S	**Sn**	**06 01 20.3**	**-1.7**
ULM	**Lac du Bonnet**	**46.87**	**330**	P	**P**	**06 06 26.3**	**-1.2**
	1.2nm,0.5s,baz=157,slow=7.7,SNR=1.8						
	1.2nm,0.5s						
PDAR	**Pinedale Array**	**51.18**	**315**	P	**P**	**06 07 00.3**	**-0.5**
	0.5nm,0.4s,baz=115,slow=9.7,SNR=7.8						
PDAR				pP	**pwP**	**06 07 36.3**	**+0.8**
	1.3nm,0.7s,baz=117,slow=10,SNR=8.1						
	0.5nm,0.4s						
TORD	**Torodi Ar. Bea**	**61.34**	**82**	P	**P**	**06 08 13.7**	**+0.7**
	1.4nm,0.3s,baz=288,slow=7.1,SNR=1.6						
	1.4nm,0.3s						
FINES	**FINESS Array B**	**77.76**	**29**	P	**P**	**06 09 53.3**	**+0.4**
	0.4nm,0.3s,baz=273,slow=5.2,SNR=4.0						
	0.4nm,0.3s						

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*DJA **25** 05:58:55.9±1.1, 2°S±4°×13°8E±°, h10^{km}, M3.6/4, MLv3.6/4*

*IDC **25** 05:58:56.0±1.7, 2°.82S×138°.56E, h0^{km}, mb3.2/2, mbtmp3.4/4, ML3.5/2, Error ellipse: s-maj=33.3km s-min=18.0km az=164.0*

ISC 25 05:58:56.7±1.4**, 2°.52S**±0°.09×**138°.5E**±0°.1**, h32**^{km}**, n7, σ1^s.06**/8**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**0.58**	**24**	P	**Pn**	**05 59 08.8**	**+0.1**
SMPI				S	**Sn**	**05 59 17.3**	**+0.2**
GENI	**Genyem**	**1.69**	**92**	P	**Pb**	**05 59 27.2**	**0.0**
JAY	**Jayapura**	**2.22**	**90**	Pn	**Pb**	**05 59 34.8**	**-1.5**
	13nm,0.3s,baz=235,slow=9.5,SNR=26						
JAY				Lg	Lg	06 00 03.9	
	5.4nm,0.3s,baz=175,slow=15,SNR=3.7						
	32nm,0.3s						
JAY	**Jayapura**	**2.22**	**90**	P	**Pb**	**05 59 35.0**	**-1.3**
JAY				S	**Sb**	**06 00 04.7**	**+1.2**
WRA	**Warramunga Arr**	**17.78**	**193**	P	**Pn**	**06 03 02.1**	**+0.2**
	0.2nm,0.3s,baz=14,slow=12,SNR=7.1						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**21.48**	**192**	P	**P**	**06 03 43.0**	**+0.2**
	0.5nm,0.5s,baz=21,slow=11,SNR=6.9						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**69.50**	**322**	P	P	06 10 08.1	+5.8
	0.3nm,0.8s,baz=116,slow=6.6,SNR=2.6						
	0.3nm,0.8s						

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*ASRS **25** 06:00:28.0±1.3, 54°.21N×86°.39E, h0^{km}, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 25 06:00:29.7±2.8**, 54°.18N**×**86°.45E, h0**^{km}**, mbtmp2.8**/2**, ML2.5**/2**, Error ellipse: s-maj=22.4km s-min=13.2km az=57.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.99**	**257**	I	I	06 05 55.0	
	0.1nm,1.2s,baz=75,slow=321,SNR=6.4						
ZALV	**Zalesovo Beam**	**0.99**	**257**	Pg	Pg	06 00 47.8	-0.9
	1.6nm,0.3s,baz=76,slow=17,SNR=14						
ZALV				Lg	Lg	06 01 03.0	
	3.7nm,0.3s,baz=77,slow=30,SNR=21						
ZALV				Rg	Rg	06 01 08.3	
	3.1nm,0.4s,baz=75,slow=34,SNR=6.1						
KURBB	**Kurchatov Arra**	**6.02**	**237**	Pn	Pn	06 02 00.7	+0.8
	0.1nm,0.3s,baz=54,slow=14,SNR=4.4						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**7.86**	**201**	Pn	Pn	06 02 26.2	+1.0
	0.1nm,0.3s,baz=22,slow=11,SNR=5.6						
	0.2nm,0.4s						

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*IDC **25** 06:01:45.9±0.4, 47°.91S×99°.49E, h0^{km}, mb5.0/19, mbtmp5.0/19, MS5.5/47, Error ellipse: s-maj=20.1km s-min=11.9km az=123.0*

*MOS **25** 06:01:47.9±1.5, 47°.91S×99°.53E, h10^{km}, mb5.5/29, MS5.3/4, Error ellipse: s-maj=15.0km s-min=9.8km az=72.4*

*BJI **25** 06:01:47.0, 47°.83S×99°.14E, h10^{km}, mB5.5/55, mb5.2/78, Ms5.7/87, Ms7 5.5/86*

*IPGP **25** 06:01:49.0, 48°.02S×99°.63E, h6^{km}, Mw5.9, Fault plane solution: NP1:ϕ_s305.00000°, δ75.00000°, λ6.00000°. NP2:ϕ_s213.00000°, δ85.00000°, λ164.00000°.*

*NEIC **25** 06:01:51.2, 47°.65S×99°.33E, h22^{km}, Moment Tensor Solution. Duration: 3^s.9 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.22; $M_{\theta\theta}$7.62; $M_{\phi\phi}$-7.40; $M_{r\theta}$-1.13; $M_{\theta\phi}$2.49; $M_{\phi r}$-1.33; Fault plane solution: $M_0$8.10000×10^{17} NP1: ϕ_s305.92000°, δ77.59000°, λ0.41000°. NP2:ϕ_s215.83000°, δ89.60000°, λ167.59000°. Principal axes: T 8.2348, Plg9.0000°, Azm170.0000°; N -0.2663, Plg78.0000°, Azm34.0000°; P -7.9685, Plg8.0000°, Azm262.0000°;*

*NEIC **25** 06:01:51.2, 47°.83S×99°.48E, h10^{km}*

*NEIC **25** 06:01:51.2, 47°.85S×99°.48E, h22^{km}*

*NEIC **25** 06:01:51.0±1.8, 47°.9S±0°.1×99°.5E±0°.1, h10^{km}±1^{km}, mb5.6/88, Ms_20 5.6/707, Mwb5.8/28, Mww5.9/20, Error ellipse: s-maj=17.4km s-min=16.4km az=179.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.90; $M_{\theta\theta}$5.80; $M_{\phi\phi}$-3.90; $M_{r\theta}$0.70; $M_{\theta\phi}$1.66; $M_{\phi r}$0.30; Fault plane solution: $M_0$5.44000×10^{17} NP1:ϕ_s35.65000°, δ89.49000°, λ173.09000°. NP2:ϕ_s125.71000°, δ83.09000°, λ0.51000°. Principal axes: T 6.1483, Plg5.0000°, Azm350.0000°; N -1.9563, Plg83.0000°, Azm211.0000°; P -4.1920, Plg5.0000°, Azm81.0000°;*

*GCMT **25** 06:01:52.0±0.1, 47°.91S×99°.60E, h12^{km}, MW5.8/169, Moment Tensor Solution. s150,c295; s169,c504; Duration: 2^s.0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.12±.04; $M_{\theta\theta}$6.11±.05; $M_{\phi\phi}$-6.23±.05; $M_{r\theta}$0.58±.11; $M_{\theta\phi}$1.96±.04; $M_{\phi r}$0.28±.10; Best double couple: $M_0$6.50700×10^{17} NP1:ϕ_s126.00000°, δ85.00000°, λ3.00000°. NP2:ϕ_s36.00000°, δ87.00000°, λ175.00000°. Principal axes: T 6.4740, Plg6.0000°, Azm351.0000°; N 0.0670, Plg84.0000°, Azm188.0000°; P -6.5390, Plg2.0000°, Azm81.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 25 06:01:52.3±0.6**, 47°.98S**±0°.04×**99°.57E**±0°.05**, h27**^{km}±3^{km}**, n1041, σ1^s.68**/702**, mb5.4**/128**, MS5.6**/414**, 22C-9D, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**16.99**	**45**	T	T	06 22 58.6	
	baz=214,slow=74						
H01W3	**Cape Leeuwin H**	**17.00**	**45**	T	T	06 22 58.6	
	baz=214,slow=74						
H01W1	**Cape Leeuwin H**	**17.00**	**45**	T	T	06 22 60.0	
	baz=214						
RKGY	**Rocky Gully**	**18.64**	**51**	P	**P**	**06 06 05.3**	**-2.4**
	comp=Z,103nm,1.5s						
CASY	**Casey**	**19.23**	**166**		**P**	**06 06 13.4**	**-0.7**
NWAO	**Narrogin (SRO)**	**20.09**	**48**		**P**	**06 06 23.8**	**+0.1**
NWAO				IAmb	IAmb	06 06 29.4	
	comp=Z,755nm,1.9s						
NWAO	**Narrogin (SRO)**	**20.09**	**48**	P	**P**	**06 06 22.7**	**-1.0**
NWAO	**Narrogin (SRO)**	**20.09**	**48**	P	**P**	**06 06 20.1**	**-3.6**
	comp=Z,11nm,0.8s,baz=215,slow=13,SNR=11						
NWAO				S	**S**	**06 10 01.0**	**-7.1**
	comp=Z,9.3nm,0.9s,baz=334,slow=13,SNR=2.1						
NWAO				LR	LR	06 12 16.9	
	comp=Z,15µm,19.1s,baz=214,slow=31						
	comp=Z,11nm,0.8s						
NWAO	**Narrogin (SRO)**	**20.09**	**48**	P	**P**	**06 06 23.3**	**-0.4**
NWAO	**Narrogin (SRO)**	**20.09**	**48**	P	**P**	**06 06 23.8**	**+0.1**
NWAO				pmax	pmax		
	comp=Z,755nm,2.0s						
MUN	**Mundaring**	**20.37**	**44**	P	**P**	**06 06 25.0**	**-1.8**
	comp=Z,183nm,1.3s						
MUN	**Mundaring**	**20.37**	**44**	P	**P**	**06 06 25.2**	**-1.5**
KLBR	**Kellerberrin**	**21.43**	**47**	P	**P**	**06 06 36.0**	**-2.1**
	comp=Z,288nm,1.1s						
KLBR	**Kellerberrin**	**21.43**	**47**	P	**P**	**06 06 37.4**	**-0.8**
BLDU	**Ballidu**	**21.75**	**43**	P	**P**	**06 06 39.3**	**-2.3**
	comp=Z,201nm,1.4s						
BLDU	**Ballidu**	**21.75**	**43**	P	**P**	**06 06 40.9**	**-0.6**
MORW	**Morawa**	**22.77**	**40**		**P**	**06 06 50.7**	**-1.8**
MORW				IAmb	IAmb	06 06 54.3	
	comp=Z,202nm,1.2s						
MORW	**Morawa**	**22.77**	**40**	P	**P**	**06 06 50.5**	**-2.0**
	comp=Z,157nm,1.4s						
MORW	**Morawa**	**22.77**	**40**	P	**P**	**06 06 51.5**	**-1.0**
KMBL	**Kambalda**	**23.75**	**54**	P	**P**	**06 06 59.4**	**-2.8**
	comp=Z,147nm,1.9s						
MEEK	**Meekatharra**	**26.00**	**42**	P	**P**	**06 07 21.4**	**-1.5**
	comp=Z,131nm,1.7s						
MEEK	**Meekatharra**	**26.00**	**42**	P	**P**	**06 07 22.5**	**-0.4**
MAW	**Mawson**	**27.06**	**210**	P	**P**	**06 07 30.1**	**-1.9**
	comp=Z,9.0nm,1.4s						
MAW	**Mawson**	**27.06**	**210**	P	**P**	**06 07 29.4**	**-2.6**
	comp=Z,21nm,1.0s,baz=63,slow=13,SNR=11						
MAW				S	**S**	**06 12 01.6**	**-6.2**
	comp=Z,1.3nm,1.0s,baz=359,slow=17,SNR=1.1						
MAW				LR	LR	06 15 29.6	
	comp=Z,10µm,20.5s,baz=54,slow=30						
	comp=Z,21nm,1.0s						
PSAD3	**Pilbara Seismi**	**30.89**	**39**	P	**P**	**06 08 05.0**	**-1.4**
	comp=Z,77nm,1.5s						
PSA00	**Pilbara Seismi**	**30.98**	**39**		**P**	**06 08 05.8**	**-1.5**
PSA00				IAmb	IAmb	06 08 08.6	
	comp=Z,82nm,1.2s						
PSA00	**Pilbara Seismi**	**30.98**	**39**	P	**P**	**06 08 06.5**	**-0.7**
PSA00				IAmb	IAmb	06 08 08.7	
	comp=Z,51nm,1.2s						
PSA00	**Pilbara Seismi**	**30.98**	**39**	P	**P**	**06 08 05.7**	**-1.5**
	comp=Z,68nm,1.5s						
PSA00	**Pilbara Seismi**	**30.98**	**39**	P	**P**	**06 08 06.4**	**-0.8**
MBWA	**Marble Bar**	**31.30**	**38**		**P**	**06 08 09.4**	**-0.6**
MBWA				IAmb	IAmb	06 08 11.5	
	comp=Z,118nm,1.2s						
MBWA	**Marble Bar**	**31.30**	**38**	P	**P**	**06 08 08.8**	**-1.2**
	comp=Z,96nm,1.6s						
MBWA	**Marble Bar**	**31.30**	**38**	P	**P**	**06 08 09.2**	**-0.8**
CRZF	**Crozet Islands**	**32.05**	**255**	IAMs_20	IAMs_20	06 17 53.5	
	comp=Z,13µm,19.0s						
WHYH	**Whyalla**	**32.16**	**76**	P	**P**	**06 08 17.4**	**-0.1**
WRKA	**Warakurna**	**32.20**	**55**	P	**P**	**06 08 15.8**	**-2.2**
	comp=Z,42nm,1.4s						
HTT	**Hallett**	**32.80**	**78**	P	P	06 08 20.3	-2.9
	comp=Z,17nm,2.4s						
HTT	**Hallett**	**32.80**	**78**	P	**P**	**06 08 23.2**	**0.0**
TAU	**Tasmania Unive**	**33.45**	**99**	P	**P**	**06 08 29.6**	**+0.9**
TAU	**Tasmania Unive**	**33.45**	**99**	IAMs_20	IAMs_20	06 18 30.7	
	comp=Z,12µm,22.0s						
TAU	**Tasmania Unive**	**33.45**	**99**	P	**P**	**06 08 29.7**	**+1.0**
TAU	**Tasmania Unive**	**33.45**	**99**	P	**P**	**06 08 29.6**	**+0.9**
TAU				pmax	pmax		
	comp=Z,214nm,1.6s						
MOO	**Moorlands**	**33.57**	**99**	P	**P**	**06 08 28.0**	**-1.8**
	comp=Z,76nm,1.9s						
CORO	**Coronation Par**	**33.98**	**97**	P	**P**	**06 08 33.5**	**+0.1**
GLAD	**Gladstone**	**34.78**	**97**	P	**P**	**06 08 40.8**	**+0.5**
TOO	**Toolangi**	**34.81**	**90**		**P**	**06 08 41.4**	**+0.8**
TOO	**Toolangi**	**34.81**	**90**	P	**P**	**06 08 38.9**	**-1.7**

```
      comp=Z,19nm,2.3s
TOO   Toolangi          34.81  90   P         P          06 08 41.4 +0.8
TOO                                 pmax      pmax
      comp=Z,82nm,2.0s
STKA  Stephens Creek    35.52  79             P          06 08 44.6 -2.2
STKA  Stephens Creek    35.52  79   P         P          06 08 43.9 -2.9
      comp=Z,312nm,1.4s
STKA  Stephens Creek    35.52  79   P         P          06 08 44.1 -2.7
      comp=Z,39nm,1.0s,baz=210,slow=9.0,SNR=26
STKA                                PcP       PcP        06 11 12.9 -2.7
      comp=Z,2.5nm,0.7s,baz=246,slow=4.4,SNR=2.8
STKA                                S         S          06 14 09.2  -11
      comp=Z,0.5nm,0.3s,baz=295,slow=13,SNR=1.4
STKA                                LR        LR         06 20 26.9
      comp=Z,14µm,21.4s,baz=224,slow=32
      comp=Z,39nm,1.0s
STKA  Stephens Creek    35.52  79   P         P          06 08 46.8  0.0
STKA  Stephens Creek    35.52  79 i P         P          06 08 44.8 -2.0
SYO   Syowa Base        35.71 212⇓iP        P          06 08 49.2 +1.3
SYO   Syowa Base        35.71 212⇑ipP       P          06 08 51.0 +3.1
COCO  West Island       35.75 355   IAMs_20   IAMs_20    06 19 36.5
      comp=Z,13µm,20.0s
AS10  Alice Springs     36.44  61   P         P          06 08 51.6 -3.1
      comp=Z,93nm,1.2s
ASAR  Alice Springs     36.45  61   P         P          06 08 51.8 -3.1
      comp=Z,79nm,1.1s,baz=218,slow=7.4,SNR=87
ASAR                                PP        PnPn       06 10 15.4 -2.3
      comp=Z,15nm,1.1s,baz=232,slow=12,SNR=4.3
ASAR                                PcP       PcP        06 11 15.4 -3.1
      comp=Z,11nm,1.0s,baz=207,slow=2.2,SNR=10.0
      comp=Z,79nm,1.1s
AS01  Alice Springs     36.48  61   P         P          06 08 53.6 -1.5
FITZ  Fitzroy Crossi    36.61  45   P         P          06 08 56.5 +0.4
FITZ  Fitzroy Crossi    36.61  45   P         P          06 08 54.1 -2.0
      comp=Z,26nm,1.4s
FITZ  Fitzroy Crossi    36.61  45   P         P          06 08 53.8 -2.3
      comp=Z,84nm,1.1s,baz=205,slow=10,SNR=22
FITZ                                LR        LR         06 22 59.4
      comp=Z,10µm,18.4s,baz=224,slow=35
      comp=Z,84nm,1.1s
FITZ  Fitzroy Crossi    36.61  45   P         P          06 08 55.6 -0.5
VNDA  Vanda             37.73 162             P          06 09 07.5 +2.4
VNDA  Vanda             37.73 162   P         P          06 09 03.5 -1.6
      comp=Z,9.5nm,0.9s,baz=286,slow=8.3,SNR=16
VNDA                                S         S          06 14 51.5 -1.9
      comp=Z,0.5nm,0.2s,baz=89,slow=9.1,SNR=1.0
VNDA                                LR        LR         06 23 26.6
      comp=Z,15µm,18.2s,baz=289,slow=34
      comp=Z,9.5nm,0.9s
VNDA  Vanda             37.73 162   P         P          06 09 07.5 +2.4
VNDA                                pmax      pmax
      comp=Z,43nm,1.5s
CAN   Canberra          38.40  89             P          06 09 11.7 +0.4
CAN                                 IAMs_20   IAMs_20    06 21 20.7
      comp=Z,10µm,21.0s
CAN   Canberra          38.40  89   P         P          06 09 11.6 +0.3
CAN   Canberra          38.40  89   P         P          06 09 11.7 +0.4
CAN                                 pmax      pmax
      comp=Z,47nm,1.3s
CMSA  Cobar Meteorol    38.45  82   P         P          06 09 09.4 -2.2
      comp=Z,60nm,1.6s
CMSA  Cobar Meteorol    38.45  82   P         P          06 09 11.9 +0.2
YNG   Young             38.59  88   P         P          06 09 11.0 -1.8
      comp=Z,59nm,1.6s
WC4   Warramunga Arr    39.60  57   P         P          06 09 18.6 -2.7
WRA   Warramunga Arr    39.61  57   P         P          06 09 18.9 -2.6
WRA   Warramunga Arr    39.61  57   P         P          06 09 18.6 -2.9
      comp=Z,127nm,1.1s,baz=217,slow=7.1,SNR=69
WRA                                 PP        PP         06 10 50.5 -2.1
      comp=Z,3.0nm,0.9s,baz=218,slow=10,SNR=4.6
WRA                                 S         S          06 15 21.4 -1.5
      comp=Z,0.6nm,0.9s,baz=192,slow=8.8,SNR=1.6
WRA                                 LR        LR         06 23 51.4
      comp=Z,15µm,20.2s,baz=214,slow=33
      comp=Z,127nm,1.1s
WRA   Warramunga Arr    39.61  57   P         P          06 09 18.9 -2.6
WRA                                 pmax      pmax
      comp=Z,19nm,1.6s
WRAB  Tennant Creek     39.63  57   P         P          06 09 19.3 -2.3
WRAB  Tennant Creek     39.63  57 i P         P          06 09 20.9 -0.7
WRAB                                pmax      pmax
      comp=Z,238nm,1.4s
WR8   Warramunga Arr    39.69  57   P         P          06 09 19.8 -2.4
WR8                                 IAmb      IAmb       06 09 23.6
      comp=Z,183nm,1.1s
WB0   Warramunga Arr    39.78  57   P         P          06 09 20.4 -2.5
WB0                                 IAmb      IAmb       06 09 24.2
      comp=Z,189nm,1.1s
KNRA  Kununurra         40.19  47   P         P          06 09 24.5 -1.8
      comp=Z,30nm,1.2s
QLP   Quilpie           40.75  75   P         P          06 09 28.9 -1.9
      comp=Z,294nm,1.7s
QLP   Quilpie           40.75  75   P         P          06 09 29.6 -1.3
PCJI  Pacitan           40.85  18   P         P          06 09 32.0 +0.3
      comp=Z,121nm,1.5s
UGM   Wanagama          41.00  17   P         P          06 09 32.7 -0.3
JAGI  Jajag, Banyuwa    41.27  22   P         P          06 09 35.1 -0.1
JAGI                                IAmb      IAmb       06 09 36.5
      comp=Z,122nm,1.1s
JAGI  Jajag, Banyuwa    41.27  22   P         P          06 09 35.1 -0.1
JAGI  Jajag, Banyuwa    41.27  22   P         P          06 09 35.7 +0.5
      comp=Z,106nm,1.5s
GMJI  Gumukmas          41.28  21   P         P          06 09 35.5 +0.2
      comp=Z,123nm,1.5s
CGJI  Cibinong          41.55   9   P         P          06 09 39.7 +2.3
      comp=Z,40nm,1.0s
LEM   Lembang           41.58  12   LR        LR         06 23 44.6
      comp=Z,11µm,20.0s,baz=200,slow=32
NGJI  Ngawi             41.71  18   P         P          06 09 39.3 +0.5
      comp=Z,102nm,1.1s
DBJI  Dramaga           41.73  11   P         P          06 09 42.7 +3.7
QSPA  South Pole Qui    42.16 180   P         P          06 09 40.7 -1.5
      comp=Z,17nm,0.6s,baz=298,slow=1.2,SNR=55
QSPA                                S         S          06 15 55.9 -4.3
      comp=Z,1.9nm,1.1s,baz=217,slow=18,SNR=1.4
QSPA                                LR        LR         06 26 16.1
      comp=Z,17µm,18.3s,baz=319,slow=35
      comp=Z,17nm,0.6s
QIS   Mount Isa         42.22  64   P         P          06 09 40.1 -2.8
      comp=Z,65nm,1.4s
QIS   Mount Isa         42.22  64   P         P          06 09 43.1 +0.1
BATI  Baumata           42.76  36   P         P          06 09 45.2 -2.2
      comp=Z,16nm,0.3s,baz=88,slow=16,SNR=4.9
BATI                                S         S          06 15 57.8  -12
      comp=Z,17nm,0.4s,baz=310,slow=15,SNR=1.5
      comp=Z,16nm,0.3s
ARMA  Armidale          43.12  85   P         P          06 09 49.3 -1.0
ARMA                                IAmb      IAmb       06 09 53.0
      comp=Z,144nm,1.4s
ARMA                                IAMs_20   IAMs_20    06 24 57.4
      comp=Z,9µm,20.0s
ARMA  Armidale          43.12  85   P         P          06 09 48.6 -1.7
      comp=Z,70nm,1.4s
ARMA  Armidale          43.12  85   P         P          06 09 49.8 -0.5
EDFI  Ende, Flores      43.35  33   P         P          06 09 50.9 -1.3
SOEI  Soe               43.41  37   P         P          06 09 52.8  0.0
SOEI                                IAmb      IAmb       06 10 46.9
      comp=Z,252nm,1.6s
SOEI                                IAMs_20   IAMs_20    06 28 07.4
      comp=Z,7µm,18.0s
SOEI  Soe               43.41  37   P         P          06 09 52.5 -0.3
SOEI  Soe               43.41  37   P         P          06 09 53.5 +0.7
      comp=Z,2µmcomp=Z,84nm,1.4s
MDSI  Maura Dua         43.51   7   P         P          06 09 53.3 -0.1
      comp=Z,2µmcomp=Z,55nm,1.4s
MTN   Manton Dam        43.78  48   P         P          06 09 55.3 -0.4
MTN                                 IAmb      IAmb       06 09 57.3
      comp=Z,125nm,1.2s
MTN   Manton Dam        43.78  48   P         P          06 09 53.0 -2.6
      comp=Z,104nm,1.3s
MTN   Manton Dam        43.78  48   P         P          06 09 55.2 -0.4
DRS   Darwin Rock St    44.02  47   P         P          06 09 57.6 +0.1
KDU   Kakadu            44.59  49   P         P          06 09 59.7 -2.4
      comp=Z,117nm,1.2s
KDU   Kakadu            44.59  49   P         P          06 10 01.5 -0.6
MSZ   Milford Sound     45.91 113   P         P          06 10 14.7 +2.4
EIDS  Eidsvold          46.06  80   P         P          06 10 14.2 +0.5
EIDS                                IAmb      IAmb       06 10 15.5
      comp=Z,85nm,1.3s
EIDS  Eidsvold          46.06  80   P         P          06 10 09.8 -3.9
      comp=Z,56nm,1.6s
EIDS  Eidsvold          46.06  80   P         P          06 10 13.6 -0.1
KAPI  Kappang           46.17  28   P         P          06 10 14.9 +0.3
KAPI                                IAmb      IAmb       06 10 16.5
      comp=Z,117nm,1.8s
KAPI  Kappang           46.17  28   P         P          06 10 11.4 -3.2
      comp=Z,6.6nm,0.3s,baz=194,slow=6.5,SNR=5.9
KAPI                                LR        LR         06 27 36.9
      comp=Z,2µm,19.9s,baz=195,slow=34
      comp=Z,6.6nm,0.3s
KAPI  Kappang           46.17  28   P         P          06 10 14.8 +0.2
KAPI  Kappang           46.17  28   P         P          06 10 14.9 +0.3
KAPI                                pmax      pmax
      comp=Z,117nm,1.8s
H08S2 Diego Garcia H    46.30 321   T         T          06 59 38.6
      baz=154,slow=76,SNR=101
H08S1 Diego Carcia H    46.31 321   T         T          06 59 36.4
      baz=154,slow=76,SNR=136
H08S3 Diego Garcia H    46.32 321   T         T          06 59 38.0
      baz=154,slow=76,SNR=315
WKZ   Wanaka            46.51 113   P         P          06 10 19.0 +1.9
CTAO  Charters Tower    46.68  70   P         P          06 10 19.7 +1.1
CTAO  Charters Tower    46.68  70   IAMs_20   IAMs_20    06 27 40.5
      comp=Z,7µm,22.0s
CTAO  Charters Tower    46.68  70   P         P          06 10 19.0 +0.4
CTAO  Charters Tower    46.68  70   P         P          06 10 19.7 +1.1
CTAO                                pmax      pmax
      comp=Z,146nm,1.3s
JCZ   Jackson Bay       46.75 112   P         P          06 10 19.9 +0.9
BNSI  Bone              46.86  29   P         P          06 10 20.4 +0.4
      comp=Z,2µmcomp=Z,91nm,1.6s
MTSU  Mount Surprise    46.93  66   P         P          06 10 18.8 -1.8
      comp=Z,17nm,1.6s
MTSU  Mount Surprise    46.93  66   P         P          06 10 20.5 -0.1
FOMA  Nahampoana Res    47.04 280   IAMs_20   IAMs_20    06 25 06.8
      comp=Z,6µm,20.0s
SPSI  Sidrap Palu       47.16  28   P         P          06 10 23.4 +1.1
      comp=Z,77nm,1.1s
TROLL Troll, Antarti    47.28 205  ⇑P         P          06 10 21.1 -1.8
      comp=Z,752nm,0.8s
TROLL                              ⇓PP        PP         06 12 14.3 +0.6
TROLL                              ⇓S         S          06 17 13.9 -0.4
PPI   Padang Panjang    47.34   1   P         P          06 10 25.0 +1.3
      comp=Z,2µmcomp=Z,37nm,0.8s
LBZ   Lake Benmore      47.45 113   P         P          06 10 25.6 +1.1
TTSI  Tana Toraja       48.04  28   P         P          06 10 30.2 +1.0
      comp=Z,44nm,1.2s
BKNI  Bangkinang        48.13   2   IAMs_20   IAMs_20    06 26 31.9
      comp=Z,7µm,21.0s
BKNI  Bangkinang        48.13   2   P         P          06 10 30.6 +0.8
RPZ   Rata Peaks        48.34 113   LR        LR         06 26 38.2
      comp=Z,4µm,21.0s,baz=239,slow=31
WVZ   Waitaha Valley    48.48 112   P         P          06 10 32.1 -0.2
SNAA  Sanae             48.94 204  ⇑P         P          06 10 33.9 -1.6
      comp=Z,424nm,0.8s
SNAA                               ⇓PP        PP         06 12 29.1 +0.4
SNAA                               ⇓S         S          06 17 39.5 +2.1
SNAA  Sanae             48.94 204   P         P          06 10 34.5 -1.1
SNAA  Sanae             48.94 204   P         P          06 10 34.0 -1.5
      comp=Z,24nm,1.0s,baz=126,slow=7.6,SNR=28
SNAA                                S         S          06 17 34.9 -2.5
      comp=Z,1.7nm,1.0s,baz=291,slow=4.9,SNR=2.9
SNAA                                LR        LR         06 29 38.9
      comp=Z,15µm,18.5s,baz=108,slow=34
      comp=Z,24nm,1.0s
SNAA  Sanae             48.94 204   P         P          06 10 34.5 -1.1
SNAA                                pmax      pmax
      comp=Z,121nm,1.3s
STKI  Sintang           48.96  16   P         P          06 10 38.5 +2.3
INZ   Inchbonnie        49.10 112   IAmb      IAmb       06 10 44.9
      comp=Z,117nm,1.5s
VOI   Vohitsoka         49.29 283   P         P          06 10 39.0  0.0
VOI                                 IAmb      IAmb       06 10 45.0
      comp=Z,103nm,1.7s
VOI                                 IAMs_20   IAMs_20    06 26 04.4
      comp=Z,7µm,19.0s
COEN  Coen              49.47  62   IAmb      IAmb       06 10 42.3
      comp=Z,91nm,1.4s
COEN  Coen              49.47  62   P         P          06 10 38.7 -1.5
      comp=Z,46nm,1.6s
COEN  Coen              49.47  62   P         P          06 10 40.6 +0.4
LTZ   Lake Taylor       49.59 113   P         P          06 10 43.7 +2.8
MYKOM Kota Tinggi       49.70   6   IAmb      IAmb       06 10 44.2
      comp=Z,106nm,1.6s
MYKOM Kota Tinggi       49.70   6   P         P          06 10 41.7 -0.2
KSM   Kuching           50.13  14   IAmb      IAmb       06 10 47.8
      comp=Z,75nm,1.4s
KSM                                 IAMs_20   IAMs_20    06 28 34.2
      comp=Z,6µm,20.0s
KSM   Kuching           50.13  14   P         P          06 10 44.9 -0.3
RPSI  Rantau Prapat     50.47 359   P         P          06 10 47.8 +0.1
RPSI                                IAMs_20   IAMs_20    06 29 51.9
      comp=Z,5µm,19.0s
THZ   Tophouse          50.53 112   P         P          06 10 47.6 -0.5
PSI   Prapat            50.57 359   LR        LR         06 30 20.8
      comp=Z,5µm,18.1s,baz=166,slow=34
PSI   Prapat            50.57 359   P         P          06 10 48.4 -0.2
PSI   Prapat            50.57 359   P         P          06 10 47.8 -0.8
PSI                                 pmax      pmax
      comp=Z,74nm,1.6s
VNA2  Neumayer--Watz    50.58 204  ⇑P         P          06 10 46.3 -1.7
      comp=Z,16nm,0.8s,baz=118,slow=7.6
VNA2                               ⇓S         S          06 18 02.3 +2.0
      baz=148,slow=0.1
QRZ   Quartz Range      50.82 111   IAMs_20   IAMs_20    06 27 24.3
      comp=Z,5µm,21.0s
QRZ   Quartz Range      50.82 111   P         P          06 10 49.8 -0.4
VNA1  Neumayer--Stat    50.97 204  ⇑P         P          06 10 49.4 -1.5
      comp=Z,40nm,1.1s
VNA3  Neumayer Olymp    51.01 203  ⇑P         P          06 10 49.4 -1.9
      comp=Z,11nm,1.0s
VNA3                               ⇑PP        PP         06 12 45.5 -2.0
VNA3                               ⇓S         S          06 18 07.2 +0.9
ABPO  Ambohimpanom      51.08 286   IAMs_20   IAMs_20    06 26 47.6
      comp=Z,6µm,20.0s
SANI  Sanana            51.12  35   P         P          06 10 52.4 -0.3
SANI  Sanana            51.12  35   P         P          06 10 52.3 -0.4
      comp=Z,1µmcomp=Z,71nm,1.2s
MPSI  Mapaga            51.27  26   P         P          06 10 53.3 -0.4
      comp=Z,2µmcomp=Z,60nm,2.0s
OPO   Ambohidratompo    51.43 286   LR        LR         06 27 15.7
      comp=Z,2µm,20.5s,baz=14,slow=30
MRSI  Marisa            52.03  29   P         P          06 11 00.0 +0.5
      comp=Z,1µmcomp=Z,36nm,0.9s
IPM   Ipoh              52.25   2   IAMs_20   IAMs_20    06 28 39.2
      comp=Z,5µm,21.0s
TOLI2 Tolitoli          52.27  27   P         P          06 10 59.8 -1.4
OGWZ  Otaki Gorge       52.48 112   P         P          06 11 01.2 -1.3
MRZ   Mangatainoka R    52.82 112   P         P          06 11 02.1 -3.0
FAKI  Fak Fak           52.97  42   P         P          06 11 06.7 +0.3
FAKI  Fak Fak           52.97  42   P         P          06 11 08.0 +1.6
      comp=Z,127nm,1.4s
KULM  Kulim             53.05   1   IAMs_20   IAMs_20    06 28 36.4
      comp=Z,5µm,22.0s
TSZ   Takapari Road     53.41 112   P         P          06 11 09.3 -0.2
PKVZ  Pokaka            53.47 111   P         P          06 11 12.1 +2.1
WNVZ  Wahianoa          53.61 111   P         P          06 11 09.2 -1.9
FWVZ  Far West T-bar    53.62 111   P         P          06 11 10.3 -1.1
PNHZ  Pukenui           53.64 112   P         P          06 11 11.2 -0.1
NGZ   Ngauruhoe         53.70 111   P         P          06 11 11.3 -0.5
NNVZ  North Ngauruho    53.73 111   P         P          06 11 10.2 -1.9
OTVZ  Oturere           53.74 111   P         P          06 11 10.8 -1.4
TMVZ  Te Maari          53.80 111   P         P          06 11 10.2 -2.3
KWHZ  Kaweka Forest     54.07 111   P         P          06 11 14.1 -0.3
KAHZ  Kahuranaki        54.13 112   P         P          06 11 14.9 +0.1
BKZ   Black Stump Fm    54.26 111   IAMs_20   IAMs_20    06 29 37.4
      comp=Z,6µm,20.0s
BKZ   Black Stump Fm    54.26 111   P         P          06 11 16.4 +0.6
BKZ   Black Stump Fm    54.26 111   P         P          06 11 13.2 -2.6
TOZ   Tahuroa Road      54.49 109   P         P          06 11 19.1 +1.7
TOZ                                 IAmb      IAmb       06 11 33.4
      comp=Z,57nm,1.4s
TOZ                                 IAMs_20   IAMs_20    06 29 50.5
      comp=Z,4µm,20.0s
OUZ   Omahuta           54.79 106   IAMs_20   IAMs_20    06 29 55.4
      comp=Z,4µm,18.0s
RTZ   Ruatahuna         54.90 111   P         P          06 11 21.9 +1.4
CMBY  CAMPBELL BAY      54.98 353  eP         P          06 11 19.2 -1.8
RKPI  Ransiki, Papua    55.09  44   P         P          06 11 23.0 +1.0
URZ   Urewera           55.19 111   LR        LR         06 30 53.2
      comp=Z,3µm,19.1s,baz=234,slow=32
PMG   Port Moresby      55.43  62   P         P          06 11 25.6 +1.2
PMG   Port Moresby      55.43  62   LR        LR         06 32 22.8
      comp=Z,5µm,21.8s,baz=217,slow=33
PMG   Port Moresby      55.43  62   P         P          06 11 25.6 +1.2
PMG                                 pmax      pmax
      comp=Z,132nm,1.4s
MYLDM Lahad Datu        55.49  23   P         P          06 11 25.4 +0.7
MYLDM Lahad Datu        55.49  23   P         P          06 11 24.5 -0.2
POGA  Pongola           55.69 266   P         P          06 11 26.3 +0.1
POGA                                IAmb      IAmb       06 11 29.0
      comp=Z,99nm,1.7s
POGA                                IAMs_20   IAMs_20    06 28 56.8
      comp=Z,6µm,22.0s
KKM   Kota Kinabalu     55.75  20   P         P          06 11 26.1 -0.7
SRIT  Nakonsritamara    56.33   0   P         P          06 11 29.6 -1.1
SRIT                                IAmb      IAmb       06 11 49.0
      comp=Z,96nm,1.4s
SRIT  Nakonsritamara    56.33   0   P         P          06 11 30.5 -0.2
MXZ   Matakaoa Point    56.37 111   IAMs_20   IAMs_20    06 31 49.1
      comp=Z,5µm,19.0s
GENI  Genyem            57.12  51   P         P          06 11 36.7 +0.3
GENI  Genyem            57.12  51   P         P          06 11 41.2 +4.8
JAY   Jayapura          57.46  51   P         P          06 11 37.6 -1.3
      comp=Z,64nm,1.1s,baz=234,slow=4.5,SNR=12
JAY                                 LR        LR         06 35 25.2
      comp=Z,7µm,20.6s,baz=204,slow=35
      comp=Z,64nm,1.1s
JAY   Jayapura          57.46  51   P         P          06 11 39.3 +0.4
      comp=Z,1µmcomp=Z,66nm,1.3s
PALK  Pallekele         57.48 338   IAMs_20   IAMs_20    06 30 52.8
      comp=Z,4µm,19.0s
PALK  Pallekele         57.48 338   LR        LR         06 31 13.9
      comp=Z,4µm,19.3s,baz=164,slow=31
ONTNC Ouen Toro         58.41  89   P         P          06 11 44.8 -0.7
ONTNC Ouen Toro         58.41  89   P         P          06 11 45.0 -0.5
DZM   Mont Dzumac       58.57  89   IAMs_20   IAMs_20    06 31 34.7
      comp=Z,4µm,21.0s
DZM   Mont Dzumac       58.57  89  eP         P          06 11 41.2 -5.5
      comp=Z,288nm,24.4s
DZM   Mont Dzumac       58.57  89  ePP        PP         06 13 50.4 -5.8
      comp=Z,178nm,23.6s
DZM                                eS         S          06 19 46.9 -2.1
      comp=Z,1µm,26.0s
DZM                                eSS        SS         06 23 45.6 +4.0
      comp=Z,1µm,25.1s
DZM                                eLQ        LQ         06 26 26.5
      comp=Z,2µm,28.9s
DZM                                eLR        LR         06 29 00.5
      comp=Z,12µm,27.9s
DZM   Mont Dzumac       58.57  89   LR        LR         06 31 57.5
      comp=Z,4µm,21.0s,baz=227,slow=31
YATNC Mamie plateau,    58.88  89   P         P          06 11 49.8 +1.1
BOSA  Boshof            59.16 260   P         P          06 11 49.8 -1.0
BOSA                                IAmb      IAmb       06 11 56.6
      comp=Z,87nm,1.6s
BOSA  Boshof            59.16 260   P         P          06 11 48.0 -2.9
      comp=Z,12nm,1.0s,baz=132,slow=10,SNR=7.8
BOSA                                LR        LR         06 32 29.6
      comp=Z,5µm,18.5s,baz=127,slow=31
      comp=Z,12nm,1.0s
BOSA  Boshof            59.16 260   P         P          06 11 49.8 -1.0
BOSA                                pmax      pmax
      comp=Z,87nm,1.6s
HMDM  Hanimaadhoo       59.27 329   IAMs_20   IAMs_20    06 32 13.4
      comp=Z,5µm,20.0s
DAV   Davao City (W)    59.42  30   LR        LR         06 34 16.8
      comp=Z,1µm,21.3s,baz=204,slow=33
TRD   Trivandrum        59.69 334  eP         P          06 11 51.0 -3.3
DLV    Lat              60.18  10   IAMs_20   IAMs_20    06 34 53.5
      comp=Z,5µm,20.0s
DGPR  DIGLIPUR          61.17 353  eP         P          06 12 00.6 -3.7
LBTB  Lobatse           61.33 264   P         P          06 12 05.3 -0.3
LBTB                                IAmb      IAmb       06 12 15.4
      comp=Z,45nm,1.4s
LBTB  Lobatse           61.33 264   LR        LR         06 34 28.7
      comp=Z,3µm,18.0s,baz=142,slow=32
LBTB  Lobatse           61.33 264   P         P          06 12 05.4 -0.3
LBTB                                pmax      pmax
      comp=Z,45nm,1.4s
MANU  Manus Island      61.49  57   P         P          06 12 07.3 +0.7
MANU                                IAMs_20   IAMs_20    06 38 17.9
      comp=Z,4µm,18.0s
LPHEP Lephephe          62.27 265   P         P          06 12 12.3 +0.3
LPHEP Lephephe          62.27 265 i P         P          06 12 12.5 +0.5
MATP  Matopo            62.52 269   LR        LR         06 34 03.0
      comp=Z,4µm,20.0s,baz=134,slow=31
SKOMA Sekoma            62.78 263 i P         P          06 12 14.0 -1.4
BROLN Tlhalogang        62.84 268 i P         P          06 12 17.2 +1.3
KDWAN Kaudwane          63.06 264   IAmb      IAmb       06 12 23.4
      comp=Z,61nm,1.1s
KDWAN Kaudwane          63.06 264 i P         P          06 12 16.1 -1.2
MDRS  Chennai           63.16 339  eP         P          06 12 14.0 -3.7
HNR   Honiara           63.37  74   LR        LR         06 37 14.3
      comp=Z,7µm,20.2s,baz=220,slow=34
VLAKA Lakatoro          63.41  85   P         P          06 12 20.2 +0.7
SAVO  Savo Central      63.49  73   P         P          06 12 20.3 +0.2
SANVU Saraoutou         63.73  84   P         P          06 12 22.3 +0.7
SANVU                               IAMs_20   IAMs_20    06 35 07.5
      comp=Z,3µm,21.0s
SANVU Saraoutou         63.73  84   P         P          06 12 22.4 +0.8
TATA  Tatamba Isabel    64.06  73   P         P          06 12 24.3 +0.5
RAO   Raoul Island      64.11 106   LR        LR         06 33 59.2
      comp=Z,1µm,20.7s,baz=206,slow=30
ALEG  Aligegeo Malai    64.36  74   P         P          06 12 25.7 -0.1
TGY   Tagaytay City     64.67  23   LR        LR         06 39 56.0
      comp=Z,790nm,19.9s,baz=186,slow=35
KGCAE Kacgae            65.06 263   IAmb      IAmb       06 12 43.0
      comp=Z,85nm,1.5s
PHDHD Phuduhudu         65.34 267   IAmb      IAmb       06 12 38.0
      comp=Z,40nm,0.8s
CMAR  Chiang Mai Arr    66.13 359   P         P          06 12 34.6 -2.5
CMAR  Chiang Mai Arr    66.13 359   P         P          06 12 34.2 -2.8
      comp=Z,18nm,1.0s,baz=197,slow=5.3,SNR=44
CMAR                                S         S          06 21 22.4 -1.3
      comp=Z,1.2nm,0.3s,baz=206,slow=22,SNR=1.5
CMAR                                LR        LR         06 38 26.4
      comp=Z,6µm,19.4s,baz=185,slow=33
      comp=Z,18nm,1.0s
CMAR  Chiang Mai Arr    66.13 359ceP        P          06 12 35.0 -2.0
CMAR                                pmax      pmax
      comp=Z,23nm,1.0s
LSZ   Lusaka            66.36 273   P         P          06 12 37.2 -1.7
LSZ                                 IAmb      IAmb       06 12 45.3
      comp=Z,59nm,1.3s
LSZ   Lusaka            66.36 273   IAMs_20   IAMs_20    06 36 04.5
      comp=Z,5µm,20.0s
LSZ   Lusaka            66.36 273   LR        LR         06 36 15.8
      comp=Z,5µm,20.5s,baz=139,slow=31
LSZ   Lusaka            66.36 273   P         P          06 12 37.2 -1.7
LSZ                                 pmax      pmax
      comp=Z,59nm,1.3s
CHTO  Chiang Mai        66.48 359   P         P          06 12 37.4 -1.9
CHTO                                IAmb      IAmb       06 12 50.5
      comp=Z,64nm,1.7s
CHTO  Chiang Mai        66.48 359   P         P          06 12 39.0 -0.3
CHTO  Chiang Mai        66.48 359   P         P          06 12 37.4 -1.9
CHTO                                pmax      pmax
      comp=Z,64nm,1.7s
KSANE Kasane            66.60 269   IAmb      IAmb       06 12 46.5
      comp=Z,51nm,1.1s
KSANE Kasane            66.60 269 i P         P          06 12 41.8 +1.4
GRTLG Ghanzi            66.76 264   IAmb      IAmb       06 12 47.5
      comp=Z,32nm,1.1s
GRTLG Ghanzi            66.76 264 i P         P          06 12 41.1 -0.3
PMSA  Palmer Station    66.86 188   LR        LR         06 41 54.6
      comp=Z,10µm,20.2s,baz=165,slow=36
QIZ   Qiongzhong        67.33  11   IAMs_20   IAMs_20    06 39 25.1
      comp=Z,5µm,20.0s
QIZ   Qiongzhong        67.33  11   P         P          06 12 46.3 +1.6
QIZ                                 PP        PP         06 15 13.8 +0.2
QIZ                                 S         S          06 21 43.3 +5.0
QIZ                                 ScS       SKSac      06 22 39.4 -0.8
QIZ                                 SS        SS         06 26 01.3 +2.4
QIZ                                 pmax      pmax
      comp=Z,27nm,1.6s
QIZ                                 pmax      pmax
      comp=Z,410nm,10.8s
QIZ                                 LR        LR
      comp=Z,1µm,19.6s
QIZ                                 LR        LR
      comp=Z,4µm,21.4s
HYB   Hyderabad         67.76 338  eP         P          06 12 48.4 +0.9
HYB                                ePcP       PcP        06 13 15.2 +1.1
HYB                                ePP        PP         06 15 17.6 +0.2
HYB                                eS         S          06 21 45.9 +2.4
QNGWA Qangwa            68.06 265   IAmb      IAmb       06 13 03.5
      comp=Z,98nm,1.9s
QNGWA Qangwa            68.06 265 i P         P          06 12 47.8 -1.8
WIN   Windhoek          68.66 260   IAmb      IAmb       06 13 00.5
      comp=Z,43nm,1.4s
SLVN  Son La            69.10   4   P         P          06 12 55.0 -0.8
SLVN                                IAMs_20   IAMs_20    06 39 28.5
      comp=Z,4µm,20.0s
SLVN  Son La            69.10   4   P         P          06 12 55.6 -0.2
MSVF  Nonsavu           69.38  94   P         P          06 12 58.9 +1.1
MSVF  Nonsavu           69.38  94   IAMs_20   IAMs_20    06 41 34.1
      comp=Z,3µm,19.0s
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MSVF	**Nonsavu**	**69.38**	**94**	LR	LR	06 37 22.0	
	comp=Z,2µm,21.0s,baz=209,slow=31						
MSVF	**Nonsavu**	**69.38**	**94**	P	**P**	**06 12 58.3**	**+0.5**
MSVF	**Nonsavu**	**69.38**	**94**	P	**P**	**06 12 58.9**	**+1.1**
MSVF				pmax	pmax		
	comp=Z,207nm,1.9s						
BRDH	**Bariadhala**	**70.69**	**352**	LR	LR	06 39 58.7	
	comp=Z,6µm,19.9s,baz=170,slow=32						
TSUM	**Tsumeb**	**70.69**	**263**	P	**P**	**06 13 05.8**	**-0.1**
TSUM	**Tsumeb**	**70.69**	**263**	LR	LR	06 39 13.0	
	comp=Z,7µm,19.6s,baz=148,slow=32						
KMBO	**Kilima Mbogo**	**70.94**	**290**	P	**P**	**06 13 06.6**	**-1.0**
KMBO	**Kilima Mbogo**	**70.94**	**290**	P	**P**	**06 13 06.6**	**-1.0**
KMBO				pmax	pmax		
	comp=Z,53nm,1.7s						
NGP	**Nagpur**	**71.23**	**340**	*e*P	P	06 13 06.0	-2.8
BLSP	**Bilaspur**	**71.52**	**343**	*e*P	P	06 13 07.0	-3.5
AZL	**Aizawl**	**71.65**	**353**	*e*P	P	06 13 08.6	-2.8
IMP	**Imphal**	**72.65**	**355**	*e*P	P	06 13 13.7	-3.6
TNCH	**TengChong**	**72.67**	**359**	⇑P	**P**	**06 13 16.3**	**-1.3**
TNCH				pP	pP	06 13 22.4	-2.7
TNCH				sP	sP	06 13 26.1	-1.7
TNCH				S	**S**	**06 22 35.3**	**-5.7**
TNCH				SS	**SS**	**06 27 19.0**	**-2.5**
TNCH				pmax	pmax		
	comp=Z,130nm,1.2s						
TNCH				pmax	pmax		
	comp=Z,490nm,3.1s						
TNCH				LR	LR		
	comp=Z,2µm,22.8s						
TNCH				LR	LR		
	comp=Z,1µm,23.3s						
TNCH				LR	LR		
	comp=Z,4µm,21.0s						
KMI	**Kunming**	**72.82**	**3**	P	**P**	**06 13 17.6**	**-0.9**
KMI				pP	pP	06 13 24.0	-2.0
KMI				S	**S**	**06 22 44.6**	**+1.8**
KMI				pmax	pmax		
	comp=Z,57nm,1.4s						
KMI				pmax	pmax		
	comp=Z,400nm,3.9s						
KMI				LR	LR		
	comp=Z,2µm,20.7s						
KMI				LR	LR		
	comp=Z,2µm,18.7s						
KMI				LR	LR		
	comp=Z,4µm,24.4s						
NRDN	**NARMADA NAGAR**	**73.19**	**338**	*e*P	P	06 13 16.9	-3.5
GUMO	**Guam**	**73.34**	**46**	LR	LR	06 45 17.4	
	comp=Z,593nm,19.1s,baz=212,slow=36						
KOHI	**KOHIMA**	**73.52**	**355**	*e*P	P	06 13 19.4	-3.1
GULI	**GuiLin**	**73.57**	**10**	P	**P**	**06 13 24.1**	**+1.4**
GULI				S	**S**	**06 22 53.9**	**+3.0**
GULI				pmax	pmax		
	comp=Z,20nm,1.4s						
GULI				LR	LR		
	comp=Z,3µm,20.6s						
GULI				LR	LR		
	comp=Z,1µm,20.0s						
GULI				LR	LR		
	comp=Z,4µm,21.2s						
BHPL	**Bhopal**	**73.63**	**339**	*e*P	P	06 13 19.6	-3.5
SSLB	**Suanglung**	**73.97**	**20**	IAmb	IAmb	06 13 27.3	
	comp=Z,98nm,1.4s						
SSLB	**Suanglung**	**73.97**	**20**	P	**P**	**06 13 25.4**	**+0.3**
PZH	**PanZhiHua**	**74.16**	**2**	P	**P**	**06 13 25.1**	**-1.1**
PZH				S	**S**	**06 22 58.3**	**+0.6**
PZH				pmax	pmax		
	comp=Z,20nm,1.6s						
PZH				pmax	pmax		
	comp=Z,260nm,4.5s						
PZH				LR	LR		
	comp=Z,2µm,21.4s						
PZH				LR	LR		
	comp=Z,2µm,21.8s						
PZH				LR	LR		
	comp=Z,3µm,23.5s						
GUWA	**GUWAHATI**	**74.17**	**353**	*e*P	P	06 13 23.0	-3.1
GYA	**Guiyang**	**74.37**	**7**	⇓P	**P**	**06 13 27.3**	**-0.1**
GYA				sP	pP	06 13 36.9	+2.1
GYA				S	**S**	**06 23 03.3**	**+3.3**
GYA				SKS	**SKSac**	**06 23 31.4**	**-1.9**
GYA				SS	**SS**	**06 27 49.4**	**+2.2**
GYA				pmax	pmax		
	comp=Z,24nm,0.6s						
GYA				LR	LR		
	comp=Z,3µm,19.0s						
GYA				LR	LR		
	comp=Z,2µm,17.9s						
GYA				LR	LR		
	comp=Z,3µm,20.2s						
TEZP	**TEZPUR**	**74.50**	**354**	*e*P	**P**	**06 13 26.5**	**-1.5**
QZH	**Quanzhou**	**74.57**	**18**	*e*P	**P**	**06 13 27.9**	**-0.6**
QZH				S	**S**	**06 23 06.4**	**+4.3**
QZH				LR	LR		
	comp=Z,1µm,17.2s						
QZH				LR	LR		
	comp=Z,740nm,18.2s						
QZH				LR	LR		
	comp=Z,1µm,16.8s						
ALBI	**Allahabad**	**74.68**	**343**	*e*P	**P**	**06 13 26.6**	**-2.5**
GUNA	**GUNA**	**75.00**	**339**	*e*P	P	06 13 27.9	-3.2
PATS	**Pohnpei**	**75.01**	**61**	IAMs_20	IAMs_20	06 44 00.4	
	comp=Z,3µm,20.0s						
MBAR	**Mbarara**	**75.50**	**286**	IAMs_20	IAMs_20	06 41 26.9	
	comp=Z,3µm,21.0s						
MBAR	**Mbarara**	**75.50**	**286**	*ce*P	**P**	**06 13 36.7**	**+2.2**
MBAR				pmax	pmax		
	comp=Z,23nm,2.5s						
JHNI	**Jhansi**	**75.51**	**340**	*e*P	P	06 13 30.8	-3.2
TAWA	**Tawang**	**75.54**	**353**	*e*P	**P**	**06 13 34.1**	**-0.4**
GTK	**Tadong**	**75.59**	**350**	*e*P	P	06 13 31.5	-3.0
LODK	**Lodwar**	**75.65**	**292**	P	**P**	**06 13 36.1**	**+1.0**
CNSH	**ChangSha**	**76.75**	**12**	P	**P**	**06 13 41.3**	**+0.4**
CNSH				S	**S**	**06 23 27.1**	**+1.0**
CNSH				pmax	pmax		
	comp=Z,34nm,1.6s						
CNSH				LR	LR		
	comp=Z,1µm,25.4s						
CNSH				LR	LR		
	comp=Z,950nm,20.6s						
CNSH				LR	LR		
	comp=Z,2µm,27.5s						
USHA	**Ushuaia**	**77.06**	**187**	LR	LR	06 46 59.4	
	comp=Z,7µm,20.0s,baz=164,slow=35						
AJM	**Ajmer**	**77.43**	**337**	*e*P	P	06 13 41.7	-3.1
ATD	**Arta Tunnel**	**77.63**	**303**	LR	LR	06 43 00.6	
	comp=Z,72nm,18.5s,baz=140,slow=32						
LSA	**Lhasa**	**77.69**	**353**	IAMs_20	IAMs_20	06 47 29.0	
	comp=Z,3µm,18.0s						
LSA	**Lhasa**	**77.69**	**353**	P	**P**	**06 13 45.8**	**-0.9**
LSA				S	**S**	**06 23 36.1**	**-1.1**
LSA				pmax	pmax		
	comp=Z,17nm,1.3s						
LSA				LR	LR		
	comp=Z,2µm,18.0s						
LSA				LR	LR		
	comp=Z,3µm,17.6s						
FURI	**Furi**	**77.93**	**298**	IAMs_20	IAMs_20	06 40 57.9	
	comp=Z,3µm,22.0s						
ENH	**Enshi**	**78.40**	**9**	IAmb	IAmb	06 13 52.2	
	comp=Z,90nm,1.3s						
ENH	**Enshi**	**78.40**	**9**	P	**P**	**06 13 50.5**	**+0.4**
SONA	**Sohna**	**78.52**	**340**	*e*P	P	06 13 47.3	-3.5
KUDL	**Kundal**	**78.56**	**339**	*e*P	P	06 13 48.0	-3.0
CD2	**Chengdu**	**78.62**	**4**	P	**P**	**06 13 49.4**	**-1.9**
CD2				sP	pP	06 13 55.8	-3.1
CD2				S	**S**	**06 23 47.6**	**+1.4**
CD2				pmax	pmax		
	comp=Z,390nm,4.8s						
CD2				LR	LR		
	comp=Z,5µm,21.6s						
CD2				LR	LR		
	comp=Z,3µm,18.6s						
CD2				LR	LR		
	comp=Z,5µm,21.6s						
JOW	**Kunigami**	**78.81**	**26**	LR	LR	06 48 37.9	
	comp=Z,474nm,19.3s,baz=318,slow=36						
NDI	**New Delhi**	**78.91**	**340**	*e*P	P	06 13 49.2	-3.7
PTH	**Pithoragarh**	**79.11**	**343**	*e*P	P	06 13 50.7	-3.5
WHN	**Wuhan**	**79.28**	**13**	⇑P	**P**	**06 13 56.1**	**+1.2**
WHN				S	**S**	**06 23 54.8**	**+1.6**
WHN				SS	**SS**	**06 29 04.8**	**+3.7**
WHN				LR	LR		
	comp=Z,3µm,16.4s						
WHN				LR	LR		
	comp=Z,3µm,18.4s						
WHN				LR	LR		
	comp=Z,6µm,22.1s						
WSAR	**Wadi Sarin**	**79.85**	**322**	LR	LR	06 42 30.1	
	comp=Z,17nm,19.4s,baz=150,slow=31						
JOSI	**Joshimath**	**80.22**	**343**	*e*P	P	06 13 57.2	-3.1
SSE	**Sheshan**	**81.07**	**19**	P	**P**	**06 14 05.8**	**+1.3**
SSE				S	**S**	**06 24 14.8**	**+2.8**
SSE				SS	**SS**	**06 29 33.3**	**+5.4**
SSE				pmax	pmax		
	comp=Z,22nm,0.7s						
SSE				pmax	pmax		
	comp=Z,140nm,6.3s						
SSE				LR	LR		
	comp=Z,410nm,18.9s						
SMLA	**Simla**	**81.28**	**341**	*e*P	P	06 14 02.3	-3.3
RAR	**Rarotonga**	**81.34**	**112**	LR	LR	06 43 04.9	
	comp=Z,966nm,21.3s,baz=225,slow=30						
KLP	**Kalpa**	**81.43**	**342**	*e*P	P	06 14 03.4	-3.4
NJ2	**Nanjing**	**81.52**	**16**	*e*P	**P**	**06 14 07.8**	**+0.9**
NJ2				S	**S**	**06 24 14.8**	**-1.8**
NJ2				pmax	pmax		
	comp=Z,18nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,350nm,3.9s						
NJ2				LR	LR		
	comp=Z,940nm,21.9s						
NJ2				LR	LR		
	comp=Z,1µm,18.5s						
NJ2				LR	LR		
	comp=Z,1µm,20.0s						
BHK	**Bhakra**	**81.72**	**340**	*e*P	P	06 14 04.8	-3.2
XAN	**Xi'an**	**82.08**	**8**	⇓P	**P**	**06 14 10.0**	**+0.2**
XAN				pP	pP	06 14 19.6	+2.3
XAN				S	**S**	**06 24 23.0**	**+0.6**
XAN				pmax	pmax		
	comp=Z,43nm,0.8s						
XAN				pmax	pmax		
	comp=Z,430nm,7.5s						
XAN				LR	LR		
	comp=Z,5µm,19.2s						
XAN				LR	LR		
	comp=Z,3µm,19.0s						
XAN				LR	LR		
	comp=Z,8µm,17.9s						
HNLY	**HANLEY**	**82.49**	**343**	*e*P	P	06 14 09.3	-3.4
DHRM	**DHARAMSHALA**	**82.55**	**340**	*e*P	P	06 14 09.3	-3.3
LYN	**LuoYang**	**82.97**	**11**	⇑P	**P**	**06 14 15.5**	**+1.1**
LYN				sP	PcP	06 14 22.3	+3.3
LYN				PP	**PP**	**06 17 28.6**	**+2.8**
LYN				S	**S**	**06 24 33.6**	**+2.2**
LYN				SS	**SS**	**06 30 00.3**	**+4.3**
LYN				pmax	pmax		
	comp=Z,27nm,1.1s						
LYN				pmax	pmax		
	comp=Z,340nm,5.7s						
LYN				LR	LR		
	comp=Z,2µm,19.0s						
LYN				LR	LR		
	comp=Z,2µm,17.1s						
LYN				LR	LR		
	comp=Z,3µm,21.1s						
LZH	**Lanzhou**	**83.78**	**3**	*e*P	P	06 14 15.4	-3.4
LZH				pP	PcP	06 14 20.3	-2.5
LZH				S	**S**	**06 24 41.3**	**+1.4**
LZH				SS	**SS**	**06 30 03.3**	**-5.1**
LZH				pmax	pmax		
	comp=Z,410nm,4.1s						
LZH				LR	LR		
	comp=Z,3µm,16.5s						
LZH				LR	LR		
	comp=Z,3µm,16.8s						
LZH				LR	LR		
	comp=Z,4µm,19.7s						
GOMU	**GeErMu**	**83.91**	**356**	P	**P**	**06 14 19.9**	**+0.2**
GOMU				pP	PcP	06 14 26.0	+2.4
GOMU				sP	pP	06 14 29.1	+1.8
GOMU				S	**SKSac**	**06 24 39.1**	**-1.7**
GOMU				SS	**SS**	**06 30 03.5**	**-7.2**
GOMU				pmax	pmax		
	comp=Z,10.0nm,1.4s						
GOMU				LR	LR		
	comp=Z,990nm,18.0s						
GOMU				LR	LR		
	comp=Z,590nm,16.5s						
GOMU				LR	LR		
	comp=Z,2µm,17.8s						
NIL	**Nilore**	**84.61**	**338**	P	**P**	**06 14 20.5**	**-2.4**
NIL	**Nilore**	**84.61**	**338**	IAMs_20	IAMs_20	06 48 35.0	
	comp=Z,2µm,19.0s						
NIL	**Nilore**	**84.61**	**338**	P	**P**	**06 14 20.5**	**-2.4**
NIL				pmax	pmax		
	comp=Z,103nm,1.3s						
TIA	**Tai'an**	**85.27**	**14**	P	**P**	**06 14 25.5**	**-0.6**
TIA				S	**SKSac**	**06 24 53.1**	**+4.4**
TIA				pmax	pmax		
	comp=Z,19nm,1.4s						
TIA				pmax	pmax		
	comp=Z,390nm,3.5s						
TIA				LR	LR		
	comp=Z,1µm,25.3s						
TIA				LR	LR		
	comp=Z,870nm,21.4s						
TIA				LR	LR		
	comp=Z,2µm,23.5s						
JNU	**Nakatsue**	**85.47**	**26**	IAmb	IAmb	06 14 28.6	
	comp=Z,61nm,1.3s						
JNU	**Nakatsue**	**85.47**	**26**	LR	LR	06 51 03.8	
	comp=Z,445nm,20.8s,baz=202,slow=35						
JNU	**Nakatsue**	**85.47**	**26**	P	**P**	**06 14 27.6**	**+0.4**
TBI	**Tubuai**	**85.94**	**121**	*e*PP	**PP**	**06 17 46.8**	**-2.6**
	comp=Z,269nm,26.0s						
TBI				*e*S	**SKSac**	**06 24 58.7**	**+4.7**
	comp=Z,616nm,23.5s						
TBI				*e*SS	**SS**	**06 30 38.7**	**-0.1**
	comp=Z,4µm,29.5s						
TBI				*e*LQ	LQ	06 37 49.7	
	comp=Z,20µm,34.2s						
TBI				*e*LR	LR	06 41 30.3	
	comp=Z,2µm,30.2s						
HNS	**HongShan**	**86.07**	**12**	⇑P	**P**	**06 14 28.9**	**-1.1**
HNS				PP	**PP**	**06 17 52.3**	**+1.3**
HNS				SKS	**SKSac**	**06 24 53.3**	**-0.3**
HNS				S	**S**	**06 25 05.0**	**+2.9**
HNS				SS	**SS**	**06 30 36.9**	**-4.8**
HNS				pmax	pmax		
	comp=Z,51nm,1.6s						
HNS				LR	LR		
	comp=Z,1µm,17.7s						
HNS				LR	LR		
	comp=Z,700nm,19.4s						
HNS				LR	LR		
	comp=Z,2µm,20.2s						
TIY	**Taiyuan**	**86.08**	**10**	*e*P	**P**	**06 14 30.3**	**+0.1**
TIY				PP	**PP**	**06 17 55.1**	**+3.9**
TIY				SKS	**SKSac**	**06 24 56.0**	**+2.1**
TIY				S	**SKKSac**	**06 25 03.3**	**+1.9**
TIY				SS	**SS**	**06 30 42.9**	**+0.8**
TIY				pmax	pmax		
	comp=Z,39nm,0.9s						
TIY				pmax	pmax		
	comp=Z,170nm,3.7s						
TIY				LR	LR		
	comp=Z,1µm,22.0s						
TIY				LR	LR		
	comp=Z,820nm,21.3s						
TIY				LR	LR		
	comp=Z,2µm,21.3s						
RAYN	**Ar Rayn**	**86.10**	**312**	P	**P**	**06 14 31.4**	**+0.8**
RAYN	**Ar Rayn**	**86.10**	**312**	IAMs_20	IAMs_20	06 46 10.0	
	comp=Z,3µm,19.0s						
RAYN	**Ar Rayn**	**86.10**	**312**	P	**P**	**06 14 31.4**	**+0.8**
RAYN				pmax	pmax		
	comp=Z,15nm,1.1s						
COYC	**Coyhaique**	**86.55**	**186**	P	**P**	**06 14 34.1**	**+1.5**
COYC				IAmb	IAmb	06 14 43.5	
	comp=Z,56nm,1.2s						
KBL	**Kabul**	**86.58**	**335**	P	**P**	**06 14 31.0**	**-1.9**
KBL	**Kabul**	**86.58**	**335**	P	**P**	**06 14 31.0**	**-1.9**
KBL				pmax	pmax		
	comp=Z,80nm,1.2s						
JMN	**Monobe**	**86.95**	**28**	P	**P**	**06 14 34.2**	**-0.3**
JMN				IAmb	IAmb	06 14 36.5	
	comp=Z,92nm,1.6s						
JMN	**Monobe**	**86.95**	**28**	P	**P**	**06 14 35.4**	**+0.9**
GTA	**Gaotai**	**87.01**	**0**	*e*P	**P**	**06 14 33.0**	**-1.8**
GTA				sP	pP	06 14 44.3	+1.9
GTA				S	**S**	**06 25 08.3**	**-3.2**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,250nm,6.8s						
GTA				LR	LR		
	comp=Z,3µm,21.5s						
GTA				LR	LR		
	comp=Z,1µm,21.9s						
GTA				LR	LR		
	comp=Z,4µm,21.5s						
TJN	**Taejon**	**87.57**	**22**	IAMs_20	IAMs_20	07 00 17.2	
	comp=Z,3µm,20.0s						
BTO	**Baotou**	**88.69**	**8**	*e*P	**P**	**06 14 43.0**	**+0.3**
BTO				PP	**PP**	**06 18 08.8**	**-3.4**
BTO				S	**S**	**06 25 29.8**	**+2.4**
BTO				pmax	pmax		
	comp=Z,49nm,1.3s						
BTO				pmax	pmax		
	comp=Z,530nm,5.9s						
BTO				LR	LR		
	comp=Z,7µm,21.6s						
BTO				LR	LR		
	comp=Z,4µm,18.1s						
BTO				LR	LR		
	comp=Z,10µm,22.2s						
DL2	**Dalian**	**88.70**	**17**	P	**P**	**06 14 40.3**	**-2.4**
DL2				S	**S**	**06 25 26.9**	**-0.5**
DL2				pmax	pmax		
	comp=Z,37nm,1.2s						
DL2				LR	LR		
	comp=Z,790nm,19.0s						
DL2				LR	LR		
	comp=Z,900nm,18.6s						
DL2				LR	LR		
	comp=Z,2µm,20.8s						
KSAR	**Wonju Array Be**	**88.71**	**22**	P	**P**	**06 14 43.8**	**+1.0**
KSAR	**Wonju Array Be**	**88.71**	**22**	P	**P**	**06 14 43.8**	**+1.0**
KSRS	**Korea Array**	**88.74**	**22**	P	**P**	**06 14 41.6**	**-1.2**
	comp=Z,3.4nm,0.8s,baz=192,slow=4.5,SNR=16						
	comp=Z,3.4nm,0.8s						
BJT	**Baijiatuau**	**88.85**	**13**	IAmb	IAmb	06 14 45.7	
	comp=Z,44nm,1.3s						
BJT	**Baijiatuau**	**88.85**	**13**	P	**P**	**06 14 44.3**	**+1.0**
BJI	**Beijing**	**88.87**	**13**	P	**P**	**06 14 42.4**	**-1.0**
BJI				S	**S**	**06 25 26.0**	**-2.9**
BJI				SS	**SS**	**06 31 20.8**	**-1.8**
BJI				pmax	pmax		
	comp=Z,14nm,1.4s						
BJI				pmax	pmax		
	comp=Z,140nm,6.0s						
BJI				LR	LR		
	comp=Z,390nm,19.2s						
BJI				LR	LR		
	comp=Z,520nm,22.3s						
BJI				LR	LR		
	comp=Z,1µm,19.7s						
HHC	**Hu-ho-hao-te**	**89.08**	**9**	*e*P	**P**	**06 14 45.0**	**+0.4**
HHC				PP	**PP**	**06 18 19.3**	**+3.9**
HHC				SKS	**SKSac**	**06 25 14.8**	**+2.7**
HHC				S	**S**	**06 25 32.3**	**+1.2**
HHC				sS	ScS	06 25 41.6	+5.5
HHC				SS	**SS**	**06 31 25.9**	**-0.1**
HHC				pmax	pmax		
	comp=Z,16nm,1.6s						
HHC				pmax	pmax		
	comp=Z,150nm,4.8s						
HHC				LR	LR		
	comp=Z,1µm,21.1s						
HHC				LR	LR		
	comp=Z,1µm,18.5s						
HHC				LR	LR		
	comp=Z,1µm,21.0s						
KSH	**Kashi**	**89.61**	**342**	P	**P**	**06 14 45.8**	**-1.3**
KSH				sP	pP	06 14 55.8	+1.2
KSH				PP	**PP**	**06 18 15.3**	**-4.3**
KSH				S	**S**	**06 25 37.5**	**+1.4**
KSH				pmax	pmax		
	comp=Z,12nm,1.3s						
KSH				pmax	pmax		
	comp=Z,240nm,4.9s						
KSH				LR	LR		
	comp=Z,2µm,21.0s						
KSH				LR	LR		
	comp=Z,1µm,20.4s						
KSH				LR	LR		
	comp=Z,2µm,23.1s						
PPT2	**Papeete2**	**90.33**	**117**	*e*P	P	06 14 42.3	-8.8
	comp=Z,55nm,22.8s						
PPT2	**Papeete2**	**90.33**	**117**	*e*PP	PP	06 18 15.3	-10
	comp=Z,51nm,24.8s						
PPT2				*e*S	**S**	**06 25 41.8**	**-2.1**
	comp=Z,377nm,25.0s						
PPT2				*e*SS	**SS**	**06 31 42.2**	**-1.0**
	comp=Z,923nm,26.5s						
PPT2				*e*LQ	LQ	06 39 47.4	
	comp=Z,4µm,31.2s						
PPT2				*e*LR	LR	06 43 30.3	
	comp=Z,2µm,26.0s						
PPT2				*e*LR	LR	06 43 38.6	
	comp=Z,2µm,27.8s						
PPT	**Papeete**	**90.34**	**117**	LR	LR	06 49 36.6	
	comp=Z,558nm,18.1s,baz=222,slow=32						
SIMJ	**Simiganj**	**90.45**	**337**	P	**P**	**06 14 50.2**	**-0.9**
MAJO	**Matsushiro**	**90.94**	**30**	P	**P**	**06 14 53.5**	**+0.2**
MAJO				IAmb	IAmb	06 14 54.7	
	comp=Z,36nm,1.4s						
MAJO	**Matsushiro**	**90.94**	**30**	P	**P**	**06 14 53.3**	**+0.1**
MAJO	**Matsushiro**	**90.94**	**30**	P	**P**	**06 14 53.5**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,36nm,1.4s						
MJAR	**Matsushiro Arr**	**90.94**	**30**	P	**P**	**06 14 51.7**	**-1.5**
	comp=Z,6.0nm,0.9s,baz=200,slow=6.0,SNR=19						
	comp=Z,6.0nm,0.9s						
MJB9	**Matsu-Tunnel**	**90.94**	**30**	IAmb	IAmb	06 14 54.7	
	comp=Z,35nm,1.4s						
PLCA	**Paso Flores**	**91.24**	**187**	P	**P**	**06 14 52.5**	**-2.6**
	comp=Z,4.5nm,1.0s,baz=197,slow=6.3,SNR=3.1						
PLCA				LR	LR	06 54 32.7	
	comp=Z,6µm,20.5s,baz=168,slow=35						
	comp=Z,4.5nm,1.0s						
NRN	**Naryn**	**91.44**	**342**	IAMs_20	IAMs_20	06 53 48.0	
	comp=Z,2µm,19.0s						
ARSB	**Arslanbob**	**91.99**	**340**	IAmb	IAmb	06 15 00.0	
	comp=Z,35nm,1.7s						
ARSB				IAMs_20	IAMs_20	06 52 43.2	
	comp=Z,2µm,21.0s						
WMQ	**Urumqi**	**92.01**	**351**	*e*P	**P**	**06 14 58.0**	**-0.1**
WMQ				sP	pP	06 15 08.4	+2.7
WMQ				PP	**PP**	**06 18 34.0**	**-4.5**
WMQ				S	**S**	**06 25 59.0**	**+1.2**
WMQ				pmax	pmax		
	comp=Z,13nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,150nm,5.1s						
WMQ				LR	LR		
	comp=Z,2µm,20.9s						
WMQ				LR	LR		
	comp=Z,1µm,22.7s						
WMQ				LR	LR		
	comp=Z,3µm,24.2s						
JSD	**Sado**	**92.31**	**30**	IAmb	IAmb	06 15 01.4	
	comp=Z,28nm,1.3s						
JSD	**Sado**	**92.31**	**30**	P	**P**	**06 15 00.5**	**+1.0**
XLT	**XiLinHaoTe**	**92.64**	**12**	*e*P	**P**	**06 15 01.9**	**+0.9**
XLT				pP	PcP	06 15 06.5	+4.8
XLT				sP	pP	06 15 10.8	+2.2
XLT				PP	**PP**	**06 18 39.3**	**-4.2**
XLT				S	**S**	**06 26 09.4**	**+5.9**
XLT				SS	**SS**	**06 32 21.3**	**+4.0**
XLT				pmax	pmax		
	comp=Z,22nm,1.5s						
XLT				pmax	pmax		
	comp=Z,140nm,6.4s						
XLT				LR	LR		
	comp=Z,1µm,20.6s						
XLT				LR	LR		
	comp=Z,2µm,20.5s						
AAK	**Ala-Archa**	**92.91**	**342**	IAMs_20	IAMs_20	06 53 00.7	
	comp=Z,2µm,21.0s						
AAK	**Ala-Archa**	**92.91**	**342**	LR	LR	06 53 11.5	
	comp=Z,2µm,21.0s,baz=164,slow=33						
AAK	**Ala-Archa**	**92.91**	**342**	*ce*P	**P**	**06 15 02.8**	**+0.4**
AAK				pmax	pmax		

	comp=Z,4.0nm,1.0s						
JMM	**Marumori**	**93.02**	**31**	P	**P**	**06 15 03.7**	**+0.9**
FRU1	**Bishkek**	**93.05**	**342**	IAMs_20	IAMs_20	06 53 16.4	
	comp=Z,2µm,20.0s						
CN2	**Changchun**	**94.19**	**18**	P	**P**	**06 15 08.0**	**0.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=Z,800nm,20.0s						
CN2				LR	LR		
	comp=Z,500nm,20.0s						
CN2				LR	LR		
	comp=Z,1µm,21.0s						
KKAR	**Karatay Array**	**94.25**	**339**	P	**P**	**06 15 07.4**	**-1.0**
KKAR	**Karatay Array**	**94.25**	**339**	P	**P**	**06 15 07.4**	**-1.0**
MK31	**Makanchi Array**	**95.59**	**348**	*ce*P	**P**	**06 15 15.9**	**+1.5**
MKAR	**Makanchi Array**	**95.59**	**348**	P	**P**	**06 15 14.7**	**+0.2**
MKAR	**Makanchi Array**	**95.59**	**348**	P	**P**	**06 15 12.4**	**-2.0**
	comp=Z,0.9nm,1.0s,baz=188,slow=7.3,SNR=5.7						
MKAR				LR	LR	06 55 02.4	
	comp=Z,2µm,21.6s,baz=161,slow=34						
MKAR	**Makanchi Array**	**95.59**	**348**	*ce*P	**P**	**06 15 15.3**	**+0.9**
MKAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SONM	**Songino Array**	**95.61**	**5**	P	**P**	**06 15 13.1**	**-1.5**
SONM	**Songino Array**	**95.61**	**5**	P	P	06 15 12.1	-2.6
	comp=Z,0.9nm,0.6s,baz=194,slow=4.3,SNR=5.3						
SONM				PP	**PP**	**06 19 03.9**	**-2.9**
	comp=Z,1.2nm,0.8s,baz=187,slow=7.5,SNR=6.8						
SONM				LR	LR	06 58 25.9	
	comp=Z,2µm,19.2s,baz=176,slow=36						
	comp=Z,0.9nm,0.6s						
SONM	**Songino Array**	**95.61**	**5**	P	**P**	**06 15 13.1**	**-1.5**
SONM				pmax	pmax		
	comp=Z,20nm,1.8s						
MAKZ	**Makanchi**	**95.64**	**348**	P	**P**	**06 15 14.1**	**-0.5**
MAKZ				IAMs_20	IAMs_20	06 54 51.0	
	comp=Z,2µm,22.0s						
MAKZ	**Makanchi**	**95.64**	**348**	P	**P**	**06 15 14.1**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,15nm,1.7s						
ULN	**Ulaanbaatar**	**95.68**	**5**	IAMs_20	IAMs_20	06 56 03.5	
	comp=Z,2µm,21.0s						
ULN	**Ulaanbaatar**	**95.68**	**5**	*ce*P	**P**	**06 15 14.6**	**-0.4**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.5s						
JTM	**Tenmabayashi**	**95.73**	**30**	P	**P**	**06 15 15.0**	**-0.2**
USRK	**Ussuriysk Ar.**	**96.12**	**23**	LR	LR	07 03 04.3	
	comp=Z,501nm,18.0s,baz=204,slow=38						
BNX	**BinXian**	**96.46**	**19**	⇑P	**P**	**06 15 18.3**	**-0.1**
BNX				pP	**PcP**	**06 15 22.4**	**+3.9**
BNX				S	**S**	**06 26 33.3**	**-3.3**
BNX				pmax	pmax		
	comp=Z,7.0nm,3.2s						
BNX				pmax	pmax		
	comp=Z,63nm,3.9s						
BNX				LR	LR		
	comp=Z,590nm,17.1s						
BNX				LR	LR		
	comp=Z,410nm,19.4s						
BNX				LR	LR		
	comp=Z,810nm,19.0s						
EIL	**Elat**	**96.55**	**308**	LR	LR	06 52 33.9	
	comp=Z,2µm,19.4s,baz=97,slow=32						
GHAJ	**Ghor Haditha**	**97.52**	**309**	IAMs_20	IAMs_20	06 53 35.4	
	comp=Z,2µm,19.0s						
ASF	**Jabal al Asfar**	**97.52**	**311**	LR	LR	06 53 59.4	
	comp=Z,1µm,18.9s,baz=168,slow=32						
MMAI	**Mount Meron Ar**	**98.95**	**310**	LR	LR	06 53 12.4	
	comp=Z,1µm,22.0s,baz=131,slow=31						
ASAJ	**Asahikawa**	**99.21**	**30**	LR	LR	06 57 53.0	
	comp=Z,451nm,21.5s,baz=176,slow=34						
ITQB	**Itaqui**	**99.80**	**201**	IAMs_20	IAMs_20	07 03 41.7	
	comp=Z,2µm,19.0s						
KURBB	**Kurchatov Arra**	**99.88**	**347**	P	**Pdif**	**06 15 30.7**	**-2.8**
	comp=Z,0.8nm,0.8s,baz=164,slow=4.5,SNR=7.6						
KURBB				LR	LR	06 56 23.2	
	comp=Z,3µm,21.7s,baz=162,slow=33						
	comp=Z,0.8nm,0.8s						
KURK	**Kurchatov**	**99.95**	**347**	*ce*P	**Pdif**	**06 15 33.3**	**-0.6**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
AKT	**Akhty**	**100.18**	**323**	*e*P	**Pdif**	**06 15 34.9**	**-0.4**
AKT				*e*S	**SKSac**	**06 26 13.5**	**+1.6**
AKT				*e*PS	**PS**	**06 28 38.8**	**-2.4**
AKT				pmax	pmax		
	comp=Z,14nm,1.1s						
HEH	**HeiHe**	**100.75**	**18**	Pdif	**Pdif**	**06 15 37.0**	**-0.4**
HEH				PP	**PP**	**06 19 44.0**	**-1.9**
HEH				SS	SS	06 34 15.5	+4.0
HEH				AMB	AMB		
	comp=Z,190nm,10.5s						
HEH				LR	LR		
	comp=Z,460nm,18.7s						
HEH				LR	LR		
	comp=Z,640nm,19.3s						
HEH				LR	LR		
	comp=Z,1µm,19.6s						
KLR	**Kul'dur**	**100.75**	**21**	*i* P	**Pdif**	**06 15 38.5**	**+1.0**
KLR				pmax	pmax		
	comp=Z,2.0nm,1.2s						
MAK	**Makhachkala**	**101.52**	**324**	*i* P	**Pdif**	**06 15 36.1**	**-5.0**
MAK				*e*		06 19 49.7	
MAK				*e*		06 26 14.5	
MAK				*e*PS	**PS**	**06 28 52.5**	**-2.6**
MAK				*e*SS	SS	06 34 24.4	+2.0
MAK				*e*SSS	SSS	06 38 16.9	
MAK				pmax	pmax		
	comp=Z,44nm,0.3s						
MAK				MLR	MLR		
	comp=Z,662nm,16.0s						
YSS	**Yuzhno-Sakhali**	**101.77**	**29**	*e*P	**Pdif**	**06 15 35.5**	**-6.6**
YSS				*e*		06 26 21.2	
YSS				*e*S		06 27 06.3	
YSS				*e*PS	**PS**	**06 28 59.1**	**+1.5**
YSS				pmax	pmax		
	comp=Z,200nm,5.7s						
KOPT	**Kop Dagi**	**102.07**	**318**	IAMs_20	IAMs_20	06 58 14.7	
	comp=Z,1µm,18.0s						
TAOE	**Nuku Hiva Isla**	**102.80**	**119**	*e*SS	SS	06 34 49.3	+10
	comp=Z,311nm,34.1s						
TAOE	**Nuku Hiva Isla**	**102.80**	**119**	*e*LQ	LQ	06 44 50.9	
	comp=Z,5µm,30.9s						
TAOE				*e*LR	LR	06 49 10.3	
	comp=Z,870nm,24.8s						
LCO	**Las Campanas**	**102.87**	**189**	IAMs_20	IAMs_20	07 02 49.8	
	comp=Z,2µm,19.0s						
BRVK	**Borovoye**	**103.70**	**342**	IAMs_20	IAMs_20	06 57 52.0	
	comp=Z,2µm,22.0s						
TORD	**Torodi Ar. Bea**	**104.90**	**273**	Pdiff	**Pdif**	**06 15 54.7**	**-2.1**
	comp=Z,1.7nm,0.3s,baz=139,slow=5.6,SNR=1.9						
ILGA	**Ilgaz**	**106.06**	**314**	IAMs_20	IAMs_20	06 58 16.4	
	comp=Z,2µm,22.0s						
GO02	**Mina Guanaco**	**106.55**	**190**	IAMs_20	IAMs_20	07 03 23.3	
	comp=Z,2µm,20.0s						
BORA	**Eskisehir**	**106.78**	**311**	IAMs_20	IAMs_20	07 02 26.6	
	comp=Z,2µm,19.0s						
ARTI	**Arti**	**109.53**	**337**	IAMs_20	IAMs_20	07 03 50.2	
	comp=Z,2µm,20.0s						
WDD	**Wied Dalam**	**112.62**	**299**	IAMs_20	IAMs_20	07 02 22.3	
	comp=Z,2µm,22.0s						
RCBR	**Riachuelo**	**113.69**	**230**	IAMs_20	IAMs_20	06 58 08.8	
	comp=Z,2µm,21.0s						
MWH	**Mokuaweoweo**	**114.07**	**87**	IAMs_20	IAMs_20	07 03 39.8	
	comp=Z,2µm,20.0s						
JOKA	**Jonika Flow**	**114.43**	**88**	IAMs_20	IAMs_20	07 01 01.4	
	comp=Z,2µm,18.0s						
KIEV	**Kiev**	**115.34**	**318**	IAMs_20	IAMs_20	07 09 08.5	
	comp=Z,1µm,21.0s						
OBN	**Obninsk**	**115.53**	**325**	*i* PKIKP	**PKPdf**	**06 20 30.8**	**+0.2**
OBN				*i* PS	**PKKPab**	**06 31 10.4**	**+4.1**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.5s						
STHS	**Stebnicka Huta**	**118.17**	**313**	*i* P	**Pdif**	**06 16 57.1**	**+2.1**
STHS	**Stebnicka Huta**	**118.17**	**313**	*e*PDIFF	**Pdif**	**06 16 57.1**	**+2.1**
SEY	**Seymchan**	**118.22**	**24**	*c i*PKIKP	**PKPdf**	**06 20 36.0**	**+0.5**
SEY				pmax	pmax		
	comp=Z,3.0nm,1.3s						
MNK	**Minsk**	**118.59**	**321**	*i* Pdif	**Pdif**	**06 16 56.4**	**-0.3**
	comp=Z,8.0nm,0.6s,baz=133						
MNK				*i* PKP	PKPdf	06 20 20.4	-16
MNK				*i* PP	**PP**	**06 21 54.5**	**-0.6**
MNK				*i* PPP	PPP	06 24 19.8	
MNK				*i* SKS	**SKSdf**	**06 27 48.3**	**+2.2**
MNK				*i* PS	**PS**	**06 31 37.7**	**-3.5**
MNK				*i* SKKS	SS	06 37 52.9	-18
MNK				*i* SS	SKKSdf	06 38 14.8	-19
MNK				*i* SSS	SSS	06 42 38.3	
MNK				*i* LQ	LQ	07 05 34.1	
MNK				*i* LRM	MLR	07 11 07.5	
	comp=E,448nm,17.7s						
MNK				*i* LRM	MLR	07 11 11.3	
	comp=Z,596nm,17.8s						
MNK				*i* LRM	MLR	07 11 12.7	
	comp=N,524nm,18.8s						
MNK	**Minsk**	**118.59**	**321**	*i* P	**Pdif**	**06 16 56.4**	**-0.3**
MNK				*i*		06 21 54.4	
MNK				*i*		06 27 48.3	
MNK				*i* PS	**PS**	**06 31 37.6**	**-3.5**
MNK				*i* SS	SS	06 38 14.8	+3.9
MNK				*i* SSS	SSS	06 42 38.3	
MNK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MNK				MLR	MLR		
	comp=E,448nm,18.0s						
MNK				MLR	MLR		
	comp=Z,596nm,18.0s						
MNK				MLR	MLR		
	comp=N,524nm,19.0s						
KLMR	**Klimovskoe**	**118.79**	**331**	*e*PKIKP	**PKPdf**	**06 20 34.7**	**-2.0**
KLMR				SP	SP	06 31 40.9	+1.7
KLMR				SS	SS	06 38 19.6	+6.3
KLMR				pmax	pmax		
	comp=Z,16nm,1.6s						
KLMR				MLR	MLR		
	comp=Z,742nm,19.0s						
NACGM	**Naroch**	**119.33**	**321**	*e*PKiKP	**PKPdf**	**06 20 37.6**	**-0.3**
	comp=Z,7.0nm,1.0s,baz=133						
MORC	**Moravsky Berou**	**120.23**	**312**	*e*PKP	**PKPdf**	**06 20 40.0**	**+0.1**
ZCCA	**Zocca**	**120.27**	**304**	IAMs_20	IAMs_20	07 18 10.8	
	comp=Z,1µm,20.0s						
KRUC	**Moravsky**	**120.36**	**311**	*e*PKP	**PKPdf**	**06 20 40.3**	**+0.2**
VRAC	**Vranov**	**120.41**	**311**	*e*PKP	**PKPdf**	**06 20 40.5**	**+0.3**
PRMA	**PARMA**	**120.90**	**304**	IAMs_20	IAMs_20	07 14 45.4	
	comp=Z,1µm,20.0s						
PABE	**Paberze**	**120.93**	**320**	IAMs_20	IAMs_20	07 14 29.9	
	comp=Z,1µm,20.0s						
TIXI	**Tiksi**	**121.12**	**10**	IAMs_20	IAMs_20	07 12 33.4	
	comp=Z,2µm,21.0s						
MAHO	**Mahon**	**121.40**	**296**	IAMs_20	IAMs_20	07 16 27.7	
	comp=Z,1µm,18.0s						
GEC2	**GERESS Array S**	**121.60**	**309**		**PKPdf**	**06 20 43.0**	**+0.4**
GERES	**GERESS Array B**	**121.60**	**309**		**PKPdf**	**06 20 42.4**	**-0.3**
GERES	**GERESS Array B**	**121.60**	**309**	PKP	**PKPdf**	**06 20 39.9**	**-2.8**
	comp=Z,1.2nm,0.7s,baz=129,slow=1.9,SNR=10						
GERES	**GERESS Array B**	**121.60**	**309**	PKIKP	**PKPdf**	**06 20 42.4**	**-0.3**
ADK	**Adak**	**122.40**	**47**	IAMs_20	IAMs_20	07 08 08.6	
	comp=Z,1µm,21.0s						
TUE	**Stuetta**	**122.49**	**305**	IAMs_20	IAMs_20	07 18 29.3	
	comp=Z,1µm,20.0s						
BRG	**Berggiesshubel**	**122.72**	**311**	*e*PKP	**PKPdf**	**06 20 45.5**	**+0.9**
BRG				Amp		06 20 46.0	
	comp=Z,3.8nm,0.9s						
BRG	**Berggiesshubel**	**122.72**	**311**	SS	SS	06 38 55.0	-9.2
BNI	**Bardonecchia**	**123.12**	**302**	IAMs_20	IAMs_20	07 17 36.3	
	comp=Z,1µm,20.0s						
CLL	**Collm**	**123.46**	**311**	*i* PKIKP	**PKPdf**	**06 20 45.6**	**-0.4**
CLL				pmax	pmax		
	comp=Z,11nm,1.4s						
CLL	**Collm**	**123.46**	**311**	*i* PKPdf	**PKPdf**	**06 20 45.6**	**-0.4**
	comp=Z,11nm,1.4s						
CLL				*e*PPPP		06 27 00.0	
CLL				*e*PS	**PS**	**06 32 24.0**	**-0.8**
CLL				*e*PPS	PPS	06 33 48.0	
CLL				*e*SS	SS	06 39 16.0	+2.5
CLL				*e*SSS	SSS	06 43 30.0	
CLL				*e*SSSS		06 47 36.0	
SENIN	**Lac Senin/Sane**	**123.56**	**304**	IAMs_20	IAMs_20	07 18 21.6	
	comp=Z,1µm,21.0s						
FINES	**FINESS Array B**	**123.90**	**326**	PKP	**PKPdf**	**06 20 43.3**	**-3.2**
	comp=Z,4.6nm,0.9s,baz=141,slow=6.9,SNR=9.3						
FINES	**FINESS Array B**	**123.90**	**326**	*c i*PKIKP	**PKPdf**	**06 20 46.4**	**-0.1**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AVE	**Averroes**	**124.69**	**283**	IAMs_20	IAMs_20	07 11 50.0	
	comp=Z,2µm,21.0s						
CEST	**Esterri de Car**	**124.84**	**297**	IAMs_20	IAMs_20	07 18 31.7	
	comp=Z,1µm,19.0s						
LVZ	**Lovozero**	**125.29**	**335**	IAMs_20	IAMs_20	07 16 28.9	
	comp=Z,1µm,21.0s						
BILL	**Bilibino**	**125.89**	**25**		**PKPdf**	**06 20 50.8**	**+0.6**
BILL	**Bilibino**	**125.89**	**25**	*c i*PKIKP	**PKPdf**	**06 20 50.8**	**+0.6**
BILL				pmax	pmax		
	comp=Z,16nm,1.7s						
ESDC	**Sonseca Array**	**126.32**	**291**		**PKPdf**	**06 20 52.9**	**+0.9**
ESDC	**Sonseca Array**	**126.32**	**291**	PKP	**PKPdf**	**06 20 48.9**	**-3.1**
	comp=Z,2.4nm,1.0s,baz=73,slow=1.2,SNR=16						
PAB	**San Pablo**	**126.49**	**291**	IAMs_20	IAMs_20	07 11 55.4	
	comp=Z,1µm,22.0s						
PVAQ	**Vaqueiros**	**127.37**	**287**	*e*PP	**PP**	**06 23 00.7**	**+6.0**
PVAQ				*e*LR	LR	07 02 51.7	
PVAQ				*i* AMs_20		07 18 52.2	
	comp=Z,968nm,18.0s						
MORF	**Marmelete**	**127.92**	**286**	IAMs_20	IAMs_20	07 15 23.7	
	comp=Z,1µm,22.0s						
PESTR	**Estremoz**	**128.14**	**288**	IAMs_20	IAMs_20	07 17 56.3	
	comp=Z,1µm,19.0s						
PMRV	**Marv??o**	**128.34**	**289**	*e*LR	LR	07 04 01.1	
PMRV				*i* AMs_20		07 16 23.8	
	comp=Z,767nm,20.0s						
KEV	**Kevo**	**128.63**	**335**	IAMs_20	IAMs_20	07 19 47.3	
	comp=Z,1µm,20.0s						
MTE	**Manteigas**	**128.99**	**290**	IAMs_20	IAMs_20	07 13 53.0	
	comp=Z,2µm,21.0s						
MTE	**Manteigas**	**128.99**	**290**	*e*PP	**PP**	**06 23 05.1**	**-0.3**
MTE				*e*SS	SS	06 40 25.0	+1.8
MTE				*e*LQ	LQ	06 56 37.5	
MTE				*e*LR	LR	07 04 08.9	
MTE				*i* AMs_20		07 14 33.1	
	comp=Z,1µm,20.0s						
MVO	**Moncorvo**	**129.09**	**291**	*e*SS	SS	06 40 28.3	+3.8
MVO				*e*LQ	LQ	06 56 18.6	
MVO				*e*LR	LR	07 04 18.1	
MVO				*i* AMs_20		07 14 34.0	
	comp=Z,1µm,22.0s						
COI	**Coimbra**	**129.43**	**289**	IAMs_20	IAMs_20	07 20 20.7	
	comp=Z,1µm,18.0s						
NOA	**NORSAR Array B**	**129.61**	**321**	PKP	**PKPdf**	**06 20 55.9**	**-1.7**
	comp=Z,1.1nm,0.9s,baz=108,slow=3.3,SNR=3.1						
PGAV	**Gavieira, Arco**	**130.31**	**291**	*e*LQ	LQ	06 59 55.8	
PGAV				*e*LR	LR	07 05 20.8	
PGAV				*i* AMs_20		07 17 27.0	
	comp=Z,2µm,22.0s						
PMOZ	**Porto Moniz, M**	**130.87**	**276**	*e*PP	**PP**	**06 23 18.7**	**+0.9**
PMOZ				*e*LR	LR	07 04 31.5	
PMOZ				*i* AMs_20		07 13 38.1	
	comp=Z,2µm,20.0s						
CNBA	**Chernabura Isl**	**132.62**	**51**	IAMs_20	IAMs_20	07 14 16.0	
	comp=Z,1µm,21.0s						
M13K	**Dall Lake**	**133.16**	**42**	IAMs_20	IAMs_20	07 13 56.3	
	comp=Z,1µm,21.0s						
EKA	**Eskdalemuir Ar**	**133.82**	**309**	PKP	**PKPdf**	**06 21 03.3**	**-2.3**
	comp=Z,1.2nm,0.8s,baz=117,slow=2.8,SNR=2.1						
ESK	**Eskdalemuir**	**133.84**	**309**	IAMs_20	IAMs_20	07 24 08.5	
	comp=Z,1µm,20.0s						
F14K	**Arctic Creek**	**133.88**	**35**	P	**PKPdf**	**06 21 06.9**	**+1.6**
	baz=248						
ANM	**Nome**	**133.91**	**37**	IAMs_20	IAMs_20	07 31 35.6	
	comp=Z,1µm,18.0s						
M14K	**Bethel**	**133.93**	**42**	P	**PKPdf**	**06 21 06.9**	**+1.3**
	baz=247						
J14K	**Nanvaranak Lak**	**133.99**	**39**	P	**PKPdf**	**06 21 07.1**	**+1.5**
	baz=248						
O15K	**Ungalikthiuk R**	**134.31**	**45**	IAMs_20	IAMs_20	07 13 33.5	
	comp=Z,1µm,22.0s						
O15K	**Ungalikthiuk R**	**134.31**	**45**	P	**PKPdf**	**06 21 07.7**	**+1.3**
	baz=247						
M15K	**Kasigluk River**	**134.49**	**43**	P	**PKPdf**	**06 21 08.1**	**+1.4**
	baz=248						
L15K	**Ungalak Mounta**	**134.49**	**41**	P	**PKPdf**	**06 21 08.2**	**+1.6**
	baz=248						
N15K	**Kwethluk River**	**134.56**	**44**	IAMs_20	IAMs_20	07 21 19.3	
	comp=Z,1µm,20.0s						
F15K	**North Star Dit**	**134.61**	**35**	P	**PKPdf**	**06 21 07.6**	**+0.9**
	baz=250						
K15K	**Wolf Creek Mou**	**134.70**	**41**	P	**PKPdf**	**06 21 07.9**	**+0.9**
	baz=249						
SPITS	**Spitsbergen Ar**	**135.10**	**343**	PKP	**PKPdf**	**06 21 05.5**	**-2.0**
	comp=Z,5.4nm,1.0s,baz=116,slow=9.8,SNR=2.6						
CHIR	**Chirikof Islan**	**135.10**	**51**	IAMs_20	IAMs_20	07 20 21.5	
	comp=Z,1µm,20.0s						
CHIR	**Chirikof Islan**	**135.10**	**51**	P	**PKPdf**	**06 21 09.0**	**+1.1**
	baz=247						
P16K	**Nushagak River**	**135.13**	**46**	IAMs_20	IAMs_20	07 14 42.3	
	comp=Z,1µm,22.0s						
C16K	**Lisburne Hills**	**135.20**	**32**	IAMs_20	IAMs_20	07 28 41.2	
	comp=Z,903nm,19.0s						
C16K	**Lisburne Hills**	**135.20**	**32**	P	**PKPdf**	**06 21 08.7**	**+1.0**
	baz=252						
N16K	**Nishlik Lake**	**135.29**	**44**	P	**PKPdf**	**06 21 09.4**	**+1.2**
	baz=249						
O16K	**Kokwok River B**	**135.29**	**45**	IAMs_20	IAMs_20	07 14 26.7	
	comp=Z,1µm,22.0s						
O16K	**Kokwok River B**	**135.29**	**45**	P	**PKPdf**	**06 21 09.5**	**+1.3**
	baz=249						
M16K	**Timber Creek**	**135.40**	**43**	P	**PKPdf**	**06 21 09.6**	**+1.2**
	baz=250						
L16K	**Owhat River**	**135.40**	**42**	P	**PKPdf**	**06 21 09.9**	**+1.5**
	baz=250						
G16K	**Koyuk River**	**135.41**	**36**	P	**PKPdf**	**06 21 09.4**	**+1.2**
	baz=251						
J16K	**Anvik River**	**135.44**	**39**	P	**PKPdf**	**06 21 09.5**	**+1.1**
	baz=251						
I17K	**Unalakleet**	**135.60**	**39**	P	**PKPdf**	**06 21 09.5**	**+0.9**
	baz=251						
O17K	**Koliganek Bris**	**135.83**	**45**	P	**PKPdf**	**06 21 10.3**	**+1.1**
	baz=250						
D17K	**Noatak River**	**135.84**	**33**	P	**PKPdf**	**06 21 09.5**	**+0.6**
	baz=253						
Q17K	**Contact Creek**	**135.88**	**47**	P	**PKPdf**	**06 21 09.5**	**0.0**
	baz=249						
P17K	**Kvichak River**	**135.94**	**46**	P	**PKPdf**	**06 21 10.3**	**+0.9**
	baz=250						
RDOG	**Red Dog Mine**	**136.00**	**32**	IAMs_20	IAMs_20	07 19 07.5	
	comp=Z,1µm,22.0s						
C17K	**DeLong Mountai**	**136.03**	**32**	P	**PKPdf**	**06 21 10.7**	**+1.3**
	baz=254						
N17K	**Nushagak Hills**	**136.04**	**44**	IAMs_20	IAMs_20	07 16 25.4	
	comp=Z,1µm,22.0s						
N17K	**Nushagak Hills**	**136.04**	**44**	P	**PKPdf**	**06 21 10.5**	**+0.9**
	baz=250						
L17K	**Donlin**	**136.07**	**41**	P	**PKPdf**	**06 21 10.8**	**+1.3**
	baz=251						
G17K	**Kiwalik Mounta**	**136.12**	**36**	P	**PKPdf**	**06 21 10.5**	**+0.9**
	baz=253						
E17K	**Hotham Inlet**	**136.12**	**34**	P	**PKPdf**	**06 21 10.1**	**+0.5**
	baz=253						
J17K	**VABM Dome**	**136.13**	**40**	IAMs_20	IAMs_20	07 32 46.3	
	comp=Z,1µm,18.0s						
J17K	**VABM Dome**	**136.13**	**40**	P	**PKPdf**	**06 21 10.7**	**+1.1**
	baz=252						
F17K	**Baldwin Pennin**	**136.16**	**35**	IAMs_20	IAMs_20	07 31 13.1	
	comp=Z,1µm,18.0s						
F17K	**Baldwin Pennin**	**136.16**	**35**	P	**PKPdf**	**06 21 10.7**	**+1.1**
	baz=253						
M17K	**Holitna River**	**136.22**	**43**	P	**PKPdf**	**06 21 10.3**	**+0.4**
	baz=251						
H17K	**Granite Mounta**	**136.25**	**37**	P	**PKPdf**	**06 21 10.6**	**+0.8**
	baz=253						
K17K	**Iditarod**	**136.25**	**41**	P	**PKPdf**	**06 21 10.7**	**+0.8**
	baz=252						
R18K	**Karluk**	**136.35**	**49**	P	**PKPdf**	**06 21 10.7**	**+0.5**
	baz=249						
Q18K	**Katmai Hardscr**	**136.45**	**47**	P	**PKPdf**	**06 21 11.1**	**+0.5**
	baz=250						
P18K	**Big Mountain,**	**136.59**	**46**	P	**PKPdf**	**06 21 11.3**	**+0.6**
	baz=250						
E18K	**Tukpahlearik C**	**136.68**	**34**	IAMs_20	IAMs_20	07 28 44.3	
	comp=Z,938nm,20.0s						
E18K	**Tukpahlearik C**	**136.68**	**34**	P	**PKPdf**	**06 21 11.3**	**+0.7**
	baz=255						
N18K	**Kilae Creek**	**136.70**	**44**		**PKPdf**	**06 21 11.9**	**+1.1**
N18K	**Kilae Creek**	**136.70**	**44**	P	**PKPdf**	**06 21 11.4**	**+0.6**
	baz=251						
B18K	**Kokolik River**	**136.74**	**31**	P	**PKPdf**	**06 21 11.4**	**+0.8**
	baz=256						
O18K	**Koktuh Hills**	**136.75**	**45**	IAMs_20	IAMs_20	07 15 30.4	
	comp=Z,1µm,22.0s						
O18K	**Koktuh Hills**	**136.75**	**45**	P	**PKPdf**	**06 21 11.6**	**+0.7**
	baz=251						
C18K	**Utukok River**	**136.78**	**32**	P	**PKPdf**	**06 21 11.3**	**+0.4**
	baz=256						
L18K	**Granite Mounta**	**136.81**	**42**	P	**PKPdf**	**06 21 12.9**	**+1.9**
	baz=252						
F18K	**Selawik**	**136.82**	**35**	P	**PKPdf**	**06 21 11.6**	**+0.8**
	baz=255						
OHAK	**Old Harbor**	**136.82**	**49**	P	**PKPdf**	**06 21 12.7**	**+1.6**
	baz=250						
H18K	**Honhosa River**	**136.94**	**37**	IAMs_20	IAMs_20	07 19 48.6	
	comp=Z,972nm,21.0s						
H18K	**Honhosa River**	**136.94**	**37**	P	**PKPdf**	**06 21 12.6**	**+1.4**
	baz=254						
M18K	**Stony River**	**136.98**	**43**	P	**PKPdf**	**06 21 12.6**	**+1.3**
	baz=252						
G18K	**Tagagawik**	**137.02**	**36**	P	**PKPdf**	**06 21 11.8**	**+0.5**
	baz=255						
J18K	**Innoko River**	**137.16**	**40**		**PKPdf**	**06 21 13.4**	**+1.8**
J18K	**Innoko River**	**137.16**	**40**	P	**PKPdf**	**06 21 12.3**	**+0.7**
	baz=254						
A19K	**Wainwright**	**137.19**	**30**	P	**PKPdf**	**06 21 12.5**	**+1.1**
	baz=257						
Q19K	**Cape Douglas,**	**137.21**	**47**	IAMs_20	IAMs_20	07 16 51.9	
	comp=Z,2µm,22.0s						
Q19K	**Cape Douglas,**	**137.21**	**47**	P	**PKPdf**	**06 21 12.6**	**+0.7**
	baz=251						
O19K	**Port Alsworth**	**137.28**	**45**	IAMs_20	IAMs_20	07 18 08.4	
	comp=Z,1µm,21.0s						
KDAK	**Kodiak Island**	**137.37**	**49**	IAMs_20	IAMs_20	07 18 49.2	
	comp=Z,1µm,21.0s						
KDAK	**Kodiak Island**	**137.37**	**49**	P	**PKPdf**	**06 21 13.0**	**+0.9**
	baz=251						
N19K	**Bonanza Creek**	**137.40**	**44**	IAMs_20	IAMs_20	07 17 59.2	
	comp=Z,1µm,21.0s						
N19K	**Bonanza Creek**	**137.40**	**44**	P	**PKPdf**	**06 21 12.7**	**+0.5**
	baz=252						
GCSA	**Galena City Sc**	**137.44**	**38**	P	**PKPdf**	**06 21 13.0**	**+1.0**
	baz=255						
C19K	**Lookout Ridge**	**137.45**	**31**	IAMs_20	IAMs_20	07 28 21.6	
	comp=Z,1µm,21.0s						
C19K	**Lookout Ridge**	**137.45**	**31**	P	**PKPdf**	**06 21 13.1**	**+1.0**
	baz=257						
F19K	**Shaleruckik Mo**	**137.60**	**35**	P	**PKPdf**	**06 21 12.9**	**+0.6**
	baz=256						
L19K	**White Mountain**	**137.62**	**42**	IAMs_20	IAMs_20	07 19 56.1	
	comp=Z,1µm,20.0s						
L19K	**White Mountain**	**137.62**	**42**	P	**PKPdf**	**06 21 13.0**	**+0.5**
	baz=254						
P19K	**Oil Pt**	**137.64**	**46**	P	**PKPdf**	**06 21 13.5**	**+0.9**
	baz=252						
G19K	**Purcell Mounta**	**137.70**	**36**	IAMs_20	IAMs_20	07 31 15.6	
	comp=Z,843nm,19.0s						
G19K	**Purcell Mounta**	**137.70**	**36**	P	**PKPdf**	**06 21 13.6**	**+1.0**
	baz=256,SNR=6.0						
Q20K	**Shuyak Island**	**137.73**	**48**	P	**PKPdf**	**06 21 13.9**	**+1.1**
	baz=252						
SYI	**Shuyak Island**	**137.73**	**48**	IAMs_20	IAMs_20	07 19 04.6	
	comp=Z,1µm,20.0s						
M19K	**Big River Lodg**	**137.75**	**43**		**PKPdf**	**06 21 13.9**	**+1.2**
M19K				IAMs_20	IAMs_20	07 19 17.6	
	comp=Z,963nm,20.0s						
M19K	**Big River Lodg**	**137.75**	**43**	P	**PKPdf**	**06 21 13.7**	**+0.9**
	baz=254						
J19K	**Poorman**	**137.77**	**39**	P	**PKPdf**	**06 21 13.4**	**+0.7**
	baz=255						
H19K	**Roundabout Mou**	**137.81**	**37**	IAMs_20	IAMs_20	07 20 46.6	
	comp=Z,1µm,21.0s						
H19K	**Roundabout Mou**	**137.81**	**37**	P	**PKPdf**	**06 21 13.2**	**+0.6**
	baz=256,SNR=6.5						
D19K	**Kuna River**	**137.84**	**32**	IAMs_20	IAMs_20	07 31 45.1	
	comp=Z,1µm,20.0s						
D19K	**Kuna River**	**137.84**	**32**	P	**PKPdf**	**06 21 14.2**	**+1.5**
	baz=258						
E19K	**Redstone River**	**137.95**	**34**	IAMs_20	IAMs_20	07 26 32.0	
	comp=Z,1µm,22.0s						
E19K	**Redstone River**	**137.95**	**34**	P	**PKPdf**	**06 21 13.9**	**+1.0**
	baz=258						
O20K	**Slope Mountain**	**138.06**	**46**	P	**PKPdf**	**06 21 13.9**	**+0.5**
	baz=253						
L20K	**Farewell, AK**	**138.14**	**42**	P	**PKPdf**	**06 21 14.1**	**+0.6**
	baz=255						
K20K	**Telida**	**138.28**	**41**	P	**PKPdf**	**06 21 14.8**	**+1.1**
	baz=256						
M20K	**Styx River**	**138.32**	**43**	P	**PKPdf**	**06 21 15.2**	**+1.3**
	baz=255						
HOM	**Homer**	**138.41**	**46**	IAMs_20	IAMs_20	07 18 02.2	
	comp=Z,1µm,21.0s						
HOM	**Homer**	**138.41**	**46**	P	**PKPdf**	**06 21 15.2**	**+1.2**
	baz=253						
D20K	**Etivluk River**	**138.43**	**32**	IAMs_20	IAMs_20	07 29 20.5	
	comp=Z,1µm,21.0s						

D20K	Etivluk River baz=259	138.43	32	P	PKPdf	06 21 15.4	+1.6
F20K	Avaraart Lake comp=Z,1µm,20.0s	138.43	35	IAMs_20	IAMs_20	07 31 32.1	
F20K	Avaraart Lake baz=258	138.43	35	P	PKPdf	06 21 15.1	+1.3
H20K	Anotleneega Mo baz=257	138.44	37	P	PKPdf	06 21 14.9	+1.0
J20K	Nowinta River baz=256	138.45	39	P	PKPdf	06 21 14.7	+0.8
I20K	Naaghedeneel baz=257	138.45	38	P	PKPdf	06 21 14.8	+1.0
B20K	Meade River comp=Z,1µm,18.0s	138.46	30	IAMs_20	IAMs_20	07 33 23.3	
B20K	Meade River baz=260	138.46	30	P	PKPdf	06 21 15.0	+1.2
E20K	Nigu River baz=259	138.50	33	P	PKPdf	06 21 14.7	+0.7
CNPM	China Poot comp=Z,1µm,22.0s	138.57	47	IAMs_20	IAMs_20	07 16 15.6	
BRLK	Bradley Lake comp=Z,1µm,21.0s	138.81	46	IAMs_20	IAMs_20	07 18 12.7	
BRSE	Bradley Lake S baz=254	138.88	46	P	PKPdf	06 21 15.8	+1.0
CAPN	Captain Cook N baz=255	138.95	45	P	PKPdf	06 21 16.0	+1.1
PPLA	Purkeypile comp=Z,1µm,21.0s	139.00	42	IAMs_20	IAMs_20	07 21 18.5	
PPLA	Purkeypile baz=256	139.00	42	P	PKPdf	06 21 15.9	+0.8
SKT	Skwentna baz=256	139.08	43	P	PKPdf	06 21 16.8	+1.6
C21K	Knifeblade Rid baz=262	139.15	32	P	PKPdf	06 21 15.6	+0.5
CAST	Castle Rocks	139.16	41		PKPdf	06 21 16.1	+0.8
CAST	comp=Z,1µm,20.0s			IAMs_20	IAMs_20	07 20 59.7	
CAST	Castle Rocks baz=257	139.16	41	P	PKPdf	06 21 16.1	+0.8
CHUM	Lake Minchumin baz=258	139.17	40	P	PKPdf	06 21 16.0	+0.8
G21K	Allakaket	139.20	36	PKPdf	PKPdf	06 21 15.8	+0.6
G21K	comp=Z,1µm,21.0s			IAMs_20	IAMs_20	07 32 03.1	
G21K	Allakaket baz=260	139.20	36	P	PKPdf	06 21 15.2	-0.1
B21K	Ikpikpuk River comp=Z,1µm,20.0s	139.28	31	IAMs_20	IAMs_20	07 26 13.9	
B21K	Ikpikpuk River baz=262	139.28	31	P	PKPdf	06 21 16.0	+0.7
SUA	Susitna One baz=256	139.32	44	P	PKPdf	06 21 16.2	+0.4
H21K	Melozitna Rive	139.32	37		PKPdf	06 21 16.3	+0.8
H21K	comp=Z,1µm,20.0s			IAMs_20	IAMs_20	07 32 29.5	
H21K	Melozitna Rive baz=259	139.32	37	P	PKPdf	06 21 16.6	+1.1
A22K	Sinclair Lake baz=263	139.33	29	P	PKPdf	06 21 15.6	+0.3
F21K	Alatna River comp=Z,1µm,20.0s	139.33	35	IAMs_20	IAMs_20	07 29 01.4	
F21K	Alatna River baz=260	139.33	35	P	PKPdf	06 21 16.1	+0.6
E21K	Killik River comp=Z,862nm,18.0s	139.34	33	IAMs_20	IAMs_20	07 34 46.9	
E21K	Killik River baz=261	139.34	33	P	PKPdf	06 21 16.8	+1.3
FIS	Fire Island comp=Z,1µm,22.0s	139.49	44	IAMs_20	IAMs_20	07 17 07.8	
O22K	Cooper Landing comp=Z,1µm,21.0s	139.56	46	IAMs_20	IAMs_20	07 18 58.8	
O22K	Cooper Landing baz=256	139.56	46	P	PKPdf	06 21 16.6	+0.6
SEW	Seward baz=255	139.60	46	P	PKPdf	06 21 16.8	+0.7
M22K	Willow comp=Z,935nm,18.0s	139.68	44	IAMs_20	IAMs_20	07 35 04.5	
M22K	Willow baz=257	139.68	44	P	PKPdf	06 21 16.8	+0.6
RC01	Rabbit Creek A baz=256	139.70	45	P	PKPdf	06 21 16.7	+0.4
KTH	Kantishna Hill comp=Z,1µm,21.0s	139.70	41	IAMs_20	IAMs_20	07 21 35.0	
CUT	Chulitna comp=Z,1µm,22.0s	139.75	43	IAMs_20	IAMs_20	07 20 10.5	
CUT	Chulitna baz=257	139.75	43	P	PKPdf	06 21 17.0	+0.6
B22K	Teshekpuk Lake comp=Z,1µm,21.0s	139.77	30	IAMs_20	IAMs_20	07 26 30.8	
B22K	Teshekpuk Lake baz=264	139.77	30	P	PKPdf	06 21 17.1	+1.0
BPAW	Bear Paw Mtn. comp=Z,1µm,20.0s	139.78	40	IAMs_20	IAMs_20	07 33 07.0	
BPAW	Bear Paw Mtn. baz=259	139.78	40	P	PKPdf	06 21 16.9	+0.5
D22K	Ayikyak River baz=263	139.86	32	P	PKPdf	06 21 17.2	+0.7
F22K	John River baz=262	139.87	35	P	PKPdf	06 21 17.1	+0.6
H22K	Ishtalitna Cre baz=261,SNR=6.1	139.94	37	P	PKPdf	06 21 17.1	+0.4
TRF	Thorofare Moun comp=Z,950nm,20.0s	139.96	41	IAMs_20	IAMs_20	07 22 19.8	
TRF	Thorofare Moun baz=259	139.96	41	P	PKPdf	06 21 17.1	+0.2
G22K	Bettles baz=262	140.05	36	P	PKPdf	06 21 17.0	+0.3
MLY	Manley baz=260	140.06	38	P	PKPdf	06 21 17.3	+0.4
E22K	Anaktuvuk Pass comp=Z,1µm,20.0s	140.09	34	IAMs_20	IAMs_20	07 30 28.6	
E22K	Anaktuvuk Pass baz=263,SNR=5.1	140.09	34	P	PKPdf	06 21 17.9	+1.0
PMR	Palmer comp=Z,1µm,22.0s	140.10	44	IAMs_20	IAMs_20	07 17 51.7	
PMR	Palmer	140.10	44	P	PKPdf	06 21 18.9	+1.9
PMR	Palmer	140.10	44	P	PKPdf	06 21 18.6	+1.6
PMR	Palmer baz=257	140.10	44	P	PKPdf	06 21 17.7	+0.7
GHO	Glory Hole Cre comp=Z,1µm,22.0s	140.24	44	IAMs_20	IAMs_20	07 17 56.3	
PWL	Port Wells comp=Z,792nm,18.0s	140.31	45	IAMs_20	IAMs_20	07 35 59.5	
PWL	Port Wells baz=257	140.31	45	P	PKPdf	06 21 17.9	+0.5
KNK	Knik Glacier comp=Z,922nm,20.0s	140.38	44	IAMs_20	IAMs_20	07 34 02.1	
KNK	Knik Glacier baz=258	140.38	44	P	PKPdf	06 21 18.3	+0.7
BWN	Browne comp=Z,1µm,20.0s	140.45	40	IAMs_20	IAMs_20	07 23 32.6	
P23K	Montague Islan baz=257	140.57	47	P	PKPdf	06 21 18.7	+0.8
RND	Reindeer comp=Z,974nm,20.0s	140.59	41	IAMs_20	IAMs_20	07 31 31.3	
COLD	Coldfoot comp=Z,1µm,20.0s	140.59	35	IAMs_20	IAMs_20	07 22 39.8	
COLD	Coldfoot baz=263	140.59	35	P	PKPdf	06 21 18.5	+0.7
D23K	Nanushuk River comp=Z,929nm,21.0s	140.59	32	IAMs_20	IAMs_20	07 30 34.8	
D23K	Nanushuk River baz=265	140.59	32	P	PKPdf	06 21 19.0	+1.3
G23K	Bananza Creek comp=Z,938nm,20.0s	140.60	36	IAMs_20	IAMs_20	07 29 27.2	
G23K	Bananza Creek baz=263	140.60	36	P	PKPdf	06 21 18.6	+0.7
MCK	McKinley comp=Z,1µm,20.0s	140.61	41	IAMs_20	IAMs_20	07 33 44.9	
MCK	McKinley baz=260	140.61	41	P	PKPdf	06 21 18.6	+0.7
WAT1	Susitna Watana baz=259	140.62	42	P	PKPdf	06 21 18.3	+0.3
I23K	Minto, Yukon-K comp=Z,838nm,19.0s	140.65	38	IAMs_20	IAMs_20	07 37 13.9	
I23K	Minto, Yukon-K baz=261	140.65	38	P	PKPdf	06 21 18.8	+0.9
H23K	Yukon River baz=262	140.68	37	P	PKPdf	06 21 18.6	+0.6
C23K	Itkillik River comp=Z,1µm,21.0s	140.69	31	IAMs_20	IAMs_20	07 26 53.1	
C23K	Itkillik River baz=266	140.69	31	P	PKPdf	06 21 18.4	+0.6
NEA2	Nenana baz=261	140.69	39	P	PKPdf	06 21 18.3	+0.3
M23K	Glacier View baz=259	140.80	44	P	PKPdf	06 21 18.9	+0.6
E23K	Chandalar comp=Z,1µm,21.0s	140.90	34	IAMs_20	IAMs_20	07 31 41.1	
E23K	Chandalar baz=265	140.90	34	P	PKPdf	06 21 18.9	+0.5
GLI	Glacier Island baz=258	140.91	45	P	PKPdf	06 21 18.8	+0.3
NOR	Nord	140.92	348	i P	PKPdf	06 21 17.3	-0.7
WAT6	Susitna Watana baz=260	140.94	43	P	PKPdf	06 21 18.7	0.0
Q23K	Middleton Isla baz=257	140.96	48	P	PKPdf	06 21 19.4	+0.8
GRGR	Grenville comp=Z,1µm,20.0s	140.97	210	IAMs_20	IAMs_20	07 26 59.5	
TOLK	Toolik Lake Re comp=Z,1µm,20.0s	140.97	33	IAMs_20	IAMs_20	07 29 29.7	
TOLK	Toolik Lake Re baz=266	140.97	33	P	PKPdf	06 21 18.8	+0.3
SCM	Sheep Creek Mo baz=259	140.99	44	P	PKPdf	06 21 19.0	+0.3
WRH	Wood River Hil comp=Z,1µm,21.0s	141.09	40	IAMs_20	IAMs_20	07 23 19.6	
HIN	Hinchinbrook I comp=Z,922nm,20.0s	141.10	46	IAMs_20	IAMs_20	07 22 24.2	
FID	Port Fidalgo comp=Z,1µm,19.0s	141.18	46	IAMs_20	IAMs_20	07 32 30.8	
DHY	Denali Highway baz=260	141.19	42	P	PKPdf	06 21 19.4	+0.2
CCB	Clear Creek Bu comp=Z,1µm,20.0s	141.24	39	IAMs_20	IAMs_20	07 23 46.4	
COLA	College comp=Z,991nm,20.0s	141.25	39	IAMs_20	IAMs_20	07 33 11.6	
COLA	College	141.25	39	i PKIKP	PKPdf	06 21 17.6	-1.4
D24K	Happy Valley comp=Z,915nm,19.0s	141.27	32	IAMs_20	IAMs_20	07 32 31.7	
D24K	Happy Valley baz=267	141.27	32	P	PKPdf	06 21 19.6	+0.6
BCIP	Isla Barro Col comp=Z,852nm,19.0s	141.32	181	IAMs_20	IAMs_20	07 25 26.2	
E24K	Your Creek comp=Z,1µm,20.0s	141.33	34	IAMs_20	IAMs_20	07 30 11.4	
E24K	Your Creek baz=266	141.33	34	P	PKPdf	06 21 19.8	+0.6
C24K	Franklin Bluff baz=268	141.34	31	P	PKPdf	06 21 19.9	+0.9
H24K	Noodor Dome baz=264	141.36	38	P	PKPdf	06 21 19.4	+0.1
EYAK	Cordova Ski Ar comp=Z,1µm,21.0s	141.49	46	IAMs_20	IAMs_20	07 35 32.7	
EYAK	Cordova Ski Ar baz=259	141.49	46	P	PKPdf	06 21 19.7	+0.2
F24K	Squaw Lake comp=Z,1µm,21.0s	141.51	35	IAMs_20	IAMs_20	07 22 59.2	
F24K	Squaw Lake baz=266	141.51	35	P	PKPdf	06 21 20.0	+0.5
KLU	Klutina baz=260	141.59	45	P	PKPdf	06 21 20.1	+0.3
G24K	Hadweenzic Riv comp=Z,1µm,20.0s	141.61	36	IAMs_20	IAMs_20	07 28 37.8	
G24K	Hadweenzic Riv baz=265	141.61	36	P	PKPdf	06 21 20.1	+0.5
ILAR	Eielson Array comp=Z,1.4nm,0.9s,baz=269,slow=3.9,SNR=9.8	141.65	39	PKhKP	PKPpre	06 21 11.1	
RAGM	Ragged Mountai comp=Z,1µm,20.0s	141.98	47	IAMs_20	IAMs_20	07 33 11.7	
K24K	Donnelly Dome baz=263	142.01	41	P	PKPdf	06 21 20.8	+0.4
KAIM	Kayak Island comp=Z,924nm,19.0s	142.02	47	IAMs_20	IAMs_20	07 28 53.8	
KAIM	Kayak Island baz=259	142.02	47	P	PKPdf	06 21 20.6	+0.1
PAX	Paxson comp=Z,1µm,20.0s	142.03	42	IAMs_20	IAMs_20	07 34 57.7	
PAX	Paxson baz=262	142.03	42	P	PKPdf	06 21 20.6	0.0
HARP	HAARP baz=261	142.09	43	P	PKPdf	06 21 21.1	+0.5
BMRM	Bremner River comp=Z,1µm,22.0s	142.12	46	IAMs_20	IAMs_20	07 18 31.3	
BMRM	Bremner River baz=260	142.12	46	P	PKPdf	06 21 21.0	+0.3
D25K	Kavik River comp=Z,792nm,18.0s	142.15	32	IAMs_20	IAMs_20	07 36 16.0	
D25K	Kavik River baz=269	142.15	32	P	PKPdf	06 21 21.1	+0.5
G25K	Bearman Lake baz=266	142.16	36	P	PKPdf	06 21 20.9	+0.3
HMT	Hamilton comp=Z,945nm,19.0s	142.18	47	IAMs_20	IAMs_20	07 34 52.8	
N25K	Chitina, Valde baz=261	142.23	45	P	PKPdf	06 21 20.9	-0.1
H25L	Birch Creek baz=266	142.23	37	P	PKPdf	06 21 21.1	+0.4
J25K	Salcha River, comp=Z,948nm,20.0s	142.28	40	IAMs_20	IAMs_20	07 31 49.9	
J25K	Salcha River, baz=264	142.28	40	P	PKPdf	06 21 20.7	-0.2
PRP	Porcupine Dome comp=Z,985nm,20.0s	142.30	38	IAMs_20	IAMs_20	07 25 41.2	
PRP	Porcupine Dome baz=265	142.30	38	P	PKPdf	06 21 20.8	-0.3
F25K	Christian Rive	142.38	35		PKPdf	06 21 21.8	+0.8
F25K	comp=Z,1µm,19.0s			IAMs_20	IAMs_20	07 33 55.0	
F25K	Christian Rive baz=268,SNR=5.3	142.38	35	P	PKPdf	06 21 20.9	-0.1
RIDG	Independent Ri baz=263	142.41	41	P	PKPdf	06 21 21.1	-0.1
E25K	Arctic Village comp=Z,1µm,21.0s	142.42	34	IAMs_20	IAMs_20	07 32 01.2	
E25K	Arctic Village baz=268	142.42	34	P	PKPdf	06 21 20.4	-0.6
BERG	Berg Lake comp=Z,934nm,19.0s	142.46	47	IAMs_20	IAMs_20	07 35 17.6	
DOT	Dot Lake comp=Z,1µm,21.0s	142.75	41	IAMs_20	IAMs_20	07 22 16.4	
MENT	Mentasta comp=Z,1µm,19.0s	142.82	43	IAMs_20	IAMs_20	07 35 04.5	
MPOM	Morne Pois Mar comp=Z,927nm,21.0s	142.84	212	IAMs_20	IAMs_20	07 26 33.1	
WAX	Waxell Ridge comp=Z,1µm,18.0s	142.89	47	IAMs_20	IAMs_20	07 30 08.6	
MCARA	McCarthy VSAT comp=Z,923nm,22.0s	142.94	45	IAMs_20	IAMs_20	07 18 46.0	
F26K	Sheenjek River comp=Z,1µm,20.0s	142.95	35	IAMs_20	IAMs_20	07 25 01.2	
L26K	Log Cabin Wild comp=Z,1µm,18.0s	143.00	42	IAMs_20	IAMs_20	07 35 26.3	
J26L	Joseph Creek comp=Z,1µm,20.0s	143.04	40	IAMs_20	IAMs_20	07 25 11.2	
G26K	Porcupine Rive comp=Z,1µm,20.0s	143.08	36	IAMs_20	IAMs_20	07 33 29.7	
C27K	Jago River comp=Z,849nm,20.0s	143.09	31	IAMs_20	IAMs_20	07 33 06.6	
M26K	Nabesna, AK comp=Z,854nm,20.0s	143.09	43	IAMs_20	IAMs_20	07 29 05.7	
ISLE	Juniper Island comp=Z,832nm,19.0s	143.16	47	IAMs_20	IAMs_20	07 34 22.1	
FDF	Fort de France comp=Z,975nm,20.0s	143.21	212	IAMs_20	IAMs_20	07 28 37.9	
I26K	Coal Creek Min comp=Z,1µm,20.0s	143.27	39	IAMs_20	IAMs_20	07 24 38.3	
MESA	MESA comp=Z,1µm,21.0s	143.29	47	IAMs_20	IAMs_20	07 36 51.5	
SVN	Savane Anatole comp=Z,1µm,19.0s	143.31	212	IAMs_20	IAMs_20	07 28 29.7	
YAH	Yahtse comp=Z,1µm,19.0s	143.41	47	IAMs_20	IAMs_20	07 36 26.0	
GRNC	Granite Creek comp=Z,795nm,19.0s	143.46	46	IAMs_20	IAMs_20	07 30 34.1	
DBG	Daneborg	143.47	337	i P	PKPab	06 21 21.0	+2.0
M27K	Edge Creek, AK baz=264	143.60	44	P	PKPab	06 21 21.4	+1.3
K27K	Chicken comp=Z,1µm,22.0s	143.66	41	IAMs_20	IAMs_20	07 20 16.8	
K27K	Chicken baz=266	143.66	41	P	PKPab	06 21 21.3	+1.2
L27K	Beaver Creek, comp=Z,969nm,21.0s	143.69	42	IAMs_20	IAMs_20	07 32 18.7	
L27K	Beaver Creek, baz=265,SNR=18	143.69	42	P	PKPab	06 21 21.4	+1.1
CTG	Chitna Glacier baz=262	143.70	46	P	PKPab	06 21 21.9	+1.4
CTGM	Chitina Glacie comp=Z,1µm,21.0s	143.70	46	IAMs_20	IAMs_20	07 34 09.2	
E27K	Coleen River comp=Z,1µm,21.0s	143.91	34	IAMs_20	IAMs_20	07 29 26.5	
E27K	Coleen River baz=272,SNR=6.5	143.91	34	P	PKPab	06 21 21.9	+0.9
G27K	Doyon Strip baz=270,SNR=25	143.92	36	P	PKPab	06 21 21.8	+0.7
I27K	Kandik River baz=269,SNR=25	143.92	38	P	PKPab	06 21 21.9	+0.8
H27K	Steamboat Moun comp=Z,1µm,21.0s	143.97	37	IAMs_20	IAMs_20	07 27 52.5	
H27K	Steamboat Moun baz=270,SNR=22	143.97	37	P	PKPab	06 21 22.1	+0.8
D27M	Malcolm River baz=274	144.08	32	P	PKPab	06 21 22.6	+1.0
BVCY	Beaver Creek baz=265,SNR=20	144.08	44	P	PKPab	06 21 22.6	+0.8
PCA	Pinnacle comp=Z,893nm,20.0s	144.11	48	IAMs_20	IAMs_20	07 22 18.5	
PINM	Pinnacle baz=262	144.12	48	P	PKPab	06 21 22.8	+0.7
YUK3	Moose Creek baz=264,SNR=20	144.21	45	P	PKPab	06 21 23.2	+0.6
O28M	Mount Upton baz=263,SNR=9.8	144.23	47	P	PKPab	06 21 24.1	+1.4
YKU2	Yakutat comp=Z,908nm,18.0s	144.32	49	IAMs_20	IAMs_20	07 27 04.8	
MAGL	Barre de l'ile comp=Z,1µm,22.0s	144.38	213	IAMs_20	IAMs_20	07 23 58.9	
BCPM	Bancas Point comp=Z,1µm,20.0s	144.40	48	IAMs_20	IAMs_20	07 22 25.8	
PNL	Peninsula baz=262,SNR=11	144.49	48	P	PKPab	06 21 24.1	+0.8
YUK8	Steele Glacier baz=264,SNR=8.1	144.49	46	P	PKPab	06 21 24.5	+0.9
F28M	Old Crow baz=273,SNR=17	144.59	35	P	PKPab	06 21 24.2	+0.7
CBE	Ff, Capester comp=Z,1µm,22.0s	144.60	212	IAMs_20	IAMs_20	07 23 33.9	
I28M	Miner Creek	144.62	38		PKPab	06 21 22.3	-1.5
I28M	comp=Z,1µm,19.0s			IAMs_20	IAMs_20	07 32 44.8	
I28M	Miner Creek baz=270,SNR=95	144.62	38	P	PKPab	06 21 24.6	+0.8
GDSD	La Dsirade Is comp=Z,961nm,22.0s	144.63	213	IAMs_20	IAMs_20	07 23 56.6	
E28M	Babbage River comp=Z,1µm,22.0s	144.64	33	IAMs_20	IAMs_20	07 27 34.9	
E28M	Babbage River baz=275,SNR=17	144.64	33	P	PKPab	06 21 24.5	+0.8
SCO	Scoresbysund	144.65	330		PKPab	06 21 25.6	+2.0
SCO	Scoresbysund	144.65	330	PKIKP	PKPab	06 21 25.6	+2.0
SCO	comp=Z,800nm,22.0s			MLR	MLR		
SCO	Scoresbysund	144.65	330	i P	PKPbc	06 21 26.0	+2.3
BORG	Borgarnes comp=Z,1µm,20.0s	144.79	320	IAMs_20	IAMs_20	07 28 31.9	
DAWY	Dawson comp=Z,979nm,21.0s	144.84	41	IAMs_20	IAMs_20	07 23 11.7	
DAWY	Dawson baz=268,SNR=128	144.84	41	P	PKPab	06 21 24.8	+0.2
GDHS	Morne Mazeau,	144.85	212		PKPab	06 21 27.0	+1.0
GDHS	comp=Z,1µm,21.0s			IAMs_20	IAMs_20	07 29 31.8	
D28M	Stokes Point baz=277	144.86	32	P	PKPab	06 21 25.0	+0.6
ABD	La Joyeuse, An comp=Z,919nm,22.0s	144.94	213	IAMs_20	IAMs_20	07 26 59.7	
O29M	Mount Kennedy baz=264,SNR=18	144.97	47	P	PKPbc	06 21 26.1	+0.8
YUK4	Talbot Arm baz=265,SNR=59	145.03	46	P	PKPbc	06 21 26.2	+0.7
YUK6	Outpost Mounta baz=265,SNR=19	145.14	46	P	PKPbc	06 21 26.3	+0.4
M29M	Somme Creek baz=267,SNR=114	145.20	44	P	PKPbc	06 21 26.7	+0.8
H29M	Whitestone comp=Z,1µm,22.0s	145.25	37	IAMs_20	IAMs_20	07 24 25.2	
H29M	Whitestone baz=272,SNR=34	145.25	37	P	PKPbc	06 21 26.0	+0.1
E29M	Blow River	145.27	33		PKPbc	06 21 26.3	+0.5
E29M	comp=Z,993nm,21.0s			IAMs_20	IAMs_20	07 30 29.3	
E29M	Blow River baz=276,SNR=19	145.27	33	P	PKPbc	06 21 25.7	-0.1
I29M	Ogilvie Camp, comp=Z,1µm,20.0s	145.31	39	IAMs_20	IAMs_20	07 31 56.1	
I29M	Ogilvie Camp, baz=271	145.31	39	P	PKPbc	06 21 25.8	-0.2
P29M	Windy Craggy	145.32	49		PKPbc	06 21 26.2	0.0
P29M	comp=Z,853nm,20.0s			IAMs_20	IAMs_20	07 21 55.4	
P29M	Windy Craggy baz=264,SNR=32	145.32	49	P	PKPbc	06 21 26.3	0.0
G29M	Pine Creek comp=Z,928nm,20.0s	145.35	36	IAMs_20	IAMs_20	07 27 24.7	
G29M	Pine Creek baz=274,SNR=30	145.35	36	P	PKPdf	06 21 26.6	+0.4
J29N	Klondike Camp baz=270	145.36	40	P	PKPdf	06 21 27.0	+0.6
L29M	L29M comp=Z,1µm,19.0s	145.38	43	IAMs_20	IAMs_20	07 37 26.1	
L29M	L29M baz=268,SNR=82	145.38	43	P	PKPdf	06 21 26.9	+0.5
HYT	Haines Junctio baz=265,SNR=52	145.55	47	P	PKPdf	06 21 27.2	+0.4
K29M	Barlow Dome comp=Z,940nm,22.0s	145.66	41	IAMs_20	IAMs_20	07 30 42.5	
K29M	Barlow Dome baz=270,SNR=53	145.66	41	P	PKPdf	06 21 27.3	+0.4
TGUH	Tegucigalpa,Un comp=Z,1µm,22.0s	145.71	168	IAMs_20	IAMs_20	07 18 27.0	
P30M	Million Dollar baz=265,SNR=20	145.76	48	P	PKPdf	06 21 27.8	+0.7
N30M	Aishikik Lake comp=Z,1µm,20.0s	145.79	46	IAMs_20	IAMs_20	07 36 15.3	
N30M	Aishikik Lake baz=267,SNR=43	145.79	46	P	PKPdf	06 21 28.2	+1.0
S31K	Pelican baz=262,SNR=7.0	145.89	52	P	PKPdf	06 21 27.8	+0.5
EPYK	Eagle Plains comp=Z,828nm,19.0s	145.91	37	IAMs_20	IAMs_20	07 31 11.5	
EPYK	Eagle Plains baz=274,SNR=30	145.91	37	P	PKPdf	06 21 26.9	-0.3
PLBC	Pleasant Camp baz=264	145.99	49	P	PKPdf	06 21 27.6	+0.2
G30M	tAoh Zraii Nji comp=Z,1µm,22.0s	146.05	36	IAMs_20	IAMs_20	07 25 58.1	
G30M	tAoh Zraii Nji baz=276,SNR=11	146.05	36	P	PKPdf	06 21 27.3	-0.1
I30M	Mount Dempster comp=Z,1µm,20.0s	146.12	39	IAMs_20	IAMs_20	07 32 47.4	
I30M	Mount Dempster baz=273,SNR=29	146.12	39	P	PKPdf	06 21 28.2	+0.5
F30M	Barrier River baz=277,SNR=14	146.15	34	P	PKPdf	06 21 28.7	+1.2
J30M	Hart River	146.17	40		PKPdf	06 21 27.7	-0.1
J30M	Hart River baz=272,SNR=75	146.17	40	P	PKPdf	06 21 29.7	+1.8
R31K	City Hall, Gus baz=263	146.20	51	P	PKPdf	06 21 28.7	+0.9
O30N	Mendenhall comp=Z,1µm,21.0s	146.23	47	IAMs_20	IAMs_20	07 23 14.4	
O30N	Mendenhall baz=266,SNR=42	146.23	47	P	PKPdf	06 21 29.8	+1.8
SIT	Sitka	146.25	54	P	PKPdf	06 21 30.7	+2.8
SIT	Sitka	146.25	54	P	PKPdf	06 21 29.9	+2.0
SIT	Sitka baz=262,SNR=9.8	146.25	54	P	PKPdf	06 21 30.0	+2.0
SLBS	Sierra La Lagu	146.29	126		PKPdf	06 21 30.1	+0.9
MAYO	Mayo, Yukon comp=Z,1µm,21.0s	146.39	42	IAMs_20	IAMs_20	07 29 36.8	
MAYO	Mayo, Yukon baz=271,SNR=11	146.39	42	P	PKPdf	06 21 30.5	+2.4
SEUS	St. Eustatius comp=Z,1µm,19.0s	146.41	211	IAMs_20	IAMs_20	07 33 00.6	
N31M	Braeburn, Yuko comp=Z,905nm,21.0s	146.42	46	IAMs_20	IAMs_20	07 24 39.9	
N31M	Braeburn, Yuko baz=268,SNR=34	146.42	46	P	PKPdf	06 21 30.2	+2.0
SKAG	Skagway comp=Z,969nm,20.0s	146.52	49	IAMs_20	IAMs_20	07 21 14.3	
SKAG	Skagway	146.52	49	P	PKPdf	06 21 31.3	+3.0
SKAG	Skagway	146.52	49	P	PKPdf	06 21 30.6	+2.3
SKAG	Skagway baz=265	146.52	49	P	PKPdf	06 21 30.4	+2.1
S32K	Killisnoo baz=263,SNR=6.1	146.71	53	P	PKPdf	06 21 31.1	+2.4
G31M	Satah River comp=Z,917nm,18.0s	146.82	36	IAMs_20	IAMs_20	07 37 30.5	
G31M	Satah River baz=278,SNR=24	146.82	36	P	PKPdf	06 21 30.7	+2.1
WHY	Whitehorse baz=267,SNR=27	146.82	47	P	PKPdf	06 21 31.6	+2.6

R32K	Eaglecrest	146.83	51	P	PKPdf	06 21 31.6	+2.7
	baz=264,SNR=11						
INK	Inuvik	146.88	33	IAMs_20	IAMs_20	07 29 24.0	
	comp=Z,946nm,20.0s						
INK	Inuvik	146.88	33	P	PKPdf	06 21 30.7	+2.0
	baz=280						
JIS	Juneau Island	146.90	51	P	PKPdf	06 21 32.0	+3.0
JIS	Juneau Island	146.90	51	P	PKPdf	06 21 31.4	+2.4
H31M	Peel River	146.92	38	IAMs_20	IAMs_20	07 38 33.4	
	comp=Z,956nm,20.0s						
H31M	Peel River	146.92	38	P	PKPdf	06 21 31.2	+2.3
	baz=276,SNR=30						
F31M	Tsiigehtchic	146.95	35	IAMs_20	IAMs_20	07 34 03.8	
	comp=Z,966nm,21.0s						
F31M	Tsiigehtchic	146.95	35	P	PKPdf	06 21 30.9	+2.1
	baz=279,SNR=6.3						
SMRT	St. Maarten	146.96	211	IAMs_20	IAMs_20	07 26 44.2	
	comp=Z,1μm,22.0s						
M31M	Drury Creek, Y	147.09	44	IAMs_20	IAMs_20	07 24 05.9	
	comp=Z,1μm,20.0s						
M31M	Drury Creek, Y	147.09	44	P	PKPdf	06 21 31.4	+2.1
	baz=270						
CRAG	Craig	147.22	57	P	PKPbc	06 21 33.6	+1.7
CRAG	Craig	147.22	57	P	PKPdf	06 21 32.1	+2.5
CRAG	Craig	147.22	57	P	PKPdf	06 21 32.5	+2.9
	baz=261						
U33K	Whale Pass	147.32	56	IAMs_20	IAMs_20	07 20 35.0	
	comp=Z,1μm,20.0s						
U33K	Whale Pass	147.32	56	P	PKPdf	06 21 32.4	+2.7
	baz=262,SNR=13						
P32M	Atlin	147.35	49	IAMs_20	IAMs_20	07 25 44.2	
	comp=Z,981nm,19.0s						
P32M	Atlin	147.35	49	P	PKPdf	06 21 32.6	+2.8
	baz=267,SNR=25						
T33K	Petersburg	147.50	54	P	PKPdf	06 21 32.8	+2.8
	baz=263						
FARO	Faro, Yukon	147.58	44	IAMs_20	IAMs_20	07 41 05.6	
	comp=Z,786nm,20.0s						
FARO	Faro, Yukon	147.58	44	P	PKPdf	06 21 32.8	+2.7
	baz=271,SNR=36						
UNM	Universidad Na	147.62	145	IAMs_20	IAMs_20	07 27 35.3	
	comp=Z,988nm,21.0s						
N32M	Quiet Lake	147.71	46	IAMs_20	IAMs_20	07 24 01.6	
	comp=Z,964nm,20.0s						
N32M	Quiet Lake	147.71	46	P	PKPdf	06 21 33.9	+3.5
	baz=270,SNR=19						
HG4B	Hotspring	147.72	63	IAMs_20	IAMs_20	07 16 42.8	
	comp=Z,1μm,21.0s						
WRAK	Wrangell Islan	147.78	55	P	PKPdf	06 21 32.9	+2.3
	baz=263,SNR=7.5						
MCCM	Marconi Confer	147.83	92	IAMs_20	IAMs_20	07 23 31.7	
	comp=Z,1μm,19.0s						
P33M	Teslin, Yukon	147.83	48	IAMs_20	IAMs_20	07 26 43.7	
	comp=Z,1μm,21.0s						
P33M	Teslin, Yukon	147.83	48	P	PKPdf	06 21 33.7	+3.1
	baz=268,SNR=16						
PDPR	Patillas Dam,	147.88	206	PKPdf	PKPdf	06 21 32.9	+1.0
SJG	San Juan	148.01	206	IAMs_20	IAMs_20	07 35 48.0	
	comp=Z,1μm,19.0s						
V35K	Ketchikan	148.04	57	P	PKPdf	06 21 34.3	+3.3
	baz=261						
Q32M	Nakina River	148.06	50	IAMs_20	IAMs_20	07 22 36.6	
	comp=Z,1μm,20.0s						
Q32M	Nakina River	148.06	50	P	PKPbc	06 21 35.3	+0.9
	baz=267,SNR=13						
KMPM	Mount Pierce	148.13	87	IAMs_20	IAMs_20	07 15 22.7	
	comp=Z,1μm,20.0s						
KCPM	Cahto Peak	148.14	89	IAMs_20	IAMs_20	07 17 25.9	
	comp=Z,1μm,20.0s						
NEEM	North Greenlan	148.30	348	*i* P	PKPdf	06 21 35.0	+3.7
UUPR	Utuado, UPR, P	148.31	205		PKPdf	06 21 36.1	+3.5
KMRM	Mail Ridge	148.31	88	IAMs_20	IAMs_20	07 14 20.3	
	comp=Z,1μm,22.0s						
SOEG	Soedalen	148.38	327	*i* P	PKPbc	06 21 35.8	+1.1
JCC	Jacoby Creek,	148.38	87	IAMs_20	IAMs_20	07 16 02.3	
	comp=Z,1μm,22.0s						
TJX	Tijuana	148.41	106	IAMs_20	IAMs_20	07 19 11.8	
	comp=Z,915nm,20.0s						
A36M	Sachs Harbour	148.45	25	IAMs_20	IAMs_20	07 34 46.2	
	comp=Z,952nm,21.0s						
A36M	Sachs Harbour	148.45	25	P	PKPdf	06 21 34.8	+3.6
	baz=295						
VTX	Valle De La Tr	148.49	109	IAMs_20	IAMs_20	07 24 54.9	
	comp=Z,1μm,20.0s						
MMPY	Sheldon Lake,	148.53	43	IAMs_20	IAMs_20	07 22 15.6	
	comp=Z,969nm,21.0s						
MMPY	Sheldon Lake,	148.53	43	P	PKPbc	06 21 36.0	+0.6
	baz=274,SNR=18						
S34M	Telegraph Cree	148.59	52	P	PKPbc	06 21 36.5	+1.0
	baz=266,SNR=20						
PASC	Pasadena Art C	148.71	102	IAMs_20	IAMs_20	07 18 27.8	
	comp=Z,1μm,20.0s						
TKX	Tecate	148.73	106	IAMs_20	IAMs_20	07 25 54.4	
	comp=Z,998nm,20.0s						
R33M	Jennings River	148.74	50	P	PKPbc	06 21 37.2	+1.1
	baz=269,SNR=17						
SFX	San Felipe	148.84	110	IAMs_20	IAMs_20	07 21 33.2	
	comp=Z,1μm,21.0s						
ELS	Elsinore Mount	148.88	104	IAMs_20	IAMs_20	07 16 34.5	
	comp=Z,999nm,21.0s						
SUMG	Summit	148.95	337	IAMs_20	IAMs_20	07 32 43.2	
	comp=Z,1μm,21.0s						
SUMG	Summit	148.95	337	*i* P	PKPbc	06 21 37.0	+0.4
T35M	Bob Quinn	148.99	54	IAMs_20	IAMs_20	07 22 12.3	
	comp=Z,1μm,20.0s						
T35M	Bob Quinn	148.99	54	P	PKPbc	06 21 37.7	+1.1
	baz=265,SNR=10						
HOLB	Holberg	149.21	67	IAMs_20	IAMs_20	07 19 59.3	
	comp=Z,1μm,21.0s						
YUH	Yuha Desert	149.22	107	IAMs_20	IAMs_20	07 30 53.4	
	comp=Z,1μm,19.0s						
ZAIG	Zacatecas	149.25	137	IAMs_20	IAMs_20	07 19 34.7	
	comp=Z,1μm,21.0s						
CMB	Columbia Colle	149.44	94	IAMs_20	IAMs_20	07 18 40.5	
	comp=Z,1μm,21.0s						
CPBX	Cerro Prieto	149.47	108	IAMs_20	IAMs_20	07 32 60.0	
	comp=Z,872nm,21.0s						
ORV	Oroville	149.47	91	IAMs_20	IAMs_20	07 17 47.2	
	comp=Z,1μm,22.0s						
PFO	Pinyon Flats O	149.49	105		PKPbc	06 21 40.1	+1.3
PFO	Pinyon Flats O	149.49	105	IAMs_20	IAMs_20	07 18 38.5	
	comp=Z,1μm,21.0s						
PFO	Pinyon Flats O	149.49	105	PKP2	PKPbc	06 21 40.1	+1.3
AFDM	Forest Hills D	149.52	92	IAMs_20	IAMs_20	07 15 29.6	
	comp=Z,1μm,22.0s						
BBB	Bella Bella	149.56	64	IAMs_20	IAMs_20	07 22 40.0	
	comp=Z,769nm,20.0s						
HSIG		149.81	118	IAMs_20	IAMs_20	07 18 40.3	
	comp=Z,984nm,20.0s						
WTLY	Watson Lake, Y	149.84	48	IAMs_20	IAMs_20	07 27 30.9	
	comp=Z,1μm,20.0s						
WTLY	Watson Lake, Y	149.84	48	P	PKPbc	06 21 39.4	+0.7
	baz=272,SNR=5.2						
I02E	Swisshome, OR	149.91	81	IAMs_20	IAMs_20	07 20 47.5	
	comp=Z,1μm,20.0s						
TGTN	Hyland Airport	150.02	45	P	PKPbc	06 21 39.9	+0.8
	baz=275,SNR=5.4						
HATC	Hat Creek Radi	150.10	88	IAMs_20	IAMs_20	07 18 27.7	
	comp=Z,936nm,21.0s						
SDDR	Presa de Saban	150.13	198		PKPbc	06 21 40.7	0.0
SDDR				IAMs_20	IAMs_20	07 26 26.3	
	comp=Z,961nm,22.0s						
MTDJ	Mount Denham	150.23	186	IAMs_20	IAMs_20	07 29 49.0	
	comp=Z,1μm,18.0s						
GSC	Goldstone, Bar	150.29	102	IAMs_20	IAMs_20	07 18 16.8	
	comp=Z,1μm,21.0s						
BEKR	Beckworth	150.39	91	IAMs_20	IAMs_20	07 18 15.4	
	comp=Z,1μm,22.0s						
OZB	Mount Ozzard	150.44	71	IAMs_20	IAMs_20	07 20 45.7	
	comp=Z,1μm,21.0s						
PNTR	Pine Nut	150.52	93	IAMs_20	IAMs_20	07 16 08.7	
	comp=Z,1μm,21.0s						
BUCK	Buck Mountain	150.52	81	IAMs_20	IAMs_20	07 22 01.5	
	comp=Z,1μm,21.0s						
QSM	Queen of Sheba	150.64	101	IAMs_20	IAMs_20	07 22 39.0	
	comp=Z,1μm,20.0s						
113A	Mohawk Valley,	150.68	109	IAMs_20	IAMs_20	07 21 29.9	
	comp=Z,939nm,20.0s						
DSP	Deep Springs	150.70	97	IAMs_20	IAMs_20	07 23 25.6	
	comp=Z,1μm,21.0s						
H04D	Lebanon	150.81	81	IAMs_20	IAMs_20	07 24 36.2	
	comp=Z,858nm,19.0s						
LHV	Little Huntoon	150.82	95	IAMs_20	IAMs_20	07 21 14.7	
	comp=Z,1μm,22.0s						
ICESG	Greenland Ices	150.92	331	*i* P	PKPbc	06 21 41.5	+0.2
TULEG	Thule	150.95	354	IAMs_20	IAMs_20	07 31 25.8	
	comp=Z,898nm,20.0s						
PAHR	Pah Rah Range	150.97	92	IAMs_20	IAMs_20	07 16 23.7	
	comp=Z,1μm,22.0s						
RYN	Ryan	151.00	95	IAMs_20	IAMs_20	07 24 41.6	
	comp=Z,989nm,20.0s						
NLWA	Neilton Lookou	151.03	75	IAMs_20	IAMs_20	07 19 29.8	
	comp=Z,1μm,22.0s						
NVAR	Mina Array Bea	151.05	95		PKPdf	06 21 38.0	+1.3
NVAR	Mina Array Bea	151.05	95	PKPbc	PKPdf	06 21 38.3	+1.6
	comp=Z,5.0nm,0.7s,baz=216,slow=4.6,SNR=12						
F04D	Rainier, OR	151.18	78	IAMs_20	IAMs_20	07 19 49.8	
	comp=Z,1μm,20.0s						
HPIG		151.20	128	IAMs_20	IAMs_20	07 27 40.8	
	comp=Z,894nm,19.0s						
LIRD	Liard River Hi	151.23	49	P	PKPbc	06 21 42.8	+0.8
	baz=273						
H04A	Detroit Lake	151.23	81	IAMs_20	IAMs_20	07 19 11.4	
	comp=Z,1μm,22.0s						
CLRS	Cowichan Lake	151.27	72	IAMs_20	IAMs_20	07 23 58.8	
	comp=Z,1μm,19.0s						
TEIG	Tepich	151.60	164	IAMs_20	IAMs_20	07 19 18.3	
	comp=Z,1μm,22.0s						
GTBY	Guantanamo Bay	151.69	191	IAMs_20	IAMs_20	07 34 20.5	
	comp=Z,1μm,19.0s						
BEAVL	Fort Liard	151.70	48	P	PKPbc	06 21 43.7	+0.7
	baz=275						
TOAD	Toad River Com	151.71	51	P	PKPbc	06 21 43.3	+0.2
	baz=273						
HOOD	Mount Hood Mea	151.82	80	IAMs_20	IAMs_20	07 26 29.8	
	comp=Z,1μm,19.0s						
CHIV	Chivirico	151.88	188	IAMs_20	IAMs_20	07 44 46.6	
	comp=Z,497nm,20.0s						
Y14A	Wickenburg	151.92	108	IAMs_20	IAMs_20	07 22 49.8	
	comp=Z,885nm,19.0s						
WRGLY	Wrigley	151.98	41	IAMs_20	IAMs_20	07 27 19.0	
	comp=Z,1μm,22.0s						
WRGLY	Wrigley	151.98	41	P	PKPbc	06 21 43.7	+0.2
	baz=282						
Q09A	Carvers	152.01	95	IAMs_20	IAMs_20	07 20 17.2	
	comp=Z,1μm,22.0s						
SHPR	Sheep Range	152.08	101	IAMs_20	IAMs_20	07 21 12.2	
	comp=Z,793nm,20.0s						
W13A	Hualapai Mount	152.08	105	IAMs_20	IAMs_20	07 26 57.9	
	comp=Z,1μm,19.0s						
KOTAN	Kotaneelee Air	152.21	48	P	PKPbc	06 21 44.6	+0.5
	baz=276						
TUC	Tucson	152.24	113	IAMs_20	IAMs_20	07 21 17.4	
	comp=Z,795nm,20.0s						
NMDO	Nuevo Mundo	152.29	191	IAMs_20	IAMs_20	07 26 06.6	
	comp=Z,1μm,22.0s						
RES	Resolute Bay	152.49	8	IAMs_20	IAMs_20	07 29 13.8	
	comp=Z,1μm,22.0s						
319A	Douglas	152.51	117	IAMs_20	IAMs_20	07 25 48.1	
	comp=Z,1μm,18.0s						
GRTK	Grand Turk	152.56	199	IAMs_20	IAMs_20	07 37 56.4	
	comp=Z,1μm,19.0s						
WVOR	Wild Horse Val	152.72	87	IAMs_20	IAMs_20	07 24 00.9	
	comp=Z,890nm,20.0s						
I07A	Izee	152.80	84	IAMs_20	IAMs_20	07 22 49.8	
	comp=Z,1μm,21.0s						
LLLB	Lillooet	153.09	69	IAMs_20	IAMs_20	07 28 30.8	
	comp=Z,1μm,20.0s						
MXC	Moxie City	153.12	78	IAMs_20	IAMs_20	07 21 00.1	
	comp=Z,1μm,21.0s						
NUUG	Nuugaatsiaq	153.17	341	*i* P	PKPdf	06 21 44.3	+5.8
X16A	Lo Mia Camp, P	153.22	109	IAMs_20	IAMs_20	07 18 28.3	
	comp=Z,1μm,22.0s						
E07A	Sunnyside	153.41	78	IAMs_20	IAMs_20	07 46 35.7	
	comp=Z,1μm,20.0s						
HAWA	Hanford	153.57	79	IAMs_20	IAMs_20	07 22 55.0	
	comp=Z,848nm,20.0s						
G08A	Pilot Rock	153.59	81	IAMs_20	IAMs_20	07 24 27.8	
	comp=Z,1μm,19.0s						
E08A	Dider Farm, El	153.91	79	IAMs_20	IAMs_20	07 23 05.1	
	comp=Z,812nm,20.0s						
KNB	Kanab	153.91	103	IAMs_20	IAMs_20	07 23 33.5	
	comp=Z,1μm,21.0s						
U15A	North Rim	153.91	104	IAMs_20	IAMs_20	07 26 12.6	
	comp=Z,1μm,21.0s						
WUAZ	Wupatki	153.96	107	IAMs_20	IAMs_20	07 27 53.7	
	comp=Z,994nm,20.0s						
D08A	Wollman Farm,	154.16	78	IAMs_20	IAMs_20	07 46 13.8	
	comp=Z,1μm,19.0s						
TXAR	Lajitas Array	154.17	128		PKPdf	06 21 42.5	+1.1
TXAR				PKPbc	pPKPdf	06 21 48.1	-1.1
TXAR				PKPab	sPKPbc	06 22 03.8	+3.8
TXAR	Lajitas Array	154.17	128	PKP	PKPdf	06 21 40.8	-0.6
	comp=Z,1.4nm,1.0s,baz=228,slow=1.5,SNR=8.1						
TXAR				PKPbc	pPKPdf	06 21 48.1	-1.1
	comp=Z,1.6nm,0.9s,baz=183,slow=2.5,SNR=9.5						
TXAR				PKPab	sPKPbc	06 22 01.5	+1.5
	comp=Z,10nm,1.1s,baz=194,slow=7.6,SNR=13						
LNOR	Lincton Mounta	154.23	80	PKPdf	PKPdf	06 21 41.6	+0.7
LNOR				PKPbc	pPKPdf	06 21 50.5	+1.9
LNOR					PKPab	06 22 04.3	+1.1
X18A	Snowflake	154.24	111	IAMs_20	IAMs_20	07 35 50.1	
	comp=Z,796nm,19.0s						
ELK	Elko	154.25	93	IAMs_20	IAMs_20	07 18 38.6	
	comp=Z,1μm,21.0s						
EPT	El Paso	154.44	120	IAMs_20	IAMs_20	07 28 07.7	
	comp=Z,852nm,18.0s						
E09A	Wood Farm, Sta	154.52	79	IAMs_20	IAMs_20	07 46 33.2	
	comp=Z,909nm,20.0s						
MFID	Camas Ranch	155.00	87	IAMs_20	IAMs_20	07 26 54.4	
	comp=Z,1μm,21.0s						
MNTX	Cornudas Mount	155.03	122	IAMs_20	IAMs_20	07 25 21.6	
	comp=Z,946nm,22.0s						
CAMR	Camarioca	155.12	178	IAMs_20	IAMs_20	07 24 31.8	
	comp=Z,3μm,20.0s						
POIN	Pond Inlet	155.17	358		PKPdf	06 21 50.7	+9.4
BGU	Big Grassy Mou	155.81	95	IAMs_20	IAMs_20	07 27 17.9	
	comp=Z,794nm,20.0s						
HLID	Hailey	156.01	88	IAMs_20	IAMs_20	07 25 28.0	
	comp=Z,986nm,21.0s						
YKAW3	Yellowknife Wh	156.05	40		PKPab	06 22 10.8	+0.5
Q16A	Castle Valley	156.05	101	IAMs_20	IAMs_20	07 23 42.2	
	comp=Z,1μm,21.0s						
YKA	Yellowknife Ar	156.07	40	PKP	PKPdf	06 21 40.8	-2.0
	comp=Z,1.0nm,1.1s,baz=290,slow=2.2,SNR=8.5						
YKA				PKPab	PKPab	06 22 08.6	-1.9
	comp=Z,7.5nm,1.1s,baz=305,slow=4.6,SNR=18						
YKAW1	Yellowknife Wh	156.13	40		PKPab	06 22 11.2	+0.5
MNHN	Monahans	156.22	126		PKPab	06 22 12.8	+0.7
MPU	Maple Canyon	156.31	98	IAMs_20	IAMs_20	07 25 07.1	
	comp=Z,1μm,20.0s						
HVU	Hansel Valley	156.37	93		PKPab	06 22 14.2	+1.5
HVU				IAMs_20	IAMs_20	07 25 33.8	
	comp=Z,887nm,20.0s						
HVU	Hansel Valley	156.37	93	PKP2	PKPab	06 22 14.2	+1.5
CTU	Camp Tracy	156.56	96	IAMs_20	IAMs_20	07 26 33.7	
	comp=Z,851nm,19.0s						
ANMO	Albuquerque	156.68	114	PKPdf	PKPdf	06 21 45.5	+0.7
ANMO	Albuquerque	156.68	114	IAMs_20	IAMs_20	07 22 46.6	
	comp=Z,1μm,20.0s						
ANMO	Albuquerque	156.68	114	IAMs_20	IAMs_20	07 22 46.6	
	comp=Z,1μm,20.0s						
ANMO	Albuquerque	156.68	114	PKIKP	PKPdf	06 21 45.5	+0.7
MVCO	Mesa Verde	156.83	107	IAMs_20	IAMs_20	07 21 30.6	
	comp=Z,988nm,21.0s						
TCUT	Toone Canyon	156.99	96	IAMs_20	IAMs_20	07 37 04.1	
	comp=Z,986nm,18.0s						
P18A	Preston Nutter	157.03	100	IAMs_20	IAMs_20	07 20 01.2	
	comp=Z,1μm,21.0s						
JCT	Junction City	157.07	133	IAMs_20	IAMs_20	07 25 55.1	
	comp=Z,745nm,19.0s						
BSUT	Blindstream Ca	157.14	98	IAMs_20	IAMs_20	07 23 34.2	
	comp=Z,1μm,21.0s						
MCMT	McKenzie Canyo	157.51	86		PKPab	06 22 18.5	+0.9
SGCY	Sterling City	157.54	128		PKPab	06 22 18.8	+1.1
AHID	Auburn Hatcher	157.92	92	IAMs_20	IAMs_20	07 47 50.6	
	comp=Z,851nm,22.0s						
061Z	Ochoppi	157.93	179	IAMs_20	IAMs_20	07 26 20.0	
	comp=Z,881nm,20.0s						
MSTX	Muleshoe	158.19	122		PKPab	06 22 20.9	+0.4
MSTX				IAMs_20	IAMs_20	07 32 19.0	
	comp=Z,857nm,19.0s						
TPAW	Teton Pass	158.31	91	IAMs_20	IAMs_20	07 21 11.8	
	comp=Z,940nm,22.0s						
FXWY	Fox Creek	158.31	90	IAMs_20	IAMs_20	07 21 23.0	
	comp=Z,1μm,22.0s						
HKT	Hockley	158.45	141	IAMs_20	IAMs_20	07 42 29.6	
	comp=Z,1μm,20.0s						
LOHW	Long Hollow	158.59	91	IAMs_20	IAMs_20	07 21 41.7	
	comp=Z,1μm,22.0s						
YHB	Horse Butte	158.60	87	IAMs_20	IAMs_20	07 22 26.5	
	comp=Z,1μm,21.0s						
YHL	Hebgen Lake	158.64	87	IAMs_20	IAMs_20	07 22 17.6	
	comp=Z,1μm,22.0s						
BW06	Boulder Array	158.95	93	IAMs_20	IAMs_20	07 29 00.1	
	comp=Z,1μm,20.0s						
PDAR	Pinedale Array	158.95	93		PKPdf	06 21 48.5	+1.1
PDAR	Pinedale Array	158.95	93	PKP	PKPdf	06 21 45.2	-2.2
	comp=Z,5.1nm,1.2s,baz=186,slow=1.3,SNR=17						
PDAR				PKPab	PKPab	06 22 22.0	-1.9
	comp=Z,4.7nm,1.1s,baz=209,slow=4.9,SNR=7.7						
SDCO	Great Sand Dun	159.06	110		PKPab	06 22 24.9	+0.4
SDCO				IAMs_20	IAMs_20	07 25 52.6	
	comp=Z,946nm,20.0s						
060A	Indiantown	159.09	180	IAMs_20	IAMs_20	07 41 47.9	
	comp=Z,1μm,20.0s						
APMT	Aspermont	159.17	127		PKPab	06 22 25.4	+0.7
T25A	Trinidad	159.36	113	IAMs_20	IAMs_20	07 32 40.7	
	comp=Z,946nm,20.0s						
AMTX	Amarillo	159.47	122	IAMs_20	IAMs_20	07 39 42.9	
	comp=Z,1μm,20.0s						
FW07	Weatherford	159.88	133	IAMs_20	IAMs_20	07 36 12.3	
	comp=Z,1μm,20.0s						
WTFS	Witchita Falls	160.38	130		PKPab	06 22 30.9	+1.0
RSSD	Black Hills	163.19	94		PKPab	06 22 42.9	+0.6
RSSD	Black Hills	163.19	94	PKP2	PKPab	06 22 42.9	+0.6
MGMO	Mountain Grove	166.12	137		PKPab	06 22 54.9	-0.2
FCC	Fort Churchill	166.50	32		PKPab	06 22 56.6	+0.6
FCC	Fort Churchill	166.50	32	PKP2	PKPab	06 22 56.6	+0.6
MDND	Maddock	167.13	83		PKPab	06 23 00.6	+1.3
CCM	Cathedral Cave	167.33	138		PKPdf	06 21 55.7	+0.5
CCM	Cathedral Cave	167.33	138	PKIKP	PKPdf	06 21 55.7	+0.5
ECSD	EROS Data Cent	167.95	105		PKPab	06 23 03.4	+0.3
N38A	Joes South For	168.37	123		PKPab	06 23 04.7	-0.3
F33A	5 Mile Ranch,	168.94	95		PKPab	06 23 07.9	+0.5
ULM	Lac du Bonnet	169.62	72	PKP	PKPdf	06 21 54.8	-1.5
	comp=Z,1.6nm,0.7s,baz=77,slow=0.8,SNR=3.5						
ULM				PKPab	PKPab	06 23 08.9	-1.4
	comp=Z,4.5nm,1.1s,baz=302,slow=9.2,SNR=4.5						
P52A	Corning	171.57	171		PKPdf	06 21 57.7	0.0
SSPA	Standing Stone	172.44	195		PKPdf	06 21 58.2	+0.1

GCG ***25*** *06:14:54.7±0.3, 13°.25N×89°.37W, h55^{km}±2^{km}, MD3.9, ML2.7*

CATAC ***25*** *06:14:54.4±0.5, 13°N±6°×8°9W±°, h37^{km}±5^{km}, M3.2/23, MLv3.2/23, Error ellipse: s-maj=13.0km s-min=6.0km az=26.5, confirmed*

SNET ***25*** *06:14:54.4±0.7, 13°.26N×89°.28W, h56^{km}±4^{km}, ML3.3*

ISC 25 06:14:54.8±1.7**, 13°.21N**±0°.08×**89°.32W**±0°.05**, h52**^{km}±11^{km}**, n65, σ0^{s}.50**/69**, 5C-6D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.28	360	*e*P	Pn	06 15 03.7	-0.2
LALI				*e*S	Sn	06 15 10.7	+0.3
LALI	Alcalda de L	0.28	360	*e*P	Pn	06 15 03.7	-0.2
LALI				*i* P		06 15 04.0	
LALI				*e*S	Sn	06 15 10.9	+0.5
LALI				*i* S		06 15 11.4	
LALI	Alcalda de L	0.28	360	P	Pn	06 15 03.2	-0.7
PANCS	Alcalda de	0.42	19	P	Pn	06 15 12.9	+7.5
LOMA	Loma Larga	0.45	19	*e*P	Pn	06 15 05.7	-0.1
LOMA	Loma Larga	0.45	19	S	Sn	06 15 14.5	+0.8
LOMA	Loma Larga	0.45	19	P	Pn	06 15 05.5	-0.3
JAYA	Jayaque - finc	0.46	344⇑	*e*P	Pn	06 15 05.5	-0.4
JAYA				*e*S	Sn	06 15 13.8	-0.1
JAYA				IAML		06 15 16.2	
	comp=Z,1μm,0.3s						
JAYA	Jayaque - finc	0.46	344	*i* P	Pn	06 15 05.5	-0.4
JAYA				*e*S	Sn	06 15 13.5	-0.4
JAYA				*i* S		06 15 14.4	
JAYA	Jayaque - finc	0.46	344	P	Pn	06 15 05.5	-0.4
ITCA	Escuela Especi	0.46	5	P	Pn	06 15 13.8	+7.9
LFRS	El Faro	0.48	32⇑	*e*P	Pn	06 15 05.8	-0.3
LFRS				*e*S	Sn	06 15 14.0	-0.2
PMON	Piamonte	0.50	1⇓	*e*P	Pn	06 15 06.1	-0.2
PMON	Piamonte	0.50	1	P	Pn	06 15 06.3	0.0
PMON	Piamonte	0.50	1	S	Sn	06 15 15.3	+0.7
SEMO	Seminario San	0.50	11	P	Pn	06 15 15.2	+8.9
UTEC	Universidad Te	0.50	13	P	Pn	06 15 06.3	0.0
UEES	Universidad Ev	0.51	9	*e*P	Pn	06 15 06.2	-0.2
UEES				*e*S	Sn	06 15 15.4	+0.6
UEES	Universidad Ev	0.51	9	P	Pn	06 15 06.3	-0.2
IGN	Direccin Gen	0.52	16	P	Pn	06 15 16.2	+10
BOQS	Boqueron	0.52	4	*e*P	Pn	06 15 06.6	-0.1
BOQS				*e*S	Sn	06 15 15.8	+0.6
UDBS	Universidad Do	0.53	18	P	Pn	06 15 06.8	+0.2
PIC2	El Picacho	0.53	7⇑	*e*P	Pn	06 15 07.0	+0.1
LFU	La Fuente	0.57	21	*e*P	Pn	06 15 07.0	-0.1
COEG	Centro de Oper	0.59	46	*e*P	Pn	06 15 06.6	-0.7
COEG				IAML		06 15 21.2	
	comp=Z,792nm,0.2s						
COEG	Centro de Oper	0.59	46	P	Pn	06 15 06.7	-0.7
CEDA	San Andres	0.59	353	*e*P	Pn	06 15 07.2	-0.1
CEDA				IAML		06 15 23.6	
	comp=Z,2μm,0.3s						
CEDA	San Andres	0.59	353	P	Pn	06 15 07.3	-0.1
TECO	Alcaldia de Te	0.62	58⇓	*e*P	Pn	06 15 06.7	-0.9
TECO	Alcaldia de Te	0.62	58	P	Pn	06 15 06.8	-0.9
PAVA	Las Pavas	0.62	37⇓	*e*P	Pn	06 15 07.5	-0.2
PAVA	Las Pavas	0.62	37	S	Sn	06 15 18.0	+0.8
PAVA	Las Pavas	0.62	37	P	Pn	06 15 07.5	-0.2
UESV	Universidad de	0.67	51	P	Pn	06 15 07.8	-0.5
CEVE	Cerro Verde	0.68	334	*e*P	Pn	06 15 08.7	+0.1
CEVE				IAML		06 15 23.1	
	comp=Z,2μm,0.3s						
CEVE	Cerro Verde	0.68	334	P	Pn	06 15 08.8	+0.1
SBLS	San Blas	0.69	335⇑	*e*P	Pn	06 15 08.9	+0.2
SNJE	San Jose	0.71	337	*e*P	Pn	06 15 08.7	-0.3
RTR	El Retiro	0.75	335	*e*P	Pn	06 15 09.6	+0.2
SCLA	Alcaldia de Sa	0.76	50⇓	*i*P	Pn	06 15 09.0	-0.4
SCLA	Alcaldia de Sa	0.76	50	P	Pn	06 15 09.0	-0.4
UNIC	Universidad Ca	0.80	344	P	Pn	06 15 09.6	-0.3
NUBE	Las Nubes	0.82	327	*e*P	Pn	06 15 09.9	-0.4
NUBE	Las Nubes	0.82	327	*e*P	Pn	06 15 10.0	-0.4
NUBE				*i* S	Sn	06 15 21.9	+0.2
NUBE	Las Nubes	0.82	327	P	Pn	06 15 10.0	-0.4
TECA	Tecapa	0.84	70	*e*P	Pn	06 15 10.1	-0.6
PQSS	Presa 15 de Se	0.85	61⇑	*e*P	Pn	06 15 09.9	-0.6
PQSS	Presa 15 de Se	0.85	61	P	Pn	06 15 10.0	-0.6
FAME	Alcaldia de Sa	0.92	313	P	Pn	06 15 10.9	-0.6
SLOZ	Alcaldia de Sa	0.93	331⇓	*e*P	Pn	06 15 11.2	-0.5
SLOZ	Alcaldia de Sa	0.93	331	P	Pn	06 15 11.3	-0.4
PACA	Pacayal	1.00	75	*e*P	Pn	06 15 12.4	-0.3
PACA	Pacayal	1.00	75	P	Pn	06 15 12.6	-0.1
LLGN	La Laguna	1.01	21	P	Pn	06 15 12.1	-0.7
LCY	Lacayo	1.02	78	*e*P	Pn	06 15 12.7	-0.3
CAHU	Cacacuatique	1.21	63	*e*P	Pn	06 15 14.8	-0.8
ESQI	Esquipulas	1.34	359	P	Pn	06 15 17.1	-0.1
LCND	La Caada	1.40	86⇓	*e*P	Pn	06 15 17.2	-0.6
LCND	La Caada	1.40	86	P	Pn	06 15 17.3	-0.6
CNCH	Conchagua	1.45	87	*e*P	Pn	06 15 17.9	-0.9
CNCH	Conchagua	1.45	87	P	Pn	06 15 18.2	-0.6
POTN	Potosi Cosigui	1.78	97	P	Pn	06 15 24.6	+1.5
PKGN	Cerro Pekin	2.35	103	P	Pn	06 15 31.1	+0.3
CNGA	Al SSO del Vol	2.65	105	P	Pn	06 15 35.4	+0.3
COPN	Copaltepe	2.85	111	P	Pn	06 15 36.9	-0.9

IDC 25 06:17:20.4±1.6**, 0°.85N×126°.32E, h0**^{km}**, mb3.6**/4**, mbtmp3.6**/5**, ML3.5**/1**, Error ellipse: s-maj=116.5km s-min=21.4km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	18.84	182	P	Pn	06 21 42.8	+0.3
	0.1nm,0.3s,baz=6.3,slow=9.2,SNR=1.9						
	2.5nm,0.9s						
WRA	Warramunga Arr	22.11	160	P	P	06 22 17.8	+0.3
	1.3nm,0.3s,baz=338,slow=11,SNR=23						
	1.3nm,0.3s						
ASAR	Alice Springs	25.46	164	P	P	06 22 49.7	-0.6
	0.3nm,0.3s,baz=340,slow=7.5,SNR=7.4						
	0.3nm,0.3s						
MKAR	Makanchi Array	59.69	326	P	P	06 27 26.6	-0.1
	0.2nm,0.4s,baz=122,slow=8.7,SNR=4.1						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	63.94	328	P	P	06 27 55.4	+0.1
	0.3nm,0.4s,baz=127,slow=6.1,SNR=2.3						
	0.3nm,0.4s						

IDC ***25*** *06:20:52.5±2.5, 48°.43S×100°.89E, h0^{km}, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=94.1km s-min=24.2km az=121.0*

ISC 25 06:20:54.0±2.2,48°.4S±0°.3×100°.9E±0°.5,h10^{km},n9,σ0ˢ.54/6,mb3.8/5,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W2	Cape Leeuwin H	16.71	41	T	T	06 42 08.4	
	baz=214,slow=74,SNR=16						
H01W1	Cape Leeuwin H	16.73	41	T	T	06 42 09.4	
	baz=214,slow=74,SNR=24						
H01W3	Cape Leeuwin H	16.73	41	T	T	06 42 10.1	
	baz=214,slow=74,SNR=30						
ASAR	Alice Springs	35.91	58	P	P	06 27 54.9	+0.4
	0.8nm,0.9s,baz=225,slow=9.1,SNR=4.3						
	0.8nm,0.9s						
VNDA	Vanda	37.00	162	P	P	06 28 03.1	0.0
	0.8nm,0.3s,baz=331,slow=6.5,SNR=2.1						
	0.8nm,0.3s						
WRA	Warramunga Arr	39.12	55	P	P	06 28 21.6	0.0
	0.8nm,0.8s,baz=216,slow=8.7,SNR=4.9						
	0.8nm,0.8s						
QSPA	South Pole Qui	41.70	180	P	P	06 28 42.5	-0.1
	1.9nm,1.0s,baz=297,slow=4.5,SNR=3.1						
	1.9nm,1.0s						
SNAA	Sanae	48.88	204	P	P	06 29 39.7	+0.3
	1.1nm,1.0s,baz=120,slow=20,SNR=2.4						
	1.1nm,1.0s						
NVAR	Mina Array Bea	150.10	95	PKPbc	PKPbc	06 40 44.0	-0.8
	0.3nm,0.3s,baz=232,slow=3.5,SNR=6.0						

IDC 25 06:21:17.2±999.0,27°.52N×79°.96W,h0^{km},Error ellipse: s-maj=1148.0km s-min=265.8km az=136.0,Bahama Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I10CA	LAC DU BONNET	25.77	336	I	I	08 56 50.0	
	baz=148,slow=324,SNR=8.5						
I57US	PINON FLAT INF	31.89	290	I	I	09 36 30.8	
	baz=92,slow=318,SNR=1.0						
I56US	NEWPORT INFRAS	35.43	316	I	I	10 00 34.5	
	0.1nm,1.8s,baz=113,slow=315,SNR=15						

IDC 25 06:43:36.4±1.8,30°.88S×177°.83W,h0^{km},mb3.8/3,mbtmp3.8/3,Error ellipse: s-maj=43.7km s-min=22.8km az=97.0

ISC 25 06:43:42.2±1.6,30°.8S±0°.1×177°.8W±0°.3,h46^{km},n6,σ1ˢ.34/6,mb3.8/3,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.59	356	Pn	Pn	06 44 06.5	-1.4
	84nm,0.3s,baz=122,slow=15,SNR=8.3						
RAO				Sn	Sn	06 44 29.0	+1.7
	116nm,0.3s,baz=211,slow=21,SNR=4.5						
URZ	Urewera	8.51	208	Pn	Pn	06 45 34.5	-8.4
	0.3nm,0.3s,baz=353,slow=20,SNR=2.0						
URZ				Sn	Sn	06 47 08.7	-8.8
	1.7nm,0.3s,baz=107,slow=17,SNR=8.6						
ASAR	Alice Springs	43.28	267	P	P	06 51 39.8	+0.2
	0.6nm,0.5s,baz=104,slow=7.3,SNR=11						
	0.6nm,0.5s						
WRA	Warramunga Arr	44.30	272	P	P	06 51 47.6	-0.3
	0.6nm,0.3s,baz=111,slow=8.1,SNR=17						
	0.6nm,0.3s						
QSPA	South Pole Qui	59.27	180	P	P	06 53 39.4	+0.5
	1.6nm,1.1s,baz=326,slow=7.9,SNR=2.8						
	1.6nm,1.1s						
FINES	FINESS Array B	145.62	340	PKPbc	PKPbc	07 03 15.2	+0.1
	0.8nm,0.7s,baz=37,slow=4.8,SNR=4.1						

CATAC 25 06:49:56.0±2.0,11°N±18°×8°7W±1°2,h16^{km}±50^{km},M2.4/4,MLv2.4/4,Error ellipse: s-maj=43.7km s-min=13.1km az=31.7,confirmed,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COPN	Copaltepe	1.05	32	P	Pb	06 50 15.6	-0.2
SAPS	Ciudad Sandino	1.15	40	P	Pn	06 50 16.8	-0.7
SAPS	Ciudad Sandino	1.15	40	S	Sg	06 50 34.9	+1.6
NADN	Granada	1.20	67	P	Pn	06 50 15.3	-2.8
NADN				S	Sn	06 50 34.0	0.0
NANN	Nandasmo	1.21	58	P	Pn	06 50 17.3	-1.0
TISN	Laguna Tiscapa	1.22	46	P	Pn	06 50 17.2	-1.2
MOMN	Momotombo	1.27	29	P	Pn	06 50 19.2	+0.1
MOMN				S	Sn	06 50 35.8	0.0
CNGA	Al SSO del Vol	1.28	21	P	Pn	06 50 19.3	0.0
CNGA				S	Sg	06 50 41.4	+3.9
CNGN	Cerro Negro	1.28	21	P	Pg	06 50 22.2	+1.3
CNGN	Cerro Negro	1.28	21	S	Sg	06 50 45.3	+7.7
PLRN	Geotermica Pol	1.34	17	P	Pn	06 50 19.5	-0.6
PLRN				S	Sb	06 50 37.7	-0.1
ILCN	San Idelfonso	1.36	19	P	Pg	06 50 25.6	+3.4
JAPN	Al SSO del Vol	1.47	81	P	Pn	06 50 21.6	-0.4

IDC 25 07:00:07.4±4.8,53°.76N×88°.09E,h0^{km},mbtmp2.7/2,ML2.4/2,Error ellipse: s-maj=52.6km s-min=25.3km az=74.0

ASRS 25 07:00:03.0±1.0,53°.78N×88°.26E,h0^{km},M2.4,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	2.04	276	I	I	07 11 09.6	
	baz=94,slow=319,SNR=8.1						
ZALV	Zalesovo Beam	2.04	276	Pn	Pg	07 00 42.4	+0.2
	0.8nm,0.3s,baz=95,slow=12,SNR=14						
ZALV				Sn	Sb	07 01 06.2	-0.8
	2.3nm,0.3s,baz=92,slow=24,SNR=15						
KURBB	Kurchatov Arra	6.76	246	Pn	Pn	07 01 47.2	+3.8
	0.1nm,0.3s,baz=63,slow=14,SNR=2.7						
	0.5nm,0.3s						
MKAR	Makanchi Array	7.97	211	Pn	Pn	07 02 04.0	+4.0
	0.1nm,0.3s,baz=29,slow=9.9,SNR=1.7						
	0.1nm,0.5s						

IDC 25 07:20:27.7±3.7,53°.72N×88°.18E,h0^{km},mbtmp2.7/2,ML2.4/2,Error ellipse: s-maj=31.5km s-min=17.3km az=61.0

ASRS 25 07:20:25.0±0.7,53°.69N×88°.14E,h0^{km},M2.5,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.99	279	I	I	07 31 45.0	
	0.1nm,1.2s,baz=96,slow=324,SNR=6.5						
ZALV	Zalesovo Beam	1.99	279	Pg	Pg	07 21 04.5	+1.4
	1.0nm,0.3s,baz=94,slow=13,SNR=12						
ZALV				Lg	Lg	07 21 31.6	
	2.7nm,0.3s,baz=94,slow=30,SNR=17						
KURBB	Kurchatov Arra	6.66	246	Pn	Pn	07 22 07.1	+3.1
	0.1nm,0.3s,baz=61,slow=13,SNR=1.8						
	0.3nm,0.3s						
MKAR	Makanchi Array	7.85	211	Pn	Pn	07 22 24.7	+4.3
	0.1nm,0.3s,baz=25,slow=14,SNR=2.8						
MKAR				Sn	Sn	07 23 53.8	+3.8
	0.1nm,0.3s,baz=27,slow=27,SNR=3.0						
MKAR				Lg	Lg	07 24 35.9	
	baz=23,slow=24,SNR=2.6						
	0.2nm,0.4s						

IDC 25 07:23:34.8±1.6,2°.72S×138°.51E,h0^{km},mb3.2/2,mbtmp3.4/5,ML3.2/3,Error ellipse: s-maj=32.0km s-min=16.7km az=164.0,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	2.21	85	Pn	Pn	07 24 12.3	-0.5
	3.9nm,0.3s,baz=302,slow=19,SNR=11						
JAY				Lg	Lg	07 24 45.2	
	1.9nm,0.3s,baz=323,slow=20,SNR=5.8						
	6.4nm,0.2s						
WRA	Warramunga Arr	17.60	193	P	Pn	07 27 41.7	0.0
	0.1nm,0.3s,baz=13,slow=12,SNR=5.4						
	0.5nm,0.5s						
FITZ	Fitzroy Crossi	19.82	219	P	P	07 28 07.2	0.0
	0.1nm,0.3s,baz=45,slow=17,SNR=1.9						
	3.2nm,1.1s						
ASAR	Alice Springs	21.30	192	P	P	07 28 23.3	+0.1
	0.7nm,0.7s,baz=19,slow=10,SNR=8.5						
	0.7nm,0.7s						
MKAR	Makanchi Array	69.67	322	P	P	07 34 46.5	+0.1
	0.1nm,0.4s,baz=116,slow=6.6,SNR=2.5						
	0.1nm,0.4s						

IDC 25 07:28:18.8±1.6,2°.87S×138°.76E,h0^{km},mb3.2/2,mbtmp3.2/3,ML3.4/1,MS3.5/1,Error ellipse: s-maj=33.1km s-min=17.0km az=161.0,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	1.97	80	Pn	Pn	07 28 53.6	+0.1
	7.4nm,0.3s,baz=261,slow=13,SNR=14						
JAY				Lg	Lg	07 29 21.4	
	4.0nm,0.3s,baz=162,slow=20,SNR=3.7						
WRA	Warramunga Arr	17.51	194	P	Pn	07 32 23.9	-0.7
	0.2nm,0.3s,baz=14,slow=12,SNR=5.2						
	0.2nm,0.3s						
ASAR	Alice Springs	21.20	192	P	P	07 33 06.5	+0.3
	0.7nm,0.7s,baz=19,slow=10,SNR=17						
ASAR				LR	LR	07 41 07.1	
	comp=Z,121nm,20.4s,slow=36						
	0.7nm,0.7s						
MKAR	Makanchi Array	69.95	322	P	P	07 39 32.1	0.0
	0.1nm,0.5s,baz=100,slow=6.0,SNR=2.1						
	0.1nm,0.5s						

IDC 25 07:40:35.2±0.7,13°.63S×167°.23E,h201^{km}±6^{km},mb3.9/18,mbtmp4.4/19,Error ellipse: s-maj=16.1km s-min=9.8km az=100.0

NEIC 25 07:40:36.1±1.2,13°.6S±0°.1×167°.2E±0°.1,h202^{km}±6^{km},mb4.4/24,Error ellipse: s-maj=19.9km s-min=14.9km az=109.0

NOU 25 07:40:37.5,13°.68S×167°.00E,h196^{km},mb4.3/25,Vanuatu Islands

ISC 25 07:40:36.0±0.6,13°.62S±0°.06×167°.19E±0°.07,h207^{km}±5^{km},h207^{km}:pP-P,n94,σ1ˢ.09/113,mb4.3/32,5C,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	1.81	180		Pn	07 41 12.8	-0.3
SANVU	Saraoutou	1.81	180	P	Pn	07 41 12.9	-0.3
VLAKA	Lakatoro	2.48	175	P	Pn	07 41 20.5	+0.5
LUES	Luesalemba Tem	3.20	337	P	Pn	07 41 28.1	-0.2
DVP	Devils Point	4.19	167	P	Pn	07 41 41.3	+0.9
HURO	Huro Makira	6.05	301	P	Pn	07 42 03.3	-0.7
NGOA	Tingoa Renbel	7.25	286	P	Pn	07 42 21.0	+1.4
YATNC	Mamie plateau,	8.40	182	P	Pn	07 42 36.7	+2.4
DZM	Mont Dzumac	8.43	185	P	Pn	07 42 35.2	+0.3
	9.6nm,0.9s,baz=24,slow=20,SNR=11						
DZM				S	S	07 44 10.0	0.0
	6.0nm,0.7s,baz=344,slow=16,SNR=1.3						
DZM	Mont Dzumac	8.43	185	P	Pn	07 42 35.4	+0.5
ONTNC	Ouen Toro	8.67	185		Pn	07 42 38.2	+0.4
TATA	Tatamba Isabel	8.92	305	P	Pn	07 42 42.6	+1.4
MSVF	Nonsavu	11.23	113		Pn	07 43 11.5	+0.5
MSVF	Nonsavu	11.23	113	P	P	07 43 16.4	-0.3
EIDS	Eidsvold	19.14	230		P	07 44 45.5	+1.8
EIDS	Eidsvold	19.14	230	P	P	07 44 45.7	+2.0
CTAO	Charters Tower	21.03	249	P	P	07 45 04.7	+0.7
CTAO				IAmb	IAmb	07 45 06.2	
	comp=Z,13nm,1.0s						
CTAO	Charters Tower	21.03	249	P	P	07 45 04.5	+0.5
ARMA	Armidale	22.03	218	P	P	07 45 14.8	+0.7
COEN	Coen	23.32	266	P	P	07 45 27.3	+1.5
CMSA	Cobar Meteorol	26.59	224	P	P	07 45 56.1	+0.9
CNB	Canberra Magne	26.92	214	P	P	07 45 59.0	+0.8
CAN	Canberra	27.13	214	P	P	07 46 00.6	+0.6
CAN	Canberra	27.13	214	P	P	07 46 00.9	+1.0
LTZ	Lake Taylor	29.39	172	P	P	07 46 19.8	-0.1
LTZ				IAmb	IAmb	07 46 20.6	
	comp=Z,9.9nm,0.8s						
STKA	Stephens Creek	29.66	228		P	07 46 23.3	+0.9
STKA	Stephens Creek	29.66	228	P	P	07 46 23.1	+0.7
	comp=Z,7.2nm,0.4s,baz=52,slow=11,SNR=37						
STKA				PcP	PcP	07 49 21.4	-0.1
	comp=Z,3.7nm,0.7s,baz=41,slow=3.9,SNR=5.8						
STKA				ScP	ScP	07 52 45.1	+1.2
	comp=Z,2.3nm,0.9s,baz=63,slow=2.3,SNR=3.5						
	comp=Z,7.2nm,0.4s						
STKA	Stephens Creek	29.66	228	P	P	07 46 23.1	+0.7
RPZ	Rata Peaks	30.17	174	P	P	07 46 29.3	+2.6
TOO	Toolangi	30.70	215	P	P	07 46 32.6	+1.1
TOO				IAmb	IAmb	07 46 33.1	
	comp=Z,3.8nm,0.8s						
WB0	Warramunga Arr	31.97	254	P	P	07 46 42.7	-0.1
WB0				IAmb	IAmb	07 46 50.9	
	comp=Z,5.5nm,0.8s						
WRA	Warramunga Arr	32.03	254	P	P	07 46 42.1	-1.3
	comp=Z,0.5nm,0.4s,baz=82,slow=8.9,SNR=12						
WRA				PcP	PcP	07 49 28.1	+0.1
	comp=Z,3.2nm,0.8s,baz=84,slow=3.1,SNR=12						
WRA				S	S	07 51 36.1	-3.9
	comp=Z,1.3nm,1.0s,baz=90,slow=17,SNR=5.1						
WRA				ScP	ScP	07 52 53.7	+1.7
	comp=Z,0.3nm,0.7s,baz=88,slow=3.8,SNR=7.1						
	comp=Z,0.5nm,0.4s						
AS01	Alice Springs	32.97	247	P	P	07 46 50.9	-0.6
AS31	Alice Springs	33.01	247		P	07 46 51.1	-0.7
ASAR	Alice Springs	33.01	247	P	P	07 46 51.0	-0.9
	comp=Z,4.3nm,0.6s,baz=81,slow=8.9,SNR=110						
ASAR				pP	pP	07 47 33.0	-0.7
	comp=Z,1.3nm,0.6s,baz=81,slow=9.3,SNR=1.6						
ASAR				PcP	PcP	07 49 30.1	-0.6
	comp=Z,2.2nm,0.6s,baz=79,slow=2.5,SNR=16						
ASAR				S	S	07 51 51.6	-3.4
	comp=Z,2.6nm,1.1s,baz=87,slow=15,SNR=11						
ASAR				ScP	ScP	07 52 56.7	+1.4
	comp=Z,3.2nm,0.9s,baz=78,slow=3.1,SNR=15						
	comp=Z,4.3nm,0.6s						
KNRA	Kununurra	37.20	262	P	P	07 47 28.0	+0.4
FITZ	Fitzroy Crossi	40.15	258	P	P	07 47 52.6	+0.4
FITZ	Fitzroy Crossi	40.15	258	PcP	PcP	07 49 52.7	+0.3
	comp=Z,4.3nm,1.0s,baz=34,slow=3.6,SNR=3.8						
MEEK	Meekatharra	47.15	246	P	P	07 48 48.1	+0.2
KLBR	Kellerberrin	48.58	240	P	P	07 48 58.3	-0.5
NWAO	Narrogin (SRO)	49.26	238	P	P	07 49 03.1	-0.7
NWAO	Narrogin (SRO)	49.26	238	P	P	07 49 03.1	-0.7
MJAR	Matsushiro Arr	56.89	332	P	P	07 49 58.7	-0.7
	comp=Z,2.0nm,0.8s,baz=166,slow=9.0,SNR=4.0						
	comp=Z,2.0nm,0.8s						
KSRS	Korea Array	62.79	326	P	P	07 50 40.2	+0.8
	comp=Z,2.0nm,0.8s,baz=151,slow=7.1,SNR=7.0						
	comp=Z,2.0nm,0.8s						
VNDA	Vanda	63.96	181	P	P	07 50 47.1	+0.6
	comp=Z,1.4nm,0.6s,baz=4.8,slow=4.7,SNR=12						
	comp=Z,1.4nm,0.6s						
CASY	Casey	64.52	202	P	P	07 50 50.2	-0.2
CASY				IAmb	IAmb	07 50 51.0	
	comp=Z,6.0nm,0.7s						
USRK	Ussuriysk Ar.	65.87	333	P	P	07 51 00.9	+1.5
	comp=Z,5.1nm,1.0s,baz=131,slow=4.2,SNR=6.7						
	comp=Z,5.1nm,1.0s						
PETK	Petropavlovsk-	66.96	354		P	07 51 06.6	+0.5
PETK	Petropavlovsk-	66.96	354	P	P	07 51 06.1	+0.1
	comp=Z,7.1nm,0.9s,baz=162,slow=5.2,SNR=16						
	comp=Z,7.1nm,0.9s						
CMAR	Chiang Mai Arr	74.43	294		P	07 51 52.0	+0.1
CMAR	Chiang Mai Arr	74.43	294	P	P	07 51 52.8	+0.9
	comp=Z,3.3nm,0.6s,baz=112,slow=5.9,SNR=16						
	comp=Z,3.3nm,0.6s						
QSPA	South Pole Qui	76.40	180	P	P	07 52 02.5	+0.1
QSPA				IAmb	IAmb	07 52 03.2	
	comp=Z,11nm,0.9s						
QSPA	South Pole Qui	76.40	180	P	P	07 52 02.0	-0.4
	comp=Z,11nm,0.8s,baz=3.8,slow=3.2,SNR=50						
	comp=Z,11nm,0.8s						
ULN	Ulaanbaatar	81.20	324	P	P	07 52 29.3	+0.5
ULN				IAmb	IAmb	07 52 30.5	
	comp=Z,8.6nm,1.0s						
BILL	Bilibino	81.44	360		P	07 52 29.9	+0.5
SONM	Songino Array	81.56	324		P	07 52 31.5	+0.8
SONM	Songino Array	81.56	324	P	P	07 52 30.9	+0.3
	comp=Z,0.8nm,0.4s,baz=140,slow=6.6,SNR=8.2						
	comp=Z,0.8nm,0.4s						
GTA	Gaotai	81.85	314	*e*P	P	07 52 33.8	+1.5
GTA				sP	PcP	07 52 40.5	+3.1
GTA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
MAW	Mawson	82.88	202	P	P	07 52 37.1	+0.1
	comp=Z,6.0nm,0.6s,baz=114,slow=8.2,SNR=30						
	comp=Z,6.0nm,0.6s						
CAST	Castle Rocks	82.97	17	P	P	07 52 37.9	+0.5
CAST				IAmb	IAmb	07 52 38.6	
	comp=Z,6.9nm,1.4s						
RND	Reindeer	83.92	18	P	P	07 52 42.1	-0.2
RND				IAmb	IAmb	07 52 42.8	
	comp=Z,5.6nm,1.0s						
E19K	Redstone River	84.90	13	P	P	07 52 48.2	+1.1
HDA	Harding Lake	85.22	18	P	P	07 52 49.5	+0.8
HDA				IAmb	IAmb	07 52 50.8	
	comp=Z,5.5nm,1.2s						
HDA					pP	07 53 37.7	-0.6
IL31		85.50	18	P	P	07 52 49.6	-0.4
IL31				pP	pP	07 53 38.7	-0.9
ILAR	Eielson Array	85.50	18	P	P	07 52 49.5	-0.6
	comp=Z,1.1nm,0.8s,baz=236,slow=5.4,SNR=14						
ILAR				pP	pP	07 53 38.4	-1.3
	comp=Z,2.4nm,0.9s,baz=234,slow=6.2,SNR=9.5						
	comp=Z,1.1nm,0.8s						
J25K	Salcha River,	85.85	19	P	P	07 52 52.3	+0.4
J25K				pP	pP	07 53 41.3	-0.2
NVAR	Mina Array Bea	86.61	49	P	P	07 52 56.4	-0.1
	comp=Z,0.3nm,0.6s,baz=247,slow=7.8,SNR=4.2						
NVAR				pP	pP	07 53 46.6	+0.2
	comp=Z,0.5nm,0.8s,baz=240,slow=3.9,SNR=2.2						
	comp=Z,0.3nm,0.6s						
TROLL	Troll, Antarti	93.95	185	⇑P	P	07 53 29.2	-0.8
	comp=Z,382nm,0.7s						
PDAR	Pinedale Array	94.26	47	P	P	07 53 31.7	-0.3
	comp=Z,0.2nm,0.5s,baz=258,slow=6.0,SNR=2.3						
PDAR				pP	pP	07 54 21.4	-1.2
	comp=Z,0.1nm,0.4s,baz=264,slow=10,SNR=2.2						
	comp=Z,0.2nm,0.5s						
SNAA	Sanae	94.64	183	⇑P	P	07 53 31.4	-1.6
	comp=Z,35nm,0.6s						
SNAA	Sanae	94.64	183		P	07 53 31.0	-2.0
SNAA				IAmb	IAmb	07 54 16.2	
	comp=Z,6.1nm,1.5s						
SNAA	Sanae	94.64	183	P	P	07 53 31.6	-1.5
	comp=Z,2.4nm,0.9s,baz=189,slow=9.1,SNR=17						
	comp=Z,2.4nm,0.9s						
VNA3	Neumayer Olymp	95.31	181	⇑P	P	07 53 34.6	-1.4
	comp=Z,6.7nm,0.6s						
VNA2	Neumayer--Watz	95.58	182	⇑P	P	07 53 36.2	-1.1
	comp=Z,5.5nm,0.6s,baz=178,slow=5.4						
VNA1	Neumayer--Stat	95.88	182	⇑P	P	07 53 36.9	-1.7
	comp=Z,3.8nm,0.6s						
MKAR	Makanchi Array	96.35	316		P	07 53 41.9	+0.7
MKAR	Makanchi Array	96.35	316	P	P	07 53 40.9	-0.3
	comp=Z,2.1nm,0.6s,baz=92,slow=6.7,SNR=26						
	comp=Z,2.1nm,0.6s						
ZALV	Zalesovo Beam	96.46	324	P	P	07 53 40.7	-0.7
	comp=Z,2.1nm,0.7s,baz=104,slow=6.1,SNR=5.7						
	comp=Z,2.1nm,0.7s						
MAKZ	Makanchi	96.57	316		P	07 53 43.0	+0.8
MAKZ				IAmb	IAmb	07 53 43.7	
	comp=Z,3.4nm,1.1s						
ARCES	ARCESS Array B	119.17	346	PKPdf	PKPdf	07 58 59.3	-0.3
ARCES	ARCESS Array B	119.17	346	PKP	PKPdf	07 58 59.2	-0.5
	comp=Z,2.8nm,0.6s,baz=48,slow=1.8,SNR=11						
ARCES				PKKPbc	PKKPab	08 09 12.5	-3.3
	comp=Z,1.3nm,0.8s,baz=222,slow=3.4,SNR=5.5						
BOSA	Boshof	124.16	221	PKPdf	PKPdf	07 59 10.7	0.0
BOSA	Boshof	124.16	221	PKP	PKPdf	07 59 10.2	-0.5
	comp=Z,3.8nm,1.1s,baz=140,slow=7.9,SNR=2.3						
FINES	FINESS Array B	124.67	338	PKPdf	PKPdf	07 59 10.0	-0.4
FINES	FINESS Array B	124.67	338	PKP	PKPdf	07 59 10.3	-0.1
	comp=Z,2.0nm,0.7s,baz=59,slow=5.4,SNR=7.3						
NB2	NORSAR Subarra	129.54	345	PKPdf	PKPdf	07 59 20.1	+0.3
	comp=Z,0.5nm,0.6s,baz=34,slow=1.9						
NOA	NORSAR Array B	129.54	345	PKP	PKPdf	07 59 19.3	-0.6
	comp=Z,0.7nm,0.6s,baz=32,slow=2.1,SNR=4.1						
HFS	Hagfors	129.65	343	PKP	PKPdf	07 59 20.6	+0.6
	comp=Z,1.5nm,0.8s,baz=33,slow=3.4,SNR=2.5						
AKASG	Malin Array Be	129.78	326	PKP	PKPdf	07 59 20.4	-0.1
	comp=Z,0.3nm,0.4s,baz=53,slow=2.5,SNR=5.0						
BRTR	Keskin Array B	131.73	312	PKP	PKPdf	07 59 24.7	-0.1
	comp=Z,0.5nm,0.5s,baz=106,slow=3.1,SNR=3.5						
BRTR				SKPbc	SKPbc	08 02 29.2	-1.8
	comp=Z,0.8nm,0.6s,baz=77,slow=0.7,SNR=4.0						
GERES	GERESS Array B	138.63	334	PKP	PKPdf	07 59 37.6	+0.4
	comp=Z,0.7nm,0.6s,baz=46,slow=2.8,SNR=7.2						
KEST	Kesra	150.31	322	PKPbc	PKPbc	08 00 02.3	-0.9
	comp=Z,14nm,0.9s,baz=31,slow=1.5,SNR=11						
ESDC	Sonseca Array	152.90	345	PKPbc	PKPbc	08 00 06.7	-2.2
	comp=Z,1.0nm,0.8s,baz=22,slow=2.1,SNR=7.9						
TORD	Torodi Ar. Bea	165.88	270	PKP	PKPdf	08 00 16.1	-0.9
	comp=Z,1.0nm,0.3s,baz=74,slow=1.4,SNR=2.4						
TORD				PKPab	PKPab	08 01 18.2	+0.3
	comp=Z,1.1nm,0.3s,baz=93,slow=5.8,SNR=3.0						

NEIC 25 07:48:00.8±1.0,18°.54S±0°.02×168°.8E±0°.2,h73^{km}±13^{km},mb4.4/14,Error ellipse: s-maj=25.6km s-min=2.3km az=88.0

NOU 25 07:48:02.0,18°.65S×168°.50E,h31^{km},MLv4.5/22,Vanuatu Islands

IDC 25 07:48:02.4±6.6,18°.69S×168°.61E,h87^{km}±49^{km},mb3.9/6,mbtmp4.2/7,ML4.0/1,Error ellipse: s-maj=47.8km s-min=33.8km az=50.0

ISC 25 07:48:02.7±0.8,18°.60S±0°.04×168°.63E±0°.07,h100^{km},n44,σ1ˢ.91/45,mb4.3/12,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	0.97	334	P	Pn	07 48 19.8	-3.0
DVP	Devils Point	0.97	334	S	Sn	07 48 34.0	-3.9
INH	Isangel	1.12	147	P	Pn	07 48 22.2	-2.3
INH	Isangel	1.12	147	S	Sn	07 48 38.5	-2.4
VLAKA	Lakatoro	2.74	335	P	Pn	07 48 43.7	-1.3
VLAKA	Lakatoro	2.74	335	S	Sn	07 49 16.4	-1.1
MARNC	Mare, Loyalty	2.92	191	P	Pn	07 48 44.7	-2.7
MARNC	Mare, Loyalty	2.92	191	S	Sn	07 49 17.1	-4.6
SANVU	Saraoutou	3.42	336		Pn	07 48 51.6	-2.6
SANVU	Saraoutou	3.42	336	P	Pn	07 48 51.9	-2.3
YATNC	Mamie plateau,	3.81	205	P	Pn	07 48 56.9	-2.4
DZM	Mont Dzumac	4.01	210		Pn	07 49 01.3	-0.9
DZM	Mont Dzumac	4.01	210	P	Pn	07 49 00.6	-1.5
	9.7nm,0.3s,baz=32,slow=19,SNR=170						
DZM				S	Sn	07 49 46.0	-2.2
	192nm,0.5s,baz=108,slow=19,SNR=16						
	27nm,0.3s						
DZM	Mont Dzumac	4.01	210	P	Pn	07 49 01.4	-0.8
DZM	Mont Dzumac	4.01	210	S	Sn	07 49 46.0	-2.2
PINNC	Pines Island,	4.14	195		Pn	07 49 03.4	-0.4
OUENC	Ouen Island, N	4.15	204	P	Pn	07 49 00.7	-3.2
OUENC	Ouen Island, N	4.15	204	S	Sn	07 49 50.3	-1.1
ONTNC	Ouen Toro	4.21	209		Pn	07 49 03.1	-1.7
ONTNC	Ouen Toro	4.21	209	P	Pn	07 49 03.1	-1.7
ONTNC	Ouen Toro	4.21	209	S	Sn	07 49 50.3	-2.6
KOUNC	Koumac, New Ca	4.53	244	P	Pn	07 49 07.3	-1.8
KOUNC	Koumac, New Ca	4.53	244	S	Sn	07 49 58.0	-2.6
INZ	Inchbonnie	24.16	175	P	P	07 53 10.8	+1.3
INZ				IAmb	IAmb	07 53 16.8	
	comp=Z,33nm,1.4s						
LTZ	Lake Taylor	24.30	173	P	P	07 53 11.5	+0.6
LTZ				IAmb	IAmb	07 53 24.5	
	comp=Z,15nm,1.2s						
STKA	Stephens Creek	27.70	236	P	P	07 53 42.9	+1.2
	comp=Z,0.9nm,0.5s,baz=66,slow=12,SNR=2.9						
	comp=Z,0.9nm,0.5s						
WR8	Warramunga Arr	32.21	262	P	P	07 54 21.7	+0.1
WR8				IAmb	IAmb	07 54 48.4	
	comp=Z,9.0nm,1.5s						
WB0	Warramunga Arr	32.32	262	P	P	07 54 23.3	+0.7
WB0				IAmb	IAmb	07 54 42.5	
	comp=Z,5.9nm,1.2s						
WRA	Warramunga Arr	32.36	262	P	P	07 54 23.1	+0.2
WRA	Warramunga Arr	32.36	262	P	P	07 54 22.6	-0.4
	comp=Z,0.5nm,0.5s,baz=100,slow=7.9,SNR=13						
	comp=Z,0.5nm,0.5s						
AS31	Alice Springs	32.72	255	P	P	07 54 26.9	+0.8
ASAR	Alice Springs	32.73	255	P	P	07 54 26.9	+0.8
ASAR	Alice Springs	32.73	255	P	P	07 54 26.6	+0.5
	comp=Z,6.1nm,0.7s,baz=88,slow=8.3,SNR=57						
	comp=Z,6.1nm,0.7s						
KNRA	Kununurra	38.15	268	P	P	07 55 13.4	+0.8
FITZ	Fitzroy Crossi	40.73	264	P	P	07 55 35.3	+1.3
FITZ				IAmb	IAmb	07 55 36.1	
	comp=Z,2.4nm,0.7s						
FITZ	Fitzroy Crossi	40.73	264	P	P	07 55 35.3	+1.3
	comp=Z,10nm,0.6s,baz=86,slow=9.6,SNR=26						
	comp=Z,10nm,0.6s						
PSA00	Pilbara Seismi	45.77	258	P	P	07 56 16.1	+1.5
PSA00				IAmb	IAmb	07 56 37.9	
	comp=Z,4.0nm,0.9s						
PSA00	Pilbara Seismi	45.77	258	P	P	07 56 16.1	+1.5

PSA00				IAmb	IAmb	07 56 16.8	
	comp=Z,6.4nm,0.8s						
MBWA	**Marble Bar**	**45.91**	**258**	P	**P**	**07 56 17.3**	**+1.6**
MORW	**Morawa**	**48.88**	**247**	P	**P**	**07 56 39.8**	**+1.2**
QSPA	**South Pole Qui**	**71.45**	**180**	P	**P**	**07 59 13.6**	**+1.4**
QSPA	**South Pole Qui**	**71.45**	**180**	P	**P**	**07 59 13.2**	**+1.0**
	comp=Z,1.4nm,0.8s,baz=352,slow=3.0,SNR=4.1						
	comp=Z,1.4nm,0.8s						
SONM	**Songino Array**	**86.37**	**323**	P	**P**	**08 00 34.8**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=140,slow=7.2,SNR=2.4						
	comp=Z,0.5nm,0.5s						
SNAA	**Sanae**	**89.77**	**183**	P	**P**	**08 00 49.9**	**+0.3**
SNAA				IAmb	IAmb	08 00 50.5	
	comp=Z,5.1nm,1.5s						

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*GCG **25** 07:48:15.1±1.4, 14.°30N×93.°24W, h38km±999km, MD3.9, ML2.6*

*MEX **25** 07:48:16.8±0.8, 14.°49N×93.°24W, h5km±33km, MD3.8*

ISC 25 07:48:12.4±2.4**, 14.°31N**±0.°09×**93.°17W**±0.°09**, h19**km±4km**, n12,** σ1.ˢ**43**/25**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**1.06**	**56**	*e*P	**Pg**	**07 48 34.2**	**+1.1**
THIG				*e*S	**Sb**	**07 48 46.6**	**+1.0**
THIG		**1.06**	**56**	*i* P	**Pg**	**07 48 34.1**	**+1.1**
PATR	**El Naranjo**	**1.21**	**48**	*e*P	**Pb**	**07 48 35.4**	**+0.6**
PATR				*e*S	**Sb**	**07 48 50.5**	**+0.3**
PAVE	**Pavencul**	**1.30**	**47**	*e*P	**Pb**	**07 48 37.2**	**+0.8**
PAVE				*e*S	**Sn**	**07 48 50.7**	**-2.1**
PCIG		**1.39**	**358**	*e*P	**Pn**	**07 48 35.9**	**-0.9**
PCIG				*e*S	**Sn**	**07 48 52.3**	**-2.2**
RTAL	**Retalhuleu**	**1.45**	**81**	*e*P	**Pg**	**07 48 40.7**	**+0.4**
RTAL				*e*S	**Sb**	**07 48 58.7**	**+2.0**
STG8	**El Palmar, Qui**	**1.77**	**85**	*e*P	**Pn**	**07 48 42.0**	**-0.1**
STG8				*i* P	**Pb**	**07 48 42.5**	**-1.8**
STG8				*i* S	**Sn**	**07 49 04.0**	**-0.3**
STG8				IAML		07 49 06.9	
	comp=N,93nm,0.1s						
STG0	**El Palmar, Qui**	**1.78**	**86**	*e*P	**Pn**	**07 48 42.3**	**+0.1**
CCIG	**Comitan**	**2.20**	**27**	*e*P	**Pb**	**07 48 51.5**	**-0.2**
CCIG				*e*S	**Sn**	**07 49 15.0**	**+0.1**
CCIG	**Comitan**	**2.20**	**27**	*e*P	**Pb**	**07 48 51.5**	**-0.2**
CCIG				*e*S	**Sb**	**07 49 18.9**	**+0.2**
CCIG				*e*S	**Sg**	**07 49 20.9**	**-2.4**
CCIG				IAML		07 49 24.8	
	comp=N,38nm,0.4s						
TGIG		**2.46**	**1**	*e*P	**Pn**	**07 48 53.4**	**+1.9**
TGIG				*e*S	**Sn**	**07 49 21.9**	**+0.8**
TGIG		**2.46**	**1**	*i* P	**Pn**	**07 48 53.4**	**+1.9**
TGIG				*e*S	**Sn**	**07 49 22.2**	**+1.2**
TGIG				*i* S	**Sb**	**07 49 23.5**	**-2.4**
TGIG				IAML		07 49 25.6	
	comp=E,20nm,0.4s						

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*IDC **25** 07:50:15.8±3.1, 53.°58N×87.°80E, h0km, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=27.9km s-min=17.9km az=56.0*

ASRS 25 07:50:12.0±1.1**, 53.°55N**×**87.°89E, h0**km**, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.87**	**284**	I	I	08 01 40.0	
	baz=100,slow=316,SNR=1.0						
ZALV	**Zalesovo Beam**	**1.87**	**284**	Pn	Pg	07 50 48.4	+0.6
	0.8nm,0.3s,baz=100,slow=13,SNR=6.9						
ZALV				Lg	Lg	07 51 13.0	
	1.6nm,0.3s,baz=100,slow=25,SNR=9.6						
KURBB	**Kurchatov Arra**	**6.47**	**247**	Pn	Pn	07 51 52.4	+4.0
	0.1nm,0.3s,baz=62,slow=14,SNR=2.6						
KURBB				Lg	Lg	07 53 39.2	
	baz=51,slow=28,SNR=1.7						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**7.66**	**210**	Pn	Pn	07 52 09.4	+4.7
	0.1nm,0.3s,baz=32,slow=14,SNR=4.2						
MKAR				Lg	Lg	07 54 19.8	
	baz=23,slow=27,SNR=2.9						
	0.1nm,0.3s						

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*IDC **25** 07:54:33.3±12.0, 17.°46S×178.°76W, h563km±164km, mb3.0/6, mbtmp3.9/6, Error ellipse: s-maj=128.2km s-min=41.0km az=162.0*

*NEIC **25** 07:54:34.4±1.1, 17.°4S±0.°1×178.°8W±0.°1, h561km±9km, mb4.3/28, Error ellipse: s-maj=21.7km s-min=14.9km az=153.0*

ISC 25 07:54:33.0±0.6**, 17.°3S**±0.°2×**178.°84W**±0.°10**, h550**km**, n34,** σ**1.ˢ13**/34**, mb4.1**/19**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.99**	**262**	P	**P**	**07 55 49.4**	**+1.3**
AFI	**Afiamalu**	**7.61**	**64**	P	**P**	**07 56 29.2**	**+2.1**
RAR	**Rarotonga**	**18.41**	**105**	P	**P**	**07 58 15.3**	**+0.7**
COEN	**Coen**	**36.69**	**270**	P	**P**	**08 00 56.5**	**+2.4**
COEN				IAmb	IAmb	08 00 56.8	
	comp=Z,24nm,1.4s						
TOO	**Toolangi**	**37.21**	**230**	P	**P**	**08 00 56.7**	**-1.4**
TOO				IAmb	IAmb	08 01 39.6	
	comp=Z,5.1nm,1.4s						
STKA	**Stephens Creek**	**38.55**	**240**	P	**P**	**08 01 08.9**	**-0.1**
STKA				IAmb	IAmb	08 01 46.8	
	comp=Z,21nm,1.4s						
TAOE	**Nuku Hiva Isla**	**38.55**	**82**	P	**P**	**08 01 09.1**	**-0.3**
HUH	**Hualalai**	**43.18**	**33**	P	**P**	**08 01 43.3**	**-2.9**
KEKH	**Kekaha**	**43.34**	**26**	P	**P**	**08 01 46.8**	**-0.2**
WR8	**Warramunga Arr**	**44.18**	**259**	P	**P**	**08 01 53.4**	**-0.4**
WR8				IAmb	IAmb	08 02 03.3	
	comp=Z,7.0nm,1.2s						
WB0	**Warramunga Arr**	**44.30**	**259**	P	**P**	**08 01 54.6**	**0.0**
WB0				IAmb	IAmb	08 02 04.4	
	comp=Z,18nm,1.5s						
WB2	**Warramunga Arr**	**44.32**	**259**	P	**P**	**08 01 54.6**	**-0.3**
WB2				IAmb	IAmb	08 02 20.8	
	comp=Z,7.2nm,1.2s						
WRA	**Warramunga Arr**	**44.33**	**259**	P	**P**	**08 01 54.6**	**-0.3**
WRA	**Warramunga Arr**	**44.33**	**259**	P	**P**	**08 01 54.4**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=96,slow=8.2,SNR=23						
	comp=Z,0.7nm,0.5s						
AS31	**Alice Springs**	**44.55**	**254**	P	**P**	**08 01 56.3**	**-0.3**
ASAR	**Alice Springs**	**44.55**	**254**	P	**P**	**08 01 56.2**	**-0.4**
	comp=Z,3.5nm,0.5s,baz=93,slow=7.7,SNR=58						
	comp=Z,3.5nm,0.5s						
MMRI	**Maumere**	**57.88**	**271**	P	**P**	**08 03 32.6**	**-0.6**
NWAO	**Narrogin (SRO)**	**59.12**	**242**	P	**P**	**08 03 39.6**	**-1.6**
NWAO				IAmb	IAmb	08 04 20.0	
	comp=Z,53nm,1.4s						
VNDA	**Vanda**	**60.97**	**185**	P	**P**	**08 03 53.7**	**+1.0**
ELS	**Elsinore Mount**	**77.42**	**49**		**P**	**08 05 32.4**	**+0.4**
ELS				IAmb	IAmb	08 05 43.9	
	comp=Z,5.9nm,0.8s						
N14K	**Kuskokwak Cree**	**78.24**	**9**	P	**P**	**08 05 37.2**	**+1.5**
N14K				IAmb	IAmb	08 05 40.8	
	comp=Z,9.4nm,1.0s						
YBH	**Yreka Blue Hor**	**78.35**	**39**	P	**P**	**08 05 37.4**	**+0.5**
P18K	**Big Mountain,**	**78.85**	**12**	P	**P**	**08 05 39.5**	**+0.4**
NVAR	**Mina Array Bea**	**79.30**	**44**	P	**P**	**08 05 41.9**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=241,slow=5.0,SNR=4.7						
	comp=Z,0.4nm,0.7s						
J05D	**Fort Rock, OR**	**80.14**	**39**	P	**P**	**08 05 46.4**	**+0.1**
L18K	**Granite Mounta**	**81.21**	**10**	P	**P**	**08 05 52.7**	**+1.5**
WVOR	**Wild Horse Val**	**81.24**	**41**	P	**P**	**08 05 51.6**	**-0.5**
WVOR				IAmb	IAmb	08 05 57.2	
	comp=Z,14nm,1.2s						
M19K	**Big River Lodg**	**81.33**	**11**	P	**P**	**08 05 52.4**	**+0.5**
M19K				IAmb	IAmb	08 06 26.8	
	comp=Z,7.0nm,1.4s						
J17K	**VABM Dome**	**81.94**	**9**	P	**P**	**08 05 56.3**	**+1.3**
J17K				IAmb	IAmb	08 06 27.2	
	comp=Z,12nm,1.5s						
SCM	**Sheep Creek Mo**	**82.78**	**14**	P	**P**	**08 05 59.6**	**+0.3**
SCM				IAmb	IAmb	08 06 43.3	
	comp=Z,7.8nm,1.3s						
ILAR	**Eielson Array**	**85.43**	**13**	P	**P**	**08 06 11.5**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=213,slow=4.5,SNR=4.9						
	comp=Z,0.3nm,0.5s						
TXAR	**Lajitas Array**	**86.04**	**58**	P	**P**	**08 06 14.9**	**-1.2**
	comp=Z,0.4nm,0.7s,baz=241,slow=4.9,SNR=6.3						
	comp=Z,0.4nm,0.7s						
PDAR	**Pinedale Array**	**87.22**	**44**	P	**P**	**08 06 20.3**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=248,slow=5.1,SNR=4.1						
	comp=Z,0.3nm,0.5s						
GERES	**GERESS Array B**	**146.96**	**345**	PKPbc	**PKPbc**	**08 13 13.0**	**-1.2**
	comp=Z,0.4nm,0.4s,baz=36,slow=3.7,SNR=2.5						

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*ASRS **25** 08:05:37.0±1.0, 54.°63N×86.°31E, h0km, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 25 08:05:42.0±3.2**, 54.°52N**×**86.°22E, h0**km**, mbtmp2.8**/2**, ML2.5**/2**, Error ellipse: s-maj=23.5km s-min=14.1km az=48.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.00**	**236**	I	I	08 11 30.0	
	baz=54,slow=330,SNR=20						
ZALV	**Zalesovo Beam**	**1.00**	**236**	Pg	Pg	08 06 00.2	-0.9
	1.2nm,0.3s,baz=54,slow=17,SNR=8.1						
ZALV				Lg	Lg	08 06 15.4	
	3.9nm,0.3s,baz=58,slow=30,SNR=17						
KURBB	**Kurchatov Arra**	**6.10**	**233**	Pn	Pn	08 07 13.5	+0.3
	0.1nm,0.3s,baz=49,slow=13,SNR=4.6						
KURBB				Lg	Lg	08 08 56.7	
	baz=48,slow=34,SNR=1.8						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**8.13**	**199**	Pn	Pn	08 07 42.5	+1.4
	0.1nm,0.3s,baz=22,slow=14,SNR=2.8						
MKAR				Sn	Sn	08 09 13.0	-0.7
	0.1nm,0.3s,baz=22,slow=27,SNR=3.6						
	0.2nm,0.3s						

IDC 25 08:17:37.1±3.1**, 30.°51S**×**177.°69W, h0**km**, mb3.5**/2**, mbtmp3.5**/2**, Error ellipse: s-maj=67.0km s-min=25.5km az=107.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.27**	**351**	Pn	Pn	08 18 02.6	+0.6
	69nm,0.3s,baz=177,slow=19,SNR=8.3						
RAO				Sn	Sn	08 18 19.8	0.0
	144nm,0.3s,baz=198,slow=20,SNR=4.6						
URZ	**Urewera**	**8.84**	**208**	Pn	Pn	08 19 39.6	-6.5
	baz=3.5,slow=19						
URZ				Sn	Sn	08 21 19.3	-7.1
	0.9nm,0.3s,baz=322,slow=17,SNR=7.6						
ASAR	**Alice Springs**	**43.37**	**267**	P	P	08 25 41.9	+0.4
	0.4nm,0.7s,baz=113,slow=7.6,SNR=4.2						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**44.37**	**272**	P	P	08 25 49.0	-0.5
	0.3nm,0.3s,baz=113,slow=7.9,SNR=8.9						
	0.3nm,0.3s						
FINES	**FINESS Array B**	**145.34**	**340**	PKPbc	PKPbc	08 37 14.8	-1.2
	1.7nm,0.9s,baz=41,slow=4.4,SNR=6.3						

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*IDC **25** 08:25:18.5±3.4, 53.°53N×87.°87E, h0km, mbtmp2.6/2, ML2.3/2, Error ellipse: s-maj=29.0km s-min=17.6km az=57.0*

ASRS 25 08:25:16.0±1.0**, 53.°61N**×**87.°93E, h0**km**, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.88**	**282**	I	I	08 36 30.0	
	baz=100,slow=322,SNR=4.6						
ZALV	**Zalesovo Beam**	**1.88**	**282**	Pg	Pb	08 25 51.5	+0.4
	0.5nm,0.3s,baz=102,slow=16,SNR=5.7						
ZALV				Lg	Lg	08 26 16.9	
	1.3nm,0.3s,baz=105,slow=25,SNR=8.1						
KURBB	**Kurchatov Arra**	**6.52**	**246**	Pn	Pn	08 26 56.5	+3.5
	0.1nm,0.3s,baz=62,slow=14,SNR=2.1						
KURBB				Lg	Lg	08 28 44.1	
	baz=64,slow=31,SNR=4.2						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**7.72**	**210**	Pn	Pn	08 27 11.3	+1.7
	0.1nm,0.3s,baz=26,slow=13,SNR=1.7						
MKAR				Lg	Lg	08 29 20.4	
	baz=27,slow=36,SNR=2.2						
	0.1nm,0.4s						

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*DJA **25** 08:25:16.9±0.4, 2°S±7°×13°8E±°, h47km±11km, M4.1/6, MLv4.1/6*

*IDC **25** 08:25:18.2±1.0, 2.°77S×138.°52E, h0km, mb3.7/5, mbtmp3.8/8, ML3.6/3, Error ellipse: s-maj=23.2km s-min=16.1km az=167.0*

ISC 25 08:25:17.0±1.1**, 2.°3S**±0.°1×**138.°05E**±0.°05**, h35**km**, n12,** σ**1.ˢ03**/11**, mb3.8**/5**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.71**	**68**	P	**Pn**	**08 25 31.9**	**+1.3**
SMPI				S	**Sn**	**08 25 39.6**	**-0.8**
GENI	**Genyem**	**2.14**	**99**	P	**Pn**	**08 25 49.4**	**-0.9**
GENI				S	**Sn**	**08 26 15.7**	**0.0**
BAKI	**Biak**	**2.21**	**299**	P	**Pn**	**08 25 50.3**	**-0.9**
BAKI				S	**Sn**	**08 26 17.5**	**+0.1**
JAY	**Jayapura**	**2.67**	**95**	Pn	**Pn**	**08 25 56.9**	**-0.6**
	28nm,0.3s,baz=265,slow=12,SNR=59						
JAY				Lg	Lg	08 26 28.1	
	17nm,0.3s,baz=127,slow=18,SNR=6.4						
	58nm,0.3s						
JAY	**Jayapura**	**2.67**	**95**	P	**Pn**	**08 25 56.7**	**-0.8**
JAY				S	**Sn**	**08 26 27.6**	**-1.1**
WRA	**Warramunga Arr**	**17.94**	**191**	P	**Pn**	**08 29 23.9**	**+0.1**
	0.4nm,0.3s,baz=16,slow=13,SNR=17						
	2.3nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.89**	**217**	P	Pn	08 29 50.5	+3.1
	baz=45,slow=11,SNR=3.2						
	2.1nm,0.7s						
ASAR	**Alice Springs**	**21.65**	**190**	P	**P**	**08 30 06.1**	**+1.6**
	3.9nm,0.7s,baz=19,slow=11,SNR=38						
	3.9nm,0.7s						
SONM	**Songino Array**	**57.04**	**335**	P	P	08 35 12.5	+13
	0.3nm,0.4s,baz=138,slow=6.7,SNR=2.0						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**69.03**	**323**	P	P	08 36 30.2	+11
	0.8nm,0.9s,baz=110,slow=7.8,SNR=3.6						
	0.8nm,0.9s						
BVAR	**Borovoye Array**	**78.57**	**325**	P	P	08 37 24.8	+10
	0.4nm,0.5s,baz=101,slow=7.5,SNR=2.3						
	0.4nm,0.5s						
ILAR	**Eielson Array**	**85.70**	**25**	P	P	08 37 58.5	+6.4
	0.3nm,0.5s,baz=260,slow=5.3,SNR=1.5						
	0.3nm,0.5s						

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*IDC **25** 08:26:58.4±1.5, 30.°57S×177.°99W, h0km, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=37.5km s-min=20.6km az=102.0*

ISC 25 08:27:03.6±1.5**, 30.°7S**±0.°1×**178.°0W**±0.°3**, h46**km**, n7,** σ**2.ˢ92**/8**, mb3.8**/4**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.41**	**3**	Pn	**Pn**	**08 27 23.3**	**-3.5**
	36nm,0.3s,baz=198,slow=20,SNR=1.6						
RAO				Sn	**Sn**	**08 27 45.1**	**+1.0**
	182nm,0.3s,baz=156,slow=20,SNR=6.5						
URZ	**Urewera**	**8.59**	**207**	Pn	Pn	08 28 59.4	-5.8
	0.3nm,0.3s,baz=338,slow=19,SNR=2.1						
URZ				Sn	**Sn**	**08 30 36.3**	**-4.4**
	1.8nm,0.3s,baz=11,slow=19,SNR=11						
STKA	**Stephens Creek**	**34.43**	**257**	P	**P**	**08 33 49.0**	**+2.3**
	3.0nm,0.8s,baz=95,slow=15,SNR=6.6						
	3.0nm,0.8s						
ASAR	**Alice Springs**	**43.10**	**267**	P	**P**	**08 35 00.0**	**+0.5**
	0.4nm,0.4s,baz=111,slow=7.8,SNR=5.5						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**44.12**	**272**	P	**P**	**08 35 08.0**	**+0.3**
	0.7nm,0.4s,baz=113,slow=8.1,SNR=9.5						
	0.7nm,0.4s						
QSPA	**South Pole Qui**	**59.45**	**180**	P	**P**	**08 37 03.5**	**+2.0**
	0.4nm,0.6s,baz=180,slow=3.6,SNR=7.0						
	0.4nm,0.6s						
FINES	**FINESS Array B**	**145.39**	**340**	PKPbc	**PKPbc**	**08 46 36.3**	**+0.6**
	0.9nm,0.5s,baz=44,slow=4.2,SNR=5.2						

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*ASRS **25** 08:30:06.0±1.0, 54.°04N×86.°51E, h0km, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 25 08:30:09.7±2.4**, 53.°98N**×**86.°49E, h0**km**, mbtmp3.0**/2**, ML2.7**/2**, Error ellipse: s-maj=19.5km s-min=11.3km az=67.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.98**	**269**	I	I	08 35 30.0	
	baz=86,slow=327,SNR=4.0						
ZALV	**Zalesovo Beam**	**0.98**	**269**	Pg	Pg	08 30 27.1	-1.5
	1.2nm,0.3s,baz=85,slow=17,SNR=11						
ZALV				Lg	Lg	08 30 43.1	
	1.7nm,0.3s,baz=92,slow=30,SNR=8.8						
KURBB	**Kurchatov Arra**	**5.92**	**239**	Pn	Pn	08 31 39.5	+0.9
	0.2nm,0.3s,baz=56,slow=14,SNR=8.5						
KURBB				Lg	Lg	08 33 18.1	
	0.1nm,0.3s,baz=57,slow=34,SNR=5.6						
	1.1nm,0.4s						
MKAR	**Makanchi Array**	**7.67**	**202**	Pn	Pn	08 32 03.9	+1.2
	0.1nm,0.3s,baz=23,slow=11,SNR=9.3						
MKAR				Sn	Sn	08 33 30.0	-0.3
	0.1nm,0.3s,baz=20,slow=25,SNR=2.8						
MKAR				Lg	Lg	08 34 13.0	
	baz=22,slow=36,SNR=5.1						
	0.3nm,0.5s						

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*SJA **25** 08:34:28.2±0.7, 21.°11S×68.°90W, h128km±4km, ML3.9, MW3.8*

*NEIC **25** 08:34:30.8±1.3, 21.°11S±0.°02×69.°01W±0.°07, h114km±5km, mb4.1/11, ML3.9(GUC), Error ellipse: s-maj=9.8km s-min=3.3km az=90.0*

*GUC **25** 08:34:31.3±0.8, 21.°10S×68.°97W, h110km±4km, ML3.9*

*IDC **25** 08:34:34.1±2.7, 20.°86S×68.°57W, h142km±26km, mb3.5/5, mbtmp4.0/8, Error ellipse: s-maj=25.0km s-min=20.8km az=92.0*

*VAO **25** 08:34:37.3±3.0, 20.°66S×68.°24W, h131km±12km, mb4.2*

ISC 25 08:34:29.8±0.6**, 21.°10S**±0.°03×**68.°91W**±0.°05**, h114**km±5km**, n87,** σ**1.ˢ59**/118**, mb3.8**/5**, 6C-5D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.54**	**276**		**Pn**	**08 34 47.3**	**-0.2**
PB01				Sn	**Sn**	**08 35 00.8**	**0.0**
PB01	**IPOC Station P**	**0.54**	**276**	⇑*e*P	**Pn**	**08 34 47.7**	**+0.2**
PB01				*e*S	**Sn**	**08 35 00.3**	**-0.5**
PB01				IAML		08 35 01.8	
	comp=E,8μm,0.2s						
PB01	**IPOC Station P**	**0.54**	**276**	*e*P	**Pn**	**08 34 47.6**	**+0.2**
PB01				*e*S	**Sn**	**08 35 01.4**	**+0.5**
PB01				IAML		08 35 02.5	
	comp=Z,5μm,0.2s						
PB09	**IPOC Station P**	**0.76**	**204**		**Pn**	**08 34 50.0**	**+0.7**
PB09				Sn	**Sn**	**08 35 04.4**	**+0.4**
PB09	**IPOC Station P**	**0.76**	**204**	⇓*e*P	**Pn**	**08 34 50.1**	**+0.7**
PB09				*e*S	**Sn**	**08 35 05.2**	**+1.3**
PB09				IAML		08 35 07.5	
	comp=E,3μm,0.2s						
PB09	**IPOC Station P**	**0.76**	**204**	*e*P	**Pn**	**08 34 50.0**	**+0.7**
PB09				*e*S	**Sn**	**08 35 05.5**	**+1.5**
PB09				IAML		08 35 06.1	
	comp=Z,2μm,0.6s						
PX03	**IPOC Station P**	**0.97**	**316**	*e*S	**Sn**	**08 35 06.9**	**-0.4**
PB08	**IPOC Station P**	**0.98**	**347**		**Pn**	**08 34 52.5**	**+0.8**
PB08	**IPOC Station P**	**0.98**	**347**	⇑*e*P	**Pn**	**08 34 52.3**	**+0.7**
PB08				*e*S	**Sn**	**08 35 08.5**	**+0.4**
PB08				IAML		08 35 10.0	
	comp=E,3μm,0.2s						
PB08	**IPOC Station P**	**0.98**	**347**	*e*P	**Pn**	**08 34 52.3**	**+0.7**
PB08				*e*S	**Sn**	**08 35 08.9**	**+0.9**
PATCX	**Punta Patache**	**1.20**	**283**		**Pn**	**08 34 53.9**	**+0.5**
PATCX				Sn	**Sn**	**08 35 10.5**	**-0.9**
PATCX	**Punta Patache**	**1.20**	**283**	*e*P	**Pn**	**08 34 54.0**	**+0.5**
PATCX				*e*S	**Sn**	**08 35 12.7**	**+1.3**
PATCX				IAML		08 35 13.7	
	comp=Z,2μm,0.4s						
PB03	**IPOC Station P**	**1.23**	**220**		**Pn**	**08 34 54.3**	**+0.4**
PB03	**IPOC Station P**	**1.23**	**220**	⇑*e*P	**Pn**	**08 34 54.4**	**+0.4**
PB03				*e*S	**Sn**	**08 35 11.8**	**-0.4**
PB03				IAML		08 35 12.9	
	comp=E,4μm,0.1s						
PB03	**IPOC Station P**	**1.23**	**220**	*e*P	**Pn**	**08 34 53.6**	**-0.3**
PB03				*e*S	**Sn**	**08 35 12.3**	**+0.1**
PB03				IAML		08 35 14.3	
	comp=Z,2μm,0.4s						
TA01	**Diego Aracena**	**1.30**	**294**		**Pn**	**08 34 54.7**	**+0.1**
TA01	**Diego Aracena**	**1.30**	**294**	⇑*e*P	**Pn**	**08 34 54.6**	**+0.1**
TA01				*e*S	**Sn**	**08 35 11.8**	**-1.5**
TA01				IAML		08 35 16.0	
	comp=N,3μm,0.5s						
TA01	**Diego Aracena**	**1.30**	**294**	*e*P	**Pn**	**08 34 54.7**	**+0.1**
TA01				*e*S	**Sn**	**08 35 14.9**	**+1.6**
TA01				IAML		08 35 16.2	
	comp=Z,795nm,0.6s						
TA02	**Huaiquique**	**1.41**	**306**		**Pn**	**08 34 55.8**	**0.0**
TA02	**Huaiquique**	**1.41**	**306**	*e*S	**Sn**	**08 35 15.2**	**-0.4**
TA02				IAML		08 35 18.1	
	comp=N,3μm,0.1s						
TA02				IAML		08 35 21.1	
	comp=E,3μm,0.1s						
TA02	**Huaiquique**	**1.41**	**306**	*e*P	**Pn**	**08 34 55.4**	**-0.4**
TA02				IAML		08 35 22.1	
	comp=Z,1μm,0.1s						
GO01	**Chusmiza**	**1.45**	**349**		**Pn**	**08 34 57.4**	**+0.6**
GO01	**Chusmiza**	**1.45**	**349**	*e*P	**Pn**	**08 34 57.4**	**+0.6**
GO01				*e*S	**Sn**	**08 35 17.8**	**+0.6**
GO01				IAML		08 35 19.4	
	comp=N,3μm,0.3s						
GO01	**Chusmiza**	**1.45**	**349**	*e*P	**Pn**	**08 34 57.4**	**+0.6**
GO01				*e*S	**Sn**	**08 35 18.5**	**+1.3**
PB11	**IPOC Station P**	**1.51**	**332**		**Pn**	**08 34 57.5**	**+0.4**
PB11	**IPOC Station P**	**1.51**	**332**	⇑*e*P	**Pn**	**08 34 57.3**	**+0.2**
PB11				*e*S	**Sn**	**08 35 17.9**	**+0.1**
PB11	**IPOC Station P**	**1.51**	**332**	*e*P	**Pn**	**08 34 56.1**	**-1.0**
PB11				*e*S	**Sn**	**08 35 19.1**	**+1.3**
PB11				IAML		08 35 19.7	
	comp=Z,1μm,1.1s						
PB06	**IPOC Station P**	**1.71**	**201**		**Pn**	**08 35 00.4**	**+0.9**
PB06	**IPOC Station P**	**1.71**	**201**	⇓*e*P	**Pn**	**08 35 00.5**	**+0.9**
PB06				*e*S	**Sn**	**08 35 22.2**	**0.0**
PB06				IAML		08 35 23.4	
	comp=E,2μm,0.7s						
PB06	**IPOC Station P**	**1.71**	**201**	*e*P	**Pn**	**08 34 59.8**	**+0.2**
PB06				*e*S	**Sn**	**08 35 23.6**	**+1.4**
PB06				IAML		08 35 24.5	
	comp=Z,1μm,0.3s						
AF01	**San Pedro de A**	**1.96**	**160**		**Pn**	**08 35 05.0**	**+2.2**
AF01	**San Pedro de A**	**1.96**	**160**	*e*P	Pn	08 34 51.1	-12
AF01				*e*S	**Sn**	**08 35 27.1**	**-0.9**
AF01				IAML		08 36 04.6	
	comp=Z,292nm,0.6s						
PB05	**IPOC Station P**	**2.12**	**214**		**Pn**	**08 35 05.0**	**+0.5**
PB05	**IPOC Station P**	**2.12**	**214**	⇑*e*P	**Pn**	**08 35 04.6**	**+0.1**
PB05				*e*S	**Sn**	**08 35 29.1**	**-2.1**
PB05				IAML		08 35 30.9	
	comp=N,781nm,0.4s						
PB05	**IPOC Station P**	**2.12**	**214**	*e*P	**Pn**	**08 35 04.8**	**+0.3**
PB05				*e*S	**Sn**	**08 35 29.5**	**-1.6**
PB05				IAML		08 35 30.4	
	comp=Z,366nm,0.3s						
PB16	**IPOC Station P**	**2.81**	**348**		**Pn**	**08 35 14.9**	**+1.0**
PB16	**IPOC Station P**	**2.81**	**348**	*e*P	Pn	08 35 04.0	-10
PB16				*e*S	**Sn**	**08 35 50.1**	**+2.3**
PB10	**IPOC Station P**	**2.84**	**212**		**Pn**	**08 35 13.9**	**+0.1**
PB10	**IPOC Station P**	**2.84**	**212**	*e*P	**Pn**	**08 35 13.0**	**-0.9**
PB10				*e*S	**Sn**	**08 35 44.1**	**-3.6**
PB10				IAML		08 35 46.0	
	comp=Z,227nm,0.5s						
AP01	**Chacalluta**	**3.03**	**333**	*e*P	**Pn**	**08 35 16.3**	**-0.1**
AP01				IAML		08 36 10.4	
	comp=Z,273nm,0.4s						
YJA	**Yavi**	**3.33**	**109**	*e*P	**Pn**	**08 35 23.6**	**+2.9**
YJA				*e*S	**Sn**	**08 36 00.4**	**+0.3**
PB18	**Visviri**	**3.54**	**351**		**Pn**	**08 35 24.1**	**+0.6**
PB14	**IPOC Station P**	**3.77**	**201**		**Pn**	**08 35 26.0**	**-0.4**
PB14	**IPOC Station P**	**3.77**	**201**	*e*P	**Pn**	**08 35 26.0**	**-0.4**
PB14				*e*S	**Sn**	**08 36 09.4**	**-0.9**
PB14				IAML		08 36 32.5	
	comp=Z,91nm,0.5s						
GO02	**Mina Guanaco**	**4.09**	**189**		**Pn**	**08 35 30.0**	**-0.7**
GO02	**Mina Guanaco**	**4.09**	**189**	*e*P	**Pn**	**08 35 30.6**	**-0.1**
GO02				*e*S	**Sn**	**08 36 18.9**	**+0.9**
LPAZ	**La Paz**	**4.84**	**9**		**Pn**	**08 35 43.6**	**+2.4**
LPAZ	**La Paz**	**4.84**	**9**	P	**Pn**	**08 35 43.3**	**+2.1**

	comp=Z,5.8nm,0.3s,baz=186,slow=3.2,SNR=45						
LPAZ				S	Sn	08 36 31.8	-4.8
	comp=Z,3.6nm,0.4s,baz=112,slow=6.0,SNR=4.1						
LPAZ	La Paz	4.84	9	eP	Pn	08 35 41.5	+0.3
AC01	Pan de Azucar	5.26	197	eP	Pn	08 35 44.1	-2.0
AC01				eS	Sn	08 36 41.5	-4.0
AC01				IAML		08 37 07.6	
	comp=Z,34nm,0.8s						
AC02	Maricunga	5.71	182		Pn	08 35 52.6	-0.1
SIV	San Ignacio	9.00	57	P	Pn	08 36 34.5	-2.5
	comp=Z,9.6nm,0.3s,baz=243,slow=13,SNR=91						
SIV				S	Sn	08 38 10.0	-6.7
	comp=Z,0.4nm,0.4s,baz=259,slow=10,SNR=3.1						
PTLB	Pontes e Lacer	10.85	60		Pn	08 37 00.2	-1.7
PTLB	Pontes e Lacer	10.85	60	eP	Pn	08 36 58.9	-3.0
BDQN	Bodoquena, MS	11.39	89	eP	Pn	08 37 06.0	-3.2
PEL	Peldehue	12.10	187		Pn	08 37 19.7	+1.3
MT10	Hacienda Santa	12.21	186	⇓eP	Pn	08 37 18.1	-1.9
MT10				eS	P	08 37 24.7	-2.9
MT10				IAML		08 37 25.6	
	comp=N,277nm,0.4s						
FCH	Farellones	12.24	185	⇓iP	Pn	08 37 15.0	-5.6
FCH				iS	P	08 37 19.1	-9.0
FCH				IAML		08 37 19.6	
	comp=E,490nm,0.2s						
MT14	Cerro Cal¡n	12.33	186	⇓eP	Pn	08 37 18.9	-2.7
MT14				eS	P	08 37 26.1	-2.8
MT14				IAML		08 37 27.3	
	comp=N,266nm,0.3s						
MT05	Renca	12.35	187		Pn	08 37 21.8	0.0
MT16	CCHEN	12.36	186		Pn	08 37 19.1	-2.8
AQDB	Aquidauana	12.37	89	eP	Pn	08 37 21.5	-0.6
MT15	Las Vizcachas	12.53	186	eP	Pn	08 37 20.6	-3.5
MT15				eS	P	08 37 28.5	-2.5
MT15				IAML		08 37 29.8	
	comp=N,228nm,0.2s						
MT09	Talagante	12.76	188	Pn	Pn	08 37 27.9	+0.7
BI02	San Fabin de	15.64	187		Pn	08 38 04.7	+0.8
BI02				IAmb	IAmb	08 38 47.4	
	comp=Z,19nm,1.4s						
TBTG	Tabatinga, AM	16.84	357		Pn	08 38 18.8	0.0
TBTG				IAmb	IAmb	08 38 54.7	
	comp=Z,8.4nm,0.6s						
TRQA	Tornquist	17.93	162	P	P	08 38 30.4	-0.3
TRQA				IAmb	IAmb	08 38 38.7	
	comp=Z,18nm,1.5s						
MACA	Manacapuru-AM	19.55	25	P	P	08 38 48.4	-0.2
PLCA	Paso Flores	19.62	184	P	Pn	08 38 54.9	+3.1
	comp=Z,2.2nm,0.8s,baz=6.3,slow=9.2,SNR=3.6						
IPMB	Ipameri, GO	19.75	85	eP	P	08 38 50.5	-0.4
BDFB	Brasilia	20.55	78	P	P	08 38 59.7	+0.1
BDFB				IAmb	IAmb	08 39 02.9	
	comp=Z,4.9nm,0.5s						
BDFB	Brasilia	20.55	78	P	P	08 38 58.7	-0.9
	comp=Z,4.5nm,0.5s,baz=260,slow=9.9,SNR=10						
	comp=Z,4.5nm,0.5s						
PMNB	Patos De Minas	21.29	87	eP	P	08 39 06.4	-1.1
MAL2	Monte Alegre,	23.79	39	P	P	08 39 33.0	+0.9
MAL2				IAmb	IAmb	08 39 36.6	
	comp=Z,8.4nm,0.9s						
SMTB	Santa Maria do	23.88	63	eP	P	08 39 32.0	-1.0
JANB	Januaria	24.13	80	eP	P	08 39 35.1	-0.2
BOAV	Boa Vista	24.75	20	P	P	08 39 41.0	+0.1
BOAV				IAmb	IAmb	08 40 03.0	
	comp=Z,7.1nm,1.3s						
GDU01	Guandu, BA	28.90	80	eP	P	08 40 18.7	+0.6
RCBR	Riachuelo	35.40	69	P	P	08 41 16.4	+1.4
TXAR	Lajitas Array	60.30	325	P	P	08 44 26.7	+0.1
TXAR	Lajitas Array	60.30	325	P	P	08 44 27.6	+1.0
	comp=Z,0.8nm,1.1s,baz=136,slow=3.4,SNR=2.1						
	comp=Z,0.8nm,1.1s						
SNAA	Sanae	62.65	161	P	P	08 44 43.6	+1.7
QSPA	South Pole Qui	69.09	180	P	P	08 45 25.8	+2.6
QSPA				IAmb	IAmb	08 45 57.7	
	comp=Z,5.4nm,1.5s						
QSPA	South Pole Qui	69.09	180	P	P	08 45 25.7	+2.4
	comp=Z,0.4nm,0.5s,baz=76,slow=4.2,SNR=7.5						
	comp=Z,0.4nm,0.5s						
ULM	Lac du Bonnet	74.94	342	P	P	08 45 58.1	+0.1
	comp=Z,0.9nm,0.5s,baz=163,slow=16,SNR=2.8						
	comp=Z,0.9nm,0.5s						
TORD	Torodi Ar. Bea	77.22	70	P	P	08 46 12.8	+1.0
TORD	Torodi Ar. Bea	77.22	70	P	P	08 46 11.8	0.0
	comp=Z,0.8nm,0.3s,baz=253,slow=5.3,SNR=2.6						
	comp=Z,0.8nm,0.3s						

IDC 25 08:37:20.9±2.2,8°.23S×127°.89E,h0^{km},mb3.3/1, mbtmp3.2/4,ML2.8/3,MS3.5/3,Error ellipse: s-maj=82.0km s-min=27.7km az=78.0,Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	Kappang	8.69	291	LR	LR	08 43 01.9	
	comp=Z,94nm,19.4s,baz=38,slow=39						
FITZ	Fitzroy Crossi	10.05	192	Pn	Pn	08 39 47.9	+1.3
	0.1nm,0.3s,baz=15,slow=9.4,SNR=6.3						
FITZ				Sn	Sn	08 41 40.0	-0.1
	0.2nm,0.3s,baz=276,slow=22,SNR=1.8						
	3.3nm,0.9s						
WRA	Warramunga Arr	13.21	152	Pn	Pn	08 40 29.8	-0.1
	baz=326,slow=14,SNR=5.2						
WRA				Sn	Sn	08 42 53.3	-4.4
	0.1nm,0.3s,baz=320,slow=27,SNR=2.0						
	0.3nm,0.8s						
ASAR	Alice Springs	16.39	160	Pn	Pn	08 41 11.8	-0.8
	baz=340,slow=11,SNR=2.3						
	0.1nm,0.6s						
LEM	Lembang	20.14	273	LR	LR	08 52 17.4	
	comp=Z,184nm,18.1s,baz=146,slow=44						
PSI	Prapat	30.90	290	LR	LR	08 56 51.9	
	comp=Z,189nm,18.9s,baz=22,slow=38						
MKAR	Makanchi Array	68.13	328	P	P	08 48 22.7	-0.1
	0.1nm,0.4s,baz=128,slow=6.1,SNR=2.0						
	0.1nm,0.4s						

*ASRS **25** 08:51:19.0±1.7,53°.74N×91°.07E,h0^{km},M3.2,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*NNC **25** 08:51:22.8±3.9,53°.77N×90°.70E,h0^{km},mb3.8,mpv3.5, Error ellipse: s-maj=29.8km s-min=23.6km az=48.0, Suspected Mining explosion.*

*IDC **25** 08:51:24.6±3.0,53°.64N×90°.88E,h0^{km},mbtmp3.4/4, ML2.9/3,Error ellipse: s-maj=26.8km s-min=21.1km az=61.0*

ISC 25 08:51:27.2±3.9,53°.7N±0°.1×90°.4E±0°.2,h0^{km},n10, σ0^s.75/13,9C-2D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	3.31	276	I	I	09 12 47.3	
	0.1nm,1.2s,baz=92,slow=321,SNR=8.1						
ZAA0	Zalesovo Array	3.31	276	⇑Pg	Pb	08 52 26.3	-0.6
	2.5nm,0.7s						
ZAA0				⇑Lg	Lg	08 53 16.2	
	16nm,1.1s						
ZALV	Zalesovo Beam	3.31	276	Pn	Pn	08 52 21.4	+1.0
	1.7nm,0.3s,baz=95,slow=16,SNR=20						
ZALV				Lg	Lg	08 53 15.1	
	4.8nm,0.3s,baz=91,slow=24,SNR=10						
	2.2nm,0.5s						
KURK	Kurchatov	7.83	252	⇓Pn	Pn	08 53 22.0	-0.3
	2.3nm,1.1s						
KURK				⇑Sn	Sn	08 54 52.3	+0.8
	14nm,1.3s						
KURK				⇑Lg	Lg	08 55 40.8	
	58nm,1.2s						
KURBB	Kurchatov Arra	7.92	252	Pn	Pn	08 53 23.6	0.0
	0.2nm,0.3s,baz=65,slow=15,SNR=12						
KURBB				Sn	Sn	08 54 54.8	+0.9
	0.1nm,0.3s,baz=64,slow=24,SNR=11						
KURBB				Lg	Lg	08 55 44.3	
	0.2nm,0.3s,baz=59,slow=33,SNR=9.0						
	2.3nm,0.5s						
KURBB	Kurchatov Arra	7.92	252	⇑Pn	Pn	08 53 19.1	-4.5
	5.0nm,0.6s						
KURBB				⇑Sn	Sn	08 54 53.8	-0.1
	44nm,0.8s						
KURBB				⇑Lg	Lg	08 55 40.9	
	62nm,1.4s						
MK31	Makanchi Array	8.65	220	⇑Pn	Pn	08 53 33.2	-0.4
	1.3nm,0.7s,baz=42,slow=13,SNR=13						
MK31				⇓Sn	Sn	08 55 12.5	+0.7
	2.4nm,0.8s,baz=34,slow=25,SNR=4.0						
MK31				⇑Lg	Lg	08 56 04.5	
	15nm,0.8s,baz=34,slow=28,SNR=3.8						
MKAR	Makanchi Array	8.65	220	Pn	Pn	08 53 33.5	-0.1
	0.4nm,0.3s,baz=38,slow=13,SNR=17						
MKAR				Sn	Sn	08 55 12.3	+0.5
	0.2nm,0.3s,baz=34,slow=23,SNR=5.9						
MKAR				Lg	Lg	08 56 00.2	
	0.2nm,0.3s,baz=35,slow=28,SNR=5.4						
	1.4nm,0.6s						
SONM	Songino Array	11.70	114	Lg	Lg	08 57 18.4	
	0.2nm,0.3s,baz=300,slow=26,SNR=10						
BVAR	Borovoye Array	11.97	275	Pn	Pn	08 54 19.6	+0.6
	0.4nm,0.4s,baz=72,slow=14,SNR=2.0						
BVAR				Sn	Sn	08 56 31.9	-1.2
	0.1nm,0.3s,baz=77,slow=27,SNR=1.8						
BVAR				Lg	Lg	08 57 56.2	
	baz=80,slow=18,SNR=1.3						

IDC 25 08:52:32.0±4.3,14°.75N×123°.80E,h0^{km},mb3.5/3, mbtmp3.6/4,ML4.4/1,Error ellipse: s-maj=108.7km s-min=27.5km az=33.0,Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	Tagaytay City	2.84	257	Pn	Pn	08 53 18.1	-0.6
	52nm,0.3s,baz=78,slow=14,SNR=2.0						
TGY				Sn	Sn	08 53 47.5	-6.3
	48nm,0.3s,baz=135,slow=2.9,SNR=4.9						
	110nm,0.3s						
CMAR	Chiang Mai Arr	24.09	282	P	P	08 57 49.9	+0.4
	0.8nm,0.3s,baz=88,slow=9.4,SNR=4.5						
	0.8nm,0.3s						
WRA	Warramunga Arr	36.00	163	P	P	08 59 34.3	-0.6
	0.2nm,0.3s,baz=342,slow=7.9,SNR=6.9						
	0.2nm,0.3s						
ASAR	Alice Springs	39.44	165	P	P	09 00 04.4	+0.3
	0.3nm,0.6s,baz=340,slow=8.4,SNR=6.0						
	0.3nm,0.6s						
H11S3	WAKE ISLAND Hy	41.20	79	T	T	09 44 31.0	
	baz=271,slow=75,SNR=7.0						
H11S1	WAKE ISLAND Hy	41.21	79	T	T	09 44 29.4	
	baz=271,slow=75,SNR=5.2						
H11S2	WAKE ISLAND Hy	41.22	79	T	T	09 44 29.8	
	baz=271,slow=75,SNR=4.9						

*ISU **25** 09:00:11,40°.12N×71°.07E,h8^{km}*

*KRNET **25** 09:00:11.1±0.1,40°.11N×71°.07E,h20^{km},mb3.3*

*SOME **25** 09:00:12.4,40°.33N×71°.12E,h0^{km}*

*NNC **25** 09:00:13.8±1.1,40°.28N×71°.11E,h0^{km},mb3.7,mpv3.3, Error ellipse: s-maj=8.2km s-min=3.6km az=14.0*

ISC 25 09:00:11.6±0.9,40°.10N±0°.03×70°.99E±0°.03,h15^{km}±7^{km}, n30,σ1^s.46/53,23C-20D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTK	Batken	0.14	252	⇓iP	Pg	09 00 15.6	+0.1
BTK				⇓eS	Sg	09 00 18.7	+0.7
CHMI	Chimion	0.44	68	P	Pg	09 00 18.9	-1.6
CHMI				S	Sg	09 00 25.2	-1.4
DRK	Karamyk	0.88	134	⇓eP	Pb	09 00 27.2	-1.6
DRK				⇓eS	Sb	09 00 38.7	-1.8
CHDK	Chadak	0.89	348	P	Pn	09 00 29.1	-0.6
CHDK				S	Sn	09 00 41.8	-0.6
GAR	Garm	1.22	205	⇑eP	Pn	09 00 34.3	+0.1
GAR				⇑eS	Sb	09 00 51.0	+1.0
TRKS	Terek-Say	1.43	5	⇓eP	Pn	09 00 36.2	-1.1
TRKS				⇓eS	Sn	09 00 54.5	-1.4
OHH	Osh	1.44	72	⇑eP	Pn	09 00 36.4	-0.9
OHH				⇑eS	Sn	09 00 54.8	-1.1
NZBK	Nazarbek	1.81	309	S	Sg	09 01 12.2	+2.3
ARK	Arkit	1.85	23	⇓iP	Pb	09 00 44.3	-0.9
ARK				⇓eS	Sb	09 01 08.4	+0.2
SFK	Sufi-Kurgan	1.93	92	⇑eP	Pn	09 00 45.0	+0.8
SFK				⇑eS	Sn	09 01 09.6	+1.2
ARSB	Arslanbob	1.95	51	⇑iP	Pn	09 00 45.3	+1.0
ARSB				⇑eS	Sn	09 01 10.1	+1.5
IUG	Iuzhnay	2.17	341	Pg	Pb	09 00 51.0	+0.3
	30nm,0.2s						
IUG				Lg	Lg	09 01 18.7	
	96nm,0.4s						
SALK	Salom-Alik	2.30	69	⇑eP	Pn	09 00 49.6	+0.4
SALK				⇑eS	Sn	09 01 18.1	+0.8
MNAS	Manas	2.64	25	⇑eP	Pn	09 00 55.3	+1.4
MNAS				⇑eS	Sn	09 01 27.4	+1.6
AML	Almayashu	2.88	44	⇑eP	Pn	09 00 58.2	+0.8
AML				⇑eS	Sn	09 01 33.2	+1.2
KK31	Karatay Array	3.02	353	⇑Pg	Pb	09 01 05.8	+0.7
	3.0nm,0.3s,baz=151,slow=11,SNR=19						
KK31				⇓Lg	Lg	09 01 44.5	
	5.7nm,0.2s,baz=180,slow=30,SNR=17						
KKAR	Karatay Array	3.02	353	⇑eP	Pn	09 01 00.8	+1.8
KKAR				⇑eS	Sb	09 01 37.0	-4.9
BRLS	Borolday	3.05	344	Pg	Pb	09 01 03.7	-2.0
	2.2nm,0.1s						
BRLS				Lg	Lg	09 01 40.3	
	29nm,0.4s						
BRLS	Borolday	3.05	344	eP	Pb	09 01 03.7	-2.0
	2.2nm,0.1s						
BRLS				eS	Sb	09 01 40.3	-2.5
	29nm,0.4s						
MRKS	Merke	3.13	32	Pg	Pb	09 01 07.4	+0.3
	10nm,0.3s						
MRKS				Lg	Lg	09 01 46.6	
	25nm,0.3s						
MRKS	Merke	3.13	32	eP	Pb	09 01 07.4	+0.3
	10nm,0.3s						
MRKS				eS	Sb	09 01 46.6	+1.4
	25nm,0.3s						
EKS2	Erkin-Say	3.31	38	⇓eP	Pn	09 01 04.3	+1.3
EKS2				⇓eS	Sn	09 01 43.1	+0.9
UCH	Uchtor	3.41	50	⇓eP	Pn	09 01 05.7	+1.0
UCH				⇓eS	Sn	09 01 45.5	+0.5
AAK	Ala-Archa	3.66	45	⇑Pg	Pb	09 01 16.8	+0.7
	0.9nm,0.4s						
AAK				⇓Lg	Lg	09 02 05.2	
	3.1nm,0.6s						
AAK	Ala-Archa	3.66	45	⇓eP	Pn	09 01 09.1	+1.2
AAK				⇓eS	Sn	09 01 51.4	+0.6
JNKS	Jany-Kuch	3.68	73	⇓eP	Pn	09 01 09.3	+1.1
JNKS				⇓iS	Sn	09 01 51.7	+0.2
KBK	Karagaybulak	3.92	48	⇓eP	Pn	09 01 12.8	+1.3
KBK				⇓eS	Sn	09 01 57.6	+0.2
NRN	Naryn	4.03	69	⇑iP	Pn	09 01 13.9	+0.7
NRN				⇑eS	Sn	09 01 59.6	-0.7
TKM2	Tokmak 2	4.46	49	⇑Pn	Pn	09 01 20.3	+1.4
	1.3nm,0.3s						
TKM2				⇑Sn	Sn	09 02 12.2	+1.5
	2.2nm,0.4s						
TKM2				⇑Lg	Lg	09 02 28.3	
	1.3nm,0.3s						
KRBS	Karabastau	5.01	43	Pg	Pb	09 01 42.2	+3.1
	1.4nm,0.4s						
KRBS				Lg	Lg	09 02 46.8	
	3.2nm,0.6s						

*BJI **25** 09:05:37.5,56°.13N×164°.34E,h10^{km},mB5.8/83,mb5.4/82, Ms6.5/80,Ms7 6.5/88*

*IDC **25** 09:05:38.9±0.4,56°.26N×164°.11E,h0^{km},mb5.3/37, mbtmp5.3/42,ML5.3/4,MS6.0/82,Error ellipse: s-maj=10.5km s-min=9.2km az=167.0*

*KRSC **25** 09:05:39.5±1.2,56°.18N×164°.41E,h57^{km}±19^{km},Mc6.8, Ml6.4,Felt [V] at HMS cape Afrika, Krutoberegovo, Ust-Kamchatsk; [IV] at Nikolskoe, kordon Kronoki; [III] at kordon Aerodrom; [II-III] at Kluchi, Kozyrevsk; [II] at springs Tumrokskie.*

*ISC-PP **25** 09:05:40,56°.20N×164°.23E,h21^{km},Mwppsm6.3,Moment Tensor Solution. s59 Moment tensor: Scale 10^{18}Nm; M_{rr}0.10±.11; $M_{\theta\theta}$-0.26±.18; $M_{\phi\phi}$0.17±.16; $M_{r\theta}$-0.07±.12; $M_{\theta\phi}$0.49±.10; $M_{\phi r}$-0.44±.14; Fault plane solution: $M_0$3.76000×10^{18} NP1:ϕ_s14.30000°,δ81.10000°, λ42.10000°. NP2:ϕ_s276.30000°,δ48.50000°,λ168.00000°.*

*IPGP **25** 09:05:40.0,56°.21N×164°.18E,h13^{km},Mw6.4,Fault plane solution: NP1:ϕ_s283.00000°,δ85.00000°,λ173.00000°. NP2:ϕ_s14.00000°,δ83.00000°,λ5.00000°.*

*NEIC **25** 09:05:40.5±1.1,56°.20N±0°.06×164°.2E±0°.1,h10^{km}±1^{km}, mb6.1/991,Ms_20 6.1/1075,Mwb6.3/115,Mww6.4/90, Error ellipse: s-maj=10.4km s-min=9.8km az=165.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.00; $M_{\theta\theta}$-1.42; $M_{\phi\phi}$1.42; $M_{r\theta}$-0.46; $M_{\theta\phi}$-3.18; $M_{\phi r}$0.18; Fault plane solution: $M_0$3.52000×10^{18} NP1:ϕ_s12.11000°, δ82.05000°,λ1.33000°. NP2:ϕ_s281.92000°,δ88.68000°, λ172.05000°. Principal axes: T 3.5257, Plg7.0000°, Azm237.0000°; N -0.0208, Plg82.0000°, Azm93.0000°; P -3.5049, Plg5.0000°, Azm327.0000°;*

*NEIC **25** 09:05:40.8,56°.21N×164°.18E,h10^{km}*

*NEIC **25** 09:05:40.8,56°.21N×164°.18E,h22^{km}*

*NEIC **25** 09:05:40.8,56°.11N×164°.36E,h22^{km},Moment Tensor Solution. Duration: 8^s.4 Moment tensor: Scale 10^{18}Nm; M_{rr}0.09; $M_{\theta\theta}$-2.20; $M_{\phi\phi}$2.10; $M_{r\theta}$1.55; $M_{\theta\phi}$-4.98; $M_{\phi r}$0.20; Fault plane solution: $M_0$5.64000×10^{18} NP1: ϕ_s191.06000°,δ75.12000°,λ-4.28000°. NP2:ϕ_s282.16000°, δ85.86000°,λ-165.08000°. Principal axes: T 5.4653, Plg7.0000°, Azm56.0000°; N 0.3374, Plg75.0000°, Azm297.0000°; P -5.8026, Plg13.0000°, Azm148.0000°;*

*BGR **25** 09:05:42.2,56°.14N×164°.45E,h33^{km},mb6.0,mB_BB6.3, Ms6.2*

*MOS **25** 09:05:43.0±0.9,56°.13N×164°.22E,h52^{km},mb6.1/87, MS6.2/103,Error ellipse: s-maj=4.8km s-min=3.5km az=70.5 Broadband fault plane solution: P waves. $M_0$4.00000×10^{18} NP1:ϕ_s199.00000°,δ90.00000°, λ0.00000°. NP2:ϕ_s109.00000°,δ90.00000°,λ180.00000°. Principal axes: T Plg0.0000°, Azm64.0000°; N Plg90.0000°, Azm239.0000°; P Plg0.0000°, Azm334.0000°;*

MOS Fault plane solution: P-wave C35, D20 . Felt (V) at Ust'-Kamchatsk; (IV) at Nikol'skoe.

*PMR **25** 09:05:44.0,56°.20N×164°.30E,h33^{km}*

*GCMT **25** 09:05:47.5±0.0,56°.24N×164°.34E,h16^{km},MW6.4/179, Moment Tensor Solution. s175,c431; s179,c775; Duration: 4^s.0 Moment tensor: Scale 10^{18}Nm; M_{rr}0.24±.02; $M_{\theta\theta}$-2.53±.02; $M_{\phi\phi}$2.28±.02; $M_{r\theta}$-0.41±.05; $M_{\theta\phi}$-4.84±.02; $M_{\phi r}$-0.24±.05; Best double couple: $M_0$5.42400×10^{18} NP1:ϕ_s13.00000°,δ87.00000°, λ-3.00000°. NP2:ϕ_s103.00000°,δ87.00000°, λ-177.00000°. Principal axes: T 5.2800, Plg0.0000°, Azm238.0000°; N 0.2830, Plg85.0000°, Azm146.0000°; P -5.5680, Plg5.0000°, Azm328.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 25 09:05:41.8±0.4,56°.15N±0°.02×164°.19E±0°.02,h19^{km}±1^{km}, h19^{km}:pP-P,n2519,σ1^s.77/2308,mb6.0/676,MS6.1/699, 164C-48D,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.77	275	PN	Pb	09 05 55.3	-1.2
KBTR	Krutoberegovo	0.77	275	eP	Pb	09 05 55.4	-1.2
KBG	Krutoberegovo	0.84	278	PN	Pb	09 05 56.9	-0.8
KBG				S	Sg	09 06 08.9	-0.3
KBG	Krutoberegovo	0.84	278	eP	Pb	09 05 57.0	-0.8
KBG				eS	Sg	09 06 08.9	-0.3
BKI	Bering	1.38	132	PN	Pn	09 06 03.1	-3.0
BKI				S	Sn	09 06 22.0	-1.8
BKI	Bering	1.38	132	eP	Pn	09 06 03.1	-3.0
BKI				eS	Sn	09 06 22.0	-1.8
SMKR	Semkarok	1.57	287	PN	Pn	09 06 08.7	-0.1
SMKR	Semkarok	1.57	287	eP	Pn	09 06 08.7	-0.1
BDR	Baidarnaya	1.71	286	PN	Pb	09 06 11.7	-1.0
BDR	Baidarnaya	1.71	286	eP	Pb	09 06 11.7	-1.0
SRKR	Sorokina	1.75	288	PN	Pn	09 06 12.2	+0.9
SRKR	Sorokina	1.75	288	eP	Pn	09 06 12.3	+0.9
CIRR	Tsirk	1.93	270	PN	Pn	09 06 14.8	+1.1
CIRR	Tsirk	1.93	270	eP	Pn	09 06 14.8	+1.1
LGNR	Loginova	1.96	270	PN	Pb	09 06 15.7	-1.4
LGNR	Loginova	1.96	270	eP	Pb	09 06 15.8	-1.4
BZGR	Bezymyannyi-Gr	1.97	265	PN	Pn	09 06 15.5	+1.2
BZGR				S	Sb	09 06 40.4	-0.9
BZGR	Bezymyannyi-Gr	1.97	265	eP	Pn	09 06 15.6	+1.2
BZGR				eS	Sb	09 06 40.5	-0.9
KRSR	Krestovskiy	2.03	273	PN	Pn	09 06 15.7	+0.6
KRSR	Krestovskiy	2.03	273	eP	Pn	09 06 15.7	+0.6
BZWR	Bezymyannyi-We	2.08	266	PN	Pn	09 06 17.2	+1.4
BZWR	Bezymyannyi-We	2.08	266	eP	Pn	09 06 17.2	+1.4
BZMR	Bezymyannaya	2.09	266	PN	Pn	09 06 17.2	+1.3
BZMR	Bezymyannaya	2.09	266	eP	Pn	09 06 17.2	+1.3
MKZ	Mys Kozlova	2.12	222	PN	Pn	09 06 15.7	-0.5
MKZ	Mys Kozlova	2.12	222	eP	Pn	09 06 15.8	-0.5
KIRR	Kirishev	2.17	266	PN	Pn	09 06 18.3	+1.3
KIRR				S	Sb	09 06 46.3	-0.7
KIRR	Kirishev	2.17	266	eP	Pn	09 06 18.4	+1.3
KIRR				eS	Sb	09 06 46.4	-0.7
KPT	Kopyto	2.23	267	PN	Pn	09 06 19.3	+1.5
KPT	Kopyto	2.23	267	eP	Pn	09 06 19.4	+1.5
KMNR	Kamenistaya	2.26	262	PN	Pn	09 06 19.6	+1.4
KMNR	Kamenistaya	2.26	262	eP	Pn	09 06 19.7	+1.4
TUMD	Tumrok D	2.34	248	PN	Pn	09 06 20.6	+1.2
TUMD				S	Sb	09 06 51.3	-0.7
TUMD	Tumrok D	2.34	248	eP	Pn	09 06 20.6	+1.2
TUMD				eS	Sb	09 06 51.4	-0.7
KOZ	Kozyrevsk	2.42	270	PN	Pn	09 06 22.1	+1.8
KOZ				S	Sb	09 06 53.8	-0.4
KOZ	Kozyrevsk	2.42	270	eP	Pn	09 06 22.2	+1.8
KOZ				eS	Sb	09 06 53.8	-0.4
SRDR	Sredinnyy	2.50	276	PN	Pn	09 06 23.0	+1.4
SRDR	Sredinnyy	2.50	276	eP	Pn	09 06 23.0	+1.4
ESO	Esso	3.09	268	PN	Pn	09 06 30.3	+0.8
ESO				S	Sn	09 07 07.9	+2.0
ESO	Esso	3.09	268	eP	Pn	09 06 30.4	+0.8
ESO				eS	Sn	09 07 07.9	+2.0
OSSR	Ossora	3.17	349	PN	Pn	09 06 28.5	-2.1
OSSR				S	Sn	09 07 05.1	-2.8
OSSR	Ossora	3.17	349	eP	Pn	09 06 28.6	-2.1
OSSR				eS	Sn	09 07 05.2	-2.8
KII	Karymskiy	3.45	234	PN	Pn	09 06 36.0	+1.5
KII	Karymskiy	3.45	234	eP	Pn	09 06 36.1	+1.5
PALN	Palana	3.72	324	PN	Pn	09 06 37.3	-0.9
PALN	Palana	3.72	324	eP	Pn	09 06 37.3	-0.9
SPN	Mys Shipunski	3.90	220	PN	Pn	09 06 39.9	-0.8
SPN				S	Sn	09 07 24.5	-1.3
SPN	Mys Shipunski	3.90	220	eP	Pn	09 06 39.9	-0.8
SPN				eS	Sn	09 07 24.6	-1.3
NLC	Nalytchevo	4.10	225	PN	Pn	09 06 44.2	+0.8
NLC				S	Sn	09 07 32.6	+1.8
NLC	Nalytchevo	4.10	225	eP	Pn	09 06 44.2	+0.8
NLC				eS	Sn	09 07 32.6	+1.8
SDLR	Sedlovina	4.21	229	PN	Pn	09 06 46.2	+1.2
SDLR	Sedlovina	4.21	229	eP	Pn	09 06 46.3	+1.2
KRER	Koryakskii	4.25	230	PN	Pn	09 06 47.5	+1.8
KRER	Koryakskii	4.25	230	eP	Pn	09 06 47.6	+1.8
KRX	Arik	4.25	231	PN	Pn	09 06 47.3	+1.6
KRX	Arik	4.25	231	eP	Pn	09 06 47.3	+1.6
SMAR	Somma	4.25	229	PN	Pn	09 06 47.1	+1.4
SMAR	Somma	4.25	229	eP	Pn	09 06 47.2	+1.4
AVH	Avacha	4.28	230	PN	Pn	09 06 47.7	+1.7
AVH	Avacha	4.28	230	eP	Pn	09 06 47.7	+1.7
UGLR	Uglovaya	4.28	229	PN	Pn	09 06 47.6	+1.5
UGLR	Uglovaya	4.28	229	eP	Pn	09 06 47.6	+1.5
KOK	Koryaka	4.31	231	PN	Pn	09 06 47.7	+1.4
KOK	Koryaka	4.31	231	eP	Pn	09 06 47.8	+1.4
GNL	Ganaly	4.36	238	PN	Pn	09 06 48.9	+1.8
GNL	Ganaly	4.36	238	eP	Pn	09 06 48.9	+1.8
TILK	Tilichiki	4.43	13	PN	Pn	09 06 46.8	-1.2
TILK	Tilichiki	4.43	13	eP	Pn	09 06 46.9	-1.2
DALK	Dalny	4.44	228	PN	Pn	09 06 49.0	+0.9
DALK				S	Sn	09 07 39.4	+0.1
DALK	Dalny	4.44	228	eP	Pn	09 06 49.1	+0.9
DALK				eS	Sn	09 07 39.4	+0.1
INSR	Institute	4.48	229	PN	Pn	09 06 49.3	+0.7
INSR				S	Sn	09 07 39.6	-0.5
INSR	Institute	4.48	229	eP	Pn	09 06 49.3	+0.7
INSR				eS	Sn	09 07 39.7	-0.5
PET	Petropavlovsk	4.49	228		Pn	09 06 49.9	+1.1
PET				Sn	Sn	09 07 41.7	+1.2
PET	Petropavlovsk	4.49	228	P	Pn	09 06 50.0	+1.2
PET	Petropavlovsk	4.49	228	b iPN	Pn	09 06 49.9	+1.1
PET				eS	Sn	09 07 42.5	+2.1
PET				pmax	pmax		
	comp=Z,3μm,0.7s						
PET				smax	smax		
	comp=N,7μm,0.5s						
PET				smax	smax		
	comp=E,10μm,0.8s						
PET				MLR	MLR		
	comp=Z,248μm,17.0s						
PET				MLR	MLR		

	comp=Z,209µm,14.0s						
PET	**Petropavlovsk**	**4.49**	**228**	⇑P	**Pn**	**09 06 49.9**	**+1.1**
I44RU	**PETROPAVLOVSK-**	**4.84**	**234**	Pn	Pn	09 06 58.8	+5.1
	baz=53,slow=24						
I44RU				I	I	09 30 00.0	
	baz=39,slow=320,SNR=2.1						
PEA0B	**Petropavlovsk-**	**4.84**	**234**		**Pn**	**09 06 55.1**	**+1.4**
PEA0B	**Petropavlovsk-**	**4.84**	**234**	PN	**Pn**	**09 06 55.6**	**+1.9**
PETK	**Petropavlovsk-**	**4.84**	**234**		**Pn**	**09 06 54.2**	**+0.5**
PETK	**Petropavlovsk-**	**4.84**	**234**	Pn	**Pn**	**09 06 54.6**	**+0.9**
	comp=Z,454nm,0.8s,baz=66,slow=14,SNR=266						
PETK				Sn	**Sn**	**09 07 54.2**	**+5.0**
	comp=Z,97nm,0.3s,baz=265,slow=12,SNR=3.6						
KRMR	**Karymshinskiy**	**4.85**	**229**	PN	**Pn**	**09 06 54.9**	**+1.2**
KRMR				S	**Sn**	**09 07 50.5**	**+1.2**
KRMR	**Karymshinskiy**	**4.85**	**229**	*e*P	**Pn**	**09 06 55.0**	**+1.2**
KRMR				*e*S	**Sn**	**09 07 50.5**	**+1.2**
RUS	**Russkaya**	**4.99**	**224**	PN	**Pn**	**09 06 57.0**	**+1.4**
RUS	**Russkaya**	**4.99**	**224**	*e*P	**Pn**	**09 06 57.0**	**+1.4**
GRL	**Gorelyy**	**5.08**	**227**	PN	**Pn**	**09 06 58.7**	**+1.8**
GRL	**Gorelyy**	**5.08**	**227**	*e*P	**Pn**	**09 06 58.7**	**+1.8**
MTVR	**Mutnovka**	**5.08**	**226**	PN	**Pn**	**09 06 58.7**	**+1.6**
MTVR	**Mutnovka**	**5.08**	**226**	*e*P	**Pn**	**09 06 58.7**	**+1.6**
APC	**Apacha**	**5.21**	**235**	PN	**Pn**	**09 07 00.7**	**+2.0**
APC	**Apacha**	**5.21**	**235**	*e*P	**Pn**	**09 07 00.7**	**+2.0**
ASAK	**Asacha**	**5.27**	**227**	PN	**Pn**	**09 07 01.4**	**+1.8**
ASAK	**Asacha**	**5.27**	**227**	*e*P	**Pn**	**09 07 01.4**	**+1.8**
MIPR	**Malaya Ipel'ka**	**5.83**	**231**	PN	**Pn**	**09 07 10.0**	**+2.8**
MIPR	**Malaya Ipel'ka**	**5.83**	**231**	*e*P	**Pn**	**09 07 10.1**	**+2.8**
PAU	**Pauzhetka**	**6.41**	**226**	PN	**Pn**	**09 07 16.5**	**+1.4**
PAU	**Pauzhetka**	**6.41**	**226**	*e*P	**Pn**	**09 07 16.5**	**+1.4**
KMSK	**Kamenskaya**	**6.42**	**8**	PN	**Pn**	**09 07 14.3**	**-1.0**
KMSK	**Kamenskaya**	**6.42**	**8**	*e*P	**Pn**	**09 07 14.4**	**-1.0**
SMY	**Shemya**	**6.72**	**117**		**Pn**	**09 07 19.6**	**+0.3**
SMY	**Shemya**	**6.72**	**117**	P	**Pn**	**09 07 19.3**	**-0.1**
SMY	**Shemya**	**6.72**	**117**	PN	**Pn**	**09 07 19.6**	**+0.3**
SMY	**Shemya**	**6.72**	**117**	⇑P	**Pn**	**09 07 17.5**	**-1.9**
SKR	**Severo-Kuril’s**	**7.29**	**225**	*c i*PN	**Pn**	**09 07 28.0**	**+0.8**
SKR				*e*S	**Sn**	**09 08 54.6**	**+5.2**
SKR				pmax	pmax		
	comp=Z,2µm,0.7s						
SKR				pmax	pmax		
	comp=Z,24µm,9.9s						
SKR				smax	smax		
	comp=N,2µm,0.7s						
SKR				smax	smax		
	comp=E,2µm,0.7s						
SKR				MLR	MLR		
	comp=Z,255µm,14.0s						
SKR				MLR	MLR		
	comp=N,207µm,13.0s						
SKR				MLR	MLR		
	comp=E,266µm,13.0s						
SKR	**Severo-Kuril’s**	**7.29**	**225**	*e*P	**Pn**	**09 07 28.3**	**+1.1**
MA2	**Magadan**	**7.94**	**301**		**Pn**	**09 07 36.6**	**+0.5**
MA2	**Magadan**	**7.94**	**301**	Pn	**Pn**	**09 07 35.8**	**-0.3**
	comp=E,5.4nm,0.3s,baz=101,slow=8.8,SNR=55						
MA2				Sn	**Sn**	**09 09 02.3**	**-2.9**
	comp=E,5.6nm,0.3s,baz=15,slow=22,SNR=3.7						
MA2				Lg	Lg	09 09 51.8	
	comp=E,3.2nm,0.3s,baz=162,slow=19,SNR=1.3						
MA2				LR	LR	09 10 34.9	
	comp=E,94µm,20.3s,baz=109,slow=38						
	comp=E,97nm,0.8s						
MA2	**Magadan**	**7.94**	**301**	P	**Pn**	**09 07 39.7**	**+3.6**
MA2	**Magadan**	**7.94**	**301**	*de*PN	**Pn**	**09 07 36.9**	**+0.8**
MA2				pmax	pmax		
	comp=Z,114nm,0.8s						
MA2				MLR	MLR		
	comp=Z,132µm,13.0s						
MA2	**Magadan**	**7.94**	**301**	⇑P	**Pn**	**09 07 36.3**	**+0.2**
SEY	**Seymchan**	**9.06**	**324**	Pn	**Pn**	**09 07 50.0**	**-1.4**
	comp=Z,3.2nm,0.3s,baz=126,slow=12,SNR=52						
SEY				Sn	**Sn**	**09 09 32.0**	**-0.7**
	comp=Z,3.0nm,0.3s,baz=108,slow=14,SNR=4.0						
SEY				Lg	Lg	09 10 11.1	
	comp=Z,1.3nm,0.3s,baz=56,slow=20,SNR=1.6						
SEY				LR	LR	09 11 20.3	
	comp=Z,90µm,21.6s,baz=102,slow=38						
	comp=Z,18nm,0.4s						
SEY	**Seymchan**	**9.06**	**324**	*de*PN	**Pn**	**09 07 52.3**	**+0.9**
SEY				pmax	pmax		
	comp=Z,38nm,1.0s						
SEY				MLR	MLR		
	comp=Z,149µm,13.0s						
AMKA	**Amchitka**	**10.14**	**112**		**Pn**	**09 08 06.5**	**+0.3**
KIWB	**Kanaga Island**	**11.78**	**104**		**Pn**	**09 08 27.8**	**-1.0**
BILL	**Bilibino**	**11.97**	**4**		**Pn**	**09 08 31.5**	**+0.2**
BILL	**Bilibino**	**11.97**	**4**	*de*PN	**Pn**	**09 08 31.9**	**+0.6**
BILL				pmax	pmax		
	comp=Z,103nm,0.6s						
BILL				MLR	MLR		
	comp=Z,66µm,16.0s						
ADK	**Adak**	**12.02**	**103**		**Pn**	**09 08 31.3**	**-0.7**
ADK	**Adak**	**12.02**	**103**	P	**Pn**	**09 08 31.7**	**-0.3**
ADK	**Adak**	**12.02**	**103**	PN	**Pn**	**09 08 31.3**	**-0.7**
ADK	**Adak**	**12.02**	**103**	⇑P	**Pn**	**09 08 30.3**	**-1.7**
OKH	**Okha**	**12.51**	**267**	*c i*PN	**Pn**	**09 08 36.3**	**-2.4**
OKH				*i* S	**Sn**	**09 11 04.5**	**+7.2**
OKH				pmax	pmax		
	comp=Z,8µm,10.4s						
OKH				smax	smax		
	comp=N,21µm,15.1s						
ATKA	**Atka Island**	**13.24**	**98**		**Pn**	**09 08 46.8**	**-1.9**
ATKA	**Atka Island**	**13.24**	**98**	P	**Pn**	**09 08 47.1**	**-1.6**
ATKA	**Atka Island**	**13.24**	**98**	⇑P	**Pn**	**09 08 45.4**	**-3.2**
TYV	**Tymovskoe**	**13.84**	**257**	*e*P	**Pn**	**09 09 00.1**	**+3.4**
TYV				*e*S	**Sn**	**09 11 35.0**	**+5.3**
TYV				pmax	pmax		
	comp=Z,209nm,1.5s						
TYV				pmax	pmax		
	comp=Z,2µm,2.4s						
TYV				smax	smax		
	comp=E,2µm,4.6s						
TYV				smax	smax		
	comp=N,82nm,1.5s						
TYV				smax	smax		
	comp=E,52nm,1.5s						
NKL	**Nikolayevsk**	**13.92**	**267**	*e*P	**Pn**	**09 08 55.9**	**-1.9**
NKL				*e*S	**Sn**	**09 11 31.3**	**-0.3**
NKL				pmax	pmax		
	comp=N,1µm,1.5s						
NKL				pmax	pmax		
	comp=E,507nm,1.4s						
NKL				pmax	pmax		
	comp=Z,2µm,1.4s						
NKL				smax	smax		
	comp=E,10µm,6.0s						
NKL				smax	smax		
	comp=N,3µm,3.5s						
NKL				MLR	MLR		
	comp=N,299µm,13.0s						
NKL				MLR	MLR		
	comp=E,252µm,13.0s						
NKL				MLR	MLR		
	comp=Z,321µm,13.0s						
SPIA	**Saint Paul Isl**	**14.07**	**75**		**Pn**	**09 08 58.9**	**-1.0**
SPIA	**Saint Paul Isl**	**14.07**	**75**	P	**Pn**	**09 09 00.5**	**+0.6**
	baz=277,SNR=16						
GAMB	**Gambell**	**14.21**	**48**		**Pn**	**09 08 59.6**	**-2.2**
GAMB	**Gambell**	**14.21**	**48**	P	**Pn**	**09 09 01.2**	**-0.6**
	baz=249,SNR=10						
P08K	**Saint George I**	**14.53**	**77**		**Pn**	**09 09 05.5**	**-0.7**
P08K	**Saint George I**	**14.53**	**77**	P	**Pn**	**09 09 05.9**	**-0.3**
	baz=279,SNR=29						
KUR	**Kuril'sk**	**15.00**	**230**	*c i*P	**Pn**	**09 09 09.9**	**-2.7**
KUR				pmax	pmax		
	comp=Z,2µm,1.4s						
KUR				pmax	pmax		
	comp=N,395nm,1.1s						
KUR				pmax	pmax		
	comp=E,407nm,1.5s						
KUR				pmax	pmax		
	comp=Z,12µm,6.8s						
KUR				MLR	MLR		
	comp=N,313µm,27.0s						
KUR				MLR	MLR		
	comp=E,105µm,25.0s						
KUR				MLR	MLR		
	comp=Z,78µm,14.0s						
KUR				MLR	MLR		
	comp=N,63µm,13.0s						
KUR				MLR	MLR		
	comp=E,73µm,13.0s						
UGL	**Uglegorsk**	**15.14**	**251**	*c i*P	**Pn**	**09 09 09.4**	**-5.1**
UGL				*e*S	**Sn**	**09 11 59.4**	**-2.1**
UGL				pmax	pmax		
	comp=Z,296nm,1.0s						
UGL				pmax	pmax		
	comp=Z,18µm,8.0s						
UGL				smax	smax		
	comp=N,31µm,11.5s						
UGL				smax	smax		
	comp=E,25µm,11.3s						
UGL				MLR	MLR		
	comp=Z,87µm,16.0s						
UGL				MLR	MLR		
	comp=N,49µm,13.0s						
UGL				MLR	MLR		
	comp=E,183µm,15.0s						
NIKH	**Nikolski High**	**15.91**	**90**		**Pn**	**09 09 23.9**	**-0.6**
NIKH				IAmb	IAmb	09 09 31.9	
	comp=Z,2µm,1.5s						
NIKH	**Nikolski High**	**15.91**	**90**	P	**Pn**	**09 09 24.0**	**-0.5**
NIKH	**Nikolski High**	**15.91**	**90**	P	**Pn**	**09 09 24.4**	**-0.1**
	baz=292,SNR=24						
M11K	**Mekoryuk**	**16.07**	**62**		**Pn**	**09 09 25.0**	**-1.4**
M11K				IAmb	IAmb	09 09 30.8	
	comp=Z,2µm,1.6s						
M11K	**Mekoryuk**	**16.07**	**62**	P	**Pn**	**09 09 25.6**	**-0.8**
	baz=268,SNR=50						
YSS	**Yuzhno-Sakhali**	**16.14**	**244**		**Pn**	**09 09 26.6**	**-0.8**
YSS	**Yuzhno-Sakhali**	**16.14**	**244**	P	**Pn**	**09 09 28.5**	**+1.1**
YSS	**Yuzhno-Sakhali**	**16.14**	**244**	*αe*P	**Pn**	**09 09 28.2**	**+0.8**
YSS				pmax	pmax		
	comp=Z,8µm,6.9s						
YSS				pmax	pmax		
	comp=N,6µm,8.2s						
YSS				pmax	pmax		
	comp=E,5µm,5.9s						
YSS				pmax	pmax		
	comp=Z,310nm,0.8s						
YSS				MLR	MLR		
	comp=E,73µm,14.0s						
YSS				MLR	MLR		
	comp=Z,96µm,14.0s						
YSS	**Yuzhno-Sakhali**	**16.14**	**244**	⇑P	**Pn**	**09 09 27.9**	**+0.5**
TNA	**Tin City**	**16.38**	**44**	Pn	**Pn**	**09 09 29.5**	**-1.0**
TNA	**Tin City**	**16.38**	**44**	P	**Pn**	**09 09 30.3**	**-0.1**
	baz=248,SNR=15						
YUK	**Yuzh-Kuril'sk**	**16.82**	**232**	*d i*P	**Pn**	**09 09 35.1**	**-1.0**
YUK				*e*S	**S**	**09 12 48.2**	**-4.6**
YUK				pmax	pmax		
	comp=Z,1µm,0.6s						
YUK				pmax	pmax		
	comp=N,565nm,0.5s						
YUK				pmax	pmax		
	comp=E,454nm,0.5s						
YUK				MLR	MLR		
	comp=Z,80µm,17.0s						
YUK				MLR	MLR		
	comp=E,99µm,21.0s						
YUK				MLR	MLR		
	comp=N,76µm,18.0s						
UNV	**Unalaska Valle**	**16.91**	**86**	P	**Pn**	**09 09 37.2**	**0.0**
UNV	**Unalaska Valle**	**16.91**	**86**	P	**Pn**	**09 09 37.4**	**+0.2**
	baz=290,SNR=18						
K13K	**Kusilvak Mount**	**16.92**	**57**		**Pn**	**09 09 36.5**	**-0.8**
K13K				IAmb	IAmb	09 09 41.1	
	comp=Z,2µm,1.5s						
K13K	**Kusilvak Mount**	**16.92**	**57**	P	**Pn**	**09 09 37.8**	**+0.5**
	baz=264,SNR=206						
F14K	**Arctic Creek**	**16.98**	**45**	P	**Pn**	**09 09 38.3**	**+0.4**
	baz=251						
LVA	**Lava Point**	**17.07**	**84**	P	**Pn**	**09 09 39.5**	**+0.3**
ANM	**Nome**	**17.09**	**48**	P	**Pn**	**09 09 39.1**	**-0.3**
ANM	**Nome**	**17.09**	**48**	P	**Pn**	**09 09 39.1**	**-0.3**
ANM				pmax	pmax		
	comp=Z,595nm,1.4s						
ANM	**Nome**	**17.09**	**48**	P	**P**	**09 09 40.5**	**-0.5**
	baz=255,SNR=39						
AKUT	**Akutan**	**17.23**	**84**	P	**P**	**09 09 41.9**	**-0.6**
AKUT	**Akutan**	**17.23**	**84**	P	**P**	**09 09 42.2**	**-0.4**
AKUT	**Akutan**	**17.23**	**84**	⇑P	**Pn**	**09 09 41.1**	**0.0**
GRNR	**Gornyy**	**17.32**	**264**	*e*P	**P**	**09 09 43.3**	**-0.4**
GRNR				MLR	MLR		
	comp=E,79µm,13.0s						
GRNR				MLR	MLR		
	comp=N,73µm,12.0s						
GRNR				MLR	MLR		
	comp=Z,73µm,13.0s						
M13K	**Dall Lake**	**17.48**	**62**	P	**Pn**	**09 09 44.1**	**-0.2**
M13K				IAmb	IAmb	09 09 48.5	
	comp=Z,2µm,1.6s						
M13K	**Dall Lake**	**17.48**	**62**	P	**Pn**	**09 09 44.4**	**+0.2**
	baz=270,SNR=61						
J14K	**Nanvaranak Lak**	**17.53**	**55**	P	**Pn**	**09 09 45.0**	**+0.2**
J14K	**Nanvaranak Lak**	**17.53**	**55**	P	**Pn**	**09 09 45.3**	**+0.5**
	baz=263,SNR=59						
F15K	**North Star Dit**	**17.71**	**45**	P	**P**	**09 09 48.2**	**+0.3**
	baz=252,SNR=111						
G15K	**Niukluk**	**17.75**	**47**	P	**P**	**09 09 48.6**	**+0.3**
	baz=255,SNR=84						
L14K	**Kuka Creek**	**17.82**	**59**	P	**P**	**09 09 49.5**	**+0.4**
	baz=268,SNR=211						
M14K	**Bethel**	**18.17**	**61**	P	**P**	**09 09 53.8**	**+0.9**
	baz=270,SNR=104						
JKA	**Kamikawa-asahi**	**18.25**	**238**	P	**Pn**	**09 09 53.6**	**-0.2**
JKA				IAmb	IAmb	09 10 05.2	
	comp=Z,2µm,1.2s						
JKA	**Kamikawa-asahi**	**18.25**	**238**	⇑P	**Pn**	**09 09 51.8**	**-2.1**
ASAJ	**Asahikawa**	**18.25**	**238**	P	**Pn**	**09 09 52.4**	**-1.5**
	comp=Z,13nm,0.3s,baz=35,slow=7.2,SNR=63						
ASAJ				S	**S**	**09 13 19.4**	**-2.4**
	comp=Z,63nm,1.1s,baz=2.6,slow=14,SNR=1.8						
ASAJ				Lg	Lg	09 15 17.7	
	baz=90,slow=9.7						
ASAJ				LR	LR	09 17 39.9	
	comp=Z,204µm,18.1s,baz=50,slow=40						
	comp=Z,268nm,0.8s						
ASAJ	**Asahikawa**	**18.25**	**238**	P	**Pn**	**09 09 53.6**	**-0.2**
ASAJ				pmax	pmax		
	comp=Z,2µm,1.2s						
FALS	**False Pass**	**18.31**	**80**	P	**P**	**09 09 55.7**	**+1.2**
FALS	**False Pass**	**18.31**	**80**	P	**P**	**09 09 54.7**	**+0.2**
	baz=288,SNR=14						
N14K	**Kuskokwak Cree**	**18.33**	**64**	IAmb	IAmb	09 10 05.2	
	comp=Z,2µm,1.5s						
N14K	**Kuskokwak Cree**	**18.33**	**64**	P	**P**	**09 09 55.4**	**+0.7**
	baz=273,SNR=92						
L15K	**Ungalak Mounta**	**18.41**	**58**	P	**Pn**	**09 09 56.4**	**+0.7**
	baz=268,SNR=204						
K15K	**Wolf Creek Mou**	**18.42**	**56**	P	**Pn**	**09 09 56.6**	**+0.8**
	baz=266,SNR=163						
H16K	**Elim**	**18.42**	**49**	P	**Pn**	**09 09 56.2**	**+0.5**
	baz=258,SNR=48						
C16K	**Lisburne Hills**	**18.43**	**37**	P	**P**	**09 09 54.9**	**-0.7**
C16K	**Lisburne Hills**	**18.43**	**37**	P	**Pn**	**09 09 56.4**	**+0.6**
	baz=244,SNR=29						
YAK	**Yakutsk**	**18.51**	**303**	P	**P**	**09 09 56.3**	**-0.4**
YAK	**Yakutsk**	**18.51**	**303**	P	**P**	**09 09 55.6**	**-1.0**
	comp=Z,14nm,0.3s,baz=111,slow=1.8,SNR=54						
YAK				Lg	Lg	09 15 25.3	
	comp=Z,4.0nm,0.3s,baz=174,slow=23,SNR=1.4						
YAK				LR	LR	09 17 00.6	
	comp=Z,26µm,18.9s,baz=95,slow=37						
	comp=Z,314nm,0.7s						
YAK	**Yakutsk**	**18.51**	**303**	*e*P	**P**	**09 09 55.7**	**-1.0**
YAK				*e*S	**Sn**	**09 13 20.1**	**-2.8**
YAK				pmax	pmax		
	comp=Z,450nm,1.3s						
YAK				pmax	pmax		
	comp=E,195nm,1.0s						
YAK				pmax	pmax		
	comp=N,28nm,1.0s						
YAK				pmax	pmax		
	comp=Z,3µm,2.1s						
YAK				pmax	pmax		
	comp=E,3µm,2.5s						
YAK				pmax	pmax		
	comp=N,284nm,2.1s						
YAK				smax	smax		
	comp=N,38µm,10.3s						
YAK				smax	smax		
	comp=E,13µm,9.6s						
YAK				MLR	MLR		
	comp=N,152µm,15.0s						
YAK				MLR	MLR		
	comp=E,50µm,15.0s						
YAK				MLR	MLR		
	comp=Z,61µm,14.0s						
YAK	**Yakutsk**	**18.51**	**303**	⇑P	**P**	**09 09 55.6**	**-1.0**
G16K	**Koyuk River**	**18.54**	**47**	P	**Pn**	**09 09 57.6**	**+0.3**
	baz=256						
O14K	**Tigyukauivet M**	**18.59**	**66**	IAmb	IAmb	09 10 06.1	
	comp=Z,2µm,1.7s						
O14K	**Tigyukauivet M**	**18.59**	**66**	P	**Pn**	**09 09 58.1**	**+0.2**
	baz=276,SNR=89						
M15K	**Kasigluk River**	**18.79**	**61**	P	**Pn**	**09 10 00.1**	**-0.2**
	baz=272						
S12K	**Black Hills**	**18.81**	**77**	IAmb	IAmb	09 10 10.8	
	comp=Z,1µm,1.0s						
S12K	**Black Hills**	**18.81**	**77**	P	**P**	**09 10 00.2**	**+0.2**
	baz=286,SNR=44						
J16K	**Anvik River**	**18.93**	**53**	P	**Pn**	**09 10 02.2**	**+0.2**
	baz=264,SNR=41						
I17K	**Unalakleet**	**18.96**	**52**	IAmb	IAmb	09 10 13.8	
	comp=Z,2µm,1.5s						
I17K	**Unalakleet**	**18.96**	**52**	P	**Pn**	**09 10 02.3**	**0.0**
	baz=262,SNR=91						
D17K	**Noatak River**	**18.97**	**39**	P	**Pn**	**09 10 02.3**	**-0.1**
	baz=248,SNR=144						
N15K	**Kwethluk River**	**19.11**	**63**	IAmb	IAmb	09 10 15.6	
	comp=Z,2µm,1.6s						
N15K	**Kwethluk River**	**19.11**	**63**	P	**Pn**	**09 10 03.9**	**-0.3**
	baz=274,SNR=72						
RDOG	**Red Dog Mine**	**19.17**	**38**	P	**P**	**09 10 03.8**	**-0.1**
RDOG	**Red Dog Mine**	**19.17**	**38**	P	**Pn**	**09 10 04.7**	**-0.1**
	baz=248,SNR=29						
E17K	**Hotham Inlet**	**19.22**	**42**	P	**Pn**	**09 10 05.2**	**-0.2**
	baz=252,SNR=87						
C17K	**DeLong Mountai**	**19.24**	**37**	P	**P**	**09 10 04.9**	**+0.3**
	baz=246,SNR=74						
F17K	**Baldwin Pennin**	**19.25**	**44**	P	**Pn**	**09 10 05.4**	**-0.4**
	baz=254						
G17K	**Kiwalik Mounta**	**19.26**	**47**	P	**P**	**09 10 05.1**	**+0.2**
	baz=258,SNR=87						
O15K	**Ungalikthiuk R**	**19.34**	**66**	IAmb	IAmb	09 10 17.4	
	comp=Z,2µm,1.6s						
O15K	**Ungalikthiuk R**	**19.34**	**66**	P	**P**	**09 10 06.2**	**+0.4**
	baz=277,SNR=89						
L16K	**Owhat River**	**19.37**	**58**	IAmb	IAmb	09 10 19.8	
	comp=Z,2µm,1.5s						
L16K	**Owhat River**	**19.37**	**58**	P	**P**	**09 10 06.3**	**+0.2**
	baz=270,SNR=87						
H17K	**Granite Mounta**	**19.46**	**49**	IAmb	IAmb	09 10 18.7	
	comp=Z,1µm,1.2s						
H17K	**Granite Mounta**	**19.46**	**49**	P	**P**	**09 10 07.6**	**+0.5**
	baz=260,SNR=137						
J17K	**VABM Dome**	**19.62**	**53**	IAmb	IAmb	09 10 19.8	
	comp=Z,1µm,1.6s						
J17K	**VABM Dome**	**19.62**	**53**	P	**P**	**09 10 09.2**	**+0.3**
	baz=265,SNR=88						
JEM	**Erimo**	**19.63**	**233**	P	**Pn**	**09 10 10.2**	**-0.2**
ERM	**Erimo**	**19.63**	**233**	P	**P**	**09 10 07.7**	**-1.3**
ERM				IAmb	IAmb	09 10 22.4	
	comp=Z,487nm,0.5s						
ERM	**Erimo**	**19.63**	**233**	P	**Pn**	**09 10 10.0**	**-0.4**
ERM	**Erimo**	**19.63**	**233**	P	**P**	**09 10 07.7**	**-1.3**
ERM				pmax	pmax		
	comp=Z,487nm,0.5s						
M16K	**Timber Creek**	**19.63**	**60**	IAmb	IAmb	09 10 19.4	
	comp=Z,1µm,1.4s						
M16K	**Timber Creek**	**19.63**	**60**	P	**P**	**09 10 09.2**	**+0.2**
	baz=272,SNR=77						
N16K	**Nishlik Lake**	**19.75**	**62**	P	**P**	**09 10 10.4**	**+0.1**
	baz=274,SNR=74						
E18K	**Tukpahlearik C**	**19.78**	**41**	IAmb	IAmb	09 10 24.1	
	comp=Z,2µm,1.8s						
E18K	**Tukpahlearik C**	**19.78**	**41**	P	**P**	**09 10 11.0**	**+0.5**
	baz=252,SNR=156						
SDPT	**Sand Point**	**19.78**	**77**	IAmb	IAmb	09 10 21.9	
	comp=Z,704nm,0.9s						
SDPT	**Sand Point**	**19.78**	**77**	P	**P**	**09 10 09.8**	**-0.7**
SDPT	**Sand Point**	**19.78**	**77**	P	**P**	**09 10 09.9**	**-0.7**
	baz=287,SNR=23						
F18K	**Selawik**	**19.91**	**44**	P	**P**	**09 10 11.5**	**-0.4**
	baz=256,SNR=106						
L17K	**Donlin**	**19.93**	**57**	P	**P**	**09 10 11.6**	**-0.6**
	baz=270,SNR=149						
K17K	**Iditarod**	**19.94**	**55**	IAmb	IAmb	09 10 25.4	
	comp=Z,1µm,1.1s						
K17K	**Iditarod**	**19.94**	**55**	P	**P**	**09 10 11.9**	**-0.4**
	baz=268,SNR=157						
C18K	**Utukok River**	**19.98**	**38**	P	**P**	**09 10 12.3**	**-0.4**
	baz=248						
S14K	**Fog Glacier**	**20.02**	**74**	P	**P**	**09 10 13.6**	**+0.3**
	baz=285,SNR=80						
B18K	**Kokolik River**	**20.05**	**35**	P	**P**	**09 10 13.8**	**+0.3**
	baz=246,SNR=88						
H18K	**Honhosa River**	**20.14**	**48**	P	**P**	**09 10 14.4**	**-0.1**
	baz=261,SNR=164						
G18K	**Tagagawik**	**20.15**	**46**	P	**P**	**09 10 14.0**	**-0.6**
	baz=259,SNR=173						
O16K	**Kokwok River B**	**20.17**	**65**	IAMs_20	IAMs_20	09 17 28.7	
	comp=Z,55µm,19.0s						
O16K	**Kokwok River B**	**20.17**	**65**	P	**P**	**09 10 14.2**	**-0.6**
	baz=277,SNR=53						
P16K	**Nushagak River**	**20.29**	**66**	P	**P**	**09 10 15.7**	**-0.5**
	baz=278,SNR=20						
M17K	**Holitna River**	**20.35**	**59**	IAmb	IAmb	09 10 28.9	
	comp=Z,1µm,1.0s						
M17K				IAMs_20	IAMs_20	09 17 36.2	
	comp=Z,54µm,20.0s						
M17K	**Holitna River**	**20.35**	**59**	P	**P**	**09 10 16.4**	**-0.4**
	baz=272,SNR=218						
CHNA	**Chernabura Isl**	**20.42**	**78**	P	**P**	**09 10 16.7**	**-0.9**
CHNA	**Chernabura Isl**	**20.42**	**78**	P	**P**	**09 10 15.8**	**-1.8**
	baz=289,SNR=41						
CNBA	**Chernabura Isl**	**20.43**	**79**	P	**P**	**09 10 16.3**	**-1.3**
N17K	**Nushagak Hills**	**20.52**	**62**	IAmb	IAmb	09 10 30.7	
	comp=Z,828nm,1.3s						
N17K				IAMs_20	IAMs_20	09 17 41.0	
	comp=Z,54µm,19.0s						
N17K	**Nushagak Hills**	**20.52**	**62**	P	**P**	**09 10 18.1**	**-0.6**
	baz=275,SNR=214						
TEY	**Ternei**	**20.59**	**249**	*e*P	**P**	**09 10 18.0**	**-1.5**
TEY				MLR	MLR		
	comp=E,39µm,15.0s						
TEY				MLR	MLR		
	comp=N,14µm,14.0s						
TEY				MLR	MLR		
	comp=Z,34µm,16.0s						
A19K	**Wainwright**	**20.64**	**33**	P	**P**	**09 10 20.1**	**+0.3**
	baz=245						
O17K	**Koliganek Bris**	**20.65**	**64**	P	**P**	**09 10 19.4**	**-0.6**
	baz=277,SNR=168						
L18K	**Granite Mounta**	**20.68**	**57**	P	**P**	**09 10 19.8**	**-0.5**
	baz=271,SNR=183						
C19K	**Lookout Ridge**	**20.69**	**37**	IAMs_20	IAMs_20	09 18 48.3	
	comp=Z,79µm,20.0s						
C19K	**Lookout Ridge**	**20.69**	**37**	P	**P**	**09 10 19.9**	**-0.5**
	baz=249,SNR=116						
J18K	**Innoko River**	**20.69**	**53**	IAMs_20	IAMs_20	09 17 55.0	
	comp=Z,56µm,21.0s						
J18K	**Innoko River**	**20.69**	**53**	P	**P**	**09 10 20.1**	**-0.3**
	baz=267,SNR=125						
F19K	**Shaleruckik Mo**	**20.69**	**44**	P	**P**	**09 10 20.4**	**0.0**
F19K	**Shaleruckik Mo**	**20.69**	**44**	P	**P**	**09 10 20.2**	**-0.2**
	baz=257						
KLR	**Kul'dur**	**20.70**	**264**	P	**P**	**09 10 18.3**	**-2.3**
	comp=Z,21nm,0.4s,baz=54,slow=10,SNR=48						
KLR				S	**S**	**09 14 10.7**	**-0.1**
	comp=Z,13nm,1.0s,baz=18,slow=19,SNR=1.2						
KLR				LR	LR	09 18 55.5	
	comp=Z,73µm,18.0s,baz=64,slow=38						
	comp=Z,21nm,0.4s						
KLR	**Kul'dur**	**20.70**	**264**	*ce*P	**P**	**09 10 18.8**	**-1.8**
KLR				pmax	pmax		
	comp=Z,93nm,1.0s						
KLR				MLR	MLR		
	comp=Z,62µm,14.0s						
GCSA	**Galena City Sc**	**20.71**	**50**	P	**P**	**09 10 19.9**	**-0.7**
	baz=264,SNR=196						
G19K	**Purcell Mounta**	**20.83**	**46**	P	**P**	**09 10 21.2**	**-0.7**
	baz=260,SNR=154						
H19K	**Roundabout Mou**	**20.99**	**48**	IAmb	IAmb	09 10 41.0	
	comp=Z,568nm,0.9s						
H19K	**Roundabout Mou**	**20.99**	**48**	P	**P**	**09 10 22.9**	**-0.8**
	baz=262,SNR=155						
D19K	**Kuna River**	**20.99**	**39**	P	**P**	**09 10 23.1**	**-0.6**
	baz=253,SNR=78						
Q16K	**King Salmon**	**21.04**	**67**	P	**P**	**09 10 23.8**	**-0.4**
	baz=280,SNR=58						
E19K	**Redstone River**	**21.04**	**42**	P	**P**	**09 10 23.9**	**-0.3**
	baz=256,SNR=156						
P17K	**Kvichak River**	**21.06**	**65**	P	**P**	**09 10 24.0**	**-0.4**
	baz=279,SNR=58						
M18K	**Stony River**	**21.12**	**59**	P	**P**	**09 10 24.7**	**-0.4**
	baz=273,SNR=192						

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N18K  Kilae Creek        21.15  61   IAMs_20  IAMs_20  09 18 01.5
      comp=Z,54µm,20.0s
N18K  Kilae Creek        21.15  61   P        P        09 10 24.8 -0.6
      baz=276,SNR=56
ZEA   Zeya               21.19 279  eP        P        09 10 26.6 +0.7
ZEA                                 eS        S        09 14 13.1 -7.4
ZEA                                  pmax     pmax
      comp=E,210nm,1.0s
ZEA                                  pmax     pmax
      comp=N,50nm,0.8s
ZEA                                  pmax     pmax
      comp=Z,320nm,1.1s
ZEA                                  pmax     pmax
      comp=E,2µm,5.3s
ZEA                                  pmax     pmax
      comp=Z,3µm,4.9s
ZEA                                  smax     smax
      comp=N,9µm,8.3s
ZEA                                  smax     smax
      comp=E,9µm,9.2s
ZEA                                  MLR      MLR
      comp=E,13µm,10.0s
ZEA                                  MLR      MLR
      comp=N,110µm,15.0s
ZEA                                  MLR      MLR
      comp=Z,58µm,16.0s
J19K  Poorman            21.20  52   IAmb     IAmb     09 10 44.2
      comp=Z,924nm,1.1s
J19K                                 IAMs_20  IAMs_20  09 18 51.5
      comp=Z,51µm,20.0s
J19K  Poorman            21.20  52   P        P        09 10 25.0 -1.0
      baz=267,SNR=166
TIXI  Tiksi              21.46 330            P        09 10 28.5  0.0
TIXI                                 IAmb     IAmb     09 10 45.0
      comp=Z,658nm,0.8s
TIXI                                 IAMs_20  IAMs_20  09 18 54.3
      comp=Z,63µm,21.0s
TIXI  Tiksi              21.46 330d iP        P        09 10 28.6  0.0
TIXI                                 pmax     pmax
      comp=Z,267nm,0.9s
TIXI                                 MLR      MLR
      comp=Z,68µm,14.0s
Q17K  Contact Creek      21.51  68   P        P        09 10 28.0 -1.4
      baz=282,SNR=137
F20K  Avaraart Lake      21.52  43   P        P        09 10 28.8 -0.6
      baz=259
L19K  White Mountain     21.54  57   IAmb     IAmb     09 10 47.0
      comp=Z,1µm,1.3s
L19K  White Mountain     21.54  57   P        P        09 10 28.9 -0.8
      baz=272,SNR=79
JTM   Tenmabayashi       21.55 234   P        P        09 10 28.2 -1.6
JTM                                  IAmb     IAmb     09 10 47.9
      comp=Z,665nm,0.9s
JTM                                  IAMs_20  IAMs_20  09 19 09.0
      comp=Z,65µm,21.0s
JTM   Tenmabayashi       21.55 234   P        P        09 10 30.9 +1.0
JTM   Tenmabayashi       21.55 234  ⇑P        P        09 10 25.6 -4.3
O18K  Koktuh Hills       21.58  63   IAmb     IAmb     09 10 40.4
      comp=Z,579nm,0.9s
O18K                                 IAMs_20  IAMs_20  09 18 23.1
      comp=Z,54µm,19.0s
O18K  Koktuh Hills       21.58  63   P        P        09 10 29.4 -0.7
      baz=278,SNR=231
D20K  Etivluk River      21.59  39   IAmb     IAmb     09 10 47.6
      comp=Z,783nm,0.9s
D20K  Etivluk River      21.59  39   P        P        09 10 29.0 -1.1
      baz=254,SNR=140
E20K  Nigu River         21.62  40   P        P        09 10 29.4 -1.0
      baz=256
H20K  Anotleneega Mo     21.63  48   P        P        09 10 30.0 -0.6
      baz=264,SNR=120
P18K  Big Mountain,      21.64  64   IAmb     IAmb     09 10 47.5
      comp=Z,1µm,1.2s
P18K  Big Mountain,      21.64  64   P        P        09 10 29.5 -1.3
      baz=279,SNR=215
I20K  Naaghedeneel       21.74  50   P        P        09 10 30.5 -1.2
      baz=266,SNR=53
M19K  Big River Lodg     21.77  58   IAmb     IAmb     09 10 49.3
      comp=Z,661nm,1.2s
M19K  Big River Lodg     21.77  58   P        P        09 10 30.9 -1.3
      baz=274,SNR=134
B20K  Meade River        21.80  35   P        P        09 10 31.0 -1.3
      baz=250
ACHA  Angle Creek He     21.81  68   P        P        09 10 31.8 -0.8
N19K  Bonanza Creek      21.82  61   P        P        09 10 32.6 -0.1
N19K                                 IAmb     IAmb     09 10 51.7
      comp=Z,586nm,1.1s
N19K                                 IAMs_20  IAMs_20  09 18 32.1
      comp=Z,55µm,20.0s
N19K  Bonanza Creek      21.82  61   P        P        09 10 31.5 -1.2
      baz=276,SNR=81
J20K  Nowinta River      21.86  51   IAmb     IAmb     09 10 50.7
      comp=Z,2µm,1.9s
J20K                                 IAMs_20  IAMs_20  09 19 31.8
      comp=Z,49µm,19.0s
J20K  Nowinta River      21.86  51   P        P        09 10 31.8 -1.1
      baz=268,SNR=119
K20K  Telida             21.88  54   IAmb     IAmb     09 10 50.1
      comp=Z,1µm,1.2s
K20K  Telida             21.88  54   P        P        09 10 32.4 -0.8
      baz=270,SNR=218
Q18K  Katmai Hardscr     21.89  66   P        P        09 10 32.2 -1.2
      baz=281,SNR=67
O19K  Port Alsworth      21.98  62   IAMs_20  IAMs_20  09 18 36.3
      comp=Z,46µm,20.0s
O19K  Port Alsworth      21.98  62   P        P        09 10 33.0 -1.2
      baz=278,SNR=22
L20K  Farewell, AK       21.98  56   P        P        09 10 33.4 -1.0
      baz=272,SNR=113
IMAR  Indian Mountai     22.15  47   P        P        09 10 36.1  0.0
CHIR  Chirikof Islan     22.27  74   P        P        09 10 36.2 -1.2
CHIR  Chirikof Islan     22.27  74   P        P        09 10 39.3 +1.8
CHIR  Chirikof Islan     22.27  74   P        P        09 10 36.3 -1.2
      baz=288,SNR=17
G21K  Allakaket          22.31  45   IAmb     IAmb     09 10 50.4
      comp=Z,1µm,1.3s
G21K  Allakaket          22.31  45   P        P        09 10 36.8 -1.1
      baz=263,SNR=230
C21K  Knifeblade Rid     22.34  38   P        P        09 10 37.4 -0.8
      baz=255
M20K  Styx River         22.37  58   IAMs_20  IAMs_20  09 18 50.6
      comp=Z,52µm,22.0s
M20K  Styx River         22.37  58   P        P        09 10 37.6 -1.0
      baz=275
R18K  Karluk             22.41  69   P        P        09 10 36.9 -2.0
      baz=284
F21K  Alatna River       22.42  43   IAmb     IAmb     09 10 57.2
      comp=Z,619nm,1.0s
F21K  Alatna River       22.42  43   P        P        09 10 38.0 -1.0
      baz=261
A21K  Barrow             22.44  32   P        P        09 10 37.9 -1.2
      baz=248
E21K  Killik River       22.46  40   P        P        09 10 38.2 -1.3
      baz=258
H21K  Melozitna Rive     22.51  48   IAmb     IAmb     09 10 59.6
      comp=Z,863nm,1.4s
H21K  Melozitna Rive     22.51  48   P        P        09 10 38.8 -1.2
      baz=266,SNR=169
B21K  Ikpikpuk River     22.52  37   IAMs_20  IAMs_20  09 19 58.9
      comp=Z,52µm,21.0s
B21K  Ikpikpuk River     22.52  37   P        P        09 10 38.8 -1.2
      baz=254
Q19K  Cape Douglas,      22.53  65   IAmb     IAmb     09 10 59.3
      comp=Z,707nm,0.8s
Q19K  Cape Douglas,      22.53  65   P        P        09 10 38.8 -1.5
      baz=281,SNR=42
ILSW  Iliamna Southw     22.59  62   IAMs_20  IAMs_20  09 18 55.6
      comp=Z,50µm,21.0s
HEH   HeiHe              22.60 270  eP        P        09 10 38.5 -2.6
HEH                                  pP       pP       09 10 41.0 -4.5
HEH                                  S        S        09 14 41.5 -6.1
HEH                                  pmax     pmax
      comp=Z,180nm,0.7s
HEH                                  pmax     pmax
      comp=Z,3µm,5.9s
HEH                                  LR       LR
      comp=Z,185µm,17.1s
HEH                                  LR       LR
      comp=Z,153µm,14.9s
P19K  Oil Pt             22.60  63   IAMs_20  IAMs_20  09 18 54.9
      comp=Z,44µm,20.0s
P19K  Oil Pt             22.60  63   P        P        09 10 40.0 -1.0
      baz=280
CHUM  Lake Minchumin     22.66  52   P        P        09 10 40.7 -0.8
      baz=270
RED   Redoubt Volcan     22.71  61   P        P        09 10 42.1 -0.2
RED                                  IAmb     IAmb     09 10 55.0
      comp=Z,928nm,1.2s
PPLA  Purkeypile         22.74  55   P        P        09 10 42.3 -0.4
PPLA                                 IAmb     IAmb     09 11 00.4
      comp=Z,682nm,1.0s
PPLA  Purkeypile         22.74  55   P        P        09 10 41.8 -0.9
      baz=273
CAST  Castle Rocks       22.77  53   P        P        09 10 41.9 -0.9
      baz=272,SNR=195
SII   Sitkinak Islan     22.82  71   IAmb     IAmb     09 11 01.0
      comp=Z,860nm,1.0s
SII   Sitkinak Islan     22.82  71   P        P        09 10 42.8 -0.6
SII   Sitkinak Islan     22.82  71   P        P        09 10 41.4 -1.9
      baz=287,SNR=17
I21K  Tanana             22.82  49   P        P        09 10 42.3 -1.0
      baz=268
A22K  Sinclair Lake      22.83  34   P        P        09 10 42.1 -1.1
      baz=251
O20K  Slope Mountain     22.83  62   P        P        09 10 42.6 -1.0
      baz=279,SNR=42
SPCR  Spurr Chakacha     22.88  59   P        P        09 10 42.8 -1.2
      baz=277
SPU   Mount Spurr        22.96  59   P        P        09 10 44.4 -0.3
F22K  John River         22.96  43   P        P        09 10 43.6 -1.1
      baz=262
D22K  Ayikyak River      23.01  39   IAmb     IAmb     09 11 03.2
      comp=Z,613nm,0.9s
D22K                                 IAMs_20  IAMs_20  09 20 27.7
      comp=Z,49µm,20.0s
D22K  Ayikyak River      23.01  39   P        P        09 10 44.3 -1.0
      baz=258,SNR=68
OHAK  Old Harbor         23.11  70   P        P        09 10 45.5 -0.7
OHAK  Old Harbor         23.11  70   P        P        09 10 46.0 -0.3
OHAK  Old Harbor         23.11  70   P        P        09 10 43.9 -2.4
      baz=286,SNR=22
H22K  Ishtalitna Cre     23.11  47   P        P        09 10 45.2 -1.1
      baz=266,SNR=101
B22K  Teshekpuk Lake     23.12  36   IAMs_20  IAMs_20  09 20 38.6
      comp=Z,45µm,20.0s
B22K  Teshekpuk Lake     23.12  36   P        P        09 10 44.7 -1.5
      baz=254,SNR=108
SKT   Skwentna           23.12  57   IAmb     IAmb     09 11 08.9
      comp=Z,1µm,1.5s
SKT                                  IAMs_20  IAMs_20  09 19 14.2
      comp=Z,48µm,21.0s
SKT   Skwentna           23.12  57   P        P        09 10 45.1 -1.2
      baz=276,SNR=44
G22K  Bettles            23.15  44   P        P        09 10 45.0 -1.6
      baz=264,SNR=257
E22K  Anaktuvuk Pass     23.19  41   P        P        09 10 45.6 -1.5
      baz=261,SNR=162
Q20K  Shuyak Island      23.23  66   P        P        09 10 45.7 -1.8
      baz=283,SNR=46
BPAW  Bear Paw Mtn.      23.24  52   IAMs_20  IAMs_20  09 20 43.2
      comp=Z,40µm,18.0s
BPAW  Bear Paw Mtn.      23.24  52   P        P        09 10 46.4 -1.2
      baz=271,SNR=125
KTH   Kantishna Hill     23.29  53   IAMs_20  IAMs_20  09 20 28.5
      comp=Z,38µm,18.0s
KDAK  Kodiak Island      23.33  68   P        P        09 10 47.0 -1.5
KDAK  Kodiak Island      23.33  68   P        P        09 10 47.0 -1.5
KDAK                                 pmax     pmax
      comp=Z,351nm,1.0s
KDAK                                 MLR      MLR
      comp=Z,35µm,21.0s
KDAK  Kodiak Island      23.33  68   P        P        09 10 45.9 -2.6
      baz=285
KDAK  Kodiak Island      23.33  68  ⇑P        P        09 10 45.9 -2.6
MLY   Manley             23.35  49   P        P        09 10 47.5 -1.2
      baz=269,SNR=136
HOM   Homer              23.40  63   P        P        09 10 48.8 -0.3
HOM   Homer              23.40  63   P        P        09 10 47.9 -1.3
      baz=281
CAPN  Captain Cook N     23.45  60   IAMs_20  IAMs_20  09 19 45.0
      comp=Z,41µm,20.0s
CAPN  Captain Cook N     23.45  60   P        P        09 10 48.5 -1.1
      baz=279
SUA   Susitna One        23.55  58   P        P        09 10 48.6 -2.2
      baz=277
TRF   Thorofare Moun     23.57  53   P        P        09 10 50.4 -0.7
TRF   Thorofare Moun     23.57  53   P        P        09 10 49.5 -1.6
      baz=273,SNR=170
USA0B Ussuriysk Arra     23.60 253   P        P        09 10 49.1 -2.2
USA0B Ussuriysk Arra     23.60 253   P        P        09 10 49.1 -2.2
USA0B                                pmax     pmax
      comp=Z,444nm,2.0s
USRK  Ussuriysk Ar.      23.60 253   P        P        09 10 49.1 -2.2
      comp=Z,17nm,0.5s,baz=56,slow=11,SNR=31
USRK                                 LR       LR       09 21 43.1
      comp=Z,75µm,18.1s,baz=55,slow=41
      comp=Z,17nm,0.5s
CNPM  China Poot         23.62  63   IAmb     IAmb     09 11 09.3
      comp=Z,546nm,0.9s
CUT   Chulitna           23.66  56   P        P        09 10 50.2 -1.5
      baz=276
COLD  Coldfoot           23.69  44   IAmb     IAmb     09 11 10.7
      comp=Z,510nm,1.0s
COLD  Coldfoot           23.69  44   P        P        09 10 50.5 -1.4
      baz=265,SNR=105
G23K  Bananza Creek      23.71  45   P        P        09 10 50.9 -1.3
G23K  Bananza Creek      23.71  45   P        P        09 10 50.5 -1.8
      baz=266,SNR=93
D23K  Nanushuk River     23.74  39   P        P        09 10 51.5 -0.9
D23K                                 IAmb     IAmb     09 11 10.0
      comp=Z,510nm,1.1s
D23K                                 IAMs_20  IAMs_20  09 21 11.1
      comp=Z,46µm,20.0s
D23K  Nanushuk River     23.74  39   P        P        09 10 50.9 -1.6
      baz=260,SNR=47
BRLK  Bradley Lake       23.75  63   P        P        09 10 51.4 -1.3
BRLK                                 IAmb     IAmb     09 10 59.4
      comp=Z,345nm,0.8s
M22K  Willow             23.81  58   IAmb     IAmb     09 11 17.3
      comp=Z,526nm,0.9s
M22K  Willow             23.81  58   P        P        09 10 51.6 -1.5
      baz=277,SNR=34
BRSE  Bradley Lake S     23.83  63   P        P        09 10 51.2 -2.2
      baz=281,SNR=40
H23K  Yukon River        23.86  47   IAmb     IAmb     09 11 17.9
      comp=Z,471nm,0.9s
H23K  Yukon River        23.86  47   P        P        09 10 52.6 -1.0
      baz=268,SNR=88
BWN   Browne             23.91  51   P        P        09 10 54.9 +0.8
C23K  Itkillik River     23.93  37   IAMs_20  IAMs_20  09 20 55.1
      comp=Z,46µm,21.0s
C23K  Itkillik River     23.93  37   P        P        09 10 52.6 -1.6
      baz=258,SNR=48
I23K  Minto, Yukon-K     23.93  49   P        P        09 10 53.2 -1.1
      baz=270,SNR=256
SLKM  Skilak Lake        23.94  61   IAMs_20  IAMs_20  09 19 52.1
      comp=Z,45µm,19.0s
E23K  Chandalar          24.00  42   IAmb     IAmb     09 11 15.6
      comp=Z,665nm,0.9s
E23K  Chandalar          24.00  42   P        P        09 10 53.6 -1.4
      baz=263,SNR=263
NEA2  Nenana             24.06  50   P        P        09 10 54.3 -1.2
NEA2                                 IAmb     IAmb     09 11 14.1
      comp=Z,603nm,1.0s
NEA2  Nenana             24.06  50   P        P        09 10 53.7 -1.9
      baz=272,SNR=144
JMM   Marumori           24.07 230   IAMs_20  IAMs_20  09 20 13.6
      comp=Z,60µm,22.0s
JMM   Marumori           24.07 230   P        P        09 10 56.8 +1.1
JMM   Marumori           24.07 230   P        P        09 10 55.8 +0.1
JMM   Marumori           24.07 230  ⇑P        P        09 10 55.8 +0.1
RC01  Rabbit Creek A     24.08  59   IAMs_20  IAMs_20  09 19 58.8
      comp=Z,44µm,20.0s
RC01  Rabbit Creek A     24.08  59   P        P        09 10 53.2 -2.6
      baz=279
TOLK  Toolik Lake Re     24.09  40   P        P        09 10 54.3 -1.5
      baz=262,SNR=90
MCK   McKinley           24.16  53   P        P        09 10 54.5 -2.0
      baz=274,SNR=68
O22K  Cooper Landing     24.19  61   IAmb     IAmb     09 11 16.8
      comp=Z,490nm,0.7s
O22K                                 IAMs_20  IAMs_20  09 20 00.7
      comp=Z,49µm,20.0s
O22K  Cooper Landing     24.19  61   P        P        09 10 54.2 -2.6
      baz=280
RND   Reindeer           24.22  53   P        P        09 10 55.3 -1.8
RND                                  IAMs_20  IAMs_20  09 21 07.1
      comp=Z,38µm,19.0s
RND   Reindeer           24.22  53   P        P        09 10 55.3 -1.8
RND                                  pmax     pmax
      comp=Z,1µm,1.5s
RND                                  MLR      MLR
      comp=Z,38µm,19.0s
PMR   Palmer             24.30  58   P        P        09 10 55.2 -2.5
      baz=278,SNR=33
GHO   Glory Hole Cre     24.37  57   IAmb     IAmb     09 11 20.2
      comp=Z,468nm,1.0s
GHO                                  IAMs_20  IAMs_20  09 20 16.2
      comp=Z,40µm,21.0s
VLA   Vladivostok        24.39 251⇓eP        P        09 10 58.9 +0.3
VLA                                  pmax     pmax
      comp=Z,152nm,1.8s
VLA                                  MLR      MLR
      comp=Z,97µm,20.0s
SEW   Seward             24.39  61   IAmb     IAmb     09 11 05.4
      comp=Z,284nm,0.8s
SEW                                  IAMs_20  IAMs_20  09 20 14.1
      comp=Z,53µm,19.0s
SEW   Seward             24.39  61   P        P        09 10 56.1 -2.5
      baz=281,SNR=57
WAT1  Susitna Watana     24.41  55   P        P        09 10 56.3 -2.5
      baz=276
E24K  Your Creek         24.42  42   P        P        09 10 56.9 -2.0
      baz=264
D24K  Happy Valley       24.43  39   P        P        09 10 58.6 -0.3
D24K                                 IAMs_20  IAMs_20  09 21 33.4
      comp=Z,56µm,20.0s
D24K  Happy Valley       24.43  39   P        P        09 10 57.6 -1.2
      baz=262,SNR=71
WRH   Wood River Hil     24.49  51   IAMs_20  IAMs_20  09 21 30.3
      comp=Z,35µm,18.0s
H24K  Noodor Dome        24.55  47   IAmb     IAmb     09 11 19.8
      comp=Z,472nm,1.1s
H24K  Noodor Dome        24.55  47   P        P        09 10 58.6 -1.4
      baz=270,SNR=88
C24K  Franklin Bluff     24.56  38   P        P        09 10 59.5 -0.6
C24K                                 IAMs_20  IAMs_20  09 21 46.8
      comp=Z,38µm,20.0s
C24K  Franklin Bluff     24.56  38   P        P        09 10 58.3 -1.7
      baz=260,SNR=75
COLA  College            24.58  50   P        P        09 10 59.2 -0.9
COLA                                 IAmb     IAmb     09 11 19.5
      comp=Z,600nm,0.9s
COLA  College            24.58  50   P        P        09 11 02.3 +2.1
COLA  College            24.58  50   P        P        09 10 59.3 -0.9
COLA                                 pmax     pmax
      comp=Z,600nm,0.9s
COLA                                 MLR      MLR
      comp=Z,33µm,19.0s
COLA  College            24.58  50   P        P        09 10 58.8 -1.4
      baz=272
COLA  College            24.58  50  ⇑P        P        09 10 59.4 -0.9
F24K  Squaw Lake         24.60  43   IAmb     IAmb     09 11 19.8
      comp=Z,290nm,0.9s
F24K  Squaw Lake         24.60  43   P        P        09 10 59.0 -1.5
      baz=266,SNR=58
MDJ   Mudanjiang         24.62 257   IAMs_20  IAMs_20  09 20 33.3
      comp=Z,66µm,20.0s
MDJ   Mudanjiang         24.62 257   P        P        09 10 57.5 -3.3
MDJ                                  PP       PnPn     09 11 35.8 +3.6
MDJ                                  SS       S        09 16 18.8  +58
MDJ                                  pmax     pmax
      comp=Z,34nm,1.2s
MDJ                                  pmax     pmax
      comp=Z,2µm,10.3s
MDJ                                  LR       LR
      comp=Z,135µm,16.5s
MDJ                                  LR       LR
      comp=Z,122µm,12.4s
MDJ   Mudanjiang         24.62 257   P        P        09 11 03.6 +2.8
KNK   Knik Glacier       24.64  58   P        P        09 10 58.5 -2.4
      baz=279,SNR=65
G24K  Hadweenzic Riv     24.73  45   P        P        09 10 59.2 -2.4
      baz=268,SNR=313
PWL   Port Wells         24.80  59   IAMs_20  IAMs_20  09 20 20.6
      comp=Z,66µm,22.0s
PWL   Port Wells         24.80  59   P        P        09 10 59.9 -2.4
      baz=280,SNR=152
WAT6  Susitna Watana     24.81  55   P        P        09 11 00.6 -1.9
      baz=277,SNR=54
DHY   Denali Highway     24.92  54   IAmb     IAmb     09 11 21.4
      comp=Z,496nm,1.0s
DHY   Denali Highway     24.92  54   P        P        09 11 01.2 -2.3
      baz=276,SNR=96
M23K  Glacier View       24.93  57   P        P        09 11 01.2 -2.2
      baz=279,SNR=69
HDA   Harding Lake       24.99  51   P        P        09 11 01.8 -2.2
      baz=274,SNR=46
ILAR  Eielson Array      24.99  50   P        P        09 11 03.4 -0.6
ILAR  Eielson Array      24.99  50   P        P        09 11 02.5 -1.5
      comp=Z,36nm,0.9s,baz=262,slow=7.7,SNR=83
ILAR                                 LR       LR       09 21 22.2
      comp=Z,32µm,18.6s,baz=251,slow=38
      comp=Z,36nm,0.9s
ILAR  Eielson Array      24.99  50   P        P        09 11 03.4 -0.6
JSD   Sado               25.05 235   IAmb     IAmb     09 11 26.9
      comp=Z,392nm,1.1s
JSD   Sado               25.05 235   P        P        09 11 05.7 +1.0
JSD   Sado               25.05 235   P        P        09 11 04.7  0.0
JSD   Sado               25.05 235  ⇑P        P        09 11 04.0 -0.6
SCM   Sheep Creek Mo     25.11  57   IAMs_20  IAMs_20  09 20 49.8
      comp=Z,41µm,22.0s
SCM   Sheep Creek Mo     25.11  57   P        P        09 11 03.0 -2.1
      baz=279,SNR=160
BNX   BinXian            25.11 261  ⇓P        P        09 11 03.5 -1.7
BNX                                  pP       pP       09 11 08.8 -1.0
BNX                                  S        S        09 15 30.0 +1.2
BNX                                  sS       sS       09 15 36.8 +0.4
BNX                                  pmax     pmax
      comp=Z,26nm,1.1s
BNX                                  pmax     pmax
      comp=Z,2µm,10.6s
BNX                                  LR       LR
      comp=Z,90µm,14.5s
BNX                                  LR       LR
      comp=Z,97µm,14.1s
MSHR  Mys Shultsa        25.14 251⇑iP        P        09 11 04.0 -1.5
MSHR                                 pmax     pmax
      comp=Z,114nm,1.2s
MSHR                                 MLR      MLR
      comp=Z,128µm,19.0s
G25K  Bearman Lake       25.27  45   P        P        09 11 05.2 -1.3
      baz=270,SNR=45
D25K  Kavik River        25.32  39   IAMs_20  IAMs_20  09 22 12.9
      comp=Z,37µm,19.0s
D25K  Kavik River        25.32  39   P        P        09 11 04.9 -2.1
      baz=264
GLI   Glacier Island     25.39  59   IAMs_20  IAMs_20  09 20 50.3
      comp=Z,48µm,21.0s
GLI   Glacier Island     25.39  59   P        P        09 11 05.8 -1.8
      baz=281,SNR=28
H25L  Birch Creek        25.39  46   P        P        09 11 05.9 -1.6
      baz=271,SNR=40
P23K  Montague Islan     25.42  61   IAMs_20  IAMs_20  09 20 48.3
      comp=Z,42µm,19.0s
P23K  Montague Islan     25.42  61   P        P        09 11 06.2 -1.7
      baz=283,SNR=45
F25K  Christian Rive     25.47  43   IAmb     IAmb     09 11 29.2
      comp=Z,535nm,0.9s
F25K                                 IAMs_20  IAMs_20  09 22 44.8
      comp=Z,37µm,18.0s
F25K  Christian Rive     25.47  43   P        P        09 11 06.5 -1.9
      baz=268,SNR=107
E25K  Arctic Village     25.52  42   P        P        09 11 07.4 -1.4
      baz=267,SNR=99
PRP   Porcupine Dome     25.53  48   IAmb     IAmb     09 11 22.6
      comp=Z,550nm,1.1s
PRP                                  IAMs_20  IAMs_20  09 21 19.7
      comp=Z,46µm,20.0s
PRP   Porcupine Dome     25.53  48   P        P        09 11 07.4 -1.6
      baz=273,SNR=107
K24K  Donnelly Dome      25.55  52   P        P        09 11 07.3 -1.8
K24K                                 IAMs_20  IAMs_20  09 22 07.4
      comp=Z,33µm,18.0s
K24K  Donnelly Dome      25.55  52   P        P        09 11 06.9 -2.2
      baz=276,SNR=24
M24K  Tolsona, Glenn     25.60  56   P        P        09 11 07.4 -2.2
      baz=279,SNR=96
FYU   Fort Yukon         25.62  46   P        P        09 11 09.2 -0.3
J25K  Salcha River,      25.66  50   IAmb     IAmb     09 11 27.7
      comp=Z,365nm,1.1s
J25K  Salcha River,      25.66  50   P        P        09 11 07.9 -2.2
      baz=275,SNR=106
FID   Port Fidalgo       25.71  59   IAmb     IAmb     09 11 31.9
      comp=Z,574nm,1.2s
FID                                  IAMs_20  IAMs_20  09 20 59.4
      comp=Z,53µm,20.0s
HIN   Hinchinbrook I     25.77  60   IAmb     IAmb     09 11 30.5
      comp=Z,462nm,0.8s
HIN                                  IAMs_20  IAMs_20  09 21 01.5
      comp=Z,53µm,20.0s
PAX   Paxson             25.80  54   IAmb     IAmb     09 11 35.1
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	comp=Z,436nm,1.0s						
PAX				IAMs_20	IAMs_20	09 21 27.8	
	comp=Z,37µm,21.0s						
PAX	**Paxson**	**25.80**	**54**	P	**P**	**09 11 09.5**	**-1.9**
	baz=278,SNR=54						
KLU	**Klutina**	**25.83**	**57**	P	**P**	**09 11 10.8**	**-0.9**
KLU				IAmb	IAmb	09 11 30.7	
	comp=Z,420nm,0.8s						
KLU				IAMs_20	IAMs_20	09 21 13.9	
	comp=Z,40µm,20.0s						
KLU	**Klutina**	**25.83**	**57**	P	**P**	**09 11 09.6**	**-2.1**
	baz=281,SNR=37						
BMAR	**Burnt Mountain**	**25.87**	**44**	P	**P**	**09 11 11.8**	**-0.2**
C26K	**Camden Bay**	**25.89**	**38**	P	**P**	**09 11 10.2**	**-1.8**
	baz=264						
DIV	**Divide**	**25.97**	**58**	IAmb	IAmb	09 11 30.9	
	comp=Z,504nm,1.1s						
DIV				IAMs_20	IAMs_20	09 21 18.6	
	comp=Z,55µm,20.0s						
RIDG	**Independent Ri**	**25.97**	**52**	IAmb	IAmb	09 11 32.6	
	comp=Z,438nm,1.0s						
RIDG	**Independent Ri**	**25.97**	**52**	P	**P**	**09 11 10.3**	**-2.6**
	baz=277,SNR=93						
HARP	**HAARP**	**26.02**	**55**	P	**P**	**09 11 11.1**	**-2.3**
	baz=280,SNR=22						
F26K	**Sheenjek River**	**26.04**	**43**	P	**P**	**09 11 12.0**	**-1.5**
	baz=269,SNR=56						
Q23K	**Middleton Isla**	**26.08**	**62**	IAMs_20	IAMs_20	09 21 15.7	
	comp=Z,42µm,19.0s						
Q23K	**Middleton Isla**	**26.08**	**62**	P	**P**	**09 11 12.5**	**-1.3**
	baz=285,SNR=29						
EYAK	**Cordova Ski Ar**	**26.10**	**59**	IAmb	IAmb	09 11 37.0	
	comp=Z,348nm,1.0s						
EYAK				IAMs_20	IAMs_20	09 21 14.1	
	comp=Z,66µm,20.0s						
EYAK	**Cordova Ski Ar**	**26.10**	**59**	P	**P**	**09 11 14.9**	**+0.9**
EYAK	**Cordova Ski Ar**	**26.10**	**59**	P	**P**	**09 11 13.2**	**-0.9**
	baz=283,SNR=48						
G26K	**Porcupine Rive**	**26.19**	**45**	IAmb	IAmb	09 11 35.6	
	comp=Z,339nm,0.9s						
G26K	**Porcupine Rive**	**26.19**	**45**	P	**P**	**09 11 14.0**	**-0.8**
	baz=271,SNR=98						
C27K	**Jago River**	**26.28**	**39**	IAMs_20	IAMs_20	09 23 03.3	
	comp=Z,57µm,19.0s						
C27K	**Jago River**	**26.28**	**39**	P	**P**	**09 11 14.2**	**-1.4**
	baz=266						
MJB9	**Matsu-Tunnel**	**26.30**	**233**	P	**P**	**09 11 16.7**	**+0.6**
MAJO	**Matsushiro**	**26.30**	**233**	P	**P**	**09 11 16.5**	**+0.3**
MAJO	**Matsushiro**	**26.30**	**233**	P	**P**	**09 11 17.4**	**+1.3**
MAJO	**Matsushiro**	**26.30**	**233**	P	**P**	**09 11 17.7**	**+1.6**
MAJO	**Matsushiro**	**26.30**	**233**	⇑P	**P**	**09 11 16.4**	**+0.3**
MAT	**Matsushiro**	**26.30**	**233**	P	**P**	**09 11 16.3**	**+0.2**
MJAR	**Matsushiro Arr**	**26.30**	**233**	P	**P**	**09 11 16.6**	**+0.5**
	comp=Z,163nm,0.8s,baz=22,slow=8.8,SNR=124						
MJAR				S	**S**	**09 15 46.2**	**-1.6**
	comp=Z,1.0nm,0.5s,baz=37,slow=8.2,SNR=1.2						
MJAR				LR	LR	09 21 53.3	
	comp=Z,98µm,21.8s,baz=42,slow=37						
	comp=Z,163nm,0.8s						
SCRK	**Sand Creek**	**26.32**	**51**	IAmb	IAmb	09 11 33.3	
	comp=Z,405nm,0.8s						
SCRK	**Sand Creek**	**26.32**	**51**	P	**P**	**09 11 13.7**	**-2.5**
	baz=277,SNR=161						
DOT	**Dot Lake**	**26.33**	**52**	IAmb	IAmb	09 11 33.4	
	comp=Z,369nm,1.0s						
N25K	**Chitina, Valde**	**26.43**	**57**	P	**P**	**09 11 16.0**	**-1.2**
N25K				IAmb	IAmb	09 11 37.6	
	comp=Z,351nm,1.1s						
N25K				IAMs_20	IAMs_20	09 21 32.7	
	comp=Z,36µm,19.0s						
N25K	**Chitina, Valde**	**26.43**	**57**	P	**P**	**09 11 15.5**	**-1.6**
	baz=282,SNR=38						
JRY	**Ryogami san**	**26.44**	**231**	P	**P**	**09 11 17.9**	**+0.6**
J26L	**Joseph Creek**	**26.44**	**50**	P	**P**	**09 11 15.0**	**-2.3**
J26L	**Joseph Creek**	**26.44**	**50**	P	**P**	**09 11 15.2**	**-2.0**
	baz=276,SNR=38						
I26K	**Coal Creek Min**	**26.54**	**48**	P	**P**	**09 11 16.6**	**-1.3**
I26K				IAMs_20	IAMs_20	09 21 50.4	
	comp=Z,43µm,21.0s						
I26K	**Coal Creek Min**	**26.54**	**48**	P	**P**	**09 11 15.8**	**-2.1**
	baz=275						
BMRM	**Bremner River**	**26.56**	**58**	P	**P**	**09 11 17.8**	**-0.4**
BMRM				IAMs_20	IAMs_20	09 21 28.2	
	comp=Z,61µm,21.0s						
BMRM	**Bremner River**	**26.56**	**58**	P	**P**	**09 11 16.1**	**-2.1**
	baz=283,SNR=58						
MENT	**Mentasta**	**26.59**	**54**	IAMs_20	IAMs_20	09 21 51.8	
	comp=Z,36µm,21.0s						
RAGM	**Ragged Mountai**	**26.66**	**60**	P	**P**	**09 11 18.7**	**-0.4**
RAGM				IAMs_20	IAMs_20	09 21 41.8	
	comp=Z,62µm,20.0s						
L26K	**Log Cabin Wild**	**26.74**	**53**	P	**P**	**09 11 19.0**	**-0.9**
L26K				IAMs_20	IAMs_20	09 23 03.9	
	comp=Z,48µm,18.0s						
L26K	**Log Cabin Wild**	**26.74**	**53**	P	**P**	**09 11 17.7**	**-2.2**
	baz=280,SNR=66						
GLB	**Gilahina Butte**	**26.83**	**57**	P	**P**	**09 11 19.7**	**-1.0**
GLB				IAmb	IAmb	09 11 58.6	
	comp=Z,304nm,1.0s						
GLB				IAMs_20	IAMs_20	09 21 46.3	
	comp=Z,43µm,20.0s						
HMT	**Hamilton**	**26.87**	**60**	IAmb	IAmb	09 11 39.4	
	comp=Z,360nm,0.9s						
HMT				IAMs_20	IAMs_20	09 21 48.4	
	comp=Z,63µm,20.0s						
BOD	**Bodaibo**	**26.89**	**295**	*e*P	**P**	**09 11 22.7**	**+1.5**
BOD				pmax	pmax		
	comp=Z,913nm,1.8s						
KAIM	**Kayak Island**	**26.90**	**60**	IAMs_20	IAMs_20	09 21 57.2	
	comp=Z,41µm,20.0s						
KAIM	**Kayak Island**	**26.90**	**60**	P	**P**	**09 11 19.7**	**-1.5**
	baz=285,SNR=48						
JGN	**Niukaw**	**26.97**	**234**	P	**P**	**09 11 22.1**	**-0.1**
E27K	**Coleen River**	**27.00**	**42**	P	**P**	**09 11 20.8**	**-1.4**
	baz=271,SNR=17						
M26K	**Nabesna, AK**	**27.01**	**55**	IAmb	IAmb	09 11 44.5	
	comp=Z,407nm,1.1s						
M26K	**Nabesna, AK**	**27.01**	**55**	P	**P**	**09 11 20.8**	**-1.6**
	baz=281,SNR=93						
G27K	**Doyon Strip**	**27.03**	**45**	IAmb	IAmb	09 11 46.6	
	comp=Z,347nm,1.2s						
G27K	**Doyon Strip**	**27.03**	**45**	P	**P**	**09 11 21.1**	**-1.3**
	baz=273,SNR=52						
VRDI	**Verde Repeater**	**27.05**	**57**	P	**P**	**09 11 21.9**	**-0.9**
VRDI				IAmb	IAmb	09 11 42.5	
	comp=Z,337nm,1.2s						
VRDI				IAMs_20	IAMs_20	09 21 52.0	
	comp=Z,38µm,20.0s						
H27K	**Steamboat Moun**	**27.12**	**46**	P	**P**	**09 11 23.1**	**-0.2**
H27K				IAmb	IAmb	09 11 41.7	
	comp=Z,591nm,1.3s						
H27K	**Steamboat Moun**	**27.12**	**46**	P	**P**	**09 11 22.0**	**-1.3**
	baz=275,SNR=168						
BERG	**Berg Lake**	**27.13**	**59**	P	**P**	**09 11 22.9**	**-0.4**
BERG				IAmb	IAmb	09 11 41.9	
	comp=Z,355nm,1.1s						
BERG				IAMs_20	IAMs_20	09 21 55.3	
	comp=Z,52µm,21.0s						
I27K	**Kandik River**	**27.15**	**48**	P	**P**	**09 11 20.9**	**-2.6**
	baz=276,SNR=22						
K27K	**Chicken**	**27.15**	**51**	P	**P**	**09 11 22.0**	**-1.5**
K27K				IAmb	IAmb	09 11 47.8	
	comp=Z,402nm,1.1s						
K27K	**Chicken**	**27.15**	**51**	P	**P**	**09 11 21.5**	**-1.9**
	baz=278						
SUCK	**Suckling Hills**	**27.17**	**60**	P	**P**	**09 11 22.8**	**-0.9**
SUCK				IAmb	IAmb	09 11 41.2	
	comp=Z,278nm,1.0s						
SUCK				IAMs_20	IAMs_20	09 21 34.4	
	comp=Z,57µm,21.0s						
MCARA	**McCarthy VSAT**	**27.21**	**57**	P	**P**	**09 11 23.8**	**-0.3**
MCARA				IAmb	IAmb	09 11 50.6	
	comp=Z,433nm,1.0s						
MCARA				IAMs_20	IAMs_20	09 21 58.4	
	comp=Z,41µm,20.0s						
MCARA	**McCarthy VSAT**	**27.21**	**57**	P	**P**	**09 11 22.9**	**-1.2**
	baz=283						
D27M	**Malcolm River**	**27.23**	**40**		**P**	**09 11 23.5**	**-0.8**
D27M				IAmb	IAmb	09 11 44.1	
	comp=Z,385nm,0.8s						
D27M				IAMs_20	IAMs_20	09 23 15.6	
	comp=Z,45µm,20.0s						
D27M	**Malcolm River**	**27.23**	**40**	P	**P**	**09 11 22.8**	**-1.5**
	baz=269						
CRQM	**Cirque**	**27.31**	**58**	P	**P**	**09 11 25.0**	**-0.1**
CRQM				IAMs_20	IAMs_20	09 21 51.5	
	comp=Z,77µm,22.0s						
CRQE	**Cirque**	**27.33**	**58**	P	**P**	**09 11 23.5**	**-1.8**
	baz=284,SNR=38						
HIA	**Hailar**	**27.39**	**274**	P	**P**	**09 11 28.0**	**+2.2**
BGLC	**Bering Glacier**	**27.40**	**60**	P	**P**	**09 11 24.2**	**-1.5**
	baz=285						
CN2	**Changchun**	**27.42**	**260**	P	**P**	**09 11 23.5**	**-2.6**
CN2				sP	sP	09 11 31.5	-0.8
CN2				S	**S**	**09 16 00.5**	**-4.7**
CN2				pmax	pmax		
	comp=Z,20nm,0.6s						
CN2				pmax	pmax		
	comp=Z,1µm,10.0s						
CN2				LR	LR		
	comp=Z,81µm,14.0s						
CN2				LR	LR		
	comp=Z,75µm,14.0s						
L27K	**Beaver Creek,**	**27.42**	**53**	IAmb	IAmb	09 11 44.9	
	comp=Z,328nm,0.9s						
L27K				IAMs_20	IAMs_20	09 23 15.7	
	comp=Z,50µm,18.0s						
L27K	**Beaver Creek,**	**27.42**	**53**	P	**P**	**09 11 24.6**	**-1.4**
	baz=281,SNR=149						
BCAR	**Beaver Creek A**	**27.44**	**53**	P	**P**	**09 11 25.5**	**-0.6**
TGL	**Tana Glacier**	**27.45**	**58**	IAmb	IAmb	09 11 43.0	
	comp=Z,261nm,0.8s						
TGL				IAMs_20	IAMs_20	09 21 55.8	
	comp=Z,69µm,22.0s						
JGF	**Kuroka**	**27.47**	**233**	P	**P**	**09 11 26.5**	**-0.1**
JGF				IAmb	IAmb	09 11 50.2	
	comp=Z,506nm,1.1s						
JGF	**Kuroka**	**27.47**	**233**	P	**P**	**09 11 28.1**	**+1.5**
JGF	**Kuroka**	**27.47**	**233**	P	**P**	**09 11 27.0**	**+0.4**
JGF	**Kuroka**	**27.47**	**233**	⇑P	**P**	**09 11 27.0**	**+0.4**
WAX	**Waxell Ridge**	**27.52**	**59**	P	**P**	**09 11 26.4**	**-0.5**
WAX				IAmb	IAmb	09 11 43.7	
	comp=Z,320nm,0.9s						
WAX				IAMs_20	IAMs_20	09 22 09.6	
	comp=Z,68µm,21.0s						
M27K	**Edge Creek, AK**	**27.53**	**55**	P	**P**	**09 11 26.8**	**-0.3**
M27K				IAmb	IAmb	09 11 46.4	
	comp=Z,418nm,0.9s						
M27K	**Edge Creek, AK**	**27.53**	**55**	P	**P**	**09 11 25.9**	**-1.2**
	baz=282,SNR=133						
F28M	**Old Crow**	**27.68**	**43**	P	**P**	**09 11 27.5**	**-0.7**
F28M	**Old Crow**	**27.68**	**43**	P	**P**	**09 11 27.1**	**-1.1**
	baz=273,SNR=56						
ISLE	**Juniper Island**	**27.73**	**58**	IAMs_20	IAMs_20	09 22 15.0	
	comp=Z,58µm,21.0s						
E28M	**Babbage River**	**27.76**	**41**	P	**P**	**09 11 27.6**	**-1.3**
	baz=272,SNR=21						
INU	**Inuyama**	**27.83**	**233**	P	**P**	**09 11 31.3**	**+1.5**
INU	**Inuyama**	**27.83**	**233**	⇑P	**P**	**09 11 29.6**	**-0.2**
I28M	**Miner Creek**	**27.86**	**48**	IAmb	IAmb	09 11 55.4	
	comp=Z,569nm,1.6s						
I28M				IAMs_20	IAMs_20	09 22 52.2	
	comp=Z,50µm,21.0s						
I28M	**Miner Creek**	**27.86**	**48**	P	**P**	**09 11 28.1**	**-1.9**
	baz=278,SNR=92						
JSG	**Sagara**	**27.88**	**231**	IAMs_20	IAMs_20	09 21 41.7	
	comp=Z,44µm,22.0s						
BARN	**Barnard Glacie**	**27.93**	**57**	IAmb	IAmb	09 11 51.4	
	comp=Z,233nm,0.8s						
GRNC	**Granite Creek**	**27.97**	**58**	P	**P**	**09 11 30.4**	**-0.7**
GRNC				IAmb	IAmb	09 11 58.4	
	comp=Z,300nm,0.9s						
GRNC				IAMs_20	IAMs_20	09 22 12.4	
	comp=Z,53µm,22.0s						
BVCY	**Beaver Creek**	**27.98**	**54**	P	**P**	**09 11 29.5**	**-1.5**
	baz=282,SNR=53						
MESA	**MESA**	**28.02**	**59**	P	**P**	**09 11 31.9**	**+0.4**
MESA				IAMs_20	IAMs_20	09 22 36.9	
	comp=Z,69µm,21.0s						
MESA	**MESA**	**28.02**	**59**	P	**P**	**09 11 29.8**	**-1.8**
	baz=286						
D28M	**Stokes Point**	**28.03**	**39**	P	**P**	**09 11 29.2**	**-2.1**
	baz=271						
YAH	**Yahtse**	**28.07**	**59**	IAMs_20	IAMs_20	09 22 27.3	
	comp=Z,73µm,22.0s						
CTG	**Chitna Glacier**	**28.11**	**57**	P	**P**	**09 11 30.7**	**-1.5**
	baz=285						
CTGM	**Chitina Glacie**	**28.11**	**57**	P	**P**	**09 11 31.7**	**-0.6**
CTGM				IAmb	IAmb	09 11 55.0	
	comp=Z,279nm,1.0s						
CTGM				IAMs_20	IAMs_20	09 22 17.0	
	comp=Z,52µm,22.0s						
LOGN	**Logan Glacier**	**28.30**	**58**	IAmb	IAmb	09 11 54.6	
	comp=Z,274nm,1.1s						
LOGN				IAMs_20	IAMs_20	09 22 33.2	
	comp=Z,46µm,22.0s						
DAWY	**Dawson**	**28.31**	**51**	IAmb	IAmb	09 11 56.3	
	comp=Z,340nm,1.1s						
DAWY	**Dawson**	**28.31**	**51**	P	**P**	**09 11 32.6**	**-1.2**
	baz=280,SNR=42						
YUK3	**Moose Creek**	**28.32**	**56**	P	**P**	**09 11 31.8**	**-2.4**
	baz=284,SNR=46						
TABL	**Table Mountain**	**28.34**	**58**	IAmb	IAmb	09 11 55.7	
	comp=Z,294nm,1.0s						
TABL				IAMs_20	IAMs_20	09 22 36.2	
	comp=Z,62µm,22.0s						
E29M	**Blow River**	**28.37**	**41**	P	**P**	**09 11 32.7**	**-1.6**
	baz=274,SNR=25						
H29M	**Whitestone**	**28.40**	**46**	P	**P**	**09 11 34.1**	**-0.6**
H29M				IAMs_20	IAMs_20	09 23 51.4	
	comp=Z,32µm,20.0s						
H29M	**Whitestone**	**28.40**	**46**	P	**P**	**09 11 33.1**	**-1.5**
	baz=277,SNR=90						
G29M	**Pine Creek**	**28.45**	**44**	P	**P**	**09 11 34.8**	**-0.3**
G29M				IAmb	IAmb	09 11 53.1	
	comp=Z,509nm,1.2s						
G29M	**Pine Creek**	**28.45**	**44**	P	**P**	**09 11 33.9**	**-1.2**
	baz=276,SNR=81						
I29M	**Ogilvie Camp,**	**28.55**	**48**	IAMs_20	IAMs_20	09 23 13.5	
	comp=Z,42µm,21.0s						
I29M	**Ogilvie Camp,**	**28.55**	**48**	P	**P**	**09 11 33.8**	**-2.1**
	baz=279						
JHJ2	**Mitsune**	**28.55**	**226**	P	**P**	**09 11 38.6**	**+2.4**
JHJ2	**Mitsune**	**28.55**	**226**	⇑P	**P**	**09 11 40.0**	**+3.8**
O28M	**Mount Upton**	**28.70**	**58**	P	**P**	**09 11 37.0**	**-0.7**
O28M				IAmb	IAmb	09 11 56.6	
	comp=Z,187nm,0.8s						
O28M				IAMs_20	IAMs_20	09 22 46.7	
	comp=Z,35µm,22.0s						
O28M	**Mount Upton**	**28.70**	**58**	P	**P**	**09 11 35.6**	**-2.0**
	baz=286,SNR=64						
J29N	**Klondike Camp**	**28.74**	**50**	P	**P**	**09 11 36.0**	**-1.7**
	baz=281						
YUK8	**Steele Glacier**	**28.76**	**56**	P	**P**	**09 11 36.3**	**-1.9**
	baz=285,SNR=20						
PCA	**Pinnacle**	**28.86**	**59**	IAmb	IAmb	09 12 00.2	
	comp=Z,340nm,1.0s						
PCA				IAMs_20	IAMs_20	09 23 13.1	
	comp=Z,54µm,20.0s						
PINM	**Pinnacle**	**28.86**	**59**	P	**P**	**09 11 37.3**	**-1.6**
	baz=287,SNR=43						
HHU	**Hamhung**	**28.95**	**252**	P	**P**	**09 11 35.5**	**-4.2**
EPYK	**Eagle Plains**	**29.04**	**45**	IAmb	IAmb	09 12 07.1	
	comp=Z,564nm,1.4s						
EPYK	**Eagle Plains**	**29.04**	**45**	P	**P**	**09 11 39.0**	**-1.4**
	baz=278,SNR=56						
L29M	**L29M**	**29.06**	**52**	IAMs_20	IAMs_20	09 24 17.0	
	comp=Z,31µm,19.0s						
L29M	**L29M**	**29.06**	**52**	P	**P**	**09 11 39.3**	**-1.2**
	baz=283,SNR=126						
M29M	**Somme Creek**	**29.07**	**54**	IAmb	IAmb	09 11 59.4	
	comp=Z,185nm,0.8s						
M29M				IAMs_20	IAMs_20	09 24 18.2	
	comp=Z,31µm,18.0s						
M29M	**Somme Creek**	**29.07**	**54**	P	**P**	**09 11 39.3**	**-1.4**
	baz=284,SNR=117						
G30M	**tAoh Zraii Nji**	**29.15**	**44**	P	**P**	**09 11 39.9**	**-1.4**
G30M				IAmb	IAmb	09 11 58.5	
	comp=Z,510nm,1.6s						
G30M	**tAoh Zraii Nji**	**29.15**	**44**	P	**P**	**09 11 40.1**	**-1.3**
	baz=278,SNR=29						
K29M	**Barlow Dome**	**29.16**	**51**	P	**P**	**09 11 40.4**	**-1.2**
K29M	**Barlow Dome**	**29.16**	**51**	P	**P**	**09 11 40.8**	**-0.8**
	baz=282,SNR=43						
BCPM	**Bancas Point**	**29.20**	**59**	P	**P**	**09 11 41.0**	**-0.8**
BCPM				IAmb	IAmb	09 12 00.6	
	comp=Z,426nm,1.0s						
BCPM				IAMs_20	IAMs_20	09 23 24.0	
	comp=Z,54µm,21.0s						
F30M	**Barrier River**	**29.24**	**43**	P	**P**	**09 11 42.0**	**0.0**
F30M				IAmb	IAmb	09 12 02.1	
	comp=Z,367nm,1.0s						
F30M	**Barrier River**	**29.24**	**43**	P	**P**	**09 11 41.0**	**-1.0**
	baz=277,SNR=49						
YUK4	**Talbot Arm**	**29.27**	**56**	P	**P**	**09 11 41.6**	**-1.0**
	baz=286,SNR=42						
I30M	**Mount Dempster**	**29.37**	**48**	IAMs_20	IAMs_20	09 23 50.1	
	comp=Z,43µm,21.0s						
I30M	**Mount Dempster**	**29.37**	**48**	P	**P**	**09 11 41.7**	**-1.7**
	baz=281,SNR=138						
PNL	**Peninsula**	**29.40**	**59**	P	**P**	**09 11 44.5**	**+0.9**
PNL	**Peninsula**	**29.40**	**59**	P	**P**	**09 11 42.7**	**-1.0**
	baz=288,SNR=38						
CIT	**Chita**	**29.43**	**284**	*e*P	**P**	**09 11 41.0**	**-3.0**
CIT				*e*		09 12 46.8	
CIT				*e*		09 12 57.4	
CIT				pmax	pmax		
	comp=Z,491nm,2.5s						
JAD	**Aida**	**29.47**	**237**	P	**P**	**09 11 44.4**	**0.0**
YUK6	**Outpost Mounta**	**29.51**	**57**	P	**P**	**09 11 43.0**	**-1.8**
	baz=287,SNR=29						
J30M	**Hart River**	**29.52**	**49**	IAMs_20	IAMs_20	09 23 33.0	
	comp=Z,34µm,22.0s						
J30M	**Hart River**	**29.52**	**49**	P	**P**	**09 11 43.0**	**-1.7**
	baz=282,SNR=17						
O29M	**Mount Kennedy**	**29.60**	**58**	IAMs_20	IAMs_20	09 23 27.6	
	comp=Z,56µm,22.0s						
O29M	**Mount Kennedy**	**29.60**	**58**	P	**P**	**09 11 44.3**	**-1.2**
	baz=288,SNR=21						
SNY	**Shenyang**	**29.76**	**259**	⇓P	**P**	**09 11 47.3**	**+0.4**
SNY				S	**S**	**09 16 46.5**	**+4.5**
SNY				pmax	pmax		
	comp=Z,730nm,7.1s						
SNY				LR	LR		
	comp=Z,90µm,15.3s						
SNY				LR	LR		
	comp=Z,79µm,14.9s						
SNY				LR	LR		
	comp=Z,26µm,18.8s						
G31M	**Satah River**	**29.92**	**44**	IAmb	IAmb	09 12 47.8	
	comp=Z,716nm,1.8s						
G31M	**Satah River**	**29.92**	**44**	P	**P**	**09 11 46.1**	**-1.9**
	baz=279,SNR=18						
MAYO	**Mayo, Yukon**	**29.92**	**51**	IAmb	IAmb	09 12 06.2	
	comp=Z,179nm,0.8s						
MAYO	**Mayo, Yukon**	**29.92**	**51**	P	**P**	**09 11 46.6**	**-1.6**
	baz=284						
HYT	**Haines Junctio**	**29.95**	**57**	P	**P**	**09 11 48.2**	**-0.4**
HYT				IAmb	IAmb	09 12 07.6	
	comp=Z,294nm,0.9s						
HYT				IAMs_20	IAMs_20	09 23 37.6	
	comp=Z,30µm,20.0s						
HYT	**Haines Junctio**	**29.95**	**57**	P	**P**	**09 11 47.3**	**-1.2**
	baz=288,SNR=53						
N30M	**Aishikik Lake**	**29.95**	**55**	P	**P**	**09 11 48.3**	**-0.2**
N30M				IAMs_20	IAMs_20	09 24 40.8	
	comp=Z,32µm,19.0s						
N30M	**Aishikik Lake**	**29.95**	**55**	P	**P**	**09 11 47.4**	**-1.2**
	baz=287,SNR=20						
INK	**Inuvik**	**29.99**	**41**	P	**P**	**09 11 47.8**	**-0.9**
INK				IAmb	IAmb	09 12 11.7	
	comp=Z,371nm,0.9s						
INK	**Inuvik**	**29.99**	**41**	P	**P**	**09 11 47.8**	**-0.9**
INK				pmax	pmax		
	comp=Z,371nm,1.0s						
INK				MLR	MLR		
	comp=Z,24µm,22.0s						
INK	**Inuvik**	**29.99**	**41**	P	**P**	**09 11 47.2**	**-1.4**
	baz=278,SNR=46						
F31M	**Tsiigehtchic**	**30.04**	**43**	P	**P**	**09 11 48.5**	**-0.6**
F31M				IAMs_20	IAMs_20	09 25 30.6	
	comp=Z,26µm,19.0s						
F31M	**Tsiigehtchic**	**30.04**	**43**	P	**P**	**09 11 47.4**	**-1.7**
	baz=279,SNR=13						
H31M	**Peel River**	**30.09**	**46**	IAMs_20	IAMs_20	09 25 39.1	
	comp=Z,30µm,18.0s						
H31M	**Peel River**	**30.09**	**46**	P	**P**	**09 11 48.3**	**-1.4**
	baz=281,SNR=29						
P29M	**Windy Craggy**	**30.21**	**59**	IAmb	IAmb	09 12 09.6	
	comp=Z,173nm,0.8s						
P29M				IAMs_20	IAMs_20	09 23 54.8	
	comp=Z,44µm,21.0s						
P29M	**Windy Craggy**	**30.21**	**59**	P	**P**	**09 11 49.6**	**-1.2**
	baz=289,SNR=31						
P30M	**Million Dollar**	**30.42**	**58**	P	**P**	**09 11 51.9**	**-0.8**
	baz=289						
SUJ	**Sinuiju**	**30.45**	**255**	P	**P**	**09 11 49.1**	**-3.9**
SUJ				S	**S**	**09 16 48.8**	**-4.2**
SUJ				AmB			
	comp=Z,279nm,1.1s						
SUJ				AMS	AMS		
	comp=Z,60µm,20.5s						
N31M	**Braeburn, Yuko**	**30.55**	**55**	IAMs_20	IAMs_20	09 25 08.4	
	comp=Z,41µm,18.0s						
N31M	**Braeburn, Yuko**	**30.55**	**55**	P	**P**	**09 11 53.2**	**-0.6**
	baz=288,SNR=26						
KS19	**Wonju Array Si**	**30.57**	**248**	P	**P**	**09 11 53.0**	**-1.1**
KSRS	**Korea Array**	**30.58**	**248**	P	**P**	**09 11 52.7**	**-1.4**
	comp=Z,15nm,0.5s,baz=40,slow=8.6,SNR=46						
KSRS				LR	LR	09 24 20.7	
	comp=Z,26433µm,18.8s,baz=45,slow=37						
	comp=Z,15nm,0.5s						
JMN	**Monobe**	**30.61**	**236**	P	**P**	**09 11 54.9**	**+0.4**
JMN				IAmb	IAmb	09 12 07.9	
	comp=Z,443nm,1.3s						
JMN				IAMs_20	IAMs_20	09 24 25.7	
	comp=Z,63µm,21.0s						
JMN	**Monobe**	**30.61**	**236**	P	**P**	**09 11 56.1**	**+1.6**
JMN	**Monobe**	**30.61**	**236**	⇑P	**P**	**09 11 55.2**	**+0.7**
KSAR	**Wonju Array Be**	**30.61**	**248**	P	**P**	**09 11 52.9**	**-1.5**
KSAR	**Wonju Array Be**	**30.61**	**248**	P	**P**	**09 11 52.9**	**-1.5**
O30N	**Mendenhall**	**30.62**	**56**	P	**P**	**09 11 54.3**	**-0.1**
	baz=288,SNR=47						
PLBC	**Pleasant Camp**	**30.93**	**59**	P	**P**	**09 11 56.8**	**-0.3**
	baz=290,SNR=14						
M31M	**Drury Creek, Y**	**30.96**	**53**	P	**P**	**09 11 57.1**	**-0.3**
M31M				IAmb	IAmb	09 12 16.4	
	comp=Z,227nm,0.8s						
M31M				IAMs_20	IAMs_20	09 25 42.5	
	comp=Z,38µm,18.0s						
M31M	**Drury Creek, Y**	**30.96**	**53**	P	**P**	**09 11 56.4**	**-0.9**
	baz=287						
WHY	**Whitehorse**	**31.22**	**56**	P	**P**	**09 11 59.7**	**-0.1**
WHY				IAMs_20	IAMs_20	09 25 47.3	
	comp=Z,53µm,18.0s						
WHY	**Whitehorse**	**31.22**	**56**	P	**P**	**09 11 59.2**	**-0.6**
	baz=289,SNR=97						
INCN	**Inchon**	**31.23**	**249**	IAMs_20	IAMs_20	09 26 38.9	
	comp=Z,38µm,21.0s						
INCN	**Inchon**	**31.23**	**249**	P	**P**	**09 11 57.5**	**-2.4**
INCN				P	**P**	**09 11 57.5**	**-2.4**
INCN				S	**S**	**09 17 01.5**	**-3.7**
INCN				S	**S**	**09 17 01.5**	**-3.7**
HJU	**Haeju**	**31.29**	**251**	P	**P**	**09 11 56.0**	**-4.4**
HJU				S	**S**	**09 17 01.7**	**-4.3**
HJU				AmB			
	comp=Z,1µm,3.6s						
HJU				AMS	AMS		
	comp=Z,66µm,13.7s						
FARO	**Faro, Yukon**	**31.42**	**53**	P	**P**	**09 12 01.3**	**-0.1**
FARO				IAMs_20	IAMs_20	09 25 49.4	
	comp=Z,34µm,19.0s						
FARO	**Faro, Yukon**	**31.42**	**53**	P	**P**	**09 12 00.7**	**-0.7**
	baz=288,SNR=77						
SKAG	**Skagway**	**31.43**	**58**	P	**P**	**09 12 01.2**	**-0.2**
SKAG				IAmb	IAmb	09 12 23.2	
	comp=Z,243nm,1.2s						
SKAG				IAMs_20	IAMs_20	09 24 44.8	
	comp=Z,51µm,20.0s						
SKAG	**Skagway**	**31.43**	**58**	P	**P**	**09 12 02.6**	**+1.2**
SKAG	**Skagway**	**31.43**	**58**	P	**P**	**09 12 00.9**	**-0.5**
	baz=291,SNR=37						
SKAG	**Skagway**	**31.43**	**58**	⇑P	**P**	**09 12 02.0**	**+0.6**
S31K	**Pelican**	**31.55**	**61**	P	**P**	**09 12 01.8**	**-0.6**
S31K	**Pelican**	**31.55**	**61**	P	**P**	**09 12 01.9**	**-0.6**
	baz=293						
R31K	**City Hall, Gus**	**31.61**	**60**	P	**P**	**09 12 02.5**	**-0.6**
	baz=292						
TJN	**Taejon**	**31.69**	**247**	IAmb	IAmb	09 13 06.6	
	comp=Z,366nm,1.3s						
TJN	**Taejon**	**31.69**	**247**	*ce*P	**P**	**09 12 02.9**	**-1.0**
N32M	**Quiet Lake**	**31.89**	**55**	IAMs_20	IAMs_20	09 26 07.0	
	comp=Z,36µm,18.0s						
N32M	**Quiet Lake**	**31.89**	**55**	P	**P**	**09 12 04.9**	**-0.7**
	baz=290						
JTU	**Tsushima**	**32.11**	**242**	P	**P**	**09 12 09.4**	**+1.7**
P32M	**Atlin**	**32.14**	**58**	P	**P**	**09 12 07.4**	**-0.4**
	baz=292,SNR=29						
MMPY	**Sheldon Lake,**	**32.22**	**52**	IAmb	IAmb	09 12 26.5	
	comp=Z,145nm,0.9s						

MMPY	Sheldon Lake,	32.22	52	P	P	09 12 07.6	-0.8
	baz=289,SNR=112						
R32K	Eaglecrest	32.26	60	IAmb	IAmb	09 12 28.3	
	comp=Z,243nm,0.8s						
R32K	Eaglecrest	32.26	60	P	P	09 12 08.7	-0.1
	baz=293,SNR=46						
A36M	Sachs Harbour	32.27	33	P	P	09 12 07.5	-1.2
A36M				IAmb	IAmb	09 12 28.4	
	comp=Z,230nm,0.8s						
A36M	Sachs Harbour	32.27	33	P	P	09 12 07.5	-1.2
	baz=279						
JIS	Juneau Island	32.33	60	P	P	09 12 11.4	+2.1
P33M	Teslin, Yukon	32.34	56	P	P	09 12 09.1	-0.5
	baz=291,SNR=58						
SIT	Sitka	32.36	63	P	P	09 12 11.6	+2.0
SIT	Sitka	32.36	63	P	P	09 12 09.9	+0.3
	baz=295,SNR=37						
JNU	Nakatsue	32.52	239	IAMs_20	IAMs_20	09 24 32.2	
	comp=Z,49µm,22.0s						
JNU	Nakatsue	32.52	239	LR	LR	09 26 31.9	
	comp=Z,36µm,19.0s,baz=41,slow=38						
JNU	Nakatsue	32.52	239	P	P	09 12 12.6	+1.2
JNU	Nakatsue	32.52	239	⇑P	P	09 12 11.9	+0.5
S32K	Killisnoo	32.56	62	P	P	09 12 10.5	-0.8
S32K				IAmb	IAmb	09 12 29.3	
	comp=Z,372nm,1.1s						
S32K	Killisnoo	32.56	62	P	P	09 12 11.5	+0.2
	baz=294,SNR=23						
XLT	XiLinHaoTe	32.57	269	*e*P	P	09 12 10.5	-1.2
XLT				sP	pwP	09 12 20.5	-0.5
XLT				S	S	09 17 26.5	+0.4
XLT				pmax	pmax		
	comp=Z,38nm,0.7s						
XLT				pmax	pmax		
	comp=Z,1µm,11.0s						
XLT				LR	LR		
	comp=Z,142µm,17.1s						
XLT				LR	LR		
	comp=Z,79µm,13.5s						
DL2	Dalian	32.86	257	P	P	09 12 12.8	-1.4
DL2				PP	PnPn	09 13 19.5	-3.4
DL2				S	S	09 17 29.5	-1.1
DL2				pmax	pmax		
	comp=Z,130nm,0.7s						
DL2				pmax	pmax		
	comp=Z,1µm,9.0s						
DL2				LR	LR		
	comp=Z,104µm,15.7s						
DL2				LR	LR		
	comp=Z,96µm,14.9s						
DL2				LR	LR		
	comp=Z,84µm,13.1s						
JCJ	Chichijima	33.07	218	P	P	09 12 17.6	+1.5
JCJ	Chichijima	33.07	218	⇑P	P	09 12 17.7	+1.6
Q32M	Nakina River	33.07	58	IAmb	IAmb	09 12 36.2	
	comp=Z,150nm,0.8s						
Q32M	Nakina River	33.07	58	P	P	09 12 15.8	-0.3
	baz=293,SNR=70						
R33M	Jennings River	33.51	57	IAmb	IAmb	09 12 39.9	
	comp=Z,182nm,0.8s						
R33M				IAMs_20	IAMs_20	09 26 19.0	
	comp=Z,39µm,20.0s						
R33M	Jennings River	33.51	57	P	P	09 12 19.9	0.0
	baz=294,SNR=58						
T33K	Petersburg	33.64	62	P	P	09 12 20.7	-0.1
	baz=296						
U33K	Whale Pass	33.87	63	IAmb	IAmb	09 12 41.2	
	comp=Z,273nm,1.1s						
U33K	Whale Pass	33.87	63	P	P	09 12 22.9	+0.1
	baz=297,SNR=17						
TGTN	Hyland Airport	33.92	53	P	P	09 12 23.3	0.0
	baz=292,SNR=17						
S34M	Telegraph Cree	34.05	60	IAmb	IAmb	09 12 44.4	
	comp=Z,145nm,0.8s						
S34M				IAMs_20	IAMs_20	09 26 30.3	
	comp=Z,24µm,22.0s						
S34M	Telegraph Cree	34.05	60	P	P	09 12 24.8	+0.4
	baz=295,SNR=39						
WRAK	Wrangell Islan	34.11	62	P	P	09 12 24.7	-0.2
WRAK				IAmb	IAmb	09 12 43.4	
	comp=Z,276nm,0.9s						
WRAK				IAMs_20	IAMs_20	09 25 39.1	
	comp=Z,28µm,21.0s						
WRAK	Wrangell Islan	34.11	62	P	P	09 12 25.4	+0.5
	baz=297,SNR=26						
WRAK	Wrangell Islan	34.11	62	⇑P	P	09 12 26.8	+1.9
CRAG	Craig	34.16	64	P	P	09 12 24.7	-0.6
CRAG				IAmb	IAmb	09 12 43.9	
	comp=Z,220nm,1.0s						
CRAG				IAMs_20	IAMs_20	09 25 42.4	
	comp=Z,27µm,21.0s						
CRAG	Craig	34.16	64	P	P	09 12 27.6	+2.3
CRAG	Craig	34.16	64	P	P	09 12 25.9	+0.6
	baz=298,SNR=15						
CRAG	Craig	34.16	64	⇑P	P	09 12 27.2	+1.9
WTLY	Watson Lake, Y	34.23	55	P	P	09 12 25.8	-0.2
WTLY	Watson Lake, Y	34.23	55	P	P	09 12 25.2	-0.8
	baz=294,SNR=54						
DLBC	Dease Lake	34.35	58	LR	LR	09 26 35.4	
	comp=Z,5µm,21.3s,baz=291,slow=37						
T35M	Bob Quinn	34.89	61	IAmb	IAmb	09 12 50.9	
	comp=Z,232nm,0.9s						
T35M	Bob Quinn	34.89	61	P	P	09 12 30.8	-0.9
	baz=297,SNR=80						
V35K	Ketchikan	34.99	64	IAmb	IAmb	09 12 50.6	
	comp=Z,203nm,1.0s						
V35K				IAMs_20	IAMs_20	09 26 18.2	
	comp=Z,25µm,21.0s						
V35K	Ketchikan	34.99	64	P	P	09 12 32.9	+0.4
	baz=299,SNR=22						
BJI	Beijing	35.07	263	P	P	09 12 33.5	+0.1
BJI				S	S	09 18 08.0	+3.3
BJI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BJI				pmax	pmax		
	comp=Z,470nm,10.6s						
BJI				LR	LR		
	comp=Z,95µm,15.3s						
BJI				LR	LR		
	comp=Z,80µm,15.6s						
BJI				LR	LR		
	comp=Z,34µm,15.0s						
BJT	Baijiatuau	35.09	263	IAMs_20	IAMs_20	09 28 04.0	
	comp=Z,30µm,20.0s						
BJT	Baijiatuau	35.09	263	P	P	09 12 36.3	+2.8
ULN	Ulaanbaatar	35.20	281	P	P	09 12 34.5	-0.1
ULN	Ulaanbaatar	35.20	281	IAMs_20	IAMs_20	09 28 40.3	
	comp=Z,37µm,20.0s						
ULN	Ulaanbaatar	35.20	281	P	P	09 12 32.3	-2.3
ULN				P	P	09 12 32.3	-2.3
ULN				P	P	09 12 32.3	-2.3
ULN				S	S	09 18 02.8	-4.1
ULN				S	S	09 18 02.8	-4.1
ULN				S	S	09 18 02.8	-4.1
ULN	Ulaanbaatar	35.20	281	*c i*P	P	09 12 34.6	0.0
ULN				pmax	pmax		
	comp=Z,86nm,1.7s						
ULN				MLR	MLR		
	comp=Z,54µm,16.0s						
ULN	Ulaanbaatar	35.20	281	⇑P	P	09 12 33.8	-0.8
WRGLY	Wrigley	35.34	48	P	P	09 12 35.2	-0.3
WRGLY				IAmb	IAmb	09 13 04.4	
	comp=Z,210nm,0.8s						
WRGLY				IAMs_20	IAMs_20	09 27 38.0	
	comp=Z,35µm,19.0s						
WRGLY	Wrigley	35.34	48	P	P	09 12 35.0	-0.5
	baz=293,SNR=19						
U35K	Hyder	35.50	62	IAMs_20	IAMs_20	09 28 07.7	
	comp=Z,28µm,20.0s						
U35K	Hyder	35.50	62	P	P	09 12 36.7	-0.2
	baz=299						
SONM	Songino Array	35.57	281	P	P	09 12 36.5	-1.3
SONM	Songino Array	35.57	281	P	P	09 12 37.6	-0.2
	comp=Z,18nm,0.5s,baz=58,slow=8.3,SNR=36						
SONM				PcP	PcP	09 15 05.3	-1.0
	comp=Z,11nm,1.0s,baz=93,slow=1.6,SNR=1.9						
SONM				S	S	09 18 08.8	-3.9
	comp=Z,2.0nm,1.0s,baz=73,slow=11,SNR=2.7						
SONM				LR	LR	09 28 45.1	
	comp=Z,36µm,18.3s,baz=55,slow=39						
	comp=Z,18nm,0.5s						
DIB	Dawson Inlet,	35.60	67	IAmb	IAmb	09 12 55.7	
	comp=Z,230nm,0.9s						
LIRD	Liard River Hi	35.77	55	P	P	09 12 39.1	-0.1
	baz=296,SNR=17						
ZAK	Zakamensk	35.82	287	*e*P	P	09 12 38.9	-1.0
ZAK				pmax	pmax		
	comp=Z,69nm,1.2s						
MOBC	Moresby Island	35.89	67	P	P	09 12 40.0	-0.4
MOBC				IAmb	IAmb	09 12 58.3	
	comp=Z,385nm,1.2s						
BEAVL	Fort Liard	35.90	54	P	P	09 12 40.0	-0.3
	baz=296,SNR=26						
RUBB	Prince Rupert	36.17	65	P	P	09 12 42.7	+0.1
MOY	Mondy	36.34	290	*e*P	P	09 12 44.9	+0.6
MOY				pmax	pmax		
	comp=Z,192nm,2.7s						
KOTAN	Kotaneelee Air	36.38	53	P	P	09 12 44.2	-0.2
	baz=296,SNR=14						
H11N2	WAKE ISLAND Hy	36.42	176	T	T	09 51 37.3	
	baz=359,slow=74						
TOAD	Toad River Com	36.42	56	P	P	09 12 44.1	-0.7
	baz=297,SNR=194						
H11N3	WAKE ISLAND Hy	36.43	176	T	T	09 51 40.7	
	baz=359						
H11N1	WAKE ISLAND Hy	36.43	176	T	T	09 51 38.2	
	baz=359,slow=74						
HG4B	Hotspring	36.74	68	P	P	09 12 46.9	-0.6
HG4B				IAmb	IAmb	09 13 05.3	
	comp=Z,193nm,0.9s						
HHC	Hu-ho-hao-te	37.09	268	⇓*i*P	P	09 12 51.5	+0.7
HHC				sP	pwP	09 12 59.0	-1.1
HHC				PP	PP	09 14 22.5	+7.2
HHC				S	S	09 18 38.0	+2.1
HHC				sS	ScP	09 18 51.5	-5.2
HHC				SS	SnSn	09 21 07.8	-2.2
HHC				pmax	pmax		
	comp=Z,23nm,1.4s						
HHC				pmax	pmax		
	comp=Z,950nm,5.0s						
HHC				LR	LR		
	comp=Z,50µm,19.3s						
TIA	Tai'an	37.27	258	P	P	09 12 50.5	-1.8
TIA				sP	pP	09 12 56.8	-0.2
TIA				PP	PnPn	09 14 22.8	+5.0
TIA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
TIA				pmax	pmax		
	comp=Z,1µm,11.4s						
TIA				LR	LR		
	comp=Z,82µm,16.5s						
TIA				LR	LR		
	comp=Z,79µm,16.3s						
TIA				LR	LR		
	comp=Z,81µm,14.5s						
H11S1	WAKE ISLAND Hy	37.62	176	T	T	09 53 14.7	
	baz=359,slow=76,SNR=4096						
H11S3	WAKE ISLAND Hy	37.64	176	T	T	09 53 11.6	
	baz=359,slow=76,SNR=2046						
H11S2	WAKE ISLAND Hy	37.64	176	T	T	09 53 07.9	
	baz=359,slow=76,SNR=5427						
HNS	HongShan	37.74	262	⇑P	P	09 12 54.0	-2.2
HNS				PP	PnPn	09 14 27.5	+4.1
HNS				S	S	09 18 48.0	+2.5
HNS				SS	SS	09 21 24.5	-6.6
HNS				pmax	pmax		
	comp=Z,16nm,1.1s						
HNS				pmax	pmax		
	comp=Z,1µm,11.0s						
HNS				LR	LR		
	comp=Z,79µm,16.1s						
BTO	Baotou	38.12	269	*e*P	P	09 13 01.0	+1.5
BTO				pP	sP	09 13 07.0	+1.2
BTO				sP	pwP	09 13 09.8	+0.9
BTO				S	S	09 18 55.0	+3.5
BTO				SS	SnSn	09 21 26.8	-8.0
BTO				pmax	pmax		
	comp=Z,61nm,0.6s						
BTO				pmax	pmax		
	comp=Z,2µm,4.7s						
BTO				LR	LR		
	comp=Z,60µm,14.5s						
KRAR	Krasnoyarsk	38.15	301	⇓*e*P	P	09 12 59.3	-0.1
EUNU	Eureka	38.39	15	P	P	09 13 00.9	-0.4
EUNU				IAmb	IAmb	09 13 31.7	
	comp=Z,392nm,1.4s						
EUNU	Eureka	38.39	15	⇑P	P	09 13 01.2	-0.1
BBB	Bella Bella	38.39	67	P	P	09 13 00.5	-1.0
BBB				IAmb	IAmb	09 13 19.6	
	comp=Z,234nm,0.9s						
BBB	Bella Bella	38.39	67	LR	LR	09 27 49.9	
	comp=Z,10µm,21.9s,baz=302,slow=35						
BBB	Bella Bella	38.39	67	⇑P	P	09 13 03.1	+1.6
JMZ	Minamidaito 2	38.54	232	P	P	09 13 04.5	+1.5
TIY	Taiyuan	38.78	264	*e*P	P	09 13 03.8	-1.3
TIY				PP	PP	09 14 41.3	+7.5
TIY				S	S	09 19 04.5	+3.1
TIY				pmax	pmax		
	comp=Z,910nm,10.3s						
TIY				LR	LR		
	comp=Z,93µm,14.4s						
TIY				LR	LR		
	comp=Z,37µm,16.5s						
JOW	Kunigami	39.01	236	P	P	09 13 06.4	-0.5
JOW	Kunigami	39.01	236	S	S	09 19 04.2	-0.6
	comp=Z,21nm,1.0s,baz=38,slow=22,SNR=2.1						
JOW	Kunigami	39.01	236	P	P	09 13 07.6	+0.7
JOW	Kunigami	39.01	236	⇑P	P	09 13 07.0	+0.1
SSE	Sheshan	39.01	248	P	P	09 13 05.3	-1.6
SSE				sP	pP	09 13 10.8	-0.9
SSE				pmax	pmax		
	comp=Z,9.0nm,0.5s						
SSE				pmax	pmax		
	comp=Z,640nm,8.0s						
SSE				LR	LR		
	comp=Z,7µm,12.9s						
HOLB	Holberg	39.25	69	IAmb	IAmb	09 13 26.9	
	comp=Z,326nm,0.8s						
YKAW3	Yellowknife Wh	39.28	46	P	P	09 13 08.0	-0.8
YKAW3				IAmb	IAmb	09 13 27.7	
	comp=Z,93nm,0.9s						
YKA	Yellowknife Ar	39.31	46	P	P	09 13 08.2	-0.9
	comp=Z,25nm,0.7s,baz=291,slow=14,SNR=117						
YKA				LR	LR	09 30 48.9	
	comp=Z,27µm,19.8s,baz=290,slow=38						
YKA				PKPPKP		09 45 38.1	
	comp=Z,0.5nm,0.9s,baz=162,slow=1.2,SNR=5.0						
	comp=Z,25nm,0.7s						
YKAW1	Yellowknife Wh	39.37	46	P	P	09 13 08.9	-0.7
YKAW1				IAmb	IAmb	09 13 29.0	
	comp=Z,105nm,1.1s						
NJ2	Nanjing	39.49	252	⇑P	P	09 13 09.5	-1.4
NJ2				pP	pP	09 13 14.0	-1.7
NJ2				PP	PP	09 14 47.0	+5.5
NJ2				S	S	09 19 10.3	-1.7
NJ2				pmax	pmax		
	comp=Z,36nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,730nm,7.3s						
NJ2				LR	LR		
	comp=Z,55µm,14.5s						
NJ2				LR	LR		
	comp=Z,66µm,12.4s						
NJ2				LR	LR		
	comp=Z,67µm,15.7s						
RES	Resolute Bay	39.58	24	LR	LR	09 32 04.4	
	comp=Z,13µm,18.9s,baz=296,slow=40						
RES	Resolute Bay	39.58	24	⇑P	P	09 13 11.3	+0.2
CBB	Campbell River	41.05	68	P	P	09 13 23.4	-0.2
CBB				IAmb	IAmb	09 13 42.6	
	comp=Z,354nm,1.4s						
LYN	LuoYang	41.06	261	P	P	09 13 21.8	-2.1
LYN				sP	pwP	09 13 32.0	-1.2
LYN				PP	PP	09 15 05.5	+6.9
LYN				SS	SS	09 22 31.0	-6.7
LYN				pmax	pmax		
	comp=Z,34nm,0.9s						
LYN				pmax	pmax		
	comp=Z,2µm,10.8s						
LYN				LR	LR		
	comp=Z,99µm,18.0s						
LYN				LR	LR		
	comp=Z,118µm,16.7s						
OZB	Mount Ozzard	41.63	69	P	P	09 13 28.5	0.0
OZB				IAmb	IAmb	09 13 47.2	
	comp=Z,303nm,1.1s						
OZB	Mount Ozzard	41.63	69	⇑P	P	09 13 29.7	+1.2
SHB	Sechelt	42.08	67	⇑P	P	09 13 32.8	+0.5
JMJ	Miyako jima 2	42.12	238	P	P	09 13 34.9	+2.2
CLRS	Cowichan Lake	42.42	68	IAmb	IAmb	09 13 53.5	
	comp=Z,420nm,1.2s						
LLLB	Lillooet	42.49	65	IAmb	IAmb	09 13 53.6	
	comp=Z,408nm,1.1s						
NOR	Nord	42.49	0	⇑P	P	09 13 35.0	-0.1
NOR	Nord	42.49	0	*i* P	P	09 13 36.3	+1.3
NOR				IAmb	IAmb	09 13 48.7	
	comp=Z,215nm,2.1s						
PGC	Sidney	42.88	68	IAMs_20	IAMs_20	09 28 49.2	
	comp=Z,17µm,22.0s						
WHN	Wuhan	43.08	255	⇑P	P	09 13 38.8	-1.6
WHN				sP	sP	09 13 47.0	+0.2
WHN				S	S	09 20 05.8	+0.6
WHN				pmax	pmax		
	comp=Z,3µm,14.1s						
ZALV	Zalesovo Beam	43.16	302	P	P	09 13 39.8	-1.0
	comp=Z,3.7nm,0.4s,baz=32,slow=8.7,SNR=7.7						
ZALV				PcP	PcP	09 15 29.9	-0.1
	comp=Z,15nm,0.8s,baz=35,slow=5.3,SNR=3.8						
ZALV				S	S	09 20 06.3	+0.3
	comp=Z,1.4nm,0.7s,baz=72,slow=17,SNR=1.7						
ZALV				LR	LR	09 33 24.4	
	comp=Z,23µm,18.8s,baz=55,slow=39						
ZALV				P4KPbc		09 51 38.2	
	comp=Z,0.5nm,0.4s,baz=270,slow=40,SNR=0.9						
A04D	Lummi Island	43.23	68	P	P	09 13 41.5	+0.1
A04D				IAmb	IAmb	09 13 60.0	
	comp=Z,506nm,1.1s						
KEKH	Kekaha	43.27	127	IAMs_20	IAMs_20	09 27 17.3	
	comp=Z,17µm,22.0s						
TULEG	Thule	43.38	16	*i* P	P	09 13 44.5	+2.1
TULEG				IAmb	IAmb	09 13 50.2	
	comp=Z,76nm,1.1s						
XAN	Xi'an	43.40	263	⇓P	P	09 13 42.0	-1.1
XAN				pP	pP	09 13 46.0	-1.8
XAN				S	S	09 20 06.3	-3.8
XAN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,2µm,11.2s						
NLWA	Neilton Lookou	43.45	70	P	P	09 13 42.3	-1.1
NLWA				IAmb	IAmb	09 14 02.1	
	comp=Z,325nm,1.0s						
NLWA				IAMs_20	IAMs_20	09 31 43.5	
	comp=Z,20µm,20.0s						
NLWA	Neilton Lookou	43.45	70	⇑P	P	09 13 44.0	+0.7
YOJ	Yonaguni jima	43.52	241	IAMs_20	IAMs_20	09 32 13.4	
	comp=Z,35µm,22.0s						
WISH	Wishkah	43.68	70	IAmb	IAmb	09 14 03.6	
	comp=Z,455nm,1.0s						
TATO	Taipei	43.84	243	IAMs_20	IAMs_20	09 34 14.8	
	comp=Z,32µm,19.0s						
TATO	Taipei	43.84	243	P	P	09 13 46.2	-0.4
TATO				S	S	09 20 13.4	-3.1
RADR	Rader Ridge	44.11	71	IAmb	IAmb	09 14 06.8	
	comp=Z,396nm,1.2s						
JOHN	Johnston Islan	44.12	142	P	P	09 13 48.7	-0.1
JOHN	Johnston Islan	44.12	142	IAMs_20	IAMs_20	09 27 32.1	
	comp=Z,16µm,21.0s						
E03A	Lebam	44.16	71	IAMs_20	IAMs_20	09 32 14.1	
	comp=Z,16µm,19.0s						
KBS	Kingsbay	44.16	353	P	P	09 13 48.2	-0.4
KBS				IAmb	IAmb	09 14 08.3	
	comp=Z,235nm,1.1s						
KBS	Kingsbay	44.16	353	P	P	09 13 48.2	-0.4
KBS				pmax	pmax		
	comp=Z,235nm,1.1s						
KBS	Kingsbay	44.16	353	*e*P	P	09 13 49.5	+0.8
KBS				IVmB_BB		09 14 03.8	
	comp=Z,3µm,2.1s						
KBS				*e*S	S	09 20 24.2	+4.0
KBS				*e*		09 23 53.9	
KBS				IVMs_BB	IVMs_BB	09 31 00.5	
	comp=Z,4µm,18.6s						
KBS	Kingsbay	44.16	353	⇑P	P	09 13 49.1	+0.5
KBS	Kingsbay	44.16	353	*i* P	P	09 13 49.4	+0.7
SPA0	Spitsbergen Ar	44.50	351	*e*P	P	09 13 51.3	0.0
SPITS	Spitsbergen Ar	44.50	351	P	P	09 13 50.9	-0.5
	comp=Z,160nm,0.8s,baz=100,slow=9.4,SNR=87						
	comp=Z,160nm,0.8s						
KIP	Kipapa	44.52	125	P	P	09 13 52.0	-0.1
KIP	Kipapa	44.52	125	IAMs_20	IAMs_20	09 28 06.5	
	comp=Z,17µm,22.0s						
KIP	Kipapa	44.52	125	P	P	09 13 52.0	-0.1
KIP				pmax	pmax		
	comp=Z,629nm,1.3s						
GTA	Gaotai	44.64	276	P	P	09 13 52.0	-1.1
GTA				pP	pP	09 13 55.5	-2.3
GTA				S	S	09 20 23.5	-4.7
GTA				pmax	pmax		
	comp=Z,11nm,1.1s						
GTA				pmax	pmax		
	comp=Z,1µm,7.2s						
GTA				LR	LR		
	comp=Z,65µm,21.1s						
LZH	Lanzhou	44.74	270	*e*P	P	09 13 53.5	-0.5
LZH				sP	pwP	09 14 02.5	-0.8
LZH				PP	PP	09 15 37.8	-0.5
LZH				S	S	09 20 26.0	-3.8
LZH				pmax	pmax		
	comp=Z,1µm,4.2s						
LZH				LR	LR		
	comp=Z,77µm,16.8s						
F04D	Rainier, OR	44.75	71	IAmb	IAmb	09 14 11.4	
	comp=Z,273nm,0.9s						
F04D				IAMs_20	IAMs_20	09 29 16.7	
	comp=Z,15µm,21.0s						
NEEM	North Greenlan	44.87	10	*i* P	P	09 13 54.9	+0.3
NEEM				IAmb	IAmb	09 14 05.0	
	comp=Z,260nm,0.9s						
GUMO	Guam	45.01	207	IAMs_20	IAMs_20	09 33 18.0	
	comp=Z,14µm,20.0s						
GUMO	Guam	45.01	207	LR	LR	09 30 10.2	
	comp=Z,13µm,21.8s,baz=29,slow=33						
HOPEN	Hopen	45.08	347	*e*P	P	09 13 57.1	+1.2
HOPEN				IVmB_BB		09 14 13.8	
	comp=Z,2µm,3.0s						
HOPEN				*e*S	S	09 20 35.0	+1.6
HOPEN				*e*SS	SS	09 24 01.5	+6.5
HOPEN				IVMs_BB	IVMs_BB	09 30 19.1	
	comp=Z,5µm,23.8s						
G03D	McMinnville, O	45.18	72	IAmb	IAmb	09 14 15.0	
	comp=Z,298nm,1.4s						
B08A	Colville Reser	45.19	66	IAmb	IAmb	09 14 14.6	
	comp=Z,284nm,1.0s						
YULB	Yu-li	45.26	242	IAMs_20	IAMs_20	09 34 57.5	
	comp=Z,26µm,20.0s						
QZH	Quanzhou	45.33	246	P	P	09 13 57.5	-1.0
QZH				S	S	09 20 41.0	+2.9
QZH				SS	ScS	09 23 49.3	-4.8
QZH				pmax	pmax		
	comp=Z,2µm,11.6s						
QZH				LR	LR		
	comp=Z,29µm,13.4s						
QZH				LR	LR		
	comp=Z,42µm,13.1s						
COR	Corvallis	45.58	73	P	P	09 14 00.2	0.0
COR				IAmb	IAmb	09 14 18.5	
	comp=Z,264nm,0.9s						
COR	Corvallis	45.58	73	P	P	09 14 00.2	0.0
COR				pmax	pmax		
	comp=Z,264nm,1.0s						
COR	Corvallis	45.58	73	⇑P	P	09 14 01.2	+0.9
I02E	Swisshome, OR	45.60	73	P	P	09 14 00.0	-0.4
G04A	Mulino	45.60	71	P	P	09 13 59.9	-0.6
HSPB	Hornsund (broa	45.65	351	*e*P	P	09 14 01.1	+0.6
HSPB				*e*S	S	09 20 41.6	-0.1
HSPB				*e*L	L	09 30 03.5	
	comp=Z,26µm,24.3s						
CNSH	ChangSha	45.69	254	P	P	09 13 58.5	-2.8
CNSH				S	S	09 20 41.3	-2.0
CNSH				pmax	pmax		
	comp=Z,1µm,11.7s						
CNSH				LR	LR		
	comp=Z,66µm,19.1s						
CNSH				LR	LR		
	comp=Z,54µm,17.5s						
KHLH	Kahului Airpor	45.71	124	IAMs_20	IAMs_20	09 29 32.8	
	comp=Z,13µm,18.0s						
KNMB	Chin-men Tao	45.83	246	IAMs_20	IAMs_20	09 33 21.4	
	comp=Z,27µm,20.0s						
TWGBT	Beinan	45.85	241	P	P	09 14 04.1	+1.4
MXC	Moxie City	45.85	69	IAmb	IAmb	09 14 20.0	
	comp=Z,223nm,1.1s						
TWG	Pinlang	45.85	242	P	P	09 14 02.8	+0.2
TWG				IAmb	IAmb	09 14 41.0	
	comp=Z,195nm,1.1s						
TWG				IAMs_20	IAMs_20	09 34 22.2	

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      comp=Z,30µm,20.0s
H04D  Lebanon          45.92  72  IAmb      IAmb      09 14 20.9
      comp=Z,209nm,1.0s
ENH   Enshi            45.94 259            P         09 14 02.3 -1.1
ENH                               IAmb      IAmb      09 14 51.8
      comp=Z,544nm,2.0s
BUCK  Buck Mountain    46.01  73  P         P         09 14 03.1 -0.7
BUCK                              IAmb      IAmb      09 14 22.0
      comp=Z,243nm,1.0s
ILON  Igloolik, Nuna   46.03  27  P         P         09 14 03.1 -0.4
ILON                              IAmb      IAmb      09 14 24.6
      comp=Z,172nm,1.1s
E07A  Sunnyside        46.09  68  P         P         09 14 04.2 -0.1
E07A                              IAmb      IAmb      09 14 21.8
      comp=Z,283nm,1.1s
KEBM  Edson Butte      46.17  75  IAmb      IAmb      09 14 23.9
      comp=Z,376nm,1.3s
D08A  Wollman Farm,    46.25  67  IAmb      IAmb      09 14 22.6
      comp=Z,204nm,1.1s
HAWA  Hanford          46.37  68  P         P         09 14 05.8 -0.7
HAWA  Hanford          46.37  68 ⇑P         P         09 14 07.0 +0.5
NEW   Newport          46.38  65  IAMs_20   IAMs_20   09 34 45.5
      comp=Z,16µm,19.0s
NEW   Newport          46.38  65  IAmb      IAmb      09 14 23.7
      comp=Z,140nm,1.0s
NEW   Newport          46.38  65  LR        LR        09 35 05.1
      comp=Z,16µm,18.2s,baz=300,slow=38
NEW   Newport          46.38  65 ⇑P         P         09 14 06.0 -0.6
F07A  Phinny Hill Vi   46.49  69  IAMs_20   IAMs_20   09 31 03.8
      comp=Z,15µm,22.0s
E08A  Dider Farm, El   46.55  68  P         P         09 14 08.0 +0.1
E08A                              IAmb      IAmb      09 14 25.0
      comp=Z,195nm,1.1s
E08A                              IAMs_20   IAMs_20   09 35 27.2
      comp=Z,13µm,19.0s
G06A  Carlson Farm,    46.56  70  IAmb      IAmb      09 14 43.0
      comp=Z,206nm,1.6s
K02D  Willamette Mer   46.65  75  IAmb      IAmb      09 14 26.8
      comp=Z,197nm,1.3s
KULLO Kullorsuaq       46.67  14 i P        P         09 14 09.2 +0.7
KULLO                             IAmb      IAmb      09 14 16.3
      comp=Z,285nm,1.0s
YPT   Yellepit         46.89  68  IAmb      IAmb      09 14 27.8
      comp=Z,193nm,1.1s
E09A  Wood Farm, Sta   47.01  67  IAMs_20   IAMs_20   09 34 45.3
      comp=Z,13µm,19.0s
HUH   Hualalai         47.03 124  IAMs_20   IAMs_20   09 29 18.8
      comp=Z,18µm,21.0s
L02F  Cave Junction    47.10  75  IAmb      IAmb      09 14 31.1
      comp=Z,285nm,1.3s
POHA  Pohakuloa        47.11 124  IAMs_20   IAMs_20   09 28 56.9
      comp=Z,15µm,22.0s
POHA  Pohakuloa        47.11 124  P         P         09 14 12.3 -0.5
KSXB  Camp Six Broad   47.13  76  P         P         09 14 12.5 -0.2
ZSN   Zaisan           47.23 295 eP         P         09 14 12.8 -0.5
ZSN                              eS         S         09 21 06.2 +1.1
ZSN                               pmax      pmax
      comp=Z,60nm,1.1s
ZSN   Zaisan           47.23 295 eP         P         09 14 12.8 -0.5
      comp=Z,60nm,1.1s
ZSN                              eS         S         09 21 06.3 +1.1
HMH   Humu‘ula Sheep   47.27 124  IAMs_20   IAMs_20   09 29 02.0
      comp=Z,14µm,22.0s
KRMB  Red Mountain     47.33  76  IAmb      IAmb      09 14 33.2
      comp=Z,292nm,1.3s
DAG   Danmarks Havn    47.33   1  P         P         09 14 14.9 +1.2
DAG   Danmarks Havn    47.33   1 ⇑P         P         09 14 13.1 -0.6
DAG   Danmarks Havn    47.33   1 i P        P         09 14 13.8 +0.2
DAG                               IAmb      IAmb      09 14 23.1
      comp=Z,64nm,0.9s
LNOR  Lincton Mounta   47.36  68  IAmb      IAmb      09 14 32.4
      comp=Z,192nm,1.2s
MLH   Mauna Loa        47.41 124  IAMs_20   IAMs_20   09 29 05.7
      comp=Z,15µm,22.0s
AIN   Ainahou          47.48 124  IAMs_20   IAMs_20   09 29 30.6
      comp=Z,15µm,22.0s
KHU   Kahuku           47.51 124  IAMs_20   IAMs_20   09 29 31.6
      comp=Z,17µm,22.0s
BYL   Byron's Ledge    47.53 124  P         P         09 14 15.0 -1.0
SEM   Semipalatinsk    47.57 300 eP         P         09 14 15.1 -1.0
SEM                               pmax      pmax
      comp=Z,91nm,1.4s
SEM                               MLR       MLR
      comp=Z,8µm,12.0s
SEM   Semipalatinsk    47.57 300 eP         P         09 14 15.2 -1.0
      comp=Z,91nm,1.4s
SEM                               LR        LR        09 35 01.9
      comp=Z,8µm,11.9s
PUH   Pauahi           47.59 124  P         P         09 14 15.7 -0.7
KNHH  Kane Nui o Ham   47.60 124  P         P         09 14 15.4 -1.1
STCH  Steam Cracks     47.62 124  P         P         09 14 15.7 -0.9
STCH                              IAmb      IAmb      09 14 43.8
      comp=Z,178nm,0.9s
JOKA  Jonika Flow      47.63 123  IAmb      IAmb      09 14 43.9
      comp=Z,177nm,1.0s
JCC   Jacoby Creek,    47.75  77  P         P         09 14 16.0 -1.3
YBH   Yreka Blue Hor   47.83  75  P         P         09 14 17.6 -0.5
YBH                               IAmb      IAmb      09 14 37.1
      comp=Z,303nm,1.4s
YBH   Yreka Blue Hor   47.83  75  LR        LR        09 30 46.9
      comp=Z,480nm,20.9s,baz=292,slow=32
YBH   Yreka Blue Hor   47.83  75  P         P         09 14 17.6 -0.5
YBH                               pmax      pmax
      comp=Z,303nm,1.4s
YBH                               MLR       MLR
      comp=Z,8µm,19.0s
KURK  Kurchatov        48.15 302  P         P         09 14 19.1 -1.1
KURK  Kurchatov        48.15 302  P         P         09 14 18.9 -1.3
KURK                              P         P         09 14 18.9 -1.3
KURK                              P         P         09 14 18.9 -1.3
KURK                              S         S         09 21 11.7 -6.3
KURK                              S         S         09 21 11.7 -6.3
KURK                              S         S         09 21 11.7 -6.3
KURK  Kurchatov        48.15 302  P         P         09 14 20.1 -0.2
CLRN  Clyde River      48.19  21 ⇑P         P         09 14 20.8 +0.4
WMQ   Urumqi           48.21 289  P         P         09 14 21.3 +0.3
WMQ                               PP        PP        09 16 16.0 +3.0
WMQ                               S         S         09 21 18.5 -0.6
WMQ                               pmax      pmax
      comp=Z,26nm,0.7s
WMQ                               pmax      pmax
      comp=Z,220nm,3.6s
WMQ                               LR        LR
      comp=Z,55µm,17.9s
WMQ                               LR        LR
      comp=Z,30µm,17.9s
KURBB Kurchatov Arra   48.25 302  P         P         09 14 20.1 -1.0
      comp=Z,17nm,0.7s,baz=54,slow=8.1,SNR=80
KURBB                             PP        PP        09 16 12.0 -1.2
      comp=Z,24nm,0.9s,baz=52,slow=11,SNR=1.5
KURBB                             LR        LR        09 36 27.7
      comp=Z,20µm,20.4s,baz=53,slow=38
KURBB                             P4KPbc              09 52 01.4
      comp=Z,0.8nm,0.2s,baz=49,slow=3.9,SNR=8.3
      comp=Z,17nm,0.7s
KURBB Kurchatov Arra   48.25 302  P         P         09 14 19.6 -1.5
UPNV  Upernavik        48.39  15 i P        P         09 14 24.5 +2.6
UPNV                              IAmb      IAmb      09 14 29.3
      comp=Z,160nm,0.9s
BMO   Blue Mountains   48.56  68  P         P         09 14 23.3 -0.4
BMO                               IAMs_20   IAMs_20   09 32 28.5
      comp=Z,15µm,22.0s
BMO   Blue Mountains   48.56  68 ⇑P         P         09 14 22.6 -1.1
CD2   Chengdu          48.62 265  P         P         09 14 22.8 -1.5
CD2                               sP        pwP       09 14 33.3 -0.4
CD2                               PP        PP        09 16 16.8 -0.3
CD2                               S         S         09 21 21.0 -4.2
CD2                               pmax      pmax
      comp=Z,140nm,0.8s
CD2                               pmax      pmax
      comp=Z,2µm,9.0s
CD2                               LR        LR
      comp=Z,64µm,14.2s
O02D  Mt. Diablo Mer   48.87  77  P         P         09 14 25.1 -1.0
O02D                              IAmb      IAmb      09 14 45.2
      comp=Z,327nm,1.3s
MSO   Missoula         48.94  64  P         P         09 14 25.9 -0.8
MSO                               IAmb      IAmb      09 14 47.1
      comp=Z,331nm,1.4s
MSO   Missoula         48.94  64 ⇑P         P         09 14 26.1 -0.5
J08A  Circle Bar Ran   48.97  71  IAmb      IAmb      09 14 44.5
      comp=Z,142nm,1.0s
MK31  Makanchi Array   48.98 296  P         P         09 14 26.1 -0.7
MK31  Makanchi Array   48.98 296  P         P         09 14 26.1 -0.7
MK31                              pmax      pmax
      comp=Z,69nm,1.1s
MKAR  Makanchi Array   48.98 296  P         P         09 14 25.2 -1.6
MKAR  Makanchi Array   48.98 296  P         P         09 14 25.1 -1.7
      comp=Z,13nm,0.7s,baz=57,slow=6.1,SNR=79
MKAR                              S         S         09 21 28.4 -1.4
      comp=Z,2.3nm,0.9s,baz=101,slow=6.3,SNR=2.3
MKAR                              LR        LR        09 34 22.9
      comp=Z,16µm,18.5s,baz=30,slow=35
MKAR                              PKPPKP    P'P'df    09 45 19.5  -14
      comp=Z,0.6nm,0.9s,baz=258,slow=3.6,SNR=4.3
MKAR                              P4KPbc              09 52 07.6
      comp=Z,0.2nm,0.7s,baz=149,slow=3.4,SNR=1.6
      comp=Z,13nm,0.7s
MKAR  Makanchi Array   48.98 296  P         P         09 14 25.2 -1.6
PLID  Pearl Lake       49.08  67  P         P         09 14 27.3 -0.5
PLID                              IAMs_20   IAMs_20   09 35 32.1
      comp=Z,13µm,20.0s
MAKZ  Makanchi         49.13 296  P         P         09 14 27.4 -0.5
MAKZ                              IAMs_20   IAMs_20   09 34 27.1
      comp=Z,21µm,19.0s
MAKZ  Makanchi         49.13 296  P         P         09 14 28.9 +1.0
MAKZ  Makanchi         49.13 296 ⇑P         P         09 14 27.4 -0.5
HATC  Hat Creek Radi   49.14  75  P         P         09 14 28.3 +0.1
FFC   Flin Flon        49.21  50  P         P         09 14 27.5 -0.9
FFC                               IAmb      IAmb      09 14 37.5
      comp=Z,343nm,1.9s
FFC   Flin Flon        49.21  50  IAMs_20   IAMs_20   09 36 12.6
      comp=Z,21µm,20.0s
FFC   Flin Flon        49.21  50  P         P         09 14 27.5 -0.9
FFC                               pmax      pmax
      comp=Z,343nm,1.9s
FFC                               MLR       MLR
      comp=Z,20µm,20.0s
FFC   Flin Flon        49.21  50 ⇑P         P         09 14 27.6 -0.9
OVMT  Ovando           49.26  64  P         P         09 14 28.7 -0.3
GULI  GuiLin           49.37 254  P         P         09 14 30.5 +0.5
GULI                              PP        PP        09 16 19.5 -4.4
GULI                              S         S         09 21 33.8 -1.9
GULI                              pmax      pmax
      comp=Z,10.0nm,1.2s
GULI                              LR        LR
      comp=Z,48µm,20.7s
GULI                              LR        LR
      comp=Z,70µm,19.4s
GULI                              LR        LR
      comp=Z,64µm,18.0s
PATS  Pohnpei          49.40 188  IAMs_20   IAMs_20   09 29 52.6
      comp=Z,23µm,21.0s
WVOR  Wild Horse Val   49.53  72  IAmb      IAmb      09 14 49.5
      comp=Z,222nm,1.2s
WVOR  Wild Horse Val   49.53  72 ⇑P         P         09 14 31.6 +0.4
GZH   Guangzhou        49.57 250  P         P         09 14 26.0 -5.5
GZH                               S         S         09 21 32.0 -6.4
GZH                               LR        LR
      comp=Z,35µm,13.5s
FCC   Fort Churchill   49.61  42  IAmb      IAmb      09 14 50.4
      comp=Z,188nm,0.8s
FCC                               IAMs_20   IAMs_20   09 37 16.9
      comp=Z,24µm,21.0s
FCC   Fort Churchill   49.61  42 ⇑P         P         09 14 29.6 -1.7
GOMU  GeErMu           49.70 277  P         P         09 14 31.8 -1.1
GOMU                              pP        sP        09 14 39.5 +0.2
GOMU                              sS        sS        09 21 57.5 +8.8
GOMU                              pmax      pmax
      comp=Z,44nm,0.8s
GOMU                              LR        LR
      comp=Z,34µm,18.5s
GOMU                              LR        LR
      comp=Z,25µm,16.7s
GOMU                              LR        LR
      comp=Z,55µm,16.6s
DBG   Daneborg         49.79   2 ⇑P         P         09 14 31.4 -1.2
DBG   Daneborg         49.79   2 i P        P         09 14 32.9 +0.4
DBG                               IAmb      IAmb      09 14 40.9
      comp=Z,57nm,0.9s
GDXM  Geysers          49.84  78  IAmb      IAmb      09 14 52.5
      comp=Z,276nm,1.3s
NUUG  Nuugaatsiaq      49.92  15 i P        P         09 14 35.5 +2.0
NUUG                              IAmb      IAmb      09 14 43.5
      comp=Z,84nm,1.1s
VADS  Vadso            49.93 342 eP         P         09 14 35.4 +1.8
VADS                              IVmB_BB             09 14 47.6
      comp=Z,2µm,3.7s
VADS                             eS         S         09 21 43.0 +0.5
VADS                              IVMs_BB   IVMs_BB   09 39 59.8
      comp=Z,8µm,15.0s
ORV   Oroville         50.01  76  P         P         09 14 34.3 -0.4
ORV   Oroville         50.01  76  P         P         09 14 34.3 -0.4
ORV                               pmax      pmax
      comp=Z,134nm,1.1s
EGMT  Eagleton         50.20  61  IAmb      IAmb      09 14 55.6
      comp=Z,234nm,1.1s
EGMT                              IAMs_20   IAMs_20   09 36 28.5
      comp=Z,19µm,20.0s
EGMT  Eagleton         50.20  61 ⇑P         P         09 14 35.3 -0.8
MFID  Camas Ranch      50.32  69  IAmb      IAmb      09 14 54.5
      comp=Z,151nm,1.0s
BVA0  Borovoye Array   50.35 308 i P        P         09 14 36.7 -0.4
BVAR  Borovoye Array   50.35 308  P         P         09 14 36.8 -0.3
      comp=Z,116nm,0.8s,baz=51,slow=7.8,SNR=225
BVAR                              S         S         09 21 50.8 +1.9
      comp=Z,0.8nm,0.3s,baz=106,slow=9.1,SNR=1.5
BVAR                              PKPPKP    P'P'df    09 45 19.9  -12
      comp=Z,0.8nm,0.6s,baz=141,slow=5.0,SNR=4.6
BVAR                              P4KPbc              09 52 09.5
      comp=Z,0.5nm,0.4s,baz=237,slow=41,SNR=1.2
      comp=Z,116nm,0.8s
BRVK  Borovoye         50.38 309  IAMs_20   IAMs_20   09 36 13.6
      comp=Z,12µm,19.0s
BRVK  Borovoye         50.38 309  P         P         09 14 36.5 -0.8
BRVK                              P         P         09 14 36.5 -0.8
BRVK                              S         S         09 21 47.1 -2.0
BRVK                              S         S         09 21 47.1 -2.0
BRVK  Borovoye         50.38 309d iP        P         09 14 36.5 -0.8
BRVK                              pmax      pmax
      comp=Z,153nm,0.9s
BRVK                              MLR       MLR
      comp=Z,32µm,15.0s
BEKR  Beckworth        50.41  75  IAmb      IAmb      09 14 56.2
      comp=Z,234nm,1.3s
HAMF  Hammerfest       50.41 344 eP         P         09 14 41.9 +4.7
HAMF                             eS         S         09 21 50.5 +1.4
GYA   Guiyang          50.46 259 ⇑P         P         09 14 37.5 -0.9
GYA                               sP        pwP       09 14 47.0 -0.7
GYA                               PP        PP        09 16 30.0 -3.9
GYA                               S         S         09 21 48.8 -2.3
GYA                               pmax      pmax
      comp=Z,2µm,11.0s
GYA                               LR        LR
      comp=Z,53µm,17.3s
GYA                               LR        LR
      comp=Z,24µm,13.4s
GYA                               LR        LR
      comp=Z,64µm,21.2s
SUMG  Summit           50.61   9  P         P         09 14 41.1 +1.8
SUMG  Summit           50.61   9  IAmb      IAmb      09 14 57.4
      comp=Z,336nm,1.1s
SUMG                              IAMs_20   IAMs_20   09 37 26.4
      comp=Z,19µm,20.0s
SUMG  Summit           50.61   9 ⇑P         P         09 14 40.0 +0.8
SUMG  Summit           50.61   9 i P        P         09 14 39.8 +0.5
SUMG                              IAmb      IAmb      09 14 50.0
      comp=Z,150nm,0.9s
DLMT  Dillon           50.63  65  P         P         09 14 39.0 -0.6
DLMT                              IAmb      IAmb      09 14 59.4
      comp=Z,371nm,1.3s
DLMT                              IAMs_20   IAMs_20   09 37 18.0
      comp=Z,15µm,20.0s
KEV   Kevo             50.65 342  P         P         09 14 38.8 -0.4
KEV                               IAMs_20   IAMs_20   09 37 21.7
      comp=Z,20µm,22.0s
KEV   Kevo             50.65 342 ⇑P         P         09 14 39.2 +0.1
LVZ   Lovozero         50.78 338  P         P         09 14 39.3 -0.9
LVZ                               IAMs_20   IAMs_20   09 38 56.2
      comp=Z,21µm,21.0s
LVZ   Lovozero         50.78 338  P         P         09 14 41.2 +1.0
LVZ   Lovozero         50.78 338 ⇑P         P         09 14 40.6 +0.4
UMMG  Uummannaq        50.85  15 i P        P         09 14 39.7 -0.9
UMMG                              IAmb      IAmb      09 14 48.5
      comp=Z,103nm,1.2s
BOZ   Bozeman (W)      50.95  64  IAmb      IAmb      09 14 59.3
      comp=Z,323nm,1.6s
BOZ                               IAMs_20   IAMs_20   09 37 02.6
      comp=Z,14µm,21.0s
BOZ   Bozeman (W)      50.95  64 ⇑P         P         09 14 41.5 -0.5
HLID  Hailey           50.95  68  IAMs_20   IAMs_20   09 36 49.8
      comp=Z,17µm,20.0s
HLID  Hailey           50.95  68 ⇑P         P         09 14 41.3 -0.7
PAHR  Pah Rah Range    51.05  75  IAmb      IAmb      09 15 01.1
      comp=Z,235nm,1.3s
ARA0  ARCESS Array S   51.10 343 eP         P         09 14 42.0 -0.5
ARA0                             eS         S         09 21 57.9 -0.9
ARA0                              IVMs_BB   IVMs_BB   09 40 49.9
      comp=Z,7µm,18.0s
ARCES ARCESS Array B   51.10 343  P         P         09 14 43.2 +0.7
ARCES                             IAmb      IAmb      09 14 58.4
      comp=Z,182nm,1.1s
ARCES ARCESS Array B   51.10 343  P         P         09 14 42.0 -0.6
      comp=Z,14nm,0.7s,baz=23,slow=7.9,SNR=16
ARCES                             LR        LR        09 40 53.6
      comp=Z,16µm,18.5s,baz=40,slow=42
      comp=Z,14nm,0.7s
ARCES ARCESS Array B   51.10 343  P         P         09 14 43.2 +0.7
ARCES                             pmax      pmax
      comp=Z,182nm,1.1s
APA   Apatity          51.32 338⇓iP         P         09 14 43.4 -0.8
APA                              i                    09 16 43.0
APA                              i S        S         09 22 01.0 -0.8
APA                               pmax      pmax
      comp=Z,62nm,0.9s
PNTR  Pine Nut         51.38  75  P         P         09 14 45.7 +0.4
PNTR                              IAmb      IAmb      09 15 04.0
      comp=Z,323nm,1.1s
SVE   Sverdlovsk       51.67 317ceP         P         09 14 47.2 +0.2
SVE                              eS         S         09 22 08.5 +1.6
SVE                              eSS        SS        09 25 40.4 -2.1
SVE                               pmax      pmax
      comp=Z,318nm,1.8s
SVE                               MLR       MLR
      comp=Z,31µm,16.0s
YHL   Hebgen Lake      51.70  64  IAmb      IAmb      09 15 05.2
      comp=Z,211nm,1.1s
YHL                               IAMs_20   IAMs_20   09 37 26.4
      comp=Z,12µm,21.0s
CMB   Columbia Colle   51.71  77  IAmb      IAmb      09 15 06.4
      comp=Z,578nm,2.0s
YHB   Horse Butte      51.77  65  IAmb      IAmb      09 15 08.2
      comp=Z,459nm,1.5s
YHB                               IAMs_20   IAMs_20   09 37 40.1
      comp=Z,13µm,20.0s
JETT  Jettan, Norway   51.88 345 eP         P         09 14 47.7 -0.7
JETT                              IVmB_BB             09 15 03.4
      comp=Z,4µm,2.2s
WAKR  Walker           51.88  76  IAmb      IAmb      09 15 07.3
      comp=Z,209nm,1.2s
TRO   Tromso           52.03 345 eP         P         09 14 48.8 -0.6
TRO                               IVmB_BB             09 15 04.4
      comp=Z,2µm,2.2s
TRO                              eS         S         09 22 12.7 +1.2
YNM   Yellowstone No   52.03  64  IAMs_20   IAMs_20   09 37 47.1
      comp=Z,16µm,20.0s
SAO   San Andreas Ge   52.05  79 ⇑P         P         09 14 51.5 +1.4
YNR   Norris Junctio   52.05  64  IAMs_20   IAMs_20   09 37 37.6
      comp=Z,18µm,20.0s
YFT   Old Faithful     52.16  65  IAmb      IAmb      09 15 00.7
      comp=Z,144nm,0.7s
YFT                               IAMs_20   IAMs_20   09 40 21.5
      comp=Z,22µm,18.0s
TDK   Taldyqorghan     52.17 296 eP         P         09 14 50.5 -0.4
TDK                              eS         S         09 22 15.5 +1.3
TDK                               pmax      pmax
      comp=Z,112nm,1.2s
TDK                               MLR       MLR
      comp=Z,25µm,15.0s
TDK   Taldyqorghan     52.17 296 eP         P         09 14 50.5 -0.4
      comp=Z,112nm,1.2s
TDK                              eS         S         09 22 15.6 +1.3
TDK                               LR        LR        09 37 56.0
      comp=Z,25µm,14.7s
YNE   Yellowstone No   52.18  64  P         P         09 14 50.7 -0.5
YNE                               IAMs_20   IAMs_20   09 37 47.0
      comp=Z,17µm,21.0s
YMP   Mirror Lake Pl   52.30  64  IAmb      IAmb      09 15 19.3
      comp=Z,329nm,1.2s
YMP                               IAMs_20   IAMs_20   09 38 35.1
      comp=Z,14µm,20.0s
H17A  Grant Village    52.33  64  IAmb      IAmb      09 15 13.9
      comp=Z,200nm,1.0s
H17A                              IAMs_20   IAMs_20   09 38 35.0
      comp=Z,19µm,20.0s
ILULI Ilulissat        52.34  15  P         P         09 14 51.4 -0.3
ILULI Ilulissat        52.34  15  P         P         09 14 51.4 -0.3
ILULI                             pmax      pmax
      comp=Z,90nm,0.8s
ILULI                             MLR       MLR
      comp=Z,26µm,19.0s
ILULI Ilulissat        52.34  15 i P        P         09 14 51.2 -0.5
ILULI                             IAmb      IAmb      09 14 58.7
      comp=Z,94nm,0.8s
RLMT  Red Lodge        52.47  63  IAmb      IAmb      09 15 13.7
      comp=Z,253nm,1.0s
RLMT                              IAMs_20   IAMs_20   09 37 51.7
      comp=Z,17µm,21.0s
RLMT  Red Lodge        52.47  63 ⇑P         P         09 14 53.5 +0.1
ELK   Elko             52.52  71  LR        LR        09 35 04.9
      comp=Z,8µm,21.6s,baz=316,slow=34
ELK   Elko             52.52  71 ⇑P         P         09 14 53.7 -0.1
NVAR  Mina Array Bea   52.55  75  P         P         09 14 53.9 -0.1
NVAR  Mina Array Bea   52.55  75  P         P         09 14 54.0  0.0
      comp=Z,20nm,0.7s,baz=303,slow=7.1,SNR=78
NVAR                              LR        LR        09 35 07.5
      comp=Z,7µm,20.9s,baz=310,slow=34
NVAR                              PKPPKP              09 45 14.0
      comp=Z,0.6nm,0.8s,baz=197,slow=4.6,SNR=3.8
NVAR                              PKP2ab              09 46 00.1
      comp=Z,0.8nm,1.0s,baz=150,slow=4.1,SNR=3.8
NVAR                              P4KPbc              09 52 20.1
      comp=Z,0.4nm,0.7s,baz=298,slow=3.2,SNR=4.1
      comp=Z,20nm,0.7s
LHV   Little Huntoon   52.57  75  P         P         09 14 54.2 +0.4
LHV                               IAmb      IAmb      09 15 13.3
      comp=Z,388nm,1.3s
NV11  Mina Array Sit   52.63  75  P         P         09 14 54.7 +0.1
FXWY  Fox Creek        52.64  65  P         P         09 14 54.5 -0.1
FXWY                              IAMs_20   IAMs_20   09 38 36.3
      comp=Z,11µm,20.0s
TPAW  Teton Pass       52.78  66  IAmb      IAmb      09 15 14.6
      comp=Z,154nm,0.9s
TPAW                              IAMs_20   IAMs_20   09 38 40.1
      comp=Z,12µm,20.0s
PDGK  Podgornoye       52.82 294  P         P         09 14 55.1 -0.7
OTUK  Ortayu           52.82 303  P         P         09 14 55.3 -0.4
ARTI  Arti             52.84 318  P         P         09 14 54.8 -0.9
ARTI  Arti             52.84 318  P         P         09 14 55.0 -0.7
      comp=Z,85nm,0.8s,baz=51,slow=5.1,SNR=57
ARTI                              S         S         09 22 19.5 -3.5
      comp=Z,1.9nm,0.3s,baz=5.5,slow=11,SNR=1.3
ARTI                              LR        LR        09 40 35.8
      comp=Z,42µm,18.1s,baz=48,slow=40
      comp=Z,85nm,0.8s
ARTI  Arti             52.84 318c iP        P         09 14 54.6 -1.1
ARTI                                                  09 16 02.2
ARTI                                                  09 16 53.8
ARTI                              PPP       PPP       09 17 58.3
ARTI                              S         S         09 22 22.5 -0.5
ARTI                              SS        SS        09 25 56.6 -4.5
ARTI                              pmax      pmax
      comp=Z,119nm,0.9s
ARTI                              pmax      pmax
      comp=Z,622nm,8.7s
ARTI                              MLR       MLR
      comp=Z,36µm,17.0s
ARTI  Arti             52.84 318 ⇑P         P         09 14 54.9 -0.7
LAO   LASA Array       52.85  60  P         P         09 14 55.9 -0.1
LAO                               IAMs_20   IAMs_20   09 38 01.6
      comp=Z,17µm,20.0s
LOHW  Long Hollow      52.87  65  P         P         09 14 56.3 -0.1
LOHW                              IAmb      IAmb      09 15 15.0
      comp=Z,160nm,1.0s
SNOW  Snow King Moun   52.90  65  P         P         09 14 56.6  0.0
SNOW                              IAMs_20   IAMs_20   09 38 45.4
      comp=Z,14µm,20.0s
SHLS  Shalkode         52.95 294 eP         P         09 14 54.7 -2.1
SHLS                             eS         S         09 22 23.3 -1.8
SHLS                              pmax      pmax
      comp=Z,103nm,0.9s
SHLS  Shalkode         52.95 294 eP         P         09 14 54.8 -2.1
      comp=Z,102nm,0.9s
SHLS                             eS         S         09 22 23.4 -1.8
JNW   Jan Mayen West   53.01 357 eP         P         09 14 57.9 +1.2
JNW                              eS         S         09 22 27.3 +2.4
ARXS  Arharly          53.03 296 eP         P         09 14 56.6 -0.7
JNE   Jan Mayen East   53.05 357 eP         P         09 14 58.2 +1.3
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JNE				IVmB_BB		09 15 12.2	
	comp=Z,3µm,2.1s						
JNE				eS	S	09 22 27.9	+2.5
JMIC	Jan Mayen	53.06	357	LR	LR	09 35 31.0	
	comp=Z,5µm,20.6s,baz=2.0,slow=34						
HVU	Hansel Valley	53.07	68	IAmb	IAmb	09 15 18.9	
	comp=Z,431nm,1.8s						
JMI	Jan Mayen	53.12	357	eP	P	09 14 58.3	+0.8
KPKS	Kokpek	53.13	295	eP	P	09 14 57.6	-0.4
KPKS	Kokpek	53.13	295	eP	P	09 14 57.7	-0.4
PZH	PanZhiHua	53.14	263	P	P	09 15 00.5	+2.1
PZH				S	S	09 22 28.5	+0.5
PZH				ScS	ScS	09 24 46.0	-1.1
PZH				pmax	pmax		
	comp=Z,20nm,0.6s						
PZH				pmax	pmax		
	comp=Z,1µm,6.5s						
PZH				LR	LR		
	comp=Z,49µm,16.7s						
PZH				LR	LR		
	comp=Z,39µm,16.7s						
UZB	Uzynbulak	53.19	294	eP	P	09 14 58.0	-0.6
UZB	Uzynbulak	53.19	294	eP	P	09 14 58.0	-0.6
AHID	Auburn Hatcher	53.23	66	IAmb	IAmb	09 15 19.1	
	comp=Z,197nm,1.2s						
AHID				IAMs_20	IAMs_20	09 39 24.9	
	comp=Z,13µm,19.0s						
TGY	Tagaytay City	53.41	236	P	P	09 15 03.4	+3.1
	comp=Z,150nm,0.3s,baz=41,slow=20,SNR=1.4						
TGY				S	S	09 22 27.1	-4.5
	comp=Z,108nm,0.3s,baz=49,slow=18,SNR=1.9						
TGY				LR	LR	09 39 10.3	
	comp=Z,9µm,21.1s,baz=24,slow=38						
DSP	Deep Springs	53.50	76	IAmb	IAmb	09 15 21.4	
	comp=Z,287nm,1.4s						
BGU	Big Grassy Mou	53.55	69	P	P	09 15 01.3	0.0
SATY	Saty	53.56	295	eP	P	09 15 00.8	-0.5
SATY				pmax	pmax		
	comp=Z,77nm,1.1s						
SATY	Saty	53.56	295	eP	P	09 15 00.9	-0.4
	comp=Z,77nm,1.1s						
MZP	Montezuma Peak	53.58	75	P	P	09 15 01.9	+0.3
SCO	Scoresbysund	53.59	3	P	P	09 15 01.1	+0.2
SCO				IAMs_20	IAMs_20	09 39 30.4	
	comp=Z,15µm,19.0s						
SCO	Scoresbysund	53.59	3	P	P	09 15 01.1	+0.2
SCO				pmax	pmax		
	comp=Z,179nm,1.4s						
SCO				MLR	MLR		
	comp=Z,15µm,19.0s						
SCO	Scoresbysund	53.59	3	⇑P	P	09 15 02.1	+1.2
SCO	Scoresbysund	53.59	3	i P	P	09 15 02.0	+1.0
SCO				IAmb	IAmb	09 15 12.5	
	comp=Z,155nm,1.5s						
KMI	Kunming	53.67	261	P	P	09 15 00.8	-1.6
KMI				S	S	09 22 30.5	-5.0
KMI				ScS	ScS	09 24 48.3	-2.7
KMI				pmax	pmax		
	comp=Z,52nm,1.4s						
KMI				pmax	pmax		
	comp=Z,1µm,12.1s						
KMI				LR	LR		
	comp=Z,37µm,20.0s						
CHKK	Chushkaly	53.71	296	eP	P	09 15 01.6	-0.6
CHKK	Chushkaly	53.71	296	eP	P	09 15 01.7	-0.6
FRB	Frobisher Bay	53.73	26	LR	LR	09 41 56.5	
	comp=Z,13µm,18.1s,baz=326,slow=41						
HWUT	Hardware Ranch	53.82	68	IAmb	IAmb	09 15 23.8	
	comp=Z,123nm,0.9s						
HWUT	Hardware Ranch	53.82	68	⇑P	P	09 15 03.4	+0.1
ICESG	Greenland Ices	53.86	10	i P	P	09 15 03.4	0.0
ICESG				IAmb	IAmb	09 15 12.8	
	comp=Z,296nm,1.5s						
PRZ	Przheval'sk	53.98	294	IAmb	IAmb	09 15 15.3	
	comp=Z,186nm,1.1s						
BW06	Boulder Array	54.01	65	IAmb	IAmb	09 15 23.0	
	comp=Z,204nm,1.2s						
BW06				IAMs_20	IAMs_20	09 38 55.6	
	comp=Z,16µm,21.0s						
BW06	Boulder Array	54.01	65	⇑P	P	09 15 04.2	-0.6
PD31	Pinedale Array	54.01	65	P	P	09 15 04.1	-0.7
PD31				IAmb	IAmb	09 15 23.0	
	comp=Z,186nm,1.1s						
PDAR	Pinedale Array	54.01	65	P	P	09 15 04.1	-0.7
PDAR	Pinedale Array	54.01	65	P	P	09 15 04.0	-0.8
	comp=Z,47nm,0.7s,baz=324,slow=3.3,SNR=151						
PDAR				S	S	09 22 41.1	+1.4
	comp=Z,0.2nm,0.5s,baz=313,slow=13,SNR=1.0						
PDAR				LR	LR	09 39 16.7	
	comp=Z,9µm,19.7s,baz=318,slow=37						
PDAR				PKPPKP	P'P'df	09 45 14.7	-12
	comp=Z,0.9nm,0.9s,baz=123,slow=5.5,SNR=5.3						
PDAR				PKP2bc		09 45 31.7	
	comp=Z,1.8nm,1.0s,baz=153,slow=4.5,SNR=6.6						
PDAR				P4KP		09 54 17.1	
	comp=Z,0.3nm,0.6s,baz=313,slow=3.0,SNR=4.0						
	comp=Z,47nm,0.7s						
R11B	Troy Canyon, C	54.07	73	P	P	09 15 04.7	-0.5
STEI	Steigen	54.12	346	eP	P	09 15 03.9	-0.9
STEI				IVmB_BB		09 15 22.4	
	comp=Z,2µm,3.5s						
STEI				eS	S	09 22 40.4	+0.4
STEI				IVMs_BB	IVMs_BB	09 36 35.0	
	comp=Z,4µm,18.9s						
LOF	Lofoten	54.15	347	eP	P	09 15 04.6	-0.5
LOF				IVmB_BB		09 15 22.4	
	comp=Z,3µm,3.1s						
LOF				eS	S	09 22 39.4	-1.0
DUG	Dugway, Tooele	54.20	70	IAmb	IAmb	09 15 26.5	
	comp=Z,132nm,1.0s						
DUG	Dugway, Tooele	54.20	70	⇑P	P	09 15 06.2	+0.2
AAA	Alma-Ata	54.21	296	eP	P	09 15 05.5	-0.5
AAA				pmax	pmax		
	comp=Z,72nm,0.7s						
AAA				MLR	MLR		
	comp=Z,24µm,14.0s						
AAA	Alma-Ata	54.21	296	eP	P	09 15 05.5	-0.5
	comp=Z,72nm,0.7s						
AAA				LR	LR	09 39 07.7	
	comp=Z,24µm,14.3s						
TCUT	Toone Canyon	54.26	68	IAmb	IAmb	09 15 27.0	
	comp=Z,283nm,1.2s						
SPR3	Spring Creek 3	54.27	72	IAMs_20	IAMs_20	09 39 33.7	
	comp=Z,9µm,19.0s						
BTLS	Baital	54.30	299	eP	P	09 15 05.9	-0.6
BTLS	Baital	54.30	299	eP	P	09 15 05.9	-0.6
KIRV	Kirov	54.33	324	P	P	09 15 05.7	-0.8
	comp=Z,148nm,0.8s,baz=26,slow=4.2,SNR=53						
KIRV				S	S	09 22 45.9	+2.9
	comp=Z,3.7nm,0.5s,baz=8.8,slow=20,SNR=1.4						
KIRV				LR	LR	09 39 33.9	
	comp=Z,28µm,21.0s,baz=32,slow=38						
	comp=Z,148nm,0.8s						
KIRV	Kirov	54.33	324	deP	P	09 15 06.1	-0.4
CTU	Camp Tracy	54.39	68	IAmb	IAmb	09 15 27.6	
	comp=Z,350nm,1.6s						
SFJD	Kangerlussuaq	54.45	16	P	P	09 15 06.6	-0.6
SFJD				IAmb	IAmb	09 15 35.2	
	comp=Z,308nm,1.6s						
SFJD	Kangerlussuaq	54.45	16	IAMs_20	IAMs_20	09 40 28.1	
	comp=Z,17µm,20.0s						
SFJD	Kangerlussuaq	54.45	16	LR	LR	09 40 59.1	
	comp=Z,18µm,18.7s,baz=342,slow=39						
SFJD	Kangerlussuaq	54.45	16	P	P	09 15 06.6	-0.6
SFJD				pmax	pmax		
	comp=Z,308nm,1.7s						
SFJD				MLR	MLR		
	comp=Z,17µm,20.0s						
SFJD	Kangerlussuaq	54.45	16	i P	P	09 15 09.3	+2.0
SFJD				IAmb	IAmb	09 15 14.8	
	comp=Z,131nm,1.3s						
ISA	Isabella, Lake	54.48	77	P	P	09 15 07.4	-0.7
ISA	Isabella, Lake	54.48	77	P	P	09 15 07.4	-0.7
ISA				pmax	pmax		
	comp=Z,101nm,1.1s						
ISA				MLR	MLR		
	comp=Z,8µm,18.0s						
S11A	Rachel	54.50	74	P	P	09 15 08.1	-0.1
S11A				IAMs_20	IAMs_20	09 40 46.1	
	comp=Z,10µm,18.0s						
BCW	Bitter Crk WRg	54.51	79	P	P	09 15 08.6	+0.3
JLU	Jordanelle	54.61	68	IAmb	IAmb	09 15 29.6	
	comp=Z,250nm,1.4s						
FAUS	Fauske	54.63	346	eP	P	09 15 08.1	-0.4
FAUS				IVmB_BB		09 15 21.8	
	comp=Z,2µm,2.1s						
FAUS				eS	S	09 22 49.6	+2.8
FAUS				IVMs_BB	IVMs_BB	09 36 27.7	
	comp=Z,5µm,22.1s						
WCT	Wildcat Mounta	54.66	75	IAmb	IAmb	09 15 40.0	
	comp=Z,180nm,1.4s						
WCT				IAMs_20	IAMs_20	09 38 16.2	
	comp=Z,10µm,19.0s						
TPNV	Topopah Spring	54.74	75	IAMs_20	IAMs_20	09 36 22.6	
	comp=Z,12µm,21.0s						
TPNV	Topopah Spring	54.74	75	⇑P	P	09 15 10.1	+0.1
QIZ	Qiongzhong	54.75	250	P	P	09 15 10.0	0.0
QIZ				pmax	pmax		
	comp=Z,120nm,1.0s						
QIZ				pmax	pmax		
	comp=Z,2µm,6.9s						
QIZ				LR	LR		
	comp=Z,27µm,15.1s						
QIZ				LR	LR		
	comp=Z,37µm,14.3s						
TARG	Taragay, Kyrgy	54.83	294	IAMs_20	IAMs_20	09 38 59.3	
	comp=Z,22µm,19.0s						
KDJ	Kajisay	54.86	295	IAmb	IAmb	09 15 31.8	
	comp=Z,145nm,1.0s						
MPU	Maple Canyon	54.95	69	IAmb	IAmb	09 15 32.1	
	comp=Z,233nm,1.1s						
ULM	Lac du Bonnet	55.01	51	P	P	09 15 10.5	-1.0
ULM				IAmb	IAmb	09 15 21.0	
	comp=Z,471nm,1.8s						
ULM	Lac du Bonnet	55.01	51	P	P	09 15 11.4	-0.2
	comp=Z,56nm,0.7s,baz=319,slow=6.8,SNR=47						
ULM				LR	LR	09 39 39.6	
	comp=Z,10µm,21.6s,baz=328,slow=37						
ULM				PKPPKP		09 45 14.1	
	comp=Z,1.2nm,0.7s,baz=202,slow=10,SNR=2.9						
	comp=Z,56nm,0.7s						
ULM	Lac du Bonnet	55.01	51	⇑P	P	09 15 10.6	-1.0
BSUT	Blindstream Ca	55.02	68	IAmb	IAmb	09 15 31.2	
	comp=Z,299nm,1.2s						
BSUT				IAMs_20	IAMs_20	09 38 55.4	
	comp=Z,11µm,21.0s						
PRN	Pahroc Range	55.05	74	IAmb	IAmb	09 15 31.3	
	comp=Z,233nm,1.1s						
PRN	Pahroc Range	55.05	74	⇑P	P	09 15 12.5	+0.3
TKM2	Tokmak 2	55.08	296	P	P	09 15 12.0	-0.5
	SNR=33						
TKM2	Tokmak 2	55.08	296	P	P	09 15 11.8	-0.7
GWY	Greenwater Val	55.08	76	P	P	09 15 12.5	0.0
CCAC	Calif City Air	55.11	78	IAMs_20	IAMs_20	09 38 27.5	
	comp=Z,10µm,18.0s						
MDND	Maddock	55.13	55	IAMs_20	IAMs_20	09 41 41.5	
	comp=Z,15µm,18.0s						
SGDS	Sogindy	55.17	297	eP	P	09 15 12.6	-0.4
	comp=Z,107nm,1.3s						
ULHL	Ulahol	55.25	295	P	P	09 15 13.7	0.0
	SNR=13						
USP	Ospenovka	55.38	297	P	P	09 15 14.2	-0.2
	SNR=104						
SOEG	Soedalen	55.43	7	⇑P	P	09 15 15.2	+0.9
SOEG	Soedalen	55.43	7	i P	P	09 15 14.9	+0.6
SOEG				IAmb	IAmb	09 15 22.7	
	comp=Z,90nm,0.9s						
CHMS	Chumysh	55.45	297	P	P	09 15 22.0	+7.1
	SNR=7.2						
KLMR	Klimovskoe	55.47	331c	iP	P	09 15 12.4	-2.3
KLMR				e		09 16 11.4	
KLMR				S	S	09 22 57.5	-0.8
KLMR				SS	SS	09 26 45.7	+3.5
KLMR				pmax	pmax		
	comp=Z,222nm,1.2s						
KLMR				MLR	MLR		
	comp=Z,22µm,15.0s						
VAGH	Vaagaholmen	55.52	346	eP	P	09 15 15.5	+0.5
VAGH				IVmB_BB		09 15 29.9	
	comp=Z,2µm,1.6s						
VAGH				eS	S	09 22 60.0	+1.3
VAGH				IVMs_BB	IVMs_BB	09 36 00.4	
	comp=Z,4µm,21.2s						
E28A	Huff	55.56	56	IAMs_20	IAMs_20	09 41 09.1	
	comp=Z,20µm,18.0s						
KBK	Karagaybulak	55.60	297	P	P	09 15 16.0	-0.2
	SNR=28						
K22A	Casper	55.63	63	P	P	09 15 16.4	0.0
K22A				IAmb	IAmb	09 15 36.9	
	comp=Z,257nm,1.2s						
K22A				IAMs_20	IAMs_20	09 38 43.3	
	comp=Z,11µm,22.0s						
GSC	Goldstone, Bar	55.66	77	P	P	09 15 16.3	-0.3
GSC				IAmb	IAmb	09 15 47.1	
	comp=Z,398nm,1.5s						
GSC	Goldstone, Bar	55.66	77	P	P	09 15 16.3	-0.3
GSC				pmax	pmax		
	comp=Z,398nm,1.5s						
TMUT	Trail Mountain	55.70	69	IAmb	IAmb	09 15 36.0	
	comp=Z,166nm,1.0s						
MVU	Marysvale	55.75	71	IAmb	IAmb	09 15 49.5	
	comp=Z,212nm,1.3s						
PASC	Pasadena Art C	55.75	78	IAmb	IAmb	09 15 35.8	
	comp=Z,434nm,1.6s						
KONS	Konsvik	55.75	346	eP	P	09 15 17.0	+0.3
RSSD	Black Hills	55.77	61	P	P	09 15 16.4	-1.0
RSSD				IAmb	IAmb	09 15 37.3	
	comp=Z,220nm,1.1s						
RSSD	Black Hills	55.77	61	IAMs_20	IAMs_20	09 40 32.0	
	comp=Z,16µm,19.0s						
RSSD	Black Hills	55.77	61	P	P	09 15 16.5	-1.0
RSSD				pmax	pmax		
	comp=Z,220nm,1.1s						
RSSD				MLR	MLR		
	comp=Z,16µm,19.0s						
RSSD	Black Hills	55.77	61	⇑P	P	09 15 16.7	-0.8
AAK	Ala-Archa	55.84	297	P	P	09 15 18.0	+0.2
	SNR=37						
AAK	Ala-Archa	55.84	297	P	P	09 15 17.7	-0.2
AAK	Ala-Archa	55.84	297	P	P	09 15 17.4	-0.5
	comp=Z,63nm,0.8s,baz=59,slow=21,SNR=48						
AAK				S	S	09 23 05.0	+0.9
	comp=Z,7.2nm,1.1s,baz=49,slow=20,SNR=1.8						
AAK				LR	LR	09 39 04.5	
	comp=Z,29µm,18.6s,baz=54,slow=36						
	comp=Z,63nm,0.8s						
AAK	Ala-Archa	55.84	297	P	P	09 15 17.1	-0.8
AAK				P	P	09 15 17.1	-0.8
AAK				S	S	09 23 02.0	-2.1
AAK				S	S	09 23 02.0	-2.1
AAK	Ala-Archa	55.84	297	P	P	09 15 18.1	+0.2
AAK	Ala-Archa	55.84	297	i P	P	09 15 16.8	-1.1
	SNR=40						
AAK	Ala-Archa	55.84	297	⇑P	P	09 15 17.9	0.0
MOR8	Moi Rana	55.89	346	eP	P	09 15 15.9	-1.8
MOR8				IVmB_BB		09 15 31.4	
	comp=Z,2µm,1.8s						
MOR8				eS	S	09 23 03.6	-0.1
MOR8				IVMs_BB	IVMs_BB	09 37 11.1	
	comp=Z,5µm,26.2s						
STOK	Stokkvaagen	55.92	346	eP	P	09 15 18.2	+0.3
STOK				IVmB_BB		09 15 32.3	
	comp=Z,2µm,2.9s						
STOK				eS	S	09 23 02.6	-1.6
STOK				IVMs_BB	IVMs_BB	09 36 48.7	
	comp=Z,4µm,22.2s						
P18A	Preston Nutter	55.95	68	IAmb	IAmb	09 15 40.6	
	comp=Z,262nm,1.3s						
Q16A	Castle Valley	55.99	70	IAmb	IAmb	09 15 39.8	
	comp=Z,185nm,1.1s						
SLVN	Son La	56.06	257	P	P	09 15 20.1	+0.6
SLVN				IAmb	IAmb	09 16 02.8	
	comp=Z,193nm,1.5s						
SLVN	Son La	56.06	257	P	P	09 15 20.8	+1.3
TNCH	TengChong	56.09	265	P	P	09 15 20.0	+0.1
TNCH				sP	pwP	09 15 31.5	+2.2
TNCH				PP	PP	09 17 22.8	-2.0
TNCH				S	S	09 23 08.5	+0.7
TNCH				sS	sS	09 23 23.5	+7.8
TNCH				ScS	ScS	09 25 04.0	-4.2
TNCH				pmax	pmax		
	comp=Z,50nm,0.6s						
TNCH				pmax	pmax		
	comp=Z,1µm,6.1s						
TNCH				LR	LR		
	comp=Z,37µm,17.9s						
TNCH				LR	LR		
	comp=Z,36µm,17.5s						
LEIR	Leirfjorden	56.12	346	eP	P	09 15 18.3	-1.0
LEIR				IVmB_BB		09 15 29.6	
	comp=Z,1µm,2.1s						
LEIR				eS	S	09 23 09.8	+3.0
LEIR				IVMs_BB	IVMs_BB	09 47 09.3	
	comp=Z,4µm,12.7s						
UCH	Uchtor	56.13	297	P	P	09 15 30.7	+10
	SNR=7.5						
EKS2	Erkin-Say	56.18	297	P	P	09 15 20.5	+0.3
	SNR=109						
SRU	San Rafael Swe	56.19	69	P	P	09 15 20.1	-0.4
SRU				IAmb	IAmb	09 15 39.4	
	comp=Z,232nm,1.0s						
SRU	San Rafael Swe	56.19	69	P	P	09 15 20.1	-0.4
SRU				pmax	pmax		
	comp=Z,232nm,1.0s						
SRU				MLR	MLR		
	comp=Z,8µm,20.0s						
LCMT	Little Creek M	56.31	73	P	P	09 15 21.7	+0.4
LCMT				IAmb	IAmb	09 15 40.6	
	comp=Z,157nm,1.2s						
EPLO	Experimental L	56.37	50	IAmb	IAmb	09 15 30.6	
	comp=Z,275nm,1.5s						
EPLO				IAMs_20	IAMs_20	09 42 34.1	
	comp=Z,21µm,21.0s						
V12A	Nelson	56.41	75	IAmb	IAmb	09 15 52.8	
	comp=Z,172nm,1.3s						
V12A				IAMs_20	IAMs_20	09 41 45.5	
	comp=Z,9µm,18.0s						
AGMN	Agassiz Nation	56.47	52	IAmb	IAmb	09 15 40.1	
	comp=Z,147nm,1.0s						
AGMN	Agassiz Nation	56.47	52	⇑P	P	09 15 21.5	-0.6
KNB	Kanab	56.53	72	IAmb	IAmb	09 16 13.6	
	comp=Z,296nm,1.3s						
ELS	Elsinore Mount	56.56	78	IAmb	IAmb	09 15 41.7	
	comp=Z,254nm,1.6s						
LSA	Lhasa	56.59	275		P	09 15 23.9	+0.1
LSA				IAmb	IAmb	09 15 35.9	
	comp=Z,158nm,0.8s						
LSA	Lhasa	56.59	275	P	P	09 15 24.3	+0.5
LSA				S	S	09 23 12.8	-2.2
LSA				pmax	pmax		
	comp=Z,36nm,0.7s						
LSA				LR	LR		
	comp=Z,21µm,20.1s						
LSA				LR	LR		
	comp=Z,31µm,18.0s						
LSA	Lhasa	56.59	275	P	P	09 15 23.9	+0.1
LSA				pmax	pmax		
	comp=Z,158nm,0.8s						
LSA				MLR	MLR		
	comp=Z,32µm,19.0s						
LSA	Lhasa	56.59	275	P	P	09 15 23.4	-0.4
AML	Almayashu	56.61	297	P	P	09 15 23.6	-0.1
	SNR=51						
O20A	White River Ci	56.61	67	IAMs_20	IAMs_20	09 40 16.6	
	comp=Z,12µm,21.0s						
ZIRO	ZIRO	56.76	271	eP	P	09 15 26.2	+1.6
NUUK	Nuuk	56.87	18	i P	P	09 15 27.8	+3.2
NUUK				IAmb	IAmb	09 15 32.6	
	comp=Z,112nm,1.2s						
PFO	Pinyon Flats O	57.12	78	P	P	09 15 26.0	-1.1
PFO	Pinyon Flats O	57.12	78	LR	LR	09 38 20.6	
	comp=Z,7µm,19.1s,baz=302,slow=34						
PFO	Pinyon Flats O	57.12	78	P	P	09 15 26.0	-1.1
PFO				pmax	pmax		
	comp=Z,74nm,1.2s						
DZA	Taraz	57.21	299	eP	P	09 15 26.8	-0.7
DZA	Taraz	57.21	299	eP	P	09 15 26.9	-0.7
ISOG	Isortoq, Green	57.36	11	i P	P	09 15 28.1	0.0
ISOG				IAmb	IAmb	09 15 38.0	
	comp=Z,182nm,1.3s						
KSH	Kashi	57.41	293	P	P	09 15 33.5	+4.5
KSH				sP	pwP	09 15 42.3	+4.8
KSH				S	S	09 23 29.3	+4.5
KSH				sS	sS	09 23 45.8	+13
KSH				pmax	pmax		
	comp=Z,160nm,1.5s						
KSH				pmax	pmax		
	comp=Z,540nm,5.5s						
KSH				LR	LR		
	comp=Z,50µm,15.9s						
KSH				LR	LR		
	comp=Z,48µm,15.1s						
PV21	Cone Mtn., Par	57.41	68	IAmb	IAmb	09 15 50.4	
	comp=Z,410nm,1.5s						
ANGG	Ammassalik, Gr	57.44	11	IAmb	IAmb	09 15 41.1	
	comp=Z,102nm,0.8s						
ANGG				IAMs_20	IAMs_20	09 42 07.0	
	comp=Z,17µm,19.0s						
ANGG	Ammassalik, Gr	57.44	11	i P	P	09 15 29.0	+0.4
ANGG				IAmb	IAmb	09 15 40.9	
	comp=Z,104nm,0.8s						
KK31	Karatay Array	57.45	300	P	P	09 15 29.1	-0.1
KK31	Karatay Array	57.45	300	P	P	09 15 29.1	-0.1
KK31				pmax	pmax		
	comp=Z,294nm,0.9s						
KKAR	Karatay Array	57.45	300	P	P	09 15 28.2	-1.0
KKAR	Karatay Array	57.45	300	⇑P	P	09 15 28.3	-0.9
PV23	Carpenter Ridg	57.47	68	P	P	09 15 29.8	+0.1
AKTO	Aktyubinsk	57.49	313	P	P	09 15 28.8	-0.5
	comp=Z,93nm,0.9s,baz=38,slow=6.3,SNR=93						
AKTO				S	S	09 23 24.6	-0.7
	comp=Z,2.4nm,0.9s,baz=40,slow=7.9,SNR=0.8						
AKTO				LR	LR	09 40 32.4	
	comp=Z,22µm,19.1s,baz=32,slow=36						
	comp=Z,93nm,0.9s						
AKTO	Aktyubinsk	57.49	313	P	P	09 15 29.3	0.0
PV14	Lion Creek, Pa	57.52	68	IAmb	IAmb	09 15 48.7	
	comp=Z,202nm,1.2s						
ARSB	Arslanbob	57.57	297	P	P	09 15 30.6	+0.4
ARSB	Arslanbob	57.57	297	P	P	09 15 30.6	+0.4
ARSB				pmax	pmax		
	comp=Z,338nm,1.1s						
PV04	Paradox Valley	57.57	68	IAmb	IAmb	09 16 07.8	
	comp=Z,315nm,1.2s						
AB31	Akbulak array	57.60	311	P	P	09 15 29.7	-0.3
AB31				IAmb	IAmb	09 15 49.2	
	comp=Z,334nm,1.4s						
AB31	Akbulak array	57.60	311	i P	P	09 15 29.6	-0.5
ABKAR	Akbulak array	57.60	311	P	P	09 15 29.3	-0.8
ABKAR				IAmb	IAmb	09 15 49.2	
	comp=Z,336nm,1.4s						
PV16	Nyswonger Mesa	57.62	68	IAmb	IAmb	09 15 55.4	
	comp=Z,240nm,1.0s						
PV17	East Wray Mesa	57.62	69	P	P	09 15 30.8	+0.1
DAV	Davao City (W)	57.63	227	IAMs_20	IAMs_20	09 41 49.8	
	comp=Z,18µm,21.0s						
DAV	Davao City (W)	57.63	227	LR	LR	09 41 42.7	
	comp=Z,11µm,18.6s,baz=15,slow=38						
DAV	Davao City (W)	57.63	227	P	P	09 15 31.5	+0.9
DAV				P	P	09 15 31.5	+0.9
DAV				P	P	09 15 31.5	+0.9
DAV	Davao City (W)	57.63	227	P	P	09 15 32.0	+1.4
NSS	Namsos	57.78	346	eP	P	09 15 32.3	+1.2
NSS				IVmB_BB		09 15 46.5	
	comp=Z,1µm,1.0s						
NSS				eS	S	09 23 31.7	+3.0
NSS				IVMs_BB	IVMs_BB	09 35 32.1	
	comp=Z,4µm,23.2s						
TAWA	Tawang	57.81	272	eP	P	09 15 34.1	+1.8
KEF	Keuruu	57.82	339	eP	P	09 15 33.0	+1.6
PV15	Paradox Valley	57.83	68	IAmb	IAmb	09 15 57.8	
	comp=Z,174nm,1.0s						
BRLS	Borolday	57.84	300	eP	P	09 15 33.0	+1.1
BRLS				pmax	pmax		
	comp=Z,78nm,1.2s						
BRLS	Borolday	57.84	300	eP	P	09 15 33.0	+1.1
	comp=Z,78nm,1.2s						
PV01	Paradox Valley	57.94	68	IAmb	IAmb	09 16 17.3	
	comp=Z,348nm,1.8s						
SUSD	Miller	57.97	57	P	P	09 15 32.3	-0.5
SUSD				IAmb	IAmb	09 15 52.1	
	comp=Z,216nm,0.9s						
CBX	Cerro Bola	57.99	79	P	P	09 15 32.8	-0.4
CBX				IAmb	IAmb	09 16 32.2	
	comp=Z,146nm,1.1s						
KOHI	KOHIMA	58.02	269	eP	P	09 15 34.2	+0.8
TEZP	TEZPUR	58.05	271	eP	P	09 15 34.0	+0.6
BLYC	Blythe	58.07	76	P	P	09 15 33.9	+0.3
BLYC				IAmb	IAmb	09 15 52.8	
	comp=Z,226nm,1.4s						
F33A	5 Mile Ranch,	58.14	54	P	P	09 15 33.8	-0.1
F33A				IAMs_20	IAMs_20	09 43 06.2	
	comp=Z,17µm,18.0s						
ISCO	Idaho Springs	58.21	65	IAmb	IAmb	09 15 56.7	
	comp=Z,368nm,1.4s						
ISCO				IAMs_20	IAMs_20	09 41 37.6	
	comp=Z,22µm,21.0s						
ISCO	Idaho Springs	58.21	65	⇑P	P	09 15 35.1	+0.3

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FIA1  FINESS Array S    58.22 338   P        P        09 15 33.5 -0.7
FINES FINESS Array B    58.22 338   P        P        09 15 33.4 -0.8
      comp=Z,39nm,0.9s,baz=35,slow=7.0,SNR=39
FINES                               S        S        09 23 31.7 -2.9
      comp=Z,1.7nm,0.9s,baz=26,slow=11,SNR=1.5
FINES                               LR       LR       09 44 03.1
      comp=Z,12µm,18.0s,baz=30,slow=40
FINES                               PKPPKP   P'P'df   09 45 06.3  -16
      comp=Z,3.0nm,1.0s,baz=239,slow=3.3,SNR=4.4
FINES                               PKP2bc            09 45 21.8
      comp=Z,3.8nm,0.8s,baz=104,slow=3.9,SNR=5.2
      comp=Z,39nm,0.9s
CCX   Cicese            58.33  79   P        P        09 15 35.6 +0.2
CCX                                 IAmb     IAmb     09 16 34.8
      comp=Z,371nm,2.0s
IUG   Iuzhnay           58.41 299  eP        P        09 15 35.5 -0.4
IUG                                 pmax     pmax
      comp=Z,66nm,0.7s
IUG   Iuzhnay           58.41 299  eP        P        09 15 35.6 -0.4
      comp=Z,66nm,0.7s
WUAZ  Wupatki           58.43  72   P        P        09 15 36.5 +0.2
WUAZ                                IAmb     IAmb     09 15 57.0
      comp=Z,140nm,1.1s
WUAZ  Wupatki           58.43  72  ⇑P        P        09 15 37.4 +1.1
GLA   Glamis            58.43  77   P        P        09 15 36.3 +0.1
GLA                                 IAmb     IAmb     09 15 55.4
      comp=Z,291nm,1.5s
GLA                                 IAMs_20  IAMs_20  09 40 49.3
      comp=Z,9µm,19.0s
GLA   Glamis            58.43  77   P        P        09 15 36.3 +0.1
GLA                                 pmax     pmax
      comp=Z,291nm,1.5s
GLA                                 MLR      MLR
      comp=Z,9µm,19.0s
CHM   Chimkent          58.48 300  eP        P        09 15 35.9 -0.5
CHM                                 pmax     pmax
      comp=Z,49nm,0.8s
CHM                                 MLR      MLR
      comp=Z,6µm,12.0s
CHM   Chimkent          58.48 300  eP        P        09 15 36.0 -0.5
      comp=Z,49nm,0.8s
CHM                                 LR       LR       09 42 00.9
      comp=Z,6µm,11.8s
ESJX  Sierra Juarez     58.62  78   P        P        09 15 38.3 +0.7
EYMN  Ely               58.64  50   P        P        09 15 36.8 -0.6
EYMN                                IAmb     IAmb     09 15 56.7
      comp=Z,286nm,1.3s
EYMN  Ely               58.64  50   IAMs_20  IAMs_20  09 43 52.2
      comp=Z,17µm,19.0s
EYMN  Ely               58.64  50  ⇑P        P        09 15 36.2 -1.2
MVCO  Mesa Verde        58.67  69   P        P        09 15 37.6 -0.5
MVCO  Mesa Verde        58.67  69  ⇑P        P        09 15 38.1 +0.1
Y14A  Wickenburg        58.75  75   P        P        09 15 38.8 +0.4
PUL   Pulkovo           58.76 335deP         P        09 15 36.9 -1.1
PUL                                 pmax     pmax
      comp=Z,51nm,0.8s
PUL                                 MLR      MLR
      comp=Z,23µm,15.0s
IMP   Imphal            58.80 269  eP        P        09 15 38.9  0.0
TBO   Thunder Bay       58.97  48   IAmb     IAmb     09 15 57.8
      comp=Z,154nm,1.3s
Q24A  Divide            59.07  65   IAMs_20  IAMs_20  09 43 35.5
      comp=Z,10µm,19.0s
OGNE  Ogallala          59.13  62   P        P        09 15 41.1 +0.1
OGNE                                IAMs_20  IAMs_20  09 41 42.9
      comp=Z,16µm,22.0s
OGNE  Ogallala          59.13  62  ⇑P        P        09 15 42.0 +1.0
VTX   Valle De La Tr    59.17  79   P        P        09 15 41.2 -0.2
X16A  Lo Mia Camp, P    59.23  73   P        P        09 15 42.3 +0.5
X16A                                IAMs_20  IAMs_20  09 39 57.1
      comp=Z,10µm,22.0s
BORG  Borgarnes         59.36   3   LR       LR       09 42 57.9
      comp=Z,7µm,18.2s,baz=354,slow=38
BORG  Borgarnes         59.36   3  ⇑P        P        09 15 45.4 +3.3
RAF   Rauma             59.48 340  eP        P        09 15 42.4 -0.6
ECSD  EROS Data Cent    59.60  56  ⇑P        P        09 15 42.9 -1.2
MANU  Manus Island      59.60 200   IAMs_20  IAMs_20  09 36 23.7
      comp=Z,10µm,22.0s
E38A  The Farm, Brul    59.65  51   IAmb     IAmb     09 16 03.3
      comp=Z,180nm,1.1s
E38A                                IAMs_20  IAMs_20  09 42 57.1
      comp=Z,13µm,19.0s
MEF   Metsahovi         59.69 338  eP        P        09 15 44.0 -0.4
SDCO  Great Sand Dun    59.82  66   IAMs_20  IAMs_20  09 42 42.3
      comp=Z,19µm,20.0s
SDCO  Great Sand Dun    59.82  66  ⇑P        P        09 15 46.2 +0.2
GTK   Tadong            59.85 275  eP        P        09 15 46.5 +0.3
BELG  Belogornoye       59.90 321   LR       LR       09 43 15.6
      comp=Z,17µm,20.2s,baz=28,slow=38
BELG  Belogornoye       59.90 321d iP        P        09 15 45.5 -0.5
BELG                                pmax     pmax
      comp=Z,91nm,0.9s
BELG                                MLR      MLR
      comp=Z,5µm,16.0s
X18A  Snowflake         59.94  72   P        P        09 15 47.2 +0.4
X18A                                IAmb     IAmb     09 16 07.6
      comp=Z,170nm,1.0s
SFX   San Felipe        59.96  78   P        P        09 15 46.3 -0.3
SPMN  Marine on St.     60.18  53   IAmb     IAmb     09 16 06.0
      comp=Z,96nm,0.9s
MOL   Molde             60.23 348  eP        P        09 15 48.0 -0.1
MOL                                 IVmB_BB           09 16 02.0
      comp=Z,2µm,2.4s
MOL                                eS        S        09 24 01.6 +1.2
MOL                                 IVMs_BB  IVMs_BB  09 36 03.7
      comp=Z,3µm,25.6s
IVI   Ivigtut           60.25  17   P        P        09 15 48.6 +0.4
IVI   Ivigtut           60.25  17  i P       P        09 15 48.6 +0.4
IVI                                 IAmb     IAmb     09 15 55.4
      comp=Z,151nm,1.0s
KSCO  Kaye Shedlock'    60.31  64   IAMs_20  IAMs_20  09 43 03.2
      comp=Z,16µm,20.0s
MOS   Moscow            60.34 328  eP        P        09 15 47.8 -1.1
MOS                                e                  09 16 03.1
MOS                                eS        S        09 23 59.5 -2.5
MOS                                eSS       SS       09 28 01.1 +2.4
MOS                                 pmax     pmax
      comp=Z,203nm,0.9s
DOMB  Dombas            60.55 347  eP        P        09 15 49.7 -0.6
DOMB                                IVmB_BB           09 16 05.3
      comp=Z,2µm,2.3s
DOMB                               eS        S        09 24 04.9 +0.1
DOMB                               eSS       SS       09 28 08.7 +6.8
DOMB                                IVMs_BB  IVMs_BB  09 46 05.7
      comp=Z,5µm,14.9s
BGNE  Belgrade          60.66  59   P        P        09 15 51.4 -0.1
BGNE                                IAMs_20  IAMs_20  09 44 17.3
      comp=Z,15µm,18.0s
AKN   Aaknes            60.67 348  eP        P        09 15 50.9 -0.2
AKN                                 IVmB_BB           09 16 03.9
      comp=Z,3µm,2.7s
AKN                                eS        S        09 24 08.6 +2.3
AKN                                 IVMs_BB  IVMs_BB  09 47 06.4
      comp=Z,4µm,15.0s
SGSI  Sangihe           60.72 226   P        P        09 15 53.4 +1.4
NRS   Narsarsuaq        60.73  16   P        P        09 15 50.9 -0.6
NRS   Narsarsuaq        60.73  16   P        P        09 15 50.9 -0.6
NRS                                 pmax     pmax
      comp=Z,421nm,1.7s
NRS   Narsarsuaq        60.73  16  i P       P        09 15 51.0 -0.6
NRS                                 IAmb     IAmb     09 16 01.4
      comp=Z,79nm,0.9s
VSU   Vasula            60.77 336deP         P        09 15 51.1 -0.7
VSU                                 pmax     pmax
      comp=Z,67nm,1.0s
VSU                                 MLR      MLR
      comp=Z,17µm,16.0s
VSU   Vasula            60.77 336  eP        P        09 15 51.5 -0.4
VSU   Vasula            60.77 336  ⇑P        P        09 15 50.9 -0.9
CHTO  Chiang Mai        60.81 260   P        P        09 15 52.7  0.0
CHTO                                IAmb     IAmb     09 16 03.4
      comp=Z,209nm,1.1s
CHTO  Chiang Mai        60.81 260   P        P        09 15 52.4 -0.3
CHTO                                P        P        09 15 52.4 -0.3
CHTO                                P        P        09 15 52.4 -0.3
CHTO                                S        S        09 24 07.4 -1.8
CHTO                                S        S        09 24 07.4 -1.8
CHTO                                S        S        09 24 07.4 -1.8
CHTO  Chiang Mai        60.81 260   P        P        09 15 53.3 +0.6
CHTO  Chiang Mai        60.81 260   P        P        09 15 52.7  0.0
CHTO                                pmax     pmax
      comp=Z,209nm,1.1s
CHTO                                MLR      MLR
      comp=Z,31µm,19.0s
CHTO  Chiang Mai        60.81 260  ⇑P        P        09 15 52.5 -0.3
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T25A  Trinidad          60.84  66   P        P        09 15 52.1 -0.8
T25A                                IAmb     IAmb     09 16 13.1
      comp=Z,122nm,1.1s
T25A                                IAMs_20  IAMs_20  09 43 41.4
      comp=Z,13µm,22.0s
I37A  Lemond, Waseca    60.85  54   P        P        09 15 52.4 -0.2
I37A                                IAmb     IAmb     09 16 11.1
      comp=Z,180nm,0.9s
HNLY  HANLEY            60.93 286  eP        P        09 15 53.3 -0.7
RABL  Rabaul            60.94 194   IAMs_20  IAMs_20  09 36 54.2
      comp=Z,9µm,22.0s
NC303 NORSAR Array S    61.03 345   IAmb     IAmb     09 16 17.0
      comp=Z,235nm,1.4s
NC204 NORSAR Array S    61.06 346   P        P        09 15 53.3 -0.6
NC204                               IAmb     IAmb     09 16 06.5
      comp=Z,142nm,0.9s
L34A  Svendsen Farm,    61.07  57   IAMs_20  IAMs_20  09 44 20.0
      comp=Z,17µm,19.0s
NC405 NORSAR Array S    61.09 345   P        P        09 15 53.4 -0.6
NC405                               IAmb     IAmb     09 16 11.8
      comp=Z,234nm,1.2s
COWI  Conover           61.09  50   P        P        09 15 53.6 -0.7
COWI                                IAmb     IAmb     09 16 03.6
      comp=Z,394nm,2.0s
COWI                                IAMs_20  IAMs_20  09 45 18.0
      comp=Z,16µm,19.0s
COWI  Conover           61.09  50  ⇑P        P        09 15 53.4 -0.9
CM31  Chiang Mai Arr    61.10 260   P        P        09 15 54.9 +0.3
CM31                                IAmb     IAmb     09 16 05.6
      comp=Z,124nm,0.8s
CM31  Chiang Mai Arr    61.10 260   P        P        09 15 54.5 -0.1
      SNR=59
CM31                                P        P        09 15 54.5 -0.1
      SNR=59
CM31                                S        S        09 24 12.5 -0.3
CM31                                S        S        09 24 12.5 -0.3
CMAR  Chiang Mai Arr    61.10 260   P        P        09 15 55.1 +0.5
      comp=Z,23nm,0.7s,baz=18,slow=7.2,SNR=49
CMAR                                LR       LR       09 43 47.7
      comp=Z,29µm,18.2s,baz=35,slow=38
CMAR                                PKP2bc            09 45 16.7
      comp=Z,0.8nm,0.3s,baz=223,slow=4.3,SNR=4.2
      comp=Z,23nm,0.7s
OBN   Obninsk           61.18 329   P        P        09 15 54.1 -0.6
OBN   Obninsk           61.18 329   LR       LR       09 43 21.9
      comp=Z,17µm,21.5s,baz=331,slow=37
OBN   Obninsk           61.18 329d iP        P        09 15 54.4 -0.3
OBN                                i                  09 16 39.3
OBN                                i S       S        09 24 02.7  -10
OBN                                 pmax     pmax
      comp=Z,332nm,1.3s
OBN                                 MLR      MLR
      comp=Z,25µm,24.0s
MTSE  Matsula           61.19 338  eP        P        09 15 54.7 +0.1
TUC   Tucson            61.19  74   P        P        09 15 54.6 -0.6
TUC   Tucson            61.19  74   P        P        09 15 54.6 -0.6
TUC                                 pmax     pmax
      comp=Z,46nm,1.1s
TUC                                 MLR      MLR
      comp=Z,7µm,21.0s
NB201 NORSAR Array S    61.21 345   P        P        09 15 54.3 -0.5
NB201                               IAmb     IAmb     09 16 13.3
      comp=Z,153nm,0.9s
NOA   NORSAR Array B    61.23 345   P        P        09 15 54.0 -1.0
      comp=Z,18nm,0.7s,baz=17,slow=6.8,SNR=79
NOA                                 PKP2bc            09 45 20.3
      comp=Z,4.1nm,1.0s,baz=168,slow=3.1,SNR=4.2
NOA                                 LR       LR       09 47 05.6
      comp=Z,9µm,18.1s,baz=5.0,slow=41
      comp=Z,18nm,0.7s
G40A  Rib Lake          61.29  51   P        P        09 15 54.9 -0.7
G40A                                IAMs_20  IAMs_20  09 43 58.3
      comp=Z,14µm,20.0s
NBO00 NORSAR Array S    61.30 346   P        P        09 15 54.9 -0.5
DLV    Lat              61.38 247   IAMs_20  IAMs_20  09 41 42.1
      comp=Z,18µm,21.0s
DLV    Lat              61.38 247  ⇑P        P        09 15 57.9 +1.2
FOO   Floro             61.46 349  eP        P        09 15 56.5 +0.1
FOO                                 IVmB_BB           09 16 08.2
      comp=Z,2µm,2.0s
FOO                                eS        S        09 24 18.4 +2.3
FOO                                 IVMs_BB  IVMs_BB  09 37 52.3
      comp=Z,3µm,22.9s
NAO01 NORSAR Array S    61.46 345   IAmb     IAmb     09 16 15.8
      comp=Z,304nm,1.6s
ANMO  Albuquerque       61.46  69   P        P        09 15 57.0 -0.2
ANMO  Albuquerque       61.46  69   LR       LR       09 40 54.9
      comp=Z,5µm,20.9s,baz=57,slow=34
ANMO  Albuquerque       61.46  69   P        P        09 15 57.0 -0.2
ANMO                                pmax     pmax
      comp=Z,52nm,1.0s
ANMO                                MLR      MLR
      comp=Z,6µm,21.0s
ANMO  Albuquerque       61.46  69  ⇑P        P        09 15 57.0 -0.2
NC602 NORSAR Array S    61.47 345   P        P        09 15 56.1 -0.5
NC602 NORSAR Array S    61.47 345  eP        P        09 15 56.5 -0.1
JAY   Jayapura          61.53 207   P        P        09 15 58.9 +1.3
      comp=Z,7.7nm,0.8s,baz=342,slow=7.2,SNR=10.0
JAY                                 LR       LR       09 42 39.2
      comp=Z,5µm,19.0s,baz=16,slow=36
      comp=Z,7.7nm,0.8s
JAY   Jayapura          61.53 207   P        P        09 16 01.8 +4.3
BAKI  Biak              61.54 212   P        P        09 16 00.5 +2.9
      comp=Z,8µmcomp=Z,7µmcomp=Z,309nm,1.0s
SIMJ  Simiganj          61.58 298   P        P        09 15 57.3 -0.5
HFS   Hagfors           61.73 344   P        P        09 15 56.9 -1.4
      comp=Z,19nm,0.7s,baz=46,slow=4.7,SNR=39
HFS                                 S        S        09 24 17.5 -2.2
      comp=Z,1.6nm,0.8s,baz=30,slow=21,SNR=1.6
HFS                                 LR       LR       09 44 05.1
      comp=Z,13µm,21.5s,baz=19,slow=37
      comp=Z,19nm,0.7s
GENI  Genyem            61.74 207   P        P        09 16 01.9 +3.0
      comp=Z,7µmcomp=Z,7µmcomp=Z,192nm,0.7s
GENI  Genyem            61.74 207  ⇑P        P        09 16 01.6 +2.7
HYA   Hoyanger          61.75 348  eP        P        09 15 59.4 +1.0
HYA                                 IVmB_BB           09 16 09.3
      comp=Z,2µm,2.7s
HYA                                eS        S        09 24 21.3 +1.4
HYA                                 IVMs_BB  IVMs_BB  09 38 27.9
      comp=Z,4µm,26.2s
BRDH  Bariadhala        61.79 269   LR       LR       09 47 28.0
      comp=Z,22µm,18.7s,baz=42,slow=41
SCHQ  Schefferville     61.82  31   P        P        09 15 58.6 -0.4
      comp=Z,43nm,0.6s,baz=343,slow=5.6,SNR=53
SCHQ                                LR       LR       09 45 15.7
      comp=Z,11µm,20.1s,baz=324,slow=38
SCHQ                                PKP2bc            09 45 18.7
      comp=Z,7.1nm,1.0s,baz=113,slow=3.9,SNR=4.8
      comp=Z,43nm,0.6s
Y22D  IRIS PASSCAL I    61.89  70   IAmb     IAmb     09 16 56.7
      comp=Z,195nm,1.1s
Y22D                                IAMs_20  IAMs_20  09 42 04.5
      comp=Z,9µm,21.0s
Y22D  IRIS PASSCAL I    61.89  70   P        P        09 15 59.9 -0.1
      baz=321
CBKS  Cedar Bluff       61.90  62   P        P        09 15 58.6 -1.3
CBKS                                IAmb     IAmb     09 16 19.1
      comp=Z,173nm,1.1s
CBKS                                IAMs_20  IAMs_20  09 44 27.1
      comp=Z,12µm,21.0s
CBKS  Cedar Bluff       61.90  62  ⇑P        P        09 16 00.1 +0.2
DUN6  Lazy B Ranch      61.91  73   P        P        09 15 59.9 -0.3
DUN6                                IAmb     IAmb     09 16 50.8
      comp=Z,172nm,1.0s
SKAR  Skarslia          61.97 347  eP        P        09 16 00.1 +0.1
SKAR                                IVmB_BB           09 16 15.4
      comp=Z,2µm,2.3s
SKAR                               eS        S        09 24 25.6 +2.8
SKAR                                IVMs_BB  IVMs_BB  09 49 23.3
      comp=Z,6µm,15.9s
BNM   Barren Site       61.99  70   P        P        09 16 00.6 -0.2
SUE   Sulen             62.02 349  eP        P        09 16 00.7 +0.5
SUE                                eS        S        09 24 26.2 +2.9
SRNI  Srinagar          62.10 290  eP        P        09 16 02.1 +0.9
I40A  Norwalk           62.19  52   P        P        09 16 01.6 -0.1
I40A                                IAmb     IAmb     09 16 21.2
      comp=Z,113nm,1.2s
RTBA  Rita Blanca       62.23  66   P        P        09 16 01.6 -0.6
KLP   Kalpa             62.28 286  eP        P        09 16 02.6 -0.3
N35A  Tabor             62.28  57   P        P        09 16 02.1 -0.3
JOSI  Joshimath         62.33 284  eP        P        09 16 02.7 -0.4
OSL   Oslo              62.36 345  eP        P        09 16 03.3 +0.8
OSL                                 IVmB_BB           09 16 16.2
      comp=Z,2µm,2.2s
OSL                                eS        S        09 24 30.3 +2.7
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OSL                                 IVMs_BB  IVMs_BB  09 47 35.1
      comp=Z,7µm,16.9s
RKPI  Ransiki, Papua    62.44 214   P        P        09 16 05.1 +1.5
      comp=Z,6µmcomp=Z,185nm,0.9s
SLIT  Slitere, Latvi    62.51 338  eP        P        09 16 05.2 +1.7
SLIT  Slitere, Latvi    62.51 338  ⇑P        P        09 16 02.6 -0.9
ASK   Askoy             62.53 348  eP        P        09 16 03.7 +0.1
ASK                                 IVmB_BB           09 16 12.7
      comp=Z,2µm,1.6s
ASK                                eS        S        09 24 32.4 +2.7
SCIA  State Center      62.59  55   P        P        09 16 04.2 -0.2
SCIA                                IAMs_20  IAMs_20  09 43 56.0
      comp=Z,16µm,21.0s
SCIA  State Center      62.59  55  ⇑P        P        09 16 04.2 -0.2
BER   Bergen            62.61 348  eP        P        09 16 04.1 -0.1
BER                                 IVmB_BB           09 16 14.9
      comp=Z,2µm,2.0s
BER                                eS        S        09 24 33.0 +2.3
BER                                eSS       SS       09 28 40.3 +6.3
LPSR  Galich'ya Gora    62.63 326  eP        P        09 16 03.1 -1.4
LPSR                               ePPP      PPP      09 19 48.6
LPSR                               eS        S        09 24 32.4 +1.1
LPSR                                pmax     pmax
      comp=Z,220nm,0.8s
LPSR                                smax     smax
      comp=E,4µm,10.4s
LPSR                                MLR      MLR
      comp=Z,27µm,19.0s
KKM   Kota Kinabalu     62.66 236   P        P        09 16 05.0 -0.2
KKM                                 IAMs_20  IAMs_20  09 44 48.7
      comp=Z,14µm,20.0s
TNTI  Ternate           62.67 222   P        P        09 16 07.4 +2.2
      comp=Z,4µmcomp=Z,2µmcomp=Z,160nm,1.4s
R32A  Long Quarter,     62.71  61   P        P        09 16 05.0 -0.3
R32A                                IAMs_20  IAMs_20  09 45 01.5
      comp=Z,14µm,21.0s
319A  Douglas           62.72  74   P        P        09 16 06.1 +0.5
319A                                IAmb     IAmb     09 16 26.1
      comp=Z,132nm,1.1s
PTH   Pithoragarh       62.75 283  eP        P        09 16 07.3 +1.4
DHRM  DHARAMSHALA       62.77 288  eP        P        09 16 06.3 +0.3
SWI   Sorong            62.79 218   P        P        09 16 08.0 +2.1
      comp=Z,7µmcomp=Z,372nm,1.4s
KONO  Kongsberg         62.79 346   P        P        09 16 05.0 -0.4
KONO  Kongsberg         62.79 346   IAMs_20  IAMs_20  09 48 02.6
      comp=Z,13µm,19.0s
KONO  Kongsberg         62.79 346   P        P        09 16 05.7 +0.3
KONO  Kongsberg         62.79 346  eP        P        09 16 05.3 -0.1
KONO                                IVmB_BB           09 16 17.7
      comp=Z,1µm,1.4s
KONO                               eS        S        09 24 34.8 +1.7
KONO                               eSS       SS       09 28 43.3 +6.4
KONO                                IVMs_BB  IVMs_BB  09 48 00.8
      comp=Z,5µm,15.7s
KONO  Kongsberg         62.79 346  ⇑P        P        09 16 05.4 -0.1
LGTI  Lohaghat          62.81 283  eP        P        09 16 06.5 +0.5
E46A  Sault Ste Mari    62.88  46   P        P        09 16 05.2 -1.0
E46A                                IAMs_20  IAMs_20  09 43 59.3
      comp=Z,19µm,21.0s
ODD1  Odda              62.92 348  eP        P        09 16 06.0 -0.4
ODD1                                IVmB_BB           09 16 13.0
      comp=Z,2µm,2.7s
ODD1                               eS        S        09 24 36.1 +1.2
VRH   Novokhopyorsk     62.92 323  eP        P        09 16 04.7 -1.7
VRH                                ePPP      PPP      09 19 54.3
VRH                                eS        S        09 24 32.4 -2.6
VRH                                 pmax     pmax
      comp=Z,180nm,0.7s
VRH                                 smax     smax
      comp=N,3µm,9.9s
VRH                                 MLR      MLR
      comp=Z,26µm,14.0s
THN   Thein Dam         62.94 288  eP        P        09 16 05.8 -1.0
I42A  Draeger Farm,     62.94  51   P        P        09 16 05.4 -1.3
I42A                                IAMs_20  IAMs_20  09 44 48.1
      comp=Z,16µm,20.0s
H43A  Windswept, Lux    62.97  50   P        P        09 16 06.0 -0.9
H43A                                IAMs_20  IAMs_20  09 46 25.8
      comp=Z,14µm,19.0s
JFWS  Jewell Farm       63.13  52   P        P        09 16 07.5 -0.5
JFWS                                pmax     pmax
      comp=Z,172nm,1.7s
JFWS                                MLR      MLR
      comp=Z,35µm,20.0s
JMU   Jammu             63.15 289  eP        P        09 16 08.2  0.0
STRU  Stroemstad        63.16 345  i P       P        09 16 07.4 -0.5
SMLA  Simla             63.18 286  eP        P        09 16 08.4  0.0
KSU1  Kansas State U    63.20  59   P        P        09 16 07.3 -1.2
KSU1                                IAmb     IAmb     09 16 10.4
      comp=Z,96nm,0.7s
KSU1  Kansas State U    63.20  59  ⇑P        P        09 16 07.1 -1.4
NIL   Nilore            63.29 291   P        P        09 16 09.5 +0.3
NIL   Nilore            63.29 291   P        P        09 16 09.5 +0.3
NIL                                 pmax     pmax
      comp=Z,227nm,0.9s
NIL                                 MLR      MLR
      comp=Z,34µm,18.0s
DDI   Dehra Dun         63.32 285  eP        P        09 16 08.3 -1.2
VORR  Voronezh          63.34 325  eP        P        09 16 09.2  0.0
VORR                               eS        S        09 24 40.0 -0.2
VORR                                pmax     pmax
      comp=Z,120nm,0.6s
VORR                                smax     smax
      comp=E,3µm,8.8s
VORR                                MLR      MLR
      comp=Z,14µm,13.0s
BHK   Bhakra            63.35 287  eP        P        09 16 09.3 -0.3
WAMI  Wamena            63.36 209   P        P        09 16 04.6 -5.1
L40A  Anamosa           63.37  54   P        P        09 16 07.5 -2.1
L40A                                IAMs_20  IAMs_20  09 44 22.7
      comp=Z,19µm,22.0s
BLS5  Blasjo            63.42 347  eP        P        09 16 10.7 +1.0
BLS5                               ePP       PP       09 18 28.9 +0.4
BLS5                               eS        S        09 24 44.2 +3.2
N38A  Joes South For    63.46  56   P        P        09 16 09.5 -0.7
N38A                                IAmb     IAmb     09 16 27.7
      comp=Z,110nm,0.8s
LRW   Lerwick           63.48 352  eP        P        09 16 08.6 -1.3
ISAL  Salakas           63.54 335  eP        P        09 16 12.3 +1.8
HSIG                    63.65  77   IAmb     IAmb     09 16 41.1
      comp=Z,310nm,1.9s
VSVD  Vaisvydziai       63.67 336  eP        P        09 16 13.4 +2.2
VSR   Storozhevoye      63.75 325  eP        P        09 16 11.2 -0.7
VSR                                ePPP      PPP      09 20 03.8
VSR                                eS        S        09 24 46.7 +1.4
VSR                                 pmax     pmax
      comp=Z,190nm,1.0s
VSR                                 smax     smax
      comp=E,5µm,11.0s
VSR                                 MLR      MLR
      comp=Z,34µm,20.0s
KMY   Karmoy            63.77 348  eP        P        09 16 12.2 +0.3
KMY                                eS        S        09 24 46.5 +1.3
TKRD  Thakurdwara       63.81 284  eP        P        09 16 12.4 -0.3
EPT   El Paso           63.90  72   IAmb     IAmb     09 16 33.5
      comp=Z,172nm,1.4s
VORD  Divnogorie        63.92 325  eP        P        09 16 12.0 -1.0
VORD                               eS        S        09 24 44.8 -2.6
VORD                                pmax     pmax
      comp=Z,80nm,0.8s
VORD                                smax     smax
      comp=E,2µm,7.6s
VORD                                MLR      MLR
      comp=Z,13µm,13.0s
KAN12 Harper NE Stat    63.94  62   IAmb     IAmb     09 16 31.8
      comp=Z,156nm,1.5s
I45A  Fountain          63.97  49   IAmb     IAmb     09 16 32.4
      comp=Z,162nm,0.9s
AMTX  Amarillo          63.98  66   IAMs_20  IAMs_20  09 46 06.5
      comp=Z,13µm,20.0s
AMTX  Amarillo          63.98  66  ⇑P        P        09 16 14.4 +0.6
NACGM Naroch            63.98 334  eP        P        09 16 14.7 +1.3
GLMI  Grayling          64.01  48  ⇑P        P        09 16 13.7 -0.1
PBUR  Paburge           64.07 338  eP        P        09 16 16.5 +2.6
MNK   Minsk             64.08 333  i P       P        09 16 13.9 -0.1
      comp=E,43nm,0.9s
MNK                                i P       P        09 16 13.9 -0.1
      comp=N,17nm,0.8s
MNK                                i P       P        09 16 13.9 -0.1
      comp=Z,93nm,0.9s,baz=26
MNK                                i PP      PP       09 18 36.7 +2.4
MNK                                i PPP     PPP      09 20 09.1
MNK                                i S       S        09 24 52.8 +3.6
MNK                                i SS      SS       09 29 02.4 +5.2
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MNK				*i* SSS	SSS	09 32 00.1	
MNK				*i* LQ	LQ	09 40 58.2	
MNK				*i* LR	LR	09 44 31.4	
MNK				*i* LRM	MLR	09 47 53.1	
	comp=Z,22µm,14.8s						
MNK				*i* LRM	MLR	09 47 56.1	
	comp=E,19µm,15.4s						
MNK				*i* LRM	MLR	09 48 16.6	
	comp=N,8µm,13.9s						
MNK	**Minsk**	**64.08**	**333**	*i* P	**P**	**09 16 13.9**	**-0.1**
MNK				*i*		09 18 36.7	
MNK				*i* PPP	PPP	09 20 09.0	
MNK				*i* S	**S**	**09 24 52.8**	**+3.6**
MNK				*i* SS	**SS**	**09 29 02.3**	**+5.2**
MNK				pmax	pmax		
	comp=E,43nm,0.9s						
MNK				pmax	pmax		
	comp=N,17nm,0.8s						
MNK				pmax	pmax		
	comp=Z,93nm,0.9s						
MNK				MLR	MLR		
	comp=E,19µm,15.0s						
MNK				MLR	MLR		
	comp=Z,22µm,15.0s						
MNK				MLR	MLR		
	comp=N,8µm,14.0s						
VLDQ	**Val d'Or**	**64.09**	**41**	P	**P**	**09 16 11.6**	**-2.5**
VLDQ				IAmb	IAmb	09 16 30.9	
	comp=Z,135nm,0.9s						
VLDQ				IAMs_20	IAMs_20	09 46 38.3	
	comp=Z,12µm,20.0s						
PABE	**Paberze**	**64.10**	**336**	P	**P**	**09 16 14.0**	**-0.1**
PABE	**Paberze**	**64.10**	**336**	*e*P	**P**	**09 16 14.4**	**+0.3**
MSTX	**Muleshoe**	**64.14**	**67**	IAmb	IAmb	09 16 34.5	
	comp=Z,164nm,1.1s						
MSTX				IAMs_20	IAMs_20	09 45 48.7	
	comp=Z,10µm,20.0s						
K43A	**Burlington**	**64.14**	**51**	P	**P**	**09 16 14.0**	**-0.6**
KAN01	**Argonia South**	**64.17**	**62**	P	**P**	**09 16 14.5**	**-0.4**
KAN01				IAmb	IAmb	09 16 33.3	
	comp=Z,228nm,1.3s						
KMSI	**Cibinong**	**64.17**	**226**	P	**P**	**09 16 10.6**	**-4.5**
ELIS	**Ellis County**	**64.20**	**63**	IAmb	IAmb	09 16 34.4	
	comp=Z,136nm,1.2s						
OK038	**West end E0370**	**64.21**	**63**	IAmb	IAmb	09 16 34.1	
	comp=Z,104nm,1.0s						
OK038				IAMs_20	IAMs_20	09 45 52.5	
	comp=Z,12µm,22.0s						
KAN14	**Manchester OK**	**64.22**	**62**	P	**P**	**09 16 15.1**	**-0.2**
P38A	**Dawn**	**64.25**	**57**	P	**P**	**09 16 14.6**	**-0.8**
P38A				IAMs_20	IAMs_20	09 46 19.0	
	comp=Z,12µm,18.0s						
KAN09	**Caldwell North**	**64.25**	**61**	IAmb	IAmb	09 16 33.9	
	comp=Z,133nm,1.2s						
KAN17	**Caldwell West**	**64.25**	**62**	P	**P**	**09 16 14.4**	**-1.1**
KAN17				IAmb	IAmb	09 16 33.9	
	comp=Z,261nm,1.5s						
BORU	**Boraas**	**64.26**	**343**	*i* P	**P**	**09 16 14.9**	**-0.2**
HOMB	**Homborsund**	**64.28**	**346**	*e*P	**P**	**09 16 16.3**	**+1.1**
HOMB				IVmB_BB		09 16 35.0	
	comp=Z,2µm,3.4s						
HOMB				*e*S	**S**	**09 24 54.2**	**+2.7**
HOMB				*e*SS	SS	09 29 11.2	+11
HOMB				IVMs_BB	IVMs_BB	09 49 25.3	
	comp=Z,6µm,15.7s						
HOMB	**Homborsund**	**64.28**	**346**	*i* P	**P**	**09 16 14.0**	**-1.2**
HOMB				*i* P	**pP**	**09 16 18.2**	**-2.1**
FAKI	**Fak Fak**	**64.38**	**216**	IAMs_20	IAMs_20	09 38 46.1	
	comp=Z,12µm,22.0s						
FAKI	**Fak Fak**	**64.38**	**216**	P	**P**	**09 16 17.5**	**+1.1**
SNART	**Snartemo**	**64.38**	**347**	*e*P	**P**	**09 16 16.6**	**+0.7**
SNART				IVmB_BB		09 16 25.0	
	comp=Z,3µm,2.8s						
SNART				*e*S	**S**	**09 24 53.8**	**+1.0**
SNART				IVMs_BB	IVMs_BB	09 49 06.1	
	comp=Z,9µm,16.8s						
SNART	**Snartemo**	**64.38**	**347**	*i* P	**P**	**09 16 13.0**	**-2.9**
SNART				*i* P	**pP**	**09 16 15.5**	**-5.5**
TATA	**Tatamba Isabel**	**64.40**	**185**	P	**P**	**09 16 17.0**	**+0.5**
VAR	**Varanasi**	**64.53**	**278**	*e*P	**P**	**09 16 19.7**	**+2.3**
MNTX	**Cornudas Mount**	**64.55**	**71**	IAmb	IAmb	09 16 38.0	
	comp=Z,197nm,1.2s						
MNTX	**Cornudas Mount**	**64.55**	**71**	⇑P	**P**	**09 16 17.6**	**+0.2**
LKN	**LUCKNOW**	**64.56**	**280**	*e*P	**P**	**09 16 17.5**	**-0.1**
CROK	**Carrier**	**64.57**	**62**	IAmb	IAmb	09 16 36.1	
	comp=Z,121nm,1.1s						
CROK				IAMs_20	IAMs_20	09 46 01.8	
	comp=Z,10µm,19.0s						
ONAU	**Onsala**	**64.62**	**344**	*i* P	**P**	**09 16 16.4**	**-1.0**
ALEG	**Aligegeo Malai**	**64.73**	**184**	P	**P**	**09 16 19.6**	**+1.0**
KBU	**Kabul Universi**	**64.74**	**295**	P	**P**	**09 16 19.6**	**+0.7**
L44A	**Lake County Fo**	**64.75**	**51**	IAmb	IAmb	09 16 37.0	
	comp=Z,100nm,1.0s						
KBL	**Kabul**	**64.77**	**295**	P	**P**	**09 16 18.1**	**-1.0**
KBL				IAmb	IAmb	09 16 27.7	
	comp=Z,161nm,0.9s						
KBL	**Kabul**	**64.77**	**295**	P	**P**	**09 16 17.4**	**-1.7**
	SNR=96						
KBL				P	**P**	**09 16 17.4**	**-1.7**
	SNR=96						
KBL				S	**S**	**09 24 53.3**	**-5.5**
KBL				S	**S**	**09 24 53.3**	**-5.5**
KBL	**Kabul**	**64.77**	**295**	P	**P**	**09 16 18.1**	**-1.0**
KBL				pmax	pmax		
	comp=Z,161nm,0.9s						
FRKB	**FARRUKHABAD**	**64.78**	**282**	*e*P	**P**	**09 16 20.1**	**+1.0**
CLN7	**Carlsbad 7**	**64.81**	**69**	P	**P**	**09 16 18.9**	**-0.4**
HTMS	**Hat Mesa**	**64.86**	**69**	P	**P**	**09 16 19.8**	**+0.1**
FABU	**Falkenberg**	**64.88**	**343**	*i* P	**P**	**09 16 19.2**	**0.0**
CSTR	**Hydro, Custer**	**64.89**	**63**	P	**P**	**09 16 19.5**	**-0.2**
CLNB	**Carlsbad**	**64.89**	**69**	P	**P**	**09 16 19.3**	**-0.5**
UGON	**Onchagaon**	**64.97**	**284**	*e*P	**P**	**09 16 20.1**	**-0.2**
TOLI2	**Tolitoli**	**65.01**	**229**	P	**P**	**09 16 20.5**	**-0.1**
TOLI2				IAmb	IAmb	09 16 42.3	
	comp=Z,154nm,0.9s						
BLEU	**Blekinge**	**65.01**	**341**	*i* P	**P**	**09 16 19.7**	**-0.3**
P40A	**Paris**	**65.02**	**56**	IAmb	IAmb	09 16 39.2	
	comp=Z,235nm,1.3s						
KNTI	**KHUNTI**	**65.04**	**274**	*e*P	**P**	**09 16 20.1**	**-0.8**
NDI	**New Delhi**	**65.06**	**285**	*e*P	**P**	**09 16 21.0**	**+0.2**
HQIL	**Hanson Quary C**	**65.08**	**52**	IAmb	IAmb	09 17 12.3	
	comp=Z,109nm,1.1s						
MRSI	**Marisa**	**65.09**	**228**	P	**P**	**09 16 24.0**	**+2.9**
	comp=Z,7µmcomp=Z,4µmcomp=Z,276nm,1.5s						
JMIU	**JAMIA UNIVERSI**	**65.11**	**284**	*e*P	**P**	**09 16 22.1**	**+1.0**
OK051	**E0350 and S346**	**65.13**	**61**	P	**P**	**09 16 20.7**	**-0.5**
OK051				IAMs_20	IAMs_20	09 43 14.7	
	comp=Z,15µm,22.0s						
LDR	**Lodi Road**	**65.14**	**285**	*e*P	**P**	**09 16 20.1**	**-1.2**
OK048	**Pawnee Station**	**65.15**	**61**	P	**P**	**09 16 21.1**	**-0.3**
OK048				IAMs_20	IAMs_20	09 43 15.2	
	comp=Z,15µm,22.0s						
DEL	**Delary**	**65.19**	**342**	*i* P	**P**	**09 16 21.0**	**-0.2**
DEL				*i* P	**P**	**09 16 21.0**	**-0.2**
ALBI	**Allahabad**	**65.20**	**279**	*e*P	**P**	**09 16 21.6**	**-0.1**
J47A	**Sunmer**	**65.22**	**49**	P	**P**	**09 16 22.1**	**+0.4**
J47A				IAmb	IAmb	09 16 29.4	
	comp=Z,101nm,0.9s						
BIGH	**Upper Bighouse**	**65.31**	**353**	*e*P	P	09 16 15.9	-6.0
DKNS	**Dickens**	**65.32**	**66**	IAmb	IAmb	09 16 42.0	
	comp=Z,113nm,1.1s						
M44A	**Midewin, Midew**	**65.33**	**52**	IAmb	IAmb	09 16 52.4	
	comp=Z,76nm,0.8s						
OK029	**Liberty Lake**	**65.39**	**62**	IAmb	IAmb	09 16 41.8	
	comp=Z,153nm,1.3s						
OK029				IAMs_20	IAMs_20	09 46 37.6	
	comp=Z,10µm,20.0s						
HNR	**Honiara**	**65.43**	**185**	IAMs_20	IAMs_20	09 40 51.6	
	comp=Z,16µm,20.0s						
HNR	**Honiara**	**65.43**	**185**	LR	LR	09 41 03.3	
	comp=Z,12µm,21.4s,baz=4.0,slow=32						
HDIL	**Hopedale**	**65.45**	**53**	⇑P	**P**	**09 16 21.7**	**-1.5**
QUOK	**Quay**	**65.46**	**61**	P	**P**	**09 16 23.1**	**-0.3**
I49A	**Point Hope**	**65.47**	**47**	IAMs_20	IAMs_20	09 45 38.8	
	comp=Z,17µm,21.0s						
SONA	**Sohna**	**65.47**	**284**	*e*P	**P**	**09 16 25.1**	**+1.6**
VHRN	**Van Horn**	**65.47**	**71**	IAmb	IAmb	09 16 44.8	
	comp=Z,80nm,0.8s						
POST	**Post**	**65.50**	**67**	IAmb	IAmb	09 16 27.2	
	comp=Z,98nm,0.7s						
OK052	**Battle Ridge R**	**65.56**	**62**	IAMs_20	IAMs_20	09 47 47.9	
	comp=Z,11µm,20.0s						
WMOK	**Wichita Mounta**	**65.56**	**64**	IAMs_20	IAMs_20	09 46 09.3	
	comp=Z,15µm,22.0s						
WMOK	**Wichita Mounta**	**65.56**	**64**	⇑P	**P**	**09 16 23.4**	**-0.7**
BUKO	**Buck Lake**	**65.59**	**44**	IAmb	IAmb	09 16 47.8	
	comp=Z,224nm,1.7s						
L46A	**Eue Claire**	**65.59**	**50**	P	**P**	**09 16 23.8**	**-0.2**
L46A				IAmb	IAmb	09 16 42.5	
	comp=Z,160nm,1.3s						
L46A				IAMs_20	IAMs_20	09 46 48.1	
	comp=Z,14µm,21.0s						
FUNA	**Funafuti**	**65.63**	**164**	IAMs_20	IAMs_20	09 38 53.6	
	comp=Z,15µm,20.0s						
SUW	**Suwalki**	**65.65**	**336**	*e*P	**P**	**09 16 23.3**	**-1.0**
SUW				*e*S	**S**	**09 25 09.1**	**+0.5**
SUW				*e*L	L	09 40 30.8	
	comp=Z,21µm,34.8s						
SUW	**Suwalki**	**65.65**	**336**	*e*P	**P**	**09 16 23.9**	**-0.3**
ODSA	**Odessa**	**65.70**	**68**	P	**P**	**09 16 24.8**	**-0.2**
ODSA				IAmb	IAmb	09 16 44.7	
	comp=Z,146nm,1.2s						
OKCSW	**OKLAHOMA CITY**	**65.71**	**62**	IAmb	IAmb	09 16 44.1	
	comp=Z,142nm,1.1s						
BJUU	**Bjuv**	**65.71**	**343**	*i* P	**P**	**09 16 24.6**	**0.0**
LINV	**Loch Inver, As**	**65.74**	**354**	*e*P	**P**	**09 16 22.5**	**-2.2**
SANI	**Sanana**	**65.79**	**223**	P	**P**	**09 16 26.3**	**+0.7**
SANI	**Sanana**	**65.79**	**223**	P	**P**	**09 16 29.6**	**+4.0**
	comp=Z,6µmcomp=Z,5µmcomp=Z,183nm,1.1s						
SANI	**Sanana**	**65.79**	**223**	⇑P	**P**	**09 16 25.9**	**+0.3**
SN07	**Snyder 07**	**65.79**	**66**	IAmb	IAmb	09 16 45.0	
	comp=Z,112nm,1.2s						
DEOK	**Depew**	**65.82**	**62**	IAMs_20	IAMs_20	09 46 55.0	
	comp=Z,13µm,22.0s						
LEWI	**Lewis, Hebride**	**65.83**	**355**	*e*P	**P**	**09 16 23.3**	**-2.1**
FNO	**Franklin**	**65.84**	**63**	IAmb	IAmb	09 16 45.2	
	comp=Z,244nm,1.5s						
FNO				IAMs_20	IAMs_20	09 46 06.6	
	comp=Z,10µm,22.0s						
KUDL	**Kundal**	**65.88**	**285**	*e*P	**P**	**09 16 25.7**	**-0.4**
S39A	**Bolivar**	**65.89**	**58**	IAMs_20	IAMs_20	09 48 43.2	
	comp=Z,14µm,20.0s						
R40A	**Maddies Statio**	**65.90**	**57**	IAmb	IAmb	09 16 44.8	
	comp=Z,178nm,1.0s						
R40A				IAMs_20	IAMs_20	09 47 48.9	
	comp=Z,13µm,18.0s						
MSAI	**Masohi**	**65.91**	**219**	P	**P**	**09 16 31.1**	**+4.7**
	comp=Z,6µmcomp=Z,5µmcomp=Z,304nm,1.2s						
SN05	**Snyder 5**	**65.97**	**67**	P	**P**	**09 16 26.1**	**-0.6**
LUNU	**Lund**	**66.06**	**342**	*i* P	**P**	**09 16 26.9**	**0.0**
MPSI	**Mapaga**	**66.08**	**230**	P	**P**	**09 16 29.1**	**+1.6**
	comp=Z,7µmcomp=Z,3µmcomp=Z,126nm,1.5s						
P43A	**Skaggs, Pawnee**	**66.08**	**54**	P	**P**	**09 16 26.2**	**-1.1**
P43A				IAmb	IAmb	09 16 45.8	
	comp=Z,122nm,1.0s						
TUL3	**Leonard**	**66.12**	**61**	P	**P**	**09 16 26.4**	**-1.2**
TUL3				IAmb	IAmb	09 16 46.4	
	comp=Z,276nm,1.5s						
LUWI	**Luwuk**	**66.13**	**226**	P	**P**	**09 16 27.4**	**-0.4**
LUWI	**Luwuk**	**66.13**	**226**	P	**P**	**09 16 30.9**	**+3.1**
	comp=Z,5µmcomp=Z,150nm,0.9s						
COP	**Copenhagen**	**66.18**	**343**	*i* P	**P**	**09 16 28.3**	**+0.6**
COP				IAmb	IAmb	09 16 30.2	
	comp=Z,62nm,0.5s						
SADO	**Sadowa**	**66.25**	**44**	IAmb	IAmb	09 16 46.7	
	comp=Z,193nm,2.0s						
SADO	**Sadowa**	**66.25**	**44**	LR	LR	09 47 32.4	
	comp=Z,15µm,18.6s,baz=348,slow=38						
RLO	**Rose Lookout**	**66.29**	**60**	P	**P**	**09 16 27.6**	**-1.1**
ICQ	**Pointe Anglais**	**66.34**	**34**	IAMs_20	IAMs_20	09 49 59.0	
	comp=Z,12µm,22.0s						
U38A	**Gravette**	**66.38**	**60**	P	**P**	**09 16 28.0**	**-1.2**
LDAQ	**Lac Daran**	**66.41**	**37**	P	**P**	**09 16 29.2**	**-0.2**
LDAQ				IAmb	IAmb	09 16 46.8	
	comp=Z,109nm,1.1s						
LDAQ				IAMs_20	IAMs_20	09 47 29.0	
	comp=Z,16µm,20.0s						
APSI	**Ampana**	**66.47**	**228**	P	**P**	**09 16 32.7**	**+2.7**
	comp=Z,3µmcomp=Z,254nm,1.1s						
NLAI	**Namlea**	**66.47**	**221**	P	PcP	09 16 41.3	-18
AAI	**Ambon**	**66.49**	**220**	P	**P**	**09 16 34.8**	**+4.7**
	comp=Z,7µmcomp=Z,5µmcomp=Z,292nm,1.0s						
WTFS	**Witchita Falls**	**66.49**	**64**	IAmb	IAmb	09 16 49.2	
	comp=Z,163nm,1.2s						
ALPN	**Alpine**	**66.51**	**70**	IAmb	IAmb	09 16 50.1	
	comp=Z,242nm,1.6s						
SLM	**Saint Louis**	**66.57**	**55**	IAmb	IAmb	09 16 49.2	
	comp=Z,127nm,1.1s						
CCM	**Cathedral Cave**	**66.57**	**56**	P	**P**	**09 16 29.1**	**-1.3**
CCM	**Cathedral Cave**	**66.57**	**56**	P	**P**	**09 16 29.2**	**-1.3**
CCM				pmax	pmax		
	comp=Z,330nm,1.6s						
CCM				MLR	MLR		
	comp=Z,20µm,19.0s						
CCM	**Cathedral Cave**	**66.57**	**56**	⇑P	**P**	**09 16 29.4**	**-1.0**
SGCY	**Sterling City**	**66.60**	**67**	P	**P**	**09 16 30.6**	**-0.2**
SGCY				IAmb	IAmb	09 16 50.3	
	comp=Z,225nm,1.4s						
HHAR	**Hobbs**	**66.72**	**59**	IAmb	IAmb	09 16 49.9	
	comp=Z,177nm,1.2s						
HHAR				IAMs_20	IAMs_20	09 48 28.6	
	comp=Z,15µm,18.0s						
TRQ	**Mont Tremblant**	**66.75**	**40**	IAMs_20	IAMs_20	09 46 50.3	
	comp=Z,11µm,22.0s						
N47A	**Urbana**	**66.78**	**51**	IAMs_20	IAMs_20	09 45 34.5	
	comp=Z,17µm,22.0s						
DRUM	**Mains of Drumt**	**66.78**	**352**	*e*P	**P**	**09 16 29.3**	**-2.1**
ABTX	**Abilene, Hawle**	**66.80**	**66**	IAMs_20	IAMs_20	09 45 36.2	
	comp=Z,9µm,22.0s						
MGMO	**Mountain Grove**	**66.82**	**58**	IAmb	IAmb	09 16 50.4	
	comp=Z,121nm,1.1s						
MGMO				IAMs_20	IAMs_20	09 49 02.1	
	comp=Z,13µm,20.0s						
PMG	**Port Moresby**	**66.83**	**198**	LR	LR	09 40 55.6	
	comp=Z,8µm,22.0s,baz=14,slow=32						
JHNI	**Jhansi**	**66.87**	**281**	*e*P	**P**	**09 16 30.4**	**-2.1**
Q44A	**Meyer Farm, Va**	**66.91**	**54**	P	**P**	**09 16 31.8**	**-0.8**
Q44A				IAmb	IAmb	09 16 51.1	
	comp=Z,199nm,1.5s						
Q44A				IAMs_20	IAMs_20	09 47 40.4	
	comp=Z,15µm,19.0s						
FVM	**French Village**	**67.01**	**56**	P	**P**	**09 16 31.9**	**-1.3**
FVM	**French Village**	**67.01**	**56**	P	**P**	**09 16 31.9**	**-1.3**
FVM				pmax	pmax		
	comp=Z,244nm,1.2s						
FVM				MLR	MLR		
	comp=Z,25µm,18.0s						
DELO	**Deloro Mine**	**67.05**	**43**	P	**P**	**09 16 32.5**	**-0.9**
DELO				IAMs_20	IAMs_20	09 47 46.4	
	comp=Z,17µm,21.0s						
LMQ	**La Malbaie**	**67.08**	**37**	IAmb	IAmb	09 16 53.5	
	comp=Z,191nm,1.2s						
RGN	**Rugen**	**67.12**	**342**	*e*P	**P**	**09 16 33.5**	**-0.1**
	comp=Z,251nm,0.9s,baz=16,slow=6.1						
RGN				*e*PP	**S**	**09 25 25.1**	**-1.3**
	baz=14,slow=11						
RGN				*e*S	**S**	**09 25 30.5**	**+4.1**
P46A	**Rosedale**	**67.14**	**53**	IAmb	IAmb	09 17 04.0	
	comp=Z,84nm,0.8s						
AKASG	**Malin Array Be**	**67.16**	**331**	P	**P**	**09 16 33.4**	**-0.6**
AKASG				IAmb	IAmb	09 16 50.0	
	comp=Z,102nm,0.8s						
AKASG	**Malin Array Be**	**67.16**	**331**	P	**P**	**09 16 33.0**	**-1.0**
	comp=Z,23nm,0.6s,baz=29,slow=6.4,SNR=52						
AKASG				S	**S**	**09 25 32.7**	**+5.6**
	comp=Z,0.4nm,0.3s,baz=7.3,slow=0.4,SNR=1.5						
AKASG				PKPPKP	P'P'df	09 44 58.2	-8.8
	comp=Z,2.1nm,0.6s,baz=255,slow=6.0,SNR=14						
AKASG				LR	LR	09 48 52.9	
	comp=Z,26µm,18.8s,baz=21,slow=39						
	comp=Z,23nm,0.6s						
AKASG	**Malin Array Be**	**67.16**	**331**	P	**P**	**09 16 33.4**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,102nm,0.8s						
AKBB	**Malin Array Si**	**67.16**	**331**	IAmb	IAmb	09 16 52.3	
	comp=Z,120nm,1.0s						
AKBB	**Malin Array Si**	**67.16**	**331**	*ce*P	**P**	**09 16 33.0**	**-1.0**
KIEV	**Kiev**	**67.17**	**331**	P	**P**	**09 16 33.2**	**-0.9**
KIEV				IAmb	IAmb	09 16 52.3	
	comp=Z,118nm,1.1s						
KIEV	**Kiev**	**67.17**	**331**	⇓P	**P**	**09 16 33.5**	**-0.6**
KIEV	**Kiev**	**67.17**	**331**	P	**P**	**09 16 33.4**	**-0.6**
KIEV	**Kiev**	**67.17**	**331**	*i* P	**P**	**09 16 33.0**	**-1.0**
	SNR=32						
KIEV	**Kiev**	**67.17**	**331**	⇑P	**P**	**09 16 32.6**	**-1.4**
PCI	**Palu**	**67.22**	**229**	P	P	09 16 42.6	+7.8
FW03	**Perrin-Whitt E**	**67.27**	**64**	IAMs_20	IAMs_20	09 47 02.6	
	comp=Z,14µm,21.0s						
TX31	**Lajitas Ar. Si**	**67.32**	**71**	P	**P**	**09 16 35.1**	**-0.3**
TX31				IAmb	IAmb	09 16 56.4	
	comp=Z,111nm,1.0s						
TXAR	**Lajitas Array**	**67.32**	**71**	P	**P**	**09 16 35.0**	**-0.4**
TXAR	**Lajitas Array**	**67.32**	**71**	P	**P**	**09 16 34.9**	**-0.5**
	comp=Z,54nm,0.7s,baz=306,slow=4.9,SNR=184						
TXAR				PKP2bc		09 44 59.1	
	comp=Z,1.1nm,1.0s,baz=148,slow=5.7,SNR=4.3						
TXAR				PKP2ab		09 45 12.0	
	comp=Z,2.3nm,1.0s,baz=122,slow=6.4,SNR=8.3						
	comp=Z,54nm,0.7s						
TXAR	**Lajitas Array**	**67.32**	**71**	P	**P**	**09 16 35.0**	**-0.4**
OZNA	**Ozona**	**67.39**	**68**	IAmb	IAmb	09 16 55.3	
	comp=Z,188nm,1.5s						
N49A	**Columbus Grove**	**67.39**	**50**	IAmb	IAmb	09 16 53.9	
	comp=Z,121nm,1.2s						
Z35A	**Perchaven, San**	**67.45**	**64**	IAmb	IAmb	09 16 54.8	
	comp=Z,152nm,1.2s						
Z35A				IAMs_20	IAMs_20	09 47 17.2	
	comp=Z,16µm,22.0s						
OLIL	**Olney**	**67.47**	**54**	IAmb	IAmb	09 16 54.7	
	comp=Z,188nm,1.5s						
T42A	**Van Buren**	**67.47**	**57**	P	**P**	**09 16 34.9**	**-1.2**
T42A				IAmb	IAmb	09 16 54.7	
	comp=Z,104nm,1.2s						
T42A				IAMs_20	IAMs_20	09 48 55.3	
	comp=Z,11µm,19.0s						
O48B	**Farmland**	**67.52**	**51**	P	**P**	**09 16 35.8**	**-0.7**
O48B				IAMs_20	IAMs_20	09 51 39.3	
	comp=Z,11µm,18.0s						
WBO	**Williamsburg**	**67.53**	**41**	P	**P**	**09 16 35.6**	**-0.8**
WBO				IAMs_20	IAMs_20	09 51 25.8	
	comp=Z,12µm,19.0s						
BLSP	**Bilaspur**	**67.54**	**276**	*e*P	**P**	**09 16 35.7**	**-1.1**
FW06	**Azle**	**67.58**	**64**	P	**P**	**09 16 36.2**	**-0.7**
FW06				IAMs_20	IAMs_20	09 47 10.8	
	comp=Z,18µm,22.0s						
LAWE	**Loch Awe, Argy**	**67.63**	**354**	*e*P	**P**	**09 16 34.9**	**-2.0**
LAWE				IAMs_20	IAMs_20	09 51 49.2	
	comp=Z,6µm,18.1s						
FW07	**Weatherford**	**67.68**	**64**	IAMs_20	IAMs_20	09 47 14.5	
	comp=Z,15µm,22.0s						
GOF	**Gofitskoye**	**67.70**	**319**	*ce*P	**P**	**09 16 38.2**	**+0.7**
GOF				*e*S	**S**	**09 25 37.6**	**+3.9**
MNTQ	**Montreal, Queb**	**67.70**	**40**	IAMs_20	IAMs_20	09 47 29.4	
	comp=Z,12µm,21.0s						
BKNR	**BIKANER**	**67.70**	**287**	*e*P	**P**	**09 16 37.4**	**-0.4**
MAK	**Makhachkala**	**67.77**	**315**	*e*P	**P**	**09 16 36.0**	**-2.0**
MAK				*e*		09 19 08.7	
MAK				*e*PPP	PPP	09 20 40.8	
MAK				*e*S	**S**	**09 25 33.6**	**-1.0**
MAK				*e*SS	**SS**	**09 29 47.4**	**-7.6**
MAK				pmax	pmax		
	comp=Z,302nm,1.3s						
MAK				pmax	pmax		
	comp=Z,2µm,3.2s						
MAK				smax	smax		
	comp=N,6µm,7.5s						
MAK				smax	smax		
	comp=E,6µm,10.3s						
MAK				MLR	MLR		
	comp=N,65µm,17.0s						
MAK				MLR	MLR		
	comp=Z,31µm,18.0s						
MAK				MLR	MLR		
	comp=E,70µm,15.0s						
R9F13	**Warsaw-Wawer**	**67.78**	**336**	*e*P	**P**	**09 16 42.1**	**+4.3**
PECO	**Prince Edward**	**67.78**	**43**	IAMs_20	IAMs_20	09 48 18.8	
	comp=Z,16µm,20.0s						
S44A	**Carbondale**	**67.79**	**55**	IAmb	IAmb	09 16 56.8	
	comp=Z,261nm,1.5s						
S44A				IAMs_20	IAMs_20	09 47 16.6	
	comp=Z,14µm,21.0s						
SIUC	**Southern Illin**	**67.79**	**55**	P	**P**	**09 16 37.4**	**-0.7**
SIUC				IAMs_20	IAMs_20	09 47 16.6	
	comp=Z,14µm,21.0s						
BLO	**Bloomington**	**67.81**	**52**	P	**P**	**09 16 38.0**	**-0.3**
BLO	**Bloomington**	**67.81**	**52**	P	**P**	**09 16 38.0**	**-0.3**
BLO				pmax	pmax		
	comp=Z,99nm,1.3s						
BLO				MLR	MLR		
	comp=Z,30µm,20.0s						
EDI	**Edinburgh**	**67.82**	**352**	*e*P	P	09 16 32.9	-5.2
EDI				IAMs_20	IAMs_20	09 52 16.7	
	comp=Z,7µm,17.3s						
MEDO	**Medina**	**67.87**	**45**	IAmb	IAmb	09 16 58.3	
	comp=Z,168nm,0.9s						
MEDO				IAMs_20	IAMs_20	09 47 35.1	
	comp=Z,9µm,19.0s						
LPIG	**La Paz**	**67.88**	**80**	LR	LR	09 44 19.5	
	comp=Z,3µm,19.3s,baz=330,slow=34						
FCAR	**Ozark Folk Cen**	**67.91**	**58**	IAmb	IAmb	09 16 57.3	
	comp=Z,153nm,1.1s						
D62A	**Allapoint, All**	**67.91**	**36**	IAmb	IAmb	09 16 46.7	
	comp=Z,98nm,0.9s						
D62A				IAMs_20	IAMs_20	09 50 24.7	
	comp=Z,13µm,19.0s						
O49A	**Covington**	**67.93**	**50**	IAMs_20	IAMs_20	09 48 29.1	
	comp=Z,12µm,20.0s						
SMKI	**Samarinda**	**67.95**	**232**	P	**PcP**	**09 17 00.8**	**-4.9**
PBMO	**Poplar Bluff**	**67.98**	**57**	IAmb	IAmb	09 16 58.3	
	comp=Z,144nm,0.9s						
PBMO				IAMs_20	IAMs_20	09 48 58.9	
	comp=Z,14µm,21.0s						
PGBU	**Glenifferbraes**	**68.02**	**353**	*e*P	**P**	**09 16 38.4**	**-0.9**
PGBU				IAMs_20	IAMs_20	10 04 38.9	
	comp=Z,13µm,16.9s						
J55A	**Hilton**	**68.03**	**44**	IAmb	IAmb	09 16 59.1	
	comp=Z,86nm,1.0s						
ERBR	**Yeremizino-Bor**	**68.05**	**321**	*e*P	**P**	**09 16 39.2**	**-0.5**
ERBR				*e*		09 19 14.1	
ERBR				*e*PPP	PPP	09 20 53.9	
ERBR				*e*S	**S**	**09 25 40.3**	**+2.4**
ERBR				pmax	pmax		
	comp=Z,272nm,1.1s						
ERBR				MLR	MLR		
	comp=N,60µm,15.0s						
ERBR				MLR	MLR		
	comp=Z,28µm,15.0s						
ERBR				MLR	MLR		
	comp=E,25µm,11.0s						
P48A	**Milroy**	**68.06**	**51**	P	**P**	**09 16 38.2**	**-1.6**
M52A	**Chesterland**	**68.06**	**47**	P	**P**	**09 16 39.9**	**+0.1**
M52A				IAmb	IAmb	09 16 56.6	
	comp=Z,213nm,1.4s						
LONY	**Lake Ozonia**	**68.11**	**41**	P	**P**	**09 16 39.1**	**-0.9**
LONY				IAMs_20	IAMs_20	09 51 42.2	
	comp=Z,11µm,18.0s						
LONY	**Lake Ozonia**	**68.11**	**41**	⇑P	**P**	**09 16 37.8**	**-2.3**
ERPA	**Erie**	**68.14**	**46**	IAmb	IAmb	09 16 57.0	
	comp=Z,263nm,1.6s						
ERPA	**Erie**	**68.14**	**46**	⇑P	**P**	**09 16 40.2**	**-0.1**
FW13	**Cleburne**	**68.14**	**64**	IAmb	IAmb	09 16 59.5	
	comp=Z,239nm,1.6s						
E62A	**Clayton Lake**	**68.15**	**37**	IAmb	IAmb	09 16 58.8	
	comp=Z,170nm,0.9s						
E62A				IAMs_20	IAMs_20	09 48 32.3	
	comp=Z,15µm,21.0s						
HPIG		**68.15**	**74**	IAmb	IAmb	09 17 11.1	
	comp=Z,182nm,1.7s						
N51A	**Ashland**	**68.16**	**49**	IAmb	IAmb	09 16 57.0	
	comp=Z,208nm,1.3s						
GUNA	**GUNA**	**68.18**	**282**	*e*P	**P**	**09 16 42.6**	**+1.8**
AJM	**Ajmer**	**68.19**	**285**	*e*P	**P**	**09 16 42.4**	**+1.5**
BRDY	**Brady**	**68.20**	**66**	IAmb	IAmb	09 17 00.1	
	comp=Z,282nm,1.8s						
BSEG	**Bad Segeberg**	**68.21**	**344**	*e*P	**P**	**09 16 40.3**	**-0.1**
	comp=Z,166nm,1.3s,baz=16,slow=6.1						
BSEG				*e*PP	**S**	**09 25 30.5**	**-8.9**
	baz=14,slow=11						
BSEG				*e*S	**S**	**09 25 38.8**	**-0.6**
LCAR	**Lake Charles**	**68.22**	**58**	P	**P**	**09 16 40.4**	**-0.5**
LCAR				IAMs_20	IAMs_20	09 49 53.2	
	comp=Z,13µm,19.0s						
FW14	**Alvarado**	**68.22**	**64**	IAMs_20	IAMs_20	09 47 58.8	
	comp=Z,12µm,20.0s						
FRNY	**Flat Rock**	**68.28**	**40**	IAMs_20	IAMs_20	09 48 49.9	
	comp=Z,10µm,20.0s						
USIN	**University of**	**68.29**	**54**	P	**P**	**09 16 40.1**	**-1.1**
MIAR	**Mount Ida**	**68.29**	**60**	IAmb	IAmb	09 17 00.7	
	comp=Z,239nm,1.4s						
MIAR				IAMs_20	IAMs_20	09 49 24.3	
	comp=Z,14µm,18.0s						
MIAR	**Mount Ida**	**68.29**	**60**	⇑P	**P**	**09 16 40.5**	**-0.9**
WHAR	**Wooly Hollow**	**68.31**	**59**	IAmb	IAmb	09 17 00.3	
	comp=Z,189nm,1.1s						
HLG	**Helgoland**	**68.33**	**345**	*e*P	**P**	**09 16 41.2**	**0.0**
	comp=Z,205nm,1.0s,baz=16,slow=6.1						
HLG				*e*PP	**S**	**09 25 39.8**	**-1.0**

	baz=14,slow=11						
HLG				*e*S	**S**	**09 25 40.3**	**-0.6**
EKA	**Eskdalemuir Ar**	**68.40**	**352**	P	**P**	**09 16 41.3**	**-0.4**
	comp=Z,27nm,0.7s,baz=16,slow=5.4,SNR=56						
EKA				PKP2bc		09 44 57.5	
	comp=Z,2.8nm,0.9s,baz=191,slow=4.0,SNR=4.2						
	comp=Z,27nm,0.7s						
SLBS	**Sierra La Lagu**	**68.41**	**80**	P	**P**	**09 16 42.0**	**-0.4**
SLBS				IAmb	IAmb	09 17 27.9	
	comp=Z,235nm,1.6s						
SLBS	**Sierra La Lagu**	**68.41**	**80**	⇑P	**P**	**09 16 44.5**	**+2.1**
WHTX	**Lake Whitney,**	**68.42**	**65**	IAMs_20	IAMs_20	09 49 46.9	
	comp=Z,11µm,20.0s						
ESK	**Eskdalemuir**	**68.42**	**352**	P	**P**	**09 16 42.0**	**+0.2**
ESK				IAmb	IAmb	09 17 04.5	
	comp=Z,195nm,1.2s						
ESK	**Eskdalemuir**	**68.42**	**352**	IAMs_20	IAMs_20	09 52 00.3	
	comp=Z,7µm,20.0s						
ESK	**Eskdalemuir**	**68.42**	**352**	*e*P	**P**	**09 16 38.7**	**-3.2**
ESK	**Eskdalemuir**	**68.42**	**352**	P	**P**	**09 16 42.0**	**+0.2**
ESK				pmax	pmax		
	comp=Z,195nm,1.3s						
ESK				MLR	MLR		
	comp=Z,7µm,20.0s						
JCT	**Junction City**	**68.43**	**67**	P	**P**	**09 16 41.6**	**-0.7**
JCT				IAMs_20	IAMs_20	09 48 43.4	
	comp=Z,11µm,19.0s						
JCT	**Junction City**	**68.43**	**67**	⇑P	**P**	**09 16 41.6**	**-0.7**
MMNY	**Mt. Morris Dam**	**68.45**	**44**	IAmb	IAmb	09 17 01.6	
	comp=Z,138nm,0.8s						
MMNY				IAMs_20	IAMs_20	09 51 12.5	
	comp=Z,9µm,20.0s						
WVNY	**West Valley, N**	**68.45**	**45**	IAmb	IAmb	09 17 02.0	
	comp=Z,117nm,0.8s						
ALLY	**Alegheny Colle**	**68.47**	**47**	IAmb	IAmb	09 17 02.5	
	comp=Z,175nm,0.9s						
ACSO	**Alum Creek Sta**	**68.47**	**49**	IAmb	IAmb	09 17 06.9	
	comp=Z,151nm,1.2s						
ACSO				IAMs_20	IAMs_20	09 49 53.4	
	comp=Z,15µm,20.0s						
ACSO	**Alum Creek Sta**	**68.47**	**49**	⇑P	**P**	**09 16 41.4**	**-1.0**
TREL	**Terrell**	**68.51**	**63**	IAmb	IAmb	09 17 01.8	
	comp=Z,112nm,1.0s						
J57A	**Williamstown**	**68.61**	**43**	IAmb	IAmb	09 17 02.5	
	comp=Z,125nm,1.3s						
J57A				IAMs_20	IAMs_20	09 48 54.7	
	comp=Z,11µm,20.0s						
T45A	**Paducah**	**68.62**	**55**	IAmb	IAmb	09 17 01.4	
	comp=Z,128nm,0.7s						
T45A				IAMs_20	IAMs_20	09 47 41.6	
	comp=Z,14µm,22.0s						
Z38A	**Mt. Pleasant**	**68.64**	**62**	IAmb	IAmb	09 17 02.6	
	comp=Z,159nm,1.1s						
WCI	**Wyandotte Cave**	**68.69**	**53**	P	**P**	**09 16 42.6**	**-1.2**
WCI	**Wyandotte Cave**	**68.69**	**53**	P	**P**	**09 16 42.6**	**-1.2**
WCI				pmax	pmax		
	comp=Z,441nm,2.0s						
WCI				MLR	MLR		
	comp=Z,28µm,20.0s						
WCI	**Wyandotte Cave**	**68.69**	**53**	⇑P	**P**	**09 16 43.4**	**-0.4**
NEWG	**New Galloway**	**68.69**	**353**	*e*P	P	09 16 38.7	-4.8
NEWG				IAMs_20	IAMs_20	09 40 47.9	
	comp=Z,9µm,26.8s						
X40A	**Basin Creek Fa**	**68.70**	**60**	P	**P**	**09 16 43.2**	**-0.7**
X40A				IAmb	IAmb	09 17 02.0	
	comp=Z,113nm,1.1s						
BATG	**Bathurst New B**	**68.70**	**34**	IAmb	IAmb	09 17 03.8	
	comp=Z,224nm,1.5s						
BATG				IAMs_20	IAMs_20	09 49 00.6	
	comp=Z,15µm,20.0s						
UALR	**University of**	**68.70**	**59**	P	**P**	**09 16 43.9**	**0.0**
DGPR	**DIGLIPUR**	**68.72**	**262**	*e*P	**P**	**09 16 44.1**	**-0.1**
HICK	**Hickman**	**68.74**	**56**	P	**P**	**09 16 43.9**	**-0.3**
KVAR	**Kislovodsk Arr**	**68.77**	**319**	LR	LR	09 49 11.9	
	comp=Z,23µm,18.1s,slow=38						
KIV	**Kislovodsk**	**68.78**	**319**	P	**P**	**09 16 44.5**	**+0.1**
KIV				IAmb	IAmb	09 17 29.8	
	comp=Z,122nm,0.9s						
KIV	**Kislovodsk**	**68.78**	**319**	P	**P**	**09 16 44.8**	**+0.4**
KIV				S	**S**	**09 25 45.6**	**-1.1**
KIV	**Kislovodsk**	**68.78**	**319**	⇑P	**P**	**09 16 45.5**	**+1.1**
KIV	**Kislovodsk**	**68.78**	**319**	*e*P	**P**	**09 16 43.9**	**-0.5**
KIV				*e*		09 19 16.3	
KIV				*e*S	**S**	**09 25 48.0**	**+1.2**
KIV				*e*SS	**SS**	**09 30 11.6**	**+0.9**
KIV				pmax	pmax		
	comp=Z,202nm,4.0s						
KIV				pmax	pmax		
	comp=Z,47nm,1.1s						
KIV				MLR	MLR		
	comp=Z,17µm,17.0s						
KIV	**Kislovodsk**	**68.78**	**319**	*i* P	**P**	**09 16 44.2**	**-0.2**
	SNR=65						
PEBM	**Pemiscott Bayo**	**68.79**	**57**	IAMs_20	IAMs_20	09 49 33.3	
	comp=Z,13µm,22.0s						
EDMD	**Edmundbyers**	**68.81**	**351**	*e*P	**P**	**09 16 41.4**	**-2.8**
EDMD				IAMs_20	IAMs_20	10 05 50.9	
	comp=Z,7µm,16.4s						
BKB	**Balikpapan**	**68.81**	**232**	IAMs_20	IAMs_20	09 48 32.3	
	comp=Z,10µm,19.0s						
BKB	**Balikpapan**	**68.81**	**232**	P	**P**	**09 16 49.0**	**+4.2**
GNAR	**Gosnell**	**68.84**	**57**	P	**P**	**09 16 44.0**	**-0.8**
GNAR				IAMs_20	IAMs_20	09 49 46.6	
	comp=Z,10µm,19.0s						
DRIO	**Del Rio**	**68.85**	**69**	IAmb	IAmb	09 17 04.1	
	comp=Z,139nm,1.0s						
SRIT	**Nakonsritamara**	**68.86**	**253**	IAmb	IAmb	09 17 09.6	
	comp=Z,214nm,1.2s						
HBAR	**Harrisburg**	**68.87**	**58**	P	**P**	**09 16 44.7**	**-0.3**
HBAR				IAMs_20	IAMs_20	09 50 12.5	
	comp=Z,10µm,18.0s						
KBZ	**Khabaz**	**68.89**	**318**	P	**P**	**09 16 44.6**	**-0.4**
	comp=Z,94nm,0.9s,baz=351,slow=1.1,SNR=59						
KBZ				S	**S**	**09 25 52.0**	**+4.2**
	comp=Z,0.7nm,0.4s,baz=110,slow=17,SNR=1.7						
KBZ				LR	LR	09 51 20.5	
	comp=Z,18µm,18.1s,baz=30,slow=40						
	comp=Z,94nm,0.9s						
KBZ	**Khabaz**	**68.89**	**318**	*ce*P	**P**	**09 16 45.3**	**+0.4**
LABN	**Labinsk**	**68.90**	**320**	*e*P	**P**	**09 16 45.4**	**+0.4**
LABN				*e*S	**S**	**09 25 50.6**	**+2.6**
LABN				pmax	pmax		
	comp=Z,161nm,1.1s						
LABN				MLR	MLR		
	comp=E,44µm,19.0s						
LABN				MLR	MLR		
	comp=Z,36µm,15.0s						
LABN				MLR	MLR		
	comp=N,37µm,14.0s						
AKT	**Akhty**	**68.93**	**314**	*e*P	**P**	**09 16 43.1**	**-2.3**
AKT				*e*		09 17 07.5	
AKT				*e*		09 19 17.6	
AKT				*e*S	**S**	**09 25 48.9**	**+0.2**
AKT				pmax	pmax		
	comp=E,66nm,0.5s						
AKT				pmax	pmax		
	comp=Z,2µm,3.2s						
AKT				pmax	pmax		
	comp=Z,379nm,1.1s						
AKT				pmax	pmax		
	comp=N,187nm,1.3s						
AKT				MLR	MLR		
	comp=E,33µm,16.0s						
AKT				MLR	MLR		
	comp=Z,23µm,13.0s						
AKT				MLR	MLR		
	comp=N,22µm,14.0s						
IDGL	**Inch Island, C**	**68.93**	**355**	*e*P	**P**	**09 16 44.7**	**-0.3**
IDGL	**Inch Island, C**	**68.93**	**355**	P	**P**	**09 16 44.7**	**-0.3**
GORT1	**Trebel**	**68.96**	**343**	*e*P	**P**	**09 16 44.8**	**-0.3**
	comp=N,390nm,1.4s,baz=16,slow=6.1						
GORT1				*e*PP	**S**	**09 25 50.5**	**+2.2**
	baz=14,slow=11						
SHA1	**Shidzhatmaz**	**68.97**	**319**	⇑*e*P	**P**	**09 16 46.0**	**+0.2**
GAL1	**Galloway**	**68.98**	**353**	*e*P	**P**	**09 16 41.4**	**-3.8**
GAL1				IAMs_20	IAMs_20	09 57 08.9	
	comp=Z,8µm,14.1s						
VT1	**Waterbury**	**69.02**	**40**	P	**P**	**09 16 44.7**	**-1.1**
VT1				IAMs_20	IAMs_20	09 49 14.6	
	comp=Z,9µm,20.0s						
RUE	**Ruedersdorf**	**69.02**	**341**	*e*P	**P**	**09 16 48.0**	**+2.4**
RUE	**Ruedersdorf**	**69.02**	**341**	*e*P	**P**	**09 16 45.1**	**-0.4**
	comp=Z,235nm,1.3s,baz=16,slow=6.1						
RUE				*e*PP	**S**	**09 25 46.5**	**-2.6**
	baz=14,slow=11						
RUE				*e*S	**S**	**09 25 47.0**	**-2.1**
G62A	**West of Eustis**	**69.03**	**38**	P	**P**	**09 16 45.3**	**-0.5**
O52A	**Adamsville**	**69.06**	**49**	IAMs_20	IAMs_20	09 48 35.9	
	comp=Z,14µm,20.0s						
L56A	**Greenwood**	**69.09**	**45**	IAmb	IAmb	09 17 06.0	
	comp=Z,192nm,1.1s						
L56A				IAMs_20	IAMs_20	09 48 23.5	
	comp=Z,11µm,20.0s						
RAGD	**RAYAGADA**	**69.10**	**274**	*e*P	**P**	**09 16 46.7**	**+0.1**
GDLE	**Glaisdale, N Y**	**69.11**	**351**	*e*P	**P**	**09 16 42.0**	**-4.2**
GDLE				IAMs_20	IAMs_20	09 51 23.9	
	comp=Z,11µm,20.0s						
J59A	**Piesco**	**69.12**	**42**	P	**P**	**09 16 45.7**	**-0.8**
J59A				IAMs_20	IAMs_20	09 50 23.2	
	comp=Z,11µm,19.0s						
KESW	**Keswick, Cumbr**	**69.14**	**352**	*e*P	**P**	**09 16 45.2**	**-1.1**
KESW				IAMs_20	IAMs_20	09 58 41.5	
	comp=Z,7µm,16.9s						
TTSI	**Tana Toraja**	**69.16**	**228**	P	P	09 16 55.6	+8.7
F64A	**Sherman**	**69.21**	**36**	IAMs_20	IAMs_20	09 49 54.2	
	comp=Z,14µm,21.0s						
BHPL	**Bhopal**	**69.25**	**281**	*e*P	**P**	**09 16 47.6**	**+0.1**
Q51A	**Peebles**	**69.32**	**50**	IAMs_20	IAMs_20	09 47 03.9	
	comp=Z,14µm,22.0s						
435B	**Jarrell**	**69.32**	**66**	IAmb	IAmb	09 17 07.3	
	comp=Z,182nm,1.2s						
P52A	**Corning**	**69.33**	**49**	IAMs_20	IAMs_20	09 48 25.1	
	comp=Z,13µm,20.0s						
T47A	**Sharon Grove**	**69.34**	**54**	IAmb	IAmb	09 17 06.8	
	comp=Z,320nm,1.7s						
T47A				IAMs_20	IAMs_20	09 49 14.8	
	comp=Z,14µm,19.0s						
H62A	**Milan**	**69.38**	**39**	P	**P**	**09 16 46.8**	**-1.2**
H62A				IAmb	IAmb	09 17 08.4	
	comp=Z,269nm,1.4s						
H62A				IAMs_20	IAMs_20	09 48 51.8	
	comp=Z,14µm,21.0s						
LBNH	**Lisbon**	**69.40**	**40**	IAmb	IAmb	09 17 07.8	
	comp=Z,117nm,1.2s						
LBNH				IAMs_20	IAMs_20	09 48 19.3	
	comp=Z,17µm,22.0s						
LBNH	**Lisbon**	**69.40**	**40**	⇑P	**P**	**09 16 48.4**	**+0.3**
PKME	**Peaks-Kenny Pk**	**69.42**	**37**	IAmb	IAmb	09 17 07.6	
	comp=Z,248nm,1.6s						
PKME	**Peaks-Kenny Pk**	**69.42**	**37**	⇑P	**P**	**09 16 48.4**	**+0.2**
KSM	**Kuching**	**69.45**	**240**	IAmb	IAmb	09 16 59.2	
	comp=Z,139nm,1.0s						
KSM				IAMs_20	IAMs_20	09 51 03.7	
	comp=Z,10µm,20.0s						
ACCN	**Adirondack Com**	**69.50**	**41**	IAmb	IAmb	09 17 07.7	
	comp=Z,157nm,1.5s						
ACCN				IAMs_20	IAMs_20	09 47 56.2	
	comp=Z,9µm,22.0s						
R50A	**Paris**	**69.51**	**51**	IAMs_20	IAMs_20	09 47 19.1	
	comp=Z,16µm,22.0s						
RETH	**Rethem/Aller,**	**69.52**	**344**	*e*P	**P**	**09 16 48.4**	**-0.2**
	comp=Z,143nm,1.4s,baz=16,slow=6.1						
RETH				*e*PP	**S**	**09 25 49.2**	**-5.7**
	baz=14,slow=11						
MET	**Memphis--Engin**	**69.57**	**57**	IAMs_20	IAMs_20	09 50 01.8	
	comp=Z,11µm,18.0s						
IOMK	**Kirk Michael**	**69.57**	**353**	*e*P	**P**	**09 16 45.0**	**-4.0**
IOMK				IAMs_20	IAMs_20	09 57 25.6	
	comp=Z,4µm,14.4s						
FLTG	**Flechtingen**	**69.61**	**343**	*e*P	**P**	**09 16 48.3**	**-0.9**
	comp=Z,152nm,1.3s,baz=16,slow=6.1						
FLTG				*e*PP	**S**	**09 25 54.6**	**-1.5**
	baz=14,slow=11						
FLTG				*e*S	**S**	**09 25 55.3**	**-0.8**
NRDL	**Niedersach Rie**	**69.63**	**343**	*e*P	**P**	**09 16 48.9**	**-0.4**
	comp=Z,138nm,1.3s,baz=16,slow=6.1						
NRDL				*e*PP	**S**	**09 25 54.6**	**-1.7**
	baz=14,slow=11						
NRDL				*e*S	**S**	**09 25 54.6**	**-1.7**
HPK	**Haverah Park**	**69.64**	**351**	*e*P	**P**	**09 16 48.0**	**-1.4**
HPK				IAMs_20	IAMs_20	09 51 41.2	
	comp=Z,8µm,18.3s						
CCAR	**Cane Creek**	**69.67**	**59**	IAMs_20	IAMs_20	09 51 59.8	
	comp=Z,9µm,21.0s						
WVT	**Waverly**	**69.72**	**55**	P	**P**	**09 16 48.9**	**-1.3**
WVT	**Waverly**	**69.72**	**55**	IAMs_20	IAMs_20	09 48 25.8	
	comp=Z,14µm,20.0s						
WVT	**Waverly**	**69.72**	**55**	P	**P**	**09 16 48.9**	**-1.3**
WVT				pmax	pmax		
	comp=Z,435nm,1.9s						
WVT				MLR	MLR		
	comp=Z,14µm,20.0s						
HNH	**Hanover**	**69.73**	**40**	IAmb	IAmb	09 17 14.9	
	comp=Z,169nm,1.6s						
HNH				IAMs_20	IAMs_20	09 49 45.2	
	comp=Z,11µm,21.0s						
SORM	**Soroca**	**69.73**	**330**	⇓P	**P**	**09 16 49.5**	**-0.6**
SORM	**Soroca**	**69.73**	**330**	P	**P**	**09 16 49.5**	**-0.6**
P53A	**Whipple**	**69.77**	**49**	IAmb	IAmb	09 17 37.8	
	comp=Z,138nm,1.3s						
P53A				IAMs_20	IAMs_20	09 48 58.7	
	comp=Z,13µm,21.0s						
NRDN	**NARMADA NAGAR**	**69.81**	**281**	*e*P	**P**	**09 16 51.2**	**+0.2**
ASSE	**Asse, Remlinge**	**69.89**	**343**	*e*P	**P**	**09 16 50.6**	**-0.3**
	comp=Z,457nm,1.8s,baz=16,slow=6.1						
ASSE				*e*S	**S**	**09 25 57.1**	**-2.3**
ASSE				*e*PP	**S**	**09 26 01.2**	**+1.9**
	baz=14,slow=11						
ANN	**Anapa**	**69.91**	**323**	*e*P	**P**	**09 16 50.3**	**-0.9**
ANN				*e*		09 19 30.5	
ANN				*e*PPP	PPP	09 21 05.0	
ANN				*e*S	**S**	**09 25 59.6**	**-0.2**
ANN				*e*SS	**SS**	**09 30 24.9**	**-2.8**
ANN				*e*SSS	SSS	09 33 34.0	
ANN				pmax	pmax		
	comp=E,67nm,1.1s						
ANN				pmax	pmax		
	comp=N,41nm,1.0s						
ANN				pmax	pmax		
	comp=Z,252nm,1.8s						
WVL	**Waterville**	**69.91**	**38**	IAmb	IAmb	09 17 10.7	
	comp=Z,235nm,1.6s						
ILTH	**Belurgan, Co L**	**69.91**	**354**	*e*P	**P**	**09 16 47.2**	**-3.8**
ILTH	**Belurgan, Co L**	**69.91**	**354**	P	**P**	**09 16 53.1**	**+2.0**
I62A	**Tamworth**	**69.92**	**39**	IAMs_20	IAMs_20	09 48 35.2	
	comp=Z,13µm,22.0s						
M57A	**Sunshine Farm,**	**69.94**	**45**	IAmb	IAmb	09 17 07.0	
	comp=Z,99nm,0.9s						
M57A				IAMs_20	IAMs_20	09 48 59.9	
	comp=Z,15µm,20.0s						
J61A	**Chester**	**69.95**	**40**	IAMs_20	IAMs_20	09 49 39.9	
	comp=Z,11µm,20.0s						
OJC	**Ojcow**	**69.95**	**337**	*e*P	**P**	**09 16 51.8**	**+0.4**
OJC				*e*S	**S**	**09 25 59.9**	**-0.4**
OJC				*e*L	L	09 41 55.2	
	comp=Z,20µm,36.1s						
NATX	**Nacogdoches**	**70.01**	**63**	IAMs_20	IAMs_20	09 50 17.9	
	comp=Z,12µm,20.0s						
SPSI	**Sidrap Palu**	**70.01**	**228**	P	**P**	**09 16 54.2**	**+2.1**
	comp=Z,3µmcomp=Z,166nm,1.4s						
L59A	**Walton**	**70.02**	**43**	IAmb	IAmb	09 17 10.8	
	comp=Z,140nm,1.2s						
L59A				IAMs_20	IAMs_20	09 53 02.9	
	comp=Z,12µm,19.0s						
NGP	**Nagpur**	**70.03**	**278**	*e*P	**P**	**09 16 50.5**	**-1.8**
I63A	**Otisfield**	**70.04**	**39**	IAmb	IAmb	09 17 12.0	
	comp=Z,228nm,1.5s						
I63A				IAMs_20	IAMs_20	09 51 21.2	
	comp=Z,14µm,19.0s						
G65A	**Princeton**	**70.06**	**36**	IAMs_20	IAMs_20	09 51 36.5	
	comp=Z,15µm,20.0s						
TRY	**Troy**	**70.07**	**42**	IAMs_20	IAMs_20	09 51 01.2	
	comp=Z,10µm,19.0s						
KSP	**Ksiaz**	**70.10**	**339**	*e*P	**P**	**09 16 52.6**	**+0.2**
KSP				*e*S	**S**	**09 26 02.6**	**+0.6**
KSP				*e*L	L	09 41 18.1	
	comp=Z,29µm,45.9s						
STKI	**Sintang**	**70.12**	**238**	P	**P**	**09 16 52.5**	**-0.4**
	comp=Z,7µmcomp=Z,169nm,1.0s						
VSLR	**Vesyoloye**	**70.17**	**320**	⇑*e*P	**P**	**09 16 52.9**	**0.0**
VSLR				pmax	pmax		
	comp=Z,53nm,0.8s						
VSLR				MLR	MLR		
	comp=Z,8µm,14.0s						
IBBN	**Ibbenburen**	**70.17**	**345**	*e*P	**P**	**09 16 52.4**	**-0.3**
	comp=Z,142nm,1.0s,baz=16,slow=6.1						
IBBN				*e*S	**S**	**09 25 57.8**	**-4.9**
IBBN				*e*PP	**S**	**09 26 02.6**	**-0.1**
	baz=14,slow=11						
SOC	**Sochi**	**70.18**	**320**	*d i*P	**P**	**09 16 53.2**	**+0.3**
SOC				*e*		09 19 24.4	
SOC				*e*PPP	PPP	09 21 05.7	
SOC				*e*S	**S**	**09 26 06.4**	**+3.4**
SOC				*e*SS	**SS**	**09 30 30.8**	**-1.2**
SOC				pmax	pmax		
	comp=Z,122nm,1.3s						
SOC				MLR	MLR		
	comp=Z,24µm,21.0s						
LBWR	**Ladybower, Pea**	**70.20**	**351**	*e*P	**P**	**09 16 52.5**	**-0.4**
LBWR				IAMs_20	IAMs_20	09 51 56.3	
	comp=Z,8µm,19.6s						
CLZ	**Clausthal**	**70.22**	**343**	*e*P	**P**	**09 16 52.9**	**-0.2**
	comp=Z,338nm,1.6s,baz=16,slow=6.1						
CLZ				*e*S	**S**	**09 26 02.1**	**-1.4**
CLZ				*e*PP	**S**	**09 26 03.9**	**+0.5**
	baz=14,slow=11						
SSPA	**Standing Stone**	**70.23**	**46**	P	**P**	**09 16 52.1**	**-1.2**
SSPA	**Standing Stone**	**70.23**	**46**	IAMs_20	IAMs_20	09 52 55.8	
	comp=Z,13µm,18.0s						
BNSI	**Bone**	**70.26**	**227**	P	P	09 17 02.8	+9.1
CLL	**Collm**	**70.28**	**341**	IAmb	IAmb	09 17 19.4	
	comp=Z,182nm,1.2s						
CLL				IAMs_20	IAMs_20	09 52 21.9	
	comp=Z,13µm,20.0s						
CLL	**Collm**	**70.28**	**341**	*i* P	**P**	**09 16 52.9**	**-0.5**
CLL				*e*S	**S**	**09 26 06.0**	**+1.9**
CLL				pmax	pmax		
	comp=Z,270nm,1.5s						
CLL				MLR	MLR		
	comp=Z,13µm,19.5s						
CLL	**Collm**	**70.28**	**341**	*e*P	**P**	**09 16 52.5**	**-0.9**
	comp=Z,496nm,1.9s,baz=16,slow=6.1						
CLL				*e*S	**S**	**09 26 01.1**	**-3.0**
CLL				*e*PP	**S**	**09 26 05.2**	**+1.2**
	baz=14,slow=11						
CLL	**Collm**	**70.28**	**341**	*i* P	**P**	**09 16 52.9**	**-0.5**
	comp=Z,56nm,1.4s						
CLL				*e*Pmax		09 16 56.0	
CLL				*i* Pmax		09 17 01.1	
	comp=Z,270nm,1.5s						
CLL				*e*PP	**PP**	**09 19 30.0**	**+1.7**
CLL				*e*PPP	PPP	09 21 18.0	
CLL				*e*S	**S**	**09 26 06.0**	**+1.9**
CLL				*e*x	x	09 26 26.0	
CLL				*e*x	x	09 26 43.0	
CLL				*e*SKSac	**ScS**	**09 26 58.0**	**+3.2**
CLL				*e*x	x	09 27 11.0	
CLL				*e*SS	**SS**	**09 30 39.0**	**+5.8**
CLL				*e*SSS	SSS	09 34 00.0	
CLL				AMS	AMS	09 52 00.0	
	comp=Z,13µm,19.5s						
CLL				AMS	AMS	09 54 00.0	
OXF	**Oxford**	**70.31**	**57**	⇑P	**P**	**09 16 53.0**	**-0.9**
LMN	**Caledonia Moun**	**70.36**	**34**	IAmb	IAmb	09 17 13.2	
	comp=Z,255nm,1.6s						
GGN	**Saint George**	**70.36**	**36**	P	**P**	**09 16 53.6**	**-0.3**
GGN				IAmb	IAmb	09 17 13.2	
	comp=Z,255nm,1.4s						
GGN				IAMs_20	IAMs_20	09 51 12.7	
	comp=Z,11µm,18.0s						
833A	**Chaparral WMA,**	**70.37**	**68**	IAmb	IAmb	09 17 14.2	
	comp=Z,143nm,1.0s						
S51A	**Beattyville**	**70.37**	**51**	IAMs_20	IAMs_20	09 50 28.7	
	comp=Z,11µm,20.0s						
STHS	**Stebnicka Huta**	**70.37**	**335**	*e*P	**P**	**09 16 53.7**	**-0.3**
STHS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
STHS	**Stebnicka Huta**	**70.37**	**335**	*e*P	**P**	**09 16 53.6**	**-0.4**
STHS				*e*S	**S**	**09 26 03.5**	**-1.7**
OSTC	**Ostas**	**70.39**	**339**	*e*P	**P**	**09 16 54.7**	**+0.6**
OSTC				*e*S	**S**	**09 26 11.4**	**+6.0**
OSTC	**Ostas**	**70.39**	**339**	*e*P	**P**	**09 16 54.7**	**+0.6**
CHVC	**Chvalec**	**70.39**	**339**	*e*P	**P**	**09 16 55.1**	**+0.9**
CHVC				AMS	AMS	09 48 50.0	
	comp=Z,22µm,20.9s						
CHVC	**Chvalec**	**70.39**	**339**	*e*P	**P**	**09 16 55.1**	**+0.9**
CHVC				MLR	MLR		
	comp=Z,22µm,20.9s						
WPS	**Cemaes, Angles**	**70.42**	**353**	*e*P	**P**	**09 16 53.0**	**-1.2**
Q54A	**Coxs Mills**	**70.42**	**49**	IAmb	IAmb	09 17 07.8	
	comp=Z,311nm,1.8s						
CLTN	**Cedars of Leba**	**70.44**	**54**	IAMs_20	IAMs_20	09 49 49.6	
	comp=Z,8µm,19.0s						
UPC	**Upice**	**70.48**	**339**	*e*P	**P**	**09 16 55.2**	**+0.5**
UPC				AMS	AMS	09 48 50.0	
	comp=Z,24µm,21.0s						
UPC	**Upice**	**70.48**	**339**	*e*P	**P**	**09 16 55.2**	**+0.5**
UPC				MLR	MLR		
	comp=Z,24µm,21.0s						
V48A	**Smith Brothers**	**70.50**	**55**	IAmb	IAmb	09 17 36.5	
	comp=Z,295nm,1.9s						
WLF1	**Llynfaes**	**70.52**	**353**	*e*P	**P**	**09 16 53.6**	**-1.3**
EMMW	**East Machias**	**70.53**	**36**	IAmb	IAmb	09 17 02.8	
	comp=Z,98nm,0.9s						
EMMW				IAMs_20	IAMs_20	09 50 45.0	
	comp=Z,15µm,20.0s						
N58A	**Sunbury**	**70.53**	**45**	IAmb	IAmb	09 17 14.5	
	comp=Z,136nm,1.1s						
BRG	**Berggiesshubel**	**70.53**	**341**	*e*P	**P**	**09 16 54.2**	**-0.7**
	comp=Z,283nm,1.8s,baz=16,slow=6.1						
BRG				*e*S	**S**	**09 26 05.3**	**-1.6**
BRG				*e*PP	**S**	**09 26 07.9**	**+1.0**
	baz=14,slow=11						
BRG	**Berggiesshubel**	**70.53**	**341**	*e*P	**P**	**09 16 54.5**	**-0.4**
BRG				Amp		09 16 57.3	
	comp=Z,19nm,1.1s						
BRG	**Berggiesshubel**	**70.53**	**341**	P	P	09 17 02.7	+7.7
BRG				Amp		09 17 07.9	
	comp=Z,44nm,1.0s						
BRG	**Berggiesshubel**	**70.53**	**341**	S	**S**	**09 26 04.0**	**-2.9**
BRG	**Berggiesshubel**	**70.53**	**341**	SS	SS	09 30 46.0	+9.0
BRG				PKKP		09 36 21.5	
BRG				Amp		09 36 23.4	
	comp=Z,7.2nm,0.8s						
PLAL	**Pickwick Lake**	**70.55**	**56**	IAmb	IAmb	09 16 57.7	
	comp=Z,101nm,0.8s						
DPC	**Dobruska-Polom**	**70.56**	**339**	*e*P	**P**	**09 16 55.8**	**+0.6**
DPC				*e*S	**S**	**09 26 10.6**	**+3.1**
DPC				AMS	AMS	09 48 40.0	
	comp=Z,21µm,21.2s						
DPC	**Dobruska-Polom**	**70.56**	**339**	*e*P	**P**	**09 16 55.8**	**+0.6**
DPC				*e*S	**S**	**09 26 10.6**	**+3.1**
DPC				MLR	MLR		
	comp=Z,21µm,21.2s						
GTTG	**Gottingen**	**70.57**	**343**	*e*P	**P**	**09 16 54.9**	**-0.3**
	comp=Z,172nm,1.4s,baz=16,slow=6.1						
GTTG				*e*S	**S**	**09 26 05.8**	**-1.6**
GTTG				*e*PP	**S**	**09 26 06.6**	**-0.9**
	baz=14,slow=11						
KOLS	**Kolonicke sedl**	**70.58**	**334**	*e*P	**P**	**09 16 56.1**	**+0.8**
KOLS				pmax	pmax		
	comp=Z,23nm,0.9s						
KOLS	**Kolonicke sedl**	**70.58**	**334**	*e*P	**P**	**09 16 56.1**	**+0.8**
NIE	**Niedzica**	**70.59**	**336**	*e*P	**P**	**09 16 56.9**	**+1.5**
NIE				*e*S	**S**	**09 26 10.4**	**+2.6**
NEUB	**Neuenburg**	**70.60**	**342**	*e*P	**P**	**09 16 54.7**	**-0.6**
	comp=Z,573nm,2.0s,baz=16,slow=6.1						
NEUB				*e*S	**S**	**09 26 06.3**	**-1.4**
NEUB				*e*PP	**S**	**09 26 09.3**	**+1.6**
	baz=14,slow=11						
KIS	**Kishinev**	**70.64**	**329**	*e*P	**P**	**09 16 55.0**	**-0.6**
	comp=Z,600nm,3.7s						
KIS				*i* S	**S**	**09 26 09.0**	**+0.7**
KIS	**Kishinev**	**70.64**	**329**	*ce*P	**P**	**09 16 55.0**	**-0.6**
KIS				*i* S	**S**	**09 26 09.0**	**+0.7**
KIS				*e*		09 26 27.0	
KIS				MLR	MLR		
	comp=N,10µm,13.5s						
KIS				MLR	MLR		
	comp=Z,9µm,13.0s						
WACR	**West Acre**	**70.65**	**349**	*e*P	P	09 16 48.8	-6.8
K62A	**Royalston**	**70.65**	**41**	IAMs_20	IAMs_20	09 50 41.6	
	comp=Z,10µm,19.0s						
STEB	**Steborice**	**70.66**	**338**	*e*P	**P**	**09 16 56.5**	**+0.7**
IGLA	**Glengowla, Co**	**70.67**	**356**	P	**P**	**09 16 55.8**	**+0.1**
OKC	**Ostrava-Krasne**	**70.67**	**337**	*e*P	**P**	**09 16 56.0**	**+0.2**
OKC				*e*S	**S**	**09 26 09.8**	**+1.2**
OKC				AMS	AMS	09 51 40.0	
	comp=Z,18µm,15.8s						
OKC	**Ostrava-Krasne**	**70.67**	**337**	*e*P	**P**	**09 16 56.0**	**+0.2**
OKC				*e*S	**S**	**09 26 09.8**	**+1.2**
OKC				MLR	MLR		
	comp=Z,18µm,15.8s						
L61B	**Northampton**	**70.68**	**41**	P	**P**	**09 16 55.3**	**-0.7**
L61B				IAMs_20	IAMs_20	09 52 56.2	
	comp=Z,8µm,20.0s						
DSB	**Dublin**	**70.69**	**354**	P	**P**	**09 16 56.1**	**+0.2**

DSB	Dublin	70.69	354	IAmb	IAmb	09 17 17.0	
	comp=Z,179nm,1.3s						
DSB	Dublin	70.69	354	P	P	09 16 55.5	-0.4
MILM	Milestii Mici	70.71	329	eP	P	09 16 55.0	-1.1
	comp=Z,170nm,1.5s						
MILM				M	M	09 17 11.0	
	comp=Z,1µm,3.6s						
MILM	Milestii Mici	70.71	329	i PP	PP	09 19 37.0	+4.9
MILM				eS	S	09 26 06.0	-3.1
MILM	Milestii Mici	70.71	329	⇑P	P	09 16 55.2	-0.9
MILM	Milestii Mici	70.71	329	eP	P	09 16 55.0	-1.1
MILM				i		09 17 10.0	
MILM				e		09 19 37.0	
MILM				eS	S	09 26 06.0	-3.1
MILM				i		09 26 27.0	
MILM				pmax	pmax		
	comp=Z,170nm,1.5s						
MILM				MLR	MLR		
	comp=Z,22µm,13.0s						
KRLC	Kraliky	70.73	338	eP	P	09 16 56.6	+0.3
KRLC				AMS	AMS	09 53 40.0	
	comp=Z,21µm,14.3s						
KRLC	Kraliky	70.73	338	eP	P	09 16 56.6	+0.3
KRLC				MLR	MLR		
	comp=Z,21µm,14.3s						
PVCC	Panska Ves	70.74	340	eP	P	09 16 55.6	-0.6
PVCC				AMS	AMS	09 55 30.0	
	comp=Z,20µm,13.7s						
PVCC	Panska Ves	70.74	340	eP	P	09 16 55.6	-0.6
PVCC				MLR	MLR		
	comp=Z,20µm,13.7s						
735A	Kenedy	70.76	67	IAMs_20	IAMs_20	09 50 21.1	
	comp=Z,12µm,21.0s						
Y45A	Yeager Farm, C	70.78	58	P	P	09 16 56.5	-0.3
Y45A				IAMs_20	IAMs_20	09 49 25.0	
	comp=Z,10µm,20.0s						
RICC	Richard	70.81	340	AMS	AMS	09 55 40.0	
	comp=Z,15µm,13.6s						
FOEL	Foel Wylfa	70.83	352	eP	P	09 16 52.8	-4.0
FOEL				IAMs_20	IAMs_20	09 52 25.4	
	comp=Z,7µm,18.7s						
143A	Socs Landing,	70.84	60	IAMs_20	IAMs_20	09 52 55.7	
	comp=Z,8µm,20.0s						
MORC	Moravsky Berou	70.86	338	IAMs_20	IAMs_20	09 49 00.1	
	comp=Z,15µm,21.0s						
MORC	Moravsky Berou	70.86	338	eP	P	09 16 57.1	+0.1
MORC				eS	S	09 26 11.1	+0.2
MORC	Moravsky Berou	70.86	338	⇓P	P	09 16 57.6	+0.6
MORC	Moravsky Berou	70.86	338	P	P	09 16 57.6	+0.6
HKT	Hockley	70.88	65	IAMs_20	IAMs_20	09 51 40.9	
	comp=Z,12µm,18.0s						
HKT	Hockley	70.88	65	deP	P	09 16 58.1	+0.8
HKT				pmax	pmax		
	comp=Z,59nm,1.5s						
HKT				MLR	MLR		
	comp=Z,9µm,16.0s						
KAPI	Kappang	70.97	228	P	P	09 16 57.8	-0.1
KAPI	Kappang	70.97	228	LR	LR	09 49 01.6	
	comp=Z,3µm,20.4s,baz=26,slow=37						
KAPI	Kappang	70.97	228	P	P	09 16 59.6	+1.6
KAPI				S	S	09 26 17.8	+5.0
KAPI	Kappang	70.97	228	⇑eP	P	09 16 57.9	-0.1
KAPI				pmax	pmax		
	comp=Z,101nm,1.4s						
KSCT	Kent School, K	71.00	42	IAmb	IAmb	09 17 16.5	
	comp=Z,172nm,0.9s						
LANS	Liptovska Anna	71.03	336	eP	P	09 17 00.8	+2.7
LANS				pmax	pmax		
	comp=Z,27nm,0.8s						
LANS	Liptovska Anna	71.03	336	eP	P	09 17 00.8	+2.7
BUR08	Bucovina Ar. S	71.04	332	P	P	09 16 58.0	-0.2
HRV	Adam Dziewonsk	71.04	40	P	P	09 16 58.2	+0.1
HRV	Adam Dziewonsk	71.04	40	IAMs_20	IAMs_20	09 50 52.7	
	comp=Z,9µm,20.0s						
HRV	Adam Dziewonsk	71.04	40	P	P	09 16 58.2	+0.1
HRV				pmax	pmax		
	comp=Z,80nm,1.1s						
HRV				MLR	MLR		
	comp=Z,9µm,20.0s						
BURAR	Bucovina Array	71.06	332	P	P	09 16 58.4	0.0
BURAR	Bucovina Array	71.06	332	⇓P	P	09 16 58.3	0.0
BURAR	Bucovina Array	71.06	332	P	P	09 16 58.2	-0.2
Q56A	Snyder Ridge,	71.06	47	P	P	09 16 58.4	0.0
Q56A				IAmb	IAmb	09 17 23.2	
	comp=Z,304nm,1.9s						
KULM	Kulim	71.08	250	IAmb	IAmb	09 17 19.3	
	comp=Z,94nm,0.9s						
KULM				IAMs_20	IAMs_20	09 48 00.2	
	comp=Z,16µm,22.0s						
KULM	Kulim	71.08	250	P	P	09 17 01.0	+2.2
BUG	Bochum--Univer	71.09	345	eP	P	09 16 57.6	-0.7
	comp=Z,124nm,1.1s,baz=16,slow=6.1						
BUG				ePP	S	09 26 10.6	-2.8
	baz=14,slow=11						
BUG				eS	S	09 26 13.1	-0.3
KASTN	Kahler Asten	71.15	344	eP	P	09 16 58.3	-0.4
	comp=Z,171nm,1.4s,baz=16,slow=6.1						
KASTN				ePP	S	09 26 10.6	-3.6
	baz=14,slow=11						
KASTN				eS	S	09 26 15.1	+0.8
P57A	Homestead Farm	71.17	46	IAMs_20	IAMs_20	09 50 26.5	
	comp=Z,11µm,20.0s						
MOX	Moxa	71.17	342	eP	P	09 16 58.4	-0.5
	comp=Z,148nm,1.3s,baz=16,slow=6.1						
MOX				eS	S	09 26 08.1	-6.4
MOX				ePP	S	09 26 10.6	-3.8
	baz=14,slow=11						
MOX				eL	L	09 50 40.3	
	comp=Z,12µm,20.2s						
HLM1	Long Mynd	71.17	352	eP	P	09 16 54.8	-4.0
HLM1				IAMs_20	IAMs_20	10 00 08.6	
	comp=Z,5µm,13.6s						
MAUC	Maruska	71.19	338	eP	P	09 17 00.4	+1.4
PRA	Prague	71.20	340	eP	P	09 16 59.4	+0.4
PRA				AMS	AMS	09 55 40.0	
	comp=Z,22µm,14.1s						
PRA	Prague	71.20	340	eP	P	09 16 59.4	+0.4
PRA				MLR	MLR		
	comp=Z,22µm,14.1s						
S54A	Dingess, Beckl	71.22	50	IAMs_20	IAMs_20	09 51 26.2	
	comp=Z,14µm,20.0s						
WES	Weston	71.23	40	IAmb	IAmb	09 17 23.9	
	comp=Z,171nm,1.5s						
WES				IAMs_20	IAMs_20	09 50 28.8	
	comp=Z,9µm,19.0s						
ELMS	Elmsett, Ipswi	71.24	349	eP	P	09 16 53.8	-5.4
ELMS				IAMs_20	IAMs_20	10 01 41.8	
	comp=Z,9µm,15.0s						
TANN	Tannenbergstha	71.24	341	eP	P	09 16 59.0	-0.3
	comp=Z,133nm,1.3s,baz=16,slow=6.1						
TANN				ePP	S	09 26 15.9	+0.6
	baz=14,slow=11						
TANN				eS	S	09 26 16.8	+1.4
GNI	Garni	71.25	315	P	P	09 16 59.0	-0.7
GNI	Garni	71.25	315	LR	LR	09 51 50.8	
	comp=Z,28µm,20.2s,baz=30,slow=39						
GNI	Garni	71.25	315	P	P	09 17 00.4	+0.6
GNI				P	P	09 17 00.4	+0.6
GNI				S	S	09 26 19.4	+3.4
GNI				S	S	09 26 19.4	+3.4
GNI	Garni	71.25	315	P	P	09 16 59.0	-0.7
GNI				pmax	pmax		
	comp=Z,329nm,1.2s						
GNI				MLR	MLR		
	comp=Z,26µm,20.0s						
GNI	Garni	71.25	315	P	P	09 16 59.7	0.0
LUPA	Lehigh Univers	71.26	44	IAMs_20	IAMs_20	09 50 15.8	
	comp=Z,13µm,21.0s						
PRU	Pruhonice	71.26	340	eP	P	09 17 00.2	+0.8
PRU				eS	S	09 26 18.5	+3.0
PRU				AMS	AMS	09 55 30.0	
	comp=Z,16µm,14.7s						
PRU	Pruhonice	71.26	340	eP	P	09 17 00.2	+0.8
PRU				eS	S	09 26 18.5	+3.0
PRU				MLR	MLR		
	comp=Z,16µm,14.7s						
UBBA	Unterbreizbach	71.27	343	eP	P	09 16 59.0	-0.3
	comp=Z,222nm,1.6s,baz=16,slow=6.1						
UBBA				ePP	S	09 26 11.9	-3.4
	baz=14,slow=11						
UBBA				eS	S	09 26 14.3	-1.0
GOPC	GO Pecny, Ondr	71.28	340	eP	P	09 16 59.4	-0.2
GOPC				eS	S	09 26 16.6	+0.8
GOPC				AMS	AMS	09 53 20.0	
	comp=Z,15µm,14.0s						
GOPC	GO Pecny, Ondr	71.28	340	eP	P	09 16 59.4	-0.2
GOPC				eS	S	09 26 16.6	+0.8
GOPC				MLR	MLR		
	comp=Z,15µm,14.0s						
TZTN	Tazewell	71.30	52	P	P	09 16 59.2	-0.7
BCX	Boston College	71.33	40	P	P	09 16 59.4	-0.5
BCX				IAMs_20	IAMs_20	09 52 44.4	
	comp=Z,10µm,20.0s						
SWET	Sewanee	71.34	54	P	P	09 16 59.0	-1.2
UCCT	U. Connecticut	71.41	41	IAMs_20	IAMs_20	09 51 03.7	
	comp=Z,9µm,21.0s						
BMR	Baia Mare	71.45	333	⇓P	P	09 17 01.9	+1.3
BMR	Baia Mare	71.45	333	P	P	09 17 01.8	+1.3
X48A	Hartselle	71.47	56	IAmb	IAmb	09 17 25.5	
	comp=Z,152nm,1.2s						
X48A				IAMs_20	IAMs_20	09 49 08.0	
	comp=Z,10µm,21.0s						
PAL	Palisades	71.47	43	IAmb	IAmb	09 17 24.9	
	comp=Z,337nm,1.7s						
PAL				IAMs_20	IAMs_20	09 49 02.3	
	comp=Z,10µm,21.0s						
BRNJ	Basking Ridge	71.50	43	P	P	09 16 59.5	-1.5
BRNJ				IAMs_20	IAMs_20	09 50 32.1	
	comp=Z,14µm,20.0s						
VRAC	Vranov	71.50	338	LR	LR	09 52 38.0	
	comp=Z,13µm,18.3s,baz=20,slow=40						
VRAC	Vranov	71.50	338	eP	P	09 17 01.2	+0.3
VRAC				eS	S	09 26 16.8	-1.5
VRAC	Vranov	71.50	338	⇑P	P	09 17 01.5	+0.6
VRAC	Vranov	71.50	338	P	P	09 17 01.5	+0.6
IPM	Ipoh	71.57	250	IAmb	IAmb	09 17 15.7	
	comp=Z,160nm,1.4s						
IWEX	Carrickbyrne,	71.59	354	eP	P	09 16 56.8	-4.5
IWEX	Carrickbyrne,	71.59	354	P	P	09 17 00.2	-1.1
CPNY	Central Park	71.63	43	P	P	09 17 00.6	-1.2
CPNY				IAmb	IAmb	09 17 20.6	
	comp=Z,111nm,1.1s						
CPNY				IAMs_20	IAMs_20	09 50 28.7	
	comp=Z,14µm,22.0s						
W50A	Signal Mountai	71.64	54	IAmb	IAmb	09 17 42.2	
	comp=Z,354nm,1.9s						
VBMS	Vicksburg	71.67	59	IAmb	IAmb	09 17 27.7	
	comp=Z,203nm,1.1s						
BSSI	Bau Bau, Buton	71.69	226	P	P	09 17 04.1	+1.8
	comp=Z,6µmcomp=Z,7µmcomp=Z,443nm,1.8s						
TESR	Tescani	71.69	331	⇑P	P	09 17 01.6	-0.4
JAVC	Velka Javorina	71.70	337	eP	P	09 17 03.5	+1.4
JAVC				eS	S	09 26 21.5	+0.8
SDMD	Soldier's Deli	71.70	46	IAMs_20	IAMs_20	09 49 53.5	
	comp=Z,7µm,20.0s						
N62A	Caumsett State	71.70	42	IAMs_20	IAMs_20	09 51 50.4	
	comp=Z,11µm,20.0s						
MANZ	Manzenberg	71.72	341	eP	P	09 17 01.7	-0.5
	comp=Z,21nm,1.1s,baz=16,slow=6.1						
MANZ				eS	S	09 26 20.8	0.0
MANZ				ePP	S	09 26 21.3	+0.5
	baz=14,slow=11						
TREC	Trest	71.74	339	AMS	AMS	09 54 40.0	
	comp=Z,19µm,14.9s						
FUTU	Fugatoga	71.74	162	IAMs_20	IAMs_20	09 40 15.5	
	comp=Z,8µm,22.0s						
WUPA	West Chester U	71.74	44	P	P	09 17 01.8	-0.6
WUPA				IAMs_20	IAMs_20	09 50 34.6	
	comp=Z,12µm,19.0s						
GBN	Guysborough	71.77	32	P	P	09 17 01.8	-0.7
GBN				IAMs_20	IAMs_20	09 53 16.7	
	comp=Z,14µm,21.0s						
ARCR	ARCALIA	71.77	332	⇑P	P	09 17 03.9	+1.4
KVTX	Kingsville	71.77	68	IAMs_20	IAMs_20	09 51 07.0	
	comp=Z,8µm,19.0s						
KRUC	Moravsky	71.78	338	eP	P	09 17 02.7	+0.2
KRUC				eS	S	09 26 18.0	-3.4
CPCT	Cooper Cave	71.78	53	P	P	09 17 02.1	-0.7
VYHS	Vyhne	71.79	337	eP	P	09 17 03.3	+0.7
VYHS	Vyhne	71.79	337	eP	P	09 17 03.3	+0.7
L64A	Middleborough	71.79	40	P	P	09 17 02.6	-0.1
L64A				IAmb	IAmb	09 17 22.9	
	comp=Z,148nm,1.3s						
L64A				IAMs_20	IAMs_20	09 52 57.8	
	comp=Z,8µm,18.0s						
M63A	Gales Ferry	71.82	41	IAmb	IAmb	09 17 26.9	
	comp=Z,205nm,1.5s						
M63A				IAMs_20	IAMs_20	09 49 49.5	
	comp=Z,9µm,21.0s						
HAL	Halifax	71.83	34	IAmb	IAmb	09 17 22.1	
	comp=Z,186nm,1.4s						
HAL				IAMs_20	IAMs_20	09 51 33.4	
	comp=Z,13µm,19.0s						
MONM	Monmouth	71.84	352	eP	P	09 16 59.1	-3.7
MONM				IAMs_20	IAMs_20	09 44 24.5	
	comp=Z,11µm,24.6s						
STRD	Stroud	71.85	351	eP	P	09 17 01.4	-1.5
STRD				IAMs_20	IAMs_20	09 58 03.9	
	comp=Z,7µm,15.8s						
ZVC	Zvikov	71.85	340	eP	P	09 17 02.6	-0.4
ZVC				AMS	AMS	09 53 50.0	
	comp=Z,15µm,15.2s						
RSBS	Rosebush, Pemb	71.88	353	eP	P	09 17 00.9	-2.2
ROTZ	Rotzenmuhle	71.91	341	eP	P	09 17 03.2	-0.1
	comp=Z,62nm,1.5s,baz=16,slow=6.1						
ROTZ				ePP	S	09 26 21.3	-1.7
	baz=14,slow=11						
ROTZ				eS	S	09 26 23.3	+0.3
ONER	Baraj Valea Uz	71.92	331	⇑P	P	09 17 04.4	+0.9
TKL	Tuckaleechee C	71.94	53	LR	LR	09 49 50.4	
	comp=Z,28µm,20.4s,baz=336,slow=37						
Z47A	Carrollton	72.02	57	IAMs_20	IAMs_20	09 51 42.9	
	comp=Z,12µm,19.0s						
COEN	Coen	72.03	201	P	P	09 17 04.6	+0.3
COEN				IAmb	IAmb	09 17 23.7	
	comp=Z,222nm,1.1s						
COEN				IAMs_20	IAMs_20	09 44 12.0	
	comp=Z,12µm,22.0s						
COEN	Coen	72.03	201	P	P	09 17 06.5	+2.2
	comp=Z,226nm,1.5s						
COEN	Coen	72.03	201	P	P	09 17 05.4	+1.1
FPAL	Fort Paine	72.05	55	P	P	09 17 03.2	-1.3
FPAL				IAMs_20	IAMs_20	09 49 46.4	
	comp=Z,9µm,20.0s						
U54A	Nelsons Funny	72.08	51	P	P	09 17 04.0	-0.7
U54A				IAMs_20	IAMs_20	09 52 08.9	
	comp=Z,11µm,19.0s						
MEM	Membach	72.08	346	dP	P	09 17 03.7	-0.6
	comp=Z,115nm,1.1s						
BTNL	Ternell	72.08	346	dP	P	09 17 03.2	-1.2
PSZ	Piszkesteto	72.09	336	P	P	09 17 04.8	+0.3
PSZ				IAmb	IAmb	09 17 22.1	
	comp=Z,301nm,1.7s						
PSZ	Piszkesteto	72.09	336	⇑P	P	09 17 04.4	-0.1
PSZ	Piszkesteto	72.09	336	P	P	09 17 04.8	+0.3
PSZ				pmax	pmax		
	comp=Z,301nm,1.7s						
PSZ				MLR	MLR		
	comp=Z,21µm,21.0s						
PSZ	Piszkesteto	72.09	336	eP	P	09 17 05.8	+1.2
BLA	Blacksburg	72.09	49	P	P	09 17 03.8	-0.9
BLA				IAMs_20	IAMs_20	09 50 11.2	
	comp=Z,10µm,20.0s						
BLA	Blacksburg	72.09	49	P	P	09 17 03.8	-0.9
BLA				pmax	pmax		
	comp=Z,118nm,1.1s						
BLA				MLR	MLR		
	comp=Z,10µm,20.0s						
TNS	Taunus Mts	72.10	344	eP	P	09 17 04.0	-0.5
	comp=Z,137nm,1.3s,baz=16,slow=6.1						
TNS				ePP	S	09 26 25.3	+0.1
	baz=14,slow=11						
TNS				eS	S	09 26 25.8	+0.6
UCC	Uccle	72.11	347	P	P	09 17 03.7	-0.8
UCC				IAMs_20	IAMs_20	09 53 31.2	
	comp=Z,7µm,18.0s						
UCC	Uccle	72.11	347	P	P	09 17 03.7	-0.8
UCC				pmax	pmax		
	comp=Z,80nm,1.3s						
UCC				MLR	MLR		
	comp=Z,7µm,18.0s						
UCC	Uccle	72.11	347	dP	P	09 17 04.0	-0.5
GRA1	Grafenberg Arr	72.16	342	IAMs_20	IAMs_20	09 50 34.3	
	comp=Z,14µm,20.0s						
GRF	Grafenberg Arr	72.16	342	eP	P	09 17 04.8	0.0
	comp=Z,166nm,1.0s,baz=16,slow=6.1						
GRF				ePP	S	09 26 25.3	-0.5
	baz=14,slow=11						
GRF				eS	S	09 26 25.6	-0.3
GRF				eL	L	09 50 34.2	
	comp=Z,13µm,20.4s						
GRFO	Grafenberg	72.16	342	P	P	09 17 04.4	-0.4
GRFO	Grafenberg	72.16	342	P	P	09 17 04.4	-0.4
GRFO				pmax	pmax		
	comp=Z,363nm,1.4s						
GRFO				MLR	MLR		
	comp=Z,15µm,20.0s						
VAL	Valentia	72.18	356	P	P	09 17 05.7	+0.9
VAL	Valentia	72.18	356	P	P	09 17 06.7	+1.9
M65A	Busby, Falmout	72.19	40	IAMs_20	IAMs_20	09 53 17.3	
	comp=Z,9µm,19.0s						
MODS	Modra-Piesok	72.24	338	eP	P	09 17 05.8	+0.4
MODS				pmax	pmax		
	comp=Z,31nm,1.1s						
MODS	Modra-Piesok	72.24	338	eP	P	09 17 05.8	+0.4
S57A	Dark Hollow, R	72.25	48	P	P	09 17 05.0	-0.5
Y49A	Blount Mountai	72.25	56	P	P	09 17 04.8	-0.9
Y49A				IAmb	IAmb	09 17 24.4	
	comp=Z,242nm,1.4s						
VRI	Vrincioaia	72.26	330	⇑P	P	09 17 06.4	+0.9
VRI	Vrincioaia	72.26	330	P	P	09 17 06.4	+0.9
KHC	Kasperske Hory	72.27	340	eP	P	09 17 04.2	-1.3
KHC				ePCP	PcP	09 17 22.0	-1.6
KHC				eS	S	09 26 30.2	+3.0
KHC				AMS	AMS	09 56 10.0	
	comp=Z,16µm,14.9s						
KHC	Kasperske Hory	72.27	340	eP	P	09 17 04.2	-1.3
KHC				e		09 17 22.0	
KHC				eS	S	09 26 30.2	+3.0
KHC				MLR	MLR		
	comp=Z,16µm,14.9s						
P61A	Hammonton	72.28	44	IAMs_20	IAMs_20	09 50 56.8	
	comp=Z,12µm,21.0s						
TLCR		72.29	329	⇑P	P	09 17 05.2	-0.5
TLCR		72.29	329	P	P	09 17 05.1	-0.5
PLOR	Plostina	72.29	330	⇑P	P	09 17 06.7	+0.9
PLOR	Plostina	72.29	330	P	P	09 17 06.6	+0.9
OZUR		72.31	331	⇓P	P	09 17 07.2	+1.3
CJR	Cluj-Napoca	72.31	333	⇑P	P	09 17 07.0	+1.2
CJR	Cluj-Napoca	72.31	333	P	P	09 17 07.0	+1.2
BHOU	Houvegnez	72.33	346	dP	P	09 17 05.8	0.0
	comp=Z,45nm,1.3s						
W52A	Murphy	72.35	53	IAmb	IAmb	09 17 26.0	
	comp=Z,259nm,1.8s						
BCLA	Clavier	72.36	346	dP	P	09 17 05.6	-0.4
	comp=Z,35nm,1.2s						
X51A	Calhoun	72.37	54	IAmb	IAmb	09 17 31.1	
	comp=Z,275nm,1.6s						
CKRC	Cesky Krumlov	72.42	340	eP	P	09 17 07.4	+1.0
CKRC				AMS	AMS	09 56 10.0	
	comp=Z,14µm,14.1s						
CKRC	Cesky Krumlov	72.42	340	eP	P	09 17 07.4	+1.0
CKRC				MLR	MLR		
	comp=Z,14µm,14.1s						
BGES	Gesves	72.42	346	dP	P	09 17 05.7	-0.7
	comp=Z,27nm,1.2s						
MARR	Marisel-Cluj	72.47	333	⇑P	P	09 17 06.9	+0.1
CFR	Carcaliu	72.49	329	⇑P	P	09 17 07.2	+0.3
CFR	Carcaliu	72.49	329	P	P	09 17 07.1	+0.3
HMNX	Herstmonceux	72.51	349	eP	P	09 17 04.2	-2.7
CBN	Corbin Frederi	72.52	47	IAMs_20	IAMs_20	09 51 27.2	
	comp=Z,12µm,20.0s						
GEC2	GERESS Array S	72.52	340	eP	P	09 17 06.7	-0.4
	comp=Z,140nm,1.4s,baz=16,slow=6.1						
GEC2				ePP	S	09 26 26.6	-3.5
	baz=14,slow=11						
GEC2				eS	S	09 26 31.8	+1.6
GERES	GERESS Array B	72.52	340	P	P	09 17 07.0	-0.1
	comp=Z,13nm,0.9s,baz=27,slow=4.5,SNR=27						
GERES				PP	PP	09 19 41.8	-5.8
	comp=Z,1.1nm,0.4s,baz=27,slow=6.6,SNR=2.1						
GERES				LR	LR	09 52 56.0	
	comp=Z,10µm,18.5s,baz=15,slow=39						
	comp=Z,13nm,0.9s						
GERES	GERESS Array B	72.52	340	P	P	09 17 07.0	-0.1
DOPR	Dopca	72.53	331	⇑P	P	09 17 08.4	+1.2
SRO	Srobarova	72.55	337	eP	P	09 17 11.2	+4.1
SRO				pmax	pmax		
	comp=Z,28nm,1.1s						
SRO	Srobarova	72.55	337	eP	P	09 17 11.2	+4.1
BMRD	Maredsous	72.55	346	dP	P	09 17 06.3	-0.8
	comp=Z,42nm,1.3s						
AFI	Afiamalu	72.64	156	IAMs_20	IAMs_20	09 47 13.3	
	comp=Z,7µm,19.0s						
LRAL	Lakeview Retre	72.66	56	P	P	09 17 06.3	-1.8
LRAL				IAmb	IAmb	09 17 09.9	
	comp=Z,74nm,0.6s						
TPGR	Topolog	72.70	329	⇑P	P	09 17 08.2	0.0
T57A	Hurt	72.77	49	P	P	09 17 08.4	-0.3
T57A				IAMs_20	IAMs_20	09 52 29.0	
	comp=Z,13µm,20.0s						
DOU	Dourbes	72.77	346	dP	P	09 17 07.9	-0.6
	comp=Z,32nm,1.2s						
HTL	Hartland	72.81	353	eP	P	09 17 07.5	-1.2
HTL				IAMs_20	IAMs_20	10 03 28.5	
	comp=Z,7µm,18.1s						
MLR	Muntele Rosu	72.82	331	IAmb	IAmb	09 17 55.9	
	comp=Z,394nm,1.7s						
MLR	Muntele Rosu	72.82	331	LR	LR	09 52 12.1	
	comp=Z,19µm,21.6s,baz=25,slow=38						
MLR	Muntele Rosu	72.82	331	⇑P	P	09 17 09.3	+0.3
MLR	Muntele Rosu	72.82	331	P	P	09 17 09.3	+0.3
U56A	King	72.84	50	P	P	09 17 08.3	-0.8
U56A				IAmb	IAmb	09 17 33.9	
	comp=Z,226nm,1.6s						
U56A				IAMs_20	IAMs_20	09 52 26.1	
	comp=Z,12µm,21.0s						
346A	Big Creek Wild	72.86	59	IAmb	IAmb	09 17 42.0	
	comp=Z,179nm,0.9s						
346A				IAMs_20	IAMs_20	09 52 18.0	
	comp=Z,13µm,19.0s						
VJD	Vijayawada	72.87	274	eP	P	09 17 09.6	+0.2
BG3	Lake Jocassee	72.88	52	IAmb	IAmb	09 17 23.1	
	comp=Z,221nm,1.5s						
V55A	Taylorsville	72.90	51	IAmb	IAmb	09 17 34.1	
	comp=Z,302nm,1.9s						
CONA	Conrad Observa	72.96	338	epP	P	09 17 09.8	+0.1
	comp=Z,128nm,1.6s,SNR=24						
WLF	Walferdange	72.98	345	P	P	09 17 11.0	+1.3
WLF	Walferdange	72.98	345	IAMs_20	IAMs_20	09 50 59.1	
	comp=Z,14µm,20.0s						
WLF	Walferdange	72.98	345	dP	P	09 17 09.5	-0.2
	comp=Z,38nm,1.2s						
WLF	Walferdange	72.98	345	eP	P	09 17 09.5	-0.2
	comp=Z,387nm,2.0s,baz=16,slow=6.1						
WLF				ePP	S	09 26 33.3	-1.9
	baz=14,slow=11						
WLF				eS	SKiKP	09 26 36.3	-4.6
ISR	Istrita	73.00	330	⇓P	P	09 17 11.0	+1.1
ISR	Istrita	73.00	330	P	P	09 17 11.0	+1.1
KOPT	Kop Dagi	73.00	318	IAmb	IAmb	09 17 37.8	
	comp=Z,198nm,0.9s						
TIRR	Tirgusor	73.07	329	P	P	09 17 09.4	-0.9
TIRR				IAmb	IAmb	09 17 41.4	
	comp=Z,257nm,1.5s						
TIRR	Tirgusor	73.07	329	⇑P	P	09 17 10.8	+0.5
TIRR	Tirgusor	73.07	329	P	P	09 17 10.8	+0.5
RONA	Rosalia, Austr	73.09	338	epP	P	09 17 10.9	+0.4
	comp=Z,85nm,1.4s,SNR=13						
TLBR	Topalu	73.09	329	⇑P	P	09 17 10.2	-0.2
LHMI	Lhok Sumawe	73.10	254	P	P	09 17 10.5	-0.4
LHMI	Lhok Sumawe	73.10	254	P	P	09 17 12.8	+1.9
VOIR		73.11	331	⇑P	P	09 17 11.2	+0.5
VOIR		73.11	331	P	P	09 17 11.2	+0.5
ZAIG	Zacatecas	73.16	74	P	P	09 17 10.3	-1.2
ZAIG				IAmb	IAmb	09 17 31.9	
	comp=Z,130nm,1.1s						
ZAIG				IAMs_20	IAMs_20	09 51 59.3	
	comp=Z,11µm,21.0s						
SIRR	Siria	73.22	334	⇑P	P	09 17 11.7	+0.5
AMRR	Amara	73.24	329	⇑P	P	09 17 12.5	+1.2
AMRR	Amara	73.24	329	P	P	09 17 12.5	+1.2
SBD	Saint Breward	73.25	353	eP	P	09 17 09.2	-2.1
MMRI	Maumere	73.27	224	P	P	09 17 12.9	+1.2
MMRI	Maumere	73.27	224	P	PcP	09 17 25.6	-2.5
ARR	Arges	73.29	331	⇑P	P	09 17 12.8	+1.1
HYB	Hyderabad	73.31	276	eP	P	09 17 12.4	+0.2
HYB				esP	pP	09 17 16.8	-0.1
HYB				ePcP	PcP	09 17 28.9	+0.5
HYB				eS	SKiKP	09 26 41.8	-0.5
Y52A	Lilburn	73.32	54	P	P	09 17 11.1	-0.9
Y52A				IAmb	IAmb	09 17 36.8	
	comp=Z,246nm,1.7s						
DYA	Yadsworthy	73.33	352	eP	P	09 17 11.2	-0.5
DYA				IAMs_20	IAMs_20	10 03 50.0	
	comp=Z,9µm,13.9s						

MOA	Molln	73.36	339	eP	P	09 17 11.7	-0.3
	comp=Z,61nm,1.1s,SNR=13						
MOA				i S	S	09 26 38.2	-1.5
	comp=Z,7.8nm,1.5s						
STU	Stuttgart	73.39	343	IAMs_20	IAMs_20	09 51 24.8	
	comp=Z,11µm,22.0s						
STU	Stuttgart	73.39	343	eP	P	09 17 14.9	+2.8
STU	Stuttgart	73.39	343	eP	P	09 17 11.5	-0.6
	comp=Z,274nm,1.3s,baz=16,slow=6.1						
STU				ePP	S	09 26 33.3	-6.5
	baz=14,slow=11						
STU				eS	SKiKP	09 26 45.0	+3.5
DIKM	Dikmen	73.43	323	⇑P	P	09 17 13.8	+1.3
KMSC	Kings Mountain	73.45	51	IAmb	IAmb	09 17 20.2	
	comp=Z,380nm,1.9s						
KMSC				IAMs_20	IAMs_20	09 52 42.3	
	comp=Z,11µm,19.0s						
GEVA	Gevas	73.50	315	IAmb	IAmb	09 17 39.1	
	comp=Z,314nm,1.7s						
KDU	Kakadu	73.52	212	P	P	09 17 14.4	+1.3
	comp=Z,0.0nmcomp=Z,240nm,1.5s						
KDU	Kakadu	73.52	212	P	P	09 17 15.1	+2.0
SOEI	Soe	73.53	221	P	P	09 17 14.6	+1.2
SOEI	Soe	73.53	221	P	P	09 17 16.0	+2.6
	comp=Z,5µmcomp=Z,4µmcomp=Z,218nm,0.9s						
BZK	Bozkurt	73.58	324	IAmb	IAmb	09 17 38.1	
	comp=Z,189nm,0.9s						
BZK	Bozkurt	73.58	324	⇑P	P	09 17 14.8	+1.5
SURR	Surduc	73.58	333	⇓P	P	09 17 13.9	+0.6
EDFI	Ende, Flores	73.58	224	P	P	09 17 15.2	+1.5
FUR	Furstenfeldbru	73.62	341	eP	P	09 17 13.2	-0.3
	comp=Z,170nm,1.2s,baz=16,slow=6.1						
FUR				ePP	S	09 26 37.3	-5.2
	baz=14,slow=11						
FUR				eS	SKiKP	09 26 41.8	-0.2
BIOA	Bad Ischl, Aus	73.64	340	i P	P	09 17 13.6	0.0
	comp=Z,81nm,1.5s						
S61A	Accomac	73.65	46	IAMs_20	IAMs_20	09 51 14.2	
	comp=Z,14µm,20.0s						
CCA1	Carnmenellis	73.67	353	eP	P	09 17 13.0	-0.7
CCA1				IAMs_20	IAMs_20	10 01 32.6	
	comp=Z,6µm,14.1s						
ARSA	Arzberg	73.68	338	IAmb	IAmb	09 17 35.0	
	comp=Z,317nm,1.8s						
ARSA	Arzberg	73.68	338	epP	P	09 17 14.1	+0.2
	comp=Z,107nm,1.9s,SNR=11						
TSI	Tuntungan	73.69	251	P	P	09 17 23.7	+9.4
GURO	Guroymak-BITLI	73.69	316	IAMs_20	IAMs_20	09 52 26.1	
	comp=Z,13µm,22.0s						
GZR	Gura Zlata	73.75	333	⇑P	P	09 17 14.5	+0.1
GZR	Gura Zlata	73.75	333	P	P	09 17 14.5	+0.1
RJOB	Jochberg	73.75	340	eP	P	09 17 14.3	-0.1
	comp=Z,118nm,0.8s,baz=16,slow=6.1						
RJOB				ePP	S	09 26 41.3	-2.8
	baz=14,slow=11						
RJOB				eS	SKiKP	09 26 47.3	+5.1
HODGE	Hodges	73.81	52	IAmb	IAmb	09 17 28.4	
	comp=Z,190nm,1.5s						
BZS	Buzias	73.83	334	⇑P	P	09 17 15.3	+0.4
BZS	Buzias	73.83	334	P	P	09 17 15.2	+0.4
V58A	Windy Hill, Pi	73.85	49	IAmb	IAmb	09 17 35.5	
	comp=Z,121nm,1.0s						
V58A				IAMs_20	IAMs_20	09 56 00.7	
	comp=Z,11µm,18.0s						
250A	Grady	73.88	56	IAmb	IAmb	09 17 34.3	
	comp=Z,141nm,1.1s						
PSN	Preselentsi	73.90	328	eP	P	09 17 17.0	+1.8
BFO	Black Forest	73.95	344	P	P	09 17 14.4	-1.1
BFO				IAMs_20	IAMs_20	09 51 54.9	
	comp=Z,12µm,22.0s						
BFO	Black Forest	73.95	344	P	P	09 17 14.4	-1.1
BFO				pmax	pmax		
	comp=Z,111nm,1.3s						
BFO				MLR	MLR		
	comp=Z,12µm,22.0s						
BFO	Black Forest	73.95	344	eP	P	09 17 14.8	-0.7
	comp=Z,110nm,1.3s,baz=16,slow=6.1						
BFO				ePP	S	09 26 41.3	-5.0
	baz=14,slow=11						
BFO				eS	SKiKP	09 26 45.5	+3.1
GOGA	Godfrey	73.97	54	P	P	09 17 15.0	-0.7
GOGA	Godfrey	73.97	54	P	P	09 17 15.0	-0.7
GOGA				pmax	pmax		
	comp=Z,161nm,1.8s						
GOGA				MLR	MLR		
	comp=Z,17µm,21.0s						
MORH	Mrgy, Hungar	73.98	336	⇑P	P	09 17 15.2	-0.4
W57A	Gilead	74.02	50	IAMs_20	IAMs_20	09 52 08.3	
	comp=Z,12µm,18.0s						
MTN	Manton Dam	74.07	214	IAmb	IAmb	09 17 34.0	
	comp=Z,145nm,1.0s						
MTN				IAMs_20	IAMs_20	09 47 28.0	
	comp=Z,7µm,22.0s						
MTN	Manton Dam	74.07	214	P	P	09 17 18.1	+1.7
	comp=Z,0.0nmcomp=Z,166nm,1.0s						
LESA	Schwarzleotal	74.08	340	epP	P	09 17 16.5	+0.2
	comp=Z,84nm,1.1s,SNR=12						
PSI	Prapat	74.09	251	LR	LR	09 53 47.1	
	comp=Z,14µm,18.9s,baz=12,slow=39						
PSI	Prapat	74.09	251	P	P	09 17 19.3	+2.5
PSI	Prapat	74.09	251	P	P	09 17 17.3	+0.5
PSI				pmax	pmax		
	comp=Z,240nm,1.4s						
PSI				MLR	MLR		
	comp=Z,21µm,19.0s						
BEHE	Becsehely	74.16	337	IAMs_20	IAMs_20	09 52 41.4	
	comp=Z,6µm,20.0s						
RPSI	Rantau Prapat	74.18	251		P	09 17 17.2	+0.1
RPSI				IAmb	IAmb	09 17 43.3	
	comp=Z,240nm,1.4s						
BRAL	Brewton	74.19	58	IAmb	IAmb	09 17 37.0	
	comp=Z,331nm,1.2s						
BRAL				IAMs_20	IAMs_20	09 50 33.2	
	comp=Z,10µm,22.0s						
TOKA	Tokat	74.19	321	IAmb	IAmb	09 17 42.5	
	comp=Z,142nm,1.0s						
TOKA				IAMs_20	IAMs_20	09 54 16.0	
	comp=Z,12µm,22.0s						
ECH	Echery	74.25	344	IAMs_20	IAMs_20	09 52 18.6	
	comp=Z,11µm,20.0s						
BIRD	Birdtown, Kers	74.25	51	P	P	09 17 16.8	-0.6
COPA	Copaceanca	74.27	331	⇓P	P	09 17 18.3	+0.9
KBA	Koelnbreinsper	74.28	340	eS	SKiKP	09 26 46.2	+3.0
	comp=Z,3.1nm,1.0s						
UBR	Ueberruh	74.29	342	eP	P	09 17 17.1	-0.4
	comp=Z,444nm,1.8s,baz=16,slow=6.1						
UBR				eS	S	09 27 01.0	+11
HERR	Herculane	74.32	333	⇑P	P	09 17 17.5	-0.1
SOKA	Soboth	74.33	338	eP	P	09 17 17.8	0.0
	comp=Z,132nm,1.8s,SNR=14						
PERS	Pernice	74.35	338	eP	P	09 17 17.6	-0.3
RETA	Reutte	74.36	342	i P	P	09 17 17.5	-0.5
	comp=Z,88nm,1.5s						
WATA	Walderalm	74.36	341	i P	P	09 17 17.8	-0.2
	comp=Z,162nm,1.4s,SNR=9.1						
TPI	Tanjungpandan	74.42	240	P	P	09 17 20.7	+2.2
	comp=Z,6µmcomp=Z,2µmcomp=Z,169nm,1.4s						
JSA	Saint Aubin	74.42	351	eP	P	09 17 11.0	-7.1
JSA				IAMs_20	IAMs_20	10 00 47.0	
	comp=Z,8µm,13.4s						
WTTA	Wattenberg	74.42	341	i pP	P	09 17 18.5	+0.1
	comp=Z,185nm,1.5s,SNR=12						
MOTA	Moosalm	74.44	341	i P	P	09 17 18.1	-0.4
	comp=Z,71nm,1.2s,SNR=12						
ILGA	Ilgaz	74.49	323	P	P	09 17 19.6	+0.6
ILGA				IAmb	IAmb	09 17 39.1	
	comp=Z,121nm,0.9s						
MSVF	Nonsavu	74.52	166	IAMs_20	IAMs_20	09 45 10.3	
	comp=Z,9µm,20.0s						
MSVF	Nonsavu	74.52	166	LR	LR	09 45 01.0	
	comp=Z,7µm,20.1s,baz=348,slow=32						
MSVF	Nonsavu	74.52	166	P	P	09 17 20.0	+1.0
SQTA	Sankt Quirin	74.54	341	eP	P	09 17 18.9	-0.1
	comp=Z,114nm,1.4s,SNR=16						
PRD	Provadia	74.55	329	eP	P	09 17 24.0	+5.0
OBKA	Obir	74.59	339	eP	P	09 17 19.2	0.0
	comp=Z,209nm,1.0s,SNR=19						
OBKA				i S	S	09 26 50.4	-3.2
	comp=Z,6.4nm,1.3s						
MDVR	Moldovita	74.59	333	⇑P	P	09 17 18.8	-0.5
ARPR	Arapgir-MALATY	74.61	319	IAmb	IAmb	09 17 42.5	
	comp=Z,212nm,1.2s						
ARPR				IAMs_20	IAMs_20	09 53 03.3	
	comp=Z,9µm,21.0s						
MYKA	Terra Mystica	74.65	339	i P	P	09 17 19.4	-0.3
	comp=Z,92nm,1.1s,SNR=9.2						
W59A	Clinton	74.67	49	IAmb	IAmb	09 17 40.6	
	comp=Z,186nm,0.9s						
W59A				IAMs_20	IAMs_20	09 53 36.4	
	comp=Z,10µm,18.0s						
DAVA	Damuels	74.71	342	i P	P	09 17 19.4	-0.6
	comp=Z,64nm,1.7s						
ABTA	Abfaltersbach	74.76	340	i P	P	09 17 20.0	-0.2
	comp=Z,135nm,1.2s,SNR=26						
X58A	Rowland	74.81	50	IAmb	IAmb	09 17 41.1	
	comp=Z,153nm,0.9s						
X58A				IAMs_20	IAMs_20	09 52 42.2	
	comp=Z,12µm,20.0s						
FETA	Feichten	74.82	342	eP	P	09 17 19.8	-0.9
	comp=Z,130nm,1.2s,SNR=18						
SZH	Strazhitsa	74.86	330	eP	P	09 17 22.2	+1.4
352A	Blakely	74.92	56	P	P	09 17 20.8	-0.6
352A				IAmb	IAmb	09 17 40.3	
	comp=Z,201nm,1.2s						
POO	Poona	75.01	281	eP	P	09 17 21.7	-0.3
CADS	Cadrg	75.02	339	eP	P	09 17 20.6	-1.1
CRES	Cresnjevec Ost	75.05	338	eP	P	09 17 21.4	-0.4
BKNI	Bangkinang	75.08	247	P	P	09 17 22.8	+0.4
BKNI	Bangkinang	75.08	247	P	PcP	09 17 36.9	+0.9
CLF	Chambon-Foret	75.10	348	P	P	09 17 22.1	0.0
CLF				IAmb	IAmb	09 17 43.6	
	comp=Z,305nm,1.5s						
CLF				IAMs_20	IAMs_20	09 55 16.1	
	comp=Z,13µm,20.0s						
VALD	Valchedram	75.17	332	eP	P	09 17 23.9	+1.4
STAL	STALIGIAL	75.19	340	P	P	09 17 21.9	-0.7
DAVOX	Davos/Dischmat	75.20	342	LR	LR	09 53 58.9	
	comp=Z,10µm,19.3s,baz=24,slow=39						
Y58A	Scranton	75.22	51	IAmb	IAmb	09 17 43.4	
	comp=Z,178nm,0.9s						
PLAI	Plampang	75.23	228	P	P	09 17 23.6	+0.4
451A	Vernon	75.26	57	IAMs_20	IAMs_20	09 53 32.7	
	comp=Z,13µm,19.0s						
KMMI	Kalianget	75.26	232	P	P	09 17 32.6	+9.2
FUORN	Ofenpass-Fuorn	75.29	342	IAMs_20	IAMs_20	09 54 00.3	
	comp=Z,10µm,19.0s						
MPEP	Malo Peshtene	75.39	331	eP	P	09 17 25.4	+1.5
MNSI	Mandailing Nat	75.44	249	P	PcP	09 17 42.1	+4.6
TIGA	Tifton	75.57	55	IAmb	IAmb	09 17 45.1	
	comp=Z,258nm,1.1s						
TUE	Stuetta	75.59	342	IAmb	IAmb	09 17 56.1	
	comp=Z,141nm,1.1s						
TUE				IAMs_20	IAMs_20	09 55 34.2	
	comp=Z,11µm,19.0s						
SRBI	Singaraja	75.64	230	P	PcP	09 17 46.4	+8.1
BOVS	Bovan	75.67	333	⇓P	P	09 17 25.1	-0.4
NHSC	New Hope	75.68	51	IAmb	IAmb	09 17 50.8	
	comp=Z,270nm,1.1s						
NHSC				IAMs_20	IAMs_20	09 51 36.5	
	comp=Z,13µm,21.0s						
BR131	Keskin Array S	75.70	323	P	P	09 17 25.7	-0.2
BR131	Keskin Array S	75.70	323	P	P	09 17 25.6	-0.2
	SNR=37						
BR131				S	S	09 27 07.0	+0.6
BR131	Keskin Array S	75.70	323	P	P	09 17 25.7	-0.2
BR131				pmax	pmax		
	comp=Z,84nm,1.1s						
BRTR	Keskin Array B	75.70	323	P	P	09 17 25.7	-0.2
BRTR	Keskin Array B	75.70	323	P	P	09 17 25.2	-0.7
	comp=Z,12nm,0.8s,baz=39,slow=3.2,SNR=30						
BRTR				PP	PP	09 20 10.5	-4.5
	comp=Z,6.5nm,0.8s,baz=52,slow=6.7,SNR=3.9						
BRTR				S	S	09 27 05.4	-0.9
	comp=Z,0.3nm,0.4s,baz=31,slow=20,SNR=1.2						
BRTR				PKPPKP	P'P'df	09 44 41.5	-10
	comp=Z,1.5nm,0.9s,baz=160,slow=3.9,SNR=4.9						
BRTR				LR	LR	09 54 10.9	
	comp=Z,10µm,19.9s,baz=12,slow=38						
	comp=Z,12nm,0.8s						
BRTR	Keskin Array B	75.70	323	ceP	P	09 17 25.7	-0.2
BRTR				pmax	pmax		
	comp=Z,13nm,0.8s						
BNN	Bunyan	75.72	321	P	P	09 17 26.2	+0.2
SNSI	Sinabang, Aceh	75.80	253	P	PcP	09 17 46.1	+7.0
KAD	Karad	75.82	280	eP	P	09 17 26.1	-0.6
CSU	Charleston Sou	75.83	51	IAMs_20	IAMs_20	09 51 40.4	
	comp=Z,12µm,20.0s						
ANTO	Ankara	75.86	323	P	P	09 17 26.9	+0.3
ANTO				IAmb	IAmb	09 17 58.2	
	comp=Z,178nm,1.3s						
ANTO	Ankara	75.86	323	IAMs_20	IAMs_20	09 54 20.0	
	comp=Z,11µm,20.0s						
ANTO	Ankara	75.86	323	P	P	09 17 27.0	+0.3
ANTO				P	P	09 17 27.0	+0.3
ANTO				S	S	09 27 08.7	+0.8
ANTO				S	S	09 27 08.7	+0.8
ANTO	Ankara	75.86	323	P	P	09 17 26.9	+0.3
ANTO				pmax	pmax		
	comp=Z,178nm,1.3s						
ANTO				MLR	MLR		
	comp=Z,11µm,20.0s						
MTSU	Mount Surprise	75.87	199	P	P	09 17 29.0	+2.2
	comp=Z,65nm,1.2s						
MDRS	Chennai	75.89	272	eP	P	09 17 26.1	-1.0
SENIN	Lac Senin/Sane	76.03	344	P	P	09 17 27.4	-0.3
SENIN				IAMs_20	IAMs_20	09 52 56.8	
	comp=Z,14µm,22.0s						
GSI	Gunungsitoli	76.06	251	P	P	09 17 31.0	+2.9
GSI	Gunungsitoli	76.06	251	P	P	09 17 32.8	+4.7
	comp=Z,4µmcomp=Z,225nm,1.1s						
PPI	Padang Panjang	76.08	248	P	PcP	09 17 39.5	-0.8
DIM	Dimitrovgrad	76.10	330	eP	P	09 17 29.5	+1.6
NGCH	Negor - Chabah	76.19	295	P	P	09 17 29.4	+0.7
NGCH				S	S	09 27 14.9	+3.1
VTS	Vitosha	76.22	331	eP	P	09 17 29.5	+0.7
553A	Crawfordville	76.23	56	IAmb	IAmb	09 17 48.6	
	comp=Z,222nm,1.1s						
PLD	Plovdiv	76.24	330	eP	P	09 17 30.0	+1.3
PLNA	Plana	76.30	331	eP	P	09 17 28.8	-0.4
MOIG	Morelia	76.42	75	IAMs_20	IAMs_20	09 52 18.7	
	comp=Z,8µm,21.0s						
KDZ	Kurdzhali	76.55	330	eP	P	09 17 32.0	+1.5
GMJI	Gumukmas	76.58	232	P	PcP	09 17 48.4	+6.0
BORA	Eskisehir	76.61	325	IAmb	IAmb	09 17 59.6	
	comp=Z,289nm,2.0s						
BORA				IAMs_20	IAMs_20	09 55 19.9	
	comp=Z,11µm,20.0s						
SMRI	Semarang	76.85	235	P	PcP	09 17 47.4	+3.8
RDO	Rodhopi	76.94	329	IAmb	IAmb	09 18 05.1	
	comp=Z,265nm,1.4s						
KKB	Krupnik	76.97	331	eP	P	09 17 34.4	+1.5
MMB	Musomishta	77.07	331	eP	P	09 17 34.7	+1.2
PEHC	Pehcevo	77.09	331	i P	P	09 17 42.1	+8.4
WOJI	Wonogiri, Jawa	77.33	234	P	P	09 17 44.2	+9.1
CTAO	Charters Tower	77.44	197	P	P	09 17 36.7	+1.1
CTAO	Charters Tower	77.44	197	P	P	09 17 37.1	+1.5
KNRA	Kununurra	77.48	215	P	P	09 17 35.6	-0.2
KNRA				IAmb	IAmb	09 17 57.2	
	comp=Z,252nm,1.4s						
KNRA	Kununurra	77.48	215	P	P	09 17 38.0	+2.2
	comp=Z,124nm,1.3s						
SISI	Saibi	77.50	248	P	P	09 17 45.1	+9.0
SSB	Saint Sauveur	77.50	345	IAMs_20	IAMs_20	09 53 22.7	
	comp=Z,8µm,21.0s						
PCJI	Pacitan	77.53	234	P	PcP	09 17 53.9	+7.4
UGM	Wanagama	77.58	235	IAMs_20	IAMs_20	09 56 16.0	
	comp=Z,6µm,18.0s						
UGM	Wanagama	77.58	235	P	PcP	09 17 54.4	+7.7
VAY	Valandovo	77.60	331	i P	P	09 17 37.1	+0.7
MDSI	Maura Dua	77.61	242	P	P	09 17 41.6	+4.9
	comp=Z,6µmcomp=Z,98nm,1.1s						
VLC	Villacollemand	77.65	341	P	P	09 17 36.9	+0.3
UNM	Universidad Na	77.78	74	IAMs_20	IAMs_20	09 55 11.7	
	comp=Z,8µm,20.0s						
656A	Willston	77.80	55	P	P	09 17 37.0	-0.7
656A				IAmb	IAmb	09 18 03.5	
	comp=Z,317nm,1.4s						
YATNC	Mamie plateau,	77.93	177	P	P	09 17 39.3	+1.1
DZM	Mont Dzumac	77.93	178	IAMs_20	IAMs_20	09 45 19.5	
	comp=Z,11µm,20.0s						
DZM	Mont Dzumac	77.93	178	eP	P	09 17 44.5	+6.2
	comp=Z,760nm,1.5s						
DZM				eS	S	09 27 23.2	-7.3
	comp=Z,4µm,26.9s						
DZM				eSS	SS	09 32 30.2	-2.0
	comp=Z,5µm,30.0s						
DZM				eLQ	LQ	09 38 21.4	
	comp=Z,25µm,28.3s						
DZM				eLR	LR	09 41 36.1	
	comp=Z,15µm,23.2s						
DZM	Mont Dzumac	77.93	178	LR	LR	09 50 41.2	
	comp=Z,6µm,18.7s,baz=7.5,slow=35						
DZM	Mont Dzumac	77.93	178	P	P	09 17 39.5	+1.2
LEM	Lembang	77.98	238	LR	LR	09 52 27.4	
	comp=Z,8µm,22.0s,baz=332,slow=36						
NIUE	Niue	78.06	155	IAMs_20	IAMs_20	09 44 56.7	
	comp=Z,12µm,21.0s						
OSSC	Osservatorio P	78.10	340	IAmb	IAmb	09 18 05.0	
	comp=Z,182nm,1.1s						
SHME	Shamm	78.11	299	P	P	09 17 39.7	+0.2
SHME				P	P	09 17 39.7	+0.2
SHME				S	S	09 27 30.5	-2.1
SHME				S	S	09 27 30.5	-2.1
SHME	Shamm	78.11	299	i P	P	09 17 39.0	-0.5
	SNR=20						
MNAI	Manna	78.11	243	IAMs_20	IAMs_20	09 54 55.8	
	comp=Z,11µm,21.0s						
LWLI	Liwa	78.13	242	P	PcP	09 17 55.8	+6.5
BANOM	Banah	78.14	299	P	P	09 17 39.4	-0.3
BANOM				P	P	09 17 39.4	-0.3
BANOM				S	S	09 27 30.3	-2.8
BANOM				S	S	09 27 30.3	-2.8
BANOM	Banah	78.14	299	i P	P	09 17 40.1	+0.4
	SNR=8.5						
DBJI	Dramaga	78.15	239	P	PcP	09 17 52.0	+2.8
ONTNC	Ouen Toro	78.16	178	IAMs_20	IAMs_20	09 45 13.7	
	comp=Z,10µm,21.0s						
OHR	Ohrid	78.27	333	i P	P	09 17 41.6	+1.4
FNA	Florina	78.42	332	P	P	09 17 40.4	-0.7
FNA	Florina	78.42	332	P	P	09 17 40.4	-0.7
FNA				pmax	pmax		
	comp=Z,38nm,1.2s						
FNA				MLR	MLR		
	comp=Z,17µm,22.0s						
MANT	Manisa	78.48	326	P	P	09 17 41.1	-0.5
MANT				IAmb	IAmb	09 18 00.1	
	comp=Z,284nm,1.8s						
MANT				IAMs_20	IAMs_20	09 56 30.3	
	comp=Z,12µm,20.0s						
CAMP	Campotosto	78.63	338	P	P	09 17 42.8	+0.6
CAMP				IAmb	IAmb	09 18 12.1	
	comp=Z,244nm,1.1s						
MDH	Madha	78.66	299	P	P	09 17 42.6	+0.1
MDH				S	S	09 27 36.4	-2.2
MASF	Masafi	78.67	299	P	P	09 17 42.3	-0.3
MASF				P	P	09 17 42.3	-0.3
MASF				S	S	09 27 35.6	-3.2
MASF				S	S	09 27 35.6	-3.2
MSFE	Esma-Masafi	78.68	299	P	P	09 17 42.1	-0.5
CESX	Cesi	78.72	339	IAmb	IAmb	09 18 03.7	
	comp=Z,238nm,1.4s						
UMQ	Umm Al-Quwin	78.78	299	P	P	09 17 43.5	+0.4
	SNR=6.9						
UMQ				P	P	09 17 43.5	+0.4
	SNR=6.9						
UMQ				S	S	09 27 39.0	-0.8
UMQ				S	S	09 27 39.0	-0.8
AQU	L'Aquila	78.80	338	P	P	09 17 44.4	+1.3
UOSS	Minazif	79.00	298	P	P	09 17 44.2	-0.2
UOSS	Minazif	79.00	298	P	P	09 17 44.8	+0.4
UOSS				P	P	09 17 44.8	+0.4
UOSS				S	S	09 27 38.3	-4.0
UOSS				S	S	09 27 38.3	-4.0
UOSS	Minazif	79.00	298	i P	P	09 17 43.8	-0.6
	SNR=14						
HATD	Hatta, Dubai	79.14	298	P	P	09 17 45.1	-0.1
	SNR=7.1						
HATD				P	P	09 17 45.1	-0.1
	SNR=7.1						
HATD				S	S	09 27 40.2	-3.6
HATD				S	S	09 27 40.2	-3.6
HATD	Hatta, Dubai	79.14	298	i P	P	09 17 45.3	+0.1
	SNR=19						
QIS	Mount Isa	79.19	203	P	P	09 17 45.8	+0.6
QIS	Mount Isa	79.19	203	P	P	09 17 46.7	+1.5
WSAR	Wadi Sarin	79.22	296	LR	LR	09 56 49.4	
	comp=Z,126nm,18.5s,baz=75,slow=39						
WSAR	Wadi Sarin	79.22	296	P	P	09 17 46.4	+0.8
	SNR=8.1						
WSAR				S	S	09 27 42.6	-2.0
NAZ	Nazwa, Dubai	79.23	299	P	P	09 17 46.1	+0.5
	SNR=10						
NAZ				P	P	09 17 46.1	+0.5
	SNR=10						
NAZ				S	S	09 27 41.1	-3.6
NAZ				S	S	09 27 41.1	-3.6
NAZ	Nazwa, Dubai	79.23	299	i P	P	09 17 44.9	-0.8
	SNR=15						
BIDO	Bidbid	79.24	296	P	P	09 17 46.9	+1.2
BIDO				P	P	09 17 46.9	+1.2
BIDO				S	S	09 27 43.5	-1.3
BIDO				S	S	09 27 43.5	-1.3
ASHO	Ashiyiah	79.30	298	P	P	09 17 46.5	+0.4
	SNR=9.0						
ASHO				P	P	09 17 46.5	+0.4
	SNR=9.0						
ASHO				S	S	09 27 41.4	-4.0
ASHO				S	S	09 27 41.4	-4.0
ASHO	Ashiyiah	79.30	298	i P	P	09 17 45.6	-0.4
	SNR=12						
TAOE	Nuku Hiva Isla	79.33	124	IAMs_20	IAMs_20	09 52 43.6	
	comp=Z,10µm,18.0s						
TAOE	Nuku Hiva Isla	79.33	124	eP	P	09 17 45.8	-0.5
	comp=Z,586nm,26.5s						
TAOE				eS	S	09 27 41.8	-4.1
	comp=Z,4µm,27.7s						
TAOE				eSS	SS	09 32 53.8	+0.6
	comp=Z,5µm,29.0s						
TAOE				eLQ	LQ	09 38 51.2	
	comp=Z,22µm,32.0s						
TAOE				eLR	LR	09 42 20.1	
	comp=Z,27µm,31.6s						
DWPF	Disney Wildern	79.38	55	P	P	09 17 45.3	-1.1
DWPF				IAmb	IAmb	09 18 12.3	
	comp=Z,373nm,1.7s						
KBD	Kabd	79.42	307	P	P	09 17 46.6	0.0
KBD				S	S	09 27 42.6	-4.0
FAQ	Al Faqa, Dubai	79.47	299	P	P	09 17 47.4	+0.4
	SNR=8.5						
FAQ				P	P	09 17 47.4	+0.4
	SNR=8.5						
FAQ				S	S	09 27 43.2	-4.0
FAQ				S	S	09 27 43.2	-4.0
FAQ	Al Faqa, Dubai	79.47	299	P	P	09 17 46.6	-0.4
SOHO	SOHO	79.52	298	P	P	09 17 47.5	+0.3
SOHO				P	P	09 17 47.5	+0.3
SOHO				S	S	09 27 43.5	-4.3
SOHO				S	S	09 27 43.5	-4.3
SOHO	SOHO	79.52	298	i P	P	09 17 45.8	-1.4
	SNR=20						
MALK	Mahakanadarawa	79.54	269	P	P	09 17 48.3	+0.9
TLIG	Tlapa	79.56	74	P	P	09 17 46.8	-0.9
TLIG				IAmb	IAmb	09 18 18.9	
	comp=Z,282nm,1.6s						
WBK	Wadi Bani Khal	79.57	295	P	P	09 17 49.4	+1.8
	SNR=7.9						
WBK				S	S	09 27 47.7	-0.7
HOQ	Hoqain	79.59	297	P	P	09 17 48.8	+1.2
	SNR=17						
HOQ				P	P	09 17 48.8	+1.2
	SNR=17						
HOQ				S	S	09 27 46.2	-2.4
HOQ				S	S	09 27 46.2	-2.4
SMDO	Samad	79.66	296	P	P	09 17 49.3	+1.1
	SNR=16						
SMDO				P	P	09 17 49.3	+1.1
	SNR=16						
SMDO				S	S	09 27 48.2	-1.3
SMDO				S	S	09 27 48.2	-1.3
WB0	Warramunga Arr	79.70	208	IAmb	IAmb	09 18 06.9	
	comp=Z,304nm,1.1s						
ASUD	Al Ashush, Dub	79.70	299	P	P	09 17 49.1	+0.9
	SNR=9.0						
ASUD				P	P	09 17 49.1	+0.9
	SNR=9.0						
ASUD				S	S	09 27 46.5	-3.2
ASUD				S	S	09 27 46.5	-3.2
ASUD	Al Ashush, Dub	79.70	299	i P	P	09 17 46.9	-1.3
	SNR=9.5						
JLN	Jalan Bani Buh	79.73	294	P	P	09 17 48.6	+0.2
	SNR=15						
JLN				P	P	09 17 48.6	+0.2
	SNR=15						
JLN				S	S	09 27 48.6	-1.4
JLN				S	S	09 27 48.6	-1.4
KOD	Kodaikanal	79.76	273	eP	P	09 17 48.6	-0.4

WR8	**Warramunga Arr**	79.85	208	P	P	09 17 49.2	+0.4
WRAB	**Tennant Creek**	79.87	208	P	P	09 17 49.7	+0.7
WRAB				IAmb	IAmb	09 18 08.4	
	comp=Z,165nm,0.9s						
WRAB	**Tennant Creek**	79.87	208	P	P	09 17 49.7	+0.7
WRAB				pmax	pmax		
	comp=Z,165nm,1.0s						
WRA	**Warramunga Arr**	79.88	208	P	P	09 17 49.4	+0.3
WRA	**Warramunga Arr**	79.88	208	P	P	09 17 49.3	+0.3
	comp=Z,33nm,1.1s,baz=20,slow=6.1,SNR=60						
WRA				S	SKSac	09 28 03.6	-1.3
	comp=Z,7.5nm,1.4s,baz=16,slow=11,SNR=5.3						
WRA				PKKPbc	PKKPbc	09 36 34.0	+0.6
	comp=Z,0.7nm,0.6s,baz=15,slow=12,SNR=6.0						
WRA				LR	LR	09 51 54.1	
	comp=Z,5µm,21.7s,baz=8.0,slow=35						
	comp=Z,33nm,1.1s						
WRA	**Warramunga Arr**	79.88	208	P	P	09 17 49.4	+0.3
WRA				pmax	pmax		
	comp=Z,30nm,1.2s						
WB1	**Warramunga Ar.**	79.90	208	P	P	09 17 50.4	+1.3
AJN	**Ajban**	79.92	299	P	P	09 17 49.3	-0.1
	SNR=9.0						
AJN				P	P	09 17 49.3	-0.1
	SNR=9.0						
AJN				S	S	09 27 48.1	-3.9
AJN				S	S	09 27 48.1	-3.9
AJN	**Ajban**	79.92	299	*i* P	P	09 17 48.6	-0.9
	SNR=16						
ALNE	**Al Ain**	79.97	298	P	P	09 17 49.5	-0.2
	SNR=20						
ALNE				S	S	09 27 48.3	-4.3
ALNE	**Al Ain**	79.97	298	*i* P	P	09 17 48.7	-1.1
	SNR=23						
CSS	**Mathiatis**	80.09	321	P	P	09 17 49.5	-0.7
CSS				IAmb	IAmb	09 18 12.3	
	comp=Z,389nm,1.6s						
CSS				IAMs_20	IAMs_20	09 59 12.3	
	comp=Z,11µm,20.0s						
ARQ	**Araqi**	80.19	297	P	P	09 17 51.3	+0.3
	SNR=18						
ARQ				P	P	09 17 51.3	+0.3
	SNR=18						
ARQ				S	S	09 27 51.9	-3.0
ARQ				S	S	09 27 51.9	-3.0
AKAS	**Kas**	80.21	324	P	P	09 17 50.7	-0.3
JMDO	**Jabal Madar**	80.21	296	P	P	09 17 50.9	-0.1
	SNR=25						
JMDO				P	P	09 17 50.9	-0.1
	SNR=25						
JMDO				S	S	09 27 53.2	-1.9
JMDO				S	S	09 27 53.2	-1.9
BSY	**Bisya**	80.35	296	P	P	09 17 52.3	+0.5
	SNR=24						
BSY				P	P	09 17 52.3	+0.5
	SNR=24						
BSY				S	S	09 27 54.3	-2.3
BSY				S	S	09 27 54.3	-2.3
PALK	**Pallekele**	80.37	269	P	P	09 17 51.0	-0.9
PALK				IAmb	IAmb	09 18 11.8	
	comp=Z,212nm,1.5s						
PALK	**Pallekele**	80.37	269	P	P	09 17 51.9	-0.1
PALK				S	S	09 27 54.3	-2.7
PALK	**Pallekele**	80.37	269	P	P	09 17 51.1	-0.9
PALK				pmax	pmax		
	comp=Z,213nm,1.5s						
PALK				MLR	MLR		
	comp=Z,16µm,19.0s						
EJON	**La Jonquera**	80.51	346	P	P	09 17 54.2	+1.8
CEST	**Esterri de Car**	80.57	347	IAmb	IAmb	09 18 14.8	
	comp=Z,347nm,1.5s						
CEST				IAMs_20	IAMs_20	09 54 04.8	
	comp=Z,10µm,21.0s						
JRN	**Qarnain Island**	80.64	301	P	P	09 17 53.2	-0.1
JRN				P	P	09 17 53.2	-0.1
JRN				S	S	09 27 55.5	-4.0
JRN				S	S	09 27 55.5	-4.0
ARG	**Arkhangelos**	80.70	325	P	P	09 17 52.3	-1.1
ARG				IAmb	IAmb	09 18 13.1	
	comp=Z,216nm,1.2s						
ARG	**Arkhangelos**	80.70	325	P	P	09 17 52.3	-1.1
ARG				pmax	pmax		
	comp=Z,216nm,1.2s						
SHMA	**Al-Shehemyia**	80.76	303	P	P	09 17 54.2	+0.3
SHMA				S	S	09 27 56.4	-4.3
FITZ	**Fitzroy Crossi**	80.77	217	LR	LR	09 56 59.7	
	comp=Z,1µm,18.9s,baz=17,slow=38						
060A	**Indiantown**	80.78	55	P	P	09 17 52.1	-1.9
060A				IAmb	IAmb	09 18 14.3	
	comp=Z,196nm,1.4s						
SAKB	**Bahrain**	80.85	303	P	P	09 17 54.9	+0.5
SAKB				S	S	09 27 57.3	-4.4
MMAI	**Mount Meron Ar**	81.09	318	P	P	09 17 55.1	-0.6
	comp=Z,21nm,0.9s,baz=40,slow=6.7,SNR=18						
MMAI				S	S	09 28 04.0	-0.2
	comp=Z,0.5nm,0.3s,baz=68,slow=19,SNR=1.3						
MMAI				LR	LR	10 00 01.3	
	comp=Z,10µm,18.1s,baz=38,slow=40						
	comp=Z,21nm,0.9s						
TIP	**Timpagrande**	81.09	335	IAmb	IAmb	09 18 11.5	
	comp=Z,301nm,1.5s						
ASF	**Jabal al Asfar**	81.28	317	LR	LR	10 00 20.3	
	comp=Z,14µm,18.8s,baz=58,slow=40						
UMZA	**Um Al Zommool**	81.39	298	P	P	09 17 57.7	+0.4
UMZA				P	P	09 17 57.7	+0.4
UMZA				S	S	09 28 02.3	-5.1
UMZA				S	S	09 28 02.3	-5.1
PMOR	**Pomariorio Ree**	81.42	134	*e*P	P	09 18 03.9	+6.6
	comp=Z,348nm,1.4s						
PMOR	**Pomariorio Ree**	81.42	134	*e*S	S	09 28 08.8	+1.4
	comp=Z,4µm,26.1s						
PMOR	**Pomariorio Ree**	81.42	134	*e*LR	LR	09 43 11.3	
	comp=Z,25µm,28.9s						
MHTO	**MHTO**	81.43	295	P	P	09 17 58.1	+0.6
	SNR=43						
MHTO				P	P	09 17 58.1	+0.6
	SNR=43						
MHTO				S	S	09 28 05.4	-2.5
MHTO				S	S	09 28 05.4	-2.5
GHWR	**Ruwais**	81.45	300	S	S	09 28 03.1	-4.9
061Z	**Ochoppi**	81.53	56	IAmb	IAmb	09 18 18.9	
	comp=Z,248nm,1.1s						
TRNA	**Turayna**	81.59	302	P	P	09 17 58.6	+0.3
	SNR=6.9						
TRNA				S	S	09 28 05.3	-4.1
KARP	**Karpathos**	81.62	326	IAmb	IAmb	09 18 17.6	
	comp=Z,133nm,0.9s						
KARP				IAMs_20	IAMs_20	09 59 57.4	
	comp=Z,11µm,20.0s						
ITM	**Ithomi**	81.65	330	IAMs_20	IAMs_20	09 59 11.1	
	comp=Z,11µm,19.0s						
VAH	**Vaihoa**	81.73	133	*e*P	P	09 18 06.9	+7.9
	comp=Z,148nm,1.2s						
VAH	**Vaihoa**	81.73	133	*e*S	S	09 28 09.8	-0.9
	comp=Z,7µm,31.5s						
VAH	**Vaihoa**	81.73	133	*e*LR	LR	09 43 20.6	
	comp=Z,18µm,28.3s						
SMRA	**Abu-Samra**	81.77	303	P	P	09 17 59.4	+0.2
	SNR=15						
SMRA				S	S	09 28 06.6	-4.6
BALJ	**Balqa**	81.83	318	IAMs_20	IAMs_20	09 57 41.5	
	comp=Z,9µm,19.0s						
SLWR	**Sila**	81.93	301	P	P	09 18 00.4	+0.3
SLWR				P	P	09 18 00.4	+0.3
SLWR				S	S	09 28 09.1	-3.8
SLWR				S	S	09 28 09.1	-3.8
EIDS	**Eidsvold**	81.95	192	IAmb	IAmb	09 18 28.3	
	comp=Z,247nm,1.8s						
EIDS	**Eidsvold**	81.95	192	P	P	09 18 01.6	+1.7
MZR	**Muzera**	81.97	299	P	P	09 18 00.5	+0.1
	SNR=26						
MZR				P	P	09 18 00.5	+0.1
	SNR=26						
MZR				S	S	09 28 09.8	-3.7
MZR				S	S	09 28 09.8	-3.7
MZR	**Muzera**	81.97	299	*i* P	P	09 17 59.4	-1.0
	SNR=16						
ECAL	**Calabor**	81.98	353	P	P	09 18 01.5	+1.2
PGAV	**Gavieira, Arco**	82.05	354	*e*P	P	09 18 01.3	+0.6
PGAV				*i* Amb		09 18 21.9	
	comp=Z,137nm,1.6s						
PGAV				*e*S	S	09 28 14.5	+0.6
PGAV				*e*SS	SS	09 33 38.9	+7.5
PGAV				*e*LQ	LQ	09 39 57.6	
PGAV				*e*LR	LR	09 41 50.0	
PGAV				*i* AMs_20		09 59 23.6	
	comp=Z,4µm,20.0s						
PBRG	**Braganca**	82.11	353	*e*P	P	09 18 02.7	+1.8
PBRG				*i* Amb		09 18 21.7	
	comp=Z,96nm,1.5s						
PCAB	**Cabril**	82.29	354	*e*P	P	09 18 02.5	+0.7
PCAB				*i* Amb		09 18 22.8	
	comp=Z,98nm,1.6s						
VSL	**Villasalto**	82.35	341	IAMs_20	IAMs_20	10 01 28.1	
	comp=Z,8µm,19.0s						
BBSR	**BB Station**	82.52	40	P	P	09 18 02.2	-0.9
BBSR				IAmb	IAmb	09 18 22.1	
	comp=Z,141nm,1.0s						
BBSR	**BB Station**	82.52	40	IAMs_20	IAMs_20	09 56 43.8	
	comp=Z,7µm,21.0s						
DQM	**DQM**	82.53	295	P	P	09 18 02.8	-0.6
DQM				P	P	09 18 02.8	-0.6
DQM				S	S	09 28 16.3	-2.9
DQM				S	S	09 28 16.3	-2.9
IDI	**Anoyia**	82.56	327	LR	LR	09 59 02.3	
	comp=Z,6µm,18.7s,baz=26,slow=39						
GHAJ	**Ghor Haditha**	82.56	318	IAMs_20	IAMs_20	10 00 53.8	
	comp=Z,11µm,20.0s						
POLO	**Lamas de Olo**	82.61	354	*e*P	P	09 18 04.5	+0.9
POLO				*i* Amb		09 18 24.0	
	comp=Z,66nm,1.5s						
PVRL	**Vila Real**	82.70	354	*e*P	P	09 18 04.4	+0.4
PVRL				*i* Amb		09 18 22.5	
	comp=Z,151nm,1.1s						
TEIG	**Tepich**	82.73	65	P	P	09 18 03.6	-0.7
TEIG				IAmb	IAmb	09 18 24.0	
	comp=Z,136nm,1.2s						
TEIG				IAMs_20	IAMs_20	10 00 10.2	
	comp=Z,6µm,22.0s						
MVO	**Moncorvo**	82.77	353	*e*P	P	09 18 05.1	+0.7
MVO				*i* Amb		09 18 24.6	
	comp=Z,135nm,1.6s						
MVO				*e*S	S	09 28 22.8	+1.5
MVO				*e*SS	SS	09 33 47.5	+5.3
MVO				*e*LQ	LQ	09 39 59.1	
MVO				*e*LR	LR	09 42 53.9	
MVO				*i* AMs_20		10 01 59.0	
	comp=Z,7µm,20.0s						
MAHO	**Mahon**	82.82	345	P	P	09 18 05.2	+0.7
MAHO	**Mahon**	82.82	345	IAMs_20	IAMs_20	09 56 47.4	
	comp=Z,10µm,22.0s						
RAR	**Rarotonga**	82.87	146	IAMs_20	IAMs_20	09 45 19.1	
	comp=Z,6µm,21.0s						
RAR	**Rarotonga**	82.87	146	LR	LR	09 47 47.8	
	comp=Z,4µm,21.6s,baz=336,slow=30						
PPT	**Papeete**	83.07	136	LR	LR	09 47 16.4	
	comp=Z,5µm,21.3s,baz=320,slow=30						
PPT2	**Papeete2**	83.09	136	*e*P	P	09 18 16.8	+11
	comp=Z,178nm,1.4s						
PPT2	**Papeete2**	83.09	136	*e*PP	PP	09 21 10.7	-6.8
	comp=Z,1µm,36.2s						
PPT2				*e*S	S	09 28 23.8	-0.9
	comp=Z,4µm,27.0s						
PPT2				*e*SS	SS	09 33 50.9	+1.5
	comp=Z,5µm,29.0s						
PPT2				*e*LQ	LQ	09 40 13.8	
	comp=Z,9µm,28.2s						
PPT2				*e*LR	LR	09 43 47.8	
	comp=Z,36µm,34.5s						
PPT2				*e*LR	LR	09 43 56.6	
	comp=Z,44µm,29.0s						
PPTF	**Pamatai, Papee**	83.09	136	IAMs_20	IAMs_20	09 46 08.8	
	comp=Z,9µm,21.0s						
PAE	**Paea**	83.15	136	*e*P	P	09 18 17.7	+11
	comp=Z,70nm,1.3s						
PAE	**Paea**	83.15	136	*e*S	S	09 28 27.0	+1.8
	comp=Z,628nm,25.8s						
PAE				*e*SS	SS	09 33 48.1	-2.1
	comp=Z,504nm,25.2s						
PAE	**Paea**	83.15	136	*e*LR	LR	09 44 01.6	
	comp=Z,4µm,22.9s						
SOR	**Soroa**	83.16	59	IAmb	IAmb	09 18 26.4	
	comp=Z,132nm,1.3s						
SOR				IAMs_20	IAMs_20	09 59 29.1	
	comp=Z,7µm,18.0s						
VAE	**Valguarnera**	83.26	336	LR	LR	09 58 04.7	
	comp=Z,10µm,21.6s,baz=12,slow=38						
PVIS	**Viseu**	83.27	354	*e*P	P	09 18 08.2	+1.3
UCM	**Universidad Co**	83.32	350	P	P	09 18 07.9	+0.7
TVO	**Taravao**	83.39	136	*e*LR	LR	09 44 07.8	
	comp=Z,5µm,24.5s						
AS01	**Alice Springs**	83.54	208	P	P	09 18 09.4	+1.1
AS31	**Alice Springs**	83.55	208	P	P	09 18 09.4	+1.0
ASAR	**Alice Springs**	83.55	208	P	P	09 18 09.1	+0.7
ASAR	**Alice Springs**	83.55	208	P	P	09 18 09.6	+1.2
	comp=Z,36nm,1.1s,baz=15,slow=4.8,SNR=104						
ASAR				PKKPbc	PKKPbc	09 36 28.4	+3.2
	comp=Z,0.6nm,0.7s,baz=182,slow=2.2,SNR=5.2						
ASAR				LR	LR	09 53 24.5	
	comp=Z,9µm,21.9s,slow=34						
	comp=Z,36nm,1.1s						
ASAR	**Alice Springs**	83.55	208	P	P	09 18 09.1	+0.7
MTE	**Manteigas**	83.57	354	IAmb	IAmb	09 18 30.0	
	comp=Z,200nm,1.5s						
MTE				IAMs_20	IAMs_20	10 01 42.1	
	comp=Z,9µm,19.0s						
MTE	**Manteigas**	83.57	354	*e*P	P	09 18 08.7	+0.2
MTE				*i* Amb		09 18 29.9	
	comp=Z,214nm,1.6s						
MTE				*e*S	SKSac	09 28 32.2	+2.2
MTE				*e*SS	SS	09 34 00.6	+6.7
MTE				*e*LQ	LQ	09 40 20.8	
MTE				*e*LR	LR	09 42 51.9	
MTE				*i* AMs_20		10 02 12.9	
	comp=Z,8µm,18.0s						
MTE	**Manteigas**	83.57	354	*e*P	P	09 18 10.5	+2.0
CAMR	**Camarioca**	83.72	58	IAmb	IAmb	09 18 29.9	
	comp=Z,916nm,1.3s						
CAMR				IAMs_20	IAMs_20	09 58 13.6	
	comp=Z,20µm,21.0s						
ECHE	**Chera**	83.80	349	P	P	09 18 11.4	+1.7
COI	**Coimbra**	83.81	354	P	P	09 18 08.9	-0.7
COI				IAmb	IAmb	09 18 23.6	
	comp=Z,174nm,1.2s						
COI				IAMs_20	IAMs_20	09 53 54.5	
	comp=Z,8µm,21.0s						
COI	**Coimbra**	83.81	354	*e*P	P	09 18 09.7	0.0
COI				*i* Amb		09 18 25.4	
	comp=Z,210nm,1.6s						
COI	**Coimbra**	83.81	354	P	P	09 18 08.9	-0.7
COI				pmax	pmax		
	comp=Z,175nm,1.2s						
PCAS	**Casmilo, Conde**	83.97	354	*e*P	P	09 18 10.9	+0.5
PCAS				*i* Amb		09 18 26.2	
	comp=Z,235nm,1.7s						
ESDC	**Sonseca Array**	84.02	351	P	P	09 18 09.8	-1.1
	comp=Z,8.2nm,0.7s,baz=360,slow=5.2,SNR=62						
ESDC				S	S	09 28 34.8	+0.9
	comp=Z,0.2nm,0.4s,baz=71,slow=4.7,SNR=1.7						
ESDC				PKPPKP		09 44 37.8	
	comp=Z,0.7nm,0.7s,baz=133,slow=2.0,SNR=5.0						
	comp=Z,8.2nm,0.7s						
PCBR	**Castelo Branco**	84.12	354	*e*P	P	09 18 11.6	+0.4
PCBR				*i* Amb		09 18 27.1	
	comp=Z,221nm,1.6s						
QLP	**Quilpie**	84.13	198	P	P	09 18 12.7	+1.5
PAB	**San Pablo**	84.18	351	P	P	09 18 10.8	-0.8
PAB				IAmb	IAmb	09 18 32.4	
	comp=Z,138nm,1.4s						
PAB	**San Pablo**	84.18	351	IAMs_20	IAMs_20	10 01 41.3	
	comp=Z,10µm,20.0s						
PAB	**San Pablo**	84.18	351	P	P	09 18 10.8	-0.8
PAB				pmax	pmax		
	comp=Z,138nm,1.4s						
EIL	**Elat**	84.26	317	LR	LR	10 01 44.2	
	comp=Z,10µm,18.7s,baz=42,slow=40						
PSARD	**Sardoal**	84.40	354	*e*P	P	09 18 13.4	+0.7
PSARD				*i* Amb		09 18 33.6	
	comp=Z,159nm,2.0s						
PSBE	**So Bento**	84.52	355	*e*P	P	09 18 14.2	+0.9
PSBE				*i* Amb		09 18 29.4	
	comp=Z,264nm,1.5s						
PMRV	**Marv??o**	84.52	353	*e*P	P	09 18 13.6	+0.3
PMRV				*i* Amb		09 18 29.1	
	comp=Z,149nm,1.7s						
PMRV				*e*S	SKSac	09 28 37.7	+1.6
PMRV				*e*SS	SS	09 34 16.2	+8.2
PMRV				*e*LQ	LQ	09 40 51.9	
PMRV				*e*LR	LR	09 43 39.5	
PMRV				*i* AMs_20		10 02 41.1	
	comp=Z,6µm,20.0s						
PGRA	**Graciosa**	84.63	9	*e*P	P	09 18 18.9	+5.1
PGRA				*i* IAmb	IAmb	09 18 40.0	
	comp=Z,235nm,1.7s						
PGRA	**Graciosa**	84.63	9	*e*P	P	09 18 18.9	+5.1
PGRA				*i* IAmb	IAmb	09 18 40.0	
	comp=Z,235nm,1.7s						
WDD	**Wied Dalam**	84.80	336	IAMs_20	IAMs_20	09 59 19.2	
	comp=Z,6µm,20.0s						
ROSA	**Rosais**	84.91	10	*e*P	P	09 18 17.0	+1.7
ROSA				*i* IAmb	IAmb	09 18 43.7	
	comp=Z,186nm,1.4s						
ROSA	**Rosais**	84.91	10	*e*P	P	09 18 17.0	+1.7
ROSA				*i* IAmb	IAmb	09 18 43.7	
	comp=Z,186nm,1.4s						
PMTG	**Montargil**	84.93	354	*e*P	P	09 18 15.9	+0.5
PMTG				*i* Amb		09 18 36.2	
	comp=Z,194nm,1.6s						
PAGU	**Agualva, Azore**	84.96	9	*e*P	P	09 18 19.3	+3.8
PAGU				*i* IAmb	IAmb	09 18 28.4	
	comp=Z,174nm,1.4s						
PAGU	**Agualva, Azore**	84.96	9	*e*P	P	09 18 19.3	+3.8
PAGU				*i* IAmb	IAmb	09 18 28.4	
	comp=Z,174nm,1.4s						
HMDM	**Hanimaadhoo**	84.99	275	P	P	09 18 16.6	+0.7
CALA	**Caldeira**	85.00	10	*e*P	P	09 18 26.4	+11
CALA				*i* IAmb	IAmb	09 18 37.4	
	comp=Z,186nm,2.7s						
CALA	**Caldeira**	85.00	10	*e*P	P	09 18 26.4	+11
CALA				*i* IAmb	IAmb	09 18 37.4	
	comp=Z,186nm,2.7s						
PSCM	**Serra do Cume**	85.03	9	*e*P	P	09 18 15.0	-0.9
PSCM				*i* IAmb	IAmb	09 18 23.2	
	comp=Z,219nm,0.6s						
PSCM	**Serra do Cume**	85.03	9	*e*P	P	09 18 15.0	-0.9
PSCM				*i* IAmb	IAmb	09 18 23.2	
	comp=Z,219nm,0.6s						
PESTR	**Estremoz**	85.09	354	P	P	09 18 16.2	0.0
PESTR	**Estremoz**	85.09	354	P	P	09 18 16.1	-0.2
PESTR				IAmb	IAmb	09 18 36.6	
	comp=Z,137nm,1.1s						
PESTR				IAMs_20	IAMs_20	10 02 36.5	
	comp=Z,9µm,18.0s						
PESTR	**Estremoz**	85.09	354	*e*P	P	09 18 16.8	+0.6
PESTR				*i* Amb		09 18 37.2	
	comp=Z,236nm,1.6s						
PICO	**Pico**	85.11	10	*e*P	P	09 18 15.3	-1.0
PICO				*i* IAmb	IAmb	09 18 30.4	
	comp=Z,147nm,1.2s						
PICO	**Pico**	85.11	10	*e*P	P	09 18 15.3	-1.0
PICO				*i* IAmb	IAmb	09 18 30.4	
	comp=Z,147nm,1.2s						
EBAD	**Badajoz**	85.17	353	P	P	09 18 16.3	-0.2
HUEH	**Huehuetenango**	85.18	70	IAMs_20	IAMs_20	10 02 34.3	
	comp=Z,5µm,22.0s						
PID	**Ribeirinha**	85.20	10	*e*P	P	09 18 14.1	-2.6
PID				*i* IAmb	IAmb	09 18 31.1	
	comp=Z,119nm,1.4s						
PID	**Ribeirinha**	85.20	10	*e*P	P	09 18 14.1	-2.6
PID				*i* IAmb	IAmb	09 18 31.1	
	comp=Z,119nm,1.4s						
PACT	**Alcochete**	85.27	355	*e*P	P	09 18 23.8	+6.8
PACT				*i* Amb		09 18 39.0	
	comp=Z,541nm,1.6s						
RAYN	**Ar Rayn**	85.28	306	P	P	09 18 16.0	-1.4
RAYN				IAmb	IAmb	09 18 34.5	
	comp=Z,71nm,0.8s						
RAYN	**Ar Rayn**	85.28	306	P	P	09 18 16.7	-0.7
RAYN				S	SKSac	09 28 39.6	-1.8
RAYN	**Ar Rayn**	85.28	306	P	P	09 18 16.0	-1.4
RAYN				pmax	pmax		
	comp=Z,71nm,0.8s						
RAYN				MLR	MLR		
	comp=Z,16µm,20.0s						
RAYN	**Ar Rayn**	85.28	306	*i* P	P	09 18 16.5	-0.9
	SNR=33						
LIS	**Lisbon**	85.33	355	*e*SKSac	SKSac	09 28 42.1	+0.9
LIS				IAMs_20	IAMs_20	10 01 57.2	
	comp=Z,9µm,12.2s						
DOK	**Doka**	85.36	297	P	P	09 18 18.1	+0.3
DOK				P	P	09 18 18.1	+0.3
DOK				S	SKSac	09 28 42.3	+0.4
DOK				S	SKSac	09 28 42.3	+0.4
EVO	**Evora**	85.45	354	P	P	09 18 18.0	0.0
EVO	**Evora**	85.45	354	*e*P	P	09 18 18.4	+0.4
EVO				*i* Amb		09 18 39.0	
	comp=Z,239nm,1.8s						
EADA	**Adamuz**	85.57	351	P	P	09 18 19.6	+1.0
MBWA	**Marble Bar**	85.67	221	P	P	09 18 19.0	-0.1
MBWA				IAmb	IAmb	09 18 39.7	
	comp=Z,172nm,0.9s						
MBWA	**Marble Bar**	85.67	221	P	P	09 18 20.3	+1.2
MBWA	**Marble Bar**	85.67	221	P	P	09 18 19.4	+0.3
DMTO	**DMTO**	85.71	296	P	P	09 18 20.0	+0.4
DMTO				S	SKSac	09 28 45.6	+1.6
ECAB	**El Cabril**	85.73	352	P	P	09 18 20.0	+0.7
RTAL	**Retalhuleu**	85.74	70	IAMs_20	IAMs_20	10 01 18.2	
	comp=Z,6µm,22.0s						
PBAR	**Barrancos**	85.75	353	P	P	09 18 19.7	+0.3
PBAR	**Barrancos**	85.75	353	*e*P	P	09 18 19.5	+0.1
PBAR				*i* Amb		09 18 40.6	
	comp=Z,328nm,1.6s						
CART	**Cartagena**	85.78	348	P	P	09 18 20.6	+1.0
CART	**Cartagena**	85.78	348	P	P	09 18 18.8	-0.8
CART				IAmb	IAmb	09 18 35.3	
	comp=Z,110nm,1.0s						
CART				IAMs_20	IAMs_20	09 57 31.8	
	comp=Z,9µm,22.0s						
TLOR	**Lorca, Murcia**	85.79	349	P	P	09 18 21.3	+1.6
PBEJ	**Beja**	85.95	354	*e*P	P	09 18 21.5	+1.0
PBEJ				*i* Amb		09 18 41.8	
	comp=Z,188nm,1.7s						
KEST	**Kesra**	86.00	340	P	P	09 18 20.1	-0.8
KEST	**Kesra**	86.00	340	P	P	09 18 21.6	+0.8
	comp=Z,4.9nm,0.6s,baz=49,slow=4.5,SNR=6.4						
KEST				S	S	09 28 57.2	+3.5
	comp=Z,1.3nm,0.6s,baz=324,slow=19,SNR=1.4						
KEST				LR	LR	10 01 22.2	
	comp=Z,9µm,19.1s,baz=0.7,slow=39						
	comp=Z,4.9nm,0.6s						
KEST	**Kesra**	86.00	340	P	P	09 18 22.1	+1.2
	SNR=16						
PSA00	**Pilbara Seismi**	86.01	221	P	P	09 18 21.0	+0.3
PSA00				IAmb	IAmb	09 18 40.8	
	comp=Z,181nm,1.1s						
PSA00	**Pilbara Seismi**	86.01	221	P	P	09 18 21.6	+0.9
CMLA	**Cha da Macela**	86.09	8	*e*P	P	09 18 19.9	-1.2
CMLA				*i* IAmb	IAmb	09 18 35.7	
	comp=Z,79nm,0.7s						
CMLA	**Cha da Macela**	86.09	8	IAMs_20	IAMs_20	09 52 05.9	
	comp=Z,7µm,22.0s						
CMLA	**Cha da Macela**	86.09	8	*e*P	P	09 18 19.9	-1.2
CMLA				*i* IAmb	IAmb	09 18 35.7	
	comp=Z,79nm,0.7s						
PGRON	**Lagoa das Cont**	86.09	8	*e*P	P	09 18 26.4	+5.1
PGRON				*i* IAmb	IAmb	09 18 35.1	
	comp=Z,116nm,0.9s						
PGRON	**Lagoa das Cont**	86.09	8	*e*P	P	09 18 26.4	+5.1
PGRON				*i* IAmb	IAmb	09 18 35.1	
	comp=Z,116nm,0.9s						
BART	**Pico Bartolome**	86.10	7	*e*P	P	09 18 20.4	-0.9
BART				*i* IAmb	IAmb	09 18 34.9	
	comp=Z,151nm,1.5s						
BART	**Pico Bartolome**	86.10	7	*e*P	P	09 18 20.4	-0.9
BART				*i* IAmb	IAmb	09 18 34.9	
	comp=Z,151nm,1.5s						
EMIN	**Mina Concepcio**	86.13	353	P	P	09 18 22.2	+0.9
WHFO	**Wadi Hawf**	86.13	297	P	P	09 18 21.7	0.0
WHFO				P	P	09 18 21.7	0.0
WHFO				S	SKSac	09 28 48.9	+2.1
WHFO				S	SKSac	09 28 48.9	+2.1
MESJ	**Messejana**	86.16	354	*e*P	P	09 18 21.6	+0.1
MESJ				*e*SKSac	SKSac	09 28 47.4	+1.0
MESJ				IAMs_20	IAMs_20	10 01 59.0	
	comp=N,8µm,19.0s						
MESJ	**Messejana**	86.16	354	IAMs_20	IAMs_20	10 01 04.6	
	comp=Z,9µm,21.0s						
MESJ	**Messejana**	86.16	354	*e*P	P	09 18 22.1	+0.6
MESJ				*i* Amb		09 18 41.5	
	comp=Z,101nm,1.9s						
MESJ	**Messejana**	86.16	354	*e*P	P	09 18 21.6	+0.1
MESJ				*e*		09 28 47.4	
RBK	**Rabkut**	86.26	296	P	P	09 18 22.8	+0.5
RBK				P	P	09 18 22.8	+0.5
RBK				S	SKSac	09 28 50.8	+3.1
RBK				S	SKSac	09 28 50.8	+3.1

PCVE	**Castro Verde**	**86.35**	**354**	P	**P**	**09 18 23.9**	**+1.4**
PCVE	**Castro Verde**	**86.35**	**354**	*e*P	**P**	**09 18 22.9**	**+0.4**
PCVE				*i* Amb		09 18 43.9	
	comp=Z,193nm,1.5s						
EGRO	**El Granado**	**86.41**	**353**	P	**P**	**09 18 24.2**	**+1.5**
EQTA	**Presa de Quent**	**86.41**	**350**	P	**P**	**09 18 23.8**	**+0.9**
RAO	**Raoul Island**	**86.42**	**164**	IAMs_20	IAMs_20	09 48 36.0	
	comp=Z,8µm,22.0s						
RAO	**Raoul Island**	**86.42**	**164**	LR	LR	09 49 31.3	
	comp=Z,4µm,21.5s,baz=6.5,slow=30						
PTEO	**Sao Teotonio**	**86.48**	**354**	*e*P	**P**	**09 18 24.6**	**+1.5**
PTEO				*i* Amb		09 18 44.1	
	comp=Z,173nm,1.8s						
ENIJ	**Nijar**	**86.52**	**349**	P	**P**	**09 18 24.3**	**+0.9**
PVAQ	**Vaqueiros**	**86.56**	**354**	P	**P**	**09 18 24.7**	**+1.2**
PVAQ	**Vaqueiros**	**86.56**	**354**	P	**P**	**09 18 22.9**	**-0.5**
PVAQ				IAMs_20	IAMs_20	10 03 53.3	
	comp=Z,7µm,18.0s						
PVAQ	**Vaqueiros**	**86.56**	**354**	*e*P	**P**	**09 18 24.4**	**+0.9**
PVAQ				*i* Amb		09 18 39.8	
	comp=Z,196nm,1.4s						
PVAQ				*e*LR	LR	09 44 41.1	
PVAQ				*i* AMs_20		10 04 23.4	
	comp=Z,7µm,20.0s						
EGOR	**Sierra Gorda,**	**86.57**	**351**	P	**P**	**09 18 24.2**	**+0.5**
MORF	**Marmelete**	**86.71**	**354**	*e*P	**P**	**09 18 24.4**	**+0.1**
MORF				*e*SKSac	**SKSac**	**09 28 50.9**	**+0.9**
MORF				IAMs_20	IAMs_20	09 43 11.1	
	comp=E,31µm,50.7s						
MORF	**Marmelete**	**86.71**	**354**	IAmb	IAmb	09 18 38.6	
	comp=Z,165nm,1.4s						
MORF				IAMs_20	IAMs_20	10 01 33.3	
	comp=Z,9µm,19.0s						
MORF	**Marmelete**	**86.71**	**354**	*e*P	**P**	**09 18 25.3**	**+1.0**
MORF				*i* Amb		09 18 40.2	
	comp=Z,202nm,1.5s						
MORF	**Marmelete**	**86.71**	**354**	*e*P	**P**	**09 18 24.4**	**+0.1**
MORF				*e*		09 28 50.9	
PBDV	**Barranco-do-Ve**	**86.73**	**354**	*e*P	**P**	**09 18 25.2**	**+0.9**
PBDV				*i* Amb		09 18 46.1	
	comp=Z,215nm,1.7s						
ELGU	**Los Guajares,**	**86.77**	**350**	P	**P**	**09 18 25.2**	**+0.5**
ABTO	**Aybut**	**86.84**	**297**	P	**P**	**09 18 25.8**	**+0.6**
ABTO				P	**P**	**09 18 25.8**	**+0.6**
ABTO				S	**S**	**09 28 57.2**	**-5.1**
ABTO				S	**S**	**09 28 57.2**	**-5.1**
PSMN	**Pico do Norte,**	**86.88**	**7**	*e*P	**P**	**09 18 22.9**	**-2.1**
PSMN				*i* IAmb	IAmb	09 18 33.2	
	comp=Z,30nm,0.8s						
PSMN	**Pico do Norte,**	**86.88**	**7**	*e*P	**P**	**09 18 22.9**	**-2.1**
PSMN				*i* IAmb	IAmb	09 18 33.2	
	comp=Z,30nm,0.8s						
ARMA	**Armidale**	**86.88**	**191**	P	**P**	**09 18 26.4**	**+1.5**
PFVI	**Vila Bisbo**	**86.89**	**354**	P	**P**	**09 18 25.8**	**+0.7**
PFVI	**Vila Bisbo**	**86.89**	**354**	*e*P	**P**	**09 18 25.3**	**+0.2**
PFVI				*i* Amb		09 18 42.0	
	comp=Z,135nm,1.3s						
EMAL	**Malaga-Limoner**	**86.95**	**351**	P	**P**	**09 18 26.7**	**+1.3**
ESPR	**Espera**	**86.96**	**352**	P	**P**	**09 18 26.1**	**+0.7**
LHI	**Lord Howe Isla**	**87.43**	**184**	IAMs_20	IAMs_20	09 57 19.0	
	comp=Z,6µm,19.0s						
COCO	**West Island**	**87.89**	**245**	IAMs_20	IAMs_20	10 00 13.9	
	comp=Z,9µm,19.0s						
COCO	**West Island**	**87.89**	**245**	P	**P**	**09 18 31.8**	**+1.7**
COCO				P	**P**	**09 18 31.8**	**+1.7**
WMELI	**Melilla**	**88.24**	**350**	P	**P**	**09 18 32.8**	**+1.2**
TBI	**Tubuai**	**88.37**	**138**	*e*P	P	09 18 43.3	+11
	comp=Z,340nm,1.2s						
TBI	**Tubuai**	**88.37**	**138**	*e*PP	PP	09 21 51.0	-9.2
	comp=Z,2µm,27.8s						
TBI				*e*S	**S**	**09 29 15.4**	**-0.8**
	comp=Z,25µm,31.0s						
TBI				*e*SS	**SS**	**09 35 06.1**	**-0.7**
	comp=Z,18µm,28.0s						
TBI				*e*LQ	LQ	09 42 00.7	
	comp=Z,57µm,47.8s						
TBI				*e*LR	LR	09 46 13.8	
	comp=Z,17µm,31.5s						
TBI				*e*LR	LR	09 46 18.9	
	comp=Z,109µm,33.5s						
TGUH	**Tegucigalpa,Un**	**88.43**	**67**	IAMs_20	IAMs_20	10 04 42.4	
	comp=Z,5µm,21.0s						
CHIV	**Chivirico**	**88.68**	**55**	P	**P**	**09 18 33.5**	**-0.3**
CHIV				IAmb	IAmb	09 18 54.2	
	comp=Z,225nm,1.3s						
CHIV				IAMs_20	IAMs_20	10 00 14.0	
	comp=Z,18µm,20.0s						
CMSA	**Cobar Meteorol**	**88.75**	**196**	P	**P**	**09 18 35.2**	**+1.5**
NMDO	**Nuevo Mundo**	**88.82**	**54**	P	**P**	**09 18 33.0**	**-1.6**
NMDO				IAmb	IAmb	09 18 53.5	
	comp=Z,50nm,0.8s						
NMDO				IAMs_20	IAMs_20	09 58 29.6	
	comp=Z,18µm,22.0s						
GIRL	**Giralia**	**89.12**	**225**	P	**P**	**09 18 37.6**	**+2.0**
MTDJ	**Mount Denham**	**89.68**	**57**	P	**P**	**09 18 37.3**	**-1.4**
MTDJ				IAmb	IAmb	09 18 58.5	
	comp=Z,108nm,1.0s						
MTDJ				IAMs_20	IAMs_20	10 02 26.6	
	comp=Z,9µm,21.0s						
CRIN	**San Cristobal**	**89.69**	**68**	IAMs_20	IAMs_20	10 04 42.3	
	comp=Z,5µm,20.0s						
STKA	**Stephens Creek**	**89.77**	**199**	P	**P**	**09 18 39.2**	**+0.7**
STKA	**Stephens Creek**	**89.77**	**199**	P	**P**	**09 18 39.5**	**+1.1**
	comp=Z,23nm,1.1s,baz=351,slow=6.4,SNR=14						
STKA				LR	LR	09 55 56.0	
	comp=Z,5µm,21.9s,baz=4.7,slow=34 comp=Z,23nm,1.1s						
STKA	**Stephens Creek**	**89.77**	**199**	⇑*e*P	**P**	**09 18 38.5**	**0.0**
HERN	**Volcan Telica**	**89.88**	**67**	IAMs_20	IAMs_20	10 04 56.8	
	comp=Z,5µm,19.0s						
BOAB	**BOACO BROADBA**	**90.62**	**67**	P	**P**	**09 18 43.8**	**+0.8**
BOAB	**BOACO BROADBA**	**90.62**	**67**	P	**P**	**09 18 41.7**	**-1.3**
BOAB				IAmb	IAmb	09 19 10.2	
	comp=Z,154nm,1.1s						
BOAB				IAMs_20	IAMs_20	10 03 03.2	
	comp=Z,9µm,22.0s						
AVE	**Averroes**	**90.62**	**353**	P	**P**	**09 18 44.6**	**+1.8**
AVE	**Averroes**	**90.62**	**353**	P	**P**	**09 18 42.1**	**-0.7**
AVE				IAmb	IAmb	09 18 56.9	
	comp=Z,100nm,1.0s						
AVE				IAMs_20	IAMs_20	10 07 17.8	
	comp=Z,7µm,20.0s						
PMPST	**Porto Santo, M**	**91.13**	**0**	*e*P	P	09 18 51.9	+6.8
ACON	**Acoyapa**	**91.28**	**66**	P	**P**	**09 18 45.4**	**-0.6**
ACON				IAmb	IAmb	09 19 05.0	
	comp=Z,111nm,1.3s						
OUZ	**Omahuta**	**91.36**	**172**	IAMs_20	IAMs_20	10 00 11.2	
	comp=Z,6µm,20.0s						
PMOZ	**Porto Moniz, M**	**91.38**	**1**	*e*P	P	09 18 54.3	+7.8
PMOZ				*e*SS	SS	09 35 56.0	+7.8
PMOZ				*e*LR	LR	09 45 07.3	
PMOZ				*i* AMs_20		10 07 52.2	
	comp=Z,3µm,18.0s						
PMAR	**Madeira**	**91.48**	**1**	*e*P	**P**	**09 18 51.3**	**+4.3**
FUL	**Funchal**	**91.55**	**1**	*e*P	P	09 18 57.4	+10
HTT	**Hallett**	**91.79**	**201**	P	**P**	**09 18 49.4**	**+1.5**
SDDR	**Presa de Saban**	**91.84**	**51**	P	**P**	**09 18 47.3**	**-1.4**
SDDR				IAMs_20	IAMs_20	10 01 33.6	
	comp=Z,7µm,20.0s						
BANI	**BANI**	**92.77**	**51**	P	**P**	**09 18 52.3**	**-0.8**
JTS	**Las Juntas de**	**92.81**	**67**	LR	LR	10 03 17.4	
	comp=Z,3µm,22.0s,baz=320,slow=37						
TIO	**Tiouine**	**92.97**	**353**	P	**P**	**09 18 55.5**	**+1.6**
TOZ	**Tahuroa Road**	**94.01**	**171**	IAMs_20	IAMs_20	10 05 24.3	
	comp=Z,9µm,19.0s						
MORW	**Morawa**	**94.22**	**221**	IAMs_20	IAMs_20	10 08 52.6	
	comp=Z,6µm,21.0s						
MORW	**Morawa**	**94.22**	**221**	P	**P**	**09 19 00.1**	**+0.9**
EMPR	**Esperanza - Ma**	**94.31**	**47**	IAMs_20	IAMs_20	10 04 48.7	
	comp=Z,4µm,18.0s						
CRPR	**Cabo Rojo, PR**	**94.50**	**48**	IAMs_20	IAMs_20	10 01 18.6	
	comp=Z,6µm,22.0s						
GCPR	**Guaynabo City**	**94.65**	**47**	IAMs_20	IAMs_20	10 03 54.5	
	comp=Z,5µm,20.0s						
CELP	**Cerrillos**	**94.66**	**48**	IAMs_20	IAMs_20	10 04 50.7	
	comp=Z,4µm,19.0s						
OBIP	**Obispado Ponce**	**94.67**	**48**	IAMs_20	IAMs_20	10 04 41.2	
	comp=Z,5µm,20.0s						
URZ	**Urewera**	**94.68**	**170**	LR	LR	10 03 27.5	
	comp=Z,2µm,18.0s,baz=356,slow=37						
HIZ	**Hauiti**	**94.73**	**172**	IAMs_20	IAMs_20	09 58 32.4	
	comp=Z,6µm,20.0s						
SJG	**San Juan**	**94.80**	**47**	IAMs_20	IAMs_20	10 02 32.6	
	comp=Z,6µm,22.0s						
SJG	**San Juan**	**94.80**	**47**	LR	LR	10 03 16.2	
	comp=Z,6µm,21.4s,baz=324,slow=36						
HUMP	**Col San Antoni**	**94.89**	**47**	IAMs_20	IAMs_20	10 03 02.0	
	comp=Z,5µm,20.0s						
PDPR	**Patillas Dam,**	**94.94**	**47**	IAMs_20	IAMs_20	10 03 16.1	
	comp=Z,4µm,20.0s						
SMRT	**St. Maarten**	**96.09**	**45**	IAMs_20	IAMs_20	10 04 42.6	
	comp=Z,7µm,20.0s						
BCIP	**Isla Barro Col**	**96.36**	**63**	IAMs_20	IAMs_20	10 05 47.3	
	comp=Z,4µm,20.0s						
SABA	**Saba**	**96.41**	**45**	IAMs_20	IAMs_20	10 02 09.1	
	comp=Z,7µm,22.0s						
SEUS	**St. Eustatius**	**96.63**	**45**	IAMs_20	IAMs_20	10 06 39.9	
	comp=Z,6µm,20.0s						
QRZ	**Quartz Range**	**96.86**	**174**	IAMs_20	IAMs_20	10 07 13.9	
	comp=Z,7µm,19.0s						
ATD	**Arta Tunnel**	**96.93**	**303**	LR	LR	10 09 12.7	
	comp=Z,550nm,19.0s,baz=28,slow=39						
ATD	**Arta Tunnel**	**96.93**	**303**	P	**P**	**09 19 12.8**	**+0.6**
ANWB	**Willy Bob**	**96.94**	**44**	IAMs_20	IAMs_20	10 05 26.0	
	comp=Z,6µm,22.0s						
NWAO	**Narrogin (SRO)**	**97.30**	**218**	IAMs_20	IAMs_20	10 01 14.0	
	comp=Z,6µm,20.0s						
NWAO	**Narrogin (SRO)**	**97.30**	**218**	LR	LR	10 01 27.3	
	comp=Z,4µm,21.4s,baz=7.0,slow=34						
NNZ	**Nelson**	**97.31**	**173**	IAMs_20	IAMs_20	09 58 19.6	
	comp=Z,7µm,20.0s						
BHW	**Baring Head**	**97.61**	**172**	IAMs_20	IAMs_20	10 06 50.6	
	comp=Z,5µm,19.0s						
THZ	**Tophouse**	**97.82**	**173**	IAMs_20	IAMs_20	10 08 09.2	
	comp=Z,7µm,19.0s						
ABD	**La Joyeuse, An**	**98.14**	**44**	IAMs_20	IAMs_20	10 06 11.8	
	comp=Z,8µm,21.0s						
GDSD	**La Dsirade Is**	**98.45**	**44**	IAMs_20	IAMs_20	10 05 22.0	
	comp=Z,7µm,22.0s						
KHZ	**Kahutara**	**98.51**	**173**	IAMs_20	IAMs_20	09 58 38.5	
	comp=Z,8µm,20.0s						
GVZ	**Greta Valley S**	**99.03**	**173**	IAMs_20	IAMs_20	10 07 17.1	
	comp=Z,7µm,20.0s						
TAM	**Tamanrasset**	**99.31**	**340**	IAMs_20	IAMs_20	10 06 31.4	
	comp=Z,7µm,22.0s						
FOZ	**Fox Glacier**	**99.42**	**176**	IAMs_20	IAMs_20	09 59 11.6	
	comp=Z,9µm,22.0s						
RPZ	**Rata Peaks**	**99.66**	**175**	IAMs_20	IAMs_20	10 02 01.9	
	comp=Z,8µm,21.0s						
RPZ	**Rata Peaks**	**99.66**	**175**	LR	LR	09 56 40.4	
	comp=Z,5µm,21.8s,baz=344,slow=31						
TAU	**Tasmania Unive**	**99.71**	**192**	IAMs_20	IAMs_20	10 01 08.2	
	comp=Z,5µm,22.0s						
SVN	**Savane Anatole**	**99.75**	**44**	IAMs_20	IAMs_20	10 08 28.6	
	comp=Z,6µm,20.0s						
FDF	**Fort de France**	**99.86**	**44**	IAMs_20	IAMs_20	10 06 09.3	
	comp=Z,5µm,20.0s						
ILAM	**Ilet Lapin Mar**	**99.93**	**44**	IAMs_20	IAMs_20	10 09 18.1	
	comp=Z,5µm,20.0s						
BIM	**Bigot**	**100.08**	**44**	IAMs_20	IAMs_20	10 06 24.4	
	comp=Z,7µm,21.0s						
MPOM	**Morne Pois Mar**	**100.23**	**44**	IAMs_20	IAMs_20	10 06 39.2	
	comp=Z,8µm,21.0s						
CTZ	**Chatham Island**	**100.82**	**166**	IAMs_20	IAMs_20	09 56 03.7	
	comp=Z,8µm,20.0s						
ODZ	**Otahua Downs**	**100.97**	**175**	IAMs_20	IAMs_20	10 00 10.5	
	comp=Z,7µm,20.0s						
SDV	**Santo Domingo**	**101.04**	**55**	IAMs_20	IAMs_20	10 07 50.5	
	comp=Z,9µm,22.0s						
DCZ	**Deep Cove**	**101.27**	**178**	IAMs_20	IAMs_20	10 02 15.5	
	comp=Z,5µm,20.0s						
WHZ	**Wether Hill Ro**	**101.72**	**177**	IAMs_20	IAMs_20	10 03 45.3	
	comp=Z,7µm,20.0s						
GRGR	**Grenville**	**102.02**	**46**	IAMs_20	IAMs_20	10 09 38.7	
	comp=Z,8µm,20.0s						
TORD	**Torodi Ar. Bea**	**109.43**	**342**	PP	**PP**	**09 24 37.2**	**-2.8**
	comp=Z,5.4nm,0.8s,baz=16,slow=8.5,SNR=4.8						
TORD				PKKP	**PKKPdf**	**09 35 27.0**	**-0.8**
	comp=Z,2.6nm,0.8s,baz=309,slow=0.9,SNR=4.4						
MBO	**M'Bour**	**109.73**	**1**	IAMs_20	IAMs_20	10 15 31.9	
	comp=Z,6µm,21.0s						
ROCAM	**Rodrigues Isla**	**112.17**	**267**	IAMs_20	IAMs_20	10 08 52.1	
	comp=Z,8µm,22.0s						
TBTG	**Tabatinga, AM**	**112.79**	**61**	IAMs_20	IAMs_20	10 16 06.6	
	comp=Z,6µm,22.0s						
CZSB	**Cruzeiro do Su**	**114.44**	**66**	IAMs_20	IAMs_20	10 18 48.4	
	comp=Z,4µm,22.0s						
DBIC	**Dimbokro**	**116.75**	**348**	PKP	**PKiKP**	**09 24 25.6**	**+0.7**
	comp=Z,6.5nm,0.8s,baz=306,slow=3.2,SNR=5.7						
RER	**Riviere de l'E**	**117.56**	**273**	IAMs_20	IAMs_20	10 11 06.8	
	comp=Z,6µm,20.0s						
NPGB	**Novo Progresso**	**121.96**	**48**	*e*P	**PKiKP**	**09 24 37.1**	**+2.0**
VOI	**Vohitsoka**	**123.13**	**280**	IAMs_20	IAMs_20	10 16 32.6	
	comp=Z,5µm,20.0s						
PRPB	**Parauapebas**	**123.36**	**42**	*e*P	**PKiKP**	**09 24 40.3**	**+2.5**
LPAZ	**La Paz**	**124.02**	**66**	PKP	**PKiKP**	**09 24 41.1**	**+1.4**
	comp=Z,2.7nm,0.8s,baz=24,slow=8.0,SNR=5.0						
LPAZ	**La Paz**	**124.02**	**66**	*e*P	**PKiKP**	**09 24 41.4**	**+1.6**
PB18	**Visviri**	**124.42**	**69**	IAMs_20	IAMs_20	10 27 11.1	
	comp=Z,4µm,21.0s						
PB16	**IPOC Station P**	**125.02**	**69**	IAMs_20	IAMs_20	10 27 47.2	
	comp=Z,5µm,21.0s						
VILB	**Vilhena**	**125.06**	**56**	*e*P	**PKiKP**	**09 24 42.1**	**+0.9**
CLDB	**Colider**	**125.21**	**51**	*e*P	**PKiKP**	**09 24 43.8**	**+2.3**
PDRB	**Porto dos Gac**	**125.46**	**52**	*e*P	**PKiKP**	**09 24 42.4**	**+0.5**
NBPB	**Pedra_Branca-C**	**126.11**	**30**	*e*P	**PKiKP**	**09 24 45.5**	**+2.2**
GO01	**Chusmiza**	**126.29**	**70**	IAMs_20	IAMs_20	10 25 51.8	
	comp=Z,5µm,21.0s						
TA02	**Huaiquique**	**126.29**	**71**	IAMs_20	IAMs_20	10 26 15.0	
	comp=Z,3µm,20.0s						
SMTB	**Santa Maria do**	**126.66**	**40**	*e*P	**PKiKP**	**09 24 46.9**	**+2.5**
PB01	**IPOC Station P**	**127.27**	**71**	IAMs_20	IAMs_20	10 28 53.8	
	comp=Z,3µm,20.0s						
SIV	**San Ignacio**	**127.28**	**59**	PKP	**PKiKP**	**09 24 46.4**	**+0.9**
	comp=Z,1.8nm,0.7s,baz=272,slow=3.2,SNR=8.1						
RCBR	**Riachuelo**	**127.34**	**25**	IAMs_20	IAMs_20	10 19 25.4	
	comp=Z,4µm,20.0s						
RCBR	**Riachuelo**	**127.34**	**25**	*e*P	**PKiKP**	**09 24 46.9**	**+1.1**
PTLB	**Pontes e Lacer**	**127.73**	**57**	*e*P	**PKiKP**	**09 24 48.6**	**+2.2**
SNDB	**Serra Nova Dou**	**128.08**	**46**	*e*P	**PKiKP**	**09 24 49.4**	**+2.2**
PB05	**IPOC Station P**	**128.36**	**73**	IAMs_20	IAMs_20	10 27 13.0	
	comp=Z,3µm,21.0s						
CASY	**Casey**	**128.59**	**205**	IAMs_20	IAMs_20	10 13 30.8	
	comp=Z,5µm,22.0s						
PB10	**IPOC Station P**	**128.71**	**74**	IAMs_20	IAMs_20	10 27 53.2	
	comp=Z,5µm,22.0s						
AF01	**San Pedro de A**	**129.52**	**71**	IAMs_20	IAMs_20	10 25 48.5	
	comp=Z,3µm,21.0s						
PB14	**IPOC Station P**	**129.68**	**75**	IAMs_20	IAMs_20	10 28 25.1	
	comp=Z,4µm,21.0s						
SALV	**Santo Antonio**	**129.71**	**53**	*e*P	**PKiKP**	**09 24 51.6**	**+1.3**
GO02	**Mina Guanaco**	**130.55**	**74**	IAMs_20	IAMs_20	10 35 02.1	
	comp=Z,3µm,21.0s						
AC01	**Pan de Azucar**	**130.79**	**76**	IAMs_20	IAMs_20	10 29 42.5	
	comp=Z,3µm,22.0s						
SDBA	**SAO DESIDERIO**	**130.90**	**39**	*e*P	**PKiKP**	**09 24 54.7**	**+1.8**
NBAN	**Anadia - AL**	**130.94**	**27**	*e*P	**PKiKP**	**09 24 54.7**	**+1.7**
ARAG	**Araguaiana, MT**	**131.22**	**49**	*e*P	**PKiKP**	**09 24 55.5**	**+2.1**
AC06	**Mina Casimiro**	**131.88**	**77**	IAMs_20	IAMs_20	10 29 44.4	
	comp=Z,3µm,21.0s						
ASCN	**Ascension**	**131.90**	**358**	IAMs_20	IAMs_20	10 31 16.5	
	comp=Z,4µm,20.0s						
GO03	**Copiapo**	**132.13**	**77**	IAMs_20	IAMs_20	10 30 58.1	
	comp=Z,3µm,21.0s						
AC02	**Maricunga**	**132.13**	**75**	IAMs_20	IAMs_20	10 25 10.0	
	comp=Z,3µm,21.0s						
AC04	**Llanos de Chal**	**132.15**	**78**	IAMs_20	IAMs_20	10 33 19.8	
	comp=Z,3µm,20.0s						
BROLN	**Tlhalogang**	**132.68**	**300**	*i* P	**PKiKP**	**09 24 58.6**	**+2.2**
BDFB	**Brasilia**	**132.71**	**44**	PKP	**PKiKP**	**09 24 56.5**	**-0.1**
	comp=Z,3.6nm,0.6s,baz=51,slow=2.9,SNR=6.9						
LCO	**Las Campanas**	**132.98**	**78**	IAMs_20	IAMs_20	10 19 56.8	
	comp=Z,2µm,20.0s						
BDQN	**Bodoquena, MS**	**133.18**	**57**	*e*P	**PKiKP**	**09 24 58.6**	**+1.3**
CO05	**La Serena**	**133.39**	**80**	IAMs_20	IAMs_20	10 14 13.7	
	comp=Z,4µm,22.0s						
VNDA	**Vanda**	**133.41**	**181**	PKP	**PKiKP**	**09 24 55.6**	**-0.5**
	comp=Z,2.3nm,0.6s,baz=15,slow=5.2,SNR=6.4						
JANB	**Januaria**	**133.56**	**40**	*e*P	**PKiKP**	**09 24 59.1**	**+0.9**
AQDB	**Aquidauana**	**133.69**	**56**	*e*P	**PKiKP**	**09 24 60.0**	**+1.7**
MURT	**Porto Murtinho**	**133.81**	**59**	*e*P	**PKiKP**	**09 24 59.8**	**+1.3**
GO04	**Tololo Observa**	**133.83**	**79**	IAMs_20	IAMs_20	10 29 15.3	
	comp=Z,4µm,21.0s						
CO01	**Juntas del Tor**	**134.07**	**79**	IAMs_20	IAMs_20	10 11 35.5	
	comp=Z,3µm,22.0s						
CO03	**El Pedregal**	**134.40**	**80**	IAMs_20	IAMs_20	10 14 54.4	
	comp=Z,3µm,21.0s						
CO02	**Combarbal**	**134.51**	**81**	IAMs_20	IAMs_20	10 14 54.3	
	comp=Z,3µm,18.0s						
RPRD	**Ribas do Rio P**	**134.62**	**54**	*e*P	**PKiKP**	**09 24 59.6**	**-0.6**
IPMB	**Ipameri, GO**	**134.75**	**46**	*e*P	**PKiKP**	**09 25 01.4**	**+0.8**
LPHEP	**Lephephe**	**135.31**	**300**	*i* P	**PKiKP**	**09 25 03.1**	**+1.4**
VA06	**Catapilco**	**135.37**	**82**	IAMs_20	IAMs_20	10 15 28.3	
	comp=Z,3µm,20.0s						
CMC01	**Camacan, BA**	**135.44**	**34**	*e*P	**PKiKP**	**09 25 03.5**	**+1.6**
VA01	**Torpederas**	**135.52**	**83**	IAMs_20	IAMs_20	10 29 55.5	
	comp=Z,3µm,20.0s						
GRTLG	**Ghanzi**	**135.77**	**306**	*i* P	**PKiKP**	**09 25 02.7**	**0.0**
KDWAN	**Kaudwane**	**135.91**	**301**	*i* P	**PKPdf**	**09 24 59.7**	**-1.6**
VA03	**San Esteban**	**135.94**	**82**	IAMs_20	IAMs_20	10 22 42.2	
	comp=Z,4µm,22.0s						
PMNB	**Patos De Minas**	**135.96**	**44**	*e*P	**PKiKP**	**09 25 04.0**	**+1.0**
MT02	**Curacav**	**135.98**	**83**	IAMs_20	IAMs_20	10 30 29.5	
	comp=Z,3µm,22.0s						
VA05	**Santo Domingo**	**136.01**	**83**	IAMs_20	IAMs_20	10 32 36.4	
	comp=Z,3µm,20.0s						
PEL	**Peldehue**	**136.15**	**82**	IAMs_20	IAMs_20	10 17 59.0	
	comp=Z,4µm,22.0s						
MT01	**Popeta**	**136.37**	**83**	IAMs_20	IAMs_20	10 31 47.8	
	comp=Z,3µm,21.0s						
MT09	**Talagante**	**136.45**	**83**	IAMs_20	IAMs_20	10 30 40.9	
	comp=Z,3µm,20.0s						
MT16	**CCHEN**	**136.45**	**82**	IAMs_20	IAMs_20	10 18 08.9	
	comp=Z,4µm,22.0s						
KGCAE	**Kacgae**	**136.61**	**304**	*i* P	**PKPdf**	**09 25 02.3**	**-0.3**
MT08	**Bocatoma Ro**	**136.74**	**82**	IAMs_20	IAMs_20	10 32 19.6	
	comp=Z,4µm,20.0s						
BO04	**La Punta**	**136.82**	**83**	IAMs_20	IAMs_20	10 22 45.7	
	comp=Z,3µm,20.0s						
BO01	**Tunca**	**136.85**	**84**	IAMs_20	IAMs_20	10 31 49.6	
	comp=Z,4µm,22.0s						
LMEL	**Las Melosas**	**136.94**	**82**	IAMs_20	IAMs_20	10 31 08.8	
	comp=Z,4µm,20.0s						
TRCB	**Terra Rica**	**137.11**	**54**	IAMs_20	IAMs_20	10 30 06.4	
	comp=Z,5µm,21.0s						
TRCB	**Terra Rica**	**137.11**	**54**	*e*P	**PKiKP**	**09 25 05.4**	**+0.2**
BO02	**Sierra Bellavi**	**137.32**	**84**	IAMs_20	IAMs_20	10 18 08.9	
	comp=Z,3µm,21.0s						
ML02	**Panimavida**	**137.67**	**85**	IAMs_20	IAMs_20	10 35 25.4	
	comp=Z,3µm,20.0s						
CPUP	**Villa Florida**	**137.87**	**62**	PKP	**PKPdf**	**09 25 02.4**	**-2.3**
	comp=Z,5.6nm,1.3s,baz=8.1,slow=2.4,SNR=7.9						
CPUP	**Villa Florida**	**137.87**	**62**	*e*P	**PKiKP**	**09 25 06.5**	**-0.1**
SJMB	**Sao Joao De Ma**	**138.03**	**37**	*e*P	**PKiKP**	**09 25 07.1**	**-0.1**
CRZF	**Crozet Islands**	**138.21**	**254**	IAMs_20	IAMs_20	10 23 43.1	
	comp=Z,4µm,22.0s						
BI02	**San Fabin de**	**138.40**	**86**	IAMs_20	IAMs_20	10 31 03.8	
	comp=Z,4µm,20.0s						
BSCB	**Bom Sucesso**	**138.83**	**43**	*e*P	**PKiKP**	**09 25 08.2**	**-0.7**
RIB01	**Linhares ES**	**138.86**	**37**	*e*P	**PKiKP**	**09 25 10.4**	**+1.6**
PTGB	**Pitanga**	**139.03**	**55**	*e*P	**PKiKP**	**09 25 09.8**	**+0.6**
LR04	**Corral**	**139.46**	**91**	IAMs_20	IAMs_20	10 39 11.9	
	comp=Z,5µm,22.0s						
VAO	**Valinhos**	**139.76**	**48**	IAMs_20	IAMs_20	10 28 31.0	
	comp=Z,3µm,19.0s						
VAO	**Valinhos**	**139.76**	**48**	*e*P	**PKiKP**	**09 25 10.5**	**-0.2**
BOSA	**Boshof**	**139.98**	**296**	PKP	**PKPdf**	**09 25 07.5**	**-1.1**
	comp=Z,7.5nm,0.7s,baz=9.0,slow=2.6,SNR=7.0						
SPB	**Sao Paulo**	**140.09**	**49**	*e*P	**PKiKP**	**09 25 11.2**	**-0.1**
LR05	**Currie**	**140.49**	**91**	IAMs_20	IAMs_20	10 40 36.3	
	comp=Z,4µm,20.0s						
VAS01	**Vassouras-RJ**	**140.50**	**42**	*e*P	**PKPdf**	**09 25 09.9**	**+0.3**
PARB	**Paraibuna**	**140.60**	**46**	*e*P	**PKPdf**	**09 25 10.4**	**+0.5**
DUB01	**Friburgo-RJ**	**140.72**	**41**	*e*P	**PKiKP**	**09 25 12.6**	**-0.1**
CAM01	**Campos-RJ**	**140.74**	**40**	*e*P	**PKiKP**	**09 25 12.3**	**-0.3**
PET01	**Itanhaem-SP**	**140.77**	**49**	*e*P	**PKiKP**	**09 25 12.3**	**-0.3**
MAN01	**Angra dos Reis**	**140.83**	**44**	*e*P	**PKiKP**	**09 25 12.3**	**-0.6**
ITAB	**Concordia**	**141.15**	**57**	*e*P	**PKiKP**	**09 25 12.7**	**-0.6**
PLCA	**Paso Flores**	**141.65**	**90**	PKP	**PKPdf**	**09 25 10.8**	**-0.4**
	comp=Z,7.2nm,1.0s,baz=320,slow=2.8,SNR=6.3						
PLCA	**Paso Flores**	**141.65**	**90**	*e*P	**PKiKP**	**09 25 13.3**	**-0.7**
CPSB	**Cacapava Do Su**	**143.16**	**62**	*e*P	**PKPdf**	**09 25 15.2**	**+1.1**
CNLB	**Canela**	**143.50**	**57**	*e*P	**PKPdf**	**09 25 16.1**	**+1.3**
MAW	**Mawson**	**143.86**	**220**	PKP	PKPbc	09 25 12.7	+0.8
	comp=Z,18nm,0.9s,baz=16,slow=3.8,SNR=13						
PLTB	**Pedras Altas**	**144.18**	**63**	*e*P	**PKPdf**	**09 25 17.1**	**+1.2**
QSPA	**South Pole Qui**	**145.90**	**180**	IAMs_20	IAMs_20	10 42 36.1	
	comp=Z,4µm,20.0s						
QSPA	**South Pole Qui**	**145.90**	**180**	PKPbc	**PKPdf**	**09 25 16.4**	**-1.4**
	comp=Z,43nm,0.7s,baz=333,slow=1.5,SNR=110						
SYO	**Syowa Base**	**152.57**	**220**	⇑*e*pPKPdf	pPKPdf	09 25 33.0	-0.3
SYO	**Syowa Base**	**152.57**	**220**	⇓*e*PKPbc	**PKiKP**	**09 25 36.6**	**+1.1**
TROLL	**Troll, Antarti**	**162.32**	**199**	⇓P	**PKPdf**	**09 25 41.0**	**+0.4**
	comp=Z,81nm,0.8s						
TROLL				⇑PP	**PP**	**09 30 17.8**	**+4.8**
SNAA	**Sanae**	**163.48**	**194**	⇓P	**PKPdf**	**09 25 37.3**	**-4.3**
	comp=Z,17nm,0.9s						
SNAA				⇓PP	PP	09 30 28.9	+10
SNAA	**Sanae**	**163.48**	**194**	PKP	**PKPdf**	**09 25 42.4**	**+0.8**
	comp=Z,5.7nm,1.2s,baz=224,slow=1.9,SNR=5.3						
SNAA				PKPab	**PKPab**	**09 26 35.3**	**+2.1**
	comp=Z,16nm,1.2s,baz=208,slow=12,SNR=7.4						
VNA3	**Neumayer Olymp**	**164.62**	**187**	⇓P	**PKPdf**	**09 25 43.0**	**+0.4**
	comp=Z,2.6nm,0.8s						
VNA3				⇑PP	**PP**	**09 30 26.0**	**+1.2**
VNA2	**Neumayer--Watz**	**164.72**	**191**	⇓P	**PKPdf**	**09 25 43.5**	**+0.8**
	comp=Z,3.2nm,1.2s,baz=162,slow=4.8						
VNA2				⇓PP	**PP**	**09 30 24.5**	**-0.9**
	baz=334,slow=4.9						
VNA1	**Neumayer--Stat**	**165.07**	**190**	⇓P	**PKPdf**	**09 25 44.8**	**+1.9**
	comp=Z,3.9nm,1.0s						

IDC ***25*** *09:10:11.8±3.9, 53°.68N×88°.00E, h0km, mbtmp2.7/2, ML2.6/2, Error ellipse: s-maj=37.1km s-min=19.2km az=48.0*

ASRS 25 09:10:12.0±1.2**, 53°.63N×88°.02E, h0km, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.93**	**281**	I	I	09 21 45.2	
	baz=98,slow=320,SNR=4.0						
ZALV	**Zalesovo Beam**	**1.93**	**281**	Pg	Pb	09 10 47.1	-0.9
	1.7nm,0.3s,baz=95,slow=14,SNR=17						
ZALV				Lg	Lg	09 11 13.1	
	2.2nm,0.3s,baz=96,slow=26,SNR=13						
KURBB	**Kurchatov Arra**	**6.57**	**247**	Pn	Pn	09 11 48.5	-1.3
	0.1nm,0.3s,baz=64,slow=15,SNR=2.4 0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.77**	**211**	Pn	Pn	09 12 08.9	+2.6
	0.1nm,0.3s,baz=28,slow=14,SNR=2.3 0.1nm,0.3s						

BUL ***25*** *09:10:58.5±1.1, 26°.10S×29°.69E, h10km, MD3.1*

PRE 25 09:10:49.6±0.9**, 26°.36S×29°.29E, h0km, ML2.2, Suspected explosion, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRLN	**Carolina, Mapu**	**0.75**	**62**	*e*P	Pg	09 11 03.3	-0.7
CRLN				*e*S	Sg	09 11 14.3	+0.6
CRLN				IAML		09 11 22.5	
	comp=Z,46nm,0.6s						
NWCL	**Newcastle**	**1.48**	**159**	*e*P	Pg	09 11 17.9	0.0
NWCL				*e*S	Sn	09 11 38.0	+0.3
NWCL				IAML		09 11 39.6	
	comp=Z,39nm,0.3s						
HRAO	**HartRAO**	**1.51**	**287**	*e*P	Pg	09 11 18.5	-0.1
HRAO				*e*S	Sn	09 11 39.3	+0.7
HRAO				IAML		09 11 40.5	
	comp=Z,32nm,0.2s						
WDLM	**Western Deep L**	**1.68**	**267**	*e*P	Pg	09 11 21.8	+0.1
WDLM				*e*S	Sg	09 11 43.6	+0.1
WDLM				IAML		09 11 46.4	
	comp=Z,44nm,0.2s						
PRYS	**Parys**	**1.82**	**251**	*e*P	Pn	09 11 22.8	+0.5
PRYS				*e*S	Sb	09 11 47.4	+0.1
PRYS				IAML		09 11 49.8	
	comp=Z,35nm,0.3s						
PILG	**Pilgrimsrest,**	**1.91**	**42**	*e*P	Pb	09 11 25.0	-0.5
PILG				*e*S	Sb	09 11 49.7	-0.3
PILG				IAML		09 11 54.0	
	comp=Z,38nm,0.3s						
SNKL	**Senekal, Frees**	**2.34**	**215**	*e*P	Pn	09 11 30.4	+0.9
SNKL				*e*S	Sn	09 12 00.1	+1.0
SNKL				IAML		09 12 03.9	
	comp=Z,20nm,0.3s						
POGA	**Pongola**	**2.38**	**115**	*e*P	Pn	09 11 30.9	+1.1
POGA				*e*S	Sn	09 12 01.0	+1.3
POGA				IAML		09 12 04.5	
	comp=Z,58nm,0.4s						
MOPA	**Mopani**	**3.41**	**35**	*e*P	Pn	09 11 45.0	+0.8
MOPA				*e*S	Sn	09 12 25.0	-0.3
MOPA				IAML		09 12 40.3	

	comp=Z,47nm,0.4s						
MOPA	Mopani	3.41	35	i P	Pn	09 11 45.8	+1.6
MOPA				i S	Sn	09 12 21.0	-4.4
MOPA	Mopani	3.41	35	i P	Pn	09 11 45.3	+1.1
MOPA				i S	Sn	09 12 20.6	-4.8
LBTB	Lobatse	3.59	291	eP	Pn	09 11 47.3	+0.6
LBTB				eS	Sn	09 12 30.3	+0.5
LBTB				IAML		09 12 49.3	
	comp=Z,8.9nm,0.3s						
SWZ	Schweizer	3.63	256	eP	Pn	09 11 47.7	+0.5
SWZ				eS	Sn	09 12 30.4	-0.5
SWZ				IAML		09 12 43.8	
	comp=Z,8.3nm,0.3s						
MUSN	Musina, Limpop	4.08	7	eP	Pn	09 11 54.5	+1.1
MUSN				eS	Sn	09 12 41.1	-0.8
MUSN				IAML		09 13 02.1	
	comp=Z,16nm,0.4s						
MUSN	Musina, Limpop	4.08	7	i P	Pn	09 11 55.8	+2.4
MUSN				i S	Sn	09 12 38.2	-3.7
MUSN	Musina, Limpop	4.08	7	i P	Pn	09 11 57.0	+3.7
BOSA	Boshof	4.23	237	eP	Pn	09 11 56.6	+1.1
BOSA				eS	Sn	09 12 45.4	-0.3
BOSA				IAML		09 13 05.2	
	comp=Z,3.8nm,0.3s						
BOSA	Boshof	4.23	237	i P	Pb	09 12 07.5	+2.5
BOSA				i S	Sb	09 12 59.2	+2.6
BOSA	Boshof	4.23	237	i P	Pb	09 12 07.5	+2.5
BOSA				i S	Sb	09 13 01.0	+4.3
KSTD	Kokstad	4.25	180	eP	Pn	09 11 55.9	+0.2
KSTD				eS	Sn	09 12 45.3	-0.8
KSTD				IAML		09 13 04.3	
	comp=Z,3.5nm,0.4s						
BLWY	Bulawayo	6.22	354	i P	Pn	09 12 25.8	+2.9
BLWY				i S	Sn	09 13 30.4	-4.4
BLWY	Bulawayo	6.22	354	i P	Pn	09 12 27.1	+4.3
BLWY				i S	Sn	09 13 31.5	-3.2
CHIPN	CHIPINGE	6.83	28	i P	Pn	09 12 33.1	+1.9
CHIPN				i S	Sn	09 13 42.9	-6.9
CHIPN	CHIPINGE	6.83	28	i P	Pn	09 12 33.3	+2.1
KRI	Karoi	9.48	2	i P	Pn	09 13 01.4	-6.3
KRI	Karoi	9.48	2	i P	Pn	09 13 02.8	-4.9

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*JMA **25** 09:11:53.9±0.1, 23°.8N±0°.7×122°.9E±0°.5, h53^{km}, MV2.8/14, NEAR ISHIGAKIJIMA ISLAND*

*TAP **25** 09:11:54.3, 23°.82N×122°.97E, h53^{km}, ML3.5, D*

ISC 25 09:11:50.0±1.1**, 23°.57N**±0°.03×**122°.95E**±0°.02**, h15**^{km}±9^{km}**, n103,** σ**0^{s}.94**/128**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS4	EOS4	0.79	314	i P	Pn	09 12 07.7	+1.3
EOS4				S	Sn	09 12 17.7	-0.1
JYNG	Yonagunijimaku	0.87	0	eP	Pn	09 12 07.5	-0.3
JYNG				S	Sg	09 12 17.7	-0.7
YOJ	Yonaguni jima	0.89	4	P	Pb	09 12 07.6	+0.5
YOJ	Yonaguni jima	0.89	4	P	Pn	09 12 08.0	0.0
YOJ				S	Sg	09 12 17.5	-1.4
YOJ	Yonaguni jima	0.89	4	⇑iP	Pb	09 12 07.6	+0.5
YOJ				i S	Sg	09 12 17.8	-1.1
EOS3	EOS3	0.91	321	eP	Pn	09 12 09.4	+1.2
EOS3				S	Sn	09 12 20.9	-0.2
HATJ	Hateruma jima	0.92	58	P	Pn	09 12 09.9	+1.4
HATJ				eS	Sn	09 12 22.5	+1.0
IRIF	Iriomote-Funau	1.04	43	P	Pn	09 12 10.9	+0.7
IRIF				eS	Sn	09 12 24.4	-0.1
EOS2	EOS2	1.06	322	P	Pg	09 12 12.4	+1.8
JKRS	Kuro-shima	1.18	56	P	Pg	09 12 13.6	+0.9
JKRS				eS	Sn	09 12 28.9	+1.1
TEYL	Yanliau Villag	1.27	284	eP	Pg	09 12 14.9	+0.4
TEYL				eS	Sn	09 12 30.4	+0.4
SHUL	Shoufeng	1.28	280	eP	Pg	09 12 15.4	+0.6
SHUL				eS	Sg	09 12 31.8	+0.3
TWD	Chiawan	1.33	292	eS	Sb	09 12 30.4	-1.3
ETL	Fush Village	1.34	296	eS	Sn	09 12 31.3	-0.7
JIJ	Ishigaki jima	1.35	54	P	Pg	09 12 15.5	-0.5
NACB	Ninganchiao	1.37	296	P	Pb	09 12 15.9	+0.5
NACB	Ninganchiao	1.37	296	S	Sn	09 12 31.4	-1.3
NACB	Ninganchiao	1.37	296	eP	Pb	09 12 15.6	+0.2
EWUT	Wuta	1.38	309	eP	Pg	09 12 16.2	-0.3
ENA	Nanau	1.39	308	eP	Pg	09 12 16.8	0.0
EGFH	Guangfu	1.40	274	eS	Sb	09 12 34.1	+0.6
ECBN	Changbin	1.40	260	eP	Pg	09 12 19.5	+2.6
HGSD	Ruisui	1.40	267	eP	Pg	09 12 16.7	-0.2
HGSD				eS	Sn	09 12 33.1	-0.2
ESL	Shilin	1.41	280	eP	Pg	09 12 16.7	-0.4
ESAO	Su ao	1.42	315	eP	Pg	09 12 17.6	+0.3
WARBT	Fenglin Townsh	1.44	276	eP	Pb	09 12 16.9	+0.4
TWC	Suao	1.44	316	eP	Pb	09 12 16.8	+0.3
EHYH	Wanrong	1.47	267	eP	Pg	09 12 18.7	+0.4
EHYH				eS	Sb	09 12 36.3	+0.6
LXIB	Xiulin Townshi	1.47	288	eP	Pb	09 12 17.6	+0.4
LXIB				eS	Sn	09 12 34.5	-0.9
CHKH	Chenggong	1.47	255	eP	Pg	09 12 19.6	+1.2
ETLH	Xiulin Townshi	1.48	296	i P	Pg	09 12 17.9	-0.6
ETLH				eS	Sn	09 12 34.3	-1.1
EHY	Hungye	1.49	268	eP	Pg	09 12 18.7	0.0
YULB	Yu-li	1.52	264	P	Pg	09 12 19.5	+0.2
YULB	Yu-li	1.52	264	S	Sg	09 12 38.4	-0.7
YULB	Yu-li	1.52	264	i P	Pg	09 12 19.3	0.0
CHKT	Chengkung	1.53	252	eP	Pg	09 12 20.9	+1.5
TWF1	Yuli	1.53	262	P	Pg	09 12 19.2	-0.3
FULB	Fuli	1.56	257	eP	Pg	09 12 20.8	+0.7
EGS		1.57	324	eP	Pb	09 12 18.4	-0.4
JISG	Ishigakijimahi	1.60	51	eP	Pn	09 12 18.5	+0.6
JISG				eS	Sn	09 12 37.3	-1.0
LATG	Datong	1.61	307	eP	Pb	09 12 19.7	+0.1
EDH	Donghe	1.62	249	eS	Sb	09 12 39.8	-0.3
TWE	Neicheng	1.63	315	P	Pb	09 12 19.9	0.0
WHF	Hehuan Shan	1.64	291	i P	Pb	09 12 20.3	0.0
WHF				S	Sn	09 12 38.9	-1.0
ENTT	Nioudou	1.65	310	eP	Pb	09 12 20.3	+0.1
EHD	Haiduan	1.65	256	eS	Sb	09 12 40.9	0.0
NNSB	Datong	1.66	301	eP	Pb	09 12 20.5	0.0
NNSB				eS	Sn	09 12 39.5	-0.6
VWDT	VWDT	1.66	277	P	Pb	09 12 21.0	+0.6
OWD	Renai	1.67	284	i P	Pb	09 12 20.8	+0.3
OWD				i S	Sn	09 12 40.1	0.0
TWB1	Santiao Chiao	1.67	329	eP	Pn	09 12 19.7	+0.9
NNS	Nan Shan	1.68	301	eP	Pb	09 12 20.6	-0.1
NNS				eS	Sn	09 12 39.7	-0.6
FUSB	Fushanzhiwuyua	1.71	314	eP	Pb	09 12 21.3	0.0
WUSB	Renai	1.73	284	eP	Pb	09 12 21.9	+0.4
TIPB	Shuangxi	1.73	324	eP	Pb	09 12 20.8	-0.7
NWLT	Wulai	1.78	313	eP	Pb	09 12 22.4	0.0
LONT	Longtian	1.80	249	eP	Pg	09 12 25.2	+0.7
SXI1	Grass Mountain	1.80	327	i P	Pn	09 12 21.6	+1.0
YHNB	Yeheng	1.80	308	P	Pb	09 12 22.7	-0.1
YHNB	Yeheng	1.80	308	eP	Pb	09 12 22.5	-0.3
ELDTW	Lidau	1.81	258	eS	Sn	09 12 44.3	+0.6
NSK	Sanguang	1.82	307	eP	Pb	09 12 22.5	-0.6
SSLB	Suanglung	1.84	277	P	Pg	09 12 25.2	-0.1
SSLB	Suanglung	1.84	277	eP	Pg	09 12 24.7	-0.6
TWGBT	Beinan	1.87	247	P	Pg	09 12 27.9	+1.9
TWGBT	Beinan	1.87	247	eP	Pg	09 12 25.0	-1.0
TWG	Pinlang	1.88	247	eP	Pg	09 12 25.5	-0.6
TWG				eS	Sb	09 12 47.2	-0.2
SMLT	Sun Moon Lake	1.90	280	eP	Pg	09 12 25.5	-1.0
WHYT	Xinyi Township	1.92	274	eP	Pg	09 12 26.7	-0.2
WCS	Beigang Elemen	1.92	285	eP	Pb	09 12 24.9	0.0
JTJ	Tarama	1.93	56	P	Pb	09 12 23.9	-1.0
TATO	Taipei	1.93	317	P	Pb	09 12 25.2	+0.3
TYC	Yuchr	1.94	280	eP	Pg	09 12 26.4	-0.9
WHP	Taichung City	1.96	291	eP	Pg	09 12 27.5	-0.2
ALS	Alishan	1.96	269	P	Pg	09 12 26.8	-1.0
NFF	Wufeng Townshi	1.98	303	eP	Pb	09 12 26.4	+0.6
LAY	Lan-yu	2.00	220	eP	Pb	09 12 26.6	+0.5
LYUB	Lan-yu	2.01	219	eP	Pb	09 12 26.7	+0.5
YM01	YM01	2.01	322	eP	Pn	09 12 24.7	+1.2
STYH	Taoyuan	2.03	259	eS	Sb	09 12 51.1	-0.7
ZUZH	Zhuzihu	2.03	321	eP	Pn	09 12 25.2	+1.4
LIOB	Emei	2.06	302	eP	Pb	09 12 27.3	+0.1
NSTT	Nanjuang	2.06	301	eS	Sn	09 12 50.3	+0.5
ECL	Taimali	2.08	242	eP	Pg	09 12 29.4	-0.5
CHN5	Tsauling	2.08	271	eP	Pg	09 12 28.6	-1.3
TPUB	Ta-pu	2.14	263	P	Pg	09 12 30.0	-1.1
TPUB	Ta-pu	2.14	263	eP	Pg	09 12 30.1	-1.1
TPUB				eS	Sb	09 12 55.5	+0.5
WCKO	Fanlu	2.15	267	eS	Sb	09 12 56.2	+0.9
WTP	Ta-pu	2.17	262	eP	Pg	09 12 30.9	-0.7
WTP				eS	Sb	09 12 56.6	+0.9
PCYT	Pengchaiyu	2.20	339	eP	Pn	09 12 27.1	+1.0
CHN1	Nanshi	2.25	261	eP	Pg	09 12 32.5	-0.7
CHN1				eS	Sb	09 12 60.0	+1.7
TAWH	Dawu Township	2.26	237	eP	Pg	09 12 32.7	-0.7
EAST	Anshuo	2.27	239	eP	Pb	09 12 30.6	-0.1
SNST	Tainan City	2.28	262	eP	Pb	09 12 31.6	+0.8
TWK	Hsinying	2.28	263	eP	Pb	09 12 31.8	+0.9
SSD	Sandimen	2.28	249	eP	Pg	09 12 33.1	-0.8
MASBT	Mashibuluo	2.33	246	eP	Pb	09 12 31.9	0.0
SCZT	Fangliau	2.45	241	eP	Pg	09 12 35.3	-1.8
TSEB	Hengchuen, Pin	2.52	229	eP	Pg	09 12 37.0	-1.4
TWKBT	Hengchun	2.55	231	eP	Pg	09 12 37.3	-1.7
TWK1	Hengchun	2.56	231	eP	Pg	09 12 37.1	-1.9
WDGT	Dungji	3.03	265	eP	Pb	09 12 41.5	-2.2
VWUC	VWUC	3.49	295	eP	Pn	09 12 45.5	+1.7
VWUC				eS	Sn	09 13 22.4	-2.4
PTMZ	Houxiangcun	3.78	293	eP	Pn	09 12 49.9	+2.0
PTMZ				eS	Sn	09 13 29.6	-2.5

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*ASRS **25** 09:11:52.0±1.3, 53°.93N×86°.59E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 25 09:11:54.5±2.9**, 53°.95N×86°.58E, h0**^{km}**, mbtmp2.8**/2**, ML2.4**/2**, Error ellipse: s-maj=24.0km s-min=14.3km az=58.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.04	271	I	I	09 18 20.0	
	baz=91,slow=316,SNR=2.8						
ZALV	Zalesovo Beam	1.04	271	Pg	Pg	09 12 13.2	-1.2
	0.7nm,0.3s,baz=84,slow=15,SNR=3.7						
ZALV				Lg	Lg	09 12 29.1	
	2.2nm,0.3s,baz=88,slow=29,SNR=7.6						
KURBB	Kurchatov Arra	5.96	239	Pn	Pn	09 13 25.1	+1.3
	0.1nm,0.3s,baz=55,slow=13,SNR=2.4						
	0.4nm,0.3s						
MKAR	Makanchi Array	7.67	203	Pn	Pn	09 13 48.3	+0.9
	0.1nm,0.3s,baz=21,slow=11,SNR=5.7						
	0.2nm,0.4s						
BRG	Berggiesshubel	42.62	297	P	P	09 19 44.8	-7.3
BRG				Amp		09 19 53.7	
	comp=Z,26nm,1.2s						

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*IDC **25** 09:19:30.5±0.7, 56°.23N×164°.29E, h0^{km}, mb3.9/15, mbtmp3.9/17, ML3.8/2, Error ellipse: s-maj=23.1km s-min=13.2km az=146.0*

*KRSC **25** 09:19:31.9±1.4, 56°.16N×164°.37E, h51^{km}±20^{km}, Ml4.6*

*MOS **25** 09:19:34.5±0.9, 56°.16N×164°.23E, h55^{km}, mb4.8/4, Error ellipse: s-maj=8.1km s-min=4.8km az=55.3*

*NEIC **25** 09:19:35.5±1.8, 56°.5N±0°.1×163°.3E±0°.2, h10^{km}±1^{km}, mb4.4/66, Error ellipse: s-maj=23.6km s-min=13.1km az=144.0*

ISC 25 09:19:37.7±0.8**, 56°.16N**±0°.04×**163°.98E**±0°.05**, h43**^{km}±8^{km}**, n188,** σ**2^{s}.08**/212**, mb4.3**/38**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.65	275	PN	Pn	09 19 47.6	-2.9
KBTR				S	Sn	09 19 58.6	-1.1
KBTR	Krutoberegovo	0.65	275	eP	Pn	09 19 47.7	-2.9
KBTR				eS	Sn	09 19 58.7	-1.1
KBG	Krutoberegovo	0.72	278	PN	Pn	09 19 48.7	-2.7
KBG				S	Sn	09 20 00.9	-0.4
KBG	Krutoberegovo	0.72	278	eP	Pn	09 19 48.8	-2.7
KBG				eS	Sn	09 20 00.9	-0.4
SMKR	Semkarok	1.46	288	PN	Pn	09 20 00.8	-0.8
SMKR				S	Sn	09 20 21.1	+1.6
SMKR	Semkarok	1.46	288	eP	Pn	09 20 00.8	-0.8
SMKR				eS	Sn	09 20 21.2	+1.6
BKI	Bering	1.48	129	PN	Pn	09 19 55.7	-6.0
BKI				S	Sn	09 20 12.5	-7.3
BKI	Bering	1.48	129	eP	Pn	09 19 55.7	-6.0
BKI				eS	Sn	09 20 12.6	-7.3
BDR	Baidarnaya	1.60	286	PN	Pn	09 20 03.6	+0.2
BDR				S	Sn	09 20 26.2	+3.3
BDR	Baidarnaya	1.60	286	eP	Pn	09 20 03.7	+0.2
BDR				eS	Sn	09 20 26.2	+3.3
SRKR	Sorokina	1.64	289	PN	Pn	09 20 03.9	-0.1
SRKR				S	Sn	09 20 25.2	+1.3
SRKR	Sorokina	1.64	289	eP	Pn	09 20 04.0	-0.1
SRKR				eS	Sn	09 20 25.3	+1.3
ZLN	Zelenaya	1.79	267	PN	Pn	09 20 06.4	+0.3
ZLN				S	Sn	09 20 31.8	+4.2
ZLN	Zelenaya	1.79	267	eP	Pn	09 20 06.5	+0.3
ZLN				eS	Sn	09 20 31.9	+4.2
CIRR	Tsirk	1.81	270	PN	Pn	09 20 06.7	+0.2
CIRR				S	Sn	09 20 31.4	+3.2
CIRR	Tsirk	1.81	270	eP	Pn	09 20 06.7	+0.2
CIRR				eS	Sn	09 20 31.4	+3.2
LGNR	Loginova	1.84	269	PN	Pn	09 20 07.6	+0.6
LGNR				S	Sn	09 20 33.2	+3.9
LGNR	Loginova	1.84	269	eP	Pn	09 20 07.7	+0.6
LGNR				eS	Sn	09 20 33.3	+3.9
BZGR	Bezymyannyi-Gr	1.86	265	PN	Pn	09 20 06.8	-0.3
BZGR	Bezymyannyi-Gr	1.86	265	eP	Pn	09 20 06.8	-0.3
KLY	Klyuchi	1.86	276	PN	Pn	09 20 05.4	-1.7
KLY				S	Sn	09 20 29.4	0.0
KLY	Klyuchi	1.86	276	eP	Pn	09 20 05.4	-1.7
KLY				eS	Sn	09 20 29.4	0.0
KRSR	Krestovskiy	1.91	273	PN	Pn	09 20 07.6	-0.2
KRSR				S	Sn	09 20 33.5	+2.9
KRSR	Krestovskiy	1.91	273	eP	Pn	09 20 07.6	-0.2
KRSR				eS	Sn	09 20 33.6	+2.9
BZWR	Bezymyannyi-We	1.96	266	PN	Pn	09 20 08.8	+0.2
BZWR	Bezymyannyi-We	1.96	266	eP	Pn	09 20 08.9	+0.2
BZMR	Bezymyannaya	1.97	265	PN	Pn	09 20 09.1	+0.4
BZMR	Bezymyannaya	1.97	265	eP	Pn	09 20 09.1	+0.4
KIRR	Kirishev	2.05	266	PN	Pn	09 20 10.5	+0.8
KIRR				S	Sn	09 20 38.2	+4.0
KIRR	Kirishev	2.05	266	eP	Pn	09 20 10.6	+0.8
KIRR				eS	Sn	09 20 38.2	+4.0
MKZ	Mys Kozlova	2.06	220	PN	Pn	09 20 07.9	-1.8
MKZ				S	Sn	09 20 33.3	-0.7
MKZ	Mys Kozlova	2.06	220	eP	Pn	09 20 07.9	-1.8
MKZ				eS	Sn	09 20 33.4	-0.7
KPT	Kopyto	2.12	266	PN	Pn	09 20 11.4	+0.8
KPT	Kopyto	2.12	266	eP	Pn	09 20 11.5	+0.8
KMNR	Kamenistaya	2.14	261	PN	Pn	09 20 11.8	+0.8
KMNR	Kamenistaya	2.14	261	eP	Pn	09 20 11.9	+0.8
TUMD	Tumrok D	2.24	246	PN	Pn	09 20 12.3	0.0
TUMD	Tumrok D	2.24	246	eP	Pn	09 20 12.4	0.0
KOZ	Kozyrevsk	2.30	269	PN	Pn	09 20 14.3	+1.2
KOZ				S	Sn	09 20 44.7	+4.5
KOZ	Kozyrevsk	2.30	269	eP	Pn	09 20 14.3	+1.2
KOZ				eS	Sn	09 20 44.8	+4.5
SRDR	Sredinnyy	2.39	276	PN	Pn	09 20 15.2	+0.9
SRDR				S	Sn	09 20 46.6	+4.3
SRDR	Sredinnyy	2.39	276	eP	Pn	09 20 15.2	+0.9
SRDR				eS	Sn	09 20 46.6	+4.3
ESO	Esso	2.97	268	PN	Pn	09 20 23.0	+0.7
ESO	Esso	2.97	268	eP	Pn	09 20 23.0	+0.7
OSSR	Ossora	3.14	351	PN	Pn	09 20 20.5	-4.0
OSSR	Ossora	3.14	351	eP	Pn	09 20 20.5	-4.0
KII	Karymskiy	3.36	233	PN	Pn	09 20 27.6	-0.1
KII	Karymskiy	3.36	233	eP	Pn	09 20 27.7	-0.1
PALN	Palana	3.65	325	PN	Pn	09 20 29.2	-2.3
PALN	Palana	3.65	325	eP	Pn	09 20 29.3	-2.3
SPN	Mys Shipunski	3.83	219	PN	Pn	09 20 31.8	-2.2
SPN	Mys Shipunski	3.83	219	eP	Pn	09 20 31.9	-2.2
NLC	Nalytchevo	4.03	224	PN	Pn	09 20 36.0	-0.7
NLC				S	Sn	09 21 23.1	+0.6
NLC	Nalytchevo	4.03	224	eP	Pn	09 20 36.0	-0.7
NLC				eS	Sn	09 21 23.2	+0.6
SDLR	Sedlovina	4.13	228	PN	Pn	09 20 38.4	+0.1
SDLR	Sedlovina	4.13	228	eP	Pn	09 20 38.5	+0.1
KRER	Koryakskii	4.17	229	PN	Pn	09 20 39.4	+0.5
KRER	Koryakskii	4.17	229	eP	Pn	09 20 39.5	+0.5
KRX	Arik	4.17	230	PN	Pn	09 20 39.2	+0.4
KRX				S	Sn	09 21 29.5	+3.1
KRX	Arik	4.17	230	eP	Pn	09 20 39.3	+0.4
KRX				eS	Sn	09 21 29.6	+3.1
SMAR	Somma	4.18	228	PN	Pn	09 20 39.0	0.0
SMAR	Somma	4.18	228	eP	Pn	09 20 39.1	0.0
AVH	Avacha	4.20	229	PN	Pn	09 20 39.6	+0.4
AVH	Avacha	4.20	229	eP	Pn	09 20 39.6	+0.4
UGLR	Uglovaya	4.21	227	PN	Pn	09 20 39.5	+0.2
UGLR	Uglovaya	4.21	227	eP	Pn	09 20 39.5	+0.2
KOK	Koryaka	4.22	229	PN	Pn	09 20 40.0	+0.4
KOK	Koryaka	4.22	229	eP	Pn	09 20 40.0	+0.4
GNL	Ganaly	4.27	237	PN	Pn	09 20 40.7	+0.5
GNL	Ganaly	4.27	237	eP	Pn	09 20 40.7	+0.5
DALK	Dalny	4.37	226	PN	Pn	09 20 41.1	-0.3
DALK				S	Sn	09 21 31.3	+0.4
DALK	Dalny	4.37	226	eP	Pn	09 20 41.1	-0.3
DALK				eS	Sn	09 21 31.4	+0.4
INSR	Institute	4.40	227	PN	Pn	09 20 44.3	+2.5
INSR	Institute	4.40	227	eP	Pn	09 20 44.4	+2.5
PET	Petropavlovsk	4.41	227	Pn	Pn	09 20 42.0	0.0
PET	Petropavlovsk	4.41	227	ePN	Pn	09 20 42.1	+0.1
PET				eS	Sn	09 21 33.0	+0.9
PET				pmax	pmax		
	comp=Z,53nm,0.6s						
PET				smax	smax		
	comp=E,104nm,0.3s						
PET				smax	smax		
	comp=N,122nm,0.4s						
PEA0B	Petropavlovsk-	4.76	233	Pn	Pn	09 20 45.8	-1.0
PEA0B	Petropavlovsk-	4.76	233	PN	Pn	09 20 45.9	-1.0
PETK	Petropavlovsk-	4.76	233	Pn	Pn	09 20 45.4	-1.4
PETK	Petropavlovsk-	4.76	233	Pn	Pn	09 20 45.3	-1.5
	comp=N,4.8nm,0.3s,baz=63,slow=17,SNR=23						
PETK				Sn	Sn	09 21 45.2	+4.5
	comp=N,3.6nm,0.3s,baz=21,slow=32,SNR=4.1						
	comp=N,5.5nm,0.4s						
KRMR	Karymshinskiy	4.77	228	PN	Pn	09 20 47.9	+1.0
KRMR				S	Sn	09 21 43.3	+2.4
KRMR	Karymshinskiy	4.77	228	eP	Pn	09 20 48.0	+1.0
KRMR				eS	Sn	09 21 43.3	+2.4
RUS	Russkaya	4.92	223	PN	Pn	09 20 48.7	-0.2
RUS	Russkaya	4.92	223	eP	Pn	09 20 48.8	-0.2
GRL	Gorelyy	5.00	226	PN	Pn	09 20 51.2	+1.0
GRL	Gorelyy	5.00	226	eP	Pn	09 20 51.2	+1.0
MTVR	Mutnovka	5.01	225	PN	Pn	09 20 50.5	+0.2
MTVR	Mutnovka	5.01	225	eP	Pn	09 20 50.5	+0.2
ASAK	Asacha	5.20	226	PN	Pn	09 20 53.8	+0.9
ASAK	Asacha	5.20	226	eP	Pn	09 20 53.9	+0.9
KMSK	Kamenskaya	6.43	9	PN	Pn	09 21 06.4	-3.2
KMSK	Kamenskaya	6.43	9	eP	Pn	09 21 06.5	-3.2
SKR	Severo-Kuril's	7.22	224	ePN	Pn	09 21 17.0	-3.5
NIKH	Nikolski High	16.03	90	Pn	P	09 23 25.0	+2.4
ANM	Nome	17.17	48	Pn	Pn	09 23 33.2	-0.8
ANM				IAmb	IAmb	09 23 43.4	
	comp=Z,36nm,1.4s						
ANM	Nome	17.17	48	P	Pn	09 23 33.2	-0.8
ANM				pmax	pmax		
	comp=Z,36nm,1.4s						
LVA	Lava Point	17.19	84	Pn	Pn	09 23 37.3	+3.0
AKUT	Akutan	17.34	84		P	09 23 41.3	+4.2
J14K	Nanvaranak Lak	17.62	55	Pn	P	09 23 39.7	-0.5
L14K	Kuka Creek	17.92	59	Pn	P	09 23 44.1	+0.7
L14K				IAmb	IAmb	09 23 44.5	
	comp=Z,25nm,0.8s						
JKA	Kamikawa-asahi	18.16	237	P	Pn	09 23 46.2	-0.1
JKA				IAmb	IAmb	09 23 48.8	
	comp=Z,27nm,0.8s						
ASAJ	Asahikawa	18.16	237	P	Pn	09 23 46.1	-0.2
	comp=Z,1.2nm,0.3s,baz=15,slow=3.8,SNR=15						
	comp=Z,28nm,0.9s						
ASAJ	Asahikawa	18.16	237	P	Pn	09 23 46.2	-0.1
ASAJ				pmax	pmax		
	comp=Z,27nm,0.8s						
C16K	Lisburne Hills	18.48	37	P	P	09 23 49.3	-0.3
C16K				IAmb	IAmb	09 23 59.2	
	comp=Z,30nm,1.2s						
J16K	Anvik River	19.02	54	P	P	09 23 58.7	+3.2
I17K	Unalakleet	19.04	52	P	P	09 23 59.0	+3.2
I17K				IAmb	IAmb	09 24 06.3	
	comp=Z,25nm,1.2s						
N15K	Kwethluk River	19.21	63	P	P	09 24 01.3	+3.7
N15K				IAmb	IAmb	09 24 06.7	
	comp=Z,32nm,1.1s						
O15K	Ungalikthiuk R	19.44	66	P	P	09 24 03.6	+3.5
L16K	Owhat River	19.46	58	P	P	09 24 03.6	+3.2
L16K				IAmb	IAmb	09 24 05.3	
	comp=Z,10nm,0.6s						
H17K	Granite Mounta	19.54	49	P	P	09 24 02.9	+1.8
ERM	Erimo	19.54	232	P	P	09 24 00.1	-1.3
ERM	Erimo	19.54	232	P	P	09 24 00.1	-1.3
ERM				pmax	pmax		
	comp=Z,51nm,1.2s						
J17K	VABM Dome	19.71	53	P	P	09 24 06.8	+3.7
J17K				IAmb	IAmb	09 24 17.7	
	comp=Z,26nm,1.2s						
M16K	Timber Creek	19.72	60	P	P	09 24 05.3	+2.0
M16K				IAmb	IAmb	09 24 17.6	
	comp=Z,33nm,1.4s						
E18K	Tukpahlearik C	19.84	41	P	P	09 24 05.9	+1.4
SDPT	Sand Point	19.89	77	P	Pn	09 24 10.3	+3.4
K17K	Iditarod	20.03	55	P	P	09 24 08.3	+1.8
C18K	Utukok River	20.04	38	P	P	09 24 05.9	-0.8
G18K	Tagagawik	20.23	46	P	P	09 24 10.7	+2.0
CNBA	Chernabura Isl	20.54	78	P	Pn	09 24 17.2	+2.6
CNBA				IAmb	IAmb	09 24 22.2	
	comp=Z,18nm,0.7s						
N17K	Nushagak Hills	20.62	62	P	P	09 24 15.4	+2.4
N17K				IAmb	IAmb	09 24 15.5	
	comp=Z,23nm,1.4s						
F19K	Shaleruckik Mo	20.76	44	P	P	09 24 15.6	+1.1
F19K				IAmb	IAmb	09 24 23.1	
	comp=Z,23nm,0.9s						
L18K	Granite Mounta	20.77	57	P	P	09 24 17.7	+3.1
L18K				IAmb	IAmb	09 24 23.3	
	comp=Z,15nm,0.9s						
G19K	Purcell Mounta	20.90	46	P	P	09 24 18.4	+2.5
D19K	Kuna River	21.06	39	P	P	09 24 18.3	+0.6
D19K				IAmb	IAmb	09 24 26.0	
	comp=Z,21nm,0.9s						
E19K	Redstone River	21.11	42		P	09 24 20.2	+2.0
E19K				IAmb	IAmb	09 24 27.6	
	comp=Z,14nm,0.9s						
J19K	Poorman	21.28	52	P	P	09 24 22.4	+2.3
J19K				IAmb	IAmb	09 24 23.1	
	comp=Z,13nm,0.9s						
JTM	Tenmabayashi	21.46	234	P	P	09 24 20.3	-1.9
F20K	Avaraart Lake	21.60	44	P	P	09 24 25.0	+1.7
D20K	Etivluk River	21.65	39		P	09 24 24.2	+0.2
IMAR	Indian Mountai	22.23	47	P	P	09 24 34.1	+4.0
M20K	Styx River	22.46	58	P	P	09 24 37.4	+4.5
M20K				IAmb	IAmb	09 24 48.1	
	comp=Z,19nm,1.5s						
B21K	Ikpikpuk River	22.58	37	P	P	09 24 36.3	+2.3
B21K				IAmb	IAmb	09 24 48.5	
	comp=Z,19nm,1.0s						
H21K	Melozitna Rive	22.59	48	P	P	09 24 36.2	+2.2
B22K	Teshekpuk Lake	23.17	36	P	P	09 24 41.3	+1.3
B22K				IAmb	IAmb	09 24 47.0	
	comp=Z,21nm,1.1s						
E22K	Anaktuvuk Pass	23.26	41	P	P	09 24 43.3	+2.3
SYI	Shuyak Island	23.33	66	P	P	09 24 47.3	+5.7
TRF	Thorofare Moun	23.66	53		P	09 24 49.0	+4.1
COLD	Coldfoot	23.76	44	P	P	09 24 48.1	+2.4
COLD				IAmb	IAmb	09 24 53.6	
	comp=Z,12nm,0.9s						
G23K	Bananza Creek	23.79	45	P	P	09 24 49.7	+3.8
H23K	Yukon River	23.94	47	P	P	09 24 49.9	+2.6
H23K				IAmb	IAmb	09 24 56.1	
	comp=Z,9.0nm,0.8s						
C23K	Itkillik River	23.99	37	P	P	09 24 49.9	+2.2
C23K				IAmb	IAmb	09 24 57.8	
	comp=Z,14nm,1.0s						
E23K	Chandalar	24.07	42	P	P	09 24 52.1	+3.5
E23K				IAmb	IAmb	09 24 57.1	
	comp=Z,8.4nm,0.8s						
NEA2	Nenana	24.14	50	P	P	09 24 52.1	+2.9
NEA2				IAmb	IAmb	09 24 57.3	
	comp=Z,7.1nm,0.7s						
TOLK	Toolik Lake Re	24.15	40	P	P	09 24 51.0	+1.6
RND	Reindeer	24.31	53	P	P	09 24 54.5	+3.7
RND				IAmb	IAmb	09 24 59.1	
	comp=Z,13nm,1.1s						
RND	Reindeer	24.31	53	P	P	09 24 54.5	+3.7
RND				pmax	pmax		
	comp=Z,13nm,1.1s						
SEW	Seward	24.49	61	P	P	09 24 56.0	+3.7
SEW				IAmb	IAmb	09 25 33.9	
	comp=Z,9.7nm,1.2s						
WRH	Wood River Hil	24.57	51	P	P	09 24 56.0	+2.9
DHY	Denali Highway	25.00	54	P	P	09 25 00.5	+3.3

IL31		25.07	50	P	P	09 24 59.8	+2.2
IL31				IAmb	IAmb	09 25 12.3	
	comp=Z,9.3nm,0.9s						
ILAR	Eielson Array	25.07	50	P	P	09 24 54.2	-3.5
	comp=Z,1.3nm,0.8s,baz=253,slow=6.6,SNR=7.2						
	comp=Z,1.3nm,0.8s						
SCM	Sheep Creek Mo	25.20	57	P	P	09 25 00.0	+1.1
SCM	Sheep Creek Mo	25.20	57	P	P	09 25 00.0	+1.1
SCM				pmax	pmax		
	comp=Z,36nm,1.0s						
M24K	Tolsona, Glenn	25.69	56	P	P	09 25 07.4	+4.1
J25K	Salcha River,	25.74	50	P	P	09 25 06.4	+2.6
J25K				IAmb	IAmb	09 25 12.8	
	comp=Z,8.2nm,0.8s						
RIDG	Independent Ri	26.06	52	P	P	09 25 09.4	+2.8
MJAR	Matsushiro Arr	26.22	232	P	P	09 25 08.1	-0.2
	comp=Z,4.9nm,0.6s,baz=28,slow=8.2,SNR=12						
	comp=Z,4.9nm,0.6s						
SCRK	Sand Creek	26.40	51		P	09 25 11.6	+1.8
RAGM	Ragged Mountai	26.75	59	P	P	09 25 17.4	+4.5
RAGM				IAmb	IAmb	09 25 21.7	
	comp=Z,15nm,1.3s						
K27K	Chicken	27.23	51	P	P	09 25 20.6	+3.5
K27K				IAmb	IAmb	09 25 28.0	
	comp=Z,7.8nm,0.9s						
KSRS	Korea Array	30.48	247	P	P	09 25 45.2	-0.9
	comp=Z,0.7nm,0.5s,baz=101,slow=18,SNR=2.2						
	comp=Z,0.7nm,0.5s						
EUNU	Eureka	38.41	15	P	P	09 26 55.0	+0.6
EUNU				IAmb	IAmb	09 27 34.4	
	comp=Z,9.2nm,1.5s						
YKAW3	Yellowknife Wh	39.35	46	P	P	09 27 04.0	+1.7
YKAW3				IAmb	IAmb	09 27 41.3	
	comp=Z,6.8nm,1.2s						
YKA	Yellowknife Ar	39.39	46	P	P	09 27 04.9	+2.3
YKA	Yellowknife Ar	39.39	46	P	P	09 26 60.0	-2.6
	comp=Z,0.9nm,0.8s,baz=291,slow=15,SNR=11						
	comp=Z,0.9nm,0.8s						
YKA	Yellowknife Ar	39.39	46	P	P	09 27 04.9	+2.3
SPITS	Spitsbergen Ar	44.47	351	P	P	09 27 42.8	-1.1
	comp=Z,6.4nm,0.8s,baz=55,slow=7.2,SNR=5.3						
	comp=Z,6.4nm,0.8s						
SPITS	Spitsbergen Ar	44.47	351	P	P	09 27 43.1	-0.8
SPITS				pmax	pmax		
	comp=Z,14nm,1.0s						
SPB2	Spitsbergen Ar	44.47	351	P	P	09 27 43.2	-0.7
BVAR	Borovoye Array	50.26	308	P	P	09 28 28.6	-0.5
	comp=Z,3.3nm,0.7s,baz=47,slow=7.9,SNR=8.7						
	comp=Z,3.3nm,0.7s						
NVAR	Mina Array Bea	52.66	75	P	P	09 28 43.4	-4.2
	comp=Z,0.3nm,0.6s,baz=300,slow=6.0,SNR=2.7						
	comp=Z,0.3nm,0.6s						
PDAR	Pinedale Array	54.11	65	P	P	09 28 55.9	-2.3
	comp=Z,0.8nm,0.7s,baz=310,slow=2.7,SNR=7.5						
	comp=Z,0.8nm,0.7s						
KIRV	Kirov	54.25	324	P	P	09 28 58.9	+0.2
	comp=Z,9.8nm,0.5s,baz=341,slow=1.9,SNR=3.0						
KK31	Karatay Array	57.35	300	P	P	09 29 19.1	-2.0
KK31				IAmb	IAmb	09 29 22.6	
	comp=Z,3.8nm,0.9s						
KK31	Karatay Array	57.35	300	P	P	09 29 19.1	-2.0
KK31				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KKAR	Karatay Array	57.35	300	P	P	09 29 19.9	-1.2
KKAR	Karatay Array	57.35	300	P	P	09 29 19.9	-1.2
AB31	Akbulak array	57.50	311	P	P	09 29 20.3	-1.7
AB31				IAmb	IAmb	09 29 23.2	
	comp=Z,7.0nm,1.3s						
ABKAR	Akbulak array	57.50	311	P	P	09 29 19.5	-2.5
ABKAR				IAmb	IAmb	09 29 23.1	
	comp=Z,7.1nm,1.3s						
CMAR	Chiang Mai Arr	60.99	260	P	P	09 29 47.2	+0.6
	comp=Z,0.7nm,0.3s,baz=17,slow=6.5,SNR=4.5						
	comp=Z,0.7nm,0.3s						
NOA	NORSAR Array B	61.19	345	P	P	09 29 45.9	-1.5
	comp=Z,0.7nm,0.7s,baz=17,slow=6.8,SNR=3.5						
	comp=Z,0.7nm,0.7s						
HFS	Hagfors	61.68	344	P	P	09 29 48.9	-1.7
	comp=Z,0.5nm,0.4s,baz=86,slow=5.9,SNR=1.4						
	comp=Z,0.5nm,0.4s						
AKASG	Malin Array Be	67.10	331	P	P	09 30 24.8	-1.3
	comp=Z,0.4nm,0.3s,baz=30,slow=6.6,SNR=4.1						
	comp=Z,0.4nm,0.3s						
TXAR	Lajitas Array	67.42	71	P	P	09 30 26.9	-1.7
	comp=Z,1.1nm,0.7s,baz=306,slow=4.2,SNR=10						
	comp=Z,1.1nm,0.7s						
TXAR	Lajitas Array	67.42	71	P	P	09 30 27.0	-1.7
WRA	Warramunga Arr	79.84	208	P	P	09 31 41.8	+0.5
	comp=Z,0.4nm,0.9s,baz=344,slow=10,SNR=1.5						
	comp=Z,0.4nm,0.9s						
ASAR	Alice Springs	83.51	208	P	P	09 32 01.5	+0.9
	comp=Z,0.5nm,0.8s,baz=4.7,slow=4.2,SNR=1.5						
	comp=Z,0.5nm,0.8s						

STR 25 09:20:42.7±1.0**, 45°N**±6°×°±°**, h0^{km}, MLv1.6**/6**, Error ellipse: s-maj=0.0km s-min=0.0km az=27.9, preliminary, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ORIF	Oris-en-Rattie	0.37	158	Pg	Pg	09 20 49.4	-0.3
ORIF				Sg	Sg	09 20 55.0	+0.6
SSB	Saint Sauveur	0.81	272	Pg	Pg	09 20 58.1	0.0
SSB				Sg	Sg	09 21 09.4	+0.8

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*ASRS **25** 09:25:10.0±1.2, 54°.33N×86°.13E, h0^{km}, M3.0, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 25 09:25:14.2±2.6**, 54°.23N×86°.05E, h0^{km}, mbtmp3.0**/2**, ML2.7**/2**, Error ellipse: s-maj=19.0km s-min=11.3km az=56.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.78	249	I	I	09 30 00.0	
	baz=70,slow=329,SNR=3.2						
ZALV	Zalesovo Beam	0.78	249	Pg	Pg	09 25 27.8	-1.4
	1.1nm,0.3s,baz=67,slow=18,SNR=15						
ZALV				Lg	Lg	09 25 40.8	
	4.5nm,0.3s,baz=68,slow=28,SNR=7.6						
KURBB	Kurchatov Arra	5.85	235	Pn	Pn	09 26 43.8	+1.7
	0.1nm,0.3s,baz=47,slow=20,SNR=2.4						
KURBB				Lg	Lg	09 28 19.1	
	baz=55,slow=7.2,SNR=1.4						
	0.5nm,0.3s						
MKAR	Makanchi Array	7.82	199	Pn	Pn	09 27 10.1	+0.9
	0.2nm,0.3s,baz=20,slow=15,SNR=7.7						
MKAR				Lg	Lg	09 29 16.1	
	0.1nm,0.3s,baz=22,slow=31,SNR=4.9						
	0.3nm,0.3s						

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*FCIAR **25** 09:34:01.0, 73°.67N×18°.26E, h10^{km}*

*HEL **25** 09:34:05.5±0.3, 74°.84N×17°.93E, h10^{km}, ML3.0, ML3.1(NAO), Confirmed Earthquake*

*NAO **25** 09:34:07.2±0.5, 74°.90N×18°.07E, h14^{km}±3^{km}, ML3.1*

*KOLA **25** 09:34:08.2, 74°.80N×18°.69E, h0^{km}, ML2.4, Error ellipse: s-maj=44.3km s-min=26.8km az=50.0, Barentz Sea*

BER 25 09:34:08.9±3.2**, 74°.84N×18°.04E, h19**^{km}±16^{km}**, ML2.3, ML3.1**(NAO)**, Confirmed Earthquake, Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HSPB	Hornsund (broa	2.25	345	Pn	Pn	09 34 42.8	-2.2
HSPB				Sn	Sn	09 35 08.5	-3.7
HSPB	Hornsund (broa	2.25	345	*e*P	Pn	09 34 40.0	-5.0
HSPB				*e*S	Sg	09 35 19.0	-2.3
HSPB	Hornsund (broa	2.25	345	*e*P	Pn	09 34 43.2	-1.8
HSPB				*e*S	Sn	09 35 09.4	-2.8
HSPB				IAML		09 35 24.2	
	comp=Z,20nm,0.6s						
HSPB	Hornsund (broa	2.25	345	*i* P	Pn	09 34 43.2	-1.8
HSPB				*i* S	Sn	09 35 09.4	-2.8
HSPB				IAML		09 35 24.2	
	comp=Z,20nm,0.6s						
HOPEN	Hopen	2.41	43	Sg	Sb	09 35 20.2	-0.5
HOPEN	Hopen	2.41	43	*e*P	Pn	09 34 46.9	-0.3
HOPEN				*e*S	Sb	09 35 20.3	-0.5
HOPEN	Hopen	2.41	43	*e*P	Pn	09 34 44.6	-2.5
HOPEN				*e*Sg	Sb	09 35 21.1	+0.4
HOPEN				IAML		09 35 33.5	
	comp=Z,40nm,0.5s						
HOPEN	Hopen	2.41	43	*e*P	Pn	09 34 44.6	-2.5
HOPEN				*e*SG	Sb	09 35 21.1	+0.4
HOPEN				IAML		09 35 33.5	
	comp=Z,40nm,0.5s						
BRBA	Barentsburg A	3.36	346	*e*P	Pn	09 34 59.5	-0.6
BRBA	Barentsburg A	3.36	346	*e*P	Pn	09 34 59.5	-0.6
SPA0	Spitsbergen Ar	3.38	354	Pn	Pn	09 34 58.6	-1.9
	baz=158,slow=14						
SPA0				Sn	Sn	09 35 35.9	-4.0
	baz=155,slow=28						
SPA0				Sg	Sb	09 35 50.2	+1.7
	baz=172,slow=37						
SPA0	Spitsbergen Ar	3.38	354	*e*P	Pn	09 34 57.6	-2.8
SPA0				*e*S	Sb	09 35 49.4	+0.9
SPA0	Spitsbergen Ar	3.38	354	Pn	Pn	09 34 58.6	-1.9
	baz=158,slow=14						
SPA0				Sn	Sn	09 35 35.9	-4.0
	baz=155,slow=28						
SPA0				Sg	Sb	09 35 50.2	+1.7
	baz=172,slow=37						
SPA0	Spitsbergen Ar	3.38	354	*e*P	Pn	09 34 58.6	-1.9
SPA0				*e*S	Sn	09 35 35.9	-4.0
SPA0				*e*SG	Sb	09 35 50.2	+1.7
KBS	Kingsbay	4.33	344	Pn	Pn	09 35 11.0	-2.5
KBS	Kingsbay	4.33	344	Pn	Pn	09 35 11.0	-2.5
KBS				*e*Sg	Sb	09 36 16.8	+0.8
KBS				IAML		09 36 31.5	
	comp=Z,13nm,0.5s						
KBS	Kingsbay	4.33	344	*e*P	Pn	09 35 11.0	-2.5
KBS				*e*SG	Sb	09 36 16.8	+0.8
KBS				IAML		09 36 31.5	
	comp=Z,13nm,0.5s						
HAMF	Hammerfest	4.54	156	*e*S	Sn	09 36 03.2	-5.4
HAMF	Hammerfest	4.54	156	*e*S	Sn	09 36 03.2	-5.4
JETT	Jettan, Norway	5.37	171	*e*S	Sn	09 36 23.1	-5.9
JETT	Jettan, Norway	5.37	171	*e*S	Sn	09 36 23.1	-5.9
KEV	Kevo	5.79	147	Pn	Pn	09 35 31.9	-1.6
KEV				Sn	Sn	09 36 35.1	-4.2
KEV	Kevo	5.79	147	*e*P	Pn	09 35 31.2	-2.3
KEV	Kevo	5.79	147	*e*P	Pn	09 35 32.0	-1.6
KEV				*e*S	Sn	09 36 34.9	-4.4
KEV	Kevo	5.79	147	*e*P	Pn	09 35 32.3	-1.3
KEV				*e*S	Sn	09 36 34.4	-4.9
KEV				MSN		09 36 39.4	
	comp=Z,3.6nm,0.2s						
ARA0	ARCESS Array S	5.80	153	Pn	Pn	09 35 30.6	-3.1
	baz=341,slow=18						
ARA0				Sn	Sn	09 36 34.2	-5.4
	baz=334,slow=22						
ARA0	ARCESS Array S	5.80	153	Pn	Pn	09 35 30.6	-3.1
	baz=341,slow=18						
ARA0				Sn	Sn	09 36 34.2	-5.4
	baz=334,slow=22						
ARA0	ARCESS Array S	5.80	153	*e*P	Pn	09 35 32.8	-1.0
ARA0				*e*S	Sn	09 36 34.8	-4.8
ARCES	ARCESS Array B	5.80	153	P	Pn	09 35 32.7	-1.0
ARCES				S	Sn	09 36 34.7	-4.9
VADS	Vadso	5.84	139	P	Pn	09 35 32.0	-2.1
VADS				S	Sn	09 36 35.8	-4.6
VADS	Vadso	5.84	139	*e*P	Pn	09 35 32.1	-2.1
VADS	Vadso	5.84	139	*e*P	Pn	09 35 32.4	-1.8
VADS				*e*S	Sn	09 36 34.2	-6.2
VADS				IAML		09 36 45.0	
	comp=Z,11nm,0.4s						
VADS	Vadso	5.84	139	*e*P	Pn	09 35 32.4	-1.8
VADS				*e*S	Sn	09 36 34.2	-6.2
VADS				IAML		09 36 45.0	
	comp=Z,11nm,0.4s						
KIF	Kilpisjarvi	5.93	170	Pn	Pn	09 35 34.6	-0.9
KIF				Sn	Sn	09 36 36.6	-6.2
KIF	Kilpisjarvi	5.93	170	Pn	Pn	09 35 34.6	-0.9
KIF				Sn	Sn	09 36 36.6	-6.2
KIF	Kilpisjarvi	5.93	170	*e*P	Pn	09 35 34.1	-1.4
KIF				*e*S	Sn	09 36 36.0	-6.7
KIF				MSN		09 36 40.8	
	comp=Z,9.1nm,0.3s						
HEF	Hetta	6.70	162	*e*P	Pn	09 35 45.4	-0.7
HEF				*e*S	Sn	09 36 56.3	-5.5
TERR	Teriberka	7.71	129	P	Pn	09 35 56.9	-3.0
TERR				S	Sn	09 37 18.3	-8.1
KLF	Kolari	7.88	163	MSN		09 37 26.3	
	comp=Z,2.2nm,0.3s						
OMEGA	Omega	8.51	33	*e*P	Pn	09 36 01.8	-9.0
OMEGA				*e*S	Sn	09 37 43.0	-3.0
ZFI2	Zemlya Franca-	8.51	32	*e*P	Pn	09 36 01.8	-9.0
ZFI2				*e*S	Sn	09 37 43.0	-3.0
APA0	Apatity Array	8.69	139	Pn	Pn	09 36 11.5	-1.7
	baz=329,slow=11						
APA0	Apatity Array	8.69	139	P	Pn	09 36 10.6	-2.6
APA0				S	Sn	09 37 42.2	-8.2
APA0	Apatity Array	8.69	139	Pn	Pn	09 36 11.5	-1.7
	baz=329,slow=11						
APA0	Apatity Array	8.69	139	*e*P	Pn	09 36 11.5	-1.7
KVDA	Kovda	9.49	142	P	Pn	09 36 20.9	-3.3
KVDA				S	Sn	09 38 03.2	-7.1

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*EST **25** 09:39:29.3±0.1, 59°.80N×27°.42E, h0^{km}, ML2.1(HEL), Explosion*

*HEL **25** 09:39:29.2±0.1, 59°.79N×27°.41E, h0^{km}, ML1.9, Explosion*

*IDC **25** 09:39:31.2±1.3, 59°.88N×27°.32E, h0^{km}, mbtmp3.1/4, ML2.6/4, Error ellipse: s-maj=14.5km s-min=8.1km az=87.0*

ISC 25 09:39:27.0±0.8**, 59°.81N**±0°.02×**27°.45E**±0°.03**, h0^{km}, n29, σ0ˢ.86**/44**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EE04	Vaivara Sinima	0.49	154	*e*P	Pb	09 39 37.8	-0.7
EE04				*e*S	Sg	09 39 43.5	+0.7
VJF	Virojoki	0.73	4	*e*P	Pb	09 39 42.7	+0.2
VJF				*e*S	Sb	09 39 52.6	-0.5
PVF	Pernaja	1.08	313	*e*P	Pb	09 39 48.7	+0.1
PVF				*e*S	Sb	09 40 02.4	-0.8
EE03	Tooma soojaam,	1.12	213	*e*P	Pb	09 39 49.4	+0.2
EE03				*e*S	Sg	09 40 03.3	+0.4
HEL1	Helsinki	1.34	287	*e*P	Pn	09 39 53.0	0.0
HEL1				*e*S	Sg	09 40 09.8	-0.3
HEL1				MSG		09 40 15.5	
	comp=Z,14nm,0.1s						
VSU	Vasula	1.41	196	*e*P	Pn	09 39 53.8	0.0
VSU	Vasula	1.41	196	*e*P	Pn	09 39 53.7	0.0
VSU				*e*S	Sg	09 40 11.5	-0.6
NUR	Nurmijarvi	1.56	298	*e*P	Pg	09 39 57.1	+0.2
NUR				*e*S	Sn	09 40 16.8	-0.1
NUR				MSG		09 40 22.3	
	comp=Z,16nm,0.2s						
MEF	Metsahovi	1.59	286	*e*P	Pg	09 39 57.5	0.0
MEF	Metsahovi	1.59	286	*e*P	Pg	09 39 57.4	0.0
MEF				*e*S	Sb	09 40 17.7	0.0
MEF				MSG		09 40 22.8	
	comp=Z,16nm,0.2s						
EE08	Sarghaua, Vand	1.62	225	*e*P	Pg	09 39 58.2	+0.2
EE08				*e*S	Sn	09 40 18.4	+0.1
FIA0	FINESS Array S	1.77	338	*e*P	Pb	09 40 00.3	+0.1
FIA0				*e*SN	Sg	09 40 24.2	+0.4
FIA0				MSG		09 40 28.1	
	comp=Z,12nm,0.1s						
FIA1	FINESS Array S	1.77	338	*e*P	Pb	09 40 00.2	-0.1
FIA1				MSG		09 40 26.4	
	comp=Z,13nm,0.1s						
FINES	FINESS Array B	1.77	338	Pg	Pb	09 40 00.2	-0.1
	comp=Z,1.5nm,0.3s,baz=159,slow=17,SNR=104						
FINES				Lg	Lg	09 40 24.6	
	comp=Z,3.2nm,0.3s,baz=160,slow=28,SNR=24						
FINES				Rg	Rg	09 40 33.8	
	comp=Z,1.7nm,0.3s,baz=160,slow=34,SNR=3.5						
RUF	Ruokolahti	1.78	24	*e*P	Pb	09 40 00.5	+0.1
RUF				*e*S	Sg	09 40 24.3	+0.3
RUF				MSG		09 40 26.5	
	comp=Z,16nm,0.1s						
EE07	Piusa Caves, O	1.98	180	*e*PG	Pg	09 40 04.9	0.0
EE07				*e*SG	Sg	09 40 30.9	+0.4
TVF	Tvarminne	2.12	273	*e*PB	Pb	09 40 06.0	-0.2
TVF				*e*SG	Sb	09 40 33.6	+0.5
TVF				MSG		09 40 39.3	
	comp=Z,5.9nm,0.1s						
MTSE	Matsula	2.17	241	*e*P	Pn	09 40 05.6	+1.3
MTSE	Matsula	2.17	241	*e*P	Pb	09 40 06.7	-0.3
MTSE				*e*SG	Sg	09 40 36.1	-0.5
KAF	Kangasniemi	2.37	347	*e*P	Pb	09 40 09.8	-0.7
KAF				MSG		09 40 44.9	
	comp=Z,8.3nm,0.2s						
KEF	Keuruu	2.67	333	*e*P	Pb	09 40 14.4	-1.3
KEF	Keuruu	2.67	333	*e*P	Pb	09 40 14.1	-1.6
KEF				MSG		09 40 49.3	
	comp=Z,8.7nm,0.2s						
RAF	Rauma	3.07	296	*e*P	Pn	09 40 19.0	+2.3
RAF	Rauma	3.07	296	*e*P	Pn	09 40 19.0	+2.3
OBN	Obninsk	6.81	130	Sn	Sn	09 42 25.1	-0.9
	comp=Z,5.1nm,0.3s,baz=323,slow=20,SNR=3.3						
HFS	Hagfors	6.91	279	Pn	Pn	09 41 10.5	+1.0
	comp=Z,0.1nm,0.3s,baz=83,slow=14,SNR=7.3						
HFS				Sn	Sn	09 42 26.6	-2.1
	comp=Z,0.3nm,0.3s,baz=82,slow=32,SNR=2.4						
HFS				Lg	Lg	09 42 58.2	
	comp=Z,0.3nm,0.3s,baz=90,slow=36,SNR=2.7						
	comp=Z,0.9nm,0.7s						
NOA	NORSAR Array B	8.12	286	Pn	Pn	09 41 24.6	-1.5
	baz=78,slow=8.6,SNR=9.1						
	comp=Z,0.1nm,0.4s						
AKASG	Malin Array Be	9.19	173	Pn	Pn	09 41 41.3	+0.6
	comp=Z,0.2nm,0.3s,baz=352,slow=13,SNR=1.6						
	comp=Z,0.4nm,0.3s						
ARCES	ARCESS Array B	9.80	356	Pn	Pn	09 41 48.7	-0.2
	comp=Z,0.1nm,0.3s,baz=169,slow=14,SNR=15						
	comp=Z,0.4nm,0.2s						

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*IDC **25** 09:43:02.2±3.5, 43°.28N×139°.07E, h215^{km}±16^{km}, mb3.3/9, mbtmp3.9/10, Error ellipse: s-maj=96.1km s-min=18.7km az=176.0*

*JMA **25** 09:43:03.0±0.3, 43°N±1°×13°9E±°, h224^{km}±2^{km}, MV3.2/25, NW OFF SHAKOTAN PEN*

ISC 25 09:43:02.4±0.8**, 43°.50N**±0°.07×**139°.13E**±0°.07**, h200^{km}, n23, σ2ˢ.22**/29**, mb3.6**/9**, Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSK	Shakotan	0.99	98	P	Pn	09 43 35.1	+3.0
JSH	Shimam	1.08	142	P	Pn	09 43 35.4	+2.7
JOSM	Okushiri--Mats	1.44	170	P	Pn	09 43 38.5	+2.9
JOSM				*e*S	Sn	09 44 05.8	+4.6
JEW	Eniwo	1.82	110	P	Pn	09 43 42.0	+2.9
JHR	Hokuryu	1.90	82	P	Pn	09 43 42.6	+2.8
JOMM	Oshimamatsumae	2.08	162	P	Pn	09 43 44.0	+2.3
JSS	Shosan	2.16	64	*e*P	Pn	09 43 45.5	+3.0
ASAJ	Asahikawa	2.58	75	P	Pn	09 43 49.4	+2.2
	13nm,0.4s,baz=254,slow=9.3,SNR=33						
ASAJ				S	Sn	09 44 26.0	+3.9
	9.5nm,0.8s,baz=153,slow=8.7,SNR=4.1						
JKK2	Kamakawa 2	2.65	81	P	Pn	09 43 50.3	+2.4
JCH	Churui	3.22	104	*e*P	Pn	09 43 54.7	+0.1
JCH				*e*S	Sn	09 44 34.6	-0.9
JAR	Ashorobuto	3.38	92	P	Pn	09 43 58.0	+1.4
JAR				*e*S	Sn	09 44 40.8	+1.8
JTKR	Abashiri--Toko	3.49	81	P	Pn	09 43 59.9	+2.0
JANG	Nango	3.59	150	P	Pn	09 43 59.4	+0.2
JANG				*e*S	Sn	09 44 42.9	-0.7
JAK	Akkeshi	4.10	95	*e*P	Pn	09 44 05.2	-0.1
JAK				*e*S	Sn	09 44 53.0	-1.7
SONM	Songino Array	23.18	292	P	P	09 47 50.3	-1.1
	0.6nm,0.5s,baz=82,slow=8.7,SNR=3.0						
	0.6nm,0.5s						
ZALV	Zalesovo Beam	36.47	306	P	P	09 49 46.4	-1.5
	1.6nm,0.3s,baz=87,slow=7.7,SNR=8.0						
	1.6nm,0.3s						
MKAR	Makanchi Array	39.48	295	P	P	09 50 11.8	-1.5
	0.8nm,0.5s,baz=86,slow=9.9,SNR=7.6						
	0.8nm,0.5s						
KURBB	Kurchatov Arra	40.86	302	P	P	09 50 23.1	-1.3
	1.8nm,0.4s,baz=78,slow=9.1,SNR=12						
	1.8nm,0.4s						
BVAR	Borovoye Array	45.09	307	P	P	09 50 57.6	-0.7
	3.8nm,0.3s,baz=77,slow=9.6,SNR=18						
	3.8nm,0.3s						
YKA	Yellowknife Ar	59.15	31	P	P	09 52 40.4	-1.2
	0.2nm,0.8s,baz=306,slow=7.3,SNR=3.0						
	0.2nm,0.8s						
FINES	FINESS Array B	62.32	330	P	P	09 53 04.0	+1.1
	0.8nm,0.5s,baz=29,slow=6.6,SNR=3.5						
	0.8nm,0.5s						
HFS	Hagfors	67.50	334	P	P	09 53 35.1	-1.4
	0.4nm,0.5s,baz=27,slow=6.6,SNR=1.2						
	0.4nm,0.5s						
NVAR	Mina Array Bea	72.53	53	P	P	09 54 07.0	-0.6
	0.2nm,0.4s,baz=315,slow=4.8,SNR=3.1						
	0.2nm,0.4s						

OMAN 25 09:46:34.8±0.2**, 14°.43N×51°.79E, h10^{km}, ml3.7**/1**, Error ellipse: s-maj=9.6km s-min=3.3km az=303.0, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABTO	Aybut	3.25	26	P	Pn	09 47 25.7	-0.2
	SNR=16						
ABTO				S	Sn	09 48 05.1	+0.4
RBK	Rabkut	3.84	37	P	Pn	09 47 34.8	+0.8
	SNR=32						
RBK				S	Sn	09 48 20.9	+1.6
WHFO	Wadi Hawf	3.96	28	P	Pn	09 47 36.0	+0.3
	SNR=28						
WHFO				S	Sn	09 48 23.3	+1.1
DMTO	DMTO	4.46	42	P	Pn	09 47 42.6	+0.1
	SNR=20						
DMTO				S	Sn	09 48 35.5	+1.0
DOK	Doka	4.73	28	P	Pn	09 47 46.1	-0.2
DOK				S	Sn	09 48 42.7	+1.5
BIDO	Bidbid	10.85	33	P	Pn	09 49 10.5	+0.3

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*IDC **25** 09:46:40.9±1.7, 2°.60S×138°.50E, h0^{km}, mb3.2/2, mbtmp3.2/4, ML3.2/2, Error ellipse: s-maj=32.6km s-min=26.5km az=159.0*

*DJA **25** 09:46:47.9±0.4, 2°S±3°×13°9E±°, h10^{km}, M3.1/4, MLv3.1/4*

ISC 25 09:46:45.2±1.1**, 2°.64S**±0°.08×**138°.62E**±0°.08**, h32^{km}, n7, σ0ˢ.75**/10**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.66	8	P	Pn	09 46 59.0	+0.7
SMPI				S	Sn	09 47 06.5	-1.1
GENI	Genyem	1.55	88	P	Pn	09 47 11.2	+0.6
GENI				S	Sn	09 47 28.8	-0.9
JAY	Jayapura	2.09	87	Pn	Pn	09 47 18.5	+0.4
	1.8nm,0.3s,baz=263,slow=11,SNR=9.4						
JAY				Sn	Sb	09 47 48.5	+0.4
	3.9nm,0.3s,baz=218,slow=19,SNR=6.0						
	4.9nm,0.3s						
JAY	Jayapura	2.09	87	P	Pn	09 47 18.5	+0.4
WRA	Warramunga Arr	17.69	193	P	Pn	09 50 48.6	-0.8
	0.1nm,0.3s,baz=14,slow=12,SNR=11						
	0.5nm,0.6s						
ASAR	Alice Springs	21.39	192	P	P	09 51 30.8	+0.4
	0.4nm,0.4s,baz=20,slow=9.8,SNR=9.7						
	0.4nm,0.4s						
MKAR	Makanchi Array	69.68	322	P	P	09 57 51.9	+0.1
	0.1nm,0.4s,baz=116,slow=6.7,SNR=1.7						
	0.1nm,0.4s						

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*IDC **25** 09:54:46.8±3.6, 43°.95N×127°.61W, h0^{km}, mb3.0/3, mbtmp3.0/5, ML2.4/3, Error ellipse: s-maj=95.4km s-min=19.0km az=54.0*

*NEIC **25** 09:54:49.3±1.7, 43°.87N±0°.08×127°.8W±0°.2, h10^{km}±2^{km}, ML2.9/84, Error ellipse: s-maj=19.7km s-min=12.0km az=246.0*

ISC 25 09:54:47.6±1.4**, 43°.81N**±0°.08×**127°.9W**±0°.1**, h10^{km}, n62, σ1ˢ.22**/56**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEBM	Edson Butte	2.76	109	Pn	Pn	09 55 30.1	-1.8
KEBM				IAML		09 56 10.3	
	comp=N,29nm,1.6s						
KEBM				IAML		09 56 10.8	
	comp=E,38nm,1.6s						
I02E	Swisshome, OR	2.94	83	Pn	Pn	09 55 34.2	-0.1
J01E	Myrtle Point	2.95	101	Pn	Pn	09 55 34.0	-0.6
J01E				IAML		09 56 16.7	
	comp=E,30nm,0.3s						
KBO	Bosley Butte	3.12	119	Pn	Pn	09 55 35.8	-1.2
KBO				IAML		09 56 00.6	
	comp=E,40nm,1.8s						
KBO				IAML		09 56 03.3	
	comp=N,27nm,1.8s						
HEBO	Mount Hebo	3.28	63	Pn	Pn	09 55 38.5	-0.6

HEBO				IAML		09 56 56.4	
	comp=N,38nm,2.2s						
K02D	Willamette Mer	3.28	108	Pn	Pn	09 55 37.7	-1.4
K02D				IAML		09 56 23.3	
	comp=E,19nm,0.4s						
K02D				IAML		09 56 23.6	
	comp=N,20nm,0.3s						
I03D	Drain, OR	3.29	90		Pn	09 55 38.6	-0.6
I03D				IAML		09 56 26.7	
	comp=N,20nm,0.6s						
COR	Corvallis	3.39	75	Pn	Pn	09 55 40.7	+0.1
COR				IAML		09 56 27.8	
	comp=N,19nm,1.8s						
COR				IAML		09 56 31.7	
	comp=N,17nm,3.5s						
KSXB	Camp Six Broad	3.55	122	Pn	Pn	09 55 41.5	-1.4
BUCK	Buck Mountain	3.56	82	Pn	Pn	09 55 43.4	+0.4
BUCK				IAML		09 56 35.9	
	comp=E,26nm,4.0s						
L02F	Cave Junction	3.59	116	Pn	Pn	09 55 43.0	-0.4
G03D	McMinnville, O	3.60	65		Pn	09 55 43.3	-0.1
G03D				IAML		09 56 33.1	
	comp=N,27nm,2.5s						
G03D				IAML		09 56 43.5	
	comp=E,22nm,3.5s						
KRMB	Red Mountain	3.72	126	Pn	Pn	09 55 46.8	+1.6
KRMB				IAML		09 56 50.9	
	comp=E,14nm,4.7s						
H04D	Lebanon	3.78	77	Pn	Pn	09 55 46.9	+1.0
H04D				IAML		09 56 43.9	
	comp=N,18nm,4.3s						
H04D				IAML		09 57 08.2	
	comp=E,17nm,4.2s						
RADR	Rader Ridge	3.90	46	Pn	Pn	09 55 48.7	+1.1
RADR				IAML		09 56 42.8	
	comp=N,26nm,4.4s						
RADR				IAML		09 58 02.3	
	comp=E,22nm,2.9s						
BBOR	Butler Butte	3.91	102		Pn	09 55 48.3	+0.4
BBOR				IAML		09 56 44.2	
	comp=E,11nm,0.5s						
E03A	Lebam	4.11	47	Pn	Pn	09 55 48.8	-1.6
E03A				IAML		09 56 18.8	
	comp=E,17nm,4.3s						
E03A				IAML		09 56 42.3	
	comp=N,12nm,2.8s						
G04A	Mulino	4.12	68	Pn	Pn	09 55 51.2	+0.6
G04A				IAML		09 56 43.8	
	comp=N,21nm,3.1s						
H04A	Detroit Lake	4.19	76		Pn	09 55 52.8	+1.2
H04A				IAML		09 56 53.0	
	comp=N,9.3nm,0.4s						
J04A	Umpqua Nationa	4.24	96		Pn	09 55 54.1	+1.6
KHMM	Horse Mountain	4.25	132	Pn	Pn	09 55 53.1	+0.6
KHMM				IAML		09 56 26.0	
	comp=E,19nm,2.4s						
YBH	Yreka Blue Hor	4.34	117	Pn	Pn	09 55 54.2	+0.5
YBH	Yreka Blue Hor	4.34	117	Pn	Pn	09 55 54.1	+0.4
	baz=324,slow=8.9,SNR=9.1						
L04D	Klamath Falls	4.39	109		Pn	09 55 54.5	0.0
L04D				IAML		09 58 02.0	
	comp=N,12nm,4.1s						
L04D				IAML		09 58 07.1	
	comp=E,12nm,4.5s						
WISH	Wishkah	4.40	40	Pn	Pn	09 55 54.6	+0.2
NLWA	Neilton Lookou	4.56	37		Pn	09 55 56.4	-0.3
NLWA				IAML		09 56 31.0	
	comp=E,7.0nm,3.5s						
NLWA				IAML		09 57 01.5	
	comp=E,8.8nm,4.5s						
K04D	Chiloquin, OR	4.64	103	Pn	Pn	09 55 58.2	+0.3
HOOD	Mount Hood Mea	4.71	69		Pn	09 56 00.1	+1.3
HOOD				IAML		09 57 00.4	
	comp=N,15nm,1.0s						
C03A	Quillayute Air	4.75	28	Pn	Pn	09 55 58.1	-1.1
I05D	Terrebonne, OR	4.75	81	Pn	Pn	09 55 58.8	-0.5
J05D	Fort Rock, OR	4.87	94		Pn	09 56 01.8	+0.8
J05D				IAML		09 56 48.2	
	comp=E,14nm,4.8s						
J05D				IAML		09 58 59.6	
	comp=N,12nm,4.7s						
G05A	Wamic	4.92	71		Pn	09 56 02.3	+0.8
PINE	Pine Mountain	5.03	88		Pn	09 56 04.0	+0.7
PINE				IAML		09 57 02.1	
	comp=E,9.7nm,4.3s						
PINE				IAML		09 57 55.4	
	comp=N,10.0nm,4.6s						
GNW	Green Mountain	5.17	42		Pn	09 56 05.6	+0.6
GNW				IAML		09 57 56.8	
	comp=E,6.3nm,4.4s						
GNW				IAML		09 59 24.5	
	comp=N,4.9nm,4.4s						
LON	Longmire	5.20	53		Pn	09 56 05.8	+0.3
LON				IAML		09 58 50.2	
	comp=E,5.2nm,4.5s						
D05A	Enumclaw	5.35	49	Pn	Pn	09 56 07.9	+0.4
OZB	Mount Ozzard	5.42	17	Pn	Pn	09 56 05.3	-3.1
CLRS	Cowichan Lake	5.65	26	Pn	Pn	09 56 09.9	-1.7
PGC	Sidney	5.74	31	Pn	Pn	09 56 12.3	-0.5
MXC	Moxie City	6.04	60	Pn	Pn	09 56 15.7	-1.4
I07A	Izee	6.06	84	Pn	Pn	09 56 18.5	+1.1
LTY	Liberty	6.13	53	Pn	Pn	09 56 17.9	-0.5
HAWA	Hanford	6.46	63	Pn	Pn	09 56 22.8	+0.1
CBB	Campbell River	6.46	15	Pn	Pn	09 56 22.7	-0.1
G08A	Pilot Rock	6.55	74	Pn	Pn	09 56 24.5	+0.4
HOLB	Holberg	6.84	359	Pn	Pn	09 56 29.2	+1.3
MPK	Martis Peak	7.42	125	Pn	Pn	09 56 38.5	+2.3
PNTR	Pine Nut	7.81	124	Pn	Pn	09 56 43.0	+1.6
BBB	Bella Bella	8.38	359	Pn	Pn	09 56 50.5	+1.4
HG4B	Hotspring	8.78	347	Pn	Pn	09 56 58.2	+3.7
BBGB	Big Mountain B	8.92	142	Pn	Pn	09 56 57.8	+1.2
NVAR	Mina Array Bea	9.01	123	Pn	Pn	09 56 58.4	+0.5
	comp=E,0.1nm,0.3s,baz=304,slow=7.8,SNR=3.0						
	comp=E,0.1nm,0.3s						
ANMO	Albuquerque	18.74	111	P	P	09 59 06.8	+0.1
	baz=300,slow=16,SNR=1.6						
	comp=E,0.4nm,0.7s						
YKA	Yellowknife Ar	20.27	18	P	P	09 59 20.6	-2.4
	comp=E,1.0nm,0.9s,baz=211,slow=10,SNR=10.0						
	comp=E,1.0nm,0.9s						
ILAR	Eielson Array	23.56	340	P	P	09 59 58.5	+0.5
	comp=E,0.4nm,0.7s,baz=158,slow=9.6,SNR=5.8						
	comp=E,0.4nm,0.7s						
TXAR	Lajitas Array	24.11	119	P	P	10 00 02.2	-1.4
	comp=E,0.3nm,0.9s,baz=319,slow=8.2,SNR=2.4						
	comp=E,0.3nm,0.9s						
H11N3	WAKE ISLAND Hy	58.84	268	T	T	11 07 47.9	
	baz=49,slow=75,SNR=18						
H11N2	WAKE ISLAND Hy	58.84	268	T	T	11 07 45.6	
	baz=49,slow=75,SNR=7.5						
H11N1	WAKE ISLAND Hy	58.85	268	T	T	11 07 49.4	
	baz=49,slow=75,SNR=7.3						
H11S1	WAKE ISLAND Hy	59.77	267	T	T	11 08 55.6	
	baz=50,slow=74						
H11S2	WAKE ISLAND Hy	59.77	267	T	T	11 09 00.7	
	baz=50,slow=74						
H11S3	WAKE ISLAND Hy	59.78	267	T	T	11 08 59.4	
	baz=50						

ASRS ***25*** *09:55:33.0±1.3, 54°.31N×86°.30E, h0km, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 25 09:55:38.9±2.6**, 54°.26N×86°.09E, h0**km**, mbtmp3.2**/2**, ML2.9**/2**, Error ellipse: s-maj=19.5km s-min=11.7km az=53.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.81	248	I	I	10 00 21.1	
	baz=69,slow=326,SNR=7.2						
ZALV	Zalesovo Beam	0.81	248	Pg	Pg	09 55 53.2	-1.2
	1.2nm,0.3s,baz=65,slow=18,SNR=7.7						
ZALV				Lg	Lg	09 56 06.2	
	4.9nm,0.3s,baz=65,slow=28,SNR=19						
KURBB	Kurchatov Arra	5.88	235	Pn	Pn	09 57 09.3	+2.0
	0.3nm,0.3s,baz=52,slow=14,SNR=2.0						
	1.2nm,0.3s						
MKAR	Makanchi Array	7.86	199	Pn	Pn	09 57 35.0	+0.6
	0.2nm,0.3s,baz=23,slow=13,SNR=8.1						
	0.3nm,0.3s						

STR 25 10:11:18.7±1.7**, 45°N**±6°×°±°**, h0**km**, MLv1.3**/7**, Error ellipse: s-maj=0.0km s-min=0.0km az=107.4, preliminary, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ORIF	Oris-en-Rattie	0.39	128	Pg	Pg	10 11 26.4	+0.3
ORIF				Sg	Sg	10 11 31.4	+0.3

UPP ***25*** *10:16:52.7±2.7, 64°.76N×30°.82E, h0km, ML1.9*

HEL ***25*** *10:16:52.6±0.2, 64°.79N×30°.66E, h0km, ML2.1, Suspected explosion*

KOLA ***25*** *10:16:53.7, 64°.80N×30°.86E, h0km, ML2.3, Kostomuksha, Karelia*

IDC ***25*** *10:16:53.8±2.9, 64°.76N×30°.67E, h0km, mbtmp3.1/3, ML2.2/3, Error ellipse: s-maj=49.2km s-min=10.0km az=106.0*

MOS ***25*** *10:16:54.0±0.4, 64°.70N±0°.03×30°.7E±0°.1, h0km, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

ISC 25 10:16:52.8±0.9**, 64°.82N**±0°.03×**30°.65E**±0°.04**, h0**km**, n51, σ1s.52**/80**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KU1	Kurvinen	0.88	329	PG	Pg	10 17 09.1	-0.5
	baz=145						
KU6	Riekki	1.25	346	PG	Pg	10 17 15.6	-1.1
	baz=161						
KU6				MSG		10 17 31.5	
	comp=Z,15nm,0.2s						
KU6				SG	Sg	10 17 33.2	+0.3
MSF	Maaselka	1.28	329	PG	Pg	10 17 16.3	-1.1
	baz=149						
MSF				SN	Sn	10 17 36.2	+0.3
KU2	Taivalkoski	1.35	312	PG	Pg	10 17 17.5	-1.2
OLKF	Oulanka, Finla	1.59	342	PG	Pn	10 17 21.7	-0.5
OLKF				MSG		10 17 41.3	
	comp=Z,15nm,0.2s						
OLKF				SN	Sn	10 17 43.8	+0.4
NIF	Nilsia	1.90	222	PG	Pn	10 17 26.6	+0.1
	baz=44						
NIF				SG	Sn	10 17 52.2	+1.1
RANF	Ranua	2.01	308	PG	Pn	10 17 28.9	+1.0
	baz=122						
RANF				SG	Sn	10 17 55.2	+1.5
OUL	Oulu	2.04	280	PG	Pn	10 17 29.5	+1.1
OUL				SG	Sn	10 17 55.8	+1.4
KVDA	Kovda	2.09	25	P	Pn	10 17 29.1	+0.1
KVDA				S	Sn	10 17 55.6	-0.1
OBF4	Vikkela, Lumij	2.37	272	PG	Pn	10 17 34.2	+1.3
	baz=87						
OBF4				MSG		10 18 02.8	
	comp=Z,15nm,0.2s						
OBF4				SG	Sb	10 18 07.3	+1.2
OUF	Merijarvi	2.59	263	PB	Pn	10 17 36.8	+0.9
	baz=78						
OUF				MSG		10 18 09.0	
	comp=Z,15nm,0.2s						
OUF				SG	Sb	10 18 11.9	-0.5
RNF	Rovaniemi	2.62	315	PB	Pn	10 17 36.9	+0.5
	baz=130						
RNF				SG	Sb	10 18 13.6	+0.2
OBF0	Syolatti, Pyha	2.77	266	PG	Pb	10 17 41.7	-1.5
OBF0				MSG		10 18 14.5	
	comp=Z,7.9nm,0.2s						
OBF0				SG	Sb	10 18 18.3	+0.5
SUF	Sumiainen	2.91	225	PB	Pn	10 17 41.5	+1.2
SUF				MSG		10 18 17.6	
	comp=Z,5.2nm,0.2s						
TOF	Tornio	2.92	298	PB	Pn	10 17 42.0	+1.5
TOF				MSG		10 18 19.1	
	comp=Z,4.9nm,0.2s						
TOF				SG	Sb	10 18 21.4	-0.7
APA0	Apatity Array	2.95	18	P	Pn	10 17 41.4	+0.4
APA0				S	Sn	10 18 18.1	+1.0
VRF	Varrio	2.97	352	PB	Pn	10 17 42.3	+1.2
VRF				MSG		10 18 21.0	
	comp=Z,5.4nm,0.2s						
VRF				SG	Sb	10 18 23.4	+0.1
APA	Apatity	2.98	21	P	Pn	10 17 41.5	+0.2
APA				S	Sn	10 18 16.0	-1.6
OBF8	Ulkokalla	3.15	264	PB	Pn	10 17 44.2	+0.7
KALU	Kalix	3.23	292	P	Pn	10 17 45.9	+1.2
KALU	Kalix	3.23	292	PB	Pn	10 17 46.5	+1.8
KALU				SG	Sb	10 18 32.1	+1.4
KAF	Kangasniemi	3.34	218	PB	Pn	10 17 48.1	+1.8
KAF				SG	Sb	10 18 34.8	+0.6
LVZ	Lovozero	3.48	26	S	Sn	10 18 27.9	-2.3
LVZ	Lovozero	3.48	26	PN	Pn	10 17 48.9	+0.6
LVZ				SG	Sb	10 18 40.3	+2.1
RUF	Ruokolahti	3.50	193	PN	Pn	10 17 49.6	+1.2
KLF	Kolari	3.65	315	PN	Pn	10 17 51.0	+0.5
KEF	Keuruu	3.71	227	PG	Pb	10 17 58.8	-0.4
RAJF	Raja-Jooseppi	3.79	347	PN	Pn	10 17 52.7	+0.3
PAJU	Pajala	3.80	309	P	Pn	10 17 52.9	+0.4
PAJU				S	Sn	10 18 39.7	+1.9
PAJU	Pajala	3.80	309	PN	Pn	10 17 53.1	+0.6
PAJU				SG	Sb	10 18 50.5	+3.4
SJUU	Sjulsmark	3.88	284	P	Pn	10 17 54.2	+0.6
SJUU				S	Sn	10 18 40.6	+0.9
ERTU	Ertsjaerv	3.90	300	P	Pn	10 17 55.1	+1.1
ERTU	Ertsjaerv	3.90	300	PN	Pn	10 17 55.1	+1.1
ERTU				SG	Sg	10 18 55.7	-2.4
FIA0	FINESS Array S	3.98	214	PG	Pb	10 18 04.4	+0.7
FIA0				SB	Sb	10 18 50.5	-1.7
FINES	FINESS Array B	3.98	214	Pn	Pn	10 17 55.0	+0.1
	comp=Z,0.2nm,0.3s,baz=28,slow=15,SNR=5.3						
FINES				Sn	Sn	10 18 41.7	-0.4
	comp=Z,0.5nm,0.3s,baz=30,slow=20,SNR=3.5						
FINES				Lg	Lg	10 18 56.3	
	comp=Z,2.2nm,0.3s,baz=31,slow=24,SNR=16						
	comp=Z,0.4nm,0.3s						
HARU	Harads	4.25	293	P	Pn	10 17 59.4	+0.8
MASU	Masugnsbyn	4.39	311	P	Pn	10 18 01.7	+0.9
UMAU	Umeaa	4.43	262	P	Pn	10 18 01.0	-0.2
UMAU	Umeaa	4.43	262	PN	Pn	10 18 00.5	-0.7
UMAU				SN	Sn	10 18 52.4	-1.0
VJF	Virojoki	4.53	200	SG	Sb	10 19 11.8	+3.7
HEF	Hetta	4.55	325	PG	Pb	10 18 15.4	+2.0
HEF				SG	Sb	10 19 13.2	+4.5
TERR	Teriberka	4.73	20	P	Pn	10 18 05.6	+0.3
TERR				S	Sn	10 18 58.1	-2.7
SVAU	Svanoeiden	4.77	271	P	Pn	10 18 05.9	0.0
ARA0	ARCESS Array S	5.14	339	*e*P	Pn	10 18 11.0	+0.1
ARCES	ARCESS Array B	5.14	339	Pn	Pn	10 18 10.4	-0.5
	comp=Z,0.7nm,0.3s,baz=154,slow=13,SNR=76						
ARCES				Sn	Sn	10 19 04.6	-6.2
	comp=Z,0.3nm,0.3s,baz=156,slow=25,SNR=6.5						
ARCES				Lg	Lg	10 19 30.6	
	comp=Z,0.6nm,0.3s,baz=160,slow=25,SNR=4.0						
	comp=Z,1.5nm,0.2s						
ARCES	ARCESS Array B	5.14	339	P	Pn	10 18 10.8	-0.1
ARCES				S	Sn	10 19 09.4	-1.4
KEV	Kevo	5.15	346	*e*P	Pn	10 18 10.8	-0.3
HUSU	Husum	5.23	259	P	Pn	10 18 12.4	+0.3
VADS	Vadso	5.34	355	P	Pn	10 18 13.6	-0.1
VADS				S	Sn	10 19 14.7	-1.2
I37NO	I37NO	6.36	317	I	I	10 53 35.0	
	comp=Z,0.1nm,1.0s,baz=127,slow=322,SNR=14						
HFS	Hagfors	9.13	247	Pn	Pn	10 19 03.2	-2.5
	comp=Z,0.2nm,0.3s,baz=64,slow=16,SNR=1.9						
HFS				Lg	Lg	10 21 35.1	
	comp=Z,0.5nm,0.3s,baz=53,slow=30,SNR=5.4						
	comp=Z,0.5nm,0.4s						

IDC ***25*** *10:23:20.5±1.7, 14°.59N×94°.11W, h0km, mb3.8/5, mbtmp3.8/8, ML3.8/3, MS4.6/1, Error ellipse: s-maj=67.4km s-min=19.6km az=44.0*

GCG ***25*** *10:23:24.9±2.3, 14°.69N×93°.76W, h38km±691km, MD4.6, ML4.9*

MEX ***25*** *10:23:27.1±0.7, 14°.77N×93°.72W, h17km±54km, MD4.6*

CATAC ***25*** *10:23:27.5±1.0, 15°N±8°×9°3W±°, h1km, M4.9/6, MLv4.9/6, Error ellipse: s-maj=19.0km s-min=11.2km az=157.5, confirmed*

NEIC ***25*** *10:23:30.3±1.9, 14°.97N±0°.09×93°.66W±0°.07, h35km±2km, mb4.1/90, Error ellipse: s-maj=16.2km s-min=8.1km az=210.0*

ISC 25 10:23:27.2±1.7**, 14°.84N**±0°.05×**93°.76W**±0°.03**, h33**km±5km**, n178, σ2s.03**/218**, mb4.1**/24**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.01	31	*e*P	Pn	10 23 42.9	-2.2
PCIG				*e*S	Sn	10 23 55.9	-2.2
THIG		1.45	87	*e*P	Pn	10 23 48.6	-2.4
THIG				*e*S	Sn	10 24 05.2	-3.7
THIG		1.45	87	*i* P	Pn	10 23 48.7	-2.4
THIG				*i* S	Sn	10 24 06.7	-2.2
PATR	El Naranjo	1.50	79	*e*P	Pn	10 23 49.1	-3.0
PATR				*i* S	Sn	10 24 06.5	-4.1
PAVE	Pavencul	1.57	77	*e*P	Pn	10 23 50.5	-2.5
PAVE				*e*S	Sn	10 24 08.9	-3.5
SMCA	Catarina	1.63	89	*e*P	Pn	10 23 51.0	-2.6
SMCA				*i* S	Sn	10 24 10.8	-2.7
RTAL	Retalhuleu	2.02	99	Pn	Pn	10 23 56.9	-2.1
RTAL				Sn	Sn	10 24 22.3	-0.9
RTAL	Retalhuleu	2.02	99	*e*P	Pn	10 23 56.6	-2.5
RTAL				*e*S	Sn	10 24 18.8	-4.4
RTAL	Retalhuleu	2.02	99	P	Pn	10 23 57.0	-2.0
RTAL	Retalhuleu	2.02	99	S	Sn	10 24 21.6	-1.6
TGIG		2.02	18	*e*P	Pn	10 23 58.9	-0.2
TGIG				*e*S	Sn	10 24 24.4	+1.1
TGIG		2.02	18	*e*P	Pn	10 23 58.9	-0.2
TGIG				*e*S	Sn	10 24 23.6	+0.3
TGBT	Tuxtla Gutierr	2.03	18	*e*P	Pn	10 23 59.2	+0.1
TGBT				*i* S	Sn	10 24 23.2	-0.2
CCIG	Comitan	2.12	47		Pn	10 24 01.0	+0.4
CCIG	Comitan	2.12	47	*e*P	Pn	10 24 01.2	+0.6
CCIG				*i* S	Sn	10 24 25.5	-0.4
CCIG	Comitan	2.12	47	*e*P	Pn	10 24 01.0	+0.4
CCIG				IAML		10 24 36.0	
	comp=N,3µm,0.5s						
HUEH	Huehuetenango	2.23	77	Pn	Pn	10 24 02.3	+0.2
HUEH	Huehuetenango	2.23	77	*e*P	Pn	10 24 01.4	-0.8
HUEH				*e*S	Sn	10 24 27.1	-1.6
HUEH	Huehuetenango	2.23	77	*i* P	Pn	10 24 02.2	+0.1
HUEH				*e*S	Sn	10 24 29.0	+0.3
HUEH				IAML		10 24 40.6	
	comp=N,12µm,0.6s						
HUEH	Huehuetenango	2.23	77	S	Sn	10 24 30.7	+2.1
HUEH	Huehuetenango	2.23	77	P	Pn	10 24 02.7	+0.6
SOKI	Kika Raxquin	2.28	90	*e*P	Pn	10 24 02.0	-1.0
STG8	El Palmar, Qui	2.36	99	*e*P	Pn	10 23 57.5	-6.4
STG8				*e*S	Sn	10 24 22.2	-10
STG8				IAML		10 24 29.1	
	comp=E,8µm,0.5s						
STG0	El Palmar, Qui	2.38	100	*e*P	Pn	10 23 57.8	-6.3
STG0				*e*S	Sn	10 24 22.9	-9.2
STG0				IAML		10 24 34.0	
	comp=E,18µm,0.3s						
HUIG	Huatulco	2.45	293	*e*P	Pn	10 24 02.3	-2.5
HUIG				*e*S	Sn	10 24 27.3	-6.3
HUIG	Huatulco	2.45	293	*e*P	Pn	10 24 02.4	-2.5
CMIG	Matias Romero	2.49	334	Pn	Pn	10 24 03.1	-2.4
	comp=E,11nm,0.3s,baz=171,slow=8.3,SNR=169						
CMIG				Sn	Sn	10 24 33.1	-1.6
	comp=E,36nm,0.3s,baz=156,slow=18,SNR=15						
	comp=E,24nm,0.3s						
FG16	Alotenango, Sa	3.20	100	*i* P	Pn	10 24 08.5	-6.9
VHSA	Villahermosa	3.23	14	*i* S	Sb	10 24 59.5	-3.2
TUIG	Tuzandepetl	3.24	349	*e*P	Pn	10 24 15.1	-0.7
TUIG				*i* S	Sn	10 24 51.9	-1.4
PEIG	Puerto Escondi	3.46	290	*e*P	Pn	10 24 15.8	-3.1
PEIG				*e*S	Sn	10 24 58.6	-0.3
VHO	Vista Hermosa	3.62	308	*e*P	Pn	10 24 21.2	0.0
VHO				*e*S	Sn	10 25 00.5	-2.5
FAME	Alcaldia de Sa	3.76	105	S	Sn	10 25 04.3	-1.8
FAME	Alcaldia de Sa	3.76	105	P	Pn	10 24 22.9	-0.1
NUBE	Las Nubes	3.97	103	*e*P	Pn	10 24 24.6	-1.3
NUBE	Las Nubes	3.97	103	P	Pn	10 24 25.5	-0.4
CEVE	Cerro Verde	4.13	104	P	Pn	10 24 31.2	+2.9
CEVE	Cerro Verde	4.13	104	S	Sn	10 25 17.6	+1.9
YOIG	Yosondua	4.16	299	*e*P	Pn	10 24 29.0	+0.3
YOIG				*i* S	Sn	10 25 18.2	+1.9
PETF	Flores	4.28	61	Pn	Pn	10 24 30.9	+0.8
PETF	Flores	4.28	61	*e*P	Pn	10 24 30.5	+0.5
PETF				*i* S	Sn	10 25 19.2	+0.3
PETF	Flores	4.28	61	*e*P	Pn	10 24 30.6	+0.6
PETF				IAML		10 25 27.5	
	comp=E,2µm,0.7s						
ESQI	Esquipulas	4.29	93		Pn	10 24 31.5	+1.2
JAYA	Jayaque - finc	4.34	105	P	Pn	10 24 30.3	-0.8
PMON	Piamonte	4.45	104	P	Pn	10 24 32.3	-0.2
PMON	Piamonte	4.45	104	S	Sn	10 25 26.6	+3.3
PNIG	Pinotepa	4.48	291	*e*P	Pn	10 24 30.8	-2.1
PNIG				*i* S	Sn	10 25 19.5	-4.4
TOIG	Toxpalan	4.53	316	*e*P	Pn	10 24 35.2	+1.5
TOIG				*i* S	Sn	10 25 24.1	-1.2
TXIG	Tlaxiaco	4.54	302	*e*P	Pn	10 24 34.2	+0.3
TXIG				*i* S	Sn	10 25 26.0	+0.2
HLIG	Huajuapan de L	4.89	308	*e*P	Pn	10 24 37.4	-1.3
HLIG				*i* S	Sn	10 25 31.7	-2.6
TPIG	Tehuac#an	4.96	316	*e*P	Pn	10 24 39.1	-0.5
TPIG				*e*S	Sn	10 25 39.2	+3.3
FTIG	Fresnillo de T	5.19	307	*e*P	Pn	10 24 43.9	+1.2
FTIG				*i* S	Sn	10 25 35.5	-6.0
MGIG	Malinaltepec	5.26	298	*e*P	Pn	10 24 44.1	+0.4
MGIG				*e*S	Sn	10 25 46.6	+3.3
TLIG	Tlapa	5.35	301	Pn	Pn	10 24 46.6	+1.6
TLIG	Tlapa	5.35	301	*e*P	Pn	10 24 43.8	-1.2
TLIG				*i* S	Sn	10 25 46.1	+0.5
JAUV	Jalcomulco	5.36	328	*e*P	Pn	10 24 42.2	-2.8
JAUV				*e*S	Sn	10 25 42.4	-3.2
LVIG	Laguna Verde	5.48	333	*e*P	Pn	10 24 46.9	+0.3
LVIG				*e*S	Sn	10 25 46.8	-1.7
CRIG	Cruz Grande	5.50	291	*e*P	Pn	10 24 44.4	-2.5
CRIG				*e*S	Sn	10 25 43.4	-5.7
DAIG	Los Arroyos	6.07	292	*e*P	Pn	10 24 54.6	0.0
DAIG				*i* S	Sn	10 26 04.4	+1.4
PBCV	Popocatepetl	6.17	313	*e*P	Pn	10 24 57.4	+1.0
PBCV				*i* S	Sn	10 26 07.8	+1.8
PBXN	Popocatepetl	6.26	312	*e*P	Pn	10 24 50.0	-7.7
PBXN				*i* S	Sn	10 26 09.2	+0.8
PPM	Popocatepetl	6.27	313	*e*P	Pn	10 24 59.6	+1.6
PPM				*i* S	Sn	10 26 10.5	+1.7
TGUH	Tegucigalpa,Un	6.33	96	Pn	Pn	10 24 58.7	+0.3
MEIG	Mezcala	6.41	299	*e*P	Pn	10 25 00.6	+1.2
MEIG				*e*S	Sn	10 26 16.7	+5.2
CXUV	Coxquihui	6.44	326	*e*P	Pn	10 25 00.3	+0.5
CXUV				*i* S	Sn	10 26 09.0	-3.2
YAIG	Yautepec	6.47	309	*e*P	Pn	10 25 02.0	+1.7
YAIG				*i* S	Sn	10 26 10.6	-2.4
PLIG	Platanillo	6.54	303	*e*P	Pn	10 25 01.3	0.0
PLIG				*i* S	Sn	10 26 17.0	+2.2
CAIG	El Cayaco	6.63	290	*e*P	Pn	10 25 01.7	-0.7
MAVM	Malinalco, Edo	6.85	308	*e*P	Pn	10 25 07.4	+1.8
MAVM				*e*S	Sn	10 26 17.1	-5.4
AOVM	Tlapan	6.91	310	*e*P	Pn	10 25 06.0	-0.6
AOVM				*e*S	Sn	10 26 23.1	-1.2
ARIG	Puente Sto Nin	7.18	299	*e*P	Pn	10 25 11.3	+1.3
ARIG				*e*S	Sn	10 26 33.9	+3.3
MYIG	Merida	7.19	32	*e*P	Pn	10 25 11.4	+1.4
MYIG				*i* S	Sn	10 26 24.9	-5.7
CNGN	Cerro Negro	7.25	108		Pn	10 25 11.7	+0.8
TEIG	Tepich	7.49	44		Pn	10 25 13.7	-0.4
TEIG	Tepich	7.49	44	*e*P	Pn	10 25 12.7	-1.5
TEIG				*e*S	Sn	10 26 29.8	-8.2
ZIIG	Zihuatanejo	7.90	291	*e*P	Pn	10 25 19.7	-0.1
BOAB	BOACO BROADBAN	8.22	106	Pn	Pn	10 25 24.9	+0.7
JTS	Las Juntas de	9.71	117	Pn	Pn	10 25 46.7	+2.0
JTS	Las Juntas de	9.71	117	Pn	Pn	10 25 46.3	+1.6
	comp=E,0.9nm,0.3s,baz=235,slow=12,SNR=5.0						
JTS				Sn	Sn	10 27 36.7	+3.9
	comp=E,0.1nm,0.3s,baz=3.3,slow=22,SNR=0.6						
	comp=E,5.1nm,0.6s						
LCR2	La Lucha 2	10.79	117		Pn	10 26 01.5	+1.8
SOR	Soroa	12.89	51	Pn	Pn	10 26 28.7	+0.6
CAMR	Camarioca	14.28	53	Pn	Pn	10 26 45.6	-1.7
833A	Chaparral WMA,	14.40	340		Pn	10 26 51.1	+2.3
HNDO	Hondo	15.48	342	P	P	10 27 06.8	-0.6
HNDO				IAmb	IAmb	10 27 27.3	
	comp=Z,8.6nm,0.8s						
DRIO	Del Rio	15.84	338	Pn	P	10 27 09.9	-1.3
JCT	Junction City	16.53	341	Pn	Pn	10 27 17.8	+1.2
BRDY	Brady	17.06	345		P	10 27 26.7	+1.9
TXAR	Lajitas Array	17.08	329		P	10 27 27.0	+1.8
TXAR	Lajitas Array	17.08	329	Pn	P	10 27 24.5	-0.6
	comp=Z,0.1nm,0.3s,baz=148,slow=14,SNR=8.7						
	comp=Z,1.3nm,0.8s						
TX31	Lajitas Ar. Si	17.09	329		P	10 27 27.5	+2.3
OZNA	Ozona	17.38	338		P	10 27 29.9	+1.5

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OZNA                                  IAmb  IAmb      10 27 32.8
        comp=Z,12nm,1.0s
VBMS  Vicksburg          17.55   9          P         10 27 30.0  -0.2
VBMS                                  IAmb  IAmb      10 27 34.0
        comp=Z,13nm,0.8s
143A  Socs Landing,      17.91   6    P     P         10 27 34.6 +0.4
ALPN  Alpine             17.93 331          P         10 27 35.8 +1.2
146A  Union              18.23  13          P         10 27 37.5  -0.2
146A                                  IAmb  IAmb      10 28 05.0
        comp=Z,15nm,0.8s
SGCY  Sterling City      18.28 340          Pn        10 27 40.4 +2.0
SGCY                                  IAmb  IAmb      10 27 44.5
        comp=Z,11nm,0.9s
Z41A  Richland Creek     18.36   3    P     P         10 27 39.2 +0.1
Z38A  Mt. Pleasant       18.37 357    P     P         10 27 39.4 +0.1
Z38A                                  IAmb  IAmb      10 27 48.6
        comp=Z,18nm,1.1s
MNHN  Monahans           18.38 335    P     Pn        10 27 40.6 +1.0
MNHN                                  IAmb  IAmb      10 27 48.2
        comp=Z,10nm,0.8s
FW06  Azle               18.38 350    P     P         10 27 38.9  -0.4
FW06                                  IAmb  IAmb      10 28 07.9
        comp=Z,23nm,1.4s
ABTX  Abilene, Hawle     18.50 344    P     Pn        10 27 42.7 +1.7
Z35A  Perchaven, San     18.68 351    P     Pn        10 27 43.8 +0.6
Z35A                                  IAmb  IAmb      10 28 12.7
        comp=Z,11nm,0.7s
WLAR  White Oak Lake     18.78   2    P     Pn        10 27 44.3   0.0
WLAR                                  IAmb  IAmb      10 28 02.4
        comp=Z,23nm,1.2s
PECS  Pecos              18.88 332    P     Pn        10 27 46.6 +0.9
VHRN  Van Horn           18.93 329          Pn        10 27 47.4 +1.1
TIGA  Tifton             18.97  28    P     P         10 27 46.3 +0.5
ODSA  Odessa             18.98 337    P     Pn        10 27 47.0 +0.1
ODSA                                  IAmb  IAmb      10 27 52.0
        comp=Z,11nm,0.8s
Z47A  Carrollton         19.00  15    P     P         10 27 46.2 +0.1
Z47A                                  IAmb  IAmb      10 28 13.8
        comp=Z,11nm,0.8s
LRAL  Lakeview Retre     19.13  18          P         10 27 47.1  -0.5
LRAL                                  IAmb  IAmb      10 27 52.1
        comp=Z,9.1nm,1.0s
WTFS  Witchita Falls     19.32 348    P     Pn        10 27 51.5 +0.7
WTFS                                  IAmb  IAmb      10 28 20.6
        comp=Z,7.7nm,0.6s
Y45A  Yeager Farm, C     19.33  11    P     P         10 27 49.4  -0.3
152A  Waverly Hall       19.57  23    P     P         10 27 52.8 +0.5
152A                                  IAmb  IAmb      10 28 15.0
        comp=Z,15nm,1.5s
X40A  Basin Creek Fa     19.58   2    P     Pn        10 27 53.7  -0.3
MIAR  Mount Ida          19.62   0          P         10 27 53.2 +0.3
MIAR                                  IAmb  IAmb      10 27 58.2
        comp=Z,11nm,1.0s
CLNB  Carlsbad           19.65 334    P     Pn        10 27 55.3 +0.4
HTMS  Hat Mesa           19.73 335    P     Pn        10 27 56.8 +1.0
MNTX  Cornudas Mount     19.86 330          Pn        10 27 58.3 +0.9
MNTX  Cornudas Mount     19.86 330   eP     P         10 27 54.8  -0.8
UALR  University of      19.89   3    P     P         10 27 56.1 +0.2
UALR                                  IAmb  IAmb      10 28 01.2
        comp=Z,9.0nm,0.7s
OXF   Oxford             19.98  11    P     P         10 27 56.9 +0.1
WMOK  Wichita Mounta     20.32 348    P     Pn        10 28 02.1  -0.7
WHAR  Wooly Hollow       20.41   3    P     P         10 28 02.2 +0.7
WHAR                                  IAmb  IAmb      10 28 08.9
        comp=Z,11nm,0.9s
X48A  Hartselle          20.45  16          P         10 28 02.9 +1.0
MSTX  Muleshoe           20.72 338          P         10 28 05.8 +0.8
MSTX                                  IAmb  IAmb      10 28 12.9
        comp=Z,9.2nm,0.8s
Y52A  Lilburn            20.88  23    P     P         10 28 06.9 +0.3
Y52A                                  IAmb  IAmb      10 28 35.4
        comp=Z,9.2nm,0.8s
FPAL  Fort Paine         20.95  19    P     P         10 28 08.0 +0.6
SMWD  Samnorwood         21.01 345          P         10 28 09.0 +0.9
FCAR  Ozark Folk Cen     21.02   4    P     P         10 28 08.6 +0.6
DEOK  Depew              21.06 354    P     P         10 28 08.9 +0.4
TUL3  Leonard            21.06 355    P     P         10 28 08.2  -0.3
OK029 Liberty Lake       21.13 352    P     P         10 28 09.7 +0.3
OK052 Battle Ridge R     21.24 353    P     P         10 28 12.1 +1.6
OK052                                 IAmb  IAmb      10 28 29.7
        comp=Z,12nm,1.1s
LCAR  Lake Charles       21.27   6    P     P         10 28 12.0 +1.2
LCAR                                  IAmb  IAmb      10 28 18.1
        comp=Z,8.6nm,1.1s
HHAR  Hobbs              21.36 360    P     P         10 28 12.3 +0.6
HHAR                                  IAmb  IAmb      10 28 19.8
        comp=Z,8.3nm,1.1s
U38A  Gravette           21.52 359    P     P         10 28 14.8 +1.3
U38A                                  IAmb  IAmb      10 28 42.6
        comp=Z,4.9nm,0.8s
ROSC  El Rosal           21.55 115    P     P         10 28 14.4  -0.1
        comp=Z,5.3nm,0.4s,baz=302,slow=13,SNR=3.8
        comp=Z,5.3nm,0.4s
W50A  Signal Mountai     21.65  19    P     P         10 28 15.5 +0.5
W50A                                  IAmb  IAmb      10 28 23.9
        comp=Z,8.8nm,1.1s
V48A  Smith Brothers     21.73  15    P     P         10 28 15.3  -0.3
V48A                                  IAmb  IAmb      10 28 35.8
        comp=Z,11nm,1.1s
WVT   Waverly            21.86  13    P     P         10 28 18.5 +1.4
WVT                                   IAmb  IAmb      10 28 37.5
        comp=Z,8.4nm,1.1s
HODGE Hodges             21.93  26    P     P         10 28 18.9 +1.1
HODGE                                 IAmb  IAmb      10 28 20.7
        comp=Z,6.0nm,0.7s
PBMO  Poplar Bluff       22.05   7    P     P         10 28 21.2 +2.0
T35A  Sooner Cattle      22.12 354    P     P         10 28 23.4 +3.4
CLTN  Cedars of Leba     22.18  16    P     P         10 28 20.8 +0.2
T42A  Van Buren          22.23   6          P         10 28 23.2 +2.1
T42A                                  IAmb  IAmb      10 28 50.4
        comp=Z,6.3nm,1.1s
MGMO  Mountain Grove     22.27   3    P     P         10 28 21.4  -0.1
MGMO                                  IAmb  IAmb      10 28 31.1
        comp=Z,11nm,1.1s
CRNM  Carthage           22.36 331    P     P         10 28 27.2 +4.5
JSC   Jenkinsville       22.41  28    P     P         10 28 22.8  -0.2
JSC                                   IAmb  IAmb      10 29 02.6
        comp=Z,5.7nm,0.9s
BNM   Barren Site        22.47 331    P     P         10 28 26.4 +2.4
CGM3  Cape Girardeau     22.66   9    P     P         10 28 26.6 +0.9
CGM3                                  IAmb  IAmb      10 28 34.1
        comp=Z,11nm,1.1s
U49A  Red Boiling Sp     22.73  17    P     P         10 28 27.2 +0.8
T47A  Sharon Grove       22.84  14    P     P         10 28 28.6 +1.0
T47A                                  IAmb  IAmb      10 28 51.5
        comp=Z,7.5nm,0.9s
V53A  Saluda             22.95  23    P     P         10 28 31.0 +2.2
V53A                                  IAmb  IAmb      10 28 48.0
        comp=Z,9.3nm,1.2s
RTBA  Rita Blanca        22.96 341    P     P         10 28 31.2 +2.2
ANMO  Albuquerque        23.05 333    P     P         10 28 30.2 +0.2
ANMO  Albuquerque        23.05 333    P     P         10 28 30.2 +0.2
ANMO  Albuquerque        23.05 333   eP     P         10 28 34.8 +4.7
S44A  Carbondale         23.11   9    P     P         10 28 32.6 +2.3
SIUC  Southern Illin     23.14   9    P     P         10 28 31.2 +0.6
TUC   Tucson             23.31 321    P     P         10 28 34.5 +2.0
T25A  Trinidad           24.15 339          P         10 28 42.9 +2.3
T25A                                  IAmb  IAmb      10 28 52.3
        comp=Z,6.5nm,1.0s
BLO   Bloomington        25.06  13    P     P         10 28 49.5 +1.0
SDCO  Great Sand Dun     25.08 338    P     P         10 28 50.7 +1.6
KSCO  Kaye Shedlock'     25.32 344    P     P         10 28 53.1 +2.1
KSCO                                  IAmb  IAmb      10 28 55.9
        comp=Z,6.8nm,1.0s
Q51A  Peebles            25.78  19    P     P         10 28 57.0 +1.8
Q51A                                  IAmb  IAmb      10 29 24.5
        comp=Z,5.4nm,0.7s
MVCO  Mesa Verde         25.85 332          P         10 28 58.8 +2.7
PV03  Paradox Valley     26.87 333    P     P         10 29 08.4 +3.2
PV12  Saucer Basin,      26.90 333    P     P         10 29 07.5 +1.9
PDAR  Pinedale Array     30.97 337    P     P         10 29 41.0  -0.6
        comp=Z,0.2nm,0.6s,baz=184,slow=6.6,SNR=1.8
        comp=Z,0.2nm,0.6s
NVAR  Mina Array Bea     31.96 322    P     P         10 29 49.4  -1.0
        comp=Z,1.6nm,1.0s,baz=138,slow=8.0,SNR=7.7
        comp=Z,1.6nm,1.0s
SNOW  Snow King Moun     32.02 336    P     P         10 29 52.7 +1.7
RYN   Ryan               32.22 322    P     P         10 29 54.5 +1.8
RYN                                   IAmb  IAmb      10 30 00.1
        comp=Z,3.8nm,1.2s
SADO  Sadowa             32.31  20    LR    LR        10 43 57.1
        comp=Z,1μm,21.4s,baz=32,slow=38
J08A  Circle Bar Ran     35.43 328    P     P         10 30 21.8 +1.4
J08A                                  IAmb  IAmb      10 30 49.0
        comp=Z,1.7nm,0.8s
YKA   Yellowknife Ar     49.83 348    P     P         10 32 16.6  -0.2
YKA   Yellowknife Ar     49.83 348    P     P         10 32 15.6  -1.2
        comp=Z,1.5nm,0.9s,baz=152,slow=7.0,SNR=16
        comp=Z,1.5nm,0.9s
ILAR  Eielson Array      61.40 337    P     P         10 33 38.7  -1.1
        comp=Z,0.7nm,0.9s,baz=133,slow=5.9,SNR=8.2
        comp=Z,0.7nm,0.9s
WRA   Warramunga Arr    133.94 257    PKP   PKPdf     10 42 39.2  -2.7
        comp=Z,0.4nm,0.7s,baz=80,slow=1.7,SNR=5.5
CMAR  Chiang Mai Arr    144.63 339    PKP   PKPab     10 42 57.7  -2.2
        comp=Z,0.4nm,0.5s,baz=340,slow=3.9,SNR=4.8
```

IDC 25 10:25:11.1±1.3, 1°.62S×138°.09E, h0km, mb3.5/3, mbtmp3.3/5, ML3.0/2, Error ellipse: s-maj=34.6km s-min=23.8km az=52.0, Near north coast of Irian Jaya

```
Code  Station Name        Δ°  AZ°    Phase ID           Time      Res
                                     Op    ISC        h  m  s     ISC
JAY   Jayapura            2.76 109   Pn    Pn         10 25 56.4  -0.2
        2.4nm,0.3s,baz=243,slow=11,SNR=5.6
JAY                                  Sn    Sn         10 26 31.2 +0.5
        1.2nm,0.3s,baz=96,slow=21,SNR=1.6
        3.9nm,0.3s
WRA   Warramunga Arr     18.58 191   P     P          10 29 28.9  -1.0
        0.1nm,0.3s,baz=12,slow=11,SNR=4.6
        0.3nm,0.8s
ASAR  Alice Springs      22.29 190   P     P          10 30 10.6 +0.4
        0.2nm,0.4s,baz=14,slow=12,SNR=4.2
        0.2nm,0.4s
MKAR  Makanchi Array     68.55 322   P     P          10 36 14.1  -1.7
        0.5nm,0.5s,baz=110,slow=8.0,SNR=2.2
        0.5nm,0.5s
KURBB Kurchatov Arra     72.49 325   P     P          10 36 41.4 +1.7
        0.3nm,0.5s,baz=129,slow=6.2,SNR=4.1
        0.3nm,0.5s
```

IDC ***25*** *10:26:12.2±7.4, 3°.16N×128°.31E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=146.3km s-min=115.3km az=81.0*

DJA ***25*** *10:26:19.2±0.5, 3°N±4°×12°8E±°, h10km, M4.0/7, mb4.4/1, MLv3.7/7*

ISC 25 10:26:14.6±2.9, 3°.1N±0°.2×128°.0E±0°.2, h10km, n6, σ1s.42/6, mb3.6/3, North of Halmahera

```
Code  Station Name        Δ°  AZ°    Phase ID           Time      Res
                                     Op    ISC        h  m  s     ISC
TNTI  Ternate             2.36 197   P     Pn         10 26 55.2 +1.8
SGSI  Sangihe             2.58 284   P     Pn         10 26 57.5 +1.0
SGSI                                 S     Sn         10 27 27.2  -0.8
SANI  Sanana              5.46 202   P     Pn         10 27 35.7  -0.5
WRA   Warramunga Arr     23.67 165   P     P          10 31 25.6  -1.0
        1.0nm,0.6s,baz=346,slow=11,SNR=17
        1.0nm,0.6s
ASAR  Alice Springs      27.16 168   P     P          10 31 58.1  -0.3
        0.2nm,0.4s,baz=351,slow=10,SNR=4.3
        0.2nm,0.4s
STKA  Stephens Creek     37.05 161   P     P          10 33 24.2  -0.7
        0.6nm,0.3s,baz=342,slow=8.0,SNR=2.9
        0.6nm,0.3s
```

CATAC ***25*** *10:28:28.9±1.9, 13°N±8°×9°0W±°, h21km±16km, M3.1/7, MLv3.1/7, Error ellipse: s-maj=18.1km s-min=13.9km az=22.5, confirmed*

GCG ***25*** *10:28:29.1±1.3, 13°.31N×90°.18W, h26km±11km, MD3.7, ML3.2*

SNET ***25*** *10:28:30.0±1.1, 13°.25N×90°.01W, h26km±11km, ML3.0*

ISC 25 10:28:29.6±2.2, 13°.21N±0°.10×90°.02W±0°.05, h24km±14km, n31, σ1s.01/36, Near coast of Guatemala

```
Code  Station Name        Δ°  AZ°    Phase ID           Time      Res
                                     Op    ISC        h  m  s     ISC
JAYA  Jayaque - finc      0.71  51  eP     Pb         10 28 43.2  -0.3
JAYA                                 IAML             10 29 00.4
        comp=Z,502nm,0.2s
JAYA  Jayaque - finc      0.71  51  eP     Pb         10 28 43.2  -0.3
JAYA                                iS     Sb         10 28 54.1 +1.2
JAYA  Jayaque - finc      0.71  51   P     Pb         10 28 43.2  -0.3
CEVE  Cerro Verde         0.73  32  eP     Pb         10 28 43.5  -0.3
CEVE                                 IAML             10 28 57.3
        comp=Z,1μm,0.4s
CEVE  Cerro Verde         0.73  32   P     Pb         10 28 43.7  -0.1
CEVE  Cerro Verde         0.73  32   S     Sn         10 28 55.9 +0.7
NUBE  Las Nubes           0.73  19  eP     Pb         10 28 43.1  -0.7
NUBE                                eS     Sb         10 28 53.6 +0.3
NUBE  Las Nubes           0.73  19  eP     Pb         10 28 43.1  -0.7
NUBE                                iS     Sb         10 28 54.0 +0.6
NUBE  Las Nubes           0.73  19   P     Pb         10 28 42.6  -1.2
SBLS  San Blas            0.74  32  eP     Pb         10 28 43.6  -0.3
SBLS                                eS     Sb         10 28 53.9 +0.2
SNJE  San Jose            0.77  32  eP     Pb         10 28 44.0  -0.6
RTR   El Retiro           0.78  28  eP     Pb         10 28 44.3  -0.3
LOAL  Lomas de Alarc      0.82  17   P     Pb         10 28 45.1  -0.1
LOAL  Lomas de Alarc      0.82  17   S     Sn         10 28 57.2   0.0
SLOZ  Alcaldia de Sa      0.84  16  eP     Pb         10 28 45.2  -0.4
PMON  Piamonte            0.85  54   P     Pn         10 28 47.0 +0.7
PMON  Piamonte            0.85  54   S     Sn         10 28 58.6 +0.5
BOQS  Boqueron            0.89  54  eP     Pb         10 28 46.4  -0.1
UNIC  Universidad Ca      0.90  31   S     Sn         10 28 58.9  -0.2
UNIC  Universidad Ca      0.90  31   P     Pb         10 28 46.0  -0.6
PANCS Alcalda de          0.91  64   P     Sn         10 28 58.3  -1.2
UEES  Universidad Ev      0.91  56   P     Pn         10 28 47.1   0.0
LOMA  Loma Larga          0.93  62   P     Pb         10 28 46.9  -0.3
FG16  Alotenango, Sa      1.16 336  eP     Pb         10 28 52.3 +1.2
FG16                                eS     Sn         10 29 09.2 +3.3
PAVA  Las Pavas           1.17  64   P     Pb         10 28 51.3 +0.1
COEG  Centro de Oper      1.18  70  eP     Pn         10 28 50.7  -0.1
COEG                                 IAML             10 29 10.6
        comp=Z,239nm,0.3s
COEG  Centro de Oper      1.18  70   P     Pn         10 28 50.3  -0.5
ESSG  Sabana Grande       1.41 326  eP     Pn         10 28 50.6  -3.3
PQSS  Presa 15 de Se      1.48  74  eP     Pn         10 28 54.4  -0.4
PQSS  Presa 15 de Se      1.48  74   P     Pn         10 28 54.5  -0.3
STG0  El Palmar, Qui      1.76 313  iP     Pb         10 29 02.0 +0.6
STG0                                 IAML             10 29 29.9
        comp=E,278nm,0.2s
```

TAP 25 10:30:41.3, 24°.29N×121°.67E, h15km, ML1.3, 1D, C, Taiwan

```
Code  Station Name        Δ°  AZ°    Phase ID           Time      Res
                                     Op    ISC        h  m  s     ISC
EAHA  Aohua               0.07  57   P     Pg         10 30 44.1  -0.3
EAHA                                 S     Sg         10 30 46.2  -0.1
NACB  Ninganchiao         0.14 212  ⇓P     Pg         10 30 44.8  -0.2
NACB                                iS     Sg         10 30 47.7 +0.2
ETL   Fush Village        0.14 199  iP     Pg         10 30 45.1  -0.1
ETL                                  S     Sg         10 30 47.9 +0.3
ENA   Nanau               0.15  24   P     Pg         10 30 44.8  -0.4
ENA                                 iS     Sg         10 30 48.0 +0.1
EWUT  Wuta                0.18  32  iP     Pg         10 30 45.7   0.0
EWUT                                eS     Sg         10 30 48.5  -0.1
ETLH  Xiulin Townshi      0.19 245   P     Pg         10 30 45.6  -0.4
ETLH                                eS     Sg         10 30 48.4  -0.6
TWD   Chiawan             0.22 199  iP     Pg         10 30 46.2  -0.1
TWD                                  S     Sg         10 30 50.1 +0.4
LATG  Datong              0.28 331   P     Pg         10 30 46.9  -0.4
LATG                                iS     Sg         10 30 51.5 +0.1
NNSB  Datong              0.30 298  iP     Pg         10 30 47.5  -0.2
NNSB                                 S     Sg         10 30 51.8  -0.2
NNS   Nan Shan            0.31 299   P     Pg         10 30 47.8  -0.1
NNS                                  S     Sg         10 30 52.3  -0.1
TWC   Suao                0.36  27  eP     Pg         10 30 48.9 +0.3
TWC                                 iS     Sg         10 30 53.9 +0.2
LXIB  Xiulin Townshi      0.36 222  eP     Pg         10 30 48.0  -0.7
LXIB                                 S     Sg         10 30 53.7  -0.1
ENTT  Nioudou             0.36 344  eP     Pg         10 30 48.8 +0.1
ENTT                                iS     Sg         10 30 53.8   0.0
WHF   Hehuan Shan         0.40 249  eP     Pg         10 30 49.4  -0.1
WHF                                  S     Sg         10 30 54.7  -0.5
YHNB  Yeheng              0.47 324  iP     Pg         10 30 50.5  -0.1
YHNB                                iS     Sg         10 30 57.1 +0.1
FUSB  Fushanzhiwuyua      0.47 351  iP     Pg         10 30 50.5  -0.3
FUSB                                 S     Sg         10 30 57.5 +0.3
NSK   Sanguang            0.48 323   P     Pg         10 30 50.2  -0.7
NSK                                  S     Sg         10 30 57.5 +0.1
OWD   Renai               0.56 234   P     Pg         10 30 51.8  -0.7
OWD                                 eS     Sg         10 30 59.3  -0.8
WUSB  Renai               0.59 240   P     Pg         10 30 52.6  -0.3
WUSB                                 S     Sg         10 31 00.9 +0.1
```

IDC ***25*** *10:31:13.2±1.3, 61°.24S×19°.92W, h0km, mb4.2/4, mbtmp4.4/5, ML4.7/1, Error ellipse: s-maj=49.7km s-min=25.5km az=65.0*

ISC 25 10:31:17.9±1.7, 61°.4S±0°.1×18°.3W±0°.4, h10km, n18, σ1s.70/10, mb4.0/3, 5C, East of South Sandwich Islands

```
Code  Station Name        Δ°  AZ°    Phase ID           Time      Res
                                     Op    ISC        h  m  s     ISC
VNA1  Neumayer--Stat     10.16 161  ⇑P     Pn         10 33 45.4 +1.8
        comp=Z,16nm,0.3s
VNA3  Neumayer Olymp     10.50 165  ⇑P     Pn         10 33 49.3 +1.1
        comp=Z,33nm,0.3s
VNA2  Neumayer--Watz     10.55 160  ⇑P     Pn         10 33 50.0 +1.1
        comp=Z,8.9nm,0.4s,baz=326,slow=14
SNAA  Sanae              11.99 156  ⇑P     Pn         10 34 10.1 +1.5
        comp=Z,170nm,0.5s
SNAA  Sanae              11.99 156   Pn    Pn         10 34 10.2 +1.5
        comp=Z,4.0nm,0.3s,baz=320,slow=14,SNR=220
SNAA                                 Sn    Sn         10 36 19.6  -2.6
        comp=Z,0.5nm,0.3s,baz=331,slow=15,SNR=3.2
        comp=Z,15nm,0.4s
TROLL Troll, Antarti     13.38 152  ⇑P     Pn         10 34 28.4 +0.7
        comp=Z,277nm,0.3s
QSPA  South Pole Qui     28.88 180   P     P          10 37 15.7  -0.7
        comp=Z,3.3nm,1.1s,baz=214,slow=4.7,SNR=6.9
        comp=Z,3.3nm,1.1s
MAW   Mawson             33.10 136   P     P          10 37 54.3 +1.0
        comp=Z,2.5nm,0.8s,baz=258,slow=8.9,SNR=4.4
        comp=Z,2.5nm,0.8s
H04S2 CROZET ISLANDS     41.46 103   T     T          11 24 51.6
        baz=224,slow=74,SNR=52
H04S3 CROZET ISLANDS     41.47 103   T     T          11 24 46.3
        baz=224,slow=74,SNR=61
H04S1 CROZET ISLANDS     41.48 103   T     T          11 24 46.3
        baz=224,slow=74,SNR=48
H10S2 ASCENSION HYDR     52.36   5   T     T          11 36 40.3
        baz=183,slow=74,SNR=45
H10S3 ASCENSION HYDR     52.37   5   T     T          11 36 40.7
        baz=37,slow=74,SNR=43
H10N1 ASCENSION HYDR     53.48   5   T     T          11 38 03.2
        baz=184
H10N3 ASCENSION HYDR     53.48   5   T     T          11 37 57.4
        baz=184
H10N2 ASCENSION HYDR     53.49   5   T     T          11 38 04.1
        baz=184
LPAZ  La Paz             57.13 299   P     P          10 40 55.9  -9.4
        comp=Z,1.0nm,0.6s,baz=135,slow=4.3,SNR=3.9
        comp=Z,1.0nm,0.6s
TORD  Torodi Ar. Bea     75.93  20   P     P          10 43 03.6  -0.9
        comp=Z,1.6nm,0.3s,baz=187,slow=7.3,SNR=1.6
        comp=Z,1.6nm,0.3s
```

JMA 25 10:31:21.2±0.2, 25°N±2°×123°.5E±0°.6, h129km±3km, MV1.9/11, NW OFF ISHIGAKIJIMA IS, Southwestern Ryukyu Islands

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Code  Station Name        Δ°  AZ°    Phase ID           Time      Res
                                     Op    ISC        h  m  s     ISC
IRIF  Iriomote-Funau      0.68 164  eP     Pn         10 31 41.1  -0.2
IRIF                                eS     Sn         10 31 57.1 +0.6
JYNG  Yonagunijimaku      0.76 225  eP     Pn         10 31 42.2 +0.3
JYNG                                eS     Sn         10 31 58.0 +0.5
JISG  Ishigakijimahi      0.82 120  eP     Pn         10 31 42.2  -0.1
JISG                                eS     Sn         10 31 58.7 +0.3
JIJ   Ishigaki jima       0.84 138  eP     Pn         10 31 42.6 +0.1
JIJ                                 eS     Sn         10 31 59.0 +0.3
JKRS  Kuro-shima          0.87 150  eP     Pn         10 31 43.2 +0.3
HATJ  Hateruma jima       0.97 165  eS     Sn         10 32 00.7   0.0
JTJ   Tarama              1.12 108  eP     Pn         10 31 45.5 +0.4
JTJ                                 eS     Sn         10 32 04.0 +0.6
JIRB  Irabujima           1.50  96  eS     Sn         10 32 11.2 +0.7
JMJ2  Miyako jima3        1.65  98  eP     Pn         10 31 51.6 +0.7
JMJ2                                eS     Sn         10 32 14.2 +0.6
```

IDC ***25*** *10:40:07.1±5.4, 15°.24S×167°.44E, h147km±41km, mb3.7/6, mbtmp4.1/7, Error ellipse: s-maj=40.5km s-min=26.8km az=36.0*

ISC 25 10:40:04.7±1.3, 15°.1S±0°.1×167°.5E±0°.3, h129km, n9, σ1s.13/10, mb4.0/6, Vanuatu Islands

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Code  Station Name        Δ°  AZ°    Phase ID           Time      Res
                                     Op    ISC        h  m  s     ISC
DZM   Mont Dzumac         7.00 188   P     Pn         10 41 46.5 +1.8
        14nm,0.3s,baz=30,slow=20,SNR=82
DZM                                  S     Sn         10 43 01.2  -1.7
        23nm,0.4s,baz=331,slow=19,SNR=9.6
STKA  Stephens Creek     28.91 230   P     P          10 45 52.6 +1.0
        2.1nm,0.3s,baz=73,slow=8.7,SNR=8.3
        2.1nm,0.3s
WRA   Warramunga Arr     31.93 257   P     P          10 46 17.7  -0.8
        0.1nm,0.5s,baz=82,slow=9.1,SNR=1.3
        0.1nm,0.5s
ASAR  Alice Springs      32.73 250   P     P          10 46 25.0  -0.4
        1.4nm,0.5s,baz=82,slow=8.8,SNR=23
        1.4nm,0.5s
QSPA  South Pole Qui     74.92 180   P     P          10 51 31.2  -0.2
        2.7nm,0.7s,baz=287,slow=0.7,SNR=24
        2.7nm,0.7s
SNAA  Sanae              93.18 183   P     P          10 53 03.1  -1.0
        0.9nm,0.6s,baz=198,slow=7.6,SNR=9.2
        0.9nm,0.6s
MKAR  Makanchi Array     97.62 316   P     P          10 53 24.6   0.0
        0.2nm,0.4s,baz=98,slow=5.2,SNR=2.9
        0.2nm,0.4s
ARCES ARCESS Array B    120.67 345   PKP   PKPdf      10 58 41.1 +0.4
        2.7nm,0.9s,baz=96,slow=2.4,SNR=6.3
FINES FINESS Array B    126.15 338   PKP   PKPdf      10 58 51.1  -0.3
        0.7nm,0.6s,baz=38,slow=7.2,SNR=1.8
```

KRSC ***25*** *10:48:37.9±1.6, 56°.15N×164°.39E, h48km±20km, Ml4.1*

IDC ***25*** *10:48:37.0±1.2, 56°.25N×164°.25E, h0km, mb3.4/7, mbtmp3.4/8, ML2.5/1, Error ellipse: s-maj=44.3km s-min=19.7km az=164.0*

ISC 25 10:48:36.6±1.6, 56°.19N±0°.05×164°.41E±0°.04, h0km±10km, n47, σ1s.38/65, mb3.5/7, Komandorsky Islands region

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Code  Station Name        Δ°  AZ°    Phase ID           Time      Res
                                     Op    ISC        h  m  s     ISC
KBTR  Krutoberegovo       0.89 272  eP     Pg         10 48 53.5  -0.1
KBTR                                eS     Sg         10 49 04.8  -0.3
KBG   Krutoberegovo       0.95 275  eP     Pg         10 48 54.5  -0.3
KBG                                 eS     Sg         10 49 07.1  -0.1
BKI   Bering              1.32 137  eP     Pn         10 49 01.8  -0.5
BKI                                 eS     Sg         10 49 18.6  -0.4
SMKR  Semkarok            1.68 285  eP     Pn         10 49 06.7  -0.7
SMKR                                eS     Sn         10 49 27.1  -2.5
BDR   Baidarnaya          1.82 283  eP     Pn         10 49 09.5 +0.3
BDR                                 eS     Sn         10 49 32.0  -1.0
SRKR  Sorokina            1.86 286  eP     Pn         10 49 08.5  -1.2
SRKR                                eS     Sn         10 49 32.6  -1.3
ZLN   Zelenaya            2.03 267  eP     Pn         10 49 12.6 +0.5
ZLN                                 eS     Sn         10 49 37.4  -0.7
CIRR  Tsirk               2.05 270  eP     Pn         10 49 12.8 +0.4
LGNR  Loginova            2.08 269  eP     Pn         10 49 13.1 +0.1
LGNR                                eS     Sn         10 49 38.1  -1.7
BZGR  Bezymyannyi-Gr      2.10 265  eP     Pn         10 49 13.8 +0.8
KLY   Klyuchi             2.10 275  eP     Pn         10 49 11.6  -1.4
KLY                                 eS     Sn         10 49 36.0  -3.8
KRSR  Krestovskiy         2.15 272  eP     Pn         10 49 13.5  -0.2
KRSR                                eS     Sn         10 49 40.3  -0.8
BZWR  Bezymyannyi-We      2.21 266  eP     Pn         10 49 15.4 +0.9
BZMR  Bezymyannaya        2.21 265  eP     Pn         10 49 15.3 +0.7
MKZ   Mys Kozlova         2.24 224  eP     Pn         10 49 14.0  -0.8
MKZ                                 eS     Sn         10 49 39.0  -4.0
KIRR  Kirishev            2.29 266  eP     Pn         10 49 16.5 +0.7
KPT   Kopyto              2.36 266  eP     Pn         10 49 17.4 +0.9
KMNR  Kamenistaya         2.38 261  eP     Pn         10 49 18.7 +1.8
KMNR                                eS     Sn         10 49 48.1 +1.2
TUMD  Tumrok D            2.48 248  eP     Pn         10 49 18.4 +0.3
TUMD                                eS     Sn         10 49 47.9  -1.1
KOZ   Kozyrevsk           2.54 269  eP     Pn         10 49 20.3 +1.2
KOZ                                 eS     Sn         10 49 52.0 +1.3
SRDR  Sredinnyy           2.62 275  eP     Pn         10 49 21.2 +1.0
SRDR                                eS     Sn         10 49 51.9  -0.8
OSSR  Ossora              3.16 347  eP     Pn         10 49 26.3  -1.1
ESO   Esso                3.21 268  eP     Pn         10 49 28.4 +0.2
KII   Karymskiy           3.57 235  eP     Pn         10 49 33.7 +0.5
SPN   Mys Shipunski       4.01 221  eP     Pn         10 49 38.1  -1.0
NLC   Nalytchevo          4.21 226  eS     Sn         10 50 28.8  -3.0
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SDLR	Sedlovina	4.33	230	eP	Pn	10 49 44.3	+0.6
KRER	Koryakskii	4.37	231	eP	Pn	10 49 45.8	+1.5
SMAR	Somma	4.38	230	eP	Pn	10 49 45.1	+0.7
KRX	Arik	4.38	232	eP	Pn	10 49 45.1	+0.7
AVH	Avacha	4.40	231	eP	Pn	10 49 45.8	+1.1
UGLR	Uglovaya	4.40	230	eP	Pn	10 49 45.5	+0.8
KOK	Koryaka	4.43	231	eP	Pn	10 49 46.3	+1.3
GNL	Ganaly	4.49	239	eP	Pn	10 49 47.4	+1.6
DALK	Dalny	4.56	228	eP	Pn	10 49 47.1	+0.4
DALK				eS	Sn	10 50 37.6	-2.7
KRMR	Karymshinskiy	4.97	230	eP	Pn	10 49 54.3	+2.0
PETK	Petropavlovsk-	4.97	234	Pn	Pn	10 49 52.9	+0.5
	1.0nm,0.3s,baz=74,slow=19,SNR=13						
PETK				Sn	Sn	10 50 51.5	+1.1
	1.0nm,0.3s,baz=76,slow=24,SNR=2.1 1.4nm,0.3s						
GRL	Gorelyy	5.19	228	eP	Pn	10 49 57.4	+1.9
MTVR	Mutnovka	5.20	227	eP	Pn	10 49 57.1	+1.4
MTVR				eS	Sn	10 50 53.7	-2.7
ASAK	Asacha	5.39	228	eP	Pn	10 49 60.0	+1.8
ILAR	Eielson Array	24.87	50	P	P	10 54 01.9	+1.5
	0.5nm,0.7s,baz=273,slow=7.5,SNR=5.5 0.5nm,0.7s						
YKA	Yellowknife Ar	39.20	47	P	P	10 56 06.2	+0.5
	0.3nm,0.8s,baz=313,slow=17,SNR=4.3 0.3nm,0.8s						
KURBB	Kurchatov Arra	48.34	302	P	P	10 57 19.0	-0.4
	0.2nm,0.5s,baz=52,slow=8.6,SNR=2.4 0.2nm,0.5s						
BVAR	Borovoye Array	50.43	309	P	P	10 57 34.5	-0.8
	1.2nm,0.7s,baz=64,slow=6.6,SNR=5.0 1.2nm,0.7s						
NVAR	Mina Array Bea	52.42	75	P	P	10 57 51.1	+0.4
	0.2nm,0.6s,baz=309,slow=6.2,SNR=2.1 0.2nm,0.6s						
PDAR	Pinedale Array	53.88	65	P	P	10 58 02.3	+0.8
	0.4nm,0.7s,baz=0.0,slow=3.3,SNR=4.3 0.4nm,0.7s						
TXAR	Lajitas Array	67.19	71	P	P	10 59 33.1	+0.8
	0.3nm,0.5s,baz=317,slow=6.7,SNR=4.6 0.3nm,0.5s						

KRSC 25 10:52:14.3±2.3,56°.18N×164°.18E,h24^{km}±31^{km},Ml3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.76	273	eP	Pb	10 52 28.6	-0.3
KBG	Krutoberegovo	0.83	276	eS	Sb	10 52 40.5	-0.2
SMKR	Semkarok	1.56	286	eP	Pb	10 52 42.4	-0.2
BZGR	Bezymyannyi-Gr	1.97	265	eP	Pn	10 52 46.7	+0.5
KLY	Klyuchi	1.98	275	eP	Pn	10 52 47.0	+0.8
KLY				eS	Sn	10 53 09.6	-0.5
BZWR	Bezymyannyi-We	2.08	266	eP	Pb	10 52 50.1	-1.3
BZMR	Bezymyannaya	2.08	265	eP	Pb	10 52 49.8	-1.7
MKZ	Mys Kozlova	2.14	222	eP	Pn	10 52 49.2	+0.7
KIRR	Kirishev	2.17	266	eP	Pb	10 52 51.7	-1.1
KPT	Kopyto	2.23	266	eP	Pb	10 52 52.9	-1.0
KMNR	Kamenistaya	2.26	261	eP	Pb	10 52 54.2	-0.3
TUMD	Tumrok D	2.35	247	eP	Pb	10 52 54.9	-1.1
TUMD				eS	Sb	10 53 23.0	-1.6
KOZ	Kozyrevsk	2.42	269	eP	Pb	10 52 55.5	-1.5
KOZ				eS	Sb	10 53 25.6	-0.7
SRDR	Sredinnyy	2.50	275	eP	Pb	10 52 56.6	-1.8
SRDR				eS	Sb	10 53 26.3	-2.4
OSSR	Ossora	3.14	349	eP	Pn	10 53 02.9	+0.7
SPN	Mys Shipunski	3.92	220	eS	Sn	10 53 57.3	-0.8
NLC	Nalytchevo	4.12	225	eS	Sn	10 54 06.0	+3.0
SDLR	Sedlovina	4.23	229	eP	Pn	10 53 20.8	+3.5
KRER	Koryakskii	4.26	230	eP	Pn	10 53 22.7	+4.8
KRX	Arik	4.27	231	eP	Pb	10 53 24.7	-4.0
SMAR	Somma	4.27	229	eP	Pn	10 53 22.8	+4.8
UGLR	Uglovaya	4.30	228	eP	Pn	10 53 22.8	+4.5
KOK	Koryaka	4.32	230	eP	Pn	10 53 23.8	+5.2
GRL	Gorelyy	5.09	227	eP	Pn	10 53 33.4	+4.2
MTVR	Mutnovka	5.10	226	eP	Pn	10 53 33.7	+4.4

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*CATAC **25** 10:59:24.6±0.8,13°N±5°×9°1W±°,h1^{km},M3.1/6,MLv3.1/6, Error ellipse: s-maj=12.4km s-min=6.2km az=29.1, confirmed*

*GCG **25** 10:59:25.5±1.9,13°.31N×91°.11W,h24^{km}±28^{km},MD4.3*

ISC 25 10:59:24.4±2.9,13°.3N±0°.1×91°.2W±0°.1,h10^{km},n18, σ1^s.27/19,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FG16	Alotenango, Sa	1.14	33	i P	Pb	10 59 46.6	+0.3
FAME	Alcaldia de Sa	1.23	64	S	Sb	11 00 03.2	-0.3
FAME	Alcaldia de Sa	1.23	64	P	Pn	10 59 46.7	-0.9
NUBE	Las Nubes	1.46	66	i P	Pn	10 59 50.1	-0.8
NUBE	Las Nubes	1.46	66	P	Pn	10 59 50.2	-0.7
NUBE	Las Nubes	1.46	66	S	Sg	11 00 11.4	+0.1
JAYA	Jayaque - finc	1.69	78	i P	Pn	10 59 53.4	-0.7
JAYA				eS	Sn	11 00 13.0	-3.0
JAYA	Jayaque - finc	1.69	78	P	Pn	10 59 54.1	-0.1
JAYA	Jayaque - finc	1.69	78	S	Sn	11 00 16.5	+0.5
PMON	Piamonte	1.83	77	S	Sg	11 00 25.7	+2.3
PMON	Piamonte	1.83	77	P	Pb	10 59 57.3	-0.8
PANCS	Alcalda de	1.94	81	P	Pn	10 59 57.5	-0.1
ESQI	Esquipulas	2.15	55	P	Pn	11 00 02.0	+1.6
ESQI	Esquipulas	2.15	55	S	Sg	11 00 33.3	-0.3
COEG	Centro de Oper	2.23	82	S	Sb	11 00 34.1	+1.4
COEG	Centro de Oper	2.23	82	P	Pn	11 00 02.4	+0.9
SCLA	Alcaldia de Sa	2.39	80	P	Pn	11 00 05.3	+1.6
SCLA	Alcaldia de Sa	2.39	80	S	Sb	11 00 37.0	-0.2

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*IDC **25** 11:17:53.0±1.1,56°.20N×164°.27E,h0^{km},mb3.5/8, mbtmp3.6/10,ML3.1/2,Error ellipse: s-maj=32.6km s-min=17.8km az=155.0*

*KRSC **25** 11:17:53.5±1.6,56°.24N×164°.39E,h48^{km}±20^{km},Ml4.0*

ISC 25 11:17:53.1±1.5,56°.22N±0°.04×164°.36E±0°.04,h3^{km}±10^{km}, n44,σ1^s.78/55,mb3.6/8,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.86	270	eP	Pg	11 18 09.7	0.0
KBTR				eS	Sg	11 18 20.0	-0.8
KBG	Krutoberegovo	0.93	273	eP	Pg	11 18 10.5	-0.4
KBG				eS	Sg	11 18 22.1	-0.7
BKI	Bering	1.36	137	eP	Pn	11 18 19.0	0.0
BKI				eS	Sg	11 18 36.1	-0.7
SMKR	Semkarok	1.65	284	eP	Pn	11 18 22.5	-0.5
SMKR				eS	Sn	11 18 42.5	-2.2
BDR	Baidarnaya	1.79	283	eS	Sn	11 18 47.2	-0.9
ZLN	Zelenaya	2.00	266	eP	Pn	11 18 28.5	+0.6
ZLN				eS	Sn	11 18 53.2	-0.2
CIRR	Tsirk	2.02	269	eP	Pn	11 18 28.7	+0.5
CIRR				eS	Sn	11 18 53.8	-0.3
KLY	Klyuchi	2.07	274	eP	Pn	11 18 27.4	-1.3
KLY				eS	Sn	11 18 51.4	-3.6
BZGR	Bezymyannyi-Gr	2.07	264	eP	Pn	11 18 29.3	+0.4
KRSR	Krestovskiy	2.12	272	eP	Pn	11 18 29.5	0.0
KRSR				eS	Sn	11 18 55.6	-0.7
BZWR	Bezymyannyi-We	2.18	265	eP	Pn	11 18 30.9	+0.5
BZMR	Bezymyannaya	2.19	264	eP	Pn	11 18 30.9	+0.4
BZMR				eS	Sn	11 18 57.6	-0.5
MKZ	Mys Kozlova	2.24	223	eS	Sn	11 18 55.7	-3.4
KIRR	Kirishev	2.27	265	eP	Pn	11 18 32.5	+0.9
KIRR				eS	Sn	11 18 58.8	-1.3
KPT	Kopyto	2.33	266	eP	Pn	11 18 33.5	+1.1
KPT				eS	Sn	11 19 02.3	+0.8
KMNR	Kamenistaya	2.36	260	eP	Pn	11 18 33.5	+0.7
TUMD	Tumrok D	2.46	247	eP	Pn	11 18 34.4	+0.3
KOZ	Kozyrevsk	2.52	268	eP	Pn	11 18 36.2	+1.3
KOZ				eS	Sn	11 19 07.5	+1.5
SRDR	Sredinnyy	2.59	274	eP	Pn	11 18 37.2	+1.2
SRDR				eS	Sn	11 19 08.0	0.0
OSSR	Ossora	3.12	348	eP	Pn	11 18 42.9	-0.2
OSSR				eS	Sn	11 19 16.4	-4.5
ESO	Esso	3.19	267	eP	Pn	11 18 45.3	+1.3
GNL	Ganaly	4.48	238	eP	Pn	11 19 03.4	+1.5
DALK	Dalny	4.56	228	eP	Pn	11 19 03.4	+0.5
DALK				eS	Sn	11 19 53.1	-3.2
PET	Petropavlovsk	4.61	228	eP	Pn	11 19 04.2	+0.7
PET				eS	Sn	11 19 54.3	-3.1
PETK	Petropavlovsk-	4.96	234	Pn	Pn	11 19 09.9	+1.5
	2.3nm,0.3s,baz=74,slow=17,SNR=46						
PETK				Sn	Sn	11 19 59.6	-6.7
	baz=77,slow=20 3.8nm,0.5s						
GRL	Gorelyy	5.19	228	eP	Pn	11 19 13.8	+2.1
MTVR	Mutnovka	5.20	227	eP	Pn	11 19 13.1	+1.3
ASAK	Asacha	5.39	227	eP	Pn	11 19 16.3	+1.9
MIPR	Malaya Ipel'ka	5.95	232	eP	Pn	11 19 24.3	+2.2
ASAJ	Asahikawa	18.37	238	P	P	11 22 09.6	+0.9
	0.2nm,0.3s,baz=22,slow=8.9,SNR=3.6 4.6nm,0.8s						
TIXI	Tiksi	21.45	330	P	P	11 22 43.2	+1.2
	2.5nm,0.7s,baz=132,slow=9.4,SNR=9.5 2.5nm,0.7s						
ILAR	Eielson Array	24.88	50	P	P	11 23 16.5	-0.1
	0.5nm,0.9s,baz=251,slow=5.3,SNR=4.8 0.5nm,0.9s						
MJAR	Matsushiro Arr	26.42	233	P	P	11 23 29.4	-1.4
	1.2nm,0.7s,baz=348,slow=15,SNR=4.2 1.2nm,0.7s						
H11N2	WAKE ISLAND Hy	36.48	176	T	T	12 03 48.3	
	baz=357,slow=76,SNR=53						
H11N3	WAKE ISLAND Hy	36.49	176	T	T	12 03 54.0	
	baz=357,slow=76,SNR=35						
H11N1	WAKE ISLAND Hy	36.49	176	T	T	12 03 59.6	
	baz=357,slow=76,SNR=38						
H11S1	WAKE ISLAND Hy	37.69	176	T	T	12 05 19.0	
	baz=4.0						
H11S3	WAKE ISLAND Hy	37.70	176	T	T	12 05 29.8	
	baz=4.0						
H11S2	WAKE ISLAND Hy	37.70	176	T	T	12 05 19.6	
	baz=4.0						
YKA	Yellowknife Ar	39.19	47	P	P	11 25 22.9	+1.1
	0.2nm,0.7s,baz=311,slow=9.4,SNR=4.3 0.2nm,0.7s						
KURBB	Kurchatov Arra	48.30	302	P	P	11 26 34.7	-0.5
	0.2nm,0.4s,baz=53,slow=7.9,SNR=1.9 0.2nm,0.4s						
BVAR	Borovoye Array	50.39	309	P	P	11 26 50.6	-0.5
	1.7nm,0.8s,baz=52,slow=9.8,SNR=4.6 1.7nm,0.8s						
PDAR	Pinedale Array	53.90	65	P	P	11 27 18.9	+1.3
	0.2nm,0.6s,baz=301,slow=6.5,SNR=2.9 0.2nm,0.6s						
TXAR	Lajitas Array	67.20	71	P	P	11 28 49.3	+0.8
	0.3nm,0.6s,baz=311,slow=4.9,SNR=4.7 0.3nm,0.6s						

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*NOU **25** 11:17:59.2,37°.71S×176°.81E,h157^{km},MLv3.5/15,North Island, New Zealand*

*WEL **25** 11:18:01.5±1.0,37°S±8°×17°7E±°,h130^{km}±9^{km},M2.8/12, ML2.9/5,MLv2.8/12,Error ellipse: s-maj=10.9km s-min=8.7km az=16.3,confirmed*

ISC 25 11:17:58.1±1.7,37°.59S±0°.05×176°.89E±0°.05,h167^{km}±9^{km}, n147,σ1^s.35/124,North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSRZ	White Island S	0.24	72	S	Sn	11 18 33.4	-4.2
OPRZ	Ohinepanea	0.37	227	P	Pn	11 18 21.1	+0.3
OPRZ				S	Sn	11 18 37.6	-0.7
MARZ	Manawahe	0.43	204	P	Pn	11 18 21.9	+0.8
MARZ				S	Sn	11 18 39.0	+0.1
TGRZ	Tauranga	0.52	255	P	Pn	11 18 21.9	+0.5
OMRZ	Omania	0.66	219	P	Pn	11 18 23.0	+0.8
KARZ	Kaharoa	0.67	230	P	Pn	11 18 23.1	+0.8
URZ	Urewera	0.69	165	P	Pn	11 18 22.8	+0.5
URZ	Urewera	0.69	165	S	Sn	11 18 40.6	-0.4
URZ	Urewera	0.69	165	P	Pn	11 18 22.9	+0.6
URZ				S	Sn	11 18 39.9	-1.1
TARZ	Mount Tarawera	0.71	205	P	Pn	11 18 23.9	+1.4
RUGZ	Raukumara Rang	0.73	121	P	Pn	11 18 22.7	-0.1
RUGZ				S	Sn	11 18 40.0	-1.6
HAZ	Te Kaha	0.73	103	P	Pn	11 18 23.0	+0.5
HAZ				S	Sn	11 18 40.9	-0.4
NGRZ	Ngongotaha	0.75	227	P	Pn	11 18 23.9	+1.1
HLRZ	Highlands Stat	0.78	213	P	Pn	11 18 24.1	+1.1
KMRZ	Kaimai	0.79	251	P	Pn	11 18 23.8	+0.8
RRRZ	Republican Roa	0.80	202	P	Pn	11 18 24.4	+1.4
RRRZ				S	Sn	11 18 42.3	-0.1
HSRZ	Hossack Road	0.88	215	P	Pn	11 18 25.1	+1.5
MUGZ	Murupara	0.89	186	P	Pn	11 18 24.6	+0.9
MUGZ				S	Sn	11 18 42.9	-0.5
MWZ	Matawai	0.90	146	P	Pn	11 18 24.5	+0.8
MWZ				S	Sn	11 18 43.1	-0.5
HRRZ	Handcock Road	0.93	211	P	Pn	11 18 25.3	+1.3
GRRZ	Galatos Road	0.97	219	P	Pn	11 18 25.7	+1.4
PKGZ	Pakihiroa	0.98	107	P	Pn	11 18 25.6	+1.3
PRRZ	Plateau Road	0.99	203	P	Pn	11 18 25.7	+1.4
PRRZ				S	Sn	11 18 45.1	+0.4
RAGZ	Rawiri	0.99	155	P	Pn	11 18 25.7	+1.2
RTZ	Ruatahuna	1.02	176	P	Pn	11 18 25.0	+0.3
TWGZ	Tauwhareparae	1.04	124	P	Pn	11 18 26.2	+1.3
ALRZ	Allen Road	1.06	204	P	Pn	11 18 26.3	+1.4
WPRZ	Whakapapatarin	1.09	212	P	Pn	11 18 26.9	+1.7
TOZ	Tahuroa Road	1.11	262	P	Pn	11 18 26.4	+1.0
MXZ	Matakaoa Point	1.13	89	P	Pn	11 18 26.5	+1.0
MXZ	Matakaoa Point	1.13	89	S	Sn	11 18 46.9	+0.4
MXZ	Matakaoa Point	1.13	89	P	Pn	11 18 26.6	+1.0
TKGZ	Te Karaka	1.13	138	P	Pn	11 18 26.6	+1.1
PUZ	Puketiti	1.18	114	P	Pn	11 18 26.7	+0.7
WMGZ	Waiomatatini S	1.23	101	P	Pn	11 18 27.6	+1.2
SNGZ	Shannon Statio	1.24	164	P	Pn	11 18 27.9	+1.4
MTHZ	Maungataniwha	1.26	182	P	Pn	11 18 27.8	+1.1
KUZ	Kuaotunu	1.26	312	P	Pn	11 18 26.7	0.0
KUZ	Kuaotunu	1.26	312	P	Pn	11 18 26.9	+0.2
MRHZ	Matea Rd	1.29	197	P	Pn	11 18 28.2	+1.1
TLZ	Tolley Road	1.30	235	P	Pn	11 18 28.5	+1.4
RIGZ	Rimuhau	1.31	149	P	Pn	11 18 28.8	+1.7
RAHZ	Arahi	1.33	173	P	Pn	11 18 28.9	+1.5
CNGZ	Carnagh Statio	1.37	131	P	Pn	11 18 29.7	+2.1
WATZ	Wairara	1.44	219	P	Pn	11 18 30.1	+1.7
MKAZ	Moumakai	1.46	289	P	Pn	11 18 29.5	+0.9
NMHZ	Naumai	1.50	182	P	Pn	11 18 30.9	+1.9
WHHZ	Waihua	1.51	170	P	Pn	11 18 31.2	+2.2
PRGZ	Paritu Road	1.54	150	P	Pn	11 18 31.0	+1.7
RATZ	Rangitukua	1.55	214	P	Pn	11 18 31.3	+1.9
KNZ	Kokohu	1.55	157	P	Pn	11 18 31.0	+1.6
BKZ	Black Stump Fm	1.60	191	P	Pn	11 18 30.6	+0.6
BKZ	Black Stump Fm	1.60	191	P	Pn	11 18 30.9	+0.8
RITZ	Rihia Road	1.60	210	P	Pn	11 18 31.8	+1.8
WIAZ	Waiheke Island	1.61	299	P	Pn	11 18 30.9	+0.8
ARHZ	Aropaoanui	1.67	177	P	Pn	11 18 32.6	+1.9
KATZ	Kakaramea	1.67	214	P	Pn	11 18 32.4	+1.6
ETAZ	East Tamaki Re	1.69	292	P	Pn	11 18 32.1	+1.2
MHGZ	Mahia Peninsul	1.75	153	P	Pn	11 18 33.6	+2.0
NTVZ	North Tongarir	1.78	212	P	Pn	11 18 33.7	+1.7
TMVZ	Te Maari	1.78	211	P	Pn	11 18 33.7	+1.7
MBAZ	Motutapu North	1.79	297	P	Pn	11 18 33.0	+1.0
KRVZ	Karewarewa	1.79	213	P	Pn	11 18 33.6	+1.5
ETVZ	East Tongariro	1.80	211	P	Pn	11 18 33.6	+1.5
WTVZ	West Tongariro	1.83	214	P	Pn	11 18 33.9	+1.4
NNVZ	North Ngauruho	1.83	213	P	Pn	11 18 34.2	+1.7
OTVZ	Oturere	1.84	211	P	Pn	11 18 34.1	+1.4
HIZ	Hauiti	1.85	240	P	Pn	11 18 34.0	+1.4
HIZ	Hauiti	1.85	240	P	Pn	11 18 34.4	+1.8
MCHZ	McNeill Hill	1.85	185	P	Pn	11 18 34.1	+1.5
KWHZ	Kaweka Forest	1.86	191	P	Pn	11 18 33.9	+1.1
TWVZ	Taurewa	1.87	217	P	Pn	11 18 34.4	+1.5
AWAZ	Awhitu Peninsu	1.87	286	P	Pn	11 18 33.9	+1.1
SNVZ	South Ngauruho	1.87	211	P	Pn	11 18 34.5	+1.5
NGZ	Ngauruhoe	1.88	212	P	Pn	11 18 34.6	+1.5
COVZ	Chateau Observ	1.92	213	P	Pn	11 18 34.8	+1.3
TUVZ	Tukino	1.93	210	P	Pn	11 18 35.0	+1.3
WTAZ	Waiatarua	1.96	289	P	Pn	11 18 35.1	+1.3
FWVZ	Far West T-bar	1.96	212	P	Pn	11 18 35.2	+1.1
MAVZ	Matarangi	1.97	212	P	Pn	11 18 35.5	+1.2
WHVZ	Whangaehu Hut	1.97	211	P	Pn	11 18 35.4	+1.2
TRVZ	Turoa	2.00	211	P	Pn	11 18 35.8	+1.3
WNVZ	Wahianoa	2.01	210	P	Pn	11 18 35.5	+1.0
MOVZ	Moawhango	2.02	206	P	Pn	11 18 35.1	+0.6
CKHZ	Cape Kidnapper	2.07	176	P	Pn	11 18 36.7	+1.7
PKVZ	Pokaka	2.08	215	P	Pn	11 18 36.6	+1.3
KRHZ	Kereru	2.09	191	P	Pn	11 18 35.9	+0.6
MTVZ	Mangateitei	2.11	211	P	Pn	11 18 36.8	+1.2
KAHZ	Kahuranaki	2.20	180	P	Pn	11 18 37.7	+1.1
VRZ	Vera Road	2.27	227	P	Pn	11 18 39.2	+1.9
PNHZ	Pukenui	2.38	193	P	Pn	11 18 38.8	+0.2
PXZ	Pawanui	2.43	181	P	Pn	11 18 39.9	+0.7
WPHZ	Waipukurau	2.49	188	P	Pn	11 18 40.4	+0.5
TSZ	Takapari Road	2.57	196	P	Pn	11 18 40.9	+0.1
WAZ	Wanganui	2.62	214	P	Pn	11 18 42.6	+1.1
WCZ	Waipu Caves	2.63	308	P	Pn	11 18 42.6	+1.0
PRHZ	Porangahau	2.68	184	P	Pn	11 18 42.8	+0.6
LREZ	Lake Rotokare	2.70	226	P	Pn	11 18 44.3	+1.9
DVHZ	Dannevirke	2.76	192	P	Pn	11 18 43.0	-0.2
NEZ	North Egmont	2.76	232	P	Pn	11 18 45.9	+2.6
PKE	Pukeiti	2.79	234	P	Pn	11 18 46.0	+2.5
KHEZ	Kahui Hut	2.83	232	P	Pn	11 18 46.5	+2.5
ANWZ	Angora Road	2.88	186	P	Pn	11 18 45.1	+0.5
POWZ	Post Office Ro	2.93	197	P	Pn	11 18 45.3	0.0
PRWZ	Pori Road	3.04	193	P	Pn	11 18 46.9	+0.3
BFZ	Birch Farm	3.12	189	P	Pn	11 18 47.6	-0.1
BFZ	Birch Farm	3.12	189	S	Sn	11 19 24.5	-1.8
BFZ	Birch Farm	3.12	189	P	Pn	11 18 47.5	-0.1
MRZ	Mangatainoka R	3.23	198	P	Pn	11 18 48.4	-0.6
TIWZ	Tintock	3.27	193	P	Pn	11 18 49.3	-0.3
CPWZ	Castlepoint	3.35	189	P	Pn	11 18 51.0	+0.5
HOWZ	Holdsworth Sta	3.47	198	P	Pn	11 18 51.1	-0.9
OGWZ	Otaki Gorge	3.49	202	P	Pn	11 18 51.5	-0.7
OUZ	Omahuta	3.56	311	P	Pn	11 18 54.4	+1.2
OUZ	Omahuta	3.56	311	P	Pn	11 18 54.3	+1.1
TMWZ	Te Maipa	3.59	192	P	Pn	11 18 53.0	-0.6
KIW	Kapiti Island	3.61	205	P	Pn	11 18 52.7	-1.1
MTW	Mount Morrison	3.72	196	P	Pn	11 18 54.0	-1.1
TRWZ	Traveller	3.91	193	P	Pn	11 18 56.8	-0.8
DUWZ	D’Urville Isla	3.95	215	P	Pn	11 18 56.8	-1.3
PAWZ	Paruwai Farm	3.95	196	P	Pn	11 18 56.8	-1.3
MSWZ	Moikau Station	4.02	198	P	Pn	11 18 57.6	-1.4
WEL	Wellington	4.04	203	P	Pn	11 18 57.7	-1.5
SNZO	South Karori	4.08	204	P	Pn	11 18 58.2	-1.5
SNZO	South Karori	4.08	204	S	Sn	11 19 45.0	-2.9
TCW	Tory Channel	4.14	208	P	Pn	11 18 58.9	-1.7
PLWZ	Palliser	4.17	197	P	Pn	11 18 59.3	-1.6
TUWZ	Tuamarina	4.46	210	P	Pn	11 19 03.7	-0.9
NNZ	Nelson	4.53	216	P	Pn	11 19 04.1	-1.5
TKNZ	Takaka Hill	4.59	220	P	Pn	11 19 04.7	-1.7
QRZ	Quartz Range	4.68	225	P	Pn	11 19 06.2	-1.3
QRZ	Quartz Range	4.68	225	S	Sn	11 19 59.1	-2.8
QRZ	Quartz Range	4.68	225	P	Pn	11 19 05.8	-1.7
BSWZ	Blackbirch Sta	4.73	209	P	Pn	11 19 06.4	-1.8
MRNZ	Matariki Terra	4.97	219	P	Pn	11 19 09.4	-1.8
THZ	Tophouse	5.18	215	P	Pn	11 19 12.3	-1.8
KHZ	Kahutara	5.46	207	P	Pn	11 19 15.9	-1.8
KHZ	Kahutara	5.46	207	P	Pn	11 19 15.8	-1.9
GVZ	Greta Valley S	6.12	208	P	Pn	11 19 23.8	-2.7
LTZ	Lake Taylor	6.27	213	P	Pn	11 19 25.5	-3.0
INZ	Inchbonnie	6.61	217	P	Pn	11 19 32.1	-0.8
OKCZ	Okains Bay	6.78	204	P	Pn	11 19 32.9	-2.3
RACZ	Rakaia	7.11	209	P	Pn	11 19 35.8	-3.7
WACZ	Wakanui South	7.41	210	P	Pn	11 19 40.4	-3.1
ARCZ	Arundel	7.69	213	P	Pn	11 19 45.2	-2.0
TMZ	Timaru	8.11	211	P	Pn	11 19 50.0	-2.8
ODZ	Otahua Downs	8.80	210	P	Pn	11 19 59.1	-2.8

IDC 25 11:30:54.6±1.5,10°.16S×152°.02E,h0^{km},mb3.7/3, mbtmp3.7/4,ML3.3/1,MS3.9/1,Error ellipse: s-maj=68.6km s-min=30.1km az=132.0, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	19.63	238	P	P	11 35 25.1	+0.2
	0.1nm,0.3s,baz=63,slow=10,SNR=9.1 0.7nm,0.7s						
ASAR	Alice Springs	21.89	230	P	P	11 35 49.7	+0.3
	0.6nm,0.7s,baz=58,slow=8.6,SNR=15 0.6nm,0.7s						
CMAR	Chiang Mai Arr	59.59	298	LR	LR	12 09 42.3	
	comp=Z,86nm,18.2s,baz=245,slow=39						
QSPA	South Pole Qui	79.83	180	P	P	11 43 04.5	-0.4
	2.4nm,1.0s,baz=330,slow=3.2,SNR=5.3 2.4nm,1.0s						
ILAR	Eielson Array	87.39	22	P	P	11 43 43.5	+0.2
	0.5nm,0.7s,baz=252,slow=5.3,SNR=8.6 0.5nm,0.7s						

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*WEL **25** 11:31:37.6±0.7,33°S±16°×17°9W±4°0,h33^{km},M4.3/7, mB4.4/2,ML4.6/13,MLv4.3/7,Mw(mB)3.5/2,Error ellipse: s-maj=56.3km s-min=3.9km az=111.3,confirmed*

*IDC **25** 11:31:45.9±1.6,33°.24S×179°.85E,h0^{km},mb4.0/4, mbtmp3.9/5,ML3.4/1,Error ellipse: s-maj=41.3km s-min=25.8km az=60.0*

ISC 25 11:31:33.7±2.1,33°.1S±0°.1×178°.4W±0°.4,h10^{km},n24, σ1^s.51/34,mb4.0/4,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.89	6	P	Pn	11 32 33.1	-0.4
GLKZ				S	Sn	11 33 16.5	-2.9
MXZ	Matakaoa Point	5.17	210	S	Sn	11 33 50.7	0.0
WMGZ	Waiomatatini S	5.34	208	S	Sn	11 33 55.3	+0.3
PKGZ	Pakihiroa	5.52	210	P	Pn	11 32 56.6	+0.6
PKGZ				S	Sn	11 33 58.8	-0.7
HAZ	Te Kaha	5.56	213	P	Pn	11 32 57.1	+0.6
PUZ	Puketiti	5.62	208	P	Pn	11 32 57.8	+0.4
PUZ				S	Sn	11 34 00.8	-1.2
RUGZ	Raukumara Rang	5.78	213	P	Pn	11 33 00.8	+1.1
RUGZ				S	Sn	11 34 05.0	-1.0
TWGZ	Tauwhareparae	5.82	209	P	Pn	11 32 59.5	-0.7
TWGZ				S	Sn	11 34 06.2	-0.8
TKGZ	Te Karaka	6.10	209	P	Pn	11 33 04.3	+0.3
TKGZ				S	Sn	11 34 13.0	-0.8
MWZ	Matawai	6.15	211	P	Pn	11 33 05.6	+1.0
MWZ				S	Sn	11 34 13.9	-1.1
URZ	Urewera	6.28	214	Pn	Pn	11 33 07.6	+1.3
	1.2nm,0.3s,baz=333,slow=6.8,SNR=10						
URZ				Sn	Sn	11 34 15.2	-2.9
	1.9nm,0.3s,baz=63,slow=16,SNR=10 2.7nm,0.3s						
URZ	Urewera	6.28	214	P	Pn	11 33 07.0	+0.7
URZ				S	Sn	11 34 16.1	-2.0
RAGZ	Rawiri	6.33	211	P	Pn	11 33 08.5	+1.4
RAGZ				S	Sn	11 34 17.5	-2.0
RIGZ	Rimuhau	6.36	208	P	Pn	11 33 08.7	+1.1
RIGZ				S	Sn	11 34 18.4	-2.0
SNGZ	Shannon Statio	6.60	210	P	Pn	11 33 12.2	+1.4
SNGZ				S	Sn	11 34 24.6	-1.6
RTZ	Ruatahuna	6.62	213	P	Pn	11 33 11.7	+0.5
RAHZ	Arahi	6.82	211	P	Pn	11 33 15.4	+1.5
RAHZ				S	Sn	11 34 30.3	-1.3
OUZ	Omahuta	6.95	250	P	Pb	11 33 21.7	-13
BKZ	Black Stump Fm	7.29	213	P	Pn	11 33 20.9	+0.6
BKZ				S	Sn	11 34 39.7	-3.5
ASAR	Alice Springs	42.70	270	P	P	11 39 32.9	+1.8
	2.2nm,0.6s,baz=108,slow=7.4,SNR=37 2.2nm,0.6s						
WRA	Warramunga Arr	43.93	275	P	P	11 39 42.6	+1.5
	1.0nm,0.5s,baz=117,slow=7.7,SNR=18 1.0nm,0.5s						
QSPA	South Pole Qui	56.97	180	P	P	11 41 33.1	+14
	1.2nm,0.8s,baz=30,slow=0.8,SNR=10 1.2nm,0.8s						
SNAA	Sanae	75.43	179	P	P	11 43 30.1	+13
	1.7nm,1.1s,baz=202,slow=9.8,SNR=10 1.7nm,1.1s						
FINES	FINESS Array B	147.58	338	PKPbc	PKiKP	11 51 29.6	+10
	1.2nm,0.7s,baz=45,slow=5.7,SNR=5.0						

CATAC 25 11:33:34.1±0.5,12°N±5°×8°7W±°,h71^{km}±5^{km},M3.2/16, MLv3.2/16,Error ellipse: s-maj=12.8km s-min=8.7km az=41.8,confirmed,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALEN	Leon	0.21	40	P	Pn	11 33 46.2	+1.2
CNGA	Al SSO del Vol	0.35	57	P	Pn	11 33 47.0	+1.1
CNGN	Cerro Negro	0.36	56	P	Pn	11 33 46.9	+1.0
CNGN	Cerro Negro	0.36	56	S	Sn	11 33 58.5	+3.8
POLN	Al Sur del Vol	0.40	28	P	Pn	11 33 47.3	+1.1
ILCN	San Idelfonso	0.41	47	P	Pn	11 33 47.2	+1.0
ILCN				S	Sn	11 33 58.4	+3.2
COPN	Copaltepe	0.42	106	P	Pn	11 33 47.5	+1.1
MOMN	Momotombo	0.47	76	P	Pn	11 33 47.5	+0.7
MOMN				S	Sn	11 33 59.1	+3.0
MOM2	El Cardon	0.53	75	P	Pn	11 33 48.3	+1.0
SAPS	Ciudad Sandino	0.60	102	P	Pn	11 33 49.2	+1.1
APQ3	Volcan Apoyequ	0.62	92	P	Pn	11 34 01.6	+13
ABCN	Banco Central	0.70	104	P	Pn	11 33 44.9	-4.2
TISN	Laguna Tiscapa	0.74	102	P	Pn	11 34 03.3	+14
UNAN	Cigeo UNAN	0.74	104	P	Pn	11 33 50.2	+0.6
UNAN				P		11 34 03.4	
R4DEC	Barrio San Lui	0.76	101	P	Pn	11 34 03.8	+14

MGAN	Managua	0.76	101	P	Pn	11 34 03.8	+14
CRUN	El Crucero	0.76	114	P	Pn	11 33 50.9	+1.1
WILN	Americas 2	0.81	100	P	Pn	11 34 05.9	+16
POTN	Potosi Cosigui	0.85	325	P	Pn	11 33 51.5	+0.6
MAS3	Al N del Volca	0.86	108	P	Pn	11 34 05.4	+14
MASN	Masaya	0.89	110	P	Pn	11 34 06.3	+15
SABN	Sabanita	0.89	112	P	Pn	11 34 06.0	+15
NANN	Nandasmo	0.94	112	P	Pn	11 33 53.5	+1.6
MATN	Matagalpa	1.23	59	P	Pn	11 33 55.1	-0.5
CNCH	Conchagua	1.27	320	P	Pn	11 33 56.6	+0.4
BOAB	BOACO BROADBAN	1.32	83	P	Pn	11 33 56.9	+0.2
RCVN	Varillal2	1.50	32	P	Pn	11 33 60.0	+0.6
RCPN	Sur Rio San Ju	1.51	36	P	Pn	11 33 59.1	-0.3
MORN	Al O del Volca	1.52	119	P	Pn	11 34 20.5	+21
ZAIG	Zacatecas	18.11	307	P	P	11 37 39.8	-0.9

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*GCG **25** 11:36:16.9±1.0, 15.̊21N×92.̊44W, h71^{km}±10^{km}, MD3.9, ML3.2*
*MEX **25** 11:36:17.8±0.6, 14.̊92N×92.̊53W, h84^{km}±8^{km}, MD3.7*
ISC 25 11:36:13.4±1.7**, 14.̊8N**±0.̊1×**92.̊5W**±0.̊1**, h100^{km}, n10, σ1.ˢ81**/20**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.24	63	*e*P	Pn	11 36 28.4	+0.7
THIG				*e*S	Sn	11 36 37.8	-0.6
PATR	El Naranjo	0.40	38	*e*P	Pn	11 36 29.1	+0.2
PATR				*e*S	Sn	11 36 38.8	-1.6
SMCA	Catarina	0.40	81	*i* P	Pn	11 36 30.0	+1.5
SMCA				*i* S	Sn	11 36 40.2	+0.3
SMCA				IAML		11 36 41.0	
	comp=E,668nm,0.1s						
PAVE	Pavencul	0.50	37	*e*P	Pn	11 36 30.2	+0.7
PAVE				*e*S	Sn	11 36 40.3	-1.1
RTAL	Retalhuleu	0.81	109	*e*P	Pn	11 36 35.0	+3.1
RTAL				*e*S	Sn	11 36 47.6	+1.8
PCIG		1.15	322	*e*P	Pn	11 36 36.1	+0.7
PCIG				*e*S	Sn	11 36 50.7	-1.4
STG8	El Palmar, Qui	1.15	107	*i* P	Pn	11 36 35.4	-0.4
STG8				*i* S	Sn	11 36 49.7	-2.9
STG8				IAML		11 36 51.5	
	comp=E,500nm,0.2s						
STG0	El Palmar, Qui	1.17	108	*i* P	Pn	11 36 35.4	-0.5
STG0				*i* S	Sn	11 36 50.4	-2.4
STG0				IAML		11 36 52.5	
	comp=E,878nm,0.1s						
CCIG	Comitan	1.52	13	*e*P	Pn	11 36 42.5	+2.4
CCIG				*e*S	Sn	11 36 59.5	-0.8
TGIG		2.06	343	*e*P	Pn	11 36 48.5	+1.6
TGIG				*e*S	Sn	11 37 09.4	-3.1

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*IDC **25** 11:38:35.3±0.6, 2.̊67S×138.̊58E, h0^{km}, mb4.2/11, mbtmp4.3/15, ML4.3/4, MS3.6/1, Error ellipse: s-maj=19.6km s-min=16.0km az=82.0*
*NEIC **25** 11:38:38.1±1.3, 2.̊77S±0.̊08×138.̊55E±0.̊05, h10^{km}±1^{km}, mb4.7/99, Error ellipse: s-maj=14.1km s-min=8.8km az=175.0*
*DJA **25** 11:38:39.2±0.5, 2°S±3°×13°9E±°, h14^{km}±5^{km}, M4.6/18, mb4.8/18, mB5.0/6, MLv4.7/11, Mw(mB)4.4/6, MwMwp5.9/1, Mwp5.9/1*
ISC 25 11:38:37.4±0.3**, 2.̊81S**±0.̊04×**138.̊57E**±0.̊04**, h10^{km}, n160, σ1.ˢ59**/154**, mb4.7**/65**, 1C-1D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.82	10	P	Pg	11 38 49.6	-3.7
GENI	Genyem	1.61	82	P	Pn	11 39 06.8	+0.9
GENI	Genyem	1.61	82	P	Pn	11 39 06.4	+0.5
JAY	Jayapura	2.15	82	Pn	Pn	11 39 12.1	-1.3
	22nm,0.3s,baz=246,slow=10,SNR=107						
JAY				Sn	Sn	11 39 42.2	+2.0
	24nm,0.3s,baz=155,slow=16,SNR=8.3						
JAY				LR	LR	11 40 03.0	
	comp=Z,2µm,21.2s,baz=262,slow=41						
	76nm,0.3s						
JAY	Jayapura	2.15	82	P	Pn	11 39 12.8	-0.6
SRPI	Serui, Papua	2.51	292	P	Pn	11 39 18.0	-0.3
SRPI				S	Sn	11 39 50.6	+1.7
BAKI	Biak	2.94	303	P	Pn	11 39 24.5	+0.3
BAKI				S	Sn	11 39 59.7	+0.1
RKPI	Ransiki, Papua	4.57	286	P	Pn	11 39 47.1	+0.4
KMPI	Kaimana, Papua	4.93	260	P	Pn	11 39 55.4	+3.8
FAKI	Fak Fak	6.31	269	Pn	Pn	11 40 11.9	+1.2
FAKI	Fak Fak	6.31	269	P	Pn	11 40 11.9	+1.2
FAKI	Fak Fak	6.31	269	P	Pn	11 40 12.5	+1.9
SWI	Sorong	7.56	285	P	Pn	11 40 29.2	+1.5
	0.3nm87nm,0.6s						
BNDI	Bandanaira	8.81	259	P	Pn	11 40 48.8	+3.8
MANU	Manus Island	8.82	85		Pn	11 40 46.9	+1.8
SAUI	Saumlaki	8.88	234	Pn	Pn	11 40 46.3	+0.5
SAUI	Saumlaki	8.88	234	P	Pn	11 40 51.4	+5.6
KDU	Kakadu	11.52	211	P	Pn	11 41 23.6	+1.5
COEN	Coen	11.98	158	Pn	Pn	11 41 28.0	-0.4
COEN	Coen	11.98	158	P	Pn	11 41 31.1	+2.8
DRS	Darwin Rock St	12.21	218	P	Pn	11 41 34.4	+2.9
MTN	Manton Dam	12.39	216	Pn	Pn	11 41 34.5	+0.4
MTN	Manton Dam	12.39	216	P	Pn	11 41 35.9	+1.9
RABL	Rabaul	13.64	96	Pn	Pn	11 41 50.5	-0.6
SOEI	Soe	15.79	243	P	Pn	11 42 21.4	+1.2
SOEI	Soe	15.79	243	P	P	11 42 25.7	+1.6
	135nm,1.0s						
KNRA	Kununurra	16.02	216	Pn	Pn	11 42 22.8	-0.2
MTSU	Mount Surprise	16.24	160	P	P	11 42 30.0	+1.1
BATI	Baumata	16.52	243	Pn	Pn	11 42 31.4	+1.9
	11nm,0.3s,baz=136,slow=2.3,SNR=8.6						
	62nm,0.7s						
BATI	Baumata	16.52	243	P	P	11 42 36.2	+4.1
	94nm,0.9s						
MRSI	Marisa	16.94	281	P	P	11 42 40.1	+3.4
APSI	Ampana	17.02	276	P	P	11 42 38.2	+0.7
	26µm1µm72nm,1.4s						
MMRI	Maumere	17.24	250	Pn	Pn	11 42 37.4	-1.1
MMRI				IAmb	IAmb	11 42 42.8	
	comp=Z,62nm,1.3s						
WB0	Warramunga Arr	17.34	193	Pn	Pn	11 42 39.3	-0.5
WR0	Warramunga Arr	17.50	193	Pn	Pn	11 42 41.7	+0.1
WR8	Warramunga Arr	17.50	193	Pn	Pn	11 42 40.7	-1.0
WRAB	Tennant Creek	17.51	193	Pn	Pn	11 42 41.2	-0.7
WRAB				IAmb	IAmb	11 43 00.0	
	comp=Z,38nm,0.8s						
WB2	Warramunga Arr	17.52	193	Pn	Pn	11 42 41.3	-0.7
WB2				IAmb	IAmb	11 43 00.2	
	comp=Z,34nm,0.8s						
WRA	Warramunga Arr	17.52	193	Pn	Pn	11 42 41.2	-0.9
WRA	Warramunga Arr	17.52	193	P	Pn	11 42 41.4	-0.6
	comp=Z,1.1nm,0.3s,baz=17,slow=12,SNR=36						
WRA				S	Sn	11 45 48.8	-8.5
	comp=Z,4.2nm,0.8s,baz=10,slow=20,SNR=4.5						
	comp=Z,5.0nm,0.6s						
QIS	Mount Isa	17.67	177	P	P	11 42 47.5	+2.7
EDFI	Ende, Flores	17.79	250	P	P	11 42 47.4	+1.1
TOLI2	Tolitoli	18.20	282	Pn	Pn	11 42 48.5	-2.0
TOLI2	Tolitoli	18.20	282	P	Pn	11 42 49.6	-0.9
TTSI	Tana Toraja	18.73	269	P	Pn	11 42 59.2	+2.3
	comp=Z,710nmcomp=Z,30nm,1.7s						
MPSI	Mapaga	18.92	279	P	Pn	11 43 00.8	+1.6
FITZ	Fitzroy Crossi	19.79	219	P	P	11 43 08.2	+0.2
FITZ	Fitzroy Crossi	19.79	219	P	P	11 43 08.4	+0.4
	comp=Z,0.6nm,0.3s,baz=45,slow=9.3,SNR=15						
FITZ				S	S	11 46 43.7	-7.4
	comp=Z,8.9nm,0.7s,baz=353,slow=8.1,SNR=3.5						
	comp=Z,1.9nm,0.4s						
AS31	Alice Springs	21.22	192		P	11 43 23.0	-0.6
ASAR	Alice Springs	21.22	192		P	11 43 24.6	+1.0
ASAR	Alice Springs	21.22	192	P	P	11 43 23.9	+0.3
	comp=Z,10nm,0.8s,baz=20,slow=9.4,SNR=68						
ASAR				S	S	11 47 17.8	-1.9
	comp=Z,6.0nm,0.9s,baz=9.5,slow=24,SNR=6.5						
	comp=Z,10nm,0.8s						
MYLDM	Lahad Datu	21.56	292		P	11 43 27.5	+0.1
MYLDM				IAmb	IAmb	11 43 34.4	
	comp=Z,54nm,1.2s						
TATA	Tatamba Isabel	21.84	106	P	P	11 43 31.7	+1.4
KKM	Kota Kinabalu	23.99	292		P	11 43 52.2	-0.4
KKM				IAmb	IAmb	11 43 54.9	
	comp=Z,31nm,1.2s						
MBWA	Marble Bar	25.87	224	P	P	11 44 09.7	+0.2
PSA00	Pilbara Seismi	26.07	223	P	P	11 44 10.3	-1.0
PSA00				IAmb	IAmb	11 44 28.0	
	comp=Z,17nm,1.2s						
MORW	Morawa	33.78	217	P	P	11 45 19.2	-0.5
IPM	Ipoh	38.21	281	P	P	11 45 57.7	-0.1
IPM				IAmb	IAmb	11 45 57.8	
	comp=Z,8.2nm,0.7s						
KULM	Kulim	38.72	282	P	P	11 46 01.6	-0.6
KULM				IAmb	IAmb	11 46 13.1	
	comp=Z,19nm,1.3s						
NJ2	Nanjing	39.40	333	*e*P	P	11 46 09.8	+2.3
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KSRS	Korea Array	41.26	347	P	P	11 46 21.4	-1.4
	comp=Z,1.4nm,0.8s,baz=159,slow=9.2,SNR=5.2						
	comp=Z,1.4nm,0.8s						
FUTU	Fugatoga	44.23	108	P	P	11 46 46.7	-0.6
CMAR	Chiang Mai Arr	44.36	300	P	P	11 46 48.1	-0.3
	comp=Z,1.3nm,0.6s,baz=118,slow=6.5,SNR=9.8						
	comp=Z,1.3nm,0.6s						
KMI	Kunming	44.48	311	P	P	11 46 50.0	+0.5
KMI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
JKA	Kamikawa-asahi	46.85	4	P	P	11 47 07.4	-0.3
BNX	BinXian	49.34	350	⇑P	P	11 47 29.0	+2.1
BNX				pP	sP	11 47 40.5	+9.2
BNX				S	S	11 54 30.5	-3.0
BNX				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BNX				pmax	pmax		
	comp=Z,130nm,11.3s						
BNX				LR	LR		
	comp=N,170nm,18.4s						
BNX				LR	LR		
	comp=E,190nm,18.6s						
BNX				LR	LR		
	comp=Z,320nm,20.4s						
TCW	Tory Channel	49.92	145	P	P	11 47 32.0	+0.6
HHC	Hu-ho-hao-te	49.96	333	*e*P	P	11 47 35.5	+3.7
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,5.4s						
GTA	Gaotai	55.06	324	*e*P	P	11 48 10.5	+0.7
GTA				pP	sP	11 48 16.5	+2.2
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
SONM	Songino Array	57.75	335	P	P	11 48 26.4	-2.4
	comp=Z,0.8nm,0.5s,baz=159,slow=7.2,SNR=4.1						
	comp=Z,0.8nm,0.5s						
EVN	Everest	58.38	305		P	11 48 34.0	-0.1
EVN				IAmb	IAmb	11 48 35.1	
	comp=Z,4.6nm,0.6s						
WMQ	Urumqi	65.00	322	*e*P	P	11 49 18.8	+1.0
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
ADK	Adak	66.33	28	P	P	11 49 26.4	+0.3
CASY	Casey	66.35	192	P	P	11 49 27.5	+1.5
CASY				IAmb	IAmb	11 49 45.0	
	comp=Z,8.5nm,1.2s						
MKAR	Makanchi Array	69.78	322		P	11 49 47.8	-0.2
MKAR	Makanchi Array	69.78	322	P	P	11 49 47.5	-0.5
	comp=Z,1.9nm,0.8s,baz=116,slow=8.2,SNR=9.4						
	comp=Z,1.9nm,0.8s						
MAKZ	Makanchi	69.98	322		P	11 49 48.9	-0.4
MAKZ				IAmb	IAmb	11 49 55.6	
	comp=Z,6.2nm,0.9s						
TARG	Taragay, Kyrgy	70.56	316	P	P	11 49 52.3	-1.1
TARG				IAmb	IAmb	11 50 04.1	
	comp=Z,7.7nm,1.5s						
ZAA0	Zalesovo Array	71.95	330	P	P	11 49 60.0	-1.1
ZALV	Zalesovo Beam	71.95	330	P	P	11 49 59.6	-1.4
ZALV	Zalesovo Beam	71.95	330	P	P	11 49 58.8	-2.2
	comp=Z,0.7nm,0.3s,baz=72,slow=9.5,SNR=4.3						
	comp=Z,0.7nm,0.3s						
BOOM	Boomskoye usch	72.13	316	P	P	11 50 02.3	-0.2
BOOM				IAmb	IAmb	11 50 12.6	
	comp=Z,5.6nm,1.2s						
KURK	Kurchatov	73.72	325	P	P	11 50 10.6	-0.9
KURBB	Kurchatov Arra	73.73	325	P	P	11 50 11.2	-0.4
	comp=Z,1.1nm,0.8s,baz=117,slow=5.7,SNR=7.7						
	comp=Z,1.1nm,0.8s						
ARSB	Arslanbob	73.80	314		P	11 50 12.3	-0.2
ARSB				IAmb	IAmb	11 50 20.1	
	comp=Z,12nm,1.4s						
SIMJ	Simiganj	75.95	311	P	P	11 50 25.1	+0.1
KK31	Karatay Array	76.10	316	P	P	11 50 25.5	-0.1
KKAR	Karatay Array	76.10	316	P	P	11 50 25.3	-0.3
L14K	Kuka Creek	78.04	25	P	P	11 50 36.4	+0.4
L14K				IAmb	IAmb	11 50 39.7	
	comp=Z,9.4nm,0.9s						
M14K	Bethel	78.07	26	P	P	11 50 36.3	+0.2
K15K	Wolf Creek Mou	78.98	24	P	P	11 50 41.5	+0.2
BVAR	Borovoye Array	79.31	325	P	P	11 50 42.3	-0.9
	comp=Z,2.8nm,0.7s,baz=108,slow=8.0,SNR=8.7						
	comp=Z,2.8nm,0.7s						
BRVK	Borovoye	79.38	325		P	11 50 43.6	-0.1
M16K	Timber Creek	79.50	26		P	11 50 44.7	+0.6
M16K				IAmb	IAmb	11 50 46.6	
	comp=Z,12nm,1.2s						
ACHA	Angle Creek He	80.05	29	P	P	11 50 46.9	-0.3
N17K	Nushagak Hills	80.08	27	P	P	11 50 48.4	+1.2
N17K				IAmb	IAmb	11 50 49.6	
	comp=Z,15nm,1.4s						
M17K	Holitna River	80.33	26		P	11 50 49.5	+1.0
M17K				IAmb	IAmb	11 50 56.3	
	comp=Z,15nm,1.2s						
K17K	Iditarod	80.51	25		P	11 50 49.7	+0.2
K17K				IAmb	IAmb	11 50 54.0	
	comp=Z,14nm,1.2s						
P18K	Big Mountain,	80.54	28	P	P	11 50 49.8	0.0
OHAK	Old Harbor	80.71	31	P	P	11 50 51.8	+1.1
OHAK				IAmb	IAmb	11 50 51.8	
	comp=Z,7.7nm,0.8s						
O18K	Koktuh Hills	80.72	28	P	P	11 50 50.8	0.0
O18K				IAmb	IAmb	11 50 53.1	
	comp=Z,7.5nm,1.1s						
L18K	Granite Mounta	80.98	25	P	P	11 50 52.9	+0.8
N19K	Bonanza Creek	81.41	27	P	P	11 50 55.1	+0.6
N19K				IAmb	IAmb	11 50 57.5	
	comp=Z,8.7nm,1.1s						
MAW	Mawson	81.98	202	P	P	11 50 56.4	-0.9
	comp=Z,2.7nm,0.9s,baz=53,slow=6.5,SNR=5.0						
	comp=Z,2.7nm,0.9s						
M20K	Styx River	82.41	26	IAmb	IAmb	11 51 03.2	
	comp=Z,8.2nm,1.2s						
G19K	Purcell Mounta	82.45	22	IAmb	IAmb	11 51 02.9	
	comp=Z,4.3nm,0.8s						
J20K	Nowinta River	82.81	24		P	11 51 02.0	+0.3
J20K				IAmb	IAmb	11 51 04.8	
	comp=Z,5.7nm,1.2s						
E19K	Redstone River	82.95	20	IAmb	IAmb	11 51 05.2	
	comp=Z,5.7nm,0.9s						
F20K	Avaraart Lake	83.32	21	IAmb	IAmb	11 51 07.3	
	comp=Z,6.8nm,1.1s						
PMR	Palmer	84.12	27		P	11 51 08.3	-0.1
PMR				IAmb	IAmb	11 51 10.1	
	comp=Z,6.2nm,1.1s						
PWL	Port Wells	84.28	28	P	P	11 51 09.4	+0.1
MLY	Manley	84.48	24	P	P	11 51 10.0	-0.3
MLY				IAmb	IAmb	11 51 16.6	
	comp=Z,5.6nm,1.4s						
AB31	Akbulak array	84.70	320		P	11 51 10.7	-1.0
AB31				IAmb	IAmb	11 51 23.4	
	comp=Z,5.7nm,1.4s						
ABKAR	Akbulak array	84.70	320		P	11 51 10.7	-1.0
ABKAR				IAmb	IAmb	11 51 23.4	
	comp=Z,5.7nm,1.4s						
RND	Reindeer	84.77	26		P	11 51 11.2	-0.6
SCM	Sheep Creek Mo	85.01	27	P	P	11 51 13.2	+0.2
NEA2	Nenana	85.03	24	P	P	11 51 11.9	-1.1
NEA2				IAmb	IAmb	11 51 15.4	
	comp=Z,8.7nm,1.4s						
D22K	Ayikyak River	85.08	20	P	P	11 51 13.7	+0.6
I23K	Minto, Yukon-K	85.08	24	P	P	11 51 13.2	0.0
I23K				IAmb	IAmb	11 51 15.6	
	comp=Z,4.8nm,0.9s						
FID	Port Fidalgo	85.13	28	P	P	11 51 13.5	-0.1
H23K	Yukon River	85.21	23	P	P	11 51 14.1	+0.2
H23K				IAmb	IAmb	11 51 17.1	
	comp=Z,3.5nm,1.0s						
DHY	Denali Highway	85.32	26	IAmb	IAmb	11 51 16.9	
	comp=Z,6.6nm,1.0s						
WRH	Wood River Hil	85.40	25	IAmb	IAmb	11 51 15.6	
	comp=Z,8.2nm,1.2s						
CCB	Clear Creek Bu	85.57	24		P	11 51 15.0	-0.6
CCB				IAmb	IAmb	11 51 16.8	
	comp=Z,5.7nm,1.0s						
HDA	Harding Lake	85.86	25	IAmb	IAmb	11 51 18.0	
	comp=Z,4.6nm,1.1s						
IL31		85.98	24	IAmb	IAmb	11 51 18.9	
	comp=Z,3.4nm,0.8s						
ILAR	Eielson Array	85.98	24	P	P	11 51 16.1	-1.6
ILAR	Eielson Array	85.98	24	P	P	11 51 15.1	-2.6
	comp=Z,2.6nm,0.8s,baz=266,slow=4.9,SNR=19						
	comp=Z,2.6nm,0.8s						
TOLK	Toolik Lake Re	86.06	20	IAmb	IAmb	11 51 23.0	
	comp=Z,6.0nm,1.1s						
C23K	Itkillik River	86.09	19		P	11 51 18.2	+0.1
HMT	Hamilton	86.09	29	P	P	11 51 18.6	+0.1
HMT				IAmb	IAmb	11 51 33.9	
	comp=Z,9.8nm,1.2s						
F24K	Squaw Lake	86.34	22		P	11 51 19.6	+0.2
F24K				IAmb	IAmb	11 51 21.2	
	comp=Z,4.4nm,0.9s						
D24K	Happy Valley	86.48	20	P	P	11 51 20.7	+0.7
GLB	Gilahina Butte	86.55	28	P	P	11 51 21.2	+0.6
GLB				IAmb	IAmb	11 51 30.0	
	comp=Z,5.5nm,1.2s						
J25K	Salcha River,	86.57	25		P	11 51 21.5	+0.8
CRQM	Cirque	86.72	29	P	P	11 51 21.7	0.0
MENT	Mentasta	86.91	27	P	P	11 51 21.4	-0.9
DOT	Dot Lake	86.91	26	P	P	11 51 22.6	+0.3
ISLE	Juniper Island	87.08	29	P	P	11 51 23.9	+0.5
FYU	Fort Yukon	87.09	23	P	P	11 51 24.2	+1.1
QSPA	South Pole Qui	87.14	180	P	P	11 51 23.9	+0.3
	comp=Z,6.4nm,1.0s,baz=315,slow=1.0,SNR=17						
	comp=Z,6.4nm,1.0s						
F25K	Christian Rive	87.19	22		P	11 51 24.6	+0.9
F25K				IAmb	IAmb	11 51 27.6	
	comp=Z,8.3nm,1.4s						
J26L	Joseph Creek	87.31	25		P	11 51 24.8	+0.4
J26L				IAmb	IAmb	11 51 25.0	
	comp=Z,6.4nm,1.4s						
BMAR	Burnt Mountain	87.55	22		P	11 51 26.1	+0.7
M27K	Edge Creek, AK	87.63	27	IAmb	IAmb	11 51 28.9	
	comp=Z,3.6nm,0.9s						
CTGM	Chitina Glacie	87.63	29	P	P	11 51 27.1	+1.1
H27K	Steamboat Moun	88.48	24		P	11 51 30.3	+0.5
DAWY	Dawson	89.02	26	IAmb	IAmb	11 51 35.5	
	comp=Z,5.3nm,0.9s						
M29M	Somme Creek	89.21	27	P	P	11 51 34.2	+0.7
M29M				IAmb	IAmb	11 51 35.0	
	comp=Z,4.0nm,1.0s						
L29M	L29M	89.45	27	P	P	11 51 35.1	+0.6
L29M				IAmb	IAmb	11 51 36.2	
	comp=Z,6.2nm,1.3s						
HYT	Haines Junctio	89.46	29		P	11 51 35.7	+1.0
HYT				IAmb	IAmb	11 51 38.8	
	comp=Z,4.9nm,1.1s						
K29M	Barlow Dome	89.81	26		P	11 51 36.5	+0.3
K29M				IAmb	IAmb	11 51 38.2	
	comp=Z,9.5nm,1.5s						
J30M	Hart River	90.41	25	P	P	11 51 40.1	+1.0
NVAR	Mina Array Bea	102.02	51	PKKPbc	PKKPbc	12 08 37.8	0.0
	comp=Z,0.1nm,0.4s,baz=150,slow=6.1,SNR=2.2						
MEM	Membach	117.90	328	*d*PKPdf	PKPdf	11 57 24.1	-0.3
TORD	Torodi Ar. Bea	136.15	286	PKPdf	PKPdf	11 57 58.3	-1.8
PB08	IPOC Station P	144.50	131	PKPdf	PKPab	11 58 14.4	+0.5
PB18	Visviri	145.71	127	PKPdf	PKPdf	11 58 15.7	-2.2
CPUP	Villa Florida	147.21	153	PKPbc	PKPbc	11 58 22.2	+0.4
	comp=Z,0.7nm,0.7s,baz=153,slow=5.0,SNR=4.4						
LPAZ	La Paz	147.50	127	PKPbc	PKPbc	11 58 24.2	+0.6
	comp=Z,5.3nm,0.9s,baz=219,slow=1.6,SNR=7.1						

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*ECX **25** 11:43:46.9±0.2, 30.̊83N×114.̊17W, h3^{km}±5^{km}, ML2.8*
ISC 25 11:43:43.4±1.5**, 30.̊84N**±0.̊05×**114.̊13W**±0.̊04**, h1^{km}**±13^{km}**, n11, σ0.ˢ60**/18**, 1D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFX	San Felipe	0.65	287	*e*P	Pb	11 43 58.0	+0.4
SFX				*e*S	Sb	11 44 06.6	-0.5
SFX				IAML		11 44 07.6	
	comp=N,648nm,0.4s						
SFX				*e*		11 44 07.6	
ECBX	El Chinero	1.01	308	*e*P	Pb	11 44 04.2	+0.5
ECBX				*e*S	Sb	11 44 17.6	+0.1
SLGB	San Luis Gonza	1.04	193	*e*P	Pb	11 44 04.7	+0.6
SPIG	San Pedro Mart	1.17	280	*e*P	Pn	11 44 06.9	-0.3
SPIG	San Pedro Mart	1.17	280	*e*P	Pn	11 44 06.8	-0.4
SPIG				*i* S	Sg	11 44 20.3	-0.7
VTX	Valle De La Tr	1.52	291	*e*P	Pg	11 44 12.8	+0.2
VTX				*e*S	Sn	11 44 33.1	+0.7
SQX	San Quintin	1.53	260	*e*P	Pg	11 44 12.7	0.0
SQX				IAML		11 44 35.0	
	comp=E,94nm,0.3s						
SQX				⇓*e*		11 44 35.0	
RHX	Rio Hardy	1.62	323	*e*P	Pg	11 44 14.7	+0.2
ALAMX	Rancho Alamar	1.78	311	*e*P	Pb	11 44 17.2	+0.3
ALAMX				*e*S	Sg	11 44 41.0	+0.3
TJIG	Tijuana	2.69	307	*e*P	Pb	11 44 32.9	+0.6
TJIG				*e*S	Sb	11 45 04.5	-1.4
TUC	Tucson	3.20	62	*e*P	Pg	11 44 44.7	-0.1
TUC				*e*S	Sb	11 45 20.3	-0.4

IDC 25 11:48:47.0±1.4**, 47.̊91S**×**99.̊86E, h0^{km}, mb3.9**/5**, mbtmp3.9**/5**, Error ellipse: s-maj=52.5km s-min=23.9km az=119.0, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	16.80	45	T	T	12 09 51.9	
	baz=214,slow=74,SNR=54						
H01W1	Cape Leeuwin H	16.82	45	T	T	12 09 52.2	
	baz=214,slow=74,SNR=99						
H01W3	Cape Leeuwin H	16.82	44	T	T	12 09 56.2	
	baz=214,slow=74,SNR=72						
ASAR	Alice Springs	36.25	60	P	P	11 55 52.0	+0.1
	2.1nm,1.0s,baz=222,slow=8.4,SNR=7.6						
	2.1nm,1.0s						
WRA	Warramunga Arr	39.41	57	P	P	11 56 18.2	-0.4
	2.7nm,1.1s,baz=220,slow=8.9,SNR=8.8						
	2.7nm,1.1s						
QSPA	South Pole Qui	42.23	180	P	P	11 56 41.8	+0.3
	1.5nm,0.9s,baz=316,slow=3.2,SNR=3.6						
	1.5nm,0.9s						
SNAA	Sanae	49.08	204	P	P	11 57 34.9	-0.5
	1.0nm,0.9s,baz=135,slow=7.1,SNR=2.3						
	1.0nm,0.9s						
CMAR	Chiang Mai Arr	66.06	359	P	P	11 59 35.7	+0.2
	0.7nm,0.3s,baz=199,slow=5.6,SNR=4.3						
	0.7nm,0.3s						

IDC 25 11:58:25.9±61.0**, 17.̊47S**×**179.̊17W, h0^{km}, mb3.8**/3**, mbtmp3.8**/3**, Error ellipse: s-maj=1111.0km s-min=166.9km az=78.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.20	240	P	P	12 05 48.4	+0.8
	1.2nm,0.6s,baz=349,slow=16,SNR=3.0						
	1.2nm,0.6s						
WRA	Warramunga Arr	44.00	259	P	P	12 06 35.1	-0.4
	0.3nm,0.6s,baz=96,slow=7.6,SNR=9.4						
	0.3nm,0.6s						
ASAR	Alice Springs	44.21	254	P	P	12 06 36.8	-0.4
	2.3nm,0.6s,baz=92,slow=7.7,SNR=37						
	2.3nm,0.6s						

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*HEL **25** 12:04:18.8±0.1, 59.̊80N×27.̊40E, h0^{km}, ML2.0, Explosion*
*EST **25** 12:04:19.0±0.1, 59.̊81N×27.̊40E, h0^{km}, ML2.0(HEL), Explosion*
*IDC **25** 12:04:21.1±1.2, 59.̊92N×27.̊24E, h0^{km}, mbtmp3.2/4, ML2.7/4, Error ellipse: s-maj=14.7km s-min=8.6km az=89.0*
ISC 25 12:04:16.6±0.7**, 59.̊85N**±0.̊02×**27.̊35E**±0.̊03**, h0^{km}, n28, σ1.ˢ18**/45**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EE04	Vaivara Sinima	0.54	150	*e*P	Pg	12 04 27.9	+0.9
EE04				*e*S	Sg	12 04 34.5	+0.6
VJF	Virojoki	0.70	8	*e*P	Pb	12 04 32.2	+0.5
VJF				*e*S	Sb	12 04 42.0	+0.1
PVF	Pernaja	1.02	314	*e*P	Pn	12 04 38.2	0.0
PVF				*e*S	Sb	12 04 51.7	+0.5
EE03	Tooma soojaam,	1.12	210	*e*P	Pb	12 04 39.1	+0.2
EE03				*e*S	Sg	12 04 53.0	+0.5
HEL1	Helsinki	1.28	286	*e*P	Pn	12 04 42.4	+0.7

HEL1				eS	**Sb**	**12 04 59.1**	**+0.5**
VSU	**Vasula**	**1.42**	**193**	eP	**Pn**	**12 04 43.4**	**-0.2**
VSU	**Vasula**	**1.42**	**193**	eP	**Pn**	**12 04 43.5**	**-0.2**
VSU				eS	**Sg**	**12 05 01.6**	**-0.7**
NUR	**Nurmijarvi**	**1.51**	**297**	eP	**Pg**	**12 04 46.6**	**+1.1**
NUR				eS	**Sn**	**12 05 06.4**	**+1.3**
NUR				MSG		12 05 07.8	
	comp=Z,9.5nm,0.1s						
MEF	**Metsahovi**	**1.53**	**285**	eP	**Pg**	**12 04 46.9**	**+1.1**
MEF	**Metsahovi**	**1.53**	**285**	eP	**Pg**	**12 04 47.0**	**+1.1**
MEF				eS	**Sg**	**12 05 06.5**	**+0.8**
MEF				MSG		12 05 10.7	
	comp=Z,12nm,0.1s						
EE08	**Sarghaua, Vand**	**1.61**	**223**	eP	**Pb**	**12 04 47.7**	**+0.6**
EE08				eS	**Sn**	**12 05 07.9**	**+0.2**
FIA0	**FINESS Array S**	**1.72**	**339**	eP	**Pb**	**12 04 49.8**	**+0.7**
FIA0				eS	**Sg**	**12 05 13.4**	**+1.5**
FIA0				MSG		12 05 16.1	
	comp=Z,7.8nm,0.1s						
FIA1	**FINESS Array S**	**1.72**	**339**	eP	**Pb**	**12 04 49.7**	**+0.6**
FIA1				MSG		12 05 17.5	
	comp=Z,11nm,0.2s						
FINES	**FINESS Array B**	**1.72**	**339**	Pg	**Pb**	**12 04 49.4**	**+0.3**
	comp=Z,1.9nm,0.3s,baz=158,slow=17,SNR=181						
FINES				Lg	Lg	12 05 13.1	
	comp=Z,2.1nm,0.3s,baz=158,slow=27,SNR=3.7						
FINES				Rg	Rg	12 05 24.0	
	comp=Z,10nm,0.5s,baz=156,slow=34,SNR=9.7						
RUF	**Ruokolahti**	**1.77**	**26**	eP	**Pb**	**12 04 50.0**	**+0.1**
RUF				eS	**Sg**	**12 05 13.5**	**+0.1**
RUF				MSG		12 05 17.3	
	comp=Z,18nm,0.1s						
EE07	**Piusa Caves, O**	**2.01**	**178**	eP	**Pb**	**12 04 54.2**	**+0.2**
EE07				ePG	**Pg**	**12 04 55.2**	**+0.1**
EE07				eSG	**Sb**	**12 05 19.7**	**+0.1**
TVF	**Tvarminne**	**2.07**	**272**	ePG	**Pg**	**12 04 56.3**	**+0.1**
TVF				eSG	**Sg**	**12 05 23.3**	**+0.2**
TVF				MSG		12 05 26.9	
	comp=Z,12nm,0.2s						
MTSE	**Matsula**	**2.14**	**240**	eP	**Pn**	**12 04 55.1**	**+1.6**
MTSE	**Matsula**	**2.14**	**240**	eP	**Pb**	**12 04 56.2**	**0.0**
MTSE				eSG	**Sg**	**12 05 25.4**	**+0.2**
KAF	**Kangasniemi**	**2.33**	**348**	eP	**Pb**	**12 04 59.2**	**-0.3**
KAF				MSG		12 05 34.3	
	comp=Z,7.4nm,0.2s						
EE06	**Soera, Palade,**	**2.46**	**251**	eP	**Pb**	**12 05 00.9**	**-0.8**
EE06				eSB	**Sb**	**12 05 32.8**	**+0.2**
KEF	**Keuruu**	**2.62**	**334**	eP	**Pb**	**12 05 04.1**	**-0.4**
KEF	**Keuruu**	**2.62**	**334**	MSG		12 05 38.6	
	comp=Z,6.1nm,0.2s						
RAF	**Rauma**	**3.01**	**296**	eP	**Pb**	**12 05 09.0**	**-2.0**
HFS	**Hagfors**	**6.86**	**278**	Pn	**Pn**	**12 05 59.6**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=84,slow=15,SNR=8.3						
HFS				Sn	**Sn**	**12 07 14.4**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=91,slow=27,SNR=2.3						
HFS				Lg	Lg	12 07 49.9	
	comp=Z,0.5nm,0.3s,baz=82,slow=31,SNR=5.4						
	comp=Z,0.7nm,0.2s						
NOA	**NORSAR Array B**	**8.07**	**285**	Pn	**Pn**	**12 06 14.5**	**-0.5**
	baz=91,slow=9.5,SNR=8.8						
	comp=Z,0.1nm,0.4s						
AKASG	**Malin Array Be**	**9.23**	**173**	Pn	**Pn**	**12 06 31.1**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=352,slow=13,SNR=4.8						
	comp=Z,0.4nm,0.3s						
ARCES	**ARCESS Array B**	**9.76**	**356**	Pn	**Pn**	**12 06 38.6**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=172,slow=14,SNR=25						
ARCES				Sn	**Sn**	**12 08 22.9**	**-5.4**
	comp=Z,0.1nm,0.3s,baz=174,slow=24,SNR=1.3						
ARCES				Lg	Lg	12 09 18.0	
	comp=Z,0.2nm,0.3s,baz=172,slow=34,SNR=1.9						
	comp=Z,0.6nm,0.2s						

HEL 25 12:05:27.4±0.2**, 67°.86N×33°.65E, h0^{km}, ML1.3, Explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVZ	**Lovozero**	**0.38**	**84**	PG	Pg	12 05 34.5	-0.2
LVZ				SG	Sg	12 05 39.9	+0.2
VRF	**Varrio**	**1.54**	**268**	PG	Pn	12 05 55.3	-0.8
	baz=80						
VRF				MSG		12 06 13.5	
	comp=Z,1.9nm,0.2s						
VRF				SG	Sn	12 06 15.2	-1.5
RAJF	**Raja-Jooseppi**	**2.09**	**290**	PG	Pb	12 06 05.1	-1.0
RAJF				SG	Sb	12 06 32.7	+0.1
KTK1	**Kautokeino**	**4.01**	**292**	SB	Sb	12 07 23.5	-4.4

KOLA 25 12:05:57.4, 67°.65N×33°.78E, h0^{km}, ML1.4, Error ellipse: s-maj=2.4km s-min=1.0km az=140.0, Khibiny, mines Kirovsk, Yukspor, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APA	**Apatity**	**0.17**	**241**	S	Sg	12 06 02.8	+0.1
APA0	**Apatity Array**	**0.30**	**262**	P	Pg	12 06 02.9	-0.3
APA0				S	Sg	12 06 07.0	-0.2
LVZ	**Lovozero**	**0.41**	**53**	S	Sg	12 06 10.7	-0.1
KVDA	**Kovda**	**1.03**	**201**	S	Sg	12 06 29.2	-1.1
TERR	**Teriberka**	**1.64**	**17**	S	Sn	12 06 47.7	-1.4

*IDC **25** 12:20:19.9±0.8, 2°.81S×138°.74E, h0^{km}, mb3.9/8, mbtmp4.0/10, ML4.2/2, Error ellipse: s-maj=20.6km s-min=15.3km az=170.0*

*DJA **25** 12:20:25.3±0.5, 2°S±4°×13°9E±°, h38^{km}±14^{km}, M3.9/6, MLv3.9/6*

ISC 25 12:20:21.3±0.7**, 2°.88S**±0°.07×**138°.65E**±0°.05**, h10^{km}, n18,** σ**2^{s}08**/22**, mb3.8**/8**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**0.88**	**4**	P	**Pg**	**12 20 37.1**	**-1.2**
GENI	**Genyem**	**1.54**	**80**	P	**Pn**	**12 20 50.2**	**+1.3**
GENI				S	**Sn**	**12 21 08.4**	**-0.6**
JAY	**Jayapura**	**2.09**	**80**	Pn	**Pn**	**12 20 56.2**	**-0.1**
	17nm,0.3s,baz=228,slow=10,SNR=34						
JAY				Lg	Lg	12 21 23.1	
	9.0nm,0.3s,baz=296,slow=17,SNR=4.8						
JAY	**Jayapura**	**2.09**	**80**	P	**Pn**	**12 20 56.8**	**+0.4**
JAY				S	**Sn**	**12 21 21.8**	**-0.6**
SRPI	**Serui, Papua**	**2.60**	**292**	P	**Pn**	**12 21 03.7**	**+0.2**
BAKI	**Biak**	**3.04**	**303**	P	**Pn**	**12 21 09.0**	**-0.5**
RKPI	**Ransiki, Papua**	**4.67**	**287**	P	**Pn**	**12 21 31.8**	**-0.1**
BATI	**Baumata**	**16.56**	**243**	Pn	**Pn**	**12 24 17.0**	**+3.1**
	2.2nm,0.3s,baz=87,slow=17,SNR=2.0						
	32nm,1.0s						
WRA	**Warramunga Arr**	**17.48**	**194**	P	**Pn**	**12 24 26.8**	**+1.5**
	0.5nm,0.3s,baz=16,slow=12,SNR=14						
WRA				S	**Sn**	**12 27 33.3**	**-6.7**
	2.1nm,0.9s,baz=14,slow=23,SNR=4.8						
	0.6nm,0.3s						
FITZ	**Fitzroy Crossi**	**19.79**	**219**	P	**Pn**	**12 24 56.0**	**+2.6**
	9.8nm,1.1s,baz=34,slow=11,SNR=7.2						
ASAR	**Alice Springs**	**21.17**	**192**	P	**P**	**12 25 08.7**	**+1.7**
	3.4nm,0.8s,baz=20,slow=10,SNR=20						
ASAR				S	**S**	**12 29 01.7**	**-0.9**
	1.0nm,0.8s,baz=15,slow=25,SNR=4.9						
	3.4nm,0.8s						
MKAR	**Makanchi Array**	**69.88**	**322**	P	**P**	**12 31 32.8**	**+0.3**
	0.6nm,0.8s,baz=100,slow=8.4,SNR=4.6						
	0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**72.05**	**330**	P	**P**	**12 31 46.6**	**+1.2**
	0.4nm,0.2s,baz=128,slow=11,SNR=2.9						
	0.4nm,0.2s						
KURBB	**Kurchatov Arra**	**73.83**	**325**	P	**P**	**12 31 58.0**	**+2.0**
	0.8nm,0.9s,baz=117,slow=5.5,SNR=4.1						
	0.8nm,0.9s						
VNDA	**Vanda**	**75.62**	**175**	P	**P**	**12 32 05.7**	**-0.4**
	1.5nm,0.7s,baz=313,slow=4.6,SNR=2.6						
	1.5nm,0.7s						
BVAR	**Borovoye Array**	**79.41**	**325**	P	**P**	**12 32 26.6**	**-1.1**
	0.8nm,0.6s,baz=108,slow=4.7,SNR=3.9						
	0.8nm,0.6s						
ILAR	**Eielson Array**	**86.01**	**24**	P	**P**	**12 32 59.9**	**-1.8**
	0.5nm,0.8s,baz=245,slow=5.2,SNR=4.5						
	0.5nm,0.8s						
QSPA	**South Pole Qui**	**87.07**	**180**	P	**P**	**12 33 07.6**	**+0.5**
	1.1nm,0.8s,baz=310,slow=1.2,SNR=7.3						
	1.1nm,0.8s						

KRSC 25 12:30:37.6±2.1**, 56°.22N×164°.45E, h47^{km}**±20^{km}**, Ml3.9, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.91**	**270**	eP	Pn	12 30 54.2	+0.2
KBTR				eS	Sn	12 31 04.5	-1.6
KBG	**Krutoberegovo**	**0.97**	**273**	eP	Pn	12 30 54.8	0.0
KBG				eS	Sn	12 31 07.0	-0.5
ZLN	**Zelenaya**	**2.05**	**266**	eP	Pn	12 31 13.3	+3.6
ZLN				eS	Sn	12 31 38.4	+4.3
CIRR	**Tsirk**	**2.07**	**269**	eS	Sn	12 31 38.2	+3.5
LGNR	**Loginova**	**2.11**	**268**	eS	Sn	12 31 39.3	+3.6
BZGR	**Bezymyannyi-Gr**	**2.12**	**264**	eP	Pn	12 31 14.1	+3.4
BZGR				eS	Sn	12 31 39.1	+3.2
KRSR	**Krestovskiy**	**2.17**	**272**	eP	Pn	12 31 14.3	+3.0
KRSR				eS	Sn	12 31 39.9	+2.9
BZWR	**Bezymyannyi-We**	**2.23**	**265**	eP	Pn	12 31 16.0	+3.8
BZMR	**Bezymyannaya**	**2.24**	**264**	eP	Pn	12 31 15.7	+3.4
BZMR				eS	Sn	12 31 42.0	+3.3
MKZ	**Mys Kozlova**	**2.27**	**224**	eP	Pn	12 31 15.3	+2.6
MKZ				eS	Sn	12 31 40.8	+1.4
KIRR	**Kirishev**	**2.32**	**265**	eP	Pn	12 31 16.7	+3.3
KIRR				eS	Sn	12 31 44.0	+3.3
KPT	**Kopyto**	**2.38**	**266**	eP	Pn	12 31 18.0	+3.8
KPT				eS	Sn	12 31 46.6	+4.4
KMNR	**Kamenistaya**	**2.41**	**261**	eP	Pn	12 31 18.7	+4.0
TUMD	**Tumrok D**	**2.51**	**248**	eP	Pn	12 31 19.2	+3.3
KOZ	**Kozyrevsk**	**2.56**	**268**	eP	Pn	12 31 20.8	+4.2
KOZ				eS	Sn	12 31 52.4	+5.8
SRDR	**Sredinnyy**	**2.64**	**274**	eP	Pn	12 31 22.3	+4.5
SRDR				eS	Sn	12 31 52.4	+3.9
OSSR	**Ossora**	**3.13**	**347**	eP	Pn	12 31 27.4	+3.1
OSSR				eS	Sn	12 32 01.5	+1.1
ESO	**Esso**	**3.23**	**267**	eP	Pn	12 31 30.2	+4.3
SPN	**Mys Shipunski**	**4.05**	**221**	eP	Pn	12 31 39.2	+2.3
NLC	**Nalytchevo**	**4.25**	**226**	eP	Pn	12 31 43.8	+4.1
NLC				eS	Sn	12 32 29.8	+1.8
SDLR	**Sedlovina**	**4.37**	**230**	eP	Pn	12 31 45.4	+3.9
KRX	**Arik**	**4.41**	**232**	eP	Pn	12 31 46.8	+4.7
SMAR	**Somma**	**4.41**	**230**	eP	Pn	12 31 46.2	+4.0
AVH	**Avacha**	**4.44**	**231**	eP	Pn	12 31 46.9	+4.5
UGLR	**Uglovaya**	**4.44**	**230**	eP	Pn	12 31 46.4	+3.9
KOK	**Koryaka**	**4.46**	**231**	eP	Pn	12 31 47.0	+4.2
GNL	**Ganaly**	**4.52**	**239**	eP	Pn	12 31 48.2	+4.6
DALK	**Dalny**	**4.60**	**228**	eP	Pn	12 31 47.9	+3.4
DALK				eS	Sn	12 32 37.4	+0.8
KRMR	**Karymshinskiy**	**5.00**	**230**	eP	Pn	12 31 55.6	+5.5
RUS	**Russkaya**	**5.14**	**225**	eP	Pn	12 31 55.8	+3.9
GRL	**Gorelyy**	**5.23**	**228**	eP	Pn	12 31 58.6	+5.3
MTVR	**Mutnovka**	**5.24**	**227**	eP	Pn	12 31 57.9	+4.5
ASAK	**Asacha**	**5.43**	**228**	eP	Pn	12 32 00.7	+4.8

IDC 25 12:33:25.8±8.8**, 6°.36S×129°.12E, h195^{km}**±94^{km}**, mb2.7**/1**, mbtmp3.9**/5**, Error ellipse: s-maj=82.4km s-min=26.3km az=41.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.62**	**234**	P	Pn	12 35 02.6	+1.6
	13nm,0.4s,baz=263,slow=13,SNR=2.3						
BATI				S	Sn	12 36 16.0	-0.5
	21nm,0.3s,baz=54,slow=21,SNR=8.1						
FITZ	**Fitzroy Crossi**	**12.15**	**196**	P	Pn	12 36 12.3	-0.4
	4.5nm,0.5s,baz=28,slow=10,SNR=25						
FITZ				S	Sn	12 38 23.5	-4.8
	3.5nm,0.8s,baz=281,slow=11,SNR=2.1						
WRA	**Warramunga Arr**	**14.43**	**160**	P	Pn	12 36 39.7	-1.6
	0.6nm,0.5s,baz=338,slow=12,SNR=12						
WRA				S	S	12 39 13.5	-8.8
	0.8nm,0.4s,baz=336,slow=21,SNR=7.3						
ASAR	**Alice Springs**	**17.82**	**166**	P	Pn	12 37 21.1	-0.9
	7.1nm,0.6s,baz=339,slow=9.8,SNR=66						
ASAR				S	S	12 40 29.9	-4.8
	0.8nm,0.7s,baz=346,slow=22,SNR=5.0						
MKAR	**Makanchi Array**	**67.21**	**327**	P	P	12 43 58.8	-0.2
	0.1nm,0.4s,baz=120,slow=5.3,SNR=1.8						
	0.1nm,0.4s						

KRSC 25 12:33:41.8±1.3**, 56°.14N×164°.41E, h24^{km}**±19^{km}**, Ml3.6, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.89**	**275**	eP	Pb	12 33 58.5	0.0
KBTR				eS	Sb	12 34 09.8	-0.2
KBG	**Krutoberegovo**	**0.96**	**278**	eP	Pb	12 33 59.7	0.0
KBG				eS	Sb	12 34 11.6	-0.4
BKI	**Bering**	**1.29**	**136**	eP	Pb	12 34 06.4	+1.1
BKI				eS	Sb	12 34 22.9	+1.5
SMKR	**Semkarok**	**1.69**	**286**	eP	Pb	12 34 11.4	-0.9
SMKR				eS	Sb	12 34 32.2	-1.0
BDR	**Baidarnaya**	**1.83**	**285**	eS	Sb	12 34 36.9	-0.2
SRKR	**Sorokina**	**1.87**	**287**	eS	Sb	12 34 36.9	-1.4
KRSR	**Krestovskiy**	**2.15**	**274**	eP	Pb	12 34 18.6	-1.4
BZWR	**Bezymyannyi-We**	**2.20**	**267**	eP	Pb	12 34 20.6	-0.4
MKZ	**Mys Kozlova**	**2.20**	**225**	eP	Pn	12 34 18.7	+1.8
MKZ				eS	Sn	12 34 44.5	+1.3
BZMR	**Bezymyannaya**	**2.21**	**266**	eP	Pb	12 34 20.5	-0.6
KIRR	**Kirishev**	**2.29**	**267**	eP	Pb	12 34 21.4	-1.0
KMNR	**Kamenistaya**	**2.38**	**262**	eP	Pb	12 34 22.9	-1.0
TUMD	**Tumrok D**	**2.46**	**249**	eP	Pb	12 34 23.4	-1.9
KOZ	**Kozyrevsk**	**2.54**	**270**	eP	Pb	12 34 25.0	-1.6
KOZ				eS	Sb	12 34 56.8	-0.6
OSSR	**Ossora**	**3.20**	**348**	eP	Pn	12 34 31.1	+0.6
SPN	**Mys Shipunski**	**3.97**	**222**	eP	Pn	12 34 43.4	+2.2
SDLR	**Sedlovina**	**4.30**	**230**	eP	Pn	12 34 49.3	+3.6
SMAR	**Somma**	**4.34**	**231**	eP	Pn	12 34 50.0	+3.6
UGLR	**Uglovaya**	**4.37**	**230**	eP	Pn	12 34 50.3	+3.6
KOK	**Koryaka**	**4.40**	**232**	eP	Pn	12 34 50.7	+3.7
MTVR	**Mutnovka**	**5.17**	**227**	eP	Pn	12 35 01.6	+3.9

IDC 25 12:34:28.0±0.8**, 56°.51N×164°.44E, h0^{km}, mb3.7**/14**, mbtmp3.7**/16**, ML3.1**/2**, Error ellipse: s-maj=28.4km s-min=13.3km az=160.0, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**5.18**	**232**	Pn	Pn	12 35 47.2	+0.5
	0.6nm,0.3s,baz=74,slow=17,SNR=5.9						
PETK				Sn	Sn	12 36 46.9	-0.2
	0.1nm,0.3s,baz=74,slow=11,SNR=4.2						
	2.3nm,0.6s						
ASAJ	**Asahikawa**	**18.57**	**237**	P	Pn	12 38 47.2	+1.0
	0.2nm,0.3s,baz=357,slow=2.8,SNR=4.6						
	5.8nm,0.8s						
KDAK	**Kodiak Island**	**23.06**	**69**	P	P	12 39 34.1	-0.6
	7.5nm,1.1s,baz=286,slow=7.1,SNR=2.6						
	7.5nm,1.1s						
ILAR	**Eielson Array**	**24.65**	**50**	P	P	12 39 49.8	-0.1
	0.7nm,0.9s,baz=268,slow=9.4,SNR=6.5						
	0.7nm,0.9s						
MJAR	**Matsushiro Arr**	**26.64**	**233**	P	P	12 40 08.8	+0.7
	0.8nm,0.6s,baz=43,slow=9.6,SNR=7.7						
	0.8nm,0.6s						
SONM	**Songino Array**	**35.64**	**281**	P	P	12 41 27.3	-0.1
	0.7nm,1.0s,baz=52,slow=7.6,SNR=1.5						
	0.7nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**36.77**	**176**	T	T	13 20 34.7	
	baz=357,slow=76,SNR=18						
H11N3	**WAKE ISLAND Hy**	**36.78**	**176**	T	T	13 20 34.4	
	baz=357,slow=76,SNR=15						
H11N1	**WAKE ISLAND Hy**	**36.79**	**176**	T	T	13 20 34.7	
	baz=357,slow=76,SNR=13						
YKA	**Yellowknife Ar**	**38.96**	**47**	P	P	12 41 55.8	+0.7
	0.4nm,0.7s,baz=304,slow=8.2,SNR=5.3						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**48.18**	**302**	P	P	12 43 09.6	0.0
	0.5nm,0.8s,baz=53,slow=8.6,SNR=4.6						
	0.5nm,0.8s						
MKAR	**Makanchi Array**	**48.95**	**296**	P	P	12 43 14.8	-0.8
	0.3nm,0.8s,baz=60,slow=8.5,SNR=3.0						
	0.3nm,0.8s						
BVAR	**Borovoye Array**	**50.24**	**308**	P	P	12 43 25.2	-0.1
	0.6nm,0.4s,baz=46,slow=8.3,SNR=2.1						
	0.6nm,0.4s						
NVAR	**Mina Array Bea**	**52.32**	**75**	P	P	12 43 40.7	-0.7
	0.6nm,0.8s,baz=281,slow=9.1,SNR=4.3						
	0.6nm,0.8s						
PDAR	**Pinedale Array**	**53.73**	**66**	P	P	12 43 52.0	+0.2
	0.9nm,0.7s,baz=348,slow=2.6,SNR=9.1						
	0.9nm,0.7s						
NOA	**NORSAR Array B**	**60.91**	**345**	P	P	12 44 41.6	-0.4
	0.6nm,0.6s,baz=17,slow=6.8,SNR=2.6						
	0.6nm,0.6s						
CMAR	**Chiang Mai Arr**	**61.31**	**260**	P	P	12 44 43.7	-1.5
	0.3nm,0.3s,baz=42,slow=5.9,SNR=1.7						
	0.3nm,0.3s						
HFS	**Hagfors**	**61.42**	**344**	P	P	12 44 46.2	+0.9
	1.2nm,0.8s,baz=17,slow=11,SNR=3.9						
	1.2nm,0.8s						
TXAR	**Lajitas Array**	**67.06**	**71**	P	P	12 45 22.8	-0.1
	0.9nm,0.7s,baz=305,slow=4.4,SNR=7.2						
	0.9nm,0.7s						

*SJA **25** 12:36:57.2±0.7, 20°.08S×68°.16W, h180^{km}, ML4.0, MW3.9*

*GUC **25** 12:36:59.4±0.9, 20°.09S×68°.22W, h175^{km}±8^{km}, ML4.2*

*IDC **25** 12:36:59.4±1.5, 19°.95S×67°.88W, h181^{km}±13^{km}, mb3.6/9, mbtmp4.1/13, Error ellipse: s-maj=17.7km s-min=12.6km az=58.0*

*NEIC **25** 12:36:59.0±1.6, 20°.11S±0°.04×68°.19W±0°.08, h170^{km}±4^{km}, mb4.2/21, ML4.2(GUC), Error ellipse: s-maj=11.8km s-min=5.1km az=71.0*

*SCB **25** 12:36:59.1±0.7, 20°.08S×68°.18W, h163^{km}±7^{km}, ML4.3/3, MW3.6, Error ellipse: s-maj=2.6km s-min=2.4km az=358.0*

*VAO **25** 12:37:00.2±1.1, 19°.98S×67°.93W, h185^{km}±7^{km}, mb4.3*

ISC 25 12:36:57.6±0.6**, 20°.06S**±0°.03×**68°.08W**±0°.04**, h167^{km}**±6^{km}**, n160,** σ**1^{s}34**/155**, mb4.0**/12**, 9C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**1.01**	**265**	Pn	**Pn**	**12 37 25.8**	**+1.2**
GO01	**Chusmiza**	**1.12**	**290**		**Pn**	**12 37 26.4**	**+0.9**
GO01				Sn	**Sn**	**12 37 48.0**	**+1.1**
GO01	**Chusmiza**	**1.12**	**290**⇑	eP	**Pn**	**12 37 26.4**	**+0.9**
GO01				eS	**Sn**	**12 37 47.2**	**+0.3**
GO01				IAML		12 37 49.8	
	comp=E,2µm,0.4s						
GO01	**Chusmiza**	**1.12**	**290**	Pg	**Pn**	**12 37 26.4**	**+0.9**
GO01	**Chusmiza**	**1.12**	**290**	eP	**Pn**	**12 37 25.8**	**+0.2**
SOEO	**Opoqueri**	**1.50**	**7**	Pg	**Pn**	**12 37 31.1**	**+2.0**
PB11	**IPOC Station P**	**1.51**	**281**		**Pn**	**12 37 29.2**	**+0.4**
PB11				Sn	**Sn**	**12 37 52.7**	**-0.1**
PB11	**IPOC Station P**	**1.51**	**281**⇑	eP	**Pn**	**12 37 29.2**	**+0.4**
PB11				eS	**Sn**	**12 37 52.6**	**-0.1**
PB11				IAML		12 37 53.5	
	comp=E,2µm,0.3s						
PB11	**IPOC Station P**	**1.51**	**281**	Pg	**Pn**	**12 37 29.2**	**+0.4**
PB11				Sg	**Sn**	**12 37 52.7**	**-0.1**
PB11				Sg		12 37 53.3	
PB11				IAML		12 37 54.6	
	comp=E,2µm,0.4s						
PB11	**IPOC Station P**	**1.51**	**281**	eP	**Pn**	**12 37 29.2**	**+0.4**
PB11				eS	**Sn**	**12 37 53.2**	**+0.4**
PB11				IAML		12 37 57.7	
	comp=Z,833nm,0.2s						
PB01	**IPOC Station P**	**1.64**	**233**		**Pn**	**12 37 30.7**	**+0.6**
PB01				Sn	**Sn**	**12 37 55.0**	**-0.1**
PB01	**IPOC Station P**	**1.64**	**233**⇑	eP	**Pn**	**12 37 30.6**	**+0.6**
PB01				eS	**Sn**	**12 37 54.8**	**-0.3**
PB01				IAML		12 37 56.1	
	comp=N,4µm,0.3s						
PB01	**IPOC Station P**	**1.64**	**233**	Pg	**Pn**	**12 37 30.7**	**+0.6**
PB01				Sg	**Sn**	**12 37 55.0**	**-0.1**
PB01				IAML		12 37 55.8	
	comp=N,3µm,0.4s						
PB01	**IPOC Station P**	**1.64**	**233**	eP	**Pn**	**12 37 30.6**	**+0.5**
PB01				eS	**Sn**	**12 37 55.4**	**+0.3**
PB01				IAML		12 37 57.2	
	comp=Z,1µm,0.2s						
HMBC	**Humberstone**	**1.71**	**262**	Pn	Pn	12 37 30.8	0.0
HMBC				Sn	**Sn**	**12 37 55.2**	**-1.2**
TA02	**Huaiquique**	**1.94**	**263**		**Pn**	**12 37 33.3**	**+0.2**
TA02	**Huaiquique**	**1.94**	**263**⇑	eP	**Pn**	**12 37 33.3**	**+0.2**
TA02				eS	**Sn**	**12 37 59.1**	**-1.4**
TA02	**Huaiquique**	**1.94**	**263**	eP	**Pn**	**12 37 33.3**	**+0.2**
TA02				eS	**Sn**	**12 38 00.2**	**-0.2**
TA02				IAML		12 38 01.1	
	comp=Z,1µm,0.5s						
TA01	**Diego Aracena**	**2.03**	**255**		Pn	12 37 34.0	-0.1
TA01	**Diego Aracena**	**2.03**	**255**⇑	eP	Pn	12 37 34.0	-0.2
TA01				eS	Sn	12 38 00.1	-2.3
TA01				IAML		12 38 01.5	
	comp=N,628nm,0.7s						
TA01	**Diego Aracena**	**2.03**	**255**	eP	Pn	12 37 34.0	-0.2
TA01				eS	Sn	12 37 57.7	-4.7
PB09	**IPOC Station P**	**2.04**	**212**		**Pn**	**12 37 35.0**	**+0.6**
PB09	**IPOC Station P**	**2.04**	**212**	eP	**Pn**	**12 37 35.6**	**+1.2**
PB09				eS	**Sn**	**12 38 04.0**	**+1.0**
PB09				IAML		12 38 07.3	
	comp=E,552nm,0.4s						
PB09	**IPOC Station P**	**2.04**	**212**	Pg	**Pn**	**12 37 35.8**	**+1.4**
PB09	**IPOC Station P**	**2.04**	**212**	eP	**Pn**	**12 37 35.4**	**+1.0**
PB09				eS	**Sn**	**12 38 04.6**	**+1.6**
PB09				IAML		12 38 07.8	
	comp=Z,498nm,0.3s						
PATCX	**Punta Patache**	**2.08**	**248**		Pn	12 37 35.0	+0.2
PATCX	**Punta Patache**	**2.08**	**248**⇑	eP	Pn	12 37 35.0	+0.2
PATCX				eS	Sn	12 38 01.8	-1.8
PATCX				IAML		12 38 03.6	
	comp=E,3µm,0.5s						
PATCX	**Punta Patache**	**2.08**	**248**	eP	Pn	12 37 35.0	+0.2
PATCX				eS	**Sn**	**12 38 03.3**	**-0.3**
PB16	**IPOC Station P**	**2.18**	**322**		**Pn**	**12 37 38.1**	**+1.5**
PB16	**IPOC Station P**	**2.18**	**322**⇑	eP	**Pn**	**12 37 38.1**	**+1.5**
PB16				eS	**Sn**	**12 38 08.0**	**+1.5**
PB16				IAML		12 38 10.0	
	comp=N,552nm,0.5s						
PB16	**IPOC Station P**	**2.18**	**322**	Pg	**Pn**	**12 37 37.9**	**+1.4**
PB16	**IPOC Station P**	**2.18**	**322**	eP	**Pn**	**12 37 38.0**	**+1.5**
PB16				eS	**Sn**	**12 38 09.1**	**+2.6**
PB16				IAML		12 38 15.2	
	comp=Z,366nm,0.5s						
PB03	**IPOC Station P**	**2.52**	**218**		**Pn**	**12 37 40.6**	**+0.6**
PB03	**IPOC Station P**	**2.52**	**218**	eP	**Pn**	**12 37 40.6**	**+0.6**
PB03				eS	**Sn**	**12 38 11.5**	**-1.4**
PB03				IAML		12 38 15.1	
	comp=E,724nm,0.2s						
PB03	**IPOC Station P**	**2.52**	**218**	eP	**Pn**	**12 37 40.4**	**+0.4**
PB03				eS	**Sn**	**12 38 11.7**	**-1.2**
PB03				IAML		12 38 12.6	
	comp=Z,727nm,0.2s						
MOCB	**Mochara**	**2.58**	**118**	Pg	**Pn**	**12 37 44.0**	**+3.0**
MOCB				Sg	**Sn**	**12 38 17.3**	**+2.8**
MOCB				IAML		12 38 18.9	
	comp=Z,582nm,0.7s						
AP01	**Chacalluta**	**2.72**	**308**		**Pn**	**12 37 41.8**	**-0.4**
AP01	**Chacalluta**	**2.72**	**308**	eP	**Pn**	**12 37 41.9**	**-0.4**
AP01				IAML		12 38 19.7	
	comp=E,2µm,0.4s						
AP01	**Chacalluta**	**2.72**	**308**	eP	**Pn**	**12 37 42.0**	**-0.2**
AP01				eS	**Sn**	**12 38 17.0**	**+0.2**
AP01				IAML		12 38 19.5	
	comp=Z,999nm,0.5s						
PB18	**Visviri**	**2.79**	**331**		**Pn**	**12 37 45.4**	**+1.7**
PB18	**Visviri**	**2.79**	**331**⇑	eP	**Pn**	**12 37 46.1**	**+2.4**
AF01	**San Pedro de A**	**2.88**	**182**	Pn	**Pn**	**12 37 45.1**	**+0.7**
AF01	**San Pedro de A**	**2.88**	**182**	eS	Sn	12 38 32.2	+11
AF01				IAML		12 39 15.6	
	comp=Z,155nm,0.5s						
PB06	**IPOC Station P**	**2.98**	**208**		**Pn**	**12 37 46.4**	**+0.9**
PB06	**IPOC Station P**	**2.98**	**208**	eP	**Pn**	**12 37 46.1**	**+0.5**
PB06				eS	**Sn**	**12 38 21.6**	**-1.2**
PB06				IAML		12 38 22.6	
	comp=E,1µm,0.4s						
PB06	**IPOC Station P**	**2.98**	**208**	eP	**Pn**	**12 37 45.5**	**0.0**
PB06				eS	**Sn**	**12 38 22.1**	**-0.8**
PB06				IAML		12 38 22.7	
	comp=Z,497nm,0.4s						
BBOJ	**La Paz, Jacaqu**	**3.07**	**358**	Pg	**Pn**	**12 37 49.6**	**+2.4**
SOEJ	**Jacaque**	**3.07**	**358**	Pg	**Pn**	**12 37 49.7**	**+2.5**
YJA	**Yavi**	**3.19**	**132**	Pg	**Pn**	**12 37 51.1**	**+2.6**
YJA	**Yavi**	**3.19**	**132**	eP	**Pn**	**12 37 51.1**	**+2.6**
YJA				eS	**Sn**	**12 38 27.0**	**-1.0**
PB05	**IPOC Station P**	**3.41**	**215**		**Pn**	**12 37 51.0**	**+0.1**
PB05	**IPOC Station P**	**3.41**	**215**⇑	eP	**Pn**	**12 37 51.0**	**+0.1**
PB05				eS	Sn	12 38 29.0	-3.4
PB05	**IPOC Station P**	**3.41**	**215**	eP	**Pn**	**12 37 51.1**	**+0.1**
PB05				eS	Sn	12 38 28.7	-3.7
PB05				IAML		12 38 33.4	
	comp=Z,410nm,0.3s						
BBOD	**La Paz, Gloria**	**3.44**	**352**	Pg	**Pn**	**12 37 53.8**	**+2.0**
LPAZ	**La Paz**	**3.75**	**359**		**Pn**	**12 37 57.7**	**+1.9**

LPAZ	La Paz	3.75	359	P	Pn	12 37 57.6	+1.8
	comp=Z,23nm,0.3s,baz=165,slow=5.8,SNR=108						
LPAZ				S	Sn	12 38 41.8	+0.7
	comp=Z,14nm,0.7s,baz=27,slow=24,SNR=6.1						
LPAZ	La Paz	3.75	359	Pg	Pn	12 37 57.8	+1.9
LPAZ	La Paz	3.75	359	eP	Pn	12 37 57.1	+1.2
LPAZ	La Paz	3.75	359	eP	Pn	12 37 56.8	+0.9
BBOB	La Paz, Bander	3.90	359	Pg	Pn	12 37 59.3	+1.7
PB10	IPOC Station P	4.13	213	Pn	Pn	12 37 59.8	-0.3
PB10	IPOC Station P	4.13	213	eP	Pn	12 37 59.5	-0.5
PB10				eS	Sn	12 38 35.6	-13
PB10				IAML		12 38 48.1	
	comp=Z,169nm,0.4s						
PB14	IPOC Station P	5.03	205		Pn	12 38 10.5	-1.4
PB14	IPOC Station P	5.03	205	eP	Pn	12 38 10.8	-1.2
PB14				eS	Sn	12 39 06.7	-3.5
PB14				IAML		12 39 08.6	
	comp=Z,116nm,0.4s						
SLA	San Lorenzo	5.21	153	eP	Pn	12 38 10.9	-3.4
SLA				eS	Sn	12 39 17.0	+2.6
SLA				IAML		12 39 18.2	
	comp=Z,31nm,0.6s						
GO02	Mina Guanaco	5.26	195		Pn	12 38 14.9	-0.2
GO02	Mina Guanaco	5.26	195	eP	Pn	12 38 14.2	-0.9
GO02				eS	Sn	12 39 14.5	-1.3
AC01	Pan de Azucar	6.49	200	Pn	Pn	12 38 29.1	-1.8
AC02	Maricunga	6.81	188		Pn	12 38 34.8	-0.9
AC06	Mina Casimiro	7.55	196	Pn	Pn	12 38 43.0	-2.0
GO03	Copiapo	7.75	194	Pn	Pn	12 38 44.9	-2.9
SIV	San Ignacio	7.80	60	P	Pn	12 38 46.9	-1.6
	comp=Z,11nm,0.4s,baz=249,slow=8.4,SNR=48						
SIV				S	Sn	12 40 11.3	-4.5
	comp=Z,6.1nm,0.7s,baz=320,slow=19,SNR=9.4						
AC04	Llanos de Chal	8.55	198	Pn	Pn	12 38 54.7	-3.6
LCO	Las Campanas	9.22	194	Pn	Pn	12 39 03.6	-3.8
PTLB	Pontes e Lacer	9.68	63		Pn	12 39 13.1	-0.1
PTLB	Pontes e Lacer	9.68	63	eP	Pn	12 39 12.9	-0.3
CO01	Juntas del Tor	10.04	190	Pn	Pn	12 39 15.3	-2.8
VILB	Vilhena	10.35	48		Pn	12 39 23.8	+1.7
VILB	Vilhena	10.35	48	eP	Pn	12 39 23.8	+1.7
GO04	Tololo Observa	10.36	193	Pn	Pn	12 39 19.3	-3.0
BDQN	Bodoquena, MS	10.64	94	eP	Pn	12 39 23.9	-2.0
CO03	El Pedregal	10.99	192	Pn	Pn	12 39 26.9	-3.5
CO06	Fray Jorge	11.04	196	Pn	Pn	12 39 28.1	-2.9
CO02	Combarbal	11.40	193	Pn	Pn	12 39 31.7	-4.1
CPUP	Villa Florida	11.69	124		Pn	12 39 40.5	+1.1
CPUP	Villa Florida	11.69	124	P	Pn	12 39 40.2	+0.8
	comp=Z,1.2nm,0.5s,baz=155,slow=12,SNR=13						
SALV	Santo Antonio	12.49	73	eP	Pn	12 39 50.5	+0.7
VA03	San Esteban	12.84	189	Pn	Pn	12 39 50.3	-4.0
VA01	Torpederas	13.30	193	Pn	Pn	12 39 56.7	-3.2
MT02	Curacav	13.42	191	Pn	Pn	12 39 59.0	-2.6
MT08	Bocatoma Ro	13.44	187	Pn	Pn	12 39 59.8	-2.3
MT05	Renca	13.49	190	Pn	Pn	12 39 59.8	-2.7
RPRD	Ribas do Rio P	13.50	94	eP	P	12 40 04.0	-2.1
PDRB	Porto dos Gac	13.77	54	eP	P	12 40 06.2	-3.0
LMEL	Las Melosas	13.86	187	Pn	Pn	12 40 03.4	-3.9
MT09	Talagante	13.90	190	Pn	Pn	12 40 04.4	-3.4
MT01	Popeta	14.03	191	Pn	Pn	12 40 05.2	-4.0
BO04	La Punta	14.05	189	Pn	Pn	12 40 05.0	-4.5
BO01	Tunca	14.52	190	Pn	Pn	12 40 12.7	-2.6
BO02	Sierra Bellavi	14.87	189	Pn	Pn	12 40 16.2	-3.5
CLDB	Colider	14.95	54	eP	P	12 40 21.1	-1.1
PTGB	Pitanga	15.52	110	eP	P	12 40 28.2	-0.3
PCMB	Pacaembu	15.80	99	eP	P	12 40 31.4	-0.3
ITAB	Concordia	16.26	119	eP	Pn	12 40 38.0	+1.3
ITRB	Iturama	16.68	92	eP	Pn	12 40 41.1	-0.8
CPSB	Cacapava Do Su	16.76	131	eP	Pn	12 40 43.9	+1.1
NPGB	Novo Progresso	17.88	45	eP	Pn	12 40 54.4	-1.9
SNDB	Serra Nova Dou	18.02	66	eP	Pn	12 40 55.9	-2.0
TRQA	Tornquist	18.70	165	P	P	12 41 02.0	-1.3
TRQA				IAmb	IAmb	12 41 19.9	
	comp=Z,24nm,1.4s						
IPMB	Ipameri, GO	18.90	87	eP	P	12 41 05.5	-0.2
BDFB	Brasilia	19.60	80	P	Pn	12 41 13.9	-2.6
BDFB				IAmb	IAmb	12 41 17.0	
	comp=Z,7.6nm,0.5s						
BDFB	Brasilia	19.60	80	P	Pn	12 41 13.5	-3.0
	comp=Z,5.7nm,0.4s,baz=244,slow=11,SNR=3.8						
ITTB	Itaituba	19.70	39	eP	P	12 41 13.1	-1.2
LR05	Currie	20.38	189	P	P	12 41 22.1	+0.8
PMNB	Patos De Minas	20.48	89	eP	P	12 41 22.1	-0.7
PLCA	Paso Flores	20.71	185	P	P	12 41 26.4	+1.4
PLCA				IAmb	IAmb	12 41 28.8	
	comp=Z,7.1nm,0.9s						
PLCA	Paso Flores	20.71	185	P	P	12 41 26.3	+1.3
	comp=Z,5.0nm,0.8s,baz=0.8,slow=11,SNR=9.0						
	comp=Z,5.0nm,0.8s						
BSCB	Bom Sucesso	21.85	97	eP	P	12 41 36.4	-0.8
PRPB	Parauapebas	22.48	55	eP	P	12 41 42.6	-0.7
MAL2	Monte Alegre,	22.50	39	P	P	12 41 42.7	-0.7
MAL2				IAmb	IAmb	12 41 46.3	
	comp=Z,11nm,0.8s						
SMTB	Santa Maria do	22.72	64	eP	P	12 41 45.8	+0.2
DIAM	Diamantina, MG	23.12	90	eP	P	12 41 49.1	-0.2
JANB	Januaria	23.19	81	eP	P	12 41 48.8	-1.1
SDBA	SAO DESIDERIO	23.50	75	eP	P	12 41 50.9	-1.8
RCBR	Riachuelo	34.31	70	P	P	12 43 29.6	+1.1
CELP	Cerrillos	37.93	2	P	P	12 43 59.2	+0.2
TXAR	Lajitas Array	59.91	324	P	P	12 46 46.9	+0.6
TXAR	Lajitas Array	59.91	324	P	P	12 46 46.2	-0.1
	comp=Z,0.4nm,0.5s,baz=151,slow=9.3,SNR=3.9						
	comp=Z,0.4nm,0.5s						
TX31	Lajitas Ar. Si	59.91	324	P	P	12 46 46.7	+0.4
BELA	Belgrano 2	60.06	172	P	P	12 46 47.9	+1.3
BELA				IAmb	IAmb	12 47 15.7	
	comp=Z,3.4nm,1.3s						
VHRN	Van Horn	61.76	324	P	P	12 46 59.4	+0.6
VHRN				IAmb	IAmb	12 46 59.7	
	comp=Z,1.9nm,0.7s						
LENM	Lemitar	65.41	325	P	P	12 47 22.1	-0.6
SDCO	Great Sand Dun	67.42	329	P	P	12 47 37.0	+1.5
DBIC	Dimbokro	67.58	74	P	P	12 47 36.3	-0.4
DBIC	Dimbokro	67.58	74	P	P	12 47 35.4	-1.3
	comp=Z,4.0nm,0.5s,baz=256,slow=2.9,SNR=12						
	comp=Z,4.0nm,0.5s						
QSPA	South Pole Qui	70.12	180	P	P	12 47 53.8	+2.0
QSPA	South Pole Qui	70.12	180	P	P	12 47 52.8	+1.1
	comp=Z,1.9nm,0.9s,baz=218,slow=1.0,SNR=6.4						
	comp=Z,1.9nm,0.9s						
BSUT	Blindstream Ca	72.19	327	P	P	12 48 06.4	+1.7
EPLO	Experimental L	73.06	343	P	P	12 48 09.2	0.0
EPLO				IAmb	IAmb	12 48 09.8	
	comp=Z,4.2nm,1.3s						
PDAR	Pinedale Array	73.27	329	P	P	12 48 11.0	+0.1
	comp=Z,0.2nm,0.5s,baz=118,slow=4.5,SNR=2.9						
	comp=Z,0.2nm,0.5s						
ULM	Lac du Bonnet	74.19	342	P	P	12 48 15.8	0.0
ULM				IAmb	IAmb	12 48 40.1	
	comp=Z,5.4nm,1.4s						
ULM	Lac du Bonnet	74.19	342	P	P	12 48 15.3	-0.4
	comp=Z,2.6nm,0.5s,baz=175,slow=6.5,SNR=6.5						
	comp=Z,2.6nm,0.5s						
NVAR	Mina Array Bea	74.85	321	P	P	12 48 21.4	+1.2
	comp=Z,0.2nm,0.5s,baz=176,slow=6.1,SNR=3.6						
	comp=Z,0.2nm,0.5s						
TORD	Torodi Ar. Bea	76.14	70	P	P	12 48 27.2	-0.5
TORD				IAmb	IAmb	12 48 27.8	
	comp=Z,5.0nm,0.7s						
TORD	Torodi Ar. Bea	76.14	70	P	P	12 48 26.9	-0.8
	comp=Z,4.9nm,0.5s,baz=258,slow=4.3,SNR=2.6						
	comp=Z,4.9nm,0.5s						
PLID	Pearl Lake	78.13	328	P	P	12 48 40.0	+1.5
KRMB	Red Mountain	80.14	321	P	P	12 48 50.8	+1.5
YKAW1	Yellowknife Wh	90.05	340	P	P	12 49 38.8	+0.9
YKA	Yellowknife Ar	90.10	340	P	P	12 49 37.9	-0.2
	comp=Z,1.2nm,0.7s,baz=131,slow=3.9,SNR=19						
	comp=Z,1.2nm,0.7s						
YKAW3	Yellowknife Wh	90.15	340	P	P	12 49 39.0	+0.7
STHS	Stebnicka Huta	104.54	42	ePDIFF	Pdif	12 50 43.6	-0.2
ASAR	Alice Springs	131.54	207	PKP	PKPdf	12 55 51.2	0.0
	comp=Z,0.2nm,0.5s,baz=146,slow=2.0,SNR=4.2						
WRA	Warramunga Arr	134.58	210	PKP	PKPdf	12 55 57.1	+0.1
	comp=Z,0.7nm,0.8s,baz=144,slow=1.7,SNR=2.8						
ZALV	Zalesovo Beam	140.33	25	PKP	PKPdf	12 56 06.6	+0.2
	comp=Z,0.5nm,0.5s,baz=279,slow=2.8,SNR=2.1						
USA0B	Ussuriysk Arra	150.69	330	PKPbc	PKiKP	12 56 30.4	-0.2
USRK	Ussuriysk Ar.	150.69	330	PKPbc	PKiKP	12 56 30.8	+0.2
MAJO	Matsushiro	151.75	311	PKPbc	PKiKP	12 56 33.5	+0.3
MJB9	Matsu-Tunnel	151.75	311	PKPbc	PKiKP	12 56 33.6	+0.4
SONM	Songino Array	151.93	8	PKPbc	PKPbc	12 56 32.9	-0.1
	comp=Z,0.7nm,0.4s,baz=320,slow=4.3,SNR=2.3						
PZH	PanZhiHua	168.66	54	PKP	PKPdf	12 56 42.3	-3.0

IDC ***25*** *12:42:01.6±0.7, 56°.31N×163°.78E, h0^{km}, mb3.6/12, mbtmp3.7/14, ML3.0/2, MS3.9/1, Error ellipse: s-maj=29.6km s-min=14.1km az=153.0*
KRSC ***25*** *12:42:02.3±1.6, 56°.22N×164°.21E, h44^{km}±21^{km}, Ml4.1*
MOS ***25*** *12:42:02.3±0.7, 56°.23N×164°.12E, h11^{km}, mb4.5/5, Error ellipse: s-maj=9.2km s-min=5.2km az=50.2*
NEIC ***25*** *12:42:03.1±1.2, 56°.1N±0°.2×163°.7E±0°.2, h10^{km}±1^{km}, mb4.0/57, Error ellipse: s-maj=30.1km s-min=17.3km az=153.0*
ISC 25 12:42:04.6±0.5**, 56°.22N**±0°.04×**163°.99E**±0°.03**, h19**^{km}**, n171, σ1^{s}.84**/187**, mb4.0**/38**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.65	269	PN	Pg	12 42 16.2	-1.3
KBTR				S	Sn	12 42 26.5	-2.1
KBTR	Krutoberegovo	0.65	269	eP	Pg	12 42 16.2	-1.3
KBTR				eS	Sn	12 42 26.5	-2.1
KBG	Krutoberegovo	0.72	273	PN	Pb	12 42 17.1	-1.3
KBG				S	Sn	12 42 28.6	-1.5
KBG	Krutoberegovo	0.72	273	eP	Pb	12 42 17.2	-1.3
KBG				eS	Sn	12 42 28.7	-1.5
SMKR	Semkarok	1.45	286	PN	Pb	12 42 29.7	-1.2
SMKR	Semkarok	1.45	286	eP	Pb	12 42 29.8	-1.2
BKI	Bering	1.52	131	PN	Pn	12 42 28.1	-2.5
BKI				S	Sn	12 42 47.3	-2.5
BKI	Bering	1.52	131	eP	Pn	12 42 28.1	-2.5
BKI				eS	Sn	12 42 47.3	-2.5
BDR	Baidarnaya	1.58	284	eS	Sg	12 42 53.9	-1.8
ZLN	Zelenaya	1.79	265	PN	Pb	12 42 35.8	-1.1
ZLN	Zelenaya	1.79	265	eP	Pb	12 42 35.8	-1.1
CIRR	Tsirk	1.81	268	PN	Pb	12 42 35.8	-1.4
CIRR	Tsirk	1.81	268	eP	Pb	12 42 35.8	-1.4
KLY	Klyuchi	1.86	274	PN	Pn	12 42 34.5	-0.9
KLY	Klyuchi	1.86	274	eP	Pn	12 42 34.6	-0.9
BZGR	Bezymyannyi-Gr	1.87	263	PN	Pb	12 42 36.7	-1.4
BZGR	Bezymyannyi-Gr	1.87	263	eP	Pb	12 42 36.8	-1.4
KRSR	Krestovskiy	1.91	271	PN	Pb	12 42 36.8	-2.1
KRSR	Krestovskiy	1.91	271	eP	Pb	12 42 36.8	-2.1
BZWR	Bezymyannyi-We	1.97	264	PN	Pb	12 42 38.4	-1.5
BZWR	Bezymyannyi-We	1.97	264	eP	Pb	12 42 38.5	-1.5
BZMR	Bezymyannaya	1.98	263	PN	Pb	12 42 38.5	-1.6
BZMR	Bezymyannaya	1.98	263	eP	Pb	12 42 38.5	-1.6
KIRR	Kirishev	2.06	264	PN	Pb	12 42 39.5	-1.9
KIRR	Kirishev	2.06	264	eP	Pb	12 42 39.6	-1.9
MKZ	Mys Kozlova	2.11	219	PN	Pn	12 42 38.1	-0.7
MKZ				S	Sn	12 43 03.1	-1.3
MKZ	Mys Kozlova	2.11	219	eP	Pn	12 42 38.1	-0.7
MKZ				eS	Sn	12 43 03.2	-1.3
KPT	Kopyto	2.13	265	PN	Pb	12 42 40.7	-1.8
KPT	Kopyto	2.13	265	eP	Pb	12 42 40.8	-1.8
KMNR	Kamenistaya	2.16	259	PN	Pb	12 42 41.6	-1.4
KMNR	Kamenistaya	2.16	259	eP	Pb	12 42 41.7	-1.4
TUMD	Tumrok D	2.27	245	PN	Pn	12 42 42.0	+0.9
TUMD	Tumrok D	2.27	245	eP	Pn	12 42 42.0	+0.9
KOZ	Kozyrevsk	2.31	268	PN	Pb	12 42 43.5	-2.0
KOZ	Kozyrevsk	2.31	268	eP	Pb	12 42 43.6	-2.0
SRDR	Sredinnyy	2.38	274	PN	Pb	12 42 44.3	-2.6
SRDR	Sredinnyy	2.38	274	eP	Pb	12 42 44.4	-2.6
ESO	Esso	2.98	266	PN	Pn	12 42 52.2	+1.4
ESO	Esso	2.98	266	eP	Pn	12 42 52.2	+1.4
OSSR	Ossora	3.08	351	PN	Pn	12 42 51.1	-1.0
OSSR	Ossora	3.08	351	eP	Pn	12 42 51.1	-1.0
OSSR				eS	Sn	12 43 25.9	-2.5
KII	Karymskiy	3.40	232	PN	Pn	12 42 58.5	+1.9
KII				S	Sb	12 43 40.6	-4.6
KII	Karymskiy	3.40	232	eP	Pn	12 42 58.6	+1.9
KII				eS	Sb	12 43 40.6	-4.6
SPN	Mys Shipunski	3.88	218	PN	Pn	12 43 02.5	-0.7
SPN	Mys Shipunski	3.88	218	eP	Pn	12 43 02.5	-0.7
SPN				eS	Sn	12 43 44.8	-3.5
SDLR	Sedlovina	4.18	227	PN	Pn	12 43 08.7	+1.4
SDLR				S	Sn	12 43 58.3	+2.7
SDLR	Sedlovina	4.18	227	eP	Pn	12 43 08.7	+1.4
SDLR				eS	Sn	12 43 58.4	+2.7
KRER	Koryakskii	4.21	228	PN	Pn	12 43 10.0	+2.1
KRER				S	Sn	12 43 59.6	+3.0
KRER	Koryakskii	4.21	228	eP	Pn	12 43 10.1	+2.1
KRER				eS	Sn	12 43 59.6	+3.0
KRX	Arik	4.22	229	PN	Pn	12 43 09.6	+1.8
KRX	Arik	4.22	229	eP	Pn	12 43 09.7	+1.8
KRX				eS	Sn	12 43 59.1	+2.5
SMAR	Somma	4.22	228	PN	Pn	12 43 09.1	+1.1
SMAR	Somma	4.22	228	eP	Pn	12 43 09.1	+1.1
AVH	Avacha	4.25	228	PN	Pn	12 43 11.3	+3.1
AVH				S	Sn	12 44 00.9	+3.6
AVH	Avacha	4.25	228	eP	Pn	12 43 11.3	+3.1
AVH				eS	Sn	12 44 00.9	+3.6
UGLR	Uglovaya	4.25	227	PN	Pn	12 43 09.8	+1.5
UGLR	Uglovaya	4.25	227	eP	Pn	12 43 09.9	+1.5
GNL	Ganaly	4.31	237	PN	Pn	12 43 11.4	+2.3
GNL	Ganaly	4.31	237	eP	Pn	12 43 11.4	+2.3
DALK	Dalny	4.41	226	PN	Pn	12 43 11.2	+0.8
DALK	Dalny	4.41	226	eP	Pn	12 43 11.3	+0.8
DALK				eS	Sn	12 44 01.5	+0.3
PET	Petropavlovsk	4.46	226		Pn	12 43 07.3	-3.8
PET	Petropavlovsk	4.46	226	PN	Pn	12 43 12.1	+1.0
PET	Petropavlovsk	4.46	226	eP	Pn	12 43 12.1	+1.0
PET				eS	Sn	12 44 03.1	+0.8
PEA0B	Petropavlovsk-	4.80	232		Pn	12 43 12.6	-3.2
PEA0B	Petropavlovsk-	4.80	232	PN	Pn	12 43 12.6	-3.2
PETK	Petropavlovsk-	4.80	232	Pn	Pn	12 43 12.6	-3.2
PETK	Petropavlovsk-	4.80	232	Pn	Pn	12 43 16.7	+0.9
	0.6nm,0.3s,baz=68,slow=16,SNR=8.9						
PETK				Sn	Sn	12 44 12.4	+1.6
	0.4nm,0.3s,baz=81,slow=20,SNR=0.9						
	1.3nm,0.4s						
KRMR	Karymshinskiy	4.81	228	eS	Sn	12 44 14.3	+3.1
RUS	Russkaya	4.97	222	PN	Pn	12 43 18.8	+0.8
RUS	Russkaya	4.97	222	eP	Pn	12 43 18.9	+0.8
GRL	Gorelyy	5.04	226	PN	Pn	12 43 21.3	+2.1
GRL	Gorelyy	5.04	226	eP	Pn	12 43 21.4	+2.1
MTVR	Mutnovka	5.05	225	PN	Pn	12 43 21.2	+1.8
MTVR	Mutnovka	5.05	225	eP	Pn	12 43 21.3	+1.8
ASAK	Asacha	5.24	225	PN	Pn	12 43 24.1	+2.2
ASAK	Asacha	5.24	225	eP	Pn	12 43 24.1	+2.2
MIPR	Malaya Ipel'ka	5.79	230	PN	Pn	12 43 32.1	+2.7
MIPR	Malaya Ipel'ka	5.79	230	eP	Pn	12 43 32.1	+2.7
ASAJ	Asahikawa	18.20	237	P	Pn	12 46 13.1	-2.7
	0.2nm,0.3s,baz=7.2,slow=15,SNR=3.7						
	5.9nm,1.0s						
C18K	Utukok River	19.99	38	P	Pn	12 46 37.6	+0.3
C18K				IAmb	IAmb	12 46 47.1	
	comp=Z,8.9nm,1.4s						
K17K	Iditarod	19.99	56	P	P	12 46 37.7	+2.2
K17K				IAmb	IAmb	12 47 02.0	
	comp=Z,16nm,1.5s						
P16K	Nushagak River	20.36	66	P	P	12 46 41.8	+2.2
N17K	Nushagak Hills	20.59	62	P	P	12 46 44.6	+2.5
N17K				IAmb	IAmb	12 46 51.6	
	comp=Z,8.9nm,1.4s						
C19K	Lookout Ridge	20.69	37	P	P	12 46 45.3	+2.1
C19K				IAmb	IAmb	12 46 45.4	
	comp=Z,10.0nm,1.4s						
F19K	Shaleruckik Mo	20.71	44	P	Pn	12 46 46.0	+0.2
J18K	Innoko River	20.73	53	P	P	12 46 45.8	+2.1
L18K	Granite Mounta	20.73	57	P	P	12 46 46.1	+2.5
L18K				IAmb	IAmb	12 47 05.2	
	comp=Z,9.1nm,1.5s						
D19K	Kuna River	21.01	39	P	P	12 46 48.1	+1.5
H19K	Roundabout Mou	21.02	48	P	P	12 46 49.3	+2.6
H19K				IAmb	IAmb	12 46 54.9	
	comp=Z,7.0nm,1.4s						
TIXI	Tiksi	21.34	330	P	P	12 46 51.8	+1.8
TIXI	Tiksi	21.34	330	P	P	12 46 51.8	+1.8
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
D20K	Etivluk River	21.60	39	P	P	12 46 55.5	+2.6
D20K				IAmb	IAmb	12 46 56.8	
	comp=Z,6.0nm,1.2s						
B20K	Meade River	21.80	36	P	P	12 46 57.6	+2.6
B20K				IAmb	IAmb	12 47 33.3	
	comp=Z,11nm,1.2s						
J20K	Nowinta River	21.90	52	P	P	12 46 58.8	+2.7
IMAR	Indian Mountai	22.18	47	P	P	12 47 02.0	+2.8
F21K	Alatna River	22.44	44	P	P	12 47 03.4	+1.5
D22K	Ayikyak River	23.03	39	P	P	12 47 09.9	+1.8
B22K	Teshekpuk Lake	23.12	36	P	P	12 47 11.1	+2.1
E22K	Anaktuvuk Pass	23.21	42	P	P	12 47 11.2	+1.2
E22K				IAmb	IAmb	12 47 52.7	
	comp=Z,6.7nm,1.5s						
MLY	Manley	23.38	49	P	P	12 47 14.1	+2.3
KDAK	Kodiak Island	23.41	68	P	P	12 47 10.8	-1.1
	comp=Z,4.6nm,1.0s,baz=274,slow=8.6,SNR=4.1						
	comp=Z,4.6nm,1.0s						
SUA	Susitna One	23.60	58	P	P	12 47 14.3	+0.3
CNPM	China Poot	23.69	63	P	P	12 47 15.4	+0.7
COLD	Coldfoot	23.71	44	P	P	12 47 15.1	+0.2
COLD				IAmb	IAmb	12 47 38.0	
	comp=Z,5.4nm,1.5s						
D23K	Nanushuk River	23.75	40	P	P	12 47 17.0	+1.8
D23K				IAmb	IAmb	12 47 59.6	
	comp=Z,6.4nm,1.3s						
H23K	Yukon River	23.89	47	P	P	12 47 18.3	+1.6
I23K	Minto, Yukon-K	23.97	49	P	P	12 47 18.8	+1.5
I23K				IAmb	IAmb	12 47 33.1	
	comp=Z,6.0nm,1.4s						
E23K	Chandalar	24.02	42	P	P	12 47 18.6	+0.7
E24K	Your Creek	24.44	42	P	P	12 47 23.4	+1.6
E24K				IAmb	IAmb	12 47 24.3	
	comp=Z,2.6nm,0.8s						
WRH	Wood River Hil	24.53	51	P	P	12 47 24.0	+1.5
WRH				IAmb	IAmb	12 47 24.0	
	comp=Z,4.1nm,1.0s						
C24K	Franklin Bluff	24.57	38	P	P	12 47 24.8	+2.0
CCB	Clear Creek Bu	24.64	50	P	P	12 47 24.2	+0.7
G24K	Hadweenzic Riv	24.75	45	P	P	12 47 25.8	+1.2
G24K				IAmb	IAmb	12 47 28.6	
	comp=Z,7.3nm,1.2s						
PWL	Port Wells	24.85	59	P	P	12 47 25.7	+0.2
ILAR	Eielson Array	25.03	50	P	P	12 47 27.8	+0.8
ILAR	Eielson Array	25.03	50	P	P	12 47 26.9	-0.1
	comp=Z,0.5nm,0.7s,baz=270,slow=7.7,SNR=5.5						
	comp=Z,0.5nm,0.7s						
ILAR	Eielson Array	25.03	50	P	P	12 47 27.8	+0.8
SCM	Sheep Creek Mo	25.16	57	P	P	12 47 29.5	+1.2
SCM				IAmb	IAmb	12 47 44.1	
	comp=Z,7.4nm,1.2s						
SCM	Sheep Creek Mo	25.16	57	P	P	12 47 29.5	+1.2
SCM				pmax	pmax		
	comp=Z,7.0nm,1.2s						
D25K	Kavik River	25.33	39	P	P	12 47 30.9	+1.1
D25K				IAmb	IAmb	12 47 32.2	
	comp=Z,4.7nm,1.1s						
P23K	Montague Islan	25.48	61	P	P	12 47 33.3	+2.1
BMAR	Burnt Mountain	25.89	44	P	P	12 47 36.4	+1.5
MJAR	Matsushiro Arr	26.26	232	P	P	12 47 38.8	+0.4
	comp=Z,0.7nm,0.5s,baz=21,slow=8.8,SNR=1.3						
	comp=Z,0.7nm,0.5s						
DOT	Dot Lake	26.37	52	P	P	12 47 38.8	-0.5
K27K	Chicken	27.19	51	P	P	12 47 47.3	+0.8
K27K				IAmb	IAmb	12 47 48.3	
	comp=Z,5.3nm,1.4s						
L27K	Beaver Creek,	27.46	53	P	P	12 47 50.6	+1.6
L27K				IAmb	IAmb	12 47 51.6	
	comp=Z,2.9nm,1.2s						
BCAR	Beaver Creek A	27.48	53	P	P	12 47 51.0	+1.7
M27K	Edge Creek, AK	27.58	55	P	P	12 47 52.4	+2.1
M27K				IAmb	IAmb	12 48 11.7	
	comp=Z,4.5nm,1.4s						
I28M	Miner Creek	27.89	48	P	P	12 47 54.8	+1.8
H29M	Whitestone	28.43	46	P	P	12 47 58.9	+1.4
H29M				IAmb	IAmb	12 48 11.7	
	comp=Z,5.0nm,1.2s						
G29M	Pine Creek	28.48	45	P	P	12 48 00.1	+2.0
L29M	L29M	29.10	52	P	P	12 48 05.4	+1.8
L29M				IAmb	IAmb	12 48 43.5	
	comp=Z,4.4nm,1.4s						
I30M	Mount Dempster	29.40	48	P	P	12 48 07.2	+0.9
INK	Inuvik	30.01	41	P	P	12 48 12.6	+1.1
INK	Inuvik	30.01	41	P	P	12 48 12.6	+1.1
INK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
Q32M	Nakina River	33.13	58	P	P	12 48 41.4	+2.1
H11N2	WAKE ISLAND Hy	36.50	175	T	T	13 27 52.4	
	baz=357,slow=76,SNR=380						
H11N3	WAKE ISLAND Hy	36.51	175	T	T	13 27 50.7	
	baz=357,slow=76,SNR=254						
H11N1	WAKE ISLAND Hy	36.52	175	T	T	13 27 53.3	
	baz=357,slow=76,SNR=319						
EUNU	Eureka	38.35	15	P	P	12 49 25.2	+1.5
EUNU				IAmb	IAmb	12 49 51.7	
	comp=Z,8.3nm,1.4s						
YKAW3	Yellowknife Wh	39.30	46	P	P	12 49 33.1	+1.4
YKAW3				IAmb	IAmb	12 49 40.1	
	comp=Z,6.8nm,1.4s						
YKA	Yellowknife Ar	39.34	46	P	P	12 49 33.1	+1.0
	comp=Z,0.6nm,0.8s,baz=301,slow=8.8,SNR=6.3						
	comp=Z,0.6nm,0.8s						
YKAW1	Yellowknife Wh	39.40	46	P	P	12 49 34.2	+1.7
YKAW1				IAmb	IAmb	12 49 40.0	
	comp=Z,3.6nm,1.2s						
BLKN	Baker Lake	45.23	37	P	P	12 50 20.6	+0.7
KURK	Kurchatov	48.01	302	P	P	12 50 41.7	-0.2
KURBB	Kurchatov Arra	48.12	301	P	P	12 50 41.7	-1.1
	comp=Z,0.3nm,0.6s,baz=52,slow=7.5,SNR=3.2						
	comp=Z,0.3nm,0.6s						
JTMT	Jette	48.22	64	P	P	12 50 45.3	+1.6
MKAR	Makanchi Array	48.84	295	P	P	12 50 45.8	-2.6
	comp=Z,0.3nm,0.4s,baz=60,slow=6.5,SNR=8.1						
	comp=Z,0.3nm,0.4s						
PLID	Pearl Lake	49.15	67	P	P	12 50 52.8	+1.7
BPMT	Black Pine Rid	49.53	64	P	P	12 50 55.0	+1.1
FCC	Fort Churchill	49.63	42	P	P	12 50 55.4	+1.2
FCC	Fort Churchill	49.63	42	P	P	12 50 55.4	+1.2
FCC				pmax	pmax		
	comp=Z,15nm,1.3s						
LYMT	Lyon Mountain	49.74	63	P	P	12 50 56.9	+1.4
MCMT	McKenzie Canyo	50.94	65	P	P	12 51 06.2	+1.5
YNE	Yellowstone No	52.25	64	P	P	12 51 16.1	+1.7
YNE				IAmb	IAmb	12 51 16.3	
	comp=Z,1.5nm,0.7s						
ELK	Elko	52.60	71	LR	LR	13 10 17.7	
	comp=Z,108nm,19.6s,baz=118,slow=32						
NVAR	Mina Array Bea	52.64	75	P	P	12 51 16.8	-0.6
	comp=Z,0.4nm,0.7s,baz=304,slow=7.8,SNR=4.6						
	comp=Z,0.4nm,0.7s						
PDAR	Pinedale Array	54.08	65	P	P	12 51 29.2	+1.2
PDAR	Pinedale Array	54.08	65	P	P	12 51 28.9	+1.0
	comp=Z,0.8nm,0.7s,baz=328,slow=4.3,SNR=7.9						
	comp=Z,0.8nm,0.7s						
ULM	Lac du Bonnet	55.05	50	P	P	12 51 35.1	+0.6
	comp=Z,1.5nm,0.7s,baz=331,slow=13,SNR=2.4						
	comp=Z,1.5nm,0.7s						
SRU	San Rafael Swe	56.27	69	P	P	12 51 44.6	+0.9
SRU	San Rafael Swe	56.27	69	P	P	12 51 44.6	+0.9
SRU				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KKAR	Karatay Array	57.32	300	P	P	12 51 50.3	-0.6
KKAR	Karatay Array	57.32	300	P	P	12 51 50.3	-0.6
AB31	Akbulak array	57.47	311	P	P	12 51 51.3	-0.5
AB31				IAmb	IAmb	12 51 52.9	
	comp=Z,1.1nm,0.6s						
ABKAR	Akbulak array	57.47	311	P	P	12 51 51.1	-0.7
ABKAR				IAmb	IAmb	12 51 52.9	
	comp=Z,1.1nm,0.6s						
AKASG	Malin Array Be	67.04	331	P	P	12 52 55.9	0.0
	comp=Z,0.3nm,0.3s,baz=26,slow=6.9,SNR=2.1						
	comp=Z,0.3nm,0.3s						
TXAR	Lajitas Array	67.40	71	P	P	12 53 00.0	+1.4
	comp=Z,0.8nm,0.8s,baz=297,slow=4.1,SNR=6.3						
	comp=Z,0.8nm,0.8s						
ASAR	Alice Springs	83.56	208	P	P	12 54 30.7	-0.4
	comp=Z,0.6nm,1.0s,baz=8.7,slow=7.7,SNR=6.9						
	comp=Z,0.6nm,1.0s						
QSPA	South Pole Qui	145.97	180	PKPbc	PKPdf	13 01 41.0	+0.4
	comp=Z,0.4nm,0.7s,baz=0.0,slow=2.0,SNR=1.1						

IDC ***25*** *12:45:33.0±1.2, 28°.37N×104°.86E, h0^{km}, mb3.5/5, mbtmp3.5/6, ML3.5/1, MS3.5/1, Error ellipse: s-maj=43.9km s-min=21.7km az=58.0*
ISC 25 12:45:36.0±1.4**, 28°.4N**±0°.2×**104°.9E**±0°.2**, h19**^{km}**, n7, σ0^{s}.11**/6**, mb3.5**/5**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.31	210	Pn	Pn	12 48 19.8	+3.1
	baz=37,slow=11						
SONM	Songino Array	19.43	3	P	P	12 50 01.2	-0.1
	0.2nm,0.3s,baz=169,slow=12,SNR=1.6						
	0.3nm,0.3s						
KSRS	Korea Array	21.29	59	P	P	12 50 21.4	+0.1
	0.6nm,0.6s,baz=241,slow=9.4,SNR=2.4						

	0.6nm,0.6s						
MKAR	Makanchi Array	25.50	322	P	P	12 51 03.1	0.0
	0.7nm,0.6s,baz=113,slow=9.8,SNR=7.1						
MKAR				LR	LR	13 03 13.6	
	comp=Z,115nm,19.4s,baz=20,slow=42						
	0.7nm,0.6s						
KURBB	Kurchatov Arra	29.83	325	P	P	12 51 41.9	+0.1
	0.5nm,0.7s,baz=136,slow=9.2,SNR=6.4						
	0.5nm,0.7s						
WRA	Warramunga Arr	55.85	146	P	P	12 55 12.5	0.0
	0.5nm,0.8s,baz=336,slow=7.5,SNR=2.4						
	0.5nm,0.8s						
ASAR	Alice Springs	58.83	149	P	P	12 55 33.4	-0.1
	0.6nm,0.9s,baz=328,slow=6.7,SNR=4.6						
	0.6nm,0.9s						

IDC 25 12:47:11.8±1.6**, 2°.67S×138°.46E, h0$^{\text{km}}$, mb3.3**/2**, mbtmp3.4**/5**, ML3.4**/3**, Error ellipse: s-maj=31.4km s-min=17.4km az=165.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	2.25	86	Pn	Pb	12 47 52.2	-1.2
	6.7nm,0.3s,baz=219,slow=10,SNR=6.2						
JAY				Lg	Lg	12 48 21.9	
	2.4nm,0.3s,baz=177,slow=23,SNR=1.0						
	10nm,0.3s						
WRA	Warramunga Arr	17.63	193	P	Pn	12 51 18.4	-0.6
	0.2nm,0.3s,baz=15,slow=12,SNR=5.5						
	0.3nm,0.5s						
FITZ	Fitzroy Crossi	19.82	218	P	P	12 51 43.8	-0.4
	baz=41,slow=13,SNR=3.1						
	4.1nm,1.2s						
ASAR	Alice Springs	21.33	192	P	P	12 52 00.8	+0.3
	0.6nm,0.5s,baz=19,slow=9.3,SNR=6.8						
	0.6nm,0.5s						
MKAR	Makanchi Array	69.61	322	P	P	12 58 22.7	-0.2
	0.2nm,0.5s,baz=134,slow=6.2,SNR=2.7						
	0.2nm,0.5s						

IDC ***25*** *12:58:50.0±2.9, 59°.88N×149°.26W, h0$^{\text{km}}$, mb3.7/2, mbtmp3.4/4, ML3.0/1, Error ellipse: s-maj=45.9km s-min=33.3km az=154.0*

NEIC ***25*** *12:59:01.7±1.4, 60°.88N±0°.02×149°.47W±0°.04, h26$^{\text{km}}$±9$^{\text{km}}$, Error ellipse: s-maj=3.2km s-min=2.7km az=76.0*

AEIC ***25*** *12:59:02.8±1.6, 60°.88N±0°.01×149°.48W±0°.04, h25$^{\text{km}}$±6$^{\text{km}}$, ML3.3, ML3.5/236(NEIC), Error ellipse: s-maj=3.1km s-min=1.6km az=98.0*

ISC 25 12:59:01.3±0.9**, 60°.86N**±0°.02×**149°.48W**±0°.02**, h33$^{\text{km}}$**±6$^{\text{km}}$**, n199, σ1$^{\text{s}}$44**/211**, Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RC01	Rabbit Creek A	0.27	332		Pb	12 59 08.8	+0.1
RC01					Sb	12 59 14.0	+0.4
O22K	Cooper Landing	0.40	198		Pb	12 59 10.7	+0.4
O22K					Sn	12 59 17.9	+0.9
FIS	Fire Island	0.46	309		Pn	12 59 12.1	+0.4
SLKM	Skilak Lake	0.51	227		Pb	12 59 12.2	+0.2
SLKM					Sb	12 59 19.9	+0.6
SLKM				IAML		12 59 20.2	
	comp=N,4μm,0.3s						
PWL	Port Wells	0.56	89		Pb	12 59 12.8	0.0
PWL				IAML		12 59 23.4	
	comp=E,2μm,0.3s						
PWL				IAML		12 59 26.3	
	comp=N,3μm,0.3s						
KNK	Knik Glacier	0.74	41		Pb	12 59 15.3	-0.6
KNK					Sb	12 59 25.9	+0.1
KNK				IAML		12 59 27.4	
	comp=N,2μm,0.6s						
KNK				IAML		12 59 27.4	
	comp=E,3μm,0.8s						
SEW	Seward	0.76	179		Pb	12 59 15.6	-0.5
SEW				IAML		12 59 30.1	
	comp=N,1μm,0.3s						
PMR	Palmer	0.76	13		Pb	12 59 15.2	-0.9
PMR					Sb	12 59 25.2	-0.8
CAPN	Captain Cook N	0.83	265		Pn	12 59 17.9	+1.2
CAPN				IAML		12 59 36.6	
	comp=N,2μm,0.4s						
CAPN				IAML		12 59 37.0	
	comp=E,2μm,0.5s						
SUA	Susitna One	0.87	315		Pb	12 59 17.0	-1.0
SUA					Sb	12 59 28.9	-0.5
SUA				IAML		12 59 29.6	
	comp=N,1μm,0.8s						
SUA				IAML		12 59 29.7	
	comp=E,2μm,0.7s						
M22K	Willow	0.95	341		Pn	12 59 17.8	-0.6
M22K					Sb	12 59 30.4	-1.2
M22K				IAML		12 59 38.0	
	comp=E,1μm,0.7s						
GHO	Glory Hole Cre	0.96	16		Pn	12 59 18.6	0.0
GHO				IAML		12 59 33.9	
	comp=E,888nm,0.5s						
GHO				IAML		12 59 34.5	
	comp=N,2μm,0.5s						
GLI	Glacier Island	1.16	88		Pn	12 59 21.4	+0.1
GLI					Sb	12 59 38.0	+0.3
BRSE	Bradley Lake S	1.28	210		Pn	12 59 23.9	+0.9
BRSE					Sn	12 59 40.6	+1.6
SPU	Mount Spurr	1.30	286		Pn	12 59 23.3	+0.1
SPU				IAML		12 59 43.3	
	comp=N,617nm,0.6s						
BRLK	Bradley Lake	1.30	213		Pn	12 59 24.5	+1.3
BRLK					Sn	12 59 41.2	+1.7
BRLK				IAML		12 59 43.8	
	comp=N,1μm,0.1s						
BRLK				IAML		12 59 44.6	
	comp=E,1μm,0.3s						
STLK	Strandline Lak	1.31	300		Pn	12 59 23.4	0.0
STLK					Sb	12 59 42.2	+0.3
STLK				IAML		12 59 43.0	
	comp=E,1μm,0.2s						
P23K	Montague Islan	1.34	129		Pn	12 59 24.5	+0.8
SPCN	Chakachatna No	1.37	287		Pn	12 59 24.7	+0.5
SPCR	Spurr Chakacha	1.38	286		Pn	12 59 24.5	+0.2
SPCR	Spurr Chakacha	1.38	286		Pn	12 59 24.6	+0.2
SCM	Sheep Creek Mo	1.43	46		Pn	12 59 26.0	+1.0
SCM				IAML		12 59 46.1	
	comp=E,707nm,0.8s						
SCM				IAML		12 59 48.9	
	comp=N,671nm,0.8s						
CKL	Chakachamna La	1.44	285		Pn	12 59 25.5	+0.4
SPBG	Spurr Blockage	1.47	287		Pn	12 59 26.1	+0.6
RDT	Redoubt	1.47	260		Pn	12 59 26.1	+0.5
FID	Port Fidalgo	1.47	93		Pn	12 59 25.6	0.0
SKT	Skwentna	1.50	320		Pn	12 59 26.6	+0.7
HIN	Hinchinbrook I	1.54	106		Pn	12 59 27.2	+0.7
HIN				IAML		12 59 49.2	
	comp=E,815nm,0.6s						
HIN				IAML		12 59 51.9	
	comp=N,859nm,0.9s						
SPWE	Spurr West	1.56	287		Pn	12 59 27.5	+0.7
CNPM	China Poot	1.60	214		Pn	12 59 28.4	+1.1
CNPM				IAML		12 59 53.3	
	comp=N,720nm,0.4s						
CNPM				IAML		12 59 53.5	
	comp=E,715nm,0.5s						
CUT	Chulitna	1.60	347		Pn	12 59 27.7	+0.4
DFR	Drift River	1.60	262		Pn	12 59 27.8	+0.4
HOM	Homer	1.62	223		Pn	12 59 29.3	+1.7
RDJH	Redoubt Jeurge	1.66	262		Pn	12 59 28.8	+0.6
RDSO	Redoubt South	1.66	257		Pn	12 59 29.0	+0.8
RED	Redoubt Volcan	1.68	256		Pn	12 59 29.4	+0.9
RDWB	Redoubt West	1.70	259		Pn	12 59 29.4	+0.7
NCT	North Crescent	1.72	262		Pn	12 59 29.9	+0.8
O20K	Slope Mountain	1.74	245		Pn	12 59 31.1	+1.7
DIV	Divide	1.83	80		Pn	12 59 31.4	+0.9
DIV				IAML		12 59 57.0	
	comp=E,392nm,0.5s						
DIV				IAML		12 59 58.1	
	comp=N,622nm,0.3s						
KLU	Klutina	1.84	68		Pn	12 59 31.6	+0.9
KLU				IAML		12 59 58.6	
	comp=N,534nm,0.4s						
KLU				IAML		13 00 01.0	
	comp=E,422nm,0.4s						
EYAK	Cordova Ski Ar	1.86	98		Pn	12 59 31.3	+0.5
EYAK				IAML		13 00 02.6	
	comp=E,265nm,0.5s						
EYAK				IAML		13 00 02.8	
	comp=N,285nm,0.4s						
WAT6	Susitna Watana	1.92	25		Pn	12 59 32.6	+0.8
ILS	Iliamna Low So	2.00	245		Pn	12 59 34.5	+1.6
WAT7	Susitna Watana	2.01	8		Pn	12 59 34.2	+1.2
ILSW	Iliamna Southw	2.02	246		Pn	12 59 34.2	+1.1
ILSW				IAML		13 00 06.5	
	comp=N,244nm,0.8s						
ILSW				IAML		13 00 06.8	
	comp=E,281nm,0.8s						
M24K	Tolsona, Glenn	2.02	50		Pn	12 59 35.2	+2.1
WAT1	Susitna Watana	2.03	12		Pn	12 59 34.5	+1.3
M20K	Styx River	2.04	302		Pn	12 59 34.9	+1.5
Q23K	Middleton Isla	2.12	131		Pn	12 59 35.8	+1.4
Q23K				IAML		13 00 11.0	
	comp=E,240nm,0.5s						
Q23K				IAML		13 00 12.9	
	comp=N,272nm,0.5s						
P19K	Oil Pt	2.23	239		Pn	12 59 37.5	+1.5
GOAT	Goat Mountain	2.35	95		Pn	12 59 38.2	+0.5
BMRM	Bremner River	2.38	85		Pn	12 59 38.6	+0.5
BMRM				IAML		13 00 14.7	
	comp=E,322nm,0.7s						
RAGM	Ragged Mountai	2.41	99		Pn	12 59 38.6	+0.1
PPLA	Purkeypile	2.42	329		Pn	12 59 39.5	+0.9
PPLA				IAML		13 00 25.0	
	comp=N,195nm,0.8s						
PPLA				IAML		13 00 25.4	
	comp=E,231nm,0.5s						
DHY	Denali Highway	2.44	23	Pn	Pn	12 59 40.5	+1.5
DHY				IAML		13 00 15.8	
	comp=E,237nm,0.4s						
AU22	Augustine Moun	2.45	234		Pn	12 59 39.7	+0.7
N19K	Bonanza Creek	2.45	271		Pn	12 59 40.2	+1.1
N25K	Chitina, Valde	2.48	70		Pn	12 59 40.6	+1.2
N25K				IAML		13 00 16.9	
	comp=E,164nm,0.3s						
N25K				IAML		13 00 18.7	
	comp=N,194nm,0.6s						
O19K	Port Alsworth	2.49	257		Pn	12 59 40.5	+1.0
AUCH	Augustine Cone	2.49	235		Pn	12 59 41.3	+1.7
RND	Reindeer	2.58	6		Pn	12 59 42.0	+1.2
RND				IAML		13 00 18.9	
	comp=E,163nm,0.4s						
RND				IAML		13 00 19.0	
	comp=N,118nm,0.5s						
HARP	HAARP	2.58	51		Pn	12 59 43.5	+2.7
M19K	Big River Lodg	2.59	296		Pn	12 59 42.1	+1.2
M19K				IAML		13 00 14.3	
	comp=N,124nm,0.6s						
HMT	Hamilton	2.62	99		Pn	12 59 41.7	+0.3
TRF	Thorofare Moun	2.63	352		Pn	12 59 42.9	+1.2
TRF				IAML		13 00 20.1	
	comp=N,224nm,0.6s						
TRF				IAML		13 00 21.8	
	comp=E,121nm,0.5s						
L20K	Farewell, AK	2.66	310		Pn	12 59 42.6	+0.8
KAIM	Kayak Island	2.68	108	Pn	Pn	12 59 42.1	0.0
KAIM				IAML		13 00 19.6	
	comp=E,106nm,0.5s						
KAIM				IAML		13 00 34.6	
	comp=N,107nm,0.7s						
SYI	Shuyak Island	2.69	215	Pn	Pn	12 59 43.6	+1.2
SYI				IAML		13 00 25.2	
	comp=N,110nm,0.7s						
SYI				IAML		13 00 25.7	
	comp=E,164nm,0.7s						
WACK	Wrangell Chich	2.72	63		Pn	12 59 44.4	+1.4
KTH	Kantishna Hill	2.79	347		Pn	12 59 44.9	+1.2
KTH				IAML		13 00 22.7	
	comp=E,139nm,0.7s						
KTH				IAML		13 00 38.1	
	comp=N,139nm,0.8s						
NICHA	Nichawak Mount	2.79	100		Pn	12 59 43.4	-0.3
GLB	Gilahina Butte	2.81	75		Pn	12 59 45.0	+1.0
GLB				IAML		13 00 28.5	
	comp=E,129nm,0.4s						
GLB				IAML		13 00 34.3	
	comp=N,169nm,0.5s						
PAX	Paxson	2.84	40		Pn	12 59 46.3	+1.8
PAX				IAML		13 00 28.9	
	comp=E,186nm,0.6s						
PAX				IAML		13 00 31.1	
	comp=N,161nm,0.7s						
CAST	Castle Rocks	2.85	336		Pn	12 59 46.1	+1.6
Q19K	Cape Douglas,	2.85	229		Pn	12 59 46.3	+1.7
BERG	Berg Lake	2.88	97		Pn	12 59 44.7	-0.3
MCK	McKinley	2.90	5	Pn	Pn	12 59 47.0	+1.8
MCK				IAML		13 00 36.5	
	comp=E,102nm,0.5s						
L19K	White Mountain	2.90	300		Pn	12 59 46.6	+1.4
SUCK	Suckling Hills	2.93	103		Pn	12 59 45.3	-0.3
SUCK				IAML		13 00 35.5	
	comp=N,123nm,0.4s						
VRDI	Verde Repeater	2.95	80		Pn	12 59 46.9	+0.8
VRDI				IAML		13 00 30.5	
	comp=N,141nm,0.8s						
VRDI				IAML		13 00 37.5	
	comp=E,116nm,0.8s						
O18K	Koktuh Hills	3.02	253		Pn	12 59 47.5	+0.7
O18K				IAML		13 00 31.5	
	comp=N,144nm,0.6s						
O18K				IAML		13 00 44.1	
	comp=E,84nm,0.6s						
CRQM	Cirque	3.11	89		Pn	12 59 48.7	+0.6
CRQM				IAML		13 00 44.4	
	comp=E,188nm,1.0s						
N18K	Kilae Creek	3.15	270		Pn	12 59 49.3	+0.7
MCARA	McCarthy VSAT	3.17	78	Pn	Pn	12 59 50.1	+1.2
P18K	Big Mountain,	3.23	245		Pn	12 59 50.7	+0.9
TGL	Tana Glacier	3.26	89	Pn	Pn	12 59 50.6	+0.5
TGL				IAML		13 00 41.0	
	comp=N,157nm,0.6s						
TGL				IAML		13 00 48.8	
	comp=E,136nm,0.8s						
WAX	Waxell Ridge	3.29	94		Pn	12 59 50.6	0.0
K20K	Telida	3.31	321		Pn	12 59 51.5	+0.6
K20K				IAML		13 00 48.7	
	comp=E,72nm,0.9s						
BWN	Browne	3.33	0	Pn	Pn	12 59 53.1	+2.1
BWN				IAML		13 00 49.2	
	comp=E,149nm,1.1s						
BPAW	Bear Paw Mtn.	3.33	348		Pn	12 59 51.7	+0.6
BPAW				IAML		13 00 46.4	
	comp=E,72nm,0.6s						
K24K	Donnelly Dome	3.42	29		Pn	12 59 55.2	+2.8
MENT	Mentasta	3.43	50		Pn	12 59 54.5	+2.0
M26K	Nabesna, AK	3.46	61		Pn	12 59 54.5	+1.6
M26K				IAML		13 00 51.0	
	comp=N,61nm,0.6s						
KDAK	Kodiak Island	3.47	209		Pn	12 59 53.3	+0.3
KDAK				IAML		13 00 52.2	
	comp=N,63nm,1.0s						
KDAK				IAML		13 00 58.8	
	comp=N,60nm,0.6s						
BALM	Baldy	3.48	84		Pn	12 59 54.0	+0.7
ISLE	Juniper Island	3.51	91		Pn	12 59 54.2	+0.5
ISLE				IAML		13 00 52.7	
	comp=E,130nm,0.6s						
ISLE				IAML		13 00 60.0	
	comp=N,142nm,0.8s						
RIDG	Independent Ri	3.61	35		Pn	12 59 56.9	+1.9
RIDG				IAML		13 00 52.6	
	comp=N,71nm,1.0s						
RIDG				IAML		13 00 57.0	
	comp=E,103nm,0.8s						
L26K	Log Cabin Wild	3.62	50		Pn	12 59 56.5	+1.4
L26K				IAML		13 01 01.9	
	comp=N,96nm,0.4s						
L26K				IAML		13 01 05.1	
	comp=E,88nm,0.6s						
WRH	Wood River Hil	3.69	9		Pn	12 59 58.1	+2.2
L18K	Granite Mounta	3.71	295		Pn	12 59 57.5	+1.1
HDA	Harding Lake	3.75	17		Pn	12 59 58.9	+2.1
HDA				IAML		13 01 00.7	
	comp=E,61nm,0.6s						
HDA				IAML		13 01 04.9	
	comp=N,72nm,0.7s						
NEA2	Nenana	3.76	3		Pn	12 59 58.6	+1.7
DOT	Dot Lake	3.78	40	Pn	Pn	12 59 58.7	+1.5
DOT				IAML		13 00 59.6	
	comp=E,94nm,0.9s						
DOT				IAML		13 01 00.7	
	comp=N,73nm,0.7s						
GRNC	Granite Creek	3.79	89		Pn	12 59 57.9	+0.4
GRNC				IAML		13 00 59.8	
	comp=E,47nm,0.8s						
GRNC				IAML		13 01 10.9	
	comp=N,67nm,0.7s						
N17K	Nushagak Hills	3.81	268		Pn	12 59 58.3	+0.7
N17K				IAML		13 01 06.3	
	comp=N,56nm,0.9s						
BARN	Barnard Glacie	3.82	84		Pn	12 59 59.4	+1.4
BARN				IAML		13 00 58.1	
	comp=E,66nm,0.5s						
BARN				IAML		13 01 02.7	
	comp=N,68nm,0.8s						
YAH	Yahtse	3.84	94		Pn	12 59 58.5	+0.2
YAH				IAML		13 01 06.2	
	comp=N,67nm,0.6s						
CCB	Clear Creek Bu	3.88	11		Pn	13 00 00.3	+1.6
M17K	Holitna River	3.90	282		Pn	12 59 59.6	+0.7
M17K				IAML		13 01 15.8	
	comp=N,92nm,0.8s						
M17K				IAML		13 01 17.6	
	comp=E,97nm,1.1s						
M27K	Edge Creek, AK	3.93	64		Pn	13 00 01.7	+2.2
J20K	Nowinta River	3.97	329		Pn	13 00 01.0	+1.1
J20K				IAML		13 01 09.6	
	comp=E,57nm,0.8s						
J20K				IAML		13 01 11.0	
	comp=N,48nm,0.6s						
CTGM	Chitina Glacie	3.98	85		Pn	13 00 01.5	+1.4
CTGM				IAML		13 01 09.2	
	comp=N,50nm,0.6s						
ACHA	Angle Creek He	3.99	231		Pn	13 00 01.8	+1.6
KELA	Mount Kelaz	4.00	235		Pn	13 00 01.9	+1.6
SCRK	Sand Creek	4.04	37		Pn	13 00 03.0	+2.1
SCRK				IAML		13 01 06.5	
	comp=E,51nm,0.7s						
SCRK				IAML		13 01 07.5	
	comp=N,44nm,1.2s						
COLA	College	4.10	10	Pn	Pn	13 00 03.3	+1.7
IL31		4.11	16		Pn	13 00 03.5	+1.8
ILAR	Eielson Array	4.11	16		Pn	13 00 03.7	+2.0
ILAR	Eielson Array	4.11	16	Pn	Pn	13 00 03.8	+2.1
	comp=N,0.6nm,0.3s,baz=198,slow=13,SNR=44						
ILAR				Sn	Sn	13 00 53.6	+5.1
	comp=N,2.8nm,0.3s,baz=200,slow=17,SNR=5.5						
	comp=N,2.3nm,0.4s						
TABL	Table Mountain	4.12	92	Pn	Pn	13 00 02.9	+0.7
TABL				IAML		13 01 04.1	
	comp=N,43nm,0.8s						
OHAK	Old Harbor	4.14	210		Pn	13 00 01.9	-0.3
OHAK				IAML		13 01 13.2	
	comp=E,38nm,1.2s						
LOGN	Logan Glacier	4.15	87		Pn	13 00 03.4	+1.0
LOGN				IAML		13 01 17.6	
	comp=E,38nm,1.0s						
LOGN				IAML		13 01 19.0	
	comp=N,39nm,1.1s						
J25K	Salcha River,	4.22	25		Pn	13 00 04.7	+1.4
J25K				IAML		13 01 02.4	
	comp=N,32nm,0.6s						
J25K				IAML		13 01 03.8	
	comp=E,49nm,0.6s						
MLY	Manley	4.23	353		Pn	13 00 04.3	+0.8
L27K	Beaver Creek,	4.23	55		Pn	13 00 05.6	+2.1
J19K	Poorman	4.25	320		Pn	13 00 05.4	+1.7
J19K				IAML		13 01 14.1	
	comp=E,40nm,0.7s						
J19K				IAML		13 01 23.9	
	comp=N,35nm,0.8s						
BCAR	Beaver Creek A	4.25	55	Pn	Pn	13 00 05.8	+2.1
YUK2	White River	4.26	74		Pn	13 00 05.3	+1.3
J18K	Innoko River	4.29	311		Pn	13 00 05.1	+0.9
I23K	Minto, Yukon-K	4.31	1		Pn	13 00 06.7	+2.2
I23K				IAML		13 01 24.1	
	comp=E,32nm,1.0s						
I23K				IAML		13 01 25.4	
	comp=N,43nm,0.9s						
YUK3	Moose Creek	4.44	74		Pn	13 00 07.9	+1.4
O16K	Kokwok River B	4.48	257		Pn	13 00 08.2	+1.3
O16K				IAML		13 01 26.7	
	comp=N,34nm,0.9s						
I21K	Tanana	4.49	346	Pn	Pn	13 00 08.5	+1.5
I21K				IAML		13 01 31.5	
	comp=N,26nm,1.1s						
O28M	Mount Upton	4.55	87	Pn	Pn	13 00 09.8	+1.7
O28M				IAML		13 01 02.2	
	comp=N,42nm,0.7s						
J26L	Joseph Creek	4.56	34		Pn	13 00 11.0	+2.9
J26L				IAML		13 01 21.0	
	comp=N,31nm,0.8s						
J26L				IAML		13 01 25.4	
	comp=E,34nm,0.6s						
I20K	Naaghedeneel	4.57	332		Pn	13 00 09.6	+1.6
K17K	Iditarod	4.59	298		Pn	13 00 09.6	+1.3
K17K				IAML		13 01 28.6	
	comp=E,36nm,0.8s						
K17K				IAML		13 01 33.8	
	comp=N,30nm,1.1s						
PCA	Pinnacle	4.62	95	Pn	Pn	13 00 09.8	+0.9
M16K	Timber Creek	4.63	276		Pn	13 00 09.8	+0.9
M16K				IAML		13 01 37.1	
	comp=N,23nm,1.0s						
P16K	Nushagak River	4.66	251		Pn	13 00 10.6	+1.3
L16K	Owhat River	4.90	284		Pn	13 00 13.2	+0.6
SII	Sitkinak Islan	4.96	212	Pn	Pn	13 00 13.7	+0.3
SII				IAML		13 01 45.8	
	comp=E,44nm,1.1s						
BCPM	Bancas Point	4.96	96	Pn	Pn	13 00 15.3	+1.8
H23K	Yukon River	4.99	360	Pn	Pn	13 00 15.6	+1.7
PRP	Porcupine Dome	5.01	19		Pn	13 00 16.2	+2.0
PRP				IAML		13 01 27.2	
	comp=N,26nm,0.6s						
PRP				IAML		13 01 40.8	
	comp=E,23nm,0.6s						
H21K	Melozitna Rive	5.05	344		Pn	13 00 15.8	+1.2
H24K	Noodor Dome	5.05	7		Pn	13 00 17.4	+2.6
H22K	Ishtalitna Cre	5.13	351		Pn	13 00 16.9	+1.2
GCSA	Galena City Sc	5.17	322		Pn	13 00 17.3	+1.0
J17K	VABM Dome	5.18	304		Pn	13 00 17.9	+1.5
J17K				IAML		13 02 08.1	
	comp=N,23nm,1.0s						
H20K	Anotleneega Mo	5.26	335		Pn	13 00 19.0	+1.4
N15K	Kwethluk River	5.29	267		Pn	13 00 19.6	+1.6
N15K				IAML		13 01 47.5	
	comp=N,24nm,1.1s						
N15K				IAML		13 01 54.1	
	comp=E,30nm,0.7s						
I26K	Coal Creek Min	5.31	30	Pn	Pn	13 00 20.3	+2.1
I26K				IAML		13 01 48.4	
	comp=N,36nm,1.0s						
I26K				IAML		13 01 48.6	
	comp=E,38nm,0.9s						
O29M	Mount Kennedy	5.40	91	Pn	Pn	13 00 19.6	-0.1
O15K	Ungalikthiuk R	5.46	257		Pn	13 00 21.6	+1.3
M29M	Somme Creek	5.49	68		Pn	13 00 22.3	+1.5
IMAR	Indian Mountai	5.49	341		Pn	13 00 22.5	+1.8
H19K	Roundabout Mou	5.65	329		Pn	13 00 24.2	+1.4
HYT	Haines Junctio	5.86	85		Pn	13 00 26.2	+0.4
G23K	Bananza Creek	5.88	358	Pn	Pn	13 00 27.4	+1.2
H18K	Honhosa River	5.91	321		Pn	13 00 26.6	+0.1
G24K	Hadweenzic Riv	5.93	8		Pn	13 00 28.5	+1.7
K15K	Wolf Creek Mou	5.94	289		Pn	13 00 28.4	+1.6
G21K	Allakaket	5.96	344	Pn	Pn	13 00 28.9	+1.8
P29M	Windy Craggy	5.97	97	Pn	Pn	13 00 28.1	+0.7
N30M	Aishikik Lake	6.03	79		Pn	13 00 28.2	+0.1
FYU	Fort Yukon	6.03	16		Pn	13 00 28.4	+0.2
M14K	Bethel	6.11	274		Pn	13 00 30.4	+1.1
G25K	Bearman Lake	6.12	13		Pn	13 00 29.9	+0.6
N14K	Kuskokwak Cree	6.13	267		Pn	13 00 30.0	+0.6
H17K	Granite Mounta	6.28	315		Pn	13 00 32.4	+0.8
I28M	Miner Creek	6.31	39	Pn	Pn	13 00 33.6	+1.5
COLD	Coldfoot	6.41	357	Pn	Pn	13 00 35.5	+2.3
L14K	Kuka Creek	6.42	280		Pn	13 00 35.1	+1.7
H27K	Steamboat Moun	6.45	30	Pn	Pn	13 00 35.8	+1.8
G18K	Tagagawik	6.52	325		Pn	13 00 35.8	+0.9
O30N	Mendenhall	6.55	85	Pn	Pn	13 00 36.9	+1.6
N31M	Braeburn, Yuko	6.66	79	Pn	Pn	13 00 38.5	+1.7
I29M	Ogilvie Camp,	6.78	43		Pn	13 00 38.3	-0.1
F20K	Avaraart Lake	6.79	339		Pn	13 00 39.9	+1.4
G27K	Doyon Strip	6.90	27	Pn	Pn	13 00 41.5	+1.4
BMAR	Burnt Mountain	6.94	16	Pn	Pn	13 00 42.2	+1.7
F25K	Christian Rive	6.97	12	Pn	Pn	13 00 43.2	+2.2
F19K	Shaleruckik Mo	7.03	332	Pn	Pn	13 00 45.8	+4.1
J30M	Hart River	7.10	53	Pn	Pn	13 00 44.8	+2.0
WHY	Whitehorse	7.15	85	Pn	Pn	13 00 45.7	+2.1
SKAG	Skagway	7.20	95	Pn	Pn	13 00 46.2	+2.1

E23K	Chandalar	7.23	360	Pn	Pn	13 00 46.3	+1.6
F26K	Sheenjek River	7.24	16		Pn	13 00 45.9	+1.2
E24K	Your Creek	7.26	3	Pn	Pn	13 00 46.4	+1.4
M31M	Drury Creek, Y	7.34	73	Pn	Pn	13 00 47.2	+1.2
I30M	Mount Dempster	7.38	48	Pn	Pn	13 00 48.6	+1.8
E19K	Redstone River	7.44	336	Pn	Pn	13 00 51.1	+3.8
E25K	Arctic Village	7.49	11	Pn	Pn	13 00 50.0	+2.0
TOLK	Toolik Lake Re	7.82	360	Pn	Pn	13 00 55.1	+2.5
YKA	Yellowknife Ar	16.51	69	Pn	Pn	13 02 45.0	-5.0
	comp=E,0.2nm,0.9s,baz=282,slow=12,SNR=1.8						
SONM	Songino Array	55.68	308	P	P	13 08 33.7	-0.4
	comp=E,0.3nm,0.3s,baz=44,slow=10,SNR=2.0						
	comp=E,0.3nm,0.3s						
FINES	FINESS Array B	57.98	3	P	P	13 08 48.9	-1.0
	comp=E,0.5nm,0.4s,baz=5.2,slow=6.5,SNR=5.5						
	comp=E,0.5nm,0.4s						

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*KRSC **25** 13:01:05.9±1.7, 56°.25N×164°.17E, h45^{km}±20^{km}, Ml3.8*
*IDC **25** 13:01:06.4±1.1, 56°.45N×163°.86E, h0^{km}, mb3.4/6, mbtmp3.5/9, ML2.8/2, Error ellipse: s-maj=31.7km s-min=15.3km az=171.0*
ISC 25 13:01:06.0±1.8, **56°.28N**±0°.05×**164°.13E**±0°.05, **h5**^{km}±11^{km}, **n43,** σ**1**^{s}**68**/47, **mb3.4**/6, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.73	265	eP	Pg	13 01 19.8	-0.2
KBTR				eS	Sg	13 01 29.9	+0.3
KBG	Krutoberegovo	0.79	269	eP	Pg	13 01 20.7	-0.6
KBG				eS	Sb	13 01 32.0	-1.3
BKI	Bering	1.50	135	eP	Pn	13 01 32.1	-1.3
BKI				eS	Sn	13 01 51.1	-2.2
SMKR	Semkarok	1.51	283	eP	Pn	13 01 33.1	-0.6
SMKR				eS	Sg	13 01 54.5	0.0
ZLN	Zelenaya	1.88	263	eP	Pn	13 01 39.3	+0.5
KLY	Klyuchi	1.94	273	eP	Pn	13 01 37.9	-1.5
BZGR	Bezymyannyi-Gr	1.95	261	eP	Pn	13 01 40.2	+0.4
KRSR	Krestovskiy	1.99	270	eP	Pn	13 01 41.2	+0.9
BZMR	Bezymyannaya	2.07	262	eP	Pn	13 01 41.9	+0.5
KIRR	Kirishev	2.15	263	eP	Pn	13 01 43.0	+0.5
MKZ	Mys Kozlova	2.20	219	eP	Pn	13 01 42.7	-0.4
MKZ				eS	Sn	13 02 07.9	-2.7
KMNR	Kamenistaya	2.25	258	eP	Pn	13 01 45.0	+1.1
TUMD	Tumrok D	2.37	245	eP	Pn	13 01 45.8	+0.4
KOZ	Kozyrevsk	2.39	267	eP	Pn	13 01 47.0	+1.3
SRDR	Sredinnyy	2.46	273	eP	Pn	13 01 47.7	+1.0
OSSR	Ossora	3.04	350	eP	Pn	13 01 54.5	0.0
OSSR				eS	Sn	13 02 29.0	-2.2
KII	Karymskiy	3.50	232	eP	Pn	13 02 01.5	+0.5
KII				eS	Sn	13 02 44.0	+1.2
SPN	Mys Shipunski	3.98	218	eS	Sn	13 02 48.8	-5.6
NLC	Nalytchevo	4.17	224	eS	Sn	13 02 57.8	-1.3
KRX	Arik	4.31	230	eP	Pn	13 02 14.2	+1.9
SMAR	Somma	4.32	228	eP	Pn	13 02 13.2	+0.9
AVH	Avacha	4.34	228	eP	Pn	13 02 14.6	+2.0
AVH				eS	Sn	13 03 04.0	+0.5
GNL	Ganaly	4.40	237	eP	Pn	13 02 14.4	+0.9
DALK	Dalny	4.51	226	eS	Sn	13 03 04.8	-2.7
PET	Petropavlovsk	4.55	227	eP	Pn	13 02 16.2	+0.8
PET				eS	Sn	13 03 06.9	-1.7
PETK	Petropavlovsk-	4.90	232	Pn	Pn	13 02 21.4	+1.3
	0.4nm,0.3s,baz=73,slow=17,SNR=5.9						
PETK				Sn	Sn	13 03 21.2	+4.1
	0.7nm,0.3s,baz=282,slow=7.3,SNR=4.6						
	1.8nm,0.7s						
KRMR	Karymshinskiy	4.91	228	eS	Sn	13 03 17.9	+0.5
GRL	Gorelyy	5.14	226	eP	Pn	13 02 21.9	-1.7
ASAK	Asacha	5.34	226	eP	Pn	13 02 27.2	+0.9
MA2	Magadan	7.84	300	Pn	Pn	13 03 00.5	0.0
	3.8nm,0.5s,baz=176,slow=18,SNR=5.4						
ASAJ	Asahikawa	18.29	237	P	Pn	13 05 20.4	+0.2
	0.1nm,0.3s,baz=137,slow=19,SNR=2.4						
	5.3nm,0.9s						
ILAR	Eielson Array	24.94	50	P	P	13 06 30.5	+0.9
	0.7nm,1.0s,baz=264,slow=6.7,SNR=4.2						
	0.7nm,1.0s						
SONM	Songino Array	35.52	281	P	P	13 08 03.1	-0.4
	0.4nm,0.4s,baz=53,slow=9.0,SNR=2.4						
	0.4nm,0.4s						
H11N2	WAKE ISLAND Hy	36.55	176	T	T	13 46 52.0	
	baz=357,slow=76,SNR=135						
H11N3	WAKE ISLAND Hy	36.56	176	T	T	13 46 56.5	
	baz=357,slow=76,SNR=96						
H11N1	WAKE ISLAND Hy	36.57	176	T	T	13 46 56.8	
	baz=357,slow=76,SNR=96						
H11S1	WAKE ISLAND Hy	37.76	176	T	T	13 48 28.0	
	baz=355,slow=29,SNR=8.6						
H11S3	WAKE ISLAND Hy	37.77	176	T	T	13 48 29.8	
	baz=355,slow=29,SNR=4.9						
H11S2	WAKE ISLAND Hy	37.77	176	T	T	13 48 29.8	
	baz=355,slow=29,SNR=5.4						
YKA	Yellowknife Ar	39.25	46	P	P	13 08 36.1	+1.4
	0.5nm,0.8s,baz=300,slow=8.0,SNR=4.6						
	0.5nm,0.8s						
MKAR	Makanchi Array	48.89	295	P	P	13 09 50.4	-2.0
	0.1nm,0.4s,baz=48,slow=6.4,SNR=2.0						
	0.1nm,0.4s						
NVAR	Mina Array Bea	52.55	75	P	P	13 10 22.4	+2.1
	0.5nm,0.8s,baz=323,slow=8.7,SNR=4.1						
	0.5nm,0.8s						
PDAR	Pinedale Array	53.99	65	P	P	13 10 32.5	+1.6
	0.4nm,0.6s,baz=314,slow=3.1,SNR=5.7						
	0.4nm,0.6s						

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*IDC **25** 13:08:25.8±1.3, 2°.58S×138°.49E, h0^{km}, mb3.4/3, mbtmp3.4/6, ML3.3/3, Error ellipse: s-maj=27.0km s-min=16.8km az=167.0*
ISC 25 13:08:30.3±1.1, **2°.7S**±0°.2×**138°.5E**±0°.2, **h32**^{km}, **n6,** σ**1**^{s}**11**/6, **mb3.5**/3, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.20	85	Pn	Pn	13 09 05.2	+0.4
	4.8nm,0.3s,baz=214,slow=11,SNR=22						
JAY				Lg	Lg	13 09 34.9	
	3.4nm,0.3s,baz=90,slow=20,SNR=4.5						
	9.2nm,0.3s						
WRA	Warramunga Arr	17.60	193	P	P	13 12 34.0	-0.1
	0.2nm,0.3s,baz=6.4,slow=12,SNR=8.7						
	0.9nm,0.7s						
FITZ	Fitzroy Crossi	19.82	219	P	Pn	13 12 60.0	-0.2
	baz=42,slow=14,SNR=1.1						
	1.0nm,0.8s						
ASAR	Alice Springs	21.30	192	P	P	13 13 14.8	+0.2
	0.6nm,0.6s,baz=24,slow=11,SNR=15						
	0.6nm,0.6s						
MKAR	Makanchi Array	69.67	322	P	P	13 19 38.0	+1.1
	0.4nm,0.8s,baz=133,slow=8.1,SNR=3.6						
	0.4nm,0.8s						
ILAR	Eielson Array	85.92	24	P	P	13 21 05.5	-1.5
	0.2nm,0.7s,baz=252,slow=4.8,SNR=2.3						
	0.2nm,0.7s						

IDC 25 13:10:13.5±3.3, **33°.24S**×**179°.59W, h0**^{km}**, mb3.6**/2, **mbtmp3.6**/3, **ML3.3**/1, **Error ellipse: s-maj=72.2km s-min=37.0km az=106.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	5.68	207	Pn	Pn	13 11 38.7	-0.5
	0.8nm,0.3s,baz=6.3,slow=9.2,SNR=6.9						
URZ				Sn	Sn	13 12 46.6	+1.5
	1.3nm,0.3s,baz=171,slow=14,SNR=8.1						
	2.5nm,0.3s						
ASAR	Alice Springs	41.70	271	P	P	13 18 04.7	+0.4
	0.7nm,0.6s,baz=111,slow=7.9,SNR=9.7						
	0.7nm,0.6s						
WRA	Warramunga Arr	42.95	276	P	P	13 18 13.7	-0.8
	0.5nm,0.7s,baz=116,slow=8.1,SNR=2.7						
	0.5nm,0.7s						
FINES	FINESS Array B	147.29	337	PKPbc	PKPbc	13 29 57.4	-0.7
	0.7nm,0.7s,baz=59,slow=4.9,SNR=1.6						

KRSC 25 13:32:35.7±1.5, **56°.19N**×**164°.45E, h51**^{km}±20^{km}**, Ml3.8, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.91	272	eP	Pn	13 32 52.4	+0.1
KBTR				eS	Sn	13 33 03.4	-1.0
KBG	Krutoberegovo	0.98	275	eP	Pn	13 32 53.4	+0.3
KBG				eS	Sn	13 33 05.7	-0.2
BKI	Bering	1.31	138	eP	Pn	13 33 00.4	+2.8
BKI				eS	Sn	13 33 16.8	+2.8
SMKR	Semkarok	1.71	285	eP	Pn	13 33 05.6	+2.6
SMKR				eS	Sn	13 33 26.3	+2.6
BDR	Baidarnaya	1.84	283	eS	Sn	13 33 30.8	+3.6
ZLN	Zelenaya	2.05	267	eP	Pn	13 33 11.2	+3.4
ZLN				eS	Sn	13 33 36.5	+4.3
CIRR	Tsirk	2.07	269	eP	Pn	13 33 11.4	+3.2
BZGR	Bezymyannyi-Gr	2.12	265	eP	Pn	13 33 12.1	+3.3
KLY	Klyuchi	2.12	275	eP	Pn	13 33 10.2	+1.5
KLY				eS	Sn	13 33 34.5	+0.6
KRSR	Krestovskiy	2.17	272	eP	Pn	13 33 12.2	+2.8
KRSR				eS	Sn	13 33 38.2	+3.0
BZWR	Bezymyannyi-We	2.23	266	eP	Pn	13 33 13.8	+3.5
BZMR	Bezymyannaya	2.24	265	eP	Pn	13 33 13.7	+3.3
BZMR				eS	Sn	13 33 40.5	+3.7
MKZ	Mys Kozlova	2.26	225	eP	Pn	13 33 12.8	+2.3
MKZ				eS	Sn	13 33 38.3	+1.3
KIRR	Kirishev	2.32	266	eP	Pn	13 33 15.1	+3.6
KIRR				eS	Sn	13 33 42.8	+4.0
KPT	Kopyto	2.38	266	eP	Pn	13 33 16.3	+4.0
KPT				eS	Sn	13 33 45.3	+5.0
KMNR	Kamenistaya	2.41	261	eP	Pn	13 33 16.6	+3.9
TUMD	Tumrok D	2.50	248	eP	Pn	13 33 17.2	+3.3
KOZ	Kozyrevsk	2.57	269	eP	Pn	13 33 19.1	+4.3
KOZ				eS	Sn	13 33 49.8	+5.0
SRDR	Sredinnyy	2.65	275	eP	Pn	13 33 19.8	+3.9
SRDR				eS	Sn	13 33 51.2	+4.4
OSSR	Ossora	3.16	347	eP	Pn	13 33 24.7	+1.8
OSSR				eS	Sn	13 33 59.0	-0.2
ESO	Esso	3.24	268	eP	Pn	13 33 28.0	+4.0
KII	Karymskiy	3.59	235	eP	Pn	13 33 33.0	+4.1
KII				eS	Sn	13 34 15.4	+5.3
SPN	Mys Shipunski	4.03	222	eP	Pn	13 33 36.5	+1.7
NLC	Nalytchevo	4.23	227	eP	Pn	13 33 40.9	+3.3
NLC				eS	Sn	13 34 27.9	+2.2
SDLR	Sedlovina	4.35	230	eP	Pn	13 33 43.2	+3.9
SDLR				eS	Sn	13 34 32.4	+3.7
KRER	Koryakskii	4.39	231	eP	Pn	13 33 44.2	+4.3
KRER				eS	Sn	13 34 33.1	+3.3
SMAR	Somma	4.39	231	eP	Pn	13 33 43.9	+3.8
SMAR				eS	Sn	13 34 32.6	+2.6
KRX	Arik	4.40	232	eP	Pn	13 33 44.1	+4.2
KRX				eS	Sn	13 34 32.5	+2.6
AVH	Avacha	4.42	231	eP	Pn	13 33 44.5	+4.3
AVH				eS	Sn	13 34 35.2	+4.7
UGLR	Uglovaya	4.42	230	eP	Pn	13 33 44.2	+3.9
UGLR				eS	Sn	13 34 33.2	+2.7
KOK	Koryaka	4.45	232	eP	Pn	13 33 44.9	+4.2
KOK				eS	Sn	13 34 35.7	+4.6
GNL	Ganaly	4.51	239	eP	Pn	13 33 45.9	+4.4
DALK	Dalny	4.58	229	eP	Pn	13 33 46.0	+3.6
DALK				eS	Sn	13 34 35.6	+1.4
PET	Petropavlovsk	4.63	229	eP	Pn	13 33 46.6	+3.6
PET				eS	Sn	13 34 37.1	+1.8
RUS	Russkaya	5.12	225	eP	Pn	13 33 53.5	+3.7
GRL	Gorelyy	5.21	228	eP	Pn	13 33 56.1	+5.0
GRL				eS	Sn	13 34 53.4	+3.4
MTVR	Mutnovka	5.22	227	eP	Pn	13 33 55.5	+4.3
MTVR				eS	Sn	13 34 52.6	+2.5
APC	Apacha	5.36	235	eP	Pn	13 33 58.3	+5.3
ASAK	Asacha	5.41	228	eP	Pn	13 33 58.8	+5.0
ASAK				eS	Sn	13 35 00.1	+5.4
KMSK	Kamenskaya	6.36	7	eP	Pn	13 34 10.9	+4.2
SKR	Severo-Kuril's	7.43	226	eP	Pn	13 34 25.3	+4.0

KRSC 25 13:35:22.1±1.7, **56°.22N**×**164°.31E, h50**^{km}±21^{km}**, Ml3.6, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.83	270	eP	Pn	13 35 37.5	0.0
KBTR				eS	Sn	13 35 48.1	-0.7
KBG	Krutoberegovo	0.90	273	eP	Pn	13 35 38.3	0.0
KBG				eS	Sn	13 35 50.0	-0.2
BKI	Bering	1.39	136	eP	Pn	13 35 47.7	+2.8
BKI				eS	Sn	13 36 05.1	+3.1
SMKR	Semkarok	1.62	284	eP	Pn	13 35 50.6	+2.4
SMKR				eS	Sn	13 36 10.0	+2.0
BDR	Baidarnaya	1.76	283	eS	Sn	13 36 14.9	+3.5
SRKR	Sorokina	1.80	285	eS	Sn	13 36 14.7	+2.3
ZLN	Zelenaya	1.97	266	eP	Pn	13 35 56.4	+3.3
ZLN				eS	Sn	13 36 21.0	+4.4
CIRR	Tsirk	1.99	269	eP	Pn	13 35 56.4	+3.0
CIRR				eS	Sn	13 36 21.6	+4.4
KLY	Klyuchi	2.04	274	eP	Pn	13 35 55.3	+1.4
KLY				eS	Sn	13 36 18.5	+0.3
BZGR	Bezymyannyi-Gr	2.04	264	eP	Pn	13 35 57.3	+3.2
KRSR	Krestovskiy	2.09	272	eP	Pn	13 35 57.4	+2.7
KRSR				eS	Sn	13 36 22.0	+2.4
BZWR	Bezymyannyi-We	2.15	265	eP	Pn	13 35 58.9	+3.3
BZMR	Bezymyannaya	2.16	264	eP	Pn	13 35 58.8	+3.2
BZMR				eS	Sn	13 36 25.3	+4.0
MKZ	Mys Kozlova	2.22	223	eP	Pn	13 35 58.3	+2.0
MKZ				eS	Sn	13 36 23.3	+0.8
KIRR	Kirishev	2.24	265	eP	Pn	13 35 60.0	+3.2
KIRR				eS	Sn	13 36 26.7	+3.5
KPT	Kopyto	2.30	265	eP	Pn	13 36 01.4	+3.8
KMNR	Kamenistaya	2.33	260	eP	Pn	13 36 02.3	+4.3
TUMD	Tumrok D	2.43	247	eP	Pn	13 36 02.7	+3.3
KOZ	Kozyrevsk	2.49	268	eP	Pn	13 36 04.0	+4.0
KOZ				eS	Sn	13 36 34.8	+5.7
SRDR	Sredinnyy	2.56	274	eP	Pn	13 36 05.0	+3.9
SRDR				eS	Sn	13 36 35.3	+4.2
OSSR	Ossora	3.11	348	eP	Pn	13 36 11.0	+2.5
OSSR				eS	Sn	13 36 45.0	+0.5
ESO	Esso	3.16	267	eP	Pn	13 36 13.2	+4.0
ESO				eS	Sn	13 36 51.1	+5.5
KII	Karymskiy	3.54	234	eP	Pn	13 36 15.2	+0.6
SPN	Mys Shipunski	4.00	220	eP	Pn	13 36 22.6	+1.9
SDLR	Sedlovina	4.31	229	eP	Pn	13 36 28.8	+3.7
KRER	Koryakskii	4.34	230	eP	Pn	13 36 30.6	+5.0
KRX	Arik	4.35	231	eP	Pn	13 36 29.6	+3.9
SMAR	Somma	4.35	229	eP	Pn	13 36 29.4	+3.6
SMAR				eS	Sn	13 37 16.6	+1.3
AVH	Avacha	4.38	230	eP	Pn	13 36 31.2	+5.2
AVH				eS	Sn	13 37 20.5	+4.8
UGLR	Uglovaya	4.38	229	eP	Pn	13 36 29.9	+3.8
KOK	Koryaka	4.40	231	eP	Pn	13 36 30.7	+4.3
GNL	Ganaly	4.46	238	eP	Pn	13 36 31.6	+4.5
DALK	Dalny	4.54	228	eP	Pn	13 36 31.4	+3.2
DALK				eS	Sn	13 37 21.0	+1.5
PET	Petropavlovsk	4.59	228	eP	Pn	13 36 32.4	+3.6
PET				eS	Sn	13 37 22.4	+1.7
GRL	Gorelyy	5.17	227	eP	Pn	13 36 41.7	+4.8
MTVR	Mutnovka	5.18	226	eP	Pn	13 36 41.4	+4.3
ASAK	Asacha	5.37	227	eP	Pn	13 36 44.5	+4.9

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*IDC **25** 13:50:04.8±0.8, 12°.44S×46°.13E, h0^{km}, mb3.8/11, mbtmp3.8/12, ML3.6/1, MS3.4/11, Error ellipse: s-maj=28.1km s-min=21.6km az=85.0*
*NEIC **25** 13:50:04.6±1.2, 12°.6S±0°.1×45°.9E±0°.3, h10^{km}±2^{km}, mb4.4/7, Error ellipse: s-maj=44.2km s-min=20.8km az=261.0*
ISC 25 13:50:05.3±0.6, **12°.59S**±0°.08×**46°.2E**±0°.2, **h10**^{km}, **n33,** σ**1**^{s}**31**/25, **mb3.9**/12, **MS3.4**/9, **Northwest of Madagascar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPO	Ambohidratompo	6.03	171	Pn	Pn	13 51 35.6	+0.8
	0.2nm,0.3s,baz=337,slow=15,SNR=14						
OPO				Sn	Sn	13 52 42.6	-1.5
	0.5nm,0.3s,baz=273,slow=23,SNR=10						
	9.1nm,0.6s						
ABPO	Ambohimpanom	6.48	171		Pn	13 51 38.9	-2.0
LSZ	Lusaka	17.64	259	LR	LR	14 00 38.0	
	comp=Z,104nm,18.9s,baz=72,slow=36						
MATP	Matopo	18.62	243	LR	LR	14 01 09.6	
	comp=Z,51nm,18.6s,baz=64,slow=36						
LBTB	Lobatse	23.01	235	LR	LR	14 03 59.5	
	comp=Z,139nm,18.2s,baz=76,slow=36						
BOSA	Boshof	25.17	228	P	P	13 55 32.3	+1.2
	3.8nm,1.0s,baz=53,slow=7.3,SNR=3.6						
BOSA				LR	LR	14 06 21.6	
	comp=Z,61nm,18.2s,baz=24,slow=39						
	3.8nm,1.0s						
TSUM	Tsumeb	28.23	253	LR	LR	14 06 54.3	
	comp=Z,95nm,18.6s,baz=22,slow=36						
PALK	Pallekele	39.60	62	LR	LR	14 10 47.3	
	comp=Z,45nm,18.5s,baz=262,slow=31						
TORD	Torodi Ar. Bea	50.96	299	P	P	13 59 08.4	+0.9
	1.4nm,0.4s,baz=130,slow=6.0,SNR=1.3						
	1.4nm,0.4s						
BRTR	Keskin Array B	53.33	348	P	P	13 59 24.2	-0.7
	0.5nm,0.5s,baz=152,slow=7.6,SNR=2.9						
	0.5nm,0.5s						
KBZ	Khabaz	56.12	357	P	P	13 59 45.1	+0.3
	1.5nm,0.8s,baz=180,slow=7.1,SNR=4.1						
	1.5nm,0.8s						
BRDH	Bariadhala	56.69	52	LR	LR	14 22 59.0	
	comp=Z,106nm,18.0s,baz=124,slow=35						
TIRR	Tirgusor	59.02	345	P	P	14 00 03.1	-2.1
KKAR	Karatay Array	59.74	20	P	P	14 00 09.7	-0.7
PDG	Podgorica	60.06	337	P	P	14 00 10.7	-1.9
CMAR	Chiang Mai Arr	60.51	60	LR	LR	14 24 26.9	
	comp=Z,20nm,18.4s,baz=225,slow=34						
AB31	Akbulak array	62.77	10	P	P	14 00 30.0	-0.7
AB31				IAmb	IAmb	14 00 31.3	
	comp=Z,4.3nm,0.8s						
ABKAR	Akbulak array	62.77	10	P	P	14 00 29.9	-0.8
BURAR	Bucovina Array	62.77	344	P	P	14 00 29.4	-1.6
CASP	Castiglione de	63.89	332	P	P	14 00 36.9	-1.5
MAKZ	Makanchi	67.27	26	P	P	14 01 00.1	0.0
MAKZ				IAmb	IAmb	14 01 01.0	
	comp=Z,1.2nm,0.8s						
MKAR	Makanchi Array	67.39	26	P	P	14 01 00.2	-0.7
MKAR	Makanchi Array	67.39	26	P	P	14 01 00.5	-0.4
	comp=Z,0.6nm,0.7s,baz=214,slow=7.1,SNR=5.7						
	comp=Z,0.6nm,0.7s						
BVAR	Borovoye Array	68.58	15	P	P	14 01 08.5	+0.2
	comp=Z,0.2nm,0.4s,baz=169,slow=2.9,SNR=1.9						
	comp=Z,0.2nm,0.4s						
KURBB	Kurchatov Arra	69.01	21	P	P	14 01 10.9	0.0
	comp=Z,0.2nm,0.5s,baz=225,slow=7.6,SNR=3.0						
	comp=Z,0.2nm,0.5s						
ESDC	Sonseca Array	69.79	321	P	P	14 01 17.4	+1.3
	comp=Z,0.1nm,0.3s,baz=148,slow=5.5,SNR=2.0						
ESDC				LR	LR	14 32 23.6	
	comp=Z,24nm,19.6s,baz=124,slow=36						
	comp=Z,0.1nm,0.3s						
QIZ	Qiongzhong	70.17	64	P	P	14 01 18.8	0.0
ZALV	Zalesovo Beam	73.98	23	P	P	14 01 40.5	-0.3
	comp=Z,0.5nm,0.4s,baz=192,slow=4.3,SNR=2.2						
	comp=Z,0.5nm,0.4s						
FINES	FINESS Array B	75.48	350	P	P	14 01 49.8	+0.4
ASAR	Alice Springs	83.02	113	P	P	14 02 34.0	+2.4
	comp=Z,1.0nm,0.7s,baz=268,slow=5.0,SNR=8.5						
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	84.12	109	P	P	14 02 39.6	+2.3
	comp=Z,0.7nm,0.8s,baz=265,slow=3.5,SNR=5.4						
	comp=Z,0.7nm,0.8s						
BDFB	Brasilia	90.59	254	LR	LR	14 38 41.4	
	comp=Z,17nm,19.7s,baz=150,slow=32						
CPUP	Villa Florida	96.24	241	LR	LR	14 40 14.1	
	comp=Z,10nm,20.9s,baz=26,slow=31						

IDC 25 13:55:33.3±333.0, **57°.42N**×**29°.02E, h0**^{km}**, Error ellipse: s-maj=132.6km s-min=95.1km az=95.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	4.53	95	I	I	14 25 10.0	
	0.1nm,0.8s,baz=278,slow=316,SNR=5.2						
I26DE	FREYUNG INFRAS	12.54	233	I	I	15 14 40.0	
	baz=38,slow=321,SNR=1.1						
I37NO	I37NO	12.57	343	I	I	15 04 40.0	
	baz=150,slow=321,SNR=1.0						

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*IDC **25** 13:59:41.0±1.0, 56°.31N×164°.72E, h0^{km}, mb3.4/10, mbtmp3.4/12, ML3.1/2, Error ellipse: s-maj=35.7km s-min=15.6km az=156.0*
*KRSC **25** 13:59:42.8±1.1, 56°.11N×164°.67E, h48^{km}±20^{km}, Ml3.8*
ISC 25 13:59:45.6±0.7, **56°.16N**±0°.06×**164°.74E**±0°.05, **h35**^{km}, **n48,** σ**1**^{s}**31**/49, **mb3.5**/10, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	1.07	273	eP	Pn	14 00 00.9	-3.1
KBG	Krutoberegovo	1.14	275	eP	Pn	14 00 02.0	-3.0
BKI	Bering	1.19	144	eP	Pn	14 00 04.8	-0.9
BKI				eS	Sn	14 00 20.1	-0.5
SMKR	Semkarok	1.87	284	eP	Pn	14 00 14.3	-0.8
LGNR	Loginova	2.27	270	eP	Pn	14 00 20.0	-0.8
BZGR	Bezymyannyi-Gr	2.28	266	eP	Pn	14 00 20.3	-0.4
KLY	Klyuchi	2.29	275	eP	Pn	14 00 18.6	-2.2
KRSR	Krestovskiy	2.33	273	eP	Pn	14 00 20.8	-0.7
MKZ	Mys Kozlova	2.35	228	eP	Pn	14 00 19.9	-1.8
MKZ				eS	Sn	14 00 46.4	-2.9
BZWR	Bezymyannyi-We	2.39	267	eP	Pn	14 00 22.5	+0.1
BZMR	Bezymyannaya	2.39	266	eP	Pn	14 00 22.3	-0.1
KIRR	Kirishev	2.48	267	eP	Pn	14 00 23.4	-0.1
KIRR				eS	Sn	14 00 52.9	+0.4
KPT	Kopyto	2.54	267	eP	Pn	14 00 24.7	+0.3
KMNR	Kamenistaya	2.56	263	eP	Pn	14 00 25.3	+0.6
TUMD	Tumrok D	2.64	250	eP	Pn	14 00 25.1	-0.5
KOZ	Kozyrevsk	2.73	270	eP	Pn	14 00 27.4	+0.6
SRDR	Sredinnyy	2.81	275	eP	Pn	14 00 28.4	+0.4
ESO	Esso	3.40	268	eP	Pn	14 00 36.5	+0.5
SPN	Mys Shipunski	4.12	224	eP	Pn	14 00 45.1	-0.8
NLC	Nalytchevo	4.33	228	eS	Sn	14 01 36.6	-1.5
SDLR	Sedlovina	4.46	232	eP	Pn	14 00 50.3	-0.4
KRER	Koryakskii	4.50	233	eP	Pn	14 00 52.6	+1.2
SMAR	Somma	4.50	232	eP	Pn	14 00 51.5	0.0
KRX	Arik	4.51	234	eP	Pn	14 00 53.7	+2.3
AVH	Avacha	4.53	233	eP	Pn	14 00 51.9	+0.2
UGLR	Uglovaya	4.53	232	eP	Pn	14 00 51.7	0.0
KOK	Koryaka	4.56	233	eP	Pn	14 00 52.4	+0.3
GNL	Ganaly	4.63	241	eP	Pn	14 00 53.6	+0.5
DALK	Dalny	4.69	230	eP	Pn	14 00 51.5	-2.2
PETK	Petropavlovsk-	5.11	236	Pn	Pn	14 01 00.9	+1.3
	0.4nm,0.3s,baz=85,slow=17,SNR=9.1						
PETK				Sn	Sn	14 01 59.7	+2.5
	0.3nm,0.3s,baz=33,slow=19,SNR=1.4						
	1.7nm,0.6s						
GRL	Gorelyy	5.32	230	eP	Pn	14 01 02.9	+0.3
MTVR	Mutnovka	5.32	229	eP	Pn	14 01 02.9	+0.3
ASAK	Asacha	5.51	229	eP	Pn	14 01 06.0	+0.8
KMSK	Kamenskaya	6.37	6	eP	Pn	14 01 18.3	+1.5
ASAJ	Asahikawa	18.52	239	P	Pn	14 04 00.3	+1.2
	0.3nm,0.3s,baz=99,slow=8.4,SNR=5.3						
	9.0nm,0.9s						
ILAR	Eielson Array	24.75	50	P	P	14 05 02.2	-1.2
	0.2nm,0.9s,baz=255,slow=8.6,SNR=5.3						
	0.2nm,0.9s						
MJAR	Matsushiro Arr	26.56	234	P	P	14 05 20.7	+0.7
	0.8nm,0.6s,baz=30,slow=8.5,SNR=5.3						
	0.8nm,0.6s						
SONM	Songino Array	35.87	282	P	P	14 06 41.9	-0.1
	0.3nm,0.4s,baz=77,slow=6.5,SNR=1.8						
	0.3nm,0.4s						
H11N2	WAKE ISLAND Hy	36.41	177	T	T	14 45 44.2	
	baz=357,slow=76,SNR=39						
H11N3	WAKE ISLAND Hy	36.43	177	T	T	14 45 52.0	
	baz=357,slow=76,SNR=27						
H11N1	WAKE ISLAND Hy	36.43	177	T	T	14 45 45.2	
	baz=357,slow=76,SNR=30						
YKA	Yellowknife Ar	39.08	47	P	P	14 07 07.7	-1.0
	0.1nm,0.6s,baz=299,slow=8.7,SNR=2.2						
	0.1nm,0.6s						
KURBB	Kurchatov Arra	48.51	302	P	P	14 08 23.4	-1.1
	0.3nm,0.7s,baz=55,slow=7.8,SNR=5.0						
	0.3nm,0.7s						
MKAR	Makanchi Array	49.25	296	P	P	14 08 30.7	+0.4
	0.1nm,0.6s,baz=60,slow=8.8,SNR=2.1						
	0.1nm,0.6s						
BVAR	Borovoye Array	50.58	309	P	P	14 08 41.5	+1.2
	0.4nm,0.4s,baz=52,slow=9.6,SNR=6.7						
	0.4nm,0.4s						
PDAR	Pinedale Array	53.73	66	P	P	14 09 03.7	-0.4
	0.8nm,1.1s,baz=316,slow=8.4,SNR=2.4						
	0.8nm,1.1s						
CMAR	Chiang Mai Arr	61.41	260	P	P	14 09 57.5	-0.7
	0.3nm,0.3s,baz=36,slow=6.3,SNR=1.4						
	0.3nm,0.3s						
TXAR	Lajitas Array	67.02	71	P	P	14 10 37.2	+2.3
	0.2nm,0.5s,baz=260,slow=2.5,SNR=3.5						
	0.2nm,0.5s						

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*PRE **25** 14:01:11.4±1.1, 26°.05S×29°.40E, h0^{km}, ML2.9, Suspected explosion*
*BGSI **25** 14:01:13.2±1.4, 25°.97S×30°.38E, h67^{km}±216^{km}, ML3.1*

ISC 25 14:01:11.4±0.9**,26°.06S**±0°.03×**29°.41E**±0°.03**,h0^{km},n17,**
σ1^{s}.81/30**,South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRLN	**Carolina, Mapu**	**0.56**	**84**	*e*P	**Pg**	**14 01 21.6**	**-0.4**
CRLN				*e*S	**Sg**	**14 01 29.2**	**0.0**
CRLN				IAML		14 01 37.0	
	comp=Z,320nm,0.6s						
PILG	**Pilgrimsrest,**	**1.62**	**47**	*e*P	**Pn**	**14 01 42.6**	**+1.2**
PILG				*e*S	**Sn**	**14 02 04.2**	**+1.1**
PILG				IAML		14 02 06.2	
	comp=Z,373nm,0.5s						
NWCL	**Newcastle**	**1.73**	**166**	*e*P	**Pn**	**14 01 43.5**	**+0.7**
NWCL				*e*S	**Sn**	**14 02 06.5**	**+0.9**
NWCL				IAML		14 02 07.8	
	comp=Z,250nm,0.4s						
PRYS	**Parys**	**2.03**	**244**	*e*P	**Pn**	**14 01 47.2**	**+0.2**
PRYS				*e*S	**Sn**	**14 02 13.2**	**+0.1**
PRYS				IAML		14 02 16.8	
	comp=Z,115nm,0.6s						
POGA	**Pongola**	**2.42**	**122**	*e*P	**Pn**	**14 01 52.3**	**+0.1**
POGA				*e*S	**Sn**	**14 02 24.1**	**+1.5**
POGA				IAML		14 02 28.2	
	comp=Z,144nm,0.4s						
SNKL	**Senekal, Frees**	**2.65**	**213**	*e*P	**Pn**	**14 01 56.6**	**+1.1**
SNKL				*e*S	**Sn**	**14 02 29.1**	**+0.7**
SNKL				IAML		14 02 42.5	
	comp=Z,81nm,0.5s						
MOPA	**Mopani**	**3.11**	**36**	*e*P	**Pn**	**14 02 02.3**	**+0.6**
MOPA				*e*S	**Sn**	**14 02 40.4**	**+0.9**
MOPA				IAML		14 02 53.9	
	comp=Z,114nm,0.5s						
PMBG	**Pietermaritzbu**	**3.58**	**164**	*e*P	**Pn**	**14 02 09.4**	**+1.2**
PMBG				*e*S	**Sn**	**14 02 51.2**	**+0.1**
PMBG				IAML		14 03 10.6	
	comp=Z,47nm,0.4s						
LBTB	**Lobatse**	**3.60**	**286**	*e*P	**Pn**	**14 02 09.2**	**+0.7**
LBTB				*e*S	**Sn**	**14 02 51.0**	**-0.8**
LBTB				IAML		14 03 05.0	
	comp=Z,59nm,0.5s						
MUSN	**Musina, Limpop**	**3.78**	**6**	*e*P	**Pn**	**14 02 11.9**	**+1.0**
MUSN				*e*S	**Sn**	**14 02 55.5**	**-0.6**
MUSN				IAML		14 03 20.2	
	comp=Z,22nm,0.5s						
MREMI	**Moremi**	**3.91**	**332**	*i* P	**Pn**	**14 02 14.8**	**+2.0**
MREMI				IAML		14 03 22.2	
	comp=N,77nm,0.5s						
MAKGR	**Makgori**	**4.16**	**272**	*i* P	**Pb**	**14 02 23.1**	**-2.4**
MAKGR				*i* S	**Sb**	**14 03 16.9**	**+0.5**
MAKGR				IAML		14 03 26.3	
	comp=E,171nm,0.6s						
BOSA	**Boshof**	**4.49**	**235**	*e*P	**Pn**	**14 02 22.2**	**+1.5**
BOSA				*e*S	**Sn**	**14 03 13.3**	**-0.5**
BOSA				IAML		14 03 38.4	
	comp=Z,27nm,0.6s						
KSTD	**Kokstad**	**4.54**	**181**	*e*P	**Pn**	**14 02 22.9**	**+1.3**
KSTD				*e*S	**Sn**	**14 03 14.6**	**-0.6**
KSTD				IAML		14 03 48.8	
	comp=Z,15nm,0.4s						
KDWAN	**Kaudwane**	**5.08**	**301**	*i* P	Pn	14 02 34.3	+5.5
KDWAN				*i* S	**Sn**	**14 03 34.4**	**+6.1**
KDWAN				IAML		14 03 58.6	
	comp=E,42nm,0.7s						
SKOMA	**Sekoma**	**5.19**	**286**	*i* P	Pn	14 02 37.0	+6.6
SKOMA				IAML		14 03 55.3	
	comp=N,49nm,0.5s						
BROLN	**Tlhalogang**	**5.29**	**338**	*i* P	**Pn**	**14 02 32.4**	**+0.6**
BROLN				*i* S	**Sn**	**14 03 28.9**	**-4.7**
BROLN				IAML		14 04 12.6	
	comp=E,19nm,1.8s						

IDC ***25*** *14:07:32.2±0.9,56°.37N×164°.37E,h0^{km},mb3.4/13,*
mbtmp3.4/15,ML3.0/2,MS2.7/6,Error ellipse:
s-maj=29.4km s-min=14.5km az=158.0
KRSC ***25*** *14:07:32.5±1.7,56°.07N×164°.62E,h21^{km}±23^{km},Ml4.0*
ISC 25 14:07:33.5±0.6**,56°.15N**±0°.05×**164°.56E**±0°.04**,h16^{km},n59,**
σ2^{s}.08/55**,mb3.5**/14**,Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.97**	**274**	*e*P	**Pb**	**14 07 50.4**	**-1.6**
KBTR				*e*S	**Sn**	**14 08 04.6**	**-1.4**
KBG	**Krutoberegovo**	**1.04**	**276**	*e*P	**Pb**	**14 07 51.7**	**-1.4**
KBG				*e*S	**Sn**	**14 08 06.6**	**-1.0**
BKI	**Bering**	**1.24**	**139**	*e*P	**Pn**	**14 07 54.4**	**-1.8**
BKI				*e*S	**Sn**	**14 08 10.1**	**-2.4**
SMKR	**Semkarok**	**1.77**	**285**	*e*P	**Pb**	**14 08 03.8**	**-1.8**
SMKR				*e*S	**Sg**	**14 08 28.1**	**-2.5**
BDR	**Baidarnaya**	**1.91**	**284**	*e*S	**Sg**	**14 08 31.4**	**-3.6**
ZLN	**Zelenaya**	**2.11**	**268**	*e*P	**Pb**	**14 08 09.8**	**-1.6**
CIRR	**Tsirk**	**2.13**	**271**	*e*P	**Pb**	**14 08 11.4**	**-0.4**
LGNR	**Loginova**	**2.17**	**270**	*e*P	**Pb**	**14 08 12.2**	**-0.3**
BZGR	**Bezymyannyi-Gr**	**2.18**	**266**	*e*P	**Pb**	**14 08 10.1**	**-2.4**
KLY	**Klyuchi**	**2.19**	**276**	*e*P	**Pn**	**14 08 08.5**	**-0.7**
KRSR	**Krestovskiy**	**2.23**	**273**	*e*P	**Pb**	**14 08 11.0**	**-2.5**
MKZ	**Mys Kozlova**	**2.27**	**226**	*e*P	**Pn**	**14 08 09.5**	**-0.9**
BZWR	**Bezymyannyi-We**	**2.29**	**267**	*e*P	**Pb**	**14 08 12.1**	**-2.4**
BZMR	**Bezymyannaya**	**2.29**	**266**	*e*P	**Pb**	**14 08 12.0**	**-2.5**
KIRR	**Kirishev**	**2.37**	**267**	*e*P	**Pb**	**14 08 13.5**	**-2.4**
KPT	**Kopyto**	**2.44**	**267**	*e*P	**Pb**	**14 08 14.3**	**-2.7**
KMNR	**Kamenistaya**	**2.46**	**262**	*e*P	**Pb**	**14 08 15.1**	**-2.3**
TUMD	**Tumrok D**	**2.54**	**250**	*e*P	**Pn**	**14 08 15.2**	**+1.1**
KOZ	**Kozyrevsk**	**2.63**	**270**	*e*P	**Pb**	**14 08 17.2**	**-3.0**
SRDR	**Sredinnyy**	**2.71**	**275**	*e*P	**Pb**	**14 08 18.0**	**-3.6**
OSSR	**Ossora**	**3.21**	**346**	*e*P	**Pn**	**14 08 23.3**	**+0.1**
ESO	**Esso**	**3.29**	**268**	*e*P	**Pb**	**14 08 27.5**	**-4.0**
KII	**Karymskiy**	**3.62**	**236**	*e*P	**Pb**	**14 08 34.0**	**-3.2**
SPN	**Mys Shipunski**	**4.04**	**223**	*e*P	**Pn**	**14 08 34.8**	**+0.2**
SDLR	**Sedlovina**	**4.37**	**231**	*e*P	**Pn**	**14 08 40.4**	**+1.1**
KRER	**Koryakskii**	**4.41**	**232**	*e*P	**Pn**	**14 08 42.1**	**+2.2**
SMAR	**Somma**	**4.42**	**231**	*e*P	**Pn**	**14 08 41.1**	**+1.0**
KRX	**Arik**	**4.42**	**233**	*e*P	**Pn**	**14 08 43.3**	**+3.3**
AVH	**Avacha**	**4.45**	**232**	*e*P	**Pn**	**14 08 41.8**	**+1.5**
UGLR	**Uglovaya**	**4.45**	**231**	*e*P	**Pn**	**14 08 41.1**	**+0.8**
KOK	**Koryaka**	**4.47**	**233**	*e*P	**Pn**	**14 08 43.7**	**+3.1**
GNL	**Ganaly**	**4.54**	**240**	*e*P	**Pn**	**14 08 45.0**	**+3.4**
DALK	**Dalny**	**4.60**	**230**	*e*P	**Pn**	**14 08 43.3**	**+1.0**
PETK	**Petropavlovsk-**	**5.02**	**235**	Pn	**Pn**	**14 08 50.4**	**+2.3**
	0.5nm,0.3s,baz=68,slow=16,SNR=12						
PETK				Sn	**Sn**	**14 09 48.1**	**+2.4**
	baz=60,slow=16						
PETK				LR	LR	14 11 06.0	
	comp=Z,105nm,19.1s,baz=25,slow=42						
	1.1nm,0.4s						
ASAK	**Asacha**	**5.43**	**229**	*e*P	**Pn**	**14 08 55.8**	**+2.0**
MA2	**Magadan**	**8.11**	**301**	LR	LR	14 12 43.7	
	comp=Z,35nm,19.5s,baz=142,slow=39						
SEY	**Seymchan**	**9.18**	**323**	LR	LR	14 13 29.0	
	comp=Z,39nm,21.4s,baz=68,slow=40						
ASAJ	**Asahikawa**	**18.43**	**238**	P	**Pn**	**14 11 48.4**	**+0.4**
	0.2nm,0.3s,baz=98,slow=19,SNR=4.5						
ASAJ				LR	LR	14 18 46.8	
	comp=Z,23nm,20.1s,baz=41,slow=37						
	6.1nm,0.7s						
YAK	**Yakutsk**	**18.68**	**303**	LR	LR	14 19 33.5	
	comp=Z,39nm,18.1s,baz=206,slow=39						
TIXI	**Tiksi**	**21.56**	**330**	P	**P**	**14 12 25.0**	**+3.3**
	0.8nm,0.6s,baz=155,slow=5.8,SNR=3.9						
ILAR	**Eielson Array**	**24.83**	**50**	P	**P**	**14 12 56.6**	**+2.0**
	0.3nm,0.8s,baz=271,slow=9.8,SNR=4.1						
ILAR				LR	LR	14 22 00.4	
	comp=Z,9.2nm,21.6s,baz=252,slow=35						
	0.3nm,0.8s						
MJAR	**Matsushiro Arr**	**26.47**	**233**	P	**P**	**14 13 11.6**	**+1.9**
	1.1nm,0.7s,baz=31,slow=8.5,SNR=5.5						
	1.1nm,0.7s						
SONM	**Songino Array**	**35.78**	**282**	P	**P**	**14 14 31.8**	**+0.1**
	0.3nm,0.3s,baz=77,slow=6.5,SNR=1.7						
	0.3nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**36.41**	**176**	T	T	14 53 33.5	
	baz=357,slow=76,SNR=46						
H11N3	**WAKE ISLAND Hy**	**36.42**	**176**	T	T	14 53 33.7	
	baz=357,slow=76,SNR=41						
H11N1	**WAKE ISLAND Hy**	**36.42**	**176**	T	T	14 53 08.5	
	baz=357,slow=76,SNR=44						
H11S1	**WAKE ISLAND Hy**	**37.62**	**177**	T	T	14 54 35.0	
	baz=352						
H11S3	**WAKE ISLAND Hy**	**37.63**	**177**	T	T	14 55 15.8	
	baz=352						
H11S2	**WAKE ISLAND Hy**	**37.63**	**177**	T	T	14 55 15.6	
	baz=352						
YKA	**Yellowknife Ar**	**39.16**	**47**	P	**P**	**14 14 59.5**	**-0.4**
	0.1nm,0.7s,baz=301,slow=9.4,SNR=1.9						
	0.1nm,0.7s						
KURBB	**Kurchatov Arra**	**48.43**	**302**	P	**P**	**14 16 12.1**	**-2.4**
	0.2nm,0.6s,baz=57,slow=7.8,SNR=2.5						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**49.16**	**296**	P	**P**	**14 16 20.0**	**-0.3**
	0.2nm,0.4s,baz=55,slow=5.5,SNR=1.7						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**50.51**	**309**	P	**P**	**14 16 31.2**	**+0.8**
	1.1nm,0.6s,baz=35,slow=5.4,SNR=5.2						
	1.1nm,0.6s						
NVAR	**Mina Array Bea**	**52.35**	**75**	P	**P**	**14 16 44.9**	**+0.2**
	0.3nm,0.5s,baz=346,slow=11,SNR=2.4						
	0.3nm,0.5s						
PDAR	**Pinedale Array**	**53.82**	**65**	P	**P**	**14 16 57.5**	**+2.0**
	0.1nm,0.5s,baz=337,slow=1.9,SNR=5.1						
	0.1nm,0.5s						
FINES	**FINESS Array B**	**58.30**	**338**	P	**P**	**14 17 26.9**	**+0.1**
	0.8nm,0.8s,baz=356,slow=9.8,SNR=1.7						
	0.8nm,0.8s						
NOA	**NORSAR Array B**	**61.27**	**346**	P	**P**	**14 17 46.0**	**-1.4**
	0.3nm,0.5s,baz=20,slow=6.6,SNR=1.5						
	0.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**61.31**	**260**	P	**P**	**14 17 48.8**	**+0.6**
	0.2nm,0.3s,baz=18,slow=6.6,SNR=5.3						
	0.2nm,0.3s						
TXAR	**Lajitas Array**	**67.12**	**71**	P	**P**	**14 18 27.4**	**+1.1**
	0.1nm,0.5s,baz=318,slow=5.0,SNR=5.1						
	0.1nm,0.5s						

AFAD ***25*** *14:15:01.7,38°.71N×40°.29E,h13^{km}±3^{km},ML2.3*
ISK ***25*** *14:15:04.7,38°.71N×40°.21E,h4^{km},ML2.5/10*
ISC 25 14:15:03.9±1.3**,38°.75N**±0°.04×**40°.19E**±0°.03**,h10^{km}**±11^{km}**,**
n14,σ1^{s}.01/22**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNGB	**Bingl**	**0.45**	**57**	Pg	**Pb**	**14 15 14.0**	**-0.1**
BNGB				Sg	**Sb**	**14 15 21.8**	**+0.8**
YEDI	**Yedisu-Bingol**	**0.74**	**22**	Pg	**Pn**	**14 15 20.2**	**-0.5**
YEDI				Sg	**Sn**	**14 15 31.1**	**-1.1**
ERZN	**Erzincan**	**0.92**	**337**	Pg	**Pn**	**14 15 23.4**	**+0.4**
ERZN				Sg	**Sn**	**14 15 37.5**	**+1.2**
ELZG	**Elazig**	**0.98**	**256**	S	**Sn**	**14 15 39.1**	**+1.2**
SVAN	**Silvan-Diyarba**	**0.99**	**127**	Pg	**Pn**	**14 15 23.6**	**-0.3**
SVAN				Sg	**Sn**	**14 15 37.5**	**-0.5**
VRTB	**Varto-Mus**	**1.07**	**67**	Pg	**Pn**	**14 15 26.0**	**+0.9**
MAYA	**Malatya/Merkez**	**1.45**	**254**	P	**Pn**	**14 15 27.7**	**-2.5**
MAYA				S	**Sg**	**14 15 51.0**	**+0.6**
MAYA				*i* IAML		14 15 56.0	
	comp=N,25nm,0.4s						
GURO	**Guroymak-BITLI**	**1.46**	**97**	Pn	**Pg**	**14 15 32.2**	**+0.4**
GURO				Sn	**Sg**	**14 15 51.9**	**+1.2**
HANM	**anlurfa/Hi**	**1.56**	**222**	P	**Pg**	**14 15 33.5**	**-0.1**
HANM				S	**Sb**	**14 15 52.8**	**+0.2**
HANM				*i* IAML		14 15 58.0	
	comp=N,64nm,0.4s						
HANM				*i* IAML		14 16 06.0	
	comp=E,26nm,0.4s						
AZEY	**Adyaman-Merk**	**1.79**	**239**	P	**Pb**	**14 15 37.0**	**+0.2**
AZEY				S	**Sb**	**14 16 00.4**	**+1.0**
AZEY				*i* IAML		14 16 04.0	
	comp=N,28nm,1.1s						
AZEY				*i* IAML		14 16 08.0	
	comp=E,21nm,0.9s						
KOPR	**Koprukoy-ERZUR**	**1.79**	**46**	Pn	**Pg**	**14 15 37.0**	**-1.3**
DARE	**Darende-Malaty**	**2.13**	**266**	Pn	**Pb**	**14 15 42.6**	**0.0**
AKDM	**Akdamar-Van**	**2.23**	**100**	Pn	**Pb**	**14 15 43.7**	**-0.6**
AGRB	**Hanur-Agry**	**2.33**	**68**	Pn	**Pb**	**14 15 45.3**	**-0.8**

IDC 25 14:18:57.2±2.1**,5°.75S**×**151°.02E,h0^{km},mb3.6**/4**,**
mbtmp3.6/4**,Error ellipse: s-maj=121.3km**
s-min=28.1km az=128.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.28**	**226**	Sn	Sn	14 21 20.4	+1.4
	1.4nm,0.3s,baz=356,slow=19,SNR=1.8						
WRA	**Warramunga Arr**	**21.50**	**227**	P	P	14 23 47.6	-0.3
	0.9nm,0.8s,baz=50,slow=11,SNR=4.9						
	0.9nm,0.8s						
ASAR	**Alice Springs**	**24.27**	**221**	P	P	14 24 15.6	-0.8
	2.0nm,0.8s,baz=55,slow=9.3,SNR=28						
	2.0nm,0.8s						
FITZ	**Fitzroy Crossi**	**27.65**	**241**	P	P	14 24 48.1	+1.1
	1.5nm,0.9s,baz=60,slow=8.4,SNR=1.8						
	1.5nm,0.9s						
ILAR	**Eielson Array**	**83.70**	**22**	P	P	14 31 27.2	-0.6
	0.2nm,0.6s,baz=258,slow=5.2,SNR=4.9						
	0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**148.89**	**286**	PKPbc	PKPbc	14 38 48.5	+0.3
	1.1nm,0.4s,baz=59,slow=4.1,SNR=1.7						

IDC 25 14:28:09.1±1.9**,0°.25N**×**124°.33E,h0^{km},mb3.0**/3**,**
mbtmp3.2/4**,ML3.1**/1**,Error ellipse: s-maj=136.5km**
s-min=27.2km az=66.0,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**18.27**	**176**	P	P	14 32 25.6	+1.1
	baz=0.0,slow=12,SNR=2.0						
	2.0nm,0.9s						
WRA	**Warramunga Arr**	**22.33**	**155**	P	P	14 33 10.3	+1.7
	0.4nm,1.1s,baz=332,slow=11,SNR=1.8						
	0.4nm,1.1s						
ASAR	**Alice Springs**	**25.52**	**159**	P	P	14 33 38.1	-1.4
	0.4nm,0.5s,baz=337,slow=8.8,SNR=12						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**59.11**	**328**	P	P	14 38 11.7	+0.1
	baz=114,slow=7.0,SNR=1.3						

IDC 25 14:28:16.8±2.2**,1°.46N**×**126°.94E,h0^{km},mb3.3**/3**,**
mbtmp3.3/3**,MS3.2**/1**,Error ellipse: s-maj=174.5km**
s-min=27.0km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.47**	**162**	P	P	14 33 18.4	+0.6
	0.5nm,0.4s,baz=340,slow=11,SNR=11						
	0.5nm,0.4s						
JOW	**Kunigami**	**25.26**	**3**	LR	LR	14 45 37.7	
	comp=Z,56nm,19.6s,baz=122,slow=41						
ASAR	**Alice Springs**	**25.88**	**165**	P	P	14 33 49.9	-0.6
	0.2nm,0.6s,baz=348,slow=9.0,SNR=5.6						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**59.54**	**326**	P	P	14 38 22.1	0.0
	0.1nm,0.3s,baz=118,slow=7.0,SNR=4.1						
	0.1nm,0.3s						

DNK ***25*** *14:28:25.0±4.5,71°.35N×19°.22W,h0^{km}±32^{km},ML2.1*
IDC ***25*** *14:28:33.9±7.2,71°.41N×15°.81W,h0^{km},mb3.5/2,*
mbtmp3.7/5,ML3.1/3,MS2.9/4,Error ellipse:
s-maj=111.7km s-min=51.5km az=84.0
ISC 25 14:28:25.5±0.8**,71°.36N**±0°.06×**19°.50W**±0°.06**,h10^{km},n15,**
σ2^{s}.00/15**,MS3.1**/3**,1C,Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCO	**Scoresbysund**	**1.19**	**224**	*i* P	**Pb**	**14 28 47.6**	**-0.5**
SCO				*i* S	**Sb**	**14 29 01.2**	**-2.4**
SCO				IAML		14 29 03.4	
	comp=Z,329nm,0.2s						
DBG	**Daneborg**	**2.97**	**356**	*i* P	**Pn**	**14 29 13.0**	**+0.4**
DBG				*i* S	**Sn**	**14 29 46.0**	**-2.2**
DBG				IAML		14 30 14.5	
	comp=Z,10nm,0.3s						
SOEG	**Soedalen**	**5.19**	**238**	*e*P	**Pn**	**14 29 46.6**	**+3.6**
SOEG				*e*S	**Sn**	**14 30 41.7**	**-1.2**
SOEG				IAML		14 31 10.2	
	comp=Z,4.2nm,0.3s						
SUMG	**Summit**	**6.00**	**291**	*i* P	**Pn**	**14 29 57.7**	**+3.2**
SUMG				*e*S	**Sn**	**14 31 03.1**	**-0.2**
SUMG				IAML		14 31 06.5	
	comp=Z,4.8nm,0.3s						
ICESG	**Greenland Ices**	**7.19**	**261**	⇑*i*P	**Pn**	**14 30 11.6**	**+0.8**
ICESG				*i* S	**Sn**	**14 31 29.6**	**-2.9**
ICESG				IAML		14 31 31.8	
	comp=Z,2.8nm,0.3s						
SPITS	**Spitsbergen Ar**	**11.40**	**38**	Pn	**Pn**	**14 31 09.1**	**+1.1**
	baz=241,slow=15						
SPITS				Sn	Sn	14 33 04.0	-11
	baz=320,slow=6.4						
	comp=Z,3.5nm,0.9s						
ARCES	**ARCESS Array B**	**14.90**	**75**	Pn	Pn	14 31 48.6	-7.3
	baz=297,slow=10.0,SNR=2.6						
	comp=Z,3.1nm,0.8s						
NOA	**NORSAR Array B**	**15.90**	**115**	LR	LR	14 37 04.1	
	comp=Z,13nm,21.8s,baz=80,slow=34						
HFS	**Hagfors**	**17.36**	**113**	Pn	**Pn**	**14 32 27.4**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=316,slow=10,SNR=4.4						
FINES	**FINESS Array B**	**20.19**	**96**	P	**P**	**14 32 58.3**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=324,slow=9.4,SNR=7.9						
	comp=Z,1.0nm,0.7s						
DAVOX	**Davos/Dischmat**	**28.31**	**135**	LR	LR	14 45 25.0	
	comp=Z,25nm,18.6s,baz=262,slow=37						
AKASG	**Malin Array Be**	**30.04**	**107**	P	**P**	**14 34 34.3**	**+0.2**
	comp=Z,0.2nm,0.2s,baz=334,slow=9.1,SNR=2.2						
	comp=Z,0.2nm,0.2s						
KURBB	**Kurchatov Arra**	**45.47**	**62**	P	**P**	**14 36 44.5**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=326,slow=7.6,SNR=2.4						
	comp=Z,0.2nm,0.5s						
MKAR	**Makanchi Array**	**49.99**	**61**	LR	LR	15 01 55.1	
	comp=Z,23nm,18.2s,baz=108,slow=41						
PDAR	**Pinedale Array**	**50.18**	**287**	LR	LR	15 01 46.3	
	comp=Z,17nm,18.4s,baz=64,slow=39						

IDC ***25*** *14:36:02.1±3.4,33°.11S×178°.24W,h0^{km},mb3.9/3,*
mbtmp3.9/4,ML3.6/1,Error ellipse: s-maj=74.9km
s-min=47.3km az=121.0
NEIC ***25*** *14:36:03.2±0.5,33°.0S±0°.1×178°.05W±0°.05,h10^{km}±1^{km},*
mb4.3/7,Error ellipse: s-maj=22.5km s-min=8.1km
az=178.0
ISC 25 14:36:02.7±1.1**,33°.1S**±0°.1×**178°.3W**±0°.2**,h10^{km},n15,**
σ1^{s}.62/15**,mb4.0**/6**,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.87**	**5**	Pn	**Pn**	**14 36 59.7**	**-2.6**
URZ	**Urewera**	**6.35**	**215**	Pn	**Pn**	**14 37 36.4**	**+0.1**
	1.3nm,0.3s,baz=332,slow=18,SNR=12						
URZ				Sn	**Sn**	**14 38 45.4**	**-3.5**
	2.4nm,0.3s,baz=24,slow=20,SNR=9.4						
	3.6nm,0.3s						
OXZ	**Oxford**	**12.70**	**214**	Pn	Pn	14 39 01.4	-2.1
AS31	**Alice Springs**	**42.79**	**270**	P	**P**	**14 44 02.1**	**+1.3**
ASAR	**Alice Springs**	**42.79**	**270**	P	**P**	**14 44 01.8**	**+1.0**
ASAR	**Alice Springs**	**42.79**	**270**	P	**P**	**14 44 02.3**	**+1.5**
	1.1nm,0.6s,baz=112,slow=8.0,SNR=40						
	1.1nm,0.6s						
WR8	**Warramunga Arr**	**43.88**	**275**	P	**P**	**14 44 10.6**	**+1.0**
WR8				IAmb	IAmb	14 44 12.2	
	comp=Z,3.2nm,1.0s						
WRA	**Warramunga Arr**	**44.02**	**275**	P	**P**	**14 44 11.9**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=115,slow=7.8,SNR=11						
	comp=Z,0.7nm,0.6s						
WB0	**Warramunga Arr**	**44.05**	**275**	P	**P**	**14 44 12.2**	**+1.2**
WB0				IAmb	IAmb	14 44 21.4	
	comp=Z,8.6nm,1.2s						
KNRA	**Kununurra**	**50.72**	**277**	P	**P**	**14 45 04.1**	**+1.2**
FITZ	**Fitzroy Crossi**	**52.16**	**272**	P	**P**	**14 45 14.8**	**+1.1**
	comp=Z,1.6nm,1.0s,baz=104,slow=8.3,SNR=1.1						
	comp=Z,1.6nm,1.0s						
AIN	**Ainahou**	**56.57**	**26**	P	**P**	**14 45 46.0**	**+0.1**
KKM	**Kota Kinabalu**	**73.18**	**289**	P	**P**	**14 47 35.0**	**+0.8**
SNAA	**Sanae**	**75.45**	**179**	P	**P**	**14 47 47.5**	**+0.9**
SNAA				IAmb	IAmb	14 47 51.6	
	comp=Z,5.0nm,1.4s						
FINES	**FINESS Array B**	**147.59**	**338**	PKPbc	**PKPbc**	**14 55 46.9**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=51,slow=6.4,SNR=3.4						

SOME ***25*** *14:39:13.7,39°.10N×73°.75E,h0^{km}*
IDC ***25*** *14:39:15.1±7.2,38°.28N×74°.57E,h160^{km}±62^{km},mb3.8/1,*
mbtmp3.6/6,Error ellipse: s-maj=69.6km s-min=44.8km
az=161.0
NNC ***25*** *14:39:17.8±2.9,38°.69N×74°.19E,h0^{km},mb3.7,mpv3.3,*
Error ellipse: s-maj=22.5km s-min=17.7km az=152.0
ISC 25 14:39:14.9±1.9**,38°.3N**±0°.1×**74°.5E**±0°.1**,h150^{km},n16,**
σ1^{s}.46/22**,4C-2D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**3.87**	**351**	P	**Pn**	**14 40 14.5**	**+0.7**
	SNR=38						
UCH	**Uchtor**	**3.91**	**0**	P	**Pn**	**14 40 15.6**	**+1.1**
	SNR=11						
AAK	**Ala-Archa**	**4.32**	**0**	P	**Pn**	**14 40 20.6**	**+1.1**
	2.5nm,0.3s,baz=180,slow=13,SNR=5.5						
AAK				S	**Sn**	**14 41 11.6**	**+1.8**
	2.2nm,0.3s,baz=191,slow=16,SNR=3.5						
AAK	**Ala-Archa**	**4.32**	**0**	⇓Pn	**Pn**	**14 40 20.4**	**+0.9**
	4.2nm,0.9s						
AAK				⇓Sn	**Sn**	**14 41 08.4**	**-1.4**
	2.6nm,0.7s						
KBK	**Karagaybulak**	**4.36**	**5**	P	**Pn**	**14 40 22.0**	**+2.1**
	SNR=9.1						
MRKS	**Merke**	**4.53**	**348**	*e*P	**Pn**	**14 40 23.1**	**+0.9**
	6.3nm,0.2s						
MRKS				*e*S	**Sn**	**14 41 13.7**	**-1.0**
	25nm,0.2s						
TKM2	**Tokmak 2**	**4.68**	**10**	P	**Pn**	**14 40 25.9**	**+1.6**
	SNR=5.9						
TKM2	**Tokmak 2**	**4.68**	**10**	⇑Pn	**Pn**	**14 40 24.8**	**+0.4**
	4.8nm,0.4s						
TKM2				⇑Sn	**Sn**	**14 41 17.9**	**-0.4**
	9.2nm,0.6s						
CHMS	**Chumysh**	**4.69**	**2**	P	**Pn**	**14 40 25.5**	**+1.3**
	SNR=6.3						
KK31	**Karatay Array**	**5.66**	**329**	⇑Pn	**Pn**	**14 40 37.2**	**+0.1**
	0.5nm,0.2s,baz=306,slow=58,SNR=9.4						
KK31				⇑Sn	**Sn**	**14 41 38.6**	**-2.6**
	2.8nm,0.3s,baz=141,slow=24,SNR=13						
BRLS	**Borolday**	**5.89**	**325**	*e*P	**Pn**	**14 40 43.2**	**+3.1**
	0.9nm,0.1s						
BRLS				*e*S	**Sn**	**14 41 47.4**	**+0.6**
	3.7nm,0.1s						
MKAR	**Makanchi Array**	**10.24**	**32**	P	**Pn**	**14 41 38.1**	**+0.1**
	0.5nm,0.7s,baz=220,slow=15,SNR=5.7						
KURBB	**Kurchatov Arra**	**12.64**	**12**	P	**Pn**	**14 42 07.6**	**-1.7**
	0.3nm,0.3s,baz=202,slow=10,SNR=6.4						
BVAR	**Borovoye Array**	**14.99**	**350**	P	**P**	**14 42 40.7**	**0.0**
	0.6nm,0.5s,baz=156,slow=11,SNR=4.9						
ZALV	**Zalesovo Beam**	**17.17**	**21**	P	**Pn**	**14 43 04.9**	**-0.7**
	1.3nm,0.3s,baz=214,slow=11,SNR=8.5						
TORD	**Torodi Ar. Bea**	**68.51**	**270**	P	**P**	**14 50 00.8**	**-0.6**
	0.8nm,0.3s,baz=56,slow=6.1,SNR=1.1						
	0.8nm,0.3s						

NOU 25 14:40:03.4,21°.97S×**169°.38E,h0^{km},MLv3.8**/10**,**
Southeast of Loyalty Islands,Southeast of Loyalty
Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.35**	**291**	P	Pg	14 40 28.7	-0.5
MARNC	**Mare, Loyalty**	**1.35**	**291**	S	Sg	14 40 46.0	-0.7
PINNC	**Pines Island,**	**1.90**	**250**	P	Pn	14 40 37.1	0.0
YATNC	**Mamie plateau,**	**2.31**	**267**	P	Pn	14 40 41.9	-0.9
OUENC	**Ouen Island, N**	**2.39**	**259**	P	Pn	14 40 44.2	+0.3
INH	**Isangel**	**2.41**	**358**	P	Pn	14 40 44.2	+0.1
DZM	**Mont Dzumac**	**2.73**	**267**	P	Pn	14 40 48.9	+0.3
ONTNC	**Ouen Toro**	**2.73**	**262**	P	Pn	14 40 47.3	-1.3
VLAKA	**Lakatoro**	**6.12**	**342**	P	Pn	14 41 35.4	+0.3

IDC ***25*** *14:45:57.5±1.2,2°.69S×138°.58E,h0^{km},mb3.4/4,*
mbtmp3.5/7,ML3.6/3,Error ellipse: s-maj=29.9km
s-min=22.0km az=138.0
ISC 25 14:45:59.7±1.2**,2°.8S**±0°.2×**138°.6E**±0°.1**,h10^{km},n7,σ0^{s}.80**/7**,**
mb3.4/4**,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.10**	**82**	Pn	**Pn**	**14 46 35.4**	**+0.3**
	12nm,0.3s,baz=239,slow=11,SNR=51						
JAY				Sn	**Sb**	**14 47 04.2**	**0.0**
	4.7nm,0.3s,baz=319,slow=20,SNR=5.8						
	22nm,0.3s						
WRA	**Warramunga Arr**	**17.53**	**193**	P	**Pn**	**14 50 03.7**	**-0.7**
	0.3nm,0.3s,baz=17,slow=12,SNR=14						
	0.9nm,0.4s						
FITZ	**Fitzroy Crossi**	**19.82**	**219**	P	**P**	**14 50 31.9**	**+1.2**
	0.1nm,0.3s,baz=45,slow=11,SNR=1.5						
	1.8nm,1.0s						
ASAR	**Alice Springs**	**21.23**	**192**	P	**P**	**14 50 46.2**	**+0.2**
	0.7nm,0.5s,baz=19,slow=10.0,SNR=42						
	0.7nm,0.5s						

MKAR	Makanchi Array	69.81	322	P	P	14 57 10.4	-0.2
	0.1nm,0.6s,baz=101,slow=7.8,SNR=2.0						
	0.1nm,0.6s						
ILAR	Eielson Array	85.96	24	P	P	14 58 37.4	-2.6
	0.2nm,0.7s,baz=259,slow=5.3,SNR=2.2						
	0.2nm,0.7s						
QSPA	South Pole Qui	87.13	180	P	P	14 58 45.3	-0.6
	0.4nm,0.6s,baz=353,slow=4.4,SNR=1.4						
	0.4nm,0.6s						

WEL 25 14:46:44.4±1.0**,39°S**±7°×**17°6E**±°**,h80**^{km}±9^{km}**,M1.6**/5**,**
MLv1.6/5**,Error ellipse: s-maj=9.3km s-min=7.6km**
az=7.2,confirmed,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRHZ	Matea Rd	0.26	114	P	Pn	14 46 57.7	+1.1
MRHZ				S	Sn	14 47 07.8	+2.2
KATZ	Kakaramea	0.41	233	P	Pn	14 46 58.9	+1.3
TMVZ	Te Maari	0.50	219	P	Pn	14 46 59.5	+1.2
NTVZ	North Tongarir	0.50	222	P	Pn	14 46 59.8	+1.4
ETVZ	East Tongariro	0.51	217	P	Pn	14 46 59.7	+1.3
KRVZ	Karewarewa	0.52	225	P	Pn	14 46 59.2	+0.7
BKZ	Black Stump Fm	0.53	146	P	Pn	14 46 59.5	+0.9
BKZ				S	Sn	14 47 11.2	+2.2
OTVZ	Oturere	0.56	218	P	Pn	14 47 00.2	+1.3
NNVZ	North Ngauruho	0.56	224	P	Pn	14 46 59.0	+0.1
WTVZ	West Tongariro	0.56	226	P	Pn	14 46 59.9	+1.0
MTHZ	Maungataniwha	0.58	102	P	Pn	14 47 00.2	+1.2
MTHZ				S	Sn	14 47 12.4	+2.5
SNVZ	South Ngauruho	0.58	219	P	Pn	14 47 00.3	+1.1
NGZ	Ngauruhoe	0.60	221	P	Pn	14 47 00.6	+1.3
TLZ	Tolley Road	0.60	312	P	Pn	14 47 00.3	+1.2
TLZ				S	Sn	14 47 12.8	+2.8
TWVZ	Taurewa	0.62	237	P	Pn	14 47 00.3	+0.8
TUVZ	Tukino	0.64	213	P	Pn	14 47 00.8	+1.1
COVZ	Chateau Observ	0.65	223	P	Pn	14 47 00.4	+0.8
NMHZ	Naumai	0.66	124	P	Pn	14 47 00.6	+0.9
FWVZ	Far West T-bar	0.68	219	P	Pn	14 47 01.2	+1.0
WHVZ	Whangaehu Hut	0.69	216	P	Pn	14 47 01.1	+0.9
MAVZ	Matarangi	0.69	218	P	Pn	14 47 01.2	+0.9
RTZ	Ruatahuna	0.69	81	P	Pn	14 47 01.0	+0.9
RTZ				S	Sn	14 47 13.8	+2.1
TRVZ	Turoa	0.72	217	P	Pn	14 47 01.4	+0.8
WNVZ	Wahianoa	0.72	214	P	Pn	14 47 01.3	+0.8
KWHZ	Kaweka Forest	0.74	161	P	Pn	14 47 01.2	+0.6
KWHZ				S	Sn	14 47 14.7	+2.2
RAHZ	Arahi	0.79	104	P	Pn	14 47 02.3	+1.2
RAHZ				S	Sn	14 47 16.4	+2.9
URZ	Urewera	0.92	59	P	Pn	14 47 02.7	+0.2
URZ				S	Sn	14 47 16.9	+1.0
KRHZ	Kereru	0.94	168	P	Pn	14 47 03.4	+0.7
VRZ	Vera Road	1.12	249	P	Pn	14 47 05.1	+0.1
PUZ	Puketiti	1.81	69	P	Pn	14 47 13.7	-0.2

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*IDC **25** 15:01:51.5±0.8, 2°.56S×138°.48E, h0^{km}, mb3.8/7,*
mbtmp3.8/10, ML3.7/3, Error ellipse: s-maj=22.0km
s-min=20.6km az=84.0

*NEIC **25** 15:01:55.3±1.3, 2°.71S±0°.06×138°.61E±0°.03, h10^{km}±1^{km},*
mb4.4/28, Error ellipse: s-maj=10.7km s-min=5.1km
az=182.0

ISC 25 15:01:54.1±0.6**,2°.70S**±0°.08×**138°.59E**±0°.07**,h10**^{km}**,n49,**
σ**1^{s}38**/51**,mb4.3**/20**,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	2.12	85	Pn	Pn	15 02 30.5	+0.8
	22nm,0.3s,baz=237,slow=11,SNR=50						
JAY				Sn	Sb	15 02 59.9	+0.7
	14nm,0.3s,baz=123,slow=17,SNR=4.7						
	53nm,0.3s						
FAKI	Fak Fak	6.33	268	Pn	Pn	15 03 29.6	+2.0
COEN	Coen	12.07	158	Pn	Pn	15 04 47.2	+0.9
MTN	Manton Dam	12.49	216	Pn	Pn	15 04 52.8	+0.7
RABL	Rabaul	13.63	97	Pn	Pn	15 05 05.9	-1.8
LUWI	Luwuk	15.89	276	Pn	Pn	15 05 37.5	-0.6
LUWI				IAmb	IAmb	15 06 04.6	
	comp=Z,42nm,0.9s						
KNRA	Kununurra	16.12	216	Pn	Pn	15 05 40.5	-0.5
BATI	Baumata	16.59	243	Pn	P	15 05 52.6	+3.1
	comp=Z,3.6nm,0.3s,baz=62,slow=15,SNR=2.4						
WB0	Warramunga Arr	17.45	193	Pn	Pn	15 05 57.0	-0.8
WR8	Warramunga Arr	17.61	193	Pn	Pn	15 05 57.9	-1.9
WRA	Warramunga Arr	17.63	193	Pn	Pn	15 05 58.9	-1.2
WRA	Warramunga Arr	17.63	193	P	Pn	15 05 59.0	-1.1
	comp=Z,0.4nm,0.3s,baz=18,slow=12,SNR=16						
WRA				S	Sn	15 09 03.1	-13
	comp=Z,1.6nm,1.0s,baz=10,slow=22,SNR=3.5						
	comp=Z,1.9nm,0.5s						
FITZ	Fitzroy Crossi	19.88	219	P	P	15 06 26.2	+0.4
FITZ	Fitzroy Crossi	19.88	219	P	P	15 06 25.4	-0.4
	comp=Z,0.1nm,0.3s,baz=45,slow=10.0,SNR=2.1						
FITZ				S	S	15 09 59.8	-10
	comp=Z,2.9nm,0.7s,baz=171,slow=19,SNR=2.9						
	comp=Z,1.8nm,0.8s						
AS31	Alice Springs	21.33	192	P	P	15 06 41.8	+0.4
ASAR	Alice Springs	21.33	192	P	P	15 06 41.3	-0.2
ASAR	Alice Springs	21.33	192	P	P	15 06 41.0	-0.5
	comp=Z,1.9nm,0.6s,baz=22,slow=9.7,SNR=15						
ASAR				S	S	15 10 34.9	-3.6
	comp=Z,1.2nm,0.9s,baz=14,slow=24,SNR=4.3						
	comp=Z,1.9nm,0.6s						
GIRL	Giralia	30.84	228	P	P	15 08 11.2	+0.7
KULM	Kulim	38.72	282	P	P	15 09 19.2	+0.4
KULM				IAmb	IAmb	15 09 53.2	
	comp=Z,16nm,1.3s						
CMAR	Chiang Mai Arr	44.33	300	P	P	15 10 02.8	-2.0
	comp=Z,0.4nm,0.4s,baz=107,slow=7.0,SNR=4.1						
	comp=Z,0.4nm,0.4s						
TUWZ	Tuamarina	49.95	145	P	P	15 10 49.4	+1.1
MKAR	Makanchi Array	69.71	322	P	P	15 13 05.3	+1.0
MKAR	Makanchi Array	69.71	322	P	P	15 13 02.5	-1.8
	comp=Z,0.3nm,0.5s,baz=112,slow=7.4,SNR=4.8						
	comp=Z,0.3nm,0.5s						
MAKZ	Makanchi	69.91	322	P	P	15 13 06.4	+0.9
BOOM	Boomskoye usch	72.06	316	P	P	15 13 19.1	+0.2
BOOM				IAmb	IAmb	15 13 48.1	
	comp=Z,3.4nm,1.1s						
KURBB	Kurchatov Arra	73.65	325	P	P	15 13 26.7	-1.2
	comp=Z,0.2nm,0.5s,baz=115,slow=6.5,SNR=2.4						
	comp=Z,0.2nm,0.5s						
SBA	Scott Base	76.57	174	P	P	15 13 45.3	+1.1
M14K	Bethel	77.96	26	P	P	15 13 52.5	+0.2
BVAR	Borovoye Array	79.24	325	P	P	15 13 56.5	-3.0
	comp=Z,0.3nm,0.4s,baz=134,slow=4.2,SNR=2.1						
	comp=Z,0.3nm,0.4s						
N17K	Nushagak Hills	79.97	27	P	P	15 14 05.1	+1.7
N17K				IAmb	IAmb	15 14 08.7	
	comp=Z,7.7nm,1.3s						
N19K	Bonanza Creek	81.31	27	P	P	15 14 11.7	+1.1
N19K				IAmb	IAmb	15 14 30.4	
	comp=Z,6.6nm,1.3s						
L19K	White Mountain	81.66	26	P	P	15 14 14.2	+1.8
L19K				IAmb	IAmb	15 14 41.0	
	comp=Z,4.6nm,1.2s						
G19K	Purcell Mounta	82.34	22	P	P	15 14 16.4	+0.5
G19K				IAmb	IAmb	15 14 31.3	
	comp=Z,3.9nm,1.1s						
CNPM	China Poot	82.39	29	P	P	15 14 17.6	+1.3
MLY	Manley	84.38	24	P	P	15 14 26.4	0.0
MLY				IAmb	IAmb	15 14 53.0	
	comp=Z,2.6nm,1.4s						
E23K	Chandalar	85.76	21	P	P	15 14 34.0	+0.6
IL31		85.88	24	P	P	15 14 31.7	-2.2
IL31				IAmb	IAmb	15 14 34.6	
	comp=Z,1.8nm,1.1s						
ILAR	Eielson Array	85.88	24	P	P	15 14 31.6	-2.3
ILAR	Eielson Array	85.88	24	P	P	15 14 31.9	-2.0
	comp=Z,1.1nm,0.7s,baz=260,slow=4.3,SNR=13						
	comp=Z,1.1nm,0.7s						
C23K	Itkillik River	85.99	19	P	P	15 14 34.2	-0.1
F24K	Squaw Lake	86.23	22	P	P	15 14 36.6	+0.9
F24K				IAmb	IAmb	15 14 38.1	
	comp=Z,3.8nm,1.2s						
J26L	Joseph Creek	87.20	25	P	P	15 14 40.4	-0.1
J26L				IAmb	IAmb	15 14 47.2	
	comp=Z,2.4nm,1.2s						
QSPA	South Pole Qui	87.24	180	P	P	15 14 40.8	0.0
QSPA	South Pole Qui	87.24	180	P	P	15 14 40.8	0.0
	comp=Z,1.2nm,0.7s,baz=286,slow=1.3,SNR=11						
	comp=Z,1.2nm,0.7s						
BMAR	Burnt Mountain	87.44	22	P	P	15 14 42.3	+0.7
BCAR	Beaver Creek A	87.70	27	P	P	15 14 44.0	+1.1
H27K	Steamboat Moun	88.38	24	P	P	15 14 46.8	+0.7
H27K				IAmb	IAmb	15 14 48.9	
	comp=Z,1.8nm,0.8s						
HYT	Haines Junctio	89.36	29	P	P	15 14 51.9	+1.0
HYT				IAmb	IAmb	15 14 53.7	
	comp=Z,3.8nm,1.4s						
N30M	Aishikik Lake	89.64	29	P	P	15 14 53.2	+1.1
N30M				IAmb	IAmb	15 14 54.3	
	comp=Z,1.8nm,0.9s						

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*IDC **25** 15:09:14.3±0.8, 2°.71S×138°.57E, h0^{km}, mb3.8/8,*
mbtmp3.8/11, ML3.9/3, MS2.7/5, Error ellipse:
s-maj=22.8km s-min=19.7km az=94.0

*NEIC **25** 15:09:17.9±1.5, 2°.8S±0°.1×138°.65E±0°.06, h10^{km}±1^{km},*
mb4.4/17, Error ellipse: s-maj=19.0km s-min=10.2km
az=350.0

ISC 25 15:09:16.9±0.6**,2°.76S**±0°.08×**138°.64E**±0°.06**,h10**^{km}**,n38,**
σ**1^{s}30**/36**,mb4.1**/15**,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	2.08	83	Pn	Pn	15 09 52.5	+0.7
	12nm,0.3s,baz=246,slow=7.8,SNR=51						
JAY				Sn	Sn	15 10 18.9	+1.1
	15nm,0.3s,baz=130,slow=18,SNR=6.3						
JAY				LR	LR	15 10 44.3	
	comp=Z,153nm,20.3s,baz=282,slow=42						
	90nm,0.4s						
FAKI	Fak Fak	6.39	268	Pn	Pn	15 10 53.0	+1.9
COEN	Coen	12.00	158	Pn	Pn	15 12 09.6	+1.5
MTN	Manton Dam	12.48	216		Pn	15 12 15.5	+0.8
KRVT	Keravat (AS076	13.45	97	LR	LR	15 16 59.6	
	comp=Z,5.9nm,19.1s,baz=217,slow=34						
KNRA	Kununurra	16.11	217		Pn	15 13 03.2	-0.4
KNRA				IAmb	IAmb	15 13 15.7	
	comp=Z,9.6nm,0.7s						
BATI	Baumata	16.61	243	Pn	P	15 13 14.2	+1.6
	comp=Z,4.0nm,0.3s,baz=144,slow=2.9,SNR=4.3						
GUMO	Guam	17.38	21	LR	LR	15 18 31.5	
	comp=Z,61nm,21.8s,baz=206,slow=32						
WB0	Warramunga Arr	17.41	193	Pn	Pn	15 13 18.5	-1.6
WR8	Warramunga Arr	17.57	193	Pn	Pn	15 13 20.6	-1.4
WRA	Warramunga Arr	17.59	194		Pn	15 13 22.8	+0.4
WRA	Warramunga Arr	17.59	194	P	Pn	15 13 20.7	-1.6
	comp=Z,0.7nm,0.3s,baz=14,slow=12,SNR=20						
WRA				S	Sn	15 16 26.1	-12
	comp=Z,1.7nm,0.9s,baz=12,slow=22,SNR=3.6						
	comp=Z,3.1nm,0.6s						
FITZ	Fitzroy Crossi	19.87	219	P	P	15 13 47.9	-0.5
FITZ	Fitzroy Crossi	19.87	219	P	P	15 13 47.5	-0.9
	comp=Z,0.3nm,0.3s,baz=41,slow=12,SNR=6.6						
FITZ				S	S	15 17 21.7	-11
	comp=Z,2.5nm,0.7s,baz=194,slow=12,SNR=2.5						
	comp=Z,1.2nm,0.6s						
AS31	Alice Springs	21.29	192	P	P	15 14 03.5	-0.2
AS31				IAmb	IAmb	15 14 12.9	
	comp=Z,4.9nm,0.6s						
ASAR	Alice Springs	21.29	192	P	P	15 14 03.4	-0.4
ASAR	Alice Springs	21.29	192	P	P	15 14 03.1	-0.7
	comp=Z,4.5nm,0.7s,baz=18,slow=9.4,SNR=45						
ASAR				S	S	15 17 57.7	-2.7
	comp=Z,1.8nm,0.8s,baz=16,slow=23,SNR=6.0						
	comp=Z,4.5nm,0.7s						
DZM	Mont Dzumac	33.13	128	P	P	15 15 54.1	+0.4
CMAR	Chiang Mai Arr	44.40	300	LR	LR	15 36 42.4	
	comp=Z,15nm,19.3s,baz=210,slow=37						
FOZ	Fox Glacier	49.13	150	P	P	15 18 05.8	+1.0
KLR	Kul'dur	52.12	354	LR	LR	15 37 20.9	
	comp=Z,12nm,21.6s,baz=173,slow=32						
NIUE	Niue	52.81	112	P	P	15 18 32.3	-0.6
SONM	Songino Array	57.73	335	P	P	15 19 06.5	-1.6
	comp=Z,0.3nm,0.3s,baz=156,slow=4.3,SNR=2.0						
	comp=Z,0.3nm,0.3s						
MKAR	Makanchi Array	69.78	322	P	P	15 20 26.6	-0.9
	comp=Z,0.2nm,0.5s,baz=120,slow=7.2,SNR=5.7						
	comp=Z,0.2nm,0.5s						
ZALV	Zalesovo Beam	71.94	330	P	P	15 20 37.8	-2.6
	comp=Z,0.5nm,0.4s,baz=128,slow=9.5,SNR=1.5						
	comp=Z,0.5nm,0.4s						
KURBB	Kurchatov Arra	73.73	325	P	P	15 20 49.8	-1.3
	comp=Z,0.6nm,1.1s,baz=111,slow=5.2,SNR=5.1						
	comp=Z,0.6nm,1.1s						
BVAR	Borovoye Array	79.31	325	P	P	15 21 22.5	-0.2
	comp=Z,0.3nm,0.4s,baz=109,slow=8.8,SNR=6.6						
	comp=Z,0.3nm,0.4s						
H19K	Roundabout Mou	82.36	22	P	P	15 21 39.9	+1.3
H19K				IAmb	IAmb	15 22 04.0	
	comp=Z,3.9nm,1.2s						
J20K	Nowinta River	82.73	24	P	P	15 21 41.8	+1.1
J20K				IAmb	IAmb	15 21 43.6	
	comp=Z,3.0nm,1.1s						
D19K	Kuna River	83.03	19	P	P	15 21 43.9	+1.6
D19K				IAmb	IAmb	15 22 01.2	
	comp=Z,4.9nm,1.2s						
H23K	Yukon River	85.13	23	P	P	15 21 54.0	+1.0
H23K				IAmb	IAmb	15 22 02.9	
	comp=Z,3.7nm,1.4s						
ILAR	Eielson Array	85.90	24	P	P	15 21 55.0	-1.9
	comp=Z,0.8nm,0.9s,baz=260,slow=5.1,SNR=8.5						
	comp=Z,0.8nm,0.9s						
C23K	Itkillik River	86.02	19	P	P	15 21 58.2	+0.9
QSPA	South Pole Qui	87.19	180	P	P	15 22 03.4	+0.1
QSPA				IAmb	IAmb	15 22 09.4	
	comp=Z,6.6nm,1.4s						
QSPA	South Pole Qui	87.19	180	P	P	15 22 02.3	-0.9
	comp=Z,1.7nm,0.9s,baz=172,slow=5.3,SNR=5.3						
	comp=Z,1.7nm,0.9s						
J26L	Joseph Creek	87.23	25	P	P	15 22 04.6	+1.1
J26L				IAmb	IAmb	15 22 04.7	
	comp=Z,1.7nm,0.9s						
BARN	Barnard Glacie	87.41	29	P	P	15 22 05.1	+0.6
BARN				IAmb	IAmb	15 22 10.9	
	comp=Z,2.6nm,0.8s						
BMAR	Burnt Mountain	87.47	22	P	P	15 22 05.8	+1.3

CATAC 25 15:11:23.4±0.7**,11°N**±5°×**8°7W**±°**,h23**^{km}±8^{km}**,M3.4**/19**,**
MLv3.4/19**,10C-2D,Error ellipse: s-maj=11.4km**
s-min=5.2km az=32.9,confirmed,Near coast of
Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUN	El Crucero	1.14	38	P	Pn	15 11 42.7	-1.3
COPN	Copaltepe	1.17	21	⇑P	Pn	15 11 44.5	+0.1
NADN	Granada	1.17	56	⇑P	Pn	15 11 43.4	-1.0
NADN				S	Sb	15 12 00.0	+0.2
NANN	Nandasmo	1.23	46	⇑P	Pb	15 11 45.6	-0.3
SAPS	Ciudad Sandino	1.24	29	S	Sb	15 12 02.7	+1.0
SAPS	Ciudad Sandino	1.24	29	⇑P	Pn	15 11 45.2	-0.2
UNAN	Cigeo UNAN	1.26	36	P	Pn	15 11 45.7	+0.1
TISN	Laguna Tiscapa	1.28	35	⇑P	Pn	15 11 46.0	0.0
APQ3	Volcan Apoyequ	1.34	28	P	Pn	15 11 46.7	-0.1
WILN	Americas 2	1.35	37	P	Pn	15 11 47.1	+0.3
JAPN	Al SSO del Vol	1.39	71	⇑P	Pn	15 11 47.8	+0.4
MOMN	Momotombo	1.40	20	⇑P	Pn	15 11 47.5	-0.1
MOMN				S	Sn	15 12 04.8	-0.6
MORN	Al O del Volca	1.42	71	P	Pb	15 11 49.1	-0.2
MORN				S	Sn	15 12 05.2	-0.7
CNGA	Al SSO del Vol	1.44	13	P	Pn	15 11 48.3	+0.1
CNGN	Cerro Negro	1.44	13	⇑P	Pn	15 11 48.1	-0.1
MOM2	El Cardon	1.45	21	⇑P	Pn	15 11 48.2	0.0
CARN	Rivas	1.48	86	P	Pb	15 11 49.4	-0.7
PLRN	Geotermica Pol	1.51	9	P	Pn	15 11 48.6	-0.6
POLN	Al Sur del Vol	1.57	7	⇓P	Pn	15 11 50.2	+0.2
PKGN	Cerro Pekin	1.58	2	⇓P	Pn	15 11 50.5	+0.5
PKGN				S	Sn	15 12 10.6	+0.8
CRIN	San Cristobal	1.61	359	P	Pn	15 11 49.9	-0.6
BOAB	BOACO BROADBAN	1.90	44	⇑P	Pn	15 11 53.8	-0.6
MATN	Matagalpa	2.13	30	S	Sn	15 12 24.3	+0.8
MATN	Matagalpa	2.13	30	P	Pn	15 11 59.0	+1.3
CNCH	Conchagua	2.32	340	P	Pn	15 11 59.5	-0.9
CNCH	Conchagua	2.32	340	S	Sn	15 12 28.7	+0.5

IDC 25 15:29:43.5±4.7**,47°.66N**×**92°.76W,h0**^{km}**,mbtmp2.5**/1**,**
ML1.2/1**,Error ellipse: s-maj=76.6km s-min=28.3km**
az=53.0,Minnesota

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULM	Lac du Bonnet	3.31	323	Pn	Pn	15 30 35.8	-0.7
	0.4nm,0.3s,baz=125,slow=12,SNR=2.4						
ULM				Sn	Sn	15 31 12.4	-4.1
	0.3nm,0.3s,baz=102,slow=14,SNR=3.2						
ULM				Lg	Lg	15 31 26.3	
	1.8nm,0.3s,baz=39,slow=15,SNR=26						
	0.9nm,0.3s						
I10CA	LAC DU BONNET	3.33	321	I	I	15 50 10.0	
	baz=139,slow=316,SNR=4.9						
I56US	NEWPORT INFRAS	16.32	281	I	I	17 14 00.0	
	baz=83,slow=320,SNR=3.5						

IDC 25 15:38:38.5±44.0**,25°.21S**×**175°.97W,h0**^{km}**,mb4.2**/3**,**
mbtmp4.2/3**,Error ellipse: s-maj=819.2km**
s-min=163.2km az=90.0,South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.69	250	P	P	15 45 56.1	+0.4
	1.3nm,0.4s,baz=86,slow=9.0,SNR=7.2						
	1.3nm,0.4s						
ASAR	Alice Springs	45.45	261	P	P	15 46 59.5	-0.1
	1.7nm,0.5s,baz=92,slow=7.3,SNR=42						
	1.7nm,0.5s						
WRA	Warramunga Arr	45.98	266	P	P	15 47 03.0	-0.7
	3.8nm,0.8s,baz=109,slow=7.9,SNR=7.1						
	3.8nm,0.8s						

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*IDC **25** 15:38:49.2±1.9, 32°.89S×178°.49W, h0^{km}, mb3.9/3,*
mbtmp3.9/4, ML4.0/1, MS3.4/1, Error ellipse: s-maj=42.1km
s-min=32.5km az=91.0

*WEL **25** 15:38:50.6±0.8, 33°S±6°×17°8W±1°4, h33^{km}, M4.3/12,*
mB4.8/8, ML4.7/17, MLv4.6/12, Mw(mB)4.1/8, Error ellipse:
s-maj=20.0km s-min=3.9km az=109.3, confirmed

ISC 25 15:38:52.3±1.1**,32°.4S**±0°.2×**179°.4W**±0°.4**,h35**^{km}**,n28,**
σ**1^{s}22**/40**,mb3.8**/3**,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.34	22	S	Pn	15 39 41.7	-0.4
GLKZ				S	Sn	15 40 22.4	+1.8
MXZ	Matakaoa Point	5.51	200	P	Pn	15 40 11.2	-0.6
MXZ				S	Sn	15 41 13.3	-0.7
WMGZ	Waiomatatini S	5.72	198	P	Pn	15 40 14.4	-0.3
WMGZ				S	Sn	15 41 19.0	-0.2
HAZ	Te Kaha	5.85	203	P	Pn	15 40 16.7	+0.2
HAZ				S	Sn	15 41 25.7	+3.3
PKGZ	Pakihiroa	5.86	200	P	Pn	15 40 14.7	-1.9
PUZ	Puketiti	6.00	198	P	Pn	15 40 19.8	+1.2
PUZ				S	Sn	15 41 25.2	-1.0
RUGZ	Raukumara Rang	6.08	203	P	Pn	15 40 20.1	+0.4
RUGZ				S	Sn	15 41 30.7	+2.6
TWGZ	Tauwhareparae	6.18	200	P	Pn	15 40 21.2	+0.2
TWGZ				S	Sn	15 41 31.3	+0.9
WCZ	Waipu Caves	6.32	234	P	Pn	15 40 35.8	+13
CNGZ	Carnagh Statio	6.41	197	P	Pn	15 40 24.3	+0.2
TKGZ	Te Karaka	6.46	200	P	Pn	15 40 25.3	+0.4
TKGZ				S	Sn	15 41 37.1	-0.3
MWZ	Matawai	6.46	202	P	Pn	15 40 22.8	-2.1
MWZ				S	Sn	15 41 37.5	+0.1
OUZ	Omahuta	6.52	242	P	Pn	15 40 38.4	+13
URZ	Urewera	6.54	205	Pn	Pn	15 40 23.4	-2.4
	3.2nm,0.3s,baz=232,slow=2.9,SNR=18						
URZ				Sn	Sn	15 41 39.9	+0.7
	5.7nm,0.3s,baz=267,slow=22,SNR=12						
	4.0nm,0.4s						
URZ	Urewera	6.54	205	P	Pn	15 40 23.8	-2.1
URZ				S	Sn	15 41 40.6	+1.4
RAGZ	Rawiri	6.65	202	P	Pn	15 40 27.7	+0.2
RAGZ				S	Sn	15 41 43.0	+1.0
RIGZ	Rimuhau	6.73	200	P	Pn	15 40 28.2	-0.4
RIGZ				S	Sn	15 41 44.6	+0.5
TOZ	Tahuroa Road	6.80	217	P	Pn	15 40 37.7	+8.2
MUGZ	Murupara	6.86	206	P	Pn	15 40 30.6	+0.3
MUGZ				S	Sn	15 41 47.1	0.0
RTZ	Ruatahuna	6.90	205	P	Pn	15 40 31.8	+0.9
RTZ				S	Sn	15 41 49.1	+0.8
SNGZ	Shannon Statio	6.93	202	P	Pn	15 40 32.1	+0.8
SNGZ				S	Sn	15 41 49.5	+0.6
RAHZ	Arahi	7.13	203	P	Pn	15 40 35.2	+1.1
RAHZ				S	Sn	15 41 53.4	-0.6
BKZ	Black Stump Fm	7.56	205	P	Pn	15 40 38.8	-1.3
BKZ				S	Sn	15 42 03.9	-0.6
MSVF	Nonsavu	14.77	350	LR	LR	15 47 29.6	
	comp=Z,122nm,18.3s,baz=189,slow=34						
ASAR	Alice Springs	41.90	270	P	P	15 46 47.8	+8.3
	0.7nm,0.5s,baz=108,slow=7.5,SNR=31						
	0.7nm,0.5s						
WRA	Warramunga Arr	43.07	275	P	P	15 46 57.3	+8.3
	0.9nm,0.3s,baz=114,slow=7.8,SNR=27						
	0.9nm,0.3s						
QSPA	South Pole Qui	57.73	180	P	P	15 48 38.5	-0.8
	0.8nm,0.9s,baz=34,slow=4.2,SNR=1.5						
	0.8nm,0.9s						
FINES	FINESS Array B	146.57	338	PKPbc	PKiKP	15 58 32.7	+0.7
	3.6nm,0.8s,baz=35,slow=3.4,SNR=11						

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*GCG **25** 15:42:49.8±1.2, 14°.15N×92°.95W, h70^{km}±55^{km}, MD4.0,*
ML3.3

*MEX **25** 15:42:51.0±0.4, 14°.36N×93°.08W, h7^{km}±18^{km}, MD3.9*

ISC 25 15:42:46.4±2.0**,14°.23N**±0°.08×**93°.10W**±0°.06**,h26**^{km}±15^{km}**,**
n14,σ**1^{s}27**/25**,Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.05	50	*e*P	Pn	15 43 07.7	+2.3
THIG				*e*S	Sn	15 43 18.9	-0.3
PATR	El Naranjo	1.22	44	*e*P	Pb	15 43 09.1	+0.2
PATR				*e*S	Sn	15 43 23.6	-0.1
PAVE	Pavencul	1.31	43	*e*P	Pb	15 43 10.6	+0.2
PAVE				*e*S	Sn	15 43 25.6	-0.3
RTAL	Retalhuleu	1.39	78	*e*P	Pb	15 43 12.6	+0.8
RTAL				*i* S	Sb	15 43 29.2	+0.1
PCIG		1.47	356	*e*P	Pn	15 43 12.4	+1.3
PCIG				*e*S	Sn	15 43 26.8	-2.8
STG8	El Palmar, Qui	1.71	83	*i* P	Pn	15 43 14.9	+0.2
STG8				*e*S	Sn	15 43 34.7	-1.2
STG0	El Palmar, Qui	1.72	83	*e*P	Pn	15 43 14.3	-0.4
STG0				*e*S	Sn	15 43 33.8	-2.2
STG0				IAML		15 43 43.3	
	comp=E,1μm,0.3s						
HUEH	Huehuetenango	1.89	55	*e*P	Pb	15 43 20.6	+0.3
HUEH				*i* S	Sb	15 43 42.1	-1.4
CCIG	Comitan	2.24	24	*e*P	Pb	15 43 26.4	+0.1
CCIG				*e*S	Sn	15 43 50.3	+1.5
CCIG	Comitan	2.24	24	*i* P	Pb	15 43 26.5	+0.2
CCIG				*e*S	Sb	15 43 54.1	+0.5
CCIG				IAML		15 43 60.0	
	comp=N,81nm,0.4s						
TGIG		2.53	360	*e*P	Pb	15 43 29.5	-1.7
TGIG				*i* S	Sn	15 43 55.5	-0.4
TGIG		2.53	360	*e*P	Pb	15 43 29.6	-1.6
TGIG				*e*		15 43 29.6	
TGIG				IAML		15 44 01.2	
	comp=E,108nm,0.5s						
HUIG	Huatulco	3.28	298	*e*S	Sn	15 44 15.4	+1.0
JAYA	Jayaque - finc	3.59	99	*e*S	Sn	15 44 21.4	-0.8

IDC 25 15:44:39.2±1.6**,4°.35N**×**122°.36E,h0**^{km}**,mb3.4**/4**,**
mbtmp3.4/4**,MS2.9**/1**,Error ellipse: s-maj=230.1km**
s-min=23.9km az=63.0,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	23.44	267	LR	LR	15 58 19.3	
	comp=Z,30nm,21.3s,baz=271,slow=35						
WRA	Warramunga Arr	26.86	154	P	P	15 50 20.4	-1.3
	0.2nm,0.6s,baz=330,slow=10,SNR=2.0						
	0.2nm,0.6s						
ASAR	Alice Springs	30.04	158	P	P	15 50 51.0	+0.9
	0.4nm,0.9s,baz=341,slow=7.0,SNR=11						
	0.4nm,0.9s						
MKAR	Makanchi Array	54.62	327	P	P	15 54 10.4	+0.7
	0.1nm,0.3s,baz=124,slow=9.2,SNR=2.9						
	0.1nm,0.3s						
KURBB	Kurchatov Arra	58.92	329	P	P	15 54 39.2	-0.9
	0.2nm,0.2s,baz=118,slow=8.6,SNR=2.5						
	0.2nm,0.2s						

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*IDC **25** 15:46:08.7±1.6, 29°.92S×178°.05W, h77^{km}±20^{km}, mb3.4/3,* *mbtmp3.7/3, Error ellipse: s-maj=42.8km s-min=31.6km az=41.0*

ISC 25 15:46:10.0±1.2**, 29°.7S**±0°.2×**177°.9W**±0°.3**, h100km, n6, σ1s.17**/8**, mb3.8**/3**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	0.41	356	P	Pn	15 46 24.3	-1.0
	250nm,0.3s,baz=102,slow=20,SNR=1.4						
RAO				S	Sn	15 46 36.8	+0.2
	578nm,0.4s,baz=282,slow=21,SNR=4.4						
ASAR	Alice Springs	43.25	266	P	P	15 54 00.9	-0.8
	0.4nm,0.6s,baz=106,slow=7.1,SNR=11						
ASAR				PcP	PcP	15 55 51.3	+2.1
	0.5nm,1.1s,baz=110,slow=3.7,SNR=1.7						
	0.4nm,0.6s						
WRA	Warramunga Arr	44.17	271	P	P	15 54 09.1	0.0
	1.1nm,0.7s,baz=112,slow=7.8,SNR=9.6						
	1.1nm,0.7s						
QSPA	South Pole Qui	60.44	180	P	P	15 56 08.4	-0.5
	0.8nm,0.7s,baz=105,slow=1.9,SNR=9.5						
	0.8nm,0.7s						
FINES	FINESS Array B	144.49	340	PKP	PKPdf	16 05 34.7	+0.8
	1.8nm,0.8s,baz=49,slow=4.2,SNR=8.9						
AKASG	Malin Array Be	150.78	324	PKPbc	PKiKP	16 05 51.1	+0.3
	0.1nm,0.3s,baz=66,slow=1.0,SNR=1.6						

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*IDC **25** 15:59:42.9±0.4, 56°.25N×163°.73E, h0km, mb4.5/36, mbtmp4.5/39, ML3.5/3, MS3.5/37, Error ellipse: s-maj=12.4km s-min=10.0km az=148.0*

*BJI **25** 15:59:43.7, 56°.35N×163°.33E, h10km, mB4.7/12, mb4.6/36, Ms4.1/16, Ms7 3.8/14*

*KRSC **25** 15:59:43.5±1.4, 56°.24N×164°.11E, h47km±19km, Mc5.1, Ml4.8*

*NEIC **25** 15:59:44.7±1.4, 56°.28N±0°.08×163°.8E±0°.1, h10km±1km, mb4.7/357, Error ellipse: s-maj=13.2km s-min=11.3km az=163.0*

*MOS **25** 15:59:47.3±1.1, 56°.20N×163°.86E, h49km, mb4.9/34, MS3.5/7, Error ellipse: s-maj=6.1km s-min=4.0km az=68.6*

*BGR **25** 15:59:55.3, 57°.15N×164°.06E, h33km, mb4.7*

ISC 25 15:59:44.4±0.9**, 56°.23N**±0°.04×**163°.88E**±0°.03**, h10km**±5km**, n730, σ1s.18**/573**, mb4.7**/246**, MS3.7**/44**, 17C-18D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.59	268	PN	Pb	15 59 56.8	0.0
KBTR	Krutoberegovo	0.59	268	eP	Pb	15 59 56.8	0.0
KBG	Krutoberegovo	0.66	273	PN	Pb	15 59 57.7	-0.2
KBG				S	Sn	16 00 08.4	-1.7
KBG	Krutoberegovo	0.66	273	eP	Pb	15 59 57.8	-0.2
KBG				eS	Sn	16 00 08.4	-1.7
SMKR	Semkarok	1.39	286	PN	Pb	16 00 10.3	-0.1
SMKR	Semkarok	1.39	286	eP	Pb	16 00 10.3	-0.1
BKI	Bering	1.57	130	PN	Pn	16 00 10.2	-2.0
BKI				S	Sn	16 00 29.2	-3.3
BKI	Bering	1.57	130	eP	Pn	16 00 10.2	-2.0
BKI				eS	Sn	16 00 29.3	-3.3
SRKR	Sorokina	1.57	287	PN	Pg	16 00 13.7	-0.7
SRKR	Sorokina	1.57	287	eP	Pg	16 00 13.8	-0.7
ZLN	Zelenaya	1.74	264	PN	Pg	16 00 16.4	-1.2
ZLN	Zelenaya	1.74	264	eP	Pg	16 00 16.4	-1.2
CIRR	Tsirk	1.76	268	PN	Pg	16 00 16.6	-1.4
CIRR	Tsirk	1.76	268	eP	Pg	16 00 16.6	-1.4
LGNR	Loginova	1.79	267	PN	Pg	16 00 17.3	-1.4
LGNR	Loginova	1.79	267	eP	Pg	16 00 17.3	-1.4
KLY	Klyuchi	1.80	274	PN	Pn	16 00 15.1	-0.4
KLY	Klyuchi	1.80	274	eP	Pn	16 00 15.2	-0.4
KRSR	Krestovskiy	1.85	271	PN	Pb	16 00 17.4	-0.9
KRSR	Krestovskiy	1.85	271	eP	Pb	16 00 17.5	-0.9
BZWR	Bezymyannyi-We	1.92	263	PN	Pb	16 00 18.9	-0.6
BZWR	Bezymyannyi-We	1.92	263	eP	Pb	16 00 18.9	-0.6
BZMR	Bezymyannaya	1.92	263	PN	Pb	16 00 18.9	-0.7
BZMR	Bezymyannaya	1.92	263	eP	Pb	16 00 19.0	-0.7
KIRR	Kirishev	2.00	264	PN	Pb	16 00 20.1	-0.9
KIRR	Kirishev	2.00	264	eP	Pb	16 00 20.1	-0.9
KPT	Kopyto	2.07	264	PN	Pb	16 00 21.5	-0.5
KPT	Kopyto	2.07	264	eP	Pb	16 00 21.5	-0.5
MKZ	Mys Kozlova	2.08	217	PN	Pn	16 00 18.9	-0.3
MKZ				S	Sn	16 00 44.7	-0.4
MKZ	Mys Kozlova	2.08	217	eP	Pn	16 00 18.9	-0.3
MKZ				eS	Sn	16 00 44.7	-0.4
KMNR	Kamenistaya	2.10	258	PN	Pb	16 00 21.7	-0.9
KMNR	Kamenistaya	2.10	258	eP	Pb	16 00 21.7	-0.9
TUMD	Tumrok D	2.22	244	PN	Pn	16 00 22.6	+1.4
TUMD	Tumrok D	2.22	244	eP	Pn	16 00 22.7	+1.4
KOZ	Kozyrevsk	2.25	267	PN	Pb	16 00 24.2	-0.9
KOZ				S	Sb	16 00 51.5	-1.4
KOZ	Kozyrevsk	2.25	267	eP	Pb	16 00 24.2	-0.9
KOZ				eS	Sb	16 00 51.6	-1.4
SRDR	Sredinnyy	2.33	274	PN	Pb	16 00 24.9	-1.5
SRDR	Sredinnyy	2.33	274	eP	Pb	16 00 24.9	-1.5
ESO	Esso	2.92	266	PN	Pn	16 00 32.4	+1.6
ESO	Esso	2.92	266	eP	Pn	16 00 32.5	+1.6
OSSR	Ossora	3.06	352	PN	Pn	16 00 31.9	-0.8
OSSR	Ossora	3.06	352	eP	Pn	16 00 31.9	-0.8
OSSR				eS	Sn	16 01 05.5	-3.9
KII	Karymskiy	3.36	231	PN	Pn	16 00 38.5	+1.6
KII	Karymskiy	3.36	231	eP	Pn	16 00 38.6	+1.6
SPN	Mys Shipunski	3.85	217	PN	Pn	16 00 43.1	-0.6
SPN				S	Sn	16 01 26.2	-2.8
SPN	Mys Shipunski	3.85	217	eP	Pn	16 00 43.1	-0.6
SPN				eS	Sn	16 01 26.2	-2.8
NLC	Nalytchevo	4.04	223	eS	Sn	16 01 34.1	+0.6
SDLR	Sedlovina	4.14	226	PN	Pn	16 00 49.1	+1.4
SDLR	Sedlovina	4.14	226	eP	Pn	16 00 49.2	+1.4
KRER	Koryakskii	4.17	228	PN	Pn	16 00 50.1	+1.9
KRER	Koryakskii	4.17	228	eP	Pn	16 00 50.2	+1.9
SMAR	Somma	4.18	227	PN	Pn	16 00 49.9	+1.5
SMAR	Somma	4.18	227	eP	Pn	16 00 49.9	+1.5
AVH	Avacha	4.21	227	PN	Pn	16 00 50.4	+1.8
AVH	Avacha	4.21	227	eP	Pn	16 00 50.5	+1.8
UGLR	Uglovaya	4.21	226	PN	Pn	16 00 50.3	+1.6
UGLR	Uglovaya	4.21	226	eP	Pn	16 00 50.4	+1.6
KOK	Koryaka	4.23	228	PN	Pn	16 00 50.8	+1.9
KOK	Koryaka	4.23	228	eP	Pn	16 00 50.9	+1.9
GNL	Ganaly	4.26	236	PN	Pn	16 00 52.2	+2.8
GNL	Ganaly	4.26	236	eP	Pn	16 00 52.2	+2.8
DALK	Dalny	4.38	225	PN	Pn	16 00 51.9	+1.1
DALK	Dalny	4.38	225	eP	Pn	16 00 52.0	+1.1
PET	Petropavlovsk	4.42	226		Pn	16 00 52.1	+0.7
PET	Petropavlovsk	4.42	226	ePN	Pn	16 00 52.8	+1.4
PET				eS	Sn	16 01 44.5	+1.6
PET				pmax	pmax		
	comp=Z,102nm,0.4s						
PET				smax	smax		
	comp=N,264nm,0.7s						
PET				smax	smax		
	comp=E,249nm,0.8s						
PET				MLR	MLR		
	comp=Z,700nm,8.0s						
PET				MLR	MLR		
	comp=Z,1μm,8.0s						
PET	Petropavlovsk	4.42	226	eP	Pn	16 00 52.8	+1.4
PET				eS	Sn	16 01 45.8	+2.9
PEA0B	Petropavlovsk-	4.76	232		Pn	16 00 55.2	-0.8
PEA0B	Petropavlovsk-	4.76	232	PN	Pn	16 00 55.3	-0.8
PETK	Petropavlovsk-	4.76	232		Pn	16 00 55.8	-0.3
PETK	Petropavlovsk-	4.76	232	Pn	Pn	16 00 55.2	-0.9
	comp=Z,3.2nm,0.3s,baz=53,slow=13,SNR=71						
PETK				Sn	Sn	16 01 46.3	-5.0
	comp=Z,1.8nm,0.3s,baz=52,slow=21,SNR=4.3						
PETK				LR	LR	16 02 53.0	
	comp=Z,107nm,21.8s,baz=190,slow=40						
	comp=Z,16nm,0.6s						
PETK	Petropavlovsk-	4.76	232	PN	Pn	16 00 55.8	-0.3
RUS	Russkaya	4.93	222	PN	Pn	16 00 59.9	+1.5
RUS	Russkaya	4.93	222	eP	Pn	16 00 59.9	+1.5
GRL	Gorelyy	5.01	225	PN	Pn	16 01 02.5	+2.9
GRL	Gorelyy	5.01	225	eP	Pn	16 01 02.5	+2.9
MTVR	Mutnovka	5.02	224	PN	Pn	16 01 02.2	+2.4
MTVR	Mutnovka	5.02	224	eP	Pn	16 01 02.2	+2.4
APC	Apacha	5.12	233	PN	Pn	16 01 04.1	+3.0
APC	Apacha	5.12	233	eP	Pn	16 01 04.1	+3.0
ASAK	Asacha	5.21	225	PN	Pn	16 01 04.5	+2.2
ASAK	Asacha	5.21	225	eP	Pn	16 01 04.5	+2.2
MIPR	Malaya Ipel'ka	5.75	229	PN	Pn	16 01 13.0	+3.3
MIPR	Malaya Ipel'ka	5.75	229	eP	Pn	16 01 13.1	+3.3
KMSK	Kamenskaya	6.37	10	PN	Pn	16 01 18.4	+0.3
KMSK	Kamenskaya	6.37	10	eP	Pn	16 01 18.4	+0.3
SMY	Shemya	6.91	116	Pn	Pn	16 01 26.5	+1.0
SMY	Shemya	6.91	116	PN	Pn	16 01 26.5	+1.0
SKR	Severo-Kuril's	7.23	223	ePN	Pn	16 01 30.4	+0.4
SKR				pmax	pmax		
	comp=Z,62nm,0.5s						
SKR				MLR	MLR		
	comp=Z,200nm,17.0s						
SKR				MLR	MLR		
	comp=N,600nm,13.0s						
SKR				MLR	MLR		
	comp=E,400nm,14.0s						
MA2	Magadan	7.75	301	Pn	Pn	16 01 43.8	+6.8
	comp=E,0.7nm,0.3s,baz=98,slow=14,SNR=1.9						
MA2				Lg	Lg	16 03 41.6	
	comp=E,0.9nm,0.3s,baz=288,slow=6.4,SNR=1.8						
MA2				LR	LR	16 04 42.9	
	comp=E,485nm,19.8s,baz=118,slow=39						
SEY	Seymchan	8.89	324	Pn	Pn	16 01 49.6	-3.1
	comp=E,0.1nm,0.3s,baz=270,slow=20,SNR=2.0						
SEY				Lg	Lg	16 04 19.4	
	baz=190,slow=19,SNR=1.6						
SEY				LR	LR	16 05 17.6	
	comp=E,344nm,21.6s,baz=106,slow=38						
BILL	Bilibino	11.91	4		Pn	16 02 34.7	+0.8
BILL	Bilibino	11.91	4	⇓ePN	Pn	16 02 35.8	+1.9
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KIWB	Kanaga Island	11.97	104	Pn	Pn	16 02 35.0	+0.1
ADK	Adak	12.21	103	Pn	Pn	16 02 37.3	-0.8
ADK	Adak	12.21	103	PN	Pn	16 02 37.3	-0.8
OKH	Okha	12.35	266	dePN	Pn	16 02 43.8	+3.8
OKH				MLR	MLR		
	comp=N,500nm,15.0s						
OKH				MLR	MLR		
	comp=Z,100nm,13.0s						
OKH				MLR	MLR		
	comp=E,700nm,18.0s						
ATKA	Atka Island	13.43	98	Pn	Pn	16 02 53.1	-1.6
YSS	Yuzhno-Sakhali	16.02	243	P	P	16 03 32.7	-0.3
YSS				IAmb	IAmb	16 03 58.1	
	comp=Z,56nm,1.3s						
YSS	Yuzhno-Sakhali	16.02	243	eP	Pn	16 03 30.1	+0.6
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YSS				MLR	MLR		
	comp=Z,400nm,14.0s						
NIKH	Nikolski High	16.08	90	P	P	16 03 35.5	+1.8
NIKH				IAmb	IAmb	16 03 35.9	
	comp=Z,46nm,0.9s						
NIKH	Nikolski High	16.08	90	P	Pn	16 03 30.1	-0.2
	baz=293						
M11K	Mekoryuk	16.18	63	P	Pn	16 03 30.7	-0.8
	baz=268						
K13K	Kusilvak Mount	17.02	57	P	Pn	16 03 41.8	-0.4
	baz=265						
F14K	Arctic Creek	17.04	45	P	Pn	16 03 40.8	-1.6
	baz=252						
UNV	Unalaska Valle	17.08	86	Pn	Pn	16 03 43.8	+0.9
UNV	Unalaska Valle	17.08	86	P	Pn	16 03 42.2	-0.7
	baz=290						
ANM	Nome	17.16	48	P	Pn	16 03 43.1	-0.9
	baz=256						
M13K	Dall Lake	17.59	63	P	Pn	16 03 48.7	-0.7
	baz=271						
J14K	Nanvaranak Lak	17.62	55		P	16 03 51.9	+1.3
J14K	Nanvaranak Lak	17.62	55	P	Pn	16 03 48.8	-0.9
	baz=263						
F15K	North Star Dit	17.77	45	P	Pn	16 03 50.9	-0.7
	baz=253						
G15K	Niukluk	17.82	48	P	Pn	16 03 51.3	-0.9
	baz=256						
L14K	Kuka Creek	17.93	60	P	Pn	16 03 53.2	-0.3
	baz=269						
JKA	Kamikawa-asahi	18.15	237		Pn	16 03 56.4	+0.1
JKA				IAmb	IAmb	16 04 05.1	
	comp=Z,89nm,1.0s						
ASAJ	Asahikawa	18.15	237	P	Pn	16 03 54.4	-2.0
	comp=Z,1.0nm,0.3s,baz=40,slow=4.8,SNR=17						
	comp=Z,38nm,0.9s						
ASAJ	Asahikawa	18.15	237	P	Pn	16 03 56.4	+0.1
ASAJ				pmax	pmax		
	comp=Z,89nm,1.0s						
M14K	Bethel	18.28	62		P	16 03 59.4	+1.6
M14K	Bethel	18.28	62	P	Pn	16 03 57.0	-0.7
	baz=271						
YAK	Yakutsk	18.32	303		P	16 03 58.5	+0.2
YAK	Yakutsk	18.32	303	P	Pn	16 03 57.1	-1.2
	comp=Z,15nm,0.4s,baz=97,slow=3.3,SNR=6.8						
YAK				LR	LR	16 11 13.3	
	comp=Z,165nm,18.7s,baz=64,slow=38						
YAK	Yakutsk	18.32	303	eP	P	16 03 58.6	+0.2
YAK				eS	S	16 07 24.7	-2.8
YAK				pmax	pmax		
	comp=Z,12nm,0.9s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,32nm,0.8s						
YAK				pmax	pmax		
	comp=N,20nm,1.5s						
YAK				pmax	pmax		
	comp=E,71nm,2.7s						
YAK				smax	smax		
	comp=N,18nm,2.6s						
YAK				smax	smax		
	comp=E,50nm,2.3s						
YAK				MLR	MLR		
	comp=N,45nm,12.0s						
YAK				MLR	MLR		
	comp=E,20nm,13.0s						
YAK				MLR	MLR		
	comp=Z,192nm,17.0s						
YAK				MLR	MLR		
	comp=E,136nm,14.0s						
YAK				MLR	MLR		
	comp=N,52nm,11.0s						
N14K	Kuskokwak Cree	18.45	64	P	P	16 03 59.5	-0.2
	baz=274						
C16K	Lisburne Hills	18.46	37	P	Pn	16 03 59.5	-0.4
	baz=245						
H16K	Elim	18.50	49	P	P	16 03 59.7	-0.6
	baz=259						
L15K	Ungalak Mounta	18.51	59	P	P	16 03 59.6	-0.8
	baz=269						
K15K	Wolf Creek Mou	18.52	57	P	Pn	16 04 01.5	+0.8
K15K	Wolf Creek Mou	18.52	57	P	P	16 03 60.0	-0.5
	baz=267						
G16K	Koyuk River	18.61	47	P	P	16 04 00.9	-0.6
	baz=257						
O14K	Tigyukauivet M	18.71	66	P	P	16 04 02.1	-0.7
	baz=276						
M15K	Kasigluk River	18.90	62	P	P	16 04 04.3	-0.5
	baz=272						
S12K	Black Hills	18.96	77	P	P	16 04 05.1	-0.4
	baz=286						
D17K	Noatak River	19.02	40	P	P	16 04 05.4	-0.6
	baz=249,SNR=8.4						
J16K	Anvik River	19.02	54	P	P	16 04 05.7	-0.4
	baz=265						
I17K	Unalakleet	19.04	52	P	P	16 04 05.8	-0.5
	baz=263						
N15K	Kwethluk River	19.23	63	P	P	16 04 08.2	-0.2
	baz=274						
E17K	Hotham Inlet	19.27	42	P	P	16 04 08.9	+0.1
	baz=253						
C17K	DeLong Mountai	19.28	37	P	P	16 04 08.4	-0.4
	baz=247						
F17K	Baldwin Pennin	19.31	44	P	P	16 04 09.4	+0.3
	baz=255						
G17K	Kiwalik Mounta	19.33	47	P	P	16 04 09.7	+0.3
	baz=258						
O15K	Ungalikthiuk R	19.46	66		Pn	16 04 12.1	+0.1
O15K	Ungalikthiuk R	19.46	66	P	P	16 04 11.5	+0.7
	baz=277,SNR=6.0						
L16K	Owhat River	19.47	59	P	P	16 04 11.2	+0.3
	baz=270						
H17K	Granite Mounta	19.53	49	P	P	16 04 11.9	+0.3
	baz=261						
J17K	VABM Dome	19.71	54	P	P	16 04 13.7	+0.1
	baz=266						
M16K	Timber Creek	19.73	61		P	16 04 14.5	+0.7
M16K	Timber Creek	19.73	61	P	Pn	16 04 14.8	-0.6
	baz=273						
E18K	Tukpahlearik C	19.83	41	P	Pn	16 04 15.4	-1.0
	baz=253						
N16K	Nishlik Lake	19.86	62	P	P	16 04 15.9	+0.6
	baz=274						
SDPT	Sand Point	19.93	78	P	Pn	16 04 17.4	-0.3
	baz=287						
F18K	Selawik	19.97	44	P	P	16 04 16.9	+0.6
	baz=257						
C18K	Utukok River	20.02	38	P	Pn	16 04 18.4	-0.4
C18K	Utukok River	20.02	38	P	Pn	16 04 17.7	-1.0
	baz=249,SNR=9.7						
L17K	Donlin	20.03	57	P	Pn	16 04 18.2	-0.6
	baz=270						
K17K	Iditarod	20.03	56	P	Pn	16 04 18.0	-0.9
	baz=269						
B18K	Kokolik River	20.09	36	P	Pn	16 04 18.8	-0.6
	baz=247						
S14K	Fog Glacier	20.16	75	P	P	16 04 19.8	+1.1
	baz=285,SNR=5.5						
H18K	Honhosa River	20.21	48	P	P	16 04 19.6	+0.6
	baz=262						
G18K	Tagagawik	20.22	46	P	P	16 04 19.8	+0.6
	baz=260,SNR=8.4						
O16K	Kokwok River B	20.29	65	P	P	16 04 21.0	+1.1
	baz=277						
P16K	Nushagak River	20.42	66	P	P	16 04 22.5	+1.2
	baz=279						
M17K	Holitna River	20.45	59	P	P	16 04 22.6	+0.9
	baz=273,SNR=15						
KLR	Kul'dur	20.54	264	P	P	16 04 22.5	-0.2
	comp=N,2.8nm,0.8s,baz=62,slow=12,SNR=7.2						
KLR				LR	LR	16 12 27.3	
	comp=N,99nm,19.6s,baz=50,slow=37						
	comp=N,2.8nm,0.8s						
KLR	Kul'dur	20.54	264	⇓eP	P	16 04 23.1	+0.4
KLR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CHNA	Chernabura Isl	20.57	79	P	P	16 04 24.2	+1.2
	baz=289						
N17K	Nushagak Hills	20.64	62	P	P	16 04 24.6	+0.9
	baz=276						
A19K	Wainwright	20.66	34	P	P	16 04 24.4	+0.6
	baz=246						
C19K	Lookout Ridge	20.72	37	IAmb	IAmb	16 04 27.4	
	comp=Z,44nm,1.1s						
C19K	Lookout Ridge	20.72	37	P	P	16 04 25.1	+0.5
	baz=250,SNR=16						
F19K	Shaleruckik Mo	20.75	44	P	Pn	16 04 26.1	-1.1
	baz=258						
O17K	Koliganek Bris	20.77	64	P	Pn	16 04 26.5	-1.0
	baz=278,SNR=9.4						
J18K	Innoko River	20.78	53	P	P	16 04 26.0	+0.8
	baz=268						
L18K	Granite Mounta	20.78	57	P	P	16 04 26.2	+1.0
	baz=271						
GCSA	Galena City Sc	20.79	50	P	P	16 04 26.4	+1.1
	baz=264						
G19K	Purcell Mounta	20.89	46	P	Pn	16 04 27.5	-1.4
	baz=261,SNR=8.4						
ZEA	Zeya	21.01	279	eP	P	16 04 26.2	-1.6
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA				MLR	MLR		
	comp=Z,100nm,11.0s						
D19K	Kuna River	21.04	39	P	P	16 04 28.6	+0.6
	baz=254						
H19K	Roundabout Mou	21.06	48	P	P	16 04 29.2	+1.0
	baz=263,SNR=17						
E19K	Redstone River	21.09	42	P	P	16 04 29.2	+0.7
	baz=257						
Q16K	King Salmon	21.16	67	P	P	16 04 29.7	+0.4
	baz=281						
P17K	Kvichak River	21.18	65	P	P	16 04 29.4	-0.2
	baz=280						
M18K	Stony River	21.22	59	P	P	16 04 30.3	+0.3
	baz=274,SNR=5.3						
N18K	Kilae Creek	21.26	61	P	P	16 04 30.9	+0.5
	baz=276						
J19K	Poorman	21.28	52	P	P	16 04 31.1	+0.5
	baz=268,SNR=10						
TIXI	Tiksi	21.30	330	P	P	16 04 31.6	+0.9
	comp=Z,18nm,0.7s,baz=134,slow=11,SNR=43						
TIXI				LR	LR	16 13 32.7	
	comp=Z,155nm,18.1s,baz=138,slow=39						
	comp=Z,18nm,0.7s						
TIXI	Tiksi	21.30	330	⇑eP	P	16 04 32.0	+1.3
TIXI				pmax	pmax		
	comp=Z,33nm,1.0s						
F20K	Avaraart Lake	21.58	44	P	P	16 04 34.3	+0.5
	baz=260						
D20K	Etivluk River	21.63	39	P	P	16 04 35.0	+0.6
	baz=255						
Q17K	Contact Creek	21.64	68	P	P	16 04 36.0	+1.4
	baz=282,SNR=7.6						
L19K	White Mountain	21.64	57	P	P	16 04 35.3	+0.8
	baz=273						
E20K	Nigu River	21.66	40	P	P	16 04 35.9	+1.1
	baz=256						
O18K	Koktuh Hills	21.70	63	P	P	16 04 35.6	+0.4
	baz=279,SNR=8.7						
H20K	Anotleneega Mo	21.71	48	P	P	16 04 36.4	+1.2
	baz=265,SNR=13						
P18K	Big Mountain,	21.76	65	P	P	16 04 37.0	+1.1
	baz=280						
I20K	Naaghedeneel	21.82	50	IAmb	IAmb	16 04 49.5	
	comp=Z,35nm,1.2s						
I20K	Naaghedeneel	21.82	50	P	P	16 04 36.9	+0.5
	baz=267						
B20K	Meade River	21.83	36	P	P	16 04 37.6	+1.1
B20K				IAmb	IAmb	16 04 40.0	
	comp=Z,33nm,0.7s						
B20K	Meade River	21.83	36	P	P	16 04 37.2	+0.8
	baz=251,SNR=20						
M19K	Big River Lodg	21.88	58	P	P	16 04 37.7	+0.7
	baz=274						
N19K	Bonanza Creek	21.93	61	P	P	16 04 37.8	+0.1
	baz=277						
J20K	Nowinta River	21.94	52	P	P	16 04 38.3	+0.7
	baz=269,SNR=11						
K20K	Telida	21.97	54	P	P	16 04 38.2	+0.2
	baz=271						
Q18K	Katmai Hardscr	22.01	67	P	P	16 04 38.7	+0.1
	baz=282,SNR=9.1						
L20K	Farewell, AK	22.08	56	P	P	16 04 39.5	+0.3
	baz=273,SNR=6.1						
O19K	Port Alsworth	22.09	62	P	P	16 04 39.6	+0.3
	baz=278						
IMAR	Indian Mountai	22.22	47	P	P	16 04 41.4	+0.7
G21K	Allakaket	22.38	45	P	P	16 04 42.4	+0.1
	baz=264						
C21K	Knifeblade Rid	22.38	38	P	P	16 04 42.4	0.0
	baz=256						
CHIR	Chirikof Islan	22.41	74	P	P	16 04 43.3	+0.5
	baz=288						
HEH	HeiHe	22.43	270	eP	P	16 04 40.5	-2.5
HEH				pmax	pmax		
	comp=Z,12nm,0.7s						
HEH				LR	LR		
	comp=Z,200nm,13.9s						
HEH				LR	LR		
	comp=Z,130nm,14.0s						
HEH				LR	LR		
	comp=Z,280nm,12.9s						
M20K	Styx River	22.47	58	P	P	16 04 43.4	-0.1
	baz=275,SNR=6.4						
F21K	Alatna River	22.48	44	P	P	16 04 43.7	+0.3
	baz=262						
E21K	Killik River	22.51	40	P	P	16 04 44.0	+0.3
	baz=258						
R18K	Karluk	22.54	69	P	P	16 04 44.2	+0.1
	baz=285						
B21K	Ikpikpuk River	22.56	37	P	P	16 04 45.1	+0.9
B21K				IAmb	IAmb	16 04 47.1	
	comp=Z,36nm,1.0s						
B21K	Ikpikpuk River	22.56	37	P	P	16 04 44.4	+0.2
	baz=255,SNR=23						
H21K	Melozitna Rive	22.58	48	P	P	16 04 44.6	+0.1
	baz=266,SNR=18						
Q19K	Cape Douglas,	22.65	65	P	P	16 04 45.5	+0.1
	baz=282,SNR=6.3						
ILSW	Iliamna Southw	22.71	63	IAmb	IAmb	16 04 49.0	
	comp=Z,18nm,0.8s						
P19K	Oil Pt	22.72	63	P	P	16 04 46.4	+0.3
	baz=280						
CHUM	Lake Minchumin	22.74	52	P	P	16 04 46.6	+0.4
	baz=271,SNR=6.8						
PPLA	Purkeypile	22.84	55	P	P	16 04 47.7	+0.3
	baz=274,SNR=8.0						
A22K	Sinclair Lake	22.85	34	P	P	16 04 47.6	+0.3
	baz=251						
CAST	Castle Rocks	22.86	54	P	P	16 04 48.0	+0.5
	baz=272,SNR=8.7						

I21K	**Tanana**	**22.90**	**49**		P	**P**	**16 04 48.3**	**+0.4**
	baz=268							
O20K	**Slope Mountain**	**22.95**	**62**		P	**P**	**16 04 48.9**	**+0.4**
	baz=280							
N20K	**Mount Spurr**	**22.98**	**59**		P	**P**	**16 04 48.9**	**0.0**
	baz=278							
SPCR	**Spurr Chakacha**	**22.98**	**59**		P	**P**	**16 04 49.1**	**+0.2**
	baz=278							
D22K	**Ayikyak River**	**23.06**	**40**		P	**P**	**16 04 49.7**	**+0.1**
	baz=259,SNR=8.1							
B22K	**Teshekpuk Lake**	**23.15**	**36**		IAmb	IAmb	16 04 51.9	
	comp=Z,20nm,0.7s							
B22K	**Teshekpuk Lake**	**23.15**	**36**		P	**P**	**16 04 50.1**	**-0.2**
	baz=255,SNR=6.5							
H22K	**Ishtalitna Cre**	**23.18**	**47**		P	**P**	**16 04 50.5**	**-0.3**
	baz=267,SNR=7.7							
G22K	**Bettles**	**23.21**	**45**		P	**P**	**16 04 50.4**	**-0.7**
	baz=265							
SKT	**Skwentna**	**23.21**	**57**		P	**P**	**16 04 50.4**	**-0.8**
	baz=276,SNR=5.1							
OHAK	**Old Harbor**	**23.24**	**70**		P	**P**	**16 04 50.7**	**-0.7**
	baz=286							
E22K	**Anaktuvuk Pass**	**23.24**	**42**		IAmb	IAmb	16 04 53.2	
	comp=Z,23nm,1.1s							
E22K	**Anaktuvuk Pass**	**23.24**	**42**		P	**P**	**16 04 50.3**	**-1.2**
	baz=261,SNR=17							
BPAW	**Bear Paw Mtn.**	**23.32**	**52**		P	**P**	**16 04 51.9**	**-0.3**
	baz=272,SNR=9.7							
Q20K	**Shuyak Island**	**23.35**	**66**		P	**P**	**16 04 52.2**	**-0.4**
	baz=283							
MLY	**Manley**	**23.42**	**49**		P	**P**	**16 04 53.0**	**-0.3**
	baz=270,SNR=14							
KDAK	**Kodiak Island**	**23.46**	**68**		P	**P**	**16 04 53.0**	**-0.6**
KDAK					IAmb	IAmb	16 04 55.1	
	comp=Z,11nm,0.7s							
KDAK	**Kodiak Island**	**23.46**	**68**		LR	LR	16 13 08.3	
	comp=Z,58nm,20.7s,baz=261,slow=34							
KDAK	**Kodiak Island**	**23.46**	**68**	*de*	P	**P**	**16 04 53.2**	**-0.4**
KDAK					pmax	pmax		
	comp=Z,19nm,1.1s							
KDAK	**Kodiak Island**	**23.46**	**68**		P	**P**	**16 04 52.6**	**-1.0**
	baz=285							
USRK	**Ussuriysk Ar.**	**23.46**	**253**		P	**P**	**16 04 51.2**	**-2.5**
	comp=Z,1.7nm,0.8s,baz=40,slow=11,SNR=4.6							
SUA	**Susitna One**	**23.65**	**58**		P	**P**	**16 04 54.8**	**-0.8**
	baz=278							
TRF	**Thorofare Moun**	**23.66**	**53**		P	**P**	**16 04 55.2**	**-0.6**
	baz=274,SNR=8.8							
CNPM	**China Poot**	**23.74**	**63**		IAmb	IAmb	16 04 58.0	
	comp=Z,18nm,0.6s							
COLD	**Coldfoot**	**23.75**	**44**		P	**P**	**16 04 56.1**	**-0.3**
	baz=265,SNR=7.1							
G23K	**Bananza Creek**	**23.78**	**45**		P	**P**	**16 04 56.2**	**-0.6**
	baz=266,SNR=11							
D23K	**Nanushuk River**	**23.79**	**40**		P	**P**	**16 04 56.9**	**+0.1**
	baz=261,SNR=5.8							
H23K	**Yukon River**	**23.93**	**47**		P	**P**	**16 04 58.4**	**+0.2**
	baz=269,SNR=8.1							
BRSE	**Bradley Lake S**	**23.94**	**63**		P	**P**	**16 04 58.1**	**-0.3**
	baz=282							
C23K	**Itkillik River**	**23.97**	**38**		IAmb	IAmb	16 05 01.0	
	comp=Z,38nm,1.4s							
C23K	**Itkillik River**	**23.97**	**38**		P	**P**	**16 04 58.5**	**+0.1**
	baz=259,SNR=8.8							
I23K	**Minto, Yukon-K**	**24.01**	**49**		P	**P**	**16 04 58.6**	**-0.2**
	baz=271,SNR=14							
E23K	**Chandalar**	**24.05**	**42**		IAmb	IAmb	16 05 01.9	
	comp=Z,17nm,1.1s							
E23K	**Chandalar**	**24.05**	**42**		P	**P**	**16 04 59.3**	**-0.1**
	baz=264,SNR=10							
TOLK	**Toolik Lake Re**	**24.14**	**41**		IAmb	IAmb	16 05 02.0	
	comp=Z,16nm,0.8s							
TOLK	**Toolik Lake Re**	**24.14**	**41**		P	**P**	**16 05 00.1**	**-0.1**
	baz=263,SNR=15							
NEA2	**Nenana**	**24.14**	**51**		P	**P**	**16 05 00.1**	**0.0**
	baz=272,SNR=6.7							
MCK	**McKinley**	**24.25**	**53**		P	**P**	**16 05 00.7**	**-0.4**
	baz=274							
RND	**Reindeer**	**24.31**	**53**			**P**	**16 05 01.6**	**-0.2**
RND	**Reindeer**	**24.31**	**53**		P	**P**	**16 05 01.6**	**-0.2**
RND					pmax	pmax		
	comp=Z,8.0nm,0.8s							
E24K	**Your Creek**	**24.47**	**42**		IAmb	IAmb	16 05 05.4	
	comp=Z,17nm,0.7s							
E24K	**Your Creek**	**24.47**	**42**		P	**P**	**16 05 03.3**	**0.0**
	baz=265,SNR=20							
D24K	**Happy Valley**	**24.48**	**39**		P	**P**	**16 05 02.8**	**-0.4**
	baz=262,SNR=9.1							
WAT1	**Susitna Watana**	**24.50**	**55**		P	**P**	**16 05 02.5**	**-1.0**
	baz=276							
SEW	**Seward**	**24.50**	**61**		IAmb	IAmb	16 05 03.5	
	comp=Z,9.0nm,0.7s							
SEW	**Seward**	**24.50**	**61**		P	**P**	**16 05 02.4**	**-1.1**
	baz=282,SNR=6.2							
WRH	**Wood River Hil**	**24.57**	**51**		IAmb	IAmb	16 05 05.7	
	comp=Z,29nm,1.0s							
C24K	**Franklin Bluff**	**24.60**	**38**		P	**P**	**16 05 03.6**	**-0.7**
	baz=261							
H24K	**Noodor Dome**	**24.62**	**47**		P	**P**	**16 05 04.4**	**-0.1**
	baz=270,SNR=9.0							
COLA	**College**	**24.65**	**50**	*ce*	P	**P**	**16 05 04.5**	**-0.3**
COLA					pmax	pmax		
	comp=Z,12nm,1.0s							
F24K	**Squaw Lake**	**24.66**	**43**		P	**P**	**16 05 04.3**	**-0.6**
	baz=267,SNR=7.2							
CCB	**Clear Creek Bu**	**24.68**	**50**		IAmb	IAmb	16 05 06.6	
	comp=Z,18nm,1.0s							
KNK	**Knik Glacier**	**24.74**	**58**		IAmb	IAmb	16 05 07.0	
	comp=Z,18nm,0.7s							
KNK	**Knik Glacier**	**24.74**	**58**		P	**P**	**16 05 05.1**	**-0.6**
	baz=280,SNR=5.6							
G24K	**Hadweenzic Riv**	**24.79**	**45**		IAmb	IAmb	16 05 07.6	
	comp=Z,22nm,0.7s							
G24K	**Hadweenzic Riv**	**24.79**	**45**		P	**P**	**16 05 05.7**	**-0.3**
	baz=269,SNR=34							
PWL	**Port Wells**	**24.90**	**59**		P	**P**	**16 05 05.8**	**-1.2**
	baz=281,SNR=15							
WAT6	**Susitna Watana**	**24.91**	**55**		P	**P**	**16 05 06.8**	**-0.4**
	baz=278,SNR=8.4							
BNX	**BinXian**	**24.96**	**261**	⇓	P	**P**	**16 05 06.0**	**-1.7**
BNX					sP	**pwP**	**16 05 15.5**	**+2.8**
BNX					S	**S**	**16 09 28.8**	**-2.2**
BNX					pmax	pmax		
	comp=Z,5.0nm,0.4s							
BNX					pmax	pmax		
	comp=Z,59nm,4.9s							
BNX					LR	LR		
	comp=Z,190nm,12.4s							
BNX					LR	LR		
	comp=Z,200nm,14.1s							
BNX					LR	LR		
	comp=Z,160nm,11.5s							
JSD	**Sado**	**24.96**	**234**		P	**P**	**16 05 07.3**	**-0.4**
DHY	**Denali Highway**	**25.01**	**54**		P	**P**	**16 05 07.3**	**-0.9**
	baz=277,SNR=8.7							
M23K	**Glacier View**	**25.03**	**57**		P	**P**	**16 05 07.6**	**-0.6**
	baz=279,SNR=7.4							
HDA	**Harding Lake**	**25.07**	**51**		IAmb	IAmb	16 05 09.5	
	comp=Z,8.4nm,0.6s							
HDA	**Harding Lake**	**25.07**	**51**		P	**P**	**16 05 07.6**	**-0.9**
	baz=274,SNR=12							
ILAR	**Eielson Array**	**25.07**	**50**		P	**P**	**16 05 08.1**	**-0.5**
	comp=Z,6.3nm,0.9s,baz=264,slow=8.0,SNR=49							
ILAR					PcP	**PcP**	**16 08 41.3**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=251,slow=2.8,SNR=2.6							
	comp=Z,6.3nm,0.9s							
SCM	**Sheep Creek Mo**	**25.21**	**57**		IAmb	IAmb	16 05 10.8	
	comp=Z,21nm,0.7s							
SCM	**Sheep Creek Mo**	**25.21**	**57**		P	**P**	**16 05 09.4**	**-0.5**
	baz=280,SNR=17							
G25K	**Bearman Lake**	**25.34**	**45**		P	**P**	**16 05 09.7**	**-1.2**
	baz=270							
D25K	**Kavik River**	**25.36**	**39**		IAmb	IAmb	16 05 13.3	
	comp=Z,13nm,0.7s							
D25K	**Kavik River**	**25.36**	**39**		P	**P**	**16 05 10.3**	**-0.9**
	baz=264,SNR=15							
H25L	**Birch Creek**	**25.45**	**46**		P	**P**	**16 05 11.8**	**-0.1**
	baz=271							
GLI	**Glacier Island**	**25.49**	**59**		P	**P**	**16 05 11.7**	**-0.7**
	baz=282							
F25K	**Christian Rive**	**25.52**	**43**		P	**P**	**16 05 12.3**	**-0.4**
	baz=269,SNR=9.4							
P23K	**Montague Islan**	**25.53**	**61**		IAmb	IAmb	16 05 15.9	
	comp=Z,22nm,1.1s							
P23K	**Montague Islan**	**25.53**	**61**		P	**P**	**16 05 12.5**	**-0.3**
	baz=283							
E25K	**Arctic Village**	**25.57**	**42**		IAmb	IAmb	16 05 14.8	
	comp=Z,22nm,1.4s							
E25K	**Arctic Village**	**25.57**	**42**		P	**P**	**16 05 12.8**	**-0.3**
	baz=268,SNR=8.0							
PRP	**Porcupine Dome**	**25.60**	**48**		IAmb	IAmb	16 05 14.8	
	comp=Z,16nm,0.9s							
PRP	**Porcupine Dome**	**25.60**	**48**		P	**P**	**16 05 13.0**	**-0.6**
	baz=273,SNR=17							
K24K	**Donnelly Dome**	**25.64**	**52**		P	**P**	**16 05 13.3**	**-0.4**
	baz=277							
FYU	**Fort Yukon**	**25.68**	**46**		IAmb	IAmb	16 05 15.7	
	comp=Z,17nm,0.8s							
M24K	**Tolsona, Glenn**	**25.70**	**56**		IAmb	IAmb	16 05 42.6	
	comp=Z,21nm,0.8s							
M24K	**Tolsona, Glenn**	**25.70**	**56**		P	**P**	**16 05 13.7**	**-0.7**
	baz=280,SNR=5.8							
J25K	**Salcha River,**	**25.73**	**50**		P	**P**	**16 05 13.7**	**-0.9**
	baz=275,SNR=8.5							
HIN	**Hinchinbrook I**	**25.88**	**60**		IAmb	IAmb	16 05 16.9	
	comp=Z,20nm,1.1s							
PAX	**Paxson**	**25.88**	**54**		P	**P**	**16 05 15.1**	**-1.0**
	baz=279,SNR=5.6							
KLU	**Klutina**	**25.93**	**57**		P	**P**	**16 05 15.4**	**-1.0**
	baz=281							
BMAR	**Burnt Mountain**	**25.93**	**44**		P	**P**	**16 05 16.9**	**+0.5**
RIDG	**Independent Ri**	**26.06**	**52**		P	**P**	**16 05 16.5**	**-1.1**
	baz=278,SNR=9.1							
DIV	**Divide**	**26.07**	**58**		IAmb	IAmb	16 05 18.5	
	comp=Z,8.9nm,0.7s							
F26K	**Sheenjek River**	**26.10**	**43**		P	**P**	**16 05 17.0**	**-0.9**
	baz=270,SNR=6.3							
HARP	**HAARP**	**26.12**	**55**		P	**P**	**16 05 17.7**	**-0.4**
	baz=280							
Q23K	**Middleton Isla**	**26.19**	**62**		P	**P**	**16 05 18.5**	**-0.2**
	baz=285							
MAJO	**Matsushiro**	**26.22**	**232**		P	**P**	**16 05 20.2**	**+1.0**
MAJO					IAmb	IAmb	16 05 27.3	
	comp=Z,20nm,0.8s							
MAJO	**Matsushiro**	**26.22**	**232**		P	**P**	**16 05 20.2**	**+1.0**
MAJO					pmax	pmax		
	comp=Z,20nm,0.8s							
MJAR	**Matsushiro Arr**	**26.22**	**232**		P	**P**	**16 05 19.6**	**+0.4**
	comp=Z,7.8nm,0.7s,baz=27,slow=8.1,SNR=28							
	comp=Z,7.8nm,0.7s							
G26K	**Porcupine Rive**	**26.25**	**45**		IAmb	IAmb	16 05 20.9	
	comp=Z,14nm,0.9s							
G26K	**Porcupine Rive**	**26.25**	**45**		P	**P**	**16 05 18.7**	**-0.4**
	baz=272,SNR=6.9							
C27K	**Jago River**	**26.32**	**39**		P	**P**	**16 05 18.8**	**-1.1**
	baz=266							
SCRK	**Sand Creek**	**26.40**	**52**		IAmb	IAmb	16 05 20.7	
	comp=Z,15nm,0.8s							
SCRK	**Sand Creek**	**26.40**	**52**		P	**P**	**16 05 19.5**	**-1.3**
	baz=278,SNR=25							
J26L	**Joseph Creek**	**26.52**	**50**		P	**P**	**16 05 21.3**	**-0.5**
	baz=277							
N25K	**Chitina, Valde**	**26.53**	**57**		P	**P**	**16 05 21.7**	**-0.2**
	baz=282,SNR=6.5							
I26K	**Coal Creek Min**	**26.61**	**48**		P	**P**	**16 05 22.7**	**+0.2**
	baz=276							
BMRM	**Bremner River**	**26.66**	**58**		IAmb	IAmb	16 05 24.5	
	comp=Z,25nm,1.0s							
BMRM	**Bremner River**	**26.66**	**58**		P	**P**	**16 05 22.9**	**-0.1**
	baz=283,SNR=11							
RAGM	**Ragged Mountai**	**26.76**	**60**		IAmb	IAmb	16 05 26.9	
	comp=Z,10nm,0.8s							
KAIM	**Kayak Island**	**27.00**	**61**		IAmb	IAmb	16 05 27.6	
	comp=Z,20nm,0.8s							
KAIM	**Kayak Island**	**27.00**	**61**		P	**P**	**16 05 26.6**	**+0.5**
	baz=285							
E27K	**Coleen River**	**27.06**	**42**		P	**P**	**16 05 26.8**	**+0.3**
	baz=271							
G27K	**Doyon Strip**	**27.09**	**45**		P	**P**	**16 05 26.8**	**-0.1**
	baz=274,SNR=6.1							
M26K	**Nabesna, AK**	**27.11**	**55**		IAmb	IAmb	16 05 28.9	
	comp=Z,14nm,1.1s							
M26K	**Nabesna, AK**	**27.11**	**55**		P	**P**	**16 05 27.5**	**+0.4**
	baz=282,SNR=12							
H27K	**Steamboat Moun**	**27.19**	**46**		IAmb	IAmb	16 05 29.8	
	comp=Z,25nm,1.2s							
H27K	**Steamboat Moun**	**27.19**	**46**		P	**P**	**16 05 27.9**	**+0.1**
	baz=275,SNR=16							
I27K	**Kandik River**	**27.22**	**48**		P	**P**	**16 05 27.5**	**-0.6**
	baz=276							
K27K	**Chicken**	**27.23**	**51**		P	**P**	**16 05 27.9**	**-0.2**
	baz=279							
SUCK	**Suckling Hills**	**27.28**	**60**		IAmb	IAmb	16 05 30.4	
	comp=Z,22nm,1.0s							
D27M	**Malcolm River**	**27.28**	**40**		P	**P**	**16 05 28.8**	**+0.2**
	baz=270							
MCARA	**McCarthy VSAT**	**27.31**	**57**		IAmb	IAmb	16 05 32.3	
	comp=Z,12nm,0.8s							
MCARA	**McCarthy VSAT**	**27.31**	**57**		P	**P**	**16 05 29.0**	**+0.1**
	baz=283							
JGF	**Kuroka**	**27.38**	**232**		P	**P**	**16 05 29.6**	**-0.1**
JGF					IAmb	IAmb	16 05 38.2	
	comp=Z,33nm,1.5s							
CRQM	**Cirque**	**27.41**	**58**		IAmb	IAmb	16 05 31.3	
	comp=Z,16nm,0.9s							
CRQE	**Cirque**	**27.43**	**58**		P	**P**	**16 05 30.3**	**+0.2**
	baz=285,SNR=6.6							
L27K	**Beaver Creek,**	**27.51**	**53**		IAmb	IAmb	16 05 32.2	
	comp=Z,15nm,0.9s							
L27K	**Beaver Creek,**	**27.51**	**53**		P	**P**	**16 05 31.2**	**+0.6**
	baz=281,SNR=24							
BCAR	**Beaver Creek A**	**27.52**	**53**		P	**P**	**16 05 31.0**	**+0.2**
M27K	**Edge Creek, AK**	**27.63**	**55**		IAmb	IAmb	16 05 33.7	
	comp=Z,13nm,0.8s							
M27K	**Edge Creek, AK**	**27.63**	**55**		P	**P**	**16 05 32.1**	**+0.3**
	baz=282,SNR=16							
F28M	**Old Crow**	**27.73**	**43**		P	**P**	**16 05 32.8**	**+0.2**
	baz=274,SNR=5.0							
E28M	**Babbage River**	**27.81**	**41**		P	**P**	**16 05 33.2**	**0.0**
	baz=272							
I28M	**Miner Creek**	**27.93**	**48**		IAmb	IAmb	16 05 36.2	
	comp=Z,18nm,1.4s							
I28M	**Miner Creek**	**27.93**	**48**		P	**P**	**16 05 34.5**	**+0.1**
	baz=278,SNR=10.0							
BVCY	**Beaver Creek**	**28.08**	**54**		P	**P**	**16 05 35.9**	**+0.2**
	baz=283,SNR=10							
CTG	**Chitna Glacier**	**28.21**	**57**		P	**P**	**16 05 36.7**	**-0.3**
	baz=285							
CTGM	**Chitina Glacie**	**28.21**	**57**		IAmb	IAmb	16 05 38.5	
	comp=Z,12nm,1.2s							
DAWY	**Dawson**	**28.39**	**51**		P	**P**	**16 05 37.8**	**-0.7**
	baz=281							
YUK3	**Moose Creek**	**28.41**	**56**		P	**P**	**16 05 39.0**	**+0.1**
	baz=284							
E29M	**Blow River**	**28.42**	**41**		P	**P**	**16 05 38.7**	**0.0**
	baz=274							
H29M	**Whitestone**	**28.46**	**46**		IAmb	IAmb	16 05 40.8	
	comp=Z,11nm,0.8s							
H29M	**Whitestone**	**28.46**	**46**		P	**P**	**16 05 39.2**	**+0.1**
	baz=278,SNR=7.9							
G29M	**Pine Creek**	**28.52**	**45**		IAmb	IAmb	16 05 41.7	
	comp=Z,17nm,0.9s							
G29M	**Pine Creek**	**28.52**	**45**		P	**P**	**16 05 39.9**	**+0.3**
	baz=277,SNR=9.5							
I29M	**Ogilvie Camp,**	**28.62**	**48**		IAmb	IAmb	16 05 41.6	
	comp=Z,12nm,1.0s							
I29M	**Ogilvie Camp,**	**28.62**	**48**		P	**P**	**16 05 41.0**	**+0.5**
	baz=280,SNR=14							
O28M	**Mount Upton**	**28.80**	**58**		IAmb	IAmb	16 05 43.7	
	comp=Z,9.4nm,0.8s							
O28M	**Mount Upton**	**28.80**	**58**		P	**P**	**16 05 42.3**	**-0.1**
	baz=286,SNR=5.1							
J29N	**Klondike Camp**	**28.82**	**50**		P	**P**	**16 05 43.0**	**+0.6**
	baz=281							
YUK8	**Steele Glacier**	**28.86**	**56**		P	**P**	**16 05 43.3**	**+0.4**
	baz=286							
PINM	**Pinnacle**	**28.97**	**59**		P	**P**	**16 05 43.9**	**+0.3**
	baz=288,SNR=5.9							
EPYK	**Eagle Plains**	**29.10**	**46**		IAmb	IAmb	16 05 46.2	
	comp=Z,8.6nm,0.8s							
EPYK	**Eagle Plains**	**29.10**	**46**		P	**P**	**16 05 45.3**	**+0.5**
	baz=279							
L29M	**L29M**	**29.14**	**52**		IAmb	IAmb	16 05 47.1	
	comp=Z,17nm,0.8s							
L29M	**L29M**	**29.14**	**52**		P	**P**	**16 05 46.3**	**+1.1**
	baz=284,SNR=24							
M29M	**Somme Creek**	**29.15**	**54**		IAmb	IAmb	16 05 47.2	
	comp=Z,8.1nm,0.7s							
M29M	**Somme Creek**	**29.15**	**54**		P	**P**	**16 05 46.4**	**+1.0**
	baz=285,SNR=19							
G30M	**tAoh Zraii Nji**	**29.21**	**44**		IAmb	IAmb	16 05 46.9	
	comp=Z,8.2nm,0.8s							
G30M	**tAoh Zraii Nji**	**29.21**	**44**		P	**P**	**16 05 45.6**	**-0.2**
	baz=278,SNR=6.1							
K29M	**Barlow Dome**	**29.24**	**51**		P	**P**	**16 05 46.0**	**-0.1**
	baz=283							
F30M	**Barrier River**	**29.29**	**43**		P	**P**	**16 05 46.4**	**0.0**
	baz=278							
YUK4	**Talbot Arm**	**29.36**	**56**		P	**P**	**16 05 47.5**	**+0.1**
	baz=286,SNR=6.4							
I30M	**Mount Dempster**	**29.44**	**48**		IAmb	IAmb	16 05 48.9	
	comp=Z,9.6nm,0.8s							
I30M	**Mount Dempster**	**29.44**	**48**		P	**P**	**16 05 47.5**	**-0.4**
	baz=281,SNR=17							
PNL	**Peninsula**	**29.51**	**59**		P	**P**	**16 05 48.5**	**+0.1**
	baz=289,SNR=5.7							
J30M	**Hart River**	**29.59**	**49**		P	**P**	**16 05 49.1**	**-0.2**
	baz=282							
YUK6	**Outpost Mounta**	**29.61**	**57**		P	**P**	**16 05 49.4**	**-0.2**
	baz=287,SNR=7.1							
O29M	**Mount Kennedy**	**29.70**	**58**		P	**P**	**16 05 50.2**	**-0.1**
	baz=288							
G31M	**Satah River**	**29.98**	**44**		P	**P**	**16 05 52.6**	**+0.1**
	baz=280							
HYT	**Haines Junctio**	**30.04**	**57**		IAmb	IAmb	16 05 55.1	
	comp=Z,11nm,0.8s							
HYT	**Haines Junctio**	**30.04**	**57**		P	**P**	**16 05 53.5**	**+0.2**
	baz=288,SNR=13							
INK	**Inuvik**	**30.04**	**41**		IAmb	IAmb	16 05 54.1	
	comp=Z,7.1nm,0.6s							
INK	**Inuvik**	**30.04**	**41**		P	**P**	**16 05 53.0**	**0.0**
	baz=278							
N30M	**Aishikik Lake**	**30.05**	**55**		P	**P**	**16 05 53.4**	**+0.2**
	baz=287							
H31M	**Peel River**	**30.16**	**46**		P	**P**	**16 05 54.6**	**+0.5**
	baz=282							
P29M	**Windy Craggy**	**30.32**	**59**		IAmb	IAmb	16 05 57.3	
	comp=Z,9.7nm,0.8s							
P29M	**Windy Craggy**	**30.32**	**59**		P	**P**	**16 05 56.1**	**+0.5**
	baz=290,SNR=6.6							
KSRS	**Korea Array**	**30.45**	**247**		P	**P**	**16 05 55.8**	**-1.1**
	comp=Z,1.1nm,0.6s,baz=35,slow=8.7,SNR=5.8							
KSRS					PcP	**PcP**	**16 08 55.2**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=352,slow=5.2,SNR=4.8							
KSRS					LR	LR	16 18 38.2	
	comp=Z,21µm,19.8s,baz=50,slow=37							
	comp=Z,1.1nm,0.6s							
P30M	**Million Dollar**	**30.52**	**58**		P	**P**	**16 05 57.7**	**+0.2**
	baz=289							
N31M	**Braeburn, Yuko**	**30.64**	**55**		P	**P**	**16 05 59.2**	**+0.8**
	baz=288							
O30N	**Mendenhall**	**30.72**	**56**		P	**P**	**16 05 59.6**	**+0.4**
	baz=289							
PLBC	**Pleasant Camp**	**31.03**	**59**		P	**P**	**16 06 03.0**	**+1.2**
	baz=291							
M31M	**Drury Creek, Y**	**31.05**	**53**		IAmb	IAmb	16 06 04.2	
	comp=Z,13nm,0.8s							
M31M	**Drury Creek, Y**	**31.05**	**53**		P	**P**	**16 06 03.4**	**+1.3**
	baz=288,SNR=17							
WHY	**Whitehorse**	**31.32**	**56**		P	**P**	**16 06 05.3**	**+0.8**
	baz=290,SNR=15							
FARO	**Faro, Yukon**	**31.50**	**53**		IAmb	IAmb	16 06 07.9	
	comp=Z,5.5nm,0.7s							
FARO	**Faro, Yukon**	**31.50**	**53**		P	**P**	**16 06 07.2**	**+1.1**
	baz=288,SNR=6.8							
SKAG	**Skagway**	**31.53**	**58**		IAmb	IAmb	16 06 08.6	
	comp=Z,12nm,1.1s							
SKAG	**Skagway**	**31.53**	**58**		P	**P**	**16 06 07.3**	**+1.1**
	baz=291							
N32M	**Quiet Lake**	**31.98**	**55**		P	**P**	**16 06 11.2**	**+1.0**
	baz=290							
P32M	**Atlin**	**32.24**	**58**		P	**P**	**16 06 13.3**	**+0.7**
	baz=292							
MMPY	**Sheldon Lake,**	**32.30**	**52**		IAmb	IAmb	16 06 15.3	
	comp=Z,8.3nm,0.8s							
MMPY	**Sheldon Lake,**	**32.30**	**52**		P	**P**	**16 06 13.9**	**+0.9**
	baz=289,SNR=18							
R32K	**Eaglecrest**	**32.37**	**60**		P	**P**	**16 06 14.4**	**+0.8**
	baz=294							
P33M	**Teslin, Yukon**	**32.43**	**56**		P	**P**	**16 06 15.7**	**+1.4**
	baz=292,SNR=6.0							
SIT	**Sitka**	**32.47**	**63**		P	**P**	**16 06 15.7**	**+1.2**
	baz=295							
S32K	**Killisnoo**	**32.67**	**62**		IAmb	IAmb	16 06 18.8	
	comp=Z,11nm,1.0s							
S32K	**Killisnoo**	**32.67**	**62**		P	**P**	**16 06 17.4**	**+1.1**
	baz=295							
Q32M	**Nakina River**	**33.17**	**58**		IAmb	IAmb	16 06 23.6	
	comp=Z,9.5nm,0.8s							
Q32M	**Nakina River**	**33.17**	**58**		P	**P**	**16 06 22.2**	**+1.3**
	baz=294,SNR=10							
R33M	**Jennings River**	**33.61**	**57**		IAmb	IAmb	16 06 27.3	
	comp=Z,10nm,0.8s							
R33M	**Jennings River**	**33.61**	**57**		P	**P**	**16 06 26.0**	**+1.3**
	baz=294,SNR=14							
U33K	**Whale Pass**	**33.98**	**63**		P	**P**	**16 06 28.8**	**+1.1**
	baz=297							
TGTN	**Hyland Airport**	**34.00**	**53**		P	**P**	**16 06 29.2**	**+1.2**
	baz=292							
S34M	**Telegraph Cree**	**34.16**	**59**		IAmb	IAmb	16 06 31.9	
	comp=Z,9.3nm,0.8s							
S34M	**Telegraph Cree**	**34.16**	**59**		P	**P**	**16 06 31.2**	**+2.0**
	baz=296,SNR=8.9							
WRAK	**Wrangell Islan**	**34.23**	**62**		P	**P**	**16 06 31.4**	**+1.6**
	baz=297,SNR=7.2							
CRAG	**Craig**	**34.28**	**64**		P	**P**	**16 06 32.2**	**+1.9**
	baz=298							
DLBC	**Dease Lake**	**34.46**	**58**		LR	LR	16 19 52.1	
	comp=Z,4.8nm,19.6s,baz=274,slow=35							
T35M	**Bob Quinn**	**35.00**	**61**		P	**P**	**16 06 38.7**	**+2.1**
	baz=298,SNR=13							
ULN	**Ulaanbaatar**	**35.01**	**281**	⇑*e*	P	**P**	**16 06 36.9**	**0.0**
ULN					pmax	pmax		
	comp=Z,3.0nm,1.0s							
V35K	**Ketchikan**	**35.10**	**64**		P	**P**	**16 06 39.2**	**+1.8**
	baz=299							
SONM	**Songino Array**	**35.39**	**281**		P	**P**	**16 06 39.3**	**-0.9**
	comp=Z,2.3nm,0.5s,baz=61,slow=7.6,SNR=11							
SONM					PcP	**PcP**	**16 09 09.9**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=54,slow=3.0,SNR=5.4							
SONM					LR	LR	16 22 44.9	
	comp=Z,141nm,18.7s,baz=68,slow=39							
	comp=Z,2.3nm,0.5s							
DIB	**Dawson Inlet,**	**35.73**	**67**		IAmb	IAmb	16 06 45.1	
	comp=Z,12nm,1.0s							
BEAVL	**Fort Liard**	**35.99**	**54**		P	**P**	**16 06 46.3**	**+1.3**
	baz=296							
KOTAN	**Kotaneelee Air**	**36.47**	**53**		P	**P**	**16 06 50.6**	**+1.6**
	baz=297							
H11N2	**WAKE ISLAND Hy**	**36.51**	**175**		T	T	16 45 34.7	
	baz=357,slow=76,SNR=2792							
TOAD	**Toad River Com**	**36.51**	**56**		P	**P**	**16 06 51.3**	**+1.8**
	baz=298,SNR=28							
H11N3	**WAKE ISLAND Hy**	**36.52**	**175**		T	T	16 45 35.7	
	baz=357,slow=76,SNR=3733							
H11N1	**WAKE ISLAND Hy**	**36.53**	**175**		T	T	16 45 42.5	
	baz=357,slow=76,SNR=2324							
HHC	**Hu-ho-hao-te**	**36.92**	**268**	*e*	P	**P**	**16 06 53.0**	**-0.3**
HHC					pmax	pmax		
	comp=Z,25nm,0.6s							
HHC					pmax	pmax		
	comp=Z,68nm,4.1s							
HHC					LR	LR		
	comp=Z,220nm,17.7s							
HHC					LR	LR		
	comp=Z,130nm,18.5s							
HHC					LR	LR		
	comp=Z,100nm,16.8s							
H11S1	**WAKE ISLAND Hy**	**37.72**	**176**		T	T	16 47 11.2	
	baz=358,slow=71,SNR=117							
H11S3	**WAKE ISLAND Hy**	**37.73**	**176**		T	T	16 47 28.2	
	baz=358,slow=71,SNR=27							
H11S2	**WAKE ISLAND Hy**	**37.73**	**176**		T	T	16 47 09.9	
	baz=358,slow=71,SNR=33							
EUNU	**Eureka**	**38.36**	**15**		IAmb	IAmb	16 07 06.9	
	comp=Z,7.7nm,0.7s							
BBB	**Bella Bella**	**38.52**	**66**		LR	LR	16 21 21.1	
	comp=Z,21nm,19.4s,baz=254,slow=34							
YKAW3	**Yellowknife Wh**	**39.34**	**46**		IAmb	IAmb	16 07 14.7	
	comp=Z,7.1nm,0.7s							
NJ2	**Nanjing**	**39.35**	**251**	*e*	P	**P**	**16 07 13.3**	**-0.4**
NJ2					pmax	pmax		
	comp=Z,8.0nm,0.5s							
YKA	**Yellowknife Ar**	**39.38**	**46**		P	**P**	**16 07 13.9**	**+0.3**
YKA	**Yellowknife Ar**	**39.38**	**46**		P	**P**	**16 07 13.4**	**-0.1**
	comp=Z,4.2nm,0.7s,baz=303,slow=8.7,SNR=38							
YKA					PcP	**PcP**	**16 09 21.9**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=310,slow=4.4,SNR=5.7							
	comp=Z,4.2nm,0.7s							
YKAW1	**Yellowknife Wh**	**39.43**	**46**		IAmb	IAmb	16 07 15.4	
	comp=Z,6.2nm,0.7s							
LLLB	**Lillooet**	**42.61**	**65**		IAmb	IAmb	16 07 42.8	
	comp=Z,9.5nm,0.8s							
ZALV	**Zalesovo Beam**	**42.97**	**302**		PcP	**PcP**	**16 09 33.6**	**+0.2**

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      comp=Z,2.0nm,0.6s,baz=71,slow=3.2,SNR=7.0
ZALV                                LR     LR      16 27 23.9
      comp=Z,78nm,18.3s,baz=50,slow=39
NLWA  Neilton Lookou   43.59  70    IAmb   IAmb    16 07 50.7
      comp=Z,12nm,1.1s
E03A  Lebam            44.29  71    IAmb   IAmb    16 07 56.2
      comp=Z,20nm,1.0s
SPITS Spitsbergen Ar   44.39 351    P      P       16 07 54.0 -0.4
      comp=Z,20nm,0.9s,baz=59,slow=8.8,SNR=13
      comp=Z,20nm,0.9s
SPB2  Spitsbergen Ar   44.39 351    P      P       16 07 54.9 +0.5
GTA   Gaotai           44.46 276   eP      P       16 07 55.3 -0.3
GTA                                 pP     pwP     16 08 00.0 -0.6
GTA                                 pmax   pmax
      comp=Z,13nm,0.9s
GTA                                 LR     LR
      comp=Z,160nm,13.9s
GTA                                 LR     LR
      comp=Z,140nm,15.1s
GTA                                 LR     LR
      comp=Z,63nm,14.3s
BLKN  Baker Lake       45.26  37    P      P       16 08 01.3 -0.1
B08A  Colville Reser   45.31  66    IAmb   IAmb    16 08 03.6
      comp=Z,13nm,0.8s
MXC   Moxie City       45.98  68    IAmb   IAmb    16 08 09.2
      comp=Z,9.7nm,1.2s
ILON  Igloolik, Nuna   46.03  27    P      P       16 08 07.4  0.0
ILON                                IAmb   IAmb    16 08 08.6
      comp=Z,7.5nm,1.0s
NEW   Newport          46.50  65    IAmb   IAmb    16 08 12.7
      comp=Z,7.3nm,0.8s
E08A  Dider Farm, El   46.68  68    IAmb   IAmb    16 08 14.1
      comp=Z,9.4nm,0.9s
BBOR  Butler Butte     47.20  74    IAmb   IAmb    16 08 19.3
      comp=Z,8.1nm,0.8s
LNOR  Lincton Mounta   47.49  68    IAmb   IAmb    16 08 21.3
      comp=Z,6.6nm,1.0s
G08A  Pilot Rock       47.53  69    IAmb   IAmb    16 08 20.8
      comp=Z,5.2nm,0.6s
KURK  Kurchatov        47.96 301    P      P       16 08 21.9 -0.9
KURK                                IAmb   IAmb    16 08 55.0
      comp=Z,8.5nm,1.2s
KURK  Kurchatov        47.96 301    P      P       16 08 22.6 -0.1
KURK                                               16 09 50.0
KHMM  Horse Mountain   48.02  76    IAmb   IAmb    16 08 26.0
      comp=Z,7.8nm,0.8s
WMQ   Urumqi           48.02 289   eP      P       16 08 26.0 +2.6
WMQ                                 LR     LR
      comp=Z,180nm,12.9s
WMQ                                 LR     LR
      comp=Z,76nm,19.9s
KURBB Kurchatov Arra   48.06 301    P      P       16 08 22.6 -1.0
      comp=Z,1.4nm,0.4s,baz=56,slow=7.8,SNR=11
KURBB                               PcP    PcP     16 09 50.0 -1.1
      comp=Z,0.6nm,0.7s,baz=53,slow=3.4,SNR=2.4
KURBB                               LR     LR      16 29 45.6
      comp=Z,61nm,19.2s,baz=183,slow=38
      comp=Z,1.4nm,0.4s
BMO   Blue Mountains   48.69  68    IAmb   IAmb    16 08 30.0
      comp=Z,9.4nm,0.8s
MK31  Makanchi Array   48.79 295 deP      P       16 08 27.8 -1.5
MKAR  Makanchi Array   48.79 295    P      P       16 08 27.6 -1.7
MKAR  Makanchi Array   48.79 295    P      P       16 08 27.8 -1.4
      comp=Z,1.9nm,0.4s,baz=56,slow=6.4,SNR=53
MKAR                                LR     LR      16 29 37.0
      comp=Z,76nm,18.4s,baz=32,slow=37
      comp=Z,1.9nm,0.4s
MAKZ  Makanchi         48.94 296    P      P       16 08 28.9 -1.5
MAKZ  Makanchi         48.94 296    P      P       16 08 28.9 -1.5
MAKZ                                pmax   pmax
      comp=Z,3.0nm,0.5s
O02D  Mt. Diablo Mer   49.02  76    IAmb   IAmb    16 08 34.0
      comp=Z,12nm,1.2s
MSO   Missoula         49.06  64    IAmb   IAmb    16 08 32.6
      comp=Z,7.3nm,0.6s
J08A  Circle Bar Ran   49.11  70    IAmb   IAmb    16 08 33.5
      comp=Z,5.5nm,0.7s
FCC   Fort Churchill   49.66  42    P      P       16 08 35.9 +0.2
FCC   Fort Churchill   49.66  42    P      P       16 08 35.9 +0.2
FCC                                 pmax   pmax
      comp=Z,21nm,0.6s
ORV   Oroville         50.16  76    IAmb   IAmb    16 08 40.9
      comp=Z,7.4nm,0.7s
BVAR  Borovoye Array   50.17 308    P      P       16 08 38.5 -1.2
      comp=Z,1.6nm,0.4s,baz=43,slow=7.3,SNR=8.1
BVAR                                LR     LR      16 32 20.9
      comp=Z,89nm,19.5s,baz=41,slow=39
      comp=Z,1.6nm,0.4s
BRVK  Borovoye         50.19 308    P      P       16 08 39.4 -0.5
BRVK                                IAmb   IAmb    16 08 41.4
      comp=Z,3.3nm,0.5s
BRVK  Borovoye         50.19 308 ceP      P       16 08 39.8  0.0
BRVK                                pmax   pmax
      comp=Z,2.0nm,0.5s
EGMT  Eagleton         50.31  61    IAmb   IAmb    16 08 41.8
      comp=Z,10nm,0.8s
MFID  Camas Ranch      50.45  69    IAmb   IAmb    16 08 43.5
      comp=Z,6.5nm,0.7s
BEKR  Beckworth        50.55  75    IAmb   IAmb    16 08 44.5
      comp=Z,6.8nm,0.6s
SUMG  Summit           50.55   9    P      P       16 08 42.5 -0.3
SUMG  Summit           50.55   9    P      P       16 08 42.5 -0.3
SUMG                                pmax   pmax
      comp=Z,21nm,1.1s
DLMT  Dillon           50.75  65    IAmb   IAmb    16 08 47.7
      comp=Z,7.1nm,0.7s
ARCES ARCESS Array B   50.97 342    P      P       16 08 45.0 -0.5
      comp=Z,3.2nm,0.7s,baz=27,slow=8.2,SNR=7.3
ARCES                               PcP    PcP     16 10 01.3 -0.2
      comp=Z,2.4nm,0.7s,baz=28,slow=4.1,SNR=5.5
ARCES                               LR     LR      16 34 02.5
      comp=Z,17nm,19.5s,baz=4.0,slow=40
      comp=Z,3.2nm,0.7s
BOZ   Bozeman (W)      51.07  64    IAmb   IAmb    16 08 48.2
      comp=Z,7.4nm,0.7s
HLID  Hailey           51.08  68    IAmb   IAmb    16 08 48.2
      comp=Z,5.0nm,0.6s
PAHR  Pah Rah Range    51.19  74    IAmb   IAmb    16 08 49.4
      comp=Z,7.0nm,0.6s
SVE   Sverdlovsk       51.49 317   eP      P       16 08 50.7 +1.1
YHL   Hebgen Lake      51.82  64    IAmb   IAmb    16 08 54.2
      comp=Z,9.2nm,0.9s
YNE   Yellowstone No   52.30  63    IAmb   IAmb    16 08 57.6
      comp=Z,12nm,0.7s
RYN   Ryan             52.43  75    IAmb   IAmb    16 08 59.0
      comp=Z,6.9nm,0.7s
ELK   Elko             52.66  71    IAmb   IAmb    16 09 00.7
      comp=Z,5.2nm,0.8s
ARTI  Arti             52.67 318    P      P       16 08 58.5 +0.2
ARTI                                IAmb   IAmb    16 08 59.6
      comp=Z,9.4nm,0.6s
ARTI  Arti             52.67 318    P      P       16 08 58.0 -0.3
      comp=Z,7.1nm,0.8s,baz=35,slow=3.8,SNR=8.4
ARTI                                LR     LR      16 34 27.6
      comp=Z,94nm,18.1s,baz=30,slow=40
      comp=Z,7.1nm,0.8s
ARTI  Arti             52.67 318c iP      P       16 08 58.5 +0.2
ARTI                                               16 10 08.4
ARTI                                               16 10 55.6
ARTI                                S      S       16 16 25.0 -0.5
ARTI                                SS     SS      16 19 59.8 -3.3
ARTI                                pmax   pmax
      comp=Z,11nm,0.9s
NVAR  Mina Array Bea   52.70  75    P      P       16 08 59.6 +0.6
NVAR  Mina Array Bea   52.70  75    P      P       16 09 00.2 +1.2
      comp=Z,5.4nm,0.7s,baz=302,slow=7.6,SNR=33
      comp=Z,5.4nm,0.7s
LHV   Little Huntoon   52.72  75    IAmb   IAmb    16 09 01.7
      comp=Z,7.2nm,0.8s
FXWY  Fox Creek        52.76  65    IAmb   IAmb    16 09 01.4
      comp=Z,10nm,0.7s
NV11  Mina Array Sit   52.77  75    IAmb   IAmb    16 09 01.7
      comp=Z,6.0nm,0.8s
TPAW  Teton Pass       52.91  65    IAmb   IAmb    16 09 02.7
      comp=Z,10nm,0.7s
PZH   PanZhiHua        52.98 263    P      P       16 09 02.3 +1.1
HVU   Hansel Valley    53.20  68    IAmb   IAmb    16 09 04.6
      comp=Z,5.6nm,0.8s
MZP   Montezuma Peak   53.72  75    IAmb   IAmb    16 09 08.6
      comp=Z,4.3nm,0.7s
HWUT  Hardware Ranch   53.95  67    IAmb   IAmb    16 09 10.2
      comp=Z,9.7nm,0.7s
GMN   Gold Mountain    54.08  75    IAmb   IAmb    16 09 11.6
      comp=Z,6.5nm,0.7s
PD31  Pinedale Array   54.13  65    IAmb   IAmb    16 09 11.1
      comp=Z,8.8nm,0.7s
PDAR  Pinedale Array   54.13  65    P      P       16 09 09.7 +0.1
PDAR  Pinedale Array   54.13  65    P      P       16 09 10.2 +0.6
      comp=Z,7.0nm,0.6s,baz=324,slow=3.0,SNR=80
PDAR                                LR     LR      16 34 57.9
      comp=Z,15nm,18.2s,baz=295,slow=39
      comp=Z,7.0nm,0.6s
KIRV  Kirov            54.16 324    P      P       16 09 08.3 -0.9
      comp=Z,10nm,0.6s,baz=26,slow=5.9,SNR=4.1
KIRV                                LR     LR      16 33 32.6
      comp=Z,74nm,20.5s,baz=39,slow=38
      comp=Z,10nm,0.6s
KIRV  Kirov            54.16 324ceP      P       16 09 09.7 +0.5
DUG   Dugway, Tooele   54.33  69    IAmb   IAmb    16 09 12.9
      comp=Z,6.8nm,0.8s
SFJD  Kangerlussuaq    54.42  16    LR     LR      16 33 57.9
      comp=Z,20nm,18.5s,baz=354,slow=38
WCT   Wildcat Mounta   54.80  75    IAmb   IAmb    16 09 16.4
      comp=Z,4.6nm,0.7s
TPNV  Topopah Spring   54.89  75    IAmb   IAmb    16 09 17.2
      comp=Z,5.6nm,0.8s
PSUT  Pine Spring      55.00  72    IAmb   IAmb    16 09 17.9
      comp=Z,5.3nm,0.7s
ULM   Lac du Bonnet    55.09  50    P      P       16 09 16.6 +0.4
      comp=Z,8.1nm,0.7s,baz=315,slow=7.2,SNR=14
      comp=Z,8.1nm,0.7s
BSUT  Blindstream Ca   55.15  68    IAmb   IAmb    16 09 19.3
      comp=Z,7.4nm,0.7s
GWY   Greenwater Val   55.23  76    IAmb   IAmb    16 09 19.5
      comp=Z,9.2nm,0.7s
QSM   Queen of Sheba   55.28  76    IAmb   IAmb    16 09 19.9
      comp=Z,5.5nm,0.7s
KLMR  Klimovskoe       55.32 331   eP      P       16 09 16.2 -1.4
KLMR                               e               16 10 17.0
KLMR                                pmax   pmax
      comp=Z,10.0nm,0.8s
AAK   Ala-Archa        55.65 297    P      P       16 09 19.7 -0.7
AAK                                 IAmb   IAmb    16 09 20.8
      comp=Z,5.1nm,0.6s
AAK   Ala-Archa        55.65 297ceP      P       16 09 19.8 -0.7
AAK                                 pmax   pmax
      comp=Z,4.0nm,0.6s
K22A  Casper           55.74  63    IAmb   IAmb    16 09 23.1
      comp=Z,5.5nm,0.9s
GSC   Goldstone, Bar   55.81  76    IAmb   IAmb    16 09 24.2
      comp=Z,6.4nm,0.8s
RSSD  Black Hills      55.88  60    P      P       16 09 22.2  0.0
RSSD                                IAmb   IAmb    16 09 23.5
      comp=Z,8.3nm,0.8s
RSSD  Black Hills      55.88  60    P      P       16 09 22.2  0.0
RSSD                                pmax   pmax
      comp=Z,8.0nm,0.8s
MVU   Marysvale        55.89  70    IAmb   IAmb    16 09 24.8
      comp=Z,4.2nm,0.7s
P18A  Preston Nutter   56.08  68    IAmb   IAmb    16 09 31.6
      comp=Z,7.3nm,0.7s
Q16A  Castle Valley    56.13  69    IAmb   IAmb    16 09 26.7
      comp=Z,8.3nm,0.7s
LSA   Lhasa            56.42 274    P      P       16 09 26.6 +0.2
LSA   Lhasa            56.42 274    P      P       16 09 26.8 +0.3
LSA                                 pmax   pmax
      comp=Z,18nm,0.6s
LSA   Lhasa            56.42 274    P      P       16 09 26.6 +0.2
LSA                                 pmax   pmax
      comp=Z,14nm,0.6s
AGMN  Agassiz Nation   56.56  52    IAmb   IAmb    16 09 27.8
      comp=Z,7.9nm,0.8s
KNB   Kanab            56.67  72    IAmb   IAmb    16 09 30.5
      comp=Z,3.8nm,0.7s
KSH   Kashi            57.22 293    P      P       16 09 35.8 +4.2
KSH                                 pmax   pmax
      comp=Z,4.0nm,0.9s
KK31  Karatay Array    57.27 300    IAmb   IAmb    16 09 31.9
      comp=Z,4.9nm,0.7s
KKAR  Karatay Array    57.27 300    P      P       16 09 30.7 -1.1
KKAR  Karatay Array    57.27 300    IAmb   IAmb    16 09 31.9
      comp=Z,5.1nm,0.7s
KKAR  Karatay Array    57.27 300    P      P       16 09 30.7 -1.1
AKTO  Aktyubinsk       57.31 313    P      P       16 09 31.6 -0.3
      comp=Z,8.8nm,0.8s,baz=50,slow=6.5,SNR=21
AKTO                                LR     LR      16 37 29.1
      comp=Z,96nm,18.6s,baz=256,slow=40
      comp=Z,8.8nm,0.8s
AB31  Akbulak array    57.42 311    IAmb   IAmb    16 09 33.8
      comp=Z,6.7nm,0.6s
ABKAR Akbulak array    57.42 311    P      P       16 09 32.8  0.0
ABKAR Akbulak array    57.42 311    IAmb   IAmb    16 09 33.8
      comp=Z,6.8nm,0.6s
PV21  Cone Mtn., Par   57.53  68    IAmb   IAmb    16 09 35.8
      comp=Z,6.7nm,0.9s
PV22  Blue Mesa, Par   57.65  68    IAmb   IAmb    16 09 36.7
      comp=Z,13nm,1.2s
PV04  Paradox Valley   57.70  68    IAmb   IAmb    16 09 37.1
      comp=Z,14nm,1.0s
PV19  Morning Glory    57.72  68    IAmb   IAmb    16 09 37.8
      comp=Z,15nm,1.1s
PV16  Nyswonger Mesa   57.75  68    IAmb   IAmb    16 09 37.4
      comp=Z,7.1nm,0.9s
PV17  East Wray Mesa   57.75  68    IAmb   IAmb    16 09 37.4
      comp=Z,14nm,1.0s
PV11  David Mesa, Pa   57.78  68    IAmb   IAmb    16 09 38.3
      comp=Z,10nm,0.9s
PV07  Paradox Valley   57.80  68    IAmb   IAmb    16 09 37.7
      comp=Z,6.8nm,0.9s
PV12  Saucer Basin,    57.81  68    IAmb   IAmb    16 09 44.0
      comp=Z,8.8nm,0.7s
PV03  Paradox Valley   57.83  68    IAmb   IAmb    16 09 37.9
      comp=Z,8.4nm,1.0s
PV13  Radium Mtn., P   57.92  68    IAmb   IAmb    16 09 38.6
      comp=Z,8.3nm,0.8s
PV02  Paradox Valley   57.92  68    IAmb   IAmb    16 09 39.4
      comp=Z,14nm,1.2s
PV15  Paradox Valley   57.95  68    IAmb   IAmb    16 09 38.8
      comp=Z,13nm,1.1s
FINES FINESS Array B   58.08 338    P      P       16 09 37.2  0.0
      comp=Z,3.9nm,0.7s,baz=50,slow=10,SNR=14
FINES                               PcP    PcP     16 10 27.6 -1.2
      comp=Z,1.2nm,0.6s,baz=35,slow=5.1,SNR=1.8
FINES                               LR     LR      16 37 19.4
      comp=Z,32nm,21.4s,baz=42,slow=39
      comp=Z,3.9nm,0.7s
ISCO  Idaho Springs    58.33  65    P      P       16 09 40.8 +1.1
ISCO                                IAmb   IAmb    16 09 42.1
      comp=Z,6.6nm,1.0s
ISCO  Idaho Springs    58.33  65    P      P       16 09 40.8 +1.1
ISCO                                pmax   pmax
      comp=Z,7.0nm,1.0s
BORG  Borgarnes        59.28   3    LR     LR      16 36 05.9
      comp=Z,18nm,18.3s,baz=303,slow=37
BELG  Belogornoye      59.73 320    P      P       16 09 48.9 +0.1
      comp=Z,22nm,0.7s,baz=312,slow=11,SNR=3.7
BELG                                LR     LR      16 37 14.9
      comp=Z,44nm,20.3s,baz=44,slow=38
      comp=Z,22nm,0.7s
BELG  Belogornoye      59.73 320c iP      P       16 09 49.0 +0.3
BELG                                pmax   pmax
      comp=Z,5.0nm,0.9s
EVN   Everest          60.17 276    P      P       16 09 51.9 -1.1
VSU   Vasula           60.63 336⇓eP      P       16 09 54.6 -0.2
VSU                                 pmax   pmax
      comp=Z,6.0nm,0.8s
CHTO  Chiang Mai       60.66 260    P      P       16 09 55.1 -0.5
CHTO                                IAmb   IAmb    16 09 56.1
      comp=Z,10.0nm,1.5s
CHTO  Chiang Mai       60.66 260    P      P       16 09 55.1 -0.5
CHTO                                pmax   pmax
      comp=Z,10.0nm,1.5s
CM31  Chiang Mai Arr   60.95 260    IAmb   IAmb    16 10 42.5
      comp=Z,5.5nm,0.7s
CMAR  Chiang Mai Arr   60.95 260    P      P       16 09 57.6  0.0
      comp=Z,2.6nm,0.7s,baz=19,slow=7.6,SNR=25
CMAR                                PcP    PcP     16 10 41.0 +0.1
      comp=Z,3.2nm,0.6s,baz=42,slow=3.8,SNR=13
      comp=Z,2.6nm,0.7s
NC405 NORSAR Array S   60.96 345    IAmb   IAmb    16 09 58.0
      comp=Z,5.3nm,0.7s
OBN   Obninsk          61.02 329  i P      P       16 09 57.5  0.0
OBN                                 pmax   pmax
      comp=Z,7.0nm,0.5s
OBN                                 MLR    MLR
      comp=Z,46nm,17.0s
NB2   NORSAR Subarra   61.11 345    P      P       16 09 58.3 +0.2
      comp=Z,2.7nm,0.6s,baz=18,slow=6.9
NOA   NORSAR Array B   61.11 345    P      P       16 09 58.1  0.0
      comp=Z,4.0nm,0.6s,baz=18,slow=6.9,SNR=24
NOA                                 LR     LR      16 41 14.9
      comp=Z,12nm,18.2s,baz=15,slow=41
      comp=Z,4.0nm,0.6s
SIMJ  Simiganj         61.39 297    P      P       16 09 59.5 -1.0
SIMJ                                IAmb   IAmb    16 10 01.2
      comp=Z,4.4nm,0.9s
ANMO  Albuquerque      61.59  69    P      P       16 10 02.2 +0.2
ANMO                                IAmb   IAmb    16 10 03.8
      comp=Z,2.5nm,0.6s
ANMO  Albuquerque      61.59  69⇓eP      P       16 10 03.2 +1.2
ANMO                                pmax   pmax
      comp=Z,1.0nm,0.7s
HFS   Hagfors          61.60 344    P      P       16 10 01.2 -0.2
      comp=Z,6.3nm,0.7s,baz=46,slow=4.9,SNR=25
HFS                                 LR     LR      16 36 12.5
      comp=Z,27nm,22.0s,baz=22,slow=36
      comp=Z,6.3nm,0.7s
SCHQ  Schefferville    61.84  31    P      P       16 10 02.6 -0.5
      comp=Z,11nm,0.6s,baz=355,slow=7.1,SNR=23
      comp=Z,11nm,0.6s
LPSR  Galich'ya Gora   62.47 326   eP      P       16 10 04.9 -2.4
LPSR                                pmax   pmax
      comp=Z,10.0nm,0.9s
VRH   Novokhopyorsk    62.76 323   eP      P       16 10 07.2 -2.1
VRH                                 pmax   pmax
      comp=Z,9.0nm,0.8s
VSR   Storozhevoye     63.58 325   eP      P       16 10 13.7 -1.1
VSR                                 pmax   pmax
      comp=Z,10.0nm,0.9s
VORD  Divnogorie       63.76 325   eP      P       16 10 14.4 -1.5
VORD                                pmax   pmax
      comp=Z,9.0nm,0.9s
NACGM Naroch           63.84 334   eP      P       16 10 17.2 +0.8
      comp=Z,4.0nm,0.8s,baz=26
MNK   Minsk            63.93 333  i P      P       16 10 17.9 +0.9
      comp=Z,17nm,0.9s,baz=25
MNK                               i PP     PP      16 12 38.7 +1.8
MNK                               i PPP    PPP     16 14 08.8
MNK                               i S      S       16 18 56.2 +3.9
MNK                               i SS     SS      16 23 05.2 +5.6
MNK                               i SSS    SSS     16 26 04.8
MNK                               i LR     LR      16 38 31.6
MNK                               i LRM    MLR     16 40 39.0
      comp=Z,37nm,18.9s
MNK   Minsk            63.93 333  i P      P       16 10 17.9 +0.9
MNK                               i                16 12 38.6
MNK                               i PPP    PPP     16 14 08.7
MNK                               i S      S       16 18 56.2 +3.9
MNK                               i SS     SS      16 23 05.2 +5.6
MNK                                 pmax   pmax
      comp=Z,17nm,0.9s
MNK                                 MLR    MLR
      comp=Z,37nm,19.0s
P40A  Paris            65.11  56    IAmb   IAmb    16 10 25.9
      comp=Z,8.6nm,0.9s
HNR   Honiara          65.50 184    LR     LR      16 34 24.1
      comp=Z,69nm,19.5s,baz=352,slow=32
VHRN  Van Horn         65.61  71    IAmb   IAmb    16 10 30.4
      comp=Z,5.9nm,0.7s
APMT  Aspermont        66.12  66    P      P       16 10 31.1 -0.6
LDAQ  Lac Daran        66.44  37    P      P       16 10 33.3 -0.3
ALPN  Alpine           66.64  70    IAmb   IAmb    16 10 36.5
      comp=Z,5.0nm,0.7s
PMG   Port Moresby     66.86 198    LR     LR      16 35 04.0
      comp=Z,241nm,19.7s,baz=181,slow=32
AKASG Malin Array Be   67.01 331    P      P       16 10 36.3 -0.6
AKASG Malin Array Be   67.01 331    P      P       16 10 36.9  0.0
      comp=Z,5.3nm,0.6s,baz=29,slow=6.4,SNR=22
AKASG                               LR     LR      16 43 47.2
      comp=Z,52nm,18.8s,baz=44,slow=40
      comp=Z,5.3nm,0.6s
AKBB  Malin Array Si   67.01 331    IAmb   IAmb    16 10 37.6
      comp=Z,6.7nm,0.9s
AKBB  Malin Array Si   67.01 331ceP      P       16 10 36.7 -0.3
KIEV  Kiev             67.02 331    P      P       16 10 36.3 -0.7
KIEV                                IAmb   IAmb    16 10 37.6
      comp=Z,5.7nm,0.8s
KIEV  Kiev             67.02 331  ⇓P      P       16 10 36.5 -0.5
KIEV  Kiev             67.02 331    P      P       16 10 36.3 -0.7
KIEV                                pmax   pmax
      comp=Z,6.0nm,0.9s
TXAR  Lajitas Array    67.45  71    P      P       16 10 40.9 +0.6
TXAR  Lajitas Array    67.45  71    P      P       16 10 41.1 +0.9
      comp=Z,7.0nm,0.6s,baz=299,slow=4.6,SNR=92
      comp=Z,7.0nm,0.6s
SAND  Sanderson        67.77  69    IAmb   IAmb    16 10 43.5
      comp=Z,5.0nm,1.1s
D62A  Allapoint, All   67.94  36    P      P       16 10 42.6 -0.4
FCAR  Ozark Folk Cen   68.01  58    IAmb   IAmb    16 10 43.6
      comp=Z,6.5nm,0.9s
E62A  Clayton Lake     68.19  37    P      P       16 10 44.0 -0.5
EKA   Eskdalemuir Ar   68.30 352    P      P       16 10 45.0  0.0
      comp=Z,4.2nm,0.8s,baz=11,slow=6.1,SNR=5.6
      comp=Z,4.2nm,0.8s
MIAR  Mount Ida        68.40  60    IAmb   IAmb    16 10 47.0
      comp=Z,8.7nm,0.9s
KVAR  Kislovodsk Arr   68.60 318    LR     LR      16 44 40.6
      comp=Z,55nm,19.9s,baz=274,slow=39
KIV   Kislovodsk       68.60 318   eP      P       16 10 48.0 +0.7
KIV                                 pmax   pmax
      comp=Z,6.0nm,1.0s
KIV                                 MLR    MLR
      comp=Z,30nm,17.0s
KBZ   Khabaz           68.72 318    P      P       16 10 48.0 +0.2
      comp=Z,3.7nm,0.8s,baz=82,slow=5.7,SNR=8.8
KBZ                                 LR     LR      16 44 41.4
      comp=Z,68nm,20.5s,baz=24,slow=39
      comp=Z,3.7nm,0.8s
KBZ   Khabaz           68.72 318   eP      P       16 10 48.9 +1.1
KBZ                                 pmax   pmax
      comp=Z,4.0nm,0.8s
SORM  Soroca           69.58 330  ⇓P      P       16 10 52.6 -0.4
OJC   Ojcow            69.81 336   eP      P       16 10 55.4 +0.8
KSP   Ksiaz            69.97 339   eP      P       16 10 55.8 +0.4
CLL   Collm            70.15 341  i P      P       16 10 56.6  0.0
CLL                                 pmax   pmax
      comp=Z,7.0nm,1.2s
CLL   Collm            70.15 341  i P      P       16 10 56.6  0.0
      comp=Z,7.0nm,1.2s
STHS  Stebnicka Huta   70.23 335   eP      P       16 10 58.1 +1.0
STHS                                pmax   pmax
      comp=Z,7.0nm,0.7s
STHS  Stebnicka Huta   70.23 335   eP      P       16 10 58.1 +1.0
KOLS  Kolonicke sedl   70.43 334   eP      P       16 10 58.9 +0.5
KOLS                                pmax   pmax
      comp=Z,9.0nm,0.6s
KOLS  Kolonicke sedl   70.43 334   eP      P       16 10 58.9 +0.5
STEB  Steborice        70.52 338   eP      P       16 10 59.8 +0.9
KRLC  Kraliky          70.59 338   eP      P       16 11 00.2 +0.8
KRLC  Kraliky          70.59 338   eP      P       16 11 00.2 +0.8
MORC  Moravsky Berou   70.72 338    IAmb   IAmb    16 11 02.1
      comp=Z,6.9nm,1.0s
MORC  Moravsky Berou   70.72 338   eP      P       16 11 01.0 +0.9
MORC  Moravsky Berou   70.72 338  ⇓P      P       16 10 56.8 -3.3
BUR08 Bucovina Ar. S   70.88 332    IAmb   IAmb    16 11 02.7
      comp=Z,3.6nm,0.7s
BURAR Bucovina Array   70.91 332    P      P       16 11 01.5 +0.1
BURAR                               IAmb   IAmb    16 11 03.0
      comp=Z,3.9nm,0.7s
BURAR Bucovina Array   70.91 332  ⇑P      P       16 10 52.3 -9.1
GNI   Garni            71.08 315    LR     LR      16 46 52.2
      comp=Z,64nm,19.4s,baz=40,slow=40
VRAC  Vranov           71.36 338    LR     LR      16 51 08.2
      comp=Z,13nm,18.5s,baz=22,slow=43
VRAC  Vranov           71.36 338   eP      P       16 11 05.2 +1.2
VRAC  Vranov           71.36 338  ⇓P      P       16 11 04.5 +0.5
SWET  Sewanee          71.43  54    IAmb   IAmb    16 11 04.8
      comp=Z,5.6nm,0.7s
TESR  Tescani          71.53 330  ⇓P      P       16 11 02.7 -2.3
JAVC  Velka Javorina   71.56 337   eP      P       16 11 07.2 +1.9
X48A  Hartselle        71.56  55    IAmb   IAmb    16 11 05.9
      comp=Z,12nm,1.3s
TREC  Trest            71.60 339   eP      P       16 11 06.5 +1.0
TREC  Trest            71.60 339   eP      P       16 11 06.5 +1.0
KRUC  Moravsky         71.64 338   eP      P       16 11 06.4 +0.7
VYHS  Vyhne            71.64 336   eP      P       16 11 06.8 +1.1
VYHS                                pmax   pmax
      comp=Z,4.0nm,0.7s
VYHS  Vyhne            71.64 336   eP      P       16 11 06.8 +1.1
ZVC   Zvikov           71.72 340   eP      P       16 11 07.0 +0.8
MEM   Membach          71.96 345   dP      P       16 11 08.2 +0.7
BTNL  Ternell          71.96 345   dP      P       16 11 08.3 +0.6
      comp=Z,7.7nm,0.8s
GRF   Grafenberg Arr   72.02 342   eP      P       16 11 09.1 +1.1
      comp=Z,5.9nm,1.0s,baz=15,slow=5.3
MODS  Modra-Piesok     72.10 337   eP      P       16 11 09.7 +1.2
MODS                                pmax   pmax
      comp=Z,7.0nm,1.1s
MODS  Modra-Piesok     72.10 337   eP      P       16 11 09.7 +1.2
KHC   Kasperske Hory   72.13 340   eP      P       16 11 10.6 +1.9
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Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KHC	Kasperske Hory	72.13	340	d iP	P	16 11 10.1	+1.4
KHC				pmax	pmax		
	comp=Z,3.0nm,1.1s						
FPAL	Fort Paine	72.14	54	IAmb	IAmb	16 11 09.4	
	comp=Z,8.1nm,1.1s						
CFR	Carcaliu	72.33	329	⇑P	P	16 11 10.9	+1.1
Y49A	Blount Mountai	72.34	55	IAmb	IAmb	16 11 10.5	
	comp=Z,12nm,1.1s						
GERES	GERESS Array B	72.38	340	P	P	16 11 10.6	+0.3
	comp=Z,2.2nm,0.7s,baz=35,slow=4.9,SNR=15						
GERES				LR	LR	16 47 54.8	
	comp=Z,33nm,18.3s,baz=15,slow=40						
	comp=Z,2.2nm,0.7s						
GERES	GERESS Array B	72.38	340	eP	P	16 11 11.1	+0.8
GERES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MLR	Muntele Rosu	72.67	330	LR	LR	16 45 30.9	
	comp=Z,50nm,19.7s,baz=61,slow=38						
MLR	Muntele Rosu	72.67	330	⇑P	P	16 11 13.9	+1.9
CONA	Conrad Observa	72.82	338	i pP	pP	16 11 14.5	-1.1
	comp=Z,4.2nm,0.7s						
RONA	Rosalia, Austr	72.95	338	i pP	pP	16 11 15.5	-0.8
	comp=Z,3.9nm,0.9s						
VOIR		72.96	331	⇑P	P	16 11 14.3	+0.6
BG3	Lake Jocassee	72.96	52	IAmb	IAmb	16 11 14.5	
	comp=Z,6.8nm,0.6s						
SIRR	Siria	73.07	334	⇑P	P	16 11 08.3	-5.9
BIOA	Bad Ischl, Aus	73.50	340	epP	pP	16 11 18.4	-1.0
	comp=Z,1.1nm,0.4s						
ARSA	Arzberg	73.54	338	epP	pP	16 11 18.5	-1.2
	comp=Z,3.4nm,0.8s						
GZR	Gura Zlata	73.60	333	⇓P	P	16 11 15.6	-1.9
BZS	Buzias	73.69	333	⇑P	P	16 11 15.7	-2.2
HODGE	Hodges	73.90	52	IAmb	IAmb	16 11 19.8	
	comp=Z,8.5nm,0.7s						
SOKA	Soboth	74.19	338	i P	P	16 11 18.7	-2.2
	comp=Z,2.6nm,0.6s						
WATA	Walderalm	74.23	341	i pP	pP	16 11 23.0	-1.0
	comp=Z,5.7nm,0.7s						
RETA	Reutte	74.23	341	epP	P	16 11 22.1	+0.9
	comp=Z,2.9nm,0.8s						
WTTA	Wattenberg	74.29	341	i pP	P	16 11 23.0	+1.4
	comp=Z,6.6nm,1.2s						
MOTA	Moosalm	74.31	341	i pP	P	16 11 22.3	+0.6
	comp=Z,3.3nm,0.8s						
ILGA	Ilgaz	74.32	323	IAmb	IAmb	16 11 25.8	
	comp=Z,9.1nm,1.0s						
SQTA	Sankt Quirin	74.41	341	i pP	pP	16 11 23.7	-1.2
	comp=Z,7.3nm,0.9s						
OBKA	Obir	74.45	339	i pP	P	16 11 23.8	+1.4
	comp=Z,10nm,0.8s						
MYKA	Terra Mystica	74.52	339	epP	pP	16 11 24.6	-0.9
	comp=Z,1.7nm,0.5s						
DAVA	Damuels	74.58	342	eP	P	16 11 22.0	-1.3
	comp=Z,4.4nm,1.1s						
ABTA	Abfaltersbach	74.62	340	i pP	P	16 11 24.1	+0.6
	comp=Z,9.7nm,1.0s						
MSVF	Nonsavu	74.64	166	LR	LR	16 43 40.8	
	comp=Z,45nm,19.0s,baz=194,slow=35						
FETA	Feichten	74.69	341	i pP	P	16 11 25.2	+1.3
	comp=Z,4.0nm,0.7s						
PRED	Cave del Predi	74.71	339	IAmb	IAmb	16 11 25.3	
	comp=Z,6.4nm,0.7s						
DAVOX	Davos/Dischmat	75.07	342	P	P	16 11 27.0	+0.8
	comp=Z,4.0nm,0.7s,baz=346,slow=5.6,SNR=6.7						
	comp=Z,4.0nm,0.7s						
DAVOX	Davos/Dischmat	75.07	342	P	P	16 11 27.0	+0.8
BOVS	Bovan	75.52	333	⇑P	P	16 11 28.9	+0.3
BR131	Keskin Array S	75.53	323	⇓eP	P	16 11 29.4	+0.5
BRTR	Keskin Array B	75.53	323	P	P	16 11 28.4	-0.5
BRTR	Keskin Array B	75.53	323	P	P	16 11 28.7	-0.2
	comp=Z,1.1nm,0.7s,baz=45,slow=3.7,SNR=7.5						
	comp=Z,1.1nm,0.7s						
KIRS	Kirsehir-Merke	75.97	322	⇑P	P	16 11 31.3	-0.1
FDMO	Fiordimonte	78.07	339	IAmb	IAmb	16 11 45.3	
	comp=Z,8.2nm,0.7s						
WB0	Warramunga Arr	79.69	208	P	P	16 11 52.4	+0.4
WB0				IAmb	IAmb	16 12 00.5	
	comp=Z,6.5nm,1.0s						
WRA	Warramunga Arr	79.87	208	P	P	16 11 53.2	+0.2
	comp=Z,4.8nm,1.0s,baz=20,slow=5.7,SNR=15						
	comp=Z,4.8nm,1.0s						
WRA	Warramunga Arr	79.87	208	eP	P	16 11 53.6	+0.6
WRA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MMAI	Mount Meron Ar	80.92	318	P	P	16 11 58.8	+0.1
	comp=Z,2.6nm,0.7s,baz=13,slow=7.9,SNR=4.7						
	comp=Z,2.6nm,0.7s						
BALJ	Balqa	81.66	318	P	P	16 12 02.5	-0.1
MVO	Moncorvo	82.67	353	eP	P	16 12 09.5	+1.6
VAE	Valguarnera	83.11	336	LR	LR	16 57 47.3	
	comp=Z,45nm,18.2s,baz=358,slow=42						
PVIS	Viseu	83.17	354	eP	P	16 12 11.3	+0.8
PPT	Papeete	83.25	136	LR	LR	16 39 37.9	
	comp=Z,36nm,21.2s,baz=321,slow=29						
PPT2	Papeete2	83.27	136	eLR	LR	16 38 16.7	
	comp=Z,62nm,23.8s						
AS31	Alice Springs	83.54	207	P	P	16 12 12.8	+0.6
ASAR	Alice Springs	83.54	207	P	P	16 12 12.6	+0.3
ASAR	Alice Springs	83.54	207	P	P	16 12 13.2	+0.8
	comp=Z,3.8nm,0.8s,baz=13,slow=4.7,SNR=30						
	comp=Z,3.8nm,0.8s						
ESDC	Sonseca Array	83.91	351	P	P	16 12 14.7	+0.4
ESDC	Sonseca Array	83.91	351	P	P	16 12 14.7	+0.4
	comp=Z,1.8nm,0.9s,baz=356,slow=5.1,SNR=16						
	comp=Z,1.8nm,0.9s						
PCBR	Castelo Branco	84.02	353	eP	P	16 12 15.7	+1.0
EIL	Elat	84.08	317	LR	LR	16 54 10.3	
	comp=Z,29nm,18.2s,baz=62,slow=39						
PMTG	Montargil	84.83	354	eP	P	16 12 19.1	+0.3
PESTR	Estremoz	84.99	353	eP	P	16 12 20.3	+0.6
RAYN	Ar Rayn	85.09	306	P	P	16 12 19.9	-0.6
RAYN				IAmb	IAmb	16 12 20.8	
	comp=Z,4.4nm,0.6s						
RAYN	Ar Rayn	85.09	306	P	P	16 12 19.9	-0.6
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
EVO	Evora	85.35	354	eP	P	16 12 22.4	+0.9
PBAR	Barrancos	85.64	353	eP	P	16 12 23.7	+0.8
MORF	Marmelete	86.61	354	eP	P	16 12 27.3	-0.5
STKA	Stephens Creek	89.79	199	P	P	16 12 43.5	+0.9
	comp=Z,3.2nm,0.7s,baz=351,slow=5.1,SNR=7.2						
	comp=Z,3.2nm,0.7s						
STKA	Stephens Creek	89.79	199	eP	P	16 12 44.0	+1.4
STKA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MAW	Mawson	143.81	220	PKP	PKPbc	16 19 16.8	+1.0
	comp=Z,2.1nm,0.8s,baz=347,slow=4.3,SNR=5.8						
QSPA	South Pole Qui	145.98	180	PKPbc	PKPdf	16 19 21.7	-0.2
	comp=Z,6.4nm,0.7s,baz=322,slow=0.3,SNR=36						
SNAA	Sanae	163.51	195	PKPab	PKPab	16 20 36.1	-1.2
	comp=Z,0.7nm,0.8s,baz=226,slow=5.1,SNR=5.5						

IDC 25 16:02:20.8±1.6**,3°.75S×139°.71E,h0^{km},mb3.2**/2**,**
mbtmp3.3/3**,ML3.2**/1**,Error ellipse: s-maj=46.3km**
s-min=14.8km az=125.0,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	1.57	39	Pg	Pn	16 02 47.8	-2.3
	2.6nm,0.3s,baz=219,slow=11,SNR=18						
JAY				Lg	Lg	16 03 12.1	
	0.8nm,0.3s,baz=144,slow=19,SNR=1.6						
WRA	Warramunga Arr	16.93	198	Pn	Pn	16 06 19.2	-0.1
	0.1nm,0.3s,baz=17,slow=12,SNR=2.1						
	0.3nm,0.6s						
ASAR	Alice Springs	20.58	195	P	P	16 07 01.6	+0.1
	1.0nm,0.7s,baz=13,slow=10.0,SNR=14						
	1.0nm,0.7s						
MKAR	Makanchi Array	71.21	322	P	P	16 13 42.4	+0.5
	0.1nm,0.4s,baz=110,slow=7.8,SNR=1.7						
	0.1nm,0.4s						

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*ASIES **25** 16:06:10.8,23°.76N×122°.97E,h42^{km},ML3.9,Mw3.6, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M$_{rr}$-1.60; M$_{\theta\theta}$2.02; M$_{\phi\phi}$-0.43; M$_{r\theta}$2.99; M$_{\theta\phi}$0.53; M$_{\phi r}$0.95; Fault plane solution: M$_0$3.67744×10^{21} NP1:ϕ_s87.79000°, δ15.80000°,λ-75.36000°. NP2:ϕ_s252.60000°,δ74.73000°, λ-94.09000°. Principal axes: T Plg29.6110°, Azm345.9270°; N Plg3.9460°, Azm253.6810°; P Plg60.0740°, Azm156.7980°;*

*JMA **25** 16:06:10.5±0.1,23°.8N±0°.7×122°.9E±0°.6,h48^{km},MV3.2/14, NEAR ISHIGAKIJIMA ISLAND*

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*TAP **25** 16:06:10.8,23°.76N×122°.97E,h42^{km},ML3.9,D*

ISC 25 16:06:06.1±1.2**,23°.69N**±0°.02×**122°.97E**±0°.02**,h6**^{km}±9^{km}**,**
n176,σ**0^s.99**/329**,2D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS4	EOS4	0.74	306	i P	Pn	16 06 24.1	+1.5
EOS4				S	Sn	16 06 34.7	+0.7
JYNG	Yonagunijimaku	0.76	358	P	Pn	16 06 24.1	+0.7
JYNG				S	Sn	16 06 34.3	-0.8
YOJ	Yonaguni jima	0.77	3	P	Pn	16 06 24.6	+1.1
YOJ	Yonaguni jima	0.77	3	S	Sn	16 06 35.1	-0.3
YOJ	Yonaguni jima	0.77	3	P	Pn	16 06 24.6	+1.1
YOJ				eS	Sn	16 06 35.0	-0.4
YOJ	Yonaguni jima	0.77	3	⇓iP	Pn	16 06 24.6	+1.1
YOJ				i S	Sn	16 06 34.8	-0.6
EOS3	EOS3	0.84	315	P	Pn	16 06 26.5	+2.2
EOS3				eS	Sn	16 06 38.2	+1.3
HATJ	Hateruma jima	0.85	64	P	Pn	16 06 26.7	+2.1
HATJ				eS	Sn	16 06 38.4	+1.1
IRIF	Iriomote-Funau	0.95	47	P	Pn	16 06 27.8	+1.9
EOS2	EOS2	0.99	317	eP	Pn	16 06 29.3	+2.9
EOS2				S	Sn	16 06 42.1	+1.4
JKRS	Kuro-shima	1.10	60	P	Pn	16 06 30.4	+2.5
JIJ	Ishigaki jima	1.27	58	P	Pg	16 06 32.2	+1.8
TEYL	Yanliau Villag	1.27	278	P	Pg	16 06 31.8	+1.4
TEYL				S	Sn	16 06 47.4	-0.3
HWA	Hwalien	1.28	283	P	Pg	16 06 31.7	+1.0
HWA				S	Sn	16 06 48.0	0.0
SHUL	Shoufeng	1.29	275	P	Pg	16 06 31.8	+0.9
SHUL				S	Sn	16 06 48.3	+0.1
EAHA	Aohua	1.29	300	i P	Pg	16 06 32.5	+1.6
EAHA				S	Sn	16 06 49.2	+0.9
TEGC	Jichi Village	1.31	271	P	Pg	16 06 32.2	+1.0
TEGC				i S	Sn	16 06 48.8	+0.2
TWD	Chiawan	1.32	288	eP	Pg	16 06 31.7	+0.4
TWD				eS	Sb	16 06 47.5	-0.8
ETL	Fush Village	1.32	291	eP	Pg	16 06 32.4	+1.0
ETL				eS	Sg	16 06 48.3	-0.2
EWUT	Wuta	1.32	305	i P	Pg	16 06 32.7	+1.2
EWUT				eS	Sn	16 06 48.8	-0.2
ENA	Nanau	1.34	304	P	Pg	16 06 32.9	+1.0
ENA				S	Sg	16 06 50.0	+0.7
NACB	Ninganchiao	1.35	291	P	Pg	16 06 32.2	+0.3
NACB	Ninganchiao	1.35	291	P	Pg	16 06 32.4	+0.5
NACB				S	Sb	16 06 48.1	-1.1
ESAO	Su ao	1.36	311	P	Pg	16 06 32.9	+0.8
TWC	Suao	1.38	312	eP	Pg	16 06 33.5	+1.0
ETM	Tongmen	1.38	282	P	Pg	16 06 32.9	+0.3
ETM				S	Sb	16 06 49.2	-1.0
EGFH	Guangfu	1.41	270	P	Pg	16 06 33.6	+0.4
EGFH				eS	Sb	16 06 51.1	0.0
ESL	Shilin	1.41	275	P	Pg	16 06 33.0	-0.2
ESL				S	Sb	16 06 50.8	-0.3
HGSD	Ruisui	1.43	263	eP	Pg	16 06 33.4	-0.1
HGSD				eS	Sn	16 06 50.1	-1.5
ECBN	Changbin	1.44	255	P	Pg	16 06 34.2	+0.5
ECBN				S	Sn	16 06 51.4	-0.5
WARBT	Fenglin Townsh	1.45	272	i P	Pg	16 06 33.9	0.0
WARBT				S	Sn	16 06 50.8	-1.4
ETLH	Xiulin Townshi	1.46	291	eP	Pg	16 06 33.9	-0.1
ETLH				eS	Sn	16 06 51.5	-0.9
LXIB	Xiulin Townshi	1.46	283	P	Pg	16 06 34.4	+0.2
LXIB				S	Sb	16 06 52.4	-0.2
NDS	Dongshan	1.48	310	eP	Pg	16 06 34.7	+0.2
NDS				i S	Sg	16 06 53.5	-0.3
EGS		1.49	321	eP	Pg	16 06 35.1	+0.4
EGS				eS	Sg	16 06 54.8	+0.8
EHYH	Wanrong	1.50	263	P	Pg	16 06 35.3	+0.4
EHYH				S	Sb	16 06 53.6	0.0
JISG	Ishigakijimahi	1.52	54	P	Pg	16 06 35.3	+0.1
EHY	Hungye	1.52	264	i P	Pg	16 06 35.4	+0.2
EHY				S	Sn	16 06 52.6	-1.3
CHKH	Chenggong	1.53	251	P	Pb	16 06 34.8	+0.1
CHKH				S	Sn	16 06 52.7	-1.3
EYUL	Yuli	1.55	258	P	Pg	16 06 36.2	+0.3
EYUL				S	Sb	16 06 54.8	-0.2
YULB	Yu-li	1.56	260	P	Pg	16 06 36.3	+0.3
YULB	Yu-li	1.56	260	P	Pg	16 06 36.0	0.0
YULB				i S	Sn	16 06 54.6	-0.3
LATG	Datong	1.57	303	P	Pg	16 06 36.5	+0.4
LATG				S	Sg	16 06 55.7	-0.8
TWF1	Yuli	1.57	258	P	Pg	16 06 35.9	-0.3
TWF1				S	Sb	16 06 55.3	-0.3
TWE	Neicheng	1.57	311	P	Pg	16 06 37.1	+0.9
TWE				eS	Sg	16 06 56.5	-0.1
CHKT	Chengkung	1.58	249	P	Pb	16 06 35.7	-0.1
CHKT				i S	Sn	16 06 54.1	-1.3
TWB1	Santiao Chiao	1.59	326	P	Pg	16 06 36.8	+0.2
ENTT	Nioudou	1.59	307	P	Pg	16 06 36.9	+0.2
ENTT				S	Sg	16 06 56.6	-0.7
FULB	Fuli	1.61	253	P	Pb	16 06 36.2	-0.1
FULB				eS	Sn	16 06 55.1	-1.1
WHF	Hehuan Shan	1.62	287	P	Pg	16 06 37.1	-0.2
WHF				S	Sn	16 06 56.0	-1.0
NNSB	Datong	1.63	297	P	Pg	16 06 37.2	-0.1
NNSB				S	Sb	16 06 57.1	-0.2
NNSH	Datong	1.63	297	i P	Pg	16 06 37.1	-0.2
NNSH				S	Sb	16 06 57.3	-0.1
NNS	Nan Shan	1.64	298	⇓P	Pg	16 06 37.4	-0.2
NNS				S	Sb	16 06 57.5	-0.3
TIPB	Shuangxi	1.65	321	P	Pg	16 06 37.9	+0.1
TIPB				eS	Sg	16 06 58.2	-1.0
FUSB	Fushanzhiwuyua	1.65	311	i P	Pg	16 06 38.2	+0.4
FUSB				S	Sg	16 06 58.2	-1.0
OWD	Renai	1.66	280	P	Pg	16 06 37.5	-0.5
OWD				S	Sn	16 06 56.5	-1.1
FUSS	Fushou	1.67	290	P	Pg	16 06 38.1	-0.1
FUSS				i S	Sb	16 06 58.1	-0.8
VWDT	VWDT	1.68	273	P	Pg	16 06 37.9	-0.4
VWDT				S	Sn	16 06 57.5	-0.2
EDH	Donghe	1.69	245	i P	Pb	16 06 37.2	-0.3
EDH				S	Sn	16 06 56.8	-1.2
EHD	Haiduan	1.71	252	P	Pb	16 06 38.1	+0.3
EHD				S	Sn	16 06 58.3	-0.1
ECS	Chishang	1.71	250	P	Pg	16 06 39.4	+0.5
ECS				S	Sn	16 06 58.2	-0.4
SXI1	Grass Mountain	1.72	325	P	Pg	16 06 38.8	-0.3
SXI1				S	Sb	16 06 59.7	-0.3
WUSB	Renai	1.72	281	P	Pg	16 06 38.6	-0.6
WUSB				S	Sn	16 06 58.3	-0.7
NWLT	Wulai	1.72	309	P	Pg	16 06 39.2	0.0
NWLT				S	Sb	16 07 00.0	0.0
TWT	Tachien	1.73	289	P	Pg	16 06 39.5	+0.2
TWT				eS	Sb	16 06 59.5	-1.0
TDCB	Techi	1.75	289	P	Pg	16 06 39.0	-0.6
TDCB				S	Sn	16 06 59.4	-0.3
NWF	Wu-fen Shan	1.75	322	P	Pg	16 06 39.8	+0.1
NWF				eS	Sg	16 07 01.4	-1.1
WFSB	Wu-fen Shan	1.75	322	eP	Pg	16 06 39.0	-0.7
WFSB				eS	Sb	16 07 01.0	+0.1
YHNB	Yeheng	1.75	304	P	Pg	16 06 39.4	-0.3
YHNB	Yeheng	1.75	304	P	Pg	16 06 39.7	-0.1
YHNB				S	Sn	16 06 59.4	-0.3
NSK	Sanguang	1.77	304	P	Pg	16 06 39.7	-0.4
NSK				S	Sb	16 07 00.8	-0.7
TWA	Mucha	1.80	316	P	Pg	16 06 40.3	-0.4
TWA				S	Sb	16 07 02.1	-0.3
TNOU	National Taiwa	1.82	323	P	Pb	16 06 39.5	-0.2
TNOU				eS	Sb	16 07 01.5	-1.3
JTJ	Tarama	1.85	59	eP	Pg	16 06 40.6	-0.8
SSLB	Suanglung	1.85	274	P	Pb	16 06 40.1	-0.2
SSLB	Suanglung	1.85	274	P	Pb	16 06 40.3	0.0
SSLB				S	Sn	16 07 01.6	-0.4
ELDTW	Lidau	1.86	255	P	Pb	16 06 40.1	-0.4
ELDTW				eS	Sn	16 07 00.6	-1.8
LONT	Longtian	1.86	246	P	Pb	16 06 40.5	0.0
LONT				S	Sn	16 07 01.2	-1.0
TATO	Taipei	1.86	314	P	Pg	16 06 41.8	0.0
TATO	Taipei	1.86	314	P	Pg	16 06 40.9	-1.0
TATO				eS	Sb	16 07 03.9	-0.2
WPL	Puli Township	1.87	280	eP	Pb	16 06 40.7	+0.1
WPL				eS	Sn	16 07 02.4	-0.1
TAP	Taipei	1.90	316	eP	Pb	16 06 41.2	+0.2
DPDB	Guoxing	1.90	281	P	Pb	16 06 41.7	+0.5
DPDB				eS	Sb	16 07 04.2	-1.0
SMLT	Sun Moon Lake	1.91	276	P	Pb	16 06 41.6	+0.3
SMLT				S	Sb	16 07 04.2	-1.1
TTN	Taitung	1.92	241	eP	Pg	16 06 42.4	-0.4
TTN				S	Sn	16 07 04.1	+0.5
WCS	Beigang Elemen	1.92	281	P	Pb	16 06 41.7	+0.3
WCS				S	Sb	16 07 04.6	-1.1
YM01	YM01	1.93	319	P	Pb	16 06 41.8	+0.1
YM01				eS	Sb	16 07 05.3	-0.8
NFF	Wufeng Townshi	1.94	299	P	Pg	16 06 42.9	-0.3
NFF				S	Sb	16 07 05.2	-1.0
WHYT	Xinyi Township	1.94	271	P	Pb	16 06 42.3	+0.5
WHYT				S	Sn	16 07 04.2	0.0
TWGBT	Beinan	1.94	244	P	Pb	16 06 41.6	-0.2
TWGBT	Beinan	1.94	244	P	Pb	16 06 41.7	-0.1
TWGBT				S	Sn	16 07 04.0	-0.2
WHP	Taichung City	1.94	288	eP	Pg	16 06 44.0	+0.7
WHP				S	Sb	16 07 05.6	-0.8
TWG	Pinlang	1.95	244	P	Pb	16 06 42.2	+0.3
TWG				S	Sn	16 07 03.9	-0.5
TYC	Yuchr	1.95	277	eP	Pg	16 06 42.5	-0.9
TYC				eS	Sn	16 07 04.1	-0.2
YM08	YM08	1.95	320	eP	Pb	16 06 40.5	-1.6
YM08				eS	Sb	16 07 05.2	-1.5
ZUZH	Zhuzihu	1.96	319	P	Pb	16 06 41.6	-0.6
ZUZH				eS	Sb	16 07 06.1	-0.8
KSHI	Guanxi Townshi	1.96	304	P	Pg	16 06 43.4	-0.4
KSHI				S	Sb	16 07 05.6	-1.4
ALS	Alishan	1.99	265	P	Pb	16 06 43.0	+0.1
ALS				S	Sn	16 07 05.5	-0.5
ANP	Anpu	1.99	319	eP	Pg	16 06 43.3	-1.0
ANP				eS	Sb	16 07 07.0	-0.9
TWS1	Kuangyinshan	2.00	315	P	Pb	16 06 42.3	-0.5
TWS1				eS	Sb	16 07 07.5	-0.4
NTY	Taoyuan	2.01	311	P	Pb	16 06 43.0	+0.1
NTY				eS	Sb	16 07 07.4	-0.8
NJD	Zhudong	2.01	302	P	Pg	16 06 44.4	-0.3
NJD				eS	Sb	16 07 08.5	+0.2
TWY	Chenhua	2.02	322	P	Pb	16 06 42.8	-0.3
TWY				eS	Sb	16 07 07.6	-0.8
NTST	Danshui	2.02	317	eP	Pb	16 06 42.9	-0.3
NTST				eS	Sb	16 07 07.0	-1.6
LIOB	Emei	2.02	299	eP	Pg	16 06 44.6	-0.3
LIOB				eS	Sb	16 07 08.5	-0.2
NSTT	Nanjuang	2.03	298	eP	Pb	16 06 43.6	+0.3
NSTT				eS	Sb	16 07 08.5	-0.4
WJS	Zhushan	2.06	274	eP	Pb	16 06 44.5	+0.7
WJS				S	Sb	16 07 09.7	0.0
STYH	Taoyuan	2.08	256	P	Pb	16 06 44.0	-0.2
STYH				eS	Sn	16 07 07.8	+0.1
STYT	Tauyuan	2.10	256	P	Pb	16 06 44.5	-0.1
STYT				S	Sn	16 07 08.5	+0.3
LAY	Lan-yu	2.10	219	P	Pb	16 06 43.8	-0.8
LAY				eS	Sn	16 07 06.8	-1.4
PCYT	Pengchaiyu	2.10	337	P	Pb	16 06 44.4	-0.2
PCYT				eS	Sb	16 07 09.1	-1.8
WNT	Mingjian	2.10	276	eP	Pg	16 06 45.6	-0.8
WNT				eS	Sb	16 07 10.4	-0.5
CHN5	Tsauling	2.10	268	P	Pb	16 06 45.3	+0.7
CHN5				eS	Sb	16 07 11.1	+0.1
LYUB	Lan-yu	2.11	218	P	Pb	16 06 43.4	-1.3
LYUB				eS	Sn	16 07 06.2	-2.2
WNT1	Nantou City	2.11	276	eP	Pg	16 06 45.8	-0.7
WNT1				eS	Sb	16 07 12.0	+0.9
WWF	Wufeng	2.11	280	P	Pg	16 06 46.2	-0.4
WWF				eS	Sb	16 07 12.3	+1.2
TWQ1	Liyutan	2.11	289	eP	Pb	16 06 45.3	+0.5
TWQ1				eS	Sb	16 07 11.6	+0.3
SBCB	Hsinchu	2.12	302	P	Pg	16 06 45.6	-1.2
SBCB				eS	Sb	16 07 09.8	-1.6
NSY	Sanyi	2.15	290	eP	Pg	16 06 47.1	-0.1
NSY				S	Sb	16 07 12.4	+0.3
ECL	Taimali	2.15	240	P	Pb	16 06 44.4	-1.0
ECL				S	Sn	16 07 08.9	-0.4
TCU	Taichung	2.15	283	eP	Pg	16 06 46.2	-1.1
TCU				eS	Sb	16 07 12.2	0.0
NJN	Zhunan	2.16	298	eP	Pb	16 06 45.1	-0.5
NJN				S	Sb	16 07 12.4	-0.1
NMLH	Miaoli	2.16	293	P	Pg	16 06 46.6	-0.9
NMLH				eS	Sb	16 07 13.2	+0.5
TPUB	Ta-pu	2.18	260	P	Pb	16 06 46.5	+0.5
TPUB	Ta-pu	2.18	260	eP	Pg	16 06 47.1	-0.8
TPUB				S	Sb	16 07 12.2	-1.0
WCKO	Fanlu	2.18	264	eP	Pg	16 06 47.4	-0.6
WCKO				S	Sb	16 07 13.1	-0.2
NHW	Xinwu Township	2.19	307	P	Pb	16 06 45.8	-0.3
NHW				S	Sb	16 07 12.0	-1.5
CHN4	Tsaushan	2.21	262	eP	Pb	16 06 47.1	+0.8
CHN4				eS	Sb	16 07 14.3	+0.3
WGK	Gukeng	2.21	270	eP	Pg	16 06 47.5	-0.9
WGK				eS	Sb	16 07 13.7	-0.3
WTP	Ta-pu	2.21	259	P	Pb	16 06 46.8	+0.4
WTP				eS	Sb	16 07 14.3	+0.3
WDL	Douliou City	2.23	271	eP	Pg	16 06 48.9	+0.2
WDLH	Douliu	2.23	271	eP	Pb	16 06 47.4	+0.6
WDLH				eS	Sb	16 07 13.9	-0.7
WDJ	Dajia District	2.23	288	P	Pb	16 06 47.2	+0.5
WDJ				eS	Sb	16 07 14.5	-0.1
WCHH	Zhanghua	2.24	281	eP	Pb	16 06 47.2	+0.3
WCHH				S	Sb	16 07 14.9	-0.1
WCH1	Changhua City	2.25	280	eP	Pb	16 06 47.5	+0.4
WCH1				eS	Sb	16 07 15.1	-0.1
SGST	Jiashian	2.27	255	eP	Pb	16 06 47.1	-0.4
SGST				eS	Sb	16 07 14.6	-1.3
CHN2	Minshiung	2.29	267	P	Pg	16 06 49.2	-0.9
CHN2				eS	Sb	16 07 17.0	+0.6
CHN1	Nanshi	2.30	258	eP	Pb	16 06 48.5	+0.5
CHN1				eS	Sb	16 07 17.6	+1.1
TWK	Hsinying	2.32	260	eP	Pb	16 06 48.5	+0.2
TWK				eS	Sb	16 07 16.6	-0.6
SNST	Tainan City	2.32	259	P	Pb	16 06 48.8	+0.6
SNST				eS	Sb	16 07 17.6	+0.5
TAW	Tawu	2.32	236	eP	Pn	16 06 46.3	+1.5
TAW				eS	Sn	16 07 12.4	-1.2
TAWH	Dawu Township	2.34	235	eP	Pb	16 06 47.7	-0.9
TAWH				eS	Sn	16 07 12.7	-1.4
CHY	Chiayi	2.34	266	P	Pb	16 06 48.9	+0.3
CHY				S	Sb	16 07 16.9	-0.9
EAST	Anshuo	2.34	237	eP	Pb	16 06 48.2	-0.5
EAST				eS	Sn	16 07 12.4	-1.8
SSD	Sandimen	2.34	247	eP	Pb	16 06 48.7	0.0
SSD				eS	Sn	16 07 14.1	-0.1
TSMG	Majia	2.35	246	eP	Pb	16 06 49.8	+1.0
TSMG				eS	Sn	16 07 14.5	+0.1
WTK	Tuku	2.37	271	P	Pb	16 06 48.7	-0.4
WTK				S	Sb	16 07 17.6	-0.9
RLNB	Erlin	2.40	275	P	Pb	16 06 49.7	0.0
RLNB				S	Sb	16 07 19.3	-0.1
JMJ	Miyako jima 2	2.40	62	eP	Pb	16 06 49.2	-0.5
JMJ				eS	Sb	16 07 17.3	-2.3
MASBT	Mashibuluo	2.40	244	P	Pb	16 06 48.7	-1.0
CHN3	Shinhua	2.47	256	P	Pg	16 06 52.9	-0.5
CHN3				S	Sb	16 07 22.0	+0.5
SLIU	Shizi	2.48	234	P	Pb	16 06 50.4	-0.6
ICHU	Yijhu	2.49	263	P	Pb	16 06 51.7	+0.5
ICHU				S	Sb	16 07 20.6	-1.4
WSF	Szhu	2.52	269	P	Pb	16 06 51.6	-0.1
WSF				eS	Sb	16 07 21.0	-1.9
WSL	Shuilin Townsh	2.52	267	eP	Pb	16 06 51.2	-0.5
WSL				eS	Sn	16 07 20.4	+1.9
SCZT	Fangliau	2.53	239	eP	Pb	16 06 52.9	+1.1
SCZT				eS	Sb	16 07 21.7	-1.5
CHN8	Yiju	2.55	263	P	Pb	16 06 52.1	-0.2
CHN8				S	Sb	16 07 22.7	-1.2
TSEB	Hengchuen, Pin	2.61	227	eP	Pn	16 06 50.8	+2.0
TSEB				S	Sn	16 07 23.1	+2.3
TWKBT	Hengchun	2.64	229	eP	Pb	16 06 53.9	+0.1
TWKBT				eS	Sn	16 07 22.8	+1.3
TWK1	Hengchun	2.65	229	eP	Pb	16 06 54.0	+0.2
TWK1				eS	Sn	16 07 22.3	+0.7
HEN	Hengchun	2.65	231	eP	Pn	16 06 50.9	+1.5
HEN				eS	Sn	16 07 21.1	-0.7
TSCK	Chigu Township	2.70	259	P	Pb	16 06 54.6	-0.2
TSCK				eS	Sb	16 07 25.5	-2.7
WDGT	Dungji	3.07	263	P	Pb	16 06 58.3	-2.7
WDGT				S	Sn	16 07 33.2	+1.1
PHUB	P'eng-hu	3.12	268	P	Pb	16 06 59.2	-2.8
PHUB				eS	Sn	16 07 33.8	+0.4
PNG	Penghu	3.13	269	P	Pb	16 06 59.1	-3.1
PNG				S	Sn	16 07 34.8	+1.1
VCHM	Qimei	3.29	262	P	Pb	16 07 02.0	-2.8
VCHM				S	Sn	16 07 37.9	+0.5
MATB	Ma-tsu	3.68	312	P	Pn	16 07 05.5	+2.0
MATB				eS	Sn	16 07 45.0	-2.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTMZ	**Houxiangcun**	**3.76**	**292**	P	**Pn**	**16 07 06.4**	**+1.9**
XPSS	**Dashiqiu**	**4.09**	**323**	*e*P	**Pn**	**16 07 10.5**	**+1.4**
XPSS				S	**Sn**	**16 07 57.7**	**+0.3**
KNM	**Kinmen**	**4.21**	**281**	*e*P	**Pn**	**16 07 14.1**	**+3.4**
KNM				S	**Sn**	**16 08 02.7**	**+2.5**
KNMB	**Chin-men Tao**	**4.26**	**281**	*e*P	**Pn**	**16 07 13.1**	**+1.6**
KNMB				S	**Sn**	**16 08 00.1**	**-1.3**
MHZQ	**Yeshan**	**4.31**	**305**	*e*P	**Pn**	**16 07 13.1**	**+0.9**
MHZQ				*e*S	**Sn**	**16 08 00.2**	**-2.5**
AXDP	**Jialang**	**4.72**	**286**	*e*P	**Pn**	**16 07 19.6**	**+1.8**
AXDP				*e*S	**Sn**	**16 08 11.2**	**-1.6**
ZPLA	**Ao Xicun**	**4.79**	**274**	P	**Pn**	**16 07 20.9**	**+2.2**
ZPLA				*e*S	**Sn**	**16 08 13.0**	**-1.5**
DSXP	**Dongshan**	**5.08**	**271**	*e*P	**Pn**	**16 07 24.9**	**+2.1**
DSXP				*e*S	**Sn**	**16 08 20.7**	**-1.0**
SXFK	**Yanhouchang**	**5.53**	**300**	*e*P	**Pn**	**16 07 30.3**	**+1.3**

IDC 25 16:06:12.2±330.0**,57°.51N**×**29°.58E,h0**^{km}**,Error ellipse: s-maj=128.6km s-min=98.4km az=97.0,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**4.24**	**98**	I	I	16 33 20.0	
	baz=280,slow=322,SNR=0.8						
I37NO	**I37NO**	**12.58**	**342**	I	I	17 18 10.0	
	baz=149,slow=324,SNR=1.0						
I26DE	**FREYUNG INFRAS**	**12.84**	**234**	I	I	17 25 20.0	
	baz=39,slow=320,SNR=1.9						

IDC ***25*** *16:12:40.2±1.0,2°.73S×138°.51E,h0^{km},mb3.7/5, mbtmp3.7/8,ML3.7/3,Error ellipse: s-maj=23.0km s-min=17.3km az=101.0*

DJA ***25*** *16:12:42.9±0.3,3°S±4°×13°9E±°,h10^{km},M3.9/7,mb4.2/3, MLv3.7/7*

ISC 25 16:12:41.6±0.7**,2°.72S**±0°.07×**138°.57E**±0°.05**,h10**^{km}**,n14,** σ**1^{s}42**/17**,mb3.7**/5**,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.73**	**11**	P	**Pg**	**16 12 53.9**	**-1.9**
GENI	**Genyem**	**1.60**	**86**	P	**Pb**	**16 13 11.8**	**+0.4**
JAY	**Jayapura**	**2.15**	**85**	Pn	**Pn**	**16 13 18.7**	**+1.2**
	6.6nm,0.3s,baz=231,slow=11,SNR=50						
JAY				Sn	**Sn**	**16 13 46.0**	**+1.8**
	8.5nm,0.3s,baz=122,slow=19,SNR=6.3						
	23nm,0.3s						
JAY	**Jayapura**	**2.15**	**85**	P	**Pn**	**16 13 18.3**	**+0.8**
SRPI	**Serui, Papua**	**2.47**	**290**	P	**Pn**	**16 13 22.2**	**+0.2**
BAKI	**Biak**	**2.89**	**302**	P	**Pn**	**16 13 29.6**	**+1.9**
FAKI	**Fak Fak**	**6.31**	**268**	P	**Pn**	**16 14 17.2**	**+2.4**
	47nm,1.9s						
WRA	**Warramunga Arr**	**17.61**	**193**	P	**Pn**	**16 16 46.1**	**-1.2**
	0.6nm,0.3s,baz=18,slow=12,SNR=14						
WRA				S	**Sn**	**16 20 04.2**	**+0.5**
	0.3nm,0.6s,baz=12,slow=23,SNR=1.6						
	1.3nm,0.5s						
FITZ	**Fitzroy Crossi**	**19.86**	**219**	P	**P**	**16 17 12.8**	**-0.2**
	0.1nm,0.3s,baz=48,slow=12,SNR=2.2						
	2.9nm,0.9s						
ASAR	**Alice Springs**	**21.31**	**192**	P	**P**	**16 17 28.6**	**-0.2**
	3.7nm,0.7s,baz=19,slow=11,SNR=40						
ASAR				S	**S**	**16 21 22.9**	**-2.7**
	0.4nm,0.9s,baz=19,slow=21,SNR=2.6						
	3.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**44.32**	**300**	P	**P**	**16 20 52.0**	**-0.2**
	0.2nm,0.4s,baz=111,slow=8.5,SNR=1.8						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**69.71**	**322**	P	**P**	**16 23 51.4**	**-0.4**
	0.3nm,0.8s,baz=116,slow=3.4,SNR=4.0						
	0.3nm,0.8s						
BVAR	**Borovoye Array**	**79.23**	**325**	P	**P**	**16 24 47.8**	**+0.8**
	0.3nm,0.4s,baz=103,slow=6.5,SNR=2.2						
	0.3nm,0.4s						
QSPA	**South Pole Qui**	**87.23**	**180**	P	**P**	**16 25 28.4**	**+0.2**
	1.2nm,0.8s,baz=270,slow=5.1,SNR=8.7						
	1.2nm,0.8s						

IDC 25 16:15:03.3±330.0**,57°.61N**×**29°.79E,h0**^{km}**,Error ellipse: s-maj=129.4km s-min=100.3km az=99.0,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**4.14**	**99**	I	I	16 41 38.3	
	0.1nm,1.8s,baz=282,slow=304,SNR=11						
I37NO	**I37NO**	**12.52**	**341**	I	I	17 26 50.0	
	baz=148,slow=324,SNR=1.1						
I26DE	**FREYUNG INFRAS**	**13.00**	**234**	I	I	17 34 41.9	
	baz=39,slow=320						

IDC ***25*** *16:16:21.7±2.5,56°.22N×164°.73E,h0^{km},mb3.4/5, mbtmp3.3/6,ML2.1/1,MS2.7/2,Error ellipse: s-maj=61.0km s-min=25.6km az=148.0*

KRSC ***25*** *16:16:21.8±1.4,56°.17N×164°.72E,h47^{km}±19^{km},Ml3.9*

ISC 25 16:16:22.1±0.8**,56°.18N**±0°.05×**164°.64E**±0°.04**,h10**^{km}**,n37,** σ**1^{s}64**/39**,mb3.4**/5**,Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**1.02**	**273**	*e*P	**Pg**	**16 16 40.5**	**-1.0**
KBTR				*e*S	**Sg**	**16 16 53.1**	**-1.7**
KBG	**Krutoberegovo**	**1.08**	**275**	*e*P	**Pb**	**16 16 41.3**	**-1.5**
KBG				*e*S	**Sg**	**16 16 56.4**	**-0.4**
BKI	**Bering**	**1.23**	**142**	*e*P	**Pg**	**16 16 44.3**	**-1.4**
BKI				*e*S	**Sg**	**16 16 59.7**	**-1.9**
SMKR	**Semkarok**	**1.81**	**284**	*e*P	**Pb**	**16 16 53.6**	**-1.6**
SMKR				*e*S	**Sg**	**16 17 19.0**	**-1.2**
BDR	**Baidarnaya**	**1.95**	**283**	*e*S	**Sb**	**16 17 21.1**	**-0.9**
SRKR	**Sorokina**	**1.99**	**285**	*e*P	**Pb**	**16 16 56.6**	**-1.7**
ZLN	**Zelenaya**	**2.15**	**267**	*e*P	**Pb**	**16 16 59.3**	**-1.9**
KLY	**Klyuchi**	**2.23**	**275**	*e*P	**Pn**	**16 16 58.1**	**-0.9**
KRSR	**Krestovskiy**	**2.28**	**273**	*e*P	**Pn**	**16 17 00.2**	**+0.4**
MKZ	**Mys Kozlova**	**2.32**	**227**	*e*P	**Pn**	**16 16 59.1**	**-1.1**
BZWR	**Bezymyannyi-We**	**2.33**	**267**	*e*P	**Pn**	**16 17 01.7**	**+1.1**
BZMR	**Bezymyannaya**	**2.34**	**266**	*e*P	**Pn**	**16 17 01.4**	**+0.7**
KIRR	**Kirishev**	**2.42**	**267**	*e*P	**Pb**	**16 17 03.1**	**-2.6**
KPT	**Kopyto**	**2.48**	**267**	*e*P	**Pb**	**16 17 04.1**	**-2.7**
KMNR	**Kamenistaya**	**2.51**	**262**	*e*P	**Pn**	**16 17 04.2**	**+1.2**
TUMD	**Tumrok D**	**2.59**	**250**	*e*P	**Pn**	**16 17 05.3**	**+1.3**
TUMD				*e*S	**Sn**	**16 17 36.1**	**+0.6**
KOZ	**Kozyrevsk**	**2.67**	**269**	*e*P	**Pb**	**16 17 07.1**	**-2.8**
OSSR	**Ossora**	**3.20**	**345**	*e*P	**Pn**	**16 17 13.5**	**+1.2**
OSSR				*e*S	**Sn**	**16 17 49.2**	**-1.2**
ESO	**Esso**	**3.34**	**268**	*e*P	**Pn**	**16 17 14.8**	**+0.5**
SPN	**Mys Shipunski**	**4.08**	**223**	*e*P	**Pn**	**16 17 24.2**	**-0.3**
SDLR	**Sedlovina**	**4.42**	**231**	*e*P	**Pn**	**16 17 30.2**	**+0.9**
KRX	**Arik**	**4.47**	**233**	*e*P	**Pn**	**16 17 32.5**	**+2.5**
UGLR	**Uglovaya**	**4.49**	**231**	*e*P	**Pn**	**16 17 31.8**	**+1.6**
KOK	**Koryaka**	**4.52**	**233**	*e*P	**Pn**	**16 17 32.3**	**+1.7**
PETK	**Petropavlovsk-**	**5.07**	**236**	Pn	**Pn**	**16 17 40.0**	**+2.0**
	0.3nm,0.3s,baz=96,slow=19,SNR=9.4						
PETK				Sn	**Sn**	**16 18 39.5**	**+3.0**
	0.1nm,0.3s,baz=58,slow=14,SNR=1.3						
	1.9nm,0.9s						
MTVR	**Mutnovka**	**5.29**	**228**	*e*P	**Pn**	**16 17 42.9**	**+1.8**
ASAK	**Asacha**	**5.48**	**229**	*e*P	**Pn**	**16 17 46.0**	**+2.3**
MA2	**Magadan**	**8.14**	**300**	LR	LR	16 21 42.6	
	comp=Z,34nm,18.7s,baz=116,slow=39						
ILAR	**Eielson Array**	**24.78**	**50**	P	**P**	**16 21 44.2**	**+0.6**
	0.4nm,0.9s,baz=271,slow=9.5,SNR=4.2						
	0.4nm,0.9s						
MJAR	**Matsushiro Arr**	**26.52**	**233**	LR	LR	16 32 30.3	
	comp=Z,22nm,19.6s,baz=128,slow=36						
H11N2	**WAKE ISLAND Hy**	**36.43**	**176**	T	T	17 02 21.7	
	baz=357,slow=76,SNR=36						
H11N3	**WAKE ISLAND Hy**	**36.44**	**176**	T	T	17 02 23.4	
	baz=357,slow=76,SNR=29						
H11N1	**WAKE ISLAND Hy**	**36.44**	**176**	T	T	17 02 21.1	
	baz=357,slow=76,SNR=45						
KURBB	**Kurchatov Arra**	**48.45**	**302**	P	**P**	**16 25 05.2**	**+1.0**
	0.2nm,0.6s,baz=58,slow=8.0,SNR=2.8						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**49.19**	**296**	P	**P**	**16 25 11.9**	**+1.9**
	0.1nm,0.4s,baz=52,slow=9.3,SNR=2.1						
	0.1nm,0.4s						
BVAR	**Borovoye Array**	**50.53**	**309**	P	**P**	**16 25 21.1**	**+1.0**
	0.8nm,0.7s,baz=50,slow=7.7,SNR=2.7						
	0.8nm,0.7s						
NOA	**NORSAR Array B**	**61.26**	**346**	P	**P**	**16 26 37.8**	**+0.9**
	0.6nm,0.6s,baz=18,slow=6.9,SNR=3.2						
	0.6nm,0.6s						

SGS ***25*** *16:21:19.4,29°.46N×32°.37E,h18^{km},Ml3.1*

GII ***25*** *16:21:20.5±0.0,29°.322N±0°.003×32°.692E±0°.001, h1^{km},Mws3.6/6,confirmed*

HLW ***25*** *16:21:24.0,29°.34N×32°.92E,h7^{km},Md2.6,Ml2.9*

ISC 25 16:21:23.7±1.2**,29°.31N**±0°.03×**32°.91E**±0°.04**,h2**^{km}±11^{km}**, n60,** σ**1^{s}17**/64**,Egypt**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZNM	**Zenema**	**0.07**	**337**	P	**Pg**	**16 21 24.8**	**-0.3**
ZNM				S	**Sg**	**16 21 27.2**	**+1.2**
ZAF	**Zafarana**	**0.31**	**264**	P	**Pg**	**16 21 30.9**	**+1.2**
HRDS	**Abu Rudays**	**0.69**	**150**	P	**Pg**	**16 21 37.4**	**+0.5**
HHAG	**Hagoal**	**0.95**	**312**	P	**Pb**	**16 21 42.0**	**-0.8**
GRB	**Gharib**	**1.04**	**186**	P	**Pn**	**16 21 44.3**	**-1.1**
KOT	**Kottamia**	**1.12**	**303**	P	**Pb**	**16 21 44.7**	**-1.1**
TR2	**Tor 2**	**1.17**	**142**	P	**Pb**	**16 21 45.6**	**-1.0**
HKAT	**Jabal Katrina**	**1.24**	**129**	P	**Pn**	**16 21 46.2**	**-1.9**
NUB	**Nuweibaa**	**1.55**	**100**	P	**Pn**	**16 21 51.1**	**-1.2**
TR1	**Tor 1**	**1.59**	**145**	P	**Pn**	**16 21 52.3**	**-0.6**
HBST	**Basata**	**1.60**	**93**	P	**Pn**	**16 21 51.9**	**-1.1**
HDHB	**Dhahab**	**1.61**	**111**	P	**Pn**	**16 21 52.0**	**-1.2**
KRMI	**Paran Flat**	**1.77**	**63**	P	**Pn**	**16 21 53.9**	**-1.5**
KRMI	**Paran Flat**	**1.77**	**63**	P	**Pn**	**16 21 54.2**	**-1.2**
KRMI	**Paran Flat**	**1.77**	**63**	S	**Sn**	**16 22 19.6**	**+1.0**
HAQS	**Haql**	**1.78**	**98**	P	**Pn**	**16 21 55.4**	**-0.1**
HAQS	**Haql**	**1.78**	**98**	S	**Sn**	**16 22 19.9**	**+1.2**
MBRI	**Mt Berech**	**1.81**	**74**	P	**Pn**	**16 21 54.7**	**-1.3**
MBRI	**Mt Berech**	**1.81**	**74**	P	**Pn**	**16 21 55.1**	**-0.9**
MBRI	**Mt Berech**	**1.81**	**74**	S	**Sb**	**16 22 21.8**	**+0.9**
EIL	**Elat**	**1.82**	**78**	P	**Pn**	**16 21 54.8**	**-1.2**
EIL	**Elat**	**1.82**	**78**	P	**Pn**	**16 21 55.2**	**-0.8**
EIL	**Elat**	**1.82**	**78**	S	**Sb**	**16 22 21.4**	**+0.4**
HQLS		**1.88**	**90**	S	**Sb**	**16 22 23.3**	**+0.5**
HQLS		**1.88**	**90**	P	**Pn**	**16 21 56.8**	**-0.1**
TAYS	**Tayyib Ism**	**1.88**	**113**	S	**Sb**	**16 22 23.6**	**+0.9**
TAYS	**Tayyib Ism**	**1.88**	**113**	P	**Pn**	**16 21 55.7**	**-1.2**
AQBJ	**Aqaba**	**1.92**	**77**	P	**Pn**	**16 21 56.1**	**-1.2**
JMOS	**Jabal al Moall**	**1.93**	**94**	P	**Pn**	**16 21 57.6**	**+0.1**
JMOS	**Jabal al Moall**	**1.93**	**94**	S	**Sb**	**16 22 24.9**	**+0.8**
RSHS		**1.94**	**121**	S	**Sb**	**16 22 25.5**	**+1.0**
RSHS				P	**Pn**	**16 21 57.0**	**-0.8**
HRFI	**Mount Harif**	**1.99**	**68**	P	**Pn**	**16 21 57.0**	**-1.4**
HRFI	**Mount Harif**	**1.99**	**68**	P	**Pn**	**16 21 57.3**	**-1.1**
HRFI	**Mount Harif**	**1.99**	**68**	S	**Sn**	**16 22 25.9**	**+2.0**
KZIT	**Kziot**	**2.05**	**39**	P	**Pn**	**16 21 57.1**	**-2.0**
KZIT	**Kziot**	**2.05**	**39**	P	**Pn**	**16 21 58.2**	**-1.0**
KZIT	**Kziot**	**2.05**	**39**	S	**Sn**	**16 22 25.3**	**+0.1**
PRNI	**Paran**	**2.10**	**60**	P	**Pn**	**16 21 58.4**	**-1.4**
PRNI	**Paran**	**2.10**	**60**	P	**Pn**	**16 21 59.5**	**-0.3**
PRNI	**Paran**	**2.10**	**60**	S	**Sn**	**16 22 28.3**	**+1.8**
BDAS	**Al Bad`**	**2.12**	**114**	S	**Sb**	**16 22 29.3**	**-0.3**
BDAS	**Al Bad`**	**2.12**	**114**	P	**Pn**	**16 21 58.7**	**-1.4**
HHRG	**Al Ghardaqah**	**2.17**	**164**	P	**Pb**	**16 22 02.5**	**-1.1**
ZFRI	**Zfri**	**2.33**	**57**	P	**Pn**	**16 22 01.5**	**-1.5**
ZFRI	**Zfri**	**2.33**	**57**	P	**Pn**	**16 22 02.1**	**-0.8**
ZFRI	**Zfri**	**2.33**	**57**	S	**Sn**	**16 22 33.2**	**+1.1**
JLOS		**2.34**	**104**	S	**Sb**	**16 22 35.6**	**-0.4**
JLOS				P	**Pn**	**16 22 02.2**	**-1.0**
AYUS	**`Aynunah**	**2.36**	**118**	S	**Sb**	**16 22 37.5**	**+1.0**
AYUS				P	**Pb**	**16 22 05.5**	**-1.4**
YTIR	**Yattir**	**2.80**	**43**	P	**Pn**	**16 22 08.9**	**-0.6**
YTIR	**Yattir**	**2.80**	**43**	S	**Sn**	**16 22 43.8**	**0.0**
MSBI	**Mazada**	**2.91**	**46**	P	**Pn**	**16 22 09.1**	**-1.8**
MSBI	**Mazada**	**2.91**	**46**	P	**Pn**	**16 22 09.2**	**-1.7**
WTBKS	**WTBKS**	**2.91**	**114**	P	**Pn**	**16 22 10.5**	**-0.7**
GHAJ	**Ghor Haditha**	**3.04**	**49**	P	**Pn**	**16 22 13.9**	**+1.2**
GHAJ	**Ghor Haditha**	**3.04**	**49**	P	**Pn**	**16 22 11.8**	**-0.9**
DSI	**Dead Sea**	**3.10**	**43**	P	**Pn**	**16 22 16.1**	**+2.5**
DSI	**Dead Sea**	**3.10**	**43**	P	**Pn**	**16 22 13.0**	**-0.6**
SALP	**Salfit**	**3.38**	**35**	P	**Pn**	**16 22 15.6**	**-1.9**
HMDT	**Nahal Hemdat**	**3.70**	**37**	P	**Pn**	**16 22 21.0**	**-0.8**
MMLI	**Mount Malkishu**	**3.79**	**34**	P	**Pn**	**16 22 22.4**	**-0.7**

IDC ***25*** *16:22:02.1±1.0,32°.03S×178°.59W,h0^{km},mb4.1/4, mbtmp4.1/4,MS3.0/2,Error ellipse: s-maj=37.7km s-min=27.9km az=56.0*

NEIC ***25*** *16:22:07±1.2,31°.74S±0°.04×178°.4W±0°.2,h35^{km}±2^{km}, mb4.4/9,Error ellipse: s-maj=31.8km s-min=3.8km az=100.0*

ISC 25 16:22:03.4±0.8**,31°.8S**±0°.1×**178°.6W**±0°.1**,h10**^{km}**,n33,** σ**1^{s}06**/27**,mb4.5**/12**,5C,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.62**	**12**	Pn	**Pn**	**16 22 45.4**	**-0.5**
URZ	**Urewera**	**7.33**	**208**	Sn	Sn	16 24 51.4	-22
	5.1nm,0.3s,baz=186,slow=16,SNR=3.6						
URZ				LR	LR	16 25 50.0	
	comp=Z,89nm,21.9s,baz=105,slow=32						
OUZ	**Omahuta**	**7.37**	**241**	P	**Pn**	**16 23 50.4**	**-0.7**
BKZ	**Black Stump Fm**	**8.36**	**207**		Pn	16 23 51.9	-13
TUWZ	**Tuamarina**	**11.31**	**210**		Pn	16 24 33.7	-11
ARMA	**Armidale**	**25.52**	**265**	P	**P**	**16 27 32.0**	**-0.4**
ARMA				IAmb	IAmb	16 27 43.7	
	comp=Z,25nm,1.3s						
CAN	**Canberra**	**27.19**	**254**	P	**P**	**16 27 46.7**	**-0.6**
PMG	**Port Moresby**	**38.81**	**298**	P	**P**	**16 29 30.1**	**+1.5**
AS31	**Alice Springs**	**42.57**	**269**	P	**P**	**16 29 59.4**	**-0.4**
ASAR	**Alice Springs**	**42.58**	**269**	P	**P**	**16 29 59.2**	**-0.6**
ASAR	**Alice Springs**	**42.58**	**269**	P	**P**	**16 29 59.7**	**-0.1**
	comp=Z,1.1nm,0.4s,baz=111,slow=7.8,SNR=52						
	comp=Z,1.1nm,0.4s						
WR8	**Warramunga Arr**	**43.55**	**274**	P	**P**	**16 30 08.1**	**+0.4**
WR8				IAmb	IAmb	16 30 17.3	
	comp=Z,15nm,1.4s						
WRA	**Warramunga Arr**	**43.69**	**274**		**P**	**16 30 09.1**	**+0.3**
WRA	**Warramunga Arr**	**43.69**	**274**	P	**P**	**16 30 09.2**	**+0.3**
	comp=Z,4.0nm,0.6s,baz=115,slow=7.6,SNR=41						
	comp=Z,4.0nm,0.6s						
WB0	**Warramunga Arr**	**43.72**	**274**		**P**	**16 30 09.3**	**+0.2**
WB0				IAmb	IAmb	16 30 17.0	
	comp=Z,15nm,1.4s						
VNDA	**Vanda**	**46.63**	**186**	P	**P**	**16 30 31.9**	**+0.5**
VNDA				IAmb	IAmb	16 30 35.7	
	comp=Z,7.4nm,1.4s						
KNRA	**Kununurra**	**50.35**	**276**	P	**P**	**16 31 02.1**	**+1.2**
FITZ	**Fitzroy Crossi**	**51.89**	**271**	P	**P**	**16 31 12.2**	**-0.2**
FITZ				IAmb	IAmb	16 31 25.5	
	comp=Z,1.9nm,1.4s						
QSPA	**South Pole Qui**	**58.29**	**180**	P	**P**	**16 31 56.0**	**-2.1**
	comp=Z,1.2nm,0.8s,baz=174,slow=2.7,SNR=8.5						
	comp=Z,1.2nm,0.8s						
TROLL	**Troll, Antarti**	**76.45**	**180**	⇑P	**P**	**16 33 55.4**	**+2.3**
	comp=Z,27nm,0.5s						
SNAA	**Sanae**	**76.75**	**179**	⇑P	**P**	**16 33 56.6**	**+1.9**
	comp=Z,9.4nm,0.4s						
SNAA	**Sanae**	**76.75**	**179**	P	**P**	**16 33 55.0**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=204,slow=8.8,SNR=10						
	comp=Z,0.8nm,0.7s						
VNA3	**Neumayer Olymp**	**76.92**	**176**	⇑P	P	16 33 58.0	+2.5
	comp=Z,4.5nm,0.7s						
VNA2	**Neumayer--Watz**	**77.34**	**177**	⇑P	P	16 34 00.5	+2.6
	comp=Z,3.0nm,0.6s,baz=166,slow=5.6						
VNA1	**Neumayer--Stat**	**77.58**	**177**	⇑P	**P**	**16 34 01.5**	**+2.3**
	comp=Z,1.8nm,0.6s						
CPUP	**Villa Florida**	**99.47**	**129**	LR	LR	17 10 54.1	
	comp=Z,8.5nm,21.5s,baz=34,slow=30						
FINES	**FINESS Array B**	**146.31**	**339**	PKPbc	**PKPab**	**16 41 44.5**	**+0.1**
	comp=Z,2.9nm,0.5s,baz=50,slow=4.1,SNR=19						
NB2	**NORSAR Subarra**	**150.08**	**350**	PKP	**PKiKP**	**16 41 54.6**	**+0.1**
	comp=Z,1.9nm,1.0s,baz=12,slow=4.1						
NOA	**NORSAR Array B**	**150.08**	**350**	PKPbc	**PKiKP**	**16 41 54.7**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=17,slow=2.5,SNR=4.4						
HFS	**Hagfors**	**150.54**	**348**	PKPbc	**PKiKP**	**16 41 55.2**	**-0.3**
	comp=Z,1.5nm,0.6s,baz=46,slow=4.2,SNR=3.9						
MMAI	**Mount Meron Ar**	**151.38**	**282**	PKPbc	**PKiKP**	**16 41 57.6**	**-0.6**
	comp=Z,1.3nm,0.5s,baz=94,slow=5.9,SNR=2.3						
AKASG	**Malin Array Be**	**152.12**	**321**	PKPbc	**PKiKP**	**16 41 58.4**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=65,slow=1.2,SNR=4.9						
BRTR	**Keskin Array B**	**152.82**	**296**	PKPbc	**PKiKP**	**16 42 00.1**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=95,slow=3.2,SNR=4.6						

WEL 25 16:22:44.7±1.0**,35°S**±17°×**17°9E**±1°9**,h206**^{km}±18^{km}**, M3.7**/11**,ML3.9**/8**,MLv3.7**/11**,Error ellipse: s-maj=31.1km s-min=13.3km az=129.8,confirmed,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.23**	**198**	P	Pn	16 23 24.0	-2.0
MXZ				S	S	16 23 59.2	+1.4
WMGZ	**Waiomatatini S**	**2.46**	**194**	P	Pn	16 23 27.7	-0.7
WMGZ				S	S	16 24 03.5	+1.4
HAZ	**Te Kaha**	**2.57**	**205**	P	Pn	16 23 30.1	+0.5
HAZ				S	S	16 24 06.5	+2.2
PKGZ	**Pakihiroa**	**2.58**	**199**	P	Pn	16 23 27.4	-2.3
PKGZ				S	S	16 24 04.7	+0.1
PUZ	**Puketiti**	**2.73**	**195**	P	Pn	16 23 30.0	-1.5
PUZ				S	S	16 24 09.3	+1.6
RUGZ	**Raukumara Rang**	**2.79**	**205**	P	Pn	16 23 31.2	-1.1
RUGZ				S	S	16 24 10.7	+1.6
TWGZ	**Tauwhareparae**	**2.90**	**199**	P	Pn	16 23 32.5	-0.9
TWGZ				S	S	16 24 14.8	+3.7
CNGZ	**Carnagh Statio**	**3.14**	**194**	P	Pn	16 23 33.9	-2.2
CNGZ				S	S	16 24 18.5	+2.4
MWZ	**Matawai**	**3.18**	**204**	P	Pn	16 23 35.6	-1.1
MWZ				S	S	16 24 17.9	+1.0
TKGZ	**Te Karaka**	**3.18**	**199**	P	Pn	16 23 38.2	+1.6
TKGZ				S	S	16 24 17.3	+0.4
URZ	**Urewera**	**3.26**	**210**	P	Pn	16 23 39.2	+1.6
URZ				S	S	16 24 17.8	-0.9
URZ	**Urewera**	**3.26**	**210**	Pn	Pn	16 23 39.0	+1.4
	3.1nm,0.3s,baz=256,slow=4.9,SNR=9.0						
RIGZ	**Rimuhau**	**3.45**	**198**	P	Pn	16 23 40.5	+0.6
RIGZ				S	S	16 24 22.9	0.0
MUGZ	**Murupara**	**3.59**	**211**	P	Pn	16 23 43.9	+2.3
MUGZ				S	S	16 24 27.4	+1.6
RTZ	**Ruatahuna**	**3.62**	**208**	P	Pn	16 23 41.3	-0.8
RTZ				S	S	16 24 25.3	-1.4
SNGZ	**Shannon Statio**	**3.65**	**203**	P	Pn	16 23 42.5	+0.3
SNGZ				S	S	16 24 27.2	+0.1
RAHZ	**Arahi**	**3.85**	**205**	P	Pn	16 23 47.8	+3.1
RAHZ				S	S	16 24 31.4	-0.2
WCZ	**Waipu Caves**	**3.95**	**261**	P	Pn	16 23 47.4	+1.5
NMHZ	**Naumai**	**4.11**	**206**	P	Pn	16 23 50.3	+2.3
NMHZ				S	S	16 24 36.8	-0.7

IDC ***25*** *16:33:16.1±1.1,28°.33N×104°.99E,h0^{km},mb3.8/8, mbtmp3.7/10,ML3.6/2,Error ellipse: s-maj=26.1km s-min=21.7km az=42.0*

NEIC ***25*** *16:33:19.2±1.0,28°.52N±0°.06×104°.9E±0°.1,h10^{km}±2^{km}, mb4.5/9,Error ellipse: s-maj=21.3km s-min=10.4km az=259.0*

ISC 25 16:33:19.5±0.7**,28°.36N**±0°.09×**104°.9E**±0°.1**,h19**^{km}**,n24,** σ**0^{s}84**/24**,mb3.9**/12**,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENH	**Enshi**	**4.47**	**64**		**Pn**	**16 34 27.4**	**+1.1**
CMAR	**Chiang Mai Arr**	**11.25**	**210**	Pn	**Pn**	**16 35 59.0**	**-0.3**
	0.1nm,0.3s,baz=17,slow=12,SNR=7.9						
	0.2nm,0.8s						
SONM	**Songino Array**	**19.48**	**3**	P	**P**	**16 37 44.1**	**-1.2**
	0.5nm,0.3s,baz=193,slow=11,SNR=3.6						
	1.1nm,0.7s						
KSRS	**Korea Array**	**21.34**	**59**	P	**P**	**16 38 04.2**	**-1.3**
	2.6nm,0.8s,baz=241,slow=10,SNR=12						
	2.6nm,0.8s						
MKAR	**Makanchi Array**	**25.50**	**322**	P	**P**	**16 38 46.4**	**-0.2**
MKAR	**Makanchi Array**	**25.50**	**322**	P	**P**	**16 38 47.3**	**+0.7**
	1.4nm,0.7s,baz=128,slow=11,SNR=13						
	1.4nm,0.7s						
MAKZ	**Makanchi**	**25.68**	**322**	P	**P**	**16 38 47.7**	**-0.5**
USRK	**Ussuriysk Ar.**	**26.82**	**47**	P	**P**	**16 38 58.2**	**-0.3**
USRK	**Ussuriysk Ar.**	**26.82**	**47**	P	**P**	**16 38 57.2**	**-1.3**
	1.9nm,0.7s,baz=242,slow=10,SNR=7.8						
	1.9nm,0.7s						
KURBB	**Kurchatov Arra**	**29.83**	**325**	P	**P**	**16 39 25.3**	**0.0**
	1.2nm,0.8s,baz=133,slow=9.6,SNR=11						
	1.2nm,0.8s						
TOLI2	**Tolitoli**	**31.09**	**148**	P	**P**	**16 39 38.0**	**+1.3**
TOLI2				IAmb	IAmb	16 40 03.8	
	comp=Z,5.8nm,1.0s						
BVAR	**Borovoye Array**	**35.36**	**324**	P	**P**	**16 40 13.9**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=134,slow=8.4,SNR=2.7						
	comp=Z,0.3nm,0.4s						
AB31	**Akbulak array**	**40.00**	**314**	P	**P**	**16 40 53.0**	**+0.1**
ABKAR	**Akbulak array**	**40.00**	**314**	P	**P**	**16 40 53.3**	**+0.4**
TIXI	**Tiksi**	**45.31**	**10**	P	**P**	**16 41 35.6**	**0.0**
WRA	**Warramunga Arr**	**55.85**	**146**	P	**P**	**16 42 54.5**	**-1.3**
	comp=Z,1.5nm,0.8s,baz=325,slow=7.1,SNR=4.5						
	comp=Z,1.5nm,0.8s						
AKASG	**Malin Array Be**	**59.74**	**315**	P	**P**	**16 43 22.3**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=72,slow=6.2,SNR=2.0						
	comp=Z,0.3nm,0.5s						
FINES	**FINESS Array B**	**60.20**	**327**	P	**P**	**16 43 27.7**	**+1.8**
	comp=Z,0.9nm,0.8s,baz=90,slow=6.9,SNR=1.3						
	comp=Z,0.9nm,0.8s						
C18K	**Utukok River**	**65.32**	**24**	P	**P**	**16 43 59.6**	**-0.4**
D19K	**Kuna River**	**66.45**	**24**	P	**P**	**16 44 06.8**	**-0.5**
D19K				IAmb	IAmb	16 44 39.6	
	comp=Z,4.4nm,1.1s						
B21K	**Ikpikpuk River**	**67.28**	**22**	P	**P**	**16 44 12.2**	**-0.2**
B21K				IAmb	IAmb	16 44 14.6	
	comp=Z,7.3nm,1.4s						
K17K	**Iditarod**	**68.22**	**30**	P	**P**	**16 44 18.5**	**0.0**
J18K	**Innoko River**	**68.64**	**28**	P	**P**	**16 44 21.1**	**0.0**
J18K				IAmb	IAmb	16 44 38.4	
	comp=Z,2.1nm,1.0s						
BMAR	**Burnt Mountain**	**71.55**	**22**	P	**P**	**16 44 39.0**	**+0.1**

IDC ***25*** *16:33:38.3±1.0,28°.43N×104°.78E,h0^{km},mb3.9/9, mbtmp3.9/11,ML3.6/2,Error ellipse: s-maj=25.8km s-min=19.1km az=56.0*

NEIC ***25*** *16:33:40.9±2.1,28°.51N±0°.10×104°.71E±0°.07,h10^{km}±1^{km}, mb4.7/17,Error ellipse: s-maj=16.6km s-min=9.5km az=169.0*

ISC 25 16:33:43.2±0.5**,28°.41N**±0°.08×**104°.74E**±0°.08**,h35**^{km}**,n32,** σ**0^{s}80**/32**,mb4.2**/18**,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENH	**Enshi**	**4.54**	**65**	Pn	**Pn**	**16 34 50.3**	**+0.8**
QIZ	**Qiongzhong**	**10.44**	**152**	Pn	**Pn**	**16 36 11.8**	**+1.4**
CMAR	**Chiang Mai Arr**	**11.24**	**209**	Pn	**Pn**	**16 36 19.6**	**-1.9**
	0.1nm,0.3s,baz=19,slow=12,SNR=6.1						
	0.8nm,0.8s						
SONM	**Songino Array**	**19.44**	**3**	P	**P**	**16 38 06.0**	**-0.7**
	0.5nm,0.3s,baz=182,slow=14,SNR=2.7						
	0.4nm,0.4s						
KSRS	**Korea Array**	**21.41**	**59**	P	**P**	**16 38 26.8**	**-1.1**
	3.1nm,0.5s,baz=243,slow=10,SNR=9.6						
	3.1nm,0.5s						
MKAR	**Makanchi Array**	**25.41**	**322**		**P**	**16 39 07.4**	**0.0**
MKAR	**Makanchi Array**	**25.41**	**322**	P	**P**	**16 39 07.7**	**+0.3**
	1.9nm,0.6s,baz=124,slow=10,SNR=11						
	1.9nm,0.6s						
MAKZ	**Makanchi**	**25.59**	**322**		**P**	**16 39 09.5**	**+0.5**
USRK	**Ussuriysk Ar.**	**26.86**	**47**	P	**P**	**16 39 19.9**	**-0.6**
	2.4nm,0.6s,baz=260,slow=9.2,SNR=8.9						
	2.4nm,0.6s						
ZALV	**Zalesovo Beam**	**29.39**	**336**	P	**P**	**16 39 43.5**	**+0.5**
	1.2nm,0.7s,baz=145,slow=5.4,SNR=3.9						
	1.2nm,0.7s						
KURBB	**Kurchatov Arra**	**29.74**	**325**	P	**P**	**16 39 46.8**	**+0.7**
	1.6nm,0.7s,baz=133,slow=9.3,SNR=9.6						
	1.6nm,0.7s						
KKAR	**Karatay Array**	**31.16**	**307**	P	**P**	**16 39 59.2**	**+0.4**
JMM	**Marumori**	**31.47**	**63**	P	**P**	**16 40 00.4**	**-1.1**
JMM				IAmb	IAmb	16 40 38.7	
	comp=Z,39nm,1.5s						
AB31	**Akbulak array**	**39.91**	**314**		**P**	**16 41 14.5**	**+0.8**
ABKAR	**Akbulak array**	**39.91**	**314**		**P**	**16 41 14.4**	**+0.7**
TIXI	**Tiksi**	**45.29**	**10**	P	**P**	**16 41 56.5**	**-0.5**
TIXI				IAmb	IAmb	16 42 00.1	
	comp=Z,5.7nm,1.4s						
MBWA	**Marble Bar**	**51.36**	**162**	P	**P**	**16 42 45.6**	**+1.2**
MBWA				IAmb	IAmb	16 43 26.4	
	comp=Z,12nm,1.4s						
PSA00	**Pilbara Seismi**	**51.79**	**162**	P	**P**	**16 42 46.1**	**-1.5**
RAYN	**Ar Rayn**	**53.03**	**279**	P	**P**	**16 42 57.2**	**+0.1**
RAYN				IAmb	IAmb	16 42 58.1	
	comp=Z,3.4nm,0.9s						
SMY	**Shemya**	**55.63**	**44**	P	**P**	**16 43 14.9**	**-0.5**
WRA	**Warramunga Arr**	**55.94**	**146**	P	**P**	**16 43 18.3**	**+0.3**
	comp=Z,1.7nm,1.0s,baz=329,slow=7.5,SNR=2.1						
	comp=Z,1.7nm,1.0s						
WB2	**Warramunga Arr**	**55.94**	**146**	P	**P**	**16 43 17.8**	**-0.3**
WB2				IAmb	IAmb	16 43 49.5	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,6.9nm,1.2s						
WR0	Warramunga Arr	56.05	146	P	P	16 43 19.6	+0.8
WR0				IAmb	IAmb	16 43 26.0	
	comp=Z,14nm,1.4s						
ASAR	Alice Springs	58.91	149	P	P	16 43 39.9	+0.9
	comp=Z,0.8nm,0.6s,baz=341,slow=8.3,SNR=1.6						
	comp=Z,0.8nm,0.6s						
GHAJ	Ghor Haditha	59.15	291	P	P	16 43 41.0	+0.4
GHAJ				IAmb	IAmb	16 43 58.2	
	comp=Z,4.5nm,0.8s						
KEV	Kevo	59.41	337	P	P	16 43 41.3	-0.5
AKASG	Malin Array Be	59.64	314	P	P	16 43 43.7	0.0
	comp=Z,0.4nm,0.5s,baz=67,slow=7.2,SNR=4.2						
	comp=Z,0.4nm,0.5s						
FINES	FINESS Array B	60.11	327	P	P	16 43 47.3	+0.6
FINES	FINESS Array B	60.11	327	P	P	16 43 46.7	-0.1
	comp=Z,0.8nm,0.6s,baz=94,slow=9.2,SNR=2.0						
	comp=Z,0.8nm,0.6s						
ELL	Elmali	62.16	299	P	P	16 44 01.4	+0.2
C16K	Lisburne Hills	63.91	24	P	P	16 44 12.6	+0.5
C16K				IAmb	IAmb	16 44 29.5	
	comp=Z,21nm,1.4s						
D19K	Kuna River	66.45	24	P	P	16 44 28.7	0.0
D19K				IAmb	IAmb	16 45 04.9	
	comp=Z,7.8nm,1.4s						

IDC 25 16:35:46.7±2.6**, 17°.05S**×**178°.61W, h545**^{km}±21^{km}**, mb2.9**/4**, mbtmp3.7**/5**, Error ellipse: s-maj=119.0km s-min=26.1km az=152.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.26	257	P	P	16 37 03.1	0.0
	19nm,0.7s,baz=125,slow=11,SNR=8.8						
WRA	Warramunga Arr	44.60	259	P	P	16 43 10.9	-0.2
	0.4nm,0.6s,baz=91,slow=8.4,SNR=1.5						
	0.4nm,0.6s						
ASAR	Alice Springs	44.84	253	P	P	16 43 12.8	-0.1
	3.9nm,0.5s,baz=89,slow=8.3,SNR=18						
ASAR				PcP	PcP	16 44 42.5	-0.5
	0.4nm,0.5s,baz=100,slow=5.1,SNR=1.0						
	3.9nm,0.5s						
ILAR	Eielson Array	85.10	13	P	P	16 47 24.6	-0.1
	0.3nm,0.6s,baz=191,slow=8.3,SNR=2.6						
	0.3nm,0.6s						
TXAR	Lajitas Array	85.70	58	P	P	16 47 28.6	0.0
	0.3nm,0.7s,baz=228,slow=5.7,SNR=3.6						
	0.3nm,0.7s						

IDC ***25*** *16:35:58.6±0.9, 32°.32S×178°.52W, h0^{km}, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=38.6km s-min=29.8km az=59.0*

WEL ***25*** *16:35:59.6±0.8, 33°S±6°×17°8W±1°4, h33^{km}, M4.4/9, mB4.8/6, ML4.9/13, MLv4.6/9, Mw(mB)4.1/6, Error ellipse: s-maj=19.5km s-min=3.9km az=109.3, confirmed*

NEIC ***25*** *16:36:03.9±0.9, 32°.2S±0°.1×178°.4W±0°.1, h35^{km}±2^{km}, mb4.4/6, Error ellipse: s-maj=23.2km s-min=15.8km az=33.0*

ISC 25 16:36:00.5±0.8**, 32°.95S**±0°.08×**177°.9W**±0°.1**, h35**^{km}**, n49, σ1^{s}36**/58**, mb4.2**/9**, 5D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.68	360	P	Pn	16 36 53.1	-1.8
GLKZ				S	Sn	16 37 34.8	-2.3
RAO	Raoul Island	3.69	360	Pn	Pn	16 36 48.7	-6.4
MXZ	Matakaoa Point	5.54	213	P	Pn	16 37 20.1	-0.4
MXZ				S	Sn	16 38 23.6	+0.6
WMGZ	Waiomatatini S	5.71	211	P	Pn	16 37 23.0	+0.2
WMGZ				S	Sn	16 38 29.0	+1.9
PKGZ	Pakihiroa	5.89	213	P	Pn	16 37 24.9	-0.5
PKGZ				S	Sn	16 38 30.5	-1.2
HAZ	Te Kaha	5.95	215	P	Pn	16 37 27.5	+1.4
HAZ				S	Sn	16 38 34.7	+1.8
PUZ	Puketiti	5.99	210	P	Pn	16 37 25.2	-1.5
PUZ				S	Sn	16 38 34.4	+0.4
RUGZ	Raukumara Rang	6.16	215	P	Pn	16 37 29.3	+0.1
RUGZ				S	Sn	16 38 38.8	+0.3
TWGZ	Tauwhareparae	6.20	212	P	Pn	16 37 28.2	-1.4
TWGZ				S	Sn	16 38 39.9	+0.7
CNGZ	Carnagh Statio	6.36	209	P	Pn	16 37 31.1	-0.7
CNGZ				S	Sn	16 38 43.4	+0.3
TKGZ	Te Karaka	6.47	211	P	Pn	16 37 34.4	+1.1
TKGZ				S	Sn	16 38 46.1	+0.3
MWZ	Matawai	6.53	213	P	Pn	16 37 32.4	-1.8
MWZ				S	Sn	16 38 47.5	+0.1
URZ	Urewera	6.67	216	Pn	Pn	16 37 36.6	+0.6
	2.2nm,0.3s,baz=264,slow=3.8,SNR=34						
URZ				Sn	Sn	16 38 48.8	-1.9
	8.1nm,0.3s,baz=217,slow=11,SNR=7.3						
URZ	Urewera	6.67	216	P	Pn	16 37 36.5	+0.5
URZ				S	Sn	16 38 48.9	-1.9
RAGZ	Rawiri	6.71	213	P	Pn	16 37 37.7	+1.1
RAGZ				S	Sn	16 38 51.5	-0.4
RIGZ	Rimuhau	6.73	210	P	Pn	16 37 36.5	-0.4
RIGZ				S	Sn	16 38 52.6	+0.2
SNGZ	Shannon Statio	6.98	212	P	Pn	16 37 38.7	-1.6
SNGZ				S	Sn	16 38 59.0	+0.6
RTZ	Ruatahuna	7.01	215	P	Pn	16 37 39.4	-1.4
RTZ				S	Sn	16 38 58.4	-0.9
WCZ	Waipu Caves	7.06	243	P	Pn	16 37 46.7	+5.3
RAHZ	Arahi	7.20	213	P	Pn	16 37 44.6	+1.2
RAHZ				S	Sn	16 39 03.5	-0.4
MTHZ	Maungataniwha	7.26	214	P	Pn	16 37 45.2	+1.0
MTHZ				S	Sn	16 39 05.5	+0.1
OUZ	Omahuta	7.40	250	P	Pn	16 37 48.1	+2.0
NMHZ	Naumai	7.48	213	P	Pn	16 37 49.0	+1.9
NMHZ				S	Sn	16 39 10.1	-0.6
MRZ	Mangatainoka R	9.29	212		Pn	16 38 07.5	-4.5
KHZ	Kahutara	11.62	213	Pn	Pn	16 38 42.8	-1.0
RAR	Rarotonga	19.90	59	P	Pn	16 40 31.9	+1.0
RAR				IAmb	IAmb	16 40 39.9	
	comp=Z,33nm,0.9s						
PPTF	Pamatai, Papee	29.72	66	P	P	16 42 07.6	+4.0
ASAR	Alice Springs	43.11	270	P	P	16 43 56.5	-1.1
	comp=Z,1.5nm,0.5s,baz=110,slow=7.6,SNR=7.5						
	comp=Z,1.5nm,0.5s						
WRA	Warramunga Arr	44.33	275	P	P	16 44 06.0	-1.4
WRA	Warramunga Arr	44.33	275	P	P	16 44 06.2	-1.3
	comp=Z,3.2nm,0.6s,baz=116,slow=7.6,SNR=11						
	comp=Z,3.2nm,0.6s						
WB0	Warramunga Arr	44.36	275	P	P	16 44 06.4	-1.3
WB0				IAmb	IAmb	16 44 23.2	
	comp=Z,7.3nm,0.8s						
FITZ	Fitzroy Crossi	52.48	272	P	P	16 45 09.2	-1.0
FITZ				IAmb	IAmb	16 45 09.6	
	comp=Z,1.4nm,0.9s						
FITZ	Fitzroy Crossi	52.48	272	S	P	16 45 08.8	-1.4
	comp=Z,2.4nm,0.7s,baz=128,slow=18,SNR=3.5						
QSPA	South Pole Qui	57.16	180	P	P	16 45 50.8	+7.2
	comp=Z,0.6nm,0.8s,baz=9.1,slow=6.3,SNR=6.7						
	comp=Z,0.6nm,0.8s						
TROLL	Troll, Antarti	75.33	180	⇓P	P	16 47 48.8	+8.9
	comp=Z,68nm,0.5s						
SNAA	Sanae	75.61	178	⇓P	P	16 47 49.8	+8.4
	comp=Z,20nm,0.6s						
SNAA	Sanae	75.61	178	P	P	16 47 48.8	+7.3
SNAA				IAmb	IAmb	16 48 31.7	
	comp=Z,4.5nm,1.5s						
SNAA	Sanae	75.61	178	P	P	16 47 49.5	+8.1
	comp=Z,0.8nm,0.7s,baz=184,slow=13,SNR=5.6						
	comp=Z,0.8nm,0.7s						
VNA3	Neumayer Olymp	75.76	176	⇓P	P	16 47 50.9	+8.6
	comp=Z,3.3nm,0.6s						
VNA2	Neumayer--Watz	76.19	177	⇓P	P	16 47 53.0	+8.3
	comp=Z,1.5nm,0.6s,baz=222,slow=2.2						
VNA1	Neumayer--Stat	76.42	176	⇓P	P	16 47 53.9	+7.9
	comp=Z,3.4nm,0.8s						
BVAR	Borovoye Array	128.26	314	PKP	PKiKP	16 55 05.0	+1.7
	comp=Z,0.4nm,0.6s,baz=107,slow=1.5,SNR=3.7						
FINES	FINESS Array B	147.56	339	PKPbc	PKPab	16 55 42.0	-0.4
	comp=Z,4.9nm,0.9s,baz=62,slow=4.5,SNR=12						
NB2	NORSAR Subarra	151.28	351	PKP	PKiKP	16 55 52.0	+1.9
	comp=Z,0.5nm,0.7s,baz=17,slow=2.6						
NOA	NORSAR Array B	151.28	351	PKPbc	PKiKP	16 55 51.3	+1.2
	comp=Z,0.8nm,0.8s,baz=14,slow=4.1,SNR=3.8						
HFS	Hagfors	151.75	348	PKPbc	PKiKP	16 55 51.9	+0.8
	comp=Z,1.7nm,0.6s,baz=130,slow=2.3,SNR=5.2						
MMAI	Mount Meron Ar	152.12	279	PKPbc	PKiKP	16 55 54.5	+1.7
	comp=Z,2.0nm,0.6s,baz=112,slow=2.2,SNR=3.6						
AKASG	Malin Array Be	153.34	320	PKPbc	PKiKP	16 55 55.9	+1.3
	comp=Z,0.3nm,0.4s,baz=45,slow=3.1,SNR=4.2						
BRTR	Keskin Array B	153.80	294	PKPbc	PKiKP	16 55 57.5	+1.4
	comp=Z,0.7nm,0.5s,baz=129,slow=4.4,SNR=4.1						

IDC ***25*** *16:36:58.9±0.8, 2°.65S×138°.62E, h0^{km}, mb3.9/7, mbtmp3.9/10, ML3.9/3, MS3.3/5, Error ellipse: s-maj=21.7km s-min=20.4km az=86.0*

NEIC ***25*** *16:37:02.2±2.0, 2°.7S±0°.1×138°.64E±0°.06, h10^{km}±1^{km}, mb4.4/13, Error ellipse: s-maj=18.1km s-min=10.4km az=352.0*

ISC 25 16:37:01.2±0.7**, 2°.70S**±0°.08×**138°.64E**±0°.09**, h10**^{km}**, n33, σ1^{s}26**/31**, mb4.0**/10**, MS3.8**/3**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	2.08	85	Pn	Pn	16 37 36.9	+0.7
	12nm,0.3s,baz=232,slow=12,SNR=15						
JAY				Sn	Sn	16 38 02.2	+0.1
	6.6nm,0.3s,baz=110,slow=9.9,SNR=3.6						
JAY				LR	LR	16 38 13.3	
	comp=Z,73nm,21.1s,baz=244,slow=36						
	35nm,0.3s						
FAKI	Fak Fak	6.38	268	Pn	Pn	16 38 36.5	+1.1
COEN	Coen	12.05	158	Pn	Pn	16 39 54.5	+1.3
MTN	Manton Dam	12.52	216		Pn	16 40 00.3	+0.7
SOEI	Soe	15.90	243	P	P	16 40 49.9	+0.7
SOEI				IAmb	IAmb	16 41 18.1	
	comp=Z,31nm,0.8s						
KNRA	Kununurra	16.15	216	Pn	Pn	16 40 49.8	+1.3
KNRA				IAmb	IAmb	16 41 00.3	
	comp=Z,12nm,0.8s						
BATI	Baumata	16.63	243	Pn	P	16 40 58.8	+1.6
	comp=Z,5.8nm,0.3s,baz=120,slow=2.3,SNR=11						
GUMO	Guam	17.33	21	LR	LR	16 47 40.2	
	comp=Z,32nm,18.8s,baz=140,slow=37						
WB0	Warramunga Arr	17.46	193	Pn	Pn	16 41 04.4	-0.6
WB0				IAmb	IAmb	16 41 12.9	
	comp=Z,11nm,0.9s						
WR8	Warramunga Arr	17.62	193	Pn	Pn	16 41 06.2	-0.9
WRA	Warramunga Arr	17.64	193	Pn	Pn	16 41 06.7	-0.7
WRA	Warramunga Arr	17.64	193	P	Pn	16 41 06.6	-0.7
	comp=Z,0.6nm,0.3s,baz=15,slow=12,SNR=13						
	comp=Z,1.1nm,0.3s						
FITZ	Fitzroy Crossi	19.91	219	P	P	16 41 32.8	-0.4
FITZ	Fitzroy Crossi	19.91	219	P	P	16 41 32.1	-1.1
	comp=Z,0.4nm,0.3s,baz=58,slow=7.3,SNR=7.5						
	comp=Z,2.1nm,1.0s						
AS31	Alice Springs	21.34	192		P	16 41 48.4	-0.2
AS31				IAmb	IAmb	16 41 56.4	
	comp=Z,6.6nm,0.7s						
ASAR	Alice Springs	21.34	192		P	16 41 47.9	-0.8
ASAR	Alice Springs	21.34	192	P	P	16 41 48.4	-0.3
	comp=Z,5.4nm,0.7s,baz=15,slow=9.6,SNR=15						
ASAR				S	S	16 45 41.9	-4.0
	comp=Z,2.3nm,0.9s,baz=14,slow=25,SNR=6.4						
	comp=Z,5.4nm,0.7s						
NWAO	Narrogin (SRO)	36.15	211	LR	LR	16 59 56.8	
	comp=Z,163nm,19.8s,baz=262,slow=38						
CMAR	Chiang Mai Arr	44.37	300	P	P	16 45 11.7	-0.6
	comp=Z,0.5nm,0.8s,baz=114,slow=6.5,SNR=4.7						
	comp=Z,0.5nm,0.8s						
RTZ	Ruatahuna	49.99	141	P	P	16 45 56.4	+0.4
ODZ	Otahua Downs	50.69	151	P	P	16 46 01.5	+0.5
CASY	Casey	66.47	192	P	P	16 47 52.3	+1.7
CASY				IAmb	IAmb	16 47 60.0	
	comp=Z,12nm,1.5s						
MKAR	Makanchi Array	69.74	322	P	P	16 48 12.1	+0.5
MKAR	Makanchi Array	69.74	322	P	P	16 48 11.2	-0.4
	comp=Z,1.1nm,0.9s,baz=106,slow=7.1,SNR=8.4						
	comp=Z,1.1nm,0.9s						
KURBB	Kurchatov Arra	73.68	325	P	P	16 48 34.6	-0.6
	comp=Z,0.7nm,0.8s,baz=111,slow=7.0,SNR=2.2						
	comp=Z,0.7nm,0.8s						
BVAR	Borovoye Array	79.26	325	P	P	16 49 05.2	-1.6
	comp=Z,0.9nm,0.7s,baz=109,slow=8.0,SNR=5.8						
	comp=Z,0.9nm,0.7s						
E19K	Redstone River	82.83	20	P	P	16 49 25.7	+0.1
E19K				IAmb	IAmb	16 49 30.9	
	comp=Z,2.4nm,0.9s						
ILAR	Eielson Array	85.86	24	P	P	16 49 38.1	-2.9
	comp=Z,0.6nm,0.8s,baz=256,slow=3.9,SNR=4.6						
	comp=Z,0.6nm,0.8s						
QSPA	South Pole Qui	87.24	180	P	P	16 49 47.8	-0.1
QSPA				IAmb	IAmb	16 49 49.0	
	comp=Z,7.8nm,1.4s						
QSPA	South Pole Qui	87.24	180	P	P	16 49 47.5	-0.4
	comp=Z,2.0nm,0.9s,baz=344,slow=0.7,SNR=8.8						
	comp=Z,2.0nm,0.9s						
G29M	Pine Creek	89.85	23	P	P	16 50 00.4	+0.3
SPITS	Spitsbergen Ar	98.96	350	LR	LR	17 36 17.8	
	comp=Z,13nm,19.7s,baz=336,slow=36						
OBN	Obninsk	99.11	325	LR	LR	17 36 28.3	
	comp=Z,65nm,21.9s,baz=333,slow=36						

IDC 25 16:56:53.3±4.0**, 2°.91S**×**137°.48E, h0**^{km}**, mb3.5**/2**, mbtmp3.6**/3**, ML3.7**/1**, Error ellipse: s-maj=157.0km s-min=19.1km az=89.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	17.20	190	P	Pn	17 00 54.8	-0.4
	0.3nm,0.3s,baz=12,slow=12,SNR=9.7						
WRA				S	Sn	17 04 09.5	+2.1
	0.6nm,0.8s,baz=9.2,slow=22,SNR=2.7						
	1.3nm,0.8s						
ASAR	Alice Springs	20.92	189	P	Pn	17 01 39.0	-1.2
	1.6nm,0.6s,baz=21,slow=11,SNR=15						
ASAR				S	S	17 05 32.2	+0.2
	1.0nm,1.1s,baz=13,slow=25,SNR=3.1						
	1.6nm,0.6s						
MKAR	Makanchi Array	69.20	323	P	P	17 08 01.8	-0.2
	0.6nm,1.0s,baz=130,slow=6.6,SNR=3.9						
	0.6nm,1.0s						

UPP ***25*** *17:00:41.9±0.1, 67°.06N×20°.96E, h0^{km}, ML1.9, Unknown*

HEL ***25*** *17:00:41.9±0.3, 67°.04N×20°.78E, h0^{km}, ML1.9, Explosion*

IDC ***25*** *17:00:42.4±1.4, 67°.09N×20°.99E, h0^{km}, mbtmp2.8/3, ML1.9/3, Error ellipse: s-maj=22.3km s-min=9.3km az=99.0*

BER ***25*** *17:00:43.2±2.3, 66°.84N×21°.41E, h0^{km}, ML1.7, Suspected explosion*

ISC 25 17:00:42.1±0.7**, 67°.07N**±0°.02×**20°.95E**±0°.02**, h0**^{km}**, n50, σ0^{s}91**/80**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	Dundret	0.16	290	P	Pg	17 00 45.3	+0.2
DUNU				S	Sg	17 00 47.8	+0.6
MASU	Masugnsbyn	0.56	46	P	Pg	17 00 52.8	-0.1
MASU				S	Sg	17 01 00.6	+0.3
ERTU	Ertsjaerv	0.71	136	P	Pg	17 00 55.2	-0.5
ERTU				S	Sg	17 01 04.6	-0.2
ERTU	Ertsjaerv	0.71	136	PG	Pg	17 00 54.9	-0.7
ERTU				SB	Sg	17 01 05.0	+0.2
PAJU	Pajala	0.85	92	P	Pg	17 00 57.7	-0.6
HARU	Harads	0.91	179	P	Pg	17 00 58.8	-0.6
KUA	Kurravaara	0.92	345	P	Pg	17 00 59.0	-0.8
KUA				S	Sg	17 01 12.0	+0.3
RATU	Laukkuluspa	0.93	326	P	Pg	17 00 59.1	-0.7
RATU				S	Sg	17 01 11.9	+0.2
SALU	Saltoluokta	1.00	289	P	Pg	17 01 00.8	-0.5
SALU	Saltoluokta	1.00	289	*e*P	Pg	17 01 00.7	-0.5
SALU				*e*S	Sg	17 01 14.8	+0.6
LANU	Lannavaara	1.06	22	PG	Pg	17 01 02.3	-0.2
KLF	Kolari	1.19	80	PG	Pg	17 01 04.0	-0.8
KLF				MSG		17 01 20.0	
	comp=Z,9.3nm,0.2s						
KLF				SG	Sg	17 01 20.8	+0.6
KOVU	Salmi	1.20	346	P	Pg	17 01 04.1	-1.0
KALU	Kalix	1.55	140	P	Pn	17 01 10.3	-0.6
KALU	Kalix	1.55	140	PG	Pn	17 01 10.2	-0.6
KALU				SN	Sn	17 01 31.7	+0.1
SJUU	Sjulsmark	1.59	170	P	Pn	17 01 11.0	-0.4
TOF	Tornio	1.67	125	PG	Pn	17 01 12.4	-0.1
TOF				MSG		17 01 33.2	
	comp=Z,6.4nm,0.2s						
TOF				SG	Sn	17 01 34.8	+0.2
HEF	Hetta	1.70	36	*e*P	Pn	17 01 12.6	-0.3
HEF				*e*S	Sn	17 01 35.6	+0.3
HEF	Hetta	1.70	36	PG	Pn	17 01 12.6	-0.3
	baz=220						
HEF				MSG		17 01 34.3	
	comp=Z,8.4nm,0.2s						
HEF				SG	Sb	17 01 36.1	+0.1
KIF	Kilpisjarvi	1.95	358	*e*P	Pb	17 01 17.6	-0.7
KIF				*e*S	Sg	17 01 44.3	-0.3
KIF	Kilpisjarvi	1.95	358	PG	Pb	17 01 17.7	-0.7
KIF				MSG		17 01 41.5	
	comp=Z,17nm,0.2s						
KIF				SG	Sg	17 01 44.4	-0.2
RNF	Rovaniemi	2.05	101	PB	Pn	17 01 18.6	+0.8
RNF				SG	Sb	17 01 46.8	+0.6
I37NO	I37NO	2.20	337	I	I	17 14 42.0	
	comp=Z,0.2nm,0.4s,baz=157,slow=330,SNR=2.5						
FAUS	Fauske	2.23	281	*e*P	Pb	17 01 21.9	-1.2
FAUS				*e*S	Sg	17 01 52.7	-0.8
FAUS				IAML		17 01 54.8	
	comp=Z,7.1nm,0.2s						
STEI	Steigen	2.36	294	*e*P	Pn	17 01 23.1	+1.1
STEI				*e*S	Sg	17 01 56.6	-1.3
STEI				IAML		17 02 03.5	
	comp=Z,3.8nm,0.3s						
JETT	Jettan, Norway	2.51	356	*e*P	Pb	17 01 27.5	-0.5
JETT				*e*S	Sb	17 01 59.0	-0.4
JETT				IAML		17 02 07.1	
	comp=Z,18nm,0.3s						
RANF	Ranua	2.56	112	PN	Pn	17 01 25.2	+0.4
	baz=296						
RANF				SG	Sb	17 02 01.4	+0.5
TRO	Tromso	2.69	345	SG	Sb	17 02 05.2	+0.9
OBF4	Vikkela, Lumij	2.83	141	PG	Pb	17 01 33.8	+0.4
OBF4				MSG		17 02 05.8	
	comp=Z,2.1nm,0.2s						
OUL	Oulu	2.83	132	PB	Pn	17 01 30.1	+1.6
OUL				SG	Sg	17 02 11.4	-1.6
OBF0	Syolatti, Pyha	2.91	151	PB	Pn	17 01 31.9	+2.3
OBF0				MSG		17 02 07.9	
	comp=Z,2.1nm,0.2s						
OBF8	Ulkokalla	2.93	158	PB	Pn	17 01 31.9	+2.1
OBF8				MSG		17 02 08.4	
	comp=Z,4.1nm,0.2s						
ARA0	ARCESS Array S	3.00	32	*e*P	Pn	17 01 31.4	+0.5
ARA0				*e*S	Sn	17 02 08.1	+0.6
ARA0	ARCESS Array S	3.00	32	PN	Pn	17 01 31.7	+0.8
ARA0				SB	Sb	17 02 13.0	-0.5
ARCES	ARCESS Array B	3.00	32	Pn	Pn	17 01 31.1	+0.3
	comp=Z,0.2nm,0.3s,baz=214,slow=14,SNR=20						
ARCES				Sn	Sn	17 02 07.7	+0.2
	comp=Z,0.4nm,0.3s,baz=208,slow=23,SNR=7.6						
	comp=Z,0.6nm,0.2s						
VAGH	Vaagaholmen	3.05	267	*e*P	Pn	17 01 33.0	+1.5
RAJF	Raja-Jooseppi	3.13	60	PB	Pn	17 01 34.7	+2.1
RAJF				SG	Sg	17 02 21.2	-1.5
UMAU	Umeaa	3.20	182	PB	Pn	17 01 34.1	+0.6
KU2	Taivalkoski	3.23	112	PN	Pn	17 01 34.8	+0.8
STOK	Stokkvaagen	3.24	261	*e*P	Pn	17 01 34.7	+0.6
LEIR	Leirfjorden	3.27	257	*e*P	Pn	17 01 36.3	+1.8
VRF	Varrio	3.41	74	PN	Pn	17 01 38.5	+2.0
	baz=259						
VRF				SB	Sb	17 02 25.4	+0.1
OLKF	Oulanka, Finla	3.44	99	PN	Pn	17 01 37.8	+0.9
OLKF				SN	Sn	17 02 20.2	+2.0
MSF	Maaselka	3.44	106	PN	Pn	17 01 37.8	+0.9
MSF				SG	Sb	17 02 27.2	+1.0
KEV	Kevo	3.51	37	*e*P	Pn	17 01 39.0	+1.3
KEV				*e*S	Sn	17 02 19.7	-0.2
KEV	Kevo	3.51	37	PN	Pn	17 01 38.1	+0.3
KEV				SN	Sn	17 02 20.2	+0.4
KU6	Riekki	3.72	102	PN	Pn	17 01 41.7	+0.9
KU6				SG	Sg	17 02 40.5	-1.0
KU1	Kurvinen	3.79	109	PN	Pn	17 01 42.6	+1.0
FINES	FINESS Array B	6.07	156	Pn	Pn	17 02 13.6	+0.7
	comp=Z,0.1nm,0.3s,baz=347,slow=12,SNR=1.7						
FINES				Sn	Sn	17 03 22.1	-0.9
	comp=Z,0.3nm,0.3s,baz=348,slow=22,SNR=6.1						
FINES				Lg	Lg	17 03 55.6	
	comp=Z,0.2nm,0.3s,baz=348,slow=26,SNR=2.1						
	comp=Z,1.2nm,0.9s						
HFS	Hagfors	7.67	208	Pn	Pn	17 02 33.8	-1.1
	comp=Z,0.1nm,0.3s,baz=28,slow=13,SNR=1.9						
	comp=Z,0.4nm,0.5s						

IDC ***25*** *17:08:18.7±2.3, 35°.32N×140°.45E, h42^{km}±19^{km}, mb3.7/15, mbtmp3.9/18, ML3.1/2, MS2.8/3, Error ellipse: s-maj=21.1km s-min=12.5km az=67.0*

NIED ***25*** *17:08:20.4, 35°.41N×140°.40E, h57^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}6.71; $M_{\theta\theta}$-0.36; $M_{\phi\phi}$-6.36; $M_{r\theta}$0.79; $M_{\theta\phi}$0.74; $M_{\phi r}$6.43; Fault plane solution: $M_0$9.23000×10^{14} NP1: ϕ_s165.00000°, δ24.00000°, λ74.00000°. NP2: ϕ_s3.00000°, δ67.00000°, λ97.00000°.*

JMA ***25*** *17:08:20.4±0.2, 35°.4N±0°.5×140°.4E±0°.8, h57^{km}±1^{km}, MV3.4/38, KUJUKURI COAST BOSO PEN*

JMA Felt II J1 at KUJUKURI COAST BOSO PEN .

ISC 25 17:08:20.5±0.7**, 35°.30N**±0°.05×**140°.43E**±0°.06**, h63**^{km}±5^{km}**, n40, σ1^{s}60**/38**, mb3.8**/15**, 5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTR	Katsuura	0.17	212	P	Pn	17 08 30.0	-0.1
KTR				S	Sn	17 08 37.1	0.0
JKUC	kamogawauchiur	0.23	234	P	Pn	17 08 30.2	-0.2
JKUC				*e*S	Sn	17 08 37.5	-0.1
BSO4	Boso 4	0.31	193	P	Pn	17 08 31.5	+0.7
BSO4				*e*X		17 08 40.5	
JSMT	Sammumatsuo	0.35	3	P	Pn	17 08 30.2	-1.0
JSMT				*e*S	Sn	17 08 37.8	-1.3
BSO3	Boso 3	0.50	172	P	Pn	17 08 33.2	+0.9
BSO3				*e*X		17 08 43.8	
BSO2	Boso 2	0.61	153	*e*X		17 08 47.0	
BSO1	Boso 1	0.79	145	P	Pn	17 08 36.2	+0.8
JYT	Yasato	0.95	349	P	Pn	17 08 36.3	-1.7
JIM2	Oshima 3	1.00	235	⇓P	Pn	17 08 38.1	-0.6
JIM2				⇓S	Sn	17 08 51.4	-0.8
JOD2	Odawara 2	1.09	269	⇓*i*P	Pn	17 08 39.3	-0.6
JOD2				⇓*e*S	Sn	17 08 53.0	-1.4
JAG	Ashikaga	1.38	325	⇓*i*P	Pn	17 08 42.4	-1.2
MJAR	Matsushiro Arr	2.19	305	P	Pn	17 08 53.8	-0.8
	3.2nm,0.3s,baz=119,slow=8.6,SNR=76						
MJAR				S	Sn	17 09 17.8	-2.8
	19nm,0.4s,baz=176,slow=22,SNR=3.5						
	16nm,0.3s						
JNU	Nakatsue	8.20	257	LR	LR	17 13 50.3	
	comp=Z,52nm,18.5s,baz=56,slow=40						
JCJ	Chichijima	8.31	169	P	Pn	17 10 16.3	-2.1
	23nm,0.3s,baz=0.0,slow=0.0						
JCJ				S	Sn	17 11 44.2	-6.5
	baz=180,slow=0.0						
ASAJ	Asahikawa	8.97	10	P	Pn	17 10 24.6	-2.6
	0.3nm,0.3s,baz=210,slow=13,SNR=2.0						
	6.1nm,0.9s						
KSRS	Korea Array	10.31	286	P	Pn	17 10 47.4	+1.8
	2.4nm,1.0s,baz=102,slow=13,SNR=7.1						
USRK	Ussuriysk Ar.	11.01	326	LR	LR	17 15 16.7	
	comp=Z,26nm,18.5s,baz=158,slow=38						
JOW	Kunigami	13.39	234	LR	LR	17 16 02.9	
	comp=Z,96nm,19.5s,baz=160,slow=35						
H11N2	WAKE ISLAND Hy	28.02	117	T	T	17 43 30.2	
	baz=309,slow=75,SNR=71						
H11N1	WAKE ISLAND Hy	28.02	117	T	T	17 43 29.2	
	baz=309,slow=75,SNR=88						
H11N3	WAKE ISLAND Hy	28.03	117	T	T	17 43 34.2	
	baz=309,slow=75,SNR=63						
H11S3	WAKE ISLAND Hy	28.66	119	T	T	17 44 05.2	
	baz=312,slow=76,SNR=34						
H11S1	WAKE ISLAND Hy	28.66	119	T	T	17 44 03.4	
	baz=312,slow=76,SNR=44						
H11S2	WAKE ISLAND Hy	28.67	119	T	T	17 44 14.7	
	baz=312,slow=76,SNR=42						
CMAR	Chiang Mai Arr	40.30	256	P	P	17 15 52.1	+0.3
	0.3nm,0.5s,baz=67,slow=8.7,SNR=2.7						
	0.3nm,0.5s						
ZALV	Zalesovo Beam	42.52	314	P	P	17 16 10.1	+0.5
	0.6nm,0.4s,baz=103,slow=7.2,SNR=4.8						
ZALV				PcP	PcP	17 18 01.6	+0.5
	0.7nm,0.5s,baz=72,slow=4.7,SNR=2.5						
	0.6nm,0.4s						
MKAR	Makanchi Array	44.39	303	P	P	17 16 25.2	+0.5
	0.5nm,0.6s,baz=86,slow=9.0,SNR=6.8						
	0.5nm,0.6s						
KURBB	Kurchatov Arra	46.46	309	P	P	17 16 41.1	+0.1
	2.2nm,0.3s,baz=82,slow=7.5,SNR=5.1						
	2.2nm,0.3s						
BVAR	Borovoye Array	51.16	313	P	P	17 17 17.0	0.0

	0.4nm,0.3s,baz=85,slow=8.8,SNR=2.6						
	0.4nm,0.3s						
ILAR	Eielson Array	51.39	32	P	P	17 17 17.8	-0.7
	0.6nm,0.8s,baz=277,slow=9.1,SNR=5.1						
	0.6nm,0.8s						
FITZ	Fitzroy Crossi	54.92	197	P	P	17 17 45.2	+0.2
	1.7nm,0.6s,baz=6.7,slow=7.3,SNR=6.0						
	1.7nm,0.6s						
WRA	Warramunga Arr	55.24	187	P	P	17 17 48.2	+1.0
	1.5nm,0.4s,baz=1.4,slow=7.6,SNR=21						
	1.5nm,0.4s						
ARTI	Arti	57.25	319	P	P	17 18 01.6	+0.4
	4.6nm,0.6s,baz=156,slow=2.4,SNR=9.9						
	4.6nm,0.6s						
ASAR	Alice Springs	58.97	187	P	P	17 18 13.6	0.0
	0.3nm,0.4s,baz=4.0,slow=6.7,SNR=14						
	0.3nm,0.4s						
FINES	FINESS Array B	69.98	332	P	P	17 19 24.9	0.0
	0.9nm,0.5s,baz=35,slow=4.7,SNR=5.8						
	0.9nm,0.5s						
AKASG	Malin Array Be	75.18	322	P	P	17 19 55.6	-0.4
	0.4nm,0.3s,baz=50,slow=5.8,SNR=5.0						
	0.4nm,0.3s						
NB2	NORSAR Subarra	75.47	337	P	P	17 19 58.3	+0.7
	comp=Z,0.6nm,0.8s,baz=40,slow=6.2						
NOA	NORSAR Array B	75.47	337	P	P	17 19 58.0	+0.3
	comp=Z,1.1nm,0.8s,baz=39,slow=5.9,SNR=4.7						
	comp=Z,1.1nm,0.8s						
BRTR	Keskin Array B	79.40	311	P	P	17 20 21.9	+1.8
	comp=Z,0.5nm,0.6s,baz=70,slow=5.4,SNR=3.6						
	comp=Z,0.5nm,0.6s						
PDAR	Pinedale Array	79.46	45	P	P	17 20 22.1	+1.7
	comp=Z,0.2nm,0.5s,baz=304,slow=6.3,SNR=2.2						
	comp=Z,0.2nm,0.5s						

IDC 25 17:10:13.9±1.5**,3°.47S×138°.96E,h0^{km},mb3.5**/2**,**
mbtmp3.9/4**,ML3.7**/2**,Error ellipse: s-maj=38.5km**
s-min=21.8km az=137.0,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	1.98	61	Pn	Pn	17 10 48.4	-0.4
	4.2nm,0.3s,baz=232,slow=11,SNR=34						
JAY				Sn	Sb	17 11 16.6	+0.4
	1.1nm,0.3s,baz=192,slow=20,SNR=1.7						
BATI	Baumata	16.59	245	Pn	Pn	17 14 06.5	-1.6
	1.7nm,0.3s,baz=59,slow=12,SNR=3.1						
	22nm,0.8s						
WRA	Warramunga Arr	16.98	195	Pn	Pn	17 14 13.8	+0.8
	0.1nm,0.3s,baz=21,slow=10,SNR=8.9						
	0.9nm,0.6s						
ASAR	Alice Springs	20.66	193	P	P	17 14 55.7	+0.2
	1.2nm,0.6s,baz=21,slow=9.9,SNR=23						
	1.2nm,0.6s						
MKAR	Makanchi Array	70.54	322	P	P	17 21 30.9	+0.1
	0.4nm,0.8s,baz=134,slow=6.2,SNR=3.0						
	0.4nm,0.8s						

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*SDD **25** 17:20:44.2±1.5,18°.33N×72°.44W,h31^{km}±24^{km},MD3.4,*
ML2.8,MW3.3
*OSPL **25** 17:20:50.2±6.2,18°.41N×72°.07W,h14^{km}±150^{km},ML2.2*
ISC 25 17:20:48.6±1.9**,18°.42N**±0°.05×**72°.14W**±0°.07**,h23**^{km}±4^{km}**,**
n13,σ1^{s}**13**/22**,Haiti region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAPH	Port-au-Prince	0.19	305	i P	Pb	17 20 54.2	+0.3
PAPH				eS	Sb	17 20 58.8	+1.4
JIDR	Jimani	0.28	74	ePg	Pb	17 20 54.9	-0.2
JIDR				IAML		17 21 03.0	
	comp=N,286nm,0.3s						
JIDR				eSg	Sn	17 21 03.2	+0.3
LODU1	El Espartillar	0.63	96	i P	Pb	17 21 00.0	-0.9
LODU1				eS	Sb	17 21 08.6	-0.8
LODU1				IAML		17 21 11.3	
	comp=Z,183nm,0.3s						
LOBH	Bahia de las A	0.72	139	i P	Pn	17 21 03.5	+0.1
PODR	Polo	0.85	107	eSg	Sn	17 21 17.8	+0.6
PODR				IAML		17 21 17.8	
	comp=N,874nm,0.3s						
PODR	Polo	0.85	107	i P	Pn	17 21 14.3	+9.0
PODR				eS	Sb	17 21 17.6	+1.8
LOVI	El Cajuil, Ovi	0.95	130	i P	Pn	17 21 06.9	+0.4
LOVI				eS	Sb	17 21 16.9	-1.7
LOVI				IAML		17 21 24.8	
	comp=Z,68nm,0.4s						
SDDR	Presa de Saban	0.98	55	ePg	Pn	17 21 06.1	-1.0
SDDR				eSg	Sn	17 21 22.1	+1.8
SDDR				IAML		17 21 22.9	
	comp=N,34nm,0.8s						
SDDR	Presa de Saban	0.98	55	i P	Pn	17 21 05.9	-1.2
SDDR				eS	Sb	17 21 18.9	-0.6
SDDR				IAML		17 21 28.9	
	comp=Z,24nm,1.2s						
ABDR	Alto Bandera	1.48	74	ePg	Pn	17 21 14.7	+0.5
ABDR				IAML		17 21 35.2	
	comp=N,32nm,1.4s						
ABDR				eSg	Sn	17 21 35.4	+2.3
BANI	BANI	1.69	90	ePg	Pn	17 21 17.3	+0.5
BANI				eSg	Sb	17 21 40.8	+0.9
BANI				IAML		17 21 53.2	
	comp=N,54nm,0.7s						
SODR	Sosua Marina B	1.99	48	ePg	Pn	17 21 21.0	+0.2
SODR				eSg	Sb	17 21 48.6	+0.2
SODR				IAML		17 21 51.2	
	comp=N,149nm,0.8s						
DR08	Loma La Naviza	2.08	74	ePg	Pn	17 21 21.4	-0.7
DR08				IAML		17 22 31.7	
	comp=N,270nm,0.1s						

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*AZER **25** 17:42:20.0,41°.84N×46°.13E,h10^{km},ml3.2*
*TIF **25** 17:42:19.6,42°.10N×46°.14E,h27^{km}*
*MOS **25** 17:42:20.6,42°.09N×46°.33E,h20^{km},MPVA4.3*
*DRS **25** 17:42:21.0,42°.10N×46°.23E,h18^{km}*
ISC 25 17:42:20.5±1.0**,42°.02N**±0°.02×**46°.17E**±0°.02**,h29**^{km}±9^{km}**,**
n72,σ2^{s}**28**/142**,3C,Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKTA	Zakatala	0.51	138	P	Pb	17 42 30.3	-0.8
ZKTA				S	Sb	17 42 38.0	-0.4
BTLR	Botlikh	0.64	4	i Pg	Pb	17 42 32.5	-0.8
BTLR				eSg	Sb	17 42 41.6	-0.4
XNZR	Khunzakh	0.66	38	i Pg	Pn	17 42 33.1	-0.9
XNZR				eSg	Sb	17 42 42.1	-0.3
GNBR	Gunib	0.70	58	i Pg	Pn	17 42 33.6	-0.8
GNBR				eSg	Sb	17 42 43.0	-0.5
KMKR	Kumukh	0.70	81	i Pg	Pb	17 42 33.8	-0.6
KMKR				eSg	Sb	17 42 43.6	-0.2
VSHL	Vashlovani	0.81	167	P	Pn	17 42 36.8	+0.8
VSHL				S	Sn	17 42 50.0	+2.9
DGRG	David-gareji	0.82	226	P	Pn	17 42 36.8	+0.6
DGRG				S	Sn	17 42 50.5	+3.1
UNCR	Uncukul	0.83	34	i Pg	Pn	17 42 35.8	-0.5
UNCR				eSg	Sn	17 42 47.0	-0.7
ARKR	Arakani	0.84	46	i Pg	Pn	17 42 36.1	-0.4
ARKR				eSg	Sn	17 42 47.4	-0.6
CHRG	Chargali	0.97	289	P	Pb	17 42 37.4	-1.4
CHRG				S	Sn	17 42 50.5	-0.7
KRNR	Karanay	0.97	34	ePg	Pn	17 42 37.8	-0.5
KRNR				eSg	Sb	17 42 50.4	-0.9
SHTL	Shatili	0.98	310	P	Pb	17 42 37.7	-1.3
SEAG	Tbilisi Sea	1.05	256	P	Pb	17 42 39.7	-0.3
SEAG				S	Sn	17 42 54.9	+1.9
BUJR	Buynaksk	1.06	41	ePg	Pb	17 42 39.4	-0.9
BUJR				eSg	Sn	17 42 53.5	+0.2
DLMR	Dylym	1.10	18	ePg	Pb	17 42 40.6	-0.3
DLMR				eSg	Sn	17 42 55.8	+1.6
URKR	Urkarakh	1.10	82	ePg	Pb	17 42 41.2	+0.2
URKR				eSg	Sn	17 42 56.6	+2.2
TBLG	Delisi	1.10	255	P	Pb	17 42 40.4	-0.6
TBLG				S	Sn	17 42 56.0	+1.6
SEKA	Sheki	1.12	136	P	Pb	17 42 40.4	-0.9
SEKA				S	Sn	17 42 56.0	+1.1
QZX	Qazax, Azerbai	1.13	212	P	Pb	17 42 40.7	-0.8
QZX				S	Sn	17 42 56.7	+1.6
GROC	Groznyy	1.21	347	ePg	Pb	17 42 43.7	+1.0
GROC				eSg	Sb	17 43 01.4	+3.4
AKT	Akhty	1.29	114	ePg	Pb	17 42 43.4	-0.8
AKT				eSg	Sb	17 43 01.4	+1.1
GDB	GEDABAY	1.34	194	P	Pn	17 42 43.2	-0.1
GDB				S	Sb	17 43 01.5	-0.3
MAK	Makhachkala	1.36	46	ePg	Pb	17 42 44.5	-0.9
MAK				eSg	Sb	17 43 02.5	+0.1
GANJ	Ganja	1.38	175	P	Pb	17 42 44.2	-1.5
GANJ				S	Sb	17 43 03.0	+0.1
KMGR	Komgaron	1.41	318	ePg	Pb	17 42 49.5	+3.3
KMGR				eSg	Sb	17 43 09.4	+5.6
MNGR	Mingechevir, A	1.43	151	P	Pb	17 42 46.2	-0.2
MNGR				S	Sb	17 43 05.7	+1.5
KZRT	Kazreti	1.47	245	P	Pn	17 42 44.1	-0.9
KZRT				S	Sb	17 43 04.3	-1.1
VLKR	Vladikavkaz	1.50	313	ePg	Pb	17 42 51.2	+3.5
VLKR				eSg	Sb	17 43 11.2	+4.8
KSMR	Kasumkent	1.53	105	ePg	Pb	17 42 47.3	-0.9
KSMR				eSg	Sb	17 43 07.8	+0.7
LACR	Lac	1.60	301	ePg	Pb	17 42 50.8	+1.3
LACR				eSg	Sb	17 43 13.7	+4.4
TRLG	Trialeti	1.62	253	P	Pb	17 42 47.8	-1.9
TRLG				S	Sb	17 43 09.8	-0.1
QSAR	Qusar	1.65	107	Pn	Pb	17 42 50.7	+0.5
QSAR				Sn	Sb	17 43 15.3	+4.7
QBL	Gabala	1.65	130	Pn	Pb	17 42 50.2	-0.1
QBL				Sn	Sb	17 43 12.7	+1.9
XNQ	Khinaliq	1.71	119	Pn	Pb	17 42 51.2	-0.2
XNQ				Sn	Sb	17 43 15.2	+2.7
BTKR	Batakoyurt	1.80	319	ePg	Pb	17 42 55.3	+2.4
BTKR				eSg	Sb	17 43 21.3	+6.3
ARNR	Ardon	1.81	310	ePg	Pb	17 42 55.2	+2.3
ARNR				eSg	Sb	17 43 20.5	+5.4
QUBA	Quba, Azerbaij	1.87	110	Pn	Pb	17 42 54.9	+1.0
QUBA				Sn	Sb	17 43 21.8	+4.9
ALIG	Mtskhetisjvari	1.88	273	P	Pb	17 42 52.1	-2.0
ALIG				S	Sb	17 43 16.7	-0.4
KORR	Kora	1.88	305	ePg	Pb	17 42 55.5	+1.3
KORR				eSg	Sb	17 43 22.0	+4.8
BRDA	Brd	1.92	156	Pn	Pb	17 42 54.0	-0.8
BRDA				Sn	Sb	17 43 20.8	+2.6
IML	Ismayilli	1.95	128	Pn	Pb	17 42 54.4	-0.9
IML				Sn	Sb	17 43 21.7	+2.4
TRKR	Terskaya	2.00	329	ePg	Pb	17 42 59.2	+3.0
TRKR				eSg	Sb	17 43 22.9	+2.3
AGDM	Agdam	2.04	159	Pn	Pb	17 42 55.0	-1.9
AGDM				Sn	Sb	17 43 23.0	+1.2
STDR	Stavd-Durt	2.05	312	ePg	Pb	17 42 59.8	+2.7
STDR				eSg	Sb	17 43 26.3	+4.2
BGD	Bogdanovka	2.07	249	P	Pb	17 42 55.1	-2.4
BGD				S	Sb	17 43 23.2	+0.4
GARIG	Gari	2.08	287	P	Pb	17 42 57.5	-0.1
GARIG				S	Sb	17 43 25.4	+2.3
AKH	Akhalkalaki	2.09	254	P	Pb	17 42 55.8	-2.1
AKH				S	Sb	17 43 23.8	+0.3
DIGR	Digorskoe uzhe	2.10	295	ePg	Pb	17 42 57.8	-0.3
DIGR				eSg	Sb	17 43 27.0	+3.2
LSNR	Lesken	2.13	307	ePg	Pb	17 43 01.5	+3.1
LSNR				i Sg	Sb	17 43 29.6	+5.1
PQL	Pirkuli	2.20	123	Pn	Pb	17 42 59.0	-0.7
PQL				Sn	Sb	17 43 30.1	+3.5
PRTR	Priterechnaya	2.21	322	ePg	Pb	17 42 60.0	+0.2
PRTR				eSg	Sb	17 43 28.6	+1.9
SIZA	Siyzn	2.26	114	Pn	Pb	17 43 01.2	+0.6
SIZA				Sn	Sb	17 43 32.6	+4.4
TKB	Tkibuli	2.38	279	P	Pn	17 42 59.1	+1.6
TKB				S	Sb	17 43 30.8	-0.8
ATGJ	Altiaghaj	2.39	118	Pn	Pb	17 43 01.8	-1.0
ATGJ				Sn	Sb	17 43 34.0	+2.2
NCK	Nalchik	2.40	309	ePn	Pb	17 43 02.1	-0.8
NCK				eSn	Sb	17 43 32.8	+0.7
HYR	Heyderabad	2.51	204	Pn	Pb	17 43 04.4	-0.4
HYR				Sn	Sb	17 43 38.9	+3.6
BLQ	Beylaqan	2.53	155	Pn	Pb	17 43 03.0	-2.2
BLQ				Sn	Sb	17 43 34.7	-1.2
SBZ	Shahbuz	2.66	190	Pg	Pb	17 43 06.9	-0.7
SBZ				Sg	Sb	17 43 42.0	+2.1
IGDI	IGDIR	2.67	217	Pg	Pb	17 43 05.8	-1.8
IGDI				Sg	Sb	17 43 41.3	+1.3
KBTC	Kuba-Taba	2.70	312	ePn	Pb	17 43 07.4	-0.8
KBTC				eSn	Sb	17 43 40.8	-0.1
QRD	Qoradiz	2.71	161	Pg	Pb	17 43 06.3	-1.9
QRD				Sg	Sb	17 43 42.7	+1.8
GHRG	Ghorjomi	2.87	266	P	Pb	17 43 08.2	-2.9
KBZ	Khabaz	2.94	306	ePn	Pb	17 43 08.4	-3.8
KBZ				eSn	Sb	17 43 46.2	-1.6
ORD	Ordubad	3.09	182	Pg	Pb	17 43 12.3	-2.5
ORD				Sg	Sb	17 43 53.4	+1.2
SHA1	Shidzhatmaz	3.10	305	ePn	Pb	17 43 11.6	-3.4
SHA1				eSn	Sb	17 43 49.5	-2.9
BEYR	Belyy Ugol+	3.16	310	ePn	Pb	17 43 12.4	-3.5
BEYR				eSn	Sb	17 43 50.1	-3.8
KIV	Kislovodsk	3.20	308	i Pn	Pb	17 43 13.9	-2.8
KIV				eSn	Sb	17 43 52.3	-2.9
YRD	Yardimli	3.48	152	Pg	Pn	17 43 14.2	+1.3
YRD				Sg	Sn	17 43 55.8	+2.5
LRK	Lerik	3.76	153	Pg	Pn	17 43 18.3	+1.6
LRK				Sg	Sb	17 44 14.3	+2.8
ASTR	Astara	4.00	149	Pg	Pn	17 43 21.3	+1.5
ASTR				Sg	Sb	17 44 19.9	+1.8
AKTO	Aktyubinsk	11.74	40	⇑P	Pn	17 45 06.1	+0.2
	2.5nm,1.4s						
AKTO				⇑S	Sn	17 47 09.8	-6.0
	1.2nm,0.7s						
AB31	Akbulak array	12.04	48	P	Pn	17 45 10.5	+0.5
	0.3nm,0.4s,baz=238,slow=14,SNR=16						
AB31				⇑S	Sn	17 47 19.4	-3.8
	1.0nm,0.6s,baz=240,slow=23,SNR=4.7						

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*IDC **25** 17:55:29.0±0.9,2°.63S×138°.48E,h0^{km},mb3.7/7,*
mbtmp3.7/10,ML3.5/3,MS2.7/1,Error ellipse:
s-maj=22.3km s-min=20.7km az=78.0
*DJA **25** 17:55:32.7±0.3,3°S±4°×13°9E±°,h10^{km},M4.0/6,mb4.5/3,*
MLv3.8/6
ISC 25 17:55:31.2±0.8**,2°.86S**±0°.08×**138°.48E**±0°.05**,h10**^{km}**,n18,**
σ**1**^{s}**71**/19**,mb3.8**/7**,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.89	15	P	Pg	17 55 43.6	-4.7
GENI	Genyem	1.70	81	P	Pn	17 56 02.2	+1.2
JAY	Jayapura	2.25	81	Pn	Pn	17 56 08.7	+0.2
	8.1nm,0.3s,baz=237,slow=11,SNR=26						
JAY				Sn	Sn	17 56 36.0	-0.3
	4.1nm,0.3s,baz=69,slow=22,SNR=3.9						
JAY				LR	LR	17 57 18.2	
	comp=Z,176nm,21.9s,baz=165,slow=49						
	18nm,0.3s						
JAY	Jayapura	2.25	81	P	Pn	17 56 09.3	+0.8
SRPI	Serui, Papua	2.44	294	P	Pn	17 56 11.3	+0.1
BAKI	Biak	2.89	305	P	Pn	17 56 17.9	+0.6
RKPI	Ransiki, Papua	4.50	287	P	Pn	17 56 40.8	+1.3
FAKI	Fak Fak	6.23	269	P	Pn	17 57 05.1	+1.9
	47nm,1.3s						
SANI	Sanana	12.51	273	P	Pn	17 58 31.1	+1.7
	34nm,0.8s						
WRA	Warramunga Arr	17.46	193	P	Pn	17 59 36.2	+1.2
	0.3nm,0.3s,baz=13,slow=12,SNR=12						
WRA				S	Sn	18 02 44.9	-4.7
	0.8nm,0.8s,baz=16,slow=22,SNR=3.7						
	1.6nm,0.7s						
FITZ	Fitzroy Crossi	19.70	219	P	P	18 00 02.0	+1.2
	baz=18,slow=14,SNR=2.8						
	4.0nm,1.1s						
ASAR	Alice Springs	21.16	192	P	P	18 00 18.2	+1.5
	1.3nm,0.7s,baz=20,slow=9.8,SNR=21						
ASAR				S	S	18 04 11.6	-0.6
	0.4nm,0.7s,baz=17,slow=24,SNR=2.3						
	1.3nm,0.7s						
CMAR	Chiang Mai Arr	44.31	300	P	P	18 03 40.9	-0.8
	0.3nm,0.6s,baz=110,slow=8.3,SNR=2.5						
	0.3nm,0.6s						
MKAR	Makanchi Array	69.77	323	P	P	18 06 40.6	-1.1
	0.8nm,0.7s,baz=115,slow=7.4,SNR=8.1						
	0.8nm,0.7s						
KURBB	Kurchatov Arra	73.72	325	P	P	18 07 03.3	-2.0
	0.2nm,0.4s,baz=119,slow=5.4,SNR=5.1						
	0.2nm,0.4s						
BVAR	Borovoye Array	79.30	325	P	P	18 07 35.5	-1.5
	0.6nm,0.5s,baz=117,slow=8.2,SNR=6.4						
	0.6nm,0.5s						
ILAR	Eielson Array	86.06	24	P	P	18 08 09.2	-2.7
	0.5nm,0.7s,baz=263,slow=3.4,SNR=5.4						
	0.5nm,0.7s						
QSPA	South Pole Qui	87.09	180	P	P	18 08 17.8	+0.7
	1.5nm,0.9s,baz=353,slow=0.7,SNR=6.5						
	1.5nm,0.9s						

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*DNK **25** 18:30:32.1±1.9,58°.76N×7°.00E,h14^{km}±7^{km},ML1.9,*
ML1.3(BER)
BER 25 18:30:32.5±2.2**,58°.76N×6°.98E,h0**^{km}±7^{km}**,ML1.3,**
Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNART	Snartemo	0.44	164	eP	Pg	18 30 40.1	-0.7
SNART				eS	Sg	18 30 46.4	-0.1
SNART				IAML		18 30 47.9	
	comp=Z,39nm,0.2s						
SNART	Snartemo	0.44	164	i P	Pg	18 30 39.9	-0.9
SNART				i S	Sg	18 30 46.7	+0.3
SNART	Snartemo	0.44	164	eP	Pg	18 30 40.1	-0.7
SNART				eS	Sg	18 30 46.4	-0.1
SNART				IAML		18 30 47.9	
	comp=Z,39nm,0.2s						
STAV	Stavanger	0.69	286	eP	Pg	18 30 44.7	-0.9
STAV				eS	Sg	18 30 53.8	-0.7
STAV				IAML		18 30 59.7	
	comp=Z,12nm,0.1s						
BLS5	Blasjo	0.72	338	eP	Pg	18 30 44.8	-1.5
BLS5				eS	Sg	18 30 54.0	-1.6
BLS5				IAML		18 31 00.6	
	comp=Z,7.0nm,0.1s						
BLS5	Blasjo	0.72	338	eP	Pg	18 30 44.8	-1.5
BLS5				eS	Sg	18 30 54.0	-1.6
BLS5				IAML		18 31 00.6	
	comp=Z,7.0nm,0.1s						
HOMB	Homborsund	0.94	121	eP	Pg	18 30 48.7	-1.7
HOMB				eS	Sg	18 31 00.5	-2.1
HOMB				IAML		18 31 05.3	
	comp=Z,24nm,0.4s						
HOMB	Homborsund	0.94	121	eP	Pg	18 30 48.6	-1.8
HOMB				i S	Sg	18 31 00.5	-2.1
HOMB	Homborsund	0.94	121	eP	Pg	18 30 48.7	-1.7
HOMB				eS	Sg	18 31 00.5	-2.1
HOMB				IAML		18 31 05.3	
	comp=Z,24nm,0.4s						
KMY	Karmoy	1.00	298	eP	Pg	18 30 50.4	-1.3
KMY				eS	Sg	18 31 03.8	-0.9
KMY				IAML		18 31 07.1	
	comp=Z,4.3nm,0.3s						
KMY	Karmoy	1.00	298	eP	Pg	18 30 50.4	-1.3
KMY				eS	Sg	18 31 03.8	-0.9
KMY				IAML		18 31 07.1	
	comp=Z,4.3nm,0.3s						
ODD1	Odda	1.17	351	eP	Pg	18 30 53.1	-1.8
ODD1				eS	Sg	18 31 08.3	-1.9
ODD1				IAML		18 31 12.1	
	comp=Z,22nm,0.4s						
ODD1	Odda	1.17	351	eP	Pg	18 30 53.1	-1.8
ODD1				eS	Sg	18 31 08.3	-1.9
ODD1				IAML		18 31 12.1	
	comp=Z,22nm,0.4s						
KONO	Kongsberg	1.62	55	eP	Pn	18 31 00.3	-2.0
KONO				eS	Sn	18 31 20.9	-2.9
KONO	Kongsberg	1.62	55	eP	Pn	18 31 00.3	-2.0
KONO				eS	Sn	18 31 20.9	-2.9
ASK	Askoy	1.95	333	eP	Pn	18 31 06.5	-0.4
ASK				eS	Sn	18 31 29.6	-2.5
ASK	Askoy	1.95	333	eP	Pn	18 31 06.5	-0.4
ASK				eS	Sn	18 31 29.6	-2.5
SKAR	Skarslia	2.04	19	eP	Pn	18 31 08.2	+0.1
SKAR				eS	Sn	18 31 33.4	-1.0
SKAR				IAML		18 31 38.3	
	comp=Z,4.2nm,0.3s						
SKAR	Skarslia	2.04	19	eP	Pn	18 31 08.2	+0.1
SKAR				eS	Sn	18 31 33.4	-1.0
SKAR				IAML		18 31 38.3	
	comp=Z,4.2nm,0.3s						
STRU	Stroemstad	2.20	81	eP	Pn	18 31 07.6	-2.6
STRU				eS	Sn	18 31 33.8	-4.3
STRU	Stroemstad	2.20	81	eP	Pn	18 31 07.6	-2.6
STRU				eS	Sn	18 31 33.8	-4.3
NAO01	NORSAR Array S	2.88	42	eP	Pn	18 31 17.5	-2.1
NAO01				eS	Sn	18 31 50.5	-4.4
NAO01				IAML		18 31 59.2	
	comp=Z,3.0nm,0.2s						
NAO01	NORSAR Array S	2.88	42	eP	Pn	18 31 17.5	-2.1
NAO01				eS	Sn	18 31 50.5	-4.4
NAO01				IAML		18 31 59.2	
	comp=Z,3.0nm,0.2s						
ONAU	Onsala	2.96	115	eP	Pn	18 31 18.6	-2.0
ONAU				eS	Sn	18 31 53.3	-3.4
ONAU	Onsala	2.96	115	eP	Pn	18 31 18.6	-2.0
ONAU				eS	Sn	18 31 53.3	-3.4
NBO00	NORSAR Array S	2.98	38	eP	Pn	18 31 19.5	-1.4
NBO00	NORSAR Array S	2.98	38	eP	Pn	18 31 19.5	-1.4
NC602	NORSAR Array S	3.04	47	eP	Pn	18 31 19.3	-2.5
NC602				eS	Sn	18 31 56.3	-2.7
NC602				IAML		18 32 06.5	
	comp=Z,1.9nm,0.1s						
NC602	NORSAR Array S	3.04	47	eP	Pn	18 31 19.3	-2.5
NC602				eS	Sn	18 31 56.3	-2.7
NC602				IAML		18 32 06.5	
	comp=Z,1.9nm,0.1s						
NC204	NORSAR Array S	3.16	35	eP	Pn	18 31 21.4	-2.2
NC204				eS	Sn	18 31 57.6	-4.4
NC204				IAML		18 32 14.4	
	comp=Z,1.9nm,0.2s						
NC204	NORSAR Array S	3.16	35	eP	Pn	18 31 21.4	-2.2
NC204				eS	Sn	18 31 57.6	-4.4
NC204				IAML		18 32 14.4	
	comp=Z,1.9nm,0.2s						
NB201	NORSAR Array S	3.17	42	eP	Pn	18 31 21.4	-2.1
NB201				eS	Sn	18 31 56.9	-5.1
NB201				IAML		18 32 07.7	
	comp=Z,1.7nm,0.2s						
NB201	NORSAR Array S	3.17	42	eP	Pn	18 31 21.4	-2.1
NB201				eS	Sn	18 31 56.9	-5.1
NB201				IAML		18 32 07.7	
	comp=Z,1.7nm,0.2s						
BORU	Boraas	3.27	108	eP	Pn	18 31 23.8	-1.1
BORU				eS	Sn	18 32 01.8	-2.6
BORU	Boraas	3.27	108	eP	Pn	18 31 23.8	-1.1
BORU				eS	Sn	18 32 01.8	-2.6
NC303	NORSAR Array S	3.32	40	eP	Pn	18 31 24.2	-1.4
NC303	NORSAR Array S	3.32	40	eP	Pn	18 31 24.2	-1.4
FABU	Falkenberg	3.54	117	eP	Pn	18 31 26.8	-1.8
FABU				eS	Sn	18 32 06.6	-4.4
FABU	Falkenberg	3.54	117	eP	Pn	18 31 26.8	-1.8
FABU				eS	Sn	18 32 06.6	-4.4

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*JMA **25** 18:39:25.4±0.1,42°.9N±0°.4×145°.8E±0°.7,h74^{km}±1^{km},*
MV2.7/39,OFF NEMURO PENINSULA
*SKHL **25** 18:39:26.0±0.3,42°.80N×145°.90E,h67^{km}±2^{km},mb3.7/2*
ISC 25 18:39:24.5±2.2**,42°.9N**±0°.1×**145°.85E**±0°.07**,h75**^{km}±13^{km}**,**
n13,σ**0**^{s}**55**/26**,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	Nemuro 2	0.52	351	i P	Pn	18 39 38.4	+0.5
NEM2				eS	Sn	18 39 47.8	0.0
NMR	Nemuro--Hokkai	0.53	350	eP	Pn	18 39 38.4	+0.5
NMR				eS	Sn	18 39 47.5	-0.4
JKHN	Kushirohamanak	0.56	295	i P	Pn	18 39 38.8	+0.5
JKHN				eS	Sn	18 39 48.4	0.0
AKK	Akkeshi	0.76	283	eP	Pn	18 39 40.5	+0.1
AKK				eS	Sn	18 39 51.6	-0.6
JAK	Akkeshi	0.86	280	i P	Pn	18 39 41.7	+0.2
JAK				eS	Sn	18 39 53.9	-0.3
JNK	Nakash	1.11	312	i P	Pn	18 39 44.4	-0.1
JNK				S	Sn	18 39 58.1	-1.4
YUK	Yuzh-Kuril'sk	1.18	0	eP	Pn	18 39 46.0	+0.5
YUK				AMB	AMB	18 39 47.5	
	20nm,0.2s						
YUK				eS	Sn	18 40 00.6	-0.6
YUK				A	A	18 40 02.2	
	160nm,0.3s						
YUK				A	A	18 40 02.2	
	130nm,0.3s						
JRA	Rausu	1.21	334	eP	Pn	18 39 46.3	+0.5
JRA				eS	Sn	18 40 02.0	+0.2
SHO	Shikotan	1.24	35	eP	Pn	18 39 46.2	0.0
SHO				AMB	AMB	18 39 48.0	
	20nm,0.3s						
SHO				eS	Sn	18 40 02.0	-0.5
SHO				A	A	18 40 03.9	

	50nm,0.3s						
SHO				A	A	18 40 03.9	
	60nm,0.3s						
JOB	Onbets	1.49	273	P	Pn	18 39 49.6	+0.3
JOB				eS	Sn	18 40 07.6	-0.5
JAR	Ashorobuto	1.59	287	P	Pn	18 39 51.1	+0.4
JAR				eS	Sn	18 40 10.4	-0.3
JTKR	Abashiri--Toko	1.81	309	P	Pn	18 39 54.4	+0.8
JTKR				eS	Sn	18 40 15.6	-0.1
JCH	Churui	1.85	264	eP	Pn	18 39 54.8	+0.6
JCH				eS	Sn	18 40 16.2	-0.6

GCG 25 18:43:46.5±0.9, 14.°48N×90.°49W, h168^{km}±15^{km}, MD3.9, ML3.7, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FG16	Alotenango, Sa	0.21	186	i P	Pn	18 44 10.0	+0.7
FG16				IAML		18 44 34.9	
	comp=N,2µm,0.2s						
STG0	El Palmar, Qui	0.83	266	i P	Pn	18 44 14.6	+2.6
STG0				eS	Sn	18 44 37.1	+5.7
STG0				IAML		18 44 40.1	
	comp=E,673nm,0.2s						
STG8	El Palmar, Qui	0.84	268	i P	Pn	18 44 14.9	+2.8
NUBE	Las Nubes	0.90	130	i P	Pn	18 44 12.7	+0.3
JAYA	Jayaque - finc	1.30	129	eP	Pn	18 44 16.0	+0.2
JAYA				eS	Sn	18 44 39.0	+0.7

TAP 25 18:45:02.6, 23.°72N×121.°43E, h11^{km}, ML0.5, 1C, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WARBT	Fenglin Townsh	0.04	274	⇑P	Pg	18 45 04.4	-0.3
WARBT				i S	Sg	18 45 06.1	-0.2
EGFH	Guangfu	0.05	186	P	Pg	18 45 04.6	-0.1
EGFH				i S	Sg	18 45 06.3	+0.1
ESL	Shilin	0.10	0	i P	Pg	18 45 05.2	-0.1
ESL				eS	Sg	18 45 07.4	+0.1
EHY	Hungye	0.23	206	eP	Pg	18 45 07.5	+0.1
EHY				eS	Sg	18 45 10.8	+0.1
VWDT	VWDT	0.27	278	P	Pg	18 45 08.0	-0.2
YULB	Yu-li	0.34	201	eP	Pg	18 45 09.7	+0.2

DJA 25 18:55:53.8±0.3, 2°S±5°×10°2E±°, h154^{km}±4^{km}, M4.0/12, mB5.5/1, mb4.2/6, MLv3.9/12, Mw(mB)5.0/1, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSI	Kapahiang	1.30	163	P	Pn	18 56 21.8	+0.1
KSI				S	Sn	18 56 43.7	+0.5
MNAI	Manna	2.08	159	P	Pn	18 56 30.7	+0.5
MNAI				S	Sn	18 56 57.9	-0.3
PPI	Padang Panjang	2.66	317	P	Pn	18 56 37.8	+0.8
MDSI	Maura Dua	2.85	137	P	Pn	18 56 41.3	+1.9
LWLI	Liwa	3.18	145	P	Pn	18 56 45.3	+1.5
SISI	Saibi	3.31	289	P	Pn	18 56 45.4	+0.2
CGJI	Cibinong	5.43	141	P	Pn	18 57 11.1	-1.9
	0.2nm24nm,1.2s						
GSI	Gunungsitoli	5.92	308	P	Pn	18 57 19.6	0.0
	59nm,0.6s						
CNJI	Cibinong	6.91	135	P	Pn	18 57 31.1	-1.6
	0.1nm33nm,1.3s						
UGM	Wanagama	9.92	124	P	Pn	18 58 13.2	+0.5

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*DJA **25** 18:58:36.9±0.4, 7°S±4°×12°9E±°, h262^{km}±12^{km}, M4.6/13, mB5.0/6, mb4.8/7, MLv4.7/13, Mw(mB)4.3/6*
*NEIC **25** 18:58:37.7±2.3, 6.°51S±0.°08×129.°21E±0.°03, h221^{km}±9^{km}, mb4.3/12, Error ellipse: s-maj=11.4km s-min=3.2km az=187.0*
*IDC **25** 18:58:41.6±4.7, 6.°72S×128.°77E, h255^{km}±46^{km}, mb3.3/7, mbtmp4.1/9, Error ellipse: s-maj=50.8km s-min=16.1km az=60.0*

ISC 25 18:58:37.0±0.5, 6.°57S±0.°05×129.°20E±0.°05, h221^{km}, n52, $\sigma 2^{s}07$/60, mb3.6/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	2.15	19	P	Pn	18 59 21.8	+3.1
BNDI	Bandanaira	2.15	19	P	Pn	18 59 19.6	+0.9
SAUI	Saumlaki	2.52	124	Pn	Pn	18 59 23.9	+1.4
SAUI				Sn	S	18 59 56.6	-1.3
SAUI	Saumlaki	2.52	124	P	Pn	18 59 24.4	+1.9
AAI	Ambon	3.03	341	P	Pn	18 59 32.2	+4.0
MSAI	Masohi	3.21	355	P	Pn	18 59 32.0	+1.7
FAKI	Fak Fak	4.73	40		Pn	18 59 47.4	-1.3
FAKI				Sn	S	19 00 37.0	-8.2
FAKI	Fak Fak	4.73	40	P	Pn	18 59 47.2	-1.5
KMPI	Kaimana, Papua	5.34	58	P	Pn	18 59 57.0	+0.7
SOEI	Soe	5.82	237		Pn	19 00 03.3	+0.8
SOEI				Sn	S	19 01 07.0	-3.2
SOEI	Soe	5.82	237	P	Pn	19 00 04.2	+1.7
SOEI	Soe	5.82	237	P	Pn	19 00 03.9	+1.4
	0.4nm3µm85nm,0.4s						
SWI	Sorong	6.03	20	P	Pn	19 00 04.7	-0.3
	0.7nm4µm119nm,0.5s						
DRS	Darwin Rock St	6.07	164	P	Pn	19 00 06.8	+1.3
MTN	Manton Dam	6.53	163		Pn	19 00 11.8	+0.4
MTN				Sn	S	19 01 22.8	-3.7
MTN	Manton Dam	6.53	163	P	Pn	19 00 11.8	+0.4
BATI	Baumata	6.56	236	P	Pn	19 00 12.7	+0.8
	193nm,0.4s,baz=114,slow=3.8,SNR=68						
BATI				S	S	19 01 22.5	-4.8
	75nm,0.4s,baz=34,slow=23,SNR=9.9						
BATI	Baumata	6.56	236	P	Pn	19 00 11.8	-0.1
	1.2nm3µm269nm,0.6s						
KDU	Kakadu	6.89	152	P	Pn	19 00 16.5	+0.5
RKPI	Ransiki, Papua	7.06	45	P	Pn	19 00 18.3	0.0
	4µm303nm,0.7s						
MMRI	Maumere	7.20	253	Pn	Pn	19 00 17.9	-2.1
MMRI				Sn	S	19 01 41.3	-0.8
MMRI	Maumere	7.20	253	P	Pn	19 00 23.7	+3.7
EDFI	Ende, Flores	7.75	253	P	Pn	19 00 29.0	+1.8
KNRA	Kununurra	9.07	183		Pn	19 00 44.1	+0.1
FITZ	Fitzroy Crossi	11.98	197	P	Pn	19 01 20.4	-0.8
	16nm,0.5s,baz=23,slow=13,SNR=72						
FITZ				S	S	19 03 28.7	-4.9
	11nm,0.8s,baz=98,slow=21,SNR=6.1						
WB0	Warramunga Arr	14.06	159	Pn	Pn	19 01 46.7	-0.4
WRA	Warramunga Arr	14.21	160	P	Pn	19 01 47.5	-1.4
	0.9nm,0.2s,baz=342,slow=11,SNR=21						
WRA				S	S	19 04 18.6	-7.5
	2.7nm,0.5s,baz=339,slow=22,SNR=6.1						
WR8	Warramunga Arr	14.27	159	Pn	Pn	19 01 48.9	-0.8
COEN	Coen	15.59	119		Pn	19 02 06.3	+0.7
COEN				IAmb	IAmb	19 02 08.2	
	comp=Z,26nm,1.4s						
MBWA	Marble Bar	17.16	211		P	19 02 23.6	+1.1
MBWA				IAmb	IAmb	19 02 57.1	
	comp=Z,10nm,1.1s						
PSA00	Pilbara Seismi	17.45	210		P	19 02 27.1	+1.6
PSA00	Pilbara Seismi	17.45	210	P	P	19 02 26.9	+1.3
AS31	Alice Springs	17.59	166		P	19 02 28.5	+1.3
AS31				IAmb	IAmb	19 02 33.0	
	comp=Z,5.9nm,0.7s						
ASAR	Alice Springs	17.60	166		P	19 02 28.9	+1.7
ASAR	Alice Springs	17.60	166	P	Pn	19 02 29.8	+0.4
	comp=Z,15nm,0.6s,baz=341,slow=9.3,SNR=124						
ASAR				S	S	19 05 34.8	-3.7
	comp=Z,2.4nm,0.8s,baz=347,slow=20,SNR=8.0						
CAN	Canberra	33.92	150	P	P	19 05 00.4	+0.9
TOO	Toolangi	34.24	157	P	P	19 05 03.2	+1.0
CMAR	Chiang Mai Arr	38.84	310	P	P	19 05 41.9	+0.7
	comp=Z,0.9nm,0.5s,baz=134,slow=6.4,SNR=9.6						
	comp=Z,0.9nm,0.5s						
BKZ	Black Stump Fm	53.47	135	P	P	19 07 35.6	+0.8
SONM	Songino Array	57.78	342	P	P	19 08 06.1	+0.8
	comp=Z,0.5nm,0.6s,baz=154,slow=7.8,SNR=3.4						
	comp=Z,0.5nm,0.6s						
KSH	Kashi	67.16	318	P	P	19 09 08.3	+0.8
KSH				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MK31	Makanchi Array	67.43	327	P	P	19 09 08.8	-0.1
MKAR	Makanchi Array	67.43	327	P	P	19 09 08.4	-0.4
MKAR	Makanchi Array	67.43	327	P	P	19 09 09.3	+0.5
	comp=Z,0.6nm,0.5s,baz=119,slow=8.0,SNR=12						
	comp=Z,0.6nm,0.5s						
ZALV	Zalesovo Beam	70.84	334	P	P	19 09 29.0	-0.6
	comp=Z,0.8nm,0.5s,baz=134,slow=4.2,SNR=4.2						
	comp=Z,0.8nm,0.5s						
KURBB	Kurchatov Arra	71.72	329	P	P	19 09 35.1	+0.1
	comp=Z,0.8nm,0.6s,baz=129,slow=4.7,SNR=10						
	comp=Z,0.8nm,0.6s						
BVAR	Borovoye Array	77.27	328	P	P	19 10 06.9	+0.1
	comp=Z,0.7nm,0.8s,baz=116,slow=6.6,SNR=3.6						
	comp=Z,0.7nm,0.8s						
ABKAR	Akbulak array	81.67	322	P	P	19 10 30.2	-0.4
QSPA	South Pole Qui	83.41	180	P	P	19 10 39.6	+0.1
QSPA				IAmb	IAmb	19 10 45.5	
	comp=Z,6.5nm,1.4s						
QSPA	South Pole Qui	83.41	180	P	P	19 10 39.8	+0.3
	comp=Z,1.1nm,0.6s,baz=265,slow=1.1,SNR=14						
	comp=Z,1.1nm,0.6s						
M16K	Timber Creek	87.04	28	P	P	19 10 58.3	+0.9
M16K				IAmb	IAmb	19 11 00.9	
	comp=Z,10nm,1.4s						
TXAR	Lajitas Array	125.39	59	PKP	PKiKP	19 17 13.8	+0.9
	comp=Z,0.2nm,0.5s,baz=348,slow=2.5,SNR=2.4						

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*NEIC **25** 19:05:28.4±1.4, 5.°4S±0.°1×154.°33E±0.°09, h124^{km}±5^{km}, mb4.4/22, Error ellipse: s-maj=17.6km s-min=13.5km az=173.0*
*IDC **25** 19:05:33.5±4.6, 5.°51S×154.°34E, h183^{km}±41^{km}, mb3.5/13, mbtmp4.1/14, Error ellipse: s-maj=25.0km s-min=15.1km az=75.0*

ISC 25 19:05:26.2±0.7, 5.°40S±0.°08×154.°41E±0.°09, h118^{km}, n47, $\sigma 1^{s}25$/46, mb4.1/23, 2C, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	2.54	298		Pn	19 06 07.7	+1.2
RABL				Sn	Sn	19 06 37.8	+0.3
PMG	Port Moresby	8.22	241	S	Sn	19 08 56.0	+2.0
	13nm,0.4s,baz=104,slow=22,SNR=2.0						
PATS	Pohnpei	12.76	18	Pn	Pn	19 08 22.6	-0.9
JAY	Jayapura	13.97	281	P	P	19 08 43.6	+0.2
	9.8nm,0.6s,baz=98,slow=6.2,SNR=5.7						
CTAO	Charters Tower	16.62	208	P	P	19 09 14.5	+1.8
CTAO				IAmb	IAmb	19 09 53.0	
	comp=Z,44nm,1.4s						
EIDS	Eidsvold	20.11	189	P	P	19 09 52.1	+1.3
EIDS				IAmb	IAmb	19 10 16.9	
	comp=Z,25nm,1.4s						
DZM	Mont Dzumac	20.25	146	P	Pn	19 09 54.1	-1.5
	comp=Z,10.0nm,1.0s,baz=294,slow=18,SNR=3.2						
	comp=Z,10.0nm,1.0s						
MTN	Manton Dam	24.13	251	P	P	19 10 31.4	0.0
MTN				IAmb	IAmb	19 10 45.6	
	comp=Z,31nm,1.4s						
WR8	Warramunga Arr	24.18	231	P	P	19 10 30.9	-1.0
WR8				IAmb	IAmb	19 11 10.2	
	comp=Z,9.2nm,1.3s						
WRA	Warramunga Arr	24.30	232	P	P	19 10 32.7	-0.2
	comp=Z,1.0nm,0.6s,baz=56,slow=9.5,SNR=5.8						
WRA				PcP	PcP	19 14 09.5	-0.5
	comp=Z,0.1nm,0.6s,baz=51,slow=2.3,SNR=1.1						
	comp=Z,1.0nm,0.6s						
H11S3	WAKE ISLAND Hy	26.65	27	T	T	19 39 06.2	
	baz=208,slow=76,SNR=19						
H11S2	WAKE ISLAND Hy	26.65	27	T	T	19 39 03.4	
	baz=208,slow=76,SNR=20						
H11S1	WAKE ISLAND Hy	26.67	27	T	T	19 39 02.9	
	baz=208,slow=76,SNR=3.4						
ASAR	Alice Springs	26.84	225	P	P	19 10 55.5	-0.4
	comp=Z,0.3nm,0.5s,baz=53,slow=8.9,SNR=6.5						
ASAR				PcP	PcP	19 14 14.8	-1.0
	comp=Z,0.2nm,0.5s,baz=39,slow=2.8,SNR=1.3						
	comp=Z,0.3nm,0.5s						
KNRA	Kununurra	27.17	246	P	P	19 10 57.7	-1.2
KNRA				IAmb	IAmb	19 11 19.4	
	comp=Z,14nm,1.2s						
FITZ	Fitzroy Crossi	30.81	243	P	P	19 11 29.4	-1.7
TOLI2	Tolitoli	34.21	280	P	P	19 11 59.1	-1.7
TOLI2				IAmb	IAmb	19 12 31.4	
	comp=Z,6.4nm,1.2s						
KKM	Kota Kinabalu	39.79	286	P	P	19 12 48.0	-0.2
KKM				IAmb	IAmb	19 13 11.2	
	comp=Z,13nm,1.4s						
TPUB	Ta-pu	43.61	312	P	P	19 13 17.3	-1.8
SSLB	Suanglung	43.66	313	P	P	19 13 19.1	-0.4
KSM	Kuching	44.58	278	P	P	19 13 25.9	-1.1
KSRS	Korea Array	49.27	332	P	P	19 14 05.2	+2.3
	comp=Z,0.8nm,0.6s,baz=147,slow=6.6,SNR=4.7						
	comp=Z,0.8nm,0.6s						
CM31	Chiang Mai Arr	59.59	295	P	P	19 15 17.4	-0.7
CM31				IAmb	IAmb	19 15 19.6	
	comp=Z,1.9nm,0.8s						
CMAR	Chiang Mai Arr	59.59	295	P	P	19 15 18.2	+0.2
CMAR	Chiang Mai Arr	59.59	295	P	P	19 15 18.8	+0.7
	comp=Z,1.6nm,0.8s,baz=116,slow=5.3,SNR=17						
	comp=Z,1.6nm,0.8s						
SONM	Songino Array	67.69	327	P	P	19 16 11.9	+1.0
SONM	Songino Array	67.69	327	P	P	19 16 11.8	+0.8
	comp=Z,0.5nm,0.4s,baz=146,slow=5.1,SNR=7.5						
	comp=Z,0.5nm,0.4s						
O14K	Tigyukauivet M	73.39	22	P	P	19 16 47.6	+2.5
O15K	Ungalikthiuk R	73.89	23	P	P	19 16 50.6	+2.6
L14K	Kuka Creek	74.35	20	P	P	19 16 52.4	+1.7
L14K				IAmb	IAmb	19 17 07.9	
	comp=Z,12nm,1.2s						
J17K	VABM Dome	76.99	20	P	P	19 17 06.7	+1.0
J17K				IAmb	IAmb	19 17 50.3	
	comp=Z,7.4nm,1.2s						
H19K	Roundabout Mou	79.26	19	P	P	19 17 20.1	+2.0
IMAR	Indian Mountai	80.41	19	P	P	19 17 26.1	+1.7
MK31	Makanchi Array	81.83	319	P	P	19 17 32.5	+0.1
MK31				IAmb	IAmb	19 18 01.8	
	comp=Z,2.6nm,0.2s						
MK31	Makanchi Array	81.83	319	⇑Pn	P	19 17 32.5	+0.1
	comp=Z,0.2nm,0.5s,baz=204,slow=17,SNR=17						
MKAR	Makanchi Array	81.83	319	P	P	19 17 32.5	+0.1
	comp=Z,1.0nm,0.6s,baz=95,slow=8.1,SNR=20						
	comp=Z,1.0nm,0.6s						
MAKZ	Makanchi	82.04	319	P	P	19 17 32.7	-0.8
MAKZ	Makanchi	82.04	319	⇑Pn	P	19 17 32.9	-0.5
	comp=Z,1.7nm,0.7s						
ILAR	Eielson Array	82.11	22	P	P	19 17 33.9	+0.5
	comp=Z,0.6nm,0.5s,baz=243,slow=5.6,SNR=8.6						
	comp=Z,0.6nm,0.5s						
ZALV	Zalesovo Beam	82.54	326	P	P	19 17 35.1	-0.8
	comp=Z,0.9nm,0.4s,baz=121,slow=7.0,SNR=4.2						
	comp=Z,0.9nm,0.4s						
J25K	Salcha River,	82.60	22	P	P	19 17 36.9	+0.9
J25K				IAmb	IAmb	19 17 38.0	
	comp=Z,2.3nm,0.6s						
M27K	Edge Creek, AK	82.93	25	P	P	19 17 39.3	+1.4
QSPA	South Pole Qui	84.57	180	P	P	19 17 46.2	0.0
	comp=Z,1.3nm,0.8s,baz=339,slow=4.8,SNR=12						
	comp=Z,1.3nm,0.8s						
KURBB	Kurchatov Arra	85.26	322	P	P	19 17 49.0	-0.7
	comp=Z,0.5nm,0.4s,baz=97,slow=4.9,SNR=11						
	comp=Z,0.5nm,0.4s						
MAW	Mawson	85.64	203	P	P	19 17 50.7	-0.6
	comp=Z,1.8nm,0.6s,baz=83,slow=4.6,SNR=9.0						
	comp=Z,1.8nm,0.6s						
BVAR	Borovoye Array	90.68	323	P	P	19 18 14.2	-1.4
	comp=Z,0.7nm,0.4s,baz=106,slow=6.7,SNR=5.6						
	comp=Z,0.7nm,0.4s						
TORD	Torodi Ar. Bea	152.02	288	PKPbc	PKPbc	19 25 06.9	-1.8
	comp=Z,0.7nm,0.3s,baz=93,slow=3.1,SNR=3.1						

RSNC 25 19:18:54.3±0.0, 13°N±4°×8°1W±°, h24^{km}±3^{km}, M2.8, mb5.0, ML2.8, Caribbean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRVC	Isla de Provid	0.02	348	P	Pb	19 18 57.6	-0.8
PRVC				S	Sb	19 19 02.2	+1.0
SAIC	Isla e San And	0.89	203	P	Pb	19 19 08.4	-2.6
SAIC				S	Sb	19 19 21.9	-0.6
SERC	Banco Serrana,	1.33	46	P	Pn	19 19 15.7	-1.8
SERC				S	Sn	19 19 33.0	-1.5
BLUN	Bluefields	2.71	241	P	Pn	19 19 35.5	-0.9
BLUN				S	Sn	19 20 04.2	-4.3
ESPN	Las Esperanzas	3.09	248	P	Pn	19 19 42.9	+1.2
ESPN				S	Sn	19 20 21.6	+3.7
BCIP	Isla Barro Col	4.43	160	P	Pn	19 19 59.7	-0.3
BCIP				S	Sn	19 20 41.3	-10
CRIN	San Cristobal	5.58	264	P	Pn	19 20 17.6	+1.6
CRIN				S	Sn	19 21 17.8	-1.7
SJCC	San Jacinto, C	6.96	119	P	Pn	19 20 29.8	-5.2
SJCC				S	Sn	19 21 42.2	-11

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*SJA **25** 19:20:14.3±0.7, 21.°90S×68.°42W, h126^{km}±6^{km}, ML4.2, MW4.1*
*IDC **25** 19:20:16.6±2.4, 21.°80S×68.°26W, h114^{km}±20^{km}, mb4.0/14, mbtmp4.3/18, Error ellipse: s-maj=19.4km s-min=12.8km az=75.0*
*NEIC **25** 19:20:16.7±1.4, 21.°84S±0.°02×68.°51W±0.°07, h120^{km}±5^{km}, mb4.5/56, ML4.1(GUC), Error ellipse: s-maj=9.0km s-min=2.8km az=97.0*
*GUC **25** 19:20:17.4±0.8, 21.°86S×68.°53W, h122^{km}±5^{km}, ML4.2*
*VAO **25** 19:20:18.1±1.0, 21.°72S×68.°14W, h128^{km}±7^{km}, mb4.8*

ISC 25 19:20:15.7±0.6, 21.°87S±0.°03×68.°38W±0.°04, h115^{km}±5^{km}, n169, $\sigma 1^{s}80$/201, mb4.5/37, 8C-5D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.80	275		Pn	19 20 36.5	+0.9
PB09				Sn	Sn	19 20 51.1	+0.4
PB09	IPOC Station P	0.80	275	⇑iP	Pn	19 20 36.6	+1.0
PB09				eS	Sn	19 20 51.6	+0.9
PB09				IAML		19 20 55.4	
	comp=N,5µm,0.4s						
PB09	IPOC Station P	0.80	275	eP	Pn	19 20 35.9	+0.3
PB09				IAML		19 20 52.7	
	comp=Z,6µm,0.7s						
AF01	San Pedro de A	1.09	170		Pn	19 20 41.0	+2.4
AF01				Sn	Sn	19 20 58.9	+3.0
AF01	San Pedro de A	1.09	170	eS	Pn	19 20 38.4	-0.2
AF01				eP	Pn	19 20 38.4	-0.2
AF01				IAML		19 21 23.0	
	comp=Z,3µm,0.9s						
PB03	IPOC Station P	1.28	262		Pn	19 20 40.6	+0.2
PB03				Sn	Sn	19 20 58.0	-1.4
PB03	IPOC Station P	1.28	262	⇑iP	Pn	19 20 40.7	+0.2
PB03				eS	Sn	19 20 59.2	-0.1
PB03				IAML		19 21 01.7	
	comp=E,4µm,0.5s						
PB03	IPOC Station P	1.28	262	eP	Pn	19 20 40.0	-0.5
PB03				eS	Sn	19 20 59.4	+0.1
PB03				IAML		19 21 00.5	
	comp=Z,4µm,0.3s						
PB01	IPOC Station P	1.32	308		Pn	19 20 40.9	+0.1
PB01				Sn	Sn	19 20 58.6	-1.3
PB01	IPOC Station P	1.32	308	⇑iP	Pn	19 20 41.1	+0.3
PB01				eS	Sn	19 20 59.8	-0.1
PB01				IAML		19 21 01.2	
	comp=N,6µm,0.2s						
PB01	IPOC Station P	1.32	308	eP	Pn	19 20 41.0	+0.3
PB01				eS	Sn	19 21 00.7	+0.9
PB01				IAML		19 21 01.5	
	comp=Z,2µm,0.3s						
PB06	IPOC Station P	1.38	233		Pn	19 20 42.4	+0.8
PB06				Sn	Sn	19 21 01.6	+0.4
PB06	IPOC Station P	1.38	233	⇑iP	Pn	19 20 42.4	+0.8
PB06				eS	Sn	19 21 02.0	+0.7
PB06				IAML		19 21 03.0	
	comp=N,6µm,0.5s						
PB06	IPOC Station P	1.38	233	eP	Pn	19 20 42.4	+0.8
PB06				eS	Sn	19 21 02.6	+1.4
PB06				IAML		19 21 03.5	
	comp=Z,5µm,1.1s						
PB08	IPOC Station P	1.87	337		Pn	19 20 49.0	+1.3
PB08				Sn	Sn	19 21 12.7	+0.7
PB08	IPOC Station P	1.87	337	⇑iP	Pn	19 20 49.2	+1.6
PB08				eS	Sn	19 21 13.1	+1.2
PB08				IAML		19 21 16.4	
	comp=E,2µm,0.2s						
PB08	IPOC Station P	1.87	337	eP	Pn	19 20 48.5	+0.9
PB08				eS	Sn	19 21 13.8	+1.9
PB08				IAML		19 21 16.4	
	comp=Z,993nm,0.4s						
PB05	IPOC Station P	1.95	240		Pn	19 20 48.2	-0.1
PB05				Sn	Sn	19 21 12.0	-1.3
PB05	IPOC Station P	1.95	240	⇑iP	Pn	19 20 48.5	+0.1
PB05				eS	Sn	19 21 12.2	-1.1
PB05				IAML		19 21 18.6	
	comp=E,2µm,0.8s						
PB05	IPOC Station P	1.95	240	eP	Pn	19 20 48.3	0.0
PB05				eS	Sn	19 21 08.5	-4.8
PB05				IAML		19 21 19.4	
	comp=Z,988nm,1.0s						
PATCX	Punta Patache	1.96	302		Pn	19 20 48.2	-0.2
PATCX				Sn	Sn	19 21 11.7	-1.7
HMBC	Humberstone	2.12	318		Pn	19 20 50.0	-0.6
HMBC				Sn	Sn	19 21 15.2	-2.0
HMBC	Humberstone	2.12	318	⇑iP	Pn	19 20 50.1	-0.4
HMBC				eS	Sn	19 21 15.6	-1.6
HMBC				IAML		19 21 18.2	
	comp=E,4µm,0.5s						
HMBC	Humberstone	2.12	318	eP	Pn	19 20 50.1	-0.4
HMBC				eS	Sn	19 21 16.2	-1.0
HMBC				IAML		19 21 20.6	
	comp=Z,3µm,0.3s						
TA01	Diego Aracena	2.12	307		Pn	19 20 49.8	-0.6
TA01				Sn	Sn	19 21 14.7	-2.3
TA01	Diego Aracena	2.12	307	i P	Pn	19 20 49.8	-0.6
TA01				eS	Sn	19 21 15.4	-1.7
TA01	Diego Aracena	2.12	307	eP	Pn	19 20 49.9	-0.5
TA01				eS	Sn	19 21 10.2	-6.8
TA01				IAML		19 21 17.9	
	comp=Z,1µm,0.6s						
TA02	Huaiquique	2.28	314		Pn	19 20 51.5	-1.0
TA02	Huaiquique	2.28	314	eP	Pn	19 20 52.6	+0.2
TA02				eS	Sn	19 21 20.6	-0.1
TA02				IAML		19 21 24.9	
	comp=Z,2µm,0.7s						
GO01	Chusmiza	2.32	341		Pn	19 20 54.1	+0.7
GO01	Chusmiza	2.32	341	eP	Pn	19 20 54.4	+0.9
GO01				eS	Sn	19 21 24.1	+1.8
GO01				IAML		19 21 27.9	
	comp=E,1µm,0.2s						
GO01	Chusmiza	2.32	341	eP	Pn	19 20 54.0	+0.5
GO01				eS	Sn	19 21 25.6	+3.3
PB11	IPOC Station P	2.42	330		Pn	19 20 54.2	-0.1
PB11	IPOC Station P	2.42	330	⇑iP	Pn	19 20 54.4	0.0
PB11				eS	Sn	19 21 23.0	-1.0
PB11	IPOC Station P	2.42	330	eP	Pn	19 20 54.3	-0.1
PB11				eS	Sn	19 21 24.3	+0.3
PB11				IAML		19 21 29.8	
	comp=Z,1µm,0.3s						
PB10	IPOC Station P	2.59	230		Pn	19 20 56.6	+0.2
PB10	IPOC Station P	2.59	230	eP	Pn	19 20 56.8	+0.3
PB10				IAML		19 21 39.0	
	comp=N,799nm,0.3s						
PB10	IPOC Station P	2.59	230	eP	Pn	19 20 56.4	0.0
PB10				eS	Sn	19 21 22.9	-4.8
PB10				IAML		19 21 36.6	
	comp=Z,471nm,1.3s						
YJA	Yavi	2.68	97	eP	Pn	19 21 02.3	+4.3
YJA	Yavi	2.68	97	eP	Pn	19 20 56.6	-1.4
SALTA		3.00	142	eP	Pn	19 21 00.8	-1.5
PB14	IPOC Station P	3.31	214		Pn	19 21 06.3	+0.1
PB14	IPOC Station P	3.31	214	eP	Pn	19 21 06.7	+0.5
PB14	IPOC Station P	3.31	214	eP	Pn	19 21 06.0	-0.2
PB14				eS	Sn	19 21 33.6	-12
PB14				IAML		19 21 56.3	
	comp=Z,452nm,0.5s						
GO02	Mina Guanaco	3.46	198		Pn	19 21 08.4	+0.2
GO02	Mina Guanaco	3.46	198	eP	Pn	19 21 08.7	+0.6
GO02				IAML		19 22 13.1	
	comp=N,649nm,0.5s						
GO02	Mina Guanaco	3.46	198	eP	Pn	19 21 03.8	-4.4
GO02				eS	Sn	19 21 42.7	-6.0
PB16	IPOC Station P	3.67	343		Pn	19 21 10.5	-0.8
PB16	IPOC Station P	3.67	343	eP	Pn	19 21 13.6	+2.2
PB16	IPOC Station P	3.67	343	eP	Pn	19 21 13.1	+1.7
PB16				IAML		19 22 28.9	
	comp=Z,194nm,0.6s						
SLA	San Lorenzo	3.88	138	eP	Pn	19 21 12.5	-1.1
SLA				eS	Sn	19 21 45.7	-13
AP01	Chacalluta	3.94	332		Pn	19 21 14.3	0.0
AC01	Pan de Azucar	4.71	205		Pn	19 21 23.5	-1.2
AC01	Pan de Azucar	4.71	205	eP	Pn	19 21 23.5	-1.2
AC01				eS	Sn	19 22 15.1	-3.3
AC01				IAML		19 22 34.0	
	comp=Z,188nm,0.8s						
AC02	Maricunga	4.99	188		Pn	19 21 29.2	+0.4
AC02	Maricunga	4.99	188	eP	Pn	19 21 29.4	+0.5

AC02				eS	Sn	19 22 33.0	+7.3
AC02				IAML		19 23 28.1	
	comp=Z,194nm,0.8s						
LPAZ	La Paz	5.56	2		Pn	19 21 36.2	-0.5
LPAZ	La Paz	5.56	2	P	Pn	19 21 38.6	+1.9
	comp=Z,7.3nm,0.3s,baz=191,slow=5.5,SNR=38						
LPAZ				S	Sn	19 22 32.6	-7.1
	comp=Z,10nm,0.6s,baz=159,slow=8.2,SNR=4.3						
LPAZ	La Paz	5.56	2	eP	Pn	19 21 37.5	+0.8
AC06	Mina Casimiro	5.75	198	Pn	Pn	19 21 36.4	-2.3
GO03	Copiapo	5.94	196	Pn	Pn	19 21 39.5	-1.8
AC04	Llanos de Chal	6.76	201	Pn	Pn	19 21 48.8	-3.6
LCO	Las Campanas	7.41	196		Pn	19 21 58.0	-3.4
CO01	Juntas del Tor	8.22	190	Pn	Pn	19 22 09.2	-3.0
GO04	Tololo Observa	8.55	194	Pn	Pn	19 22 12.8	-3.9
SIV	San Ignacio	9.06	51	P	Pn	19 22 21.3	-2.2
	comp=Z,34nm,0.3s,baz=237,slow=11,SNR=174						
SIV				S	Sn	19 23 56.7	-7.1
	comp=Z,6.8nm,0.7s,baz=267,slow=17,SNR=4.1						
CO06	Fray Jorge	9.24	198	Pn	Pn	19 22 20.0	-5.9
CO02	Combarbal	9.59	194	Pn	Pn	19 22 25.7	-5.0
CFA	Coronel Fontan	9.70	179	P	Pn	19 22 30.4	-1.6
	comp=Z,0.9nm,0.3s,baz=337,slow=11,SNR=2.7						
CFA				S	Sn	19 24 14.1	-5.0
	comp=Z,1.1nm,0.4s,baz=154,slow=20,SNR=1.3						
MURT	Porto Murtinho	10.01	91	eP	Pn	19 22 34.9	-1.5
PTLB	Pontes e Lacer	10.84	55		Pn	19 22 45.7	-1.9
PTLB	Pontes e Lacer	10.84	55	eP	Pn	19 22 45.5	-2.1
BDQN	Bodoquena, MS	10.95	85	eP	Pn	19 22 46.5	-2.5
BDQN				eS	Sn	19 24 47.1	-2.5
CPUP	Villa Florida	11.03	116	Pn	Pn	19 22 49.4	-0.6
CPUP	Villa Florida	11.03	116	P	Pn	19 22 50.7	+0.7
	comp=Z,1.3nm,0.8s,baz=262,slow=3.0,SNR=6.4						
SJPY	San Joaquin	11.69	108	eP	Pn	19 22 59.5	+0.6
VILB	Vilhena	11.81	43		Pn	19 22 58.6	-2.0
VILB	Vilhena	11.81	43	eP	Pn	19 22 59.4	-1.2
SALV	Santo Antonio	13.39	66	eP	Pn	19 23 19.7	-1.5
RPRD	Ribas do Rio P	13.77	87	eP	Pn	19 23 25.1	-1.0
TRCB	Terra Rica	14.60	97	eP	Pn	19 23 36.2	-0.6
PDRB	Porto dos Gac	15.11	49	eP	Pn	19 23 42.0	-1.2
PTGB	Pitanga	15.26	104	eP	Pn	19 23 45.4	+0.4
CPSB	Cacapava Do Su	15.87	125	eP	Pn	19 23 52.6	+0.1
PCMB	Pacaembu	15.91	92	eP	Pn	19 23 53.3	+0.1
CLDB	Colider	16.28	50	eP	Pn	19 23 56.0	-1.7
TRQA	Tornquist	17.05	163	P	P	19 24 06.5	-0.4
PLCA	Paso Flores	18.89	185	P	P	19 24 26.8	-0.4
PLCA	Paso Flores	18.89	185	P	Pn	19 24 28.7	-0.3
	comp=Z,5.4nm,0.7s,baz=9.7,slow=10,SNR=9.8						
NPGB	Novo Progresso	19.37	42	eP	P	19 24 31.0	-1.5
SPB	Sao Paulo	19.40	99		P	19 24 33.3	+0.5
SPB				IAmb	IAmb	19 24 33.9	
	comp=Z,11nm,0.7s						
MACA	Manacapuru-AM	20.05	23		P	19 24 38.4	-1.4
MACA	Manacapuru-AM	20.05	23	eP	P	19 24 38.3	-1.5
BDFB	Brasilia	20.25	76	P	P	19 24 41.5	-0.6
BDFB				IAmb	IAmb	19 24 44.1	
	comp=Z,23nm,1.3s						
BDFB	Brasilia	20.25	76	P	P	19 24 40.9	-1.2
	comp=Z,6.5nm,0.5s,baz=222,slow=8.0,SNR=8.9						
	comp=Z,6.5nm,0.5s						
ITTB	Itaituba	21.29	37	eP	P	19 24 51.7	-1.5
DIAM	Diamantina, MG	23.47	86	eP	P	19 25 14.4	-0.8
PRPB	Parauapebas	23.79	52	eP	P	19 25 16.7	-1.2
JANB	Januaria	23.80	78	eP	P	19 25 16.9	-1.2
SMTB	Santa Maria do	23.82	60	eP	P	19 25 17.7	-0.5
MAL2	Monte Alegre,	24.09	37		P	19 25 20.8	+0.2
SDBA	SAO DESIDERIO	24.30	71	eP	P	19 25 22.1	-0.5
BOAV	Boa Vista	25.31	19		P	19 25 32.1	+0.4
BOAV	Boa Vista	25.31	19	eP	P	19 25 31.9	+0.2
GUA01	Guaratinga, BA	27.47	84	eP	P	19 25 49.9	-1.3
RUSC	La Rusia	27.98	350		P	19 25 56.2	+0.1
RUSC				IAmb	IAmb	19 25 58.4	
	comp=Z,6.6nm,0.8s						
MG03	Isla Dawson	31.96	182	P	P	19 26 31.8	+1.4
BIRD	Birdtown, Kers	57.37	348	P	P	19 29 52.4	+0.6
V55A	Taylorsville	58.68	348	P	P	19 30 01.3	+0.3
V53A	Saluda	58.84	346	P	P	19 30 01.8	-0.3
V53A				IAmb	IAmb	19 30 03.1	
	comp=Z,4.1nm,0.7s						
TKL	Tuckaleechee C	59.05	345	P	P	19 30 02.2	-1.4
TKL				IAmb	IAmb	19 30 04.2	
	comp=Z,6.3nm,0.8s						
SWET	Sewanee	59.17	343	P	P	19 30 03.8	-0.6
U54A	Nelsons Funny	59.45	347	P	P	19 30 06.3	-0.1
VNA3	Neumayer Olymp	59.57	161	⇓P	P	19 30 08.1	+1.3
	comp=Z,2.2nm,0.4s						
VNA1	Neumayer--Stat	59.77	160	⇓P	P	19 30 09.4	+1.4
	comp=Z,5.1nm,0.8s						
VNA2	Neumayer--Watz	60.14	161	⇓P	P	19 30 12.2	+1.5
	comp=Z,4.4nm,0.6s,baz=293,slow=6.6						
WVT	Waverly	60.55	342	P	P	19 30 12.7	-1.1
T47A	Sharon Grove	61.15	343		P	19 30 17.6	-0.3
OZNA	Ozona	61.18	328	P	P	19 30 17.6	-0.7
OZNA				IAmb	IAmb	19 30 29.3	
	comp=Z,10nm,1.4s						
TXAR	Lajitas Array	61.21	325	P	P	19 30 19.0	+0.4
	comp=Z,0.4nm,0.6s,baz=156,slow=5.6,SNR=3.4						
	comp=Z,0.4nm,0.6s						
SNAA	Sanae	61.77	161	⇓P	P	19 30 22.9	+1.2
	comp=Z,117nm,0.7s						
SNAA	Sanae	61.77	161	P	P	19 30 23.1	+1.4
SNAA				IAmb	IAmb	19 30 23.9	
	comp=Z,4.7nm,0.8s						
SNAA				PcP	PcP	19 31 02.3	+0.5
SNAA	Sanae	61.77	161	P	P	19 30 22.8	+1.2
	comp=Z,3.6nm,0.6s,baz=282,slow=8.6,SNR=42						
	comp=Z,3.6nm,0.6s						
PBMO	Poplar Bluff	61.94	340	P	P	19 30 21.8	-1.3
PBMO				IAmb	IAmb	19 30 23.7	
	comp=Z,5.9nm,0.7s						
FVM	French Village	63.04	341	P	P	19 30 30.4	-0.1
FVM				IAmb	IAmb	19 30 31.2	
	comp=Z,8.0nm,0.8s						
VHRN	Van Horn	63.06	325	IAmb	IAmb	19 30 32.0	
	comp=Z,2.5nm,0.6s						
TROLL	Troll, Antarti	63.48	161	⇓P	P	19 30 34.7	+1.5
	comp=Z,210nm,0.5s						
QSPA	South Pole Qui	68.32	180	P	P	19 31 06.4	+2.1
QSPA				PcP	PcP	19 31 26.4	-2.7
QSPA	South Pole Qui	68.32	180	P	P	19 31 06.1	+1.8
	comp=Z,6.0nm,0.5s,baz=162,slow=12,SNR=82						
	comp=Z,6.0nm,0.5s						
DBIC	Dimbokro	68.37	73	P	P	19 31 06.0	+0.8
DBIC	Dimbokro	68.37	73	P	P	19 31 05.6	+0.3
	comp=Z,11nm,0.9s,baz=265,slow=9.1,SNR=8.2						
	comp=Z,11nm,0.9s						
D62A	Allapoint, All	68.63	360	P	P	19 31 06.9	+0.8
D62A				IAmb	IAmb	19 31 07.6	
	comp=Z,3.8nm,0.7s						
BATG	Bathurst New B	68.86	2	P	P	19 31 06.8	-0.7
BATG				IAmb	IAmb	19 31 18.0	
	comp=Z,7.2nm,1.4s						
LDAQ	Lac Daran	69.56	358	P	P	19 31 12.2	+0.3
LDAQ				IAmb	IAmb	19 31 13.2	
	comp=Z,5.5nm,0.6s						
WUAZ	Wupatki	70.12	324	IAmb	IAmb	19 31 19.0	
	comp=Z,9.1nm,1.0s						
ICQ	Pointe Anglais	71.08	1	P	P	19 31 21.4	+0.4
ICQ				IAmb	IAmb	19 31 24.1	
	comp=Z,12nm,1.1s						
U15A	North Rim	71.29	324	IAmb	IAmb	19 31 26.4	
	comp=Z,7.1nm,1.0s						
KNB	Kanab	72.01	324		P	19 31 28.4	+1.2
KNB				IAmb	IAmb	19 31 30.8	
	comp=Z,9.3nm,0.9s						
P18A	Preston Nutter	72.61	327	IAmb	IAmb	19 31 33.6	
	comp=Z,6.1nm,0.7s						
MVU	Marysvale	72.78	325	IAmb	IAmb	19 31 34.9	
	comp=Z,5.6nm,0.9s						
PDAR	Pinedale Array	74.68	330	P	P	19 31 43.8	+1.0
	comp=Z,0.8nm,0.7s,baz=132,slow=7.3,SNR=7.0						
	comp=Z,0.8nm,0.7s						
ULM	Lac du Bonnet	75.82	342	P	P	19 31 48.7	-0.1
	comp=Z,1.6nm,0.4s,baz=158,slow=8.7,SNR=2.6						
	comp=Z,1.6nm,0.4s						
NVAR	Mina Array Bea	76.09	322	P	P	19 31 52.5	+1.5
	comp=Z,1.6nm,0.8s,baz=158,slow=6.4,SNR=8.1						
	comp=Z,1.6nm,0.8s						
SCHQ	Schefferville	76.40	1	P	P	19 31 52.2	+0.1
	comp=Z,1.4nm,0.6s,baz=172,slow=15,SNR=1.8						
	comp=Z,1.4nm,0.6s						
TORD	Torodi Ar. Bea	77.02	70	P	P	19 31 56.5	+0.1
TORD				IAmb	IAmb	19 31 58.7	
	comp=Z,6.3nm,0.8s						
TORD	Torodi Ar. Bea	77.02	70	P	P	19 31 56.3	-0.1
	comp=Z,8.0nm,0.7s,baz=264,slow=4.6,SNR=15						
	comp=Z,8.0nm,0.7s						
HLID	Hailey	77.62	328	IAmb	IAmb	19 32 02.4	
	comp=Z,4.9nm,0.8s						
PLID	Pearl Lake	79.51	328	IAmb	IAmb	19 32 12.1	
	comp=Z,5.8nm,0.8s						
K05A	Summer Lake	80.43	324	IAmb	IAmb	19 32 17.7	
	comp=Z,8.3nm,0.9s						
PINE	Pine Mountain	81.17	324	IAmb	IAmb	19 32 21.6	
	comp=Z,6.4nm,1.0s						
GRTLG	Ghanzi	81.94	110	P	P	19 32 23.2	0.0
BOSA	Boshof	82.84	118	P	P	19 32 28.1	+0.3
BOSA				IAmb	IAmb	19 32 52.6	
	comp=Z,10nm,1.4s						
BOSA	Boshof	82.84	118	P	P	19 32 28.7	+0.9
	comp=Z,2.8nm,0.7s,baz=251,slow=3.4,SNR=8.0						
	comp=Z,2.8nm,0.7s						
MAW	Mawson	83.83	163	P	P	19 32 33.5	+1.6
	comp=Z,3.6nm,0.8s,baz=198,slow=6.9,SNR=6.2						
	comp=Z,3.6nm,0.8s						
LBTB	Lobatse	84.42	115	P	P	19 32 36.2	+0.4
LBTB				IAmb	IAmb	19 33 14.3	
	comp=Z,11nm,1.4s						
NRS	Narsarsuaq	84.79	11	P	P	19 32 36.3	-0.3
ESDC	Sonseca Array	85.75	44	P	P	19 32 44.1	+2.1
	comp=Z,0.5nm,0.9s,baz=231,slow=4.1,SNR=4.0						
	comp=Z,0.5nm,0.9s						
YKA	Yellowknife Ar	91.70	340	P	P	19 33 10.1	+0.6
	comp=Z,1.8nm,0.7s,baz=131,slow=4.0,SNR=15						
	comp=Z,1.8nm,0.7s						
YKAW3	Yellowknife Wh	91.75	340	P	P	19 33 09.7	-0.1
YKAW3				IAmb	IAmb	19 33 11.4	
	comp=Z,5.3nm,0.9s						
ASAR	Alice Springs	129.81	207	PKP	PKiKP	19 39 13.0	0.0
	comp=Z,1.7nm,0.8s,baz=128,slow=2.1,SNR=16						
WRA	Warramunga Arr	132.88	210	PKP	PKiKP	19 39 19.3	+0.1
	comp=Z,1.5nm,0.7s,baz=160,slow=1.7,SNR=16						
BVAR	Borovoye Array	135.82	35	PKP	PKiKP	19 39 24.1	0.0
	comp=Z,0.7nm,0.7s,baz=242,slow=3.2,SNR=3.9						
KURBB	Kurchatov Arra	141.37	34	PKP	PKiKP	19 39 34.2	-1.3
	comp=Z,0.7nm,0.8s,baz=302,slow=2.3,SNR=6.0						
ZALV	Zalesovo Beam	142.08	26	PKP	PKPdf	19 39 35.3	+1.4
	comp=Z,2.0nm,0.6s,baz=325,slow=2.3,SNR=8.2						
KSH	Kashi	144.95	52	PKP	PKPdf	19 39 40.0	+0.4
MKAR	Makanchi Array	145.64	37	PKPbc	PKPab	19 39 41.9	+0.5
	comp=Z,0.7nm,0.3s,baz=4.1,slow=3.0,SNR=19						
MJAR	Matsushiro Arr	152.69	308	PKPbc	PKiKP	19 39 59.8	+0.5
	comp=Z,0.9nm,0.8s,baz=76,slow=5.1,SNR=3.1						
SONM	Songino Array	153.76	8	PKP	PKPdf	19 39 52.7	-0.6
	comp=Z,0.6nm,0.8s,baz=85,slow=1.6,SNR=4.2						
SONM				PKPbc	PKiKP	19 40 02.1	+0.8
	comp=Z,0.6nm,0.6s,baz=170,slow=2.1,SNR=4.2						
SONM				PKPab	PKPab	19 40 15.2	+0.8
	comp=Z,0.4nm,0.5s,baz=0.0,slow=3.0,SNR=3.7						
PZH	PanZhiHua	169.88	61	PKP	PKPdf	19 40 10.3	-0.1

*IDC **25** 19:42:02.9±0.7, 2°.70S×138°.53E, h0^{km}, mb4.0/10, mbtmp4.0/12, ML3.9/2, MS3.3/15, Error ellipse: s-maj=18.7km s-min=15.1km az=23.0*

*NEIC **25** 19:42:04.7±1.4, 2°.68S±0°.09×138°.52E±0°.03, h10^{km}±1^{km}, mb4.3/27, Error ellipse: s-maj=15.9km s-min=2.9km az=162.0*

*DJA **25** 19:42:06.9±0.4, 2°S±5°×13°9E±°, h10^{km}, M4.1/6, mB5.5/1, mb3.9/1, MLv4.2/6, Mw(mB)5.0/1*

ISC 25 19:42:04.0±0.4**, 2°.78S**±0°.05×**138°.51E**±0°.05**, h10^{km}, n71, σ1^{s}.54**/60**, mb4.3**/22**, MS3.3**/11**, 1C, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.81	15	P	Pg	19 42 17.3	-2.3
GENI	Genyem	1.67	84	P	Pb	19 42 34.6	-0.3
JAY	Jayapura	2.21	83	Pn	Pn	19 42 41.8	+0.9
	23nm,0.3s,baz=227,slow=12,SNR=76						
JAY				Lg	Lg	19 43 11.4	
	15nm,0.3s,baz=68,slow=18,SNR=4.2						
JAY				LR	LR	19 43 29.3	
	comp=Z,275nm,20.3s,baz=251,slow=40						
	64nm,0.3s						
JAY	Jayapura	2.21	83	P	Pn	19 42 41.8	+0.9
SRPI	Serui, Papua	2.44	292	P	Pn	19 42 45.8	+1.9
BAKI	Biak	2.87	303	P	Pb	19 42 52.9	-2.4
RKPI	Ransiki, Papua	4.50	286	P	Pn	19 43 15.1	+2.7
FAKI	Fak Fak	6.25	269	Pn	Pn	19 43 40.1	+3.8
SAUI	Saumlaki	8.84	234	Pn	Pn	19 44 13.6	+1.6
COEN	Coen	12.03	158	Pn	Pn	19 44 56.5	+0.8
SOEI	Soe	15.75	243	Pn	Pn	19 45 47.1	+0.8
SOEI				IAmb	IAmb	19 46 17.6	
	comp=Z,30nm,0.9s						
KNRA	Kununurra	16.01	216	Pn	Pn	19 45 50.5	+0.9
DAV	Davao City (W)	16.19	307	LR	LR	19 52 09.4	
	comp=Z,30nm,18.1s,baz=70,slow=38						
WB0	Warramunga Arr	17.36	193		Pn	19 46 05.8	-0.8
WB0				IAmb	IAmb	19 46 20.1	
	comp=Z,20nm,1.1s						
GUMO	Guam	17.44	21	LR	LR	19 52 15.6	
	comp=Z,50nm,20.6s,baz=152,slow=35						
WR8	Warramunga Arr	17.52	193		Pn	19 46 07.2	-1.4
WR8				IAmb	IAmb	19 46 22.0	
	comp=Z,16nm,0.9s						
WRA	Warramunga Arr	17.54	193	Pn	Pn	19 46 07.0	-1.8
WRA	Warramunga Arr	17.54	193	P	Pn	19 46 08.9	0.0
	comp=Z,0.6nm,0.3s,baz=13,slow=12,SNR=17						
WRA				S	Sn	19 49 18.3	-6.1
	comp=Z,1.8nm,0.9s,baz=11,slow=23,SNR=3.2						
	comp=Z,2.5nm,0.6s						
CTAO	Charters Tower	18.80	157	P	P	19 46 20.8	-3.0
CTAO				IAmb	IAmb	19 47 02.0	
	comp=Z,31nm,1.4s						
KAPI	Kappang	18.84	263	LR	LR	19 54 18.5	
	comp=Z,63nm,19.2s,baz=65,slow=39						
FITZ	Fitzroy Crossi	19.77	219	P	P	19 46 34.6	+0.1
AS31	Alice Springs	21.24	192		P	19 46 51.5	+1.1
ASAR	Alice Springs	21.24	192		P	19 46 51.6	+1.1
ASAR	Alice Springs	21.24	192	P	P	19 46 52.0	+1.6
	comp=Z,5.5nm,0.9s,baz=23,slow=10,SNR=32						
ASAR				S	S	19 50 43.5	-3.2
	comp=Z,0.8nm,1.0s,baz=14,slow=24,SNR=2.3						
	comp=Z,5.5nm,0.9s						
TGY	Tagaytay City	24.18	314	LR	LR	19 57 23.8	
	comp=Z,64nm,19.0s,baz=19,slow=38						
EIDS	Eidsvold	25.52	153	P	P	19 47 32.1	-0.8
PSA00	Pilbara Seismi	26.05	223	P	P	19 47 39.2	+1.4
STKA	Stephens Creek	29.09	175	LR	LR	20 01 02.1	
	comp=Z,122nm,19.4s,baz=24,slow=39						
DZM	Mont Dzumac	33.23	128	LR	LR	20 02 20.2	
	comp=Z,167nm,18.9s,baz=352,slow=37						
NWAO	Narrogin (SRO)	36.02	211	P	P	19 49 06.4	+0.9
JNU	Nakatsue	36.42	349	LR	LR	20 01 07.1	
	comp=Z,44nm,21.8s,baz=176,slow=32						
JMN	Monobe	36.57	354	P	P	19 49 08.5	-1.7
MJAR	Matsushiro Arr	39.12	360	LR	LR	20 03 43.3	
	comp=Z,45nm,18.6s,baz=195,slow=33						
KSRS	Korea Array	41.22	347	P	P	19 49 49.2	+0.1
	comp=Z,0.8nm,0.6s,baz=162,slow=7.5,SNR=4.7						
	comp=Z,0.8nm,0.6s						
CMAR	Chiang Mai Arr	44.29	300	P	P	19 50 15.2	+0.8
	comp=Z,0.9nm,0.7s,baz=122,slow=6.0,SNR=13						
	comp=Z,0.9nm,0.7s						
KMI	Kunming	44.41	311	P	P	19 50 15.3	-0.2
KMI				pmax	pmax		
	comp=Z,11nm,0.6s						
PZH	PanZhiHua	45.92	312	P	P	19 50 28.3	+0.9
ASAJ	Asahikawa	46.83	4	LR	LR	20 08 37.1	
	comp=Z,28nm,21.7s,baz=165,slow=34						
USRK	Ussuriysk Ar.	47.13	354	LR	LR	20 07 10.0	
	comp=Z,20nm,19.8s,baz=159,slow=32						
BNX	BinXian	49.30	350	⇑P	P	19 50 53.3	+0.1
BNX				pP	pP	19 50 56.8	+0.4
BNX				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC	Hu-ho-hao-te	49.90	333	eP	P	19 50 59.5	+1.5
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,40nm,6.6s						
KLR	Kul'dur	52.13	354	LR	LR	20 11 57.5	
	comp=Z,25nm,19.1s,baz=196,slow=34						
GTA	Gaotai	55.00	324	eP	P	19 51 37.3	+1.4
GTA				pP	sP	19 51 42.0	+1.6
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SONM	Songino Array	57.69	335	P	P	19 51 55.2	+0.3
	comp=Z,1.4nm,0.9s,baz=160,slow=6.4,SNR=6.2						
	comp=Z,1.4nm,0.9s						
PETK	Petropavlovsk-	57.97	14	LR	LR	20 12 39.2	
	comp=Z,23nm,21.6s,baz=220,slow=32						
YAK	Yakutsk	64.98	355	P	P	19 52 43.4	-0.4
YAK	Yakutsk	64.98	355	LR	LR	20 17 57.2	
	comp=Z,27nm,21.7s,baz=194,slow=33						
MKAR	Makanchi Array	69.72	322	P	P	19 53 13.8	-0.5
MKAR	Makanchi Array	69.72	322	P	P	19 53 14.6	+0.3
	comp=Z,2.9nm,0.9s,baz=116,slow=7.8,SNR=17						
	comp=Z,2.9nm,0.9s						
MAKZ	Makanchi	69.91	322	P	P	19 53 15.2	-0.3
MAKZ				IAmb	IAmb	19 53 23.5	
	comp=Z,4.4nm,1.1s						
ZALV	Zalesovo Beam	71.89	330	P	P	19 53 27.2	-0.1
	comp=Z,0.8nm,0.6s,baz=108,slow=4.8,SNR=4.1						
	comp=Z,0.8nm,0.6s						
KURBB	Kurchatov Arra	73.66	325	P	P	19 53 37.6	-0.2
	comp=Z,1.5nm,1.0s,baz=116,slow=5.5,SNR=9.9						
	comp=Z,1.5nm,1.0s						
TIXI	Tiksi	74.56	357	P	P	19 53 42.4	-0.2
TIXI				IAmb	IAmb	19 53 43.7	
	comp=Z,5.9nm,1.4s						
VNDA	Vanda	75.73	175	P	P	19 53 50.4	+1.0
	comp=Z,1.3nm,0.8s,baz=317,slow=3.9,SNR=3.5						
	comp=Z,1.3nm,0.8s						
BVAR	Borovoye Array	79.25	325	P	P	19 54 08.8	-0.7
	comp=Z,1.7nm,0.7s,baz=116,slow=6.8,SNR=3.6						
	comp=Z,1.7nm,0.7s						
M16K	Timber Creek	79.50	26	P	P	19 54 10.5	-0.1
SII	Sitkinak Islan	80.02	31	P	P	19 54 14.3	+0.6
KDAK	Kodiak Island	81.26	30	LR	LR	20 25 43.8	
	comp=Z,25nm,20.5s,baz=226,slow=32						
G18K	Tagagawik	81.75	22	P	P	19 54 22.7	-0.1
G18K				IAmb	IAmb	19 54 33.7	
	comp=Z,2.9nm,1.1s						
G19K	Purcell Mounta	82.44	22	P	P	19 54 27.2	+0.9
G19K				IAmb	IAmb	19 54 35.9	
	comp=Z,3.6nm,1.1s						
AB31	Akbulak array	84.64	320	P	P	19 54 37.2	-0.7
AB31				IAmb	IAmb	19 54 41.1	
	comp=Z,1.1nm,0.7s						
ABKAR	Akbulak array	84.64	320	P	P	19 54 37.3	-0.7
HIN	Hinchinbrook I	85.03	29	P	P	19 54 39.6	-0.1
E23K	Chandalar	85.86	21	P	P	19 54 44.4	+0.6
ILAR	Eielson Array	85.98	24	P	P	19 54 42.0	-2.3
	comp=Z,0.9nm,0.8s,baz=266,slow=5.2,SNR=7.5						
QSPA	South Pole Qui	87.17	180	P	P	19 54 50.8	+0.5
QSPA	South Pole Qui	87.17	180	P	P	19 54 51.2	+0.9
	comp=Z,1.9nm,0.8s,baz=262,slow=1.1,SNR=11						
	comp=Z,1.9nm,0.8s						
J26L	Joseph Creek	87.30	25	P	P	19 54 50.8	-0.2
BMAR	Burnt Mountain	87.54	22	P	P	19 54 52.7	+0.8
F26K	Sheenjek River	87.76	22	P	P	19 54 53.8	+0.8
F26K				IAmb	IAmb	19 54 57.8	
	comp=Z,2.7nm,1.2s						
HYT	Haines Junctio	89.47	29	P	P	19 55 01.9	+0.6
HYT				IAmb	IAmb	19 55 04.3	
	comp=Z,1.4nm,0.8s						

*KRNET **25** 19:55:30.4±0.1, 39°.28N×78°.50E, mb2.6*

SOME 25 19:55:33.4, 42°.45N×80°.65E, h5^{km}, 6C-2D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	Shalkode	1.12	309	eP	Pg	19 55 50.2	-4.8
	2.5nm,0.1s						
SHLS				eS	Sg	19 56 02.5	-7.0
	19nm,0.3s						
DJR	Jarkent	1.98	342	eP	Pb	19 56 10.2	+0.2
	0.5nm,0.1s						
DJR				eS	Sg	19 56 36.8	-0.3
	2.8nm,0.2s						
TARG	Taragay, Kyrgy	2.24	252	⇑iP	Pn	19 56 10.7	-0.8
TARG				⇑iS	Sn	19 56 40.2	+0.5
KDJ	Kajisay	2.59	264	⇓iP	Pn	19 56 17.8	+1.6
KDJ				⇓iS	Sb	19 56 51.9	-0.8
ULHL	Ulahol	3.27	268	⇑eP	Pn	19 56 23.4	-2.2
ULHL				⇑iS	Sn	19 57 01.8	-3.2
BOOM	Boomskoye usch	3.48	272	⇑eP	Pn	19 56 27.8	-0.6
BOOM				⇑eS	Sn	19 57 09.1	-1.0

IDC 25 20:09:58.4±2.1**, 32°.62S**×**178°.53W, h0^{km}, mb3.9**/2**, mbtmp3.9**/3**, ML3.9**/1**, Error ellipse: s-maj=62.2km s-min=37.8km az=138.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.66	211	Pn	Pn	20 11 36.3	-1.2
	2.2nm,0.3s,baz=297,slow=5.0,SNR=8.5						
URZ				Sn	Sn	20 12 48.9	-5.1
	6.6nm,0.3s,baz=115,slow=19,SNR=7.1						
	4.8nm,0.3s						
ASAR	Alice Springs	42.59	270	P	P	20 17 56.5	+0.1
	0.6nm,0.5s,baz=112,slow=8.4,SNR=13						
	0.6nm,0.5s						
WRA	Warramunga Arr	43.78	275	P	P	20 18 06.1	+0.1
	1.4nm,0.6s,baz=115,slow=8.3,SNR=16						
	1.4nm,0.6s						
FINES	FINESS Array B	147.05	338	PKPbc	PKPbc	20 29 41.5	-0.8
	1.5nm,0.6s,baz=55,slow=3.0,SNR=14						
NOA	NORSAR Array B	150.86	350	PKPbc	PKPbc	20 29 51.8	-0.4
	0.2nm,0.5s,baz=19,slow=3.0,SNR=3.5						

*IDC **25** 20:10:31.6±1.0, 32°.34S×178°.43W, h0^{km}, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=42.3km s-min=34.9km az=19.0*

*WEL **25** 20:10:31.6±1.0, 33°S±6°×17°8W±1°6, h33^{km}, M4.5/12, mB4.9/6, ML5.0/12, MLv4.7/12, Mw(mB)4.2/6, Error ellipse: s-maj=21.9km s-min=4.1km az=108.6, confirmed*

ISC 25 20:10:34.0±0.9**, 32°.86S**±0°.08×**178°.0W**±0°.2**, h35^{km}, n30, σ2^{s}.00**/42**, mb3.8**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.58	1	P	Pn	20 11 25.4	-1.7
GLKZ				S	Sn	20 12 03.5	-4.7
PKGZ	Pakihiroa	5.94	212	P	Pn	20 11 58.2	-1.3
PKGZ				S	Sn	20 13 06.3	0.0
HAZ	Te Kaha	5.99	214	P	Pn	20 12 00.7	+0.6
HAZ				S	Sn	20 13 09.2	+1.7
RUGZ	Raukumara Rang	6.20	214	P	Pn	20 12 02.8	-0.5
RUGZ				S	Sn	20 13 13.5	+0.5
TWGZ	Tauwhareparae	6.24	211	P	Pn	20 12 01.1	-2.6
TWGZ				S	Sn	20 13 14.4	+0.6
MWZ	Matawai	6.57	212	P	Pn	20 12 07.4	-0.8
MWZ				S	Sn	20 13 19.9	-2.0
URZ	Urewera	6.71	215	Pn	Pn	20 12 09.4	-0.6
	1.8nm,0.3s,baz=326,slow=7.3,SNR=4.1						
URZ				Sn	Sn	20 13 22.5	-2.7
	13nm,0.3s,baz=112,slow=19,SNR=9.8						
URZ	Urewera	6.71	215	P	Pn	20 12 09.3	-0.8
URZ				S	Sn	20 13 23.5	-1.7
RAGZ	Rawiri	6.75	212	P	Pn	20 12 10.3	-0.5
RAGZ				S	Sn	20 13 24.5	-1.9
SNGZ	Shannon Statio	7.02	211	P	Pn	20 12 10.5	-3.9
SNGZ				S	Sn	20 13 30.0	-3.0
WCZ	Waipu Caves	7.04	242	P	Pn	20 12 19.4	+4.8
MUGZ	Murupara	7.04	216	P	Pn	20 12 13.9	-0.8
MUGZ				S	Sn	20 13 30.4	-3.1
RTZ	Ruatahuna	7.05	214	P	Pn	20 12 12.9	-1.9
RTZ				S	Sn	20 13 31.2	-2.6
ETAZ	East Tamaki Re	7.11	233	P	Pn	20 12 16.4	+0.9
RAHZ	Arahi	7.25	212	P	Pn	20 12 17.2	-0.3
RAHZ				S	Sn	20 13 36.3	-2.2
MTHZ	Maungataniwha	7.31	214	P	Pn	20 12 18.5	+0.2
MTHZ				S	Sn	20 13 37.4	-2.6
OUZ	Omahuta	7.37	249	P	Pn	20 12 21.1	+2.0
ASAR	Alice Springs	43.04	270	P	P	20 18 30.3	-0.3
	1.1nm,0.5s,baz=111,slow=7.8,SNR=11						
	1.1nm,0.5s						
WRA	Warramunga Arr	44.25	275	P	P	20 18 39.5	-0.8
	2.0nm,0.5s,baz=114,slow=7.9,SNR=12						
	2.0nm,0.5s						
QSPA	South Pole Qui	57.26	180	P	P	20 20 24.4	+6.6
	0.6nm,0.7s,baz=347,slow=1.9,SNR=3.9						
	0.6nm,0.7s						
KURBB	Kurchatov Arra	122.77	313	PKP	PKiKP	20 29 26.6	+0.6
	0.3nm,0.4s,baz=115,slow=1.9,SNR=4.7						
BVAR	Borovoye Array	128.15	314	PKP	PKiKP	20 29 37.5	+1.0
	0.6nm,0.4s,baz=160,slow=4.6,SNR=5.9						
ARCES	ARCESS Array B	140.98	347	PKP	PKPdf	20 29 60.0	+0.5
	3.3nm,0.9s,baz=72,slow=2.9,SNR=1.8						
FINES	FINESS Array B	147.44	339	PKPbc	PKPab	20 30 14.8	-0.7

	2.2nm,0.4s,baz=44,slow=4.0,SNR=12						
NB2	NORSAR Subarra	151.17	351	PKP	PKiKP	20 30 25.4	+2.0
	comp=Z,2.6nm,1.2s,baz=15,slow=4.1						
NOA	NORSAR Array B	151.17	351	PKPbc	PKiKP	20 30 25.1	+1.7
	comp=Z,0.6nm,0.6s,baz=14,slow=4.1,SNR=4.7						
MMAI	Mount Meron Ar	152.04	280	PKPbc	PKiKP	20 30 28.5	+2.3
	comp=Z,0.4nm,0.4s,baz=120,slow=5.2,SNR=4.5						
DBIC	Dimbokro	153.17	165	PKPbc	PKiKP	20 30 33.2	+4.3
	comp=Z,5.1nm,0.7s,baz=155,slow=4.9,SNR=3.2						
AKASG	Malin Array Be	153.22	320	PKPbc	PKiKP	20 30 28.9	+1.0
	comp=Z,0.4nm,0.4s,baz=48,slow=2.7,SNR=4.2						
BRTR	Keskin Array B	153.69	294	PKPbc	PKiKP	20 30 30.9	+1.5
	comp=Z,0.7nm,0.5s,baz=137,slow=3.4,SNR=4.8						

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*IDC **25** 20:32:16.4±0.8, 0°.24N×124°.11E, h114km±7km, mb3.8/20, mbtmp4.2/24, MS3.0/6, Error ellipse: s-maj=19.5km s-min=9.2km az=80.0*

*NEIC **25** 20:32:17.9±1.9, 0°.25N±0°.07×124°.17E±0°.06, h119km±7km, mb4.5/39, Error ellipse: s-maj=10.7km s-min=9.1km az=185.0*

*DJA **25** 20:32:18.5±0.2, 0°N±2°×12°4E±°, h90km±5km, M4.7/25, mb5.0/17, mB5.1/11, MLv5.0/25, Mw(mB)4.5/11*

ISC 25 20:32:16.2±0.3**, 0°.18N**±0°.04×**124°.22E**±0°.04**, h110**km**, n139, σ1s.50**/153**, mb4.4**/44**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	0.46	328	P	Pn	20 32 34.6	+1.8
KMSI				S	Sn	20 32 47.4	+2.1
LUWI	Luwuk	1.89	230		Pn	20 32 49.8	+2.0
LUWI	Luwuk	1.89	230	P	Pn	20 32 49.1	+1.2
LUWI	Luwuk	1.89	230	P	Pn	20 32 49.9	+2.0
LUWI				S	Sn	20 33 14.8	+2.8
MRSI	Marisa	2.30	277	P	Pn	20 32 52.4	-0.7
MRSI				S	Sn	20 33 19.0	-2.3
APSI	Ampana	2.79	247	P	Pn	20 33 00.2	+0.7
SANI	Sanana	2.83	141	P	Pn	20 32 59.6	-0.4
SANI	Sanana	2.83	141	P	Pn	20 32 59.8	-0.2
SANI				S	Sn	20 33 30.4	-3.4
TNTI	Ternate	3.20	79		Pn	20 33 06.4	+1.6
TNTI	Ternate	3.20	79	P	Pn	20 33 06.5	+1.6
TNTI	Ternate	3.20	79	P	Pn	20 33 06.8	+1.9
TNTI				S	Sn	20 33 44.2	+1.8
TOLI2	Tolitoli	3.56	285		Pn	20 33 10.2	+0.4
TOLI2	Tolitoli	3.56	285	P	Pn	20 33 10.0	+0.3
TOLI2	Tolitoli	3.56	285	S	Sn	20 33 52.3	+1.2
SGSI	Sangihe	3.72	21	P	Pn	20 33 14.7	+2.8
MPSI	Mapaga	4.33	272	P	Pn	20 33 21.5	+1.5
MPSI				S	Sn	20 34 11.1	+1.6
NLAI	Namlea	4.45	140	P	Pn	20 33 23.2	+1.5
PCI	Palu	4.52	256	P	Pn	20 33 23.5	+0.9
TTSI	Tana Toraja	5.44	234	P	Pn	20 33 36.2	+1.1
AAI	Ambon	5.52	134	P	Pn	20 33 38.6	+2.4
	2.0nm2µm163nm,0.7s						
MSAI	Masohi	5.86	127	P	Pn	20 33 43.7	+2.9
	289nm,0.8s						
MSAI				S	Sn	20 34 49.6	+2.8
	289nm,0.8s						
BBSI	Bau Bau	5.87	196	P	Pn	20 33 42.6	+1.8
	0.8nm3µm185nm,0.5s						
SPSI	Sidrap Palu	6.06	227	P	Pn	20 33 45.7	+2.2
	0.5nm2µm104nm,0.5s						
BNSI	Bone	6.13	222	P	Pn	20 33 45.8	+1.4
	0.6nm1µm59nm,0.8s						
KAPI	Kappang	6.82	221		Pn	20 33 55.9	+2.1
KAPI	Kappang	6.82	221	P	Pn	20 33 55.4	+1.6
	33nm,0.2s,baz=54,slow=5.7,SNR=26						
KAPI				S	Sn	20 35 07.5	-2.5
	30nm,0.4s,baz=46,slow=21,SNR=9.1						
KAPI				LR	LR	20 36 56.7	
	comp=Z,152nm,18.4s,baz=74,slow=41						
KAPI	Kappang	6.82	221	P	Pn	20 33 56.5	+2.7
KAPI	Kappang	6.82	221	S	Sn	20 35 09.8	-0.2
DAV	Davao City (W)	6.98	11	LR	LR	20 36 51.5	
	comp=Z,116nm,20.2s,baz=215,slow=40						
SWI	Sorong	7.11	98	P	Pn	20 33 59.8	+2.1
	0.3nm72nm,0.9s						
BSSI	Bau Bau, Buton	7.30	211	P	Pn	20 34 02.3	+2.0
BKB	Balikpapan	7.46	259	Pn	Pn	20 34 03.7	+1.2
MYLDM	Lahad Datu	7.57	311		Pn	20 34 05.0	+1.0
MYLDM	Lahad Datu	7.57	311	P	Pn	20 34 07.8	+3.8
FAKI	Fak Fak	8.59	111	Pn	Pn	20 34 18.1	+0.3
FAKI	Fak Fak	8.59	111	P	Pn	20 34 18.1	+0.3
FAKI	Fak Fak	8.59	111	P	Pn	20 34 18.6	+0.8
MMRI	Maumere	8.98	193	Pn	Pn	20 34 25.9	+2.9
MMRI	Maumere	8.98	193	P	Pn	20 34 24.5	+1.5
MMRI	Maumere	8.98	193	P	Pn	20 34 24.8	+1.8
	47nm,1.0s						
EDFI	Ende, Flores	9.22	196	P	Pn	20 34 27.7	+1.2
SOEI	Soe	9.87	180		Pn	20 34 38.9	+3.6
SOEI	Soe	9.87	180	P	Pn	20 34 34.4	-0.9
SOEI	Soe	9.87	180	P	Pn	20 34 37.9	+2.6
	89nm,0.9s						
KKM	Kota Kinabalu	9.89	306	P	Pn	20 34 39.2	+3.7
BATI	Baumata	10.33	183	P	Pn	20 34 42.5	+1.0
	23nm,0.8s,baz=1.3,slow=5.5,SNR=4.2						
BATI				LR	LR	20 39 14.7	
	comp=Z,90nm,20.4s,baz=110,slow=40						
PLAI	Plampang	11.01	216	P	Pn	20 34 50.8	+0.2
JAGI	Jajag, Banyuwa	13.21	229	P	P	20 35 27.1	+1.6
KSM	Kuching	13.97	275		P	20 35 34.6	+0.6
MTN	Manton Dam	14.64	152	Pn	P	20 35 40.0	-1.4
UGM	Wanagama	15.85	239		P	20 35 55.3	+0.5
KNRA	Kununurra	16.38	164		P	20 36 00.9	+0.3
LEM	Lembang	17.97	247	P	P	20 36 17.4	-1.0
	22nm,0.5s,baz=57,slow=7.6,SNR=5.0						
BBJI	Bungbulang	18.19	245	P	P	20 36 19.9	-0.8
FITZ	Fitzroy Crossi	18.22	176		Pn	20 36 21.7	-0.3
FITZ	Fitzroy Crossi	18.22	176	P	Pn	20 36 22.1	0.0
	7.5nm,0.8s,baz=17,slow=9.6,SNR=9.8						
MYKOM	Kota Tinggi	20.43	275	P	P	20 36 45.0	0.0
MYKOM				IAmb	IAmb	20 36 48.5	
	comp=Z,14nm,0.9s						
MBWA	Marble Bar	21.66	191	P	P	20 36 58.0	-0.1
MBWA				IAmb	IAmb	20 36 58.5	
	comp=Z,12nm,0.7s						
MNAI	Manna	21.72	258	P	P	20 36 58.0	-0.8
MNAI	Manna	21.72	258	P	P	20 36 59.0	+0.2
PSA00	Pilbara Seismi	22.04	191	P	P	20 37 02.7	+0.6
WB0	Warramunga Arr	22.19	154	P	P	20 37 03.5	-0.2
WRA	Warramunga Arr	22.32	154	P	P	20 37 04.2	-0.8
	comp=Z,2.3nm,0.5s,baz=330,slow=11,SNR=14						
WRA				PcP	PcP	20 40 56.4	-0.4
	comp=Z,1.6nm,0.8s,baz=335,slow=2.0,SNR=4.6						
WRA				ScP	ScP	20 44 22.8	-1.6
	comp=Z,0.4nm,0.7s,baz=338,slow=2.7,SNR=2.3						
	comp=Z,2.3nm,0.5s						
WR8	Warramunga Arr	22.40	154	P	P	20 37 05.6	-0.2
WR8				IAmb	IAmb	20 37 35.2	
	comp=Z,23nm,1.4s						
TPUB	Ta-pu	23.25	352	P	P	20 37 14.9	+0.8
COEN	Coen	23.44	128	P	P	20 37 17.4	+1.4
COEN				IAmb	IAmb	20 37 39.4	
	comp=Z,16nm,1.1s						
IPM	Ipoh	23.56	281	P	P	20 37 16.5	-0.6
IPM				IAmb	IAmb	20 37 17.1	
	comp=Z,12nm,0.6s						
IPM	Ipoh	23.56	281	P	P	20 37 17.3	+0.2
KULM	Kulim	24.08	283	P	P	20 37 20.8	-0.9
KULM				IAmb	IAmb	20 37 23.3	
	comp=Z,41nm,1.4s						
KULM	Kulim	24.08	283	P	P	20 37 20.9	-0.8
GIRL	Giralia	24.68	203	P	P	20 37 27.7	+0.6
AS31	Alice Springs	25.50	159	P	P	20 37 36.3	+1.8
ASAR	Alice Springs	25.50	159	P	P	20 37 36.5	+2.0
ASAR	Alice Springs	25.50	159	P	P	20 37 35.4	+0.8
	comp=Z,0.8nm,0.5s,baz=333,slow=7.9,SNR=13						
ASAR				pP	pP	20 37 59.3	+1.2
	comp=Z,3.2nm,0.8s,baz=325,slow=8.0,SNR=4.8						
ASAR				PcP	PcP	20 41 04.0	+0.4
	comp=Z,1.1nm,0.4s,baz=336,slow=2.2,SNR=7.7						
ASAR				ScP	ScP	20 44 31.6	-1.4
	comp=Z,0.8nm,0.8s,baz=332,slow=2.4,SNR=6.0						
	comp=Z,0.8nm,0.5s						
AS01	Alice Springs	25.52	159	P	P	20 37 34.9	+0.2
QIS	Mount Isa	25.52	145	P	P	20 37 36.3	+1.6
GSI	Gunungsitoli	26.67	273	P	P	20 37 43.6	-1.6
GSI				IAmb	IAmb	20 38 02.4	
	comp=Z,22nm,1.2s						
GSI	Gunungsitoli	26.67	273	P	P	20 37 44.3	-0.9
MEEK	Meekatharra	27.20	191	P	P	20 37 49.3	+0.2
CMAR	Chiang Mai Arr	30.77	308	P	P	20 38 21.2	-0.3
	comp=Z,0.5nm,0.5s,baz=146,slow=9.8,SNR=5.3						
CMAR				ScP	ScP	20 44 48.0	-1.5
	comp=Z,0.3nm,0.3s,baz=129,slow=3.7,SNR=5.3						
	comp=Z,0.5nm,0.5s						
CHTO	Chiang Mai	30.96	308	P	P	20 38 22.4	-0.8
BLDU	Ballidu	31.45	192	P	P	20 38 26.9	-0.4
JCJ	Chichijima	31.85	31	P	P	20 38 30.6	-0.3
JCJ	Chichijima	31.85	31	P	P	20 38 31.4	+0.5
NJ2	Nanjing	32.10	351	*e*P	P	20 38 35.3	+2.3
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KLBR	Kellerberrin	32.19	190	P	P	20 38 33.6	-0.2
JNU	Nakatsue	33.36	10	LR	LR	20 53 58.9	
	comp=Z,14nm,18.7s,baz=123,slow=39						
PZH	PanZhiHua	33.96	322	P	P	20 38 51.3	+1.8
STKA	Stephens Creek	35.87	154	P	P	20 39 06.6	+0.9
STKA				IAmb	IAmb	20 39 37.4	
	comp=Z,11nm,0.6s						
STKA	Stephens Creek	35.87	154	P	P	20 39 06.4	+0.7
	comp=Z,2.0nm,0.5s,baz=333,slow=6.4,SNR=7.9						
STKA				pP	pwP	20 39 31.8	-0.8
	comp=Z,1.8nm,0.6s,baz=330,slow=9.4,SNR=2.6						
	comp=Z,2.0nm,0.5s						
STKA	Stephens Creek	35.87	154	P	P	20 39 05.4	-0.3
JHJ2	Mitsune	35.90	23	P	P	20 39 05.1	-0.7
KSRS	Korea Array	37.25	5	P	P	20 39 17.6	+0.4
	comp=Z,0.9nm,0.6s,baz=179,slow=12,SNR=5.0						
	comp=Z,0.9nm,0.6s						
JGF	Kuroka	37.31	18	P	P	20 39 17.4	-0.4
JGF				IAmb	IAmb	20 39 19.0	
	comp=Z,5.4nm,0.7s						
MAJO	Matsushiro	38.44	18		P	20 39 26.4	-0.9
MAJO				IAmb	IAmb	20 39 27.3	
	comp=Z,7.9nm,0.7s						
MJAR	Matsushiro Arr	38.44	18	P	P	20 39 26.5	-0.8
	comp=Z,6.7nm,0.7s,baz=193,slow=8.7,SNR=32						
MJAR				ScP	S	20 45 15.3	+0.9
	comp=Z,0.7nm,0.4s,baz=191,slow=4.3,SNR=5.1						
	comp=Z,6.7nm,0.7s						
MJB9	Matsu-Tunnel	38.44	18	P	P	20 39 26.7	-0.7
MJB9				IAmb	IAmb	20 39 27.3	
	comp=Z,7.6nm,0.7s						
JSD	Sado	39.83	17	P	P	20 39 38.3	-0.5
JSD				IAmb	IAmb	20 39 41.6	
	comp=Z,3.1nm,0.5s						
LZH	Lanzhou	40.44	334	*e*P	P	20 39 39.5	-4.6
LZH				pmax	pmax		
	comp=Z,26nm,1.1s						
JMM	Marumori	40.49	20	P	P	20 39 45.8	+1.5
HHC	Hu-ho-hao-te	42.08	346	*e*P	P	20 39 58.8	+1.4
HHC				pmax	pmax		
	comp=Z,25nm,0.6s						
HHC				pmax	pmax		
	comp=Z,40nm,3.5s						
USA0B	Ussuriysk Arra	44.37	8	P	P	20 40 15.8	+0.1
USA0B				IAmb	IAmb	20 40 16.6	
	comp=Z,7.3nm,0.6s						
USRK	Ussuriysk Ar.	44.37	8	P	P	20 40 15.8	+0.2
	comp=Z,4.8nm,0.4s,baz=193,slow=7.1,SNR=22						
	comp=Z,4.8nm,0.4s						
GTA	Gaotai	44.97	333	*e*P	P	20 40 22.3	+1.6
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
EVN	Everest	45.24	311	P	P	20 40 22.9	-0.7
EVN				IAmb	IAmb	20 40 57.2	
	comp=Z,9.0nm,1.4s						
JKA	Kamikawa-asahi	46.71	18	P	P	20 40 34.7	+0.7
JKA				IAmb	IAmb	20 40 35.2	
	comp=Z,38nm,1.4s						
KLR	Kul'dur	49.29	7	LR	LR	21 04 33.8	
	comp=Z,16nm,18.1s,baz=176,slow=39						
SONM	Songino Array	49.93	344	P	P	20 40 57.7	-1.3
	comp=Z,0.7nm,0.6s,baz=160,slow=9.5,SNR=4.1						
SONM				pP	pP	20 41 24.4	-0.6
	comp=Z,0.6nm,0.8s,baz=208,slow=5.0,SNR=2.4						
	comp=Z,0.7nm,0.6s						
KSH	Kashi	58.87	318	P	P	20 42 05.5	+1.7
KSH				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	Makanchi Array	59.11	328	P	P	20 42 03.4	-1.8
MKAR	Makanchi Array	59.11	328	P	P	20 42 03.6	-1.6
	comp=Z,0.8nm,0.3s,baz=125,slow=8.3,SNR=22						
MKAR				ScP	ScP	20 46 40.4	-3.0
	comp=Z,0.8nm,0.6s,baz=138,slow=5.0,SNR=7.8						
	comp=Z,0.8nm,0.3s						
MAKZ	Makanchi	59.29	328	P	P	20 42 05.0	-1.4
PEA0B	Petropavlovsk-	59.65	23	P	P	20 42 09.1	+0.4
PETK	Petropavlovsk-	59.65	23	P	P	20 42 09.2	+0.4
PETK	Petropavlovsk-	59.65	23	P	P	20 42 09.4	+0.7
	comp=Z,4.7nm,0.6s,baz=198,slow=6.4,SNR=11						
	comp=Z,4.7nm,0.6s						
YAK	Yakutsk	61.83	3	P	P	20 42 22.8	-0.6
YAK	Yakutsk	61.83	3	LR	LR	21 10 59.7	
	comp=Z,13nm,18.2s,baz=168,slow=38						
ZALV	Zalesovo Beam	62.66	335	P	P	20 42 26.3	-2.8
	comp=Z,0.6nm,0.4s,baz=116,slow=5.9,SNR=2.6						
	comp=Z,0.6nm,0.4s						
MA2	Magadan	62.74	15	P	P	20 42 30.4	+0.9
KURBB	Kurchatov Arra	63.43	329	P	P	20 42 32.5	-1.7
	comp=Z,0.8nm,0.5s,baz=126,slow=6.0,SNR=7.2						
	comp=Z,0.8nm,0.5s						
CASY	Casey	67.03	186	P	P	20 42 57.3	+0.2
CASY				IAmb	IAmb	20 42 58.0	
	comp=Z,3.9nm,0.8s						
BVAR	Borovoye Array	68.97	329	P	P	20 43 08.4	-1.1
	comp=Z,0.3nm,0.3s,baz=152,slow=9.9,SNR=4.4						
	comp=Z,0.3nm,0.3s						
TIXI	Tiksi	71.42	2	P	P	20 43 23.1	-1.0
TIXI				IAmb	IAmb	20 43 23.7	
	comp=Z,5.4nm,0.5s						
ATKA	Atka Island	72.82	35	P	P	20 43 33.1	+0.2
ABKAR	Akbulak array	73.34	322	P	P	20 43 35.0	-1.0
ABPO	Ambohimpanom	77.77	251	P	P	20 44 01.5	-0.6
ABPO				IAmb	IAmb	20 44 01.6	
	comp=Z,4.5nm,0.8s						
VOI	Vohitsoka	78.41	248	P	P	20 44 04.2	-1.4
VOI				IAmb	IAmb	20 44 05.2	
	comp=Z,12nm,0.8s						
MAW	Mawson	79.58	200	P	P	20 44 11.1	+0.3
	comp=Z,1.9nm,0.5s,baz=56,slow=5.2,SNR=7.1						
	comp=Z,1.9nm,0.5s						
VNDA	Vanda	80.26	172	P	P	20 44 14.3	0.0
	comp=Z,1.0nm,0.5s,baz=29,slow=2.5,SNR=4.1						
	comp=Z,1.0nm,0.5s						
M14K	Bethel	81.98	28	P	P	20 44 25.1	+1.5
M14K				IAmb	IAmb	20 44 48.8	
	comp=Z,15nm,1.3s						
L16K	Owhat River	83.36	28	P	P	20 44 32.2	+1.3
L16K				IAmb	IAmb	20 44 35.5	
	comp=Z,10nm,1.4s						
MLY	Manley	87.73	25	P	P	20 44 52.8	+0.3
H23K	Yukon River	88.29	24	P	P	20 44 55.8	+0.7
MMAI	Mount Meron Ar	88.91	303	P	P	20 44 57.9	-1.0
	comp=Z,0.5nm,0.5s,baz=63,slow=6.6,SNR=1.8						
	comp=Z,0.5nm,0.5s						
ILAR	Eielson Array	89.36	25	P	P	20 44 58.5	-1.6
	comp=Z,0.3nm,0.6s,baz=244,slow=4.9,SNR=4.3						
	comp=Z,0.3nm,0.6s						
QSPA	South Pole Qui	90.11	180	P	P	20 45 04.1	+0.3
	comp=Z,1.2nm,0.5s,baz=145,slow=0.9,SNR=20						
	comp=Z,1.2nm,0.5s						
ARCES	ARCESS Array B	92.89	340	P	P	20 45 14.3	-2.1
	comp=Z,2.1nm,0.9s,baz=79,slow=4.8,SNR=2.0						
	comp=Z,2.1nm,0.9s						
SPITS	Spitsbergen Ar	93.45	349	P	P	20 45 17.8	-1.1
	comp=Z,2.3nm,0.6s,baz=90,slow=5.8,SNR=4.4						
	comp=Z,2.3nm,0.6s						
TORD	Torodi Ar. Bea	121.54	285	PKP	PKPdf	20 50 56.6	-1.4
	comp=Z,0.6nm,0.3s,baz=92,slow=1.6,SNR=3.1						

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*NNC **25** 20:35:15.9±1.3, 41°.86N×79°.58E, h0km, mb2.9, mpv3.0, Error ellipse: s-maj=8.5km s-min=5.6km az=148.0*

*KRNET **25** 20:35:15.8±0.1, 41°.80N×79°.50E, h16km, mb2.3*

*SOME **25** 20:35:16.1, 41°.88N×79°.52E, h5km*

ISC 25 20:35:14.4±2.1**, 41°.75N**±0°.07×**79°.52E**±0°.06**, h13**km±12km**, n23, σ0s.94**/40**, 14C-4D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	Przheval'sk	1.11	312	⇑*i*P	Pg	20 35 36.4	+0.6
PRZ				⇑*i*S	Sn	20 35 51.0	0.0
TARG	Taragay, Kyrgy	1.28	270	⇑*i*P	Pb	20 35 39.7	+1.1
TARG				⇑*i*S	Sg	20 35 57.5	+1.7
SHLS	Shalkode	1.41	358	P	Pb	20 35 41.0	+0.5
	5.9nm,0.1s						
SHLS				S	Sb	20 35 59.0	+0.5
	18nm,0.2s						
SHLS	Shalkode	1.41	358	*e*P	Pb	20 35 41.0	+0.5
	5.9nm,0.1s						
SHLS				*e*S	Sb	20 35 59.0	+0.5
	18nm,0.2s						
SATY	Saty	1.55	328	P	Pg	20 35 44.1	0.0
	1.4nm,0.1s						
SATY				S	Sb	20 36 02.8	+0.3
	12nm,0.1s						
PDGK	Podgornoye	1.58	359	⇓P	Pn	20 35 42.2	0.0
	2.4nm,0.5s						
PDGK				⇑S	Sb	20 36 03.4	0.0
	10nm,0.5s						
KDJ	Kajisay	1.79	283	⇑*e*P	Pb	20 35 48.4	+1.4
KDJ				⇑*i*S	Sg	20 36 12.0	+0.2
KTMS	Ketmen	1.80	20	P	Pb	20 35 46.9	-0.4
	1.1nm,0.1s						
KTMS				S	Sn	20 36 08.3	+0.2
	1.5nm,0.2s						
KTMS	Ketmen	1.80	20	*e*P	Pb	20 35 47.2	-0.1
	1.1nm,0.1s						
KTMS				*e*S	Sb	20 36 09.2	-0.6
	5.8nm,0.1s						
KPKS	Kokpek	1.82	341	P	Pb	20 35 48.2	+0.6
	0.6nm,0.3s						
KPKS				S	Sb	20 36 11.4	+1.0
	3.2nm,0.4s						
KOTS	Kotyrbulak	2.32	311	Pg	Pg	20 35 58.0	-0.8
	1.9nm,0.1s						
KOTS				Lg	Lg	20 36 27.9	
	8.6nm,0.3s						
KOTS	Kotyrbulak	2.32	311	*e*P	Pg	20 35 58.0	-0.8
	1.9nm,0.1s						
KOTS				*e*S	Sg	20 36 27.9	-1.0
	8.6nm,0.3s						
KNDC	Almaty	2.39	309	⇑Pg	Pb	20 35 58.4	+1.1
	11nm,0.6s						
KNDC				⇓Lg	Lg	20 36 30.2	
	8.1nm,0.3s						
BLB	Baldybastay	2.47	342	Pg	Pb	20 35 58.9	+0.2
	18nm,0.1s						
BLB				Lg	Lg	20 36 30.6	
	7.1nm,0.2s						
ULHL	Ulahol	2.49	283	⇑*i*P	Pb	20 35 59.1	0.0
ULHL				⇑*i*S	Sb	20 36 30.7	+0.9
DJR	Jarkent	2.59	4	Pg	Pb	20 36 01.0	+0.3
	1.3nm,0.3s						
DJR				Lg	Lg	20 36 32.9	
	4.7nm,0.3s						
DJR	Jarkent	2.59	4	*e*P	Pb	20 36 01.0	+0.3
	1.3nm,0.3s						
DJR				*e*S	Sb	20 36 32.9	+0.5
	4.7nm,0.3s						
NRN	Naryn	2.66	264	⇓*e*P	Pb	20 36 01.7	-0.3
NRN				⇓*e*S	Sb	20 36 35.3	+0.7
MTBS	Maitube	2.67	302	Pg	Pg	20 36 04.7	-0.8
	0.4nm,0.1s						
MTBS				Lg	Lg	20 36 39.4	
	7.3nm,0.3s						
MTBS	Maitube	2.67	302	*e*P	Pg	20 36 04.7	-0.8
	0.4nm,0.1s						
MTBS				*e*S	Sg	20 36 39.4	-0.8
	7.3nm,0.3s						
BOOM	Boomskoye usch	2.76	287	⇑*e*P	Pb	20 36 02.8	-0.9
BOOM				⇑*e*S	Sb	20 36 37.2	-0.3
KTBS	Karatobe	2.87	314	Pg	Pb	20 36 07.1	+1.7
	0.8nm,0.2s						
KTBS				Lg	Lg	20 36 43.9	
	8.5nm,0.2s						
TKM2	Tokmak 2	3.13	293	⇑*i*P	Pb	20 36 07.8	-2.2
TKM2				⇑*i*S	Sb	20 36 45.8	-2.4

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*IDC **25** 20:42:56.8±2.8, 32°.63S×178°.43W, h0km, mb3.8/2, mbtmp3.8/3, ML3.7/1, Error ellipse: s-maj=70.8km s-min=45.1km az=129.0*

*WEL **25** 20:42:59.5±1.1, 33°S±11°×17°8W±2°8, h33km, mB4.4/2, ML4.5/11, MLv4.1/4, Mw(mB)3.5/2, Error ellipse: s-maj=38.9km s-min=4.1km az=110.7, confirmed*

ISC 25 20:42:58.1±2.2**, 32°.9S**±0°.1×**177°.9W**±0°.3**, h35**km**, n19, σ1s.93**/32**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.64	360	P	Pn	20 43 53.2	+1.3
GLKZ				S	Sn	20 44 30.9	-2.8
WMGZ	Waiomatatini S	5.75	210	P	Pn	20 44 21.9	+1.0
WMGZ				S	Sn	20 45 18.7	-6.9
PKGZ	Pakihiroa	5.93	212	P	Pn	20 44 23.3	-0.1
PKGZ				S	Sn	20 45 30.9	+0.7
HAZ	Te Kaha	5.98	215	P	Pn	20 44 23.6	-0.5
HAZ				S	Sn	20 45 33.4	+2.0
RUGZ	Raukumara Rang	6.20	214	P	Pn	20 44 27.3	0.0
RUGZ				S	Sn	20 45 39.5	+2.6
TWGZ	Tauwhareparae	6.23	211	S	Sn	20 45 36.6	-1.1
MWZ	Matawai	6.56	213	P	Pn	20 44 33.6	+1.4
MWZ				P	Sn	20 45 46.6	+0.8
URZ	Urewera	6.70	216	Pn	Pn	20 44 35.2	+1.2
	1.4nm,0.3s,baz=79,slow=5.2,SNR=2.0						
URZ				Sn	Sn	20 45 47.1	-2.1
	2.2nm,0.3s,baz=149,slow=19,SNR=7.0						
	3.0nm,0.3s						
URZ	Urewera	6.70	216	P	Pn	20 44 34.6	+0.5
URZ				S	Sn	20 45 47.0	-2.1
RAGZ	Rawiri	6.75	213	P	Pn	20 44 35.8	+1.1
RAGZ				S	Sn	20 45 50.0	-0.4
SNGZ	Shannon Statio	7.01	212	P	Pn	20 44 40.0	+1.7
SNGZ				P	Sn	20 45 57.1	+0.2
MUGZ	Murupara	7.04	216	S	Sn	20 45 56.2	-1.3
RTZ	Ruatahuna	7.05	215	P	Pn	20 44 37.4	-1.5
RTZ				S	Sn	20 45 58.8	+1.0
MTHZ	Maungataniwha	7.30	214	P	Pn	20 44 43.9	+1.6
MTHZ				S	Sn	20 46 02.3	-1.6
TLZ	Tolley Road	7.60	223	P	Pn	20 44 48.5	+2.2
BKZ	Black Stump Fm	7.71	214	P	Pn	20 44 47.0	-1.0
BKZ				S	Sn	20 46 12.1	-2.1
ASAR	Alice Springs	43.11	270	P	P	20 50 55.6	+0.4
	0.4nm,0.4s,baz=107,slow=7.7,SNR=8.5						
	0.4nm,0.4s						
WRA	Warramunga Arr	44.33	275	P	P	20 51 04.9	-0.1
	0.8nm,0.4s,baz=114,slow=7.8,SNR=16						
	0.8nm,0.4s						
FINES	FINESS Array B	147.51	339	PKPbc	PKPab	21 02 40.1	+0.3
	0.7nm,0.4s,baz=59,slow=3.1,SNR=13						

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*IDC **25** 20:51:27.8±3.2, 6°.69S×129°.11E, h238km±26km, mb3.0/2, mbtmp3.9/6, Error ellipse: s-maj=49.4km s-min=15.4km az=64.0*

ISC 25 20:51:26.8±0.9**, 6°.75S**±0°.07×**129°.19E**±0°.06**, h250**km**, n18, σ2s.39**/23**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	2.42	121	P	Pn	20 52 13.7	+0.4
SAUI	Saumlaki	2.42	121	S	S	20 52 46.6	-3.4
FAKI	Fak Fak	4.87	39	P	Pn	20 52 37.6	-3.5
SOEI	Soe	5.72	238	P	Pn	20 52 51.9	+0.3
SOEI	Soe	5.72	238	S	S	20 53 56.2	-3.2
DRS	Darwin Rock St	5.89	164	P	Pn	20 52 55.4	+1.7
DRS	Darwin Rock St	5.89	164	S	S	20 54 03.0	-0.1
MTN	Manton Dam	6.35	163	P	Pn	20 53 00.3	+0.9
BATI	Baumata	6.46	237	P	Pn	20 53 00.9	+0.1
	41nm,0.4s,baz=137,slow=2.9,SNR=12						
BATI				S	S	20 54 12.8	-3.2
	40nm,0.3s,baz=14,slow=21,SNR=7.6						
KDU	Kakadu	6.73	152	P	Pn	20 53 04.6	+0.5
FITZ	Fitzroy Crossi	11.80	197	P	Pn	20 54 09.3	+1.3
	2.0nm,0.3s,baz=17,slow=11,SNR=39						
FITZ				S	S	20 56 15.4	-4.4
	2.0nm,0.3s,baz=68,slow=21,SNR=1.8						
FITZ	Fitzroy Crossi	11.80	197	P	Pn	20 54 09.3	+1.3
WRA	Warramunga Arr	14.04	160	P	Pn	20 54 36.6	+1.1
	0.4nm,0.4s,baz=339,slow=12,SNR=9.5						
WRA				S	S	20 57 07.8	-3.2
	1.1nm,0.4s,baz=330,slow=23,SNR=7.1						
QIS	Mount Isa	17.04	145	P	Pn	20 55 12.7	+1.4
ASAR	Alice Springs	17.42	165	P	Pn	20 55 17.2	+1.5
	3.0nm,0.5s,baz=346,slow=11,SNR=36						
ASAR				S	S	20 58 24.8	+3.3
	0.3nm,0.7s,baz=347,slow=20,SNR=1.7						
ASAR				ScP	ScP	21 02 55.8	+3.1
	0.4nm,0.6s,baz=339,slow=2.4,SNR=4.3						

AS01	Alice Springs	17.43	165	P	Pn	20 55 17.7	+1.9
CMAR	Chiang Mai Arr	38.96	310	P	P	20 58 30.1	+0.8
	0.6nm,0.5s,baz=144,slow=7.9,SNR=7.1						
	0.6nm,0.5s						
MKAR	Makanchi Array	67.58	327	P	P	21 01 58.3	+1.7
	0.2nm,0.4s,baz=118,slow=7.6,SNR=5.6						
	0.2nm,0.4s						

ASIES ***25*** *21:08:34.1, 23.°38N×120.°50E, h7^{km}, ML3.5, Mw3.2, Moment Tensor Solution. Moment tensor: Scale 10^{20}Nm; M_{rr}2.65; $M_{\theta\theta}$4.31; $M_{\phi\phi}$-6.96; $M_{r\theta}$-2.46; $M_{\theta\phi}$-2.33; $M_{\phi r}$1.72; Fault plane solution: $M_0$7.17265×10^{20} NP1: ϕ_s231.22000°, δ60.52000°, λ158.72000°. NP2: ϕ_s332.07000°, δ71.58000°, λ31.25000°. Principal axes: T Plg34.8470°, Azm194.6240°; N Plg54.2110°, Azm359.5790°; P Plg7.1560°, Azm99.6090°;*

TAP ***25*** *21:08:34.1, 23.°38N×120.°50E, h7^{km}, ML3.5, B*

ISC 25 21:08:34.9±0.8**, 23.°39N**±0.°01×**120.°49E**±0.°01**, h14**^{km}±4^{km}**, n143, σ0.^{s}86**/244**, 16C-11D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WCKO	Fanlu	0.11	64	⇑iP	Pg	21 08 37.5	-0.8
WCKO				S	Sg	21 08 40.1	-0.4
TWK	Hsinying	0.12	182	iP	Pg	21 08 37.3	-1.0
TWK				iS	Sg	21 08 39.8	-0.9
CHY	Chiayi	0.13	330	eP	Pg	21 08 38.1	-0.3
CHY				eS	Sg	21 08 40.8	+0.1
CHN2	Minshiung	0.14	353	⇑iP	Pg	21 08 38.6	0.0
CHN2				iS	Sg	21 08 42.5	+1.4
TPUB	Ta-pu	0.15	125	P	Pg	21 08 37.7	-1.1
TPUB	Ta-pu	0.15	125	P	Pg	21 08 41.1	+2.3
TPUB	Ta-pu	0.15	125	P	Pg	21 08 37.8	-0.9
TPUB				iS	Sg	21 08 40.7	-0.7
SNST	Tainan City	0.17	179	⇑iP	Pg	21 08 38.3	-0.7
SNST				S	Sg	21 08 41.4	-0.3
WTP	Ta-pu	0.18	142	⇓P	Pg	21 08 38.6	-0.6
WTP				iS	Sg	21 08 42.0	0.0
ICHU	Yijhu	0.20	262	⇓iP	Pg	21 08 39.5	+0.1
ICHU				S	Sg	21 08 44.2	+1.7
CHN1	Nanshi	0.20	171	⇑iP	Pg	21 08 38.9	-0.6
CHN1				S	Sg	21 08 42.6	0.0
CHN5	Tsauling	0.27	39	⇑iP	Pb	21 08 40.6	-1.0
CHN5				eS	Sb	21 08 45.4	-0.7
WSL	Shuilin Townsh	0.28	299	⇓iP	Pb	21 08 41.1	-0.6
WDLH	Douliu	0.30	8	eP	Pb	21 08 42.0	-0.2
WDLH				S	Sb	21 08 47.7	+0.7
WGK	Gukeng	0.30	12	⇑iP	Pb	21 08 41.9	-0.2
WGK				iS	Sb	21 08 48.1	+1.1
ALS	Alishan	0.31	67	⇓iP	Pb	21 08 41.6	-0.9
ALS				eS	Sb	21 08 47.3	-0.3
SSHA	Shanhua	0.31	217	⇑iP	Pb	21 08 41.9	-0.4
SSHA				eS	Sb	21 08 47.7	+0.4
WTK	Tuku	0.31	342	⇓iP	Pb	21 08 42.0	-0.3
WTK				iS	Sb	21 08 48.5	+1.2
WDL	Douliou City	0.33	7	⇑iP	Pb	21 08 42.5	-0.1
WDL				eS	Sb	21 08 48.9	+1.1
CHN3	Shinhua	0.33	201	⇑iP	Pb	21 08 42.4	-0.2
CHN3				eS	Sb	21 08 48.8	+0.9
STYH	Taoyuan	0.34	130	⇓iP	Pb	21 08 41.5	-1.2
STYH				iS	Sb	21 08 47.1	-0.8
SCLT	Jiali	0.35	232	⇓iP	Pb	21 08 42.6	-0.2
SCLT				iS	Sb	21 08 49.3	+1.1
WSF	Szhu	0.35	315	⇓iP	Pb	21 08 42.3	-0.7
WSF				eS	Sb	21 08 49.2	+0.8
TAI1	Yung-k'ang	0.42	215	eP	Pb	21 08 44.4	+0.2
TSCK	Chigu Township	0.45	237	P	Pb	21 08 43.9	-0.7
TSCK				eS	Sb	21 08 52.6	+1.6
WHYT	Xinyi Township	0.45	47	P	Pb	21 08 44.4	-0.3
WHYT				S	Sb	21 08 52.0	+0.6
WJS	Zhushan	0.48	26	eP	Pb	21 08 45.0	-0.2
WJS				eS	Sb	21 08 53.5	+1.3
SCST	Cishan	0.50	180	⇑P	Pb	21 08 45.5	0.0
SCST				eS	Sb	21 08 54.7	+2.0
WTCT	Ta-ch'eng	0.51	338	P	Pb	21 08 45.2	-0.5
WTCT				eS	Sb	21 08 53.4	+0.4
WNT	Mingjian	0.52	20	⇑iP	Pb	21 08 45.8	0.0
WNT				iS	Sb	21 08 54.5	+1.2
ELDTW	Lidau	0.52	112	⇓iP	Pb	21 08 45.1	-0.8
ELDTW				S	Sb	21 08 52.9	-0.5
SSLB	Suanglung	0.58	47	P	Pb	21 08 46.6	-0.3
SSLB	Suanglung	0.58	47	iP	Pb	21 08 46.3	-0.6
SSLB				eS	Sb	21 08 55.7	+0.7
TYC	Yuchr	0.61	33	iP	Pb	21 08 47.5	+0.1
TYC				iS	Sb	21 08 57.8	+1.8
SMLT	Sun Moon Lake	0.62	37	eP	Pb	21 08 47.4	-0.2
SMLT				iS	Sb	21 08 58.0	+1.8
SNJT	Kaohsiung City	0.65	193	eP	Pn	21 08 49.2	-0.5
SNJT				eS	Sn	21 09 00.6	+0.9
SSD	Sandimen	0.65	169	⇑iP	Pb	21 08 47.8	-0.3
SSD				iS	Sb	21 08 58.0	+0.9
SGLT	Jiouru	0.66	180	eP	Pn	21 08 49.2	-0.7
SGLT				eS	Sn	21 09 01.0	+0.9
WCH1	Changhua City	0.68	4	⇑P	Pb	21 08 48.6	-0.1
WCH1				iS	Sb	21 08 59.5	+1.5
WCHH	Zhanghua	0.69	5	eP	Pb	21 08 48.5	-0.3
WCHH				iS	Sb	21 08 59.5	+1.3
TSMG	Majia	0.69	168	P	Pb	21 08 48.4	-0.4
TSMG				eS	Sb	21 08 59.2	+1.0
EHD	Haiduan	0.70	110	eP	Pb	21 08 48.3	-0.6
EHD				S	Sb	21 08 58.3	-0.1
VWDT	VWDT	0.70	58	eP	Pb	21 08 48.7	-0.2
ECS	Chishang	0.73	113	eP	Pb	21 08 48.8	-0.6
ECS				S	Sb	21 08 60.0	+0.7
YULB	Yu-li	0.74	89	P	Pb	21 08 49.1	-0.5
YULB	Yu-li	0.74	89	⇓iP	Pb	21 08 48.9	-0.7
YULB				eS	Sb	21 08 59.4	-0.2
TWF1	Yuli	0.74	93	⇑iP	Pb	21 08 49.3	-0.3
TWF1				eS	Sb	21 08 59.9	+0.3
LONT	Longtian	0.76	129	eP	Pb	21 08 49.7	-0.2
LONT				S	Sb	21 09 00.8	+0.7
EYUL	Yuli	0.76	93	eP	Pb	21 08 49.7	-0.2
EYUL				eS	Sb	21 09 00.7	+0.5
FULB	Fuli	0.76	104	eP	Pb	21 08 50.0	0.0
WCS	Beigang Elemen	0.77	30	eP	Pb	21 08 49.8	-0.3
WCS				iS	Sb	21 09 01.8	+1.4
EHY	Hungye	0.77	81	eP	Pb	21 08 49.8	-0.4
EHY				S	Sb	21 09 00.6	+0.1
TCU	Taichung	0.77	12	eP	Pb	21 08 50.2	0.0
TCU				eS	Sb	21 09 01.8	+1.2
TWG	Pinlang	0.78	137	eP	Pb	21 08 50.1	-0.2
TWG				iS	Sb	21 09 01.6	+0.9
WDGT	Dungji	0.78	261	⇓iP	Pg	21 08 49.4	-0.7
WDGT				eS	Sb	21 09 00.8	+0.1
MASBT	Mashibuluo	0.78	171	eP	Pb	21 08 50.0	-0.4
MASBT				S	Sn	21 09 02.0	-1.1
TWGBT	Beinan	0.78	136	P	Pb	21 08 50.4	+0.1
TWGBT	Beinan	0.78	136	eP	Pb	21 08 49.9	-0.4
TWGBT				S	Sb	21 09 01.3	+0.5
EHYH	Wanrong	0.79	82	eP	Pb	21 08 50.1	-0.3
EHYH				eS	Sb	21 09 00.9	-0.1
WUSB	Renai	0.83	43	P	Pb	21 08 50.8	-0.4
WUSB				eS	Sb	21 09 03.3	+1.0
OWD	Renai	0.84	48	eP	Pb	21 08 51.2	-0.2
OWD				iS	Sb	21 09 03.3	+0.6
CHKH	Chenggong	0.85	103	eP	Pn	21 08 52.0	-0.5
CHKH				eS	Sn	21 09 05.0	+0.3
CHKT	Chengkung	0.85	110	⇑P	Pn	21 08 52.0	-0.5
CHKT				eS	Sn	21 09 05.0	+0.2
EDH	Donghe	0.85	119	eP	Pb	21 08 51.5	-0.1
EDH				eS	Sn	21 09 04.5	-0.3
PHUB	P'eng-hu	0.86	279	eP	Pg	21 08 50.4	-1.1
PHUB				eS	Sb	21 09 02.5	-0.4
HGSD	Ruisui	0.86	83	eP	Pb	21 08 51.8	+0.2
HGSD				eS	Sn	21 09 04.6	-0.4
TTN	Taitung	0.87	136	eP	Pn	21 08 52.5	-0.2
TTN				eS	Sn	21 09 06.2	+0.9
PNG	Penghu	0.88	282	iP	Pg	21 08 50.9	-1.1
PNG				eS	Sb	21 09 03.5	-0.1
WARBT	Fenglin Townsh	0.88	68	eP	Pb	21 08 51.9	-0.1
WARBT				eS	Sb	21 09 03.9	+0.2
ECBN	Changbin	0.88	94	eP	Pn	21 08 53.2	+0.3
ECL	Taimali	0.89	152	eP	Pb	21 08 51.9	-0.3
ECL				iS	Sn	21 09 06.0	+0.1
EGFH	Guangfu	0.90	72	eP	Pn	21 08 52.7	-0.5
EGFH				eS	Sb	21 09 05.0	+0.8
ESL	Shilin	0.96	64	eP	Pb	21 08 53.5	+0.1
ESL				eS	Sb	21 09 06.5	+0.5
WDJ	Dajia District	0.96	8	eP	Pb	21 08 53.8	+0.3
WDJ				iS	Sn	21 09 08.3	+0.7
WHP	Taichung City	0.98	25	eP	Pb	21 08 53.8	+0.1
WHP				iS	Sn	21 09 08.9	+0.8
TWQ1	Liyutan	0.99	15	P	Pb	21 08 54.1	+0.2
TWQ1				S	Sn	21 09 08.7	+0.4
VCHM	Qimei	0.99	260	eP	Pg	21 08 52.8	-1.4
VCHM				S	Sg	21 09 06.5	-0.7
SCZT	Fangliau	1.02	173	iP	Pn	21 08 54.4	-0.4
SCZT				eS	Sn	21 09 09.2	+0.3
WHF	Hehuan Shan	1.03	43	eP	Pn	21 08 55.1	-0.3
WHF				eS	Sb	21 09 09.2	+0.7
WLCH	Liuqiu	1.04	186	eP	Pn	21 08 56.8	+1.7
WLCH				eS	Sn	21 09 12.0	+2.6
TWP	Hsiaoliuchiu	1.04	187	eP	Pn	21 08 55.6	+0.4
TWP				eS	Sn	21 09 12.0	+2.5
EAST	Anshuo	1.05	162	⇑iP	Pn	21 08 55.0	-0.3
EAST				S	Sn	21 09 10.7	+0.9
NSY	Sanyi	1.05	13	eP	Pn	21 08 55.9	+0.6
NSY				eS	Sn	21 09 10.0	+0.2
LXIB	Xiulin Townshi	1.05	53	P	Pb	21 08 54.8	-0.2
LXIB				eS	Sn	21 09 10.4	+0.4
TDCB	Techi	1.05	35	eP	Pb	21 08 54.9	-0.2
TDCB				eS	Sb	21 09 09.5	+0.7
SHUL	Shoufeng	1.06	68	P	Pn	21 08 55.9	+0.5
SHUL				eS	Sn	21 09 11.8	+1.9
TWT	Tachien	1.06	36	eP	Pb	21 08 55.2	0.0
TWT				eS	Sn	21 09 10.2	-0.2
ETM	Tongmen	1.08	58	eP	Pn	21 08 55.6	0.0
ETM				eS	Sn	21 09 10.4	-0.1
TAW	Tawu	1.09	160	eP	Pn	21 08 55.7	-0.1
TAW				eS	Sn	21 09 11.5	+0.8
FUSS	Fushou	1.10	39	eP	Pb	21 08 55.6	-0.3
FUSS				eS	Sn	21 09 11.3	0.0
TAWH	Dawu Township	1.10	161	eP	Pn	21 08 55.9	-0.1
TAWH				eS	Sn	21 09 11.3	+0.2
TEYL	Yanliau Villag	1.12	65	eP	Pg	21 08 55.7	-0.8
NMLH	Miaoli	1.18	13	eP	Pn	21 08 57.3	+0.3
NMLH				eS	Sn	21 09 14.2	+1.3
SLIU	Shizi	1.20	166	eP	Pn	21 08 57.2	-0.1
SLIU				eS	Sn	21 09 15.1	+1.7
ETLH	Xiulin Townshi	1.22	48	eP	Pn	21 08 58.0	+0.4
ETLH				eS	Sn	21 09 14.8	+0.7
TWD	Chiawan	1.22	55	eP	Pg	21 08 57.9	-0.6
TWD				S	Sn	21 09 15.0	+1.0
NACB	Ninganchiao	1.28	52	P	Pg	21 08 59.1	-0.4
NACB	Ninganchiao	1.28	52	eP	Pn	21 08 58.4	0.0
NACB				eS	Sn	21 09 15.8	+0.4
ETL	Fush Village	1.29	53	eP	Pg	21 09 00.8	+1.1
NNSB	Datong	1.32	38	eP	Pn	21 08 58.9	-0.2
NNSB				eS	Sn	21 09 17.6	+1.0
NNS	Nan Shan	1.32	37	eP	Pg	21 08 59.6	-0.8
NNS				eS	Sn	21 09 19.0	+2.4
NSTT	Nanjuang	1.32	20	eP	Pn	21 08 59.2	+0.2
NSTT				iS	Sn	21 09 17.5	+1.0
LIOB	Emei	1.34	21	P	Pn	21 08 59.4	+0.1
LIOB				eS	Sn	21 09 18.3	+1.4
NFF	Wufeng Townshi	1.36	25	eP	Pn	21 08 59.9	+0.2
NFF				eS	Sg	21 09 18.4	-0.5
HEN	Hengchun	1.39	171	eP	Pn	21 08 60.0	0.0
HEN				eS	Sg	21 09 22.8	+2.9
SMST	Manzhou Townsh	1.40	167	eP	Pg	21 09 01.2	-0.6
TWK1	Hengchun	1.47	169	eP	Pn	21 09 00.6	-0.4
TWKBT	Hengchun	1.47	168	eP	Pn	21 09 00.5	-0.5
EAHA	Aohua	1.48	50	eP	Pg	21 09 03.1	-0.2
EAHA				eS	Sg	21 09 23.1	+0.5
LATG	Datong	1.48	39	eP	Pb	21 09 02.3	-0.1
LATG				eS	Sg	21 09 23.5	+0.8
NSK	Sanguang	1.51	31	eP	Pb	21 09 02.3	-0.5
NSK				eS	Sg	21 09 22.9	-0.6
YHNB	Yeheng	1.51	32	P	Pb	21 09 02.5	-0.3
YHNB	Yeheng	1.51	32	eP	Pb	21 09 02.4	-0.3
KSHI	Guanxi Townshi	1.52	24	eP	Pb	21 09 02.4	-0.5
KSHI				iS	Sg	21 09 23.1	-0.7
TSEB	Hengchuen, Pin	1.53	166	eP	Pg	21 09 04.2	-0.1
ENA	Nanau	1.54	48	eP	Pb	21 09 03.2	-0.1
ENA				eS	Sg	21 09 23.4	-1.2
EWUT	Wuta	1.58	48	eP	Pb	21 09 03.9	0.0
EWUT				eS	Sg	21 09 25.5	-0.3
ENTT	Nioudou	1.59	38	eP	Pg	21 09 04.5	-0.9
LAY	Lan-yu	1.66	144	eP	Pn	21 09 02.9	-0.8
NDS	Dongshan	1.67	42	eP	Pn	21 09 04.5	+0.7
FUSB	Fushanzhiwuyua	1.69	36	eP	Pb	21 09 05.3	-0.6
FUSB				S	Sg	21 09 28.1	-1.3
TWE	Neicheng	1.71	39	eP	Pg	21 09 06.5	-1.2
TWE				S	Sg	21 09 29.8	-0.1
LYUB	Lan-yu	1.71	144	eP	Pn	21 09 02.0	-2.3
TWC	Suao	1.74	45	eP	Pg	21 09 07.1	-1.2
TWC				eS	Sg	21 09 29.5	-1.3
TATO	Taipei	1.82	30	P	Pb	21 09 07.6	-0.5
VWUC	VWUC	1.86	329	eP	Pn	21 09 05.1	-1.3
TIPB	Shuangxi	1.99	37	eP	Pb	21 09 09.7	-1.3
YM01	YM01	2.01	29	eP	Pn	21 09 08.6	+0.1
ZUZH	Zhuzihu	2.01	28	eP	Pn	21 09 07.5	-1.0
ANP	Anpu	2.02	27	eP	Pn	21 09 08.8	+0.1
PTMZ	Houxiangcun	2.07	323	eP	Pn	21 09 08.1	-1.1
SXI1	Grass Mountain	2.12	36	eP	Pn	21 09 11.4	+1.4
KNM	Kinmen	2.15	299	eP	Pn	21 09 10.6	+0.3
KNMB	Chin-men Tao	2.20	299	eP	Pn	21 09 09.8	-1.4
YOJ	Yonaguni jima	2.54	65	eP	Pn	21 09 17.0	+1.3
ZPLA	Ao Xicun	2.57	283	eP	Pn	21 09 15.2	-1.0
PCYT	Pengchaiyu	2.65	32	eP	Pn	21 09 19.5	+2.1
AXDP	Jialang	2.75	304	eP	Pn	21 09 17.3	-1.4
MATB	Ma-tsu	2.80	350	eP	Pn	21 09 17.9	-1.4
DSXP	Dongshan	2.83	277	eP	Pn	21 09 18.3	-1.5
MHZQ	Yeshan	3.01	334	eP	Pn	21 09 22.2	0.0
XPSS	Dashiqiu	3.54	356	eP	Pn	21 09 28.7	-0.7
SXFK	Yanhouchang	3.96	320	eP	Pn	21 09 34.0	-1.3

SNET ***25*** *21:08:48.0±2.1, 12.°97N×88.°95W, h78^{km}±104^{km}, ML4.0*

CATAC ***25*** *21:08:48.7±0.2, 13°N±3°×8°9W±°, h57^{km}±5^{km}, M4.3/41, MLv4.3/41, Error ellipse: s-maj=7.9km s-min=2.3km az=23.4, confirmed*

GCG ***25*** *21:08:53.5±0.4, 13.°18N×89.°30W, h52^{km}±3^{km}, MD4.0, ML3.1*

ISC 25 21:08:45.4±1.5**, 12.°85N**±0.°08×**89.°02W**±0.°05**, h85**^{km}±13^{km}**, n92, σ2.^{s}06**/102**, 4C-20D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALJI	Alcalda de J	0.65	42	S	Sn	21 09 11.3	-1.2
ALJI	Alcalda de J	0.65	42	⇑P	Pn	21 09 03.8	+2.8
LALI	Alcalda de L	0.70	335	eP	Pn	21 09 03.0	+1.4
LALI				eS	Sn	21 09 09.9	-3.6
LALI				IAML		21 09 12.0	
	comp=N,766nm,0.1s						
LALI	Alcalda de L	0.70	335	⇑P	Pn	21 09 02.8	+1.3
TECO	Alcaldia de Te	0.72	19	⇓P	Pn	21 09 04.6	+2.8
TECO	Alcaldia de Te	0.72	19	S	Sn	21 09 13.0	-0.9
PANCS	Alcalda de	0.78	348	P	Pn	21 09 03.8	+1.4
COEG	Centro de Oper	0.78	10	S	Sn	21 09 14.2	-0.8
COEG	Centro de Oper	0.78	10	⇓P	Pn	21 09 04.9	+2.4
LOMA	Loma Larga	0.81	349	eP	Pn	21 09 04.3	+1.5
LOMA	Loma Larga	0.81	349	⇓P	Pn	21 09 04.4	+1.5
TECA	Tecapa	0.81	38	eP	Pn	21 09 05.2	+2.2
TECA				eP		21 09 05.2	
TECA				eS	Sn	21 09 14.1	-1.8
TECA				eS		21 09 14.8	
UESV	Universidad de	0.81	16	S	Sn	21 09 16.0	+0.3
UESV	Universidad de	0.81	16	P	Pn	21 09 05.7	+2.9
AEIL	Aeropuerto Ilo	0.85	354	eP	Pn	21 09 05.2	+2.0
ITCA	Escuela Especi	0.86	343	P	Pn	21 09 04.6	+1.3
PAVA	Las Pavas	0.86	5	eP	Pn	21 09 05.8	+2.4
PAVA	Las Pavas	0.86	5	⇓P	Pn	21 09 05.8	+2.4
IGN	Direccin Gen	0.87	350	⇓P	Pn	21 09 05.2	+1.7
UDBS	Universidad Do	0.87	351	eP	Pn	21 09 05.1	+1.7
UDBS	Universidad Do	0.87	351	S	Sn	21 09 14.8	-2.0
UDBS	Universidad Do	0.87	351	P	Pn	21 09 05.1	+1.7
LBRS	Las Brisas	0.89	358	eP	Pn	21 09 05.8	+2.2
UEES	Universidad Ev	0.89	346	eP	Pn	21 09 05.1	+1.5
UEES	Universidad Ev	0.89	346	P	Pn	21 09 05.2	+1.5
PQSS	Presa 15 de Se	0.89	30	S	Sn	21 09 16.3	-0.8
PQSS	Presa 15 de Se	0.89	30	⇓P	Pn	21 09 06.5	+2.9
SCLA	Alcaldia de Sa	0.89	18	⇓P	Pn	21 09 07.2	+3.6
LFU	La Fuente	0.90	354	eP	Pn	21 09 05.8	+2.0
JAYA	Jayaque - finc	0.90	332	eP	Pn	21 09 04.8	+0.9
JAYA	Jayaque - finc	0.90	332	eP	Pn	21 09 04.8	+0.9
JAYA	Jayaque - finc	0.90	332	⇓P	Pn	21 09 04.9	+0.9
PMON	Piamonte	0.91	341	eP	Pn	21 09 05.2	+1.3
PMON	Piamonte	0.91	341	S	Sn	21 09 14.9	-2.7
PMON	Piamonte	0.91	341	⇓P	Pn	21 09 05.2	+1.3
PACA	Pacayal	0.92	48	eP	Pn	21 09 06.1	+2.0
PACA	Pacayal	0.92	48	⇓P	Pn	21 09 06.0	+2.0
BOQS	Boqueron	0.92	344	eP	Pn	21 09 05.5	+1.4
RANC	El Ranchito	0.92	51	⇓P	Pn	21 09 06.0	+2.0
PIC2	El Picacho	0.92	345	eP	Pn	21 09 05.8	+1.6
BLLM	Bellamira	0.96	52	eP	Pn	21 09 05.8	+1.4
CEDA	San Andres	1.02	339	P	Pn	21 09 06.5	+1.4
CEDA	San Andres	1.02	339	S	Sn	21 09 17.5	-2.3
CNRM	Centro Naciona	1.03	53	eP	Pn	21 09 06.6	+1.4
CNRM	Centro Naciona	1.03	53	S	Sn	21 09 18.2	-1.8
CEVE	Cerro Verde	1.14	329	eP	Pn	21 09 08.4	+1.7
CEVE	Cerro Verde	1.14	329	P	Pn	21 09 08.6	+1.9
SBLS	San Blas	1.15	329	eP	Pn	21 09 08.4	+1.5
SNJE	San Jose	1.16	331	eP	Pn	21 09 08.4	+1.4
LCND	La Caada	1.19	67	eP	Pn	21 09 08.0	+1.0
LCND				eP		21 09 08.5	
LCND	La Caada	1.19	67	S	Sn	21 09 20.5	-2.9
LCND	La Caada	1.19	67	P	Pn	21 09 08.2	+1.2
RTR	El Retiro	1.21	330	eP	Pn	21 09 09.2	+1.7
CNCH	Conchagua	1.23	70	eP	Pn	21 09 08.7	+0.9
CNCH	Conchagua	1.23	70	S	Sn	21 09 21.3	-3.2
CNCH	Conchagua	1.23	70	P	Pn	21 09 08.6	+0.9
NUBE	Las Nubes	1.28	325	eP	Pn	21 09 09.8	+1.4
NUBE	Las Nubes	1.28	325	iP	Pn	21 09 09.8	+1.4
NUBE				iS	Sn	21 09 22.7	-3.0
NUBE	Las Nubes	1.28	325	P	Pn	21 09 09.8	+1.4
LLGN	La Laguna	1.31	3	P	Pn	21 09 11.0	+2.3
LOAL	Lomas de Alarc	1.36	327	P	Pn	21 09 11.1	+1.8
FAME	Alcaldia de Sa	1.39	316	P	Pn	21 09 10.7	+1.2
SLOZ	Alcaldia de Sa	1.39	328	S	Sn	21 09 25.9	-1.9
SLOZ	Alcaldia de Sa	1.39	328	P	Pn	21 09 10.9	+1.3
POTN	Potosi Cosigui	1.48	84	⇓P	Pn	21 09 12.0	+1.3
POTN				S	Sn	21 09 26.6	-3.2
ESQI	Esquipulas	1.73	350	⇓P	Pn	21 09 16.6	+2.5
ESQI	Esquipulas	1.73	350	S	Sn	21 09 35.4	-0.3
CRIN	San Cristobal	1.93	94	⇓P	Pn	21 09 18.8	+2.2
PKGN	Cerro Pekin	2.00	95	⇓P	Pn	21 09 19.3	+1.8
TGUH	Tegucigalpa,Un	2.08	55	⇓P	Pn	21 09 20.3	+1.7
POLN	Al Sur del Vol	2.16	95	⇓P	Pn	21 09 21.3	+1.6
CNGN	Cerro Negro	2.29	98	⇓P	Pn	21 09 23.1	+1.7
COPN	Copaltepe	2.46	105	P	Pn	21 09 25.8	+2.2
OCON	Estacion meteo	2.59	72	P	Pn	21 09 26.3	+0.8
OCON				S	Sn	21 09 53.2	-2.9
SAPS	Ciudad Sandino	2.64	105	⇑P	Pn	21 09 30.1	+4.0
APQ3	Volcan Apoyequ	2.65	102	P	Pn	21 09 27.7	+1.5
APQ3				S	Sn	21 09 57.4	0.0
TISN	Laguna Tiscapa	2.77	104	P	Pn	21 09 28.8	+1.0
UNAN	Cigeo UNAN	2.78	105	P	Pn	21 09 29.8	+1.9
UNAN				S	Sn	21 09 58.3	-2.4
CRUN	El Crucero	2.79	108	P	Pn	21 09 28.0	-0.2
R4DEC	Barrio San Lui	2.79	104	S	Sn	21 09 59.1	-1.9
MGAN	Managua	2.79	104	S	Sn	21 09 57.9	-3.0
MGAN				S		21 09 58.6	
MAFN	Magfor	2.82	105	S	Sn	21 10 00.2	-1.3
RCVN	Varillal2	2.85	75	P	Pn	21 09 30.2	+1.3
WILN	Americas 2	2.85	104	P	Pn	21 09 31.6	+2.8
WILN				S	Sn	21 09 59.9	-2.3
MAS3	Al N del Volca	2.90	106	P	Pn	21 09 32.8	+3.3
MAS3				S	Sn	21 10 00.4	-3.1
SABN	Sabanita	2.93	107	P	Pn	21 09 32.9	+3.0
NANN	Nandasmo	2.97	107	⇑P	Pn	21 09 34.5	+4.0
NANN	Nandasmo	2.97	107	S	Sn	21 10 03.9	-1.4
MATN	Matagalpa	3.02	88	⇓P	Pn	21 09 31.6	+0.4
MATN	Matagalpa	3.02	88	S	Sn	21 10 03.3	-3.2
BOAB	BOACO BROADBAN	3.29	97	⇓P	Pn	21 09 36.3	+1.5
CARN	Rivas	3.80	115	P	Pn	21 09 44.6	+2.9
CARN				S	Sn	21 10 24.0	-1.2

IDC ***25*** *21:29:51.2±0.7, 2.°74S×138.°50E, h0^{km}, mb4.0/9, mbtmp4.0/12, ML4.1/3, Error ellipse: s-maj=18.7km s-min=15.4km az=173.0*

NEIC ***25*** *21:29:53.2±0.8, 2.°8S±0.°1×138.°58E±0.°04, h10^{km}±1^{km}, mb4.3/11, Error ellipse: s-maj=19.9km s-min=5.6km az=174.0*

DJA ***25*** *21:29:55.5±0.9, 3°S±5°×13°9E±°, h16^{km}±10^{km}, M4.3/9, mb4.5/4, MLv4.3/9*

ISC 25 21:29:52.7±0.6**, 2.°78S**±0.°05×**138.°66E**±0.°06**, h10**^{km}**, n39, σ1.^{s}34**/40**, mb4.1**/13**, 1C, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.78	4	P	Pn	21 30 09.5	-0.3
SMPI				S	Sg	21 30 17.0	-1.1
GENI	Genyem	1.52	83	P	Pn	21 30 22.1	+2.1
JAY	Jayapura	2.06	83	Pn	Pn	21 30 29.1	+1.7
	29nm,0.3s,baz=227,slow=12,SNR=43						
JAY				Lg	Lg	21 31 01.6	
	12nm,0.3s,baz=155,slow=22,SNR=4.5						
	89nm,0.3s						
JAY	Jayapura	2.06	83	P	Pn	21 30 29.2	+1.7
SRPI	Serui, Papua	2.58	290	P	Pn	21 30 35.3	+0.7
BAKI	Biak	3.00	302	P	Pn	21 30 41.3	+1.0
RKPI	Ransiki, Papua	4.65	286	P	Pn	21 31 03.4	+0.3
FAKI	Fak Fak	6.40	269	Pn	Pn	21 31 27.2	0.0
FAKI	Fak Fak	6.40	269	P	Pn	21 31 30.2	+3.0
	0.2nm37nm,1.0s						
SWI	Sorong	7.63	284	P	Pn	21 31 46.3	+2.2
	0.1nm31nm,1.0s						
COEN	Coen	11.97	158	Pn	Pn	21 32 44.7	+1.1
MTN	Manton Dam	12.47	216		Pn	21 32 52.1	+1.7
SOEI	Soe	15.89	243		P	21 33 39.9	-0.6
SOEI				IAmb	IAmb	21 33 49.6	
	comp=Z,30nm,0.9s						
KNRA	Kununurra	16.10	217	Pn	Pn	21 33 39.1	-0.3
KNRA				IAmb	IAmb	21 33 54.9	
	comp=Z,39nm,1.4s						
WB0	Warramunga Arr	17.39	194		Pn	21 33 55.8	0.0
WB0				IAmb	IAmb	21 34 24.0	
	comp=Z,11nm,0.9s						
WRA	Warramunga Arr	17.58	194		Pn	21 33 56.7	-1.3
WRA	Warramunga Arr	17.58	194	P	Pn	21 33 57.0	-1.0
	comp=Z,0.8nm,0.3s,baz=17,slow=12,SNR=15						
WRA				S	Sn	21 37 03.2	-11
	comp=Z,4.5nm,1.1s,baz=8.4,slow=21,SNR=4.8						
	comp=Z,3.5nm,0.7s						
TOLI2	Tolitoli	18.28	282	P	Pn	21 34 05.5	-1.3
TOLI2				IAmb	IAmb	21 34 22.9	
	comp=Z,11nm,1.1s						
FITZ	Fitzroy Crossi	19.87	219	P	P	21 34 23.8	-0.5
FITZ	Fitzroy Crossi	19.87	219	P	P	21 34 23.5	-0.7
	comp=Z,0.4nm,0.3s,baz=40,slow=11,SNR=8.6						
FITZ				S	S	21 37 56.5	-12
	comp=Z,1.9nm,0.7s,baz=74,slow=18,SNR=2.0						
	comp=Z,2.3nm,0.8s						
AS31	Alice Springs	21.27	192	P	P	21 34 39.2	-0.2
AS31				IAmb	IAmb	21 34 48.0	
	comp=Z,8.5nm,0.9s						
ASAR	Alice Springs	21.27	192	P	P	21 34 39.2	-0.3
ASAR	Alice Springs	21.27	192	P	P	21 34 39.7	+0.2
	comp=Z,5.4nm,0.7s,baz=19,slow=11,SNR=18						
ASAR				S	S	21 38 31.9	-4.1
	comp=Z,1.6nm,0.8s,baz=14,slow=23,SNR=4.5						
	comp=Z,5.4nm,0.7s						
PSA00	Pilbara Seismi	26.15	223	P	P	21 35 26.5	-0.9
CMAR	Chiang Mai Arr	44.43	300	P	P	21 38 03.2	-1.0
	comp=Z,0.7nm,0.3s,baz=118,slow=8.8,SNR=1.7						
	comp=Z,0.7nm,0.3s						
BNX	BinXian	49.33	350	⇑P	P	21 38 44.3	+2.2
BNX				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONM	Songino Array	57.76	335	P	P	21 39 43.9	-0.2
	comp=Z,0.3nm,0.3s,baz=140,slow=5.1,SNR=2.3						
	comp=Z,0.3nm,0.3s						
PETK	Petropavlovsk-	57.94	13	P	P	21 39 46.2	+1.1
	comp=Z,2.0nm,0.8s,baz=195,slow=7.6,SNR=2.0						
	comp=Z,2.0nm,0.8s						
MKAR	Makanchi Array	69.81	322	P	P	21 41 02.8	-0.7
	comp=Z,0.7nm,0.8s,baz=104,slow=7.3,SNR=5.4						
	comp=Z,0.7nm,0.8s						
KSH	Kashi	71.09	313	P	P	21 41 19.5	+7.8
KSH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURBB	Kurchatov Arra	73.75	325	P	P	21 41 26.1	-1.0
	comp=Z,0.2nm,0.4s,baz=113,slow=5.3,SNR=4.6						
	comp=Z,0.2nm,0.4s						
BVAR	Borovoye Array	79.34	325	P	P	21 41 58.2	-0.5
	comp=Z,1.7nm,0.8s,baz=114,slow=3.6,SNR=4.9						
	comp=Z,1.7nm,0.8s						

ILAR	Eielson Array	85.91	24	P	P	21 42 31.4	-1.4
	comp=Z,1.1nm,0.7s,baz=269,slow=4.5,SNR=11						
	comp=Z,1.1nm,0.7s						
QSPA	South Pole Qui	87.17	180	P	P	21 42 38.8	-0.2
QSPA				IAmb	IAmb	21 42 47.9	
	comp=Z,2.9nm,1.1s						
QSPA	South Pole Qui	87.17	180	P	P	21 42 39.0	0.0
	comp=Z,1.0nm,0.7s,baz=335,slow=1.5,SNR=12						
	comp=Z,1.0nm,0.7s						
BMAR	Burnt Mountain	87.48	22	P	P	21 42 40.8	+0.4
M27K	Edge Creek, AK	87.56	27	P	P	21 42 40.5	-0.5
M27K				IAmb	IAmb	21 42 40.6	
	comp=Z,3.5nm,1.4s						
F26K	Sheenjek River	87.71	22	P	P	21 42 42.1	+0.6
LPAZ	La Paz	147.45	126	PKPbc	PKPbc	21 49 39.8	+1.0
	comp=Z,1.5nm,0.7s,baz=272,slow=1.6,SNR=5.1						

IDC ***25*** *21:35:40.0±1.0, 2.°69S×138.°55E, h0^{km}, mb3.8/5, mbtmp3.8/8, ML3.7/3, MS3.2/12, Error ellipse: s-maj=23.6km s-min=15.6km az=169.0*

NEIC ***25*** *21:35:43.0±1.1, 2.°63S±0.°07×138.°60E±0.°06, h10^{km}±1^{km}, mb4.2/12, Error ellipse: s-maj=13.4km s-min=7.6km az=215.0*

DJA ***25*** *21:35:44.2±0.5, 2°S±4°×13°9E±°, h12^{km}±5^{km}, M4.2/8, mb4.4/3, MLv4.2/8*

ISC 25 21:35:42.0±0.6, **2.°68S**±0.°05×**138.°64E**±0.°06, **h10**^{km}, **n47**, σ**1^{s}82**/38, **mb4.1**/9, **MS3.2**/10, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.69	6	P	Pg	21 35 54.7	-0.6
SMPI				S	Sg	21 36 00.7	-3.6
GENI	Genyem	1.53	87	P	Pn	21 36 11.4	+2.0
JAY	Jayapura	2.07	86	Pn	Pn	21 36 18.2	+1.3
	14nm,0.3s,baz=272,slow=15,SNR=47						
JAY				Lg	Lg	21 36 49.5	
	13nm,0.3s,baz=145,slow=21,SNR=6.9						
	34nm,0.3s						
JAY	Jayapura	2.07	86	P	Pn	21 36 17.9	+1.0
SRPI	Serui, Papua	2.53	288	P	Pn	21 36 22.6	-0.6
BAKI	Biak	2.93	300	P	Pn	21 36 31.5	+2.8
BAKI				S	Sn	21 37 05.5	+1.5
RKPI	Ransiki, Papua	4.61	284	P	Pn	21 36 55.2	+3.4
FAKI	Fak Fak	6.39	268	Pn	Pn	21 37 15.2	-1.0
FAKI	Fak Fak	6.39	268	P	Pn	21 37 17.6	+1.3
	0.2nm33nm,1.1s						
SAUI	Saumlaki	9.01	234	Pn	Pn	21 37 53.9	+1.6
COEN	Coen	12.07	158	Pn	Pn	21 38 34.4	+0.2
MTN	Manton Dam	12.54	216	Pn	Pn	21 38 43.4	+2.7
SOEI	Soe	15.92	243		P	21 39 29.8	-0.3
KNRA	Kununurra	16.17	216	Pn	Pn	21 39 29.1	-0.5
KNRA				IAmb	IAmb	21 39 36.6	
	comp=Z,29nm,1.2s						
GUMO	Guam	17.30	21	LR	LR	21 46 38.6	
	comp=Z,49nm,19.6s,baz=110,slow=38						
WB0	Warramunga Arr	17.49	193		Pn	21 39 48.0	+1.8
WB0				IAmb	IAmb	21 40 06.6	
	comp=Z,14nm,0.8s						
WRA	Warramunga Arr	17.67	193		Pn	21 39 49.0	+0.6
WRA	Warramunga Arr	17.67	193	P	Pn	21 39 47.0	-1.5
	comp=Z,0.6nm,0.3s,baz=14,slow=12,SNR=9.7						
WRA				S	Sn	21 42 54.5	-11
	comp=Z,1.2nm,0.7s,baz=3.9,slow=23,SNR=4.8						
	comp=Z,2.8nm,0.8s						
TOLI2	Tolitoli	18.25	282		P	21 39 56.1	+0.3
KAPI	Kappang	18.99	262	LR	LR	21 48 59.3	
	comp=Z,68nm,18.1s,baz=80,slow=42						
FITZ	Fitzroy Crossi	19.93	219	P	P	21 40 14.8	+0.6
FITZ	Fitzroy Crossi	19.93	219	P	P	21 40 13.2	-1.1
	comp=Z,0.1nm,0.3s,baz=11,slow=16,SNR=1.5						
FITZ				S	S	21 43 48.5	-10
	comp=Z,2.4nm,0.6s,baz=208,slow=16,SNR=5.6						
	comp=Z,3.2nm,0.9s						
AS31	Alice Springs	21.36	192	P	P	21 40 30.7	+0.9
AS31				IAmb	IAmb	21 40 51.9	
	comp=Z,6.1nm,0.8s						
ASAR	Alice Springs	21.36	192	P	P	21 40 29.1	-0.6
ASAR	Alice Springs	21.36	192	P	P	21 40 28.6	-1.1
	comp=Z,2.0nm,0.6s,baz=24,slow=9.9,SNR=9.9						
ASAR				S	S	21 44 20.4	-6.7
	comp=Z,1.3nm,0.7s,baz=8.6,slow=26,SNR=4.7						
	comp=Z,2.0nm,0.6s						
HNR	Honiara	22.21	109	LR	LR	21 49 11.7	
	comp=Z,58nm,20.1s,baz=192,slow=36						
STKA	Stephens Creek	29.18	175	LR	LR	21 55 08.1	
	comp=Z,108nm,18.1s,baz=351,slow=40						
NWAO	Narrogin (SRO)	36.17	211	LR	LR	21 57 25.2	
	comp=Z,119nm,21.8s,baz=56,slow=36						
JNU	Nakatsue	36.35	349	LR	LR	21 55 06.2	
	comp=Z,28nm,21.5s,baz=170,slow=32						
CMAR	Chiang Mai Arr	44.36	300	P	P	21 43 53.7	+0.7
	comp=Z,0.2nm,0.3s,baz=104,slow=7.5,SNR=2.4						
	comp=Z,0.2nm,0.3s						
SONM	Songino Array	57.66	335	LR	LR	22 10 45.0	
	comp=Z,20nm,19.4s,baz=156,slow=36						
PETK	Petropavlovsk-	57.84	13	LR	LR	22 06 15.4	
	comp=Z,22nm,21.9s,baz=216,slow=32						
MA2	Magadan	62.80	7	LR	LR	22 12 54.8	
	comp=Z,8.7nm,19.5s,baz=98,slow=36						
MKAR	Makanchi Array	69.72	322	P	P	21 46 51.7	-0.6
MKAR	Makanchi Array	69.72	322	P	P	21 46 51.4	-0.9
	comp=Z,0.3nm,0.6s,baz=107,slow=8.1,SNR=4.1						
	comp=Z,0.3nm,0.6s						
MAKZ	Makanchi	69.92	322	P	P	21 46 53.6	+0.1
MAKZ				IAmb	IAmb	21 47 08.1	
	comp=Z,1.8nm,1.1s						
TIXI	Tiksi	74.47	357	LR	LR	22 17 27.3	
	comp=Z,14nm,20.9s,baz=202,slow=34						
L19K	White Mountain	81.61	26	P	P	21 48 00.7	+0.6
L19K				IAmb	IAmb	21 48 02.5	
	comp=Z,4.3nm,1.2s						
MLY	Manley	84.34	24	P	P	21 48 15.0	+0.8
MLY				IAmb	IAmb	21 48 20.7	
	comp=Z,1.1nm,1.0s						
ABKAR	Akbulak array	84.65	320	P	P	21 48 16.2	+0.2
ILAR	Eielson Array	85.83	24	P	P	21 48 20.2	-1.4
	comp=Z,1.0nm,0.8s,baz=264,slow=5.0,SNR=9.5						
	comp=Z,1.0nm,0.8s						
QSPA	South Pole Qui	87.27	180	P	P	21 48 29.4	+0.6
QSPA	South Pole Qui	87.27	180	P	P	21 48 28.2	-0.6
	comp=Z,2.1nm,1.0s,baz=333,slow=4.5,SNR=6.5						
	comp=Z,2.1nm,1.0s						
BMAR	Burnt Mountain	87.40	22	P	P	21 48 29.8	+0.5
H27K	Steamboat Moun	88.33	24	P	P	21 48 34.5	+0.7
BBB	Bella Bella	94.09	38	LR	LR	22 24 37.4	
	comp=Z,16nm,19.4s,baz=193,slow=31						
KVAR	Kislovodsk Arr	96.13	314	LR	LR	22 37 46.6	
	comp=Z,16nm,20.2s,baz=296,slow=39						

NNC ***25*** *21:37:19.6±2.5, 36.°71N×70.°86E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=21.1km s-min=19.2km az=129.0*

IDC ***25*** *21:37:26.8±33.0, 36.°32N×71.°98E, h179^{km}±186^{km}, mb3.7/1, mbtmp3.5/4, ML2.9/3, Error ellipse: s-maj=357.6km s-min=120.9km az=173.0*

ISC 25 21:37:30.2±3.0, **36.°6N**±0.°3×**71.°9E**±0.°3, **h200**^{km}, **n7**, σ**2^{s}30**/7, **4C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	6.33	18	⇑Pn	Pn	21 38 56.8	-5.0
	0.3nm,0.3s						
AAK				⇑Sn	Sn	21 40 13.8	-0.5
	1.8nm,0.7s						
KK31	Karatay Array	6.54	351	Pn	Pn	21 38 55.8	-8.7
	1.3nm,0.4s,baz=177,slow=12,SNR=44						
KK31				⇓Sn	Sn	21 40 09.5	-10
	0.9nm,0.3s,baz=205,slow=60,SNR=4.0						
TKM2	Tokmak 2	6.90	23	⇑Pn	Pn	21 39 05.8	-3.4
	1.8nm,0.4s						
TKM2				⇑Sn	Sn	21 40 30.6	+2.8
	1.3nm,0.7s						
MKAR	Makanchi Array	12.78	34	P	Pn	21 40 24.6	-0.2
	0.1nm,0.3s,baz=222,slow=14,SNR=4.6						
	0.1nm,0.5s						
KURBB	Kurchatov Arra	14.78	17	P	P	21 40 50.6	+0.2
	baz=205,slow=11,SNR=4.1						
	0.3nm,0.5s						
ZALV	Zalesovo Beam	19.50	23	P	P	21 41 42.7	+0.7
	0.2nm,0.3s,baz=213,slow=10,SNR=4.6						
	0.7nm,0.3s						
ARCES	ARCESS Array B	41.29	337	P	P	21 44 56.6	+1.0
	3.8nm,1.0s,baz=121,slow=8.9,SNR=2.1						
	3.8nm,1.0s						

RSNC 25 21:38:30.0±0.5, **16°N**±3°×**8°4W**±°, **h0**^{km}, **M3.1, mb4.1, Mjma3.9, ML4.2, ML3.1, MLh3.7, MLv4.1, Ms(BB)3.7, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGUH	Tegucigalpa,Un	3.83	231	P	Pn	21 39 32.4	+2.1
TGUH				S	Sn	21 40 14.8	-1.3
PRVC	Isla de Provid	4.13	138	P	Pn	21 39 32.5	-2.0
PRVC				S	Sn	21 40 23.1	-0.5
ESPN	Las Esperanzas	4.27	181	P	Pn	21 39 38.0	+1.7
ESPN				S	Sn	21 40 25.8	-1.1
ACON	Acoyapa	4.59	192	P	Pn	21 39 44.9	+4.1
ACON				S	Sn	21 40 34.1	-0.8
TEIG	Tepich	5.37	314	P	Pn	21 39 52.8	+1.4
TEIG				S	Sn	21 40 51.8	-2.1

IDC ***25*** *21:40:42.8±4.0, 15.°94S×176.°71W, h411^{km}±31^{km}, mb3.4/3, mbtmp4.1/4, Error ellipse: s-maj=50.4km s-min=35.4km az=23.0*

ISC 25 21:40:40.9±2.1, **15.°7S**±0.°4×**176.°6W**±0.°3, **h400**^{km}, **n6**, σ**0^{s}57**/5, **mb3.6**/3, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	5.52	248	P	Pn	21 42 08.9	+0.4
	9.2nm,0.5s,baz=104,slow=19,SNR=9.9						
WRA	Warramunga Arr	46.79	257	P	P	21 48 32.1	-0.5
	1.4nm,0.6s,baz=97,slow=6.2,SNR=16						
	1.4nm,0.6s						
ASAR	Alice Springs	47.10	252	P	P	21 48 34.7	-0.3
	4.7nm,0.5s,baz=87,slow=8.0,SNR=61						
	4.7nm,0.5s						
QSPA	South Pole Qui	74.31	180	P	P	21 51 35.6	-0.1
	1.0nm,0.7s,baz=61,slow=5.1,SNR=6.0						
	1.0nm,0.7s						
ARCES	ARCESS Array B	124.47	351	PKP	PKPdf	21 58 53.0	+0.3
	5.0nm,1.2s,baz=13,slow=3.4,SNR=4.0						
BRTR	Keskin Array B	144.42	318	PKP	PKPbc	21 59 31.9	+1.6
	0.5nm,0.7s,baz=100,slow=3.4,SNR=4.3						

IDC 25 21:48:49.5±2.2, **30.°31S**×**178.°19W**, **h0**^{km}, **mb3.6**/3, **mbtmp3.6**/3, **Error ellipse: s-maj=63.7km s-min=37.4km az=47.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	42.95	267	P	P	21 56 51.0	+0.6
	0.1nm,0.3s,baz=108,slow=8.3,SNR=1.9						
	0.1nm,0.3s						
WRA	Warramunga Arr	43.93	272	P	P	21 56 58.1	-0.2
	0.5nm,0.5s,baz=112,slow=7.9,SNR=5.8						
	0.5nm,0.5s						
QSPA	South Pole Qui	59.80	180	P	P	21 58 56.6	+0.2
	1.0nm,0.8s,baz=37,slow=5.1,SNR=8.7						
	1.0nm,0.8s						
FINES	FINESS Array B	145.00	340	PKPbc	PKPbc	22 08 25.4	-1.9
	1.4nm,0.9s,baz=96,slow=4.2,SNR=4.5						

JMA 25 21:54:57.2±0.2, **24.°0N**±0.°9×**12°3E**±°, **h35**^{km}, **NW OFF ISHIGAKIJIMA IS, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	0.53	35	*e*S	Sn	21 55 15.6	-0.5
IRIF	Iriomote-Funau	1.01	72	P	Pn	21 55 14.9	0.0
IRIF				S	Sn	21 55 27.9	0.0
HATJ	Hateruma jima	1.03	88	S	Sn	21 55 28.6	+0.1
JKRS	Kuro-shima	1.24	80	P	Pn	21 55 19.1	+1.1
JKRS				*e*S	Sn	21 55 34.7	+1.2
JIJ	Ishigaki jima	1.38	76	*e*P	Pn	21 55 21.6	+1.5
JIJ				*e*S	Sn	21 55 38.4	+1.3
JISG	Ishigakijimahi	1.59	69	*e*S	Sn	21 55 42.9	+0.6

TAP 25 21:55:07.1, 24.°73N×121.°01E, h7^{km}**, ML1.6, B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HSN1	Hsinchu	0.04	6	*i* P	Pg	21 55 09.1	+0.6
HSN1				S	Sg	21 55 10.7	+1.1
SBCB	Hsinchu	0.06	337	*i* P	Pg	21 55 09.5	+0.7
SBCB				*e*S	Sg	21 55 12.1	+2.1
NJD	Zhudong	0.07	88	*i* P	Pg	21 55 09.6	+0.8
NJD				S	Sg	21 55 11.4	+1.3
HSN	Hsinchu	0.08	330	*i* P	Pg	21 55 10.2	+1.2
HSN				*e*S	Sg	21 55 12.8	+2.5
LIOB	Emei	0.09	178	*i* P	Pg	21 55 10.0	+0.8
LIOB				S	Sg	21 55 12.8	+2.2
NSTT	Nanjuang	0.10	186	*i* P	Pg	21 55 10.3	+0.9
NSTT				*e*S	Sg	21 55 13.1	+2.1
NFF	Wufeng Townshi	0.14	137	*i* P	Pg	21 55 10.8	+0.8
NFF				S	Sg	21 55 13.4	+1.4
NJN	Zhunan	0.14	249	P	Pg	21 55 10.3	+0.3
NJN				*e*S	Sg	21 55 15.0	+3.1
KSHI	Guanxi Townshi	0.15	74	*i* P	Pg	21 55 11.5	+1.2
KSHI				S	Sg	21 55 14.6	+2.1
NSK	Sanguang	0.32	100	*i* P	Pb	21 55 14.8	-0.5
NSK				*i* S	Sb	21 55 19.6	-1.0
YHNB	Yeheng	0.34	101	*i* P	Pb	21 55 14.8	-0.7
YHNB				*i* S	Sb	21 55 19.9	-1.2
NNSB	Datong	0.45	132	*e*P	Pb	21 55 16.8	-0.8
NNSB				*e*S	Sb	21 55 23.3	-1.3
WHP	Taichung City	0.46	188	*i* P	Pb	21 55 17.2	-0.4
WHP				*e*S	Sb	21 55 25.2	+0.5

IDC ***25*** *22:24:22.4±0.5, 57.°90S×25.°26W, h0^{km}, mb4.4/10, mbtmp4.4/11, ML4.6/1, MS3.6/19, Error ellipse: s-maj=24.4km s-min=15.2km az=64.0*

NEIC ***25*** *22:24:27.8±1.0, 58.°0S±0.°1×25.°3W±0.°2, h35^{km}±1^{km}, mb4.9/31, Error ellipse: s-maj=21.2km s-min=12.8km az=47.0*

ISC 25 22:24:27.5±0.3, **58.°05S**±0.°07×**25.°26W**±0.°09, **h35**^{km}, **n341**, σ**0^{s}73**/312, **mb4.7**/21, **MS3.6**/17, **10C-1D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	7.32	296		Pn	22 26 16.5	+4.7
VNA1	Neumayer--Stat	14.54	157	⇑P	Pn	22 27 51.0	+0.7
	comp=Z,4.4nm,0.2s						
VNA1				⇑S	Sn	22 30 23.1	-6.9
VNA3	Neumayer Olymp	14.75	160	⇑P	Pn	22 27 53.0	-0.2
	comp=Z,1.0nm,0.3s						
VNA3				⇓S	Sn	22 30 22.2	-13
VNA2	Neumayer--Watz	14.94	157	⇑P	Pn	22 27 56.1	+0.4
	comp=Z,1.8nm,0.2s,baz=325,slow=13						
VNA2				⇑S	Sn	22 30 30.3	-9.4
	baz=333,slow=5.9						
SNAA	Sanae	16.48	155	⇑P	Pn	22 28 16.9	+1.2
	comp=Z,82nm,0.4s						
SNAA				⇑S	Sn	22 31 07.7	-10
SNAA	Sanae	16.48	155		Pn	22 28 17.0	+1.3
SNAA	Sanae	16.48	155	Pn	Pn	22 28 16.9	+1.2
	comp=Z,2.0nm,0.3s,baz=328,slow=18,SNR=77						
SNAA				Sn	Sn	22 31 07.8	-9.4
	comp=Z,0.1nm,0.3s,baz=345,slow=15,SNR=2.0						
SNAA				LR	LR	22 33 27.9	
	comp=Z,135nm,18.2s,baz=10.0,slow=33						
	comp=Z,7.1nm,0.4s						
TROLL	Troll, Antarti	17.98	152	⇑P	P	22 28 36.8	+2.1
	comp=Z,52nm,0.2s						
TROLL				⇑S	Sn	22 31 42.7	-11
PMSA	Palmer Station	19.47	234	LR	LR	22 35 02.3	
	comp=Z,335nm,19.7s,baz=71,slow=33						
EFI	East Falkland	19.78	275	P	Pn	22 28 55.9	-0.2
BELA	Belgrano 2	20.17	186	P	P	22 28 59.1	+0.7
USHA	Ushuaia	23.78	259	LR	LR	22 36 42.0	
	comp=Z,441nm,18.5s,baz=205,slow=31						
MG02	Cerro Sombrero	25.15	263	P	P	22 29 48.8	-0.2
GO09	Cerro Castillo	27.57	264	P	P	22 30 10.5	-0.4
SYO	Syowa Base	29.37	138	⇑*e*P	P	22 30 22.2	-4.5
QSPA	South Pole Qui	32.20	180	P	P	22 30 53.2	+1.3
QSPA				IAmb	IAmb	22 30 54.2	
	comp=Z,15nm,1.4s						
QSPA	South Pole Qui	32.20	180	P	P	22 30 53.7	+1.8
	comp=Z,4.0nm,0.5s,baz=224,slow=1.7,SNR=65						
QSPA				LR	LR	22 43 49.5	
	comp=Z,112nm,18.7s,baz=200,slow=36						
	comp=Z,4.0nm,0.5s						
PLCA	Paso Flores	33.41	281	P	P	22 31 02.0	-0.6
PLCA				IAmb	IAmb	22 31 31.8	
	comp=Z,58nm,1.9s						
PLCA	Paso Flores	33.41	281	P	P	22 31 02.8	+0.1
	comp=Z,3.3nm,0.8s,baz=162,slow=5.0,SNR=5.1						
PLCA				LR	LR	22 44 26.1	
	comp=Z,88nm,18.6s,baz=129,slow=36						
	comp=Z,3.3nm,0.8s						
PLCA	Paso Flores	33.41	281	P	P	22 31 02.7	+0.1
MAW	Mawson	37.92	141	P	P	22 31 41.1	+0.4
	comp=Z,1.2nm,0.5s,baz=244,slow=7.5,SNR=11						
MAW				LR	LR	22 45 12.0	
	comp=Z,84nm,19.8s,baz=263,slow=33						
	comp=Z,1.2nm,0.5s						
SPB	Sao Paulo	37.93	326		P	22 31 41.1	-0.2
SPB				IAmb	IAmb	22 31 43.4	
	comp=Z,19nm,0.9s						
SPB	Sao Paulo	37.93	326	*e*P	P	22 31 42.4	+1.0
VAO	Valinhos	38.35	327	*e*P	P	22 31 46.6	+1.6
BO01	Tunca	38.50	288	P	P	22 31 46.5	+0.3
BO01				IAmb	IAmb	22 32 11.8	
	comp=Z,17nm,1.2s						
CPUP	Villa Florida	38.92	311	P	P	22 31 48.6	-1.1
CPUP	Villa Florida	38.92	311	P	P	22 31 48.8	-0.9
	comp=Z,0.5nm,0.4s,baz=1.5,slow=3.7,SNR=6.2						
CPUP				LR	LR	22 45 37.1	
	comp=Z,15nm,21.9s,baz=35,slow=33						
	comp=Z,0.5nm,0.4s						
MT09	Talagante	38.94	288	P	P	22 31 49.4	-0.6
MT09				IAmb	IAmb	22 33 15.7	
	comp=Z,102nm,2.0s						
SJPY	San Joaquin	39.63	313	*e*P	P	22 31 53.6	-2.1
BSCB	Bom Sucesso	39.65	331	*e*P	P	22 31 57.1	+1.3
TRCB	Terra Rica	40.36	319	*e*P	P	22 32 02.3	+0.6
BB19B	Bebedouro	40.63	325	*e*P	P	22 32 05.0	+0.9
PCMB	Pacaembu	40.99	322	*e*P	P	22 32 08.1	+1.1
SJMB	Sao Joao De Ma	41.01	337	*e*P	P	22 32 08.1	+1.0
DIAM	Diamantina, MG	41.96	333	*e*P	P	22 32 16.0	+0.9
PMNB	Patos De Minas	42.44	329	*e*P	P	22 32 19.5	+0.6
ITRB	Iturama	42.48	324	*e*P	P	22 32 19.8	+0.7
GUA01	Guaratinga, BA	42.80	339	*e*P	P	22 32 22.4	+0.8
RPRD	Ribas do Rio P	42.87	319	*e*P	P	22 32 22.7	+0.5
MURT	Porto Murtinho	43.23	313	*e*P	P	22 32 24.4	-0.7
IPMB	Ipameri, GO	43.46	327	*e*P	P	22 32 28.1	+1.0
AQDB	Aquidauana	43.59	316	*e*P	P	22 32 27.1	-0.9
AC02	Maricunga	43.72	296	P	P	22 32 28.1	-1.5
AC02				IAmb	IAmb	22 32 41.6	
	comp=Z,49nm,1.8s						
BDQN	Bodoquena, MS	44.00	315	*e*P	P	22 32 30.4	-1.0
SBA	Scott Base	44.15	184	P	P	22 32 33.4	+1.4
SBA				IAmb	IAmb	22 33 03.5	
	comp=Z,67nm,1.8s						
C2SB	Chapadao do Su	44.16	321	*e*P	P	22 32 33.4	+0.8
VNDA	Vanda	44.62	182		P	22 32 37.5	+1.8
VNDA	Vanda	44.62	182	P	P	22 32 37.8	+2.1
	comp=Z,3.2nm,0.6s,baz=184,slow=7.7,SNR=12						
	comp=Z,3.2nm,0.6s						
VNDA	Vanda	44.62	182	P	P	22 32 37.8	+2.1
JANB	Januaria	45.23	334	*e*P	P	22 32 41.7	+0.4
BOSA	Boshof	45.51	72	P	P	22 32 43.0	-0.5
BOSA				IAmb	IAmb	22 34 15.7	
	comp=Z,57nm,1.9s						
BOSA	Boshof	45.51	72	LR	LR	22 47 41.3	
	comp=Z,93nm,20.7s,baz=212,slow=31						
CCD	Concordia, Ant	45.51	169	P	P	22 32 43.0	-0.3
BDFB	Brasilia	45.63	329		P	22 32 44.2	-0.2
BDFB				IAmb	IAmb	22 32 46.1	
	comp=Z,11nm,1.2s						
BDFB	Brasilia	45.63	329	P	P	22 32 44.2	-0.2
	comp=Z,3.0nm,0.4s,baz=141,slow=9.7,SNR=7.2						
	comp=Z,3.0nm,0.4s						
H04S2	CROZET ISLANDS	45.80	111	T	T	23 23 16.6	
	baz=226,slow=75,SNR=19						
H04S3	CROZET ISLANDS	45.81	111	T	T	23 23 22.1	
	baz=226,slow=75,SNR=6.1						
H04S1	CROZET ISLANDS	45.82	111	T	T	23 23 19.1	
	baz=226,slow=75,SNR=14						
ARAG	Araguaiana, MT	46.69	324	*e*P	P	22 32 52.9	+0.2
SALV	Santo Antonio	47.80	319	*e*P	P	22 33 01.4	+0.1
SDBA	SAO DESIDERIO	47.93	334	*e*P	P	22 33 03.0	+0.6
BBSD	Serra de San D	48.45	312	*e*P	P	22 33 05.5	-0.9
LBTB	Lobatse	48.65	70	LR	LR	22 49 41.5	
	comp=Z,94nm,20.1s,baz=191,slow=31						
PTLB	Pontes e Lacer	49.47	315		P	22 33 13.1	-1.0
PTLB				IAmb	IAmb	22 33 14.3	
	comp=Z,14nm,1.3s						
PTLB	Pontes e Lacer	49.47	315	*e*P	P	22 33 13.6	-0.6
H10S2	ASCENSION HYDR	49.66	14	T	T	23 27 49.6	
	baz=33,slow=74,SNR=23						
H10S3	ASCENSION HYDR	49.66	14	T	T	23 27 47.8	
	baz=187,slow=74,SNR=25						
SIV	San Ignacio	49.72	312	LR	LR	22 54 37.4	
	comp=Z,22nm,19.4s,baz=114,slow=37						
SNDB	Serra Nova Dou	50.05	326	*e*P	P	22 33 19.0	+0.4
H10N1	ASCENSION HYDR	50.77	14	T	T	23 29 11.6	
	baz=197						
H10N3	ASCENSION HYDR	50.78	14	T	T	23 29 13.7	
	baz=197,slow=74						
H10N2	ASCENSION HYDR	50.79	14	T	T	23 29 15.2	
	baz=197,slow=74						
CASY	Casey	51.66	159	P	P	22 33 29.7	-0.5
SMTB	Santa Maria do	52.00	332	*e*P	P	22 33 34.2	+1.0
PDRB	Porto dos Gac	52.14	320	*e*P	P	22 33 33.8	-0.5
VILB	Vilhena	52.15	315	P	P	22 33 32.9	-1.5
VILB				IAmb	IAmb	22 33 34.8	
	comp=Z,15nm,0.6s						
VILB	Vilhena	52.15	315	*e*P	P	22 33 33.7	-0.7
LPAZ	La Paz	52.39	304		P	22 33 35.2	-1.6
LPAZ				IAmb	IAmb	22 33 38.7	
	comp=Z,3.6nm,0.5s						
LPAZ	La Paz	52.39	304	P	P	22 33 35.7	-1.1
	comp=Z,3.4nm,0.4s,baz=102,slow=5.3,SNR=21						
LPAZ				PcP	PcP	22 34 47.4	-0.1
	comp=Z,2.2nm,0.5s,baz=58,slow=4.6,SNR=2.6						
LPAZ				LR	LR	22 55 57.8	
	comp=Z,19nm,21.0s,baz=165,slow=36						
	comp=Z,3.4nm,0.4s						
LPAZ	La Paz	52.39	304	*e*P	P	22 33 35.4	-1.5
LPAZ	La Paz	52.39	304	P	P	22 33 35.8	-1.1
CLDB	Colider	52.51	321	*e*P	P	22 33 36.4	-0.7
MATP	Matopo	53.94	69	LR	LR	22 53 02.3	
	comp=Z,47nm,18.6s,baz=240,slow=32						
PRPB	Parauapebas	55.16	330	*e*P	P	22 33 57.5	+1.1
NPGB	Novo Progresso	55.96	323	*e*P	P	22 34 01.9	-0.2
LSZ	Lusaka	58.17	66	LR	LR	22 55 51.9	
	comp=Z,100nm,19.0s,baz=191,slow=32						
ITTB	Itaituba	58.60	324	*e*P	P	22 34 20.5	-0.3
MAL2	Monte Alegre,	60.35	326		P	22 34 32.7	-0.1
MACA	Manacapuru-AM	61.38	319	P	P	22 34 38.2	-1.6
ATAH	Atahualpa	65.10	299	LR	LR	23 04 33.9	
	comp=Z,26nm,18.8s,baz=184,slow=37						
OPO	Ambohidratompo	65.15	85	LR	LR	22 59 46.4	
	comp=Z,46nm,19.1s,baz=354,slow=33						
BOAV	Boa Vista	66.51	321		P	22 35 12.4	-1.1
BOAV				IAmb	IAmb	22 35 13.8	
	comp=Z,19nm,0.8s						
DBIC	Dimbokro	66.59	22	P	P	22 35 13.6	-0.4
DBIC	Dimbokro	66.59	22	P	P	22 35 13.9	-0.1
	comp=Z,4.0nm,0.4s,baz=208,slow=5.7,SNR=9.7						
	comp=Z,4.0nm,0.4s						
MDP	Montagnes des	66.70	330	LR	LR	23 03 55.6	
	comp=Z,27nm,19.4s,baz=155,slow=36						
COHC	Cochancay	69.61	300		P	22 35 32.9	-0.1
TORD	Torodi Ar. Bea	74.32	27		P	22 36 01.0	-0.1
TORD				IAmb	IAmb	22 36 02.3	
	comp=Z,5.1nm,0.7s						
TORD	Torodi Ar. Bea	74.32	27	P	P	22 36 01.3	+0.2
	comp=Z,7.4nm,0.7s,baz=198,slow=5.9,SNR=64						
	comp=Z,7.4nm,0.7s						
RUSC	La Rusia	74.41	310	P	P	22 36 00.6	-1.7
RUSC				IAmb	IAmb	22 36 01.3	
	comp=Z,5.8nm,0.7s						
SDV	Santo Domingo	76.17	314	LR	LR	23 11 00.0	
	comp=Z,35nm,20.0s,baz=207,slow=37						
THZ	Tophouse	79.40	194	P	P	22 36 30.3	+0.6
THZ				IAmb	IAmb	22 39 05.9	
	comp=Z,15nm,0.9s						
CBE	Ff, Capester	79.70	325	P	P	22 36 31.5	+0.1
GDHS	Morne Mazeau,	79.94	325	P	P	22 36 32.8	+0.1
PPT2	Papeete2	91.81	232	*e*LR	LR	23 06 56.6	
	comp=Z,100nm,27.0s						
PPT2				*e*LR	LR	23 07 00.5	
	comp=Z,77nm,23.0s						
MDT	Midelt	92.17	17	LR	LR	23 14 37.1	
	comp=Z,43nm,18.1s,baz=228,slow=33						

ASAR	Alice Springs	96.75	161	P	P	22 37 54.5	+0.1
	comp=Z,0.7nm,0.8s,baz=188,slow=4.6,SNR=4.1						
	comp=Z,0.7nm,0.8s						
KEST	Kesra	97.83	28	LR	LR	23 17 16.4	
	comp=Z,36nm,18.0s,baz=324,slow=32						
PDAR	Pinedale Array	122.28	300	PKP	PKPdf	22 43 17.3	-0.8
	comp=Z,0.4nm,0.4s,baz=126,slow=5.4,SNR=5.9						
CMAR	Chiang Mai Arr	123.38	110	PKP	PKPdf	22 43 20.9	+0.3
	comp=Z,0.8nm,0.3s,baz=233,slow=3.3,SNR=7.7						
FINES	FINESS Array B	125.67	28	PKP	PKPdf	22 43 23.2	-0.3
	comp=Z,1.5nm,0.5s,baz=192,slow=2.2,SNR=24						
ABKAR	Akbulak array	127.64	56	PKPdf	PKPdf	22 43 27.5	-0.2
PZH	PanZhiHua	131.50	107	PKP	PKPdf	22 43 36.3	+0.3
ARCES	ARCESS Array B	132.42	22	PKP	PKPdf	22 43 35.3	-0.9
	comp=Z,1.6nm,0.9s,baz=222,slow=1.6,SNR=6.6						
BVAR	Borovoye Array	134.95	58	PKP	PKPdf	22 43 42.1	+0.6
	comp=Z,1.1nm,0.6s,baz=213,slow=2.3,SNR=5.2						
CD2	Chengdu	136.10	106	PKP	PKPdf	22 43 44.0	-0.4
MKAR	Makanchi Array	136.51	72	PKPdf	PKPdf	22 43 45.1	+0.4
MKAR	Makanchi Array	136.51	72	PKP	PKiKP	22 43 46.0	-0.4
	comp=Z,0.7nm,0.8s,baz=210,slow=2.3,SNR=6.0						
KURBB	Kurchatov Arra	137.19	66	PKhKP	PKPpre	22 43 39.4	
	comp=Z,0.4nm,0.5s,baz=240,slow=2.5,SNR=5.2						
KURBB				PKP	PKPdf	22 43 46.6	+0.9
	comp=Z,0.4nm,0.5s,baz=241,slow=2.1,SNR=3.7						
YKA	Yellowknife Ar	138.35	316		PKPdf	22 43 48.4	+0.9
YKA	Yellowknife Ar	138.35	316	PKP	PKPdf	22 43 47.7	+0.2
	comp=Z,2.0nm,0.8s,baz=123,slow=1.5,SNR=15						
P33M	Teslin, Yukon	144.48	305	PKPdf	PKPbc	22 43 57.5	+0.2
P33M	Teslin, Yukon	144.48	305	P	PKPab	22 43 57.2	+0.1
	baz=119						
S31K	Pelican	144.89	300		PKPbc	22 43 58.8	+0.3
S31K	Pelican	144.89	300	P	PKPdf	22 43 59.1	-0.2
	baz=120						
R31K	City Hall, Gus	144.89	301	P	PKPdf	22 43 59.2	-0.1
	baz=120						
MMPY	Sheldon Lake,	144.96	309	P	PKPdf	22 43 59.2	-0.2
	baz=117						
N32M	Quiet Lake	145.04	306	P	PKPdf	22 43 59.6	0.0
	baz=118						
SKAG	Skagway	145.22	303	P	PKPdf	22 44 00.2	+0.4
	baz=119						
WHY	Whitehorse	145.59	305	PKPdf	PKPdf	22 44 00.8	+0.2
WHY	Whitehorse	145.59	305	P	PKPab	22 44 01.2	-0.1
	baz=118						
FARO	Faro, Yukon	145.65	308	P	PKPab	22 44 01.5	+0.1
	baz=116						
PLBC	Pleasant Camp	145.68	302	P	PKPab	22 44 01.4	-0.1
	baz=118						
M31M	Drury Creek, Y	146.08	307	P	PKPbc	22 44 02.1	-0.2
	baz=116						
O30N	Mendenhall	146.17	305	PKPdf	PKPbc	22 44 02.6	0.0
O30N	Mendenhall	146.17	305	P	PKPbc	22 44 02.7	+0.1
	baz=117						
P30M	Million Dollar	146.26	303	P	PKPbc	22 44 03.1	+0.2
	baz=117						
N31M	Braeburn, Yuko	146.35	306	P	PKPbc	22 44 03.6	+0.5
	baz=116						
P29M	Windy Craggy	146.38	302		PKPdf	22 44 02.6	+0.7
P29M	Windy Craggy	146.38	302	P	PKPbc	22 44 03.3	0.0
	baz=117						
A36M	Sachs Harbour	146.47	326	P	PKPbc	22 44 03.5	+0.4
	baz=108						
HYT	Haines Junctio	146.82	304	P	PKPbc	22 44 05.0	+0.4
	baz=116						
N30M	Aishikik Lake	146.91	305	P	PKPbc	22 44 04.9	+0.1
	baz=115						
PNL	Peninsula	147.15	301	P	PKPbc	22 44 05.9	+0.4
	baz=116						
YUK6	Outpost Mounta	147.25	304	P	PKPbc	22 44 06.3	+0.3
	baz=115						
H31M	Peel River	147.49	314		PKPbc	22 44 05.8	-0.4
H31M	Peel River	147.49	314	P	PKPbc	22 44 05.7	-0.5
	baz=111						
YUK4	Talbot Arm	147.54	304	P	PKPbc	22 44 06.9	+0.2
	baz=114						
PINM	Pinnacle	147.73	302	P	PKPbc	22 44 07.3	+0.2
	baz=116						
J30M	Hart River	147.83	311	P	PKPbc	22 44 07.1	-0.2
	baz=111						
G31M	Satah River	147.84	316	P	PKPbc	22 44 06.6	-0.4
	baz=109						
M29M	Somme Creek	147.91	306	P	PKPbc	22 44 07.3	-0.2
	baz=113						
O28M	Mount Upton	147.99	303	P	PKPbc	22 44 08.0	0.0
	baz=114						
YUK8	Steele Glacier	148.01	304	P	PKPbc	22 44 08.1	+0.1
	baz=114						
INK	Inuvik	148.01	318		PKPbc	22 44 07.2	-0.3
INK	Inuvik	148.01	318	P	PKPbc	22 44 07.1	-0.3
	baz=108						
L29M	L29M	148.02	308		PKPbc	22 44 07.7	0.0
L29M	L29M	148.02	308	P	PKPbc	22 44 07.7	0.0
	baz=112,SNR=14						
K29M	Barlow Dome	148.04	309	P	PKPbc	22 44 07.7	-0.2
	baz=112						
I30M	Mount Dempster	148.08	312	P	PKPbc	22 44 07.5	-0.4
	baz=110,SNR=14						
YUK3	Moose Creek	148.51	305	P	PKPbc	22 44 08.7	-0.5
	baz=113						
MESA	MESA	148.53	301	P	PKPbc	22 44 09.3	-0.1
	baz=114						
J29N	Klondike Camp	148.55	310	P	PKPbc	22 44 08.7	-0.4
	baz=110						
CTG	Chitna Glacier	148.58	303	P	PKPbc	22 44 08.9	-0.4
	baz=114						
EPYK	Eagle Plains	148.59	314	P	PKPbc	22 44 08.5	-0.6
	baz=108						
G30M	tAoh Zraii Nji	148.59	315	P	PKPbc	22 44 08.6	-0.5
	baz=108						
F30M	Barrier River	148.62	316	P	PKPbc	22 44 08.5	-0.6
	baz=107						
I29M	Ogilvie Camp,	148.89	312	P	PKPbc	22 44 09.2	-0.7
	baz=109						
DAWY	Dawson	148.90	309		PKPbc	22 44 09.5	-0.4
DAWY	Dawson	148.90	309	P	PKPbc	22 44 09.3	-0.7
	baz=110						
BVCY	Beaver Creek	148.93	306	P	PKPbc	22 44 09.5	-0.6
	baz=112						
H29M	Whitestone	149.18	313	P	PKPbc	22 44 10.1	-0.5
	baz=107						
G29M	Pine Creek	149.25	315	P	PKPbc	22 44 10.4	-0.3
	baz=106,SNR=10						
CRQE	Cirque	149.28	302	P	PKPbc	22 44 10.7	-0.4
	baz=113						
CRQM	Cirque	149.30	302	PKPbc	PKPbc	22 44 11.0	-0.2
M27K	Edge Creek, AK	149.35	305	P	PKPbc	22 44 10.8	-0.5
	baz=111,SNR=8.3						
MCARA	McCarthy VSAT	149.49	303	P	PKPbc	22 44 11.2	-0.2
	baz=112						
BCAR	Beaver Creek A	149.56	306		PKPbc	22 44 11.3	-0.4
KAIM	Kayak Island	149.56	300	P	PKPbc	22 44 11.1	-0.5
	baz=114						
I28M	Miner Creek	149.56	311	P	PKPbc	22 44 11.1	-0.6
	baz=107						
L27K	Beaver Creek,	149.57	306	P	PKPbc	22 44 11.3	-0.3
	baz=110						
E29M	Blow River	149.60	318	P	PKPbc	22 44 11.1	-0.4
	baz=104						
SONM	Songino Array	149.76	88	PKPbc	PKPbc	22 44 12.0	-0.7
SONM	Songino Array	149.76	88	PKPbc	PKPbc	22 44 12.8	+0.1
	comp=Z,3.8nm,0.7s,baz=225,slow=3.1,SNR=23						
M26K	Nabesna, AK	149.85	305	P	PKPbc	22 44 12.3	0.0
	baz=110						
K27K	Chicken	150.00	308	P	PKPbc	22 44 12.7	+0.1
	baz=108						
BMRM	Bremner River	150.05	302	P	PKPbc	22 44 13.0	+0.2
	baz=112						
F28M	Old Crow	150.13	316		PKPbc	22 44 12.4	-0.5
F28M	Old Crow	150.13	316	P	PKPbc	22 44 12.6	-0.2
	baz=104,SNR=12						
L26K	Log Cabin Wild	150.22	306	P	PKPbc	22 44 13.2	+0.1
	baz=109						
N25K	Chitina, Valde	150.28	303	P	PKPbc	22 44 13.5	0.0
	baz=111						
I27K	Kandik River	150.28	311	P	PKPbc	22 44 13.4	+0.1
	baz=106						
EYAK	Cordova Ski Ar	150.41	300	P	PKPbc	22 44 14.0	+0.3
	baz=112						
H27K	Steamboat Moun	150.41	313	P	PKPbc	22 44 13.4	-0.2
	baz=105						
G27K	Doyon Strip	150.61	314	P	PKPbc	22 44 13.7	-0.3
	baz=104						
J26L	Joseph Creek	150.76	309	P	PKPbc	22 44 14.6	0.0
	baz=106						
SCRK	Sand Creek	150.79	308	P	PKPbc	22 44 14.8	+0.2
	baz=107						
HARP	HAARP	150.80	304	P	PKPbc	22 44 14.7	+0.1
	baz=109						
I26K	Coal Creek Min	150.82	310	P	PKPbc	22 44 14.7	+0.2
	baz=105						
KLU	Klutina	150.83	302	P	PKPbc	22 44 15.0	+0.2
	baz=110						
D27M	Malcolm River	150.87	319	P	PKPbc	22 44 15.0	+0.4
	baz=100						
E27K	Coleen River	150.89	316	P	PKPbc	22 44 14.5	-0.1
	baz=102						
P23K	Montague Islan	150.97	299	P	PKPbc	22 44 14.7	-0.3
	baz=112						
RIDG	Independent Ri	151.08	307	P	PKPbc	22 44 15.3	0.0
	baz=107						
PAX	Paxson	151.12	305		PKPbc	22 44 14.6	-0.8
PAX	Paxson	151.12	305	P	PKPbc	22 44 15.2	-0.2
	baz=108						
GLI	Glacier Island	151.15	301	P	PKPbc	22 44 15.3	-0.1
	baz=110						
M24K	Tolsona, Glenn	151.15	303	P	PKPbc	22 44 15.8	+0.3
	baz=109						
G26K	Porcupine Rive	151.46	314	P	PKPbc	22 44 15.8	-0.1
	baz=102						
K24K	Donnelly Dome	151.50	307	P	PKiKP	22 44 16.7	0.0
	baz=106						
J25K	Salcha River,	151.54	309	P	PKPbc	22 44 16.3	0.0
	baz=105						
SCM	Sheep Creek Mo	151.58	302		PKPbc	22 44 16.2	-0.2
SCM	Sheep Creek Mo	151.58	302	P	PKPbc	22 44 16.6	+0.1
	baz=109						
PWL	Port Wells	151.71	300	P	PKPbc	22 44 17.0	+0.3
	baz=110						
F26K	Sheenjek River	151.74	315	P	PKiKP	22 44 17.2	+0.2
	baz=100,SNR=8.7						
M23K	Glacier View	151.74	302	P	PKPbc	22 44 16.9	+0.1
	baz=108						
PRP	Porcupine Dome	151.83	310	P	PKPbc	22 44 16.9	-0.1
	baz=103						
BMAR	Burnt Mountain	151.86	314		PKPbc	22 44 16.8	-0.1
C27K	Jago River	151.88	319	P	PKiKP	22 44 17.3	+0.1
	baz=97						
KNK	Knik Glacier	151.95	301	P	PKiKP	22 44 17.7	+0.1
	baz=109						
SEW	Seward	151.97	298	P	PKiKP	22 44 17.9	+0.3
	baz=110						
DHY	Denali Highway	151.98	305	P	PKPbc	22 44 17.7	+0.2
	baz=106						
WAT6	Susitna Watana	151.99	304	P	PKPbc	22 44 17.7	+0.1
	baz=107						
H25L	Birch Creek	152.11	312	P	PKiKP	22 44 17.9	+0.1
	baz=102						
HDA	Harding Lake	152.15	308	P	PKiKP	22 44 18.0	+0.1
	baz=104						
ILAR	Eielson Array	152.21	308		PKPbc	22 44 17.0	-0.8
ILAR	Eielson Array	152.21	308	PKPbc	PKPbc	22 44 17.4	-0.3
	comp=Z,7.0nm,0.9s,baz=108,slow=2.8,SNR=35						
F25K	Christian Rive	152.29	315	P	PKiKP	22 44 18.2	0.0
	baz=99,SNR=7.4						
G25K	Bearman Lake	152.32	313	P	PKiKP	22 44 18.5	+0.4
	baz=101						
E25K	Arctic Village	152.34	316	P	PKiKP	22 44 18.3	0.0
	baz=98						
WAT1	Susitna Watana	152.42	304	P	PKiKP	22 44 18.8	+0.2
	baz=106						
RC01	Rabbit Creek A	152.43	300	P	PKiKP	22 44 18.9	+0.3
	baz=109						
BRSE	Bradley Lake S	152.45	297	P	PKiKP	22 44 19.0	+0.3
	baz=110						
KDAK	Kodiak Island	152.60	292	P	PKiKP	22 44 19.4	+0.4
	baz=113						
COLA	College	152.64	308	P	PKiKP	22 44 19.4	+0.5
	baz=103						
OHAK	Old Harbor	152.73	291	P	PKPbc	22 44 19.3	+0.2
	baz=114						
D25K	Kavik River	152.78	318	P	PKiKP	22 44 19.3	+0.1
	baz=95						
MCK	McKinley	152.83	306	P	PKiKP	22 44 19.4	0.0
	baz=104						
G24K	Hadweenzic Riv	152.85	312	P	PKiKP	22 44 19.5	+0.2
	baz=100						
H24K	Noodor Dome	152.85	311	P	PKPbc	22 44 19.3	+0.1
	baz=101						
SII	Sitkinak Islan	152.90	289	P	PKPbc	22 44 19.7	+0.2
	baz=115						
KSRS	Korea Array	152.94	128	PKPbc	PKPbc	22 44 20.4	+0.2
	comp=Z,0.4nm,0.3s,baz=208,slow=2.3,SNR=4.4						
CAPN	Captain Cook N	152.99	299	P	PKiKP	22 44 20.0	+0.3
	baz=108						
SUA	Susitna One	153.01	301	P	PKiKP	22 44 20.3	+0.4
	baz=107						
CUT	Chulitna	153.07	303	P	PKiKP	22 44 20.3	+0.5
	baz=106						
NEA2	Nenana	153.09	308	P	PKPbc	22 44 19.8	+0.1
	baz=102						
F24K	Squaw Lake	153.13	314	P	PKiKP	22 44 20.1	+0.2
	baz=98						
CHIR	Chirikof Islan	153.32	287	P	PKPbc	22 44 20.4	0.0
	baz=116						
TRF	Thorofare Moun	153.35	305	P	PKPbc	22 44 20.5	-0.1
	baz=104						
E24K	Your Creek	153.42	315	P	PKiKP	22 44 20.6	+0.1
	baz=96						
SKT	Skwentna	153.52	301	P	PKPbc	22 44 20.9	+0.1
	baz=106						
Q19K	Cape Douglas,	153.55	294	P	PKPbc	22 44 20.9	0.0
	baz=110						
P19K	Oil Pt	153.60	296	P	PKPbc	22 44 21.0	+0.1
	baz=109						
N20K	Mount Spurr	153.61	299	P	PKiKP	22 44 21.3	+0.2
	baz=107						
SPCR	Spurr Chakacha	153.61	299	P	PKiKP	22 44 21.2	+0.1
	baz=107						
C24K	Franklin Bluff	153.63	319	P	PKiKP	22 44 21.3	+0.5
	baz=93						
D24K	Happy Valley	153.64	318	P	PKiKP	22 44 21.6	+0.8
	baz=94						
BPAW	Bear Paw Mtn.	153.80	306	P	PKPbc	22 44 21.2	-0.1
	baz=102						
E23K	Chandalar	153.84	315	P	PKiKP	22 44 21.7	+0.2
	baz=95						
G23K	Bananza Creek	153.85	312	P	PKPbc	22 44 21.4	+0.1
	baz=98						
MLY	Manley	153.88	308	P	PKiKP	22 44 21.7	+0.1
	baz=100						
TOLK	Toolik Lake Re	153.88	317	P	PKPbc	22 44 21.5	+0.1
	baz=94						
COLD	Coldfoot	153.98	313	P	PKiKP	22 44 22.2	+0.6
	baz=96						
Q18K	Katmai Hardscr	154.12	293	P	PKPbc	22 44 22.4	+0.2
	baz=110						
CAST	Castle Rocks	154.12	304	P	PKPbc	22 44 22.1	+0.1
	baz=103						
M20K	Styx River	154.22	301	P	PKiKP	22 44 22.5	+0.2
	baz=105						
H22K	Ishtalitna Cre	154.28	310	P	PKiKP	22 44 22.7	+0.4
	baz=98						
C23K	Itkillik River	154.30	319	P	PKiKP	22 44 23.0	+0.8
	baz=91						
D23K	Nanushuk River	154.30	317	P	PKiKP	22 44 23.0	+0.8
	baz=92						
Q17K	Contact Creek	154.41	292	P	PKiKP	22 44 23.4	+0.5
	baz=111						
I21K	Tanana	154.42	308	P	PKiKP	22 44 23.3	+0.8
	baz=99						
G22K	Bettles	154.46	312	P	PKiKP	22 44 23.7	+1.1
	baz=96						
P18K	Big Mountain,	154.48	294	P	PKiKP	22 44 23.6	+0.7
	baz=109						
N19K	Bonanza Creek	154.56	298	P	PKiKP	22 44 23.6	+0.5
	baz=106						
O18K	Koktuh Hills	154.62	296	P	PKiKP	22 44 24.0	+0.9
	baz=108						
E22K	Anaktuvuk Pass	154.67	315	P	PKiKP	22 44 24.2	+1.1
	baz=93						
L20K	Farewell, AK	154.71	302	P	PKiKP	22 44 24.4	+1.1
	baz=103						
F22K	John River	154.77	314	P	PKiKP	22 44 24.4	+1.2
	baz=94						
M19K	Big River Lodg	154.81	300	P	PKiKP	22 44 24.5	+1.0
	baz=104						
H21K	Melozitna Rive	154.83	309	P	PKiKP	22 44 24.9	+1.4
	baz=98						
K20K	Telida	154.99	304	P	PKiKP	22 44 24.7	+0.9
	baz=101						
P17K	Kvichak River	155.00	294	P		22 44 25.0	
	baz=109						
D22K	Ayikyak River	155.02	317	P		22 44 25.1	
	baz=91						
L19K	White Mountain	155.08	301	P	PKPdf	22 44 25.7	+10
	baz=103						
J20K	Nowinta River	155.17	306	P	PKPdf	22 44 26.0	+11
	baz=100						
N18K	Kilae Creek	155.18	297	P	PKPdf	22 44 26.1	+11
	baz=106						
G21K	Allakaket	155.21	311	P	PKPab	22 44 40.9	+0.4
	baz=95						
B22K	Teshekpuk Lake	155.25	321	P	PKPab	22 44 41.0	+0.5
	baz=87						
F21K	Alatna River	155.25	313	P	PKPab	22 44 41.0	+0.3
	baz=94						
M18K	Stony River	155.37	299	P	PKPab	22 44 41.5	+0.3
	baz=104						
E21K	Killik River	155.49	316	P	PKPab	22 44 42.1	+0.5
	baz=90						
O17K	Koliganek Bris	155.50	295	P	PKPab	22 44 42.3	+0.4
	baz=107						
S14K	Fog Glacier	155.52	286	P	PKPab	22 44 42.5	+0.3
	baz=113						
SDPT	Sand Point	155.61	283	P	PKPab	22 44 42.7	+0.3
	baz=115						
B21K	Ikpikpuk River	155.69	319	P	PKPab	22 44 42.6	+0.2
	baz=87						
P16K	Nushagak River	155.71	293	P	PKPab	22 44 43.1	+0.3
	baz=108						
N17K	Nushagak Hills	155.76	296	P	PKPab	22 44 43.3	+0.3
	baz=105						
C21K	Knifeblade Rid	155.77	318	P	PKPab	22 44 43.5	+0.6
	baz=88						
J19K	Poorman	155.78	305	P	PKPab	22 44 43.3	+0.3
	baz=99						
L18K	Granite Mounta	155.93	301	P	PKPab	22 44 43.8	+0.1
	baz=102						
O16K	Kokwok River B	155.93	294	P	PKPab	22 44 44.1	+0.3
	baz=107						
M17K	Holitna River	156.09	298	P	PKPab	22 44 44.3	-0.1
	baz=103						
F20K	Avaraart Lake	156.12	313	P	PKPab	22 44 44.6	+0.3
	baz=92						
J18K	Innoko River	156.18	304	P	PKPab	22 44 44.9	+0.2
	baz=99						
A21K	Barrow	156.20	323	P	PKPab	22 44 45.2	+0.6
	baz=81						
E20K	Nigu River	156.31	316	P	PKPab	22 44 45.6	+0.4
	baz=89						
H19K	Roundabout Mou	156.32	309	P	PKPab	22 44 45.5	+0.3
	baz=95						
GCSA	Galena City Sc	156.42	307	P	PKPab	22 44 45.7	0.0
	baz=96						
D20K	Etivluk River	156.45	317	P	PKPab	22 44 46.0	+0.2
	baz=87						
N16K	Nishlik Lake	156.50	296	P	PKPab	22 44 46.2	0.0
	baz=105						
B20K	Meade River	156.55	320	P	PKPab	22 44 46.5	+0.4
	baz=84						
G19K	Purcell Mounta	156.62	310	P	PKPab	22 44 46.8	+0.2
	baz=93						
E19K	Redstone River	156.71	314	P	PKPab	22 44 47.0	+0.1
	baz=90						
M16K	Timber Creek	156.72	297	P	PKPab	22 44 47.1	0.0
	baz=103						
K17K	Iditarod	156.76	301	P	PKPab	22 44 47.2	0.0
	baz=100						
F19K	Shaleruckik Mo	156.92	312	P	PKPab	22 44 47.8	0.0
	baz=91						
D19K	Kuna River	157.01	316	P	PKPab	22 44 48.6	+0.4
	baz=86						
H18K	Honhosa River	157.09	308	P	PKPab	22 44 49.0	+0.4
	baz=94						
O14K	Tigyukauivet M	157.39	292	P	PKPab	22 44 50.3	+0.3
	baz=106						
M15K	Kasigluk River	157.47	296	P	PKPab	22 44 50.8	+0.4
	baz=103						
C19K	Lookout Ridge	157.49	318	P	PKPab	22 44 50.8	+0.5
	baz=83						
F18K	Selawik	157.67	311	P	PKPab	22 44 51.0	0.0
	baz=90						
H17K	Granite Mounta	157.73	307	P	PKPab	22 44 51.3	-0.1
	baz=93						
N14K	Kuskokwak Cree	157.77	293	P	PKPab	22 44 52.1	+0.5
	baz=104						
J16K	Anvik River	157.88	302	P	PKPab	22 44 52.6	+0.5
	baz=97						
E18K	Tukpahlearik C	158.01	314	P	PKPab	22 44 53.2	+0.7
	baz=86						
L15K	Ungalak Mounta	158.05	298	P	PKPab	22 44 53.1	+0.3
	baz=100						
G17K	Kiwalik Mounta	158.07	308	P	PKPab	22 44 53.2	+0.4
	baz=91						
E17K	Hotham Inlet	158.51	313	P	PKPab	22 44 54.6	0.0
	baz=86						
M13K	Dall Lake	158.69	294	P	PKPab	22 44 55.5	-0.2
	baz=102						
G16K	Koyuk River	158.78	308	P	PKPab	22 44 55.9	+0.1
	baz=90						
C17K	DeLong Mountai	158.87	317	P	PKPab	22 44 56.6	+0.4
	baz=81						
D17K	Noatak River	158.94	315	P	PKPab	22 44 56.9	+0.4
	baz=83						
NIKH	Nikolski High	158.96	272	P	PKPab	22 44 57.8	+0.8
	baz=118						
J14K	Nanvaranak Lak	159.16	301	P	PKPab	22 44 57.7	+0.1
	baz=96						
G15K	Niukluk	159.49	307	P	PKPab	22 44 59.2	+0.2
	baz=90						
K13K	Kusilvak Mount	159.58	298	P	PKPab	22 45 00.0	+0.6
	baz=97						
C16K	Lisburne Hills	159.70	316	P	PKPab	22 45 00.4	+0.6
	baz=79						
F15K	North Star Dit	159.72	309	P	PKPab	22 45 00.7	+0.7
	baz=87						
ANM	Nome	160.06	306	P	PKPab	22 45 02.0	+0.5
	baz=90						
M11K	Mekoryuk	160.08	293	P	PKPab	22 45 02.3	+0.7
	baz=100						
F14K	Arctic Creek	160.44	308	P	PKPab	22 45 02.7	-0.4
	baz=86						

WEL 25 22:25:33.2±1.1,**39˚S**±14˚×**17˚5E**±1˚1,**h203**km±7km,
M2.4/12,**ML2.3**/12,**MLv2.4**/12,**Error ellipse:**
s-maj=18.9km s-min=14.0km az=175.7,confirmed,
North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
VRZ	Vera Road	0.09	241	P	Pn	22 25 59.7	+0.1
VRZ				S	S	22 26 21.4	+1.1
TWVZ	Taurewa	0.45	89	P	Pn	22 26 00.9	+0.4
COVZ	Chateau Observ	0.54	103	P	Pn	22 26 01.4	+0.6
MTVZ	Mangateitei	0.56	123	P	Pn	22 26 01.4	+0.6
MTVZ				S	S	22 26 23.9	+1.4
FWVZ	Far West T-bar	0.56	108	P	Pn	22 26 01.7	+0.6
HIZ	Hauiti	0.56	359	P	Pn	22 26 01.0	+0.1
HIZ				S	S	22 26 23.9	+1.5
WTVZ	West Tongariro	0.57	94	P	Pn	22 26 01.6	+0.7
MAVZ	Matarangi	0.57	109	P	Pn	22 26 01.9	+0.7
NGZ	Ngauruhoe	0.58	100	P	Pn	22 26 01.7	+0.6
NNVZ	North Ngauruho	0.59	95	P	Pn	22 26 01.8	+0.7
WHVZ	Whangaehu Hut	0.60	110	P	Pn	22 26 01.9	+0.6
KRVZ	Karewarewa	0.61	92	P	Pn	22 26 01.8	+0.7
SNVZ	South Ngauruho	0.61	100	P	Pn	22 26 02.0	+0.8
WNVZ	Wahianoa	0.62	114	P	Pn	22 26 01.9	+0.6
NEZ	North Egmont	0.63	252	P	Pn	22 26 01.6	+0.5
NEZ				S	S	22 26 24.3	+1.4
OTVZ	Oturere	0.63	98	P	Pn	22 26 02.2	+0.9
NTVZ	North Tongarir	0.63	92	P	Pn	22 26 02.0	+0.8
TMVZ	Te Maari	0.66	93	P	Pn	22 26 02.4	+1.0
TMVZ				S	S	22 26 24.7	+1.5
KATZ	Kakaramea	0.66	81	P	Pn	22 26 01.9	+0.5
ETVZ	East Tongariro	0.66	95	P	Pn	22 26 02.2	+0.8
ETVZ				S	S	22 26 25.2	+2.0
WAZ	Wanganui	0.68	172	S	S	22 26 24.6	+1.3
WAZ				P	Pn	22 26 02.1	+0.8
KHEZ	Kahui Hut	0.69	252	P	S	22 26 25.1	+1.7
MOVZ	Moawhango	0.77	116	P	Pn	22 26 02.0	+0.2
MOVZ				S	S	22 26 24.1	0.0
WATZ	Wairara	0.77	62	P	Pn	22 26 02.3	+0.4
RITZ	Rihia Road	0.78	83	P	Pn	22 26 02.6	+0.7
TLZ	Tolley Road	0.92	35	P	Pn	22 26 02.9	+0.2
KUTZ	Kaahu Road	0.95	52	P	Pn	22 26 03.6	+0.7
BFZ	Birch Farm	1.92	147	P	S	22 26 35.6	-4.5
QRZ	Quartz Range	2.50	225	P	Pn	22 26 14.1	-3.1
KHZ	Kahutara	3.48	196	P	Pn	22 26 25.8	-2.8
RPZ	Rata Peaks	5.45	211	P	Pn	22 26 48.1	-5.1

ODZ	Otahua Downs	6.74	206	P	Pn	22 27 05.5	-4.3
JCZ	Jackson Bay	6.76	220	P	Pn	22 27 04.4	-5.8

DJA 25 22:26:41.9±0.5, 5°S±3°×10°3E±°, h34km±8km, M4.6/14, mB5.2/3, mb4.6/8, MLv4.5/14, Mw(mB)4.6/3
IDC 25 22:26:42.8±1.0, 4°.75S×103°.07E, h62km±7km, mb4.2/23, mbtmp4.5/24, MS3.2/4, Error ellipse: s-maj=23.0km s-min=9.7km az=45.0
NEIC 25 22:26:43.7±1.5, 4°.77S±0°.07×103°.08E±0°.08, h69km±5km, mb4.6/42, Error ellipse: s-maj=13.3km s-min=7.7km az=49.0
ISC 25 22:26:42.1±0.7, **4°.93S**±0°.06×**103°.02E**±0°.05, **h62**km±4km, **n116**, σ**1.01**/125, **mb4.6**/49, **1D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNAI	Manna	0.57	353		Pn	22 26 55.3	+0.2
MNAI				Sn	Sn	22 27 05.0	+0.6
MNAI	Manna	0.57	353	P	Pn	22 26 55.1	+0.1
MNAI				S	Sn	22 27 04.8	+0.4
LWLI	Liwa	1.04	95	P	Pn	22 27 00.7	-0.1
LWLI				S	Sn	22 27 14.5	-0.2
MDSI	Maura Dua	1.23	69	P	Pn	22 27 03.4	+0.1
MDSI				S	Sn	22 27 20.1	+1.0
KSI	Kapahiang	1.34	341	P	Pn	22 27 05.3	+0.5
KSI				S	Sn	22 27 22.8	+1.0
KLI	Kotabumi	1.83	88	P	Pn	22 27 11.8	+0.5
KLI				S	Sn	22 27 34.9	+1.4
PMBI	Palembang	2.65	41		Pn	22 27 21.2	-1.2
PMBI	Palembang	2.65	41	P	Pn	22 27 23.3	+0.9
CGJI	Cibinong	3.14	122	P	Pn	22 27 28.8	-0.4
CGJI				S	Sn	22 28 04.0	-1.5
CNJI	Cibinong	4.72	120	P	Pn	22 27 50.5	-0.3
LEM	Lembang	4.95	113	P	Pn	22 27 56.3	+2.2
	32nm,0.4s,baz=188,slow=6.0,SNR=6.2						
LEM				S	Sn	22 28 52.0	+1.9
	26nm,0.4s,baz=175,slow=23,SNR=1.6						
TPI	Tanjungpandan	5.10	65	P	Pn	22 27 56.9	+0.9
	51nm,0.8s						
PPI	Padang Panjang	5.16	329	P	Pn	22 27 57.4	+0.6
	0.4nm40nm,1.0s						
SISI	Saibi	5.31	312	P	Pn	22 27 59.4	+0.5
	0.6nm60nm,0.6s						
BKNI	Bangkinang	5.58	339	Pn	Pn	22 28 01.6	-1.1
CMJI	Cimerak	6.09	118	P	Pn	22 28 09.5	-0.1
	0.4nm2µm57nm,0.5s						
MNSI	Mandailing Nat	6.64	329	P	Pn	22 28 17.7	+0.5
	0.1nm24nm,0.9s						
MYKOM	Kota Tinggi	6.72	7		Pn	22 28 19.5	+1.2
UGM	Wanagama	8.02	112	Pn	Pn	22 28 36.2	+0.1
UGM	Wanagama	8.02	112	P	Pn	22 28 36.1	0.0
	67nm,1.3s						
GSI	Gunungsitoli	8.24	319		Pn	22 28 37.9	-1.2
GSI	Gunungsitoli	8.24	319	P	Pn	22 28 39.4	+0.3
PSI	Prapat	8.70	332	LR	LR	22 32 36.7	
	comp=Z,126nm,18.2s,baz=148,slow=42						
KULM	Kulim	10.42	347	Pn	Pn	22 29 08.7	-0.3
JAGI	Jajag, Banyuwa	11.60	108		Pn	22 29 24.5	-0.5
KKM	Kota Kinabalu	17.10	51	Pn	Pn	22 30 35.2	-2.0
TOLI2	Tolitoli	18.73	72		P	22 30 55.5	-0.5
BATI	Baumata	21.11	106	P	P	22 31 23.2	+1.3
	23nm,0.4s,baz=307,slow=8.7,SNR=7.0						
	23nm,0.4s						
SOEI	Soe	21.60	104	P	P	22 31 27.2	0.0
SOEI				IAmb	IAmb	22 31 52.7	
	comp=Z,25nm,0.8s						
CMAR	Chiang Mai Arr	23.58	350	P	P	22 31 45.8	-1.6
CMAR	Chiang Mai Arr	23.58	350	P	P	22 31 46.5	-0.9
	comp=Z,2.4nm,0.3s,baz=185,slow=8.7,SNR=21						
CMAR				LR	LR	22 40 42.2	
	comp=Z,51nm,18.4s,baz=170,slow=36						
	comp=Z,2.4nm,0.3s						
CHTO	Chiang Mai	23.93	350		P	22 31 49.1	-1.4
FITZ	Fitzroy Crossi	25.69	122	P	P	22 32 06.7	+0.1
KNRA	Kununurra	27.45	115	P	P	22 32 21.2	-1.2
KNRA				IAmb	IAmb	22 32 33.2	
	comp=Z,13nm,1.1s						
H08S2	Diego Garcia H	30.46	263	T	T	23 04 05.4	
	baz=87,slow=75,SNR=23						
H08S3	Diego Garcia H	30.47	263	T	T	23 04 06.1	
	baz=87,slow=75,SNR=49						
H08S1	Diego Carcia H	30.48	263	T	T	23 04 06.8	
	baz=87,slow=75,SNR=25						
PZH	PanZhiHua	31.27	358	P	P	22 32 59.8	+3.4
H01W3	Cape Leeuwin H	31.53	162	T	T	23 06 22.7	
	baz=340,slow=76,SNR=13						
H01W2	Cape Leeuwin H	31.55	162	T	T	23 06 23.2	
	baz=340,slow=76,SNR=12						
H01W1	Cape Leeuwin H	31.55	162	T	T	23 06 16.8	
	baz=340,slow=76,SNR=23						
WRA	Warramunga Arr	33.93	119		P	22 33 19.0	-0.7
WRA	Warramunga Arr	33.93	119	P	P	22 33 20.0	+0.3
	comp=Z,2.8nm,0.5s,baz=300,slow=9.1,SNR=55						
WRA				PcP	PcP	22 35 57.6	+0.5
	comp=Z,1.2nm,0.6s,baz=292,slow=2.1,SNR=5.5						
	comp=Z,2.8nm,0.5s						
WR8	Warramunga Arr	34.08	119		P	22 33 21.0	+0.1
AS31	Alice Springs	35.11	125		P	22 33 30.5	+0.6
AS31				IAmb	IAmb	22 33 32.2	
	comp=Z,3.2nm,0.5s						
ASAR	Alice Springs	35.11	125	P	P	22 33 30.2	+0.4
ASAR	Alice Springs	35.11	125	P	P	22 33 30.8	+0.9
	comp=Z,3.9nm,0.3s,baz=296,slow=7.6,SNR=48						
ASAR				pP	pP	22 33 46.2	+1.4
	comp=Z,1.5nm,0.7s,baz=301,slow=8.4,SNR=2.9						
ASAR				PcP	PcP	22 36 01.4	+1.0
	comp=Z,1.4nm,0.5s,baz=309,slow=2.3,SNR=5.7						
ASAR				S	S	22 38 56.5	-1.8
	comp=Z,0.4nm,0.5s,baz=301,slow=15,SNR=4.3						
	comp=Z,3.9nm,0.3s						
NJ2	Nanjing	39.74	21	*e*P	P	22 34 10.0	+1.2
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
COEN	Coen	40.55	106	P	P	22 34 14.6	-1.3
COEN				IAmb	IAmb	22 34 37.7	
	comp=Z,19nm,1.2s						
LZH	Lanzhou	40.81	1	*e*P	P	22 34 17.3	-0.4
LZH				sP	pP	22 34 35.0	+1.5
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
CTAO	Charters Tower	44.65	114	P	P	22 34 49.8	+0.8
STKA	Stephens Creek	44.96	131	P	P	22 34 52.3	+1.0
STKA	Stephens Creek	44.96	131	P	P	22 34 52.7	+1.4
	comp=Z,4.5nm,0.4s,baz=309,slow=7.0,SNR=20						
	comp=Z,4.5nm,0.4s						
JNU	Nakatsue	46.15	33	P	P	22 35 00.1	-0.5
HHC	Hu-ho-hao-te	46.22	9	*e*P	P	22 35 05.3	+4.1
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,54nm,5.0s						
NIL	Nilore	47.60	326	P	P	22 35 10.9	-1.1
NIL				IAmb	IAmb	22 35 14.9	
	comp=Z,5.8nm,0.6s						
KSRS	Korea Array	48.12	27	P	P	22 35 16.1	+0.2
	comp=Z,2.0nm,0.6s,baz=232,slow=6.9,SNR=11						
	comp=Z,2.0nm,0.6s						
XLT	XiLinHaoTe	50.01	12	*e*P	P	22 35 29.3	-1.0
XLT				sP	sP	22 35 54.8	+1.2
XLT				pmax	pmax		
	comp=Z,7.0nm,0.5s						
XLT				pmax	pmax		
	comp=Z,67nm,6.5s						
KSH	Kashi	50.78	333	P	P	22 35 34.8	-1.5
KSH				sP	sP	22 35 56.0	-3.5
KSH				pmax	pmax		
	comp=Z,7.0nm,0.6s						
TARG	Taragay, Kyrgy	51.82	336	P	P	22 35 44.0	-0.4
NRN	Naryn	52.33	334	P	P	22 35 47.5	-0.6
NRN				IAmb	IAmb	22 35 48.4	
	comp=Z,9.0nm,1.2s						
KDJ	Kajisay	52.41	336	P	P	22 35 48.7	+0.2
SONM	Songino Array	52.62	3	P	P	22 35 49.3	-0.5
SONM				IAmb	IAmb	22 35 51.0	
	comp=Z,4.4nm,0.8s						
SONM	Songino Array	52.62	3	P	P	22 35 50.2	+0.4
	comp=Z,4.7nm,0.6s,baz=183,slow=8.9,SNR=25						
SONM				PcP	PcP	22 36 59.2	-0.1
	comp=Z,1.2nm,0.3s,baz=201,slow=4.2,SNR=7.2						
SONM				LR	LR	22 58 44.2	
	comp=Z,19nm,20.9s,baz=186,slow=37						
	comp=Z,4.7nm,0.6s						
MJAR	Matsushiro Arr	52.76	36	P	P	22 35 49.3	-1.6
	comp=Z,2.8nm,0.8s,baz=216,slow=6.7,SNR=10						
	comp=Z,2.8nm,0.8s						
ARSB	Arslanbob	53.59	332	P	P	22 35 57.1	-0.1
ARSB				IAmb	IAmb	22 35 57.9	
	comp=Z,5.8nm,0.6s						
JSD	Sado	53.83	34	P	P	22 35 57.8	-0.9
JSD				IAmb	IAmb	22 35 59.1	
	comp=Z,5.7nm,0.6s						
AAK	Ala-Archa	53.96	334	P	P	22 35 58.7	-1.1
AAK				IAmb	IAmb	22 36 10.9	
	comp=Z,2.3nm,0.7s						
MKAR	Makanchi Array	54.67	343	P	P	22 36 03.8	-1.0
MKAR	Makanchi Array	54.67	343	P	P	22 36 04.2	-0.6
	comp=Z,4.6nm,0.8s,baz=143,slow=8.3,SNR=33						
MKAR				pP	pP	22 36 20.4	-0.7
	comp=Z,0.9nm,0.4s,baz=150,slow=8.9,SNR=3.6						
	comp=Z,4.6nm,0.8s						
MAKZ	Makanchi	54.78	342	P	P	22 36 04.9	-0.7
BNX	BinXian	54.93	21	⇓P	P	22 36 06.3	-0.3
BNX				sP	sP	22 36 29.3	-0.7
BNX				pmax	pmax		
	comp=Z,12nm,1.2s						
USA0B	Ussuriysk Arra	55.41	25	P	P	22 36 09.5	-0.6
USRK	Ussuriysk Ar.	55.41	25	P	P	22 36 09.6	-0.5
USRK	Ussuriysk Ar.	55.41	25	P	P	22 36 09.7	-0.4
	comp=Z,7.4nm,0.7s,baz=219,slow=6.4,SNR=27						
USRK				pP	pP	22 36 25.8	-0.6
	comp=Z,1.7nm,0.5s,baz=204,slow=6.0,SNR=3.1						
	comp=Z,7.4nm,0.7s						
KK31	Karatay Array	56.13	332	P	P	22 36 14.9	-0.4
KKAR	Karatay Array	56.13	332	P	P	22 36 15.1	-0.2
HEH	HeiHe	58.86	18	*e*P	P	22 36 34.0	-0.3
HEH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KURBB	Kurchatov Arra	59.22	342	P	P	22 36 36.1	-0.7
	comp=Z,2.8nm,0.8s,baz=158,slow=6.6,SNR=12						
KURBB				PcP	PcP	22 37 24.7	+0.2
	comp=Z,1.4nm,0.6s,baz=154,slow=3.5,SNR=7.1						
	comp=Z,2.8nm,0.8s						
KURK	Kurchatov	59.27	342	P	P	22 36 36.2	-0.9
KURK				IAmb	IAmb	22 36 37.3	
	comp=Z,5.2nm,0.9s						
ZAA0	Zalesovo Array	60.62	348	P	P	22 36 45.3	-1.0
ZALV	Zalesovo Beam	60.62	348	P	P	22 36 45.3	-1.0
ZALV	Zalesovo Beam	60.62	348	P	P	22 36 45.6	-0.7
	comp=Z,4.6nm,0.4s,baz=159,slow=6.1,SNR=24						
	comp=Z,4.6nm,0.4s						
BVAR	Borovoye Array	63.97	339	P	P	22 37 07.8	-1.0
	comp=Z,6.0nm,0.6s,baz=143,slow=8.9,SNR=45						
	comp=Z,6.0nm,0.6s						
BRVK	Borovoye	64.04	339	P	P	22 37 07.9	-1.3
BRVK				IAmb	IAmb	22 37 08.9	
	comp=Z,3.5nm,0.6s						
AB31	Akbulak array	65.65	331	P	P	22 37 18.9	-0.9
AB31				IAmb	IAmb	22 37 20.5	
	comp=Z,6.1nm,0.9s						
ABKAR	Akbulak array	65.65	331	P	P	22 37 19.0	-0.8
ABKAR				IAmb	IAmb	22 37 20.5	
	comp=Z,6.1nm,0.9s						
ABKAR	Akbulak array	65.65	331		P	22 37 19.0	-0.8
ARTI	Arti	71.13	336	P	P	22 37 52.8	-1.1
ARTI				IAmb	IAmb	22 37 53.7	
	comp=Z,6.5nm,0.6s						
OUZ	Omahuta	71.32	125	P	P	22 37 54.5	-1.0
KBZ	Khabaz	72.48	319	P	P	22 38 02.7	+0.5
	comp=Z,2.7nm,0.8s,baz=145,slow=5.9,SNR=7.3						
	comp=Z,2.7nm,0.8s						
MMAI	Mount Meron Ar	74.19	306	P	P	22 38 14.6	+1.9
	comp=Z,2.1nm,0.6s,baz=117,slow=7.0,SNR=6.2						
	comp=Z,2.1nm,0.6s						
CSS	Mathiatis	76.39	308	P	P	22 38 25.4	+0.2
CSS				IAmb	IAmb	22 38 34.3	
	comp=Z,5.9nm,0.9s						
BR131	Keskin Array S	77.51	312	P	P	22 38 31.0	-0.5
BR131				IAmb	IAmb	22 38 32.3	
	comp=Z,3.5nm,0.8s						
BRTR	Keskin Array B	77.51	312	P	P	22 38 31.4	-0.1
	comp=Z,2.1nm,0.7s,baz=114,slow=6.2,SNR=17						
	comp=Z,2.1nm,0.7s						
TIXI	Tiksi	78.28	8	P	P	22 38 33.8	-1.1
KGCAE	Kacgae	79.65	248	P	P	22 38 45.0	+1.3
BORA	Eskisehir	79.91	312	P	P	22 38 44.0	-0.7
BORA				IAmb	IAmb	22 39 03.7	
	comp=Z,6.3nm,1.2s						
GRTLG	Ghanzi	80.60	249	P	P	22 38 49.8	+0.9
GRTLG				IAmb	IAmb	22 38 53.4	
	comp=Z,4.4nm,0.9s						
KARP	Karpathos	81.43	307	P	P	22 38 54.0	+1.2
AKASG	Malin Array Be	83.63	322	P	P	22 39 03.6	-0.2
	comp=Z,0.9nm,0.5s,baz=91,slow=4.4,SNR=9.2						
	comp=Z,0.9nm,0.5s						
BURAR	Bucovina Array	85.44	318	P	P	22 39 14.6	+1.4
BURAR				IAmb	IAmb	22 39 15.9	
	comp=Z,3.8nm,0.8s						
BUR08	Bucovina Ar. S	85.45	318	P	P	22 39 14.4	+1.1
BUR08				IAmb	IAmb	22 39 15.8	
	comp=Z,4.3nm,0.8s						
KOLS	Kolonicke sedl	87.62	319	*e*P	P	22 39 24.6	+0.9
FINES	FINESS Array B	88.09	332	P	P	22 39 25.9	+0.3
	comp=Z,3.1nm,0.5s,baz=114,slow=5.6,SNR=44						
	comp=Z,3.1nm,0.5s						
STHS	Stebnicka Huta	88.37	320	*e*P	P	22 39 26.8	-0.5
STHS				*e*PP	PP	22 42 55.2	-0.5
ARCES	ARCESS Array B	90.24	340	P	P	22 39 35.5	-0.1
	comp=Z,3.7nm,0.8s,baz=105,slow=4.4,SNR=7.7						
	comp=Z,3.7nm,0.8s						
VRAC	Vranov	91.37	319	LR	LR	23 27 45.5	
	comp=Z,12nm,18.2s,baz=219,slow=40						
GERES	GERESS Array B	93.22	319	P	P	22 39 50.6	+0.6
	comp=Z,0.4nm,0.5s,baz=98,slow=4.9,SNR=3.7						
	comp=Z,0.4nm,0.5s						
HFS	Hagfors	93.90	330	P	P	22 39 52.8	+0.1
	comp=Z,1.6nm,0.7s,baz=100,slow=4.9,SNR=3.9						
	comp=Z,1.6nm,0.7s						
SPITS	Spitsbergen Ar	94.10	348	P	P	22 39 52.9	-0.4
	comp=Z,2.1nm,0.7s,baz=94,slow=4.0,SNR=1.4						
	comp=Z,2.1nm,0.7s						
NB2	NORSAR Subarra	95.16	331	P	P	22 39 58.0	-0.5
	comp=Z,0.7nm,0.7s,baz=92,slow=4.6						
NOA	NORSAR Array B	95.16	331	P	P	22 39 58.1	-0.5
	comp=Z,0.6nm,0.8s,baz=92,slow=4.5,SNR=4.0						
	comp=Z,0.6nm,0.8s						
PDAR	Pinedale Array	132.53	33	PKP	PKPdf	22 45 50.4	+0.2
	comp=Z,0.3nm,0.2s,baz=312,slow=6.7,SNR=7.1						
BDFB	Brasilia	144.79	234	PKP	PKPdf	22 46 13.9	+0.8
	comp=Z,2.1nm,0.3s,baz=123,slow=7.7,SNR=5.3						
TXAR	Lajitas Array	144.97	43	PKP	PKPbc	22 46 13.2	+0.7
	comp=Z,2.3nm,0.5s,baz=263,slow=0.8,SNR=46						

DJA 25 22:29:11.0±0.5, **1°S**±5°×**13°9E**±°, **h10**km, **M3.9**/5, **mb4.3**/1, **MLv3.7**/5, **Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.53	170	P	Pb	22 29 23.0	+0.5
SMPI				S	Sg	22 29 28.7	+0.2
GENI	Genyem	1.91	126	P	Pn	22 29 42.3	-1.4
GENI				S	Sb	22 30 10.0	0.0
JAY	Jayapura	2.33	117	P	Pn	22 29 48.4	-1.1
JAY				S	Sn	22 30 19.4	+1.1
SRPI	Serui, Papua	2.41	260	P	Pn	22 29 50.4	-0.2
SRPI				S	Sn	22 30 21.3	+1.1
SWI	Sorong	7.38	275	P	Pn	22 30 59.0	+0.1

IDC 25 22:29:22.7±2.0, 34°.25S×178°.82W, h0km, mb3.6/3, mbtmp3.6/4, ML3.8/1, Error ellipse: s-maj=48.4km s-min=39.2km az=70.0
WEL 25 22:29:27.8±1.1, 34°S±12°×17°9W±1°4, h33km, M3.9/7, mB4.5/4, ML4.2/12, MLv4.0/7, Mw(mB)3.6/4, Error ellipse: s-maj=22.4km s-min=7.6km az=130.2, confirmed
ISC 25 22:29:28.4±1.4, **34°.3S**±0°.1×**179°.0W**±0°.1, **h35**km, **n21**, σ**1.12**/36, **mb3.6**/3, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	4.07	210	P	Pn	22 30 28.1	-0.1
WMGZ				S	Sn	22 31 14.8	+0.1
PKGZ	Pakihiroa	4.26	213	S	Sn	22 31 20.1	+0.8
HAZ	Te Kaha	4.31	216	P	Pn	22 30 32.7	+1.3
HAZ				S	Sn	22 31 23.4	+3.0
PUZ	Puketiti	4.35	210	P	Pn	22 30 32.3	+0.2
PUZ				S	Sn	22 31 19.0	-2.6
RUGZ	Raukumara Rang	4.53	215	P	Pn	22 30 33.5	-1.0
RUGZ				S	Sn	22 31 27.3	+1.3
TWGZ	Tauwhareparae	4.56	211	P	Pn	22 30 34.3	-0.6
TWGZ				S	Sn	22 31 27.2	+0.5
TKGZ	Te Karaka	4.84	211	P	Pn	22 30 38.8	+0.1
TKGZ				S	Sn	22 31 33.6	+0.2
MWZ	Matawai	4.89	214	P	Pn	22 30 39.3	-0.2
MWZ				S	Sn	22 31 35.4	+0.5
URZ	Urewera	5.03	217	Pn	Pn	22 30 40.0	-1.4
	3.2nm,0.3s,baz=67,slow=18,SNR=7.6						
URZ				Sn	Sn	22 31 38.2	0.0
	2.0nm,0.3s,baz=140,slow=19,SNR=6.3						
	5.6nm,0.2s						
URZ	Urewera	5.03	217	P	Pn	22 30 39.5	-1.9
URZ				S	Sn	22 31 38.5	+0.2
RAGZ	Rawiri	5.07	214	P	Pn	22 30 41.5	-0.5
RAGZ				S	Sn	22 31 38.3	-1.2
SNGZ	Shannon Statio	5.34	212	P	Pn	22 30 45.0	-0.7
SNGZ				S	Sn	22 31 46.4	+0.5
MUGZ	Murupara	5.37	218	P	Pn	22 30 45.7	-0.4
MUGZ				S	Sn	22 31 46.7	0.0
RTZ	Ruatahuna	5.37	216	P	Pn	22 30 46.1	-0.1
RTZ				S	Sn	22 31 47.3	+0.5
MTHZ	Maungataniwha	5.63	215	P	Pn	22 30 48.6	-1.0
MTHZ				S	Sn	22 31 53.9	+0.9
OTVZ	Oturere	6.46	220	P	Pn	22 30 58.7	-2.4
OTVZ				S	Sn	22 32 12.5	-1.1
CTZ	Chatham Island	9.59	170	P	Pn	22 31 43.4	-0.5
ASAR	Alice Springs	42.21	272	P	P	22 37 19.2	+1.1
	0.7nm,0.6s,baz=117,slow=7.2,SNR=6.0						
	0.7nm,0.6s						
WRA	Warramunga Arr	43.55	277	P	P	22 37 29.6	+0.5
	0.2nm,0.3s,baz=113,slow=7.9,SNR=1.8						
	0.2nm,0.3s						
QSPA	South Pole Qui	55.81	180	P	P	22 39 02.2	+0.3
	0.9nm,1.0s,baz=34,slow=3.3,SNR=1.4						
	0.9nm,1.0s						
FINES	FINESS Array B	148.47	337	PKPbc	PKPbc	22 49 09.6	-0.9
	1.4nm,1.0s,baz=59,slow=2.1,SNR=6.0						

IDC 25 22:29:45.2±1.4, **2°.39S**×**138°.94E**, **h0**km, **mb3.8**/4, **mbtmp3.8**/5, **ML3.8**/1, **Error ellipse: s-maj=77.1km s-min=26.7km az=93.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.02	194	P	Pn	22 33 56.8	-0.6
	0.4nm,0.3s,baz=16,slow=12,SNR=4.7						
	2.2nm,0.6s						
ASAR	Alice Springs	21.71	193	P	P	22 34 38.6	+0.5
	3.3nm,0.7s,baz=21,slow=10.0,SNR=8.1						
	3.3nm,0.7s						
MKAR	Makanchi Array	69.67	322	P	P	22 40 56.8	0.0
	0.4nm,0.7s,baz=114,slow=7.1,SNR=4.1						
	0.4nm,0.7s						
ILAR	Eielson Array	85.45	24	P	P	22 42 25.2	+0.6
	0.4nm,0.7s,baz=271,slow=4.1,SNR=3.2						
	0.4nm,0.7s						
QSPA	South Pole Qui	87.56	180	P	P	22 42 34.4	-0.7
	0.9nm,0.9s,baz=344,slow=0.5,SNR=1.5						
	0.9nm,0.9s						

IDC 25 22:35:40.0±0.6, 30°.79S×177°.31W, h0km, mb4.4/12, mbtmp4.4/13, ML3.8/1, MS3.9/16, Error ellipse: s-maj=24.0km s-min=16.4km az=81.0
NEIC 25 22:35:42.0±1.4, 30°.88S±0°.06×177°.4W±0°.1, h10km±1km, mb4.8/16, Error ellipse: s-maj=17.7km s-min=9.5km az=91.0
ISC 25 22:35:44.0±0.5, **30°.92S**±0°.05×**177°.48W**±0°.09, **h27**km, **n111**, σ**1.81**/114, **mb4.6**/26, **MS3.9**/13, **2C-5D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	1.70	347	P	Pn	22 36 10.0	-1.8
GLKZ				S	Sn	22 36 33.2	+0.5
RAO	Raoul Island	1.71	347		Pn	22 36 10.1	-1.9
RAO				Sn	Sn	22 36 32.9	-0.1
RAO	Raoul Island	1.71	347	Pn	Pn	22 36 10.5	-1.5
	423nm,0.3s,baz=161,slow=5.2,SNR=14						
RAO				Sn	Sn	22 36 31.9	-1.0
	764nm,0.3s,baz=314,slow=21,SNR=10						
RIZ	Raoul Island	1.72	347	P	Pn	22 36 10.3	-1.8
RIZ				S	Sn	22 36 33.6	+0.5
WMGZ	Waiomatatini S	7.67	205	P	Pn	22 37 32.7	-1.2
HAZ	Te Kaha	7.86	209	P	Pn	22 37 34.8	-1.7
HAZ				S	Sn	22 39 05.2	+0.6
PUZ	Puketiti	7.95	205	P	Pn	22 37 34.8	-3.0
PUZ				S	Sn	22 39 06.0	-0.9
RUGZ	Raukumara Rang	8.08	208	P	Pn	22 37 36.7	-3.0
RUGZ				S	Sn	22 39 09.8	-0.4
MWZ	Matawai	8.46	208	P	Pn	22 37 41.3	-3.5
MWZ				S	Sn	22 39 17.9	-1.4
URZ	Urewera	8.57	210	Pn	Pn	22 37 42.2	-4.1
	1.2nm,0.3s,baz=37,slow=5.1,SNR=5.4						
URZ				Sn	Sn	22 39 19.7	-2.3
	7.1nm,0.3s,baz=223,slow=16,SNR=14						
MTHZ	Maungataniwha	9.18	209	P	Pn	22 37 51.2	-3.5
MTHZ				S	Sn	22 39 36.0	-1.1
OTVZ	Oturere	9.95	212	P	Pn	22 38 00.8	-4.6
SNVZ	South Ngauruho	9.98	212	P	Pn	22 38 03.7	-2.1
WNVZ	Wahianoa	10.12	212	P	Pn	22 38 09.3	+1.6
CTZ	Chatham Island	12.81	177	Pn	Pn	22 38 41.1	-3.1
MSVF	Nonsavu	13.74	342	LR	LR	22 43 41.6	
	comp=Z,704nm,18.1s,baz=158,slow=35						
RPZ	Rata Peaks	15.67	212	Sn	Sn	22 42 02.6	-13
	1.1nm,0.3s,baz=40,slow=20,SNR=2.5						
DZM	Mont Dzumac	16.86	298		Pn	22 39 38.5	+0.2
DZM	Mont Dzumac	16.86	298	*e*Pn	Pn	22 39 35.6	-2.7
	98nm,1.2s						
DZM				*e*LR	LR	22 43 38.2	
	524nm,24.9s						
DZM	Mont Dzumac	16.86	298	Pn	P	22 39 39.9	-0.3
	0.3nm,0.3s,baz=82,slow=19,SNR=4.1						
DZM				LR	LR	22 45 11.8	
	comp=Z,474nm,18.9s,baz=74,slow=34						
	28nm,1.2s						
RAR	Rarotonga	18.59	63	LR	LR	22 46 05.1	
	comp=Z,314nm,18.9s,baz=276,slow=34						
TBI	Tubuai	26.00	80	*e*LR	LR	22 47 27.8	
	942nm,21.5s						
ARMA	Armidale	26.54	263	P	P	22 41 20.2	+0.5
ARMA				IAmb	IAmb	22 41 25.1	
	comp=Z,26nm,1.3s						
EIDS	Eidsvold	28.21	273	P	P	22 41 35.6	+1.0
PPT2	Papeete2	28.60	69	*e*LR	LR	22 48 43.6	
	comp=Z,175nm,21.5s						
PPT2				*e*LR	LR	22 48 47.6	
	comp=Z,201nm,21.0s						
PPT	Papeete	28.61	69	LR	LR	22 52 36.1	
	comp=Z,177nm,18.1s,baz=198,slow=36						
HNR	Honiara	29.98	311	LR	LR	22 51 38.7	
	comp=Z,107nm,20.0s,baz=154,slow=32						
CTAO	Charters Tower	34.33	280	P	P	22 42 29.7	+1.2
CTAO				IAmb	IAmb	22 42 32.1	
	comp=Z,14nm,0.8s						
STKA	Stephens Creek	34.80	258		P	22 42 33.6	+1.1
STKA	Stephens Creek	34.80	258	P	P	22 42 34.5	+2.0
	comp=Z,14nm,0.9s,baz=94,slow=9.2,SNR=19						
	comp=Z,14nm,0.9s						
COEN	Coen	39.84	286	P	P	22 43 16.3	+0.9
COEN				IAmb	IAmb	22 43 18.7	
	comp=Z,44nm,1.4s						
TAOE	Nuku Hiva Isla	41.11	66	*e*LR	LR	22 54 31.3	
	comp=Z,291nm,24.8s						
AS31	Alice Springs	43.53	267		P	22 43 45.6	0.0
ASAR	Alice Springs	43.53	267	P	P	22 43 45.4	-0.1
ASAR	Alice Springs	43.53	267	P	P	22 43 46.2	+0.7
	comp=Z,4.2nm,0.7s,baz=103,slow=7.5,SNR=48						
ASAR				PcP	PcP	22 45 34.0	+0.8
	comp=Z,1.6nm,0.8s,baz=112,slow=4.0,SNR=3.6						
ASAR				ScP	ScP	22 49 26.9	+4.0
	comp=Z,0.2nm,0.3s,baz=97,slow=4.1,SNR=2.6						
	comp=Z,4.2nm,0.7s						
WR8	Warramunga Arr	44.42	272		P	22 43 53.2	+0.5
WR8				IAmb	IAmb	22 43 55.9	
	comp=Z,12nm,0.9s						
WRA	Warramunga Arr	44.56	272	P	P	22 43 54.5	+0.6
WRA	Warramunga Arr	44.56	272	P	P	22 43 54.1	+0.2
	comp=Z,8.9nm,0.8s,baz=111,slow=8.0,SNR=28						
WRA				PcP	PcP	22 45 37.2	+0.4
	comp=Z,2.1nm,0.8s,baz=115,slow=3.3,SNR=5.7						
WRA				ScP	ScP	22 49 31.9	+4.8
	comp=Z,1.3nm,0.9s,baz=115,slow=4.4,SNR=5.3						
	comp=Z,8.9nm,0.8s						

VNDA	Vanda	47.62	186	LR	LR	23 01 04.2	
	comp=Z,85nm,20.7s,baz=5.0,slow=32						
JAY	Jayapura	48.53	297	LR	LR	23 04 06.9	
	comp=Z,91nm,18.2s,baz=266,slow=35						
KNRA	Kununurra	51.19	274	P	P	22 44 44.7	-0.5
KNRA				IAmb	IAmb	22 44 47.5	
	comp=Z,13nm,1.1s						
FITZ	Fitzroy Crossi	52.81	270	P	P	22 44 57.2	0.0
CASY	Casey	54.89	208		P	22 45 12.0	+0.2
CASY				IAmb	IAmb	22 45 14.5	
	comp=Z,11nm,1.2s						
BATI	Baumata	58.16	277	LR	LR	23 11 53.6	
	comp=Z,321nm,19.0s,baz=124,slow=37						
QSPA	South Pole Qui	59.19	180	P	P	22 45 43.8	+1.4
QSPA	South Pole Qui	59.19	180	P	P	22 45 44.3	+1.9
	comp=Z,5.3nm,1.1s,baz=6.6,slow=0.6,SNR=12						
QSPA				LR	LR	23 08 18.3	
	comp=Z,59nm,19.5s,baz=32,slow=33						
	comp=Z,5.3nm,1.1s						
LUWI	Luwuk	63.76	286	P	P	22 46 14.6	+0.7
BELA	Belgrano 2	69.21	172	P	P	22 46 47.8	+0.1
BELA				IAmb	IAmb	22 47 00.1	
	comp=Z,4.4nm,1.0s						
PMSA	Palmer Station	71.61	156	LR	LR	23 12 31.6	
	comp=Z,90nm,20.8s,baz=238,slow=31						
MAW	Mawson	71.98	200	P	P	22 47 05.1	+0.4
	comp=Z,2.2nm,0.9s,baz=70,slow=12,SNR=2.5						
	comp=Z,2.2nm,0.9s						
SYO	Syowa Base	76.71	193	⇑*e*PcP	PcP	22 47 42.0	-1.5
TROLL	Troll, Antarti	77.35	180	⇓P	P	22 47 36.4	+0.4
	comp=Z,88nm,0.9s						
SNAA	Sanae	77.62	178	⇓P	P	22 47 36.9	-0.5
	comp=Z,18nm,1.0s						
SNAA	Sanae	77.62	178	P	P	22 47 37.8	+0.3
SNAA				IAmb	IAmb	22 48 13.9	
	comp=Z,13nm,1.4s						
SNAA	Sanae	77.62	178	P	P	22 47 38.5	+1.1
	comp=Z,1.3nm,1.1s,baz=198,slow=9.6,SNR=1.5						
	comp=Z,1.3nm,1.1s						
VNA3	Neumayer Olymp	77.75	176	⇓P	P	22 47 38.3	+0.2
	comp=Z,2.5nm,0.7s						
VNA2	Neumayer--Watz	78.19	177	⇓P	P	22 47 41.0	+0.5
	comp=Z,2.4nm,1.0s,baz=178,slow=6.1						
VNA1	Neumayer--Stat	78.42	176	⇓P	P	22 47 42.5	+0.7
	comp=Z,4.9nm,0.9s						
MJAR	Matsushiro Arr	78.92	325	P	P	22 47 44.5	-0.5
	comp=Z,1.2nm,0.3s,baz=156,slow=5.0,SNR=10						
	comp=Z,1.2nm,0.3s						
PLCA	Paso Flores	81.82	133	LR	LR	23 17 00.5	
	comp=Z,90nm,18.5s,baz=230,slow=30						
LPIG	La Paz	84.43	58	LR	LR	23 18 12.6	
	comp=Z,160nm,18.9s,baz=223,slow=30						
KSRS	Korea Array	85.03	319	P	P	22 48 18.0	+1.0
	comp=Z,1.3nm,0.6s,baz=153,slow=4.8,SNR=4.7						
	comp=Z,1.3nm,0.6s						
PETK	Petropavlovsk-	86.43	345	P	P	22 48 24.0	+0.5
	comp=Z,3.4nm,0.8s,baz=131,slow=6.1,SNR=5.1						
	comp=Z,3.4nm,0.8s						
NJ2	Nanjing	86.92	310	*e*P	P	22 48 27.3	+0.8
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
USRK	Ussuriysk Ar.	87.84	326	P	P	22 48 31.0	+0.4
	comp=Z,2.9nm,0.9s,baz=114,slow=4.5,SNR=6.3						
	comp=Z,2.9nm,0.9s						
NVAR	Mina Array Bea	88.32	42	P	P	22 48 32.5	-0.9
	comp=Z,1.1nm,0.9s,baz=223,slow=8.1,SNR=4.4						
	comp=Z,1.1nm,0.9s						
CN2	Changchun	90.83	323	P	P	22 48 43.5	-1.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BNX	BinXian	91.19	325	⇑P	P	22 48 47.0	+0.7
BNX				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NNA	Nana	92.85	106	LR	LR	23 21 40.8	
	comp=Z,50nm,20.3s,baz=206,slow=30						
CMAR	Chiang Mai Arr	93.99	289	P	P	22 49 01.0	+1.1
	comp=Z,0.6nm,0.3s,baz=134,slow=4.1,SNR=4.3						
	comp=Z,0.6nm,0.3s						
NEW	Newport	95.53	36	LR	LR	23 24 56.5	
	comp=Z,112nm,20.1s,baz=191,slow=31						
PZH	PanZhiHua	95.94	297	P	P	22 49 10.3	+1.5
SEY	Seymchan	96.59	347	LR	LR	23 31 56.0	
	comp=Z,36nm,18.3s,baz=183,slow=35						
HHC	Hu-ho-hao-te	96.92	314	*e*P	P	22 49 14.5	+1.6
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,61nm,4.7s						
CPUP	Villa Florida	99.31	128	LR	LR	23 28 08.8	
	comp=Z,14nm,19.3s,baz=46,slow=32						
ZALV	Zalesovo Beam	118.72	318	PKP	PKiKP	22 54 30.4	+1.3
	comp=Z,0.9nm,0.5s,baz=114,slow=2.8,SNR=2.6						
KURBB	Kurchatov Arra	121.77	313	PKP	PKPdf	22 54 34.2	-0.9
	comp=Z,0.5nm,0.6s,baz=100,slow=1.6,SNR=5.1						
GNI	Garni	144.71	297	PKPdf	PKPab	22 55 16.9	-0.3
KBZ	Khabaz	145.77	303	PKPbc	PKPab	22 55 21.1	+0.4
	comp=Z,4.5nm,1.0s,baz=341,slow=2.5,SNR=7.4						
FIA1	FINESS Array S	145.79	340	PKPdf	PKPdf	22 55 18.8	-0.5
FINES	FINESS Array B	145.79	340	PKPdf	PKPdf	22 55 19.0	-0.3
FINES	FINESS Array B	145.79	340	PKPbc	PKPdf	22 55 19.2	-0.2
	comp=Z,8.4nm,0.8s,baz=46,slow=3.2,SNR=44						
OBN	Obninsk	145.85	325	PKPdf	PKPdf	22 55 19.5	-0.1
KIV	Kislovodsk	145.89	304	PKPdf	PKPdf	22 55 20.3	+0.1
NB2	NORSAR Subarra	149.33	352	PKP	PKPbc	22 55 29.0	-0.6
	comp=Z,1.4nm,0.9s,baz=12,slow=2.7						
NOA	NORSAR Array B	149.33	352	PKPbc	PKPbc	22 55 29.1	-0.6
	comp=Z,2.2nm,0.8s,baz=14,slow=4.2,SNR=9.1						
HFS	Hagfors	149.84	349	PKPbc	PKPbc	22 55 30.1	-0.8
	comp=Z,3.1nm,0.8s,baz=27,slow=2.5,SNR=7.8						
MNK	Minsk	150.26	330	*i* PKiKP	PKPbc	22 55 31.6	-0.5
	comp=E,9.0nm,0.9s,baz=330						
MNK				*i* PKiKP	PKPbc	22 55 31.6	-0.5
	comp=N,7.0nm,0.9s,baz=330						
MNK				*i* PKiKP	PKPbc	22 55 31.6	-0.5
	comp=Z,13nm,0.9s,baz=330						
MNK				*i* PP	PP	22 59 08.2	+0.9
	baz=330						
MNK				*i* PPP	PPP	23 02 28.4	
	baz=330						
MNK				*i* SKS	SKSdf	23 02 32.8	+0.1
	baz=330						
MNK				*i* SKKS	SKKSdf	23 11 24.4	-1.8
	baz=330						
MNK				*i* SS	SS	23 18 14.3	-9.0
	baz=330						
MNK				*i* SSS	SSS	23 24 20.7	
	baz=330						
MNK				*i* LR	LR	00 06 44.5	
	baz=330						
NACGM	Naroch	150.45	331	*e*PKiKP	PKPbc	22 55 32.8	+0.3
	comp=Z,10.0nm,0.9s,baz=45						
AKASG	Malin Array Be	151.99	323	PKPbc	PKPbc	22 55 36.0	-0.2
	comp=Z,3.8nm,0.8s,baz=51,slow=2.8,SNR=19						
MMAI	Mount Meron Ar	152.09	283	PKPbc	PKiKP	22 55 38.5	+1.1
	comp=Z,1.8nm,0.5s,baz=102,slow=2.6,SNR=9.8						
ILGA	Ilgaz	152.94	301	PKPbc	PKPbc	22 55 37.6	-1.4
BRTR	Keskin Array B	153.24	298	PKPbc	PKPbc	22 55 38.8	-0.8
BRTR	Keskin Array B	153.24	298	PKPbc	PKPbc	22 55 39.1	-0.5
	comp=Z,1.1nm,0.9s,baz=90,slow=2.6,SNR=5.7						
BRTR				PKPab	PKPab	22 55 51.7	+0.2
	comp=Z,1.9nm,0.9s,baz=83,slow=3.0,SNR=7.4						
CONA	Conrad Observa	160.18	333	*e*PKP	PKPab	22 56 19.9	-1.0
	comp=Z,2.0nm,1.0s						
GERES	GERESS Array B	160.19	338	PKPab	PKPab	22 56 21.3	+0.3
	comp=Z,0.1nm,0.3s,baz=22,slow=4.8,SNR=2.4						
RONA	Rosalia, Austr	160.19	332	*e*PKP	PKPab	22 56 20.8	-0.1
	comp=Z,1.4nm,0.9s						
MOA	Molln	160.85	335	*e*pPKP	PKPab	22 56 30.1	+6.3
	comp=Z,4.3nm,1.3s						
ARSA	Arzberg	160.87	332	*e*PKP	PKPab	22 56 22.2	-1.7
	comp=Z,2.1nm,0.9s						
BIOA	Bad Ischl, Aus	161.21	336	*e*PKP	PKPab	22 56 25.6	+0.3
	comp=Z,1.9nm,0.9s						
SOKA	Soboth	161.53	332	*i* PKP	PKPab	22 56 27.3	+0.5
	comp=Z,3.7nm,1.2s						
LESA	Schwarzleotal	161.76	338	*i* pPKP	PKPab	22 56 29.7	+1.8
	comp=Z,4.3nm,1.2s						
OBKA	Obir	161.86	332	*e*PKP	PKPab	22 56 28.7	+0.4
	comp=Z,5.6nm,1.5s						
WATA	Walderalm	162.19	340	*e*PKP	PKPab	22 56 28.9	-0.8
RETA	Reutte	162.29	341	*e*PKP	PKPab	22 56 28.9	-1.2
	comp=Z,3.1nm,1.0s						
TORD	Torodi Ar. Bea	162.29	177	PKPab	PKPab	22 56 31.2	+0.5
	comp=Z,1.0nm,1.0s,baz=174,slow=3.4,SNR=3.3						
MOTA	Moosalm	162.32	340	*e*PKP	PKPab	22 56 30.2	-0.1
	comp=Z,5.6nm,1.5s						
SQTA	Sankt Quirin	162.40	340	*e*PKP	PKPab	22 56 27.4	-3.2
	comp=Z,1.8nm,0.5s						
ABTA	Abfaltersbach	162.41	337	*i* PKP	PKPab	22 56 28.9	-1.8
	comp=Z,4.1nm,0.6s						
DAVA	Damuels	162.70	343	*e*PKP	PKPab	22 56 32.1	+0.1
	comp=Z,2.6nm,0.7s						
FETA	Feichten	162.72	341	*e*PKP	PKPab	22 56 31.1	-1.1
	comp=Z,2.4nm,0.8s						

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*IDC **25** 22:44:17.6±2.4, 22°.53N×143°.27E, h116^{km}±20^{km}, mb3.9/19, mbtmp4.2/20, MS3.2/2, Error ellipse: s-maj=21.3km s-min=13.8km az=67.0*

*NEIC **25** 22:44:21.1±1.2, 22°.63N±0°.05×143°.3E±0°.1, h136^{km}±6^{km}, mb4.4/27, Error ellipse: s-maj=18.7km s-min=6.5km az=80.0*

ISC 25 22:44:18.0±0.6**, 22°.49N**±0°.07×**143°.3E**±0°.1**, h118**^{km}**, n70, σ0^{s}.91**/66**, mb4.3**/33**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	4.68	348		Pn	22 45 27.9	+1.2
JCJ				Sn	Sn	22 46 19.6	-0.4
JCJ	Chichijima	4.68	348	P	Pn	22 45 26.3	-0.4
	68nm,0.3s,baz=180,slow=0.0						
JCJ				S	Sn	22 46 18.4	-1.7
	baz=180,slow=0.0						
GUMO	Guam	8.99	170	LR	LR	22 48 42.6	
	comp=Z,19nm,19.4s,baz=118,slow=29						
JGF	Kuroka	14.04	340	Pn	Pn	22 47 31.3	-0.4
MJAR	Matsushiro Arr	14.67	344	Pn	Pn	22 47 40.3	+0.6
JMM	Marumori	15.47	353	Pn	Pn	22 47 49.4	-0.3
JMM				IAmb	IAmb	22 47 54.0	
	comp=Z,13nm,0.7s						
JSD	Sado	16.08	346		Pn	22 47 57.0	-0.3
YOJ	Yonaguni jima	18.67	280	P	P	22 48 27.9	+0.9
ERM	Erimo	19.47	360	P	P	22 48 36.0	+0.6
ERM				IAmb	IAmb	22 48 44.5	
	comp=Z,21nm,0.9s						
KSRS	Korea Array	19.93	322	P	Pn	22 48 45.6	+2.4
	comp=Z,6.1nm,0.4s,baz=146,slow=8.8,SNR=21						
YHNB	Yeheng	20.17	280	P	P	22 48 44.6	+1.3
YHNB				IAmb	IAmb	22 48 48.3	
	comp=Z,18nm,0.9s						
SSLB	Suanglung	20.55	278		Pn	22 48 49.9	-0.8
H11N1	WAKE ISLAND Hy	22.22	93	T	T	23 12 19.5	
	baz=281						
H11N2	WAKE ISLAND Hy	22.22	93	T	T	23 12 12.0	
	baz=281						
H11N3	WAKE ISLAND Hy	22.24	93	T	T	23 12 14.7	
	baz=281						
H11S3	WAKE ISLAND Hy	22.30	96	T	T	23 12 16.6	
	baz=284,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	22.31	96	T	T	23 12 17.3	
	baz=284,slow=75,SNR=4.9						
H11S2	WAKE ISLAND Hy	22.32	96	T	T	23 12 17.9	
	baz=284,slow=75,SNR=7.5						
USRK	Ussuriysk Ar.	23.56	339	P	P	22 49 19.8	+2.1
	comp=Z,1.0nm,0.5s,baz=151,slow=9.0,SNR=4.6						
SONM	Songino Array	38.77	320	P	P	22 51 31.2	0.0
SONM	Songino Array	38.77	320	P	P	22 51 31.7	+0.5
	comp=Z,1.0nm,0.4s,baz=134,slow=8.0,SNR=9.3						
	comp=Z,1.0nm,0.4s						
SEY	Seymchan	40.89	6	P	P	22 51 49.9	+1.7
	comp=Z,2.0nm,0.2s,baz=183,slow=16,SNR=4.2						
WB2	Warramunga Arr	43.06	192	P	P	22 52 06.3	-0.1
WB2				IAmb	IAmb	22 52 34.8	
	comp=Z,8.7nm,1.3s						
WRA	Warramunga Arr	43.07	192	P	P	22 52 05.3	-1.1
	comp=Z,0.3nm,0.3s,baz=15,slow=8.0,SNR=5.0						
	comp=Z,0.3nm,0.3s						
ASAR	Alice Springs	46.78	192	P	P	22 52 35.1	-0.7
	comp=Z,0.4nm,0.6s,baz=17,slow=9.8,SNR=1.3						
	comp=Z,0.4nm,0.6s						
GSI	Gunungsitoli	49.11	251	P	P	22 52 54.2	+0.2
TIXI	Tiksi	49.87	354	P	P	22 52 59.0	+0.2
TIXI	Tiksi	49.87	354	P	P	22 52 58.8	0.0
	comp=Z,0.6nm,0.4s,baz=87,slow=3.1,SNR=1.9						
	comp=Z,0.6nm,0.4s						
EVN	Everest	50.97	288		P	22 53 08.7	0.0
EVN				IAmb	IAmb	22 53 10.1	
	comp=Z,5.3nm,0.6s						
MSVF	Nonsavu	52.51	137	P	P	22 53 20.5	+1.2
MSVF	Nonsavu	52.51	137	P	P	22 53 20.7	+1.3
	comp=Z,4.3nm,0.3s,baz=24,slow=20,SNR=7.8						
	comp=Z,4.3nm,0.3s						
ZAA0	Zalesovo Array	53.63	321	P	P	22 53 26.8	-0.3
ZAA0				IAmb	IAmb	22 53 27.3	
	comp=Z,2.9nm,0.6s						
ZALV	Zalesovo Beam	53.63	321	P	P	22 53 26.5	-0.6
ZALV				PcP	PcP	22 54 31.1	-0.9
ZALV	Zalesovo Beam	53.63	321	P	P	22 53 27.1	0.0
	comp=Z,2.7nm,0.5s,baz=110,slow=7.5,SNR=12						
	comp=Z,2.7nm,0.5s						
O15K	Ungalikthiuk R	54.13	32	P	P	22 53 30.8	+0.2
O15K				IAmb	IAmb	22 53 57.3	
	comp=Z,6.5nm,0.9s						
MKAR	Makanchi Array	54.21	312		P	22 53 31.7	+0.2
MKAR				PcP	PcP	22 54 33.7	-0.7
MKAR	Makanchi Array	54.21	312	P	P	22 53 32.0	+0.5
	comp=Z,1.3nm,0.6s,baz=100,slow=8.1,SNR=19						
MKAR				PcP	PcP	22 54 33.9	-0.5
	comp=Z,0.4nm,0.5s,baz=88,slow=4.3,SNR=3.1						
	comp=Z,1.3nm,0.6s						
MAKZ	Makanchi	54.43	312		P	22 53 33.3	+0.3
K17K	Iditarod	55.90	28	P	P	22 53 44.2	+0.9
K17K				IAmb	IAmb	22 53 54.7	
	comp=Z,8.1nm,1.2s						
H18K	Honhosa River	56.66	26	P	P	22 53 48.3	-0.4
H18K				IAmb	IAmb	22 54 09.7	
	comp=Z,8.9nm,1.5s						
G18K	Tagagawik	56.80	25	P	P	22 53 50.0	+0.4
G18K				IAmb	IAmb	22 54 13.9	
	comp=Z,7.6nm,1.5s						
KURK	Kurchatov	56.94	317	P	P	22 53 50.5	-0.4
KURBB	Kurchatov Arra	56.99	317	P	P	22 53 51.5	+0.2
	comp=Z,8.4nm,0.6s,baz=94,slow=7.7,SNR=102						
	comp=Z,8.4nm,0.6s						
KDAK	Kodiak Island	57.51	35	P	P	22 53 54.7	0.0
BOOM	Boomskoye usch	58.68	307		P	22 54 03.6	+0.1
BOOM				IAmb	IAmb	22 54 05.1	
	comp=Z,2.7nm,0.7s						
IMAR	Indian Mountai	58.74	25	P	P	22 54 03.8	+0.6
ARSB	Arslanbob	60.96	306	P	P	22 54 19.9	+0.9
ARSB				IAmb	IAmb	22 54 20.7	
	comp=Z,5.3nm,1.2s						
ILAR	Eielson Array	61.30	27	P	P	22 54 19.9	-0.9
	comp=Z,0.9nm,0.7s,baz=257,slow=5.7,SNR=7.4						
	comp=Z,0.9nm,0.7s						
BVAR	Borovoye Array	62.11	319	P	P	22 54 26.7	+0.3
	comp=Z,10nm,0.5s,baz=89,slow=7.4,SNR=64						
	comp=Z,10nm,0.5s						
BMAR	Burnt Mountain	62.60	24	P	P	22 54 30.8	+1.4
KKAR	Karatay Array	62.62	308		P	22 54 29.9	0.0
KKAR	Karatay Array	62.62	308	P	P	22 54 30.2	+0.3
SIMJ	Simiganj	64.33	303		P	22 54 41.3	-0.1
SIMJ				IAmb	IAmb	22 54 42.4	
	comp=Z,3.6nm,0.9s						
AB31	Akbulak array	69.03	316	P	P	22 55 10.5	-0.4
AB31				IAmb	IAmb	22 55 11.3	
	comp=Z,3.3nm,0.8s						
ABKAR	Akbulak array	69.03	316	P	P	22 55 10.3	-0.5
EUNU	Eureka	74.30	8	P	P	22 55 41.5	-0.5
YKA	Yellowknife Ar	75.72	28	P	P	22 55 50.0	-0.3
	comp=Z,0.6nm,0.7s,baz=298,slow=6.4,SNR=6.6						
	comp=Z,0.6nm,0.7s						
YKAW1	Yellowknife Wh	75.78	28	P	P	22 55 50.7	0.0
YKAW1				IAmb	IAmb	22 56 02.0	
	comp=Z,6.0nm,1.4s						
ARCES	ARCESS Array B	78.19	341	P	P	22 56 03.8	-0.3
	comp=Z,1.6nm,0.6s,baz=67,slow=6.1,SNR=8.5						
	comp=Z,1.6nm,0.6s						
KBZ	Khabaz	81.86	314	P	P	22 56 24.9	+0.6
	comp=Z,3.5nm,0.9s,baz=98,slow=2.9,SNR=3.9						
	comp=Z,3.5nm,0.9s						
FINES	FINESS Array B	82.49	334	P	P	22 56 26.0	-1.2
	comp=Z,2.5nm,0.3s,baz=64,slow=4.8,SNR=25						
	comp=Z,2.5nm,0.3s						
NVAR	Mina Array Bea	82.60	52	P	P	22 56 29.3	+0.7
	comp=Z,1.1nm,0.8s,baz=276,slow=5.5,SNR=5.3						
	comp=Z,1.1nm,0.8s						
AKASG	Malin Array Be	86.90	324	P	P	22 56 48.2	-1.3
	comp=Z,0.7nm,0.5s,baz=58,slow=4.7,SNR=0.6						
	comp=Z,0.7nm,0.5s						
HFS	Hagfors	88.02	337	P	P	22 56 52.7	-2.1
	comp=Z,1.5nm,0.3s,baz=50,slow=4.8,SNR=16						
	comp=Z,1.5nm,0.3s						
NB2	NORSAR Subarra	88.23	339	P	P	22 56 53.6	-2.2
	comp=Z,1.0nm,0.6s,baz=43,slow=5.1						
NOA	NORSAR Array B	88.23	339	P	P	22 56 54.2	-1.5
	comp=Z,0.9nm,0.7s,baz=28,slow=3.5,SNR=4.2						
	comp=Z,0.9nm,0.7s						
BRTR	Keskin Array B	89.84	313	P	P	22 57 02.9	-1.1
	comp=Z,0.7nm,0.7s,baz=79,slow=4.6,SNR=2.1						
	comp=Z,0.7nm,0.7s						
SCHQ	Schefferville	98.78	17	LR	LR	23 43 42.9	
	comp=Z,78nm,20.3s,baz=292,slow=36						
TORD	Torodi Ar. Bea	128.29	310	PKP	PKPdf	23 03 10.6	-0.9
	comp=Z,0.2nm,0.5s,baz=36,slow=2.1,SNR=1.7						
LPAZ	La Paz	149.80	84	PKPbc	PKPbc	23 03 55.2	-0.6
	comp=Z,0.6nm,0.4s,baz=22,slow=5.4,SNR=2.7						

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*IDC **25** 22:46:14.0±1.6, 2°.73S×138°.64E, h0^{km}, mb3.4/2, mbtmp3.5/4, ML3.5/2, Error ellipse: s-maj=32.5km s-min=17.5km az=166.0*

*DJA **25** 22:46:19.9±0.7, 2°S±11°×13°9E±°, h57^{km}±11^{km}, M3.3/5, MLv3.3/5*

ISC 25 22:46:14.4±0.9**, 2°.72S**±0°.07×**138°.64E**±0°.05**, h10**^{km}**, n9, σ0^{s}.99**/11**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.73	6	P	Pb	22 46 29.4	+0.2
WAMI	Wamena	1.16	176	P	Sn	22 46 53.2	+0.7
GENI	Genyem	1.54	85	P	Pg	22 46 44.1	+0.3
JAY	Jayapura	2.08	84	Pn	Pb	22 46 51.3	-0.9
	5.9nm,0.3s,baz=244,slow=10,SNR=23						
JAY				Lg	Lg	22 47 19.2	
	3.1nm,0.3s,baz=159,slow=22,SNR=3.9						
	17nm,0.4s						
JAY	Jayapura	2.08	84	P	Pb	22 46 51.0	-1.2
JAY				S	Sn	22 47 14.9	-0.4
SRPI	Serui, Papua	2.54	289	P	Pb	22 46 59.2	-0.9
SRPI				S	Sb	22 47 30.0	-1.4
WRA	Warramunga Arr	17.62	193	P	P	22 50 20.9	-0.3
	0.3nm,0.3s,baz=15,slow=13,SNR=7.5						
	1.4nm,0.8s						
ASAR	Alice Springs	21.32	192	P	P	22 51 02.5	+0.9
	0.8nm,0.4s,baz=20,slow=11,SNR=12						
	0.8nm,0.4s						
MKAR	Makanchi Array	69.76	322	P	P	22 57 25.9	+1.1
	0.2nm,0.6s,baz=116,slow=6.6,SNR=2.0						
	0.2nm,0.6s						

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*IDC **25** 22:47:52.4±1.0, 31°.20S×177°.37W, h0^{km}, mb4.0/5, mbtmp4.0/6, ML3.3/1, Error ellipse: s-maj=32.7km s-min=25.2km az=120.0*

ISC 25 22:47:56.5±1.0**, 31°.19S**±0°.08×**177°.5W**±0°.2**, h27**^{km}**, n16, σ1^{s}.24**/19**, mb4.1**/5**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.96	350	Pn	Pn	22 48 28.1	+0.1
	113nm,0.3s,baz=218,slow=19,SNR=5.3						
RAO				Sn	Sn	22 48 49.5	-2.1
	412nm,0.3s,baz=138,slow=21,SNR=5.0						
URZ	Urewera	8.31	211	Pn	Pn	22 49 52.9	-2.4
	0.4nm,0.3s,baz=266,slow=3.8,SNR=6.3						
URZ				Sn	Sn	22 51 27.4	-0.9
	1.9nm,0.3s,baz=4.1,slow=23,SNR=7.0						
	1.9nm,0.3s						
STKA	Stephens Creek	34.69	258	P	P	22 54 46.0	+1.9
	1.0nm,0.4s,baz=76,slow=8.3,SNR=1.7						
	1.0nm,0.4s						
ASAR	Alice Springs	43.47	268	P	P	22 55 58.8	+1.1
	0.7nm,0.5s,baz=107,slow=7.3,SNR=8.0						
	0.7nm,0.5s						
WRA	Warramunga Arr	44.53	273	P	P	22 56 06.9	+0.8
	1.5nm,0.4s,baz=111,slow=7.9,SNR=9.4						
	1.5nm,0.4s						
FITZ	Fitzroy Crossi	52.76	270	P	P	22 57 09.3	-0.1
	3.2nm,0.9s,baz=72,slow=6.4,SNR=1.3						
	3.2nm,0.9s						
SNAA	Sanae	77.36	178	P	P	22 59 49.9	+1.3
	0.8nm,0.9s,baz=115,slow=1.4,SNR=1.8						
	0.8nm,0.9s						
KURBB	Kurchatov Arra	121.92	313	PKP	PKPdf	23 06 47.5	-0.4
	0.3nm,0.6s,baz=107,slow=1.5,SNR=4.6						
BVAR	Borovoye Array	127.24	315	PKP	PKiKP	23 06 58.3	-0.3
	0.3nm,0.5s,baz=100,slow=3.2,SNR=2.4						
SPITS	Spitsbergen Ar	132.51	356	PKP	PKiKP	23 07 08.1	-0.4
	2.1nm,0.8s,baz=349,slow=1.5,SNR=1.5						
FINES	FINESS Array B	146.02	340	PKPbc	PKPbc	23 07 32.5	-0.6
	1.2nm,0.4s,baz=51,slow=3.8,SNR=33						
NOA	NORSAR Array B	149.59	352	PKPbc	PKPbc	23 07 41.9	-1.0
	0.3nm,0.6s,baz=14,slow=4.0,SNR=3.4						
HFS	Hagfors	150.09	349	PKPbc	PKPbc	23 07 42.7	-1.4
	0.7nm,0.6s,baz=31,slow=1.7,SNR=4.1						
MMAI	Mount Meron Ar	152.09	283	PKPbc	PKiKP	23 07 51.3	+1.2
	1.7nm,0.7s,baz=105,slow=3.2,SNR=6.2						
AKASG	Malin Array Be	152.16	322	PKPbc	PKPbc	23 07 48.9	-0.3
	0.5nm,0.5s,baz=58,slow=1.9,SNR=1.6						
AKASG				PKPab	PKPab	23 08 00.0	+1.1
	1.3nm,0.6s,baz=54,slow=3.0,SNR=6.5						
BRTR	Keskin Array B	153.32	297	PKPbc	PKiKP	23 07 52.7	+0.2
	0.4nm,0.6s,baz=95,slow=3.1,SNR=3.3						

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*IDC **25** 22:51:36.6±1.9, 2°.53S×138°.43E, h0^{km}, mb3.5/2, mbtmp3.5/4, ML3.6/2, Error ellipse: s-maj=34.7km s-min=19.6km az=162.0*

*DJA **25** 22:51:42.6±1.1, 2°S±12°×13°9E±°, h33^{km}±8^{km}, M3.5/5, MLv3.5/5*

ISC 25 22:51:36.7±0.8**, 2°.54S**±0°.07×**138°.44E**±0°.04**, h10**^{km}**, n9, σ1^{s}.01**/11**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.61	27	P	Pn	22 51 52.1	+0.6
SMPI				S	Sg	22 51 56.1	-0.5
WAMI	Wamena	1.36	168	P	Sn	22 52 19.2	-0.8
GENI	Genyem	1.73	92	P	Pg	22 52 09.4	-0.6
JAY	Jayapura	2.27	89	Pn	Pb	22 52 17.4	-0.5
	12nm,0.3s,baz=275,slow=14,SNR=37						
JAY				Lg	Lg	22 52 47.8	
	5.9nm,0.3s,baz=98,slow=20,SNR=4.3						
	34nm,0.3s						
JAY	Jayapura	2.27	89	P	Pb	22 52 16.4	-1.4
SRPI	Serui, Papua	2.29	287	P	Pg	22 52 19.6	-1.1
SRPI				S	Sg	22 52 50.3	-0.2
WRA	Warramunga Arr	17.75	193	P	Pn	22 55 44.5	+0.3
	0.2nm,0.3s,baz=17,slow=12,SNR=4.7						
	0.3nm,0.4s						
ASAR	Alice Springs	21.46	191	P	P	22 56 26.6	+1.1
	0.7nm,0.6s,baz=22,slow=11,SNR=7.1						
	0.7nm,0.6s						
ILAR	Eielson Array	85.79	24	P	P	23 04 17.4	+1.3
	0.4nm,0.7s,baz=271,slow=5.6,SNR=4.7						
	0.4nm,0.7s						

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*IDC **25** 22:51:51.4±1.5, 55°.16N×164°.65E, h0^{km}, mb3.6/11, mbtmp3.6/12, ML3.1/1, MS2.8/3, Error ellipse: s-maj=39.6km s-min=17.3km az=172.0*

*KRSC **25** 22:51:53.6±1.5, 54°.97N×164°.61E, h50^{km}±25^{km}, Ml4.4, Felt [II-III] at Nikolskoe.*

*MOS **25** 22:51:54.8±0.8, 55°.02N×164°.78E, h45^{km}, mb4.0/1, Error ellipse: s-maj=7.0km s-min=6.5km az=153.0*

ISC 25 22:51:54.8±0.5**, 55°.11N**±0°.03×**164°.56E**±0°.03**, h27**^{km}**, n98, σ1^{s}.77**/103**, mb3.6**/11**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	0.81	83	PN	Pn	22 52 09.5	-0.9
BKI				S	Sn	22 52 19.4	-2.1
BKI	Bering	0.81	83	*e*P	Pn	22 52 09.6	-0.9
BKI				*e*S	Sn	22 52 19.4	-2.1
KBTR	Krutoberegovo	1.48	319	PN	Pb	22 52 20.0	-1.5
KBTR				S	Sn	22 52 38.0	+0.1
KBTR	Krutoberegovo	1.48	319	*e*P	Pb	22 52 20.0	-1.5
KBTR				*e*S	Sn	22 52 38.1	+0.1
KBG	Krutoberegovo	1.56	318	PN	Pb	22 52 21.1	-1.7
KBG				S	Sn	22 52 40.6	+0.8
KBG	Krutoberegovo	1.56	318	*e*P	Pb	22 52 21.2	-1.7
KBG				*e*S	Sn	22 52 40.7	+0.8
MKZ	Mys Kozlova	1.73	252	PN	Pb	22 52 23.8	-2.0
MKZ				S	Sb	22 52 44.0	-3.1
MKZ	Mys Kozlova	1.73	252	*e*P	Pb	22 52 23.9	-2.0
MKZ				*e*S	Sb	22 52 44.1	-3.1
SMKR	Semkarok	2.28	311	PN	Pb	22 52 33.0	-2.3
SMKR				S	Sb	22 53 02.1	-1.0

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SMKR  Semkarok          2.28 311  eP     Pb      22 52 33.0 -2.3
SMKR                              eS     Sb      22 53 02.2 -1.0
ZLN   Zelenaya          2.32 295   PN    Pb      22 52 34.4 -1.5
ZLN   Zelenaya          2.32 295  eP     Pb      22 52 34.4 -1.5
BZGR  Bezymyannyi-Gr    2.35 292   PN    Pb      22 52 34.4 -2.0
BZGR                               S     Sb      22 53 04.1 -0.9
BZGR  Bezymyannyi-Gr    2.35 292  eP     Pb      22 52 34.5 -2.0
BZGR                              eS     Sb      22 53 04.1 -0.9
BDR   Baidarnaya        2.39 309  eS     Sb      22 53 05.7 -0.5
TUMD  Tumrok D          2.39 274   PN    Pb      22 52 34.2 -2.9
TUMD                               S     Sb      22 53 04.2 -1.9
TUMD  Tumrok D          2.39 274  eP     Pb      22 52 34.2 -2.9
TUMD                              eS     Sb      22 53 04.3 -1.9
LGNR  Loginova          2.40 295   PN    Pb      22 52 35.9 -1.5
LGNR  Loginova          2.40 295  eP     Pb      22 52 35.9 -1.5
BZMR  Bezymyannaya      2.46 291   PN    Pb      22 52 35.9 -2.4
BZMR  Bezymyannaya      2.46 291  eP     Pb      22 52 36.0 -2.4
BZWR  Bezymyannyi-We    2.46 292   PN    Pb      22 52 36.2 -2.2
BZWR  Bezymyannyi-We    2.46 292  eP     Pb      22 52 36.3 -2.2
KRSR  Krestovskiy       2.52 298   PN    Pb      22 52 35.7 -3.6
KRSR  Krestovskiy       2.52 298  eP     Pb      22 52 35.7 -3.6
KIRR  Kirishev          2.54 291   PN    Pb      22 52 36.9 -2.8
KIRR                               S     Sb      22 53 09.0 -1.6
KIRR  Kirishev          2.54 291  eP     Pb      22 52 36.9 -2.8
KIRR                              eS     Sb      22 53 09.1 -1.6
KMNR  Kamenistaya       2.55 286   PN    Pb      22 52 37.1 -2.7
KMNR  Kamenistaya       2.55 286  eP     Pb      22 52 37.2 -2.7
KPT   Kopyto            2.61 291   PN    Pb      22 52 38.4 -2.4
KPT                                S     Sb      22 53 11.4 -1.1
KPT   Kopyto            2.61 291  eP     Pb      22 52 38.5 -2.4
KPT                               eS     Sb      22 53 11.5 -1.1
KOZ   Kozyrevsk         2.83 292   PN    Pb      22 52 41.7 -2.8
KOZ                                S     Sb      22 53 16.8 -1.8
KOZ   Kozyrevsk         2.83 292  eP     Pb      22 52 41.8 -2.8
KOZ                               eS     Sb      22 53 16.8 -1.8
SRDR  Sredinnyy         3.00 296   PN    Pb      22 52 44.1 -3.3
SRDR  Sredinnyy         3.00 296  eP     Pb      22 52 44.1 -3.3
KII   Karymskiy         3.17 252   PN    Pb      22 52 44.7 -5.6
KII   Karymskiy         3.17 252  eP     Pb      22 52 44.8 -5.6
SPN   Mys Shipunski     3.35 235   PN    Pn      22 52 45.4 +0.2
SPN   Mys Shipunski     3.35 235  eP     Pn      22 52 45.5 +0.2
SPN                               eS     Sn      22 53 21.8 -2.3
ESO   Esso              3.43 286   PN    Pb      22 52 48.9 -5.9
ESO   Esso              3.43 286  eP     Pb      22 52 48.9 -5.9
NLC   Nalytchevo        3.63 240   PN    Pn      22 52 50.5 +1.3
NLC   Nalytchevo        3.63 240  eP     Pn      22 52 50.5 +1.3
NLC                               eS     Sn      22 53 30.4 -0.7
SDLR  Sedlovina         3.81 243   PN    Pb      22 52 53.8 -7.4
SDLR                               S     Sn      22 53 35.8 +0.2
SDLR  Sedlovina         3.81 243  eP     Pb      22 52 53.9 -7.4
SDLR                              eS     Sn      22 53 35.9 +0.2
SMAR  Somma             3.86 244   PN    Pb      22 52 54.5 -7.7
SMAR  Somma             3.86 244  eP     Pb      22 52 54.6 -7.7
SMAR                              eS     Sn      22 53 36.8 -0.2
KRER  Koryakskii        3.87 244   PN    Pb      22 52 54.7 -7.6
KRER                               S     Sn      22 53 37.6 +0.5
KRER  Koryakskii        3.87 244  eP     Pb      22 52 54.8 -7.6
KRER                              eS     Sn      22 53 37.7 +0.5
UGLR  Uglovaya          3.88 243   PN    Pn      22 52 54.3 +1.7
UGLR                               S     Sn      22 53 37.4 +0.1
UGLR  Uglovaya          3.88 243  eP     Pn      22 52 54.4 +1.7
UGLR                              eS     Sn      22 53 37.4 +0.1
AVH   Avacha            3.89 244   PN    Pb      22 52 55.1 -7.5
AVH                                S     Sn      22 53 38.3 +0.7
AVH   Avacha            3.89 244  eP     Pb      22 52 55.2 -7.5
AVH                               eS     Sn      22 53 38.3 +0.7
KRX   Arik              3.89 246   PN    Pb      22 52 55.0 -7.6
KRX   Arik              3.89 246  eP     Pb      22 52 55.1 -7.6
KRX                               eS     Sn      22 53 37.2 -0.5
KOK   Koryaka           3.93 245   PN    Pb      22 52 55.5 -7.8
KOK                                S     Sn      22 53 39.3 +0.7
KOK   Koryaka           3.93 245  eP     Pb      22 52 55.5 -7.8
KOK                               eS     Sn      22 53 39.3 +0.7
DALK  Dalny             4.01 241  eS     Sn      22 53 38.9 -1.4
PET   Petropavlovsk     4.06 241  ePN    Pn      22 52 57.1 +2.1
PET                                pmax  pmax
      comp=Z,30nm,0.4s
GNL   Ganaly            4.12 253   PN    Pn      22 52 58.2 +2.2
GNL   Ganaly            4.12 253  eP     Pn      22 52 58.2 +2.2
OSSR  Ossora            4.23 349   PN    Pn      22 53 00.0 +2.7
OSSR  Ossora            4.23 349  eP     Pn      22 53 00.0 +2.7
KRMR  Karymshinskiy     4.43 242   PN    Pn      22 53 02.4 +2.3
KRMR  Karymshinskiy     4.43 242  eP     Pn      22 53 02.5 +2.3
KRMR                              eS     Sn      22 53 50.1 -0.7
RUS   Russkaya          4.48 236   PN    Pn      22 53 02.0 +1.2
RUS   Russkaya          4.48 236  eP     Pn      22 53 02.0 +1.2
PEA0B Petropavlovsk-    4.51 246   PN    Pn      22 53 03.4 +2.2
PETK  Petropavlovsk-    4.51 246   Pn    Pn      22 53 02.9 +1.6
      comp=Z,5.0nm,0.3s,baz=69,slow=17,SNR=34
PETK                               Sn    Sn      22 53 56.2 +3.5
      comp=Z,4.4nm,0.3s,baz=48,slow=18,SNR=9.5
      comp=Z,6.0nm,0.3s
MTVR  Mutnovka          4.61 238   PN    Pn      22 53 04.3 +1.6
MTVR  Mutnovka          4.61 238  eP     Pn      22 53 04.4 +1.6
MTVR                              eS     Sn      22 53 54.6 -0.8
GRL   Gorelyy           4.62 239   PN    Pn      22 53 04.9 +2.1
GRL   Gorelyy           4.62 239  eP     Pn      22 53 05.0 +2.1
GRL                               eS     Sn      22 53 54.7 -1.0
ASAK  Asacha            4.81 238   PN    Pn      22 53 07.5 +2.1
ASAK  Asacha            4.81 238  eP     Pn      22 53 07.6 +2.1
ASAK                              eS     Sn      22 53 59.4 -0.8
MA2   Magadan           8.69 307  LR     LR      22 57 42.6
      comp=Z,44nm,19.1s,baz=8.5,slow=40
SEY   Seymchan         10.03 326  LR     LR      22 58 34.5
      comp=Z,41nm,19.0s,baz=96,slow=40
TIXI  Tiksi            22.46 331  P      P       22 56 52.5 +1.2
      comp=Z,0.7nm,0.3s,baz=129,slow=8.2,SNR=7.9
TIXI                              LR     LR      23 05 45.1
      comp=Z,32nm,19.5s,baz=202,slow=37
      comp=Z,0.7nm,0.3s
ILAR  Eielson Array    25.51  48  P      P       22 57 20.1 -0.5
      comp=Z,1.1nm,0.6s,baz=263,slow=8.8,SNR=14
      comp=Z,1.1nm,0.6s
H11N2 WAKE ISLAND Hy   35.37 176  T      T       23 36 52.1
      baz=359,slow=76,SNR=57
H11N3 WAKE ISLAND Hy   35.38 176  T      T       23 36 56.0
      baz=359,slow=76,SNR=46
H11N1 WAKE ISLAND Hy   35.38 176  T      T       23 36 43.9
      baz=359,slow=76,SNR=39
H11S1 WAKE ISLAND Hy   36.58 177  T      T       23 38 17.9
      baz=352
H11S3 WAKE ISLAND Hy   36.59 177  T      T       23 38 19.6
      baz=352
H11S2 WAKE ISLAND Hy   36.59 177  T      T       23 38 08.6
      baz=352
YKA   Yellowknife Ar   39.88  46  P      P       22 59 26.1 +0.5
      comp=Z,0.5nm,0.7s,baz=302,slow=9.0,SNR=5.9
      comp=Z,0.5nm,0.7s
KURK  Kurchatov        48.88 303  P      P       23 00 39.3 +1.6
KURBB Kurchatov Arra   48.98 303  P      P       23 00 39.3 +0.8
      comp=Z,1.7nm,0.8s,baz=56,slow=8.1,SNR=12
      comp=Z,1.7nm,0.8s
MKAR  Makanchi Array   49.63 297  P      P       23 00 43.5  0.0
      comp=Z,0.4nm,0.7s,baz=58,slow=7.9,SNR=5.4
      comp=Z,0.4nm,0.7s
BVAR  Borovoye Array   51.17 309  P      P       23 00 56.1 +1.0
      comp=Z,1.1nm,0.7s,baz=58,slow=9.2,SNR=6.9
      comp=Z,1.1nm,0.7s
PDAR  Pinedale Array   54.26  65  P      P       23 01 19.5 +1.2
      comp=Z,0.9nm,1.1s,baz=306,slow=8.9,SNR=3.7
      comp=Z,0.9nm,1.1s
FINES FINESS Array B   59.27 338  P      P       23 01 53.3 +0.1
      comp=Z,0.6nm,0.7s,baz=33,slow=6.2,SNR=1.6
      comp=Z,0.6nm,0.7s
NB2   NORSAR Subarra   62.29 346  P      P       23 02 13.7 -0.1
      comp=Z,0.3nm,0.6s,baz=19,slow=6.9
NOA   NORSAR Array B   62.29 346  P      P       23 02 13.9 +0.1
      comp=Z,0.4nm,0.7s,baz=19,slow=6.5,SNR=3.8
      comp=Z,0.4nm,0.7s
NOA   NORSAR Array B   62.29 346  P      P       23 02 14.0 +0.1
TXAR  Lajitas Array    67.45  71  P      P       23 02 48.0  0.0
      comp=Z,0.3nm,0.8s,baz=323,slow=6.3,SNR=3.7
      comp=Z,0.3nm,0.8s
BRTR  Keskin Array B   76.66 323  P      P       23 03 44.0 +0.9
      comp=Z,0.3nm,0.7s,baz=31,slow=6.0,SNR=4.0
      comp=Z,0.3nm,0.7s
BRTR  Keskin Array B   76.66 323  P      P       23 03 44.0 +0.9
```

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*IDC **25** 23:21:28.6±0.7, 2°.67S×138°.57E, h0^{km}, mb4.0/9, mbtmp4.0/12, ML4.0/3, MS3.7/13, Error ellipse: s-maj=17.9km s-min=14.8km az=10.0*

*NEIC **25** 23:21:31.2±1.6, 2°.7S±0°.1×138°.59E±0°.03, h10^{km}±1^{km}, mb4.4/15, Error ellipse: s-maj=19.3km s-min=3.3km az=168.0*

*DJA **25** 23:21:31.4±0.4, 3°S±4°×13°9E±°, h10^{km}, M4.3/7, mb4.3/2, MLv4.2/7*

ISC 25 23:21:30.3±0.5**, 2°.69S**±0°.06×**138°.60E**±0°.05**, h10^{km}, n52, σ1^{s}08**/43**, mb4.1**/15**, MS3.6**/11**, Irian Jaya**

```
Code  Station Name       Δ°   AZ°     Phase ID           Time      Res
                                  Op     ISC          h  m  s    ISC
SMPI  Sarmi             0.70   9  P      Pg      23 21 42.3 -1.6
GENI  Genyem            1.57  87  P      Pn      23 21 59.4 +1.1
JAY   Jayapura          2.11  85  Pn     Pn      23 22 07.0 +1.2
      21nm,0.3s,baz=225,slow=7.2,SNR=40
JAY                               Lg     Lg      23 22 36.2
      24nm,0.3s,baz=79,slow=18,SNR=5.3
      64nm,0.3s
JAY   Jayapura          2.11  85  P      Pn      23 22 06.7 +0.9
SRPI  Serui, Papua      2.49 289  P      Pn      23 22 11.4 +0.4
BAKI  Biak              2.90 301  P      Pn      23 22 17.1 +0.5
FAKI  Fak Fak           6.35 268  Pn     Pn      23 23 05.3 +1.3
FAKI  Fak Fak           6.35 268  P      Pn      23 23 05.0 +1.0
      37nm,1.2s
COEN  Coen             12.08 158  Pn     Pn      23 24 23.1 +0.4
MTN   Manton Dam       12.51 216  Pn     Pn      23 24 30.6 +2.0
SOEI  Soe              15.88 243  Pn     Pn      23 25 14.8 +0.6
KNRA  Kununurra        16.14 216  Pn     Pn      23 25 17.6 +0.2
KNRA                              IAmb   IAmb    23 25 20.1
      comp=Z,28nm,1.2s
GUMO  Guam             17.32  21  LR     LR      23 33 17.9
      comp=Z,67nm,18.1s,baz=162,slow=41
WB0   Warramunga Arr   17.47 193         Pn      23 25 32.9 -1.3
WB0                               IAmb   IAmb    23 25 51.0
      comp=Z,40nm,1.4s
WR8   Warramunga Arr   17.63 193  Pn     Pn      23 25 36.0 -0.2
WR8                               IAmb   IAmb    23 25 47.5
      comp=Z,22nm,1.1s
WRA   Warramunga Arr   17.65 193         Pn      23 25 37.0 +0.5
WRA   Warramunga Arr   17.65 193  P      Pn      23 25 34.2 -2.3
      comp=Z,0.7nm,0.3s,baz=13,slow=12,SNR=16
WRA                               S      Sn      23 28 40.0  -13
      comp=Z,3.8nm,1.1s,baz=14,slow=23,SNR=4.0
WRA                               LR     LR      23 32 56.6
      comp=Z,640nm,18.5s,baz=334,slow=39
      comp=Z,4.5nm,0.8s
TOLI2 Tolitoli         18.21 282  P      P       23 25 44.9 +1.3
FITZ  Fitzroy Crossi   19.90 219  P      P       23 26 01.7 -0.5
FITZ  Fitzroy Crossi   19.90 219  P      P       23 26 01.8 -0.4
      comp=Z,0.3nm,0.3s,baz=73,slow=6.5,SNR=4.8
      comp=Z,6.0nm,1.1s
AS31  Alice Springs    21.35 192  P      P       23 26 17.6 -0.2
AS31                              IAmb   IAmb    23 26 27.8
      comp=Z,7.3nm,1.0s
ASAR  Alice Springs    21.35 192  P      P       23 26 18.8 +0.9
ASAR  Alice Springs    21.35 192  P      P       23 26 17.6 -0.3
      comp=Z,6.4nm,0.9s,baz=22,slow=10,SNR=30
ASAR                              S      S       23 30 11.3 -3.7
      comp=Z,0.8nm,0.7s,baz=17,slow=25,SNR=4.2
      comp=Z,6.4nm,0.9s
TGY   Tagaytay City    24.18 314  LR     LR      23 36 46.9
      comp=Z,102nm,18.6s,baz=222,slow=38
NWAO  Narrogin (SRO)   36.14 211  LR     LR      23 44 53.3
      comp=Z,450nm,20.1s,baz=72,slow=39
JNU   Nakatsue         36.35 349  LR     LR      23 43 21.3
      comp=Z,66nm,19.4s,baz=164,slow=36
CMAR  Chiang Mai Arr   44.33 300  P      P       23 29 41.3 +0.3
      comp=Z,1.1nm,0.5s,baz=115,slow=6.8,SNR=6.7
      comp=Z,1.1nm,0.5s
RPZ   Rata Peaks       49.97 149  LR     LR      23 51 47.5
      comp=Z,144nm,20.1s,baz=140,slow=36
SONM  Songino Array    57.65 335  P      P       23 31 21.3 +0.3
      comp=Z,0.3nm,0.3s,baz=157,slow=7.8,SNR=2.0
SONM                              LR     LR      23 55 15.0
      comp=Z,48nm,21.1s,baz=142,slow=35
      comp=Z,0.3nm,0.3s
PETK  Petropavlovsk-   57.86  13  LR     LR      23 51 10.0
      comp=Z,43nm,21.9s,baz=192,slow=31
MKAR  Makanchi Array   69.70 322  P      P       23 32 40.0 -0.5
MKAR  Makanchi Array   69.70 322  P      P       23 32 40.4  0.0
      comp=Z,0.6nm,0.4s,baz=116,slow=8.2,SNR=10.0
      comp=Z,0.6nm,0.4s
MAKZ  Makanchi         69.90 322  P      P       23 32 41.3 -0.4
MAKZ                              IAmb   IAmb    23 32 48.5
      comp=Z,5.6nm,1.1s
ZAA0  Zalesovo Array   71.86 330  P      P       23 32 54.0 +0.7
ZAA0                              IAmb   IAmb    23 33 10.3
      comp=Z,2.0nm,1.1s
ZALV  Zalesovo Beam    71.86 330  P      P       23 32 53.5 +0.1
ZALV  Zalesovo Beam    71.86 330  LR     LR      00 02 40.5
      comp=Z,24nm,21.9s,baz=110,slow=34
KURBB Kurchatov Arra   73.64 325  P      P       23 33 03.6 -0.5
      comp=Z,1.1nm,0.8s,baz=114,slow=5.4,SNR=9.9
      comp=Z,1.1nm,0.8s
VNDA  Vanda            75.81 175  P      P       23 33 16.1 -0.1
      comp=Z,0.6nm,0.7s,baz=39,slow=8.8,SNR=1.5
      comp=Z,0.6nm,0.7s
BVAR  Borovoye Array   79.23 325  P      P       23 33 35.5 -0.2
      comp=Z,1.5nm,0.7s,baz=108,slow=8.0,SNR=9.4
      comp=Z,1.5nm,0.7s
BRVK  Borovoye         79.30 325  P      P       23 33 35.6 -0.5
BRVK                              IAmb   IAmb    23 33 46.0
      comp=Z,2.8nm,0.8s
KDAK  Kodiak Island    81.14  30  LR     LR      00 05 59.2
      comp=Z,34nm,19.9s,baz=219,slow=33
MAW   Mawson           82.11 202  LR     LR      00 08 45.4
      comp=Z,79nm,18.2s,baz=70,slow=35
E23K  Chandalar        85.74  21  P      P       23 34 10.2 +0.7
ILAR  Eielson Array    85.86  24  P      P       23 34 08.1 -1.9
      comp=Z,1.0nm,0.8s,baz=250,slow=4.8,SNR=9.7
ILAR                              LR     LR      00 13 54.3
      comp=Z,18nm,18.1s,baz=179,slow=37
      comp=Z,1.0nm,0.8s
C23K  Itkillik River   85.97  19  P      P       23 34 11.0 +0.6
C23K                              IAmb   IAmb    23 34 18.8
      comp=Z,6.1nm,0.9s
QSPA  South Pole Qui   87.26 180  P      P       23 34 16.7 -0.4
QSPA  South Pole Qui   87.26 180  P      P       23 34 17.1  0.0
      comp=Z,3.8nm,1.0s,baz=259,slow=0.9,SNR=7.6
QSPA                              LR     LR      00 14 40.2
      comp=Z,96nm,18.3s,baz=12,slow=37
      comp=Z,3.8nm,1.0s
BMAR  Burnt Mountain   87.42  22  P      P       23 34 18.6 +0.9
I28M  Miner Creek      88.87  24  P      P       23 34 25.9 +1.2
I28M                              IAmb   IAmb    23 34 29.5
      comp=Z,3.5nm,1.2s
PB11  IPOC Station P  144.40 130  PKPdf  PKPbc   23 41 07.3 +0.9
CPUP  Villa Florida   147.30 153  PKPbc  PKPbc   23 41 15.3 +0.4
      comp=Z,1.1nm,1.0s,baz=157,slow=3.5,SNR=3.4
LPAZ  La Paz          147.55 126  PKPbc  PKPbc   23 41 16.8 +0.1
      comp=Z,4.2nm,1.0s,baz=276,slow=3.2,SNR=7.8
```

IDC 25 23:23:02.8±9.1**, 32°.11S**×**179°.96W, h0^{km}, mb3.8**/2**, mbtmp3.8**/2**, Error ellipse: s-maj=410.0km s-min=58.8km az=160.0, South of Kermadec Islands**

```
Code  Station Name       Δ°   AZ°     Phase ID           Time      Res
                                  Op     ISC          h  m  s    ISC
ASAR  Alice Springs    41.38 270  P      P       23 30 50.5 -0.5
      0.9nm,0.7s,baz=116,slow=8.0,SNR=6.3
      0.9nm,0.7s
WRA   Warramunga Arr   42.53 275  P      P       23 31 00.6 +0.3
      0.7nm,0.4s,baz=115,slow=8.1,SNR=2.8
      0.7nm,0.4s
FINES FINESS Array B  146.13 338  PKPbc  PKPdf   23 42 43.3 +0.1
      0.8nm,0.7s,baz=49,slow=1.6,SNR=7.9
```

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*NEIC **25** 23:30:30.7±1.6, 9°.3N±0°.1×126°.0E±0°.2, h100^{km}±8^{km}, mb4.5/12, Error ellipse: s-maj=26.2km s-min=14.8km az=79.0*

*IDC **25** 23:30:33.9±4.7, 9°.22N×126°.04E, h139^{km}±38^{km}, mb3.5/10, mbtmp3.9/11, MS3.3/2, Error ellipse: s-maj=96.6km s-min=14.4km az=67.0*

ISC 25 23:30:30.1±0.7**, 9°.37N**±0°.08×**126°.2E**±0°.2**, h100^{km}, n33, σ1^{s}14**/29**, mb4.0**/15**, Mindanao**

```
Code  Station Name       Δ°   AZ°     Phase ID           Time      Res
                                  Op     ISC          h  m  s    ISC
DAV   Davao City (W)    2.38 196  Pn     Pn      23 31 06.8 -0.8
DAV   Davao City (W)    2.38 196  P      Pn      23 31 12.0 +4.4
      132nm,0.3s,baz=93,slow=8.7,SNR=7.1
DAV                               S      Sn      23 31 38.9 +2.6
      122nm,0.4s,baz=270,slow=21,SNR=6.2
DAV                               LR     LR      23 32 19.7
      comp=Z,319nm,19.0s,baz=334,slow=49
KNRA  Kununurra        25.02 174  P      P       23 35 44.4 -0.5
KNRA                              IAmb   IAmb    23 36 01.6
      comp=Z,26nm,1.4s
FITZ  Fitzroy Crossi   27.30 181  P      P       23 36 05.3 -0.2
FITZ  Fitzroy Crossi   27.30 181  P      P       23 36 05.3 -0.2
      comp=Z,1.9nm,0.4s,baz=358,slow=13,SNR=5.6
      comp=Z,1.9nm,0.4s
WB0   Warramunga Arr   30.05 165         P       23 36 29.1 -0.8
WB0                               IAmb   IAmb    23 36 45.5
      comp=Z,8.6nm,1.2s
WRA   Warramunga Arr   30.21 165  P      P       23 36 29.1 -2.2
      comp=Z,0.6nm,0.9s,baz=344,slow=8.9,SNR=1.8
      comp=Z,0.6nm,0.9s
WR8   Warramunga Arr   30.26 164  P      P       23 36 30.6 -1.2
WR8                               IAmb   IAmb    23 36 35.1
      comp=Z,12nm,1.4s
ASAR  Alice Springs    33.68 167  P      P       23 37 00.3 -1.4
      comp=Z,0.4nm,0.4s,baz=349,slow=7.5,SNR=6.2
      comp=Z,0.4nm,0.4s
H11S3 WAKE ISLAND Hy   40.22  72  T      T       00 20 47.8
      baz=263,slow=70,SNR=24
H11S1 WAKE ISLAND Hy   40.24  72  T      T       00 20 57.1
      baz=263,slow=70,SNR=14
H11S2 WAKE ISLAND Hy   40.24  72  T      T       00 20 53.7
      baz=263,slow=70,SNR=25
BBOO  Buckleboo        42.98 168  P      P       23 38 19.1 -0.4
STKA  Stephens Creek   43.57 161  P      P       23 38 23.9 -0.3
STKA  Stephens Creek   43.57 161  P      P       23 38 23.6 -0.7
      comp=Z,0.7nm,0.2s,baz=344,slow=5.7,SNR=3.7
      comp=Z,0.7nm,0.2s
MKAR  Makanchi Array   52.71 323  P      P       23 39 34.5  0.0
MKAR  Makanchi Array   52.71 323  P      P       23 39 34.0 -0.5
      comp=Z,0.8nm,0.6s,baz=131,slow=8.2,SNR=12
      comp=Z,0.8nm,0.6s
MAKZ  Makanchi         52.91 323  P      P       23 39 35.1 -0.8
ZALV  Zalesovo Beam    55.39 332  P      P       23 39 52.3 -1.5
      comp=Z,0.4nm,0.4s,baz=127,slow=7.5,SNR=2.3
      comp=Z,0.4nm,0.4s
KURBB Kurchatov Arra   56.78 326  P      P       23 40 03.3 -0.4
      comp=Z,0.7nm,0.6s,baz=123,slow=6.7,SNR=6.6
      comp=Z,0.7nm,0.6s
KKAR  Karatay Array    58.85 315  P      P       23 40 17.9 -0.5
BVAR  Borovoye Array   62.38 326  P      P       23 40 42.3 +0.2
      comp=Z,0.8nm,0.6s,baz=121,slow=8.3,SNR=4.8
      comp=Z,0.8nm,0.6s
O18K  Koktuh Hills     76.21  31  P      P       23 42 09.3 +2.0
O18K                              IAmb   IAmb    23 42 18.5
      comp=Z,4.8nm,0.9s
CASY  Casey            76.33 186  P      P       23 42 08.5 +0.8
CASY                              IAmb   IAmb    23 42 44.9
      comp=Z,7.8nm,1.4s
IMAR  Indian Mountai   77.43  24  P      P       23 42 15.1 +1.1
BMAR  Burnt Mountain   81.11  23  P      P       23 42 36.0 +2.0
I28M  Miner Creek      83.14  25  P      P       23 42 46.6 +1.7
ARCES ARCESS Array B   85.02 340  P      P       23 42 54.2 +0.1
ARCES                             IAmb   IAmb    23 43 25.1
      comp=Z,17nm,1.4s
ARCES ARCESS Array B   85.02 340  P      P       23 42 54.5 +0.3
      comp=Z,1.4nm,0.6s,baz=84,slow=6.7,SNR=12
      comp=Z,1.4nm,0.6s
FIA1  FINESS Array S   86.65 332  P      P       23 43 01.9 -0.4
FINES FINESS Array B   86.66 332  P      P       23 43 01.8 -0.5
FINES FINESS Array B   86.66 332  P      P       23 43 02.0 -0.3
      comp=Z,0.6nm,0.5s,baz=94,slow=4.2,SNR=6.1
      comp=Z,0.6nm,0.5s
NOA   NORSAR Array B   93.54 334  LR     LR      00 28 05.1
      comp=Z,21nm,18.5s,baz=85,slow=37
```

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*IDC **25** 23:51:35.0±1.2, 29°.50S×178°.97W, h342^{km}±14^{km}, mb2.9/2, mbtmp3.9/4, Error ellipse: s-maj=40.6km s-min=33.1km az=147.0*

ISC 25 23:51:34.0±1.1**, 29°.5S**±0°.1×**178°.8W**±0°.2**, h350^{km}, n7, σ1^{s}89**/9**, Kermadec Islands**

```
Code  Station Name       Δ°   AZ°     Phase ID           Time      Res
                                  Op     ISC          h  m  s    ISC
RAO   Raoul Island      0.82  70  P      Pn      23 52 19.7 +0.5
      320nm,0.2s,baz=239,slow=21,SNR=5.1
RAO                               S      S       23 52 52.1 -3.2
      210nm,0.2s,baz=69,slow=21,SNR=1.5
URZ   Urewera           9.34 200  P      Pn      23 53 45.1 +1.1
      2.8nm,0.3s,baz=349,slow=16,SNR=11
URZ                               S      S       23 55 28.8 -1.5
      3.7nm,0.3s,baz=263,slow=21,SNR=9.8
DZM   Mont Dzumac      15.21 296  P      Pn      23 54 52.5 -1.0
      9.0nm,1.0s,baz=159,slow=18,SNR=1.3
ASAR  Alice Springs    42.46 266  P      P       23 58 56.1  0.0
      0.5nm,0.5s,baz=102,slow=7.3,SNR=8.5
      0.5nm,0.5s
WRA   Warramunga Arr   43.37 272  P      P       23 59 02.9 -0.5
      0.6nm,0.5s,baz=109,slow=8.3,SNR=3.2
      0.6nm,0.5s
FINES FINESS Array B  144.09 340  PKP    PKPab   00 10 27.0 +0.6
      0.5nm,0.4s,baz=45,slow=3.2,SNR=11
MMAI  Mount Meron Ar  150.63 286  PKPbc  PKiKP   00 10 48.2 +2.4
      0.3nm,0.3s,baz=95,slow=3.1,SNR=4.4
```

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*OMAN **25** 23:52:15.5±0.8, 26°.79N×54°.13E, h10^{km}, ml2.8/13, Error ellipse: s-maj=7.0km s-min=6.5km az=119.0*

*TEH **25** 23:52:18.8, 27°.96N×54°.57E, h10^{km}*

ISC 25 23:52:11.0±1.0**, 27°.04N**±0°.07×**53°.99E**±0°.07**, h10^{km}, n23, σ1^{s}06**/28**, Southern Iran**

```
Code  Station Name       Δ°   AZ°     Phase ID           Time      Res
                                  Op     ISC          h  m  s    ISC
LAR1  LAR               0.71  29  Pg     Pb      23 52 25.6 +0.1
JHRM  Jahrom            1.50 346  Pg     Pb      23 52 38.7 -0.3
GENO  Geno              1.98  79  Pg     Pb      23 52 47.4 +0.1
SHME  Shamm             2.17 117  P      Pn      23 52 48.0 +0.8
NAZ   Nazwa, Dubai      2.54 143  P      Pn      23 52 54.2 +1.8
MASF  Masafi            2.57 130  P      Pn      23 52 52.4 -0.3
ASUD  Al Ashush, Dub    2.70 153  P      Pn      23 52 56.2 +1.8
MDH   Madha             2.71 129  P      Pn      23 52 55.2 +0.6
DSBU  Dashti - Bushe    2.75 299  Pn     Pg      23 53 03.8 +0.1
UOSS  Minazif           2.89 136  P      Pn      23 52 57.7 +0.5
HATD  Hatta, Dubai      2.94 138  P      Pn      23 52 58.9 +1.1
ASHO  Ashiyiah          3.00 141  P      Pn      23 52 60.0 +1.3
      SNR=21
MZWR  Madinat Zayed     3.27 182  P      Pn      23 53 02.6 +0.3
MZWR                              S      Sn      23 53 40.5 -0.8
ALNE  Al Ain            3.38 151  P      Pn      23 53 05.0 +1.2
SOHO  SOHO              3.70 141  P      Pn      23 53 08.9 +0.6
ARQ   Araqi             4.35 148  P      Pn      23 53 18.2 +1.0
ARQ                               S      Sn      23 54 06.7 -1.2
HOQ   Hoqain            4.58 138  P      Pn      23 53 21.5 +1.1
HOQ                               S      Sn      23 54 11.8 -1.8
IRAM  Ramesheh          4.95 344  Pn     Pn      23 53 25.8 +0.1
BSY   Bisya             5.18 145  P      Pn      23 53 29.4 +0.7
BSY                               S      Sn      23 54 28.1 -0.5
SMDO  Samad             5.42 136  P      Pn      23 53 32.7 +0.8
      SNR=9.0
SMDO                              S      Sn      23 54 32.8 -1.7
WSAR  Wadi Sarin        5.66 131  P      Pn      23 53 36.7 +1.4
JMDO  Jabal Madar       5.97 140  P      Pn      23 53 40.8 +1.2
MHTO  MHTO              7.04 148  P      Pn      23 53 54.4 +0.1
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*IDC **26** 00:10:26.9±1.7, 24°.44N×36°.76E, h0^{km}, mb3.7/9, mbtmp3.7/13, ML3.4/4, MS2.8/1, Error ellipse: s-maj=31.6km s-min=20.1km az=23.0*

*SGS **26** 00:10:26.9, 24°.53N×36°.72E, h9^{km}, Ml3.0*

*HLW **26** 00:10:32.8, 24°.58N×36°.04E, h13^{km}±3^{km}, Md3.3, Ml3.3*

ISC 26 00:10:26.3±0.8**, 24°.48N**±0°.05×**36°.72E**±0°.03**, h10^{km}, n77, σ1^{s}97**/73**, mb3.6**/9**, Red Sea**

```
Code  Station Name       Δ°   AZ°     Phase ID           Time      Res
                                  Op     ISC          h  m  s    ISC
UMJS  Umm Lajj          0.92  36  P      Pn      00 10 43.2 -2.1
UMJS  Umm Lajj          0.92  36  S      Sn      00 10 55.6 -3.0
LNY07 LNY07             1.00  50  S      Sn      00 10 58.0 -2.8
LNY07 LNY07             1.00  50  P      Pn      00 10 44.8 -1.7
UMJ12 UMJ12             1.05  20  P      Pn      00 10 45.3 -1.7
LNY05 LNY05             1.05  57  P      Pn      00 10 45.5 -1.6
LNY13 LNY13             1.08  50  P      Pn      00 10 46.3 -1.2
LNY04 LNY04             1.15  47  P      Pn      00 10 46.9 -1.6
LNY08 LNY08             1.16  62  P      Pn      00 10 47.5 -1.3
YNBS  Yanbu` al Bahr    1.17  97  P      Pb      00 10 45.9 -2.6
LNY16 LNY16             1.18  43  P      Pn      00 10 47.1 -1.7
UMJ13 Umluj             1.19  31  P      Pn      00 10 47.2 -1.8
LNY06 LNY06             1.20  53  P      Pn      00 10 48.3 -1.0
UMJ11 UMJ11             1.21  16  P      Pn      00 10 47.4 -1.8
LNY02 LNY02             1.23  58  P      Pg      00 10 48.4 -1.4
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LNY12	LNY12	1.24	50	P	Pg	00 10 48.5	-1.5
LNY17	LNY17	1.24	52	P	Pg	00 10 48.8	-1.3
LNY15	LNY15	1.25	51	P	Pg	00 10 49.2	-1.0
LNY09	LNY09	1.25	43	P	Pg	00 10 48.6	-1.7
LNYS	LNYS	1.26	62	P	Pg	00 10 49.0	-1.5
LNY11	LNY11	1.27	49	P	Pg	00 10 48.8	-1.8
LNY10	LNY10	1.30	53	P	Pg	00 10 49.7	-1.6
LNY01	LNY01	1.34	57	P	Pg	00 10 50.3	-1.8
UMJ06	UMJ06	1.36	24	P	Pb	00 10 49.5	-2.3
LNY03	LNY03	1.36	49	P	Pg	00 10 50.4	-2.1
UMJ08	UMJ08	1.37	34	P	Pg	00 10 50.0	-2.6
UMJ02	UMJ02	1.37	26	P	Pg	00 10 49.9	-2.7
RYNBS	Yanbu	1.39	108	P	Pn	00 10 48.8	-2.9
UMJ07	UMJ07	1.40	27	P	Pb	00 10 50.3	-2.2
UMJ04	UMJ04	1.44	25	P	Pb	00 10 50.7	-2.5
FGALY	Al Ais	1.48	81	P	Pn	00 10 51.6	-1.3
UMJ05	UMJ05	1.54	13	P	Pb	00 10 51.9	-2.9
UMJ09	UMJ09	1.56	31	P	Pb	00 10 53.0	-2.2
HAGS	Hagol	1.58	267	P	Pn	00 10 51.1	-3.3
EWJHS	Al Wajh	1.67	358	P	Pn	00 10 53.3	-2.2
UMJ10	UMJ10	1.70	28	P	Pb	00 10 55.1	-2.6
TRAS	Al Qrash	1.77	71	P	Pb	00 10 56.4	-2.5
YOBS		1.85	93	P	Pn	00 10 57.0	-1.1
BADR	Badr	1.87	108	P	Pn	00 10 55.4	-2.9
OLAS	OLAS	1.94	25	P	Pb	00 10 58.5	-3.3
NSAFS	Ar Rayis	2.16	117	P	Pn	00 10 59.6	-2.8
NADB	Abo Dabab	2.19	293	P	Pn	00 11 00.4	-2.3
URD03	Al Ula	2.27	17	P	Pn	00 11 03.2	-0.8
KBR11	Shajwa	2.29	76	P	Pn	00 11 03.5	-0.6
KBR13	Birmah	2.32	56	P	Pn	00 11 03.9	-0.7
BRNS	Bernies	2.46	256	P	Pn	00 11 04.2	-2.3
URD04	Abu Rakah	2.63	11	P	Pn	00 11 08.1	-0.8
URD05	Al Faraah	2.74	4	P	Pn	00 11 09.7	-0.8
KBR08	Khaybar	2.79	63	P	Pn	00 11 11.0	0.0
RHT01	RHT01	2.82	94	P	Pn	00 11 10.8	-0.7
RHT04	RHT04	2.92	99	P	Pn	00 11 12.0	-0.9
URD06	Shuwaq	2.96	1	P	Pn	00 11 12.6	-0.8
RHT02	RHT02	3.07	89	P	Pn	00 11 14.9	0.0
KBR09	Khaybar	3.08	59	P	Pn	00 11 15.1	-0.1
RHT03	RHT03	3.16	94	P	Pn	00 11 15.9	-0.2
KBR02	Khaybar	3.28	76	P	Pn	00 11 17.8	0.0
RHT20	RHT20	3.58	110	P	Pn	00 11 20.6	-1.3
NAHD	NAHD	3.66	260	P	Pn	00 11 21.4	-1.7
MHDS	Al Mahd	3.76	102	P	Pn	00 11 23.6	-0.7
NNMR	New North Mara	3.87	260	P	Pn	00 11 24.5	-1.4
HHRG	Al Ghardaqah	3.94	314	P	Pn	00 11 23.4	-3.4
AWKL	West Kalabsha	4.05	256	P	Pn	00 11 26.9	-1.4
EIL	Elat	5.40	343	Pn	Pn	00 11 48.7	+1.8
	0.6nm,0.3s,baz=50,slow=10,SNR=5.0						
EIL				Lg	Lg	00 13 20.2	
	0.9nm,0.3s,baz=13,slow=22,SNR=4.9						
EIL				LR	LR	00 13 47.8	
	comp=Z,90nm,18.3s,baz=65,slow=37						
	3.2nm,0.7s						
ASF	Jabal al Asfar	7.66	1	Pn	Pn	00 12 20.8	+2.8
	1.1nm,0.3s,baz=198,slow=5.0,SNR=9.9						
ASF				Lg	Lg	00 14 21.1	
	0.2nm,0.3s,baz=58,slow=18,SNR=3.9						
	2.4nm,0.2s						
MMAI	Mount Meron Ar	8.58	353	Pn	Pn	00 12 31.5	+0.9
	0.9nm,0.3s,baz=157,slow=17,SNR=7.5						
	0.8nm,0.3s						
BRTR	Keskin Array B	15.42	351	Pn	P	00 14 09.2	+0.6
	0.1nm,0.3s,baz=180,slow=12,SNR=8.9						
	0.4nm,0.7s						
WSAR	Wadi Sarin	20.08	89	P	Pn	00 15 01.9	+0.1
	baz=270,slow=20,SNR=2.7						
KEST	Kesra	26.12	302	P	P	00 16 03.3	+2.8
	2.2nm,0.8s,baz=85,slow=12,SNR=3.6						
	2.2nm,0.8s						
AKASG	Malin Array Be	26.81	349	P	P	00 16 09.9	+3.4
	1.8nm,0.7s,baz=164,slow=9.6,SNR=8.9						
	1.8nm,0.7s						
ESDC	Sonseca Array	37.31	304	P	P	00 17 40.9	+2.1
	0.6nm,0.7s,baz=97,slow=8.0,SNR=8.2						
	0.6nm,0.7s						
FINES	FINESS Array B	37.66	352	P	P	00 17 42.6	+1.3
	1.0nm,0.9s,baz=198,slow=8.7,SNR=1.4						
	1.0nm,0.9s						
BVAR	Borovoye Array	38.14	33	P	P	00 17 47.4	+1.9
	0.5nm,0.6s,baz=232,slow=7.1,SNR=1.6						
	0.5nm,0.6s						
NB2	NORSAR Subarra	40.51	341	P	P	00 18 08.8	+3.5
	comp=Z,0.7nm,0.7s,baz=142,slow=8.6						
NOA	NORSAR Array B	40.51	341	P	P	00 18 08.6	+3.3
	comp=Z,0.4nm,0.8s,baz=138,slow=8.2,SNR=3.5						
	comp=Z,0.4nm,0.8s						
KURBB	Kurchatov Arra	41.39	40	P	P	00 18 14.8	+2.3
	comp=Z,0.9nm,0.6s,baz=251,slow=8.3,SNR=6.0						
	comp=Z,0.9nm,0.6s						
MKAR	Makanchi Array	42.47	47	P	P	00 18 23.9	+2.3
	comp=Z,1.3nm,0.6s,baz=250,slow=7.2,SNR=13						
	comp=Z,1.3nm,0.6s						
ZALV	Zalesovo Beam	46.20	38	P	P	00 18 52.4	+1.1
	comp=Z,0.3nm,0.3s,baz=232,slow=7.1,SNR=1.7						
	comp=Z,0.3nm,0.3s						

KRNET ***26*** *00:10:36.5±0.1, 42°.69N×78°.95E, h17^{km}, mb2.4*
SOME ***26*** *00:10:36.6, 42°.67N×78°.93E, h15^{km}*
NNC ***26*** *00:10:36.2±0.7, 42°.69N×78°.98E, h0^{km}, mb3.1, mpv2.9, Error ellipse: s-maj=4.8km s-min=2.0km az=158.0*

ISC 26 00:10:36.2±1.3**, 42°.67N**±0°.04×**78°.93E**±0°.04**, h7**^{km}±10^{km}**, n32, σ0^s.75**/60**, 18C-1D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	Przheval'sk	0.43	246	⇑*i*P	Pg	00 10 45.5	+0.8
PRZ				⇑*i*S	Sg	00 10 51.5	+1.1
UZB	Uzynbulak	0.49	8	P	Pg	00 10 45.5	-0.1
	12nm,0.1s						
UZB				S	Sg	00 10 52.5	+0.5
	57nm,0.1s						
UZB	Uzynbulak	0.49	8	*e*P	Pg	00 10 45.5	-0.1
UZB				*e*S	Sg	00 10 52.5	+0.5
SATY	Saty	0.55	316	P	Pg	00 10 47.0	+0.1
	4.2nm,0.1s						
SATY				S	Sg	00 10 55.0	+0.8
	96nm,0.1s						
SATY	Saty	0.55	316	*e*P	Pg	00 10 47.0	+0.1
SATY				*e*S	Sg	00 10 55.0	+0.8
SHLS	Shalkode	0.63	38	P	Pn	00 10 52.0	+0.3
	7.0nm,0.2s						
SHLS				S	Sn	00 11 03.5	+1.5
	120nm,0.2s						
SHLS	Shalkode	0.63	38	*e*P	Pn	00 10 52.0	+0.3
SHLS				*e*S	Sn	00 11 03.5	+1.5
SHLS	Shalkode	0.63	38	*e*P	Pn	00 10 52.0	+0.3
	7.0nm,0.2s						
SHLS				*e*S	Sn	00 11 03.5	+1.5
	120nm,0.2s						
PDGK	Podgornoye	0.78	31	⇑P	Pg	00 10 50.3	-0.9
	1.2nm,0.2s						
PDGK				⇑S	Sg	00 11 01.0	-0.4
	12nm,0.5s						
KPKS	Kokpek	0.82	347	P	Pg	00 10 51.4	-0.6
	0.6nm,0.2s						
KPKS				S	Sg	00 11 02.4	-0.3
	37nm,0.3s						
KPKS	Kokpek	0.82	347	*e*P	Pg	00 10 51.4	-0.6
KPKS				*e*S	Sg	00 11 02.4	-0.3
TARG	Taragay, Kyrgy	1.26	222	⇑*i*P	Pn	00 11 00.2	-0.4
TARG				⇑*i*S	Sn	00 11 17.6	-0.4
KDJ	Kajisay	1.41	248	⇑*i*P	Pb	00 11 02.5	-0.4
KDJ				⇑*i*S	Sb	00 11 21.5	+0.4
KOTS	Kotyrbulak	1.45	294	P	Pb	00 11 03.3	-0.4
	5.5nm,0.3s						
KOTS				S	Sg	00 11 22.8	-0.1
	13nm,0.1s						
KOTS	Kotyrbulak	1.45	294	*e*P	Pb	00 11 03.3	-0.4
KOTS				*e*S	Sg	00 11 22.8	-0.1
KOTS	Kotyrbulak	1.45	294	*e*P	Pb	00 11 03.3	-0.4
	5.5nm,0.3s						
KOTS				*e*S	Sg	00 11 22.8	-0.1
	13nm,0.1s						
BLB	Baldybastay	1.47	347	P	Pb	00 11 03.7	-0.3
	40nm,0.1s						
BLB				S	Sg	00 11 23.5	0.0
	13nm,0.2s						
KNOS	Konyrlen	1.70	6	P	Pb	00 11 07.7	-0.3
	7.2nm,0.1s						
KNOS				S	Sg	00 11 30.4	-0.5
	6.7nm,0.2s						
ARXS	Arharly	1.75	333	P	Pb	00 11 08.7	0.0
	4.8nm,0.3s						
ARXS				S	Sg	00 11 32.0	-0.3
	12nm,0.2s						
DJR	Jarkent	1.78	20	P	Pb	00 11 09.1	-0.1
	3.7nm,0.2s						
DJR				S	Sg	00 11 32.8	-0.6
	30nm,0.3s						
DJR	Jarkent	1.78	20	*e*P	Pb	00 11 09.1	-0.1
	3.7nm,0.2s						
DJR				*e*S	Sg	00 11 32.8	-0.6
	30nm,0.3s						
MTBS	Maitube	1.90	285	P	Pb	00 11 11.1	-0.2
	2.7nm,0.2s						
MTBS				S	Sg	00 11 36.3	-0.9
	17nm,0.5s						
MTBS	Maitube	1.90	285	*e*P	Pb	00 11 11.1	-0.2
	2.7nm,0.2s						
MTBS				*e*S	Sg	00 11 36.3	-0.9
	17nm,0.5s						
KTBS	Karatobe	1.95	303	Pg	Pb	00 11 12.3	+0.2
	7.7nm,0.3s						
KTBS				Lg	Lg	00 11 38.5	
	24nm,0.3s						
ULHL	Ulahol	2.04	259	⇑*i*P	Pb	00 11 13.1	-0.6
ULHL				⇑*i*S	Sb	00 11 39.3	0.0
KST	Kastek	2.22	281	Pg	Pb	00 11 16.6	-0.1
	1.8nm,0.3s						
KST				Lg	Lg	00 11 45.9	
	14nm,0.3s						
KST	Kastek	2.22	281	*e*P	Pb	00 11 16.6	-0.1
	1.8nm,0.3s						
KST				*e*S	Sb	00 11 45.9	+1.4
	14nm,0.3s						
BOOM	Boomskoye usch	2.22	266	⇑*i*P	Pb	00 11 15.9	-0.8
BOOM				⇑*i*S	Sb	00 11 43.6	-0.9
TKM2	Tokmak 2	2.47	277	⇑Pg	Pg	00 11 23.9	+0.3
	1.2nm,0.4s						
TKM2				⇓Lg	Lg	00 11 57.1	
	4.9nm,0.4s						
TKM2	Tokmak 2	2.47	277	⇑*i*P	Pb	00 11 19.1	-2.0
TKM2				⇑*i*S	Sb	00 11 49.5	-2.3
KRBS	Karabastau	2.60	294	Pg	Pb	00 11 24.0	+0.9
	1.8nm,0.3s						
KRBS				Lg	Lg	00 11 58.4	
	7.5nm,0.3s						
MK31	Makanchi Array	4.77	29	⇑Pn	Pn	00 11 49.3	+0.7
	0.1nm,0.3s,baz=90,slow=17,SNR=2.8						
MK31				⇑Sn	Sn	00 12 43.4	-0.7
	0.2nm,0.3s,baz=252,slow=35,SNR=5.0						
MK31				⇑Lg	Lg	00 13 05.6	
	0.2nm,0.3s,baz=208,slow=22,SNR=3.9						

NEIC ***26*** *00:28:35.7±2.0, 18°.9N±0°.3×69°.49W±0°.06, h86^{km}±21^{km}, ML2.6/20, Md3.8/8(RSPR), Error ellipse: s-maj=47.1km s-min=5.2km az=186.0*
SDD ***26*** *00:28:36.5±2.6, 18°.76N×69°.42W, h96^{km}±11^{km}, MD3.3, ML2.8, MW2.9*
OSPL ***26*** *00:28:37.2±2.1, 18°.88N×69°.47W, h78^{km}±17^{km}, ML2.7*
RSPR ***26*** *00:28:37.2, 19°.55N×68°.93W, h142^{km}±10^{km}, MD3.8/8*

ISC 26 00:28:35.5±1.2**, 18°.85N**±0°.04×**69°.49W**±0°.02**, h92**^{km}±6^{km}**, n60, σ1^s.53**/83**, 29C-4D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATOM	Hato Mayor del	0.12	121	⇑*e*Pg	Pn	00 28 48.1	-0.5
HATOM				⇑*e*Sg	Sn	00 28 57.6	-0.6
HATOM				IAML		00 28 58.3	
	comp=N,706nm,0.2s						
DR12	Loma Pena Alta	0.12	121	Pn	Pn	00 28 48.0	-0.7
DR12					Sn	00 28 57.7	-0.7
MIDR	Miches	0.43	72	⇑*e*Pg	Pn	00 28 50.0	0.0
MIDR				⇑*e*Sg	Sn	00 29 01.8	+1.0
MIDR				IAML		00 29 02.9	
	comp=N,329nm,0.2s						
SMDR	Samana, DR	0.52	33	⇑*e*Pg	Pn	00 28 50.8	+0.1
SMDR				⇑*e*Sg	Sn	00 29 03.9	+2.0
SMDR				IAML		00 29 07.1	
	comp=N,250nm,0.3s						
SDD	Santo Domingo	0.56	226	Pn	Pn	00 28 50.2	-0.7
SDD				Sn	Sn	00 29 01.3	-1.1
SDD				IAML		00 29 01.9	
	comp=E,208nm,0.2s						
SDD	Santo Domingo	0.56	226	⇓*e*Pg	Pn	00 28 50.3	-0.7
SDD				⇑*e*		00 29 01.3	
SDD				⇑*e*Sg	Sn	00 29 01.3	-1.1
SDD				IAML		00 29 02.4	
	comp=N,27nm,0.1s						
SDD	Santo Domingo	0.56	226	*i* P	Pn	00 28 50.3	-0.7
SDD				*e*S	Sn	00 29 01.4	-1.1
NADR	Nagua	0.61	325	⇑*e*Sg	Sn	00 29 06.0	+2.8
NADR				IAML		00 29 07.6	
	comp=N,613nm,0.2s						
LOSC1	San Cristbal	0.73	233	*i* P	Pn	00 29 04.7	+12
LOSC1				*e*S	Sn	00 29 16.9	+12
HIDR	Higuey Centro	0.77	109	⇑*e*Pg	Pn	00 28 51.5	-1.5
HIDR				⇑*e*Sg	Sn	00 29 05.9	0.0
HIDR				IAML		00 29 07.2	
	comp=N,487nm,0.2s						
CADR	Cabrera	0.92	332	⇑*e*Pg	Pn	00 28 54.6	+0.1
CADR				⇑*e*Sg	Sn	00 29 10.8	+2.1
CADR				IAML		00 29 11.3	
	comp=N,276nm,0.3s						
BANI	BANI	0.94	241	Pn	Pn	00 28 54.9	0.0
BANI				Sn	Sn	00 29 09.8	+0.4
BANI	BANI	0.94	241	⇑*e*Pg	Pn	00 28 55.7	+0.8
BANI				IAML		00 29 13.8	
	comp=N,386nm,0.1s						
ABDR	Alto Bandera	1.08	268	⇑*e*Pg	Pn	00 28 57.0	+0.3
ABDR				⇑*e*Sg	Sn	00 29 13.4	+0.9
ABDR				IAML		00 29 14.8	
	comp=N,154nm,0.2s						
SC01	Santiago de lo	1.31	296	*i* P	Pn	00 28 57.9	-1.1
SDDR	Presa de Saban	1.71	275	Pn	Pn	00 29 04.3	+0.2
SDDR				Sn	Sn	00 29 28.1	+2.3
SDDR	Presa de Saban	1.71	275	⇑*e*Pg	Pn	00 29 05.9	+1.7
SDDR				IAML		00 29 30.5	
	comp=N,26nm,0.6s						
SDDR	Presa de Saban	1.71	275	*i* P	Pn	00 29 04.5	+0.4
SDDR				IAML		00 29 34.5	
	comp=Z,14nm,0.5s						
PODR	Polo	1.83	249	⇑*e*Pg	Pn	00 29 07.3	+1.4
PODR				⇓*e*Sg	Sn	00 29 28.8	-0.1
PODR				IAML		00 29 36.6	
	comp=N,21nm,0.5s						
PODR	Polo	1.83	249	*i* P	Pn	00 29 06.2	+0.3
PODR				*e*S	Sn	00 29 28.8	-0.1
LODU1	El Espartillar	1.95	256	*i* P	Pn	00 29 08.7	+1.5
IDE	Isla Desecheo	1.96	103		Pn	00 29 07.3	0.0
IDE					Sn	00 29 33.6	+2.0
IDE	Isla Desecheo	1.96	103	⇑*e*P	Pn	00 29 07.3	0.0
IDE	Isla Desecheo	1.96	103	*e*S	Sn	00 29 33.6	+2.0
LOVI	El Cajuil, Ovi	2.07	240	*i* P	Pn	00 29 08.2	-0.6
LOVI				*e*S	Sn	00 29 32.0	-2.1
LOVI				IAML		00 29 34.4	
	comp=Z,61nm,0.7s						
LOBH	Bahia de las A	2.27	245	*i* P	Pn	00 29 11.7	+0.3
LOBH				*e*S	Sn	00 29 38.4	-0.3
LOBH				IAML		00 29 43.5	
	comp=Z,27nm,0.6s						
AGPR	Aguadilla, PR	2.28	99	Pn	Pn	00 29 11.3	-0.2
AGPR				IAML		00 29 49.5	
	comp=E,43nm,0.8s						
AGPR	Aguadilla, PR	2.28	99	⇓*e*P	Pn	00 29 12.1	+0.6
AGPR	Aguadilla, PR	2.28	99	*e*S	Sn	00 29 40.2	+1.1
AGPR	Aguadilla, PR	2.28	99	*i* P	Pn	00 29 11.6	+0.1
AGPR				IAML		00 29 54.5	
	comp=Z,46nm,1.3s						
LSP	Las Mesas	2.37	106		Pn	00 29 13.6	+0.8
LSP					Sn	00 29 41.5	+0.2
LSP	Las Mesas	2.37	106	⇑*e*P	Pn	00 29 13.6	+0.8
LSP	Las Mesas	2.37	106	*e*S	Sn	00 29 41.5	+0.2
CRPR	Cabo Rojo, PR	2.41	110	Pn	Pn	00 29 16.2	+3.0
CRPR				Sn	Sn	00 29 45.3	+3.3
CRPR				IAML		00 30 53.6	
	comp=N,17nm,1.9s						
CRPR	Cabo Rojo, PR	2.41	110	⇑*e*P	Pn	00 29 15.7	+2.6
CRPR	Cabo Rojo, PR	2.41	110	*e*S	Sn	00 29 45.1	+3.0
CRPR	Cabo Rojo, PR	2.41	110	*i* P	Pn	00 29 14.3	+1.1
CRPR				IAML		00 29 51.5	
	comp=Z,30nm,1.6s						
MLPR	Magueyes Islan	2.48	110	⇓*e*P	Pn	00 29 16.3	+2.1
MLPR	Magueyes Islan	2.48	110	*e*S	Sn	00 29 47.3	+3.5
MLPR	Magueyes Islan	2.48	110	⇑*e*Pg	Pn	00 29 13.2	-1.0
AOPR	Arecibo Observ	2.64	100	Pn	Pn	00 29 15.6	-0.7
AOPR				Sn	Sn	00 29 46.0	-1.6
AOPR	Arecibo Observ	2.64	100	⇑*e*P	Pn	00 29 17.0	+0.7
AOPR	Arecibo Observ	2.64	100	*e*S	Sn	00 29 46.7	-1.0
UUPR	Utuado, UPR, P	2.69	102	Pn	Pn	00 29 16.4	-0.6
UUPR				Sn	Sn	00 29 49.8	+1.0
UUPR	Utuado, UPR, P	2.69	102	⇑*e*P	Pn	00 29 17.6	+0.6
UUPR	Utuado, UPR, P	2.69	102	*e*S	Sn	00 29 50.2	+1.4
OBIP	Obispado Ponce	2.85	106	Pn	Pn	00 29 22.0	+2.9
OBIP				IAML		00 30 36.9	
	comp=N,17nm,2.2s						
CELP	Cerrillos	2.86	105	Pn	Pn	00 29 19.1	-0.2
CELP				IAML		00 30 00.9	
	comp=N,18nm,0.9s						
CELP				IAML		00 30 11.3	
	comp=E,13nm,1.1s						
CELP	Cerrillos	2.86	105	⇑*e*P	Pn	00 29 20.4	+1.0
CELP	Cerrillos	2.86	105	*e*S	Sn	00 29 53.8	+0.7
ECPR	Experimental S	3.01	100	⇑*e*P	Pn	00 29 21.0	-0.2
ECPR	Experimental S	3.01	100	*e*S	Sn	00 29 53.6	-2.9
GRTK	Grand Turk	3.07	330	⇑*e*Sg	Sn	00 29 56.2	-1.6
GRTK				IAML		00 30 28.3	
	comp=N,36nm,3.4s						
GRTK	Grand Turk	3.07	330	*i* P	Pn	00 29 21.4	-0.6
GRTK				*e*S	Sn	00 29 55.5	-2.4
GRTK				IAML		00 29 57.7	
	comp=Z,33nm,1.2s						
PDPR	Patillas Dam,	3.39	104	Pn	Pn	00 29 26.6	+0.2
PDPR				Sn	Sn	00 30 01.8	-3.8
PDPR				IAML		00 30 10.5	
	comp=N,12nm,0.1s						
PDPR				IAML		00 30 12.9	
	comp=E,8.4nm,0.4s						
PDPR	Patillas Dam,	3.39	104	⇑*e*P	Pn	00 29 25.8	-0.6
PDPR	Patillas Dam,	3.39	104	*e*S	Sn	00 30 04.7	-1.0
HUMP	Col San Antoni	3.52	101	Pn	Pn	00 29 26.4	-1.7
HUMP				Sn	Sn	00 30 05.2	-3.7
HUMP				IAML		00 30 13.3	
	comp=N,9.9nm,0.2s						
HUMP				IAML		00 30 18.0	
	comp=E,16nm,0.2s						
HUMP	Col San Antoni	3.52	101	⇑*e*P	Pn	00 29 27.7	-0.4
HUMP	Col San Antoni	3.52	101	*e*S	Sn	00 30 06.8	-2.1

DJA 26 00:29:08.7±1.8**, 2°S**±4°×**12°3E**±°**, h26**^{km}±18^{km}**, M3.1**/6**, mb2.0**/1**, MLv3.7**/6**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	Luwuk	1.04	3	P	Pn	00 29 26.2	-1.5
LUWI				S	Sb	00 29 41.6	+0.2
APSI	Ampana	1.58	318	P	Pn	00 29 35.5	+0.4
TTSI	Tana Toraja	3.04	252	P	Pn	00 29 54.8	-0.3
TTSI				S	Sn	00 30 30.1	-0.6
SPSI	Sidrap Palu	3.48	238	P	Pn	00 30 02.4	+1.2
SPSI				S	Sn	00 30 42.9	+1.4
MPSI	Mapaga	3.70	311	P	Pn	00 30 05.0	+0.7
LBMI	Labuha	5.00	73	P	Pn	00 30 22.1	-0.1

IDC ***26*** *00:29:50.5±1.6, 43°.57N×127°.08W, h0^{km}, mb3.4/5, mbtmp3.6/11, ML3.4/5, MS3.2/18, Error ellipse: s-maj=27.2km s-min=13.1km az=51.0*
NEIC ***26*** *00:29:51.3±2.2, 43°.37N±0°.07×127°.2W±0°.1, h10^{km}±2^{km}, mb4.1/51, ML3.2/84, Error ellipse: s-maj=14.5km s-min=10.7km az=242.0*

ISC 26 00:29:51.6±1.0**, 43°.40N**±0°.09×**127°.2W**±0°.1**, h14**^{km}**, n164, σ1^s.10**/146**, mb4.1**/25**, MS3.2**/12**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEBM	Edson Butte	2.14	103		Pn	00 30 25.8	-1.2
KEBM				IAML		00 30 57.6	
	comp=N,194nm,0.7s						
KEBM				IAML		00 31 00.1	
	comp=E,204nm,0.7s						
J01E	Myrtle Point	2.37	95	Pn	Pn	00 30 28.8	-1.3
J01E				IAML		00 31 04.2	
	comp=N,107nm,0.3s						
J01E				IAML		00 31 05.6	
	comp=E,93nm,0.6s						
KBO	Bosley Butte	2.47	118	Pn	Pn	00 30 30.1	-1.4
I02E	Swisshome, OR	2.50	72	Pn	Pn	00 30 31.1	-0.9
I02E				IAML		00 30 48.4	
	comp=E,80nm,0.7s						
K02D	Willamette Mer	2.66	104	Pn	Pn	00 30 32.7	-1.4
I03D	Drain, OR	2.79	83	Pn	Pn	00 30 35.1	-0.7
I03D				IAML		00 30 54.8	
	comp=E,54nm,0.7s						
I03D				IAML		00 31 14.7	
	comp=N,55nm,0.8s						
KSXB	Camp Six Broad	2.89	122	Pn	Pn	00 30 36.3	-1.0
L02F	Cave Junction	2.94	115	Pn	Pn	00 30 37.6	-0.3
COR	Corvallis	3.03	66	Pn	Pn	00 30 38.5	-0.5
COR				IAML		00 30 59.1	
	comp=N,57nm,0.6s						
COR				IAML		00 31 03.2	
	comp=N,64nm,0.9s						
HEBO	Mount Hebo	3.05	52	Pn	Pn	00 30 38.6	-0.8
HEBO				IAML		00 31 20.1	
	comp=E,126nm,0.5s						
HEBO				IAML		00 31 20.7	
	comp=N,118nm,1.1s						
KRMB	Red Mountain	3.06	127	Pn	Pn	00 30 39.1	-0.5
BUCK	Buck Mountain	3.13	74	Pn	Pn	00 30 40.5	0.0
BUCK				IAML		00 31 24.6	
	comp=E,45nm,0.6s						
BUCK				IAML		00 31 29.7	
	comp=N,50nm,1.4s						
BBOR	Butler Butte	3.32	97	Pn	Pn	00 30 43.2	-0.1
BBOR				IAML		00 31 30.4	
	comp=N,39nm,0.7s						
BBOR				IAML		00 31 34.0	
	comp=E,58nm,0.6s						
G03D	McMinnville, O	3.33	56	Pn	Pn	00 30 42.8	-0.5
G03D				IAML		00 31 29.9	
	comp=E,122nm,0.7s						
H04D	Lebanon	3.39	69	Pn	Pn	00 30 44.3	+0.3
H04D				IAML		00 31 08.6	
	comp=N,83nm,0.6s						
H04D				IAML		00 31 08.9	
	comp=E,103nm,0.7s						
F03A	Seaside	3.61	44	Pn	Pn	00 30 46.6	-0.4
YBH	Yreka Blue Hor	3.69	115	Pn	Pn	00 30 49.4	+1.1
YBH	Yreka Blue Hor	3.69	115	Pn	Pn	00 30 50.1	+1.9
	comp=E,0.1nm,0.3s,baz=311,slow=9.3,SNR=45						
YBH				Sn	Sn	00 31 27.5	-4.1
	baz=179,slow=12,SNR=3.1						
J04A	Umpqua Nationa	3.69	91	Pn	Pn	00 30 49.4	+0.9
L04D	Klamath Falls	3.77	107	Pn	Pn	00 30 50.4	+1.0
L04D				IAML		00 31 44.3	
	comp=E,39nm,1.2s						
H04A	Detroit Lake	3.81	69	Pn	Pn	00 30 50.5	+0.5
H04A				IAML		00 31 16.2	
	comp=N,61nm,0.7s						
H04A				IAML		00 31 22.2	
	comp=E,42nm,0.5s						
G04A	Mulino	3.82	60	Pn	Pn	00 30 50.8	+0.8
RADR	Rader Ridge	3.85	37	Pn	Pn	00 30 49.9	-0.6
F04D	Rainier, OR	3.99	46	Pn	Pn	00 30 52.5	+0.1
K04D	Chiloquin, OR	4.04	99	Pn	Pn	00 30 53.4	+0.1
K04D				IAML		00 32 03.5	
	comp=E,58nm,0.9s						
E03A	Lebam	4.05	38	Pn	Pn	00 30 52.7	-0.5
I05D	Terrebonne, OR	4.32	75		Pn	00 30 57.5	+0.6
I05D				IAML		00 31 30.2	
	comp=N,22nm,0.8s						
I05D				IAML		00 32 05.2	
	comp=E,25nm,3.3s						
J05D	Fort Rock, OR	4.33	90	Pn	Pn	00 30 57.6	+0.5
HOOD	Mount Hood Mea	4.39	62	Pn	Pn	00 30 59.1	+1.1
HOOD				IAML		00 31 58.2	
	comp=N,51nm,0.9s						
WISH	Wishkah	4.42	32	Pn	Pn	00 30 57.8	-0.5
WISH				IAML		00 32 14.3	
	comp=E,46nm,0.9s						
PINE	Pine Mountain	4.54	83	Pn	Pn	00 31 00.6	+0.6
PINE				IAML		00 31 32.5	
	comp=E,17nm,0.7s						
G05A	Wamic	4.58	64	Pn	Pn	00 31 01.3	+0.8
G05A				IAML		00 31 36.8	
	comp=N,32nm,1.0s						
G05A				IAML		00 31 37.7	

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             comp=E,30nm,0.6s
K05A  Summer Lake        4.64  96  Pn     Pn     00 31 02.4 +0.9
K05A                               IAML          00 33 09.9
             comp=E,39nm,1.2s
K05A                               IAML          00 33 52.5
             comp=N,14nm,4.9s
C03A  Quillayute Air     4.90  21  Pn     Pn     00 31 04.7 -0.1
G06A  Carlson Farm,      5.03  66  Pn     Pn     00 31 07.1 +0.4
G06A                               IAML          00 31 48.1
             comp=E,11nm,1.7s
G06A                               IAML          00 32 26.7
             comp=N,10.0nm,2.7s
LON   Longmire           5.06  47  Pn     Pn     00 31 07.9 +0.8
LON                                IAML          00 32 11.3
             comp=E,26nm,0.5s
HOPS  Hopland Field      5.38 144  Pn     Pn     00 31 12.4 +1.0
HOPS                               IAML          00 33 55.4
             comp=N,19nm,1.8s
HOPS                               IAML          00 34 31.3
             comp=E,27nm,2.7s
OZB   Mount Ozzard       5.68  11  Pn     Pn     00 31 14.7 -0.9
F07A  Phinny Hill Vi     5.73  62  Pn     Pn     00 31 17.6 +1.3
CLRS  Cowichan Lake      5.81  20  Pn     Pn     00 31 16.6 -0.7
MXC   Moxie City         5.82  55  Pn     Pn     00 31 18.7 +1.2
LTY   Liberty            5.99  48  Pn     Pn     00 31 21.1 +1.3
E07A  Sunnyside          6.07  56  Pn     Pn     00 31 22.1 +1.2
G08A  Pilot Rock         6.18  69  Pn     Pn     00 31 23.4 +0.9
HAWA  Hanford            6.19  58  Pn     Pn     00 31 23.7 +1.1
J08A  Circle Bar Ran     6.33  87  Pn     Pn     00 31 26.2 +1.5
WVOR  Wild Horse Val     6.34  96  Pn     Pn     00 31 24.9 +0.2
WAH2  Wahluke Slope      6.34  55  Pn     Pn     00 31 26.4 +1.8
E08A  Dider Farm, El     6.53  59  Pn     Pn     00 31 27.9 +0.8
LNOR  Lincton Mounta     6.80  66  Pn     Pn     00 31 31.1 +0.1
D08A  Wollman Farm,      6.87  55  Pn     Pn     00 31 33.0 +1.0
BMO   Blue Mountains     7.24  75  Pn     Pn     00 31 37.6 +0.5
HOLB  Holberg            7.27 355  Pn     Pn     00 31 38.0 +0.5
B08A  Colville Reser     7.38  45  Pn     Pn     00 31 38.5 -0.4
C09A  Chrisman Ranch     7.63  52  Pn     Pn     00 31 42.5 +0.2
LLLB  Lillooet           8.06  25  Pn     Pn     00 31 48.5 +0.2
PLID  Pearl Lake         8.19  74  Pn     Pn     00 31 51.0 +0.8
NVAR  Mina Array Bea     8.35 124  Pn     Pn     00 31 55.0 +2.7
             comp=E,0.2nm,0.3s,baz=299,slow=12,SNR=4.9
NVAR                               LR     LR     00 34 58.0
             comp=E,27nm,19.7s,baz=188,slow=36
             comp=E,0.8nm,0.7s
NEW   Newport            8.53  52  Pn     Pn     00 31 55.8 +1.1
NEW   Newport            8.53  52  Pn     Pn     00 31 55.2 +0.5
             comp=E,7.6nm,0.4s,baz=250,slow=12,SNR=21
NEW                                LR     LR     00 35 15.3
             comp=E,216nm,20.3s,baz=252,slow=39
BBB   Bella Bella        8.81 356  Pn     Pn     00 31 57.5 -0.9
             comp=E,0.5nm,0.3s,baz=206,slow=20,SNR=4.5
             comp=E,13nm,0.8s
ELK   Elko               9.26 103  Pn     Pn     00 32 07.9 +3.0
             comp=E,0.1nm,0.3s,baz=299,slow=14,SNR=6.4
ELK                                LR     LR     00 36 00.9
             comp=E,64nm,20.6s,baz=289,slow=40
             comp=E,1.0nm,0.6s
MSO   Missoula           9.96  65  Pn     Pn     00 32 15.7 +1.4
JTMT  Jette             10.02  60  Pn     Pn     00 32 16.5 +1.2
BPMT  Black Pine Rid    10.19  68  Pn     Pn     00 32 18.8 +1.1
MCMT  McKenzie Canyo    10.40  77  Pn     Pn     00 32 21.1 +0.6
DLMT  Dillon            10.61  74  Pn     Pn     00 32 24.3 +1.0
OVMT  Ovando            10.64  65  Pn     Pn     00 32 24.8 +1.1
LRM   Limekiln Ridge    10.77  72  Pn     Pn     00 32 25.1 -0.4
BGU   Big Grassy Mou    10.78  98  Pn     Pn     00 32 28.4 +2.7
CCAC  Calif City Air    10.86 136  Pn     Pn     00 32 27.5 +0.8
LYMT  Lyon Mountain     11.09  66  Pn     Pn     00 32 29.9 -0.1
BOZ   Bozeman (W)       11.31  73  Pn     Pn     00 32 33.3 +0.4
YHB   Horse Butte       11.57  78  Pn     Pn     00 32 38.8 +2.3
YHL   Hebgen Lake       11.58  77  Pn     Pn     00 32 39.2 +2.5
TPAW  Teton Pass        11.79  84  Pn     Pn     00 32 41.9 +2.3
YHH   Holmes Hill       11.82  78  Pn     Pn     00 32 41.2 +1.3
LOHW  Long Hollow       12.03  83  Pn     Pn     00 32 43.3 +0.5
PFO   Pinyon Flats O    12.87 136  LR     LR     00 37 45.8
             comp=E,126nm,18.2s,baz=260,slow=37
PD31  Pinedale Array    12.89  87  Pn     Pn     00 32 56.8 +2.2
PDAR  Pinedale Array    12.89  87         Pn     00 32 56.1 +1.5
PDAR  Pinedale Array    12.89  87  Pn     Pn     00 32 57.8 +3.2
             comp=E,0.1nm,0.3s,baz=277,slow=12,SNR=17
PDAR                               LR     LR     00 38 18.8
             comp=E,80nm,20.6s,baz=262,slow=40
             comp=E,2.5nm,1.0s
P18A  Preston Nutter    13.23 101  Pn     Pn     00 33 01.0 +1.7
BLYC  Blythe            13.79 130  Pn     Pn     00 33 07.6 +1.0
O20A  White River Ci    14.49  97  Pn     Pn     00 33 17.0 +0.5
WUAZ  Wupatki           14.50 118  Pn     Pn     00 33 16.6  0.0
PV22  Blue Mesa, Par    14.70 103  Pn     Pn     00 33 20.4 +1.1
X16A  Lo Mia Camp, P    15.16 121  Pn     Pn     00 33 25.0 -0.4
LAO   LASA Array        15.16  70  Pn     Pn     00 33 25.9 +0.7
LAO                                IAmb   IAmb   00 33 35.0
             comp=Z,14nm,1.2s
DLBC  Dease Lake        15.16 354  LR     LR     00 38 34.6
             comp=Z,6.0nm,18.5s,baz=168,slow=35
X18A  Snowflake         16.03 118  Pn     Pn     00 33 36.3 -0.5
X18A                               IAmb   IAmb   00 33 47.0
             comp=Z,15nm,1.4s
ISCO  Idaho Springs     16.51  95  Pn     Pn     00 33 43.4 +0.4
Q24A  Divide            17.14  97  Pn     Pn     00 33 50.4 -0.6
Q24A                               IAmb   IAmb   00 33 57.9
             comp=Z,8.2nm,0.9s
SDCO  Great Sand Dun    17.38 102  P      P      00 33 55.1 -0.2
ANMO  Albuquerque       18.11 111  P      P      00 34 05.0 +1.8
             comp=Z,0.1nm,0.3s,baz=9.6,slow=10,SNR=4.7
ANMO                               LR     LR     00 40 30.1
             comp=Z,24nm,18.3s,baz=24,slow=35
             comp=Z,1.8nm,0.8s
O30N  Mendenhall        18.21 346  P      P      00 34 04.6 +0.6
319A  Douglas           18.56 124  P      P      00 34 08.1  0.0
319A                               IAmb   IAmb   00 34 22.5
             comp=Z,13nm,1.5s
WAX   Waxell Ridge      19.53 336  P      P      00 34 18.1 -0.4
WAX                                IAmb   IAmb   00 34 22.4
             comp=Z,18nm,1.2s
BARN  Barnard Glacie    19.70 339  P      P      00 34 20.2 -0.3
FFC   Flin Flon         19.90  46  P      P      00 34 23.1 +0.6
FFC                                IAmb   IAmb   00 34 25.3
             comp=Z,8.3nm,0.8s
K30B  Basset            20.12  83  P      Pn     00 34 27.2 +0.3
YKA   Yellowknife Ar    20.50  17  P      P      00 34 28.3 -0.5
             comp=Z,0.6nm,0.8s,baz=219,slow=10,SNR=5.8
             comp=Z,0.6nm,0.8s
KLU   Klutina           21.28 335  P      P      00 34 36.7 -0.7
K29M  Barlow Dome       21.33 347  P      P      00 34 37.5 -0.4
KDAK  Kodiak Island     21.44 321  LR     LR     00 40 47.0
             comp=Z,68nm,20.1s,baz=108,slow=31
BCAR  Beaver Creek A    21.45 342  P      P      00 34 39.2 -0.1
L27K  Beaver Creek,     21.46 342  P      P      00 34 39.6 +0.3
L26K  Log Cabin Wild    21.79 340  P      P      00 34 43.2 +0.3
DAWY  Dawson            21.85 346  P      P      00 34 43.8 +0.2
F33A  5 Mile Ranch,     22.04  73  P      P      00 34 47.4 +1.7
F33A                               IAmb   IAmb   00 34 52.4
             comp=Z,14nm,1.3s
ECSD  EROS Data Cent    22.08  79  P      P      00 34 47.5 +1.3
ECSD                               IAmb   IAmb   00 34 49.7
             comp=Z,10nm,0.9s
AGMN  Agassiz Nation    22.26  66  P      P      00 34 48.5 +0.6
K27K  Chicken           22.36 343  P      P      00 34 49.0 +0.1
ULM   Lac du Bonnet     22.36  61  P      P      00 34 48.1 -1.0
             comp=Z,1.4nm,0.5s,baz=238,slow=9.0,SNR=3.7
ULM                                LR     LR     00 43 50.0
             comp=Z,88nm,21.2s,baz=248,slow=38
             comp=Z,1.4nm,0.5s
DHY   Denali Highway    22.93 336  P      P      00 34 54.5 -0.7
DHY                                IAmb   IAmb   00 34 57.3
             comp=Z,7.1nm,1.0s
CROK  Carrier           23.33  97  P      P      00 35 01.1 +1.8
N35A  Tabor             23.45  85  P      P      00 35 02.5 +2.1
TX31  Lajitas Ar. Si    23.46 119  P      P      00 35 01.4 +0.7
TX31                               IAmb   IAmb   00 35 06.1
             comp=Z,4.1nm,1.2s
TXAR  Lajitas Array     23.46 119  P      P      00 35 01.9 +1.1
TXAR  Lajitas Array     23.46 119  P      P      00 35 02.6 +1.9
             comp=Z,0.8nm,0.8s,baz=291,slow=7.5,SNR=9.8
             comp=Z,0.8nm,0.8s
WMOK  Wichita Mounta    23.59 102  P      P      00 35 03.9 +2.0
WMOK                               IAmb   IAmb   00 35 07.6
             comp=Z,7.6nm,1.0s
I26K  Coal Creek Min    23.70 343  P      P      00 35 02.2 -0.5
LPIG  La Paz            23.73 139  LR     LR     00 44 09.9
             comp=Z,47nm,19.6s,baz=273,slow=36
IL31                    24.13 339  P      P      00 35 06.0 -0.6
IL31                               IAmb   IAmb   00 35 13.8
             comp=Z,2.3nm,0.7s
ILAR  Eielson Array     24.13 339  P      P      00 35 06.7  0.0
             comp=Z,1.6nm,0.8s,baz=150,slow=9.1,SNR=17
ILAR                               LR     LR     00 42 54.8
             comp=Z,56nm,21.1s,baz=118,slow=33
             comp=Z,1.6nm,0.8s
WRH   Wood River Hil    24.21 338  P      P      00 35 07.0 -0.4
WRH                                IAmb   IAmb   00 35 09.5
             comp=Z,4.7nm,1.2s
G29M  Pine Creek        24.29 350  P      P      00 35 07.8 -0.4
G29M                               IAmb   IAmb   00 35 10.2
             comp=Z,6.4nm,1.1s
WTFS  Witchita Falls    24.31 104  P      P      00 35 09.1 +0.4
I37A  Lemond, Waseca    24.32  77  P      P      00 35 08.4 -0.3
BPAW  Bear Paw Mtn.     24.78 335  P      P      00 35 12.0 -0.7
BPAW                               IAmb   IAmb   00 35 12.9
             comp=Z,3.6nm,0.7s
I23K  Minto, Yukon-K    25.08 338  P      P      00 35 15.4 +0.1
I23K                               IAmb   IAmb   00 35 17.9
             comp=Z,3.1nm,0.8s
INK   Inuvik            25.19 354  LR     LR     00 44 47.8
             comp=Z,76nm,19.1s,baz=282,slow=36
H24K  Noodor Dome       25.23 340  P      P      00 35 16.6 -0.2
H24K                               IAmb   IAmb   00 35 19.7
             comp=Z,4.0nm,1.1s
K20K  Telida            25.29 331  P      P      00 35 16.8 -0.5
K20K                               IAmb   IAmb   00 35 26.0
             comp=Z,6.8nm,1.1s
BRDY  Brady             25.32 109  P      P      00 35 17.6 -0.3
BRDY                               IAmb   IAmb   00 35 20.6
             comp=Z,4.3nm,1.0s
MLY   Manley            25.38 337  P      P      00 35 16.8 -1.4
MLY                                IAmb   IAmb   00 35 19.1
             comp=Z,2.7nm,0.8s
DRIO  Del Rio           25.38 115  P      P      00 35 19.0 +0.6
L18K  Granite Mounta    25.57 328  P      P      00 35 19.9  0.0
L18K                               IAmb   IAmb   00 35 22.4
             comp=Z,4.4nm,0.8s
I21K  Tanana            25.85 336  P      P      00 35 21.8 -0.5
I21K                               IAmb   IAmb   00 35 23.4
             comp=Z,5.3nm,0.9s
J19K  Poorman           26.23 332  P      P      00 35 25.0 -0.8
J19K                               IAmb   IAmb   00 35 28.7
             comp=Z,4.8nm,0.9s
G23K  Bananza Creek     26.46 340  P      P      00 35 27.7 -0.2
G23K                               IAmb   IAmb   00 35 29.4
             comp=Z,3.7nm,0.9s
IMAR  Indian Mountai    26.94 336  P      P      00 35 31.8 -0.4
E22K  Anaktuvuk Pass    28.00 341  P      P      00 35 41.8 +0.1
E22K                               IAmb   IAmb   00 36 08.4
             comp=Z,5.4nm,1.4s
F19K  Shaleruckik Mo    28.72 335  P      P      00 35 47.4 -0.6
E19K  Redstone River    28.96 336  P      P      00 35 50.2  0.0
E19K                               IAmb   IAmb   00 35 53.2
             comp=Z,1.7nm,0.9s
D20K  Etivluk River     29.64 339  P      P      00 35 55.5 -0.7
D20K                               IAmb   IAmb   00 36 19.8
             comp=Z,6.2nm,1.4s
D19K  Kuna River        29.90 338  P      P      00 35 58.9 +0.3
C18K  Utukok River      30.87 336  P      P      00 36 07.0 -0.2
C16K  Lisburne Hills    31.92 334  P      P      00 36 16.2 -0.1
TKL   Tuckaleechee C    34.04  88  LR     LR     00 50 54.7
             comp=Z,90nm,20.1s,baz=312,slow=37
SADO  Sadowa            34.13  71  LR     LR     00 50 10.2
             comp=Z,54nm,19.5s,baz=329,slow=36
CMIG  Matias Romero     37.88 124  LR     LR     00 54 00.3
             comp=Z,24nm,18.2s,baz=340,slow=38
SCHQ  Schefferville     39.90  52  LR     LR     00 54 14.4
             comp=Z,72nm,21.3s,baz=278,slow=37
SEY   Seymchan          48.38 323  LR     LR     00 57 33.3
             comp=Z,31nm,18.3s,baz=60,slow=34
MA2   Magadan           50.17 319  LR     LR     00 57 51.4
             comp=Z,34nm,18.1s,baz=90,slow=34
TIXI  Tiksi             53.58 338  LR     LR     01 02 40.6
             comp=Z,17nm,18.8s,baz=58,slow=37
H11N3 WAKE ISLAND Hy    59.35 269  T      T      01 43 44.3
             baz=51,slow=75,SNR=126
H11N2 WAKE ISLAND Hy    59.35 269  T      T      01 43 51.6
             baz=51,slow=75,SNR=89
H11N1 WAKE ISLAND Hy    59.37 269  T      T      01 43 45.0
             baz=51,slow=75,SNR=88
H11S1 WAKE ISLAND Hy    60.27 268  T      T      01 44 51.8
             baz=50,slow=75,SNR=625
H11S2 WAKE ISLAND Hy    60.28 268  T      T      01 44 52.4
             baz=50,slow=75,SNR=583
H11S3 WAKE ISLAND Hy    60.29 268  T      T      01 44 53.1
             baz=50,slow=75,SNR=517
KURBB Kurchatov Arra    83.72 344  P      P      00 42 19.3 -0.5
             comp=Z,0.3nm,0.4s,baz=29,slow=4.6,SNR=4.5
             comp=Z,0.3nm,0.4s
PZH   PanZhiHua         97.20 317  P      P      00 43 23.8 -0.3
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*IDC **26** 00:32:07.8±1.8, 1°.13N×124°.57E, h0^{km}, mb3.7/3, mbtmp3.7/4, ML3.8/1, Error ellipse: s-maj=132.1km s-min=24.0km az=66.0*

*DJA **26** 00:32:34.0±0.8, 0°N±5°×12°4E±°, h202^{km}±12^{km}, M3.5/6, MLv3.5/6*

ISC 26 00:32:32.1±1.2**, 0°.4N**±0°.1×**124°.0E**±0°.1**, h218^{km}, n9, σ1^{s}.19**/10**, mb3.5**/3**, Minahassa Peninsula, Sulawesi**

```
Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                   Op     ISC      h  m  s    ISC
KMSI  Cibinong           0.18   9  P      Pn     00 33 01.9 +1.3
LUWI  Luwuk              1.86 220  P      Pn     00 33 11.1 +0.5
APSI  Ampana             2.65 241  P      Pn     00 33 19.1 +0.3
SANI  Sanana             3.17 140  P      Pn     00 33 25.3 +0.6
SANI                               S      S      00 34 04.1 -1.6
MPSI  Mapaga             4.06 269  P      Pn     00 33 36.0 +0.7
FITZ  Fitzroy Crossi    18.45 175  P      P      00 36 32.1 +0.4
             0.2nm,0.3s,baz=4.6,slow=12,SNR=1.8
             2.3nm,0.7s
WRA   Warramunga Arr    22.63 154  P      P      00 37 15.5 +0.7
             1.7nm,0.3s,baz=336,slow=10,SNR=24
             1.7nm,0.3s
ASAR  Alice Springs     25.80 159  P      P      00 37 44.5 +1.1
             0.2nm,0.4s,baz=330,slow=8.8,SNR=2.2
             0.2nm,0.4s
MKAR  Makanchi Array    58.78 328  P      P      00 42 06.0 -1.5
             0.5nm,0.4s,baz=120,slow=7.7,SNR=7.1
             0.5nm,0.4s
```

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*IDC **26** 00:33:14.8±0.8, 2°.60S×138°.46E, h0^{km}, mb3.8/8, mbtmp3.8/10, ML3.8/2, MS2.9/3, Error ellipse: s-maj=21.2km s-min=16.1km az=11.0*

*DJA **26** 00:33:17.8±0.4, 3°S±3°×13°9E±°, h10^{km}, M4.0/5, MLv4.0/5*

ISC 26 00:33:19.8±0.7**, 2°.55S**±0°.09×**138°.56E**±0°.06**, h32^{km}, n20, σ1^{s}.29**/17**, mb3.8**/11**, 1D, Irian Jaya**

```
Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                   Op     ISC      h  m  s    ISC
SMPI  Sarmi              0.57  15  P      Pb     00 33 28.9 -2.6
GENI  Genyem             1.61  92  P      Pn     00 33 47.3 +1.3
JAY   Jayapura           2.14  89  Pn     Pn     00 33 53.1 -0.3
             12nm,0.3s,baz=262,slow=6.7,SNR=27
JAY                                Lg     Lg     00 34 26.9
             10nm,0.3s,baz=148,slow=19,SNR=6.2
             94nm,0.9s
JAY   Jayapura           2.14  89  P      Pn     00 33 54.0 +0.6
SRPI  Serui, Papua       2.41 286  P      Pn     00 33 56.7 -0.4
SRPI                               S      Sn     00 34 26.9 +1.3
GUMO  Guam              17.21  21  LR     LR     00 44 12.8
             comp=Z,29nm,18.9s,baz=103,slow=38
WRA   Warramunga Arr    17.78 193  P      Pn     00 37 24.4 -0.6
             0.4nm,0.3s,baz=15,slow=12,SNR=11
             2.0nm,0.5s
ASAR  Alice Springs     21.48 192  P      P      00 38 03.9 -2.0
             2.7nm,0.7s,baz=21,slow=11,SNR=20
             2.7nm,0.7s
JNU   Nakatsue          36.21 349  LR     LR     00 52 16.5
             comp=Z,32nm,21.3s,baz=180,slow=32
ASAJ  Asahikawa         46.59   4  LR     LR     01 00 56.9
             comp=Z,13nm,18.5s,baz=142,slow=36
BNX   BinXian           49.09 350 ⇓P      P      00 42 05.5 +1.4
BNX                                pmax   pmax
             comp=Z,3.0nm,0.5s
HHC   Hu-ho-hao-te      49.72 333 eP      P      00 42 04.5 -4.7
HHC                                pmax   pmax
             comp=Z,14nm,0.7s
HHC                                pmax   pmax
             comp=Z,36nm,4.4s
SONM  Songino Array     57.51 335  P      P      00 43 07.8 +1.6
             comp=Z,0.3nm,0.4s,baz=116,slow=6.6,SNR=1.9
             comp=Z,0.3nm,0.4s
MKAR  Makanchi Array    69.57 322  P      P      00 44 25.6 -0.1
             comp=Z,0.7nm,0.8s,baz=116,slow=6.9,SNR=6.3
             comp=Z,0.7nm,0.8s
KSH   Kashi             70.86 313  P      P      00 44 35.5 +1.5
KSH                                pmax   pmax
             comp=Z,3.0nm,0.9s
ZALV  Zalesovo Beam     71.72 330  P      P      00 44 38.3 -0.4
             comp=Z,0.4nm,0.4s,baz=123,slow=5.3,SNR=2.1
             comp=Z,0.4nm,0.4s
KURBB Kurchatov Arra    73.51 325  P      P      00 44 49.2 -0.2
             comp=Z,0.2nm,0.3s,baz=116,slow=4.3,SNR=4.2
             comp=Z,0.2nm,0.3s
BVAR  Borovoye Array    79.09 325  P      P      00 45 21.7 +0.6
             comp=Z,0.6nm,0.6s,baz=105,slow=9.3,SNR=4.6
             comp=Z,0.6nm,0.6s
ILAR  Eielson Array     85.75  24  P      P      00 45 54.6 -0.9
             comp=Z,0.7nm,0.7s,baz=257,slow=4.9,SNR=7.5
             comp=Z,0.7nm,0.7s
QSPA  South Pole Qui    87.40 180  P      P      00 46 03.7 -0.1
             comp=Z,1.9nm,0.8s,baz=331,slow=1.3,SNR=14
             comp=Z,1.9nm,0.8s
```

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*ISK **26** 00:41:51.4, 34°.31N×26°.57E, h4^{km}, ML2.7/19*

*IDC **26** 00:41:51.1±1.6, 34°.74N×26°.81E, h0^{km}, mb3.5/6, mbtmp3.4/10, ML3.3/4, Error ellipse: s-maj=34.7km s-min=16.4km az=12.0*

*AFAD **26** 00:41:54.0, 34°.13N×26°.66E, h84^{km}, ML2.4*

*THE **26** 00:41:55.9, 35°N±10°×2°6E±°, h0^{km}±31^{km}, M2.7/8, MLh2.7/8*

*ATH **26** 00:41:55.6, 34°.56N×26°.50E, h8^{km}±2^{km}, ML2.6/7, Manual Solution by A.Papageorgiou First location: 2019/06/26 00:43:20, This location: 2019/06/26 05:05:34 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

ISC 26 00:41:52.4±2.0**, 34°.45N**±0°.06×**26°.59E**±0°.03**, h11^{km}**±12^{km}**, n65, σ2^{s}.31**/92**, mb3.4**/6**, Crete**

```
Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                   Op     ISC      h  m  s    ISC
ZKR   Zakros             0.73 335  Pg     Pb     00 42 07.7 +0.5
ZKR                                Sg     Sn     00 42 20.9 +1.1
ZKR   Zakros             0.73 335  P      Pb     00 42 07.7 +0.5
ZKR   Zakros             0.73 335  P      Pb     00 42 07.4 +0.2
ZKR                                S      Sg     00 42 15.6 -0.7
KARP  Karpathos          1.19  23  Pn     Pn     00 42 17.5 +2.5
KARP  Karpathos          1.19  23  P      Pn     00 42 18.1 +3.1
KARP  Karpathos          1.19  23  P      Pn     00 42 17.7 +2.7
KARP                               S      Sn     00 42 32.1 +0.9
TMBK  Timbaki Herakl     1.63 293  P      Pb     00 42 23.4 +1.0
TMBK                               S      Sg     00 42 44.9 +0.2
TMBK  Timbaki Herakl     1.63 293  P      Pb     00 42 23.5 +1.2
TMBK                               S      Sn     00 42 42.7 +0.9
IDI   Anoyia             1.63 301  Pn     Pn     00 42 22.7 +1.6
IDI                                Sn     Sg     00 42 44.9  0.0
IDI   Anoyia             1.63 301  P      Pn     00 42 23.0 +2.0
IDI                                S      Sg     00 42 44.7 -0.2
IDI   Anoyia             1.63 301  Pn     Pn     00 42 21.6 +0.5
             3.2nm,0.3s,baz=147,slow=7.8,SNR=21
IDI                                Sn     Sg     00 42 45.5 +0.6
             4.4nm,0.3s,baz=20,slow=18,SNR=7.4
IDI   Anoyia             1.63 301  P      Pn     00 42 23.1 +2.0
IDI                                S      Sn     00 42 42.9 +0.8
PRNS  Prines Rethymn     1.95 299  P      Pb     00 42 28.8 +1.0
PRNS                               S      Sg     00 42 55.1 +0.1
GVD   Gavdhos            2.10 281  Pn     Pn     00 42 28.6 +1.1
GVD   Gavdhos            2.10 281  P      Pn     00 42 30.2 +2.8
GVD   Gavdhos            2.10 281  P      Pn     00 42 29.9 +2.4
GVD                                S      Sn     00 42 55.8 +2.2
THERA Ancient Thera,     2.12 335  P      Pn     00 42 29.8 +2.1
THERA                              S      Sb     00 42 57.4 +0.3
THR6  Thira Island,      2.14 333  P      Pb     00 42 30.8 -0.3
THR8  Santorini-Mono     2.16 335  P      Pb     00 42 30.9 -0.5
ARG   Arkhangelos        2.17  35  Pn     Pb     00 42 31.4 -0.2
ARG                                Sn     Sb     00 42 59.8 +1.4
ARG   Arkhangelos        2.17  35  P      Pb     00 42 32.1 +0.5
ARG                                S      Sg     00 43 01.9 -0.1
ARG   Arkhangelos        2.17  35  P      Pb     00 42 31.6 +0.1
ARG                                S      Sb     00 42 58.0 -0.4
SAP3  Santorini-Thir     2.23 333  P      Pb     00 42 32.2 -0.5
SAP3  Santorini-Thir     2.23 333  P      Pn     00 42 31.6 +2.4
IMMV  Iera Moni Meta     2.37 296  Pn     Pn     00 42 33.2 +2.0
IMMV  Iera Moni Meta     2.37 296  P      Pn     00 42 33.9 +2.8
DAT   Datca              2.41  19  Pn     Pn     00 42 34.9 +3.0
BODT  Bodrum             2.67  12  Pn     Pn     00 42 38.7 +3.3
TURN  Turunc             2.68  30  Pn     Pn     00 42 38.6 +3.1
TURN  Turunc             2.68  30  P      Pn     00 42 38.4 +2.9
TURN                             i IAML          00 43 23.0
             comp=E,10nm,0.4s
TURN                             i IAML          00 43 29.0
             comp=N,10nm,0.4s
APE   Apeiranthos        2.75 342  Pn     Pn     00 42 39.4 +2.9
APE   Apeiranthos        2.75 342  P      Pn     00 42 38.5 +2.0
APE                                S      Sn     00 43 11.8 +2.0
KSL   Kastellorizon      2.98  54  P      Pn     00 42 41.8 +2.3
KSL                                S      Sn     00 43 19.4 +4.2
KSL   Kastellorizon      2.98  54  P      Pn     00 42 41.9 +2.3
KSL                                S      Sn     00 43 19.1 +3.9
FETY  Fethiye            2.98  42  Pn     Pn     00 42 42.6 +3.0
FETY  Fethiye            2.98  42  P      Pn     00 42 42.0 +2.4
FETY                               S      Sb     00 43 20.1 -1.8
MLSB  Milas              3.00  18  Pn     Pn     00 42 43.1 +3.2
AKAS  Kas                3.04  53  Pn     Pn     00 42 42.7 +2.2
AKAS  Kas                3.04  53  P      Pn     00 42 42.6 +2.1
AKAS                               S      Sn     00 43 20.1 +3.2
AKAS                             i IAML          00 43 21.0
             comp=E,23nm,0.7s
AKAS                             i IAML          00 43 26.0
             comp=N,35nm,0.4s
ANKY  Antikythira Is     3.04 299  P      Pn     00 42 43.6 +3.2
ANKY                               S      Sn     00 43 18.7 +1.8
ANKY  Antikythira Is     3.04 299  P      Pn     00 42 42.5 +2.1
ANKY                               S      Sn     00 43 18.3 +1.5
SABU  Mula-Dalaman       3.06  39  P      Pn     00 42 43.3 +2.6
SABU                               S      Sn     00 43 19.4 +2.1
SABU                             i IAML          00 43 52.0
             comp=E,10nm,1.1s
SABU                             i IAML          00 43 57.0
             comp=N,12nm,1.3s
CAME  Cameli-Denizli     3.33  41  Pn     Pn     00 42 47.3 +2.8
DNZT  Denizli-Tavas-     3.45  34  P      Pn     00 42 48.3 +2.3
DNZT                               S      Sb     00 43 32.6 -2.8
DNZT                             i IAML          00 43 34.0
             comp=N,5.3nm,0.4s
DNZT                             i IAML          00 43 42.0
             comp=E,5.5nm,0.7s
CAEL  Denizli, Camel     3.47  39  P      Pn     00 42 49.0 +2.6
CAEL                               S      Sn     00 43 30.7 +3.2
CAEL                             i IAML          00 43 42.0
             comp=E,35nm,0.8s
CAEL                             i IAML          00 44 28.0
             comp=N,33nm,2.2s
ELL   Elmali             3.54  49  Pn     Pn     00 42 50.5 +3.1
ELL   Elmali             3.54  49  P      Pn     00 42 50.2 +2.7
AKUM  Antalya-Kumluc     3.59  58  P      Pn     00 42 48.7 +0.8
AKUM                               S      Sn     00 43 29.9 -0.3
AKUM                             i IAML          00 43 50.0
             comp=E,9.9nm,0.9s
AKUM                             i IAML          00 44 54.0
             comp=N,7.6nm,1.2s
GOLH  Golhisar           3.68  40  P      Pn     00 42 53.1 +3.8
GOLH                               S      Sn     00 43 38.5 +5.8
GOLH                             i IAML          00 44 17.0
             comp=E,9.0nm,0.9s
GOLH                             i IAML          00 44 32.0
             comp=N,18nm,1.2s
APMY  Acipayam-Deniz     3.73  35  Pn     Pn     00 42 53.2 +3.2
VLI   Veliai             3.74 308  P      Pn     00 42 51.2 +1.1
VLI                                S      Sn     00 43 31.7 -2.3
VLI   Veliai             3.74 308  P      Pn     00 42 50.5 +0.5
VLI                                S      Sn     00 43 34.2 +0.1
KORT  Korkueli           3.98  49  Pn     Pn     00 42 56.8 +3.4
ODEM  Odemis-Izmir       4.00  17  Pn     Pn     00 42 56.4 +2.7
ITM   Ithomi             4.67 307  Pn     Pn     00 43 05.4 +2.6
MMAI  Mount Meron Ar     7.48  99  Pn     Pn     00 43 39.5 -2.0
             1.2nm,0.3s,baz=306,slow=11,SNR=8.0
MMAI                               Sn     Sn     00 45 01.8 -4.4
             1.3nm,0.3s,baz=270,slow=39,SNR=4.3
             0.6nm,0.3s
EIL   Elat               8.54 122  Pn     Pn     00 43 54.4 -1.6
             0.3nm,0.3s,baz=317,slow=2.8,SNR=6.4
EIL                                Sn     Sn     00 45 25.6 -6.8
             0.4nm,0.3s,baz=6.4,slow=11,SNR=2.2
```

	1.6nm,0.5s						
AKASG	Malin Array Be	16.36	6	Pn	Pn	00 45 37.8	-4.0
	0.4nm,0.3s,baz=195,slow=11,SNR=4.3						
	0.1nm,0.3s						
GERES	GERESS Array B	17.28	330	P	Pn	00 45 52.8	-0.7
	baz=137,slow=12,SNR=2.8						
	0.2nm,0.5s						
ESDC	Sonseca Array	24.87	291	P	P	00 47 16.7	+1.7
	0.2nm,0.8s,baz=81,slow=9.0,SNR=6.1						
	0.2nm,0.8s						
FINES	FINESS Array B	27.02	359	P	P	00 47 30.5	-3.6
	0.7nm,0.7s,baz=165,slow=11,SNR=4.2						
	0.7nm,0.7s						
ARCES	ARCESS Array B	35.15	359	P	P	00 48 41.9	-3.8
	3.7nm,1.0s,baz=184,slow=8.4,SNR=5.0						
	3.7nm,1.0s						
KURBB	Kurchatov Arra	40.66	50	P	P	00 49 30.6	-1.8
	0.2nm,0.3s,baz=276,slow=8.4,SNR=4.5						
	0.2nm,0.3s						
MKAR	Makanchi Array	43.19	56	P	P	00 49 51.9	-1.3
	0.2nm,0.5s,baz=269,slow=7.5,SNR=4.3						
	0.2nm,0.5s						
ZALV	Zalesovo Beam	44.65	46	P	P	00 50 04.0	-0.8
	0.4nm,0.4s,baz=262,slow=5.5,SNR=2.1						
	0.4nm,0.4s						

*SDD **26** 00:43:09.9±2.1, 17°.81N×68°.12W, h136^{km}±18^{km}, MD3.5, ML2.5, MW3.1*

*NEIC **26** 00:43:10.5±1.2, 18°.2N±0°.2×68°.02W±0°.06, h132^{km}±9^{km}, ML2.6/24, Md3.2/15(RSPR), Error ellipse: s-maj=32.4km s-min=6.5km az=189.0*

*RSPR **26** 00:43:11.1, 18°.17N×68°.08W, h126^{km}±1^{km}, MD3.2/15*

*OSPL **26** 00:43:12.0±1.0, 18°.14N×67°.97W, h136^{km}±13^{km}, ML2.7*

ISC 26 00:43:10.4±1.6**, 18°.13N**±0°.09×**68°.04W**±0°.03**, h132**^{km}±11^{km}**, n63, σ0^{s}.90**/85**, 22C-12D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.50	320	⇑eSg	Sn	00 43 44.7	+0.4
PCDR				IAML		00 43 45.8	
	comp=N,86nm,1.1s						
IDE	Isla Desecheo	0.60	64		Pn	00 43 30.1	-0.3
IDE	Isla Desecheo	0.60	64	⇓eP	Pn	00 43 30.1	-0.3
HIDR	Higuey Centro	0.79	306	⇑eP	Pn	00 43 31.6	-0.1
HIDR	Higuey Centro	0.79	306	eS	Sn	00 43 46.3	-1.6
HIDR	Higuey Centro	0.79	306	⇓ePg	Pn	00 43 30.6	-1.0
HIDR				⇑eSg	Sn	00 43 47.5	-0.3
HIDR				IAML		00 43 48.2	
	comp=N,66nm,0.2s						
PRSN	Puerto Rico Se	0.86	84	Pn	Pn	00 43 32.1	-0.1
CRPR	Cabo Rojo, PR	0.90	98	Pn	Pn	00 43 32.6	0.0
CRPR				Sn	Sn	00 43 49.1	-0.2
CRPR	Cabo Rojo, PR	0.90	98	⇑eP	Pn	00 43 32.7	+0.2
CRPR	Cabo Rojo, PR	0.90	98	⇑ePg	Pn	00 43 32.7	+0.2
CRPR				⇑eSg	Sn	00 43 48.6	-0.7
CRPR				IAML		00 43 55.7	
	comp=N,23nm,0.6s						
CRPR	Cabo Rojo, PR	0.90	98	iP	Pn	00 43 32.7	+0.2
CRPR				eS	Sn	00 43 48.4	-0.9
CRPR				IAML		00 43 55.5	
	comp=Z,39nm,0.8s						
LSP	Las Mesas	0.91	87		Pn	00 43 32.8	+0.1
LSP					Sn	00 43 51.5	+1.9
LSP	Las Mesas	0.91	87	⇓eP	Pn	00 43 32.8	+0.1
LSP	Las Mesas	0.91	87	eS	Sn	00 43 51.5	+1.9
AGPR	Aguadilla, PR	0.95	69	Pn	Pn	00 43 33.0	0.0
AGPR				Sn	Sn	00 43 48.9	-1.3
AGPR				IAML		00 43 51.2	
	comp=E,87nm,0.4s						
AGPR				IAML		00 43 51.5	
	comp=N,122nm,0.5s						
AGPR	Aguadilla, PR	0.95	69	⇓eP	Pn	00 43 33.1	0.0
AGPR	Aguadilla, PR	0.95	69	eS	Sn	00 43 50.3	+0.1
AGPR	Aguadilla, PR	0.95	69	⇓ePg	Pn	00 43 33.0	0.0
AGPR				⇑eSg	Sn	00 43 51.0	+0.8
AGPR				IAML		00 43 53.4	
	comp=N,84nm,0.2s						
AGPR	Aguadilla, PR	0.95	69	iP	Pn	00 43 33.1	0.0
AGPR				eS	Sn	00 43 49.1	-1.1
AGPR				IAML		00 43 52.3	
	comp=Z,49nm,0.2s						
MLPR	Magueyes Islan	0.96	99	⇑eP	Pn	00 43 33.4	+0.2
MLPR	Magueyes Islan	0.96	99	eS	Sn	00 43 50.4	0.0
MLPR	Magueyes Islan	0.96	99	⇑ePg	Pn	00 43 33.4	+0.2
MLPR				⇑eSg	Sn	00 43 50.4	0.0
MLPR				IAML		00 43 55.1	
	comp=N,8.5nm,0.3s						
GBPR	Guanica, Bosqu	1.12	98		Pn	00 43 35.0	+0.4
GBPR	Guanica, Bosqu	1.12	98	⇓eP	Pn	00 43 35.0	+0.4
AOPR	Arecibo Observ	1.24	80	Pn	Pn	00 43 35.8	-0.1
AOPR				Sn	Sn	00 43 55.0	-0.3
AOPR	Arecibo Observ	1.24	80	⇓eP	Pn	00 43 36.3	+0.4
AOPR	Arecibo Observ	1.24	80	eS	Sn	00 43 55.3	0.0
AOPR	Arecibo Observ	1.24	80	⇑ePg	Pn	00 43 35.8	-0.1
AOPR				⇑eSg	Sn	00 43 55.1	-0.2
AOPR				IAML		00 43 56.5	
	comp=N,261nm,0.2s						
UUPR	Utuado, UPR, P	1.26	84	Pn	Pn	00 43 36.4	+0.3
UUPR				Sn	Sn	00 43 55.0	-0.7
UUPR	Utuado, UPR, P	1.26	84	⇑eP	Pn	00 43 36.5	+0.4
UUPR	Utuado, UPR, P	1.26	84	eS	Sn	00 43 56.2	+0.5
MIDR	Miches	1.28	312	⇑ePg	Pn	00 43 35.9	-0.4
MIDR				⇑eSg	Sn	00 43 58.5	+2.5
MIDR				IAML		00 44 02.1	
	comp=N,30nm,0.3s						
OBIP	Obispado Ponce	1.37	93	Pn	Pn	00 43 36.9	-0.3
OBIP				Sn	Sn	00 43 57.1	-0.5
OBIP	Obispado Ponce	1.37	93	⇑eP	Pn	00 43 37.4	+0.2
OBIP	Obispado Ponce	1.37	93	eS	Sn	00 43 58.8	+1.2
CELP	Cerrillos	1.39	92	Pn	Pn	00 43 37.3	-0.2
CELP				Sn	Sn	00 43 58.1	0.0
CELP				IAML		00 44 01.5	
	comp=E,42nm,0.4s						
CELP				IAML		00 44 01.7	
	comp=N,40nm,0.5s						
CELP	Cerrillos	1.39	92	⇓eP	Pn	00 43 37.4	0.0
CELP	Cerrillos	1.39	92	eS	Sn	00 43 59.2	+1.1
CELP	Cerrillos	1.39	92	⇑ePg	Pn	00 43 37.6	+0.1
CELP				IAML		00 44 02.5	
	comp=N,40nm,0.2s						
DR12	Loma Pena Alta	1.43	298	Pn	Pn	00 43 37.5	-0.4
EMPR	Esperanza - Ma	1.48	76	Pn	Pn	00 43 38.4	+0.1
EMPR				Sn	Sn	00 43 58.1	-1.6
EMPR				IAML		00 44 02.3	
	comp=E,124nm,0.8s						
EMPR				IAML		00 44 07.2	
	comp=N,134nm,1.2s						
EMPR	Esperanza - Ma	1.48	76	⇓eP	Pn	00 43 38.9	+0.5
EMPR	Esperanza - Ma	1.48	76	eS	Sn	00 43 59.1	-0.6
SMDR	Samana, DR	1.59	317	⇑ePg	Pn	00 43 40.8	+1.2
SMDR				⇑eSg	Sn	00 44 03.5	+1.5
SMDR				IAML		00 44 08.6	
	comp=N,70nm,0.5s						
ECPR	Experimental S	1.61	83	⇓eP	Pn	00 43 39.6	-0.3
ECPR	Experimental S	1.61	83	eS	Sn	00 44 01.3	-1.1
SJG	San Juan	1.80	90	Pn	Pn	00 43 41.6	-0.4
SJG				IAML		00 44 09.1	
	comp=N,32nm,0.3s						
SJG				IAML		00 44 09.1	
	comp=N,38nm,0.2s						
SJG	San Juan	1.80	90	⇑eP	Pn	00 43 42.8	+0.7
SJG	San Juan	1.80	90	eS	Sn	00 44 07.2	+0.9
IGPR	InterUniversit	1.85	95		Pn	00 43 43.6	+1.0
IGPR					Sn	00 44 08.5	+1.2
IGPR	InterUniversit	1.85	95	⇑eP	Pn	00 43 43.6	+1.0
IGPR	InterUniversit	1.85	95	eS	Sn	00 44 08.5	+1.2
GCPR	Guaynabo City	1.87	84	Pn	Pn	00 43 41.5	-1.4
GCPR				Sn	Sn	00 44 05.6	-2.2
GCPR	Guaynabo City	1.87	84	⇑eP	Pn	00 43 41.9	-1.0
GCPR	Guaynabo City	1.87	84	eS	Sn	00 44 06.5	-1.3
PDPR	Patillas Dam,	1.92	93	Pn	Pn	00 43 42.9	-0.7
PDPR				IAML		00 44 10.7	
	comp=E,25nm,0.2s						
PDPR				IAML		00 44 12.3	
	comp=N,26nm,0.2s						
PDPR	Patillas Dam,	1.92	93	⇓eP	Pn	00 43 43.9	+0.3
PDPR	Patillas Dam,	1.92	93	eS	Sn	00 44 10.3	+1.4
HUMP	Col San Antoni	2.08	89	Pn	Pn	00 43 45.1	-0.4
HUMP				Sn	Sn	00 44 11.3	-1.1
HUMP				IAML		00 44 15.0	
	comp=N,33nm,0.2s						
HUMP				IAML		00 44 16.4	
	comp=E,58nm,0.2s						
HUMP	Col San Antoni	2.08	89	⇓eP	Pn	00 43 46.2	+0.7
HUMP	Col San Antoni	2.08	89	eS	Sn	00 44 11.8	-0.6
LOVI	El Cajuil, Ovi	3.18	265	iP	Pn	00 44 00.8	+1.3
LOVI				eS	Sn	00 44 35.2	-2.2
LOVI				IAML		00 44 37.5	
	comp=Z,36nm,1.2s						
LOBH	Bahia de las A	3.43	266	iP	Pn	00 44 03.1	+0.4
LOBH				eS	Sn	00 44 41.8	-1.4
LOBH				IAML		00 44 45.1	
	comp=Z,24nm,2.6s						

*IDC **26** 00:48:57.3±0.6, 1°.11S×23°.55W, h0^{km}, mb4.2/18, mbtmp4.2/19, ML4.6/1, MS3.7/50, Error ellipse: s-maj=25.0km s-min=13.1km az=132.0*

*NEIC **26** 00:48:59.0±1.6, 1°.15S±0°.09×23°.72W±0°.09, h10^{km}±1^{km}, mb4.7/48, Error ellipse: s-maj=15.7km s-min=14.5km az=176.0*

*GCMT **26** 00:49:00.0±0.4, 1°.15S±0°.03×23°.46W±0°.02, h23^{km}±1^{km}, MW4.8/95, Moment Tensor Solution. s16,c17; s95,c109; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.51±.14; $M_{\theta\theta}$0.92±.13; $M_{\phi\phi}$-0.40±.10; $M_{r\theta}$0.76±.17; $M_{\theta\phi}$-2.10±.10; $M_{\phi r}$0.40±.15; Best double couple: $M_0$2.39800×10^{16} NP1:ϕ_s169.00000°, δ68.00000°, λ-12.00000°. NP2: ϕ_s264.00000°, δ79.00000°, λ-157.00000°. Principal axes: T 2.5080, Plg7.0000°, Azm35.0000°; N -0.2180, Plg65.0000°, Azm289.0000°; P -2.2890, Plg24.0000°, Azm128.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 00:48:59.1±0.4**, 1°.10S**±0°.07×**23°.61W**±0°.06**, h13**^{km}**, n160, σ0^{s}.91**/115**, mb4.5**/53**, MS3.8**/53**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N3	ASCENSION HYDR	11.28	127	T	T	01 03 24.7	
	baz=306,slow=73,SNR=200						
H10N2	ASCENSION HYDR	11.28	127	T	T	01 03 11.1	
	baz=306,slow=73,SNR=132						
H10N1	ASCENSION HYDR	11.29	127	T	T	01 03 19.5	
	baz=306,slow=73,SNR=228						
ASCN	Ascension	11.44	127		Pn	00 51 42.0	-0.3
H10S3	ASCENSION HYDR	11.84	132	T	T	01 04 04.8	
	baz=269,slow=74,SNR=167						
H10S2	ASCENSION HYDR	11.85	131	T	T	01 04 03.3	
	baz=311,slow=74,SNR=171						
RCBR	Riachuelo	13.14	249		Pn	00 52 00.8	-4.8
NBCL	Cascavel-CE	14.99	258	eP	Pn	00 52 32.7	+1.8
SACV	Santiago Islan	15.97	360		Pn	00 52 43.6	-0.1
NBPB	Pedra_Branca-C	16.55	254	eP	Pn	00 52 52.7	+1.6
BBTS	Babate	17.16	24	P	Pn	00 52 57.3	-1.5
	1.9nm,0.3s,baz=20,slow=1.0,SNR=5.9						
BBTS				LR	LR	00 58 04.6	
	comp=Z,394nm,20.2s,baz=83,slow=32						
	17nm,0.6s						
DBIC	Dimbokro	20.25	67		P	00 53 33.5	-0.8
DBIC				IAmb	IAmb	00 53 37.6	
	comp=Z,37nm,1.0s						
DBIC	Dimbokro	20.25	67	P	P	00 53 33.4	-1.0
	comp=Z,25nm,1.0s,baz=265,slow=12,SNR=9.2						
DBIC				LR	LR	00 59 38.3	
	comp=Z,192nm,20.1s,baz=257,slow=32						
	comp=Z,25nm,1.0s						
CMC01	Camacan, BA	21.15	227	eP	P	00 53 44.4	+0.3
GUA01	Guaratinga, BA	22.16	225	eP	P	00 53 55.0	0.0
SDBA	SAO DESIDERIO	23.91	241	eP	P	00 54 14.0	+0.9
TMAB	Tom-Au,PA,Br	24.51	267	eP	P	00 54 18.4	-0.1
JANB	Januaria	24.70	235	eP	P	00 54 19.8	-0.5
SMTB	Santa Maria do	25.09	251	eP	P	00 54 25.7	+1.9
DIAM	Diamantina, MG	26.08	228	eP	P	00 54 32.3	-0.5
PRPB	Parauapebas	26.63	258	eP	P	00 54 37.8	0.0
BDFB	Brasilia	28.08	238	P	P	00 54 48.9	-1.9
BDFB	Brasilia	28.08	238	P	P	00 54 50.9	+0.1
	comp=Z,1.8nm,0.5s,baz=68,slow=8.2,SNR=4.8						
BDFB				LR	LR	01 04 58.7	
	comp=Z,507nm,20.0s,baz=101,slow=34						
	comp=Z,1.8nm,0.5s						
TORD	Torodi Ar. Bea	28.81	60	P	P	00 54 56.4	-0.8
TORD	Torodi Ar. Bea	28.81	60	P	P	00 54 56.0	-1.3
	comp=Z,1.1nm,0.3s,baz=253,slow=8.3,SNR=5.1						
	comp=Z,1.1nm,0.3s						
IPMB	Ipameri, GO	29.42	234	eP	P	00 55 02.5	-0.2
MDP	Montagnes des	29.65	282	LR	LR	01 04 00.9	
	comp=Z,58nm,20.6s,baz=138,slow=30						
NPGB	Novo Progresso	32.20	259	eP	P	00 55 28.8	+1.5
ITTB	Itaituba	32.25	264	eP	P	00 55 27.5	-0.2
SALV	Santo Antonio	34.89	243	eP	P	00 55 51.5	+0.8
TAM	Tamanrasset	37.00	48		P	00 56 10.3	+1.4
BOAV	Boa Vista	37.07	275		P	00 56 09.1	-0.4
BOAV				IAmb	IAmb	00 56 14.5	
	comp=Z,9.7nm,0.9s						
BOAV	Boa Vista	37.07	275	eP	P	00 56 10.2	+0.7
PTLB	Pontes e Lacer	37.84	246		P	00 56 15.5	-0.4
PTLB	Pontes e Lacer	37.84	246	eP	P	00 56 17.0	+1.1
MDT	Midelt	38.21	26	LR	LR	01 10 34.3	
	comp=Z,237nm,21.4s,baz=242,slow=34						
MURT	Porto Murtinho	38.92	236	eP	P	00 56 24.6	-0.3
SJPY	San Joaquin	39.36	230	eP	P	00 56 28.5	0.0
BBSD	Serra de San D	39.75	244	eP	P	00 56 33.0	+1.1
SIV	San Ignacio	39.78	246	LR	LR	01 12 27.5	
	comp=Z,169nm,18.6s,baz=113,slow=35						
FDF	Fort de France	40.34	294	P	P	00 56 34.9	-2.0
CPSB	Cacapava Do Su	40.63	221	eP	P	00 56 37.9	-1.1
CPUP	Villa Florida	41.00	229	P	P	00 56 43.0	+0.8
	comp=Z,1.4nm,0.9s,baz=292,slow=6.4,SNR=6.6						
CPUP				LR	LR	01 13 09.8	
	comp=Z,64nm,18.8s,baz=260,slow=35						
	comp=Z,1.4nm,0.9s						
CPUP	Villa Florida	41.00	229	eP	P	00 56 42.5	+0.3
PLTB	Pedras Altas	41.62	220	eP	P	00 56 48.1	+0.9
ITQB	Itaqui	42.35	225	eP	P	00 56 53.9	+0.7
TSUM	Tsumeb	44.17	117	LR	LR	01 11 30.2	
	comp=Z,162nm,19.5s,baz=324,slow=31						
ESDC	Sonseca Array	44.39	22	P	P	00 57 09.8	+0.2
ESDC	Sonseca Array	44.39	22	P	P	00 57 09.9	+0.3
	comp=Z,2.9nm,1.0s,baz=213,slow=8.4,SNR=20						
ESDC				LR	LR	01 14 41.7	
	comp=Z,57nm,19.8s,baz=226,slow=35						
	comp=Z,2.9nm,1.0s						
ESBB	Sonseca Array	44.39	22	P	P	00 57 10.2	+0.7
ESBB				IAmb	IAmb	00 57 12.5	
	comp=Z,8.6nm,1.2s						
HUMP	Col San Antoni	45.74	297	P	P	00 57 19.6	-0.9
PDPR	Patillas Dam,	45.85	297	P	P	00 57 20.0	-1.4
PDPR				IAmb	IAmb	00 57 34.8	
	comp=Z,9.5nm,0.8s						
SJG	San Juan	46.00	297	LR	LR	01 12 39.0	
	comp=Z,28nm,20.1s,baz=116,slow=31						
LPAZ	La Paz	46.38	248		P	00 57 24.8	-1.5
LPAZ	La Paz	46.38	248	P	P	00 57 26.9	+0.6
	comp=Z,9.9nm,0.8s,baz=65,slow=4.4,SNR=27						
LPAZ				LR	LR	01 15 42.4	
	comp=Z,89nm,20.8s,baz=77,slow=35						
	comp=Z,9.9nm,0.8s						
LPAZ	La Paz	46.38	248	eP	P	00 57 26.6	+0.3
KEST	Kesra	47.82	37	P	P	00 57 38.8	+2.1
KEST				IAmb	IAmb	00 57 42.3	
	comp=Z,5.2nm,0.9s						
KEST	Kesra	47.82	37	P	P	00 57 36.5	-0.2
	comp=Z,1.8nm,1.0s,baz=120,slow=4.9,SNR=4.9						
KEST				LR	LR	01 18 37.0	
	comp=Z,272nm,18.3s,baz=335,slow=37						
	comp=Z,1.8nm,1.0s						
SDV	Santo Domingo	47.89	283	LR	LR	01 16 49.0	
	comp=Z,55nm,18.9s,baz=109,slow=35						
CEST	Esterri de Car	48.93	24	P	P	00 57 46.3	+1.1
CEST				IAmb	IAmb	00 57 48.0	
	comp=Z,6.2nm,1.0s						
PB09	IPOC Station P	48.95	242	P	P	00 57 44.9	-0.8
RUSC	La Rusia	49.89	279	P	P	00 57 51.6	-1.8
ROSC	El Rosal	51.00	277	LR	LR	01 18 18.5	
	comp=Z,72nm,18.8s,baz=94,slow=34						
VAE	Valguarnera	52.05	38	LR	LR	01 20 45.4	
	comp=Z,331nm,19.1s,baz=276,slow=37						
LSZ	Lusaka	53.00	108	LR	LR	01 16 28.4	
	comp=Z,73nm,21.4s,baz=284,slow=31						
LBTB	Lobatse	53.08	121	LR	LR	01 17 34.4	
	comp=Z,86nm,19.3s,baz=292,slow=32						
BNI	Bardonecchia	53.24	27		P	00 58 18.9	+1.3
BNI				IAmb	IAmb	00 58 20.7	
	comp=Z,6.8nm,0.9s						
CLF	Chambon-Foret	53.86	21	P	P	00 58 22.1	+0.3
NNA	Nana	53.88	256	LR	LR	01 20 18.5	
	comp=Z,95nm,20.7s,baz=67,slow=35						
BOSA	Boshof	54.03	125	P	P	00 58 24.0	+0.3
BOSA	Boshof	54.03	125	LR	LR	01 16 39.2	
	comp=Z,116nm,21.7s,baz=276,slow=31						
MATP	Matopo	54.37	114	LR	LR	01 17 56.8	
	comp=Z,47nm,21.4s,baz=246,slow=32						
SENIN	Lac Senin/Sane	54.53	26		P	00 58 26.6	-0.4
SENIN				IAmb	IAmb	00 58 29.1	
	comp=Z,5.7nm,0.8s						
ZCCA	Zocca	54.74	30	P	P	00 58 29.9	+1.4
FDMO	Fiordimonte	54.91	32		P	00 58 29.7	0.0
FDMO				IAmb	IAmb	00 58 31.8	
	comp=Z,7.1nm,0.9s						
ECH	Echery	55.92	24	P	P	00 58 37.1	+0.3
ECH				IAmb	IAmb	00 58 38.7	
	comp=Z,7.7nm,1.2s						
DAVOX	Davos/Dischmat	56.00	27	LR	LR	01 23 06.3	
	comp=Z,70nm,18.1s,baz=259,slow=37						
FUORN	Ofenpass-Fuorn	56.06	28	P	P	00 58 37.6	-0.6
DAVA	Damuels	56.38	27	iP	P	00 58 40.8	+0.4
	comp=Z,6.5nm,0.7s						
BFO	Black Forest	56.50	25	P	P	00 58 41.2	+0.2
BFO				IAmb	IAmb	00 58 42.6	
	comp=Z,11nm,1.2s						
FETA	Feichten	56.57	28	iP	P	00 58 42.1	+0.4
	comp=Z,7.0nm,0.9s						
RETA	Reutte	56.93	27	iP	P	00 58 45.0	+0.9
	comp=Z,7.3nm,1.3s						
SQTA	Sankt Quirin	56.94	28	iP	P	00 58 44.8	+0.5
	comp=Z,6.8nm,1.0s						
MOTA	Moosalm	56.98	28	iP	P	00 58 45.4	+0.9
	comp=Z,5.1nm,1.2s						
WTTA	Wattenberg	57.17	28	eP	P	00 58 46.8	+0.8
	comp=Z,5.0nm,1.2s						
WATA	Walderalm	57.19	28	eP	P	00 58 48.3	+2.2
	comp=Z,2.2nm,0.4s						
ABTA	Abfaltersbach	57.21	29	iP	P	00 58 47.0	+0.8
	comp=Z,7.0nm,1.3s						
MYKA	Terra Mystica	57.68	30	iP	P	00 58 50.4	+1.0
	comp=Z,1.8nm,0.5s						
LESA	Schwarzleotal	57.78	28	iP	P	00 58 50.3	+0.2
	comp=Z,3.9nm,0.9s						
PLCA	Paso Flores	57.92	221	LR	LR	01 22 35.7	
	comp=Z,69nm,20.0s,baz=121,slow=35						
OBKA	Obir	58.05	30	iP	P	00 58 53.4	+1.3
	comp=Z,7.2nm,1.4s						
FNA	Florina	58.36	39	P	P	00 58 54.3	0.0
BIOA	Bad Ischl, Aus	58.42	29	eP	P	00 58 56.0	+1.5
	comp=Z,1.3nm,0.6s						
MOA	Molln	58.84	29	eP	P	00 58 59.0	+1.6
	comp=Z,2.6nm,0.9s						
ARSA	Arzberg	59.05	30	iP	P	00 58 59.0	+0.1
	comp=Z,1.7nm,0.7s						
GEC2	GERESS Array S	59.27	28	P	P	00 59 00.1	-0.4
GERES	GERESS Array B	59.27	28	P	P	00 59 00.5	0.0
	comp=Z,1.8nm,0.9s,baz=226,slow=7.3,SNR=12						
GERES				LR	LR	01 23 40.0	
	comp=Z,69nm,19.6s,baz=258,slow=35						
	comp=Z,1.8nm,0.9s						
KHC	Kasperske Hory	59.42	27	eP	P	00 59 01.5	0.0
CKRC	Cesky Krumlov	59.54	28	AMS	AMS	01 25 20.0	
	comp=Z,100nm,16.6s						
CONA	Conrad Observa	59.67	30	iP	P	00 59 03.6	+0.3
	comp=Z,3.2nm,1.4s						
RONA	Rosalia, Austr	59.73	30	eP	P	00 59 04.3	+0.7
	comp=Z,2.2nm,0.6s						
PRU	Pruhonice	60.47	27	AMS	AMS	01 23 10.0	
	comp=Z,100nm,19.3s						
PRA	Prague	60.48	27	AMS	AMS	01 24 10.0	
	comp=Z,100nm,21.7s						
CLL	Collm	60.73	25	iP	P	00 59 11.7	+1.3
CLL				eS	S	01 07 28.0	+1.0
CLL				ex	x	01 10 25.0	
VRAC	Vranov	60.96	29	LR	LR	01 26 38.8	
	comp=Z,61nm,18.3s,baz=226,slow=37						
UPC	Upice	61.51	28	AMS	AMS	01 23 50.0	
	comp=Z,100nm,17.0s						
JTS	Las Juntas de	62.07	282	LR	LR	01 26 48.4	
	comp=Z,28nm,18.2s,baz=78,slow=37						
EIL	Elat	63.61	56	LR	LR	01 27 28.8	
	comp=Z,64nm,18.5s,baz=248,slow=36						
MLR	Muntele Rosu	63.73	37	LR	LR	01 28 17.8	
	comp=Z,164nm,19.3s,baz=268,slow=37						
HODGE	Hodges	65.15	309	P	P	00 59 39.4	-0.7
HODGE				IAmb	IAmb	00 59 44.6	
	comp=Z,6.3nm,0.9s						
BORG	Borgarnes	65.72	1	LR	LR	01 21 14.2	
	comp=Z,53nm,20.2s,baz=164,slow=30						
SCHQ	Schefferville	66.05	334	LR	LR	01 24 09.8	
	comp=Z,58nm,20.2s,baz=132,slow=32						
BR131	Keskin Array S	66.11	45	P	P	00 59 46.8	+0.3
BR131				IAmb	IAmb	00 59 52.1	
	comp=Z,5.6nm,1.4s						
BRTR	Keskin Array B	66.11	45	P	P	00 59 47.0	+0.5
	comp=Z,1.6nm,0.8s,baz=236,slow=5.8,SNR=10						
	comp=Z,1.6nm,0.8s						
TKL	Tuckaleechee C	66.80	310	LR	LR	01 22 48.0	
	comp=Z,64nm,21.6s,baz=134,slow=30						
SADO	Sadowa	67.07	320	LR	LR	01 23 46.0	
	comp=Z,47nm,18.4s,baz=138,slow=31						
BNN	Bunyan	67.37	47	P	P	00 59 54.2	-0.2
NB2	NORSAR Subarra	67.49	18	P	P	00 59 55.2	+0.5
	comp=Z,2.0nm,0.7s,baz=217,slow=6.5						
NOA	NORSAR Array B	67.49	18	P	P	00 59 55.6	+0.9
	comp=Z,1.1nm,0.7s,baz=216,slow=6.4,SNR=7.5						
NOA				LR	LR	01 26 27.5	
	comp=Z,31nm,21.1s,baz=210,slow=33						
	comp=Z,1.1nm,0.7s						
HFS	Hagfors	67.57	19	P	P	00 59 55.9	+0.7
	comp=Z,1.8nm,0.7s,baz=210,slow=8.6,SNR=11						
HFS				LR	LR	01 27 48.9	
	comp=Z,50nm,21.4s,baz=230,slow=34						
	comp=Z,1.8nm,0.7s						
KIEV	Kiev	68.31	33	P	P	00 59 59.5	-0.5
KIEV				IAmb	IAmb	01 00 03.9	
	comp=Z,2.8nm,0.7s						
AKASG	Malin Array Be	68.32	33	P	P	00 59 59.5	-0.5
	comp=Z,2.4nm,0.8s,baz=241,slow=6.4,SNR=9.0						
AKASG				LR	LR	01 30 32.2	
	comp=Z,39nm,18.9s,baz=224,slow=36						
	comp=Z,2.4nm,0.8s						
AKBB	Malin Array Si	68.32	33	P	P	00 59 59.2	-0.8
AKBB				IAmb	IAmb	01 00 03.9	
	comp=Z,3.2nm,0.7s						
SWET	Sewanee	68.33	309	P	P	00 59 59.6	-0.9
SWET				IAmb	IAmb	01 00 04.7	
	comp=Z,5.4nm,0.9s						
U49A	Red Boiling Sp	68.61	310	P	P	01 00 02.1	0.0
U49A				IAmb	IAmb	01 00 06.5	
	comp=Z,7.4nm,0.9s						
V48A	Smith Brothers	69.18	309	P	P	01 00 05.2	-0.5
SFJD	Kangerlussuaq	70.58	349	LR	LR	01 23 00.8	
	comp=Z,28nm,19.3s,baz=170,slow=29						
SNAA	Sanae	71.71	173	P	P	01 00 21.1	+0.6
SNAA	Sanae	71.71	173	P	P	01 00 21.3	+0.7
	comp=Z,1.0nm,0.8s,baz=289,slow=3.2,SNR=3.6						
	comp=Z,1.0nm,0.8s						
FINES	FINESS Array B	72.90	23	P	P	01 00 28.6	+0.9
	comp=Z,2.3nm,0.6s,baz=224,slow=5.3,SNR=14						
FINES				LR	LR	01 32 04.5	
	comp=Z,49nm,20.6s,baz=235,slow=36						
	comp=Z,2.3nm,0.6s						
P38A	Dawn	75.35	311	P	P	01 00 43.0	+0.5
P38A				IAmb	IAmb	01 00 45.3	
	comp=Z,4.8nm,0.9s						
BELA	Belgrano 2	76.93	182	P	P	01 00 49.2	-1.7
ARCES	ARCESS Array B	77.74	16	LR	LR	01 35 17.3	
	comp=Z,18nm,18.2s,baz=276,slow=36						
ECSD	EROS Data Cent	78.54	315	P	P	01 00 60.0	-0.5
ECSD				IAmb	IAmb	01 01 04.8	
	comp=Z,5.6nm,0.9s						
BELG	Belogornoye	79.51	36	LR	LR	01 36 40.2	
	comp=Z,43nm,20.7s,baz=242,slow=36						
ULM	Lac du Bonnet	79.58	322	LR	LR	01 31 38.3	
	comp=Z,55nm,18.9s,baz=70,slow=32						
OZNA	Ozona	79.87	302	P	P	01 01 07.0	-1.0
OZNA				IAmb	IAmb	01 01 13.7	
	comp=Z,11nm,1.1s						
TXAR	Lajitas Array	81.87	300	P	P	01 01 19.2	+0.4
	comp=Z,2.3nm,0.9s,baz=124,slow=6.5,SNR=17						
	comp=Z,2.3nm,0.9s						
KIRV	Kirov	82.15	30	LR	LR	01 38 18.2	
	comp=Z,46nm,21.4s,baz=262,slow=36						
VHRN	Van Horn	83.15	301	P	P	01 01 24.8	-0.7
VHRN				IAmb	IAmb	01 01 30.0	

	comp=Z,7.8nm,0.9s						
BLKN	Baker Lake	83.42	335	P	P	01 01 26.8	+0.8
BLKN				IAmb	IAmb	01 01 29.9	
	comp=Z,3.7nm,0.9s						
ANMO	Albuquerque	84.76	305	P	P	01 01 33.0	-0.7
ANMO	Albuquerque	84.76	305	LR	LR	01 34 43.2	
	comp=Z,64nm,20.9s,baz=177,slow=32						
AKTO	Aktyubinsk	85.50	39	LR	LR	01 44 14.2	
	comp=Z,29nm,18.4s,baz=211,slow=39						
ARTI	Arti	86.47	33	LR	LR	01 42 12.0	
	comp=Z,26nm,18.1s,baz=256,slow=37						
PV18	Skein Mesa, Pa	86.98	308	P	P	01 01 45.4	+0.7
PV18				IAmb	IAmb	01 01 49.3	
	comp=Z,6.7nm,0.9s						
PDAR	Pinedale Array	87.76	313	P	P	01 01 48.4	-0.1
	comp=Z,1.1nm,0.9s,baz=104,slow=6.3,SNR=7.6						
PDAR				LR	LR	01 35 23.0	
	comp=Z,33nm,21.9s,baz=102,slow=32						
	comp=Z,1.1nm,0.9s						
QSPA	South Pole Qui	88.98	180	P	P	01 01 54.6	+1.1
QSPA	South Pole Qui	88.98	180	P	P	01 01 53.4	-0.1
	comp=Z,1.9nm,0.9s,baz=151,slow=1.7,SNR=8.1						
	comp=Z,1.9nm,0.9s						
YKA	Yellowknife Ar	91.43	332	P	P	01 02 04.8	0.0
	comp=Z,2.0nm,0.8s,baz=89,slow=4.8,SNR=19						
YKA				LR	LR	01 39 17.4	
	comp=Z,73nm,20.2s,baz=94,slow=33						
	comp=Z,2.0nm,0.8s						
YKAW3	Yellowknife Wh	91.44	332	P	P	01 02 05.6	+0.8
YKAW3				IAmb	IAmb	01 02 08.4	
	comp=Z,3.9nm,0.8s						
NEW	Newport	93.16	318	LR	LR	01 38 50.4	
	comp=Z,70nm,21.3s,baz=134,slow=32						
BVAR	Borovoye Array	93.29	37	LR	LR	01 47 25.3	
	comp=Z,24nm,19.1s,baz=247,slow=38						
AAK	Ala-Archa	96.71	47	LR	LR	01 50 03.4	
	comp=Z,26nm,20.0s,baz=289,slow=38						
INK	Inuvik	98.30	339	LR	LR	01 44 07.3	
	comp=Z,25nm,19.2s,baz=228,slow=34						
BBB	Bella Bella	99.74	323	LR	LR	01 43 59.1	
	comp=Z,52nm,20.0s,baz=144,slow=33						
PZH	PanZhiHua	121.79	59	PKP	PKPdf	01 07 53.5	-0.5
STKA	Stephens Creek	144.33	158	PKP	PKPdf	01 08 36.8	+1.1
	comp=Z,1.0nm,0.6s,baz=315,slow=1.4,SNR=2.9						
ASAR	Alice Springs	147.07	140	PKPbc	PKPbc	01 08 42.9	+0.1
	comp=Z,2.2nm,0.5s,baz=213,slow=2.2,SNR=28						
WRA	Warramunga Arr	149.92	135	PKPbc	PKPbc	01 08 49.1	-1.1
	comp=Z,0.6nm,0.6s,baz=234,slow=2.5,SNR=7.2						

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*NNC **26** 01:19:52.4±2.3, 36°.83N×70°.84E, h147^{km}±39^{km}, mb2.7, mpv3.6, Error ellipse: s-maj=21.3km s-min=15.5km az=19.0*

*IDC **26** 01:19:52.4±8.4, 36°.84N×70°.89E, h203^{km}±56^{km}, mb3.3/4, mbtmp3.7/10, MS3.0/1, Error ellipse: s-maj=82.5km s-min=42.8km az=170.0*

ISC 26 01:19:52.2±2.1**, 36°.8N**±0°.2×**70°.9E**±0°.1**, h200^{km}, n17, σ0^{s}69**/19**, mb3.7**/4**, 4C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.27	357	⇓P	Pn	01 21 23.1	+0.2
	1.0nm,0.3s,baz=180,slow=12,SNR=24						
KK31				⇑S	Sn	01 22 33.5	-1.3
	4.4nm,0.5s,baz=190,slow=22,SNR=15						
AAK	Ala-Archa	6.41	24	P	Pn	01 21 25.5	+0.6
	4.9nm,0.3s,baz=170,slow=5.7,SNR=9.9						
AAK				S	Sn	01 22 38.5	+0.2
	2.7nm,0.3s,baz=168,slow=19,SNR=9.7						
AAK	Ala-Archa	6.41	24	⇓P	Pn	01 21 25.3	+0.4
AAK				⇑S	Sn	01 22 38.5	+0.2
TKM2	Tokmak 2	7.06	29	⇑P	Pn	01 21 33.1	-0.2
	5.0nm,0.6s						
MK31	Makanchi Array	13.05	37	P	P	01 22 52.9	-0.5
	0.1nm,0.4s,baz=204,slow=9.8,SNR=4.6						
MKAR	Makanchi Array	13.05	37	P	Pn	01 22 50.2	0.0
	0.1nm,0.3s,baz=233,slow=14,SNR=2.3						
AB31	Akbulak array	14.77	331	⇑P	P	01 23 13.6	+1.2
	0.4nm,0.5s,baz=148,slow=11,SNR=15						
KURBB	Kurchatov Arra	14.82	19	P	P	01 23 13.1	+0.1
	0.1nm,0.3s,baz=208,slow=11,SNR=2.1						
BVAR	Borovoye Array	16.20	359	P	P	01 23 28.6	+0.5
	0.8nm,0.4s,baz=172,slow=10,SNR=9.0						
AKTO	Aktyubinsk	16.47	330	P	Pn	01 23 32.1	+0.2
	1.3nm,0.3s,baz=146,slow=8.1,SNR=7.9						
ZALV	Zalesovo Beam	19.64	25	P	P	01 24 05.7	+0.3
	0.6nm,0.3s,baz=224,slow=12,SNR=3.0						
FINES	FINESS Array B	37.18	326	P	P	01 26 43.4	-0.3
	0.7nm,0.3s,baz=119,slow=9.3,SNR=13						
	0.7nm,0.3s						
ARCES	ARCESS Array B	40.82	337	P	P	01 27 13.7	0.0
	3.0nm,0.8s,baz=115,slow=8.1,SNR=7.2						
	3.0nm,0.8s						
HFS	Hagfors	42.77	322	P	P	01 27 29.1	-0.6
	1.4nm,0.6s,baz=99,slow=9.8,SNR=6.9						
	1.4nm,0.6s						
NB2	NORSAR Subarra	44.08	323	P	P	01 27 39.1	-1.1
	comp=Z,0.2nm,0.5s,baz=96,slow=7.9						
NOA	NORSAR Array B	44.08	323	P	P	01 27 39.0	-1.1
	comp=Z,0.2nm,0.5s,baz=95,slow=7.9,SNR=3.5						
	comp=Z,0.2nm,0.5s						
BORG	Borgarnes	58.29	330	LR	LR	01 57 48.5	
	comp=Z,13nm,19.5s,baz=230,slow=39						

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*MEX **26** 01:19:57.9±0.5, 31°.58N×114°.48W, h16^{km}±15^{km}, MD3.8*

*ECX **26** 01:19:58.3±0.3, 31°.60N×114°.50W, h9^{km}±5^{km}, ML2.9*

ISC 26 01:19:55.6±2.4**, 31°.69N**±0°.06×**114°.52W**±0°.05**, h11^{km}**±18^{km}**, n11, σ0^{s}54**/21**, 1C-2D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECBX	El Chinero	0.50	245	⇑eP	Pb	01 20 06.8	+0.4
ECBX				eS	Sb	01 20 13.7	+0.1
ECBX				IAML		01 20 14.1	
	comp=E,632nm,0.3s						
ECBX				⇓e		01 20 14.1	
RITX	Riito Sonora	0.61	322	eP	Pn	01 20 10.3	+0.2
RITX				eS	Sn	01 20 19.9	0.0
SFX	San Felipe	0.70	204	eP	Pb	01 20 09.6	-0.2
SFX				eS	Sg	01 20 18.5	0.0
RHX	Rio Hardy	0.79	305	eP	Pn	01 20 11.7	-0.9
RHX				eS	Sn	01 20 23.3	-1.0
SPIG	San Pedro Mart	1.03	232	eP	Pn	01 20 15.7	-0.5
SPIG				eS	Sb	01 20 29.4	+0.3
SPIG	San Pedro Mart	1.03	232	eP	Pb	01 20 15.3	-0.2
SPIG				i S	Sb	01 20 29.5	+0.3
ALAMX	Rancho Alamar	1.06	288	eP	Pn	01 20 17.6	+1.2
VTX	Valle De La Tr	1.12	255	eP	Pn	01 20 17.0	-0.2
VTX				eS	Sb	01 20 32.0	+0.5
SQX	San Quintin	1.60	227	eP	Pb	01 20 25.0	-0.1
SQX				eS	Sb	01 20 45.9	+0.5
SQX				IAML		01 20 46.8	
	comp=E,193nm,0.2s						
SQX				⇓e		01 20 46.8	
TJIG	Tijuana	1.98	293	eP	Pb	01 20 31.2	-0.4
TJIG				eS	Sn	01 20 54.0	+0.3
TUC	Tucson	3.23	78	eP	Pn	01 20 46.4	+0.1
TUC				eS	Sn	01 21 24.9	+0.1

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*JMA **26** 01:21:02.4±0.1, 24°N±2°×122°6E±0°.5, h70^{km}±2^{km}, MV2.0/11, NW OFF ISHIGAKIJIMA IS*

*TAP **26** 01:21:02.1, 24°.36N×122°.65E, h74^{km}, ML2.7, C*

ISC 26 01:21:02.2±1.3**, 24°.30N**±0°.04×**122°.65E**±0°.03**, h76^{km}**±7^{km}**, n52, σ0^{s}79**/101**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS3	EOS3	0.30	267	P	Pn	01 21 14.5	+0.7
EOS3				S	Sn	01 21 24.0	+1.6
JYNG	Yonagunijimaku	0.31	61	eP	Pn	01 21 13.9	-0.2
JYNG				eS	Sn	01 21 22.2	-0.6
EOS4	EOS4	0.35	239	eP	Pn	01 21 14.2	+0.3
EOS4				i S	Sn	01 21 23.6	+1.0
YOJ	Yonaguni jima	0.37	64	eP	Pn	01 21 14.5	0.0
YOJ				eS	Sn	01 21 22.8	-0.6
YOJ	Yonaguni jima	0.37	64	P	Pn	01 21 14.2	-0.3
YOJ				S	Sn	01 21 22.8	-0.6
EOS2	EOS2	0.40	287	eP	Pn	01 21 15.1	+0.5
EOS2				eS	Sn	01 21 25.0	+1.3
TWC	Suao	0.79	293	eP	Pn	01 21 17.9	-0.6
TWC				eS	Sn	01 21 29.6	-1.0
EWUT	Wuta	0.81	280	eP	Pn	01 21 19.0	+0.3
EWUT				eS	Sn	01 21 30.6	-0.4
ENA	Nanau	0.84	279	eP	Pn	01 21 19.7	+0.6
ENA				eS	Sn	01 21 31.6	0.0
NACB	Ninganchiao	0.97	263	P	Pn	01 21 20.2	-0.4
NACB				S	Sn	01 21 33.2	-1.3
IRIF	Iriomote-Funau	0.99	88	P	Pn	01 21 20.8	0.0
IRIF				S	Sn	01 21 35.0	+0.3
TWD	Chiawan	0.99	257	P	Pn	01 21 20.3	-0.5
TWD				S	Sn	01 21 33.7	-1.0
TIPB	Shuangxi	1.00	312	P	Pn	01 21 20.7	-0.4
TIPB				S	Sn	01 21 33.9	-1.3
ENTT	Nioudou	1.04	289	P	Pn	01 21 21.8	+0.3
ENTT				eS	Sn	01 21 35.8	-0.2
LATG	Datong	1.05	283	P	Pn	01 21 21.8	+0.1
LATG				eS	Sn	01 21 36.2	-0.1
TEYL	Yanliau Villag	1.05	246	eP	Pn	01 21 21.5	-0.2
TEYL				eS	Sn	01 21 35.9	-0.3
SXI1	Grass Mountain	1.06	318	eP	Pn	01 21 20.8	-1.0
SXI1				eS	Sn	01 21 35.4	-1.0
FUSB	Fushanzhiwuyua	1.07	295	eP	Pn	01 21 22.1	+0.2
FUSB				S	Sn	01 21 36.4	-0.3
ETLH	Xiulin Townshi	1.07	265	eP	Pn	01 21 21.7	-0.2
ETLH				eS	Sn	01 21 35.9	-0.8
HATJ	Hateruma jima	1.08	103	eP	Pn	01 21 22.9	+0.8
NNSB	Datong	1.16	276	P	Pn	01 21 23.1	-0.1
NNSB				S	Sn	01 21 37.9	-0.9
LXIB	Xiulin Townshi	1.16	256	eP	Pn	01 21 22.0	-1.2
LXIB				eS	Sn	01 21 37.8	-1.1
YHNB	Yeheng	1.22	288	P	Pn	01 21 24.0	+0.3
YHNB				S	Sn	01 21 39.5	-0.5
NSK	Sanguang	1.23	288	P	Pn	01 21 24.2	+0.2
NSK				S	Sn	01 21 39.7	-0.7
JKRS	Kuro-shima	1.24	93	eP	Pn	01 21 24.5	+0.5
JKRS				eS	Sn	01 21 41.2	+0.8
WHF	Hehuan Shan	1.27	263	P	Pn	01 21 24.9	+0.1
WHF				eS	Sn	01 21 40.9	-0.9
EGFH	Guangfu	1.28	241	eS	Sn	01 21 40.8	-0.5
FUSS	Fushou	1.28	268	eP	Pn	01 21 24.9	+0.1
FUSS				eS	Sn	01 21 41.9	+0.2
WARBT	Fenglin Townsh	1.29	243	eP	Pn	01 21 24.1	-0.6
WARBT				eS	Sn	01 21 40.0	-1.6
TDCB	Techi	1.36	268	eS	Sn	01 21 43.3	-0.1
HGSD	Ruisui	1.38	235	eP	Pn	01 21 25.6	-0.2
HGSD				eS	Sn	01 21 42.7	-0.9
OWD	Renai	1.39	256	eP	Pn	01 21 26.4	+0.3
OWD				eS	Sn	01 21 43.0	-1.1
WUSB	Renai	1.43	258	eP	Pn	01 21 27.3	+0.7
WUSB				S	Sn	01 21 44.8	-0.2
NFF	Wufeng Townshi	1.43	284	eP	Pn	01 21 27.3	+0.7
NFF				S	Sn	01 21 45.2	+0.3
EHYH	Wanrong	1.44	236	eP	Pn	01 21 26.4	-0.2
EHYH				eS	Sn	01 21 44.3	-0.7
EHY	Hungye	1.45	237	eP	Pn	01 21 27.1	+0.3
EHY				eS	Sn	01 21 44.6	-0.6
VWDT	VWDT	1.48	249	eP	Pn	01 21 27.9	+0.8
VWDT				eS	Sn	01 21 45.5	-0.4
LIOB	Emei	1.53	283	eP	Pn	01 21 28.6	+0.9
LIOB				eS	Sn	01 21 47.9	+0.8
YULB	Yu-li	1.53	234	eP	Pn	01 21 27.2	-0.7
YULB				eS	Sn	01 21 45.7	-1.5
NSTT	Nanjuang	1.54	283	eP	Pn	01 21 28.4	+0.5
NSTT				eS	Sn	01 21 47.5	+0.3
JISG	Ishigakijimahi	1.54	79	eP	Pn	01 21 27.9	0.0
JISG				eS	Sn	01 21 46.4	-0.9
WHP	Taichung City	1.56	269	eP	Pn	01 21 29.1	+1.0
WHP				eS	Sn	01 21 47.7	-0.1
TWF1	Yuli	1.56	233	eP	Pn	01 21 28.1	0.0
TWF1				eS	Sn	01 21 46.5	-1.3
SSLB	Suanglung	1.63	252	eP	Pn	01 21 30.0	+0.9
SSLB				eS	Sn	01 21 49.6	+0.1
SMLT	Sun Moon Lake	1.65	256	eP	Pn	01 21 31.5	+2.0
SMLT				eS	Sn	01 21 51.1	+1.0
FULB	Fuli	1.66	229	eP	Pn	01 21 29.3	-0.2
FULB				eS	Sn	01 21 49.6	-0.5
TYC	Yuchr	1.69	257	eP	Pn	01 21 31.3	+1.5
TYC				eS	Sn	01 21 51.5	+0.8
WHYT	Xinyi Township	1.75	250	eP	Pn	01 21 31.7	+0.9
WHYT				S	Sn	01 21 53.3	+1.0
EDH	Donghe	1.81	223	eP	Pn	01 21 30.9	-0.5
EDH				i S	Sn	01 21 51.9	-1.8
ALS	Alishan	1.86	245	eP	Pn	01 21 33.9	+1.4
ALS				eS	Sn	01 21 55.9	+0.5
JTJ	Tarama	1.90	79	eP	Pn	01 21 32.7	+0.1
JTJ				eS	Sn	01 21 55.7	-0.1
CHN5	Tsauling	1.94	249	eP	Pn	01 21 34.7	+1.5
CHN5				eS	Sn	01 21 57.8	+1.0

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*NOU **26** 01:22:48.5, 24°.80S×179°.88E, h529^{km}, mb4.2/10, South of Fiji Islands*

ISC 26 01:22:47.7±1.4**, 24°.95S**±0°.09×**179°.7W**±0°.4**, h500^{km}, n36, σ1^{s}92**/33**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	6.74	7	P	P	01 24 32.1	+0.7
MSVF	Nonsavu	7.49	343	P	P	01 24 37.7	-1.4
TAVE	Taveuni	8.21	359	P	P	01 24 47.2	+0.8
GRZ	Great Barrier	12.01	199	P	P	01 25 35.1	+8.9
WIAZ	Waiheke Island	12.61	199	P	P	01 25 37.9	+5.3
MBAZ	Motutapu North	12.66	200	P	P	01 25 39.0	+5.9
MXZ	Matakaoa Point	12.69	187	P	P	01 25 35.8	+2.4
MXZ	Matakaoa Point	12.69	187	P	P	01 25 33.9	+0.5
HAZ	Te Kaha	12.95	189	P	P	01 25 36.2	+0.1
HAZ				S	S	01 27 55.6	+0.7
RUGZ	Raukumara Rang	13.17	189	P	P	01 25 35.1	-3.5
RUGZ				S	S	01 27 59.6	+0.2
TOZ	Tahuroa Road	13.38	197	P	P	01 25 42.9	+2.2
URZ	Urewera	13.54	191	P	P	01 25 42.4	0.0
URZ	Urewera	13.54	191	P	P	01 25 39.1	-3.4
MWZ	Matawai	13.55	189	P	P	01 25 42.6	0.0
RAGZ	Rawiri	13.72	190	P	P	01 25 42.6	-1.8
TLZ	Tolley Road	13.94	196	P	P	01 25 48.6	+1.9
HIZ	Hauiti	14.29	198	P	P	01 25 52.3	+2.0
HIZ	Hauiti	14.29	198	P	P	01 25 54.1	+3.8
NTVZ	North Tongarir	14.64	194	P	P	01 25 53.8	-0.3
OTVZ	Oturere	14.70	194	P	P	01 25 53.3	-1.5
NGZ	Ngauruhoe	14.73	195	P	P	01 25 53.9	-1.2
SNVZ	South Ngauruho	14.73	194	P	P	01 25 53.7	-1.4
TUVZ	Tukino	14.80	194	P	P	01 25 54.2	-1.7
FWVZ	Far West T-bar	14.82	195	P	P	01 25 54.1	-2.0
WHVZ	Whangaehu Hut	14.83	194	P	P	01 25 54.6	-1.6
TRVZ	Turoa	14.86	195	P	P	01 25 54.7	-1.9
WNVZ	Wahianoa	14.88	194	P	P	01 25 54.7	-1.9
PNHZ	Pukenui	15.31	192	P	P	01 25 57.6	-3.4
TSZ	Takapari Road	15.50	193	P	P	01 26 00.3	-2.7
DVHZ	Dannevirke	15.69	192	P	P	01 26 02.4	-2.6
BFZ	Birch Farm	16.05	191	P	P	01 26 09.2	+0.5
BFZ	Birch Farm	16.05	191	P	P	01 26 05.4	-3.3
MRZ	Mangatainoka R	16.16	193	P	P	01 26 06.6	-3.2
QRZ	Quartz Range	17.11	200	P	P	01 26 18.8	-0.8
KHZ	Kahutara	18.30	196	P	P	01 26 30.4	-0.2
JCZ	Jackson Bay	21.27	203	P	P	01 26 56.7	-1.1

GCG 26 01:22:49.7±0.6**, 14°.27N**×**91°.49W, h62^{km}**±7^{km}**, MD3.6, ML3.3, MW2.9, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG0	El Palmar, Qui	0.21	41	i P	Pn	01 23 02.2	+2.5
STG0				i S	Sn	01 23 11.6	+4.6
STG0				IAML		01 23 14.0	
	comp=E,4µm,0.1s						
STG8	El Palmar, Qui	0.23	35	i P	Pn	01 23 02.6	+2.7
STG8				eS	Sn	01 23 12.3	+5.1
STG8				IAML		01 23 13.9	
	comp=E,2µm,0.1s						
SOKI	Kika Raxquin	0.56	8	eS	Sn	01 23 15.2	+2.7
SOKI				IAML		01 23 15.8	
	comp=N,563nm,0.2s						
ESSG	Sabana Grande	0.65	79	i S	Sn	01 23 14.5	+0.8
ESSG				IAML		01 23 14.7	
	comp=N,328nm,0.1s						
FG16	Alotenango, Sa	0.95	89	i P	Pn	01 23 04.0	-3.3
FG16				i S	Sn	01 23 15.6	-4.8
FG16				IAML		01 23 23.2	
	comp=N,3µm,0.4s						

GCMT 26 01:26:06.0±0.2**, 55°.92S**±0°.02×**123°.37W**±0°.02**, h23^{km}**±1^{km}**, MW5.0**/79**, Moment Tensor Solution. s43,c55; s79,c114; Duration: 0 Moment tensor: Scale** 10^{16} **Nm;** M_{rr}-0.34±.17; $M_{\theta\theta}$2.02±.16; $M_{\phi\phi}$-1.68±.14; $M_{r\theta}$-0.08±.20; $M_{\theta\phi}$3.21±.11; $M_{\phi r}$0.24±.20; **Best double couple:** $M_0$3.71500×10^{16} **NP1:**ϕ_s105.00000°**,**δ86.00000°**,** λ-3.00000°. **NP2:**ϕ_s195.00000°**,**δ87.00000°**,** λ-176.00000°. **Principal axes:** T 3.8750**,** Plg1.0000°**,** Azm330.0000°**;** N -0.3190**,** Plg86.0000°**,** Azm232.0000°**;** P -3.5540**,** Plg4.0000°**,** Azm60.0000°**; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBI	Tubuai	37.78	319	eLR	LR	01 43 33.1	
	2µm,26.5s						
PPT2	Papeete2	43.11	322	eS	S	01 40 30.7	+1.5
	110nm,25.8s						
PPT2				eSS	SS	01 43 48.8	+6.8
	74nm,24.2s						
PPT2				eLR	LR	01 46 01.0	
	548nm,25.8s						
PPT2				eLR	LR	01 46 02.4	
	316nm,24.5s						
TAOE	Nuku Hiva Isla	48.77	338	eLR	LR	01 48 33.8	
	292nm,24.6s						
DZM	Mont Dzumac	60.94	273	eLR	LR	01 54 31.7	
	206nm,26.1s						

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*IDC **26** 01:38:45.2±1.7, 2°.34S×138°.58E, h0^{km}, mb3.3/2, mbtmp3.4/4, ML3.5/2, MS2.4/1 Error ellipse: s-maj=31.0km s-min=17.8km az=179.0*

*DJA **26** 01:38:47.0±0.7, 2°S±10°×13°9E±°, h20^{km}±6^{km}, M3.5/6, MLv3.5/6*

ISC 26 01:38:49.5±1.1**, 2°.3S**±0°.2×**138°.45E**±0°.07**, h35^{km}, n9, σ1^{s}49**/9**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	Sarmi	0.42	39	P	Pn	01 38 53.6	-5.4
GENI	Genyem	1.74	99	P	Pn	01 39 16.7	-0.5
SRPI	Serui, Papua	2.25	281	P	Pn	01 39 23.8	-0.5
SRPI				S	Sn	01 39 51.5	+0.7
JAY	Jayapura	2.26	95	Pn	Pn	01 39 23.2	-1.2
	3.1nm,0.3s,baz=226,slow=12,SNR=12						
JAY				Lg	Lg	01 39 52.5	
	3.8nm,0.3s,baz=120,slow=18,SNR=5.2						
JAY				LR	LR	01 40 36.5	
	comp=Z,76nm,18.1s,baz=122,slow=52						
	11nm,0.5s						
JAY	Jayapura	2.26	95	P	Pn	01 39 23.3	-1.2
BAKI	Biak	2.59	296	P	Pn	01 39 26.8	-2.2
WRA	Warramunga Arr	17.97	193	P	Pn	01 42 55.5	-1.1
	0.3nm,0.3s,baz=17,slow=12,SNR=7.7						
	0.6nm,0.4s						
ASAR	Alice Springs	21.67	191	P	P	01 43 38.1	+0.8
	0.5nm,0.4s,baz=16,slow=12,SNR=7.3						
	0.5nm,0.4s						
MKAR	Makanchi Array	69.32	322	P	P	01 49 55.2	+1.7
	0.2nm,0.5s,baz=115,slow=10,SNR=2.9						
	0.2nm,0.5s						

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*IDC **26** 01:38:53.5±0.9, 9°.15S×75°.72W, h0^{km}, mb4.0/7, mbtmp4.0/10, ML3.9/3, MS3.2/4, Error ellipse: s-maj=32.5km s-min=17.5km az=47.0*

*NEIC **26** 01:38:55.4±1.4, 9°.24S±0°.08×75°.78W±0°.09, h10^{km}±1^{km}, mb4.6/36, Error ellipse: s-maj=16.4km s-min=11.4km az=119.0*

*VAO **26** 01:38:57.1±2.3, 9°.44S×75°.69W, h20^{km}±16^{km}, mb4.5*

ISC 26 01:38:54.8±0.5**, 9°.26S**±0°.05×**75°.73W**±0°.06**, h10^{km}, n117, σ1^{s}47**/115**, mb4.5**/22**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	2.92	202		Pn	01 39 43.1	+1.7
NNA	Nana	2.92	202	Pn	Pn	01 39 43.8	+2.4
	34nm,0.3s,baz=3.6,slow=18,SNR=38						
NNA				Lg	Lg	01 40 22.9	
	72nm,0.3s,baz=280,slow=17,SNR=5.0						
	68nm,0.3s						
NNA	Nana	2.92	202	P	Pn	01 39 43.7	+2.3
NNA				S	Sb	01 40 20.7	-2.3
CZSB	Cruzeiro do Su	3.36	63	Pn	Pn	01 39 49.6	+2.3
CZSB	Cruzeiro do Su	3.36	63	eP	Pn	01 39 50.2	+2.8
CZSB	Cruzeiro do Su	3.36	63	P	Pn	01 39 50.1	+2.8
ATAH	Atahualpa	3.37	308	Pn	Pn	01 39 51.0	+3.1
	29nm,0.3s,baz=121,slow=10,SNR=98						
ATAH				Lg	Lg	01 40 38.7	
	30nm,0.3s,baz=69,slow=7.9,SNR=4.8						
MCRA	Macar, Loja	6.41	319	P	Pn	01 40 28.1	-1.3
	802nm48nm,0.8s						
COHC	Cochancay	7.60	332	P	Pn	01 40 46.5	+0.8
	1µm46nm,0.4s						
TBTG	Tabatinga, AM	7.67	49	Pn	Pn	01 40 48.6	+2.0
TBTG	Tabatinga, AM	7.67	49	eP	Pn	01 40 49.1	+2.5
TBTG	Tabatinga, AM	7.67	49	P	Pn	01 40 51.4	+4.8
	2µm137nm,0.5s						
PIAT	Ana Tenorio	8.58	343	P	Pn	01 40 59.5	0.0
	910nm67nm,0.6s						
PPLP	Puerto Lpez	9.16	326	P	Pn	01 41 07.1	0.0
	58nm,0.5s						
PTLC	Puerto Leguiza	9.41	6	P	Pn	01 41 06.4	-4.2
FLF1	Flavio Alfaro-	9.74	335	P	Pn	01 41 14.7	-0.4
	37nm,0.9s						
OTAV	Otavalo	9.81	344		Pn	01 41 17.9	+1.5
OTAV	Otavalo	9.81	344	eP	Pn	01 41 19.8	+3.4
OTAV	Otavalo	9.81	344	P	Pn	01 41 18.5	+2.1
	10nm,1.1s						
PAC1	Pacto, Paraso	9.94	342	P	Pn	01 41 22.5	+4.6
	715nm31nm,0.4s						
TULM	Tulcn-Chalpat	10.12	348	P	Pn	01 41 20.4	-0.2
	781nm55nm,1.0s						
LPAZ	La Paz	10.19	134	Pn	Pn	01 41 22.3	+0.6
LPAZ	La Paz	10.19	134	Pn	Pn	01 41 23.8	+2.1
	0.2nm,0.3s,baz=330,slow=12,SNR=8.8						
LPAZ				Lg	Lg	01 44 18.6	
	1.4nm,0.3s,baz=22,slow=5.7,SNR=5.3						
	1.6nm,0.6s						
LPAZ	La Paz	10.19	134	eP	Pn	01 41 20.6	-1.1
LPAZ	La Paz	10.19	134	P	Pn	01 41 22.9	+1.2
	6.4nm,1.0s						
GCUF	Volcan Galeras	10.54	351	P	Pn	01 41 28.4	+2.0
	26nm,0.7s						
FLOC	Florencia	10.77	0	Pn	Pn	01 41 29.4	+0.3
FLOC	Florencia	10.77	0	P	Pn	01 41 28.9	-0.3
	453nm28nm,0.8s						
CRUC	La Cruz	10.82	354	P	Pn	01 41 30.6	+0.4
PB16	IPOC Station P	10.86	147	Pn	Pn	01 41 33.2	+2.2
BBAC	Balboa, Cauca	11.30	352	P	Pn	01 41 37.9	+1.2
	33nm,0.8s						
GARC	Garzon, Huila	11.37	1	P	Pn	01 41 38.2	+0.6
MACC	Macarena, Meta	11.48	10	P	Pn	01 41 37.7	-1.2
	609nm35nm,0.6s						
POPC	Popayan, Colom	11.76	355	P	Pn	01 41 43.6	+0.7
	11nm,0.7s						
TEFE	Tefe	12.42	63	eP	Pn	01 41 51.4	-0.4
ORTC	Ortega, Tolima	13.09	2	P	Pn	01 42 00.5	-0.4
	40nm,1.1s						
YOTC	Yotoco, Valle	13.17	357	P	Pn	01 42 03.7	+1.6
	5.2nm,0.6s						
VILC	Villavicencio,	13.43	9	P	Pn	01 42 06.0	+0.3
	1µm107nm,0.6s						
CVER	Cruz Verde, Cu	13.79	7	P	Pn	01 42 12.1	+1.2
	1µm36nm,0.7s						
CHIC	Chingaza	13.94	8	P	Pn	01 42 13.8	+0.9
	19nm,0.6s						
ROSC	El Rosal	14.07	6	LR	LR	01 48 59.9	
	comp=Z,156nm,18.4s,baz=239,slow=43						
PLMC	San Jos del P	14.08	358	P	Pn	01 42 17.6	+3.1
	10nm,0.4s						
GUY2C	Guyana, Caldas	14.39	1	P	Pn	01 42 21.7	+2.6
	18nm,1.1s						
CBOC	Ciudad Bolivar	15.02	359	P	P	01 42 30.7	-2.2
	32nm,1.0s						
RUSC	La Rusia	15.28	10	Pn	Pn	01 42 30.8	-0.3
RUSC				IAmb	IAmb	01 43 05.3	
	comp=Z,18nm,0.9s						
RUSC	La Rusia	15.28	10	P	Pn	01 42 30.7	-0.5
	comp=Z,17nm,1.0s						
VILB	Vilhena	15.68	105	Pn	Pn	01 42 35.8	-0.2
VILB	Vilhena	15.68	105	eP	Pn	01 42 36.0	0.0

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PTBC  PUERTO BERRIO, 15.74   5  P      Pn     01 42 37.6 +0.8
      comp=Z,6.8nm,0.7s
SIV   San Ignacio    15.79 117  Pn     Pn     01 42 36.7 -0.8
      comp=Z,0.1nm,0.3s,baz=296,slow=11,SNR=15
SIV                             Lg     Lg     01 47 08.4
      comp=Z,0.2nm,0.3s,baz=25,slow=19,SNR=5.1
SIV                             LR     LR     01 49 53.4
      comp=Z,41nm,21.9s,baz=302,slow=42
      comp=Z,2.4nm,0.4s
MACA  Manacapuru-AM  16.13  69  Pn     Pn     01 42 41.2 -0.6
MACA                            IAmb   IAmb   01 43 03.6
      comp=Z,33nm,0.6s
MACA  Manacapuru-AM  16.13  69  eP     Pn     01 42 44.2 +2.4
ZARC  Zaragoza, Cauc 16.66   3  P      P      01 42 51.6 +0.6
BBSD  Serra de San D 16.69 120  eP     Pn     01 42 48.8 -0.1
PTLB  Pontes e Lacer 17.34 112  Pn     Pn     01 42 56.1 -0.9
PTLB  Pontes e Lacer 17.34 112  eP     Pn     01 42 55.3 -1.7
PDRB  Porto dos Gac  18.84  99  eP     P      01 43 15.0  0.0
SJCC  San Jacinto, C 19.04   2  P      Pn     01 43 18.3 +0.4
BOAV  Boa Vista      19.07  53  eP     Pn     01 43 19.1 +0.7
CLDB  Colider        19.70  96  eP     P      01 43 24.6 +0.1
NPGB  Novo Progresso 20.29  85  eP     P      01 43 30.8 -0.2
ITTB  Itaituba       20.44  78  eP     P      01 43 33.7 +1.2
SALV  Santo Antonio  20.63 111  eP     P      01 43 35.9 +1.2
MURT  Porto Murtinho 21.35 127  eP     P      01 43 41.2 -1.1
ESPN  Las Esperanzas 22.95 338  P      P      01 43 57.6 -1.8
SNDB  Serra Nova Dou 24.17  99  eP     P      01 44 13.0 +1.5
ARAG  Araguaiana, MT 24.21 108  eP     P      01 44 13.4 +1.5
CPUP  Villa Florida  24.34 137  LR     LR     01 54 07.3
      comp=Z,31nm,22.0s,baz=85,slow=37
BDFB  Brasilia       27.78 106  P      P      01 44 44.1 -0.2
      comp=Z,1.5nm,0.5s,baz=142,slow=9.5,SNR=3.9
      comp=Z,1.5nm,0.5s
IPMB  Ipameri, GO    28.09 111  eP     P      01 44 46.4 -0.6
JANB  Januaria       31.23 104  eP     P      01 45 14.4 -0.5
BSCB  Bom Sucesso    32.02 115  eP     P      01 45 21.2 -0.6
RIB01 Linhares ES    35.61 110  eP     P      01 45 51.9 -1.1
HNDO  Hondo          44.74 330  P      P      01 47 09.2 +0.7
T57A  Hurt           46.13 356  P      P      01 47 19.9 +0.6
TXAR  Lajitas Array  46.87 326  P      P      01 47 25.9 +0.5
      comp=Z,0.7nm,0.6s,baz=146,slow=8.4,SNR=7.3
      comp=Z,0.7nm,0.6s
TX31  Lajitas Ar. Si 46.87 326  P      P      01 47 26.0 +0.5
WHAR  Wooly Hollow   46.99 341  P      P      01 47 25.6 -0.6
WHAR                            IAmb   IAmb   01 47 37.5
      comp=Z,8.0nm,1.4s
LPIG  La Paz         47.32 315  LR     LR     02 05 07.7
      comp=Z,60nm,19.5s,baz=193,slow=33
ABTX  Abilene, Hawle 47.48 332  P      P      01 47 30.1  0.0
FCAR  Ozark Folk Cen 47.49 342  P      P      01 47 28.6 -1.4
FCAR                            IAmb   IAmb   01 47 51.0
      comp=Z,4.7nm,1.2s
ALPN  Alpine         47.66 327  P      P      01 47 31.0 -0.7
T42A  Van Buren      48.24 343  P      P      01 47 34.2 -1.7
T42A                            IAmb   IAmb   01 47 35.2
      comp=Z,3.5nm,0.7s
MGMO  Mountain Grove 48.70 342  P      P      01 47 38.7 -0.7
MGMO                            IAmb   IAmb   01 47 39.7
      comp=Z,4.4nm,0.8s
DKNS  Dickens        48.94 332  P      P      01 47 41.0 -0.4
DKNS                            IAmb   IAmb   01 47 50.6
      comp=Z,9.2nm,1.1s
FVM   French Village 48.96 345  P      P      01 47 40.1 -1.3
FVM                             IAmb   IAmb   01 47 41.3
      comp=Z,4.5nm,0.7s
SMWD  Samnorwood     49.84 334  P      P      01 47 47.8 -0.4
P43A  Skaggs, Pawnee 50.30 346  P      P      01 47 49.7 -1.9
N41A  Harden Midland 51.64 345  P      P      01 47 59.9 -1.7
PECO  Prince Edward  52.95 359  P      P      01 48 10.8 -0.5
PECO                            IAmb   IAmb   01 48 47.2
      comp=Z,10nm,1.0s
T25A  Trinidad       53.41 331  P      P      01 48 15.4 +0.3
SDCO  Great Sand Dun 54.42 331  P      P      01 48 22.3 -0.3
SDCO                            IAmb   IAmb   01 48 23.8
      comp=Z,3.9nm,0.8s
X16A  Lo Mia Camp, P 55.06 324  P      P      01 48 27.0 -0.2
PV02  Paradox Valley 56.37 329  P      P      01 48 36.7 +0.1
HMU   Henry Mountain 57.22 327  P      P      01 48 42.3 -0.3
HMU                             IAmb   IAmb   01 48 53.5
      comp=Z,5.5nm,1.2s
LCMT  Little Creek M 57.93 325  P      P      01 48 47.9 +0.4
DUG   Dugway, Tooele 59.97 328  P      P      01 49 01.3 -0.3
DUG                             IAmb   IAmb   01 49 03.1
      comp=Z,3.6nm,0.8s
PDAR  Pinedale Array 60.28 332  P      P      01 49 03.3 -0.6
PDAR  Pinedale Array 60.28 332  P      P      01 49 03.1 -0.7
      comp=Z,0.3nm,0.5s,baz=158,slow=5.9,SNR=5.2
      comp=Z,0.3nm,0.5s
HWUT  Hardware Ranch 60.36 330  P      P      01 49 04.0 -0.4
HWUT                            IAmb   IAmb   01 49 05.0
      comp=Z,3.4nm,0.8s
ULM   Lac du Bonnet  61.81 345  P      P      01 49 13.0 -0.7
      comp=Z,3.2nm,0.6s,baz=162,slow=8.7,SNR=6.6
      comp=Z,3.2nm,0.6s
MFID  Camas Ranch    63.84 328  P      P      01 49 27.4 -0.3
MFID                            IAmb   IAmb   01 49 29.0
      comp=Z,5.0nm,1.1s
DBIC  Dimbokro       72.38  80  P      P      01 50 22.0 +0.3
      comp=Z,4.9nm,0.5s,baz=271,slow=4.3,SNR=9.9
      comp=Z,4.9nm,0.5s
YKA   Yellowknife Ar 77.57 343  P      P      01 50 50.2 -0.5
      comp=Z,0.4nm,0.6s,baz=137,slow=5.4,SNR=3.6
      comp=Z,0.4nm,0.6s
TORD  Torodi Ar. Bea 80.03  75  P      P      01 51 05.2  0.0
ESDC  Sonseca Array  82.14  48  P      P      01 51 17.5 +1.4
      comp=Z,0.7nm,0.8s,baz=250,slow=5.7,SNR=7.3
      comp=Z,0.7nm,0.8s
L29M  L29M           86.23 336  P      P      01 51 35.9 -0.5
L29M                            IAmb   IAmb   01 51 37.5
      comp=Z,5.0nm,0.9s
BCAR  Beaver Creek A 87.69 335  P      P      01 51 43.5 +0.1
L27K  Beaver Creek,  87.71 335  P      P      01 51 44.0 +0.5
L27K                            IAmb   IAmb   01 51 44.7
      comp=Z,3.3nm,0.9s
J26L  Joseph Creek   89.02 336  P      P      01 51 48.9 -0.8
J26L                            IAmb   IAmb   01 51 54.5
      comp=Z,3.0nm,0.8s
ABKAR Akbulak array 125.69  34  PKPdf  PKPdf  01 57 57.0 +0.3
ZALV  Zalesovo Beam 132.77  16  PKPdf  PKPdf  01 58 10.6 +0.5
ZALV  Zalesovo Beam 132.77  16  PKP    PKPdf  01 58 08.6 -1.4
      comp=Z,0.6nm,0.5s,baz=319,slow=8.2,SNR=3.7
KURBB Kurchatov Arra 133.60 22  PKP    PKPdf  01 58 11.4 -0.3
      comp=Z,0.2nm,0.4s,baz=321,slow=1.3,SNR=1.9
WRA   Warramunga Arr 138.55 225 PKP    PKPdf  01 58 20.5 -1.3
      comp=Z,0.2nm,0.3s,baz=159,slow=3.8,SNR=2.5
KSRS  Korea Array   144.72 326  PKP    PKPab  01 58 30.6 -0.4
      comp=Z,0.7nm,0.3s,baz=48,slow=1.9,SNR=5.5
KSAR  Wonju Array Be 144.75 326 PKPdf  PKPab  01 58 30.4 -0.7
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*IDC **26** 01:41:06.1±4.2, 32°.48S×70°.15W, h93km±37km, mb3.5/4, mbtmp3.9/4, MS3.5/4, Error ellipse: s-maj=44.4km s-min=20.9km az=86.0*

*SJA **26** 01:41:06.0±0.8, 32°.51S×70°.02W, h120km±3km, ML4.2, MW3.9*

*NEIC **26** 01:41:07.5±1.3, 32°.49S±0°.03×70°.03W±0°.07, h109km±6km, mb4.3/6, ML4.2(GUC), Error ellipse: s-maj=8.5km s-min=4.7km az=84.0*

*GUC **26** 01:41:07.1±0.8, 32°.52S×70°.16W, h111km±3km, ML4.2*

ISC 26 01:41:08.0±0.7**, 32°.49S**±0°.03×**70°.01W**±0°.03**, h116**km±5km**, n107, σ1.s83**/137**, mb4.2**/8**, 10C-10D, Chile-Argentina border region**

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Code  Station Name     Δ°  AZ°   Phase ID        Time     Res
                                 Op     ISC     h  m  s   ISC
VA03  San Esteban     0.53 238          Pn     01 41 24.5 -1.3
VA03                             Sn     Sn     01 41 37.6 -1.7
VA03  San Esteban     0.53 238⇑iP      Pn     01 41 24.5 -1.3
VA03                             eS     Sn     01 41 37.7 -1.7
VA03                             IAML          01 41 39.6
      comp=E,16µm,0.2s
VA03  San Esteban     0.53 238  eP     Pn     01 41 24.6 -1.3
VA03                             eS     Sn     01 41 38.1 -1.2
VA03                             IAML          01 41 40.5
      comp=Z,6µm,0.2s
AUSP  Uspallata       0.59  64  eP     Pn     01 41 25.6 -0.9
AUSP                             eS     Sn     01 41 39.3 -1.1
PEL   Peldehue        0.87 221  Pn     Pn     01 41 26.8 -1.7
PEL                              Sn     Sn     01 41 41.8 -2.2
PEL   Peldehue        0.87 221  eP     Pn     01 41 26.8 -1.7
PEL                              eS     Sn     01 41 42.0 -2.0
PEL                              IAML          01 41 43.4
      comp=N,6µm,0.2s
PEL   Peldehue        0.87 221  eP     Pn     01 41 27.0 -1.5
PEL                              eS     Sn     01 41 42.5 -1.5
FCH   Farellones      0.87 195⇓iP      Pn     01 41 27.8 -1.0
FCH                              eS     Sn     01 41 43.5 -1.0
FCH                              IAML          01 41 45.0
      comp=N,5µm,0.2s
MT10  Hacienda Santa  0.90 209⇓iP      Pn     01 41 27.9 -1.1
MT10                             eS     Sn     01 41 43.5 -1.3
MT10                             IAML          01 41 45.5
      comp=E,12µm,0.5s
RTLS  Leoncito        0.92  42  eP     Pn     01 41 28.9 -0.4
RTLS                             eS     Sn     01 41 45.7 +0.5
RTLS                             IAML          01 41 47.0
      comp=Z,3µm,0.8s
MT04  Ro Olivares     0.92 186⇓iP      Pn     01 41 28.4 -0.9
MT04                             eS     Sn     01 41 44.6 -0.6
MT08  Bocatoma Ro     0.96 180  Sn     Sn     01 41 45.4 -0.4
MT08  Bocatoma Ro     0.96 180⇓iP      Pn     01 41 29.0 -0.6
MT08                             eS     Sn     01 41 44.9 -1.0
ROCH  El Roble        0.97 240⇑iP      Pn     01 41 28.2 -1.5
ROCH                             eS     Sn     01 41 44.0 -2.0
ROCH                             IAML          01 41 45.3
      comp=E,13µm,0.3s
ROC1  El Roble        0.98 240  eP     Pn     01 41 28.3 -1.5
ROC1                             eS     Sn     01 41 44.6 -1.6
ASAL  Salagasta       1.00  96  eP     Pn     01 41 29.4 -0.4
ASAL                             eS     Sn     01 41 46.3  0.0
MT14  Cerro Cal¡n     1.01 206⇓iP      Pn     01 41 28.9 -1.0
MT14                             eS     Sn     01 41 45.1 -1.4
MT14                             IAML          01 41 48.0
      comp=E,4µm,0.3s
MT16  CCHEN           1.03 204  Pn     Pn     01 41 29.1 -1.1
MT16                             Sn     Sn     01 41 45.8 -1.0
MT16  CCHEN           1.03 204  i P    Pn     01 41 29.0 -1.1
MT16                             eS     Sn     01 41 45.6 -1.2
VA06  Catapilco       1.09 266  Pn     Pn     01 41 28.8 -1.8
VA06                             Sn     Sn     01 41 45.0 -2.7
VA06  Catapilco       1.09 266⇑iP      Pn     01 41 28.8 -1.8
VA06                             eS     Sn     01 41 44.9 -2.7
VA06                             IAML          01 41 47.2
      comp=E,5µm,0.2s
MT03  Universidad Ad  1.09 202  Pn     Pn     01 41 29.7 -1.0
MT03                             Sn     Sn     01 41 47.2 -0.8
MT03  Universidad Ad  1.09 202  eP     Pn     01 41 29.7 -1.0
MT03                             eS     Sn     01 41 47.3 -0.6
MT03                             IAML          01 41 50.1
      comp=Z,3µm,0.2s
MT05  Renca           1.09 214  Pn     Pn     01 41 29.5 -1.3
MT05                             Sn     Sn     01 41 46.6 -1.3
MT05  Renca           1.09 214⇓iP      Pn     01 41 29.6 -1.0
MT05                             eS     Sn     01 41 46.7 -1.2
MT05                             IAML          01 41 47.9
      comp=N,18µm,0.4s
MT05  Renca           1.09 214  eP     Pn     01 41 29.7 -1.0
MT05                             eS     Sn     01 41 46.8 -1.1
MT05                             IAML          01 41 48.3
      comp=Z,3µm,0.1s
MT15  Las Vizcachas   1.19 200  eP     Pn     01 41 30.6 -1.1
MT15                             eS     Sn     01 41 48.8 -0.9
MT15                             IAML          01 41 50.8
      comp=N,8µm,0.3s
MT02  Curacav         1.22 231  Pn     Pn     01 41 29.9 -2.1
MT02                             Sn     Sn     01 41 47.3 -2.9
MT02  Curacav         1.22 231⇑iP      Pn     01 41 30.1 -1.9
MT02                             eS     Sn     01 41 47.6 -2.7
MT12  Pirque          1.32 200⇓iP      Pn     01 41 32.2 -1.0
MT12                             eS     Sn     01 41 51.2 -1.1
MT12                             IAML          01 41 52.4
      comp=N,5µm,0.3s
LMEL  Las Melosas     1.37 187⇓iP      Pn     01 41 33.1 -0.7
LMEL                             IAML          01 42 00.3
      comp=N,3µm,0.1s
ZON   Zonda           1.47  51  Pn     Pn     01 41 30.8 -4.1
ZON   Zonda           1.47  51  eP     Pn     01 41 26.0 -8.9
ZON                              eS     Sn     01 41 54.7 -0.7
MT09  Talagante       1.53 212  Pn     Pn     01 41 34.3 -1.4
MT09  Talagante       1.53 212  eP     Pn     01 41 34.0 -1.7
MT09                             eS     Sn     01 41 55.2 -1.5
MT09                             IAML          01 41 55.8
      comp=E,3µm,0.3s
CO02  Combarbal       1.53 326  Pn     Pn     01 41 35.2 -0.6
CO02  Combarbal       1.53 326⇑iP      Pn     01 41 35.0 -0.7
CO02                             eS     Sn     01 41 56.0 -0.7
CO02  Combarbal       1.53 326  eP     Pn     01 41 35.1 -0.6
CO02                             eS     Sn     01 41 56.6  0.0
CO02                             IAML          01 41 57.1
      comp=Z,3µm,0.2s
SJA   San Juan        1.56  53  eP     Pn     01 41 20.5  -15
SJA                              IAML          01 41 51.4
      comp=Z,444nm,0.5s
BO04  La Punta        1.58 198  Pn     Pn     01 41 35.0 -1.2
BO04  La Punta        1.58 198⇓iP      Pn     01 41 35.1 -1.1
BO04                             eS     Sn     01 41 56.7 -1.0
BO04                             IAML          01 41 58.8
      comp=E,2µm,0.3s
MT01  Popeta          1.72 217  Pn     Pn     01 41 35.9 -2.0
MT01  Popeta          1.72 217⇓iP      Pn     01 41 35.9 -2.0
MT01                             eS     Sn     01 41 57.9 -2.8
CO03  El Pedregal     1.74 340⇑iP      Pn     01 41 36.9 -1.3
CO03                             IAML          01 42 02.0
      comp=E,4µm,0.4s
CO03  El Pedregal     1.74 340  eP     Pn     01 41 37.1 -1.1
CO03                             eS     Sn     01 42 01.7 +0.6
CO03                             IAML          01 42 03.3
      comp=Z,1µm,0.5s
RTLL  Cerro Villicun  1.74  49  eP     Pn     01 41 27.0  -11
RTLL                             eP            01 41 37.9
RTLL                             eS     Sn     01 42 00.8 -0.3
CFA   Coronel Fontan  1.75  60  P      Pn     01 41 34.4 -3.8
      comp=Z,63nm,0.3s,baz=246,slow=11,SNR=326
CFA                              S      Sn     01 42 00.0 -1.1
      comp=Z,94nm,0.3s,baz=336,slow=18,SNR=30
VA05  Santo Domingo   1.78 229  Pn     Pn     01 41 37.1 -1.4
VA05  Santo Domingo   1.78 229  eP     Pn     01 41 36.5 -2.0
VA05                             IAML          01 42 06.3
      comp=E,3µm,0.4s
ACCO  Cerro Coronel   2.06  23  eP     Pn     01 41 42.4 +0.1
ACCO                             eS     Sn     01 42 08.0 -0.6
BO01  Tunca           2.10 205  Pn     Pn     01 41 40.7 -1.8
BO01  Tunca           2.10 205  eP     Pn     01 41 40.8 -1.8
BO01                             eS     Sn     01 42 08.0 -1.0
BO01                             IAML          01 42 09.1
      comp=Z,380nm,0.4s
CO06  Fray Jorge      2.27 322  Pn     Pn     01 41 43.5 -1.3
CO06  Fray Jorge      2.27 322  IAML          01 42 16.3
      comp=E,2µm,0.4s
AROD  Rodeo           2.36  11  eP     Pn     01 41 33.5  -13
AROD                             eS     Sn     01 42 17.1 +1.8
BO02  Sierra Bellavi  2.39 195  Pn     Pn     01 41 45.3 -1.1
BO02  Sierra Bellavi  2.39 195  eP     Pn     01 41 45.2 -1.1
BO02  Sierra Bellavi  2.39 195  eP     Pn     01 41 40.0 -6.3
BO02                             eP            01 41 45.4
BO02                             IAML          01 42 24.6
      comp=Z,554nm,0.2s
ACAN  Cantantal       2.40  86  eP     Pn     01 41 45.6 -0.8
ACAN                             eS     Sn     01 42 13.6 -2.3
GO04  Tololo Observa  2.40 344  eP     Pn     01 41 42.7 -4.0
GO04  Tololo Observa  2.40 344  eP     Pn     01 41 43.0 -3.7
GO04                             eS     Sn     01 42 16.9 +0.7
ACDV  Cuesta del Vie  2.43  19  eP     Pn     01 41 33.5  -13
ACDV                             eS     Sn     01 42 18.0 +1.2
ACDV                             IAML          01 42 22.2
      comp=Z,173nm,0.9s
BO03  Pichilemu       2.58 219  eP     Pn     01 41 45.8 -2.9
RFA   San Rafael      2.62 151  eP     Pn     01 41 42.5 -6.8
RFA                              eP            01 41 43.0
RFA                              eP            01 41 48.2
RFA                              eS     Sn     01 42 18.7 -2.3
RFA                              IAML          01 42 20.0
      comp=Z,311nm,0.6s
CO05  La Serena       2.77 337  Pn     Pn     01 41 47.3 -3.9
CO05  La Serena       2.77 337  IAML          01 42 24.3
      comp=N,1µm,0.3s
AVFE  Valle Fertil    2.84  51  eP     Pn     01 41 39.0  -13
AVFE                             eS     Sn     01 42 09.7  -17
AVFE                             IAML          01 42 25.9
      comp=Z,124nm,0.8s
ACHE  Chepes          3.14  66  eP     Pn     01 41 55.3 -0.9
ACHE                             eS     Sn     01 42 26.5 -6.9
ACHE                             eS            01 42 31.8
AGUA  GUANDACOL       3.26  24  eP     Pn     01 41 43.5  -14
AGUA                             IAML          01 42 42.0
      comp=Z,184nm,0.6s
EDS3  Malargue        3.32 171  eP     Pn     01 41 58.2 -0.4
ML02  Panimavida      3.47 199  Pn     Pn     01 41 58.0 -2.4
LCO   Las Campanas    3.51 350  Pn     Pn     01 41 60.0 -1.3
MRA   San Martin      3.63  90  eP     Pn     01 42 00.9 -1.8
MRA                              eS     Sn     01 42 26.5  -18
MRA                              IAML          01 42 45.5
      comp=Z,286nm,0.8s
VCA   Vinchina        4.05  23  eS     Sn     01 42 53.0 -2.0
VCA                              IAML          01 42 58.9
      comp=Z,134nm,0.4s
BI02  San Fabin de    4.30 194  Pn     Pn     01 42 09.6 -1.9
TCA   Tanti           4.75  77  eS     Sn     01 43 06.9 -4.8
TCA                              IAML          01 43 49.4
      comp=Z,97nm,0.4s
GO03  Copiapo         4.88 358  Pn     Pn     01 42 19.1 -0.3
GO03  Copiapo         4.88 358  eP     Pn     01 42 21.5 +2.1
GO03                             eS     Sn     01 43 11.2 -3.7
AC06  Mina Casimiro   5.12 357  Pn     Pn     01 42 21.1 -1.5
PIL   Pilar           5.27  83  eP     Pn     01 42 40.0  +15
CYA   Choya           5.43  43  IAML          01 44 06.1
      comp=Z,21nm,0.5s
AC02  Maricunga       5.68   8  Pn     Pn     01 42 29.2 -1.5
AC02  Maricunga       5.68   8  eS     Sn     01 43 28.0 -6.9
AC02                             IAML          01 44 18.6
      comp=Z,24nm,0.3s
AC01  Pan de Azucar   6.34 355  Pn     Pn     01 42 38.2 -0.8
TRQA  Tornquist       8.60 132  Pn     Pn     01 43 07.7 -1.9
PB03  IPOC Station P 10.40   1  Pn     Pn     01 43 34.5 +0.4
PB16  IPOC Station P 14.10   2  P      P      01 44 29.4 +2.2
ATAH  Atahualpa      26.40 341  LR     LR     01 55 38.7
      comp=Z,112nm,19.3s,baz=216,slow=33
ROSC  El Rosal       37.34 353  LR     LR     02 04 09.2
      comp=Z,42nm,19.4s,baz=207,slow=37
SDV   Santo Domingo  41.14 359  LR     LR     02 05 25.5
      comp=Z,51nm,19.9s,baz=80,slow=36
PCRV  Puerto La Cruz 42.73   8  LR     LR     02 08 59.8
      comp=Z,84nm,20.7s,slow=39
BELA  Belgrano 2     48.08 171  P      P      01 49 36.4 +1.1
VNA3  Neumayer Olymp 50.13 159 ⇑P      P      01 49 51.3 +0.2
      comp=Z,2.1nm,0.7s
VNA2  Neumayer--Watz 50.76 158 ⇑P      P      01 49 56.1 +0.3
      comp=Z,1.7nm,0.6s,baz=278,slow=7.0
SNAA  Sanae          52.35 158 ⇑P      P      01 50 07.9 +0.2
      comp=Z,46nm,0.6s
SNAA  Sanae          52.35 158  P      P      01 50 07.8 +0.2
SNAA                             IAmb   IAmb   01 50 16.1
      comp=Z,2.3nm,0.8s
SNAA  Sanae          52.35 158  P      P      01 50 08.2 +0.6
      comp=Z,1.9nm,0.7s,baz=274,slow=8.1,SNR=14
      comp=Z,1.9nm,0.7s
TROLL Troll, Antarti 54.07 159 ⇑P      P      01 50 20.6 +0.3
      comp=Z,138nm,0.8s
TEIG  Tepich         55.25 339  P      P      01 50 29.3 +0.1
QSPA  South Pole Qui 57.75 180  P      P      01 50 47.3 +0.7
QSPA                             IAmb   IAmb   01 50 48.4
      comp=Z,2.2nm,0.7s
QSPA  South Pole Qui 57.75 180  P      P      01 50 47.7 +1.1
      comp=Z,1.8nm,0.6s,baz=159,slow=2.6,SNR=19
      comp=Z,1.8nm,0.6s
TXAR  Lajitas Array  69.28 329  P      P      01 52 03.9 +1.1
      comp=Z,0.3nm,0.6s,baz=150,slow=8.6,SNR=3.4
      comp=Z,0.3nm,0.6s
WVT   Waverly        70.27 345  P      P      01 52 08.7 +0.2
WVT                              IAmb   IAmb   01 52 09.8
      comp=Z,4.9nm,0.8s
R40A  Maddies Statio 73.40 342  P      P      01 52 27.2  0.0
R40A                             IAmb   IAmb   01 52 28.2
      comp=Z,4.1nm,0.7s
PDAR  Pinedale Array 83.21 332  P      P      01 53 21.9 +0.5
      comp=Z,0.3nm,0.5s,baz=148,slow=11,SNR=3.7
      comp=Z,0.3nm,0.5s
KURBB Kurchatov Arra 150.61 43  PKPbc  PKiKP  02 00 46.2 -0.3
      comp=Z,0.6nm,0.5s,baz=294,slow=3.0,SNR=4.9
ZALV  Zalesovo Beam 152.04  32  PKPbc  PKiKP  02 00 49.2 -0.2
      comp=Z,1.6nm,0.4s,baz=330,slow=2.1,SNR=5.4
```

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*KRSC **26** 02:13:04.2±1.4, 56°.18N×164°.75E, h48km±18km, Ml3.6*

*IDC **26** 02:13:05.9±1.4, 56°.55N×164°.65E, h0km, mb3.5/8, mbtmp3.5/9, ML2.3/1, Error ellipse: s-maj=41.8km s-min=22.8km az=173.0*

ISC 26 02:13:04.8±0.7**, 56°.13N**±0°.06×**164°.61E**±0°.04**, h10**km**, n33, σ1.s53**/39**, mb3.6**/8**, Komandorsky Islands region**

```
Code  Station Name     Δ°  AZ°   Phase ID        Time     Res
                                 Op     ISC     h  m  s   ISC
KBTR  Krutoberegovo   1.00 275  eP     Pg     02 13 23.1 -0.9
KBTR                             eS     Sg     02 13 36.2 -0.9
KBG   Krutoberegovo   1.07 277  eP     Pb     02 13 24.5 -0.8
KBG                              eS     Sg     02 13 38.6 -0.7
BKI   Bering          1.21 140  eP     Pn     02 13 26.2 -1.5
BKI                              eS     Sb     02 13 41.8 -1.5
SMKR  Semkarok        1.81 286  eP     Pb     02 13 36.4 -1.5
SMKR                             eS     Sb     02 13 59.4 -1.2
BDR   Baidarnaya      1.94 284  eS     Sb     02 14 03.7 -0.9
ZLN   Zelenaya        2.14 268  eP     Pb     02 13 41.9 -1.7
BZGR  Bezymyannyi-Gr  2.21 267  eP     Pn     02 13 42.5 +1.0
KLY   Klyuchi         2.22 276  eP     Pn     02 13 41.0 -0.6
KLY                              eS     Sn     02 14 07.0 -2.0
KRSR  Krestovskiy     2.26 274  eP     Pn     02 13 43.4 +1.1
MKZ   Mys Kozlova     2.28 227  eP     Pn     02 13 42.3 -0.1
MKZ                              eS     Sn     02 14 10.1 -0.4
BZWR  Bezymyannyi-We  2.31 267  eP     Pb     02 13 44.5 -2.1
BZMR  Bezymyannaya    2.32 267  eP     Pn     02 13 44.2 +1.1
KIRR  Kirishev        2.40 267  eP     Pb     02 13 45.9 -2.2
KPT   Kopyto          2.47 268  eP     Pn     02 13 46.2 +1.1
KMNR  Kamenistaya     2.49 263  eP     Pb     02 13 47.6 -1.9
TUMD  Tumrok D        2.56 250  eP     Pb     02 13 48.7 -2.0
KOZ   Kozyrevsk       2.66 270  eP     Pn     02 13 49.0 +1.4
SRDR  Sredinnyy       2.74 276  eP     Pn     02 13 50.6 +1.9
SRDR                             eS     Sn     02 14 23.5 +1.6
OSSR  Ossora          3.23 346  eS     Sn     02 14 30.4 -3.6
SDLR  Sedlovina       4.38 232  eP     Pn     02 14 13.0 +1.5
SMAR  Somma           4.43 232  eP     Pn     02 14 13.8 +1.7
AVH   Avacha          4.46 232  eP     Pn     02 14 15.0 +2.6
UGLR  Uglovaya        4.46 231  eP     Pn     02 14 14.1 +1.7
PETK  Petropavlovsk-  5.03 236  Pn     Pb     02 14 27.1 -5.7
      0.5nm,0.3s,baz=63,slow=9.4,SNR=5.0
      2.2nm,0.8s
ILAR  Eielson Array  24.82  50  P      P      02 18 27.2 +0.5
      0.9nm,1.0s,baz=273,slow=8.8,SNR=5.9
      0.9nm,1.0s
YKA   Yellowknife Ar 39.15  47  P      P      02 20 33.0 +1.0
      0.5nm,0.7s,baz=293,slow=11,SNR=2.5
      0.5nm,0.7s
MKAR  Makanchi Array 49.20 296  P      P      02 21 53.6 +0.8
      0.2nm,0.4s,baz=30,slow=7.5,SNR=2.1
      0.2nm,0.4s
NVAR  Mina Array Bea 52.33  75  P      P      02 22 17.8 +1.1
      0.4nm,0.6s,baz=314,slow=11,SNR=2.2
      0.4nm,0.6s
PDAR  Pinedale Array 53.80  66  P      P      02 22 28.3 +0.8
      0.5nm,0.8s,baz=343,slow=3.6,SNR=4.7
      0.5nm,0.8s
NB2   NORSAR Subarra 61.30 346  P      P      02 23 20.4 +0.6
      comp=Z,0.3nm,0.6s,baz=17,slow=6.9
NOA   NORSAR Array B 61.30 346  P      P      02 23 19.6 -0.2
      comp=Z,0.6nm,0.7s,baz=18,slow=6.7,SNR=4.2
      comp=Z,0.6nm,0.7s
HFS   Hagfors        61.80 344  P      P      02 23 23.3 +0.2
      comp=Z,0.9nm,0.6s,baz=321,slow=2.1,SNR=7.0
      comp=Z,0.9nm,0.6s
TXAR  Lajitas Array  67.10  71  P      P      02 24 00.2 +1.8
      comp=Z,0.6nm,0.9s,baz=312,slow=5.7,SNR=3.5
      comp=Z,0.6nm,0.9s
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*TEH **26** 02:15:12.0, 26°.73N×55°.00E, h9km*

*DSN **26** 02:15:12.2±1.5, 26°.65N×55°.04E, h15km, ML2.7/5, Error ellipse: s-maj=17.4km s-min=8.7km az=6.0*

*OMAN **26** 02:15:13.9±0.1, 26°.52N×55°.10E, h10km, ml2.7/9, Error ellipse: s-maj=3.3km s-min=1.9km az=19.0*

ISC 26 02:15:11.6±2.8**, 26°.57N**±0°.05×**55°.1E**±0°.1**, h1**km±17km**, n21, σ0.s73**/29**, Southern Iran**

```
Code  Station Name     Δ°  AZ°   Phase ID        Time     Res
                                 Op     ISC     h  m  s   ISC
SHME  Shamm           1.11 117  P      Pb     02 15 33.8 +0.3
      SNR=17
SHME                             S      Sb     02 15 48.7 +0.3
SHME  Shamm           1.11 117  P      Pb     02 15 33.1 -0.5
UMQ   Umm Al-Quwin    1.18 152  P      Pn     02 15 35.1  0.0
UMQ                              S      Sn     02 15 52.7 +0.9
BNDS  Bandar-Abbas    1.30  50  Pg     Pb     02 15 36.0 -0.9
```

GENO	**Geno**	**1.30**	**50**	Pg	**Pg**	**02 15 36.4**	**-0.1**
MASF	**Masafi**	**1.56**	**140**	P	**Pn**	**02 15 40.7**	**+0.3**
	SNR=5.1						
MASF				S	**Sn**	**02 16 01.7**	**+0.4**
MSFE	**Esma-Masafi**	**1.56**	**140**	P	**Pn**	**02 15 40.3**	**-0.2**
MSFE				S	**Sn**	**02 16 01.6**	**+0.2**
IBND	**Bandar-abas**	**1.59**	**56**	Pg	**Pg**	**02 15 42.4**	**+0.3**
NAZ	**Nazwa, Dubai**	**1.67**	**160**	P	**Pn**	**02 15 42.7**	**+0.7**
NAZ	**Nazwa, Dubai**	**1.67**	**160**	P	**Pn**	**02 15 41.1**	**-0.8**
MDH	**Madha**	**1.69**	**138**	P	**Pn**	**02 15 42.8**	**+0.5**
MDH				S	**Sn**	**02 16 03.6**	**-1.0**
MDH	**Madha**	**1.69**	**138**	P	**Pn**	**02 15 42.6**	**+0.4**
UOSS	**Minazif**	**1.92**	**147**	P	**Pn**	**02 15 46.7**	**+1.3**
UOSS				S	**Sn**	**02 16 08.5**	**-1.8**
UOSS	**Minazif**	**1.92**	**147**	P	**Pn**	**02 15 46.8**	**+1.4**
HATD	**Hatta, Dubai**	**1.99**	**150**	P	**Pn**	**02 15 46.8**	**+0.4**
HATD				S	**Sn**	**02 16 11.8**	**-0.2**
ASHO	**Ashiyiah**	**2.08**	**154**	P	**Pn**	**02 15 48.0**	**+0.2**
	SNR=9.0						
ASHO				S	**Sn**	**02 16 14.6**	**+0.3**
SOHO	**SOHO**	**2.77**	**151**	P	**Pn**	**02 15 57.2**	**+0.1**
ARQ	**Araqi**	**3.48**	**157**	P	**Pn**	**02 16 06.5**	**-0.5**
KRBR	**Kerman**	**3.72**	**24**	Pn	**Pn**	**02 16 11.2**	**+0.7**
KHGB	**Koh Gabri**	**4.00**	**18**	Pn	**Pn**	**02 16 14.9**	**+0.7**
IRAM	**Ramesheh**	**5.72**	**337**	Pn	**Pn**	**02 16 37.7**	**-0.2**

CATAC ***26*** *02:16:53.0±0.7, 14°N±4°×9°3W±°, h1km, M4.0/9, MLv4.0/9, Error ellipse: s-maj=8.8km s-min=7.5km az=80.3, confirmed*

GCG ***26*** *02:16:55.8±1.1, 14°.28N×92°.94W, h30km±26km, MD4.4, ML3.9*

MEX ***26*** *02:16:57.1±0.6, 14°.37N×93°.05W, h16km±21km, MD4.2*

ISC 26 02:16:52.5±1.6**, 14°.26N**±0°.06×**93°.06W**±0°.03**, h26**km±14km**,** **n50, σ2^{s}52**/71**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**1.00**	**50**	*i* P	**Pn**	**02 17 11.6**	**+0.7**
THIG				*i* S	**Sb**	**02 17 24.5**	**+0.5**
THIG				IAML		02 17 26.4	
	comp=E,2μm,0.6s						
SMCA	**Catarina**	**1.12**	**58**	*i* P	**Pb**	**02 17 13.7**	**+0.5**
SMCA				*i* S	**Sb**	**02 17 27.6**	**+0.1**
PATR	**El Naranjo**	**1.17**	**43**	*e*P	**Pn**	**02 17 13.9**	**+0.5**
PATR				*e*S	**Sn**	**02 17 27.8**	**-0.8**
PAVE	**Pavencul**	**1.26**	**42**	*e*P	**Pn**	**02 17 15.3**	**+0.7**
PAVE				*e*S	**Sn**	**02 17 29.7**	**-1.3**
RTAL	**Retalhuleu**	**1.35**	**78**	*e*P	**Pn**	**02 17 17.1**	**+1.4**
RTAL				*e*S	**Sn**	**02 17 32.9**	**+0.2**
RTAL	**Retalhuleu**	**1.35**	**78**	P	**Pn**	**02 17 16.9**	**+1.2**
RTAL	**Retalhuleu**	**1.35**	**78**	S	**Sn**	**02 17 33.9**	**+1.2**
PCIG		**1.45**	**354**	*e*P	**Pn**	**02 17 17.9**	**+0.9**
PCIG				*e*S	**Sn**	**02 17 31.7**	**-3.4**
STG8	**El Palmar, Qui**	**1.67**	**83**	*i* P	**Pn**	**02 17 19.6**	**-0.6**
STG8				IAML		02 17 45.4	
	comp=N,2μm,0.2s						
STG0	**El Palmar, Qui**	**1.67**	**84**	*i* P	**Pn**	**02 17 19.0**	**-1.3**
STG0				*i* S	**Sn**	**02 17 37.7**	**-3.2**
STG0				IAML		02 17 43.8	
	comp=E,2μm,0.2s						
SOKI	**Kika Raxquin**	**1.70**	**70**	*i* P	**Pb**	**02 17 23.4**	**+0.1**
SOKI				*i* S	**Sb**	**02 17 44.8**	**+0.4**
SOKI				IAML		02 17 51.9	
	comp=N,1μm,0.8s						
HUEH	**Huehuetenango**	**1.84**	**55**	*e*P	**Pn**	**02 17 24.2**	**+1.6**
HUEH				*e*S	**Sb**	**02 17 47.7**	**-0.6**
HUEH	**Huehuetenango**	**1.84**	**55**	*i* P	**Pn**	**02 17 24.6**	**+2.1**
HUEH				IAML		02 18 07.3	
	comp=E,2μm,0.3s						
HUEH	**Huehuetenango**	**1.84**	**55**	P	**Pn**	**02 17 24.3**	**+1.7**
HUEH	**Huehuetenango**	**1.84**	**55**	S	**Sb**	**02 17 52.6**	**+4.4**
CCIG	**Comitan**	**2.20**	**24**	*e*P	**Pb**	**02 17 31.1**	**-0.6**
CCIG				*e*S	**Sb**	**02 17 57.0**	**-1.7**
CCIG	**Comitan**	**2.20**	**24**	*i* P	**Pb**	**02 17 30.8**	**-1.0**
CCIG				*i* S	**Sb**	**02 17 57.6**	**-1.1**
CCIG				IAML		02 18 07.1	
	comp=N,592nm,0.4s						
CCIG	**Comitan**	**2.20**	**24**	P	**Pb**	**02 17 31.4**	**-0.3**
CCIG	**Comitan**	**2.20**	**24**	S	**Sb**	**02 17 59.7**	**+1.0**
FG16	**Alotenango, Sa**	**2.47**	**89**	*i* P	**Pn**	**02 17 28.6**	**-2.6**
FG16				*i* S	**Sn**	**02 17 55.4**	**-5.3**
FG16				IAML		02 18 05.1	
	comp=N,2μm,0.1s						
TGIG		**2.51**	**359**	*e*P	**Pb**	**02 17 34.6**	**-2.3**
TGIG				*e*S	**Sn**	**02 18 02.0**	**+0.5**
TGIG		**2.51**	**359**	*i* P	**Pb**	**02 17 34.7**	**-2.3**
TGIG				*i* S	**Sb**	**02 18 04.4**	**-3.0**
TGIG				IAML		02 18 11.8	
	comp=E,383nm,0.3s						
FAME	**Alcaldia de Sa**	**2.98**	**98**	P	**Pn**	**02 17 41.9**	**+3.8**
NUBE	**Las Nubes**	**3.20**	**96**	P	**Pn**	**02 17 43.5**	**+2.3**
HUIG	**Huatulco**	**3.31**	**297**	*e*P	**Pn**	**02 17 45.3**	**+2.7**
HUIG				*e*S	**Sn**	**02 18 18.6**	**-2.5**
CEVE	**Cerro Verde**	**3.36**	**97**	S	**Sn**	**02 18 25.0**	**+2.3**
JAYA	**Jayaque - finc**	**3.55**	**99**	P	**Pn**	**02 17 46.9**	**+0.8**
LLGN	**La Laguna**	**3.99**	**91**	P	**Pn**	**02 17 53.0**	**+0.9**
PETF	**Flores**	**4.05**	**49**	*e*P	**Pn**	**02 17 56.7**	**+3.8**
PETF				*e*S	**Sn**	**02 18 42.2**	**+2.6**
PETF	**Flores**	**4.05**	**49**	P	Pn	02 17 57.9	+5.0
PEIG	**Puerto Escondi**	**4.31**	**294**	*e*P	**Pn**	**02 17 59.7**	**+3.3**
PEIG				*e*S	**Sn**	**02 18 41.7**	**-4.3**
VHO	**Vista Hermosa**	**4.51**	**309**	*e*S	**Sn**	**02 18 57.6**	**+6.4**
YOIG	**Yosondua**	**5.04**	**301**	*e*P	Pn	02 18 12.6	+5.9
YOIG				*e*S	**Sn**	**02 19 03.8**	**-0.4**
PNIG	**Pinotepa**	**5.33**	**294**	*e*P	Pn	02 18 15.5	+5.1
PNIG				*e*S	**Sn**	**02 19 06.4**	**-4.7**
TOIG	**Toxpalan**	**5.42**	**315**	*e*P	**Pn**	**02 18 14.1**	**+2.3**
TOIG				*e*S	**Sn**	**02 19 10.8**	**-2.6**
TXIG	**Tlaxiaco**	**5.43**	**304**	*e*P	Pn	02 18 17.2	+5.2
TXIG				*e*S	**Sn**	**02 19 11.9**	**-1.9**
HLIG	**Huajuapan de L**	**5.78**	**309**	*e*P	**Pn**	**02 18 19.2**	**+2.4**
HLIG				*e*S	**Sn**	**02 19 21.7**	**-0.8**
TPIG	**Tehuac#an**	**5.85**	**316**	*e*S	**Sn**	**02 19 27.3**	**+3.2**
FTIG	**Fresnillo de T**	**6.08**	**307**	*e*P	**Pn**	**02 18 22.9**	**+2.1**
FTIG				*e*S	**Sn**	**02 19 29.3**	**-0.4**
MGIG	**Malinaltepec**	**6.13**	**300**	*e*P	**Pn**	**02 18 26.1**	**+4.5**
MGIG				*e*S	Sn	02 19 23.7	-7.3
JAUV	**Jalcomulco**	**6.22**	**325**	*e*P	**Pn**	**02 18 24.6**	**+1.9**
JAUV				*e*S	**Sn**	**02 19 30.7**	**-2.3**
TLIG	**Tlapa**	**6.24**	**303**	*e*P	**Pn**	**02 18 25.6**	**+2.6**
TLIG				*e*S	**Sn**	**02 19 30.2**	**-3.3**
CRIG	**Cruz Grande**	**6.35**	**294**	*e*S	**Sn**	**02 19 32.2**	**-4.0**
PPM	**Popocatepetl**	**7.17**	**313**	*e*P	Pn	02 18 43.9	+7.8
PPM				*e*S	**Sn**	**02 19 59.4**	**+2.4**
MEIG	**Mezcala**	**7.29**	**301**	*e*P	Pn	02 18 44.0	+6.7
MEIG				*e*S	**Sn**	**02 20 03.2**	**+3.9**
CXUV	**Coxquihui**	**7.31**	**324**	*e*P	**Pn**	**02 18 34.8**	**-2.8**
CXUV				*e*S	**Sn**	**02 19 56.9**	**-2.9**
YAIG	**Yautepec**	**7.36**	**309**	*e*P	Pn	02 18 45.2	+6.7
YAIG				*e*S	**Sn**	**02 20 02.1**	**+0.8**
PLIG	**Platanillo**	**7.43**	**304**	*e*P	Pn	02 18 47.2	+7.8
PLIG				*e*S	**Sn**	**02 20 00.9**	**-2.0**
CAIG	**El Cayaco**	**7.48**	**293**	*e*P	Pn	02 18 45.6	+5.6
ARIG	**Puente Sto Nin**	**8.06**	**301**	*e*P	Pn	02 18 53.6	+5.7
ARIG				*e*S	**Sn**	**02 20 16.4**	**-1.9**

BJI ***26*** *02:18:02.1, 56°.20N×164°.16E, h10km, mB6.6/83, mb6.1/90, Ms6.8/97, Ms7 6.7/99*

KRSC ***26*** *02:18:06.7±1.4, 56°.16N×164°.36E, h52km±22km, Mc7.2, Ml6.5, Felt [IV] at HMS cape Afrika, Krutoberegovo, Ust-Kamchatsk, kordon Kronoki; [III-IV] at Nikolskoe.*

IDC ***26*** *02:18:06.8±0.3, 56°.24N×164°.05E, h0km, mb6.0/34, mbtmp6.0/37, ML4.9/4, MS6.3/81, Error ellipse: s-maj=10.5km s-min=9.1km az=0.0*

NEIC ***26*** *02:18:07.9, 56°.18N×164°.11E, h10km*

IPGP ***26*** *02:18:07.0, 56°.19N×164°.13E, h9km, Mw6.3, Fault plane solution: NP1: ϕ_s30.00000°, δ65.00000°, λ36.00000°. NP2: ϕ_s282.00000°, δ58.00000°, λ150.00000°.*

NEIC ***26*** *02:18:07.8±1.8, 56°.18N±0°.07×164°.1E±0°.1, h10km±1km, mb6.3/1104, Ms_20 6.4/1144, Mwb6.2/124, Mww6.3/74, Error ellipse: s-maj=11.6km s-min=10.3km az=357.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.08; $M_{\theta\theta}$-1.94; $M_{\phi\phi}$0.85; $M_{r\theta}$-0.56; $M_{\theta\phi}$-0.90; $M_{\phi r}$0.77; Fault plane solution: $M_0$2.13000×10^{18} NP1: ϕ_s288.64000°, δ64.86000°, λ140.89000°. NP2: ϕ_s37.70000°, δ55.17000°, λ31.17000°. Principal axes: T 2.0068, Plg45.0000°, Azm249.0000°; N 0.2297, Plg45.0000°, Azm81.0000°; P -2.2365, Plg6.0000°, Azm345.0000°;*

BGR ***26*** *02:18:08.4, 55°.82N×164°.66E, h33km, mb6.2, Ms6.5*

NEIC ***26*** *02:18:08, 56°.19N×164°.12E, h18km*

NEIC ***26*** *02:18:08, 55°.89N×164°.12E, h18km, Moment Tensor Solution. Duration: 7^{s}3 Moment tensor: Scale 10^{18}Nm; M_{rr}2.62; $M_{\theta\theta}$-3.19; $M_{\phi\phi}$0.57; $M_{r\theta}$0.02; $M_{\theta\phi}$-2.68; $M_{\phi r}$0.77; Fault plane solution: $M_0$4.06000×10^{18} NP1: ϕ_s270.98000°, δ50.36000°, λ132.79000°. NP2: ϕ_s35.56000°, δ55.59000°, λ50.65000°. Principal axes: T 3.0586, Plg58.0000°, Azm247.0000°; N 1.5477, Plg32.0000°, Azm60.0000°; P -4.6063, Plg3.0000°, Azm152.0000°;*

MOS ***26*** *02:18:10.6±0.9, 56°.13N×164°.07E, h54km, mb6.4/82, MS6.4/83 Error ellipse: s-maj=5.1km s-min=3.7km az=71.7 Broadband fault plane solution: P waves. $M_0$8.30000×10^{18} NP1: ϕ_s20.00000°, δ47.00000°, λ36.00000°. NP2: ϕ_s264.00000°, δ65.00000°, λ131.00000°. Principal axes: T Plg52.0000°, Azm222.0000°; N Plg36.0000°, Azm63.0000°; P Plg10.0000°, Azm326.0000°;*

MOS Fault plane solution: P-wave C79, D11 . Felt (IV) at Ust'-Kamchatsk; (III-IV) at Nikol'skoe.

GCMT ***26*** *02:18:11.8±0.0, 56°.24N×164°.25E, h12km, MW6.4/174, Moment Tensor Solution. s169,c395; s174,c713; Duration: 3^{s}7 Moment tensor: Scale 10^{18}Nm; M_{rr}2.52±.02; $M_{\theta\theta}$-3.96±.02; $M_{\phi\phi}$1.45±.02; $M_{r\theta}$-1.00±.05; $M_{\theta\phi}$-2.49±.02; $M_{\phi r}$0.82±.05; Best double couple: $M_0$4.30500×10^{18} NP1: ϕ_s33.00000°, δ55.00000°, λ34.00000°. NP2: ϕ_s282.00000°, δ63.00000°, λ140.00000°. Principal axes: T 3.6250, Plg47.0000°, Azm244.0000°; N 1.3700, Plg43.0000°, Azm74.0000°; P -4.9860, Plg5.0000°, Azm339.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 26 02:18:08.5±0.4**, 56°.14N**±0°.02×**164°.12E**±0°.02**, h13**km±2km**,** **h13km:pP-P, n3068, σ1^{s}44**/2591**, mb6.2**/709**, MS6.4**/732**,** **326C-79D, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.73**	**276**	PN	**Pg**	**02 18 21.8**	**-0.9**
KBTR	**Krutoberegovo**	**0.73**	**276**	*e*P	**Pg**	**02 18 21.8**	**-0.9**
KBG	**Krutoberegovo**	**0.80**	**279**	PN	**Pg**	**02 18 22.7**	**-1.3**
KBG				S	**Sb**	**02 18 35.8**	**+0.8**
KBG	**Krutoberegovo**	**0.80**	**279**	*e*P	**Pg**	**02 18 22.8**	**-1.3**
KBG				*e*S	**Sb**	**02 18 35.8**	**+0.8**
BKI	**Bering**	**1.40**	**131**	PN	**Pn**	**02 18 32.2**	**-1.5**
BKI				S	**Sn**	**02 18 49.3**	**-2.7**
BKI	**Bering**	**1.40**	**131**	*e*P	**Pn**	**02 18 32.3**	**-1.5**
BKI				*e*S	**Sn**	**02 18 49.4**	**-2.7**
SMKR	**Semkarok**	**1.54**	**288**	PN	**Pn**	**02 18 35.0**	**-0.8**
SMKR	**Semkarok**	**1.54**	**288**	*e*P	**Pn**	**02 18 35.0**	**-0.8**
ZLN	**Zelenaya**	**1.86**	**268**	PN	**Pn**	**02 18 40.9**	**+0.7**
ZLN	**Zelenaya**	**1.86**	**268**	*e*P	**Pn**	**02 18 41.0**	**+0.7**
CIRR	**Tsirk**	**1.89**	**271**	PN	**Pn**	**02 18 41.1**	**+0.5**
CIRR	**Tsirk**	**1.89**	**271**	*e*P	**Pn**	**02 18 41.2**	**+0.5**
LGNR	**Loginova**	**1.92**	**270**	PN	**Pn**	**02 18 41.8**	**+0.7**
LGNR	**Loginova**	**1.92**	**270**	*e*P	**Pn**	**02 18 41.9**	**+0.7**
BZGR	**Bezymyannyi-Gr**	**1.93**	**266**	PN	**Pn**	**02 18 42.1**	**+1.0**
BZGR				S	**Sb**	**02 19 07.7**	**+0.1**
BZGR	**Bezymyannyi-Gr**	**1.93**	**266**	*e*P	**Pn**	**02 18 42.1**	**+1.0**
BZGR				*e*S	**Sb**	**02 19 07.8**	**+0.1**
KLY	**Klyuchi**	**1.95**	**277**	PN	**Pn**	**02 18 39.9**	**-1.3**
KLY	**Klyuchi**	**1.95**	**277**	*e*P	**Pn**	**02 18 39.9**	**-1.3**
KRSR	**Krestovskiy**	**1.99**	**274**	PN	**Pn**	**02 18 42.0**	**+0.1**
KRSR	**Krestovskiy**	**1.99**	**274**	*e*P	**Pn**	**02 18 42.0**	**+0.1**
BZWR	**Bezymyannyi-We**	**2.04**	**267**	PN	**Pn**	**02 18 43.4**	**+0.7**
BZWR	**Bezymyannyi-We**	**2.04**	**267**	*e*P	**Pn**	**02 18 43.5**	**+0.7**
BZMR	**Bezymyannaya**	**2.05**	**266**	PN	**Pn**	**02 18 43.5**	**+0.7**
BZMR	**Bezymyannaya**	**2.05**	**266**	*e*P	**Pn**	**02 18 43.5**	**+0.7**
MKZ	**Mys Kozlova**	**2.09**	**222**	PN	**Pn**	**02 18 42.6**	**-0.6**
MKZ	**Mys Kozlova**	**2.09**	**222**	*e*P	**Pn**	**02 18 42.7**	**-0.6**
KIRR	**Kirishev**	**2.13**	**267**	PN	**Pn**	**02 18 45.0**	**+1.2**
KIRR				S	**Sb**	**02 19 13.0**	**-0.3**
KIRR	**Kirishev**	**2.13**	**267**	*e*P	**Pn**	**02 18 45.1**	**+1.2**
KIRR				*e*S	**Sb**	**02 19 13.1**	**-0.3**
KPT	**Kopyto**	**2.19**	**267**	PN	**Pn**	**02 18 45.5**	**+0.8**
KPT	**Kopyto**	**2.19**	**267**	*e*P	**Pn**	**02 18 45.6**	**+0.8**
KMNR	**Kamenistaya**	**2.22**	**262**	PN	**Pn**	**02 18 46.0**	**+0.9**
KMNR	**Kamenistaya**	**2.22**	**262**	*e*P	**Pn**	**02 18 46.0**	**+0.9**
TUMD	**Tumrok D**	**2.31**	**248**	PN	**Pn**	**02 18 47.1**	**+0.9**
TUMD				S	**Sb**	**02 19 17.5**	**-0.8**
TUMD	**Tumrok D**	**2.31**	**248**	*e*P	**Pn**	**02 18 47.2**	**+0.9**
TUMD				*e*S	**Sb**	**02 19 17.5**	**-0.8**
KOZ	**Kozyrevsk**	**2.38**	**270**	PN	**Pn**	**02 18 49.0**	**+1.8**
KOZ				S	**Sb**	**02 19 19.6**	**-0.9**
KOZ	**Kozyrevsk**	**2.38**	**270**	*e*P	**Pn**	**02 18 49.0**	**+1.8**
KOZ				*e*S	**Sb**	**02 19 19.6**	**-0.9**
SRDR	**Sredinnyy**	**2.47**	**276**	PN	**Pn**	**02 18 49.3**	**+0.9**
SRDR	**Sredinnyy**	**2.47**	**276**	*e*P	**Pn**	**02 18 49.4**	**+0.9**
ESO	**Esso**	**3.05**	**268**	PN	**Pn**	**02 18 57.2**	**+0.8**
ESO	**Esso**	**3.05**	**268**	*e*P	**Pn**	**02 18 57.2**	**+0.8**
OSSR	**Ossora**	**3.17**	**350**	PN	**Pn**	**02 18 55.2**	**-2.8**
OSSR	**Ossora**	**3.17**	**350**	*e*P	**Pn**	**02 18 55.3**	**-2.8**
KII	**Karymskiy**	**3.41**	**234**	PN	**Pn**	**02 19 02.4**	**+1.0**
KII	**Karymskiy**	**3.41**	**234**	*e*P	**Pn**	**02 19 02.5**	**+1.0**
PALN	**Palana**	**3.71**	**325**	PN	**Pn**	**02 19 04.2**	**-1.2**
PALN	**Palana**	**3.71**	**325**	*e*P	**Pn**	**02 19 04.3**	**-1.2**
SPN	**Mys Shipunski**	**3.87**	**220**	PN	**Pn**	**02 19 06.9**	**-0.7**
SPN				S	**Sn**	**02 19 50.6**	**-2.2**
SPN	**Mys Shipunski**	**3.87**	**220**	*e*P	**Pn**	**02 19 06.9**	**-0.7**
SPN				*e*S	**Sn**	**02 19 50.7**	**-2.2**
NLC	**Nalytchevo**	**4.06**	**225**	PN	**Pn**	**02 19 11.2**	**+0.9**
NLC				S	**Sn**	**02 19 56.8**	**-0.9**
NLC	**Nalytchevo**	**4.06**	**225**	*e*P	**Pn**	**02 19 11.3**	**+0.9**
NLC				*e*S	**Sn**	**02 19 56.9**	**-0.9**
SDLR	**Sedlovina**	**4.17**	**229**	PN	**Pn**	**02 19 13.0**	**+1.1**
SDLR	**Sedlovina**	**4.17**	**229**	*e*P	**Pn**	**02 19 13.0**	**+1.1**
KRER	**Koryakskii**	**4.21**	**230**	PN	**Pn**	**02 19 13.9**	**+1.4**
KRER	**Koryakskii**	**4.21**	**230**	*e*P	**Pn**	**02 19 13.9**	**+1.4**
KRX	**Arik**	**4.22**	**231**	PN	**Pn**	**02 19 14.1**	**+1.5**
KRX	**Arik**	**4.22**	**231**	*e*P	**Pn**	**02 19 14.1**	**+1.5**
SMAR	**Somma**	**4.22**	**229**	PN	**Pn**	**02 19 13.8**	**+1.2**
SMAR	**Somma**	**4.22**	**229**	*e*P	**Pn**	**02 19 13.8**	**+1.2**
AVH	**Avacha**	**4.25**	**230**	PN	**Pn**	**02 19 14.2**	**+1.3**
AVH				S	**Sn**	**02 20 03.0**	**+0.7**
AVH	**Avacha**	**4.25**	**230**	*e*P	**Pn**	**02 19 14.2**	**+1.3**
AVH				*e*S	**Sn**	**02 20 03.0**	**+0.7**
UGLR	**Uglovaya**	**4.25**	**229**	PN	**Pn**	**02 19 14.2**	**+1.3**
UGLR	**Uglovaya**	**4.25**	**229**	*e*P	**Pn**	**02 19 14.3**	**+1.3**
KOK	**Koryaka**	**4.27**	**230**	PN	**Pn**	**02 19 14.9**	**+1.7**
KOK	**Koryaka**	**4.27**	**230**	*e*P	**Pn**	**02 19 15.0**	**+1.7**
GNL	**Ganaly**	**4.32**	**238**	PN	**Pn**	**02 19 16.1**	**+2.1**
GNL	**Ganaly**	**4.32**	**238**	*e*P	**Pn**	**02 19 16.2**	**+2.1**
DALK	**Dalny**	**4.41**	**227**	PN	**Pn**	**02 19 16.1**	**+1.1**
DALK				S	**Sn**	**02 20 06.2**	**+0.1**
DALK	**Dalny**	**4.41**	**227**	*e*P	**Pn**	**02 19 16.1**	**+1.1**
DALK				*e*S	**Sn**	**02 20 06.3**	**+0.1**
INSR	**Institute**	**4.44**	**228**	PN	**Pn**	**02 19 17.1**	**+1.6**
INSR	**Institute**	**4.44**	**228**	*e*P	**Pn**	**02 19 17.2**	**+1.6**
TILK	**Tilichiki**	**4.45**	**13**	PN	**Pn**	**02 19 14.3**	**-1.3**
TILK	**Tilichiki**	**4.45**	**13**	*e*P	**Pn**	**02 19 14.3**	**-1.3**
PET	**Petropavlovsk**	**4.45**	**228**		**Pn**	**02 19 16.4**	**+0.7**
PET	**Petropavlovsk**	**4.45**	**228**	P	**Pn**	**02 19 17.2**	**+1.5**
PET	**Petropavlovsk**	**4.45**	**228**	S	**Sn**	**02 20 10.9**	**+3.6**
PET	**Petropavlovsk**	**4.45**	**228**	⇑*i*PN	**Pn**	**02 19 16.7**	**+1.0**
PET				*e*S	**Sn**	**02 20 08.3**	**+1.0**
PET				pmax	pmax		
	comp=Z,6μm,0.6s						
PET				smax	smax		
	comp=N,23μm,0.8s						
PET				smax	smax		
	comp=E,14μm,0.9s						
PET				MLR	MLR		
	comp=Z,630μm,8.0s						
PET				MLR	MLR		
	comp=Z,473μm,10.0s						
PET	**Petropavlovsk**	**4.45**	**228**	*e*P	**Pn**	**02 19 17.1**	**+1.5**
PET				*e*S	**Sn**	**02 20 06.8**	**-0.5**
PET	**Petropavlovsk**	**4.45**	**228**	⇑P	**Pn**	**02 19 16.7**	**+1.0**
I44RU	**PETROPAVLOVSK-**	**4.80**	**233**	Pn	**Pn**	**02 19 20.0**	**-0.5**
	baz=62,slow=20						
I44RU				I	I	02 42 50.0	
	baz=41,slow=319,SNR=1.5						
PEA0B	**Petropavlovsk-**	**4.81**	**234**	Pn	**Pn**	**02 19 22.1**	**+1.5**
PEA0B	**Petropavlovsk-**	**4.81**	**234**	*c i*PN	**Pn**	**02 19 21.9**	**+1.3**
PETK	**Petropavlovsk-**	**4.81**	**234**	Pn	**Pn**	**02 19 21.1**	**+0.6**
PETK	**Petropavlovsk-**	**4.81**	**234**	Pn	**Pn**	**02 19 21.8**	**+1.3**
	comp=Z,82nm,0.3s,baz=87,slow=6.1,SNR=314						
PETK				Sn	**Sn**	**02 20 22.9**	**+6.8**
	comp=Z,154nm,0.3s,baz=204,slow=14,SNR=6.0						
PETK				LR	LR	02 21 33.1	
	comp=Z,468μm,20.1s,baz=56,slow=43						
	comp=Z,572nm,0.7s						
PETK	**Petropavlovsk-**	**4.81**	**234**	PN	**Pn**	**02 19 21.2**	**+0.6**
KRMR	**Karymshinskiy**	**4.81**	**229**	PN	**Pn**	**02 19 22.0**	**+1.4**
KRMR				S	**Sn**	**02 20 17.5**	**+1.4**
KRMR	**Karymshinskiy**	**4.81**	**229**	*e*P	**Pn**	**02 19 22.0**	**+1.4**
KRMR				*e*S	**Sn**	**02 20 17.5**	**+1.4**
RUS	**Russkaya**	**4.96**	**224**	PN	**Pn**	**02 19 23.1**	**+0.6**
RUS				S	**Sn**	**02 20 19.6**	**0.0**
RUS	**Russkaya**	**4.96**	**224**	*e*P	**Pn**	**02 19 23.2**	**+0.6**
RUS				*e*S	**Sn**	**02 20 19.7**	**0.0**
GRL	**Gorelyy**	**5.04**	**227**	PN	**Pn**	**02 19 25.8**	**+2.0**
GRL	**Gorelyy**	**5.04**	**227**	*e*P	**Pn**	**02 19 25.9**	**+2.0**
MTVR	**Mutnovka**	**5.05**	**226**	PN	**Pn**	**02 19 25.3**	**+1.3**
MTVR	**Mutnovka**	**5.05**	**226**	*e*P	**Pn**	**02 19 25.3**	**+1.3**
APC	**Apacha**	**5.18**	**234**	PN	**Pn**	**02 19 28.1**	**+2.6**
APC	**Apacha**	**5.18**	**234**	*e*P	**Pn**	**02 19 28.2**	**+2.6**
ASAK	**Asacha**	**5.24**	**227**	PN	**Pn**	**02 19 28.3**	**+1.8**
ASAK	**Asacha**	**5.24**	**227**	*e*P	**Pn**	**02 19 28.3**	**+1.8**
MIPR	**Malaya Ipel'ka**	**5.80**	**231**	PN	**Pn**	**02 19 36.6**	**+2.5**
MIPR	**Malaya Ipel'ka**	**5.80**	**231**	*e*P	**Pn**	**02 19 36.7**	**+2.5**
PAU	**Pauzhetka**	**6.37**	**226**	PN	**Pn**	**02 19 43.5**	**+1.5**
PAU	**Pauzhetka**	**6.37**	**226**	*e*P	**Pn**	**02 19 43.6**	**+1.5**
KMSK	**Kamenskaya**	**6.44**	**9**	PN	**Pn**	**02 19 42.2**	**-0.7**
KMSK	**Kamenskaya**	**6.44**	**9**	*e*P	**Pn**	**02 19 42.2**	**-0.7**
SMY	**Shemya**	**6.75**	**116**	Pn	**Pn**	**02 19 47.1**	**0.0**
SMY	**Shemya**	**6.75**	**116**	P	**Pn**	**02 19 48.6**	**+1.5**
SMY	**Shemya**	**6.75**	**116**	⇑P	**Pn**	**02 19 44.1**	**-3.0**
SKR	**Severo-Kuril’s**	**7.26**	**225**	*e*PN	**Pn**	**02 19 55.3**	**+1.2**
SKR				pmax	pmax		
	comp=Z,40μm,5.1s						
SKR				pmax	pmax		
	comp=Z,4μm,1.0s						
SKR				MLR	MLR		
	comp=Z,349μm,14.0s						
SKR	**Severo-Kuril’s**	**7.26**	**225**	*e*P	**Pn**	**02 19 54.4**	**+0.3**
MA2	**Magadan**	**7.91**	**301**	Pn	**Pn**	**02 20 04.7**	**+1.6**
MA2	**Magadan**	**7.91**	**301**	Pn	**Pn**	**02 20 02.8**	**-0.3**
	comp=Z,1.9nm,0.3s,baz=96,slow=10,SNR=29						
MA2				LR	LR	02 23 19.7	
	comp=Z,327μm,18.1s,baz=106,slow=40						
MA2	**Magadan**	**7.91**	**301**	P	**Pn**	**02 20 00.9**	**-2.2**
MA2	**Magadan**	**7.91**	**301**	PN	**Pn**	**02 20 04.7**	**+1.6**
MA2	**Magadan**	**7.91**	**301**	⇓P	**Pn**	**02 20 03.2**	**+0.1**
SEY	**Seymchan**	**9.04**	**324**	Pn	**Pn**	**02 20 18.5**	**-0.1**
	comp=Z,1.9nm,0.3s,baz=115,slow=14,SNR=20						
AMKA	**Amchitka**	**10.17**	**112**	Pn	**Pn**	**02 20 33.4**	**-0.6**
BILL	**Bilibino**	**11.99**	**4**	Pn	**Pn**	**02 21 00.3**	**+1.4**
BILL	**Bilibino**	**11.99**	**4**	*d i*PN	**Pn**	**02 21 00.4**	**+1.6**
BILL				pmax	pmax		
	comp=Z,2μm,2.5s						
BILL				MLR	MLR		
	comp=Z,253μm,13.0s						
ADK	**Adak**	**12.05**	**103**	Pn	**Pn**	**02 20 58.8**	**-1.0**
ADK	**Adak**	**12.05**	**103**	P	**Pn**	**02 20 58.9**	**-0.9**
ADK	**Adak**	**12.05**	**103**	⇓P	**Pn**	**02 20 58.1**	**-1.7**
OKH	**Okha**	**12.47**	**267**	*c i*PN	**Pn**	**02 21 03.1**	**-2.4**
OKH				*e*S	**Sn**	**02 23 27.4**	**+3.2**
OKH				pmax	pmax		
	comp=Z,52μm,9.1s						
OKH				smax	smax		
	comp=N,36μm,8.8s						
OKH				smax	smax		
	comp=E,24μm,6.5s						
ATKA	**Atka Island**	**13.28**	**98**	Pn	**Pn**	**02 21 14.6**	**-1.9**
ATKA	**Atka Island**	**13.28**	**98**	P	**Pn**	**02 21 15.4**	**-1.1**
ATKA	**Atka Island**	**13.28**	**98**	⇑P	**Pn**	**02 21 14.2**	**-2.3**
TYV	**Tymovskoe**	**13.80**	**257**	*e*P	**Pn**	**02 21 27.6**	**+4.0**
TYV				*e*S	**Sn**	**02 24 01.9**	**+5.4**
TYV				pmax	pmax		
	comp=Z,1μm,1.4s						
TYV				pmax	pmax		
	comp=Z,7μm,2.8s						
TYV				smax	smax		
	comp=N,3μm,3.5s						
TYV				smax	smax		
	comp=E,3μm,3.5s						
TYV				smax	smax		
	comp=N,85nm,2.1s						
TYV				smax	smax		
	comp=E,219nm,2.1s						
TYV				MLR	MLR		
	comp=Z,155μm,15.0s						
TYV	**Tymovskoe**	**13.80**	**257**	*e*P	**Pn**	**02 21 26.3**	**+2.7**
NKL	**Nikolayevsk**	**13.88**	**267**	*e*P	**Pn**	**02 21 25.8**	**+1.1**
NKL				*e*S	**Sn**	**02 24 03.6**	**+5.2**
NKL				pmax	pmax		
	comp=N,2μm,2.5s						
NKL				pmax	pmax		
	comp=E,1μm,2.1s						
NKL				pmax	pmax		
	comp=Z,4μm,2.1s						
NKL				smax	smax		
	comp=E,8μm,6.6s						
NKL				smax	smax		
	comp=N,5μm,4.6s						
NKL				MLR	MLR		
	comp=E,714μm,16.0s						
NKL				MLR	MLR		
	comp=N,317μm,18.0s						
NKL				MLR	MLR		
	comp=Z,318μm,19.0s						
SPIA	**Saint Paul Isl**	**14.11**	**75**	Pn	**Pn**	**02 21 28.9**	**+1.1**
SPIA	**Saint Paul Isl**	**14.11**	**75**	P	**Pn**	**02 21 25.6**	**-2.2**
	baz=277,SNR=11						
GAMB	**Gambell**	**14.24**	**48**	Pn	**Pn**	**02 21 29.6**	**0.0**
GAMB	**Gambell**	**14.24**	**48**	P	**Pn**	**02 21 28.1**	**-1.5**
	baz=249						
P08K	**Saint George I**	**14.57**	**77**	Pn	**Pn**	**02 21 35.2**	**+1.2**
P08K	**Saint George I**	**14.57**	**77**	P	**Pn**	**02 21 33.5**	**-0.6**
	baz=279,SNR=22						
KUR	**Kuril'sk**	**14.96**	**230**	*c i*P	**Pn**	**02 21 36.1**	**-3.4**
KUR				pmax	pmax		
	comp=Z,12μm,6.7s						
KUR				pmax	pmax		
	comp=Z,749nm,0.9s						
KUR				MLR	MLR		
	comp=Z,176μm,14.0s						
UGL	**Uglegorsk**	**15.10**	**251**	*c i*P	**Pn**	**02 21 36.1**	**-5.2**
UGL				*e*S	**Sn**	**02 24 23.8**	**-4.5**
UGL				pmax	pmax		
	comp=Z,2μm,1.0s						
UGL				pmax	pmax		
	comp=Z,60μm,8.0s						
UGL				smax	smax		
	comp=N,45μm,12.3s						
UGL				smax	smax		
	comp=E,16μm,8.6s						
UGL				MLR	MLR		
	comp=Z,96μm,12.0s						
UGL				MLR	MLR		
	comp=N,209μm,13.0s						
UGL				MLR	MLR		
	comp=E,178μm,13.0s						
NIKH	**Nikolski High**	**15.95**	**90**	Pn	**Pn**	**02 21 52.9**	**+0.5**
NIKH				IAmb	IAmb	02 21 59.7	
	comp=Z,2μm,1.2s						
NIKH	**Nikolski High**	**15.95**	**90**	P	**P**	**02 21 54.6**	**-1.3**
NIKH	**Nikolski High**	**15.95**	**90**	P	**Pn**	**02 21 52.9**	**+0.5**
	baz=292,SNR=40						
YSS	**Yuzhno-Sakhali**	**16.10**	**244**	Pn	**Pn**	**02 21 53.9**	**-0.4**
YSS				IAmb	IAmb	02 22 00.7	
	comp=Z,3μm,1.5s						
YSS	**Yuzhno-Sakhali**	**16.10**	**244**	P	**Pn**	**02 21 55.6**	**+1.3**
YSS	**Yuzhno-Sakhali**	**16.10**	**244**	α*e*P	**Pn**	**02 21 55.7**	**+1.4**
YSS				*e*S	**Sn**	**02 24 52.3**	**-0.2**
YSS				pmax	pmax		
	comp=Z,1μm,1.2s						
YSS				pmax	pmax		
	comp=N,520nm,1.4s						
YSS				pmax	pmax		
	comp=Z,8μm,7.7s						
YSS				pmax	pmax		
	comp=N,14μm,7.8s						
YSS				pmax	pmax		
	comp=E,14μm,6.5s						
YSS				MLR	MLR		
	comp=Z,92μm,16.0s						

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YSS                                   MLR      MLR
        comp=N,81µm,17.0s
YSS                                   MLR      MLR
        comp=E,92µm,16.0s
YSS   Yuzhno-Sakhali   16.10 244 ⥣P   Pn       02 21 54.9 +0.6
M11K  Mekoryuk         16.10  62      P        02 21 56.2 -1.3
M11K  Mekoryuk         16.10  62  P   Pn       02 21 54.3 +0.1
        baz=268,SNR=9.8
TNA   Tin City         16.42  44      Pn       02 21 59.3 +1.0
TNA   Tin City         16.42  44  P   Pn       02 21 57.5 -0.7
        baz=248,SNR=21
YUK   Yuzh-Kuril'sk    16.79 231d iP  Pn       02 21 58.9 -4.2
YUK                              eS   Sn       02 25 11.3 +2.1
YUK                               pmax     pmax
        comp=Z,3µm,0.6s
YUK                               pmax     pmax
        comp=N,904nm,0.7s
YUK                               pmax     pmax
        comp=E,2µm,0.7s
YUK                               MLR      MLR
        comp=Z,80µm,14.0s
YUK                               MLR      MLR
        comp=N,70µm,15.0s
YUK                               MLR      MLR
        comp=E,47µm,13.0s
YUK   Yuzh-Kuril'sk    16.79 231 eP   Pn       02 21 58.5 -4.5
UNV   Unalaska Valle   16.95  85  Pn  Pn       02 22 04.7 -0.4
UNV                               IAmb     IAmb     02 22 12.5
        comp=Z,3µm,1.5s
UNV   Unalaska Valle   16.95  85  P   P        02 22 07.1 +0.1
UNV   Unalaska Valle   16.95  85  P   Pn       02 22 05.4 +0.3
        baz=290,SNR=22
K13K  Kusilvak Mount   16.96  57  P   Pn       02 22 06.0 +0.8
        baz=264
F14K  Arctic Creek     17.01  45  P   P        02 22 06.7 -0.9
        baz=251,SNR=60
LVA   Lava Point       17.11  84      P        02 22 08.5 -0.3
LVA                               IAmb     IAmb     02 22 14.2
        comp=Z,4µm,1.8s
ANM   Nome             17.12  48  P   P        02 22 08.2 -0.7
        baz=255
AKUT  Akutan           17.26  84  Pn  Pn       02 22 08.4 -0.5
AKUT  Akutan           17.26  84  P   P        02 22 12.6 +2.1
GRNR  Gornyy           17.28 264⥣iP   P        02 22 10.6 -0.1
GRNR                              pmax     pmax
        comp=E,160nm,1.2s
GRNR                              pmax     pmax
        comp=N,110nm,1.3s
GRNR                              pmax     pmax
        comp=Z,200nm,1.1s
GRNR                              MLR      MLR
        comp=E,62µm,12.0s
GRNR                              MLR      MLR
        comp=N,52µm,13.0s
GRNR                              MLR      MLR
        comp=Z,73µm,12.0s
M13K  Dall Lake        17.52  62  P   P        02 22 13.9 +0.7
        baz=270
J14K  Nanvaranak Lak   17.57  55  P   P        02 22 13.8 +0.1
        baz=263,SNR=42
F15K  North Star Dit   17.75  45  P   P        02 22 16.8 +1.0
        baz=252,SNR=112
G15K  Niukluk          17.79  47  P   P        02 22 17.0 +0.8
        baz=255,SNR=50
L14K  Kuka Creek       17.86  59  P   P        02 22 17.8 +0.9
        baz=268
M14K  Bethel           18.20  61  P   P        02 22 22.3 +1.5
        baz=271,SNR=84
JKA   Kamikawa-asahi   18.21 238      Pn       02 22 19.4 -1.4
ASAJ  Asahikawa        18.21 238  P   Pn       02 22 20.7 -0.1
        comp=Z,31nm,0.3s,baz=26,slow=4.8,SNR=84
ASAJ                              LR       LR       02 30 03.5
        comp=Z,220µm,18.4s,baz=48,slow=39
        comp=Z,3µm,0.9s
FALS  False Pass       18.34  80  P   P        02 22 23.7 +1.3
FALS  False Pass       18.34  80  P   P        02 22 23.4 +1.0
        baz=288,SNR=22
N14K  Kuskokwak Cree   18.36  64  P   P        02 22 23.6 +1.1
        baz=273,SNR=38
L15K  Ungalak Mounta   18.45  58  P   Pn       02 22 24.8 +1.2
        baz=268,SNR=82
C16K  Lisburne Hills   18.45  37  P   Pn       02 22 23.9 +0.4
C16K                              IAmb     IAmb     02 22 29.5
        comp=Z,3µm,1.6s
C16K  Lisburne Hills   18.45  37  P   Pn       02 22 24.4 +0.9
        baz=244,SNR=236
K15K  Wolf Creek Mou   18.45  56  P   Pn       02 22 25.1 +1.4
        baz=266,SNR=46
H16K  Elim             18.46  49  P   Pn       02 22 24.7 +1.1
        baz=258,SNR=111
YAK   Yakutsk          18.48 303  P   P        02 22 22.9 -0.9
YAK                               IAmb     IAmb     02 22 26.7
        comp=Z,2µm,1.2s
YAK   Yakutsk          18.48 303  P   P        02 22 23.1 -0.7
        comp=Z,785nm,0.6s,baz=96,slow=7.8,SNR=121
YAK                               LR       LR       02 29 50.1
        comp=Z,65µm,18.1s,baz=96,slow=38
YAK   Yakutsk          18.48 303c iP  P        02 22 23.4 -0.4
YAK                              eS   Sn       02 25 50.7 +0.6
YAK                               pmax     pmax
        comp=Z,1µm,1.1s
YAK                               pmax     pmax
        comp=N,128nm,1.1s
YAK                               pmax     pmax
        comp=E,661nm,1.5s
YAK                               pmax     pmax
        comp=Z,18µm,4.6s
YAK                               pmax     pmax
        comp=N,5µm,4.3s
YAK                               pmax     pmax
        comp=E,23µm,5.8s
YAK                               smax     smax
        comp=N,56µm,8.6s
YAK                               smax     smax
        comp=E,18µm,9.0s
YAK                               MLR      MLR
        comp=Z,64µm,19.0s
YAK                               MLR      MLR
        comp=N,81µm,15.0s
YAK                               MLR      MLR
        comp=E,34µm,14.0s
YAK   Yakutsk          18.48 303 ⥥P   P        02 22 23.1 -0.7
G16K  Koyuk River      18.58  47  P   Pn       02 22 26.1 +1.0
        baz=256,SNR=74
O14K  Tigyukauivet M   18.63  66  P   Pn       02 22 26.7 +0.9
        baz=276
M15K  Kasigluk River   18.83  61  P   Pn       02 22 29.0 +0.8
        baz=272,SNR=59
S12K  Black Hills      18.85  77  IAmb     IAmb     02 22 32.8
        comp=Z,1µm,0.9s
S12K  Black Hills      18.85  77  P   Pn       02 22 28.9 +0.4
        baz=286,SNR=61
J16K  Anvik River      18.96  53  P   Pn       02 22 30.4 +0.5
        baz=264,SNR=50
I17K  Unalakleet       19.00  52  P   Pn       02 22 31.1 +1.0
        baz=262,SNR=138
D17K  Noatak River     19.00  39  P   Pn       02 22 30.5 +0.2
        baz=249,SNR=567
N15K  Kwethluk River   19.15  63  P   Pn       02 22 32.7 +0.6
        baz=274,SNR=192
RDOG  Red Dog Mine     19.20  38  P   Pn       02 22 33.0 +0.4
RDOG                              IAmb     IAmb     02 22 38.8
        comp=Z,2µm,1.4s
RDOG  Red Dog Mine     19.20  38  P   Pn       02 22 32.5 -0.1
        baz=248,SNR=172
E17K  Hotham Inlet     19.25  42  P   Pn       02 22 33.7 +0.5
        baz=252,SNR=618
C17K  DeLong Mountai   19.27  37  P   Pn       02 22 33.7 +0.2
        baz=246,SNR=293
F17K  Baldwin Pennin   19.28  44  P   Pn       02 22 33.7 +0.1
        baz=254,SNR=158
G17K  Kiwalik Mounta   19.30  47  P   Pn       02 22 33.8  0.0
        baz=258,SNR=122
O15K  Ungalikthiuk R   19.37  66  IAmb     IAmb     02 22 46.5
        comp=Z,3µm,1.8s
O15K  Ungalikthiuk R   19.37  66  P   Pn       02 22 34.4 -0.4
        baz=277,SNR=108
L16K  Owhat River      19.40  58  IAmb     IAmb     02 22 41.9
        comp=Z,3µm,1.9s
L16K  Owhat River      19.40  58  P   Pn       02 22 34.9 -0.2
        baz=270,SNR=151
H17K  Granite Mounta   19.49  49  P   Pn       02 22 36.2  0.0
        baz=260,SNR=263
JEM   Erimo            19.59 233  P   P        02 22 34.7 -1.4
ERM   Erimo            19.59 233  P   P        02 22 32.6 -3.5
ERM   Erimo            19.59 233  P   P        02 22 34.6 -1.5
ERM   Erimo            19.59 233deP   P        02 22 33.9 -2.2
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ERM                               pmax     pmax
        comp=Z,240nm,0.5s
ERM                               MLR      MLR
        comp=Z,93µm,13.0s
ERM   Erimo            19.59 233  S   Sn       02 26 24.6 +7.6
ERM   Erimo            19.59 233 ⥣P   P        02 22 29.9 -6.2
J17K  VABM Dome        19.66  53  P   Pn       02 22 38.2  0.0
        baz=266,SNR=227
M16K  Timber Creek     19.66  60  P   Pn       02 22 37.8 -0.4
        baz=272
N16K  Nishlik Lake     19.79  62  P   Pn       02 22 39.2 -0.5
        baz=274,SNR=117
E18K  Tukpahlearik C   19.81  41  P   Pn       02 22 39.5 -0.4
        baz=253,SNR=413
SDPT  Sand Point       19.82  77  P   P        02 22 38.6 +0.1
SDPT  Sand Point       19.82  77  P   P        02 22 38.0 -0.5
        baz=287,SNR=21
F18K  Selawik          19.94  44  P   Pn       02 22 41.0 -0.4
        baz=256,SNR=259
L17K  Donlin           19.96  57  P   Pn       02 22 41.2 -0.6
        baz=270,SNR=135
K17K  Iditarod         19.97  55  IAmb     IAmb     02 22 52.5
        comp=Z,2µm,1.4s
K17K  Iditarod         19.97  55  P   Pn       02 22 41.1 -0.7
        baz=268,SNR=232
C18K  Utukok River     20.01  38  P   P        02 22 40.6  0.0
C18K                              IAmb     IAmb     02 22 48.3
        comp=Z,2µm,1.3s
C18K  Utukok River     20.01  38  P   P        02 22 41.3 +0.7
        baz=249,SNR=312
S14K  Fog Glacier      20.06  74  P   P        02 22 41.8 +0.6
        baz=285,SNR=88
B18K  Kokolik River    20.09  35  P   P        02 22 42.0 +0.7
        baz=246,SNR=99
H18K  Honhosa River    20.18  48  P   P        02 22 42.8 +0.5
        baz=261
G18K  Tagagawik        20.18  46  IAmb     IAmb     02 22 57.4
        comp=Z,3µm,1.6s
G18K  Tagagawik        20.18  46  P   Pn       02 22 43.5 -0.9
        baz=259,SNR=350
O16K  Kokwok River B   20.20  64  IAMs_20  IAMs_20  02 30 02.2
        comp=Z,150µm,19.0s
O16K  Kokwok River B   20.20  64  P   P        02 22 43.0 +0.4
        baz=277,SNR=140
P16K  Nushagak River   20.33  66  IAmb     IAmb     02 22 59.7
        comp=Z,1µm,1.1s
P16K                              IAMs_20  IAMs_20  02 30 04.0
        comp=Z,120µm,20.0s
P16K  Nushagak River   20.33  66  P   P        02 22 44.7 +0.6
        baz=278,SNR=112
M17K  Holitna River    20.39  59  P   Pn       02 22 45.7 -1.0
        baz=272,SNR=165
CHNA  Chernabura Isl   20.46  78  P   P        02 22 45.2 -0.3
CHNA  Chernabura Isl   20.46  78  P   P        02 22 44.9 -0.5
        baz=289,SNR=39
TEY   Ternei           20.55 249⥣eP   P        02 22 42.7 -3.9
TEY                               pmax     pmax
        comp=N,60nm,2.6s
TEY                               pmax     pmax
        comp=E,70nm,2.6s
TEY                               pmax     pmax
        comp=Z,120nm,2.6s
TEY                               pmax     pmax
        comp=N,5µm,11.6s
TEY                               pmax     pmax
        comp=E,7µm,11.6s
TEY                               pmax     pmax
        comp=Z,10µm,11.6s
TEY                               MLR      MLR
        comp=N,55µm,18.0s
TEY                               MLR      MLR
        comp=E,37µm,18.0s
TEY                               MLR      MLR
        comp=Z,23µm,18.0s
N17K  Nushagak Hills   20.56  62  IAmb     IAmb     02 23 02.0
        comp=Z,2µm,1.6s
N17K                              IAMs_20  IAMs_20  02 30 24.6
        comp=Z,145µm,19.0s
N17K  Nushagak Hills   20.56  62  P   P        02 22 47.1 +0.5
        baz=275,SNR=134
KLR   Kul'dur          20.66 264  P   P        02 22 46.5 -1.3
        comp=Z,151nm,0.9s,baz=63,slow=10,SNR=103
KLR                               PcP      PcP      02 26 58.6 +1.3
        comp=Z,15nm,0.8s,baz=16,slow=1.8,SNR=4.9
KLR                               LR       LR       02 31 18.7
        comp=Z,82µm,19.6s,baz=68,slow=38
        comp=Z,151nm,0.9s
A19K  Wainwright       20.67  33  P   P        02 22 46.4 -1.2
        baz=245,SNR=82
O17K  Koliganek Bris   20.69  64  P   P        02 22 47.9  0.0
        baz=277,SNR=167
C19K  Lookout Ridge    20.72  37  IAMs_20  IAMs_20  02 31 31.3
        comp=Z,106µm,18.0s
C19K  Lookout Ridge    20.72  37  P   P        02 22 48.6 +0.4
        baz=250,SNR=669
L18K  Granite Mounta   20.72  57  IAMs_20  IAMs_20  02 31 15.5
        comp=Z,120µm,18.0s
L18K  Granite Mounta   20.72  57  P   P        02 22 48.8 +0.5
        baz=271,SNR=73
F19K  Shaleruckik Mo   20.73  44  IAmb     IAmb     02 23 03.0
        comp=Z,1µm,1.1s
F19K  Shaleruckik Mo   20.73  44  P   P        02 22 48.9 +0.6
        baz=258,SNR=296
J18K  Innoko River     20.73  53  P   P        02 22 48.9 +0.6
        baz=268,SNR=275
GCSA  Galena City Sc   20.75  50  P   P        02 22 48.5 -0.1
        baz=264,SNR=80
G19K  Purcell Mounta   20.86  46  P   P        02 22 50.0 +0.2
G19K  Purcell Mounta   20.86  46  P   P        02 22 50.2 +0.4
        baz=260,SNR=345
H19K  Roundabout Mou   21.02  48  P   P        02 22 51.9 +0.4
        baz=262,SNR=337
D19K  Kuna River       21.03  39  IAmb     IAmb     02 23 05.8
        comp=Z,1µm,1.1s
D19K  Kuna River       21.03  39  P   P        02 22 52.3 +0.7
        baz=253,SNR=422
E19K  Redstone River   21.07  42  IAmb     IAmb     02 23 10.4
        comp=Z,3µm,1.4s
E19K  Redstone River   21.07  42  P   P        02 22 52.9 +0.9
        baz=257,SNR=453
Q16K  King Salmon      21.07  67  P   P        02 22 53.5 +1.5
        baz=280,SNR=50
P17K  Kvichak River    21.10  65  P   P        02 22 52.9 +0.6
        baz=279,SNR=119
M18K  Stony River      21.16  59  P   P        02 22 53.5 +0.5
        baz=274,SNR=130
ZEA   Zeya             21.16 279 eP   P        02 22 51.1 -1.9
ZEA                              eS   S        02 26 35.0  -13
ZEA                              e             02 27 09.1
ZEA                               pmax     pmax
        comp=N,70nm,0.8s
ZEA                               pmax     pmax
        comp=E,410nm,0.8s
ZEA                               pmax     pmax
        comp=Z,610nm,0.9s
ZEA                               pmax     pmax
        comp=E,2µm,3.9s
ZEA                               pmax     pmax
        comp=N,900nm,1.7s
ZEA                               pmax     pmax
        comp=Z,5µm,2.9s
ZEA                               smax     smax
        comp=E,9µm,5.5s
ZEA                               smax     smax
        comp=N,10µm,9.8s
ZEA                               MLR      MLR
        comp=N,72µm,12.0s
ZEA                               MLR      MLR
        comp=E,48µm,12.0s
ZEA                               MLR      MLR
        comp=Z,81µm,12.0s
N18K  Kilae Creek      21.19  61  IAMs_20  IAMs_20  02 30 54.3
        comp=Z,147µm,19.0s
N18K  Kilae Creek      21.19  61  P   P        02 22 53.6 +0.3
        baz=276,SNR=91
J19K  Poorman          21.24  52  IAmb     IAmb     02 23 11.6
        comp=Z,1µm,1.3s
J19K  Poorman          21.24  52  P   P        02 22 53.7 -0.1
        baz=267,SNR=154
TIXI  Tiksi            21.45 330  P   P        02 22 55.8 -0.3
TIXI                              IAmb     IAmb     02 23 13.6
        comp=Z,2µm,1.4s
TIXI  Tiksi            21.45 330  P   P        02 22 55.6 -0.4
        comp=Z,616nm,0.8s,baz=124,slow=11,SNR=135
TIXI                              PcP      PcP      02 26 59.0 +0.6
        comp=Z,73nm,0.7s,baz=138,slow=2.6,SNR=6.1
TIXI                              LR       LR       02 32 01.9
        comp=Z,159µm,20.1s,baz=142,slow=39
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        comp=Z,616nm,0.8s
TIXI  Tiksi            21.45 330 ⥣P   P        02 22 55.7 -0.3
JTM   Tenmabayashi     21.51 234  P   P        02 22 55.6 -1.4
JTM   Tenmabayashi     21.51 234 ⥣P   P        02 22 50.2 -6.7
Q17K  Contact Creek    21.55  68  P   P        02 22 57.3  0.0
        baz=282,SNR=193
F20K  Avaraart Lake    21.56  43  IAmb     IAmb     02 23 13.4
        comp=Z,2µm,1.6s
F20K  Avaraart Lake    21.56  43  P   P        02 22 57.6 +0.4
        baz=259,SNR=232
L19K  White Mountain   21.58  57  IAMs_20  IAMs_20  02 31 52.5
        comp=Z,99µm,18.0s
L19K  White Mountain   21.58  57  P   P        02 22 57.7 +0.1
        baz=273,SNR=107
D20K  Etivluk River    21.62  39  IAmb     IAmb     02 23 10.1
        comp=Z,1µm,1.0s
D20K  Etivluk River    21.62  39  P   P        02 22 58.0 +0.1
        baz=254,SNR=413
O18K  Koktuh Hills     21.62  63  IAmb     IAmb     02 23 11.3
        comp=Z,1µm,1.2s
O18K                              IAMs_20  IAMs_20  02 31 05.7
        comp=Z,147µm,19.0s
O18K  Koktuh Hills     21.62  63  P   P        02 22 58.1 +0.1
        baz=278,SNR=164
E20K  Nigu River       21.65  40  P   P        02 22 58.5 +0.2
        baz=256,SNR=248
H20K  Anotleneega Mo   21.67  48  P   P        02 22 58.7 +0.2
        baz=264,SNR=293
P18K  Big Mountain,    21.68  64  IAMs_20  IAMs_20  02 30 58.3
        comp=Z,119µm,20.0s
P18K  Big Mountain,    21.68  64  P   P        02 22 58.9 +0.2
        baz=279,SNR=232
I20K  Naaghedeneel     21.78  50  P   P        02 22 59.5 -0.1
        baz=266,SNR=87
M19K  Big River Lodg   21.81  58  P   P        02 23 00.3 +0.2
        baz=274,SNR=144
B20K  Meade River      21.83  35  P   P        02 23 00.4 +0.2
B20K  Meade River      21.83  35  P   P        02 23 00.3 +0.2
        baz=250,SNR=250
ACHA  Angle Creek He   21.85  68  IAMs_20  IAMs_20  02 31 09.7
        comp=Z,91µm,18.0s
N19K  Bonanza Creek    21.86  61  IAMs_20  IAMs_20  02 31 25.1
        comp=Z,123µm,19.0s
N19K  Bonanza Creek    21.86  61  P   P        02 23 01.0 +0.4
        baz=276,SNR=141
J20K  Nowinta River    21.89  51  P   P        02 23 00.6 -0.2
        baz=268,SNR=276
K20K  Telida           21.91  54  P   P        02 23 00.9 -0.3
        baz=270,SNR=211
Q18K  Katmai Hardscr   21.93  66  P   P        02 23 00.8 -0.6
        baz=281,SNR=121
O19K  Port Alsworth    22.02  62  IAMs_20  IAMs_20  02 31 38.2
        comp=Z,157µm,18.0s
O19K  Port Alsworth    22.02  62  P   P        02 23 02.2  0.0
        baz=278,SNR=21
L20K  Farewell, AK     22.02  56  P   P        02 23 02.3  0.0
        baz=273
IMAR  Indian Mountai   22.19  47  P   P        02 23 03.5 -0.5
CHIR  Chirikof Islan   22.31  74  P   P        02 23 06.0 +0.6
CHIR  Chirikof Islan   22.31  74  P   P        02 23 04.2 -1.2
        baz=288,SNR=34
G21K  Allakaket        22.34  45  IAmb     IAmb     02 23 21.5
        comp=Z,2µm,1.4s
G21K  Allakaket        22.34  45  P   P        02 23 05.7  0.0
        baz=263,SNR=156
C21K  Knifeblade Rid   22.37  38  P   P        02 23 06.1 +0.1
        baz=255,SNR=297
M20K  Styx River       22.41  58  IAmb     IAmb     02 23 17.1
        comp=Z,2µm,1.9s
M20K                              IAMs_20  IAMs_20  02 32 10.4
        comp=Z,100µm,18.0s
M20K  Styx River       22.41  58  P   P        02 23 06.8 +0.3
        baz=275,SNR=140
R18K  Karluk           22.45  69  P   P        02 23 05.5 -1.4
        baz=284
F21K  Alatna River     22.45  43  IAmb     IAmb     02 23 21.1
        comp=Z,2µm,1.9s
F21K  Alatna River     22.45  43  P   P        02 23 06.8  0.0
        baz=261,SNR=277
A21K  Barrow           22.47  32  P   P        02 23 06.9 -0.1
        baz=248,SNR=49
E21K  Killik River     22.49  40  IAmb     IAmb     02 23 22.3
        comp=Z,943nm,1.3s
E21K  Killik River     22.49  40  P   P        02 23 06.9 -0.4
        baz=258
H21K  Melozitna Rive   22.54  48  IAmb     IAmb     02 23 23.1
        comp=Z,1µm,1.4s
H21K  Melozitna Rive   22.54  48  P   P        02 23 07.2 -0.7
        baz=266,SNR=362
B21K  Ikpikpuk River   22.55  37  P   P        02 23 07.4 -0.5
B21K                              IAmb     IAmb     02 23 23.2
        comp=Z,1µm,1.0s
B21K  Ikpikpuk River   22.55  37  P   P        02 23 07.9  0.0
        baz=254,SNR=248
HEH   HeiHe            22.57 270 eP   P        02 23 04.5 -3.7
HEH                               pP       pP       02 23 06.8 -4.1
HEH                               PcP      PcP      02 27 00.8 -0.2
HEH                               S        S        02 27 06.0 -9.0
HEH                               pmax     pmax
        comp=Z,410nm,0.9s
HEH                               pmax     pmax
        comp=Z,13µm,5.1s
HEH                               LR       LR
        comp=Z,223µm,17.9s
HEH                               LR       LR
        comp=Z,148µm,11.4s
Q19K  Cape Douglas,    22.57  65  IAmb     IAmb     02 23 13.0
        comp=Z,1µm,0.8s
Q19K                              IAMs_20  IAMs_20  02 32 09.8
        comp=Z,123µm,18.0s
Q19K  Cape Douglas,    22.57  65  P   P        02 23 08.1 -0.1
        baz=282,SNR=147
ILSW  Iliamna Southw   22.63  62  IAmb     IAmb     02 23 21.3
        comp=Z,1µm,1.4s
ILSW                              IAMs_20  IAMs_20  02 31 47.4
        comp=Z,153µm,18.0s
P19K  Oil Pt           22.64  63  IAmb     IAmb     02 23 20.9
        comp=Z,2µm,1.4s
P19K                              IAMs_20  IAMs_20  02 32 04.7
        comp=Z,145µm,18.0s
P19K  Oil Pt           22.64  63  P   P        02 23 09.7 +0.8
        baz=280,SNR=58
CHUM  Lake Minchumin   22.69  52  P   P        02 23 10.0 +0.6
        baz=271
RED   Redoubt Volcan   22.75  61  IAmb     IAmb     02 23 22.7
        comp=Z,889nm,1.2s
PPLA  Purkeypile       22.78  55  IAMs_20  IAMs_20  02 32 49.3
        comp=Z,110µm,18.0s
PPLA  Purkeypile       22.78  55  P   P        02 23 10.7 +0.2
        baz=273
CAST  Castle Rocks     22.80  53  IAmb     IAmb     02 23 17.1
        comp=Z,3µm,2.0s
CAST  Castle Rocks     22.80  53  P   P        02 23 10.8 +0.1
        baz=272
A22K  Sinclair Lake    22.86  34  P   P        02 23 11.2 +0.1
        baz=251,SNR=35
SII   Sitkinak Islan   22.86  71  IAmb     IAmb     02 23 22.1
        comp=Z,2µm,1.4s
SII   Sitkinak Islan   22.86  71  P   P        02 23 12.0 +0.8
SII   Sitkinak Islan   22.86  71  P   P        02 23 09.6 -1.6
        baz=287,SNR=26
I21K  Tanana           22.86  49  IAmb     IAmb     02 23 18.6
        comp=Z,986nm,1.4s
I21K  Tanana           22.86  49  P   P        02 23 11.1 -0.1
        baz=268
O20K  Slope Mountain   22.87  62  P   P        02 23 11.5  0.0
        baz=279,SNR=65
N20K  Mount Spurr      22.92  59  P   P        02 23 11.9  0.0
        baz=277
SPCR  Spurr Chakacha   22.92  59  P   P        02 23 12.1 +0.2
        baz=277,SNR=41
F22K  John River       22.99  43  P   P        02 23 12.8 +0.2
        baz=262
SPU   Mount Spurr      22.99  59  IAmb     IAmb     02 23 24.3
        comp=Z,2µm,2.0s
D22K  Ayikyak River    23.05  39  P   P        02 23 12.8 -0.3
        baz=258
B22K  Teshekpuk Lake   23.15  36  P   P        02 23 13.8 -0.2
        baz=254
H22K  Ishtalitna Cre   23.15  47  P   P        02 23 13.8 -0.4
        baz=267,SNR=201
OHAK  Old Harbor       23.15  69  P   P        02 23 15.0 +0.8
OHAK  Old Harbor       23.15  69  P   P        02 23 12.2 -2.0
        baz=286,SNR=54
SKT   Skwentna         23.15  57  P   P        02 23 13.6 -0.7
SKT                               IAmb     IAmb     02 23 37.6
        comp=Z,1µm,1.6s
SKT                               IAMs_20  IAMs_20  02 33 10.1
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                 comp=Z,98µm,18.0s
SKT   Skwentna          23.15  57  P        P        02 23 14.4 +0.1
                 baz=276,SNR=172
G22K  Bettles           23.18  44  P        P        02 23 14.1 -0.3
                 baz=264
E22K  Anaktuvuk Pass    23.22  41  IAmb     IAmb     02 23 27.8
                 comp=Z,1µm,1.3s
E22K  Anaktuvuk Pass    23.22  41  P        P        02 23 14.4 -0.5
                 baz=261,SNR=580
Q20K  Shuyak Island     23.27  66  P        P        02 23 14.9 -0.5
                 baz=283,SNR=91
SYI   Shuyak Island     23.27  66  IAMs_20  IAMs_20  02 31 59.4
                 comp=Z,96µm,20.0s
BPAW  Bear Paw Mtn.     23.28  52  IAmb     IAmb     02 23 29.3
                 comp=Z,1µm,1.2s
BPAW  Bear Paw Mtn.     23.28  52  P        P        02 23 15.1 -0.3
                 baz=271,SNR=309
KDAK  Kodiak Island     23.37  68  P        P        02 23 15.1 -1.3
KDAK                               IAmb     IAmb     02 23 20.5
                 comp=Z,2µm,1.8s
KDAK  Kodiak Island     23.37  68  IAMs_20  IAMs_20  02 32 00.1
                 comp=Z,102µm,19.0s
KDAK  Kodiak Island     23.37  68  LR       LR       02 32 11.6
                 comp=Z,97µm,19.4s,baz=262,slow=36
KDAK  Kodiak Island     23.37  68  P        P        02 23 15.1 -1.3
KDAK                               pmax     pmax
                 comp=Z,2µm,1.8s
KDAK                               MLR      MLR
                 comp=Z,102µm,19.0s
KDAK  Kodiak Island     23.37  68  P        P        02 23 14.6 -1.8
                 baz=285
KDAK  Kodiak Island     23.37  68 ⇑P        P        02 23 14.3 -2.1
MLY   Manley            23.38  49  P        P        02 23 16.3 -0.2
                 baz=269,SNR=231
HOM   Homer             23.43  63  IAMs_20  IAMs_20  02 31 54.5
                 comp=Z,104µm,20.0s
HOM   Homer             23.43  63  P        P        02 23 15.8 -1.2
                 baz=281,SNR=28
CAPN  Captain Cook N    23.48  60  IAMs_20  IAMs_20  02 32 27.9
                 comp=Z,100µm,19.0s
CAPN  Captain Cook N    23.48  60  P        P        02 23 17.4 -0.1
                 baz=279
USRK  Ussuriysk Ar.     23.56 253  P        P        02 23 14.8 -3.6
                 comp=Z,51nm,0.8s,baz=52,slow=8.9,SNR=66
USRK                               PcP      PcP      02 27 04.7 +1.5
                 comp=Z,76nm,1.0s,baz=48,slow=1.1,SNR=7.9
USRK                               ScP      ScP      02 30 42.1 +1.4
                 comp=Z,10nm,1.0s,baz=36,slow=3.5,SNR=6.5
SUA   Susitna One       23.58  58  IAmb     IAmb     02 23 24.0
                 comp=Z,559nm,1.0s
SUA                                IAMs_20  IAMs_20  02 33 06.6
                 comp=Z,82µm,18.0s
SUA   Susitna One       23.58  58  P        P        02 23 17.9 -0.8
                 baz=278
TRF   Thorofare Moun    23.61  53  IAmb     IAmb     02 23 24.6
                 comp=Z,1µm,1.2s
TRF   Thorofare Moun    23.61  53  P        P        02 23 19.0  0.0
                 baz=273,SNR=402
CNPM  China Poot        23.66  63  P        P        02 23 17.7 -1.7
CNPM                               IAMs_20  IAMs_20  02 32 01.7
                 comp=Z,116µm,20.0s
CUT   Chulitna          23.70  56  IAmb     IAmb     02 23 34.2
                 comp=Z,869nm,1.0s
CUT                                IAMs_20  IAMs_20  02 33 19.6
                 comp=Z,82µm,18.0s
CUT   Chulitna          23.70  56  P        P        02 23 18.7 -0.9
                 baz=276,SNR=55
COLD  Coldfoot          23.72  44  IAmb     IAmb     02 23 32.5
                 comp=Z,706nm,1.2s
COLD  Coldfoot          23.72  44  P        P        02 23 19.5 -0.3
                 baz=265,SNR=160
G23K  Bananza Creek     23.75  45  IAmb     IAmb     02 23 33.4
                 comp=Z,2µm,1.8s
G23K  Bananza Creek     23.75  45  P        P        02 23 19.7 -0.4
                 baz=266,SNR=174
D23K  Nanushuk River    23.77  39  IAmb     IAmb     02 23 32.8
                 comp=Z,1µm,1.5s
D23K  Nanushuk River    23.77  39  P        P        02 23 19.8 -0.5
                 baz=260,SNR=103
BRLK  Bradley Lake      23.79  63  IAmb     IAmb     02 23 31.4
                 comp=Z,2µm,1.9s
BRLK                               IAMs_20  IAMs_20  02 32 05.9
                 comp=Z,110µm,20.0s
M22K  Willow            23.84  57  IAMs_20  IAMs_20  02 33 25.3
                 comp=Z,80µm,18.0s
M22K  Willow            23.84  57  P        P        02 23 19.8 -1.2
                 baz=277,SNR=44
BRSE  Bradley Lake S    23.87  63  P        P        02 23 19.8 -1.5
                 baz=281,SNR=60
H23K  Yukon River       23.90  47  P        P        02 23 21.3 -0.2
                 baz=268,SNR=412
BWN   Browne            23.94  51  P        P        02 23 22.7 +0.7
C23K  Itkillik River    23.96  37  IAmb     IAmb     02 23 34.2
                 comp=Z,1µm,1.1s
C23K  Itkillik River    23.96  37  P        P        02 23 22.0 -0.1
                 baz=258,SNR=249
I23K  Minto, Yukon-K    23.97  49  IAmb     IAmb     02 23 38.3
                 comp=Z,2µm,1.4s
I23K  Minto, Yukon-K    23.97  49  P        P        02 23 22.0 -0.1
                 baz=270,SNR=275
SLKM  Skilak Lake       23.98  61  IAMs_20  IAMs_20  02 32 53.0
                 comp=Z,130µm,19.0s
E23K  Chandalar         24.03  42  IAmb     IAmb     02 23 28.6
                 comp=Z,816nm,1.1s
E23K  Chandalar         24.03  42  P        P        02 23 22.6 -0.2
                 baz=263,SNR=496
JMM   Marumori          24.03 230  P        P        02 23 24.6 +1.6
JMM   Marumori          24.03 230 ⇑P        P        02 23 22.5 -0.5
NEA2  Nenana            24.10  50  IAmb     IAmb     02 23 39.3
                 comp=Z,2µm,1.6s
NEA2  Nenana            24.10  50  P        P        02 23 22.6 -0.8
                 baz=272,SNR=120
RC01  Rabbit Creek A    24.12  59  P        P        02 23 22.5 -1.1
                 baz=279,SNR=25
TOLK  Toolik Lake Re    24.12  40  P        P        02 23 23.5 -0.1
                 baz=262,SNR=250
MCK   McKinley          24.20  52  IAmb     IAmb     02 23 36.3
                 comp=Z,2µm,1.6s
MCK   McKinley          24.20  52  P        P        02 23 23.4 -0.9
                 baz=274,SNR=153
O22K  Cooper Landing    24.23  60  IAmb     IAmb     02 23 41.6
                 comp=Z,378nm,0.6s
O22K                               IAMs_20  IAMs_20  02 33 01.6
                 comp=Z,151µm,19.0s
O22K  Cooper Landing    24.23  60  P        P        02 23 22.9 -1.7
                 baz=280,SNR=8.8
RND   Reindeer          24.26  53  IAmb     IAmb     02 23 41.5
                 comp=Z,2µm,1.7s
PMR   Palmer            24.33  58  P        P        02 23 27.1 +1.6
PMR   Palmer            24.33  58  P        P        02 23 24.0 -1.5
                 baz=278,SNR=25
VLA   Vladivostok       24.35 251ceP        P        02 23 22.9 -2.9
VLA                                pmax     pmax
                 comp=Z,127nm,1.3s
VLA                                MLR      MLR
                 comp=Z,70µm,16.0s
GHO   Glory Hole Cre    24.40  57  IAmb     IAmb     02 23 39.8
                 comp=Z,963nm,1.5s
GHO                                IAMs_20  IAMs_20  02 33 44.1
                 comp=Z,78µm,18.0s
SEW   Seward            24.43  61  IAmb     IAmb     02 23 41.7
                 comp=Z,432nm,0.8s
SEW   Seward            24.43  61  P        P        02 23 25.3 -1.2
                 baz=281,SNR=28
WAT1  Susitna Watana    24.45  55  P        P        02 23 25.5 -1.2
                 baz=276
E24K  Your Creek        24.45  42  P        P        02 23 26.9 +0.2
                 baz=264,SNR=473
D24K  Happy Valley      24.46  39  IAmb     IAmb     02 23 42.6
                 comp=Z,774nm,1.1s
D24K  Happy Valley      24.46  39  P        P        02 23 26.7  0.0
                 baz=262,SNR=214
WRH   Wood River Hil    24.53  51  IAmb     IAmb     02 23 47.5
                 comp=Z,916nm,1.1s
MDJ   Mudanjiang        24.58 257  P        P        02 23 24.0 -4.0
MDJ                                         PcP      02 27 06.3 +0.9
MDJ   Mudanjiang        24.58 257  P        P        02 23 24.3 -3.7
MDJ                                S        S        02 27 51.0 +2.6
MDJ                                pmax     pmax
                 comp=Z,250nm,2.3s
MDJ                                pmax     pmax
                 comp=Z,10µm,11.4s
MDJ                                LR       LR
                 comp=Z,163µm,17.2s
MDJ                                LR       LR
                 comp=Z,126µm,14.4s
MDJ   Mudanjiang        24.58 257  P        P        02 23 26.4 -1.6
H24K  Noodor Dome       24.58  47  IAmb     IAmb     02 23 46.0
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                 comp=Z,1µm,1.7s
H24K  Noodor Dome       24.58  47  P        P        02 23 27.6 -0.3
                 baz=270,SNR=234
C24K  Franklin Bluff    24.59  38  IAmb     IAmb     02 23 39.8
                 comp=Z,849nm,0.9s
C24K  Franklin Bluff    24.59  38  P        P        02 23 27.7 -0.1
                 baz=261
COLA  College           24.61  50  P        P        02 23 27.8 -0.3
COLA                               IAMs_20  IAMs_20  02 33 59.3
                 comp=Z,79µm,19.0s
COLA  College           24.61  50  P        P        02 23 29.4 +1.4
COLA  College           24.61  50c iP       P        02 23 27.4 -0.6
COLA                               pmax     pmax
                 comp=Z,202nm,0.9s
COLA                               MLR      MLR
                 comp=Z,80µm,15.0s
COLA  College           24.61  50  P        P        02 23 27.5 -0.6
                 baz=272
COLA  College           24.61  50  P        P        02 23 27.5 -0.5
COLA                               S        S        02 27 44.8 -3.7
COLA  College           24.61  50 ⇑P        P        02 23 27.3 -0.7
F24K  Squaw Lake        24.64  43  P        P        02 23 27.9 -0.5
                 baz=266,SNR=155
CCB   Clear Creek Bu    24.64  50  P        P        02 23 26.8 -1.5
CCB                                IAmb     IAmb     02 23 43.2
                 comp=Z,708nm,1.0s
CCB                                IAMs_20  IAMs_20  02 33 58.5
                 comp=Z,73µm,18.0s
KNK   Knik Glacier      24.68  58  IAmb     IAmb     02 23 57.8
                 comp=Z,570nm,1.1s
KNK   Knik Glacier      24.68  58  P        P        02 23 27.6 -1.1
                 baz=279,SNR=63
G24K  Hadweenzic Riv    24.76  45  IAmb     IAmb     02 23 44.9
                 comp=Z,1µm,1.1s
G24K  Hadweenzic Riv    24.76  45  P        P        02 23 29.2 -0.2
                 baz=268,SNR=609
POKR  Poker Plat Res    24.78  49  P        P        02 23 29.0 -0.6
                 baz=272,SNR=38
PWL   Port Wells        24.83  59  IAmb     IAmb     02 24 00.7
                 comp=Z,1µm,1.1s
PWL                                IAMs_20  IAMs_20  02 32 54.5
                 comp=Z,96µm,20.0s
PWL   Port Wells        24.83  59  P        P        02 23 28.5 -1.7
                 baz=281,SNR=354
WAT6  Susitna Watana    24.85  55  P        P        02 23 28.8 -1.7
                 baz=277,SNR=252
DHY   Denali Highway    24.95  54  IAmb     IAmb     02 23 48.1
                 comp=Z,624nm,1.1s
DHY   Denali Highway    24.95  54  P        P        02 23 30.3 -1.1
                 baz=276,SNR=289
M23K  Glacier View      24.96  57  P        P        02 23 30.4 -0.9
                 baz=279,SNR=111
JSD   Sado              25.01 235  IAmb     IAmb     02 23 35.4
                 comp=Z,641nm,0.8s
JSD   Sado              25.01 235  P        P        02 23 33.2 +1.3
JSD   Sado              25.01 235 ⇑P        P        02 23 30.9 -1.1
HDA   Harding Lake      25.02  51  P        P        02 23 29.8 -2.0
HDA                                IAmb     IAmb     02 23 54.3
                 comp=Z,419nm,1.0s
HDA   Harding Lake      25.02  51  P        P        02 23 30.3 -1.5
                 baz=274,SNR=181
IL31                    25.03  50  IAmb     IAmb     02 23 54.8
                 comp=Z,605nm,1.1s
ILAR  Eielson Array     25.03  50  P        P        02 23 30.0 -1.9
ILAR  Eielson Array     25.03  50  P        P        02 23 30.5 -1.4
                 comp=Z,202nm,0.9s,baz=263,slow=7.8,SNR=153
ILAR                               LR       LR       02 33 55.0
                 comp=Z,65µm,19.1s,baz=256,slow=38
ILAR                               P3KPbc            02 56 36.8
                 comp=Z,2.2nm,0.9s,baz=118,slow=3.2,SNR=12
                 comp=Z,202nm,0.9s
BNX   BinXian           25.07 261 ⇑P        P        02 23 30.8 -1.6
BNX                                pP       pP       02 23 34.0 -1.3
BNX                                PcP      PcP      02 27 06.0 -0.5
BNX                                S        S        02 27 55.8 -0.5
BNX                                pmax     pmax
                 comp=Z,350nm,1.0s
BNX                                pmax     pmax
                 comp=Z,9µm,11.8s
BNX                                LR       LR
                 comp=Z,140µm,13.1s
BNX                                LR       LR
                 comp=Z,171µm,14.5s
MSHR  Mys Shultsa       25.11 251⇑eP        P        02 23 30.3 -2.4
MSHR                               pmax     pmax
                 comp=Z,149nm,1.3s
MSHR                               MLR      MLR
                 comp=Z,129µm,18.0s
SCM   Sheep Creek Mo    25.14  57  IAMs_20  IAMs_20  02 34 14.7
                 comp=Z,70µm,18.0s
SCM   Sheep Creek Mo    25.14  57  P        P        02 23 32.6 -0.4
                 baz=279,SNR=386
PSTR  Posyet            25.25 252d iP       P        02 23 30.6 -3.3
G25K  Bearman Lake      25.30  45  P        P        02 23 34.2 -0.1
                 baz=270,SNR=80
D25K  Kavik River       25.35  39  P        P        02 23 33.7 -1.0
D25K                               IAmb     IAmb     02 23 49.7
                 comp=Z,588nm,0.9s
D25K  Kavik River       25.35  39  P        P        02 23 34.2 -0.5
                 baz=264,SNR=216
H25L  Birch Creek       25.42  46  P        P        02 23 34.8 -0.5
                 baz=271,SNR=26
GLI   Glacier Island    25.42  59  IAmb     IAmb     02 23 50.2
                 comp=Z,1µm,1.4s
GLI                                IAMs_20  IAMs_20  02 34 01.2
                 comp=Z,88µm,18.0s
GLI   Glacier Island    25.42  59  P        P        02 23 34.3 -1.2
                 baz=281,SNR=112
P23K  Montague Islan    25.46  61  IAmb     IAmb     02 23 50.7
                 comp=Z,1µm,1.1s
P23K                               IAMs_20  IAMs_20  02 33 57.7
                 comp=Z,129µm,18.0s
P23K  Montague Islan    25.46  61  P        P        02 23 34.9 -0.8
                 baz=283,SNR=64
F25K  Christian Rive    25.50  43  IAmb     IAmb     02 23 51.2
                 comp=Z,739nm,1.4s
F25K  Christian Rive    25.50  43  P        P        02 23 36.2  0.0
                 baz=268,SNR=160
E25K  Arctic Village    25.55  42  IAmb     IAmb     02 23 51.7
                 comp=Z,1µm,1.6s
E25K  Arctic Village    25.55  42  P        P        02 23 36.3 -0.3
                 baz=267,SNR=169
PRP   Porcupine Dome    25.57  48  IAmb     IAmb     02 23 41.3
                 comp=Z,439nm,1.0s
PRP   Porcupine Dome    25.57  48  P        P        02 23 36.6 -0.3
                 baz=273,SNR=324
K24K  Donnelly Dome     25.59  52  IAmb     IAmb     02 24 04.2
                 comp=Z,772nm,1.2s
K24K  Donnelly Dome     25.59  52  P        P        02 23 35.5 -1.5
                 baz=276,SNR=90
M24K  Tolsona, Glenn    25.64  56  P        P        02 23 36.9 -0.6
                 baz=279,SNR=165
FYU   Fort Yukon        25.65  46  IAmb     IAmb     02 24 00.3
                 comp=Z,765nm,1.2s
J25K  Salcha River,     25.69  50  IAMs_20  IAMs_20  02 34 13.2
                 comp=Z,67µm,18.0s
J25K  Salcha River,     25.69  50  P        P        02 23 35.9 -2.1
                 baz=275,SNR=168
FID   Port Fidalgo      25.75  59  IAMs_20  IAMs_20  02 34 09.5
                 comp=Z,121µm,18.0s
HIN   Hinchinbrook I    25.81  60  IAmb     IAmb     02 23 53.9
                 comp=Z,477nm,1.0s
HIN                                IAMs_20  IAMs_20  02 34 11.6
                 comp=Z,138µm,18.0s
PAX   Paxson            25.83  54  IAmb     IAmb     02 24 14.2
                 comp=Z,1µm,1.9s
PAX   Paxson            25.83  54  P        P        02 23 38.0 -1.2
                 baz=278,SNR=114
KLU   Klutina           25.86  57  IAmb     IAmb     02 23 50.5
                 comp=Z,600nm,1.3s
KLU                                IAMs_20  IAMs_20  02 34 39.0
                 comp=Z,82µm,18.0s
KLU   Klutina           25.86  57  P        P        02 23 38.9 -0.6
                 baz=281,SNR=83
BMAR  Burnt Mountain    25.91  44  P        P        02 23 39.1 -0.7
C26K  Camden Bay        25.92  38  P        P        02 23 39.9  0.0
                 baz=264,SNR=21
DIV   Divide            26.01  58  IAmb     IAmb     02 24 06.4
                 comp=Z,1µm,2.0s
DIV                                IAMs_20  IAMs_20  02 33 20.8
                 comp=Z,96µm,22.0s
RIDG  Independent Ri    26.01  52  P        P        02 23 39.0 -1.8
                 baz=277,SNR=154
HARP  HAARP             26.06  55  P        P        02 23 40.8 -0.5
                 baz=280,SNR=31
F26K  Sheenjek River    26.07  43  P        P        02 23 41.2 -0.1
                 baz=270,SNR=162
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Q23K  Middleton Isla    26.11  62  IAmb     IAmb     02 23 57.0
                 comp=Z,709nm,0.9s
Q23K                               IAMs_20  IAMs_20  02 34 00.9
                 comp=Z,77µm,19.0s
Q23K  Middleton Isla    26.11  62  P        P        02 23 41.2 -0.4
                 baz=285,SNR=21
EYAK  Cordova Ski Ar    26.14  59  IAmb     IAmb     02 23 57.4
                 comp=Z,842nm,1.5s
EYAK  Cordova Ski Ar    26.14  59  P        P        02 23 43.7 +1.8
EYAK  Cordova Ski Ar    26.14  59  P        P        02 23 41.3 -0.6
                 baz=283,SNR=42
G26K  Porcupine Rive    26.22  45  P        P        02 23 42.6  0.0
                 baz=271,SNR=254
MJB9  Matsu-Tunnel      26.27 233  P        P        02 23 43.1 -0.2
MAJO  Matsushiro        26.27 233  P        P        02 23 43.6 +0.3
MAJO  Matsushiro        26.27 233  IAMs_20  IAMs_20  02 34 54.7
                 comp=Z,80µm,20.0s
MAJO  Matsushiro        26.27 233  P        P        02 23 45.0 +1.7
MAJO  Matsushiro        26.27 233c iP       P        02 23 43.7 +0.3
MAJO                               pmax     pmax
                 comp=Z,2µm,0.9s
MAJO                               MLR      MLR
                 comp=Z,80µm,19.0s
MAJO  Matsushiro        26.27 233  P        P        02 23 43.2 -0.1
MAJO  Matsushiro        26.27 233 ⇑P        P        02 23 43.6 +0.3
MJAR  Matsushiro Arr    26.27 233  P        P        02 23 43.6 +0.3
                 comp=Z,725nm,0.9s,baz=23,slow=7.8,SNR=383
MJAR                               PcP      PcP      02 27 10.8 +1.4
                 comp=Z,95nm,1.1s,baz=64,slow=2.2,SNR=5.4
MJAR                               ScP      ScP      02 30 50.2 +1.6
                 comp=Z,42nm,1.3s,baz=354,slow=1.7,SNR=9.4
MJAR                               LR       LR       02 34 56.6
                 comp=Z,86µm,19.9s,baz=40,slow=38
                 comp=Z,725nm,0.9s
C27K  Jago River        26.31  39  P        P        02 23 42.6 -0.9
C27K  Jago River        26.31  39  P        P        02 23 43.4 -0.1
                 baz=266,SNR=71
SCRK  Sand Creek        26.36  51  P        P        02 23 42.5 -1.6
                 baz=277,SNR=359
N25K  Chitina, Valde    26.46  57  IAmb     IAmb     02 24 04.3
                 comp=Z,1µm,1.9s
N25K                               IAMs_20  IAMs_20  02 34 58.9
                 comp=Z,77µm,18.0s
N25K  Chitina, Valde    26.46  57  P        P        02 23 44.3 -0.7
                 baz=282,SNR=98
J26L  Joseph Creek      26.48  50  P        P        02 23 43.1 -1.9
                 baz=277,SNR=85
I26K  Coal Creek Min    26.57  48  P        P        02 23 43.6 -2.2
                 baz=275,SNR=46
BMRM  Bremner River     26.59  58  IAmb     IAmb     02 24 13.6
                 comp=Z,656nm,1.1s
BMRM                               IAMs_20  IAMs_20  02 33 52.4
                 comp=Z,97µm,21.0s
BMRM  Bremner River     26.59  58  P        P        02 23 45.2 -1.0
                 baz=283,SNR=110
MENT  Mentasta          26.63  54  IAMs_20  IAMs_20  02 34 27.1
                 comp=Z,80µm,19.0s
MENT  Mentasta          26.63  54  P        P        02 23 47.5 +1.1
RAGM  Ragged Mountai    26.70  59  IAmb     IAmb     02 24 05.4
                 comp=Z,2µm,1.7s
L26K  Log Cabin Wild    26.78  53  IAMs_20  IAMs_20  02 34 31.1
                 comp=Z,94µm,20.0s
L26K  Log Cabin Wild    26.78  53  P        P        02 23 47.2 -0.5
                 baz=280,SNR=22
BOD   Bodaibo           26.86 295 eP        P        02 23 46.1 -2.4
BOD                                pmax     pmax
                 comp=Z,766nm,1.8s
GLB   Gilahina Butte    26.87  57  IAMs_20  IAMs_20  02 35 20.5
                 comp=Z,78µm,18.0s
KAIM  Kayak Island      26.93  60  IAmb     IAmb     02 24 10.4
                 comp=Z,564nm,1.0s
KAIM                               IAMs_20  IAMs_20  02 34 56.4
                 comp=Z,121µm,18.0s
KAIM  Kayak Island      26.93  60  P        P        02 23 49.0 -0.1
                 baz=285,SNR=15
E27K  Coleen River      27.04  42  P        P        02 23 49.8 -0.2
                 baz=271,SNR=52
M26K  Nabesna, AK       27.05  55  P        P        02 23 50.3 +0.1
                 baz=281,SNR=271
G27K  Doyon Strip       27.07  45  IAmb     IAmb     02 24 27.7
                 comp=Z,940nm,1.9s
G27K  Doyon Strip       27.07  45  P        P        02 23 50.5 +0.2
                 baz=274,SNR=117
VRDI  Verde Repeater    27.08  57  IAMs_20  IAMs_20  02 35 27.2
                 comp=Z,78µm,18.0s
H27K  Steamboat Moun    27.16  46  IAmb     IAmb     02 24 05.0
                 comp=Z,1µm,1.7s
H27K  Steamboat Moun    27.16  46  P        P        02 23 51.5 +0.4
                 baz=275,SNR=358
BERG  Berg Lake         27.16  59  IAmb     IAmb     02 24 21.2
                 comp=Z,997nm,1.5s
I27K  Kandik River      27.18  48  P        P        02 23 50.6 -0.7
                 baz=276,SNR=57
K27K  Chicken           27.18  51  IAmb     IAmb     02 24 03.1
                 comp=Z,707nm,1.3s
K27K  Chicken           27.18  51  P        P        02 23 50.8 -0.5
                 baz=279
SUCK  Suckling Hills    27.21  60  P        P        02 23 51.8 +0.2
SUCK                               IAmb     IAmb     02 24 29.6
                 comp=Z,629nm,1.3s
SUCK                               IAMs_20  IAMs_20  02 35 17.6
                 comp=Z,133µm,18.0s
MCARA McCarthy VSAT     27.25  57  IAmb     IAmb     02 24 22.6
                 comp=Z,852nm,1.3s
MCARA                              IAMs_20  IAMs_20  02 35 32.6
                 comp=Z,73µm,18.0s
MCARA McCarthy VSAT     27.25  57  P        P        02 23 52.0 +0.1
                 baz=283,SNR=42
D27M  Malcolm River     27.27  40  P        P        02 23 52.2 +0.1
                 baz=269,SNR=51
CRQM  Cirque            27.34  58  IAmb     IAmb     02 24 24.5
                 comp=Z,725nm,1.1s
CRQM                               IAMs_20  IAMs_20  02 34 15.7
                 comp=Z,131µm,22.0s
HIA   Hailar            27.35 274  P        P        02 23 53.7 +0.7
CRQE  Cirque            27.37  58  P        P        02 23 52.9 -0.3
                 baz=284,SNR=112
CN2   Changchun         27.38 260 eP        P        02 23 49.3 -4.0
CN2                                PP       PnPn     02 24 36.0 -1.3
CN2                               eS        S        02 28 30.3 -2.4
CN2                                pmax     pmax
                 comp=Z,6µm,13.6s
CN2                                LR       LR
                 comp=Z,119µm,14.0s
CN2                                LR       LR
                 comp=Z,119µm,15.1s
JGF   Kuroka            27.43 233  P        P        02 23 55.2 +1.4
JGF   Kuroka            27.43 233 ⇑P        P        02 23 53.9  0.0
BGLC  Bering Glacier    27.43  60  P        P        02 23 53.8 +0.3
                 baz=285
L27K  Beaver Creek,     27.45  53  IAmb     IAmb     02 23 58.6
                 comp=Z,401nm,1.0s
L27K                               IAMs_20  IAMs_20  02 35 01.9
                 comp=Z,91µm,19.0s
L27K  Beaver Creek,     27.45  53  P        P        02 23 53.9 +0.1
                 baz=281,SNR=543
BCAR  Beaver Creek A    27.47  53           P        02 23 53.9 -0.2
TGL   Tana Glacier      27.49  58  IAMs_20  IAMs_20  02 34 30.0
                 comp=Z,111µm,21.0s
WAX   Waxell Ridge      27.56  59  IAmb     IAmb     02 24 15.4
                 comp=Z,1µm,1.8s
M27K  Edge Creek, AK    27.57  55  IAmb     IAmb     02 24 25.2
                 comp=Z,518nm,1.1s
M27K  Edge Creek, AK    27.57  55  P        P        02 23 55.5 +0.5
                 baz=282,SNR=289
F28M  Old Crow          27.71  43  P        P        02 23 56.3 +0.2
                 baz=274,SNR=123
ISLE  Juniper Island    27.76  58  IAMs_20  IAMs_20  02 35 37.2
                 comp=Z,119µm,18.0s
E28M  Babbage River     27.79  41  P        P        02 23 56.6 -0.1
                 baz=272,SNR=57
INU   Inuyama           27.79 233  P        P        02 23 56.5 -0.5
INU                                IAMs_20  IAMs_20  02 35 32.9
                 comp=Z,76µm,20.0s
INU   Inuyama           27.79 233  P        P        02 23 58.9 +1.9
INU   Inuyama           27.79 233 ⇑P        P        02 23 56.7 -0.3
JSG   Sagara            27.85 231  P        P        02 24 00.1 +2.6
JSG   Sagara            27.85 231 ⇑P        P        02 23 58.4 +0.9
I28M  Miner Creek       27.89  48  IAmb     IAmb     02 24 10.9
                 comp=Z,770nm,1.8s
I28M                               IAMs_20  IAMs_20  02 36 03.4
                 comp=Z,76µm,18.0s
I28M  Miner Creek       27.89  48  P        P        02 23 57.4 -0.4
                 baz=278,SNR=204
GRNC  Granite Creek     28.01  58  IAmb     IAmb     02 24 16.3
                 comp=Z,379nm,1.0s
GRNC                               IAMs_20  IAMs_20  02 34 46.6
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	comp=Z,88µm,22.0s						
BVCY	Beaver Creek	28.02	54	P	P	02 23 59.2	+0.3
	baz=283,SNR=42						
D28M	Stokes Point	28.06	39	P	P	02 23 59.0	-0.1
	baz=271						
MESA	MESA	28.06	59	IAmb	IAmb	02 24 15.3	
	comp=Z,558nm,1.2s						
MESA	MESA	28.06	59	P	P	02 23 59.6	+0.2
	baz=286,SNR=59						
YAH	Yahtse	28.11	59	IAmb	IAmb	02 24 10.9	
	comp=Z,786nm,1.4s						
CTG	Chitna Glacier	28.14	57	P	P	02 24 00.3	+0.2
	baz=285,SNR=59						
CTGM	Chitina Glacie	28.15	57	IAmb	IAmb	02 24 14.9	
	comp=Z,892nm,1.8s						
CTGM				IAMs_20	IAMs_20	02 34 40.3	
	comp=Z,84µm,22.0s						
LOGN	Logan Glacier	28.34	58	IAMs_20	IAMs_20	02 34 57.4	
	comp=Z,81µm,22.0s						
DAWY	Dawson	28.34	51	P	P	02 24 01.3	-0.4
	baz=281,SNR=139						
YUK3	Moose Creek	28.35	56	P	P	02 24 01.8	-0.2
	baz=284,SNR=115						
TABL	Table Mountain	28.38	58	IAMs_20	IAMs_20	02 35 09.4	
	comp=Z,82µm,20.0s						
E29M	Blow River	28.40	41	P	P	02 24 02.5	+0.3
	baz=274,SNR=72						
H29M	Whitestone	28.43	46	IAmb	IAmb	02 24 38.8	
	comp=Z,555nm,1.4s						
H29M	Whitestone	28.43	46	P	P	02 24 02.8	+0.3
	baz=278,SNR=141						
G29M	Pine Creek	28.49	44	IAmb	IAmb	02 24 24.2	
	comp=Z,494nm,1.0s						
G29M	Pine Creek	28.49	44	P	P	02 24 03.5	+0.5
	baz=276,SNR=207						
JHJ2	Mitsune	28.51	226	P	P	02 24 05.1	+1.7
JHJ2	Mitsune	28.51	226	⇑P	P	02 24 04.3	+0.9
I29M	Ogilvie Camp,	28.58	48	P	P	02 24 03.6	-0.3
	baz=279,SNR=76						
O28M	Mount Upton	28.74	57	IAMs_20	IAMs_20	02 34 58.9	
	comp=Z,69µm,22.0s						
O28M	Mount Upton	28.74	57	P	P	02 24 05.3	-0.3
	baz=286,SNR=101						
J29N	Klondike Camp	28.77	50	P	P	02 24 04.7	-0.9
J29N	Klondike Camp	28.77	50	P	P	02 24 04.9	-0.8
	baz=281						
YUK8	Steele Glacier	28.80	56	P	P	02 24 06.0	-0.1
	baz=285,SNR=32						
PCA	Pinnacle	28.90	59	IAmb	IAmb	02 24 19.8	
	comp=Z,386nm,1.0s						
PINM	Pinnacle	28.90	59	P	P	02 24 06.5	-0.3
	baz=287,SNR=84						
HHU	Hamhung	28.91	251	P	P	02 24 04.4	-2.6
HHU				AmB			
	comp=Z,3µm,2.2s						
HHU				AMS	AMS		
	comp=Z,48µm,11.3s						
EPYK	Eagle Plains	29.07	45	IAmb	IAmb	02 24 21.7	
	comp=Z,406nm,1.1s						
EPYK	Eagle Plains	29.07	45	P	P	02 24 08.4	+0.2
	baz=278,SNR=71						
L29M	L29M	29.09	52	IAmb	IAmb	02 24 13.5	
	comp=Z,405nm,1.0s						
L29M				IAMs_20	IAMs_20	02 36 29.5	
	comp=Z,68µm,19.0s						
L29M	L29M	29.09	52	P	P	02 24 08.7	+0.3
	baz=283,SNR=370						
M29M	Somme Creek	29.10	54	P	P	02 24 08.9	+0.3
	baz=284,SNR=268						
G30M	tAoh Zraii Nji	29.18	44	P	P	02 24 08.9	-0.3
	baz=278,SNR=85						
K29M	Barlow Dome	29.20	51	P	P	02 24 09.0	-0.4
	baz=282,SNR=79						
BCPM	Bancas Point	29.24	59	IAmb	IAmb	02 24 22.6	
	comp=Z,272nm,0.7s						
F30M	Barrier River	29.27	43	IAmb	IAmb	02 24 24.0	
	comp=Z,799nm,1.3s						
F30M	Barrier River	29.27	43	P	P	02 24 10.2	+0.3
	baz=277,SNR=76						
YUK4	Talbot Arm	29.30	56	P	P	02 24 10.3	-0.2
	baz=286,SNR=47						
YKU2	Yakutat	29.36	60	IAMs_20	IAMs_20	02 37 05.8	
	comp=Z,59µm,20.0s						
CIT	Chita	29.40	284	*e*P	P	02 24 09.8	-1.5
CIT				*e*		02 24 20.2	
CIT				*e*		02 25 09.8	
CIT				*e*		02 25 27.6	
CIT				*e*		02 27 16.8	
CIT				pmax	pmax		
	comp=Z,1µm,2.2s						
I30M	Mount Dempster	29.40	48	IAMs_20	IAMs_20	02 36 50.6	
	comp=Z,65µm,19.0s						
I30M	Mount Dempster	29.40	48	P	P	02 24 10.5	-0.8
	baz=281,SNR=223						
PNL	Peninsula	29.44	59	P	P	02 24 13.0	+1.5
PNL	Peninsula	29.44	59	P	P	02 24 11.2	-0.3
	baz=288,SNR=76						
YUK6	Outpost Mounta	29.55	57	P	P	02 24 12.7	0.0
	baz=287,SNR=80						
J30M	Hart River	29.55	49	P	P	02 24 12.3	-0.3
	baz=282,SNR=38						
O29M	Mount Kennedy	29.64	58	IAMs_20	IAMs_20	02 35 29.1	
	comp=Z,96µm,22.0s						
O29M	Mount Kennedy	29.64	58	P	P	02 24 13.2	-0.1
	baz=288,SNR=33						
SNY	Shenyang	29.72	259	⇓P	P	02 24 11.8	-2.3
SNY				pP	pP	02 24 17.0	+0.1
SNY				sP	pwP	02 24 20.3	-1.2
SNY				S	S	02 29 04.5	-5.0
SNY				pmax	pmax		
	comp=Z,140nm,2.1s						
SNY				pmax	pmax		
	comp=Z,4µm,9.8s						
SNY				LR	LR		
	comp=Z,106µm,15.3s						
SNY				LR	LR		
	comp=Z,81µm,12.9s						
SNY				LR	LR		
	comp=Z,124µm,14.3s						
G31M	Satah River	29.95	44	IAmb	IAmb	02 24 29.1	
	comp=Z,534nm,1.6s						
G31M	Satah River	29.95	44	P	P	02 24 15.5	-0.3
	baz=280,SNR=40						
MAYO	Mayo, Yukon	29.96	51	P	P	02 24 15.7	-0.4
MAYO	Mayo, Yukon	29.96	51	P	P	02 24 16.2	+0.2
	baz=284,SNR=20						
HYT	Haines Junctio	29.98	57	IAMs_20	IAMs_20	02 36 19.1	
	comp=Z,56µm,19.0s						
HYT	Haines Junctio	29.98	57	P	P	02 24 16.6	+0.2
	baz=288,SNR=200						
N30M	Aishikik Lake	29.99	55	IAMs_20	IAMs_20	02 37 03.3	
	comp=Z,57µm,19.0s						
N30M	Aishikik Lake	29.99	55	P	P	02 24 16.1	-0.3
	baz=287,SNR=33						
INK	Inuvik	30.02	41	IAmb	IAmb	02 24 31.2	
	comp=Z,379nm,1.2s						
INK	Inuvik	30.02	41	LR	LR	02 37 30.8	
	comp=Z,15µm,18.2s,baz=266,slow=39						
INK	Inuvik	30.02	41	P	P	02 24 17.0	+0.4
	baz=278,SNR=83						
INK	Inuvik	30.02	41	⇑P	P	02 24 16.1	-0.4
F31M	Tsiigehtchic	30.07	43	P	P	02 24 16.8	-0.1
	baz=279,SNR=16						
H31M	Peel River	30.12	46	P	P	02 24 17.1	-0.4
	baz=281,SNR=74						
P29M	Windy Craggy	30.25	59	IAmb	IAmb	02 24 25.5	
	comp=Z,548nm,1.6s						
P29M	Windy Craggy	30.25	59	P	P	02 24 18.8	+0.1
	baz=289,SNR=59						
SUJ	Sinuiju	30.41	255	P	P	02 24 17.5	-2.8
SUJ				S	S	02 29 17.1	-3.3
SUJ				AmB			
	comp=Z,1µm,1.8s						
P30M	Million Dollar	30.46	58	P	P	02 24 20.9	+0.4
	baz=289						
KS19	Wonju Array Si	30.53	248	P	P	02 24 20.2	-1.2
KSRS	Korea Array	30.54	248	P	P	02 24 20.1	-1.2
	comp=Z,78nm,0.8s,baz=36,slow=8.4,SNR=86						
KSRS				PcP	PcP	02 27 21.9	+2.0
	comp=Z,107nm,1.0s,baz=12,slow=2.0,SNR=22						
KSRS				PKiKP	PKiKP	02 34 52.0	+1.3
	comp=Z,1.2nm,0.7s,baz=136,slow=0.2,SNR=5.3						
	comp=Z,78nm,0.8s						
KSAR	Wonju Array Be	30.57	248	P	P	02 24 19.3	-2.3
KSAR	Wonju Array Be	30.57	248	P	P	02 24 19.3	-2.3
JMN	Monobe	30.57	236	IAmb	IAmb	02 24 26.8	
	comp=Z,662nm,1.1s						
JMN				IAMs_20	IAMs_20	02 37 24.2	
	comp=Z,83µm,19.0s						
JMN	Monobe	30.57	236	P	P	02 24 23.2	+1.5
JMN	Monobe	30.57	236	⇑P	P	02 24 22.2	+0.5
N31M	Braeburn, Yuko	30.58	55	P	P	02 24 22.3	+0.7
	baz=288,SNR=39						
O30N	Mendenhall	30.66	56	P	P	02 24 22.3	0.0
	baz=289,SNR=92						
PLBC	Pleasant Camp	30.97	59	P	P	02 24 25.4	+0.5
	baz=290,SNR=42						
M31M	Drury Creek, Y	31.00	53	IAMs_20	IAMs_20	02 37 48.9	
	comp=Z,67µm,18.0s						
M31M	Drury Creek, Y	31.00	53	P	P	02 24 25.8	+0.6
	baz=287,SNR=235						
INCN	Inchon	31.19	249	P	P	02 24 25.6	-1.5
INCN	Inchon	31.19	249	IAMs_20	IAMs_20	02 38 00.5	
	comp=Z,56µm,19.0s						
INCN	Inchon	31.19	249	P	P	02 24 25.9	-1.2
INCN				P	P	02 24 25.9	-1.2
INCN	Inchon	31.19	249	P	P	02 24 26.5	-0.7
INCN	Inchon	31.19	249	P	P	02 24 25.6	-1.5
INCN				pmax	pmax		
	comp=Z,516nm,2.0s						
INCN				MLR	MLR		
	comp=Z,56µm,19.0s						
HJU	Haeju	31.25	251	P	P	02 24 25.3	-2.3
HJU				AmB			
	comp=Z,2µm,2.2s						
HJU				AMS	AMS		
	comp=Z,51µm,11.0s						
WHY	Whitehorse	31.26	56	P	P	02 24 28.3	+0.6
	baz=290,SNR=176						
FARO	Faro, Yukon	31.45	53	IAMs_20	IAMs_20	02 38 03.0	
	comp=Z,70µm,19.0s						
FARO	Faro, Yukon	31.45	53	P	P	02 24 29.9	+0.6
	baz=288,SNR=60						
SKAG	Skagway	31.46	58	IAMs_20	IAMs_20	02 38 12.3	
	comp=Z,98µm,18.0s						
SKAG	Skagway	31.46	58	P	P	02 24 31.1	+1.8
SKAG	Skagway	31.46	58	P	P	02 24 30.3	+1.0
	baz=291,SNR=18						
SKAG	Skagway	31.46	58	⇑P	P	02 24 30.3	+1.0
S31K	Pelican	31.58	61	IAmb	IAmb	02 25 27.7	
	comp=Z,461nm,1.8s						
S31K				IAMs_20	IAMs_20	02 38 29.6	
	comp=Z,80µm,19.0s						
S31K	Pelican	31.58	61	P	P	02 24 30.8	+0.5
	baz=293,SNR=14						
TJN	Taejon	31.65	247	P	P	02 24 29.2	-1.9
TJN				IAmb	IAmb	02 24 35.6	
	comp=Z,583nm,1.2s						
TJN				PcP	PcP	02 27 23.0	+0.1
TJN	Taejon	31.65	247	P	P	02 24 31.2	0.0
TJN	Taejon	31.65	247	P	P	02 24 29.3	-1.9
TJN						02 27 23.0	
TJN				pmax	pmax		
	comp=Z,583nm,1.2s						
TJN				MLR	MLR		
	comp=Z,284µm,18.0s						
R31K	City Hall, Gus	31.65	60	P	P	02 24 31.6	+0.7
	baz=292						
N32M	Quiet Lake	31.92	55	P	P	02 24 33.6	+0.2
	baz=290						
JTU	Tsushima	32.07	242	P	P	02 24 35.9	+1.0
MMPY	Sheldon Lake,	32.25	52	P	P	02 24 36.8	+0.5
	baz=289,SNR=250						
R32K	Eaglecrest	32.30	60	IAmb	IAmb	02 24 51.9	
	comp=Z,280nm,1.1s						
R32K	Eaglecrest	32.30	60	P	P	02 24 37.4	+0.7
	baz=293,SNR=54						
A36M	Sachs Harbour	32.30	33	IAmb	IAmb	02 24 50.4	
	comp=Z,265nm,0.9s						
A36M	Sachs Harbour	32.30	33	P	P	02 24 36.7	+0.2
	baz=279,SNR=17						
JIS	Juneau Island	32.36	60	P	P	02 24 38.7	+1.5
P33M	Teslin, Yukon	32.37	56	IAMs_20	IAMs_20	02 38 53.4	
	comp=Z,93µm,18.0s						
P33M	Teslin, Yukon	32.37	56	P	P	02 24 38.3	+0.9
	baz=291,SNR=108						
SIT	Sitka	32.40	63	IAMs_20	IAMs_20	02 37 36.2	
	comp=Z,63µm,19.0s						
SIT	Sitka	32.40	63	P	P	02 24 39.3	+1.8
SIT	Sitka	32.40	63	P	P	02 24 38.9	+1.4
	baz=295,SNR=34						
JNU	Nakatsue	32.48	239	IAmb	IAmb	02 24 50.1	
	comp=Z,509nm,1.4s						
JNU	Nakatsue	32.48	239	LR	LR	02 36 58.0	
	comp=Z,46µm,21.6s,baz=41,slow=35						
JNU	Nakatsue	32.48	239	P	P	02 24 39.8	+1.2
JNU	Nakatsue	32.48	239	⇑P	P	02 24 37.8	-0.8
XLT	XiLinHaoTe	32.53	269	*e*P	P	02 24 36.0	-3.0
XLT				PP	PnPn	02 25 46.3	+0.2
XLT				PcP	PcP	02 27 25.8	+0.5
XLT				S	S	02 29 53.3	-0.4
XLT				pmax	pmax		
	comp=Z,54nm,1.5s						
XLT				pmax	pmax		
	comp=Z,4µm,9.5s						
XLT				LR	LR		
	comp=Z,13µm,13.7s						
XLT				LR	LR		
	comp=Z,84µm,12.8s						
XLT				LR	LR		
	comp=Z,157µm,13.5s						
S32K	Killisnoo	32.59	62	IAmb	IAmb	02 24 50.9	
	comp=Z,518nm,1.4s						
S32K				IAMs_20	IAMs_20	02 39 08.4	
	comp=Z,97µm,18.0s						
S32K	Killisnoo	32.59	62	P	P	02 24 40.5	+1.2
	baz=294,SNR=59						
DL2	Dalian	32.82	256	P	P	02 24 38.8	-2.6
DL2				PP	PP	02 25 52.3	-3.2
DL2				PcP	PcP	02 27 27.3	+1.3
DL2				S	S	02 29 57.0	-1.1
DL2				PcS	PcS	02 31 09.8	-1.5
DL2				pmax	pmax		
	comp=Z,160nm,1.1s						
DL2				pmax	pmax		
	comp=Z,5µm,10.3s						
DL2				LR	LR		
	comp=Z,131µm,15.2s						
DL2				LR	LR		
	comp=Z,131µm,15.5s						
DL2				LR	LR		
	comp=Z,109µm,13.1s						
JCJ	Chichijima	33.03	218	P	P	02 24 45.6	+2.2
JCJ	Chichijima	33.03	218	⇑P	P	02 24 44.8	+1.4
Q32M	Nakina River	33.11	58	IAMs_20	IAMs_20	02 39 12.9	
	comp=Z,95µm,18.0s						
Q32M	Nakina River	33.11	58	P	P	02 24 45.3	+1.3
	baz=294,SNR=124						
R33M	Jennings River	33.55	57	IAmb	IAmb	02 24 53.5	
	comp=Z,942nm,1.9s						
R33M				IAMs_20	IAMs_20	02 38 43.5	
	comp=Z,86µm,20.0s						
R33M	Jennings River	33.55	57	P	P	02 24 48.9	+1.2
	baz=294,SNR=168						
T33K	Petersburg	33.67	62	P	P	02 24 49.9	+1.2
	baz=296						
U33K	Whale Pass	33.90	63	IAMs_20	IAMs_20	02 38 36.1	
	comp=Z,91µm,19.0s						
U33K	Whale Pass	33.90	63	P	P	02 24 52.2	+1.5
	baz=297,SNR=18						
TGTN	Hyland Airport	33.95	52	P	P	02 24 51.5	+0.3
	baz=292,SNR=31						
S34M	Telegraph Cree	34.09	59	P	P	02 24 53.3	+1.0
	baz=296,SNR=74						
WRAK	Wrangell Islan	34.15	62	IAMs_20	IAMs_20	02 38 47.6	
	comp=Z,75µm,18.0s						
WRAK	Wrangell Islan	34.15	62	P	P	02 24 54.1	+1.3
	baz=297,SNR=41						
WRAK	Wrangell Islan	34.15	62	⇑P	P	02 24 54.2	+1.3
CRAG	Craig	34.20	64	IAMs_20	IAMs_20	02 38 06.9	
	comp=Z,69µm,20.0s						
CRAG	Craig	34.20	64	P	P	02 24 54.1	+0.9
CRAG	Craig	34.20	64	P	P	02 24 55.0	+1.8
	baz=298,SNR=10						
CRAG	Craig	34.20	64	⇑P	P	02 24 54.3	+1.1
WTLY	Watson Lake, Y	34.27	55	IAmb	IAmb	02 25 06.9	
	comp=Z,781nm,1.8s						
WTLY				IAMs_20	IAMs_20	02 39 55.1	
	comp=Z,86µm,19.0s						
WTLY	Watson Lake, Y	34.27	55	P	P	02 24 54.7	+0.8
	baz=294,SNR=14						
DLBC	Dease Lake	34.39	58	LR	LR	02 39 18.6	
	comp=Z,6µm,20.2s,baz=282,slow=37						
T35M	Bob Quinn	34.93	61	IAMs_20	IAMs_20	02 40 41.7	
	comp=Z,46µm,20.0s						
T35M	Bob Quinn	34.93	61	P	P	02 25 01.7	+2.1
	baz=297,SNR=109						
V35K	Ketchikan	35.02	64	IAMs_20	IAMs_20	02 38 41.3	
	comp=Z,83µm,20.0s						
V35K	Ketchikan	35.02	64	P	P	02 25 01.5	+1.2
	baz=299,SNR=27						
BJI	Beijing	35.03	263	P	P	02 24 57.8	-2.8
BJI				S	S	02 30 35.8	+3.6
BJI				pmax	pmax		
	comp=Z,2µm,6.2s						
BJI				LR	LR		
	comp=Z,78µm,14.9s						
BJI				LR	LR		
	comp=Z,65µm,15.9s						
BJT	Baijiatuau	35.05	263	IAMs_20	IAMs_20	02 41 40.4	
	comp=Z,84µm,19.0s						
BJT	Baijiatuau	35.05	263	P	P	02 25 01.3	+0.5
ULN	Ulaanbaatar	35.16	281	P	P	02 25 00.6	-1.2
ULN				IAmb	IAmb	02 25 05.9	
	comp=Z,440nm,1.3s						
ULN	Ulaanbaatar	35.16	281	IAMs_20	IAMs_20	02 40 45.8	
	comp=Z,83µm,18.0s						
ULN	Ulaanbaatar	35.16	281	P	P	02 25 01.8	0.0
ULN				P	P	02 25 01.8	0.0
ULN				P	P	02 25 01.8	0.0
ULN	Ulaanbaatar	35.16	281	*c i*P	P	02 25 01.0	-0.9
ULN				pmax	pmax		
	comp=Z,543nm,1.7s						
ULN				MLR	MLR		
	comp=Z,84µm,16.0s						
ULN	Ulaanbaatar	35.16	281	⇑P	P	02 24 59.9	-1.9
WRGLY	Wrigley	35.38	48	IAMs_20	IAMs_20	02 40 21.2	
	comp=Z,55µm,19.0s						
WRGLY	Wrigley	35.38	48	P	P	02 25 04.0	+0.7
	baz=293,SNR=5.1						
U35K	Hyder	35.54	62	IAMs_20	IAMs_20	02 38 42.8	
	comp=Z,70µm,21.0s						
U35K	Hyder	35.54	62	P	P	02 25 05.6	+0.9
	baz=299						
SONM	Songino Array	35.54	281	P	P	02 25 04.1	-1.0
SONM				IAmb	IAmb	02 25 07.8	
	comp=Z,390nm,1.0s						
SONM	Songino Array	35.54	281	P	P	02 25 04.6	-0.5
	comp=Z,220nm,0.8s,baz=60,slow=7.8,SNR=288						
SONM				PcP	PcP	02 27 35.3	+1.4
	comp=Z,112nm,0.9s,baz=77,slow=2.1,SNR=11						
SONM				LR	LR	02 41 02.9	
	comp=Z,71µm,18.5s,baz=56,slow=39						
SONM				P3KPbc		02 55 49.6	
	comp=Z,3.9nm,0.9s,baz=245,slow=4.8,SNR=11						
	comp=Z,220nm,0.8s						
DIB	Dawson Inlet,	35.64	67	IAMs_20	IAMs_20	02 40 23.7	
	comp=Z,46µm,18.0s						
ZAK	Zakamensk	35.79	287	*e*P	P	02 25 06.4	-0.8
ZAK				*e*		02 27 32.3	
ZAK				pmax	pmax		
	comp=Z,178nm,1.5s						
LIRD	Liard River Hi	35.80	55	P	P	02 25 08.3	+1.2
	baz=296,SNR=42						
MOBC	Moresby Island	35.93	67	IAMs_20	IAMs_20	02 40 32.5	
	comp=Z,55µm,18.0s						
BEAVL	Fort Liard	35.94	54	P	P	02 25 09.2	+1.0
	baz=296,SNR=49						
MOY	Mondy	36.30	290	*e*P	P	02 25 10.6	-1.0
MOY				pmax	pmax		
	comp=Z,430nm,2.5s						
H11N2	WAKE ISLAND Hy	36.41	176	T	T	03 04 04.5	
	baz=360						
KOTAN	Kotaneelee Air	36.41	53	P	P	02 25 13.5	+1.2
	baz=296,SNR=12						
H11N3	WAKE ISLAND Hy	36.42	176	T	T	03 04 02.4	
	baz=360,slow=74,SNR=708						
H11N1	WAKE ISLAND Hy	36.42	176	T	T	03 04 01.9	
	baz=360,slow=74,SNR=1483						
TOAD	Toad River Com	36.46	56	P	P	02 25 13.9	+1.2
	baz=297,SNR=55						
HHC	Hu-ho-hao-te	37.05	268	*e*P	P	02 25 16.0	-2.1
HHC				sP	sP	02 25 23.0	+0.8
HHC				PP	PnPn	02 26 45.0	+2.4
HHC				S	S	02 31 00.5	-2.9
HHC				SS	SnSn	02 33 25.3	-12
HHC				ScS	ScS	02 35 28.8	-3.5
HHC				pmax	pmax		
	comp=Z,160nm,1.5s						
HHC				pmax	pmax		
	comp=Z,4µm,7.1s						
HHC				LR	LR		
	comp=Z,166µm,14.5s						
HHC				LR	LR		
	comp=Z,166µm,15.6s						
HHC				LR	LR		
	comp=Z,87µm,15.3s						
TIA	Tai'an	37.23	258	P	P	02 25 16.5	-3.0
TIA				PcP	PcP	02 27 40.0	+1.0
TIA				S	S	02 30 59.5	-6.6
TIA				PcS	PcS	02 31 27.5	+0.2
TIA				SS	SnSn	02 33 36.3	-4.9
TIA				pmax	pmax		
	comp=Z,84nm,0.9s						
TIA				pmax	pmax		
	comp=Z,5µm,10.6s						
TIA				LR	LR		
	comp=Z,76µm,16.2s						
TIA				LR	LR		
	comp=Z,107µm,15.0s						
HNS	HongShan	37.70	261	⇑P	P	02 25 21.0	-2.4
HNS				PP	PnPn	02 26 53.8	+3.4
HNS				PcP	PcP	02 27 42.3	+2.0
HNS				S	S	02 31 12.8	-0.3
HNS				PcS	PcS	02 31 30.0	+1.0
HNS				pmax	pmax		
	comp=Z,110nm,1.7s						
HNS				pmax	pmax		
	comp=Z,5µm,12.0s						
HNS				LR	LR		
	comp=Z,108µm,15.7s						
HNS				LR	LR		
	comp=Z,119µm,16.7s						
BTO	Baotou	38.08	269	*e*P	P	02 25 24.8	-2.0
BTO				pP	pP	02 25 29.0	-0.7
BTO				S	S	02 31 17.0	-2.0
BTO				pmax	pmax		
	comp=Z,560nm,1.3s						
BTO				pmax	pmax		
	comp=Z,6µm,5.1s						
BTO				LR	LR		
	comp=Z,180µm,12.3s						
BTO				LR	LR		
	comp=Z,189µm,14.3s						
BTO				LR	LR		
	comp=Z,227µm,14.5s						
KRAR	Krasnoyarsk	38.12	301	⇓*e*P	P	02 25 27.2	+0.4
BBB	Bella Bella	38.43	66	IAMs_20	IAMs_20	02 39 49.5	
	comp=Z,41µm,20.0s						
BBB	Bella Bella	38.43	66	LR	LR	02 40 11.2	
	comp=Z,39µm,20.6s,baz=302,slow=34						
BBB	Bella Bella	38.43	66	⇑P	P	02 25 30.6	+1.2
JMZ	Minamidaito 2	38.50	232	P	P	02 25 32.1	+1.9
JMZ	Minamidaito 2	38.50	232	⇓P	P	02 25 32.1	+1.9
TIY	Taiyuan	38.74	264	*e*P	P	02 25 31.3	-1.0
TIY				S	S	02 31 30.3	+1.3
TIY				pmax	pmax		
	comp=Z,58nm,1.4s						
TIY				pmax	pmax		
	comp=Z,5µm,10.8s						
TIY				LR	LR		
	comp=Z,107µm,15.8s						
TIY				LR	LR		
	comp=Z,63µm,17.9s						
JOW	Kunigami	38.97	236	P	P	02 25 34.5	+0.4
JOW	Kunigami	38.97	236	⇑P	P	02 25 34.6	+0.4
SSE	Sheshan	38.97	248	P	P	02 25 32.8	-1.4
SSE				S	S	02 31 32.0	-0.4
SSE				pmax	pmax		
	comp=Z,3µm,9.2s						
YKAW3	Yellowknife Wh	39.31	46	IAmb	IAmb	02 25 40.6	
	comp=Z,120nm,0.8s						
YKA	Yellowknife Ar	39.35	46	P	P	02 25 35.7	-1.2
YKA	Yellowknife Ar	39.35	46	P	P	02 25 35.1	-1.8
	comp=Z,99nm,0.8s,baz=138,slow=6.4,SNR=213						
YKA				PKPPKP	P'P'df	02 58 00.4	-14
	comp=Z,1.6nm,0.9s,baz=172,slow=2.3,SNR=4.9						
	comp=Z,99nm,0.8s						
YKA	Yellowknife Ar	39.35	46	P	P	02 25 35.7	-1.2

YKAW1	**Yellowknife Wh**	**39.40**	**46**	IAmb	IAmb	02 25 41.3	
	comp=Z,98nm,0.8s						
NJ2	**Nanjing**	**39.45**	**252**	⇑*i*P	**P**	**02 25 35.8**	**-2.4**
NJ2				sP	**pwP**	**02 25 45.0**	**-0.6**
NJ2				PP	**PnPn**	**02 27 11.3**	**-0.2**
NJ2				PcP	**PcP**	**02 27 47.3**	**+1.4**
NJ2				S	**S**	**02 31 37.3**	**-2.2**
NJ2				pmax	pmax		
	comp=Z,92nm,1.5s						
NJ2				pmax	pmax		
	comp=Z,5µm,10.7s						
NJ2				LR	LR		
	comp=Z,52µm,20.5s						
NJ2				LR	LR		
	comp=Z,45µm,21.4s						
NJ2				LR	LR		
	comp=Z,82µm,17.5s						
RES	**Resolute Bay**	**39.60**	**24**	LR	LR	02 44 30.1	
	comp=Z,19µm,18.8s,baz=296,slow=40						
RES	**Resolute Bay**	**39.60**	**24**	⇑P	**P**	**02 25 38.1**	**-0.8**
LYN	**LuoYang**	**41.02**	**261**	⇑P	**P**	**02 25 49.0**	**-2.2**
LYN				PcP	**PcP**	**02 27 52.3**	**+1.4**
LYN				S	**S**	**02 31 56.0**	**-7.0**
LYN				pmax	pmax		
	comp=Z,290nm,1.1s						
LYN				pmax	pmax		
	comp=Z,8µm,8.0s						
LYN				LR	LR		
	comp=Z,53µm,15.3s						
LYN				LR	LR		
	comp=Z,122µm,16.5s						
LYN				LR	LR		
	comp=Z,122µm,16.9s						
OZB	**Mount Ozzard**	**41.67**	**69**	IAmb	IAmb	02 26 10.8	
	comp=Z,767nm,1.7s						
OZB	**Mount Ozzard**	**41.67**	**69**	⇑P	**P**	**02 25 57.6**	**+1.3**
JMJ	**Miyako jima 2**	**42.09**	**238**	P	**P**	**02 26 02.4**	**+2.4**
SHB	**Sechelt**	**42.12**	**67**	⇑P	**P**	**02 26 00.8**	**+0.7**
CLRS	**Cowichan Lake**	**42.46**	**68**	IAMs_20	IAMs_20	02 41 11.2	
	comp=Z,44µm,21.0s						
NOR	**Nord**	**42.50**	**0**	⇑P	**P**	**02 26 02.9**	**+0.2**
NOR	**Nord**	**42.50**	**0**	*i* P	**P**	**02 26 02.7**	**0.0**
NOR				IAmb	IAmb	02 26 14.9	
	comp=Z,203nm,1.5s						
LLLB	**Lillooet**	**42.52**	**65**	IAmb	IAmb	02 26 10.1	
	comp=Z,1µm,1.9s						
LLLB				IAMs_20	IAMs_20	02 42 11.7	
	comp=Z,56µm,20.0s						
PGC	**Sidney**	**42.92**	**68**	IAmb	IAmb	02 26 20.6	
	comp=Z,991nm,1.9s						
PGC				IAMs_20	IAMs_20	02 41 13.3	
	comp=Z,45µm,22.0s						
WHN	**Wuhan**	**43.04**	**255**	⇑*i*P	**P**	**02 26 05.0**	**-2.6**
WHN				pP	**pP**	**02 26 09.0**	**-1.6**
WHN				PcP	**PcP**	**02 27 58.5**	**+0.9**
WHN				PcS	**PcS**	**02 31 50.3**	**+0.3**
WHN				S	**S**	**02 32 30.5**	**-2.3**
WHN				ScS	**ScS**	**02 36 07.8**	**0.0**
WHN				pmax	pmax		
	comp=Z,480nm,1.1s						
WHN				pmax	pmax		
	comp=Z,11µm,6.2s						
WHN				LR	LR		
	comp=Z,255µm,16.5s						
ZALV	**Zalesovo Beam**	**43.13**	**302**	P	**P**	**02 26 05.6**	**-2.6**
ZALV	**Zalesovo Beam**	**43.13**	**302**	P	**P**	**02 26 05.7**	**-2.4**
	comp=Z,8.0nm,0.7s,baz=54,slow=7.5,SNR=14						
ZALV				PP	**PP**	**02 27 47.5**	**-0.6**
	comp=Z,40nm,0.9s,baz=67,slow=11,SNR=5.7						
ZALV				PKiKP	**PKiKP**	**02 35 01.7**	**+1.3**
	comp=Z,7.4nm,0.9s,baz=180,slow=2.7,SNR=4.3						
ZALV				LR	LR	02 45 51.5	
	comp=Z,62µm,19.2s,baz=52,slow=39						
ZALV				P4KPbc		03 04 07.8	
	comp=Z,1.9nm,0.8s,baz=9.5,slow=4.5,SNR=5.6						
A04D	**Lummi Island**	**43.26**	**68**	P	**P**	**02 26 10.1**	**+0.8**
KEKH	**Kekaha**	**43.29**	**127**	IAmb	IAmb	02 26 14.0	
	comp=Z,401nm,1.0s						
KEKH				IAMs_20	IAMs_20	02 40 50.5	
	comp=Z,47µm,20.0s						
XAN	**Xi'an**	**43.37**	**263**	⇑P	**P**	**02 26 08.0**	**-2.4**
XAN				pP	pP	02 26 12.5	-0.8
XAN				PcP	**PcP**	**02 28 00.0**	**+1.2**
XAN				PcS	**PcS**	**02 31 51.0**	**-0.5**
XAN				S	**S**	**02 32 38.0**	**+0.3**
XAN				SS	**SS**	**02 35 42.0**	**-9.2**
XAN				pmax	pmax		
	comp=Z,7µm,9.9s						
XAN				LR	LR		
	comp=Z,138µm,16.5s						
XAN				LR	LR		
	comp=Z,190µm,15.8s						
XAN				LR	LR		
	comp=Z,61µm,16.5s						
TULEG	**Thule**	**43.40**	**16**	*i* P	**P**	**02 26 10.0**	**-0.1**
TULEG				IAmb	IAmb	02 26 12.9	
	comp=Z,88nm,1.1s						
YOJ	**Yonaguni jima**	**43.48**	**241**	IAMs_20	IAMs_20	02 46 48.5	
	comp=Z,28µm,18.0s						
YOJ	**Yonaguni jima**	**43.48**	**241**	P	**P**	**02 26 13.0**	**+1.7**
NLWA	**Neilton Lookou**	**43.49**	**70**	IAMs_20	IAMs_20	02 41 13.5	
	comp=Z,37µm,22.0s						
NLWA	**Neilton Lookou**	**43.49**	**70**	⇑P	**P**	**02 26 12.5**	**+1.3**
TATO	**Taipei**	**43.80**	**243**	IAMs_20	IAMs_20	02 46 48.9	
	comp=Z,44µm,18.0s						
TATO	**Taipei**	**43.80**	**243**	P	**P**	**02 26 15.8**	**+2.0**
TATO				P	**P**	**02 26 15.8**	**+2.0**
TATO	**Taipei**	**43.80**	**243**	P	**P**	**02 26 15.2**	**+1.3**
YHNB	**Yeheng**	**44.11**	**243**	IAMs_20	IAMs_20	02 47 14.6	
	comp=Z,37µm,20.0s						
YHNB	**Yeheng**	**44.11**	**243**	P	**P**	**02 26 17.5**	**+1.0**
JOHN	**Johnston Islan**	**44.13**	**142**	P	**P**	**02 26 17.6**	**+1.1**
JOHN				IAmb	IAmb	02 26 20.6	
	comp=Z,783nm,1.4s						
JOHN	**Johnston Islan**	**44.13**	**142**	IAMs_20	IAMs_20	02 40 51.1	
	comp=Z,49µm,19.0s						
JOHN	**Johnston Islan**	**44.13**	**142**	P	**P**	**02 26 19.6**	**+3.1**
JOHN	**Johnston Islan**	**44.13**	**142**	⇓P	**P**	**02 26 18.1**	**+1.6**
RADR	**Rader Ridge**	**44.15**	**71**	IAmb	IAmb	02 26 31.8	
	comp=Z,711nm,1.5s						
KBS	**Kingsbay**	**44.17**	**353**	P	**P**	**02 26 16.2**	**0.0**
KBS				IAmb	IAmb	02 26 30.6	
	comp=Z,732nm,1.4s						
KBS	**Kingsbay**	**44.17**	**353**	*e*P	**P**	**02 26 16.2**	**0.0**
KBS				IVmB_BB		02 26 27.1	
	comp=Z,5µm,3.1s						
KBS				IVMs_BB	IVMs_BB	02 41 18.1	
	comp=Z,8µm,28.5s						
KBS	**Kingsbay**	**44.17**	**353**	⇑P	**P**	**02 26 17.2**	**+1.0**
KBS	**Kingsbay**	**44.17**	**353**	*i* P	**P**	**02 26 17.3**	**+1.1**
E03A	**Lebam**	**44.19**	**71**	IAmb	IAmb	02 26 22.2	
	comp=Z,546nm,1.2s						
E03A				IAMs_20	IAMs_20	02 41 56.1	
	comp=Z,39µm,21.0s						
NACB	**Ninganchiao**	**44.42**	**242**	IAMs_20	IAMs_20	02 47 34.4	
	comp=Z,41µm,18.0s						
NACB	**Ninganchiao**	**44.42**	**242**	P	**P**	**02 26 19.7**	**+0.9**
SPA0	**Spitsbergen Ar**	**44.51**	**351**	*e*P	**P**	**02 26 19.1**	**+0.2**
SPITS	**Spitsbergen Ar**	**44.51**	**351**	P	**P**	**02 26 18.4**	**-0.6**
	comp=Z,572nm,0.8s,baz=89,slow=7.8,SNR=132						
SPITS				LR	LR	02 44 43.8	
	comp=Z,25µm,18.6s,baz=351,slow=36						
	comp=Z,572nm,0.8s						
SPITS	**Spitsbergen Ar**	**44.51**	**351**	P	**P**	**02 26 18.9**	**-0.1**
SPITS				pmax	pmax		
	comp=Z,2µm,1.2s						
SPB2	**Spitsbergen Ar**	**44.51**	**351**	P	**P**	**02 26 18.3**	**-0.6**
KIP	**Kipapa**	**44.55**	**125**	P	**P**	**02 26 20.6**	**+0.8**
KIP	**Kipapa**	**44.55**	**125**	IAMs_20	IAMs_20	02 42 33.8	
	comp=Z,44µm,20.0s						
KIP	**Kipapa**	**44.55**	**125**	P	**P**	**02 26 22.3**	**+2.4**
KIP	**Kipapa**	**44.55**	**125**	P	**P**	**02 26 22.4**	**+2.5**
KIP	**Kipapa**	**44.55**	**125**	*de*P	**P**	**02 26 18.7**	**-1.2**
KIP				pmax	pmax		
	comp=Z,255nm,0.9s						
KIP				MLR	MLR		
	comp=Z,23µm,17.0s						
F03A	**Seaside**	**44.59**	**71**	IAmb	IAmb	02 26 31.7	
	comp=Z,600nm,1.2s						
F03A				IAMs_20	IAMs_20	02 44 54.8	
	comp=Z,29µm,18.0s						
GTA	**Gaotai**	**44.60**	**276**	⇑P	**P**	**02 26 19.3**	**-1.1**
GTA				sP	pwP	02 26 26.5	-1.4
GTA				S	**S**	**02 32 52.3**	**-3.6**
GTA				pmax	pmax		
	comp=Z,500nm,1.6s						
GTA				pmax	pmax		
	comp=Z,10µm,8.4s						
GTA				LR	LR		
	comp=Z,173µm,21.1s						
GTA				LR	LR		
	comp=Z,156µm,21.1s						
GTA				LR	LR		
	comp=Z,102µm,14.3s						
D05A	**Enumclaw**	**44.61**	**69**	IAmb	IAmb	02 26 34.4	
	comp=Z,836nm,1.4s						
LZH	**Lanzhou**	**44.70**	**270**	⇑P	**P**	**02 26 20.3**	**-0.9**
LZH				pP	pP	02 26 24.0	-0.2
LZH				PP	**PcP**	**02 28 03.8**	**+0.3**
LZH				S	**S**	**02 32 54.0**	**-3.4**
LZH				pmax	pmax		
	comp=Z,870nm,1.4s						
LZH				pmax	pmax		
	comp=Z,9µm,4.6s						
LZH				LR	LR		
	comp=Z,168µm,15.5s						
LZH				LR	LR		
	comp=Z,152µm,16.5s						
LZH				LR	LR		
	comp=Z,146µm,16.2s						
F04D	**Rainier, OR**	**44.79**	**71**	IAmb	IAmb	02 26 26.6	
	comp=Z,437nm,1.4s						
F04D				IAMs_20	IAMs_20	02 41 50.8	
	comp=Z,35µm,22.0s						
NEEM	**North Greenlan**	**44.89**	**10**	⇑P	**P**	**02 26 21.6**	**-0.8**
NEEM	**North Greenlan**	**44.89**	**10**	*i* P	**P**	**02 26 22.0**	**-0.4**
NEEM				IAmb	IAmb	02 26 27.2	
	comp=Z,295nm,0.8s						
HEBO	**Mount Hebo**	**44.96**	**72**	IAmb	IAmb	02 26 36.4	
	comp=Z,472nm,1.1s						
GUMO	**Guam**	**44.98**	**207**	LR	LR	02 43 03.0	
	comp=Z,16µm,20.6s,baz=34,slow=33						
SSLB	**Suanglung**	**45.06**	**242**	P	**P**	**02 26 24.4**	**+0.5**
SSLB				IAMs_20	IAMs_20	02 47 37.3	
	comp=Z,54µm,18.0s						
SSLB	**Suanglung**	**45.06**	**242**	P	**P**	**02 26 25.2**	**+1.2**
HOPEN	**Hopen**	**45.08**	**347**	*e*P	**P**	**02 26 24.2**	**+0.7**
HOPEN				*e*S	**S**	**02 32 58.2**	**-3.5**
HOPEN				*e*ScS	**SS**	**02 36 22.1**	**-0.9**
HOPEN				IVMs_BB	IVMs_BB	02 44 38.9	
	comp=Z,14µm,23.4s						
YULB	**Yu-li**	**45.22**	**242**	P	**P**	**02 26 23.7**	**-1.5**
YULB				IAmb	IAmb	02 26 30.4	
	comp=Z,297nm,1.1s						
YULB				IAMs_20	IAMs_20	02 47 31.6	
	comp=Z,30µm,19.0s						
YULB	**Yu-li**	**45.22**	**242**	P	**P**	**02 26 26.1**	**+0.8**
B08A	**Colville Reser**	**45.23**	**66**	IAmb	IAmb	02 26 38.5	
	comp=Z,271nm,1.1s						
B08A				IAMs_20	IAMs_20	02 45 46.3	
	comp=Z,37µm,19.0s						
QZH	**Quanzhou**	**45.29**	**246**	⇑*i*P	**P**	**02 26 24.0**	**-1.7**
QZH				PP	**PcP**	**02 28 06.5**	**+1.1**
QZH				S	**S**	**02 33 10.0**	**+4.3**
QZH				SS	**ScS**	**02 36 18.0**	**-4.1**
QZH				pmax	pmax		
	comp=Z,120nm,1.4s						
QZH				pmax	pmax		
	comp=Z,8µm,7.7s						
QZH				LR	LR		
	comp=Z,25µm,12.4s						
QZH				LR	LR		
	comp=Z,53µm,12.7s						
COR	**Corvallis**	**45.62**	**73**	P	**P**	**02 26 29.4**	**+1.2**
COR				IAmb	IAmb	02 26 39.9	
	comp=Z,394nm,1.1s						
COR	**Corvallis**	**45.62**	**73**	⇑P	**P**	**02 26 29.6**	**+1.4**
TPUB	**Ta-pu**	**45.63**	**242**	IAMs_20	IAMs_20	02 45 37.4	
	comp=Z,44µm,20.0s						
TPUB	**Ta-pu**	**45.63**	**242**	P	**P**	**02 26 29.5**	**+1.0**
I02E	**Swisshome, OR**	**45.64**	**73**	IAmb	IAmb	02 26 41.7	
	comp=Z,811nm,1.7s						
G04A	**Mulino**	**45.64**	**71**	IAmb	IAmb	02 27 02.1	
	comp=Z,288nm,1.0s						
CNSH	**ChangSha**	**45.65**	**254**	P	**P**	**02 26 26.8**	**-1.8**
CNSH				S	**S**	**02 33 09.3**	**-1.6**
CNSH				pmax	pmax		
	comp=Z,52nm,0.9s						
CNSH				LR	LR		
	comp=Z,58µm,17.8s						
CNSH				LR	LR		
	comp=Z,71µm,14.9s						
HSPB	**Hornsund (broa**	**45.66**	**351**	*e*P	**P**	**02 26 28.7**	**+0.6**
HSPB				*e*S	**S**	**02 33 05.9**	**-4.0**
HSPB				*e*L	L	02 42 55.1	
	comp=Z,42µm,24.8s						
KHLH	**Kahului Airpor**	**45.73**	**124**	IAMs_20	IAMs_20	02 43 45.0	
	comp=Z,36µm,19.0s						
KNMB	**Chin-men Tao**	**45.79**	**246**	IAMs_20	IAMs_20	02 47 31.5	
	comp=Z,30µm,18.0s						
TWGBT	**Beinan**	**45.81**	**241**	P	**P**	**02 26 31.0**	**+1.1**
TWG	**Pinlang**	**45.81**	**241**	P	**P**	**02 26 29.4**	**-0.5**
TWG				IAmb	IAmb	02 26 40.6	
	comp=Z,246nm,0.7s						
TWG				IAMs_20	IAMs_20	02 48 23.3	
	comp=Z,45µm,18.0s						
MXC	**Moxie City**	**45.89**	**69**	IAmb	IAmb	02 26 44.0	
	comp=Z,663nm,1.8s						
MXC				IAMs_20	IAMs_20	02 42 44.8	
	comp=Z,33µm,22.0s						
ENH	**Enshi**	**45.90**	**259**	IAmb	IAmb	02 28 11.8	
	comp=Z,218nm,0.9s						
ENH				IAMs_20	IAMs_20	02 48 16.6	
	comp=Z,46µm,19.0s						
ENH	**Enshi**	**45.90**	**259**	P	**P**	**02 26 30.1**	**-0.5**
HLK	**Haleakala**	**45.94**	**124**	IAMs_20	IAMs_20	02 43 14.4	
	comp=Z,34µm,19.0s						
H04D	**Lebanon**	**45.96**	**72**	IAmb	IAmb	02 26 44.0	
	comp=Z,325nm,1.1s						
BUCK	**Buck Mountain**	**46.04**	**73**	IAmb	IAmb	02 26 45.2	
	comp=Z,323nm,1.1s						
ILON	**Igloolik, Nuna**	**46.05**	**27**	P	**P**	**02 26 30.3**	**-0.9**
ILON				IAmb	IAmb	02 26 44.4	
	comp=Z,289nm,1.1s						
E07A	**Sunnyside**	**46.13**	**68**	IAMs_20	IAMs_20	02 46 14.2	
	comp=Z,33µm,19.0s						
C09A	**Chrisman Ranch**	**46.13**	**66**	IAMs_20	IAMs_20	02 46 22.2	
	comp=Z,41µm,19.0s						
H04A	**Detroit Lake**	**46.15**	**72**	IAmb	IAmb	02 26 45.9	
	comp=Z,443nm,1.4s						
WAH2	**Wahluke Slope**	**46.15**	**68**	IAmb	IAmb	02 26 36.8	
	comp=Z,301nm,1.2s						
I03D	**Drain, OR**	**46.19**	**73**	IAmb	IAmb	02 26 39.2	
	comp=Z,629nm,1.7s						
J01E	**Myrtle Point**	**46.23**	**74**	P	**P**	**02 26 33.5**	**+0.5**
G05A	**Wamic**	**46.23**	**71**	IAmb	IAmb	02 26 51.9	
	comp=Z,388nm,1.1s						
G05A				IAMs_20	IAMs_20	02 42 48.1	
	comp=Z,33µm,22.0s						
D08A	**Wollman Farm,**	**46.28**	**67**	IAmb	IAmb	02 26 39.0	
	comp=Z,305nm,1.4s						
D08A				IAMs_20	IAMs_20	02 47 56.3	
	comp=Z,33µm,18.0s						
HAWA	**Hanford**	**46.41**	**68**	IAmb	IAmb	02 26 39.0	
	comp=Z,514nm,1.6s						
HAWA				IAMs_20	IAMs_20	02 46 32.6	
	comp=Z,36µm,18.0s						
HAWA	**Hanford**	**46.41**	**68**	⇑P	**P**	**02 26 34.2**	**-0.1**
NEW	**Newport**	**46.41**	**65**	IAMs_20	IAMs_20	02 44 11.6	
	comp=Z,45µm,21.0s						
NEW	**Newport**	**46.41**	**65**	LR	LR	02 44 22.2	
	comp=Z,43µm,21.6s,baz=308,slow=34						
NEW	**Newport**	**46.41**	**65**	⇑P	**P**	**02 26 33.9**	**-0.6**
F07A	**Phinny Hill Vi**	**46.53**	**69**	IAmb	IAmb	02 26 40.2	
	comp=Z,311nm,1.0s						
F07A				IAMs_20	IAMs_20	02 43 16.9	
	comp=Z,39µm,22.0s						
E08A	**Dider Farm, El**	**46.59**	**68**	IAMs_20	IAMs_20	02 46 27.3	
	comp=Z,35µm,18.0s						
G06A	**Carlson Farm,**	**46.60**	**70**	IAmb	IAmb	02 28 14.7	
	comp=Z,464nm,1.6s						
G06A				IAMs_20	IAMs_20	02 43 41.7	
	comp=Z,30µm,21.0s						
KULLO	**Kullorsuaq**	**46.69**	**14**	⇑P	**P**	**02 26 36.3**	**+0.1**
KULLO	**Kullorsuaq**	**46.69**	**14**	*i* P	**P**	**02 26 35.9**	**-0.3**
KULLO				IAmb	IAmb	02 26 42.3	
	comp=Z,439nm,1.1s						
K02D	**Willamette Mer**	**46.69**	**75**	IAmb	IAmb	02 26 50.1	
	comp=Z,378nm,1.5s						
I05D	**Terrebonne, OR**	**46.83**	**72**	IAmb	IAmb	02 26 50.5	
	comp=Z,606nm,1.6s						
E09A	**Wood Farm, Sta**	**47.05**	**67**	IAmb	IAmb	02 26 43.7	
	comp=Z,308nm,1.0s						
E09A				IAMs_20	IAMs_20	02 48 28.4	
	comp=Z,30µm,19.0s						
HUH	**Hualalai**	**47.06**	**124**	IAMs_20	IAMs_20	02 42 17.1	
	comp=Z,43µm,21.0s						
POHA	**Pohakuloa**	**47.13**	**124**	P	**P**	**02 26 41.3**	**+0.8**
POHA	**Pohakuloa**	**47.13**	**124**	IAMs_20	IAMs_20	02 44 54.1	
	comp=Z,31µm,19.0s						
POHA	**Pohakuloa**	**47.13**	**124**	P	**P**	**02 26 43.0**	**+2.4**
POHA	**Pohakuloa**	**47.13**	**124**	⇓P	**P**	**02 26 42.4**	**+1.8**
L02F	**Cave Junction**	**47.13**	**75**	IAmb	IAmb	02 26 53.6	
	comp=Z,286nm,1.2s						
ZSN	**Zaisan**	**47.20**	**295**	*e*P	**P**	**02 26 39.5**	**-1.1**
ZSN				pmax	pmax		
	comp=Z,104nm,1.0s						
ZSN	**Zaisan**	**47.20**	**295**	*e*P	**P**	**02 26 39.5**	**-1.1**
	comp=Z,104nm,1.0s						
HMH	**Humu‘ula Sheep**	**47.29**	**124**	IAMs_20	IAMs_20	02 41 38.3	
	comp=Z,39µm,22.0s						
MWH	**Mokuaweoweo**	**47.34**	**124**	IAMs_20	IAMs_20	02 44 42.6	
	comp=Z,37µm,20.0s						
DAG	**Danmarks Havn**	**47.34**	**1**	P	**P**	**02 26 43.0**	**+1.7**
DAG	**Danmarks Havn**	**47.34**	**1**	⇑P	**P**	**02 26 40.9**	**-0.4**
DAG	**Danmarks Havn**	**47.34**	**1**	*i* P	**P**	**02 26 40.6**	**-0.7**
DAG				IAmb	IAmb	02 26 44.5	
	comp=Z,152nm,0.7s						
KRMB	**Red Mountain**	**47.36**	**76**	IAmb	IAmb	02 26 55.6	
	comp=Z,381nm,1.4s						
LNOR	**Lincton Mounta**	**47.40**	**68**	IAmb	IAmb	02 26 54.9	
	comp=Z,288nm,1.4s						
PINE	**Pine Mountain**	**47.41**	**72**	IAmb	IAmb	02 26 56.4	
	comp=Z,465nm,1.2s						
PINE				IAMs_20	IAMs_20	02 47 46.2	
	comp=Z,29µm,18.0s						
MLH	**Mauna Loa**	**47.43**	**124**	P	**P**	**02 26 42.0**	**-0.9**
MLH				IAMs_20	IAMs_20	02 42 05.0	
	comp=Z,36µm,22.0s						
AIN	**Ainahou**	**47.50**	**124**	IAMs_20	IAMs_20	02 42 29.9	
	comp=Z,40µm,21.0s						
UWE	**Uwekahuna**	**47.54**	**124**	IAMs_20	IAMs_20	02 42 07.8	
	comp=Z,35µm,22.0s						
KHU	**Kahuku**	**47.54**	**124**	IAMs_20	IAMs_20	02 42 29.9	
	comp=Z,39µm,21.0s						
HATHI	**Halema‘uma‘u T**	**47.55**	**124**	IAMs_20	IAMs_20	02 41 57.2	
	comp=Z,36µm,22.0s						
BYL	**Byron's Ledge**	**47.56**	**124**	IAmb	IAmb	02 26 47.8	
	comp=Z,349nm,0.9s						
BYL				IAMs_20	IAMs_20	02 42 07.4	
	comp=Z,32µm,20.0s						
J05D	**Fort Rock, OR**	**47.60**	**72**	IAmb	IAmb	02 26 57.3	
	comp=Z,378nm,1.0s						
PUH	**Pauahi**	**47.61**	**124**	IAMs_20	IAMs_20	02 41 59.8	
	comp=Z,37µm,22.0s						
HLP	**Hilina Pali**	**47.64**	**124**	IAMs_20	IAMs_20	02 42 00.5	
	comp=Z,41µm,22.0s						
STCH	**Steam Cracks**	**47.65**	**123**	IAMs_20	IAMs_20	02 42 10.7	
	comp=Z,32µm,22.0s						
JOKA	**Jonika Flow**	**47.66**	**123**	IAMs_20	IAMs_20	02 42 24.1	
	comp=Z,30µm,22.0s						
JCC	**Jacoby Creek,**	**47.79**	**77**	IAmb	IAmb	02 26 59.5	
	comp=Z,327nm,1.2s						
YBH	**Yreka Blue Hor**	**47.87**	**75**	P	**P**	**02 26 46.3**	**+0.3**
YBH				IAmb	IAmb	02 26 59.6	
	comp=Z,183nm,0.9s						
YBH	**Yreka Blue Hor**	**47.87**	**75**	LR	LR	02 46 25.4	
	comp=Z,1µm,18.1s,baz=292,slow=36						
YBH	**Yreka Blue Hor**	**47.87**	**75**	P	**P**	**02 26 46.3**	**+0.3**
YBH				pmax	pmax		
	comp=Z,183nm,0.9s						
YBH				MLR	MLR		
	comp=Z,23µm,18.0s						
I07A	**Izee**	**47.97**	**71**	IAmb	IAmb	02 26 59.5	
	comp=Z,427nm,1.7s						
I07A				IAMs_20	IAMs_20	02 44 14.1	
	comp=Z,29µm,21.0s						
KURK	**Kurchatov**	**48.12**	**302**	P	**P**	**02 26 47.5**	**-0.2**
KURK				P	**P**	**02 26 47.5**	**-0.2**
KURK				S	**S**	**02 33 46.2**	**+0.5**
KURK				S	**S**	**02 33 46.2**	**+0.5**
KURK	**Kurchatov**	**48.12**	**302**	P	**P**	**02 26 46.6**	**-1.1**
KURK	**Kurchatov**	**48.12**	**302**	⇑P	**P**	**02 26 46.5**	**-1.1**
K05A	**Summer Lake**	**48.16**	**73**	IAmb	IAmb	02 27 01.8	
	comp=Z,468nm,1.3s						
WMQ	**Urumqi**	**48.18**	**289**	P	**P**	**02 26 48.3**	**0.0**
WMQ				S	**S**	**02 33 45.8**	**-1.0**
WMQ				pmax	pmax		
	comp=Z,430nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,9µm,7.3s						
WMQ				LR	LR		
	comp=Z,74µm,18.1s						
WMQ				LR	LR		
	comp=Z,44µm,21.9s						
CLRN	**Clyde River**	**48.21**	**21**	⇓P	**P**	**02 26 47.4**	**-0.7**
KURBB	**Kurchatov Arra**	**48.23**	**302**	P	**P**	**02 26 46.6**	**-1.9**
	comp=Z,96nm,0.8s,baz=55,slow=8.0,SNR=214						
KURBB				PP	**PP**	**02 28 41.9**	**+1.4**
	comp=Z,76nm,1.0s,baz=47,slow=9.7,SNR=5.7						
KURBB				LR	LR	02 49 15.2	
	comp=Z,57µm,21.5s,baz=54,slow=39						
KURBB				PKPPKP	P'P'df	02 57 47.3	-15
	comp=Z,0.6nm,0.6s,baz=265,slow=3.1,SNR=4.5						
KURBB				P4KPbc		03 04 28.5	
	comp=Z,2.7nm,0.7s,baz=47,slow=4.1,SNR=26						
	comp=Z,96nm,0.8s						
KURBB	**Kurchatov Arra**	**48.23**	**302**	P	**P**	**02 26 46.7**	**-1.8**
KMRM	**Mail Ridge**	**48.38**	**77**	IAmb	IAmb	02 27 03.8	
	comp=Z,225nm,0.9s						
UPNV	**Upernavik**	**48.41**	**15**	*i* P	**P**	**02 26 47.9**	**-1.7**
UPNV				IAmb	IAmb	02 26 54.7	
	comp=Z,149nm,0.9s						
CD2	**Chengdu**	**48.59**	**265**	P	**P**	**02 26 50.5**	**-1.1**
CD2				pP	pP	02 26 54.0	-0.5
CD2				S	**S**	**02 33 55.5**	**+2.6**
CD2				ScS	**ScS**	**02 36 41.8**	**-2.0**
CD2				pmax	pmax		
	comp=Z,240nm,0.8s						
CD2				pmax	pmax		
	comp=Z,11µm,7.2s						
CD2				LR	LR		
	comp=Z,120µm,15.9s						
CD2				LR	LR		
	comp=Z,128µm,17.6s						
CD2				LR	LR		
	comp=Z,119µm,14.9s						
BMO	**Blue Mountains**	**48.60**	**68**	IAmb	IAmb	02 27 04.2	
	comp=Z,223nm,1.2s						
BMO				IAMs_20	IAMs_20	02 44 42.6	
	comp=Z,41µm,22.0s						
BMO	**Blue Mountains**	**48.60**	**68**	⇑P	**P**	**02 26 51.5**	**0.0**
KCPM	**Cahto Peak**	**48.82**	**78**	IAmb	IAmb	02 27 06.8	
	comp=Z,735nm,1.8s						
O02D	**Mt. Diablo Mer**	**48.91**	**77**	IAmb	IAmb	02 27 00.8	
	comp=Z,328nm,1.3s						
MK31	**Makanchi Array**	**48.95**	**296**	*i* P	**P**	**02 26 52.7**	**-1.4**
MK31				pmax	pmax		
	comp=Z,73nm,0.6s						
MKAR	**Makanchi Array**	**48.95**	**296**	P	**P**	**02 26 52.2**	**-1.9**
MKAR	**Makanchi Array**	**48.95**	**296**	P	**P**	**02 26 52.5**	**-1.6**
	comp=Z,71nm,0.8s,baz=51,slow=5.8,SNR=241						
MKAR				LR	LR	02 48 05.7	
	comp=Z,50µm,18.8s,baz=28,slow=37						
MKAR				P4KPbc		03 04 31.3	
	comp=Z,1.2nm,1.0s,baz=85,slow=2.8,SNR=4.6						
	comp=Z,71nm,0.8s						
MSO	**Missoula**	**48.98**	**64**	IAmb	IAmb	02 26 58.8	
	comp=Z,568nm,1.6s						
MSO				IAMs_20	IAMs_20	02 45 18.5	
	comp=Z,48µm,22.0s						
MSO	**Missoula**	**48.98**	**64**	⇑P	**P**	**02 26 54.3**	**-0.2**
J08A	**Circle Bar Ran**	**49.01**	**71**	IAmb	IAmb	02 27 07.7	
	comp=Z,294nm,1.4s						
MAKZ	**Makanchi**	**49.10**	**296**	P	**P**	**02 26 53.2**	**-2.1**
MAKZ				IAmb	IAmb	02 26 59.2	
	comp=Z,245nm,1.2s						
PLID	**Pearl Lake**	**49.12**	**67**	IAMs_20	IAMs_20	02 49 52.2	
	comp=Z,35µm,19.0s						
FFC	**Flin Flon**	**49.24**	**50**	P	**P**	**02 26 55.3**	**-0.9**
FFC				IAmb	IAmb	02 27 00.2	
	comp=Z,130nm,0.9s						
FFC	**Flin Flon**	**49.24**	**50**	P	**P**	**02 26 55.3**	**-0.9**
FFC				pmax	pmax		
	comp=Z,130nm,0.9s						
FFC				MLR	MLR		
	comp=Z,53µm,18.0s						
FFC	**Flin Flon**	**49.24**	**50**	⇑P	**P**	**02 26 55.4**	**-0.8**
GULI	**GuiLin**	**49.33**	**254**	P	**P**	**02 26 56.0**	**-1.3**

GULI				pmax	pmax		
	comp=Z,180nm,0.9s						
GULI				pmax	pmax		
	comp=Z,7μm,8.4s						
GULI				LR	LR		
	comp=Z,45μm,16.5s						
GULI				LR	LR		
	comp=Z,55μm,14.7s						
GULI				LR	LR		
	comp=Z,75μm,14.3s						
PATS	**Pohnpei**	**49.38**	**188**	P	**P**	**02 27 00.9**	**+3.2**
GZH	**Guangzhou**	**49.53**	**250**	P	P	02 26 53.0	-5.8
GZH				PP	**PP**	**02 28 48.0**	**-4.9**
GZH				S	**S**	**02 33 58.5**	**-7.6**
GZH				LR	LR		
	comp=Z,63μm,14.7s						
GZH				LR	LR		
	comp=Z,40μm,13.1s						
GZH				LR	LR		
	comp=Z,76μm,14.8s						
WVOR	**Wild Horse Val**	**49.56**	**72**	IAMs_20	IAMs_20	02 47 26.3	
	comp=Z,25μm,18.0s						
WVOR	**Wild Horse Val**	**49.56**	**72**	⇑P	**P**	**02 26 59.3**	**+0.3**
HOPS	**Hopland Field**	**49.59**	**78**	IAmb	IAmb	02 27 33.1	
	comp=Z,338nm,1.3s						
HOPS				IAMs_20	IAMs_20	02 49 03.3	
	comp=Z,30μm,18.0s						
FCC	**Fort Churchill**	**49.64**	**42**	IAmb	IAmb	02 27 02.8	
	comp=Z,297nm,0.8s						
FCC				IAMs_20	IAMs_20	02 51 20.1	
	comp=Z,35μm,20.0s						
FCC	**Fort Churchill**	**49.64**	**42**	⇑P	**P**	**02 26 58.5**	**-0.7**
GOMU	**GeErMu**	**49.67**	**277**	P	**P**	**02 26 58.5**	**-1.7**
GOMU				PcP	**PcP**	**02 28 20.5**	**-0.8**
GOMU				S	**S**	**02 34 05.3**	**-3.3**
GOMU				pmax	pmax		
	comp=Z,380nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,6μm,7.9s						
GOMU				LR	LR		
	comp=Z,71μm,16.2s						
GOMU				LR	LR		
	comp=Z,34μm,15.0s						
GOMU				LR	LR		
	comp=Z,45μm,17.3s						
DBG	**Daneborg**	**49.80**	**2**	⇓P	**P**	**02 26 59.4**	**-0.9**
DBG	**Daneborg**	**49.80**	**2**	*i* P	**P**	**02 26 59.2**	**-1.0**
DBG				IAmb	IAmb	02 27 04.2	
	comp=Z,152nm,0.8s						
GDXM	**Geysers**	**49.88**	**78**	IAMs_20	IAMs_20	02 49 13.8	
	comp=Z,41μm,18.0s						
VADS	**Vadso**	**49.92**	**341**	*e*P	**P**	**02 27 01.1**	**-0.1**
VADS				IVmB_BB		02 27 10.4	
	comp=Z,6μm,2.7s						
VADS				*e*S	**S**	**02 34 11.0**	**+0.4**
VADS				IVMs_BB	IVMs_BB	02 56 05.8	
	comp=Z,12μm,13.1s						
NUUG	**Nuugaatsiaq**	**49.94**	**15**	⇓P	**P**	**02 27 01.5**	**+0.2**
NUUG	**Nuugaatsiaq**	**49.94**	**15**	*i* P	**P**	**02 26 59.9**	**-1.4**
NUUG				IAmb	IAmb	02 27 08.2	
	comp=Z,46nm,0.8s						
EGMT	**Eagleton**	**50.24**	**61**	IAmb	IAmb	02 27 08.0	
	comp=Z,233nm,0.9s						
EGMT	**Eagleton**	**50.24**	**61**	⇑P	**P**	**02 27 03.5**	**-0.5**
MCCM	**Marconi Confer**	**50.30**	**79**	IAmb	IAmb	02 27 37.1	
	comp=Z,296nm,1.2s						
BVA0	**Borovoye Array**	**50.33**	**308**	*i* P	**P**	**02 27 04.1**	**-0.4**
BVAR	**Borovoye Array**	**50.33**	**308**	P	**P**	**02 27 04.2**	**-0.3**
	comp=Z,249nm,0.8s,baz=53,slow=7.6,SNR=319						
BVAR				PP	**PP**	**02 29 02.5**	**+2.9**
	comp=Z,70nm,0.9s,baz=65,slow=8.5,SNR=5.1						
BVAR				LR	LR	02 50 27.4	
	comp=Z,58μm,20.5s,baz=49,slow=39						
BVAR				PKPPKP	P'P'df	02 57 47.8	-13
	comp=Z,7.0nm,1.0s,baz=178,slow=4.0,SNR=5.8						
BVAR				P4KPbc		03 04 37.2	
	comp=Z,3.8nm,0.9s,baz=66,slow=3.7,SNR=9.5						
	comp=Z,249nm,0.8s						
BRVK	**Borovoye**	**50.35**	**309**	P	**P**	**02 27 04.1**	**-0.6**
BRVK				IAmb	IAmb	02 27 06.5	
	comp=Z,386nm,0.8s						
BRVK	**Borovoye**	**50.35**	**309**	P	**P**	**02 27 04.1**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,386nm,0.9s						
MFID	**Camas Ranch**	**50.36**	**69**	IAMs_20	IAMs_20	02 45 35.2	
	comp=Z,27μm,22.0s						
HAMF	**Hammerfest**	**50.41**	**344**	*e*P	**P**	**02 27 04.4**	**-0.5**
HAMF				IVmB_BB		02 27 14.0	
	comp=Z,4μm,2.8s						
HAMF				*e*S	**S**	**02 34 16.5**	**-0.8**
HAMF				*e*ScS	**ScS**	**02 36 56.1**	**+1.3**
HAMF				IVMs_BB	IVMs_BB	02 54 51.6	
	comp=Z,15μm,14.4s						
GYA	**Guiyang**	**50.42**	**259**	⇑P	**P**	**02 27 04.5**	**-1.2**
GYA				pP	sP	02 27 11.0	+1.4
GYA				S	**S**	**02 34 17.0**	**-1.7**
GYA				pmax	pmax		
	comp=Z,64nm,0.9s						
GYA				pmax	pmax		
	comp=Z,8μm,8.4s						
GYA				LR	LR		
	comp=Z,49μm,15.0s						
GYA				LR	LR		
	comp=Z,55μm,16.2s						
GYA				LR	LR		
	comp=Z,66μm,20.0s						
SZP	**Santa**	**50.60**	**238**	P	**P**	**02 27 09.1**	**+2.2**
SZP	**Santa**	**50.60**	**238**	⇑P	**P**	**02 27 07.9**	**+1.0**
SUMG	**Summit**	**50.62**	**9**	P	**P**	**02 27 06.1**	**-0.8**
SUMG	**Summit**	**50.62**	**9**	P	**P**	**02 27 06.7**	**-0.3**
SUMG				IAMs_20	IAMs_20	02 50 37.4	
	comp=Z,29μm,18.0s						
SUMG	**Summit**	**50.62**	**9**	⇑P	**P**	**02 27 07.2**	**+0.2**
SUMG	**Summit**	**50.62**	**9**	*i* P	**P**	**02 27 06.5**	**-0.5**
SUMG				IAmb	IAmb	02 27 13.6	
	comp=Z,472nm,1.2s						
KEV	**Kevo**	**50.65**	**342**	P	**P**	**02 27 05.7**	**-1.0**
KEV				IAMs_20	IAMs_20	02 51 19.3	
	comp=Z,28μm,19.0s						
KEV	**Kevo**	**50.65**	**342**	P	**P**	**02 27 05.3**	**-1.4**
KEV				S	**S**	**02 34 19.3**	**-1.3**
KEV	**Kevo**	**50.65**	**342**	⇑P	**P**	**02 27 06.6**	**-0.1**
DLMT	**Dillon**	**50.67**	**65**	IAmb	IAmb	02 27 11.8	
	comp=Z,756nm,1.6s						
DLMT				IAMs_20	IAMs_20	02 49 23.1	
	comp=Z,26μm,18.0s						
LVZ	**Lovozero**	**50.78**	**338**	P	**P**	**02 27 06.5**	**-1.2**
LVZ	**Lovozero**	**50.78**	**338**	*c i*P	**P**	**02 27 06.8**	**-0.9**
LVZ				pmax	pmax		
	comp=Z,173nm,1.0s						
LVZ				MLR	MLR		
	comp=Z,59μm,21.0s						
LVZ	**Lovozero**	**50.78**	**338**	⇑P	**P**	**02 27 06.9**	**-0.9**
UMMG	**Uummannaq**	**50.87**	**15**	*i* P	**P**	**02 27 07.8**	**-0.5**
UMMG				IAmb	IAmb	02 27 20.9	
	comp=Z,338nm,1.4s						
BOZ	**Bozeman (W)**	**50.99**	**64**	IAMs_20	IAMs_20	02 48 38.7	
	comp=Z,37μm,21.0s						
BOZ	**Bozeman (W)**	**50.99**	**64**	⇑P	**P**	**02 27 09.5**	**-0.3**
HLID	**Hailey**	**50.99**	**68**	IAMs_20	IAMs_20	02 49 24.9	
	comp=Z,38μm,19.0s						
HLID	**Hailey**	**50.99**	**68**	⇑P	**P**	**02 27 09.8**	**-0.1**
MPK	**Martis Peak**	**51.03**	**75**	P	**P**	**02 27 10.4**	**+0.1**
ARA0	**ARCESS Array S**	**51.10**	**343**	*e*P	**P**	**02 27 10.7**	**+0.6**
ARA0				IVmB_BB		02 27 19.5	
	comp=Z,4μm,3.0s						
ARA0				*e*S	**S**	**02 34 26.4**	**-0.6**
ARA0				IVMs_BB	IVMs_BB	02 55 46.5	
	comp=Z,12μm,12.6s						
ARCES	**ARCESS Array B**	**51.10**	**343**	P	**P**	**02 27 09.2**	**-0.9**
ARCES	**ARCESS Array B**	**51.10**	**343**	P	**P**	**02 27 09.6**	**-0.6**
	comp=Z,54nm,0.7s,baz=27,slow=8.2,SNR=38						
ARCES				PcP	**PcP**	**02 28 25.5**	**-0.1**
	comp=Z,102nm,1.0s,baz=10,slow=2.7,SNR=4.9						
ARCES				LR	LR	02 50 23.2	
	comp=Z,25μm,22.0s,baz=40,slow=38						
ARCES				PKPPKP	**P'P'df**	**02 57 55.8**	**-5.3**
	comp=Z,3.7nm,0.8s,baz=193,slow=5.0,SNR=4.5						
	comp=Z,54nm,0.7s						
APA	**Apatity**	**51.31**	**338**	⇓*i*P	**P**	**02 27 09.9**	**-1.8**
APA				*i*		02 28 25.1	
APA				*i*		02 29 09.0	
APA				*i* S	**S**	**02 34 26.0**	**-3.9**
APA				pmax	pmax		
	comp=Z,50nm,0.8s						
BRZS	**Berezniki**	**51.41**	**304**	*e*P	**P**	**02 27 11.8**	**-0.9**
BRZS				*e*S	**S**	**02 34 32.4**	**+0.6**
BRZS	**Berezniki**	**51.41**	**304**	*e*P	**P**	**02 27 11.8**	**-0.9**
BRZS				*e*S	**S**	**02 34 32.4**	**+0.6**
PNTR	**Pine Nut**	**51.41**	**75**	IAmb	IAmb	02 27 32.3	
	comp=Z,327nm,0.9s						
SVE	**Sverdlovsk**	**51.65**	**317**	*d i*P	**P**	**02 27 15.3**	**+0.9**
SVE				*e*		02 29 13.7	
SVE				*e*S	**S**	**02 34 36.3**	**+1.4**
SVE				*e*SS	**SS**	**02 38 09.1**	**-1.3**
SVE				pmax	pmax		
	comp=Z,836nm,1.8s						
SVE				pmax	pmax		
	comp=Z,3μm,10.6s						
SVE				MLR	MLR		
	comp=Z,91μm,14.0s						
YHL	**Hebgen Lake**	**51.74**	**64**	IAMs_20	IAMs_20	02 51 01.5	
	comp=Z,33μm,18.0s						
CMB	**Columbia Colle**	**51.74**	**77**	IAMs_20	IAMs_20	02 50 46.2	
	comp=Z,25μm,18.0s						
YHB	**Horse Butte**	**51.80**	**65**	IAmb	IAmb	02 27 28.8	
	comp=Z,277nm,0.8s						
JETT	**Jettan, Norway**	**51.88**	**345**	*e*P	**P**	**02 27 16.1**	**+0.1**
JETT				IVmB_BB		02 27 28.2	
	comp=Z,7μm,2.2s						
JETT				*e*S	**S**	**02 34 37.6**	**-0.2**
JETT				IVMs_BB	IVMs_BB	02 56 50.4	
	comp=Z,11μm,14.9s						
TRO	**Tromso**	**52.03**	**345**	*e*P	**P**	**02 27 17.0**	**0.0**
TRO				IVmBBB		02 27 26.7	
	comp=Z,4μm,2.5s						
TRO				*e*S	**S**	**02 34 41.6**	**+2.0**
TRO				*e*S	S	02 34 44.0	+4.3
TRO				IVmB_BB		02 49 30.4	
	comp=Z,8μm,20.0s						
YNM	**Yellowstone No**	**52.07**	**64**	IAMs_20	IAMs_20	02 50 29.2	
	comp=Z,38μm,19.0s						
SAO	**San Andreas Ge**	**52.09**	**79**	IAMs_20	IAMs_20	02 50 36.4	
	comp=Z,21μm,18.0s						
SAO	**San Andreas Ge**	**52.09**	**79**	⇑P	**P**	**02 27 18.9**	**+1.0**
YNR	**Norris Junctio**	**52.09**	**64**	IAmb	IAmb	02 27 32.9	
	comp=Z,427nm,1.3s						
YNR				IAMs_20	IAMs_20	02 50 12.8	
	comp=Z,41μm,19.0s						
TDK	**Taldyqorghan**	**52.15**	**296**	*e*P	**P**	**02 27 17.4**	**-0.9**
TDK				*e*S	**S**	**02 34 42.6**	**+0.6**
TDK				pmax	pmax		
	comp=Z,172nm,0.8s						
TDK				MLR	MLR		
	comp=Z,28μm,13.0s						
TDK	**Taldyqorghan**	**52.15**	**296**	*e*P	**P**	**02 27 17.4**	**-0.9**
	comp=Z,172nm,0.8s						
TDK				*e*S	**S**	**02 34 42.6**	**+0.6**
TDK				LR	LR	02 50 24.4	
	comp=Z,28μm,13.4s						
YNE	**Yellowstone No**	**52.22**	**64**	IAmb	IAmb	02 27 31.9	
	comp=Z,234nm,0.8s						
ILULI	**Ilulissat**	**52.35**	**15**	IAmb	IAmb	02 27 33.3	
	comp=Z,647nm,1.8s						
ILULI				IAMs_20	IAMs_20	02 52 05.2	
	comp=Z,33μm,18.0s						
ILULI	**Ilulissat**	**52.35**	**15**	⇑P	**P**	**02 27 18.9**	**-0.5**
ILULI	**Ilulissat**	**52.35**	**15**	*i* P	**P**	**02 27 18.5**	**-1.0**
ILULI				IAmb	IAmb	02 27 22.8	
	comp=Z,94nm,0.6s						
RLMT	**Red Lodge**	**52.51**	**63**	IAmb	IAmb	02 27 26.2	
	comp=Z,377nm,0.8s						
RLMT	**Red Lodge**	**52.51**	**63**	⇑P	**P**	**02 27 21.6**	**+0.4**
ELK	**Elko**	**52.56**	**71**	IAMs_20	IAMs_20	02 46 58.5	
	comp=Z,26μm,21.0s						
ELK	**Elko**	**52.56**	**71**	LR	LR	02 47 20.2	
	comp=Z,24μm,21.5s,baz=316,slow=33						
ELK	**Elko**	**52.56**	**71**	⇑P	**P**	**02 27 22.3**	**+0.6**
DGMT	**Dagmar**	**52.59**	**57**	IAmb	IAmb	02 27 34.4	
	comp=Z,291nm,1.1s						
NVAR	**Mina Array Bea**	**52.59**	**75**	P	**P**	**02 27 22.1**	**+0.2**
NVAR	**Mina Array Bea**	**52.59**	**75**	P	**P**	**02 27 22.8**	**+0.8**
	comp=Z,52nm,0.8s,baz=298,slow=7.5,SNR=254						
NVAR				LR	LR	02 47 42.8	
	comp=Z,13μm,20.1s,baz=310,slow=34						
NVAR				PKPPKP	P'P'df	02 57 46.6	-8.4
	comp=Z,2.8nm,1.0s,baz=151,slow=3.4,SNR=4.6						
NVAR				P4KPbc		03 04 49.2	
	comp=Z,1.5nm,0.8s,baz=315,slow=4.6,SNR=8.0						
	comp=Z,52nm,0.8s						
LHV	**Little Huntoon**	**52.61**	**75**	IAmb	IAmb	02 27 36.5	
	comp=Z,744nm,1.4s						
NV11	**Mina Array Sit**	**52.67**	**75**	IAmb	IAmb	02 27 35.8	
	comp=Z,313nm,1.1s						
PDGK	**Podgornoye**	**52.79**	**294**	P	**P**	**02 27 21.7**	**-1.5**
OTUK	**Ortayu**	**52.80**	**303**	P	**P**	**02 27 22.7**	**-0.4**
TPAW	**Teton Pass**	**52.82**	**65**	IAmb	IAmb	02 27 36.9	
	comp=Z,309nm,0.9s						
ARTI	**Arti**	**52.83**	**318**	P	**P**	**02 27 22.1**	**-1.0**
ARTI	**Arti**	**52.83**	**318**	LR	LR	02 53 03.8	
	comp=Z,73μm,18.9s,baz=48,slow=40						
ARTI	**Arti**	**52.83**	**318**	*d i*P	**P**	**02 27 22.9**	**-0.2**
ARTI						02 29 21.4	
ARTI				PPP	PPP	02 30 27.9	
ARTI				SS	SKiKP	02 38 21.9	-20
ARTI				pmax	pmax		
	comp=Z,1μm,1.7s						
ARTI				pmax	pmax		
	comp=Z,3μm,9.3s						
ARTI				MLR	MLR		
	comp=Z,74μm,15.0s						
ARTI	**Arti**	**52.83**	**318**	⇑P	**P**	**02 27 22.7**	**-0.5**
LAO	**LASA Array**	**52.89**	**60**	IAmb	IAmb	02 27 28.7	
	comp=Z,426nm,0.9s						
LAO	**LASA Array**	**52.89**	**60**	⇑P	**P**	**02 27 24.3**	**+0.5**
Q09A	**Carvers**	**52.90**	**74**	IAmb	IAmb	02 27 37.7	
	comp=Z,576nm,1.1s						
Q09A				IAMs_20	IAMs_20	02 51 10.7	
	comp=Z,28μm,18.0s						
SHLS	**Shalkode**	**52.92**	**294**	*c i*P	**P**	**02 27 21.5**	**-2.7**
SHLS				pmax	pmax		
	comp=Z,220nm,0.7s						
SHLS	**Shalkode**	**52.92**	**294**	⇑*i*P	**P**	**02 27 21.6**	**-2.7**
	comp=Z,220nm,0.7s						
SNOW	**Snow King Moun**	**52.94**	**65**	IAmb	IAmb	02 27 29.8	
	comp=Z,392nm,1.5s						
JNW	**Jan Mayen West**	**53.02**	**357**	*e*P	**P**	**02 27 26.4**	**+2.0**
JNW				IVmB_BB		02 27 40.4	
	comp=Z,10μm,3.6s						
JNW				*e*S	**S**	**02 34 59.2**	**+6.0**
JNW				IVMs_BB	IVMs_BB	02 44 45.1	
	comp=Z,5μm,18.4s						
JNE	**Jan Mayen East**	**53.06**	**357**	*e*P	**P**	**02 27 25.9**	**+1.3**
JNE				IVmB_BB		02 27 30.4	
	comp=Z,6μm,2.3s						
JNE				*e*		02 35 03.9	
JNE				IVMs_BB	IVMs_BB	02 44 37.2	
	comp=Z,7μm,29.7s						
JMIC	**Jan Mayen**	**53.07**	**357**	LR	LR	02 50 00.8	
	comp=Z,6μm,18.6s,baz=4.5,slow=36						
JMIC	**Jan Mayen**	**53.07**	**357**	*e*P	**P**	**02 27 26.2**	**+1.5**
JMIC				IVmB_BB		02 27 35.7	
	comp=Z,6μm,3.8s						
JMIC				*e*S	**S**	**02 34 55.4**	**+1.6**
KPKS	**Kokpek**	**53.10**	**295**	*c i*P	**P**	**02 27 24.6**	**-0.8**
KPKS				*e*S	**S**	**02 34 55.9**	**+0.7**
KPKS	**Kokpek**	**53.10**	**295**	⇑*i*P	**P**	**02 27 24.7**	**-0.8**
	comp=Z,15nm,1.1s						
KPKS				*e*S	**S**	**02 34 55.9**	**+0.7**
PZH	**PanZhiHua**	**53.10**	**263**	P	**P**	**02 27 24.0**	**-1.7**
PZH				S	**S**	**02 34 52.5**	**-3.2**
PZH				pmax	pmax		
	comp=Z,80nm,1.1s						
PZH				LR	LR		
	comp=Z,57μm,16.7s						
PZH				LR	LR		
	comp=Z,50μm,17.1s						
JMI	**Jan Mayen**	**53.13**	**357**	*e*P	**P**	**02 27 28.0**	**+2.9**
JMI				IVmB_BB		02 27 31.0	
	comp=Z,6μm,3.3s						
JMI				*e*S	**S**	**02 34 59.7**	**+5.0**
UZB	**Uzynbulak**	**53.16**	**294**	*c i*P	**P**	**02 27 24.9**	**-1.0**
UZB	**Uzynbulak**	**53.16**	**294**	⇑*i*P	**P**	**02 27 24.9**	**-1.0**
AHID	**Auburn Hatcher**	**53.27**	**66**	IAMs_20	IAMs_20	02 50 58.0	
	comp=Z,32μm,20.0s						
AHID	**Auburn Hatcher**	**53.27**	**66**	⇑P	**P**	**02 27 27.1**	**+0.3**
TGY	**Tagaytay City**	**53.37**	**236**	LR	LR	02 53 27.2	
	comp=Z,10μm,18.1s,baz=24,slow=40						
SATY	**Saty**	**53.53**	**295**	*c i*P	**P**	**02 27 27.7**	**-1.0**
SATY				*e*S	**S**	**02 35 01.5**	**+0.4**
SATY	**Saty**	**53.53**	**295**	⇑*i*P	**P**	**02 27 27.7**	**-1.0**
SATY				*e*S	**S**	**02 35 01.6**	**+0.4**
DSP	**Deep Springs**	**53.54**	**76**	IAmb	IAmb	02 27 35.8	
	comp=Z,551nm,1.6s						
SCO	**Scoresbysund**	**53.60**	**3**	P	**P**	**02 27 28.9**	**+0.3**
SCO				IAmb	IAmb	02 27 42.7	
	comp=Z,272nm,1.2s						
SCO				IAMs_20	IAMs_20	02 51 47.2	
	comp=Z,30μm,18.0s						
SCO	**Scoresbysund**	**53.60**	**3**	⇑P	**P**	**02 27 29.3**	**+0.7**
SCO	**Scoresbysund**	**53.60**	**3**	*i* P	**P**	**02 27 29.1**	**+0.5**
SCO				IAmb	IAmb	02 27 37.8	
	comp=Z,257nm,1.4s						
KMI	**Kunming**	**53.63**	**261**	⇑P	**P**	**02 27 28.3**	**-1.5**
KMI				S	**S**	**02 35 00.8**	**-2.3**
KMI				pmax	pmax		
	comp=Z,130nm,1.0s						
KMI				pmax	pmax		
	comp=Z,7μm,7.2s						
KMI				LR	LR		
	comp=Z,52μm,14.9s						
KMI				LR	LR		
	comp=Z,47μm,18.4s						
FRB	**Frobisher Bay**	**53.76**	**26**	LR	LR	02 53 09.5	
	comp=Z,21μm,19.5s,baz=322,slow=39						
FRB	**Frobisher Bay**	**53.76**	**26**	⇓P	**P**	**02 27 28.7**	**-1.1**
HWUT	**Hardware Ranch**	**53.86**	**68**	IAmb	IAmb	02 27 44.4	
	comp=Z,206nm,0.9s						
HWUT				IAMs_20	IAMs_20	02 52 46.8	
	comp=Z,28μm,18.0s						
HWUT	**Hardware Ranch**	**53.86**	**68**	⇑P	**P**	**02 27 31.7**	**+0.5**
ICESG	**Greenland Ices**	**53.88**	**10**	⇑P	**P**	**02 27 30.6**	**-0.6**
ICESG	**Greenland Ices**	**53.88**	**10**	*i* P	**P**	**02 27 30.4**	**-0.7**
ICESG				IAmb	IAmb	02 27 36.7	
	comp=Z,208nm,0.9s						
PRZ	**Przheval'sk**	**53.95**	**294**	IAmb	IAmb	02 27 36.7	
	comp=Z,240nm,1.0s						
BW06	**Boulder Array**	**54.05**	**65**	IAmb	IAmb	02 27 45.4	
	comp=Z,223nm,0.8s						
BW06				IAMs_20	IAMs_20	02 51 29.7	
	comp=Z,29μm,20.0s						
BW06	**Boulder Array**	**54.05**	**65**	⇑P	**P**	**02 27 32.7**	**+0.1**
PD31	**Pinedale Array**	**54.05**	**65**	IAmb	IAmb	02 27 45.4	
	comp=Z,223nm,0.8s						
PDAR	**Pinedale Array**	**54.05**	**65**	P	**P**	**02 27 32.0**	**-0.6**
PDAR	**Pinedale Array**	**54.05**	**65**	P	**P**	**02 27 32.8**	**+0.1**
	comp=Z,133nm,0.8s,baz=336,slow=3.3,SNR=430						
PDAR				LR	LR	02 51 41.0	
	comp=Z,17μm,20.0s,baz=319,slow=37						
PDAR				PKPPKP	P'P'df	02 57 45.0	-9.0
	comp=Z,4.7nm,1.0s,baz=94,slow=4.5,SNR=8.9						
	comp=Z,133nm,0.8s						
R11B	**Troy Canyon, C**	**54.11**	**73**	IAmb	IAmb	02 27 46.1	
	comp=Z,704nm,1.8s						
STEI	**Steigen**	**54.12**	**346**	⇑*i*P	**P**	**02 27 32.2**	**-0.2**
STEI				*e*S	**S**	**02 35 08.5**	**+0.4**
STEI				IVmBBB		02 57 09.6	
	comp=Z,10μm,16.5s						
LOF	**Lofoten**	**54.16**	**347**	*e*P	**P**	**02 27 32.5**	**-0.2**
LOF				IVmBBB		02 27 41.9	
	comp=Z,6μm,3.6s						
LOF				*e*S	**S**	**02 35 11.4**	**+2.8**
AAA	**Alma-Ata**	**54.18**	**296**	*e*P	**P**	**02 27 32.6**	**-0.8**
AAA	**Alma-Ata**	**54.18**	**296**	*e*P	**P**	**02 27 32.4**	**-0.9**
	comp=Z,222nm,0.8s						
AAA				LR	LR	02 51 38.3	
	comp=Z,24μm,12.2s						
DUG	**Dugway, Tooele**	**54.23**	**70**	IAmb	IAmb	02 27 47.1	
	comp=Z,202nm,0.9s						
DUG				IAMs_20	IAMs_20	02 51 14.8	
	comp=Z,27μm,18.0s						
DUG	**Dugway, Tooele**	**54.23**	**70**	⇑P	**P**	**02 27 34.5**	**+0.6**
BTLS	**Baital**	**54.28**	**299**	*c i*P	**P**	**02 27 33.0**	**-0.9**
BTLS				*e*S	**S**	**02 35 11.5**	**+0.6**
BTLS	**Baital**	**54.28**	**299**	⇑*i*P	**P**	**02 27 33.0**	**-0.9**
BTLS				*e*S	**S**	**02 35 11.5**	**+0.6**
TCUT	**Toone Canyon**	**54.30**	**68**	IAmb	IAmb	02 27 40.6	
	comp=Z,695nm,1.6s						
SPR3	**Spring Creek 3**	**54.30**	**72**	IAMs_20	IAMs_20	02 50 38.8	
	comp=Z,22μm,20.0s						
KIRV	**Kirov**	**54.32**	**324**	LR	LR	02 54 51.4	
	comp=Z,66μm,18.2s,baz=41,slow=41						
KIRV	**Kirov**	**54.32**	**324**	*d i*P	**P**	**02 27 34.1**	**+0.1**
SFJD	**Kangerlussuaq**	**54.47**	**16**	P	**P**	**02 27 34.4**	**-0.6**
SFJD				IAmb	IAmb	02 27 47.6	
	comp=Z,576nm,1.9s						
SFJD	**Kangerlussuaq**	**54.47**	**16**	IAMs_20	IAMs_20	02 53 30.1	
	comp=Z,28μm,18.0s						
SFJD	**Kangerlussuaq**	**54.47**	**16**	LR	LR	02 53 32.6	
	comp=Z,26μm,18.1s,baz=338,slow=39						
SFJD	**Kangerlussuaq**	**54.47**	**16**	P	**P**	**02 27 34.4**	**-0.6**
SFJD				pmax	pmax		
	comp=Z,576nm,1.9s						
SFJD				MLR	MLR		
	comp=Z,28μm,18.0s						
SFJD	**Kangerlussuaq**	**54.47**	**16**	P	**P**	**02 27 32.7**	**-2.2**
SFJD				S	**S**	**02 35 10.1**	**-2.8**
SFJD	**Kangerlussuaq**	**54.47**	**16**	⇑P	**P**	**02 27 34.2**	**-0.8**
SFJD	**Kangerlussuaq**	**54.47**	**16**	*i* P	**P**	**02 27 33.1**	**-1.9**
SFJD				IAmb	IAmb	02 27 38.8	
	comp=Z,59nm,0.7s						
ISA	**Isabella, Lake**	**54.52**	**77**	IAmb	IAmb	02 28 11.4	
	comp=Z,299nm,1.4s						
ISA				IAMs_20	IAMs_20	02 47 59.8	
	comp=Z,19μm,18.0s						
S11A	**Rachel**	**54.54**	**74**	IAMs_20	IAMs_20	02 52 30.1	
	comp=Z,26μm,18.0s						
FAUS	**Fauske**	**54.63**	**346**	⇑*i*P	**P**	**02 27 36.0**	**-0.1**
FAUS				*e*S	**S**	**02 35 16.1**	**+1.1**
FAUS				IVMs_BB	IVMs_BB	02 49 50.8	
	comp=Z,11μm,21.0s						
WCT	**Wildcat Mounta**	**54.69**	**75**	IAmb	IAmb	02 27 50.5	
	comp=Z,495nm,1.7s						
WCT				IAMs_20	IAMs_20	02 48 35.2	
	comp=Z,28μm,21.0s						
QIZ	**Qiongzhong**	**54.71**	**250**	IAMs_20	IAMs_20	02 51 10.5	
	comp=Z,27μm,20.0s						
QIZ	**Qiongzhong**	**54.71**	**250**	P	**P**	**02 27 38.0**	**+0.7**
QIZ				PcP	**PcP**	**02 28 40.5**	**+0.6**
QIZ				S	**S**	**02 35 20.0**	**+2.8**
QIZ				pmax	pmax		
	comp=Z,260nm,1.8s						
QIZ				pmax	pmax		
	comp=Z,12μm,4.8s						
QIZ				LR	LR		
	comp=Z,37μm,14.9s						
QIZ				LR	LR		
	comp=Z,50μm,15.7s						
QIZ	**Qiongzhong**	**54.71**	**250**	P	**P**	**02 27 39.4**	**+2.1**
TPNV	**Topopah Spring**	**54.78**	**75**	IAmb	IAmb	02 27 51.3	
	comp=Z,422nm,1.2s						
TPNV				IAMs_20	IAMs_20	02 48 58.6	
	comp=Z,27μm,20.0s						
TPNV	**Topopah Spring**	**54.78**	**75**	⇑P	**P**	**02 27 38.7**	**+0.8**
PSUT	**Pine Spring**	**54.90**	**72**	IAmb	IAmb	02 27 52.1	
	comp=Z,238nm,1.0s						
ULM	**Lac du Bonnet**	**55.05**	**50**	P	**P**	**02 27 39.1**	**-0.3**
	comp=Z,204nm,0.8s,baz=314,slow=7.7,SNR=171						
ULM				LR	LR	02 53 05.0	
	comp=Z,19μm,18.1s,baz=326,slow=38						
	comp=Z,204nm,0.8s						
ULM	**Lac du Bonnet**	**55.05**	**50**	⇑P	**P**	**02 27 38.9**	**-0.5**
TKM2	**Tokmak 2**	**55.05**	**296**	P	**P**	**02 27 39.0**	**-0.8**
	SNR=128						
TKM2	**Tokmak 2**	**55.05**	**296**	*i* P	**P**	**02 27 38.4**	**-1.5**
TKM2				pmax	pmax		
	comp=Z,181nm,1.3s						
PRN	**Pahroc Range**	**55.09**	**73**	IAmb	IAmb	02 27 53.6	
	comp=Z,329nm,0.8s						
PRN				IAMs_20	IAMs_20	02 54 19.6	
	comp=Z,22μm,18.0s						
PRN	**Pahroc Range**	**55.09**	**73**	⇑P	**P**	**02 27 41.1**	**+1.0**
GWY	**Greenwater Val**	**55.12**	**76**	IAmb	IAmb	02 27 53.6	
	comp=Z,275nm,0.9s						
SGDS	**Sogindy**	**55.15**	**297**	*e*P	**P**	**02 27 39.5**	**-0.9**
	comp=Z,132nm,1.1s						
CCAC	**Calif City Air**	**55.15**	**77**	IAMs_20	IAMs_20	02 48 20.5	
	comp=Z,22μm,19.0s						
MDND	**Maddock**	**55.16**	**55**	IAMs_20	IAMs_20	02 52 52.7	
	comp=Z,32μm,18.0s						
QSM	**Queen of Sheba**	**55.17**	**76**	IAmb	IAmb	02 27 53.9	
	comp=Z,464nm,1.3s						
QSM				IAMs_20	IAMs_20	02 53 02.0	
	comp=Z,25μm,18.0s						
BOOM	**Boomskoye usch**	**55.19**	**296**	IAmb	IAmb	02 27 45.4	
	comp=Z,241nm,1.0s						
BOOM				IAMs_20	IAMs_20	02 53 18.1	
	comp=Z,41μm,18.0s						

ULHL	**Ulahol**	**55.22**	**295**	P	**P**	**02 27 40.6**	**-0.5**
	SNR=58						
USP	**Ospenovka**	**55.35**	**297**	P	**P**	**02 27 41.3**	**-0.4**
	SNR=259						
CHMS	**Chumysh**	**55.42**	**297**	P	**P**	**02 27 43.2**	**+0.9**
	SNR=18						
SOEG	**Soedalen**	**55.45**	**7**	*i* P	**P**	**02 27 41.1**	**-1.0**
SOEG				IAmb	IAmb	02 27 46.4	
	comp=Z,120nm,0.7s						
KLMR	**Klimovskoe**	**55.46**	**331**	*d i*P	**P**	**02 27 40.1**	**-2.2**
KLMR				*e*		02 28 39.7	
KLMR				S	**S**	**02 35 24.7**	**-1.7**
KLMR				SS	**SS**	**02 39 08.6**	**-1.6**
KLMR				pmax	pmax		
	comp=Z,594nm,1.3s						
KLMR				MLR	MLR		
	comp=Z,70µm,17.0s						
VAGH	**Vaagaholmen**	**55.52**	**346**	*e*P	**P**	**02 27 42.2**	**-0.3**
VAGH				IVmB_BB		02 27 51.9	
	comp=Z,4µm,4.4s						
VAGH				*e*S	**S**	**02 35 28.0**	**+1.1**
VAGH				IVMs_BB	IVMs_BB	02 58 25.8	
	comp=Z,8µm,15.0s						
KBK	**Karagaybulak**	**55.57**	**297**	P	**P**	**02 27 43.3**	**-0.3**
	SNR=74						
E28A	**Huff**	**55.60**	**56**	IAMs_20	IAMs_20	02 52 11.2	
	comp=Z,38µm,19.0s						
FRU1	**Bishkek**	**55.62**	**297**	IAmb	IAmb	02 27 46.3	
	comp=Z,275nm,0.8s						
FRU1				IAMs_20	IAMs_20	02 50 52.3	
	comp=Z,41µm,22.0s						
K22A	**Casper**	**55.66**	**63**	IAmb	IAmb	02 27 48.6	
	comp=Z,206nm,1.0s						
K22A				IAMs_20	IAMs_20	02 52 16.3	
	comp=Z,30µm,18.0s						
SHPR	**Sheep Range**	**55.70**	**74**	IAmb	IAmb	02 27 57.9	
	comp=Z,382nm,1.9s						
TMUT	**Trail Mountain**	**55.73**	**69**	IAmb	IAmb	02 27 58.3	
	comp=Z,279nm,0.9s						
KONS	**Konsvik**	**55.76**	**346**	*e*P	**P**	**02 27 44.6**	**+0.3**
KONS				*e*S	**S**	**02 35 31.4**	**+1.3**
MVU	**Marysvale**	**55.79**	**71**	IAMs_20	IAMs_20	02 53 29.0	
	comp=Z,28µm,18.0s						
AAK	**Ala-Archa**	**55.81**	**297**	P	**P**	**02 27 45.0**	**-0.3**
	SNR=112						
AAK	**Ala-Archa**	**55.81**	**297**	P	**P**	**02 27 44.4**	**-0.8**
AAK				IAmb	IAmb	02 27 47.5	
	comp=Z,212nm,0.8s						
AAK	**Ala-Archa**	**55.81**	**297**	IAMs_20	IAMs_20	02 51 10.5	
	comp=Z,33µm,20.0s						
AAK	**Ala-Archa**	**55.81**	**297**	LR	LR	02 51 20.6	
	comp=Z,32µm,19.6s,baz=46,slow=36						
AAK	**Ala-Archa**	**55.81**	**297**	P	**P**	**02 27 45.6**	**+0.3**
AAK	**Ala-Archa**	**55.81**	**297**	*c i*P	**P**	**02 27 44.8**	**-0.5**
AAK				pmax	pmax		
	comp=Z,200nm,0.7s						
AAK				MLR	MLR		
	comp=Z,31µm,15.0s						
AAK	**Ala-Archa**	**55.81**	**297**	*i* P	**P**	**02 27 44.8**	**-0.5**
	SNR=117						
AAK	**Ala-Archa**	**55.81**	**297**	P	**P**	**02 27 44.8**	**-0.5**
AAK				S	**S**	**02 35 30.8**	**-1.1**
AAK	**Ala-Archa**	**55.81**	**297**	⇑P	**P**	**02 27 44.8**	**-0.5**
RSSD	**Black Hills**	**55.81**	**60**	P	**P**	**02 27 44.9**	**-0.4**
RSSD				IAmb	IAmb	02 27 57.8	
	comp=Z,205nm,0.8s						
RSSD	**Black Hills**	**55.81**	**60**	⇑P	**P**	**02 27 45.2**	**-0.2**
MOR8	**Moi Rana**	**55.89**	**346**	*e*P	**P**	**02 27 43.6**	**-1.6**
MOR8				IVmB_BB		02 27 53.5	
	comp=Z,5µm,3.1s						
MOR8				*i*		02 31 18.8	
MOR8				*e*S	**S**	**02 35 30.6**	**-1.3**
MOR8				IVMs_BB	IVMs_BB	02 59 45.0	
	comp=Z,11µm,13.9s						
STOK	**Stokkvaagen**	**55.93**	**346**	*e*P	**P**	**02 27 44.9**	**-0.6**
STOK				*e*S	**S**	**02 35 33.5**	**+1.1**
STOK				IVmBBB		03 00 44.5	
	comp=Z,8µm,13.5s						
SLVN	**Son La**	**56.02**	**257**	IAMs_20	IAMs_20	02 55 02.1	
	comp=Z,38µm,20.0s						
SLVN	**Son La**	**56.02**	**257**	P	**P**	**02 27 47.3**	**+0.5**
Q16A	**Castle Valley**	**56.03**	**69**	IAmb	IAmb	02 28 00.4	
	comp=Z,183nm,0.9s						
TNCH	**TengChong**	**56.05**	**265**	P	**P**	**02 27 47.0**	**-0.2**
TNCH				pP	sP	02 27 51.0	-0.2
TNCH				PP	**PP**	**02 29 49.8**	**-2.2**
TNCH				S	**S**	**02 35 36.8**	**+1.3**
TNCH				ScS	**ScS**	**02 37 34.5**	**-1.8**
TNCH				SS	**SS**	**02 39 20.0**	**-1.4**
TNCH				pmax	pmax		
	comp=Z,330nm,1.7s						
TNCH				pmax	pmax		
	comp=Z,10µm,7.5s						
TNCH				LR	LR		
	comp=Z,48µm,16.8s						
TNCH				LR	LR		
	comp=Z,72µm,16.3s						
UCH	**Uchtor**	**56.10**	**297**	P	**P**	**02 27 48.0**	**+0.3**
	SNR=11						
LEIR	**Leirfjorden**	**56.12**	**346**	*e*P	**P**	**02 27 46.7**	**-0.2**
LEIR				IVmB_BB		02 27 56.4	
	comp=Z,4µm,3.5s						
LEIR				*e*S	**S**	**02 35 36.2**	**+1.2**
LEIR				IVMs_BB	IVMs_BB	02 59 07.5	
	comp=Z,11µm,14.1s						
EKS2	**Erkin-Say**	**56.15**	**297**	P	**P**	**02 27 47.3**	**-0.4**
	SNR=223						
LCMT	**Little Creek M**	**56.35**	**72**	IAmb	IAmb	02 28 02.8	
	comp=Z,329nm,1.2s						
LCMT				IAMs_20	IAMs_20	02 51 50.9	
	comp=Z,26µm,18.0s						
EPLO	**Experimental L**	**56.40**	**50**	IAmb	IAmb	02 27 53.2	
	comp=Z,317nm,0.9s						
EPLO				IAMs_20	IAMs_20	02 54 40.2	
	comp=Z,36µm,18.0s						
V12A	**Nelson**	**56.44**	**75**	IAmb	IAmb	02 28 03.3	
	comp=Z,253nm,1.2s						
V12A				IAMs_20	IAMs_20	02 49 57.5	
	comp=Z,22µm,20.0s						
AGMN	**Agassiz Nation**	**56.51**	**52**	IAmb	IAmb	02 27 54.1	
	comp=Z,252nm,0.8s						
AGMN	**Agassiz Nation**	**56.51**	**52**	⇑P	**P**	**02 27 49.5**	**-0.4**
LSA	**Lhasa**	**56.56**	**274**	IAMs_20	IAMs_20	02 52 32.6	
	comp=Z,40µm,20.0s						
LSA	**Lhasa**	**56.56**	**274**	P	**P**	**02 27 51.3**	**+0.2**
LSA				S	S	02 35 27.5	-15
LSA				pmax	pmax		
	comp=Z,120nm,0.6s						
LSA				LR	LR		
	comp=Z,47µm,14.8s						
LSA				LR	LR		
	comp=Z,12µm,16.1s						
LSA	**Lhasa**	**56.56**	**274**	P	**P**	**02 27 51.8**	**+0.7**
LSA				P	**P**	**02 27 51.8**	**+0.7**
LSA	**Lhasa**	**56.56**	**274**	P	**P**	**02 27 51.0**	**-0.1**
AML	**Almayashu**	**56.59**	**297**	P	**P**	**02 27 50.5**	**-0.5**
	SNR=122						
ELS	**Elsinore Mount**	**56.60**	**78**	IAmb	IAmb	02 28 24.1	
	comp=Z,693nm,1.9s						
O20A	**White River Ci**	**56.65**	**66**	IAmb	IAmb	02 28 04.3	
	comp=Z,358nm,0.8s						
O20A				IAMs_20	IAMs_20	02 52 52.6	
	comp=Z,28µm,20.0s						
ZIRO	**ZIRO**	**56.72**	**271**	*e*P	**P**	**02 27 51.0**	**-0.9**
NUUK	**Nuuk**	**56.89**	**18**	⇑P	**P**	**02 27 52.0**	**-0.4**
NUUK	**Nuuk**	**56.89**	**18**	*i* P	**P**	**02 27 51.7**	**-0.7**
NUUK				IAmb	IAmb	02 28 02.1	
	comp=Z,235nm,1.3s						
PFO	**Pinyon Flats O**	**57.16**	**78**	P	**P**	**02 27 54.7**	**-0.2**
PFO	**Pinyon Flats O**	**57.16**	**78**	IAMs_20	IAMs_20	02 49 40.6	
	comp=Z,22µm,19.0s						
PFO	**Pinyon Flats O**	**57.16**	**78**	LR	LR	02 49 51.7	
	comp=Z,20µm,19.5s,baz=300,slow=33						
PFO	**Pinyon Flats O**	**57.16**	**78**	P	**P**	**02 27 54.7**	**-0.2**
PFO				pmax	pmax		
	comp=Z,143nm,1.3s						
DZA	**Taraz**	**57.19**	**299**	*e*P	**P**	**02 27 54.0**	**-0.9**
DZA	**Taraz**	**57.19**	**299**	*e*P	**P**	**02 27 54.0**	**-0.9**
U15A	**North Rim**	**57.29**	**72**	IAmb	IAmb	02 28 09.5	
	comp=Z,448nm,1.6s						
U15A				IAMs_20	IAMs_20	02 52 29.0	
	comp=Z,27µm,19.0s						
KSH	**Kashi**	**57.38**	**293**	P	**P**	**02 27 59.5**	**+3.1**
KSH				S	**S**	**02 35 54.0**	**+1.4**
KSH				pmax	pmax		
	comp=Z,110nm,1.4s						
KSH				pmax	pmax		
	comp=Z,7µm,6.6s						
KSH				LR	LR		
	comp=Z,82µm,18.6s						
KSH				LR	LR		
	comp=Z,80µm,15.1s						
KSH				LR	LR		
	comp=Z,79µm,14.4s						
ISOG	**Isortoq, Green**	**57.38**	**11**	⇑P	**P**	**02 27 57.4**	**+1.6**
ISOG	**Isortoq, Green**	**57.38**	**11**	*i* P	**P**	**02 27 54.4**	**-1.5**
ISOG				IAmb	IAmb	02 28 04.0	
	comp=Z,244nm,1.1s						
KK31	**Karatay Array**	**57.43**	**300**	IAmb	IAmb	02 27 58.4	
	comp=Z,274nm,0.8s						
KK31	**Karatay Array**	**57.43**	**300**	P	**P**	**02 27 55.7**	**-0.9**
KKAR	**Karatay Array**	**57.43**	**300**	P	**P**	**02 27 55.3**	**-1.3**
KKAR	**Karatay Array**	**57.43**	**300**	IAmb	IAmb	02 27 58.4	
	comp=Z,288nm,0.8s						
KKAR	**Karatay Array**	**57.43**	**300**	⇑P	**P**	**02 27 54.3**	**-2.2**
ANGG	**Ammassalik, Gr**	**57.45**	**11**	IAmb	IAmb	02 28 07.7	
	comp=Z,319nm,1.3s						
ANGG	**Ammassalik, Gr**	**57.45**	**11**	⇓P	**P**	**02 27 56.0**	**-0.4**
ANGG	**Ammassalik, Gr**	**57.45**	**11**	*i* P	**P**	**02 27 54.4**	**-2.0**
ANGG				IAmb	IAmb	02 28 04.9	
	comp=Z,120nm,0.9s						
AKTO	**Aktyubinsk**	**57.47**	**313**	LR	LR	02 55 56.8	
	comp=Z,76µm,18.7s,baz=36,slow=40						
AKTO	**Aktyubinsk**	**57.47**	**313**	P	**P**	**02 27 56.7**	**0.0**
PV14	**Lion Creek, Pa**	**57.56**	**68**	IAmb	IAmb	02 28 11.6	
	comp=Z,301nm,1.1s						
AB31	**Akbulak array**	**57.58**	**311**	P	**P**	**02 27 57.7**	**+0.2**
ABKAR	**Akbulak array**	**57.58**	**311**	P	**P**	**02 27 56.4**	**-1.1**
ABKAR	**Akbulak array**	**57.58**	**311**	⇑P	**P**	**02 27 56.8**	**-0.7**
DAV	**Davao City (W)**	**57.60**	**227**	IAMs_20	IAMs_20	02 54 13.0	
	comp=Z,22µm,20.0s						
DAV	**Davao City (W)**	**57.60**	**227**	LR	LR	02 54 13.9	
	comp=Z,13µm,18.5s,baz=27,slow=38						
DAV	**Davao City (W)**	**57.60**	**227**	P	**P**	**02 28 00.6**	**+2.6**
DAV				P	**P**	**02 28 00.6**	**+2.6**
DAV				P	**P**	**02 28 00.6**	**+2.6**
DAV	**Davao City (W)**	**57.60**	**227**	P	**P**	**02 28 00.0**	**+2.0**
DAV	**Davao City (W)**	**57.60**	**227**	P	**P**	**02 27 59.5**	**+1.5**
DAV	**Davao City (W)**	**57.60**	**227**	P	**P**	**02 27 56.0**	**-2.0**
PV04	**Paradox Valley**	**57.61**	**68**	IAmb	IAmb	02 28 11.3	
	comp=Z,400nm,1.0s						
PV16	**Nyswonger Mesa**	**57.66**	**68**	IAmb	IAmb	02 28 11.6	
	comp=Z,538nm,1.3s						
TJX	**Tijuana**	**57.66**	**79**	P	**P**	**02 27 58.8**	**+0.5**
TJX				IAmb	IAmb	02 28 11.8	
	comp=Z,424nm,1.1s						
PV07	**Paradox Valley**	**57.71**	**68**	IAmb	IAmb	02 28 12.5	
	comp=Z,426nm,1.3s						
PV05	**Paradox Valley**	**57.74**	**69**	IAmb	IAmb	02 28 12.2	
	comp=Z,400nm,1.1s						
TAWA	**Tawang**	**57.78**	**272**	*e*P	**P**	**02 27 58.5**	**-1.1**
NSS	**Namsos**	**57.78**	**346**	*e*P	**P**	**02 27 58.3**	**-0.4**
NSS				IVmB_BB		02 28 14.8	
	comp=Z,4µm,4.7s						
NSS				*e*		02 31 34.9	
NSS				*e*S	**S**	**02 35 57.8**	**+0.9**
NSS				IVMs_BB	IVMs_BB	02 59 19.7	
	comp=Z,9µm,13.8s						
BRLS	**Borolday**	**57.81**	**300**	*c i*P	**P**	**02 28 00.2**	**+1.0**
BRLS	**Borolday**	**57.81**	**300**	⇑*i*P	**P**	**02 28 00.3**	**+1.0**
KEF	**Keuruu**	**57.82**	**339**	*e*P	**P**	**02 27 57.9**	**-1.1**
PV13	**Radium Mtn., P**	**57.83**	**68**	IAmb	IAmb	02 28 13.4	
	comp=Z,340nm,1.0s						
PV15	**Paradox Valley**	**57.87**	**68**	IAmb	IAmb	02 28 13.0	
	comp=Z,309nm,1.1s						
PV01	**Paradox Valley**	**57.98**	**68**	IAmb	IAmb	02 28 07.2	
	comp=Z,606nm,1.8s						
KOHI	**KOHIMA**	**57.98**	**269**	*e*P	**P**	**02 27 60.0**	**-0.8**
SUSD	**Miller**	**58.00**	**57**	IAmb	IAmb	02 28 04.4	
	comp=Z,278nm,0.9s						
TEZP	**TEZPUR**	**58.01**	**271**	*e*P	**P**	**02 27 59.8**	**-1.0**
CBX	**Cerro Bola**	**58.03**	**79**	IAmb	IAmb	02 28 14.2	
	comp=Z,332nm,1.2s						
BLYC	**Blythe**	**58.11**	**76**	IAmb	IAmb	02 28 14.8	
	comp=Z,272nm,1.3s						
BLYC				IAMs_20	IAMs_20	02 54 47.6	
	comp=Z,17µm,18.0s						
F33A	**5 Mile Ranch,**	**58.17**	**54**	IAmb	IAmb	02 28 06.0	
	comp=Z,399nm,1.2s						
F33A				IAMs_20	IAMs_20	02 54 44.3	
	comp=Z,30µm,18.0s						
FINES	**FINESS Array B**	**58.22**	**338**	P	**P**	**02 28 00.9**	**-0.9**
FINES	**FINESS Array B**	**58.22**	**338**	P	**P**	**02 28 01.1**	**-0.7**
	comp=Z,151nm,0.9s,baz=28,slow=8.6,SNR=108						
FINES				PcP	**PcP**	**02 28 52.0**	**-1.0**
	comp=Z,37nm,0.7s,baz=46,slow=5.5,SNR=3.8						
FINES				LR	LR	02 56 25.3	
	comp=Z,29µm,18.1s,baz=39,slow=40						
FINES				PKPPKP	P'P'df	02 57 40.5	-10
	comp=Z,15nm,1.0s,baz=144,slow=3.5,SNR=9.0						
	comp=Z,151nm,0.9s						
ISCO	**Idaho Springs**	**58.24**	**65**	IAMs_20	IAMs_20	02 54 13.7	
	comp=Z,30µm,20.0s						
ISCO	**Idaho Springs**	**58.24**	**65**	⇑P	**P**	**02 28 03.7**	**+1.0**
IUG	**Iuzhnay**	**58.38**	**299**	*e*P	**P**	**02 28 02.5**	**-0.9**
IUG				pmax	pmax		
	comp=Z,223nm,0.9s						
IUG	**Iuzhnay**	**58.38**	**299**	*e*P	**P**	**02 28 02.5**	**-0.9**
	comp=Z,223nm,0.9s						
CHM	**Chimkent**	**58.46**	**300**	*e*P	**P**	**02 28 02.9**	**-0.9**
CHM				pmax	pmax		
	comp=Z,162nm,0.8s						
CHM				MLR	MLR		
	comp=Z,14µm,12.0s						
CHM	**Chimkent**	**58.46**	**300**	*e*P	**P**	**02 28 02.9**	**-0.9**
	comp=Z,162nm,0.8s						
CHM				LR	LR	02 53 49.3	
	comp=Z,14µm,12.3s						
WUAZ	**Wupatki**	**58.47**	**72**	IAmb	IAmb	02 28 17.7	
	comp=Z,359nm,1.4s						
WUAZ	**Wupatki**	**58.47**	**72**	⇑P	**P**	**02 28 05.2**	**+1.0**
GLA	**Glamis**	**58.47**	**77**	IAmb	IAmb	02 28 17.3	
	comp=Z,271nm,1.3s						
GLA				IAMs_20	IAMs_20	02 50 50.3	
	comp=Z,19µm,19.0s						
ESJX	**Sierra Juarez**	**58.65**	**78**	IAmb	IAmb	02 28 18.6	
	comp=Z,278nm,1.3s						
EYMN	**Ely**	**58.67**	**50**	IAmb	IAmb	02 28 09.2	
	comp=Z,277nm,0.8s						
EYMN	**Ely**	**58.67**	**50**	⇑P	**P**	**02 28 04.6**	**-0.6**
MVCO	**Mesa Verde**	**58.71**	**69**	⇑P	**P**	**02 28 06.3**	**+0.4**
PUL	**Pulkovo**	**58.76**	**335**	*c i*P	**P**	**02 28 06.3**	**+0.8**
PUL				pmax	pmax		
	comp=Z,221nm,1.0s						
PUL				MLR	MLR		
	comp=Z,29µm,16.0s						
IMP	**Imphal**	**58.76**	**269**	*e*P	**P**	**02 28 05.7**	**-0.6**
Y14A	**Wickenburg**	**58.79**	**75**	IAmb	IAmb	02 28 19.6	
	comp=Z,418nm,1.7s						
TBO	**Thunder Bay**	**59.01**	**48**	IAmb	IAmb	02 28 11.1	
	comp=Z,278nm,1.1s						
K30B	**Basset**	**59.03**	**59**	IAMs_20	IAMs_20	02 53 21.3	
	comp=Z,33µm,20.0s						
Q24A	**Divide**	**59.11**	**65**	IAMs_20	IAMs_20	02 54 40.7	
	comp=Z,28µm,19.0s						
OGNE	**Ogallala**	**59.17**	**62**	IAMs_20	IAMs_20	02 53 55.1	
	comp=Z,36µm,21.0s						
OGNE	**Ogallala**	**59.17**	**62**	⇑P	**P**	**02 28 09.3**	**+0.5**
VTX	**Valle De La Tr**	**59.21**	**79**	IAmb	IAmb	02 28 22.3	
	comp=Z,255nm,1.4s						
X16A	**Lo Mia Camp, P**	**59.26**	**73**	IAMs_20	IAMs_20	02 52 33.2	
	comp=Z,24µm,20.0s						
BORG	**Borgarnes**	**59.37**	**3**	P	**P**	**02 28 11.0**	**+1.2**
BORG				IAmb	IAmb	02 28 15.6	
	comp=Z,180nm,0.8s						
BORG	**Borgarnes**	**59.37**	**3**	LR	LR	02 54 17.1	
	comp=Z,8µm,18.3s,baz=354,slow=37						
BORG	**Borgarnes**	**59.37**	**3**	⇑P	**P**	**02 28 12.1**	**+2.3**
RAF	**Rauma**	**59.48**	**340**	*e*P	**P**	**02 28 09.3**	**-1.2**
DRK	**Karamyk**	**59.52**	**296**	IAmb	IAmb	02 28 15.8	
	comp=Z,214nm,1.1s						
MANU	**Manus Island**	**59.58**	**200**	P	**P**	**02 28 12.8**	**+1.0**
MANU				IAmb	IAmb	02 28 16.0	
	comp=Z,205nm,0.9s						
ECSD	**EROS Data Cent**	**59.64**	**56**	IAmb	IAmb	02 28 15.2	
	comp=Z,163nm,1.0s						
ECSD	**EROS Data Cent**	**59.64**	**56**	⇑P	**P**	**02 28 11.2**	**-0.8**
W18A	**Petrified Fore**	**59.64**	**71**	P	**P**	**02 28 13.0**	**+0.7**
W18A				IAmb	IAmb	02 28 25.8	
	comp=Z,217nm,1.2s						
MEF	**Metsahovi**	**59.69**	**338**	*e*P	**P**	**02 28 11.1**	**-0.9**
E38A	**The Farm, Brul**	**59.69**	**51**	IAmb	IAmb	02 28 15.3	
	comp=Z,337nm,1.0s						
E38A				IAMs_20	IAMs_20	02 55 13.2	
	comp=Z,23µm,18.0s						
GTK	**Tadong**	**59.81**	**275**	*e*P	**P**	**02 28 12.7**	**-0.8**
SDCO	**Great Sand Dun**	**59.85**	**66**	IAMs_20	IAMs_20	02 56 37.5	
	comp=Z,30µm,20.0s						
SDCO	**Great Sand Dun**	**59.85**	**66**	⇑P	**P**	**02 28 14.1**	**+0.2**
BELG	**Belogornoye**	**59.88**	**321**	LR	LR	02 57 06.6	
	comp=Z,46µm,18.4s,baz=45,slow=39						
BELG	**Belogornoye**	**59.88**	**321**	*c i*P	**P**	**02 28 13.8**	**+0.4**
BELG				pmax	pmax		
	comp=Z,290nm,0.9s						
BELG				MLR	MLR		
	comp=Z,8µm,15.0s						
X18A	**Snowflake**	**59.98**	**72**	IAmb	IAmb	02 28 28.2	
	comp=Z,281nm,1.2s						
SPMN	**Marine on St.**	**60.21**	**52**	IAmb	IAmb	02 28 19.3	
	comp=Z,179nm,0.8s						
MOL	**Molde**	**60.23**	**348**	*e*P	**P**	**02 28 15.6**	**-0.1**
MOL				*e*S	**S**	**02 36 29.8**	**+1.1**
MOL				IVMs_BB	IVMs_BB	03 00 26.0	
	comp=Z,6µm,20.8s						
IVI	**Ivigtut**	**60.27**	**17**	IAmb	IAmb	02 28 21.1	
	comp=Z,192nm,1.0s						
IVI				IAMs_20	IAMs_20	02 57 00.5	
	comp=Z,28µm,18.0s						
IVI	**Ivigtut**	**60.27**	**17**	⇓P	**P**	**02 28 15.9**	**0.0**
IVI	**Ivigtut**	**60.27**	**17**	*i* P	**P**	**02 28 16.9**	**+1.0**
IVI				IAmb	IAmb	02 28 27.6	
	comp=Z,283nm,1.2s						
EVN	**Everest**	**60.31**	**277**	⇑P	**P**	**02 28 16.3**	**-1.3**
MOS	**Moscow**	**60.33**	**328**	*e*P	**P**	**02 28 14.0**	**-2.4**
MOS				*e*		02 29 00.7	
MOS				*e*PPP	PPP	02 31 58.1	
MOS				*e*S	**S**	**02 36 27.6**	**-2.5**
MOS				*e*		02 38 03.4	
MOS				*e*SS	**SS**	**02 40 31.1**	**+4.5**
MOS				pmax	pmax		
	comp=Z,3µm,2.7s						
MOS				pmax	pmax		
	comp=Z,642nm,1.4s						
MOS				pmax	pmax		
	comp=N,292nm,1.2s						
MOS				smax	smax		
	comp=N,11µm,7.2s						
MOS				smax	smax		
	comp=E,4µm,6.0s						
MOS				MLR	MLR		
	comp=Z,33µm,16.0s						
MOS				MLR	MLR		
	comp=N,26µm,15.0s						
MOS				MLR	MLR		
	comp=E,30µm,15.0s						
KSCO	**Kaye Shedlock'**	**60.35**	**64**	IAmb	IAmb	02 28 29.9	
	comp=Z,206nm,0.8s						
KSCO				IAMs_20	IAMs_20	02 55 06.3	
	comp=Z,27µm,20.0s						
JPG	**JALPAIGURI**	**60.35**	**274**	*e*P	**P**	**02 28 16.0**	**-1.1**
214A	**Organ Pipe Nat**	**60.40**	**76**	IAmb	IAmb	02 28 30.6	
	comp=Z,249nm,1.3s						
DOMB	**Dombas**	**60.55**	**347**	*e*P	**P**	**02 28 17.6**	**-0.4**
DOMB				IVmB_BB		02 28 27.2	
	comp=Z,3µm,2.7s						
DOMB				*e*S	**S**	**02 36 34.6**	**+1.6**
DOMB				IVMs_BB	IVMs_BB	03 01 36.7	
	comp=Z,11µm,14.4s						
AKN	**Aaknes**	**60.67**	**348**	*e*P	**P**	**02 28 19.1**	**+0.3**
AKN				IVmB_BB		02 28 31.6	
	comp=Z,7µm,2.1s						
AKN				*e*S	**S**	**02 36 36.9**	**+2.4**
AKN				IVMs_BB	IVMs_BB	02 50 07.4	
	comp=Z,7µm,28.8s						
BGNE	**Belgrade**	**60.70**	**59**	IAMs_20	IAMs_20	02 54 23.4	
	comp=Z,32µm,20.0s						
NRS	**Narsarsuaq**	**60.75**	**16**	IAMs_20	IAMs_20	02 58 21.2	
	comp=Z,29µm,18.0s						
NRS	**Narsarsuaq**	**60.75**	**16**	⇓P	**P**	**02 28 19.1**	**-0.2**
NRS	**Narsarsuaq**	**60.75**	**16**	*i* P	**P**	**02 28 18.3**	**-1.0**
NRS				IAmb	IAmb	02 28 22.2	
	comp=Z,95nm,0.9s						
VSU	**Vasula**	**60.77**	**336**	*c i*P	**P**	**02 28 18.5**	**-0.9**
VSU				pmax	pmax		
	comp=Z,283nm,1.0s						
VSU				MLR	MLR		
	comp=Z,28µm,16.0s						
VSU	**Vasula**	**60.77**	**336**	*e*P	**P**	**02 28 18.4**	**-0.9**
VSU	**Vasula**	**60.77**	**336**	⇓P	**P**	**02 28 18.2**	**-1.2**
CHTO	**Chiang Mai**	**60.78**	**260**	P	**P**	**02 28 19.5**	**-0.5**
CHTO				IAMs_20	IAMs_20	02 56 00.8	
	comp=Z,35µm,20.0s						
CHTO	**Chiang Mai**	**60.78**	**260**	P	**P**	**02 28 20.8**	**+0.8**
CHTO	**Chiang Mai**	**60.78**	**260**	P	**P**	**02 28 20.4**	**+0.4**
CHTO	**Chiang Mai**	**60.78**	**260**	P	**P**	**02 28 20.0**	**-0.1**
CHTO				S	**S**	**02 36 33.7**	**-3.2**
CHTO	**Chiang Mai**	**60.78**	**260**	⇑P	**P**	**02 28 18.7**	**-1.4**
T25A	**Trinidad**	**60.88**	**66**	IAmb	IAmb	02 28 33.7	
	comp=Z,202nm,1.1s						
T25A				IAMs_20	IAMs_20	02 53 30.5	
	comp=Z,23µm,21.0s						
HNLY	**HANLEY**	**60.90**	**286**	*e*P	**P**	**02 28 20.1**	**-1.3**
RABL	**Rabaul**	**60.92**	**194**	IAMs_20	IAMs_20	02 48 51.5	
	comp=Z,20µm,22.0s						
CM31	**Chiang Mai Arr**	**61.06**	**260**	P	**P**	**02 28 22.9**	**+0.9**
	SNR=110						
CM31				P	**P**	**02 28 22.9**	**+0.9**
	SNR=110						
CMAR	**Chiang Mai Arr**	**61.06**	**260**	P	**P**	**02 28 21.6**	**-0.4**
CMAR	**Chiang Mai Arr**	**61.06**	**260**	P	**P**	**02 28 22.4**	**+0.5**
	comp=Z,216nm,0.8s,baz=20,slow=7.0,SNR=289						
CMAR				PcP	**PcP**	**02 29 06.0**	**+0.9**
	comp=Z,150nm,0.9s,baz=16,slow=4.0,SNR=11						
CMAR				LR	LR	02 56 21.2	
	comp=Z,30µm,18.1s,baz=25,slow=38						
CMAR				PKPPKP	**P'P'df**	**02 57 38.4**	**-0.2**
	comp=Z,1.3nm,0.3s,baz=241,slow=3.9,SNR=4.6						
CMAR				P4KPbc		03 05 25.6	
	comp=Z,3.7nm,0.8s,baz=13,slow=4.2,SNR=16						
	comp=Z,216nm,0.8s						
NC204	**NORSAR Array S**	**61.07**	**346**	IAmb	IAmb	02 28 23.2	
	comp=Z,418nm,1.4s						
NC405	**NORSAR Array S**	**61.09**	**345**	IAmb	IAmb	02 28 23.3	
	comp=Z,362nm,1.4s						
L34A	**Svendsen Farm,**	**61.11**	**57**	IAMs_20	IAMs_20	02 55 27.2	
	comp=Z,28µm,19.0s						
COWI	**Conover**	**61.12**	**50**	IAmb	IAmb	02 28 25.7	
	comp=Z,191nm,0.9s						
COWI	**Conover**	**61.12**	**50**	⇑P	**P**	**02 28 21.1**	**-1.0**
OBN	**Obninsk**	**61.17**	**329**	P	**P**	**02 28 21.2**	**-1.0**
OBN	**Obninsk**	**61.17**	**329**	LR	LR	02 58 03.4	
	comp=Z,30µm,19.7s,baz=326,slow=39						
OBN	**Obninsk**	**61.17**	**329**	⇑P	**P**	**02 28 22.1**	**-0.1**
OBN	**Obninsk**	**61.17**	**329**	*d i*P	**P**	**02 28 21.7**	**-0.5**
OBN				*e*		02 29 05.2	
OBN				*e*		02 30 43.7	
OBN				*e*PPP	PPP	02 32 05.0	
OBN				*i* S	**S**	**02 36 40.9**	**0.0**
OBN				*e*PPS	PPS	02 36 53.7	
OBN				*i* SS	**SS**	**02 40 40.1**	**+0.2**
OBN				pmax	pmax		
	comp=Z,797nm,1.7s						
OBN				pmax	pmax		
	comp=Z,2µm,2.2s						
OBN				MLR	MLR		
	comp=Z,54µm,15.0s						
OBN	**Obninsk**	**61.17**	**329**	⇓P	**P**	**02 28 21.9**	**-0.3**
MTSE	**Matsula**	**61.18**	**338**	*e*P	**P**	**02 28 22.2**	**0.0**
TUC	**Tucson**	**61.23**	**74**	P	**P**	**02 28 23.0**	**-0.1**
TUC				IAmb	IAmb	02 28 36.3	
	comp=Z,98nm,1.2s						
TUC	**Tucson**	**61.23**	**74**	P	**P**	**02 28 23.0**	**-0.1**
TUC				pmax	pmax		
	comp=Z,98nm,1.2s						
TUC				MLR	MLR		
	comp=Z,15µm,19.0s						
TUC	**Tucson**	**61.23**	**74**	⇑P	**P**	**02 28 23.9**	**+0.8**
NB2	**NORSAR Subarra**	**61.23**	**345**	P	**P**	**02 28 22.0**	**-0.6**
	comp=Z,684nm,1.7s,baz=18,slow=6.9						
NB2				P'P'		02 57 24.3	
	comp=Z,1.1nm,0.9s,baz=191,slow=2.9						
NB2	**NORSAR Subarra**	**61.23**	**345**	P	**P**	**02 28 22.0**	**-0.6**
	baz=18,slow=6.9						
NOA	**NORSAR Array B**	**61.23**	**345**	P	**P**	**02 28 21.9**	**-0.6**
	comp=Z,97nm,0.9s,baz=17,slow=6.9,SNR=193						
NOA				LR	LR	02 55 58.0	
	comp=Z,14µm,20.1s,baz=15,slow=37						
NOA				PKPPKP	P'P'df	02 57 33.9	-12

	comp=Z,5.2nm,1.0s,baz=147,slow=3.2,SNR=7.3						
	comp=Z,97nm,0.9s						
NBO00	**NORSAR Array S**	**61.30**	**346**	IAmb	IAmb	02 28 24.6	
	comp=Z,223nm,1.3s						
G40A	**Rib Lake**	**61.32**	**51**	IAMs_20	IAMs_20	02 56 12.5	
	comp=Z,23µm,19.0s						
DLV	**Lat**	**61.34**	**247**	P	**P**	**02 28 25.7**	**+1.6**
DLV	**Lat**	**61.34**	**247**	⇑P	**P**	**02 28 25.2**	**+1.1**
FOO	**Floro**	**61.46**	**349**	*e*P	**P**	**02 28 24.4**	**+0.4**
FOO				IVmB_BB		02 28 33.9	
	comp=Z,3µm,3.4s						
FOO				*e*S	**S**	**02 36 46.7**	**+2.3**
FOO				IVMs_BB	IVMs_BB	03 00 09.8	
	comp=Z,6µm,17.0s						
NAO01	**NORSAR Array S**	**61.46**	**345**	IAmb	IAmb	02 28 37.3	
	comp=Z,628nm,1.9s						
NC602	**NORSAR Array S**	**61.48**	**345**	IAmb	IAmb	02 28 25.6	
	comp=Z,227nm,1.4s						
NC602	**NORSAR Array S**	**61.48**	**345**	*e*P	**P**	**02 28 23.5**	**-0.7**
ANMO	**Albuquerque**	**61.50**	**69**	P	**P**	**02 28 25.0**	**0.0**
ANMO	**Albuquerque**	**61.50**	**69**	LR	LR	02 54 44.8	
	comp=Z,17µm,19.1s,baz=64,slow=36						
ANMO	**Albuquerque**	**61.50**	**69**	⇑P	**P**	**02 28 25.4**	**+0.4**
JAY	**Jayapura**	**61.50**	**207**	LR	LR	02 50 25.0	
	comp=Z,14µm,21.9s,baz=12,slow=32						
SIMJ	**Simiganj**	**61.55**	**298**	P	**P**	**02 28 23.5**	**-1.7**
GENI	**Genyem**	**61.72**	**207**	P	**P**	**02 28 28.6**	**+2.3**
GENI	**Genyem**	**61.72**	**207**	⇑P	**P**	**02 28 28.0**	**+1.6**
HFS	**Hagfors**	**61.73**	**344**	P	**P**	**02 28 25.1**	**-0.8**
	comp=Z,68nm,0.7s,baz=46,slow=6.4,SNR=176						
HFS				LR	LR	02 54 40.1	
	comp=Z,25µm,21.9s,baz=20,slow=36						
HFS				PKPPKP	P'P'df	02 57 33.1	-12
	comp=Z,8.1nm,1.0s,baz=83,slow=6.1,SNR=7.1						
	comp=Z,68nm,0.7s						
BRDH	**Bariadhala**	**61.75**	**269**	LR	LR	02 59 51.8	
	comp=Z,38µm,18.2s,baz=38,slow=41						
HYA	**Hoyanger**	**61.75**	**348**	*e*P	**P**	**02 28 26.4**	**+0.3**
HYA				IVmBBB		02 28 35.6	
	comp=Z,4µm,3.1s						
HYA				*e*S	**S**	**02 36 50.0**	**+1.9**
HYA				IVMs_BB	IVMs_BB	03 03 17.5	
	comp=Z,9µm,15.5s						
F42A	**Maple Grove Fa**	**61.82**	**49**	IAmb	IAmb	02 28 30.7	
	comp=Z,289nm,1.1s						
SCHQ	**Schefferville**	**61.85**	**31**	P	**P**	**02 28 26.1**	**-0.7**
	comp=Z,163nm,0.6s,baz=345,slow=10.0						
SCHQ				PKPPKP	P'P'df	02 57 34.5	-10
	comp=Z,11nm,0.9s,baz=135,slow=1.2,SNR=6.4						
SCHQ				LR	LR	02 59 08.9	
	comp=Z,13µm,18.1s,baz=324,slow=40						
	comp=Z,163nm,0.6s						
Y22D	**IRIS PASSCAL I**	**61.93**	**70**	IAmb	IAmb	02 28 41.8	
	comp=Z,303nm,1.1s						
Y22D				IAMs_20	IAMs_20	02 57 43.6	
	comp=Z,24µm,18.0s						
Y22D	**IRIS PASSCAL I**	**61.93**	**70**	P	**P**	**02 28 29.3**	**+1.5**
	baz=321,SNR=8.2						
CBKS	**Cedar Bluff**	**61.94**	**62**	IAmb	IAmb	02 28 39.6	
	comp=Z,243nm,0.8s						
CBKS				IAMs_20	IAMs_20	02 55 32.3	
	comp=Z,36µm,21.0s						
CBKS	**Cedar Bluff**	**61.94**	**62**	⇑P	**P**	**02 28 27.2**	**-0.5**
SKAR	**Skarslia**	**61.97**	**347**	*e*P	**P**	**02 28 28.1**	**+0.5**
SKAR				IVmB_BB		02 28 28.6	
	comp=Z,2µm,1.9s						
SKAR				*e*S	**S**	**02 36 51.9**	**+0.8**
SKAR				IVMs_BB	IVMs_BB	03 00 39.5	
	comp=Z,12µm,16.2s						
SUE	**Sulen**	**62.02**	**349**	*e*P	**P**	**02 28 28.0**	**+0.2**
SUE				IVmBBB		02 28 38.0	
	comp=Z,5µm,3.4s						
SUE				*e*S	**S**	**02 36 54.0**	**+2.5**
SUE				IVMs_BB	IVMs_BB	03 03 50.1	
	comp=Z,8µm,14.5s						
SRNI	**Srinagar**	**62.07**	**290**	*e*P	**P**	**02 28 28.6**	**0.0**
XMAS	**Kiritimati**	**62.12**	**135**	P	**P**	**02 28 29.0**	**-0.1**
XMAS	**Kiritimati**	**62.12**	**135**	IAMs_20	IAMs_20	02 48 06.7	
	comp=Z,25µm,22.0s						
XMAS	**Kiritimati**	**62.12**	**135**	P	**P**	**02 28 31.2**	**+2.1**
XMAS	**Kiritimati**	**62.12**	**135**	⇑P	**P**	**02 28 30.2**	**+1.1**
I40A	**Norwalk**	**62.23**	**52**	IAmb	IAmb	02 28 32.6	
	comp=Z,156nm,0.9s						
KLP	**Kalpa**	**62.25**	**286**	*e*P	**P**	**02 28 29.2**	**-1.0**
JOSI	**Joshimath**	**62.30**	**284**	*e*P	**P**	**02 28 29.6**	**-0.9**
N35A	**Tabor**	**62.32**	**57**	IAMs_20	IAMs_20	02 57 19.2	
	comp=Z,31µm,18.0s						
MYLDM	**Lahad Datu**	**62.34**	**233**	IAMs_20	IAMs_20	02 57 29.4	
	comp=Z,21µm,20.0s						
MYLDM	**Lahad Datu**	**62.34**	**233**	P	**P**	**02 28 33.7**	**+3.2**
OSL	**Oslo**	**62.36**	**345**	*e*P	**P**	**02 28 30.4**	**+0.3**
OSL				IVmB_BB		02 28 43.8	
	comp=Z,5µm,4.1s						
OSL				*e*S	**S**	**02 36 56.4**	**+0.6**
OSL				IVMs_BB	IVMs_BB	03 02 54.5	
	comp=Z,12µm,12.1s						
SLIT	**Slitere, Latvi**	**62.50**	**338**	*e*P	**P**	**02 28 30.4**	**-0.6**
SLIT	**Slitere, Latvi**	**62.50**	**338**	⇑P	**P**	**02 28 30.8**	**-0.3**
ASK	**Askoy**	**62.53**	**348**	*e*P	**P**	**02 28 30.1**	**-1.2**
ASK				IVmB_BB		02 28 40.9	
	comp=Z,6µm,2.4s						
ASK				*e*S	**S**	**02 36 59.8**	**+1.8**
ASK				IVMs_BB	IVMs_BB	03 03 57.9	
	comp=Z,10µm,14.3s						
BER	**Bergen**	**62.62**	**348**	*e*P	**P**	**02 28 31.7**	**-0.1**
BER				IVmB_BB		02 28 33.0	
	comp=Z,3µm,1.6s						
BER				*e*S	**S**	**02 37 00.6**	**+1.6**
BER				IVMs_BB	IVMs_BB	03 03 05.5	
	comp=Z,9µm,12.6s						
KKM	**Kota Kinabalu**	**62.62**	**236**	P	**P**	**02 28 34.2**	**+1.6**
KKM	**Kota Kinabalu**	**62.62**	**236**	⇑P	**P**	**02 28 34.0**	**+1.4**
LPSR	**Galich'ya Gora**	**62.62**	**326**	*e*P	**P**	**02 28 30.0**	**-2.0**
LPSR				*e*PPP	PPP	02 32 17.1	
LPSR				*e*S	**S**	**02 36 56.2**	**-3.1**
LPSR				pmax	pmax		
	comp=Z,970nm,1.0s						
LPSR				pmax	pmax		
	comp=Z,760nm,0.9s						
LPSR				smax	smax		
	comp=N,7µm,9.3s						
LPSR				MLR	MLR		
	comp=Z,67µm,18.0s						
SCIA	**State Center**	**62.63**	**55**	IAMs_20	IAMs_20	02 56 30.2	
	comp=Z,26µm,19.0s						
SCIA	**State Center**	**62.63**	**55**	⇑P	**P**	**02 28 31.9**	**-0.4**
TNTI	**Ternate**	**62.64**	**222**	P	**P**	**02 28 34.4**	**+1.8**
TNTI	**Ternate**	**62.64**	**222**	⇑P	**P**	**02 28 33.2**	**+0.6**
PTH	**Pithoragarh**	**62.72**	**283**	*e*P	**P**	**02 28 32.2**	**-1.0**
DHRM	**DHARAMSHALA**	**62.74**	**288**	*e*P	**P**	**02 28 32.5**	**-0.9**
R32A	**Long Quarter,**	**62.74**	**61**	IAmb	IAmb	02 28 37.8	
	comp=Z,328nm,1.6s						
R32A				IAMs_20	IAMs_20	02 57 12.7	
	comp=Z,29µm,20.0s						
319A	**Douglas**	**62.76**	**74**	IAmb	IAmb	02 28 47.4	
	comp=Z,245nm,1.1s						
319A				IAMs_20	IAMs_20	02 57 26.8	
	comp=Z,18µm,19.0s						
KONO	**Kongsberg**	**62.79**	**346**	P	**P**	**02 28 32.9**	**-0.1**
KONO				IAmb	IAmb	02 28 35.0	
	comp=Z,457nm,1.6s						
KONO	**Kongsberg**	**62.79**	**346**	IAMs_20	IAMs_20	02 56 11.2	
	comp=Z,19µm,20.0s						
KONO	**Kongsberg**	**62.79**	**346**	P	**P**	**02 28 33.1**	**+0.1**
KONO	**Kongsberg**	**62.79**	**346**	*e*P	**P**	**02 28 33.3**	**+0.3**
KONO				IVmBBB		02 28 45.7	
	comp=Z,3µm,2.3s						
KONO				*e*S	**S**	**02 37 01.0**	**-0.3**
KONO				IVMs_BB	IVMs_BB	03 00 47.3	
	comp=Z,8µm,17.1s						
KONO	**Kongsberg**	**62.79**	**346**	⇑P	**P**	**02 28 33.0**	**-0.1**
THN	**Thein Dam**	**62.91**	**288**	*e*P	**P**	**02 28 33.3**	**-0.9**
VRH	**Novokhopyorsk**	**62.91**	**323**	*e*P	**P**	**02 28 31.6**	**-2.3**
VRH				*e*PPP	PPP	02 32 30.5	
VRH				*e*S	**S**	**02 36 57.1**	**-5.9**
VRH				pmax	pmax		
	comp=Z,430nm,0.7s						
VRH				pmax	pmax		
	comp=Z,410nm,0.7s						
VRH				smax	smax		
	comp=N,8µm,8.2s						
VRH				MLR	MLR		
	comp=Z,62µm,14.0s						
E46A	**Sault Ste Mari**	**62.92**	**46**	IAmb	IAmb	02 28 36.3	
	comp=Z,196nm,0.8s						
E46A				IAMs_20	IAMs_20	02 58 49.5	
	comp=Z,26µm,19.0s						
ODD1	**Odda**	**62.92**	**347**	*e*P	**P**	**02 28 34.5**	**+0.5**
ODD1				IVmB_BB		02 28 48.2	
	comp=Z,4µm,4.1s						
ODD1				*e*S	**S**	**02 37 00.5**	**-2.6**
ODD1				IVMs_BB	IVMs_BB	03 02 30.6	
	comp=Z,10µm,16.7s						
I42A	**Draeger Farm,**	**62.98**	**51**	IAMs_20	IAMs_20	02 58 46.2	
	comp=Z,31µm,18.0s						
JMU	**Jammu**	**63.12**	**289**	*e*P	**P**	**02 28 35.0**	**-0.6**
SMLA	**Simla**	**63.14**	**286**	*e*P	**P**	**02 28 35.1**	**-0.7**
STRU	**Stroemstad**	**63.16**	**345**	*i* P	**P**	**02 28 35.3**	**-0.2**
JFWS	**Jewell Farm**	**63.17**	**52**	⇑P	**P**	**02 28 34.7**	**-1.1**
KSU1	**Kansas State U**	**63.23**	**59**	⇑P	**P**	**02 28 35.5**	**-0.8**
NIL	**Nilore**	**63.26**	**291**	P	**P**	**02 28 35.9**	**-0.7**
NIL	**Nilore**	**63.26**	**291**	IAMs_20	IAMs_20	02 56 51.7	
	comp=Z,31µm,19.0s						
NIL	**Nilore**	**63.26**	**291**	P	**P**	**02 28 37.2**	**+0.6**
NIL				P	**P**	**02 28 37.2**	**+0.6**
NIL	**Nilore**	**63.26**	**291**	P	**P**	**02 28 35.9**	**-0.7**
NIL				pmax	pmax		
	comp=Z,987nm,1.6s						
NIL				MLR	MLR		
	comp=Z,31µm,19.0s						
DDI	**Dehra Dun**	**63.29**	**285**	*e*P	**P**	**02 28 35.7**	**-1.2**
BHK	**Bhakra**	**63.32**	**287**	*e*P	**P**	**02 28 34.5**	**-2.5**
VORR	**Voronezh**	**63.33**	**325**	*e*P	**P**	**02 28 35.5**	**-1.2**
VORR				*e*S	**S**	**02 37 04.8**	**-3.5**
VORR				pmax	pmax		
	comp=Z,210nm,0.8s						
VORR				pmax	pmax		
	comp=Z,600nm,1.5s						
VORR				smax	smax		
	comp=N,2µm,6.0s						
VORR				MLR	MLR		
	comp=Z,33µm,12.0s						
L40A	**Anamosa**	**63.41**	**54**	IAmb	IAmb	02 28 39.8	
	comp=Z,135nm,0.8s						
BLS5	**Blasjo**	**63.42**	**347**	*e*P	**P**	**02 28 37.4**	**+0.1**
BLS5				IVmB_BB		02 28 53.3	
	comp=Z,4µm,2.7s						
BLS5				*e*S	**S**	**02 37 10.7**	**+1.5**
BLS5				IVMs_BB	IVMs_BB	03 01 35.2	
	comp=Z,12µm,19.2s						
LRW	**Lerwick**	**63.49**	**352**	*e*P	**P**	**02 28 39.3**	**+1.7**
LRW				IAMs_20	IAMs_20	02 48 51.1	
	comp=Z,32µm,46.6s						
LRW	**Lerwick**	**63.49**	**352**	⇑P	**P**	**02 28 38.7**	**+1.1**
ISAL	**Salakas**	**63.53**	**335**	*e*P	**P**	**02 28 39.8**	**+1.8**
VSVD	**Vaisvydziai**	**63.66**	**336**	*e*P	**P**	**02 28 39.5**	**+0.7**
HSIG		**63.69**	**77**	IAmb	IAmb	02 28 52.4	
	comp=Z,196nm,1.2s						
VSR	**Storozhevoye**	**63.74**	**325**	*e*P	**P**	**02 28 37.8**	**-1.6**
VSR				*e*PPP	PPP	02 32 26.7	
VSR				*e*S	**S**	**02 37 07.6**	**-5.7**
VSR				pmax	pmax		
	comp=Z,520nm,1.0s						
VSR				pmax	pmax		
	comp=Z,470nm,0.9s						
VSR				smax	smax		
	comp=N,9µm,8.4s						
VSR				MLR	MLR		
	comp=Z,47µm,14.0s						
KMY	**Karmoy**	**63.77**	**348**	*e*P	**P**	**02 28 40.1**	**+0.6**
KMY				IVmB_BB		02 28 49.6	
	comp=Z,4µm,2.9s						
KMY				*e*S	**S**	**02 37 14.8**	**+1.3**
KMY				*e*SS	**SS**	**02 41 23.4**	**+3.2**
KMY				IVMs_BB	IVMs_BB	03 03 08.7	
	comp=Z,10µm,16.8s						
VORD	**Divnogorie**	**63.91**	**325**	*e*P	**P**	**02 28 39.0**	**-1.6**
VORD				*e*S	**S**	**02 37 10.5**	**-5.0**
VORD				pmax	pmax		
	comp=Z,340nm,1.1s						
VORD				pmax	pmax		
	comp=Z,640nm,1.4s						
VORD				smax	smax		
	comp=N,2µm,5.8s						
VORD				MLR	MLR		
	comp=Z,21µm,13.0s						
EPT	**El Paso**	**63.93**	**71**	IAmb	IAmb	02 28 54.0	
	comp=Z,156nm,1.1s						
EPT				IAMs_20	IAMs_20	02 55 40.7	
	comp=Z,21µm,19.0s						
NACGM	**Naroch**	**63.98**	**334**	⇓*i*P	**P**	**02 28 41.1**	**+0.1**
I45A	**Fountain**	**64.01**	**49**	IAMs_20	IAMs_20	02 58 03.5	
	comp=Z,32µm,18.0s						
AMTX	**Amarillo**	**64.02**	**66**	IAmb	IAmb	02 28 53.9	
	comp=Z,161nm,0.9s						
AMTX				IAMs_20	IAMs_20	02 55 46.7	
	comp=Z,23µm,20.0s						
AMTX	**Amarillo**	**64.02**	**66**	⇑P	**P**	**02 28 41.5**	**-0.2**
GLMI	**Grayling**	**64.04**	**48**	P	**P**	**02 28 40.9**	**-0.7**
GLMI	**Grayling**	**64.04**	**48**	⇑P	**P**	**02 28 41.1**	**-0.4**
KAN08	**Anthony NE Sta**	**64.04**	**62**	IAmb	IAmb	02 28 44.1	
	comp=Z,194nm,1.3s						
PBUR	**Paburge**	**64.06**	**337**	*e*P	**P**	**02 28 41.3**	**-0.2**
MNK	**Minsk**	**64.07**	**333**	*i* P	**P**	**02 28 42.5**	**+1.0**
	comp=E,193nm,0.9s						
MNK				*i* P	**P**	**02 28 42.5**	**+1.0**
	comp=Z,375nm,0.9s,baz=25						
MNK				*i* PP	**PP**	**02 31 05.3**	**+3.5**
MNK				*i* PPP	PPP	02 32 34.1	
MNK				*i* S	**S**	**02 37 20.7**	**+3.3**
MNK				*i* SS	SS	02 41 36.2	+11
MNK				*i* SSS	SSS	02 44 32.8	
MNK				*i* LQ	LQ	02 52 07.4	
MNK				*i* LR	LR	02 57 27.4	
MNK	**Minsk**	**64.07**	**333**	*i* P	**P**	**02 28 42.5**	**+1.0**
MNK				*i*		02 31 05.3	
MNK				*i* PPP	PPP	02 32 34.0	
MNK				*i* S	**S**	**02 37 20.6**	**+3.3**
MNK				pmax	pmax		
	comp=N,62nm,1.0s						
MNK				pmax	pmax		
	comp=E,193nm,0.9s						
MNK				pmax	pmax		
	comp=Z,375nm,0.9s						
MNK				MLR	MLR		
	comp=Z,45µm,15.0s						
MNK				MLR	MLR		
	comp=N,20µm,13.0s						
MNK				MLR	MLR		
	comp=E,29µm,14.0s						
PABE	**Paberze**	**64.09**	**336**	*e*P	**P**	**02 28 41.6**	**-0.1**
VLDQ	**Val d'Or**	**64.12**	**41**	IAMs_20	IAMs_20	02 58 54.5	
	comp=Z,27µm,18.0s						
L42A	**Oliver, Polo**	**64.15**	**53**	IAmb	IAmb	02 28 44.5	
	comp=Z,167nm,0.9s						
MSTX	**Muleshoe**	**64.17**	**67**	IAmb	IAmb	02 28 46.2	
	comp=Z,230nm,1.1s						
MSTX				IAMs_20	IAMs_20	02 56 57.8	
	comp=Z,21µm,20.0s						
K43A	**Burlington**	**64.18**	**51**	IAmb	IAmb	02 28 45.5	
	comp=Z,198nm,1.1s						
KAN01	**Argonia South**	**64.21**	**61**	IAmb	IAmb	02 28 45.2	
	comp=Z,218nm,1.1s						
ELIS	**Ellis County**	**64.24**	**63**	IAmb	IAmb	02 28 54.9	
	comp=Z,276nm,1.4s						
ELIS				IAMs_20	IAMs_20	02 58 58.3	
	comp=Z,27µm,18.0s						
KKR	**Kurukshetra**	**64.24**	**286**	*e*P	**P**	**02 28 42.5**	**-0.6**
OK038	**West end E0370**	**64.25**	**63**	IAmb	IAmb	02 28 46.0	
	comp=Z,215nm,1.0s						
BORU	**Boraas**	**64.26**	**343**	*i* P	**P**	**02 28 42.1**	**-0.7**
HOMB	**Homborsund**	**64.28**	**346**	*e*P	**P**	**02 28 43.1**	**+0.3**
HOMB				IVmB_BB		02 28 43.8	
	comp=Z,2µm,3.2s						
HOMB				*e*S	**S**	**02 37 22.2**	**+2.5**
HOMB				*i*		02 41 51.4	
HOMB				IVMs_BB	IVMs_BB	03 04 05.1	
	comp=Z,13µm,12.7s						
HOMB	**Homborsund**	**64.28**	**346**	*i* P	**P**	**02 28 42.8**	**-0.1**
P38A	**Dawn**	**64.28**	**57**	IAmb	IAmb	02 28 46.7	
	comp=Z,232nm,0.8s						
P38A				IAMs_20	IAMs_20	02 57 36.2	
	comp=Z,24µm,19.0s						
KAN09	**Caldwell North**	**64.29**	**61**	IAmb	IAmb	02 28 45.7	
	comp=Z,187nm,1.1s						
KAN17	**Caldwell West**	**64.29**	**62**	IAmb	IAmb	02 28 45.7	
	comp=Z,197nm,1.0s						
SRIG	**Santa Rosalia**	**64.31**	**79**	IAmb	IAmb	02 28 56.2	
	comp=Z,144nm,0.9s						
FAKI	**Fak Fak**	**64.35**	**216**	IAMs_20	IAMs_20	02 51 19.1	
	comp=Z,18µm,22.0s						
FAKI	**Fak Fak**	**64.35**	**216**	P	**P**	**02 28 45.6**	**+1.8**
FAKI	**Fak Fak**	**64.35**	**216**	⇑P	**P**	**02 28 44.7**	**+0.8**
SNART	**Snartemo**	**64.38**	**347**	*e*P	**P**	**02 28 43.6**	**+0.1**
SNART				IVmB_BB		02 28 44.7	
	comp=Z,4µm,2.1s						
SNART				*e*S	**S**	**02 37 22.5**	**+1.4**
SNART				IVMs_BB	IVMs_BB	03 04 49.3	
	comp=Z,15µm,13.2s						
SNART	**Snartemo**	**64.38**	**347**	*i* P	**P**	**02 28 43.4**	**-0.1**
TATA	**Tatamba Isabel**	**64.39**	**185**	P	**P**	**02 28 45.9**	**+1.9**
KAN13	**South Haven SW**	**64.45**	**61**	IAmb	IAmb	02 28 46.7	
	comp=Z,159nm,0.9s						
VAR	**Varanasi**	**64.50**	**278**	*e*P	**P**	**02 28 44.3**	**-0.5**
MERT	**Meerut**	**64.52**	**284**	*e*P	**P**	**02 28 44.5**	**-0.4**
LKN	**LUCKNOW**	**64.53**	**280**	*e*P	**P**	**02 28 45.0**	**0.0**
SMWD	**Samnorwood**	**64.58**	**65**	IAmb	IAmb	02 28 58.2	
	comp=Z,216nm,1.1s						
MNTX	**Cornudas Mount**	**64.59**	**71**	IAmb	IAmb	02 28 58.6	
	comp=Z,270nm,1.0s						
MNTX				IAMs_20	IAMs_20	02 57 02.0	
	comp=Z,16µm,19.0s						
MNTX	**Cornudas Mount**	**64.59**	**71**	⇑P	**P**	**02 28 45.9**	**+0.6**
CROK	**Carrier**	**64.61**	**62**	IAmb	IAmb	02 28 48.0	
	comp=Z,128nm,0.8s						
CROK				IAMs_20	IAMs_20	02 57 27.0	
	comp=Z,31µm,20.0s						
ONAU	**Onsala**	**64.62**	**344**	*i* P	**P**	**02 28 44.6**	**-0.5**
KBU	**Kabul Universi**	**64.71**	**295**	P	**P**	**02 28 44.2**	**-2.2**
ALEG	**Aligegeo Malai**	**64.72**	**184**	P	**P**	**02 28 47.8**	**+1.6**
KBL	**Kabul**	**64.74**	**295**	P	**P**	**02 28 44.1**	**-2.4**
KBL				IAmb	IAmb	02 28 49.6	
	comp=Z,271nm,1.1s						
KBL	**Kabul**	**64.74**	**295**	P	**P**	**02 28 45.3**	**-1.3**
	SNR=210						
KBL				P	**P**	**02 28 45.3**	**-1.3**
	SNR=210						
KBL	**Kabul**	**64.74**	**295**	P	**P**	**02 28 44.1**	**-2.4**
KBL				pmax	pmax		
	comp=Z,271nm,1.1s						
FRKB	**FARRUKHABAD**	**64.75**	**282**	*e*P	**P**	**02 28 45.8**	**-0.6**
GNR	**GANAUR**	**64.78**	**285**	*e*P	**P**	**02 28 45.9**	**-0.7**
L44A	**Lake County Fo**	**64.79**	**51**	IAmb	IAmb	02 28 49.1	
	comp=Z,211nm,0.9s						
FABU	**Falkenberg**	**64.87**	**343**	*i* P	**P**	**02 28 46.4**	**-0.4**
UGON	**Onchagaon**	**64.94**	**284**	*e*P	**P**	**02 28 47.1**	**-0.6**
TOLI2	**Tolitoli**	**64.97**	**229**	P	**P**	**02 28 49.4**	**+1.5**
KNTI	**KHUNTI**	**65.01**	**274**	*e*P	**P**	**02 28 45.6**	**-2.6**
BLEU	**Blekinge**	**65.01**	**341**	*i* P	**P**	**02 28 47.1**	**-0.6**
NDI	**New Delhi**	**65.03**	**285**	*e*P	**P**	**02 28 47.5**	**-0.7**
JMIU	**JAMIA UNIVERSI**	**65.07**	**284**	*e*P	**P**	**02 28 47.9**	**-0.6**
NPLP	**NPLP New Delhi**	**65.09**	**285**	*e*P	**P**	**02 28 48.0**	**-0.7**
LDR	**Lodi Road**	**65.10**	**284**	*e*P	**P**	**02 28 48.2**	**-0.5**
HQIL	**Hanson Quary C**	**65.12**	**52**	IAmb	IAmb	02 28 51.7	
	comp=Z,201nm,1.1s						
SAVO	**Savo Central**	**65.14**	**185**	P	**P**	**02 28 50.0**	**+1.0**
ALBI	**Allahabad**	**65.16**	**279**	*e*P	**P**	**02 28 47.1**	**-2.0**
OK051	**E0350 and S346**	**65.17**	**61**	IAMs_20	IAMs_20	02 58 48.9	
	comp=Z,28µm,20.0s						
OK048	**Pawnee Station**	**65.19**	**61**	IAMs_20	IAMs_20	02 58 50.4	
	comp=Z,27µm,19.0s						
DEL	**Delary**	**65.19**	**342**	*i* P	**P**	**02 28 48.0**	**-0.8**
AYAN	**Aya Nagar**	**65.23**	**284**	*e*P	**P**	**02 28 49.1**	**-0.4**
BIGH	**Upper Bighouse**	**65.32**	**353**	*e*P	**P**	**02 28 51.2**	**+1.6**
DKNS	**Dickens**	**65.36**	**66**	IAmb	IAmb	02 29 02.6	
	comp=Z,182nm,0.9s						
M44A	**Midewin, Midew**	**65.37**	**52**	IAmb	IAmb	02 28 53.2	
	comp=Z,158nm,0.8s						
HNR	**Honiara**	**65.42**	**185**	LR	LR	02 52 48.6	
	comp=Z,53µm,21.4s,baz=19,slow=32						
OK029	**Liberty Lake**	**65.43**	**62**	IAmb	IAmb	02 29 02.3	
	comp=Z,138nm,0.9s						
OK029				IAMs_20	IAMs_20	02 57 52.7	
	comp=Z,28µm,20.0s						
SONA	**Sohna**	**65.44**	**284**	*e*P	**P**	**02 28 50.5**	**-0.4**
HDIL	**Hopedale**	**65.48**	**53**	P	**P**	**02 28 50.3**	**-0.7**
HDIL	**Hopedale**	**65.48**	**53**	⇑P	**P**	**02 28 50.4**	**-0.7**
QUOK	**Quay**	**65.50**	**61**	IAmb	IAmb	02 28 54.6	
	comp=Z,301nm,1.6s						
I49A	**Point Hope**	**65.50**	**47**	IAmb	IAmb	02 28 53.8	
	comp=Z,259nm,0.9s						
I49A				IAMs_20	IAMs_20	02 58 35.0	
	comp=Z,34µm,20.0s						
VHRN	**Van Horn**	**65.51**	**71**	IAmb	IAmb	02 29 04.5	
	comp=Z,156nm,1.0s						
POST	**Post**	**65.54**	**67**	IAmb	IAmb	02 29 03.9	
	comp=Z,263nm,0.9s						
OK052	**Battle Ridge R**	**65.59**	**62**	IAmb	IAmb	02 28 54.5	
	comp=Z,162nm,1.1s						
OK052				IAMs_20	IAMs_20	02 58 16.1	
	comp=Z,26µm,20.0s						
WMOK	**Wichita Mounta**	**65.60**	**64**	IAmb	IAmb	02 28 56.1	
	comp=Z,253nm,0.9s						
WMOK	**Wichita Mounta**	**65.60**	**64**	IAMs_20	IAMs_20	02 58 34.5	
	comp=Z,27µm,21.0s						
WMOK	**Wichita Mounta**	**65.60**	**64**	⇑P	**P**	**02 28 51.5**	**-0.4**
BUKO	**Buck Lake**	**65.62**	**44**	IAmb	IAmb	02 29 03.3	
	comp=Z,479nm,1.7s						
L46A	**Eue Claire**	**65.62**	**50**	IAmb	IAmb	02 28 54.6	
	comp=Z,183nm,1.1s						
L46A				IAMs_20	IAMs_20	02 58 55.3	
	comp=Z,30µm,18.0s						
PECS	**Pecos**	**65.64**	**70**	IAmb	IAmb	02 29 05.0	
	comp=Z,501nm,1.7s						
SUW	**Suwalki**	**65.65**	**336**	*e*P	**P**	**02 28 51.4**	**-0.4**
SUW				*e*PP	**PP**	**02 31 16.1**	**+0.5**
SUW				*e*S	**S**	**02 37 35.9**	**-0.8**
SUW				*e*L	L	02 55 41.4	
	comp=Z,47µm,26.7s						
SUW	**Suwalki**	**65.65**	**336**	*e*P	**P**	**02 28 52.1**	**+0.3**
BJUU	**Bjuv**	**65.71**	**343**	*i* P	**P**	**02 28 51.6**	**-0.6**
ODSA	**Odessa**	**65.74**	**68**	IAmb	IAmb	02 29 05.2	
	comp=Z,180nm,1.0s						
OKCSW	**OKLAHOMA CITY**	**65.74**	**62**	IAmb	IAmb	02 29 04.6	
	comp=Z,247nm,0.9s						
LINV	**Loch Inver, As**	**65.75**	**354**	*e*P	**P**	**02 28 54.0**	**+1.7**
LINV				IAMs_20	IAMs_20	02 49 56.9	
	comp=Z,25µm,38.8s						
SANI	**Sanana**	**65.76**	**223**	P	**P**	**02 28 53.1**	**+0.1**
SANI	**Sanana**	**65.76**	**223**	P	**P**	**02 28 54.2**	**+1.2**
SANI	**Sanana**	**65.76**	**223**	⇑P	**P**	**02 28 52.9**	**-0.1**
SN07	**Snyder 07**	**65.83**	**66**	IAmb	IAmb	02 29 05.5	
	comp=Z,205nm,1.2s						
LEWI	**Lewis, Hebride**	**65.84**	**355**	*e*P	**P**	**02 28 54.7**	**+1.7**
LEWI				IAMs_20	IAMs_20	02 50 02.4	
	comp=Z,30µm,41.7s						
KUDL	**Kundal**	**65.84**	**285**	*e*P	**P**	**02 28 53.0**	**-0.5**
DEOK	**Depew**	**65.86**	**61**	IAmb	IAmb	02 29 05.1	
	comp=Z,127nm,0.9s						
DEOK				IAMs_20	IAMs_20	02 59 10.2	
	comp=Z,25µm,20.0s						
FNO	**Franklin**	**65.88**	**62**	IAmb	IAmb	02 29 03.1	
	comp=Z,198nm,1.1s						
FNO				IAMs_20	IAMs_20	02 59 26.8	
	comp=Z,28µm,19.0s						
S39A	**Bolivar**	**65.92**	**58**	IAMs_20	IAMs_20	02 57 55.4	
	comp=Z,26µm,19.0s						
R40A	**Maddies Statio**	**65.94**	**57**	IAMs_20	IAMs_20	02 58 46.0	
	comp=Z,28µm,18.0s						
SN05	**Snyder 5**	**66.00**	**67**	IAmb	IAmb	02 29 06.5	
	comp=Z,133nm,0.9s						
APMT	**Aspermont**	**66.04**	**66**	IAmb	IAmb	02 29 06.6	
	comp=Z,269nm,0.9s						
LUNU	**Lund**	**66.06**	**342**	*i* P	**P**	**02 28 54.8**	**+0.3**
LUWI	**Luwuk**	**66.10**	**226**	P	**P**	**02 28 54.1**	**-1.1**
LUWI	**Luwuk**	**66.10**	**226**	P	**P**	**02 28 55.5**	**+0.3**
P43A	**Skaggs, Pawnee**	**66.12**	**54**	IAmb	IAmb	02 28 57.8	
	comp=Z,243nm,1.0s						
MCD	**Coleburn Disti**	**66.18**	**353**	*e*P	**P**	**02 28 57.1**	**+1.9**
MCD				IAMs_20	IAMs_20	02 52 49.4	
	comp=Z,19µm,25.9s						
COP	**Copenhagen**	**66.18**	**343**	*i* P	**P**	**02 28 55.4**	**+0.1**
COP				IAmb	IAmb	02 28 59.5	
	comp=Z,504nm,1.3s						
X34A	**Smith Ranch, M**	**66.19**	**63**	IAMs_20	IAMs_20	02 58 31.8	
	comp=Z,30µm,20.0s						
MNHN	**Monahans**	**66.25**	**69**	IAmb	IAmb	02 29 08.5	
	comp=Z,128nm,0.8s						
SADO	**Sadowa**	**66.28**	**44**	LR	LR	02 59 28.9	
	comp=Z,17µm,18.5s,baz=344,slow=38						
RLO	**Rose Lookout**	**66.33**	**60**	P	**P**	**02 28 55.5**	**-1.0**
ICQ	**Pointe Anglais**	**66.37**	**34**	IAMs_20	IAMs_20	03 02 03.2	
	comp=Z,30µm,18.0s						
HURO	**Huro Makira**	**66.38**	**182**	P	**P**	**02 28 58.1**	**+1.2**
U38A	**Gravette**	**66.42**	**60**	IAMs_20	IAMs_20	02 57 15.8	
	comp=Z,29µm,21.0s						

LDAQ	**Lac Daran**	**66.44**	**37**	IAmb	IAmb	02 29 00.5	
	comp=Z,292nm,1.1s						
LDAQ				IAMs_20	IAMs_20	02 58 30.2	
	comp=Z,21µm,21.0s						
WTFS	**Witchita Falls**	**66.53**	**64**	IAmb	IAmb	02 29 09.7	
	comp=Z,169nm,0.9s						
ALPN	**Alpine**	**66.55**	**70**	IAmb	IAmb	02 29 10.7	
	comp=Z,134nm,0.9s						
K50A	**Casco**	**66.55**	**48**	IAmb	IAmb	02 29 02.4	
	comp=Z,235nm,1.1s						
LUES	**Luesalemba Tem**	**66.57**	**178**	P	**P**	**02 29 00.7**	**+2.6**
KPL	**Plockton**	**66.58**	**354**	*e*P	**P**	**02 28 59.3**	**+1.6**
KPL				IAMs_20	IAMs_20	02 52 35.5	
	comp=Z,18µm,25.5s						
SLM	**Saint Louis**	**66.61**	**55**	IAmb	IAmb	02 29 01.1	
	comp=Z,204nm,0.9s						
CCM	**Cathedral Cave**	**66.61**	**56**	P	**P**	**02 28 56.7**	**-1.6**
CCM				IAmb	IAmb	02 29 01.7	
	comp=Z,282nm,1.1s						
CCM	**Cathedral Cave**	**66.61**	**56**	P	**P**	**02 28 56.7**	**-1.6**
CCM				pmax	pmax		
	comp=Z,282nm,1.1s						
CCM				MLR	MLR		
	comp=Z,34µm,18.0s						
CCM	**Cathedral Cave**	**66.61**	**56**	⇑P	**P**	**02 28 57.5**	**-0.8**
BNDI	**Bandanaira**	**66.64**	**218**	P	**P**	**02 29 00.7**	**+2.1**
SGCY	**Sterling City**	**66.64**	**67**	IAmb	IAmb	02 29 10.8	
	comp=Z,226nm,0.9s						
HHAR	**Hobbs**	**66.76**	**59**	IAmb	IAmb	02 29 10.5	
	comp=Z,189nm,0.9s						
HHAR				IAMs_20	IAMs_20	02 57 38.8	
	comp=Z,28µm,21.0s						
TRQ	**Mont Tremblant**	**66.78**	**40**	IAMs_20	IAMs_20	03 00 34.5	
	comp=Z,26µm,19.0s						
DRUM	**Mains of Drumt**	**66.79**	**352**	*e*P	**P**	**02 29 00.5**	**+1.4**
DRUM				IAMs_20	IAMs_20	02 53 20.3	
	comp=Z,17µm,24.8s						
PMG	**Port Moresby**	**66.81**	**198**	P	**P**	**02 28 59.0**	**-0.7**
PMG	**Port Moresby**	**66.81**	**198**	P	**P**	**02 29 00.1**	**+0.4**
PMG	**Port Moresby**	**66.81**	**198**	P	**P**	**02 28 59.9**	**+0.2**
PMG	**Port Moresby**	**66.81**	**198**	⇑P	**P**	**02 28 59.1**	**-0.5**
N47A	**Urbana**	**66.81**	**51**	IAmb	IAmb	02 29 01.6	
	comp=Z,139nm,0.9s						
SSRD	**Sdr. Stenderup**	**66.82**	**345**	*i* P	**P**	**02 29 00.0**	**+0.7**
SSRD				IAmb	IAmb	02 29 02.1	
	comp=Z,485nm,1.4s						
JHNI	**Jhansi**	**66.84**	**281**	*e*P	**P**	**02 28 59.1**	**-0.9**
ABTX	**Abilene, Hawle**	**66.84**	**66**	IAmb	IAmb	02 29 12.0	
	comp=Z,222nm,0.9s						
ABTX				IAMs_20	IAMs_20	02 57 47.4	
	comp=Z,19µm,20.0s						
MGMO	**Mountain Grove**	**66.85**	**58**	IAmb	IAmb	02 29 02.3	
	comp=Z,216nm,0.8s						
MGMO				IAMs_20	IAMs_20	02 58 34.3	
	comp=Z,25µm,19.0s						
JHSG	**JHARSUGUGA**	**66.88**	**275**	*e*P	**P**	**02 28 59.6**	**-0.6**
LMQ	**La Malbaie**	**67.11**	**37**	IAMs_20	IAMs_20	03 01 03.9	
	comp=Z,27µm,19.0s						
RGN	**Rugen**	**67.12**	**342**	IAMs_20	IAMs_20	03 00 29.7	
	comp=Z,36µm,22.0s						
RGN	**Rugen**	**67.12**	**342**	⇑P	**P**	**02 29 02.2**	**+1.0**
RGN	**Rugen**	**67.12**	**342**	*e*P	**P**	**02 29 01.8**	**+0.5**
	comp=Z,724nm,1.3s,baz=16,slow=6.1						
RGN				*e*S	**S**	**02 37 57.3**	**+2.7**
	baz=16,slow=12						
AKASG	**Malin Array Be**	**67.16**	**331**	P	**P**	**02 29 00.5**	**-1.0**
AKASG				IAmb	IAmb	02 29 05.0	
	comp=Z,278nm,1.0s						
AKASG	**Malin Array Be**	**67.16**	**331**	P	**P**	**02 29 00.9**	**-0.7**
	comp=Z,108nm,0.7s,baz=29,slow=6.1,SNR=213						
AKASG				PKPPKP	P'P'df	02 57 25.0	-10
	comp=Z,2.8nm,0.9s,baz=212,slow=2.9,SNR=8.8						
AKASG				LR	LR	03 02 32.8	
	comp=Z,76µm,18.4s,baz=20,slow=40						
	comp=Z,108nm,0.7s						
AKBB	**Malin Array Si**	**67.16**	**331**	IAmb	IAmb	02 29 04.9	
	comp=Z,320nm,1.1s						
AKBB	**Malin Array Si**	**67.16**	**331**	*c i*P	**P**	**02 29 01.0**	**-0.5**
KIEV	**Kiev**	**67.17**	**331**	P	**P**	**02 29 00.9**	**-0.7**
KIEV				IAmb	IAmb	02 29 04.9	
	comp=Z,288nm,1.1s						
KIEV	**Kiev**	**67.17**	**331**	⇑P	**P**	**02 29 01.2**	**-0.4**
KIEV	**Kiev**	**67.17**	**331**	*i* P	**P**	**02 29 01.1**	**-0.5**
	SNR=70						
KIEV	**Kiev**	**67.17**	**331**	⇑P	**P**	**02 29 00.9**	**-0.7**
FW03	**Perrin-Whitt E**	**67.31**	**64**	IAmb	IAmb	02 29 06.0	
	comp=Z,228nm,0.8s						
FW03				IAMs_20	IAMs_20	02 59 27.7	
	comp=Z,32µm,20.0s						
TX31	**Lajitas Ar. Si**	**67.36**	**71**	IAmb	IAmb	02 29 16.2	
	comp=Z,214nm,0.8s						
TXAR	**Lajitas Array**	**67.36**	**71**	P	**P**	**02 29 03.5**	**+0.2**
TXAR	**Lajitas Array**	**67.36**	**71**	P	**P**	**02 29 03.6**	**+0.3**
	comp=Z,78nm,0.6s,baz=305,slow=3.8,SNR=467						
TXAR				PKPPKP	**P'P'df**	**02 57 29.1**	**-2.7**
	comp=Z,10nm,0.9s,baz=146,slow=4.3,SNR=12						
TXAR				P4KPbc		03 05 50.6	
	comp=Z,0.7nm,0.9s,baz=251,slow=3.8,SNR=4.9						
	comp=Z,78nm,0.6s						
PLPT	**Palo Pinto**	**67.36**	**65**	IAmb	IAmb	02 29 06.4	
	comp=Z,192nm,0.9s						
N49A	**Columbus Grove**	**67.43**	**50**	IAmb	IAmb	02 29 06.7	
	comp=Z,275nm,1.2s						
OZNA	**Ozona**	**67.43**	**68**	IAmb	IAmb	02 29 15.8	
	comp=Z,184nm,1.2s						
Z35A	**Perchaven, San**	**67.49**	**64**	IAmb	IAmb	02 29 16.0	
	comp=Z,208nm,1.1s						
Z35A				IAMs_20	IAMs_20	03 00 44.4	
	comp=Z,29µm,18.0s						
BLSP	**Bilaspur**	**67.50**	**276**	*e*P	**P**	**02 29 03.9**	**-0.3**
OLIL	**Olney**	**67.50**	**54**	IAmb	IAmb	02 29 07.2	
	comp=Z,200nm,1.1s						
T42A	**Van Buren**	**67.51**	**57**	IAmb	IAmb	02 29 06.6	
	comp=Z,124nm,0.8s						
T42A				IAMs_20	IAMs_20	02 58 59.5	
	comp=Z,27µm,18.0s						
M50A	**Fremont**	**67.51**	**49**	IAmb	IAmb	02 29 07.0	
	comp=Z,158nm,0.8s						
NGOA	**Tingoa Renbel**	**67.52**	**184**	P	**P**	**02 29 06.8**	**+2.6**
O48B	**Farmland**	**67.56**	**51**	IAmb	IAmb	02 29 06.4	
	comp=Z,174nm,0.9s						
O48B				IAMs_20	IAMs_20	02 58 21.5	
	comp=Z,27µm,22.0s						
WBO	**Williamsburg**	**67.56**	**41**	IAMs_20	IAMs_20	03 01 41.0	
	comp=Z,26µm,18.0s						
GKP	**Gorka Klasztor**	**67.61**	**339**	*e*P	**P**	**02 29 04.4**	**+0.1**
GKP				*e*S	**S**	**02 38 00.7**	**+0.1**
GKP				*e*L	L	03 00 07.5	
	comp=Z,54µm,22.1s						
GKP	**Gorka Klasztor**	**67.61**	**339**	*e*P	**P**	**02 29 04.5**	**+0.1**
FW06	**Azle**	**67.62**	**64**	IAmb	IAmb	02 29 07.9	
	comp=Z,147nm,1.0s						
FW06				IAMs_20	IAMs_20	02 59 46.9	
	comp=Z,29µm,21.0s						
LAWE	**Loch Awe, Argy**	**67.64**	**354**	*e*P	**P**	**02 29 06.4**	**+1.9**
LAWE				IAMs_20	IAMs_20	02 53 05.1	
	comp=Z,17µm,26.0s						
BKNR	**BIKANER**	**67.67**	**287**	*e*P	**P**	**02 29 03.4**	**-1.8**
SAND	**Sanderson**	**67.68**	**69**	IAmb	IAmb	02 29 17.7	
	comp=Z,232nm,1.2s						
GOF	**Gofitskoye**	**67.68**	**319**	*c i*P	**P**	**02 29 05.4**	**+0.4**
GOF				*e*S	**S**	**02 38 00.9**	**-0.8**
FW07	**Weatherford**	**67.72**	**64**	IAmb	IAmb	02 29 09.3	
	comp=Z,194nm,1.1s						
MNTQ	**Montreal, Queb**	**67.73**	**40**	IAmb	IAmb	02 29 08.0	
	comp=Z,202nm,1.0s						
MNTQ				IAMs_20	IAMs_20	03 01 04.6	
	comp=Z,22µm,19.0s						
MAK	**Makhachkala**	**67.76**	**315**	*c i*P	**P**	**02 29 03.8**	**-1.6**
MAK				*e*		02 31 35.0	
MAK				*e*PPP	PPP	02 33 12.4	
MAK				*e*S	**S**	**02 38 01.5**	**-1.1**
MAK				*e*SS	**SS**	**02 42 17.4**	**-5.4**
MAK				pmax	pmax		
	comp=Z,4µm,2.4s						
MAK				pmax	pmax		
	comp=Z,707nm,1.5s						
MAK				smax	smax		
	comp=E,14µm,7.7s						
MAK				smax	smax		
	comp=N,21µm,11.2s						
MAK				MLR	MLR		
	comp=Z,48µm,13.0s						
MAK				MLR	MLR		
	comp=E,97µm,13.0s						
MAK				MLR	MLR		
	comp=N,120µm,14.0s						
R9F13	**Warsaw-Wawer**	**67.77**	**336**	*e*P	**P**	**02 29 06.1**	**+0.7**
	comp=N,8.8nm,0.7s						
R9F13				*e*S	**S**	**02 38 04.0**	**+1.5**
ESY	**Stoneypath**	**67.78**	**352**	*e*P	**P**	**02 29 06.2**	**+0.8**
PECO	**Prince Edward**	**67.82**	**43**	IAmb	IAmb	02 29 08.4	
	comp=Z,194nm,1.1s						
EDI	**Edinburgh**	**67.82**	**352**	*e*P	**P**	**02 29 07.4**	**+1.7**
EDI				IAMs_20	IAMs_20	02 54 02.2	
	comp=Z,16µm,23.0s						
S44A	**Carbondale**	**67.82**	**55**	P	**P**	**02 29 04.6**	**-1.3**
S44A				IAmb	IAmb	02 29 08.8	
	comp=Z,208nm,0.9s						
SIUC	**Southern Illin**	**67.82**	**55**	IAmb	IAmb	02 29 08.8	
	comp=Z,236nm,1.0s						
MEDO	**Medina**	**67.90**	**45**	IAMs_20	IAMs_20	03 00 01.3	
	comp=Z,16µm,19.0s						
LPIG	**La Paz**	**67.91**	**80**	LR	LR	02 56 45.1	
	comp=Z,7µm,18.5s,baz=320,slow=34						
D62A	**Allapoint, All**	**67.94**	**36**	IAmb	IAmb	02 29 09.7	
	comp=Z,230nm,0.8s						
FCAR	**Ozark Folk Cen**	**67.94**	**58**	IAmb	IAmb	02 29 09.8	
	comp=Z,246nm,1.0s						
FCAR				IAMs_20	IAMs_20	02 58 27.1	
	comp=Z,26µm,20.0s						
CGM3	**Cape Girardeau**	**67.96**	**56**	IAmb	IAmb	02 29 18.1	
	comp=Z,219nm,1.6s						
O49A	**Covington**	**67.97**	**50**	IAmb	IAmb	02 29 10.1	
	comp=Z,242nm,1.1s						
O49A				IAMs_20	IAMs_20	03 01 49.3	
	comp=Z,25µm,18.0s						
PBMO	**Poplar Bluff**	**68.02**	**57**	IAmb	IAmb	02 29 18.9	
	comp=Z,314nm,1.1s						
PGBU	**Glenifferbraes**	**68.03**	**353**	*e*P	**P**	**02 29 08.0**	**+1.1**
PGBU				IAMs_20	IAMs_20	02 53 18.1	
	comp=Z,35µm,26.2s						
ERBR	**Yeremizino-Bor**	**68.04**	**321**	*e*P	**P**	**02 29 06.7**	**-0.5**
ERBR				*e*S	**S**	**02 38 05.3**	**-0.7**
ERBR				pmax	pmax		
	comp=Z,377nm,1.1s						
ERBR				MLR	MLR		
	comp=Z,37µm,15.0s						
J55A	**Hilton**	**68.07**	**44**	IAmb	IAmb	02 29 10.2	
	comp=Z,365nm,1.3s						
J55A				IAMs_20	IAMs_20	03 02 41.6	
	comp=Z,24µm,19.0s						
P48A	**Milroy**	**68.09**	**51**	IAmb	IAmb	02 29 09.8	
	comp=Z,184nm,0.9s						
LONY	**Lake Ozonia**	**68.14**	**41**	IAMs_20	IAMs_20	03 02 01.4	
	comp=Z,28µm,18.0s						
LONY	**Lake Ozonia**	**68.14**	**41**	⇑P	**P**	**02 29 06.2**	**-1.7**
GUNA	**GUNA**	**68.15**	**282**	*e*P	**P**	**02 29 07.7**	**-0.6**
AJM	**Ajmer**	**68.16**	**285**	*e*P	**P**	**02 29 08.0**	**-0.3**
ERPA	**Erie**	**68.17**	**46**	P	**P**	**02 29 06.6**	**-1.5**
ERPA				IAmb	IAmb	02 29 11.2	
	comp=Z,194nm,0.9s						
ERPA				IAMs_20	IAMs_20	03 00 47.5	
	comp=Z,16µm,19.0s						
ERPA	**Erie**	**68.17**	**46**	⇑P	**P**	**02 29 07.3**	**-0.8**
FW13	**Cleburne**	**68.18**	**64**	IAmb	IAmb	02 29 20.1	
	comp=Z,168nm,0.9s						
E62A	**Clayton Lake**	**68.19**	**37**	IAMs_20	IAMs_20	03 01 47.4	
	comp=Z,25µm,21.0s						
HPIG		**68.19**	**74**	IAmb	IAmb	02 29 13.6	
	comp=Z,492nm,2.0s						
BSEG	**Bad Segeberg**	**68.21**	**344**	*e*P	**P**	**02 29 08.6**	**+0.5**
	comp=Z,323nm,1.4s,baz=16,slow=6.1						
BSEG				*e*S	**S**	**02 38 10.3**	**+2.7**
	baz=16,slow=12						
BEL	**Belsk**	**68.21**	**336**	*e*P	**P**	**02 29 08.9**	**+0.8**
BEL				*e*S	**S**	**02 38 08.9**	**+1.2**
BEL				*e*L	L	02 57 25.0	
	comp=Z,46µm,27.2s						
BRDY	**Brady**	**68.23**	**66**	IAmb	IAmb	02 29 12.8	
	comp=Z,551nm,2.0s						
LCAR	**Lake Charles**	**68.26**	**58**	IAMs_20	IAMs_20	02 59 01.4	
	comp=Z,20µm,19.0s						
FW14	**Alvarado**	**68.26**	**64**	IAMs_20	IAMs_20	03 00 22.9	
	comp=Z,22µm,19.0s						
FRNY	**Flat Rock**	**68.32**	**40**	IAMs_20	IAMs_20	03 01 30.0	
	comp=Z,23µm,18.0s						
USIN	**University of**	**68.33**	**54**	IAmb	IAmb	02 29 12.0	
	comp=Z,196nm,0.8s						
MIAR	**Mount Ida**	**68.33**	**60**	IAmb	IAmb	02 29 13.3	
	comp=Z,345nm,1.2s						
MIAR				IAMs_20	IAMs_20	02 58 36.4	
	comp=Z,31µm,20.0s						
MIAR	**Mount Ida**	**68.33**	**60**	⇑P	**P**	**02 29 08.7**	**-0.5**
HLG	**Helgoland**	**68.33**	**345**	⇑P	**P**	**02 29 09.7**	**+0.8**
HLG	**Helgoland**	**68.33**	**345**	*e*P	**P**	**02 29 09.4**	**+0.6**
	comp=Z,626nm,1.5s,baz=16,slow=6.1						
HLG				*e*S	**S**	**02 38 11.8**	**+2.7**
	baz=16,slow=12						
FW16	**Waxahatchie**	**68.34**	**64**	IAmb	IAmb	02 29 48.4	
	comp=Z,508nm,2.0s						
WHAR	**Wooly Hollow**	**68.35**	**59**	IAmb	IAmb	02 29 12.2	
	comp=Z,282nm,1.0s						
WHAR				IAMs_20	IAMs_20	02 58 48.9	
	comp=Z,28µm,20.0s						
EKA	**Eskdalemuir Ar**	**68.41**	**352**	P	**P**	**02 29 09.3**	**-0.1**
	comp=Z,173nm,0.8s,baz=16,slow=5.0,SNR=110						
EKA				PKPPKP	P'P'df	02 57 19.4	-14
	comp=Z,14nm,0.9s,baz=160,slow=2.3,SNR=16						
	comp=Z,173nm,0.8s						
ESK	**Eskdalemuir**	**68.43**	**352**	P	**P**	**02 29 09.1**	**-0.4**
ESK				IAmb	IAmb	02 29 13.5	
	comp=Z,270nm,0.9s						
ESK	**Eskdalemuir**	**68.43**	**352**	*e*P	**P**	**02 29 11.2**	**+1.7**
ESK				IAMs_20	IAMs_20	02 54 19.4	
	comp=Z,16µm,22.8s						
SLBS	**Sierra La Lagu**	**68.44**	**79**	P	**P**	**02 29 10.6**	**+0.4**
SLBS				IAmb	IAmb	02 29 15.7	
	comp=Z,471nm,1.8s						
SLBS	**Sierra La Lagu**	**68.44**	**79**	⇑P	**P**	**02 29 11.2**	**+1.0**
WHTX	**Lake Whitney,**	**68.46**	**65**	IAmb	IAmb	02 29 13.3	
	comp=Z,155nm,1.1s						
WHTX				IAMs_20	IAMs_20	03 00 13.1	
	comp=Z,30µm,20.0s						
JCT	**Junction City**	**68.47**	**67**	IAmb	IAmb	02 29 14.2	
	comp=Z,286nm,1.0s						
JCT				IAMs_20	IAMs_20	03 00 02.5	
	comp=Z,22µm,19.0s						
JCT	**Junction City**	**68.47**	**67**	⇑P	**P**	**02 29 09.8**	**-0.4**
MMNY	**Mt. Morris Dam**	**68.48**	**44**	IAMs_20	IAMs_20	03 03 28.7	
	comp=Z,18µm,18.0s						
WVNY	**West Valley, N**	**68.48**	**45**	IAMs_20	IAMs_20	03 02 11.7	
	comp=Z,26µm,19.0s						
ACSO	**Alum Creek Sta**	**68.51**	**49**	IAMs_20	IAMs_20	03 02 18.6	
	comp=Z,30µm,19.0s						
ACSO	**Alum Creek Sta**	**68.51**	**49**	⇑P	**P**	**02 29 09.4**	**-0.9**
TREL	**Terrell**	**68.55**	**63**	IAmb	IAmb	02 29 13.7	
	comp=Z,200nm,0.9s						
J57A	**Williamstown**	**68.64**	**43**	IAmb	IAmb	02 29 13.6	
	comp=Z,197nm,1.2s						
Z38A	**Mt. Pleasant**	**68.67**	**62**	IAmb	IAmb	02 29 23.2	
	comp=Z,223nm,0.9s						
Z38A				IAMs_20	IAMs_20	03 01 31.7	
	comp=Z,21µm,19.0s						
DGPR	**DIGLIPUR**	**68.69**	**262**	*e*P	**P**	**02 29 11.7**	**+0.1**
NEWG	**New Galloway**	**68.70**	**353**	*e*P	**P**	**02 29 12.9**	**+1.7**
NEWG				IAMs_20	IAMs_20	02 54 51.0	
	comp=Z,14µm,21.8s						
WCI	**Wyandotte Cave**	**68.72**	**53**	P	**P**	**02 29 10.5**	**-1.1**
WCI				IAmb	IAmb	02 29 14.4	
	comp=Z,164nm,0.8s						
WCI	**Wyandotte Cave**	**68.72**	**53**	P	**P**	**02 29 10.5**	**-1.1**
WCI				pmax	pmax		
	comp=Z,164nm,0.9s						
WCI				MLR	MLR		
	comp=Z,52µm,20.0s						
WCI	**Wyandotte Cave**	**68.72**	**53**	⇑P	**P**	**02 29 10.9**	**-0.7**
X40A	**Basin Creek Fa**	**68.73**	**60**	IAmb	IAmb	02 29 14.5	
	comp=Z,177nm,1.0s						
X40A				IAMs_20	IAMs_20	02 58 48.2	
	comp=Z,32µm,21.0s						
UALR	**University of**	**68.74**	**59**	IAmb	IAmb	02 29 24.6	
	comp=Z,160nm,1.1s						
UALR				IAMs_20	IAMs_20	02 59 22.2	
	comp=Z,30µm,20.0s						
KVAR	**Kislovodsk Arr**	**68.76**	**319**	LR	LR	03 02 25.8	
	comp=Z,45µm,20.5s,baz=278,slow=39						
KIV	**Kislovodsk**	**68.76**	**319**	*e*P	**P**	**02 29 12.3**	**+0.4**
KIV	**Kislovodsk**	**68.76**	**319**	P	**P**	**02 29 12.0**	**+0.1**
KIV	**Kislovodsk**	**68.76**	**319**	P	**P**	**02 29 12.8**	**+0.9**
KIV				P	**P**	**02 29 12.8**	**+0.9**
KIV				P	**P**	**02 29 12.8**	**+0.9**
KIV	**Kislovodsk**	**68.76**	**319**	⇑P	**P**	**02 29 11.4**	**-0.5**
KIV	**Kislovodsk**	**68.76**	**319**	*e*P	**P**	**02 29 12.4**	**+0.6**
KIV				*e*		02 31 42.4	
KIV				*e*PPP	PPP	02 33 21.3	
KIV				*e*S	**S**	**02 38 16.5**	**+1.7**
KIV				*e*SS	**SS**	**02 42 42.8**	**+4.3**
KIV				pmax	pmax		
	comp=Z,2µm,4.1s						
KIV				pmax	pmax		
	comp=Z,204nm,1.1s						
KIV				MLR	MLR		
	comp=Z,29µm,17.0s						
KIV	**Kislovodsk**	**68.76**	**319**	*i* P	**P**	**02 29 12.5**	**+0.6**
	SNR=63						
KIV	**Kislovodsk**	**68.76**	**319**	P	**P**	**02 29 12.3**	**+0.4**
KIV				S	**S**	**02 38 14.9**	**+0.1**
BKB	**Balikpapan**	**68.78**	**232**	P	**P**	**02 29 13.8**	**+1.6**
EDMD	**Edmundbyers**	**68.81**	**351**	*e*P	**P**	**02 29 13.4**	**+1.5**
EDMD				IAMs_20	IAMs_20	02 51 41.1	
	comp=Z,21µm,38.1s						
SRIT	**Nakonsritamara**	**68.83**	**253**	P	**P**	**02 29 13.2**	**+0.7**
CLGH	**Cloghs, Cushen**	**68.85**	**354**	*e*P	**P**	**02 29 13.6**	**+1.5**
GNAR	**Gosnell**	**68.88**	**57**	IAMs_20	IAMs_20	02 59 50.7	
	comp=Z,28µm,19.0s						
KBZ	**Khabaz**	**68.88**	**318**	P	**P**	**02 29 13.3**	**+0.9**
	comp=Z,408nm,0.9s,baz=44,slow=6.6,SNR=162						
KBZ				PKPPKP	**P'P'df**	**02 57 28.4**	**-3.0**
	comp=Z,2.4nm,0.8s,baz=240,slow=10,SNR=4.6						
KBZ				LR	LR	03 03 09.8	
	comp=Z,61µm,20.6s,baz=30,slow=39						
	comp=Z,408nm,0.9s						
DRIO	**Del Rio**	**68.89**	**69**	IAmb	IAmb	02 29 16.6	
	comp=Z,166nm,0.9s						
HBAR	**Harrisburg**	**68.91**	**57**	IAMs_20	IAMs_20	02 59 20.7	
	comp=Z,24µm,20.0s						
AKT	**Akhty**	**68.91**	**314**	*e*P	**P**	**02 29 12.1**	**-0.8**
AKT				*e*		02 29 33.7	
AKT				pmax	pmax		
	comp=Z,1µm,2.0s						
AKT				pmax	pmax		
	comp=E,240nm,1.2s						
AKT				pmax	pmax		
	comp=N,237nm,1.2s						
N53A	**Lisbon**	**68.93**	**47**	IAmb	IAmb	02 29 15.5	
	comp=Z,250nm,0.9s						
IDGL	**Inch Island, C**	**68.94**	**355**	*e*P	**P**	**02 29 14.3**	**+1.7**
IDGL	**Inch Island, C**	**68.94**	**355**	P	**P**	**02 29 13.0**	**+0.3**
SHA1	**Shidzhatmaz**	**68.96**	**319**	*c i*P	**P**	**02 29 13.8**	**+0.5**
GORT1	**Trebel**	**68.96**	**343**	*e*P	**P**	**02 29 13.4**	**+0.7**
	comp=Z,605nm,1.4s,baz=16,slow=6.1						
GAL1	**Galloway**	**68.98**	**353**	*e*P	**P**	**02 29 13.8**	**+0.9**
GAL1				IAMs_20	IAMs_20	02 53 56.2	
	comp=Z,17µm,25.9s						
RUE	**Ruedersdorf**	**69.02**	**341**	*e*P	**P**	**02 29 13.2**	**+0.1**
RUE	**Ruedersdorf**	**69.02**	**341**	*e*P	**P**	**02 29 13.5**	**+0.3**
	comp=Z,423nm,1.4s,baz=16,slow=6.1						
RUE				*e*S	**S**	**02 38 19.3**	**+2.0**
	baz=16,slow=12						
K57A	**Scipio Center**	**69.02**	**43**	IAmb	IAmb	02 29 16.0	
	comp=Z,227nm,1.2s						
K57A				IAMs_20	IAMs_20	03 03 12.9	
	comp=Z,27µm,19.0s						
VT1	**Waterbury**	**69.05**	**40**	IAMs_20	IAMs_20	03 01 54.8	
	comp=Z,27µm,19.0s						
RAGD	**RAYAGADA**	**69.06**	**273**	*e*P	**P**	**02 29 13.6**	**-0.4**
G62A	**West of Eustis**	**69.07**	**38**	P	**P**	**02 29 12.8**	**-0.8**
G62A				IAmb	IAmb	02 29 17.6	
	comp=Z,233nm,1.1s						
GDLE	**Glaisdale, N Y**	**69.11**	**351**	*e*P	**P**	**02 29 15.0**	**+1.3**
GDLE				IAMs_20	IAMs_20	03 06 38.0	
	comp=Z,20µm,16.9s						
L56A	**Greenwood**	**69.12**	**44**	IAMs_20	IAMs_20	03 00 47.6	
	comp=Z,21µm,19.0s						
KESW	**Keswick, Cumbr**	**69.14**	**352**	*e*P	**P**	**02 29 15.6**	**+1.6**
KESW				IAMs_20	IAMs_20	02 54 53.5	
	comp=Z,16µm,24.1s						
J59A	**Piesco**	**69.16**	**42**	IAMs_20	IAMs_20	03 01 31.4	
	comp=Z,25µm,20.0s						
R49A	**Shelbyville**	**69.17**	**52**	IAmb	IAmb	02 29 26.0	
	comp=Z,140nm,1.0s						
BHPL	**Bhopal**	**69.22**	**281**	*e*P	**P**	**02 29 14.4**	**-0.6**
O53A	**New Philadelph**	**69.24**	**48**	IAmb	IAmb	02 29 17.3	
	comp=Z,226nm,0.9s						
F64A	**Sherman**	**69.24**	**36**	IAmb	IAmb	02 29 17.5	
	comp=Z,183nm,0.8s						
Q51A	**Peebles**	**69.36**	**50**	IAmb	IAmb	02 29 19.0	
	comp=Z,308nm,1.4s						
Q51A				IAMs_20	IAMs_20	03 05 14.0	
	comp=Z,22µm,18.0s						
435B	**Jarrell**	**69.36**	**66**	IAmb	IAmb	02 29 19.8	
	comp=Z,294nm,1.2s						
P52A	**Corning**	**69.37**	**49**	IAmb	IAmb	02 29 17.8	
	comp=Z,239nm,0.8s						
T47A	**Sharon Grove**	**69.38**	**54**	IAmb	IAmb	02 29 19.0	
	comp=Z,174nm,0.9s						
H62A	**Milan**	**69.41**	**39**	IAmb	IAmb	02 29 19.5	
	comp=Z,257nm,1.0s						
H62A				IAMs_20	IAMs_20	03 03 08.9	
	comp=Z,24µm,20.0s						
SAUI	**Saumlaki**	**69.41**	**215**	P	**P**	**02 29 18.2**	**+2.2**
KSM	**Kuching**	**69.42**	**240**	P	**P**	**02 29 17.7**	**+1.6**
LBNH	**Lisbon**	**69.43**	**40**	IAmb	IAmb	02 29 21.1	
	comp=Z,196nm,1.2s						
LBNH	**Lisbon**	**69.43**	**40**	⇑P	**P**	**02 29 15.3**	**-0.6**
PKME	**Peaks-Kenny Pk**	**69.45**	**37**	P	**P**	**02 29 14.8**	**-1.2**
PKME	**Peaks-Kenny Pk**	**69.45**	**37**	⇑P	**P**	**02 29 15.5**	**-0.5**
RETH	**Rethem/Aller,**	**69.52**	**344**	*e*P	**P**	**02 29 16.6**	**+0.4**
	comp=Z,307nm,1.4s,baz=16,slow=6.1						
HDBT	**Hernando Brdge**	**69.52**	**57**	IAMs_20	IAMs_20	02 59 49.8	
	comp=Z,18µm,20.0s						
ACCN	**Adirondack Com**	**69.54**	**41**	IAMs_20	IAMs_20	03 02 50.4	
	comp=Z,25µm,19.0s						
R50A	**Paris**	**69.55**	**51**	IAmb	IAmb	02 29 19.7	
	comp=Z,167nm,0.9s						
IOMK	**Kirk Michael**	**69.58**	**353**	*e*P	**P**	**02 29 18.2**	**+1.6**
IOMK				IAMs_20	IAMs_20	02 54 13.5	
	comp=Z,8µm,25.3s						
MET	**Memphis--Engin**	**69.60**	**57**	IAMs_20	IAMs_20	02 59 53.0	
	comp=Z,22µm,20.0s						
FLTG	**Flechtingen**	**69.61**	**343**	⇑P	**P**	**02 29 16.7**	**-0.1**
FLTG	**Flechtingen**	**69.61**	**343**	*e*P	**P**	**02 29 16.5**	**-0.3**
	comp=Z,218nm,1.4s,baz=16,slow=6.1						
FLTG				*e*S	**S**	**02 38 24.0**	**-0.2**
	baz=16,slow=12						
NRDL	**Niedersach Rie**	**69.63**	**343**	*e*P	**P**	**02 29 17.1**	**+0.2**
	comp=Z,196nm,1.4s,baz=16,slow=6.1						
NRDL				*e*S	**S**	**02 38 25.8**	**+1.4**
	baz=16,slow=12						
O54A	**Avella**	**69.64**	**48**	IAmb	IAmb	02 29 19.9	
	comp=Z,209nm,1.0s						
HPK	**Haverah Park**	**69.65**	**351**	*e*P	**P**	**02 29 18.6**	**+1.6**
HPK				IAMs_20	IAMs_20	03 07 06.2	
	comp=Z,16µm,17.9s						
BINY	**Binghamton**	**69.68**	**43**	IAMs_20	IAMs_20	03 01 52.3	
	comp=Z,27µm,18.0s						
BINY	**Binghamton**	**69.68**	**43**	⇑P	**P**	**02 29 16.2**	**-1.3**
CCAR	**Cane Creek**	**69.71**	**59**	IAMs_20	IAMs_20	02 59 52.0	
	comp=Z,27µm,20.0s						
SORM	**Soroca**	**69.72**	**330**	⇑P	**P**	**02 29 17.4**	**-0.2**
SORM	**Soroca**	**69.72**	**330**	P	**P**	**02 29 17.4**	**-0.2**
Z41A	**Richland Creek**	**69.75**	**60**	IAmb	IAmb	02 29 29.2	
	comp=Z,238nm,1.1s						
WVT	**Waverly**	**69.76**	**55**	P	**P**	**02 29 17.0**	**-1.0**
WVT				IAmb	IAmb	02 29 21.4	
	comp=Z,281nm,1.1s						
WVT	**Waverly**	**69.76**	**55**	P	**P**	**02 29 17.0**	**-1.0**
WVT				pmax	pmax		
	comp=Z,281nm,1.1s						
WVT				MLR	MLR		
	comp=Z,38µm,19.0s						
WVT	**Waverly**	**69.76**	**55**	⇑P	**P**	**02 29 17.4**	**-0.6**
HNH	**Hanover**	**69.76**	**40**	IAMs_20	IAMs_20	03 02 14.3	
	comp=Z,20µm,20.0s						
NRDN	**NARMADA NAGAR**	**69.78**	**281**	*e*P	**P**	**02 29 17.7**	**-0.7**
P53A	**Whipple**	**69.80**	**49**	IAmb	IAmb	02 29 21.5	
	comp=Z,227nm,1.1s						
JASL	**Jaisalmer**	**69.81**	**288**	*e*P	**P**	**02 29 17.6**	**-0.9**
Q52A	**Bidwell**	**69.87**	**50**	IAmb	IAmb	02 29 21.8	
	comp=Z,286nm,1.2s						
Q52A				IAMs_20	IAMs_20	03 01 57.7	
	comp=Z,24µm,18.0s						
ANN	**Anapa**	**69.89**	**323**	*e*P	**P**	**02 29 17.2**	**-1.5**
ANN				*e*S	**S**	**02 38 27.1**	**-0.8**
ANN				pmax	pmax		
	comp=Z,69nm,0.7s						
ANN				MLR	MLR		
	comp=Z,37µm,14.0s						
ASSE	**Asse, Remlinge**	**69.89**	**343**	*e*P	**P**	**02 29 18.9**	**+0.3**

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       comp=Z,324nm,1.4s,baz=16,slow=6.1
ASSE                              eS        S         02 38 30.1 +2.6
       baz=16,slow=12
ILTH   Belurgan, Co L   69.92 354 eP        P         02 29 20.2 +1.5
ILTH   Belurgan, Co L   69.92 354  P        P         02 29 18.5 -0.2
OJC    Ojcow            69.94 336 eP        P         02 29 19.4 +0.4
OJC                               eS        S         02 38 29.1 +0.7
OJC                               eL        L         02 57 43.7
       comp=Z,40µm,29.1s
I62A   Tamworth         69.96  39  IAmb     IAmb      02 29 22.9
       comp=Z,440nm,1.7s
I62A                               IAMs_20  IAMs_20   03 02 25.4
       comp=Z,27µm,19.0s
M57A   Sunshine Farm,   69.97  45  IAMs_20  IAMs_20   03 01 24.1
       comp=Z,24µm,20.0s
J61A   Chester          69.98  40  IAmb     IAmb      02 29 22.7
       comp=Z,240nm,1.5s
J61A                               IAMs_20  IAMs_20   03 01 44.0
       comp=Z,17µm,19.0s
NGP    Nagpur           69.99 278 eP        P         02 29 19.0 -0.7
NATX   Nacogdoches      70.05  63  IAmb     IAmb      02 29 24.1
       comp=Z,243nm,0.8s
NATX                               IAMs_20  IAMs_20   03 02 09.1
       comp=Z,26µm,19.0s
NATX   Nacogdoches      70.05  63 ⇑P        P         02 29 20.2 +0.3
L59A   Walton           70.05  43  IAmb     IAmb      02 29 22.0
       comp=Z,186nm,0.8s
L59A                               IAMs_20  IAMs_20   03 01 56.0
       comp=Z,24µm,19.0s
I63A   Otisfield        70.07  39  IAmb     IAmb      02 29 24.0
       comp=Z,276nm,1.1s
I63A                               IAMs_20  IAMs_20   03 03 39.3
       comp=Z,27µm,18.0s
G65A   Princeton        70.08  36  IAmb     IAmb      02 29 23.6
       comp=Z,358nm,1.2s
G65A                               IAMs_20  IAMs_20   03 03 51.7
       comp=Z,27µm,21.0s
KSP    Ksiaz            70.10 339 eP        P         02 29 20.1 +0.2
KSP                               eS        S         02 38 29.8 -0.4
KSP                               eL        L         03 01 24.1
       comp=Z,41µm,22.4s
TRY    Troy             70.10  42  IAMs_20  IAMs_20   03 02 01.3
       comp=Z,23µm,18.0s
DRBR   Darabani         70.14 331 ⇓P        P         02 29 19.6 -0.6
VSLR   Vesyoloye        70.15 320c iP       P         02 29 20.6 +0.2
VSLR                               pmax     pmax
       comp=Z,360nm,0.9s
VSLR                               MLR      MLR
       comp=Z,20µm,16.0s
SOC    Sochi            70.16 320 eP        P         02 29 18.5 -1.9
SOC                               e                   02 31 50.9
SOC                               ePPP      PPP       02 33 32.2
SOC                               eS        S         02 38 31.1  0.0
SOC                                pmax     pmax
       comp=Z,145nm,0.9s
SOC                                MLR      MLR
       comp=Z,28µm,14.0s
IBBN   Ibbenburen       70.17 345 eP        P         02 29 20.6 +0.3
       comp=Z,360nm,1.1s,baz=16,slow=6.1
IBBN                              eS        S         02 38 32.4 +1.5
       baz=16,slow=12
LBWR   Ladybower, Pea   70.21 351 eP        P         02 29 22.3 +1.7
LBWR                               IAMs_20  IAMs_20   03 07 22.6
       comp=Z,17µm,16.4s
CLZ    Clausthal        70.22 343 eP        P         02 29 21.2 +0.5
       comp=Z,464nm,1.4s,baz=16,slow=6.1
CLZ                               eS        S         02 38 32.7 +1.1
       baz=16,slow=12
SSPA   Standing Stone   70.27  46  P        P         02 29 19.2 -2.0
SSPA                               IAmb     IAmb      02 29 23.6
       comp=Z,163nm,0.8s
SSPA   Standing Stone   70.27  46  IAMs_20  IAMs_20   03 02 12.0
       comp=Z,22µm,21.0s
SSPA   Standing Stone   70.27  46 ⇓P        P         02 29 19.9 -1.3
CLL    Collm            70.28 341  IAmb     IAmb      02 29 22.9
       comp=Z,366nm,1.4s
CLL                                IAMs_20  IAMs_20   03 02 57.4
       comp=Z,25µm,21.0s
CLL    Collm            70.28 341⇑iP        P         02 29 21.0  0.0
CLL                               eS        S         02 38 34.0 +1.7
CLL                                pmax     pmax
       comp=Z,371nm,1.4s
CLL                                MLR      MLR
       comp=Z,25µm,21.2s
CLL    Collm            70.28 341 eP        P         02 29 20.8 -0.2
       comp=Z,348nm,1.4s,baz=16,slow=6.1
CLL                               eS        S         02 38 33.1 +0.8
       baz=16,slow=12
CLL    Collm            70.28 341⇑iP        P         02 29 21.0  0.0
       comp=Z,371nm,1.4s
CLL                               ePmax               02 29 24.0
CLL                               i x       x         02 29 27.3
CLL                               ePP       PP        02 31 58.0 +2.1
CLL                               ePPP      PPP       02 33 36.0
CLL                               eS        S         02 38 34.0 +1.7
CLL                               ePS       PnS       02 38 57.0 -1.7
CLL                               ePPS      PPS       02 39 08.0
CLL                               ex        x         02 39 34.0
CLL                               eSS       SS        02 43 03.0 +1.7
CLL                               eSSS      SSS       02 46 24.0
CLL                               ex        x         02 48 24.0
CLL                               ex        x         02 57 18.0
CLL                               ePKPPKPdfP'P'df     02 57 21.0 -8.9
       comp=Z,25nm,1.4s
CLL                                AMS      AMS       03 02 00.0
       comp=Z,25µm,21.2s
CLL                                AMS      AMS       03 07 00.0
MCWV   Mont Chateau     70.30  47  IAmb     IAmb      02 29 24.2
       comp=Z,175nm,0.8s
MCWV   Mont Chateau     70.30  47 ⇑P        P         02 29 20.8 -0.6
KSPA   Keystone Colle   70.31  44  IAMs_20  IAMs_20   03 04 11.1
       comp=Z,21µm,18.0s
OXF    Oxford           70.35  57  IAMs_20  IAMs_20   03 00 23.8
       comp=Z,26µm,20.0s
OXF    Oxford           70.35  57 ⇑P        P         02 29 21.2 -0.5
STHS   Stebnicka Huta   70.37 335 eP        P         02 29 21.7 +0.1
STHS                               pmax     pmax
       comp=Z,154nm,1.2s
STHS   Stebnicka Huta   70.37 335 eP        P         02 29 21.7 +0.1
T50A   Nancy            70.37  52  IAmb     IAmb      02 29 25.4
       comp=Z,207nm,1.1s
U49A   Red Boiling Sp   70.37  53  IAmb     IAmb      02 29 25.5
       comp=Z,283nm,1.4s
OSTC   Ostas            70.39 339 eP        P         02 29 22.4 +0.7
OSTC                               AMS      AMS       03 04 10.0
       comp=Z,40µm,17.1s
OSTC   Ostas            70.39 339 eP        P         02 29 22.4 +0.7
OSTC                               MLR      MLR
       comp=Z,40µm,17.1s
CHVC   Chvalec          70.39 339 eP        P         02 29 22.6 +0.8
CHVC                              eS        S         02 38 39.1 +5.5
CHVC                               AMS      AMS       03 04 10.0
       comp=Z,35µm,16.6s
CHVC   Chvalec          70.39 339 eP        P         02 29 22.6 +0.8
CHVC                               MLR      MLR
       comp=Z,35µm,16.6s
GGN    Saint George     70.39  36  IAmb     IAmb      02 29 25.3
       comp=Z,294nm,1.1s
GGN                                IAMs_20  IAMs_20   03 04 53.8
       comp=Z,21µm,18.0s
833A   Chaparral WMA,   70.41  68  IAmb     IAmb      02 29 34.8
       comp=Z,204nm,1.0s
S51A   Beattyville      70.41  51  IAMs_20  IAMs_20   03 01 41.9
       comp=Z,27µm,18.0s
WME    Myndd Eilian     70.42 353 eP        P         02 29 22.3 +0.5
WPS    Cemaes, Angles   70.43 353 eP        P         02 29 23.0 +1.2
WPS                                IAMs_20  IAMs_20   02 54 52.9
       comp=Z,16µm,28.4s
Q54A   Coxs Mills       70.46  49  IAmb     IAmb      02 29 25.7
       comp=Z,418nm,1.5s
UPC    Upice            70.47 339  AMS      AMS       03 01 10.0
       comp=Z,43µm,20.6s
BRG    Berggiesshubel   70.53 340 eP        P         02 29 22.5  0.0
       comp=Z,208nm,1.4s,baz=16,slow=6.1
BRG                               eS        S         02 38 37.5 +2.3
       baz=16,slow=12
BRG    Berggiesshubel   70.53 340 eP        P         02 29 22.6 +0.1
BRG                                Amp                02 29 25.3
       comp=Z,208nm,1.4s
BRG    Berggiesshubel   70.53 340  S        S         02 38 38.0 +2.9
BRG    Berggiesshubel   70.53 340  SS       SS        02 43 10.0 +4.9
WLF1   Llynfaes         70.53 353 eP        P         02 29 23.8 +1.3
WLF1                               IAMs_20  IAMs_20   02 54 44.8
       comp=Z,28µm,22.1s
V48A   Smith Brothers   70.54  55  IAmb     IAmb      02 29 25.9
       comp=Z,197nm,0.9s
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V48A                               IAMs_20  IAMs_20   03 01 24.6
       comp=Z,24µm,18.0s
EMMW   East Machias     70.56  36  IAmb     IAmb      02 29 26.3
       comp=Z,239nm,0.9s
EMMW                               IAMs_20  IAMs_20   03 04 14.1
       comp=Z,26µm,20.0s
STNC   Stoke            70.56 351 eP        P         02 29 24.4 +1.7
STNC                               IAMs_20  IAMs_20   03 07 35.8
       comp=Z,18µm,16.7s
N58A   Sunbury          70.56  45  IAmb     IAmb      02 29 25.1
       comp=Z,190nm,0.8s
N58A                               IAMs_20  IAMs_20   03 01 41.6
       comp=Z,26µm,20.0s
DPC    Dobruska-Polom   70.56 339 eP        P         02 29 23.7 +0.9
DPC                               eS        S         02 38 36.1 +0.4
DPC                                AMS      AMS       03 04 10.0
       comp=Z,40µm,17.8s
DPC    Dobruska-Polom   70.56 339 eP        P         02 29 23.7 +0.9
DPC                               eS        S         02 38 36.1 +0.4
DPC                                MLR      MLR
       comp=Z,40µm,17.8s
KOLS   Kolonicke sedl   70.57 334 eP        P         02 29 23.6 +0.7
KOLS                               pmax     pmax
       comp=Z,117nm,0.8s
KOLS   Kolonicke sedl   70.57 334 eP        P         02 29 23.6 +0.7
GTTG   Gottingen        70.57 343 eP        P         02 29 23.2 +0.4
       comp=Z,264nm,1.5s,baz=16,slow=6.1
GTTG                              eS        S         02 38 38.4 +2.7
       baz=16,slow=12
NIE    Niedzica         70.58 336 eP        P         02 29 24.0 +1.0
NIE                               eS        S         02 38 38.3 +2.3
NIE                               eL        L         02 59 03.5
       comp=Z,22µm,26.1s
NEUB   Neuenburg        70.60 342 eP        P         02 29 23.0  0.0
       comp=Z,201nm,1.2s,baz=16,slow=6.1
NEUB                              eS        S         02 38 36.3 +0.3
       baz=16,slow=12
KIS    Kishinev         70.63 329⇑iP        P         02 29 23.0 -0.2
       comp=Z,800nm,2.6s
KIS                               i S       S         02 38 37.0 +0.6
KIS                               eL        L         03 01 12.0
KIS                                LRM      MLR       03 04 17.0
       comp=Z,19µm,16.0s
KIS    Kishinev         70.63 329 ⇑P        P         02 29 23.7 +0.5
KIS    Kishinev         70.63 329c iP       P         02 29 23.0 -0.2
KIS                               i S       S         02 38 37.0 +0.6
KIS                                pmax     pmax
       comp=Z,800nm,2.6s
KIS                                MLR      MLR
       comp=Z,19µm,16.0s
AKH    Akhalkalaki      70.64 317 eP        P         02 29 24.9 +1.3
WACR   West Acre        70.65 349 eP        P         02 29 24.1 +0.9
WACR                               IAMs_20  IAMs_20   02 55 15.3
       comp=Z,25µm,27.8s
STEB   Steborice        70.66 338 eP        P         02 29 24.0 +0.7
OKC    Ostrava-Krasne   70.67 337 eP        P         02 29 24.4 +1.0
OKC                               eS        S         02 38 38.0 +1.2
OKC                                AMS      AMS       03 04 00.0
       comp=Z,37µm,16.2s
OKC    Ostrava-Krasne   70.67 337 eP        P         02 29 24.4 +1.0
OKC                               eS        S         02 38 38.0 +1.2
OKC                                MLR      MLR
       comp=Z,37µm,16.2s
IGLA   Glengowla, Co    70.68 356 eP        P         02 29 25.1 +1.7
IGLA   Glengowla, Co    70.68 356  P        P         02 29 23.1 -0.3
K62A   Royalston        70.69  41  IAMs_20  IAMs_20   03 03 36.7
       comp=Z,21µm,18.0s
MILM   Milestii Mici    70.70 329⇑iP        P         02 29 23.0 -0.6
       comp=Z,1µm,2.1s
MILM   Milestii Mici    70.70 329 ePP       PP        02 32 02.0 +2.4
MILM                              i S       S         02 38 37.0 -0.2
       comp=Z,9µm,9.2s
MILM                              eL        L         03 01 07.0
MILM                               LRM      MLR       03 04 20.0
       comp=Z,52µm,16.0s
MILM   Milestii Mici    70.70 329 ⇑P        P         02 29 23.1 -0.6
MILM   Milestii Mici    70.70 329  P        P         02 29 23.0 -0.6
DSB    Dublin           70.70 354  P        P         02 29 23.1 -0.5
DSB    Dublin           70.70 354  IAmb     IAmb      02 29 27.5
       comp=Z,226nm,0.8s
DSB    Dublin           70.70 354  P        P         02 29 23.8 +0.2
DSB    Dublin           70.70 354 ⇑P        P         02 29 23.7 +0.2
L61B   Northampton      70.71  41  IAMs_20  IAMs_20   03 03 37.4
       comp=Z,24µm,19.0s
KRLC   Kraliky          70.73 338 eP        P         02 29 24.4 +0.5
KRLC                               AMS      AMS       03 05 40.0
       comp=Z,32µm,14.4s
KRLC   Kraliky          70.73 338 eP        P         02 29 24.4 +0.5
KRLC                               MLR      MLR
       comp=Z,32µm,14.4s
PVCC   Panska Ves       70.74 340 eP        P         02 29 24.5 +0.7
PVCC                               AMS      AMS       03 07 30.0
       comp=Z,32µm,15.0s
PVCC   Panska Ves       70.74 340 eP        P         02 29 24.5 +0.7
PVCC                               MLR      MLR
       comp=Z,32µm,15.0s
PURM   Purcari          70.75 328 ⇑P        P         02 29 23.8 -0.1
735A   Kenedy           70.80  67  IAMs_20  IAMs_20   03 04 17.2
       comp=Z,21µm,18.0s
IASR   Iasi             70.81 330 ⇑P        P         02 29 24.2 -0.1
RICC   Richard          70.81 340 eP        P         02 29 24.7 +0.4
RICC                              eS        S         02 38 40.1 +1.6
RICC                               AMS      AMS       03 04 40.0
       comp=Z,30µm,15.9s
Y45A   Yeager Farm, C   70.82  58  IAMs_20  IAMs_20   03 02 20.2
       comp=Z,22µm,18.0s
CWF    Charnwood Fore   70.83 351 eP        P         02 29 26.1 +1.8
CWF                                IAMs_20  IAMs_20   02 52 36.6
       comp=Z,27µm,42.0s
FOEL   Foel Wylfa       70.84 352 eP        P         02 29 26.2 +1.8
FOEL                               IAMs_20  IAMs_20   02 56 07.6
       comp=Z,16µm,23.1s
MORC   Moravsky Berou   70.85 338  IAmb     IAmb      02 29 29.2
       comp=Z,202nm,1.0s
MORC                               IAMs_20  IAMs_20   03 03 42.5
       comp=Z,27µm,19.0s
MORC   Moravsky Berou   70.85 338 eP        P         02 29 24.6  0.0
MORC                              eS        S         02 38 38.0 -1.1
MORC   Moravsky Berou   70.85 338 ⇑P        P         02 29 25.4 +0.8
MORC   Moravsky Berou   70.85 338 ⇑P        P         02 29 24.4 -0.3
SIM    Simferopol'      70.86 325 eP        P         02 29 25.0 +0.3
SIM                                pmax     pmax
       comp=Z,290nm,1.4s
SIM                                MLR      MLR
       comp=Z,41µm,15.0s
143A   Socs Landing,    70.88  60  IAMs_20  IAMs_20   03 00 16.9
       comp=Z,21µm,21.0s
HKT    Hockley          70.92  65  P        P         02 29 24.2 -1.0
KAPI   Kappang          70.93 227  P        P         02 29 25.8 +0.4
KAPI   Kappang          70.93 227  LR       LR        03 01 05.5
       comp=Z,3µm,20.7s,baz=18,slow=36
KAPI   Kappang          70.93 227  P        P         02 29 27.5 +2.1
KAPI                               P        P         02 29 27.5 +2.1
KAPI   Kappang          70.93 227  P        P         02 29 27.1 +1.7
KAPI   Kappang          70.93 227c iP       P         02 29 26.1 +0.7
KAPI                               pmax     pmax
       comp=Z,289nm,1.2s
KAPI   Kappang          70.93 227  P        P         02 29 26.1 +0.7
KAPI                               S        S         02 38 40.7 +0.1
PRAR   RASCA            71.01 331 ⇑P        P         02 29 25.4 -0.1
LANS   Liptovska Anna   71.02 336 eP        P         02 29 27.2 +1.5
LANS                               pmax     pmax
       comp=Z,173nm,1.1s
LANS   Liptovska Anna   71.02 336 eP        P         02 29 27.2 +1.5
KSCT   Kent School, K   71.04  42  IAmb     IAmb      02 29 28.2
       comp=Z,292nm,0.9s
KULM   Kulim            71.04 250  IAMs_20  IAMs_20   03 05 42.4
       comp=Z,16µm,18.0s
KULM   Kulim            71.04 250  P        P         02 29 27.0 +0.9
BURAR  Bucovina Array   71.05 332  P        P         02 29 24.9 -1.0
BURAR                              IAmb     IAmb      02 29 29.7
       comp=Z,149nm,0.8s
BURAR  Bucovina Array   71.05 332 ⇑P        P         02 29 26.2 +0.3
BURAR  Bucovina Array   71.05 332  P        P         02 29 26.2 +0.3
HRV    Adam Dziewonsk   71.07  40  P        P         02 29 25.1 -0.9
HRV                                IAMs_20  IAMs_20   03 03 49.9
       comp=Z,22µm,18.0s
HRV    Adam Dziewonsk   71.07  40  P        P         02 29 25.1 -0.9
HRV                                pmax     pmax
       comp=Z,170nm,1.1s
HRV                                MLR      MLR
       comp=Z,22µm,18.0s
BUG    Bochum--Univer   71.09 345 eP        P         02 29 25.9  0.0
       comp=Z,182nm,1.0s,baz=16,slow=6.1
BUG                               eS        S         02 38 43.7 +2.1
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       baz=16,slow=12
KASTN  Kahler Asten     71.15 344 eP        P         02 29 26.6 +0.3
       comp=Z,276nm,1.4s,baz=16,slow=6.1
KASTN                             eS        S         02 38 44.6 +2.2
       baz=16,slow=12
MOX    Moxa             71.17 342 eP        P         02 29 26.7 +0.2
       comp=Z,125nm,1.0s,baz=16,slow=6.1
MOX                               eS        S         02 38 44.6 +2.0
       baz=16,slow=12
MOX                               eL        L         03 03 24.4
       comp=Z,26µm,20.6s
HLM1   Long Mynd        71.18 352 eP        P         02 29 28.2 +1.7
HLM1                               IAMs_20  IAMs_20   03 07 57.0
       comp=Z,18µm,17.2s
MAUC   Maruska          71.18 337 eP        P         02 29 27.6 +1.0
MAUC                              eS        S         02 38 45.6 +2.7
P57A   Homestead Farm   71.20  46  IAmb     IAmb      02 29 29.9
       comp=Z,332nm,1.8s
PRA    Prague           71.20 340 eP        P         02 29 27.5 +0.9
PRA                               eS        S         02 38 44.2 +1.2
PRA                                AMS      AMS       03 04 50.0
       comp=Z,39µm,15.8s
PRA    Prague           71.20 340 eP        P         02 29 27.5 +0.9
PRA                               eS        S         02 38 44.2 +1.2
PRA                                MLR      MLR
       comp=Z,39µm,15.8s
GNI    Garni            71.24 315 eP        P         02 29 29.0 +1.8
GNI    Garni            71.24 315  P        P         02 29 27.9 +0.7
GNI                                IAmb     IAmb      02 29 41.9
       comp=Z,788nm,1.2s
GNI    Garni            71.24 315  LR       LR        03 04 14.8
       comp=Z,76µm,21.3s,baz=34,slow=39
GNI    Garni            71.24 315  P        P         02 29 28.8 +1.5
GNI                                P        P         02 29 28.8 +1.5
GNI    Garni            71.24 315  P        P         02 29 28.0 +0.7
GNI                                pmax     pmax
       comp=Z,788nm,1.3s
GNI                                MLR      MLR
       comp=Z,74µm,21.0s
GNI    Garni            71.24 315  P        P         02 29 28.9 +1.6
TANN   Tannenbergstha   71.24 341 eP        P         02 29 27.3 +0.4
       comp=Z,249nm,1.4s,baz=16,slow=6.1
TANN                              eS        S         02 38 45.1 +1.5
       baz=16,slow=12
ELMS   Elmsett, Ipswi   71.24 349 eP        P         02 29 27.8 +1.0
ELMS                               IAMs_20  IAMs_20   02 55 45.2
       comp=Z,21µm,25.3s
VASR   Vaslui           71.24 330 ⇑P        P         02 29 27.3 +0.3
S54A   Dingess, Beckl   71.25  50  IAmb     IAmb      02 29 30.0
       comp=Z,145nm,0.9s
S54A                               IAMs_20  IAMs_20   03 03 07.3
       comp=Z,21µm,18.0s
PRU    Pruhonice        71.26 340 eP        P         02 29 27.6 +0.6
PRU                               eS        S         02 38 44.8 +1.1
PRU                                AMS      AMS       03 04 50.0
       comp=Z,38µm,15.8s
PRU    Pruhonice        71.26 340 eP        P         02 29 27.6 +0.6
PRU                               eS        S         02 38 44.8 +1.1
PRU                                MLR      MLR
       comp=Z,38µm,15.8s
WES    Weston           71.26  40  IAmb     IAmb      02 29 30.0
       comp=Z,163nm,0.9s
WES                                IAMs_20  IAMs_20   03 04 04.9
       comp=Z,18µm,18.0s
UBBA   Unterbreizbach   71.27 343 eP        P         02 29 27.2 +0.3
       comp=Z,690nm,2.0s,baz=16,slow=6.1
UBBA                              eS        S         02 38 43.9 +0.3
       baz=16,slow=12
GOPC   GO Pecny, Ondr   71.28 340 eP        P         02 29 28.7 +1.5
GOPC                               AMS      AMS       03 04 50.0
       comp=Z,39µm,15.8s
GOPC   GO Pecny, Ondr   71.28 340 eP        P         02 29 28.7 +1.5
GOPC                               MLR      MLR
       comp=Z,39µm,15.8s
LUPA   Lehigh Univers   71.29  44  IAmb     IAmb      02 29 30.1
       comp=Z,198nm,1.0s
LUPA                               IAMs_20  IAMs_20   03 05 16.9
       comp=Z,22µm,20.0s
TZTN   Tazewell         71.34  52  IAmb     IAmb      02 29 30.9
       comp=Z,184nm,0.9s
TZTN   Tazewell         71.34  52 ⇑P        P         02 29 27.4 -0.3
R55A   Marlinton        71.35  48  IAmb     IAmb      02 29 31.4
       comp=Z,248nm,1.0s
BCX    Boston College   71.36  40  IAMs_20  IAMs_20   03 03 20.5
       comp=Z,15µm,19.0s
SWET   Sewanee          71.38  54  IAmb     IAmb      02 29 30.6
       comp=Z,223nm,0.9s
SWET                               IAMs_20  IAMs_20   03 00 21.8
       comp=Z,20µm,21.0s
NKC    Novy Kostel      71.42 341 eP        P         02 29 28.6 +0.6
NKC                               eS        S         02 38 44.2 -1.3
NKC                                AMS      AMS       03 07 00.0
       comp=Z,36µm,13.6s
NKC    Novy Kostel      71.42 341 eP        P         02 29 28.6 +0.6
NKC                               eS        S         02 38 44.2 -1.3
NKC                                MLR      MLR
       comp=Z,36µm,13.6s
MVL    Millersville     71.42  45  IAMs_20  IAMs_20   03 03 03.5
       comp=Z,26µm,18.0s
BMR    Baia Mare        71.44 333 ⇑P        P         02 29 28.1 -0.1
BMR    Baia Mare        71.44 333  P        P         02 29 28.0 -0.1
UCCT   U. Connecticut   71.44  41  IAmb     IAmb      02 29 31.4
       comp=Z,177nm,1.1s
UCCT                               IAMs_20  IAMs_20   03 03 59.9
       comp=Z,21µm,18.0s
KARS   Kars             71.47 317 eP        P         02 29 30.1 +1.5
VRAC   Vranov           71.50 338  LR       LR        03 03 18.4
       comp=Z,19µm,21.8s,baz=24,slow=38
VRAC   Vranov           71.50 338 eP        P         02 29 29.1 +0.6
VRAC                              eS        S         02 38 47.4 +0.9
VRAC   Vranov           71.50 338 ⇑P        P         02 29 29.5 +1.0
VRAC   Vranov           71.50 338  P        P         02 29 29.5 +1.0
X48A   Hartselle        71.50  56  IAmb     IAmb      02 29 32.2
       comp=Z,489nm,1.5s
PAL    Palisades        71.50  43  IAmb     IAmb      02 29 30.8
       comp=Z,176nm,0.8s
PAL                                IAMs_20  IAMs_20   03 02 50.5
       comp=Z,25µm,18.0s
BRNJ   Basking Ridge    71.53  43  P        P         02 29 27.3 -1.4
BRNJ                               IAMs_20  IAMs_20   03 02 50.2
       comp=Z,19µm,19.0s
IPM    Ipoh             71.53 250  IAmb     IAmb      02 29 32.0
       comp=Z,178nm,0.8s
IPM                                IAMs_20  IAMs_20   03 01 50.3
       comp=Z,25µm,19.0s
IPM    Ipoh             71.53 250  P        P         02 29 29.3 +0.2
TASB   TASBURUN-IGDIR   71.58 315 eP        P         02 29 30.7 +1.5
IWEX   Carrickbyrne,    71.59 354 eP        P         02 29 31.0 +2.0
IWEX   Carrickbyrne,    71.59 354  P        P         02 29 29.3 +0.3
441A   DeRidder         71.60  62  IAmb     IAmb      02 29 33.5
       comp=Z,283nm,1.0s
441A                               IAMs_20  IAMs_20   03 03 16.1
       comp=Z,24µm,20.0s
BIR    Birlad           71.63 330 ⇓P        P         02 29 29.8 +0.4
BIR    Birlad           71.63 330  P        P         02 29 29.7 +0.4
CPNY   Central Park     71.67  43  IAmb     IAmb      02 29 31.9
       comp=Z,169nm,0.8s
W50A   Signal Mountai   71.67  54  IAmb     IAmb      02 29 41.4
       comp=Z,183nm,0.9s
TESR   Tescani          71.68 331 ⇓P        P         02 29 29.7 +0.1
JAVC   Velka Javorina   71.69 337 eP        P         02 29 31.4 +1.7
JAVC                              eS        S         02 38 54.0 +5.1
VBMS   Vicksburg        71.70  59  IAmb     IAmb      02 29 34.4
       comp=Z,363nm,1.0s
VBMS                               IAMs_20  IAMs_20   03 00 43.7
       comp=Z,27µm,21.0s
MCH1   Michaelchurch    71.71 352 eP        P         02 29 31.4 +1.8
MANZ   Manzenberg       71.71 341 eP        P         02 29 30.0 +0.2
       comp=Z,28nm,1.1s,baz=16,slow=6.1
MANZ                              eS        S         02 38 50.7 +1.7
       baz=16,slow=12
N62A   Caumsett State   71.73  42  IAmb     IAmb      02 29 32.5
       comp=Z,502nm,1.7s
TREC   Trest            71.73 339 eP        P         02 29 30.2 +0.3
TREC                              eS        S         02 38 52.3 +3.0
TREC                               AMS      AMS       03 06 40.0
       comp=Z,38µm,15.8s
TREC   Trest            71.73 339 eP        P         02 29 30.2 +0.3
TREC                              eS        S         02 38 52.3 +3.0
TREC                               MLR      MLR
       comp=Z,38µm,15.8s
FUTU   Fugatoga         71.74 162  P        P         02 29 32.7 +2.5
ARCR   ARCALIA          71.77 332 ⇓P        P         02 29 30.4 +0.3
KRUC   Moravsky         71.77 338 eP        P         02 29 29.8 -0.3
KRUC                              eS        S         02 38 51.4 +1.8
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WUPA	**West Chester U**	**71.77**	**44**	IAMs_20	IAMs_20	03 03 08.7	
	comp=Z,17µm,18.0s						
VYHS	**Vyhne**	**71.78**	**336**	*e*P	**P**	**02 29 30.9**	**+0.7**
VYHS				pmax	pmax		
	comp=Z,613nm,2.1s						
VYHS	**Vyhne**	**71.78**	**336**	*e*P	**P**	**02 29 30.9**	**+0.7**
GBN	**Guysborough**	**71.80**	**32**	IAmb	IAmb	02 29 34.6	
	comp=Z,226nm,1.0s						
SENK	**Senkaya-Erzuru**	**71.81**	**317**	*e*P	**P**	**02 29 32.0**	**+1.2**
KVTX	**Kingsville**	**71.81**	**68**	IAMs_20	IAMs_20	03 05 08.1	
	comp=Z,14µm,18.0s						
L64A	**Middleborough**	**71.83**	**40**	P	**P**	**02 29 29.6**	**-0.9**
L64A				IAmb	IAmb	02 29 33.9	
	comp=Z,285nm,1.1s						
L64A				IAMs_20	IAMs_20	03 05 05.9	
	comp=Z,17µm,18.0s						
MONM	**Monmouth**	**71.85**	**352**	*e*P	**P**	**02 29 32.1**	**+1.6**
MONM				IAMs_20	IAMs_20	03 08 25.3	
	comp=Z,18µm,17.1s						
M63A	**Gales Ferry**	**71.85**	**41**	IAmb	IAmb	02 29 33.5	
	comp=Z,255nm,1.2s						
M63A				IAMs_20	IAMs_20	03 04 11.6	
	comp=Z,22µm,18.0s						
ZVC	**Zvikov**	**71.85**	**340**	*e*P	**P**	**02 29 31.1**	**+0.5**
ZVC				AMS	AMS	03 05 10.0	
	comp=Z,40µm,15.5s						
STRD	**Stroud**	**71.86**	**351**	*e*P	**P**	**02 29 32.1**	**+1.5**
STRD				IAMs_20	IAMs_20	02 53 09.4	
	comp=Z,27µm,42.1s						
HAL	**Halifax**	**71.86**	**34**	IAmb	IAmb	02 29 34.2	
	comp=Z,204nm,1.0s						
VLDR	**Vladesti**	**71.89**	**329**	⇓P	**P**	**02 29 31.4**	**+0.5**
VARL	**Varlezi**	**71.90**	**329**	⇑P	**P**	**02 29 32.1**	**+1.2**
ROTZ	**Rotzenmuhle**	**71.91**	**341**	*e*P	**P**	**02 29 31.5**	**+0.5**
	comp=Z,75nm,1.4s,baz=16,slow=6.1						
ROTZ				*e*S	**S**	**02 38 54.3**	**+3.1**
	baz=16,slow=12						
ONER	**Baraj Valea Uz**	**71.91**	**331**	⇑P	**P**	**02 29 31.7**	**+0.7**
BEBN	**Eben Emael**	**71.94**	**346**	*d*P	**P**	**02 29 31.3**	**+0.2**
CHOM	**Cayeli-Rize**	**71.94**	**318**	*e*P	**P**	**02 29 31.9**	**+0.6**
TKL	**Tuckaleechee C**	**71.98**	**53**	IAmb	IAmb	02 29 35.1	
	comp=Z,242nm,1.3s						
TKL	**Tuckaleechee C**	**71.98**	**53**	LR	LR	03 02 23.6	
	comp=Z,62µm,19.9s,baz=336,slow=37						
COEN	**Coen**	**72.00**	**201**	P	**P**	**02 29 32.3**	**+0.6**
COEN				IAMs_20	IAMs_20	02 56 33.2	
	comp=Z,24µm,22.0s						
COEN	**Coen**	**72.00**	**201**	P	**P**	**02 29 33.1**	**+1.3**
OLDB	**Oldbury-Upon-S**	**72.00**	**351**	*e*P	**P**	**02 29 32.7**	**+1.3**
OLDB				IAMs_20	IAMs_20	03 08 36.2	
	comp=Z,16µm,17.1s						
VLAKA	**Lakatoro**	**72.02**	**177**	P	**P**	**02 29 34.1**	**+2.3**
146A	**Union**	**72.06**	**58**	IAMs_20	IAMs_20	03 00 56.0	
	comp=Z,21µm,18.0s						
Z47A	**Carrollton**	**72.06**	**57**	IAMs_20	IAMs_20	03 01 38.0	
	comp=Z,18µm,20.0s						
MESR	**Meseseni**	**72.06**	**333**	⇑P	**P**	**02 29 33.0**	**+1.1**
SMOL	**Smolenice**	**72.07**	**337**	*e*P	**P**	**02 29 33.6**	**+1.7**
SMOL				pmax	pmax		
	comp=Z,156nm,1.4s						
MEM	**Membach**	**72.08**	**346**	*d*P	**P**	**02 29 31.8**	**-0.1**
	comp=Z,319nm,0.9s						
PSZ	**Piszkesteto**	**72.08**	**336**	⇑P	**P**	**02 29 33.3**	**+1.1**
PSZ	**Piszkesteto**	**72.08**	**336**	P	**P**	**02 29 33.2**	**+1.1**
PSZ	**Piszkesteto**	**72.08**	**336**	*e*P	**P**	**02 29 32.9**	**+0.8**
FPAL	**Fort Paine**	**72.08**	**54**	IAmb	IAmb	02 29 35.2	
	comp=Z,180nm,1.0s						
SWN1	**Swindon**	**72.08**	**351**	*e*P	**P**	**02 29 33.5**	**+1.6**
SWN1				IAMs_20	IAMs_20	03 10 24.4	
	comp=Z,15µm,14.2s						
BTNL	**Ternell**	**72.09**	**345**	*d*P	**P**	**02 29 32.0**	**0.0**
	comp=Z,222nm,0.9s						
COSR	**Cosmesti PH**	**72.10**	**330**	⇑P	**P**	**02 29 32.7**	**+0.6**
TNS	**Taunus Mts**	**72.10**	**344**	*e*P	**P**	**02 29 32.3**	**+0.2**
	comp=Z,137nm,1.0s,baz=16,slow=6.1						
TNS				*e*S	**S**	**02 38 55.5**	**+2.0**
	baz=16,slow=12						
U54A	**Nelsons Funny**	**72.11**	**51**	IAMs_20	IAMs_20	03 02 46.1	
	comp=Z,25µm,18.0s						
UCC	**Uccle**	**72.12**	**347**	IAMs_20	IAMs_20	03 06 43.8	
	comp=Z,25µm,18.0s						
UCC	**Uccle**	**72.12**	**347**	*d*P	**P**	**02 29 31.6**	**-0.5**
	comp=Z,63nm,1.0s						
TATR	**Tatarca**	**72.12**	**329**	⇑P	**P**	**02 29 32.9**	**+0.7**
PANC	**Panciu**	**72.13**	**330**	⇑P	**P**	**02 29 33.2**	**+1.0**
BLA	**Blacksburg**	**72.13**	**49**	IAmb	IAmb	02 29 37.2	
	comp=Z,255nm,1.0s						
BLA				IAMs_20	IAMs_20	03 02 32.4	
	comp=Z,18µm,19.0s						
BUW	**Bucklebury Wes**	**72.14**	**350**	*e*P	**P**	**02 29 33.7**	**+1.5**
GRA1	**Grafenberg Arr**	**72.15**	**342**	IAMs_20	IAMs_20	03 03 42.8	
	comp=Z,27µm,20.0s						
GRF	**Grafenberg Arr**	**72.15**	**342**	*e*P	**P**	**02 29 33.1**	**+0.7**
	comp=Z,333nm,1.2s,baz=16,slow=6.1						
GRF				*e*S	**S**	**02 38 56.6**	**+2.5**
	baz=16,slow=12						
GRF				*e*PKPPKP	**P'P'df**	**02 57 22.0**	**-4.7**
	baz=183,slow=2.6						
GRF				*e*L	L	03 03 43.8	
	comp=Z,22µm,18.9s						
GRFO	**Grafenberg**	**72.15**	**342**	P	**P**	**02 29 32.6**	**+0.3**
GRFO				IAmb	IAmb	02 29 37.0	
	comp=Z,315nm,1.2s						
GRFO				IAMs_20	IAMs_20	03 03 42.8	
	comp=Z,27µm,20.0s						
GRFO	**Grafenberg**	**72.15**	**342**	P	**P**	**02 29 32.7**	**+0.3**
GRFO				pmax	pmax		
	comp=Z,315nm,1.2s						
GRFO				MLR	MLR		
	comp=Z,27µm,20.0s						
BSTI	**Sart Tilman**	**72.17**	**346**	*d*P	**P**	**02 29 32.8**	**+0.4**
	comp=Z,41nm,1.1s						
GIUM	**Giurgiulesti**	**72.18**	**329**	⇑P	**P**	**02 29 33.1**	**+0.5**
VAL	**Valentia**	**72.19**	**356**	P	**P**	**02 29 32.8**	**+0.3**
M65A	**Busby, Falmout**	**72.22**	**40**	IAMs_20	IAMs_20	03 04 35.4	
	comp=Z,20µm,18.0s						
M65A	**Busby, Falmout**	**72.22**	**40**	P	**P**	**02 29 31.9**	**-1.0**
	baz=331						
NEGRR	**Negrea**	**72.23**	**329**	⇓P	**P**	**02 29 33.4**	**+0.6**
WOL	**Wolverton**	**72.23**	**350**	*e*P	**P**	**02 29 34.0**	**+1.2**
TUDR		**72.23**	**329**	⇑P	**P**	**02 29 33.6**	**+0.7**
TGMR	**Targu Mures**	**72.24**	**332**	⇓P	**P**	**02 29 33.7**	**+0.8**
MODS	**Modra-Piesok**	**72.24**	**337**	*e*P	**P**	**02 29 33.3**	**+0.4**
MODS				pmax	pmax		
	comp=Z,1µm,2.0s						
MODS	**Modra-Piesok**	**72.24**	**337**	*e*P	**P**	**02 29 33.3**	**+0.4**
VRI	**Vrincioaia**	**72.25**	**330**	*e*P	**P**	**02 29 33.5**	**+0.5**
VRI	**Vrincioaia**	**72.25**	**330**	⇑P	**P**	**02 29 33.6**	**+0.5**
VRI	**Vrincioaia**	**72.25**	**330**	P	**P**	**02 29 33.5**	**+0.5**
ODBI	**Odobesti**	**72.25**	**330**	⇑P	**P**	**02 29 34.6**	**+1.6**
IZVR	**Izvoarele**	**72.25**	**329**	⇑P	**P**	**02 29 33.6**	**+0.6**
KHC	**Kasperske Hory**	**72.26**	**340**	*e*P	**P**	**02 29 33.8**	**+0.7**
KHC				*e*x	x	02 29 39.5	
KHC				*e*x	x	02 34 10.1	
KHC				*e*S	**S**	**02 38 58.1**	**+2.7**
KHC				AMS	AMS	03 04 40.0	
	comp=Z,37µm,16.3s						
KHC	**Kasperske Hory**	**72.26**	**340**	*e*P	**P**	**02 29 33.8**	**+0.7**
KHC				*e*S	**S**	**02 38 58.1**	**+2.7**
KHC				MLR	MLR		
	comp=Z,37µm,16.3s						
CBBR	**Cluj-Babes-Bol**	**72.27**	**333**	⇓P	**P**	**02 29 34.2**	**+1.1**
TURR	**Turia**	**72.27**	**331**	⇑P	**P**	**02 29 34.3**	**+1.1**
SCHL	**Schela**	**72.27**	**329**	⇑P	**P**	**02 29 33.6**	**+0.5**
TLCR		**72.28**	**329**	⇑P	**P**	**02 29 33.4**	**+0.2**
TLCR		**72.28**	**329**	P	**P**	**02 29 33.4**	**+0.2**
S57A	**Dark Hollow, R**	**72.28**	**48**	IAmb	IAmb	02 29 37.0	
	comp=Z,277nm,1.0s						
PLOR	**Plostina**	**72.28**	**330**	⇓P	**P**	**02 29 33.6**	**+0.2**
PLOR	**Plostina**	**72.28**	**330**	P	**P**	**02 29 33.5**	**+0.2**
Y49A	**Blount Mountai**	**72.29**	**55**	IAmb	IAmb	02 29 36.3	
	comp=Z,290nm,1.0s						
OZUR		**72.30**	**331**	⇑P	**P**	**02 29 33.6**	**+0.2**
SCHLR	**Schela**	**72.30**	**329**	⇑P	**P**	**02 29 34.0**	**+0.7**
CJR	**Cluj-Napoca**	**72.31**	**333**	⇑P	**P**	**02 29 34.4**	**+1.0**
CJR	**Cluj-Napoca**	**72.31**	**333**	P	**P**	**02 29 34.4**	**+1.0**
P61A	**Hammonton**	**72.31**	**44**	IAMs_20	IAMs_20	03 03 34.0	
	comp=Z,25µm,19.0s						
BHOU	**Houvegnez**	**72.33**	**345**	*d*P	**P**	**02 29 31.8**	**-1.7**
BOSR	**Bodos**	**72.35**	**331**	⇑P	**P**	**02 29 33.9**	**+0.2**
MYKOM	**Kota Tinggi**	**72.35**	**246**	P	**P**	**02 29 35.3**	**+1.3**
BCLA	**Clavier**	**72.36**	**346**	*d*P	**P**	**02 29 33.8**	**+0.2**
	comp=Z,58nm,1.0s						
W52A	**Murphy**	**72.38**	**53**	IAmb	IAmb	02 29 45.8	
	comp=Z,158nm,0.9s						
X51A	**Calhoun**	**72.41**	**54**	IAmb	IAmb	02 29 37.2	
	comp=Z,226nm,1.0s						
KTUT	**Trabzon**	**72.41**	**319**	*e*P	**P**	**02 29 32.8**	**-1.2**
BORR	**Bors**	**72.41**	**334**	⇑P	**P**	**02 29 35.3**	**+1.3**
AGRB	**Hanur-Agry**	**72.42**	**316**	*e*P	**P**	**02 29 35.5**	**+1.1**
CKRC	**Cesky Krumlov**	**72.42**	**340**	*e*P	**P**	**02 29 34.2**	**+0.2**
CKRC				AMS	AMS	03 05 40.0	
	comp=Z,47µm,17.0s						
CKRC	**Cesky Krumlov**	**72.42**	**340**	*e*P	**P**	**02 29 34.2**	**+0.2**
CKRC				MLR	MLR		
	comp=Z,47µm,17.0s						
CLDR	**Caldiran**	**72.42**	**315**	*e*P	**P**	**02 29 33.9**	**-0.6**
BGES	**Gesves**	**72.43**	**346**	*d*P	**P**	**02 29 33.8**	**-0.2**
	comp=Z,58nm,1.0s						
DRGR		**72.46**	**333**	*e*P	**P**	**02 29 34.8**	**+0.4**
DRGR		**72.46**	**333**	⇑P	**P**	**02 29 34.1**	**-0.3**
DRGR		**72.46**	**333**	P	**P**	**02 29 34.0**	**-0.3**
MARR	**Marisel-Cluj**	**72.46**	**333**	⇑P	**P**	**02 29 34.9**	**+0.5**
CFR	**Carcaliu**	**72.48**	**329**	⇓P	**P**	**02 29 34.2**	**-0.2**
CFR	**Carcaliu**	**72.48**	**329**	P	**P**	**02 29 34.2**	**-0.2**
KOPR	**Koprukoy-ERZUR**	**72.49**	**317**	*e*P	**P**	**02 29 36.3**	**+1.5**
GEC2	**GERESS Array S**	**72.51**	**340**	IAmb	IAmb	02 29 37.0	
	comp=Z,252nm,1.4s						
GEC2	**GERESS Array S**	**72.51**	**340**	*e*P	**P**	**02 29 35.0**	**+0.3**
	comp=Z,246nm,1.4s,baz=16,slow=6.1						
GEC2				*e*S	**S**	**02 39 00.7**	**+2.3**
	baz=16,slow=12						
GERES	**GERESS Array B**	**72.51**	**340**	P	**P**	**02 29 34.2**	**-0.5**
GERES	**GERESS Array B**	**72.51**	**340**	P	**P**	**02 29 34.8**	**+0.1**
	comp=Z,54nm,0.8s,baz=24,slow=3.6,SNR=156						
GERES				PKPPKP	P'P'df	02 57 08.9	-17
	comp=Z,1.6nm,1.0s,baz=211,slow=1.6,SNR=4.3						
GERES				LR	LR	03 06 03.1	
	comp=Z,42µm,18.3s,baz=22,slow=40						
	comp=Z,54nm,0.8s						
HMNX	**Herstmonceux**	**72.52**	**349**	*e*P	**P**	**02 29 36.5**	**+2.1**
DOPR	**Dopca**	**72.52**	**331**	⇓P	**P**	**02 29 35.4**	**+0.7**
SRO	**Srobarova**	**72.54**	**337**	*e*P	**P**	**02 29 36.3**	**+1.6**
SRO				pmax	pmax		
	comp=Z,105nm,1.1s						
SRO	**Srobarova**	**72.54**	**337**	*e*P	**P**	**02 29 36.3**	**+1.6**
BMRD	**Maredsous**	**72.55**	**346**	*d*P	**P**	**02 29 34.7**	**0.0**
	comp=Z,96nm,1.0s						
GRER		**72.63**	**330**	⇓P	**P**	**02 29 36.9**	**+1.6**
MDB	**Medias**	**72.63**	**332**	⇑P	**P**	**02 29 36.6**	**+1.3**
MDB	**Medias**	**72.63**	**332**	P	**P**	**02 29 36.6**	**+1.3**
JURR	**Jurilovca**	**72.64**	**328**	⇑P	**P**	**02 29 35.2**	**-0.2**
AFI	**Afiamalu**	**72.65**	**155**	P	**P**	**02 29 34.5**	**-1.2**
AFI				IAMs_20	IAMs_20	03 00 06.1	
	comp=Z,14µm,19.0s						
TPGR	**Topolog**	**72.69**	**329**	⇑P	**P**	**02 29 36.2**	**+0.5**
LRAL	**Lakeview Retre**	**72.70**	**56**	IAmb	IAmb	02 29 38.4	
	comp=Z,199nm,0.7s						
NEHR	**Nehoiu**	**72.77**	**330**	⇑P	**P**	**02 29 37.1**	**+0.9**
DOU	**Dourbes**	**72.78**	**346**	*d*P	**P**	**02 29 35.8**	**-0.2**
	comp=Z,74nm,1.0s						
MLR	**Muntele Rosu**	**72.81**	**331**	*e*P	**P**	**02 29 37.1**	**+0.5**
MLR	**Muntele Rosu**	**72.81**	**331**	LR	LR	03 04 11.0	
	comp=Z,64µm,21.3s,baz=24,slow=38						
MLR	**Muntele Rosu**	**72.81**	**331**	⇑P	**P**	**02 29 37.0**	**+0.4**
MLR	**Muntele Rosu**	**72.81**	**331**	P	**P**	**02 29 36.9**	**+0.4**
HTL	**Hartland**	**72.82**	**352**	*e*P	**P**	**02 29 38.0**	**+1.7**
HTL				IAMs_20	IAMs_20	02 56 15.3	
	comp=Z,16µm,26.4s						
ESPY	**Espiye-Giresun**	**72.85**	**320**	*e*P	**P**	**02 29 36.6**	**-0.1**
U56A	**King**	**72.88**	**50**	IAmb	IAmb	02 29 40.6	
	comp=Z,290nm,1.2s						
U56A				IAMs_20	IAMs_20	03 04 52.2	
	comp=Z,21µm,18.0s						
346A	**Big Creek Wild**	**72.89**	**59**	IAMs_20	IAMs_20	03 01 31.2	
	comp=Z,28µm,21.0s						
BG3	**Lake Jocassee**	**72.91**	**52**	IAmb	IAmb	02 29 40.9	
	comp=Z,511nm,1.4s						
V55A	**Taylorsville**	**72.94**	**51**	IAmb	IAmb	02 29 40.9	
	comp=Z,182nm,1.1s						
V55A				IAMs_20	IAMs_20	03 04 54.9	
	comp=Z,26µm,18.0s						
CONA	**Conrad Observa**	**72.96**	**338**	*i* pP	**P**	**02 29 38.3**	**+1.0**
	comp=Z,71nm,1.1s,SNR=129						
MLAZ	**Malazgirt-MUS**	**72.96**	**316**	*e*P	**P**	**02 29 39.0**	**+1.4**
WLF	**Walferdange**	**72.98**	**345**	P	**P**	**02 29 37.9**	**+0.5**
WLF	**Walferdange**	**72.98**	**345**	*d*P	**P**	**02 29 37.6**	**+0.4**
	comp=Z,64nm,1.2s						
WLF	**Walferdange**	**72.98**	**345**	*e*P	**P**	**02 29 37.7**	**+0.4**
	comp=Z,175nm,1.2s,baz=16,slow=6.1						
WLF				*e*S	**S**	**02 39 06.3**	**+2.9**
	baz=16,slow=12						
HARR	**Harsova**	**72.99**	**329**	⇓P	**P**	**02 29 36.8**	**-0.6**
HARR	**Harsova**	**72.99**	**329**	P	**P**	**02 29 36.8**	**-0.6**
ISR	**Istrita**	**72.99**	**330**	⇓P	**P**	**02 29 38.1**	**+0.5**
ISR	**Istrita**	**72.99**	**330**	P	**P**	**02 29 38.0**	**+0.5**
TIRR	**Tirgusor**	**73.06**	**328**	*e*P	**P**	**02 29 38.4**	**+0.6**
TIRR	**Tirgusor**	**73.06**	**328**	IAmb	IAmb	02 29 41.9	
	comp=Z,332nm,1.1s						
TIRR	**Tirgusor**	**73.06**	**328**	⇓P	**P**	**02 29 38.2**	**+0.4**
LHMI	**Lhok Sumawe**	**73.06**	**254**	P	**P**	**02 29 40.4**	**+2.2**
TLBR	**Topalu**	**73.08**	**329**	⇓P	**P**	**02 29 38.2**	**+0.2**
RONA	**Rosalia, Austr**	**73.09**	**338**	*i* pP	**P**	**02 29 39.5**	**+1.5**
	comp=Z,48nm,1.0s,SNR=113						
VOIR		**73.10**	**331**	⇓P	**P**	**02 29 39.1**	**+0.8**
VOIR		**73.10**	**331**	P	**P**	**02 29 39.0**	**+0.8**
VANB	**Van**	**73.11**	**315**	*e*P	**P**	**02 29 39.6**	**+1.2**
TNR	**Turnu Rosu**	**73.11**	**332**	⇓P	**P**	**02 29 39.0**	**+0.7**
TNR	**Turnu Rosu**	**73.11**	**332**	P	**P**	**02 29 38.9**	**+0.7**
ZAIG	**Zacatecas**	**73.20**	**74**	IAmb	IAmb	02 29 44.5	
	comp=Z,221nm,1.2s						
ZAIG				IAMs_20	IAMs_20	03 04 45.3	
	comp=Z,20µm,20.0s						
SIRR	**Siria**	**73.21**	**334**	⇓P	**P**	**02 29 39.6**	**+0.9**
CMBY	**CAMPBELL BAY**	**73.22**	**257**	*e*P	**P**	**02 29 37.9**	**-1.2**
AMRR	**Amara**	**73.23**	**329**	⇑P	**P**	**02 29 38.9**	**+0.1**
AMRR	**Amara**	**73.23**	**329**	P	**P**	**02 29 38.9**	**+0.1**
MMRI	**Maumere**	**73.23**	**224**	P	**P**	**02 29 40.7**	**+1.6**
DEV	**Deva**	**73.25**	**333**	⇓P	**P**	**02 29 39.5**	**+0.5**
DEV	**Deva**	**73.25**	**333**	P	**P**	**02 29 39.5**	**+0.5**
R61A	**Willards**	**73.26**	**45**	IAmb	IAmb	02 29 42.8	
	comp=Z,413nm,1.1s						
R61A				IAMs_20	IAMs_20	03 03 26.1	
	comp=Z,18µm,19.0s						
SBD	**Saint Breward**	**73.26**	**353**	*e*P	**P**	**02 29 40.1**	**+1.1**
HYB	**Hyderabad**	**73.27**	**276**	*e*P	**P**	**02 29 39.2**	**-0.3**
HYB				*e*sP	**sP**	**02 29 44.0**	**+0.4**
HYB				*e*PcP	**PcP**	**02 29 55.4**	**-0.5**
HYB				*e*PP	**PP**	**02 32 22.2**	**-0.3**
HYB				*e*SKSac	**SKSac**	**02 39 44.9**	**-0.4**
ARR	**Arges**	**73.28**	**331**	⇑P	**P**	**02 29 40.1**	**+0.8**
MTUR	**Matau**	**73.30**	**331**	⇑P	**P**	**02 29 39.2**	**-0.2**
MTUR	**Matau**	**73.30**	**331**	P	**P**	**02 29 39.2**	**-0.2**
MFTR	**Murfatlar**	**73.31**	**328**	⇓P	**P**	**02 29 39.6**	**+0.3**
DYA	**Yadsworthy**	**73.33**	**352**	*e*P	**P**	**02 29 40.6**	**+1.2**
DYA				IAMs_20	IAMs_20	03 09 50.4	
	comp=Z,14µm,19.9s						
DGTI	**Dogotuki**	**73.34**	**164**	P	**P**	**02 29 41.5**	**+1.8**
Y52A	**Lilburn**	**73.35**	**54**	IAmb	IAmb	02 29 42.9	
	comp=Z,201nm,1.0s						
MOA	**Molln**	**73.36**	**339**	*i* pP	**P**	**02 29 40.0**	**+0.4**
	comp=Z,24nm,0.7s,SNR=89						
VRTB	**Varto-Mus**	**73.37**	**317**	*e*P	**P**	**02 29 41.4**	**+1.4**
STU	**Stuttgart**	**73.39**	**343**	IAMs_20	IAMs_20	03 04 00.4	
	comp=Z,24µm,21.0s						
STU	**Stuttgart**	**73.39**	**343**	*e*P	**P**	**02 29 39.9**	**+0.2**
STU	**Stuttgart**	**73.39**	**343**	*e*P	**P**	**02 29 39.8**	**0.0**
	comp=Z,305nm,1.1s,baz=16,slow=6.1						
STU				*e*S	**SKiKP**	**02 39 10.0**	**+0.1**
	baz=16,slow=12						
KARO	**Karliova-Bingo**	**73.39**	**317**	*e*P	**P**	**02 29 41.0**	**+0.8**
DIKM	**Dikmen**	**73.42**	**322**	*e*P	**P**	**02 29 41.2**	**+1.2**
DIKM	**Dikmen**	**73.42**	**322**	⇑P	**P**	**02 29 41.0**	**+1.0**
BHUJ	**Bhuj**	**73.43**	**287**	*e*P	**P**	**02 29 40.6**	**+0.3**
LOT	**Lotru**	**73.44**	**332**	*e*P	**P**	**02 29 39.8**	**-0.4**
LOT	**Lotru**	**73.44**	**332**	⇓P	**P**	**02 29 39.8**	**-0.4**
SULR		**73.47**	**330**	⇑P	**P**	**02 29 40.8**	**+0.6**
GEVA	**Gevas**	**73.48**	**315**	IAmb	IAmb	02 29 45.4	
	comp=Z,258nm,1.0s						
KDU	**Kakadu**	**73.49**	**212**	P	**P**	**02 29 41.7**	**+1.1**
KMSC	**Kings Mountain**	**73.49**	**51**	IAmb	IAmb	02 29 43.3	
	comp=Z,225nm,0.9s						
SOEI	**Soe**	**73.49**	**221**	P	**P**	**02 29 40.3**	**-0.5**
SOEI	**Soe**	**73.49**	**221**	P	**P**	**02 29 42.6**	**+1.8**
AKDM	**Akdamar-Van**	**73.50**	**315**	*e*P	**P**	**02 29 41.8**	**+1.0**
LEHL	**Lehliu**	**73.50**	**330**	⇑P	**P**	**02 29 40.9**	**+0.5**
T59A	**Double "B" Far**	**73.53**	**47**	IAmb	IAmb	02 29 44.5	
	comp=Z,296nm,1.4s						
ICOR	**Ion Corvin**	**73.55**	**329**	⇓P	**P**	**02 29 40.7**	**0.0**
PAULI	**Pauline**	**73.55**	**52**	IAmb	IAmb	02 29 44.3	
	comp=Z,271nm,1.4s						
BZK	**Bozkurt**	**73.56**	**324**	*e*P	**P**	**02 29 40.7**	**-0.2**
BZK	**Bozkurt**	**73.56**	**324**	IAmb	IAmb	02 29 44.8	
	comp=Z,412nm,1.1s						
BZK	**Bozkurt**	**73.56**	**324**	⇑P	**P**	**02 29 41.1**	**+0.3**
SURR	**Surduc**	**73.57**	**333**	⇑P	**P**	**02 29 41.4**	**+0.6**
MANR	**Mangalia**	**73.59**	**328**	⇑P	**P**	**02 29 41.7**	**+0.7**
FUR	**Furstenfeldbru**	**73.62**	**341**	*e*P	**P**	**02 29 41.5**	**+0.3**
	comp=Z,368nm,1.4s,baz=16,slow=6.1						
FUR				*e*S	**S**	**02 39 12.9**	**+2.1**
	baz=16,slow=12						
BIOA	**Bad Ischl, Aus**	**73.63**	**340**	*i* pP	**P**	**02 29 42.3**	**+1.0**
	comp=Z,5.6nm,0.6s,SNR=80						
ERZN	**Erzincan**	**73.65**	**318**	*e*P	**P**	**02 29 42.8**	**+1.2**
DVP	**Devils Point**	**73.65**	**176**	P	**P**	**02 29 44.4**	**+3.0**
KVT	**Kavak**	**73.65**	**322**	*e*P	**P**	**02 29 42.8**	**+1.3**
GURO	**Guroymak-BITLI**	**73.67**	**316**	*e*P	**P**	**02 29 43.4**	**+1.6**
GURO	**Guroymak-BITLI**	**73.67**	**316**	IAMs_20	IAMs_20	03 05 48.2	
	comp=Z,23µm,20.0s						
ARSA	**Arzberg**	**73.67**	**338**	IAmb	IAmb	02 29 50.9	
	comp=Z,242nm,1.3s						
ARSA	**Arzberg**	**73.67**	**338**	*i* pP	**P**	**02 29 42.6**	**+1.1**
	comp=Z,52nm,0.8s,SNR=78						
CCA1	**Carnmenellis**	**73.67**	**353**	*e*P	**P**	**02 29 42.1**	**+0.7**
CCA1				IAMs_20	IAMs_20	03 09 57.7	
	comp=Z,13µm,16.8s						
S61A	**Accomac**	**73.69**	**46**	IAMs_20	IAMs_20	03 04 40.4	
	comp=Z,24µm,19.0s						
DRS	**Darwin Rock St**	**73.73**	**214**	P	**P**	**02 29 43.9**	**+1.9**
GZR	**Gura Zlata**	**73.74**	**333**	⇑P	**P**	**02 29 41.7**	**-0.3**
GZR	**Gura Zlata**	**73.74**	**333**	P	**P**	**02 29 41.6**	**-0.3**
RJOB	**Jochberg**	**73.75**	**340**	*e*P	**P**	**02 29 42.6**	**+0.6**
	comp=Z,224nm,0.9s,baz=16,slow=6.1						
RJOB				*e*S	**S**	**02 39 16.0**	**+3.6**
	baz=16,slow=12						
TAVE	**Taveuni**	**73.80**	**164**	P	**P**	**02 29 45.4**	**+3.1**
RSDY	**Resadiye-TOKAT**	**73.81**	**320**	*e*P	**P**	**02 29 43.4**	**+1.0**
BNGB	**Bingl**	**73.81**	**317**	*e*P	**P**	**02 29 43.7**	**+1.2**
TIM	**Timisoara**	**73.81**	**334**	⇑P	**P**	**02 29 42.8**	**+0.5**
TIM	**Timisoara**	**73.81**	**334**	P	**P**	**02 29 42.7**	**+0.5**
BZS	**Buzias**	**73.83**	**334**	*e*P	**P**	**02 29 42.4**	**+0.1**
BZS	**Buzias**	**73.83**	**334**	⇓P	**P**	**02 29 42.5**	**+0.1**
HODGE	**Hodges**	**73.85**	**52**	IAmb	IAmb	02 29 45.7	
	comp=Z,211nm,0.9s						
V58A	**Windy Hill, Pi**	**73.89**	**49**	IAmb	IAmb	02 29 46.6	
	comp=Z,433nm,1.0s						
V58A				IAMs_20	IAMs_20	03 07 06.9	
	comp=Z,21µm,18.0s						
PSN	**Preselentsi**	**73.89**	**328**	⇑*i*P	**P**	**02 29 43.5**	**+0.8**
250A	**Grady**	**73.92**	**56**	IAmb	IAmb	02 29 46.1	
	comp=Z,324nm,1.1s						
250A				IAMs_20	IAMs_20	03 02 56.2	
	comp=Z,24µm,19.0s						
BFO	**Black Forest**	**73.95**	**343**	P	**P**	**02 29 42.7**	**-0.4**
BFO				IAMs_20	IAMs_20	03 04 18.4	
	comp=Z,28µm,21.0s						
BFO	**Black Forest**	**73.95**	**343**	*e*P	**P**	**02 29 43.1**	**0.0**
	comp=Z,119nm,0.9s,baz=16,slow=6.1						
BFO				*e*S	**S**	**02 39 15.8**	**+1.2**
	baz=16,slow=12						
MORH	**Mrgy, Hungar**	**73.98**	**336**	⇑P	**P**	**02 29 43.4**	**+0.2**
CIDE	**Kastamonu/Cide**	**73.98**	**324**	⇓P	**P**	**02 29 42.8**	**-0.5**
MTN	**Manton Dam**	**74.04**	**214**	P	**P**	**02 29 45.0**	**+1.2**
PSI	**Prapat**	**74.05**	**251**	P	**P**	**02 29 44.6**	**+0.4**
152A	**Waverly Hall**	**74.06**	**55**	IAmb	IAmb	02 29 46.6	
	comp=Z,279nm,0.9s						
W57A	**Gilead**	**74.06**	**50**	IAmb	IAmb	02 29 46.8	
	comp=Z,240nm,0.9s						
LESA	**Schwarzleotal**	**74.07**	**340**	*i* pP	**P**	**02 29 44.6**	**+0.7**
	comp=Z,36nm,0.8s,SNR=85						
KURC	**Kurucasile-Bar**	**74.08**	**324**	*e*P	**P**	**02 29 44.3**	**+0.4**
RPSI	**Rantau Prapat**	**74.14**	**251**	IAmb	IAmb	02 29 47.2	
	comp=Z,380nm,1.0s						
RPSI				IAMs_20	IAMs_20	03 05 38.5	
	comp=Z,26µm,21.0s						
TOKT	**Tokat**	**74.15**	**321**	*e*P	**P**	**02 29 45.6**	**+1.2**
TOKA	**Tokat**	**74.17**	**321**	IAMs_20	IAMs_20	03 06 40.1	
	comp=Z,22µm,21.0s						
CUKT	**Cukurca**	**74.18**	**314**	*e*P	**P**	**02 29 43.6**	**-1.2**
ILIC	**ilic-Erzincan**	**74.19**	**319**	*e*P	**P**	**02 29 45.4**	**+0.6**
BRAL	**Brewton**	**74.22**	**57**	IAMs_20	IAMs_20	03 02 57.4	
	comp=Z,23µm,21.0s						
ECH	**Echery**	**74.25**	**344**	IAMs_20	IAMs_20	03 05 52.1	
	comp=Z,23µm,20.0s						
COPA	**Copaceanca**	**74.26**	**331**	⇑P	**P**	**02 29 44.5**	**-0.4**
BIRD	**Birdtown, Kers**	**74.29**	**51**	IAmb	IAmb	02 29 48.7	
	comp=Z,232nm,0.9s						
HERR	**Herculane**	**74.31**	**333**	⇑P	**P**	**02 29 44.7**	**-0.6**
SRE	**Strehaia**	**74.31**	**332**	⇓P	**P**	**02 29 45.6**	**+0.3**
SRE	**Strehaia**	**74.31**	**332**	P	**P**	**02 29 45.5**	**+0.3**
SOKA	**Soboth**	**74.32**	**338**	*i* pP	**P**	**02 29 46.3**	**+1.0**
	comp=Z,44nm,0.8s,SNR=86						
SVAN	**Silvan-Diyarba**	**74.34**	**317**	*e*P	**P**	**02 29 46.9**	**+1.3**
PERS	**Pernice**	**74.34**	**338**	*i* P	**P**	**02 29 45.9**	**+0.5**
PERS				*e*S	**S**	**02 39 22.1**	**+3.0**
SVSK	**Karacayir**	**74.35**	**320**	*e*P	**P**	**02 29 46.8**	**+1.3**
RETA	**Reutte**	**74.36**	**342**	*i* pP	**P**	**02 29 45.8**	**+0.2**
	comp=Z,47nm,0.9s,SNR=73						
WATA	**Walderalm**	**74.36**	**341**	*i* pP	**P**	**02 29 46.1**	**+0.4**
	comp=Z,65nm,0.9s,SNR=129						
WTTA	**Wattenberg**	**74.42**	**341**	*i* pP	**P**	**02 29 46.8**	**+0.7**
	comp=Z,95nm,1.2s,SNR=139						
JSA	**Saint Aubin**	**74.42**	**351**	*e*P	**P**	**02 29 47.3**	**+1.6**
JSA				IAMs_20	IAMs_20	02 54 20.0	
	comp=Z,22µm,38.7s						
MOTA	**Moosalm**	**74.44**	**341**	*i* pP	**P**	**02 29 46.6**	**+0.5**
	comp=Z,80nm,1.2s,SNR=103						
ILGA	**Ilgaz**	**74.47**	**323**	IAmb	IAmb	02 29 51.5	
	comp=Z,380nm,0.9s						
ILGA				IAMs_20	IAMs_20	03 07 32.9	
	comp=Z,19µm,20.0s						
DJES	**Djerdap**	**74.49**	**333**	⇓P	**P**	**02 29 45.5**	**-0.7**
MSVF	**Nonsavu**	**74.51**	**166**	P	**P**	**02 29 48.3**	**+1.7**
MSVF	**Nonsavu**	**74.51**	**166**	IAMs_20	IAMs_20	02 57 35.1	
	comp=Z,20µm,20.0s						
MSVF	**Nonsavu**	**74.51**	**166**	LR	LR	02 56 46.1	
	comp=Z,22µm,20.7s,baz=351,slow=31						
MSVF	**Nonsavu**	**74.51**	**166**	P	**P**	**02 29 49.2**	**+2.6**
SQTA	**Sankt Quirin**	**74.54**	**341**	*i* pP	**P**	**02 29 47.3**	**+0.7**
	comp=Z,138nm,1.4s,SNR=134						
OBKA	**Obir**	**74.58**	**339**	⇑*i*P	**P**	**02 29 47.8**	**+0.9**
OBKA	**Obir**	**74.58**	**339**	*i* pP	**P**	**02 29 48.0**	**+1.2**
	comp=Z,114nm,0.8s,SNR=224						
MDVR	**Moldovita**	**74.58**	**333**	⇓P	**P**	**02 29 46.9**	**0.0**
MYKA	**Terra Mystica**	**74.65**	**339**	*i* pP	**P**	**02 29 48.1**	**+0.9**
	comp=Z,29nm,0.8s,SNR=80						
ZIMR		**74.66**	**330**	⇑P	**P**	**02 29 47.0**	**-0.2**
ZIMR		**74.66**	**330**	P	**P**	**02 29 47.0**	**-0.2**
FRGS	**Fruska Gora**	**74.70**	**335**	⇑*i*P	**P**	**02 29 47.8**	**+0.3**
DAVA	**Damuels**	**74.71**	**342**	*i* pP	**P**	**02 29 48.9**	**+1.2**
	comp=Z,24nm,0.9s,SNR=50						
PUNG	**Punghina**	**74.74**	**332**	⇓P	**P**	**02 29 47.5**	**-0.2**
ABTA	**Abfaltersbach**	**74.75**	**340**	*i* pP	**P**	**02 29 48.6**	**+0.7**
	comp=Z,105nm,1.2s,SNR=218						
FETA	**Feichten**	**74.82**	**341**	*i* pP	**P**	**02 29 49.0**	**+0.7**
	comp=Z,96nm,0.8s,SNR=151						
154A	**Montrose**	**74.83**	**54**	IAMs_20	IAMs_20	03 02 00.3	
	comp=Z,28µm,22.0s						
PRED	**Cave del Predi**	**74.84**	**339**	IAmb	IAmb	02 29 52.3	
	comp=Z,190nm,0.9s						
Y57A	**Sumter**	**74.85**	**51**	IAmb	IAmb	02 29 51.3	
	comp=Z,189nm,0.8s						
Y57A				IAMs_20	IAMs_20	03 04 11.6	
	comp=Z,25µm,18.0s						
SZH	**Strazhitsa**	**74.85**	**330**	⇑*i*P	**P**	**02 29 48.4**	**0.0**
SZH	**Strazhitsa**	**74.85**	**330**	P	**P**	**02 29 48.0**	**-0.4**
CANT	**Cankiri**	**74.91**	**323**	*e*P	**P**	**02 29 50.3**	**+1.5**
CORM	**Corum**	**74.95**	**322**	*e*P	**P**	**02 29 50.9**	**+1.8**
352A	**Blakely**	**74.96**	**56**	IAmb	IAmb	02 29 52.3	
	comp=Z,261nm,0.7s						
POO	**Poona**	**74.98**	**281**	*e*P	**P**	**02 29 49.0**	**-0.5**
LJU	**Ljubljana**	**75.03**	**339**	*e*P	**P**	**02 29 49.7**	**+0.3**
LJU				*e*S	**S**	**02 39 28.2**	**+1.5**
BKNI	**Bangkinang**	**75.04**	**247**	P	**P**	**02 29 49.9**	**+0.1**
BKNI	**Bangkinang**	**75.04**	**247**	IAMs_20	IAMs_20	03 05 46.5	
	comp=Z,19µm,19.0s						
BKNI	**Bangkinang**	**75.04**	**247**	P	**P**	**02 29 51.2**	**+1.4**
ROBS	**Robic**	**75.04**	**339**	*i* P	**P**	**02 29 49.0**	**-0.5**
ROBS				*e*S	**S**	**02 39 27.3**	**+0.6**
ROBS				*e*		02 44 17.2	
CRES	**Cresnjevec Ost**	**75.05**	**338**	⇑*i*P	**P**	**02 29 50.0**	**+0.5**
CLF	**Chambon-Foret**	**75.10**	**348**	IAMs_20	IAMs_20	03 08 42.7	
	comp=Z,24µm,20.0s						
VALD	**Valchedram**	**75.16**	**332**	⇑*i*P	**P**	**02 29 50.0**	**-0.1**

YOZ	Yozgat	75.19	322	*e*P	P	02 29 51.2	+0.6
PLAI	Plampang	75.19	228	P	P	02 29 50.2	-0.4
DAVOX	Davos/Dischmat	75.20	342	LR	LR	03 05 48.8	
	comp=Z,24µm,21.1s,baz=31,slow=38						
PVL	Pavlikeni	75.21	330	⇑*i*P	P	02 29 50.5	+0.1
Y58A	Scranton	75.26	50	IAMs_20	IAMs_20	03 06 58.4	
	comp=Z,25µm,18.0s						
SABO	M.te Sabotino	75.28	339	IAMs_20	IAMs_20	03 05 38.2	
	comp=Z,25µm,19.0s						
FUORN	Ofenpass-Fuorn	75.29	342	IAmb	IAmb	02 30 01.9	
	comp=Z,330nm,1.4s						
FUORN				IAMs_20	IAMs_20	03 06 24.7	
	comp=Z,22µm,21.0s						
451A	Vernon	75.30	57	IAMs_20	IAMs_20	03 03 49.8	
	comp=Z,20µm,19.0s						
TEKS	Tekeris	75.34	335	⇑*i*P	P	02 29 51.3	+0.1
CEY	Cerknica	75.34	339	⇑*i*P	P	02 29 51.3	+0.1
DARE	Darende-Malaty	75.37	319	*e*P	P	02 29 52.9	+1.3
MPEP	Malo Peshtene	75.39	331	⇑*i*P	P	02 29 51.3	-0.2
BOJS	Bojanci	75.40	338	⇑*i*P	P	02 29 51.9	+0.4
JMB	Yambol	75.41	329	⇑*i*P	P	02 29 51.9	+0.3
JMB	Yambol	75.41	329	P	P	02 29 51.6	0.0
LKBA	Tubou, Lakemba	75.47	163	P	P	02 29 54.2	+2.2
A051A	Mrakovica	75.51	337	⇑*i*P	P	02 29 52.3	+0.1
INH	Isangel	75.51	175	P	P	02 29 54.5	+2.3
TUE	Stuetta	75.59	342	IAmb	IAmb	02 29 55.5	
	comp=Z,398nm,1.5s						
BOVS	Bovan	75.66	333	⇓P	P	02 29 52.9	-0.1
BR131	Keskin Array S	75.69	323	*e*P	P	02 29 53.8	+0.3
BR131	Keskin Array S	75.69	323	P	P	02 29 54.0	+0.6
	SNR=114						
BR131	Keskin Array S	75.69	323	*c* *i*P	P	02 29 53.6	+0.2
BRTR	Keskin Array B	75.69	323	P	P	02 29 52.8	-0.6
BRTR	Keskin Array B	75.69	323	P	P	02 29 53.8	+0.3
	comp=Z,57nm,1.0s,baz=56,slow=3.2,SNR=174						
BRTR				PKKPbc	PKKPbc	02 49 14.7	+6.0
	comp=Z,0.6nm,0.8s,baz=151,slow=2.8,SNR=3.7						
BRTR				PKPPKP	P'P'df	02 57 05.5	-14
	comp=Z,2.8nm,0.9s,baz=163,slow=3.3,SNR=4.8						
BRTR				LR	LR	03 06 36.2	
	comp=Z,23µm,21.7s,baz=18,slow=38						
	comp=Z,57nm,1.0s						
BLY	Banja Luka	75.70	336	⇑*i*P	P	02 29 53.3	+0.1
SILT	Sile	75.70	326	*e*P	P	02 29 53.7	+0.4
SILT	Sile	75.70	326	⇑P	P	02 29 53.7	+0.4
BNN	Bunyan	75.70	321	*e*P	P	02 29 54.2	+0.7
KOZK	Kozakli-Nevseh	75.73	322	*e*P	P	02 29 54.3	+0.7
YUVA	Yuva-Kibriscik	75.74	324	*e*P	P	02 29 54.4	+0.7
KAD	Karad	75.78	280	*e*P	P	02 29 53.5	-0.6
KLYT	Kilyos	75.79	327	*e*P	P	02 29 54.4	+0.6
KLYT	Kilyos	75.79	327	⇑P	P	02 29 54.0	+0.3
CTYL	Yalikoy Yolu	75.82	327	*e*P	P	02 29 52.4	-1.5
MDUB	Mudurnu	75.82	325	*e*P	P	02 29 55.4	+1.3
LOD	Lodumlu	75.84	323	*e*P	P	02 29 55.2	+1.0
ANTO	Ankara	75.84	323	*e*P	P	02 29 55.3	+1.1
ANTO	Ankara	75.84	323	P	P	02 29 54.5	+0.3
ANTO				IAmb	IAmb	02 29 59.2	
	comp=Z,227nm,0.9s						
ANTO	Ankara	75.84	323	IAMs_20	IAMs_20	03 06 55.2	
	comp=Z,25µm,20.0s						
ANTO	Ankara	75.84	323	P	P	02 29 55.5	+1.3
ANTO				P	P	02 29 55.5	+1.3
ANTO	Ankara	75.84	323	⇓P	P	02 29 55.1	+0.9
ANTO	Ankara	75.84	323	P	P	02 29 54.5	+0.3
ANTO				pmax	pmax		
	comp=Z,227nm,0.9s						
ANTO				MLR	MLR		
	comp=Z,25µm,20.0s						
ANTO	Ankara	75.84	323	P	P	02 29 54.4	+0.2
ANTO				S	S	02 39 38.0	+2.0
MTSU	Mount Surprise	75.85	199	P	P	02 29 55.9	+1.7
MDRS	Chennai	75.86	272	*e*P	P	02 29 55.2	+0.7
SAUV	Serdivan-Sakar	75.86	326	*e*P	P	02 29 54.7	+0.5
PHSR	Pinarhisar	75.91	328	*e*P	P	02 29 55.3	+0.8
PHSR	Pinarhisar	75.91	328	⇑P	P	02 29 54.9	+0.5
PMBI	Palembang	75.94	242	IAMs_20	IAMs_20	03 06 36.8	
	comp=Z,13µm,19.0s						
PMBI	Palembang	75.94	242	P	P	02 29 56.6	+1.7
EDRB	Edirne	75.94	329	*e*P	P	02 29 55.1	+0.5
BGKT	Bogazkoy	75.94	327	*e*P	P	02 29 55.2	+0.6
ISK	Istanbul-Kandi	75.96	327	*e*P	P	02 29 53.4	-1.3
KAVV	Kandilli-Istan	75.96	327	*e*P	P	02 29 54.4	-0.4
KAMT	Kaman	75.98	323	*e*P	P	02 29 55.9	+0.8
BBLS	Lazi&#263i	76.01	334	⇑*i*P	P	02 29 55.7	+0.6
GSI	Gunungsitoli	76.03	251	IAMs_20	IAMs_20	03 04 15.4	
	comp=Z,24µm,21.0s						
GSI	Gunungsitoli	76.03	251	P	P	02 29 56.0	+0.5
PGB	Panagyurishte	76.05	331	⇑*i*P	P	02 29 55.7	+0.4
GULT	Gulveren	76.08	325	*e*P	P	02 29 56.3	+0.7
DIM	Dimitrovgrad	76.09	329	P	P	02 29 56.2	+0.7
A050A	Klekovaca	76.09	337	⇑*i*P	P	02 29 55.9	+0.3
KIRS	Kirsehir-Merke	76.13	322	⇑P	P	02 29 55.9	+0.1
AFSR	Afar-Bala (An	76.13	323	*e*P	P	02 29 56.5	+0.6
NGCH	Negor - Chabah	76.17	295	P	P	02 29 58.1	+2.0
	SNR=29						
VTS	Vitosha	76.21	331	⇑*i*P	P	02 29 56.3	-0.1
VTS	Vitosha	76.21	331	P	P	02 29 56.1	-0.3
PLD	Plovdiv	76.23	330	*e*P	P	02 29 56.9	+0.6
PLD	Plovdiv	76.23	330	P	P	02 29 56.5	+0.2
RUDO	Rudo	76.26	334	⇑*i*P	P	02 29 55.7	-0.7
PLNA	Plana	76.29	331	⇑*i*P	P	02 29 57.5	+0.7
CRLT	Corlu	76.30	328	*e*P	P	02 29 57.9	+1.2
ADVT	Abdulvahap	76.32	326	*e*P	P	02 29 57.2	+0.4
KOUNC	Koumac, New Ca	76.38	180	P	P	02 29 59.3	+2.1
JAGI	Jajag, Banyuwa	76.41	231	IAmb	IAmb	02 29 57.9	
	comp=Z,196nm,0.9s						
JAGI	Jajag, Banyuwa	76.41	231	P	P	02 29 58.3	+0.7
SERE	Sereflikochisa	76.41	322	*e*P	P	02 29 58.3	+0.8
SJES	Sjenica	76.44	334	⇑*i*P	P	02 29 58.2	+0.6
MOIG	Morelia	76.45	75	IAmb	IAmb	02 30 03.6	
	comp=Z,318nm,1.2s						
MOIG				IAMs_20	IAMs_20	03 07 01.7	
	comp=Z,19µm,19.0s						
ARMT	Armutlu	76.48	327	*e*P	P	02 29 57.7	0.0
CAVI	Cavuskoy	76.50	326	*e*P	P	02 29 57.9	0.0
KULU	Kulu	76.52	323	*e*P	P	02 29 59.2	+1.1
TV1H	Townsville Har	76.52	197	P	P	02 29 59.6	+1.6
KMRS	Kahramanmaras	76.52	319	*e*P	P	02 29 59.1	+1.0
PLE	Pljevlja	76.52	334	*e*P	P	02 29 58.7	+0.6
KDZ	Kurdzhali	76.54	329	*e*P	P	02 29 58.7	+0.6
KDZ	Kurdzhali	76.54	329	⇑*i*P	P	02 29 58.7	+0.6
KDZ	Kurdzhali	76.54	329	P	P	02 29 58.2	+0.1
SVRH	Sivrihisar-ESK	76.64	324	*e*P	P	02 29 59.0	+0.2
MDNY	Mudanya-Bursa	76.65	326	*e*P	P	02 29 56.8	-1.9
RZN	Rozhen	76.65	330	⇑*i*P	P	02 29 59.5	+0.5
RZN	Rozhen	76.65	330	P	P	02 29 59.5	+0.5
GAZ	Gaziantep	76.70	319	*e*P	P	02 30 00.3	+1.1
GULA	Gulagac	76.72	322	*e*P	P	02 29 59.1	-0.2
UPM	Unac-Piva	76.76	335	⇑*i*P	P	02 29 59.7	+0.2
UPM	Unac-Piva	76.76	335	*e*P	P	02 29 59.9	+0.4
SMRI	Semarang	76.82	235	P	P	02 30 01.7	+1.8
IVA	Berane	76.83	334	*e*P	P	02 30 00.1	+0.3
CIFT	Cifteler, Eski	76.87	324	*e*P	P	02 30 00.2	+0.1
RKY	Sarkoy-Tekirda	76.88	328	*e*P	P	02 30 00.7	+0.7
BAND	Balkesir-Ban	76.90	327	⇑P	P	02 30 00.5	+0.4
KOZT	Kozan	76.93	320	*e*P	P	02 30 01.3	+0.9
RDO	Rodhopi	76.93	329	*e*P	P	02 30 00.9	+0.6
RDO	Rodhopi	76.93	329	IAMs_20	IAMs_20	03 06 44.8	
	comp=Z,26µm,21.0s						
RDO	Rodhopi	76.93	329	P	P	02 30 00.8	+0.5
KOME	Kolasin	76.94	334	*e*P	P	02 30 00.1	-0.3
KKB	Krupnik	76.96	331	⇑*i*P	P	02 30 01.2	+0.8
KKB	Krupnik	76.96	331	P	P	02 30 00.9	+0.4
ALN	Alexandroupoli	77.02	329	*e*P	P	02 30 01.2	+0.5
ALN	Alexandroupoli	77.02	329	IAmb	IAmb	02 30 04.8	
	comp=Z,297nm,1.1s						
ALN	Alexandroupoli	77.02	329	P	P	02 30 00.8	+0.1
MMB	Musomishta	77.06	331	⇑*i*P	P	02 30 01.7	+0.6
MMB	Musomishta	77.06	331	P	P	02 30 01.5	+0.4
CMRD	Camardi-Nigde	77.07	321	*e*P	P	02 30 02.2	+0.9
PEHC	Pehcevo	77.08	331	*i* P	P	02 30 03.6	+2.4
ERIK	Erikli-Kesan	77.09	328	*e*P	P	02 30 01.7	+0.6
SULT	Sultanhani-AKS	77.10	322	*e*P	P	02 30 01.7	+0.3
BRY	Bratogost	77.13	335	*e*P	P	02 30 00.4	-1.2
BRY	Bratogost	77.13	335	*e*P	P	02 30 01.6	0.0
ENEZ	Enez	77.13	329	*e*P	P	02 30 02.6	+1.2
ENEZ	Enez	77.13	329	P	P	02 30 01.2	-0.2
CAVK	Edirne/Enez-Ca	77.17	329	⇑P	P	02 30 01.9	+0.3
BCI	Bajram Curri	77.26	334	P	P	02 30 01.9	-0.3
SKO	Skopje	77.28	332	*i* P	P	02 30 02.5	+0.3
LPK	Lapseki	77.29	328	*e*P	P	02 30 03.2	+0.9
TVSB	Tavsanli	77.31	326	*e*P	P	02 30 02.9	+0.3
GELI	Tayfur-Gelibol	77.35	328	*e*P	P	02 30 03.1	+0.5
TREB	Trebinje	77.35	335	⇑*i*P	P	02 30 02.3	-0.3
STON	Ston	77.36	335	⇑*i*P	P	02 30 01.7	-0.9
KAVA	Kavala	77.36	330	P	P	02 30 02.7	0.0
CEME	Cevo	77.38	334	*e*P	P	02 30 02.3	-0.5
MARNC	Mare, Loyalty	77.38	176	P	P	02 30 07.4	+4.6
CEYT	Ceyhan	77.38	320	*e*P	P	02 30 03.5	+0.7
YESY	Yesilyurt	77.40	322	*e*P	P	02 30 03.8	+0.7
PDG	Podgorica	77.40	334	*e*P	P	02 30 02.9	0.0
PDG	Podgorica	77.40	334	IAmb	IAmb	02 30 06.5	
	comp=Z,211nm,1.1s						
PDG				IAMs_20	IAMs_20	03 06 56.0	
	comp=Z,20µm,21.0s						
PDG	Podgorica	77.40	334	⇑*i*P	P	02 30 02.6	-0.3
PDG	Podgorica	77.40	334	⇑P	P	02 30 02.8	-0.1
PDG	Podgorica	77.40	334	*e*P	P	02 30 02.3	-0.6
KARA	Karaisali	77.41	321	*e*P	P	02 30 04.0	+1.0
BNI	Bardonecchia	77.41	344	IAmb	IAmb	02 30 10.1	
	comp=Z,308nm,1.3s						
CTAO	Charters Tower	77.42	197	P	P	02 30 03.5	+0.4
CTAO	Charters Tower	77.42	197	P	P	02 30 03.8	+0.7
LADK	Ladik-KONYA	77.49	323	*e*P	P	02 30 03.8	+0.2
SSB	Saint Sauveur	77.50	345	IAMs_20	IAMs_20	03 07 44.2	
	comp=Z,17µm,21.0s						
SRS	Serrai	77.51	331	*e*P	P	02 30 03.9	+0.4
SRS	Serrai	77.51	331	P	P	02 30 03.7	+0.2
UGM	Wanagama	77.54	235	P	P	02 30 03.5	-0.4
SMTH	Samothraki Isl	77.56	329	P	P	02 30 03.5	-0.3
HCY	Herceg Novi	77.57	335	*e*P	P	02 30 01.9	-2.0
HCY	Herceg Novi	77.57	335	*e*P	P	02 30 04.2	+0.3
VAY	Valandovo	77.59	331	*i* P	P	02 30 04.7	+0.8
PUK	Puka	77.61	334	P	P	02 30 04.1	-0.1
BUM	Brajici-Budva	77.61	334	*e*P	P	02 30 03.5	-0.7
VLC	Villacollemand	77.65	341	P	P	02 30 05.1	+0.8
MSSA	Maissana	77.65	342	IAmb	IAmb	02 30 07.7	
	comp=Z,226nm,0.9s						
DRME	Dracevica, Mon	77.65	334	⇑*i*P	P	02 30 04.4	+0.1
DRME	Dracevica, Mon	77.65	334	*e*P	P	02 30 04.1	-0.2
KNT	Kendrikon	77.66	331	*e*P	P	02 30 05.2	+0.8
KNT	Kendrikon	77.66	331	P	P	02 30 05.0	+0.6
THAS	Thassos island	77.67	330	P	P	02 30 04.3	-0.1
KOKK	Kokkinochori,	77.67	330	P	P	02 30 04.2	-0.3
GEDZ	Gediz	77.69	325	*e*P	P	02 30 05.1	+0.4
GADA	Gvkgeada	77.71	329	*e*P	P	02 30 04.9	+0.3
GADA	Gvkgeada	77.71	329	P	P	02 30 04.8	+0.1
KONT	Konya--Tatoy	77.72	323	*e*P	P	02 30 04.9	+0.1
SHUT	Suhut-Afyon	77.77	324	*e*P	P	02 30 05.9	+0.7
TAHT	Tahtakopru-Hat	77.79	319	*e*P	P	02 30 05.9	+0.7
SIMA	Simav-Kutahya	77.79	326	*e*P	P	02 30 05.6	+0.3
PHP	Peshkopia	77.81	333	P	P	02 30 05.3	0.0
ULC	Ulcinj	77.85	334	*e*P	P	02 30 06.8	+1.4
SOH	Sokhos	77.85	331	P	P	02 30 05.3	-0.2
YATNC	Mamie plateau,	77.92	177	P	P	02 30 09.5	+3.7
DZM	Mont Dzumac	77.92	178	IAmb	IAmb	02 30 11.4	
	comp=Z,304nm,1.1s						
DZM				IAMs_20	IAMs_20	03 10 05.1	
	comp=Z,23µm,18.0s						
DZM	Mont Dzumac	77.92	178	*e*P	P	02 30 05.6	-0.3
	comp=Z,844nm,1.4s						
DZM	Mont Dzumac	77.92	178	*e*PP	PP	02 32 54.6	-7.6
	comp=Z,655nm,25.1s						
DZM				*e*S	S	02 39 53.7	-5.0
	comp=Z,6µm,26.9s						
DZM				*e*SS	SS	02 45 01.1	+0.9
	comp=Z,6µm,27.9s						
DZM				*e*LQ	LQ	02 50 53.8	
	comp=Z,16µm,28.4s						
DZM				*e*LR	LR	02 54 15.5	
	comp=Z,44µm,27.3s						
DZM	Mont Dzumac	77.92	178	LR	LR	03 00 37.3	
	comp=Z,15µm,19.8s,baz=350,slow=33						
DZM	Mont Dzumac	77.92	178	P	P	02 30 08.4	+2.5
EZN	Ezine	77.92	328	*e*P	P	02 30 06.1	+0.3
EZN	Ezine	77.92	328	P	P	02 30 05.6	-0.2
EZN	Ezine	77.92	328	⇑P	P	02 30 05.9	0.0
EZN	Ezine	77.92	328	P	P	02 30 05.8	0.0
LEM	Lembang	77.94	238	LR	LR	03 04 51.8	
	comp=Z,8µm,21.8s,baz=338,slow=36						
MERS	Mersin	77.94	321	*e*P	P	02 30 06.1	0.0
BOZC	Bozcaada	77.99	328	*e*P	P	02 30 06.4	+0.2
NIUE	Niue	78.06	155	IAMs_20	IAMs_20	02 56 31.6	
	comp=Z,25µm,22.0s						
SHME	Shamm	78.08	299	P	P	02 30 07.3	+0.4
	SNR=37						
SHME				P	P	02 30 07.3	+0.4
	SNR=37						
SHME	Shamm	78.08	299	*i* P	P	02 30 06.1	-0.9
	SNR=94						
KRMN	Karaman	78.11	322	*e*P	P	02 30 06.8	-0.3
HORT	Hortiatis	78.13	331	*e*P	P	02 30 07.1	0.0
HORT	Hortiatis	78.13	331	P	P	02 30 06.6	-0.5
OUR	Ouranopolis	78.13	330	P	P	02 30 06.6	-0.3
THE	Thessaloniki	78.13	331	P	P	02 30 06.7	-0.2
GUMA	Gualdo di Mace	78.13	339	IAMs_20	IAMs_20	03 06 22.1	
	comp=Z,27µm,22.0s						
ONTNC	Ouen Toro	78.16	178	IAmb	IAmb	02 30 19.5	
	comp=Z,324nm,1.2s						
ONTNC				IAMs_20	IAMs_20	02 59 51.3	
	comp=Z,16µm,20.0s						
ONTNC	Ouen Toro	78.16	178	P	P	02 30 08.8	+1.7
LIA	Limnos Island	78.19	329	P	P	02 30 07.2	-0.1
GORD	Gordes-Manisa	78.20	326	*e*P	P	02 30 07.8	+0.3
PLG	Polygyros	78.24	330	P	P	02 30 07.4	-0.2
OHR	Ohrid	78.26	333	*i* P	P	02 30 08.3	+0.5
TIR	Tirane	78.27	333	*e*P	P	02 30 07.3	-0.5
TIR	Tirane	78.27	333	IAmb	IAmb	02 30 11.2	
	comp=Z,225nm,1.0s						
TIR	Tirane	78.27	333	⇑P	P	02 30 07.4	-0.4
OUENC	Ouen Island, N	78.28	177	P	P	02 30 10.8	+3.1
SEYD	Seydisehir-KON	78.39	323	*e*P	P	02 30 08.8	+0.2
KULA	Kula-Manisa	78.41	326	*e*P	P	02 30 08.2	-0.5
FNA	Florina	78.42	332	*e*P	P	02 30 08.7	+0.1
FNA	Florina	78.42	332	P	P	02 30 08.3	-0.3
KIZK	Mersin	78.43	321	*e*P	P	02 30 08.5	-0.2
DKL	Dikili	78.44	327	*e*P	P	02 30 07.6	-1.1
ISP	Isparta	78.45	324	*e*P	P	02 30 07.6	-1.3
ISP	Isparta	78.45	324	*ce*P	P	02 30 08.6	-0.3
ISP				pmax	pmax		
	comp=Z,251nm,1.7s						
ISP				MLR	MLR		
	comp=Z,31µm,19.0s						
MANT	Manisa	78.47	326	IAmb	IAmb	02 30 12.8	
	comp=Z,207nm,1.1s						
PRK	Paraskevi	78.47	328	P	P	02 30 08.4	-0.4
BBJI	Bungbulang	78.48	238	P	P	02 30 08.3	-0.9
PINNC	Pines Island,	78.48	177	P	P	02 30 10.7	+1.8
BASM	Basmaki-Afyon	78.51	325	*e*P	P	02 30 09.6	+0.3
HDMB	Hadim	78.57	322	*e*P	P	02 30 09.8	+0.1
PAIG	Paliouri	78.59	330	P	P	02 30 09.0	-0.6
SILI	Silifke-Mersin	78.61	321	*e*P	P	02 30 07.6	-2.1
KEBE	Keben-Mersin	78.61	321	*e*P	P	02 30 09.5	-0.3
CAMP	Campotosto	78.62	338	IAMs_20	IAMs_20	03 09 40.1	
	comp=Z,12µm,20.0s						
SIGR	SIGRI	78.63	328	*e*P	P	02 30 09.6	-0.1
SIGR	SIGRI	78.63	328	P	P	02 30 08.5	-1.2
MDH	Madha	78.64	298	P	P	02 30 10.2	+0.2
	SNR=40						
MDH				P	P	02 30 10.2	+0.2
	SNR=40						
MDH	Madha	78.64	298	*i* P	P	02 30 08.9	-1.1
	SNR=35						
MASF	Masafi	78.64	299	P	P	02 30 10.2	+0.1
	SNR=43						
MASF				P	P	02 30 10.2	+0.1
	SNR=43						
MSFE	Esma-Masafi	78.65	299	*i* P	P	02 30 09.4	-0.8
	SNR=67						
KBN	Korca	78.72	332	P	P	02 30 10.2	-0.2
CESX	Cesi	78.72	339	IAmb	IAmb	02 30 14.5	
	comp=Z,254nm,1.1s						
BCK	Bucak	78.75	324	*e*P	P	02 30 10.2	-0.4
KZN	Kozani	78.76	332	P	P	02 30 10.1	-0.5
UMQ	Umm Al-Quwin	78.76	299	P	P	02 30 12.7	+2.0
	SNR=17						
UMQ				P	P	02 30 12.7	+2.0
	SNR=17						
UMQ	Umm Al-Quwin	78.76	299	*i* P	P	02 30 11.0	+0.4
	SNR=20						
AQU	L'Aquila	78.80	338	P	P	02 30 11.7	+1.0
ODEM	Odemis-Izmir	78.81	326	*e*P	P	02 30 11.0	+0.1
NEST	Nestorio	78.85	332	P	P	02 30 10.9	-0.2
BERE	Bereket-Mersin	78.87	322	*e*P	P	02 30 10.9	-0.4
CASP	Castiglione de	78.88	340	IAMs_20	IAMs_20	03 09 10.8	
	comp=Z,18µm,21.0s						
UOSS	Minazif	78.98	298	P	P	02 30 10.9	-1.0
UOSS	Minazif	78.98	298	P	P	02 30 11.9	0.0
UOSS				P	P	02 30 11.9	0.0
UOSS	Minazif	78.98	298	*i* P	P	02 30 11.0	-0.9
	SNR=71						
UOSS	Minazif	78.98	298	P	P	02 30 10.9	-1.0
UOSS				S	S	02 40 04.6	-5.6
MNGI	Mangalore	78.98	277	*e*P	P	02 30 11.7	-0.3
INTR	Introdacqua	79.02	338	IAmb	IAmb	02 30 15.5	
	comp=Z,229nm,1.1s						
PENT	Pentalofos	79.03	332	P	P	02 30 12.0	-0.1
BLCB	Balcova	79.03	327	*e*P	P	02 30 11.6	-0.4
BLCB	Balcova	79.03	327	P	P	02 30 11.3	-0.7
NAZL	Nazilli-Aydin	79.03	326	*e*P	P	02 30 12.5	+0.5
TEKE	Tekeli-Mersin	79.09	322	*e*P	P	02 30 11.6	-0.7
HATD	Hatta, Dubai	79.11	298	P	P	02 30 13.0	+0.3
	SNR=77						
HATD				P	P	02 30 13.0	+0.3
	SNR=77						
HATD	Hatta, Dubai	79.11	298	*i* P	P	02 30 11.9	-0.7
	SNR=151						
APMY	Acipayam-Deniz	79.16	325	*e*P	P	02 30 13.1	+0.3
QIS	Mount Isa	79.16	203	P	P	02 30 14.2	+1.5
AYDB	Zeytinkoy-Aydi	79.17	326	*e*P	P	02 30 12.9	0.0
WSAR	Wadi Sarin	79.19	296	LR	LR	03 09 06.0	
	comp=Z,157nm,18.1s,baz=79,slow=39						
WSAR	Wadi Sarin	79.19	296	P	P	02 30 13.7	+0.6
	SNR=117						
TYRN	Tyrnavos	79.19	331	P	P	02 30 11.8	-1.0
URLA	Izmir	79.19	327	*e*P	P	02 30 12.9	0.0
KPRO	Kipourio	79.19	332	P	P	02 30 12.8	-0.1
VLO	Vlora	79.19	333	P	P	02 30 13.1	+0.3
NAZ	Nazwa, Dubai	79.21	299	P	P	02 30 13.0	-0.2
	SNR=59						
NAZ				P	P	02 30 13.0	-0.2
	SNR=59						
NAZ	Nazwa, Dubai	79.21	299	*i* P	P	02 30 12.3	-0.8
	SNR=111						
BIDO	Bidbid	79.21	296	P	P	02 30 14.0	+0.8
	SNR=62						
BIDO				P	P	02 30 14.0	+0.8
	SNR=62						
LSK	Leskovik	79.21	332	P	P	02 30 13.8	+0.7
AOS	Alonnisos	79.24	330	P	P	02 30 12.4	-0.7
ANTB	Antalya	79.24	324	*e*P	P	02 30 12.8	-0.3
ASHO	Ashiyiah	79.27	298	P	P	02 30 14.0	+0.5
	SNR=99						
ASHO	Ashiyiah	79.27	298	*i* P	P	02 30 12.7	-0.9
	SNR=123						
EREN	Erenkoy	79.27	320	*e*P	P	02 30 14.0	+0.7
GAZI	Gazipasa	79.28	322	*e*P	P	02 30 12.1	-1.3
NEO	Neokhori	79.30	330	P	P	02 30 12.1	-1.3
CHOS	Chios island	79.33	328	*e*P	P	02 30 13.1	-0.6
CHOS	Chios island	79.33	328	P	P	02 30 12.6	-1.1
TAOE	Nuku Hiva Isla	79.35	124	IAMs_20	IAMs_20	02 57 27.0	
	comp=Z,22µm,22.0s						
TAOE	Nuku Hiva Isla	79.35	124	*e*P	P	02 30 12.1	-1.9
	comp=Z,956nm,23.8s						
TAOE	Nuku Hiva Isla	79.35	124	*e*PP	PP	02 33 09.4	-4.8
	comp=Z,546nm,27.9s						
TAOE				*e*S	S	02 40 09.9	-4.5
	comp=Z,11µm,28.8s						
TAOE				*e*SS	SS	02 45 14.2	-7.5
	comp=Z,6µm,25.5s						
TAOE				*e*LQ	LQ	02 51 17.2	
	comp=Z,29µm,29.2s						
TAOE				*e*LR	LR	02 54 46.2	
	comp=Z,51µm,25.4s						
THL	Klokotos Trika	79.39	331	P	P	02 30 12.6	-1.3
BEIL	Beino	79.42	319	*e*P	P	02 30 14.4	+0.1
FAQ	Al Faqa, Dubai	79.44	299	P	P	02 30 14.0	-0.5
	SNR=52						
FAQ				P	P	02 30 14.0	-0.5
	SNR=52						
FAQ	Al Faqa, Dubai	79.44	299	*i* P	P	02 30 13.6	-0.9
	SNR=52						
SOHO	SOHO	79.49	298	P	P	02 30 15.0	+0.3
SOHO	SOHO	79.49	298	*i* P	P	02 30 13.2	-1.4
	SNR=107						
MALK	Mahakanadarawa	79.50	269	P	P	02 30 14.1	-0.8
HOQ	Hoqain	79.57	297	P	P	02 30 15.0	-0.2
	SNR=170						
HOQ				P	P	02 30 15.0	-0.2
	SNR=170						
TLIG	Tlapa	79.60	74	IAMs_20	IAMs_20	03 07 43.8	
	comp=Z,15µm,18.0s						
FKH	Fakeheh	79.60	318	*e*P	P	02 30 15.8	+0.4
GCAM	G?zelcaml?	79.61	327	*e*P	P	02 30 14.9	-0.2
JAN	Janina	79.61	332	P	P	02 30 15.7	+0.5
SRN	Sarande	79.62	333	P	P	02 30 14.8	-0.4
ELL	Elmali	79.62	324	*e*P	P	02 30 15.3	-0.1
ELL	Elmali	79.62	324	IAmb	IAmb	02 30 26.0	
	comp=Z,431nm,1.1s						
SMDO	Samad	79.63	296	P	P	02 30 16.0	+0.3
	SNR=112						
SMDO				P	P	02 30 16.0	+0.3
	SNR=112						
CAME	Cameli-Denizli	79.64	325	*e*P	P	02 30 16.1	+0.5
ASUD	Al Ashush, Dub	79.67	299	P	P	02 30 16.0	+0.3
	SNR=32						
ASUD	Al Ashush, Dub	79.67	299	*i* P	P	02 30 14.8	-0.9
	SNR=37						
KYMI	Kymi, Euboea I	79.67	329	P	P	02 30 14.1	-1.4
JLN	Jalan Bani Buh	79.70	294	P	P	02 30 16.2	+0.3
	SNR=135						
JLN				P	P	02 30 16.2	+0.3
	SNR=135						
MATE	Matera	79.70	335	*e*P	P	02 30 16.1	+0.5
MATE	Matera	79.70	335	⇓P	P	02 30 15.8	+0.2
MATE	Matera	79.70	335	*e*P	P	02 30 12.8	-2.8
SMG	Samos	79.72	327	P	P	02 30 14.8	-1.0
LFK	Lefkose	79.72	321	*e*P	P	02 30 15.5	-0.4
KOD	Kodaikanal	79.72	273	*e*P	P	02 30 16.0	-0.4
HWQ	Hawqa	79.75	319	*e*P	P	02 30 15.9	-0.2
TETR	Tetrakomo, Epi	79.79	332	P	P	02 30 16.6	+0.4
AGG	Agios Georgios	79.81	331	*e*P	P	02 30 15.2	-1.1
AGG	Agios Georgios	79.81	331	P	P	02 30 14.9	-1.4
MLSB	Milas	79.81	326	*e*P	P	02 30 16.6	+0.3
SCTE	Santa Cesarea	79.83	334	IAmb	IAmb	02 30 19.5	
	comp=Z,258nm,0.9s						
WR8	Warramunga Arr	79.83	208	IAmb	IAmb	02 30 20.4	
	comp=Z,360nm,0.9s						
KEK	Kerkira	79.83	333	*e*P	P	02 30 18.6	+2.3
KEK	Kerkira	79.83	333	P	P	02 30 18.4	+2.0
WRAB	Tennant Creek	79.84	208	P	P	02 30 16.9	+0.5
WRAB				IAMs_20	IAMs_20	03 02 23.8	
	comp=Z,18µm,22.0s						
WRAB	Tennant Creek	79.84	208	P	P	02 30 16.9	+0.5
WRAB				pmax	pmax		
	comp=Z,513nm,1.0s						
WRA	Warramunga Arr	79.86	208	P	P	02 30 16.7	+0.2
WRA	Warramunga Arr	79.86	208	P	P	02 30 17.1	+0.6
	comp=Z,312nm,0.9s,baz=22,slow=5.6,SNR=314						
WRA				PKKPbc	PKKPbc	02 49 03.7	+2.5
	comp=Z,1.9nm,0.9s,baz=199,slow=2.0,SNR=5.2						
WRA				PKPPKP	P'P'df	02 57 06.4	+5.8
	comp=Z,2.9nm,1.1s,baz=195,slow=1.6,SNR=6.3						
WRA				LR	LR	03 03 10.1	
	comp=Z,15µm,21.9s,baz=12,slow=34						
	comp=Z,312nm,0.9s						
WRA	Warramunga Arr	79.86	208	*i* P	P	02 30 17.1	+0.6
WRA				pmax	pmax		
	comp=Z,317nm,0.9s						
IGT	Igoumenitsa	79.86	332	P	P	02 30 16.1	-0.4
MAKR	Makrakomi, Fth	79.87	331	P	P	02 30 15.7	-0.9
WB1	Warramunga Ar.	79.87	208	P	P	02 30 17.4	+0.8
AJN	Ajban	79.89	299	P	P	02 30 16.3	-0.5
	SNR=39						
AJN	Ajban	79.89	299	*i* P	P	02 30 15.8	-1.1
	SNR=38						
ALNE	Al Ain	79.94	298	P	P	02 30 17.0	-0.2
	SNR=194						
ALNE				P	P	02 30 17.0	-0.2
	SNR=194						
ALNE	Al Ain	79.94	298	*i* P	P	02 30 16.6	-0.6
	SNR=80						
LKR	Lokris	79.97	330	P	P	02 30 15.9	-1.2
FETY	Fethiye	80.00	325	*e*P	P	02 30 17.1	-0.2
FETY	Fethiye	80.00	325	P	P	02 30 16.9	-0.4
LFKM	Lefkimmi	80.01	333	P	P	02 30 17.9	+0.7
EVR	Evrytania	80.05	331	P	P	02 30 18.1	+0.5
CSS	Mathiatis	80.08	321	*e*P	P	02 30 16.9	-0.9
CSS	Mathiatis	80.08	321	IAMs_20	IAMs_20	03 11 35.5	
	comp=Z,18µm,20.0s						

TURN	Turunc	80.14	325	eP	P	02 30 18.2	+0.2
ARQ	Araqi	80.17	297	P	P	02 30 18.2	-0.2
	SNR=178						
ARQ				P	P	02 30 18.2	-0.2
	SNR=178						
BODT	Bodrum	80.17	326	eP	P	02 30 17.8	-0.4
BODT	Bodrum	80.17	326	P	P	02 30 17.3	-0.9
JMDO	Jabal Madar	80.18	295	P	P	02 30 19.0	+0.5
	SNR=195						
JMDO				P	P	02 30 19.0	+0.5
	SNR=195						
BHL	Bhannes	80.19	319	eP	P	02 30 18.4	-0.1
AKAS	Kas	80.19	324	eP	P	02 30 17.9	-0.6
AMPL	Ampelaki	80.20	331	P	P	02 30 17.8	-0.5
DION	Dionisos Attik	80.24	329	P	P	02 30 16.8	-1.8
KSL	Kastellorizon	80.28	324	P	P	02 30 17.9	-0.8
ANX	Ano Chora	80.32	331	P	P	02 30 18.4	-0.8
BSY	Bisya	80.32	296	P	P	02 30 19.5	+0.2
	SNR=242						
BSY				P	P	02 30 19.5	+0.2
	SNR=242						
VILL	Villia	80.33	330	P	P	02 30 17.8	-1.3
PALK	Pallekele	80.34	269	P	P	02 30 18.7	-0.8
PALK				IAmb	IAmb	02 30 22.3	
	comp=Z,352nm,1.1s						
PALK	Pallekele	80.34	269	IAMs_20	IAMs_20	03 08 01.7	
	comp=Z,21µm,19.0s						
PALK	Pallekele	80.34	269	P	P	02 30 20.2	+0.8
PALK				P	P	02 30 20.2	+0.8
PALK	Pallekele	80.34	269	P	P	02 30 19.4	0.0
PALK	Pallekele	80.34	269	P	P	02 30 18.8	-0.6
PALK				S	S	02 40 23.1	-1.8
ATHU	Athens Univers	80.39	329	P	P	02 30 18.4	-1.0
DQRL	Deir Qamar	80.39	319	eP	P	02 30 19.8	+0.2
ATH	Athens Observa	80.40	329	P	P	02 30 18.5	-0.9
PVO	Paravola	80.41	331	P	P	02 30 19.0	-0.5
GD1S	Gladstone Soft	80.42	192	P	P	02 30 21.5	+2.1
TSLK	Tsoukalades, L	80.44	332	P	P	02 30 19.5	-0.2
KALE	Kalithea	80.45	331	P	P	02 30 18.5	-1.3
SERG	Sergoula	80.45	331	P	P	02 30 18.7	-1.1
LKD2	Lefkada island	80.48	332	eP	P	02 30 18.9	-1.0
LKD2	Lefkada island	80.48	332	P	P	02 30 19.6	-0.3
EFP	Efpalio	80.48	331	P	P	02 30 19.7	-0.2
RCY	Rachaya	80.48	318	eP	P	02 30 20.2	0.0
QRWL	Qaraoun	80.50	318	eP	P	02 30 20.2	0.0
EJON	La Jonquera	80.51	346	P	P	02 30 21.0	+1.1
NYDR	Nydri-Lefkada	80.54	332	P	P	02 30 19.8	-0.3
LTK	Loutraki	80.56	330	P	P	02 30 18.4	-2.0
CEST	Esterri de Car	80.57	347	IAmb	IAmb	02 30 28.0	
	comp=Z,281nm,1.1s						
CEST				IAMs_20	IAMs_20	03 10 58.4	
	comp=Z,16µm,20.0s						
JRN	Qarnain Island	80.61	301	P	P	02 30 20.5	-0.2
	SNR=41						
JRN				P	P	02 30 20.5	-0.2
	SNR=41						
EVGI	Lefkada island	80.63	332	P	P	02 30 20.2	-0.5
NISR	Nisiros	80.64	326	P	P	02 30 19.6	-1.1
SHBL	Chebaa	80.65	318	eP	P	02 30 21.0	-0.1
ARG	Arkhangelos	80.69	325	eP	P	02 30 20.7	-0.3
ARG	Arkhangelos	80.69	325	IAmb	IAmb	02 30 24.6	
	comp=Z,480nm,1.1s						
ARG	Arkhangelos	80.69	325	P	P	02 30 20.4	-0.6
APE	Apeiranthos	80.70	328	eP	P	02 30 18.9	-2.2
APE	Apeiranthos	80.70	328	P	P	02 30 19.0	-2.2
APE	Apeiranthos	80.70	328	ceP	P	02 30 19.5	-1.6
APE				pmax	pmax		
	comp=Z,44nm,0.9s						
APE				MLR	MLR		
	comp=Z,22µm,20.0s						
SHMA	Al-Shehemyia	80.73	303	P	P	02 30 22.0	+0.6
	SNR=50						
FITZ	Fitzroy Crossi	80.74	217	LR	LR	03 12 42.5	
	comp=Z,3µm,18.0s,baz=20,slow=40						
FITZ	Fitzroy Crossi	80.74	217	P	P	02 30 22.9	+1.6
KLV	Kalavryta, Ach	80.77	330	P	P	02 30 20.5	-1.0
FSK	Fiskardo	80.81	332	P	P	02 30 20.7	-0.9
060A	Indiantown	80.82	55	IAmb	IAmb	02 30 26.2	
	comp=Z,314nm,1.0s						
GUR	Goura	80.82	330	P	P	02 30 20.5	-1.3
SAKB	Bahrain	80.83	303	P	P	02 30 22.1	+0.2
AXS	Araxos	80.84	331	P	P	02 30 21.5	-0.2
RLS	Riolos of Patr	80.95	331	P	P	02 30 22.4	+0.1
DRO	Drossia	80.98	331	P	P	02 30 22.6	+0.1
DMLN	Damoulianata-K	81.07	332	P	P	02 30 23.3	+0.2
MMAI	Mount Meron Ar	81.07	318	P	P	02 30 23.6	+0.4
	comp=Z,117nm,0.9s,baz=39,slow=6.7,SNR=97						
MMAI				LR	LR	03 11 25.2	
	comp=Z,20µm,18.4s,baz=26,slow=40						
	comp=Z,117nm,0.9s						
TIP	Timpagrande	81.09	335	IAmb	IAmb	02 30 25.8	
	comp=Z,420nm,1.5s						
TIP				IAMs_20	IAMs_20	03 10 04.4	
	comp=Z,23µm,21.0s						
TIP	Timpagrande	81.09	335	⇑P	P	02 30 23.8	+0.7
MZWR	Madinat Zayed	81.11	300	P	P	02 30 23.4	-0.1
ASF	Jabal al Asfar	81.26	317	LR	LR	03 12 26.1	
	comp=Z,30µm,18.6s,baz=58,slow=40						
UMZA	Um Al Zommool	81.36	298	P	P	02 30 25.4	+0.6
UMZA				P	P	02 30 25.4	+0.6
MHTO	MHTO	81.40	295	P	P	02 30 25.2	+0.2
	SNR=244						
MHTO				P	P	02 30 25.2	+0.2
	SNR=244						
TRD	Trivandrum	81.42	272	eP	P	02 30 24.8	-0.4
GHWR	Ruwais	81.43	300	P	P	02 30 25.2	+0.1
PMOR	Pomariorio Ree	81.44	133	eP	P	02 30 25.6	+0.6
	comp=Z,374nm,1.1s						
PMOR	Pomariorio Ree	81.44	133	eS	S	02 40 33.6	-2.3
	comp=Z,6µm,25.3s						
PMOR				eSS	SS	02 45 53.1	+0.4
	comp=Z,3µm,24.9s						
PMOR				eLR	LR	02 55 46.5	
	comp=Z,43µm,26.6s						
TRNA	Turayna	81.57	302	P	P	02 30 26.0	+0.2
	SNR=57						
MMLI	Mount Malkishu	81.58	318	eP	P	02 30 26.6	+0.7
KARP	Karpathos	81.61	326	eP	P	02 30 24.5	-1.5
KARP	Karpathos	81.61	326	IAmb	IAmb	02 30 28.8	
	comp=Z,192nm,0.9s						
KARP	Karpathos	81.61	326	eP	P	02 30 24.2	-1.8
ITM	Ithomi	81.64	330	eP	P	02 30 25.5	-0.6
ITM	Ithomi	81.64	330	IAmb	IAmb	02 30 30.8	
	comp=Z,262nm,0.9s						
ITM				IAMs_20	IAMs_20	03 12 00.4	
	comp=Z,15µm,18.0s						
SMRA	Abu-Samra	81.74	302	P	P	02 30 27.0	+0.2
	SNR=104						
VAH	Vaihoa	81.75	133	eP	P	02 30 28.2	+1.5
	comp=Z,233nm,1.1s						
VAH	Vaihoa	81.75	133	eS	S	02 40 42.0	+2.8
	comp=Z,7µm,28.0s						
VAH				eSS	SS	02 45 49.2	-8.3
	comp=Z,7µm,28.1s						
VAH	Vaihoa	81.75	133	eLR	LR	02 55 55.5	
	comp=Z,23µm,23.8s						
SLWR	Sila	81.91	301	P	P	02 30 28.1	+0.4
SLWR				P	P	02 30 28.1	+0.4
EIDS	Eidsvold	81.94	192	IAMs_20	IAMs_20	03 03 59.4	
	comp=Z,15µm,20.0s						
EIDS	Eidsvold	81.94	192	P	P	02 30 29.7	+2.2
MZR	Muzera	81.94	299	P	P	02 30 27.6	-0.3
	SNR=138						
MZR				P	P	02 30 27.6	-0.3
	SNR=138						
MZR	Muzera	81.94	299	i P	P	02 30 27.1	-0.7
	SNR=174						
CMIG	Matias Romero	81.96	71	P	P	02 30 28.7	+0.7
	comp=Z,98nm,1.0s,baz=331,slow=3.7,SNR=79						
CMIG				LR	LR	03 08 40.5	
	comp=Z,6µm,18.1s,baz=314,slow=37						
	comp=Z,98nm,1.0s						
ECAL	Calabor	81.98	353	P	P	02 30 28.5	+0.6
UJAP	Al Uja	82.00	318	eP	P	02 30 28.5	+0.5
XMI	Christmas Isla	82.01	238	P	P	02 30 29.8	+1.6
PGAV	Gavieira, Arco	82.06	354	⇑iP	P	02 30 28.9	+0.7
PGAV				i Amb		02 30 32.4	
	comp=Z,270nm,1.4s						
PGAV				eS	S	02 40 44.0	+1.8
PGAV				eSS	SS	02 46 05.6	+5.9
PGAV				eLQ	LQ	02 52 36.5	
PGAV				eLR	LR	02 57 21.0	
PGAV				i AMs_20		03 11 57.1	
	comp=Z,8µm,20.0s						
PBRG	Braganca	82.12	353	⇑iP	P	02 30 28.9	+0.3
PBRG				i Amb		02 30 33.4	
	comp=Z,184nm,1.5s						
KTHA	Kythira Island	82.19	329	eP	P	02 30 28.3	-0.7
PCAB	Cabril	82.30	354	⇑iP	P	02 30 30.0	+0.5
PCAB				i Amb		02 30 33.7	
	comp=Z,198nm,1.2s						
ZKR	Zakros	82.30	326	eP	P	02 30 28.9	-0.7
VSL	Villasalto	82.35	341	IAmb	IAmb	02 30 34.2	
	comp=Z,182nm,1.0s						
VSL				IAMs_20	IAMs_20	03 10 29.6	
	comp=Z,21µm,21.0s						
DQM	DQM	82.50	295	P	P	02 30 31.0	+0.2
	SNR=33						
DQM				P	P	02 30 31.0	+0.2
	SNR=33						
IDI	Anoyia	82.55	327	eP	P	02 30 30.4	-0.5
IDI	Anoyia	82.55	327	P	P	02 30 29.1	-1.9
BBSR	BB Station	82.55	40	P	P	02 30 30.0	-0.9
BBSR				IAmb	IAmb	02 30 34.8	
	comp=Z,233nm,0.9s						
BBSR	BB Station	82.55	40	IAMs_20	IAMs_20	03 09 48.9	
	comp=Z,11µm,20.0s						
POLO	Lamas de Olo	82.62	354	⇑iP	P	02 30 31.7	+0.5
POLO				i Amb		02 30 35.5	
	comp=Z,114nm,1.1s						
IMMV	Iera Moni Meta	82.66	328	eP	P	02 30 31.2	-0.2
PVRL	Vila Real	82.71	354	⇑iP	P	02 30 32.1	+0.4
PVRL				i Amb		02 30 35.9	
	comp=Z,340nm,1.1s						
TEIG	Tepich	82.77	64	P	P	02 30 31.7	-0.5
MVO	Moncorvo	82.78	353	⇑iP	P	02 30 32.6	+0.5
MVO				i Amb		02 30 36.2	
	comp=Z,322nm,1.1s						
MVO				eS	S	02 40 50.2	+0.6
MVO				eSS	SS	02 46 14.0	+3.6
MVO				eLQ	LQ	02 53 24.9	
MVO				eLR	LR	02 57 52.5	
MVO				i AMs_20		03 14 37.3	
	comp=Z,13µm,20.0s						
MAHO	Mahon	82.82	345	P	P	02 30 33.0	+0.9
MAHO	Mahon	82.82	345	IAMs_20	IAMs_20	03 09 23.9	
	comp=Z,19µm,22.0s						
RAR	Rarotonga	82.88	146	IAMs_20	IAMs_20	03 00 55.1	
	comp=Z,11µm,20.0s						
RAR	Rarotonga	82.88	146	LR	LR	03 00 35.3	
	comp=Z,10µm,20.6s,baz=332,slow=31						
PTO	Porto	82.90	354	⇓eP	P	02 30 32.1	-0.4
PTO				i Amb		02 30 35.1	
	comp=Z,268nm,1.2s						
KNDR	Palaiochora Ch	82.96	328	eP	P	02 30 32.4	-0.5
PPT	Papeete	83.09	136	P	P	02 30 35.8	+2.2
	comp=Z,159nm,0.8s,baz=290,slow=7.9,SNR=9.6						
PPT				LR	LR	02 59 30.6	
	comp=Z,22µm,21.5s,baz=317,slow=30						
	comp=Z,159nm,0.8s						
PPT2	Papeete2	83.11	136	eP	P	02 30 35.1	+1.3
	comp=Z,299nm,1.3s						
PPT2	Papeete2	83.11	136	ePP	PP	02 33 34.9	-10
	comp=Z,772nm,26.5s						
PPT2				eS	S	02 40 48.9	-4.2
	comp=Z,5µm,26.5s						
PPT2				eSS	SS	02 46 20.7	+2.9
	comp=Z,7µm,27.8s						
PPT2				eLQ	LQ	02 52 39.4	
	comp=Z,25µm,27.2s						
PPT2				eLR	LR	02 56 13.4	
	comp=Z,54µm,30.8s						
PPT2				eLR	LR	02 56 37.5	
	comp=Z,56µm,23.0s						
PPTF	Pamatai, Papee	83.11	136	IAMs_20	IAMs_20	02 58 58.0	
	comp=Z,22µm,21.0s						
PPTF	Pamatai, Papee	83.11	136	P	P	02 30 36.8	+2.9
ETOS	Mallorca	83.15	346	P	P	02 30 35.3	+1.3
PAE	Paea	83.17	136	eP	P	02 30 34.0	0.0
	comp=Z,110nm,1.2s						
PAE	Paea	83.17	136	eS	S	02 40 54.3	+0.7
	comp=Z,963nm,25.4s						
PAE				eSS	SS	02 46 12.9	-5.7
	comp=Z,1µm,27.3s						
PAE	Paea	83.17	136	eLR	LR	02 56 35.2	
	comp=Z,10µm,22.4s						
SOR	Soroa	83.20	59	IAmb	IAmb	02 30 38.9	
	comp=Z,385nm,1.6s						
SOR				IAMs_20	IAMs_20	03 10 18.2	
	comp=Z,13µm,20.0s						
GVD	Gavdhos	83.20	328	eP	P	02 30 33.3	-1.0
VAE	Valguarnera	83.25	336	LR	LR	03 13 00.6	
	comp=Z,33µm,18.1s,baz=16,slow=40						
PVIS	Viseu	83.28	354	⇑iP	P	02 30 35.0	+0.3
RMQ	Roma	83.33	194	P	P	02 30 37.5	+2.8
UCM	Universidad Co	83.33	350	P	P	02 30 35.7	+0.8
TVO	Taravao	83.41	136	eP	P	02 30 34.9	-0.5
	comp=Z,82nm,1.1s						
TVO	Taravao	83.41	136	eS	SKSac	02 40 59.0	+1.7
	comp=Z,932nm,25.9s						
TVO				eSS	SS	02 46 17.0	-5.2
	comp=Z,617nm,22.6s						
TVO	Taravao	83.41	136	eLR	LR	02 56 42.4	
	comp=Z,12µm,22.8s						
AS01	Alice Springs	83.51	208	P	P	02 30 37.5	+1.7
ASAR	Alice Springs	83.52	208	P	P	02 30 36.7	+0.9
ASAR	Alice Springs	83.52	208	P	P	02 30 37.0	+1.1
	comp=Z,374nm,0.9s,baz=15,slow=4.8,SNR=428						
ASAR				PKKPbc	PKKPbc	02 48 52.1	-0.8
	comp=Z,2.2nm,0.9s,baz=189,slow=4.7,SNR=5.9						
ASAR				PKPPKP	P'P'df	02 56 55.5	+1.5
	comp=Z,1.7nm,0.8s,baz=162,slow=0.4,SNR=8.8						
	comp=Z,374nm,0.9s						
ASAR	Alice Springs	83.52	208	P	P	02 30 36.7	+0.9
MTE	Manteigas	83.57	354	IAmb	IAmb	02 30 41.3	
	comp=Z,149nm,0.9s						
MTE				IAMs_20	IAMs_20	03 14 37.7	
	comp=Z,13µm,19.0s						
MTE	Manteigas	83.57	354	⇑iP	P	02 30 36.8	+0.6
MTE				i Amb		02 30 40.4	
	comp=Z,421nm,1.9s						
MTE				eS	SKSac	02 40 58.8	+0.5
MTE				eSS	SS	02 46 25.7	+3.6
MTE				eLQ	LQ	02 52 44.9	
MTE				eLR	LR	02 57 59.7	
MTE				i AMs_20		03 16 27.8	
	comp=Z,15µm,18.0s						
MTE	Manteigas	83.57	354	eP	P	02 30 35.6	-0.5
CAMR	Camarioca	83.75	57	IAmb	IAmb	02 30 42.4	
	comp=Z,2µm,1.5s						
CAMR				IAMs_20	IAMs_20	03 09 02.7	
	comp=Z,53µm,20.0s						
ECHE	Chera	83.80	348	P	P	02 30 38.5	+1.2
COI	Coimbra	83.81	354	IAMs_20	IAMs_20	03 13 47.1	
	comp=Z,16µm,20.0s						
COI	Coimbra	83.81	354	⇑iP	P	02 30 37.6	+0.4
COI				i Amb		02 30 41.9	
	comp=Z,691nm,1.2s						
PCAS	Casmilo, Conde	83.97	354	⇑iP	P	02 30 38.9	+0.7
PCAS				i Amb		02 30 42.5	
	comp=Z,635nm,1.1s						
ESDC	Sonseca Array	84.02	351	P	P	02 30 38.6	+0.1
ESDC	Sonseca Array	84.02	351	P	P	02 30 39.0	+0.5
	comp=Z,59nm,0.8s,baz=360,slow=5.2,SNR=192						
ESDC				PKKPbc	PKKPbc	02 48 52.5	+2.2
	comp=Z,1.9nm,0.9s,baz=204,slow=1.0,SNR=9.1						
ESDC				PKPPKP	P'P'df	02 56 52.4	-13
	comp=Z,2.1nm,1.0s,baz=176,slow=1.5,SNR=9.0						
	comp=Z,59nm,0.8s						
EIBI	Ibiza	84.08	347	P	P	02 30 40.1	+1.5
QLP	Quilpie	84.11	198	P	P	02 30 40.5	+1.8
PCBR	Castelo Branco	84.12	354	⇑iP	P	02 30 39.3	+0.4
PCBR				i Amb		02 30 43.1	
	comp=Z,534nm,1.2s						
PAB	San Pablo	84.18	351	P	P	02 30 39.1	-0.2
PAB				IAmb	IAmb	02 30 41.9	
	comp=Z,352nm,1.6s						
PAB	San Pablo	84.18	351	IAMs_20	IAMs_20	03 14 05.9	
	comp=Z,18µm,19.0s						
EIL	Elat	84.24	317	eP	P	02 30 39.9	+0.3
EIL	Elat	84.24	317	LR	LR	03 14 10.0	
	comp=Z,30µm,18.6s,baz=43,slow=40						
PSARD	Sardoal	84.41	354	⇑iP	P	02 30 40.5	+0.1
PSARD				i Amb		02 30 44.3	
	comp=Z,400nm,1.3s						
GC1S	Gold Coast 1 S	84.45	189	P	P	02 30 43.3	+3.0
PSBE	So Bento	84.53	355	⇑iP	P	02 30 41.4	+0.4
PSBE				i Amb		02 30 45.2	
	comp=Z,652nm,1.3s						
PMRV	Marv??o	84.53	353	⇑iP	P	02 30 41.3	+0.3
PMRV				i Amb		02 30 44.9	
	comp=Z,376nm,1.8s						
PMRV				eS	SKSac	02 41 04.8	+0.4
PMRV				eSS	SS	02 46 44.6	+8.3
PMRV				eLQ	LQ	02 53 08.8	
PMRV				eLR	LR	02 58 30.7	
PMRV				i AMs_20		03 16 20.7	
	comp=Z,10µm,18.0s						
SRBC	Serra Branca	84.63	9	eP	P	02 30 42.8	+1.3
SRBC				i IAmb	IAmb	02 30 48.4	
	comp=Z,1µm,1.7s						
SRBC	Serra Branca	84.63	9	eP	P	02 30 42.8	+1.3
SRBC				i IAmb	IAmb	02 30 48.4	
	comp=Z,1µm,1.7s						
PETF	Flores	84.73	68	IAmb	IAmb	02 30 47.4	
	comp=Z,136nm,0.9s						
WDD	Wied Dalam	84.80	336	IAMs_20	IAMs_20	03 15 04.6	
	comp=Z,14µm,18.0s						
ROSA	Rosais	84.93	10	eP	P	02 30 43.8	+0.8
ROSA				i IAmb	IAmb	02 30 47.8	
	comp=Z,536nm,1.6s						
ROSA	Rosais	84.93	10	eP	P	02 30 43.8	+0.8
ROSA				i IAmb	IAmb	02 30 47.8	
	comp=Z,536nm,1.6s						
PMTG	Montargil	84.94	354	⇑iP	P	02 30 43.0	0.0
PMTG				i Amb		02 30 46.9	
	comp=Z,466nm,1.2s						
HMDM	Hanimaadhoo	84.95	275	IAMs_20	IAMs_20	03 10 38.7	
	comp=Z,17µm,20.0s						
HMDM	Hanimaadhoo	84.95	275	P	P	02 30 44.1	+0.7
	SNR=16						
PCED	Cedros	84.97	10	eP	P	02 30 43.0	-0.2
PCED				i IAmb	IAmb	02 30 57.3	
	comp=Z,261nm,1.9s						
PCED	Cedros	84.97	10	eP	P	02 30 43.0	-0.2
PCED				i IAmb	IAmb	02 30 57.3	
	comp=Z,261nm,1.9s						
PAGU	Agualva, Azore	84.97	9	eP	P	02 30 43.8	+0.6
PAGU				i IAmb	IAmb	02 30 50.8	
	comp=Z,292nm,2.3s						
PAGU	Agualva, Azore	84.97	9	eP	P	02 30 43.8	+0.6
PAGU				i IAmb	IAmb	02 30 50.8	
	comp=Z,292nm,2.3s						
CALA	Caldeira	85.02	10	eP	P	02 30 43.7	+0.1
CALA				i IAmb	IAmb	02 31 07.6	
	comp=Z,450nm,1.5s						
CALA	Caldeira	85.02	10	eP	P	02 30 43.7	+0.1
CALA				i IAmb	IAmb	02 31 07.6	
	comp=Z,450nm,1.5s						
PMAN	Manadas	85.03	10	eP	P	02 30 44.7	+1.2
PMAN				i IAmb	IAmb	02 30 49.2	
	comp=Z,581nm,1.5s						
PMAN	Manadas	85.03	10	eP	P	02 30 44.7	+1.2
PMAN				i IAmb	IAmb	02 30 49.2	
	comp=Z,581nm,1.5s						
ADH	Angra Heroismo	85.08	9	eP	P	02 30 45.3	+1.6
ADH				i IAmb	IAmb	02 31 05.9	
	comp=Z,428nm,1.9s						
ADH	Angra Heroismo	85.08	9	eP	P	02 30 45.3	+1.6
ADH				i IAmb	IAmb	02 31 05.9	
	comp=Z,428nm,1.9s						
PESTR	Estremoz	85.10	354	P	P	02 30 44.1	+0.3
PESTR	Estremoz	85.10	354	IAMs_20	IAMs_20	03 16 13.1	
	comp=Z,18µm,18.0s						
PESTR	Estremoz	85.10	354	⇑iP	P	02 30 44.0	+0.1
PESTR				i Amb		02 30 47.9	
	comp=Z,493nm,1.4s						
PMAFR	Mafra	85.11	355	P	P	02 30 44.3	+0.4
PICO	Pico	85.13	10	eP	P	02 30 46.0	+1.9
PICO				i IAmb	IAmb	02 30 56.0	
	comp=Z,459nm,1.6s						
PICO	Pico	85.13	10	eP	P	02 30 46.0	+1.9
PICO				i IAmb	IAmb	02 30 56.0	
	comp=Z,459nm,1.6s						
PCAN	Candelaria	85.16	10	eP	P	02 30 46.6	+2.4
PCAN				i IAmb	IAmb	02 30 59.8	
	comp=Z,256nm,1.5s						
PCAN	Candelaria	85.16	10	eP	P	02 30 46.6	+2.4
PCAN				i IAmb	IAmb	02 30 59.8	
	comp=Z,256nm,1.5s						
PPNO	Prainha do Nor	85.17	10	eP	P	02 30 46.0	+1.7
PPNO				i IAmb	IAmb	02 31 05.8	
	comp=Z,327nm,1.8s						
PPNO	Prainha do Nor	85.17	10	eP	P	02 30 46.0	+1.7
PPNO				i IAmb	IAmb	02 31 05.8	
	comp=Z,327nm,1.8s						
EBAD	Badajoz	85.17	353	P	P	02 30 44.6	+0.4
PID	Ribeirinha	85.21	10	eP	P	02 30 46.0	+1.5
PID				i IAmb	IAmb	02 30 52.0	
	comp=Z,416nm,1.7s						
PID	Ribeirinha	85.21	10	eP	P	02 30 46.0	+1.5
PID				i IAmb	IAmb	02 30 52.0	
	comp=Z,416nm,1.7s						
RAYN	Ar Rayn	85.25	306	P	P	02 30 44.4	-0.5
RAYN				IAmb	IAmb	02 30 47.4	
	comp=Z,200nm,0.8s						
RAYN	Ar Rayn	85.25	306	P	P	02 30 45.3	+0.4
RAYN	Ar Rayn	85.25	306	i P	P	02 30 44.4	-0.5
	SNR=196						
DOK	Doka	85.33	297	P	P	02 30 45.0	-0.3
	SNR=40						
DOK				P	P	02 30 45.0	-0.3
	SNR=40						
LIS	Lisbon	85.34	355	eP	P	02 30 45.0	0.0
LIS				eSKSac	SKSac	02 41 09.6	0.0
LIS				IAMs_20	IAMs_20	03 15 30.1	
	comp=N,17µm,19.5s						
EVO	Evora	85.46	354	P	P	02 30 46.0	+0.3
EVO	Evora	85.46	354	⇑iP	P	02 30 45.9	+0.3
EVO				i Amb		02 30 49.9	
	comp=N,595nm,1.1s						
EADA	Adamuz	85.57	351	P	P	02 30 47.3	+1.0
MBWA	Marble Bar	85.64	221	P	P	02 30 46.3	-0.2
MBWA	Marble Bar	85.64	221	P	P	02 30 47.6	+1.1
MBWA				P	P	02 30 47.6	+1.1
MBWA	Marble Bar	85.64	221	P	P	02 30 46.9	+0.4
MBWA	Marble Bar	85.64	221	P	P	02 30 46.2	-0.2
DMTO	DMTO	85.68	295	P	P	02 30 47.0	0.0
	SNR=8.4						
DMTO				P	P	02 30 47.0	0.0
	SNR=8.4						
ECAB	El Cabril	85.73	352	P	P	02 30 47.7	+0.6
PBAR	Barrancos	85.75	353	P	P	02 30 47.6	+0.5
PBAR	Barrancos	85.75	353	⇑iP	P	02 30 47.6	+0.5
PBAR				i Amb		02 30 51.8	
	comp=N,715nm,1.4s						
CART	Cartagena	85.78	348	P	P	02 30 47.5	+0.2
CART	Cartagena	85.78	348	IAmb	IAmb	02 30 51.2	
	comp=Z,331nm,1.1s						
CART				IAMs_20	IAMs_20	03 10 06.4	
	comp=Z,14µm,22.0s						
TLOR	Lorca, Murcia	85.79	349	P	P	02 30 48.6	+1.2
PBEJ	Beja	85.95	354	⇑iP	P	02 30 48.6	+0.5
PBEJ				i Amb		02 30 53.0	
	comp=Z,399nm,1.5s						
PSA00	Pilbara Seismi	85.98	221	P	P	02 30 48.3	+0.1
PSA00	Pilbara Seismi	85.98	221	P	P	02 30 49.4	+1.2
KEST	Kesra	86.00	340	P	P	02 30 48.7	+0.2
	comp=Z,49nm,0.8s,baz=281,slow=0.9,SNR=33						
KEST				PKKPbc	PKKPbc	02 48 48.8	+3.1
	comp=Z,8.0nm,0.9s,baz=276,slow=2.7,SNR=11						
KEST				LR	LR	03 15 43.6	
	comp=Z,18µm,18.2s,baz=1.2,slow=40						
	comp=Z,49nm,0.8s						
KEST	Kesra	86.00	340	P	P	02 30 50.0	+1.5
	SNR=40						
KEST				P	P	02 30 50.0	+1.5
	SNR=40						
PSET	Sete Cidades	86.03	8	eP	P	02 30 49.1	+0.6
PSET				i IAmb	IAmb	02 31 00.5	
	comp=Z,444nm,1.9s						
PSET	Sete Cidades	86.03	8	eP	P	02 30 49.1	+0.6
PSET				i IAmb	IAmb	02 31 00.5	
	comp=Z,444nm,1.9s						
WHFO	Wadi Hawf	86.10	297	P	P	02 30 49.0	-0.1
	SNR=26						
WHFO				P	P	02 30 49.0	-0.1
	SNR=26						
CMLA	Cha da Macela	86.11	8	eP	P	02 30 49.8	+0.9
CMLA				i IAmb	IAmb	02 30 58.9	
	comp=Z,341nm,1.8s						
CMLA	Cha da Macela	86.11	8	IAMs_20	IAMs_20	03 04 32.7	
	comp=Z,11µm,22.0s						
CMLA	Cha da Macela	86.11	8	eP	P	02 30 49.8	+0.9
CMLA				i IAmb	IAmb	02 30 58.9	

	comp=Z,341nm,1.8s						
PGRON	Lagoa das Cont	86.11	8	eP	P	02 30 50.1	+1.1
PGRON				i IAmb	IAmb	02 31 05.9	
	comp=Z,454nm,1.7s						
PGRON	Lagoa das Cont	86.11	8	eP	P	02 30 50.1	+1.1
PGRON				i IAmb	IAmb	02 31 05.9	
	comp=Z,454nm,1.7s						
BART	Pico Bartolome	86.12	7	eP	P	02 30 48.9	-0.1
BART				i IAmb	IAmb	02 31 03.6	
	comp=Z,221nm,1.9s						
BART	Pico Bartolome	86.12	7	eP	P	02 30 48.9	-0.1
BART				i IAmb	IAmb	02 31 03.6	
	comp=Z,221nm,1.9s						
EMIN	Mina Concepcio	86.13	353	P	P	02 30 49.7	+0.7
MESJ	Messejana	86.16	354	eP	P	02 30 49.0	-0.1
MESJ				eSKSac	SKSac	02 41 14.9	+0.1
MESJ				IAMs_20	IAMs_20	03 13 32.8	
	comp=Z,16µm,23.1s						
MESJ	Messejana	86.16	354	eP	P	02 30 49.0	-0.1
MESJ				e		02 41 14.9	
RBK	Rabkut	86.23	296	P	P	02 30 50.0	+0.2
	SNR=22						
RBK				P	P	02 30 50.0	+0.2
	SNR=22						
SET	Setif	86.25	343	P	P	02 30 56.0	+6.3
PCVE	Castro Verde	86.36	354	P	P	02 30 50.6	+0.5
PCVE	Castro Verde	86.36	354	⇑iP	P	02 30 50.4	+0.3
PCVE				i Amb		02 30 55.1	
	comp=Z,368nm,1.8s						
RAO	Raoul Island	86.42	164	LR	LR	03 03 00.6	
	comp=Z,24µm,21.2s,baz=20,slow=31						
EQTA	Presa de Quent	86.42	350	P	P	02 30 51.2	+0.6
EGRO	El Granado	86.42	353	P	P	02 30 50.9	+0.5
PTEO	Sao Teotonio	86.48	354	⇑iP	P	02 30 50.9	+0.2
PTEO				i Amb		02 30 54.9	
	comp=Z,332nm,1.4s						
ENIJ	Nijar	86.53	349	P	P	02 30 50.9	-0.1
PVAQ	Vaqueiros	86.56	353	P	P	02 30 51.8	+0.6
EGOR	Sierra Gorda,	86.58	351	P	P	02 30 52.2	+0.8
MORF	Marmelete	86.72	354	eP	P	02 30 52.0	0.0
MORF				eS	SKSac	02 41 18.6	+0.2
MORF				IAMs_20	IAMs_20	03 14 02.8	
	comp=Z,14µm,18.4s						
MORF	Marmelete	86.72	354	IAmb	IAmb	02 30 56.2	
	comp=Z,220nm,1.1s						
MORF				IAMs_20	IAMs_20	03 14 08.0	
	comp=Z,14µm,21.0s						
MORF	Marmelete	86.72	354	⇑iP	P	02 30 52.2	+0.3
MORF				i Amb		02 30 56.9	
	comp=Z,445nm,1.8s						
PBDV	Barranco-do-Ve	86.74	354	⇑iP	P	02 30 52.6	+0.6
PBDV				i Amb		02 30 56.6	
	comp=Z,379nm,1.5s						
ELGU	Los Guajares,	86.77	350	P	P	02 30 52.7	+0.4
ARNO	Arenosillo	86.80	353	P	P	02 30 53.3	+1.0
ABTO	Aybut	86.81	297	P	P	02 30 53.0	+0.3
	SNR=28						
ABTO				P	P	02 30 53.0	+0.3
	SNR=28						
ARMA	Armidale	86.86	191	IAmb	IAmb	02 30 57.7	
	comp=Z,190nm,1.0s						
ARMA				IAMs_20	IAMs_20	03 05 40.0	
	comp=Z,17µm,21.0s						
ARMA	Armidale	86.86	191	P	P	02 30 54.4	+1.9
PSMN	Pico do Norte,	86.89	7	eP	P	02 30 51.6	-1.1
PSMN				i IAmb	IAmb	02 31 26.2	
	comp=Z,198nm,1.8s						
PSMN	Pico do Norte,	86.89	7	eP	P	02 30 51.6	-1.1
PSMN				i IAmb	IAmb	02 31 26.2	
	comp=Z,198nm,1.8s						
PSMA	Santa Maria	86.90	7	eP	P	02 30 51.6	-1.1
PSMA				i IAmb	IAmb	02 30 59.1	
	comp=Z,286nm,1.6s						
PSMA	Santa Maria	86.90	7	eP	P	02 30 51.6	-1.1
PSMA				i IAmb	IAmb	02 30 59.1	
	comp=Z,286nm,1.6s						
PFVI	Vila Bisbo	86.90	354	P	P	02 30 53.3	+0.5
PFVI	Vila Bisbo	86.90	354	⇑iP	P	02 30 53.2	+0.4
PFVI				i Amb		02 30 57.6	
	comp=Z,310nm,1.4s						
EMAL	Malaga-Limoner	86.95	351	P	P	02 30 53.6	+0.6
ESPR	Espera	86.97	352	P	P	02 30 54.0	+0.9
EANR	'Ain N'Sour	87.14	346	P	P	02 30 53.0	-1.0
EMIJ	Mijas	87.18	351	P	P	02 30 54.3	+0.1
SFS	San Fernando	87.39	352	P	P	02 30 56.8	+1.6
LHI	Lord Howe Isla	87.41	184	IAMs_20	IAMs_20	03 10 23.5	
	comp=Z,12µm,19.0s						
CNIL	Conil	87.48	352	P	P	02 30 56.7	+1.2
EALB	Alboran	87.63	350	P	P	02 30 56.0	-0.3
COCO	West Island	87.85	244	P	P	02 30 57.8	+0.3
COCO	West Island	87.85	244	P	P	02 30 59.7	+2.3
COCO				P	P	02 30 59.7	+2.3
COCO	West Island	87.85	244	P	P	02 30 59.1	+1.6
COCO	West Island	87.85	244	P	P	02 30 57.8	+0.3
COCO				pmax	pmax		
	comp=Z,2µm,1.5s						
ECEU	Ceuta	87.89	351	P	P	02 30 58.1	+0.6
WMELI	Melilla	88.24	349	P	P	02 30 59.0	-0.2
EMLI	Melilla	88.26	349	P	P	02 30 59.1	-0.2
TBI	Tubuai	88.39	138	eP	P	02 31 01.6	+1.8
	comp=Z,442nm,1.3s						
TBI	Tubuai	88.39	138	ePP	PP	02 34 23.3	-4.6
	comp=Z,2µm,25.0s						
TBI				eS	S	02 41 40.6	-4.0
	comp=Z,25µm,28.0s						
TBI				eSS	SS	02 47 30.1	-5.1
	comp=Z,24µm,27.0s						
TBI				eLQ	LQ	02 54 26.2	
	comp=Z,93µm,42.5s						
TBI				eLR	LR	02 58 38.7	
	comp=Z,32µm,35.2s						
TBI				eLR	LR	02 58 53.1	
	comp=Z,124µm,25.2s						
TGUH	Tegucigalpa,Un	88.47	67	IAMs_20	IAMs_20	03 17 18.5	
	comp=Z,10µm,18.0s						
CHIV	Chivirico	88.72	55	IAmb	IAmb	02 31 14.9	
	comp=Z,351nm,1.2s						
CHIV				IAMs_20	IAMs_20	03 12 39.0	
	comp=Z,31µm,19.0s						
CMSA	Cobar Meteorol	88.73	196	P	P	02 31 03.1	+1.9
NMDO	Nuevo Mundo	88.86	54	IAmb	IAmb	02 31 06.2	
	comp=Z,142nm,1.0s						
NMDO				IAMs_20	IAMs_20	03 11 59.7	
	comp=Z,36µm,20.0s						
GIRL	Giralia	89.08	225	P	P	02 31 04.7	+1.6
NTLH	Newcastle Hard	89.31	190	P	P	02 31 06.3	+2.4
MGCD	Mangrove Creek	89.68	191	P	P	02 31 08.5	+2.8
GRTK	Grand Turk	89.71	50	IAMs_20	IAMs_20	03 11 41.2	
	comp=Z,19µm,21.0s						
MTDJ	Mount Denham	89.71	57	IAmb	IAmb	02 31 10.3	
	comp=Z,254nm,1.0s						
MTDJ				IAMs_20	IAMs_20	03 14 08.6	
	comp=Z,12µm,20.0s						
STKA	Stephens Creek	89.75	199	P	P	02 31 07.2	+1.2
	comp=Z,173nm,0.9s,baz=352,slow=6.3,SNR=147						
STKA				LR	LR	03 07 43.6	
	comp=Z,12µm,22.0s,baz=12,slow=33						
	comp=Z,173nm,0.9s						
STKA	Stephens Creek	89.75	199	P	P	02 31 07.4	+1.4
STKA	Stephens Creek	89.75	199	c iP	P	02 31 07.0	+1.0
HERN	Volcan Telica	89.92	67	IAMs_20	IAMs_20	03 18 12.9	
	comp=Z,8µm,19.0s						
KAAM	Kaadhehdhoo	90.22	271	IAmb	IAmb	02 31 11.6	
	comp=Z,163nm,0.9s						
KAAM				IAMs_20	IAMs_20	03 09 23.6	
	comp=Z,20µm,20.0s						
KAAM	Kaadhehdhoo	90.22	271	P	P	02 31 09.1	+0.3
SYDH	Sydney Hard Ro	90.27	191	P	P	02 31 10.6	+2.3
RIV	Riverview	90.29	191	P	P	02 31 11.5	+3.1
AVE	Averroes	90.63	353	P	P	02 31 10.8	+0.3
AVE	Averroes	90.63	353	IAMs_20	IAMs_20	03 19 53.5	
	comp=Z,16µm,20.0s						
BOAB	BOACO BROADBAN	90.66	66	P	P	02 31 10.2	-0.6
BOAB	BOACO BROADBAN	90.66	66	IAMs_20	IAMs_20	03 18 20.3	
	comp=Z,10µm,20.0s						
WOLH	Wollongong Har	90.89	191	P	P	02 31 13.8	+2.6
MEEK	Meekatharra	91.05	220	P	P	02 31 12.2	-0.1
PMPST	Porto Santo, M	91.14	0	⇑iP	P	02 31 12.7	-0.2
PMPST				i Amb		02 31 18.9	
	comp=Z,298nm,1.6s						
ACON	Acoyapa	91.31	66	IAmb	IAmb	02 31 17.4	
	comp=Z,212nm,1.3s						
OUZ	Omahuta	91.36	172	IAMs_20	IAMs_20	03 11 21.8	
	comp=Z,14µm,19.0s						
OUZ	Omahuta	91.36	172	P	P	02 31 15.7	+2.3
PMOZ	Porto Moniz, M	91.39	1	P	P	02 31 14.2	+0.1
PMOZ	Porto Moniz, M	91.39	1	⇑iP	P	02 31 14.2	+0.1
PMOZ				i Amb		02 31 18.5	
	comp=Z,260nm,1.2s						
PMOZ				ePP	PP	02 34 54.4	+3.8
PMOZ				eS	SKSac	02 41 50.3	+4.0
PMOZ				eLQ	LQ	02 55 20.3	
PMOZ				eLR	LR	03 01 42.1	
PMOZ				i AMs_20		03 23 32.7	
	comp=Z,5µm,18.0s						
PMAR	Madeira	91.49	1	⇑iP	P	02 31 14.4	-0.2
PMAR				i Amb		02 31 20.9	
	comp=Z,304nm,1.7s						
FUL	Funchal	91.56	1	⇓iP	P	02 31 15.6	+0.8
FUL				i Amb		02 31 18.9	
	comp=Z,231nm,1.4s						
ESPN	Las Esperanzas	91.57	65	P	P	02 31 15.2	+0.2
WHYH	Whyalla	91.66	202	P	P	02 31 16.5	+1.7
PTPS	Port Pirie	91.70	202	P	P	02 31 16.7	+1.7
HTT	Hallett	91.77	201	P	P	02 31 17.2	+1.8
BBOO	Buckleboo	91.77	203	P	P	02 31 16.7	+1.3
SDDR	Presa de Saban	91.88	51	IAmb	IAmb	02 31 20.4	
	comp=Z,89nm,0.9s						
SDDR				IAMs_20	IAMs_20	03 10 42.7	
	comp=Z,10µm,21.0s						
CNB	Canberra Magne	91.96	192	P	P	02 31 18.0	+1.7
CAN	Canberra	92.01	192	IAMs_20	IAMs_20	03 07 28.8	
	comp=Z,20µm,21.0s						
JTS	Las Juntas de	92.85	67	LR	LR	03 15 30.0	
	comp=Z,6µm,21.7s,baz=329,slow=37						
TIO	Tiouine	92.97	353	P	P	02 31 21.9	+0.4
KUZ	Kuaotunu	93.05	171	P	P	02 31 24.2	+3.1
HDC	Heredia	93.53	66	IAMs_20	IAMs_20	03 20 27.4	
	comp=Z,10µm,18.0s						
TOZ	Tahuroa Road	94.00	171	IAMs_20	IAMs_20	03 07 24.0	
	comp=Z,12µm,20.0s						
MXZ	Matakaoa Point	94.11	169	IAMs_20	IAMs_20	03 09 53.9	
	comp=Z,16µm,21.0s						
AGPR	Aguadilla, PR	94.12	48	IAmb	IAmb	02 31 31.2	
	comp=Z,208nm,1.2s						
MORW	Morawa	94.19	221	IAmb	IAmb	02 31 29.8	
	comp=Z,170nm,1.2s						
MORW	Morawa	94.19	221	P	P	02 31 27.8	+1.1
PRSN	Puerto Rico Se	94.33	48	IAmb	IAmb	02 31 31.8	
	comp=Z,203nm,1.8s						
AOPR	Arecibo Observ	94.37	48	IAMs_20	IAMs_20	03 16 54.5	
	comp=Z,15µm,22.0s						
UUPR	Utuado, UPR, P	94.47	48	IAMs_20	IAMs_20	03 16 58.1	
	comp=Z,9µm,20.0s						
CRPR	Cabo Rojo, PR	94.53	48	IAMs_20	IAMs_20	03 14 49.6	
	comp=Z,9µm,20.0s						
URZ	Urewera	94.68	170	LR	LR	03 07 08.6	
	comp=Z,13µm,22.0s,baz=20,slow=31						
GCPR	Guaynabo City	94.68	47	IAMs_20	IAMs_20	03 17 05.6	
	comp=Z,12µm,18.0s						
HIZ	Hauiti	94.72	172	IAMs_20	IAMs_20	03 07 35.1	
	comp=Z,10µm,22.0s						
SJG	San Juan	94.83	47	IAMs_20	IAMs_20	03 17 35.7	
	comp=Z,15µm,20.0s						
SJG	San Juan	94.83	47	LR	LR	03 17 36.8	
	comp=Z,11µm,19.4s,baz=334,slow=38						
SJG	San Juan	94.83	47	P	P	02 31 29.5	-0.5
SJG				pmax	pmax		
	comp=Z,46nm,0.9s						
SJG				MLR	MLR		
	comp=Z,15µm,20.0s						
HUMP	Col San Antoni	94.93	47	IAMs_20	IAMs_20	03 16 55.1	
	comp=Z,13µm,20.0s						
PDPR	Patillas Dam,	94.97	47	IAMs_20	IAMs_20	03 17 36.2	
	comp=Z,11µm,19.0s						
RTZ	Ruatahuna	95.02	170	IAMs_20	IAMs_20	03 08 46.8	
	comp=Z,16µm,20.0s						
BLDU	Ballidu	95.35	220	P	P	02 31 33.1	+1.1
BKZ	Black Stump Fm	95.52	170	P	P	02 31 34.5	+2.0
KLBR	Kellerberrin	95.87	218	P	P	02 31 35.1	+0.8
MACI	Morro de la Ar	95.95	1	P	P	02 31 34.2	-1.0
EOSO	Osorio	96.13	360	P	P	02 31 35.6	-0.3
SABA	Saba	96.45	45	IAMs_20	IAMs_20	03 16 54.2	
	comp=Z,14µm,21.0s						
SEUS	St. Eustatius	96.67	45	IAMs_20	IAMs_20	03 17 10.0	
	comp=Z,15µm,22.0s						
QRZ	Quartz Range	96.86	174	IAMs_20	IAMs_20	03 08 23.5	
	comp=Z,16µm,22.0s						
ATD	Arta Tunnel	96.91	302	LR	LR	03 21 57.8	
	comp=Z,1µm,18.0s,baz=28,slow=40						
ATD	Arta Tunnel	96.91	302	P	P	02 31 41.2	+1.6
	SNR=24						
MRZ	Mangatainoka R	96.92	171	IAMs_20	IAMs_20	03 09 44.1	
	comp=Z,14µm,21.0s						
ANWB	Willy Bob	96.97	44	IAMs_20	IAMs_20	03 17 41.1	
	comp=Z,9µm,21.0s						
BFZ	Birch Farm	97.00	171	IAMs_20	IAMs_20	03 08 58.2	
	comp=Z,14µm,21.0s						
NWAO	Narrogin (SRO)	97.27	218	IAMs_20	IAMs_20	03 23 44.2	
	comp=Z,8µm,20.0s						
NWAO	Narrogin (SRO)	97.27	218	P	Pdif	02 31 42.0	+1.3
NWAO	Narrogin (SRO)	97.27	218	P	Pdif	02 31 42.5	+1.8
NNZ	Nelson	97.30	173	P	P	02 31 40.1	-0.4
NNZ				IAMs_20	IAMs_20	03 10 45.3	
	comp=Z,18µm,21.0s						
SNZO	South Karori	97.49	172	IAMs_20	IAMs_20	03 09 49.3	
	comp=Z,19µm,22.0s						
BHW	Baring Head	97.60	172	IAMs_20	IAMs_20	03 10 34.2	
	comp=Z,10µm,21.0s						
DSZ	Denniston Nort	97.73	174	IAMs_20	IAMs_20	03 18 43.6	
	comp=Z,14µm,20.0s						
THZ	Tophouse	97.81	173	IAMs_20	IAMs_20	03 11 01.8	
	comp=Z,15µm,22.0s						
PTCN	Pitcairn Islan	98.10	123	IAMs_20	IAMs_20	03 06 47.8	
	comp=Z,14µm,21.0s						
ABD	La Joyeuse, An	98.17	44	IAMs_20	IAMs_20	03 17 56.9	
	comp=Z,15µm,21.0s						
GDHS	Morne Mazeau,	98.25	44	IAMs_20	IAMs_20	03 18 21.6	
	comp=Z,16µm,21.0s						
GDSD	La Dsirade Is	98.48	44	IAMs_20	IAMs_20	03 17 46.1	
	comp=Z,18µm,22.0s						
CBE	Ff, Capester	98.50	44	IAMs_20	IAMs_20	03 18 38.5	
	comp=Z,14µm,20.0s						
GVZ	Greta Valley S	99.02	173	IAMs_20	IAMs_20	03 11 00.8	
	comp=Z,16µm,22.0s						
OXZ	Oxford	99.32	174	IAMs_20	IAMs_20	03 13 35.6	
	comp=Z,17µm,20.0s						
FOZ	Fox Glacier	99.41	176	IAMs_20	IAMs_20	03 12 55.2	
	comp=Z,16µm,21.0s						
RPZ	Rata Peaks	99.65	175	LR	LR	03 16 58.0	
	comp=Z,11µm,18.1s,baz=348,slow=35						
TAU	Tasmania Unive	99.69	192	IAMs_20	IAMs_20	03 12 12.6	
	comp=Z,9µm,21.0s						
MQZ	McQueen's Vall	99.73	174	IAMs_20	IAMs_20	03 11 14.6	
	comp=Z,11µm,20.0s						
SVN	Savane Anatole	99.78	44	IAMs_20	IAMs_20	03 18 38.7	
	comp=Z,14µm,21.0s						
FDF	Fort de France	99.89	44	IAMs_20	IAMs_20	03 18 41.4	
	comp=Z,17µm,21.0s						
JCZ	Jackson Bay	99.92	177	P	Pdif	02 31 54.6	+2.3
ILAM	Ilet Lapin Mar	99.96	44	IAMs_20	IAMs_20	03 18 54.2	
	comp=Z,11µm,21.0s						
LBZ	Lake Benmore	100.28	176	IAMs_20	IAMs_20	03 10 57.1	
	comp=Z,17µm,22.0s						
ODZ	Otahua Downs	100.96	175	IAMs_20	IAMs_20	03 14 05.1	
	comp=Z,13µm,20.0s						
SDV	Santo Domingo	101.07	55	P	Pdif	02 31 58.3	-0.1
	comp=Z,5.5nm,0.4s,baz=356,slow=9.0,SNR=6.8						
SDV	Santo Domingo	101.07	55	P	Pdif	02 31 57.9	-0.5
DCZ	Deep Cove	101.26	178	IAMs_20	IAMs_20	03 14 42.1	
	comp=Z,12µm,22.0s						
WHZ	Wether Hill Ro	101.71	177	IAMs_20	IAMs_20	03 09 37.9	
	comp=Z,15µm,22.0s						
PYZ	Puysegur Point	101.95	178	IAMs_20	IAMs_20	03 21 49.4	
	comp=Z,10µm,20.0s						
GRGR	Grenville	102.05	46	IAMs_20	IAMs_20	03 21 10.8	
	comp=Z,9µm,20.0s						
MSEY	Mahe Island	104.21	283	IAMs_20	IAMs_20	03 20 30.4	
	comp=Z,12µm,18.0s						
MSEY	Mahe Island	104.21	283	P	Pdif	02 32 13.8	+1.7
MSEY				P	pPdif	02 32 14.0	-1.4
TULM	Tulcn-Chalpat	104.67	66	P	PKKPab	02 48 19.5	+1.8
	comp=Z,54nm,1.7s						
OTAV	Otavalo	104.74	67	P	Pdif	02 32 15.2	+0.1
OTAV	Otavalo	104.74	67	P	Pdif	02 32 15.3	+0.2
OTAV	Otavalo	104.74	67	P	PKKPab	02 48 19.5	+2.2
	comp=Z,53nm,1.8s						
MACC	Macarena, Meta	105.42	62	P	PKKPab	02 48 15.6	+1.5
	comp=Z,37nm,1.8s						
PIAT	Ana Tenorio	105.89	67	P	PKKPab	02 48 13.7	+1.6
	comp=Z,42nm,1.0s						
COHC	Cochancay	106.62	69	P	PKKPab	02 48 10.1	+1.9
	comp=Z,26nm,2.0s						
PTLC	Puerto Leguiza	106.65	63	P	PKKPab	02 48 08.4	-0.1
	comp=Z,2µmcomp=Z,152nm,1.1s						
LODK	Lodwar	107.50	305	IAMs_20	IAMs_20	03 28 40.0	
	comp=Z,13µm,18.0s						
TORD	Torodi Ar. Bea	109.43	342	PKiKP	PKiKP	02 36 40.3	+1.7
	comp=Z,4.5nm,0.6s,baz=336,slow=3.3,SNR=4.0						
TORD				PP	PP	02 37 04.5	-3.0
	comp=Z,6.6nm,0.6s,baz=13,slow=8.9,SNR=5.8						
TORD				PKKPbc	PKKPbc	02 47 44.4	+3.1
	comp=Z,6.7nm,0.8s,baz=327,slow=1.4,SNR=5.2						
VA02	Isla de Pascua	110.20	109	IAMs_20	IAMs_20	03 21 15.8	
	comp=Z,6µm,19.0s						
RPN	Rapa Nui	110.23	109	IAMs_20	IAMs_20	03 20 59.5	
	comp=Z,6µm,19.0s						
SGC2	Sao Gabriel da	110.72	56	P	Pdif	02 32 41.0	0.0
ATAH	Atahualpa	111.02	71	PP	PP	02 37 19.9	-0.4
	comp=Z,3.5nm,0.7s,baz=85,slow=0.1,SNR=4.1						
KIBK	Kibwezi	111.28	300	IAMs_20	IAMs_20	03 28 51.1	
	comp=Z,15µm,21.0s						
MDP	Montagnes des	111.93	40	PP	PP	02 37 24.7	-1.2
	comp=Z,16nm,0.9s,baz=3.5,slow=8.5,SNR=4.5						
ROCAM	Rodrigues Isla	112.14	267	IAMs_20	IAMs_20	03 23 41.5	
	comp=Z,8µm,20.0s						
MBAR	Mbarara	113.15	308	IAMs_20	IAMs_20	03 31 18.5	
	comp=Z,13µm,20.0s						
DBIC	Dimbokro	116.76	348	PKP	PKiKP	02 36 52.8	+0.2
	comp=Z,28nm,0.9s,baz=37,slow=1.0,SNR=12						
DBIC				PP	PP	02 37 57.6	-2.1
	comp=Z,10.0nm,0.8s,baz=41,slow=9.1,SNR=3.3						
DBIC				PKKPbc	PKKPbc	02 47 20.6	+3.9
	comp=Z,7.5nm,1.0s,baz=226,slow=6.0,SNR=3.3						
ACRG	Accra	117.10	342		PKiKP	02 36 53.5	+0.2
ACRG				IAMs_20	IAMs_20	03 36 49.0	
	comp=Z,9µm,18.0s						
RER	Riviere de l'E	117.52	273	IAMs_20	IAMs_20	03 23 41.2	
	comp=Z,8µm,21.0s						
MAL2	Monte Alegre,	117.91	45	IAMs_20	IAMs_20	03 28 10.9	
	comp=Z,11µm,20.0s						
BMO2	UHE Belo Monte	119.97	43	PKP	PKPdf	02 36 58.1	-0.7
TMAB	Tom-Au,PA,Br	120.48	38	PKP	PKPdf	02 36 59.8	0.0
TMAB	Tom-Au,PA,Br	120.48	38	eP	PKiKP	02 37 00.1	+0.3
ABPO	Ambohimpanom	120.53	282	IAMs_20	IAMs_20	03 26 51.0	
	comp=Z,10µm,18.0s						
NPGB	Novo Progresso	121.99	48	PKP	PKPdf	02 37 01.5	-1.2
NPGB	Novo Progresso	121.99	48	eP	PKPdf	02 37 02.6	-0.1
VOI	Vohitsoka	123.10	280		PKiKP	02 37 05.2	+0.3
VOI				IAMs_20	IAMs_20	03 29 40.1	
	comp=Z,8µm,21.0s						
VOI	Vohitsoka	123.10	280	P	PKiKP	02 37 05.7	+0.8
	SNR=5.9						
PRPB	Parauapebas	123.39	42	eP	PKiKP	02 37 05.6	+0.1
LPAZ	La Paz	124.06	66	PKP	PKPdf	02 37 06.5	-0.7
	comp=Z,6.6nm,0.9s,baz=23,slow=2.5,SNR=13						
LPAZ				PP	PP	02 38 48.5	-2.8
	comp=Z,6.2nm,0.8s,baz=5.9,slow=3.5,SNR=4.3						
LPAZ				PKKPbc	PKKPab	02 46 54.6	+1.9
	comp=Z,2.2nm,0.5s,baz=194,slow=1.4,SNR=8.8						
LPAZ	La Paz	124.06	66	eP	PKPdf	02 37 07.1	-0.2
SBBR	Sobral	124.23	30	PKP	PKPdf	02 37 06.8	-0.2
PB18	Visviri	124.45	69	IAMs_20	IAMs_20	03 38 13.2	
	comp=Z,7µm,20.0s						
NBPS	Pedro II - PI	124.51	31	PKP	PKPdf	02 37 06.4	-1.2
PAL01	Palmeiras do T	124.64	39	PKP	PKPdf	02 37 07.6	-0.1
PB16	IPOC Station P	125.06	69	IAMs_20	IAMs_20	03 39 59.2	
	comp=Z,7µm,20.0s						
VILB	Vilhena	125.10	56	PKP	PKiKP	02 37 08.9	0.0
VILB	Vilhena	125.10	56	eP	PKiKP	02 37 09.3	+0.4
NBCL	Cascavel-CE	125.22	28	PKP	PKPdf	02 37 08.5	-0.3
NBCL	Cascavel-CE	125.22	28	eP	PKiKP	02 37 09.7	+0.5
CLDB	Colider	125.24	51	PKP	PKPdf	02 37 08.3	-0.5
CLDB	Colider	125.24	51	eP	PKiKP	02 37 09.3	+0.1
FOMA	Nahampoana Res	125.43	278	IAMs_20	IAMs_20	03 42 35.2	
	comp=Z,10µm,21.0s						
PDRB	Porto dos Gac	125.49	52	PKP	PKPdf	02 37 08.9	-0.4
PDRB	Porto dos Gac	125.49	52	eP	PKPdf	02 37 09.3	0.0
NBPB	Pedra_Branca-C	126.14	30	PKP	PKPdf	02 37 10.3	-0.3
NBPB	Pedra_Branca-C	126.14	30	eP	PKiKP	02 37 10.9	-0.1
PB11	IPOC Station P	126.16	70	IAMs_20	IAMs_20	03 39 36.5	
	comp=Z,7µm,19.0s						
GO01	Chusmiza	126.33	70	IAMs_20	IAMs_20	03 38 08.9	
	comp=Z,6µm,20.0s						
SMTB	Santa Maria do	126.69	40	PKP	PKiKP	02 37 11.9	-0.2
SMTB	Santa Maria do	126.69	40	eP	PKiKP	02 37 12.2	+0.1
PB08	IPOC Station P	126.74	70	IAMs_20	IAMs_20	03 38 01.8	
	comp=Z,7µm,22.0s						
NBPA	Parau_RN	126.99	27	PKP	PKPdf	02 37 11.4	-0.8
LSZ	Lusaka	127.24	303	P	PKiKP	02 37 14.4	+1.1
SIV	San Ignacio	127.32	59	PKP	PKPdf	02 37 12.2	-0.5
	comp=Z,15nm,0.8s,baz=268,slow=3.1,SNR=23						
SIV				PP	PP	02 39 11.4	-0.8
	comp=Z,11nm,0.7s,baz=321,slow=4.8,SNR=4.4						
RCBR	Riachuelo	127.36	25	IAMs_20	IAMs_20	03 34 42.4	
	comp=Z,6µm,20.0s						
RCBR	Riachuelo	127.36	25	PKP	PKPdf	02 37 08.2	-4.8
RCBR	Riachuelo	127.36	25	eP	PKiKP	02 37 13.8	+0.3
LAJE	UHE Lajeado	127.45	42	PKP	PKPdf	02 37 13.3	+0.2
PTLB	Pontes e Lacer	127.77	57	IAMs_20	IAMs_20	03 35 48.2	
	comp=Z,9µm,20.0s						
PTLB	Pontes e Lacer	127.77	57	PKP	PKPdf	02 37 13.4	-0.1
PTLB	Pontes e Lacer	127.77	57	eP	PKPdf	02 37 13.4	-0.1
NBPV	Pedro Velho	128.08	25	PKP	PKPdf	02 37 14.2	-0.1
NBMA	Muriti-CE	128.10	29	PKP	PKPdf	02 37 14.2	-0.2
SNDB	Serra Nova Dou	128.12	46	PKP	PKPdf	02 37 14.5	+0.1
SNDB	Serra Nova Dou	128.12	46	eP	PKPdf	02 37 14.6	+0.3
CASY	Casey	128.56	205	PKPdf	PKPdf	02 37 13.7	+0.2
CASY	Casey	128.56	205	IAMs_20	IAMs_20	03 25 04.2	
	comp=Z,10µm,22.0s						
BBSD	Serra de San D	128.57	59	eP	PKPdf	02 37 15.0	-0.1
PB10	IPOC Station P	128.74	74	IAMs_20	IAMs_20	03 40 50.1	
	comp=Z,6µm,21.0s						
AF01	San Pedro de A	129.56	71	IAMs_20	IAMs_20	03 38 23.5	
	comp=Z,5µm,20.0s						
NBCA	Caruaru-PE	129.65	26	PKP	PKPdf	02 37 17.1	-0.2
SALV	Santo Antonio	129.75	53	PKP	PKPdf	02 37 17.0	-0.4
SALV	Santo Antonio	129.75	53	eP	PKPdf	02 37 17.7	+0.3
SSV2	Sao Salvador	130.12	43	PKP	PKPdf	02 37 18.4	+0.2
CAN3	Cana Brava	130.32	43	PKP	PKiKP	02 37 19.0	-0.3
GO02	Mina Guanaco	130.59	74	PKPdf	PKPdf	02 37 18.8	-0.4
AC01	Pan de Azucar	130.83	76	IAMs_20	IAMs_20	03 28 05.5	
	comp=Z,7µm,20.0s						
SDBA	SAO DESIDERIO	130.93	39	PKP	PKPdf	02 37 19.0	-0.7
SDBA	SAO DESIDERIO	130.93	39	eP	PKPdf	02 37 19.1	-0.7
NBAN	Anadia - AL	130.97	27	PKP	PKPdf	02 37 18.8	-1.0
NBAN	Anadia - AL	130.97	27	eP	PKiKP	02 37 20.3	-0.4
ARAG	Araguaiana, MT	131.26	49	PKP	PKiKP	02 37 20.8	-0.4
ARAG	Araguaiana, MT	131.26	49	eP	PKPdf	02 37 20.3	+0.1
NBLA	Lagarto - SE	131.83	29	PKP	PKPdf	02 37 21.0	-0.4
ASCN	Ascension	131.91	358	IAMs_20	IAMs_20	03 46 05.2	
	comp=Z,5µm,20.0s						
AC06	Mina Casimiro	131.92	77	IAMs_20	IAMs_20	03 28 58.4	
	comp=Z,7µm,22.0s						
VA04	Juan Fernndez	132.01	90	IAMs_20	IAMs_20	03 25 20.6	
	comp=Z,8µm,20.0s						
GO03	Copiapo	132.17	77	IAMs_20	IAMs_20	03 29 05.0	
	comp=Z,7µm,22.0s						
AC02	Maricunga	132.17	75	IAMs_20	IAMs_20	03 25 44.0	
	comp=Z,7µm,21.0s						
AC04	Llanos de Chal	132.19	78	IAMs_20	IAMs_20	03 23 29.7	
	comp=Z,6µm,22.0s						
BROLN	Tlhalogang	132.65	300	i P	PKiKP	02 37 23.9	-0.1
SOOWA	Sowa	132.73	301	i P	PKiKP	02 37 24.6	+0.4
BDFB	Brasilia	132.74	44	PKP	PKPdf	02 37 23.1	-0.1
	comp=Z,18nm,1.1s,baz=45,slow=4.6,SNR=5.1						
BDFB	Brasilia	132.74	44	PKP	PKPdf	02 37 23.5	+0.3
LCO	Las Campanas	133.02	78	PKPdf	PKiKP	02 37 24.2	-0.5
LCO	Las Campanas	133.02	78	IAMs_20	IAMs_20	03 28 51.7	
	comp=Z,8µm,22.0s						
LCO	Las Campanas	133.02	78	PKIKP	PKiKP	02 37 24.2	-0.5
PHDHD	Phuduhudu	133.21	303	i P	PKiKP	02 37 25.2	0.0
BDQN	Bodoquena, MS	133.22	57	eP	PKPdf	02 37 24.0	+0.2
VNDA	Vanda	133.40	181	PKhKP	PKPpre	02 37 09.4	
	comp=Z,2.2nm,0.9s,baz=336,slow=3.1,SNR=8.2						
VNDA				PKP	PKPdf	02 37 22.2	-0.2
	comp=Z,30nm,0.9s,baz=307,slow=4.1,SNR=26						
CO05	La Serena	133.43	80	IAMs_20	IAMs_20	03 29 12.6	
	comp=Z,8µm,20.0s						
C2SB	Chapadao do Su	133.54	52	PKP	PKiKP	02 37 25.2	-0.5
C2SB	Chapadao do Su	133.54	52	eP	PKiKP	02 37 25.6	-0.1
JANB	Januaria	133.59	39	PKP	PKPdf	02 37 24.0	-0.8
JANB	Januaria	133.59	39	eP	PKPdf	02 37 23.4	-1.3
SBA	Scott Base	133.74	179	PKPdf	PKiKP	02 37 23.9	-0.4
SBA	Scott Base	133.74	179	IAMs_20	IAMs_20	03 35 46.7	
	comp=Z,6µm,19.0s						
SBA	Scott Base	133.74	179	PKIKP	PKiKP	02 37 23.9	-0.4

SBA				MLR	MLR		
	comp=Z,6µm,19.0s						
CO06	Fray Jorge	133.79	81	IAMs_20	IAMs_20	03 28 23.2	
	comp=Z,7µm,20.0s						
MREMI	Moremi	133.84	298	*i* P	PKiKP	02 37 26.5	+0.1
MURT	Porto Murtinho	133.84	59	*e*P	PKiKP	02 37 25.8	-0.4
GO04	Tololo Observa	133.87	79	IAMs_20	IAMs_20	03 28 59.2	
	comp=Z,8µm,20.0s						
CO01	Juntas del Tor	134.10	79	IAMs_20	IAMs_20	03 24 56.4	
	comp=Z,10µm,22.0s						
ANA01	Lindo Horizont	134.30	35	PKP	PKPdf	02 37 25.7	-0.3
CO03	El Pedregal	134.44	80	IAMs_20	IAMs_20	03 29 49.3	
	comp=Z,8µm,21.0s						
BAT2	UHE Batalha	134.51	45	PKP	PKPdf	02 37 26.8	+0.4
BAT3	Ipameri	134.53	45	PKP	PKiKP	02 37 27.3	-0.6
CO02	Combarbal	134.55	81	IAMs_20	IAMs_20	03 24 24.2	
	comp=Z,7µm,21.0s						
RPRD	Ribas do Rio P	134.65	54	*e*P	PKPdf	02 37 27.0	+0.5
ITU3	Corumbazu	134.73	47	PKP	PKPdf	02 37 26.9	+0.1
IPMB	Ipameri, GO	134.79	46	PKP	PKPdf	02 37 26.5	-0.4
IPMB	Ipameri, GO	134.79	46	*e*P	PKPdf	02 37 27.4	+0.6
SFA1	Serra Facao	134.98	45	PKP	PKPdf	02 37 27.2	0.0
LPHEP	Lephephe	135.28	300	*i* P	PKPdf	02 37 28.4	+0.6
VA06	Catapilco	135.41	82	IAMs_20	IAMs_20	03 29 28.2	
	comp=Z,7µm,20.0s						
ITRB	Iturama	135.44	49	PKP	PKPdf	02 37 28.3	+0.3
ITRB	Iturama	135.44	49	*e*P	PKPdf	02 37 28.7	+0.6
CMC01	Camacan, BA	135.47	33	PKP	PKPdf	02 37 28.3	+0.2
CMC01	Camacan, BA	135.47	33	*e*P	PKPdf	02 37 28.7	+0.5
VA01	Torpederas	135.56	83	IAMs_20	IAMs_20	03 29 55.4	
	comp=Z,8µm,20.0s						
JQT1	Jequitai-MG	135.59	41	PKP	PKPdf	02 37 23.3	-5.1
POGA	Pongola	135.60	290		PKPpre	02 37 13.8	
POGA				IAMs_20	IAMs_20	03 47 27.8	
	comp=Z,10µm,19.0s						
GRTLG	Ghanzi	135.75	306	*i* P	PKiKP	02 37 31.3	+1.0
KDWAN	Kaudwane	135.88	301	*i* P	PKiKP	02 37 32.2	+1.8
PMNB	Patos De Minas	135.99	44	PKP	PKPdf	02 37 29.2	+0.1
PMNB	Patos De Minas	135.99	44	*e*P	PKPdf	02 37 29.3	+0.1
MT02	Curacav	136.02	83	IAMs_20	IAMs_20	03 30 54.4	
	comp=Z,8µm,20.0s						
VA05	Santo Domingo	136.05	83	IAMs_20	IAMs_20	03 31 45.3	
	comp=Z,6µm,19.0s						
ZON	Zonda	136.09	79	IAMs_20	IAMs_20	03 30 06.8	
	comp=Z,7µm,20.0s						
PEL	Peldehue	136.19	82	IAMs_20	IAMs_20	03 30 36.9	
	comp=Z,8µm,20.0s						
MT05	Renca	136.34	82	PKPdf	PKPdf	02 37 29.1	-0.3
MT05				IAMs_20	IAMs_20	03 36 47.9	
	comp=Z,6µm,18.0s						
CFA	Coronel Fontan	136.37	78	PKP	PKPdf	02 37 29.3	-0.1
	comp=Z,3.3nm,0.5s,baz=300,slow=0.9,SNR=5.5						
CFA				PP	PP	02 40 15.7	+4.9
	comp=Z,3.9nm,0.9s,baz=346,slow=5.7,SNR=4.7						
MT01	Popeta	136.41	83	IAMs_20	IAMs_20	03 30 20.7	
	comp=Z,6µm,20.0s						
CAR01	Carai MG	136.47	37	PKP	PKPdf	02 37 30.1	0.0
MT09	Talagante	136.49	83	IAMs_20	IAMs_20	03 32 10.8	
	comp=Z,6µm,20.0s						
MT16	CCHEN	136.49	82	IAMs_20	IAMs_20	03 36 28.7	
	comp=Z,7µm,19.0s						
GUA01	Guaratinga, BA	136.53	34	PKP	PKPdf	02 37 30.3	+0.2
GUA01	Guaratinga, BA	136.53	34	*e*P	PKPdf	02 37 30.1	0.0
MT03	Universidad Ad	136.54	82	IAMs_20	IAMs_20	03 36 21.2	
	comp=Z,7µm,18.0s						
KGCAE	Kacgae	136.59	304	*i* P	PKiKP	02 37 31.3	-0.6
PCMB	Pacaembu	136.73	52	PKP	PKPdf	02 37 30.2	-0.2
PCMB	Pacaembu	136.73	52	*e*P	PKPdf	02 37 30.9	+0.6
MT08	Bocatoma Ro	136.78	82	IAMs_20	IAMs_20	03 30 59.5	
	comp=Z,9µm,20.0s						
DIAM	Diamantina, MG	136.81	40	PKP	PKPdf	02 37 30.7	0.0
DIAM	Diamantina, MG	136.81	40	*e*P	PKPdf	02 37 31.5	+0.8
BO04	La Punta	136.86	83	IAMs_20	IAMs_20	03 28 43.6	
	comp=Z,5µm,20.0s						
BO01	Tunca	136.89	84	IAMs_20	IAMs_20	03 34 13.5	
	comp=Z,6µm,20.0s						
KJAB	KAMANJAB	136.90	315	*i* P	PKPdf	02 37 31.7	+0.8
KJAB				IAML		02 38 04.6	
	comp=Z,640µm,0.3s						
LMEL	Las Melosas	136.98	82	IAMs_20	IAMs_20	03 32 10.7	
	comp=Z,7µm,20.0s						
TRCB	Terra Rica	137.15	54	IAMs_20	IAMs_20	03 42 49.4	
	comp=Z,8µm,20.0s						
TRCB	Terra Rica	137.15	54	*e*P	PKiKP	02 37 32.5	-0.4
SKOMA	Sekoma	137.19	301	*i* P	PKiKP	02 37 32.6	-0.4
BO02	Sierra Bellavi	137.36	84	IAMs_20	IAMs_20	03 34 34.8	
	comp=Z,6µm,19.0s						
SJPY	San Joaquin	137.40	60	*e*P	PKiKP	02 37 33.0	-0.4
BB19B	Bebedouro	137.42	48	PKP	PKPdf	02 37 32.6	+0.9
BB19B	Bebedouro	137.42	48	*e*P	PKiKP	02 37 33.0	-0.6
BI05	Punta Hualpn	137.43	88	IAMs_20	IAMs_20	03 32 08.9	
	comp=Z,8µm,19.0s						
CANS	Sao Roque de M	137.59	45	PKP	PKPdf	02 37 32.6	+0.5
KOOLE	Kule	137.63	306	*i* P	PKiKP	02 37 35.2	+1.1
ML02	Panimavida	137.71	85	IAMs_20	IAMs_20	03 31 43.2	
	comp=Z,7µm,20.0s						
MAKGR	Makgori	137.86	299	*i* P	PKiKP	02 37 34.0	-0.5
CPUP	Villa Florida	137.91	62	PKP	PKPdf	02 37 32.2	-0.2
	comp=Z,2.2nm,0.9s,baz=113,slow=5.9,SNR=3.4						
CPUP	Villa Florida	137.91	62	*e*P	PKPdf	02 37 33.0	+0.7
SJMB	Sao Joao De Ma	138.06	37	PKP	PKPdf	02 37 28.0	-4.9
BI02	San Fabin de	138.44	86	IAMs_20	IAMs_20	03 31 54.6	
	comp=Z,10µm,20.0s						
BSCB	Bom Sucesso	138.86	43	PKP	PKPdf	02 37 34.4	0.0
BSCB	Bom Sucesso	138.86	43	*e*P	PKPdf	02 37 34.3	-0.1
RIB01	Linhares ES	138.89	37	PKP	PKPdf	02 37 34.0	-0.3
RIB01	Linhares ES	138.89	37	*e*P	PKPdf	02 37 33.6	-0.8
FRTB	Fartura	138.99	51	PKP	PKPdf	02 37 34.7	+0.2
FRTB	Fartura	138.99	51	*e*P	PKPdf	02 37 34.3	-0.2
SHEL	Horse Pasture	139.16	345	IAMs_20	IAMs_20	03 43 31.6	
	comp=Z,6µm,19.0s						
VABB	Valinhos	139.79	47	PKP	PKPdf	02 37 36.6	+0.6
VAO	Valinhos	139.79	47	IAMs_20	IAMs_20	03 43 21.0	
	comp=Z,6µm,20.0s						
VAO	Valinhos	139.79	47	*e*P	PKPdf	02 37 36.7	+0.7
BOSA	Boshof	139.95	296	PKhKP	PKPpre	02 37 30.8	
	comp=Z,16nm,0.9s,baz=28,slow=2.0,SNR=11						
BOSA				PKP	PKPdf	02 37 36.6	+0.4
	comp=Z,60nm,0.9s,baz=75,slow=1.8,SNR=16						
BOSA	Boshof	139.95	296	PKP	PKPdf	02 37 37.1	+0.9
SPB	Sao Paulo	140.12	48	IAMs_20	IAMs_20	03 41 26.8	
	comp=Z,7µm,21.0s						
SPB	Sao Paulo	140.12	48	*e*P	PKPdf	02 37 37.1	+0.6
LR05	Currie	140.53	91	IAMs_20	IAMs_20	03 30 34.1	
	comp=Z,9µm,19.0s						
VAS01	Vassouras-RJ	140.53	42	PKP	PKPdf	02 37 37.4	0.0
VAS01	Vassouras-RJ	140.53	42	*e*P	PKPdf	02 37 37.1	-0.2
PARB	Paraibuna	140.64	46	PKP	PKPdf	02 37 38.1	+0.5
PARB	Paraibuna	140.64	46	*e*P	PKPdf	02 37 37.9	+0.4
DUB01	Friburgo-RJ	140.75	41	PKP	PKPdf	02 37 36.3	-1.4
DUB01	Friburgo-RJ	140.75	41	*e*P	PKPdf	02 37 37.5	-0.2
CAM01	Campos-RJ	140.78	40	PKP	PKPdf	02 37 37.3	-0.4
CAM01	Campos-RJ	140.78	40	*e*P	PKPdf	02 37 36.7	-1.0
PET01	Itanhaem-SP	140.80	49	PKP	PKPdf	02 37 37.9	+0.1
PET01	Itanhaem-SP	140.80	49	*e*P	PKiKP	02 37 39.2	-1.2
SLP01	Ubatuba-SP	140.81	45	PKP	PKPdf	02 37 38.4	+0.4
SLP01	Ubatuba-SP	140.81	45	*e*P	PKPdf	02 37 39.2	+1.2
MAN01	Angra dos Reis	140.87	43	PKP	PKPdf	02 37 38.3	+0.3
MAN01	Angra dos Reis	140.87	43	*e*P	PKPdf	02 37 39.2	+1.2
LL03	Petrohue	140.92	92	IAMs_20	IAMs_20	03 32 31.5	
	comp=Z,8µm,19.0s						
ITQB	Itaqui	141.01	65	PKP	PKiKP	02 37 40.5	-0.1
ITQB	Itaqui	141.01	65	*e*P	PKPdf	02 37 39.2	+1.3
ITAB	Concordia	141.18	57	IAMs_20	IAMs_20	03 46 53.5	
	comp=Z,8µm,18.0s						
PLCA	Paso Flores	141.68	90		PKPdf	02 37 37.8	-1.1
PLCA	Paso Flores	141.68	90	PKhKP	PKPpre	02 37 33.6	
	comp=Z,5.7nm,0.9s,baz=136,slow=12,SNR=4.8						
PLCA				PKP	PKPdf	02 37 38.5	-0.4
	comp=Z,24nm,0.9s,baz=315,slow=3.0,SNR=7.0						
PLCA	Paso Flores	141.68	90	PKIKP	PKPdf	02 37 37.8	-1.1
PLCA	Paso Flores	141.68	90	PKP	PKiKP	02 37 41.7	0.0
PLCA	Paso Flores	141.68	90	*e*P	PKiKP	02 37 40.4	-1.4
LL01	San Ignacio de	141.74	93	IAMs_20	IAMs_20	03 36 49.2	
	comp=Z,9µm,19.0s						
GRHM	Grahamstown, E	143.09	290	PKPdf	PKPbc	02 37 38.2	-0.3
CPSB	Cacapava Do Su	143.19	62	PKP	PKPab	02 37 38.0	+0.5
CPSB	Cacapava Do Su	143.19	62	*e*P	PKPbc	02 37 40.3	+1.5
MAW	Mawson	143.83	220	PKP	PKPbc	02 37 39.8	+0.3
	comp=Z,222nm,1.0s,baz=58,slow=4.1,SNR=90						
PLTB	Pedras Altas	144.22	63	PKP	PKPab	02 37 40.5	-0.9
PLTB	Pedras Altas	144.22	63	*e*P	PKPbc	02 37 42.0	+0.2
TRQA	Tornquist	144.60	79	PKPdf	PKPab	02 37 42.5	-0.1
TRQA				IAMs_20	IAMs_20	03 40 59.2	
	comp=Z,8µm,21.0s						
TRQA	Tornquist	144.60	79	PKIKP	PKPab	02 37 42.5	-0.1
TRQA				MLR	MLR		
	comp=Z,8µm,21.0s						
TRQA	Tornquist	144.60	79	PKP	PKPab	02 37 41.7	-0.9
AY03	Cochrane	144.68	100	IAMs_20	IAMs_20	03 34 39.2	
	comp=Z,6µm,20.0s						
QSPA	South Pole Qui	145.89	180	PKPdf	PKPdf	02 37 44.2	-1.2
QSPA	South Pole Qui	145.89	180	IAMs_20	IAMs_20	03 39 48.6	
	comp=Z,9µm,20.0s						
QSPA	South Pole Qui	145.89	180	PKPbc	PKPdf	02 37 44.8	-0.6
	comp=Z,536nm,0.9s,baz=336,slow=0.3,SNR=736						
GO09	Cerro Castillo	147.04	106	IAMs_20	IAMs_20	03 40 15.7	
	comp=Z,8µm,19.0s						
SYO	Syowa Base	152.54	220	⇓*i*PKPdf	PKPdf	02 37 57.4	+1.6
SYO	Syowa Base	152.54	220	⇓*i*pPKPdf	pPKPdf	02 37 59.8	+0.8
SYO	Syowa Base	152.54	220	⇓*i*PKPbc	PKiKP	02 38 05.0	+1.9
SYO	Syowa Base	152.54	220	⇑*i*pPKPbc	pPKPbc	02 38 07.2	+1.3
SMAI	San Martin Ant	154.11	138		PKPdf	02 37 56.8	-1.4
EFI	East Falkland	155.05	98	PKPbc	PKPdf	02 38 08.4	+8.5
EFI				PKPab	PKPab	02 38 24.0	-0.6
EFI	East Falkland	155.05	98	PKP2	PKPab	02 38 24.0	-0.6
BELA	Belgrano 2	157.21	170	IAMs_20	IAMs_20	03 42 54.8	
	comp=Z,8µm,20.0s						
NVL	N'lazarevskaya	161.09	208	*e*PKIKP	PKPdf	02 38 07.4	+0.6
NVL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
NVL				pmax	pmax		
	comp=N,3µm,13.9s						
TROLL	Troll, Antarti	162.30	199	⇑PKPab	PKPab	02 38 54.7	-1.0
	comp=Z,5µm,0.8s						
TROLL				⇑PKPdf	PKPdf	02 38 07.6	-0.6
	comp=Z,1µm,0.9s						
TROLL				⇑PP	PP	02 42 40.8	+0.3
SNAA	Sanae	163.46	195	⇑PKPab	PKPab	02 38 60.0	-0.7
	comp=Z,984nm,0.9s						
SNAA				⇑PKPdf	PKPdf	02 38 08.0	-1.2
	comp=Z,305nm,1.1s						
SNAA				⇓PP	PP	02 42 46.6	+0.1
SNAA	Sanae	163.46	195	PKPdf	PKPdf	02 38 07.3	-1.9
SNAA					PKPab	02 38 59.4	-1.3
SNAA	Sanae	163.46	195	PKP	PKPdf	02 38 08.1	-1.2
	comp=Z,28nm,1.2s,baz=268,slow=0.5,SNR=18						
SNAA				PKPab	PKPab	02 39 00.5	-0.1
	comp=Z,51nm,0.9s,baz=181,slow=2.8,SNR=14						
SNAA				PP	PP	02 42 49.4	+2.9
	comp=Z,27nm,1.0s,baz=175,slow=6.5,SNR=3.5						
SNAA	Sanae	163.46	195	PKP2	PKPab	02 38 59.4	-1.3
SNAA						03 38 07.4	
VNA3	Neumayer Olymp	164.60	188	⇑PKPab	PKPab	02 39 04.7	-1.0
	comp=Z,185nm,0.8s						
VNA3				⇑PKPdf	PKPdf	02 38 08.7	-1.5
	comp=Z,51nm,0.9s						
VNA3				⇑PP	PP	02 42 53.3	+0.8
VNA2	Neumayer--Watz	164.71	191	⇑PKPab	PKPab	02 39 05.0	-1.1
	comp=Z,146nm,0.8s,baz=160,slow=2.1						
VNA2				⇑PKPdf	PKPdf	02 38 09.0	-1.3
	comp=Z,55nm,1.0s,baz=163,slow=3.6						
VNA2				⇑PP	PP	02 42 53.8	+0.9
	baz=139,slow=2.6						
VNA1	Neumayer--Stat	165.06	190	⇑PKPab	PKPab	02 39 07.4	-0.2
	comp=Z,124nm,1.0s						
VNA1				⇑PKPdf	PKPdf	02 38 09.7	-0.8
	comp=Z,60nm,1.1s						

KRSC 26 02:22:51.1±1.2, 55.°99N×164.°13E, h15^{km}±19^{km}, Ml4.9, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.76	287	*e*P	Pg	02 23 05.0	-1.0
KBTR				*e*S	Sg	02 23 15.4	-0.6
KBG	Krutoberegovo	0.84	289	*e*P	Pb	02 23 06.7	-0.5
KBG				*e*S	Sb	02 23 18.0	-0.3
BKI	Bering	1.31	126	*e*P	Pb	02 23 15.3	0.0
BKI				*e*S	Sg	02 23 32.9	-0.4
BDR	Baidarnaya	1.73	291	*e*S	Sn	02 23 42.6	+0.2
ZLN	Zelenaya	1.87	272	*e*P	Pb	02 23 23.9	-0.9
CIRR	Tsirk	1.90	275	*e*P	Pb	02 23 24.5	-1.0
BZGR	Bezymyannyi-Gr	1.93	270	*e*P	Pn	02 23 24.3	+0.9
LGNR	Loginova	1.93	274	*e*P	Pb	02 23 25.4	-0.6
KLY	Klyuchi	1.97	281	*e*P	Pn	02 23 23.1	-0.7
KLY				*e*S	Sn	02 23 46.7	-1.5
MKZ	Mys Kozlova	1.98	225	*e*P	Pb	02 23 26.3	-0.5
BZWR	Bezymyannyi-We	2.04	271	*e*P	Pb	02 23 26.9	-0.9
BZWR				*e*S	Sb	02 23 54.0	+0.9
BZMR	Bezymyannaya	2.04	270	*e*P	Pb	02 23 26.8	-1.1
KIRR	Kirishev	2.13	271	*e*P	Pb	02 23 28.0	-1.3
KPT	Kopyto	2.19	271	*e*P	Pn	02 23 28.6	+1.6
KMNR	Kamenistaya	2.20	266	*e*P	Pb	02 23 29.8	-0.8
TUMD	Tumrok D	2.26	251	*e*P	Pb	02 23 30.2	-1.3
TUMD				*e*S	Sb	02 23 59.4	+0.3
KOZ	Kozyrevsk	2.39	273	*e*P	Pn	02 23 31.4	+1.8
SRDR	Sredinnyy	2.49	279	*e*P	Pn	02 23 32.6	+1.6
SRDR				*e*S	Sn	02 24 03.4	+2.4
KII	Karymskiy	3.33	236	*e*P	Pb	02 23 46.2	-3.5
NLC	Nalytchevo	3.96	227	*e*P	Pn	02 23 54.2	+3.1
NLC				*e*S	Sn	02 24 40.4	+3.2
SDLR	Sedlovina	4.08	230	*e*P	Pn	02 23 56.5	+3.5
SMAR	Somma	4.13	231	*e*P	Pn	02 23 56.4	+2.8
AVH	Avacha	4.15	231	*e*P	Pn	02 23 58.1	+4.2
UGLR	Uglovaya	4.15	230	*e*P	Pn	02 23 57.7	+3.7
KOK	Koryaka	4.18	232	*e*P	Pn	02 23 58.6	+4.3
DALK	Dalny	4.31	229	*e*P	Pn	02 23 59.3	+3.4
PET	Petropavlovsk	4.36	229	*e*P	Pn	02 23 59.8	+3.2
KRMR	Karymshinskiy	4.72	230	*e*P	Pn	02 24 06.2	+4.6
RUS	Russkaya	4.85	225	*e*P	Pn	02 24 06.4	+3.1
GRL	Gorelyy	4.94	228	*e*P	Pn	02 24 09.5	+4.7
MTVR	Mutnovka	4.95	227	*e*P	Pn	02 24 09.3	+4.5
APC	Apacha	5.09	236	*e*P	Pn	02 24 12.1	+5.4
ASAK	Asacha	5.14	228	*e*P	Pn	02 24 11.8	+4.4
MIPR	Malaya Ipel'ka	5.71	232	*e*P	Pn	02 24 19.8	+4.7
PAU	Pauzhetka	6.27	227	*e*P	Pn	02 24 26.9	+4.0
SKR	Severo-Kuril's	7.15	225	*e*P	Pn	02 24 38.0	+3.0

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*JMA **26** 02:27:28.8±0.1, 23.°7N±0.°5×122.°9E±0.°4, h37^{km}, MV2.6/10, NEAR ISHIGAKIJIMA ISLAND*

*TAP **26** 02:27:29.0, 23.°79N×122.°98E, h54^{km}, ML3.3, D*

ISC 26 02:27:28.8±1.3, 23.°71N±0.°04×122.°97E±0.°03, h34^{km}±3^{km}, n63, σ1^{s}11/111, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS4	EOS4	0.72	305	*i* P	Pb	02 27 42.7	-0.1
EOS4				S	Sb	02 27 53.1	+0.7
JYNG	Yonagunijimaku	0.74	358	P	Pb	02 27 42.6	-0.8
JYNG				S	Sb	02 27 51.9	-1.4
YOJ	Yonaguni jima	0.75	3	P	Pb	02 27 42.8	-0.7
YOJ				S	Sb	02 27 52.9	-0.7
YOJ	Yonaguni jima	0.75	3	*i* P	Pb	02 27 42.9	-0.7
YOJ				*i* S	Sb	02 27 53.0	-0.5
EOS3	EOS3	0.83	314	*e*P	Pb	02 27 44.5	-0.2
EOS3				*e*S	Sb	02 27 56.2	+0.6
HATJ	Hateruma jima	0.84	65	P	Pb	02 27 44.8	-0.2
HATJ				*e*S	Sb	02 27 56.7	+0.6
IRIF	Iriomote-Funau	0.94	48	*e*P	Pb	02 27 46.2	-0.4
IRIF				*e*S	Sb	02 27 58.1	-0.6
EOS2	EOS2	0.98	317	*i* P	Pb	02 27 47.4	+0.2
EOS2				*e*S	Sb	02 28 00.4	+0.6
JKRS	Kuro-shima	1.09	61	P	Pn	02 27 48.7	+1.0
JKRS				*e*S	Sb	02 28 03.4	+0.3
TEYL	Yanliau Villag	1.27	278	*e*P	Pn	02 27 50.1	0.0
TEYL				*e*S	Sn	02 28 05.5	-0.5
SHUL	Shoufeng	1.29	274	*e*P	Pn	02 27 49.9	-0.5
SHUL				S	Sn	02 28 06.4	-0.2
TWD	Chiawan	1.31	287	*e*P	Pn	02 27 49.6	-1.2
TWD				*e*S	Sn	02 28 04.9	-2.1
EWUT	Wuta	1.31	304	*e*P	Pn	02 27 51.0	+0.2
EWUT				*e*S	Sn	02 28 07.5	+0.4
ENA	Nanau	1.33	303	*e*P	Pn	02 27 51.0	0.0
ENA				*e*S	Sn	02 28 07.5	-0.1
NACB	Ninganchiao	1.34	291	P	Pn	02 27 50.5	-0.6
NACB				*e*S	Sn	02 28 05.9	-1.9
ESAO	Su ao	1.34	310	*e*P	Pn	02 27 52.2	+1.0
TWC	Suao	1.36	311	*e*P	Pn	02 27 52.5	+1.1
ETM	Tongmen	1.38	281	P	Pn	02 27 50.7	-0.9
ETM				*e*S	Sn	02 28 06.7	-2.0
EGFH	Guangfu	1.41	269	*e*S	Sn	02 28 09.3	-0.3
HGSD	Ruisui	1.43	262	*e*P	Pn	02 27 51.9	-0.5
HGSD				*e*S	Sn	02 28 08.0	-2.1
ETLH	Xiulin Townshi	1.45	290	*e*P	Pn	02 27 52.8	+0.1
ETLH				S	Sn	02 28 09.6	-1.0
WARBT	Fenglin Townsh	1.45	271	P	Pn	02 27 52.3	-0.4
WARBT				S	Sn	02 28 09.1	-1.5
LXIB	Xiulin Townshi	1.46	283	P	Pn	02 27 52.6	-0.3
LXIB				*e*S	Sn	02 28 09.6	-1.3
EHYH	Wanrong	1.50	262	*e*P	Pn	02 27 53.3	-0.1
EHYH				*e*S	Sn	02 28 11.2	-0.7
EHY	Hungye	1.52	263	*e*P	Pn	02 27 53.7	0.0
EHY				*e*S	Sn	02 28 10.5	-1.9
CHKH	Chenggong	1.53	251	*e*P	Pn	02 27 52.9	-0.9
CHKH				*e*S	Sn	02 28 10.6	-1.9
LATG	Datong	1.55	302	*e*P	Pn	02 27 54.9	+0.7
LATG				*e*S	Sn	02 28 13.4	+0.2
TWE	Neicheng	1.56	311	*e*P	Pn	02 27 54.8	+0.6
YULB	Yu-li	1.56	259	*e*P	Pn	02 27 54.2	-0.1
YULB				*e*S	Sn	02 28 12.7	-0.7
TWB1	Santiao Chiao	1.57	326	*e*P	Pn	02 27 53.6	-0.7
TWB1				*e*S	Sn	02 28 12.5	-1.0
TWF1	Yuli	1.57	257	*e*P	Pn	02 27 53.9	-0.5
TWF1				*e*S	Sn	02 28 13.5	-0.2
ENTT	Nioudou	1.58	306	*e*P	Pn	02 27 55.2	+0.7
ENTT				*e*S	Sn	02 28 13.8	0.0
NNSB	Datong	1.62	297	*e*P	Pn	02 27 55.2	+0.1
NNSB				*e*S	Sn	02 28 14.4	-0.4
WHF	Hehuan Shan	1.62	286	P	Pn	02 27 55.2	-0.2
WHF				*e*S	Sn	02 28 13.8	-1.5
FULB	Fuli	1.62	252	*e*P	Pn	02 27 54.6	-0.5
FULB				*e*S	Sn	02 28 13.0	-1.7
NNS	Nan Shan	1.63	297	*e*S	Sn	02 28 14.8	-0.3
TIPB	Shuangxi	1.63	321	P	Pn	02 27 55.8	+0.5
FUSB	Fushanzhiwuyua	1.64	310	*e*P	Pn	02 27 55.8	+0.5
FUSB				*e*S	Sn	02 28 15.9	+0.6
OWD	Renai	1.66	279	*e*P	Pn	02 27 55.1	-0.6
OWD				S	Sn	02 28 15.1	-0.9
FUSS	Fushou	1.67	289	*e*P	Pn	02 27 56.1	+0.2
FUSS				*e*S	Sn	02 28 15.5	-0.7
VWDT	VWDT	1.68	272	*e*P	Pn	02 27 55.6	-0.1
VWDT				*e*S	Sn	02 28 15.1	-1.0
EDH	Donghe	1.70	245	*e*P	Pn	02 27 56.3	+0.2
EDH				*e*S	Sn	02 28 14.8	-1.8
SXI1	Grass Mountain	1.70	324	*e*P	Pn	02 27 56.5	+0.3
SXI1				*e*S	Sn	02 28 16.6	-0.3
WUSB	Renai	1.72	280	*e*P	Pn	02 27 57.0	+0.5
WUSB				*e*S	Sn	02 28 17.1	-0.2
YHNB	Yeheng	1.74	304	*e*P	Pn	02 27 57.4	+0.7
YHNB				*e*S	Sn	02 28 16.4	-1.4
NSK	Sanguang	1.76	304	P	Pn	02 27 57.6	+0.6
NSK				*e*S	Sn	02 28 17.2	-1.1
ELDTW	Lidau	1.86	254	*e*P	Pn	02 27 58.1	-0.3
ELDTW				*e*S	Sn	02 28 19.8	-1.2
SMLT	Sun Moon Lake	1.90	276	*e*P	Pn	02 27 59.7	+0.7
WCS	Beigang Elemen	1.92	281	*e*P	Pn	02 27 59.5	+0.5
NFF	Wufeng Townshi	1.92	299	*e*P	Pn	02 28 01.5	+2.2
NFF				*e*S	Sn	02 28 23.7	+1.4
WHP	Taichung City	1.94	287	*e*P	Pn	02 28 01.4	+2.0
WHYT	Xinyi Township	1.94	270	*e*P	Pn	02 28 01.5	+2.1
TYC	Yuchr	1.94	276	*e*P	Pn	02 28 00.0	+0.6
TWGBT	Beinan	1.95	243	*e*P	Pn	02 28 00.0	+0.5
TWGBT				*e*S	Sn	02 28 21.7	-1.2
KSHI	Guanxi Townshi	1.95	303	*e*P	Pn	02 28 00.6	+1.1
TWG	Pinlang	1.96	244	*e*P	Pn	02 28 01.3	+1.6
TWG				*e*S	Sn	02 28 21.8	-1.2
ALS	Alishan	1.99	265	*e*P	Pn	02 28 01.8	+1.4
LIOB	Emei	2.01	298	*e*P	Pn	02 28 02.0	+1.6
LIOB				*e*S	Sn	02 28 25.7	+1.2
NSTT	Nanjuang	2.02	297	*e*P	Pn	02 28 02.3	+1.8
NSTT				*e*S	Sn	02 28 25.4	+0.9
TPUB	Ta-pu	2.19	260	*e*P	Pn	02 28 04.8	+2.0
TPUB				*e*S	Sn	02 28 30.8	+2.0
WTP	Ta-pu	2.21	258	*e*P	Pn	02 28 05.7	+2.5
WTP				*e*S	Sn	02 28 31.2	+1.8
CHN1	Nanshi	2.30	257	*e*P	Pn	02 28 07.5	+3.1
MASBT	Mashibuluo	2.41	244	*e*P	Pn	02 28 08.0	+2.1

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*IDC **26** 02:28:52.9±0.7, 56.°23N×164.°04E, h0^{km}, mb4.1/24, mbtmp4.1/25, ML3.0/1, Error ellipse: s-maj=18.3km s-min=14.4km az=163.0*

*KRSC **26** 02:28:53.9±1.8, 56.°19N×164.°21E, h50^{km}±21^{km}, Ml4.4, Felt [II] at HMS cape Afrika.*

*NEIC **26** 02:28:55.2±1.8, 56.°4N±0.°1×164.°0E±0.°2, h10^{km}±1^{km}, mb4.7/63, Error ellipse: s-maj=26.1km s-min=18.4km az=152.0*

*MOS **26** 02:28:57.2±1.2, 56.°19N×164.°07E, h47^{km}, mb4.9/7, Error ellipse: s-maj=10.1km s-min=4.9km az=56.9*

ISC 26 02:28:55.7±0.4, 56.°21N±0.°04×164.°18E±0.°04, h19^{km}, n179, σ1^{s}17/197, mb4.5/59, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.76	270	PN	Pb	02 29 08.3	-2.0
KBTR				S	Sb	02 29 18.7	-1.6
KBTR	Krutoberegovo	0.76	270	*e*P	Pb	02 29 08.3	-2.0
KBTR				*e*S	Sb	02 29 18.7	-1.6
KBG	Krutoberegovo	0.83	274	PN	Pb	02 29 09.6	-1.8
KBG				S	Sb	02 29 21.4	-0.7
KBG	Krutoberegovo	0.83	274	*e*P	Pb	02 29 09.6	-1.8
KBG				*e*S	Sb	02 29 21.4	-0.7
BKI	Bering	1.43	134	*e*S	Sn	02 29 36.5	-2.4
ZLN	Zelenaya	1.90	266	PN	Pn	02 29 27.7	+0.5
ZLN	Zelenaya	1.90	266	*e*P	Pn	02 29 27.7	+0.5
CIRR	Tsirk	1.92	269	PN	Pn	02 29 27.8	+0.3
CIRR	Tsirk	1.92	269	*e*P	Pn	02 29 27.9	+0.3
KLY	Klyuchi	1.97	274	PN	Pn	02 29 26.6	-1.4
KLY	Klyuchi	1.97	274	*e*P	Pn	02 29 26.6	-1.4
BZMR	Bezymyannaya	2.09	264	PN	Pn	02 29 30.6	+0.8
BZMR	Bezymyannaya	2.09	264	*e*P	Pn	02 29 30.6	+0.8
KIRR	Kirishev	2.17	265	PN	Pn	02 29 31.7	+0.8
KIRR	Kirishev	2.17	265	*e*P	Pn	02 29 31.8	+0.8
MKZ	Mys Kozlova	2.17	221	PN	Pn	02 29 29.4	-1.3
MKZ				S	Sn	02 29 55.3	-1.7
MKZ	Mys Kozlova	2.17	221	*e*P	Pn	02 29 29.4	-1.3
MKZ				*e*S	Sn	02 29 55.4	-1.7
KPT	Kopyto	2.23	265	PN	Pn	02 29 33.0	+1.3
KPT	Kopyto	2.23	265	*e*P	Pn	02 29 33.0	+1.3
KMNR	Kamenistaya	2.26	260	PN	Pn	02 29 33.6	+1.5
KMNR	Kamenistaya	2.26	260	*e*P	Pn	02 29 33.7	+1.5
TUMD	Tumrok D	2.37	246	PN	Pn	02 29 33.6	+0.1
TUMD				S	Sn	02 30 03.0	+1.0
TUMD	Tumrok D	2.37	246	*e*P	Pn	02 29 33.6	+0.1
TUMD				*e*S	Sn	02 30 03.1	+1.0
KOZ	Kozyrevsk	2.42	268	PN	Pn	02 29 35.6	+1.5
KOZ	Kozyrevsk	2.42	268	*e*P	Pn	02 29 35.7	+1.5
SRDR	Sredinnyy	2.49	274	PN	Pn	02 29 36.2	+1.0
SRDR	Sredinnyy	2.49	274	*e*P	Pn	02 29 36.3	+1.0
ESO	Esso	3.09	267	PN	Pn	02 29 44.9	+1.5
ESO	Esso	3.09	267	*e*P	Pn	02 29 45.0	+1.5
OSSR	Ossora	3.11	349	PN	Pn	02 29 42.7	-0.9
OSSR	Ossora	3.11	349	*e*P	Pn	02 29 42.8	-0.9
OSSR				*e*S	Sn	02 30 17.2	-3.0
KII	Karymskiy	3.48	233	PN	Pn	02 29 49.6	+0.7
KII	Karymskiy	3.48	233	*e*P	Pn	02 29 49.6	+0.7
SPN	Mys Shipunski	3.94	219	PN	Pn	02 29 53.8	-1.3
SPN	Mys Shipunski	3.94	219	*e*P	Pn	02 29 53.9	-1.3
SPN				*e*S	Sn	02 30 36.1	-4.8
NLC	Nalytchevo	4.14	225	PN	Pn	02 29 57.8	0.0
NLC				S	Sn	02 30 43.9	-1.7
NLC	Nalytchevo	4.14	225	*e*P	Pn	02 29 57.9	0.0
NLC				*e*S	Sn	02 30 44.0	-1.7
SDLR	Sedlovina	4.25	228	PN	Pn	02 29 59.7	+0.3
SDLR	Sedlovina	4.25	228	*e*P	Pn	02 29 59.8	+0.3
KRER	Koryakskii	4.29	229	PN	Pn	02 30 01.4	+1.4
KRER	Koryakskii	4.29	229	*e*P	Pn	02 30 01.5	+1.4
KRX	Arik	4.29	231	PN	Pn	02 30 01.0	+1.0
KRX	Arik	4.29	231	*e*P	Pn	02 30 01.0	+1.0
SMAR	Somma	4.29	229	PN	Pn	02 30 00.5	+0.4
SMAR	Somma	4.29	229	*e*P	Pn	02 30 00.6	+0.4
UGLR	Uglovaya	4.32	228	PN	Pn	02 30 00.9	+0.5
UGLR	Uglovaya	4.32	228	*e*P	Pn	02 30 01.0	+0.5
KOK	Koryaka	4.34	230	PN	Pn	02 30 02.1	+1.4
KOK	Koryaka	4.34	230	*e*P	Pn	02 30 02.2	+1.4
GNL	Ganaly	4.39	238	PN	Pn	02 30 02.7	+1.3
GNL	Ganaly	4.39	238	*e*P	Pn	02 30 02.8	+1.3
DALK	Dalny	4.48	227	PN	Pn	02 30 02.7	+0.2
DALK	Dalny	4.48	227	*e*P	Pn	02 30 02.7	+0.2
PET	Petropavlovsk	4.53	227	Pn	Pn	02 30 02.3	-0.9
PET	Petropavlovsk	4.53	227	*e*S	Sn	02 30 54.6	-0.7
PEA0B	Petropavlovsk-	4.88	233	Pn	Pn	02 30 09.9	+1.9

PEA0B	Petropavlovsk-	4.88	233	PN	Pn	02 30 09.9	+1.9
PETK	Petropavlovsk-	4.88	233	Pn	Pn	02 30 09.4	+1.3
PETK	Petropavlovsk-	4.88	233	Pn	Pn	02 30 08.7	+0.7
	3.0nm,0.3s,baz=68,slow=17,SNR=8.2						
PETK				Sn	Sn	02 31 04.5	+0.5
	1.9nm,0.3s,baz=111,slow=8.4,SNR=1.8						
	9.2nm,0.5s						
KRMR	Karymshinskiy	4.89	229	PN	Pn	02 30 09.1	+1.0
KRMR				S	Sn	02 31 05.2	+1.1
KRMR	Karymshinskiy	4.89	229	*e*P	Pn	02 30 09.1	+1.0
KRMR				*e*S	Sn	02 31 05.2	+1.1
RUS	Russkaya	5.03	224	PN	Pn	02 30 10.0	-0.1
RUS	Russkaya	5.03	224	*e*P	Pn	02 30 10.0	-0.1
RUS				*e*S	Sn	02 31 04.9	-2.7
GRL	Gorelyy	5.12	227	PN	Pn	02 30 12.8	+1.4
GRL	Gorelyy	5.12	227	*e*P	Pn	02 30 12.8	+1.4
MTVR	Mutnovka	5.12	226	PN	Pn	02 30 12.5	+1.0
MTVR				S	Sn	02 31 10.1	0.0
MTVR	Mutnovka	5.12	226	*e*P	Pn	02 30 12.5	+1.0
MTVR				*e*S	Sn	02 31 10.2	0.0
APC	Apacha	5.25	234	PN	Pn	02 30 15.6	+2.6
APC	Apacha	5.25	234	*e*P	Pn	02 30 15.6	+2.6
ASAK	Asacha	5.31	226	PN	Pn	02 30 15.4	+1.4
ASAK	Asacha	5.31	226	*e*P	Pn	02 30 15.5	+1.4
MIPR	Malaya Ipel'ka	5.87	231	PN	Pn	02 30 23.4	+1.8
MIPR	Malaya Ipel'ka	5.87	231	*e*P	Pn	02 30 23.5	+1.8
N15K	Kwethluk River	19.09	63	P	P	02 33 17.5	+0.6
O15K	Ungalikthiuk R	19.31	66	P	P	02 33 20.6	+1.3
M16K	Timber Creek	19.60	61	P	Pn	02 33 24.1	+0.2
C19K	Lookout Ridge	20.64	37	P	P	02 33 33.8	+0.1
F19K	Shaleruckik Mo	20.65	44	P	P	02 33 33.6	-0.2
J19K	Poorman	21.16	52	P	P	02 33 40.9	+1.5
TIXI	Tiksi	21.40	330	P	P	02 33 42.9	+1.1
	7.4nm,0.7s,baz=123,slow=10,SNR=5.9						
	7.4nm,0.7s						
ACHA	Angle Creek He	21.79	68	P	P	02 33 48.5	+2.3
CHIR	Chirikof Islan	22.25	74	P	P	02 33 52.2	+1.1
E22K	Anaktuvuk Pass	23.14	41	P	P	02 34 00.8	+0.3
SYI	Shuyak Island	23.21	66	P	P	02 34 02.2	+1.1
KDAK	Kodiak Island	23.31	68	P	P	02 34 02.0	-0.1
KDAK				IAmb	IAmb	02 34 09.9	
	comp=Z,20nm,1.3s						
KDAK	Kodiak Island	23.31	68	P	P	02 34 02.0	-0.1
KDAK				pmax	pmax		
	comp=Z,20nm,1.3s						
CNPM	China Poot	23.60	63	P	P	02 34 05.2	+0.1
CNPM				IAmb	IAmb	02 34 12.2	
	comp=Z,17nm,1.0s						
TOLK	Toolik Lake Re	24.04	41	P	P	02 34 09.9	+0.7
E24K	Your Creek	24.38	42	P	P	02 34 12.6	+0.3
WRH	Wood River Hil	24.45	51	P	P	02 34 15.0	+2.1
WRH				IAmb	IAmb	02 34 16.8	
	comp=Z,14nm,1.3s						
C24K	Franklin Bluff	24.51	38	P	P	02 34 14.2	+0.8
C24K				IAmb	IAmb	02 34 21.5	
	comp=Z,28nm,1.4s						
CCB	Clear Creek Bu	24.57	50	P	P	02 34 14.3	+0.3
G24K	Hadweenzic Riv	24.68	45	P	P	02 34 16.0	+1.0
G24K				IAmb	IAmb	02 34 23.7	
	comp=Z,24nm,1.5s						
PWL	Port Wells	24.77	59	P	P	02 34 15.5	-0.3
PWL				IAmb	IAmb	02 34 53.9	
	comp=Z,18nm,1.1s						
IL31		24.95	50	P	P	02 34 17.7	+0.3
IL31				IAmb	IAmb	02 34 20.5	
	comp=Z,11nm,1.2s						
ILAR	Eielson Array	24.95	50	P	P	02 34 17.1	-0.4
	comp=Z,1.8nm,0.9s,baz=263,slow=7.9,SNR=5.5						
	comp=Z,1.8nm,0.9s						
SCM	Sheep Creek Mo	25.08	57	P	P	02 34 18.8	+0.1
SCM	Sheep Creek Mo	25.08	57	P	P	02 34 18.8	+0.1
SCM				pmax	pmax		
	comp=Z,44nm,1.3s						
D25K	Kavik River	25.27	39	P	P	02 34 21.1	+0.8
D25K				IAmb	IAmb	02 34 56.8	
	comp=Z,10nm,1.1s						
BMAR	Burnt Mountain	25.83	44	P	P	02 34 26.7	+1.3
G26K	Porcupine Rive	26.14	45	P	P	02 34 29.4	+1.3
G26K				IAmb	IAmb	02 34 52.9	
	comp=Z,24nm,1.4s						
MJAR	Matsushiro Arr	26.34	233	P	P	02 34 29.7	-0.5
	comp=Z,3.0nm,0.7s,baz=26,slow=8.6,SNR=4.7						
	comp=Z,3.0nm,0.7s						
G29M	Pine Creek	28.41	45	P	P	02 34 49.8	+1.2
Q32M	Nakina River	33.04	58	P	P	02 35 31.4	+1.8
Q32M				IAmb	IAmb	02 35 39.8	
	comp=Z,14nm,1.5s						
YKAW3	Yellowknife Wh	39.23	46	P	P	02 36 22.9	+0.6
YKAW3				IAmb	IAmb	02 36 24.2	
	comp=Z,9.5nm,1.1s						
YKA	Yellowknife Ar	39.27	46	P	P	02 36 22.6	0.0
YKA	Yellowknife Ar	39.27	46	P	P	02 36 23.1	+0.6
	comp=Z,1.7nm,0.7s,baz=304,slow=14,SNR=8.9						
	comp=Z,1.7nm,0.7s						
SPITS	Spitsbergen Ar	44.44	351	P	P	02 37 04.2	-0.4
	comp=Z,7.3nm,0.7s,baz=76,slow=7.0,SNR=5.2						
	comp=Z,7.3nm,0.7s						
SPITS	Spitsbergen Ar	44.44	351	P	P	02 37 05.9	+1.2
SPITS				pmax	pmax		
	comp=Z,46nm,1.4s						
SPB2	Spitsbergen Ar	44.44	351	P	P	02 37 05.1	+0.5
BLKN	Baker Lake	45.17	37	P	P	02 37 10.6	0.0
BLKN				IAmb	IAmb	02 37 11.6	
	comp=Z,12nm,0.9s						
KURK	Kurchatov	48.11	302	P	P	02 37 33.0	-0.8
JTMT	Jette	48.12	64	P	P	02 37 35.8	+1.7
KURBB	Kurchatov Arra	48.22	302	P	P	02 37 33.0	-1.6
	comp=Z,0.9nm,0.9s,baz=55,slow=8.0,SNR=1.9						
	comp=Z,0.9nm,0.9s						
BMO	Blue Mountains	48.54	68	P	P	02 37 39.0	+1.6
BMO	Blue Mountains	48.54	68	P	P	02 37 39.0	+1.6
BMO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR	Makanchi Array	48.95	296	P	P	02 37 38.8	-1.6
	comp=Z,0.4nm,0.5s,baz=67,slow=6.7,SNR=5.6						
	comp=Z,0.4nm,0.5s						
PLID	Pearl Lake	49.05	67	P	P	02 37 42.9	+1.5
FCC	Fort Churchill	49.56	42	P	P	02 37 45.5	+0.7
FCC				IAmb	IAmb	02 37 55.8	
	comp=Z,8.5nm,0.9s						
FCC	Fort Churchill	49.56	42	P	P	02 37 45.5	+0.7
FCC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BVAR	Borovoye Array	50.31	308	P	P	02 37 50.8	+0.2
	comp=Z,2.7nm,0.8s,baz=72,slow=5.0,SNR=3.7						
	comp=Z,2.7nm,0.8s						
BOZ	Bozeman (W)	50.93	64	P	P	02 37 56.1	+0.5
BOZ	Bozeman (W)	50.93	64	P	P	02 37 56.1	+0.5
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RLMT	Red Lodge	52.45	63	P	P	02 38 08.6	+1.6
RLMT				IAmb	IAmb	02 38 15.5	
	comp=Z,7.2nm,0.8s						
NVAR	Mina Array Bea	52.54	75	P	P	02 38 09.5	+1.8
	comp=Z,0.7nm,0.6s,baz=312,slow=8.1,SNR=5.7						
	comp=Z,0.7nm,0.6s						
FXWY	Fox Creek	52.62	65	P	P	02 38 09.7	+1.3
FXWY				IAmb	IAmb	02 38 16.7	
	comp=Z,4.3nm,0.9s						
LOHW	Long Hollow	52.85	65	P	P	02 38 11.4	+1.4
BW06	Boulder Array	53.99	65	P	P	02 38 19.3	+0.9
PD31	Pinedale Array	53.99	65	P	P	02 38 19.8	+1.3
PDAR	Pinedale Array	53.99	65	P	P	02 38 19.0	+0.6
PDAR	Pinedale Array	53.99	65	P	P	02 38 19.6	+1.1
	comp=Z,2.6nm,0.7s,baz=330,slow=2.9,SNR=7.8						
	comp=Z,2.6nm,0.7s						
SPR3	Spring Creek 3	54.25	72	P	P	02 38 22.9	+2.4
SPR3				IAmb	IAmb	02 38 29.9	
	comp=Z,5.6nm,0.9s						
ULM	Lac du Bonnet	54.97	51	P	P	02 38 25.8	+0.6
ULM	Lac du Bonnet	54.97	51	P	P	02 38 25.3	+0.2
	comp=Z,3.7nm,0.6s,baz=316,slow=4.5,SNR=5.6						
	comp=Z,3.7nm,0.6s						
ULM	Lac du Bonnet	54.97	51	P	P	02 38 25.8	+0.6
ULM				pmax	pmax		
	comp=Z,19nm,1.4s						
BSUT	Blindstream Ca	55.00	68	P	P	02 38 27.8	+1.8
BSUT				IAmb	IAmb	02 38 34.9	
	comp=Z,9.3nm,1.2s						
O20A	White River Ci	56.59	67	P	P	02 38 38.6	+1.5
O20A				IAmb	IAmb	02 38 39.5	
	comp=Z,8.7nm,0.8s						
HMU	Henry Mountain	56.93	70	P	P	02 38 41.2	+1.5
PV22	Blue Mesa, Par	57.50	68	P	P	02 38 45.2	+1.6
PV22				IAmb	IAmb	02 38 51.0	
	comp=Z,9.8nm,1.3s						
AB31	Akbulak array	57.55	311	P	P	02 38 43.8	+0.2
ABKAR	Akbulak array	57.55	311	P	P	02 38 43.9	+0.3
FINES	FINESS Array B	58.16	338	P	P	02 38 46.7	-0.9
FINES	FINESS Array B	58.16	338	P	P	02 38 47.7	+0.1
	comp=Z,2.0nm,0.9s,baz=24,slow=7.9,SNR=2.2						
	comp=Z,2.0nm,0.9s						
EYMN	Ely	58.60	50	P	P	02 38 51.1	+0.1
EYMN				IAmb	IAmb	02 39 19.0	
	comp=Z,14nm,1.4s						
ECSD	EROS Data Cent	59.57	56	P	P	02 38 58.0	+0.3
ECSD				IAmb	IAmb	02 39 34.0	
	comp=Z,11nm,1.4s						
BELG	Belogornoye	59.85	321	P	P	02 38 59.8	+0.4
	comp=Z,21nm,0.9s,baz=351,slow=1.2,SNR=3.9						
	comp=Z,21nm,0.9s						
NC405	NORSAR Array S	61.02	345	P	P	02 39 07.2	-0.2
NC405				IAmb	IAmb	02 39 16.0	
	comp=Z,11nm,1.2s						
NB2	NORSAR Subarra	61.16	345	P	P	02 39 08.1	-0.3
	comp=Z,0.5nm,0.5s,baz=17,slow=6.9						
NOA	NORSAR Array B	61.16	345	P	P	02 39 08.5	+0.1
	comp=Z,0.7nm,0.5s,baz=18,slow=6.9,SNR=4.4						
	comp=Z,0.7nm,0.5s						
HFS	Hagfors	61.66	344	P	P	02 39 10.8	-0.9
	comp=Z,1.7nm,0.6s,baz=30,slow=4.1,SNR=6.7						
	comp=Z,1.7nm,0.6s						
SCHQ	Schefferville	61.77	31	P	P	02 39 12.2	-0.3
	comp=Z,2.9nm,0.6s,baz=342,slow=7.8,SNR=5.7						
	comp=Z,2.9nm,0.6s						
P38A	Dawn	64.22	57	P	P	02 39 28.9	-0.1
P38A				IAmb	IAmb	02 39 35.5	
	comp=Z,5.3nm,0.9s						
MNTX	Cornudas Mount	64.53	71	P	P	02 39 32.6	+1.4
MNTX				IAmb	IAmb	02 39 39.9	
	comp=Z,4.2nm,1.0s						
WMOK	Wichita Mounta	65.54	64	P	P	02 39 38.0	+0.3
WMOK				IAmb	IAmb	02 39 39.1	
	comp=Z,4.1nm,0.7s						
WMOK	Wichita Mounta	65.54	64	P	P	02 39 38.0	+0.3
WMOK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
R40A	Maddies Statio	65.87	57	P	P	02 39 38.9	-0.9
MGMO	Mountain Grove	66.78	58	P	P	02 39 45.2	-0.5
MGMO				IAmb	IAmb	02 39 45.7	
	comp=Z,5.5nm,0.8s						
FVM	French Village	66.98	56	P	P	02 39 46.4	-0.5
FVM	French Village	66.98	56	P	P	02 39 46.4	-0.5
FVM				pmax	pmax		
	comp=Z,20nm,1.4s						
AKASG	Malin Array Be	67.11	331	P	P	02 39 47.2	-0.2
	comp=Z,1.7nm,0.4s,baz=28,slow=6.7,SNR=6.6						
	comp=Z,1.7nm,0.4s						
TX31	Lajitas Ar. Si	67.30	71	P	P	02 39 50.0	+0.9
TX31				IAmb	IAmb	02 39 51.0	
	comp=Z,4.5nm,0.8s						
TXAR	Lajitas Array	67.30	71	P	P	02 39 49.8	+0.6
TXAR	Lajitas Array	67.30	71	P	P	02 39 49.9	+0.8
	comp=Z,2.8nm,0.7s,baz=301,slow=4.8,SNR=17						
	comp=Z,2.8nm,0.7s						
T42A	Van Buren	67.44	57	P	P	02 39 49.3	-0.5
T42A				IAmb	IAmb	02 40 32.3	
	comp=Z,10nm,1.4s						
D62A	Allapoint, All	67.86	36	P	P	02 39 52.6	+0.3
EKA	Eskdalemuir Ar	68.34	352	P	P	02 39 54.9	-0.3
	comp=Z,1.4nm,0.6s,baz=31,slow=5.0,SNR=5.1						
	comp=Z,1.4nm,0.6s						
M57A	Sunshine Farm,	69.90	45	P	P	02 40 04.5	-0.6
BUR08	Bucovina Ar. S	70.98	332	P	P	02 40 11.9	+0.2
BUR08				IAmb	IAmb	02 40 44.0	
	comp=Z,9.4nm,1.4s						
BURAR	Bucovina Array	71.00	332	P	P	02 40 12.1	+0.3
Z47A	Carrollton	71.99	57	P	P	02 40 17.7	-0.2
GERES	GERESS Array B	72.45	340	P	P	02 40 21.2	+0.7
	comp=Z,0.5nm,0.6s,baz=8.5,slow=5.7,SNR=2.6						
	comp=Z,0.5nm,0.6s						
T57A	Hurt	72.73	49	P	P	02 40 22.0	-0.3
T57A				IAmb	IAmb	02 40 22.2	
	comp=Z,14nm,1.5s						
HODGE	Hodges	73.78	52	P	P	02 40 27.9	-0.5
HODGE				IAmb	IAmb	02 40 29.2	
	comp=Z,3.9nm,0.7s						
BRTR	Keskin Array B	75.65	323	P	P	02 40 39.5	0.0
	comp=Z,0.8nm,0.7s,baz=72,slow=4.7,SNR=3.4						
	comp=Z,0.8nm,0.7s						
WRA	Warramunga Arr	79.94	208	P	P	02 41 03.1	-0.1
	comp=Z,0.8nm,0.8s,baz=18,slow=5.7,SNR=2.5						
	comp=Z,0.8nm,0.8s						
ASAR	Alice Springs	83.61	208	P	P	02 41 23.0	+0.6
	comp=Z,1.1nm,0.9s,baz=16,slow=5.7,SNR=3.2						
	comp=Z,1.1nm,0.9s						
ESDC	Sonseca Array	83.95	351	P	P	02 41 24.6	+0.3
	comp=Z,1.5nm,0.9s,baz=26,slow=4.3,SNR=5.3						
	comp=Z,1.5nm,0.9s						
QSPA	South Pole Qui	145.96	180	PKPdf	PKPdf	02 48 31.2	-0.5
QSPA	South Pole Qui	145.96	180	PKPbc	PKPdf	02 48 31.1	-0.6
	comp=Z,1.2nm,0.5s,baz=268,slow=1.6,SNR=7.8						

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*MOS **26** 02:32:49.1±0.7, 56.°24N×164.°31E, h10^{km}, mb4.5/3, Error ellipse: s-maj=8.4km s-min=4.8km az=52.5*

*IDC **26** 02:32:49.5±0.6, 56.°27N×164.°05E, h0^{km}, mb4.0/23, mbtmp4.0/25, ML3.7/2, Error ellipse: s-maj=18.2km s-min=14.1km az=146.0*

*KRSC **26** 02:32:50.0±1.8, 56.°18N×164.°35E, h50^{km}±22^{km}, Ml4.3*

*NEIC **26** 02:32:51.7±1.4, 56.°3N±0.°1×164.°0E±0.°2, h10^{km}±1^{km}, mb4.3/28, Error ellipse: s-maj=26.5km s-min=17.2km az=154.0*

ISC 26 02:32:49.8±1.5**, 56.°20N**±0.°04×**164.°31E**±0.°03**, h4**^{km}±9^{km}**, n151, σ1.^{s}28**/186**, mb4.2**/37**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.83	271	PN	Pg	02 33 05.3	-0.4
KBTR				S	Sg	02 33 15.8	-0.7
KBTR	Krutoberegovo	0.83	271	*e*P	Pg	02 33 05.4	-0.4
KBTR				*e*S	Sg	02 33 15.8	-0.7
KBG	Krutoberegovo	0.90	274	PN	Pg	02 33 07.1	+0.1
KBG				S	Sg	02 33 18.3	-0.3
KBG	Krutoberegovo	0.90	274	*e*P	Pg	02 33 07.1	+0.1
KBG				*e*S	Sg	02 33 18.3	-0.3
BKI	Bering	1.37	136	PN	Pn	02 33 15.0	-0.6
BKI				S	Sb	02 33 32.6	-1.2
BKI	Bering	1.37	136	*e*P	Pn	02 33 15.1	-0.6
BKI				*e*S	Sb	02 33 32.6	-1.2
SMKR	Semkarok	1.62	285	PN	Pn	02 33 18.5	-0.7
SMKR				S	Sn	02 33 39.1	-1.5
SMKR	Semkarok	1.62	285	*e*P	Pn	02 33 18.6	-0.7
SMKR				*e*S	Sn	02 33 39.1	-1.5
BDR	Baidarnaya	1.76	283	*e*S	Sn	02 33 43.8	-0.2
ZLN	Zelenaya	1.97	266	PN	Pn	02 33 24.1	+0.1
ZLN				S	Sn	02 33 49.3	+0.2
ZLN	Zelenaya	1.97	266	*e*P	Pn	02 33 24.1	+0.1
ZLN				*e*S	Sn	02 33 49.4	+0.2
CIRR	Tsirk	1.99	269	PN	Pn	02 33 24.1	-0.2
CIRR				S	Sn	02 33 50.7	+0.9
CIRR	Tsirk	1.99	269	*e*P	Pn	02 33 24.2	-0.2
CIRR				*e*S	Sn	02 33 50.7	+0.9
LGNR	Loginova	2.03	268	PN	Pn	02 33 25.3	+0.3
LGNR				S	Sn	02 33 50.9	+0.1
LGNR	Loginova	2.03	268	*e*P	Pn	02 33 25.3	+0.3
LGNR				*e*S	Sn	02 33 51.0	+0.1
BZGR	Bezymyannyi-Gr	2.04	264	PN	Pn	02 33 25.5	+0.5
BZGR				S	Sn	02 33 51.2	+0.3
BZGR	Bezymyannyi-Gr	2.04	264	*e*P	Pn	02 33 25.5	+0.5
BZGR				*e*S	Sn	02 33 51.3	+0.3
KLY	Klyuchi	2.04	275	PN	Pn	02 33 23.2	-1.6
KLY				S	Sn	02 33 47.4	-3.4
KLY	Klyuchi	2.04	275	*e*P	Pn	02 33 23.3	-1.6
KLY				*e*S	Sn	02 33 47.5	-3.4
KRSR	Krestovskiy	2.09	272	PN	Pn	02 33 25.8	+0.2
KRSR				S	Sn	02 33 52.1	0.0
KRSR	Krestovskiy	2.09	272	*e*P	Pn	02 33 25.9	+0.2
KRSR				*e*S	Sn	02 33 52.1	0.0
BZWR	Bezymyannyi-We	2.15	265	PN	Pn	02 33 27.4	+0.9
BZWR	Bezymyannyi-We	2.15	265	*e*P	Pn	02 33 27.4	+0.9
BZMR	Bezymyannaya	2.16	265	PN	Pn	02 33 27.3	+0.7
BZMR	Bezymyannaya	2.16	265	*e*P	Pn	02 33 27.4	+0.7
MKZ	Mys Kozlova	2.21	223	PN	Pn	02 33 24.5	-2.6
MKZ	Mys Kozlova	2.21	223	*e*P	Pn	02 33 24.5	-2.6
MKZ				*e*S	Sn	02 33 50.6	-4.2
KIRR	Kirishev	2.24	265	PN	Pn	02 33 28.1	+0.4
KIRR				S	Sn	02 33 56.3	+0.5
KIRR	Kirishev	2.24	265	*e*P	Pn	02 33 28.2	+0.4
KIRR				*e*S	Sn	02 33 56.3	+0.5
KPT	Kopyto	2.30	266	*e*P	Pn	02 33 29.8	+1.2
KPT				*e*S	Sn	02 33 58.5	+1.1
KMNR	Kamenistaya	2.33	261	PN	Pn	02 33 30.0	+1.1
KMNR	Kamenistaya	2.33	261	*e*P	Pn	02 33 30.1	+1.1
TUMD	Tumrok D	2.43	247	PN	Pn	02 33 30.4	+0.2
TUMD				S	Sn	02 34 00.3	0.0
TUMD	Tumrok D	2.43	247	*e*P	Pn	02 33 30.4	+0.2
TUMD				*e*S	Sn	02 34 00.4	0.0
KOZ	Kozyrevsk	2.49	269	PN	Pn	02 33 32.6	+1.6
KOZ	Kozyrevsk	2.49	269	*e*P	Pn	02 33 32.6	+1.6
SRDR	Sredinnyy	2.56	275	PN	Pn	02 33 33.0	+0.9
SRDR				S	Sn	02 34 04.0	+0.3
SRDR	Sredinnyy	2.56	275	*e*P	Pn	02 33 33.0	+0.9
SRDR				*e*S	Sn	02 34 04.0	+0.3
OSSR	Ossora	3.13	348	PN	Pn	02 33 38.9	-0.9
OSSR	Ossora	3.13	348	*e*P	Pn	02 33 38.9	-0.9
OSSR				*e*S	Sn	02 34 13.3	-4.3
ESO	Esso	3.16	267	PN	Pn	02 33 41.2	+1.0
ESO	Esso	3.16	267	*e*P	Pn	02 33 41.3	+1.0
KII	Karymskiy	3.53	234	PN	Pn	02 33 46.3	+0.9
KII	Karymskiy	3.53	234	*e*P	Pn	02 33 46.4	+0.9
SPN	Mys Shipunski	3.98	220	PN	Pn	02 33 50.7	-0.8
SPN	Mys Shipunski	3.98	220	*e*P	Pn	02 33 50.8	-0.8
SPN				*e*S	Sn	02 34 34.9	-3.6
NLC	Nalytchevo	4.18	226	PN	Pn	02 33 54.7	+0.4
NLC	Nalytchevo	4.18	226	*e*P	Pn	02 33 54.7	+0.4
NLC				*e*S	Sn	02 34 41.5	-2.0
SDLR	Sedlovina	4.29	229	PN	Pn	02 33 56.6	+0.7
SDLR	Sedlovina	4.29	229	*e*P	Pn	02 33 56.7	+0.7
SDLR				*e*S	Sn	02 34 45.1	-1.4
KRER	Koryakskii	4.33	230	PN	Pn	02 33 57.8	+1.2
KRER	Koryakskii	4.33	230	*e*P	Pn	02 33 57.8	+1.2
KRX	Arik	4.34	231	PN	Pn	02 33 57.6	+1.1
KRX	Arik	4.34	231	*e*P	Pn	02 33 57.7	+1.1
SMAR	Somma	4.34	230	PN	Pn	02 33 57.3	+0.7
SMAR	Somma	4.34	230	*e*P	Pn	02 33 57.4	+0.7
AVH	Avacha	4.37	230	PN	Pn	02 33 59.1	+2.2
AVH	Avacha	4.37	230	*e*P	Pn	02 33 59.1	+2.2
UGLR	Uglovaya	4.37	229	PN	Pn	02 33 57.4	+0.5
UGLR	Uglovaya	4.37	229	*e*P	Pn	02 33 57.5	+0.5
KOK	Koryaka	4.39	231	PN	Pn	02 33 58.3	+1.1
KOK	Koryaka	4.39	231	*e*P	Pn	02 33 58.4	+1.1
GNL	Ganaly	4.45	238	PN	Pn	02 33 59.4	+1.4
GNL	Ganaly	4.45	238	*e*P	Pn	02 33 59.5	+1.4
DALK	Dalny	4.53	228	PN	Pn	02 33 59.2	+0.2
DALK	Dalny	4.53	228	*e*P	Pn	02 33 59.2	+0.2
DALK				*e*S	Sn	02 34 49.6	-2.4
PET	Petropavlovsk	4.57	228	Pn	Pn	02 33 59.8	+0.1
PET	Petropavlovsk	4.57	228	*e*PN	Pn	02 33 59.9	+0.3
PET				pmax	pmax		
	comp=Z,37nm,0.3s						
PET	Petropavlovsk	4.57	228	*e*P	Pn	02 34 00.1	+0.4
PET				*e*S	Sn	02 34 52.7	-0.4
PEA0B	Petropavlovsk-	4.93	234	Pn	Pn	02 34 05.7	+1.1
PEA0B	Petropavlovsk-	4.93	234	PN	Pn	02 34 05.7	+1.1
PETK	Petropavlovsk-	4.93	234	Pn	Pn	02 34 06.2	+1.6
PETK	Petropavlovsk-	4.93	234	Pn	Pn	02 34 05.4	+0.8
	comp=Z,2.7nm,0.3s,baz=67,slow=18,SNR=9.6						
PETK				Sn	Sn	02 35 05.6	+3.6
	comp=Z,0.5nm,0.3s,baz=94,slow=40,SNR=1.5						
	comp=Z,7.1nm,0.5s						
KRMR	Karymshinskiy	4.93	229	PN	Pn	02 34 06.4	+1.9
KRMR	Karymshinskiy	4.93	229	*e*P	Pn	02 34 06.5	+1.9
KRMR				*e*S	Sn	02 35 02.4	+0.4
RUS	Russkaya	5.07	224	PN	Pn	02 34 06.9	+0.4
RUS	Russkaya	5.07	224	*e*P	Pn	02 34 06.9	+0.4
GRL	Gorelyy	5.16	228	PN	Pn	02 34 09.5	+1.7
GRL	Gorelyy	5.16	228	*e*P	Pn	02 34 09.5	+1.7
MTVR	Mutnovka	5.17	226	PN	Pn	02 34 09.1	+1.2
MTVR	Mutnovka	5.17	226	*e*P	Pn	02 34 09.2	+1.2
APC	Apacha	5.30	235	PN	Pn	02 34 11.5	+1.9
APC	Apacha	5.30	235	*e*P	Pn	02 34 11.5	+1.9
ASAK	Asacha	5.36	227	PN	Pn	02 34 12.1	+1.6
ASAK	Asacha	5.36	227	*e*P	Pn	02 34 12.1	+1.6
ASAJ	Asahikawa	18.33	238	P	Pn	02 37 04.8	0.0
	comp=Z,0.9nm,0.3s,baz=286,slow=3.4,SNR=4.0						
	comp=Z,10nm,0.6s						
C19K	Lookout Ridge	20.61	37	P	Pn	02 37 31.6	-0.2
TIXI	Tiksi	21.45	330	P	P	02 37 38.9	+0.4
	comp=Z,5.6nm,0.8s,baz=112,slow=7.2,SNR=5.0						
	comp=Z,5.6nm,0.8s						
ACHA	Angle Creek He	21.73	68	P	P	02 37 45.7	+3.9
E22K	Anaktuvuk Pass	23.11	41	P	P	02 37 58.1	+1.8
KDAK	Kodiak Island	23.25	68	P	P	02 37 59.0	+1.2
KDAK				IAmb	IAmb	02 38 32.2	
	comp=Z,15nm,1.4s						
KDAK	Kodiak Island	23.25	68	P	P	02 37 59.0	+1.2
KDAK				pmax	pmax		
	comp=Z,15nm,1.4s						
CNPM	China Poot	23.54	63	P	P	02 38 01.4	+0.7
E24K	Your Creek	24.34	42	P	P	02 38 08.3	0.0
E24K				IAmb	IAmb	02 38 31.5	
	comp=Z,13nm,1.5s						
G24K	Hadweenzic Riv	24.64	45	P	P	02 38 12.0	+1.0
G24K				IAmb	IAmb	02 38 27.6	
	comp=Z,9.8nm,1.4s						
PWL	Port Wells	24.71	59	P	P	02 38 11.8	+0.1
PWL				IAmb	IAmb	02 38 22.5	
	comp=Z,4.8nm,0.9s						
ILAR	Eielson Array	24.91	50	P	P	02 38 13.7	+0.3
	comp=Z,1.4nm,1.1s,baz=282,slow=6.9,SNR=2.4						
	comp=Z,1.4nm,1.1s						
BMAR	Burnt Mountain	25.79	44	P	P	02 38 23.1	+1.7
MJAR	Matsushiro Arr	26.39	233	P	P	02 38 27.0	0.0
	comp=Z,3.0nm,0.8s,baz=23,slow=9.4,SNR=6.3						
	comp=Z,3.0nm,0.8s						
G29M	Pine Creek	28.37	45	P	P	02 38 46.4	+1.8
G29M				IAmb	IAmb	02 39 18.7	
	comp=Z,4.9nm,1.1s						
I30M	Mount Dempster	29.29	48	P	P	02 38 53.1	+0.2
SONM	Songino Array	35.63	282	P	P	02 39 47.6	-0.9
	comp=Z,0.5nm,0.4s,baz=61,slow=6.8,SNR=4.9						
	comp=Z,0.5nm,0.4s						
SPITS	Spitsbergen Ar	44.46	351	P	P	02 41 01.7	+0.5
	comp=Z,4.7nm,0.8s,baz=72,slow=9.3,SNR=3.1						
	comp=Z,4.7nm,0.8s						
SPB2	Spitsbergen Ar	44.46	351	P	P	02 41 01.7	+0.4
BLKN	Baker Lake	45.14	37	P	P	02 41 06.7	0.0
BLKN				IAmb	IAmb	02 41 17.2	
	comp=Z,4.1nm,0.9s						
JTMT	Jette	48.07	64	P	P	02 41 31.8	+1.7
KURK	Kurchatov	48.18	302	P	P	02 41 30.2	-0.6
KURBB	Kurchatov Arra	48.28	302	P	P	02 41 30.2	-1.3
	comp=Z,0.5nm,0.6s,baz=56,slow=8.6,SNR=3.2						
	comp=Z,0.5nm,0.6s						
PLID	Pearl Lake	48.99	67	P	P	02 41 39.1	+1.7
PLID				IAmb	IAmb	02 41 45.8	
	comp=Z,2.8nm,1.2s						
MKAR	Makanchi Array	49.02	296	P	P	02 41 34.9	-2.4
	comp=Z,0.6nm,0.7s,baz=56,slow=8.1,SNR=5.9						
	comp=Z,0.6nm,0.7s						
LYMT	Lyon Mountain	49.59	63	P	P	02 41 43.6	+1.6
BVAR	Borovoye Array	50.37	309	P	P	02 41 46.6	-1.0
	comp=Z,1.3nm,0.5s,baz=43,slow=8.9,SNR=4.9						
	comp=Z,1.3nm,0.5s						
BW06	Boulder Array	53.93	65	P	P	02 42 15.8	+1.3
BW06				IAmb	IAmb	02 42 16.6	
	comp=Z,1.7nm,0.7s						
PD31	Pinedale Array	53.93	65	P	P	02 42 15.4	+1.0
PD31				IAmb	IAmb	02 42 16.6	
	comp=Z,1.6nm,0.7s						
PDAR	Pinedale Array	53.93	65	P	P	02 42 16.0	+1.5
PDAR	Pinedale Array	53.93	65	P	P	02 42 16.1	+1.7
	comp=Z,0.9nm,0.6s,baz=327,slow=3.0,SNR=6.4						
	comp=Z,0.9nm,0.6s						
ULM	Lac du Bonnet	54.93	51	P	P	02 42 21.2	-0.1
	comp=Z,1.6nm,0.7s,baz=243,slow=4.5,SNR=1.9						
	comp=Z,1.6nm,0.7s						
SRU	San Rafael Swe	56.11	69	P	P	02 42 31.6	+1.4
SRU	San Rafael Swe	56.11	69	P	P	02 42 31.6	+1.4
SRU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
O20A	White River Ci	56.53	67	P	P	02 42 34.9	+1.7
KKAR	Karatay Array	57.49	300	P	P	02 42 38.6	-1.1
KKAR	Karatay Array	57.49	300	P	P	02 42 38.6	-1.1
AKTO	Aktyubinsk	57.50	313	P	P	02 42 38.7	-1.0
	comp=Z,1.7nm,0.5s,baz=44,slow=5.9,SNR=4.1						
	comp=Z,1.7nm,0.5s						
AB31	Akbulak array	57.62	311	P	P	02 42 40.0	-0.5
AB31				IAmb	IAmb	02 42 41.4	
	comp=Z,6.2nm,1.4s						
ABKAR	Akbulak array	57.62	311	P	P	02 42 40.1	-0.4

ABKAR				IAmb	IAmb	02 42 41.4	
	comp=Z,6.2nm,1.4s						
FINES	FINESS Array B	58.20	338	P	P	02 42 43.6	-0.8
	comp=Z,1.3nm,0.8s,baz=355,slow=6.3,SNR=2.1						
	comp=Z,1.3nm,0.8s						
EVN	Everest	60.41	277	P	P	02 42 59.5	-1.4
CMAR	Chiang Mai Arr	61.18	260	P	P	02 43 05.0	-0.5
	comp=Z,1.9nm,0.3s,baz=25,slow=6.4,SNR=4.1						
	comp=Z,1.9nm,0.3s						
CMAR	Chiang Mai Arr	61.18	260	P	P	02 43 05.0	-0.5
NOA	NORSAR Array B	61.20	345	P	P	02 43 04.4	-0.6
	comp=Z,0.4nm,0.5s,baz=19,slow=6.9,SNR=3.8						
	comp=Z,0.4nm,0.5s						
HFS	Hagfors	61.70	344	P	P	02 43 07.5	-0.8
	comp=Z,0.7nm,0.5s,baz=26,slow=3.8,SNR=5.8						
	comp=Z,0.7nm,0.5s						
SCHQ	Schefferville	61.74	31	P	P	02 43 09.1	+0.3
	comp=Z,2.4nm,0.8s,baz=1.8,slow=5.3,SNR=4.3						
	comp=Z,2.4nm,0.8s						
MNTX	Cornudas Mount	64.47	71	P	P	02 43 29.1	+1.8
VHRN	Van Horn	65.39	71	P	P	02 43 35.0	+1.5
VHRN				IAmb	IAmb	02 43 53.6	
	comp=Z,3.1nm,1.4s						
WMOK	Wichita Mounta	65.48	64	P	P	02 43 35.3	+1.5
WMOK				IAmb	IAmb	02 43 37.7	
	comp=Z,2.3nm,0.8s						
WMOK	Wichita Mounta	65.48	64	P	P	02 43 35.3	+1.5
WMOK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKASG	Malin Array Be	67.15	331	P	P	02 43 43.5	-0.7
	comp=Z,1.2nm,0.5s,baz=28,slow=6.8,SNR=4.6						
	comp=Z,1.2nm,0.5s						
TX31	Lajitas Ar. Si	67.24	71	P	P	02 43 46.2	+1.0
TXAR	Lajitas Array	67.24	71	P	P	02 43 46.7	+1.4
TXAR	Lajitas Array	67.24	71	P	P	02 43 46.9	+1.6
	comp=Z,1.5nm,0.5s,baz=299,slow=4.9,SNR=19						
	comp=Z,1.5nm,0.5s						
E62A	Clayton Lake	68.07	37	P	P	02 43 50.4	+0.3
KBZ	Khabaz	68.90	318	P	P	02 43 55.0	-0.2
	comp=Z,2.3nm,0.8s,baz=279,slow=2.6,SNR=4.2						
	comp=Z,2.3nm,0.8s						
BURAR	Bucovina Array	71.04	332	P	P	02 44 08.5	-0.1
Z47A	Carrollton	71.94	57	P	P	02 44 14.8	+0.7
LRAL	Lakeview Retre	72.58	57	P	P	02 44 17.6	-0.2
LRAL				IAmb	IAmb	02 44 44.1	
	comp=Z,3.8nm,1.2s						
BRTR	Keskin Array B	75.70	323	P	P	02 44 36.0	-0.3
	comp=Z,0.7nm,0.8s,baz=70,slow=4.4,SNR=3.9						
	comp=Z,0.7nm,0.8s						
WRA	Warramunga Arr	79.96	209	P	P	02 44 59.5	-0.3
	comp=Z,1.2nm,0.7s,baz=24,slow=5.8,SNR=5.2						
	comp=Z,1.2nm,0.7s						
ASAR	Alice Springs	83.63	208	P	P	02 45 19.5	+0.4
	comp=Z,1.2nm,0.8s,baz=18,slow=6.0,SNR=6.7						
	comp=Z,1.2nm,0.8s						
ESDC	Sonseca Array	83.98	351	P	P	02 45 20.9	-0.1
	comp=Z,0.4nm,0.6s,baz=12,slow=4.3,SNR=5.6						
	comp=Z,0.4nm,0.6s						
QSPA	South Pole Qui	145.95	180	PKPdf	PKPdf	02 52 28.1	-0.2
QSPA	South Pole Qui	145.95	180	PKPbc	PKPdf	02 52 28.3	0.0
	comp=Z,2.8nm,0.8s,baz=116,slow=0.6,SNR=19						

*KRSC **26** 02:36:07.5±1.8, 56°.24N×164°.42E, h49^{km}±22^{km}, Ml4.3*
*MOS **26** 02:36:07.0±0.7, 56°.28N×164°.36E, h11^{km}, mb4.7/3, Error ellipse: s-maj=8.2km s-min=4.9km az=54.8*
*IDC **26** 02:36:07.3±0.6, 56°.29N×164°.13E, h0^{km}, mb4.0/26, mbtmp4.0/27, ML2.7/1, Error ellipse: s-maj=17.2km s-min=12.9km az=159.0*
*NEIC **26** 02:36:09.7±1.3, 56°.4N±0°.1×164°.1E±0°.2, h10^{km}±1^{km}, mb4.1/28, Error ellipse: s-maj=26.9km s-min=18.3km az=151.0*
ISC 26 02:36:08.2±1.5**, 56°.25N**±0°.04×**164°.29E**±0°.03**, h7**^{km}±9^{km}**, n157,** $\sigma 1^{s}$**14**/187**, mb4.1**/39**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.82	268	PN	Pg	02 36 23.4	-0.6
KBTR				S	Sg	02 36 34.7	+0.1
KBTR	Krutoberegovo	0.82	268	*e*P	Pg	02 36 23.4	-0.6
KBTR				*e*S	Sg	02 36 34.7	+0.1
KBG	Krutoberegovo	0.88	271	PN	Pg	02 36 24.4	-0.7
KBG				S	Sb	02 36 36.9	-1.0
KBG	Krutoberegovo	0.88	271	*e*P	Pg	02 36 24.5	-0.7
KBG				*e*S	Sb	02 36 36.9	-1.0
BKI	Bering	1.42	137	PN	Pn	02 36 33.3	-1.1
BKI				S	Sn	02 36 51.3	-2.0
BKI	Bering	1.42	137	*e*P	Pn	02 36 33.3	-1.1
BKI				*i* S	Sn	02 36 51.4	-2.0
SMKR	Semkarok	1.60	283	PN	Pn	02 36 36.2	-0.8
SMKR				S	Sb	02 36 57.7	-0.9
SMKR	Semkarok	1.60	283	*e*P	Pn	02 36 36.3	-0.8
SMKR				*e*S	Sb	02 36 57.7	-0.9
BDR	Baidarnaya	1.74	282	*e*S	Sb	02 37 01.5	-1.2
SRKR	Sorokina	1.78	285	*e*S	Sn	02 37 01.3	-1.1
ZLN	Zelenaya	1.96	265	PN	Pn	02 36 42.3	+0.2
ZLN				S	Sb	02 37 08.1	-1.0
ZLN	Zelenaya	1.96	265	*e*P	Pn	02 36 42.3	+0.2
ZLN				*e*S	Sb	02 37 08.1	-1.0
CIRR	Tsirk	1.98	268	PN	Pn	02 36 43.3	+1.0
CIRR	Tsirk	1.98	268	*e*P	Pn	02 36 43.4	+1.0
LGNR	Loginova	2.02	267	PN	Pn	02 36 43.6	+0.6
LGNR	Loginova	2.02	267	*e*P	Pn	02 36 43.7	+0.6
KLY	Klyuchi	2.03	273	PN	Pn	02 36 41.4	-1.4
KLY				S	Sn	02 37 06.3	-2.1
KLY	Klyuchi	2.03	273	*e*P	Pn	02 36 41.5	-1.4
KLY				*e*S	Sn	02 37 06.3	-2.1
BZGR	Bezymyannyi-Gr	2.04	263	PN	Pn	02 36 43.3	+0.3
BZGR				S	Sb	02 37 09.3	-1.8
BZGR	Bezymyannyi-Gr	2.04	263	*e*P	Pn	02 36 43.4	+0.3
BZGR				*e*S	Sb	02 37 09.3	-1.8
KRSR	Krestovskiy	2.08	271	PN	Pn	02 36 43.4	-0.2
KRSR	Krestovskiy	2.08	271	*e*P	Pn	02 36 43.5	-0.2
BZWR	Bezymyannyi-We	2.14	264	PN	Pn	02 36 45.2	+0.6
BZWR				S	Sb	02 37 14.1	-0.2
BZWR	Bezymyannyi-We	2.14	264	*e*P	Pn	02 36 45.2	+0.6
BZWR				*e*S	Sb	02 37 14.1	-0.2
BZMR	Bezymyannaya	2.15	263	PN	Pn	02 36 45.2	+0.5
BZMR	Bezymyannaya	2.15	263	*e*P	Pn	02 36 45.2	+0.5
KIRR	Kirishev	2.23	264	PN	Pn	02 36 46.2	+0.5
KIRR				S	Sb	02 37 15.2	-1.5
KIRR	Kirishev	2.23	264	*e*P	Pn	02 36 46.2	+0.5
KIRR				*e*S	Sb	02 37 15.3	-1.5
MKZ	Mys Kozlova	2.24	222	PN	Pn	02 36 44.6	-1.0
MKZ	Mys Kozlova	2.24	222	*e*P	Pn	02 36 44.7	-1.0
MKZ				*e*S	Sn	02 37 10.4	-3.1
KPT	Kopyto	2.29	265	PN	Pn	02 36 47.9	+1.3
KPT	Kopyto	2.29	265	*e*P	Pn	02 36 47.9	+1.3
KMNR	Kamenistaya	2.33	259	PN	Pn	02 36 48.3	+1.3
KMNR	Kamenistaya	2.33	259	*e*P	Pn	02 36 48.4	+1.3
TUMD	Tumrok D	2.44	246	PN	Pn	02 36 48.9	+0.5
TUMD				S	Sn	02 37 18.2	-0.3
TUMD	Tumrok D	2.44	246	*e*P	Pn	02 36 49.0	+0.5
TUMD				*e*S	Sn	02 37 18.2	-0.3
KOZ	Kozyrevsk	2.48	267	PN	Pn	02 36 50.2	+1.2
KOZ				S	Sb	02 37 22.1	-1.6
KOZ	Kozyrevsk	2.48	267	*e*P	Pn	02 36 50.3	+1.2
KOZ				*e*S	Sb	02 37 22.2	-1.6
SRDR	Sredinnyy	2.55	273	PN	Pn	02 36 50.9	+0.9
SRDR				S	Sn	02 37 22.1	+0.7
SRDR	Sredinnyy	2.55	273	*e*P	Pn	02 36 51.0	+0.9
SRDR				*e*S	Sn	02 37 22.1	+0.7
OSSR	Ossora	3.08	348	PN	Pn	02 36 56.4	-0.9
OSSR	Ossora	3.08	348	*e*P	Pn	02 36 56.4	-0.9
OSSR				*e*S	Sn	02 37 30.2	-4.2
ESO	Esso	3.15	266	PN	Pn	02 37 00.1	+1.9
ESO	Esso	3.15	266	*e*P	Pn	02 37 00.2	+1.9
KII	Karymskiy	3.55	233	PN	Pn	02 37 04.3	+0.4
KII	Karymskiy	3.55	233	*e*P	Pn	02 37 04.3	+0.4
SPN	Mys Shipunski	4.01	220	PN	Pn	02 37 09.4	-0.6
SPN	Mys Shipunski	4.01	220	*e*P	Pn	02 37 09.5	-0.6
SPN				*e*S	Sn	02 37 53.0	-4.2
NLC	Nalytchevo	4.21	225	PN	Pn	02 37 13.1	+0.4
NLC	Nalytchevo	4.21	225	*e*P	Pn	02 37 13.2	+0.4
NLC				*e*S	Sn	02 38 00.6	-1.5
SDLR	Sedlovina	4.32	229	PN	Pn	02 37 14.9	+0.5
SDLR	Sedlovina	4.32	229	*e*P	Pn	02 37 15.0	+0.5
KRER	Koryakskii	4.36	230	PN	Pn	02 37 16.4	+1.4
KRER	Koryakskii	4.36	230	*e*P	Pn	02 37 16.5	+1.4
KRX	Arik	4.36	231	PN	Pn	02 37 15.8	+0.8
KRX	Arik	4.36	231	*e*P	Pn	02 37 15.9	+0.8
SMAR	Somma	4.36	229	PN	Pn	02 37 15.7	+0.6
SMAR	Somma	4.36	229	*e*P	Pn	02 37 15.7	+0.6
AVH	Avacha	4.39	229	PN	Pn	02 37 16.4	+1.1
AVH	Avacha	4.39	229	*e*P	Pn	02 37 16.5	+1.1
UGLR	Uglovaya	4.39	228	PN	Pn	02 37 16.0	+0.6
UGLR	Uglovaya	4.39	228	*e*P	Pn	02 37 16.1	+0.6
KOK	Koryaka	4.41	230	PN	Pn	02 37 16.5	+0.8
KOK	Koryaka	4.41	230	*e*P	Pn	02 37 16.6	+0.8
GNL	Ganaly	4.46	238	PN	Pn	02 37 17.9	+1.5
GNL	Ganaly	4.46	238	*e*P	Pn	02 37 17.9	+1.5
DALK	Dalny	4.55	227	PN	Pn	02 37 17.8	+0.3
DALK	Dalny	4.55	227	*e*P	Pn	02 37 17.8	+0.3
PET	Petropavlovsk	4.60	228	Pn	Pn	02 37 18.3	+0.2
PET	Petropavlovsk	4.60	228	*e*PN	Pn	02 37 18.3	+0.2
PET				pmax	pmax		
	comp=Z,24nm,0.3s						
PET	Petropavlovsk	4.60	228	*e*P	Pn	02 37 18.6	+0.5
PEA0B	Petropavlovsk-	4.95	233	Pn	Pn	02 37 24.7	+1.7
PEA0B	Petropavlovsk-	4.95	233	PN	Pn	02 37 23.5	+0.5
PETK	Petropavlovsk-	4.95	233	Pn	Pn	02 37 23.9	+0.9
PETK	Petropavlovsk-	4.95	233	Pn	Pn	02 37 23.7	+0.7
	comp=Z,1.5nm,0.3s,baz=69,slow=18,SNR=17						
PETK				Sn	Sn	02 38 21.8	+1.3
	comp=Z,0.7nm,0.3s,baz=81,slow=20,SNR=1.5						
	comp=Z,1.8nm,0.3s						
KRMR	Karymshinskiy	4.96	229	PN	Pn	02 37 24.5	+1.5
KRMR	Karymshinskiy	4.96	229	*e*P	Pn	02 37 24.6	+1.5
KRMR				*e*S	Sn	02 38 20.0	-0.6
RUS	Russkaya	5.10	224	PN	Pn	02 37 25.2	+0.2
RUS	Russkaya	5.10	224	*e*P	Pn	02 37 25.3	+0.2
GRL	Gorelyy	5.18	227	PN	Pn	02 37 28.2	+1.9
GRL	Gorelyy	5.18	227	*e*P	Pn	02 37 28.3	+1.9
MTVR	Mutnovka	5.19	226	PN	Pn	02 37 27.1	+0.7
MTVR	Mutnovka	5.19	226	*e*P	Pn	02 37 27.2	+0.7
ASAK	Asacha	5.38	227	PN	Pn	02 37 30.3	+1.3
ASAK	Asacha	5.38	227	*e*P	Pn	02 37 30.3	+1.3
ASAK				*e*S	Sn	02 38 32.6	+1.4
C16K	Lisburne Hills	18.31	37		P	02 40 24.3	+1.8
E18K	Tukpahlearik C	19.66	41	P	Pn	02 40 39.4	+0.6
C18K	Utukok River	19.86	38	P	Pn	02 40 41.6	+0.4
C18K				IAmb	IAmb	02 40 45.3	
	comp=Z,14nm,1.2s						
C19K	Lookout Ridge	20.57	37	P	P	02 40 49.3	+1.9
F19K	Shaleruckik Mo	20.58	44	P	P	02 40 49.5	+2.1
F19K				IAmb	IAmb	02 40 53.0	
	comp=Z,6.3nm,0.8s						
J18K	Innoko River	20.58	54	P	P	02 40 49.5	+2.0
H19K	Roundabout Mou	20.88	48	P	Pn	02 40 53.2	+0.1
J19K	Poorman	21.09	52	P	P	02 40 54.0	+1.1
TIXI	Tiksi	21.40	330	P	P	02 40 56.9	+0.9
	comp=Z,5.6nm,0.7s,baz=122,slow=9.3,SNR=8.9						
	comp=Z,5.6nm,0.7s						
D20K	Etivluk River	21.47	39	P	P	02 40 58.2	+1.2
D20K				IAmb	IAmb	02 41 01.0	
	comp=Z,8.7nm,1.1s						
N19K	Bonanza Creek	21.72	61	P	P	02 41 02.4	+2.6
N19K				IAmb	IAmb	02 41 36.0	
	comp=Z,8.7nm,1.2s						
CAST	Castle Rocks	22.66	54	P	P	02 41 12.3	+2.5
CAST				IAmb	IAmb	02 41 12.8	
	comp=Z,6.9nm,1.4s						
E22K	Anaktuvuk Pass	23.08	42	P	P	02 41 14.9	+0.8
E23K	Chandalar	23.89	42	P	P	02 41 23.4	+1.2
TOLK	Toolik Lake Re	23.98	41	P	P	02 41 23.0	0.0
C24K	Franklin Bluff	24.45	38	P	P	02 41 28.0	+0.8
C24K				IAmb	IAmb	02 41 29.9	
	comp=Z,9.6nm,1.1s						
G24K	Hadweenzic Riv	24.61	45	P	P	02 41 29.7	+0.9
G24K				IAmb	IAmb	02 42 10.8	
	comp=Z,8.3nm,1.5s						
ILAR	Eielson Array	24.89	50	P	P	02 41 31.2	-0.1
	comp=Z,1.2nm,0.7s,baz=267,slow=8.8,SNR=8.5						
	comp=Z,1.2nm,0.7s						
D25K	Kavik River	25.20	39	P	P	02 41 34.4	+0.3
D25K				IAmb	IAmb	02 41 35.3	
	comp=Z,3.9nm,0.8s						
BMAR	Burnt Mountain	25.76	44	P	P	02 41 40.3	+1.1
MJAR	Matsushiro Arr	26.41	233	P	P	02 41 44.5	-0.8
	comp=Z,3.2nm,0.8s,baz=14,slow=9.1,SNR=7.2						
	comp=Z,3.2nm,0.8s						
H29M	Whitestone	28.29	46	P	P	02 42 02.6	+0.7
I30M	Mount Dempster	29.26	48	P	P	02 42 11.3	+0.6
Q32M	Nakina River	32.97	58	P	P	02 42 45.9	+2.3
SONM	Songino Array	35.61	281	P	P	02 43 06.3	-0.1
	comp=Z,0.8nm,0.8s,baz=74,slow=6.2,SNR=2.8						
	comp=Z,0.8nm,0.8s						
YKAW3	Yellowknife Wh	39.17	46	P	P	02 43 37.2	+1.0
YKAW3				IAmb	IAmb	02 43 46.8	
	comp=Z,5.3nm,1.5s						
YKA	Yellowknife Ar	39.20	47	P	P	02 43 37.1	+0.6
YKA	Yellowknife Ar	39.20	47	P	P	02 43 36.6	+0.2
	comp=Z,1.5nm,0.7s,baz=291,slow=15,SNR=9.1						
	comp=Z,1.5nm,0.7s						
YKA	Yellowknife Ar	39.20	47	P	P	02 43 37.1	+0.6
RES	Resolute Bay	39.46	24	P	P	02 43 39.6	+1.1
RES				IAmb	IAmb	02 43 40.6	
	comp=Z,7.6nm,1.4s						
RES	Resolute Bay	39.46	24	P	P	02 43 39.6	+1.1
RES				pmax	pmax		
	comp=Z,8.0nm,1.5s						
SPITS	Spitsbergen Ar	44.41	351	P	P	02 44 18.8	-0.1
	comp=Z,13nm,0.9s,baz=91,slow=4.2,SNR=7.3						
	comp=Z,13nm,0.9s						
SPITS	Spitsbergen Ar	44.41	351	P	P	02 44 19.1	+0.2
SPITS				pmax	pmax		
	comp=Z,14nm,0.9s						
SPB2	Spitsbergen Ar	44.41	351	P	P	02 44 19.8	+0.9
BLKN	Baker Lake	45.11	37	P	P	02 44 24.7	+0.2
ILON	Igloolik, Nuna	45.91	27	P	P	02 44 31.1	+0.3
ILON				IAmb	IAmb	02 44 32.2	
	comp=Z,1.8nm,0.7s						
JTMT	Jette	48.06	64	P	P	02 44 49.1	+1.0
KURK	Kurchatov	48.14	302	P	P	02 44 48.7	+0.2
KURBB	Kurchatov Arra	48.25	302	P	P	02 44 48.7	-0.7
	comp=Z,0.6nm,0.7s,baz=56,slow=8.2,SNR=3.7						
	comp=Z,0.6nm,0.7s						
MKAR	Makanchi Array	48.98	296	P	P	02 44 53.8	-1.3
	comp=Z,0.4nm,0.7s,baz=55,slow=7.1,SNR=2.8						
	comp=Z,0.4nm,0.7s						
LYMT	Lyon Mountain	49.58	63	P	P	02 45 01.2	+1.3
BVAR	Borovoye Array	50.33	308	P	P	02 45 04.6	-0.7
	comp=Z,2.4nm,0.7s,baz=54,slow=7.5,SNR=9.6						
	comp=Z,2.4nm,0.7s						
BRVK	Borovoye	50.36	309	P	P	02 45 05.2	-0.3
BRVK	Borovoye	50.36	309	P	P	02 45 05.2	-0.3
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NVAR	Mina Array Bea	52.47	75	P	P	02 45 22.9	+1.1
	comp=Z,0.6nm,0.5s,baz=292,slow=7.8,SNR=3.6						
	comp=Z,0.6nm,0.5s						
ARTI	Arti	52.81	318	P	P	02 45 23.7	0.0
	comp=Z,1.8nm,0.4s,baz=44,slow=2.3,SNR=4.1						
	comp=Z,1.8nm,0.4s						
PDAR	Pinedale Array	53.92	65	P	P	02 45 33.8	+1.3
	comp=Z,1.4nm,0.8s,baz=316,slow=4.1,SNR=8.7						
	comp=Z,1.4nm,0.8s						
ULM	Lac du Bonnet	54.91	51	P	P	02 45 40.0	+0.9
	comp=Z,2.9nm,0.7s,baz=318,slow=6.6,SNR=5.1						
	comp=Z,2.9nm,0.7s						
KKAR	Karatay Array	57.45	300	P	P	02 45 57.0	-0.5
KKAR	Karatay Array	57.45	300	P	P	02 45 57.0	-0.5
AKTO	Aktyubinsk	57.46	313	P	P	02 45 57.3	-0.1
	comp=Z,1.3nm,0.6s,baz=41,slow=6.2,SNR=5.0						
	comp=Z,1.3nm,0.6s						
AB31	Akbulak array	57.57	311	P	P	02 45 58.4	+0.2
AB31				IAmb	IAmb	02 45 58.7	
	comp=Z,5.1nm,1.3s						
ABKAR	Akbulak array	57.57	311	P	P	02 45 58.2	0.0
ABKAR				IAmb	IAmb	02 45 58.7	
	comp=Z,5.1nm,1.3s						
FINES	FINESS Array B	58.15	338	P	P	02 46 01.2	-0.8
	comp=Z,1.9nm,0.9s,baz=14,slow=16,SNR=5.1						
	comp=Z,1.9nm,0.9s						
EYMN	Ely	58.53	50	P	P	02 46 04.6	-0.4
BELG	Belogornoye	59.85	321	P	P	02 46 13.5	-0.5
	comp=Z,14nm,0.8s,baz=337,slow=5.1,SNR=3.5						
	comp=Z,14nm,0.8s						
NOA	NORSAR Array B	61.14	345	P	P	02 46 22.2	-0.5
	comp=Z,0.2nm,0.4s,baz=20,slow=6.6,SNR=2.8						
	comp=Z,0.2nm,0.4s						
CMAR	Chiang Mai Arr	61.17	260	P	P	02 46 23.3	-0.2
	comp=Z,1.0nm,0.3s,baz=20,slow=6.8,SNR=5.0						
	comp=Z,1.0nm,0.3s						
HFS	Hagfors	61.64	344	P	P	02 46 24.9	-1.2
	comp=Z,0.5nm,0.5s,baz=329,slow=2.5,SNR=6.2						
	comp=Z,0.5nm,0.5s						
SCHQ	Schefferville	61.70	31	P	P	02 46 26.0	-0.6
	comp=Z,2.0nm,0.6s,baz=318,slow=4.9,SNR=6.4						
	comp=Z,2.0nm,0.6s						
AKASG	Malin Array Be	67.10	331	P	P	02 47 01.7	-0.3
	comp=Z,0.5nm,0.4s,baz=27,slow=6.3,SNR=4.6						
	comp=Z,0.5nm,0.4s						
TX31	Lajitas Ar. Si	67.23	71	P	P	02 47 04.4	+1.1
TXAR	Lajitas Array	67.23	71	P	P	02 47 04.0	+0.7
TXAR	Lajitas Array	67.23	71	P	P	02 47 03.9	+0.6
	comp=Z,2.6nm,0.7s,baz=295,slow=4.5,SNR=22						
	comp=Z,2.6nm,0.7s						
TXAR	Lajitas Array	67.23	71	P	P	02 47 04.0	+0.7
BURAR	Bucovina Array	70.99	332	P	P	02 47 26.1	-0.3
BURAR				IAmb	IAmb	02 47 27.6	
	comp=Z,1.8nm,1.1s						
BRTR	Keskin Array B	75.66	323	P	P	02 47 52.4	-1.7
	comp=Z,0.6nm,0.8s,baz=31,slow=7.5,SNR=3.6						
	comp=Z,0.6nm,0.8s						
WRA	Warramunga Arr	80.00	208	P	P	02 48 17.8	-0.3
	comp=Z,1.6nm,0.8s,baz=22,slow=5.6,SNR=4.9						
	comp=Z,1.6nm,0.8s						
ASAR	Alice Springs	83.67	208	P	P	02 48 37.5	+0.2
	comp=Z,2.0nm,0.9s,baz=14,slow=6.7,SNR=7.0						
	comp=Z,2.0nm,0.9s						
ESDC	Sonseca Array	83.92	351	P	P	02 48 37.9	-0.8
	comp=Z,0.8nm,1.0s,baz=1.2,slow=5.1,SNR=4.7						
	comp=Z,0.8nm,1.0s						
QSPA	South Pole Qui	146.00	180	PKPdf	PKPdf	02 55 46.2	-0.2
QSPA	South Pole Qui	146.00	180	PKPbc	PKPdf	02 55 46.5	+0.1
	comp=Z,1.5nm,0.5s,baz=263,slow=0.5,SNR=24						

*LDG **26** 02:38:03.7±0.0, 44°.81N×6°.75E, h5^{km}, Md2.2/4, Ml2.0/12, Error ellipse: s-maj=1.0km s-min=0.7km az=63.0*
*GEN **26** 02:38:03.0, 44°.80N×6°.74E, h5^{km}±1^{km}, Ml1.3*
*ROM **26** 02:38:03.2±0.1, 44°.801N±0°.005×6°.741E±0°.009, h11^{km}, ML1.3/13, Error ellipse: s-maj=0.6km s-min=0.5km az=38.0*
STR 26 02:38:03.6±0.3**, 45°N**±2°×°±°**, h10**^{km}±7^{km}**, MLv2.0**/24**, Error ellipse: s-maj=0.0km s-min=0.0km az=52.9, preliminary, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBDF	Montbardon	0.08	169	*e*Pg	Pg	02 38 05.8	-0.2
MBDF				*e*Sg	Sg	02 38 06.9	-0.9
RRL	Rocca Remolon	0.12	13	Pg	Pg	02 38 06.8	+0.2
RRL				Sg	Sg	02 38 09.0	+0.1
RRL	Rocca Remolon	0.12	13	P	Pg	02 38 06.8	+0.2
RRL				S	Sg	02 38 09.0	+0.2
RRL	Rocca Remolon	0.12	13	P	Pg	02 38 06.8	+0.2
RRL				S	Sg	02 38 09.0	+0.1
RRL				AML	AML		
	comp=E,546µm,0.4s						
RRL				AML	AML		
	comp=N,552µm,0.5s						
RRL				AML	AML		
	comp=E,384µm,0.2s						
RRL				AML	AML		
	comp=N,429µm,0.2s						
BNI	Bardonecchia	0.25	348	P	Pg	02 38 09.6	+0.7
BNI				S	Sg	02 38 13.1	+0.8
BNI	Bardonecchia	0.25	348	P	Pg	02 38 09.2	+0.4
BNI				S	Sg	02 38 12.9	+0.6
BNI				AML	AML		
	comp=E,46µm,0.1s						
BNI				AML	AML		
	comp=N,44µm,1.1s						
BNI				AML	AML		
	comp=N,44µm,0.9s						
BNI				AML	AML		
	comp=E,46µm,0.1s						
BNI				AML	AML		
	comp=N,34µm,0.1s						
BNI				AML	AML		
	comp=E,46µm,0.1s						
CREF	Crivoux	0.27	200	Pg	Pg	02 38 09.0	-0.1
CREF				Sg	Sg	02 38 12.6	-0.3
SURF	Saint Ours	0.33	172	Pg	Pg	02 38 10.0	-0.2
SURF	Saint Ours	0.33	172	P	Pg	02 38 10.1	-0.1
SURF				S	Sg	02 38 15.4	+0.9
BHB	Bricherasio	0.37	84	Pg	Pg	02 38 11.1	+0.2
BHB	Bricherasio	0.37	84	P	Pg	02 38 11.1	+0.3
BHB				S	Sg	02 38 16.8	+1.0
BHB	Bricherasio	0.37	84	P	Pg	02 38 11.1	+0.3
BHB				S	Sg	02 38 16.7	+1.0
BHB				AML	AML		
	comp=E,63µm,0.3s						
BHB				AML	AML		
	comp=N,72µm,1.4s						
BHB				AML	AML		
	comp=N,64µm,0.1s						
JAUF	Jausiers	0.38	180	Pg	Pg	02 38 10.9	-0.1
JAUF				Sg	Sg	02 38 16.4	+0.4
PZZ	Stroppo	0.40	139	Pg	Pg	02 38 11.1	-0.3
PZZ	Stroppo	0.40	139	P	Pg	02 38 11.3	-0.1
PZZ				S	Sg	02 38 17.0	+0.3
PZZ	Stroppo	0.40	139	P	Pg	02 38 11.2	-0.2
PZZ				S	Sg	02 38 17.1	+0.5
PZZ				AML	AML		
	comp=N,332µm,1.4s						
PZZ				AML	AML		
	comp=N,332µm,0.6s						
PZZ				AML	AML		
	comp=E,288µm,0.6s						
OGMO	Fort Saint-Gob	0.41	353	Pg	Pg	02 38 11.9	+0.2
OGMO				Sg	Sg	02 38 17.3	+0.3
OGMO	Fort Saint-Gob	0.41	353	P	Pg	02 38 11.9	+0.3
OGMO				S	Sg	02 38 17.3	+0.3
RSP	Reno Superiore	0.50	46	Pg	Pg	02 38 13.6	+0.2
RSP	Reno Superiore	0.50	46	P	Pg	02 38 13.7	+0.3
RSP				S	Sg	02 38 20.5	+0.5
ORIF	Oris-en-Rattie	0.63	281	*e*Pg	Pg	02 38 15.7	-0.1
ORIF				*e*Sg	Sg	02 38 23.2	-0.9
	comp=E,24nm,0.3s						
ORIF	Oris-en-Rattie	0.63	281	Pg	Pg	02 38 15.7	-0.1
ORIF	Oris-en-Rattie	0.63	281	P	Pg	02 38 15.8	-0.1
ORIF				S	Sg	02 38 23.9	-0.2
ISO	Isola	0.66	161	Pg	Pg	02 38 16.0	-0.3
ISO				Sg	Sg	02 38 24.8	-0.1
ISO	Isola	0.66	161	P	Pg	02 38 16.6	+0.3
ISO				S	Sg	02 38 25.6	+0.6
STV	Sant Anna di V	0.69	143	Pg	Pg	02 38 16.3	-0.7
STV	Sant Anna di V	0.69	143	Sg	Sg	02 38 26.4	+0.3
STV	Sant Anna di V	0.69	143	P	Pb	02 38 17.6	-0.2
STV				S	Sg	02 38 26.4	+0.3
STV	Sant Anna di V	0.69	143	P	Pg	02 38 16.7	-0.3
STV				S	Sg	02 38 26.3	+0.2
STV				AML	AML		
	comp=N,36µm,1.3s						
STV				AML	AML		
	comp=E,36µm,0.1s						
STV				AML	AML		
	comp=N,29µm,0.1s						
LPG	La Plagne	0.69	0	*e*Pg	Pg	02 38 17.5	+0.4
LPG				*e*Sg	Sg	02 38 26.2	0.0
	comp=N,10.0nm,0.3s						
ENAUX	Enaux	0.69	179	Pg	Pg	02 38 17.0	0.0
LPL	La Plagne	0.71	359	*e*Pg	Pg	02 38 17.6	+0.2
LPL				*e*Sg	Sg	02 38 26.4	-0.4
	comp=N,3.2nm,0.2s						
ENR	Entracque	0.75	140	Pg	Pg	02 38 17.8	-0.2
ENR	Entracque	0.75	140	Sg	Sg	02 38 27.9	+0.1
ENR	Entracque	0.75	140	P	Pg	02 38 18.2	+0.1
ENR				S	Sg	02 38 28.2	+0.3
ENR	Entracque	0.75	140	P	Pg	02 38 18.0	-0.1
ENR				S	Sg	02 38 28.1	+0.2
ENR				AML	AML		
	comp=E,62µm,0.5s						
ENR				AML	AML		
	comp=N,64µm,0.8s						
ENR				AML	AML		
	comp=N,49µm,0.1s						
OGDI	Digne	0.77	205	Pg	Pn	02 38 19.8	-0.7
OGDI	Digne	0.77	205	P	Pn	02 38 19.8	-0.7
MONC	Moncucco Torin	0.88	72	P	Pn	02 38 21.6	-0.4
SALSA	La sagne	0.92	183	Pg	Pb	02 38 21.8	0.0
PIAF	les Granges de	0.93	138	Pg	Pg	02 38 21.1	-0.3
TURF	col de Turini	0.95	151	Pg	Pg	02 38 21.2	-0.7
TURF				Sg	Sg	02 38 34.4	+0.2
TURF	col de Turini	0.95	151	P	Pb	02 38 22.6	+0.3
TURF				S	Sb	02 38 34.7	-0.2
MVIF	Mont Vial	0.95	162	Pg	Pg	02 38 22.0	0.0
MVIF				Sg	Sb	02 38 35.3	+0.3

GBOS	Grotte di Boss	0.96	125	Pg	Pg	02 38 21.5	-0.6
GBOS	Grotte di Boss	0.96	125	Sg	Sg	02 38 34.5	-0.1
GBOS	Grotte di Boss	0.96	125	P	Pg	02 38 21.5	-0.6
GBOS				S	Sg	02 38 34.5	-0.1
CIRO	Champorcher	0.98	36	Pg	Pg	02 38 22.6	0.0
CIRO	Champorcher	0.98	36	Sg	Sg	02 38 35.1	-0.3
CIRO	Champorcher	0.98	36	P	Pg	02 38 21.9	-0.7
CIRO				S	Sg	02 38 35.6	+0.2
CIRO				AML	AML		
	comp=N,10µm,0.4s						
BLAF	les Blancs	0.99	211	Pg	Pg	02 38 22.7	+0.1
TRAV	Traversella	1.00	44	Pg	Pg	02 38 22.5	-0.4
SAOF	Saorge	1.00	145	Pg	Pg	02 38 22.3	-0.6
SAOF				Sg	Sb	02 38 36.5	+0.2
CALF	Calern	1.06	173	Pg	Pg	02 38 23.8	-0.2
ESCA	l'Escarene	1.07	155	Pg	Pg	02 38 23.9	-0.2
ESCA				Sg	Sb	02 38 38.5	+0.2
TRIGF	Trigance	1.08	193	Pg	Pn	02 38 24.9	-0.1
TRIGF				Sg	Sb	02 38 39.4	+0.6
RORO	Rocca Rossa	1.17	126	Pg	Pb	02 38 25.0	-0.9
RORO	Rocca Rossa	1.17	126	Sg	Sb	02 38 40.2	-0.8
SMRF	Simiane la Rot	1.18	226	*e*Pg	Pg	02 38 26.9	+0.6
SMRF				*e*Sg	Sn	02 38 42.9	+0.5
	comp=N,3.4nm,0.3s						
LMR	La Mourre	1.48	187	*e*Pg	Pg	02 38 31.6	-0.4
LMR				*e*Sg	Sb	02 38 50.5	+0.5
	comp=N,6.4nm,0.2s						
VIVF	Saint-Julien-l	1.48	273	*e*Pg	Pg	02 38 31.9	-0.1
VIVF				*e*Sg	Sb	02 38 50.2	+0.1
	comp=N,3.1nm,0.3s						
CABF	La Chapelle	1.87	346	*e*Pg	Pb	02 38 38.5	+0.7
CABF				*e*Sg	Sg	02 39 03.5	-0.1
	comp=N,0.9nm,0.3s						
LASF	Ste Croix	2.20	252	*e*P	Pn	02 38 40.3	+0.1
LASF				*e*Sn	Sn	02 39 06.0	-1.4
	comp=N,0.6nm,0.2s						
SMF	Signal de Mont	2.75	313	*e*P	Pn	02 38 48.9	+1.2
SMF				*e*Sg	Sg	02 39 29.4	-2.4
	comp=N,0.6nm,0.2s						
PGF	Pioggiola	2.78	143	*e*P	Pn	02 38 49.5	+1.2
PGF				*e*Sn	Sn	02 39 18.9	-3.1
	comp=N,0.5nm,0.2s						
AVF	Avril sur Loir	3.10	311	*e*P	Pn	02 38 54.1	+1.6
AVF				*e*Sg	Sg	02 39 40.3	-2.8
	comp=N,0.3nm,0.2s						
BGF	Bois d'Agland	3.25	304	*e*P	Pn	02 38 56.1	+1.4
BGF				*e*Sg	Sg	02 39 45.2	-2.8
	comp=N,0.5nm,0.2s						

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*KRSC **26** 02:39:10.1±1.6, 56°.24N×164°.35E, h47^{km}±19^{km}, Ml4.0*

*IDC **26** 02:39:10.1±2.6, 56°.58N×163°.94E, h0^{km}, mb3.4/2, mbtmp3.3/3, ML2.0/1, Error ellipse: s-maj=211.6km s-min=33.1km az=142.0*

ISC 26 02:39:09.8±0.9**, 56°.26N**±0°.05×**164°.23E**±0°.05**, h10^{km}, n32,** σ**1^{s}65**/36**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.79	267	*e*P	Pn	02 39 25.6	-1.4
KBTR				*e*S	Sb	02 39 35.7	-0.7
KBG	Krutoberegovo	0.85	270	*e*P	Pn	02 39 26.6	-1.3
KBG				*e*S	Sn	02 39 39.0	-1.3
BKI	Bering	1.45	136	*e*P	Pn	02 39 34.8	-1.3
BKI				*e*S	Sn	02 39 52.7	-2.3
BDR	Baidarnaya	1.71	282	*e*S	Sg	02 40 03.5	-1.2
ZLN	Zelenaya	1.93	264	*e*P	Pb	02 39 44.9	-0.3
BZGR	Bezymyannyi-Gr	2.00	262	*e*P	Pb	02 39 45.6	-0.8
KRSR	Krestovskiy	2.04	270	*e*P	Pb	02 39 46.5	-0.7
BZWR	Bezymyannyi-We	2.11	263	*e*P	Pb	02 39 47.4	-0.9
BZMR	Bezymyannaya	2.12	263	*e*P	Pb	02 39 47.4	-0.9
KIRR	Kirishev	2.20	264	*e*P	Pb	02 39 48.6	-1.1
MKZ	Mys Kozlova	2.22	221	*e*P	Pn	02 39 46.9	+0.2
KPT	Kopyto	2.26	264	*e*P	Pb	02 39 50.8	0.0
KMNR	Kamenistaya	2.30	259	*e*P	Pb	02 39 50.3	-1.1
TUMD	Tumrok D	2.41	246	*e*P	Pb	02 39 50.8	-2.5
KOZ	Kozyrevsk	2.44	267	*e*P	Pb	02 39 53.5	-0.3
SRDR	Sredinnyy	2.52	273	*e*P	Pb	02 39 53.5	-1.6
OSSR	Ossora	3.06	349	*e*P	Pn	02 39 59.0	+0.7
OSSR				*e*S	Sn	02 40 33.8	-1.1
KII	Karymskiy	3.53	233	*e*P	Pn	02 40 06.7	+1.9
SPN	Mys Shipunski	4.00	219	*e*P	Pn	02 40 11.3	+0.2
KRER	Koryakskii	4.34	229	*e*P	Pn	02 40 18.9	+2.9
KRX	Arik	4.34	230	*e*P	Pn	02 40 18.3	+2.3
SMAR	Somma	4.35	229	*e*P	Pn	02 40 17.6	+1.5
AVH	Avacha	4.37	229	*e*P	Pn	02 40 17.9	+1.6
UGLR	Uglovaya	4.38	228	*e*P	Pn	02 40 18.0	+1.6
KOK	Koryaka	4.39	230	*e*P	Pn	02 40 18.7	+2.0
GNL	Ganaly	4.44	237	*e*P	Pn	02 40 19.9	+2.6
PETK	Petropavlovsk-	4.93	233	Pn	Pn	02 40 26.4	+2.5
	0.3nm,0.3s,baz=73,slow=18,SNR=5.1						
	0.8nm,0.5s						
RUS	Russkaya	5.09	223	*e*P	Pn	02 40 27.3	+1.3
MTVR	Mutnovka	5.18	226	*e*P	Pn	02 40 29.7	+2.2
ASAK	Asacha	5.37	226	*e*P	Pn	02 40 32.4	+2.4
ILAR	Eielson Array	24.90	50	P	P	02 44 33.4	+0.9
	0.3nm,0.7s,baz=274,slow=7.9,SNR=3.0						
	0.3nm,0.7s						
TXAR	Lajitas Array	67.26	71	P	P	02 50 06.7	+2.2
	0.5nm,0.5s,baz=301,slow=5.3,SNR=7.5						
	0.5nm,0.5s						

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*KRSC **26** 02:39:25.6±1.1, 56°.24N×164°.30E, h53^{km}±18^{km}, Ml4.1*

*IDC **26** 02:39:26.2±1.6, 56°.33N×164°.21E, h0^{km}, mb3.6/6, mbtmp3.7/7, ML2.6/1, Error ellipse: s-maj=39.8km s-min=28.1km az=173.0*

ISC 26 02:39:29.6±0.7**, 56°.23N**±0°.05×**164°.21E**±0°.06**, h35^{km}, n45,** σ**2^{s}25**/47**, mb3.7**/6**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBG	Krutoberegovo	0.84	272	*e*S	Sn	02 39 54.3	-1.7
BKI	Bering	1.43	135	*e*S	Sn	02 40 08.7	-1.9
ZLN	Zelenaya	1.92	265	*e*P	Pn	02 40 00.4	+0.5
KRSR	Krestovskiy	2.04	271	*e*P	Pn	02 40 00.7	-0.7
MKZ	Mys Kozlova	2.20	221	*e*P	Pn	02 40 01.8	-1.8
TUMD	Tumrok D	2.39	246	*e*P	Pn	02 40 06.4	+0.1
OSSR	Ossora	3.09	349	*e*P	Pn	02 40 15.1	-0.8
OSSR				*e*S	Sn	02 40 49.9	-1.6
KII	Karymskiy	3.51	233	*e*P	Pn	02 40 22.2	+0.5
SPN	Mys Shipunski	3.97	220	*e*P	Pn	02 40 26.0	-1.9
SPN				*e*S	Sn	02 41 13.5	+0.3
SDLR	Sedlovina	4.28	228	*e*P	Pn	02 40 32.1	-0.2
KRX	Arik	4.32	231	*e*P	Pn	02 40 34.0	+1.1
SMAR	Somma	4.32	229	*e*P	Pn	02 40 32.9	-0.1
AVH	Avacha	4.34	229	*e*P	Pn	02 40 34.7	+1.5
UGLR	Uglovaya	4.35	228	*e*P	Pn	02 40 34.2	+1.0
KOK	Koryaka	4.37	230	*e*P	Pn	02 40 34.8	+1.2
GNL	Ganaly	4.42	237	*e*P	Pn	02 40 33.7	-0.5
PETK	Petropavlovsk-	4.91	233	Pn	Pn	02 40 42.5	+1.7
	1.1nm,0.3s,baz=71,slow=19,SNR=6.2						
	7.4nm,0.7s						
RUS	Russkaya	5.06	224	*e*P	Pn	02 40 42.4	-0.4
GRL	Gorelyy	5.14	227	*e*P	Pn	02 40 44.7	+0.5
MTVR	Mutnovka	5.15	226	*e*P	Pn	02 40 44.9	+0.6
ASAK	Asacha	5.34	226	*e*P	Pn	02 40 47.6	+0.7
TIXI	Tiksi	21.39	330	P	P	02 44 15.2	+1.5
	1.1nm,0.4s,baz=124,slow=8.7,SNR=6.3						
	1.1nm,0.4s						
ILAR	Eielson Array	24.93	50	P	P	02 44 50.9	+1.8
	0.4nm,0.9s,baz=260,slow=8.1,SNR=4.2						
	0.4nm,0.9s						
PDAR	Pinedale Array	53.97	65	P	P	02 48 52.0	+2.1
	0.6nm,0.6s,baz=321,slow=1.9,SNR=5.2						
	0.6nm,0.6s						
NB2	NORSAR Subarra	61.15	345	P	P	02 49 40.5	+0.6
	comp=Z,1.0nm,1.0s,baz=30,slow=6.5						
NOA	NORSAR Array B	61.15	345	P	P	02 49 39.9	0.0
	comp=Z,0.2nm,0.5s,baz=17,slow=6.8,SNR=3.8						
	comp=Z,0.2nm,0.5s						
SCHQ	Schefferville	61.74	31	P	P	02 49 44.7	+0.7
	comp=Z,1.6nm,0.6s,baz=356,slow=8.5,SNR=3.6						
	comp=Z,1.6nm,0.6s						
TXAR	Lajitas Array	67.28	71	P	P	02 50 21.8	+1.2
	comp=Z,1.5nm,0.9s,baz=298,slow=4.4,SNR=6.3						
	comp=Z,1.5nm,0.9s						
CONA	Conrad Observa	72.89	338	*i* PKiKP	PKiKP	02 56 51.5	-2.5
	comp=Z,6.7nm,1.5s						
RONA	Rosalia, Austr	73.02	338	*i* PKiKP	PKiKP	02 56 50.8	-3.3
	comp=Z,5.6nm,1.2s						
MOA	Molln	73.29	339	*i* PKiKP	PKiKP	02 56 52.4	-2.1
	comp=Z,4.6nm,1.1s						
BIOA	Bad Ischl, Aus	73.56	340	*e*PKiKP	PKiKP	02 56 51.8	-3.1
	comp=Z,2.6nm,0.9s						
ARSA	Arzberg	73.61	338	*i* PKiKP	PKiKP	02 56 52.3	-2.7
	comp=Z,7.0nm,1.2s						
LESA	Schwarzleotal	74.00	340	*e*PKiKP	PKiKP	02 56 52.7	-2.9
	comp=Z,2.8nm,1.1s						
SOKA	Soboth	74.25	338	*i* PKiKP	PKiKP	02 56 52.6	-3.4
	comp=Z,3.4nm,0.8s						
RETA	Reutte	74.29	342	*i* PKiKP	PKiKP	02 56 49.7	-6.3
	comp=Z,5.5nm,1.4s						
WATA	Walderalm	74.29	341	*i* PKiKP	PKiKP	02 56 52.6	-3.6
	comp=Z,5.9nm,1.6s						
WTTA	Wattenberg	74.35	341	*e*PKiKP	PKiKP	02 56 50.2	-6.1
	comp=Z,10nm,1.6s						
MOTA	Moosalm	74.36	341	*i* PKiKP	PKiKP	02 56 53.3	-2.9
	comp=Z,8.6nm,1.5s						
SQTA	Sankt Quirin	74.47	341	*i* PKiKP	PKiKP	02 56 54.0	-2.4
	comp=Z,12nm,1.3s						
OBKA	Obir	74.51	339	*e*PKiKP	PKiKP	02 56 54.0	-2.4
	comp=Z,5.1nm,1.0s						
MYKA	Terra Mystica	74.58	339	*e*PKiKP	PKiKP	02 56 55.1	-1.3
	comp=Z,1.4nm,0.5s						
DAVA	Damuels	74.64	342	*i* PKiKP	PKiKP	02 56 54.3	-2.4
	comp=Z,9.2nm,1.7s						
ABTA	Abfaltersbach	74.68	340	*i* PKiKP	PKiKP	02 56 54.9	-1.7
	comp=Z,7.2nm,1.5s						
FETA	Feichten	74.74	342	*i* PKiKP	PKiKP	02 56 55.0	-1.8
	comp=Z,12nm,1.3s						

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*MOS **26** 02:44:25.6±0.8, 56°.20N×164°.23E, h11^{km}, mb4.6/10, Error ellipse: s-maj=7.9km s-min=4.5km az=53.1*

*IDC **26** 02:44:25.7±0.6, 56°.24N×164°.02E, h0^{km}, mb4.0/23, mbtmp4.0/25, ML3.5/2, Error ellipse: s-maj=18.3km s-min=12.4km az=160.0*

*KRSC **26** 02:44:26.1±1.8, 56°.17N×164°.31E, h52^{km}±22^{km}, Ml4.4*

*NEIC **26** 02:44:27.3±1.5, 56°.3N±0°.1×163°.89E±0°.08, h10^{km}±1^{km}, mb4.6/73, Error ellipse: s-maj=17.0km s-min=7.6km az=358.0*

ISC 26 02:44:26.1±1.5**, 56°.19N**±0°.03×**164°.25E**±0°.03**, h5^{km}**±9^{km}**, n221,** σ**1^{s}34**/245**, mb4.5**/59**, 1C-1D, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.80	272	PN	Pg	02 44 41.0	-0.4
KBTR				S	Sg	02 44 52.4	+0.7
KBTR	Krutoberegovo	0.80	272	*i* P	Pg	02 44 41.1	-0.4
KBTR				*e*S	Sg	02 44 52.4	+0.7
KBG	Krutoberegovo	0.86	275	PN	Pg	02 44 41.9	-0.7
KBG				S	Sg	02 44 53.9	+0.1
KBG	Krutoberegovo	0.86	275	*e*P	Pg	02 44 42.0	-0.7
KBG				*e*S	Sg	02 44 53.9	+0.1
BKI	Bering	1.39	135	PN	Pn	02 44 51.0	-1.0
BKI				S	Sn	02 45 09.2	-1.5
BKI	Bering	1.39	135	*e*P	Pn	02 44 51.0	-1.0
BKI				*e*S	Sn	02 45 09.3	-1.5
SMKR	Semkarok	1.59	285	PN	Pn	02 44 54.2	-0.8
SMKR				S	Sn	02 45 15.2	-0.7
SMKR	Semkarok	1.59	285	*e*P	Pn	02 44 54.3	-0.8
SMKR				*e*S	Sn	02 45 15.3	-0.7
BDR	Baidarnaya	1.73	284	*e*S	Sn	02 45 19.4	0.0
SRKR	Sorokina	1.77	287	*e*S	Sn	02 45 20.6	+0.3
ZLN	Zelenaya	1.94	266	PN	Pn	02 45 00.3	+0.6
ZLN	Zelenaya	1.94	266	*i* P	Pn	02 45 00.4	+0.6
CIRR	Tsirk	1.96	269	PN	Pn	02 45 00.3	+0.3
CIRR	Tsirk	1.96	269	*e*P	Pn	02 45 00.4	+0.3
LGNR	Loginova	1.99	268	PN	Pn	02 45 01.3	+0.6
LGNR	Loginova	1.99	268	*e*P	Pn	02 45 01.3	+0.6
BZGR	Bezymyannyi-Gr	2.01	264	PN	Pn	02 45 01.2	+0.5
BZGR	Bezymyannyi-Gr	2.01	264	*e*P	Pn	02 45 01.2	+0.5
KLY	Klyuchi	2.01	275	PN	Pn	02 44 58.9	-1.7
KLY				S	Sn	02 45 22.9	-3.1
KLY	Klyuchi	2.01	275	*e*P	Pn	02 44 58.9	-1.7
KLY				*e*S	Sn	02 45 23.0	-3.1
KRSR	Krestovskiy	2.06	272	PN	Pn	02 45 01.2	-0.2
KRSR				S	Sn	02 45 27.7	+0.3
KRSR	Krestovskiy	2.06	272	*e*P	Pn	02 45 01.2	-0.2
KRSR				*e*S	Sn	02 45 27.8	+0.3
BZWR	Bezymyannyi-We	2.11	265	PN	Pn	02 45 02.7	+0.5
BZWR	Bezymyannyi-We	2.11	265	*e*P	Pn	02 45 02.8	+0.5
BZMR	Bezymyannaya	2.12	265	PN	Pn	02 45 02.9	+0.6
BZMR	Bezymyannaya	2.12	265	*e*P	Pn	02 45 02.9	+0.6
MKZ	Mys Kozlova	2.18	222	PN	Pn	02 45 01.7	-1.2
MKZ				S	Sn	02 45 27.3	-2.8
MKZ	Mys Kozlova	2.18	222	*e*P	Pn	02 45 01.7	-1.2
MKZ				*e*S	Sn	02 45 27.4	-2.8
KIRR	Kirishev	2.20	265	PN	Pn	02 45 04.4	+1.0
KIRR				S	Sn	02 45 33.0	+2.0
KIRR	Kirishev	2.20	265	*i* P	Pn	02 45 04.4	+1.0
KIRR				*e*S	Sn	02 45 33.0	+2.0
KPT	Kopyto	2.27	266	PN	Pn	02 45 05.1	+0.9
KPT	Kopyto	2.27	266	*e*P	Pn	02 45 05.2	+0.9
KMNR	Kamenistaya	2.29	261	PN	Pn	02 45 06.1	+1.5
KMNR	Kamenistaya	2.29	261	*e*P	Pn	02 45 06.2	+1.5
TUMD	Tumrok D	2.39	247	PN	Pn	02 45 06.1	+0.3
TUMD				S	Sn	02 45 35.8	+0.3
TUMD	Tumrok D	2.39	247	*e*P	Pn	02 45 06.2	+0.3
TUMD				*e*S	Sn	02 45 35.8	+0.3
KOZ	Kozyrevsk	2.45	269	PN	Pn	02 45 08.0	+1.3
KOZ	Kozyrevsk	2.45	269	*e*P	Pn	02 45 08.0	+1.3
SRDR	Sredinnyy	2.53	275	PN	Pn	02 45 08.8	+1.0
SRDR				S	Sn	02 45 40.4	+1.4
SRDR	Sredinnyy	2.53	275	*e*P	Pn	02 45 08.9	+1.0
SRDR				*e*S	Sn	02 45 40.4	+1.4
ESO	Esso	3.12	267	PN	Pn	02 45 17.1	+1.2
ESO	Esso	3.12	267	*e*P	Pn	02 45 17.1	+1.2
OSSR	Ossora	3.13	349	PN	Pn	02 45 15.3	-0.7
OSSR	Ossora	3.13	349	*e*P	Pn	02 45 15.4	-0.7
OSSR				*e*S	Sn	02 45 49.1	-4.6
SPN	Mys Shipunski	3.95	220	PN	Pn	02 45 26.1	-1.2
SPN	Mys Shipunski	3.95	220	*e*P	Pn	02 45 26.1	-1.2
SPN				*e*S	Sn	02 46 08.9	-5.0
NLC	Nalytchevo	4.15	225	PN	Pn	02 45 30.4	+0.4
NLC	Nalytchevo	4.15	225	*e*P	Pn	02 45 30.4	+0.4
NLC				*e*S	Sn	02 46 16.6	-2.2
SDLR	Sedlovina	4.26	229	PN	Pn	02 45 32.2	+0.6
SDLR	Sedlovina	4.26	229	*e*P	Pn	02 45 32.3	+0.6
SDLR				*e*S	Sn	02 46 21.9	+0.1
KRER	Koryakskii	4.30	230	PN	Pn	02 45 33.4	+1.1
KRER	Koryakskii	4.30	230	*e*P	Pn	02 45 33.4	+1.1
KRX	Arik	4.30	231	PN	Pn	02 45 33.4	+1.1
KRX	Arik	4.30	231	*e*P	Pn	02 45 33.4	+1.1
SMAR	Somma	4.31	229	PN	Pn	02 45 33.0	+0.6
SMAR	Somma	4.31	229	*e*P	Pn	02 45 33.0	+0.6
SMAR				*e*S	Sn	02 46 23.5	+0.5
AVH	Avacha	4.33	230	PN	Pn	02 45 33.7	+1.1
AVH	Avacha	4.33	230	*e*P	Pn	02 45 33.8	+1.1
UGLR	Uglovaya	4.34	229	PN	Pn	02 45 33.2	+0.5
UGLR	Uglovaya	4.34	229	*e*P	Pn	02 45 33.2	+0.5
KOK	Koryaka	4.36	231	PN	Pn	02 45 34.1	+1.2
KOK	Koryaka	4.36	231	*e*P	Pn	02 45 34.2	+1.2
GNL	Ganaly	4.41	238	PN	Pn	02 45 35.0	+1.3
GNL	Ganaly	4.41	238	*e*P	Pn	02 45 35.1	+1.3
DALK	Dalny	4.49	228	PN	Pn	02 45 35.0	+0.3
DALK	Dalny	4.49	228	*e*P	Pn	02 45 35.0	+0.3
PET	Petropavlovsk	4.54	228	Pn	Pn	02 45 34.6	-0.8
PET	Petropavlovsk	4.54	228	*e*PN	Pn	02 45 35.7	+0.4
PET				pmax	pmax		
	comp=Z,52nm,0.4s						
PET	Petropavlovsk	4.54	228	*e*P	Pn	02 45 35.7	+0.4
PET				*e*S	Sn	02 46 26.2	-2.2
PEA0B	Petropavlovsk-	4.90	234	Pn	Pn	02 45 40.8	+0.5
PEA0B	Petropavlovsk-	4.90	234	PN	Pn	02 45 40.8	+0.5
PETK	Petropavlovsk-	4.90	234	Pn	Pn	02 45 40.2	-0.1
PETK	Petropavlovsk-	4.90	234	Pn	Pn	02 45 41.0	+0.7
	comp=Z,3.2nm,0.3s,baz=66,slow=17,SNR=22						
PETK				Sn	Sn	02 46 41.4	+4.1
	comp=Z,1.7nm,0.3s,baz=108,slow=7.2,SNR=4.2						
	comp=Z,12nm,0.6s						
PETK	Petropavlovsk-	4.90	234	PN	Pn	02 45 40.2	-0.1
KRMR	Karymshinskiy	4.90	229	PN	Pn	02 45 40.7	+0.4
KRMR	Karymshinskiy	4.90	229	*e*P	Pn	02 45 40.7	+0.4
KRMR				*e*S	Sn	02 46 36.2	-1.1
RUS	Russkaya	5.04	224	PN	Pn	02 45 42.2	0.0
RUS	Russkaya	5.04	224	*e*P	Pn	02 45 42.2	0.0
GRL	Gorelyy	5.13	227	PN	Pn	02 45 45.0	+1.5
GRL	Gorelyy	5.13	227	*e*P	Pn	02 45 45.0	+1.5
MTVR	Mutnovka	5.13	226	PN	Pn	02 45 44.3	+0.7
MTVR	Mutnovka	5.13	226	*e*P	Pn	02 45 44.4	+0.7
MTVR				*e*S	Sn	02 46 42.1	-1.2
APC	Apacha	5.26	235	PN	Pn	02 45 47.1	+1.9
APC	Apacha	5.26	235	*e*P	Pn	02 45 47.2	+1.9
ASAK	Asacha	5.32	227	PN	Pn	02 45 47.7	+1.5
ASAK	Asacha	5.32	227	*e*P	Pn	02 45 47.7	+1.5
MIPR	Malaya Ipel'ka	5.88	231	PN	Pn	02 45 56.0	+2.2
MIPR	Malaya Ipel'ka	5.88	231	*e*P	Pn	02 45 56.0	+2.2
PAU	Pauzhetka	6.46	226	PN	Pn	02 46 02.9	+1.2
PAU	Pauzhetka	6.46	226	*e*P	Pn	02 46 02.9	+1.2
MA2	Magadan	7.94	301	*e*PN	Pn	02 46 19.0	-3.0
JKA	Kamikawa-asahi	18.30	238		Pn	02 48 40.8	+0.3
JKA				IAmb	IAmb	02 48 48.3	
	comp=Z,66nm,1.2s						
ASAJ	Asahikawa	18.30	238	P	Pn	02 48 40.8	+0.3
	comp=Z,0.6nm,0.3s,baz=25,slow=3.8,SNR=4.6						
	comp=Z,15nm,0.9s						
RDOG	Red Dog Mine	19.11	39	P	Pn	02 48 51.1	+0.9
ERM	Erimo	19.68	233	P	P	02 48 53.6	-2.1
ERM				IAmb	IAmb	02 49 05.6	
	comp=Z,24nm,1.0s						
ERM	Erimo	19.68	233	P	P	02 48 53.6	-2.1
ERM				pmax	pmax		
	comp=Z,24nm,1.0s						
C18K	Utukok River	19.93	38	P	Pn	02 49 00.8	+0.9
M17K	Holitna River	20.30	59		Pn	02 49 06.2	+1.8
C19K	Lookout Ridge	20.63	37	P	P	02 49 07.1	+1.1
C19K				IAmb	IAmb	02 49 16.0	
	comp=Z,36nm,1.1s						
J18K	Innoko River	20.64	53	P	Pn	02 49 08.6	+0.2
H19K	Roundabout Mou	20.94	48	P	P	02 49 10.3	+1.1
D19K	Kuna River	20.94	39	P	Pn	02 49 11.4	-0.5
D19K				IAmb	IAmb	02 49 31.3	
	comp=Z,39nm,1.4s						
TIXI	Tiksi	21.44	330	P	P	02 49 15.1	+0.6
	comp=Z,8.1nm,0.8s,baz=124,slow=8.6,SNR=13						
	comp=Z,8.1nm,0.8s						
D20K	Etivluk River	21.53	39	P	P	02 49 18.0	+2.3
D20K				IAmb	IAmb	02 49 26.7	
	comp=Z,22nm,1.2s						
O18K	Koktuh Hills	21.54	63	P	P	02 49 17.7	+1.9
M19K	Big River Lodg	21.72	58	P	P	02 49 20.0	+2.2
B20K	Meade River	21.75	35	P	P	02 49 18.0	+0.1
B20K				IAmb	IAmb	02 49 31.1	
	comp=Z,45nm,1.4s						
B21K	Ikpikpuk River	22.47	37	P	P	02 49 26.4	+0.7
ILSW	Iliamna Southw	22.55	63	P	P	02 49 28.3	+1.6
E22K	Anaktuvuk Pass	23.14	41	P	P	02 49 34.5	+1.8
USA0B	Ussuriysk Arra	23.64	253	*e*P	P	02 49 35.5	-2.4
COLA	College	24.52	50	*e*P	P	02 49 48.1	+2.1
COLA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
CCB	Clear Creek Bu	24.55	50	P	P	02 49 46.9	+0.6
G24K	Hadweenzic Riv	24.67	45	P	P	02 49 48.9	+1.5
G24K				IAmb	IAmb	02 49 57.1	
	comp=Z,8.7nm,0.9s						
PWL	Port Wells	24.75	59	P	P	02 49 47.9	-0.2
PWL				IAmb	IAmb	02 49 56.1	
	comp=Z,12nm,0.8s						
IL31		24.94	50	P	P	02 49 50.5	+0.7
ILAR	Eielson Array	24.94	50	P	P	02 49 50.0	+0.2
	comp=Z,1.9nm,1.0s,baz=266,slow=6.7,SNR=8.4						
	comp=Z,1.9nm,1.0s						
D25K	Kavik River	25.26	39	P	P	02 49 53.1	+0.4
D25K				IAmb	IAmb	02 50 02.0	
	comp=Z,12nm,1.1s						
F25K	Christian Rive	25.41	43	P	P	02 49 55.3	+1.2
SCRK	Sand Creek	26.27	52	P	P	02 50 02.1	+0.1
MJA0	Matsu Arr-Jizo	26.34	233	*e*P	P	02 50 03.1	+0.4
MJA0				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MJB9	Matsu-Tunnel	26.35	233	P	P	02 50 02.5	-0.4
MJB9				IAmb	IAmb	02 50 10.6	
	comp=Z,16nm,0.9s						
MAJO	Matsushiro	26.36	233	P	P	02 50 02.2	-0.6
MAJO				IAmb	IAmb	02 50 10.6	
	comp=Z,15nm,0.9s						
MAJO	Matsushiro	26.36	233	⇓*i*P	P	02 50 02.8	-0.1
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MJAR	Matsushiro Arr	26.36	233	P	P	02 50 02.4	-0.5
	comp=Z,4.7nm,0.8s,baz=20,slow=8.6,SNR=11						
	comp=Z,4.7nm,0.8s						
H27K	Steamboat Moun	27.07	46	P	P	02 50 09.7	+0.5
H27K				IAmb	IAmb	02 50 18.0	
	comp=Z,13nm,1.3s						
L27K	Beaver Creek,	27.37	53	P	P	02 50 12.7	+0.9
L27K				IAmb	IAmb	02 50 20.5	
	comp=Z,19nm,1.4s						
I29M	Ogilvie Camp,	28.49	48	P	P	02 50 22.4	+0.6
I29M				IAmb	IAmb	02 50 30.4	
	comp=Z,14nm,1.2s						
L29M	L29M	29.00	52	P	P	02 50 27.9	+1.5
L29M				IAmb	IAmb	02 50 35.5	
	comp=Z,13nm,1.3s						
M31M	Drury Creek, Y	30.91	53	P	P	02 50 44.7	+1.5
WHY	Whitehorse	31.17	56	P	P	02 50 47.4	+1.8
MMPY	Sheldon Lake,	32.17	52	P	P	02 50 56.5	+2.2
MMPY				IAmb	IAmb	02 51 03.8	
	comp=Z,12nm,1.2s						
SONM	Songino Array	35.60	281	P	P	02 51 22.3	-2.0
SONM	Songino Array	35.60	281	P	P	02 51 22.7	-1.7
	comp=Z,1.3nm,0.8s,baz=69,slow=8.1,SNR=5.5						
	comp=Z,1.3nm,0.8s						
SONM	Songino Array	35.60	281	*e*P	P	02 51 23.5	-0.9
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HHC	Hu-ho-hao-te	37.12	268	*e*P	P	02 51 36.0	-1.4
HHC				pmax	pmax		
	comp=Z,22nm,0.6s						
YKA	Yellowknife Ar	39.26	46	P	P	02 51 56.1	+1.1
	comp=Z,1.3nm,0.8s,baz=306,slow=8.8,SNR=7.1						
	comp=Z,1.3nm,0.8s						
NJ2	Nanjing	39.53	252	*e*P	P	02 51 55.8	-1.8
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
SPITS	Spitsbergen Ar	44.46	351	P	P	02 52 38.1	+0.7
	comp=Z,9.0nm,0.9s,baz=50,slow=13,SNR=5.1						
	comp=Z,9.0nm,0.9s						
BLKN	Baker Lake	45.17	37	P	P	02 52 43.7	+0.6
HAWA	Hanford	46.32	68	P	P	02 52 53.8	+1.3
E09A	Wood Farm, Sta	46.96	67	P	P	02 52 58.4	+0.9
J05D	Fort Rock, OR	47.51	73	P	P	02 53 03.5	+1.5
JTMT	Jette	48.10	64	P	P	02 53 07.4	+0.9
KURK	Kurchatov	48.15	302	P	P	02 53 06.7	0.0
KURBB	Kurchatov Arra	48.26	302	P	P	02 53 06.7	-0.8
	comp=Z,0.5nm,0.5s,baz=55,slow=8.0,SNR=3.5						
	comp=Z,0.5nm,0.5s						
BMO	Blue Mountains	48.52	68	P	P	02 53 10.3	+0.6
BMO				IAmb	IAmb	02 53 18.1	
	comp=Z,4.0nm,0.9s						
BMO	Blue Mountains	48.52	68	P	P	02 53 10.3	+0.6
BMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MSO	Missoula	48.89	64	P	P	02 53 12.6	-0.1
MSO				IAmb	IAmb	02 53 20.8	
	comp=Z,3.5nm,0.8s						
MKAR	Makanchi Array	48.99	296	P	P	02 53 10.2	-3.1
MKAR	Makanchi Array	48.99	296	P	P	02 53 11.7	-1.6
	comp=Z,0.3nm,0.4s,baz=58,slow=7.4,SNR=6.5						
	comp=Z,0.3nm,0.4s						
PLID	Pearl Lake	49.03	67	P	P	02 53 14.9	+1.1
PLID				IAmb	IAmb	02 53 22.5	
	comp=Z,4.6nm,0.9s						
BPMT	Black Pine Rid	49.41	64	P	P	02 53 17.9	+1.1
WVOR	Wild Horse Val	49.48	72	P	P	02 53 18.7	+1.5
WVOR	Wild Horse Val	49.48	72	P	P	02 53 18.7	+1.5
WVOR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
LYMT	Lyon Mountain	49.63	63	P	P	02 53 19.6	+1.2
MFID	Camas Ranch	50.28	69	P	P	02 53 24.4	+1.2
BVAR	Borovoye Array	50.35	308	P	P	02 53 23.6	0.0
	comp=Z,1.3nm,0.6s,baz=46,slow=6.6,SNR=8.1						
	comp=Z,1.3nm,0.6s						
BEKR	Beckworth	50.37	75	P	P	02 53 26.9	+2.9
BEKR				IAmb	IAmb	02 53 32.3	
	comp=Z,4.4nm,0.9s						
DLMT	Dillon	50.58	65	P	P	02 53 27.3	+1.7
DLMT				IAmb	IAmb	02 53 34.8	
	comp=Z,4.6nm,0.9s						
MCMT	McKenzie Canyo	50.83	66	P	P	02 53 28.1	+0.6
GCMT	Greycliff	51.75	63	P	P	02 53 34.7	+0.4
YFT	Old Faithful	52.11	65	P	P	02 53 39.5	+2.3
YFT				IAmb	IAmb	02 53 47.5	
	comp=Z,7.4nm,0.8s						
RLMT	Red Lodge	52.42	63	P	P	02 53 40.3	+0.9
NVAR	Mina Array Bea	52.51	75	P	P	02 53 42.2	+2.1

	comp=Z,1.4nm,0.9s,baz=301,slow=6.8,SNR=5.5						
	comp=Z,1.4nm,0.9s						
FXWY	Fox Creek	52.59	66	P	P	02 53 42.5	+1.8
FXWY				IAmb	IAmb	02 53 49.7	
	comp=Z,6.4nm,0.9s						
LAO	LASA Array	52.80	60	P	P	02 53 43.6	+1.6
PZH	PanZhiHua	53.18	263	P	P	02 53 45.3	+0.2
HWUT	Hardware Ranch	53.78	68	P	P	02 53 50.6	+1.2
HWUT				IAmb	IAmb	02 53 58.0	
	comp=Z,5.2nm,0.8s						
BW06	Boulder Array	53.97	65	P	P	02 53 51.8	+0.9
BW06				IAmb	IAmb	02 53 59.5	
	comp=Z,5.4nm,0.8s						
PDAR	Pinedale Array	53.97	65	P	P	02 53 52.3	+1.5
	comp=Z,2.3nm,0.9s,baz=332,slow=3.8,SNR=13						
	comp=Z,2.3nm,0.9s						
SPR3	Spring Creek 3	54.22	72	P	P	02 53 55.5	+2.6
SPR3				IAmb	IAmb	02 54 03.0	
	comp=Z,8.0nm,0.9s						
WCT	Wildcat Mounta	54.61	75	P	P	02 53 57.0	+1.6
ULM	Lac du Bonnet	54.96	51	P	P	02 53 58.6	+1.0
ULM				IAmb	IAmb	02 54 05.9	
	comp=Z,8.2nm,0.8s						
ULM	Lac du Bonnet	54.96	51	P	P	02 53 58.1	+0.5
	comp=Z,3.3nm,0.8s,baz=297,slow=6.3,SNR=5.7						
	comp=Z,3.3nm,0.8s						
ULM	Lac du Bonnet	54.96	51	*e*P	P	02 53 59.0	+1.4
ULM				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TMUT	Trail Mountain	55.65	69	P	P	02 54 05.3	+2.1
TMUT				IAmb	IAmb	02 54 12.5	
	comp=Z,6.2nm,0.8s						
RSSD	Black Hills	55.73	61	P	P	02 54 04.6	+1.1
RSSD				IAmb	IAmb	02 54 12.0	
	comp=Z,7.6nm,0.9s						
RSSD	Black Hills	55.73	61	P	P	02 54 04.6	+1.1
RSSD				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SRU	San Rafael Swe	56.15	69	P	P	02 54 07.8	+1.2
SRU	San Rafael Swe	56.15	69	P	P	02 54 07.8	+1.2
SRU				pmax	pmax		
	comp=Z,13nm,0.8s						
HMU	Henry Mountain	56.90	70	P	P	02 54 14.0	+1.9
PV23	Carpenter Ridg	57.42	68	P	P	02 54 17.1	+1.4
AKTO	Aktyubinsk	57.48	313	P	P	02 54 15.3	-0.4
	comp=Z,4.5nm,1.0s,baz=360,slow=4.1,SNR=8.7						
	comp=Z,4.5nm,1.0s						
AB31	Akbulak array	57.59	311	P	P	02 54 14.9	-1.6
ABKAR	Akbulak array	57.59	311	P	P	02 54 15.3	-1.1
F33A	5 Mile Ranch,	58.09	54	P	P	02 54 20.2	+0.3
ISCO	Idaho Springs	58.16	65	P	P	02 54 21.9	+0.9
ISCO				IAmb	IAmb	02 54 30.6	
	comp=Z,4.5nm,0.9s						
ISCO	Idaho Springs	58.16	65	P	P	02 54 21.9	+0.9
ISCO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
FINES	FINESS Array B	58.20	338	P	P	02 54 19.3	-1.2
	comp=Z,1.1nm,0.9s,baz=15,slow=10,SNR=3.4						
	comp=Z,1.1nm,0.9s						
X16A	Lo Mia Camp, P	59.18	73	P	P	02 54 30.3	+2.3
CMAR	Chiang Mai Arr	61.14	260	P	P	02 54 41.1	-0.2
	comp=Z,0.6nm,0.3s,baz=11,slow=6.7,SNR=6.0						
	comp=Z,0.6nm,0.3s						
CMAR	Chiang Mai Arr	61.14	260	*e*P	P	02 54 42.0	+0.7
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NB2	NORSAR Subarra	61.20	345	P	P	02 54 41.3	+0.1
	comp=Z,0.8nm,0.7s,baz=17,slow=6.9						
NOA	NORSAR Array B	61.20	345	P	P	02 54 41.4	+0.1
	comp=Z,0.5nm,0.5s,baz=18,slow=6.8,SNR=4.0						
	comp=Z,0.5nm,0.5s						
HFS	Hagfors	61.69	344	P	P	02 54 43.8	-0.7
	comp=Z,2.3nm,1.0s,baz=357,slow=5.8,SNR=5.9						
	comp=Z,2.3nm,1.0s						
SCHQ	Schefferville	61.77	31	P	P	02 54 44.2	-0.9
	comp=Z,2.0nm,0.6s,baz=325,slow=8.1,SNR=4.8						
	comp=Z,2.0nm,0.6s						
MNTX	Cornudas Mount	64.50	71	P	P	02 55 04.6	+1.0
AKASG	Malin Array Be	67.14	331	P	P	02 55 19.7	-0.6
	comp=Z,0.5nm,0.4s,baz=29,slow=6.3,SNR=4.7						
	comp=Z,0.5nm,0.4s						
TXAR	Lajitas Array	67.27	71	P	P	02 55 23.1	+1.5
	comp=Z,2.8nm,0.9s,baz=298,slow=4.4,SNR=13						
	comp=Z,2.8nm,0.9s						
JCT	Junction City	68.38	67	P	P	02 55 29.8	+1.3
JCT	Junction City	68.38	67	P	P	02 55 29.8	+1.3
JCT				pmax	pmax		
	comp=Z,12nm,0.9s						
KIV	Kislovodsk	68.77	319	*e*P	P	02 55 28.7	-2.1
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KBZ	Khabaz	68.88	318	P	P	02 55 31.1	-0.2
	comp=Z,3.2nm,0.9s,baz=347,slow=1.3,SNR=6.3						
	comp=Z,3.2nm,0.9s						
KBZ	Khabaz	68.88	318⇑	*e*P	P	02 55 31.5	+0.2
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
STHS	Stebnicka Huta	70.35	335	*e*P	P	02 55 39.0	-1.3
STHS				pmax	pmax		
	comp=Z,4.0nm,1.3s						
STHS	Stebnicka Huta	70.35	335	*e*P	P	02 55 39.0	-1.3
LANS	Liptovska Anna	71.00	336	*e*P	P	02 55 46.2	+1.8
LANS				pmax	pmax		
	comp=Z,4.0nm,1.2s						
LANS	Liptovska Anna	71.00	336	*e*P	P	02 55 46.2	+1.8
146A	Union	71.97	58	P	P	02 55 51.5	+1.1
Z47A	Carrollton	71.97	57	P	P	02 55 50.7	+0.4
MODS	Modra-Piesok	72.22	338	*e*P	P	02 55 45.2	-6.5
MODS				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MODS	Modra-Piesok	72.22	338	*e*P	P	02 55 45.2	-6.5
LRAL	Lakeview Retre	72.61	56	P	P	02 55 54.2	0.0
152A	Waverly Hall	73.97	55	P	P	02 56 02.5	+0.3
152A				IAmb	IAmb	02 56 09.5	
	comp=Z,6.2nm,1.0s						
BRTR	Keskin Array B	75.69	323	P	P	02 56 12.6	+0.3
	comp=Z,0.6nm,0.8s,baz=84,slow=4.4,SNR=4.4						
	comp=Z,0.6nm,0.8s						
BRTR	Keskin Array B	75.69	323	*e*P	P	02 56 13.3	+1.0
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	Warramunga Arr	79.94	208	P	P	02 56 36.1	+0.3
	comp=Z,0.8nm,0.7s,baz=25,slow=5.7,SNR=5.6						
	comp=Z,0.8nm,0.7s						
ASAR	Alice Springs	83.60	208	P	P	02 56 54.7	-0.4
ASAR	Alice Springs	83.60	208	P	P	02 56 54.7	-0.4
QSPA	South Pole Qui	145.94	180	PKPbc	PKPdf	03 04 04.2	-0.2
	comp=Z,1.8nm,0.7s,baz=286,slow=1.3,SNR=10						

KRSC 26 02:52:45.0±1.8**, 56°.26N**×**164°.39E, h50**^{km}±24^{km}**, Ml3.8,**
Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.88	267	*e*P	Pn	02 53 00.6	-0.4
KBTR				*e*S	Sn	02 53 12.2	-0.6
KBG	Krutoberegovo	0.94	271	*e*P	Pn	02 53 01.6	-0.2
KBG				*e*S	Sn	02 53 14.8	+0.7
BKI	Bering	1.39	139	*e*P	Pn	02 53 10.8	+2.9
BKI				*e*S	Sn	02 53 28.8	+3.9
SMKR	Semkarok	1.65	283	*e*P	Pn	02 53 13.9	+2.3
SMKR				*e*S	Sn	02 53 35.0	+3.3
BDR	Baidarnaya	1.79	281	*e*S	Sn	02 53 38.8	+3.7
ZLN	Zelenaya	2.02	265	*e*P	Pn	02 53 19.8	+3.2
ZLN				*e*S	Sn	02 53 45.9	+5.2
LGNR	Loginova	2.07	267	*e*P	Pn	02 53 20.8	+3.3
KLY	Klyuchi	2.08	273	*e*P	Pn	02 53 18.6	+1.3
KLY				*e*S	Sn	02 53 43.6	+1.6
KRSR	Krestovskiy	2.13	271	*e*P	Pn	02 53 20.8	+2.7
BZWR	Bezymyannyi-We	2.20	264	*e*P	Pn	02 53 22.8	+3.7
BZMR	Bezymyannaya	2.21	263	*e*P	Pn	02 53 22.7	+3.4
MKZ	Mys Kozlova	2.28	223	*e*S	Sn	02 53 47.6	+0.8
KIRR	Kirishev	2.29	264	*e*P	Pn	02 53 24.0	+3.7
KPT	Kopyto	2.35	265	*e*P	Pn	02 53 24.8	+3.7
KMNR	Kamenistaya	2.38	260	*e*P	Pn	02 53 25.8	+4.2
TUMD	Tumrok D	2.49	247	*e*P	Pn	02 53 26.3	+3.3
TUMD				*e*S	Sn	02 53 54.7	+2.6
KOZ	Kozyrevsk	2.53	267	*e*P	Pn	02 53 27.8	+4.2
KOZ				*e*S	Sn	02 54 00.5	+7.4
SRDR	Sredinnyy	2.60	273	*e*P	Pn	02 53 28.9	+4.4
OSSR	Ossora	3.08	347	*e*P	Pn	02 53 33.7	+2.7
OSSR				*e*S	Sn	02 54 07.5	+0.8
SPN	Mys Shipunski	4.05	220	*e*S	Sn	02 54 29.3	-1.2
NLC	Nalytchevo	4.25	225	*e*S	Sn	02 54 38.0	+2.6
SDLR	Sedlovina	4.36	229	*e*S	Sn	02 54 40.3	+1.9
UGLR	Uglovaya	4.44	229	*e*P	Pn	02 53 53.4	+3.7
GNL	Ganaly	4.51	238	*e*P	Pn	02 53 55.7	+4.9
KRMR	Karymshinskiy	5.00	229	*e*S	Sn	02 54 57.8	+3.9
RUS	Russkaya	5.14	224	*e*P	Pn	02 54 02.8	+3.5
MTVR	Mutnovka	5.24	226	*e*P	Pn	02 54 05.2	+4.5
ASAK	Asacha	5.43	227	*e*P	Pn	02 54 08.1	+4.8

KRSC ***26*** *02:56:20.2*±*1.4, 56°.23N*×*164°.28E, h48*^{km}±*18*^{km}*, Ml4.1*
IDC ***26*** *02:56:20.2*±*1.1, 56°.27N*×*164°.30E, h0*^{km}*, mb3.7/9, mbtmp3.7/10, ML2.8/1, Error ellipse: s-maj=35.5km s-min=20.6km az=151.0*
ISC 26 02:56:22.2±0.6**, 56°.23N**±0°.05×**164°.24E**±0°.04**, h19**^{km}**, n40,**
σ**1**^{s}**21**/45**, mb3.9**/9**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.80	269	*e*P	Pb	02 56 35.1	-2.4
KBTR				*e*S	Sb	02 56 46.0	-1.8
KBG	Krutoberegovo	0.86	272	*e*P	Pb	02 56 35.9	-2.6
KBG				*e*S	Sb	02 56 48.0	-1.6
BKI	Bering	1.42	136	*e*P	Pn	02 56 45.5	-1.5
BKI				*e*S	Sn	02 57 03.6	-1.5
SMKR	Semkarok	1.58	284	*e*P	Pn	02 56 48.3	-1.0
SRKR	Sorokina	1.76	285	*e*P	Pn	02 56 51.3	-0.4
ZLN	Zelenaya	1.94	265	*e*P	Pn	02 56 54.0	-0.2
CIRR	Tsirk	1.96	268	*e*P	Pn	02 56 55.6	+1.1
LGNR	Loginova	1.99	267	*e*P	Pn	02 56 55.2	0.0
KRSR	Krestovskiy	2.06	271	*e*P	Pn	02 56 55.1	-0.7
BZWR	Bezymyannyi-We	2.12	264	*e*P	Pn	02 56 56.7	0.0
BZMR	Bezymyannaya	2.12	263	*e*P	Pn	02 56 57.0	+0.2
KIRR	Kirishev	2.20	264	*e*P	Pn	02 56 57.9	0.0
MKZ	Mys Kozlova	2.21	222	*e*P	Pn	02 56 55.7	-2.1
KPT	Kopyto	2.27	265	*e*P	Pn	02 56 58.9	+0.2
KMNR	Kamenistaya	2.30	260	*e*P	Pn	02 56 59.9	+0.7
TUMD	Tumrok D	2.41	246	*e*P	Pn	02 57 00.0	-0.5
TUMD				*e*S	Sn	02 57 29.4	-0.1
SRDR	Sredinnyy	2.53	274	*e*P	Pn	02 57 02.5	+0.3
OSSR	Ossora	3.09	349	*e*P	Pn	02 57 08.9	-1.1
OSSR				*e*S	Sn	02 57 44.1	-2.2
ESO	Esso	3.12	267	*e*P	Pn	02 57 13.8	+3.4
SDLR	Sedlovina	4.29	229	*e*P	Pn	02 57 26.3	-0.2
KRER	Koryakskii	4.33	230	*e*P	Pn	02 57 27.9	+0.7
KRX	Arik	4.33	231	*e*P	Pn	02 57 28.2	+1.1
SMAR	Somma	4.33	229	*e*P	Pn	02 57 27.1	-0.1
AVH	Avacha	4.36	229	*e*P	Pn	02 57 28.2	+0.7
UGLR	Uglovaya	4.37	228	*e*P	Pn	02 57 27.5	0.0
KOK	Koryaka	4.38	230	*e*P	Pn	02 57 28.4	+0.6
GNL	Ganaly	4.43	238	*e*P	Pn	02 57 29.0	+0.5
PETK	Petropavlovsk-	4.92	233	Pn	Pn	02 57 36.4	+1.2
	1.8nm,0.3s,baz=75,slow=18,SNR=9.4						
	6.9nm,0.6s						
GRL	Gorelyy	5.16	227	*e*P	Pn	02 57 39.0	+0.5
MTVR	Mutnovka	5.16	226	*e*P	Pn	02 57 39.1	+0.5
ASAK	Asacha	5.35	227	*e*P	Pn	02 57 41.7	+0.6
TIXI	Tiksi	21.40	330	P	P	03 01 10.0	+1.7
	1.6nm,0.3s,baz=121,slow=9.3,SNR=6.1						
	1.6nm,0.3s						
ILAR	Eielson Array	24.91	50	P	P	03 01 44.4	+0.8
	0.5nm,0.9s,baz=270,slow=9.5,SNR=5.0						
	0.5nm,0.9s						
MJAR	Matsushiro Arr	26.38	233	P	P	03 01 58.3	+1.2
	1.0nm,0.6s,baz=30,slow=5.9,SNR=2.0						
	1.0nm,0.6s						
YKA	Yellowknife Ar	39.23	47	P	P	03 03 49.1	+0.4
	0.3nm,0.6s,baz=303,slow=9.7,SNR=2.9						
	0.3nm,0.6s						
PDAR	Pinedale Array	53.95	65	P	P	03 05 46.0	+1.3
	0.8nm,0.7s,baz=334,slow=3.1,SNR=7.5						
	0.8nm,0.7s						
ULM	Lac du Bonnet	54.93	51	P	P	03 05 52.0	+0.7
	1.4nm,0.7s,baz=326,slow=3.6,SNR=3.0						
	1.4nm,0.7s						
NOA	NORSAR Array B	61.15	345	P	P	03 06 35.0	+0.2
	0.3nm,0.5s,baz=18,slow=6.9,SNR=2.3						
	0.3nm,0.5s						
SCHQ	Schefferville	61.73	31	P	P	03 06 38.7	0.0
	2.1nm,0.7s,baz=311,slow=4.8,SNR=4.8						
	2.1nm,0.7s						
TXAR	Lajitas Array	67.26	71	P	P	03 07 16.1	+0.7
	0.9nm,0.7s,baz=302,slow=4.5,SNR=7.3						
	0.9nm,0.7s						

KRSC ***26*** *02:58:21.6*±*1.5, 56°.18N*×*164°.29E, h52*^{km}±*21*^{km}*, Ml4.3*
IDC ***26*** *02:58:21.1*±*0.6, 56°.21N*×*164°.03E, h0*^{km}*, mb4.0/25, mbtmp4.0/27, ML3.4/2, Error ellipse: s-maj=17.5km s-min=13.2km az=158.0*
NEIC ***26*** *02:58:23.1*±*1.6, 56°.3N*±*0°.1*×*163°.9E*±*0°.2, h10*^{km}±*1*^{km}*, mb4.3/65, Error ellipse: s-maj=21.3km s-min=12.3km az=155.0*
MOS ***26*** *02:58:24.2*±*1.1, 56°.19N*×*164°.18E, h34*^{km}*, mb4.6/8, Error ellipse: s-maj=8.3km s-min=4.9km az=54.2*
ISC 26 02:58:23.1±1.3**, 56°.22N**±0°.04×**164°.18E**±0°.04**, h12**^{km}±8^{km}**,**
n195, σ**1**^{s}**26**/208**, mb4.2**/59**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.76	270	PN	Pg	02 58 36.3	-1.6
KBTR				S	Sg	02 58 48.0	+0.2
KBTR	Krutoberegovo	0.76	270	*e*P	Pg	02 58 36.3	-1.6
KBTR				*e*S	Sg	02 58 48.1	+0.2
KBG	Krutoberegovo	0.83	273	PN	Pg	02 58 37.5	-1.5
KBG				S	Sg	02 58 50.1	+0.3
KBG	Krutoberegovo	0.83	273	*e*P	Pg	02 58 37.5	-1.5
KBG				*e*S	Sg	02 58 50.2	+0.3
BKI	Bering	1.43	134	PN	Pn	02 58 45.8	-3.0
BKI				S	Sn	02 59 03.4	-4.2
BKI	Bering	1.43	134	*e*P	Pn	02 58 45.8	-3.0
BKI				*e*S	Sn	02 59 03.4	-4.2
SMKR	Semkarok	1.55	285	PN	Pn	02 58 50.2	-0.4
SMKR	Semkarok	1.55	285	*e*P	Pn	02 58 50.2	-0.4
ZLN	Zelenaya	1.90	265	PN	Pn	02 58 55.7	+0.3
ZLN	Zelenaya	1.90	265	*e*P	Pn	02 58 55.8	+0.3
CIRR	Tsirk	1.92	268	PN	Pn	02 58 55.9	+0.2
CIRR	Tsirk	1.92	268	*e*P	Pn	02 58 56.0	+0.2
LGNR	Loginova	1.96	268	PN	Pn	02 58 56.5	+0.1
LGNR	Loginova	1.96	268	*e*P	Pn	02 58 56.5	+0.1
KLY	Klyuchi	1.97	274	PN	Pn	02 58 54.6	-1.7
KLY				S	Sn	02 59 18.6	-2.2
KLY	Klyuchi	1.97	274	*e*P	Pn	02 58 54.6	-1.7
KLY				*e*S	Sn	02 59 18.7	-2.2
BZGR	Bezymyannyi-Gr	1.97	263	PN	Pn	02 58 56.6	+0.2
BZGR	Bezymyannyi-Gr	1.97	263	*e*P	Pn	02 58 56.6	+0.2
KRSR	Krestovskiy	2.02	271	PN	Pn	02 58 56.7	-0.3
KRSR	Krestovskiy	2.02	271	*e*P	Pn	02 58 56.7	-0.3
BZWR	Bezymyannyi-We	2.08	265	PN	Pn	02 58 58.2	+0.3
BZWR	Bezymyannyi-We	2.08	265	*e*P	Pn	02 58 58.3	+0.3
BZMR	Bezymyannaya	2.09	264	PN	Pn	02 58 58.3	+0.3
BZMR	Bezymyannaya	2.09	264	*e*P	Pn	02 58 58.4	+0.3
KIRR	Kirishev	2.17	265	PN	Pn	02 58 59.3	+0.2
KIRR	Kirishev	2.17	265	*e*P	Pn	02 58 59.4	+0.2
MKZ	Mys Kozlova	2.17	221	PN	Pn	02 58 57.4	-1.6
MKZ				S	Sn	02 59 22.9	-2.9
MKZ	Mys Kozlova	2.17	221	*e*P	Pn	02 58 57.5	-1.6
MKZ				*e*S	Sn	02 59 23.0	-2.9
KPT	Kopyto	2.23	265	PN	Pn	02 59 00.8	+0.8
KPT	Kopyto	2.23	265	*e*P	Pn	02 59 00.8	+0.8
KMNR	Kamenistaya	2.27	260	PN	Pn	02 59 01.3	+0.9
KMNR	Kamenistaya	2.27	260	*e*P	Pn	02 59 01.3	+0.9
TUMD	Tumrok D	2.37	246	PN	Pn	02 59 01.8	0.0
TUMD				S	Sn	02 59 31.3	+0.6
TUMD	Tumrok D	2.37	246	*e*P	Pn	02 59 01.8	0.0
TUMD				*e*S	Sn	02 59 31.4	+0.6
KOZ	Kozyrevsk	2.42	268	PN	Pn	02 59 03.5	+1.1
KOZ	Kozyrevsk	2.42	268	*e*P	Pn	02 59 03.6	+1.1
SRDR	Sredinnyy	2.49	274	PN	Pn	02 59 04.5	+1.0
SRDR	Sredinnyy	2.49	274	*e*P	Pn	02 59 04.5	+1.0
OSSR	Ossora	3.10	349	PN	Pn	02 59 10.7	-1.0
OSSR	Ossora	3.10	349	*e*P	Pn	02 59 10.8	-1.0
OSSR				*e*S	Sn	02 59 44.7	-3.9
KII	Karymskiy	3.49	233	PN	Pn	02 59 17.3	+0.1
KII				S	Sn	02 59 58.8	+0.4
KII	Karymskiy	3.49	233	*e*P	Pn	02 59 17.3	+0.1
KII				*e*S	Sn	02 59 58.8	+0.4
SPN	Mys Shipunski	3.95	219	PN	Pn	02 59 21.6	-1.8
SPN	Mys Shipunski	3.95	219	*e*P	Pn	02 59 21.6	-1.8
SPN				*e*S	Sn	03 00 04.4	-5.3
NLC	Nalytchevo	4.15	225	*e*S	Sn	03 00 11.9	-2.6
SDLR	Sedlovina	4.25	228	PN	Pn	02 59 27.8	+0.1
SDLR	Sedlovina	4.25	228	*e*P	Pn	02 59 27.8	+0.1
KRER	Koryakskii	4.29	229	PN	Pn	02 59 28.9	+0.6
KRER	Koryakskii	4.29	229	*e*P	Pn	02 59 28.9	+0.6
KRX	Arik	4.30	230	PN	Pn	02 59 29.5	+1.2
KRX	Arik	4.30	230	*e*P	Pn	02 59 29.5	+1.2
SMAR	Somma	4.30	229	PN	Pn	02 59 28.3	-0.1
SMAR	Somma	4.30	229	*e*P	Pn	02 59 28.3	-0.1
SMAR				*e*S	Sn	03 00 15.2	-3.4
AVH	Avacha	4.32	229	PN	Pn	02 59 29.0	+0.4
AVH	Avacha	4.32	229	*e*P	Pn	02 59 29.1	+0.4
UGLR	Uglovaya	4.33	228	PN	Pn	02 59 28.8	0.0
UGLR	Uglovaya	4.33	228	*e*P	Pn	02 59 28.8	0.0
KOK	Koryaka	4.35	230	PN	Pn	02 59 29.6	+0.6
KOK	Koryaka	4.35	230	*e*P	Pn	02 59 29.7	+0.6
GNL	Ganaly	4.40	238	PN	Pn	02 59 30.6	+0.9
GNL	Ganaly	4.40	238	*e*P	Pn	02 59 30.7	+0.9
PET	Petropavlovsk	4.53	227		Pn	02 59 29.9	-1.6
PET	Petropavlovsk	4.53	227	*e*PN	Pn	02 59 29.8	-1.7
PET				pmax	pmax		
	comp=Z,36nm,0.5s						
PET	Petropavlovsk	4.53	227	*e*S	Sn	03 00 22.9	-1.1
PEA0B	Petropavlovsk-	4.88	233	Pn	Pn	02 59 36.7	+0.4
PEA0B	Petropavlovsk-	4.88	233	PN	Pn	02 59 36.7	+0.4
PETK	Petropavlovsk-	4.88	233	Pn	Pn	02 59 36.1	-0.2
	comp=Z,2.6nm,0.3s,baz=66,slow=18,SNR=7.2						
PETK				Sn	Sn	03 00 36.3	+3.6
	comp=Z,1.5nm,0.3s,baz=50,slow=53,SNR=1.6						
	comp=Z,8.6nm,0.6s						
KRMR	Karymshinskiy	4.89	229	PN	Pn	02 59 37.4	+1.0
KRMR				S	Sn	03 00 33.8	+1.0
KRMR	Karymshinskiy	4.89	229	*e*P	Pn	02 59 37.5	+1.0
KRMR				*e*S	Sn	03 00 33.9	+1.0
RUS	Russkaya	5.04	224	PN	Pn	02 59 38.2	-0.2
RUS	Russkaya	5.04	224	*e*P	Pn	02 59 38.2	-0.2
GRL	Gorelyy	5.12	227	PN	Pn	02 59 40.9	+1.2
GRL	Gorelyy	5.12	227	*e*P	Pn	02 59 40.9	+1.2
MTVR	Mutnovka	5.13	226	PN	Pn	02 59 40.3	+0.6
MTVR	Mutnovka	5.13	226	*e*P	Pn	02 59 40.4	+0.6
MTVR				*e*S	Sn	03 00 37.4	-1.5
ASAK	Asacha	5.32	226	PN	Pn	02 59 43.3	+1.0
ASAK	Asacha	5.32	226	*e*P	Pn	02 59 43.3	+1.0
ADK	Adak	12.04	103	Pn	Pn	03 01 18.6	+4.3
ADK	Adak	12.04	103	PN	Pn	03 01 18.6	+4.3
ATKA	Atka Island	13.26	99	Pn	Pn	03 01 34.1	+3.2
ASAJ	Asahikawa	18.28	238	P	Pn	03 02 36.1	-0.2
	comp=Z,0.4nm,0.3s,baz=62,slow=7.9,SNR=4.3						
	comp=Z,6.1nm,0.7s						
E18K	Tukpahlearik C	19.73	41	P	Pn	03 02 54.7	+1.1
H18K	Honhosa River	20.10	48	P	Pn	03 02 57.4	-0.6
G18K	Tagagawik	20.10	46	P	Pn	03 02 58.1	0.0
F19K	Shaleruckik Mo	20.64	44	P	Pn	03 03 04.4	0.0
J18K	Innoko River	20.65	53	P	Pn	03 03 04.4	-0.2
H19K	Roundabout Mou	20.94	48	P	Pn	03 03 07.2	-0.8
E19K	Redstone River	20.99	42	Pn	Pn	03 03 08.2	-0.3
J19K	Poorman	21.16	52	P	P	03 03 06.8	-0.9
TIXI	Tiksi	21.39	330	P	P	03 03 10.2	+0.1
TIXI				IAmb	IAmb	03 03 14.0	
	comp=Z,7.3nm,0.8s						
TIXI	Tiksi	21.39	330	P	P	03 03 10.1	0.0
	comp=Z,6.4nm,0.7s,baz=130,slow=11,SNR=14						
	comp=Z,6.4nm,0.7s						
TIXI	Tiksi	21.39	330	P	P	03 03 10.2	+0.1
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
D20K	Etivluk River	21.53	39	P	P	03 03 13.7	+2.0
D20K				IAmb	IAmb	03 03 21.1	
	comp=Z,16nm,1.4s						
O18K	Koktuh Hills	21.55	63	P	P	03 03 14.4	+2.4
O18K				IAmb	IAmb	03 03 22.8	
	comp=Z,11nm,1.2s						
P18K	Big Mountain,	21.61	65	P	P	03 03 15.1	+2.4
ACHA	Angle Creek He	21.79	68	P	P	03 03 16.2	+1.6
IMAR	Indian Mountai	22.11	47	P	P	03 03 20.1	+2.2
D22K	Ayikyak River	22.96	39	P	P	03 03 27.9	+0.9
D22K				IAmb	IAmb	03 03 50.2	
	comp=Z,9.7nm,1.5s						
E22K	Anaktuvuk Pass	23.14	41	P	P	03 03 28.8	-0.1
SYI	Shuyak Island	23.21	66	P	P	03 03 31.2	+1.7
KDAK	Kodiak Island	23.31	68	P	P	03 03 30.4	-0.1
KDAK				IAmb	IAmb	03 04 11.8	
	comp=Z,13nm,1.2s						
KDAK	Kodiak Island	23.31	68	P	P	03 03 30.4	-0.1
KDAK				pmax	pmax		
	comp=Z,13nm,1.2s						
CNPM	China Poot	23.59	63	P	P	03 03 32.0	-1.4
CNPM				IAmb	IAmb	03 03 57.6	
	comp=Z,16nm,1.3s						
D23K	Nanushuk River	23.69	40	P	P	03 03 35.1	+0.9
H23K	Yukon River	23.82	47	P	P	03 03 35.7	+0.2
E23K	Chandalar	23.95	42	P	P	03 03 37.3	+0.5
E23K				IAmb	IAmb	03 03 45.3	
	comp=Z,8.4nm,1.1s						
E24K	Your Creek	24.37	42	P	P	03 03 41.1	+0.4
E24K				IAmb	IAmb	03 03 49.0	
	comp=Z,6.2nm,0.9s						
WRH	Wood River Hil	24.45	51	P	P	03 03 40.9	-0.4
WRH				IAmb	IAmb	03 03 48.5	
	comp=Z,5.2nm,1.0s						
C24K	Franklin Bluff	24.51	38	P	P	03 03 41.1	-0.6
G24K	Hadweenzic Riv	24.68	45	P	P	03 03 44.2	+0.8
G24K				IAmb	IAmb	03 03 52.4	
	comp=Z,6.7nm,1.1s						
ILAR	Eielson Array	24.95	50	P	P	03 03 45.7	-0.2
	comp=Z,0.9nm,0.7s,baz=267,slow=8.3,SNR=6.1						
	comp=Z,0.9nm,0.7s						
D25K	Kavik River	25.26	39	P	P	03 03 49.2	+0.5
D25K				IAmb	IAmb	03 03 50.8	
	comp=Z,5.3nm,0.8s						
M24K	Tolsona, Glenn	25.57	56	P	P	03 03 51.9	+0.4
M24K				IAmb	IAmb	03 04 12.3	
	comp=Z,8.7nm,0.9s						
BMAR	Burnt Mountain	25.82	44	P	P	03 03 54.5	+0.7
MJAR	Matsushiro Arr	26.34	233	P	P	03 03 57.7	-1.0
	comp=Z,1.6nm,0.7s,baz=39,slow=8.0,SNR=4.4						
	comp=Z,1.6nm,0.7s						
H29M	Whitestone	28.35	46	P	P	03 04 16.8	+0.3
H29M				IAmb	IAmb	03 04 33.3	
	comp=Z,9.2nm,1.4s						
M29M	Somme Creek	29.02	54	P	P	03 04 23.6	+0.9
I30M	Mount Dempster	29.32	48	P	P	03 04 25.5	+0.2
I30M				IAmb	IAmb	03 04 34.3	
	comp=Z,3.8nm,1.1s						
Q32M	Nakina River	33.04	58	P	P	03 04 59.8	+1.7
Q32M				IAmb	IAmb	03 05 06.8	
	comp=Z,5.5nm,1.1s						
SONM	Songino Array	35.56	281	P	P	03 05 19.3	-0.6
	comp=Z,0.6nm,0.5s,baz=56,slow=9.0,SNR=3.6						
	comp=Z,0.6nm,0.5s						
YKAW3	Yellowknife Wh	39.23	46	P	P	03 05 50.8	+0.1
YKAW3				IAmb	IAmb	03 05 57.8	
	comp=Z,3.1nm,0.9s						
YKA	Yellowknife Ar	39.27	46	P	P	03 05 50.9	-0.1
	comp=Z,1.0nm,0.7s,baz=302,slow=9.2,SNR=7.0						
	comp=Z,1.0nm,0.7s						
SPITS	Spitsbergen Ar	44.43	351	P	P	03 06 33.0	-0.1
	comp=Z,6.0nm,0.7s,baz=66,slow=6.8,SNR=4.3						
	comp=Z,6.0nm,0.7s						
SPITS	Spitsbergen Ar	44.43	351	P	P	03 06 33.0	-0.1
JTMT	Jette	48.12	64	P	P	03 07 03.7	+1.0
BMO	Blue Mountains	48.54	68	P	P	03 07 06.3	+0.6
BMO				IAmb	IAmb	03 07 13.4	
	comp=Z,1.4nm,0.8s						
BMO	Blue Mountains	48.54	68	P	P	03 07 06.4	+0.6
BMO				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	Makanchi Array	48.95	296	P	P	03 07 07.2	-1.6
MKAR	Makanchi Array	48.95	296	P	P	03 07 07.6	-1.3
	comp=Z,0.2nm,0.4s,baz=48,slow=5.7,SNR=5.9						
	comp=Z,0.2nm,0.4s						
PLID	Pearl Lake	49.05	67	P	P	03 07 10.5	+0.6
PLID				IAmb	IAmb	03 07 17.6	
	comp=Z,2.0nm,0.6s						
BPMT	Black Pine Rid	49.43	64	P	P	03 07 13.5	+0.6
FCC	Fort Churchill	49.56	42	P	P	03 07 13.5	+0.2
FCC	Fort Churchill	49.56	42	P	P	03 07 13.5	+0.2
FCC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LYMT	Lyon Mountain	49.65	63	P	P	03 07 15.3	+0.9
BVAR	Borovoye Array	50.31	308	P	P	03 07 18.5	-0.6
	comp=Z,1.4nm,0.7s,baz=72,slow=6.4,SNR=5.5						
	comp=Z,1.4nm,0.7s						
DLMT	Dillon	50.60	65	P	P	03 07 22.2	+0.6
DLMT				IAmb	IAmb	03 07 31.3	
	comp=Z,2.3nm,0.8s						

BOZ	Bozeman (W)	50.92	64	P	P	03 07 25.1	+1.1
BOZ				IAmb	IAmb	03 07 31.6	
	comp=Z,2.3nm,0.8s						
BOZ	Bozeman (W)	50.92	64	P	P	03 07 25.1	+1.1
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NVAR	Mina Array Bea	52.54	75	P	P	03 07 37.7	+1.5
	comp=Z,1.0nm,0.8s,baz=306,slow=6.3,SNR=4.2						
	comp=Z,1.0nm,0.8s						
FXWY	Fox Creek	52.61	66	P	P	03 07 37.3	+0.5
FXWY				IAmb	IAmb	03 07 44.9	
	comp=Z,2.5nm,0.8s						
TPAW	Teton Pass	52.76	66	P	P	03 07 39.6	+1.7
TPAW				IAmb	IAmb	03 07 46.2	
	comp=Z,3.8nm,0.8s						
LOHW	Long Hollow	52.85	65	P	P	03 07 39.8	+1.3
LOHW				IAmb	IAmb	03 07 46.7	
	comp=Z,3.1nm,0.9s						
PD31	Pinedale Array	53.99	65	P	P	03 07 47.8	+0.9
PD31				IAmb	IAmb	03 07 48.5	
	comp=Z,2.4nm,0.7s						
PDAR	Pinedale Array	53.99	65	P	P	03 07 47.3	+0.4
PDAR	Pinedale Array	53.99	65	P	P	03 07 47.8	+0.9
	comp=Z,1.6nm,0.6s,baz=326,slow=3.3,SNR=16						
	comp=Z,1.6nm,0.6s						
ULM	Lac du Bonnet	54.97	51	P	P	03 07 53.9	+0.3
ULM				IAmb	IAmb	03 07 54.8	
	comp=Z,4.3nm,0.8s						
ULM	Lac du Bonnet	54.97	51	P	P	03 07 54.0	+0.4
	comp=Z,3.7nm,0.7s,baz=301,slow=6.8,SNR=8.1						
	comp=Z,3.7nm,0.7s						
SRU	San Rafael Swe	56.17	69	P	P	03 08 03.7	+1.1
SRU	San Rafael Swe	56.17	69	P	P	03 08 03.7	+1.1
SRU				pmax	pmax		
	comp=Z,8.0nm,0.8s						
O20A	White River Ci	56.59	67	P	P	03 08 06.3	+0.7
AKTO	Aktyubinsk	57.44	313	P	P	03 08 10.8	-0.4
	comp=Z,2.2nm,0.8s,baz=29,slow=10,SNR=5.2						
	comp=Z,2.2nm,0.8s						
AB31	Akbulak array	57.55	311	P	P	03 08 11.6	-0.4
AB31				IAmb	IAmb	03 08 12.7	
	comp=Z,2.8nm,0.6s						
ABKAR	Akbulak array	57.55	311	P	P	03 08 11.8	-0.3
ABKAR				IAmb	IAmb	03 08 12.7	
	comp=Z,2.8nm,0.6s						
FINES	FINESS Array B	58.16	338	P	P	03 08 15.7	-0.4
FINES	FINESS Array B	58.16	338	P	P	03 08 15.4	-0.7
	comp=Z,2.7nm,1.1s,baz=35,slow=4.7,SNR=3.4						
	comp=Z,2.7nm,1.1s						
FINES	FINESS Array B	58.16	338	P	P	03 08 15.7	-0.4
EYMN	Ely	58.59	50	P	P	03 08 19.1	-0.3
EYMN				IAmb	IAmb	03 08 54.1	
	comp=Z,5.9nm,1.2s						
NC204	NORSAR Array S	60.99	346	P	P	03 08 35.6	-0.2
NB2	NORSAR Subarra	61.16	345	P	P	03 08 36.7	-0.2
	comp=Z,0.5nm,0.5s,baz=18,slow=6.9						
NOA	NORSAR Array B	61.16	345	P	P	03 08 36.3	-0.6
	comp=Z,0.8nm,0.6s,baz=18,slow=6.9,SNR=5.5						
	comp=Z,0.8nm,0.6s						
HFS	Hagfors	61.66	344	P	P	03 08 39.7	-0.5
	comp=Z,0.9nm,0.5s,baz=41,slow=4.7,SNR=11						
	comp=Z,0.9nm,0.5s						
SCHQ	Schefferville	61.76	31	P	P	03 08 41.0	+0.1
	comp=Z,2.5nm,0.6s,baz=7.5,slow=7.2,SNR=10						
	comp=Z,2.5nm,0.6s						
MNTX	Cornudas Mount	64.53	71	P	P	03 09 01.1	+1.4
MNTX				IAmb	IAmb	03 09 07.9	
	comp=Z,2.9nm,0.8s						
WMOK	Wichita Mounta	65.54	64	P	P	03 09 06.4	+0.2
WMOK	Wichita Mounta	65.54	64	P	P	03 09 06.4	+0.2
WMOK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
R40A	Maddies Statio	65.87	57	P	P	03 09 07.7	-0.6
MGMO	Mountain Grove	66.78	58	P	P	03 09 13.1	-1.1
FVM	French Village	66.97	56	P	P	03 09 15.3	0.0
FVM	French Village	66.97	56	P	P	03 09 15.3	0.0
FVM				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AKASG	Malin Array Be	67.10	331	P	P	03 09 15.2	-0.7
	comp=Z,1.3nm,0.4s,baz=30,slow=6.5,SNR=5.6						
	comp=Z,1.3nm,0.4s						
TX31	Lajitas Ar. Si	67.30	71	P	P	03 09 18.3	+0.7
TXAR	Lajitas Array	67.30	71	P	P	03 09 17.9	+0.2
TXAR	Lajitas Array	67.30	71	P	P	03 09 18.5	+0.8
	comp=Z,2.5nm,0.7s,baz=300,slow=4.6,SNR=19						
	comp=Z,2.5nm,0.7s						
TXAR	Lajitas Array	67.30	71	P	P	03 09 17.9	+0.2
D62A	Allapoint, All	67.85	36	P	P	03 09 20.5	-0.2
D62A				IAmb	IAmb	03 09 26.9	
	comp=Z,3.1nm,0.8s						
EKA	Eskdalemuir Ar	68.33	352	P	P	03 09 23.8	+0.1
	comp=Z,2.1nm,0.7s,baz=22,slow=5.6,SNR=4.6						
	comp=Z,2.1nm,0.7s						
KBZ	Khabaz	68.84	318	P	P	03 09 26.9	0.0
	comp=Z,1.3nm,0.8s,baz=172,slow=9.9,SNR=4.2						
	comp=Z,1.3nm,0.8s						
KBZ	Khabaz	68.84	318	P	P	03 09 27.0	0.0
WVT	Waverly	69.68	55	P	P	03 09 31.8	-0.5
WVT	Waverly	69.68	55	P	P	03 09 31.8	-0.5
WVT				pmax	pmax		
	comp=Z,3.0nm,0.7s						
M57A	Sunshine Farm,	69.89	45	P	P	03 09 32.3	-1.2
BUR08	Bucovina Ar. S	70.97	332	P	P	03 09 40.5	+0.3
BURAR	Bucovina Array	71.00	332	P	P	03 09 40.4	+0.1
BURAR				IAmb	IAmb	03 09 41.4	
	comp=Z,1.2nm,0.6s						
TZTN	Tazewell	71.26	52	P	P	03 09 42.1	+0.2
TZTN				IAmb	IAmb	03 09 48.5	
	comp=Z,3.9nm,0.9s						
Y49A	Blount Mountai	72.21	56	P	P	03 09 47.0	-0.8
GERES	GERESS Array B	72.45	340	P	P	03 09 49.6	+0.6
	comp=Z,0.4nm,0.6s,baz=39,slow=6.8,SNR=3.9						
	comp=Z,0.4nm,0.6s						
HODGE	Hodges	73.77	52	P	P	03 09 56.5	-0.4
HODGE				IAmb	IAmb	03 09 57.8	
	comp=Z,2.7nm,0.7s						
W57A	Gilead	73.98	50	P	P	03 09 58.1	0.0
BRTR	Keskin Array B	75.64	323	P	P	03 10 07.7	-0.2
BRTR	Keskin Array B	75.64	323	P	P	03 10 08.3	+0.4
	comp=Z,0.5nm,0.5s,baz=67,slow=5.6,SNR=4.5						
	comp=Z,0.5nm,0.5s						
WRA	Warramunga Arr	79.94	208	P	P	03 10 31.4	-0.3
	comp=Z,1.0nm,1.0s,baz=21,slow=5.9,SNR=3.7						
	comp=Z,1.0nm,1.0s						
ASAR	Alice Springs	83.61	208	P	P	03 10 50.4	-0.7
	comp=Z,0.8nm,0.8s,baz=14,slow=5.7,SNR=4.5						
	comp=Z,0.8nm,0.8s						
ESDC	Sonseca Array	83.95	351	P	P	03 10 53.0	+0.2
	comp=Z,0.4nm,0.6s,baz=6.2,slow=4.4,SNR=7.2						
	comp=Z,0.4nm,0.6s						
QSPA	South Pole Qui	145.97	180	PKPdf	PKPdf	03 17 59.8	-0.5
QSPA	South Pole Qui	145.97	180	PKPbc	PKPdf	03 17 59.4	-0.9
	comp=Z,1.2nm,0.6s,baz=248,slow=0.9,SNR=16						

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*IDC **26** 02:59:41.8±0.7, 56°.25N×164°.07E, h0^{km}, mb3.8/19, mbtmp3.8/20, ML2.8/1, Error ellipse: s-maj=20.6km s-min=15.6km az=151.0*
*MOS **26** 02:59:41.8±0.7, 56°.24N×164°.30E, h11^{km}, mb4.8/3, Error ellipse: s-maj=9.4km s-min=7.0km az=48.6*
*KRSC **26** 02:59:42.2±1.4, 56°.20N×164°.33E, h57^{km}±22^{km}, Ml4.2*
*NEIC **26** 02:59:44.4±1.4, 56°.4N±0°.2×164°.1E±0°.2, h10^{km}±1^{km}, mb4.3/14, Error ellipse: s-maj=30.6km s-min=17.0km az=143.0*
ISC 26 02:59:42.1±3.1**, 56°.20N**±0°.04×**164°.27E**±0°.03**, h4**^{km}±20^{km}**, n88,** σ1^{s}**41**/99**, mb4.0**/27**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.81	272	PN	Pb	02 59 57.6	-1.1
KBTR				S	Sb	03 00 08.8	-1.2
KBTR	Krutoberegovo	0.81	272	eP	Pb	02 59 57.6	-1.1
KBTR				eS	Sb	03 00 08.8	-1.2
KBG	Krutoberegovo	0.88	275	PN	Pb	02 59 59.0	-0.8
KBG	Krutoberegovo	0.88	275	eP	Pb	02 59 59.1	-0.8
BKI	Bering	1.38	135	PN	Pn	03 00 07.2	-0.9
BKI				S	Sn	03 00 24.6	-2.2
BKI	Bering	1.38	135	eP	Pn	03 00 07.3	-0.9
BKI				eS	Sn	03 00 24.6	-2.2
SMKR	Semkarok	1.60	285	PN	Pn	03 00 10.6	-0.7
SMKR				S	Sn	03 00 31.6	-0.9
SMKR	Semkarok	1.60	285	eP	Pn	03 00 10.7	-0.7
SMKR				eS	Sn	03 00 31.6	-0.9
BDR	Baidarnaya	1.74	284	eS	Sn	03 00 36.0	+0.1
ZLN	Zelenaya	1.95	266	PN	Pn	03 00 16.7	+0.7
ZLN	Zelenaya	1.95	266	eP	Pn	03 00 16.7	+0.7
CIRR	Tsirk	1.97	269	PN	Pn	03 00 16.9	+0.5
CIRR	Tsirk	1.97	269	eP	Pn	03 00 16.9	+0.5
LGNR	Loginova	2.01	268	PN	Pn	03 00 17.8	+0.8
LGNR	Loginova	2.01	268	eP	Pn	03 00 17.9	+0.8
BZGR	Bezymyannyi-Gr	2.02	264	PN	Pn	03 00 17.6	+0.6
BZGR	Bezymyannyi-Gr	2.02	264	eP	Pn	03 00 17.6	+0.6
KLY	Klyuchi	2.02	275	PN	Pn	03 00 15.3	-1.6
KLY	Klyuchi	2.02	275	eP	Pn	03 00 15.3	-1.6
BZMR	Bezymyannaya	2.13	265	PN	Pn	03 00 19.5	+0.9
BZMR	Bezymyannaya	2.13	265	eP	Pn	03 00 19.5	+0.9
MKZ	Mys Kozlova	2.19	222	PN	Pn	03 00 18.6	-0.6
MKZ				S	Sn	03 00 44.4	-2.3
MKZ	Mys Kozlova	2.19	222	eP	Pn	03 00 18.7	-0.6
MKZ				eS	Sn	03 00 44.5	-2.3
KIRR	Kirishev	2.21	265	PN	Pn	03 00 20.6	+0.9
KIRR	Kirishev	2.21	265	eP	Pn	03 00 20.7	+0.9
KMNR	Kamenistaya	2.31	261	PN	Pn	03 00 22.5	+1.5
KMNR	Kamenistaya	2.31	261	eP	Pn	03 00 22.5	+1.5
TUMD	Tumrok D	2.41	247	PN	Pn	03 00 22.4	+0.2
TUMD				S	Sn	03 00 51.8	-0.3
TUMD	Tumrok D	2.41	247	eP	Pn	03 00 22.5	+0.2
TUMD				eS	Sn	03 00 51.8	-0.3
KOZ	Kozyrevsk	2.46	269	PN	Pn	03 00 24.8	+1.7
KOZ	Kozyrevsk	2.46	269	eP	Pn	03 00 24.8	+1.7
SRDR	Sredinnyy	2.54	275	PN	Pn	03 00 25.7	+1.5
SRDR	Sredinnyy	2.54	275	eP	Pn	03 00 25.7	+1.5
OSSR	Ossora	3.13	349	PN	Pn	03 00 31.7	-0.5
OSSR	Ossora	3.13	349	eP	Pn	03 00 31.7	-0.5
OSSR				eS	Sn	03 01 05.6	-4.3
SPN	Mys Shipunski	3.96	220	eS	Sn	03 01 25.1	-5.4
NLC	Nalytchevo	4.17	225	PN	Pn	03 00 46.7	+0.4
NLC	Nalytchevo	4.17	225	eP	Pn	03 00 46.8	+0.4
NLC				eS	Sn	03 01 34.0	-1.4
PET	Petropavlovsk	4.55	228	Pn	Pn	03 00 54.2	+2.4
PEA0B	Petropavlovsk-	4.91	234	Pn	Pn	03 00 59.2	+2.5
PEA0B	Petropavlovsk-	4.91	234	PN	Pn	03 00 59.2	+2.5
PETK	Petropavlovsk-	4.91	234	Pn	Pn	03 00 58.4	+1.8
PETK	Petropavlovsk-	4.91	234	Pn	Pn	03 00 57.2	+0.5
	1.9nm,0.3s,baz=78,slow=21,SNR=2.6						
	4.1nm,0.5s						
RUS	Russkaya	5.05	224	PN	Pn	03 00 59.5	+0.9
RUS	Russkaya	5.05	224	eP	Pn	03 00 59.5	+0.9
MTVR	Mutnovka	5.15	226	PN	Pn	03 01 01.5	+1.5
MTVR	Mutnovka	5.15	226	eP	Pn	03 01 01.6	+1.5
ASAK	Asacha	5.34	227	PN	Pn	03 01 04.3	+1.7
ASAK	Asacha	5.34	227	eP	Pn	03 01 04.3	+1.7
H18K	Honhosa River	20.07	48	P	Pn	03 04 18.3	+0.4
TIXI	Tiksi	21.44	330	P	P	03 04 29.9	-0.9
	2.7nm,0.5s,baz=124,slow=8.3,SNR=5.2						
	2.7nm,0.5s						
ACHA	Angle Creek He	21.75	68	P	P	03 04 37.4	+3.0
ACHA				IAmb	IAmb	03 04 51.9	
	comp=Z,8.9nm,1.4s						
SUA	Susitna One	23.48	58	P	P	03 04 55.0	+2.4
SUA				IAmb	IAmb	03 05 24.7	
	comp=Z,11nm,1.2s						
CCB	Clear Creek Bu	24.54	50	P	P	03 05 03.5	+1.1
PWL	Port Wells	24.73	59	P	P	03 05 04.4	+0.2
PWL				IAmb	IAmb	03 05 08.8	
	comp=Z,5.0nm,0.7s						
ILAR	Eielson Array	24.93	50	P	P	03 05 05.2	-0.7
	comp=Z,0.9nm,1.1s,baz=274,slow=9.5,SNR=0.9						
	comp=Z,0.9nm,1.1s						
MJAR	Matsushiro Arr	26.37	233	P	P	03 05 18.2	-1.0
	comp=Z,1.5nm,0.7s,baz=18,slow=8.8,SNR=4.5						
	comp=Z,1.5nm,0.7s						
SONM	Songino Array	35.61	281	P	P	03 06 39.8	-0.9
	comp=Z,0.4nm,0.4s,baz=56,slow=11,SNR=2.5						
	comp=Z,0.4nm,0.4s						
EUNU	Eureka	38.33	15	P	P	03 07 05.1	+1.7
YKA	Yellowknife Ar	39.24	46	P	P	03 07 11.6	+0.5
	comp=Z,0.5nm,0.6s,baz=304,slow=14,SNR=2.7						
	comp=Z,0.5nm,0.6s						
YOJ	Yonaguni jima	43.58	241	P	P	03 07 47.7	+0.6
JTMT	Jette	48.09	64	P	P	03 08 23.0	+0.3
MKAR	Makanchi Array	49.00	296	P	P	03 08 27.7	-1.9
	comp=Z,0.3nm,0.5s,baz=54,slow=5.0,SNR=2.6						
	comp=Z,0.3nm,0.5s						
FCC	Fort Churchill	49.54	42	P	P	03 08 33.9	+0.5
FCC	Fort Churchill	49.54	42	P	P	03 08 33.9	+0.5
FCC				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BVAR	Borovoye Array	50.36	308	P	P	03 08 39.5	-0.3
	comp=Z,1.4nm,0.7s,baz=32,slow=8.7,SNR=3.9						
	comp=Z,1.4nm,0.7s						
PD31	Pinedale Array	53.95	65	P	P	03 09 08.6	+1.7
PD31				IAmb	IAmb	03 09 15.4	
	comp=Z,2.1nm,0.9s						
PDAR	Pinedale Array	53.95	65	P	P	03 09 08.6	+1.7
PDAR	Pinedale Array	53.95	65	P	P	03 09 08.3	+1.4
	comp=Z,0.8nm,0.6s,baz=325,slow=2.6,SNR=5.8						
	comp=Z,0.8nm,0.6s						
ULM	Lac du Bonnet	54.95	51	P	P	03 09 14.6	+0.9
ULM	Lac du Bonnet	54.95	51	P	P	03 09 14.2	+0.5
	comp=Z,1.5nm,0.5s,baz=315,slow=8.6,SNR=2.7						
	comp=Z,1.5nm,0.5s						
ULM	Lac du Bonnet	54.95	51	P	P	03 09 14.6	+0.9
ULM				pmax	pmax		
	comp=Z,11nm,1.5s						
SRU	San Rafael Swe	56.13	69	P	P	03 09 24.1	+1.4
SRU				IAmb	IAmb	03 09 32.2	
	comp=Z,5.0nm,1.0s						
SRU	San Rafael Swe	56.13	69	P	P	03 09 24.1	+1.4
SRU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AKTO	Aktyubinsk	57.49	313	P	P	03 09 32.1	+0.2
	comp=Z,1.2nm,0.5s,baz=357,slow=6.0,SNR=4.2						
	comp=Z,1.2nm,0.5s						
AB31	Akbulak array	57.60	311	P	P	03 09 32.4	-0.3
AB31				IAmb	IAmb	03 09 33.2	
	comp=Z,6.4nm,1.4s						
ABKAR	Akbulak array	57.60	311	P	P	03 09 32.7	0.0
ABKAR				IAmb	IAmb	03 09 33.2	
	comp=Z,6.4nm,1.4s						
EYMN	Ely	58.57	50	P	P	03 09 39.6	0.0
EYMN				IAmb	IAmb	03 09 41.9	
	comp=Z,4.9nm,1.1s						
NOA	NORSAR Array B	61.19	345	P	P	03 09 56.6	-0.8
	comp=Z,0.6nm,0.6s,baz=18,slow=6.9,SNR=3.8						
	comp=Z,0.6nm,0.6s						
HFS	Hagfors	61.69	344	P	P	03 10 00.6	-0.1
	comp=Z,0.9nm,0.5s,baz=3.8,slow=4.5,SNR=5.8						
	comp=Z,0.9nm,0.5s						
SCHQ	Schefferville	61.75	31	P	P	03 10 01.4	+0.1
	comp=Z,2.4nm,0.6s,baz=341,slow=6.7,SNR=6.1						
	comp=Z,2.4nm,0.6s						
AKASG	Malin Array Be	67.14	331	P	P	03 10 36.3	-0.2
	comp=Z,0.7nm,0.4s,baz=30,slow=6.2,SNR=3.4						
	comp=Z,0.7nm,0.4s						
TXAR	Lajitas Array	67.26	71	P	P	03 10 39.2	+1.4
	comp=Z,1.3nm,0.7s,baz=300,slow=4.4,SNR=6.0						
	comp=Z,1.3nm,0.7s						
GERES	GERESS Array B	72.49	340	P	P	03 11 09.3	-0.3
	comp=Z,0.3nm,0.5s,baz=352,slow=5.4,SNR=3.9						
	comp=Z,0.3nm,0.5s						
BRTR	Keskin Array B	75.69	323	P	P	03 11 28.4	-0.1
	comp=Z,0.5nm,0.8s,baz=93,slow=2.5,SNR=3.6						
	comp=Z,0.5nm,0.8s						
WRA	Warramunga Arr	79.95	208	P	P	03 11 52.1	+0.1
	comp=Z,0.4nm,0.7s,baz=13,slow=5.7,SNR=2.2						
	comp=Z,0.4nm,0.7s						
ASAR	Alice Springs	83.61	208	P	P	03 12 12.2	+0.8
	comp=Z,0.8nm,0.8s,baz=13,slow=4.6,SNR=5.2						
	comp=Z,0.8nm,0.8s						
QSPA	South Pole Qui	145.95	180	PKPbc	PKPdf	03 19 20.7	+0.1
	comp=Z,1.2nm,0.6s,baz=201,slow=0.6,SNR=8.9						

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*IDC **26** 03:07:38.2±1.2, 56°.20N×164°.05E, h0^{km}, mb3.6/7, mbtmp3.6/8, ML2.4/1, Error ellipse: s-maj=34.4km s-min=20.7km az=158.0*
*KRSC **26** 03:07:39.7±0.8, 56°.00N×164°.14E, h14^{km}±11^{km}, Ml4.0*
ISC 26 03:07:38.4±1.8**, 56°.08N**±0°.06×**164°.22E**±0°.05**, h7**^{km}±11^{km}**, n37,** σ1^{s}**80**/43**, mb3.8**/7**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.79	280	eP	Pg	03 07 54.3	+0.7
KBTR				eS	Sg	03 08 04.4	+0.4
KBG	Krutoberegovo	0.86	283	eS	Sb	03 08 07.4	-0.1
BKI	Bering	1.32	131	eP	Pn	03 08 03.4	+0.1
BKI				eS	Sn	03 08 21.2	0.0
SMKR	Semkarok	1.61	289	eP	Pn	03 08 07.2	-0.2
SMKR				eS	Sn	03 08 28.1	-0.4
BDR	Baidarnaya	1.75	288	eS	Sb	03 08 32.3	-0.8
ZLN	Zelenaya	1.92	270	eP	Pb	03 08 12.9	-0.9
CIRR	Tsirk	1.94	273	eP	Pb	03 08 13.4	-0.8
LGNR	Loginova	1.98	272	eP	Pb	03 08 14.1	-0.8
BZGR	Bezymyannyi-Gr	1.98	268	eP	Pb	03 08 13.9	-1.0
KLY	Klyuchi	2.01	278	eP	Pn	03 08 11.9	-0.8
KLY				eS	Sn	03 08 37.1	-1.0
KRSR	Krestovskiy	2.05	275	eP	Pn	03 08 13.9	+0.5
MKZ	Mys Kozlova	2.08	224	eP	Pb	03 08 14.7	-1.8
BZWR	Bezymyannyi-We	2.09	268	eP	Pn	03 08 15.0	+0.9
BZMR	Bezymyannaya	2.10	268	eP	Pb	03 08 16.0	-0.9
KIRR	Kirishev	2.18	268	eP	Pb	03 08 17.0	-1.3
KPT	Kopyto	2.25	269	eP	Pb	03 08 18.2	-1.2
KMNR	Kamenistaya	2.26	263	eP	Pb	03 08 18.8	-0.9
TUMD	Tumrok D	2.33	250	eP	Pb	03 08 18.9	-1.9
TUMD				eS	Sb	03 08 46.9	-3.0
KOZ	Kozyrevsk	2.44	271	eP	Pb	03 08 20.6	-2.0
SRDR	Sredinnyy	2.53	277	eP	Pn	03 08 21.5	+1.6
SRDR				eS	Sn	03 08 52.4	+1.4
ESO	Esso	3.10	269	eP	Pn	03 08 30.7	+2.9
KII	Karymskiy	3.42	235	eP	Pb	03 08 35.3	-4.1
KRER	Koryakskii	4.22	231	eP	Pn	03 08 45.4	+2.2
SMAR	Somma	4.22	230	eP	Pn	03 08 45.9	+2.5
UGLR	Uglovaya	4.25	230	eP	Pn	03 08 45.7	+2.1
GNL	Ganaly	4.34	239	eP	Pn	03 08 47.7	+2.8
KRMR	Karymshinskiy	4.82	230	eP	Pn	03 08 54.4	+3.1
PETK	Petropavlovsk-	4.82	235	Pn	Pn	03 08 53.5	+2.2
	0.8nm,0.3s,baz=68,slow=18,SNR=8.4						
	1.8nm,0.5s						
GRL	Gorelyy	5.04	228	eP	Pn	03 08 57.8	+3.3
MTVR	Mutnovka	5.05	227	eP	Pn	03 08 57.9	+3.3
TIXI	Tiksi	21.53	330	P	P	03 12 27.6	0.0
	1.9nm,0.4s,baz=112,slow=13,SNR=4.9						
	1.9nm,0.4s						
ILAR	Eielson Array	25.03	50	P	P	03 13 04.2	+1.5
	0.3nm,1.0s,baz=262,slow=9.6,SNR=4.5						
	0.3nm,1.0s						
MJAR	Matsushiro Arr	26.27	233	P	P	03 13 14.9	+0.7
	1.9nm,0.8s,baz=27,slow=8.5,SNR=5.3						
	1.9nm,0.8s						
SONM	Songino Array	35.60	282	P	P	03 14 36.3	-0.2
	0.3nm,0.4s,baz=87,slow=8.8,SNR=1.9						
	0.3nm,0.4s						
MKAR	Makanchi Array	49.02	296	P	P	03 16 24.7	-0.9
	0.2nm,0.4s,baz=60,slow=5.8,SNR=2.6						
	0.2nm,0.4s						
BVAR	Borovoye Array	50.41	309	P	P	03 16 35.1	-0.9
	1.1nm,0.8s,baz=38,slow=7.5,SNR=4.0						
	1.1nm,0.8s						
TXAR	Lajitas Array	67.32	71	P	P	03 18 34.9	+0.9
	0.4nm,0.5s,baz=298,slow=5.4,SNR=6.6						
	0.4nm,0.5s						

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*SJA **26** 03:09:55.6±1.2, 27°.89S×71°.41W, h30^{km}, ML3.5, MW3.7*
*GUC **26** 03:09:55.1±0.7, 27°.93S×71°.23W, h22^{km}±3^{km}, ML3.6*
ISC 26 03:09:52.2±1.6**, 27°.88S**±0°.04×**71°.41W**±0°.08**, h10**^{km}**, n20,** σ**2**^{s}**18**/31**, 1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC04	Llanos de Chal	0.44	138	eP	Pb	03 10 02.3	+0.2
AC04				eS	Sb	03 10 07.0	-1.8
AC04				IAML		03 10 07.3	
	comp=E,9µm,0.2s						
AC06	Mina Casimiro	1.07	61	eP	Pg	03 10 12.1	-0.8
AC06				eS	Sg	03 10 26.2	-0.6
GO03	Copiapo	1.08	75⇓	eP	Pg	03 10 12.2	-0.8
GO03				eS	Sg	03 10 24.7	-2.4
GO03				IAML		03 10 30.0	
	comp=E,2µm,0.2s						
LCO	Las Campanas	1.29	151	eP	Pb	03 10 16.2	-0.5
LCO				eS	Sg	03 10 32.3	-1.6
AC01	Pan de Azucar	1.87	23	eP	Pn	03 10 24.8	+0.4
CO05	La Serena	2.04	176	eP	Pn	03 10 27.9	+1.3
CO05				eS	Sn	03 10 53.9	+1.7
CO05				IAML		03 10 56.3	
	comp=E,874nm,0.4s						
AC02	Maricunga	2.28	63	eP	Pn	03 10 32.5	+2.1
AC02				eS	Sb	03 11 00.3	-2.0
AC02				IAML		03 11 03.6	
	comp=N,607nm,0.2s						
AC02	Maricunga	2.28	63	i P	Pn	03 10 33.0	+2.6
AC02				i S	Sb	03 11 03.1	+0.8
AC02				IAML		03 11 05.4	
	comp=Z,323nm,0.2s						
CO01	Juntas del Tor	2.39	151	IAML		03 11 06.6	
	comp=N,302nm,0.4s						
AROD	Rodeo	2.84	144	i P	Pb	03 10 41.9	-1.4
AROD				i S	Sb	03 11 16.9	-1.4
VCA	Vinchina	2.95	108	i P	Pb	03 10 44.1	-1.0
VCA				i S	Sb	03 11 18.5	-2.8
VCA				IAML		03 11 26.4	
	comp=Z,215nm,0.5s						
AGUA	GUANDACOL	3.03	123	i P	Pb	03 10 45.2	-1.1
AGUA				i S	Sn	03 11 17.3	+0.7
AGUA				IAML		03 11 31.0	
	comp=Z,197nm,0.5s						
ACDV	Cuesta del Vie	3.04	139	i P	Pb	03 10 45.0	-1.5
ACDV				i S	Sb	03 11 24.9	+1.1
ACDV				IAML		03 11 31.7	
	comp=Z,64nm,0.4s						
GO02	Mina Guanaco	3.16	32	eP	Pn	03 10 43.3	+1.0
GO02				IAML		03 11 37.3	
	comp=N,282nm,0.7s						
ACCO	Cerro Coronel	3.39	143	i P	Pb	03 10 50.0	-2.6
ACCO				i S	Sb	03 11 29.8	-4.2
RTLL	Cerro Villicun	4.29	144	i P	Pn	03 11 03.0	+5.4
RTLL				i S	Sn	03 11 52.0	+4.4
AVFE	Valle Fertil	4.43	130	i P	Pn	03 11 02.0	+2.4
AVFE				i S	Sn	03 11 55.0	+3.7
AVFE				IAML		03 12 02.3	
	comp=Z,86nm,0.6s						
CYA	Choya	4.98	98	i P	Pn	03 11 09.6	+2.4
CYA				IAML		03 12 13.8	
	comp=Z,40nm,0.7s						
FSA	Cafayete	5.16	71	i P	Pn	03 11 13.0	+3.4
SLA	San Lorenzo	6.16	61	i P	Pn	03 11 31.6	+8.1
SLA				IAML		03 12 57.4	
	comp=Z,12nm,3.7s						

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*IDC **26** 03:10:46.9±1.2, 60°.15N×59°.86E, h0^{km}, mb2.9/2, mbtmp3.3/7, ML2.9/5, Error ellipse: s-maj=28.1km s-min=11.4km az=43.0*
*MIRAS **26** 03:10:48.5, 60°.24N×59°.97E, h0^{km}, ML2.9/6*
ISC 26 03:10:48.5±1.3**, 60°.49N**±0°.08×**60°.24E**±0°.08**, h35**^{km}**, n14,** σ**1**^{s}**20**/53**, Ural Mountains region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PR7R	Sarany	2.09	202	eP	Pn	03 11 20.3	-0.7
PR7R				eP	Pn	03 11 20.3	-0.7
PR7R				eP	Pn	03 11 20.3	-0.7
	66nm,0.5s						
PR7R				eS	Sn	03 11 44.0	-1.7
	72nm,0.8s						
PR7R				eS	Sn	03 11 44.0	-1.7
PR7R				eS	Sn	03 11 44.0	-1.7
PR7R				i AML	AML	03 11 50.7	
	234nm,0.3s						
PR1R	Pomanovo	2.20	235	eP	Pn	03 11 22.8	+0.3
PR1R				eP	Pn	03 11 22.8	+0.3
	12nm,0.4s						
PR1R				eP	Pn	03 11 22.8	+0.3
PR1R				eS	Sn	03 11 49.9	+1.5
PR1R				eS	Sn	03 11 49.9	+1.5
	32nm,0.4s						
PR1R				eS	Sn	03 11 49.9	+1.5
PR1R				i AML	AML	03 11 53.9	
	108nm,0.2s						
PR0R	Verkhnechusovs	2.79	216	eP	Pn	03 11 30.3	-0.4
PR0R				eP	Pn	03 11 30.3	-0.4
	44nm,0.2s						
PR0R				eP	Pn	03 11 30.3	-0.4
PR0R				eS	Sn	03 12 03.1	+0.1
PR0R				eS	Sn	03 12 03.1	+0.1
	119nm,0.5s						
PR0R				eS	Sn	03 12 03.1	+0.1
PR0R				i AML	AML	03 12 08.6	
	267nm,0.3s						
PR6R	Ekimyata	3.16	224	eP	Pn	03 11 36.0	+0.4
PR6R				eP	Pn	03 11 36.0	+0.4
PR6R				eP	Pn	03 11 36.0	+0.4

	6.8nm,0.1s						
PR6R				eS	Sn	03 12 11.7	-0.2
PR6R				eS	Sn	03 12 11.7	-0.2
PR6R				eS	Sn	03 12 11.7	-0.2
	22nm,0.3s						
PR6R				i AML	AML	03 12 23.9	
	33nm,0.3s						
PR3R	Kungur	3.49	210	eS	Sn	03 12 19.7	-0.4
PR3R				eS	Sn	03 12 19.7	-0.4
PR3R				eS	Sn	03 12 19.7	-0.4
PR4R	Vlasy	3.49	224	eP	Pn	03 11 40.1	-0.1
PR4R				eP	Pn	03 11 40.1	-0.1
PR4R				eP	Pn	03 11 40.1	-0.1
PR4R				eS	Sn	03 12 19.3	-1.0
PR4R				eS	Sn	03 12 19.3	-1.0
PR4R				eS	Sn	03 12 19.3	-1.0
PR4R				i AML	AML	03 12 34.1	
	76nm,0.4s						
ARTI	Arti	4.23	194	Pn	Pn	03 11 49.3	-1.1
	0.8nm,0.3s,baz=23,slow=10,SNR=4.6						
ARTI				Lg	Lg	03 12 48.5	
	1.3nm,0.3s,baz=337,slow=23,SNR=8.3						
	1.5nm,0.2s						
ARTI	Arti	4.23	194	eP	Pn	03 11 50.4	0.0
ARTI				eP	Pn	03 11 50.4	0.0
	2.5nm,0.3s						
ARTI				eP	Pn	03 11 50.4	0.0
ARTI				eP	Pn	03 11 50.4	0.0
ARTI				eP	Pn	03 11 50.4	0.0
ARTI				eP	Pn	03 11 50.4	0.0
ARTI				eS	Sn	03 12 40.0	+1.5
ARTI				eS	Sn	03 12 40.0	+1.5
ARTI				eS	Sn	03 12 40.0	+1.5
ARTI				eS	Sn	03 12 40.0	+1.5
ARTI				eS	Sn	03 12 40.0	+1.5
	5.5nm,0.3s						
ARTI				eS	Sn	03 12 40.0	+1.5
ARTI				i AML	AML	03 12 56.8	
	25nm,10.2s						
BVAR	Borovoye Array	9.32	139	Pn	Pn	03 12 59.9	-0.3
	baz=324,slow=15,SNR=8.2						
BVAR				Sn	Sn	03 14 40.5	-3.2
	0.1nm,0.3s,baz=330,slow=25,SNR=4.0						
	1.8nm,0.6s						
FINES	FINESS Array B	16.50	288	Pn	Pn	03 14 34.2	-2.7
	0.1nm,0.3s,baz=81,slow=12,SNR=4.6						
	0.7nm,0.8s						
ARCES	ARCESS Array B	16.97	317	Pn	Pn	03 14 40.5	-2.3
	0.1nm,0.3s,baz=112,slow=15,SNR=4.6						
	2.8nm,0.9s						
MKAR	Makanchi Array	18.82	127	P	Pn	03 15 08.1	+2.5
	0.1nm,0.3s,baz=316,slow=8.2,SNR=2.7						
	0.3nm,0.7s						
HFS	Hagfors	22.69	290	P	P	03 15 48.4	+1.9
	0.3nm,0.3s,baz=74,slow=11,SNR=1.3						
	0.3nm,0.3s						
NOA	NORSAR Array B	23.51	293	P	P	03 15 56.2	+1.3
	0.1nm,0.3s,baz=70,slow=13,SNR=1.1						
	0.1nm,0.3s						

KRSC 26 03:11:29.9±1.0**,56°.10N**×**164°.22E,h14km**±8km**,Ml3.7,**
Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.79	278	eP	Pg	03 11 44.5	-0.7
KBTR				eS	Sg	03 11 55.6	0.0
KBG	Krutoberegovo	0.86	281	eS	Sg	03 11 56.9	-0.9
BKI	Bering	1.34	131	eP	Pn	03 11 54.4	+0.2
BKI				eS	Sb	03 12 12.4	+0.6
SMKR	Semkarok	1.60	289	eP	Pn	03 11 57.4	-0.5
SMKR				eS	Sn	03 12 18.1	-0.4
BDR	Baidarnaya	1.74	287	eS	Sb	03 12 22.7	-0.7
ZLN	Zelenaya	1.92	269	eP	Pb	03 12 03.7	-1.0
ZLN				eS	Sb	03 12 29.2	+0.7
BZGR	Bezymyannyi-Gr	1.98	267	eP	Pb	03 12 04.6	-1.2
KLY	Klyuchi	2.00	278	eS	Sn	03 12 26.8	-1.3
KRSR	Krestovskiy	2.05	275	eP	Pn	03 12 05.2	+1.3
BZWR	Bezymyannyi-We	2.09	268	eP	Pb	03 12 06.5	-1.2
BZMR	Bezymyannaya	2.10	267	eP	Pn	03 12 06.1	+1.3
KIRR	Kirishev	2.18	268	eP	Pb	03 12 07.8	-1.4
KPT	Kopyto	2.25	268	eP	Pb	03 12 08.6	-1.7
KMNR	Kamenistaya	2.27	263	eP	Pb	03 12 09.2	-1.4
TUMD	Tumrok D	2.34	249	eP	Pn	03 12 09.9	+1.9
TUMD				eS	Sb	03 12 39.3	-1.3
SDLR	Sedlovina	4.19	230	eP	Pn	03 12 37.6	+4.2
SMAR	Somma	4.24	230	eP	Pn	03 12 37.1	+3.0
AVH	Avacha	4.26	230	eP	Pn	03 12 38.6	+4.1
UGLR	Uglovaya	4.27	229	eP	Pn	03 12 38.1	+3.6
MTVR	Mutnovka	5.06	227	eP	Pn	03 12 48.9	+3.5
ASAK	Asacha	5.25	227	eP	Pn	03 12 51.3	+3.3

IDC ***26*** *03:12:52.3±2.1, 56°.08N×164°.41E, h0km, mb3.1/3, mbtmp3.1/4, ML2.0/1, Error ellipse: s-maj=180.9km s-min=33.2km az=146.0*
KRSC ***26*** *03:12:52.9±1.4, 55°.97N×164°.09E, h16km±22km, Ml3.8*
ISC 26 03:12:53.6±0.9**,56°.09N**±0°.07×**164°.19E**±0°.04**,h19km,n18,**
σ**1s.80**/21**,mb3.2**/3**,Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.78	279	eP	Pb	03 13 06.6	-1.9
KBTR				eS	Sb	03 13 14.9	-3.7
KBG	Krutoberegovo	0.85	282	eP	Pb	03 13 08.1	-1.6
KBG				eS	Sb	03 13 20.0	-0.6
BKI	Bering	1.34	131	eP	Pn	03 13 16.5	-0.8
BKI				eS	Sb	03 13 33.5	-1.3
SMKR	Semkarok	1.60	289	eP	Pn	03 13 20.5	-0.3
BZWR	Bezymyannyi-We	2.08	268	eP	Pb	03 13 30.0	-0.8
MKZ	Mys Kozlova	2.08	224	eP	Pn	03 13 27.4	-0.1
MKZ				eS	Sn	03 13 52.3	-0.5
KIRR	Kirishev	2.17	268	eP	Pn	03 13 30.5	+1.8
KMNR	Kamenistaya	2.25	263	eP	Pn	03 13 31.8	+1.9
TUMD	Tumrok D	2.33	249	eS	Sn	03 13 59.4	+0.5
SPN	Mys Shipunski	3.86	221	eS	Sn	03 14 33.5	-3.0
NLC	Nalytchevo	4.06	226	eS	Sn	03 14 40.9	-0.6
SDLR	Sedlovina	4.17	230	eS	Sn	03 14 46.5	+1.9
DALK	Dalny	4.41	228	eP	Pn	03 14 04.3	+5.0
PETK	Petropavlovsk-	4.81	234	Pn	Pn	03 14 07.5	+2.5
	0.3nm,0.3s,baz=88,slow=16,SNR=1.5						
	2.1nm,0.7s						
MTVR	Mutnovka	5.04	227	eP	Pn	03 14 10.7	+2.5
ILAR	Eielson Array	25.03	50	P	P	03 18 17.0	+1.0
	0.3nm,0.9s,baz=269,slow=9.7,SNR=2.4						
	0.3nm,0.9s						
PDAR	Pinedale Array	54.03	65	P	P	03 22 17.6	+1.0
	0.1nm,0.3s,baz=329,slow=2.6,SNR=5.5						
	0.1nm,0.3s						
TXAR	Lajitas Array	67.33	71	P	P	03 23 48.0	+0.8
	0.1nm,0.5s,baz=299,slow=3.2,SNR=4.8						
	0.1nm,0.5s						

BJI ***26*** *03:18:13.3, 9°.31S×157°.84E, h6km, mB5.5/2, mb5.3/83, Ms5.8/14, Ms7 5.5/16*
IDC ***26*** *03:18:13.3±0.5, 9°.48S×157°.59E, h0km, mb5.0/21, mbtmp5.0/25, ML2.2/1, MS5.1/23, Error ellipse: s-maj=15.5km s-min=13.1km az=81.0*
MOS ***26*** *03:18:15.4±1.2, 9°.49S×157°.66E, h25km, mb5.6/49, MS5.4/6, Error ellipse: s-maj=7.4km s-min=6.2km az=116.2*
NEIC ***26*** *03:18:15.6±1.4, 9°.52S±0°.02×157°.75E±0°.06, h18km±3km, mb5.5/297, Ms_20 5.7/41, Mww5.6/27, Error ellipse: s-maj=8.1km s-min=3.5km az=84.0*
NEIC ***26*** *03:18:16.3, 9°.34S×157°.54E, h22km, Moment Tensor Solution. Duration: 3s.1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.07; $M_{\theta\theta}$-1.03; $M_{\phi\phi}$0.96; $M_{r\theta}$-0.30; $M_{\theta\phi}$2.75; $M_{\phi r}$1.21; Fault plane solution: $M_0$3.18000×10^{17} NP1:ϕ_s79.82000°, δ67.05000°, λ-0.53000°. NP2:ϕ_s170.02000°, δ89.51000°, λ-157.05000°. Principal axes: T 3.1176, Plg16.0000°, Azm303.0000°; N 0.1195, Plg67.0000°, Azm171.0000°; P -3.2371, Plg16.0000°, Azm37.0000°;*
NEIC ***26*** *03:18:16.3, 9°.54S×157°.75E, h22km*
GCMT ***26*** *03:18:17.6±0.1, 9°.48S±0°.01×157°.54E±0°.01, h21km, MW5.7/153, Moment Tensor Solution. s73,c111; s153,c315; Duration: 1s.6 Moment tensor: Scale 10^{17} Nm; M_{rr}0.12±.08; $M_{\theta\theta}$-1.10±.06; $M_{\phi\phi}$0.97±.06; $M_{r\theta}$-0.18±.13; $M_{\theta\phi}$3.52±.06; $M_{\phi r}$-0.52±.13; Best double couple: $M_0$3.71100×10^{17} NP1:ϕ_s262.00000°, δ82.00000°, λ4.00000°. NP2:ϕ_s172.00000°, δ86.00000°, λ172.00000°. Principal axes: T 3.6820, Plg8.0000°, Azm127.0000°; N 0.0540, Plg81.0000°, Azm323.0000°; P -3.7410, Plg2.0000°, Azm217.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 26 03:18:17.2±0.5**,9°.51S**±0°.04×**157°.71E**±0°.04**,h25km**±3km**,**
h25km:pP-P,n995,σ**1s.42**/921**,mb5.5**/272**,MS5.4**/52**,**
28C-6D,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAVO	Savo Central	2.10	80	P	Pn	03 18 50.0	-0.9
HNR	Honiara	2.21	88		Pn	03 18 50.7	-1.6
HNR				Sn	Sn	03 19 16.6	-2.2
HNR	Honiara	2.21	88	Pn	Pn	03 18 51.0	-1.3
	2µm,0.3s,baz=218,slow=8.0,SNR=46						
HNR				Sn	Sn	03 19 16.4	-2.4
	2µm,0.3s,baz=342,slow=21,SNR=26						
HNR				LR	LR	03 19 48.4	
	comp=Z,23µm,21.1s,baz=247,slow=41						
HNR	Honiara	2.21	88	P	Pn	03 18 51.8	-0.5
HNR	Honiara	2.21	88	P	Pn	03 18 50.7	-1.6
HNR						03 19 16.6	
TATA	Tatamba Isabel	2.35	62	P	Pn	03 18 54.7	+0.4
ALEG	Aligegeo Malai	3.04	76	P	Pn	03 19 05.7	+1.9
NGOA	Tingoa Renbel	3.08	132	P	Pn	03 19 03.0	-1.3
HURO	Huro Makira	4.24	103	P	Pn	03 19 20.4	+0.2
RABL	Rabaul	7.63	313		Pn	03 20 06.1	-0.8
LUES	Luesalemba Tem	8.16	99	P	Pn	03 20 15.7	+1.6
PMG	Port Moresby	10.41	270		Pn	03 20 46.1	+1.1
PMG	Port Moresby	10.41	270	Pn	Pn	03 20 42.9	-2.1
	1.0nm,0.3s,baz=104,slow=9.4,SNR=1.8						
	39nm,1.0s						
PMG	Port Moresby	10.41	270	P	Pn	03 20 45.0	0.0
PMG	Port Moresby	10.41	270	P	Pn	03 20 45.9	+0.9
PMG	Port Moresby	10.41	270	P	Pn	03 20 46.1	+1.1
VLAKA	Lakatoro	11.52	126	P	Pn	03 21 02.5	+2.4
KOUNC	Koumac, New Ca	12.68	151	P	Pn	03 21 18.6	+2.5
MANU	Manus Island	12.68	305		Pn	03 21 15.0	-1.1
TV1H	Townsville Har	14.34	226	P	Pn	03 21 37.6	-1.1
COEN	Coen	14.90	251		Pn	03 21 45.2	-1.2
COEN	Coen	14.90	251	P	Pn	03 21 47.1	+0.6
	comp=Z,534nm,1.7s						
COEN	Coen	14.90	251	P	Pn	03 21 48.4	+1.9
INH	Isangel	14.99	133	P	Pn	03 21 48.8	+1.3
DZM	Mont Dzumac	15.04	147		Pn	03 21 47.2	-1.2
DZM	Mont Dzumac	15.04	147	eP	Pn	03 21 48.2	-0.2
	comp=Z,596nm,1.8s						
DZM				eLR	LR	03 25 07.1	
	comp=Z,20µm,28.8s						
DZM	Mont Dzumac	15.04	147	Pn	Pn	03 21 47.7	-0.8
	comp=Z,37nm,1.1s,baz=330,slow=11,SNR=18						
DZM				LR	LR	03 27 05.9	
	comp=Z,12µm,18.1s,baz=330,slow=35						
DZM	Mont Dzumac	15.04	147	P	Pn	03 21 50.3	+1.9
ONTNC	Ouen Toro	15.24	148		Pn	03 21 49.5	-1.4
ONTNC	Ouen Toro	15.24	148	P	Pn	03 21 51.8	+0.9
CTAO	Charters Tower	15.26	225		Pn	03 21 48.5	-2.8
CTAO				IAmb	IAmb	03 21 50.7	
	comp=Z,552nm,1.3s						
CTAO	Charters Tower	15.26	225	P	Pn	03 21 49.1	-2.1
CTAO	Charters Tower	15.26	225	P	Pn	03 21 48.5	-2.8
CTAO				pmax	pmax		
	comp=Z,552nm,1.3s						
YATNC	Mamie plateau,	15.28	146	P	Pn	03 21 53.6	+2.2
OUENC	Ouen Island, N	15.54	147	P	Pn	03 21 56.3	+1.5
MTSU	Mount Surprise	15.57	235	P	Pn	03 21 54.1	-1.1
	comp=Z,190nm,0.9s						
MTSU	Mount Surprise	15.57	235	P	Pn	03 21 54.4	-0.9
PINNC	Pines Island,	16.03	146		Pn	03 22 00.1	-1.0
PINNC				IAmb	IAmb	03 22 04.8	
	comp=Z,1µm,1.9s						
PATS	Pohnpei	16.25	2		Pn	03 22 02.8	-1.2
PATS				IAmb	IAmb	03 22 08.6	
	comp=Z,678nm,1.2s						
PATS	Pohnpei	16.25	2	P	Pn	03 22 01.0	-3.0
	comp=Z,495nm,1.4s						
PATS	Pohnpei	16.25	2	P	Pn	03 22 05.2	+1.3
EIDS	Eidsvold	16.99	201		Pn	03 22 10.4	-2.9
EIDS				IAmb	IAmb	03 22 17.9	
	comp=Z,461nm,1.4s						
EIDS	Eidsvold	16.99	201	P	Pn	03 22 13.2	0.0
	comp=Z,313nm,1.4s						
EIDS	Eidsvold	16.99	201	P	Pn	03 22 13.6	+0.3
JAY	Jayapura	18.27	291	P	Pn	03 22 26.4	-2.9
	comp=Z,271nm,0.9s,baz=99,slow=4.0,SNR=58						
JAY	Jayapura	18.27	291	P	Pn	03 22 26.4	-2.9
	comp=Z,300nm,1.1s						
GENI	Genyem	18.74	290	P	Pn	03 22 34.8	-0.1
GENI	Genyem	18.74	290	P	P	03 22 32.5	-1.9
	comp=Z,8µmcomp=Z,284nm,0.9s						
RMQ	Roma	18.89	206	P	Pn	03 22 36.8	0.0
	comp=Z,134nm,1.1s						
RMQ	Roma	18.89	206	P	Pn	03 22 37.7	+1.0
GC1S	Gold Coast 1 S	18.97	191	P	Pn	03 22 38.1	+0.5
SMPI	Sarmi	20.32	290	P	P	03 22 50.3	-1.3
	comp=Z,10µmcomp=Z,680nm,1.2s						
QIS	Mount Isa	20.62	236	P	P	03 22 55.4	+0.4
	comp=Z,1µm,1.1s						
QIS	Mount Isa	20.62	236	P	P	03 22 55.7	+0.7
QLP	Quilpie	21.24	215	P	P	03 23 01.5	0.0
	comp=Z,1µm,1.6s						
QLP	Quilpie	21.24	215	P	P	03 23 02.9	+1.4
FUNA	Funafuti	21.24	89	P	P	03 23 00.1	-1.6
FUNA				IAmb	IAmb	03 23 17.1	
	comp=Z,441nm,1.6s						
MSVF	Nonsavu	21.37	115	P	P	03 23 01.9	-1.2
MSVF	Nonsavu	21.37	115	P	P	03 23 03.5	+0.4
	comp=Z,12nm,0.9s,baz=287,slow=16,SNR=6.4						
MSVF				LR	LR	03 30 19.7	
	comp=Z,4µm,18.0s,baz=307,slow=34						
	comp=Z,12nm,0.9s						
MSVF	Nonsavu	21.37	115	P	P	03 23 05.8	+2.7
ARMA	Armidale	21.57	194	P	P	03 23 04.1	-1.0
ARMA	Armidale	21.57	194	P	P	03 23 05.8	+0.7
	comp=Z,129nm,1.1s						
ARMA	Armidale	21.57	194	P	P	03 23 06.1	+1.0
DGTI	Dogotuki	22.49	110	P	P	03 23 17.8	+2.7
TAVE	Taveuni	22.93	110	P	P	03 23 22.5	+2.8
BAKI	Biak	23.02	290	P	P	03 23 20.7	0.0
	comp=Z,4µmcomp=Z,391nm,1.1s						
NTLH	Newcastle Hard	23.93	193	P	P	03 23 31.2	+1.9
MGCD	Mangrove Creek	24.36	194	P	P	03 23 35.1	+1.7
KMPI	Kaimana, Papua	24.54	282	P	P	03 23 35.1	0.0
CMSA	Cobar Meteorol	24.60	205	P	P	03 23 35.3	-0.3
	comp=Z,259nm,1.4s						
CMSA	Cobar Meteorol	24.60	205	P	P	03 23 35.6	+0.1
WR0	Warramunga Arr	24.67	242	P	P	03 23 35.7	-0.6
WR8	Warramunga Arr	24.70	243	P	P	03 23 35.6	-1.0
RKPI	Ransiki, Papua	24.72	287	P	P	03 23 37.4	+0.6
WRAB	Tennant Creek	24.82	243	d iP	P	03 23 37.0	-0.7
WRAB				pmax	pmax		
	comp=Z,263nm,0.9s						
WRA	Warramunga Arr	24.84	243		P	03 23 36.2	-1.7
WRA	Warramunga Arr	24.84	243	P	P	03 23 34.9	-3.0
	comp=Z,275nm,1.1s,baz=69,slow=10,SNR=153						
WRA				S	S	03 28 02.6	+3.2
	comp=Z,15nm,1.3s,baz=73,slow=18,SNR=5.3						
WRA				LR	LR	03 33 19.8	
	comp=Z,4µm,18.7s,baz=28,slow=37						
WRA	Warramunga Arr	24.84	243	P	P	03 23 36.2	-1.7
WRA				pmax	pmax		
	comp=Z,14nm,1.1s						
RIV	Riverview	24.95	193	P	P	03 23 39.7	+1.1
	comp=Z,218nm,2.2s						
KDU	Kakadu	24.96	260	P	P	03 23 38.3	-0.7
	comp=Z,158nm,1.0s						
KDU	Kakadu	24.96	260	P	P	03 23 39.7	+0.7
SYDH	Sydney Hard Ro	24.98	194	P	P	03 23 40.1	+1.2
WOLH	Wollongong Har	25.56	193	P	P	03 23 45.7	+1.5
YNG	Young	26.11	198	P	P	03 23 51.0	+1.7
	comp=Z,157nm,1.1s						
FAKI	Fak Fak	26.13	283	P	P	03 23 50.0	+0.4
FAKI				IAmb	IAmb	03 24 19.2	
	comp=Z,215nm,1.3s						
FAKI	Fak Fak	26.13	283	P	P	03 23 50.5	+0.9
FAKI	Fak Fak	26.13	283	P	P	03 23 49.8	+0.2
	comp=Z,3µmcomp=Z,129nm,1.3s						
SAUI	Saumlaki	26.15	271	P	P	03 23 50.4	+0.6
GUMO	Guam	26.25	331	P	P	03 23 47.8	-2.8
GUMO	Guam	26.25	331	P	P	03 23 52.1	+1.5
GUMO	Guam	26.25	331	P	P	03 23 47.8	-2.8
GUMO				pmax	pmax		
	comp=Z,1µm,1.4s						
MTN	Manton Dam	26.28	260	P	P	03 23 48.3	-2.7
MTN				IAmb	IAmb	03 23 59.3	
	comp=Z,77nm,0.9s						
MTN	Manton Dam	26.28	260	P	P	03 23 50.2	-0.7
	comp=Z,98nm,0.9s						
MTN	Manton Dam	26.28	260	P	P	03 23 51.8	+0.9
DRS	Darwin Rock St	26.48	261	P	P	03 23 53.5	+0.8
AS17	Alice Springs	26.68	235	P	P	03 23 53.2	-1.4
	comp=Z,115nm,0.9s						
AS01	Alice Springs	26.71	235	P	P	03 23 53.6	-1.2
ASAR	Alice Springs	26.75	235	P	P	03 23 53.2	-2.0
ASAR	Alice Springs	26.75	235	P	P	03 23 53.5	-1.7
	comp=Z,87nm,0.8s,baz=63,slow=9.2,SNR=136						
	comp=Z,87nm,0.8s						
CNB	Canberra Magne	26.80	195	P	P	03 23 56.9	+1.4
	comp=Z,259nm,1.2s						
CNB	Canberra Magne	26.80	195	P	P	03 23 57.1	+1.6
STKA	Stephens Creek	26.81	212	P	P	03 23 54.9	-0.7
STKA	Stephens Creek	26.81	212	P	P	03 23 55.6	0.0
	comp=Z,1µm,1.4s						
STKA	Stephens Creek	26.81	212	P	P	03 23 55.4	-0.2
	comp=Z,162nm,0.8s,baz=17,slow=10,SNR=66						
STKA				LR	LR	03 34 06.3	
	comp=Z,5µm,18.2s,baz=351,slow=36						
	comp=Z,162nm,0.8s						
STKA	Stephens Creek	26.81	212	P	P	03 23 55.5	0.0
CAN	Canberra	26.90	196	P	P	03 23 55.5	-0.8
CAN				IAmb	IAmb	03 24 01.2	
	comp=Z,173nm,1.2s						
CAN	Canberra	26.90	196	P	P	03 23 55.6	-0.8
CAN				pmax	pmax		
	comp=Z,173nm,1.2s						
SWI	Sorong	27.68	287	P	P	03 24 04.9	+1.3
	comp=Z,151nm,1.3s						
MILA	Mila	28.50	194	P	P	03 24 12.3	+1.6
	comp=Z,28nm,1.2s						
KNRA	Kununurra	28.89	255	P	P	03 24 12.6	-1.7
KNRA				IAmb	IAmb	03 24 14.8	
	comp=Z,72nm,1.0s						
KNRA	Kununurra	28.89	255	P	P	03 24 13.7	-0.7
	comp=Z,77nm,1.1s						
OUZ	Omahuta	29.42	153	P	P	03 24 20.4	+1.6
HTT	Hallett	29.43	213	P	P	03 24 19.1	0.0
	comp=Z,29nm,1.3s						
HTT	Hallett	29.43	213	P	P	03 24 19.2	+0.2
WHYH	Whyalla	29.89	215	P	P	03 24 23.2	+0.2
TOO	Toolangi	30.04	200	P	P	03 24 23.7	-0.7
TOO	Toolangi	30.04	200	P	P	03 24 25.2	+0.9
	comp=Z,19nm,1.1s						
TOO	Toolangi	30.04	200	P	P	03 24 23.7	-0.7
TOO				pmax	pmax		
	comp=Z,22nm,1.1s						
TOO				MLR	MLR		
	comp=Z,2µm,19.0s						
RAO	Raoul Island	30.12	134	LR	LR	03 34 06.6	
	comp=Z,5µm,19.5s,baz=332,slow=32						
BBOO	Buckleboo	30.62	218	P	P	03 24 28.4	-1.0
BBOO	Buckleboo	30.62	218	P	P	03 24 28.8	-0.7
	comp=Z,167nm,1.4s						
BBOO	Buckleboo	30.62	218	P	P	03 24 28.9	-0.6
TNTI	Ternate	31.89	287	P	P	03 24 39.6	-1.3
TNTI	Ternate	31.89	287	P	P	03 24 41.5	+0.6
TNTI	Ternate	31.89	287	P	P	03 24 40.8	-0.1
	comp=Z,95nm,1.3s						
WRKA	Warakurna	31.95	237	P	P	03 24 39.4	-2.0
	comp=Z,42nm,1.2s						
FITZ	Fitzroy Crossi	32.25	251		P	03 24 42.6	-1.4
FITZ	Fitzroy Crossi	32.25	251	P	P	03 24 42.1	-1.9
	comp=Z,14nm,1.3s						
FITZ	Fitzroy Crossi	32.25	251	LR	LR	03 37 36.7	
	comp=Z,3µm,18.1s,baz=63,slow=36						
FITZ	Fitzroy Crossi	32.25	251	P	P	03 24 42.8	-1.2
TOZ	Tahuroa Road	32.36	153	P	P	03 24 43.1	-1.6
TOZ	Tahuroa Road	32.36	153	P	P	03 24 46.0	+1.4
SANI	Sanana	32.40	281	P	P	03 24 46.4	+1.1
SANI	Sanana	32.40	281	P	P	03 24 45.4	+0.1
	comp=Z,142nm,2.0s						
GLAD	Gladstone	32.51	194	P	P	03 24 47.5	+1.6
CORO	Coronation Par	33.16	195	P	P	03 24 53.1	+1.5
HAZ	Te Kaha	33.44	150	P	P	03 24 54.4	+0.2
URZ	Urewera	33.52	152	LR	LR	03 36 11.1	
	comp=Z,4µm,20.7s,baz=304,slow=32						
URZ	Urewera	33.52	152	P	P	03 24 56.5	+1.6
BATI	Baumata	33.54	266	LR	LR	03 39 22.5	
	comp=Z,5µm,19.1s,baz=288,slow=38						
BATI	Baumata	33.54	266	P	P	03 24 55.2	-0.2
	comp=Z,162nm,1.1s						
OTVZ	Oturere	33.62	154	P	P	03 24 57.6	+1.7
SNVZ	South Ngauruho	33.62	154	P	P	03 24 58.1	+2.1
FWVZ	Far West T-bar	33.65	155	P	P	03 24 57.6	+1.4
WHVZ	Whangaehu Hut	33.68	155	P	P	03 24 58.2	+1.6
WNVZ	Wahianoa	33.73	155	P	P	03 24 58.7	+1.8
RTZ	Ruatahuna	33.75	152		P	03 24 55.5	-1.5
RTZ				IAmb	IAmb	03 24 58.3	
	comp=Z,54nm,0.9s						
RTZ	Ruatahuna	33.75	152	P	P	03 24 57.7	+0.8
PUZ	Puketiti	33.92	150	P	P	03 24 59.1	+0.7
BKZ	Black Stump Fm	33.98	153	P	P	03 24 59.9	+1.0
MOO	Moorlands	34.08	194	P	P	03 25 01.4	+1.7
KRHZ	Kereru	34.32	154	P	P	03 25 02.5	+0.7
PNHZ	Pukenui	34.47	154	P	P	03 25 03.6	+0.5
TSZ	Takapari Road	34.49	155	P	P	03 25 03.7	+0.4
TAU	Tasmania Unive	34.49	194	P	P	03 25 05.7	+2.5
SGSI	Sangihe	34.64	291	P	P	03 25 05.3	+0.4
THZ	Tophouse	34.81	160	P	P	03 25 06.5	+0.4
TCW	Tory Channel	34.81	158		P	03 25 04.5	-1.4
TCW	Tory Channel	34.81	158	P	P	03 25 07.0	+1.0
MRZ	Mangatainoka R	34.84	156	P	P	03 25 05.8	-0.5
MMRI	Maumere	35.03	269		P	03 25 06.4	-1.9
MMRI	Maumere	35.03	269	P	P	03 25 09.2	+0.9
MMRI	Maumere	35.03	269	P	P	03 25 07.6	-0.7
BBSI	Bau Bau	35.06	274	P	P	03 25 09.6	+1.1
	comp=Z,162nm,0.9s						
BSWZ	Blackbirch Sta	35.10	159	P	P	03 25 07.4	-1.2
BFZ	Birch Farm	35.13	155	P	P	03 25 10.9	+2.1
BFZ	Birch Farm	35.13	155	P	P	03 25 08.4	-0.4
INZ	Inchbonnie	35.21	162		P	03 25 07.5	-2.0
INZ				IAmb	IAmb	03 25 11.9	
	comp=Z,56nm,1.2s						
PLWZ	Palliser	35.49	157	P	P	03 25 10.2	-1.7
FOZ	Fox Glacier	35.50	165	P	P	03 25 12.9	+1.0
LTZ	Lake Taylor	35.51	161	P	P	03 25 12.6	+0.5
KHZ	Kahutara	35.60	160	P	P	03 25 12.6	-0.2
JCZ	Jackson Bay	35.76	166	P	P	03 25 16.5	+2.3
LUWI	Luwuk	35.76	282	P	P	03 25 15.7	+1.1
GVZ	Greta Valley S	35.92	161	P	P	03 25 15.8	+0.1
MQZ	McQueen's Vall	36.47	162	P	P	03 25 20.6	+0.4
WKZ	Wanaka	36.52	166	IAMs_20	IAMs_20	03 38 57.4	
	comp=Z,8µm,19.0s						
TMZ	Timaru	36.61	164	P	P	03 25 20.9	-0.5
APSI	Ampana	36.88	281	P	P	03 25 24.7	+0.6
	comp=Z,110nm,1.5s						
MRSI	Marisa	36.97	284	P	P	03 25 25.5	+0.6
	comp=Z,47nm,1.3s						
BSSI	Bau Bau, Buton	37.01	272	P	P	03 25 26.1	+0.8
	comp=Z,3µmcomp=Z,163nm,1.7s						
BNSI	Bone	37.65	275	P	P	03 25 31.2	+0.5
	comp=Z,4µmcomp=Z,186nm,1.5s						
WBSI	Waikabubak, Su	37.77	267	P	P	03 25 29.5	-2.3
	comp=Z,120nm,1.2s						
KAPI	Kappang	37.90	274	P	P	03 25 32.0	-0.8
KAPI	Kappang	37.90	274	LR	LR	03 42 55.1	
	comp=Z,2µm,18.6s,baz=267,slow=39						
KAPI	Kappang	37.90	274	P	P	03 25 33.7	+0.9
KAPI	Kappang	37.90	274	c iP	P	03 25 32.5	-0.3
KAPI				pmax	pmax		
	comp=Z,150nm,1.1s						
SPSI	Sidrap Palu	38.06	276	P	P	03 25 34.0	-0.1
TTSI	Tana Toraja	38.18	277	P	P	03 25 35.1	-0.1
	comp=Z,36nm,0.9s						
PSAC2	Pilbara Seismi	38.24	247	P	P	03 25 34.0	-1.7
	comp=Z,125nm,1.2s						
TOLI2	Tolitoli	38.26	284	P	P	03 25 34.0	-1.8
PSA00	Pilbara Seismi	38.29	247	P	P	03 25 34.5	-1.5
PSA00	Pilbara Seismi	38.29	247	P	P	03 25 33.8	-2.3
PSA00				IAmb	IAmb	03 25 35.9	
	comp=Z,100nm,0.9s						
PSA00	Pilbara Seismi	38.29	247	P	P	03 25 34.9	-1.1
MBWA	Marble Bar	38.31	248		P	03 25 34.8	-1.4
MBWA				IAmb	IAmb	03 25 36.0	
	comp=Z,91nm,1.0s						
MBWA	Marble Bar	38.31	248	P	P	03 25 34.8	-1.4

PCI	Palu	38.63	281	P	P	03 25 39.4	+0.4
	comp=Z,153nm,1.4s						
MPSI	Mapaga	38.89	282	P	P	03 25 40.1	-1.0
	comp=Z,33nm,0.9s						
JCJ	Chichijima	39.38	338	P	P	03 25 44.2	-0.8
JCJ				IAmb	IAmb	03 26 26.0	
	comp=Z,152nm,1.7s						
PLAI	Plampang	39.42	268	P	P	03 25 46.5	+1.0
PLAI	Plampang	39.42	268	P	P	03 25 44.3	-1.2
	comp=Z,4µmcomp=Z,202nm,1.0s						
KMBL	Kambalda	39.72	232	P	P	03 25 47.2	-0.7
	comp=Z,72nm,1.3s						
MEEK	Meekatharra	40.68	240	P	P	03 25 55.2	-0.7
	comp=Z,86nm,1.2s						
MEEK	Meekatharra	40.68	240	P	P	03 25 54.9	-1.0
MYLDM	Lahad Datu	41.71	289	P	P	03 26 04.1	-0.4
MYLDM	Lahad Datu	41.71	289	P	P	03 26 06.8	+2.3
JAGI	Jajag, Banyuwa	43.02	268	P	P	03 26 12.6	-2.5
JAGI	Jajag, Banyuwa	43.02	268	P	P	03 26 13.4	-1.8
JAGI	Jajag, Banyuwa	43.02	268	P	P	03 26 12.9	-2.3
KLBR	Kellerberrin	43.05	233	P	P	03 26 13.9	-1.2
	comp=Z,162nm,1.0s						
KLBR	Kellerberrin	43.05	233	P	P	03 26 14.6	-0.6
TGY	Tagaytay City	43.37	302	LR	LR	03 42 48.7	
	comp=Z,2µm,20.0s,baz=74,slow=34						
BLDU	Ballidu	43.53	235	P	P	03 26 18.8	-0.4
	comp=Z,84nm,1.5s						
BLDU	Ballidu	43.53	235	P	P	03 26 19.1	0.0
MORW	Morawa	43.58	238	P	P	03 26 17.5	-2.0
MORW				IAmb	IAmb	03 26 20.1	
	comp=Z,100nm,1.1s						
MORW	Morawa	43.58	238	P	P	03 26 18.9	-0.7
	comp=Z,96nm,1.2s						
MORW	Morawa	43.58	238	P	P	03 26 19.3	-0.3
GIRL	Giralia	43.60	247	P	P	03 26 19.6	-0.2
GIRL	Giralia	43.60	247	P	P	03 26 19.5	-0.3
	comp=Z,189nm,1.5s						
GIRL	Giralia	43.60	247	P	P	03 26 21.0	+1.2
NWAO	Narrogin (SRO)	43.96	232	P	P	03 26 21.4	-1.1
NWAO				IAmb	IAmb	03 26 23.2	
	comp=Z,117nm,1.1s						
NWAO	Narrogin (SRO)	43.96	232	P	P	03 26 21.9	-0.6
	comp=Z,179nm,1.2s						
NWAO	Narrogin (SRO)	43.96	232	LR	LR	03 46 02.2	
	comp=Z,3µm,18.1s,baz=48,slow=38						
NWAO	Narrogin (SRO)	43.96	232	P	P	03 26 22.5	0.0
NWAO	Narrogin (SRO)	43.96	232	P	P	03 26 21.4	-1.1
NWAO				pmax	pmax		
	comp=Z,117nm,1.1s						
KKM	Kota Kinabalu	44.14	289		P	03 26 22.6	-1.7
KKM	Kota Kinabalu	44.14	289	P	P	03 26 25.2	+0.9
MUN	Mundaring	44.41	234	P	P	03 26 26.2	0.0
	comp=Z,59nm,1.2s						
MUN	Mundaring	44.41	234	P	P	03 26 26.8	+0.6
PCJI	Pacitan	45.97	268	P	P	03 26 38.3	-0.5
WOJI	Wonogiri, Jawa	46.26	268	P	P	03 26 39.7	-1.3
	comp=Z,229nm,1.2s						
UGM	Wanagama	46.64	268	P	P	03 26 44.2	+0.1
UGM	Wanagama	46.64	268	P	P	03 26 45.4	+1.3
SMRI	Semarang	46.81	269	P	P	03 26 44.4	-1.0
SMRI	Semarang	46.81	269	P	P	03 26 48.0	+2.6
SMRI	Semarang	46.81	269	P	P	03 26 54.8	+9.4
STKI	Sintang	46.99	279	P	P	03 26 48.0	+1.2
	comp=Z,136nm,1.6s						
JSG	Sagara	47.68	338	P	P	03 26 51.3	-0.4
JSG	Sagara	47.68	338	P	P	03 26 53.5	+1.8
YOJ	Yonaguni jima	47.82	316	P	P	03 26 51.7	-1.3
YOJ	Yonaguni jima	47.82	316	P	P	03 26 54.2	+1.2
YOJ	Yonaguni jima	47.82	316	P	P	03 26 51.7	-1.3
YOJ				pmax	pmax		
	comp=Z,518nm,1.6s						
TWGBT	Beinan	48.16	312	P	P	03 26 58.2	+2.5
TWG	Pinlang	48.16	312	P	P	03 26 55.1	-0.7
YULB	Yu-li	48.35	313	P	P	03 26 56.5	-0.6
YULB				IAmb	IAmb	03 27 02.6	
	comp=Z,62nm,0.8s						
YULB	Yu-li	48.35	313	P	P	03 26 58.4	+1.2
KSM	Kuching	48.45	280	P	P	03 26 57.2	-0.9
KSM				IAmb	IAmb	03 27 12.8	
	comp=Z,76nm,1.1s						
KSM	Kuching	48.45	280	P	P	03 26 59.0	+0.9
JMN	Monobe	48.60	333	P	P	03 26 59.2	+0.3
JMN	Monobe	48.60	333	P	P	03 27 00.1	+1.1
NACB	Ninganchiao	48.63	314	P	P	03 26 58.5	-0.8
NACB	Ninganchiao	48.63	314	P	P	03 27 00.5	+1.2
INU	Inuyama	48.71	337	P	P	03 26 59.4	-0.3
TPUB	Ta-pu	48.78	313	P	P	03 26 59.3	-1.2
TPUB	Ta-pu	48.78	313	P	P	03 27 01.4	+0.9
JGF	Kuroka	48.81	338	P	P	03 27 00.0	-0.5
JGF				IAmb	IAmb	03 27 15.4	
	comp=Z,96nm,1.2s						
JGF	Kuroka	48.81	338	P	P	03 27 01.8	+1.3
SSLB	Suanglung	48.84	313		P	03 26 59.5	-1.5
SSLB	Suanglung	48.84	313	P	P	03 27 01.7	+0.7
JCJI	Jatiwangi	49.02	270	P	P	03 27 11.3	+8.8
YHNB	Yeheng	49.09	314	P	P	03 27 04.0	+1.1
TATO	Taipei	49.21	315	P	P	03 27 04.7	+1.0
MJAR	Matsushiro Arr	49.34	339	P	P	03 27 03.7	-0.8
	comp=Z,12nm,0.8s,baz=168,slow=8.0,SNR=16						
	comp=Z,12nm,0.8s						
MAJO	Matsushiro	49.34	339	P	P	03 27 03.2	-1.4
MAJO	Matsushiro	49.34	339	P	P	03 27 05.8	+1.2
MAJO	Matsushiro	49.34	339	⇑*i*P	P	03 27 03.4	-1.2
MAJO				pmax	pmax		
	comp=Z,14nm,1.0s						
MJB9	Matsu-Tunnel	49.35	339	P	P	03 27 03.1	-1.5
JNU	Nakatsue	49.50	330	P	P	03 27 05.0	-0.9
JNU				IAmb	IAmb	03 27 16.5	
	comp=Z,94nm,1.1s						
JNU	Nakatsue	49.50	330	P	P	03 27 07.0	+1.1
BBJI	Bungbulang	49.52	268	P	P	03 27 07.6	+1.2
LEM	Lembang	49.62	269	LR	LR	03 52 40.8	
	comp=Z,2µm,18.3s,baz=174,slow=42						
JMM	Marumori	49.71	342	P	P	03 27 10.7	+3.4
TPI	Tanjungpandan	50.18	274	P	P	03 27 10.4	-0.9
	comp=Z,75nm,1.5s						
DBJI	Dramaga	50.51	269	P	P	03 27 15.1	+1.2
	comp=Z,153nm,1.0s						
JSD	Sado	50.67	340		P	03 27 13.6	-1.0
JSD	Sado	50.67	340	P	P	03 27 16.1	+1.5
QZH	Quanzhou	51.25	313	⇑*i*P	P	03 27 22.0	+2.8
QZH				pmax	pmax		
	comp=Z,120nm,1.7s						
CGJI	Cibinong	51.55	269	P	P	03 27 20.0	-1.7
PPT	Papeete	51.73	105	LR	LR	03 44 27.3	
	comp=Z,2µm,21.6s,baz=294,slow=30						
PPT2	Papeete2	51.73	105	*e*S	S	03 34 42.3	-1.5
	comp=Z,2µm,23.0s						
PPT2				*e*LQ	LQ	03 40 02.8	
	comp=Z,5µm,28.5s						
PPT2				*e*LR	LR	03 42 10.2	
	comp=Z,3µm,23.8s						
PPT2				*e*LR	LR	03 42 15.1	
	comp=Z,3µm,24.2s						
TBI	Tubuai	52.23	112	*e*LQ	LQ	03 40 12.4	
	comp=Z,14µm,36.2s						
TBI				*e*LR	LR	03 42 23.3	
	comp=Z,12µm,30.2s						
TBI				*e*LR	LR	03 42 23.8	
	comp=Z,3µm,35.2s						
JTM	Tenmabayashi	52.35	344	P	P	03 27 28.8	+1.7
MDSI	Maura Dua	53.32	271	P	P	03 27 33.8	-1.0
	comp=Z,51nm,1.5s						
DLV	Lat	53.36	293		P	03 27 33.4	-2.0
DLV	Lat	53.36	293	P	P	03 27 35.8	+0.5
TJN	Taejon	53.84	330	P	P	03 27 38.5	+0.3
TJN	Taejon	53.84	330	P	P	03 27 39.8	+1.7
TJN	Taejon	53.84	330	⇑*e*P	P	03 27 38.7	+0.6
KSRS	Korea Array	54.41	331	P	P	03 27 42.1	-0.3
	comp=Z,15nm,0.9s,baz=149,slow=7.7,SNR=26						
	comp=Z,15nm,0.9s						
KSAR	Wonju Array Be	54.42	331		P	03 27 41.2	-1.2
KSAR	Wonju Array Be	54.42	331	P	P	03 27 41.2	-1.2
KS19	Wonju Array Si	54.48	331	P	P	03 27 41.9	-0.9
KS19				IAmb	IAmb	03 27 46.5	
	comp=Z,54nm,1.3s						
QIZ	Qiongzhong	55.05	301	P	P	03 27 46.8	-0.5
QIZ	Qiongzhong	55.05	301	P	P	03 27 50.0	+2.7
QIZ				S	S	03 35 31.5	+2.9
QIZ				pmax	pmax		
	comp=Z,52nm,1.6s						
QIZ				LR	LR		
	comp=Z,2µm,15.3s						
QIZ				LR	LR		
	comp=Z,3µm,29.0s						
QIZ	Qiongzhong	55.05	301	P	P	03 27 48.5	+1.2
INCN	Inchon	55.07	330	P	P	03 27 47.0	-0.1
INCN	Inchon	55.07	330	P	P	03 27 50.1	+3.0
INCN	Inchon	55.07	330	P	P	03 27 47.0	-0.1
INCN				pmax	pmax		
	comp=Z,100nm,1.2s						
ASAJ	Asahikawa	55.11	347	LR	LR	03 50 44.2	
	comp=Z,2µm,19.4s,baz=330,slow=35						
NJ2	Nanjing	55.55	320	⇑*i*P	P	03 27 53.8	+3.1
NJ2				pP	sP	03 28 00.8	+1.1
NJ2				sP	pwP	03 28 05.3	+2.7
NJ2				pmax	pmax		
	comp=Z,70nm,1.3s						
MSHR	Mys Shultsa	57.24	337	⇑*e*P	P	03 28 01.7	-0.8
MSHR				pmax	pmax		
	comp=Z,37nm,1.9s						
BKNI	Bangkinang	57.24	277	P	P	03 28 02.4	-0.7
CNSH	ChangSha	57.25	312	P	P	03 28 04.0	+1.1
CNSH				pmax	pmax		
	comp=Z,60nm,1.4s						
PSTR	Posyet	57.44	337	⇑*e*P	P	03 28 04.4	+0.5
WHN	Wuhan	57.60	315	P	P	03 28 06.5	+1.2
WHN				pmax	pmax		
	comp=Z,230nm,1.2s						
GULI	GuiLin	57.63	308	P	P	03 28 06.8	+1.2
GULI				pmax	pmax		
	comp=Z,60nm,1.3s						
PPI	Padang Panjang	57.72	275	P	P	03 28 05.0	-1.5
	comp=Z,63nm,1.0s						
YSS	Yuzhno-Sakhali	57.77	348	⇑*e*P	P	03 28 07.0	+0.9
YSS				pmax	pmax		
	comp=Z,45nm,1.3s						
IPM	Ipoh	58.17	281	P	P	03 28 08.8	-0.8
IPM				IAmb	IAmb	03 29 13.1	
	comp=Z,43nm,1.1s						
IPM	Ipoh	58.17	281	P	P	03 28 10.4	+0.7
USRK	Ussuriysk Ar.	58.32	338	P	P	03 28 09.6	-0.5
	comp=Z,21nm,1.0s,baz=140,slow=6.8,SNR=18						
	comp=Z,21nm,1.0s						
DL2	Dalian	58.71	327	P	P	03 28 16.0	+3.1
DL2				pmax	pmax		
	comp=Z,75nm,1.3s						
KULM	Kulim	58.73	282	P	P	03 28 12.0	-1.5
KULM	Kulim	58.73	282	P	P	03 28 14.6	+1.1
MNSI	Mandailing Nat	58.77	277	P	P	03 28 14.0	+0.2
	comp=Z,81nm,0.9s						
TIA	Tai'an	59.38	322	P	P	03 28 16.8	-0.8
TIA				pmax	pmax		
	comp=Z,28nm,1.4s						
MDJ	Mudanjiang	59.57	337	P	P	03 28 19.5	+0.7
MDJ				pmax	pmax		
	comp=Z,11nm,1.4s						
RPSI	Rantau Prapat	59.80	279	P	P	03 28 19.1	-1.9
RPSI				IAmb	IAmb	03 28 34.7	
	comp=Z,61nm,1.2s						
PSI	Prapat	59.83	279	P	P	03 28 21.8	+0.5
PSI	Prapat	59.83	279	P	P	03 28 19.1	-2.2
PSI				pmax	pmax		
	comp=Z,61nm,1.2s						
SRIT	Nakonsritamara	60.59	285	P	P	03 28 25.6	-0.8
SRIT				IAmb	IAmb	03 28 28.8	
	comp=Z,71nm,1.2s						
SRIT	Nakonsritamara	60.59	285	P	P	03 28 27.2	+0.8
CN2	Changchun	60.61	334	*e*P	P	03 28 27.8	+1.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GSI	Gunungsitoli	60.83	277	P	P	03 28 27.1	-1.0
GSI	Gunungsitoli	60.83	277	P	P	03 28 29.3	+1.3
GSI	Gunungsitoli	60.83	277	P	P	03 28 29.1	+1.1
	comp=Z,165nm,1.6s						
ENH	Enshi	60.91	312	P	P	03 28 29.8	+1.5
SLVN	Son La	61.07	301	P	P	03 28 29.2	-0.4
SLVN	Son La	61.07	301	P	P	03 28 30.8	+1.2
TAOE	Nuku Hiva Isla	61.27	95	*e*LR	LR	03 46 31.2	
	comp=Z,1µm,23.4s						
LYN	LuoYang	61.27	318	P	P	03 28 33.0	+2.4
LYN				sP	sP	03 28 39.3	-0.4
LYN				pmax	pmax		
	comp=Z,68nm,1.4s						
BNX	BinXian	61.36	336	⇑P	P	03 28 31.5	+0.5
BNX				pmax	pmax		
	comp=Z,18nm,1.6s						
HNS	HongShan	61.62	322	⇑P	P	03 28 33.0	+0.1
HNS				pmax	pmax		
	comp=Z,75nm,1.4s						
PET	Petropavlovsk	62.29	1	P	P	03 28 36.9	-0.1
PET				IAmb	IAmb	03 28 55.1	
	comp=Z,59nm,1.3s						
PET	Petropavlovsk	62.29	1	⇓*e*P	P	03 28 36.6	-0.4
PET				pmax	pmax		
	comp=Z,37nm,1.3s						
PEA0B	Petropavlovsk-	62.37	360	P	P	03 28 37.5	-0.1
PEA0B	Petropavlovsk-	62.37	360	⇑*e*P	P	03 28 38.2	+0.6
PETK	Petropavlovsk-	62.37	360	P	P	03 28 36.9	-0.7
PETK	Petropavlovsk-	62.37	360	P	P	03 28 36.1	-1.5
	comp=Z,5.5nm,0.7s,baz=234,slow=10,SNR=4.7						
PETK				LR	LR	03 51 52.0	
	comp=Z,2µm,21.9s,baz=281,slow=32						
	comp=Z,5.5nm,0.7s						
PETK	Petropavlovsk-	62.37	360	P	P	03 28 36.9	-0.7
BJT	Baijiatuau	62.49	325	P	P	03 28 40.4	+1.7
BJI	Beijing	62.50	325	P	P	03 28 40.5	+1.8
BJI				pmax	pmax		
	comp=Z,1µm,11.2s						
BJI				LR	LR		
	comp=Z,1µm,12.4s						
BJI				LR	LR		
	comp=Z,800nm,13.6s						
BJI				LR	LR		
	comp=Z,2µm,12.5s						
MLSI	Meulaboh, Aceh	62.60	280	P	P	03 28 41.3	+1.3
	comp=Z,158nm,1.3s						
KLR	Kul'dur	62.78	341	⇑*e*P	P	03 28 40.7	+0.3
KLR				pmax	pmax		
	comp=Z,30nm,1.7s						
KLR				MLR	MLR		
	comp=Z,1µm,14.0s						
TIY	Taiyuan	63.22	321	*e*P	P	03 28 46.3	+2.6
TIY				pmax	pmax		
	comp=Z,32nm,0.6s						
XAN	Xi'an	63.37	316	⇑P	P	03 28 44.3	-0.4
XAN				pmax	pmax		
	comp=Z,27nm,1.1s						
KMI	Kunming	63.64	304	P	P	03 28 47.8	+0.9
KMI				pmax	pmax		
	comp=Z,78nm,1.7s						
CM31	Chiang Mai Arr	64.29	296	P	P	03 28 50.1	-0.9
CMAR	Chiang Mai Arr	64.29	296		P	03 28 49.7	-1.3
CMAR	Chiang Mai Arr	64.29	296	P	P	03 28 50.4	-0.6
	comp=Z,34nm,1.1s,baz=124,slow=4.8,SNR=36						
CMAR				PKPPKP	P'P'df	03 57 46.5	+4.9
	comp=Z,1.8nm,0.3s,baz=293,slow=3.9,SNR=6.3						
	comp=Z,34nm,1.1s						
CMAR	Chiang Mai Arr	64.29	296	*i* P	P	03 28 51.9	+0.9
CMAR				pmax	pmax		
	comp=Z,35nm,1.1s						
CHTO	Chiang Mai	64.41	296	P	P	03 28 51.1	-0.7
CHTO	Chiang Mai	64.41	296	P	P	03 28 52.8	+1.0
CHTO	Chiang Mai	64.41	296	P	P	03 28 51.1	-0.7
CHTO				pmax	pmax		
	comp=Z,186nm,1.6s						
ADK	Adak	65.00	17	P	P	03 28 54.9	-0.1
ADK				IAmb	IAmb	03 28 56.6	
	comp=Z,40nm,0.8s						
ADK	Adak	65.00	17	P	P	03 28 55.6	+0.6
ADK	Adak	65.00	17	P	P	03 28 54.9	-0.1
ADK				pmax	pmax		
	comp=Z,40nm,0.8s						
PZH	PanZhiHua	65.05	305	P	P	03 28 56.0	0.0
PZH				pmax	pmax		
	comp=Z,50nm,1.6s						
PZH				pmax	pmax		
	comp=Z,210nm,5.7s						
CASY	Casey	65.08	199	P	P	03 28 54.9	-0.4
HEH	HeiHe	65.11	339	*e*P	P	03 28 55.5	-0.2
HEH				pmax	pmax		
	comp=Z,19nm,1.1s						
XLT	XiLinHaoTe	65.19	328	*e*P	P	03 28 56.8	+0.3
XLT				sP	sP	03 29 05.0	-0.8
XLT				pmax	pmax		
	comp=Z,31nm,1.0s						
CD2	Chengdu	65.48	310	P	P	03 28 59.3	+0.7
CD2				pmax	pmax		
	comp=Z,130nm,0.7s						
HHC	Hu-ho-hao-te	65.70	323	*e*P	P	03 29 03.0	+3.1
HHC				pmax	pmax		
	comp=Z,28nm,1.1s						
BTO	Baotou	66.47	322	*e*P	P	03 29 08.8	+3.9
BTO				pP	sP	03 29 13.5	-0.5
BTO				sP	pwP	03 29 15.5	-1.5
BTO				PP	PP	03 31 37.0	+5.4
BTO				S	S	03 38 03.5	+9.4
BTO				pmax	pmax		
	comp=Z,41nm,0.7s						
BTO				LR	LR		
	comp=Z,6µm,15.7s						
BTO				LR	LR		
	comp=Z,4µm,13.3s						
BTO				LR	LR		
	comp=Z,6µm,13.1s						
TNCH	TengChong	67.09	302	⇑P	P	03 29 12.0	+2.8
TNCH				pmax	pmax		
	comp=Z,300nm,1.3s						
HIA	Hailar	67.33	334	P	P	03 29 13.6	+3.5
LZH	Lanzhou	67.98	315	*e*P	P	03 29 15.3	+0.7
LZH				sP	sP	03 29 24.3	+0.6
LZH				pmax	pmax		
	comp=Z,79nm,1.8s						
VNDA	Vanda	68.02	179	P	P	03 29 14.1	+0.1
VNDA				IAmb	IAmb	03 29 25.7	
	comp=Z,34nm,1.1s						
VNDA	Vanda	68.02	179	P	P	03 29 14.9	+1.0
	comp=Z,16nm,1.1s,baz=343,slow=7.1,SNR=41						
	comp=Z,16nm,1.1s						
VNDA	Vanda	68.02	179	P	P	03 29 15.0	+1.0
ZEA	Zeya	68.09	341	*e*P	P	03 29 15.7	+1.0
ZEA				pmax	pmax		
	comp=N,20nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,40nm,1.0s						
NIKH	Nikolski High	68.46	21	P	P	03 29 16.2	-0.8
	baz=216						
MA2	Magadan	69.08	356	P	P	03 29 21.2	+0.5
MA2	Magadan	69.08	356	*ce*P	P	03 29 21.1	+0.4
MA2				pmax	pmax		
	comp=Z,39nm,1.7s						
UNV	Unalaska Valle	70.00	22	P	P	03 29 29.1	+2.6
CIT	Chita	72.05	333	*e*P	P	03 29 40.3	+1.2
CIT				*e*		03 30 01.2	
CIT				*e*		03 32 27.2	
CIT				*e*		03 46 49.2	
CIT				pmax	pmax		
	comp=Z,121nm,2.7s						
SEY	Seymchan	72.34	357	⇑*e*P	P	03 29 40.8	+0.3
SEY				pmax	pmax		
	comp=Z,46nm,1.7s						
GTA	Gaotai	72.40	316	P	P	03 29 42.8	+1.2
GTA				sP	pwP	03 29 53.3	-0.5
GTA				pmax	pmax		
	comp=Z,18nm,1.3s						
ULN	Ulaanbaatar	72.56	327	P	P	03 29 42.6	+0.2
ULN				IAmb	IAmb	03 29 52.4	
	comp=Z,55nm,1.3s						
ULN	Ulaanbaatar	72.56	327	⇓*e*P	P	03 29 43.5	+1.1
ULN				pmax	pmax		
	comp=Z,48nm,1.7s						
SONM	Songino Array	72.89	327	P	P	03 29 44.2	-0.1
SONM	Songino Array	72.89	327	P	P	03 29 44.2	-0.1
	comp=Z,6.8nm,1.0s,baz=136,slow=5.5,SNR=18						
SONM				LR	LR	04 01 24.1	
	comp=Z,610nm,20.2s,baz=328,slow=36						
	comp=Z,6.8nm,1.0s						
SDPT	Sand Point	73.43	23	P	P	03 29 46.5	-0.6
	baz=223						
GOMU	GeErMu	74.51	312	P	P	03 29 55.3	+0.9
GOMU				sP	sP	03 30 02.5	-1.1
GOMU				pmax	pmax		
	comp=Z,12nm,1.0s						
YAK	Yakutsk	74.59	347	P	P	03 29 54.0	+0.3
YAK	Yakutsk	74.59	347	*e*P	P	03 29 54.5	+0.8
YAK				*e**PP	pP	03 29 58.2	-2.4
YAK				*e*		03 30 09.7	
YAK				*e*		03 32 41.1	
YAK				*e*S	S	03 39 31.7	+4.1
YAK				*e**SS	SKSac	03 39 53.9	-6.2
YAK				*e*SS	SS	03 44 09.5	-5.7
YAK				pmax	pmax		
	comp=Z,59nm,0.9s						
YAK				pmax	pmax		
	comp=N,11nm,1.1s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,5µm,13.5s						
YAK				pmax	pmax		
	comp=N,3µm,16.4s						
YAK				pmax	pmax		
	comp=E,2µm,13.4s						
YAK				smax	smax		
	comp=E,2µm,10.8s						
YAK				smax	smax		
	comp=N,2µm,11.6s						
YAK				MLR	MLR		
	comp=Z,3µm,25.0s						
YAK				MLR	MLR		
	comp=N,1µm,19.0s						
YAK				MLR	MLR		
	comp=E,746nm,24.0s						
CHIR	Chirikof Islan	75.73	25	P	P	03 29 60.0	-0.5
	baz=228						
BOD	Bodaibo	75.94	338	*e*P	P	03 30 01.5	-0.1
BOD				pmax	pmax		
	comp=Z,46nm,1.5s						
O14K	Tigyukauivet M	76.02	20	P	P	03 30 01.4	-0.7
O14K				IAmb	IAmb	03 30 24.7	
	comp=Z,97nm,1.4s						
O14K	Tigyukauivet M	76.02	20	P	P	03 30 02.0	0.0
	baz=222						
ZAK	Zakamensk	76.04	328	*e*P	P	03 30 02.7	+0.2
ZAK				pmax	pmax		
	comp=Z,35nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.5s						
N14K	Kuskokwak Cree	76.38	20	P	P	03 30 04.7	+0.6
	baz=221						
O15K	Ungalikthiuk R	76.47	21	P	P	03 30 05.1	+0.5
	baz=223						
GAMB	Gambell	76.69	13	P	P	03 30 06.2	+0.4
	baz=211						
SII	Sitkinak Islan	76.82	25	P	P	03 30 06.9	+0.2
	baz=229						
M14K	Bethel	76.92	19	P	P	03 30 07.5	+0.4
	baz=221						
K13K	Kusilvak Mount	77.00	17	P	P	03 30 08.1	+0.5
	baz=218						
P16K	Nushagak River	77.02	22	P	P	03 30 08.2	+0.5
	baz=225						
N15K	Kwethluk River	77.10	20	P	P	03 30 08.7	+0.4
	baz=223						
L14K	Kuka Creek	77.14	18		P	03 30 07.5	-0.8
L14K				IAmb	IAmb	03 30 18.9	
	comp=Z,69nm,1.2s						
L14K	Kuka Creek	77.14	18	P	P	03 30 09.1	+0.8
	baz=220,SNR=7.1						
Q16K	King Salmon	77.27	23	P	P	03 30 09.5	+0.4
	baz=226						
Q17K	Contact Creek	77.28	23	P	P	03 30 09.6	+0.3
	baz=227						
M15K	Kasigluk River	77.29	20	P	P	03 30 09.7	+0.5
	baz=222						
R18K	Karluk	77.38	24	P	P	03 30 10.1	+0.3
	baz=228						
O16K	Kokwok River B	77.38	21	P	P	03 30 10.5	+0.7
	baz=225						
ACHA	Angle Creek He	77.46	23	P	P	03 30 08.9	-1.4
BILL	Bilibino	77.59	3		P	03 30 10.9	+0.1
BILL				IAmb	IAmb	03 30 33.4	
	comp=Z,48nm,1.1s						
BILL	Bilibino	77.59	3	⇑*e*P	P	03 30 10.8	0.0
BILL				pmax	pmax		
	comp=Z,42nm,1.7s						
BILL				MLR	MLR		
	comp=Z,1µm,15.0s						
OHAK	Old Harbor	77.62	25	P	P	03 30 11.7	+0.5
	baz=230						
P17K	Kvichak River	77.71	22	P	P	03 30 12.5	+0.9
	baz=226						
L15K	Ungalak Mounta	77.77	19	P	P	03 30 12.4	+0.6
	baz=221						
N16K	Nishlik Lake	77.78	20	P	P	03 30 12.6	+0.6

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      baz=224
O17K  Koliganek Bris   77.87  22  P       P       03 30 12.6 +0.2
      baz=226
Q18K  Katmai Hardscr   77.88  23  P       P       03 30 12.9 +0.1
      baz=228
EVN   Everest          77.93 301          P       03 30 12.4 -2.0
MOY   Mondy            77.95 328 eP       P       03 30 15.8 +2.5
MOY                               pmax    pmax
      comp=Z,68nm,3.3s
J14K  Nanvaranak Lak   77.97  17          P       03 30 12.3 -0.6
J14K                              IAmb    IAmb    03 30 23.7
      comp=Z,108nm,1.4s
J14K  Nanvaranak Lak   77.97  17  P       P       03 30 14.3 +1.4
      baz=219
M16K  Timber Creek     78.11  20  P       P       03 30 13.3 -0.5
M16K                              IAmb    IAmb    03 30 24.5
      comp=Z,53nm,1.1s
M16K  Timber Creek     78.11  20  P       P       03 30 14.6 +0.8
      baz=224
K15K  Wolf Creek Mou   78.22  18          P       03 30 14.0 -0.4
K15K                              IAmb    IAmb    03 30 25.1
      comp=Z,81nm,1.2s
K15K  Wolf Creek Mou   78.22  18  P       P       03 30 15.4 +1.0
      baz=221,SNR=10
KDAK  Kodiak Island    78.28  25⇑iP       P       03 30 14.1 -0.7
KDAK                              pmax    pmax
      comp=Z,44nm,2.3s
KDAK  Kodiak Island    78.28  25  P       P       03 30 15.2 +0.4
      baz=230
P18K  Big Mountain,    78.30  22          P       03 30 13.3 -1.6
P18K  Big Mountain,    78.30  22  P       P       03 30 15.9 +0.9
      baz=227
N17K  Nushagak Hills   78.36  21          P       03 30 15.0 -0.2
N17K                              IAmb    IAmb    03 30 26.1
      comp=Z,45nm,1.2s
N17K  Nushagak Hills   78.36  21  P       P       03 30 15.8 +0.5
      baz=225
L16K  Owhat River      78.44  19          P       03 30 14.4 -1.2
L16K                              IAmb    IAmb    03 30 34.5
      comp=Z,66nm,1.5s
L16K  Owhat River      78.44  19  P       P       03 30 16.4 +0.8
      baz=223,SNR=7.0
PALK  Pallekele        78.50 279  P       P       03 30 15.2 -1.9
PALK  Pallekele        78.50 279  P       P       03 30 15.2 -1.9
PALK                              pmax    pmax
      comp=Z,165nm,1.6s
Q19K  Cape Douglas,    78.60  23  P       P       03 30 16.9 +0.3
      baz=229
O18K  Koktuh Hills     78.62  22  P       P       03 30 17.0 +0.4
      baz=227
Q20K  Shuyak Island    78.89  24  P       P       03 30 18.6 +0.5
      baz=230
M17K  Holitna River    78.89  20          P       03 30 17.7 -0.4
M17K  Holitna River    78.89  20  P       P       03 30 19.1 +0.9
      baz=225,SNR=6.6
ANM   Nome             78.90  15  P       P       03 30 19.1 +1.0
      baz=217
N18K  Kilae Creek      78.93  21          P       03 30 18.0 -0.4
N18K                              IAmb    IAmb    03 30 29.1
      comp=Z,47nm,1.1s
N18K  Kilae Creek      78.93  21  P       P       03 30 19.5 +1.1
      baz=227,SNR=10
TNA   Tin City         79.08  14  P       P       03 30 20.0 +1.0
      baz=214
L17K  Donlin           79.13  19  P       P       03 30 20.1 +0.7
      baz=224,SNR=12
P19K  Oil Pt           79.23  23          P       03 30 20.1  0.0
P19K                              IAmb    IAmb    03 30 29.7
      comp=Z,47nm,0.9s
P19K  Oil Pt           79.23  23  P       P       03 30 20.9 +0.8
      baz=229
J16K  Anvik River      79.25  18  IAmb    IAmb    03 30 23.4
      comp=Z,54nm,1.1s
J16K  Anvik River      79.25  18  P       P       03 30 21.0 +1.0
      baz=222,SNR=12
F14K  Arctic Creek     79.39  14  P       P       03 30 21.9 +1.2
      baz=216
ILSW  Iliamna Southw   79.48  23  IAmb    IAmb    03 30 31.3
      comp=Z,44nm,1.2s
M18K  Stony River      79.51  21  P       P       03 30 22.8 +1.3
      baz=227,SNR=13
N19K  Bonanza Creek    79.53  22  P       P       03 30 22.7 +1.0
      baz=228
K17K  Iditarod         79.55  19  IAmb    IAmb    03 30 24.7
      comp=Z,36nm,0.9s
K17K  Iditarod         79.55  19  P       P       03 30 22.8 +1.1
      baz=224,SNR=15
G15K  Niukluk          79.59  16  P       P       03 30 22.8 +1.0
      baz=218
I17K  Unalakleet       79.67  17  P       P       03 30 23.9 +1.6
      baz=222,SNR=7.1
L18K  Granite Mounta   79.72  20  IAmb    IAmb    03 30 33.0
      comp=Z,50nm,0.9s
L18K  Granite Mounta   79.72  20  P       P       03 30 24.0 +1.3
      baz=226,SNR=36
O20K  Slope Mountain   79.74  23  P       P       03 30 24.3 +1.4
      baz=230
J17K  VABM Dome        79.80  18  P       P       03 30 24.2 +1.2
      baz=223,SNR=14
H16K  Elim             79.80  16  P       P       03 30 24.4 +1.5
      baz=220
HOM   Homer            79.85  24  P       P       03 30 24.7 +1.4
      baz=231
CNPM  China Poot       79.93  24  P       P       03 30 23.5 -0.3
CNPM                              IAmb    IAmb    03 30 34.1
      comp=Z,88nm,1.2s
F15K  North Star Dit   80.00  15  P       P       03 30 25.5 +1.5
      baz=218
BRLK  Bradley Lake     80.22  24  P       P       03 30 24.9 -0.6
BRSE  Bradley Lake S   80.26  24  P       P       03 30 26.9 +1.3
      baz=232
M19K  Big River Lodg   80.30  21  IAmb    IAmb    03 30 29.0
      comp=Z,49nm,0.8s
M19K  Big River Lodg   80.30  21  P       P       03 30 27.5 +1.8
      baz=228,SNR=44
L19K  White Mountain   80.32  21  IAmb    IAmb    03 30 28.9
      comp=Z,46nm,0.8s
L19K  White Mountain   80.32  21  P       P       03 30 26.9 +0.9
      baz=227,SNR=48
G16K  Koyuk River      80.35  16  IAmb    IAmb    03 30 35.7
      comp=Z,35nm,0.9s
G16K  Koyuk River      80.35  16  P       P       03 30 27.0 +1.1
      baz=220,SNR=9.8
QSPA  South Pole Qui   80.48 180  P       P       03 30 25.7 -1.3
QSPA  South Pole Qui   80.48 180  P       P       03 30 27.6 +0.6
      comp=Z,26nm,1.0s,baz=356,slow=1.0,SNR=50
      comp=Z,26nm,1.0s
J18K  Innoko River     80.59  19          P       03 30 26.3 -1.0
J18K                              IAmb    IAmb    03 30 37.6
      comp=Z,97nm,1.8s
J18K  Innoko River     80.59  19  P       P       03 30 27.8 +0.5
      baz=226,SNR=18
N20K  Mount Spurr      80.62  22  P       P       03 30 27.5 -0.1
      baz=230
H17K  Granite Mounta   80.68  17          P       03 30 26.9 -0.8
H17K                              IAmb    IAmb    03 30 37.5
      comp=Z,93nm,1.9s
H17K  Granite Mounta   80.68  17  P       P       03 30 28.5 +0.8
      baz=222,SNR=9.4
M20K  Styx River       80.73  21  P       P       03 30 27.4 -0.8
M20K  Styx River       80.73  21  P       P       03 30 29.4 +1.2
      baz=229
L20K  Farewell, AK     80.86  21  P       P       03 30 30.4 +1.6
      baz=228
G17K  Kiwalik Mounta   80.89  16  P       P       03 30 29.6 +0.7
      baz=222,SNR=9.6
SLKM  Skilak Lake      80.94  23          P       03 30 28.6 -0.7
SLKM                              IAmb    IAmb    03 30 39.1
      comp=Z,78nm,1.3s
SEW   Seward           81.00  24  P       P       03 30 28.4 -1.0
SEW                               IAmb    IAmb    03 30 39.6
      comp=Z,143nm,1.8s
SEW   Seward           81.00  24  P       P       03 30 30.3 +0.8
      baz=233
H18K  Honhosa River    81.29  17  P       P       03 30 30.6 -0.4
H18K  Honhosa River    81.29  17  P       P       03 30 31.6 +0.6
      baz=224
J19K  Poorman          81.31  19          P       03 30 30.5 -0.6
J19K                              IAmb    IAmb    03 30 41.8
      comp=Z,70nm,1.6s
J19K  Poorman          81.31  19  P       P       03 30 31.9 +0.8
      baz=226,SNR=12
SUA   Susitna One      81.34  22  P       P       03 30 29.6 -1.9
SUA                               IAmb    IAmb    03 30 40.1
      comp=Z,112nm,1.8s
SUA   Susitna One      81.34  22  P       P       03 30 31.3 -0.2
      baz=231
SKT   Skwentna         81.37  22  P       P       03 30 29.9 -1.6
SKT   Skwentna         81.37  22  P       P       03 30 31.1 -0.5
      baz=230
K20K  Telida           81.38  20          P       03 30 29.7 -1.8
K20K                              IAmb    IAmb    03 30 41.5
      comp=Z,32nm,1.0s
K20K  Telida           81.38  20  P       P       03 30 32.5 +0.9
      baz=228,SNR=21
GCSA  Galena City Sc   81.44  18  P       P       03 30 33.0 +1.3
      baz=225
F17K  Baldwin Pennin   81.44  15          P       03 30 31.3 -0.5
F17K                              IAmb    IAmb    03 30 42.1
      comp=Z,141nm,1.9s
F17K  Baldwin Pennin   81.44  15  P       P       03 30 33.5 +1.8
      baz=221,SNR=6.8
RC01  Rabbit Creek A   81.49  23  P       P       03 30 31.2 -0.9
RC01                              IAmb    IAmb    03 30 42.2
      comp=Z,64nm,1.3s
RC01  Rabbit Creek A   81.49  23  P       P       03 30 32.4 +0.3
      baz=232,SNR=8.5
PPLA  Purkeypile       81.72  21  P       P       03 30 32.3 -1.2
PPLA                              IAmb    IAmb    03 30 43.7
      comp=Z,111nm,1.7s
PPLA  Purkeypile       81.72  21  P       P       03 30 34.0 +0.5
      baz=230
G18K  Tagagawik        81.75  17          P       03 30 32.5 -1.0
G18K  Tagagawik        81.75  17  P       P       03 30 33.6 +0.2
      baz=223,SNR=16
M22K  Willow           81.75  22  P       P       03 30 32.7 -0.7
M22K  Willow           81.75  22  P       P       03 30 34.4 +0.9
      baz=232
P23K  Montague Islan   81.76  25  P       P       03 30 32.2 -1.4
P23K  Montague Islan   81.76  25  P       P       03 30 34.5 +0.9
      baz=234
E17K  Hotham Inlet     81.78  15  P       P       03 30 34.3 +0.8
      baz=220,SNR=14
C16K  Lisburne Hills   81.88  13  P       P       03 30 34.8 +0.8
      baz=217
PWL   Port Wells       81.89  24  P       P       03 30 33.2 -1.1
PWL   Port Wells       81.89  24  P       P       03 30 34.7 +0.4
      baz=234,SNR=24
J20K  Nowinta River    81.91  19          P       03 30 32.9 -1.4
J20K                              IAmb    IAmb    03 30 45.0
      comp=Z,109nm,1.7s
J20K  Nowinta River    81.91  19  P       P       03 30 35.2 +0.9
      baz=228,SNR=19
D17K  Noatak River     81.95  14  P       P       03 30 36.5 +2.1
      baz=219,SNR=7.9
F18K  Selawik          81.99  16  P       P       03 30 36.9 +2.3
      baz=222,SNR=9.9
PMR   Palmer           82.03  23          P       03 30 33.1 -1.8
PMR   Palmer           82.03  23  P       P       03 30 36.5 +1.6
PMR   Palmer           82.03  23  P       P       03 30 33.1 -1.8
PMR                               pmax    pmax
      comp=Z,140nm,1.7s
PMR   Palmer           82.03  23  P       P       03 30 35.1 +0.2
      baz=233,SNR=9.8
CAST  Castle Rocks     82.10  20  P       P       03 30 34.4 -0.9
CAST                              IAmb    IAmb    03 30 36.5
      comp=Z,33nm,0.7s
CAST  Castle Rocks     82.10  20  P       P       03 30 35.4 +0.1
      baz=230
CUT   Chulitna         82.10  22  P       P       03 30 36.2 +0.9
      baz=232
H19K  Roundabout Mou   82.12  18          P       03 30 34.6 -0.8
H19K  Roundabout Mou   82.12  18  P       P       03 30 36.0 +0.7
      baz=226,SNR=17
KNK   Knik Glacier     82.18  23  P       P       03 30 34.5 -1.2
KNK                               IAmb    IAmb    03 30 46.1
      comp=Z,49nm,1.1s
KNK   Knik Glacier     82.18  23  P       P       03 30 36.7 +0.9
      baz=233
GHO   Glory Hole Cre   82.21  23  P       P       03 30 35.5 -0.5
GHO                               IAmb    IAmb    03 30 54.5
      comp=Z,87nm,1.3s
I20K  Naaghedeneel     82.22  19  P       P       03 30 36.4 +0.5
I20K  Naaghedeneel     82.22  19  P       P       03 30 36.5 +0.6
      baz=228,SNR=5.6
RDOG  Red Dog Mine     82.27  14  P       P       03 30 35.4 -0.7
RDOG                              IAmb    IAmb    03 30 45.8
      comp=Z,38nm,1.1s
RDOG  Red Dog Mine     82.27  14  P       P       03 30 37.2 +1.1
      baz=219
CHUM  Lake Minchumin   82.32  20  P       P       03 30 37.5 +1.1
      baz=230
E18K  Tukpahlearik C   82.35  15          P       03 30 36.0 -0.5
E18K  Tukpahlearik C   82.35  15  P       P       03 30 37.5 +1.0
      baz=221,SNR=8.1
G19K  Purcell Mounta   82.37  17          P       03 30 36.1 -0.6
G19K                              IAmb    IAmb    03 30 47.1
      comp=Z,97nm,1.5s
G19K  Purcell Mounta   82.37  17  P       P       03 30 38.2 +1.5
      baz=225,SNR=28
GLI   Glacier Island   82.40  24  P       P       03 30 36.2 -0.7
GLI   Glacier Island   82.40  24  P       P       03 30 37.5 +0.6
      baz=235,SNR=12
WMQ   Urumqi           82.48 317 eP       P       03 30 38.8 +0.9
WMQ                               pP      PcP     03 30 41.0 -1.9
WMQ                               pmax    pmax
      comp=Z,67nm,1.7s
C17K  DeLong Mountai   82.53  14  P       P       03 30 38.0 +0.5
      baz=219,SNR=5.2
H20K  Anotleneega Mo   82.57  18  P       P       03 30 39.0 +1.3
      baz=227,SNR=9.1
FID   Port Fidalgo     82.57  24  P       P       03 30 36.2 -1.6
FID                               IAmb    IAmb    03 30 47.8
      comp=Z,74nm,1.6s
KTH   Kantishna Hill   82.59  21  P       P       03 30 37.1 -0.9
KTH                               IAmb    IAmb    03 30 46.9
      comp=Z,59nm,1.2s
HYB   Hyderabad        82.63 289 eP       P       03 30 39.0 -0.1
HYB                              epP      PcP     03 30 43.9 -0.2
HYB                              ePP      PP      03 33 47.7 -1.4
HYB                              eS       S       03 40 55.4 -0.2
F19K  Shaleruckik Mo   82.67  16          P       03 30 37.0 -1.2
F19K                              IAmb    IAmb    03 30 48.2
      comp=Z,133nm,2.0s
F19K  Shaleruckik Mo   82.67  16  P       P       03 30 38.5 +0.3
      baz=224,SNR=19
M23K  Glacier View     82.68  23  P       P       03 30 38.7 +0.3
      baz=234
TRF   Thorofare Moun   82.74  21  P       P       03 30 37.1 -1.8
TRF                               IAmb    IAmb    03 30 47.3
      comp=Z,33nm,1.0s
TRF   Thorofare Moun   82.74  21  P       P       03 30 38.2 -0.7
      baz=232,SNR=25
EYAK  Cordova Ski Ar   82.75  25  P       P       03 30 40.9 +2.2
EYAK  Cordova Ski Ar   82.75  25  P       P       03 30 39.0 +0.3
      baz=236
SCM   Sheep Creek Mo   82.86  23  P       P       03 30 38.5 -0.9
SCM   Sheep Creek Mo   82.86  23  P       P       03 30 38.5 -0.9
SCM                               pmax    pmax
      comp=Z,98nm,1.3s
SCM   Sheep Creek Mo   82.86  23  P       P       03 30 40.1 +0.7
      baz=234,SNR=9.7
BPAW  Bear Paw Mtn.    82.91  20          P       03 30 38.1 -1.5
BPAW                              IAmb    IAmb    03 30 48.8
      comp=Z,78nm,1.8s
BPAW  Bear Paw Mtn.    82.91  20  P       P       03 30 38.9 -0.7
      baz=231,SNR=17
WAT1  Susitna Watana   82.99  22  P       P       03 30 40.6 +0.6
      baz=233
DIV   Divide           83.07  24  P       P       03 30 39.1 -1.4
DIV                               IAmb    IAmb    03 30 50.8
      comp=Z,59nm,1.6s
MAW   Mawson           83.13 203  P       P       03 30 40.4 -0.3
      comp=Z,19nm,1.1s,baz=90,slow=6.6,SNR=14
      comp=Z,19nm,1.1s
C18K  Utukok River     83.14  14          P       03 30 39.1 -1.5
C18K  Utukok River     83.14  14  P       P       03 30 40.9 +0.2
      baz=221,SNR=5.3
WAT6  Susitna Watana   83.14  22  P       P       03 30 41.5 +0.5
      baz=234,SNR=16
KLU   Klutina          83.22  24  P       P       03 30 40.3 -1.0
KLU                               IAmb    IAmb    03 31 09.0
      comp=Z,38nm,1.1s
KLU   Klutina          83.22  24  P       P       03 30 42.1 +0.8
      baz=236,SNR=10
TIXI  Tiksi            83.22 351          P       03 30 41.0  0.0
TIXI  Tiksi            83.22 351⇓eP       P       03 30 41.8 +0.9
TIXI                              pmax    pmax
      comp=Z,18nm,1.7s
RND   Reindeer         83.23  21          P       03 30 40.0 -1.3
RND   Reindeer         83.23  21  P       P       03 30 40.0 -1.3
RND                               pmax    pmax
      comp=Z,104nm,1.4s
IMAR  Indian Mountai   83.25  18  P       P       03 30 40.3 -0.9
HMT   Hamilton         83.26  25  P       P       03 30 41.3 -0.1
HMT                               IAmb    IAmb    03 30 52.0
      comp=Z,102nm,2.0s
E19K  Redstone River   83.27  16  P       P       03 30 40.6 -0.7
E19K                              IAmb    IAmb    03 30 51.2
      comp=Z,47nm,0.9s
E19K  Redstone River   83.27  16  P       P       03 30 42.0 +0.7
      baz=225,SNR=23
I21K  Tanana           83.27  19  P       P       03 30 40.8 -0.6
I21K                              IAmb    IAmb    03 30 51.1
      comp=Z,33nm,0.9s
I21K  Tanana           83.27  19  P       P       03 30 42.4 +1.1
      baz=230
H21K  Melozitna Rive   83.32  18  P       P       03 30 41.3 -0.4
H21K  Melozitna Rive   83.32  18  P       P       03 30 42.7 +1.1
      baz=229,SNR=11
F20K  Avaraart Lake    83.40  17  P       P       03 30 41.1 -0.8
F20K  Avaraart Lake    83.40  17  P       P       03 30 42.9 +1.0
      baz=226
MCK   McKinley         83.40  21          P       03 30 40.2 -1.9
MCK   McKinley         83.40  21  P       P       03 30 40.2 -1.9
MCK                               pmax    pmax
      comp=Z,129nm,1.2s
MCK   McKinley         83.40  21  P       P       03 30 41.8 -0.3
      baz=233,SNR=31
BMRM  Bremner River    83.46  25  P       P       03 30 41.6 -0.9
BMRM                              IAmb    IAmb    03 30 52.8
      comp=Z,67nm,1.6s
BMRM  Bremner River    83.46  25  P       P       03 30 43.3 +0.8
      baz=237
M24K  Tolsona, Glenn   83.47  23  P       P       03 30 41.2 -1.3
M24K  Tolsona, Glenn   83.47  23  P       P       03 30 44.0 +1.5
      baz=235,SNR=8.1
BWN   Browne           83.48  21  P       P       03 30 41.9 -0.6
BERG  Berg Lake        83.52  25  P       P       03 30 41.5 -1.3
BERG                              IAmb    IAmb    03 30 54.0
      comp=Z,28nm,1.0s
B18K  Kokolik River    83.54  13  P       P       03 30 43.8 +1.2
      baz=220
DHY   Denali Highway   83.57  22          P       03 30 42.0 -1.1
DHY                               IAmb    IAmb    03 31 01.0
      comp=Z,46nm,1.2s
DHY   Denali Highway   83.57  22  P       P       03 30 43.3 +0.1
      baz=234,SNR=21
MLY   Manley           83.58  20          P       03 30 42.5 -0.6
MLY                               IAmb    IAmb    03 30 52.1
      comp=Z,32nm,1.1s
MLY   Manley           83.58  20  P       P       03 30 43.4 +0.3
      baz=231,SNR=26
G21K  Allakaket        83.68  18  P       P       03 30 42.2 -1.3
G21K  Allakaket        83.68  18  P       P       03 30 44.5 +1.0
      baz=228,SNR=7.4
D19K  Kuna River       83.78  15          P       03 30 43.5 -0.4
D19K  Kuna River       83.78  15  P       P       03 30 44.3 +0.3
      baz=224,SNR=13
N25K  Chitina, Valde   83.81  24  P       P       03 30 42.8 -1.5
N25K                              IAmb    IAmb    03 30 55.0
      comp=Z,63nm,1.4s
N25K  Chitina, Valde   83.81  24  P       P       03 30 45.4 +1.1
      baz=237,SNR=8.3
C19K  Lookout Ridge    83.86  14  P       P       03 30 43.6 -0.8
C19K                              IAmb    IAmb    03 30 55.9
      comp=Z,92nm,1.8s
C19K  Lookout Ridge    83.86  14  P       P       03 30 45.1 +0.7
      baz=222,SNR=9.6
NEA2  Nenana           83.87  20  P       P       03 30 43.3 -1.2
NEA2                              IAmb    IAmb    03 30 52.9
      comp=Z,38nm,1.0s
NEA2  Nenana           83.87  20  P       P       03 30 44.2 -0.3
      baz=232,SNR=35
WAX   Waxell Ridge     83.91  25  P       P       03 30 43.9 -1.0
WAX                               IAmb    IAmb    03 30 56.0
      comp=Z,18nm,0.8s
H22K  Ishtalitna Cre   83.93  19  P       P       03 30 45.5 +0.8
      baz=230,SNR=17
CRQE  Cirque           83.97  25  P       P       03 30 45.8 +0.6
      baz=238
HARP  HAARP            84.02  23  P       P       03 30 45.8 +0.5
      baz=236
GLB   Gilahina Butte   84.04  24          P       03 30 44.7 -0.8
VRDI  Verde Repeater   84.07  25          P       03 30 44.7 -1.1
VRDI                              IAmb    IAmb    03 30 56.0
      comp=Z,46nm,1.6s
E20K  Nigu River       84.11  16  P       P       03 30 46.4 +0.6
      baz=226,SNR=25
I23K  Minto, Yukon-K   84.11  20  P       P       03 30 44.4 -1.2
I23K  Minto, Yukon-K   84.11  20  P       P       03 30 45.6  0.0
      baz=232,SNR=10
WRH   Wood River Hil   84.14  21  P       P       03 30 44.7 -1.1
MESA  MESA             84.15  26  P       P       03 30 44.2 -2.1
MESA                              IAmb    IAmb    03 30 56.9
      comp=Z,68nm,1.7s
MESA  MESA             84.15  26  P       P       03 30 46.8 +0.6
      baz=239
F21K  Alatna River     84.16  17          P       03 30 44.5 -1.4
F21K                              IAmb    IAmb    03 30 56.1
      comp=Z,67nm,1.9s
F21K  Alatna River     84.16  17  P       P       03 30 46.5 +0.6
      baz=228,SNR=11
PAX   Paxson           84.22  23          P       03 30 45.5 -0.9
PAX                               IAmb    IAmb    03 30 56.6
      comp=Z,45nm,1.8s
PAX   Paxson           84.22  23  P       P       03 30 45.5 -0.9
PAX                               pmax    pmax
      comp=Z,45nm,1.8s
PAX   Paxson           84.22  23  P       P       03 30 47.3 +0.9
      baz=236
D20K  Etivluk River    84.32  15  P       P       03 30 46.3 -0.4
D20K                              IAmb    IAmb    03 30 56.4
      comp=Z,44nm,1.4s
D20K  Etivluk River    84.32  15  P       P       03 30 47.5 +0.8
      baz=225,SNR=16
MCARA McCarthy VSAT    84.33  25  P       P       03 30 47.7 +0.8
      baz=238
CCB   Clear Creek Bu   84.34  21          P       03 30 45.1 -1.7
CCB                               IAmb    IAmb    03 30 55.2
      comp=Z,20nm,1.0s
A19K  Wainwright       84.35  13  P       P       03 30 47.6 +0.8
      baz=221
COLA  College          84.46  20  P       P       03 30 46.1 -1.2
COLA                              IAmb    IAmb    03 30 55.8
      comp=Z,42nm,0.9s
COLA  College          84.46  20  P       P       03 30 49.4 +2.0
COLA  College          84.46  20ceP       P       03 30 47.0 -0.4
COLA                              pmax    pmax
      comp=Z,30nm,0.9s
COLA  College          84.46  20  P       P       03 30 48.0 +0.6
      baz=234
H23K  Yukon River      84.47  19  P       P       03 30 46.9 -0.6
H23K                              IAmb    IAmb    03 30 57.1
      comp=Z,38nm,1.0s
H23K  Yukon River      84.47  19  P       P       03 30 48.4 +0.8
      baz=232,SNR=21
HDA   Harding Lake     84.50  21  IAmb    IAmb    03 30 57.2
      comp=Z,59nm,1.3s
HDA   Harding Lake     84.50  21  P       P       03 30 48.5 +0.8
      baz=234,SNR=12
G22K  Bettles          84.55  18  P       P       03 30 49.6 +1.8
      baz=230,SNR=10
K24K  Donnelly Dome    84.58  22  IAmb    IAmb    03 31 01.8
      comp=Z,22nm,0.8s
K24K  Donnelly Dome    84.58  22  P       P       03 30 48.9 +0.8
      baz=236,SNR=7.4
F22K  John River       84.73  17  P       P       03 30 49.9 +1.1
      baz=229
IL31                   84.73  21  IAmb    IAmb    03 30 57.9
      comp=Z,22nm,1.0s
ILAR  Eielson Array    84.73  21  P       P       03 30 48.2 -0.7
ILAR  Eielson Array    84.73  21  P       P       03 30 47.9 -0.9
      comp=Z,8.1nm,0.9s,baz=276,slow=4.4,SNR=54
ILAR                              PKKPbc  PKKPbc  03 49 04.7 +3.3
      comp=Z,0.2nm,0.8s,baz=341,slow=3.4,SNR=4.4
      comp=Z,8.1nm,0.9s
ILAR  Eielson Array    84.73  21  P       P       03 30 48.2 -0.7
POKR  Poker Plat Res   84.75  20  P       P       03 30 50.0 +1.1
      baz=234
CTG   Chitna Glacier   84.81  25  P       P       03 30 50.5 +1.0
      baz=240
CTGM  Chitina Glacie   84.82  25  IAmb    IAmb    03 31 00.2
      comp=Z,92nm,2.0s
E21K  Killik River     84.84  16  P       P       03 30 50.7 +1.3
      baz=228
PCA   Pinnacle         84.85  26  IAmb    IAmb    03 31 11.1
      comp=Z,28nm,1.0s
PINM  Pinnacle         84.85  26  P       P       03 30 50.6 +1.0
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	baz=241						
G23K	Bananza Creek	84.87	18	P	P	03 30 50.1	+0.5
	baz=232,SNR=11						
M26K	Nabesna, AK	84.87	24	P	P	03 30 50.8	+1.1
	baz=238,SNR=9.0						
MENT	Mentasta	84.88	23	P	P	03 30 50.6	+1.0
RIDG	Independent Ri	84.89	22	IAmb	IAmb	03 30 59.9	
	comp=Z,56nm,1.2s						
RIDG	Independent Ri	84.89	22	P	P	03 30 50.5	+0.8
	baz=236,SNR=22						
H24K	Noodor Dome	85.02	20	P	P	03 30 51.5	+1.2
	baz=234,SNR=12						
PNL	Peninsula	85.03	27	P	P	03 30 51.0	+0.6
	baz=242						
L26K	Log Cabin Wild	85.06	23	IAmb	IAmb	03 31 01.2	
	comp=Z,83nm,1.9s						
L26K	Log Cabin Wild	85.06	23	P	P	03 30 51.4	+0.8
	baz=238						
B20K	Meade River	85.11	14	P	P	03 30 51.4	+0.8
	baz=224						
C21K	Knifeblade Rid	85.11	15	P	P	03 30 51.8	+1.1
	baz=227,SNR=13						
DOT	Dot Lake	85.13	22	IAmb	IAmb	03 31 00.5	
	comp=Z,28nm,1.0s						
COLD	Coldfoot	85.14	18	P	P	03 30 51.8	+1.0
	baz=231						
J25K	Salcha River,	85.18	21	IAmb	IAmb	03 31 01.2	
	comp=Z,40nm,1.1s						
J25K	Salcha River,	85.18	21	P	P	03 30 51.5	+0.4
	baz=236,SNR=36						
O28M	Mount Upton	85.21	26	P	P	03 30 52.2	+0.5
	baz=241						
E22K	Anaktuvuk Pass	85.24	17	P	P	03 30 52.0	+0.6
	baz=230,SNR=9.4						
M27K	Edge Creek, AK	85.30	24	P	P	03 30 52.6	+0.7
	baz=239,SNR=24						
SCRK	Sand Creek	85.33	22	IAmb	IAmb	03 31 01.7	
	comp=Z,30nm,1.1s						
SCRK	Sand Creek	85.33	22	P	P	03 30 52.6	+0.5
	baz=237,SNR=23						
B21K	Ikpikpuk River	85.47	15	IAmb	IAmb	03 31 02.1	
	comp=Z,24nm,0.9s						
B21K	Ikpikpuk River	85.47	15	P	P	03 30 53.9	+1.5
	baz=227						
D22K	Ayikyak River	85.48	16	IAmb	IAmb	03 30 55.1	
	comp=Z,20nm,0.8s						
D22K	Ayikyak River	85.48	16	P	P	03 30 53.7	+1.1
	baz=229,SNR=15						
YUK3	Moose Creek	85.58	25	P	P	03 30 54.5	+1.1
	baz=241,SNR=7.1						
ZSN	Zaisan	85.59	319	*e*P	P	03 30 54.3	+0.8
ZSN				pmax	pmax		
	comp=Z,33nm,1.2s						
ZSN	Zaisan	85.59	319	*e*P	P	03 30 54.4	+0.8
	comp=Z,32nm,1.2s						
PRP	Porcupine Dome	85.64	20	P	P	03 30 53.7	+0.2
	baz=236						
YUK8	Steele Glacier	85.64	25	P	P	03 30 54.4	+0.7
	baz=241						
G24K	Hadweenzic Riv	85.67	19	IAmb	IAmb	03 31 03.3	
	comp=Z,25nm,1.1s						
G24K	Hadweenzic Riv	85.67	19	P	P	03 30 55.5	+2.1
	baz=234,SNR=15						
L27K	Beaver Creek,	85.68	23	IAmb	IAmb	03 31 04.6	
	comp=Z,49nm,1.5s						
L27K	Beaver Creek,	85.68	23	P	P	03 30 55.5	+1.9
	baz=239,SNR=19						
O29M	Mount Kennedy	85.69	27	IAmb	IAmb	03 31 05.0	
	comp=Z,47nm,1.4s						
O29M	Mount Kennedy	85.69	27	P	P	03 30 55.0	+1.1
	baz=242						
BCAR	Beaver Creek A	85.69	23	P	P	03 30 52.2	-1.6
S31K	Pelican	85.72	29	P	P	03 30 55.2	+1.3
	baz=245						
BVCY	Beaver Creek	85.73	24	P	P	03 30 55.5	+1.6
	baz=240,SNR=12						
P29M	Windy Craggy	85.75	27	IAmb	IAmb	03 31 05.0	
	comp=Z,75nm,1.7s						
P29M	Windy Craggy	85.75	27	P	P	03 30 55.3	+1.2
	baz=243						
J26L	Joseph Creek	85.77	22	P	P	03 30 55.6	+1.5
	baz=238,SNR=11						
SIT	Sitka	85.79	30	P	P	03 30 55.3	+1.1
	baz=245						
E23K	Chandalar	85.83	17	IAmb	IAmb	03 31 07.3	
	comp=Z,32nm,1.3s						
E23K	Chandalar	85.83	17	P	P	03 30 56.5	+2.1
	baz=232,SNR=7.7						
H25L	Birch Creek	85.96	20	P	P	03 30 56.6	+1.8
	baz=235						
F24K	Squaw Lake	86.02	18	P	P	03 30 57.4	+2.1
	baz=233,SNR=8.8						
K27K	Chicken	86.08	23	IAmb	IAmb	03 31 07.0	
	comp=Z,54nm,1.4s						
K27K	Chicken	86.08	23	P	P	03 30 57.4	+1.9
	baz=239						
YUK6	Outpost Mounta	86.08	26	P	P	03 30 57.3	+1.4
	baz=243,SNR=12						
D23K	Nanushuk River	86.09	16	IAmb	IAmb	03 31 05.9	
	comp=Z,34nm,1.1s						
D23K	Nanushuk River	86.09	16	P	P	03 30 56.9	+1.3
	baz=231,SNR=12						
YUK4	Talbot Arm	86.14	26	P	P	03 30 58.0	+1.9
	baz=242,SNR=12						
G25K	Bearman Lake	86.15	19	P	P	03 30 57.6	+1.7
	baz=235,SNR=6.6						
E24K	Your Creek	86.18	18	P	P	03 30 57.0	+1.0
	baz=233						
TOLK	Toolik Lake Re	86.20	17	P	P	03 30 57.2	+1.1
	baz=232,SNR=6.5						
B22K	Teshekpuk Lake	86.26	15	IAmb	IAmb	03 31 05.8	
	comp=Z,25nm,1.1s						
B22K	Teshekpuk Lake	86.26	15	P	P	03 30 57.9	+1.6
	baz=228						
CRAG	Craig	86.28	32	P	P	03 30 57.9	+1.2
	baz=247						
PLBC	Pleasant Camp	86.31	28	P	P	03 30 58.0	+1.3
	baz=244,SNR=8.6						
P30M	Million Dollar	86.33	27	P	P	03 30 58.6	+1.6
	baz=244						
S32K	Killisnoo	86.33	30	P	P	03 30 58.3	+1.5
	baz=246						
A22K	Sinclair Lake	86.33	14	P	P	03 30 57.8	+1.2
	baz=226						
I26K	Coal Creek Min	86.35	21	IAmb	IAmb	03 31 06.7	
	comp=Z,57nm,1.5s						
I26K	Coal Creek Min	86.35	21	P	P	03 30 58.0	+1.1
	baz=238						
HYT	Haines Junctio	86.40	26	P	P	03 30 59.2	+1.8
	baz=243,SNR=27						
U33K	Whale Pass	86.53	32	P	P	03 30 59.1	+1.2
	baz=247						
C23K	Itkillik River	86.67	16	IAmb	IAmb	03 31 10.1	
	comp=Z,36nm,1.2s						
C23K	Itkillik River	86.67	16	P	P	03 30 60.0	+1.7
	baz=231						
R32K	Eaglecrest	86.68	29	P	P	03 30 60.0	+1.3
	baz=246						
M29M	Somme Creek	86.73	25	IAmb	IAmb	03 31 10.0	
	comp=Z,42nm,1.6s						
M29M	Somme Creek	86.73	25	P	P	03 31 00.5	+1.6
	baz=242,SNR=13						
D24K	Happy Valley	86.73	17	P	P	03 30 56.9	-1.7
D24K	Happy Valley	86.73	17	P	P	03 31 00.3	+1.6
	baz=232						
F25K	Christian Rive	86.77	19	P	P	03 31 00.5	+1.5
	baz=236						
SKAG	Skagway	86.79	28	P	P	03 31 02.6	+3.5
SKAG	Skagway	86.79	28	P	P	03 31 00.5	+1.4
	baz=245						
N30M	Aishikik Lake	86.86	26	P	P	03 31 01.1	+1.5
	baz=244,SNR=8.7						
O30N	Mendenhall	87.00	27	P	P	03 31 01.2	+1.0
	baz=245,SNR=14						
G26K	Porcupine Rive	87.02	20	P	P	03 31 02.0	+1.9
	baz=237,SNR=24						
BMAR	Burnt Mountain	87.02	19		P	03 30 58.8	-1.4
V35K	Ketchikan	87.03	33	P	P	03 31 01.7	+1.4
	baz=249						
WRAK	Wrangell Islan	87.05	32	P	P	03 31 01.7	+1.3
	baz=248						
I27K	Kandik River	87.06	21	P	P	03 31 02.4	+2.0
	baz=239,SNR=33						
MK31	Makanchi Array	87.06	318	*ce*P	P	03 31 00.3	-0.5
MKAR	Makanchi Array	87.06	318		P	03 30 59.7	-1.1
MKAR	Makanchi Array	87.06	318	P	P	03 31 00.6	-0.2
	comp=Z,9.7nm,0.8s,baz=100,slow=6.0,SNR=52						
	comp=Z,9.7nm,0.8s						
E25K	Arctic Village	87.09	18	IAmb	IAmb	03 31 11.5	
	comp=Z,45nm,1.8s						
E25K	Arctic Village	87.09	18	P	P	03 31 02.2	+1.7
	baz=236						
C24K	Franklin Bluff	87.11	16	IAmb	IAmb	03 31 03.0	
	comp=Z,28nm,0.9s						
C24K	Franklin Bluff	87.11	16	P	P	03 31 02.3	+1.8
	baz=233						
DAWY	Dawson	87.12	23	IAmb	IAmb	03 31 11.9	
	comp=Z,58nm,1.5s						
DAWY	Dawson	87.12	23	P	P	03 31 02.5	+1.7
	baz=242,SNR=18						
L29M	L29M	87.17	24	P	P	03 31 02.2	+1.2
	baz=243,SNR=22						
MAKZ	Makanchi	87.27	318		P	03 31 00.3	-1.5
MAKZ				IAmb	IAmb	03 31 05.1	
	comp=Z,37nm,1.1s						
MAKZ	Makanchi	87.27	318	P	P	03 31 00.3	-1.5
MAKZ				pmax	pmax		
	comp=Z,37nm,1.2s						
F26K	Sheenjek River	87.30	19	IAmb	IAmb	03 31 13.0	
	comp=Z,58nm,1.8s						
F26K	Sheenjek River	87.30	19	P	P	03 31 03.2	+1.6
	baz=237						
H27K	Steamboat Moun	87.41	21	P	P	03 31 04.0	+1.9
	baz=239,SNR=23						
N31M	Braeburn, Yuko	87.44	26	P	P	03 31 03.5	+1.2
	baz=245,SNR=19						
WHY	Whitehorse	87.49	27	P	P	03 31 04.0	+1.3
	baz=246						
D25K	Kavik River	87.54	17	P	P	03 31 03.6	+1.0
	baz=235						
I28M	Miner Creek	87.58	22	IAmb	IAmb	03 31 14.6	
	comp=Z,75nm,1.8s						
I28M	Miner Creek	87.58	22	P	P	03 31 04.7	+1.7
	baz=241,SNR=12						
G27K	Doyon Strip	87.66	20	IAmb	IAmb	03 31 13.7	
	comp=Z,23nm,1.1s						
G27K	Doyon Strip	87.66	20	P	P	03 31 05.0	+1.7
	baz=239,SNR=11						
K29M	Barlow Dome	87.75	24	P	P	03 31 05.7	+1.8
	baz=243,SNR=23						
ZAA0	Zalesovo Array	87.76	326	IAmb	IAmb	03 31 17.6	
	comp=Z,25nm,1.4s						
ZALV	Zalesovo Beam	87.76	326		P	03 31 02.1	-1.8
ZALV	Zalesovo Beam	87.76	326	P	P	03 31 02.8	-1.1
	comp=Z,5.1nm,0.8s,baz=104,slow=6.3,SNR=12						
	comp=Z,5.1nm,0.8s						
BBB	Bella Bella	87.92	36	LR	LR	04 01 45.2	
	comp=Z,802nm,21.0s,baz=332,slow=30						
SHLS	Shalkode	87.98	314	*e*P	P	03 31 04.5	-1.0
SHLS	Shalkode	87.98	314	*e*P	P	03 31 04.5	-1.0
I29M	Ogilvie Camp,	88.14	22	IAmb	IAmb	03 31 15.5	
	comp=Z,27nm,1.0s						
I29M	Ogilvie Camp,	88.14	22	P	P	03 31 06.6	+1.1
	baz=242,SNR=18						
S34M	Telegraph Cree	88.21	30	P	P	03 31 07.1	+1.1
	baz=249						
P33M	Teslin, Yukon	88.25	28	P	P	03 31 07.4	+1.2
	baz=248						
MAYO	Mayo, Yukon	88.29	24	P	P	03 31 07.6	+1.2
	baz=245						
UZB	Uzynbulak	88.29	314	*e*P	P	03 31 07.4	+0.5
UZB				pmax	pmax		
	comp=Z,28nm,1.5s						
UZB	Uzynbulak	88.29	314	*e*P	P	03 31 07.5	+0.5
	comp=Z,28nm,1.5s						
C26K	Camden Bay	88.30	17	P	P	03 31 07.5	+1.4
	baz=236						
T35M	Bob Quinn	88.33	31	P	P	03 31 07.7	+1.0
	baz=250						
M31M	Drury Creek, Y	88.34	26	P	P	03 31 08.6	+2.0
	baz=246,SNR=6.0						
E27K	Coleen River	88.38	19	IAmb	IAmb	03 31 17.3	
	comp=Z,44nm,1.2s						
E27K	Coleen River	88.38	19	P	P	03 31 08.5	+1.8
	baz=239,SNR=9.1						
C27K	Jago River	88.49	17	P	P	03 31 09.0	+1.9
	baz=237						
N32M	Quiet Lake	88.49	27	P	P	03 31 08.0	+0.7
	baz=247						
H29M	Whitestone	88.52	21	P	P	03 31 09.2	+1.9
	baz=242						
J30M	Hart River	88.54	23	IAmb	IAmb	03 31 18.9	
	comp=Z,65nm,1.6s						
J30M	Hart River	88.54	23	P	P	03 31 09.4	+1.7
	baz=244,SNR=8.9						
YBH	Yreka Blue Hor	88.58	47	P	P	03 31 06.7	-1.6
YBH	Yreka Blue Hor	88.58	47	LR	LR	04 03 00.3	
	comp=Z,109nm,21.4s,baz=12,slow=30						
YBH	Yreka Blue Hor	88.58	47	P	P	03 31 06.7	-1.6
YBH				pmax	pmax		
	comp=Z,12nm,1.4s						
KPKS	Kokpek	88.61	314	*e*P	P	03 31 08.8	+0.4
KPKS				*e*S	SKSac	03 41 37.4	+1.2
KPKS	Kokpek	88.61	314	*e*P	P	03 31 08.8	+0.4
KPKS				*e*S	SKSac	03 41 37.4	+1.2
F28M	Old Crow	88.66	20	P	P	03 31 10.0	+2.0
	baz=241						
SATY	Saty	88.71	314	*e*P	P	03 31 09.3	+0.4
SATY				pmax	pmax		
	comp=Z,36nm,2.3s						
SATY	Saty	88.71	314	*e*P	P	03 31 09.4	+0.4
	comp=Z,36nm,2.3s						
FARO	Faro, Yukon	88.80	26	P	P	03 31 10.5	+1.7
	baz=247						
I30M	Mount Dempster	88.81	23	P	P	03 31 10.6	+1.8
	baz=244,SNR=10						
R33M	Jennings River	88.82	29	P	P	03 31 10.4	+1.4
	baz=249						
DLBC	Dease Lake	88.94	30	LR	LR	04 05 17.1	
	comp=Z,174nm,19.1s,baz=297,slow=32						
G29M	Pine Creek	88.96	21	IAmb	IAmb	03 31 19.6	
	comp=Z,30nm,1.1s						
G29M	Pine Creek	88.96	21	P	P	03 31 10.8	+1.4
	baz=243,SNR=7.0						
D27M	Malcolm River	89.12	18	P	P	03 31 12.0	+1.8
	baz=240						
EPYK	Eagle Plains	89.18	22	IAmb	IAmb	03 31 20.6	
	comp=Z,39nm,1.1s						
EPYK	Eagle Plains	89.18	22	P	P	03 31 11.9	+1.5
	baz=244,SNR=6.9						
TDK	Taldyqorghan	89.19	316	*e*P	P	03 31 11.3	+0.4
TDK				pmax	pmax		
	comp=Z,29nm,1.2s						
TDK	Taldyqorghan	89.19	316	*e*P	P	03 31 11.4	+0.4
	comp=Z,29nm,1.2s						
AFDM	Forest Hills D	89.23	50	P	P	03 31 09.0	-2.3
AFDM				IAmb	IAmb	03 31 17.3	
	comp=Z,47nm,1.7s						
E28M	Babbage River	89.25	19	IAmb	IAmb	03 31 16.7	
	comp=Z,87nm,2.0s						
E28M	Babbage River	89.25	19	P	P	03 31 12.4	+1.7
	baz=241						
CMB	Columbia Colle	89.48	51	P	P	03 31 11.5	-1.0
CMB	Columbia Colle	89.48	51	P	P	03 31 11.5	-1.0
CMB				pmax	pmax		
	comp=Z,27nm,1.7s						
G30M	tAoh Zraii Nji	89.63	21	IAmb	IAmb	03 31 24.9	
	comp=Z,57nm,1.6s						
G30M	tAoh Zraii Nji	89.63	21	P	P	03 31 14.5	+2.0
	baz=244,SNR=7.1						
KSH	Kashi	89.68	310	P	P	03 31 18.3	+4.8
KSH				pmax	pmax		
	comp=Z,19nm,1.5s						
E29M	Blow River	89.69	20	P	P	03 31 14.8	+2.0
	baz=243						
AAA	Alma-Ata	89.81	314	*e*P	P	03 31 14.4	+0.4
AAA				pmax	pmax		
	comp=Z,21nm,0.6s						
AAA	Alma-Ata	89.81	314	*e*P	P	03 31 14.4	+0.4
	comp=Z,21nm,0.6s						
H31M	Peel River	89.82	22	IAmb	IAmb	03 31 55.1	
	comp=Z,39nm,1.5s						
H31M	Peel River	89.82	22	P	P	03 31 15.2	+1.7
	baz=246						
MMPY	Sheldon Lake,	89.84	26	IAmb	IAmb	03 31 24.8	
	comp=Z,34nm,1.6s						
MMPY	Sheldon Lake,	89.84	26	P	P	03 31 15.5	+1.8
	baz=249,SNR=6.3						
BEKR	Beckworth	89.90	50	P	P	03 31 11.3	-3.3
BEKR				IAmb	IAmb	03 31 20.5	
	comp=Z,57nm,1.8s						
F30M	Barrier River	90.05	21	IAmb	IAmb	03 31 56.1	
	comp=Z,33nm,1.3s						
F30M	Barrier River	90.05	21	P	P	03 31 16.4	+1.9
	baz=245						
NRN	Naryn	90.07	312	IAmb	IAmb	03 31 20.2	
	comp=Z,62nm,1.4s						
K05A	Summer Lake	90.13	47	P	P	03 31 13.3	-2.4
G31M	Satah River	90.30	21	IAmb	IAmb	03 31 27.3	
	comp=Z,35nm,1.4s						
G31M	Satah River	90.30	21	P	P	03 31 17.9	+2.3
	baz=246,SNR=5.4						
PNTR	Pine Nut	90.31	51	P	P	03 31 14.0	-2.6
PNTR				IAmb	IAmb	03 31 36.8	
	comp=Z,20nm,1.0s						
WAKR	Walker	90.31	51	P	P	03 31 14.1	-2.5
KURK	Kurchatov	90.46	321		P	03 31 15.1	-1.6
KURK				IAmb	IAmb	03 31 20.2	
	comp=Z,75nm,1.8s						
KURK	Kurchatov	90.46	321	P	P	03 31 16.5	-0.2
KURBB	Kurchatov Arra	90.49	321	P	P	03 31 16.5	-0.4
	comp=Z,3.5nm,0.8s,baz=111,slow=3.3,SNR=22						
KURBB				PP	PP	03 34 54.0	+2.3
	comp=Z,1.3nm,0.2s,baz=105,slow=7.7,SNR=5.0						
KURBB				LR	LR	04 09 45.9	
	comp=Z,1µm,21.9s,baz=346,slow=34						
	comp=Z,3.5nm,0.8s						
NIL	Nilore	90.63	304		P	03 31 16.9	-1.1
NIL	Nilore	90.63	304	P	P	03 31 16.9	-1.1
NIL				pmax	pmax		
	comp=Z,89nm,1.7s						
SYO	Syowa Base	90.83	199⥣	*e*sP	sP	03 31 26.6	-0.9
INK	Inuvik	91.12	20	IAmb	IAmb	03 31 57.5	
	comp=Z,26nm,1.6s						
INK	Inuvik	91.12	20	P	P	03 31 20.9	+1.6
	baz=247						
NVAR	Mina Array Bea	91.17	51	P	P	03 31 19.1	-1.6
NVAR	Mina Array Bea	91.17	51	P	P	03 31 21.9	+1.3
	comp=Z,4.7nm,0.8s,baz=240,slow=7.5,SNR=22						
	comp=Z,4.7nm,0.8s						
DSP	Deep Springs	91.23	52	IAmb	IAmb	03 31 39.9	
	comp=Z,26nm,1.3s						
NV11	Mina Array Sit	91.28	51	IAmb	IAmb	03 31 45.1	
	comp=Z,40nm,1.4s						
AAK	Ala-Archa	91.42	313		P	03 31 20.0	-1.7
AAK				IAmb	IAmb	03 31 26.0	
	comp=Z,60nm,1.8s						
AAK	Ala-Archa	91.42	313⥥	*e*P	P	03 31 21.6	0.0
AAK				pmax	pmax		
	comp=Z,33nm,1.6s						
SGDS	Sogindy	91.49	314	*e*P	P	03 31 22.3	+0.5
PFO	Pinyon Flats O	91.75	56	LR	LR	04 04 58.7	
	comp=Z,2µm,22.0s,baz=342,slow=30						
PFO	Pinyon Flats O	91.75	56	*i* P	P	03 31 22.1	-1.2
GSC	Goldstone, Bar	91.77	55	P	P	03 31 21.8	-1.5
GSC	Goldstone, Bar	91.77	55	P	P	03 31 21.8	-1.5
GSC				pmax	pmax		
	comp=Z,13nm,0.3s						
ESJX	Sierra Juarez	91.89	58	P	P	03 31 22.3	-1.7
ESJX				IAmb	IAmb	03 31 43.7	
	comp=Z,30nm,1.7s						
G08A	Pilot Rock	92.03	45	P	P	03 31 22.7	-1.7
YUH	Yuha Desert	92.03	57	P	P	03 31 23.0	-1.5
YUH				IAmb	IAmb	03 31 30.8	
	comp=Z,23nm,1.6s						
GWY	Greenwater Val	92.04	54	IAmb	IAmb	03 31 52.5	
	comp=Z,23nm,1.5s						
BELA	Belgrano 2	92.48	177		P	03 31 24.6	-1.1
BELA				IAmb	IAmb	03 31 41.1	
	comp=Z,18nm,1.0s						
S11A	Rachel	93.01	53	P	P	03 31 27.8	-1.3
S11A				IAmb	IAmb	03 32 44.4	
	comp=Z,42nm,1.5s						
BMO	Blue Mountains	93.09	45	P	P	03 31 26.4	-2.9
BMO	Blue Mountains	93.09	45	P	P	03 31 26.4	-2.9
BMO				pmax	pmax		
	comp=Z,9.0nm,1.2s						
SHPR	Sheep Range	93.29	54	P	P	03 31 27.8	-2.6
PRN	Pahroc Range	93.52	53	P	P	03 31 29.0	-2.5
PRN				IAmb	IAmb	03 31 59.7	
	comp=Z,22nm,1.3s						
BTK	Batken	93.68	310	IAmb	IAmb	03 31 36.0	
	comp=Z,42nm,1.4s						
DZA	Taraz	93.76	313	*e*P	P	03 31 32.5	+0.3
DZA	Taraz	93.76	313	*e*P	P	03 31 32.6	+0.3
ELK	Elko	93.91	50		P	03 31 30.9	-2.4
ELK	Elko	93.91	50	P	P	03 31 30.9	-2.4
ELK				pmax	pmax		
	comp=Z,24nm,1.9s						
KK31	Karatay Array	94.38	313	IAmb	IAmb	03 31 38.8	
	comp=Z,60nm,1.8s						
KKAR	Karatay Array	94.38	313		P	03 31 33.4	-1.7
KKAR	Karatay Array	94.38	313	IAmb	IAmb	03 31 38.8	
	comp=Z,63nm,1.8s						
KKAR	Karatay Array	94.38	313	P	P	03 31 33.4	-1.7
IUG	Iuzhnay	94.59	312	*e*P	P	03 31 36.4	+0.2
IUG				pmax	pmax		
	comp=Z,19nm,1.4s						
IUG	Iuzhnay	94.59	312	*e*P	P	03 31 36.4	+0.2
	comp=Z,19nm,1.4s						
BRLS	Borolday	94.86	313	*e*P	P	03 31 38.0	+0.7
BRLS	Borolday	94.86	313	*e*P	P	03 31 38.0	+0.7
CHM	Chimkent	94.93	312	*e*P	P	03 31 37.7	+0.1
CHM	Chimkent	94.93	312	*e*P	P	03 31 37.8	+0.1
KNB	Kanab	95.22	53	P	P	03 31 38.4	-0.9
KNB	Kanab	95.22	53	P	P	03 31 38.4	-0.9
U15A	North Rim	95.57	54	P	P	03 31 38.6	-2.4
BVAR	Borovoye Array	95.91	323	P	P	03 31 40.5	-1.3
	comp=Z,7.3nm,0.8s,baz=100,slow=5.1,SNR=20						
BVAR				PP	PP	03 35 36.5	+2.3
	comp=Z,1.4nm,0.7s,baz=125,slow=7.4,SNR=4.2						
	comp=Z,7.3nm,0.8s						
BRVK	Borovoye	95.98	323	P	P	03 31 40.2	-1.9
BRVK				IAmb	IAmb	03 31 56.2	
	comp=Z,15nm,1.1s						
BRVK	Borovoye	95.98	323	P	P	03 31 40.2	-1.9
BRVK				pmax	pmax		
	comp=Z,15nm,1.2s						
HWUT	Hardware Ranch	96.77	49	IAMs_20	IAMs_20	04 05 55.3	
	comp=Z,2µm,21.0s						
TROLL	Troll, Antarti	97.02	188	⥣P	Pdif	03 31 47.0	+0.2
	comp=Z,79nm,0.8s						
YKA	Yellowknife Ar	97.29	28	P	P	03 31 47.3	-0.5
YKA	Yellowknife Ar	97.29	28	P	P	03 31 47.9	0.0
	comp=Z,0.8nm,0.8s,baz=271,slow=5.0,SNR=4.3						
YKA				LR	LR	04 10 23.7	
	comp=Z,1µm,19.8s,baz=355,slow=32						
	comp=Z,0.8nm,0.8s						
YKA	Yellowknife Ar	97.29	28	*i* P	Pdif	03 31 49.5	+1.6
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SNAA	Sanae	97.97	186	⥣P	Pdif	03 31 52.7	+1.8
	comp=Z,28nm,0.8s						
SNAA	Sanae	97.97	186	P	P	03 31 50.2	-0.7
	comp=Z,3.3nm,1.2s,baz=22,slow=2.9,SNR=3.1						
	comp=Z,3.3nm,1.2s						
SNAA	Sanae	97.97	186⥣	*e*P	Pdif	03 31 51.6	+0.6
SNAA				pmax	pmax		
	comp=Z,9.0nm,1.5s						
PDAR	Pinedale Array	98.38	48	P	Pdif	03 31 54.4	+0.9
	comp=Z,0.8nm,0.8s,baz=245,slow=2.5,SNR=5.3						
	comp=Z,0.8nm,0.8s						
VNA3	Neumayer Olymp	98.98	184	⥣P	Pdif	03 31 56.8	+1.4
	comp=Z,1.5nm,0.9s						
VNA2	Neumayer--Watz	99.11	185	⥣P	Pdif	03 31 54.5	-1.5
	comp=Z,0.9nm,0.5s,baz=168,slow=5.3						
TXAR	Lajitas Array	102.07	62	PP	PP	03 36 24.6	+2.6
	comp=Z,0.3nm,0.8s,baz=275,slow=6.2,SNR=3.8						
ABKAR	Akbulak array	102.20	318		Pdif	03 32 08.6	-1.4
ARTI	Arti	103.02	326	P	Pdif	03 32 12.3	-1.2
	comp=Z,2.7nm,0.7s,baz=68,slow=3.4,SNR=4.5						
ARTI				PP	PP	03 36 28.8	+0.6
	comp=Z,0.9nm,0.3s,baz=86,slow=4.2,SNR=4.7						
ARTI	Arti	103.02	326	P	Pdif	03 32 12.4	-1.2
ARTI						03 36 26.4	
ARTI				S	SKSac	03 42 52.1	+0.4
AKTO	Aktyubinsk	103.44	320	Pdiff	Pdif	03 32 14.7	-0.9
	comp=Z,0.4nm,0.3s,baz=106,slow=2.3,SNR=3.9						
OK038	West end E0370	106.46	55	IAMs_20	IAMs_20	04 13 20.1	
	comp=Z,3µm,20.0s						
OK029	Liberty Lake	107.51	55	IAMs_20	IAMs_20	04 05 47.9	
	comp=Z,2µm,19.0s						
DEOK	Depew	108.29	55	IAMs_20	IAMs_20	04 10 25.4	
	comp=Z,3µm,20.0s						
BELG	Belogornoye	109.71	322	PP	PP	03 37 17.7	+0.2
	comp=Z,6.7nm,0.5s,baz=11,slow=7.4,SNR=3.8						
APA	Apatity	111.40	340⥥	*i*PKIKP	PKiKP	03 36 43.4	-5.3
APA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,1µm,17.0s						

KLMR	Klimovskoe	111.79	332	eP	Pdif	03 32 50.6	-1.8
KLMR				e		03 37 30.2	
KLMR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KBZ	Khabaz	114.40	314	PP	PP	03 37 51.2	-0.2
	comp=Z,0.7nm,0.3s,baz=100,slow=6.8,SNR=3.8						
KIV	Kislovodsk	114.51	314	ePKIKP	PKiKP	03 36 56.4	+0.9
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
OBN	Obninsk	115.30	327⇑	iPKIKP	PKiKP	03 36 55.8	-0.7
OBN						03 37 04.0	
OBN						03 38 03.0	
OBN				SS	SS	03 53 59.0	+5.7
OBN				pmax	pmax		
	comp=Z,4.0nm,0.4s						
OBN				MLR	MLR		
	comp=Z,749nm,17.0s						
ATD	Arta Tunnel	116.05	278	IAMs_20	IAMs_20	04 32 28.0	
	comp=Z,3µm,21.0s						
CRIN	San Cristobal	116.51	81	IAMs_20	IAMs_20	04 20 01.9	
	comp=Z,1µm,20.0s						
HERN	Volcan Telica	116.71	81	IAMs_20	IAMs_20	04 22 37.6	
	comp=Z,2µm,20.0s						
ACON	Acoyapa	118.28	82	IAMs_20	IAMs_20	04 27 02.0	
	comp=Z,945nm,18.0s						
MNK	Minsk	120.12	329	i PKP	PKPdf	03 37 02.2	-3.6
	comp=E,5.0nm,0.7s						
MNK				i PKP	PKPdf	03 37 02.2	-3.6
	comp=N,5.0nm,0.9s						
MNK				i PKP	PKPdf	03 37 02.2	-3.6
	comp=Z,3.0nm,0.7s,baz=61						
MNK				i PP	PP	03 38 27.5	-3.1
MNK				i PPP	PPP	03 41 00.4	
MNK				i SKS	SKSdf	03 44 13.3	-2.9
MNK				i SS	SKKSdf	03 54 58.0	-1.4
MNK				i SSS	SSS	03 59 19.8	
MNK				i LQ	LQ	04 22 13.1	
MNK	Minsk	120.12	329	i PKIKP	PKPdf	03 37 02.2	-3.6
MNK				i		03 38 27.5	
MNK				i PPP	PPP	03 41 00.3	
MNK				i		03 44 13.2	
MNK				i SS	SS	03 54 58.0	+2.2
MNK				i SSS	SSS	03 59 19.8	
MNK				pmax	pmax		
	comp=N,5.0nm,0.9s						
MNK				pmax	pmax		
	comp=E,5.0nm,0.7s						
MNK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NACGM	Naroch	120.48	330	ePKiKP	PKiKP	03 37 07.6	+1.0
	comp=Z,5.0nm,0.9s,baz=60						
AKASG	Malin Array Be	121.13	324	PKP	PKiKP	03 37 08.9	+1.0
	comp=Z,1.5nm,0.7s,baz=66,slow=1.8,SNR=6.3						
AKASG				PP	PP	03 38 37.4	-0.3
	comp=Z,0.3nm,0.4s,baz=57,slow=5.5,SNR=7.3						
AKASG	Malin Array Be	121.13	324	PKIKP	PKiKP	03 37 09.0	+1.0
MMNY	Mt. Morris Dam	121.43	45	IAMs_20	IAMs_20	04 14 17.4	
	comp=Z,2µm,22.0s						
BR131	Keskin Array S	122.05	311⇑	iPKIKP	PKPdf	03 37 10.2	0.0
BRTR	Keskin Array B	122.05	311	PKP	PKiKP	03 37 10.6	+0.2
	comp=Z,2.0nm,1.0s,baz=165,slow=1.9,SNR=8.0						
BRTR				PP	PP	03 38 45.0	+0.4
	comp=Z,1.7nm,0.9s,baz=104,slow=5.2,SNR=4.8						
NB2	NORSAR Subarra	122.94	341	PKPdf	PKPdf	03 37 10.7	-0.4
	comp=Z,13nm,1.4s,baz=41,slow=2.0						
NB2	NORSAR Subarra	122.94	341	PKPdf	PKPdf	03 37 10.7	-0.4
	baz=41,slow=2.0						
NOA	NORSAR Array B	122.94	341	PKP	PKiKP	03 37 12.6	+1.3
	comp=Z,1.4nm,1.1s,baz=42,slow=2.2,SNR=3.7						
KOLS	Kolonicke sedl	125.93	325	ePKIKP	PKiKP	03 37 19.7	+2.1
KOLS	Kolonicke sedl	125.93	325	ePKP	PKiKP	03 37 19.7	+2.1
ALN	Alexandroupoli	127.17	315	IAMs_20	IAMs_20	04 45 19.9	
	comp=Z,1µm,21.0s						
PSZ	Piszkesteto	127.82	325	IAMs_20	IAMs_20	04 19 06.8	
	comp=Z,1µm,18.0s						
LPAZ	La Paz	127.89	119	PKP	PKiKP	03 37 23.2	0.0
	comp=Z,1.7nm,0.7s,baz=234,slow=3.0,SNR=8.0						
LPAZ	La Paz	127.89	119	eP	PKPdf	03 37 22.1	-0.5
MORC	Moravsky Berou	128.03	328	ePKP	PKPdf	03 37 21.5	+0.3
VYHS	Vyhne	128.08	326	ePKIKP	PKiKP	03 37 30.8	+8.9
VYHS	Vyhne	128.08	326	ePKP	PKiKP	03 37 30.8	+8.9
KARP	Karpathos	128.17	308	IAMs_20	IAMs_20	04 46 03.0	
	comp=Z,2µm,21.0s						
JAVC	Velka Javorina	128.50	327	ePKP	PKiKP	03 37 23.4	+0.6
VRAC	Vranov	128.80	328	ePKP	PKPdf	03 37 23.0	+0.4
MODS	Modra-Piesok	129.00	327	ePKIKP	PKiKP	03 37 26.4	+2.6
MODS	Modra-Piesok	129.00	327	ePKP	PKiKP	03 37 26.4	+2.6
KRUC	Moravsky	129.06	328	ePKP	PKiKP	03 37 23.8	0.0
BRG	Berggiesshubel	129.13	331	ePKP	PKiKP	03 37 27.7	+3.8
BRG				Amp		03 37 28.8	
	comp=Z,4.3nm,1.0s						
BRG	Berggiesshubel	129.13	331	P	PKiKP	03 37 33.1	+9.2
BRG				Amp		03 37 34.8	
	comp=Z,18nm,1.4s						
CLL	Collm	129.28	332	ePKIKP	PKiKP	03 37 27.0	+2.8
CLL				e		03 37 33.0	
CLL				MLR	MLR		
	comp=Z,1µm,21.0s						
CLL	Collm	129.28	332	ePKPdf	PKPdf	03 37 22.0	-1.5
CLL				epPKPdf	PKiKP	03 37 27.0	+2.8
CLL				ex	x	03 37 33.0	
	comp=Z,12nm,1.4s						
CLL				AMS	AMS	04 53 00.0	
	comp=N,1µm,21.1s						
CLL				AMS	AMS	04 53 00.0	
	comp=E,600nm,21.6s						
CLL				AMS	AMS	04 53 00.0	
	comp=Z,1µm,21.0s						
RONA	Rosalia, Austr	129.93	327	ePKiKP	PKiKP	03 37 25.6	-0.1
	comp=Z,10nm,1.4s						
CONA	Conrad Observa	130.03	327	ePKiKP	PKiKP	03 37 26.3	+0.3
GERES	GERESS Array B	130.58	329	PKP	PKiKP	03 37 26.9	-0.2
	comp=Z,0.7nm,0.8s,baz=64,slow=3.1,SNR=7.7						
ARSA	Arzberg	130.62	327	i PKiKP	PKiKP	03 37 27.4	+0.3
	comp=Z,2.3nm,1.0s						
MOA	Molln	130.92	328	ePKiKP	PKPdf	03 37 26.9	+0.1
	comp=Z,2.2nm,1.1s						
GRF	Grafenberg Arr	131.22	332	ePKP	PKiKP	03 37 27.7	-0.4
	baz=46,slow=1.1						
GRF	Grafenberg Arr	131.22	332	ePKP	PKiKP	03 37 31.6	+3.4
	baz=52,slow=1.1						
SOKA	Soboth	131.24	326	epPKP	PKiKP	03 37 30.7	+2.3
	comp=Z,4.1nm,1.2s						
BIOA	Bad Ischl, Aus	131.35	328	epPKP	PKiKP	03 37 31.4	+2.9
	comp=Z,5.3nm,1.3s						
ITM	Ithomi	131.56	312	IAMs_20	IAMs_20	04 41 50.5	
	comp=Z,2µm,22.0s						
OBKA	Obir	131.60	326	ePKP	PKPdf	03 37 27.2	-1.0
	comp=Z,4.5nm,1.3s						
MYKA	Terra Mystica	132.02	327	epPKP	PKiKP	03 37 31.4	+1.5
	comp=Z,1.1nm,0.4s						
LESA	Schwarzleotal	132.02	328	i PKP	PKPdf	03 37 28.5	-0.4
	comp=Z,5.4nm,1.5s						
ABTA	Abfaltersbach	132.54	328	ePKiKP	PKiKP	03 37 31.8	+0.8
	comp=Z,4.7nm,1.3s						
WATA	Walderalm	132.64	329	epPKiKP	PKiKP	03 37 34.8	+3.5
	comp=Z,18nm,1.6s						
WTTA	Wattenberg	132.66	329	epPKiKP	PKiKP	03 37 35.5	+4.1
	comp=Z,12nm,1.1s						
SCTE	Santa Cesarea	132.74	317	IAMs_20	IAMs_20	04 18 20.9	
	comp=Z,1µm,18.0s						
MOTA	Moosalm	132.88	329	epPKP	PKiKP	03 37 32.8	+1.0
	comp=Z,7.9nm,1.1s						
SQTA	Sankt Quirin	132.91	329	epPKiKP	PKiKP	03 37 35.5	+3.7
	comp=Z,7.5nm,1.2s						
RETA	Reutte	132.95	330	epPKiKP	PKiKP	03 37 35.4	+3.5
	comp=Z,2.4nm,0.9s						
FETA	Feichten	133.28	329	i PKiKP	PKPdf	03 37 31.4	0.0
	comp=Z,5.6nm,1.1s						
DAVA	Damuels	133.53	330	epPKiKP	PKiKP	03 37 36.8	+3.7
	comp=Z,4.8nm,0.8s						
TIP	Timpagrande	134.32	317	IAMs_20	IAMs_20	04 50 16.9	
	comp=Z,2µm,19.0s						
GUMA	Gualdo di Mace	134.37	323	IAMs_20	IAMs_20	04 46 22.4	
	comp=Z,1µm,20.0s						
CEL	Celeste	135.37	316	IAMs_20	IAMs_20	04 43 49.6	
	comp=Z,2µm,21.0s						
VSL	Villasalto	138.90	322	IAMs_20	IAMs_20	04 49 14.5	
	comp=Z,2µm,21.0s						
KEST	Kesra	141.15	317	PKP	PKPdf	03 37 45.4	-0.8
	comp=Z,2.3nm,0.5s,baz=292,slow=11,SNR=3.6						
MAN01	Angra dos Reis	141.45	147	eP	PKPdf	03 37 46.7	-0.4
ITTB	Itaituba	143.93	111	eP	PKPdf	03 37 51.7	0.0
BDFB	Brasilia	144.31	134		PKPab	03 37 49.6	-0.7
BDFB	Brasilia	144.31	134	PKP	PKPbc	03 37 50.9	+0.3
	comp=Z,15nm,0.6s,baz=234,slow=2.0,SNR=39						
PBRG	Braganca	145.03	340	ePKP	PKPdf	03 37 53.0	+0.2
DIAM	Diamantina, MG	145.23	143	eP	PKPbc	03 37 53.1	-0.4
PGAV	Gavieira, Arco	145.40	341	ePKP	PKPab	03 37 54.6	+1.1
PCAB	Cabril	145.55	341	ePKP	PKPab	03 37 54.8	+0.8
MVO	Moncorvo	145.70	339	ePKP	PKPab	03 37 55.6	+0.9
POLO	Lamas de Olo	145.78	340	ePKP	PKPab	03 37 55.9	+0.9
ESDC	Sonseca Array	145.80	334	PKPbc	PKPab	03 37 55.0	0.0
	comp=Z,17nm,1.2s,baz=17,slow=3.8,SNR=27						
PVRL	Vila Real	145.84	340	ePKP	PKPab	03 37 56.1	+1.0
PAB	San Pablo	146.07	335	IAMs_20	IAMs_20	04 49 35.8	
	comp=Z,2µm,20.0s						
CART	Cartagena	146.08	329	IAMs_20	IAMs_20	04 36 00.8	
	comp=Z,2µm,22.0s						
EANR	'Ain N'Sour	146.16	325	P	PKPab	03 37 56.8	+0.3
PTO	Porto	146.25	341	ePKP	PKPbc	03 37 55.9	0.0
RIB01	Linhares ES	146.25	148	eP	PKPdf	03 37 56.0	+0.5
SJMB	Sao Joao De Ma	146.34	146	eP	PKPdf	03 37 55.8	+0.2
PVIS	Viseu	146.40	340	ePKP	PKPab	03 37 57.6	+0.3
MTE	Manteigas	146.56	339	ePKP	PKPab	03 37 58.7	+0.7
COI	Coimbra	147.03	340	ePKP	PKPab	03 37 59.3	-0.3
PCBR	Castelo Branco	147.03	339	ePKP	PKPab	03 37 59.8	+0.1
PCAS	Casmilo, Conde	147.20	340	ePKP	PKPbc	03 37 59.3	+0.6
JANB	Januaria	147.26	138	eP	PKPdf	03 37 57.4	+0.1
PMRV	Marv??o	147.37	338	ePKP	PKPbc	03 37 59.8	+0.6
PSARD	Sardoal	147.49	339	ePKP	PKPbc	03 38 00.2	+0.7
PSBE	So Bento	147.78	340	ePKP	PKPbc	03 37 59.8	-0.5
PESTR	Estremoz	147.93	338	ePKP	PKPab	03 38 04.2	+0.9
PMTG	Montargil	147.98	339	ePKP	PKPbc	03 38 00.1	-0.7
PBAR	Barrancos	148.33	337	ePKP	PKPbc	03 38 02.0	+0.2
EVO	Evora	148.38	338	ePKP	PKPbc	03 38 02.2	+0.2
PRPB	Parauapebas	148.46	119	eP	PKPdf	03 37 59.2	-0.1
PBEJ	Beja	148.78	338	ePKP	PKPab	03 38 06.3	-0.4
SMTB	Santa Maria do	148.89	125	eP	PKPdf	03 37 59.5	-0.5
PCVE	Castro Verde	149.19	338	ePKP	PKPbc	03 38 04.5	+0.5
MORF	Marmelete	149.71	338	ePKP	PKPbc	03 38 05.3	-0.1
PFVI	Vila Bisbo	149.92	338	ePKP	PKPdf	03 38 02.4	+1.4
CMC01	Camacan, BA	149.97	145	eP	PKPdf	03 38 01.7	+0.1
TORD	Torodi Ar. Bea	156.21	281	PKPab	PKPab	03 38 38.9	+0.3
	comp=Z,8.2nm,0.8s,baz=60,slow=5.8,SNR=5.8						
PMOZ	Porto Moniz, M	156.33	349	ePKP	PKPdf	03 38 12.5	+2.0

KRSC 26 03:19:24.6±1.0, 56°.06N×164°.22E, h20^{km}±13^{km}, Ml3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.80	281	eP	Pb	03 19 39.9	+0.1
KBTR				eS	Sb	03 19 50.5	+0.4
KBG	Krutoberegovo	0.87	284	eP	Pb	03 19 41.0	+0.1
KBG				eS	Sb	03 19 52.1	0.0
BKI	Bering	1.31	130	eP	Pb	03 19 48.9	+0.4
BKI				eS	Sb	03 20 06.2	+1.3
SMKR	Semkarok	1.62	290	eP	Pn	03 19 52.7	+0.7
SMKR				eS	Sb	03 20 13.2	-0.6
BDR	Baidarnaya	1.75	288	eS	Sb	03 20 17.6	0.0
SRKR	Sorokina	1.80	291	eS	Sn	03 20 17.2	+0.5
BZGR	Bezymyannyi-Gr	1.98	268	eP	Pb	03 19 59.5	-0.5
KLY	Klyuchi	2.01	279	eS	Sn	03 20 22.0	+0.2
MKZ	Mys Kozlova	2.07	224	eP	Pb	03 20 00.2	-1.2
MKZ				eS	Sb	03 20 26.3	-0.4
BZWR	Bezymyannyi-We	2.09	269	eP	Pb	03 20 01.5	-0.4
KMNR	Kamenistaya	2.26	264	eP	Pb	03 20 04.5	-0.3
SMAR	Somma	4.21	231	eP	Pn	03 20 31.3	+3.5
UGLR	Uglovaya	4.24	230	eP	Pn	03 20 31.6	+3.5
RUS	Russkaya	4.94	225	eP	Pn	03 20 41.0	+3.4
MTVR	Mutnovka	5.04	227	eP	Pn	03 20 43.5	+4.4

KRSC 26 03:20:22.4±1.2, 56°.16N×164°.32E, h25^{km}±21^{km}, Ml3.5, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.84	274	eP	Pb	03 20 38.2	-0.2
KBTR				eS	Sb	03 20 49.2	-0.1
KBG	Krutoberegovo	0.91	277	eS	Sn	03 20 52.0	+0.2
BKI	Bering	1.34	135	eP	Pb	03 20 47.9	+1.1
BKI				eS	Sb	03 21 05.8	+2.4
SMKR	Semkarok	1.64	286	eP	Pb	03 20 52.9	+0.8
BDR	Baidarnaya	1.78	285	eS	Sb	03 21 18.9	+2.5
MKZ	Mys Kozlova	2.18	224	eP	Pn	03 20 58.7	+1.7
MKZ				eS	Sn	03 21 25.4	+2.2
TUMD	Tumrok D	2.42	248	eP	Pb	03 21 03.1	-2.1
TUMD				eS	Sb	03 21 33.1	-1.5
OSSR	Ossora	3.17	348	eS	Sn	03 21 49.4	+1.7
UGLR	Uglovaya	4.35	229	eP	Pn	03 21 30.4	+3.5
RUS	Russkaya	5.05	225	eP	Pn	03 21 39.8	+3.4
GRL	Gorelyy	5.14	228	eP	Pn	03 21 41.7	+3.9
MTVR	Mutnovka	5.14	227	eP	Pn	03 21 41.9	+4.1

KRSC 26 03:21:59.4±1.4, 56°.23N×164°.32E, h49^{km}±20^{km}, Ml3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.84	269	eP	Pn	03 22 14.4	-0.4
KBTR				eS	Sn	03 22 25.8	-0.4
KBG	Krutoberegovo	0.90	272	eP	Pn	03 22 15.9	+0.2
KBG				eS	Sn	03 22 28.3	+0.6
BKI	Bering	1.39	137	eP	Pn	03 22 24.5	+2.2
BKI				eS	Sn	03 22 41.4	+2.0
SMKR	Semkarok	1.62	284	eP	Pn	03 22 27.9	+2.4
SMKR				eS	Sn	03 22 48.3	+3.0
BDR	Baidarnaya	1.76	282	eS	Sn	03 22 53.1	+4.4
ZLN	Zelenaya	1.98	265	eP	Pn	03 22 34.2	+3.7
KLY	Klyuchi	2.05	274	eP	Pn	03 22 32.8	+1.5
BZGR	Bezymyannyi-Gr	2.05	263	eP	Pn	03 22 34.7	+3.2
KRSR	Krestovskiy	2.10	271	eP	Pn	03 22 35.1	+3.1
BZWR	Bezymyannyi-We	2.16	265	eP	Pn	03 22 36.5	+3.5
BZMR	Bezymyannaya	2.17	264	eP	Pn	03 22 36.5	+3.4
MKZ	Mys Kozlova	2.23	222	eP	Pn	03 22 36.3	+2.5
MKZ				eS	Sn	03 23 01.8	+1.7
KMNR	Kamenistaya	2.34	260	eP	Pn	03 22 39.8	+4.4
TUMD	Tumrok D	2.44	247	eP	Pn	03 22 40.0	+3.2
KOZ	Kozyrevsk	2.49	268	eP	Pn	03 22 41.5	+4.1
SRDR	Sredinnyy	2.57	274	eP	Pn	03 22 42.5	+4.0
OSSR	Ossora	3.10	348	eP	Pn	03 22 48.3	+2.6
OSSR				eS	Sn	03 23 23.1	+1.6
SPN	Mys Shipunski	4.01	220	eS	Sn	03 23 43.5	-0.2
GNL	Ganaly	4.47	238	eP	Pn	03 23 09.3	+4.7
MTVR	Mutnovka	5.19	226	eP	Pn	03 23 18.7	+4.2

IDC 26 03:26:18.6±5.0, 21°.57S×178°.51W, h0^{km}, mb4.0/2, mbtmp4.0/2, Error ellipse: s-maj=280.2km s-min=54.3km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.82	258	P	P	03 34 26.0	-0.7
	0.9nm,0.6s,baz=103,slow=7.4,SNR=9.7						
	0.9nm,0.6s						
WRA	Warramunga Arr	43.99	263	P	P	03 34 28.4	+0.3
	1.4nm,0.4s,baz=96,slow=8.1,SNR=31						
	1.4nm,0.4s						
HFS	Hagfors	140.51	350	PKP	PKPdf	03 45 47.4	-2.0
	1.1nm,0.4s,baz=47,slow=4.6,SNR=18						
AKASG	Malin Array Be	143.70	330	PKP	PKPdf	03 45 55.3	-0.1
	1.0nm,0.5s,baz=43,slow=3.7,SNR=8.0						
BRTR	Keskin Array B	147.18	311	PKPbc	PKPbc	03 46 03.7	-0.5
	0.5nm,0.6s,baz=64,slow=5.6,SNR=3.6						

KRSC 26 03:27:50.7±1.5, 56°.28N×164°.38E, h44^{km}±19^{km}, Ml3.8, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.87	266	eP	Pn	03 28 06.7	+0.1
KBTR				eS	Sn	03 28 17.6	-0.5
KBG	Krutoberegovo	0.94	269	eP	Pn	03 28 06.7	-0.7
KBG				eS	Sn	03 28 18.7	-0.9
BKI	Bering	1.41	140	eP	Pn	03 28 16.2	+2.4
BKI				eS	Sn	03 28 33.8	+2.6
ZLN	Zelenaya	2.02	264	eP	Pn	03 28 26.0	+3.6
ZLN				eS	Sn	03 28 51.4	+5.0
KLY	Klyuchi	2.08	272	eP	Pn	03 28 24.7	+1.7
KLY				eS	Sn	03 28 49.6	+2.0
BZGR	Bezymyannyi-Gr	2.09	262	eP	Pn	03 28 27.2	+3.9
KRSR	Krestovskiy	2.13	270	eP	Pn	03 28 27.4	+3.5
BZWR	Bezymyannyi-We	2.20	263	eP	Pn	03 28 28.6	+3.7
BZMR	Bezymyannaya	2.21	262	eP	Pn	03 28 28.3	+3.4
KOZ	Kozyrevsk	2.53	267	eP	Pn	03 28 33.2	+3.9
SRDR	Sredinnyy	2.60	273	eP	Pn	03 28 34.4	+4.1
OSSR	Ossora	3.06	347	eS	Sn	03 29 14.2	+2.4
NLC	Nalytchevo	4.27	225	eS	Sn	03 29 43.1	+1.4
RUS	Russkaya	5.16	224	eP	Pn	03 29 09.7	+4.3

*IDC **26** 03:35:34.9±0.8, 56°.30N×164°.12E, h0^{km}, mb3.7/9, mbtmp3.6/10, ML2.6/1, Error ellipse: s-maj=27.9km s-min=21.0km az=138.0*

*KRSC **26** 03:35:34.8±2.1, 56°.25N×164°.46E, h43^{km}±18^{km}, Ml4.0*

ISC 26 03:35:35.6±2.0, 56°.32N±0°.06×164°.28E±0°.07, h6^{km}±11^{km}, n46, σ1^{s}.09/54, mb3.7/9, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.82	263	eP	Pg	03 35 51.2	-0.2
KBTR				eS	Sg	03 36 01.7	-0.3
KBG	Krutoberegovo	0.88	267	eP	Pg	03 35 52.1	-0.3
KBG				eS	Sg	03 36 04.2	+0.3
SMKR	Semkarok	1.58	281	eP	Pn	03 36 04.1	-0.3
SMKR				eS	Sn	03 36 24.2	-1.0
BDR	Baidarnaya	1.73	280	eS	Sn	03 36 28.9	+0.3
ZLN	Zelenaya	1.97	263	eP	Pn	03 36 10.2	+0.6
CIRR	Tsirk	1.98	266	eP	Pn	03 36 10.3	+0.4
LGNR	Loginova	2.02	265	eP	Pn	03 36 11.2	+0.7
KLY	Klyuchi	2.02	271	eP	Pn	03 36 08.8	-1.4
KLY				eS	Sn	03 36 32.6	-3.2
KRSR	Krestovskiy	2.08	269	eP	Pn	03 36 11.3	+0.2
BZWR	Bezymyannyi-We	2.15	262	eP	Pn	03 36 12.6	+0.5
BZMR	Bezymyannaya	2.16	261	eP	Pn	03 36 12.8	+0.6
KIRR	Kirishev	2.23	262	eP	Pn	03 36 14.7	+1.4
KIRR				eS	Sn	03 36 42.2	+1.0
MKZ	Mys Kozlova	2.29	221	eP	Pn	03 36 12.2	-1.6
KPT	Kopyto	2.30	263	eP	Pn	03 36 15.6	+1.5
KMNR	Kamenistaya	2.34	258	eP	Pn	03 36 15.8	+1.2
TUMD	Tumrok D	2.46	245	eP	Pn	03 36 16.5	+0.2
TUMD				eS	Sn	03 36 45.7	-0.9
KOZ	Kozyrevsk	2.48	266	eP	Pn	03 36 18.1	+1.6
SRDR	Sredinnyy	2.54	272	eP	Pn	03 36 18.6	+1.1
SRDR				eS	Sn	03 36 51.5	+2.7
OSSR	Ossora	3.02	348	eS	Sn	03 36 58.4	-1.8
ESO	Esso	3.15	265	eP	Pn	03 36 26.1	+0.3
KII	Karymskiy	3.59	233	eP	Pn	03 36 32.8	+1.0
NLC	Nalytchevo	4.25	224	eP	Pn	03 36 40.8	-0.1
SDLR	Sedlovina	4.36	228	eP	Pn	03 36 42.6	+0.1
KRER	Koryakskii	4.40	229	eP	Pn	03 36 43.9	+0.8
KRX	Arik	4.40	230	eP	Pn	03 36 44.9	+1.9
SMAR	Somma	4.41	228	eP	Pn	03 36 43.2	0.0
AVH	Avacha	4.43	229	eP	Pn	03 36 44.6	+1.2
UGLR	Uglovaya	4.43	228	eP	Pn	03 36 43.8	+0.3
KOK	Koryaka	4.45	230	eP	Pn	03 36 44.6	+0.9
GNL	Ganaly	4.50	237	eP	Pn	03 36 45.6	+1.3
PETK	Petropavlovsk-	4.99	233	Pn	Pn	03 36 51.1	+0.1
	1.2nm,0.3s,baz=84,slow=14,SNR=9.7						
PETK				Sn	Sn	03 37 47.6	-1.3
	1.1nm,0.3s,baz=315,slow=15,SNR=4.2						
	4.3nm,0.6s						
KRMR	Karymshinskiy	5.00	228	eP	Pn	03 36 52.4	+1.3
RUS	Russkaya	5.15	223	eP	Pn	03 36 53.1	-0.1
GRL	Gorelyy	5.23	226	eP	Pn	03 36 55.8	+1.4
MTVR	Mutnovka	5.24	225	eP	Pn	03 36 55.4	+0.9
ASAK	Asacha	5.43	226	eP	Pn	03 36 57.5	+0.5
ILAR	Eielson Array	24.84	50	P	P	03 40 59.9	+1.5
	0.2nm,0.7s,baz=267,slow=7.6,SNR=2.8						
	0.2nm,0.7s						
MJAR	Matsushiro Arr	26.45	233	P	P	03 41 13.0	-0.1
	2.1nm,0.7s,baz=31,slow=9.0,SNR=7.4						
	2.1nm,0.7s						
MKAR	Makanchi Array	48.95	296	P	P	03 44 21.9	-0.5
	0.3nm,0.6s,baz=59,slow=7.0,SNR=2.6						
	0.3nm,0.6s						
BVAR	Borovoye Array	50.29	308	P	P	03 44 32.0	-0.5
	1.6nm,0.7s,baz=29,slow=6.8,SNR=5.8						
	1.6nm,0.7s						
AKASG	Malin Array Be	67.04	331	P	P	03 46 29.0	-0.1
	0.4nm,0.3s,baz=28,slow=6.5,SNR=3.4						
	0.4nm,0.3s						
TXAR	Lajitas Array	67.21	71	P	P	03 46 31.6	+1.0
	0.3nm,0.6s,baz=302,slow=3.4,SNR=5.4						
	0.3nm,0.6s						
BRTR	Keskin Array B	75.60	323	P	P	03 47 21.2	0.0
	0.3nm,0.6s,baz=16,slow=6.8,SNR=2.3						
	0.3nm,0.6s						
WRA	Warramunga Arr	80.06	208	P	P	03 47 45.8	-0.1
	0.8nm,0.8s,baz=24,slow=5.7,SNR=3.7						
	0.8nm,0.8s						
ASAR	Alice Springs	83.72	208	P	P	03 48 04.6	-0.6
	0.6nm,0.7s,baz=20,slow=5.0,SNR=5.0						
	0.6nm,0.7s						
QSPA	South Pole Qui	146.07	180	PKPbc	PKPdf	03 55 14.0	-0.1
	0.9nm,0.6s,baz=279,slow=0.6,SNR=12						

KRSC 26 03:38:18.2±0.9, 56°.09N×164°.24E, h14^{km}±14^{km}, Ml3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBG	Krutoberegovo	0.87	282	eP	Pb	03 38 33.4	-1.6
KBG				eS	Sg	03 38 45.4	-1.1
BKI	Bering	1.32	131	i P	Pb	03 38 42.5	-0.2
BKI				i S	Sg	03 39 00.3	-0.6
SMKR	Semkarok	1.62	289	eP	Pn	03 38 46.0	-0.3
BDR	Baidarnaya	1.75	287	eS	Sn	03 39 10.7	+0.4
ZLN	Zelenaya	1.93	269	eS	Sn	03 39 15.6	+1.1
KRSR	Krestovskiy	2.06	275	eP	Pn	03 38 52.9	+0.6
MKZ	Mys Kozlova	2.10	224	eP	Pb	03 38 54.5	-1.5
MKZ				eS	Sn	03 39 20.0	+1.3
BZWR	Bezymyannyi-We	2.10	268	eP	Pb	03 38 54.9	-1.2
BZMR	Bezymyannaya	2.11	267	eP	Pb	03 38 55.3	-0.9
KIRR	Kirishev	2.19	268	eP	Pb	03 38 56.6	-1.0
KIRR				eS	Sb	03 39 23.7	-0.9
KPT	Kopyto	2.26	269	eP	Pb	03 38 57.7	-0.9
KMNR	Kamenistaya	2.27	263	eP	Pb	03 38 57.8	-1.2
TUMD	Tumrok D	2.35	249	eP	Pn	03 38 58.2	+1.9
TUMD				eS	Sn	03 39 26.9	+2.1
KOZ	Kozyrevsk	2.44	271	eP	Pb	03 39 00.7	-1.1
SRDR	Sredinnyy	2.54	277	eP	Pn	03 39 00.5	+1.6
UGLR	Uglovaya	4.27	230	eP	Pn	03 39 25.4	+2.7
MTVR	Mutnovka	5.06	227	eP	Pn	03 39 36.8	+3.2

*IPEC **26** 03:46:24.8±0.2, 51°.59N×16°.20E, h1^{km}, ML2.8/5, Error ellipse: s-maj=3.0km s-min=1.5km az=72.0*

*IDC **26** 03:46:25.6±0.8, 51°.53N×16°.07E, h0^{km}, mbtmp3.3/7, ML2.7/7, Error ellipse: s-maj=13.9km s-min=7.4km az=113.0*

*DNK **26** 03:46:25.4±2.0, 51°.73N×16°.05E, h0^{km}±84^{km}, ML2.0*

*PRU **26** 03:46:27.8, 51°.49N×16°.08E, h0^{km}*

ISC 26 03:46:23.1±0.7, 51°.67N±0°.03×16°.12E±0°.02, h0^{km}, n59, σ1^{s}.24/112, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.84	172	ePg	Pg	03 46 39.6	+0.5
KSP				eSg	Sg	03 46 49.5	-0.5
CHVC	Chvalec	1.09	182	ePG	Pg	03 46 44.3	+0.4
CHVC				eSG	Sg	03 46 57.4	-0.6
	comp=Z,206nm,1.2s						
OSTC	Ostas	1.12	177	ePG	Pg	03 46 45.1	+0.6
OSTC				eSG	Sg	03 46 58.4	-0.6
	comp=Z,94nm,0.4s						
UPC	Upice	1.17	183	ePG	Pg	03 46 45.8	+0.3
UPC				eSG	Sg	03 46 59.4	-1.2
DPC	Dobruska-Polom	1.33	174	ePG	Pg	03 46 48.5	-0.1
DPC				eSG	Sg	03 47 04.0	-1.8
	comp=Z,52nm,0.4s						
PVCC	Panska Ves	1.51	221	ePG	Pn	03 46 52.0	+0.7
PVCC				eSG	Sb	03 47 11.6	0.0
	comp=Z,256nm,0.5s						
PIVO	Bartosovice	1.51	170	ePg	Pn	03 46 51.1	-0.4
	baz=351						
PIVO				eSg	Sg	03 47 09.2	-2.5
	97nm,0.4s,baz=351						
BRG	Berggiesshubel	1.58	240	Pn	Pn	03 46 52.3	-0.1
BRG				Pg	Pg	03 46 54.3	+0.9
BRG				Sg	Sg	03 47 14.2	+0.3
BRG				Amp		03 47 15.9	
	comp=Z,164nm,0.4s						
KRLC	Kraliky	1.66	165	ePG	Pn	03 46 53.8	+0.4
KRLC				eSG	Sn	03 47 15.1	-0.3

	comp=Z,77nm,0.7s						
RICC	Richard	1.70	229	eSG	Sn	03 47 15.7	-0.8
PRA	Prague	1.93	214	ePN	Pn	03 46 57.4	+0.3
GOPC	GO Pecny, Ondr	1.95	206	ePN	Pn	03 46 57.6	+0.1
PRU	Pruhonice	1.96	211	ePG	Pb	03 46 59.6	-0.1
PRU				eSG	Sn	03 47 23.8	+0.9
	comp=Z,47nm,0.5s						
CLL	Collm	1.98	261	i Pn	Pn	03 46 58.3	+0.4
	comp=Z,20nm,0.5s						
CLL				i Pg	Pg	03 47 01.9	+0.8
CLL				i x	x	03 47 05.3	
CLL				eSg	Sg	03 47 27.0	+0.3
	comp=Z,28nm,0.6s						
STEB	Steborice	2.03	148	ePG	Pg	03 47 01.9	-0.1
STEB				eSG	Sg	03 47 27.9	-0.5
MORC	Moravsky Berou	2.10	154	ePn	Pn	03 46 59.6	0.0
	baz=335						
MORC				eSg	Sn	03 47 27.5	+1.1
	comp=Z,70nm,0.6s,baz=335						
MORC	Moravsky Berou	2.10	154	ePN	Pn	03 46 59.7	+0.1
MORC				eSG	Sn	03 47 27.6	+1.1
OKC	Ostrava-Krasne	2.25	144	eSG	Sb	03 47 33.0	+0.2
VRAC	Vranov	2.39	173	Pn	Pn	03 47 04.7	+1.2
	comp=Z,3.5nm,0.3s,baz=343,slow=15,SNR=16						
VRAC				Lg	Lg	03 47 37.1	
	comp=Z,5.6nm,0.3s,baz=228,slow=7.6,SNR=5.7						
	comp=Z,11nm,0.5s						
VRAC	Vranov	2.39	173	ePn	Pn	03 47 04.0	+0.5
	baz=354						
VRAC				eSg	Sb	03 47 36.6	-0.3
	comp=Z,51nm,0.7s,baz=354						
KRUC	Moravsky	2.62	176	ePn	Pn	03 47 06.8	+0.1
	baz=357						
KRUC				eSg	Sb	03 47 43.9	+0.3
	comp=Z,37nm,0.7s,baz=357						
NKC	Novy Kostel	2.73	240	ePG	Pg	03 47 16.1	+0.7
NKC				eSG	Sg	03 47 50.5	-0.3
	comp=Z,82nm,0.6s						
OJC	Ojcow	2.75	121	ePn	Pn	03 47 07.8	-0.6
OJC				ePg	Pg	03 47 16.3	+0.6
OJC				eSg	Sg	03 47 52.0	+0.8
JAVC	Velka Javorina	2.99	160	ePn	Pn	03 47 11.6	-0.2
	baz=342						
KHC	Kasperske Hory	3.02	214	ePN	Pn	03 47 12.4	+0.2
KHC				ePG	Pb	03 47 18.6	+0.9
KHC				eSG	Sg	03 47 58.2	-1.9
	comp=Z,22nm,0.6s						
CKRC	Cesky Krumlov	3.08	203	ePN	Pn	03 47 13.9	+0.9
CKRC				ePG	Pb	03 47 19.9	+1.1
CKRC				eSG	Sg	03 48 00.6	-1.5
GERES	GERESS Array B	3.23	210	Pn	Pn	03 47 15.2	+0.1
	comp=Z,0.2nm,0.3s,baz=31,slow=13,SNR=39						
GERES				Pg	Pb	03 47 21.9	+0.6
	comp=Z,0.5nm,0.3s,baz=33,slow=16,SNR=30						
GERES				Lg	Lg	03 48 03.3	
	comp=Z,0.7nm,0.3s,baz=30,slow=28,SNR=9.7						
	comp=Z,4.3nm,0.5s						
LANS	Liptovska Anna	3.31	138	ePG	Pn	03 47 18.8	+2.6
LANS				eSG	Sg	03 48 08.5	-0.9
LANS				eLG	Lg	03 48 14.4	
MODS	Modra-Piesok	3.39	167	ePG	Pn	03 47 18.4	+1.2
MODS				eSG	Sg	03 48 09.0	-2.8
NIE	Niedzica	3.49	129	ePg	Pg	03 47 30.1	+0.1
NIE				eSg	Sg	03 48 17.0	+1.8
VYHS	Vyhne	3.63	150	ePG	Pn	03 47 21.1	+0.5
VYHS				eSG	Sg	03 48 17.7	-2.0
CONA	Conrad Observa	3.75	183	ePn	Pn	03 47 23.1	+0.8
	comp=Z,2.1nm,0.4s,SNR=9.1						
CONA				i Sn	Sn	03 48 07.6	+0.4
	comp=Z,3.6nm,0.3s						
STHS	Stebnicka Huta	3.97	123	ePG	Pg	03 47 39.0	-0.2
STHS				eSG	Sg	03 48 33.0	+2.4
RONA	Rosalia, Austr	3.98	178	ePn	Pn	03 47 26.3	+0.9
	comp=Z,3.8nm,0.5s						
RONA				i Sn	Sn	03 48 11.7	-1.0
	comp=Z,3.5nm,0.4s						
MOA	Molln	4.01	198	ePn	Pn	03 47 26.4	+0.6
	comp=Z,9.4nm,0.3s,SNR=9.5						
MOA				eSn	Sn	03 48 14.6	+1.1
	comp=Z,6.4nm,0.3s						
LUNU	Lund	4.27	339	eP	Pn	03 47 31.0	+1.7
LUNU				eS	Sn	03 48 20.6	+0.7
BIOA	Bad Ischl, Aus	4.30	203	ePn	Pn	03 47 30.5	+0.7
	comp=Z,2.1nm,0.4s						
BIOA				i Sn	Sn	03 48 18.5	-2.1
	comp=Z,4.5nm,0.4s						
ARSA	Arzberg	4.45	185	i Pn	Pn	03 47 32.3	+0.6
	comp=Z,1.4nm,0.3s						
ARSA				i Sn	Sn	03 48 26.0	+1.9
	comp=Z,1.9nm,0.4s						
BLEU	Blekinge	4.64	358	eP	Pn	03 47 37.1	+2.8
BLEU				eS	Sn	03 48 28.3	-0.7
BJUU	Bjuv	4.77	339	eP	Pn	03 47 37.3	+1.1
BJUU				eS	Sn	03 48 30.2	-1.9
LESA	Schwarzleotal	4.81	209	ePn	Pn	03 47 36.8	0.0
	comp=Z,2.4nm,0.3s						
LESA				i Sn	Sn	03 48 34.2	+1.0
	comp=Z,5.2nm,0.4s						
DEL	Delary	4.99	345	eP	Pn	03 47 40.9	+1.8
DEL				eS	Sn	03 48 35.6	-1.8
SOKA	Soboth	5.05	189	ePn	Pn	03 47 41.1	+1.0
	comp=Z,0.9nm,0.4s						
SOKA				eSn	Sn	03 48 39.2	+0.1
	comp=Z,1.4nm,0.5s						
WATA	Walderalm	5.25	216	ePn	Pn	03 47 44.2	+1.2
	comp=Z,2.7nm,0.5s						
WATA				i Sn	Sn	03 48 45.2	+0.9
	comp=Z,3.2nm,0.3s						
OBKA	Obir	5.27	192	ePn	Pn	03 47 42.3	-0.9
	comp=Z,1.4nm,0.4s						
OBKA				i Sn	Sn	03 48 46.2	+1.6
	comp=Z,2.0nm,0.5s						
WTTA	Wattenberg	5.29	215	ePn	Pn	03 47 43.0	-0.5
	comp=Z,2.4nm,0.5s						
WTTA				i Sn	Sn	03 48 45.8	+0.5
	comp=Z,5.2nm,0.6s						
MYKA	Terra Mystica	5.30	199	i Pn	Pn	03 47 43.6	0.0
	comp=Z,1.4nm,0.4s						
MYKA				i Sn	Sn	03 48 48.8	+3.4
	comp=Z,1.3nm,0.4s						
MOTA	Moosalm	5.43	219	i Pn	Pn	03 47 47.5	+2.1
	comp=Z,1.9nm,0.5s						
MOTA				i Sn	Sn	03 48 48.5	0.0
	comp=Z,4.5nm,0.6s						
RETA	Reutte	5.45	222	ePn	Pn	03 47 46.3	+0.7
	comp=Z,2.4nm,0.5s						
RETA				eSn	Sn	03 48 49.8	+0.8
	comp=Z,1.1nm,0.2s						
ABTA	Abfaltersbach	5.47	207	ePn	Pn	03 47 44.4	-1.4
	comp=Z,5.2nm,1.1s						
ABTA				i Sn	Sn	03 48 50.4	+0.9
	comp=Z,1.9nm,0.5s						
SQTA	Sankt Quirin	5.49	218	i Pn	Pn	03 47 46.2	0.0
	comp=Z,1.5nm,0.5s						
SQTA				i Sn	Sn	03 48 50.8	+0.8
	comp=Z,1.1nm,0.3s						
FABU	Falkenberg	5.70	341	eP	Pn	03 47 50.2	+1.3
FABU				eS	Sn	03 48 53.7	-1.2
FETA	Feichten	5.84	219	ePn	Pn	03 47 49.3	-1.7
	comp=Z,2.5nm,0.8s						
FETA				i Sn	Sn	03 48 58.1	-0.6
	comp=Z,1.2nm,0.4s						
DAVA	Damuels	5.98	225	ePn	Pn	03 47 47.0	-5.9
	comp=Z,2.5nm,0.5s						
DAVA				i Sn	Sn	03 49 02.6	+0.3
	comp=Z,4.0nm,0.5s						
DAVOX	Davos/Dischmat	6.38	222	Pn	Pn	03 47 58.8	+0.4
	comp=Z,0.3nm,0.3s,baz=42,slow=17,SNR=3.9						
DAVOX				Lg	Lg	03 49 44.6	
	comp=Z,0.5nm,0.3s,baz=182,slow=22,SNR=4.0						
	comp=Z,0.8nm,0.3s						
AKASG	Malin Array Be	8.29	92	Pn	Pn	03 48 23.3	-1.2
	comp=Z,0.9nm,0.3s,baz=281,slow=12,SNR=7.8						
	comp=Z,0.8nm,0.5s						
HFS	Hagfors	8.59	352	Pn	Pn	03 48 30.3	+1.8
	baz=158,slow=16,SNR=2.3						
	comp=Z,1.4nm,0.9s						
FINES	FINESS Array B	11.21	25	Pn	Pn	03 49 05.3	+0.9
	comp=Z,0.2nm,0.3s,baz=214,slow=12,SNR=4.6						
FINES				Sn	Sn	03 51 05.0	-5.3
	comp=Z,0.2nm,0.3s,baz=207,slow=22,SNR=3.9						
	comp=Z,1.4nm,0.8s						
ARCES	ARCESS Array B	18.46	10	Pn	P	03 50 39.1	-0.9
	baz=190,slow=15,SNR=1.2						
	comp=Z,1.4nm,0.8s						

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*IDC **26** 03:50:55.4±0.6, 56°.01N×164°.51E, h0^{km}, mb3.8/27, mbtmp3.9/29, ML3.8/2, MS3.7/2, Error ellipse: s-maj=17.0km s-min=12.1km az=152.0*

*KRSC **26** 03:50:56.3±1.3, 56°.15N×164°.43E, h47^{km}±19^{km}, Ml4.7*

*NEIC **26** 03:50:57.1±1.6, 55°.94N±0°.09×164°.4E±0°.1, h10^{km}±1^{km}, mb4.4/66, Error ellipse: s-maj=15.8km s-min=11.0km az=155.0*

*MOS **26** 03:50:57.0±0.8, 56°.13N×164°.39E, h20^{km}, mb4.8/12, Error ellipse: s-maj=7.2km s-min=4.8km az=59.7*

ISC 26 03:50:55.8±1.3**, 56°.10N**±0°.04×**164°.39E**±0°.03**, h1**^{km}±8^{km}**, n240,** σ1.^{s}36/240**, mb4.4**/66**, 9C-2D, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.88	277	PN	Pg	03 51 12.3	-0.4
KBTR				S	Sg	03 51 24.3	+0.2
KBTR	Krutoberegovo	0.88	277	eP	Pg	03 51 12.4	-0.4
KBTR				eS	Sg	03 51 24.4	+0.2
KBG	Krutoberegovo	0.95	280	PN	Pg	03 51 13.4	-0.6
KBG				S	Sg	03 51 25.6	-0.7
KBG	Krutoberegovo	0.95	280	eP	Pg	03 51 13.4	-0.6
KBG				eS	Sg	03 51 25.7	-0.7
BKI	Bering	1.27	134	PN	Pn	03 51 20.1	-0.5
BKI				S	Sb	03 51 36.8	-0.5
BKI	Bering	1.27	134	eP	Pn	03 51 20.2	-0.5
BKI				eS	Sb	03 51 36.8	-0.5
SMKR	Semkarok	1.69	288	PN	Pn	03 51 25.8	-0.8
SMKR				S	Sn	03 51 47.3	-1.6
SMKR	Semkarok	1.69	288	eP	Pn	03 51 25.8	-0.8
SMKR				eS	Sn	03 51 47.3	-1.6
BDR	Baidarnaya	1.83	286	eS	Sn	03 51 51.8	-0.5
ZLN	Zelenaya	2.01	269	PN	Pn	03 51 31.6	+0.7
ZLN	Zelenaya	2.01	269	eP	Pn	03 51 31.6	+0.7
CIRR	Tsirk	2.04	272	PN	Pn	03 51 31.6	+0.3
CIRR	Tsirk	2.04	272	eP	Pn	03 51 31.6	+0.3
BZGR	Bezymyannyi-Gr	2.08	267	PN	Pn	03 51 32.0	+0.2
BZGR	Bezymyannyi-Gr	2.08	267	eP	Pn	03 51 32.1	+0.2
KLY	Klyuchi	2.10	277	PN	Pn	03 51 30.5	-1.5
KLY				S	Sn	03 51 55.5	-3.2
KLY	Klyuchi	2.10	277	eP	Pn	03 51 30.5	-1.5
KLY				eS	Sn	03 51 55.6	-3.2
KRSR	Krestovskiy	2.14	275	PN	Pn	03 51 32.2	-0.5
KRSR	Krestovskiy	2.14	275	eP	Pn	03 51 32.3	-0.5
MKZ	Mys Kozlova	2.17	226	PN	Pn	03 51 32.2	-0.8
MKZ				S	Sn	03 51 58.6	-1.8
MKZ	Mys Kozlova	2.17	226	eP	Pn	03 51 32.2	-0.8
MKZ				eS	Sn	03 51 58.7	-1.8
BZWR	Bezymyannyi-We	2.19	268	PN	Pn	03 51 33.9	+0.5
BZWR	Bezymyannyi-We	2.19	268	eP	Pn	03 51 34.0	+0.5
BZMR	Bezymyannaya	2.19	267	PN	Pn	03 51 34.1	+0.6
BZMR	Bezymyannaya	2.19	267	eP	Pn	03 51 34.1	+0.6
KIRR	Kirishev	2.28	268	PN	Pn	03 51 35.3	+0.7
KIRR	Kirishev	2.28	268	eP	Pn	03 51 35.3	+0.7
KPT	Kopyto	2.34	268	PN	Pn	03 51 36.0	+0.6
KPT	Kopyto	2.34	268	eP	Pn	03 51 36.1	+0.6
KMNR	Kamenistaya	2.36	263	PN	Pn	03 51 37.1	+1.4
KMNR	Kamenistaya	2.36	263	eP	Pn	03 51 37.2	+1.4
TUMD	Tumrok D	2.43	250	PN	Pn	03 51 37.2	+0.6
TUMD	Tumrok D	2.43	250	eP	Pn	03 51 37.3	+0.6
SRDR	Sredinnyy	2.62	277	PN	Pn	03 51 40.2	+1.0
SRDR				S	Sn	03 52 12.8	+1.2
SRDR	Sredinnyy	2.62	277	eP	Pn	03 51 40.2	+1.0
SRDR				eS	Sn	03 52 12.9	+1.2
ESO	Esso	3.20	269	PN	Pn	03 51 48.5	+1.4
ESO	Esso	3.20	269	eP	Pn	03 51 48.6	+1.4
OSSR	Ossora	3.23	348	PN	Pn	03 51 45.6	-2.0
OSSR	Ossora	3.23	348	eP	Pn	03 51 45.7	-2.0
KII	Karymskiy	3.52	236	PN	Pn	03 51 52.3	+0.7
KII	Karymskiy	3.52	236	eP	Pn	03 51 52.3	+0.7
SPN	Mys Shipunski	3.94	222	PN	Pn	03 51 57.0	-0.3
SPN	Mys Shipunski	3.94	222	eP	Pn	03 51 57.1	-0.3
SPN				eS	Sn	03 52 40.8	-3.3
SDLR	Sedlovina	4.27	231	PN	Pn	03 52 03.1	+1.2
SDLR	Sedlovina	4.27	231	eP	Pn	03 52 03.2	+1.2
KRER	Koryakskii	4.31	232	PN	Pn	03 52 04.0	+1.4
KRER	Koryakskii	4.31	232	eP	Pn	03 52 04.0	+1.4
SMAR	Somma	4.31	231	PN	Pn	03 52 03.7	+1.1
SMAR	Somma	4.31	231	eP	Pn	03 52 03.8	+1.1
KRX	Arik	4.32	233	PN	Pn	03 52 04.1	+1.5
KRX	Arik	4.32	233	eP	Pn	03 52 04.1	+1.5
AVH	Avacha	4.34	231	PN	Pn	03 52 04.4	+1.5
AVH	Avacha	4.34	231	eP	Pn	03 52 04.4	+1.5
UGLR	Uglovaya	4.34	230	PN	Pn	03 52 04.0	+1.1
UGLR	Uglovaya	4.34	230	eP	Pn	03 52 04.0	+1.1
KOK	Koryaka	4.37	232	PN	Pn	03 52 05.1	+1.8
KOK	Koryaka	4.37	232	eP	Pn	03 52 05.2	+1.8
GNL	Ganaly	4.43	240	PN	Pn	03 52 05.8	+1.6
GNL	Ganaly	4.43	240	eP	Pn	03 52 05.9	+1.6
TILK	Tilichiki	4.45	11	PN	Pn	03 52 03.6	-0.7
TILK	Tilichiki	4.45	11	eP	Pn	03 52 03.6	-0.7
DALK	Dalny	4.50	229	PN	Pn	03 52 05.9	+1.0
DALK	Dalny	4.50	229	eP	Pn	03 52 06.0	+1.0
PET	Petropavlovsk	4.54	230		Pn	03 52 04.3	-1.3
PET	Petropavlovsk	4.54	230	ePN	Pn	03 52 04.8	-0.8
PET				eS	Sn	03 53 02.5	+3.5
PET				pmax	pmax		
	comp=Z,48nm,0.4s						
PET				smax	smax		
	comp=N,214nm,0.9s						
PET				smax	smax		
	comp=E,142nm,0.9s						
PEA0B	Petropavlovsk-	4.91	235		Pn	03 52 10.1	-0.6
PEA0B	Petropavlovsk-	4.91	235	PN	Pn	03 52 10.1	-0.6
PETK	Petropavlovsk-	4.91	235		Pn	03 52 08.5	-2.2
PETK	Petropavlovsk-	4.91	235	Pn	Pn	03 52 12.0	+1.3
	comp=E,2.5nm,0.3s,baz=68,slow=16,SNR=12						
PETK				Sn	Sn	03 53 13.5	+5.4
	comp=E,1.5nm,0.3s,baz=79,slow=17,SNR=1.1						
	comp=E,7.5nm,0.5s						
RUS	Russkaya	5.04	226	PN	Pn	03 52 13.4	+1.1
RUS	Russkaya	5.04	226	eP	Pn	03 52 13.5	+1.1
GRL	Gorelyy	5.13	229	PN	Pn	03 52 16.1	+2.4
GRL	Gorelyy	5.13	229	eP	Pn	03 52 16.2	+2.4
MTVR	Mutnovka	5.13	228	PN	Pn	03 52 15.6	+1.8
MTVR	Mutnovka	5.13	228	eP	Pn	03 52 15.7	+1.8
ASAK	Asacha	5.33	228	PN	Pn	03 52 18.5	+2.1
ASAK	Asacha	5.33	228	eP	Pn	03 52 18.6	+2.1
SMY	Shemya	6.60	117	Pn	Pn	03 52 34.7	+0.9
SMY	Shemya	6.60	117	PN	Pn	03 52 34.7	+0.9
ADK	Adak	11.90	103	Pn	Pn	03 53 45.4	-1.0
ADK	Adak	11.90	103	PN	Pn	03 53 45.4	-1.0
BILL	Bilibino	12.01	3		Pn	03 53 51.7	+3.8
BILL	Bilibino	12.01	3	⇑ePN	Pn	03 53 47.8	-0.1
ATKA	Atka Island	13.13	98	Pn	Pn	03 54 00.9	-2.3
P08K	Saint George I	14.43	77	Pn	Pn	03 54 21.4	+0.5
NIKH	Nikolski High	15.80	90	Pn	Pn	03 54 36.3	-3.0
YSS	Yuzhno-Sakhali	16.22	245	eP	P	03 54 56.2	+8.3
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
UNV	Unalaska Valle	16.80	86	Pn	Pn	03 54 51.3	-0.8
K13K	Kusilvak Mount	16.85	57		Pn	03 54 54.8	+2.2
K13K				IAmb	IAmb	03 55 12.0	
	comp=Z,39nm,1.4s						
YUK	Yuzh-Kuril'sk	16.88	232	⇑eP	Pn	03 54 51.1	-2.0
L14K	Kuka Creek	17.75	59	P	P	03 55 06.2	+1.5
L14K				IAmb	IAmb	03 55 24.9	
	comp=Z,30nm,1.1s						
JKA	Kamikawa-asahi	18.32	238		Pn	03 55 08.9	-2.1
ASAJ	Asahikawa	18.32	238	P	Pn	03 55 11.0	0.0
	comp=Z,1.7nm,0.3s,baz=27,slow=8.8,SNR=7.2						
ASAJ				LR	LR	04 01 54.7	
	comp=Z,2µm,19.8s,baz=345,slow=36						
	comp=Z,17nm,0.8s						
ASAJ	Asahikawa	18.32	238	P	Pn	03 55 11.0	0.0
K15K	Wolf Creek Mou	18.35	56	P	P	03 55 12.8	+1.4
K15K				IAmb	IAmb	03 55 22.4	
	comp=Z,25nm,1.1s						
C16K	Lisburne Hills	18.39	36	P	Pn	03 55 11.6	-0.1
YAK	Yakutsk	18.63	303	⇑eP	P	03 55 11.6	-2.8
YAK				pmax	pmax		
	comp=Z,11nm,0.8s						
N15K	Kwethluk River	19.03	63		P	03 55 20.4	+1.6
N15K				IAmb	IAmb	03 55 39.9	
	comp=Z,54nm,1.4s						
L16K	Owhat River	19.30	58	P	P	03 55 22.5	+0.8
H17K	Granite Mounta	19.40	48		P	03 55 22.7	-0.2
M16K	Timber Creek	19.55	60	P	P	03 55 25.2	+0.6
M16K				IAmb	IAmb	03 56 01.8	
	comp=Z,34nm,1.4s						
J17K	VABM Dome	19.56	53	P	P	03 55 24.1	-0.5
ERM	Erimo	19.69	233	P	P	03 55 23.4	-2.8
ERM				IAmb	IAmb	03 55 40.4	
	comp=Z,21nm,0.8s						
ERM	Erimo	19.69	233	P	P	03 55 23.4	-2.8
ERM				pmax	pmax		
	comp=Z,21nm,0.8s						
E18K	Tukpahlearik C	19.73	41		Pn	03 55 28.4	+0.4
E18K				IAmb	IAmb	03 55 40.0	
	comp=Z,19nm,1.1s						
C18K	Utukok River	19.94	37		P	03 55 30.0	+1.1
C18K				IAmb	IAmb	03 55 42.3	
	comp=Z,23nm,1.3s						
H18K	Honhosa River	20.09	48	P	P	03 55 31.3	+1.0
G18K	Tagagawik	20.10	46	P	P	03 55 31.4	+0.8
M17K	Holitna River	20.27	59	P	P	03 55 33.4	+0.9
M17K				IAmb	IAmb	03 55 46.8	
	comp=Z,35nm,1.2s						
J18K	Innoko River	20.62	53	P	P	03 55 37.0	+0.8
J18K				IAmb	IAmb	03 56 04.1	
	comp=Z,16nm,1.0s						
F19K	Shaleruckik Mo	20.65	44	P	P	03 55 38.2	+1.8
F19K				IAmb	IAmb	03 55 47.0	
	comp=Z,15nm,1.0s						
C19K	Lookout Ridge	20.65	37	P	P	03 55 37.9	+1.4
G19K	Purcell Mounta	20.78	46	Pn	Pn	03 55 40.8	+0.6
KLR	Kul'dur	20.80	264	P	P	03 55 38.7	+0.4
	comp=Z,0.4nm,0.4s,baz=43,slow=15,SNR=4.6						
	comp=Z,0.4nm,0.4s						
H19K	Roundabout Mou	20.94	47	P	P	03 55 41.4	+1.9
H19K				IAmb	IAmb	03 56 14.3	
	comp=Z,31nm,1.5s						
D19K	Kuna River	20.96	39	P	Pn	03 55 42.2	-0.2
D19K				IAmb	IAmb	03 56 22.3	
	comp=Z,36nm,1.4s						
J19K	Poorman	21.14	52		P	03 55 43.2	+1.4
ZEA	Zeya	21.31	279	eP	P	03 55 51.0	+7.3
TIXI	Tiksi	21.55	330		P	03 55 45.4	-0.7
TIXI				IAmb	IAmb	03 56 03.2	
	comp=Z,32nm,1.5s						
TIXI	Tiksi	21.55	330	P	P	03 55 47.8	+1.7
	comp=Z,3.1nm,0.3s,baz=134,slow=8.6,SNR=9.8						
	comp=Z,3.1nm,0.3s						
P18K	Big Mountain,	21.56	64	P	P	03 55 46.9	+0.5
P18K				IAmb	IAmb	03 55 58.1	
	comp=Z,12nm,0.9s						
JTM	Tenmabayashi	21.62	235	P	P	03 55 44.0	-3.0
JTM				IAmb	IAmb	03 55 58.4	
	comp=Z,21nm,1.0s						
B20K	Meade River	21.77	35	P	P	03 55 49.5	+1.0
IMAR	Indian Mountai	22.10	47	P	P	03 55 52.7	+0.6
M20K	Styx River	22.30	57	P	P	03 55 54.2	-0.2
E21K	Killik River	22.42	40	P	P	03 55 56.2	+0.7
H21K	Melozitna Rive	22.45	48	P	P	03 55 57.9	+2.0
HEH	HeiHe	22.71	271	eP	P	03 55 56.0	-2.7
HEH				pmax	pmax		
	comp=Z,11nm,0.9s						
BPAW	Bear Paw Mtn.	23.18	52		P	03 56 04.9	+1.4
BPAW				IAmb	IAmb	03 56 27.6	
	comp=Z,16nm,1.4s						
KDAK	Kodiak Island	23.24	68	P	P	03 56 03.7	-0.5
KDAK				IAmb	IAmb	03 56 43.8	
	comp=Z,17nm,1.1s						
KDAK	Kodiak Island	23.24	68	P	P	03 56 04.6	+0.5
	comp=Z,5.5nm,1.0s,baz=288,slow=9.4,SNR=4.3						
	comp=Z,5.5nm,1.0s						
SUA	Susitna One	23.47	58	P	P	03 56 07.2	+0.6
SUA				IAmb	IAmb	03 56 44.3	
	comp=Z,12nm,1.2s						
TRF	Thorofare Moun	23.51	53	P	P	03 56 08.7	+1.7
TRF				IAmb	IAmb	03 56 31.9	
	comp=Z,15nm,1.1s						
CNPM	China Poot	23.54	63	P	P	03 56 06.5	-0.7
CNPM				IAmb	IAmb	03 56 29.7	
	comp=Z,13nm,0.9s						
TOLK	Toolik Lake Re	24.05	40		P	03 56 12.8	+0.7
TOLK				IAmb	IAmb	03 56 38.7	
	comp=Z,8.9nm,0.9s						
RND	Reindeer	24.16	53	P	P	03 56 13.7	+0.5
RND	Reindeer	24.16	53	P	P	03 56 13.7	+0.5
RND				pmax	pmax		
	comp=Z,7.0nm,1.0s						
E24K	Your Creek	24.38	42	P	P	03 56 15.7	+0.5
E24K				IAmb	IAmb	03 56 24.4	
	comp=Z,11nm,0.8s						
D24K	Happy Valley	24.39	39	P	P	03 56 15.3	+0.2
D24K				IAmb	IAmb	03 56 24.1	
	comp=Z,8.2nm,0.8s						
WRH	Wood River Hil	24.43	51	P	P	03 56 15.7	+0.1
WRH				IAmb	IAmb	03 56 34.5	
	comp=Z,12nm,0.9s						
COLA	College	24.52	50	⇓eP	P	03 56 12.4	-3.9
COLA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CCB	Clear Creek Bu	24.55	50		P	03 56 16.9	+0.4
CCB				IAmb	IAmb	03 56 34.9	
	comp=Z,13nm,1.0s						
PWL	Port Wells	24.72	59	P	P	03 56 17.7	-0.6
IL31		24.94	50	P	P	03 56 20.6	+0.5
IL31				IAmb	IAmb	03 57 01.7	
	comp=Z,9.2nm,1.1s						
ILAR	Eielson Array	24.94	50	P	P	03 56 20.2	+0.1
ILAR	Eielson Array	24.94	50	P	P	03 56 19.7	-0.4
	comp=Z,1.7nm,0.9s,baz=257,slow=8.6,SNR=14						
	comp=Z,1.7nm,0.9s						
ILAR	Eielson Array	24.94	50	P	P	03 56 20.2	+0.1
SCM	Sheep Creek Mo	25.04	57	P	P	03 56 21.3	+0.1
SCM	Sheep Creek Mo	25.04	57	P	P	03 56 21.3	+0.1
SCM				pmax	pmax		
	comp=Z,40nm,1.2s						
JSD	Sado	25.12	235		P	03 56 20.5	-1.4
JSD				IAmb	IAmb	03 56 30.4	
	comp=Z,10nm,0.7s						
BNX	BinXian	25.22	261	⇓P	P	03 56 21.5	-1.3
BNX				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KLU	Klutina	25.76	57	P	P	03 56 28.3	+0.7
KLU				IAmb	IAmb	03 57 05.5	
	comp=Z,18nm,1.4s						
BMAR	Burnt Mountain	25.83	44		P	03 56 29.1	+0.9
MJB9	Matsu-Tunnel	26.37	233	P	P	03 56 32.8	-0.5
MAJO	Matsushiro	26.37	233		P	03 56 32.9	-0.4
MAJO	Matsushiro	26.37	233	⇑eP	P	03 56 32.9	-0.4
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MJAR	Matsushiro Arr	26.37	233	P	P	03 56 32.6	-0.7
	comp=Z,3.4nm,0.7s,baz=19,slow=8.6,SNR=12						
	comp=Z,3.4nm,0.7s						
K27K	Chicken	27.09	51	P	P	03 56 40.2	+0.7
K27K				IAmb	IAmb	03 57 08.1	
	comp=Z,7.3nm,1.1s						
BCAR	Beaver Creek A	27.37	53	P	P	03 56 43.5	+1.3
JGF	Kuroka	27.53	233	P	P	03 56 43.0	-0.9
INU	Inuyama	27.89	233	P	P	03 56 45.0	-2.0
HYT	Haines Junctio	29.88	57	P	P	03 57 05.1	+0.5
KSRS	Korea Array	30.66	248	PcP	PcP	04 00 10.8	+1.2
	comp=Z,1.4nm,0.8s,baz=49,slow=3.8,SNR=5.8						
ULN	Ulaanbaatar	35.31	281	P	P	03 57 53.1	+0.8
ULN				IAmb	IAmb	03 58 00.1	
	comp=Z,11nm,1.4s						
ULN	Ulaanbaatar	35.31	281	P	P	03 57 53.1	+0.8
ULN				pmax	pmax		
	comp=Z,11nm,1.4s						
SONM	Songino Array	35.69	282		P	03 57 56.3	+0.8
SONM	Songino Array	35.69	282	P	P	03 57 54.7	-0.9
	comp=Z,1.7nm,0.9s,baz=67,slow=7.2,SNR=4.9						
SONM				PcP	PcP	04 00 24.9	+1.3
	comp=Z,0.8nm,0.5s,baz=101,slow=1.5,SNR=5.2						
	comp=Z,1.7nm,0.9s						
H11N2	WAKE ISLAND Hy	36.37	176	T	T	04 36 54.7	
	baz=357,slow=76,SNR=138						
H11N3	WAKE ISLAND Hy	36.38	176	T	T	04 36 51.7	
	baz=357,slow=76,SNR=106						
H11N1	WAKE ISLAND Hy	36.38	176	T	T	04 37 00.2	
	baz=357,slow=76,SNR=202						
HHC	Hu-ho-hao-te	37.20	269	eP	P	03 58 09.3	+0.8
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,660nm,4.8s						
YKA	Yellowknife Ar	39.26	46	P	P	03 58 24.1	-1.3
	comp=Z,0.3nm,0.3s,baz=138,slow=6.6,SNR=9.4						
	comp=Z,0.3nm,0.3s						
NJ2	Nanjing	39.58	252	eP	P	03 58 28.0	-0.4

NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
LLLB	**Lillooet**	**42.40**	**65**	P	**P**	**03 58 52.4**	**+0.9**
SPITS	**Spitsbergen Ar**	**44.56**	**351**	P	**P**	**03 59 09.4**	**+0.8**
	comp=Z,7.2nm,0.9s,baz=78,slow=13,SNR=4.5						
	comp=Z,7.2nm,0.9s						
GTA	**Gaotai**	**44.76**	**276**	*e*P	P	03 59 17.0	+6.3
GTA				pP		03 59 22.5	
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
LZH	**Lanzhou**	**44.85**	**270**	*e*P	**P**	**03 59 15.0**	**+3.4**
LZH				pP		03 59 20.0	
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
J05D	**Fort Rock, OR**	**47.46**	**73**		**P**	**03 59 31.9**	**-0.1**
JTMT	**Jette**	**48.07**	**64**		**P**	**03 59 36.8**	**+0.1**
KURK	**Kurchatov**	**48.27**	**302**	P	**P**	**03 59 39.4**	**+1.4**
KURK				IAmb	IAmb	03 59 45.5	
	comp=Z,3.2nm,0.9s						
KURK	**Kurchatov**	**48.27**	**302**	P	**P**	**03 59 39.4**	**+1.4**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURBB	**Kurchatov Arra**	**48.37**	**302**	P	**P**	**03 59 38.4**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=51,slow=7.7,SNR=6.0						
	comp=Z,0.4nm,0.6s						
MK31	**Makanchi Array**	**49.10**	**296**	P	**P**	**03 59 45.5**	**+1.1**
MK31	**Makanchi Array**	**49.10**	**296**	P	**P**	**03 59 45.5**	**+1.1**
MK31				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MKAR	**Makanchi Array**	**49.10**	**296**	P	**P**	**03 59 44.2**	**-0.2**
MKAR	**Makanchi Array**	**49.10**	**296**	P	**P**	**03 59 44.0**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=67,slow=7.5,SNR=4.4						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**49.10**	**296**	P	**P**	**03 59 44.2**	**-0.2**
LYMT	**Lyon Mountain**	**49.59**	**63**	P	**P**	**03 59 48.4**	**-0.1**
BVAR	**Borovoye Array**	**50.47**	**309**	P	**P**	**03 59 55.1**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=52,slow=9.6,SNR=17						
	comp=Z,0.7nm,0.5s						
RLMT	**Red Lodge**	**52.39**	**63**		**P**	**04 00 09.7**	**+0.1**
RLMT				IAmb	IAmb	04 00 19.6	
	comp=Z,8.8nm,1.1s						
ARTI	**Arti**	**52.95**	**318***c*	*i*P	**P**	**04 00 13.2**	**0.0**
ARTI						04 02 11.4	
ARTI				S	**S**	**04 07 42.4**	**-0.7**
ARTI				SS	**SS**	**04 11 16.4**	**-4.8**
ARTI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PDAR	**Pinedale Array**	**53.93**	**65**	P	**P**	**04 00 21.1**	**+0.1**
PDAR	**Pinedale Array**	**53.93**	**65**	P	**P**	**04 00 19.4**	**-1.5**
	comp=Z,0.4nm,0.5s,baz=321,slow=1.9,SNR=5.2						
	comp=Z,0.4nm,0.5s						
ULM	**Lac du Bonnet**	**54.95**	**51**	P	**P**	**04 00 26.1**	**-1.8**
	comp=Z,1.9nm,0.8s,baz=311,slow=7.4,SNR=3.5						
	comp=Z,1.9nm,0.8s						
ULM	**Lac du Bonnet**	**54.95**	**51**⇑	*e*P	**P**	**04 00 27.1**	**-0.8**
KLMR	**Klimovskoe**	**55.57**	**331**	*e*P	**P**	**04 00 30.2**	**-2.0**
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
SRU	**San Rafael Swe**	**56.10**	**69**	P	**P**	**04 00 37.0**	**+0.4**
SRU	**San Rafael Swe**	**56.10**	**69**	P	**P**	**04 00 37.0**	**+0.4**
SRU				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KK31	**Karatay Array**	**57.57**	**300**	P	**P**	**04 00 47.3**	**+0.5**
KK31	**Karatay Array**	**57.57**	**300**	P	**P**	**04 00 47.3**	**+0.5**
KK31				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KKAR	**Karatay Array**	**57.57**	**300**		**P**	**04 00 47.5**	**+0.7**
KKAR	**Karatay Array**	**57.57**	**300**	P	**P**	**04 00 47.5**	**+0.7**
ABKAR	**Akbulak array**	**57.71**	**311**		**P**	**04 00 48.5**	**+0.9**
FINES	**FINESS Array B**	**58.31**	**338**	P	**P**	**04 00 51.6**	**0.0**
FINES	**FINESS Array B**	**58.31**	**338**	P	**P**	**04 00 53.1**	**+1.5**
	comp=Z,1.2nm,0.9s,baz=41,slow=5.7,SNR=2.1						
	comp=Z,1.2nm,0.9s						
BELG	**Belogornoye**	**60.00**	**321**	P	**P**	**04 01 04.5**	**+1.0**
	comp=Z,6.6nm,0.8s,baz=94,slow=2.4,SNR=7.4						
	comp=Z,6.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**61.21**	**260**	P	**P**	**04 01 12.3**	**+0.2**
	comp=Z,1.2nm,0.2s,baz=16,slow=7.0,SNR=6.6						
	comp=Z,1.2nm,0.2s						
OBN	**Obninsk**	**61.28**	**329**⇑	*i*P	P	04 01 19.1	+7.0
OBN				*PP		04 01 21.3	
OBN						04 02 01.0	
OBN				*e*SS	SS	04 13 30.8	-1.0
OBN				pmax	pmax		
	comp=Z,6.0nm,0.4s						
OBN				MLR	MLR		
	comp=Z,525nm,17.0s						
NB2	**NORSAR Subarra**	**61.30**	**345**	P	P	04 01 18.4	+6.1
	comp=Z,0.4nm,0.6s,baz=17,slow=6.9						
NOA	**NORSAR Array B**	**61.30**	**345**	P	**P**	**04 01 14.5**	**+2.2**
	comp=Z,1.2nm,0.8s,baz=17,slow=6.8,SNR=5.2						
	comp=Z,1.2nm,0.8s						
ANMO	**Albuquerque**	**61.37**	**69**⇑	*e*P	P	04 01 09.5	-3.9
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.0s						
HFS	**Hagfors**	**61.80**	**344**	P	**P**	**04 01 14.7**	**-0.9**
	comp=Z,1.2nm,0.9s,baz=46,slow=4.3,SNR=9.3						
	comp=Z,1.2nm,0.9s						
LPSR	**Galich'ya Gora**	**62.73**	**326**	*e*P	P	04 01 26.8	+4.8
LPSR				pmax	pmax		
	comp=Z,16nm,1.0s						
VRH	**Novokhopyorsk**	**63.03**	**324**	*e*P	P	04 01 28.7	+4.8
VRH				pmax	pmax		
	comp=Z,14nm,1.2s						
VSR	**Storozhevoye**	**63.85**	**325**	*e*P	P	04 01 33.7	+4.3
VSR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
WMOK	**Wichita Mounta**	**65.48**	**64**	P	**P**	**04 01 40.5**	**+0.1**
WMOK	**Wichita Mounta**	**65.48**	**64**	P	**P**	**04 01 40.5**	**+0.1**
WMOK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TX31	**Lajitas Ar. Si**	**67.22**	**71**	P	**P**	**04 01 51.6**	**-0.1**
TX31				IAmb	IAmb	04 02 00.5	
	comp=Z,3.5nm,0.8s						
TXAR	**Lajitas Array**	**67.22**	**71**	P	**P**	**04 01 51.9**	**+0.2**
TXAR	**Lajitas Array**	**67.22**	**71**	P	**P**	**04 01 52.5**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=293,slow=4.7,SNR=10						
	comp=Z,0.5nm,0.5s						
AKASG	**Malin Array Be**	**67.26**	**331**	P	**P**	**04 01 52.5**	**+1.1**
	comp=Z,0.5nm,0.4s,baz=29,slow=6.6,SNR=9.3						
	comp=Z,0.5nm,0.4s						
AKBB	**Malin Array Si**	**67.26**	**331**⇑	*e*P	**P**	**04 01 52.1**	**+0.7**
EKA	**Eskdalemuir Ar**	**68.46**	**352**	P	**P**	**04 02 00.0**	**+1.1**
	comp=Z,0.6nm,0.6s,baz=26,slow=5.9,SNR=4.5						
	comp=Z,0.6nm,0.6s						
KIV	**Kislovodsk**	**68.88**	**319**	*e*P	P	04 01 58.0	-3.9
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KBZ	**Khabaz**	**69.00**	**319**	P	**P**	**04 02 03.5**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=268,slow=1.7,SNR=7.2						
	comp=Z,0.6nm,0.5s						
MORC	**Moravsky Berou**	**70.94**	**338**	*e*P	P	04 02 21.9	+7.5
VRAC	**Vranov**	**71.58**	**338**	*e*P	P	04 02 25.9	+7.7
JAVC	**Velka Javorina**	**71.78**	**338**	*e*P	P	04 02 28.1	+8.6
KRUC	**Moravsky**	**71.86**	**338**	*e*P	P	04 02 27.4	+7.5
GERES	**GERESS Array B**	**72.60**	**340**	P	**P**	**04 02 26.2**	**+1.8**
GERES	**GERESS Array B**	**72.60**	**340**	P	**P**	**04 02 24.8**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=38,slow=5.0,SNR=6.9						
	comp=Z,0.1nm,0.3s						
GERES	**GERESS Array B**	**72.60**	**340**	P	**P**	**04 02 26.2**	**+1.8**
BRTR	**Keskin Array B**	**75.81**	**323**	P	**P**	**04 02 43.0**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=53,slow=4.8,SNR=7.3						
	comp=Z,0.3nm,0.6s						
BRTR	**Keskin Array B**	**75.81**	**323**	P	**P**	**04 02 43.0**	**-0.4**
WSAR	**Wadi Sarin**	**79.34**	**296**	LR	LR	04 40 04.8	
	comp=Z,6.5nm,20.7s,baz=248,slow=37						
WRA	**Warramunga Arr**	**79.90**	**209**	P	**P**	**04 03 05.3**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=19,slow=5.7,SNR=11						
	comp=Z,0.7nm,0.7s						
ASAR	**Alice Springs**	**83.56**	**208**	P	**P**	**04 03 24.5**	**-0.8**
ASAR	**Alice Springs**	**83.56**	**208**	P	**P**	**04 03 25.4**	**0.0**
	comp=Z,0.9nm,0.9s,baz=22,slow=5.6,SNR=4.5						
	comp=Z,0.9nm,0.9s						
ESDC	**Sonseca Array**	**84.08**	**351**	P	**P**	**04 03 28.8**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=0.6,slow=4.9,SNR=8.2						
	comp=Z,0.2nm,0.5s						
QSPA	**South Pole Qui**	**145.86**	**180**	PKPbc	**PKPdf**	**04 10 33.7**	**-1.0**
	comp=Z,1.2nm,0.9s,baz=77,slow=0.6,SNR=5.7						

*IDC **26** 03:54:42.0±1.1, 2°.30S×138°.55E, h0^{km}, mb3.6/4, mbtmp3.6/6, ML3.3/2, Error ellipse: s-maj=25.1km s-min=16.8km az=11.0*

*DJA **26** 03:54:44.5±0.7, 2°S±10°×13°9E±°, h17^{km}±5^{km}, M3.7/6, MLv3.7/6*

ISC 26 03:54:43.6±2.2**, 2°.3S**±0°.1×**138°.48E**±0°.06**, h11**^{km}±15^{km}**, n11, σ0^{s}73**/13**, mb3.6**/4**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.35**	**42**	P	**Pg**	**03 54 50.6**	**+0.1**
GENI	**Genyem**	**1.72**	**101**	P	**Pn**	**03 55 14.2**	**+0.7**
JAY	**Jayapura**	**2.24**	**97**	Pn	**Pn**	**03 55 20.1**	**-0.6**
	2.4nm,0.3s,baz=238,slow=11,SNR=12						
JAY				Lg	Lg	03 55 50.8	
	2.3nm,0.3s,baz=99,slow=12,SNR=4.7						
	15nm,0.6s						
JAY	**Jayapura**	**2.24**	**97**	P	**Pn**	**03 55 20.7**	**0.0**
SRPI	**Serui, Papua**	**2.27**	**280**	P	**Pn**	**03 55 21.4**	**+0.3**
SRPI				S	**Sn**	**03 55 49.5**	**+0.4**
BAKI	**Biak**	**2.59**	**294**	P	**Pn**	**03 55 24.9**	**-0.6**
BAKI				S	**Sn**	**03 55 57.0**	**-0.1**
WRA	**Warramunga Arr**	**18.04**	**193**	P	**Pn**	**03 58 54.4**	**-0.2**
	0.2nm,0.3s,baz=17,slow=12,SNR=8.3						
	1.0nm,0.6s						
ASAR	**Alice Springs**	**21.75**	**191**	P	**P**	**03 59 34.9**	**-0.5**
	1.5nm,0.7s,baz=21,slow=11,SNR=14						
	1.5nm,0.7s						
MKAR	**Makanchi Array**	**69.29**	**322**	P	**P**	**04 05 52.2**	**+1.2**
	0.6nm,0.8s,baz=106,slow=8.9,SNR=4.2						
	0.6nm,0.8s						
KURBB	**Kurchatov Arra**	**73.22**	**325**	P	**P**	**04 06 15.4**	**+0.7**
	0.4nm,0.8s,baz=110,slow=5.2,SNR=4.0						
	0.4nm,0.8s						
ILAR	**Eielson Array**	**85.51**	**24**	P	**P**	**04 07 20.4**	**-1.0**
	0.5nm,0.9s,baz=265,slow=4.1,SNR=4.4						
	0.5nm,0.9s						

KRSC 26 03:55:14.7±1.1**, 55°.97N**×**164°.07E, h16**^{km}±26^{km}**, Ml3.6, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.74**	**290**	*e*P	Pg	03 55 28.2	-1.1
KBG	**Krutoberegovo**	**0.82**	**291**	*e*P	Pb	03 55 29.5	-1.0
BKI	**Bering**	**1.32**	**125**	*e*P	Pn	03 55 38.2	-0.3
BKI				*e*S	Sb	03 55 56.3	+0.5
SMKR	**Semkarok**	**1.58**	**294**	*e*P	Pn	03 55 42.3	+0.1
KLY	**Klyuchi**	**1.95**	**282**	*e*P	Pn	03 55 46.3	-0.8
MKZ	**Mys Kozlova**	**1.95**	**224**	*e*P	Pb	03 55 49.0	-0.7
MKZ				*e*S	Sb	03 56 14.7	+0.9
BZMR	**Bezymyannaya**	**2.02**	**271**	*e*P	Pb	03 55 50.4	-0.7
KPT	**Kopyto**	**2.17**	**272**	*e*P	Pb	03 55 52.4	-1.1
KMNR	**Kamenistaya**	**2.17**	**266**	*e*P	Pb	03 55 53.3	-0.4
TUMD	**Tumrok D**	**2.22**	**251**	*e*P	Pb	03 55 53.5	-1.0
SPN	**Mys Shipunski**	**3.72**	**221**	*e*S	Sn	03 56 55.5	+0.7
SMAR	**Somma**	**4.09**	**231**	*e*P	Pn	03 56 20.2	+3.4
AVH	**Avacha**	**4.12**	**231**	*e*P	Pb	03 56 22.0	-4.8
UGLR	**Uglovaya**	**4.12**	**230**	*e*P	Pn	03 56 21.6	+4.6
RUS	**Russkaya**	**4.81**	**225**	*e*P	Pn	03 56 29.9	+3.4
GRL	**Gorelyy**	**4.91**	**228**	*e*P	Pn	03 56 32.6	+4.7
MTVR	**Mutnovka**	**4.91**	**227**	*e*P	Pn	03 56 31.8	+3.9
ASAK	**Asacha**	**5.10**	**228**	*e*P	Pn	03 56 35.0	+4.5

*NEIC **26** 03:59:01.7±1.0, 19°.4N±0°.2×68°.6W±0°.1, h10^{km}±2^{km}, ML2.4/10, Md2.4/3(RSPR), Error ellipse: s-maj=37.9km s-min=6.9km az=31.0*

*SDD **26** 03:59:02.3±2.5, 18°.65N×68°.68W, h128^{km}±17^{km}, MD2.7, ML2.2, MW2.5*

*RSPR **26** 03:59:04.4, 19°.08N×68°.54W, h120^{km}±2^{km}, MD2.4/3*

ISC 26 03:59:03.2±1.9**, 18°.6N**±0°.1×**68°.80W**±0°.07**, h115**^{km}±12^{km}**, n33, σ1^{s}05**/41**, 7C-1D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HIDR	**Higuey Centro**	**0.09**	**116**	*e*Pg	**Pn**	**03 59 17.5**	**-1.5**
HIDR				*e*Sg	**Sn**	**03 59 29.8**	**-1.0**
HIDR				IAML		03 59 31.2	
	comp=N,147nm,0.2s						
PCDR	**Punta Cana, DR**	**0.41**	**106**	*e*Pg	**Pn**	**03 59 19.3**	**-0.8**
PCDR				*e*Sg	**Sn**	**03 59 34.0**	**+1.3**
PCDR				IAML		04 00 20.4	
	comp=N,60nm,2.3s						
MIDR	**Miches**	**0.42**	**326**	*e*Pg	**Pn**	**03 59 19.6**	**-0.5**
MIDR				*e*Pg	**Pn**	**03 59 19.6**	**-0.5**
MIDR				*e*Sg	**Sn**	**03 59 32.6**	**-0.2**
MIDR				*e*Sg	**Sn**	**03 59 32.6**	**-0.2**
MIDR				IAML		03 59 33.6	
	comp=N,24nm,0.5s						
MIDR				IAML		03 59 33.9	
	comp=N,35nm,0.3s						
MIDR				IAML		03 59 33.9	
	comp=N,35nm,0.3s						
SMDR	**Samana, DR**	**0.75**	**331**⇑	*e*P	**Pn**	**03 59 23.1**	**+0.7**
SMDR	**Samana, DR**	**0.75**	**331**	*e*S	**Sn**	**03 59 37.4**	**+0.4**
SMDR	**Samana, DR**	**0.75**	**331**	*e*Pg	**Pn**	**03 59 22.8**	**+0.3**
SMDR				*e*Sg	**Sn**	**03 59 37.9**	**+0.9**
SMDR				IAML		03 59 43.2	
	comp=N,35nm,1.6s						
IDE	**Isla Desecheo**	**1.28**	**101**		**Pn**	**03 59 28.6**	**+0.8**
IDE					**Sn**	**03 59 46.8**	**+0.4**
IDE	**Isla Desecheo**	**1.28**	**101**⇓	*e*P	**Pn**	**03 59 28.6**	**+0.8**
IDE	**Isla Desecheo**	**1.28**	**101**	*e*S	**Sn**	**03 59 46.8**	**+0.4**
AGPR	**Aguadilla, PR**	**1.61**	**96**		**Pn**	**03 59 31.5**	**-0.1**
AGPR					**Sn**	**03 59 53.3**	**0.0**
AGPR	**Aguadilla, PR**	**1.61**	**96**	IAML		03 59 54.9	
	comp=N,43nm,3.4s						
AGPR				IAML		03 59 57.4	
	comp=E,43nm,1.9s						
AGPR	**Aguadilla, PR**	**1.61**	**96**⇑	*e*P	**Pn**	**03 59 31.5**	**-0.1**
AGPR	**Aguadilla, PR**	**1.61**	**96**	*e*S	**Sn**	**03 59 53.3**	**0.0**
LSP	**Las Mesas**	**1.69**	**105**		**Pn**	**03 59 32.7**	**+0.1**
LSP					**Sn**	**03 59 56.3**	**+1.3**
LSP	**Las Mesas**	**1.69**	**105**⇑	*e*P	**Pn**	**03 59 32.7**	**+0.1**
LSP	**Las Mesas**	**1.69**	**105**	*e*S	**Sn**	**03 59 56.3**	**+1.3**
ABDR	**Alto Bandera**	**1.74**	**276**	*e*Pg	**Pn**	**03 59 33.7**	**+0.1**
ABDR				*e*Sg	**Sn**	**03 59 57.0**	**+0.3**
ABDR				IAML		04 00 02.4	
	comp=N,20nm,2.1s						
MLPR	**Magueyes Islan**	**1.79**	**111**⇑	*e*P	**Pn**	**03 59 34.9**	**+1.1**
MLPR	**Magueyes Islan**	**1.79**	**111**	*e*S	**Sn**	**03 59 58.6**	**+1.4**
AOPR	**Arecibo Observ**	**1.96**	**98**		**Pn**	**03 59 35.7**	**-0.3**
AOPR					**Sn**	**04 00 00.4**	**-0.6**
AOPR	**Arecibo Observ**	**1.96**	**98**	IAML		04 00 08.2	
	comp=N,23nm,1.1s						
AOPR				IAML		04 00 15.2	
	comp=E,35nm,0.3s						
AOPR	**Arecibo Observ**	**1.96**	**98**⇑	*e*P	**Pn**	**03 59 35.7**	**-0.3**
AOPR	**Arecibo Observ**	**1.96**	**98**	*e*S	**Sn**	**04 00 00.4**	**-0.6**
UUPR	**Utuado, UPR, P**	**2.01**	**100**	Pn	**Pn**	**03 59 36.9**	**+0.3**
CELP	**Cerrillos**	**2.18**	**104**	Pn	**Pn**	**03 59 39.3**	**+0.6**
ECPR	**Experimental S**	**2.33**	**97**⇑	*e*P	**Pn**	**03 59 40.5**	**-0.2**
ECPR	**Experimental S**	**2.33**	**97**	*e*S	**Sn**	**04 00 07.8**	**-1.6**
HUMP	**Col San Antoni**	**2.84**	**99**		**Pn**	**03 59 47.0**	**-0.3**
HUMP				IAML		04 00 22.7	
	comp=E,10nm,2.3s						
HUMP	**Col San Antoni**	**2.84**	**99**		**Sn**	**04 00 18.6**	**-2.6**
HUMP	**Col San Antoni**	**2.84**	**99**	IAML		04 00 18.1	
	comp=N,8.7nm,2.6s						
HUMP	**Col San Antoni**	**2.84**	**99**⇑	*e*P	**Pn**	**03 59 47.0**	**-0.3**
HUMP	**Col San Antoni**	**2.84**	**99**	*e*S	**Sn**	**04 00 18.6**	**-2.6**
MDN	**Morne-Daniel**	**7.81**	**114**	*e*P	**Pn**	**04 00 56.9**	**+2.7**

*IDC **26** 04:13:08.3±2.1, 56°.11N×164°.49E, h0^{km}, mb3.0/2, mbtmp3.0/3, ML2.4/1, Error ellipse: s-maj=200.1km s-min=32.4km az=146.0*

*KRSC **26** 04:13:09.6±0.9, 56°.01N×164°.16E, h14^{km}±7^{km}, Ml3.9*

ISC 26 04:13:07.9±1.8**, 56°.24N**±0°.09×**164°.28E**±0°.05**, h6**^{km}±12^{km}**, n25, σ1^{s}46**/30**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.82**	**268**	*e*P	**Pg**	**04 13 23.7**	**+0.1**
KBTR				*e*S	**Sg**	**04 13 34.7**	**+0.6**
KBG	**Krutoberegovo**	**0.88**	**272**	*e*P	**Pb**	**04 13 25.2**	**-0.3**
KBG				*e*S	**Sg**	**04 13 37.3**	**+1.1**
BKI	**Bering**	**1.41**	**137**	*e*P	**Pb**	**04 13 33.3**	**-1.3**
BKI				*e*S	**Sb**	**04 13 50.8**	**-2.0**
BDR	**Baidarnaya**	**1.74**	**282**	*e*S	**Sb**	**04 14 02.0**	**-0.3**
KLY	**Klyuchi**	**2.02**	**274**	*e*P	**Pn**	**04 13 41.7**	**-0.8**
KLY				*e*S	**Sn**	**04 14 06.3**	**-1.7**
BZWR	**Bezymyannyi-We**	**2.14**	**264**	*e*P	**Pb**	**04 13 45.7**	**-1.4**
BZMR	**Bezymyannaya**	**2.15**	**263**	*e*P	**Pb**	**04 13 45.7**	**-1.5**
KIRR	**Kirishev**	**2.23**	**264**	*e*P	**Pb**	**04 13 46.9**	**-1.6**
MKZ	**Mys Kozlova**	**2.23**	**222**	*e*P	**Pn**	**04 13 44.7**	**-0.6**
KPT	**Kopyto**	**2.29**	**265**	*e*P	**Pb**	**04 13 48.3**	**-1.4**
KMNR	**Kamenistaya**	**2.32**	**260**	*e*P	**Pb**	**04 13 48.7**	**-1.5**
TUMD	**Tumrok D**	**2.43**	**246**	*e*P	**Pn**	**04 13 48.8**	**+0.7**
TUMD				*e*S	**Sn**	**04 14 17.8**	**-0.3**
KOZ	**Kozyrevsk**	**2.47**	**268**	*e*P	**Pb**	**04 13 50.9**	**-1.8**
SRDR	**Sredinnyy**	**2.54**	**274**	*e*P	**Pb**	**04 13 51.9**	**-2.1**
SDLR	**Sedlovina**	**4.31**	**229**	*e*P	**Pn**	**04 14 15.1**	**+1.0**
KRX	**Arik**	**4.35**	**231**	*e*P	**Pn**	**04 14 16.5**	**+1.9**
SMAR	**Somma**	**4.36**	**229**	*e*P	**Pn**	**04 14 15.8**	**+1.0**
UGLR	**Uglovaya**	**4.38**	**228**	*e*P	**Pn**	**04 14 16.1**	**+1.0**
KOK	**Koryaka**	**4.41**	**230**	*e*P	**Pn**	**04 14 16.9**	**+1.5**
PETK	**Petropavlovsk-**	**4.94**	**233**	Pn	**Pn**	**04 14 24.0**	**+1.4**
	0.7nm,0.3s,baz=81,slow=18,SNR=9.5						
	1.1nm,0.4s						
GRL	**Gorelyy**	**5.18**	**227**	*e*P	**Pn**	**04 14 28.1**	**+2.2**
MTVR	**Mutnovka**	**5.18**	**226**	*e*P	**Pn**	**04 14 27.9**	**+1.8**
ASAK	**Asacha**	**5.37**	**227**	*e*P	**Pn**	**04 14 30.5**	**+1.9**
ILAR	**Eielson Array**	**24.89**	**50**	P	**P**	**04 18 32.4**	**+1.3**
	0.2nm,0.8s,baz=273,slow=9.3,SNR=1.9						
	0.2nm,0.8s						
TXAR	**Lajitas Array**	**67.24**	**71**	P	**P**	**04 24 04.0**	**+1.0**
	0.2nm,0.7s,baz=298,slow=4.6,SNR=3.5						
	0.2nm,0.7s						

KRSC 26 04:16:28.4±0.6**, 56°.05N**×**164°.21E, h15**^{km}±6^{km}**, Ml3.8, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.80**	**282**	*e*S	Sg	04 16 53.8	-0.5
KBG	**Krutoberegovo**	**0.87**	**284**	*e*S	Sb	04 16 55.9	-0.6
BKI	**Bering**	**1.31**	**130**	*e*P	Pn	04 16 52.2	+0.1
BKI				*e*S	Sn	04 17 09.8	+0.4
SMKR	**Semkarok**	**1.62**	**290**	*e*P	Pn	04 16 56.4	0.0
BDR	**Baidarnaya**	**1.75**	**288**	*e*S	Sb	04 17 21.5	-0.6
BZGR	**Bezymyannyi-Gr**	**1.98**	**268**	*e*P	Pn	04 17 02.7	+1.3
MKZ	**Mys Kozlova**	**2.06**	**224**	*e*P	Pn	04 17 03.6	+1.1
MKZ				*e*S	Sn	04 17 29.1	+1.3
BZWR	**Bezymyannyi-We**	**2.09**	**269**	*e*P	Pb	04 17 05.3	-0.7
BZMR	**Bezymyannaya**	**2.09**	**268**	*e*P	Pb	04 17 04.7	-1.4
KPT	**Kopyto**	**2.24**	**269**	*e*P	Pb	04 17 07.3	-1.3
TUMD	**Tumrok D**	**2.32**	**250**	*e*P	Pn	04 17 08.0	+1.9
SDLR	**Sedlovina**	**4.16**	**230**	*e*P	Pn	04 17 35.4	+4.0
MTVR	**Mutnovka**	**5.03**	**227**	*e*P	Pn	04 17 47.4	+4.1

*MOS **26** 04:17:12.5±0.9, 43°.94N×147°.00E, h106^{km}, mb4.9/48, Error ellipse: s-maj=6.0km s-min=4.4km az=121.9*

MOS Felt (III) at Malokuril'skoe, Yuzhno-Kuril'sk.

*BJI **26** 04:17:13.4, 44°.28N×146°.76E, h88^{km}, mB5.4/2, mb4.8/30, Ms4.9/4, Ms7 4.7/4*

*NEIC **26** 04:17:14.2±1.1, 43°.93N±0°.09×146°.9E±0°.1, h101^{km}±8^{km}, mb4.6/179, Error ellipse: s-maj=13.9km s-min=12.1km az=127.0*

*JMA **26** 04:17:14.3±0.2, 43°.8N±0°.9×14°7E±°, h99^{km}±2^{km}, MD4.5/39, MV4.9/39, E OFF HOKKAIDO*

JMA Felt II J1 at E OFF HOKKAIDO .

*IDC **26** 04:17:14.1±1.6, 44°.07N×146°.96E, h103^{km}±13^{km}, mb4.3/29, mbtmp4.7/35, Error ellipse: s-maj=13.2km s-min=10.6km az=152.0*

*SKHL **26** 04:17:14.6±0.8, 43°.90N×146°.90E, h109^{km}±6^{km}, mb5.6/10, msha6.8/3*

*BGR **26** 04:17:20.7, 45°.97N×145°.33E, h33^{km}, mb4.9*

ISC 26 04:17:13.4±0.5**, 44°.01N**±0°.04×**147°.02E**±0°.04**, h99**^{km}±3^{km}**, h99**^{km}**:pP-P, n574, σ1^{s}16**/575**, mb4.7**/209**, 57C-17D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.19**	**225***c*	*i*PN	**Pn**	**04 17 29.1**	**+1.7**
SHO				*i* S	**Sn**	**04 17 39.2**	**+1.4**
SHO				pmax	pmax		
	comp=Z,6µm,0.1s						
SHO				pmax	pmax		
	comp=N,2µm,0.2s						
SHO				pmax	pmax		
	comp=E,1µm,0.1s						
SHO				smax	smax		
	comp=N,24µm,0.3s						
SHO				smax	smax		
	comp=E,50µm,0.4s						
SHO	**Shikotan**	**0.19**	**225**	*i* P	**Pn**	**04 17 29.1**	**+1.7**
SHO				AMB	AMB	04 17 29.5	
	comp=E,5µm,0.3s						
SHO				*i* S	**Sn**	**04 17 39.1**	**+1.3**
SHO				A	A	04 17 39.8	
	comp=E,27µm,0.4s						
SHO				A	A	04 17 39.8	
	comp=E,47µm,0.4s						
YUK	**Yuzh-Kuril'sk**	**0.84**	**272***d*	*i*PN	**Pn**	**04 17 32.8**	**+0.9**
YUK				*i* S	**Sn**	**04 17 46.5**	**+0.6**
YUK				pmax	pmax		
	comp=Z,18µm,0.3s						
YUK				pmax	pmax		
	comp=N,1µm,0.1s						
YUK				pmax	pmax		
	comp=E,1µm,0.1s						
YUK				smax	smax		
	comp=E,62µm,0.4s						
YUK				smax	smax		
	comp=N,33µm,0.3s						
YUK	**Yuzh-Kuril'sk**	**0.84**	**272**	*i* P	**Pn**	**04 17 32.8**	**+0.9**
YUK				AMB	AMB	04 17 33.2	
	comp=N,19µm,0.4s						
YUK				*i* S	**Sn**	**04 17 46.6**	**+0.6**
YUK				A	A	04 17 47.5	
	comp=N,50µm,0.5s						
YUK				A	A	04 17 47.5	
	comp=N,67µm,0.5s						
GLVR	**Golovnino**	**1.12**	**257**⇓	*i*PN	**Pn**	**04 17 35.9**	**+0.9**
GLVR				*e*S	**Sn**	**04 17 52.3**	**+1.0**
GLVR				pmax	pmax		
	comp=N,233nm,0.4s						
GLVR				pmax	pmax		
	comp=Z,6µm,0.4s						
GLVR				pmax	pmax		
	comp=E,441nm,0.1s						
GLVR				smax	smax		
	comp=N,24µm,0.3s						
GLVR				smax	smax		
	comp=E,12µm,0.3s						
GLVR	**Golovnino**	**1.12**	**257**	*i* P	**Pn**	**04 17 35.9**	**+0.9**
GLVR				AMB	AMB	04 17 36.2	
	comp=E,6µm,0.2s						
GLVR				*e*S	**Sn**	**04 17 52.3**	**+1.0**
GLVR				A	A	04 17 54.4	
	comp=E,24µm,0.3s						
GLVR				A	A	04 17 54.4	
	comp=E,12µm,0.3s						
NEM2	**Nemuro 2**	**1.13**	**236**	P	**Pn**	**04 17 35.2**	**+0.1**
NEM2				S	**Sn**	**04 17 50.4**	**-1.1**
NEM2	**Nemuro 2**	**1.13**	**236**	A	A	04 17 35.2	
	comp=N,22nm,0.8s,comp=E,30nm,1.1s						
NMR	**Nemuro--Hokkai**	**1.13**	**236**⇓	*i*PN	**Pn**	**04 17 35.2**	**+0.1**
NMR				*e*S	**Sn**	**04 17 50.4**	**-1.2**
NMR	**Nemuro--Hokkai**	**1.13**	**236**	*i* P	**Pn**	**04 17 35.2**	**+0.1**
NMR				*e*S	**Sn**	**04 17 50.8**	**-0.8**
RUSJ	**Misakicho**	**1.28**	**275**⇓	*i*PN	**Pn**	**04 17 38.4**	**+1.5**
RUSJ				*e*S	**Sn**	**04 17 56.5**	**+1.9**
KUR	**Kuril'sk**	**1.37**	**26***d*	*i*PN	**Pn**	**04 17 38.8**	**+0.9**
KUR				*i* S	**Sn**	**04 17 57.8**	**+1.4**
KUR				pmax	pmax		
	comp=N,620nm,0.6s						
KUR				pmax	pmax		
	comp=E,592nm,0.6s						
KUR				pmax	pmax		
	comp=Z,3µm,0.6s						
KUR				smax	smax		
	comp=N,4µm,0.6s						
KUR				smax	smax		
	comp=E,10µm,0.6s						
KUR				smax	smax		
	comp=N,14µm,1.7s						
KUR				smax	smax		
	comp=E,18µm,1.7s						
KUR	**Kuril'sk**	**1.37**	**26**	*i* P	**Pn**	**04 17 39.6**	**+1.7**
KUR				AMB	AMB	04 17 40.5	
	comp=E,3µm,0.5s						
KUR				*i* S	**Sn**	**04 17 58.7**	**+2.3**
KUR				A	A	04 17 59.6	
	comp=E,7µm,0.5s						
KUR				A	A	04 17 59.6	

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       comp=E,11µm,0.5s
JRA    Rausu              1.37 268   P      Pn     04 17 39.4 +1.4
JRA                                 S      Sn     04 17 58.1 +1.5
JRA    Rausu              1.37 268   A      A      04 17 39.4
       comp=N,20nm,1.4s,comp=E,12nm,0.4s
JNSB   Nemuroshibetsu     1.48 262 i P      Pn     04 17 40.7 +1.5
JNSB                               eS      Sn     04 18 00.8 +2.0
JNSB   Nemuroshibetsu     1.48 262   A      A      04 17 40.7
       comp=N,33nm,1.8s,comp=E,23nm,2.4s
JKHN   Kushirohamanak     1.64 236 i P      Pn     04 17 41.7 +0.5
JKHN                               eS      Sn     04 18 01.8 -0.7
JKHN   Kushirohamanak     1.64 236   A      A      04 17 41.7
       comp=N,17nm,1.0s,comp=E,30nm,1.3s
JNK    Nakash             1.72 257   P      Pn     04 17 43.0 +0.8
JNK                                eS      Sn     04 18 04.3  0.0
JNK    Nakash             1.72 257   A      A      04 17 43.0
       comp=N,6.0nm,1.3s,comp=E,7.0nm,3.0s
AKK    Akkeshi            1.87 239 i P      Pn     04 17 44.3 +0.2
JAK    Akkeshi            1.97 240   P      Pn     04 17 45.7 +0.2
JAK                                eS      Sn     04 18 09.0 -0.9
JAK    Akkeshi            1.97 240   A      A      04 17 45.7
       comp=N,13nm,0.3s,comp=E,11nm,0.5s
JTKR   Abashiri--Toko     2.25 270   P      Pn     04 17 50.5 +1.5
JTKR                               eS      Sn     04 18 17.4 +1.0
JAR    Ashorobuto         2.46 254   P      Pn     04 17 53.5 +1.6
JAR                                eS      Sn     04 18 23.3 +1.8
JAR    Ashorobuto         2.46 254   A      A      04 17 53.5
       comp=N,5.0nm,1.9s,comp=E,6.0nm,0.5s
JOB    Onbets             2.57 246   P      Pn     04 17 54.3 +1.0
JOB                                eS      Sn     04 18 24.0  0.0
JMP    Maruseppu          2.64 271   P      Pn     04 17 55.9 +1.6
JMP                                eS      Sn     04 18 27.8 +2.0
JCH    Churui             3.01 244   P      Pn     04 17 59.5 +0.4
JKK2   Kamakawa 2         3.09 269 eP      Pn     04 18 02.1 +1.9
JKA    Kamikawa-asahi     3.19 273          Pn     04 18 03.4 +1.9
ASAJ   Asahikawa          3.19 273   P      Pn     04 18 03.0 +1.5
       comp=E,335nm,0.4s,baz=77,slow=18,SNR=134
ASAJ                                 S      Sn     04 18 40.1 +1.3
       comp=E,434nm,0.8s,baz=171,slow=29,SNR=5.9
ASAJ   Asahikawa          3.19 273   P      Pn     04 18 03.7 +2.1
JTHR   Tokachihiroo       3.22 239 eP      Pn     04 18 02.6 +0.7
JSE    Soyaes             3.31 288 eP      Pn     04 18 05.0 +1.8
JFR    Furan              3.33 257   P      Pn     04 18 05.0 +1.6
JEM    Erimo              3.46 236   P      Pn     04 18 07.0 +1.8
ERM    Erimo              3.46 236          Pn     04 18 04.9 -0.3
ERM    Erimo              3.46 236   P      Pn     04 18 07.1 +1.9
ERM    Erimo              3.46 236dePN     Pn     04 18 05.3 +0.1
ERM                                  pmax   pmax
       comp=Z,2µm,1.0s
JAB    Ashibetsu          3.51 263   P      Pn     04 18 08.4 +2.5
JNBK   Urakawa-nobuka     3.57 243   P      Pn     04 18 06.5 -0.1
YSS    Yuzhno-Sakhali     4.20 316          Pn     04 18 16.1 +0.9
YSS    Yuzhno-Sakhali     4.20 316   P      Pn     04 18 17.6 +2.4
YSS    Yuzhno-Sakhali     4.20 316⇑ePN     Pn     04 18 17.2 +2.0
YSS                                eS      Sn     04 19 02.1 -1.1
YSS                                  pmax   pmax
       comp=Z,600nm,4.7s
YSS                                  pmax   pmax
       comp=N,500nm,5.0s
YSS                                  pmax   pmax
       comp=Z,180nm,0.8s
YSS                                  pmax   pmax
       comp=E,150nm,0.6s
YSS                                  smax   smax
       comp=N,60nm,0.7s
YSS                                  smax   smax
       comp=E,120nm,0.9s
YSS    Yuzhno-Sakhali     4.20 316 eP      Pn     04 18 17.0 +1.8
YSS                                  AMB    AMB    04 18 23.3
       comp=E,200nm,0.8s
YSS                                eS      Sn     04 19 04.8 +1.6
JTM    Tenmabayashi       5.46 236          Pn     04 18 30.6 -1.6
JTM    Tenmabayashi       5.46 236   P      Pn     04 18 31.4 -0.8
UGL    Uglegorsk          6.11 328 ePN     Pn     04 18 36.1 -4.9
UGL                                  pmax   pmax
       comp=Z,500nm,0.9s
UGL    Uglegorsk          6.11 328 eP      Pn     04 18 43.7 +2.7
UGL                                  AMB    AMB    04 18 44.5
       comp=Z,440nm,0.9s
TYV    Tymovskoe          7.47 338 ePN     Pn     04 19 01.6 +2.2
TYV                                eS      Sn     04 20 22.3 -0.1
TYV                                  pmax   pmax
       comp=Z,55nm,0.9s
TYV                                  pmax   pmax
       comp=Z,200nm,2.9s
TYV                                  smax   smax
       comp=N,44nm,1.7s
TYV                                  smax   smax
       comp=E,26nm,1.7s
TYV                                  smax   smax
       comp=N,300nm,2.9s
TYV                                  smax   smax
       comp=E,300nm,2.9s
TYV    Tymovskoe          7.47 338 eP      Pn     04 19 01.9 +2.5
TYV                                  AMB    AMB    04 19 05.6
       comp=E,60nm,0.9s
TEY    Ternei             7.52 281 ePN     Pn     04 18 58.9 -1.2
JMM    Marumori           7.74 220          Pn     04 19 00.5 -2.7
JMM    Marumori           7.74 220   P      Pn     04 19 01.3 -1.9
JSD    Sado               8.91 231          Pn     04 19 18.0 -1.1
JSD    Sado               8.91 231   P      Pn     04 19 17.8 -1.3
SKR    Severo-Kuril's     9.09  40 ePN     Pn     04 19 22.2 +0.7
SKR                                  pmax   pmax
       comp=Z,2µm,9.9s
SKR                                  MLR    MLR
       comp=Z,2µm,14.0s
SKR    Severo-Kuril's     9.09  40 eP      Pn     04 19 22.0 +0.5
SKR                                  AMB    AMB    04 19 25.2
       comp=Z,70nm,0.8s
SKR                                eS      Sn     04 20 59.8 -2.1
GRNR   Gornyy             9.86 317⇓iPN     Pn     04 19 33.9 +1.9
GRNR                                 pmax   pmax
       comp=Z,10.0nm,1.1s
OKH    Okha               9.92 346 eP      Pn     04 19 35.6 +2.8
OKH                                  AMB    AMB    04 19 39.5
       comp=Z,290nm,0.7s
PAU    Pauzhetka          9.95  38 eP      Pn     04 19 32.2 -1.0
MJB9   Matsu-Tunnel      10.04 225          Pn     04 19 32.9 -1.7
MAJO   Matsushiro        10.04 225          Pn     04 19 33.1 -1.4
MAJO   Matsushiro        10.04 225   P      Pn     04 19 33.2 -1.4
MAJO   Matsushiro        10.04 225   PN     Pn     04 19 33.2 -1.4
MJAR   Matsushiro Arr    10.04 225   P      Pn     04 19 33.5 -1.1
       comp=Z,58nm,0.8s,baz=29,slow=14,SNR=134
NKL    Nikolayevsk       10.06 338 eP      Pn     04 19 35.4 +0.7
NKL                                  AMB    AMB    04 19 41.8
       comp=Z,90nm,0.8s
USA0B  Ussuriysk Arra    10.81 276          Pn     04 19 45.2 +0.2
USA0B  Ussuriysk Arra    10.81 276   PN     Pn     04 19 45.2 +0.2
USRK   Ussuriysk Ar.     10.81 276   P      Pn     04 19 44.9 -0.2
       comp=Z,136nm,0.2s,baz=90,slow=13,SNR=5.6
JGF    Kuroka            11.21 225          Pn     04 19 48.9 -1.5
JGF    Kuroka            11.21 225   P      Pn     04 19 49.3 -1.1
PEA0B  Petropavlovsk-    11.52  34⇑ePN     Pn     04 19 55.1 +0.7
PETK   Petropavlovsk-    11.52  34   P      Pn     04 19 53.6 -0.9
       comp=Z,2.3nm,0.6s,baz=188,slow=8.7,SNR=4.4
INU    Inuyama           11.57 225          Pn     04 19 53.6 -1.7
INU    Inuyama           11.57 225   P      Pn     04 19 54.9 -0.4
MSHR   Mys Shultsa       11.65 268⇑ePN     Pn     04 19 54.8 -1.5
MSHR                                 pmax   pmax
       comp=Z,54nm,1.7s
KLR    Kul'dur           11.72 302   P      Pn     04 19 56.1 -1.1
       comp=Z,5.8nm,0.8s,baz=107,slow=15,SNR=16
KLR    Kul'dur           11.72 302⇓ePN     Pn     04 19 57.6 +0.4
KLR                                  pmax   pmax
       comp=Z,23nm,2.3s
KLR    Kul'dur           11.72 302 eP      Pn     04 19 57.6 +0.4
PSTR   Posyet            11.89 269⇑ePN     Pn     04 19 58.8 -0.6
PSTR   Posyet            11.89 269 eP      Pn     04 19 58.8 -0.6
JHJ2   Mitsune           12.25 210   Pn     Pn     04 20 02.2 -2.0
BNX    BinXian           14.02 284 ⇑P      Pn     04 20 26.5 -0.9
BNX                                  S      Sn     04 23 00.5 -1.1
BNX                                  pmax   pmax
       comp=Z,12nm,0.8s
BNX                                  LR     LR
       comp=Z,720nm,12.9s
BNX                                  LR     LR
       comp=Z,570nm,12.6s
BNX                                  LR     LR
       comp=Z,900nm,14.7s
HEH    HeiHe             14.71 302 eP      Pn     04 20 33.0 -3.3
HEH                                  pmax   pmax
       comp=Z,2.0nm,0.8s
CN2    Changchun         15.55 277 eP      Pn     04 20 44.3 -2.6
CN2                                  pmax   pmax
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       comp=Z,10.0nm,0.6s
MA2    Magadan           15.76   7⇑eP      Pn     04 20 48.4 -1.0
MA2                                  pmax   pmax
       comp=Z,8.0nm,1.0s
MA2    Magadan           15.76   7 eP      Pn     04 20 48.4 -1.0
KSRS   Korea Array       15.87 252   P      Pn     04 20 50.2 -0.7
       comp=Z,12nm,0.8s,baz=64,slow=12,SNR=33
KSAR   Wonju Array Be    15.90 252          Pn     04 20 49.9 -1.4
KSAR   Wonju Array Be    15.90 252   P      Pn     04 20 49.9 -1.4
ZEA    Zeya              16.19 314 eP      Pn     04 20 54.7 -0.1
ZEA                                  pmax   pmax
       comp=Z,20nm,0.6s
ZEA    Zeya              16.19 314 eP      Pn     04 20 54.0 -0.8
JNU    Nakatsue          16.63 235          Pn     04 20 59.5 -0.9
JNU                                  IAmb   IAmb   04 21 04.7
       comp=Z,34nm,0.9s
JNU    Nakatsue          16.63 235   P      Pn     04 20 59.6 -0.8
       comp=Z,28nm,0.9s,baz=34,slow=7.8,SNR=12
TJN    Taejon            16.82 250          Pn     04 21 02.1 -0.5
TJN    Taejon            16.82 250⇑eP      Pn     04 21 02.4 -0.2
SEY    Seymchan          19.21   7   P      P      04 21 27.6 -1.6
       comp=Z,3.6nm,0.5s,baz=190,slow=9.7,SNR=14
SEY    Seymchan          19.21   7⇓eP      P      04 21 27.7 -1.5
SEY                                  pmax   pmax
       comp=Z,15nm,1.3s
HIA    Hailar            19.40 295          P      04 21 29.1 -2.3
HIA    Hailar            19.40 295   P      P      04 21 29.1 -2.3
HIA                                  pmax   pmax
       comp=Z,14nm,0.8s
DL2    Dalian            19.67 264   P      Pn     04 21 36.5 -0.2
DL2                                  sP     sP     04 22 09.5 +3.9
DL2                                  S      S      04 25 11.0 +0.3
DL2                                  pmax   pmax
       comp=Z,48nm,0.8s
YAK    Yakutsk           20.72 337          P      04 21 42.1 -3.3
YAK    Yakutsk           20.72 337 eP      P      04 21 42.2 -3.3
YAK                                eS      S      04 25 28.3 -2.8
YAK                                e              04 25 48.1
YAK                                e              04 32 58.5
YAK                                  pmax   pmax
       comp=Z,50nm,0.9s
YAK                                  pmax   pmax
       comp=N,28nm,1.3s
YAK                                  pmax   pmax
       comp=E,20nm,1.3s
YAK                                  smax   smax
       comp=E,546nm,10.1s
YAK                                  smax   smax
       comp=N,524nm,10.5s
XLT    XiLinHaoTe        22.21 281 eP      P      04 22 00.8 -0.9
XLT                                  pmax   pmax
       comp=N,27nm,0.7s
BJT    Baijiatuau        23.20 271   P      P      04 22 09.0 -2.4
BJT    Baijiatuau        23.20 271   P      P      04 22 09.0 -2.4
BJT                                  pmax   pmax
       comp=Z,6.0nm,0.9s
BTO    Baotou            27.42 276 eP      P      04 22 51.3 +1.6
BTO                                  pP     pP     04 23 12.0 +0.3
BTO                                  sP     sP     04 23 22.3 -1.0
BTO                                  PP     PnPn   04 23 42.5 +2.7
BTO                                  S      S      04 27 26.5 +3.7
BTO                                  pmax   pmax
       comp=Z,11nm,0.5s
BTO                                  pmax   pmax
       comp=Z,630nm,7.6s
BTO                                  LR     LR
       comp=Z,2µm,11.8s
BTO                                  LR     LR
       comp=Z,710nm,10.8s
BTO                                  LR     LR
       comp=Z,1µm,12.0s
ULN    Ulaanbaatar       27.84 292          P      04 22 53.5  0.0
ULN                                  IAmb   IAmb   04 22 55.7
       comp=Z,16nm,0.9s
ULN    Ulaanbaatar       27.84 292c iP      P      04 22 53.8 +0.4
ULN                                  pmax   pmax
       comp=Z,26nm,1.3s
ULN    Ulaanbaatar       27.84 292 eP      P      04 22 53.8 +0.4
SONM   Songino Array     28.29 292          P      04 22 57.4 +0.1
SONM                                 IAmb   IAmb   04 22 59.0
       comp=Z,7.4nm,0.6s
SONM   Songino Array     28.29 292   P      P      04 22 57.2 -0.1
       comp=Z,8.5nm,0.6s,baz=81,slow=8.5,SNR=50
       comp=Z,8.5nm,0.6s
SONM   Songino Array     28.29 292   P      P      04 22 57.4 +0.1
SONM                                 pmax   pmax
       comp=Z,7.0nm,0.6s
WHN    Wuhan             29.06 254   P      P      04 23 06.3 +2.1
WHN                                  pmax   pmax
       comp=Z,40nm,0.4s
TIXI   Tiksi             29.09 348 i P      P      04 23 00.7 -3.3
H11N2  WAKE ISLAND Hy    29.36 139   T      T      04 54 02.9
       baz=330,slow=75,SNR=252
H11N1  WAKE ISLAND Hy    29.37 139   T      T      04 54 04.0
       baz=330,slow=75,SNR=286
H11N3  WAKE ISLAND Hy    29.38 139   T      T      04 54 05.9
       baz=330,slow=75,SNR=367
ZAK    Zakamensk         30.05 298 eP      P      04 23 11.8 -1.1
ZAK                                  pmax   pmax
       comp=Z,4.0nm,1.0s
H11S1  WAKE ISLAND Hy    30.33 141   T      T      04 55 21.4
       baz=331,slow=76,SNR=568
H11S3  WAKE ISLAND Hy    30.33 141   T      T      04 55 21.8
       baz=331,slow=76,SNR=633
H11S2  WAKE ISLAND Hy    30.34 141   T      T      04 55 15.3
       baz=331,slow=76,SNR=368
GTA    Gaotai            35.16 279 eP      P      04 23 58.8 +1.2
GTA                                  pmax   pmax
       comp=Z,7.0nm,1.2s
F17K   Baldwin Pennin    35.55  33          P      04 24 01.9 +1.5
F17K                                 IAmb   IAmb   04 24 04.1
       comp=Z,9.2nm,0.6s
C18K   Utukok River      36.13  29   P      P      04 24 05.3 -0.1
C18K                                 IAmb   IAmb   04 24 21.6
       comp=Z,6.7nm,1.1s
G18K   Tagagawik         36.48  34   P      P      04 24 09.9 +1.5
H18K   Honhosa River     36.48  35   P      P      04 24 10.1 +1.6
H18K                                 IAmb   IAmb   04 24 10.7
       comp=Z,12nm,0.9s
L18K   Granite Mounta    36.94  40          P      04 24 14.2 +1.9
L18K                                 IAmb   IAmb   04 24 17.2
       comp=Z,9.2nm,1.3s
F19K   Shaleruckik Mo    36.99  33   P      P      04 24 13.5 +0.8
F19K                                 IAmb   IAmb   04 24 14.0
       comp=Z,7.1nm,0.8s
G19K   Purcell Mounta    37.15  34   P      P      04 24 14.8 +0.8
G19K                                 IAmb   IAmb   04 24 16.0
       comp=Z,7.3nm,0.8s
D19K   Kuna River        37.19  30          P      04 24 14.6 +0.1
D19K                                 IAmb   IAmb   04 24 18.3
       comp=Z,6.0nm,0.9s
E19K   Redstone River    37.31  32   P      P      04 24 16.4 +1.0
E19K                                 IAmb   IAmb   04 24 18.7
       comp=Z,10.0nm,0.7s
H19K   Roundabout Mou    37.33  35          P      04 24 17.2 +1.7
J19K   Poorman           37.53  38   P      P      04 24 18.6 +1.2
J20K   Nowinta River     38.19  37          P      04 24 24.7 +1.9
J20K                                 IAmb   IAmb   04 24 28.2
       comp=Z,7.2nm,0.8s
IMAR   Indian Mountai    38.48  34   P      P      04 24 26.7 +1.4
M20K   Styx River        38.61  41   P      P      04 24 28.2 +1.7
G21K   Allakaket         38.63  34   IAmb   IAmb   04 24 29.2
       comp=Z,12nm,0.8s
F21K   Alatna River      38.71  32          P      04 24 28.2 +1.0
H21K   Melozitna Rive    38.85  35   P      P      04 24 29.8 +1.4
H21K                                 IAmb   IAmb   04 24 30.6
       comp=Z,8.6nm,1.1s
CAST   Castle Rocks      39.09  39   IAmb   IAmb   04 24 37.5
       comp=Z,4.2nm,0.7s
KDAK   Kodiak Island     39.14  48deP      P      04 24 31.0 +0.1
KDAK                                 pmax   pmax
       comp=Z,13nm,0.9s
E22K   Anaktuvuk Pass    39.44  31          P      04 24 34.0 +0.7
E22K                                 IAmb   IAmb   04 24 34.8
       comp=Z,6.7nm,0.5s
KTH    Kantishna Hill    39.61  38   IAmb   IAmb   04 24 39.7
       comp=Z,7.2nm,0.8s
COLD   Coldfoot          39.98  33   P      P      04 24 39.1 +1.4
G23K   Bananza Creek     40.03  33          P      04 24 39.2 +1.0
G23K                                 IAmb   IAmb   04 24 40.4
       comp=Z,6.5nm,0.8s
H23K   Yukon River       40.20  35   IAmb   IAmb   04 24 42.3
       comp=Z,8.9nm,0.8s
E23K   Chandalar         40.26  31   P      P      04 24 40.8 +0.7
E23K                                 IAmb   IAmb   04 24 43.4
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       comp=Z,6.8nm,0.8s
NEA2   Nenana            40.40  37   IAmb   IAmb   04 24 46.0
       comp=Z,9.1nm,0.6s
GHO    Glory Hole Cre    40.61  41   IAmb   IAmb   04 24 50.8
       comp=Z,4.8nm,0.6s
E24K   Your Creek        40.68  31   IAmb   IAmb   04 24 46.9
       comp=Z,8.2nm,0.6s
ZAA0   Zalesovo Array    40.77 307   IAmb   IAmb   04 24 45.8
       comp=Z,13nm,1.2s
ZALV   Zalesovo Beam     40.77 307          P      04 24 45.4 +1.0
ZALV   Zalesovo Beam     40.77 307   P      P      04 24 43.5 -0.8
       comp=Z,5.1nm,0.5s,baz=88,slow=7.0,SNR=15
ZALV                                 PcP    PcP    04 26 44.0 +0.4
       comp=Z,2.9nm,0.6s,baz=64,slow=3.4,SNR=6.4
       comp=Z,5.1nm,0.5s
H24K   Noodor Dome       40.89  35   IAmb   IAmb   04 24 48.1
       comp=Z,7.4nm,1.1s
F24K   Squaw Lake        40.89  32          P      04 24 46.9 +1.6
F24K                                 IAmb   IAmb   04 24 48.2
       comp=Z,11nm,1.4s
COLA   College           40.92  36   P      P      04 24 47.3 +1.8
COLA                                 IAmb   IAmb   04 24 50.2
       comp=Z,11nm,0.7s
COLA   College           40.92  36   P      P      04 24 47.3 +1.8
COLA                                 pmax   pmax
       comp=Z,11nm,0.7s
G24K   Hadweenzic Riv    41.04  33   IAmb   IAmb   04 24 49.0
       comp=Z,7.2nm,0.7s
DHY    Denali Highway    41.23  39   IAmb   IAmb   04 24 52.5
       comp=Z,4.5nm,0.6s
ILAR   Eielson Array     41.34  36   P      P      04 24 50.1 +1.1
ILAR   Eielson Array     41.34  36   P      P      04 24 50.0 +1.1
       comp=Z,4.1nm,0.8s,baz=272,slow=8.1,SNR=43
ILAR                                 ScP    ScP    04 30 24.4 -1.7
       comp=Z,0.3nm,1.0s,baz=282,slow=3.7,SNR=4.3
       comp=Z,4.1nm,0.8s
ILAR   Eielson Array     41.34  36   P      P      04 24 50.0 +1.1
SCM    Sheep Creek Mo    41.36  41   IAmb   IAmb   04 24 54.5
       comp=Z,16nm,1.4s
F25K   Christian Rive    41.75  32          P      04 24 53.9 +1.6
F25K                                 IAmb   IAmb   04 24 55.4
       comp=Z,14nm,1.5s
PRP    Porcupine Dome    41.87  35   IAmb   IAmb   04 24 55.8
       comp=Z,6.7nm,0.6s
FYU    Fort Yukon        41.94  34   IAmb   IAmb   04 24 56.6
       comp=Z,14nm,0.7s
KLU    Klutina           42.06  41   P      P      04 24 56.4 +1.5
KLU                                  IAmb   IAmb   04 25 00.7
       comp=Z,6.1nm,0.8s
RIDG   Independent Ri    42.30  38   IAmb   IAmb   04 25 01.4
       comp=Z,11nm,1.2s
F26K   Sheenjek River    42.32  32   IAmb   IAmb   04 24 59.5
       comp=Z,4.6nm,0.6s
G26K   Porcupine Rive    42.50  33          P      04 25 00.1 +1.9
G26K                                 IAmb   IAmb   04 25 01.1
       comp=Z,9.9nm,0.6s
ZSN    Zaisan            42.51 297 eP      P      04 24 59.1 +0.5
ZSN                                  pmax   pmax
       comp=Z,9.0nm,0.6s
ZSN    Zaisan            42.51 297 eP      P      04 24 59.2 +0.5
       comp=Z,9.5nm,0.6s
SCRK   Sand Creek        42.66  37   IAmb   IAmb   04 25 03.3
       comp=Z,4.5nm,0.7s
M26K   Nabesna, AK       43.31  40   P      P      04 25 06.9 +1.9
M26K                                 IAmb   IAmb   04 25 11.0
       comp=Z,7.4nm,0.9s
H27K   Steamboat Moun    43.45  34          P      04 25 08.1 +2.0
H27K                                 IAmb   IAmb   04 25 09.2
       comp=Z,21nm,1.5s
K27K   Chicken           43.48  37   IAmb   IAmb   04 25 11.0
       comp=Z,7.1nm,0.9s
CRQM   Cirque            43.51  42   IAmb   IAmb   04 25 12.9
       comp=Z,8.5nm,0.8s
L27K   Beaver Creek,     43.74  39          P      04 25 10.5 +2.1
L27K                                 IAmb   IAmb   04 25 13.8
       comp=Z,5.7nm,0.5s
BCAR   Beaver Creek A    43.76  39   P      P      04 25 10.6 +2.0
M27K   Edge Creek, AK    43.83  40   IAmb   IAmb   04 25 14.8
       comp=Z,4.7nm,0.7s
F28M   Old Crow          43.96  32          P      04 25 12.0 +1.9
GRNC   Granite Creek     44.19  42   IAmb   IAmb   04 25 18.0
       comp=Z,4.9nm,0.7s
I28M   Miner Creek       44.20  35          P      04 25 13.6 +1.5
I28M                                 IAmb   IAmb   04 25 15.3
       comp=Z,9.5nm,0.6s
MK31   Makanchi Array    44.38 297c iP      P      04 25 13.8  0.0
MKAR   Makanchi Array    44.38 297          P      04 25 14.2 +0.4
MKAR   Makanchi Array    44.38 297   P      P      04 25 14.0 +0.2
       comp=Z,19nm,0.5s,baz=78,slow=8.7,SNR=171
       comp=Z,19nm,0.5s
MKAR   Makanchi Array    44.38 297   P      P      04 25 14.2 +0.4
MAKZ   Makanchi          44.58 297          P      04 25 15.6 +0.3
MAKZ   Makanchi          44.58 297   P      P      04 25 15.6 +0.3
MAKZ                                 pmax   pmax
       comp=Z,25nm,0.7s
E29M   Blow River        44.61  31   IAmb   IAmb   04 25 18.6
       comp=Z,6.1nm,0.8s
H29M   Whitestone        44.72  34          P      04 25 17.9 +1.8
H29M                                 IAmb   IAmb   04 25 19.1
       comp=Z,9.0nm,1.1s
G29M   Pine Creek        44.76  33   IAmb   IAmb   04 25 20.0
       comp=Z,12nm,0.9s
KURK   Kurchatov         45.31 304          P      04 25 20.6 -0.4
KURK   Kurchatov         45.31 304   P      P      04 25 21.0  0.0
KURK   Kurchatov         45.31 304 eP      P      04 25 19.9 -1.1
EPYK   Eagle Plains      45.36  33   IAmb   IAmb   04 25 23.8
       comp=Z,16nm,1.0s
L29M   L29M              45.38  38          P      04 25 23.4 +1.9
L29M                                 IAmb   IAmb   04 25 27.7
       comp=Z,9.4nm,1.1s
KURBB  Kurchatov Arra    45.39 304   P      P      04 25 20.9 -0.7
       comp=Z,16nm,0.4s,baz=75,slow=8.7,SNR=85
       comp=Z,16nm,0.4s
G30M   tAoh Zraii Nji    45.45  32          P      04 25 23.4 +1.5
G30M                                 IAmb   IAmb   04 25 24.2
       comp=Z,9.7nm,0.7s
I30M   Mount Dempster    45.71  35   IAmb   IAmb   04 25 28.9
       comp=Z,6.3nm,0.7s
HYT    Haines Junctio    46.20  41          P      04 25 29.8 +1.8
HYT                                  IAmb   IAmb   04 25 34.7
       comp=Z,13nm,0.8s
H31M   Peel River        46.42  34   IAmb   IAmb   04 25 32.1
       comp=Z,7.4nm,0.8s
CMAR   Chiang Mai Arr    47.51 253   P      P      04 25 40.0 +1.4
       comp=Z,1.0nm,0.3s,baz=34,slow=7.9,SNR=6.5
       comp=Z,1.0nm,0.3s
CMAR   Chiang Mai Arr    47.51 253   P      P      04 25 40.0 +1.4
TDK    Taldyqorghan      47.58 297 eP      P      04 25 39.4 +0.6
TDK                                  pmax   pmax
       comp=Z,22nm,1.4s
TDK    Taldyqorghan      47.58 297 eP      P      04 25 39.5 +0.6
       comp=Z,22nm,1.4s
SHLS   Shalkode          47.67 294 eP      P      04 25 37.9 -1.8
SHLS                                 pmax   pmax
       comp=Z,11nm,0.5s
SHLS   Shalkode          47.67 294 eP      P      04 25 37.9 -1.8
       comp=Z,11nm,0.5s
UZB    Uzynbulak         47.96 294 eP      P      04 25 42.4 +0.4
UZB                                  pmax   pmax
       comp=Z,5.0nm,0.4s
UZB    Uzynbulak         47.96 294 eP      P      04 25 42.5 +0.4
       comp=Z,4.7nm,0.4s
KPKS   Kokpek            48.05 295c iP      P      04 25 43.2 +0.7
KPKS   Kokpek            48.05 295⇑iP      P      04 25 43.3 +0.7
ARXS   Arharly           48.28 296 eP      P      04 25 44.7 +0.3
SATY   Saty              48.41 294 eP      P      04 25 46.0 +0.6
SATY                                 pmax   pmax
       comp=Z,10.0nm,0.7s
SATY   Saty              48.41 294 eP      P      04 25 46.0 +0.6
       comp=Z,9.9nm,0.7s
P33M   Teslin, Yukon     48.59  41          P      04 25 48.3 +1.8
CHKK   Chushkaly         48.98 296 eP      P      04 25 50.3 +0.6
CHKK   Chushkaly         48.98 296 eP      P      04 25 50.4 +0.6
BRZS   Berezniki         49.12 305c iP      P      04 25 50.8 +0.2
BRZS   Berezniki         49.12 305⇑iP      P      04 25 50.8 +0.2
BVAR   Borovoye Array    49.27 309   P      P      04 25 52.2 +0.5
       comp=Z,4.4nm,0.5s,baz=80,slow=9.2,SNR=14
       comp=Z,4.4nm,0.5s
AAA    Alma-Ata          49.32 295 eP      P      04 25 52.9 +0.6
AAA    Alma-Ata          49.32 295 eP      P      04 25 52.9 +0.6
KUU    Kurty             49.39 296 eP      P      04 25 52.8 +0.1
KUU                                  pmax   pmax
       comp=Z,8.0nm,0.7s
KUU    Kurty             49.39 296 eP      P      04 25 52.9 +0.1
       comp=Z,8.1nm,0.7s
TARG   Taragay, Kyrgy    49.40 293   IAmb   IAmb   04 25 56.1
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       comp=Z,15nm,1.2s
ULHL   Ulahol            50.20 294    P       P       04 26 00.1 +1.0
       SNR=11
TKM2   Tokmak 2          50.31 295    P       P       04 26 01.0 +1.0
       SNR=27
BTLS   Baital            50.35 298c iP        P       04 26 00.1 +0.1
BTLS   Baital            50.35 298⇑iP        P       04 26 00.1 +0.1
SGDS   Sogindy           50.70 296  eP       P       04 26 03.3 +0.6
       comp=Z,7.1nm,0.7s
KBK    Karagaybulak      50.85 295    P       P       04 26 05.4 +1.4
       SNR=7.1
USP    Ospenovka         50.86 296    P       P       04 26 04.7 +0.8
       SNR=14
AAK    Ala-Archa         51.16 295    P       P       04 26 07.2 +0.9
       SNR=6.0
AAK    Ala-Archa         51.16 295            P       04 26 06.2 -0.1
AAK    Ala-Archa         51.16 295c iP        P       04 26 07.0 +0.7
AAK                                  pmax    pmax
       comp=Z,17nm,1.3s
AAK    Ala-Archa         51.16 295  eP       P       04 26 07.0 +0.7
EKS2   Erkin-Say         51.62 296    P       P       04 26 10.4 +0.7
       SNR=17
KSH    Kashi             51.68 291    P       P       04 26 15.3 +5.1
KSH                                  pmax    pmax
       comp=Z,5.0nm,0.8s
KSH                                  LR      LR
       comp=Z,770nm,18.2s
KSH                                  LR      LR
       comp=Z,640nm,21.0s
KSH                                  LR      LR
       comp=Z,770nm,21.3s
AML    Almayashu         51.92 295    P       P       04 26 13.6 +1.3
       SNR=14
ARSB   Arslanbob         52.78 295    P       P       04 26 18.1 -0.2
ARSB   Arslanbob         52.78 295    P       P       04 26 18.1 -0.2
ARSB                                 pmax    pmax
       comp=Z,46nm,0.7s
SVE    Sverdlovsk        52.89 317  eP       P       04 26 18.6 -0.1
SVE                                  pmax    pmax
       comp=Z,15nm,0.8s
DZA    Taraz             53.09 297  eP       P       04 26 20.8 +0.4
DZA                                  pmax    pmax
       comp=Z,9.0nm,0.6s
DZA    Taraz             53.09 297  eP       P       04 26 20.9 +0.4
       comp=Z,8.8nm,0.6s
KK31   Karatay Array     53.51 298            P       04 26 23.5  0.0
KK31   Karatay Array     53.51 298    P       P       04 26 23.5  0.0
KK31                                 pmax    pmax
       comp=Z,18nm,0.8s
KKAR   Karatay Array     53.51 298    P       P       04 26 23.2 -0.3
KKAR   Karatay Array     53.51 298            P       04 26 23.8 +0.3
KKAR   Karatay Array     53.51 298    P       P       04 26 23.8 +0.3
BRLS   Borolday          53.98 298  eP       P       04 26 28.8 +1.9
BRLS   Borolday          53.98 298  eP       P       04 26 28.9 +1.9
ARTI   Arti              54.20 317            P       04 26 28.1 -0.1
ARTI   Arti              54.20 317d iP        P       04 26 27.0 -1.3
ARTI                                                  04 27 27.3
ARTI                                 S       S       04 33 56.5 -1.0
ARTI                                 SS      SKiKP   04 37 32.9 +4.1
ARTI                                 pmax    pmax
       comp=Z,12nm,0.6s
IUG    Iuzhnay           54.29 297  eP       P       04 26 29.9 +0.6
IUG                                  pmax    pmax
       comp=Z,9.0nm,0.7s
IUG    Iuzhnay           54.29 297  eP       P       04 26 30.0 +0.6
       comp=Z,8.7nm,0.7s
NOR    Nord              54.34 357  i P       P       04 26 26.6 -2.3
NOR                                  IAmb    IAmb    04 26 27.5
       comp=Z,3.7nm,0.8s
CHM    Chimkent          54.48 297  eP       P       04 26 31.2 +0.7
CHM                                  pmax    pmax
       comp=Z,12nm,0.5s
CHM    Chimkent          54.48 297  eP       P       04 26 31.2 +0.7
       comp=Z,12nm,0.5s
SPITS  Spitsbergen Ar    54.51 349    P       P       04 26 28.1 -2.2
       comp=Z,1.4nm,0.4s,baz=73,slow=8.8,SNR=12
       comp=Z,1.4nm,0.4s
KBS    Kingsbay          54.51 350  i P       P       04 26 27.6 -2.7
RES    Resolute Bay      54.75  17            P       04 26 31.4 -0.5
RES                                  IAmb    IAmb    04 26 33.9
       comp=Z,7.0nm,0.6s
RES    Resolute Bay      54.75  17    P       P       04 26 31.5 -0.5
RES                                  pmax    pmax
       comp=Z,7.0nm,0.6s
BTK    Batken            54.84 294            P       04 26 32.5 -0.7
BTK    Batken            54.84 294    P       P       04 26 32.5 -0.7
BTK                                  pmax    pmax
       comp=Z,15nm,1.2s
YKAW3  Yellowknife Wh    55.60  34   IAmb    IAmb    04 26 43.2
       comp=Z,4.3nm,0.7s
YKA    Yellowknife Ar    55.64  34    P       P       04 26 38.9 +0.3
       comp=Z,2.4nm,0.7s,baz=305,slow=7.5,SNR=12
       comp=Z,2.4nm,0.7s
YKA    Yellowknife Ar    55.64  34  i P       P       04 26 39.7 +1.2
YKA                                  pmax    pmax
       comp=Z,3.0nm,0.7s
SIMJ   Simiganj          56.77 294            P       04 26 47.2 +0.1
AB31   Akbulak array     56.83 309    P       P       04 26 47.5 +0.4
ABKAR  Akbulak array     56.83 309            P       04 26 47.6 +0.4
ABKAR  Akbulak array     56.83 309            P       04 26 47.6 +0.4
KIRV   Kirov             57.33 322deP        P       04 26 49.5 -1.0
APA    Apatity           58.10 336⇓iP        P       04 26 54.1 -1.7
APA                                  pmax    pmax
       comp=Z,7.0nm,0.9s
NEEM   North Greenlan    58.30   5  i P       P       04 26 56.2 -1.2
NEEM                                 IAmb    IAmb    04 26 56.8
       comp=Z,9.9nm,0.5s
ARCES  ARCESS Array B    58.97 340    P       P       04 27 00.7 -1.1
ARCES  ARCESS Array B    58.97 340    P       P       04 27 00.8 -1.1
       comp=Z,1.6nm,0.3s,baz=48,slow=6.6,SNR=27
       comp=Z,1.6nm,0.3s
DAG    Danmarks Havn     59.16 356  i P       P       04 27 01.6 -1.4
DAG                                  IAmb    IAmb    04 27 01.8
       comp=Z,3.8nm,0.6s
POIN   Pond Inlet        59.47  14   IAmb    IAmb    04 27 04.9
       comp=Z,3.9nm,0.8s
KLMR   Klimovskoe        60.17 327  eP       P       04 27 07.0 -3.1
KLMR                                e*PP     pP      04 27 33.0 -1.5
KLMR                                 pmax    pmax
       comp=Z,30nm,0.8s
JETT   Jettan, Norway    60.20 341  eP       P       04 27 09.6 -0.7
TRO    Tromso            60.48 342  eP       P       04 27 10.8 -1.3
BLKN   Baker Lake        61.28  26            P       04 27 18.0 +0.3
BLKN                                 IAmb    IAmb    04 27 18.8
       comp=Z,10nm,1.1s
ILON   Igloolik, Nuna    61.37  18            P       04 27 17.6 -0.6
ILON                                 IAmb    IAmb    04 27 18.4
       comp=Z,6.0nm,0.7s
BELG   Belogornoye       61.65 317c iP        P       04 27 19.9 -0.4
BELG                                 pmax    pmax
       comp=Z,7.0nm,0.9s
DBG    Daneborg          61.66 356  i P       P       04 27 19.1 -1.0
DBG                                  IAmb    IAmb    04 27 20.8
       comp=Z,3.7nm,0.8s
J05D   Fort Rock, OR     62.81  55            P       04 27 29.7 +1.2
FAUS   Fauske            63.09 341  eP       P       04 27 28.7 -1.0
SUMG   Summit            63.66   2            P       04 27 33.6 -0.2
SUMG                                 IAmb    IAmb    04 27 34.8
       comp=Z,12nm,0.8s
SUMG   Summit            63.66   2    P       P       04 27 33.6 -0.2
SUMG                                 pmax    pmax
       comp=Z,12nm,0.8s
SUMG   Summit            63.66   2  i P       P       04 27 33.5 -0.2
SUMG                                 IAmb    IAmb    04 27 34.7
       comp=Z,12nm,0.8s
MOS    Moscow            64.19 324  eP       P       04 27 35.6 -1.5
MOS                                  pmax    pmax
       comp=Z,26nm,0.7s
MOR8   Moi Rana          64.26 341  eP       P       04 27 35.6 -1.9
FIA1   FINESS Array S    64.60 333            P       04 27 38.7 -0.9
FINES  FINESS Array B    64.60 333            P       04 27 38.7 -1.0
FINES  FINESS Array B    64.60 333    P       P       04 27 37.9 -1.8
       comp=Z,13nm,0.5s,baz=43,slow=7.2,SNR=81
       comp=Z,13nm,0.5s
FINES  FINESS Array B    64.60 333  i P       P       04 27 38.7 -1.0
FINES                                pmax    pmax
       comp=Z,13nm,0.5s
WRA    Warramunga Arr    64.69 193    P       P       04 27 41.0 +0.3
       comp=Z,4.2nm,0.8s,baz=12,slow=6.7,SNR=19
       comp=Z,4.2nm,0.8s
WRA    Warramunga Arr    64.69 193  i P       P       04 27 41.0 +0.3
WRA                                  pmax    pmax
       comp=Z,4.0nm,0.8s
PLID   Pearl Lake        64.75  51            P       04 27 42.5 +1.2
MSO    Missoula          64.82  49    P       P       04 27 42.6 +1.1
MSO                                  IAmb    IAmb    04 27 44.1
       comp=Z,8.3nm,1.4s
OBN    Obninsk           65.05 324c iP        P       04 27 42.3 -0.4
OBN                                  *PP     pP      04 28 04.0 -3.4
OBN                                 e                04 28 19.7
OBN                                                  04 30 03.0
OBN                                 eS       S       04 36 07.5 -9.3
OBN                                  pmax    pmax
       comp=Z,50nm,1.3s
OBN                                  MLR     MLR
       comp=Z,971nm,19.0s
OBN    Obninsk           65.05 324  eP       P       04 27 41.9 -0.8
OBN    Obninsk           65.05 324    P       P       04 27 42.5 -0.2
       comp=Z,21nm,0.4s
VRH    Novokhopyorsk     65.27 318  eP       P       04 27 43.5 -0.7
VRH                                  pmax    pmax
       comp=Z,38nm,0.6s
LPSR   Galich'ya Gora    65.67 320  eP       P       04 27 46.2 -0.5
LPSR                                 pmax    pmax
       comp=Z,45nm,0.7s
VORR   Voronezh          66.16 320  eP       P       04 27 49.7 -0.2
VORR                                 pmax    pmax
       comp=Z,63nm,0.4s
NSS    Namsos            66.21 340  eP       P       04 27 50.0  0.0
VSR    Storozhevoye      66.48 319  eP       P       04 27 49.5 -2.4
VSR                                  pmax    pmax
       comp=Z,20nm,0.8s
VSU    Vasula            66.56 330deP        P       04 27 50.8 -1.5
VSU                                  pmax    pmax
       comp=Z,34nm,1.7s
VORD   Divnogorie        66.58 319  eP       P       04 27 51.0 -1.6
VORD                                 pmax    pmax
       comp=Z,30nm,0.9s
BOZ    Bozeman (W)       66.84  48   IAmb    IAmb    04 27 56.8
       comp=Z,4.3nm,0.8s
ICESG  Greenland Ices    67.11   3  i P       P       04 27 56.2 +0.1
ICESG                                IAmb    IAmb    04 27 57.4
       comp=Z,9.0nm,0.6s
NVAR   Mina Array Bea    67.52  58    P       P       04 27 60.0 +0.9
NVAR   Mina Array Bea    67.52  58    P       P       04 28 00.4 +1.3
       comp=Z,2.8nm,0.7s,baz=288,slow=6.6,SNR=20
       comp=Z,2.8nm,0.7s
TPH    Tonopah           68.41  58    P       P       04 28 05.1 +0.5
TPH    Tonopah           68.41  58    P       P       04 28 05.1 +0.5
TPH                                  pmax    pmax
       comp=Z,15nm,0.8s
ASAR   Alice Springs     68.41 193    P       P       04 28 03.5 -0.8
       comp=Z,1.0nm,0.5s,baz=10.0,slow=5.7,SNR=8.4
       comp=Z,1.0nm,0.5s
GOF    Gofitskoye        68.60 312ceP        P       04 28 06.3 +0.9
DOMB   Dombas            69.02 340  eP       P       04 28 08.0 +0.3
MNK    Minsk             69.06 327  i P       P       04 28 09.0 +1.0
       comp=E,31nm,0.9s
MNK                                 i P       P       04 28 09.0 +1.0
       comp=N,12nm,0.7s
MNK                                 i P       P       04 28 09.0 +1.0
       comp=Z,80nm,0.8s,baz=42
MNK                                 i pP      pP      04 28 34.2 +1.3
MNK                                 i PP      PP      04 30 42.0 +0.9
MNK                                 i PPP     PPP     04 32 24.7
MNK                                 i S       S       04 37 06.9 +1.9
MNK                                 i sS      SKiKP   04 37 50.7 +2.2
MNK                                 i SS      SS      04 41 33.9 +2.3
MNK                                 i SSS     SSS     04 44 54.9
MNK                                 i LQ      LQ      04 53 19.8
MNK                                 i LR      LR      04 58 00.4
MNK    Minsk             69.06 327  i P       P       04 28 09.0 +1.0
MNK                                 i *PP     pP      04 28 34.2 +1.3
MNK                                 i                 04 30 42.0
MNK                                 i PPP     PPP     04 32 24.6
MNK                                 i S       S       04 37 06.8 +1.9
MNK                                 i *SS     SKiKP   04 37 50.7 +2.2
MNK                                 i SS      SS      04 41 33.8 +2.3
MNK                                  pmax    pmax
       comp=N,12nm,0.7s
MNK                                  pmax    pmax
       comp=Z,80nm,0.8s
MNK                                  pmax    pmax
       comp=E,31nm,0.9s
NC405  NORSAR Array S    69.14 339    P       P       04 28 08.7 +0.2
NACGM  Naroch            69.19 328⇑iP        P       04 28 09.2 +0.3
       comp=Z,49nm,0.8s,baz=42
NC204  NORSAR Array S    69.25 339            P       04 28 08.8 -0.4
NB2    NORSAR Subarra    69.33 339    P       P       04 28 09.2 -0.5
       comp=Z,7.6nm,0.4s,baz=32,slow=6.5
NB2    NORSAR Subarra    69.33 339    P       P       04 28 09.2 -0.5
       baz=32,slow=6.5
NOA    NORSAR Array B    69.33 339    P       P       04 28 09.2 -0.5
       comp=Z,11nm,0.5s,baz=32,slow=6.5,SNR=118
       comp=Z,11nm,0.5s
HFS    Hagfors           69.42 337    P       P       04 28 09.5 -0.7
       comp=Z,22nm,0.4s,baz=46,slow=6.4,SNR=186
       comp=Z,22nm,0.4s
NC602  NORSAR Array S    69.50 338   IAmb    IAmb    04 28 11.1
       comp=Z,16nm,1.1s
NC602  NORSAR Array S    69.50 338  eP       P       04 28 10.6 -0.1
KIV    Kislovodsk        69.52 312            P       04 28 11.9 +0.7
KIV    Kislovodsk        69.52 312  ⇑P       P       04 28 13.6 +2.4
KIV    Kislovodsk        69.52 312    P       P       04 28 13.6 +2.4
KIV    Kislovodsk        69.52 312  eP       P       04 28 13.0 +1.7
KIV    Kislovodsk        69.52 312    P       P       04 28 12.7 +1.4
       comp=Z,56nm,1.1s
SPR3   Spring Creek 3    69.55  55            P       04 28 12.6 +0.8
KBZ    Khabaz            69.56 311    P       P       04 28 11.8 +0.4
       comp=Z,25nm,0.8s,baz=50,slow=4.2,SNR=58
       comp=Z,25nm,0.8s
KBZ    Khabaz            69.56 311ceP        P       04 28 12.4 +1.1
KBZ                                  pmax    pmax
       comp=Z,26nm,0.9s
KBZ    Khabaz            69.56 311  eP       P       04 28 12.4 +1.1
NAO01  NORSAR Array S    69.58 339   IAmb    IAmb    04 28 12.3
       comp=Z,14nm,0.8s
DUG    Dugway, Tooele    69.67  54            P       04 28 12.9 +0.7
DUG    Dugway, Tooele    69.67  54    P       P       04 28 13.0 +0.7
DUG                                  pmax    pmax
       comp=Z,4.0nm,1.2s
SHA1   Shidzhatmaz       69.68 312c iP        P       04 28 13.2 +0.8
PABE   Paberze           69.79 329            P       04 28 12.9 +0.4
PDAR   Pinedale Array    69.81  50    P       P       04 28 14.1 +0.8
       comp=Z,2.3nm,0.9s,baz=251,slow=1.8,SNR=14
       comp=Z,2.3nm,0.9s
GWY    Greenwater Val    69.95  59            P       04 28 15.3 +1.1
HYA    Hoyanger          70.47 341  eP       P       04 28 17.0 +0.5
GNI    Garni             70.91 308⇑eP        P       04 28 20.5 +0.6
GNI                                  pmax    pmax
       comp=Z,9.0nm,1.4s
STRU   Stroemstad        71.04 338  i P       P       04 28 20.2 +0.2
VSLR   Vesyoloye         71.27 313d iP        P       04 28 22.7 +0.9
VSLR                                 pmax    pmax
       comp=Z,46nm,0.9s
AK03   Malin Array Si    71.30 324    P       P       04 28 22.0 +0.2
AK23   Malin Array Si    71.31 324    P       P       04 28 22.0 +0.1
AKASG  Malin Array Be    71.32 324    P       P       04 28 21.8 -0.1
AKASG                                IAmb    IAmb    04 28 23.2
       comp=Z,17nm,1.1s
AKASG  Malin Array Be    71.32 324    P       P       04 28 21.8 -0.1
       comp=Z,10nm,0.5s,baz=40,slow=6.4,SNR=98
       comp=Z,10nm,0.5s
AKBB   Malin Array Si    71.32 324            P       04 28 21.9  0.0
AKBB   Malin Array Si    71.32 324    P       P       04 28 21.9  0.0
AKBB                                 pmax    pmax
       comp=Z,39nm,0.9s
AKBB   Malin Array Si    71.32 324    P       P       04 28 21.9  0.0
AK04   Malin Array Si    71.33 324    P       P       04 28 21.8 -0.2
AK01   Malin Array Si    71.33 324    P       P       04 28 22.1 +0.1
KIEV   Kiev              71.33 324            P       04 28 21.8 -0.1
KIEV   Kiev              71.33 324  ⇑P       P       04 28 22.1 +0.1
KIEV   Kiev              71.33 324    P       P       04 28 22.0 +0.1
KIEV   Kiev              71.33 324    P       P       04 28 21.9 -0.1
AK22   Malin Array Si    71.34 324    P       P       04 28 22.1 +0.1
AK08   Malin Array Si    71.35 324    P       P       04 28 22.1  0.0
LCMT   Little Creek M    71.50  56    P       P       04 28 24.4 +1.0
BORU   Boraas            71.77 336  i P       P       04 28 24.0 -0.5
BLEU   Blekinge          71.95 334  i P       P       04 28 25.0 -0.6
ONAU   Onsala            72.22 336  i P       P       04 28 26.8 -0.4
FABU   Falkenberg        72.32 336  i P       P       04 28 27.1 -0.7
HMU    Henry Mountain    72.37  54   IAmb    IAmb    04 28 35.1
       comp=Z,7.9nm,1.1s
DEL    Delary            72.42 335  i P       P       04 28 27.9 -0.5
SNART  Snartemo          72.69 339  eP       P       04 28 30.9 +0.9
SNART  Snartemo          72.69 339  i P       P       04 28 30.5 +0.5
BJUU   Bjuv              73.01 335  i P       P       04 28 31.4 -0.5
PV10   Paradox Valley    73.06  53    P       P       04 28 33.6 +0.8
PV10                                 IAmb    IAmb    04 28 35.2
       comp=Z,9.2nm,0.8s
PV19   Morning Glory     73.14  53    P       P       04 28 33.7 +0.5
PV19                                 IAmb    IAmb    04 28 35.9
       comp=Z,20nm,1.4s
PV17   East Wray Mesa    73.17  53    P       P       04 28 34.4 +0.9
PV17                                 IAmb    IAmb    04 28 35.4
       comp=Z,4.5nm,0.6s
PV16   Nyswonger Mesa    73.17  53    P       P       04 28 34.3 +0.8
PV18   Skein Mesa, Pa    73.22  53            P       04 28 34.7 +1.0
PV18                                 IAmb    IAmb    04 28 35.7
       comp=Z,5.9nm,0.9s
PV05   Paradox Valley    73.23  53    P       P       04 28 35.1 +1.3
PV05                                 IAmb    IAmb    04 28 36.0
       comp=Z,7.2nm,1.2s
LUNU   Lund              73.25 335  i P       P       04 28 33.2 -0.1
PV03   Paradox Valley    73.25  53    P       P       04 28 34.8 +0.8
PV13   Radium Mtn., P    73.33  53    P       P       04 28 35.3 +0.8
KOPT   Kop Dagi          73.39 310            P       04 28 35.1 +0.2
KOPT                                 IAmb    IAmb    04 28 39.8
       comp=Z,8.4nm,0.8s
COP    Copenhagen        73.52 335  i P       P       04 28 35.4 +0.6
COP                                  IAmb    IAmb    04 28 36.0
       comp=Z,41nm,0.6s
GURO   Guroymak-BITLI    73.54 308    P       P       04 28 36.1 +0.6
GURO                                 IAmb    IAmb    04 28 39.0
       comp=Z,11nm,0.9s
SORM   Soroca            73.61 322  ⇑P       P       04 28 35.7 +0.1
SORM   Soroca            73.61 322    P       P       04 28 35.6 +0.1
BEL    Belsk             73.84 329  eP       P       04 28 38.1 +1.2
X16A   Lo Mia Camp, P    74.32  57            P       04 28 40.8 +0.5
SSRD   Sdr. Stenderup    74.52 336  i P       P       04 28 38.5 -2.2
SSRD                                 IAmb    IAmb    04 28 42.1
       comp=Z,64nm,1.1s
DIKM   Dikmen            75.06 314  ⇑P       P       04 28 45.1 +1.0
ARPR   Arapgir-MALATY    75.23 310    P       P       04 28 45.8 +0.5
ARPR                                 IAmb    IAmb    04 28 48.9
       comp=Z,16nm,0.9s
BUR08  Bucovina Ar. S    75.36 324            P       04 28 46.8 +0.9
BURAR  Bucovina Array    75.37 324            P       04 28 46.9 +1.0
BURAR  Bucovina Array    75.37 324  ⇑P       P       04 28 46.5 +0.5
BURAR  Bucovina Array    75.37 324    P       P       04 28 46.4 +0.5
BZK    Bozkurt           75.48 315  ⇑P       P       04 28 47.6 +1.2
OJC    Ojcow             75.51 328  eP       P       04 28 47.1 +0.6
OJC    Ojcow             75.51 328            P       04 28 47.6 +1.1
OJC    Ojcow             75.51 328    P       P       04 28 47.6 +1.1
KOLS   Kolonicke sedl    75.57 326  eP       P       04 28 47.9 +1.0
KOLS                                 pmax    pmax
       comp=Z,16nm,0.7s
KOLS   Kolonicke sedl    75.57 326  eP       P       04 28 47.9 +1.0
STHS   Stebnicka Huta    75.59 327  eP       P       04 28 48.0 +0.9
STHS                                 pmax    pmax
       comp=Z,15nm,0.7s
STHS   Stebnicka Huta    75.59 327  eP       P       04 28 48.0 +0.9
TESR   Tescani           75.60 322  ⇑P       P       04 28 46.8 -0.4
TLCR                     75.62 320  ⇑P       P       04 28 47.9 +0.6
TLCR                     75.62 320    P       P       04 28 47.8 +0.6
BSEG   Bad Segeberg      75.65 335  eP       P       04 28 47.7 +0.5
       comp=Z,18nm,1.0s,baz=31,slow=5.7
ONER   Baraj Valea Uz    75.85 322  ⇑P       P       04 28 48.5  0.0
CFR    Carcaliu          75.94 320  ⇑P       P       04 28 49.7 +0.6
CFR    Carcaliu          75.94 320    P       P       04 28 49.6 +0.6
NIE    Niedzica          75.96 327  eP       P       04 28 50.3 +1.2
TPGR   Topolog           76.05 320  ⇑P       P       04 28 50.5 +0.8
VRI    Vrincioaia        76.06 322  ⇑P       P       04 28 50.9 +1.1
VRI    Vrincioaia        76.06 322    P       P       04 28 50.8 +1.1
PLOR   Plostina          76.10 322  ⇑P       P       04 28 50.0 -0.1
PLOR   Plostina          76.10 322    P       P       04 28 49.9 -0.1
ARCR   ARCALIA           76.15 324  ⇑P       P       04 28 50.2 -0.1
GORT1  Trebel            76.16 334  eP       P       04 28 50.3 +0.2
       comp=Z,29nm,1.2s,baz=31,slow=5.7
TURR   Turia             76.23 322  ⇑P       P       04 28 50.8 +0.1
ILGA   Ilgaz             76.29 314            P       04 28 52.5 +1.1
ILGA                                 IAmb    IAmb    04 28 54.5
       comp=Z,9.4nm,0.8s
KSP    Ksiaz             76.29 330  eP       P       04 28 51.6 +0.6
OZUR                     76.30 322  ⇑P       P       04 28 52.0 +0.8
LANS   Liptovska Anna    76.50 328  eP       P       04 28 53.1 +0.9
LANS                                 pmax    pmax
       comp=Z,12nm,0.8s
LANS   Liptovska Anna    76.50 328  eP       P       04 28 53.1 +0.9
STEB   Steborice         76.50 329  eP       P       04 28 52.8 +0.6
OSTC   Ostas             76.56 330  eP       P       04 28 53.9 +1.4
OSTC   Ostas             76.56 330  eP       P       04 28 53.9 +1.4
DOPR   Dopca             76.57 322  ⇑P       P       04 28 53.7 +1.0
CHVC   Chvalec           76.59 330  eP       P       04 28 53.6 +0.9
CHVC   Chvalec           76.59 330  eP       P       04 28 53.6 +0.9
UPC    Upice             76.67 330  eP       P       04 28 54.4 +1.3
UPC    Upice             76.67 330  eP       P       04 28 54.4 +1.3
DPC    Dobruska-Polom    76.69 330  eP       P       04 28 54.4 +1.1
DPC    Dobruska-Polom    76.69 330  eP       P       04 28 54.4 +1.1
MLR    Muntele Rosu      76.70 322    P       P       04 28 53.8 +0.3
       comp=Z,5.0nm,0.6s,baz=178,slow=7.1,SNR=6.0
       comp=Z,5.0nm,0.6s
MLR    Muntele Rosu      76.70 322  ⇑P       P       04 28 54.1 +0.5
MLR    Muntele Rosu      76.70 322    P       P       04 28 54.0 +0.5
MORC   Moravsky Berou    76.72 329            P       04 28 54.1 +0.6
MORC   Moravsky Berou    76.72 329  eP       P       04 28 53.9 +0.4
MORC   Moravsky Berou    76.72 329  ⇑P       P       04 28 53.7 +0.3
MORC   Moravsky Berou    76.72 329    P       P       04 28 54.1 +0.6
MORC                                 pmax    pmax
       comp=Z,14nm,0.7s
FLTG   Flechtingen       76.75 334  eP       P       04 28 53.5  0.0
       comp=Z,16nm,0.8s,baz=31,slow=5.7
KRLC   Kraliky           76.75 330  eP       P       04 28 54.6 +0.9
KRLC   Kraliky           76.75 330  eP       P       04 28 54.6 +0.9
BNN    Bunyan            76.76 312            P       04 28 55.0 +1.0
ICOR   Ion Corvin        76.90 320  ⇑P       P       04 28 55.0 +0.5
ANMO   Albuquerque       76.93  54⇓eP        P       04 28 55.2 +0.1
ANMO                                 pmax    pmax
       comp=Z,7.0nm,2.8s
RETH   Rethem/Aller,     76.98 335  eP       P       04 28 55.1 +0.4
       comp=Z,15nm,1.0s,baz=31,slow=5.7
MARR   Marisel-Cluj      77.00 324  ⇑P       P       04 28 54.9 -0.3
CLL    Collm             77.04 332            P       04 28 55.5 +0.3
CLL    Collm             77.04 332    P       P       04 28 55.5 +0.3
CLL                                  pmax    pmax
       comp=Z,21nm,0.8s
CLL    Collm             77.04 332  eP       P       04 28 55.1 -0.1
       comp=Z,21nm,0.8s,baz=31,slow=5.7
CLL    Collm             77.04 332  i P       P       04 28 55.3 +0.1
       comp=Z,23nm,0.7s
CLL                                 ePcP     PcP     04 29 07.0 +1.3
BRG    Berggiesshubel    77.09 332  eP       P       04 28 55.8 +0.3
       comp=Z,5.6nm,0.9s,baz=31,slow=5.7
BRG    Berggiesshubel    77.09 332  eP       P       04 28 56.6 +1.1
BRG                                  Amp             04 28 57.5
       comp=Z,3.9nm,0.5s
ASSE   Asse, Remlinge    77.10 334  eP       P       04 28 56.0 +0.6
       comp=Z,11nm,1.1s,baz=31,slow=5.7
VOIR                     77.14 322  ⇑P       P       04 28 55.3 -0.6
VOIR                     77.14 322    P       P       04 28 55.3 -0.6
PVCC   Panska Ves        77.17 331  eP       P       04 28 56.8 +0.9
PVCC   Panska Ves        77.17 331  eP       P       04 28 56.8 +0.9
VYHS   Vyhne             77.28 328  eP       P       04 28 57.4 +0.8
VYHS                                 pmax    pmax
       comp=Z,7.0nm,0.8s
VYHS   Vyhne             77.28 328  eP       P       04 28 57.4 +0.8
BR131  Keskin Array S    77.30 313            P       04 28 57.9 +0.9
BR131                                IAmb    IAmb    04 28 59.1
       comp=Z,6.0nm,0.8s
BR131  Keskin Array S    77.30 313    P       P       04 28 57.9 +0.9
BR131                                pmax    pmax
       comp=Z,6.0nm,0.8s
BRTR   Keskin Array B    77.30 313            P       04 28 57.7 +0.7
BRTR   Keskin Array B    77.30 313    P       P       04 28 57.9 +0.9
       comp=Z,4.3nm,0.7s,baz=80,slow=3.3,SNR=30
       comp=Z,4.3nm,0.7s
PSZ    Piszkesteto       77.33 327  ⇓P       P       04 28 56.5 -0.5
PSZ    Piszkesteto       77.33 327    P       P       04 28 56.4 -0.5
ARR    Arges             77.37 322  ⇑P       P       04 28 58.0 +0.7
SCHQ   Schefferville     77.41  19    P       P       04 28 56.7 -0.5
       comp=Z,2.2nm,0.7s,baz=313,slow=5.6,SNR=7.8
       comp=Z,2.2nm,0.7s
JAVC   Velka Javorina    77.42 328  eP       P       04 28 59.3 +1.9
CLZ    Clausthal         77.44 334  eP       P       04 28 58.0 +0.5
       comp=Z,18nm,0.7s,baz=31,slow=5.7
VRAC   Vranov            77.45 329  eP       P       04 28 57.9 +0.3
VRAC   Vranov            77.45 329  ⇑P       P       04 28 57.9 +0.3
VRAC   Vranov            77.45 329    P       P       04 28 57.8 +0.3
NEUB   Neuenburg         77.53 333  eP       P       04 28 58.2 +0.3
       comp=Z,19nm,0.9s,baz=31,slow=5.7
GOPC   GO Pecny, Ondr    77.60 331  eP       P       04 28 59.1 +0.7
GOPC   GO Pecny, Ondr    77.60 331  eP       P       04 28 59.1 +0.7
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PRU	Pruhonice	77.63	331	eP	P	04 28 59.5	+1.0
PRU	Pruhonice	77.63	331	eP	P	04 28 59.5	+1.0
ANTO	Ankara	77.63	314	P	P	04 28 59.4	+0.6
ANTO	Ankara	77.63	314	⥣P	P	04 28 60.0	+1.2
ANTO	Ankara	77.63	314	P	P	04 28 59.9	+1.2
LOT	Lotru	77.69	323	⥣P	P	04 28 59.2	+0.1
KRUC	Moravsky	77.73	329	eP	P	04 28 59.7	+0.6
GTTG	Gottingen	77.82	334	eP	P	04 29 00.4	+0.9
	comp=Z,11nm,0.8s,baz=31,slow=5.7						
IBBN	Ibbenburen	77.83	336	eP	P	04 29 00.5	+1.0
	comp=Z,15nm,0.8s,baz=31,slow=5.7						
EKA	Eskdalemuir Ar	77.85	343	P	P	04 28 59.3	-0.3
	comp=Z,2.4nm,0.6s,baz=34,slow=4.7,SNR=8.0						
	comp=Z,2.4nm,0.6s						
SIRR	Siria	77.94	325	⥣P	P	04 29 00.7	+0.4
MODS	Modra-Piesok	77.97	328	eP	P	04 29 00.8	+0.4
MODS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MODS	Modra-Piesok	77.97	328	eP	P	04 29 00.8	+0.4
TANN	Tannenbergstha	77.98	332	eP	P	04 29 00.5	0.0
	comp=Z,4.2nm,0.8s,baz=31,slow=5.7						
MOX	Moxa	78.07	333	eP	P	04 29 01.0	+0.1
	comp=Z,5.6nm,0.8s,baz=31,slow=5.7						
SURR	Surduc	78.15	324	⥣P	P	04 29 01.7	+0.3
GZR	Gura Zlata	78.16	323	⥣P	P	04 29 02.1	+0.5
GZR	Gura Zlata	78.16	323	P	P	04 29 02.1	+0.5
ZVC	Zvikov	78.21	331	eP	P	04 29 02.6	+0.9
UBBA	Unterbreizbach	78.44	334	eP	P	04 29 03.2	+0.4
	comp=Z,5.4nm,0.7s,baz=31,slow=5.7						
MANZ	Manzenberg	78.47	332	eP	P	04 29 01.5	-1.7
	comp=Z,1.0nm,0.7s,baz=31,slow=5.7						
KASTN	Kahler Asten	78.60	335	eP	P	04 29 04.8	+0.9
	comp=Z,9.3nm,0.8s,baz=31,slow=5.7						
ROTZ	Rotzenmuhle	78.62	332	eP	P	04 29 05.0	+1.0
	comp=Z,1.5nm,0.7s,baz=31,slow=5.7						
KHC	Kasperske Hory	78.69	331	eP	P	04 29 05.1	+0.7
KHC	Kasperske Hory	78.69	331	eP	P	04 29 05.1	+0.7
CKRC	Cesky Krumlov	78.69	330	eP	P	04 29 05.0	+0.6
CKRC	Cesky Krumlov	78.69	330	eP	P	04 29 05.0	+0.6
HERR	Herculane	78.72	323	⥣P	P	04 29 04.5	-0.1
BUG	Bochum--Univer	78.74	336	eP	P	04 29 04.9	+0.4
	comp=Z,13nm,0.7s,baz=31,slow=5.7						
CONA	Conrad Observa	78.87	329	i P	P	04 29 06.7	+1.2
	comp=Z,7.3nm,0.6s,SNR=8.1						
GEC2	GERESS Array S	78.89	331		P	04 29 06.0	+0.4
GEC2				IAmb	IAmb	04 29 07.3	
	comp=Z,5.7nm,0.9s						
GEC2	GERESS Array S	78.89	331	eP	P	04 29 05.9	+0.4
	comp=Z,5.8nm,0.9s,baz=31,slow=5.7						
GERES	GERESS Array B	78.89	331	P	P	04 29 06.1	+0.5
GERES	GERESS Array B	78.89	331	P	P	04 29 05.8	+0.2
	comp=Z,3.8nm,0.6s,baz=24,slow=4.8,SNR=30						
	comp=Z,3.8nm,0.6s						
GERES	GERESS Array B	78.89	331	P	P	04 29 06.1	+0.5
RONA	Rosalia, Austr	78.90	329	eP	P	04 29 06.9	+1.3
	comp=Z,5.4nm,0.8s						
GRF	Grafenberg Arr	79.02	333	eP	P	04 29 07.2	+1.0
	comp=Z,26nm,0.8s,baz=31,slow=5.7						
MDVR	Moldovita	79.10	324	⥣P	P	04 29 06.6	-0.2
MORH	Mrgy, Hungar	79.21	326	⥣P	P	04 29 07.2	0.0
TNS	Taunus Mts	79.45	334	eP	P	04 29 09.2	+0.7
	comp=Z,9.7nm,0.8s,baz=31,slow=5.7						
MOA	Molln	79.53	330	i P	P	04 29 09.4	+0.4
	comp=Z,7.2nm,0.7s						
ARSA	Arzberg	79.56	329	i P	P	04 29 10.6	+1.4
	comp=Z,2.2nm,0.5s						
BIOA	Bad Ischl, Aus	79.89	330	i P	P	04 29 12.3	+1.4
	comp=Z,7.5nm,0.8s						
RJOB	Jochberg	80.15	331	eP	P	04 29 13.5	+1.1
	comp=Z,7.1nm,0.8s,baz=31,slow=5.7						
SOKA	Soboth	80.23	329	i P	P	04 29 13.6	+0.7
	comp=Z,5.1nm,0.7s,SNR=6.9						
VLDQ	Val d'Or	80.28	28	P	P	04 29 13.1	+0.2
VLDQ				IAmb	IAmb	04 29 19.1	
	comp=Z,7.1nm,0.8s						
FUR	Furstenfeldbru	80.31	332	eP	P	04 29 14.6	+1.4
	comp=Z,16nm,0.6s,baz=31,slow=5.7						
LESA	Schwarzleotal	80.46	330	eP	P	04 29 15.1	+1.0
	comp=Z,9.6nm,1.1s,SNR=7.3						
OBKA	Obir	80.55	329	i P	P	04 29 14.1	-0.5
	comp=Z,5.9nm,0.7s						
VHRN	Van Horn	80.75	56		P	04 29 16.8	+0.8
MYKA	Terra Mystica	80.78	330	i P	P	04 29 15.7	-0.1
	comp=Z,3.2nm,0.8s						
MANT	Manisa	80.83	316		P	04 29 16.7	+0.3
MANT				IAmb	IAmb	04 29 18.8	
	comp=Z,6.8nm,0.8s						
WATA	Walderalm	80.92	331	i P	P	04 29 17.4	+0.7
	comp=Z,11nm,0.5s						
WTTA	Wattenberg	80.96	331	i P	P	04 29 17.6	+0.8
	comp=Z,11nm,0.5s,SNR=6.1						
PRED	Cave del Predi	80.97	329		P	04 29 16.5	-0.3
PRED				IAmb	IAmb	04 29 18.2	
	comp=Z,6.7nm,0.6s						
RETA	Reutte	81.07	332	i P	P	04 29 18.1	+0.8
	comp=Z,3.5nm,0.7s						
MOTA	Moosalm	81.08	331	i P	P	04 29 17.8	+0.3
	comp=Z,9.1nm,0.8s,SNR=7.7						
ABTA	Abfaltersbach	81.09	330	eP	P	04 29 15.9	-1.6
	comp=Z,1.1nm,0.6s						
BFO	Black Forest	81.14	334		P	04 29 17.8	+0.1
BFO				IAmb	IAmb	04 29 18.6	
	comp=Z,5.6nm,0.7s						
BFO	Black Forest	81.14	334	P	P	04 29 17.8	+0.1
BFO				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BFO	Black Forest	81.14	334	eP	P	04 29 17.7	+0.1
	comp=Z,4.6nm,0.8s,baz=31,slow=5.7						
SQTA	Sankt Quirin	81.15	331	i P	P	04 29 18.5	+0.7
	comp=Z,6.2nm,0.5s						
MMAI	Mount Meron Ar	81.25	308	P	P	04 29 19.5	+0.9
	comp=Z,3.8nm,0.5s,baz=27,slow=3.9,SNR=6.9						
	comp=Z,3.8nm,0.5s						
STAL	STALIGIAL	81.44	330	P	P	04 29 18.7	-0.5
STAL				IAmb	IAmb	04 29 19.8	
	comp=Z,6.8nm,0.6s						
ELL	Elmali	81.47	314	P	P	04 29 20.2	+0.5
ELL	Elmali	81.47	314	P	P	04 29 20.2	+0.5
ELL				pmax	pmax		
	comp=Z,25nm,0.9s						
FETA	Feichten	81.48	331	i P	P	04 29 20.8	+1.2
	comp=Z,2.6nm,0.6s						
CIMO	Cimolais	81.49	330		P	04 29 19.7	+0.1
DAVA	Damuels	81.54	332	i P	P	04 29 19.8	-0.2
	comp=Z,5.8nm,0.5s						
ECH	Echery	81.62	334		P	04 29 20.5	+0.3
ECH				IAmb	IAmb	04 29 21.8	
	comp=Z,6.1nm,0.9s						
ECH	Echery	81.62	334	P	P	04 29 20.5	+0.3
ECH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
DAVOX	Davos/Dischmat	81.98	332	P	P	04 29 23.0	+0.7
	comp=Z,4.8nm,0.5s,baz=347,slow=8.5,SNR=7.3						
	comp=Z,4.8nm,0.5s						
DAVOX	Davos/Dischmat	81.98	332	P	P	04 29 23.0	+0.7
FUORN	Ofenpass-Fuorn	81.99	332		P	04 29 22.9	+0.4
FUORN				IAmb	IAmb	04 29 24.8	
	comp=Z,6.1nm,0.6s						
PDG	Podgorica	82.05	324	⥣P	P	04 29 22.2	-0.3
TUE	Stuetta	82.43	332		P	04 29 25.3	+0.6
TUE				IAmb	IAmb	04 29 30.4	
	comp=Z,6.5nm,0.5s						
TX31	Lajitas Ar. Si	82.58	56		P	04 29 26.6	+0.9
TXAR	Lajitas Array	82.58	56	P	P	04 29 26.7	+1.1
	comp=Z,2.2nm,0.7s,baz=297,slow=3.8,SNR=22						
	comp=Z,2.2nm,0.7s						
SENIN	Lac Senin/Sane	83.21	333		P	04 29 29.1	+0.4
SENIN				IAmb	IAmb	04 29 30.5	
	comp=Z,4.2nm,0.7s						
ZCCA	Zocca	83.70	330		P	04 29 31.8	+0.8
ZCCA				IAmb	IAmb	04 29 55.0	
	comp=Z,16nm,1.2s						
BNI	Bardonecchia	84.57	333		P	04 29 36.1	+0.5
BNI				IAmb	IAmb	04 29 41.6	
	comp=Z,5.1nm,0.8s						
BNI	Bardonecchia	84.57	333	P	P	04 29 36.1	+0.5
BNI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ITM	Ithomi	85.11	319	P	P	04 29 38.2	0.0
IDI	Anoyia	85.17	316	P	P	04 29 38.2	-0.4
	comp=Z,9.1nm,0.4s,baz=28,slow=6.9,SNR=16						
	comp=Z,9.1nm,0.4s						
ESDC	Sonseca Array	92.68	338	P	P	04 30 14.1	-0.1
	comp=Z,0.9nm,0.7s,baz=19,slow=3.8,SNR=8.5						
	comp=Z,0.9nm,0.7s						
H03N2	Juan Fernandez	143.06	89	T	T	07 16 03.2	
	baz=304,slow=77,SNR=9.7						
H03N3	Juan Fernandez	143.07	89	T	T	07 15 59.6	
	baz=304,slow=77,SNR=18						
H03N1	Juan Fernandez	143.07	89	T	T	07 16 00.5	
	baz=304,slow=77,SNR=15						

IDC 26 04:25:32.1±4.7, 15°.13S×167°.39E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=169.2km s-min=35.6km az=138.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.84	257	P	P	04 31 58.2	-0.9
	0.3nm,0.8s,baz=84,slow=11,SNR=1.7						
	0.3nm,0.8s						
ASAR	Alice Springs	32.64	250	P	P	04 32 06.5	+0.4
	0.9nm,0.8s,baz=74,slow=9.9,SNR=7.1						
	0.9nm,0.8s						
SONM	Songino Array	82.89	324	P	P	04 37 59.6	+0.8
	0.6nm,0.6s,baz=106,slow=5.2,SNR=3.7						
	0.6nm,0.6s						
ILAR	Eielson Array	86.87	18	P	P	04 38 17.9	-0.4
	0.1nm,0.6s,baz=232,slow=4.4,SNR=1.8						
	0.1nm,0.6s						
MKAR	Makanchi Array	97.58	316	P	P	04 39 08.0	-0.4
	1.1nm,0.7s,baz=95,slow=6.0,SNR=9.9						

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*IDC **26** 04:29:45.6±1.1, 56°.26N×164°.16E, h0km, mb3.5/8, mbtmp3.5/9, ML2.5/1, Error ellipse: s-maj=38.8km s-min=18.2km az=165.0*

*KRSC **26** 04:29:46.8±1.6, 56°.20N×164°.30E, h52km±20km, Ml3.8*

ISC 26 04:29:45.8±1.7, 56°.22N±0°.04×164°.35E±0°.04, h6km±10km, n46, σ1s.51/62, mb3.6/8, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.85	270	eP	Pg	04 30 01.9	-0.3
KBTR				eS	Sg	04 30 12.6	-0.7
KBG	Krutoberegovo	0.92	273	eP	Pg	04 30 03.1	-0.3
KBG				eS	Sg	04 30 15.3	0.0
BKI	Bering	1.37	137	eP	Pn	04 30 11.7	+0.2
BKI				eS	Sb	04 30 29.1	-0.6
SMKR	Semkarok	1.64	284	eP	Pn	04 30 15.1	-0.3
SMKR				eS	Sn	04 30 34.7	-2.1
BDR	Baidarnaya	1.78	283	eS	Sn	04 30 40.0	-0.2
ZLN	Zelenaya	2.00	266	eP	Pn	04 30 21.0	+0.8
ZLN				eS	Sn	04 30 45.0	-0.6
CIRR	Tsirk	2.02	269	eP	Pn	04 30 20.6	+0.1
LGNR	Loginova	2.05	268	eP	Pn	04 30 22.0	+0.9
LGNR				eS	Sn	04 30 45.4	-1.8
KLY	Klyuchi	2.06	274	eP	Pn	04 30 19.8	-1.2
KLY				eS	Sn	04 30 44.2	-2.8
BZGR	Bezymyannyi-Gr	2.07	264	eP	Pn	04 30 21.8	+0.6
BZGR				eS	Sn	04 30 47.7	+0.4
KRSR	Krestovskiy	2.11	271	eP	Pn	04 30 22.1	+0.3
BZWR	Bezymyannyi-We	2.17	265	eP	Pn	04 30 23.5	+0.8
BZMR	Bezymyannaya	2.18	264	eP	Pn	04 30 23.5	+0.7
MKZ	Mys Kozlova	2.24	223	eP	Pn	04 30 22.6	-0.8
MKZ				eS	Sn	04 30 48.9	-2.5
KIRR	Kirishev	2.26	265	eP	Pn	04 30 24.8	+0.9
KPT	Kopyto	2.33	265	eP	Pn	04 30 26.0	+1.3
KMNR	Kamenistaya	2.36	260	eP	Pn	04 30 26.9	+1.7
TUMD	Tumrok D	2.46	247	eP	Pn	04 30 27.1	+0.7
TUMD				eS	Sn	04 30 56.0	-0.8
KOZ	Kozyrevsk	2.51	268	eP	Pn	04 30 28.9	+1.8
SRDR	Sredinnyy	2.58	274	eP	Pn	04 30 29.6	+1.4
SRDR				eS	Sn	04 31 00.7	+0.7
OSSR	Ossora	3.12	348	eP	Pn	04 30 35.6	+0.1
OSSR				eS	Sn	04 31 09.9	-3.1
KII	Karymskiy	3.56	234	eP	Pn	04 30 42.6	+0.8
SPN	Mys Shipunski	4.01	221	eP	Pn	04 30 46.8	-1.0
SPN				eS	Sn	04 31 29.4	-5.7
NLC	Nalytchevo	4.21	226	eS	Sn	04 31 38.9	-1.1
SDLR	Sedlovina	4.33	229	eP	Pn	04 30 53.1	+0.9
KRER	Koryakskii	4.37	230	eP	Pn	04 30 54.3	+1.5
KRX	Arik	4.37	231	eP	Pn	04 30 54.3	+1.4
SMAR	Somma	4.37	230	eP	Pn	04 30 54.0	+1.0
AVH	Avacha	4.40	230	eP	Pn	04 30 54.7	+1.5
AVH				eS	Sn	04 31 44.1	-0.6
KOK	Koryaka	4.42	231	eP	Pn	04 30 54.7	+1.2
GNL	Ganaly	4.48	238	eP	Pn	04 30 56.0	+1.7
PETK	Petropavlovsk-	4.96	234	Pn	Pn	04 31 01.8	+0.9
	1.0nm,0.3s,baz=70,slow=18,SNR=9.0						
	2.7nm,0.6s						
KRMR	Karymshinskiy	4.96	229	eP	Pn	04 31 02.7	+1.8
KRMR				eS	Sn	04 31 57.8	-0.8
RUS	Russkaya	5.10	224	eP	Pn	04 31 03.5	+0.8
GRL	Gorelyy	5.19	228	eP	Pn	04 31 06.2	+2.1
MTVR	Mutnovka	5.20	226	eP	Pn	04 31 06.0	+1.8
APC	Apacha	5.33	235	eP	Pn	04 31 09.1	+3.2
ASAK	Asacha	5.39	227	eP	Pn	04 31 08.8	+2.0
ASAK				eS	Sn	04 32 08.9	-0.2
ILAR	Eielson Array	24.88	50	P	P	04 35 10.5	+1.6
	0.1nm,0.4s,baz=254,slow=7.7,SNR=4.5						
	0.1nm,0.4s						
MJAR	Matsushiro Arr	26.42	233	P	P	04 35 22.8	-0.3
	0.6nm,0.3s,baz=22,slow=5.8,SNR=4.6						
	0.6nm,0.3s						
SONM	Songino Array	35.65	282	P	P	04 36 44.0	-0.5
	0.5nm,0.6s,baz=60,slow=8.8,SNR=3.2						
	0.5nm,0.6s						
KURBB	Kurchatov Arra	48.29	302	P	P	04 38 27.2	-0.2
	0.2nm,0.4s,baz=57,slow=7.2,SNR=2.5						
	0.2nm,0.4s						
MKAR	Makanchi Array	49.03	296	P	P	04 38 32.2	-1.0
	0.2nm,0.5s,baz=54,slow=7.3,SNR=2.5						
	0.2nm,0.5s						
BVAR	Borovoye Array	50.38	309	P	P	04 38 43.5	+0.1
	0.5nm,0.4s,baz=22,slow=5.5,SNR=5.0						
	0.5nm,0.4s						
PDAR	Pinedale Array	53.90	65	P	P	04 39 11.1	+1.1
	0.2nm,0.5s,baz=338,slow=3.5,SNR=3.6						
	0.2nm,0.5s						
TXAR	Lajitas Array	67.21	71	P	P	04 40 41.9	+1.1
	0.6nm,0.7s,baz=300,slow=5.2,SNR=10						
	0.6nm,0.7s						

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*KRSC **26** 04:35:27.5±1.6, 56°.19N×164°.53E, h46km±20km, Ml4.5*

*IDC **26** 04:35:28.1±0.6, 56°.26N×164°.42E, h0km, mb3.6/18, mbtmp3.7/20, ML3.4/2, MS3.7/1, Error ellipse: s-maj=20.1km s-min=13.8km az=148.0*

*MOS **26** 04:35:30.6±0.8, 56°.13N×164°.41E, h40km, mb4.5/3, Error ellipse: s-maj=8.5km s-min=5.5km az=50.7*

*NEIC **26** 04:35:37.2±1.9, 56°.61N±0°.09×163°.8E±0°.2, h10km±1km, mb4.2/55, Error ellipse: s-maj=16.7km s-min=13.7km az=144.0*

ISC 26 04:35:31.7±1.6, 56°.17N±0°.04×163°.98E±0°.05, h7km±10km, n171, σ2s.31/175, mb4.2/46, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.65	274	PN	Pg	04 35 44.4	+0.2
KBTR				S	Sb	04 35 56.0	+1.5
KBTR	Krutoberegovo	0.65	274	eP	Pg	04 35 44.4	+0.2
KBTR				eS	Sb	04 35 56.1	+1.5
KBG	Krutoberegovo	0.72	277	PN	Pb	04 35 45.4	-1.1
KBG				S	Sn	04 35 58.7	-0.7
KBG	Krutoberegovo	0.72	277	eP	Pb	04 35 45.4	-1.1
KBG				eS	Sn	04 35 58.8	-0.7
SMKR	Semkarok	1.46	288	PN	Pn	04 35 57.0	-1.4
SMKR				S	Sg	04 36 20.1	+1.7
SMKR	Semkarok	1.46	288	eP	Pn	04 35 57.1	-1.4
SMKR				eS	Sg	04 36 20.2	+1.7
BKI	Bering	1.49	130	PN	Pn	04 35 51.7	-7.0
BKI				S	Sn	04 36 08.6	-10
BKI	Bering	1.49	130	eP	Pn	04 35 51.8	-7.0
BKI				eS	Sn	04 36 08.6	-10
BDR	Baidarnaya	1.59	286	eS	Sb	04 36 23.3	+1.5
ZLN	Zelenaya	1.79	266	PN	Pn	04 36 03.5	+0.5
ZLN	Zelenaya	1.79	266	eP	Pn	04 36 03.5	+0.5
CIRR	Tsirk	1.81	270	PN	Pn	04 36 03.8	+0.5
CIRR	Tsirk	1.81	270	eP	Pn	04 36 03.8	+0.5
LGNR	Loginova	1.84	269	PN	Pn	04 36 04.6	+0.7
LGNR	Loginova	1.84	269	eP	Pn	04 36 04.6	+0.7
BZGR	Bezymyannyi-Gr	1.86	264	PN	Pn	04 36 04.5	+0.6
BZGR				S	Sb	04 36 29.7	+0.3
BZGR	Bezymyannyi-Gr	1.86	264	eP	Pn	04 36 04.6	+0.6
BZGR				eS	Sb	04 36 29.7	+0.3
KLY	Klyuchi	1.86	276	PN	Pn	04 36 01.9	-2.0
KLY				S	Sn	04 36 27.2	-0.4
KLY	Klyuchi	1.86	276	eP	Pn	04 36 01.9	-2.0
KLY				eS	Sn	04 36 27.3	-0.4
KRSR	Krestovskiy	1.91	273	PN	Pn	04 36 04.6	-0.1
KRSR	Krestovskiy	1.91	273	eP	Pn	04 36 04.6	-0.1
BZWR	Bezymyannyi-We	1.96	265	PN	Pn	04 36 05.8	+0.3
BZWR	Bezymyannyi-We	1.96	265	eP	Pn	04 36 05.8	+0.3
BZMR	Bezymyannaya	1.97	265	PN	Pn	04 36 06.1	+0.6
BZMR	Bezymyannaya	1.97	265	eP	Pn	04 36 06.2	+0.6
KIRR	Kirishev	2.05	265	PN	Pn	04 36 07.0	+0.3
KIRR	Kirishev	2.05	265	eP	Pn	04 36 07.0	+0.3
MKZ	Mys Kozlova	2.07	219	PN	Pn	04 36 04.5	-2.2
MKZ	Mys Kozlova	2.07	219	eP	Pn	04 36 04.5	-2.2
KPT	Kopyto	2.12	266	PN	Pn	04 36 08.4	+0.9
KPT	Kopyto	2.12	266	eP	Pn	04 36 08.4	+0.9
KMNR	Kamenistaya	2.15	260	PN	Pn	04 36 08.5	+0.6
KMNR	Kamenistaya	2.15	260	eP	Pn	04 36 08.6	+0.6
TUMD	Tumrok D	2.25	246	PN	Pn	04 36 08.9	-0.3
TUMD				S	Sb	04 36 40.0	-0.5
TUMD	Tumrok D	2.25	246	eP	Pn	04 36 08.9	-0.3
TUMD				eS	Sb	04 36 40.0	-0.5
KOZ	Kozyrevsk	2.30	269	PN	Pn	04 36 09.9	-0.1
KOZ	Kozyrevsk	2.30	269	eP	Pn	04 36 10.0	-0.1
SRDR	Sredinnyy	2.38	275	PN	Pn	04 36 12.0	+0.8
SRDR	Sredinnyy	2.38	275	eP	Pn	04 36 12.0	+0.8
ESO	Esso	2.97	267	PN	Pn	04 36 20.4	+1.2
ESO	Esso	2.97	267	eP	Pn	04 36 20.4	+1.2
OSSR	Ossora	3.13	351	PN	Pn	04 36 17.3	-4.0
OSSR	Ossora	3.13	351	eP	Pn	04 36 17.4	-4.0
OSSR				eS	Sn	04 36 52.1	-6.7
KII	Karymskiy	3.37	232	PN	Pn	04 36 24.2	-0.5
KII	Karymskiy	3.37	232	eP	Pn	04 36 24.2	-0.5
PALN	Palana	3.64	325	PN	Pn	04 36 30.2	+1.9
PALN	Palana	3.64	325	eP	Pn	04 36 30.2	+1.9
SPN	Mys Shipunski	3.84	218	PN	Pn	04 36 28.3	-2.8
SPN	Mys Shipunski	3.84	218	eP	Pn	04 36 28.3	-2.8
SDLR	Sedlovina	4.14	228	PN	Pn	04 36 35.1	-0.2
SDLR	Sedlovina	4.14	228	eP	Pn	04 36 35.1	-0.2
KRER	Koryakskii	4.18	229	PN	Pn	04 36 39.1	+3.2
KRER	Koryakskii	4.18	229	eP	Pn	04 36 39.1	+3.2
KRX	Arik	4.18	230	PN	Pn	04 36 35.9	0.0
KRX	Arik	4.18	230	eP	Pn	04 36 35.9	0.0
SMAR	Somma	4.18	228	PN	Pn	04 36 35.2	-0.8
SMAR	Somma	4.18	228	eP	Pn	04 36 35.3	-0.8
AVH	Avacha	4.21	228	PN	Pn	04 36 36.6	+0.4
AVH	Avacha	4.21	228	eP	Pn	04 36 36.7	+0.4
UGLR	Uglovaya	4.21	227	PN	Pn	04 36 36.1	-0.2
UGLR	Uglovaya	4.21	227	eP	Pn	04 36 36.2	-0.2
GNL	Ganaly	4.28	237	PN	Pn	04 36 37.5	+0.3
GNL	Ganaly	4.28	237	eP	Pn	04 36 37.5	+0.3
DALK	Dalny	4.37	226	PN	Pn	04 36 38.2	-0.2
DALK	Dalny	4.37	226	eP	Pn	04 36 38.3	-0.2
PET	Petropavlovsk	4.42	227	ePN	Pn	04 36 39.9	+0.9
PET				eS	Sn	04 37 34.0	+3.3
PET				pmax	pmax		
	comp=Z,30nm,0.6s						
PET				smax	smax		
	comp=E,89nm,0.9s						
PET				smax	smax		
	comp=N,67nm,0.8s						
PEA0B	Petropavlovsk-	4.77	233		Pb	04 36 51.7	-3.8
PEA0B				Sn	Sb	04 37 49.6	-3.3
PEA0B	Petropavlovsk-	4.77	233	PN	Pn	04 36 46.1	+2.3
PETK	Petropavlovsk-	4.77	233	Pn	Pn	04 36 44.5	+0.6
	comp=N,1.2nm,0.3s,baz=90,slow=21,SNR=8.1						
PETK				Sn	Sn	04 37 45.5	+6.2
	comp=N,0.6nm,0.3s,baz=60,slow=27,SNR=3.6						
	comp=N,1.3nm,0.4s						
RUS	Russkaya	4.93	223	PN	Pn	04 36 45.5	-0.5
RUS	Russkaya	4.93	223	eP	Pn	04 36 45.5	-0.5
GRL	Gorelyy	5.01	226	PN	Pn	04 36 47.9	+0.7
GRL	Gorelyy	5.01	226	eP	Pn	04 36 47.9	+0.7
MTVR	Mutnovka	5.01	225	PN	Pn	04 36 47.5	+0.1
MTVR	Mutnovka	5.01	225	eP	Pn	04 36 47.5	+0.1
ASAK	Asacha	5.20	226	PN	Pn	04 36 50.0	+0.1
ASAK	Asacha	5.20	226	eP	Pn	04 36 50.0	+0.1
SEY	Seymchan	8.97	324	LR	LR	04 41 07.1	
	comp=N,484nm,19.9s,baz=41,slow=38						
BILL	Bilibino	11.96	4		Pn	04 38 21.1	-1.3
ASAJ	Asahikawa	18.16	237	P	P	04 39 46.0	+1.5
	comp=N,0.6nm,0.3s,baz=61,slow=8.2,SNR=4.2						
	comp=N,7.6nm,0.8s						
ASAJ	Asahikawa	18.16	237	P	P	04 39 46.0	+1.5
E18K	Tukpahlearik C	19.84	41		P	04 40 01.7	-0.9
C18K	Utukok River	20.03	38		P	04 40 03.9	-0.9
H18K	Honhosa River	20.21	48	P	P	04 40 06.5	-0.2
H18K				IAmb	IAmb	04 40 16.1	
	comp=Z,13nm,1.1s						
C19K	Lookout Ridge	20.74	37	P	P	04 40 10.4	-2.1
F19K	Shaleruckik Mo	20.75	44		P	04 40 10.7	-1.9
F19K				IAmb	IAmb	04 40 18.9	
	comp=Z,14nm,1.1s						
J18K	Innoko River	20.77	53	P	P	04 40 10.1	-2.7
J18K				IAmb	IAmb	04 40 19.0	
	comp=Z,11nm,1.0s						
D19K	Kuna River	21.05	39		P	04 40 12.7	-3.1
H19K	Roundabout Mou	21.06	48	P	P	04 40 15.7	-0.1
H19K				IAmb	IAmb	04 40 26.2	
	comp=Z,19nm,1.5s						
E19K	Redstone River	21.10	42	P	P	04 40 19.5	+3.1
E19K				IAmb	IAmb	04 40 23.1	
	comp=Z,13nm,1.2s						
TIXI	Tiksi	21.38	330	P	P	04 40 19.2	-0.1
TIXI	Tiksi	21.38	330	P	P	04 40 18.0	-1.3
	comp=Z,1.7nm,0.3s,baz=107,slow=6.4,SNR=5.8						
	comp=Z,1.7nm,0.3s						
TIXI	Tiksi	21.38	330	P	P	04 40 19.2	-0.1
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.2s						
F20K	Avaraart Lake	21.59	44	P	P	04 40 24.5	+3.0
D20K	Etivluk River	21.64	39	P	P	04 40 24.3	+2.2
D20K				IAmb	IAmb	04 40 29.4	
	comp=Z,16nm,1.1s						
B20K	Meade River	21.85	35	P	P	04 40 26.3	+2.0
ACHA	Angle Creek He	21.91	68	P	P	04 40 29.9	+4.8
J20K	Nowinta River	21.93	52		P	04 40 27.3	+2.1
IMAR	Indian Mountai	22.22	47	P	P	04 40 31.0	+2.6
G21K	Allakaket	22.38	45	P	P	04 40 33.3	+3.2
F21K	Alatna River	22.48	44		P	04 40 34.6	+3.4
H21K	Melozitna Rive	22.58	48	P	P	04 40 33.8	+1.5
H21K				IAmb	IAmb	04 40 40.6	
	comp=Z,11nm,1.4s						
E22K	Anaktuvuk Pass	23.25	41		P	04 40 40.9	+1.6
E22K				IAmb	IAmb	04 40 47.0	
	comp=Z,11nm,1.2s						
BPAW	Bear Paw Mtn.	23.32	52	P	P	04 40 43.0	+3.1
TRF	Thorofare Moun	23.65	53	P	P	04 40 46.9	+3.5
TRF				IAmb	IAmb	04 40 60.0	
	comp=Z,12nm,1.2s						
COLD	Coldfoot	23.75	44	P	P	04 40 45.6	+1.5
COLD				IAmb	IAmb	04 40 48.5	
	comp=Z,8.5nm,1.3s						
H23K	Yukon River	23.93	47	P	P	04 40 48.8	+2.9
I23K	Minto, Yukon-K	24.00	49	P	P	04 40 50.2	+3.7
I23K				IAmb	IAmb	04 41 24.2	
	comp=Z,10nm,1.3s						
E23K	Chandalar	24.06	42	P	P	04 40 50.1	+3.0
E23K				IAmb	IAmb	04 41 30.7	
	comp=Z,9.1nm,1.1s						
TOLK	Toolik Lake Re	24.15	40		P	04 40 51.2	+3.3
TOLK				IAmb	IAmb	04 40 53.3	
	comp=Z,9.5nm,1.0s						
E24K	Your Creek	24.48	42	P	P	04 40 54.5	+3.5
E24K				IAmb	IAmb	04 40 55.8	
	comp=Z,6.5nm,0.8s						
D24K	Happy Valley	24.48	39	P	P	04 40 54.5	+3.6
D24K				IAmb	IAmb	04 40 56.0	
	comp=Z,8.0nm,0.9s						
WRH	Wood River Hil	24.57	51	P	P	04 40 55.5	+3.8
WRH				IAmb	IAmb	04 40 55.8	
	comp=Z,8.1nm,1.0s						
CCB	Clear Creek Bu	24.68	50		P	04 40 55.6	+2.9
CCB				IAmb	IAmb	04 40 57.7	
	comp=Z,5.5nm,0.9s						
G24K	Hadweenzic Riv	24.79	45		P	04 40 56.9	+3.1
IL31		25.07	50	P	P	04 40 58.4	+2.2
IL31				IAmb	IAmb	04 41 03.3	
	comp=Z,5.4nm,1.1s						
ILAR	Eielson Array	25.07	50	P	P	04 40 49.8	-6.5
	comp=Z,0.4nm,0.8s,baz=258,slow=7.3,SNR=5.4						
	comp=Z,0.4nm,0.8s						
SCM	Sheep Creek Mo	25.19	57	P	P	04 41 01.9	+4.4

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
D25K	Kavik River	25.37	39	P	P	04 41 01.9	+2.9
D25K				IAmb	IAmb	04 41 25.1	
	comp=Z,7.1nm,0.9s						
F25K	Christian Rive	25.53	43		P	04 41 03.6	+3.1
F25K				IAmb	IAmb	04 41 06.4	
	comp=Z,7.1nm,1.1s						
E25K	Arctic Village	25.58	42	P	P	04 41 03.5	+2.7
PRP	Porcupine Dome	25.60	48		P	04 41 04.1	+2.9
PRP				IAmb	IAmb	04 41 34.6	
	comp=Z,7.8nm,1.4s						
M24K	Tolsona, Glenn	25.68	56	P	P	04 41 05.7	+3.7
J25K	Salcha River,	25.73	50		P	04 41 03.8	+1.4
BMAR	Burnt Mountain	25.93	44	P	P	04 41 07.3	+3.1
MAJO	Matsushiro	26.23	232	P	P	04 41 12.7	+5.7
MAJO	Matsushiro	26.23	232	P	P	04 41 12.7	+5.7
MAJO				pmax	pmax		
	comp=Z,15nm,1.0s						
MJAR	Matsushiro Arr	26.23	232	P	P	04 41 05.0	-2.0
	comp=Z,0.9nm,0.3s,baz=20,slow=8.4,SNR=12						
	comp=Z,0.9nm,0.3s						
MJAR	Matsushiro Arr	26.23	232	P	P	04 41 05.0	-2.0
SCRK	Sand Creek	26.40	51	P	P	04 41 10.0	+1.6
H27K	Steamboat Moun	27.19	46	P	P	04 41 18.8	+3.3
K27K	Chicken	27.22	51	P	P	04 41 18.9	+3.2
L27K	Beaver Creek,	27.50	53		P	04 41 21.8	+3.5
BCAR	Beaver Creek A	27.52	53	P	P	04 41 21.8	+3.3
M27K	Edge Creek, AK	27.61	55	P	P	04 41 23.2	+3.7
M27K				IAmb	IAmb	04 41 26.7	
	comp=Z,7.8nm,1.3s						
F28M	Old Crow	27.74	43	P	P	04 41 23.7	+3.3
F28M				IAmb	IAmb	04 41 25.1	
	comp=Z,4.5nm,1.1s						
I29M	Ogilvie Camp,	28.62	48	P	P	04 41 30.8	+2.6
I29M				IAmb	IAmb	04 41 32.9	
	comp=Z,4.5nm,1.1s						
L29M	L29M	29.13	52		P	04 41 35.5	+2.7
L29M				IAmb	IAmb	04 41 37.9	
	comp=Z,5.9nm,1.1s						
SONM	Songino Array	35.45	281	P	P	04 42 26.1	-2.4
	comp=Z,0.3nm,0.5s,baz=72,slow=9.5,SNR=5.7						
SONM				PcP	PcP	04 44 53.9	-3.9
	comp=Z,0.6nm,0.5s,baz=83,slow=4.5,SNR=4.4						
	comp=Z,0.3nm,0.5s						
H11N2	WAKE ISLAND Hy	36.45	175	T	T	05 21 26.8	
	baz=357,slow=76,SNR=140						
H11N3	WAKE ISLAND Hy	36.46	175	T	T	05 21 32.6	
	baz=357,slow=76,SNR=140						
H11N1	WAKE ISLAND Hy	36.47	175	T	T	05 21 34.1	
	baz=357,slow=76,SNR=126						
YKA	Yellowknife Ar	39.38	46	P	P	04 42 56.0	-5.3
	comp=Z,0.1nm,0.5s,baz=306,slow=8.7,SNR=5.9						
	comp=Z,0.1nm,0.5s						
SPITS	Spitsbergen Ar	44.46	351	P	P	04 43 40.0	-2.7
	comp=Z,7.9nm,1.1s,baz=130,slow=8.9,SNR=5.0						
	comp=Z,7.9nm,1.1s						
SPITS	Spitsbergen Ar	44.46	351	P	P	04 43 40.0	-2.7
BLKN	Baker Lake	45.27	37		P	04 43 51.9	+2.6
KURK	Kurchatov	48.04	302	P	P	04 44 11.8	+0.7
KURBB	Kurchatov Arra	48.14	302	P	P	04 44 11.8	-0.1
	comp=Z,0.6nm,0.2s,baz=45,slow=7.3,SNR=4.3						
	comp=Z,0.6nm,0.2s						
JTMT	Jette	48.24	64		P	04 44 15.8	+2.9
BMO	Blue Mountains	48.66	68	P	P	04 44 20.0	+3.9
BMO				IAmb	IAmb	04 44 21.6	
	comp=Z,4.0nm,1.2s						
MKAR	Makanchi Array	48.86	295	P	P	04 44 17.0	-0.6
	comp=Z,0.2nm,0.5s,baz=58,slow=7.3,SNR=3.7						
	comp=Z,0.2nm,0.5s						
BPMT	Black Pine Rid	49.55	64		P	04 44 26.8	+3.7
LYMT	Lyon Mountain	49.77	63	P	P	04 44 29.1	+4.4
BVAR	Borovoye Array	50.25	308	P	P	04 44 25.8	-2.2
	comp=Z,0.7nm,0.5s,baz=44,slow=7.0,SNR=9.6						
	comp=Z,0.7nm,0.5s						
BRVK	Borovoye	50.27	308	P	P	04 44 31.1	+3.0
BRVK	Borovoye	50.27	308	P	P	04 44 31.1	+3.0
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RLMT	Red Lodge	52.56	63		P	04 44 48.9	+3.2
LOHW	Long Hollow	52.97	65	P	P	04 44 52.9	+4.2
LOHW				IAmb	IAmb	04 44 54.7	
	comp=Z,3.3nm,1.1s						
PDAR	Pinedale Array	54.11	65		P	04 45 00.9	+3.8
PDAR	Pinedale Array	54.11	65	P	P	04 44 52.3	-4.8
	comp=Z,0.6nm,0.8s,baz=48,slow=2.2,SNR=4.6						
	comp=Z,0.6nm,0.8s						
SPR3	Spring Creek 3	54.37	72		P	04 45 03.3	+4.1
SPR3				IAmb	IAmb	04 45 06.8	
	comp=Z,2.8nm,1.0s						
ULM	Lac du Bonnet	55.09	50	P	P	04 44 58.6	-5.2
	comp=Z,1.1nm,0.6s,baz=139,slow=5.3,SNR=3.1						
	comp=Z,1.1nm,0.6s						
GWY	Greenwater Val	55.19	76	P	P	04 45 08.6	+3.6
GWY				IAmb	IAmb	04 45 10.3	
	comp=Z,2.6nm,0.9s						
CMAR	Chiang Mai Arr	60.99	260	P	P	04 45 43.6	-2.0
	comp=Z,0.6nm,0.3s,baz=22,slow=6.7,SNR=4.7						
	comp=Z,0.6nm,0.3s						
TXAR	Lajitas Array	67.42	71	P	P	04 46 24.2	-3.6
	comp=Z,0.7nm,0.8s,baz=294,slow=3.9,SNR=8.1						
	comp=Z,0.7nm,0.8s						
GERES	GERESS Array B	72.45	340	P	P	04 46 57.1	-1.3
	comp=Z,0.1nm,0.2s,baz=57,slow=8.1,SNR=3.7						
	comp=Z,0.1nm,0.2s						
BRTR	Keskin Array B	75.61	323	P	P	04 47 15.8	-1.4
	comp=Z,0.2nm,0.4s,baz=49,slow=5.6,SNR=4.8						
	comp=Z,0.2nm,0.4s						
WRA	Warramunga Arr	79.85	208	P	P	04 47 39.9	-0.7
	comp=Z,0.1nm,0.4s,baz=20,slow=5.5,SNR=6.6						
	comp=Z,0.1nm,0.4s						
ASAR	Alice Springs	83.52	208	P	P	04 47 59.4	-0.5
	comp=Z,0.2nm,0.6s,baz=16,slow=5.0,SNR=12						
	comp=Z,0.2nm,0.6s						
ESDC	Sonseca Array	83.97	351	P	P	04 48 00.9	-1.4
	comp=Z,0.1nm,0.3s,baz=12,slow=4.3,SNR=5.7						
	comp=Z,0.1nm,0.3s						
QSPA	South Pole Qui	145.92	180	PKPbc	PKPdf	04 55 09.3	-0.3
	comp=Z,3.4nm,0.9s,baz=218,slow=1.4,SNR=5.6						

*ISK **26** 04:36:56.9, 37°.09N×27°.65E, h13km, ML2.5/10*
*AFAD **26** 04:36:56.2, 37°.05N×27°.67E, h7km±2km, ML1.7*
ISC 26 04:36:56.9±0.9**, 37°.07N**±0°.03×**27°.65E**±0°.03**, h13**km±7km**,**
n17, σ0^{s}44/29**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.17	269	P	Pg	04 37 00.9	0.0
BDRM				S	Sg	04 37 03.4	-0.2
MLSB	Milas	0.25	24	Pg	Pg	04 37 02.2	0.0
MLSB				Sg	Sg	04 37 06.2	+0.4
BODT	Bodrum	0.27	268	Pg	Pg	04 37 02.7	0.0
BODT				Sg	Sb	04 37 07.7	-0.6
YKAV	Yalikavak-Bodr	0.30	281	Pg	Pg	04 37 03.3	+0.1
YKAV				Sg	Sb	04 37 08.2	-0.9
DATC	Datca-Mugla	0.31	179	Pg	Pb	04 37 04.0	-0.3
DATC				Sg	Sb	04 37 09.4	+0.1
DAT	Datca	0.34	190	Pg	Pb	04 37 04.7	-0.3
YAZI	Mula-Dat§a-	0.42	202	P	Pg	04 37 05.0	-0.3
YAZI				S	Sg	04 37 10.9	0.0
YAZI				*i* IAML		04 37 16.0	
	comp=E,58nm,0.4s						
DIDI	Didim-Aydin	0.45	313	Pg	Pg	04 37 05.2	-0.6
DDIM	Aydin, Didim	0.51	320	P	Pg	04 37 06.2	-0.8
DDIM				S	Sb	04 37 15.1	+0.1
TURN	Turunc	0.56	122	P	Pb	04 37 08.8	+0.3
TURN				S	Sb	04 37 16.2	-0.2
TURN				*i* IAML		04 37 21.0	
	comp=N,57nm,0.3s						
MULA	Mugla, Merkez-	0.57	71	P	Pg	04 37 07.0	-1.1
MULA				S	Sg	04 37 15.5	-0.1
MULA				*i* IAML		04 37 17.0	
	comp=E,58nm,0.2s						
MULA				*i* IAML		04 37 23.0	
	comp=N,46nm,0.6s						
GCAM	G?zelcaml?	0.71	332	Pg	Pg	04 37 10.7	-0.1
GCAM	G?zelcaml?	0.71	332	P	Pg	04 37 10.7	-0.1
GCAM				S	Sb	04 37 21.4	+0.5
AYDB	Zeytinkoy-Aydi	0.90	12	Pg	Pg	04 37 14.0	-0.3
ARG	Arkhangelos	0.93	156	Pg	Pn	04 37 16.2	+0.5
ARG				Sg	Sn	04 37 29.5	+0.5
SABU	Mula-Dalaman	1.08	103	P	Pn	04 37 18.1	+0.3
SABU				S	Sb	04 37 31.6	0.0
SABU				*i* IAML		04 37 40.0	
	comp=N,20nm,0.6s						
SABU				*i* IAML		04 37 41.0	
	comp=E,16nm,0.5s						
ODEM	Odemis-Izmir	1.25	15	Pn	Pb	04 37 20.3	-0.1

*IDC **26** 04:46:32.0±1.9, 55°.87N×164°.82E, h0km, mb3.3/3, mbtmp3.3/4, ML2.3/1, Error ellipse: s-maj=163.2km s-min=31.6km az=148.0*
*KRSC **26** 04:46:32.9±1.0, 55°.98N×164°.04E, h16km±23km, Ml3.7*
ISC 26 04:46:31.8±0.9**, 56°.16N**±0°.07×**164°.24E**±0°.05**, h10**km**, n26,**
σ1^{s}42/29**, mb3.4**/3**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.80	274	*e*P	Pg	04 46 46.1	-1.0
KBG	Krutoberegovo	0.86	277	*e*P	Pg	04 46 47.3	-1.2
BKI	Bering	1.37	134	*e*P	Pn	04 46 56.4	-0.6
BKI				*e*S	Sb	04 47 15.0	0.0
SMKR	Semkarok	1.60	287	*e*P	Pn	04 46 59.7	-0.5
BZGR	Bezymyannyi-Gr	2.00	265	*e*P	Pn	04 47 06.1	+0.3
KRSR	Krestovskiy	2.05	273	*e*P	Pn	04 47 05.7	-0.8
BZWR	Bezymyannyi-We	2.11	266	*e*P	Pn	04 47 07.4	+0.1
BZMR	Bezymyannaya	2.12	265	*e*P	Pn	04 47 08.0	+0.7
MKZ	Mys Kozlova	2.15	223	*e*P	Pn	04 47 07.1	-0.6
MKZ				*e*S	Sn	04 47 31.9	-2.5
KIRR	Kirishev	2.19	266	*e*P	Pn	04 47 09.1	+0.7
KIRR				*e*S	Sn	04 47 34.2	-1.6
KPT	Kopyto	2.26	267	*e*P	Pn	04 47 10.3	+1.0
KMNR	Kamenistaya	2.29	261	*e*P	Pn	04 47 11.6	+2.0
TUMD	Tumrok D	2.38	248	*e*P	Pn	04 47 12.2	+1.4
KOZ	Kozyrevsk	2.45	269	*e*P	Pn	04 47 12.9	+1.1
SRDR	Sredinnyy	2.53	275	*e*P	Pn	04 47 14.0	+1.1
SDLR	Sedlovina	4.24	229	*e*P	Pn	04 47 36.9	+0.4
SMAR	Somma	4.28	230	*e*P	Pn	04 47 38.0	+0.7
AVH	Avacha	4.31	230	*e*P	Pn	04 47 39.8	+2.3
GNL	Ganaly	4.39	238	*e*P	Pn	04 47 41.7	+3.1
PETK	Petropavlovsk-	4.88	234	Pn	Pn	04 47 48.0	+2.9
	0.6nm,0.3s,baz=77,slow=17,SNR=6.3						
	1.2nm,0.4s						
KRMR	Karymshinskiy	4.88	229	*e*S	Sn	04 48 40.8	-0.8
MTVR	Mutnovka	5.11	226	*e*P	Pn	04 47 49.9	+1.4
ASAK	Asacha	5.30	227	*e*P	Pn	04 47 52.1	+1.0
ILAR	Eielson Array	24.96	50	P	P	04 51 56.1	+1.1
	0.5nm,0.8s,baz=263,slow=7.5,SNR=7.1						
	0.5nm,0.8s						
PDAR	Pinedale Array	53.98	65	P	P	04 55 56.0	+0.1
	0.5nm,0.8s,baz=350,slow=4.5,SNR=4.3						
	0.5nm,0.8s						
TXAR	Lajitas Array	67.29	71	P	P	04 57 27.3	+0.6
	0.2nm,0.7s,baz=316,slow=5.2,SNR=3.5						
	0.2nm,0.7s						

*IDC **26** 04:49:57.0±0.5, 2°.63S×138°.58E, h0km, mb4.5/16, mbtmp4.5/20, ML4.4/4, MS4.3/6, Error ellipse: s-maj=14.2km s-min=12.4km az=67.0*
*MOS **26** 04:49:57.9±0.8, 2°.64S×138°.44E, h16km, mb4.9/21, Error ellipse: s-maj=13.0km s-min=7.9km az=101.5*
*NEIC **26** 04:49:58.7±1.2, 2°.66S±0°.09×138°.50E±0°.06, h10km±1km, mb5.0/123, Error ellipse: s-maj=14.7km s-min=11.0km az=179.0*
*DJA **26** 04:50:00.2±0.6, 3°S±3°×13°9E±°, h14km±5km, M4.8/23, mb4.7/23, mB5.5/6, MLv4.8/8, Mw(mB)4.9/6, MwMwp6.9/1, Mwp6.7/1*
ISC 26 04:49:58.7±0.3**, 2°.68S**±0°.04×**138°.52E**±0°.04**, h10**km**, n432,**
σ1^{s}02/405**, mb4.9**/105**, MS4.7**/7**, 5C-11D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.71	15	P	Pg	04 50 11.2	-1.4
GENI	Genyem	1.65	87	P	Pb	04 50 29.4	+0.1
GENI	Genyem	1.65	87	P	Pb	04 50 28.9	-0.4
JAY	Jayapura	2.19	86	Pn	Pn	04 50 35.1	-0.2
	49nm,0.3s,baz=240,slow=11,SNR=75						
JAY				Lg	Lg	04 51 05.1	
	38nm,0.3s,baz=281,slow=23,SNR=5.8						
JAY				LR	LR	04 51 22.3	
	comp=Z,2µm,21.8s,baz=116,slow=40						
	102nm,0.3s						
JAY	Jayapura	2.19	86	P	Pn	04 50 36.4	+1.1
SRPI	Serui, Papua	2.42	289	P	Pn	04 50 39.3	+0.9
BAKI	Biak	2.83	302	P	Pn	04 50 45.6	+1.5
RKPI	Ransiki, Papua	4.49	285	P	Pn	04 51 08.0	+1.1
FAKI	Fak Fak	6.27	268		Pn	04 51 31.3	-0.1
FAKI	Fak Fak	6.27	268	P	Pn	04 51 34.4	+3.0
FAKI	Fak Fak	6.27	268	P	Pn	04 51 33.6	+2.2
	0.3nm57nm,1.3s						
COEN	Coen	12.11	158		Pn	04 52 51.5	-0.1
COEN	Coen	12.11	158	P	Pn	04 52 53.1	+1.6
MTN	Manton Dam	12.46	216		Pn	04 52 56.9	+0.5
MTN	Manton Dam	12.46	216	P	Pn	04 52 59.4	+3.1
SOEI	Soe	15.81	243		Pn	04 53 40.8	-1.0
SOEI				IAmb	IAmb	04 53 51.8	
	comp=Z,125nm,1.3s						
SOEI	Soe	15.81	243	P	P	04 53 44.6	-1.0
LUWI	Luwuk	15.82	276	Pn	Pn	04 53 40.9	-0.9
LUWI				IAmb	IAmb	04 53 52.2	
	comp=Z,218nm,1.5s						
KNRA	Kununurra	16.10	216		Pn	04 53 42.4	-2.9
BATI	Baumata	16.54	242	Pn	P	04 53 53.0	-0.6
	comp=Z,3.6nm,0.3s,baz=272,slow=5.5,SNR=1.4						
	comp=Z,18nm,0.3s						
MRSI	Marisa	16.87	280	P	Pn	04 53 55.3	+0.1
	comp=Z,30nm,1.1s						
APSI	Ampana	16.95	276	P	P	04 53 57.8	-0.4
	comp=Z,1µmcomp=Z,107nm,1.5s						
MMRI	Maumere	17.24	249		Pn	04 53 53.4	-6.5
MMRI				IAmb	IAmb	04 53 59.8	
	comp=Z,83nm,0.5s						
GUMO	Guam	17.35	21	LR	LR	05 00 21.2	
	comp=Z,372nm,21.1s,baz=187,slow=36						
WB0	Warramunga Arr	17.45	193		Pn	04 53 60.0	-2.5
WB0				IAmb	IAmb	04 54 13.7	
	comp=Z,110nm,1.2s						
WR8	Warramunga Arr	17.61	193		Pn	04 54 02.5	-1.9
WR8				IAmb	IAmb	04 54 15.6	
	comp=Z,173nm,1.6s						
WRAB	Tennant Creek	17.62	193		Pn	04 54 03.6	-1.0
WRAB	Tennant Creek	17.62	193	*de*P	P	04 54 06.2	+0.6
WRAB				pmax	pmax		
	comp=Z,42nm,1.2s						
WRA	Warramunga Arr	17.63	193		Pn	04 54 01.6	-3.2
WRA	Warramunga Arr	17.63	193	P	Pn	04 54 03.8	-1.0
	comp=Z,1.2nm,0.3s,baz=19,slow=12,SNR=30						
WRA				S	S	04 57 25.8	-3.1
	comp=Z,15nm,1.1s,baz=20,slow=24,SNR=7.4						
WRA				LR	LR	05 00 44.5	
	comp=Z,1µm,20.7s,baz=152,slow=37						
	comp=Z,5.2nm,0.4s						
QIS	Mount Isa	17.80	177	P	P	04 54 08.4	+0.9
TOLI2	Tolitoli	18.13	282	P	Pn	04 54 10.5	-0.4
TTSI	Tana Toraja	18.68	268	P	P	04 54 17.1	-0.2
	comp=Z,1µmcomp=Z,41nm,1.3s						
MPSI	Mapaga	18.86	279	P	P	04 54 18.1	-1.1
FITZ	Fitzroy Crossi	19.85	219		P	04 54 29.5	-0.6
FITZ	Fitzroy Crossi	19.85	219	P	Pn	04 54 31.1	-0.6
	comp=Z,0.7nm,0.3s,baz=50,slow=13,SNR=13						
FITZ				S	Sn	04 58 17.1	+2.1
	comp=Z,12nm,0.9s,baz=214,slow=14,SNR=3.2						
	comp=Z,2.2nm,0.4s						
FITZ	Fitzroy Crossi	19.85	219	P	Pn	04 54 31.7	0.0
ASAR	Alice Springs	21.33	192	P	P	04 54 45.8	-0.3
ASAR	Alice Springs	21.33	192	P	P	04 54 46.1	0.0
	comp=Z,11nm,0.6s,baz=20,slow=10,SNR=45						
ASAR				S	S	04 58 46.7	+3.5
	comp=Z,3.3nm,1.0s,baz=13,slow=24,SNR=4.2						
	comp=Z,11nm,0.6s						
MYLDM	Lahad Datu	21.47	291	P	P	04 54 46.9	-0.8
MYLDM				IAmb	IAmb	04 55 02.7	
	comp=Z,58nm,1.3s						
TATA	Tatamba Isabel	21.92	106	P	P	04 54 53.8	+1.3
NGOA	Tingoa Renbel	23.10	113	P	P	04 55 06.4	+1.4
KKM	Kota Kinabalu	23.90	291	P	P	04 55 11.7	-1.4
KKM				IAmb	IAmb	04 55 15.7	
	comp=Z,104nm,1.7s						
EIDS	Eidsvold	25.59	153	P	P	04 55 27.5	-0.8
EIDS				IAmb	IAmb	04 55 44.3	
	comp=Z,21nm,0.9s						
EIDS	Eidsvold	25.59	153	P	P	04 55 30.0	+1.7
MBWA	Marble Bar	25.92	223	P	P	04 55 30.4	-1.0
PSA00	Pilbara Seismi	26.12	223	P	P	04 55 31.8	-1.4
PSA00				IAmb	IAmb	04 55 39.5	
	comp=Z,63nm,1.7s						
PSA00	Pilbara Seismi	26.12	223	P	P	04 55 32.4	-0.8
PSA00				IAmb	IAmb	04 55 42.3	
	comp=Z,36nm,1.9s						
KSM	Kuching	28.50	278	P	P	04 55 53.3	-1.3
STKA	Stephens Creek	29.18	175	P	P	04 56 00.8	+0.4
	comp=Z,0.8nm,0.3s,baz=352,slow=14,SNR=3.2						
STKA				LR	LR	05 08 57.4	
	comp=Z,2µm,18.2s,baz=62,slow=39						
	comp=Z,0.8nm,0.3s						
JOW	Kunigami	30.97	342	LR	LR	05 06 16.8	
	comp=Z,616nm,19.6s,baz=119,slow=32						
MDSI	Maura Dua	34.32	266	P	P	04 56 46.7	+0.8
	comp=Z,19nm,1.1s						
LWLI	Liwa	34.46	265	P	P	04 56 48.8	+1.6
NWAO	Narrogin (SRO)	36.10	211	LR	LR	05 12 20.6	
	comp=Z,480nm,20.5s,baz=40,slow=37						
JNU	Nakatsue	36.34	349	P	P	04 57 01.4	-1.6
	comp=Z,14nm,1.0s,baz=193,slow=2.8,SNR=4.8						
	comp=Z,14nm,1.0s						
NJ2	Nanjing	39.27	333	*e*P	P	04 57 30.8	+3.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
RPSI	Rantau Prapat	39.94	277	P	P	04 57 32.4	-1.3
RPSI				IAmb	IAmb	04 57 34.6	
	comp=Z,34nm,1.2s						
PSI	Prapat	39.95	278	P	P	04 57 32.4	-1.5
PSI				pmax	pmax		
	comp=Z,34nm,1.2s						
JSD	Sado	40.52	360	P	P	04 57 36.3	-1.8
KSRS	Korea Array	41.13	347	P	P	04 57 42.2	-0.8
	comp=Z,2.5nm,0.9s,baz=171,slow=10,SNR=10						
	comp=Z,2.5nm,0.9s						
SLVN	Son La	41.44	307		P	04 57 44.2	-1.8
CMAR	Chiang Mai Arr	44.26	300	P	P	04 58 09.8	+0.9
	comp=Z,1.8nm,0.6s,baz=120,slow=6.4,SNR=17						
	comp=Z,1.8nm,0.6s						
KMI	Kunming	44.36	311	P	P	04 58 11.0	+1.2
KMI				pmax	pmax		
	comp=Z,15nm,1.2s						
LYN	LuoYang	44.40	329	*e*P	P	04 58 11.3	+1.6
LYN				pmax	pmax		
	comp=Z,33nm,0.9s						
HNS	HongShan	45.60	333	⇑P	P	04 58 20.0	+0.8
HNS				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PZH	PanZhiHua	45.87	312	P	P	04 58 27.3	+5.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.3s						
XAN	Xi'an	45.95	325	⇑P	P	04 58 22.0	-0.1
XAN				pmax	pmax		
	comp=Z,31nm,1.3s						
BJI	Beijing	47.20	337	P	P	04 58 32.3	+0.6
BJI				pP	sP	04 58 42.5	+6.1
BJI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BJI				pmax	pmax		
	comp=Z,150nm,9.9s						
BJI				LR	LR		
	comp=N,150nm,19.7s						
BJI				LR	LR		
	comp=E,200nm,18.7s						
BJI				LR	LR		
	comp=Z,320nm,22.3s						
MDJ	Mudanjiang	47.76	351	P	P	04 58 37.5	+1.4
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BNX	BinXian	49.21	350	⇓P	P	04 58 47.5	+0.3
BNX				pmax	pmax		
	comp=Z,10.0nm,1.4s						
HHC	Hu-ho-hao-te	49.82	333	*e*P	P	04 58 55.5	+3.4
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,50nm,5.0s						
TUWZ	Tuamarina	50.00	145	P	P	04 58 53.5	+0.2
TCW	Tory Channel	50.05	145	P	P	04 58 53.9	+0.2
LZH	Lanzhou	50.35	323	*e*P	P	04 58 55.5	-0.8
LZH				sP	sP	04 59 14.8	+14
LZH				pmax	pmax		
	comp=Z,38nm,1.7s						
LZH				LR	LR		
	comp=N,1µm,18.2s						
LZH				LR	LR		
	comp=E,1µm,15.1s						
LZH				LR	LR		
	comp=Z,1µm,15.1s						
MRZ	Mangatainoka R	50.46	144		P	04 58 56.3	-0.6
MRZ				IAmb	IAmb	04 58 59.8	
	comp=Z,24nm,1.1s						
KLR	Kul'dur	52.04	354	P	P	04 59 09.0	+0.5
	comp=Z,1.6nm,0.6s,baz=152,slow=12,SNR=4.4						
	comp=Z,1.6nm,0.6s						
KLR	Kul'dur	52.04	354	⇑*e*P	P	04 59 09.8	+1.3
KLR				pmax	pmax		
	comp=Z,11nm,1.8s						
HEH	HeiHe	53.59	351	*e*P	P	04 59 20.5	+0.6
GTA	Gaotai	54.94	324	*e*P	P	04 59 31.0	+0.8
GTA				pP	sP	04 59 44.3	+10
GTA				pmax	pmax		
	comp=Z,12nm,1.2s						
GTA				LR	LR		
	comp=N,480nm,19.9s						
GTA				LR	LR		
	comp=E,440nm,18.7s						
GTA				LR	LR		
	comp=Z,620nm,18.7s						
ZEA	Zeya	57.01	352	*e*P	P	04 59 43.9	-0.6
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ULN	Ulaanbaatar	57.36	335		P	04 59 46.1	-1.3
ULN				IAmb	IAmb	04 59 49.2	
	comp=Z,11nm,0.6s						
ULN	Ulaanbaatar	57.36	335	*de*P	P	04 59 48.7	+1.3
ULN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SONM	Songino Array	57.62	335	P	P	04 59 48.8	-0.3
SONM	Songino Array	57.62	335	P	P	04 59 48.6	-0.6
	comp=Z,1.9nm,0.8s,baz=152,slow=6.6,SNR=7.2						
	comp=Z,1.9nm,0.8s						
SONM	Songino Array	57.62	335	P	P	04 59 48.8	-0.3
SONM				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ZAK	Zakamensk	60.88	335	*e*P	P	05 00 11.3	-0.4
ZAK				pmax	pmax		
	comp=Z,11nm,1.4s						
HYB	Hyderabad	62.39	291	*e*P	P	05 00 21.9	-0.5
MOY	Mondy	62.81	335	*e*P	P	05 00 25.4	+0.8
MOY				pmax	pmax		
	comp=Z,15nm,2.2s						
MA2	Magadan	62.82	7	*de*P	P	05 00 24.8	+0.4
MA2				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WMQ	Urumqi	64.87	322	*e*P	P	05 00 40.0	+1.6
WMQ				pmax	pmax		
	comp=Z,25nm,0.9s						
YAK	Yakutsk	64.89	355	P	P	05 00 38.0	+0.1
	comp=Z,21nm,0.4s,baz=209,slow=2.1,SNR=7.3						
	comp=Z,21nm,0.4s						
YAK	Yakutsk	64.89	355	*e*P	P	05 00 37.6	-0.4
YAK				*e**PP	sP	05 00 44.0	+1.3
YAK				*e*		05 01 09.9	
YAK				*e*		05 02 59.8	
YAK				*e*PPP	PPP	05 04 32.3	
YAK				*e*S	S	05 09 17.5	-1.7
YAK				*e**SS	sS	05 09 34.8	+10
YAK				*e*		05 10 29.9	
YAK				*e*SS	SS	05 13 31.3	+0.4
YAK				pmax	pmax		
	comp=Z,43nm,1.1s						
YAK				pmax	pmax		
	comp=N,20nm,1.5s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,300nm,7.7s						
YAK				pmax	pmax		
	comp=N,154nm,4.4s						
YAK				pmax	pmax		
	comp=E,106nm,3.8s						
YAK				smax	smax		
	comp=N,133nm,4.4s						
YAK				smax	smax		
	comp=E,107nm,3.5s						
YAK				MLR	MLR		
	comp=Z,796nm,21.0s						
YAK				MLR	MLR		

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       comp=N,416nm,17.0s
YAK                                      MLR      MLR
       comp=E,431nm,18.0s
SEY    Seymchan          66.28   7⇓eP    P        05 00 47.8 +0.9
SEY                                      pmax     pmax
       comp=Z,15nm,2.3s
CASY   Casey             66.46 192       P        P        05 00 48.3 +0.2
CASY                                     IAmb     IAmb     05 00 55.8
       comp=Z,17nm,1.6s
MK31   Makanchi Array    69.65 322c iP   P        05 01 08.4  -0.2
MKAR   Makanchi Array    69.65 322                P        05 01 07.6  -1.0
MKAR   Makanchi Array    69.65 322       P        P        05 01 08.9 +0.3
       comp=Z,8.9nm,1.0s,baz=116,slow=7.2,SNR=45
       comp=Z,8.9nm,1.0s
MAKZ   Makanchi          69.85 322                P        05 01 08.2  -1.6
MAKZ   Makanchi          69.85 322       P        P        05 01 08.2  -1.6
MAKZ                                     pmax     pmax
       comp=Z,23nm,1.2s
TARG   Taragay, Kyrgy    70.43 316       P        P        05 01 13.2  -0.8
TARG   Taragay, Kyrgy    70.43 316       P        P        05 01 13.2  -0.8
TARG                                     pmax     pmax
       comp=Z,8.0nm,1.1s
ZALV   Zalesovo Beam     71.82 330                P        05 01 19.8  -1.8
ZALV   Zalesovo Beam     71.82 330       P        P        05 01 20.7  -0.9
       comp=Z,0.8nm,0.3s,baz=343,slow=4.6,SNR=4.6
       comp=Z,0.8nm,0.3s
BOOM   Boomskoye usch    72.00 316       P        P        05 01 22.2  -0.9
BOOM   Boomskoye usch    72.00 316       P        P        05 01 22.3  -0.9
BOOM                                     pmax     pmax
       comp=Z,9.0nm,1.1s
UNV    Unalaska Valle    72.41  31       P        P        05 01 25.4 +0.3
       baz=239
AAK    Ala-Archa         73.06 316deP    P        05 01 30.2 +0.8
AAK                                      pmax     pmax
       comp=Z,6.0nm,1.3s
BILL   Bilibino          73.18  11⇓eP    P        05 01 29.5 +0.1
BILL                                     pmax     pmax
       comp=Z,5.0nm,1.7s
KURK   Kurchatov         73.59 325                P        05 01 31.1  -1.0
KURK   Kurchatov         73.59 325       P        P        05 01 31.9  -0.2
KURBB  Kurchatov Arra    73.60 325       P        P        05 01 31.9  -0.3
       comp=Z,1.9nm,0.7s,baz=122,slow=5.2,SNR=15
       comp=Z,1.9nm,0.7s
ARSB   Arslanbob         73.68 314       P        P        05 01 32.2  -0.9
ARSB   Arslanbob         73.68 314       P        P        05 01 32.2  -0.9
ARSB                                     pmax     pmax
       comp=Z,7.0nm,0.8s
TIXI   Tiksi             74.47 357                P        05 01 35.7  -1.1
TIXI   Tiksi             74.47 357⇓eP    P        05 01 35.8  -1.1
TIXI                                     pmax     pmax
       comp=Z,13nm,1.7s
S12K   Black Hills       75.56  30       P        P        05 01 44.8 +1.2
       baz=243
VNDA   Vanda             75.82 175       P        P        05 01 44.6  -0.1
VNDA                                     IAmb     IAmb     05 01 48.7
       comp=Z,15nm,1.6s
VNDA   Vanda             75.82 175       P        P        05 01 45.2 +0.6
       comp=Z,1.7nm,0.6s,baz=325,slow=6.8,SNR=9.5
       comp=Z,1.7nm,0.6s
SIMJ   Simiganj          75.83 311       P        P        05 01 44.1  -1.5
SIMJ                                     IAmb     IAmb     05 02 00.2
       comp=Z,8.8nm,0.9s
KKAR   Karatay Array     75.98 316       P        P        05 01 45.7  -0.5
KKAR   Karatay Array     75.98 316       P        P        05 01 45.5  -0.8
KKAR   Karatay Array     75.98 316       P        P        05 01 45.7  -0.5
KKAR                                     pmax     pmax
       comp=Z,4.0nm,1.1s
SDPT   Sand Point        76.21  31       P        P        05 01 48.4 +1.2
       baz=244
S14K   Fog Glacier       77.08  30       P        P        05 01 53.0 +0.7
       baz=245
M13K   Dall Lake         77.21  26       P        P        05 01 54.2 +1.4
       baz=240
K13K   Kusilvak Mount    77.44  24       P        P        05 01 55.0 +1.0
       baz=239
O14K   Tigyukauivet M    77.58  27       P        P        05 01 54.7  -0.2
L14K   Kuka Creek        77.95  25       P        P        05 01 57.5 +0.6
L14K   Kuka Creek        77.95  25       P        P        05 01 57.8 +1.0
       baz=241
M14K   Bethel            77.98  26       P        P        05 01 57.8 +0.8
M14K   Bethel            77.98  26       P        P        05 01 57.7 +0.8
       baz=242
TNA    Tin City          78.19  20       P        P        05 01 59.8 +1.7
       baz=235
O15K   Ungalikthiuk R    78.21  28       P        P        05 01 59.1 +0.8
       baz=244
M15K   Kasigluk River    78.50  26       P        P        05 02 00.9 +0.9
       baz=243
N15K   Kwethluk River    78.53  27       P        P        05 02 01.2 +1.1
       baz=244
ANM    Nome              78.55  21       P        P        05 02 01.4 +1.3
       baz=238
L15K   Ungalak Mounta    78.62  25       P        P        05 02 00.8 +0.2
       baz=242
F14K   Arctic Creek      78.70  20       P        P        05 02 01.8 +0.9
       baz=237
K15K   Wolf Creek Mou    78.89  24       P        P        05 02 03.0 +0.9
K15K   Wolf Creek Mou    78.89  24       P        P        05 02 03.3 +1.2
       baz=242
CHIR   Chirikof Islan    78.92  32       P        P        05 02 03.5 +1.1
       baz=248
P16K   Nushagak River    79.00  28       P        P        05 02 03.9 +1.2
       baz=246
BVAR   Borovoye Array    79.18 325       P        P        05 02 03.4  -0.5
       comp=Z,2.3nm,0.4s,baz=111,slow=6.5,SNR=15
       comp=Z,2.3nm,0.4s
O16K   Kokwok River B    79.19  28       P        P        05 02 04.7 +1.0
       baz=245
BRVK   Borovoye          79.25 325       P        P        05 02 03.9  -0.4
BRVK   Borovoye          79.25 325       P        P        05 02 03.9  -0.4
BRVK                                     pmax     pmax
       comp=Z,9.0nm,1.1s
N16K   Nishlik Lake      79.25  27       P        P        05 02 05.1 +0.9
       baz=245
G15K   Niukluk           79.26  21       P        P        05 02 04.9 +0.8
       baz=239
M16K   Timber Creek      79.41  26       P        P        05 02 04.3  -0.6
M16K                                     IAmb     IAmb     05 02 15.2
       comp=Z,21nm,1.2s
M16K   Timber Creek      79.41  26       P        P        05 02 05.9 +0.9
       baz=244
F15K   North Star Dit    79.41  21       P        P        05 02 06.0 +1.2
       baz=238
L16K   Owhat River       79.49  25       P        P        05 02 06.1 +0.8
       baz=244
Q16K   King Salmon       79.50  29       P        P        05 02 05.7 +0.3
       baz=247
Q17K   Contact Creek     79.71  29       P        P        05 02 06.8 +0.1
       baz=248
O17K   Koliganek Bris    79.72  28       P        P        05 02 07.6 +0.9
       baz=246
J16K   Anvik River       79.73  24       P        P        05 02 07.8 +1.1
       baz=242
H16K   Elim              79.74  22       P        P        05 02 07.7 +1.0
       baz=241
P17K   Kvichak River     79.80  28       P        P        05 02 08.0 +0.9
       baz=247
SII    Sitkinak Islan    79.94  31       P        P        05 02 08.7 +0.8
       baz=249
ACHA   Angle Creek He    79.96  29       P        P        05 02 08.1   0.0
I17K   Unalakleet        79.98  23       P        P        05 02 08.3 +0.3
       baz=242
N17K   Nushagak Hills    79.99  27       P        P        05 02 08.8 +0.7
N17K                                     IAmb     IAmb     05 02 18.8
       comp=Z,19nm,1.4s
N17K   Nushagak Hills    79.99  27       P        P        05 02 09.0 +0.9
       baz=246
G16K   Koyuk River       80.07  21       P        P        05 02 08.7 +0.2
       baz=241
R18K   Karluk            80.16  30       P        P        05 02 09.3 +0.2
       baz=249
L17K   Donlin            80.17  25       P        P        05 02 09.6 +0.5
       baz=245
M17K   Holitna River     80.23  26       P        P        05 02 10.7 +1.3
M17K                                     IAmb     IAmb     05 02 20.2
       comp=Z,25nm,1.2s
M17K   Holitna River     80.23  26       P        P        05 02 10.3 +0.9
       baz=246
Q18K   Katmai Hardscr    80.28  29       P        P        05 02 09.8  -0.1
       baz=248
J17K   VABM Dome         80.40  24       P        P        05 02 10.2  -0.1
       baz=244
K17K   Iditarod          80.42  25                P        05 02 09.5  -0.9
K17K                                     IAmb     IAmb     05 02 19.2
       comp=Z,30nm,1.4s
K17K   Iditarod          80.42  25       P        P        05 02 10.4   0.0
       baz=245
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P18K   Big Mountain,     80.45  28       P        P        05 02 10.8 +0.1
       baz=248
C16K   Lisburne Hills    80.56  18       P        P        05 02 11.5 +0.5
       baz=237
OHAK   Old Harbor        80.63  31       P        P        05 02 11.4  -0.2
       baz=250
O18K   Koktuh Hills      80.64  28       P        P        05 02 11.1  -0.5
       baz=248
N18K   Kilae Creek       80.64  27                P        05 02 11.9 +0.3
N18K                                     IAmb     IAmb     05 02 13.8
       comp=Z,13nm,1.1s
N18K   Kilae Creek       80.64  27       P        P        05 02 11.7 +0.1
       baz=247
G17K   Kiwalik Mounta    80.75  22       P        P        05 02 12.2 +0.1
       baz=242
H17K   Granite Mounta    80.76  22       P        P        05 02 12.7 +0.5
       baz=243
L18K   Granite Mounta    80.89  25       P        P        05 02 12.7  -0.2
       baz=246
D17K   Noatak River      80.98  19       P        P        05 02 13.1  -0.1
       baz=240
F17K   Baldwin Pennin    80.98  21       P        P        05 02 13.5 +0.2
       baz=241
M18K   Stony River       80.98  26       P        P        05 02 14.1 +0.7
       baz=247
Q19K   Cape Douglas,     81.04  29       P        P        05 02 13.8   0.0
       baz=250
E17K   Hotham Inlet      81.09  20       P        P        05 02 13.9   0.0
       baz=241
KDAK   Kodiak Island     81.18  30       P        P        05 02 14.8 +0.2
KDAK   Kodiak Island     81.18  30deP    P        05 02 15.4 +0.9
KDAK                                     pmax     pmax
       comp=Z,11nm,0.9s
KDAK   Kodiak Island     81.18  30       P        P        05 02 15.1 +0.6
       baz=251
O19K   Port Alsworth     81.18  28       P        P        05 02 14.2  -0.2
       baz=249
RDOG   Red Dog Mine      81.22  19       P        P        05 02 15.2 +0.6
       baz=240
N19K   Bonanza Creek     81.33  27                P        05 02 14.6  -0.8
N19K                                     IAmb     IAmb     05 02 25.0
       comp=Z,24nm,1.2s
N19K   Bonanza Creek     81.33  27       P        P        05 02 15.8 +0.4
       baz=248
C17K   DeLong Mountai    81.35  19       P        P        05 02 15.6 +0.4
       baz=239
P19K   Oil Pt            81.50  28       P        P        05 02 16.1  -0.1
       baz=250
Q20K   Shuyak Island     81.55  30       P        P        05 02 16.6 +0.1
       baz=251
F18K   Selawik           81.62  21       P        P        05 02 17.0 +0.3
       baz=243
L19K   White Mountain    81.67  26       P        P        05 02 16.9  -0.3
L19K                                     IAmb     IAmb     05 02 18.9
       comp=Z,9.6nm,0.9s
L19K   White Mountain    81.67  26       P        P        05 02 17.8 +0.7
       baz=248
E18K   Tukpahlearik C    81.67  20                P        05 02 16.4  -0.5
E18K                                     IAmb     IAmb     05 02 27.2
       comp=Z,13nm,1.3s
E18K   Tukpahlearik C    81.67  20       P        P        05 02 17.6 +0.6
       baz=242
M19K   Big River Lodg    81.77  26       P        P        05 02 17.8 +0.2
M19K                                     IAmb     IAmb     05 02 28.1
       comp=Z,15nm,1.3s
M19K   Big River Lodg    81.77  26       P        P        05 02 18.5 +0.8
       baz=248
J19K   Poorman           82.05  24                P        05 02 18.7  -0.3
J19K                                     IAmb     IAmb     05 02 28.5
       comp=Z,14nm,1.3s
J19K   Poorman           82.05  24       P        P        05 02 19.9 +0.9
       baz=247
C18K   Utukok River      82.06  19       P        P        05 02 19.6 +0.5
       baz=241
MAW    Mawson            82.08 202       P        P        05 02 19.0  -0.1
       comp=Z,5.6nm,1.0s,baz=39,slow=9.3,SNR=4.5
       comp=Z,5.6nm,1.0s
MAW    Mawson            82.08 202       P        P        05 02 19.0  -0.1
L20K   Farewell, AK      82.20  26       P        P        05 02 20.3 +0.3
       baz=249
B18K   Kokolik River     82.22  18       P        P        05 02 20.6 +0.7
       baz=241
HOM    Homer             82.26  29       P        P        05 02 20.7 +0.6
       baz=251
M20K   Styx River        82.32  26       P        P        05 02 19.9  -0.7
M20K                                     IAmb     IAmb     05 02 30.7
       comp=Z,23nm,1.3s
M20K   Styx River        82.32  26       P        P        05 02 21.0 +0.4
       baz=250
H19K   Roundabout Mou    82.34  22                P        05 02 20.1  -0.4
H19K   Roundabout Mou    82.34  22       P        P        05 02 21.3 +0.8
       baz=246
G19K   Purcell Mounta    82.35  22                P        05 02 19.6  -1.0
G19K                                     IAmb     IAmb     05 02 28.1
       comp=Z,9.3nm,1.0s
G19K   Purcell Mounta    82.35  22       P        P        05 02 21.4 +0.8
       baz=245
F19K   Shaleruckik Mo    82.39  21       P        P        05 02 21.0 +0.3
       baz=245
CNPM   China Poot        82.41  29       P        P        05 02 20.6  -0.4
K20K   Telida            82.44  25                P        05 02 20.1  -1.0
K20K                                     IAmb     IAmb     05 02 30.9
       comp=Z,14nm,1.3s
K20K   Telida            82.44  25       P        P        05 02 21.4 +0.2
       baz=248
N20K   Mount Spurr       82.50  27       P        P        05 02 21.8 +0.2
       baz=250
J20K   Nowinta River     82.72  24                P        05 02 22.2  -0.3
J20K                                     IAmb     IAmb     05 02 32.9
       comp=Z,14nm,1.3s
J20K   Nowinta River     82.72  24       P        P        05 02 22.8 +0.3
       baz=248
C19K   Lookout Ridge     82.80  19       IAmb     IAmb     05 02 24.4
       comp=Z,8.1nm,0.9s
C19K   Lookout Ridge     82.80  19       P        P        05 02 22.7  -0.2
       baz=243
I20K   Naaghedeneel      82.81  23       P        P        05 02 23.4 +0.4
       baz=248
E19K   Redstone River    82.85  20       P        P        05 02 22.6  -0.6
E19K                                     IAmb     IAmb     05 02 33.8
       comp=Z,10nm,1.1s
E19K   Redstone River    82.85  20       P        P        05 02 23.4 +0.2
       baz=245,SNR=8.6
A19K   Wainwright        82.86  17       P        P        05 02 23.7 +0.6
       baz=241
H20K   Anotleneega Mo    82.92  23       P        P        05 02 24.0 +0.4
       baz=248
D19K   Kuna River        83.00  19                P        05 02 24.2 +0.2
D19K                                     IAmb     IAmb     05 02 33.9
       comp=Z,7.8nm,1.0s
D19K   Kuna River        83.00  19       P        P        05 02 24.6 +0.6
       baz=244
SKT    Skwentna          83.06  27       IAmb     IAmb     05 02 31.6
       comp=Z,10nm,1.4s
SKT    Skwentna          83.06  27       P        P        05 02 23.9  -0.5
       baz=251
PPLA   Purkeypile        83.08  26       P        P        05 02 24.9 +0.3
       baz=250
SLKM   Skilak Lake       83.20  28       P        P        05 02 24.3  -0.8
F20K   Avaraart Lake     83.22  21       IAmb     IAmb     05 02 36.4
       comp=Z,7.6nm,1.1s
F20K   Avaraart Lake     83.22  21       P        P        05 02 25.7 +0.7
       baz=247
SUA    Susitna One       83.25  27       P        P        05 02 24.8  -0.8
       baz=252
CAST   Castle Rocks      83.30  25       IAmb     IAmb     05 02 35.1
       comp=Z,11nm,1.3s
CAST   Castle Rocks      83.30  25       P        P        05 02 26.0 +0.4
       baz=250
CHUM   Lake Minchumin    83.36  25       P        P        05 02 25.4  -0.4
       baz=250
SEW    Seward            83.45  29       P        P        05 02 26.1  -0.2
       baz=253
E20K   Nigu River        83.55  20       P        P        05 02 26.6  -0.2
       baz=246,SNR=6.5
D20K   Etivluk River     83.59  19       IAmb     IAmb     05 02 29.7
       comp=Z,19nm,1.4s
D20K   Etivluk River     83.59  19       P        P        05 02 26.9  -0.1
       baz=246,SNR=5.2
RC01   Rabbit Creek A    83.60  28       P        P        05 02 27.4 +0.3
       baz=253
M22K   Willow            83.63  27       P        P        05 02 27.7 +0.5
       baz=252
H21K   Melozitna Rive    83.79  23       IAmb     IAmb     05 02 36.1
       comp=Z,12nm,1.6s
H21K   Melozitna Rive    83.79  23       P        P        05 02 28.5 +0.4
       baz=249
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G21K   Allakaket         83.83  22       P        P        05 02 28.7 +0.5
       baz=249
KTH    Kantishna Hill    83.84  25       IAmb     IAmb     05 02 37.4
       comp=Z,16nm,1.2s
I21K   Tanana            83.94  23       P        P        05 02 28.8   0.0
       baz=250
B20K   Meade River       83.96  18       P        P        05 02 28.8   0.0
       baz=245
BPAW   Bear Paw Mtn.     83.99  25       P        P        05 02 29.1  -0.1
       baz=251
PMR    Palmer            84.03  27       IAmb     IAmb     05 02 37.5
       comp=Z,13nm,1.1s
PMR    Palmer            84.03  27       P        P        05 02 28.8  -0.5
       baz=253
TRF    Thorofare Moun    84.08  25       P        P        05 02 29.0  -0.7
       baz=252
F21K   Alatna River      84.09  21       P        P        05 02 29.6   0.0
       baz=249
PWL    Port Wells        84.19  28       P        P        05 02 30.4 +0.2
       baz=254
KNK    Knik Glacier      84.29  28       P        P        05 02 30.9 +0.2
       baz=254
E21K   Killik River      84.38  20       P        P        05 02 31.1 +0.1
       baz=248
C21K   Knifeblade Rid    84.38  19       P        P        05 02 31.6 +0.6
       baz=247
MLY    Manley            84.39  24                P        05 02 30.9  -0.2
MLY                                      IAmb     IAmb     05 02 41.0
       comp=Z,9.3nm,1.2s
MLY    Manley            84.39  24       P        P        05 02 31.9 +0.7
       baz=251
P23K   Montague Islan    84.40  29                P        05 02 30.2  -1.0
P23K   Montague Islan    84.40  29       P        P        05 02 31.6 +0.4
       baz=255
H22K   Ishtalitna Cre    84.42  23       P        P        05 02 30.9  -0.4
       baz=251
AB31   Akbulak array     84.58 320       P        P        05 02 30.9  -1.5
ABKAR  Akbulak array     84.58 320       P        P        05 02 31.6  -0.8
ABKAR  Akbulak array     84.58 320                P        05 02 31.3  -1.1
B21K   Ikpikpuk River    84.61  19       P        P        05 02 32.9 +0.8
       baz=247
WAT1   Susitna Watana    84.65  26       P        P        05 02 32.4  -0.1
       baz=254
F22K   John River        84.67  21       P        P        05 02 33.3 +0.8
       baz=250
A21K   Barrow            84.68  17       P        P        05 02 33.1 +0.7
       baz=245
G22K   Bettles           84.72  22       P        P        05 02 33.6 +0.9
       baz=250
M23K   Glacier View      84.73  27       P        P        05 02 33.5 +0.6
       baz=254
MCK    McKinley          84.74  25                P        05 02 31.5  -1.4
MCK    McKinley          84.74  25       P        P        05 02 31.5  -1.4
MCK                                      pmax     pmax
       comp=Z,22nm,1.4s
MCK    McKinley          84.74  25       P        P        05 02 32.5  -0.5
       baz=253
Q23K   Middleton Isla    84.78  30       P        P        05 02 33.0  -0.1
       baz=256
GLI    Glacier Island    84.78  28       P        P        05 02 32.5  -0.7
GLI                                      IAmb     IAmb     05 02 41.7
       comp=Z,16nm,1.2s
GLI    Glacier Island    84.78  28       P        P        05 02 33.6 +0.4
       baz=255
SCM    Sheep Creek Mo    84.92  27       P        P        05 02 34.0   0.0
       baz=255
NEA2   Nenana            84.94  24       IAmb     IAmb     05 02 43.9
       comp=Z,10nm,1.2s
NEA2   Nenana            84.94  24       P        P        05 02 34.3 +0.4
       baz=253
WAT6   Susitna Watana    84.94  26       P        P        05 02 34.3 +0.1
       baz=254
D22K   Ayikyak River     84.97  20       P        P        05 02 34.2 +0.2
       baz=249
I23K   Minto, Yukon-K    84.98  24       IAmb     IAmb     05 02 43.7
       comp=Z,12nm,1.2s
I23K   Minto, Yukon-K    84.98  24       P        P        05 02 34.7 +0.6
       baz=253,SNR=7.3
E22K   Anaktuvuk Pass    85.02  21       IAmb     IAmb     05 02 36.2
       comp=Z,9.6nm,1.1s
E22K   Anaktuvuk Pass    85.02  21       P        P        05 02 34.9 +0.6
       baz=250,SNR=8.8
H23K   Yukon River       85.11  23       P        P        05 02 34.7  -0.1
       baz=252
G23K   Bananza Creek     85.20  22       IAmb     IAmb     05 02 45.6
       comp=Z,7.9nm,1.2s
G23K   Bananza Creek     85.20  22       P        P        05 02 36.0 +0.8
       baz=252
DHY    Denali Highway    85.23  26       IAmb     IAmb     05 02 44.2
       comp=Z,12nm,1.1s
DHY    Denali Highway    85.23  26       P        P        05 02 36.0 +0.4
       baz=255
B22K   Teshekpuk Lake    85.27  18       P        P        05 02 36.1 +0.7
       baz=248
COLD   Coldfoot          85.30  22       P        P        05 02 36.5 +0.9
       baz=252
WRH    Wood River Hil    85.31  25       IAmb     IAmb     05 02 44.2
       comp=Z,17nm,1.2s
EYAK   Cordova Ski Ar    85.34  29       P        P        05 02 36.5 +0.6
       baz=256
CCB    Clear Creek Bu    85.47  24       IAmb     IAmb     05 02 44.9
       comp=Z,20nm,1.5s
KLU    Klutina           85.48  28       IAmb     IAmb     05 02 46.4
       comp=Z,21nm,1.6s
KLU    Klutina           85.48  28       P        P        05 02 37.2 +0.4
       baz=256
COLA   College           85.52  24d iP   P        05 02 36.2  -0.5
COLA                                     pmax     pmax
       comp=Z,4.0nm,0.9s
COLA   College           85.52  24       P        P        05 02 37.0 +0.3
       baz=254
M24K   Tolsona, Glenn    85.52  27       P        P        05 02 36.6  -0.3
       baz=256
D23K   Nanushuk River    85.69  20       P        P        05 02 38.1 +0.5
       baz=251,SNR=9.4
POKR   Poker Plat Res    85.75  24       P        P        05 02 39.1 +1.1
       baz=254
HDA    Harding Lake      85.77  25       P        P        05 02 38.0   0.0
       baz=255,SNR=5.2
E23K   Chandalar         85.77  21       P        P        05 02 38.5 +0.4
       baz=252,SNR=12
H24K   Noodor Dome       85.77  23       P        P        05 02 37.9  -0.2
       baz=254
KAIM   Kayak Island      85.84  29       P        P        05 02 39.2 +0.7
       baz=258
ILAR   Eielson Array     85.89  24       P        P        05 02 37.0  -1.6
ILAR   Eielson Array     85.89  24       P        P        05 02 37.4  -1.3
       comp=Z,3.3nm,0.7s,baz=265,slow=4.2,SNR=34
       comp=Z,3.3nm,0.7s
TOLK   Toolik Lake Re    85.97  20       P        P        05 02 39.3 +0.3
       baz=252,SNR=5.7
BMRM   Bremner River     85.98  28       P        P        05 02 39.2   0.0
       baz=257
C23K   Itkillik River    85.99  19       P        P        05 02 39.3 +0.3
       baz=251
PAX    Paxson            86.05  26       P        P        05 02 39.6 +0.1
       baz=256
HARP   HAARP             86.05  27       P        P        05 02 40.1 +0.6
       baz=257
K24K   Donnelly Dome     86.11  26       P        P        05 02 39.7  -0.1
       baz=256
N25K   Chitina, Valde    86.13  28       P        P        05 02 39.7  -0.3
       baz=257
G24K   Hadweenzic Riv    86.17  23       P        P        05 02 40.1 +0.1
       baz=254,SNR=6.7
E24K   Your Creek        86.18  21       IAmb     IAmb     05 02 54.2
       comp=Z,10.0nm,1.4s
E24K   Your Creek        86.18  21       P        P        05 02 40.7 +0.6
       baz=253
F24K   Squaw Lake        86.24  22       P        P        05 02 41.2 +0.9
       baz=254
D24K   Happy Valley      86.38  20       P        P        05 02 41.6 +0.6
       baz=253
J25K   Salcha River,     86.48  25       P        P        05 02 41.2  -0.5
       baz=256
RIDG   Independent Ri    86.50  26       P        P        05 02 41.8 +0.1
       baz=257
C24K   Franklin Bluff    86.59  19       P        P        05 02 42.2 +0.3
       baz=253
PRP    Porcupine Dome    86.63  24       P        P        05 02 42.9 +0.5
       baz=256
CRQE   Cirque            86.66  29       P        P        05 02 43.1 +0.4
       baz=259
H25L   Birch Creek       86.70  23       P        P        05 02 43.0 +0.5
       baz=256
G25K   Bearman Lake      86.71  23       P        P        05 02 43.7 +1.1
       baz=256
MENT   Mentasta          86.82  27       P        P        05 02 43.3   0.0
```

SCRK	Sand Creek	86.92	26	P	P	05 02 44.7	+0.8
	baz=258						
L26K	Log Cabin Wild	87.00	27	P	P	05 02 45.3	+1.1
	baz=258						
M26K	Nabesna, AK	87.04	27	P	P	05 02 44.9	+0.5
	baz=259						
F25K	Christian Rive	87.09	22	IAmb	IAmb	05 02 46.7	
	comp=Z,17nm,1.5s						
F25K	Christian Rive	87.09	22	P	P	05 02 45.0	+0.5
	baz=256,SNR=6.4						
J26L	Joseph Creek	87.22	25	IAmb	IAmb	05 02 55.0	
	comp=Z,7.1nm,1.0s						
J26L	Joseph Creek	87.22	25	P	P	05 02 45.6	+0.3
	baz=258,SNR=8.3						
E25K	Arctic Village	87.25	21	P	P	05 02 46.2	+1.0
	baz=256						
QSPA	South Pole Qui	87.26	180		P	05 02 45.4	-0.1
QSPA	South Pole Qui	87.26	180	P	P	05 02 45.7	+0.2
	comp=Z,9.9nm,0.9s,baz=190,slow=0.4,SNR=40						
	comp=Z,9.9nm,0.9s						
D25K	Kavik River	87.27	20	P	P	05 02 46.3	+1.0
	baz=255						
BMAR	Burnt Mountain	87.45	22		P	05 02 45.5	-0.8
M27K	Edge Creek, AK	87.54	27	IAmb	IAmb	05 02 56.4	
	comp=Z,18nm,1.6s						
M27K	Edge Creek, AK	87.54	27	P	P	05 02 47.8	+0.8
	baz=260,SNR=5.8						
CTG	Chitna Glacier	87.54	29	P	P	05 02 47.3	+0.3
	baz=260						
I26K	Coal Creek Min	87.55	24	IAmb	IAmb	05 02 48.3	
	comp=Z,8.0nm,1.4s						
I26K	Coal Creek Min	87.55	24	P	P	05 02 47.8	+1.1
	baz=258						
G26K	Porcupine Rive	87.65	23	P	P	05 02 48.7	+1.6
	baz=258,SNR=8.3						
F26K	Sheenjek River	87.67	22	P	P	05 02 48.8	+1.5
	baz=257,SNR=5.5						
L27K	Beaver Creek,	87.69	27	IAmb	IAmb	05 02 56.9	
	comp=Z,11nm,1.4s						
L27K	Beaver Creek,	87.69	27	P	P	05 02 48.1	+0.6
	baz=260,SNR=6.4						
BCAR	Beaver Creek A	87.71	27	P	P	05 02 47.1	-0.5
K27K	Chicken	87.76	26	P	P	05 02 48.4	+0.7
	baz=259						
C26K	Camden Bay	87.91	20	P	P	05 02 49.4	+1.0
	baz=256						
PCA	Pinnacle	87.93	30	P	P	05 02 47.6	-1.1
PINM	Pinnacle	87.93	30	P	P	05 02 49.3	+0.5
	baz=261						
BVCY	Beaver Creek	88.02	27	P	P	05 02 50.0	+1.0
	baz=260,SNR=6.4						
O28M	Mount Upton	88.07	29	P	P	05 02 50.1	+0.5
	baz=261						
YUK3	Moose Creek	88.10	28	P	P	05 02 50.6	+0.9
	baz=261,SNR=7.0						
I27K	Kandik River	88.24	24	P	P	05 02 50.7	+0.6
	baz=260,SNR=14						
C27K	Jago River	88.25	20	P	P	05 02 50.5	+0.5
	baz=258						
PNL	Peninsula	88.30	30	P	P	05 02 51.3	+0.9
	baz=262						
YUK8	Steele Glacier	88.35	29	P	P	05 02 51.5	+0.5
	baz=262						
H27K	Steamboat Moun	88.39	24	P	P	05 02 52.2	+1.5
	baz=260,SNR=12						
G27K	Doyon Strip	88.44	23	P	P	05 02 51.9	+0.9
	baz=260						
E27K	Coleen River	88.72	22	P	P	05 02 53.1	+0.9
	baz=260						
O29M	Mount Kennedy	88.79	30	P	P	05 02 53.4	+0.5
	baz=263						
YUK4	Talbot Arm	88.89	29	P	P	05 02 54.1	+0.6
	baz=263						
I28M	Miner Creek	88.91	24	P	P	05 02 54.2	+0.9
	baz=261,SNR=7.3						
DAWY	Dawson	88.93	26	P	P	05 02 54.0	+0.7
	baz=262,SNR=13						
YUK6	Outpost Mounta	88.98	29	P	P	05 02 54.3	+0.4
	baz=263						
M29M	Somme Creek	89.12	27	IAmb	IAmb	05 03 04.0	
	comp=Z,6.9nm,1.1s						
M29M	Somme Creek	89.12	27	P	P	05 02 55.5	+1.1
	baz=263						
P29M	Windy Craggy	89.12	30	P	P	05 02 55.1	+0.7
	baz=263						
D27M	Malcolm River	89.13	21	P	P	05 02 54.9	+0.7
	baz=260						
F28M	Old Crow	89.26	22	P	P	05 02 55.2	+0.4
	baz=261						
L29M	L29M	89.36	27	IAmb	IAmb	05 03 05.2	
	comp=Z,11nm,1.2s						
L29M	L29M	89.36	27	P	P	05 02 56.6	+1.2
	baz=263						
HYT	Haines Junctio	89.38	29	IAmb	IAmb	05 02 57.2	
	comp=Z,5.6nm,0.9s						
HYT	Haines Junctio	89.38	29	P	P	05 02 56.7	+1.0
	baz=264,SNR=5.8						
E28M	Babbage River	89.54	21	P	P	05 02 56.9	+0.8
	baz=262						
I29M	Ogilvie Camp,	89.57	25	P	P	05 02 57.4	+1.1
	baz=263						
P30M	Million Dollar	89.57	30	P	P	05 02 56.7	+0.2
	baz=264						
N30M	Aishikik Lake	89.65	29	P	P	05 02 57.3	+0.5
	baz=264						
H29M	Whitestone	89.65	24	P	P	05 02 57.7	+1.1
	baz=263						
K29M	Barlow Dome	89.72	26	IAmb	IAmb	05 03 06.9	
	comp=Z,12nm,1.2s						
K29M	Barlow Dome	89.72	26	P	P	05 02 57.7	+0.6
	baz=264,SNR=5.3						
PLBC	Pleasant Camp	89.80	31	P	P	05 02 58.1	+0.7
	baz=264						
G29M	Pine Creek	89.88	23	P	P	05 02 58.4	+0.7
	baz=263						
D28M	Stokes Point	89.92	21	P	P	05 02 58.3	+0.5
	baz=262						
R31K	City Hall, Gus	90.03	32	P	P	05 02 59.3	+0.8
	baz=265						
O30N	Mendenhall	90.06	29	P	P	05 02 59.4	+0.7
	baz=265						
E29M	Blow River	90.11	22	P	P	05 02 59.7	+1.0
	baz=263						
SIT	Sitka	90.14	33	P	P	05 02 59.7	+0.6
	baz=265						
N31M	Braeburn, Yuko	90.28	29	IAmb	IAmb	05 03 01.3	
	comp=Z,7.1nm,1.1s						
N31M	Braeburn, Yuko	90.28	29	P	P	05 03 00.6	+0.8
	baz=265						
J30M	Hart River	90.31	25	P	P	05 03 00.0	+0.1
	baz=264						
SKAG	Skagway	90.33	31	P	P	05 03 00.6	+0.7
	baz=265						
EPYK	Eagle Plains	90.33	24	P	P	05 03 01.0	+1.1
	baz=264						
I30M	Mount Dempster	90.36	25	P	P	05 03 01.2	+1.1
	baz=264						
S32K	Killisnoo	90.57	33	P	P	05 03 01.5	+0.4
	baz=266						
G30M	tAoh Zraii Nji	90.59	23	P	P	05 03 00.7	-0.4
	baz=265						
WHY	Whitehorse	90.65	29	IAmb	IAmb	05 03 02.9	
	comp=Z,7.5nm,0.9s						
WHY	Whitehorse	90.65	29	P	P	05 03 01.9	+0.4
	baz=266						
R32K	Eaglecrest	90.66	32	P	P	05 03 02.6	+1.0
	baz=266						
SYO	Syowa Base	90.71	201	⇓*e*P	P	05 03 02.6	+1.1
SYO	Syowa Base	90.71	201	⇑*e*pP	pP	05 03 05.5	+0.5
F30M	Barrier River	90.81	22	P	P	05 03 03.3	+1.3
	baz=265						
H31M	Peel River	91.25	24	P	P	05 03 05.4	+1.2
	baz=266						
CRAG	Craig	91.26	35	P	P	05 03 04.5	+0.2
	baz=267						
G31M	Satah River	91.35	23	P	P	05 03 05.7	+1.2
	baz=266						
FARO	Faro, Yukon	91.48	28	IAmb	IAmb	05 03 15.8	
	comp=Z,2.8nm,0.5s						
FARO	Faro, Yukon	91.48	28	P	P	05 03 06.2	+0.9
	baz=267						
N32M	Quiet Lake	91.56	29	P	P	05 03 06.8	+1.1
	baz=267						
P33M	Teslin, Yukon	91.64	30	P	P	05 03 06.3	+0.1
	baz=268						
INK	Inuvik	91.72	22	P	P	05 03 06.0	-0.2
	baz=267						
WRAK	Wrangell Islan	91.73	34	P	P	05 03 06.7	+0.2
	baz=268						
Q32M	Nakina River	91.87	31	P	P	05 03 07.7	+0.3
	baz=268						
V35K	Ketchikan	92.11	35	P	P	05 03 08.4	+0.2
	baz=268						
MMPY	Sheldon Lake,	92.46	28	P	P	05 03 10.6	+0.7
	baz=269						
BELA	Belgrano 2	99.45	181	P	Pdif	05 03 41.3	0.0
BELA				IAmb	IAmb	05 03 48.5	
	comp=Z,5.4nm,1.4s						
YKA	Yellowknife Ar	100.13	27	P	Pdif	05 03 44.9	+0.3
	comp=Z,0.6nm,0.9s,baz=294,slow=5.0,SNR=3.8						
TXAR	Lajitas Array	115.44	59	PKP	PKPdf	05 08 40.7	-1.1
	comp=Z,0.1nm,0.5s,baz=284,slow=3.6,SNR=4.9						
ROSC	El Rosal	147.16	85	PKPbc	PKPdf	05 09 42.1	+0.4
	comp=Z,4.3nm,0.5s,baz=236,slow=6.5,SNR=4.3						
CPUP	Villa Florida	147.34	153	PKPbc	PKPbc	05 09 42.6	-0.9
	comp=Z,2.6nm,1.1s,baz=314,slow=4.4,SNR=4.1						
LPAZ	La Paz	147.61	126	PKPbc	PKPbc	05 09 44.2	-1.0
	comp=Z,7.3nm,1.0s,baz=287,slow=1.1,SNR=12						

*IDC **26** 05:15:20.6±0.5, 56°.01N×164°.37E, h0^{km}, mb4.0/32, mbtmp4.1/35, ML4.5/2, MS4.4/1, Error ellipse: s-maj=16.0km s-min=10.9km az=160.0*

*KRSC **26** 05:15:21.0±1.3, 56°.19N×164°.48E, h51^{km}±19^{km}, Ml4.8*

*BJI **26** 05:15:22.0, 55°.70N×164°.20E, h10^{km}, mB5.0/5, mb4.6/19, Ms5.0/9, Ms7 4.8/9*

*NEIC **26** 05:15:24.7±2.5, 55°.6N±0°.1×164°.7E±0°.1, h10^{km}±1^{km}, mb4.6/136, Error ellipse: s-maj=21.2km s-min=11.8km az=166.0*

*MOS **26** 05:15:25.5±1.0, 56°.04N×164°.23E, h50^{km}, mb4.8/15, Error ellipse: s-maj=8.2km s-min=4.8km az=53.4*

ISC 26 05:15:23.3±0.3**, 56°.12N**±0°.04×**164°.38E**±0°.03**, h10^{km}, n484,** σ**1$\overset{s}{.}$76**/394**, mb4.5**/120**, 3C-1D, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.88	277	PN	Pg	05 15 37.5	-2.6
KBTR	Krutoberegovo	0.88	277	*e*P	Pg	05 15 37.6	-2.6
KBG	Krutoberegovo	0.94	279	PN	Pg	05 15 38.9	-2.5
KBG				S	Sg	05 15 51.9	-1.9
KBG	Krutoberegovo	0.94	279	*e*P	Pg	05 15 39.0	-2.5
KBG				*e*S	Sg	05 15 51.9	-1.9
BKI	Bering	1.29	135	PN	Pn	05 15 45.0	-2.2
BKI				S	Sb	05 16 02.4	-1.6
BKI	Bering	1.29	135	*e*P	Pn	05 15 45.0	-2.2
BKI				*e*S	Sb	05 16 02.5	-1.6
SMKR	Semkarok	1.69	287	PN	Pn	05 15 50.9	-1.9
SMKR	Semkarok	1.69	287	*e*P	Pn	05 15 51.0	-1.9
ZLN	Zelenaya	2.01	269	PN	Pn	05 15 56.7	-0.6
ZLN	Zelenaya	2.01	269	*e*P	Pn	05 15 56.7	-0.6
CIRR	Tsirk	2.03	271	PN	Pn	05 15 56.9	-0.8
CIRR	Tsirk	2.03	271	*e*P	Pn	05 15 57.0	-0.8
LGNR	Loginova	2.07	271	PN	Pn	05 15 56.9	-1.3
LGNR	Loginova	2.07	271	*e*P	Pn	05 15 57.0	-1.3
BZGR	Bezymyannyi-Gr	2.07	267	PN	Pn	05 15 56.9	-1.3
BZGR	Bezymyannyi-Gr	2.07	267	*e*P	Pn	05 15 56.9	-1.3
MKZ	Mys Kozlova	2.18	225	PN	Pn	05 15 57.8	-1.7
MKZ				S	Sn	05 16 24.1	-2.3
MKZ	Mys Kozlova	2.18	225	*e*P	Pn	05 15 57.8	-1.7
MKZ				*e*S	Sn	05 16 24.2	-2.3
BZWR	Bezymyannyi-We	2.18	268	PN	Pn	05 15 59.0	-0.8
BZWR	Bezymyannyi-We	2.18	268	*e*P	Pn	05 15 59.1	-0.8
BZMR	Bezymyannaya	2.19	267	PN	Pn	05 15 59.1	-0.7
BZMR	Bezymyannaya	2.19	267	*e*P	Pn	05 15 59.2	-0.7
KIRR	Kirishev	2.27	268	PN	Pn	05 15 59.9	-1.0
KIRR				S	Sn	05 16 28.1	-0.9
KIRR	Kirishev	2.27	268	*e*P	Pn	05 15 60.0	-1.0
KIRR				*e*S	Sn	05 16 28.2	-0.9
KPT	Kopyto	2.34	268	PN	Pn	05 16 01.5	-0.3
KPT	Kopyto	2.34	268	*e*P	Pn	05 16 01.6	-0.3
KMNR	Kamenistaya	2.36	263	PN	Pn	05 16 02.0	-0.1
KMNR	Kamenistaya	2.36	263	*e*P	Pn	05 16 02.0	-0.1
TUMD	Tumrok D	2.43	250	PN	Pn	05 16 02.5	-0.6
TUMD				S	Sn	05 16 32.5	-0.4
TUMD	Tumrok D	2.43	250	*e*P	Pn	05 16 02.5	-0.6
TUMD				*e*S	Sn	05 16 32.6	-0.4
KOZ	Kozyrevsk	2.52	271	PN	Pn	05 16 04.4	+0.1
KOZ	Kozyrevsk	2.52	271	*e*P	Pn	05 16 04.5	+0.1
SRDR	Sredinnyy	2.61	276	PN	Pn	05 16 05.3	-0.3
SRDR				S	Sn	05 16 37.1	-0.2
SRDR	Sredinnyy	2.61	276	*e*P	Pn	05 16 05.3	-0.3
SRDR				*e*S	Sn	05 16 37.2	-0.2
ESO	Esso	3.19	269	PN	Pn	05 16 13.1	-0.4
ESO	Esso	3.19	269	*e*P	Pn	05 16 13.1	-0.4
OSSR	Ossora	3.22	348	PN	Pn	05 16 10.4	-3.4
OSSR	Ossora	3.22	348	*e*P	Pn	05 16 10.4	-3.4
OSSR				*e*S	Sn	05 16 46.3	-5.9
KII	Karymskiy	3.52	236	PN	Pn	05 16 17.7	-0.3
KII	Karymskiy	3.52	236	*e*P	Pn	05 16 17.7	-0.3
SPN	Mys Shipunski	3.94	222	PN	Pn	05 16 21.8	-2.0
SPN	Mys Shipunski	3.94	222	*e*P	Pn	05 16 21.8	-2.0
NLC	Nalytchevo	4.16	227	PN	Pn	05 16 26.9	+0.2
NLC	Nalytchevo	4.16	227	*e*P	Pn	05 16 27.0	+0.2
SDLR	Sedlovina	4.27	231	PN	Pn	05 16 28.3	-0.1
SDLR	Sedlovina	4.27	231	*e*P	Pn	05 16 28.4	-0.1
KRER	Koryakskii	4.31	232	PN	Pn	05 16 29.1	0.0
KRER	Koryakskii	4.31	232	*e*P	Pn	05 16 29.1	0.0
SMAR	Somma	4.32	231	PN	Pn	05 16 29.1	-0.1
SMAR	Somma	4.32	231	*e*P	Pn	05 16 29.1	-0.1
KRX	Arik	4.32	233	PN	Pn	05 16 29.3	+0.2
KRX	Arik	4.32	233	*e*P	Pn	05 16 29.3	+0.2
AVH	Avacha	4.34	231	PN	Pn	05 16 29.4	0.0
AVH	Avacha	4.34	231	*e*P	Pn	05 16 29.4	0.0
UGLR	Uglovaya	4.35	230	PN	Pn	05 16 29.5	+0.1
UGLR	Uglovaya	4.35	230	*e*P	Pn	05 16 29.5	+0.1
KOK	Koryaka	4.37	232	PN	Pn	05 16 31.2	+1.5
KOK	Koryaka	4.37	232	*e*P	Pn	05 16 31.3	+1.5
GNL	Ganaly	4.44	240	PN	Pn	05 16 30.9	+0.2
GNL	Ganaly	4.44	240	*e*P	Pn	05 16 31.0	+0.2
DALK	Dalny	4.50	229	PN	Pn	05 16 31.0	-0.4
DALK	Dalny	4.50	229	*e*P	Pn	05 16 31.1	-0.4
PET	Petropavlovsk	4.55	229		Pn	05 16 30.9	-1.2
PET	Petropavlovsk	4.55	229	*e*PN	Pn	05 16 31.4	-0.7
PET				*e*S	Sn	05 17 22.6	-2.4
PET				pmax	pmax		
	comp=Z,96nm,0.5s						
PET				smax	smax		
	comp=E,198nm,0.6s						
PET				smax	smax		
	comp=N,178nm,0.8s						
KRMR	Karymshinskiy	4.91	230	PN	Pn	05 16 37.9	+0.9
KRMR	Karymshinskiy	4.91	230	*e*P	Pn	05 16 38.0	+0.9
PEA0B	Petropavlovsk-	4.92	235		Pn	05 16 37.5	+0.3
PEA0B	Petropavlovsk-	4.92	235	PN	Pn	05 16 34.2	-3.0
PETK	Petropavlovsk-	4.92	235		Pn	05 16 37.5	+0.3
PETK	Petropavlovsk-	4.92	235	Pn	Pn	05 16 35.8	-1.3
	comp=N,6.7nm,0.4s,baz=91,slow=18,SNR=5.6						
PETK				Sn	Sn	05 17 37.5	+3.5
	comp=N,3.3nm,0.3s,baz=305,slow=5.2,SNR=3.7						
RUS	Russkaya	5.04	225	PN	Pn	05 16 38.7	-0.2
RUS	Russkaya	5.04	225	*e*P	Pn	05 16 38.7	-0.2
GRL	Gorelyy	5.13	229	PN	Pn	05 16 41.4	+1.1
GRL	Gorelyy	5.13	229	*e*P	Pn	05 16 41.4	+1.1
MTVR	Mutnovka	5.14	227	PN	Pn	05 16 41.1	+0.8
MTVR	Mutnovka	5.14	227	*e*P	Pn	05 16 41.2	+0.8
APC	Apacha	5.28	236	PN	Pn	05 16 43.6	+1.4
APC	Apacha	5.28	236	*e*P	Pn	05 16 43.7	+1.4
ASAK	Asacha	5.33	228	PN	Pn	05 16 43.9	+1.0
ASAK	Asacha	5.33	228	*e*P	Pn	05 16 43.9	+1.0
SMY	Shemya	6.61	117		Pn	05 16 57.9	-2.5
SMY	Shemya	6.61	117	PN	Pn	05 16 57.9	-2.5
ADK	Adak	11.91	103		Pn	05 18 11.9	-1.1
ADK	Adak	11.91	103	PN	Pn	05 18 11.9	-1.1
BILL	Bilibino	12.00	3	*i* PN	Pn	05 18 23.5	+9.4
OKH	Okha	12.62	267	*de*PN	Pn	05 18 18.3	-4.3
OKH				MLR	MLR		
	comp=N,4µm,16.0s						
OKH				MLR	MLR		
	comp=E,2µm,17.0s						
OKH				MLR	MLR		
	comp=Z,1µm,15.0s						
ATKA	Atka Island	13.14	98		Pn	05 18 27.6	-2.0
NIKH	Nikolski High	15.81	90		P	05 19 07.7	-1.9
NIKH	Nikolski High	15.81	90	P	Pn	05 19 04.5	-1.2
	baz=290						
M11K	Mekoryuk	15.98	62	P	P	05 19 09.4	-2.1
	baz=266						
YSS	Yuzhno-Sakhali	16.22	245	*i* P	Pn	05 19 10.1	-0.9
UNV	Unalaska Valle	16.81	86		P	05 19 20.4	-0.3
UNV				IAmb	IAmb	05 19 50.6	
	comp=Z,70nm,1.2s						
UNV	Unalaska Valle	16.81	86	P	Pn	05 19 19.0	+0.5
	baz=288						
K13K	Kusilvak Mount	16.85	57	P	P	05 19 21.9	+0.8
	baz=262						
F14K	Arctic Creek	16.92	45	P	P	05 19 24.3	+2.4
	baz=249						
F15K	North Star Dit	17.66	45	P	P	05 19 34.0	+4.0
	baz=250						
G15K	Niukluk	17.70	47	P	P	05 19 34.2	+3.8
	baz=253						
L14K	Kuka Creek	17.75	59		P	05 19 35.2	+4.3
L14K	Kuka Creek	17.75	59	P	P	05 19 33.0	+2.0
	baz=266						
JKA	Kamikawa-asahi	18.32	238	P	P	05 19 37.6	+0.1
JKA				IAmb	IAmb	05 19 44.4	
	comp=Z,58nm,1.1s						
ASAJ	Asahikawa	18.32	238	P	Pn	05 19 35.0	-2.4
	comp=Z,1.1nm,0.3s,baz=12,slow=5.4,SNR=9.3						
	comp=Z,24nm,0.8s						
ASAJ	Asahikawa	18.32	238	P	Pn	05 19 35.0	-2.4
K15K	Wolf Creek Mou	18.35	56	P	P	05 19 40.4	+2.8
	baz=264						
H16K	Elim	18.36	49	P	P	05 19 40.7	+3.0
	baz=257						
C16K	Lisburne Hills	18.39	37	P	P	05 19 40.8	+2.9
C16K	Lisburne Hills	18.39	37	P	P	05 19 42.4	+4.5
	baz=242						
G16K	Koyuk River	18.49	46	P	Pn	05 19 42.8	+3.7
	baz=254						
O14K	Tigyukauivet M	18.51	66	P	Pn	05 19 41.9	+2.4
	baz=274						
YAK	Yakutsk	18.61	303	P	Pn	05 19 40.5	-0.2
	comp=Z,2.2nm,0.3s,baz=88,slow=1.3,SNR=4.5						
	comp=Z,14nm,0.5s						
M15K	Kasigluk River	18.71	61	P	Pn	05 19 43.6	+1.6
	baz=270						
S12K	Black Hills	18.72	77	P	Pn	05 19 42.5	+0.5
	baz=284						
J16K	Anvik River	18.86	53	P	Pn	05 19 46.3	+2.5
	baz=262						
I17K	Unalakleet	18.89	51		Pn	05 19 46.6	+2.5
I17K	Unalakleet	18.89	51	P	Pn	05 19 46.6	+2.5
	baz=260						
D17K	Noatak River	18.93	39	P	Pn	05 19 47.9	+3.4
	baz=247						
N15K	Kwethluk River	19.03	63		Pn	05 19 47.1	+1.3
N15K	Kwethluk River	19.03	63	P	Pn	05 19 47.5	+1.7
	baz=272						
RDOG	Red Dog Mine	19.12	38	P	Pn	05 19 51.0	+4.1
RDOG	Red Dog Mine	19.12	38	P	Pn	05 19 50.5	+3.6
	baz=246						
E17K	Hotham Inlet	19.17	42	P	Pn	05 19 49.9	+2.5
	baz=250						
C17K	DeLong Mountai	19.20	37	P	Pn	05 19 50.4	+2.6
	baz=245						
F17K	Baldwin Pennin	19.20	44	P	Pn	05 19 50.3	+2.5
	baz=253						
G17K	Kiwalik Mounta	19.20	47	P	Pn	05 19 50.4	+2.5
	baz=256						
O15K	Ungalikthiuk R	19.25	66	P	Pn	05 19 48.8	+0.4
	baz=275						
L16K	Owhat River	19.29	58	P	Pn	05 19 50.2	+1.3
	baz=268						
H17K	Granite Mounta	19.40	48	P	Pn	05 19 52.0	+1.8
	baz=258						
M16K	Timber Creek	19.55	60	P	Pn	05 19 52.2	+0.2
	baz=270						
J17K	VABM Dome	19.56	53	P	Pn	05 19 52.9	+0.8
	baz=264						
N16K	Nishlik Lake	19.67	62	P	Pn	05 19 53.5	0.0
	baz=272						
SDPT	Sand Point	19.68	78	P	P	05 19 51.9	-0.3
	baz=285						
E18K	Tukpahlearik C	19.73	41		Pn	05 19 54.3	+0.2
E18K	Tukpahlearik C	19.73	41	P	Pn	05 19 56.1	+1.9
	baz=251						
L17K	Donlin	19.85	57	P	Pn	05 19 55.9	+0.2
	baz=268						
F18K	Selawik	19.86	44	P	Pn	05 19 56.5	+0.9
	baz=254						
K17K	Iditarod	19.87	55		Pn	05 19 58.1	+2.3
K17K				IAmb	IAmb	05 20 35.0	
	comp=Z,22nm,0.9s						
K17K	Iditarod	19.87	55	P	Pn	05 19 55.8	0.0
	baz=266						
S14K	Fog Glacier	19.93	74	P	P	05 19 55.0	-0.1
	baz=283						
C18K	Utukok River	19.94	37	P	Pn	05 19 57.3	+0.7
	baz=247,SNR=6.7						
B18K	Kokolik River	20.02	35	P	Pn	05 19 58.7	+1.2
	baz=244,SNR=5.8						
H18K	Honhosa River	20.08	48	P	Pn	05 19 58.2	-0.1
	baz=260						
O16K	Kokwok River B	20.08	64	P	P	05 19 55.5	-1.1
	baz=275						
G18K	Tagagawik	20.09	46	P	Pn	05 19 58.4	-0.1
	baz=257						
M17K	Holitna River	20.27	59	P	Pn	05 20 00.3	-0.3
M17K				IAmb	IAmb	05 20 25.3	
	comp=Z,28nm,1.1s						
M17K	Holitna River	20.27	59	P	Pn	05 19 59.9	-0.7
	baz=271						
CHNA	Chernabura Isl	20.32	79	P	P	05 19 57.6	-1.5
	baz=287						
N17K	Nushagak Hills	20.45	62	P	P	05 20 00.6	+0.1
	baz=273						
O17K	Koliganek Bris	20.57	64	P	P	05 20 01.7	-0.1
	baz=275						
A19K	Wainwright	20.60	33	P	Pn	05 20 05.1	+0.7
	baz=243						
L18K	Granite Mounta	20.61	57	P	P	05 20 03.0	+0.8
	baz=269						
F19K	Shaleruckik Mo	20.64	44	P	Pn	05 20 04.5	-0.3
	baz=256,SNR=6.5						
C19K	Lookout Ridge	20.65	37	P	Pn	05 20 03.7	-1.3
	baz=248,SNR=7.7						
GCSA	Galena City Sc	20.65	50	P	Pn	05 20 04.5	-0.5
	baz=262						
G19K	Purcell Mounta	20.77	46		Pn	05 20 07.2	+0.8
G19K	Purcell Mounta	20.77	46	P	Pn	05 20 05.5	-0.9
	baz=258						
H19K	Roundabout Mou	20.93	47	P	Pn	05 20 07.0	-1.3
	baz=261						
Q16K	King Salmon	20.95	67	P	P	05 20 05.4	-0.5
	baz=279						
D19K	Kuna River	20.95	39	P	Pn	05 20 07.9	-0.7
	baz=251						
P17K	Kvichak River	20.98	65	P	P	05 20 05.9	-0.4
	baz=277						
E19K	Redstone River	20.99	42	P	Pn	05 20 08.2	-0.7
	baz=255,SNR=5.7						
M18K	Stony River	21.04	59	P	P	05 20 06.9	0.0
	baz=272						
N18K	Kilae Creek	21.07	61	P	P	05 20 06.8	-0.5
	baz=274						
J19K	Poorman	21.14	52	P	P	05 20 08.8	+0.8
	baz=266						
Q17K	Contact Creek	21.42	68	P	P	05 20 10.2	-1.0
	baz=280						
L19K	White Mountain	21.47	57	P	P	05 20 11.7	+0.1
	baz=271						
F20K	Avaraart Lake	21.47	43	P	P	05 20 13.3	+1.8
	baz=258						
O18K	Koktuh Hills	21.50	63	P	P	05 20 11.4	-0.6
	baz=276						
TIXI	Tiksi	21.54	330	P	P	05 20 11.4	-0.7
	comp=Z,3.7nm,0.7s,baz=133,slow=6.3,SNR=6.5						
	comp=Z,3.7nm,0.7s						
D20K	Etivluk River	21.54	39	P	P	05 20 13.6	+1.3
	baz=253,SNR=6.2						
P18K	Big Mountain,	21.56	64	P	P	05 20 12.2	-0.4
	baz=278						
E20K	Nigu River	21.57	40	P	P	05 20 13.3	+0.7
	baz=254,SNR=8.0						
H20K	Anotleneega Mo	21.57	48	P	P	05 20 14.0	+1.3
	baz=262						
I20K	Naaghedeneel	21.68	50	P	P	05 20 14.4	+0.6
	baz=265						
M19K	Big River Lodg	21.70	58	P	P	05 20 13.7	-0.3
	baz=272						
N19K	Bonanza Creek	21.74	61	P	P	05 20 14.3	-0.3
	baz=275						
B20K	Meade River	21.76	35	P	P	05 20 17.1	+2.5
	baz=249						
J20K	Nowinta River	21.79	51	P	P	05 20 16.4	+1.4

	baz=266						
Q18K	Katmai Hardscr	21.80	66	P	P	05 20 14.5	-0.8
	baz=280						
K20K	Telida	21.81	54	P	P	05 20 15.7	+0.5
	baz=269						
L20K	Farewell, AK	21.91	56	P	P	05 20 17.1	+0.7
	baz=271						
IMAR	Indian Mountai	22.09	47	P	P	05 20 20.7	+2.5
CHIR	Chirikof Islan	22.17	74	P	P	05 20 17.9	-1.2
	baz=286						
G21K	Allakaket	22.26	45	P	P	05 20 21.3	+1.3
	baz=261						
M20K	Styx River	22.30	58	P	P	05 20 20.7	+0.1
	baz=273						
C21K	Knifeblade Rid	22.30	38	P	P	05 20 22.9	+2.5
	baz=254						
F21K	Alatna River	22.37	43	P	P	05 20 23.8	+2.6
	baz=260						
A21K	Barrow	22.41	32	P	P	05 20 25.1	+3.6
	baz=247						
E21K	Killik River	22.41	40	P	P	05 20 24.1	+2.4
	baz=256						
Q19K	Cape Douglas,	22.44	65	P	P	05 20 22.1	0.0
	baz=280						
H21K	Melozitna Rive	22.45	48	P	P	05 20 23.7	+1.7
	baz=264						
B21K	Ikpikpuk River	22.48	37	P	P	05 20 25.5	+3.2
	baz=253						
CHUM	Lake Minchumin	22.59	52	P	P	05 20 25.0	+1.5
	baz=269						
PPLA	Purkeypile	22.67	55	P	P	05 20 25.8	+1.2
	baz=271						
CAST	Castle Rocks	22.70	53	P	P	05 20 26.4	+1.7
	baz=270						
HEH	HeiHe	22.71	271	*e*P	P	05 20 21.0	-3.9
I21K	Tanana	22.76	49	P	P	05 20 27.9	+2.5
	baz=266						
A22K	Sinclair Lake	22.79	33	P	P	05 20 29.0	+3.4
	baz=249						
F22K	John River	22.91	43	P	P	05 20 29.3	+2.4
	baz=260						
D22K	Ayikyak River	22.97	39	IAmb	IAmb	05 20 41.4	
	comp=Z,19nm,1.2s						
D22K	Ayikyak River	22.97	39	P	P	05 20 29.9	+2.3
	baz=257						
OHAK	Old Harbor	23.02	70	P	P	05 20 28.4	+0.3
	baz=284						
SKT	Skwentna	23.04	57	P	P	05 20 29.7	+1.4
	baz=274						
H22K	Ishtalitna Cre	23.05	47	P	P	05 20 30.5	+2.1
	baz=265						
B22K	Teshekpuk Lake	23.08	35	P	P	05 20 31.9	+3.3
	baz=253						
G22K	Bettles	23.09	44	P	P	05 20 31.1	+2.4
	baz=263						
E22K	Anaktuvuk Pass	23.14	41	P	P	05 20 31.5	+2.2
	baz=260						
Q20K	Shuyak Island	23.15	66	P	P	05 20 29.4	0.0
	baz=281						
BPAW	Bear Paw Mtn.	23.18	52	IAmb	IAmb	05 21 06.0	
	comp=Z,21nm,1.5s						
BPAW	Bear Paw Mtn.	23.18	52	P	P	05 20 31.2	+1.6
	baz=270						
KDAK	Kodiak Island	23.24	68	P	P	05 20 27.9	-2.5
	comp=Z,4.8nm,0.8s,baz=200,slow=7.4,SNR=5.9						
	comp=Z,4.8nm,0.8s						
KDAK	Kodiak Island	23.24	68	P	P	05 20 30.5	+0.1
	baz=283						
MLY	Manley	23.28	49	P	P	05 20 32.0	+1.2
	baz=268						
HOM	Homer	23.31	63	P	P	05 20 31.4	+0.4
	baz=280						
CAPN	Captain Cook N	23.37	60	P	P	05 20 32.3	+0.7
	baz=277						
SUA	Susitna One	23.47	58	P	P	05 20 33.3	+0.5
	baz=276						
TRF	Thorofare Moun	23.51	53	IAmb	IAmb	05 21 14.4	
	comp=Z,20nm,1.2s						
TRF	Thorofare Moun	23.51	53	P	P	05 20 33.8	+0.6
	baz=272						
CNPM	China Poot	23.54	63	P	P	05 20 35.1	+1.7
CNPM				IAmb	IAmb	05 20 45.5	
	comp=Z,12nm,0.8s						
CUT	Chulitna	23.59	56	P	P	05 20 34.7	+0.9
	baz=274						
COLD	Coldfoot	23.63	44	P	P	05 20 35.0	+0.9
	baz=263						
G23K	Bananza Creek	23.66	45	P	P	05 20 35.4	+0.9
	baz=265						
D23K	Nanushuk River	23.70	39	P	P	05 20 36.3	+1.5
	baz=259						
M22K	Willow	23.73	57	P	P	05 20 35.7	+0.6
	baz=276						
BRSE	Bradley Lake S	23.75	63	P	P	05 20 35.4	0.0
	baz=280						
H23K	Yukon River	23.80	47	P	P	05 20 36.4	+0.5
	baz=267						
I23K	Minto, Yukon-K	23.87	49	P	P	05 20 37.0	+0.5
	baz=269,SNR=6.0						
C23K	Itkillik River	23.89	37	IAmb	IAmb	05 20 44.9	
	comp=Z,20nm,1.0s						
C23K	Itkillik River	23.89	37	P	P	05 20 38.2	+1.7
	baz=257						
E23K	Chandalar	23.95	42	P	P	05 20 38.0	+0.7
	baz=262,SNR=7.4						
NEA2	Nenana	24.00	50	P	P	05 20 37.8	+0.1
	baz=270						
RC01	Rabbit Creek A	24.01	59	P	P	05 20 37.5	-0.3
	baz=278						
TOLK	Toolik Lake Re	24.04	40		P	05 20 41.8	+3.6
TOLK	Toolik Lake Re	24.04	40	P	P	05 20 38.3	+0.2
	baz=261,SNR=5.5						
MCK	McKinley	24.09	52	P	P	05 20 38.8	+0.2
	baz=272						
PMR	Palmer	24.22	58	P	P	05 20 39.8	+0.1
	baz=277						
E24K	Your Creek	24.37	42	P	P	05 20 41.2	0.0
	baz=263						
D24K	Happy Valley	24.39	39	P	P	05 20 46.5	+5.3
D24K				IAmb	IAmb	05 20 49.4	
	comp=Z,20nm,1.0s						
D24K	Happy Valley	24.39	39	P	P	05 20 41.6	+0.4
	baz=260						
H24K	Noodor Dome	24.49	47	P	P	05 20 42.1	-0.2
	baz=269						
COLA	College	24.52	50	P	P	05 20 45.7	+3.3
COLA	College	24.52	50	P	P	05 20 45.7	+3.3
COLA				pmax	pmax		
	comp=Z,27nm,1.3s						
C24K	Franklin Bluff	24.52	38	P	P	05 20 43.6	+1.2
	baz=259						
F24K	Squaw Lake	24.55	43		P	05 20 47.9	+5.1
F24K	Squaw Lake	24.55	43	P	P	05 20 43.3	+0.5
	baz=265						
G24K	Hadweenzic Riv	24.67	45	P	P	05 20 43.5	-0.3
	baz=267,SNR=5.3						
POKR	Poker Plat Res	24.68	49	P	P	05 20 45.6	+1.6
	baz=271						
PWL	Port Wells	24.72	59	P	P	05 20 44.3	0.0
	baz=279						
WAT6	Susitna Watana	24.74	55	P	P	05 20 45.6	+0.9
	baz=276						
DHY	Denali Highway	24.85	54	P	P	05 20 45.9	+0.2
	baz=275						
M23K	Glacier View	24.85	57	P	P	05 20 45.8	+0.3
	baz=278						
HDA	Harding Lake	24.93	51	P	P	05 20 46.6	+0.4
	baz=272						
ILAR	Eielson Array	24.93	50	P	P	05 20 49.5	+3.3
ILAR	Eielson Array	24.93	50	P	P	05 20 44.9	-1.3
	comp=Z,1.3nm,0.9s,baz=264,slow=8.7,SNR=12						
	comp=Z,1.3nm,0.9s						
SCM	Sheep Creek Mo	25.04	57	P	P	05 20 47.3	+0.1
	baz=278						
JSD	Sado	25.12	235		P	05 20 47.1	-1.0
JSD				IAmb	IAmb	05 20 58.4	
	comp=Z,8.3nm,0.8s						
G25K	Bearman Lake	25.22	45	P	P	05 20 49.6	+0.9
	baz=268						
D25K	Kavik River	25.27	39	P	P	05 20 50.6	+1.3
	baz=263						
GLI	Glacier Island	25.31	59	P	P	05 20 49.7	0.0
	baz=280						
H25L	Birch Creek	25.33	46	P	P	05 20 50.8	+1.0
	baz=270						
P23K	Montague Islan	25.34	61	P	P	05 20 49.6	-0.3
	baz=282						
F25K	Christian Rive	25.41	43	P	P	05 20 52.0	+1.3
	baz=267						
PRP	Porcupine Dome	25.47	48	P	P	05 20 51.6	+0.4
	baz=271						
K24K	Donnelly Dome	25.49	52	P	P	05 20 52.2	+0.9
	baz=275						
M24K	Tolsona, Glenn	25.53	56	P	P	05 20 52.3	+0.6
	baz=278						
J25K	Salcha River,	25.59	50	P	P	05 20 53.3	+1.0
	baz=273						
PAX	Paxson	25.73	54	P	P	05 20 54.4	+0.9
	baz=277						
KLU	Klutina	25.75	57	P	P	05 20 54.2	+0.4
	baz=280						
BMAR	Burnt Mountain	25.82	44		P	05 20 58.2	+4.0
RIDG	Independent Ri	25.91	52	P	P	05 20 56.0	+0.8
	baz=276						
F26K	Sheenjek River	25.99	43	P	P	05 20 57.7	+1.9
	baz=268						
Q23K	Middleton Isla	26.00	62	P	P	05 20 56.8	+1.0
	baz=283						
G26K	Porcupine Rive	26.13	45	P	P	05 20 57.1	+0.1
	baz=270						
C27K	Jago River	26.24	39	P	P	05 21 01.4	+3.4
	baz=265						
SCRK	Sand Creek	26.26	51	P	P	05 20 58.5	+0.2
	baz=276						
MJA0	Matsu Arr-Jizo	26.35	233	*e*P	P	05 20 58.6	-0.8
MJA0				pmax	pmax		
	comp=Z,9.0nm,0.8s						
N25K	Chitina, Valde	26.36	57	P	P	05 21 01.4	+2.2
	baz=280						
MAJO	Matsushiro	26.37	233		P	05 20 58.5	-0.9
MAJO	Matsushiro	26.37	233	P	P	05 20 58.6	-0.9
MAJO				pmax	pmax		
	comp=Z,28nm,1.0s						
MJAR	Matsushiro Arr	26.37	233	P	P	05 20 56.6	-2.9
	comp=Z,7.0nm,0.7s,baz=19,slow=8.2,SNR=17						
	comp=Z,7.0nm,0.7s						
J26L	Joseph Creek	26.38	50	P	P	05 21 02.1	+2.7
	baz=275						
I26K	Coal Creek Min	26.47	48	P	P	05 21 03.0	+2.9
	baz=274						
BMRM	Bremner River	26.48	58	P	P	05 21 01.8	+1.5
	baz=281						
M26K	Nabesna, AK	26.94	55	P	P	05 21 05.2	+0.7
	baz=280						
E27K	Coleen River	26.95	42	P	P	05 21 06.3	+1.8
	baz=270						
G27K	Doyon Strip	26.98	45	P	P	05 21 06.1	+1.3
	baz=272						
H27K	Steamboat Moun	27.07	46	P	P	05 21 06.4	+0.9
	baz=274						
K27K	Chicken	27.08	51	P	P	05 21 06.2	+0.6
	baz=277						
I27K	Kandik River	27.09	48	P	P	05 21 07.6	+1.9
	baz=275						
D27M	Malcolm River	27.19	40	P	P	05 21 09.8	+3.1
	baz=268						
CRQE	Cirque	27.25	58	P	P	05 21 08.1	+0.8
	baz=283						
BGLC	Bering Glacier	27.32	60	P	P	05 21 08.9	+1.1
	baz=284						
L27K	Beaver Creek,	27.35	53	IAmb	IAmb	05 21 35.4	
	comp=Z,11nm,1.1s						
L27K	Beaver Creek,	27.35	53	P	P	05 21 09.6	+1.5
	baz=279						
BCAR	Beaver Creek A	27.37	53	P	P	05 21 12.3	+4.0
M27K	Edge Creek, AK	27.46	55	IAmb	IAmb	05 21 36.5	
	comp=Z,9.9nm,0.9s						
M27K	Edge Creek, AK	27.46	55	P	P	05 21 10.3	+1.1
	baz=281						
JGF	Kuroka	27.54	233		P	05 21 10.2	+0.2
F28M	Old Crow	27.62	43	P	P	05 21 12.6	+2.0
	baz=272						
E28M	Babbage River	27.71	41	P	P	05 21 13.7	+2.4
	baz=271						
I28M	Miner Creek	27.80	48	P	P	05 21 14.0	+1.8
	baz=276						
BVCY	Beaver Creek	27.92	54	P	P	05 21 14.2	+1.0
	baz=281						
D28M	Stokes Point	27.98	39	P	P	05 21 15.8	+2.2
	baz=270						
CTG	Chitna Glacier	28.03	57	P	P	05 21 15.1	+0.8
	baz=284						
DAWY	Dawson	28.24	51	P	P	05 21 17.1	+1.0
	baz=279						
YUK3	Moose Creek	28.24	56	P	P	05 21 17.0	+0.7
	baz=283						
E29M	Blow River	28.32	41	P	P	05 21 18.7	+2.0
	baz=273						
H29M	Whitestone	28.34	46	P	P	05 21 18.7	+1.8
	baz=276						
G29M	Pine Creek	28.40	44	IAmb	IAmb	05 21 47.2	
	comp=Z,10.0nm,0.9s						
G29M	Pine Creek	28.40	44	P	P	05 21 19.1	+1.7
	baz=275						
I29M	Ogilvie Camp,	28.49	48	P	P	05 21 19.9	+1.7
	baz=278						
O28M	Mount Upton	28.63	58	P	P	05 21 20.6	+0.8
	baz=285						
YUK8	Steele Glacier	28.69	56	P	P	05 21 21.5	+1.1
	baz=284						
PINM	Pinnacle	28.79	59	P	P	05 21 21.8	+0.8
	baz=286						
EPYK	Eagle Plains	28.98	45	P	P	05 21 24.7	+2.1
	baz=277						
L29M	L29M	28.99	52	P	P	05 21 23.6	+0.9
	baz=282						
M29M	Somme Creek	29.00	54	P	P	05 21 24.4	+1.5
	baz=283						
G30M	tAoh Zraii Nji	29.09	44	P	P	05 21 25.3	+1.6
	baz=277						
K29M	Barlow Dome	29.10	51	P	P	05 21 25.2	+1.4
	baz=281						
YUK4	Talbot Arm	29.19	56	P	P	05 21 26.0	+1.2
	baz=285						
I30M	Mount Dempster	29.31	48	P	P	05 21 27.4	+1.7
	baz=280						
PNL	Peninsula	29.33	59	P	P	05 21 26.4	+0.7
	baz=287						
YUK6	Outpost Mounta	29.44	57	P	P	05 21 27.7	+0.8
	baz=286						
J30M	Hart River	29.45	49	P	P	05 21 28.8	+1.8
	baz=281						
G31M	Satah River	29.86	44	P	P	05 21 32.6	+2.3
	baz=278						
HYT	Haines Junctio	29.87	57	P	P	05 21 31.9	+1.2
	baz=286						
N30M	Aishikik Lake	29.88	55	P	P	05 21 32.4	+1.8
	baz=286						
INK	Inuvik	29.95	41	P	P	05 21 33.4	+2.3
	baz=277						
N31M	Braeburn, Yuko	30.48	55	P	P	05 21 37.1	+1.2
	baz=286						
O30N	Mendenhall	30.55	56	P	P	05 21 37.1	+0.5
	baz=287						
KSRS	Korea Array	30.67	248	P	P	05 21 35.9	-1.8
	comp=Z,0.8nm,0.5s,baz=31,slow=9.8,SNR=2.8						
	comp=Z,0.8nm,0.5s						
PLBC	Pleasant Camp	30.86	59	P	P	05 21 40.6	+1.4
	baz=289						
M31M	Drury Creek, Y	30.89	53	P	P	05 21 40.6	+1.0
	baz=286						
WHY	Whitehorse	31.15	56	P	P	05 21 42.7	+0.8
	baz=288						
SKAG	Skagway	31.35	58	P	P	05 21 45.5	+2.0
	baz=290						
FARO	Faro, Yukon	31.35	53	IAmb	IAmb	05 22 11.8	
	comp=Z,6.8nm,1.2s						
FARO	Faro, Yukon	31.35	53	P	P	05 21 44.7	+1.1
	baz=287						
S31K	Pelican	31.47	62	P	P	05 21 45.7	+1.2
	baz=292						
R31K	City Hall, Gus	31.54	61	P	P	05 21 46.4	+1.3
	baz=291						
MMPY	Sheldon Lake,	32.15	52	P	P	05 21 52.6	+1.9
	baz=288						
R32K	Eaglecrest	32.18	60	P	P	05 21 51.9	+1.0
	baz=292						
SIT	Sitka	32.28	63	P	P	05 21 52.9	+1.3
	baz=294						
Q32M	Nakina River	33.00	58	P	P	05 21 59.5	+1.2
	baz=292						
R33M	Jennings River	33.44	57	P	P	05 22 04.2	+2.2
	baz=292						
S34M	Telegraph Cree	33.97	60	P	P	05 22 08.3	+1.7
	baz=294						
WRAK	Wrangell Islan	34.03	62	P	P	05 22 08.6	+1.6
	baz=296						
T35M	Bob Quinn	34.81	61	P	P	05 22 14.9	+1.1
	baz=296						
ULN	Ulaanbaatar	35.30	281	⇑*i*P	P	05 22 21.6	+3.3
ULN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
SONM	Songino Array	35.68	282	P	P	05 22 19.8	-1.8
	comp=Z,1.4nm,0.8s,baz=63,slow=8.4,SNR=6.4						
	comp=Z,1.4nm,0.8s						
TOAD	Toad River Com	36.35	56	P	P	05 22 28.1	+1.1
	baz=296						
HHC	Hu-ho-hao-te	37.20	269	*e*P	P	05 22 37.0	+2.5
HHC				pmax	pmax		
	comp=Z,16nm,0.7s						
HHC				pmax	pmax		
	comp=Z,140nm,5.2s						
JOW	Kunigami	39.08	237	LR	LR	05 39 34.5	
	comp=Z,598nm,20.9s,baz=116,slow=37						
YKA	Yellowknife Ar	39.26	46	P	P	05 22 50.8	-0.6
	comp=Z,1.0nm,0.7s,baz=301,slow=8.6,SNR=7.4						
	comp=Z,1.0nm,0.7s						
RES	Resolute Bay	39.56	24		P	05 22 55.3	+1.5
RES	Resolute Bay	39.56	24	P	P	05 22 55.3	+1.5
RES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NJ2	Nanjing	39.58	252	*e*P	P	05 22 56.3	+1.8
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
KBS	Kingsbay	44.21	353	⇑*i*P	P	05 23 38.0	+6.2
KBS				pmax	pmax		
	comp=Z,27nm,1.5s						
SPITS	Spitsbergen Ar	44.55	351	P	P	05 23 35.5	+0.9
	comp=Z,7.7nm,0.9s,baz=84,slow=7.6,SNR=4.7						
	comp=Z,7.7nm,0.9s						
GTA	Gaotai	44.75	276	*e*P	P	05 23 34.5	-2.2
GTA				sP	pwP	05 23 42.0	-2.0
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LZH	Lanzhou	44.85	270	*e*P	P	05 23 46.3	+8.7
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
B08A	Colville Reser	45.10	66	IAmb	IAmb	05 23 48.0	
	comp=Z,8.0nm,1.1s						
HOOD	Mount Hood Mea	45.87	71	P	P	05 23 46.0	+0.4
ILON	Igloolik, Nuna	46.01	27		P	05 23 51.3	+5.2
ILON				IAmb	IAmb	05 23 52.8	
	comp=Z,6.0nm,0.9s						
BBOR	Butler Butte	46.96	74	IAmb	IAmb	05 24 03.6	
	comp=Z,10nm,1.4s						
LNOR	Lincton Mounta	47.27	68	IAmb	IAmb	05 24 05.2	
	comp=Z,5.1nm,1.2s						
PINE	Pine Mountain	47.28	72	IAmb	IAmb	05 24 06.0	
	comp=Z,6.3nm,1.1s						
YBH	Yreka Blue Hor	47.73	75	IAmb	IAmb	05 24 09.8	
	comp=Z,5.1nm,1.1s						
K05A	Summer Lake	48.03	73	IAmb	IAmb	05 24 18.2	
	comp=Z,6.4nm,1.1s						
KURK	Kurchatov	48.25	302	P	P	05 24 03.2	-0.7
WMQ	Urumqi	48.32	289	*e*P	P	05 24 10.5	+5.9
WMQ				pmax	pmax		
	comp=Z,23nm,0.9s						
WMQ				LR	LR		
	comp=Z,1µm,21.7s						
WMQ				LR	LR		
	comp=Z,560nm,22.9s						
WMQ				LR	LR		
	comp=Z,660nm,19.3s						
KURBB	Kurchatov Arra	48.36	302	P	P	05 24 03.1	-1.6
	comp=Z,0.5nm,0.5s,baz=55,slow=7.6,SNR=5.5						
	comp=Z,0.5nm,0.5s						
BMO	Blue Mountains	48.47	69	IAmb	IAmb	05 24 14.5	
	comp=Z,5.9nm,1.2s						
MSO	Missoula	48.86	64	IAmb	IAmb	05 24 17.8	
	comp=Z,5.8nm,0.9s						
PLID	Pearl Lake	48.99	67	IAmb	IAmb	05 24 18.4	
	comp=Z,7.8nm,1.3s						
MK31	Makanchi Array	49.09	296	*e*P	P	05 24 15.1	+4.7
MKAR	Makanchi Array	49.09	296	P	P	05 24 09.0	-1.4
	comp=Z,0.7nm,0.7s,baz=67,slow=6.8,SNR=4.4						
	comp=Z,0.7nm,0.7s						
MAKZ	Makanchi	49.23	296	P	P	05 24 15.7	+4.1
MAKZ	Makanchi	49.23	296	P	P	05 24 15.7	+4.1
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.4s						
EGMT	Eagleton	50.12	61	IAmb	IAmb	05 24 25.6	
	comp=Z,6.6nm,0.9s						
MFID	Camas Ranch	50.23	69	IAmb	IAmb	05 24 27.9	
	comp=Z,5.9nm,1.1s						
BVAR	Borovoye Array	50.45	309	P	P	05 24 19.1	-1.6
	comp=Z,1.4nm,0.7s,baz=56,slow=9.1,SNR=4.8						
	comp=Z,1.4nm,0.7s						
DLMT	Dillon	50.54	65	IAmb	IAmb	05 24 30.2	
	comp=Z,6.6nm,1.1s						
YHL	Hebgen Lake	51.62	65	IAmb	IAmb	05 24 38.6	
	comp=Z,6.5nm,1.1s						
YNE	Yellowstone No	52.10	64	IAmb	IAmb	05 24 42.0	
	comp=Z,4.9nm,0.9s						
NVAR	Mina Array Bea	52.46	75	P	P	05 24 36.4	+0.3
NVAR	Mina Array Bea	52.46	75	P	P	05 24 35.5	-0.6
	comp=Z,2.0nm,0.8s,baz=302,slow=7.3,SNR=11						
	comp=Z,2.0nm,0.8s						
TPAW	Teton Pass	52.70	66	IAmb	IAmb	05 24 47.1	
	comp=Z,6.8nm,1.1s						
ARTI	Arti	52.94	318	P	P	05 24 38.8	-0.4
	comp=Z,2.2nm,0.4s,baz=88,slow=7.5,SNR=6.1						
	comp=Z,2.2nm,0.4s						
ARTI	Arti	52.94	318	*c* *i*P	P	05 24 42.9	+3.7
ARTI						05 26 41.1	
ARTI				S	S	05 32 11.1	+3.1
ARTI				SS	SS	05 35 47.7	+1.5
ARTI				pmax	pmax		
	comp=Z,13nm,1.5s						
PZH	PanZhiHua	53.24	263	P	P	05 24 46.3	+4.3
BW06	Boulder Array	53.93	65	IAmb	IAmb	05 24 55.5	
	comp=Z,6.1nm,1.1s						
PD31	Pinedale Array	53.93	65	IAmb	IAmb	05 24 55.5	
	comp=Z,6.8nm,1.1s						
PDAR	Pinedale Array	53.93	65		P	05 24 46.6	-0.4
PDAR	Pinedale Array	53.93	65	P	P	05 24 45.8	-1.2
	comp=Z,1.9nm,0.7s,baz=330,slow=2.8,SNR=21						
	comp=Z,1.9nm,0.7s						
S11A	Rachel	54.41	74	IAmb	IAmb	05 25 02.1	
	comp=Z,8.4nm,1.1s						
ULM	Lac du Bonnet	54.95	51	P	P	05 24 53.0	-0.9
	comp=Z,2.3nm,0.7s,baz=303,slow=12,SNR=3.9						
	comp=Z,2.3nm,0.7s						
PRN	Pahroc Range	54.96	74	IAmb	IAmb	05 24 55.7	
	comp=Z,5.1nm,0.7s						
GWY	Greenwater Val	54.98	76	IAmb	IAmb	05 25 03.3	
	comp=Z,6.5nm,0.9s						
QSM	Queen of Sheba	55.04	76	IAmb	IAmb	05 24 57.7	
	comp=Z,6.4nm,0.9s						
BOOM	Boomskoye usch	55.33	296	P	P	05 25 02.0	+4.9
BOOM				IAmb	IAmb	05 25 04.4	
	comp=Z,7.1nm,1.3s						
BOOM	Boomskoye usch	55.33	296	P	P	05 25 02.0	+4.9
BOOM				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KLMR	Klimovskoe	55.55	331	*e*P	P	05 25 01.9	+3.8
KLMR				pmax	pmax		
	comp=Z,15nm,1.3s						
GSC	Goldstone, Bar	55.57	77	IAmb	IAmb	05 25 07.4	
	comp=Z,9.1nm,1.2s						
TMUT	Trail Mountain	55.61	69	IAmb	IAmb	05 25 00.3	
	comp=Z,4.1nm,0.8s						
RSSD	Black Hills	55.70	61		P	05 24 59.4	-0.4
RSSD				IAmb	IAmb	05 25 07.9	
	comp=Z,5.3nm,0.9s						
RSSD	Black Hills	55.70	61	P	P	05 24 59.4	-0.4
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.9s						
P18A	Preston Nutter	55.87	68	IAmb	IAmb	05 25 21.8	
	comp=Z,4.7nm,1.0s						
AAK	Ala-Archa	55.95	297	P	P	05 25 00.1	-1.4
	comp=Z,1.0nm,0.3s,baz=52,slow=21,SNR=4.4						
	comp=Z,1.0nm,0.3s						
LCMT	Little Creek M	56.22	73	IAmb	IAmb	05 25 13.1	
	comp=Z,6.3nm,1.3s						
KNB	Kanab	56.44	72	IAmb	IAmb	05 25 14.2	
	comp=Z,8.9nm,1.4s						
PV22	Blue Mesa, Par	57.44	68	IAmb	IAmb	05 25 41.6	
	comp=Z,5.7nm,0.9s						
PV16	Nyswonger Mesa	57.54	69	IAmb	IAmb	05 25 21.8	
	comp=Z,7.9nm,1.1s						
PV17	East Wray Mesa	57.54	69	IAmb	IAmb	05 25 43.0	
	comp=Z,7.6nm,1.0s						
AKTO	Aktyubinsk	57.59	313	P	P	05 25 12.0	-0.8
	comp=Z,0.6nm,0.4s,baz=24,slow=3.3,SNR=4.9						

	comp=Z,0.6nm,0.4s						
AKTO	Aktyubinsk	57.59	313	P	P	05 25 12.0	-0.8
PV03	Paradox Valley	57.61	69	IAmb	IAmb	05 25 22.3	
	comp=Z,10nm,1.4s						
PV13	Radium Mtn., P	57.70	69	IAmb	IAmb	05 25 22.4	
	comp=Z,7.7nm,1.1s						
PV15	Paradox Valley	57.74	68	IAmb	IAmb	05 25 30.0	
	comp=Z,4.8nm,0.8s						
ISCO	Idaho Springs	58.12	65	IAmb	IAmb	05 25 27.3	
	comp=Z,4.5nm,0.9s						
FINES	FINESS Array B	58.29	338	P	P	05 25 16.7	-0.8
	comp=Z,1.6nm,0.9s,baz=110,slow=8.6,SNR=2.3						
	comp=Z,1.6nm,0.9s						
BELG	Belogornoye	59.99	321	*i* P	P	05 25 34.9	+5.5
BELG				pmax	pmax		
	comp=Z,8.0nm,1.2s						
CMAR	Chiang Mai Arr	61.20	260	P	P	05 25 35.9	-2.3
	comp=Z,1.2nm,0.4s,baz=21,slow=6.7,SNR=7.9						
	comp=Z,1.2nm,0.4s						
NOA	NORSAR Array B	61.28	345	P	P	05 25 37.3	-0.9
	comp=Z,0.5nm,0.6s,baz=18,slow=6.8,SNR=3.3						
	comp=Z,0.5nm,0.6s						
SIMJ	Simiganj	61.68	298		P	05 25 46.1	+4.8
SCHQ	Schefferville	61.79	31	P	P	05 25 39.8	-1.9
	comp=Z,1.9nm,0.8s,baz=344,slow=6.4,SNR=12						
	comp=Z,1.9nm,0.8s						
LPSR	Galich'ya Gora	62.72	326	*e*P	P	05 25 53.2	+5.3
LPSR				pmax	pmax		
	comp=Z,11nm,0.8s						
VRH	Novokhopyorsk	63.01	324	*e*P	P	05 25 48.9	-1.0
VRH				pmax	pmax		
	comp=Z,26nm,0.6s						
MNTX	Cornudas Mount	64.46	71	IAmb	IAmb	05 26 08.3	
	comp=Z,3.9nm,0.9s						
VHRN	Van Horn	65.38	71	IAmb	IAmb	05 26 14.8	
	comp=Z,6.1nm,1.3s						
WMOK	Wichita Mounta	65.48	64	P	P	05 26 05.4	-1.0
WMOK	Wichita Mounta	65.48	64	P	P	05 26 05.4	-1.0
WMOK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
APMT	Aspermont	65.92	66	IAmb	IAmb	05 26 16.8	
	comp=Z,5.9nm,1.0s						
MNHN	Monahans	66.12	69	IAmb	IAmb	05 26 18.2	
	comp=Z,3.1nm,0.8s						
ALPN	Alpine	66.42	70	IAmb	IAmb	05 26 20.3	
	comp=Z,3.0nm,0.8s						
LMQ	La Malbaie	67.03	37		P	05 26 21.1	+4.9
TX31	Lajitas Ar. Si	67.22	71	IAmb	IAmb	05 26 25.9	
	comp=Z,5.0nm,0.8s						
TXAR	Lajitas Array	67.23	71		P	05 26 17.8	+0.1
TXAR	Lajitas Array	67.23	71	P	P	05 26 17.5	-0.3
	comp=Z,3.4nm,0.7s,baz=299,slow=4.3,SNR=54						
	comp=Z,3.4nm,0.7s						
AKASG	Malin Array Be	67.24	331	P	P	05 26 18.6	+1.2
	comp=Z,0.4nm,0.4s,baz=26,slow=6.6,SNR=5.9						
	comp=Z,0.4nm,0.4s						
AKBB	Malin Array Si	67.24	331	*i* P	P	05 26 21.8	+4.5
AKBB				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MIAR	Mount Ida	68.21	60	IAmb	IAmb	05 26 41.7	
	comp=Z,6.3nm,1.1s						
EKA	Eskdalemuir Ar	68.44	352	P	P	05 26 25.6	+0.7
	comp=Z,0.8nm,0.7s,baz=5.3,slow=5.2,SNR=6.8						
	comp=Z,0.8nm,0.7s						
DRIO	Del Rio	68.76	69	IAmb	IAmb	05 26 34.3	
	comp=Z,5.2nm,1.0s						
KBZ	Khabaz	68.98	319	P	P	05 26 28.6	+0.2
	comp=Z,1.3nm,0.6s,baz=38,slow=0.3,SNR=3.7						
	comp=Z,1.3nm,0.6s						
CLL	Collm	70.35	341	*e*P	P	05 26 42.0	+5.3
CLL	Collm	70.35	341	*e*P	P	05 26 42.0	+5.3
GERES	GERESS Array B	72.58	340	P	P	05 26 49.7	-0.6
	comp=Z,0.3nm,0.2s,baz=34,slow=5.0,SNR=6.0						
	comp=Z,0.3nm,0.2s						
CONA	Conrad Observa	73.03	338	*i* pP	P	05 26 58.9	+5.9
	comp=Z,6.0nm,1.4s						
MOA	Molln	73.42	340	*e*pP	P	05 27 02.1	+6.9
	comp=Z,2.0nm,0.6s						
BIOA	Bad Ischl, Aus	73.70	340	*e*pP	P	05 27 04.9	+8.1
	comp=Z,1.7nm,0.4s						
ARSA	Arzberg	73.75	338	*e*pP	P	05 27 02.5	+5.3
	comp=Z,1.8nm,0.5s						
LESA	Schwarzleotal	74.14	340	*e*pP	P	05 27 04.6	+5.1
	comp=Z,1.0nm,0.4s						
SOKA	Soboth	74.39	339	*e*pP	P	05 27 08.5	+7.5
	comp=Z,1.3nm,0.7s						
RETA	Reutte	74.42	342	*e*pP	P	05 27 07.1	+5.9
	comp=Z,0.6nm,0.3s						
WATA	Walderalm	74.43	341	*i* pP	P	05 27 06.8	+5.5
	comp=Z,1.6nm,0.4s						
WTTA	Wattenberg	74.48	341	*e*pP	P	05 27 07.2	+5.5
	comp=Z,2.0nm,0.4s						
MOTA	Moosalm	74.50	341	*i* pP	P	05 27 07.6	+5.8
	comp=Z,2.4nm,0.6s						
SQTA	Sankt Quirin	74.60	341	*i* pP	P	05 27 09.1	+6.8
	comp=Z,3.2nm,0.6s						
OBKA	Obir	74.65	339	*e*P	P	05 27 07.0	+4.4
	comp=Z,12nm,1.2s						
DAVA	Damuels	74.77	342	*e*P	P	05 27 07.2	+3.9
	comp=Z,1.9nm,0.4s						
ABTA	Abfaltersbach	74.82	340	*i* pP	P	05 27 10.8	+7.3
	comp=Z,7.4nm,1.1s						
FETA	Feichten	74.88	342	*e*pP	P	05 27 10.8	+6.9
	comp=Z,6.5nm,1.3s						
DAVOX	Davos/Dischmat	75.26	342	P	P	05 27 06.3	+0.1
	comp=Z,1.3nm,0.4s,baz=147,slow=3.0,SNR=3.9						
	comp=Z,1.3nm,0.4s						
TUE	Stuetta	75.65	342		P	05 27 13.3	+4.8
TUE				IAmb	IAmb	05 27 15.7	
	comp=Z,8.1nm,1.4s						
BRTR	Keskin Array B	75.79	323		P	05 27 14.5	+5.2
BRTR	Keskin Array B	75.79	323	P	P	05 27 08.5	-0.8
	comp=Z,0.3nm,0.5s,baz=90,slow=3.7,SNR=6.7						
	comp=Z,0.3nm,0.5s						
WRA	Warramunga Arr	79.91	209		P	05 27 31.6	-0.4
WRA	Warramunga Arr	79.91	209	P	P	05 27 30.8	-1.3
	comp=Z,1.7nm,1.1s,baz=19,slow=5.7,SNR=6.1						
	comp=Z,1.7nm,1.1s						
ASF	Jabal al Asfar	81.37	317	P	P	05 27 40.1	0.0
	comp=Z,1.1nm,0.4s,baz=131,slow=4.6,SNR=5.0						
	comp=Z,1.1nm,0.4s						
PGAV	Gavieira, Arco	82.09	354	*e*P	P	05 27 50.4	+6.6
PGAV				*i* Amb		05 27 55.0	
	comp=Z,27nm,1.5s						
PBRG	Braganca	82.16	353	*e*P	P	05 27 49.6	+5.6
PCAB	Cabril	82.33	354	*e*P	P	05 27 51.6	+6.7
PVRL	Vila Real	82.74	354	*e*P	P	05 27 53.8	+6.6
MVO	Moncorvo	82.81	353	*e*P	P	05 27 52.5	+5.0
MVO				*i* Amb		05 27 59.5	
	comp=Z,14nm,2.3s						
PVIS	Viseu	83.31	354	*e*P	P	05 27 56.8	+6.7
ASAR	Alice Springs	83.58	208	P	P	05 27 51.1	-0.2
	comp=Z,1.0nm,0.7s,baz=15,slow=5.1,SNR=7.4						
	comp=Z,1.0nm,0.7s						
ESDC	Sonseca Array	84.06	351		P	05 27 57.5	+3.6
ESDC				IAmb	IAmb	05 28 01.9	
	comp=Z,5.1nm,1.4s						
ESDC	Sonseca Array	84.06	351	P	P	05 27 53.4	-0.6
	comp=Z,0.4nm,0.7s,baz=2.7,slow=6.1,SNR=9.6						
	comp=Z,0.4nm,0.7s						
PCBR	Castelo Branco	84.16	354	*e*P	P	05 27 59.0	+4.7
RAYN	Ar Rayn	85.38	306		P	05 28 05.3	+4.5
RAYN				IAmb	IAmb	05 28 06.4	
	comp=Z,5.6nm,1.0s						
RAYN	Ar Rayn	85.38	306	P	P	05 28 05.3	+4.5
RAYN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
EVO	Evora	85.49	354	*e*P	P	05 28 05.8	+4.7
EVO				*i* Amb		05 28 07.1	
	comp=Z,10nm,1.5s						
PBAR	Barrancos	85.79	353	*e*P	P	05 28 06.1	+3.6
PBEJ	Beja	85.99	354	*e*P	P	05 28 09.7	+6.2
PVAQ	Vaqueiros	86.60	354	*e*P	P	05 28 11.6	+5.0
QSPA	South Pole Qui	145.87	180	PKPbc	PKPdf	05 34 59.6	-1.1
	comp=Z,2.3nm,0.8s,baz=337,slow=0.7,SNR=9.8						

IDC ***26*** *05:16:34.3±1.5, 34°.00N×25°.00E, h0^{km}, mb4.1/14, mbtmp4.1/22, ML3.9/8, Error ellipse: s-maj=29.5km s-min=14.9km az=20.0*

NEIC ***26*** *05:16:36.1±2.0, 33°.88N±0°.08×25°.00E±0°.08, h10^{km}±2^{km}, mb4.0/6, Error ellipse: s-maj=16.0km s-min=9.3km az=213.0*

ISK ***26*** *05:16:38.2, 34°.13N×25°.15E, h12^{km}, ML3.5/28*

ATH ***26*** *05:16:41.1, 34°.12N×25°.02E, h29^{km}±13^{km}, ML3.5/3, Manual Solution by E.Daskalaki First location: 2019/06/26 05:18:13, This location: 2019/06/26 07:14:41 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 7 km; Longitude uncertainty: 3 km*

NAO ***26*** *05:16:42.1, 34°.31N×25°.02E, h33^{km}, mb4.1*

AFAD ***26*** *05:16:43.0, 34°.23N×25°.46E, h15^{km}, MW4.0*

THE ***26*** *05:16:43.8, 34°N±7°×2°5E±°, h63^{km}±16^{km}, M3.3/11, MLh3.3/11*

HLW ***26*** *05:16:43.8, 33°.81N×25°.41E, h29^{km}±16^{km}, Md3.8, Ml3.3*

GII ***26*** *05:16:43.5±0.0, 33°.788N±0°.002×25°.779E±0°.001, h5^{km}, Mws4.1, confirmed*

ISC 26 05:16:37.4±1.3**, 33°.93N**±0°.04×**25°.15E**±0°.04**, h24**^{km}±10^{km}**, n172,** σ**1^{s}.95**/212**, mb4.0**/15**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TMBK	Timbaki Herakl	1.19	345	P	Pb	05 16 59.1	0.0
TMBK				S	Sb	05 17 14.3	+0.2
TMBK	Timbaki Herakl	1.19	345	P	Pb	05 16 58.9	-0.3
GVD	Gavdhos	1.26	316	Pn	Pb	05 17 00.1	-0.4
GVD				Sn	Sb	05 17 16.0	-0.3
GVD	Gavdhos	1.26	316	P	Pb	05 17 00.3	-0.2
GVD				S	Sn	05 17 13.8	-2.0
GVD	Gavdhos	1.26	316	P	Pb	05 17 00.0	-0.4
IDI	Anoyia	1.37	351	Pn	Pn	05 17 00.9	-0.3
IDI				Sn	Sn	05 17 17.6	-1.1
IDI	Anoyia	1.37	351		Pb	05 17 02.1	-0.4
IDI	Anoyia	1.37	351	P	Pb	05 17 02.0	-0.4
IDI				S	Sn	05 17 18.9	+0.3
IDI	Anoyia	1.37	351	Pn	Pn	05 17 01.5	+0.4
	42nm,0.3s,baz=161,slow=20,SNR=101						
IDI				Sn	Sn	05 17 14.3	-4.3
	65nm,0.3s,baz=149,slow=21,SNR=9.0						
IDI	Anoyia	1.37	351	P	Pn	05 17 01.6	+0.4
IDI				S	Sn	05 17 17.1	-1.6
IACM	Heraklion	1.38	357	P	Pb	05 17 02.7	+0.3
ZKR	Zakros	1.48	36	Pn	Pn	05 17 03.1	+0.6
ZKR	Zakros	1.48	36	P	Pb	05 17 05.1	+0.9
PRNS	Prines Rethymn	1.53	340	P	Pb	05 17 04.1	-0.9
PRNS				S	Sn	05 17 21.2	-1.1
PRNS	Prines Rethymn	1.53	340	P	Pn	05 17 03.7	+0.5
KNDR	Palaiochora Ch	1.78	318	Pn	Pb	05 17 08.3	-0.9
IMMV	Iera Moni Meta	1.81	328	Pn	Pn	05 17 07.9	+0.9
IMMV	Iera Moni Meta	1.81	328	P	Pn	05 17 08.1	+1.0
IMMV				S	Sn	05 17 23.6	-5.7
KARP	Karpathos	2.31	45	Pn	Pb	05 17 16.7	-1.7
KARP				Sn	Sn	05 17 42.6	+0.8
KARP	Karpathos	2.31	45		Pb	05 17 17.2	-1.3
KARP	Karpathos	2.31	45	P	Pb	05 17 17.3	-1.1
KARP				S	Sn	05 17 44.9	+3.1
KARP	Karpathos	2.31	45	P	Pb	05 17 16.7	-1.7
SLUM	Salum	2.43	179	P	Pb	05 17 19.7	-0.7
THR9	Santorini-Faro	2.43	4	P	Pn	05 17 16.9	+1.2
THR6	Thira Island,	2.43	5	P	Pn	05 17 16.9	+1.2
THERA	Ancient Thera,	2.45	6	P	Pn	05 17 16.3	+0.4
THERA				S	Sn	05 17 41.7	-3.4
ANKY	Antikythira Is	2.46	322	P	Pb	05 17 18.8	-2.1
SNT5	Nea Kammeni, S	2.48	5	P	Pn	05 17 13.4	-2.9
SNT5				S	Sn	05 17 42.1	-3.7
SAP3	Santorini-Thir	2.51	4	P	Pn	05 17 16.9	+0.2
SAP3				S	Sn	05 17 46.5	0.0
KTHA	Kythira Island	2.88	324	Pn	Pn	05 17 23.1	+1.2
KTHA				Sn	Sn	05 17 55.4	-0.5
NISR	Nisiros	3.13	31	P	Pn	05 17 26.8	+1.6
NISR				S	Sn	05 18 00.7	-1.2
APE	Apeiranthos	3.15	6	Pn	Pn	05 17 25.6	0.0
APE	Apeiranthos	3.15	6	P	Pn	05 17 25.6	0.0
APE				S	Sn	05 17 59.5	-3.0
APE	Apeiranthos	3.15	6	P	Pn	05 17 25.1	-0.5
VLI	Veliai	3.32	328	P	Pn	05 17 28.1	+0.3
VLI				S	Sn	05 18 03.6	-2.9
VLI	Veliai	3.32	328	P	Pn	05 17 28.1	+0.3
YAZI	Mula-Dat§a-	3.33	34	P	Pn	05 17 29.6	+1.6
YAZI				S	Sn	05 18 02.5	-4.4
ARG	Arkhangelos	3.34	46	Pn	Pn	05 17 31.0	+2.8
ARG				Sn	Sn	05 18 07.9	+0.8
ARG	Arkhangelos	3.34	46		Pn	05 17 31.0	+2.8
ARG	Arkhangelos	3.34	46	P	Pn	05 17 30.8	+2.6
ARG				S	Sn	05 18 08.6	+1.5
ARG	Arkhangelos	3.34	46	P	Pn	05 17 31.0	+2.8
ARG				S	Sn	05 18 08.1	+1.0
DAT	Datca	3.43	35	Pn	Pn	05 17 30.7	+1.2
DATC	Datca-Mugla	3.49	35	Pn	Pn	05 17 31.7	+1.5
BODT	Bodrum	3.59	29	Pn	Pn	05 17 32.9	+1.3
BODT	Bodrum	3.59	29	P	Pn	05 17 32.3	+0.8
BODT				S	Sn	05 18 12.0	-1.3
TURN	Turunc	3.81	41	Pn	Pn	05 17 36.3	+1.8
TURN	Turunc	3.81	41	P	Pn	05 17 36.2	+1.7
TURN				S	Sn	05 18 17.1	-1.4
MLSB	Milas	3.98	32	Pn	Pn	05 17 38.4	+1.4
DB3	El Dabaa	4.07	134	P	Pn	05 17 41.0	+2.8
ITM	Ithomi	4.17	322	Pn	Pn	05 17 41.3	+1.7
ITM	Ithomi	4.17	322	Pn	Pn	05 17 40.1	+0.5
ITM	Ithomi	4.17	322	P	Pn	05 17 40.1	+0.5
FETY	Fethiye	4.20	49	Pn	Pn	05 17 41.4	+1.4
FETY				Sn	Sn	05 18 28.9	+0.5
FETY	Fethiye	4.20	49	P	Pn	05 17 43.3	+3.3
FETY				S	Sn	05 18 28.5	+0.1
MULA	Mugla, Merkez-	4.21	37	P	Pn	05 17 42.7	+2.6
MULA				S	Sn	05 18 27.6	-1.0
SABU	Mula-Dalaman	4.25	46	P	Pn	05 17 41.9	+1.2
SABU				S	Sn	05 18 27.5	-2.1
AKAS	Kas	4.32	57	Pn	Pn	05 17 43.5	+1.9
AKAS	Kas	4.32	57		Pn	05 17 43.9	+2.2
AKAS	Kas	4.32	57	P	Pn	05 17 43.6	+1.9
AKAS				S	Sn	05 18 29.9	-1.5
CHOS	Chios island	4.51	9	Pn	Pn	05 17 45.6	+1.3
CAME	Cameli-Denizli	4.53	47	Pn	Pn	05 17 46.5	+1.8
URLA	Izmir	4.58	14	Pn	Pn	05 17 46.5	+1.4
AYDB	Zeytinkoy-Aydi	4.59	28	Pn	Pn	05 17 47.1	+1.7
DNZT	Denizli-Tavas-	4.60	42	P	Pn	05 17 47.4	+1.9
DNZT				S	Sn	05 18 36.6	-1.7
KNIK	Mula-Seydike	4.64	50	P	Pn	05 17 47.5	+1.4
KNIK				S	Sn	05 18 36.0	-3.4
ESEN	Aydn-Nazilli	4.66	33	P	Pn	05 17 47.7	+1.6
ESEN				S	Sn	05 18 38.6	-0.9
CAEL	Denizli, Camel	4.66	46	P	Pn	05 17 50.5	+4.1
CAEL				S	Sn	05 18 40.9	+1.1
TAVA	DENIZLI_Tavas	4.67	40	P	Pn	05 17 48.8	+2.3
TAVA				S	Sn	05 18 39.0	-1.1
SWA2		4.68	177	P	Pn	05 17 50.5	+4.0
NAZL	Nazilli-Aydin	4.77	31	Pn	Pn	05 17 49.7	+1.9
KLV	Kalavryta, Ach	4.77	330	P	Pn	05 17 48.3	+0.4
ELL	Elmali	4.80	53	Pn	Pn	05 17 50.9	+2.6
DNIZ	Denizli-Tavas-	4.86	39	P	Pn	05 17 52.6	+3.5
DNIZ				S	Sn	05 18 43.0	-1.6
GOLH	Golhisar	4.88	46	P	Pn	05 17 51.1	+1.7
GOLH				S	Sn	05 18 46.0	+0.7
APMY	Acipayam-Deniz	4.89	43	Pn	Pn	05 17 51.7	+2.2
ODEM	Odemis-Izmir	4.94	28	Pn	Pn	05 17 52.1	+1.9
KORT	Korkueli	5.24	53	P	Pn	05 17 56.4	+2.1
KORT				S	Sn	05 18 54.7	+0.7
MANT	Manisa	5.32	30		Pn	05 17 56.8	+1.2
KULA	Kula-Manisa	5.39	31	Pn	Pn	05 17 58.6	+2.3
GORD	Gordes-Manisa	5.54	25	Pn	Pn	05 18 00.2	+1.8
AGG	Agios Georgios	5.57	337	Pn	Pn	05 18 00.9	+2.1
PASA	Karahalli, USA	5.64	37	P	Pn	05 18 00.8	+1.0
PASA				S	Sn	05 18 59.7	-4.1
RYAN	Fayoum	6.52	136	P	Pn	05 18 14.9	+3.1
CSS	Mathiatis	6.84	79		Pn	05 18 18.2	+2.0
HFRF	Wahat Farafira	7.29	157	P	Pn	05 18 25.4	+3.1
NBNS	Bani Suef	7.46	134	P	Pn	05 18 27.9	+3.2
FNA	Florina	7.47	337		Pn	05 18 24.8	-0.2
KZIT	Kziot	8.38	109	P	Pn	05 18 38.4	+1.1
KZIT	Kziot	8.38	109	S	Sn	05 20 08.2	-3.0
SLTI	Sal'it	8.47	99	P	Pn	05 18 39.7	+1.1
SLTI	Sal'it	8.47	99	S	Sn	05 20 09.9	-3.6
AMAZ	Amatzia	8.57	104	P	Pn	05 18 40.9	+0.9
AMAZ	Amatzia	8.57	104	S	Sn	05 20 12.5	-3.4
MMA0B	Mount Meron ar	8.62	93	P	Pn	05 18 42.2	+1.6
MMA0B	Mount Meron ar	8.62	93	S	Sn	05 20 14.6	-2.5
MMAI	Mount Meron Ar	8.62	93	Pn	Pn	05 18 42.5	+1.9
	4.6nm,0.3s,baz=260,slow=13,SNR=7.8						
MMAI				Sn	Sn	05 20 14.2	-2.9
	6.2nm,0.3s,baz=270,slow=22,SNR=3.1						
	2.7nm,0.3s						
CEL	Celeste	8.65	303		Pn	05 18 40.5	-0.6
MMLI	Mount Malkishu	8.74	97	P	Pn	05 18 42.8	+0.4
MMLI	Mount Malkishu	8.74	97	S	Sn	05 20 16.4	-3.7
YTIR	Yattir	8.79	104	P	Pn	05 18 44.3	+1.3
YTIR	Yattir	8.79	104	S	Sn	05 20 18.4	-3.0
GEM	Giv'at Ha'Em	8.80	92	P	Pn	05 18 44.3	+1.1
GEM	Giv'at Ha'Em	8.80	92	S	Sn	05 20 19.1	-2.6
NATI	Neve Ativ	8.86	91	P	Pn	05 18 45.2	+1.3
NATI	Neve Ativ	8.86	91	S	Sn	05 20 20.6	-2.4
HMDT	Nahal Hemdat	8.87	98	P	Pn	05 18 45.0	+1.0
HMDT	Nahal Hemdat	8.87	98	S	Sn	05 20 20.1	-3.1
BRTR	Keskin Array B	8.93	47	Pn	Pn	05 18 47.4	+2.3
	0.2nm,0.3s,baz=236,slow=8.8,SNR=3.8						
	1.0nm,0.7s						
DSI	Dead Sea	8.93	102	P	Pn	05 18 45.9	+1.0
DSI	Dead Sea	8.93	102	S	Sn	05 20 21.0	-3.8
KRMI	Paran Flat	8.97	112	P	Pn	05 18 46.9	+1.3
KRMI	Paran Flat	8.97	112	S	Sn	05 20 22.4	-3.5
MSBI	Mazada	9.00	104	P	Pn	05 18 46.6	+0.8
MSBI	Mazada	9.00	104	S	Sn	05 20 23.0	-3.4
BALJ	Balqa	9.00	99		Pn	05 18 47.4	+1.5
PRNI	Paran	9.09	110	P	Pn	05 18 49.0	+1.9
PRNI	Paran	9.09	110	S	Sn	05 20 25.4	-3.2
HRFI	Mount Harif	9.25	112	P	Pn	05 18 51.7	+2.4
HRFI	Mount Harif	9.25	112	S	Sn	05 20 29.5	-3.1
MBRI	Mt Berech	9.27	114	P	Pn	05 18 50.9	+1.2
MBRI	Mt Berech	9.27	114	S	Sn	05 20 30.0	-3.2
EIL	Elat	9.36	114	Pn	Pn	05 18 52.6	+1.8
	2.8nm,0.3s,baz=352,slow=4.4,SNR=22						
EIL				Sn	Sn	05 20 32.1	-3.2
	4.2nm,0.3s,baz=316,slow=12,SNR=7.8						
	8.2nm,0.4s						
EIL	Elat	9.36	114	P	Pn	05 18 51.8	+1.0
EIL	Elat	9.36	114	S	Sn	05 20 32.0	-3.3
CUC	Castrocucco	9.61	312		Pn	05 18 54.4	+0.1
PDG	Podgorica	9.67	333	Pn	Pn	05 18 55.4	+0.4
BNN	Bunyan	9.92	57		Pn	05 19 01.2	+2.6
ASF	Jabal al Asfar	10.02	97	Pn	Pn	05 19 00.7	+0.8
	1.1nm,0.3s,baz=294,slow=18,SNR=3.9						
	1.6nm,0.3s						
RONA	Rosalia, Austr	15.29	337	*e*Pn	P	05 20 16.6	+0.3
	3.2nm,0.5s						
ABTA	Abfaltersbach	16.00	327	*i* Pn	P	05 20 24.8	+0.6
	6.6nm,0.6s						
MOA	Molln	16.14	333	*i* Pn	P	05 20 26.2	+0.6
	6.7nm,0.7s						
LESA	Schwarzleotal	16.44	329	*e*Pn	P	05 20 30.3	+1.2
	5.7nm,0.9s						
VRAC	Vranov	16.63	340	Pn	Pn	05 20 28.3	-0.4
	0.3nm,0.3s,baz=173,slow=11,SNR=4.0						
	3.8nm,0.6s						
WTTA	Wattenberg	16.78	327	*e*Pn	P	05 20 34.6	+1.7
	4.7nm,0.6s						
WATA	Walderalm	16.86	327	*i* Pn	P	05 20 37.8	+3.9
	5.0nm,0.5s						
KBZ	Khabaz	16.91	49	Pn	P	05 20 35.1	+0.9
	0.2nm,0.3s,baz=235,slow=7.9,SNR=12						
	6.1nm,0.9s						
CKRC	Cesky Krumlov	16.93	335	*e*P	P	05 20 35.4	+1.0
SQTA	Sankt Quirin	16.95	326	*i* Pn	P	05 20 37.6	+2.8
	2.1nm,0.4s						
FUORN	Ofenpass-Fuorn	16.98	323	Pn	Pn	05 20 33.3	-0.3
KIEV	Kiev	17.02	9		Pn	05 20 34.1	+0.4
KIEV				IAmb	IAmb	05 20 47.3	
	comp=Z,6.0nm,0.7s						
AKASG	Malin Array Be	17.03	9	Pn	Pn	05 20 34.4	+0.7
	comp=Z,2.1nm,0.3s,baz=204,slow=10,SNR=10.0						
	comp=Z,0.3nm,0.3s						
AKBB	Malin Array Si	17.03	9		Pn	05 20 34.1	+0.3
AKBB				IAmb	IAmb	05 20 47.3	
	comp=Z,6.7nm,0.7s						
FETA	Feichten	17.03	324	*e*Pn	P	05 20 36.5	+0.8
	comp=Z,1.9nm,0.5s						
MOTA	Moosalm	17.09	326	*i* Pn	P	05 20 39.7	+3.4
	comp=Z,2.3nm,0.5s						
GEC2	GERESS Array S	17.17	334		P	05 20 37.3	+0.1
GEC2				IAmb	IAmb	05 20 38.3	
	comp=Z,10nm,0.8s						
GERES	GERESS Array B	17.17	334	P	Pn	05 20 36.1	+0.4
GERES	GERESS Array B	17.17	334	P	Pn	05 20 36.0	+0.3
	comp=Z,0.1nm,0.3s,baz=150,slow=12,SNR=52						
	comp=Z,6.7nm,0.7s						
KHC	Kasperske Hory	17.45	334	*e*P	P	05 20 41.1	+0.9
ZVC	Zvikov	17.50	336	*e*P	P	05 20 40.8	+0.1
DAVA	Damuels	17.63	324	*e*Pn	Pn	05 20 38.5	-3.1
	comp=Z,2.8nm,0.5s						
CLL	Collm	19.49	337	*i* P	P	05 21 02.5	0.0
	comp=Z,5.0nm,0.8s						
BLEU	Blekinge	23.28	347	*i* P	P	05 21 38.9	-4.2
DEL	Delary	23.84	344	*i* P	P	05 21 45.6	-2.9
ESDC	Sonseca Array	23.95	292	P	P	05 21 49.3	-0.4
	comp=Z,1.3nm,0.7s,baz=80,slow=9.5,SNR=14						
	comp=Z,1.3nm,0.7s						
HFS	Hagfors	27.27	347	P	P	05 22 18.0	-1.7
	comp=Z,1.1nm,0.5s,baz=108,slow=9.5,SNR=6.6						
	comp=Z,1.1nm,0.5s						
FINES	FINESS Array B	27.54	1	P	P	05 22 20.4	-1.6
	comp=Z,1.5nm,0.6s,baz=171,slow=11,SNR=8.4						
	comp=Z,1.5nm,0.6s						
NB2	NORSAR Subarra	28.59	346	P	P	05 22 30.2	-1.2
	comp=Z,1.9nm,0.9s,baz=155,slow=9.3						
NOA	NORSAR Array B	28.59	346	P	P	05 22 31.3	-0.1
	comp=Z,0.6nm,0.6s,baz=172,slow=10,SNR=7.8						
	comp=Z,0.6nm,0.6s						
EKA	Eskdalemuir Ar	29.05	326	P	P	05 22 34.1	-1.4
	comp=Z,1.9nm,0.7s,baz=151,slow=10,SNR=5.9						
	comp=Z,1.9nm,0.7s						
ARCES	ARCESS Array B	35.66	0	P	P	05 23 31.2	-2.0
	comp=Z,1.9nm,0.7s,baz=167,slow=5.9,SNR=8.5						
	comp=Z,1.9nm,0.7s						
BVAR	Borovoye Array	37.21	45	P	P	05 23 46.5	-0.2
	comp=Z,1.0nm,0.6s,baz=262,slow=3.0,SNR=6.8						
	comp=Z,1.0nm,0.6s						
KURBB	Kurchatov Arra	41.91	50	P	P	05 24 27.2	+1.3
	comp=Z,4.5nm,0.6s,baz=277,slow=8.7,SNR=32						
	comp=Z,4.5nm,0.6s						
KURK	Kurchatov	41.97	50		P	05 24 26.6	+0.3
KURK				IAmb	IAmb	05 24 33.9	
	comp=Z,6.1nm,0.9s						
MKAR	Makanchi Array	44.47	55	P	P	05 24 47.5	+0.9
MKAR	Makanchi Array	44.47	55	P	P	05 24 48.2	+1.5
	comp=Z,4.5nm,0.5s,baz=278,slow=6.4,SNR=29						
	comp=Z,4.5nm,0.5s						
SPITS	Spitsbergen Ar	44.52	357	P	P	05 24 47.6	+1.1
	comp=Z,0.8nm,0.4s,baz=158,slow=9.0,SNR=5.8						
	comp=Z,0.8nm,0.4s						
ZAA0	Zalesovo Array	45.87	45	P	P	05 24 58.1	+0.5
ZALV	Zalesovo Beam	45.87	45	P	P	05 24 58.2	+0.6
	comp=Z,5.5nm,0.4s,baz=271,slow=8.8,SNR=24						
	comp=Z,5.5nm,0.4s						
ZALV	Zalesovo Beam	45.87	45	P	P	05 24 58.2	+0.6
SONM	Songino Array	60.28	50	P	P	05 26 45.4	+1.4
	comp=Z,1.8nm,0.6s,baz=278,slow=6.7,SNR=5.2						
	comp=Z,1.8nm,0.6s						
SCHQ	Schefferville	64.12	320	P	P	05 27 09.4	-0.1
	comp=Z,1.7nm,0.5s,baz=38,slow=4.7,SNR=4.9						
	comp=Z,1.7nm,0.5s						
ILAR	Eielson Array	81.43	357	P	P	05 28 52.8	+0.8
	comp=Z,0.3nm,0.6s,baz=355,slow=3.5,SNR=6.3						
	comp=Z,0.3nm,0.6s						

KRSC ***26*** *05:16:59.3±1.3, 56°.20N×164°.48E, h52^{km}±22^{km}, Ml5.1, Felt [II] at Ust-Kamchatsk.*

IDC ***26*** *05:16:59.2±0.5, 56°.21N×164°.30E, h0^{km}, mb4.2/33, mbtmp4.2/37, ML3.6/3, MS4.5/5, Error ellipse: s-maj=14.7km s-min=11.9km az=151.0*

BJI ***26*** *05:17:03.2, 55°.70N×164°.20E, h24^{km}, mB5.2/4, mb4.5/30, Ms5.0/10, Ms7 4.8/10*

NEIC ***26*** *05:17:04.7±2.5, 55°.73N±0°.09×164°.3E±0°.1, h10^{km}±1^{km}, mb4.9/75, Error ellipse: s-maj=15.8km s-min=11.5km az=165.0*

MOS ***26*** *05:17:05.8±2.9, 55°.85N×164°.21E, h53^{km}, mb4.9/26, Error ellipse: s-maj=6.5km s-min=5.2km az=71.1*

ISC 26 05:17:00.8±0.4**, 56°.17N**±0°.04×**164°.36E**±0°.04**, h10**^{km}**, n269,** σ**1^{s}.59**/145**, mb4.7**/106**, MS4.6**/6**, 8C-6D, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.86	273	PN	Pg	05 17 15.6	-1.8
KBTR	Krutoberegovo	0.86	273	*e*P	Pg	05 17 15.6	-1.8
KBG	Krutoberegovo	0.93	276	PN	Pg	05 17 16.9	-1.8
KBG	Krutoberegovo	0.93	276	*e*P	Pg	05 17 17.0	-1.8
BKI	Bering	1.33	136	PN	Pn	05 17 23.2	-2.1
BKI				S	Sb	05 17 40.3	-2.6
BKI	Bering	1.33	136	*e*P	Pn	05 17 23.3	-2.1
BKI				*e*S	Sb	05 17 40.3	-2.6

ZLN	**Zelenaya**	**2.00**	**267**	PN	**Pn**	**05 17 35.3**	**+0.6**
ZLN	**Zelenaya**	**2.00**	**267**	*e*P	**Pn**	**05 17 35.3**	**+0.6**
CIRR	**Tsirk**	**2.02**	**270**	PN	**Pn**	**05 17 35.3**	**+0.3**
CIRR	**Tsirk**	**2.02**	**270**	*e*P	**Pn**	**05 17 35.4**	**+0.3**
LGNR	**Loginova**	**2.06**	**269**	PN	**Pn**	**05 17 35.7**	**0.0**
LGNR	**Loginova**	**2.06**	**269**	*e*P	**Pn**	**05 17 35.8**	**0.0**
BZGR	**Bezymyannyi-Gr**	**2.07**	**265**	PN	**Pn**	**05 17 35.9**	**+0.2**
BZGR	**Bezymyannyi-Gr**	**2.07**	**265**	*e*P	**Pn**	**05 17 35.9**	**+0.2**
KLY	**Klyuchi**	**2.08**	**275**	PN	**Pn**	**05 17 33.8**	**-1.8**
KLY	**Klyuchi**	**2.08**	**275**	*e*P	**Pn**	**05 17 33.8**	**-1.8**
KRSR	**Krestovskiy**	**2.12**	**273**	PN	**Pn**	**05 17 36.8**	**+0.4**
KRSR	**Krestovskiy**	**2.12**	**273**	*e*P	**Pn**	**05 17 36.8**	**+0.4**
BZWR	**Bezymyannyi-We**	**2.18**	**266**	PN	**Pn**	**05 17 37.8**	**+0.6**
BZWR	**Bezymyannyi-We**	**2.18**	**266**	*e*P	**Pn**	**05 17 37.8**	**+0.6**
BZMR	**Bezymyannaya**	**2.19**	**265**	PN	**Pn**	**05 17 37.5**	**+0.2**
BZMR	**Bezymyannaya**	**2.19**	**265**	*e*P	**Pn**	**05 17 37.6**	**+0.2**
MKZ	**Mys Kozlova**	**2.21**	**224**	PN	**Pn**	**05 17 36.0**	**-1.5**
MKZ	**Mys Kozlova**	**2.21**	**224**	*e*P	**Pn**	**05 17 36.0**	**-1.5**
KIRR	**Kirishev**	**2.27**	**266**	PN	**Pn**	**05 17 39.4**	**+1.0**
KIRR	**Kirishev**	**2.27**	**266**	*e*P	**Pn**	**05 17 39.4**	**+1.0**
KPT	**Kopyto**	**2.33**	**267**	PN	**Pn**	**05 17 40.1**	**+0.9**
KPT	**Kopyto**	**2.33**	**267**	*e*P	**Pn**	**05 17 40.2**	**+0.9**
KMNR	**Kamenistaya**	**2.36**	**261**	PN	**Pn**	**05 17 40.6**	**+1.0**
KMNR	**Kamenistaya**	**2.36**	**261**	*e*P	**Pn**	**05 17 40.6**	**+1.0**
TUMD	**Tumrok D**	**2.45**	**248**	PN	**Pn**	**05 17 40.6**	**-0.2**
TUMD	**Tumrok D**	**2.45**	**248**	*e*P	**Pn**	**05 17 40.6**	**-0.2**
SRDR	**Sredinnyy**	**2.60**	**275**	*e*S	**Sn**	**05 18 16.8**	**+2.3**
OSSR	**Ossora**	**3.16**	**348**	PN	**Pn**	**05 17 48.5**	**-2.0**
OSSR	**Ossora**	**3.16**	**348**	*e*P	**Pn**	**05 17 48.5**	**-2.0**
OSSR				*e*S	**Sn**	**05 18 24.0**	**-4.3**
SPN	**Mys Shipunski**	**3.98**	**221**	PN	**Pn**	**05 18 02.2**	**+0.4**
SPN				S	**Sn**	**05 18 43.9**	**-4.6**
SPN	**Mys Shipunski**	**3.98**	**221**	*e*P	**Pn**	**05 18 02.2**	**+0.4**
SPN				*e*S	**Sn**	**05 18 44.0**	**-4.6**
NLC	**Nalytchevo**	**4.19**	**226**	PN	**Pn**	**05 18 04.4**	**-0.2**
NLC				S	**Sn**	**05 18 52.0**	**-1.5**
NLC	**Nalytchevo**	**4.19**	**226**	*e*P	**Pn**	**05 18 04.5**	**-0.2**
NLC				*e*S	**Sn**	**05 18 52.0**	**-1.5**
UGLR	**Uglovaya**	**4.38**	**230**	PN	**Pn**	**05 18 08.4**	**+1.0**
UGLR	**Uglovaya**	**4.38**	**230**	*e*P	**Pn**	**05 18 08.4**	**+1.0**
GNL	**Ganaly**	**4.46**	**239**	PN	**Pn**	**05 18 09.7**	**+1.2**
GNL	**Ganaly**	**4.46**	**239**	*e*P	**Pn**	**05 18 09.7**	**+1.2**
PET	**Petropavlovsk**	**4.58**	**229**	Pn	**Pn**	**05 18 09.4**	**-0.6**
PET	**Petropavlovsk**	**4.58**	**229**	*e*PN	**Pn**	**05 18 10.7**	**+0.7**
PET				*e*S	**Sn**	**05 19 00.6**	**-2.6**
PET				pmax	pmax		
	comp=Z,156nm,0.7s						
PET				smax	smax		
	comp=N,482nm,1.3s						
PET				smax	smax		
	comp=E,361nm,1.2s						
PEA0B	**Petropavlovsk-**	**4.94**	**234**	⇑*e*PN	**Pn**	**05 18 16.2**	**+1.2**
PETK	**Petropavlovsk-**	**4.94**	**234**	Pn	**Pn**	**05 18 14.8**	**-0.2**
PETK	**Petropavlovsk-**	**4.94**	**234**	Pn	**Pn**	**05 18 16.4**	**+1.3**
	comp=E,3.9nm,0.3s,baz=123,slow=21,SNR=5.9						
PETK				Sn	**Sn**	**05 19 16.6**	**+4.4**
	comp=E,3.4nm,0.3s,baz=78,slow=23,SNR=1.5						
	comp=E,24nm,0.6s						
RUS	**Russkaya**	**5.08**	**225**	PN	**Pn**	**05 18 16.9**	**+0.1**
RUS				S	**Sn**	**05 19 13.4**	**-2.1**
RUS	**Russkaya**	**5.08**	**225**	*e*P	**Pn**	**05 18 17.0**	**+0.1**
RUS				*e*S	**Sn**	**05 19 13.4**	**-2.1**
GRL	**Gorelyy**	**5.17**	**228**	PN	**Pn**	**05 18 19.9**	**+1.7**
GRL	**Gorelyy**	**5.17**	**228**	*e*P	**Pn**	**05 18 20.0**	**+1.7**
MTVR	**Mutnovka**	**5.17**	**227**	PN	**Pn**	**05 18 19.5**	**+1.2**
MTVR	**Mutnovka**	**5.17**	**227**	*e*P	**Pn**	**05 18 19.5**	**+1.2**
APC	**Apacha**	**5.31**	**235**	PN	**Pn**	**05 18 22.7**	**+2.7**
APC	**Apacha**	**5.31**	**235**	*e*P	**Pn**	**05 18 22.7**	**+2.7**
ASAK	**Asacha**	**5.36**	**228**	PN	**Pn**	**05 18 22.1**	**+1.3**
ASAK	**Asacha**	**5.36**	**228**	*e*P	**Pn**	**05 18 22.2**	**+1.3**
MIPR	**Malaya Ipel'ka**	**5.93**	**232**	PN	**Pn**	**05 18 30.8**	**+2.3**
MIPR	**Malaya Ipel'ka**	**5.93**	**232**	*e*P	**Pn**	**05 18 30.9**	**+2.3**
SMY	**Shemya**	**6.64**	**117**	Pn	**Pn**	**05 18 40.3**	**+2.0**
SMY	**Shemya**	**6.64**	**117**	PN	**Pn**	**05 18 40.3**	**+2.0**
SKR	**Severo-Kuril’s**	**7.38**	**225**	*e*PN	**Pn**	**05 18 50.2**	**+1.7**
SKR				pmax	pmax		
	comp=Z,600nm,5.8s						
SKR				MLR	MLR		
	comp=Z,4µm,13.0s						
MA2	**Magadan**	**8.01**	**301**	⇓*e*PN	Pn	05 19 07.4	+10
SEY	**Seymchan**	**9.09**	**323**	Pn	**Pn**	**05 19 12.1**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=99,slow=13,SNR=3.7						
	comp=Z,4.7nm,1.0s						
AMKA	**Amchitka**	**10.05**	**112**	Pn	**Pn**	**05 19 26.5**	**+1.4**
ADK	**Adak**	**11.93**	**103**	Pn	**Pn**	**05 19 50.7**	**-0.1**
ADK	**Adak**	**11.93**	**103**	PN	**Pn**	**05 19 50.7**	**-0.1**
BILL	**Bilibino**	**11.94**	**3**	Pn	Pn	05 19 59.1	+8.2
BILL	**Bilibino**	**11.94**	**3**	⇓*e*PN	Pn	05 20 05.3	+14
BILL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ATKA	**Atka Island**	**13.15**	**99**		P	05 20 11.5	-6.1
TYV	**Tymovskoe**	**13.94**	**257**	*e*P	**P**	**05 20 23.5**	**-2.8**
TYV				pmax	pmax		
	comp=Z,200nm,2.4s						
TYV				pmax	pmax		
	comp=Z,31nm,1.4s						
NIKH	**Nikolski High**	**15.81**	**90**	P	**P**	**05 20 49.3**	**+2.2**
NIKH				IAmb	IAmb	05 20 50.1	
	comp=Z,81nm,1.0s						
YSS	**Yuzhno-Sakhali**	**16.24**	**244**	*e*P	**P**	**05 20 49.8**	**-2.0**
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS				MLR	MLR		
	comp=Z,2µm,13.0s						
YSS				MLR	MLR		
	comp=N,600nm,14.0s						
YSS				MLR	MLR		
	comp=E,900nm,12.0s						
UNV	**Unalaska Valle**	**16.81**	**86**		**P**	**05 21 01.6**	**+3.4**
UNV				IAmb	IAmb	05 21 07.8	
	comp=Z,161nm,1.6s						
C16K	**Lisburne Hills**	**18.34**	**37**		P	05 21 22.9	+7.9
JKA	**Kamikawa-asahi**	**18.35**	**238**		**Pn**	**05 21 14.9**	**-0.3**
JKA				IAmb	IAmb	05 21 23.9	
	comp=Z,110nm,1.1s						
ASAJ	**Asahikawa**	**18.35**	**238**	P	**Pn**	**05 21 14.9**	**-0.2**
	comp=Z,1.7nm,0.3s,baz=31,slow=8.3,SNR=5.9						
ASAJ				LR	LR	05 27 23.7	
	comp=Z,2µm,21.4s,baz=10,slow=34						
	comp=Z,27nm,0.8s						
YAK	**Yakutsk**	**18.58**	**303**	P	Pn	05 21 24.3	+6.5
YAK				IAmb	IAmb	05 21 24.6	
	comp=Z,42nm,0.6s						
YAK	**Yakutsk**	**18.58**	**303**	P	**P**	**05 21 16.6**	**-1.0**
	comp=Z,12nm,0.5s,baz=113,slow=2.9,SNR=5.1						
N15K	**Kwethluk River**	**19.01**	**63**	P	Pn	05 21 29.7	+6.6
ERM	**Erimo**	**19.72**	**233**	P	**P**	**05 21 28.5**	**-1.8**
ERM				IAmb	IAmb	05 21 44.3	
	comp=Z,93nm,1.6s						
ERM	**Erimo**	**19.72**	**233**	P	**P**	**05 21 28.5**	**-1.8**
ERM				pmax	pmax		
	comp=Z,93nm,1.7s						
M17K	**Holitna River**	**20.25**	**59**	P	Pn	05 21 41.7	+3.8
M17K				IAmb	IAmb	05 21 50.8	
	comp=Z,37nm,1.0s						
KLR	**Kul'dur**	**20.80**	**264**	⇑*e*P	Pn	05 21 48.1	+3.7
KLR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ZEA	**Zeya**	**21.28**	**279**	*e*P	**P**	**05 21 52.1**	**+5.0**
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
TIXI	**Tiksi**	**21.48**	**330**	P	P	05 21 55.9	+6.8
TIXI				IAmb	IAmb	05 21 59.9	
	comp=Z,20nm,0.7s						
TIXI	**Tiksi**	**21.48**	**330**	P	**P**	**05 21 48.6**	**-0.5**
	comp=Z,10.0nm,0.8s,baz=119,slow=7.5,SNR=4.2						
TIXI				LR	LR	05 30 44.5	
	comp=Z,580nm,18.9s,baz=32,slow=38						
	comp=Z,10.0nm,0.8s						
B20K	**Meade River**	**21.72**	**35**	P	P	05 21 57.1	+5.5
B20K				IAmb	IAmb	05 22 05.9	
	comp=Z,52nm,0.9s						
IMAR	**Indian Mountai**	**22.06**	**47**	P	P	05 22 04.4	+9.0
F21K	**Alatna River**	**22.33**	**43**	P	P	05 22 06.6	+8.3
ILSW	**Iliamna Southw**	**22.49**	**63**	P	P	05 22 08.1	+7.9
HEH	**HeiHe**	**22.70**	**271**	*e*P	**P**	**05 21 59.8**	**-2.5**
HEH				pmax	pmax		
	comp=Z,18nm,0.6s						
HEH				LR	LR		
	comp=Z,2µm,17.1s						
HEH				LR	LR		
	comp=Z,2µm,17.2s						
HEH				LR	LR		
	comp=Z,4µm,12.8s						
E24K	**Your Creek**	**24.34**	**42**	IAmb	IAmb	05 22 27.3	
	comp=Z,17nm,0.8s						
C24K	**Franklin Bluff**	**24.48**	**38**	P	P	05 22 26.8	+7.2
C24K				IAmb	IAmb	05 22 40.7	
	comp=Z,32nm,1.1s						
ILAR	**Eielson Array**	**24.90**	**50**	P	**P**	**05 22 23.8**	**+0.4**
	comp=Z,4.8nm,1.1s,baz=266,slow=9.9,SNR=4.7						
ILAR				LR	LR	05 32 34.8	
	comp=Z,1µm,20.6s,baz=204,slow=38						
	comp=Z,4.8nm,1.1s						
JSD	**Sado**	**25.15**	**235**		**P**	**05 22 25.7**	**-0.2**
BNX	**BinXian**	**25.21**	**261**	⇑P	**P**	**05 22 28.5**	**+2.1**
BNX				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BMAR	**Burnt Mountain**	**25.79**	**44**	P	P	05 22 39.1	+7.7
MJB9	**Matsu-Tunnel**	**26.40**	**233**	P	**P**	**05 22 37.9**	**+0.6**
MAJO	**Matsushiro**	**26.40**	**233**	P	**P**	**05 22 37.8**	**+0.5**
MAJO	**Matsushiro**	**26.40**	**233**	P	**P**	**05 22 37.8**	**+0.5**
MAJO				pmax	pmax		
	comp=Z,38nm,0.9s						
MJAR	**Matsushiro Arr**	**26.40**	**233**	P	**P**	**05 22 36.7**	**-0.5**
	comp=Z,8.4nm,0.7s,baz=31,slow=7.9,SNR=6.9						
MJAR				LR	LR	05 35 06.9	
	comp=Z,760nm,19.8s,baz=32,slow=41						
	comp=Z,8.4nm,0.7s						
CRQM	**Cirque**	**27.21**	**58**	IAmb	IAmb	05 23 14.0	
	comp=Z,19nm,0.8s						
KSRS	**Korea Array**	**30.68**	**248**	P	**P**	**05 23 15.7**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=34,slow=9.2,SNR=6.1						
KSRS				PcP	**PcP**	**05 26 13.5**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=357,slow=2.3,SNR=6.1						
	comp=Z,0.9nm,0.6s						
ULN	**Ulaanbaatar**	**35.29**	**281**	⇑*e*P	P	05 24 02.3	+6.6
ULN				pmax	pmax		
	comp=Z,7.0nm,1.8s						
SONM	**Songino Array**	**35.66**	**282**		**P**	**05 24 02.2**	**+3.3**
SONM	**Songino Array**	**35.66**	**282**	P	**P**	**05 23 58.1**	**-0.8**
	comp=Z,2.3nm,0.6s,baz=60,slow=8.5,SNR=6.4						
SONM				PcP	**PcP**	**05 26 28.3**	**+1.2**
	comp=Z,1.5nm,0.6s,baz=94,slow=2.4,SNR=4.2						
	comp=Z,2.3nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**36.44**	**176**	T	T	06 02 56.6	
	baz=357,slow=76,SNR=4837						
H11N3	**WAKE ISLAND Hy**	**36.45**	**176**	T	T	06 02 57.6	
	baz=357,slow=76,SNR=957						
H11N1	**WAKE ISLAND Hy**	**36.45**	**176**	T	T	06 03 02.3	
	baz=357,slow=76,SNR=3163						
HHC	**Hu-ho-hao-te**	**37.19**	**268**	*e*P	P	05 24 16.5	+4.5
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,170nm,4.7s						
YKA	**Yellowknife Ar**	**39.22**	**46**	P	**P**	**05 24 28.9**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=304,slow=14,SNR=8.2						
	comp=Z,0.9nm,0.6s						
NJ2	**Nanjing**	**39.59**	**252**	*e*P	**P**	**05 24 34.3**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
ZALV	**Zalesovo Beam**	**43.23**	**302**	PcP	**PcP**	**05 26 50.8**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=80,slow=1.7,SNR=3.8						
SPITS	**Spitsbergen Ar**	**44.49**	**351**	P	**P**	**05 25 11.4**	**-0.2**
	comp=Z,8.7nm,0.7s,baz=101,slow=8.6,SNR=5.0						
	comp=Z,8.7nm,0.7s						
GTA	**Gaotai**	**44.73**	**276**	*e*P	**P**	**05 25 13.5**	**-0.6**
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
LZH	**Lanzhou**	**44.84**	**270**	*e*P	**P**	**05 25 16.3**	**+1.2**
LZH				pP	pwP	05 25 23.5	+1.6
LZH				sP	sP	05 25 28.0	+10
LZH				pmax	pmax		
	comp=Z,19nm,1.4s						
B08A	**Colville Reser**	**45.09**	**66**	IAmb	IAmb	05 25 30.8	
	comp=Z,12nm,1.2s						
NEW	**Newport**	**46.28**	**65**		P	05 25 32.9	+6.8
NEW	**Newport**	**46.28**	**65**	P	P	05 25 32.9	+6.8
NEW				pmax	pmax		
	comp=Z,7.0nm,1.2s						
E09A	**Wood Farm, Sta**	**46.91**	**67**	IAmb	IAmb	05 25 41.2	
	comp=Z,26nm,1.5s						
PINE	**Pine Mountain**	**47.27**	**72**	IAmb	IAmb	05 26 08.7	
	comp=Z,12nm,1.2s						
KURK	**Kurchatov**	**48.22**	**302**	P	**P**	**05 25 41.1**	**0.0**
WMQ	**Urumqi**	**48.29**	**289**	*e*P	P	05 25 48.3	+6.4
WMQ				pmax	pmax		
	comp=Z,18nm,1.1s						
WMQ				LR	LR		
	comp=Z,1µm,20.7s						
WMQ				LR	LR		
	comp=Z,670nm,17.3s						
WMQ				LR	LR		
	comp=Z,660nm,18.1s						
KURBB	**Kurchatov Arra**	**48.32**	**302**	P	**P**	**05 25 41.1**	**-0.9**
	comp=Z,1.1nm,0.4s,baz=56,slow=7.6,SNR=4.9						
	comp=Z,1.1nm,0.4s						
MSO	**Missoula**	**48.84**	**64**	IAmb	IAmb	05 25 56.4	
	comp=Z,12nm,1.4s						
MK31	**Makanchi Array**	**49.06**	**296**	*de*P	P	05 25 53.8	+6.1
MKAR	**Makanchi Array**	**49.06**	**296**	P	**P**	**05 25 47.3**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=52,slow=6.0,SNR=8.2						
	comp=Z,0.8nm,0.6s						
BVAR	**Borovoye Array**	**50.41**	**309**	P	**P**	**05 25 57.0**	**-0.9**
	comp=Z,2.0nm,0.5s,baz=45,slow=8.5,SNR=4.1						
BVAR				LR	LR	05 48 20.3	
	comp=Z,992nm,20.4s,baz=67,slow=37						
	comp=Z,2.0nm,0.5s						
BRVK	**Borovoye**	**50.44**	**309**	P	P	05 26 04.4	+6.3
BRVK				IAmb	IAmb	05 26 05.8	
	comp=Z,16nm,0.8s						
BRVK	**Borovoye**	**50.44**	**309**	P	P	05 26 04.4	+6.3
BRVK				pmax	pmax		
	comp=Z,16nm,0.8s						
YNE	**Yellowstone No**	**52.08**	**64**	IAmb	IAmb	05 26 20.6	
	comp=Z,12nm,1.4s						
RLMT	**Red Lodge**	**52.37**	**63**	IAmb	IAmb	05 26 23.6	
	comp=Z,9.9nm,1.0s						
NVAR	**Mina Array Bea**	**52.45**	**75**	P	**P**	**05 26 13.5**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=303,slow=7.8,SNR=4.2						
	comp=Z,1.4nm,0.8s						
LAO	**LASA Array**	**52.75**	**60**	IAmb	IAmb	05 26 25.4	
	comp=Z,13nm,1.0s						
ARTI	**Arti**	**52.89**	**318**		P	05 26 22.7	+6.4
ARTI				IAmb	IAmb	05 26 24.3	
	comp=Z,14nm,0.7s						
ARTI	**Arti**	**52.89**	**318**	P	**P**	**05 26 16.6**	**+0.2**
	comp=Z,2.1nm,0.4s,baz=36,slow=3.8,SNR=10						
	comp=Z,2.1nm,0.4s						
PZH	**PanZhiHua**	**53.24**	**263**	P	P	05 26 23.5	+4.0
PDAR	**Pinedale Array**	**53.91**	**65**	P	**P**	**05 26 24.5**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=323,slow=2.2,SNR=4.3						
	comp=Z,1.4nm,0.7s						
KIRV	**Kirov**	**54.37**	**324**	*ce*P	P	05 26 34.5	+7.4
ULM	**Lac du Bonnet**	**54.92**	**51**	IAmb	IAmb	05 26 39.8	
	comp=Z,7.2nm,0.8s						
ULM	**Lac du Bonnet**	**54.92**	**51**	P	**P**	**05 26 31.6**	**+0.3**
	comp=Z,1.8nm,0.5s,baz=319,slow=7.3,SNR=6.9						
	comp=Z,1.8nm,0.5s						
KLMR	**Klimovskoe**	**55.50**	**331**	*e*P	P	05 26 41.2	+5.9
KLMR				pmax	pmax		
	comp=Z,13nm,0.9s						
RSSD	**Black Hills**	**55.68**	**61**		P	05 26 43.7	+6.6
RSSD				IAmb	IAmb	05 26 46.5	
	comp=Z,14nm,1.4s						
RSSD	**Black Hills**	**55.68**	**61**	P	P	05 26 43.7	+6.6
RSSD				pmax	pmax		
	comp=Z,14nm,1.4s						
AAK	**Ala-Archa**	**55.92**	**297**		P	05 26 43.5	+4.7
AAK				IAmb	IAmb	05 26 46.8	
	comp=Z,7.3nm,0.8s						
AAK	**Ala-Archa**	**55.92**	**297**	P	**P**	**05 26 38.0**	**-0.7**
	comp=Z,2.2nm,0.4s,baz=45,slow=15,SNR=6.2						
	comp=Z,2.2nm,0.4s						
EPLO	**Experimental L**	**56.27**	**50**	P	P	05 26 48.9	+7.9
EPLO				IAmb	IAmb	05 26 49.9	
	comp=Z,9.5nm,1.1s						
AGMN	**Agassiz Nation**	**56.38**	**52**	IAmb	IAmb	05 26 50.3	
	comp=Z,7.0nm,0.8s						
AKTO	**Aktyubinsk**	**57.54**	**313**	P	**P**	**05 26 50.0**	**0.0**
	comp=Z,1.8nm,0.8s,baz=44,slow=5.7,SNR=10						
	comp=Z,1.8nm,0.8s						
AKTO	**Aktyubinsk**	**57.54**	**313**	P	**P**	**05 26 50.0**	**0.0**
PV05	**Paradox Valley**	**57.60**	**69**	IAmb	IAmb	05 27 04.6	
	comp=Z,15nm,1.3s						
ARSB	**Arslanbob**	**57.65**	**297**	IAmb	IAmb	05 26 59.6	
	comp=Z,7.0nm,0.7s						
ISCO	**Idaho Springs**	**58.10**	**65**	IAmb	IAmb	05 28 11.5	
	comp=Z,14nm,1.4s						
FINES	**FINESS Array B**	**58.24**	**338**	P	**P**	**05 26 54.0**	**-0.7**
	comp=Z,1.5nm,0.9s,baz=32,slow=11,SNR=4.1						
	comp=Z,1.5nm,0.9s						
EYMN	**Ely**	**58.55**	**50**	IAmb	IAmb	05 27 05.4	
	comp=Z,8.4nm,0.8s						
BTK	**Batken**	**59.68**	**297**		P	05 27 11.8	+6.7
BTK				IAmb	IAmb	05 27 12.8	
	comp=Z,8.9nm,0.7s						
BTK	**Batken**	**59.68**	**297**	P	P	05 27 11.9	+6.7
BTK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BELG	**Belogornoye**	**59.94**	**321**	*c i*P	P	05 27 13.8	+7.2
BELG				pmax	pmax		
	comp=Z,15nm,1.0s						
NRS	**Narsarsuaq**	**60.68**	**16**	P	P	05 27 17.2	+5.7
NRS	**Narsarsuaq**	**60.68**	**16**	P	P	05 27 17.2	+5.7
NRS				pmax	pmax		
	comp=Z,51nm,0.6s						
VSU	**Vasula**	**60.79**	**336**	*de*P	P	05 27 18.1	+5.8
VSU				pmax	pmax		
	comp=Z,15nm,1.7s						
CMAR	**Chiang Mai Arr**	**61.20**	**260**	P	**P**	**05 27 13.9**	**-1.8**
	comp=Z,1.2nm,0.4s,baz=22,slow=7.2,SNR=5.9						
	comp=Z,1.2nm,0.4s						
OBN	**Obninsk**	**61.21**	**329**	⇑*i*P	P	05 27 20.9	+5.7
OBN				*e*		05 27 36.6	
OBN				*e*		05 28 06.0	
OBN						05 29 41.0	
OBN				PPP	PPP	05 31 08.0	
OBN				*e*		05 36 00.2	
OBN				*e*		05 36 56.0	
OBN				SS	SS	05 39 33.0	-0.5
OBN				pmax	pmax		
	comp=Z,39nm,1.7s						
NB2	**NORSAR Subarra**	**61.23**	**345**	P	**P**	**05 27 14.2**	**-1.1**
	comp=Z,3.5nm,0.8s,baz=18,slow=6.9						
NOA	**NORSAR Array B**	**61.23**	**345**	P	**P**	**05 27 14.4**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=17,slow=6.9,SNR=5.4						
	comp=Z,0.5nm,0.5s						
SIMJ	**Simiganj**	**61.65**	**298**	P	P	05 27 24.6	+5.9
SIMJ				IAmb	IAmb	05 27 26.8	
	comp=Z,8.8nm,0.8s						
HFS	**Hagfors**	**61.73**	**344**	P	**P**	**05 27 17.1**	**-1.6**
	comp=Z,1.0nm,0.5s,baz=26,slow=3.8,SNR=9.9						
	comp=Z,1.0nm,0.5s						
SCHQ	**Schefferville**	**61.74**	**31**	P	**P**	**05 27 17.7**	**-1.2**
	comp=Z,3.9nm,1.0s,baz=358,slow=8.3,SNR=3.6						
	comp=Z,3.9nm,1.0s						
LPSR	**Galich'ya Gora**	**62.67**	**326**	*e*P	**P**	**05 27 28.1**	**+3.0**
LPSR				pmax	pmax		
	comp=Z,25nm,0.6s						
KONO	**Kongsberg**	**62.79**	**346**	⇓*e*P	P	05 27 33.6	+7.8
KONO				pmax	pmax		
	comp=Z,16nm,1.7s						
VRH	**Novokhopyorsk**	**62.96**	**324**	*e*P	P	05 27 31.0	+4.0
VRH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSR	**Storozhevoye**	**63.78**	**325**	*e*P	P	05 27 37.2	+4.7
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VORD	**Divnogorie**	**63.96**	**325**	*e*P	P	05 27 37.7	+4.1
VORD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MNTX	**Cornudas Mount**	**64.45**	**71**	IAmb	IAmb	05 27 49.8	
	comp=Z,8.9nm,1.3s						
APMT	**Aspermont**	**65.90**	**66**	P	P	05 27 53.0	+6.3
AKASG	**Malin Array Be**	**67.19**	**331**	P	**P**	**05 27 53.2**	**-1.3**
	comp=Z,0.9nm,0.5s,baz=30,slow=6.3,SNR=9.7						
	comp=Z,0.9nm,0.5s						
AKBB	**Malin Array Si**	**67.19**	**331**		P	05 28 00.7	+6.2
AKBB				IAmb	IAmb	05 28 01.7	
	comp=Z,7.6nm,0.9s						
AKBB	**Malin Array Si**	**67.19**	**331**	P	P	05 28 00.7	+6.2
AKBB				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TXAR	**Lajitas Array**	**67.22**	**71**	P	**P**	**05 27 55.3**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=297,slow=5.3,SNR=5.0						
	comp=Z,1.7nm,0.8s						
D62A	**Allapoint, All**	**67.83**	**36**	P	P	05 28 05.0	+6.4
E62A	**Clayton Lake**	**68.07**	**37**	P	P	05 28 07.3	+7.1
MIAR	**Mount Ida**	**68.19**	**60**	P	**P**	**05 28 03.7**	**+2.6**
MIAR	**Mount Ida**	**68.19**	**60**	P	**P**	**05 28 03.7**	**+2.6**
MIAR				pmax	pmax		
	comp=Z,241nm,1.0s						
EKA	**Eskdalemuir Ar**	**68.39**	**352**	P	**P**	**05 28 01.7**	**-0.3**
	comp=Z,1.7nm,0.7s,baz=13,slow=5.2,SNR=5.0						
	comp=Z,1.7nm,0.7s						
KIV	**Kislovodsk**	**68.82**	**319**	*e*P	P	05 28 12.8	+7.8
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KBZ	**Khabaz**	**68.94**	**319**	P	**P**	**05 28 06.0**	**+0.4**
	comp=Z,2.6nm,1.0s,baz=56,slow=1.7,SNR=12						
	comp=Z,2.6nm,1.0s						
L56A	**Greenwood**	**69.00**	**45**	P	P	05 28 12.1	+6.0
OJC	**Ojcow**	**69.97**	**337**	P	P	05 28 19.1	+7.2
OJC	**Ojcow**	**69.97**	**337**	P	P	05 28 19.1	+7.2
CLL	**Collm**	**70.29**	**341**	*i* P	P	05 28 20.8	+7.0
CLL				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CLL	**Collm**	**70.29**	**341**	*i* P	P	05 28 20.8	+7.0
	comp=Z,7.0nm,1.1s						
CLL				*i* PcP	PcP	05 28 44.1	+8.6
	comp=Z,11nm,1.5s						
STHS	**Stebnicka Huta**	**70.39**	**335**	*e*P	P	05 28 21.2	+6.7
STHS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
STHS	**Stebnicka Huta**	**70.39**	**335**	*e*P	P	05 28 21.2	+6.7
KOLS	**Kolonicke sedl**	**70.60**	**335**	*e*P	P	05 28 22.4	+6.6
KOLS				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KOLS	**Kolonicke sedl**	**70.60**	**335**	*e*P	P	05 28 22.4	+6.6
MORC	**Moravsky Berou**	**70.87**	**338**	P	P	05 28 24.1	+6.6
MORC	**Moravsky Berou**	**70.87**	**338**	*e*P	P	05 28 24.8	+7.3
MORC	**Moravsky Berou**	**70.87**	**338**	P	P	05 28 24.1	+6.6
MORC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LANS	**Liptovska Anna**	**71.04**	**336**	*e*P	P	05 28 27.6	+9.1
LANS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LANS	**Liptovska Anna**	**71.04**	**336**	*e*P	P	05 28 27.6	+9.1
BURAR	**Bucovina Array**	**71.08**	**332**		P	05 28 25.1	+6.2
GNI	**Garni**	**71.31**	**315**	⇑*e*P	P	05 28 28.5	+8.1
GNI				pmax	pmax		
	comp=Z,30nm,1.7s						
VRAC	**Vranov**	**71.51**	**338**	*e*P	P	05 28 29.1	+7.8
JAVC	**Velka Javorina**	**71.71**	**338**	*e*P	P	05 28 31.2	+8.6
KRUC	**Moravsky**	**71.79**	**338**	*e*P	P	05 28 30.5	+7.5
VYHS	**Vyhne**	**71.80**	**337**	*e*P	P	05 28 30.6	+7.5
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
VYHS	**Vyhne**	**71.80**	**337**	*e*P	P	05 28 30.6	+7.5
KHC	**Kasperske Hory**	**72.28**	**340**	*de*P	P	05 28 33.5	+7.5
KHC				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GERES	**GERESS Array B**	**72.53**	**340**	P	**P**	**05 28 27.4**	**-0.1**
	comp=Z,0.3nm,0.2s,baz=26,slow=3.4,SNR=6.9						
	comp=Z,0.3nm,0.2s						
CONA	**Conrad Observa**	**72.97**	**338**	*e*P	P	05 28 35.7	+5.5
	comp=Z,8.7nm,1.3s						
RONA	**Rosalia, Austr**	**73.10**	**338**	*e*P	P	05 28 37.2	+6.3
	comp=Z,3.9nm,0.6s						
MOA	**Molln**	**73.37**	**339**	*i* P	P	05 28 39.2	+6.7
	comp=Z,8.0nm,1.6s						
GEVA	**Gevas**	**73.55**	**316**		P	05 28 41.2	+7.3
GEVA				IAmb	IAmb	05 28 42.7	
	comp=Z,8.3nm,0.9s						
ARSA	**Arzberg**	**73.69**	**338**	*i* P	P	05 28 42.2	+7.9
	comp=Z,3.2nm,0.5s						
LESA	**Schwarzleotal**	**74.08**	**340**	*i* P	P	05 28 43.0	+6.3
	comp=Z,1.8nm,0.5s						
SOKA	**Soboth**	**74.34**	**339**	*i* P	P	05 28 44.6	+6.3
	comp=Z,1.8nm,0.5s						
RETA	**Reutte**	**74.37**	**342**	*e*P	P	05 28 43.8	+5.5
	comp=Z,1.2nm,0.6s						
WATA	**Walderalm**	**74.37**	**341**	*e*P	P	05 28 44.8	+6.3
	comp=Z,7.4nm,1.0s						
WTTA	**Wattenberg**	**74.43**	**341**	*i* P	P	05 28 44.5	+5.6
	comp=Z,9.5nm,1.1s						
MOTA	**Moosalm**	**74.45**	**341**	*e*P	P	05 28 44.9	+5.9
	comp=Z,0.1nm,0.2s						
ILGA	**Ilgaz**	**74.52**	**323**		P	05 28 47.2	+7.6
ILGA				IAmb	IAmb	05 28 48.9	
	comp=Z,14nm,0.8s						
SQTA	**Sankt Quirin**	**74.55**	**341**	*e*P	P	05 28 45.5	+6.1
	comp=Z,9.9nm,1.1s						
OBKA	**Obir**	**74.60**	**339**	*i* P	P	05 28 45.7	+5.9
	comp=Z,11nm,0.8s						

MYKA	**Terra Mystica**	**74.66**	**340**	*e*P	P	05 28 46.4	+6.3
	comp=Z,6.2nm,1.0s						
ABTA	**Abfaltersbach**	**74.77**	**340**	*i* P	P	05 28 46.6	+5.9
	comp=Z,12nm,1.3s						
FETA	**Feichten**	**74.83**	**342**	*i* P	P	05 28 47.1	+6.0
	comp=Z,4.7nm,1.1s						
PRED	**Cave del Predi**	**74.86**	**340**		P	05 28 47.6	+6.4
BR131	**Keskin Array S**	**75.74**	**323**		P	05 28 53.1	+6.6
BR131	**Keskin Array S**	**75.74**	**323**	P	P	05 28 53.2	+6.7
BR131				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BRTR	**Keskin Array B**	**75.74**	**323**		P	05 28 53.7	+7.2
BRTR	**Keskin Array B**	**75.74**	**323**	P	**P**	**05 28 46.2**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=68,slow=4.2,SNR=8.1						
	comp=Z,0.7nm,0.7s						
BNN	**Bunyan**	**75.76**	**321**	P	P	05 28 52.6	+5.9
FDMO	**Fiordimonte**	**78.22**	**339**		P	05 29 07.2	+6.9
FDMO				IAmb	IAmb	05 29 09.3	
	comp=Z,9.5nm,0.8s						
NRCA	**Norcia**	**78.41**	**339**	P	P	05 29 08.0	+6.6
NRCA				IAmb	IAmb	05 29 11.0	
	comp=Z,17nm,0.9s						
UOSS	**Minazif**	**79.08**	**299**		P	05 29 11.4	+6.2
WR8	**Warramunga Arr**	**79.92**	**208**	P	**P**	**05 29 09.8**	**+0.1**
WR8				IAmb	IAmb	05 29 20.1	
	comp=Z,19nm,1.4s						
WRA	**Warramunga Arr**	**79.95**	**209**	P	**P**	**05 29 09.4**	**-0.4**
	comp=Z,3.0nm,0.9s,baz=23,slow=5.2,SNR=5.1						
	comp=Z,3.0nm,0.9s						
MMAI	**Mount Meron Ar**	**81.14**	**319**	P	**P**	**05 29 16.3**	**0.0**
	comp=Z,0.6nm,0.2s,baz=63,slow=7.6,SNR=6.3						
	comp=Z,0.6nm,0.2s						
PBRG	**Braganca**	**82.10**	**353**	*e*P	P	05 29 29.9	+8.6
PCAB	**Cabril**	**82.27**	**354**	*e*P	P	05 29 33.8	+12
POLO	**Lamas de Olo**	**82.59**	**354**	*e*P	P	05 29 31.7	+7.8
PVRL	**Vila Real**	**82.69**	**354**	*e*P	P	05 29 31.8	+7.5
PVRL				*i* Amb		05 30 12.3	
	comp=Z,22nm,1.8s						
MVO	**Moncorvo**	**82.76**	**353**	*e*P	P	05 29 32.1	+7.3
PVIS	**Viseu**	**83.26**	**354**	*e*P	P	05 29 35.2	+7.9
MTE	**Manteigas**	**83.55**	**354**	*e*P	P	05 29 36.2	+7.4
ASAR	**Alice Springs**	**83.62**	**208**	P	**P**	**05 29 29.6**	**+0.5**
ASAR	**Alice Springs**	**83.62**	**208**	P	**P**	**05 29 28.6**	**-0.5**
	comp=Z,2.0nm,0.9s,baz=15,slow=3.9,SNR=5.1						
	comp=Z,2.0nm,0.9s						
ASAR	**Alice Springs**	**83.62**	**208**	P	**P**	**05 29 29.6**	**+0.5**
PCAS	**Casmilo, Conde**	**83.95**	**354**	*e*P	P	05 29 37.7	+6.9
PCAS				*i* Amb		05 30 20.8	
	comp=Z,21nm,1.6s						
ESDC	**Sonseca Array**	**84.01**	**351**	P	**P**	**05 29 30.8**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=356,slow=5.0,SNR=5.0						
	comp=Z,0.8nm,0.7s						
PCBR	**Castelo Branco**	**84.10**	**354**	*e*P	P	05 29 38.6	+7.1
PSARD	**Sardoal**	**84.38**	**354**	*e*P	P	05 29 41.0	+8.0
PSARD				*i* Amb		05 30 27.1	
	comp=Z,15nm,1.4s						
PSBE	**So Bento**	**84.50**	**355**	*e*P	P	05 29 41.1	+7.5
PSBE				*i* Amb		05 30 25.1	
	comp=Z,23nm,2.0s						
PMTG	**Montargil**	**84.92**	**354**	*e*P	P	05 29 43.1	+7.5
PMTG				*i* Amb		05 29 44.2	
	comp=Z,16nm,1.7s						
PESTR	**Estremoz**	**85.08**	**354**	*e*P	P	05 29 43.6	+7.1
PESTR				*i* Amb		05 29 44.9	
	comp=Z,15nm,1.3s						
RAYN	**Ar Rayn**	**85.34**	**306**	P	P	05 29 41.7	+3.6
RAYN				IAmb	IAmb	05 29 45.4	
	comp=Z,6.3nm,0.7s						
RAYN	**Ar Rayn**	**85.34**	**306**	P	P	05 29 41.7	+3.6
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
EVO	**Evora**	**85.44**	**354**	*e*P	P	05 29 45.6	+7.3
PBAR	**Barrancos**	**85.73**	**353**	*e*P	P	05 29 47.0	+7.3
PBAR				*i* Amb		05 29 48.7	
	comp=Z,16nm,1.2s						
KEST	**Kesra**	**86.01**	**340**	P	**P**	**05 29 42.4**	**+1.1**
	comp=Z,1.7nm,0.7s,baz=340,slow=4.0,SNR=3.8						
	comp=Z,1.7nm,0.7s						
PCVE	**Castro Verde**	**86.33**	**354**	*e*P	P	05 29 50.4	+7.6
PCVE				*i* Amb		05 30 23.1	
	comp=Z,20nm,1.6s						
PVAQ	**Vaqueiros**	**86.54**	**354**	*e*P	P	05 29 51.8	+8.0
PVAQ				*i* Amb		05 29 53.1	
	comp=Z,14nm,1.5s						
PBDV	**Barranco-do-Ve**	**86.72**	**354**	*e*P	P	05 29 53.4	+8.7
PFVI	**Vila Bisbo**	**86.88**	**355**	*e*P	P	05 29 54.6	+9.2
STKA	**Stephens Creek**	**89.83**	**199**	P	**P**	**05 29 60.0**	**+0.8**
	comp=Z,0.7nm,0.2s,baz=131,slow=11,SNR=3.1						
	comp=Z,0.7nm,0.2s						
STKA	**Stephens Creek**	**89.83**	**199**	P	**P**	**05 30 00.0**	**+0.8**
QSPA	**South Pole Qui**	**145.93**	**180**	PKPbc	**PKPab**	**05 36 38.7**	**-0.9**
	comp=Z,14nm,1.0s,baz=292,slow=1.5,SNR=11						

IDC ***26*** *05:23:28.0±5.7, 30°.47S×178°.24W, h111^{km}±33^{km}, mb3.8/2, mbtmp4.2/2, Error ellipse: s-maj=99.2km s-min=27.0km az=150.0*

ISC 26 05:23:29.6±1.0**, 30°.1S**±0°.2×**178°.9W**±0°.2**, h100^{km}, n9, σ2^{s}01**/10**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.18**	**44**	P	**Pn**	**05 23 53.3**	**+1.2**
	452nm,0.4s,baz=77,slow=23,SNR=5.3						
RAO				S	**Sn**	**05 24 09.7**	**+0.7**
	334nm,0.4s,baz=297,slow=24,SNR=5.9						
URZ	**Urewera**	**8.79**	**201**	S	**Sn**	**05 27 11.4**	**+0.4**
	5.1nm,0.3s,baz=80,slow=23,SNR=8.7						
ASAR	**Alice Springs**	**42.38**	**267**	P	**P**	**05 31 15.9**	**+1.7**
	1.2nm,0.5s,baz=106,slow=7.5,SNR=10						
	1.2nm,0.5s						
WRA	**Warramunga Arr**	**43.34**	**272**	P	**P**	**05 31 23.6**	**+1.6**
	2.8nm,0.5s,baz=111,slow=8.0,SNR=24						
	2.8nm,0.5s						
FINES	**FINESS Array B**	**144.61**	**340**	PKPbc	**PKPbc**	**05 42 50.0**	**-2.7**
	1.9nm,0.5s,baz=46,slow=4.0,SNR=12						
NB2	**NORSAR Subarra**	**148.34**	**351**	PKP	**PKPbc**	**05 43 02.3**	**-1.3**
	comp=Z,0.6nm,0.5s,baz=15,slow=2.8						
NOA	**NORSAR Array B**	**148.34**	**351**	PKPbc	**PKPbc**	**05 43 02.1**	**-1.6**
	comp=Z,0.8nm,0.6s,baz=16,slow=4.2,SNR=5.0						
HFS	**Hagfors**	**148.81**	**348**	PKPbc	**PKPbc**	**05 43 03.1**	**-1.7**
	comp=Z,1.8nm,0.7s,baz=52,slow=2.4,SNR=4.7						
AKASG	**Malin Array Be**	**150.61**	**322**	PKPbc	**PKPbc**	**05 43 06.9**	**-2.6**
	comp=Z,0.4nm,0.3s,baz=48,slow=3.0,SNR=6.5						

UPA ***26*** *05:23:48.9±1.1, 8°.35N×82°.84W, h18^{km}±2^{km}, MW6.1, Fault plane solution: NP1:ϕ_s108.00000°, δ87.00000°, λ-2.00000°.*

MOS ***26*** *05:23:48.4±1.0, 8°.41N×82°.77W, h33^{km}, mb6.1/26, MS5.9/21, Error ellipse: s-maj=8.9km s-min=5.8km az=108.0*

UCR ***26*** *05:23:48.7±1.2, 8°.33N×82°.82W, h26^{km}±2^{km}, MW6.4, Fault plane solution: NP1:ϕ_s109.57000°, δ57.39000°, λ13.47000°.*

CATAC ***26*** *05:23:48.9±0.5, 8°N±5°×8°3W±°, h16^{km}±5^{km}, M6.5/24, mb6.3/15, mB6.9/21, MLv6.9/24, Mw(mB)6.8/21, MwMwp5.7/10, Mwp5.8/10, Error ellipse: s-maj=10.9km s-min=5.5km az=171.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.96; $M_{\theta\theta}$1.95; $M_{\phi\phi}$-2.91; $M_{r\theta}$0.02; $M_{\theta\phi}$1.51; $M_{\phi r}$0.45; Fault plane solution: $M_0$3.01367×10^{18} NP1:ϕ_s118.91942°, δ81.93747°, λ0.13970°. NP2:ϕ_s28.89982°, δ89.86168°, λ171.93744°. Principal axes: T 2.3963, Plg5.7899°, Azm343.6250°; N 0.9872, Plg81.9363°, Azm207.9235°; P -3.3835, Plg5.5934°, Azm74.1940°; Moment Tensor Solution. Moment tensor: Scale 10^{18} Nm; M_{rr}0.95; $M_{\theta\theta}$1.89; $M_{\phi\phi}$-2.85; $M_{r\theta}$0.09; $M_{\theta\phi}$1.54; $M_{\phi r}$0.37; Fault plane solution: $M_0$2.97150×10^{18} NP1:ϕ_s118.47732°, δ81.42854°, λ2.35815°. NP2:ϕ_s28.12566°, δ87.66820°, λ171.42139°. Principal axes: T 2.3782, Plg7.7100°, Azm343.0016°; N 0.9528, Plg81.1124°, Azm193.0318°; P -3.3310, Plg4.3943°, Azm73.5977°; Moment Tensor Solution. Moment tensor: Scale 10^{18} Nm; M_{rr}0.85; $M_{\theta\theta}$1.77; $M_{\phi\phi}$-2.62; $M_{r\theta}$0.16; $M_{\theta\phi}$1.40; $M_{\phi r}$0.41; Fault plane solution: $M_0$2.73952×10^{18} NP1:ϕ_s118.98045°, δ78.48633°, λ4.40775°. NP2:ϕ_s28.09899°, δ85.68112°, λ168.45310°. Principal axes: T 2.2271, Plg11.2091°, Azm343.0311°; N 0.8320, Plg77.6821°, Azm187.8650°; P -3.0591, Plg5.0422°, Azm74.0329°; Moment Tensor Solution. Moment tensor: Scale 10^{18} Nm; M_{rr}0.29; $M_{\theta\theta}$1.65; $M_{\phi\phi}$-1.94; $M_{r\theta}$-0.04; $M_{\theta\phi}$0.91; $M_{\phi r}$0.30; Fault plane solution: $M_0$2.05109×10^{18} NP1:ϕ_s121.41099°, δ84.24151°, λ-4.10752°. NP2:ϕ_s211.82382°, δ85.91324°, λ-174.22678°. Principal axes: T 1.8696, Plg1.1778°, Azm346.5459°; N 0.3243, Plg82.9307°, Azm247.0033°; P -2.1939, Plg6.9695°, Azm76.6899°; confirmed*

BGR ***26*** *05:23:49.2, 9°.29N×83°.47W, h33^{km}, mb5.7, mB_BB6.2, Ms6.3*

IDC ***26*** *05:23:49.7±3.3, 8°.46N×82°.74W, h33^{km}±25^{km}, mb4.9/28, mbtmp5.2/32, ML4.8/5, MS5.8/52, Error ellipse: s-maj=16.8km s-min=9.4km az=57.0*

NEIC ***26*** *05:23:50.4, 8°.35N×82°.76W, h30^{km}, Moment Tensor Solution. Duration: 6^{s}1 Moment tensor: Scale 10^{18}Nm; M_{rr}0.24; $M_{\theta\theta}$2.20; $M_{\phi\phi}$-2.44; $M_{r\theta}$-0.56; $M_{\theta\phi}$1.25; $M_{\phi r}$-0.07; Fault plane solution: $M_0$2.70000×10^{18} NP1: ϕ_s210.15000°, δ79.70000°, λ171.59000°. NP2: ϕ_s301.66000°, δ81.73000°, λ10.41000°. Principal axes: T 2.6469, Plg13.0000°, Azm166.0000°; N 0.1094, Plg77.0000°, Azm340.0000°; P -2.7564, Plg1.0000°, Azm76.0000°;*

NEIC ***26*** *05:23:50.4, 8°.45N×82°.76W, h22^{km}*

NEIC ***26*** *05:23:50.4, 8°.45N×82°.76W, h30^{km}*

ISC-PP ***26*** *05:23:51, 8°.46N×82°.75W, h18^{km}, Mwppsm6.2, Moment Tensor Solution. s29 Moment tensor: Scale 10^{18}Nm; M_{rr}0.13±.06; $M_{\theta\theta}$0.81±.18; $M_{\phi\phi}$-0.13±.14; $M_{r\theta}$-0.22±.21; $M_{\theta\phi}$0.32±.11; $M_{\phi r}$-0.08±.14; Fault plane solution: $M_0$2.75000×10^{18} NP1:ϕ_s233.50000°, δ50.10000°, λ192.40000°. NP2:ϕ_s135.50000°, δ80.50000°, λ-40.50000°.*

NEIC ***26*** *05:23:51.5±2.3, 8°.46N±0°.06×82°.75W±0°.05, h33^{km}±4^{km}, mb5.9/925, Ms_20 5.9/945, Mwb6.1/55, Mww6.2/100 Error ellipse: s-maj=8.8km s-min=7.0km az=220.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.06; $M_{\theta\theta}$1.88; $M_{\phi\phi}$-1.94; $M_{r\theta}$-0.20; $M_{\theta\phi}$0.77; $M_{\phi r}$0.39; Fault plane solution: $M_0$2.11000×10^{18} NP1: ϕ_s123.65000°, δ85.14000°, λ-10.25000°. NP2: ϕ_s214.53000°, δ79.79000°, λ-175.06000°. Principal axes: T 2.0378, Plg4.0000°, Azm169.0000°; N 0.1344, Plg79.0000°, Azm279.0000°; P -2.1723, Plg11.0000°, Azm79.0000°;*

OSUNB ***26*** *05:23:52.1±0.3, 8°.27N×82°.81W, h54^{km}±2^{km}, mB6.0/50 Error ellipse: s-maj=2.3km s-min=2.9km az=0.0*

GCMT ***26*** *05:23:52.6±0.1, 8°.34N×82°.87W, h33^{km}, MW6.3/171, Moment Tensor Solution. s163,c398; s171,c650; Duration: 3^{s}3 Moment tensor: Scale 10^{18}Nm; M_{rr}0.54±.01; $M_{\theta\theta}$2.41±.01; $M_{\phi\phi}$-2.95±.01; $M_{r\theta}$-0.43±.02; $M_{\theta\phi}$1.49±.01; $M_{\phi r}$0.08±.03; Best double couple: $M_0$3.10400×10^{18} NP1:ϕ_s210.00000°, δ81.00000°, λ175.00000°. NP2:ϕ_s301.00000°, δ85.00000°, λ9.00000°. Principal axes: T 2.8620, Plg10.0000°, Azm166.0000°; N 0.4780, Plg80.0000°, Azm329.0000°; P -3.3450, Plg3.0000°, Azm75.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

BJI ***26*** *05:23:52.1, 8°.40N×82°.80W, h40^{km}, mB6.1/42, Ms6.4/73, Ms7 6.2/72*

SNET ***26*** *05:23:55.4±0.6, 8°.73N×83°.10W, h10^{km}, ML6.3*

ISC 26 05:23:49.6±0.3**, 8°.34N**±0°.02×**82°.81W**±0°.02**, h31^{km}**±2^{km}**, h32^{km}:pP-P, n2274, σ1^{s}62**/1738**, mb5.9**/549**, MS5.9**/562**, 187C-84D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	**La Esperanza,**	**0.06**	**14**	⇓*i*P	**Pb**	**05 23 54.1**	**-0.9**
LESP3				*e*S	**Sb**	**05 23 54.9**	**-3.7**
LPPC	**Paso Canoas**	**0.19**	**350**	⇑*e*P	**Pb**	**05 23 54.7**	**-1.3**
LPPC				*e*S	**Sb**	**05 23 59.5**	**-0.8**
LMNES	**Limones**	**0.25**	**193**	⇑*e*P	**Pb**	**05 23 56.1**	**-0.5**
MCANO	**Manzana, Boque**	**0.32**	**46**	⇓*e*P	**Pb**	**05 23 56.7**	**-0.8**
MCANO	**Manzana, Boque**	**0.32**	**46**	⇓*i*P	**Pb**	**05 23 56.9**	**-0.7**
NELY	**Ciudad Neily**	**0.34**	**335**	⇑*e*P	**Pb**	**05 23 56.2**	**-1.5**
NELY				*e*S	**Sb**	**05 24 02.5**	**-0.6**
DVD	**David**	**0.36**	**75**	⇓*i*P	**Pb**	**05 23 57.5**	**-0.6**
DVD				*e*S	**Sb**	**05 24 03.6**	**-0.2**
CSTBL	**De las Acacias**	**0.37**	**79**	⇓*e*P	**Pb**	**05 23 57.5**	**-0.6**
CSTBL	**De las Acacias**	**0.37**	**79**	⇓*i*P	**Pb**	**05 23 57.6**	**-0.5**
PEDE3	**Pedregal, Chir**	**0.38**	**84**	⇓*i*P	**Pb**	**05 23 57.7**	**-0.7**
PEDE3				*e*S	**Sb**	**05 24 04.3**	**0.0**
LOCO3	**Loma Colorada,**	**0.39**	**80**	⇓*i*P	**Pb**	**05 23 57.9**	**-0.6**
LOMA3	**Las Lomas, Chi**	**0.42**	**78**	⇓*i*P	**Pb**	**05 23 58.2**	**-0.7**
LOMA3				*e*S	**Sn**	**05 24 06.0**	**-0.2**
CLLRA	**Cordillera,**	**0.44**	**25**	⇓*e*P	**Pb**	**05 23 58.3**	**-1.0**
CLLRA	**Cordillera,**	**0.44**	**25**	⇓*i*P	**Pb**	**05 23 58.4**	**-0.9**
FITO	**Golfito**	**0.44**	**309**	⇑*e*P	**Pb**	**05 23 56.8**	**-2.5**
FITO				*e*S	**Sb**	**05 24 03.3**	**-2.6**
MLIR3	**Monte Lirio, C**	**0.45**	**358**	⇑*e*P	**Pb**	**05 23 58.7**	**-0.8**
MLIR3				*e*S	**Sn**	**05 24 06.3**	**-0.7**
BRU2	**Volcan**	**0.46**	**14**		**Pb**	**05 23 58.4**	**-1.3**
BRU2					**Sb**	**05 24 06.2**	**-0.3**
BRU2	**Volcan**	**0.46**	**14**	⇓*e*P	**Pb**	**05 23 58.5**	**-1.2**
BRU2	**Volcan**	**0.46**	**14**	⇓P	**Pb**	**05 23 58.1**	**-1.5**
BRU2	**Volcan**	**0.46**	**14**	⇓*i*P	**Pb**	**05 23 58.7**	**-1.0**
BRU2				*e*S	**Sb**	**05 24 06.4**	**-0.1**
PTAR3	**Potrerillos Ar**	**0.46**	**41**	⇓*i*P	**Pb**	**05 23 58.8**	**-0.9**
EDAD	**Golfito**	**0.47**	**311**	⇑*e*P	**Pb**	**05 23 57.7**	**-2.1**
TBS2		**0.47**	**18**	⇓*e*P	**Pb**	**05 23 59.5**	**-0.3**
CHIR3	**Chiriqui UPA,**	**0.47**	**84**	⇓*i*P	**Pb**	**05 23 59.0**	**-0.7**
RSRNO	**Rio Sereno**	**0.47**	**353**	*e*P	**Pb**	**05 23 59.2**	**-0.6**
RSRNO	**Rio Sereno**	**0.47**	**353**	⇑*e*P	**Pb**	**05 23 59.1**	**-0.6**
SCLRA	**Santa Clara, W**	**0.49**	**3**	*e*P	**Pb**	**05 23 59.3**	**-0.7**
SCLRA	**Santa Clara, W**	**0.49**	**3**	⇑*i*P	**Pb**	**05 23 59.4**	**-0.7**
VITO	**San Vito**	**0.50**	**341**	*e*P	**Pb**	**05 23 59.2**	**-1.0**
BC3P	**Paso Ancho**	**0.51**	**22**	⇓*i*P	**Pb**	**05 23 59.1**	**-1.3**
BQTLY	**Boquete Panama**	**0.53**	**40**	⇓*e*P	**Pb**	**05 23 59.6**	**-1.2**
BQTLY	**Boquete Panama**	**0.53**	**40**	⇓*i*P	**Pb**	**05 23 59.7**	**-1.2**
BQSF3	**Alto Boquete,**	**0.54**	**43**	⇓*i*P	**Pb**	**05 23 59.8**	**-1.1**
PSOM3	**Paja de Sombre**	**0.59**	**55**	⇓*i*P	**Pb**	**05 24 00.3**	**-1.2**
PSOM3				*e*S	**Sb**	**05 24 09.8**	**+0.1**
ALCO	**Alturas Coton,**	**0.60**	**357**	⇑*e*P	**Pb**	**05 24 00.2**	**-1.8**
EDP2	**Potrero Grande**	**0.76**	**331**	*e*P	**Pb**	**05 24 02.9**	**-1.6**
EDP2				*e*S	**Sb**	**05 24 14.2**	**-0.4**
PBNVO	**Pueblo Nuevo,**	**0.81**	**48**	⇓*e*P	**Pb**	**05 24 03.4**	**-1.9**
RBALA	**Bur**	**0.84**	**50**	⇓*e*P	**Pb**	**05 24 04.1**	**-1.6**
RBALA	**Bur**	**0.84**	**50**	⇓*i*P	**Pb**	**05 24 04.2**	**-1.5**
PANP	**Palmar Norte**	**0.89**	**314**	⇑*e*P	**Pb**	**05 24 04.2**	**-2.5**
PANP				*e*S	**Sb**	**05 24 16.5**	**-1.7**
RMDIO	**Remedios, Chir**	**0.97**	**97**	⇓*e*P	**Pn**	**05 24 06.3**	**-0.8**
RMDIO	**Remedios, Chir**	**0.97**	**97**	⇓*i*P	**Pn**	**05 24 06.6**	**-0.5**
BURE	**Buenos Aires**	**0.98**	**327**	⇑*e*P	**Pn**	**05 24 05.7**	**-1.5**
DRK0	**Durika**	**1.01**	**335**	⇑*e*P	**Pn**	**05 24 06.2**	**-1.7**
DRK0	**Durika**	**1.01**	**335**	⇑P	**Pn**	**05 24 06.2**	**-1.7**
DRK0	**Durika**	**1.01**	**335**	⇑*i*P	**Pn**	**05 24 06.2**	**-1.7**
PDCAN	**Manzana , Fuen**	**1.10**	**93**	⇓*e*P	**Pn**	**05 24 07.6**	**-1.3**
KKNTU	**Kakintº**	**1.10**	**63**	⇓*e*P	**Pn**	**05 24 07.7**	**-1.2**
KKNTU	**Kakintº**	**1.10**	**63**	⇓*i*P	**Pn**	**05 24 07.9**	**-1.0**
EDPE	**Pejibaye, P**	**1.11**	**317**	⇑*e*P	**Pn**	**05 24 07.7**	**-1.3**
EDPE				*e*S	**Sb**	**05 24 22.6**	**-1.8**
ISBTO	**Bastimentos Is**	**1.16**	**31**	⇓*e*P	**Pb**	**05 24 10.3**	**-0.8**
ISBTO	**Bastimentos Is**	**1.16**	**31**	⇓*i*P	**Pb**	**05 24 10.5**	**-0.6**
SAJE	**San Jernim**	**1.22**	**325**	⇑*e*P	**Pn**	**05 24 09.0**	**-1.6**
BRIBI	**Bribri**	**1.27**	**359**	⇑*e*P	**Pb**	**05 24 11.9**	**-1.0**
MESA3	**La Mesa, Verag**	**1.61**	**97**	⇓*i*P	**Pn**	**05 24 15.7**	**-0.2**
GMAL	**Guarumal, Vera**	**1.66**	**110**	⇓*e*P	**Pn**	**05 24 15.1**	**-1.5**
GMAL	**Guarumal, Vera**	**1.66**	**110**	P	**Pn**	**05 24 15.5**	**-1.1**
GMAL	**Guarumal, Vera**	**1.66**	**110**	⇓*i*P	**Pn**	**05 24 15.4**	**-1.1**
GMAL				*e*S	**Sn**	**05 24 36.8**	**0.0**
RSUS3	**Rio de Jesus,**	**1.67**	**102**	*e*P	**Pn**	**05 24 16.3**	**-0.4**
LLNJ	**Naranjito**	**1.70**	**311**	*e*P	**Pn**	**05 24 16.2**	**-1.0**
PIEC	**Cerro El Cedra**	**1.71**	**318**	⇑*e*P	**Pn**	**05 24 16.5**	**-1.0**
QUEP	**Quepos**	**1.72**	**309**	*e*P	**Pn**	**05 24 16.9**	**-0.6**
RAZU	**San Marcos de**	**1.78**	**317**	*e*P	**Pn**	**05 24 18.1**	**-0.3**
PITB	**Pirrs, San**	**1.78**	**318**	*e*P	**Pn**	**05 24 17.4**	**-1.0**
TURIB	**Turrialba**	**1.78**	**331**	⇑*e*P	**Pn**	**05 24 18.1**	**-0.3**
VINA	**Juan Vinas**	**1.80**	**329**	⇑*e*P	**Pn**	**05 24 18.2**	**-0.5**
REPA	**Paraso**	**1.81**	**325**	⇑*e*P	**Pn**	**05 24 18.1**	**-0.8**
TAAN	**Batan**	**1.81**	**343**	⇑*e*P	**Pn**	**05 24 18.6**	**-0.1**
VERB	**Verbena**	**1.82**	**331**	⇑*e*P	**Pn**	**05 24 18.8**	**-0.1**
LCR2	**La Lucha 2**	**1.83**	**320**		**Pn**	**05 24 18.2**	**-0.9**
LCR2	**La Lucha 2**	**1.83**	**320**	⇑*e*P	**Pn**	**05 24 18.2**	**-0.9**
LCR2	**La Lucha 2**	**1.83**	**320**	S	**Sn**	**05 24 42.8**	**+1.5**
LCR2	**La Lucha 2**	**1.83**	**320**	⇑P	**Pn**	**05 24 18.1**	**-0.9**
PISJ	**San Jernim**	**1.83**	**315**	*e*P	**Pn**	**05 24 19.0**	**-0.1**
ABE2	**San Pablo**	**1.83**	**318**	*e*P	**Pn**	**05 24 18.5**	**-0.6**
STIA3	**Santiago, Vera**	**1.83**	**97**	⇓*i*P	**Pn**	**05 24 19.1**	**+0.1**
PCAYA	**Pacayas**	**1.85**	**328**	⇑*e*P	**Pn**	**05 24 19.2**	**-0.3**
VTCV	**VTCV, Calle Va**	**1.87**	**331**	⇑*e*P	**Pn**	**05 24 19.7**	**+0.1**
RESJ	**San Isidro (Tu**	**1.87**	**334**	⇑*e*P	**Pn**	**05 24 19.9**	**+0.4**
IRES	**Siquirres**	**1.87**	**338**	⇑*e*P	**Pn**	**05 24 19.8**	**+0.2**
TAGO	**Cartago**	**1.87**	**324**	*e*P	**Pn**	**05 24 19.3**	**-0.4**
PICV	**PH. Pirrs**	**1.87**	**313**	*e*P	**Pn**	**05 24 19.7**	**+0.1**
ABRB	**Las Abras (San**	**1.88**	**331**	⇑*e*P	**Pn**	**05 24 20.1**	**+0.3**
RAFA	**San Farael, Vo**	**1.89**	**328**	⇑*e*P	**Pn**	**05 24 19.9**	**-0.1**
CVTV	**Tajo**	**1.90**	**331**	⇑*e*P	**Pn**	**05 24 20.4**	**+0.3**
PAR1A	**Puntarenas Pro**	**1.90**	**311**	*e*P	**Pn**	**05 24 20.0**	**+0.2**
CVTQ	**Turrialba Volc**	**1.90**	**330**	⇑*e*P	**Pn**	**05 24 20.2**	**-0.1**
VTLA	**Turrialba Volc**	**1.91**	**330**	⇑*e*P	**Pn**	**05 24 20.4**	**+0.1**
VTR0	**Volcan Turrial**	**1.91**	**331**	⇑*e*P	**Pn**	**05 24 20.4**	**0.0**
RVLA	**Villa Bonita**	**1.92**	**336**	⇑*e*P	**Pn**	**05 24 20.6**	**+0.4**
VICA	**Volcano Irazu**	**1.93**	**328**	⇑*e*P	**Pn**	**05 24 20.2**	**-0.5**
CALO3	**Calobre, Verag**	**1.94**	**91**	*e*P	**Pn**	**05 24 20.8**	**+0.3**
TRIO	**Tres Rios**	**1.95**	**323**	⇑*e*P	**Pn**	**05 24 19.9**	**-0.8**
ACOS	**Acosta**	**1.97**	**317**	*e*P	**Pn**	**05 24 19.9**	**-1.1**
AMPA	**Desamparados**	**1.98**	**321**	⇑*e*P	**Pn**	**05 24 20.2**	**-0.9**
CORON	**Coronado**	**2.00**	**324**	*e*P	**Pn**	**05 24 21.9**	**+0.4**
ECI	**Escuela Centro**	**2.01**	**322**	⇑*e*P	**Pn**	**05 24 21.0**	**-0.5**
SJS3	**Mercedes San J**	**2.01**	**322**	⇑*e*P	**Pn**	**05 24 21.2**	**-0.3**
LUJA	**Lujan**	**2.01**	**322**	*e*P	**Pn**	**05 24 21.1**	**-0.5**
SJS	**Escuela Geolog**	**2.01**	**322**	⇑*e*P	**Pn**	**05 24 21.2**	**-0.3**
CVIMO	**Finca Echandi**	**2.01**	**326**	⇑*e*P	**Pn**	**05 24 21.5**	**-0.1**
LUPE	**Guadalupe**	**2.02**	**322**	⇑*e*P	**Pn**	**05 24 21.2**	**-0.5**
CENT	**San Jose**	**2.02**	**322**	*e*P	**Pn**	**05 24 22.3**	**+0.7**
MEXI	**Barrio Mexico**	**2.03**	**322**	⇑*e*P	**Pn**	**05 24 21.3**	**-0.5**
TIBA	**Tibas**	**2.04**	**322**	*e*P	**Pn**	**05 24 21.8**	**-0.2**
PAVB	**Pavas, San Jos**	**2.05**	**321**	*e*P	**Pn**	**05 24 21.8**	**-0.3**
DOMI	**Santo Domingo**	**2.06**	**322**	⇑*e*P	**Pn**	**05 24 21.9**	**-0.4**
SANTA	**Santa Ana**	**2.09**	**319**	*e*P	**Pn**	**05 24 21.8**	**-0.8**
HDC	**Heredia**	**2.09**	**322**		**Pn**	**05 24 22.8**	**+0.1**
HDC	**Heredia**	**2.09**	**322**	⇑P	**Pn**	**05 24 22.6**	**-0.2**
HDC	**Heredia**	**2.09**	**322**	*e*P	**Pn**	**05 24 22.0**	**-0.7**
HDC	**Heredia**	**2.09**	**322**	⇑*e*P	**Pn**	**05 24 22.4**	**-0.3**
HDC	**Heredia**	**2.09**	**322**	⇑P	**Pn**	**05 24 22.3**	**-0.4**
HDC				S	**Sb**	**05 24 50.8**	**-1.9**
HDC	**Heredia**	**2.09**	**322**	⇑*i*P	**Pn**	**05 24 22.8**	**+0.1**
HDC				*e*S	**Sn**	**05 24 48.6**	**+0.8**
HEME	**Heredia, Merce**	**2.10**	**321**	*e*P	**Pn**	**05 24 23.0**	**+0.2**
PURI	**Puriscal**	**2.11**	**315**	*e*P	**Pn**	**05 24 22.5**	**-0.4**
BELE	**Belen**	**2.12**	**320**	*e*P	**Pn**	**05 24 22.5**	**-0.5**
CACAO	**El Cacao, Vera**	**2.17**	**117**	P	**Pn**	**05 24 24.0**	**+0.4**
CACAO	**El Cacao, Vera**	**2.17**	**117**	⇑*e*P	**Pn**	**05 24 24.0**	**+0.4**
CACAO				*e*S	**Sn**	**05 24 51.3**	**+1.9**
VBV1	**V. Barva**	**2.17**	**324**	⇑*e*P	**Pn**	**05 24 23.9**	**0.0**
BITO	**Garabito Jaco**	**2.20**	**305**	*e*P	**Pn**	**05 24 23.0**	**-1.0**
CARI	**Cariari**	**2.21**	**335**	*e*P	**Pn**	**05 24 24.7**	**+0.6**
POAS	**San Pedro de P**	**2.23**	**321**	*e*P	**Pn**	**05 24 24.8**	**+0.2**
TCS1	**Tacares**	**2.24**	**319**	⇑*e*P	**Pn**	**05 24 24.8**	**+0.1**
TCS1	**Tacares**	**2.24**	**319**	⇑P	**Pn**	**05 24 24.6**	**-0.1**
TRB2	**Turrubares**	**2.25**	**314**	*e*P	**Pn**	**05 24 24.4**	**-0.3**
GREC	**Grecia**	**2.27**	**319**	*e*P	**Pn**	**05 24 25.4**	**+0.3**
SARCI	**Sarchi**	**2.31**	**319**	⇑*e*P	**Pn**	**05 24 25.9**	**+0.3**
VPS8	**V Poas**	**2.31**	**322**	⇑*e*P	**Pn**	**05 24 26.1**	**+0.2**
VPS5	**V. Poas**	**2.31**	**323**	⇑*e*P	**Pn**	**05 24 25.8**	**-0.1**
NARAN	**Naranjo de Ala**	**2.33**	**318**	⇑*e*P	**Pn**	**05 24 25.9**	**-0.1**
PALD	**Palmares**	**2.34**	**317**	*e*P	**Pn**	**05 24 25.8**	**-0.3**
TRT2	**Tortugero**	**2.38**	**337**	⇑*e*P	**Pn**	**05 24 26.5**	**-0.1**
TRT2	**Tortugero**	**2.38**	**337**	S	**Sb**	**05 24 59.4**	**-1.5**
TRT2	**Tortugero**	**2.38**	**337**	⇑P	**Pn**	**05 24 26.2**	**-0.3**
RAMO	**San Ramon**	**2.39**	**317**	*e*P	**Pn**	**05 24 26.5**	**-0.2**
SRA1	**San Ramn**	**2.39**	**316**	*e*P	**Pn**	**05 24 27.1**	**+0.3**
CHIT3	**Chitre**	**2.40**	**99**	⇓*i*P	**Pn**	**05 24 27.0**	**+0.3**
ZARE	**Zarcero**	**2.41**	**320**	*e*P	**Pn**	**05 24 27.4**	**+0.4**
TRT1	**Tortuguero**	**2.41**	**339**	⇑*e*P	**Pn**	**05 24 26.9**	**0.0**
SARA	**Sarapiqu**	**2.41**	**330**	⇑*e*P	**Pn**	**05 24 27.4**	**+0.4**
VPL1	**V. Platanar**	**2.45**	**321**	⇑*e*P	**Pn**	**05 24 27.5**	**-0.1**
ARZA	**Esparza**	**2.46**	**312**	*e*P	**Pn**	**05 24 27.8**	**+0.2**
VPL2	**V. Platanar**	**2.50**	**322**	⇑*e*P	**Pn**	**05 24 28.4**	**+0.1**
ROBF	**Roble, Puntare**	**2.51**	**311**	*e*P	**Pn**	**05 24 28.2**	**-0.1**
TOSI3	**Tonosi**	**2.52**	**111**	⇑*i*P	**Pn**	**05 24 30.7**	**+2.2**
QUEU	**Ciudad Quesada**	**2.54**	**321**	*e*P	**Pn**	**05 24 30.6**	**+1.8**
ITAL	**Pital**	**2.55**	**325**	⇑*e*P	**Pn**	**05 24 29.3**	**+0.5**
PAQE	**Paquera**	**2.56**	**305**	*e*P	**Pn**	**05 24 28.2**	**-0.8**
AZU	**Azuero**	**2.57**	**102**	⇓*e*P	**Pn**	**05 24 29.4**	**+0.3**
AZU	**Azuero**	**2.57**	**102**	P	**Pn**	**05 24 29.9**	**+0.8**
AZU	**Azuero**	**2.57**	**102**	⇓*i*P	**Pn**	**05 24 29.9**	**+0.8**
AZU				*e*S	**Sn**	**05 25 01.8**	**+2.5**
CBL1	**Cabuya**	**2.58**	**299**	*e*P	**Pn**	**05 24 28.0**	**-1.2**
ENAS	**Puntarenas**	**2.58**	**309**	*e*P	**Pn**	**05 24 28.7**	**-0.6**
JCR1	**Jicaral**	**2.73**	**303**	*e*P	**Pn**	**05 24 29.7**	**-1.7**
TUNA	**La Fortuna**	**2.78**	**319**	⇑*e*P	**Pn**	**05 24 32.5**	**+0.4**
FORC	**Fortuna**	**2.80**	**319**	*e*P	**Pn**	**05 24 32.9**	**+0.6**
MTEVE	**Monteverde**	**2.80**	**315**	*e*P	**Pn**	**05 24 33.3**	**+0.8**
VACR	**Volcan Arenal**	**2.81**	**319**	*e*P	**Pn**	**05 24 33.5**	**+1.0**
CASO	**Castillo**	**2.82**	**318**	*e*P	**Pn**	**05 24 34.0**	**+1.4**
ARE1	**Arenal 1**	**2.83**	**318**	*e*P	**Pn**	**05 24 33.6**	**+0.9**
VARE2	**V. Arenal**	**2.83**	**318**	*e*P	**Pn**	**05 24 33.6**	**+0.8**
CEDE	**Laguna Cedeo**	**2.84**	**319**	*e*P	**Pn**	**05 24 33.8**	**+1.0**
JUNT	**Juntas**	**2.87**	**312**	*e*P	**Pn**	**05 24 33.6**	**+0.3**
JTS	**Las Juntas de**	**2.87**	**313**		**Pn**	**05 24 33.8**	**+0.5**
JTS	**Las Juntas de**	**2.87**	**313**	Pn	**Pn**	**05 24 33.0**	**-0.3**
	3µm,0.3s,baz=107,slow=7.7,SNR=1963						
JTS				LR	LR	05 25 02.7	
	comp=Z,20µm,19.5s,baz=96,slow=26						
JTS				Sn	**Sn**	**05 25 06.3**	**-0.5**
	4µm,0.3s,baz=129,slow=22,SNR=9.1						
JTS	**Las Juntas de**	**2.87**	**313**	*e*P	**Pn**	**05 24 33.2**	**0.0**
JTS	**Las Juntas de**	**2.87**	**313**	⇑*e*P	**Pn**	**05 24 33.4**	**+0.1**
JTS				*e*S	**Sn**	**05 25 09.9**	**+3.1**
PEDA3	**Pedasi**	**2.87**	**106**	⇓*e*P	**Pn**	**05 24 34.9**	**+1.6**
PEDA3				*e*S	**Sb**	**05 25 12.1**	**-2.9**
CHIK	**Chiripa**	**2.94**	**315**	*e*P	**Pn**	**05 24 36.2**	**+1.8**
ZANG	**Zanguenga, Cho**	**2.97**	**78**	*e*P	**Pn**	**05 24 34.9**	**+0.3**
TILA	**Tilaran**	**3.00**	**315**	*e*P	**Pn**	**05 24 36.0**	**+0.9**
BCIP	**Isla Barro Col**	**3.04**	**74**		**Pn**	**05 24 36.1**	**+0.5**
BCIP	**Isla Barro Col**	**3.04**	**74**	P	**Pn**	**05 24 36.2**	**+0.5**
BCIP	**Isla Barro Col**	**3.04**	**74**	⇓P	**Pn**	**05 24 36.0**	**+0.3**
BCIP	**Isla Barro Col**	**3.04**	**74**	⇓*e*P	**Pn**	**05 24 36.3**	**+0.5**
BCIP	**Isla Barro Col**	**3.04**	**74**	P	**Pn**	**05 24 36.2**	**+0.5**
BCIP	**Isla Barro Col**	**3.04**	**74**	⇓*i*P	**Pn**	**05 24 36.2**	**+0.5**
QUEB	**Quebradon, Cot**	**3.06**	**318**	*e*P	**Pn**	**05 24 37.0**	**+1.0**
CNAS	**Canas**	**3.06**	**313**	*e*P	**Pn**	**05 24 36.5**	**+0.6**
CMARA	**Lajas Hojancha**	**3.08**	**303**	*e*P	**Pn**	**05 24 35.8**	**-0.4**
CMARA	**Lajas Hojancha**	**3.08**	**303**	S	**Sn**	**05 25 10.5**	**-1.4**
CMARA	**Lajas Hojancha**	**3.08**	**303**	⇓P	**Pn**	**05 24 33.9**	**-2.3**
INVE	**Universidad In**	**3.08**	**314**	*e*P	**Pn**	**05 24 37.1**	**+1.0**
TIMP	**Tierras Morena**	**3.12**	**316**	*e*P	**Pn**	**05 24 37.5**	**+0.8**
ARRA3	**Arraijan, Pana**	**3.17**	**79**	⇓*i*P	**Pn**	**05 24 37.9**	**+0.5**
TENO	**El Achiote**	**3.18**	**318**	*e*P	**Pn**	**05 24 38.8**	**+1.2**
PLVR	**Palo Verde**	**3.21**	**309**	*e*P	**Pn**	**05 24 38.6**	**+0.6**
TABO3	**Taboga, Panama**	**3.25**	**82**	⇑*i*P	**Pn**	**05 24 40.1**	**+1.7**
BAGA	**Bagaces**	**3.25**	**312**	*e*P	**Pn**	**05 24 39.4**	**+0.8**
CUI	**Cuipilapa**	**3.27**	**315**	*e*P	**Pn**	**05 24 39.5**	**+0.6**
LCHIL	**Los Chiles**	**3.27**	**325**	*e*P	**Pn**	**05 24 39.6**	**+0.8**
UPA	**Univ. de Panam**	**3.30**	**79**	⇓*i*P	**Pn**	**05 24 39.5**	**+0.4**
COLC	**Colonia**	**3.30**	**314**	*e*P	**Pn**	**05 24 41.3**	**+2.0**
SACU	**Santa Cruz**	**3.34**	**305**	*e*P	**Pn**	**05 24 40.0**	**+0.3**
UPAL	**Upala**	**3.34**	**320**	*e*P	**Pn**	**05 24 39.9**	**+0.1**
MESS	**Mesas**	**3.35**	**315**	⇑*e*P	**Pn**	**05 24 40.6**	**+0.7**
CAZU	**Cerro Azul, Pa**	**3.47**	**75**	⇓*e*P	**Pn**	**05 24 41.8**	**+0.2**
GPS3	**Bodega del ICE**	**3.48**	**314**	*e*P	**Pn**	**05 24 43.6**	**+1.9**
GPS1	**Guardaparques**	**3.48**	**314**	*e*P	**Pn**	**05 24 43.5**	**+1.7**
VRLE	**La Escondida,**	**3.50**	**314**	⇑*e*P	**Pn**	**05 24 42.9**	**+0.8**
ALIBA	**Liberia Airpor**	**3.51**	**310**	*e*P	**Pn**	**05 24 44.2**	**+2.1**
VORI	**VORI**	**3.51**	**315**	⇑*e*P	**Pn**	**05 24 42.8**	**+0.5**
LAPC	**Finca la Perla**	**3.54**	**313**	*e*P	**Pn**	**05 24 43.4**	**+0.9**
PEJA	**Penjamo Buenos**	**3.54**	**316**	*e*P	**Pn**	**05 24 43.3**	**+0.7**
ELI1	**Hacienda Flor**	**3.55**	**310**	*e*P	**Pn**	**05 24 45.4**	**+2.9**
PG27	**Guanacaste Pro**	**3.55**	**314**	*e*P	**Pn**	**05 24 43.7**	**+0.9**
BLUN	**Bluefields**	**3.76**	**345**	⇑*e*P	**Pn**	**05 24 44.9**	**-0.6**
BLUN	**Bluefields**	**3.76**	**345**	⇑P	**Pn**	**05 24 44.7**	**-0.8**
BLUN	**Bluefields**	**3.76**	**345**	P	**Pn**	**05 24 45.3**	**-0.2**
CORNA	**Casa Canada**	**3.81**	**356**	*e*P	**Pn**	**05 24 46.1**	**-0.1**
LCRUZ	**La Cruz**	**3.89**	**315**	*e*P	**Pn**	**05 24 47.9**	**+0.6**
CARN	**Rivas**	**3.89**	**317**	*e*P	**Pn**	**05 24 47.0**	**-0.3**
CARN	**Rivas**	**3.89**	**317**	⇑P	**Pn**	**05 24 47.2**	**-0.2**
ESPN	**Las Esperanzas**	**4.10**	**339**		**Pn**	**05 24 50.6**	**+0.4**
ESPN	**Las Esperanzas**	**4.10**	**339**	⇑*e*P	**Pn**	**05 24 50.2**	**0.0**
ACON	**Acoyapa**	**4.29**	**327**		**Pn**	**05 24 52.8**	**-0.1**
ACON	**Acoyapa**	**4.29**	**327**	⇑*e*P	**Pn**	**05 24 52.5**	**-0.3**
ACON	**Acoyapa**	**4.29**	**327**	P	**Pn**	**05 24 52.7**	**-0.1**
ARIN	**Rivas**	**4.30**	**316**	P	**Pn**	**05 24 54.2**	**+1.3**
ARIN	**Rivas**	**4.30**	**316**	S	**Sn**	**05 25 44.8**	**+2.8**
SAIC	**Isla e San And**	**4.30**	**14**	P	**Pn**	**05 24 52.4**	**-0.6**

MAPC	Malpelo	4.47	164	P	Pn	05 24 53.4	-1.9
NANN	Nandasmo	4.84	318	S	Sb	05 26 04.6	-7.0
NANN	Nandasmo	4.84	318	⇑P	Pn	05 25 01.8	+1.4
SABN	Sabanita	4.88	318	⇓P	Pn	05 25 02.0	+1.1
BOAB	BOACO BROADBAN	4.96	326	P	Pn	05 25 01.9	-0.1
BOAB				S	Sn	05 25 59.1	+0.9
BOAB	BOACO BROADBAN	4.96	326		Pn	05 25 02.1	+0.2
BOAB	BOACO BROADBAN	4.96	326	⇑P	Pn	05 25 01.8	-0.2
BOAB	BOACO BROADBAN	4.96	326	⇑P	Pn	05 25 01.6	-0.3
WILN	Americas 2	5.05	319	⇓P	Pn	05 25 03.6	+0.4
UNAN	Cigeo UNAN	5.06	318	⇑P	Pn	05 25 04.4	+1.0
USIM	UNAN	5.07	318		Pn	05 25 05.3	+1.8
MGAN	Managua	5.08	318		Pn	05 25 04.5	+0.9
MGAN	Managua	5.08	318	⇑*e*P	Pn	05 25 03.2	-0.4
MGAN	Managua	5.08	318	P	Pn	05 25 04.1	+0.5
MGAN	Managua	5.08	318	⇑P	Pn	05 25 03.3	-0.3
MGAN	Managua	5.08	318	P	Pn	05 25 04.8	+1.2
	158µm13µm,1.1s						
R4DEC	Barrio San Lui	5.08	318	⇓P	Pn	05 25 03.7	0.0
TISN	Laguna Tiscapa	5.09	318	⇑P	Pn	05 25 03.8	0.0
PTAC	Punta Ardita,	5.09	103	P	Pn	05 25 03.8	0.0
	193µm35µm2µm,0.8s						
PTAC	Punta Ardita,	5.09	103	⇓*i*P	Pn	05 25 03.2	-0.6
ABCN	Banco Central	5.10	318	P	Pn	05 25 05.1	+1.2
ABCN	Banco Central	5.10	318	S	Sn	05 26 05.1	+3.4
APQ2	Apoyeque	5.16	318	P	Pn	05 25 06.8	+2.0
APQ2				S	Sn	05 26 07.6	+4.2
PRVC	Isla de Provid	5.20	16		Pn	05 25 05.4	+0.1
PRVC	Isla de Provid	5.20	16	P	Pn	05 25 05.8	+0.5
	206µm83µm6µm,1.6s						
PRVC	Isla de Provid	5.20	16	⇑*i*P	Pn	05 25 05.2	-0.1
APQ3	Volcan Apoyequ	5.25	318	⇑P	Pn	05 25 06.8	+0.8
APQ3				S	Sn	05 26 13.1	+7.7
AMTN	Mateare	5.26	318	P	Pn	05 25 08.1	+1.9
AMTN	Mateare	5.26	318	S	Sn	05 26 12.1	+6.3
COPN	Copaltepe	5.33	316	⇑*e*P	Pn	05 25 08.0	+0.9
COPN	Copaltepe	5.33	316	⇑P	Pn	05 25 08.3	+1.2
BC86	Nagarote	5.37	317	S	Sn	05 26 11.4	+2.9
BC86	Nagarote	5.37	317	⇓P	Pn	05 25 09.0	+1.3
CNGN	Cerro Negro	5.63	317		Pn	05 25 12.6	+1.3
CNGN	Cerro Negro	5.63	317	*e*P	Pn	05 25 11.3	-0.1
BILN	Bilwi Airport	5.70	354	⇑*e*P	Pn	05 25 11.7	-0.5
SOLC	Bahia Solano	5.75	111	P	Pn	05 25 12.9	0.0
	7µm,1.2s						
HERN	Volcan Telica	5.80	317		Pn	05 25 14.6	+0.9
CRIN	San Cristobal	6.01	316		Pn	05 25 18.1	+1.5
CRIN	San Cristobal	6.01	316	⇑*e*P	Pn	05 25 17.3	+0.7
CRIN	San Cristobal	6.01	316	P	Pn	05 25 17.9	+1.3
	150µm18µm,0.7s						
APAC	Apartado, Choc	6.18	94	P	Pn	05 25 22.1	+3.3
	315µm105µm4µm,1.0s						
LCBC	Los crdobas,	6.39	85	P	Pn	05 25 25.9	+4.3
	470µm72µm3µm,1.1s						
POTN	Potosi Cosigui	6.54	315	⇑*e*P	Pn	05 25 24.1	+0.3
DBBC	Dabeiba	6.67	101	P	Pn	05 25 27.7	+2.1
MALC	Bahia Malaga	6.93	128	P	Pn	05 25 35.1	+5.9
LCND	La Caada	7.02	315	*e*P	Pn	05 25 32.2	+1.8
LCND				IAML		05 26 52.3	
	comp=Z,6µm,0.3s						
GR1C	Gorgona, Isla	7.03	139	P	Pn	05 25 34.4	+3.9
TGUH	Tegucigalpa,Un	7.17	323		Pn	05 25 33.3	+0.7
TGUH	Tegucigalpa,Un	7.17	323	⇑P	Pn	05 25 33.2	+0.7
CBOC	Ciudad Bolivar	7.18	110	P	Pn	05 25 33.8	+1.1
	comp=Z,111µmcomp=Z,11µmcomp=Z,735nm,1.1s						
UREC	San Jos de Ur	7.23	94	P	Pn	05 25 35.1	+1.9
	comp=Z,6µmcomp=Z,756nm,0.9s						
UREC	San Jos de Ur	7.23	94	⇓*i*P	Pn	05 25 34.5	+1.3
PLMC	San Jos del P	7.32	117	P	Pn	05 25 35.0	+0.4
	comp=Z,88µmcomp=Z,13µmcomp=Z,716nm,1.0s						
CNRM	Centro Naciona	7.33	315	*e*P	Pn	05 25 36.8	+2.2
CNRM	Centro Naciona	7.33	315	P	Pn	05 25 36.3	+1.7
CNRM	Centro Naciona	7.33	315	S	Sn	05 26 57.5	+0.7
BLLM	Bellamira	7.36	314	*e*P	Pn	05 25 36.8	+1.8
HELC	Santa Helena	7.53	106	P	Pn	05 25 39.9	+2.2
	comp=Z,135µmcomp=Z,14µmcomp=Z,896nm,1.4s						
TUMC	Tumaco	7.64	148		Pn	05 25 41.7	+2.8
TUMC	Tumaco	7.64	148	P	Pn	05 25 44.0	+5.1
	comp=Z,188µmcomp=Z,64µmcomp=Z,4µm,1.1s						
SJCC	San Jacinto, C	7.69	78	P	Pn	05 25 41.0	+1.4
	comp=Z,265µmcomp=Z,27µmcomp=Z,2µm,1.0s						
YOTC	Yotoco, Valle	7.75	124	P	Pn	05 25 41.4	+1.0
	comp=Z,62µmcomp=Z,9µmcomp=Z,326nm,1.3s						
SCLA	Alcaldia de Sa	7.88	313	S	Sn	05 27 09.1	-1.4
SCLA	Alcaldia de Sa	7.88	313	⇑P	Pn	05 25 43.5	+1.3
UESV	Universidad de	7.88	312	S	Sn	05 27 08.6	-1.9
UESV	Universidad de	7.88	312	⇑P	Pn	05 25 44.3	+2.1
ZARC	Zaragoza, Cauc	7.92	96	P	Pn	05 25 44.3	+1.6
	comp=Z,196µmcomp=Z,17µmcomp=Z,914nm,0.9s						
JAMC	Jamundi, Valle	7.95	130	P	Pn	05 25 47.4	+4.1
	comp=Z,93µmcomp=Z,12µmcomp=Z,457nm,1.3s						
GUY2C	Guyana, Caldas	8.01	112	P	Pn	05 25 47.1	+2.7
	comp=Z,75µmcomp=Z,16µmcomp=Z,1µm,1.1s						
AEIL	Aeropuerto Ilo	8.16	311	*e*P	Pn	05 25 48.6	+2.5
LALI	Alcalda de L	8.19	309	*e*P	Pn	05 25 48.6	+2.3
UDBS	Universidad Do	8.21	311	⇑P	Pn	05 25 49.0	+2.3
IGN	Direccin Gen	8.22	311	P	Pn	05 25 48.4	+1.5
UTEC	Universidad Te	8.23	311	S	Sn	05 27 17.0	-2.0
UTEC	Universidad Te	8.23	311	P	Pn	05 25 49.4	+2.3
BOQS	Boqueron	8.31	311	*e*P	Pn	05 25 50.7	+2.4
BOQS				*e*S	Sn	05 27 20.3	-0.9
BBAC	Balboa, Cauca	8.37	138	P	Pn	05 25 52.4	+3.3
	comp=Z,139µmcomp=Z,17µmcomp=Z,1µm,1.2s						
POPC	Popayan, Colom	8.39	133	P	Pn	05 25 52.3	+2.9
	comp=Z,93µmcomp=Z,17µmcomp=Z,1µm,1.3s						
CEDA	San Andres	8.44	311	*e*P	Pn	05 25 52.2	+2.3
PTBC	PUERTO BERRIO,	8.47	102	P	Pn	05 25 54.5	+4.2
	comp=Z,3µmcomp=Z,297nm,0.8s						
ARGC	Ariguani, Magd	8.59	79	P	Pn	05 25 54.0	+2.1
	comp=Z,229µmcomp=Z,22µmcomp=Z,1µm,1.1s						
CEVE	Cerro Verde	8.63	310	*e*P	Pn	05 25 55.0	+2.3
CEVE				*e*S	Sn	05 27 29.9	+0.8
ORTC	Ortega, Tolima	8.71	120	P	Pn	05 25 57.0	+3.4
	comp=Z,43µmcomp=Z,16µmcomp=Z,825nm,0.7s						
NUBE	Las Nubes	8.79	310	S	Sn	05 27 26.8	-6.3
NUBE	Las Nubes	8.79	310	⇓P	Pn	05 25 56.1	+1.3
LOAL	Lomas de Alarc	8.85	310	P	Pn	05 25 57.7	+2.1
LOAL	Lomas de Alarc	8.85	310	S	Sn	05 27 35.1	+0.8
CMBC	Cumbal	8.87	146	P	Pn	05 25 57.7	+1.5
CRUC	La Cruz	8.90	139	P	Pn	05 26 01.0	+4.5
SMRC	Santa Marta, M	8.91	71		Pn	05 25 55.5	-0.8
SMRC	Santa Marta, M	8.91	71	P	Pn	05 25 57.8	+1.5
	comp=Z,197µmcomp=Z,15µmcomp=Z,392nm,0.6s						
PAC1	Pacto, Paraso	8.97	153	P	Pn	05 25 59.1	+1.9
	comp=Z,176µmcomp=Z,22µmcomp=Z,994nm,1.3s						
SPBC	San Pablo de B	9.07	107	P	Pn	05 26 03.9	+5.3
	comp=Z,96µmcomp=Z,14µmcomp=Z,375nm,2.0s						
TULM	Tulcn-Chalpat	9.08	146	P	Pn	05 26 02.5	+3.5
	comp=Z,186µmcomp=Z,50µmcomp=Z,3µm,1.2s						
CUSE	Cuicocha Este	9.11	151	P	Pn	05 26 02.0	+2.5
	comp=Z,306µmcomp=Z,24µmcomp=Z,2µm,1.1s						
PRAC	Prado	9.12	120	P	Pn	05 26 02.8	+3.6
	comp=Z,35µmcomp=Z,18µmcomp=Z,675nm,1.0s						
ROSC	El Rosal	9.12	112	Pn	Pn	05 26 03.0	+3.5
	comp=Z,26nm,0.3s,baz=306,slow=7.5,SNR=178						
ROSC				LR	LR	05 29 48.7	
	comp=Z,60µm,20.7s,baz=321,slow=40						
OTAV	Otavalo	9.15	151		Pn	05 26 02.4	+2.4
OTAV	Otavalo	9.15	151	P	Pn	05 26 02.4	+2.4
OTAV	Otavalo	9.15	151	P	Pn	05 25 59.2	-0.8
OTAV				S	Sn	05 27 39.9	-2.3
OTAV	Otavalo	9.15	151	⇑P	Pn	05 26 00.1	+0.2
OTAV	Otavalo	9.15	151	*e*P	Pn	05 26 02.4	+2.4
OTAV	Otavalo	9.15	151	P	Pn	05 26 02.2	+2.2
	comp=Z,186µmcomp=Z,20µmcomp=Z,776nm,1.2s						
OCAC	Ocana	9.39	90	P	Pn	05 26 03.8	+0.8
	comp=Z,168µmcomp=Z,14µmcomp=Z,697nm,0.6s						
BONI	La Bonita	9.44	146	P	Pn	05 26 07.9	+4.1
	comp=Z,135µmcomp=Z,39µmcomp=Z,2µm,1.0s						
CVER	Cruz Verde, Cu	9.47	113	P	Pn	05 26 10.4	+6.0
GARC	Garzon, Huila	9.51	130	P	Pn	05 26 08.3	+3.6
	comp=Z,55µmcomp=Z,11µmcomp=Z,626nm,1.3s						
BARC	Barichara	9.70	100	P	Pn	05 26 11.2	+3.9
CHIC	Chingaza	9.74	112	P	Pn	05 26 13.5	+5.4
FLOC	Florencia	9.79	133		Pn	05 26 11.8	+3.3
FLOC	Florencia	9.79	133	P	Pn	05 26 12.2	+3.8
	comp=Z,56µmcomp=Z,18µmcomp=Z,866nm,1.3s						
RUSC	La Rusia	9.95	104		Pn	05 26 14.2	+3.2
RUSC	La Rusia	9.95	104	P	Pn	05 26 15.6	+4.6
	comp=Z,125µmcomp=Z,19µmcomp=Z,2µm,1.2s						
VILC	Villavicencio,	9.98	114	P	Pn	05 26 17.0	+5.8
PPLP	Puerto Lpez	10.03	168	P	Pn	05 26 12.6	+0.9
	comp=Z,141µmcomp=Z,50µmcomp=Z,3µm,1.6s						
PAMC	Pamplona, Colo	10.06	95	P	Pn	05 26 14.9	+2.4
CRJC	Cerrejon, Guaj	10.14	74	P	Pn	05 26 13.3	+0.1
	comp=Z,144µmcomp=Z,10µmcomp=Z,449nm,0.8s						
PIAT	Ana Tenorio	10.32	154	P	Pn	05 26 19.5	+3.4
	comp=Z,144µmcomp=Z,23µmcomp=Z,632nm,1.3s						
RTAL	Retalhuleu	10.66	306		Pn	05 26 22.1	+1.8
MACC	Macarena, Meta	10.84	124	P	Pn	05 26 25.5	+2.8
	comp=Z,30µmcomp=Z,10µmcomp=Z,494nm,0.9s						
PETF	Flores	10.96	322		Pn	05 26 27.3	+3.0
MTDJ	Mount Denham	11.08	27		Pn	05 26 26.3	+0.2
MTDJ	Mount Denham	11.08	27	⇑P	Pn	05 26 26.1	0.0
TAMC	Tame, Arauca	11.09	99	P	Pn	05 26 30.2	+4.0
	comp=Z,20µmcomp=Z,777nm,1.2s						
URIC	Uribia, Colomb	11.16	72	P	Pn	05 26 28.9	+1.8
	comp=Z,123µmcomp=Z,10µmcomp=Z,604nm,1.7s						
COHC	Cochancay	11.31	162		Pn	05 26 30.9	+1.8
COHC	Cochancay	11.31	162	P	Pn	05 26 31.1	+1.9
	comp=Z,122µmcomp=Z,22µmcomp=Z,715nm,1.3s						
PTLC	Puerto Leguiza	11.38	135	P	Pn	05 26 36.4	+6.2
GUVC	San Jose del G	11.65	119	P	Pn	05 26 35.9	+2.0
PAYG	Puerto Ayora	11.65	220		Pn	05 26 37.1	+3.2
SDV	Santo Domingo	12.05	87		Pn	05 26 40.5	+1.1
SDV	Santo Domingo	12.05	87	Pn	Pn	05 26 38.4	-1.0
	comp=Z,7.6nm,0.3s,baz=269,slow=10,SNR=26						
SDV				LR	LR	05 32 07.0	
	comp=Z,62µm,19.7s,baz=263,slow=42						
	comp=Z,145nm,0.8s						
SDV	Santo Domingo	12.05	87	P	Pn	05 26 39.1	-0.4
SDV	Santo Domingo	12.05	87	*e*P	Pn	05 26 39.8	+0.3
SDV	Santo Domingo	12.05	87	P	Pn	05 26 41.0	+1.5
	comp=Z,129µmcomp=Z,10µmcomp=Z,498nm,0.9s						
CCIG	Comitan	12.05	312		Pn	05 26 41.1	+1.5
CCIG	Comitan	12.05	312	⇑P	Pn	05 26 41.0	+1.5
PILO	Pilon	12.63	24	P	Pn	05 26 47.6	+0.4
MCRA	Macar, Loja	12.95	167	P	Pn	05 26 54.1	+2.5
	comp=Z,96µmcomp=Z,21µmcomp=Z,776nm,1.2s						
TEIG	Tepich	12.95	336		Pn	05 26 51.4	-0.1
TEIG	Tepich	12.95	336	⇓P	Pn	05 26 53.4	+1.9
TEIG	Tepich	12.95	336	P	Pn	05 26 54.9	+3.4
	comp=Z,172µmcomp=Z,103µmcomp=Z,2µm,2.2s						
CHIV	Chivirico	13.12	27	P	Pn	05 26 53.2	-0.7
GTBY	Guantanamo Bay	13.71	32		Pn	05 27 02.1	+0.1
GTBY	Guantanamo Bay	13.71	32	⇓P	Pn	05 27 03.0	+0.9
GTBY	Guantanamo Bay	13.71	32	P	Pn	05 27 04.7	+2.7
	comp=Z,25µmcomp=Z,29µmcomp=Z,1µm,1.6s						
QMBU	Quimbuelo	14.10	32	P	Pn	05 27 07.1	-0.2
NMDO	Nuevo Mundo	14.31	31		Pn	05 27 11.8	+1.6
NMDO	Nuevo Mundo	14.31	31	P	Pn	05 27 11.9	+1.8
SOR	Soroa	14.37	359		Pn	05 27 12.8	+1.8
SOR	Soroa	14.37	359	P	Pn	05 27 12.8	+1.8
MASC	Masc	14.39	34	P	Pn	05 27 14.3	+3.0
BAUV	El Baul	14.61	87	*e*P	Pn	05 27 11.8	-2.5
CMIG	Matias Romero	14.63	308	Pn	Pn	05 27 14.0	-0.7
	comp=Z,14nm,0.3s,baz=135,slow=9.9,SNR=147						
	comp=Z,158nm,0.6s						
CAMR	Camarioca	14.70	5	⇑P	Pn	05 27 18.3	+2.9
SDDR	Presa de Saban	15.39	45		Pn	05 27 24.1	-0.5
SDDR				IAmb	IAmb	05 27 29.2	
	comp=Z,976nm,1.6s						
SDDR	Presa de Saban	15.39	45	⇓P	Pn	05 27 23.6	-1.0
ATAH	Atahualpa	15.99	164	Pn	Pn	05 27 34.1	+1.3
	comp=Z,1.1nm,0.3s,baz=350,slow=11,SNR=56						
ATAH				LR	LR	05 33 02.6	
	comp=Z,47µm,20.8s,baz=1.6,slow=34						
	comp=Z,80nm,1.0s						
SC01	Santiago de lo	16.08	45	IAmb	IAmb	05 27 42.3	
	comp=Z,643nm,0.9s						
GRTK	Grand Turk	17.26	39	⇓P	P	05 27 50.3	+0.6
061Z	Ochoppi	17.52	6	IAmb	IAmb	05 27 59.5	
	comp=Z,3µm,1.9s						
TLIG	Tlapa	17.87	302	IAmb	IAmb	05 28 02.1	
	comp=Z,825nm,1.2s						
TLIG	Tlapa	17.87	302	⇓P	P	05 27 57.3	+0.7
SGC2	Sao Gabriel da	17.89	117	P	Pn	05 27 56.3	+0.1
SGC2	Sao Gabriel da	17.89	117	P	Pn	05 27 56.4	+0.1
	comp=Z,20µmcomp=Z,14µmcomp=Z,501nm,1.3s						
TBTG	Tabatinga, AM	17.90	134	P	Pn	05 27 56.4	0.0
TBTG				IAmb	IAmb	05 28 01.1	
	comp=Z,2µm,1.5s						
TBTG	Tabatinga, AM	17.90	134	P	Pn	05 27 55.8	-0.6
TBTG				S	Sn	05 31 18.3	+3.1
TBTG	Tabatinga, AM	17.90	134	*e*P	Pn	05 27 55.8	-0.6
PCRV	Puerto La Cruz	18.02	83	P	Pn	05 27 57.4	-0.6
	comp=Z,4.0nm,0.3s,baz=264,slow=7.1,SNR=37						
PCRV				LR	LR	05 38 08.1	
	comp=Z,46µm,18.2s,slow=48						
PCRV	Puerto La Cruz	18.02	83	*e*P	Pn	05 27 57.6	-0.4
OBIP	Obispado Ponce	18.47	57	IAmb	IAmb	05 28 07.3	
	comp=Z,2µm,1.6s						
UUPR	Utuado, UPR, P	18.48	56	IAmb	IAmb	05 28 15.1	
	comp=Z,712nm,1.1s						
AOPR	Arecibo Observ	18.50	56	*e*P	P	05 28 03.2	-0.2
CELP	Cerrillos	18.51	57	IAmb	IAmb	05 28 06.7	
	comp=Z,695nm,1.1s						
060A	Indiantown	18.74	7	IAmb	IAmb	05 28 16.2	
	comp=Z,1µm,1.2s						
EMPR	Esperanza - Ma	18.75	56	IAmb	IAmb	05 28 16.4	
	comp=Z,2µm,1.8s						
CZSB	Cruzeiro do Su	18.88	148	P	Pn	05 28 08.7	+0.4
CZSB	Cruzeiro do Su	18.88	148	P	P	05 28 08.2	+0.7
CZSB				S	Sn	05 31 32.4	-6.4
CZSB	Cruzeiro do Su	18.88	148	*e*P	Pn	05 28 08.6	+0.4
CZSB	Cruzeiro do Su	18.88	148	P	Pn	05 28 08.9	+0.6
	comp=Z,25µmcomp=Z,1µm,1.4s						
SJG	San Juan	18.88	57	P	Pn	05 28 08.7	+0.4
SJG				IAmb	IAmb	05 28 14.4	
	comp=Z,684nm,0.8s						
SJG	San Juan	18.88	57	P	P	05 28 06.7	-0.9
	comp=Z,15nm,0.3s,baz=245,slow=9.7,SNR=76						
SJG				LR	LR	05 34 52.7	
	comp=Z,33µm,19.9s,baz=236,slow=35						
	comp=Z,456nm,0.8s						
SJG	San Juan	18.88	57	P	Pn	05 28 08.7	+0.4
SJG				pmax	pmax		
	comp=Z,684nm,0.8s						
SJG	San Juan	18.88	57	*e*P	Pn	05 28 08.7	+0.4
SJG	San Juan	18.88	57	⇓P	P	05 28 08.1	+0.5
SJG	San Juan	18.88	57	P	Pn	05 28 09.0	+0.7
	comp=Z,22µmcomp=Z,469nm,0.8s						
GCPR	Guaynabo City	19.03	57	P	Pn	05 28 10.6	+0.5
HUMP	Col San Antoni	19.15	58	IAmb	IAmb	05 28 23.1	
	comp=Z,1µm,1.2s						
UNM	Universidad Na	19.27	306	P	Pn	05 28 15.2	+1.9
UNM	Universidad Na	19.27	306	P	Pn	05 28 15.2	+1.9
UNM				pmax	pmax		
	comp=Z,266nm,0.7s						
656A	Willston	20.92	1	P	P	05 28 30.9	+1.2
JRQG	Juriquilla Cam	21.01	308	IAmb	IAmb	05 28 49.1	
	comp=Z,594nm,1.4s						
NNA	Nana	21.05	164	P	P	05 28 32.4	+1.2
NNA				IAmb	IAmb	05 28 47.9	
	comp=Z,949nm,1.3s						
NNA	Nana	21.05	164	P	P	05 28 32.5	+1.2
	comp=Z,364nm,1.0s,baz=343,slow=8.4,SNR=70						
	comp=Z,364nm,1.0s						
NNA	Nana	21.05	164	⇑P	P	05 28 32.4	+1.2
GRFF	Grenada Fort F	21.06	78	*e*P	P	05 28 32.9	+1.6
MOIG	Morelia	21.07	304	P	P	05 28 34.2	+2.5
MOIG				IAMs_20	IAMs_20	05 37 42.8	
	comp=Z,58µm,22.0s						
MOIG	Morelia	21.07	304	⇓P	P	05 28 34.4	+2.7
GRW	Mount Saint Ca	21.15	78	*e*P	P	05 28 34.8	+2.4
GRGR	Grenville	21.15	78	*e*P	P	05 28 33.1	+0.7
GRGR	Grenville	21.15	78	⇑P	P	05 28 33.7	+1.4
GRGR	Grenville	21.15	78	P	P	05 28 35.1	+2.8
	comp=Z,73µmcomp=Z,6µm,1.4s						
TPP	Pointe-a-Pierr	21.16	83	*e*P	P	05 28 34.2	+1.7
GRSS	Sisters	21.21	78	*e*P	P	05 28 33.5	+0.5
TRN	Trinidad (W)	21.23	82	*e*P	P	05 28 32.3	-0.9
GCMP	Grenada, Carri	21.42	77	*e*P	P	05 28 35.5	+0.3
SKOC	St. Kitts, UWI	21.48	64	*e*P	P	05 28 36.5	+0.7
SKI	Saint Kitts	21.49	63	*e*P	P	05 28 37.2	+1.3
TBH	Brigand Hill	21.55	83	*e*P	P	05 28 39.5	+2.8
TEFE	Tefe	21.61	122	P	P	05 28 37.7	+0.4
TEFE				S	S	05 32 35.3	0.0
TEFE	Tefe	21.61	122	*e*P	P	05 28 38.0	+0.7
SVT	Saint Vincent	21.71	75	*e*P	P	05 28 38.9	+0.6
SVB	Belmont	21.72	75	*e*P	P	05 28 39.3	+0.8
SVOC	Richmond Hill,	21.73	75	*e*P	P	05 28 40.5	+1.9
MBFL	Flemmings, Mon	21.75	65	*e*P	P	05 28 40.4	+1.6
553A	Crawfordville	21.79	356	IAMs_20	IAMs_20	05 37 39.5	
	comp=Z,34µm,18.0s						
MDN	Morne-Daniel	22.06	70	*e*P	P	05 28 42.4	+0.3
DRTD	Roseau, Domini	22.06	70	*e*P	P	05 28 43.5	+1.4
DSLB	Salisbury	22.07	69	*e*P	P	05 28 43.0	+0.8
CBE	Ff, Capester	22.08	68	P	P	05 28 43.5	+1.1
CBE	Ff, Capester	22.08	68	*e*P	P	05 28 44.7	+2.3
FDF	Fort de France	22.14	71	P	P	05 28 43.1	+0.2
FDF				IAmb	IAmb	05 28 46.5	
	comp=Z,629nm,1.0s						
FDF	Fort de France	22.14	71	P	P	05 28 43.1	+0.2
FDF				pmax	pmax		
	comp=Z,629nm,1.0s						
FDF	Fort de France	22.14	71	⇓P	P	05 28 43.2	+0.2
SLBI	Saint Lucia, B	22.14	73	*e*P	P	05 28 43.3	+0.4
SVN	Savane Anatole	22.15	71	*e*P	P	05 28 42.6	-0.4
BIM	Bigot	22.16	72	P	P	05 28 43.5	+0.3
BIM	Bigot	22.16	72	*e*P	P	05 28 43.3	+0.1
DLPL	La Plaine	22.20	70	*e*P	P	05 28 45.0	+1.4
DWS	Wesley	22.21	69	*e*P	P	05 28 44.5	+0.8
MPOM	Morne Pois Mar	22.34	72	*e*P	P	05 28 42.3	-2.9
ILAM	Ilet Lapin Mar	22.41	71	*e*P	P	05 28 46.5	+0.7
ANWB	Willy Bob	22.46	64	IAmb	IAmb	05 28 58.4	
	comp=Z,542nm,0.9s						
ANWB	Willy Bob	22.46	64	*e*P	P	05 28 44.7	-1.6
ANWB	Willy Bob	22.46	64	⇓P	P	05 28 44.9	-1.5
GDSD	La Dsirade Is	22.65	67	IAmb	IAmb	05 29 03.7	
	comp=Z,622nm,1.2s						
BOAV	Boa Vista	22.95	104	P	P	05 28 51.9	+0.3
BOAV				IAmb	IAmb	05 29 01.4	
	comp=Z,490nm,1.3s						
BOAV	Boa Vista	22.95	104	P	P	05 28 51.8	+0.2
BOAV				S	S	05 33 01.9	+2.0
BOAV	Boa Vista	22.95	104	*e*P	P	05 28 51.9	+0.3
BOAV	Boa Vista	22.95	104	P	P	05 28 51.9	+0.3
352A	Blakely	23.11	355	P	P	05 28 53.5	+0.6
BBGH	Gun Hill	23.32	76	IAMs_20	IAMs_20	05 34 23.7	
	comp=Z,51µm,19.0s						
BBGH	Gun Hill	23.32	76	*e*P	P	05 28 55.7	+0.3
257A	Skidaway Islan	23.57	4	IAMs_20	IAMs_20	05 38 20.7	
	comp=Z,34µm,20.0s						
250A	Grady	23.74	353	P	P	05 29 00.2	+1.0
346A	Big Creek Wild	23.75	346	IAmb	IAmb	05 29 06.0	
	comp=Z,879nm,1.4s						
ZAIG	Zacatecas	23.79	309	⇑P	P	05 29 01.8	+1.7
152A	Waverly Hall	24.27	356	IAmb	IAmb	05 29 16.9	
	comp=Z,1µm,1.4s						
152A				IAMs_20	IAMs_20	05 39 18.3	
	comp=Z,34µm,18.0s						
LABB	L¡brea	24.47	135	P	P	05 29 06.1	0.0
LABB				S	S	05 33 25.5	+0.9
CSU	Charleston Sou	24.65	6	IAMs_20	IAMs_20	05 38 56.1	
	comp=Z,35µm,20.0s						
HKT	Hockley	24.72	332	P	P	05 29 08.2	0.0
HKT	Hockley	24.72	332	P	P	05 29 08.2	0.0
HKT				pmax	pmax		
	comp=Z,2µm,1.9s						
HKT	Hockley	24.72	332	⇑P	P	05 29 07.7	-0.5
NHSC	New Hope	24.76	5	P	P	05 29 09.9	+1.4
NHSC				IAMs_20	IAMs_20	05 38 59.0	
	comp=Z,36µm,20.0s						
NHSC	New Hope	24.76	5	⇑P	P	05 29 09.2	+0.7
VBMS	Vicksburg	24.81	344	⇑P	P	05 29 09.5	+0.5
MACA	Manacapuru-AM	24.85	117	P	P	05 29 10.2	+0.7
MACA				IAmb	IAmb	05 29 41.8	
	comp=Z,360nm,1.0s						
MACA				IAMs_20	IAMs_20	05 39 42.7	
	comp=Z,32µm,19.0s						
MACA	Manacapuru-AM	24.85	117	P	P	05 29 10.0	+0.5
MACA				S	S	05 33 31.9	+1.2
MACA	Manacapuru-AM	24.85	117	*e*P	P	05 29 10.3	+0.7
LRAL	Lakeview Retre	24.88	352	⇑P	P	05 29 10.2	+0.6
GOGA	Godfrey	24.95	359	⇑P	P	05 29 10.7	+0.4
Y52A	Lilburn	25.42	358	IAMs_20	IAMs_20	05 40 11.7	
	comp=Z,34µm,18.0s						
Y58A	Scranton	25.60	6	IAMs_20	IAMs_20	05 39 24.3	
	comp=Z,31µm,20.0s						
Y57A	Sumter	25.65	5	IAMs_20	IAMs_20	05 39 46.5	
	comp=Z,30µm,19.0s						
NATX	Nacogdoches	25.78	336	IAmb	IAmb	05 29 23.7	
	comp=Z,503nm,1.1s						
NATX	Nacogdoches	25.78	336	⇑P	P	05 29 17.2	-0.6
Y60A	Bolivia	25.89	9	P	P	05 29 20.4	+1.6
Y60A				IAmb	IAmb	05 29 34.7	
	comp=Z,587nm,1.1s						
Y60A				IAMs_20	IAMs_20	05 39 22.8	
	comp=Z,32µm,21.0s						
HNDO	Hondo	26.14	326	IAmb	IAmb	05 29 28.6	
	comp=Z,318nm,1.0s						
X51A	Calhoun	26.17	356	IAmb	IAmb	05 29 35.6	
	comp=Z,384nm,1.1s						
X51A				IAMs_20	IAMs_20	05 40 26.3	
	comp=Z,31µm,18.0s						
FPAL	Fort Paine	26.20	355	IAmb	IAmb	05 29 35.0	
	comp=Z,980nm,1.9s						
BIRD	Birdtown, Kers	26.27	4	IAMs_20	IAMs_20	05 40 04.8	
	comp=Z,33µm,19.0s						
X58A	Rowland	26.28	6	IAMs_20	IAMs_20	05 39 47.2	
	comp=Z,32µm,19.0s						
BG3	Lake Jocassee	26.52	360	IAMs_20	IAMs_20	05 39 44.8	
	comp=Z,32µm,21.0s						
KMSC	Kings Mountain	26.71	3	IAmb	IAmb	05 29 39.3	
	comp=Z,764nm,1.6s						
OXF	Oxford	26.74	348	IAmb	IAmb	05 30 08.9	
	comp=Z,486nm,1.1s						
OXF	Oxford	26.74	348	⇑P	P	05 29 25.6	-0.9
W57A	Gilead	26.81	5	IAMs_20	IAMs_20	05 40 21.2	
	comp=Z,35µm,19.0s						
W50A	Signal Mountai	26.83	355	IAmb	IAmb	05 29 39.9	
	comp=Z,651nm,1.4s						
W59A	Clinton	27.00	8	IAmb	IAmb	05 29 45.8	
	comp=Z,678nm,1.7s						
W59A				IAMs_20	IAMs_20	05 40 20.1	
	comp=Z,29µm,20.0s						
CPCT	Cooper Cave	27.02	357	IAMs_20	IAMs_20	05 40 53.1	
	comp=Z,35µm,18.0s						
JCT	Junction City	27.16	326	IAmb	IAmb	05 29 38.7	
	comp=Z,287nm,1.1s						
JCT	Junction City	27.16	326	⇑P	P	05 29 29.0	-1.4
WHTX	Lake Whitney,	27.19	332	IAmb	IAmb	05 30 12.7	
	comp=Z,597nm,1.4s						
V53A	Saluda	27.20	360	IAMs_20	IAMs_20	05 41 01.6	
	comp=Z,35µm,18.0s						
TKL	Tuckaleechee C	27.20	358	LR	LR	05 40 37.4	
	comp=Z,16µm,19.8s,baz=166,slow=37						
TKL	Tuckaleechee C	27.20	358	⇑P	P	05 29 30.8	+0.1
Z38A	Mt. Pleasant	27.23	337	IAmb	IAmb	05 29 38.6	
	comp=Z,241nm,0.9s						
V55A	Taylorsville	27.42	3	IAMs_20	IAMs_20	05 41 56.4	
	comp=Z,26µm,18.0s						
V48A	Smith Brothers	27.52	353	IAmb	IAmb	05 29 45.8	
	comp=Z,582nm,1.4s						
V58A	Windy Hill, Pi	27.53	6	IAMs_20	IAMs_20	05 40 35.3	
	comp=Z,28µm,20.0s						
UALR	University of	27.73	343	IAmb	IAmb	05 29 38.4	
	comp=Z,218nm,0.9s						
CLTN	Cedars of Leba	27.81	354	IAmb	IAmb	05 29 48.5	
	comp=Z,266nm,1.4s						
MIAR	Mount Ida	27.89	341	IAmb	IAmb	05 29 49.7	
	comp=Z,241nm,1.0s						
MIAR	Mount Ida	27.89	341	⇑P	P	05 29 35.6	-1.2
V61A	Roper	27.91	11	IAmb	IAmb	05 30 17.2	
	comp=Z,326nm,1.2s						
V61A				IAMs_20	IAMs_20	05 40 34.3	
	comp=Z,41µm,20.0s						
FW07	Weatherford	27.93	332	IAmb	IAmb	05 30 22.6	
	comp=Z,501nm,1.5s						
U56A	King	27.96	4	IAMs_20	IAMs_20	05 41 05.8	
	comp=Z,30µm,19.0s						
HBAR	Harrisburg	28.02	346	IAmb	IAmb	05 30 09.5	
	comp=Z,436nm,1.0s						
WVT	Waverly	28.04	351	P	P	05 29 36.9	-1.2
WVT				IAmb	IAmb	05 29 59.6	
	comp=Z,749nm,1.8s						
WVT	Waverly	28.04	351	P	P	05 29 36.9	-1.2
WVT				pmax	pmax		
	comp=Z,749nm,1.8s						
WVT	Waverly	28.04	351	⇑P	P	05 29 36.9	-1.2
FW06	Azle	28.06	333	IAmb	IAmb	05 30 00.8	
	comp=Z,198nm,1.0s						
TZTN	Tazewell	28.08	359	IAMs_20	IAMs_20	05 41 30.0	
	comp=Z,31µm,18.0s						
TZTN	Tazewell	28.08	359	⇑P	P	05 29 38.5	0.0
U49A	Red Boiling Sp	28.17	355	IAmb	IAmb	05 29 51.7	
	comp=Z,581nm,1.4s						
WHAR	Wooly Hollow	28.19	343	IAmb	IAmb	05 29 42.5	
	comp=Z,250nm,0.9s						
Z35A	Perchaven, San	28.23	334	IAmb	IAmb	05 30 23.4	
	comp=Z,428nm,1.4s						
OZNA	Ozona	28.24	325	IAmb	IAmb	05 30 42.5	
	comp=Z,513nm,1.6s						

PLPT	Palo Pinto	28.27	332	IAmb	IAmb	05 30 28.6	
	comp=Z,349nm,1.2s						
FW03	Perrin-Whitt E	28.34	332	IAmb	IAmb	05 30 23.9	
	comp=Z,323nm,1.2s						
LPAZ	La Paz	28.46	149	P	P	05 29 43.2	+0.6
	comp=Z,36nm,1.1s,baz=340,slow=9.8,SNR=51						
LPAZ				LR	LR	05 42 27.1	
	comp=Z,16µm,18.3s,baz=295,slow=39						
	comp=Z,36nm,1.1s						
LPAZ	La Paz	28.46	149	P	P	05 29 43.3	+0.6
LPAZ	La Paz	28.46	149	⇑P	P	05 29 43.1	+0.4
LPAZ	La Paz	28.46	149	*e*P	P	05 29 43.3	+0.6
T50A	Nancy	28.61	357	IAmb	IAmb	05 29 55.6	
	comp=Z,626nm,1.6s						
T50A				IAMs_20	IAMs_20	05 42 17.5	
	comp=Z,32µm,18.0s						
LCAR	Lake Charles	28.63	346	IAmb	IAmb	05 29 46.5	
	comp=Z,298nm,0.9s						
TXAR	Lajitas Array	28.64	320	P	P	05 29 44.5	+0.9
TXAR	Lajitas Array	28.64	320	P	P	05 29 43.2	-0.4
	comp=Z,2.8nm,0.7s,baz=143,slow=5.7,SNR=16						
TXAR				PcP	PcP	05 32 54.8	+0.6
	comp=Z,8.6nm,0.8s,baz=139,slow=2.8,SNR=4.7						
	comp=Z,2.8nm,0.7s						
HICK	Hickman	28.67	349	IAmb	IAmb	05 29 52.6	
	comp=Z,435nm,1.1s						
T57A	Hurt	28.71	6	IAMs_20	IAMs_20	05 41 19.0	
	comp=Z,25µm,19.0s						
FCAR	Ozark Folk Cen	28.71	344	IAmb	IAmb	05 29 46.9	
	comp=Z,160nm,0.9s						
ABTX	Abilene, Hawle	28.77	329	IAmb	IAmb	05 30 31.1	
	comp=Z,342nm,1.3s						
BLA	Blacksburg	28.82	4	IAMs_20	IAMs_20	05 41 42.0	
	comp=Z,28µm,19.0s						
BLA	Blacksburg	28.82	4	⇑P	P	05 29 45.8	+0.7
T59A	Double "B" Far	28.89	9	IAMs_20	IAMs_20	05 40 20.0	
	comp=Z,40µm,21.0s						
PB18	Visviri	28.94	153	IAmb	IAmb	05 30 30.9	
	comp=Z,306nm,1.1s						
T45A	Paducah	29.04	350	IAmb	IAmb	05 29 58.5	
	comp=Z,412nm,1.0s						
S51A	Beattyville	29.17	359	IAmb	IAmb	05 30 08.8	
	comp=Z,241nm,1.1s						
S51A				IAMs_20	IAMs_20	05 42 05.5	
	comp=Z,30µm,18.0s						
H06E1	SOCORRO T-PHAS	29.19	294	T	T	06 00 02.0	
	SNR=12						
H06S1	SOCORRO T	29.21	294	T	T	06 00 08.1	
	SNR=12						
BBSR	BB Station	29.23	33	P	P	05 29 49.2	+0.6
H06N1	SOCORRO T-PHAS	29.27	294	T	T	06 00 07.6	
	SNR=13						
S54A	Dingess, Beckl	29.36	2	IAmb	IAmb	05 30 02.9	
	comp=Z,494nm,1.7s						
S57A	Dark Hollow, R	29.49	6	IAmb	IAmb	05 30 32.5	
	comp=Z,288nm,1.6s						
S57A				IAMs_20	IAMs_20	05 41 43.8	
	comp=Z,32µm,20.0s						
T42A	Van Buren	29.53	346	IAmb	IAmb	05 29 54.1	
	comp=Z,130nm,0.8s						
APMT	Aspermont	29.57	330	IAmb	IAmb	05 30 39.8	
	comp=Z,294nm,1.4s						
SN05	Snyder 5	29.60	328	IAmb	IAmb	05 30 47.7	
	comp=Z,434nm,1.6s						
HHAR	Hobbs	29.61	342	IAmb	IAmb	05 29 54.1	
	comp=Z,244nm,1.5s						
S44A	Carbondale	29.80	350	IAmb	IAmb	05 30 05.5	
	comp=Z,410nm,1.5s						
ITTB	Itaituba	29.81	114	P	P	05 29 55.6	+1.5
ITTB				S	S	05 34 49.8	+0.8
ITTB	Itaituba	29.81	114	*e*P	P	05 29 54.6	+0.6
SIUC	Southern Illin	29.81	350	IAmb	IAmb	05 30 05.6	
	comp=Z,368nm,1.4s						
R58B	Mineral	29.82	8	IAMs_20	IAMs_20	05 40 47.5	
	comp=Z,34µm,21.0s						
RLO	Rose Lookout	29.85	340	IAmb	IAmb	05 30 15.3	
	comp=Z,421nm,1.8s						
R49A	Shelbyville	29.89	356	IAMs_20	IAMs_20	05 42 58.6	
	comp=Z,34µm,18.0s						
R55A	Marlinton	29.91	4	IAmb	IAmb	05 30 44.5	
	comp=Z,356nm,1.6s						
R55A				IAMs_20	IAMs_20	05 42 15.8	
	comp=Z,21µm,19.0s						
S61A	Accomac	29.91	11	IAMs_20	IAMs_20	05 41 44.9	
	comp=Z,32µm,20.0s						
WCI	Wyandotte Cave	29.92	354	P	P	05 29 54.5	-0.3
WCI	Wyandotte Cave	29.92	354	P	P	05 29 54.5	-0.3
WCI				pmax	pmax		
	comp=Z,2µm,2.0s						
WCI				MLR	MLR		
	comp=Z,21µm,20.0s						
WCI	Wyandotte Cave	29.92	354	⇑P	P	05 29 54.3	-0.5
ODSA	Odessa	29.93	325	IAmb	IAmb	05 30 47.8	
	comp=Z,664nm,2.0s						
WMOK	Wichita Mounta	30.09	333	⇑P	P	05 29 54.2	-2.1
DEOK	Depew	30.10	337	IAmb	IAmb	05 31 00.9	
	comp=Z,470nm,1.6s						
MPGF	Montagnes des	30.12	94	⇓P	P	05 29 58.1	+1.3
MPGF	Montagnes des	30.12	94	P	P	05 29 57.8	+0.9
MPGF				pP	sP	05 30 07.1	-2.7
MDP	Montagnes des	30.12	94	LR	LR	05 42 38.6	
	comp=Z,44µm,19.0s,baz=279,slow=38						
SLBS	Sierra La Lagu	30.13	304	P	P	05 29 59.5	+2.5
SLBS				IAmb	IAmb	05 30 13.7	
	comp=Z,239nm,1.2s						
SLBS	Sierra La Lagu	30.13	304	⇑P	P	05 29 59.3	+2.3
SLBS	Sierra La Lagu	30.13	304	P	P	05 29 59.5	+2.5
DKNS	Dickens	30.24	329	IAmb	IAmb	05 30 53.6	
	comp=Z,240nm,1.4s						
MAL2	Monte Alegre,	30.34	109	P	P	05 30 00.0	+1.2
MAL2				IAmb	IAmb	05 30 08.9	
	comp=Z,278nm,1.1s						
MAL2	Monte Alegre,	30.34	109	P	P	05 30 00.1	+1.2
MAL2				S	S	05 34 59.2	+1.7
OK052	Battle Ridge R	30.34	337	IAmb	IAmb	05 30 10.8	
	comp=Z,167nm,0.8s						
OK029	Liberty Lake	30.43	336	IAmb	IAmb	05 30 42.4	
	comp=Z,323nm,1.6s						
Q52A	Bidwell	30.49	1	IAmb	IAmb	05 30 21.3	
	comp=Z,382nm,1.2s						
CCM	Cathedral Cave	30.55	347	P	P	05 29 59.2	-1.2
CCM	Cathedral Cave	30.55	347	P	P	05 29 59.2	-1.2
CCM				pmax	pmax		
	comp=Z,820nm,1.6s						
CCM	Cathedral Cave	30.55	347	⇑P	P	05 29 59.1	-1.2
CCM	Cathedral Cave	30.55	347	P	P	05 29 59.2	-1.2
Q51A	Peebles	30.55	359	IAmb	IAmb	05 30 21.1	
	comp=Z,276nm,1.0s						
Q51A				IAMs_20	IAMs_20	05 42 58.0	
	comp=Z,32µm,18.0s						
Q54A	Coxs Mills	30.56	3	IAmb	IAmb	05 30 18.7	
	comp=Z,336nm,1.3s						
Q54A				IAMs_20	IAMs_20	05 42 48.1	
	comp=Z,22µm,19.0s						
R61A	Willards	30.61	12	IAMs_20	IAMs_20	05 41 55.2	
	comp=Z,34µm,21.0s						
Q56A	Snyder Ridge,	30.74	6	IAMs_20	IAMs_20	05 42 32.7	
	comp=Z,26µm,20.0s						
OK048	Pawnee Station	30.77	337	IAmb	IAmb	05 31 05.6	
	comp=Z,225nm,1.3s						
OK051	E0350 and S346	30.81	338	IAmb	IAmb	05 31 06.1	
	comp=Z,313nm,1.4s						
VILB	Vilhena	30.85	133	IAmb	IAmb	05 30 15.7	
	comp=Z,181nm,1.1s						
VILB	Vilhena	30.85	133	P	P	05 30 03.0	-0.3
VILB	Vilhena	30.85	133	*e*P	P	05 30 03.4	0.0
BLO	Bloomington	30.88	354	IAMs_20	IAMs_20	05 42 26.6	
	comp=Z,22µm,21.0s						
Q44A	Meyer Farm, Va	30.94	351	IAmb	IAmb	05 30 15.3	
	comp=Z,395nm,1.3s						
R40A	Maddies Statio	31.02	345	IAmb	IAmb	05 30 15.8	
	comp=Z,316nm,1.5s						
P53A	Whipple	31.04	2	IAmb	IAmb	05 30 23.0	
	comp=Z,426nm,1.4s						
P53A				IAMs_20	IAMs_20	05 43 13.7	
	comp=Z,21µm,18.0s						
T35A	Sooner Cattle	31.05	338	IAmb	IAmb	05 30 06.6	
	comp=Z,225nm,1.2s						
SMWD	Samnorwood	31.06	332	IAmb	IAmb	05 31 12.8	
	comp=Z,356nm,1.7s						
P48A	Milroy	31.07	356	IAMs_20	IAMs_20	05 43 18.8	
	comp=Z,23µm,18.0s						
P52A	Corning	31.16	1	IAMs_20	IAMs_20	05 44 29.9	
	comp=Z,18µm,18.0s						
MCWV	Mont Chateau	31.29	4	⇑P	P	05 30 08.4	+1.5
P57A	Homestead Farm	31.30	7	IAmb	IAmb	05 30 32.8	
	comp=Z,141nm,1.1s						
P57A				IAMs_20	IAMs_20	05 42 50.7	
	comp=Z,26µm,20.0s						
MNTX	Cornudas Mount	31.32	321	⇑P	P	05 30 06.3	-1.0
PB08	IPOC Station P	31.33	155	P	P	05 30 08.9	+1.1
NPGB	Novo Progresso	31.34	118	P	P	05 30 07.2	-0.5
NPGB				S	S	05 35 10.4	-2.7
NPGB	Novo Progresso	31.34	118	*e*P	P	05 30 07.5	-0.2
P46A	Rosedale	31.39	353	IAmb	IAmb	05 30 19.1	
	comp=Z,306nm,1.2s						
MSTX	Muleshoe	31.45	327	IAmb	IAmb	05 31 06.5	
	comp=Z,253nm,1.5s						
KAN13	South Haven SW	31.50	337	IAmb	IAmb	05 30 23.3	
	comp=Z,274nm,1.6s						
PATCX	Punta Patache	31.54	157	IAmb	IAmb	05 30 14.6	
	comp=Z,235nm,1.3s						
OK038	West end E0370	31.54	335	IAmb	IAmb	05 31 07.5	
	comp=Z,158nm,1.1s						
AMTX	Amarillo	31.59	329	IAmb	IAmb	05 31 16.2	
	comp=Z,181nm,1.4s						
KAN14	Manchester OK	31.64	336	IAmb	IAmb	05 31 20.6	
	comp=Z,531nm,1.9s						
O52A	Adamsville	31.65	1	IAmb	IAmb	05 30 23.6	
	comp=Z,558nm,1.7s						
O52A				IAMs_20	IAMs_20	05 43 34.0	
	comp=Z,21µm,18.0s						
KAN09	Caldwell North	31.66	337	IAmb	IAmb	05 31 15.7	
	comp=Z,324nm,1.5s						
KAN01	Argonia South	31.73	337	IAmb	IAmb	05 31 17.6	
	comp=Z,428nm,1.5s						
ACSO	Alum Creek Sta	31.75	360	IAmb	IAmb	05 30 24.2	
	comp=Z,302nm,1.1s						
ACSO	Alum Creek Sta	31.75	360	⇑P	P	05 30 11.0	0.0
O54A	Avella	31.78	4	IAmb	IAmb	05 30 29.1	
	comp=Z,159nm,1.1s						
O54A				IAMs_20	IAMs_20	05 41 58.3	
	comp=Z,26µm,22.0s						
O53A	New Philadelph	31.80	2	IAmb	IAmb	05 30 33.0	
	comp=Z,162nm,1.1s						
O53A				IAMs_20	IAMs_20	05 42 01.0	
	comp=Z,22µm,22.0s						
KAN08	Anthony NE Sta	31.88	337	IAmb	IAmb	05 31 23.6	
	comp=Z,308nm,1.4s						
KAN12	Harper NE Stat	31.95	337	IAmb	IAmb	05 31 24.5	
	comp=Z,341nm,1.6s						
PB01	IPOC Station P	32.00	156	P	P	05 30 14.8	+1.4
P61A	Hammonton	32.01	12	IAmb	IAmb	05 30 42.6	
	comp=Z,331nm,1.3s						
P61A				IAMs_20	IAMs_20	05 42 47.4	
	comp=Z,24µm,21.0s						
MVL	Millersville	32.05	9	IAmb	IAmb	05 30 38.1	
	comp=Z,167nm,1.2s						
MVL				IAMs_20	IAMs_20	05 42 14.4	
	comp=Z,37µm,22.0s						
WUPA	West Chester U	32.11	10	IAMs_20	IAMs_20	05 43 01.0	
	comp=Z,24µm,20.0s						
SFIN	Lafayette	32.13	354	IAMs_20	IAMs_20	05 45 08.8	
	comp=Z,21µm,18.0s						
P40A	Paris	32.14	346	IAmb	IAmb	05 30 26.4	
	comp=Z,350nm,1.3s						
SIV	San Ignacio	32.37	138	P	P	05 30 16.6	0.0
	comp=Z,37nm,0.9s,baz=311,slow=9.3,SNR=115						
SIV				LR	LR	05 43 51.1	
	comp=Z,16µm,20.9s,baz=330,slow=37						
	comp=Z,37nm,0.9s						
N53A	Lisbon	32.38	3	IAmb	IAmb	05 30 29.0	
	comp=Z,244nm,1.5s						
N53A				IAMs_20	IAMs_20	05 43 55.2	
	comp=Z,22µm,19.0s						
N51A	Ashland	32.44	1	IAmb	IAmb	05 30 29.9	
	comp=Z,228nm,1.0s						
N51A				IAMs_20	IAMs_20	05 44 06.0	
	comp=Z,19µm,19.0s						
SSPA	Standing Stone	32.45	7	P	P	05 30 17.7	+0.6
SSPA				IAmb	IAmb	05 30 32.7	
	comp=Z,227nm,1.3s						
SSPA	Standing Stone	32.45	7	IAMs_20	IAMs_20	05 43 35.2	
	comp=Z,30µm,20.0s						
SSPA	Standing Stone	32.45	7	⇑P	P	05 30 17.7	+0.6
SSPA	Standing Stone	32.45	7	P	P	05 30 17.9	+0.8
SSPA				pP	sP	05 30 27.2	-2.8
N49A	Columbus Grove	32.47	358	IAMs_20	IAMs_20	05 43 57.7	
	comp=Z,27µm,18.0s						
HDIL	Hopedale	32.59	351	⇑P	P	05 30 16.9	-1.4
P38A	Dawn	32.60	345	IAmb	IAmb	05 30 34.1	
	comp=Z,138nm,0.8s						
ATM1	UHE Belo Monte	32.61	110	P	P	05 30 19.8	+1.0
ATM1				S	S	05 35 34.9	+1.9
PDRB	Porto dos Gac	32.64	127	P	P	05 30 18.1	-1.0
PDRB				S	S	05 35 30.7	-2.7
PDRB	Porto dos Gac	32.64	127	*e*P	P	05 30 18.3	-0.7
PB09	IPOC Station P	32.78	156	P	P	05 30 22.1	+1.8
LUPA	Lehigh Univers	32.80	10	IAmb	IAmb	05 30 49.0	
	comp=Z,174nm,1.1s						
PB03	IPOC Station P	32.80	157	IAmb	IAmb	05 30 42.2	
	comp=Z,437nm,1.8s						
N58A	Sunbury	32.81	9	IAmb	IAmb	05 30 36.1	
	comp=Z,202nm,1.3s						
N58A				IAMs_20	IAMs_20	05 44 03.6	
	comp=Z,27µm,19.0s						
BMO2	UHE Belo Monte	32.85	109	P	P	05 30 21.8	+0.9
BMO2				S	S	05 35 37.6	+0.9
M50A	Fremont	32.92	360	IAmb	IAmb	05 30 44.3	
	comp=Z,174nm,1.1s						
M50A				IAMs_20	IAMs_20	05 44 28.8	
	comp=Z,30µm,18.0s						
CLDB	Colider	32.97	125	P	P	05 30 20.3	-1.6
CLDB				S	S	05 35 34.1	-4.3
CLDB	Colider	32.97	125	*e*P	P	05 30 20.6	-1.3
BMO1	UHE Belo Monte	33.01	109	P	P	05 30 22.8	+0.5
BMO1				S	S	05 35 38.7	-0.3
BRNJ	Basking Ridge	33.03	12	IAmb	IAmb	05 30 51.8	
	comp=Z,155nm,1.1s						
BRNJ				IAMs_20	IAMs_20	05 43 18.4	
	comp=Z,28µm,20.0s						
KSU1	Kansas State U	33.04	340	⇑P	P	05 30 20.9	-1.4
M52A	Chesterland	33.09	2	IAMs_20	IAMs_20	05 44 28.0	
	comp=Z,24µm,19.0s						
M57A	Sunshine Farm,	33.24	8	IAmb	IAmb	05 30 56.1	
	comp=Z,281nm,1.2s						
ALLY	Alegheny Colle	33.25	4	IAmb	IAmb	05 30 36.7	
	comp=Z,457nm,1.9s						
ALLY				IAMs_20	IAMs_20	05 42 42.4	
	comp=Z,26µm,21.0s						
CPNY	Central Park	33.26	12	IAmb	IAmb	05 30 55.6	
	comp=Z,193nm,1.8s						
CPNY				IAMs_20	IAMs_20	05 44 27.4	
	comp=Z,26µm,19.0s						
PTLB	Pontes e Lacer	33.30	135	P	P	05 30 24.3	-0.4
PTLB	Pontes e Lacer	33.30	135	*e*P	P	05 30 24.0	-0.7
RTBA	Rita Blanca	33.34	330	IAmb	IAmb	05 31 36.0	
	comp=Z,397nm,1.9s						
PB05	IPOC Station P	33.37	159	P	P	05 30 26.9	+1.5
PB05				IAmb	IAmb	05 30 50.7	
	comp=Z,139nm,1.3s						
PAL	Palisades	33.48	12	IAmb	IAmb	05 30 55.1	
	comp=Z,157nm,1.2s						
PAL				IAMs_20	IAMs_20	05 44 34.1	
	comp=Z,23µm,18.0s						
N62A	Caumsett State	33.50	13	IAMs_20	IAMs_20	05 44 36.7	
	comp=Z,24µm,18.0s						
HSIG		33.51	312	IAmb	IAmb	05 30 45.1	
	comp=Z,434nm,2.0s						
BBSD	Serra de San D	33.54	139	*e*P	P	05 30 26.4	-0.5
SRIG	Santa Rosalia	33.64	308	⇓P	P	05 30 29.7	+2.1
KSPA	Keystone Colle	33.66	10	IAmb	IAmb	05 30 55.4	
	comp=Z,140nm,0.9s						
319A	Douglas	33.66	317	IAmb	IAmb	05 30 44.4	
	comp=Z,244nm,1.0s						
L46A	Eue Claire	33.67	355	IAMs_20	IAMs_20	05 43 50.7	
	comp=Z,21µm,21.0s						
ERPA	Erie	33.73	4	IAmb	IAmb	05 30 42.9	
	comp=Z,237nm,1.8s						
Y22D	IRIS PASSCAL I	33.89	323	P	P	05 30 30.1	+0.1
	baz=134						
CBKS	Cedar Bluff	33.95	336	IAmb	IAmb	05 30 32.5	
	comp=Z,202nm,1.3s						
CBKS	Cedar Bluff	33.95	336	⇑P	P	05 30 29.1	-1.1
WVNY	West Valley, N	34.13	6	IAmb	IAmb	05 30 46.9	
	comp=Z,271nm,1.2s						
WVNY				IAMs_20	IAMs_20	05 44 27.5	
	comp=Z,20µm,20.0s						
ANMO	Albuquerque	34.23	324	P	P	05 30 32.5	-0.4
ANMO	Albuquerque	34.23	324	LR	LR	05 46 40.7	
	comp=Z,13µm,20.9s,baz=222,slow=40						
ANMO	Albuquerque	34.23	324	P	P	05 30 32.5	-0.4
ANMO				pmax	pmax		
	comp=Z,37nm,1.0s						
ANMO				MLR	MLR		
	comp=Z,10µm,21.0s						
ANMO	Albuquerque	34.23	324	⇑P	P	05 30 32.4	-0.4
ANMO	Albuquerque	34.23	324	P	P	05 30 32.9	0.0
BINY	Binghamton	34.25	9	IAmb	IAmb	05 31 00.5	
	comp=Z,99nm,0.9s						
BINY	Binghamton	34.25	9	⇑P	P	05 30 33.3	+0.5
KSCT	Kent School, K	34.26	12	IAmb	IAmb	05 31 01.4	
	comp=Z,195nm,0.9s						
M63A	Gales Ferry	34.28	14	IAmb	IAmb	05 31 20.0	
	comp=Z,269nm,1.6s						
M63A				IAMs_20	IAMs_20	05 45 15.4	
	comp=Z,22µm,19.0s						
K50A	Casco	34.30	0	IAMs_20	IAMs_20	05 44 28.0	
	comp=Z,20µm,21.0s						
L59A	Walton	34.40	10	IAmb	IAmb	05 31 06.4	
	comp=Z,270nm,1.4s						
MMNY	Mt. Morris Dam	34.52	6	IAmb	IAmb	05 30 50.0	
	comp=Z,319nm,1.3s						
MMNY				IAMs_20	IAMs_20	05 44 50.9	
	comp=Z,28µm,20.0s						
UCCT	U. Connecticut	34.60	14	IAmb	IAmb	05 31 11.3	
	comp=Z,182nm,1.6s						
UCCT				IAMs_20	IAMs_20	05 45 23.0	
	comp=Z,27µm,19.0s						
SCIA	State Center	34.67	346	⇑P	P	05 30 34.5	-1.9
K57A	Scipio Center	34.70	8	IAmb	IAmb	05 30 51.9	
	comp=Z,336nm,1.4s						
K57A				IAMs_20	IAMs_20	05 45 59.5	
	comp=Z,23µm,19.0s						
T25A	Trinidad	34.73	329	IAmb	IAmb	05 30 41.5	
	comp=Z,189nm,1.4s						
M65A	Busby, Falmout	34.79	16	IAMs_20	IAMs_20	05 44 21.0	
	comp=Z,27µm,20.0s						
M65A	Busby, Falmout	34.79	16	P	P	05 30 37.0	-0.4
	baz=201						
J47A	Sunmer	34.80	357	IAMs_20	IAMs_20	05 45 28.5	
	comp=Z,15µm,18.0s						
MEDO	Medina	34.89	6	IAmb	IAmb	05 30 53.0	
	comp=Z,160nm,1.1s						
MEDO				IAMs_20	IAMs_20	05 43 23.7	
	comp=Z,23µm,22.0s						
PB14	IPOC Station P	34.93	160	P	P	05 30 40.8	+1.6
PB14				IAmb	IAmb	05 30 44.4	
	comp=Z,290nm,1.5s						
JFWS	Jewell Farm	35.05	350	IAmb	IAmb	05 30 50.5	
	comp=Z,273nm,1.1s						
JFWS	Jewell Farm	35.05	350	⇑P	P	05 30 37.9	-1.7
J55A	Hilton	35.06	6	IAmb	IAmb	05 31 10.7	
	comp=Z,197nm,1.7s						
J55A				IAMs_20	IAMs_20	05 45 17.1	
	comp=Z,30µm,20.0s						
L64A	Middleborough	35.09	16	IAMs_20	IAMs_20	05 46 20.8	
	comp=Z,16µm,19.0s						
L61B	Northampton	35.12	13	IAMs_20	IAMs_20	05 45 23.7	
	comp=Z,19µm,19.0s						
TRY	Troy	35.18	12	IAmb	IAmb	05 31 12.7	
	comp=Z,142nm,1.2s						
TRY				IAMs_20	IAMs_20	05 45 58.3	
	comp=Z,19µm,19.0s						
TUC	Tucson	35.25	316	P	P	05 30 42.7	+1.1
TUC	Tucson	35.25	316	IAMs_20	IAMs_20	05 45 41.9	
	comp=Z,25µm,20.0s						
TUC	Tucson	35.25	316	P	P	05 30 42.7	+1.1
TUC				pmax	pmax		
	comp=Z,77nm,1.0s						
TUC				MLR	MLR		
	comp=Z,25µm,20.0s						
TUC	Tucson	35.25	316	⇑P	P	05 30 42.4	+0.8
TUC	Tucson	35.25	316	P	P	05 30 42.7	+1.1
BCX	Boston College	35.38	15	IAmb	IAmb	05 31 18.1	
	comp=Z,207nm,1.5s						
BCX				IAMs_20	IAMs_20	05 46 06.4	
	comp=Z,22µm,19.0s						
K62A	Royalston	35.43	13	IAmb	IAmb	05 31 19.0	
	comp=Z,177nm,1.5s						
K62A				IAMs_20	IAMs_20	05 45 43.8	
	comp=Z,17µm,20.0s						
J57A	Williamstown	35.44	9	IAmb	IAmb	05 30 58.1	
	comp=Z,224nm,1.5s						
HRV	Adam Dziewonsk	35.44	14	P	P	05 30 43.4	+0.4
HRV				IAMs_20	IAMs_20	05 45 57.1	
	comp=Z,28µm,19.0s						
HRV	Adam Dziewonsk	35.44	14	P	P	05 30 43.4	+0.4
HRV				pmax	pmax		
	comp=Z,78nm,1.3s						
HRV				MLR	MLR		
	comp=Z,28µm,19.0s						
I49A	Point Hope	35.46	360	IAMs_20	IAMs_20	05 45 12.8	
	comp=Z,23µm,20.0s						
I45A	Fountain	35.68	356	IAMs_20	IAMs_20	05 46 53.8	
	comp=Z,18µm,18.0s						
GO02	Mina Guanaco	35.70	159	⇑P	P	05 30 47.6	+1.8
J59A	Piesco	35.73	10	IAmb	IAmb	05 31 19.9	
	comp=Z,250nm,1.6s						
SDCO	Great Sand Dun	35.75	328	IAmb	IAmb	05 30 50.4	
	comp=Z,252nm,1.8s						
SDCO	Great Sand Dun	35.75	328	⇑P	P	05 30 45.8	-0.3
ACCN	Adirondack Com	35.81	11	IAmb	IAmb	05 31 17.7	
	comp=Z,169nm,1.4s						
ACCN				IAMs_20	IAMs_20	05 46 25.8	
	comp=Z,20µm,18.0s						
PECO	Prince Edward	35.81	7	IAmb	IAmb	05 31 00.1	
	comp=Z,162nm,1.3s						
PRPB	Parauapebas	35.92	113	P	P	05 30 47.0	-0.5
PRPB				S	S	05 36 20.6	-3.4
PRPB	Parauapebas	35.92	113	*e*P	P	05 30 47.4	-0.1
J61A	Chester	36.01	13	IAmb	IAmb	05 31 16.7	
	comp=Z,110nm,1.1s						
J61A				IAMs_20	IAMs_20	05 45 15.1	
	comp=Z,16µm,20.0s						
X18A	Snowflake	36.07	320	IAmb	IAmb	05 31 06.8	
	comp=Z,156nm,1.5s						
SALV	Santo Antonio	36.07	132	P	P	05 30 48.2	-0.5
SALV				S	S	05 36 24.8	-1.4
SALV	Santo Antonio	36.07	132	*e*P	P	05 30 48.3	-0.5
H43A	Windswept, Lux	36.25	354	IAMs_20	IAMs_20	05 45 50.7	
	comp=Z,24µm,21.0s						
AC01	Pan de Azucar	36.28	161	P	P	05 30 52.6	+2.3
AC01				IAmb	IAmb	05 30 55.3	
	comp=Z,465nm,1.9s						
DELO	Deloro Mine	36.32	6	IAmb	IAmb	05 31 10.4	
	comp=Z,173nm,1.5s						
GLMI	Grayling	36.38	358	⇑P	P	05 30 49.6	-1.4
HNH	Hanover	36.41	13	IAMs_20	IAMs_20	05 46 03.5	
	comp=Z,15µm,19.0s						
SADO	Sadowa	36.43	4	IAmb	IAmb	05 30 55.8	
	comp=Z,302nm,1.8s						
SADO	Sadowa	36.43	4	LR	LR	05 47 11.4	
	comp=Z,16µm,18.1s,baz=195,slow=39						
214A	Organ Pipe Nat	36.45	314	IAmb	IAmb	05 31 07.6	
	comp=Z,240nm,1.1s						
OGNE	Ogallala	36.69	335	⇑P	P	05 30 53.5	-0.3
I62A	Tamworth	36.78	14	IAMs_20	IAMs_20	05 46 36.6	
	comp=Z,18µm,20.0s						
LONY	Lake Ozonia	36.84	10	IAmb	IAmb	05 31 30.2	
	comp=Z,282nm,1.6s						
LONY	Lake Ozonia	36.84	10	⇑P	P	05 30 54.9	-0.1
VT1	Waterbury	36.90	12	IAmb	IAmb	05 31 30.5	
	comp=Z,307nm,1.5s						
VT1				IAMs_20	IAMs_20	05 45 27.5	
	comp=Z,20µm,22.0s						
X16A	Lo Mia Camp, P	36.95	319	IAMs_20	IAMs_20	05 46 41.9	
	comp=Z,17µm,18.0s						
MVCO	Mesa Verde	36.99	325	IAmb	IAmb	05 31 01.0	
	comp=Z,343nm,1.6s						
MVCO	Mesa Verde	36.99	325	⇑P	P	05 30 55.6	-1.1
LBNH	Lisbon	36.99	13	IAmb	IAmb	05 31 31.9	
	comp=Z,227nm,1.6s						
LBNH	Lisbon	36.99	13	⇓P	P	05 30 57.5	+1.2
WBO	Williamsburg	37.10	9	IAmb	IAmb	05 31 28.5	
	comp=Z,268nm,1.5s						
I63A	Otisfield	37.13	15	IAmb	IAmb	05 31 34.0	
	comp=Z,178nm,1.4s						
I63A				IAMs_20	IAMs_20	05 46 57.8	
	comp=Z,26µm,19.0s						
FRNY	Flat Rock	37.22	11	IAmb	IAmb	05 31 33.6	
	comp=Z,300nm,1.8s						
FRNY				IAMs_20	IAMs_20	05 47 08.2	
	comp=Z,18µm,19.0s						
ECSD	EROS Data Cent	37.26	343	⇑P	P	05 30 56.4	-2.2
SNDB	Serra Nova Dou	37.27	122	P	P	05 30 58.5	-0.5
SNDB				S	S	05 36 41.4	-3.2
SNDB	Serra Nova Dou	37.27	122	*e*P	P	05 30 58.7	-0.2
G40A	Rib Lake	37.34	351	IAmb	IAmb	05 31 09.9	
	comp=Z,282nm,1.3s						
ISCO	Idaho Springs	37.38	331	IAmb	IAmb	05 31 04.3	

	comp=Z,334nm,1.9s						
ISCO	Idaho Springs	37.38	331	⇑P	P	05 30 59.5	-0.4
AC02	Maricunga	37.40	160	IAmb	IAmb	05 31 24.0	
	comp=Z,448nm,1.6s						
AC06	Mina Casimiro	37.48	162	IAmb	IAmb	05 31 32.7	
	comp=Z,329nm,1.9s						
H62A	Milan	37.49	14	IAMs_20	IAMs_20	05 48 48.2	
	comp=Z,16µm,19.0s						
F42A	Maple Grove Fa	37.56	354	IAmb	IAmb	05 31 11.7	
	comp=Z,547nm,1.9s						
F42A				IAMs_20	IAMs_20	05 46 31.4	
	comp=Z,21µm,20.0s						
WUAZ	Wupatki	37.59	320	IAMs_20	IAMs_20	05 47 31.8	
	comp=Z,16µm,21.0s						
WUAZ	Wupatki	37.59	320	⇑P	P	05 31 02.6	+0.9
PV01	Paradox Valley	37.68	326	IAmb	IAmb	05 31 07.2	
	comp=Z,278nm,1.8s						
Y14A	Wickenburg	37.71	317	IAMs_20	IAMs_20	05 49 20.0	
	comp=Z,21µm,20.0s						
GO03	Copiapo	37.74	162	IAmb	IAmb	05 31 40.5	
	comp=Z,202nm,1.5s						
GO03	Copiapo	37.74	162	⇓P	P	05 31 04.6	+1.7
GAC	Glen Almond	37.76	8	⇑P	P	05 31 02.8	+0.1
PV15	Paradox Valley	37.78	326	IAmb	IAmb	05 31 08.1	
	comp=Z,271nm,1.5s						
PV13	Radium Mtn., P	37.84	326	IAmb	IAmb	05 31 08.2	
	comp=Z,316nm,1.4s						
WVL	Waterville	37.85	15	IAmb	IAmb	05 31 39.8	
	comp=Z,199nm,1.3s						
WVL				IAMs_20	IAMs_20	05 47 11.8	
	comp=Z,18µm,19.0s						
MNTQ	Montreal, Queb	37.86	11	IAmb	IAmb	05 31 39.0	
	comp=Z,439nm,1.8s						
MNTQ				IAMs_20	IAMs_20	05 47 28.1	
	comp=Z,20µm,19.0s						
E46A	Sault Ste Mari	37.91	358	IAmb	IAmb	05 31 26.4	
	comp=Z,305nm,1.8s						
PV03	Paradox Valley	37.92	326	IAmb	IAmb	05 31 08.7	
	comp=Z,153nm,1.3s						
PV05	Paradox Valley	37.94	325	IAmb	IAmb	05 31 18.1	
	comp=Z,142nm,1.1s						
PV07	Paradox Valley	37.94	326	IAmb	IAmb	05 31 09.2	
	comp=Z,339nm,1.5s						
PV18	Skein Mesa, Pa	37.95	326	IAmb	IAmb	05 31 08.9	
	comp=Z,333nm,1.3s						
PV11	David Mesa, Pa	37.97	326	IAmb	IAmb	05 31 09.2	
	comp=Z,438nm,1.6s						
PV16	Nyswonger Mesa	38.00	326	IAmb	IAmb	05 31 09.4	
	comp=Z,271nm,1.5s						
PV17	East Wray Mesa	38.00	326	IAmb	IAmb	05 31 08.4	
	comp=Z,359nm,1.7s						
COWI	Conover	38.01	353	IAmb	IAmb	05 31 15.6	
	comp=Z,230nm,1.4s						
COWI				IAMs_20	IAMs_20	05 46 56.4	
	comp=Z,19µm,20.0s						
COWI	Conover	38.01	353	⇑P	P	05 31 02.9	-2.0
PV20	West Nyswonger	38.05	326	IAmb	IAmb	05 31 09.7	
	comp=Z,214nm,1.2s						
PV04	Paradox Valley	38.05	326	IAmb	IAmb	05 31 09.9	
	comp=Z,305nm,1.5s						
PV22	Blue Mesa, Par	38.09	326	IAmb	IAmb	05 31 10.2	
	comp=Z,299nm,1.7s						
PV10	Paradox Valley	38.12	326	IAmb	IAmb	05 31 09.8	
	comp=Z,323nm,1.4s						
PV23	Carpenter Ridg	38.15	326	IAmb	IAmb	05 31 09.8	
	comp=Z,431nm,1.8s						
PAL01	Palmeiras do T	38.16	112	P	P	05 31 07.2	+0.6
PAL01				S	S	05 36 58.3	0.0
G62A	West of Eustis	38.24	14	IAmb	IAmb	05 31 43.6	
	comp=Z,314nm,1.4s						
G62A				IAMs_20	IAMs_20	05 47 32.2	
	comp=Z,21µm,19.0s						
VTX	Valle De La Tr	38.31	311	IAmb	IAmb	05 31 13.1	
	comp=Z,499nm,1.6s						
VTX				IAMs_20	IAMs_20	05 49 16.4	
	comp=Z,16µm,20.0s						
TRQ	Mont Tremblant	38.40	9	IAMs_20	IAMs_20	05 46 21.3	
	comp=Z,25µm,22.0s						
BDQN	Bodoquena, MS	38.41	138	*e*P	P	05 31 08.0	-0.5
PAL2	UHE Estreito -	38.42	112	P	P	05 31 08.9	+0.2
PAL2				S	S	05 37 01.9	-0.2
GLA	Glamis	38.48	314	IAmb	IAmb	05 31 24.9	
	comp=Z,328nm,1.0s						
CPBX	Cerro Prieto	38.48	313	IAMs_20	IAMs_20	05 49 44.8	
	comp=Z,15µm,20.0s						
PKME	Peaks-Kenny Pk	38.60	15	IAmb	IAmb	05 31 47.7	
	comp=Z,226nm,1.4s						
PKME				IAMs_20	IAMs_20	05 47 43.5	
	comp=Z,19µm,18.0s						
PKME	Peaks-Kenny Pk	38.60	15	⇑P	P	05 31 10.8	+1.0
EMMW	East Machias	38.60	18	IAMs_20	IAMs_20	05 45 32.6	
	comp=Z,19µm,22.0s						
BLYC	Blythe	38.64	315	IAmb	IAmb	05 31 27.5	
	comp=Z,229nm,1.1s						
MURT	Porto Murtinho	38.73	141	*e*P	P	05 31 09.8	-1.4
ESJX	Sierra Juarez	38.74	312	IAmb	IAmb	05 31 31.9	
	comp=Z,354nm,1.2s						
ESJX				IAMs_20	IAMs_20	05 49 50.6	
	comp=Z,18µm,20.0s						
U15A	North Rim	38.74	321	IAMs_20	IAMs_20	05 48 08.2	
	comp=Z,14µm,20.0s						
HMU	Henry Mountain	38.79	324	IAmb	IAmb	05 31 16.7	
	comp=Z,351nm,1.4s						
E38A	The Farm, Brul	38.86	350	IAmb	IAmb	05 31 27.9	
	comp=Z,575nm,1.7s						
LAJE	UHE Lajeado	38.86	117	P	P	05 31 12.0	-0.5
ARAG	Araguaiana, MT	38.90	128	P	P	05 31 11.5	-1.2
ARAG				S	S	05 37 06.0	-3.3
ARAG	Araguaiana, MT	38.90	128	*e*P	P	05 31 11.5	-1.2
LCO	Las Campanas	38.93	163	P	P	05 31 14.8	+1.7
LCO				IAmb	IAmb	05 31 18.1	
	comp=Z,260nm,1.5s						
LCO	Las Campanas	38.93	163	P	P	05 31 14.8	+1.7
LCO				pmax	pmax		
	comp=Z,260nm,1.5s						
LCO	Las Campanas	38.93	163	⇑P	P	05 31 14.8	+1.7
W13A	Hualapai Mount	38.97	318	IAMs_20	IAMs_20	05 50 12.6	
	comp=Z,17µm,20.0s						
G65A	Princeton	39.02	17	IAMs_20	IAMs_20	05 48 04.6	
	comp=Z,16µm,19.0s						
SMTB	Santa Maria do	39.03	115	P	P	05 31 13.9	0.0
SMTB				S	S	05 37 10.6	-0.7
SMTB	Santa Maria do	39.03	115	*e*P	P	05 31 13.6	-0.3
YUH	Yuha Desert	39.05	313	IAMs_20	IAMs_20	05 50 11.7	
	comp=Z,16µm,22.0s						
F33A	5 Mile Ranch,	39.12	345	IAmb	IAmb	05 31 29.9	
	comp=Z,160nm,1.0s						
GGN	Saint George	39.16	18	IAMs_20	IAMs_20	05 45 37.4	
	comp=Z,20µm,22.0s						
F64A	Sherman	39.40	16	IAMs_20	IAMs_20	05 50 23.8	
	comp=Z,17µm,19.0s						
SRU	San Rafael Swe	39.46	325	IAmb	IAmb	05 31 20.6	
	comp=Z,282nm,1.6s						
TKX	Tecate	39.51	312	IAmb	IAmb	05 31 22.9	
	comp=Z,591nm,1.9s						
TKX				IAMs_20	IAMs_20	05 50 14.9	
	comp=Z,18µm,19.0s						
Q16A	Castle Valley	39.70	325	IAmb	IAmb	05 31 24.0	
	comp=Z,254nm,1.7s						
E62A	Clayton Lake	39.80	14	IAmb	IAmb	05 31 56.4	
	comp=Z,304nm,1.7s						
E62A				IAMs_20	IAMs_20	05 48 19.4	
	comp=Z,23µm,19.0s						
VLDQ	Val d'Or	39.89	6	IAMs_20	IAMs_20	05 48 07.1	
	comp=Z,23µm,20.0s						
PFO	Pinyon Flats O	39.93	314	P	P	05 31 22.6	+1.3
PFO				IAmb	IAmb	05 31 38.5	
	comp=Z,242nm,1.2s						
PFO	Pinyon Flats O	39.93	314	IAMs_20	IAMs_20	05 50 39.9	
	comp=Z,14µm,20.0s						
PFO	Pinyon Flats O	39.93	314	LR	LR	05 51 00.3	
	comp=Z,13µm,19.2s,baz=130,slow=41						
PFO	Pinyon Flats O	39.93	314	*ce*P	P	05 31 22.7	+1.4
PFO	Pinyon Flats O	39.93	314	P	P	05 31 23.1	+1.9
V12A	Nelson	39.98	318	IAmb	IAmb	05 31 34.8	
	comp=Z,266nm,1.5s						
V12A				IAMs_20	IAMs_20	05 50 40.1	
	comp=Z,17µm,20.0s						
C2SB	Chapadao do Su	39.99	133	S	S	05 37 24.6	-0.9
C2SB	Chapadao do Su	39.99	133	*e*P	P	05 31 22.9	+1.1
MVU	Marysvale	40.03	323	IAMs_20	IAMs_20	05 50 46.0	
	comp=Z,17µm,20.0s						
CPE	Camp Elliot	40.03	313	IAMs_20	IAMs_20	05 50 28.9	
	comp=Z,16µm,20.0s						
EYMN	Ely	40.15	351	⇓P	P	05 31 20.2	-2.6
RSSD	Black Hills	40.15	336	P	P	05 31 22.5	-0.6
RSSD				IAmb	IAmb	05 31 26.5	
	comp=Z,281nm,1.4s						
RSSD	Black Hills	40.15	336	P	P	05 31 22.5	-0.6
RSSD				pmax	pmax		
	comp=Z,281nm,1.4s						
RSSD				MLR	MLR		
	comp=Z,8µm,22.0s						
RSSD	Black Hills	40.15	336	⇑P	P	05 31 22.6	-0.5
RSSD	Black Hills	40.15	336	P	P	05 31 23.0	-0.1
SSV2	Sao Salvador	40.30	121	P	P	05 31 26.5	+2.0
SSV2				S	S	05 37 31.0	+0.6
D62A	Allapoint, All	40.35	15	P	P	05 31 24.7	+0.4
CAN3	Cana Brava	40.36	122	P	P	05 31 24.9	0.0
LMN	Caledonia Moun	40.46	19	IAMs_20	IAMs_20	05 47 51.9	
	comp=Z,22µm,20.0s						
LMQ	La Malbaie	40.49	13	IAMs_20	IAMs_20	05 49 11.5	
	comp=Z,19µm,20.0s						
RPRD	Ribas do Rio P	40.49	135	*e*P	P	05 31 25.6	-0.4
TBO	Thunder Bay	40.55	353	IAmb	IAmb	05 31 37.4	
	comp=Z,560nm,1.6s						
TBO				IAMs_20	IAMs_20	05 48 03.6	
	comp=Z,23µm,20.0s						
ELS	Elsinore Mount	40.64	313	IAmb	IAmb	05 31 44.2	
	comp=Z,336nm,1.4s						
ELS				IAMs_20	IAMs_20	05 51 08.9	
	comp=Z,14µm,20.0s						
LDAQ	Lac Daran	40.68	12	IAMs_20	IAMs_20	05 47 43.8	
	comp=Z,21µm,21.0s						
GSC	Goldstone, Bar	41.07	316	IAMs_20	IAMs_20	05 50 38.0	
	comp=Z,21µm,22.0s						
PRN	Pahroc Range	41.09	320	IAMs_20	IAMs_20	05 51 43.4	
	comp=Z,14µm,19.0s						
PRN	Pahroc Range	41.09	320	⇑P	P	05 31 32.0	+1.1
AGMN	Agassiz Nation	41.32	347	⇑P	P	05 31 30.2	-2.2
TCUT	Toone Canyon	41.34	327	IAmb	IAmb	05 31 37.2	
	comp=Z,336nm,1.2s						
PASC	Pasadena Art C	41.45	314	IAmb	IAmb	05 31 48.8	
	comp=Z,439nm,1.5s						
GWY	Greenwater Val	41.45	317	P	P	05 31 35.0	+1.2
GWY				IAmb	IAmb	05 31 49.5	
	comp=Z,207nm,1.2s						
GWY				IAMs_20	IAMs_20	05 50 01.2	
	comp=Z,23µm,22.0s						
QSM	Queen of Sheba	41.47	317	IAmb	IAmb	05 31 46.9	
	comp=Z,422nm,1.6s						
DUG	Dugway, Tooele	41.49	325	IAMs_20	IAMs_20	05 51 53.7	
	comp=Z,13µm,20.0s						
DUG	Dugway, Tooele	41.49	325	⇑P	P	05 31 34.2	+0.1
BW06	Boulder Array	41.56	330	IAmb	IAmb	05 31 49.5	
	comp=Z,355nm,1.8s						
BW06	Boulder Array	41.56	330	⇑P	P	05 31 33.7	-1.0
PD31	Pinedale Array	41.56	330	IAmb	IAmb	05 31 49.5	
	comp=Z,327nm,1.8s						
PDAR	Pinedale Array	41.56	330	P	P	05 31 33.5	-1.3
PDAR	Pinedale Array	41.56	330	P	P	05 31 33.6	-1.1
	comp=Z,17nm,0.7s,baz=139,slow=9.2,SNR=86						
PDAR				PcP	PcP	05 33 31.9	+0.1
	comp=Z,5.9nm,0.8s,baz=112,slow=3.3,SNR=3.7						
PDAR				LR	LR	05 52 58.5	
	comp=Z,7µm,19.7s,baz=132,slow=42						
	comp=Z,17nm,0.7s						
TPNV	Topopah Spring	41.60	318	IAmb	IAmb	05 31 48.7	
	comp=Z,417nm,1.8s						
TPNV				IAMs_20	IAMs_20	05 50 14.5	
	comp=Z,13µm,21.0s						
TPNV	Topopah Spring	41.60	318	⇑P	P	05 31 36.6	+1.5
S11A	Rachel	41.68	320	IAmb	IAmb	05 32 21.8	
	comp=Z,502nm,1.6s						
S11A				IAMs_20	IAMs_20	05 51 32.9	
	comp=Z,16µm,21.0s						
H03N2	Juan Fernandez	41.72	175	T	T	06 16 12.7	
	baz=354,slow=76,SNR=104						
H03N1	Juan Fernandez	41.72	175	T	T	06 16 13.7	
	baz=354,slow=76,SNR=157						
H03N3	Juan Fernandez	41.73	175	T	T	06 16 24.5	
	baz=354,slow=76,SNR=173						
HWUT	Hardware Ranch	41.76	327	⇑P	P	05 31 35.8	-0.6
WCT	Wildcat Mounta	41.76	318	IAMs_20	IAMs_20	05 50 15.3	
	comp=Z,21µm,22.0s						
CCAC	Calif City Air	41.83	315	IAMs_20	IAMs_20	05 49 51.2	
	comp=Z,16µm,22.0s						
BDFB	Brasilia	41.90	125	P	P	05 31 37.6	-0.1
BDFB	Brasilia	41.90	125	P	P	05 31 37.6	-0.1
	comp=Z,27nm,1.0s,baz=290,slow=10,SNR=29						
BDFB				LR	LR	05 50 06.6	
	comp=Z,16µm,19.2s,baz=303,slow=38						
	comp=Z,27nm,1.0s						
BDFB	Brasilia	41.90	125	P	P	05 31 37.3	-0.4
BDFB				S	S	05 37 51.7	-2.6
SJPY	San Joaquin	42.13	143	*e*P	P	05 31 38.8	-0.6
EPLO	Experimental L	42.20	349	IAmb	IAmb	05 31 50.1	
	comp=Z,310nm,1.2s						
AHID	Auburn Hatcher	42.34	329	⇑P	P	05 31 40.1	-0.9
ITRB	Iturama	42.40	131	S	S	05 37 57.7	-3.7
ITRB	Iturama	42.40	131	*e*P	P	05 31 41.0	-0.6
ISA	Isabella, Lake	42.41	315	IAmb	IAmb	05 31 54.9	
	comp=Z,632nm,1.9s						
ISA				IAMs_20	IAMs_20	05 50 42.6	
	comp=Z,14µm,22.0s						
CPUP	Villa Florida	42.43	145	P	P	05 31 40.8	-0.9
CPUP	Villa Florida	42.43	145	P	P	05 31 40.5	-1.1
	comp=Z,4.0nm,1.0s,baz=194,slow=8.7,SNR=12						
CPUP				LR	LR	05 52 17.9	
	comp=Z,3µm,19.2s,baz=193,slow=40						
	comp=Z,4.0nm,1.0s						
CPUP	Villa Florida	42.43	145	P	P	05 31 40.8	-0.9
CPUP				pmax	pmax		
	comp=Z,29nm,1.5s						
CPUP	Villa Florida	42.43	145	P	P	05 31 40.9	-0.8
CPUP				S	S	05 38 04.9	+3.4
CPUP	Villa Florida	42.43	145	⇓P	P	05 31 41.1	-0.5
CPUP	Villa Florida	42.43	145	*e*P	P	05 31 40.8	-0.9
ITU3	Corumbazu	42.65	128	P	P	05 31 44.1	+0.4
ITU3				S	S	05 38 01.8	-3.3
SNOW	Snow King Moun	42.67	330	IAmb	IAmb	05 31 50.2	
	comp=Z,294nm,1.4s						
BCW	Bitter Crk WRg	42.71	314	IAmb	IAmb	05 32 36.3	
	comp=Z,437nm,1.4s						
BCW				IAMs_20	IAMs_20	05 52 16.6	
	comp=Z,17µm,21.0s						
TRCB	Terra Rica	42.78	137	IAMs_20	IAMs_20	05 51 08.4	
	comp=Z,11µm,18.0s						
TRCB	Terra Rica	42.78	137	S	S	05 38 01.7	-5.3
SDBA	SAO DESIDERIO	42.94	118	P	P	05 31 45.4	-0.7
SDBA				S	S	05 38 05.8	-3.8
SDBA	SAO DESIDERIO	42.94	118	*e*P	P	05 31 45.4	-0.7
PCMB	Pacaembu	42.95	134	P	P	05 31 44.7	-1.3
PCMB				S	S	05 38 04.8	-4.6
PCMB	Pacaembu	42.95	134	*e*P	P	05 31 44.8	-1.3
DSP	Deep Springs	42.98	318	IAmb	IAmb	05 31 59.5	
	comp=Z,448nm,1.7s						
IPMB	Ipameri, GO	43.02	128	P	P	05 31 45.6	-1.1
IPMB				S	S	05 38 08.4	-2.3
IPMB	Ipameri, GO	43.02	128	*e*P	P	05 31 45.8	-1.0
ICQ	Pointe Anglais	43.06	15	P	P	05 31 46.5	0.0
ICQ				IAMs_20	IAMs_20	05 50 19.6	
	comp=Z,20µm,19.0s						
LAO	LASA Array	43.14	336	IAmb	IAmb	05 31 49.9	
	comp=Z,317nm,1.1s						
LAO	LASA Array	43.14	336	⇑P	P	05 31 46.4	-0.9
NBPS	Pedro II - PI	43.15	106	P	P	05 31 47.8	0.0
NBPS				S	S	05 38 11.0	-1.7
ULM	Lac du Bonnet	43.17	348	IAmb	IAmb	05 31 57.7	
	comp=Z,357nm,1.2s						
ULM	Lac du Bonnet	43.17	348	P	P	05 31 45.0	-2.4
	comp=Z,123nm,0.9s,baz=160,slow=7.7,SNR=60						
	comp=Z,123nm,0.9s						
ULM	Lac du Bonnet	43.17	348	P	P	05 31 45.0	-2.4
ULM	Lac du Bonnet	43.17	348	⇑P	P	05 31 44.8	-2.6
RLMT	Red Lodge	43.20	333	⇑P	P	05 31 47.1	-0.9
BAT3	Ipameri	43.23	126	S	S	05 38 10.9	-2.8
ELK	Elko	43.26	324	IAMs_20	IAMs_20	05 52 21.5	
	comp=Z,12µm,18.0s						
ELK	Elko	43.26	324	LR	LR	05 52 41.1	
	comp=Z,11µm,18.0s,baz=142,slow=40						
ELK	Elko	43.26	324	⇑P	P	05 31 48.7	+0.1
BAT2	UHE Batalha	43.26	126	P	P	05 31 48.1	-0.6
SFA1	Serra Facao	43.42	127	P	P	05 31 48.7	-1.3
SFA1				S	S	05 38 13.6	-2.9
YFT	Old Faithful	43.43	331	IAmb	IAmb	05 31 54.2	
	comp=Z,250nm,1.4s						
NV11	Mina Array Sit	43.69	319	IAmb	IAmb	05 32 05.2	
	comp=Z,295nm,1.4s						
VA02	Isla de Pascua	43.72	215	P	P	05 31 54.2	+2.1
VA02				IAmb	IAmb	05 31 55.0	
	comp=Z,268nm,1.1s						
NVAR	Mina Array Bea	43.78	319	P	P	05 31 54.0	+1.1
NVAR	Mina Array Bea	43.78	319	P	P	05 31 52.9	0.0
	comp=Z,27nm,0.6s,baz=126,slow=6.8,SNR=125						
NVAR				LR	LR	05 51 42.5	
	comp=Z,18µm,21.6s,baz=132,slow=38						
	comp=Z,27nm,0.6s						
LHV	Little Huntoon	43.81	318	IAmb	IAmb	05 32 17.9	
	comp=Z,259nm,1.2s						
LHV				IAMs_20	IAMs_20	05 51 21.6	
	comp=Z,21µm,22.0s						
YHB	Horse Butte	43.83	331	IAmb	IAmb	05 31 56.6	
	comp=Z,336nm,1.8s						
YHB				IAMs_20	IAMs_20	05 53 13.2	
	comp=Z,14µm,22.0s						
DGMT	Dagmar	43.88	340	IAmb	IAmb	05 32 08.9	
	comp=Z,244nm,1.0s						
DGMT				IAMs_20	IAMs_20	05 53 36.1	
	comp=Z,16µm,21.0s						
YHL	Hebgen Lake	43.89	331	IAmb	IAmb	05 31 57.6	
	comp=Z,511nm,1.6s						
YHL				IAMs_20	IAMs_20	05 53 15.9	
	comp=Z,14µm,21.0s						
RYN	Ryan	44.04	319	IAmb	IAmb	05 32 07.7	
	comp=Z,218nm,1.5s						
RYN				IAMs_20	IAMs_20	05 51 42.4	
	comp=Z,19µm,22.0s						
SBBR	Sobral	44.09	104	P	P	05 31 53.8	-1.5
SBBR				S	S	05 38 22.5	-3.8
RAMR	Ramage Ranch	44.09	314	IAMs_20	IAMs_20	05 53 07.3	
	comp=Z,14µm,21.0s						
NBMO	Morrinhos-CE	44.19	103	S	S	05 38 25.3	-2.5
LDASE	Londrina, Braz	44.22	136	*e*P	P	05 31 55.1	-1.2
PMPB	Monarch Peak	44.32	315	IAMs_20	IAMs_20	05 51 53.2	
	comp=Z,16µm,21.0s						
PTGB	Pitanga	44.48	138	S	S	05 38 27.0	-4.8
PTGB	Pitanga	44.48	138	*e*P	P	05 31 57.0	-1.4
HULI	Fort Hunter Li	44.53	314	IAMs_20	IAMs_20	05 53 10.1	
	comp=Z,15µm,21.0s						
WAKR	Walker	44.57	318	IAmb	IAmb	05 32 04.1	
	comp=Z,259nm,1.4s						
WAKR				IAMs_20	IAMs_20	05 52 08.5	
	comp=Z,22µm,22.0s						
BB19B	Bebedouro	44.59	131	S	S	05 38 29.0	-4.4
BB19B	Bebedouro	44.59	131	*e*P	P	05 31 58.6	-0.7
HLID	Hailey	44.63	327	⇑P	P	05 31 59.2	-0.3
BOZ	Bozeman (W)	44.66	331	IAmb	IAmb	05 32 02.9	
	comp=Z,212nm,1.2s						
BBGB	Big Mountain B	44.67	315	IAmb	IAmb	05 32 17.4	
	comp=Z,245nm,1.2s						
BBGB				IAMs_20	IAMs_20	05 51 15.3	
	comp=Z,17µm,21.0s						
JANB	Januaria	44.68	121	P	P	05 31 59.4	-0.8
JANB				S	S	05 38 32.9	-2.1
JANB	Januaria	44.68	121	*e*P	P	05 31 59.3	-0.8
PMNB	Patos De Minas	44.73	127	P	P	05 31 59.7	-0.8
PMNB				S	S	05 38 32.5	-3.1
PMNB	Patos De Minas	44.73	127	⇑P	P	05 32 00.2	-0.3
PMNB	Patos De Minas	44.73	127	*e*P	P	05 31 59.6	-0.8
SCZ	Santa Cruz	44.93	315	IAMs_20	IAMs_20	05 53 48.5	
	comp=Z,12µm,21.0s						
DLMT	Dillon	44.95	330	IAmb	IAmb	05 32 05.4	
	comp=Z,262nm,1.2s						
PNTR	Pine Nut	44.99	319	IAmb	IAmb	05 32 36.4	
	comp=Z,397nm,2.0s						
PNTR				IAMs_20	IAMs_20	05 52 24.7	
	comp=Z,15µm,22.0s						
SAO	San Andreas Ge	45.04	315	IAmb	IAmb	05 32 15.1	
	comp=Z,301nm,1.5s						
SAO				IAMs_20	IAMs_20	05 53 52.3	
	comp=Z,15µm,20.0s						
SAO	San Andreas Ge	45.04	315	⇑P	P	05 32 03.8	+1.1
PAHR	Pah Rah Range	45.19	320	IAmb	IAmb	05 32 21.8	
	comp=Z,316nm,1.7s						
PAHR				IAMs_20	IAMs_20	05 52 22.0	
	comp=Z,13µm,21.0s						
NBPB	Pedra_Branca-C	45.26	106	P	P	05 32 03.8	-0.9
NBPB				S	S	05 38 40.4	-2.9
NBPB	Pedra_Branca-C	45.26	106	*e*P	P	05 32 04.3	-0.4
FRTB	Fartura	45.26	135	P	P	05 32 03.8	-0.8
FRTB				S	S	05 38 39.1	-4.0
FRTB	Fartura	45.26	135	*e*P	P	05 32 05.1	+0.5
MFID	Camas Ranch	45.31	326	IAmb	IAmb	05 32 08.3	
	comp=Z,349nm,1.8s						
MFID				IAMs_20	IAMs_20	05 52 49.6	
	comp=Z,16µm,22.0s						
MTOS	Mt Oso, Westle	45.33	316	IAMs_20	IAMs_20	05 51 51.8	
	comp=Z,18µm,21.0s						
MPK	Martis Peak	45.38	319	IAmb	IAmb	05 32 10.4	
	comp=Z,254nm,1.3s						
ITQB	Itaqui	45.42	147	P	P	05 32 05.7	0.0
ITQB				S	S	05 38 43.3	-1.9
ITQB	Itaqui	45.42	147	*e*P	P	05 32 06.0	+0.3
EGMT	Eagleton	45.65	335	IAmb	IAmb	05 32 10.3	
	comp=Z,171nm,1.1s						
EGMT	Eagleton	45.65	335	⇑P	P	05 32 06.7	-0.7
JQT1	Jequitai-MG	45.72	124	P	P	05 32 07.3	-1.0
JQT1				S	S	05 38 49.3	-0.7
CANS	Sao Roque de M	45.74	129	P	P	05 32 08.3	-0.3
CANS				S	S	05 38 46.3	-4.0
AFDM	Forest Hills D	45.82	318	IAmb	IAmb	05 32 26.3	
	comp=Z,224nm,1.8s						
BEKR	Beckworth	45.91	319	IAmb	IAmb	05 32 27.5	
	comp=Z,269nm,1.7s						
BEKR				IAMs_20	IAMs_20	05 52 44.9	
	comp=Z,18µm,22.0s						
DRLN	Deer Lake	45.97	23	P	P	05 32 09.5	-0.2
DRLN				IAmb	IAmb	05 32 26.2	
	comp=Z,92nm,0.9s						
NBCL	Cascavel-CE	46.12	104	P	P	05 32 10.7	-0.8
NBCL				S	S	05 38 55.0	-0.6
NBCL	Cascavel-CE	46.12	104	*e*P	P	05 32 11.8	+0.4
ITAB	Concordia	46.20	141	P	P	05 32 09.8	-2.1
ITAB				S	S	05 38 52.7	-3.7
ITAB	Concordia	46.20	141	*e*P	P	05 32 11.7	-0.1
WVOR	Wild Horse Val	46.30	323	IAmb	IAmb	05 32 27.7	
	comp=Z,183nm,0.9s						
WVOR				IAMs_20	IAMs_20	05 53 14.1	
	comp=Z,12µm,20.0s						
WVOR	Wild Horse Val	46.30	323	⇑P	P	05 32 12.6	-0.2
ORV	Oroville	46.49	318	IAMs_20	IAMs_20	05 53 55.7	
	comp=Z,12µm,22.0s						
PLID	Pearl Lake	46.50	328	IAmb	IAmb	05 32 16.6	
	comp=Z,141nm,1.2s						
NBMA	Muriti-CE	46.59	108	P	P	05 32 15.0	-0.2
NBMA				S	S	05 38 59.4	-3.2
MSO	Missoula	46.66	331	IAmb	IAmb	05 32 18.1	
	comp=Z,181nm,1.4s						
MSO	Missoula	46.66	331	⇑P	P	05 32 14.5	-0.9
MCCM	Marconi Confer	46.71	316	IAmb	IAmb	05 32 32.4	
	comp=Z,198nm,1.1s						
MCCM				IAMs_20	IAMs_20	05 54 54.8	
	comp=Z,16µm,21.0s						
MCCM	Marconi Confer	46.71	316	⇓P	P	05 32 17.2	+1.4
J08A	Circle Bar Ran	46.77	324	IAmb	IAmb	05 32 32.9	
	comp=Z,143nm,1.4s						
DIAM	Diamantina, MG	46.82	125	P	P	05 32 16.6	-0.5
DIAM				S	S	05 39 02.9	-3.0
DIAM	Diamantina, MG	46.82	125	*e*P	P	05 32 16.7	-0.4
VABB	Valinhos	46.91	132	P	P	05 32 16.5	-1.1
VABB				S	S	05 39 03.6	-3.2
VAO	Valinhos	46.91	132	*e*P	P	05 32 15.9	-1.8
SPB	Sao Paulo	46.93	133	P	P	05 32 16.9	-0.8
SPB				IAMs_20	IAMs_20	05 54 32.9	
	comp=Z,16µm,19.0s						
SPB	Sao Paulo	46.93	133	*e*P	P	05 32 18.8	+1.1
TIJ01	Guaruva-PR	46.93	136	S	S	05 39 09.8	+2.6
GDXM	Geysers	46.97	317	IAMs_20	IAMs_20	05 52 54.7	
	comp=Z,15µm,22.0s						
BMO	Blue Mountains	47.05	327	IAmb	IAmb	05 32 20.3	
	comp=Z,172nm,1.6s						
BMO				IAMs_20	IAMs_20	05 55 19.1	
	comp=Z,11µm,19.0s						
BMO	Blue Mountains	47.05	327	⇑P	P	05 32 16.8	-1.7
O03E	Paynes Creek	47.07	319	IAMs_20	IAMs_20	05 54 29.8	
	comp=Z,12µm,21.0s						
HATC	Hat Creek Radi	47.13	320	IAMs_20	IAMs_20	05 53 47.6	
	comp=Z,20µm,22.0s						
HOPS	Hopland Field	47.25	317	IAmb	IAmb	05 33 00.2	
	comp=Z,146nm,1.2s						
HOPS				IAMs_20	IAMs_20	05 53 38.1	
	comp=Z,11µm,20.0s						
BSCB	Bom Sucesso	47.39	129	P	P	05 32 22.3	+0.9
BSCB				S	S	05 39 09.9	-4.0
BSCB	Bom Sucesso	47.39	129	*e*P	P	05 32 20.9	-0.6
PET01	Itanhaem-SP	47.48	134	S	S	05 39 11.2	-3.6
PET01	Itanhaem-SP	47.48	134	*e*P	P	05 32 20.7	-1.2

ANA01	**Lindo Horizont**	47.50	118	P	P	05 32 21.5	-0.9
ANA01				S	S	05 39 11.7	-3.8
O02D	**Mt. Diablo Mer**	47.66	318	P	P	05 32 22.2	-1.0
O02D				IAmb	IAmb	05 32 36.3	
	comp=Z,126nm,1.4s						
O02D				IAMs_20	IAMs_20	05 55 57.7	
	comp=Z,11µm,21.0s						
NBPA	**Parau_RN**	47.67	106	P	P	05 32 23.3	-0.4
NBPA				S	S	05 39 15.2	-2.6
CPSB	**Cacapava Do Su**	47.74	145	S	S	05 39 16.2	-2.2
CPSB	**Cacapava Do Su**	47.74	145	*e*P	P	05 32 23.8	-0.1
K05A	**Summer Lake**	47.83	322	IAMs_20	IAMs_20	05 56 26.0	
	comp=Z,14µm,21.0s						
KCPM	**Cahto Peak**	47.94	317	IAMs_20	IAMs_20	05 54 40.2	
	comp=Z,10µm,20.0s						
SCHQ	**Schefferville**	48.09	12	P	P	05 32 25.1	-1.2
	comp=Z,64nm,1.0s,baz=199,slow=6.3,SNR=51						
SCHQ				LR	LR	05 54 06.6	
	comp=Z,10µm,21.1s,baz=204,slow=38						
	comp=Z,64nm,1.0s						
PARB	**Paraibuna**	48.10	132	P	P	05 32 26.4	-0.5
PARB				S	S	05 39 21.7	-2.1
PARB	**Paraibuna**	48.10	132	*e*P	P	05 32 26.1	-0.8
CAR01	**Carai MG**	48.13	122	P	P	05 32 26.7	-0.5
CAR01				S	S	05 39 22.4	-2.0
LNOR	**Lincton Mounta**	48.23	327	IAmb	IAmb	05 32 31.5	
	comp=Z,253nm,1.9s						
K04D	**Chiloquin, OR**	48.30	322	IAmb	IAmb	05 32 31.7	
	comp=Z,179nm,1.2s						
K04D				IAMs_20	IAMs_20	05 55 51.4	
	comp=Z,13µm,21.0s						
M02C	**Callahan**	48.33	320	IAMs_20	IAMs_20	05 56 34.0	
	comp=Z,11µm,21.0s						
YBH	**Yreka Blue Hor**	48.41	320	LR	LR	05 57 27.9	
	comp=Z,736nm,18.2s,baz=130,slow=42						
L04D	**Klamath Falls**	48.42	321	IAMs_20	IAMs_20	05 54 46.6	
	comp=Z,11µm,20.0s						
SLP01	**Ubatuba-SP**	48.44	131	P	P	05 32 29.0	-0.5
SLP01				S	S	05 39 26.9	-1.7
SLP01	**Ubatuba-SP**	48.44	131	*e*P	P	05 32 29.8	+0.3
CNLB	**Canela**	48.47	142	*e*P	P	05 32 29.1	-0.5
PINE	**Pine Mountain**	48.47	323	IAmb	IAmb	05 32 45.5	
	comp=Z,90nm,1.0s						
PINE				IAMs_20	IAMs_20	05 54 32.8	
	comp=Z,13µm,21.0s						
E09A	**Wood Farm, Sta**	48.57	328	IAMs_20	IAMs_20	05 56 24.2	
	comp=Z,15µm,20.0s						
KHMM	**Horse Mountain**	48.63	319	IAMs_20	IAMs_20	05 54 47.4	
	comp=Z,16µm,20.0s						
PLTB	**Pedras Altas**	48.68	146	P	P	05 32 31.3	+0.1
PLTB				S	S	05 39 30.9	-0.7
PLTB	**Pedras Altas**	48.68	146	*e*P	P	05 32 30.7	-0.4
FFC	**Flin Flon**	48.73	345	P	P	05 32 30.2	-1.0
FFC	**Flin Flon**	48.73	345	P	P	05 32 30.2	-1.0
FFC				pmax	pmax		
	comp=Z,559nm,2.0s						
FFC	**Flin Flon**	48.73	345	⇑P	P	05 32 30.0	-1.2
FFC	**Flin Flon**	48.73	345	P	P	05 32 30.2	-1.0
NBLA	**Lagarto - SE**	48.73	112	P	P	05 32 31.3	-0.5
NBLA				S	S	05 39 28.1	-4.8
JCC	**Jacoby Creek,**	48.80	318	IAMs_20	IAMs_20	05 54 01.8	
	comp=Z,16µm,22.0s						
NBIT	**Itapeh - BA**	48.82	118	P	P	05 32 32.2	-0.3
RCBR	**Riachuelo**	48.84	105	P	P	05 32 33.4	+0.6
RCBR				IAmb	IAmb	05 33 00.5	
	comp=Z,124nm,1.4s						
RCBR	**Riachuelo**	48.84	105	LR	LR	05 56 41.1	
	comp=Z,5µm,19.2s,baz=304,slow=40						
RCBR	**Riachuelo**	48.84	105	P	P	05 32 33.4	+0.6
RCBR				pmax	pmax		
	comp=Z,124nm,1.4s						
RCBR	**Riachuelo**	48.84	105	P	P	05 32 32.3	-0.4
RCBR				S	S	05 39 35.7	+1.1
RCBR	**Riachuelo**	48.84	105	*e*P	P	05 32 32.0	-0.8
J04A	**Umpqua Nationa**	48.85	322	IAmb	IAmb	05 32 36.0	
	comp=Z,147nm,0.8s						
J04A				IAMs_20	IAMs_20	05 56 24.2	
	comp=Z,14µm,21.0s						
CMC01	**Camacan, BA**	48.93	119	P	P	05 32 32.8	-0.5
CMC01	**Camacan, BA**	48.93	119	*e*P	P	05 32 32.8	-0.5
KRPM	**Rodgers**	48.96	319	IAMs_20	IAMs_20	05 54 11.2	
	comp=Z,16µm,21.0s						
BBOR	**Butler Butte**	49.01	321	IAmb	IAmb	05 32 48.3	
	comp=Z,128nm,1.3s						
I05D	**Terrebonne, OR**	49.02	324	IAmb	IAmb	05 32 50.5	
	comp=Z,79nm,0.9s						
I05D				IAMs_20	IAMs_20	05 55 01.3	
	comp=Z,15µm,22.0s						
E08A	**Dider Farm, El**	49.04	327	IAmb	IAmb	05 32 36.0	
	comp=Z,92nm,1.1s						
SJMB	**Sao Joao De Ma**	49.06	124	P	P	05 32 33.7	-0.5
SJMB				S	S	05 39 35.6	-1.8
SJMB	**Sao Joao De Ma**	49.06	124	*e*P	P	05 32 33.6	-0.6
MAN01	**Angra dos Reis**	49.06	130	*e*P	P	05 32 33.5	-0.8
KRMB	**Red Mountain**	49.07	319	IAMs_20	IAMs_20	05 55 18.1	
	comp=Z,15µm,20.0s						
VAS01	**Vassouras-RJ**	49.13	129	S	S	05 39 36.2	-2.2
VAS01	**Vassouras-RJ**	49.13	129	*e*P	P	05 32 37.6	+2.9
G06A	**Carlson Farm,**	49.14	325	IAmb	IAmb	05 32 48.4	
	comp=Z,165nm,1.5s						
F07A	**Phinny Hill Vi**	49.14	326	IAmb	IAmb	05 32 37.6	
	comp=Z,108nm,1.0s						
L02F	**Cave Junction**	49.16	320	IAMs_20	IAMs_20	05 55 44.4	
	comp=Z,17µm,22.0s						
NEW	**Newport**	49.20	330	IAmb	IAmb	05 32 37.3	
	comp=Z,133nm,1.3s						
NEW	**Newport**	49.20	330	⇑P	P	05 32 33.7	-1.3
KSXB	**Camp Six Broad**	49.21	320	IAMs_20	IAMs_20	05 55 26.7	
	comp=Z,18µm,21.0s						
GUA01	**Guaratinga, BA**	49.22	120	P	P	05 32 35.0	-0.6
GUA01				S	S	05 39 36.8	-2.9
GUA01	**Guaratinga, BA**	49.22	120	*e*P	P	05 32 36.8	+1.3
HAWA	**Hanford**	49.23	327	IAmb	IAmb	05 32 37.7	
	comp=Z,104nm,1.1s						
HAWA				IAMs_20	IAMs_20	05 56 32.9	
	comp=Z,12µm,21.0s						
HAWA	**Hanford**	49.23	327	⇑P	P	05 32 34.4	-0.8
D08A	**Wollman Farm,**	49.33	328	IAmb	IAmb	05 32 40.0	
	comp=Z,193nm,1.5s						
D08A				IAMs_20	IAMs_20	05 56 47.3	
	comp=Z,13µm,19.0s						
LR05	**Currie**	49.35	169	P	P	05 32 37.6	+1.5
LR05				IAmb	IAmb	05 32 42.2	
	comp=Z,193nm,1.2s						
NBCA	**Caruaru-PE**	49.45	108	P	P	05 32 37.2	-0.2
NBCA				S	S	05 39 41.1	-2.0
E07A	**Sunnyside**	49.51	327	IAmb	IAmb	05 32 40.3	
	comp=Z,69nm,0.8s						
E07A				IAMs_20	IAMs_20	05 57 33.2	
	comp=Z,10µm,19.0s						
NBPV	**Pedro Velho**	49.59	106	P	P	05 32 38.3	-0.1
NBPV				S	S	05 39 44.0	-1.0
KBO	**Bosley Butte**	49.63	320	IAMs_20	IAMs_20	05 55 04.7	
	comp=Z,18µm,22.0s						
NBAN	**Anadia - AL**	49.67	110	P	P	05 32 38.0	-1.0
NBAN				S	S	05 39 42.6	-3.5
NBAN	**Anadia - AL**	49.67	110	*e*P	P	05 32 36.8	-2.2
H04A	**Detroit Lake**	49.71	324	IAmb	IAmb	05 32 42.4	
	comp=Z,58nm,0.7s						
HOOD	**Mount Hood Mea**	49.77	325	IAMs_20	IAMs_20	05 56 20.1	
	comp=Z,12µm,21.0s						
DUB01	**Friburgo-RJ**	49.85	128	P	P	05 32 41.0	+0.7
DUB01				S	S	05 39 45.4	-3.1
DUB01	**Friburgo-RJ**	49.85	128	*e*P	P	05 32 36.8	-3.5
I03D	**Drain, OR**	49.86	322	IAmb	IAmb	05 32 43.1	
	comp=Z,120nm,1.1s						
BUCK	**Buck Mountain**	49.91	323	IAmb	IAmb	05 32 43.2	
	comp=Z,124nm,1.1s						
J01E	**Myrtle Point**	49.93	321	IAMs_20	IAMs_20	05 56 44.8	
	comp=Z,9µm,18.0s						
H04D	**Lebanon**	49.95	323	IAMs_20	IAMs_20	05 57 15.0	
	comp=Z,15µm,21.0s						
RIB01	**Linhares ES**	50.01	124	P	P	05 32 40.4	-1.1
RIB01				S	S	05 39 47.5	-3.2
RIB01	**Linhares ES**	50.01	124	*e*P	P	05 32 41.6	+0.1
KEBM	**Edson Butte**	50.03	321	IAMs_20	IAMs_20	05 55 44.5	
	comp=Z,13µm,22.0s						
TRQA	**Tornquist**	50.09	159	P	P	05 32 42.0	+0.2
TRQA				IAmb	IAmb	05 32 59.0	
	comp=Z,131nm,1.3s						
TRQA	**Tornquist**	50.09	159	P	P	05 32 42.0	+0.2
TRQA				pmax	pmax		
	comp=Z,131nm,1.3s						
TRQA	**Tornquist**	50.09	159	P	P	05 32 41.6	-0.2
TRQA				S	S	05 39 50.8	-0.4
PLCA	**Paso Flores**	50.12	168	P	P	05 32 42.3	+0.3
PLCA				IAmb	IAmb	05 32 45.5	
	comp=Z,103nm,1.1s						
PLCA	**Paso Flores**	50.12	168	P	P	05 32 42.5	+0.4
	comp=Z,46nm,0.8s,baz=336,slow=8.6,SNR=37						
	comp=Z,46nm,0.8s						
PLCA	**Paso Flores**	50.12	168	P	P	05 32 42.6	+0.4
PLCA	**Paso Flores**	50.12	168	⇑P	P	05 32 42.5	+0.4
PLCA	**Paso Flores**	50.12	168	*e*P	P	05 32 42.4	+0.4
PLCA	**Paso Flores**	50.12	168	P	P	05 32 42.4	+0.3
PLCA				sP	sP	05 32 55.9	+0.7
CAM01	**Campos-RJ**	50.28	127	P	P	05 32 43.0	-0.4
CAM01	**Campos-RJ**	50.28	127	*e*P	P	05 32 42.0	-1.4
COR	**Corvallis**	50.32	323	P	P	05 32 43.3	-0.2
COR				IAmb	IAmb	05 33 00.2	
	comp=Z,88nm,0.9s						
COR	**Corvallis**	50.32	323	P	P	05 32 43.3	-0.2
COR				pmax	pmax		
	comp=Z,88nm,0.9s						
COR				MLR	MLR		
	comp=Z,8µm,20.0s						
COR	**Corvallis**	50.32	323	⇓P	P	05 32 43.9	+0.4
COR	**Corvallis**	50.32	323	P	P	05 32 43.7	+0.3
B08A	**Colville Reser**	50.38	329	IAMs_20	IAMs_20	05 57 27.0	
	comp=Z,11µm,21.0s						
I02E	**Swisshome, OR**	50.38	322	IAmb	IAmb	05 32 47.6	
	comp=Z,109nm,0.9s						
I02E				IAMs_20	IAMs_20	05 56 25.6	
	comp=Z,14µm,21.0s						
G03D	**McMinnville, O**	50.64	324	IAmb	IAmb	05 33 01.5	
	comp=Z,182nm,1.2s						
G03D				IAMs_20	IAMs_20	05 57 39.3	
	comp=Z,12µm,21.0s						
KUQ	**Kuujjuuaa**	50.88	10	IAmb	IAmb	05 33 25.3	
	comp=Z,116nm,1.3s						
HEBO	**Mount Hebo**	50.93	323	IAmb	IAmb	05 33 36.9	
	comp=Z,146nm,1.2s						
HEBO				IAMs_20	IAMs_20	05 58 07.0	
	comp=Z,12µm,22.0s						
F04D	**Rainier, OR**	50.98	325	IAmb	IAmb	05 33 04.1	
	comp=Z,222nm,1.3s						
F04D				IAMs_20	IAMs_20	05 58 13.3	
	comp=Z,12µm,21.0s						
FCC	**Fort Churchill**	51.04	352	⇑P	P	05 32 47.1	-1.5
D05A	**Enumclaw**	51.05	326	IAmb	IAmb	05 33 04.2	
	comp=Z,113nm,0.9s						
D05A				IAMs_20	IAMs_20	05 58 32.1	
	comp=Z,10µm,21.0s						
F03A	**Seaside**	51.21	324	IAmb	IAmb	05 33 06.2	
	comp=Z,189nm,1.0s						
F03A				IAMs_20	IAMs_20	05 58 02.4	
	comp=Z,14µm,21.0s						
E03A	**Lebam**	51.56	325	IAMs_20	IAMs_20	05 58 41.6	
	comp=Z,16µm,22.0s						
RADR	**Rader Ridge**	51.63	325	IAmb	IAmb	05 33 10.3	
	comp=Z,157nm,1.0s						
WISH	**Wishkah**	52.00	325	IAmb	IAmb	05 33 40.0	
	comp=Z,418nm,1.8s						
NLWA	**Neilton Lookou**	52.22	326	IAmb	IAmb	05 33 13.6	
	comp=Z,143nm,1.1s						
NLWA	**Neilton Lookou**	52.22	326	⇑P	P	05 32 57.7	0.0
LL02	**Futaleuf**	52.25	170	IAmb	IAmb	05 33 02.0	
	comp=Z,162nm,1.1s						
LL02	**Futaleuf**	52.25	170	⇑P	P	05 32 58.4	+0.5
A04D	**Lummi Island**	52.36	328	IAmb	IAmb	05 33 26.8	
	comp=Z,112nm,1.0s						
C03A	**Quillayute Air**	52.92	326	IAmb	IAmb	05 33 29.1	
	comp=Z,176nm,1.3s						
LLLB	**Lillooet**	53.09	330	IAmb	IAmb	05 33 07.3	
	comp=Z,149nm,1.1s						
SHB	**Sechelt**	53.49	328	⇑P	P	05 33 06.7	-0.5
OZB	**Mount Ozzard**	54.00	326	⇑P	P	05 33 11.2	+0.4
COYC	**Coyhaique**	54.53	171	⇑P	P	05 33 15.2	+0.6
COYC	**Coyhaique**	54.53	171	P	P	05 33 15.0	+0.4
COYC				sP	sP	05 33 29.1	+1.4
CBB	**Campbell River**	54.53	328	IAmb	IAmb	05 33 18.6	
	comp=Z,146nm,1.4s						
CBB				IAMs_20	IAMs_20	06 00 58.1	
	comp=Z,9µm,20.0s						
AY03	**Cochrane**	56.09	172	IAmb	IAmb	05 33 36.4	
	comp=Z,109nm,1.4s						
FRB	**Frobisher Bay**	56.24	8	LR	LR	05 57 49.9	
	comp=Z,14µm,21.2s,baz=200,slow=36						
FRB	**Frobisher Bay**	56.24	8	⇑P	P	05 33 24.4	-2.3
HOLB	**Holberg**	56.35	327	IAmb	IAmb	05 34 24.4	
	comp=Z,327nm,1.9s						
BLKN	**Baker Lake**	56.66	353	IAmb	IAmb	05 33 40.9	
	comp=Z,249nm,1.4s						
CALA	**Caldeira**	57.02	49	*e*P	P	05 33 34.6	+1.8
CALA				*i* IAmb	IAmb	05 34 02.4	
	comp=Z,255nm,1.3s						
CALA				*e*LQ	LQ	05 48 06.5	
CALA				*i* LR	LR	05 51 07.2	
CALA				*i* IAMs_20	IAMs_20	05 51 24.9	
	comp=Z,1µm,11.8s						
CALA	**Caldeira**	57.02	49	*e*P	P	05 33 34.6	+1.8
CALA				*i* IAmb	IAmb	05 34 02.4	
	comp=Z,255nm,1.3s						
CALA				*e*LQ	LQ	05 48 06.5	
CALA				*i* LR	LR	05 51 07.2	
CALA				*i* IAMs_20	IAMs_20	05 51 24.9	
	comp=Z,1µm,11.8s						
PCED	**Cedros**	57.04	49	*e*P	P	05 33 34.6	+1.8
PCED				*i* IAmb	IAmb	05 33 52.7	
	comp=Z,381nm,1.6s						
PCED	**Cedros**	57.04	49	*e*P	P	05 33 34.6	+1.8
PCED				*i* IAmb	IAmb	05 33 52.7	
	comp=Z,381nm,1.6s						
PCAN	**Candelaria**	57.15	49	*e*P	P	05 33 36.4	+2.7
PCAN				*i* IAmb	IAmb	05 34 13.5	
	comp=Z,184nm,1.5s						
PCAN	**Candelaria**	57.15	49	*e*P	P	05 33 36.4	+2.7
PCAN				*i* IAmb	IAmb	05 34 13.5	
	comp=Z,184nm,1.5s						
BBB	**Bella Bella**	57.17	329	IAmb	IAmb	05 33 37.0	
	comp=Z,200nm,1.8s						
BBB				IAMs_20	IAMs_20	06 02 41.9	
	comp=Z,9µm,21.0s						
BBB	**Bella Bella**	57.17	329	LR	LR	06 03 01.5	
	comp=Z,7µm,19.1s,baz=148,slow=41						
PICO	**Pico**	57.21	49	*e*P	P	05 33 37.1	+3.0
PICO				*i* IAmb	IAmb	05 33 55.4	
	comp=Z,341nm,1.3s						
PICO				*e*LQ	LQ	05 48 11.8	
PICO				*i* LR	LR	05 51 04.6	
PICO				*i* IAMs_20	IAMs_20	05 51 19.5	
	comp=Z,1µm,10.4s						
PICO	**Pico**	57.21	49	*e*P	P	05 33 37.1	+3.0
PICO				*i* IAmb	IAmb	05 33 55.4	
	comp=Z,341nm,1.3s						
PICO				*e*LQ	LQ	05 48 11.8	
PICO				*i* LR	LR	05 51 04.6	
PICO				*i* IAMs_20	IAMs_20	05 51 19.5	
	comp=Z,1µm,10.4s						
PPNO	**Prainha do Nor**	57.32	49	*e*P	P	05 33 36.6	+1.7
PPNO				*i* IAmb	IAmb	05 34 25.5	
	comp=Z,289nm,1.3s						
PPNO	**Prainha do Nor**	57.32	49	*e*P	P	05 33 36.6	+1.7
PPNO				*i* IAmb	IAmb	05 34 25.5	
	comp=Z,289nm,1.3s						
ROSA	**Rosais**	57.41	49	*e*P	P	05 33 38.7	+3.2
ROSA				*i* IAmb	IAmb	05 33 55.0	
	comp=Z,339nm,1.7s						
ROSA				*e*LQ	LQ	05 48 27.8	
ROSA				*i* LR	LR	05 51 01.9	
ROSA				*i* IAMs_20	IAMs_20	05 51 23.8	
	comp=Z,1µm,11.3s						
ROSA	**Rosais**	57.41	49	*e*P	P	05 33 38.7	+3.2
ROSA				*i* IAmb	IAmb	05 33 55.0	
	comp=Z,339nm,1.7s						
ROSA				*e*LQ	LQ	05 48 27.8	
ROSA				*i* LR	LR	05 51 01.9	
ROSA				*i* IAMs_20	IAMs_20	05 51 23.8	
	comp=Z,1µm,11.3s						
PID	**Ribeirinha**	57.42	50	*e*P	P	05 33 36.6	+1.1
PID				*i* IAmb	IAmb	05 34 22.9	
	comp=Z,233nm,1.8s						
PID	**Ribeirinha**	57.42	50	*e*P	P	05 33 36.6	+1.1
PID				*i* IAmb	IAmb	05 34 22.9	
	comp=Z,233nm,1.8s						
PMAN	**Manadas**	57.50	49	*e*P	P	05 33 42.8	+6.8
PMAN				*i* IAmb	IAmb	05 33 56.6	
	comp=Z,248nm,1.7s						
PMAN	**Manadas**	57.50	49	*e*P	P	05 33 42.8	+6.8
PMAN				*i* IAmb	IAmb	05 33 56.6	
	comp=Z,248nm,1.7s						
PAGU	**Agualva, Azore**	58.22	49	*e*P	P	05 33 43.3	+2.2
PAGU				*i* IAmb	IAmb	05 33 52.6	
	comp=Z,255nm,1.8s						
PAGU				*e*LQ	LQ	05 48 17.8	
PAGU				*i* LR	LR	05 51 24.4	
PAGU				*i* IAMs_20	IAMs_20	05 51 49.6	
	comp=Z,2µm,11.6s						
PAGU	**Agualva, Azore**	58.22	49	*e*P	P	05 33 43.3	+2.2
PAGU				*i* IAmb	IAmb	05 33 52.6	
	comp=Z,255nm,1.8s						
PAGU				*e*LQ	LQ	05 48 17.8	
PAGU				*i* LR	LR	05 51 24.4	
PAGU				*i* IAMs_20	IAMs_20	05 51 49.6	
	comp=Z,2µm,11.6s						
YKAW1	**Yellowknife Wh**	58.75	343	IAmb	IAmb	05 33 46.7	
	comp=Z,112nm,1.2s						
YKA	**Yellowknife Ar**	58.79	343	P	P	05 33 43.3	-1.3
	comp=Z,30nm,0.9s,baz=140,slow=6.1,SNR=63						
	comp=Z,30nm,0.9s						
YKAW3	**Yellowknife Wh**	58.85	343	IAmb	IAmb	05 33 47.4	
	comp=Z,141nm,1.3s						
PSET	**Sete Cidades**	59.08	51	*e*P	P	05 33 46.8	-0.4
PSET				*i* IAmb	IAmb	05 34 31.3	
	comp=Z,405nm,2.1s						
PSET				*e*LQ	LQ	05 48 19.9	
PSET				*i* LR	LR	05 51 50.4	
PSET				*i* IAMs_20	IAMs_20	05 52 14.7	
	comp=Z,2µm,10.9s						
PSET	**Sete Cidades**	59.08	51	*e*P	P	05 33 46.8	-0.4
PSET				*i* IAmb	IAmb	05 34 31.3	
	comp=Z,405nm,2.1s						
PSET				*e*LQ	LQ	05 48 19.9	
PSET				*i* LR	LR	05 51 50.4	
PSET				*i* IAMs_20	IAMs_20	05 52 14.7	
	comp=Z,2µm,10.9s						
CMLA	**Cha da Macela**	59.22	51	*e*P	P	05 33 50.7	+2.6
CMLA				*i* IAmb	IAmb	05 34 02.0	
	comp=Z,269nm,1.6s						
CMLA				*e*LQ	LQ	05 48 25.8	
CMLA				*i* LR	LR	05 51 51.9	
CMLA				*i* IAMs_20	IAMs_20	05 52 19.0	
	comp=Z,1µm,18.1s						
CMLA	**Cha da Macela**	59.22	51	*e*P	P	05 33 50.7	+2.6
CMLA				*i* IAmb	IAmb	05 34 02.0	
	comp=Z,269nm,1.6s						
CMLA				*e*LQ	LQ	05 48 25.8	
CMLA				*i* LR	LR	05 51 51.9	
CMLA				*i* IAMs_20	IAMs_20	05 52 19.0	
	comp=Z,1µm,18.1s						
PSMA	**Santa Maria**	59.34	52	*e*P	P	05 33 48.4	-0.5
PSMA				*i* IAmb	IAmb	05 34 02.1	
	comp=Z,184nm,1.7s						
PSMA	**Santa Maria**	59.34	52	*e*P	P	05 33 48.4	-0.5
PSMA				*i* IAmb	IAmb	05 34 02.1	
	comp=Z,184nm,1.7s						
PSMN	**Pico do Norte,**	59.39	52	*e*P	P	05 33 50.1	+0.8
PSMN				*i* IAmb	IAmb	05 34 02.8	
	comp=Z,206nm,1.7s						
PSMN				*e*LQ	LQ	05 48 35.1	
PSMN				*i* LR	LR	05 51 40.5	
PSMN				*i* IAMs_20	IAMs_20	05 52 01.3	
	comp=Z,2µm,11.5s						
PSMN	**Pico do Norte,**	59.39	52	*e*P	P	05 33 50.1	+0.8
PSMN				*i* IAmb	IAmb	05 34 02.8	
	comp=Z,206nm,1.7s						
PSMN				*e*LQ	LQ	05 48 35.1	
PSMN				*i* LR	LR	05 51 40.5	
PSMN				*i* IAMs_20	IAMs_20	05 52 01.3	
	comp=Z,2µm,11.5s						
RUBB	**Prince Rupert**	59.41	330	IAMs_20	IAMs_20	06 04 07.0	
	comp=Z,12µm,20.0s						
BART	**Pico Bartolome**	59.49	51	*e*P	P	05 33 52.6	+2.5
BART				*i* IAmb	IAmb	05 34 11.2	
	comp=Z,213nm,1.2s						
BART	**Pico Bartolome**	59.49	51	*e*P	P	05 33 52.6	+2.5
BART				*i* IAmb	IAmb	05 34 11.2	
	comp=Z,213nm,1.2s						
TAOE	**Nuku Hiva Isla**	59.63	255	*e*P	P	05 33 50.3	-1.1
	comp=Z,648nm,27.0s						
TAOE				*e*S	S	05 41 56.7	-3.5
	comp=Z,7µm,27.3s						
TAOE				*e*SS	SS	05 45 55.3	-1.0
	comp=Z,5µm,26.6s						
TAOE				*e*LQ	LQ	05 48 53.8	
	comp=Z,4µm,26.0s						
TAOE				*e*LR	LR	05 51 18.4	
	comp=Z,11µm,25.6s						
MOBC	**Moresby Island**	59.68	328	IAmb	IAmb	05 34 08.1	
	comp=Z,146nm,1.4s						
MOBC				IAMs_20	IAMs_20	06 02 50.3	
	comp=Z,7µm,19.0s						
TOAD	**Toad River Com**	59.81	336	P	P	05 33 51.0	-0.8
	baz=129,SNR=24						
NUUK	**Nuuk**	59.95	15	*i* P	P	05 33 51.2	-1.4
NUUK				IAmb	IAmb	05 33 53.6	
	comp=Z,51nm,0.9s						
DIB	**Dawson Inlet,**	59.97	328	IAmb	IAmb	05 34 08.2	
	comp=Z,170nm,1.6s						
GO09	**Cerro Castillo**	60.06	172	P	P	05 33 56.6	+3.1
GO09				IAmb	IAmb	05 34 04.2	
	comp=Z,131nm,1.5s						
U35K	**Hyder**	60.16	332	IAMs_20	IAMs_20	06 03 28.7	
	comp=Z,10µm,18.0s						
U35K	**Hyder**	60.16	332	P	P	05 33 54.0	-0.2
	baz=123						
KOTAN	**Kotaneelee Air**	60.18	338	P	P	05 33 54.4	0.0
	baz=131,SNR=6.5						
MG05	**Puerto Natales**	60.44	173	P	P	05 33 58.8	+2.7
MG05				IAmb	IAmb	05 35 26.6	
	comp=Z,167nm,1.7s						
LIRD	**Liard River Hi**	60.51	336	P	P	05 33 56.0	-0.6
	baz=129						
BEAVL	**Fort Liard**	60.60	337	P	P	05 33 57.5	+0.3
	baz=130,SNR=52						
V35K	**Ketchikan**	60.61	330	IAmb	IAmb	05 34 12.2	
	comp=Z,273nm,2.0s						
V35K				IAMs_20	IAMs_20	06 04 31.7	
	comp=Z,12µm,20.0s						
V35K	**Ketchikan**	60.61	330	P	P	05 33 57.5	+0.2
	baz=121						
T35M	**Bob Quinn**	60.85	332	IAMs_20	IAMs_20	06 04 07.9	
	comp=Z,11µm,18.0s						
T35M	**Bob Quinn**	60.85	332	P	P	05 33 59.4	+0.4
	baz=123,SNR=22						
CRAG	**Craig**	61.42	330	IAMs_20	IAMs_20	06 05 14.2	
	comp=Z,9µm,18.0s						
CRAG	**Craig**	61.42	330	P	P	05 34 03.8	+1.0
CRAG	**Craig**	61.42	330	P	P	05 34 02.8	0.0
	baz=120						
WRAK	**Wrangell Islan**	61.53	331	IAmb	IAmb	05 34 18.2	
	comp=Z,170nm,1.9s						
WRAK				IAMs_20	IAMs_20	06 04 43.9	
	comp=Z,8µm,18.0s						
WRAK	**Wrangell Islan**	61.53	331	P	P	05 34 03.3	-0.2
	baz=121						
DLBC	**Dease Lake**	61.57	334	LR	LR	06 05 30.6	
	comp=Z,1µm,18.2s,baz=104,slow=41						
U33K	**Whale Pass**	61.75	331	IAmb	IAmb	05 34 19.8	
	comp=Z,201nm,1.6s						
U33K				IAMs_20	IAMs_20	06 05 15.7	
	comp=Z,6µm,18.0s						
U33K	**Whale Pass**	61.75	331	P	P	05 34 05.2	+0.2
	baz=120						
S34M	**Telegraph Cree**	61.77	333	IAmb	IAmb	05 34 21.1	
	comp=Z,208nm,1.9s						
S34M				IAMs_20	IAMs_20	06 02 56.0	
	comp=Z,11µm,22.0s						
S34M	**Telegraph Cree**	61.77	333	P	P	05 34 05.3	+0.2
	baz=123						
WTLY	**Watson Lake, Y**	62.02	336	IAMs_20	IAMs_20	06 04 58.7	
	comp=Z,7µm,21.0s						
WTLY	**Watson Lake, Y**	62.02	336	P	P	05 34 07.0	+0.2
	baz=126,SNR=29						
WRGLY	**Wrigley**	62.06	340	IAMs_20	IAMs_20	06 05 36.4	
	comp=Z,12µm,20.0s						
WRGLY	**Wrigley**	62.06	340	P	P	05 34 06.0	-0.9
	baz=133						
SFJD	**Kangerlussuaq**	62.50	14	LR	LR	06 03 44.8	
	comp=Z,9µm,19.6s,baz=218,slow=38						
SFJD	**Kangerlussuaq**	62.50	14	P	P	05 34 07.9	-2.0
SFJD				S	S	05 42 29.2	-5.7
SFJD	**Kangerlussuaq**	62.50	14	⇓P	P	05 34 07.8	-2.0
SFJD	**Kangerlussuaq**	62.50	14	*i* P	P	05 34 05.7	-4.1
SFJD				IAmb	IAmb	05 34 09.8	
	comp=Z,33nm,0.9s						
R33M	**Jennings River**	62.51	335	P	P	05 34 10.3	+0.1

	baz=124,SNR=43						
TGTN	**Hyland Airport**	**62.67**	**337**	P	**P**	**05 34 11.1**	**-0.1**
	baz=127,SNR=8.4						
MG03	**Isla Dawson**	**62.83**	**172**	P	**P**	**05 34 14.6**	**+2.4**
MG03				IAmb	IAmb	05 34 16.9	
	comp=Z,146nm,1.4s						
Q32M	**Nakina River**	**62.84**	**334**	IAmb	IAmb	05 34 28.7	
	comp=Z,233nm,1.6s						
Q32M	**Nakina River**	**62.84**	**334**	P	**P**	**05 34 12.3**	**-0.2**
	baz=122,SNR=23						
S32K	**Killisnoo**	**63.12**	**332**	IAmb	IAmb	05 34 28.9	
	comp=Z,156nm,1.7s						
S32K	**Killisnoo**	**63.12**	**332**	P	**P**	**05 34 14.1**	**0.0**
	baz=119,SNR=6.8						
SIT	**Sitka**	**63.27**	**331**	IAMs_20	IAMs_20	06 06 12.0	
	comp=Z,8µm,18.0s						
SIT	**Sitka**	**63.27**	**331**	P	**P**	**05 34 15.3**	**+0.2**
	baz=118						
JIS	**Juneau Island**	**63.43**	**332**	P	**P**	**05 34 17.0**	**+0.9**
EFI	**East Falkland**	**63.46**	**163**	*i* P	**P**	**05 34 14.3**	**-2.1**
EFI				pmax	pmax		
	comp=Z,258nm,1.8s						
R32K	**Eaglecrest**	**63.49**	**332**	IAmb	IAmb	05 34 31.5	
	comp=Z,187nm,1.9s						
R32K	**Eaglecrest**	**63.49**	**332**	P	**P**	**05 34 16.3**	**-0.3**
	baz=120						
P33M	**Teslin, Yukon**	**63.74**	**335**	IAmb	IAmb	05 34 34.1	
	comp=Z,117nm,1.4s						
P33M	**Teslin, Yukon**	**63.74**	**335**	P	**P**	**05 34 18.2**	**-0.1**
	baz=122,SNR=34						
R31K	**City Hall, Gus**	**64.12**	**332**	P	**P**	**05 34 20.2**	**-0.5**
	baz=119						
S31K	**Pelican**	**64.13**	**332**	P	**P**	**05 34 20.3**	**-0.5**
	baz=118,SNR=8.0						
ILULI	**Ilulissat**	**64.20**	**12**	*i* P	**P**	**05 34 19.2**	**-1.9**
ILULI				IAmb	IAmb	05 34 22.9	
	comp=Z,78nm,1.1s						
N32M	**Quiet Lake**	**64.36**	**336**	IAMs_20	IAMs_20	06 07 40.3	
	comp=Z,9µm,22.0s						
N32M	**Quiet Lake**	**64.36**	**336**	P	**P**	**05 34 22.0**	**-0.3**
	baz=122,SNR=10						
SKAG	**Skagway**	**64.44**	**333**	IAmb	IAmb	05 34 38.6	
	comp=Z,240nm,1.8s						
SKAG				IAMs_20	IAMs_20	06 04 07.8	
	comp=Z,11µm,21.0s						
SKAG	**Skagway**	**64.44**	**333**	P	**P**	**05 34 22.8**	**0.0**
SKAG	**Skagway**	**64.44**	**333**	P	**P**	**05 34 22.3**	**-0.5**
	baz=119,SNR=7.9						
MMPY	**Sheldon Lake,**	**64.45**	**337**	IAmb	IAmb	05 34 26.6	
	comp=Z,178nm,1.5s						
MMPY	**Sheldon Lake,**	**64.45**	**337**	P	**P**	**05 34 22.5**	**-0.4**
	baz=125,SNR=74						
ISOG	**Isortoq, Green**	**64.65**	**19**	⇓P	**P**	**05 34 22.9**	**-1.1**
ISOG	**Isortoq, Green**	**64.65**	**19**	*i* P	**P**	**05 34 22.4**	**-1.6**
ISOG				IAmb	IAmb	05 34 23.4	
	comp=Z,101nm,1.0s						
MBO	**M'Bour**	**64.67**	**78**	IAMs_20	IAMs_20	06 01 22.0	
	comp=Z,6µm,20.0s						
WHY	**Whitehorse**	**64.85**	**335**	P	**P**	**05 34 25.0**	**-0.6**
	baz=120,SNR=13						
PLBC	**Pleasant Camp**	**64.90**	**333**	P	**P**	**05 34 25.4**	**-0.4**
	baz=118,SNR=8.8						
FARO	**Faro, Yukon**	**65.05**	**336**	P	**P**	**05 34 26.5**	**-0.3**
	baz=122,SNR=32						
PMOZ	**Porto Moniz, M**	**65.05**	**58**	*e*P	**P**	**05 34 28.9**	**+1.5**
PMOZ				*i* Amb		05 34 46.5	
	comp=Z,159nm,1.9s						
PMOZ				*e*PP	**PP**	**05 36 55.3**	**+4.6**
PMOZ				*e*S	**S**	**05 43 12.4**	**+4.4**
PMOZ				*e*LQ	LQ	05 50 50.0	
PMOZ				*e*LR	LR	05 54 01.0	
PMOZ				*i* AMs_20		05 56 37.4	
	comp=Z,4µm,22.0s						
BBTS	**Babate**	**65.06**	**78**	LR	LR	06 01 55.4	
	comp=Z,6µm,20.4s,baz=142,slow=35						
ANGG	**Ammassalik, Gr**	**65.12**	**19**	IAMs_20	IAMs_20	06 02 52.5	
	comp=Z,11µm,21.0s						
ANGG	**Ammassalik, Gr**	**65.12**	**19**	⇑P	**P**	**05 34 25.4**	**-1.6**
ANGG	**Ammassalik, Gr**	**65.12**	**19**	*i* P	**P**	**05 34 24.8**	**-2.2**
ANGG				IAmb	IAmb	05 34 25.8	
	comp=Z,54nm,0.8s						
UMMG	**Uummannaq**	**65.22**	**11**	*i* P	**P**	**05 34 25.7**	**-1.9**
UMMG				IAmb	IAmb	05 34 27.3	
	comp=Z,23nm,0.9s						
MACI	**Morro de la Ar**	**65.24**	**63**	P	**P**	**05 34 29.9**	**+1.0**
PMAR	**Madeira**	**65.27**	**58**	*e*P	**P**	**05 34 30.1**	**+1.1**
O30N	**Mendenhall**	**65.42**	**334**	IAMs_20	IAMs_20	06 06 57.5	
	comp=Z,6µm,19.0s						
O30N	**Mendenhall**	**65.42**	**334**	P	**P**	**05 34 29.4**	**+0.1**
	baz=119,SNR=24						
M31M	**Drury Creek, Y**	**65.44**	**336**	IAMs_20	IAMs_20	06 08 31.1	
	comp=Z,9µm,20.0s						
M31M	**Drury Creek, Y**	**65.44**	**336**	P	**P**	**05 34 29.1**	**-0.3**
	baz=122						
P30M	**Million Dollar**	**65.49**	**334**	P	**P**	**05 34 29.6**	**-0.1**
	baz=118						
P29M	**Windy Craggy**	**65.60**	**333**	IAmb	IAmb	05 34 43.4	
	comp=Z,69nm,0.8s						
P29M	**Windy Craggy**	**65.60**	**333**	P	**P**	**05 34 30.3**	**-0.1**
	baz=117,SNR=15						
N31M	**Braeburn, Yuko**	**65.64**	**335**	IAmb	IAmb	05 34 46.4	
	comp=Z,100nm,1.2s						
N31M				IAMs_20	IAMs_20	06 07 36.4	
	comp=Z,9µm,18.0s						
N31M	**Braeburn, Yuko**	**65.64**	**335**	P	**P**	**05 34 31.1**	**+0.4**
	baz=120,SNR=12						
NUUG	**Nuugaatsiaq**	**65.75**	**10**	*i* P	**P**	**05 34 29.2**	**-1.9**
NUUG				IAmb	IAmb	05 34 32.0	
	comp=Z,62nm,0.9s						
PMPS	**Porto Santo**	**65.80**	**58**	*e*P	**P**	**05 34 35.0**	**+2.9**
PMPS				*i* Amb		05 34 48.7	
	comp=Z,137nm,1.5s						
PMPST	**Porto Santo, M**	**65.80**	**58**	*e*P	**P**	**05 34 34.1**	**+2.0**
PMPST				*i* Amb		05 35 23.0	
	comp=Z,207nm,1.6s						
HYT	**Haines Junctio**	**66.06**	**334**	IAmb	IAmb	05 34 49.8	
	comp=Z,134nm,1.6s						
HYT	**Haines Junctio**	**66.06**	**334**	P	**P**	**05 34 33.8**	**+0.3**
	baz=118,SNR=11						
N30M	**Aishikik Lake**	**66.18**	**335**	IAmb	IAmb	05 34 50.3	
	comp=Z,310nm,1.9s						
N30M				IAMs_20	IAMs_20	06 07 16.6	
	comp=Z,8µm,19.0s						
N30M	**Aishikik Lake**	**66.18**	**335**	P	**P**	**05 34 34.5**	**+0.3**
	baz=118,SNR=30						
O29M	**Mount Kennedy**	**66.28**	**333**	IAmb	IAmb	05 34 50.9	
	comp=Z,205nm,2.0s						
O29M				IAMs_20	IAMs_20	06 06 16.5	
	comp=Z,10µm,22.0s						
O29M	**Mount Kennedy**	**66.28**	**333**	P	**P**	**05 34 35.4**	**+0.4**
	baz=117						
UPNV	**Upernavik**	**66.36**	**8**	*i* P	**P**	**05 34 32.0**	**-3.0**
UPNV				IAmb	IAmb	05 34 35.9	
	comp=Z,77nm,1.1s						
PNL	**Peninsula**	**66.38**	**332**	P	**P**	**05 34 36.0**	**+0.6**
	baz=116						
YKU2	**Yakutat**	**66.43**	**332**	IAMs_20	IAMs_20	06 07 18.5	
	comp=Z,9µm,20.0s						
YUK6	**Outpost Mounta**	**66.48**	**334**	P	**P**	**05 34 36.6**	**+0.3**
	baz=117						
BCPM	**Bancas Point**	**66.61**	**333**	IAMs_20	IAMs_20	06 05 57.1	
	comp=Z,9µm,22.0s						
RES	**Resolute Bay**	**66.67**	**357**	LR	LR	06 04 47.0	
	comp=Z,14µm,19.4s,baz=163,slow=37						
MAYO	**Mayo, Yukon**	**66.75**	**337**	IAmb	IAmb	05 34 52.6	
	comp=Z,103nm,0.8s						
MAYO				IAMs_20	IAMs_20	06 06 14.6	
	comp=Z,9µm,20.0s						
MAYO	**Mayo, Yukon**	**66.75**	**337**	P	**P**	**05 34 38.0**	**+0.3**
	baz=120,SNR=9.7						
YUK4	**Talbot Arm**	**66.79**	**334**	P	**P**	**05 34 38.8**	**+0.6**
	baz=117,SNR=7.1						
ICESG	**Greenland Ices**	**66.81**	**15**	*i* P	**P**	**05 34 36.1**	**-2.3**
ICESG				IAmb	IAmb	05 34 40.4	
	comp=Z,151nm,1.0s						
PINM	**Pinnacle**	**66.95**	**333**	P	**P**	**05 34 39.5**	**+0.4**
	baz=115						
PCA	**Pinnacle**	**66.95**	**333**	IAMs_20	IAMs_20	06 06 07.1	
	comp=Z,7µm,21.0s						
O28M	**Mount Upton**	**67.21**	**333**	IAMs_20	IAMs_20	06 08 18.9	
	comp=Z,10µm,21.0s						
O28M	**Mount Upton**	**67.21**	**333**	P	**P**	**05 34 41.9**	**+0.9**
	baz=115						
M29M	**Somme Creek**	**67.22**	**335**	IAmb	IAmb	05 34 53.8	
	comp=Z,104nm,1.1s						
M29M	**Somme Creek**	**67.22**	**335**	P	**P**	**05 34 41.1**	**+0.3**
	baz=118,SNR=74						
YUK8	**Steele Glacier**	**67.25**	**334**	P	**P**	**05 34 41.3**	**+0.1**
	baz=116,SNR=7.8						
H31M	**Peel River**	**67.36**	**340**	P	**P**	**05 34 41.8**	**+0.3**
	baz=123,SNR=34						
L29M	**L29M**	**67.39**	**336**	IAmb	IAmb	05 34 55.1	
	comp=Z,93nm,1.1s						
L29M				IAMs_20	IAMs_20	06 07 54.6	
	comp=Z,10µm,22.0s						
L29M	**L29M**	**67.39**	**336**	P	**P**	**05 34 41.9**	**0.0**
	baz=118,SNR=75						
J30M	**Hart River**	**67.42**	**338**	IAmb	IAmb	05 35 01.4	
	comp=Z,83nm,1.1s						
J30M				IAMs_20	IAMs_20	06 06 31.2	
	comp=Z,10µm,20.0s						
J30M	**Hart River**	**67.42**	**338**	P	**P**	**05 34 42.3**	**+0.2**
	baz=120,SNR=87						
TABL	**Table Mountain**	**67.50**	**333**	IAmb	IAmb	05 34 59.1	
	comp=Z,70nm,0.9s						
TABL				IAMs_20	IAMs_20	06 08 01.5	
	comp=Z,6µm,18.0s						
K29M	**Barlow Dome**	**67.51**	**337**	IAMs_20	IAMs_20	06 06 46.5	
	comp=Z,11µm,22.0s						
K29M	**Barlow Dome**	**67.51**	**337**	P	**P**	**05 34 42.4**	**-0.2**
	baz=119,SNR=66						
MESA	**MESA**	**67.76**	**332**	IAmb	IAmb	05 35 08.0	
	comp=Z,131nm,1.2s						
MESA	**MESA**	**67.76**	**332**	P	**P**	**05 34 44.6**	**+0.2**
	baz=113						
YUK3	**Moose Creek**	**67.76**	**334**	P	**P**	**05 34 44.7**	**+0.3**
	baz=115,SNR=13						
I30M	**Mount Dempster**	**67.77**	**339**	IAmb	IAmb	05 34 48.0	
	comp=Z,170nm,1.1s						
I30M	**Mount Dempster**	**67.77**	**339**	P	**P**	**05 34 44.4**	**+0.1**
	baz=121,SNR=138						
CTGM	**Chitina Glacie**	**67.80**	**333**	IAmb	IAmb	05 35 00.1	
	comp=Z,281nm,2.0s						
CTG	**Chitna Glacier**	**67.80**	**333**	P	**P**	**05 34 44.6**	**+0.1**
	baz=114,SNR=6.2						
KULLO	**Kullorsuaq**	**67.81**	**7**	*i* P	**P**	**05 34 42.4**	**-1.8**
KULLO				IAmb	IAmb	05 34 44.8	
	comp=Z,205nm,1.3s						
GRNC	**Granite Creek**	**67.89**	**333**	IAMs_20	IAMs_20	06 08 13.0	
	comp=Z,8µm,20.0s						
G31M	**Satah River**	**67.94**	**341**	P	**P**	**05 34 44.6**	**-0.5**
G31M				IAMs_20	IAMs_20	06 08 54.9	
	comp=Z,9µm,20.0s						
G31M	**Satah River**	**67.94**	**341**	P	**P**	**05 34 45.3**	**+0.1**
	baz=123,SNR=44						
BARN	**Barnard Glacie**	**67.98**	**333**	IAmb	IAmb	05 35 04.6	
	comp=Z,94nm,1.2s						
F31M	**Tsiigehtchic**	**68.06**	**341**	IAmb	IAmb	05 35 02.9	
	comp=Z,214nm,1.2s						
F31M	**Tsiigehtchic**	**68.06**	**341**	P	**P**	**05 34 46.5**	**+0.6**
	baz=124,SNR=8.4						
J29N	**Klondike Camp**	**68.07**	**337**	P	**P**	**05 34 46.1**	**0.0**
	baz=118						
ISLE	**Juniper Island**	**68.10**	**333**	IAmb	IAmb	05 35 02.6	
	comp=Z,169nm,1.5s						
BVCY	**Beaver Creek**	**68.20**	**335**	P	**P**	**05 34 46.9**	**0.0**
	baz=115,SNR=46						
WAX	**Waxell Ridge**	**68.28**	**332**	IAmb	IAmb	05 35 09.3	
	comp=Z,179nm,1.5s						
DAWY	**Dawson**	**68.34**	**337**	IAMs_20	IAMs_20	06 06 31.6	
	comp=Z,10µm,21.0s						
DAWY	**Dawson**	**68.34**	**337**	P	**P**	**05 34 47.3**	**-0.5**
	baz=117,SNR=57						
VAH	**Vaihoa**	**68.36**	**250**	*e*P	**P**	**05 34 49.5**	**+0.8**
	comp=Z,68nm,1.0s						
VAH				*e*S	**S**	**05 43 46.1**	**-2.2**
	comp=Z,5µm,24.8s						
VAH	**Vaihoa**	**68.36**	**250**	*e*LR	LR	05 55 29.1	
	comp=Z,8µm,22.1s						
TGL	**Tana Glacier**	**68.39**	**333**	IAmb	IAmb	05 35 03.4	
	comp=Z,151nm,1.2s						
TGL				IAMs_20	IAMs_20	06 07 02.0	
	comp=Z,7µm,18.0s						
EPYK	**Eagle Plains**	**68.48**	**340**	IAMs_20	IAMs_20	06 06 57.1	
	comp=Z,7µm,20.0s						
EPYK	**Eagle Plains**	**68.48**	**340**	P	**P**	**05 34 48.8**	**+0.3**
	baz=121,SNR=36						
INK	**Inuvik**	**68.48**	**342**	P	**P**	**05 34 48.5**	**+0.1**
INK	**Inuvik**	**68.48**	**342**	P	**P**	**05 34 48.5**	**+0.1**
INK				pmax	pmax		
	comp=Z,370nm,1.6s						
INK	**Inuvik**	**68.48**	**342**	P	**P**	**05 34 48.6**	**+0.1**
	baz=124,SNR=42						
CRQE	**Cirque**	**68.50**	**333**	P	**P**	**05 34 48.9**	**-0.1**
	baz=112,SNR=7.5						
CRQM	**Cirque**	**68.53**	**333**	IAmb	IAmb	05 35 04.1	
	comp=Z,115nm,1.3s						
CRQM				IAMs_20	IAMs_20	06 06 57.2	
	comp=Z,7µm,19.0s						
I29M	**Ogilvie Camp,**	**68.54**	**338**	P	**P**	**05 34 48.9**	**-0.1**
	baz=119						
PMOR	**Pomariorio Ree**	**68.55**	**250**	*e*P	**P**	**05 34 50.2**	**+0.4**
	comp=Z,161nm,1.3s						
PMOR				*e*S	**S**	**05 43 55.5**	**+5.0**
	comp=Z,7µm,24.1s						
PMOR				*e*SS	**SS**	**05 48 15.0**	**-0.3**
	comp=Z,3µm,25.8s						
PMOR				*e*LR	LR	05 55 32.8	
	comp=Z,7µm,21.7s						
TULEG	**Thule**	**68.58**	**3**	*i* P	**P**	**05 34 47.2**	**-1.8**
TULEG				IAmb	IAmb	05 34 49.3	
	comp=Z,53nm,0.9s						
M27K	**Edge Creek, AK**	**68.61**	**335**	IAmb	IAmb	05 35 04.9	
	comp=Z,85nm,1.1s						
M27K	**Edge Creek, AK**	**68.61**	**335**	P	**P**	**05 34 49.3**	**-0.3**
	baz=114,SNR=30						
G30M	**tAoh Zraii Nji**	**68.62**	**340**	IAmb	IAmb	05 35 13.3	
	comp=Z,338nm,1.9s						
G30M				IAMs_20	IAMs_20	06 09 57.9	
	comp=Z,11µm,22.0s						
G30M	**tAoh Zraii Nji**	**68.62**	**340**	P	**P**	**05 34 50.2**	**+0.7**
	baz=121,SNR=17						
A36M	**Sachs Harbour**	**68.64**	**347**	P	**P**	**05 34 48.7**	**-0.7**
	baz=134,SNR=21						
SOEG	**Soedalen**	**68.64**	**18**	*i* P	**P**	**05 34 48.5**	**-1.0**
SOEG				IAmb	IAmb	05 34 51.7	
	comp=Z,24nm,1.0s						
BERG	**Berg Lake**	**68.65**	**332**	IAmb	IAmb	05 35 05.2	
	comp=Z,123nm,1.0s						
MCARA	**McCarthy VSAT**	**68.72**	**333**	IAmb	IAmb	05 35 15.0	
	comp=Z,125nm,1.0s						
MCARA				IAMs_20	IAMs_20	06 09 45.8	
	comp=Z,9µm,21.0s						
MCARA	**McCarthy VSAT**	**68.72**	**333**	P	**P**	**05 34 50.5**	**+0.3**
	baz=113,SNR=12						
KAIM	**Kayak Island**	**68.81**	**332**	P	**P**	**05 34 50.6**	**-0.1**
	baz=111						
F30M	**Barrier River**	**68.81**	**341**	P	**P**	**05 34 50.9**	**+0.3**
	baz=122,SNR=78						
BCAR	**Beaver Creek A**	**68.86**	**335**	P	**P**	**05 34 51.8**	**+0.7**
L27K	**Beaver Creek,**	**68.88**	**335**	IAmb	IAmb	05 35 15.0	
	comp=Z,121nm,1.1s						
L27K	**Beaver Creek,**	**68.88**	**335**	P	**P**	**05 34 51.7**	**+0.5**
	baz=114,SNR=141						
HMT	**Hamilton**	**68.88**	**332**	IAmb	IAmb	05 35 06.6	
	comp=Z,94nm,1.1s						
HMT				IAMs_20	IAMs_20	06 07 24.3	
	comp=Z,11µm,22.0s						
H29M	**Whitestone**	**68.98**	**339**	P	**P**	**05 34 52.5**	**+0.8**
	baz=119,SNR=48						
GLB	**Gilahina Butte**	**69.09**	**333**	IAmb	IAmb	05 35 07.8	
	comp=Z,134nm,1.2s						
RAGM	**Ragged Mountai**	**69.09**	**332**	IAmb	IAmb	05 35 08.1	
	comp=Z,128nm,1.2s						
M26K	**Nabesna, AK**	**69.10**	**334**	IAmb	IAmb	05 35 07.7	
	comp=Z,121nm,1.4s						
M26K	**Nabesna, AK**	**69.10**	**334**	P	**P**	**05 34 53.3**	**+0.7**
	baz=113,SNR=18						
I28M	**Miner Creek**	**69.18**	**338**	IAmb	IAmb	05 35 09.2	
	comp=Z,141nm,1.2s						
I28M	**Miner Creek**	**69.18**	**338**	P	**P**	**05 34 53.3**	**+0.3**
	baz=117,SNR=37						
G29M	**Pine Creek**	**69.20**	**340**	IAmb	IAmb	05 35 16.5	
	comp=Z,201nm,1.1s						
G29M				IAMs_20	IAMs_20	06 10 28.1	
	comp=Z,8µm,20.0s						
G29M	**Pine Creek**	**69.20**	**340**	P	**P**	**05 34 53.5**	**+0.5**
	baz=120,SNR=99						
BMRM	**Bremner River**	**69.27**	**333**	P	**P**	**05 34 54.3**	**+0.7**
	baz=111,SNR=13						
K27K	**Chicken**	**69.39**	**336**	IAMs_20	IAMs_20	06 10 42.3	
	comp=Z,8µm,19.0s						
K27K	**Chicken**	**69.39**	**336**	P	**P**	**05 34 55.2**	**+0.9**
	baz=115						
SUMG	**Summit**	**69.47**	**13**	P	**P**	**05 34 54.5**	**-0.6**
SUMG	**Summit**	**69.47**	**13**	*i* P	**P**	**05 34 53.9**	**-1.2**
SUMG				IAmb	IAmb	05 34 56.7	
	comp=Z,181nm,0.9s						
L26K	**Log Cabin Wild**	**69.50**	**335**	IAmb	IAmb	05 35 10.2	
	comp=Z,155nm,1.6s						
L26K				IAMs_20	IAMs_20	06 07 55.3	
	comp=Z,10µm,22.0s						
L26K	**Log Cabin Wild**	**69.50**	**335**	P	**P**	**05 34 55.5**	**+0.5**
	baz=113,SNR=46						
N25K	**Chitina, Valde**	**69.50**	**333**	IAmb	IAmb	05 35 16.9	
	comp=Z,91nm,1.2s						
N25K	**Chitina, Valde**	**69.50**	**333**	P	**P**	**05 34 56.2**	**+1.1**
	baz=111,SNR=25						
Q23K	**Middleton Isla**	**69.56**	**331**	IAmb	IAmb	05 35 17.2	
	comp=Z,194nm,1.4s						
Q23K				IAMs_20	IAMs_20	06 07 36.1	
	comp=Z,6µm,19.0s						
Q23K	**Middleton Isla**	**69.56**	**331**	P	**P**	**05 34 56.2**	**+0.9**
	baz=109						
MENT	**Mentasta**	**69.62**	**335**	P	**P**	**05 34 56.2**	**+0.5**
EYAK	**Cordova Ski Ar**	**69.65**	**332**	IAmb	IAmb	05 35 13.4	
	comp=Z,108nm,1.0s						
EYAK	**Cordova Ski Ar**	**69.65**	**332**	P	**P**	**05 34 57.5**	**+1.6**
EYAK	**Cordova Ski Ar**	**69.65**	**332**	P	**P**	**05 34 56.6**	**+0.7**
	baz=110,SNR=18						
DIV	**Divide**	**69.86**	**333**	IAmb	IAmb	05 35 12.2	
	comp=Z,80nm,1.1s						
DIV				IAMs_20	IAMs_20	06 08 45.0	
	comp=Z,8µm,20.0s						
I27K	**Kandik River**	**69.88**	**338**	P	**P**	**05 34 57.9**	**+0.5**
	baz=116,SNR=176						
E29M	**Blow River**	**69.90**	**341**	IAmb	IAmb	05 35 12.1	
	comp=Z,115nm,1.2s						
E29M	**Blow River**	**69.90**	**341**	P	**P**	**05 34 57.8**	**+0.5**
	baz=120,SNR=23						
HIN	**Hinchinbrook I**	**69.95**	**332**	IAmb	IAmb	05 35 23.8	
	comp=Z,110nm,1.2s						
HARP	**HAARP**	**70.03**	**334**	P	**P**	**05 34 58.7**	**+0.4**
	baz=111,SNR=6.5						
DOT	**Dot Lake**	**70.04**	**335**	IAmb	IAmb	05 35 22.1	
	comp=Z,136nm,1.0s						
KLU	**Klutina**	**70.05**	**333**	IAMs_20	IAMs_20	06 08 29.1	
	comp=Z,7µm,20.0s						
KLU	**Klutina**	**70.05**	**333**	P	**P**	**05 34 58.5**	**0.0**
	baz=110,SNR=16						
FID	**Port Fidalgo**	**70.06**	**332**	IAmb	IAmb	05 35 15.8	
	comp=Z,278nm,2.0s						
H27K	**Steamboat Moun**	**70.12**	**338**	P	**P**	**05 34 59.0**	**+0.2**
	baz=116,SNR=58						
SCRK	**Sand Creek**	**70.14**	**336**	IAmb	IAmb	05 35 16.6	
	comp=Z,342nm,2.0s						
SCRK	**Sand Creek**	**70.14**	**336**	P	**P**	**05 34 59.4**	**+0.4**
	baz=113,SNR=54						
F28M	**Old Crow**	**70.17**	**340**	IAmb	IAmb	05 35 22.2	
	comp=Z,151nm,1.4s						
F28M				IAMs_20	IAMs_20	06 07 47.8	
	comp=Z,7µm,21.0s						
F28M	**Old Crow**	**70.17**	**340**	P	**P**	**05 34 59.3**	**+0.3**
	baz=118,SNR=41						
J26L	**Joseph Creek**	**70.17**	**336**	IAMs_20	IAMs_20	06 11 14.2	
	comp=Z,9µm,19.0s						
J26L	**Joseph Creek**	**70.17**	**336**	P	**P**	**05 34 59.3**	**+0.1**
	baz=113,SNR=160						
P23K	**Montague Islan**	**70.25**	**331**	IAmb	IAmb	05 35 03.1	
	comp=Z,117nm,1.5s						
P23K	**Montague Islan**	**70.25**	**331**	P	**P**	**05 34 59.2**	**-0.4**
	baz=108,SNR=13						
I26K	**Coal Creek Min**	**70.34**	**337**	P	**P**	**05 35 00.2**	**+0.1**
	baz=114						
PAX	**Paxson**	**70.38**	**334**	IAMs_20	IAMs_20	06 10 59.5	
	comp=Z,9µm,20.0s						
PAX	**Paxson**	**70.38**	**334**	P	**P**	**05 35 00.3**	**-0.2**
	baz=111,SNR=49						
M24K	**Tolsona, Glenn**	**70.38**	**333**	IAMs_20	IAMs_20	06 10 27.7	
	comp=Z,7µm,18.0s						
M24K	**Tolsona, Glenn**	**70.38**	**333**	P	**P**	**05 35 00.4**	**0.0**
	baz=110,SNR=20						
GLI	**Glacier Island**	**70.38**	**332**	P	**P**	**05 35 00.4**	**0.0**
	baz=109						
RIDG	**Independent Ri**	**70.40**	**335**	IAmb	IAmb	05 35 24.3	
	comp=Z,201nm,1.2s						
RIDG	**Independent Ri**	**70.40**	**335**	P	**P**	**05 35 00.9**	**+0.4**
	baz=112,SNR=91						
G27K	**Doyon Strip**	**70.42**	**339**	IAMs_20	IAMs_20	06 08 43.5	
	comp=Z,6µm,21.0s						
G27K	**Doyon Strip**	**70.42**	**339**	P	**P**	**05 35 00.2**	**-0.4**
	baz=116,SNR=38						
E28M	**Babbage River**	**70.53**	**341**	IAmb	IAmb	05 35 23.9	
	comp=Z,120nm,1.3s						
E28M	**Babbage River**	**70.53**	**341**	P	**P**	**05 35 01.1**	**-0.1**
	baz=119,SNR=22						
JOKA	**Jonika Flow**	**70.54**	**288**	IAMs_20	IAMs_20	05 59 11.0	
	comp=Z,9µm,22.0s						
TVO	**Taravao**	**70.55**	**248**	*e*S	**S**	**05 44 15.5**	**+1.3**
	comp=Z,1µm,24.4s						
TVO	**Taravao**	**70.55**	**248**	*e*LR	LR	05 56 26.0	
	comp=Z,2µm,23.0s						
BORG	**Borgarnes**	**70.56**	**24**	IAMs_20	IAMs_20	06 01 32.4	
	comp=Z,9µm,21.0s						
BORG	**Borgarnes**	**70.56**	**24**	LR	LR	06 01 53.8	
	comp=Z,7µm,21.5s,baz=251,slow=32						
D28M	**Stokes Point**	**70.63**	**342**	P	**P**	**05 35 01.6**	**-0.1**
	baz=120						
STCH	**Steam Cracks**	**70.65**	**288**	IAMs_20	IAMs_20	05 59 16.1	
	comp=Z,10µm,22.0s						
KNHH	**Kane Nui o Ham**	**70.70**	**288**	P	**P**	**05 35 04.2**	**+1.0**
PUH	**Pauahi**	**70.74**	**288**	P	**P**	**05 35 04.1**	**+0.6**
PUH				IAMs_20	IAMs_20	05 59 16.4	
	comp=Z,10µm,22.0s						
BYL	**Byron's Ledge**	**70.78**	**288**	IAMs_20	IAMs_20	05 59 20.5	
	comp=Z,9µm,22.0s						
HATHI	**Halema‘uma‘u T**	**70.78**	**288**	IAmb	IAmb	05 36 06.0	
	comp=Z,175nm,1.1s						
HATHI				IAMs_20	IAMs_20	05 59 28.5	
	comp=Z,8µm,21.0s						
PPTF	**Pamatai, Papee**	**70.78**	**248**	IAMs_20	IAMs_20	05 58 29.8	
	comp=Z,6µm,20.0s						
PPT	**Papeete**	**70.79**	**248**	LR	LR	05 58 42.5	
	comp=Z,6µm,18.7s,baz=54,slow=30						
PPT2	**Papeete2**	**70.79**	**248**	*e*P	**P**	**05 35 05.0**	**+1.2**
	comp=Z,846nm,26.0s						
PPT2				*e*S	**S**	**05 44 16.1**	**-1.0**
	comp=Z,5µm,25.5s						
PPT2				*e*SS	**SS**	**05 48 49.2**	**-0.8**
	comp=Z,4µm,29.2s						
PPT2				*e*LQ	LQ	05 53 09.5	
	comp=Z,4µm,32.2s						
PPT2				*e*LR	LR	05 56 35.6	
	comp=Z,8µm,25.0s						
PPT2				*e*LR	LR	05 56 42.0	
	comp=Z,8µm,22.8s						
SCM	**Sheep Creek Mo**	**70.80**	**333**	IAmb	IAmb	05 35 37.0	
	comp=Z,108nm,1.2s						
SCM				IAMs_20	IAMs_20	06 10 35.9	
	comp=Z,6µm,19.0s						
SCM	**Sheep Creek Mo**	**70.80**	**333**	P	**P**	**05 35 02.6**	**-0.5**
	baz=109,SNR=20						
K24K	**Donnelly Dome**	**70.81**	**335**	IAmb	IAmb	05 35 26.5	
	comp=Z,193nm,1.2s						
K24K	**Donnelly Dome**	**70.81**	**335**	P	**P**	**05 35 02.8**	**-0.2**
	baz=111,SNR=57						
UWE	**Uwekahuna**	**70.81**	**288**	IAmb	IAmb	05 36 01.3	
	comp=Z,153nm,1.0s						
UWE				IAMs_20	IAMs_20	05 59 19.3	
	comp=Z,10µm,22.0s						
PAE	**Paea**	**70.82**	**248**	*e*S	**S**	**05 44 14.1**	**-3.1**
	comp=Z,950nm,25.1s						
PAE	**Paea**	**70.82**	**248**	*e*LR	LR	05 56 38.8	
	comp=Z,2µm,23.5s						
MLH	**Mauna Loa**	**70.90**	**288**	IAmb	IAmb	05 35 15.2	
	comp=Z,217nm,1.3s						
MLH				IAMs_20	IAMs_20	05 59 32.6	
	comp=Z,9µm,22.0s						
J25K	**Salcha River,**	**70.94**	**336**	IAmb	IAmb	05 35 18.9	
	comp=Z,105nm,0.9s						
J25K				IAMs_20	IAMs_20	06 11 04.3	
	comp=Z,9µm,20.0s						
J25K	**Salcha River,**	**70.94**	**336**	P	**P**	**05 35 04.0**	**+0.2**
	baz=112,SNR=145						
PWL	**Port Wells**	**70.95**	**332**	IAmb	IAmb	05 35 28.6	
	comp=Z,136nm,1.4s						
PWL	**Port Wells**	**70.95**	**332**	P	**P**	**05 35 03.6**	**-0.3**
	baz=108,SNR=16						
M23K	**Glacier View**	**70.97**	**333**	P	**P**	**05 35 04.0**	**0.0**
	baz=108,SNR=14						
AIN	**Ainahou**	**70.97**	**288**	IAMs_20	IAMs_20	05 59 24.5	
	comp=Z,9µm,22.0s						
E27K	**Coleen River**	**71.01**	**340**	IAmb	IAmb	05 35 29.2	

	comp=Z,137nm,1.4s						
E27K				IAMs_20	IAMs_20	06 10 14.0	
	comp=Z,8µm,19.0s						
E27K	Coleen River	71.01	340	P	P	05 35 04.5	+0.3
	baz=116,SNR=26						
NEEM	North Greenlan	71.05	7	i P	P	05 35 03.7	-0.9
NEEM				IAmb	IAmb	05 35 05.2	
	comp=Z,281nm,0.9s						
MWH	Mokuaweoweo	71.10	288	IAMs_20	IAMs_20	05 59 39.8	
	comp=Z,8µm,20.0s						
KHU	Kahuku	71.12	287	IAMs_20	IAMs_20	05 59 28.6	
	comp=Z,10µm,22.0s						
KNK	Knik Glacier	71.18	332	IAmb	IAmb	05 35 13.5	
	comp=Z,150nm,1.2s						
KNK	Knik Glacier	71.18	332	P	P	05 35 05.4	+0.1
	baz=108,SNR=13						
WAT6	Susitna Watana	71.22	334	P	P	05 35 05.5	-0.2
	baz=109,SNR=76						
DHY	Denali Highway	71.23	334	IAmb	IAmb	05 35 28.6	
	comp=Z,166nm,1.8s						
DHY				IAMs_20	IAMs_20	06 11 33.1	
	comp=Z,8µm,20.0s						
DHY	Denali Highway	71.23	334	P	P	05 35 05.0	-0.7
	baz=109,SNR=26						
G26K	Porcupine Rive	71.24	339	IAMs_20	IAMs_20	06 10 49.2	
	comp=Z,6µm,20.0s						
G26K	Porcupine Rive	71.24	339	P	P	05 35 05.2	-0.3
	baz=114,SNR=41						
SEW	Seward	71.26	331	IAmb	IAmb	05 35 31.1	
	comp=Z,119nm,1.2s						
SEW	Seward	71.26	331	P	P	05 35 05.5	-0.2
	baz=106						
D27M	Malcolm River	71.29	341	IAMs_20	IAMs_20	06 10 26.2	
	comp=Z,9µm,22.0s						
D27M	Malcolm River	71.29	341	P	P	05 35 05.8	0.0
	baz=117						
HUH	Hualalai	71.31	288	IAMs_20	IAMs_20	05 59 44.6	
	comp=Z,9µm,20.0s						
PRP	Porcupine Dome	71.33	337	IAMs_20	IAMs_20	06 09 14.7	
	comp=Z,8µm,20.0s						
PRP	Porcupine Dome	71.33	337	P	P	05 35 06.2	-0.1
	baz=112,SNR=36						
O22K	Cooper Landing	71.50	331	P	P	05 35 06.9	-0.3
	baz=106						
GHO	Glory Hole Cre	71.50	333	IAmb	IAmb	05 35 36.3	
	comp=Z,109nm,1.0s						
GHO				IAMs_20	IAMs_20	06 09 11.5	
	comp=Z,9µm,21.0s						
HDA	Harding Lake	71.50	336	IAmb	IAmb	05 35 10.5	
	comp=Z,173nm,1.0s						
HDA	Harding Lake	71.50	336	P	P	05 35 07.2	+0.1
	baz=110,SNR=119						
PMR	Palmer	71.54	333	P	P	05 35 07.6	+0.2
PMR	Palmer	71.54	333	P	P	05 35 06.8	-0.6
	baz=107,SNR=14						
ILAR	Eielson Array	71.60	336	P	P	05 35 07.5	-0.3
ILAR	Eielson Array	71.60	336	P	P	05 35 07.2	-0.5
	comp=Z,39nm,0.8s,baz=114,slow=4.4,SNR=92						
ILAR				LR	LR	06 09 37.9	
	comp=Z,7µm,20.6s,baz=104,slow=38						
	comp=Z,39nm,0.8s						
ILAR	Eielson Array	71.60	336	P	P	05 35 07.5	-0.3
FYU	Fort Yukon	71.62	338	IAMs_20	IAMs_20	06 09 28.2	
	comp=Z,8µm,21.0s						
HLK	Haleakala	71.66	289	IAMs_20	IAMs_20	05 59 51.6	
	comp=Z,8µm,21.0s						
WAT1	Susitna Watana	71.66	334	P	P	05 35 07.8	-0.3
	baz=108						
F26K	Sheenjek River	71.67	339	IAMs_20	IAMs_20	06 11 54.6	
	comp=Z,5µm,20.0s						
F26K	Sheenjek River	71.67	339	P	P	05 35 08.4	+0.3
	baz=114,SNR=44						
RC01	Rabbit Creek A	71.67	332	P	P	05 35 08.6	+0.4
	baz=106,SNR=14						
BMAR	Burnt Mountain	71.72	339	P	P	05 35 08.9	+0.4
H25L	Birch Creek	71.73	338	P	P	05 35 08.9	+0.5
	baz=112,SNR=70						
SLKM	Skilak Lake	71.74	331	IAmb	IAmb	05 35 29.6	
	comp=Z,124nm,1.3s						
SLKM				IAMs_20	IAMs_20	06 09 04.0	
	comp=Z,8µm,22.0s						
BRSE	Bradley Lake S	71.79	330	P	P	05 35 09.5	+0.5
	baz=105,SNR=23						
KHLH	Kahului Airpor	71.82	289	IAMs_20	IAMs_20	05 59 56.9	
	comp=Z,8µm,21.0s						
BRLK	Bradley Lake	71.86	330	IAmb	IAmb	05 35 27.9	
	comp=Z,120nm,1.1s						
BRLK				IAMs_20	IAMs_20	06 11 54.4	
	comp=Z,7µm,20.0s						
FIS	Fire Island	71.92	332	IAMs_20	IAMs_20	06 11 01.4	
	comp=Z,9µm,20.0s						
POKR	Poker Plat Res	71.94	336	IAmb	IAmb	05 35 38.8	
	comp=Z,119nm,1.3s						
POKR	Poker Plat Res	71.94	336	P	P	05 35 10.2	+0.4
	baz=110,SNR=14						
RND	Reindeer	71.97	334	IAMs_20	IAMs_20	06 08 40.8	
	comp=Z,10µm,22.0s						
CNPM	China Poot	71.97	330	IAmb	IAmb	05 35 26.1	
	comp=Z,239nm,1.7s						
CNPM				IAMs_20	IAMs_20	06 07 36.2	
	comp=Z,7µm,21.0s						
G25K	Bearman Lake	72.02	338	P	P	05 35 10.4	+0.3
	baz=112,SNR=31						
COLA	College	72.03	336	P	P	05 35 10.1	-0.1
COLA				IAMs_20	IAMs_20	06 10 25.2	
	comp=Z,7µm,20.0s						
COLA	College	72.03	336	P	P	05 35 09.8	-0.4
COLA	College	72.03	336	P	P	05 35 10.1	-0.1
COLA				pmax	pmax		
	comp=Z,61nm,0.9s						
COLA				MLR	MLR		
	comp=Z,7µm,20.0s						
COLA	College	72.03	336	P	P	05 35 10.3	+0.1
	baz=109						
COLA	College	72.03	336	P	P	05 35 10.7	+0.4
COLA				S	S	05 44 29.6	0.0
COLA	College	72.03	336	P	P	05 35 10.1	-0.1
M22K	Willow	72.04	333	IAmb	IAmb	05 35 27.2	
	comp=Z,92nm,0.9s						
M22K				IAMs_20	IAMs_20	06 10 39.7	
	comp=Z,7µm,20.0s						
M22K	Willow	72.04	333	P	P	05 35 10.4	0.0
	baz=106,SNR=7.2						
LIS	Lisbon	72.08	52	eP	P	05 35 11.2	+0.1
LIS				eS	S	05 44 30.6	-0.6
LIS				IAMs_20	IAMs_20	05 58 39.5	
	comp=E,16µm,25.7s						
MCK	McKinley	72.11	335	IAmb	IAmb	05 35 25.6	
	comp=Z,109nm,1.0s						
MCK				IAMs_20	IAMs_20	06 12 00.3	
	comp=Z,9µm,20.0s						
MCK	McKinley	72.11	335	P	P	05 35 11.4	+0.6
	baz=108,SNR=34						
F25K	Christian Rive	72.16	339	IAMs_20	IAMs_20	06 09 15.5	
	comp=Z,8µm,20.0s						
F25K	Christian Rive	72.16	339	P	P	05 35 11.8	+0.7
	baz=112,SNR=61						
HOM	Homer	72.21	330	IAMs_20	IAMs_20	06 07 43.4	
	comp=Z,6µm,22.0s						
HOM	Homer	72.21	330	P	P	05 35 11.5	+0.1
	baz=104						
KDAK	Kodiak Island	72.24	328	P	P	05 35 12.6	+0.9
KDAK	Kodiak Island	72.24	328	IAMs_20	IAMs_20	06 09 00.5	
	comp=Z,7µm,21.0s						
KDAK	Kodiak Island	72.24	328	LR	LR	06 09 22.8	
	comp=Z,6µm,20.6s,baz=108,slow=38						
KDAK	Kodiak Island	72.24	328	P	P	05 35 12.6	+0.9
KDAK				pmax	pmax		
	comp=Z,55nm,1.0s						
KDAK				MLR	MLR		
	comp=Z,7µm,21.0s						
KDAK	Kodiak Island	72.24	328	P	P	05 35 11.8	+0.1
	baz=103						
PFVI	Vila Bisbo	72.25	54	P	P	05 35 12.2	0.0
PFVI	Vila Bisbo	72.25	54	eP	P	05 35 10.4	-1.8
PFVI				i Amb		05 35 42.1	
	comp=Z,160nm,1.4s						
SUA	Susitna One	72.25	332	IAMs_20	IAMs_20	06 11 45.2	
	comp=Z,5µm,19.0s						
SUA	Susitna One	72.25	332	P	P	05 35 11.8	0.0
	baz=106						
CAPN	Captain Cook N	72.25	331	P	P	05 35 12.3	+0.7
	baz=105						
CUT	Chulitna	72.29	333	P	P	05 35 11.9	+0.1
	baz=106,SNR=9.6						
TBI	Tubuai	72.33	242	ePKP1	P	05 35 12.7	-0.1
	comp=Z,3µm,27.8s						
TBI	Tubuai	72.33	242	ePP	PP	05 37 56.0	+2.0
	comp=Z,1µm,33.8s						
TBI				eS	S	05 44 35.5	+1.1
	comp=Z,24µm,28.5s						
TBI				eSS	SS	05 49 14.0	+0.8
	comp=Z,13µm,32.5s						
TBI				eLQ	LQ	05 54 23.7	
	comp=Z,41µm,30.8s						
TBI				eLR	LR	05 57 23.1	
	comp=Z,24µm,25.0s						
TBI				eLR	LR	05 57 25.6	
	comp=Z,7µm,25.2s						
C27K	Jago River	72.33	341	IAmb	IAmb	05 35 35.5	
	comp=Z,182nm,1.6s						
C27K				IAMs_20	IAMs_20	06 12 07.8	
	comp=Z,8µm,22.0s						
C27K	Jago River	72.33	341	P	P	05 35 12.1	0.0
	baz=115						
SYI	Shuyak Island	72.33	329	IAmb	IAmb	05 35 47.1	
	comp=Z,118nm,1.4s						
SYI				IAMs_20	IAMs_20	06 13 08.8	
	comp=Z,8µm,20.0s						
Q20K	Shuyak Island	72.33	329	P	P	05 35 12.7	+0.5
	baz=103						
E25K	Arctic Village	72.34	340	IAMs_20	IAMs_20	06 09 45.1	
	comp=Z,7µm,20.0s						
E25K	Arctic Village	72.34	340	P	P	05 35 12.6	+0.5
	baz=112,SNR=38						
PTEO	Sao Teotonio	72.35	53	eP	P	05 35 13.0	+0.3
PTEO				i Amb		05 35 27.7	
	comp=Z,134nm,2.1s						
H24K	Noodor Dome	72.36	337	IAmb	IAmb	05 35 37.6	
	comp=Z,240nm,1.6s						
H24K	Noodor Dome	72.36	337	P	P	05 35 12.3	0.0
	baz=110,SNR=66						
MORF	Marmelete	72.39	54	eP	P	05 35 13.1	0.0
MORF				eS	S	05 44 34.3	-0.7
MORF				IAMs_20	IAMs_20	05 58 30.7	
	comp=Z,9µm,16.0s						
MORF	Marmelete	72.39	54	IAMs_20	IAMs_20	05 59 47.9	
	comp=Z,9µm,21.0s						
MORF	Marmelete	72.39	54	eP	P	05 35 12.8	-0.3
MORF				i Amb		05 35 41.3	
	comp=Z,178nm,1.5s						
MORF	Marmelete	72.39	54	eP	P	05 35 13.1	0.0
MORF				eS	S	05 44 34.3	-0.7
PSBE	So Bento	72.41	51	eP	P	05 35 12.2	-0.9
PSBE				i Amb		05 35 40.1	
	comp=Z,132nm,1.6s						
NEA2	Nenana	72.43	336	P	P	05 35 12.3	-0.4
	baz=108,SNR=80						
BWN	Browne	72.46	335	IAMs_20	IAMs_20	06 10 35.9	
	comp=Z,6µm,20.0s						
OHAK	Old Harbor	72.49	327	IAmb	IAmb	05 35 29.4	
	comp=Z,105nm,1.0s						
OHAK	Old Harbor	72.49	327	P	P	05 35 13.9	+0.7
OHAK	Old Harbor	72.49	327	P	P	05 35 13.5	+0.4
	baz=102,SNR=14						
G24K	Hadweenzic Riv	72.50	338	IAmb	IAmb	05 35 31.0	
	comp=Z,206nm,1.4s						
G24K				IAMs_20	IAMs_20	06 11 42.5	
	comp=Z,8µm,18.0s						
G24K	Hadweenzic Riv	72.50	338	P	P	05 35 13.8	+0.6
	baz=110,SNR=68						
TRF	Thorofare Moun	72.60	334	IAMs_20	IAMs_20	06 09 12.3	
	comp=Z,9µm,22.0s						
TRF	Thorofare Moun	72.60	334	P	P	05 35 13.8	-0.1
	baz=107,SNR=41						
PCAS	Casmilo, Conde	72.67	51	eP	P	05 35 14.3	-0.4
PCAS				i Amb		05 35 41.6	
	comp=Z,202nm,1.7s						
SCO	Scoresbysund	72.68	18	P	P	05 35 12.6	-1.5
SCO	Scoresbysund	72.68	18	P	P	05 35 12.6	-1.5
SCO				pmax	pmax		
	comp=Z,30nm,1.0s						
SCO				MLR	MLR		
	comp=Z,11µm,20.0s						
SCO	Scoresbysund	72.68	18	i P	P	05 35 13.0	-1.0
SCO				IAmb	IAmb	05 35 14.7	
	comp=Z,36nm,1.2s						
I23K	Minto, Yukon-K	72.72	336	IAmb	IAmb	05 35 39.0	
	comp=Z,218nm,1.2s						
I23K				IAMs_20	IAMs_20	06 12 14.4	
	comp=Z,8µm,20.0s						
I23K	Minto, Yukon-K	72.72	336	P	P	05 35 14.6	+0.2
	baz=108,SNR=95						
SKT	Skwentna	72.75	333	IAmb	IAmb	05 35 40.3	
	comp=Z,117nm,1.2s						
SKT				IAMs_20	IAMs_20	06 12 01.4	
	comp=Z,6µm,20.0s						
SKT	Skwentna	72.75	333	P	P	05 35 14.5	-0.1
	baz=105,SNR=43						
COI	Coimbra	72.75	51	IAmb	IAmb	05 35 40.1	
	comp=Z,139nm,1.1s						
COI				IAMs_20	IAMs_20	06 09 10.0	
	comp=Z,8µm,19.0s						
COI	Coimbra	72.75	51	eP	P	05 35 15.7	+0.6
COI				i Amb		05 35 41.6	
	comp=Z,208nm,1.6s						
MESJ	Messejana	72.76	53	eP	P	05 35 15.3	+0.1
MESJ				eS	S	05 44 38.2	-0.9
MESJ				IAMs_20	IAMs_20	05 58 52.0	
	comp=Z,12µm,30.6s						
MESJ	Messejana	72.76	53	eP	P	05 35 15.3	+0.1
MESJ				eS	S	05 44 38.2	-0.9
O20K	Slope Mountain	72.79	330	P	P	05 35 15.3	+0.3
	baz=103,SNR=6.8						
PMTG	Montargil	72.82	52	eP	P	05 35 14.1	-1.5
PMTG				i Amb		05 35 42.3	
	comp=Z,112nm,1.6s						
C26K	Camden Bay	72.83	341	P	P	05 35 15.0	+0.1
	baz=114						
SII	Sitkinak Islan	72.84	327	IAmb	IAmb	05 35 31.8	
	comp=Z,148nm,0.9s						
SII				IAMs_20	IAMs_20	06 07 51.4	
	comp=Z,6µm,21.0s						
SII	Sitkinak Islan	72.84	327	P	P	05 35 16.8	+1.5
SII	Sitkinak Islan	72.84	327	P	P	05 35 15.6	+0.3
	baz=101,SNR=8.6						
SPCR	Spurr Chakacha	72.86	332	P	P	05 35 15.0	-0.4
	baz=104,SNR=5.9						
PCVE	Castro Verde	72.90	53	P	P	05 35 16.0	0.0
PCVE	Castro Verde	72.90	53	eP	P	05 35 15.7	-0.3
PCVE				i Amb		05 35 43.5	
	comp=Z,91nm,1.5s						
KTH	Kantishna Hill	72.90	334	IAMs_20	IAMs_20	06 09 31.3	
	comp=Z,9µm,21.0s						
PSARD	Sardoal	72.90	51	eP	P	05 35 14.5	-1.5
PSARD				i Amb		05 35 42.6	
	comp=Z,99nm,1.6s						
F24K	Squaw Lake	72.94	339	P	P	05 35 16.4	+0.7
	baz=110,SNR=25						
RED	Redoubt Volcan	72.94	331	IAmb	IAmb	05 35 34.6	
	comp=Z,163nm,1.0s						
PBDV	Barranco-do-Ve	72.97	54	eP	P	05 35 16.6	+0.1
PBDV				i Amb		05 35 46.5	
	comp=Z,102nm,1.6s						
PGAV	Gavieira, Arco	72.97	49	eP	P	05 35 15.6	-0.9
PGAV				i Amb		05 35 47.5	
	comp=Z,121nm,1.5s						
PGAV				ePP	PP	05 38 11.1	+12
PGAV				eS	S	05 44 44.0	+2.4
PGAV				eLQ	LQ	05 53 08.4	
PGAV				eLR	LR	05 58 06.0	
PGAV				i AMs_20		06 02 26.5	
	comp=Z,6µm,20.0s						
P19K	Oil Pt	72.99	330	P	P	05 35 15.9	-0.3
	baz=103						
H23K	Yukon River	73.00	337	IAmb	IAmb	05 35 33.3	
	comp=Z,112nm,1.1s						
H23K	Yukon River	73.00	337	P	P	05 35 15.9	-0.3
	baz=108,SNR=48						
ILSW	Iliamna Southw	73.02	330	IAMs_20	IAMs_20	06 08 08.8	
	comp=Z,7µm,22.0s						
Q19K	Cape Douglas,	73.04	329	IAmb	IAmb	05 35 31.7	
	comp=Z,283nm,1.4s						
Q19K				IAMs_20	IAMs_20	06 11 13.4	
	comp=Z,6µm,19.0s						
Q19K	Cape Douglas,	73.04	329	P	P	05 35 16.9	+0.4
	baz=102						
PBEJ	Beja	73.05	53	eP	P	05 35 15.7	-1.2
PBEJ				i Amb		05 36 04.9	
	comp=Z,76nm,1.7s						
D25K	Kavik River	73.07	341	P	P	05 35 16.8	+0.3
	baz=112						
BPAW	Bear Paw Mtn.	73.08	335	P	P	05 35 16.4	-0.3
BPAW				IAmb	IAmb	05 35 39.8	
	comp=Z,172nm,1.3s						
BPAW	Bear Paw Mtn.	73.08	335	P	P	05 35 16.3	-0.3
	baz=106,SNR=73						
PCAB	Cabril	73.14	49	eP	P	05 35 16.6	-0.9
PCAB				i Amb		05 35 33.8	
	comp=Z,67nm,1.6s						
PVAQ	Vaqueiros	73.14	54	P	P	05 35 17.6	+0.1
PVAQ	Vaqueiros	73.14	54	IAmb	IAmb	05 35 43.3	
	comp=Z,178nm,1.5s						
PVAQ	Vaqueiros	73.14	54	eP	P	05 35 17.3	-0.2
PVAQ				i Amb		05 35 48.0	
	comp=Z,88nm,1.7s						
PVAQ				eS	S	05 44 46.7	+3.3
PVAQ				eLQ	LQ	05 53 22.7	
PVAQ				eLR	LR	05 56 57.9	
PVAQ				i AMs_20		06 00 42.4	
	comp=Z,8µm,22.0s						
PVIS	Viseu	73.17	50	eP	P	05 35 16.9	-0.7
R18K	Karluk	73.18	328	P	P	05 35 17.7	+0.5
	baz=101						
MLY	Manley	73.24	336	IAmb	IAmb	05 35 40.8	
	comp=Z,135nm,1.1s						
MLY				IAMs_20	IAMs_20	06 12 02.3	
	comp=Z,7µm,20.0s						
MLY	Manley	73.24	336	P	P	05 35 17.4	-0.2
	baz=107,SNR=150						
AVE	Averroes	73.27	58	IAMs_20	IAMs_20	06 00 30.5	
	comp=Z,8µm,22.0s						
KIP	Kipapa	73.28	290	IAMs_20	IAMs_20	06 02 14.4	
	comp=Z,8µm,21.0s						
PPLA	Purkeypile	73.28	333	P	P	05 35 17.6	-0.4
	baz=105						
POLO	Lamas de Olo	73.29	49	eP	P	05 35 17.0	-1.4
POLO				i Amb		05 36 08.8	
	comp=Z,39nm,1.6s						
PESTR	Estremoz	73.31	52	P	P	05 35 18.1	-0.4
PESTR	Estremoz	73.31	52	IAmb	IAmb	05 35 47.8	
	comp=Z,90nm,1.0s						
PESTR				IAMs_20	IAMs_20	06 00 39.0	
	comp=Z,9µm,22.0s						
PESTR	Estremoz	73.31	52	eP	P	05 35 17.8	-0.6
PESTR				i Amb		05 35 45.2	
	comp=Z,144nm,1.7s						
EGRO	El Granado	73.33	53	P	P	05 35 18.7	+0.1
PVRL	Vila Real	73.34	49	eP	P	05 35 20.4	+1.8
PVRL				i Amb		05 35 34.8	
	comp=Z,85nm,1.8s						
E24K	Your Creek	73.34	339	P	P	05 35 18.3	+0.1
	baz=110						
CAST	Castle Rocks	73.37	334	IAMs_20	IAMs_20	06 09 46.7	
	comp=Z,10µm,22.0s						
CAST	Castle Rocks	73.37	334	P	P	05 35 18.0	-0.3
	baz=105						
TIO	Tiouine	73.38	60	P	P	05 35 18.7	-0.4
MTE	Manteigas	73.42	50	IAMs_20	IAMs_20	06 05 28.8	
	comp=Z,8µm,19.0s						
MTE	Manteigas	73.42	50	eP	P	05 35 18.2	-0.9
MTE				i Amb		05 35 45.7	
	comp=Z,71nm,1.7s						
MTE				eS	SKiKP	05 44 49.8	+1.7
MTE				eLQ	LQ	05 53 21.6	
MTE				eLR	LR	05 58 20.0	
MTE				i AMs_20		06 05 17.1	
	comp=Z,7µm,18.0s						
PCBR	Castelo Branco	73.44	51	eP	P	05 35 20.8	+1.6
PCBR				i Amb		05 35 48.5	
	comp=Z,89nm,1.5s						
M20K	Styx River	73.45	332	IAMs_20	IAMs_20	06 12 56.1	
	comp=Z,8µm,20.0s						
M20K	Styx River	73.45	332	P	P	05 35 18.7	-0.2
	baz=104						
G23K	Bananza Creek	73.46	338	IAmb	IAmb	05 35 34.2	
	comp=Z,138nm,1.2s						
G23K	Bananza Creek	73.46	338	P	P	05 35 19.4	+0.6
	baz=108,SNR=111						
PMRV	Marv??o	73.49	51	eP	P	05 35 18.4	-1.1
PMRV				i Amb		05 35 46.1	
	comp=Z,83nm,1.6s						
PMRV				ePP	PP	05 38 14.1	+11
PMRV				eS	SKiKP	05 44 50.7	+2.5
PMRV				eLQ	LQ	05 52 39.0	
PMRV				eLR	LR	05 58 26.9	
PMRV				i AMs_20		06 00 55.2	
	comp=Z,8µm,24.0s						
CHIR	Chirikof Islan	73.50	326	IAmb	IAmb	05 35 35.8	
	comp=Z,171nm,0.8s						
CHIR				IAMs_20	IAMs_20	06 09 48.9	
	comp=Z,8µm,20.0s						
CHIR	Chirikof Islan	73.50	326	P	P	05 35 20.3	+1.1
CHIR	Chirikof Islan	73.50	326	P	P	05 35 18.9	-0.3
	baz=100						
HOPE	Hope Point	73.50	154	P	P	05 35 19.9	+0.8
HOPE				IAmb	IAmb	05 35 23.0	
	comp=Z,110nm,0.9s						
HOPE	Hope Point	73.50	154	P	P	05 35 19.9	+0.8
HOPE				pmax	pmax		
	comp=Z,110nm,1.0s						
CHUM	Lake Minchumin	73.59	334	P	P	05 35 18.8	-0.7
	baz=105						
O19K	Port Alsworth	73.64	330	IAMs_20	IAMs_20	06 08 27.3	
	comp=Z,9µm,22.0s						
O19K	Port Alsworth	73.64	330	P	P	05 35 19.7	-0.2
	baz=102,SNR=5.1						
Q18K	Katmai Hardscr	73.68	329	P	P	05 35 20.5	+0.1
	baz=101,SNR=13						
COLD	Coldfoot	73.69	338	P	P	05 35 21.0	+0.9
	baz=108,SNR=91						
PBAR	Barrancos	73.71	53	P	P	05 35 20.6	-0.2
PBAR	Barrancos	73.71	53	eP	P	05 35 20.4	-0.4
PBAR				i Amb		05 35 47.8	
	comp=Z,109nm,1.6s						
E23K	Chandalar	73.74	339	IAmb	IAmb	05 35 44.5	
	comp=Z,180nm,1.1s						
E23K	Chandalar	73.74	339	P	P	05 35 20.4	-0.1
	baz=109,SNR=79						
H22K	Ishtalitna Cre	73.75	337	P	P	05 35 20.3	-0.2
	baz=106,SNR=52						
EBAD	Badajoz	73.75	52	P	P	05 35 20.3	-0.7
I21K	Tanana	73.79	336	IAMs_20	IAMs_20	06 11 04.7	
	comp=Z,7µm,20.0s						
I21K	Tanana	73.79	336	P	P	05 35 20.6	-0.1
	baz=106						
D24K	Happy Valley	73.83	340	IAMs_20	IAMs_20	06 10 11.3	
	comp=Z,7µm,21.0s						
D24K	Happy Valley	73.83	340	P	P	05 35 20.7	-0.1
	baz=110,SNR=14						
N19K	Bonanza Creek	73.85	331	IAmb	IAmb	05 36 03.8	
	comp=Z,178nm,1.5s						
N19K				IAMs_20	IAMs_20	06 12 26.7	
	comp=Z,8µm,20.0s						
N19K	Bonanza Creek	73.85	331	P	P	05 35 20.9	-0.3
	baz=102,SNR=25						
MVO	Moncorvo	73.85	50	eP	P	05 35 21.0	-0.6
MVO				i Amb		05 35 48.3	
	comp=Z,92nm,1.8s						
MVO				ePP	PP	05 37 49.2	-17
MVO				eS	S	05 44 54.0	+2.6
MVO				eLQ	LQ	05 53 27.4	
MVO				eLR	LR	05 58 55.0	
MVO				i AMs_20		06 08 50.5	
	comp=Z,5µm,18.0s						
TOLK	Toolik Lake Re	73.91	339	P	P	05 35 21.5	+0.1
	baz=109,SNR=25						
P18K	Big Mountain,	73.93	329	IAmb	IAmb	05 35 54.8	
	comp=Z,162nm,1.8s						
P18K	Big Mountain,	73.93	329	P	P	05 35 21.1	-0.6
	baz=101,SNR=9.4						
L20K	Farewell, AK	73.93	333	P	P	05 35 21.2	-0.5
	baz=103						
C24K	Franklin Bluff	73.98	341	IAMs_20	IAMs_20	06 12 42.3	
	comp=Z,8µm,19.0s						
C24K	Franklin Bluff	73.98	341	P	P	05 35 22.0	+0.3
	baz=110						
EMIN	Mina Concepcio	73.99	53	P	P	05 35 22.2	-0.2
O18K	Koktuh Hills	74.01	330	IAMs_20	IAMs_20	06 14 01.0	
	comp=Z,6µm,20.0s						
O18K	Koktuh Hills	74.01	330	P	P	05 35 21.6	-0.6
	baz=101,SNR=22						
M19K	Big River Lodg	74.04	332	IAmb	IAmb	05 35 38.3	
	comp=Z,156nm,1.6s						
M19K	Big River Lodg	74.04	332	P	P	05 35 22.1	-0.2
	baz=102,SNR=13						
Q17K	Contact Creek	74.06	328	P	P	05 35 22.8	+0.2
	baz=100,SNR=27						
G22K	Bettles	74.09	338	P	P	05 35 22.5	+0.1
	baz=106						
PBRG	Braganca	74.10	49	eP	P	05 35 22.4	-0.7

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PBRG                                  i Amb                05 35 49.2
         comp=Z,85nm,1.4s
ECAL  Calabor           74.11  49    P         P          05 35 23.0 -0.2
K20K  Telida            74.22 334    P         P          05 35 23.1 -0.2
         baz=103,SNR=26
H21K  Melozitna Rive    74.25 336    IAMs_20   IAMs_20    06 13 09.8
         comp=Z,9µm,20.0s
H21K  Melozitna Rive    74.25 336    P         P          05 35 22.9 -0.5
         baz=105,SNR=33
L19K  White Mountain    74.31 332    IAMs_20   IAMs_20    06 11 12.8
         comp=Z,7µm,19.0s
L19K  White Mountain    74.31 332    P         P          05 35 23.6 -0.3
         baz=102,SNR=15
D23K  Nanushuk River    74.40 340    IAmb      IAmb       05 35 48.3
         comp=Z,208nm,1.4s
D23K  Nanushuk River    74.40 340    P         P          05 35 24.5 +0.3
         baz=108,SNR=33
J20K  Nowinta River     74.44 334    IAmb      IAmb       05 35 48.7
         comp=Z,160nm,1.3s
J20K                                 IAMs_20   IAMs_20    06 11 50.0
         comp=Z,7µm,21.0s
J20K  Nowinta River     74.44 334    P         P          05 35 24.1 -0.4
         baz=103,SNR=43
N18K  Kilae Creek       74.50 331    IAmb      IAmb       05 35 50.4
         comp=Z,137nm,1.3s
N18K                                 IAMs_20   IAMs_20    06 12 49.0
         comp=Z,6µm,18.0s
N18K  Kilae Creek       74.50 331    P         P          05 35 24.6 -0.4
         baz=101,SNR=28
F22K  John River        74.50 338    P         P          05 35 24.6 -0.3
         baz=106
P17K  Kvichak River     74.51 329    P         P          05 35 25.3 +0.3
         baz=100,SNR=13
Q16K  King Salmon       74.53 329    P         P          05 35 25.4 +0.2
         baz=100,SNR=7.7
E22K  Anaktuvuk Pass    74.55 339    IAmb      IAmb       05 35 48.5
         comp=Z,250nm,1.7s
E22K  Anaktuvuk Pass    74.55 339    P         P          05 35 25.2  0.0
         baz=106,SNR=47
ESPR  Espera            74.61  54    P         P          05 35 26.1  0.0
M18K  Stony River       74.62 332    P         P          05 35 25.2 -0.4
         baz=101,SNR=32
C23K  Itkillik River    74.64 341    IAmb      IAmb       05 35 49.3
         comp=Z,277nm,1.4s
C23K                                 IAMs_20   IAMs_20    06 10 39.0
         comp=Z,9µm,22.0s
C23K  Itkillik River    74.64 341    P         P          05 35 26.5 +0.9
         baz=108,SNR=41
IMAR  Indian Mountai    74.71 336    P         P          05 35 25.6 -0.4
I20K  Naaghedeneel      74.72 335    IAMs_20   IAMs_20    06 12 51.4
         comp=Z,6µm,18.0s
I20K  Naaghedeneel      74.72 335    P         P          05 35 26.8 +0.7
         baz=103,SNR=20
G21K  Allakaket         74.74 337    IAmb      IAmb       05 35 41.5
         comp=Z,155nm,1.1s
G21K                                 IAMs_20   IAMs_20    06 11 02.8
         comp=Z,8µm,20.0s
G21K  Allakaket         74.74 337    P         P          05 35 26.8 +0.5
         baz=104,SNR=96
DBG   Daneborg          74.77  15  i P         P          05 35 24.9 -1.3
DBG                                  IAmb      IAmb       05 35 27.8
         comp=Z,34nm,1.5s
KEKH  Kekaha            74.83 290    IAMs_20   IAMs_20    06 01 17.5
         comp=Z,6µm,20.0s
F21K  Alatna River      74.91 338    P         P          05 35 27.5 +0.3
         baz=105
O17K  Koliganek Bris    74.94 330    P         P          05 35 27.4 -0.1
         baz=99,SNR=35
ECAB  El Cabril         74.98  53    P         P          05 35 28.0 -0.3
J19K  Poorman           75.03 334    P         P          05 35 27.7 -0.3
         baz=102,SNR=16
H20K  Anotleneega Mo    75.05 336    P         P          05 35 27.6 -0.4
         baz=103,SNR=34
D22K  Ayikyak River     75.06 339    P         P          05 35 28.2 +0.2
         baz=106,SNR=25
N17K  Nushagak Hills    75.11 330    IAMs_20   IAMs_20    06 14 28.9
         comp=Z,7µm,19.0s
N17K  Nushagak Hills    75.11 330    P         P          05 35 28.2 -0.2
         baz=100,SNR=16
L18K  Granite Mounta    75.16 332    IAMs_20   IAMs_20    06 13 58.3
         comp=Z,6µm,20.0s
L18K  Granite Mounta    75.16 332    P         P          05 35 28.6 -0.2
         baz=100,SNR=19
DSB   Dublin            75.24  37    IAMs_20   IAMs_20    06 07 56.0
         comp=Z,6µm,20.0s
P16K  Nushagak River    75.27 329    IAMs_20   IAMs_20    06 14 02.5
         comp=Z,5µm,18.0s
P16K  Nushagak River    75.27 329    P         P          05 35 29.1 -0.3
         baz=98
M17K  Holitna River     75.37 331    IAMs_20   IAMs_20    06 13 01.9
         comp=Z,7µm,21.0s
M17K  Holitna River     75.37 331    P         P          05 35 30.0 +0.1
         baz=100,SNR=12
E21K  Killik River      75.40 339    IAMs_20   IAMs_20    06 13 32.9
         comp=Z,8µm,20.0s
E21K  Killik River      75.40 339    P         P          05 35 30.3 +0.3
         baz=104
O16K  Kokwok River B    75.41 329    IAMs_20   IAMs_20    06 12 37.0
         comp=Z,6µm,20.0s
O16K  Kokwok River B    75.41 329    P         P          05 35 30.1 -0.1
         baz=98,SNR=11
EMIJ  Mijas             75.48  54    P         P          05 35 30.9 -0.2
LEWI  Lewis, Hebride    75.54  32  e P         P          05 35 28.0 -2.9
LEWI                                 IAMs_20   IAMs_20    06 06 25.3
         comp=Z,7µm,21.4s
CNBA  Chernabura Isl    75.61 324    IAmb      IAmb       05 35 43.7
         comp=Z,242nm,1.5s
CNBA                                 IAMs_20   IAMs_20    06 10 44.9
         comp=Z,5µm,20.0s
CHNA  Chernabura Isl    75.61 324    P         P          05 35 34.0 +2.6
CHNA  Chernabura Isl    75.61 324    P         P          05 35 31.5 +0.1
         baz=96
EADA  Adamuz            75.65  53    P         P          05 35 31.3 -0.8
CCA1  Carnmenellis      75.68  40    IAMs_20   IAMs_20    06 03 12.4
         comp=Z,13µm,20.4s
H19K  Roundabout Mou    75.69 336    IAmb      IAmb       05 35 35.3
         comp=Z,91nm,1.1s
H19K                                 IAMs_20   IAMs_20    06 12 14.0
         comp=Z,8µm,20.0s
H19K  Roundabout Mou    75.69 336    P         P          05 35 31.8 +0.1
         baz=101,SNR=60
B22K  Teshekpuk Lake    75.71 341    IAMs_20   IAMs_20    06 15 24.1
         comp=Z,8µm,19.0s
B22K  Teshekpuk Lake    75.71 341    P         P          05 35 32.3 +0.6
         baz=106,SNR=17
GCSA  Galena City Sc    75.72 335    P         P          05 35 31.7 -0.2
         baz=101
F20K  Avaraart Lake     75.72 337    IAMs_20   IAMs_20    06 14 47.7
         comp=Z,8µm,20.0s
F20K  Avaraart Lake     75.72 337    P         P          05 35 31.9 +0.1
         baz=102
S14K  Fog Glacier       75.75 326    P         P          05 35 32.5 +0.1
         baz=96
EMAL  Malaga-Limoner    75.76  54    P         P          05 35 32.8 +0.2
PAB   San Pablo         75.85  51    P         P          05 35 33.2  0.0
PAB                                  IAmb      IAmb       05 35 58.8
         comp=Z,275nm,1.9s
PAB   San Pablo         75.85  51    IAMs_20   IAMs_20    06 05 58.1
         comp=Z,8µm,20.0s
PAB   San Pablo         75.85  51    P         P          05 35 33.3  0.0
PAB                                  pmax      pmax
         comp=Z,275nm,1.9s
C21K  Knifeblade Rid    75.87 339    P         P          05 35 33.5 +0.8
         baz=104,SNR=15
N16K  Nishlik Lake      75.87 330    P         P          05 35 33.4 +0.5
         baz=98,SNR=7.0
L17K  Donlin            75.89 332    P         P          05 35 33.1 +0.2
         baz=99,SNR=23
B21K  Ikpikpuk River    75.92 340    IAMs_20   IAMs_20    06 13 22.7
         comp=Z,8µm,20.0s
B21K  Ikpikpuk River    75.92 340    P         P          05 35 33.1 +0.1
         baz=104
K17K  Iditarod          75.99 333    P         P          05 35 33.6 +0.1
         baz=99,SNR=15
EGOR  Sierra Gorda,     76.02  54    P         P          05 35 34.4 +0.1
M16K  Timber Creek      76.04 331    IAMs_20   IAMs_20    06 09 26.6
         comp=Z,6µm,21.0s
M16K  Timber Creek      76.04 331    P         P          05 35 33.8  0.0
         baz=98
G19K  Purcell Mounta    76.07 336    IAmb      IAmb       05 36 00.1
         comp=Z,187nm,1.3s
G19K                                 IAMs_20   IAMs_20    06 13 04.0
         comp=Z,8µm,20.0s
G19K  Purcell Mounta    76.07 336    P         P          05 35 34.0 +0.2
         baz=101,SNR=66
DAG   Danmarks Havn     76.13  12  i P         P          05 35 32.3 -1.7
DAG                                  IAmb      IAmb       05 35 34.4
         comp=Z,56nm,1.0s
ESDC  Sonseca Array     76.14  51    P         P          05 35 34.6 -0.3
ESDC  Sonseca Array     76.14  51    P         P          05 35 34.2 -0.7
         comp=Z,16nm,1.0s,baz=277,slow=5.3,SNR=50
ESDC                                 LR        LR         06 02 58.5
         comp=Z,7µm,21.3s,baz=268,slow=31
         comp=Z,16nm,1.0s
E20K  Nigu River        76.16 338    P         P          05 35 34.8 +0.4
         baz=102,SNR=105
SDPT  Sand Point        76.17 325    P         P          05 35 35.8 +1.2
SDPT  Sand Point        76.17 325    P         P          05 35 34.9 +0.3
         baz=95
O15K  Ungalikthiuk R    76.23 329    IAMs_20   IAMs_20    06 11 27.8
         comp=Z,6µm,21.0s
O15K  Ungalikthiuk R    76.23 329    P         P          05 35 34.4 -0.5
         baz=97
GAL1  Galloway          76.37  36    IAMs_20   IAMs_20    06 02 14.4
         comp=Z,7µm,23.6s
E19K  Redstone River    76.38 338    IAMs_20   IAMs_20    06 14 47.1
         comp=Z,7µm,20.0s
E19K  Redstone River    76.38 338    P         P          05 35 35.4 -0.2
         baz=101,SNR=40
L16K  Owhat River       76.38 332    IAmb      IAmb       05 35 52.3
         comp=Z,92nm,0.9s
L16K                                 IAMs_20   IAMs_20    06 14 18.6
         comp=Z,7µm,21.0s
L16K  Owhat River       76.38 332    P         P          05 35 36.5 +0.8
         baz=98,SNR=25
A22K  Sinclair Lake     76.38 341    P         P          05 35 35.7 +0.1
         baz=104
ELGU  Los Guajares,     76.40  54    P         P          05 35 36.4 -0.1
D20K  Etivluk River     76.41 339    IAmb      IAmb       05 35 57.4
         comp=Z,109nm,1.1s
D20K  Etivluk River     76.41 339    P         P          05 35 36.2 +0.4
         baz=102,SNR=65
H18K  Honhosa River     76.41 335    IAMs_20   IAMs_20    06 11 48.1
         comp=Z,6µm,21.0s
H18K  Honhosa River     76.41 335    P         P          05 35 36.3 +0.4
         baz=100
LINV  Loch Inver, As    76.42  32  e P         P          05 35 33.3 -2.6
LINV                                 IAMs_20   IAMs_20    06 02 38.7
         comp=Z,5µm,20.5s
J17K  VABM Dome         76.44 333    P         P          05 35 36.5 +0.4
         baz=98,SNR=22
F19K  Shaleruckik Mo    76.47 337    IAMs_20   IAMs_20    06 11 18.5
         comp=Z,8µm,22.0s
F19K  Shaleruckik Mo    76.47 337    P         P          05 35 36.4 +0.2
         baz=100,SNR=58
N15K  Kwethluk River    76.48 330    IAMs_20   IAMs_20    06 13 57.4
         comp=Z,5µm,21.0s
N15K  Kwethluk River    76.48 330    P         P          05 35 36.4  0.0
         baz=97
DYA   Yadsworthy        76.53  40    IAMs_20   IAMs_20    06 03 28.4
         comp=Z,10µm,20.4s
EQTA  Presa de Quent    76.55  54    P         P          05 35 37.5 +0.2
G18K  Tagagawik         76.66 336    P         P          05 35 37.8 +0.6
         baz=100
NEWG  New Galloway      76.67  35  e P         P          05 35 34.4 -3.0
NEWG                                 IAMs_20   IAMs_20    06 02 23.1
         comp=Z,7µm,22.8s
UCM   Universidad Co    76.70  51    P         P          05 35 37.8 -0.3
M15K  Kasigluk River    76.84 330    P         P          05 35 39.0 +0.7
         baz=96,SNR=15
B20K  Meade River       76.87 340    IAMs_20   IAMs_20    06 14 01.8
         comp=Z,7µm,20.0s
B20K  Meade River       76.87 340    P         P          05 35 38.1 -0.2
         baz=102
EALB  Alboran           76.89  55    P         P          05 35 38.0 -1.1
D19K  Kuna River        76.91 339    IAmb      IAmb       05 36 00.3
         comp=Z,165nm,1.4s
D19K  Kuna River        76.91 339    P         P          05 35 39.3 +0.7
         baz=101,SNR=41
WMELI Melilla           76.97  56    P         P          05 35 38.0 -1.5
JMI   Jan Mayen         76.97  19  e P         P          05 35 41.0 +2.2
O14K  Tigyukauivet M    76.97 329    IAMs_20   IAMs_20    06 10 27.2
         comp=Z,7µm,22.0s
O14K  Tigyukauivet M    76.97 329    P         P          05 35 39.4 +0.3
         baz=96
A21K  Barrow            76.98 341    P         P          05 35 39.3 +0.4
         baz=103,SNR=10
H17K  Granite Mounta    77.03 335    IAMs_20   IAMs_20    06 12 18.4
         comp=Z,9µm,22.0s
H17K  Granite Mounta    77.03 335    P         P          05 35 40.0 +0.6
         baz=98,SNR=20
JMIC  Jan Mayen         77.06  19    LR        LR         06 07 04.5
         comp=Z,4µm,21.6s,baz=262,slow=34
S12K  Black Hills       77.10 325    IAmb      IAmb       05 35 53.0
         comp=Z,75nm,0.8s
S12K  Black Hills       77.10 325    P         P          05 35 40.2 +0.3
         baz=94
J16K  Anvik River       77.11 333    IAmb      IAmb       05 35 56.9
         comp=Z,212nm,1.6s
J16K  Anvik River       77.11 333    P         P          05 35 40.0 +0.2
         baz=97,SNR=13
FOEL  Foel Wylfa        77.12  38  e P         P          05 35 37.7 -2.4
FOEL                                 IAMs_20   IAMs_20    06 02 38.2
         comp=Z,7µm,22.6s
JNE   Jan Mayen East    77.13  19  e S         S          05 45 28.2 +1.8
BIGH  Upper Bighouse    77.13  32  e P         P          05 35 38.4 -1.6
F18K  Selawik           77.17 336    P         P          05 35 40.6 +0.6
         baz=99,SNR=32
DBIC  Dimbokro          77.18  85    P         P          05 35 41.4 +0.2
DBIC                                 IAmb      IAmb       05 35 44.4
         comp=Z,166nm,1.1s
DBIC  Dimbokro          77.18  85    P         P          05 35 41.3 +0.1
         comp=Z,93nm,0.9s,baz=309,slow=5.9,SNR=35
DBIC                                 LR        LR         06 07 43.3
         comp=Z,6µm,21.1s,baz=282,slow=34
         comp=Z,93nm,0.9s
DBIC  Dimbokro          77.18  85    PKIKP     P          05 35 41.3 +0.1
DBIC  Dimbokro          77.18  85    P         P          05 35 41.4 +0.2
DBIC                                 pmax      pmax
         comp=Z,166nm,1.1s
DBIC  Dimbokro          77.18  85    P         P          05 35 41.1  0.0
DBIC                                 S         S          05 45 29.3 +0.3
I17K  Unalakleet        77.22 334    IAMs_20   IAMs_20    06 14 18.7
         comp=Z,7µm,18.0s
I17K  Unalakleet        77.22 334    P         P          05 35 40.5 +0.1
         baz=97,SNR=6.3
N14K  Kuskokwak Cree    77.25 330    IAmb      IAmb       05 35 56.8
         comp=Z,129nm,0.9s
N14K                                 IAMs_20   IAMs_20    06 13 00.7
         comp=Z,6µm,20.0s
N14K  Kuskokwak Cree    77.25 330    P         P          05 35 40.8 +0.2
         baz=95
ESK   Eskdalemuir       77.27  35    IAMs_20   IAMs_20    06 02 58.5
         comp=Z,6µm,22.0s
ESK   Eskdalemuir       77.27  35  e P         P          05 35 37.3 -3.5
ESK                                  IAMs_20   IAMs_20    06 02 41.0
         comp=Z,6µm,21.6s
KESW  Keswick, Cumbr    77.28  36  e P         P          05 35 37.9 -3.0
KESW                                 IAMs_20   IAMs_20    06 06 03.4
         comp=Z,6µm,18.5s
EKA   Eskdalemuir Ar    77.30  35    P         P          05 35 40.3 -0.7
         comp=Z,3.3nm,0.6s,baz=257,slow=5.0,SNR=12
         comp=Z,3.3nm,0.6s
HLM1  Long Mynd         77.30  38  e P         P          05 35 37.6 -3.5
HLM1                                 IAMs_20   IAMs_20    06 07 09.9
         comp=Z,8µm,18.7s
MONM  Monmouth          77.31  39  e P         P          05 35 38.1 -3.0
MONM                                 IAMs_20   IAMs_20    06 07 11.1
         comp=Z,12µm,18.7s
L15K  Ungalak Mounta    77.33 331    P         P          05 35 41.0  0.0
         baz=96
G17K  Kiwalik Mounta    77.41 335    P         P          05 35 42.5 +1.0
         baz=98,SNR=28
K15K  Wolf Creek Mou    77.42 332    P         P          05 35 42.1 +0.5
         baz=96,SNR=12
M14K  Bethel            77.47 330    IAMs_20   IAMs_20    06 14 24.3
         comp=Z,6µm,20.0s
M14K  Bethel            77.47 330    P         P          05 35 42.6 +0.8
         baz=95,SNR=16
ENIJ  Nijar             77.54  54    P         P          05 35 41.8 -1.0
C19K  Lookout Ridge     77.54 339    IAmb      IAmb       05 35 57.9
         comp=Z,188nm,1.2s
C19K  Lookout Ridge     77.54 339    P         P          05 35 43.0 +0.8
         baz=99,SNR=53
JSA   Saint Aubin       77.62  42  e P         P          05 35 39.1 -3.7
JSA                                  IAMs_20   IAMs_20    06 04 20.3
         comp=Z,16µm,21.1s
E18K  Tukpahlearik C    77.66 337    P         P          05 35 42.6 -0.1
         baz=98,SNR=29
STRD  Stroud            77.71  39  e P         P          05 35 39.8 -3.5
STRD                                 IAMs_20   IAMs_20    06 07 32.9
         comp=Z,11µm,19.4s
F17K  Baldwin Pennin    77.78 336    IAMs_20   IAMs_20    06 13 17.1
         comp=Z,7µm,20.0s
F17K  Baldwin Pennin    77.78 336    P         P          05 35 43.4 -0.1
         baz=97,SNR=19
FALS  False Pass        77.82 324    IAMs_20   IAMs_20    06 11 52.3
         comp=Z,5µm,21.0s
FALS  False Pass        77.82 324    P         P          05 35 44.7 +0.8
FALS  False Pass        77.82 324    P         P          05 35 43.7 -0.2
         baz=93
L14K  Kuka Creek        77.87 331    IAMs_20   IAMs_20    06 16 24.9
         comp=Z,5µm,20.0s
L14K  Kuka Creek        77.87 331    P         P          05 35 44.5 +0.4
         baz=95
EDMD  Edmundbyers       77.95  36  e P         P          05 35 41.1 -3.6
EDMD                                 IAMs_20   IAMs_20    06 06 23.9
         comp=Z,6µm,18.9s
H16K  Elim              77.98 334    P         P          05 35 45.3 +0.7
         baz=96,SNR=21
LBWR  Ladybower, Pea    78.03  37  e P         P          05 35 41.4 -3.8
LBWR                                 IAMs_20   IAMs_20    06 09 33.2
         comp=Z,6µm,19.4s
C18K  Utukok River      78.05 338    IAmb      IAmb       05 36 06.4
         comp=Z,343nm,1.8s
C18K  Utukok River      78.05 338    P         P          05 35 45.4 +0.3
         baz=98,SNR=42
E17K  Hotham Inlet      78.09 337    P         P          05 35 45.5 +0.3
         baz=97,SNR=57
G16K  Koyuk River       78.11 335    P         P          05 35 45.6 +0.2
         baz=96,SNR=16
M13K  Dall Lake         78.12 330    IAMs_20   IAMs_20    06 14 47.5
         comp=Z,5µm,20.0s
M13K  Dall Lake         78.12 330    P         P          05 35 45.8 +0.3
         baz=94
A19K  Wainwright        78.22 340    P         P          05 35 46.2 +0.3
         baz=98,SNR=6.1
B18K  Kokolik River     78.36 339    P         P          05 35 46.9 +0.3
         baz=97,SNR=10.0
NOR   Nord              78.38   8  i P         P          05 35 45.1 -1.4
NOR                                  IAmb      IAmb       05 35 48.7
         comp=Z,60nm,1.4s
ECHE  Chera             78.46  51    P         P          05 35 47.8 -0.1
CART  Cartagena         78.48  53    P         P          05 35 46.4 -1.6
RDOG  Red Dog Mine      78.61 338    IAMs_20   IAMs_20    06 16 26.9
         comp=Z,7µm,19.0s
RDOG  Red Dog Mine      78.61 338    P         P          05 35 48.4 +0.3
         baz=96,SNR=14
D17K  Noatak River      78.64 337    P         P          05 35 48.5 +0.3
         baz=96,SNR=36
LRW   Lerwick           78.64  30  e P         P          05 35 45.2 -3.2
LRW                                  IAMs_20   IAMs_20    06 08 26.6
         comp=Z,6µm,19.0s
C17K  DeLong Mountai    78.75 338    P         P          05 35 49.5 +0.6
         baz=96,SNR=25
G15K  Niukluk           78.78 335    P         P          05 35 49.2 +0.2
         baz=94,SNR=23
K13K  Kusilvak Mount    78.85 331    IAMs_20   IAMs_20    06 16 05.0
         comp=Z,7µm,20.0s
K13K  Kusilvak Mount    78.85 331    P         P          05 35 49.7 +0.2
         baz=93
F15K  North Star Dit    79.09 335    IAmb      IAmb       05 35 55.2
         comp=Z,146nm,0.9s
F15K  North Star Dit    79.09 335    P         P          05 35 51.4 +0.6
         baz=94,SNR=48
AKUT  Akutan            79.17 324    IAMs_20   IAMs_20    06 12 22.1
         comp=Z,5µm,21.0s
ANM   Nome              79.32 334    P         P          05 35 52.5 +0.5
         baz=93,SNR=9.1
LVA   Lava Point        79.33 324    IAMs_20   IAMs_20    06 12 27.2
         comp=Z,5µm,21.0s
M11K  Mekoryuk          79.53 330    IAMs_20   IAMs_20    06 16 52.1
         comp=Z,5µm,20.0s
M11K  Mekoryuk          79.53 330    P         P          05 35 53.6 +0.4
         baz=92
C16K  Lisburne Hills    79.53 338    IAmb      IAmb       05 35 56.9
         comp=Z,158nm,1.1s
C16K                                 IAMs_20   IAMs_20    06 14 23.4
         comp=Z,8µm,22.0s
C16K  Lisburne Hills    79.53 338    P         P          05 35 53.6 +0.5
         baz=94,SNR=47
UNV   Unalaska Valle    79.60 323    IAmb      IAmb       05 36 05.6
         comp=Z,169nm,1.0s
UNV                                  IAMs_20   IAMs_20    06 12 45.5
         comp=Z,5µm,22.0s
UNV   Unalaska Valle    79.60 323    P         P          05 35 56.3 +2.6
UNV   Unalaska Valle    79.60 323    P         P          05 35 54.0 +0.3
         baz=90
ELMS  Elmsett, Ipswi    79.66  39  e P         P          05 35 52.0 -2.1
ELMS                                 IAMs_20   IAMs_20    06 08 43.2
         comp=Z,11µm,19.3s
F14K  Arctic Creek      79.77 335    P         P          05 35 55.0 +0.5
         baz=92,SNR=11
CEST  Esterri de Car    80.05  48    IAMs_20   IAMs_20    06 06 04.0
         comp=Z,6µm,22.0s
EANR  'Ain N'Sour       80.24  55    P         P          05 35 57.7  0.0
EIBI  Ibiza             80.27  52    P         P          05 35 56.9 -0.8
TNA   Tin City          80.44 335    IAMs_20   IAMs_20    06 15 03.5
         comp=Z,6µm,19.0s
TNA   Tin City          80.44 335    P         P          05 35 58.0  0.0
         baz=91
CLF   Chambon-Foret     80.56  43    IAmb      IAmb       05 36 35.1
         comp=Z,153nm,1.3s
RAR   Rarotonga         81.00 247    LR        LR         06 04 01.7
         comp=Z,5µm,18.3s,baz=90,slow=30
NIKH  Nikolski High     81.02 322    P         P          05 36 03.9 +2.5
NIKH  Nikolski High     81.02 322    P         P          05 36 01.3 -0.1
         baz=88
EJON  La Jonquera       81.26  48    P         P          05 36 02.4 -0.6
P08K  Saint George I    81.30 326    IAMs_20   IAMs_20    06 13 42.2
         comp=Z,5µm,21.0s
P08K  Saint George I    81.30 326    P         P          05 36 02.7 -0.2
         baz=88
SUE   Sulen             81.58  29  e P         P          05 36 07.0 +2.9
SPIA  Saint Paul Isl    81.67 327    P         P          05 36 04.6 -0.2
         baz=88
FOO   Floro             81.70  29  e S         S          05 46 15.7 +0.5
UCC   Uccle             81.81  40  d P         P          05 36 04.9 -0.7
ASK   Askoy             81.82  30  e P         P          05 36 06.6 +1.2
ASK                                  IVmB_BB              05 36 20.7
         comp=Z,2µm,2.7s
ASK                                e S         S          05 46 16.1 -0.4
BER   Bergen            81.89  30  e P         P          05 36 06.9 +1.1
BER                                e S         S          05 46 17.7 +0.5
ACRG  Accra             81.90  85    IAmb      IAmb       05 36 09.9
         comp=Z,104nm,1.1s
ACRG                                 IAMs_20   IAMs_20    06 10 21.2
         comp=Z,5µm,21.0s
KMY   Karmoy            81.90  31  e P         P          05 36 03.9 -2.0
KMY                                e S         S          05 46 16.5 -0.8
DOU   Dourbes           82.00  41  d P         P          05 36 04.8 -1.9
GAMB  Gambell           82.09 333    IAMs_20   IAMs_20    06 15 40.3
         comp=Z,7µm,20.0s
GAMB  Gambell           82.09 333    P         P          05 36 07.1 +0.3
         baz=87
BMRD  Maredsous         82.10  40  d P         P          05 36 05.4 -1.8
HYA   Hoyanger          82.27  29  e P         P          05 36 07.9 +0.1
HYA                                e S         S          05 46 22.0 +1.0
HYA                                  IVMs_BB   IVMs_BB    06 11 20.5
         comp=Z,2µm,21.5s
BGES  Gesves            82.30  40  d P         P          05 36 07.6 -0.6
BCLA  Clavier           82.43  40  d P         P          05 36 08.6 -0.3
         comp=Z,14nm,1.2s
MAHO  Mahon             82.47  51    IAMs_20   IAMs_20    06 09 42.5
         comp=Z,7µm,20.0s
BLS5  Blasjo            82.51  31  e P         P          05 36 09.4 +0.2
BLS5                               e S         S          05 46 24.8 +1.1
BLS5                                 IVMs_BB   IVMs_BB    06 07 27.6
         comp=Z,2µm,22.9s
ODD1  Odda              82.56  31  e P         P          05 36 10.4 +0.9
ODD1                               e S         S          05 46 25.1 +0.9
AKN   Aaknes            82.59  28  e S         S          05 46 24.8 +0.3
AKN                                  IVMs_BB   IVMs_BB    06 05 16.0
         comp=Z,2µm,26.1s
KBS   Kingsbay          82.78  11    P         P          05 36 10.5 +0.3
KBS                                  IAmb      IAmb       05 36 27.6
         comp=Z,187nm,1.5s
KBS   Kingsbay          82.78  11    P         P          05 36 10.5 +0.3
KBS                                  pmax      pmax
         comp=Z,187nm,1.5s
KBS   Kingsbay          82.78  11  e P         P          05 36 13.2 +2.9
KBS                                  IVMs_BB   IVMs_BB    06 11 30.6
         comp=Z,6µm,20.2s
KBS   Kingsbay          82.78  11  i P         P          05 36 10.5 +0.3
TORD  Torodi Ar. Bea    82.82  78    P         P          05 36 10.5 -1.1
TORD  Torodi Ar. Bea    82.82  78    P         P          05 36 11.4 -0.2
         comp=Z,14nm,0.8s,baz=316,slow=7.4,SNR=18
TORD                                 LR        LR         06 12 46.5
         comp=Z,5µm,20.9s,baz=266,slow=36
         comp=Z,14nm,0.8s
MOL   Molde             82.82  28  e P         P          05 36 11.4 +0.7
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MOL				IVmB_BB		05 36 30.3	
	comp=Z,934nm,3.6s						
MOL				eS	S	05 46 25.4	-1.3
MOL				IVMs_BB	IVMs_BB	06 05 37.1	
	comp=Z,2µm,21.1s						
MEM	Membach	82.87	40	dP	P	05 36 10.0	-1.2
BHOU	Houvegnez	82.89	40	dP	P	05 36 13.7	+2.4
WLF	Walferdange	83.03	41	P	P	05 36 11.1	-1.0
WLF	Walferdange	83.03	41	dP	P	05 36 10.8	-1.3
	comp=Z,29nm,1.1s						
WLF	Walferdange	83.03	41	eP	P	05 36 10.4	-1.6
	comp=Z,54nm,1.2s,baz=279,slow=5.1						
WLF				eS	S	05 46 27.0	-2.5
	baz=278,slow=10						
SKAR	Skarslia	83.33	30	eP	P	05 36 14.1	+0.6
SKAR				IVmBBB		05 36 37.1	
	comp=Z,945nm,2.8s						
SKAR				eS	S	05 46 32.9	+0.7
SKAR				eSS	SS	05 51 59.6	+2.4
SKAR				IVMs_BB	IVMs_BB	06 11 42.2	
	comp=Z,3µm,22.3s						
DOMB	Dombas	83.57	28	eP	P	05 36 16.0	+1.4
DOMB				eS	SKSac	05 46 36.4	+1.5
DOMB				IVMs_BB	IVMs_BB	06 05 45.3	
	comp=Z,2µm,24.8s						
BUG	Bochum--Univer	83.59	39	eP	P	05 36 12.7	-2.2
	comp=Z,37nm,1.0s,baz=279,slow=5.1						
BUG				eS	S	05 46 31.6	-3.3
	baz=278,slow=10						
HOMB	Homborsund	83.66	32	eSKSac	S	05 46 36.4	+1.0
HOMB				IVMs_BB	IVMs_BB	06 08 58.8	
	comp=Z,2µm,20.6s						
HOMB	Homborsund	83.66	32	i P	P	05 36 13.6	-1.5
HLG	Helgoland	83.71	36	eP	P	05 36 13.3	-2.1
	comp=Z,159nm,1.2s,baz=279,slow=5.1						
HLG				eS	S	05 46 32.4	-3.5
	baz=278,slow=10						
SPA0	Spitsbergen Ar	83.77	12	eP	P	05 36 14.8	-0.5
SPITS	Spitsbergen Ar	83.77	12	P	P	05 36 14.6	-0.8
	comp=Z,12nm,0.7s,baz=151,slow=1.9,SNR=13						
SPITS				LR	LR	06 16 35.7	
	comp=Z,8µm,18.8s,baz=250,slow=38						
	comp=Z,12nm,0.7s						
SPB2	Spitsbergen Ar	83.77	12	IAmb	IAmb	05 36 26.6	
	comp=Z,203nm,1.9s						
BNI	Bardonecchia	83.80	45	IAMs_20	IAMs_20	06 10 02.1	
	comp=Z,6µm,20.0s						
HSPB	Hornsund (broa	83.80	13	eP	P	05 36 15.2	-0.3
HSPB				eS	S	05 46 34.9	-1.3
HSPB				eL	L	06 09 25.1	
	comp=Z,12µm,24.4s						
IBBN	Ibbenburen	83.81	38	eP	P	05 36 13.8	-2.2
	comp=Z,83nm,1.5s,baz=279,slow=5.1						
IBBN				eS	S	05 46 32.9	-4.2
	baz=278,slow=10						
KONO	Kongsberg	84.08	31	P	P	05 36 18.3	+1.1
KONO	Kongsberg	84.08	31	IAMs_20	IAMs_20	06 15 21.3	
	comp=Z,6µm,19.0s						
KONO	Kongsberg	84.08	31	P	P	05 36 18.3	+1.1
KONO				pmax	pmax		
	comp=Z,95nm,1.8s						
KONO				MLR	MLR		
	comp=Z,6µm,19.0s						
KONO	Kongsberg	84.08	31	eP	P	05 36 17.2	-0.1
KONO				IVmB_BB		05 36 18.7	
	comp=Z,619nm,3.2s						
KONO				IVMs_BB	IVMs_BB	06 15 20.8	
	comp=Z,2µm,17.2s						
SENIN	Lac Senin/Sane	84.10	44	IAMs_20	IAMs_20	06 09 22.0	
	comp=Z,6µm,20.0s						
ATKA	Atka Island	84.33	322	IAmb	IAmb	05 36 31.8	
	comp=Z,113nm,0.9s						
ATKA	Atka Island	84.33	322	P	P	05 36 20.2	+1.6
KASTN	Kahler Asten	84.33	39	eP	P	05 36 16.5	-2.2
	comp=Z,256nm,2.7s,baz=279,slow=5.1						
KASTN				eS	SKSac	05 46 37.9	-2.4
	baz=278,slow=10						
TNS	Taunus Mts	84.46	40	eP	P	05 36 17.6	-1.8
	comp=Z,90nm,1.6s,baz=279,slow=5.1						
TNS				eS	SKSac	05 46 40.0	-1.2
	baz=278,slow=10						
NC204	NORSAR Array S	84.46	29	IAmb	IAmb	05 36 35.8	
	comp=Z,175nm,2.0s						
NBO00	NORSAR Array S	84.50	29	IAmb	IAmb	05 36 44.0	
	comp=Z,89nm,1.4s						
JOHN	Johnston Islan	84.52	286	IAMs_20	IAMs_20	06 05 57.8	
	comp=Z,6µm,20.0s						
SSRD	Sdr. Stenderup	84.57	35	i P	P	05 36 16.9	-2.8
SSRD				IAmb	IAmb	05 36 22.9	
	comp=Z,38nm,0.6s						
NAO01	NORSAR Array S	84.58	29	IAmb	IAmb	05 36 46.9	
	comp=Z,244nm,2.0s						
NSS	Namsos	84.58	26	eP	P	05 36 21.6	+1.9
NSS				eSKSac	SKSac	05 46 43.2	+2.0
NSS				IVMs_BB	IVMs_BB	06 08 02.9	
	comp=Z,2µm,25.0s						
BFO	Black Forest	84.59	42	eP	P	05 36 17.9	-2.2
	comp=Z,74nm,1.7s,baz=279,slow=5.1						
BFO				eS	SKSac	05 46 42.2	+0.2
	baz=278,slow=10						
LOF	Lofoten	84.68	22	eP	P	05 36 22.9	+2.9
LOF				IVmB_BB		05 36 34.9	
	comp=Z,1µm,3.4s						
LOF				eS	S	05 46 45.4	+0.1
LOF				IVMs_BB	IVMs_BB	06 11 01.1	
	comp=Z,2µm,18.5s						
NB2	NORSAR Subarra	84.71	29	P	P	05 36 19.0	-1.5
	comp=Z,322nm,2.0s,baz=281,slow=5.1						
NB2	NORSAR Subarra	84.71	29	P	P	05 36 19.0	-1.5
	baz=281,slow=5.1						
NOA	NORSAR Array B	84.71	29	P	P	05 36 19.9	-0.6
	comp=Z,4.4nm,0.9s,baz=280,slow=4.9,SNR=10						
NOA				LR	LR	06 12 39.4	
	comp=Z,4µm,19.3s,baz=280,slow=35						
	comp=Z,4.4nm,0.9s						
RETH	Rethem/Aller,	84.74	38	eP	P	05 36 19.0	-1.6
	comp=Z,129nm,1.5s,baz=279,slow=5.1						
NB201	NORSAR Array S	84.75	29	IAmb	IAmb	05 36 45.2	
	comp=Z,106nm,1.4s						
STOK	Stokkvaagen	84.76	24	eP	P	05 36 20.5	0.0
STOK				eS	S	05 46 46.4	+0.4
STOK				IVmB_BB		06 07 60.0	
	comp=Z,2µm,20.1s						
NC303	NORSAR Array S	84.76	29	IAmb	IAmb	05 36 47.8	
	comp=Z,154nm,1.8s						
KONS	Konsvik	84.77	24	eP	P	05 36 23.2	+2.6
LEIR	Leirfjorden	84.83	24	eP	P	05 36 20.2	-0.7
LEIR				IVmB_BB		05 36 31.8	
	comp=Z,671nm,1.4s						
LEIR				eS	S	05 46 47.2	+0.5
LEIR				IVMs_BB	IVMs_BB	06 07 44.0	
	comp=Z,2µm,21.8s						
NC602	NORSAR Array S	84.91	29	IAmb	IAmb	05 36 38.3	
	comp=Z,130nm,1.6s						
NC602	NORSAR Array S	84.91	29	eP	P	05 36 22.4	+1.0
NC405	NORSAR Array S	84.94	29	IAmb	IAmb	05 36 46.0	
	comp=Z,97nm,1.4s						
STRU	Stroemstad	84.96	31	i P	P	05 36 18.2	-3.5
STU	Stuttgart	85.11	42	eP	P	05 36 20.8	-1.9
	comp=Z,118nm,1.1s,baz=279,slow=5.1						
STU				ePP	PP	05 39 38.9	-1.0
	baz=278,slow=6.9						
STU				eS	SKSac	05 46 46.7	+1.5
	baz=278,slow=10						
BSEG	Bad Segeberg	85.16	36	eP	P	05 36 20.7	-2.1
	comp=Z,242nm,2.0s,baz=279,slow=5.1						
BSEG				eS	SKSac	05 46 48.2	+2.9
	baz=278,slow=10						
NRDL	Niedersach Rie	85.22	38	eP	P	05 36 21.3	-1.7
	comp=Z,92nm,1.4s,baz=279,slow=5.1						
NRDL				eS	SKSac	05 46 48.5	+2.9
	baz=278,slow=10						
GTTG	Gottingen	85.25	39	eP	P	05 36 21.5	-1.8
	comp=Z,76nm,1.3s,baz=279,slow=5.1						
GTTG				eS	SKSac	05 46 47.7	+1.7
	baz=278,slow=10						
TAM	Tamanrasset	85.29	68	IAmb	IAmb	05 36 47.6	
	comp=Z,71nm,1.2s						
TAM				IAMs_20	IAMs_20	06 14 08.7	
	comp=Z,5µm,20.0s						
STEI	Steigen	85.35	22	eP	P	05 36 22.9	-0.5
MOR8	Moi Rana	85.35	24	eP	P	05 36 21.7	-1.9
MOR8				eS	S	05 46 53.3	+1.3
MOR8				IVMs_BB	IVMs_BB	06 13 19.6	
	comp=Z,3µm,20.5s						
UBBA	Unterbreizbach	85.37	39	eP	P	05 36 22.1	-1.7
	comp=Z,271nm,2.5s,baz=279,slow=5.1						
UBBA				eS	SKSac	05 46 49.8	+3.2
	baz=278,slow=10						
FAUS	Fauske	85.47	23	eP	P	05 36 23.4	-0.6
FAUS				IVmB_BB		05 36 34.5	
	comp=Z,736nm,2.0s						
FAUS				eS	S	05 46 52.9	-0.1
FAUS				eSS	SS	05 52 30.0	+1.9
FAUS				IVMs_BB	IVMs_BB	06 11 56.5	
	comp=Z,2µm,19.1s						
CLZ	Clausthal	85.47	38	eP	P	05 36 22.7	-1.7
	comp=Z,85nm,1.3s,baz=279,slow=5.1						
CLZ				eS	SKSac	05 46 50.9	+3.4
	baz=278,slow=10						
TUE	Stuetta	85.50	44	P	P	05 36 25.4	+0.5
	comp=Z,5µmcomp=Z,189nm,1.3s						
ONAU	Onsala	85.58	33	i P	P	05 36 23.9	-0.9
ASSE	Asse, Remlinge	85.61	38	eP	P	05 36 23.4	-1.6
	comp=Z,118nm,1.5s,baz=279,slow=5.1						
ASSE				eS	S	05 46 52.4	-2.5
	baz=278,slow=10						
DAVA	Damuels	85.75	43	i P	P	05 36 27.7	+1.5
	comp=Z,27nm,1.0s						
DAVOX	Davos/Dischmat	85.82	43	LR	LR	06 08 34.4	
	comp=Z,6µm,21.9s,baz=285,slow=31						
GORT1	Trebel	85.88	37	eP	P	05 36 24.5	-1.8
	comp=Z,495nm,2.5s,baz=279,slow=5.1						
ADK	Adak	85.89	322	P	P	05 36 26.7	+0.3
ADK	Adak	85.89	322	P	P	05 36 27.8	+1.3
ADK	Adak	85.89	322	P	P	05 36 26.7	+0.3
ADK				pmax	pmax		
	comp=Z,405nm,1.2s						
FLTG	Flechtingen	85.93	38	eP	P	05 36 24.3	-2.3
	comp=Z,116nm,1.5s,baz=279,slow=5.1						
FLTG				eS	S	05 46 55.3	-2.8
	baz=278,slow=10						
BORU	Boraas	86.00	32	i P	P	05 36 24.7	-2.2
HOPEN	Hopen	86.04	13	eP	P	05 36 25.4	-1.3
HOPEN				IVmB_BB		05 36 37.2	
	comp=Z,2µm,1.4s						
HOPEN				IVMs_BB	IVMs_BB	06 14 16.6	
	comp=Z,4µm,18.8s						
HFS	Hagfors	86.06	30	P	P	05 36 25.6	-1.6
	comp=Z,3.8nm,0.6s,baz=228,slow=1.8,SNR=13						
HFS				LR	LR	06 13 48.1	
	comp=Z,4µm,19.8s,baz=276,slow=35						
	comp=Z,3.8nm,0.6s						
FABU	Falkenberg	86.07	33	i P	P	05 36 26.4	-0.8
FUORN	Ofenpass-Fuorn	86.11	44	IAmb	IAmb	05 37 15.0	
	comp=Z,115nm,1.6s						
FUORN				IAMs_20	IAMs_20	06 10 25.9	
	comp=Z,7µm,21.0s						
COP	Copenhagen	86.12	34	i P	P	05 36 27.9	+0.4
COP				IAmb	IAmb	05 36 30.1	
	comp=Z,31nm,0.5s						
TRO	Tromso	86.30	20	eP	P	05 36 26.4	-1.7
TRO				IVmB_BB		05 36 46.6	
	comp=Z,2µm,4.1s						
TRO				e		05 47 00.6	
GRF	Grafenberg Arr	86.30	40	eP	P	05 36 27.0	-1.6
	comp=Z,58nm,1.2s,baz=279,slow=5.1						
GRF				ePP	PP	05 39 43.5	-6.1
	baz=278,slow=6.9						
GRF				eS	S	05 46 59.6	-2.4
	baz=278,slow=10						
GRF				eL	L	06 09 05.7	
	comp=Z,14µm,21.8s						
RETA	Reutte	86.32	43	eP	P	05 36 29.6	+0.8
	comp=Z,23nm,1.2s						
FETA	Feichten	86.36	43	eP	P	05 36 30.2	+1.0
	comp=Z,17nm,1.0s						
BJUU	Bjuv	86.39	34	i P	P	05 36 27.2	-1.6
PRMA	PARMA	86.40	45	IAMs_20	IAMs_20	06 09 13.8	
	comp=Z,7µm,22.0s						
MOX	Moxa	86.41	39	eP	P	05 36 27.3	-1.8
	comp=Z,197nm,2.4s,baz=279,slow=5.1						
MOX				ePP	PP	05 39 46.9	-3.5
	baz=278,slow=6.9						
MOX				eS	S	05 47 01.7	-1.3
	baz=278,slow=10						
MOX				eL	L	06 09 53.8	
	comp=Z,11µm,20.4s						
NEUB	Neuenburg	86.42	39	eP	P	05 36 27.4	-1.7
	comp=Z,41nm,1.1s,baz=279,slow=5.1						
NEUB				ePP	PP	05 39 48.0	-2.5
	baz=278,slow=6.9						
NEUB				eS	S	05 47 01.1	-2.0
	baz=278,slow=10						
VSL	Villasalto	86.44	51	IAmb	IAmb	05 36 59.9	
	comp=Z,110nm,1.3s						
VSL				IAMs_20	IAMs_20	06 15 09.4	
	comp=Z,6µm,20.0s						
VLC	Villacollemand	86.54	46	P	P	05 36 30.1	+0.2
FUR	Furstenfeldbru	86.56	42	eP	P	05 36 28.3	-1.6
	comp=Z,44nm,1.1s,baz=279,slow=5.1						
FUR				ePP	PP	05 39 49.7	-2.1
	baz=278,slow=6.9						
FUR				eS	S	05 47 02.8	-1.8
	baz=278,slow=10						
MOTA	Moosalm	86.57	43	i P	P	05 36 30.5	+0.3
	comp=Z,21nm,1.5s						
SQTA	Sankt Quirin	86.66	43	i P	P	05 36 31.7	+1.2
	comp=Z,15nm,1.1s						
LUNU	Lund	86.70	34	i P	P	05 36 28.4	-2.0
DEL	Delary	86.78	34	i P	P	05 36 29.0	-1.8
RGN	Rugen	86.81	35	IAMs_20	IAMs_20	06 12 34.9	
	comp=Z,4µm,21.0s						
RGN	Rugen	86.81	35	eP	P	05 36 28.9	-2.0
	comp=Z,170nm,1.3s,baz=279,slow=5.1						
RGN				eS	S	05 47 05.7	-0.9
	baz=278,slow=10						
JETT	Jettan, Norway	86.82	20	eP	P	05 36 29.8	-1.0
MANZ	Manzenberg	86.83	40	eP	P	05 36 29.7	-1.5
	comp=Z,9.6nm,1.4s,baz=279,slow=5.1						
MANZ				eS	S	05 47 07.5	+0.4
	baz=278,slow=10						
WATA	Walderalm	86.89	43	eP	P	05 36 33.6	+1.9
	comp=Z,13nm,1.1s						
ROTZ	Rotzenmuhle	86.92	40	eP	P	05 36 30.3	-1.3
	comp=Z,28nm,1.9s,baz=279,slow=5.1						
ROTZ				ePP	PP	05 39 49.9	-4.6
	baz=278,slow=6.9						
ROTZ				eS	S	05 47 07.3	-0.6
	baz=278,slow=10						
ZCCA	Zocca	86.93	46	IAmb	IAmb	05 36 57.5	
	comp=Z,60nm,1.0s						
ZCCA				IAMs_20	IAMs_20	06 14 15.9	
	comp=Z,5µm,21.0s						
KEST	Kesra	86.93	55	IAmb	IAmb	05 36 60.0	
	comp=Z,86nm,1.5s						
KEST	Kesra	86.93	55	P	P	05 36 31.2	-0.9
	comp=Z,4.5nm,0.8s,baz=15,slow=3.4,SNR=5.2						
KEST				LR	LR	06 10 25.0	
	comp=Z,3µm,21.4s,baz=288,slow=32						
	comp=Z,4.5nm,0.8s						
WTTA	Wattenberg	86.94	43	i P	P	05 36 33.0	+1.0
	comp=Z,20nm,1.3s						
TANN	Tannenbergstha	86.98	40	eP	P	05 36 30.3	-1.6
	comp=Z,53nm,1.2s,baz=279,slow=5.1						
TANN				eS	S	05 47 06.5	-2.1
	baz=278,slow=10						
CLL	Collm	87.17	39	IAmb	IAmb	05 37 19.4	
	comp=Z,86nm,1.5s						
CLL				IAMs_20	IAMs_20	06 14 02.6	
	comp=Z,6µm,20.0s						
CLL	Collm	87.17	39	eP	P	05 36 31.0	-1.8
CLL				i *PP	sP	05 36 45.8	-0.6
CLL				eS	S	05 47 06.0	-4.3
CLL				pmax	pmax		
	comp=Z,83nm,1.9s						
CLL				MLR	MLR		
	comp=Z,6µm,20.9s						
CLL	Collm	87.17	39	eP	P	05 36 30.9	-1.9
	comp=Z,43nm,1.1s,baz=279,slow=5.1						
CLL				ePP	PP	05 39 52.9	-3.6
	baz=278,slow=6.9						
CLL				eS	S	05 47 07.4	-2.9
	baz=278,slow=10						
CLL	Collm	87.17	39	eP	P	05 36 31.0	-1.8
	comp=Z,31nm,1.8s						
CLL				i Pmax		05 36 34.6	
	comp=Z,83nm,1.9s						
CLL				ePmax		05 36 37.0	
CLL				i pP	sP	05 36 45.8	-0.6
	comp=Z,56nm,1.3s						
CLL				ex	x	05 40 18.0	
CLL				eS	S	05 47 06.0	-4.3
CLL				ePS	PnS	05 48 11.0	-2.0
CLL				ex	x	05 51 30.0	
CLL				eSS	SS	05 52 42.0	-12
CLL				AMS	AMS	06 13 00.0	
CLL				AMS	AMS	06 15 00.0	
	comp=Z,6µm,20.9s						
OSSC	Osservatorio P	87.24	47	IAMs_20	IAMs_20	06 12 30.3	
	comp=Z,6µm,20.0s						
RUE	Ruedersdorf	87.44	37	eP	P	05 36 31.8	-2.2
	comp=Z,48nm,0.9s,baz=279,slow=5.1						
RUE				eS	S	05 47 10.6	-2.2
	baz=278,slow=10						
HAMF	Hammerfest	87.58	19	eP	P	05 36 36.4	+2.0
HAMF				e		05 47 12.3	
LESA	Schwarzleotal	87.61	43	eP	P	05 36 34.5	-0.6
	comp=Z,17nm,2.5s						
ABTA	Abfaltersbach	87.62	43	eP	P	05 36 35.0	-0.1
	comp=Z,43nm,1.2s						
CIMO	Cimolais	87.64	44	IAmb	IAmb	05 37 21.8	
	comp=Z,55nm,1.2s						
RJOB	Jochberg	87.64	42	eP	P	05 36 33.6	-1.6
	comp=Z,52nm,1.4s,baz=279,slow=5.1						
RJOB				ePP	PP	05 39 55.3	-5.2
	baz=278,slow=6.9						
RJOB				eS	S	05 47 09.0	-6.1
	baz=278,slow=10						
BRG	Berggiesshubel	87.83	39	eP	P	05 36 34.3	-1.7
	comp=Z,32nm,1.1s,baz=279,slow=5.1						
BRG				ePP	PP	05 39 57.7	-4.1
	baz=278,slow=6.9						
BRG				eS	S	05 47 13.5	-3.2
	baz=278,slow=10						
BRG	Berggiesshubel	87.83	39	eP	P	05 36 35.3	-0.7
BRG				Amp		05 36 39.2	
	comp=Z,9.6nm,1.0s						
BRG	Berggiesshubel	87.83	39	PP	PP	05 40 04.0	+2.2
BRG	Berggiesshubel	87.83	39	⇑SKS	SKSac	05 47 03.0	+1.0
BRG	Berggiesshubel	87.83	39	S	S	05 47 18.0	+1.4
BRG	Berggiesshubel	87.83	39	SS	SS	05 53 10.0	+6.4
STAL	STALIGIAL	87.83	44	IAmb	IAmb	05 37 00.4	
	comp=Z,168nm,1.8s						
BLEU	Blekinge	87.88	33	i P	P	05 36 33.8	-2.3
KHC	Kasperske Hory	87.91	41	eP	P	05 36 36.0	-0.5
KHC				ex	x	05 36 42.6	
KHC				eS	S	05 47 16.4	-1.2
KHC				AMS	AMS	06 09 40.0	
	comp=Z,13µm,21.8s						
KHC	Kasperske Hory	87.91	41	eP	P	05 36 42.6	+6.1
KHC				eS	S	05 47 16.4	-1.2
KHC				MLR	MLR		
	comp=Z,13µm,21.8s						
RICC	Richard	87.99	39	AMS	AMS	06 10 50.0	
	comp=Z,9µm,20.3s						
GEC2	GERESS Array S	88.04	41	eP	P	05 36 35.4	-1.7
	comp=Z,51nm,1.3s,baz=279,slow=5.1						
GEC2				eS	S	05 47 18.3	-0.7
	baz=278,slow=10						
GERES	GERESS Array B	88.04	41	P	P	05 36 36.4	-0.8
GERES	GERESS Array B	88.04	41	P	P	05 36 36.0	-1.2
	comp=Z,2.0nm,0.8s,baz=270,slow=5.3,SNR=15						
GERES				LR	LR	06 10 16.8	
	comp=Z,9µm,21.7s,baz=276,slow=32						
	comp=Z,2.0nm,0.8s						
GERES	GERESS Array B	88.04	41	P	P	05 36 36.4	-0.8
BIOA	Bad Ischl, Aus	88.21	42	eP	P	05 36 38.4	+0.5
	comp=Z,22nm,1.3s						
ZVC	Zvikov	88.25	40	eSKS	SKSac	05 46 58.4	-6.2
ZVC				AMS	AMS	06 11 20.0	
	comp=Z,15µm,20.2s						
PVCC	Panska Ves	88.29	39	eP	P	05 36 34.3	-3.8
PVCC				AMS	AMS	06 10 50.0	
	comp=Z,9µm,19.6s						
PVCC	Panska Ves	88.29	39	eP	P	05 36 34.3	-3.8
PVCC				MLR	MLR		
	comp=Z,9µm,19.6s						
PRA	Prague	88.29	40	AMS	AMS	06 10 40.0	
	comp=Z,16µm,20.5s						
CESX	Cesi	88.36	47	IAMs_20	IAMs_20	06 10 48.0	
	comp=Z,5µm,22.0s						
PRU	Pruhonice	88.37	40	AMS	AMS	06 10 40.0	
	comp=Z,16µm,20.6s						
PRED	Cave del Predi	88.38	43	IAmb	IAmb	05 37 07.4	
	comp=Z,65nm,1.2s						
MYKA	Terra Mystica	88.40	43	i P	P	05 36 38.6	-0.2
	comp=Z,10.0nm,1.0s						
CKRC	Cesky Krumlov	88.44	41	eS	SKSac	05 47 01.1	-4.8
CKRC				AMS	AMS	06 09 50.0	
	comp=Z,10µm,21.4s						
SABO	M.te Sabotino	88.49	44	IAmb	IAmb	05 37 32.4	
	comp=Z,99nm,1.5s						
ARA0	ARCESS Array S	88.53	20	eP	P	05 36 38.6	-0.3
ARCES	ARCESS Array B	88.53	20	P	P	05 36 38.6	-0.3
ARCES				IAmb	IAmb	05 36 53.0	
	comp=Z,85nm,1.6s						
ARCES	ARCESS Array B	88.53	20	P	P	05 36 38.2	-0.7
	comp=Z,9.8nm,0.8s,baz=282,slow=4.1,SNR=21						
ARCES				LR	LR	06 14 19.4	
	comp=Z,3µm,20.5s,baz=300,slow=34						
	comp=Z,9.8nm,0.8s						
ARCES	ARCESS Array B	88.53	20	P	P	05 36 38.6	-0.3
ARCES				pmax	pmax		
	comp=Z,85nm,1.6s						
GOPC	GO Pecny, Ondr	88.54	40	eS	S	05 47 21.6	-1.9
GOPC				AMS	AMS	06 11 00.0	
	comp=Z,17µm,20.5s						
MOA	Molln	88.60	42	i P	P	05 36 41.2	+1.5
	comp=Z,8.2nm,1.2s						
FDMO	Fiordimonte	88.65	47	IAMs_20	IAMs_20	06 13 26.6	
	comp=Z,5µm,19.0s						
KEV	Kevo	88.95	19	P	P	05 36 41.1	+0.2
KEV				S	S	05 47 22.7	-3.8
CAMP	Campotosto	88.97	47	IAMs_20	IAMs_20	06 11 51.1	
	comp=Z,7µm,22.0s						
OBKA	Obir	89.04	43	eP	P	05 36 43.2	+1.3
	comp=Z,7.5nm,1.1s						
TREC	Trest	89.11	40	eP	P	05 36 39.8	-2.3
TREC				AMS	AMS	06 12 00.0	
	comp=Z,13µm,19.8s						
TREC	Trest	89.11	40	eP	P	05 36 39.8	-2.3
TREC				MLR	MLR		
	comp=Z,13µm,19.8s						
UPC	Upice	89.19	39	AMS	AMS	06 11 30.0	
	comp=Z,8µm,19.8s						
CHVC	Chvalec	89.20	39	eP	P	05 36 56.8	+14
CHVC				AMS	AMS	06 11 40.0	
	comp=Z,7µm,20.0s						
KSP	Ksiaz	89.30	39	eP	P	05 36 41.1	-1.8
KSP				eS	S	05 47 31.7	+1.2
KSP				eL	L	06 11 21.7	
	comp=Z,5µm,22.7s						
OSTC	Ostas	89.31	39	AMS	AMS	06 11 10.0	
	comp=Z,7µm,20.1s						
GKP	Gorka Klasztor	89.33	36	eP	P	05 36 40.8	-2.2
GKP				eL	L	06 15 03.7	
	comp=Z,9µm,20.1s						
SOKA	Soboth	89.33	43	i P	P	05 36 43.2	0.0
	comp=Z,12nm,1.4s						
DPC	Dobruska-Polom	89.42	39	eP	P	05 36 44.4	+0.9
DPC				AMS	AMS	06 11 30.0	
	comp=Z,10µm,20.1s						
DPC	Dobruska-Polom	89.42	39	eP	P	05 36 44.4	+0.9
DPC				MLR	MLR		
	comp=Z,10µm,20.1s						
ARSA	Arzberg	89.55	42	IAMs_20	IAMs_20	06 11 15.9	
	comp=Z,7µm,21.0s						
ARSA	Arzberg	89.55	42	eP	P	05 36 45.1	+0.9
	comp=Z,8.7nm,1.2s						
VADS	Vadso	89.56	18	eP	P	05 36 45.6	+1.9
VADS				e		05 47 27.4	
CONA	Conrad Observa	89.63	42	eP	P	05 36 44.0	-0.6
	comp=Z,24nm,2.1s						
KRUC	Moravsky	89.74	40	eP	P	05 36 44.3	-0.7
KRLC	Kraliky	89.77	39	AMS	AMS	06 11 50.0	
	comp=Z,13µm,20.6s						
VRAC	Vranov	89.81	40	LR	LR	06 12 06.3	
	comp=Z,14µm,20.8s,baz=276,slow=32						
VRAC	Vranov	89.81	40	eP	P	05 36 44.6	-0.8
BILL	Bilibino	89.96	339	P	P	05 36 46.4	+0.8
BILL	Bilibino	89.96	339	i P	P	05 36 46.1	+0.5
BILL				pmax	pmax		
	comp=Z,107nm,1.4s						
RONA	Rosalia, Austr	89.97	42	i P	P	05 36 46.3	+0.2
	comp=Z,15nm,1.5s						
MORC	Moravsky Berou	90.31	40	eP	P	05 36 47.0	-0.7
MODS	Modra-Piesok	90.46	41	eP	P	05 36 51.0	+2.6
MODS				pmax	pmax		
	comp=Z,146nm,2.0s						

MODS	Modra-Piesok	90.46	41	eP	P	05 36 51.0	+2.6
JAVC	Velka Javorina	90.61	40	eP	P	05 36 49.1	0.0
VAE	Valguarnera	90.66	52	LR	LR	06 15 51.1	
	comp=Z,7µm,18.9s,baz=318,slow=34						
OKC	Ostrava-Krasne	90.68	39	eSKS	SKSac	05 47 16.5	-2.4
OKC				AMS	AMS	06 12 20.0	
	comp=Z,12µm,20.2s						
MPLH	Magyarpolny	90.91	42	P	P	05 36 51.5	+1.0
	comp=Z,2µmcomp=Z,42nm,1.3s						
AFI	Afiamalu	90.98	256	IAMs_20	IAMs_20	06 11 40.9	
	comp=Z,4µm,19.0s						
CUC	Castrocucco	91.24	49	IAMs_20	IAMs_20	06 13 07.4	
	comp=Z,6µm,22.0s						
VYHS	Vyhne	91.44	41	eP	P	05 36 55.6	+2.6
VYHS				pmax	pmax		
	comp=Z,11nm,0.8s						
VYHS	Vyhne	91.44	41	eP	P	05 36 55.6	+2.6
VYHS	Vyhne	91.44	41	eS	S	05 47 48.0	-2.4
FINES	FINESS Array B	91.57	27	P	P	05 36 52.4	-0.9
FINES	FINESS Array B	91.57	27	P	P	05 36 52.2	-1.0
	comp=Z,5.2nm,0.9s,baz=277,slow=3.1,SNR=10						
FINES				LR	LR	06 17 22.8	
	comp=Z,2µm,19.2s,baz=284,slow=35						
	comp=Z,5.2nm,0.9s						
FINES	FINESS Array B	91.57	27	P	P	05 36 52.4	-0.9
FIA1	FINESS Array S	91.57	27	IAmb	IAmb	05 37 09.2	
	comp=Z,119nm,1.4s						
OJC	Ojcow	91.62	39	eP	P	05 36 52.8	-1.0
OJC				eL	L	06 12 55.0	
	comp=Z,10µm,21.6s						
CEL	Celeste	91.66	51	IAMs_20	IAMs_20	06 22 10.6	
	comp=Z,4µm,19.0s						
MORH	Mrgy, Hungar	91.87	43	P	P	05 36 55.8	+0.8
	comp=Z,444nmcomp=Z,12nm,1.9s						
R9F13	Warsaw-Wawer	91.89	37	eP	P	05 36 55.2	+0.3
R9F13				ePP	PP	05 40 33.8	-0.2
TIP	Timpagrande	92.12	50	IAMs_20	IAMs_20	06 14 40.9	
	comp=Z,6µm,21.0s						
NIE	Niedzica	92.14	40	eP	P	05 36 56.3	+0.1
NIE				eL	L	06 13 11.6	
	comp=Z,7µm,20.8s						
LVZ	Lovozero	92.25	20	IAMs_20	IAMs_20	06 15 28.6	
	comp=Z,5µm,22.0s						
LVZ	Lovozero	92.25	20	i P	P	05 36 54.5	-1.8
LVZ				pmax	pmax		
	comp=Z,60nm,1.3s						
PSZ	Piszkesteto	92.27	41	IAmb	IAmb	05 37 22.3	
	comp=Z,107nm,1.8s						
PSZ				IAMs_20	IAMs_20	06 14 43.9	
	comp=Z,6µm,20.0s						
VNA3	Neumayer Olymp	92.50	162	⇑P	P	05 36 56.8	-0.5
	comp=Z,26nm,0.8s						
PABE	Paberze	92.52	33	IAMs_20	IAMs_20	06 12 56.6	
	comp=Z,5µm,20.0s						
SUW	Suwalki	92.55	35	IAMs_20	IAMs_20	06 14 30.5	
	comp=Z,6µm,22.0s						
VNA1	Neumayer--Stat	92.75	161	⇑P	P	05 36 59.0	+0.6
	comp=Z,17nm,1.0s						
VSU	Vasula	92.94	30	i P	P	05 36 58.2	-1.4
VSU				pmax	pmax		
	comp=Z,44nm,1.3s						
VNA2	Neumayer--Watz	93.11	161	⇑P	P	05 36 59.3	-0.7
	baz=302,slow=4.8						
PDG	Podgorica	93.22	46	IAMs_20	IAMs_20	06 14 52.6	
	comp=Z,6µm,22.0s						
NACGM	Naroch	94.24	33	eP	P	05 37 08.5	+2.8
	comp=Z,9.0nm,0.6s,baz=291						
SNAA	Sanae	94.72	162	⇑P	P	05 37 06.8	-0.7
	comp=Z,163nm,0.9s						
SNAA	Sanae	94.72	162	P	P	05 37 06.9	-0.6
	comp=Z,5.6nm,0.9s,baz=271,slow=4.6,SNR=12						
	comp=Z,5.6nm,0.9s						
SNAA	Sanae	94.72	162	i PKIKP	P	05 37 06.2	-1.3
RNPP9	Sopachiv	94.95	37	P	P	05 37 09.7	+0.7
MNK	Minsk	94.98	33	i P	P	05 37 04.5	-4.6
MNK				i		05 40 53.1	
MNK				i S	SKSac	05 47 37.1	-5.4
MNK				i SS	SS	05 54 44.5	-1.7
MNK				i SSS	SSS	05 58 25.4	
MNK				pmax	pmax		
	comp=N,8.0nm,0.6s						
MNK				pmax	pmax		
	comp=E,16nm,0.8s						
MNK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MNK				MLR	MLR		
	comp=E,3µm,19.0s						
MNK				MLR	MLR		
	comp=Z,4µm,19.0s						
MNK				MLR	MLR		
	comp=N,3µm,21.0s						
RNPP5	Staryi Chortor	95.01	37	P	P	05 37 10.5	+1.2
FNA	Florina	95.18	48	IAMs_20	IAMs_20	06 20 55.7	
	comp=Z,5µm,21.0s						
BURAR	Bucovina Array	95.80	40	P	P	05 37 13.7	+0.5
TROLL	Troll, Antarti	96.43	162	⇑P	P	05 37 15.2	-0.2
	comp=Z,1µm,0.9s						
ITM	Ithomi	96.56	51	IAMs_20	IAMs_20	06 23 12.4	
	comp=Z,3µm,21.0s						
MLR	Muntele Rosu	96.97	42	IAmb	IAmb	05 37 44.0	
	comp=Z,61nm,1.7s						
MLR	Muntele Rosu	96.97	42	LR	LR	06 18 14.9	
	comp=Z,6µm,20.4s,baz=290,slow=34						
AK17	Malin Array Si	97.08	37	P	Pdif	05 37 19.6	+0.8
FUTU	Fugatoga	97.14	257	IAMs_20	IAMs_20	06 15 14.0	
	comp=Z,4µm,19.0s						
KIEV	Kiev	97.16	36	P	Pdif	05 37 20.3	+1.1
AKASG	Malin Array Be	97.17	36	PP	PP	05 41 19.7	+4.6
	comp=Z,0.2nm,0.3s,baz=296,slow=6.0,SNR=5.7						
AKASG				LR	LR	06 20 25.3	
	comp=Z,5µm,19.0s,baz=286,slow=35						
AKBB	Malin Array Si	97.17	36	P	Pdif	05 37 20.2	+1.0
TIXI	Tiksi	97.47	350	P	P	05 37 18.7	-1.3
TIXI	Tiksi	97.47	350	P	P	05 37 18.7	-1.3
	comp=Z,13nm,0.8s,baz=44,slow=6.4,SNR=19						
TIXI				PP	PP	05 41 20.7	+3.9
	comp=Z,5.7nm,0.9s,baz=66,slow=7.2,SNR=4.6						
TIXI				LR	LR	06 24 57.9	
	comp=Z,5µm,19.0s,baz=32,slow=38						
	comp=Z,13nm,0.8s						
SEY	Seymchan	97.48	338	P	P	05 37 19.2	-1.0
	comp=Z,5.1nm,0.9s,baz=82,slow=4.8,SNR=9.3						
SEY				LR	LR	06 27 41.9	
	comp=Z,7µm,19.0s,baz=50,slow=39						
	comp=Z,5.1nm,0.9s						
SEY	Seymchan	97.48	338	i P	P	05 37 19.8	-0.5
SEY				pmax	pmax		
	comp=Z,23nm,1.9s						
KLMR	Klimovskoe	97.66	25	eP	P	05 37 19.6	-1.5
KLMR				e*PP	pP	05 37 28.2	-3.0
KLMR				e		05 41 18.4	
KLMR				S	SKSac	05 47 54.3	-2.0
KLMR				pmax	pmax		
	comp=Z,55nm,1.3s						
RDO	Rodhopi	98.09	46	IAMs_20	IAMs_20	06 22 13.3	
	comp=Z,3µm,20.0s						
MILM	Milestii Mici	98.33	40	eP	P	05 37 24.0	-0.4
MILM	Milestii Mici	98.33	40	ePP	PP	05 41 30.0	+5.8
MILM				eSKS	SKSac	05 47 52.0	-8.2
MILM				⇑iSKKS	SKKSac	05 48 15.0	-15
MILM				eL	L	06 04 38.0	
MILM				LQ	LQ	06 05 37.0	
	comp=Z,2µm,38.0s						
MILM				LRM	MLR	06 17 40.0	
	comp=Z,4µm,20.0s						
MILM	Milestii Mici	98.33	40	eP	P	05 37 24.0	-0.4
MILM				e		05 41 30.0	
MILM				e		05 47 52.0	
QSPA	South Pole Qui	98.34	180	P	P	05 37 23.9	-0.2
	comp=Z,5.4nm,0.9s,baz=295,slow=1.5,SNR=3.0						
	comp=Z,5.4nm,0.9s						
RAO	Raoul Island	98.46	242	LR	LR	06 12 04.7	
	comp=Z,3µm,21.8s,baz=102,slow=29						
ALN	Alexandroupoli	98.53	47	IAMs_20	IAMs_20	06 25 38.2	
	comp=Z,3µm,19.0s						
OBN	Obninsk	99.26	30	LR	LR	06 21 37.4	
	comp=Z,4µm,18.8s,baz=248,slow=35						
OBN	Obninsk	99.26	30	⇓eP	Pdif	05 37 26.6	-1.8
OBN				*PP	pP	05 37 38.0	-0.5
OBN				*SP	sP	05 37 42.0	-0.1
OBN				eS	SKSac	05 48 04.9	+0.4
OBN				e		05 48 48.8	
OBN				ePS	PS	05 50 30.2	+2.1
OBN				eSS	SS	05 55 49.4	+3.1
OBN				pmax	pmax		
	comp=Z,59nm,2.1s						

OBN				MLR	MLR		
	comp=Z,7µm,19.0s						
IDI	Anoyia	99.39	52	LR	LR	06 16 31.8	
	comp=Z,1µm,21.2s,baz=308,slow=32						
MOS	Moscow	99.47	30	eP	Pdif	05 37 36.4	+7.1
MOS				MLR	MLR		
	comp=Z,5µm,20.0s						
MOS				MLR	MLR		
	comp=E,3µm,19.0s						
MOS				MLR	MLR		
	comp=N,5µm,20.0s						
MANT	Manisa	101.16	48	IAMs_20	IAMs_20	06 27 35.8	
	comp=Z,4µm,19.0s						
MSVF	Nonsavu	101.16	254	IAMs_20	IAMs_20	06 17 22.5	
	comp=Z,4µm,19.0s						
LPSR	Galich'ya Gora	101.72	32	eP	Pdif	05 37 38.7	-0.7
LPSR				pmax	pmax		
	comp=Z,13nm,0.9s						
WIN	Windhoek	102.26	111	IAMs_20	IAMs_20	06 20 33.6	
	comp=Z,5µm,21.0s						
SIM	Simferopol'	102.51	40	i P	Pdif	05 37 47.0	+3.9
SIM				e		05 42 00.0	
SIM				eSP	SP	05 51 01.0	+2.1
SIM				pmax	pmax		
	comp=Z,100nm,15.6s						
SIM				pmax	pmax		
	comp=Z,100nm,13.0s						
SIM				pmax	pmax		
	comp=Z,290nm,13.0s						
RTZ	Ruatahuna	103.12	232	IAMs_20	IAMs_20	06 19 18.1	
	comp=Z,4µm,19.0s						
BKZ	Black Stump Fm	103.50	232	IAMs_20	IAMs_20	06 15 54.1	
	comp=Z,4µm,20.0s						
ANTO	Ankara	103.71	46	IAMs_20	IAMs_20	06 23 02.0	
	comp=Z,4µm,21.0s						
ILGA	Ilgaz	103.88	44	IAMs_20	IAMs_20	06 24 27.3	
	comp=Z,4µm,21.0s						
BRTR	Keskin Array B	104.36	45	PP	PP	05 42 12.1	+2.0
	comp=Z,1.2nm,0.9s,baz=304,slow=10,SNR=4.4						
BRTR				PKKPbc	PKKPdf	05 53 49.6	+1.1
	comp=Z,1.1nm,0.8s,baz=111,slow=2.8,SNR=3.7						
BHW	Baring Head	104.71	229	IAMs_20	IAMs_20	06 17 25.8	
	comp=Z,4µm,19.0s						
HIZ	Hauiti	104.79	232	IAMs_20	IAMs_20	06 18 16.2	
	comp=Z,3µm,19.0s						
KHZ	Kahutara	105.66	228	IAMs_20	IAMs_20	06 17 54.9	
	comp=Z,5µm,19.0s						
NNZ	Nelson	105.84	230	IAMs_20	IAMs_20	06 15 19.7	
	comp=Z,4µm,21.0s						
SUR	Sutherland	105.90	121	IAMs_20	IAMs_20	06 25 05.1	
	comp=Z,4µm,19.0s						
TOKA	Tokat	106.09	44	IAMs_20	IAMs_20	06 22 14.8	
	comp=Z,3µm,22.0s						
QRZ	Quartz Range	106.50	230	IAMs_20	IAMs_20	06 20 27.3	
	comp=Z,4µm,19.0s						
ODZ	Otahua Downs	107.55	225	IAMs_20	IAMs_20	06 19 50.7	
	comp=Z,4µm,19.0s						
ARTI	Arti	108.00	22	IAMs_20	IAMs_20	06 25 51.2	
	comp=Z,5µm,21.0s						
ARTI	Arti	108.00	22	P	Pdif	05 38 20.4	+13
ARTI						05 42 34.8	
ARTI				MLR	MLR		
	comp=Z,5µm,21.0s						
KIV	Kislovodsk	108.37	38	IAMs_20	IAMs_20	06 24 02.6	
	comp=Z,4µm,20.0s						
KBZ	Khabaz	108.62	38	PKKPbc	PKKPbc	05 53 27.4	+1.1
	comp=Z,2.2nm,0.9s,baz=112,slow=1.5,SNR=3.7						
WKZ	Wanaka	108.72	226	IAMs_20	IAMs_20	06 21 25.8	
	comp=Z,4µm,20.0s						
SYO	Syowa Base	109.00	161	⇑ePdiff	Pdif	05 38 12.2	+0.9
SYO	Syowa Base	109.00	161	⇑epPKiKP	PKiKP	05 42 29.3	+14
BOSA	Boshof	109.78	117	PKiKP	PKiKP	05 42 18.1	-0.3
	comp=Z,3.3nm,0.9s,baz=17,slow=3.4,SNR=4.5						
YSS	Yuzhno-Sakhali	111.69	328	IAMs_20	IAMs_20	06 34 34.6	
	comp=Z,4µm,20.0s						
GNI	Garni	111.69	41	IAMs_20	IAMs_20	06 28 16.8	
	comp=Z,3µm,21.0s						
MAK	Makhachkala	111.84	37	i P	Pdif	05 38 24.4	-0.2
MAK				i		05 42 20.8	
MAK				e		05 43 03.3	
MAK				ePPP	PPP	05 45 28.8	
MAK				e		05 49 00.1	
MAK				ePS	PS	05 52 40.6	+3.0
MAK				eSS	SS	05 58 37.0	-1.5
MAK				eSSS	SSS	06 02 43.7	
MAK				pmax	pmax		
	comp=Z,37nm,0.2s						
MAK				MLR	MLR		
	comp=Z,4µm,18.0s						
DZM	Mont Dzumac	112.28	250	ePP	PP	05 43 05.9	-2.8
	comp=Z,410nm,24.3s						
DZM	Mont Dzumac	112.28	250	eSS	SS	05 58 47.3	+0.5
	comp=Z,3µm,27.6s						
DZM	Mont Dzumac	112.28	250	eLQ	LQ	06 11 05.2	
	comp=Z,3µm,36.8s						
DZM				eLR	LR	06 15 47.7	
	comp=Z,3µm,24.1s						
AKT	Akhty	112.84	38	ePKIKP	PKiKP	05 42 20.0	-3.9
JKA	Kamikawa-asahi	113.60	326	IAMs_20	IAMs_20	06 39 38.5	
	comp=Z,4µm,20.0s						
ERM	Erimo	114.61	324	IAMs_20	IAMs_20	06 35 13.4	
	comp=Z,3µm,21.0s						
ERM	Erimo	114.61	324	P	Pdif	05 38 37.6	+0.6
BVAR	Borovoye Array	114.75	17	PKP	PKiKP	05 42 26.1	-1.0
	comp=Z,2.2nm,0.8s,baz=309,slow=0.9,SNR=5.5						
BVAR				PP	PP	05 43 23.9	-0.4
	comp=Z,1.1nm,0.5s,baz=350,slow=5.1,SNR=3.8						
HEH	HeiHe	116.00	339	PKP	PKiKP	05 42 21.5	-8.0
HEH				PP	PP	05 43 30.8	-2.3
HEH				PKS	PKSdf	05 46 02.8	-3.3
HEH	HeiHe	116.00	339	SS	SS	05 59 30.8	-1.6
HEH				AMB	AMB		
	comp=Z,980nm,7.4s						
HEH				LR	LR		
	comp=N,5µm,22.7s						
HEH				LR	LR		
	comp=E,4µm,21.3s						
HEH				LR	LR		
	comp=Z,4µm,17.8s						
ZALV	Zalesovo Beam	117.07	8		PKPdf	05 42 29.7	-1.8
ZALV	Zalesovo Beam	117.07	8	PKP	PKPdf	05 42 30.0	-1.5
	comp=Z,2.5nm,0.7s,baz=318,slow=2.0,SNR=8.7						
ZALV				PP	PP	05 43 37.4	-2.9
	comp=Z,7.3nm,0.9s,baz=335,slow=6.6,SNR=5.4						
LODK	Lodwar	117.24	82	IAMs_20	IAMs_20	06 37 56.6	
	comp=Z,3µm,19.0s						
BRZS	Berezniki	118.11	18	ePKIKP	PKPdf	05 42 31.8	-1.8
BRZS	Berezniki	118.11	18	ePKP	PKPdf	05 42 31.8	-1.8
LHI	Lord Howe Isla	118.26	239	IAMs_20	IAMs_20	06 29 07.1	
	comp=Z,3µm,18.0s						
JMM	Marumori	118.62	322	IAMs_20	IAMs_20	06 32 46.0	
	comp=Z,3µm,22.0s						
KURK	Kurchatov	119.02	13		PKPdf	05 42 34.0	-1.3
KURK	Kurchatov	119.02	13	PKIKP	PKPdf	05 42 34.3	-1.0
KURBB	Kurchatov Arra	119.08	13	PKP	PKPdf	05 42 34.3	-1.2
	comp=Z,6.2nm,0.8s,baz=338,slow=2.3,SNR=26						
KURBB				PP	PP	05 43 53.7	-0.6
	comp=Z,1.5nm,0.9s,baz=345,slow=6.9,SNR=5.3						
KURBB				PKKPbc	PKKPab	05 52 53.1	0.0
	comp=Z,0.6nm,0.3s,baz=158,slow=3.0,SNR=5.5						
FURI	Furi	119.24	75	IAMs_20	IAMs_20	06 36 37.9	
	comp=Z,3µm,19.0s						
KMBO	Kilima Mbogo	119.89	87	IAMs_20	IAMs_20	06 33 23.2	
	comp=Z,3µm,20.0s						
MOY	Mondy	120.14	357	ePKIKP	PKPdf	05 42 37.7	0.0
MOY				e		05 44 02.0	
MOY				pmax	pmax		
	comp=Z,129nm,3.5s						
KIBK	Kibwezi	120.86	88	IAMs_20	IAMs_20	06 32 27.9	
	comp=Z,3µm,21.0s						
MAJO	Matsushiro	121.06	322		PKPdf	05 42 38.8	-0.9
MAJO	Matsushiro	121.06	322	IAMs_20	IAMs_20	06 33 32.3	
	comp=Z,3µm,22.0s						
MAJO	Matsushiro	121.06	322	PKIKP	PKPdf	05 42 38.8	-0.9
MAJO				MLR	MLR		
	comp=Z,3µm,22.0s						
MJAR	Matsushiro Arr	121.06	322	PKP	PKPdf	05 42 38.8	-0.9
	comp=Z,6.2nm,0.8s,baz=60,slow=1.0,SNR=10						
CASY	Casey	121.42	186	IAMs_20	IAMs_20	06 31 54.2	
	comp=Z,3µm,19.0s						
CN2	Changchun	122.12	336	PKP	PKPdf	05 42 40.3	-1.2
CN2				PP	PP	05 44 17.5	+2.1
CN2				AMB	AMB		
	comp=Z,600nm,7.5s						
CN2				LR	LR		
	comp=Z,3µm,20.1s						

CN2				LR	LR		
	comp=Z,3µm,20.1s						
CN2				LR	LR		
	comp=Z,5µm,19.6s						
JHJ2	Mitsune	122.19	318	IAMs_20	IAMs_20	06 40 18.0	
	comp=Z,2µm,21.0s						
JSG	Sagara	122.27	320	IAMs_20	IAMs_20	06 45 24.8	
	comp=Z,2µm,19.0s						
ATD	Arta Tunnel	122.46	71	IAMs_20	IAMs_20	06 38 25.5	
	comp=Z,2µm,20.0s						
INU	Inuyama	122.56	322	IAMs_20	IAMs_20	06 44 06.1	
	comp=Z,2µm,20.0s						
BTLS	Baital	122.92	19	ePKIKP	PKPdf	05 42 41.1	-1.9
BTLS				e		05 44 20.0	
BTLS	Baital	122.92	19	ePKP	PKPdf	05 42 41.1	-1.9
BTLS				ePP	PP	05 44 20.0	-0.7
BRLS	Borolday	123.12	24	ePKIKP	PKPdf	05 42 41.6	-1.9
BRLS				e		05 44 22.0	
BRLS	Borolday	123.12	24	ePKP	PKPdf	05 42 41.6	-1.9
BRLS				ePP	PP	05 44 22.1	-0.2
KKAR	Karatay Array	123.33	23		PKPdf	05 42 42.6	-1.3
KKAR	Karatay Array	123.33	23	PKIKP	PKPdf	05 42 42.6	-1.3
ULN	Ulaanbaatar	123.36	352		PKPdf	05 42 43.8	-0.2
ULN	Ulaanbaatar	123.36	352	PKIKP	PKPdf	05 42 43.8	-0.2
ZSN	Zaisan	123.38	10	ePKIKP	PKPdf	05 42 41.9	-1.9
ZSN	Zaisan	123.38	10	ePKP	PKPdf	05 42 42.0	-1.9
SONM	Songino Array	123.48	353		PKPdf	05 42 43.0	-1.2
SONM	Songino Array	123.48	353	PKP	PKPdf	05 42 43.4	-0.8
	comp=Z,8.2nm,0.9s,baz=1.1,slow=1.4,SNR=28						
SONM				PP	PP	05 44 25.2	+0.8
	comp=Z,6.9nm,1.2s,baz=357,slow=7.7,SNR=3.8						
SONM				PKKPbc	PKKPbc	05 52 38.1	+3.6
	comp=Z,1.3nm,0.9s,baz=204,slow=5.8,SNR=4.2						
MK31	Makanchi Array	123.52	12	i PKIKP	PKPdf	05 42 40.4	-3.8
MKAR	Makanchi Array	123.52	12		PKPdf	05 42 42.6	-1.6
MKAR	Makanchi Array	123.52	12	PKP	PKPdf	05 42 42.4	-1.8
	comp=Z,5.6nm,0.9s,baz=343,slow=2.1,SNR=26						
MKAR	Makanchi Array	123.52	12	PKIKP	PKPdf	05 42 42.6	-1.6
CHM	Chimkent	123.62	24	ePKIKP	PKPdf	05 42 42.5	-2.0
CHM	Chimkent	123.62	24	ePKP	PKPdf	05 42 42.5	-2.0
DZA	Taraz	123.82	23	ePKIKP	PKPdf	05 42 42.9	-2.0
DZA	Taraz	123.82	23	ePKP	PKPdf	05 42 42.9	-2.0
IUG	Iuzhnay	123.94	24	ePKIKP	PKPdf	05 42 43.2	-2.0
IUG	Iuzhnay	123.94	24	ePKP	PKPdf	05 42 43.2	-2.0
TDK	Taldyqorghan	124.27	16	ePKIKP	PKPdf	05 42 43.5	-2.1
TDK	Taldyqorghan	124.27	16	ePKP	PKPdf	05 42 43.5	-2.1
TAU	Tasmania Unive	124.33	223	IAMs_20	IAMs_20	06 26 51.5	
	comp=Z,3µm,20.0s						
SGDS	Sogindy	124.52	20	ePKP	PKPdf	05 42 44.2	-2.1
USP	Ospenovka	124.64	20	P	PKPdf	05 42 46.0	-0.5
	SNR=15						
ARMA	Armidale	124.74	239	IAMs_20	IAMs_20	06 24 24.6	
	comp=Z,3µm,22.0s						
EKS2	Erkin-Say	124.92	21	P	PKPdf	05 42 47.6	+0.4
	SNR=14						
AAK	Ala-Archa	125.19	20		PKPdf	05 42 47.2	-0.5
AAK	Ala-Archa	125.19	20	PKIKP	PKPdf	05 42 47.2	-0.5
AAK				MLR	MLR		
	comp=Z,5µm,22.0s						
AAK	Ala-Archa	125.19	20	PKP	PKPdf	05 42 47.7	0.0
XLT	XiLinHaoTe	125.25	343	ePKP	PKiKP	05 42 48.8	+0.8
XLT				LR	LR		
	comp=Z,3µm,19.2s						
XLT				LR	LR		
	comp=Z,4µm,21.5s						
TKM2	Tokmak 2	125.31	19	P	PKPdf	05 42 47.6	-0.4
	SNR=12						
AML	Almayashu	125.36	21	P	PKPdf	05 42 48.4	+0.1
	SNR=14						
JMN	Monobe	125.57	322	IAMs_20	IAMs_20	06 46 10.7	
	comp=Z,2µm,20.0s						
CAN	Canberra	125.69	232	IAMs_20	IAMs_20	06 31 00.2	
	comp=Z,3µm,19.0s						
KPKS	Kokpek	125.76	17	ePKIKP	PKPdf	05 42 46.6	-2.0
KPKS				e		05 44 39.4	
KPKS	Kokpek	125.76	17	ePKP	PKPdf	05 42 46.6	-2.0
KPKS				ePP	PP	05 44 39.4	-0.4
SATY	Saty	126.06	17	ePKIKP	PKPdf	05 42 47.2	-2.1
SATY	Saty	126.06	17	ePKP	PKPdf	05 42 47.2	-2.1
EIDS	Eidsvold	126.09	245	IAMs_20	IAMs_20	06 31 44.8	
	comp=Z,2µm,20.0s						
ULHL	Ulahol	126.13	19	P	PKPdf	05 42 49.6	+0.1
	SNR=13						
KSRS	Korea Array	126.13	330	PKP	PKPdf	05 42 48.8	-0.6
	comp=Z,24nm,0.9s,baz=14,slow=1.5,SNR=51						
UZB	Uzynbulak	126.15	16	ePKIKP	PKPdf	05 42 47.4	-2.1
UZB	Uzynbulak	126.15	16	ePKP	PKPdf	05 42 47.4	-2.1
KSAR	Wonju Array Be	126.16	330		PKPdf	05 42 48.8	-0.6
KSAR	Wonju Array Be	126.16	330	PKIKP	PKPdf	05 42 48.8	-0.6
SHLS	Shalkode	126.26	16	ePKIKP	PKPdf	05 42 47.7	-2.0
SHLS				e		05 44 43.1	
SHLS	Shalkode	126.26	16	ePKP	PKPdf	05 42 47.8	-2.0
SHLS				ePP	PP	05 44 43.1	0.0
SIMJ	Simiganj	126.38	27		PKPdf	05 42 49.3	-0.8
INCN	Inchon	126.74	331	IAMs_20	IAMs_20	06 41 27.7	
	comp=Z,3µm,21.0s						
WMQ	Urumqi	127.37	9	PKP	PKiKP	05 42 53.3	+1.1
WMQ				sPKP		05 43 04.3	
WMQ				AMB	AMB		
	comp=Z,660nm,11.9s						
WMQ				LR	LR		
	comp=Z,4µm,20.7s						
WMQ				LR	LR		
	comp=Z,3µm,22.9s						
WMQ				LR	LR		
	comp=Z,6µm,24.1s						
DL2	Dalian	127.79	336	PKP	PKPdf	05 42 53.3	+0.8
DL2				AMB	AMB		
	comp=Z,1µm,6.9s						
DL2				LR	LR		
	comp=Z,3µm,19.4s						
DL2				LR	LR		
	comp=Z,4µm,20.9s						
DL2				LR	LR		
	comp=Z,5µm,26.0s						
UOSS	Minazif	128.14	49	IAMs_20	IAMs_20	06 45 05.3	
	comp=Z,2µm,20.0s						
KSH	Kashi	128.48	21	PKP	PKPdf	05 42 54.8	+0.8
KSH				SKS	SKSac	05 49 59.8	0.0
KSH				AMB	AMB		
	comp=Z,420nm,6.5s						
KSH				LR	LR		
	comp=Z,4µm,22.0s						
KSH				LR	LR		
	comp=Z,4µm,22.0s						
KSH				LR	LR		
	comp=Z,4µm,24.0s						
BJI	Beijing	128.76	341	PKP	PKPdf	05 42 53.3	-1.0
BJI				AMB	AMB		
	comp=Z,230nm,9.3s						
BJI				LR	LR		
	comp=Z,1µm,19.2s						
BJI				LR	LR		
	comp=Z,2µm,19.9s						
BJI				LR	LR		
	comp=Z,3µm,22.8s						
HHC	Hu-ho-hao-te	129.29	346	ePKP	PKPdf	05 42 54.8	-0.7
CMSA	Cobar Meteorol	129.42	236	P	PKiKP	05 42 56.9	+0.4
CMSA	Cobar Meteorol	129.42	236	P	PKPdf	05 42 55.7	-0.1
KBL	Kabul	129.71	30		PKPdf	05 42 56.7	+0.1
KBL	Kabul	129.71	30	PKIKP	PKPdf	05 42 56.7	+0.1
BTO	Baotou	129.88	347	ePKP	PKPdf	05 42 56.8	+0.2
BTO				SS	SS	06 02 27.8	-0.7
BTO				LR	LR		
	comp=Z,9µm,20.6s						
BTO				LR	LR		
	comp=Z,15µm,20.8s						
BTO				LR	LR		
	comp=Z,15µm,22.5s						
CTAO	Charters Tower	131.20	251	IAMs_20	IAMs_20	06 32 59.4	
	comp=Z,3µm,19.0s						
HNS	HongShan	131.63	341	⇑PKP	PKPdf	05 43 00.0	+0.1
HNS				PP	PP	05 45 27.8	+10
HNS				PKS	PKSdf	05 46 38.5	+2.2
HNS				LR	LR		
	comp=Z,4µm,18.7s						
HNS				LR	LR		
	comp=Z,2µm,21.4s						
HNS				LR	LR		
	comp=Z,5µm,19.0s						
TIA	Tai'an	131.88	338	PKP	PKPdf	05 42 59.8	-0.6
TIA				PP	PP	05 45 24.0	+4.1
TIA				LR	LR		
	comp=Z,2µm,24.2s						
TIA				LR	LR		

	comp=Z,5µm,22.7s						
TIA				LR	LR		
	comp=Z,8µm,18.7s						
GTA	Gaotai	132.43	357	PKP	PKPdf	05 43 00.8	-0.7
GTA				PP	PP	05 45 29.3	+6.0
GTA				SS	SS	06 02 57.0	-2.5
GTA				AMB	AMB		
	comp=Z,1µm,9.2s						
GTA				LR	LR		
	comp=Z,6µm,21.1s						
GTA				LR	LR		
	comp=Z,4µm,19.1s						
GTA				LR	LR		
	comp=Z,9µm,22.3s						
STKA	Stephens Creek	132.63	234	PKP	PKPdf	05 43 01.8	-0.1
	comp=Z,7.1nm,0.8s,baz=39,slow=2.2,SNR=8.4						
JOW	Kunigami	133.83	320	IAMs_20	IAMs_20	06 51 18.9	
	comp=Z,3µm,19.0s						
SSE	Sheshan	134.54	331	PKP	PKPdf	05 43 05.8	+0.3
SSE				PP	PP	05 45 41.5	+4.4
SSE				AMB	AMB		
	comp=Z,280nm,8.2s						
SSE				LR	LR		
	comp=Z,1µm,24.0s						
SSE				LR	LR		
	comp=Z,930nm,22.8s						
THN	Thein Dam	134.57	26	*e*P	PKPdf	05 43 04.9	-0.6
COEN	Coen	134.60	259		PKiKP	05 43 07.9	+0.5
COEN				IAMs_20	IAMs_20	06 40 25.6	
	comp=Z,2µm,20.0s						
NJ2	Nanjing	134.82	334	*e*PKP	PKPdf	05 43 06.8	+0.8
NJ2				PKS	PKSdf	05 46 45.5	+3.1
NJ2				AMB	AMB		
	comp=Z,930nm,6.8s						
NJ2				LR	LR		
	comp=Z,2µm,22.4s						
NJ2				LR	LR		
	comp=Z,2µm,22.4s						
NJ2				LR	LR		
	comp=Z,3µm,19.5s						
LYN	LuoYang	134.95	342	PKP	PKiKP	05 43 07.8	+0.1
LYN				LR	LR		
	comp=Z,5µm,22.6s						
LYN				LR	LR		
	comp=Z,3µm,21.1s						
LYN				LR	LR		
	comp=Z,8µm,23.0s						
DHRM	DHARAMSHALA	134.97	25	*e*P	PKPdf	05 43 05.9	-0.7
LZH	Lanzhou	135.37	352	*e*PKP	PKPdf	05 43 07.0	-0.2
LZH				sPKP		05 43 21.3	
LZH				LR	LR		
	comp=Z,730nm,18.1s						
LZH				LR	LR		
	comp=Z,560nm,17.5s						
LZH				LR	LR		
	comp=Z,600nm,20.9s						
HNLY	HANLEY	135.57	22	*e*P	PKPdf	05 43 07.4	-0.8
GOMU	GeErMu	135.64	3	PKP	PKPdf	05 43 08.5	+0.6
GOMU				PP	PP	05 45 46.5	+2.5
GOMU				SS	SS	06 03 41.3	+2.5
GOMU				AMB	AMB		
	comp=Z,310nm,4.4s						
GOMU				LR	LR		
	comp=Z,2µm,21.0s						
GOMU				LR	LR		
	comp=Z,3µm,22.9s						
GOMU				LR	LR		
	comp=Z,4µm,22.5s						
SMLA	Simla	136.31	25	*e*P	PKPdf	05 43 08.2	-0.6
XAN	Xi'an	136.41	346	⇓PKP	PKPdf	05 43 10.0	+1.0
XAN				LR	LR		
	comp=Z,6µm,20.6s						
XAN				LR	LR		
	comp=Z,3µm,22.7s						
XAN				LR	LR		
	comp=Z,5µm,22.7s						
BBOO	Buckleboo	136.60	230		PKPdf	05 43 10.7	+1.4
DDI	Dehra Dun	137.38	25	*e*P	PKPdf	05 43 10.1	-0.9
WHN	Wuhan	137.97	338	PKPbc	PKiKP	05 43 22.5	+8.6
WHN				PP	PP	05 46 10.3	+12
MSEY	Mahe Island	138.41	88	IAMs_20	IAMs_20	06 45 17.0	
	comp=Z,2µm,21.0s						
NDI	New Delhi	138.44	27	*e*P	PKPdf	05 43 11.9	-0.9
KUDL	Kundal	138.57	28	*e*P	PKPdf	05 43 12.2	-0.8
YOJ	Yonaguni jima	138.80	323	IAMs_20	IAMs_20	06 51 32.9	
	comp=Z,3µm,20.0s						
YHNB	Yeheng	139.59	325	IAMs_20	IAMs_20	06 44 59.5	
	comp=Z,3µm,21.0s						
NACB	Ninganchiao	139.85	324	IAMs_20	IAMs_20	06 51 35.7	
	comp=Z,3µm,21.0s						
CD2	Chengdu	140.47	351	PKP	PKPdf	05 43 15.3	-1.2
CD2				PP	PP	05 46 15.5	+1.9
CD2				AMB	AMB		
	comp=Z,950nm,5.8s						
CD2				LR	LR		
	comp=Z,5µm,22.6s						
CD2				LR	LR		
	comp=Z,9µm,22.7s						
CD2				LR	LR		
	comp=Z,7µm,26.3s						
YULB	Yu-li	140.62	324	IAMs_20	IAMs_20	06 52 37.2	
	comp=Z,3µm,21.0s						
CNSH	ChangSha	140.63	338	PKP	PKPdf	05 43 18.5	+1.7
CNSH				PP	PP	05 46 24.8	+10
CNSH				AMB	AMB		
	comp=Z,870nm,11.5s						
CNSH				LR	LR		
	comp=Z,4µm,23.5s						
CNSH				LR	LR		
	comp=Z,4µm,22.6s						
CNSH				LR	LR		
	comp=Z,4µm,24.5s						
QZH	Quanzhou	140.89	328	*e*PKP	PKiKP	05 43 24.8	+4.8
QZH				PP	PP	05 46 20.8	+4.0
KNMB	Chin-men Tao	141.39	328	IAMs_20	IAMs_20	06 54 27.7	
	comp=Z,3µm,20.0s						
ASAR	Alice Springs	141.71	242	PKhKP	PKPpre	05 43 13.0	
	comp=Z,7.8nm,0.6s,baz=122,slow=3.8,SNR=46						
LSA	Lhasa	141.73	9	IAMs_20	IAMs_20	06 56 23.7	
	comp=Z,2µm,20.0s						
LSA	Lhasa	141.73	9	PKP	PKPdf	05 43 19.0	-0.4
LSA				LR	LR		
	comp=Z,2µm,24.9s						
LSA				LR	LR		
	comp=Z,4µm,23.9s						
JHNI	Jhansi	141.80	28	*e*P	PKPdf	05 43 18.0	-1.1
WRA	Warramunga Arr	142.27	248	PKhKP	PKPpre	05 43 16.0	
	comp=Z,22nm,0.8s,baz=104,slow=2.8,SNR=60						
BHPL	Bhopal	143.13	31	*e*P	PKPbc	05 43 20.4	+2.0
ALBI	Allahabad	143.35	24	*e*P	PKPbc	05 43 20.7	+1.9
NRDN	NARMADA NAGAR	143.43	32	*e*P	PKPbc	05 43 20.8	+1.7
GULI	GuiLin	144.19	339	PKP	PKPbc	05 43 21.8	+0.5
GYA	Guiyang	144.21	345	PKP	PKPbc	05 43 23.0	+1.5
POO	Poona	144.74	41	*e*P	PKPab	05 43 22.8	-0.4
TEZP	TEZPUR	144.99	7	*e*P	PKPab	05 43 23.6	-0.2
GZH	Guangzhou	144.99	333	PKP	PKPab	05 43 23.5	-0.4
GZH				SS	SS	06 05 25.0	-3.4
GZH				LR	LR		
	comp=Z,2µm,22.4s						
GZH				LR	LR		
	comp=Z,3µm,21.6s						
GZH				LR	LR		
	comp=Z,6µm,18.6s						
PZH	PanZhiHua	145.08	353	PKPbc	PKPbc	05 43 23.0	-1.3
PZH				PKPab	PKPdf	05 43 25.3	+0.4
PZH				PP	PP	05 46 45.5	+3.9
PZH				AMB	AMB		
	comp=Z,480nm,6.6s						
PZH				LR	LR		
	comp=Z,3µm,23.0s						
PZH				LR	LR		
	comp=Z,3µm,22.4s						
PZH				LR	LR		
	comp=Z,3µm,21.8s						
NGP	Nagpur	145.70	31	*e*P	PKPdf	05 43 24.8	-1.2
KAD	Karad	145.84	42	*e*P	PKPdf	05 43 25.1	-1.3
KOHI	KOHIMA	146.01	5	*e*P	PKPdf	05 43 25.4	-1.1
KMI	Kunming	146.30	351	⇓PKPbc	PKPdf	05 43 26.8	-0.4
KMI				pPKP	pPKPbc	05 43 37.3	-1.2
KMI				LR	LR		
	comp=Z,3µm,21.4s						
KMI				LR	LR		
	comp=Z,2µm,19.3s						
KMI				LR	LR		
	comp=Z,3µm,24.6s						
BLSP	Bilaspur	146.31	26	*e*P	PKPdf	05 43 25.9	-1.1
KNTI	KHUNTI	146.69	20	*e*P	PKPdf	05 43 26.4	-1.2
TNCH	TengChong	146.81	358	PKPbc	PKPdf	05 43 27.0	-1.0
TNCH				PKPab	PKPbc	05 43 30.3	+0.6
TNCH				PP	PP	05 46 53.8	+1.9
TNCH				AMB	AMB		
	comp=Z,630nm,4.6s						
TNCH				LR	LR		
	comp=Z,2µm,21.1s						
TNCH				LR	LR		
	comp=Z,2µm,18.6s						
TNCH				LR	LR		
	comp=Z,6µm,21.5s						
IMP	Imphal	146.88	5	*e*P	PKPdf	05 43 26.8	-1.1
JHSG	JHARSUGUGA	147.31	24	*e*P	PKPdf	05 43 27.2	-1.4
AZL	Aizawl	147.81	8	*e*P	PKPdf	05 43 28.4	-1.2
DAV	Davao City (W)	147.83	298	IAMs_20	IAMs_20	06 45 44.6	
	comp=Z,2µm,22.0s						
DAV	Davao City (W)	147.83	298	PKPbc	PKPbc	05 43 33.6	+1.0
	comp=Z,215nm,0.3s,baz=345,slow=1.5,SNR=4.9						
DAV	Davao City (W)	147.83	298	P	PKPbc	05 43 33.0	+0.4
HYB	Hyderabad	148.46	36	*e*PKPbc	PKPbc	05 43 33.8	-0.4
HYB				*e*PP	PP	05 47 04.0	+1.8
HYB				*e*SKSdf	SKSdf	05 50 36.8	-0.5
HYB				*e*SKKSac	SKKSac	05 53 51.4	-1.6
TNTI	Ternate	148.59	285	IAMs_20	IAMs_20	06 43 33.8	
	comp=Z,2µm,19.0s						
NWAO	Narrogin (SRO)	149.30	214		PKPbc	05 43 36.1	+0.2
NWAO	Narrogin (SRO)	149.30	214	PKP2	PKPbc	05 43 36.1	+0.2
H01W1	Cape Leeuwin H	149.33	208	T	T	08 31 12.3	
	baz=144,slow=76,SNR=17						
H01W2	Cape Leeuwin H	149.34	208	T	T	08 31 08.9	
	baz=144,slow=76,SNR=17						
H01W3	Cape Leeuwin H	149.35	208	T	T	08 31 12.9	
	baz=144,slow=76,SNR=16						
RAGD	RAYAGADA	149.42	26	*e*P	PKPdf	05 43 30.9	-1.2
QIZ	Qiongzhong	150.08	335	PKPbc	PKiKP	05 43 40.0	+0.9
QIZ				PP	PP	05 47 13.5	+2.3
FITZ	Fitzroy Crossi	150.70	248		PKPdf	05 43 33.7	-0.5
MDRS	Chennai	152.87	39	*e*P	PKPdf	05 43 36.2	-1.3
CHTO	Chiang Mai	152.96	356	PKP	PKPdf	05 43 37.1	-0.5
KOD	Kodaikanal	153.05	47	*e*P	PKPdf	05 43 36.7	-1.5
CMAR	Chiang Mai Arr	153.31	356		PKPdf	05 43 37.6	-0.5
CMAR	Chiang Mai Arr	153.31	356	PKP	PKPdf	05 43 38.3	+0.2
	comp=Z,17nm,0.9s,baz=304,slow=2.2,SNR=35						
CMAR				PKPbc	PKPbc	05 43 44.9	-0.7
	comp=Z,29nm,0.9s,baz=323,slow=2.2,SNR=14						
CMAR				PKPab	sPKPbc	05 43 56.9	-2.6
	comp=Z,24nm,0.9s,baz=334,slow=3.4,SNR=5.1						
MBWA	Marble Bar	154.80	237		PKPdf	05 43 41.2	+1.1
MBWA	Marble Bar	154.80	237	PKP	PKPdf	05 43 39.6	-0.5
MMRI	Maumere	155.23	267	IAMs_20	IAMs_20	06 53 09.2	
	comp=Z,2µm,20.0s						
KKM	Kota Kinabalu	156.25	306	IAMs_20	IAMs_20	07 02 57.4	
	comp=Z,2µm,22.0s						
KAPI	Kappang	157.36	277	IAMs_20	IAMs_20	06 46 58.0	
	comp=Z,2µm,21.0s						

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*UCR **26** 05:29:31.3±0.8, 8°.35N×82°.89W, h31^{km}±2^{km}, MW3.9, Fault plane solution: NP1:φs109.57000°, δ57.39000°, λ13.47000°.*

*UPA **26** 05:29:32.1±0.8, 8°.44N×82°.82W, h38^{km}±6^{km}, MW3.4*

ISC 26 05:29:31.2±1.1, **8°.38N**±0°.04×**82°.89W**±0°.03, **h33**^{km}±3^{km}, **n37**, σ**0^{s}.50**/53, **5D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPPC	Paso Canoas	0.16	19	*e*P	Pb	05 29 37.4	0.0
LPPC				*e*S	Sb	05 29 42.0	+0.4
NELY	Ciudad Neily	0.27	348	*e*P	Pn	05 29 38.6	-0.2
NELY				*e*S	Sb	05 29 44.4	+0.8
LMNES	Limones	0.28	174	*e*P	Pn	05 29 39.3	+0.3
FITO	Golfito	0.35	313	*e*P	Pb	05 29 39.0	-0.6
FITO				*e*S	Sn	05 29 45.0	-0.8
MCANO	Manzana, Boque	0.36	59	*e*P	Pb	05 29 39.9	+0.1
EDAD	Golfito	0.38	314	*e*P	Pb	05 29 39.5	-0.6
EDAD				*e*S	Sb	05 29 46.1	-0.1
MLIR3	Monte Lirio, C	0.41	9	*i* P	Pn	05 29 41.2	+0.2
MLIR3				*e*S	Sn	05 29 47.1	-0.3
RSRNO	Rio Sereno	0.43	4	*e*P	Pn	05 29 41.4	+0.2
DVD	David	0.44	83	⇓*i*P	Pb	05 29 40.7	-0.1
DVD				*i* S	Sn	05 29 47.8	-0.1
VITO	San Vito	0.44	350	*e*P	Pb	05 29 41.5	+0.5
CSTBL	De las Acacias	0.45	86	*e*P	Pb	05 29 40.7	-0.2
CLLRA	Cordillera,	0.45	37	*e*P	Pb	05 29 41.1	-0.1
BRU2	Volcan	0.45	26	*e*P	Pb	05 29 41.4	+0.2
BRU2				*e*S	Sn	05 29 49.0	+0.4
BRU2	Volcan	0.45	26	*e*P	Pb	05 29 41.4	+0.2
BRU2				*i* S	Sn	05 29 48.9	+0.3
SCLRA	Santa Clara, W	0.46	13	*e*P	Pb	05 29 41.7	+0.4
PEDE3	Pedregal, Chir	0.46	90	⇓*i*P	Pb	05 29 41.0	-0.2
PEDE3				*i* S	Sn	05 29 48.3	-0.3
LOCO3	Loma Colorada,	0.47	87	⇓*i*P	Pb	05 29 41.2	-0.1
LOCO3				*i* S	Sb	05 29 47.9	-0.3
LOMA3	Las Lomas, Chi	0.49	85	*i* P	Pb	05 29 41.4	-0.3
LOMA3				*e*S	Sb	05 29 48.3	-0.6
PTAR3	Potrerillos Ar	0.50	52	⇓*i*P	Pb	05 29 41.8	0.0
PTAR3				*i* S	Sb	05 29 48.6	-0.5
BC3P	Paso Ancho	0.51	33	*i* P	Pb	05 29 42.1	0.0
BC3P				*i* S	Sn	05 29 50.6	+0.5
BQTLY	Boquete Panama	0.56	49	*e*P	Pn	05 29 42.5	-0.5
ALCO	Alturas Coton,	0.56	6	*e*P	Pn	05 29 42.7	-0.4
ALCO				*e*S	Sn	05 29 51.9	+0.5
BQSF3	Alto Boquete,	0.57	52	*i* P	Pn	05 29 42.7	-0.4
PSOM3	Paja de Sombre	0.64	62	⇓*i*P	Pn	05 29 43.4	-0.6
PSOM3				*e*S	Sn	05 29 51.5	-1.4
EDP2	Potrero Grande	0.69	336	*e*P	Pn	05 29 45.1	+0.4
PANP	Palmar Norte	0.80	316	*e*P	Pn	05 29 46.4	+0.2
PBNVO	Pueblo Nuevo,	0.85	54	*e*P	Pn	05 29 46.6	-0.3
RBALA	Bur	0.88	56	*e*P	Pn	05 29 47.2	0.0
BURE	Buenos Aires	0.90	331	*e*P	Pn	05 29 47.9	+0.3
DRK0	Durika	0.94	338	*e*P	Pn	05 29 48.5	+0.2
DRK0	Durika	0.94	338	*i* P	Pn	05 29 48.6	+0.3
RMDIO	Remedios, Chir	1.06	98	*e*P	Pn	05 29 50.1	+0.4
KKNTU	Kakintº	1.16	67	*e*P	Pn	05 29 51.0	-0.1
PDCAN	Manzana , Fuen	1.18	94	*e*P	Pn	05 29 51.2	-0.2
BRIBI	Bribri	1.23	3	*e*P	Pb	05 29 54.8	+0.9
PIEC	Cerro El Cedra	1.62	319	*e*P	Pb	05 29 59.9	-0.8
RSUS3	Rio de Jesus,	1.76	103	*e*P	Pn	05 30 00.1	+0.8
RSUS3				*i* S	Sn	05 30 22.0	+1.4

GUC 26 05:30:17.6±0.5, **32°.31S**×**71°.87W**, **h24**^{km}±25^{km}, **ML3.2, 3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	Catapilco	0.54	118	⇓*i*P	Pb	05 30 28.1	-0.5
VA06				*e*S	Sb	05 30 35.6	-0.3
VA06				IAML		05 30 36.8	
	comp=N,2µm,0.2s						
VA01	Torpederas	0.74	165	*e*P	Pb	05 30 31.0	-0.7
ROCH	El Roble	0.98	133	*e*P	Pb	05 30 35.1	-0.9
ROCH				IAML		05 30 51.5	
	comp=N,705nm,0.4s						
MT02	Curacav	1.13	147	*e*P	Pn	05 30 37.3	-0.6
MT02				*e*S	Sn	05 30 52.0	-0.7
VA03	San Esteban	1.20	113	⇓*i*P	Pn	05 30 38.5	-0.5
VA03				IAML		05 30 58.4	
	comp=E,2µm,0.1s						
PEL	Peldehue	1.30	130	*e*P	Pn	05 30 40.2	-0.1
PEL				IAML		05 31 00.5	
	comp=N,633nm,0.2s						
CO02	Combarbal	1.33	34	⇓*i*P	Pn	05 30 40.4	-0.4
VA05	Santo Domingo	1.36	171	*e*P	Pn	05 30 40.7	-0.4
VA05				IAML		05 31 10.3	
	comp=E,570nm,0.3s						
MT05	Renca	1.44	139	*e*P	Pn	05 30 42.7	+0.4
MT05				IAML		05 31 05.1	
	comp=E,1µm,0.4s						
MT10	Hacienda Santa	1.48	131	*e*P	Pn	05 30 43.0	+0.2
MT10				IAML		05 31 06.9	
	comp=E,1µm,0.3s						
MT14	Cerro Cal¡n	1.56	134	IAML		05 31 15.0	
	comp=E,561nm,0.6s						
MT01	Popeta	1.64	162	IAML		05 31 16.0	
	comp=E,271nm,0.3s						
MT09	Talagante	1.64	153	IAML		05 31 14.2	
	comp=N,499nm,0.3s						
MT03	Universidad Ad	1.64	136	IAML		05 31 11.3	
	comp=E,794nm,0.2s						
MT15	Las Vizcachas	1.72	139	IAML		05 31 18.9	
	comp=N,592nm,0.4s						
MT12	Pirque	1.80	142	IAML		05 31 20.9	
	comp=E,720nm,0.6s						
MT04	Ro Olivares	1.82	127	IAML		05 31 14.8	
	comp=E,206nm,0.2s						

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*UCR **26** 05:33:14.2±0.8, 8°.32N×82°.82W, h26^{km}±2^{km}, MW4.0*

*UPA **26** 05:33:15.5±1.1, 8°.43N×82°.79W, h22^{km}±3^{km}, MW3.8, Fault plane solution: NP1:φs31.00000°, δ68.00000°, λ-149.00000°.*

ISC 26 05:33:14.7±0.9, **8°.38N**±0°.03×**82°.81W**±0°.02, **h29**^{km}±6^{km}, **n54**, σ**0^{s}.63**/78, **11C-17D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.04	30	⇓*e*P	Pb	05 33 19.5	0.0
LESP3				*e*S	Sb	05 33 21.8	-1.0
LPPC	Paso Canoas	0.16	349	⇓*e*P	Pb	05 33 20.3	0.0
LMNES	Limones	0.28	191	*e*P	Pb	05 33 20.8	-0.9
LMNES	Limones	0.28	191	⇑*e*P	Pn	05 33 23.3	+0.4
LMNES				*e*S	Sn	05 33 29.0	+0.9
MCANO	Manzana, Boque	0.30	50	*e*P	Pb	05 33 22.3	+0.2
MCANO	Manzana, Boque	0.30	50	⇓*i*P	Pb	05 33 22.4	+0.2
MCANO				*e*S	Sb	05 33 27.3	+0.1
NELY	Ciudad Neily	0.31	333	*e*P	Pb	05 33 22.0	-0.1
DVD	David	0.36	80	⇓*i*P	Pb	05 33 22.8	0.0
DVD				*e*S	Sb	05 33 29.3	+0.9
CSTBL	De las Acacias	0.36	84	*e*P	Pb	05 33 22.4	-0.5
CSTBL	De las Acacias	0.36	84	⇓*i*P	Pb	05 33 22.9	0.0
CSTBL				*e*S	Sb	05 33 28.9	+0.4
PEDE3	Pedregal, Chir	0.38	89	⇓*i*P	Pb	05 33 23.0	-0.2
PEDE3				*e*S	Sb	05 33 29.6	+0.6
LOCO3	Loma Colorada,	0.39	85	⇓*i*P	Pb	05 33 23.2	0.0
LOCO3				*e*S	Sn	05 33 30.6	-0.2
CLLRA	Cordillera,	0.41	28	*e*P	Pb	05 33 23.9	+0.1
CLLRA	Cordillera,	0.41	28	⇑*e*P	Pb	05 33 23.9	+0.1
CLLRA				*e*S	Sb	05 33 30.8	+0.7
LOMA3	Las Lomas, Chi	0.42	82	⇓*i*P	Pb	05 33 23.6	-0.2
LOMA3				*e*S	Sb	05 33 30.4	+0.5
MLIR3	Monte Lirio, C	0.42	358	⇑*e*P	Pb	05 33 24.1	+0.3
MLIR3				*e*S	Sb	05 33 29.9	-0.1
FITO	Golfito	0.42	306	*e*P	Pb	05 33 22.7	-1.1
BRU2	Volcan	0.43	16	⇑*e*P	Pb	05 33 24.1	0.0
BRU2	Volcan	0.43	16	⇑*i*P	Pb	05 33 24.1	0.0
BRU2				*e*S	Sn	05 33 31.8	-0.3
PTAR3	Potrerillos Ar	0.44	44	*e*P	Pb	05 33 24.3	+0.1
PTAR3				*e*S	Sb	05 33 30.9	+0.2
RSRNO	Rio Sereno	0.44	353	⇓*i*P	Pn	05 33 24.8	-0.4
EDAD	Golfito	0.45	308	*e*P	Pb	05 33 23.2	-1.1
EDAD				*e*S	Sb	05 33 29.9	-0.9
SCLRA	Santa Clara, W	0.46	3	*e*P	Pb	05 33 24.5	+0.1
SCLRA	Santa Clara, W	0.46	3	⇑*e*P	Pb	05 33 24.1	-0.3
VITO	San Vito	0.47	340	*e*P	Pb	05 33 24.9	+0.3
CHIR3	Chiriqui UPA,	0.47	88	⇓*i*P	Pb	05 33 24.3	-0.3
CHIR3				*e*S	Sb	05 33 32.1	+0.7
BC3P	Paso Ancho	0.48	24	*e*P	Pb	05 33 24.7	-0.2
BC3P				*e*S	Sn	05 33 33.5	+0.2
BQTLY	Boquete Panama	0.51	42	*e*P	Pb	05 33 25.2	-0.2
BQTLY	Boquete Panama	0.51	42	⇓*i*P	Pb	05 33 25.2	-0.2
BQTLY				*e*S	Sb	05 33 31.4	-1.2
BQSF3	Alto Boquete,	0.52	45	*e*P	Pb	05 33 25.1	-0.3
BQSF3				*e*S	Sb	05 33 33.4	+0.6
PSOM3	Paja de Sombre	0.57	57	⇓*e*P	Pb	05 33 25.7	-0.6
PSOM3				*e*S	Sb	05 33 33.8	-0.3
ALCO	Alturas Coton,	0.57	357	⇑*e*P	Pb	05 33 25.8	-0.6
EDP2	Potrero Grande	0.73	330	*e*P	Pb	05 33 28.6	-0.3
PBNVO	Pueblo Nuevo,	0.80	50	*e*P	Pn	05 33 29.2	-0.8
RBALA	Bur	0.82	52	*e*P	Pn	05 33 29.7	-0.6
RBALA	Bur	0.82	52	*e*S	Sb	05 33 41.1	+0.1
PANP	Palmar Norte	0.87	312	*e*P	Pn	05 33 30.4	-0.5
BURE	Buenos Aires	0.95	327	*e*P	Pn	05 33 31.7	-0.5
RMDIO	Remedios, Chir	0.98	99	*e*P	Pn	05 33 31.9	-0.6
RMDIO	Remedios, Chir	0.98	99	⇑*e*P	Pn	05 33 32.1	-0.4
RMDIO				*e*S	Sn	05 33 44.8	-0.6
DRK0	Durika	0.98	334	*e*P	Pn	05 33 32.2	-0.5
DRK0	Durika	0.98	334	⇑*e*P	Pn	05 33 32.3	-0.4
DRK0				*e*S	Sn	05 33 45.8	+0.1
EDPE	Pejibaye, P	1.08	316	*e*P	Pn	05 33 33.7	-0.3
KKNTU	Kakintº	1.09	65	⇓*i*P	Pn	05 33 32.8	-1.3
PDCAN	Manzana , Fuen	1.10	94	*e*P	Pn	05 33 33.0	-1.2
SAJE	San Jernim	1.19	324	*e*P	Pn	05 33 35.4	-0.1
BRIBI	Bribri	1.24	360	⇓*e*P	Pb	05 33 37.8	+0.4
MESA3	La Mesa, Verag	1.62	98	⇑*i*P	Pn	05 33 41.4	+0.1
MESA3				*e*S	Sb	05 34 02.9	-1.1
GMAL	Guarumal, Vera	1.67	111	*e*P	Pn	05 33 41.2	-0.8
GMAL				*e*S	Sn	05 34 03.1	+0.6
LLNJ	Naranjito	1.68	311	⇓*e*P	Pn	05 33 43.2	+1.1
ABRB	Las Abras (San	1.85	331	⇓*e*P	Pn	05 33 46.1	+1.3
PAR1A	Puntarenas Pro	1.87	310	⇓*e*P	Pn	05 33 46.0	+1.2
AZU	Azuero	2.58	103	⇑*i*P	Pn	05 33 56.0	+1.6
AZU				*e*S	Sn	05 34 25.5	+0.7
JTS	Las Juntas de	2.85	312	*e*P	Pn	05 33 58.9	+0.7
JTS				*e*S	Sn	05 34 31.7	+0.1

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*UCR **26** 05:33:31.0±1.1, 8°.46N×82°.73W, h47^{km}±6^{km}, MW3.7*

*UPA **26** 05:33:33.8±2.6, 8°.42N×82°.76W, h46^{km}±35^{km}, MW3.8*

ISC 26 05:33:32.1±1.4, **8°.37N**±0°.06×**82°.80W**±0°.04, **h35**^{km}, **n18**, σ**2^{s}.11**/23, **Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPPC	Paso Canoas	0.17	347	*e*P	Pn	05 33 39.4	+0.7
LPPC				*e*S	Sn	05 33 44.1	+0.9
LMNES	Limones	0.27	193	*e*P	Pn	05 33 41.1	+1.4
MCANO	Manzana, Boque	0.30	48	*e*P	Pn	05 33 41.8	+1.6
NELY	Ciudad Neily	0.32	333	*e*P	Pn	05 33 40.5	+0.2
NELY				*e*S	Sn	05 33 46.6	+0.8
CSTBL	De las Acacias	0.36	83	*e*P	Pn	05 33 39.9	-0.9
CSTBL	De las Acacias	0.36	83	*e*S	Sn	05 33 49.3	+2.6
CLLRA	Cordillera,	0.42	26	*e*S	Sn	05 33 51.4	+3.0
FITO	Golfito	0.43	306	*e*P	Pn	05 33 41.0	-0.8
FITO				*e*S	Sn	05 33 47.1	-1.4
BRU2	Volcan	0.44	14	*e*P	Pn	05 33 43.8	+1.7
BRU2				*e*S	Sn	05 33 51.2	+2.3
EDAD	Golfito	0.46	308	*e*P	Pn	05 33 41.5	-0.8
EDAD				*e*S	Sn	05 33 47.8	-1.4
SCLRA	Santa Clara, W	0.46	2	*e*P	Pn	05 33 43.6	+1.2
BQTLY	Boquete Panama	0.51	41	*e*P	Pn	05 33 46.7	+3.6
BQTLY				*e*S	Sn	05 33 52.8	+2.0
PBNVO	Pueblo Nuevo,	0.80	49	*e*P	Pn	05 33 43.7	-3.2
RBALA	Bur	0.82	51	*e*P	Pn	05 33 44.3	-2.8
KKNTU	Kakintº	1.09	64	*e*P	Pn	05 33 47.3	-3.6
KKNTU	Kakintº	1.09	64	*e*S	Pn	05 33 47.4	-3.5
SAJE	San Jernim	1.20	324	*e*P	Pn	05 33 50.8	-1.8
BRIBI	Bribri	1.25	359	*e*P	Pn	05 33 52.7	-0.4

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*UCR **26** 05:39:27.6±1.1, 8°.36N×82°.85W, h26^{km}±2^{km}, MW4.2, Fault plane solution: NP1:φs100.00000°, δ60.00000°, λ0.00000°.*

*UPA **26** 05:39:28.4±1.5, 8°.42N×82°.85W, h21^{km}±4^{km}, MD3.4, MW3.9, Fault plane solution: NP1:φs20.00000°, δ31.00000°, λ156.00000°.*

ISC 26 05:39:28.3±0.9, **8°.41N**±0°.03×**82°.85W**±0°.02, **h29**^{km}±4^{km}, **n74**, σ**0^{s}.85**/102, **23C-31D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.06	89	⇓*e*P	Pb	05 39 32.7	-0.5
LESP3				*i* S	Sb	05 39 36.6	0.0
LPPC	Paso Canoas	0.13	6	⇑*e*P	Pb	05 39 33.2	-0.5
LPPC				*e*S	Sn	05 39 37.9	+0.5
NELY	Ciudad Neily	0.26	339	⇑*e*P	Pb	05 39 34.6	-0.5
NELY				*e*S	Sb	05 39 40.4	+0.6
LMNES	Limones	0.30	181	⇑*e*P	Pb	05 39 35.2	-0.5
LMNES	Limones	0.30	181	⇑*i*P	Pb	05 39 35.2	-0.5
LMNES				*e*S	Sb	05 39 40.6	-0.1
MCANO	Manzana, Boque	0.32	59	⇓*e*P	Pb	05 39 35.7	-0.3
MCANO	Manzana, Boque	0.32	59	⇓*i*P	Pb	05 39 35.7	-0.3
FITO	Golfito	0.37	306	⇑*e*P	Pb	05 39 35.0	-1.6
MLIR3	Monte Lirio, C	0.39	4	⇑*i*P	Pb	05 39 37.1	+0.1
MLIR3				*i* S	Sb	05 39 43.5	+0.7
EDAD	Golfito	0.40	308	⇑*e*P	Pb	05 39 35.5	-1.5
EDAD				*e*S	Sb	05 39 42.3	-0.7
DVD	David	0.40	86	⇓*i*P	Pb	05 39 36.5	-0.5
DVD				*i* S	Sb	05 39 42.4	-0.6

CSTBL	De las Acacias	0.41	89⇓	eP	Pb	05 39 36.6	-0.6
CSTBL	De las Acacias	0.41	89⇓	iP	Pb	05 39 36.6	-0.6
CSTBL				eS	Sb	05 39 43.2	0.0
RSRNO	Rio Sereno	0.41	359	eP	Pb	05 39 37.3	0.0
RSRNO	Rio Sereno	0.41	359⇑	iP	Pb	05 39 37.5	+0.1
CLLRA	Cordillera,	0.41	35⇓	eP	Pb	05 39 37.1	-0.3
CLLRA	Cordillera,	0.41	35⇓	iP	Pb	05 39 37.1	-0.3
CLLRA				eS	Sn	05 39 45.1	-0.1
BRU2	Volcan	0.42	22⇓	eP	Pb	05 39 37.2	-0.2
BRU2	Volcan	0.42	22⇓	iP	Pb	05 39 37.2	-0.2
BRU2				eS	Sn	05 39 45.7	+0.3
PEDE3	Pedregal, Chir	0.43	93⇓	iP	Pb	05 39 36.8	-0.7
PEDE3				i S	Sb	05 39 42.4	-1.4
VITO	San Vito	0.43	344⇑	eP	Pb	05 39 37.5	-0.1
VITO				eS	Sn	05 39 45.6	0.0
LOCO3	Loma Colorada,	0.43	89⇓	iP	Pb	05 39 37.0	-0.5
LOCO3				i S	Sb	05 39 43.0	-0.8
SCLRA	Santa Clara, W	0.43	9⇑	eP	Pb	05 39 37.7	+0.1
SCLRA	Santa Clara, W	0.43	9⇑	iP	Pb	05 39 37.8	+0.1
PTAR3	Potrerillos Ar	0.45	51⇓	iP	Pb	05 39 37.7	-0.3
PTAR3				i S	Sb	05 39 44.6	-0.1
LOMA3	Las Lomas, Chi	0.46	87⇓	iP	Pb	05 39 37.2	-0.7
LOMA3				i S	Sb	05 39 45.0	+0.4
BC3P	Paso Ancho	0.47	30⇓	iP	Pb	05 39 37.9	-0.5
BC3P				i S	Sb	05 39 46.1	+0.8
CHIR3	Chiriqui UPA,	0.52	91⇓	iP	Pb	05 39 38.0	-0.9
CHIR3				i S	Sb	05 39 46.3	+0.1
BQTLY	Boquete Panama	0.52	48⇓	eP	Pb	05 39 38.5	-0.6
BQSF3	Alto Boquete,	0.53	51⇓	iP	Pb	05 39 38.5	-0.7
BQSF3				i S	Sb	05 39 47.3	+0.5
ALCO	Alturas Coton,	0.54	2⇑	eP	Pb	05 39 38.7	-0.7
PSOM3	Paja de Sombre	0.59	62⇓	iP	Pb	05 39 39.2	-1.0
PSOM3				i S	Sb	05 39 48.8	+0.4
EDP2	Potrero Grande	0.69	332⇑	eP	Pb	05 39 41.1	-0.7
PBNVO	Pueblo Nuevo,	0.81	53⇓	eP	Pn	05 39 42.4	-1.4
PANP	Palmar Norte	0.81	313⇑	eP	Pn	05 39 42.3	-1.5
RBALA	Bur	0.84	56⇓	eP	Pn	05 39 43.1	-1.0
RBALA	Bur	0.84	56⇓	iP	Pn	05 39 43.1	-1.0
RBALA				eS	Sn	05 39 55.2	-0.2
BURE	Buenos Aires	0.90	328⇑	eP	Pn	05 39 44.0	-1.1
DRK0	Durika	0.94	336	eP	Pn	05 39 44.4	-1.3
DRK0	Durika	0.94	336⇑	eP	Pn	05 39 44.4	-1.3
DRK0				i S	Sn	05 39 57.0	-1.2
EDPE	Pejibaye, P	1.03	317⇑	eP	Pn	05 39 45.9	-0.9
KKNTU	Kakintº	1.12	67⇓	eP	Pn	05 39 46.8	-1.2
KKNTU	Kakintº	1.12	67⇓	iP	Pn	05 39 46.9	-1.2
KKNTU				eS	Sn	05 40 01.7	-0.8
ISBTO	Bastimentos Is	1.13	34	eP	Pb	05 39 49.1	-0.1
SAJE	San Jernim	1.14	325	eP	Pn	05 39 47.2	-1.2
PDCAN	Manzana , Fuen	1.15	96	eP	Pn	05 39 46.9	-1.6
BRIBI	Bribri	1.21	2	eP	Pb	05 39 50.7	+0.2
PIEC	Cerro El Cedra	1.63	318	eP	Pn	05 39 55.0	-0.3
MESA3	La Mesa, Verag	1.67	99⇓	eP	Pn	05 39 55.4	-0.2
MESA3				eS	Sn	05 40 16.9	+0.8
GMAL	Guarumal, Vera	1.73	112	eP	Pn	05 39 56.2	-0.1
GMAL	Guarumal, Vera	1.73	112	eP	Pn	05 39 56.2	-0.1
GMAL				i S	Sn	05 40 18.8	+1.3
RSUS3	Rio de Jesus,	1.73	104⇓	eP	Pn	05 39 57.5	+1.1
RSUS3				i S	Sn	05 40 18.1	+0.6
VERB	Verbena	1.74	332⇑	eP	Pn	05 39 57.0	+0.3
ABE2	San Pablo	1.75	317	eP	Pn	05 39 57.8	+0.9
PCAYA	Pacayas	1.77	328	eP	Pn	05 39 57.9	+0.6
VTCV	VTCV, Calle Va	1.79	331⇑	eP	Pn	05 39 57.7	+0.3
RESJ	San Isidro (Tu	1.79	334⇑	eP	Pn	05 39 58.0	+0.7
IRES	Siquirres	1.80	339	eP	Pn	05 39 58.5	+1.2
ABRB	Las Abras (San	1.81	332⇓	eP	Pn	05 39 58.6	+0.9
CVTV	Tajo	1.82	331⇑	eP	Pn	05 39 58.6	+0.7
PAR1A	Puntarenas Pro	1.82	311	eP	Pn	05 39 58.4	+0.7
CVTQ	Turrialba Volc	1.83	330	eP	Pn	05 39 58.9	+0.8
VTR0	Volcan Turrial	1.83	331	eP	Pn	05 39 58.8	+0.6
STIA3	Santiago, Vera	1.89	99⇓	eP	Pn	05 39 59.6	+1.0
ACOS	Acosta	1.89	317	eP	Pn	05 39 60.0	+1.2
CALO3	Calobre, Verag	1.99	92	eP	Pn	05 40 01.0	+1.0
CALO3				i S	Sb	05 40 26.8	-1.5
BELE	Belen	2.04	320	eP	Pn	05 40 01.8	+1.0
ATEO	Atenas	2.17	316	eP	Pn	05 40 03.8	+1.2
CACAO	El Cacao, Vera	2.24	118⇓	eP	Pn	05 40 03.3	-0.1
CACAO				eS	Sn	05 40 31.7	+1.6
CHIT3	Chitre	2.45	100⇓	eP	Pn	05 40 07.4	+1.1
CBL1	Cabuya	2.50	298⇑	eP	Pn	05 40 06.3	-0.8
TOSI3	Tonosi	2.59	112⇓	eP	Pn	05 40 09.7	+1.5
JTS	Las Juntas de	2.79	312	eP	Pn	05 40 11.9	+0.8
JTS				i S	Sn	05 40 44.7	+0.8
ALIBA	Liberia Airpor	3.43	310⇑	eP	Pn	05 40 22.1	+2.2

IDC **26** *05:40:42.9±0.7, 56.̊18N×164.̊18E, h0km, mb3.7/22, mbtmp3.8/24, ML3.1/2, Error ellipse: s-maj=19.7km s-min=13.0km az=159.0*

KRSC **26** *05:40:43.1±4.1, 56.̊18N×164.̊43E, h47km±31km, Ml4.4*

MOS **26** *05:40:44.3±1.2, 56.̊16N×164.̊38E, h25km, mb4.8/1, Error ellipse: s-maj=8.5km s-min=5.2km az=49.2*

NEIC **26** *05:40:44.3±1.5, 56.̊11N±0.̊09×164.̊4E±0.̊1, h10km±1km, mb4.2/21, Error ellipse: s-maj=16.0km s-min=9.0km az=207.0*

ISC 26 05:40:44.1±0.4**, 56.̊14N**±0.̊05×**164.̊41E**±0.̊04**, h10km, n134, σ1.̊08**/132**, mb3.9**/27**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.89	275	PN	Pg	05 40 58.9	-2.4
KBTR	Krutoberegovo	0.89	275	eP	Pg	05 40 59.0	-2.4
KBG	Krutoberegovo	0.96	277	PN	Pg	05 40 59.9	-2.6
KBG	Krutoberegovo	0.96	277	eP	Pg	05 40 60.0	-2.6
BKI	Bering	1.29	136	PN	Pn	05 41 06.8	-1.4
BKI				S	Sb	05 41 24.0	-1.1
BKI	Bering	1.29	136	eP	Pn	05 41 06.9	-1.4
BKI				eS	Sb	05 41 24.0	-1.1
SMKR	Semkarok	1.69	286	PN	Pn	05 41 07.7	-6.1
SMKR	Semkarok	1.69	286	eP	Pn	05 41 07.8	-6.1
ZLN	Zelenaya	2.03	268	PN	Pn	05 41 18.4	0.0
ZLN	Zelenaya	2.03	268	eP	Pn	05 41 18.5	0.0
CIRR	Tsirk	2.05	271	PN	Pn	05 41 18.4	-0.4
CIRR	Tsirk	2.05	271	eP	Pn	05 41 18.4	-0.4
LGNR	Loginova	2.08	270	PN	Pn	05 41 19.0	-0.4
LGNR	Loginova	2.08	270	eP	Pn	05 41 19.1	-0.4
BZGR	Bezymyannyi-Gr	2.09	266	PN	Pn	05 41 18.9	-0.4
BZGR	Bezymyannyi-Gr	2.09	266	eP	Pn	05 41 19.0	-0.4
KRSR	Krestovskiy	2.15	274	PN	Pn	05 41 19.4	-0.7
KRSR	Krestovskiy	2.15	274	eP	Pn	05 41 19.4	-0.7
BZWR	Bezymyannyi-We	2.20	267	PN	Pn	05 41 21.6	+0.7
BZWR	Bezymyannyi-We	2.20	267	eP	Pn	05 41 21.7	+0.7
MKZ	Mys Kozlova	2.21	225	PN	Pn	05 41 19.1	-1.7
MKZ	Mys Kozlova	2.21	225	eP	Pn	05 41 19.1	-1.7
BZMR	Bezymyannaya	2.21	266	PN	Pn	05 41 20.6	-0.3
BZMR	Bezymyannaya	2.21	266	eP	Pn	05 41 20.7	-0.3
KIRR	Kirishev	2.29	267	PN	Pn	05 41 21.6	-0.5
KIRR	Kirishev	2.29	267	eP	Pn	05 41 21.7	-0.5
KPT	Kopyto	2.36	267	PN	Pn	05 41 22.8	-0.1
KPT	Kopyto	2.36	267	eP	Pn	05 41 22.8	-0.1
KMNR	Kamenistaya	2.38	262	PN	Pn	05 41 23.5	+0.2
KMNR	Kamenistaya	2.38	262	eP	Pn	05 41 23.5	+0.2
TUMD	Tumrok D	2.46	249	PN	Pn	05 41 23.8	-0.5
TUMD	Tumrok D	2.46	249	eP	Pn	05 41 23.9	-0.5
KOZ	Kozyrevsk	2.54	270	PN	Pn	05 41 25.9	+0.5
KOZ	Kozyrevsk	2.54	270	eP	Pn	05 41 26.0	+0.5
SRDR	Sredinnyy	2.63	276	PN	Pn	05 41 26.8	+0.2
SRDR	Sredinnyy	2.63	276	eP	Pn	05 41 26.8	+0.2
ESO	Esso	3.21	268	PN	Pn	05 41 34.3	-0.3
ESO	Esso	3.21	268	eP	Pn	05 41 34.4	-0.3
KII	Karymskiy	3.55	236	PN	Pn	05 41 40.3	+1.0
KII	Karymskiy	3.55	236	eP	Pn	05 41 40.3	+1.0
SPN	Mys Shipunski	3.98	222	PN	Pn	05 41 44.1	-1.0
SPN	Mys Shipunski	3.98	222	eP	Pn	05 41 44.1	-1.0
NLC	Nalytchevo	4.19	227	PN	Pn	05 41 48.3	+0.4
NLC	Nalytchevo	4.19	227	eP	Pn	05 41 48.3	+0.4
SDLR	Sedlovina	4.30	230	PN	Pn	05 41 50.0	+0.3
SDLR	Sedlovina	4.30	230	eP	Pn	05 41 50.0	+0.3
KRER	Koryakskii	4.34	231	PN	Pn	05 41 51.3	+1.0
KRER	Koryakskii	4.34	231	eP	Pn	05 41 51.4	+1.0
SMAR	Somma	4.35	231	PN	Pn	05 41 50.8	+0.4
SMAR	Somma	4.35	231	eP	Pn	05 41 50.8	+0.4
KRX	Arik	4.35	232	PN	Pn	05 41 50.7	+0.4
KRX	Arik	4.35	232	eP	Pn	05 41 50.8	+0.4
AVH	Avacha	4.38	231	PN	Pn	05 41 51.1	+0.5
AVH	Avacha	4.38	231	eP	Pn	05 41 51.1	+0.5
UGLR	Uglovaya	4.38	230	PN	Pn	05 41 51.0	+0.3
UGLR	Uglovaya	4.38	230	eP	Pn	05 41 51.0	+0.3
KOK	Koryaka	4.40	232	PN	Pn	05 41 51.9	+0.9
KOK	Koryaka	4.40	232	eP	Pn	05 41 51.9	+0.9
GNL	Ganaly	4.47	239	PN	Pn	05 41 52.8	+0.9
GNL	Ganaly	4.47	239	eP	Pn	05 41 52.8	+0.9
PET	Petropavlovsk	4.58	229	Pn	Pn	05 41 52.3	-1.1
KRMR	Karymshinskiy	4.94	230	PN	Pn	05 42 00.0	+1.7
KRMR	Karymshinskiy	4.94	230	eP	Pn	05 42 00.0	+1.7
PEA0B	Petropavlovsk-	4.95	235		Pn	05 41 58.0	-0.4
PEA0B	Petropavlovsk-	4.95	235	PN	Pn	05 41 58.0	-0.4
PETK	Petropavlovsk-	4.95	235	Pn	Pn	05 41 57.9	-0.5
PETK	Petropavlovsk-	4.95	235	Pn	Pn	05 41 58.5	+0.1
	1.0nm,0.3s,baz=67,slow=20,SNR=6.6						
PETK				Sn	Sn	05 43 01.2	+5.6
	0.1nm,0.3s,baz=189,slow=27,SNR=1.3						
	4.5nm,0.6s						
PETK	Petropavlovsk-	4.95	235	PN	Pn	05 41 57.9	-0.5
RUS	Russkaya	5.07	225	PN	Pn	05 42 00.3	+0.2
RUS	Russkaya	5.07	225	eP	Pn	05 42 00.3	+0.2
GRL	Gorelyy	5.17	228	PN	Pn	05 42 03.3	+1.8
GRL	Gorelyy	5.17	228	eP	Pn	05 42 03.4	+1.8
MTVR	Mutnovka	5.17	227	PN	Pn	05 42 02.5	+0.9
MTVR	Mutnovka	5.17	227	eP	Pn	05 42 02.6	+0.9
ASAK	Asacha	5.36	228	PN	Pn	05 42 05.4	+1.2
ASAK	Asacha	5.36	228	eP	Pn	05 42 05.4	+1.2
SMY	Shemya	6.61	117	Pn	Pn	05 42 22.4	+1.2
SMY	Shemya	6.61	117	PN	Pn	05 42 22.4	+1.2
ADK	Adak	11.90	103	Pn	Pn	05 43 33.0	-0.7
ADK	Adak	11.90	103	PN	Pn	05 43 33.0	-0.7
ATKA	Atka Island	13.12	99	Pn	Pn	05 43 49.2	-1.1
ASAJ	Asahikawa	18.35	238	P	Pn	05 44 58.2	-0.4
	0.2nm,0.3s,baz=351,slow=28,SNR=4.3						
	13nm,0.8s						
F17K	Baldwin Pennin	19.17	44	P	P	05 45 07.3	-0.1
O15K	Ungalikthiuk R	19.22	66	P	P	05 45 07.4	-0.7
O15K				IAmb	IAmb	05 45 23.7	
	comp=Z,9.8nm,0.8s						
H17K	Granite Mounta	19.37	49	P	P	05 45 08.8	-0.8
E18K	Tukpahlearik C	19.70	41		P	05 45 13.6	+0.4
E18K				IAmb	IAmb	05 45 33.8	
	comp=Z,13nm,1.2s						
ERM	Erimo	19.72	233	P	P	05 45 13.3	-0.3
ERM				IAmb	IAmb	05 45 16.5	
	comp=Z,26nm,0.9s						
ERM	Erimo	19.72	233	P	P	05 45 13.3	-0.3
ERM				pmax	pmax		
	comp=Z,26nm,0.9s						
C18K	Utukok River	19.91	37		P	05 45 15.5	0.0
C18K				IAmb	IAmb	05 45 25.5	
	comp=Z,11nm,1.0s						
H18K	Honhosa River	20.05	48	P	P	05 45 17.6	+0.5
M17K	Holitna River	20.24	59	P	P	05 45 20.6	+1.4
M17K				IAmb	IAmb	05 45 38.9	
	comp=Z,12nm,1.1s						
C19K	Lookout Ridge	20.61	37	P	P	05 45 23.6	+0.4
H19K	Roundabout Mou	20.90	47	P	P	05 45 27.4	+1.2
H19K				IAmb	IAmb	05 45 36.5	
	comp=Z,14nm,1.3s						
TIXI	Tiksi	21.52	330	P	P	05 45 31.4	-1.5
	comp=Z,1.0nm,0.3s,baz=124,slow=8.9,SNR=14						
	comp=Z,1.0nm,0.3s						
IMAR	Indian Mountai	22.06	47	P	P	05 45 40.6	+1.8
MLY	Manley	23.25	49	P	P	05 45 52.3	+1.0
C24K	Franklin Bluff	24.49	38	P	P	05 46 04.2	+1.2
ILAR	Eielson Array	24.90	50	P	P	05 46 07.2	+0.4
	comp=Z,0.7nm,0.9s,baz=260,slow=8.1,SNR=5.8						
	comp=Z,0.7nm,0.9s						
D25K	Kavik River	25.24	39	P	P	05 46 10.3	+0.4
D25K				IAmb	IAmb	05 46 18.8	
	comp=Z,6.3nm,0.7s						
BMAR	Burnt Mountain	25.79	44	P	P	05 46 16.5	+1.7
MJAR	Matsushiro Arr	26.40	233	P	P	05 46 20.6	0.0
	comp=Z,2.0nm,0.5s,baz=18,slow=7.6,SNR=6.2						
	comp=Z,2.0nm,0.5s						
INK	Inuvik	29.91	41	P	P	05 46 52.3	+0.7
INK				IAmb	IAmb	05 47 01.2	
	comp=Z,11nm,1.4s						
INK	Inuvik	29.91	41	P	P	05 46 52.3	+0.7
INK				pmax	pmax		
	comp=Z,11nm,1.5s						
SONM	Songino Array	35.70	282	P	P	05 47 40.6	-1.9
	comp=Z,1.3nm,0.8s,baz=55,slow=6.8,SNR=4.5						
	comp=Z,1.3nm,0.8s						
H11N2	WAKE ISLAND Hy	36.40	176	T	T	06 26 41.0	
	baz=357,slow=76,SNR=154						
H11N3	WAKE ISLAND Hy	36.42	176	T	T	06 26 40.2	
	baz=357,slow=76,SNR=135						
H11N1	WAKE ISLAND Hy	36.42	176	T	T	06 26 42.5	
	baz=357,slow=76,SNR=139						
EUNU	Eureka	38.36	15		P	05 48 06.1	+1.4
EUNU				IAmb	IAmb	05 48 24.1	
	comp=Z,5.5nm,1.2s						
YKAW3	Yellowknife Wh	39.19	46	P	P	05 48 11.9	+0.1
YKAW3				IAmb	IAmb	05 48 20.0	
	comp=Z,3.3nm,0.8s						
YKA	Yellowknife Ar	39.22	46	P	P	05 48 13.7	+1.6
	comp=Z,0.3nm,0.6s,baz=301,slow=8.8,SNR=4.3						
	comp=Z,0.3nm,0.6s						
YKAW1	Yellowknife Wh	39.28	46	P	P	05 48 13.0	+0.5
YKAW1				IAmb	IAmb	05 48 20.5	
	comp=Z,3.1nm,0.8s						
SPITS	Spitsbergen Ar	44.52	351	P	P	05 48 55.9	+0.7
	comp=Z,3.8nm,0.9s,baz=102,slow=10,SNR=10						
	comp=Z,3.8nm,0.9s						
SPB2	Spitsbergen Ar	44.52	351	P	P	05 48 55.3	+0.1
BLKN	Baker Lake	45.15	37	P	P	05 48 59.4	-0.8
KURK	Kurchatov	48.26	302	P	P	05 49 25.0	+0.2
KURBB	Kurchatov Arra	48.36	302	P	P	05 49 24.9	-0.6
	comp=Z,0.5nm,0.5s,baz=57,slow=7.8,SNR=4.7						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	49.09	296	P	P	05 49 30.3	-1.1
MKAR	Makanchi Array	49.09	296	P	P	05 49 30.6	-0.8
	comp=Z,0.4nm,0.7s,baz=58,slow=7.8,SNR=4.3						
	comp=Z,0.4nm,0.7s						
O03E	Paynes Creek	49.20	76	P	P	05 49 32.3	0.0
BVAR	Borovoye Array	50.45	309	P	P	05 49 40.9	-0.7
	comp=Z,1.0nm,0.6s,baz=46,slow=8.5,SNR=14						
	comp=Z,1.0nm,0.6s						
NVAR	Mina Array Bea	52.43	75	P	P	05 49 58.5	+1.6
	comp=Z,0.4nm,0.7s,baz=312,slow=8.6,SNR=4.4						
	comp=Z,0.4nm,0.7s						
PDAR	Pinedale Array	53.90	65	P	P	05 50 09.2	+1.6
	comp=Z,0.2nm,0.5s,baz=312,slow=4.0,SNR=8.5						
	comp=Z,0.2nm,0.5s						
ULM	Lac du Bonnet	54.92	51	P	P	05 50 14.7	+0.1
	comp=Z,1.2nm,0.6s,baz=323,slow=6.5,SNR=5.1						
	comp=Z,1.2nm,0.6s						
CMAR	Chiang Mai Arr	61.23	260	P	P	05 50 59.0	-0.1
	comp=Z,0.6nm,0.3s,baz=14,slow=7.1,SNR=5.0						
	comp=Z,0.6nm,0.3s						
SCHQ	Schefferville	61.76	31	P	P	05 51 03.5	+1.2
	comp=Z,0.8nm,0.6s,baz=332,slow=6.6,SNR=6.2						
	comp=Z,0.8nm,0.6s						
TXAR	Lajitas Array	67.20	71	P	P	05 51 39.2	+0.8
	comp=Z,0.6nm,0.8s,baz=304,slow=4.3,SNR=6.7						
	comp=Z,0.6nm,0.8s						
AKASG	Malin Array Be	67.23	331	P	P	05 51 36.4	-1.7
	comp=Z,0.1nm,0.3s,baz=31,slow=6.1,SNR=6.1						
	comp=Z,0.1nm,0.3s						
EKA	Eskdalemuir Ar	68.42	352	P	P	05 51 45.5	-0.1
	comp=Z,0.8nm,0.7s,baz=15,slow=6.9,SNR=3.8						
	comp=Z,0.8nm,0.7s						
KBZ	Khabaz	68.98	319	P	P	05 51 50.8	+1.6
	comp=Z,1.4nm,0.9s,baz=351,slow=5.6,SNR=6.1						
	comp=Z,1.4nm,0.9s						
GERES	GERESS Array B	72.56	340	P	P	05 52 11.8	+0.7
	comp=Z,0.3nm,0.2s,baz=348,slow=5.9,SNR=3.6						
	comp=Z,0.3nm,0.2s						
BRTR	Keskin Array B	75.78	323	P	P	05 52 29.4	-0.7
	comp=Z,0.3nm,0.5s,baz=315,slow=0.3,SNR=5.0						
	comp=Z,0.3nm,0.5s						
ASAR	Alice Springs	83.61	208	P	P	05 53 12.2	-0.2
	comp=Z,0.3nm,0.5s,baz=13,slow=4.6,SNR=5.9						
	comp=Z,0.3nm,0.5s						
ESDC	Sonseca Array	84.04	351	P	P	05 53 13.9	-0.7
	comp=Z,0.3nm,0.7s,baz=354,slow=5.0,SNR=5.2						
	comp=Z,0.3nm,0.7s						
QSPA	South Pole Qui	145.90	180	PKPbc	PKPdf	06 00 21.2	-0.3
	comp=Z,0.6nm,0.6s,baz=295,slow=2.5,SNR=7.1						

UPA **26** *05:41:21.8±0.8, 8.̊33N×82.̊85W, h16km±3km, MW3.4*

UCR **26** *05:41:22.1±0.6, 8.̊33N×82.̊83W, h32km±1km, MW3.9, Fault plane solution: NP1:φs140.00000°, δ35.00000°, λ90.00000°.*

ISC 26 05:41:22.8±1.0**, 8.̊36N**±0.̊03×**82.̊81W**±0.̊02**, h10km, n44, σ1.̊47**/66**, 6C-1D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.05	21⇑	iP	Pg	05 41 28.0	+3.1
LESP3				eS	Sg	05 41 31.2	+5.0
LESP3	La Esperanza,	0.05	21⇑	iP	Pg	05 41 20.2	-4.6
LESP3				eS	Sg	05 41 30.8	+4.5
LPPC	Paso Canoas	0.17	350	eP	Pg	05 41 28.7	+2.1
LPPC				eS	Sg	05 41 33.5	+4.3
LMNES	Limones	0.26	191	eP	Pg	05 41 29.5	+1.3
MCANO	Manzana, Boque	0.31	48	eP	Pb	05 41 30.6	0.0
NELY	Ciudad Neily	0.32	335	eP	Pb	05 41 30.1	-0.6
NELY				eS	Sb	05 41 36.2	+0.3
DVD	David	0.36	78	eP	Pg	05 41 29.9	-0.1
DVD				eS	Sb	05 41 37.7	+0.6
DVD	David	0.36	78	eP	Pg	05 41 30.0	0.0
DVD				eS	Sb	05 41 37.0	-0.1
CSTBL	De las Acacias	0.37	82	eP	Pb	05 41 31.1	-0.3
CSTBL	De las Acacias	0.37	82	eS	Sb	05 41 37.3	0.0
PEDE3	Pedregal, Chir	0.38	86	eP	Pg	05 41 30.1	-0.3
PEDE3				eS	Sb	05 41 37.2	-0.5
PEDE3	Pedregal, Chir	0.38	86⇑	iP	Pg	05 41 30.1	-0.3
PEDE3				eS	Sb	05 41 37.7	0.0
LOCO3	Loma Colorada,	0.39	83	eP	Pg	05 41 30.3	-0.2
LOCO3				eS	Sg	05 41 36.5	+0.9
LOCO3	Loma Colorada,	0.39	83	eP	Pb	05 41 31.7	-0.1
LOCO3				eS	Sb	05 41 37.5	-0.4
LOMA3	Las Lomas, Chi	0.42	80	i P	Pg	05 41 31.3	+0.3
LOMA3				eS	Sb	05 41 39.0	+0.3
CLLRA	Cordillera,	0.43	27	eP	Pb	05 41 32.0	-0.5
MLIR3	Monte Lirio, C	0.43	358⇑	iP	Pb	05 41 32.3	-0.3
MLIR3				eS	Sb	05 41 39.1	-0.1
FITO	Golfito	0.43	308	eP	Pg	05 41 30.5	-0.8
FITO				eS	Sb	05 41 37.5	-1.6
BRU2	Volcan	0.45	15	eP	Pb	05 41 32.1	-0.7
BRU2				eS	Sb	05 41 40.0	+0.3
BRU2	Volcan	0.45	15	eP	Pb	05 41 32.2	-0.7
BRU2				eS	Sb	05 41 40.1	+0.3
BRU2	Volcan	0.45	15⇑	iP	Pb	05 41 32.2	-0.7
BRU2				eS	Sb	05 41 40.1	+0.4
PTAR3	Potrerillos Ar	0.45	43	eP	Pg	05 41 31.8	+0.1
PTAR3				eS	Sb	05 41 40.1	+0.3
PTAR3	Potrerillos Ar	0.45	43⇑	iP	Pb	05 41 32.6	-0.4
PTAR3				eS	Sb	05 41 40.4	+0.6
EDAD	Golfito	0.46	309	eP	Pg	05 41 31.1	-0.7
RSRNO	Rio Sereno	0.46	353	eP	Pb	05 41 32.8	-0.3
SCLRA	Santa Clara, W	0.47	3	eP	Pb	05 41 32.8	-0.5
CHIR3	Chiriqui UPA,	0.47	86	i P	Pb	05 41 32.7	-0.5
CHIR3				eS	Sg	05 41 39.4	+1.1
BC3P	Paso Ancho	0.49	23	eP	Pg	05 41 32.8	+0.3
BC3P				eS	Sb	05 41 41.2	+0.1
BQTLY	Boquete Panama	0.52	41	eP	Pg	05 41 33.3	+0.3
BQTLY	Boquete Panama	0.52	41	eP	Pg	05 41 33.4	+0.4
BQSF3	Alto Boquete,	0.53	44	eP	Pg	05 41 33.4	+0.2
BQSF3				eS	Sg	05 41 41.3	+1.1
PSOM3	Paja de Sombre	0.58	56	eP	Pg	05 41 34.0	-0.1
PSOM3				eS	Sg	05 41 41.8	+0.1
PSOM3	Paja de Sombre	0.58	56⇓	iP	Pg	05 41 34.2	+0.1
PSOM3				eS	Sg	05 41 41.9	+0.1
ALCO	Alturas Coton,	0.59	358	eP	Pg	05 41 34.1	-0.2
EDP2	Potrero Grande	0.75	331	eP	Pg	05 41 36.5	-0.8
PBNVO	Pueblo Nuevo,	0.81	49	eP	Pg	05 41 37.1	-1.3
RBALA	Bur	0.83	51	eP	Pg	05 41 37.9	-1.0
PANP	Palmar Norte	0.88	313	eP	Pg	05 41 38.2	-1.6
RMDIO	Remedios, Chir	0.98	98	eP	Pg	05 41 40.4	-1.3
DRK0	Durika	1.00	334	eP	Pg	05 41 40.4	-1.6
EDPE	Pejibaye, P	1.10	317	eP	Pg	05 41 41.6	-2.3
KKNTU	Kakintº	1.10	64	eP	Pb	05 41 41.2	-2.8
BRIBI	Bribri	1.25	360	eP	Pn	05 41 45.7	-0.7
BELE	Belen	2.11	320	eP	Pn	05 41 50.0	-8.2

UCR **26** *05:41:55.4±0.8, 8.̊34N×82.̊87W, h30km±2km, MW4.3, Fault plane solution: NP1:φs140.00000°, δ35.00000°, λ90.00000°.*

UPA **26** *05:41:55.9±0.6, 8.̊38N×82.̊87W, h29km±3km, MW4.4*

ISC 26 05:41:55.9±1.0**, 8.̊39N**±0.̊03×**82.̊88W**±0.̊03**, h32km**±5km**, n57, σ0.̊83**/91**, 12C-28D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.09	78⇑	iP	Pb	05 42 01.0	-0.5
LESP3				eS	Sb	05 42 04.3	-0.9
LESP3	La Esperanza,	0.09	78	eP	Pb	05 42 00.9	-0.5
LESP3				eS	Sb	05 42 04.8	-0.4
LPPC	Paso Canoas	0.15	14⇑	eP	Pb	05 42 01.6	-0.3
LPPC				eS	Sb	05 42 06.1	+0.2
NELY	Ciudad Neily	0.27	345⇑	eP	Pb	05 42 02.9	-0.3
NELY				eS	Sn	05 42 08.8	0.0
LMNES	Limones	0.29	177⇓	eP	Pb	05 42 03.3	-0.1
MCANO	Manzana, Boque	0.35	59⇓	eP	Pb	05 42 04.1	-0.2
FITO	Golfito	0.36	310⇑	eP	Pb	05 42 03.4	-1.0
FITO				eS	Sb	05 42 09.9	-0.3
EDAD	Golfito	0.39	312⇑	eP	Pb	05 42 03.9	-0.9
MLIR3	Monte Lirio, C	0.41	7	eP	Pn	05 42 06.2	+0.5
MLIR3				eS	Sn	05 42 12.2	0.0
MLIR3	Monte Lirio, C	0.41	7	eP	Pb	05 42 05.2	+0.1
MLIR3				eS	Sb	05 42 11.8	+0.5
DVD	David	0.42	84⇓	iP	Pb	05 42 04.8	-0.4
DVD				eS	Sb	05 42 10.9	-0.8
DVD	David	0.42	84⇓	iP	Pb	05 42 04.8	-0.4
DVD				eS	Sb	05 42 11.9	+0.3
RSRNO	Rio Sereno	0.43	2	eP	Pb	05 42 05.7	+0.3
CSTBL	De las Acacias	0.43	87⇓	eP	Pb	05 42 04.8	-0.5
CLLRA	Cordillera,	0.44	36⇓	eP	Pb	05 42 05.5	-0.2
VITO	San Vito	0.44	348⇑	eP	Pb	05 42 05.8	+0.2
BRU2	Volcan	0.44	24⇓	eP	Pb	05 42 05.6	-0.1
BRU2				eS	Sn	05 42 13.4	+0.2
BRU2	Volcan	0.44	24⇓	iP	Pb	05 42 05.6	-0.1
BRU2				eS	Sb	05 42 12.2	-0.1
BRU2	Volcan	0.44	24⇓	iP	Pb	05 42 05.6	-0.1
BRU2				eS	Sn	05 42 13.5	+0.2
PEDE3	Pedregal, Chir	0.45	91⇓	iP	Pb	05 42 05.1	-0.6
PEDE3				eS	Sb	05 42 11.7	-0.6
PEDE3	Pedregal, Chir	0.45	91	eP	Pb	05 42 05.0	-0.6
PEDE3				eS	Sb	05 42 12.2	-0.1
SCLRA	Santa Clara, W	0.45	12⇓	eP	Pb	05 42 06.0	+0.1
LOCO3	Loma Colorada,	0.45	87⇓	iP	Pb	05 42 05.3	-0.4
LOCO3				eS	Sb	05 42 12.0	-0.4
LOCO3	Loma Colorada,	0.45	87⇓	iP	Pb	05 42 05.3	-0.4
LOCO3				eS	Sb	05 42 12.0	-0.4
LOMA3	Las Lomas, Chi	0.48	85⇓	iP	Pb	05 42 05.6	-0.6
LOMA3				eS	Sb	05 42 13.3	+0.1
LOMA3	Las Lomas, Chi	0.48	85⇓	iP	Pb	05 42 05.6	-0.6
LOMA3				eS	Sb	05 42 13.3	+0.1
PTAR3	Potrerillos Ar	0.48	51⇓	iP	Pb	05 42 06.1	-0.2
PTAR3				eS	Sb	05 42 12.6	-0.8
PTAR3	Potrerillos Ar	0.48	51	i P	Pb	05 42 06.0	-0.2
PTAR3				eS	Sb	05 42 12.6	-0.8
BC3P	Paso Ancho	0.50	32⇓	iP	Pb	05 42 06.3	-0.3
BC3P				eS	Sn	05 42 14.9	+0.2
BC3P	Paso Ancho	0.50	32⇓	iP	Pb	05 42 06.2	-0.3
BC3P				eS	Sn	05 42 14.7	0.0
CHIR3	Chiriqui UPA,	0.54	89⇓	iP	Pb	05 42 06.3	-0.7
CHIR3				eS	Sb	05 42 13.7	-1.1
CHIR3	Chiriqui UPA,	0.54	89⇓	iP	Pb	05 42 06.4	-0.7
CHIR3				eS	Sb	05 42 14.8	+0.1
BQTLY	Boquete Panama	0.55	48⇓	eP	Pb	05 42 06.9	-0.5
ALCO	Alturas Coton,	0.56	4	eP	Pb	05 42 07.0	-0.5
ALCO				eS	Sb	05 42 15.9	+0.4
BQSF3	Alto Boquete,	0.56	51⇓	iP	Pb	05 42 06.9	-0.6
BQSF3				eS	Sb	05 42 14.8	-0.6
BQSF3	Alto Boquete,	0.56	51⇓	iP	Pb	05 42 06.9	-0.6
BQSF3				eS	Sb	05 42 14.8	-0.6
PSOM3	Paja de Sombre	0.62	62⇓	iP	Pb	05 42 07.5	-0.9
PSOM3				eS	Sb	05 42 15.2	-1.8
PSOM3	Paja de Sombre	0.62	62	i P	Pb	05 42 07.5	-0.9
PSOM3				eS	Sb	05 42 17.0	-0.1
EDP2	Potrero Grande	0.69	334⇑	eP	Pb	05 42 09.1	-0.5
PANP	Palmar Norte	0.81	315⇓	eP	Pn	05 42 10.9	-0.3
PBNVO	Pueblo Nuevo,	0.84	53⇓	eP	Pn	05 42 10.8	-0.8
RBALA	Bur	0.86	56⇓	eP	Pn	05 42 11.4	-0.5
BURE	Buenos Aires	0.90	330	eP	Pn	05 42 12.3	-0.2
DRK0	Durika	0.94	337	eP	Pn	05 42 13.1	-0.1
DRK0	Durika	0.94	337	eP	Pn	05 42 13.1	-0.1
DRK0				eS	Sb	05 42 26.3	+0.1
DRK0	Durika	0.94	337	eP	Pn	05 42 13.0	-0.1
EDPE	Pejibaye, P	1.03	318	eP	Pn	05 42 14.3	+0.1
KKNTU	Kakintº	1.15	67⇓	eP	Pn	05 42 15.1	-0.8

BRIBI	**Bribri**	**1.23**	**3**	eP	**Pb**	**05 42 19.2**	**+0.7**
MESA3	**La Mesa, Verag**	**1.69**	**98**	⇑eP	**Pn**	**05 42 24.7**	**+1.4**
MESA3				eS	**Sn**	**05 42 42.7**	**-1.2**
RSUS3	**Rio de Jesus,**	**1.75**	**103**	eP	**Pn**	**05 42 25.4**	**+1.4**
RSUS3				eS	**Sn**	**05 42 46.1**	**+0.9**
STIA3	**Santiago, Vera**	**1.91**	**99**	⇑iP	**Pn**	**05 42 27.6**	**+1.4**
STIA3				eS	**Sn**	**05 42 49.9**	**+0.7**
CALO3	**Calobre, Verag**	**2.01**	**92**	eP	Pn	05 42 21.1	-6.7
CALO3				eS	**Sn**	**05 42 51.9**	**0.0**
CACAO	**El Cacao, Vera**	**2.25**	**117**	⇑iP	**Pn**	**05 42 32.2**	**+1.3**
TOSI3	**Tonosi**	**2.60**	**112**	eP	**Pn**	**05 42 38.6**	**+2.8**
TOSI3				eS	**Sb**	**05 43 13.2**	**-0.3**
AZU	**Azuero**	**2.64**	**103**	⇑iP	**Pb**	**05 42 39.7**	**-2.9**
BCIP	**Isla Barro Col**	**3.10**	**75**	⇑iP	**Pn**	**05 42 46.1**	**+3.4**

WEL 26 05:43:54.5±1.6, 33°S±26°×17°9W±5°3, h33km, M3.6/3, mB4.4/3, ML4.0/7, MLv3.6/3, Mw(mB)3.5/3, Error ellipse: s-maj=76.5km s-min=12.1km az=115.3, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PKGZ	**Pakihiroa**	**5.03**	**204**	P	Pn	05 45 08.1	+0.5
PKGZ				S	Sn	05 46 06.8	+2.3
HAZ	**Te Kaha**	**5.04**	**207**	P	Pn	05 45 08.8	+1.1
HAZ				S	Sn	05 46 08.0	+3.2
PUZ	**Puketiti**	**5.16**	**202**	P	Pn	05 45 09.2	-0.2
PUZ				S	Sn	05 46 07.6	-0.1
RUGZ	**Raukumara Rang**	**5.26**	**207**	P	Pn	05 45 10.6	-0.3
RUGZ				S	Sn	05 46 10.2	-0.2
TKGZ	**Te Karaka**	**5.62**	**203**	P	Pn	05 45 15.9	+0.1
TKGZ				S	Sn	05 46 19.0	-0.1
MWZ	**Matawai**	**5.64**	**206**	P	Pn	05 45 16.1	+0.1
URZ	**Urewera**	**5.74**	**209**	P	Pn	05 45 16.2	-1.1
URZ				S	Sn	05 46 21.7	-0.3

KRSC 26 05:44:52.0±1.1, 55°.99N×164°.25E, h15km±20km, Ml3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.83**	**286**	eP	Pg	05 45 07.3	-0.9
KBTR				eS	Sg	05 45 18.8	-0.4
KBG	**Krutoberegovo**	**0.91**	**288**	eP	Pb	05 45 08.5	-1.0
KBG				eS	Sb	05 45 21.0	-0.3
BKI	**Bering**	**1.25**	**128**	eP	Pn	05 45 14.5	-0.5
BKI				eS	Sg	05 45 32.3	-0.1
SMKR	**Semkarok**	**1.66**	**292**	eP	Pn	05 45 20.3	-0.4
BDR	**Baidarnaya**	**1.79**	**290**	eS	Sb	05 45 46.4	-0.6
BZGR	**Bezymyannyi-Gr**	**2.00**	**270**	eP	Pb	05 45 27.2	-1.0
MKZ	**Mys Kozlova**	**2.03**	**226**	eP	Pb	05 45 27.7	-1.0
KLY	**Klyuchi**	**2.04**	**281**	eP	Pn	05 45 25.1	-0.7
KRSR	**Krestovskiy**	**2.08**	**278**	eP	Pn	05 45 27.0	+0.5
BZWR	**Bezymyannyi-We**	**2.11**	**271**	eP	Pb	05 45 29.1	-1.0
BZMR	**Bezymyannaya**	**2.12**	**270**	eP	Pb	05 45 29.3	-0.8
KIRR	**Kirishev**	**2.20**	**271**	eP	Pb	05 45 30.2	-1.3
KMNR	**Kamenistaya**	**2.27**	**266**	eP	Pb	05 45 32.1	-0.7
TUMD	**Tumrok D**	**2.32**	**252**	eP	Pb	05 45 32.2	-1.4
TUMD				eS	Sb	05 46 02.0	-0.1
SRDR	**Sredinnyy**	**2.56**	**279**	eP	Pn	05 45 34.9	+1.9
SPN	**Mys Shipunski**	**3.80**	**222**	eP	Pn	05 45 53.0	+3.0
SPN				eS	Sn	05 46 35.0	+0.6
SDLR	**Sedlovina**	**4.13**	**231**	eP	Pn	05 45 58.2	+3.5
SMAR	**Somma**	**4.18**	**232**	eP	Pn	05 45 58.9	+3.5
KRX	**Arik**	**4.18**	**233**	eP	Pn	05 45 59.0	+3.6
AVH	**Avacha**	**4.21**	**232**	eP	Pn	05 45 59.6	+3.9
UGLR	**Uglovaya**	**4.21**	**231**	eP	Pn	05 45 59.3	+3.6
KOK	**Koryaka**	**4.23**	**233**	eP	Pn	05 46 00.6	+4.6
GNL	**Ganaly**	**4.31**	**240**	eP	Pn	05 46 00.9	+3.8
RUS	**Russkaya**	**4.90**	**226**	eP	Pn	05 46 08.5	+3.4
GRL	**Gorelyy**	**5.00**	**229**	eP	Pn	05 46 11.3	+4.8
MTVR	**Mutnovka**	**5.00**	**228**	eP	Pn	05 46 10.8	+4.2
ASAK	**Asacha**	**5.19**	**229**	eP	Pn	05 46 14.0	+4.8

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*UCR **26** 05:47:22.9±0.9, 8°.33N×82°.82W, h29km±1km, MW4.7, Fault plane solution: NP1:φs135.11000°, δ86.47000°, λ3.54000°.*

*UPA **26** 05:47:23.6±1.1, 8°.39N×82°.82W, h24km±3km, MW4.7, Fault plane solution: NP1:φs33.00000°, δ58.00000°, λ-180.00000°.*

*RSNC **26** 05:47:24.5±0.9, 8°N±3°×8°3W±°, h34km±15km, M3.7, mb4.5, mB6.1, ML3.7, Mw(mB)5.7*

*CATAC **26** 05:47:25.4±0.6, 9°N±4°×8°3W±°, h28km±3km, M4.6/14, mb4.7/10, mB5.1/3, MLv4.6/14, Mw(mB)4.4/3, Error ellipse: s-maj=10.8km s-min=4.6km az=31.3, confirmed*

*IDC **26** 05:47:29.4±5.8, 10°.04N×82°.68W, h0km, mb3.6/3, mbtmp3.8/5, ML3.8/2, MS2.5/1, Error ellipse: s-maj=112.6km s-min=21.2km az=170.0*

ISC 26 05:47:23.3±0.8, 8°.38N±0°.03×82°.82W±0°.02, h31km±5km, n155, σ1s06/184, mb3.6/3, 43C-34D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LESP3	**La Esperanza,**	**0.04**	**43**	⇓iP	**Pb**	**05 47 28.5**	**0.0**
LESP3				eS	**Sb**	**05 47 31.1**	**-1.0**
LPPC	**Paso Canoas**	**0.16**	**352**	⇑eP	**Pb**	**05 47 29.2**	**0.0**
LPPC				eS	**Sn**	**05 47 34.3**	**+0.8**
LMNES	**Limones**	**0.28**	**189**	⇑eP	**Pb**	**05 47 30.4**	**-0.2**
LMNES	**Limones**	**0.28**	**189**	⇑iP	**Pb**	**05 47 30.4**	**-0.2**
LMNES				eS	**Sb**	**05 47 35.7**	**+0.2**
NELY	**Ciudad Neily**	**0.30**	**335**	⇑eP	**Pb**	**05 47 30.7**	**-0.2**
NELY				eS	**Sn**	**05 47 36.9**	**-0.1**
MCANO	**Manzana, Boque**	**0.31**	**52**	⇓eP	**Pb**	**05 47 31.1**	**+0.1**
MCANO	**Manzana, Boque**	**0.31**	**52**	⇓iP	**Pb**	**05 47 31.2**	**+0.1**
MCANO				eS	**Sb**	**05 47 35.3**	**-1.0**
DVD	**David**	**0.37**	**81**	⇓iP	**Pb**	**05 47 31.7**	**-0.1**
DVD				eS	**Sn**	**05 47 38.4**	**-0.3**
CSTBL	**De las Acacias**	**0.37**	**85**	⇓eP	**Pb**	**05 47 31.8**	**-0.1**
CSTBL	**De las Acacias**	**0.37**	**85**	⇓iP	**Pb**	**05 47 31.8**	**-0.1**
PEDE3	**Pedregal, Chir**	**0.39**	**89**	⇓iP	**Pb**	**05 47 31.8**	**-0.3**
PEDE3				eS	**Sn**	**05 47 38.8**	**-0.4**
LOCO3	**Loma Colorada,**	**0.40**	**85**	⇓iP	**Pb**	**05 47 32.1**	**-0.1**
MLIR3	**Monte Lirio, C**	**0.41**	**359**	⇑iP	**Pb**	**05 47 32.9**	**+0.3**
FITO	**Golfito**	**0.41**	**307**	⇓eP	**Pb**	**05 47 31.3**	**-1.2**
FITO				eS	**Sb**	**05 47 37.9**	**-0.8**
CLLRA	**Cordillera,**	**0.42**	**29**	⇑eP	**Pb**	**05 47 32.5**	**-0.1**
CLLRA	**Cordillera,**	**0.42**	**29**	⇑eP	**Pb**	**05 47 32.6**	**-0.1**
LOMA3	**Las Lomas, Chi**	**0.42**	**83**	⇓iP	**Pb**	**05 47 32.3**	**-0.3**
LOMA3				eS	**Sb**	**05 47 38.8**	**-0.2**
BRU2	**Volcan**	**0.43**	**17**	⇑eP	**Pb**	**05 47 32.7**	**-0.2**
BRU2				eS	**Sn**	**05 47 40.4**	**-0.1**
BRU2	**Volcan**	**0.43**	**17**	P	**Pb**	**05 47 32.7**	**-0.2**
BRU2	**Volcan**	**0.43**	**17**	⇑iP	**Pb**	**05 47 32.8**	**-0.2**
BRU2				eS	**Sn**	**05 47 40.6**	**+0.1**
RSRNO	**Rio Sereno**	**0.44**	**354**	⇑eP	**Pb**	**05 47 33.2**	**+0.3**
RSRNO	**Rio Sereno**	**0.44**	**354**	⇑iP	**Pn**	**05 47 33.4**	**-0.2**
EDAD	**Golfito**	**0.44**	**308**	⇓eP	**Pb**	**05 47 31.8**	**-1.2**
EDAD				eS	**Sb**	**05 47 38.7**	**-0.7**
PTAR3	**Potrerillos Ar**	**0.45**	**45**	⇓iP	**Pb**	**05 47 33.1**	**0.0**
PTAR3				eS	**Sn**	**05 47 41.1**	**+0.3**
SCLRA	**Santa Clara, W**	**0.45**	**4**	⇑eP	**Pb**	**05 47 33.2**	**0.0**
SCLRA	**Santa Clara, W**	**0.45**	**4**	⇑iP	**Pb**	**05 47 33.5**	**+0.3**
VITO	**San Vito**	**0.46**	**341**	⇑eP	**Pb**	**05 47 33.5**	**+0.2**
BC3P	**Paso Ancho**	**0.48**	**25**	⇑iP	**Pb**	**05 47 33.3**	**-0.3**
BC3P				eS	**Sn**	**05 47 42.3**	**+0.5**
CHIR3	**Chiriqui UPA,**	**0.48**	**88**	⇓iP	**Pb**	**05 47 33.1**	**-0.4**
BQTLY	**Boquete Panama**	**0.52**	**43**	⇓eP	**Pb**	**05 47 33.9**	**-0.3**
BQTLY	**Boquete Panama**	**0.52**	**43**	⇓iP	**Pb**	**05 47 34.0**	**-0.3**
BQSF3	**Alto Boquete,**	**0.53**	**46**	⇓iP	**Pb**	**05 47 33.9**	**-0.4**
BQSF3				eS	**Sb**	**05 47 41.4**	**-0.4**
ALCO	**Alturas Coton,**	**0.57**	**358**	⇑eP	**Pb**	**05 47 34.4**	**-0.7**
PSOM3	**Paja de Sombre**	**0.58**	**58**	⇓iP	**Pb**	**05 47 34.4**	**-0.7**
PSOM3				eS	**Sb**	**05 47 43.0**	**-0.1**
EDP2	**Potrero Grande**	**0.73**	**331**	⇑eP	**Pn**	**05 47 37.1**	**-0.4**
PBNVO	**Pueblo Nuevo,**	**0.80**	**50**	⇓eP	**Pn**	**05 47 37.6**	**-0.9**
RBALA	**Bur**	**0.82**	**53**	⇓eP	**Pn**	**05 47 38.3**	**-0.5**
RBALA	**Bur**	**0.82**	**53**	⇓iP	**Pn**	**05 47 38.4**	**-0.5**
PANP	**Palmar Norte**	**0.86**	**312**	⇑eP	**Pn**	**05 47 38.4**	**-0.9**
BURE	**Buenos Aires**	**0.94**	**327**	⇑eP	**Pn**	**05 47 39.9**	**-0.6**
DRK0	**Durika**	**0.98**	**334**	⇑eP	**Pn**	**05 47 40.3**	**-0.8**
DRK0	**Durika**	**0.98**	**334**	P	**Pn**	**05 47 40.2**	**-0.8**
DRK0	**Durika**	**0.98**	**334**	⇑iP	**Pn**	**05 47 40.3**	**-0.8**
DRK0				eS	**Sb**	**05 47 54.4**	**-0.1**
RMDIO	**Remedios, Chir**	**0.99**	**99**	⇓eP	**Pn**	**05 47 40.5**	**-0.5**
RMDIO	**Remedios, Chir**	**0.99**	**99**	⇓iP	**Pn**	**05 47 40.5**	**-0.5**
EDPE	**Pejibaye, P**	**1.08**	**316**	⇑eP	**Pn**	**05 47 41.9**	**-0.5**
KKNTU	**Kakintº**	**1.10**	**65**	⇓eP	**Pn**	**05 47 41.8**	**-0.8**
KKNTU	**Kakintº**	**1.10**	**65**	⇓iP	**Pn**	**05 47 41.9**	**-0.7**
PDCAN	**Manzana , Fuen**	**1.11**	**94**	⇓eP	**Pn**	**05 47 41.6**	**-1.2**
ISBTO	**Bastimentos Is**	**1.14**	**32**	eP	**Pb**	**05 47 44.4**	**0.0**
SAJE	**San Jernim**	**1.18**	**325**	⇑eP	**Pn**	**05 47 43.1**	**-0.7**
BRIBI	**Bribri**	**1.23**	**360**	⇑eP	**Pb**	**05 47 45.9**	**-0.2**
LLNJ	**Naranjito**	**1.67**	**311**	eP	**Pn**	**05 47 50.2**	**-0.3**
PIEC	**Cerro El Cedra**	**1.67**	**318**	eP	**Pn**	**05 47 50.6**	**-0.2**
GMAL	**Guarumal, Vera**	**1.68**	**111**	P	**Pn**	**05 47 49.5**	**-1.1**
GMAL				S	**Sn**	**05 48 12.4**	**+1.2**
GMAL	**Guarumal, Vera**	**1.68**	**111**	eP	**Pn**	**05 47 49.5**	**-1.1**
GMAL				eS	**Sn**	**05 48 12.5**	**+1.4**
RSUS3	**Rio de Jesus,**	**1.69**	**103**	eP	**Pn**	**05 47 50.4**	**-0.3**
RSUS3				eS	**Sn**	**05 48 12.0**	**+0.8**
QUEP	**Quepos**	**1.69**	**308**	eP	**Pn**	**05 47 50.9**	**+0.2**
VINA	**Juan Vinas**	**1.77**	**329**	⇑eP	**Pn**	**05 47 52.4**	**+0.5**
REPA	**Paraso**	**1.78**	**324**	eP	**Pn**	**05 47 52.2**	**+0.1**
VERB	**Verbena**	**1.78**	**331**	⇑eP	**Pn**	**05 47 53.0**	**+0.9**
LCR2	**La Lucha 2**	**1.79**	**319**	⇑eP	**Pn**	**05 47 52.1**	**-0.2**
LCR2	**La Lucha 2**	**1.79**	**319**	P	**Pn**	**05 47 51.9**	**-0.4**
LCR2	**La Lucha 2**	**1.79**	**319**	S	**Sb**	**05 48 16.3**	**-1.5**
PISJ	**San Jernim**	**1.79**	**314**	eP	**Pn**	**05 47 52.6**	**+0.3**
ABE2	**San Pablo**	**1.80**	**317**	eP	**Pn**	**05 47 52.8**	**+0.4**
PCAYA	**Pacayas**	**1.82**	**327**	⇑eP	**Pn**	**05 47 53.3**	**+0.6**
VTCV	**VTCV, Calle Va**	**1.83**	**331**	⇑eP	**Pn**	**05 47 53.8**	**+0.9**
RESJ	**San Isidro (Tu**	**1.83**	**334**	⇑eP	**Pn**	**05 47 54.0**	**+1.2**
IRES	**Siquirres**	**1.84**	**338**	⇑eP	**Pn**	**05 47 53.9**	**+1.1**
TAGO	**Cartago**	**1.84**	**324**	eP	**Pn**	**05 47 53.5**	**+0.5**
ABRB	**Las Abras (San**	**1.85**	**331**	⇑eP	**Pn**	**05 47 54.1**	**+1.0**
RAFA	**San Farael, Vo**	**1.85**	**328**	⇑eP	**Pn**	**05 47 53.8**	**+0.5**
CVTV	**Tajo**	**1.86**	**330**	⇑eP	**Pn**	**05 47 54.3**	**+0.9**
PAR1A	**Puntarenas Pro**	**1.86**	**311**	⇓eP	**Pn**	**05 47 54.1**	**+0.9**
CVTQ	**Turrialba Volc**	**1.87**	**330**	⇑eP	**Pn**	**05 47 54.4**	**+0.9**
VTLA	**Turrialba Volc**	**1.87**	**330**	⇑eP	**Pn**	**05 47 54.3**	**+0.8**
VTR0	**Volcan Turrial**	**1.88**	**330**	⇑eP	**Pn**	**05 47 54.6**	**+0.9**
RVLA	**Villa Bonita**	**1.88**	**336**	eP	**Pn**	**05 47 54.5**	**+1.2**
TRIO	**Tres Rios**	**1.91**	**323**	eP	**Pn**	**05 47 54.0**	**+0.1**
ACOS	**Acosta**	**1.94**	**317**	eP	**Pn**	**05 47 54.3**	**+0.1**
AMPA	**Desamparados**	**1.95**	**321**	eP	**Pn**	**05 47 55.0**	**+0.7**
CALO3	**Calobre, Verag**	**1.96**	**91**	eP	**Pn**	**05 47 54.9**	**+0.5**
CORON	**Coronado**	**1.97**	**324**	eP	**Pn**	**05 47 55.6**	**+0.8**
SJS3	**Mercedes San J**	**1.97**	**322**	eP	**Pn**	**05 47 55.2**	**+0.4**
LUJA	**Lujan**	**1.98**	**321**	eP	**Pn**	**05 47 55.1**	**+0.3**
CVIMO	**Finca Echandi**	**1.98**	**326**	⇑eP	**Pn**	**05 47 55.5**	**+0.6**
LUPE	**Guadalupe**	**1.98**	**322**	eP	**Pn**	**05 47 55.3**	**+0.4**
DOMI	**Santo Domingo**	**2.03**	**322**	eP	**Pn**	**05 47 56.3**	**+0.7**
SANTA	**Santa Ana**	**2.05**	**319**	eP	**Pn**	**05 47 55.7**	**-0.2**
HDC	**Heredia**	**2.06**	**322**	eP	**Pn**	**05 47 56.5**	**+0.6**
PURI	**Puriscal**	**2.08**	**315**	eP	**Pn**	**05 47 56.7**	**+0.5**
BELE	**Belen**	**2.09**	**320**	eP	**Pn**	**05 47 57.1**	**+0.8**
BITO	**Garabito Jaco**	**2.17**	**305**	eP	**Pn**	**05 47 57.6**	**+0.3**
CARI	**Cariari**	**2.17**	**335**	eP	**Pn**	**05 47 58.8**	**+1.4**
CACAO	**El Cacao, Vera**	**2.19**	**118**	P	**Pn**	**05 47 57.8**	**+0.2**
CACAO				S	**Sn**	**05 48 24.4**	**+0.7**
CACAO	**El Cacao, Vera**	**2.19**	**118**	eP	**Pn**	**05 47 57.9**	**+0.3**
TCS1	**Tacares**	**2.21**	**319**	⇑eP	**Pn**	**05 47 58.7**	**+0.7**
TRB2	**Turrubares**	**2.22**	**314**	eP	**Pn**	**05 47 58.6**	**+0.5**
TRT2	**Tortugero**	**2.35**	**337**	⇑eP	**Pn**	**05 48 00.4**	**+0.6**
SRA1	**San Ramn**	**2.36**	**316**	eP	**Pn**	**05 48 00.7**	**+0.6**
TRT1	**Tortuguero**	**2.37**	**339**	⇑eP	**Pn**	**05 48 00.8**	**+0.7**
SARA	**Sarapiqu**	**2.38**	**330**	⇑eP	**Pn**	**05 48 01.6**	**+1.3**
CHIT3	**Chitre**	**2.41**	**100**	⇓iP	**Pn**	**05 48 02.0**	**+1.4**
CHIT3				eS	**Sn**	**05 48 31.3**	**+2.1**
PAQE	**Paquera**	**2.53**	**305**	eP	**Pn**	**05 48 02.3**	**0.0**
CBL1	**Cabuya**	**2.55**	**298**	⇓eP	**Pn**	**05 48 01.8**	**-0.8**
AZU	**Azuero**	**2.58**	**103**	⇓eP	**Pn**	**05 48 03.5**	**+0.4**
AZU	**Azuero**	**2.58**	**103**	P	**Pn**	**05 48 04.0**	**+1.0**
AZU				S	**Sb**	**05 48 36.9**	**-3.5**
AZU	**Azuero**	**2.58**	**103**	⇓eP	**Pn**	**05 48 03.8**	**+0.7**
AZU				eS	**Sn**	**05 48 34.9**	**+1.4**
ACHO3	**Achotines, Los**	**2.79**	**110**	eP	**Pn**	**05 48 07.3**	**+1.5**
ARE1	**Arenal 1**	**2.79**	**318**	eP	**Pn**	**05 48 07.5**	**+1.5**
JTS	**Las Juntas de**	**2.84**	**312**	Pn	**Pn**	**05 48 07.1**	**+0.5**
	41nm,0.3s,baz=90,slow=19,SNR=45						
JTS				Lg	Lg	05 48 41.0	
	63nm,0.3s,baz=320,slow=20,SNR=8.3						
	159nm,0.2s						
JTS	**Las Juntas de**	**2.84**	**312**	eP	**Pn**	**05 48 07.0**	**+0.5**
JTS	**Las Juntas de**	**2.84**	**312**	P	**Pn**	**05 48 06.8**	**+0.2**
JTS				S	**Sn**	**05 48 41.4**	**+1.7**
JTS	**Las Juntas de**	**2.84**	**312**	eP	**Pn**	**05 48 07.0**	**+0.5**
JTS				eS	**Sn**	**05 48 41.2**	**+1.4**
CMARA	**Lajas Hojancha**	**3.05**	**303**	eP	**Pn**	**05 48 09.9**	**+0.5**
BCIP	**Isla Barro Col**	**3.05**	**75**	⇓eP	**Pn**	**05 48 09.8**	**+0.4**
BCIP	**Isla Barro Col**	**3.05**	**75**	P	**Pn**	**05 48 10.1**	**+0.7**
BCIP	**Isla Barro Col**	**3.05**	**75**	⇓eP	**Pn**	**05 48 10.2**	**+0.8**
BCIP				eS	**Sn**	**05 48 46.5**	**+1.7**
CHOR3	**La Chorrera**	**3.06**	**80**	eP	**Pn**	**05 48 11.3**	**+1.7**
PLVR	**Palo Verde**	**3.18**	**308**	⇓eP	**Pn**	**05 48 12.6**	**+1.2**
COLC	**Colonia**	**3.27**	**314**	eP	**Pn**	**05 48 13.9**	**+1.4**
BLUN	**Bluefields**	**3.73**	**345**	P	**Pn**	**05 48 19.1**	**+0.3**
CHPO	**Chepo, Panama**	**3.74**	**78**	eS	**Sn**	**05 49 03.2**	**+1.2**
CARN	**Rivas**	**3.86**	**317**	P	**Pn**	**05 48 22.2**	**+1.6**
CARN				S	**Sn**	**05 49 08.6**	**+3.7**
ESPN	**Las Esperanzas**	**4.07**	**339**	⇑eP	**Pn**	**05 48 24.4**	**+1.0**
ESPN	**Las Esperanzas**	**4.07**	**339**	P	**Pn**	**05 48 24.2**	**+0.8**
ACON	**Acoyapa**	**4.26**	**327**	P	**Pn**	**05 48 26.6**	**+0.6**
SAIC	**Isla e San And**	**4.28**	**15**	P	**Pn**	**05 48 26.4**	**+0.1**
SAIC				S	**Sn**	**05 49 14.7**	**-0.4**
NANN	**Nandasmo**	**4.81**	**318**	P	**Pn**	**05 48 36.0**	**+2.3**
BOAB	**BOACO BROADBAN**	**4.92**	**326**	P	**Pn**	**05 48 35.4**	**+0.2**
PRVC	**Isla de Provid**	**5.17**	**16**	P	**Pn**	**05 48 39.2**	**+0.6**
	77nm,0.8s						
PRVC				S	**Sn**	**05 49 35.7**	**-1.5**
	77nm,0.8s						
COPN	**Copaltepe**	**5.30**	**316**	P	**Pn**	**05 48 41.4**	**+1.0**
CNGA	**Al SSO del Vol**	**5.60**	**317**	P	**Pn**	**05 48 48.1**	**+3.6**
SIUN	**Universidad Ur**	**5.64**	**340**	P	**Pn**	**05 48 45.9**	**+0.8**
SOLC	**Bahia Solano**	**5.78**	**111**	P	**Pn**	**05 48 47.3**	**+0.4**
POLN	**Al Sur del Vol**	**5.78**	**318**	P	**Pn**	**05 48 50.4**	**+3.3**
RCVN	**Varillal2**	**6.14**	**328**	⇓P	**Pn**	**05 48 52.1**	**0.0**
APAC	**Apartado, Choc**	**6.19**	**94**	P	Pn	05 48 58.2	+5.5
OCON	**Estacion meteo**	**6.34**	**326**	P	**Pn**	**05 48 56.5**	**+1.7**
LCND	**La Caada**	**6.99**	**315**	P	**Pn**	**05 49 05.8**	**+2.2**
LCND	**La Caada**	**6.99**	**315**	S	**Sn**	**05 50 22.0**	**-0.1**
CBOC	**Ciudad Bolivar**	**7.20**	**110**	P	**Pn**	**05 49 07.7**	**+1.0**
	9.0nm,0.5s						
CBOC				S	**Sn**	**05 50 28.3**	**+0.8**
	9.0nm,0.5s						
HELC	**Santa Helena**	**7.55**	**106**	P	**Pn**	**05 49 13.5**	**+1.8**
HELC				S	**Sn**	**05 50 38.9**	**+2.4**
SJCC	**San Jacinto, C**	**7.69**	**78**	P	**Pn**	**05 49 14.9**	**+1.6**
SCLA	**Alcaldia de Sa**	**7.85**	**313**	P	**Pn**	**05 49 17.2**	**+1.7**
POPC	**Popayan, Colom**	**8.42**	**133**	P	Pn	05 49 29.3	+5.7
NUBE	**Las Nubes**	**8.76**	**309**	P	**Pn**	**05 49 30.0**	**+1.9**
NUBE	**Las Nubes**	**8.76**	**309**	S	**Sn**	**05 51 03.2**	**-2.8**
FAME	**Alcaldia de Sa**	**8.91**	**308**	P	**Pn**	**05 49 31.5**	**+1.5**
TEIG	**Tepich**	**12.91**	**336**	LR	LR	05 54 10.9	
	comp=Z,25nm,21.8s,baz=111,slow=35						
CMIG	**Matias Romero**	**14.61**	**308**	Pn	**Pn**	**05 50 46.2**	**-1.7**
	0.3nm,0.3s,baz=117,slow=11,SNR=8.8						
	6.4nm,0.9s						
ULM	**Lac du Bonnet**	**43.13**	**348**	P	**P**	**05 55 17.7**	**-3.1**
	2.9nm,0.9s,baz=158,slow=10,SNR=5.8						
	2.9nm,0.9s						
NVAR	**Mina Array Bea**	**43.75**	**319**	P	**P**	**05 55 28.9**	**+2.6**
	0.3nm,0.6s,baz=126,slow=7.6,SNR=2.3						
	0.3nm,0.6s						
YKA	**Yellowknife Ar**	**58.76**	**343**	P	**P**	**05 57 18.1**	**0.0**
	0.4nm,0.8s,baz=142,slow=6.7,SNR=3.3						
	0.4nm,0.8s						

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*KRSC **26** 05:53:30.1±1.2, 56°.16N×164°.63E, h42km±18km, Ml4.6*

*IDC **26** 05:53:31.0±0.6, 56°.33N×164°.61E, h0km, mb4.0/21, mbtmp4.0/23, ML3.4/2, MS3.8/1, Error ellipse: s-maj=18.4km s-min=12.3km az=150.0*

*NEIC **26** 05:53:33.8±2.1, 56°.2N±0°.1×164°.6E±0°.1, h10km±1km, mb4.5/140, Error ellipse: s-maj=22.0km s-min=12.6km az=169.0*

*MOS **26** 05:53:33.4±1.4, 56°.15N×164°.61E, h42km, mb4.6/9, Error ellipse: s-maj=9.3km s-min=6.5km az=69.2*

ISC 26 05:53:33.0±0.4, 56°.17N±0°.04×164°.54E±0°.03, h16km, n430, σ1s33/382, mb4.4/92, 1C-1D, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.96**	**273**	PN	**Pb**	**05 53 48.4**	**-2.9**
KBTR				S	**Sb**	**05 54 00.4**	**-3.4**
KBTR	**Krutoberegovo**	**0.96**	**273**	eP	**Pb**	**05 53 48.4**	**-2.9**
KBTR				eS	**Sb**	**05 54 00.5**	**-3.4**
KBG	**Krutoberegovo**	**1.03**	**275**	PN	**Pb**	**05 53 49.8**	**-2.6**
KBG				S	**Sb**	**05 54 03.8**	**-1.9**
KBG	**Krutoberegovo**	**1.03**	**275**	eP	**Pb**	**05 53 49.8**	**-2.6**
KBG				eS	**Sb**	**05 54 03.9**	**-1.9**
BKI	**Bering**	**1.26**	**140**	PN	Pn	05 53 52.2	-3.8
BKI				S	**Sn**	**05 54 07.7**	**-4.8**
BKI	**Bering**	**1.26**	**140**	eP	Pn	05 53 52.2	-3.8
BKI				eS	**Sn**	**05 54 07.7**	**-4.8**
SMKR	**Semkarok**	**1.76**	**285**	PN	**Pn**	**05 54 01.8**	**-1.1**
SMKR	**Semkarok**	**1.76**	**285**	eP	**Pn**	**05 54 01.9**	**-1.1**
ZLN	**Zelenaya**	**2.10**	**267**	PN	**Pn**	**05 54 08.6**	**+1.0**
ZLN	**Zelenaya**	**2.10**	**267**	eP	**Pn**	**05 54 08.7**	**+1.0**
BZGR	**Bezymyannyi-Gr**	**2.17**	**265**	PN	**Pn**	**05 54 07.9**	**-0.6**
BZGR	**Bezymyannyi-Gr**	**2.17**	**265**	eP	**Pn**	**05 54 08.0**	**-0.6**
MKZ	**Mys Kozlova**	**2.28**	**226**	PN	**Pn**	**05 54 07.4**	**-2.5**
MKZ				S	**Sn**	**05 54 34.3**	**-3.3**
MKZ	**Mys Kozlova**	**2.28**	**226**	eP	**Pn**	**05 54 07.5**	**-2.5**
MKZ				eS	**Sn**	**05 54 34.4**	**-3.3**
KMNR	**Kamenistaya**	**2.46**	**262**	PN	**Pn**	**05 54 12.8**	**+0.3**
KMNR	**Kamenistaya**	**2.46**	**262**	eP	**Pn**	**05 54 12.9**	**+0.3**
OSSR	**Ossora**	**3.19**	**346**	PN	**Pn**	**05 54 21.3**	**-1.1**
OSSR				S	**Sn**	**05 54 57.2**	**-2.8**
OSSR	**Ossora**	**3.19**	**346**	eP	**Pn**	**05 54 21.3**	**-1.1**
OSSR				eS	**Sn**	**05 54 57.2**	**-2.8**
AVH	**Avacha**	**4.45**	**232**	PN	**Pn**	**05 54 40.9**	**+1.0**
AVH	**Avacha**	**4.45**	**232**	eP	**Pn**	**05 54 40.9**	**+1.0**
UGLR	**Uglovaya**	**4.45**	**231**	PN	**Pn**	**05 54 39.6**	**-0.3**
UGLR	**Uglovaya**	**4.45**	**231**	eP	**Pn**	**05 54 39.6**	**-0.3**
KOK	**Koryaka**	**4.48**	**232**	PN	**Pn**	**05 54 41.5**	**+1.3**
KOK	**Koryaka**	**4.48**	**232**	eP	**Pn**	**05 54 41.6**	**+1.3**
PET	**Petropavlovsk**	**4.66**	**230**		**Pn**	**05 54 44.3**	**+1.7**
PET	**Petropavlovsk**	**4.66**	**230**	i PN	**Pn**	**05 54 42.4**	**-0.2**
PEA0B	**Petropavlovsk-**	**5.02**	**235**		**Pn**	**05 54 50.2**	**+2.6**
PEA0B	**Petropavlovsk-**	**5.02**	**235**	i PN	**Pn**	**05 54 49.6**	**+2.0**
PETK	**Petropavlovsk-**	**5.02**	**235**	Pn	**Pn**	**05 54 49.6**	**+2.0**
PETK	**Petropavlovsk-**	**5.02**	**235**	Pn	**Pn**	**05 54 49.9**	**+2.3**
	1.4nm,0.3s,baz=70,slow=19,SNR=7.5						
PETK				Sn	**Sn**	**05 55 48.3**	**+3.0**
	baz=68,slow=24						
PETK				LR	LR	05 56 43.9	
	comp=Z,966nm,20.6s,baz=297,slow=38						
	7.1nm,0.7s						
RUS	**Russkaya**	**5.15**	**226**	PN	**Pn**	**05 54 48.1**	**-1.2**
RUS	**Russkaya**	**5.15**	**226**	eP	**Pn**	**05 54 48.2**	**-1.2**
ASAK	**Asacha**	**5.43**	**228**	PN	**Pn**	**05 54 53.4**	**0.0**
ASAK	**Asacha**	**5.43**	**228**	eP	**Pn**	**05 54 53.4**	**0.0**
SMY	**Shemya**	**6.55**	**118**	Pn	**Pn**	**05 55 09.7**	**+1.1**
SMY	**Shemya**	**6.55**	**118**	PN	**Pn**	**05 55 09.7**	**+1.1**
ADK	**Adak**	**11.83**	**103**	Pn	**Pn**	**05 56 18.6**	**-2.3**
ADK	**Adak**	**11.83**	**103**	PN	**Pn**	**05 56 18.6**	**-2.3**
BILL	**Bilibino**	**11.94**	**3**	i PN	**Pn**	**05 56 21.5**	**-0.8**
M11K	**Mekoryuk**	**15.88**	**63**	P	**Pn**	**05 57 15.8**	**+0.3**
	baz=267						
TNA	**Tin City**	**16.23**	**43**	P	**Pn**	**05 57 20.5**	**+0.5**
	baz=247						
YSS	**Yuzhno-Sakhali**	**16.33**	**245**	eP	**P**	**05 57 25.2**	**+1.0**
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
UNV	**Unalaska Valle**	**16.71**	**86**	P	**Pn**	**05 57 26.6**	**+0.3**
	baz=290						
K13K	**Kusilvak Mount**	**16.74**	**57**	P	**Pn**	**05 57 27.3**	**+0.7**
	baz=264						
F14K	**Arctic Creek**	**16.82**	**45**	P	**Pn**	**05 57 27.8**	**+0.4**
	baz=250						
ANM	**Nome**	**16.93**	**48**	P	**Pn**	**05 57 29.5**	**+0.6**
	baz=254						
M13K	**Dall Lake**	**17.29**	**63**	P	**Pn**	**05 57 33.3**	**-0.1**
	baz=270						
F15K	**North Star Dit**	**17.55**	**45**		**P**	**05 57 39.0**	**+1.3**
F15K	**North Star Dit**	**17.55**	**45**	P	**Pn**	**05 57 36.6**	**-0.1**
	baz=251,SNR=6.0						
G15K	**Niukluk**	**17.59**	**47**	P	**Pn**	**05 57 37.2**	**+0.1**
	baz=254						
L14K	**Kuka Creek**	**17.64**	**59**		**P**	**05 57 40.1**	**+1.5**
L14K	**Kuka Creek**	**17.64**	**59**	P	**Pn**	**05 57 37.5**	**-0.2**
	baz=267						
M14K	**Bethel**	**17.98**	**61**	P	**Pn**	**05 57 42.0**	**+0.1**
	baz=270						
N14K	**Kuskokwak Cree**	**18.14**	**64**	P	**Pn**	**05 57 44.0**	**+0.1**
	baz=273						
L15K	**Ungalak Mounta**	**18.23**	**58**	P	**Pn**	**05 57 44.7**	**-0.3**
	baz=268						
K15K	**Wolf Creek Mou**	**18.24**	**56**	P	**P**	**05 57 46.8**	**+1.5**
K15K				IAmb	IAmb	05 57 48.2	
	comp=Z,38nm,1.1s						
K15K	**Wolf Creek Mou**	**18.24**	**56**	P	**Pn**	**05 57 45.2**	**+0.1**
	baz=266						
H16K	**Elim**	**18.26**	**49**	P	**Pn**	**05 57 45.2**	**-0.1**
	baz=258						
C16K	**Lisburne Hills**	**18.29**	**37**		**P**	**05 57 47.3**	**+1.6**
C16K	**Lisburne Hills**	**18.29**	**37**	P	**P**	**05 57 46.5**	**+0.8**
	baz=243						
G16K	**Koyuk River**	**18.38**	**46**	P	**P**	**05 57 47.3**	**+0.5**
	baz=255						
O14K	**Tigyukauivet M**	**18.40**	**66**	P	**P**	**05 57 47.2**	**+0.2**
	baz=275						
ASAJ	**Asahikawa**	**18.43**	**238**	P	**Pn**	**05 57 48.2**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=45,slow=5.2,SNR=7.5						
	comp=Z,17nm,0.8s						
M15K	**Kasigluk River**	**18.61**	**62**	P	**P**	**05 57 49.6**	**+0.3**
	baz=271						
S12K	**Black Hills**	**18.61**	**77**	P	**P**	**05 57 49.7**	**+0.2**
	baz=285						
J16K	**Anvik River**	**18.75**	**53**	P	**P**	**05 57 51.5**	**+0.5**
	baz=264						
I17K	**Unalakleet**	**18.79**	**52**	P	**Pn**	**05 57 52.9**	**+1.1**
I17K	**Unalakleet**	**18.79**	**52**	P	**P**	**05 57 52.0**	**+0.7**
	baz=262						
D17K	**Noatak River**	**18.83**	**39**	P	**Pn**	**05 57 52.9**	**+0.7**
	baz=248,SNR=7.0						
N15K	**Kwethluk River**	**18.92**	**63**	P	**Pn**	**05 57 54.8**	**+1.4**
N15K				IAmb	IAmb	05 58 09.2	
	comp=Z,43nm,1.1s						
N15K	**Kwethluk River**	**18.92**	**63**	P	**Pn**	**05 57 54.1**	**+0.6**
	baz=273						
RDOG	**Red Dog Mine**	**19.02**	**38**	P	**Pn**	**05 57 55.7**	**+1.0**
	baz=247						
E17K	**Hotham Inlet**	**19.07**	**42**	P	**Pn**	**05 57 56.5**	**+1.3**
	baz=251,SNR=8.5						
F17K	**Baldwin Pennin**	**19.10**	**44**	P	**Pn**	**05 57 56.0**	**+0.5**
	baz=254						
C17K	**DeLong Mountai**	**19.10**	**37**	P	**Pn**	**05 57 56.3**	**+0.8**
	baz=246,SNR=5.4						
G17K	**Kiwalik Mounta**	**19.10**	**47**	P	**Pn**	**05 57 56.1**	**+0.5**
	baz=257						
O15K	**Ungalikthiuk R**	**19.14**	**66**	P	**Pn**	**05 57 57.7**	**+1.5**
O15K	**Ungalikthiuk R**	**19.14**	**66**	P	**P**	**05 57 56.1**	**+0.9**
	baz=276						
L16K	**Owhat River**	**19.18**	**58**	P	**P**	**05 57 56.2**	**+0.6**
	baz=269						
H17K	**Granite Mounta**	**19.29**	**49**		**Pn**	**05 57 58.4**	**+0.5**
H17K				IAmb	IAmb	05 58 08.7	
	comp=Z,21nm,1.0s						
H17K	**Granite Mounta**	**19.29**	**49**	P	**P**	**05 57 57.9**	**+1.1**
	baz=259,SNR=7.6						
M16K	**Timber Creek**	**19.44**	**60**	P	**Pn**	**05 58 00.5**	**+0.8**
M16K				IAmb	IAmb	05 58 26.0	
	comp=Z,24nm,1.2s						
M16K	**Timber Creek**	**19.44**	**60**	P	**P**	**05 57 59.6**	**+1.1**
	baz=272						
J17K	**VABM Dome**	**19.45**	**53**		**Pn**	**05 58 00.3**	**+0.5**
J17K	**VABM Dome**	**19.45**	**53**	P	**P**	**05 57 59.1**	**+0.5**
	baz=265						
N16K	**Nishlik Lake**	**19.56**	**62**	P	**P**	**05 58 00.6**	**+0.8**
	baz=273						
E18K	**Tukpahlearik C**	**19.63**	**41**		**Pn**	**05 58 02.3**	**+0.5**
E18K				IAmb	IAmb	05 58 05.8	
	comp=Z,25nm,1.2s						
E18K	**Tukpahlearik C**	**19.63**	**41**	P	**Pn**	**05 58 02.2**	**+0.3**
	baz=252						
L17K	**Donlin**	**19.75**	**57**	P	**Pn**	**05 58 03.6**	**+0.3**
	baz=269						
F18K	**Selawik**	**19.75**	**44**	P	**Pn**	**05 58 03.7**	**+0.4**
	baz=255						
S14K	**Fog Glacier**	**19.82**	**75**	P	**P**	**05 58 04.2**	**+1.4**
	baz=285						
C18K	**Utukok River**	**19.84**	**37**		**P**	**05 58 04.0**	**+1.2**
C18K				IAmb	IAmb	05 58 13.1	
	comp=Z,24nm,1.1s						
C18K	**Utukok River**	**19.84**	**37**	P	**P**	**05 58 04.1**	**+1.2**
	baz=248,SNR=8.8						
B18K	**Kokolik River**	**19.92**	**35**	P	**Pn**	**05 58 05.7**	**+0.4**

	baz=245,SNR=6.8						
H18K	Honhosa River	19.98	48	P	P	05 58 05.7	+1.4
H18K				IAmb	IAmb	05 58 14.9	
	comp=Z,25nm,1.0s						
H18K	Honhosa River	19.98	48	P	Pn	05 58 05.9	-0.1
	baz=261						
O16K	Kokwok River B	19.98	65	P	P	05 58 05.3	+1.0
	baz=276						
P16K	Nushagak River	20.10	66	P	P	05 58 07.0	+1.4
	baz=278						
M17K	Holitna River	20.16	59		P	05 58 08.0	+1.6
M17K	Holitna River	20.16	59	P	Pn	05 58 08.2	0.0
	baz=272,SNR=12						
CHNA	Chernabura Isl	20.22	79	P	P	05 58 08.2	+1.3
	baz=288						
N17K	Nushagak Hills	20.34	62	P	P	05 58 10.0	+1.7
	baz=274						
O17K	Koliganek Bris	20.46	64	P	P	05 58 10.7	+1.1
	baz=277						
L18K	Granite Mounta	20.50	57		P	05 58 11.3	+1.3
L18K	Granite Mounta	20.50	57	P	P	05 58 11.7	+1.7
	baz=270,SNR=5.4						
A19K	Wainwright	20.51	33	P	Pn	05 58 12.3	+0.1
	baz=244						
F19K	Shaleruckik Mo	20.54	44		P	05 58 11.9	+1.6
F19K				IAmb	IAmb	05 58 12.7	
	comp=Z,20nm,0.9s						
F19K	Shaleruckik Mo	20.54	44	P	P	05 58 11.9	+1.6
	baz=257,SNR=16						
C19K	Lookout Ridge	20.55	37	P	P	05 58 11.8	+1.3
C19K	Lookout Ridge	20.55	37	P	Pn	05 58 12.2	-0.6
	baz=249,SNR=26						
GCSA	Galena City Sc	20.55	50	P	Pn	05 58 12.2	-0.4
	baz=263,SNR=8.0						
G19K	Purcell Mounta	20.67	46	P	P	05 58 13.4	+1.7
	baz=259						
H19K	Roundabout Mou	20.83	48		P	05 58 14.7	+1.3
H19K	Roundabout Mou	20.83	48	P	P	05 58 15.0	+1.5
	baz=262,SNR=11						
Q16K	King Salmon	20.84	67	P	P	05 58 15.1	+1.5
	baz=280						
D19K	Kuna River	20.85	39		P	05 58 14.9	+1.2
D19K				IAmb	IAmb	05 58 26.1	
	comp=Z,20nm,1.1s						
D19K	Kuna River	20.85	39	P	P	05 58 15.0	+1.2
	baz=252,SNR=12						
P17K	Kvichak River	20.87	65	P	P	05 58 15.3	+1.4
	baz=279						
E19K	Redstone River	20.89	42	IAmb	IAmb	05 58 25.3	
	comp=Z,26nm,1.1s						
E19K	Redstone River	20.89	42	P	Pn	05 58 16.1	-0.6
	baz=256,SNR=16						
M18K	Stony River	20.93	59	P	P	05 58 16.0	+1.3
	baz=273						
N18K	Kilae Creek	20.96	61		P	05 58 16.0	+1.0
N18K	Kilae Creek	20.96	61	P	P	05 58 16.3	+1.2
	baz=275						
J19K	Poorman	21.03	52		P	05 58 16.9	+1.2
J19K	Poorman	21.03	52	P	P	05 58 17.1	+1.4
	baz=266,SNR=7.1						
Q17K	Contact Creek	21.32	68	P	P	05 58 20.2	+1.3
	baz=281						
L19K	White Mountain	21.36	57	P	P	05 58 20.5	+1.2
	baz=272						
F20K	Avaraart Lake	21.37	43	P	P	05 58 21.1	+1.8
	baz=258						
O18K	Koktuh Hills	21.39	63	IAmb	IAmb	05 58 24.1	
	comp=Z,26nm,1.1s						
O18K	Koktuh Hills	21.39	63	P	P	05 58 20.8	+1.1
	baz=278,SNR=6.1						
D20K	Etivluk River	21.44	39	P	P	05 58 21.0	+0.9
D20K				IAmb	IAmb	05 58 30.4	
	comp=Z,29nm,1.1s						
D20K	Etivluk River	21.44	39	P	P	05 58 21.8	+1.7
	baz=253,SNR=15						
P18K	Big Mountain,	21.45	65	IAmb	IAmb	05 58 32.4	
	comp=Z,18nm,1.1s						
P18K	Big Mountain,	21.45	65	P	P	05 58 21.4	+1.1
	baz=279						
E20K	Nigu River	21.47	40	P	P	05 58 22.5	+2.1
	baz=255,SNR=12						
H20K	Anotleneega Mo	21.47	48	P	P	05 58 22.5	+2.1
	baz=263,SNR=6.6						
TIXI	Tiksi	21.54	330		P	05 58 23.9	+2.9
TIXI	Tiksi	21.54	330	P	P	05 58 18.2	-2.8
	comp=Z,1.3nm,0.4s,baz=110,slow=12,SNR=3.7						
	comp=Z,1.3nm,0.4s						
TIXI	Tiksi	21.54	330	*i* P	P	05 58 21.3	+0.3
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
I20K	Naaghedeneel	21.58	50	P	P	05 58 22.8	+1.3
	baz=266						
M19K	Big River Lodg	21.59	58	P	P	05 58 23.1	+1.3
	baz=273						
N19K	Bonanza Creek	21.64	61	P	P	05 58 23.5	+1.2
	baz=276						
B20K	Meade River	21.66	35	P	P	05 58 23.9	+1.4
	baz=250						
J20K	Nowinta River	21.68	51	P	P	05 58 24.4	+1.7
	baz=268,SNR=5.5						
Q18K	Katmai Hardscr	21.69	67	P	P	05 58 24.3	+1.3
	baz=281,SNR=5.8						
K20K	Telida	21.70	54		P	05 58 23.6	+0.6
K20K	Telida	21.70	54	P	P	05 58 24.4	+1.5
	baz=270,SNR=5.9						
O19K	Port Alsworth	21.79	62	P	P	05 58 25.0	+1.2
	baz=277						
L20K	Farewell, AK	21.80	56	P	P	05 58 25.1	+1.1
	baz=272						
IMAR	Indian Mountai	21.99	47	P	P	05 58 27.2	+1.2
CHIR	Chirikof Islan	22.07	74	P	P	05 58 27.8	+0.9
	baz=288						
G21K	Allakaket	22.15	45	IAmb	IAmb	05 59 01.9	
	comp=Z,16nm,1.1s						
G21K	Allakaket	22.15	45	P	P	05 58 29.4	+1.7
	baz=262						
M20K	Styx River	22.19	58	P	P	05 58 29.3	+1.1
	baz=274						
C21K	Knifeblade Rid	22.20	38	P	P	05 58 29.9	+1.7
	baz=254						
R18K	Karluk	22.22	69	P	P	05 58 29.3	+0.8
	baz=284						
F21K	Alatna River	22.26	43	IAmb	IAmb	05 58 48.1	
	comp=Z,19nm,1.2s						
F21K	Alatna River	22.26	43	P	P	05 58 30.5	+1.6
	baz=261						
A21K	Barrow	22.31	32	P	P	05 58 30.8	+1.5
	baz=247						
E21K	Killik River	22.31	40	P	P	05 58 30.9	+1.4
	baz=257						
Q19K	Cape Douglas,	22.34	65	P	P	05 58 30.7	+0.9
	baz=281						
H21K	Melozitna Rive	22.34	48	P	P	05 58 31.5	+1.7
	baz=265,SNR=5.9						
B21K	Ikpikpuk River	22.38	37	P	P	05 58 32.0	+1.9
	baz=254						
ILSW	Iliamna Southw	22.41	63	P	P	05 58 31.9	+1.2
P19K	Oil Pt	22.41	64	P	P	05 58 31.9	+1.3
	baz=280						
CHUM	Lake Minchumin	22.48	52	P	P	05 58 32.4	+1.2
	baz=270						
PPLA	Purkeypile	22.57	55	IAmb	IAmb	05 59 06.3	
	comp=Z,26nm,1.3s						
PPLA	Purkeypile	22.57	55	P	P	05 58 33.0	+0.7
	baz=272						
CAST	Castle Rocks	22.59	54	P	P	05 58 33.3	+0.7
CAST	Castle Rocks	22.59	54	P	P	05 58 33.5	+1.0
	baz=271						
SII	Sitkinak Islan	22.62	72	P	P	05 58 33.2	+0.4
	baz=286						
O20K	Slope Mountain	22.65	62	P	P	05 58 33.9	+0.8
	baz=279						
I21K	Tanana	22.66	49	P	P	05 58 33.9	+0.8
	baz=267						
A22K	Sinclair Lake	22.70	33	P	P	05 58 34.4	+1.0
	baz=250						
SPCR	Spurr Chakacha	22.70	59	P	P	05 58 34.5	+0.8
	baz=276						
HEH	HeiHe	22.80	271	*e*P	P	05 58 31.3	-3.4
F22K	John River	22.81	43	P	P	05 58 35.2	+0.5
	baz=261						
STLK	Strandline Lak	22.84	58	IAmb	IAmb	05 58 37.3	
	comp=Z,8.8nm,0.8s						
D22K	Ayikyak River	22.87	39	P	P	05 58 36.0	+0.6
	baz=258						
OHAK	Old Harbor	22.91	70	P	P	05 58 36.0	+0.1
	baz=285						
SKT	Skwentna	22.94	57	P	P	05 58 36.3	+0.2
	baz=275						
H22K	Ishtalitna Cre	22.95	47	P	P	05 58 36.9	+0.7
	baz=266						
B22K	Teshekpuk Lake	22.98	35	P	P	05 58 36.7	+0.3
	baz=253						
G22K	Bettles	22.99	44	P	P	05 58 37.0	+0.5
	baz=263						
Q20K	Shuyak Island	23.04	66	P	P	05 58 37.2	+0.1
	baz=282						
E22K	Anaktuvuk Pass	23.04	41	IAmb	IAmb	05 58 38.4	
	comp=Z,11nm,0.9s						
E22K	Anaktuvuk Pass	23.04	41	P	P	05 58 37.5	+0.4
	baz=260,SNR=12						
BPAW	Bear Paw Mtn.	23.07	52		P	05 58 37.5	+0.1
BPAW				IAmb	IAmb	05 58 49.7	
	comp=Z,22nm,1.4s						
BPAW	Bear Paw Mtn.	23.07	52	P	P	05 58 38.0	+0.5
	baz=271,SNR=7.7						
KTH	Kantishna Hill	23.11	53	IAmb	IAmb	05 58 55.5	
	comp=Z,21nm,1.4s						
KDAK	Kodiak Island	23.14	68	*i* P	P	05 58 36.0	-2.1
KDAK				pmax	pmax		
	comp=Z,26nm,1.1s						
KDAK	Kodiak Island	23.14	68	P	P	05 58 37.9	-0.3
	baz=284						
MLY	Manley	23.18	49	IAmb	IAmb	05 58 57.9	
	comp=Z,12nm,1.2s						
MLY	Manley	23.18	49	P	P	05 58 38.6	-0.1
	baz=269						
HOM	Homer	23.21	63	P	P	05 58 38.6	-0.2
	baz=280						
CAPN	Captain Cook N	23.26	60	P	P	05 58 39.4	0.0
	baz=278						
SUA	Susitna One	23.36	58	IAmb	IAmb	05 58 51.1	
	comp=Z,13nm,0.8s						
SUA	Susitna One	23.36	58	P	P	05 58 40.1	-0.4
	baz=277						
TRF	Thorofare Moun	23.40	53	IAmb	IAmb	05 58 50.9	
	comp=Z,16nm,1.1s						
TRF	Thorofare Moun	23.40	53	P	P	05 58 41.3	+0.3
	baz=273,SNR=6.2						
COLD	Coldfoot	23.53	44	P	P	05 58 41.5	-0.5
COLD				IAmb	IAmb	05 58 51.8	
	comp=Z,13nm,0.9s						
COLD	Coldfoot	23.53	44	P	P	05 58 42.6	+0.6
	baz=264						
G23K	Bananza Creek	23.55	45	IAmb	IAmb	05 59 21.6	
	comp=Z,12nm,1.2s						
G23K	Bananza Creek	23.55	45	P	P	05 58 42.3	-0.1
	baz=265						
D23K	Nanushuk River	23.59	39	P	P	05 58 42.8	+0.2
	baz=260						
M22K	Willow	23.62	58	P	P	05 58 42.5	-0.4
	baz=277						
BRSE	Bradley Lake S	23.64	63	P	P	05 58 42.8	-0.4
	baz=281						
H23K	Yukon River	23.70	47	IAmb	IAmb	05 58 54.0	
	comp=Z,10.0nm,0.9s						
H23K	Yukon River	23.70	47	P	P	05 58 44.3	+0.6
	baz=268,SNR=6.5						
I23K	Minto, Yukon-K	23.77	49	IAmb	IAmb	05 58 55.2	
	comp=Z,19nm,1.2s						
I23K	Minto, Yukon-K	23.77	49	P	P	05 58 45.2	+1.0
	baz=270,SNR=7.7						
C23K	Itkillik River	23.79	37	IAmb	IAmb	05 58 54.6	
	comp=Z,9.8nm,0.8s						
C23K	Itkillik River	23.79	37	P	P	05 58 44.5	0.0
	baz=258						
E23K	Chandalar	23.85	42	IAmb	IAmb	05 59 25.0	
	comp=Z,25nm,1.4s						
E23K	Chandalar	23.85	42	P	P	05 58 46.3	+1.1
	baz=263,SNR=8.0						
NEA2	Nenana	23.89	50	P	P	05 58 46.1	+0.5
	baz=271						
RC01	Rabbit Creek A	23.90	59	P	P	05 58 46.3	+0.6
	baz=279						
TOLK	Toolik Lake Re	23.94	40		P	05 58 46.0	0.0
TOLK	Toolik Lake Re	23.94	40	P	P	05 58 47.3	+1.3
	baz=261,SNR=8.0						
MCK	McKinley	23.99	53	P	P	05 58 46.4	-0.1
	baz=273						
RND	Reindeer	24.05	53	IAmb	IAmb	05 58 56.7	
	comp=Z,8.1nm,0.8s						
PMR	Palmer	24.11	58	P	P	05 58 47.9	+0.3
	baz=278						
SEW	Seward	24.21	62	IAmb	IAmb	05 58 48.3	
	comp=Z,14nm,0.8s						
SEW	Seward	24.21	62	P	P	05 58 47.9	-0.6
	baz=281						
WAT1	Susitna Watana	24.23	55	P	P	05 58 48.4	-0.4
	baz=276						
E24K	Your Creek	24.27	42	P	P	05 58 49.9	+0.8
	baz=264						
D24K	Happy Valley	24.29	39	P	P	05 58 49.9	+0.7
	baz=261						
WRH	Wood River Hil	24.32	51	IAmb	IAmb	05 58 59.9	
	comp=Z,13nm,0.9s						
H24K	Noodor Dome	24.39	47	P	P	05 58 50.6	+0.5
	baz=269						
COLA	College	24.41	50	*i* P	P	05 58 48.5	-1.8
COLA				pmax	pmax		
	comp=Z,16nm,1.1s						
COLA	College	24.41	50	P	P	05 58 50.5	+0.3
	baz=272						
C24K	Franklin Bluff	24.42	38	P	P	05 58 50.9	+0.6
	baz=260						
F24K	Squaw Lake	24.45	43	P	P	05 58 50.8	+0.1
	baz=266						
KNK	Knik Glacier	24.46	58	P	P	05 58 50.9	+0.1
	baz=279						
G24K	Hadweenzic Riv	24.57	45	IAmb	IAmb	05 59 03.2	
	comp=Z,19nm,1.2s						
G24K	Hadweenzic Riv	24.57	45	P	P	05 58 52.1	+0.4
	baz=268,SNR=8.2						
POKR	Poker Plat Res	24.58	49	P	P	05 58 52.5	+0.6
	baz=271						
PWL	Port Wells	24.61	59	P	P	05 58 51.5	-0.7
	baz=280,SNR=17						
WAT6	Susitna Watana	24.63	55	P	P	05 58 51.6	-0.9
	baz=277						
DHY	Denali Highway	24.74	54	IAmb	IAmb	05 59 06.1	
	comp=Z,6.5nm,0.8s						
DHY	Denali Highway	24.74	54	P	P	05 58 53.0	-0.6
	baz=276						
M23K	Glacier View	24.75	57	P	P	05 58 52.6	-0.8
	baz=278,SNR=5.7						
HDA	Harding Lake	24.82	51	IAmb	IAmb	05 59 04.3	
	comp=Z,8.3nm,0.9s						
HDA	Harding Lake	24.82	51	P	P	05 58 53.8	-0.2
	baz=273						
IL31		24.83	50	P	P	05 58 52.6	-1.4
IL31				IAmb	IAmb	05 59 05.0	
	comp=Z,15nm,1.1s						
ILAR	Eielson Array	24.83	50	P	P	05 58 53.0	-1.1
ILAR	Eielson Array	24.83	50	P	P	05 58 52.5	-1.6
	comp=Z,2.6nm,0.8s,baz=264,slow=9.5,SNR=22						
	comp=Z,2.6nm,0.8s						
ILAR	Eielson Array	24.83	50	P	P	05 58 53.0	-1.1
SCM	Sheep Creek Mo	24.93	57	P	P	05 58 54.8	-0.3
	baz=279,SNR=17						
G25K	Bearman Lake	25.11	45	P	P	05 58 56.6	0.0
	baz=269						
D25K	Kavik River	25.17	39	P	P	05 58 57.3	+0.1
	baz=263						
GLI	Glacier Island	25.20	59	IAmb	IAmb	05 59 07.5	
	comp=Z,12nm,0.8s						
GLI	Glacier Island	25.20	59	P	P	05 58 56.4	-1.1
	baz=281						
H25L	Birch Creek	25.23	46	P	P	05 58 57.7	+0.1
	baz=270						
JSD	Sado	25.23	235		P	05 58 59.1	+1.3
JSD				IAmb	IAmb	05 59 05.7	
	comp=Z,7.2nm,0.7s						
P23K	Montague Islan	25.24	61	IAmb	IAmb	05 58 57.7	
	comp=Z,13nm,0.9s						
P23K	Montague Islan	25.24	61	P	P	05 58 56.8	-1.0
	baz=282						
BNX	BinXian	25.31	261	⇑P	P	05 59 03.3	+4.7
BNX				pmax	pmax		
	comp=Z,7.0nm,1.1s						
F25K	Christian Rive	25.31	43	IAmb	IAmb	05 59 10.3	
	comp=Z,10nm,0.9s						
F25K	Christian Rive	25.31	43	P	P	05 58 59.0	+0.5
	baz=268,SNR=6.5						
E25K	Arctic Village	25.36	42	P	P	05 58 59.5	+0.5
	baz=267						
PRP	Porcupine Dome	25.37	48	IAmb	IAmb	05 59 31.5	
	comp=Z,11nm,1.3s						
PRP	Porcupine Dome	25.37	48	P	P	05 58 59.3	+0.2
	baz=272						
K24K	Donnelly Dome	25.38	52	P	P	05 58 59.0	-0.1
	baz=276						
M24K	Tolsona, Glenn	25.42	56	P	P	05 58 59.8	+0.2
	baz=279						
J25K	Salcha River,	25.49	50	P	P	05 59 00.4	+0.3
	baz=274						
PAX	Paxson	25.62	54	P	P	05 59 01.5	+0.1
	baz=278						
KLU	Klutina	25.65	57	IAmb	IAmb	05 59 21.2	
	comp=Z,8.4nm,0.9s						
KLU	Klutina	25.65	57	P	P	05 59 02.0	+0.4
	baz=280						
BMAR	Burnt Mountain	25.72	44	P	P	05 59 02.6	+0.4
C26K	Camden Bay	25.75	38	P	P	05 59 03.3	+0.9
	baz=264						
RIDG	Independent Ri	25.80	52		P	05 59 03.6	+0.6
RIDG				IAmb	IAmb	05 59 14.4	
	comp=Z,11nm,1.1s						
RIDG	Independent Ri	25.80	52	P	P	05 59 03.2	+0.3
	baz=276						
HARP	HAARP	25.85	55	P	P	05 59 03.7	+0.4
	baz=279						
F26K	Sheenjek River	25.89	43	P	P	05 59 04.1	+0.4
	baz=269						
Q23K	Middleton Isla	25.89	62	P	P	05 59 03.6	-0.1
	baz=284						
EYAK	Cordova Ski Ar	25.92	60	P	P	05 59 04.2	+0.3
	baz=282						
G26K	Porcupine Rive	26.03	45	IAmb	IAmb	05 59 16.6	
	comp=Z,7.9nm,0.8s						
G26K	Porcupine Rive	26.03	45	P	P	05 59 05.4	+0.5
	baz=271						
C27K	Jago River	26.14	39	P	P	05 59 06.2	+0.3
	baz=265						
SCRK	Sand Creek	26.15	52	IAmb	IAmb	05 59 15.1	
	comp=Z,11nm,1.2s						
SCRK	Sand Creek	26.15	52	P	P	05 59 05.8	-0.4
	baz=277						
N25K	Chitina, Valde	26.25	57	P	P	05 59 07.0	-0.1
	baz=281						
J26L	Joseph Creek	26.27	50	P	P	05 59 07.4	+0.1
	baz=276						
I26K	Coal Creek Min	26.37	48	P	P	05 59 08.3	+0.3
	baz=275						
BMRM	Bremner River	26.38	58	P	P	05 59 07.6	-0.6
BMRM				IAmb	IAmb	05 59 16.8	
	comp=Z,13nm,0.9s						
BMRM	Bremner River	26.38	58	P	P	05 59 08.1	-0.1
	baz=282,SNR=6.3						
RAGM	Ragged Mountai	26.47	60	IAmb	IAmb	05 59 18.7	
	comp=Z,10nm,0.8s						
MJB9	Matsu-Tunnel	26.48	233	P	P	05 59 11.5	+2.2
MAJO	Matsushiro	26.48	233		P	05 59 11.4	+2.1
MAJO	Matsushiro	26.48	233	*i* P	P	05 59 09.5	+0.2
MAJO				pmax	pmax		
	comp=Z,16nm,0.8s						
MJAR	Matsushiro Arr	26.48	233	P	P	05 59 11.4	+2.1
	comp=Z,4.3nm,0.7s,baz=29,slow=8.2,SNR=11						
	comp=Z,4.3nm,0.7s						
L26K	Log Cabin Wild	26.57	54	P	P	05 59 10.3	+0.4
	baz=279						
HMT	Hamilton	26.69	60	IAmb	IAmb	05 59 13.7	
	comp=Z,13nm,1.0s						
KAIM	Kayak Island	26.71	61	P	P	05 59 11.5	+0.3
	baz=284						
M26K	Nabesna, AK	26.84	55	IAmb	IAmb	05 59 13.8	
	comp=Z,12nm,1.4s						
M26K	Nabesna, AK	26.84	55	P	P	05 59 12.7	+0.3
	baz=281						
E27K	Coleen River	26.85	42	P	P	05 59 13.0	+0.6
	baz=270						
G27K	Doyon Strip	26.87	45	P	P	05 59 13.1	+0.5
	baz=273						
H27K	Steamboat Moun	26.96	46	P	P	05 59 13.7	+0.2
	baz=274						
K27K	Chicken	26.98	51	IAmb	IAmb	05 59 34.9	
	comp=Z,13nm,1.1s						
K27K	Chicken	26.98	51	P	P	05 59 13.6	+0.1
	baz=278						
I27K	Kandik River	26.98	48	P	P	05 59 14.2	+0.5
	baz=275						
MCARA	McCarthy VSAT	27.03	57	P	P	05 59 15.3	+1.2
	baz=283						
D27M	Malcolm River	27.09	40	P	P	05 59 15.4	+0.8
	baz=269						
CRQE	Cirque	27.15	58	P	P	05 59 15.7	+0.5
	baz=284						
BGLC	Bering Glacier	27.21	60	P	P	05 59 16.5	+0.9
	baz=285						
L27K	Beaver Creek,	27.25	53	IAmb	IAmb	05 59 17.2	
	comp=Z,13nm,1.3s						
L27K	Beaver Creek,	27.25	53	P	P	05 59 16.4	+0.4
	baz=280,SNR=9.5						
BCAR	Beaver Creek A	27.26	53	P	P	05 59 16.4	+0.2
M27K	Edge Creek, AK	27.36	55	IAmb	IAmb	05 59 32.0	
	comp=Z,16nm,1.3s						
M27K	Edge Creek, AK	27.36	55	P	P	05 59 17.9	+0.8
	baz=282,SNR=7.1						
F28M	Old Crow	27.52	43	P	P	05 59 18.7	+0.3
	baz=273						
E28M	Babbage River	27.61	41	P	P	05 59 19.5	+0.4
	baz=271						
I28M	Miner Creek	27.70	48	P	P	05 59 20.2	+0.1
	baz=277						
BVCY	Beaver Creek	27.81	54	P	P	05 59 21.6	+0.5
	baz=282						
MESA	MESA	27.84	59	P	P	05 59 21.5	-0.1
	baz=286						
D28M	Stokes Point	27.88	39	P	P	05 59 22.0	+0.5
	baz=271						
CTG	Chitna Glacier	27.93	58	P	P	05 59 22.1	-0.1
	baz=284						
YUK3	Moose Creek	28.14	56	P	P	05 59 24.0	-0.2
	baz=284						
DAWY	Dawson	28.14	51	P	P	05 59 24.1	+0.1
	baz=280						
E29M	Blow River	28.22	41	P	P	05 59 25.0	+0.4
	baz=273						
H29M	Whitestone	28.24	46	P	P	05 59 25.0	+0.1
	baz=277						
G29M	Pine Creek	28.30	45	P	P	05 59 25.5	+0.2
	baz=276						
I29M	Ogilvie Camp,	28.38	48	IAmb	IAmb	05 59 37.5	
	comp=Z,12nm,1.4s						
I29M	Ogilvie Camp,	28.38	48	P	P	05 59 26.2	+0.1
	baz=278						
O28M	Mount Upton	28.52	58	P	P	05 59 27.4	-0.3
	baz=286						
YUK8	Steele Glacier	28.58	56	P	P	05 59 28.0	-0.2
	baz=285						
PINM	Pinnacle	28.68	59	P	P	05 59 28.7	-0.2
	baz=287						
EPYK	Eagle Plains	28.88	46	P	P	05 59 31.3	+0.8
	baz=278						
L29M	L29M	28.88	52	IAmb	IAmb	05 59 42.9	
	comp=Z,6.8nm,0.9s						
L29M	L29M	28.88	52	P	P	05 59 31.3	+0.6
	baz=283						
M29M	Somme Creek	28.89	54	P	P	05 59 31.3	+0.5
	baz=284						
K29M	Barlow Dome	28.99	51	P	P	05 59 32.0	+0.4
	baz=282						
G30M	tAoh Zraii Nji	28.99	44	P	P	05 59 32.1	+0.6
	baz=277						
F30M	Barrier River	29.08	43	P	P	05 59 32.9	+0.6
	baz=276						
YUK4	Talbot Arm	29.09	56	P	P	05 59 33.0	+0.4
	baz=285						
I30M	Mount Dempster	29.21	48	P	P	05 59 33.8	+0.3
	baz=280						
PNL	Peninsula	29.22	60	P	P	05 59 33.6	0.0
	baz=288						
YUK6	Outpost Mounta	29.33	57	P	P	05 59 34.9	+0.1
	baz=286						
J30M	Hart River	29.35	49	P	P	05 59 34.9	0.0
	baz=282						
O29M	Mount Kennedy	29.42	58	P	P	05 59 35.1	-0.3
	baz=287						
HYT	Haines Junctio	29.77	57	P	P	05 59 38.6	0.0
	baz=287,SNR=5.1						
N30M	Aishikik Lake	29.77	55	P	P	05 59 38.7	+0.1
	baz=286						
INK	Inuvik	29.84	41	P	P	05 59 39.8	+0.8
	baz=277						
F31M	Tsiigehtchic	29.88	43	P	P	05 59 38.8	-0.6
	baz=278						

H31M	Peel River	29.93	46	P	P	05 59 40.2	+0.4
	baz=281						
P29M	Windy Craggy	30.03	59	P	P	05 59 41.0	+0.2
	baz=289						
P30M	Million Dollar	30.24	58	P	P	05 59 42.9	+0.2
	baz=289						
N31M	Braeburn, Yuko	30.37	55	P	P	05 59 44.0	+0.2
	baz=287						
O30N	Mendenhall	30.44	56	P	P	05 59 44.6	+0.2
	baz=288						
PLBC	Pleasant Camp	30.75	59	P	P	05 59 47.3	+0.2
	baz=290						
KSRS	Korea Array	30.77	248	P	P	05 59 47.4	-0.1
	comp=Z,0.4nm,0.3s,baz=39,slow=8.8,SNR=5.4						
	comp=Z,0.4nm,0.3s						
M31M	Drury Creek, Y	30.79	53	P	P	05 59 47.6	+0.1
	baz=287						
WHY	Whitehorse	31.04	56	IAmb	IAmb	05 59 51.5	
	comp=Z,8.8nm,1.1s						
WHY	Whitehorse	31.04	56	P	P	05 59 50.2	+0.4
	baz=289						
SKAG	Skagway	31.24	59	P	P	05 59 52.0	+0.6
	baz=291						
FARO	Faro, Yukon	31.25	53	P	P	05 59 52.1	+0.6
	baz=288						
S31K	Pelican	31.36	62	P	P	05 59 53.3	+0.9
	baz=292						
MMPY	Sheldon Lake,	32.05	52	P	P	05 59 59.2	+0.6
	baz=288						
R32K	Eaglecrest	32.08	60	P	P	05 59 59.4	+0.6
	baz=293						
A36M	Sachs Harbour	32.14	33	P	P	06 00 00.8	+1.6
	baz=278						
P33M	Teslin, Yukon	32.16	56	P	P	06 00 00.2	+0.7
	baz=291						
SIT	Sitka	32.17	63	P	P	06 00 00.3	+0.7
	baz=294						
S32K	Killisnoo	32.37	62	P	P	06 00 02.4	+1.1
	baz=294						
Q32M	Nakina River	32.89	58	P	P	06 00 07.1	+0.9
	baz=293						
R33M	Jennings River	33.33	57	P	P	06 00 10.8	+0.9
	baz=293						
S34M	Telegraph Cree	33.87	60	P	P	06 00 15.8	+1.3
	baz=295						
WRAK	Wrangell Islan	33.93	63	P	P	06 00 15.8	+0.9
	baz=297						
CRAG	Craig	33.97	64	P	P	06 00 16.4	+1.1
	baz=298						
WTLY	Watson Lake, Y	34.06	55	P	P	06 00 17.3	+1.2
	baz=293						
T35M	Bob Quinn	34.70	61	P	P	06 00 23.1	+1.4
	baz=297						
V35K	Ketchikan	34.80	64	P	P	06 00 23.5	+1.1
	baz=298						
ULN	Ulaanbaatar	35.38	281	*i* P	P	06 00 25.9	-1.9
ULN				pmax	pmax		
	comp=Z,3.0nm,1.4s						
SONM	Songino Array	35.76	282	P	P	06 00 30.1	-1.0
	comp=Z,1.1nm,0.8s,baz=64,slow=9.8,SNR=5.1						
	comp=Z,1.1nm,0.8s						
TOAD	Toad River Com	36.24	56	P	P	06 00 36.0	+1.1
	baz=297,SNR=9.0						
H11N2	WAKE ISLAND Hy	36.43	176	T	T	06 39 34.7	
	baz=357,slow=76,SNR=110						
H11N3	WAKE ISLAND Hy	36.44	176	T	T	06 39 41.5	
	baz=357,slow=76,SNR=89						
H11N1	WAKE ISLAND Hy	36.44	176	T	T	06 39 40.8	
	baz=357,slow=76,SNR=90						
HHC	Hu-ho-hao-te	37.29	269	*e*P	P	06 00 46.8	+2.7
HHC				pmax	pmax		
	comp=Z,14nm,0.6s						
HHC				pmax	pmax		
	comp=Z,220nm,4.8s						
YKA	Yellowknife Ar	39.15	47	P	P	06 00 59.4	0.0
	comp=Z,1.2nm,0.8s,baz=303,slow=9.3,SNR=7.9						
	comp=Z,1.2nm,0.8s						
NJ2	Nanjing	39.69	252	*e*P	P	06 01 06.8	+2.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SPITS	Spitsbergen Ar	44.51	351	P	P	06 01 43.3	+0.2
	comp=Z,3.0nm,0.6s,baz=59,slow=6.9,SNR=6.0						
	comp=Z,3.0nm,0.6s						
GTA	Gaotai	44.83	276	*e*P	P	06 01 47.5	+1.3
GTA				pP	sP	06 01 52.8	+1.3
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LZH	Lanzhou	44.94	270	*e*P	P	06 01 53.3	+6.1
LZH				sP	pwP	06 02 00.0	+3.9
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
B08A	Colville Reser	45.00	66	P	P	06 01 46.8	-0.6
B08A				IAmb	IAmb	06 01 56.4	
	comp=Z,3.6nm,0.8s						
BLKN	Baker Lake	45.08	37		P	06 01 46.7	-0.9
J05D	Fort Rock, OR	47.36	73	P	P	06 02 05.1	-1.0
J05D				IAmb	IAmb	06 02 07.9	
	comp=Z,4.9nm,1.0s						
KURK	Kurchatov	48.30	302	P	P	06 02 13.8	+0.7
KURBB	Kurchatov Arra	48.41	302	P	P	06 02 13.8	-0.1
	comp=Z,0.4nm,0.5s,baz=49,slow=7.5,SNR=4.3						
	comp=Z,0.4nm,0.5s						
MK31	Makanchi Array	49.15	296	*i* P	P	06 02 18.9	-0.8
BVAR	Borovoye Array	50.49	309	P	P	06 02 28.9	-0.9
	comp=Z,0.9nm,0.4s,baz=52,slow=9.7,SNR=5.7						
	comp=Z,0.9nm,0.4s						
RLMT	Red Lodge	52.28	63	IAmb	IAmb	06 02 45.4	
	comp=Z,5.0nm,0.9s						
NVAR	Mina Array Bea	52.35	75	P	P	06 02 44.0	-0.2
	comp=Z,1.3nm,0.9s,baz=301,slow=7.7,SNR=5.1						
	comp=Z,1.3nm,0.9s						
ARTI	Arti	52.96	318	*d i*P	P	06 02 45.7	-2.4
ARTI						06 04 47.0	
ARTI				S	S	06 10 15.0	-1.5
ARTI				SS	SS	06 13 44.4	-10
ARTI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PZH	PanZhiHua	53.34	263	P	P	06 02 56.8	+5.3
PZH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,100nm,4.8s						
PD31	Pinedale Array	53.82	66	P	P	06 02 54.5	-0.5
PD31				IAmb	IAmb	06 03 03.7	
	comp=Z,3.0nm,0.8s						
PDAR	Pinedale Array	53.82	66	P	P	06 02 54.5	-0.5
PDAR	Pinedale Array	53.82	66	P	P	06 02 55.0	0.0
	comp=Z,1.9nm,0.9s,baz=319,slow=4.3,SNR=12						
	comp=Z,1.9nm,0.9s						
SPR3	Spring Creek 3	54.07	72	IAmb	IAmb	06 02 59.3	
	comp=Z,5.3nm,1.2s						
ULM	Lac du Bonnet	54.84	51	P	P	06 03 00.1	-1.8
	comp=Z,1.7nm,0.7s,baz=283,slow=2.7,SNR=3.7						
	comp=Z,1.7nm,0.7s						
PRN	Pahroc Range	54.85	74	IAmb	IAmb	06 03 32.1	
	comp=Z,7.3nm,1.1s						
TMUT	Trail Mountain	55.50	70	IAmb	IAmb	06 03 46.4	
	comp=Z,3.7nm,0.9s						
AAK	Ala-Archa	56.01	297	*i* P	P	06 03 10.0	-0.7
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LCMT	Little Creek M	56.11	73	IAmb	IAmb	06 03 21.6	
	comp=Z,5.7nm,1.5s						
PV16	Nyswonger Mesa	57.43	69	IAmb	IAmb	06 03 38.5	
	comp=Z,5.6nm,1.0s						
PV05	Paradox Valley	57.51	69	IAmb	IAmb	06 03 41.7	
	comp=Z,4.1nm,0.8s						
PV13	Radium Mtn., P	57.59	69	IAmb	IAmb	06 03 40.1	
	comp=Z,5.0nm,0.9s						
PV02	Paradox Valley	57.60	69	IAmb	IAmb	06 03 45.2	
	comp=Z,5.4nm,1.0s						
KK31	Karatay Array	57.61	300	P	P	06 03 23.3	+1.4
KK31	Karatay Array	57.61	300	P	P	06 03 23.3	+1.4
KK31				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KKAR	Karatay Array	57.61	300	P	P	06 03 22.6	+0.7
KKAR	Karatay Array	57.61	300		P	06 03 21.7	-0.2
KKAR	Karatay Array	57.61	300	P	P	06 03 22.6	+0.7
KKAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PV15	Paradox Valley	57.63	68	IAmb	IAmb	06 03 34.8	
	comp=Z,6.1nm,0.9s						
AB31	Akbulak array	57.73	311	P	P	06 03 25.0	+2.3
FINES	FINESS Array B	58.28	338	P	P	06 03 25.9	-0.4
	comp=Z,1.9nm,0.9s,baz=1.9,slow=12,SNR=4.5						
	comp=Z,1.9nm,0.9s						
EVN	Everest	60.54	277		P	06 03 43.7	+0.6
NB2	NORSAR Subarra	61.25	346	P	P	06 03 46.2	-0.6
	comp=Z,0.6nm,0.6s,baz=18,slow=6.9						
NOA	NORSAR Array B	61.25	346	P	P	06 03 45.8	-1.0
	comp=Z,0.9nm,0.7s,baz=18,slow=6.8,SNR=4.1						
	comp=Z,0.9nm,0.7s						
CMAR	Chiang Mai Arr	61.30	260	P	P	06 03 49.6	+2.0
	comp=Z,1.7nm,0.3s,baz=25,slow=6.3,SNR=7.1						
	comp=Z,1.7nm,0.3s						
HFS	Hagfors	61.76	344	P	P	06 03 49.4	-0.7
	comp=Z,1.4nm,0.6s,baz=61,slow=4.2,SNR=7.7						
	comp=Z,1.4nm,0.6s						
TXAR	Lajitas Array	67.12	71	P	P	06 04 26.0	+0.2
	comp=Z,0.9nm,0.7s,baz=301,slow=4.8,SNR=8.7						
	comp=Z,0.9nm,0.7s						
TXAR	Lajitas Array	67.12	71	P	P	06 04 26.0	+0.2
KBZ	Khabaz	69.00	319	P	P	06 04 39.2	+2.0
	comp=Z,1.0nm,0.6s,baz=31,slow=6.3,SNR=5.4						
	comp=Z,1.0nm,0.6s						
KBZ	Khabaz	69.00	319	*i* P	P	06 04 37.6	+0.3
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GERES	GERESS Array B	72.56	340	P	P	06 04 59.4	+0.4
	comp=Z,0.4nm,0.2s,baz=30,slow=3.5,SNR=3.5						
	comp=Z,0.4nm,0.2s						
WRA	Warramunga Arr	80.00	209	P	P	06 05 42.5	+1.2
	comp=Z,0.4nm,1.0s,baz=28,slow=6.0,SNR=5.7						
	comp=Z,0.4nm,1.0s						
ASAR	Alice Springs	83.67	208	P	P	06 06 03.1	+2.5
	comp=Z,1.0nm,0.9s,baz=15,slow=5.1,SNR=6.0						
	comp=Z,1.0nm,0.9s						
QSPA	South Pole Qui	145.93	180	PKPbc	PKPdf	06 13 09.4	-0.1
	comp=Z,2.0nm,0.9s,baz=278,slow=2.1,SNR=9.4						

*UCR **26** 05:54:02.2±0.6, 8°.39N×82°.90W, h31^{km}±2^{km}, MW3.5*
*UPA **26** 05:54:03.6±1.2, 8°.45N×82°.85W, h23^{km}±5^{km}, MW3.3, Fault plane solution: NP1:ϕ_s0.00000°, δ38.00000°, λ58.00000°.*
ISC 26 05:54:02.3±1.1, **8°.43N**±0°.03×**82°.90W**±0°.03, **h33**^{km}±5^{km}, **n39, σ0^{s}.65**/57, **6C-6D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.11	103	⇑*i*P	Pb	05 54 08.0	-0.2
LESP3				*e*S	Sb	05 54 10.9	-1.2
LPPC	Paso Canoas	0.12	30	*e*P	Pb	05 54 08.0	-0.2
LPPC				*e*S	Sb	05 54 12.6	+0.4
NELY	Ciudad Neily	0.22	348	*e*P	Pb	05 54 09.1	-0.1
NELY				*e*S	Sb	05 54 14.6	+0.8
FITO	Golfito	0.32	307	*e*P	Pb	05 54 09.2	-1.1
FITO				*e*S	Sb	05 54 15.1	-0.6
LMNES	Limones	0.33	173	*e*P	Pb	05 54 10.5	0.0
LMNES	Limones	0.33	173	⇓*i*P	Pb	05 54 10.7	+0.2
LMNES				*e*S	Sb	05 54 18.0	+2.0
EDAD	Golfito	0.34	310	*e*P	Pb	05 54 09.9	-0.8
MCANO	Manzana, Boque	0.35	67	*e*P	Pb	05 54 10.9	+0.2
MCANO	Manzana, Boque	0.35	67	*i* P	Pb	05 54 11.1	+0.3
MCANO				*e*S	Sb	05 54 16.6	+0.1
MLIR3	Monte Lirio, C	0.37	12	*e*S	Sb	05 54 17.3	+0.3
RSRNO	Rio Sereno	0.39	5	*e*P	Pb	05 54 11.8	+0.5
RSRNO	Rio Sereno	0.39	5	⇑*e*P	Pb	05 54 12.0	+0.6
RSRNO				*e*S	Sb	05 54 17.9	+0.4
VITO	San Vito	0.39	350	*e*P	Pb	05 54 11.8	+0.3
BRU2	Volcan	0.42	30	*e*P	Pb	05 54 12.1	+0.3
BRU2	Volcan	0.42	30	⇑*i*P	Pb	05 54 12.2	+0.4
BRU2				*e*S	Sn	05 54 19.6	+0.9
SCLRA	Santa Clara, W	0.42	16	*e*P	Pb	05 54 11.9	+0.1
SCLRA	Santa Clara, W	0.42	16	*e*P	Pb	05 54 12.1	+0.3
SCLRA				*e*S	Sb	05 54 18.6	+0.3
CLLRA	Cordillera,	0.42	42	*e*P	Pb	05 54 12.1	+0.2
CLLRA	Cordillera,	0.42	42	⇑*i*P	Pb	05 54 12.3	+0.4
CLLRA				*e*S	Sb	05 54 18.0	-0.4
DVD	David	0.44	89	⇑*i*P	Pb	05 54 12.0	-0.1
DVD				*e*S	Sb	05 54 17.3	-1.4
CSTBL	De las Acacias	0.45	92	*e*P	Pb	05 54 11.8	-0.3
CSTBL	De las Acacias	0.45	92	⇓*i*P	Pb	05 54 12.0	-0.1
CSTBL				*e*S	Sb	05 54 19.0	+0.1
PEDE3	Pedregal, Chir	0.47	96	⇓*i*P	Pb	05 54 12.2	-0.3
PEDE3				*e*S	Sb	05 54 19.2	-0.3
LOCO3	Loma Colorada,	0.48	92	*e*S	Sb	05 54 19.3	-0.2
PTAR3	Potrerillos Ar	0.48	57	*i* P	Pb	05 54 12.9	+0.3
PTAR3				*e*S	Sb	05 54 18.9	-0.8
BC3P	Paso Ancho	0.48	37	⇑*i*P	Pb	05 54 12.9	+0.2
BC3P				*e*S	Sb	05 54 19.6	-0.2
LOMA3	Las Lomas, Chi	0.50	90	*e*S	Sb	05 54 20.6	+0.4
ALCO	Alturas Coton,	0.52	7	*e*P	Pb	05 54 13.2	-0.2
BQTLY	Boquete Panama	0.54	53	*e*P	Pb	05 54 13.5	-0.2
BQTLY	Boquete Panama	0.54	53	*e*P	Pb	05 54 14.4	+0.8
BQSF3	Alto Boquete,	0.55	56	⇓*i*P	Pb	05 54 13.7	-0.1
BQSF3				*e*S	Sb	05 54 22.2	+0.4
CHIR3	Chiriqui UPA,	0.56	94	*e*S	Sb	05 54 22.5	+0.6
PSOM3	Paja de Sombre	0.62	66	⇓*i*P	Pb	05 54 14.5	-0.4
PSOM3				*e*S	Sb	05 54 21.5	-2.0
PANP	Palmar Norte	0.77	314	*e*P	Pb	05 54 16.8	-0.5
PBNVO	Pueblo Nuevo,	0.83	57	*e*P	Pb	05 54 17.5	-1.0
RBALA	Bur	0.86	59	*e*P	Pb	05 54 18.1	-0.7
RBALA	Bur	0.86	59	⇓*i*P	Pb	05 54 18.3	-0.6
RBALA				*e*S	Sb	05 54 30.1	0.0
ISBTO	Bastimentos Is	1.14	37	*e*P	Pb	05 54 24.1	+0.6
KKNTU	Kakintº	1.15	69	*e*P	Pn	05 54 21.9	-0.2

*UCR **26** 05:54:40.3±1.3, 8°.32N×82°.81W, h20^{km}±5^{km}, MW3.6*
*UPA **26** 05:54:40.3±1.0, 8°.37N×82°.80W, h32^{km}±4^{km}, MW3.9, Fault plane solution: NP1:ϕ_s150.00000°, δ83.00000°, λ17.00000°.*
ISC 26 05:54:40.3±1.0, **8°.37N**±0°.04×**82°.80W**±0°.03, **h31**^{km}±7^{km}, **n44, σ0^{s}.67**/63, **7C-2D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.04	15	⇑*i*P	Pb	05 54 45.2	-0.3
LESP3				*e*S	Sb	05 54 49.5	+0.3
LMNES	Limones	0.27	193	*e*P	Pb	05 54 47.3	-0.2
LMNES	Limones	0.27	193	*e*S	Sb	05 54 52.3	-0.1
MCANO	Manzana, Boque	0.30	48	*e*P	Pb	05 54 48.0	+0.1
MCANO	Manzana, Boque	0.30	48	⇓*i*P	Pb	05 54 48.2	+0.2
MCANO				*e*S	Sn	05 54 53.9	-0.1
NELY	Ciudad Neily	0.32	333	*e*P	Pb	05 54 47.7	-0.4
NELY				*e*S	Sn	05 54 54.0	-0.3
DVD	David	0.35	79	*e*P	Pb	05 54 48.5	0.0
DVD				*e*S	Sn	05 54 55.0	-0.1
CSTBL	De las Acacias	0.36	83	*e*P	Pb	05 54 48.6	0.0
CSTBL	De las Acacias	0.36	83	⇓*i*P	Pb	05 54 48.7	0.0
PEDE3	Pedregal, Chir	0.38	87	*e*P	Pb	05 54 48.7	-0.1
PEDE3				*e*S	Sb	05 54 55.2	+0.4
LOCO3	Loma Colorada,	0.38	83	*e*P	Pb	05 54 48.9	0.0
LOCO3				*e*S	Sb	05 54 55.0	+0.1
LOMA3	Las Lomas, Chi	0.41	81	*e*P	Pb	05 54 49.2	-0.1
CLLRA	Cordillera,	0.42	26	*e*P	Pb	05 54 49.6	-0.1
CLLRA	Cordillera,	0.42	26	⇑*i*P	Pb	05 54 49.6	-0.1
MLIR3	Monte Lirio, C	0.42	357	*e*P	Pn	05 54 50.0	-0.3
FITO	Golfito	0.43	306	*e*P	Pb	05 54 48.4	-1.4
FITO				*e*S	Sb	05 54 55.3	-0.9
BRU2	Volcan	0.44	14	*e*P	Pb	05 54 49.8	-0.2
BRU2				*e*S	Sn	05 54 57.6	+0.1
BRU2	Volcan	0.44	14	⇑*i*P	Pb	05 54 49.8	-0.2
BRU2				*e*S	Sn	05 54 57.6	+0.1
PTAR3	Potrerillos Ar	0.44	43	*e*P	Pb	05 54 50.0	+0.1
PTAR3				*e*S	Sn	05 54 57.3	-0.3
RSRNO	Rio Sereno	0.45	352	*e*P	Pn	05 54 50.4	-0.3
RSRNO	Rio Sereno	0.45	352	⇑*i*P	Pb	05 54 50.2	+0.1
EDAD	Golfito	0.46	308	*e*P	Pb	05 54 48.8	-1.4
EDAD				*e*S	Sb	05 54 56.1	-0.9
SCLRA	Santa Clara, W	0.46	2	*e*P	Pb	05 54 50.3	-0.1
SCLRA	Santa Clara, W	0.46	2	⇑*i*P	Pb	05 54 50.2	-0.1
VITO	San Vito	0.48	340	*e*P	Pb	05 54 50.5	-0.1
VITO				*e*S	Sn	05 54 59.2	+0.7
BC3P	Paso Ancho	0.48	23	*e*P	Pb	05 54 50.3	-0.4
BC3P				*e*S	Sn	05 54 59.3	+0.6
BQTLY	Boquete Panama	0.51	41	*e*P	Pb	05 54 50.8	-0.3
BQTLY	Boquete Panama	0.51	41	⇑*i*P	Pb	05 54 50.9	-0.3
BQTLY				*e*S	Sn	05 54 58.9	-0.4
BQSF3	Alto Boquete,	0.52	44	*e*P	Pb	05 54 50.9	-0.3
BQSF3				*e*S	Sb	05 54 58.9	+0.2
PSOM3	Paja de Sombre	0.57	56	*e*P	Pb	05 54 51.5	-0.5
PSOM3				*e*S	Sb	05 54 59.1	-0.8
EDP2	Potrero Grande	0.74	330	*e*P	Pn	05 54 54.3	-0.3
EDP2				*e*S	Sn	05 55 05.9	+1.1
PBNVO	Pueblo Nuevo,	0.80	49	*e*P	Pn	05 54 54.7	-0.6
RBALA	Bur	0.82	51	*e*P	Pn	05 54 55.5	-0.1
RBALA	Bur	0.82	51	⇑*i*P	Pn	05 54 55.5	-0.1
PANP	Palmar Norte	0.88	312	*e*P	Pn	05 54 55.9	-0.6
PANP				*e*S	Sn	05 55 07.9	-0.2
RMDIO	Remedios, Chir	0.97	98	*i* P	Pn	05 54 57.8	+0.1
KKNTU	Kakintº	1.09	64	*e*P	Pn	05 54 59.0	-0.4
KKNTU	Kakintº	1.09	64	*i* P	Pn	05 54 59.0	-0.4
KKNTU				*e*S	Sn	05 55 13.3	-0.1
EDPE	Pejibaye, P	1.09	316	*e*P	Pn	05 54 59.6	+0.1
PAR1A	Puntarenas Pro	1.88	311	*e*P	Pn	05 55 11.2	+0.9
ACOS	Acosta	1.96	317	*e*P	Pn	05 55 12.9	+1.5
SANTA	Santa Ana	2.07	319	*e*P	Pn	05 55 15.0	+2.0
BELE	Belen	2.11	320	*e*P	Pn	05 55 15.4	+2.0
ATEO	Atenas	2.24	316	*e*P	Pn	05 55 17.3	+2.0

*SJA **26** 06:02:37.2±0.6, 37°.69S×73°.60W, h101^{km}±5^{km}, ML3.5, MW3.8*
*GUC **26** 06:02:41.5±0.7, 37°.73S×73°.23W, h35^{km}±6^{km}, ML3.6*
ISC 26 06:02:39.3±2.0, **37°.69S**±0°.04×**73°.58W**±0°.09, **h86**^{km}±20^{km}, **n19, σ0^{s}.73**/23, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BI04	Isla Mocha	0.76	198	*e*P	Pn	06 02 56.2	+0.1
BI04				IAML		06 03 12.8	
	comp=N,7µm,0.3s						
BI05	Punta Hualpn	0.99	18	*e*P	Pn	06 02 58.9	+0.3
BI05				*e*S	Sn	06 03 11.4	-1.6
BI05				IAML		06 03 14.7	
	comp=N,1µm,0.4s						
BI05	Punta Hualpn	0.99	18	*i* P	Pn	06 02 58.6	0.0
BI05				*i* S	Sn	06 03 14.0	+1.0
BI05				IAML		06 03 14.5	
	comp=Z,658nm,0.5s						
LC01	Cunco	1.80	132	*e*P	Pn	06 03 08.2	-0.6
LC01				IAML		06 03 33.1	
	comp=E,965nm,0.1s						
CANA	Caviahue	2.00	96	*i* P	Pn	06 03 11.1	-0.5
CANA				*i* S	Sn	06 03 36.7	+0.5
CANA				IAML		06 03 40.1	
	comp=Z,111nm,0.7s						
BI02	San Fabin de	2.11	62	*e*P	Pn	06 03 12.6	-0.3
BI02				IAML		06 03 41.0	
	comp=E,230nm,0.4s						
BI02	San Fabin de	2.11	62	*i* P	Pn	06 03 12.5	-0.3
BI02				*i* S	Sn	06 03 39.1	+0.6
BI02				IAML		06 03 44.9	
	comp=Z,194nm,0.9s						
LR03	Panguipulli	2.17	154	*e*P	Pn	06 03 14.0	+0.4
LR03				IAML		06 03 46.9	
	comp=E,1µm,0.5s						
LR03	Panguipulli	2.17	154	*i* P	Pn	06 03 13.4	-0.2
LR03				*i* S	Sn	06 03 40.3	+0.5
LR03				IAML		06 03 47.5	
	comp=Z,997nm,0.3s						
LR04	Corral	2.19	177	*e*P	Pn	06 03 12.8	-1.1
LR04				IAML		06 03 51.2	
	comp=E,814nm,0.3s						
LR04	Corral	2.19	177	*i* P	Pn	06 03 13.2	-0.7
LR04				*i* S	Sn	06 03 40.3	0.0
LR04				IAML		06 03 52.7	
	comp=Z,253nm,0.2s						
ML02	Panimavida	2.59	43	IAML		06 04 01.3	
	comp=E,458nm,0.6s						
ML02	Panimavida	2.59	43	*i* P	Pn	06 03 18.9	-0.4
ML02				*i* S	Sn	06 03 49.6	-0.2
ML02				IAML		06 04 06.8	
	comp=Z,170nm,0.4s						
LR05	Currie	2.82	155	*e*P	Pn	06 03 23.3	+1.0
LR05				IAML		06 04 06.3	
	comp=E,282nm,0.3s						
GO05	Hualane	2.99	27	*e*P	Pn	06 03 25.7	+1.1
GO05				IAML		06 04 21.6	
	comp=E,161nm,0.6s						
BO03	Pichilemu	3.45	23	IAML		06 04 28.9	
	comp=N,68nm,0.6s						
BO02	Sierra Bellavi	3.67	39	IAML		06 04 34.9	
	comp=E,206nm,0.5s						
BO01	Tunca	3.86	32	*i* P	Pn	06 03 36.1	-0.3
BO01				IAML		06 04 39.0	
	comp=Z,60nm,1.1s						
LMEL	Las Melosas	4.71	37	*i* P	Pn	06 03 47.8	-0.4

*IDC **26** 06:04:08.0±1.7, 55°.92N×165°.60E, h0^{km}, mb3.1/4, mbtmp3.1/5, ML2.3/1, Error ellipse: s-maj=63.8km s-min=26.2km az=168.0*
*KRSC **26** 06:04:11.8±0.9, 55°.97N×164°.51E, h14^{km}±12^{km}, Ml3.7*
ISC 26 06:04:11.4±2.0, **56°.20N**±0°.09×**164°.85E**±0°.07, **h28**^{km}±17^{km}, **n30, σ2^{s}.22**/32, **mb3.1**/4, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	1.14	271	*e*P	Pn	06 04 29.2	-2.2
KBTR				*e*S	Sn	06 04 42.3	-3.7
BKI	Bering	1.18	147	*e*P	Pb	06 04 32.5	-0.6
BKI				*e*S	Sb	06 04 47.9	-0.1
KBG	Krutoberegovo	1.20	274	*e*P	Pn	06 04 30.7	-1.6
KBG				*e*S	Sn	06 04 44.9	-2.6
SMKR	Semkarok	1.92	283	*e*P	Pn	06 04 43.9	+1.6
KLY	Klyuchi	2.34	275	*e*P	Pn	06 04 47.5	-0.6
KLY				*e*S	Sn	06 05 13.6	-2.2
KRSR	Krestovskiy	2.39	272	*e*P	Pn	06 04 49.6	+0.8
MKZ	Mys Kozlova	2.42	229	*e*P	Pn	06 04 48.5	-0.6
MKZ				*e*S	Sn	06 05 15.4	-2.3
BZWR	Bezymyannyi-We	2.45	266	*e*P	Pn	06 04 51.7	+2.1
KIRR	Kirishev	2.54	266	*e*P	Pn	06 04 50.9	0.0
KMNR	Kamenistaya	2.63	262	*e*P	Pn	06 04 53.8	+1.8
TUMD	Tumrok D	2.71	250	*e*P	Pn	06 04 54.1	+1.1
KOZ	Kozyrevsk	2.79	269	*e*P	Pn	06 04 56.2	+2.1
SRDR	Sredinnyy	2.87	275	*e*P	Pn	06 04 57.0	+1.8
ESO	Esso	3.46	268	*e*P	Pn	06 05 07.0	+3.6
SDLR	Sedlovina	4.53	232	*e*P	Pn	06 05 19.2	+1.1
SMAR	Somma	4.58	233	*e*P	Pn	06 05 19.8	+1.0
KRX	Arik	4.58	234	*e*P	Pn	06 05 20.6	+1.7
AVH	Avacha	4.60	233	*e*P	Pn	06 05 21.5	+2.4
UGLR	Uglovaya	4.60	232	*e*P	Pn	06 05 21.3	+2.2
GNL	Ganaly	4.71	241	*e*P	Pn	06 05 23.4	+2.9
PETK	Petropavlovsk-	5.18	236	Pn	Pn	06 05 30.3	+3.3
	0.5nm,0.3s,baz=74,slow=17,SNR=5.7						
	1.1nm,0.7s						
RUS	Russkaya	5.29	227	*e*P	Pn	06 05 29.3	+0.9
GRL	Gorelyy	5.39	230	*e*P	Pn	06 05 32.6	+2.6
ILAR	Eielson Array	24.68	50	P	P	06 09 30.2	+0.7
	0.2nm,0.6s,baz=256,slow=9.7,SNR=4.7						
	0.2nm,0.6s						
H11N2	WAKE ISLAND Hy	36.44	177	T	T	06 50 19.8	
	baz=357,slow=76,SNR=24						
H11N3	WAKE ISLAND Hy	36.46	177	T	T	06 50 18.6	
	baz=357,slow=76,SNR=21						
H11N1	WAKE ISLAND Hy	36.46	177	T	T	06 50 18.0	
	baz=357,slow=76,SNR=22						
BVAR	Borovoye Array	50.61	309	P	P	06 13 11.4	+4.1
	0.6nm,0.5s,baz=44,slow=11,SNR=5.0						
	0.6nm,0.5s						
PDAR	Pinedale Array	53.66	66	P	P	06 13 28.1	-2.3
	0.1nm,0.5s,baz=325,slow=7.2,SNR=3.5						
	0.1nm,0.5s						
TXAR	Lajitas Array	66.95	72	P	P	06 15 00.5	-0.8
	0.1nm,0.5s,baz=316,slow=3.5,SNR=4.4						
	0.1nm,0.5s						

*UCR **26** 06:09:00.8±1.3, 8°.34N×82°.84W, h18^{km}±4^{km}, MW3.5*
*UPA **26** 06:09:01.1±0.8, 8°.39N×82°.82W, h25^{km}±6^{km}, MW3.3*
ISC 26 06:09:00.6±1.1, **8°.41N**±0°.05×**82°.80W**±0°.03, **h28**^{km}±8^{km}, **n53, σ0^{s}.99**/68, **1D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.01	83	*e*P	Pb	06 09 05.2	-0.1
MCANO	Manzana, Boque	0.28	54	*e*P	Pn	06 09 08.7	-0.1
NELY	Ciudad Neily	0.28	329	*e*P	Pb	06 09 07.8	+0.1
NELY				*e*S	Sn	06 09 13.5	-0.7
LMNES	Limones	0.31	191	*e*P	Pb	06 09 08.0	-0.1
DVD	David	0.35	85	*e*P	Pn	06 09 09.3	-0.4
DVD				*e*S	Sn	06 09 15.4	-0.4
CSTBL	De las Acacias	0.35	89	*e*P	Pn	06 09 09.4	-0.5
CLLRA	Cordillera,	0.38	28	*e*P	Pn	06 09 10.2	-0.2
MLIR3	Monte Lirio, C	0.39	356	*e*P	Pn	06 09 10.3	-0.1
MLIR3				*e*S	Sn	06 09 16.4	-0.5
BRU2	Volcan	0.40	15	*e*P	Pn	06 09 10.2	-0.4
BRU2				*e*S	Sn	06 09 18.0	+0.6

BRU2	**Volcan**	**0.40**	**15**	⇓*i*P	**Pn**	**06 09 10.4**	**-0.2**
BRU2				*e*S	**Sn**	**06 09 17.9**	**+0.6**
FITO	**Golfito**	**0.41**	**302**	*e*P	**Pb**	**06 09 08.6**	**-0.9**
FITO				*e*S	**Sb**	**06 09 14.7**	**-0.9**
PTAR3	**Potrerillos Ar**	**0.41**	**46**	*e*P	**Pn**	**06 09 10.5**	**-0.3**
PTAR3				*e*S	**Sn**	**06 09 18.0**	**+0.4**
SCLRA	**Santa Clara, W**	**0.43**	**2**	*e*P	**Pn**	**06 09 11.0**	**0.0**
EDAD	**Golfito**	**0.44**	**304**	*e*P	**Pb**	**06 09 09.2**	**-0.8**
EDAD				*e*S	**Sb**	**06 09 15.7**	**-0.7**
VITO	**San Vito**	**0.45**	**338**	*e*P	**Pn**	**06 09 10.9**	**-0.3**
VITO				*e*S	**Sn**	**06 09 19.1**	**+0.7**
BC3P	**Paso Ancho**	**0.45**	**25**	*e*P	**Pn**	**06 09 10.9**	**-0.4**
BC3P				*e*S	**Sn**	**06 09 19.4**	**+0.8**
BQTLY	**Boquete Panama**	**0.48**	**44**	*e*P	**Pn**	**06 09 11.6**	**-0.2**
BQSF3	**Alto Boquete,**	**0.49**	**47**	*e*P	**Pn**	**06 09 11.6**	**-0.3**
BQSF3				*e*S	**Sn**	**06 09 19.4**	**-0.1**
ALCO	**Alturas Coton,**	**0.54**	**356**	*e*P	**Pn**	**06 09 12.2**	**-0.4**
ALCO				*e*S	**Sn**	**06 09 20.9**	**0.0**
PSOM3	**Paja de Sombre**	**0.55**	**59**	*e*P	**Pb**	**06 09 12.1**	**+0.4**
PSOM3				*e*S	**Sn**	**06 09 20.5**	**-0.3**
EDP2	**Potrero Grande**	**0.71**	**328**	*e*P	**Pb**	**06 09 14.6**	**+0.1**
EDP2				*e*S	**Sn**	**06 09 25.6**	**+0.8**
PBNVO	**Pueblo Nuevo,**	**0.77**	**51**	*e*P	**Pb**	**06 09 15.5**	**0.0**
RBALA	**Bur**	**0.79**	**54**	*e*P	**Pn**	**06 09 16.2**	**+0.3**
PANP	**Palmar Norte**	**0.85**	**310**	*e*P	**Pb**	**06 09 16.1**	**-0.8**
DRK0	**Durika**	**0.96**	**333**	*e*P	**Pn**	**06 09 18.2**	**-0.1**
DRK0	**Durika**	**0.96**	**333**	*e*P	**Pn**	**06 09 18.3**	**-0.1**
DRK0				*e*S	**Sn**	**06 09 31.7**	**+0.5**
RMDIO	**Remedios, Chir**	**0.97**	**100**	*e*P	**Pn**	**06 09 18.5**	**+0.2**
EDPE	**Pejibaye, P**	**1.07**	**315**	*e*P	**Pn**	**06 09 19.5**	**-0.3**
KKNTU	**Kakintº**	**1.07**	**66**	*e*P	**Pn**	**06 09 20.0**	**+0.2**
PDCAN	**Manzana , Fuen**	**1.10**	**96**	*e*P	**Pn**	**06 09 20.3**	**+0.2**
SAJE	**San Jernim**	**1.17**	**323**	*e*P	**Pn**	**06 09 20.9**	**-0.3**
BRIBI	**Bribri**	**1.21**	**359**	*e*P	**Pb**	**06 09 23.8**	**+0.9**
PIEC	**Cerro El Cedra**	**1.67**	**317**	*e*P	**Pn**	**06 09 29.0**	**+0.9**
VINA	**Juan Vinas**	**1.75**	**328**	*e*P	**Pb**	**06 09 30.9**	**-1.2**
LCR2	**La Lucha 2**	**1.78**	**318**	*e*P	**Pn**	**06 09 30.4**	**+0.7**
PISJ	**San Jernim**	**1.79**	**313**	*e*P	**Pn**	**06 09 30.9**	**+1.2**
ABE2	**San Pablo**	**1.79**	**316**	*e*P	**Pn**	**06 09 31.4**	**+1.6**
PCAYA	**Pacayas**	**1.81**	**326**	*e*P	**Pn**	**06 09 31.5**	**+1.5**
VTCV	**VTCV, Calle Va**	**1.82**	**330**	*e*P	**Pb**	**06 09 31.9**	**-1.4**
RESJ	**San Isidro (Tu**	**1.82**	**333**	*e*P	**Pb**	**06 09 32.1**	**-1.2**
ABRB	**Las Abras (San**	**1.83**	**330**	*e*P	**Pb**	**06 09 32.2**	**-1.4**
PICV	**PH. Pirrs**	**1.84**	**311**	*e*P	**Pb**	**06 09 32.5**	**-1.1**
CVTV	**Tajo**	**1.84**	**330**	*e*P	**Pb**	**06 09 32.5**	**-1.4**
CVTQ	**Turrialba Volc**	**1.85**	**329**	*e*P	**Pb**	**06 09 32.8**	**-1.2**
PAR1A	**Puntarenas Pro**	**1.86**	**310**	*e*P	**Pb**	**06 09 32.6**	**-1.4**
VTR0	**Volcan Turrial**	**1.86**	**329**	*e*P	**Pn**	**06 09 32.7**	**+1.7**
ACOS	**Acosta**	**1.93**	**316**	*e*P	**Pn**	**06 09 31.8**	**+0.1**
BELE	**Belen**	**2.08**	**319**	*e*P	**Pn**	**06 09 35.6**	**+1.9**
ATEO	**Atenas**	**2.21**	**315**	*e*P	**Pn**	**06 09 36.9**	**+1.5**
TRB2	**Turrubares**	**2.21**	**313**	*e*P	**Pn**	**06 09 36.4**	**+1.0**
ARE1	**Arenal 1**	**2.79**	**317**	*e*P	**Pn**	**06 09 46.4**	**+3.0**
VARE2	**V. Arenal**	**2.79**	**317**	*e*P	**Pn**	**06 09 46.5**	**+3.0**
JTS	**Las Juntas de**	**2.83**	**312**	*e*P	**Pn**	**06 09 45.9**	**+1.9**

UCR ***26*** *06:15:46.7±1.3, 8°.39N×82°.88W, h15^{km}±6^{km}, MW3.9*
CATAC ***26*** *06:15:46.0±0.8, 8°N±7°×8°3W±°, h38^{km}±17^{km}, M3.9/9, MLv3.9/9, Error ellipse: s-maj=16.2km s-min=13.1km az=148.1, confirmed*
UPA ***26*** *06:15:47.0±0.4, 8°.44N×82°.83W, h35^{km}±2^{km}, MW4.0*
ISC 26 06:15:47.3±1.8**, 8°.38N**±0°.05×**82°.84W**±0°.03**, h36**^{km}±1^{km}**, n57,** σ**1**^{s}**45**/64**, 3D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LESP3	**La Esperanza,**	**0.06**	**62**	*e*P	**Pn**	**06 15 53.3**	**+0.1**
LESP3				*e*S	**Sn**	**06 15 57.0**	**-0.3**
CDITO	**Canoas**	**0.20**	**351**	P	**Pn**	**06 15 56.5**	**+0.9**
LMNES	**Limones**	**0.28**	**184**	*e*P	**Pn**	**06 15 53.9**	**-1.4**
NELY	**Ciudad Neily**	**0.29**	**339**	*e*P	**Pn**	**06 15 53.3**	**-2.0**
NELY				*e*S	**Sn**	**06 15 59.2**	**-2.5**
DVD	**David**	**0.39**	**82**	*e*P	**Pn**	**06 15 55.6**	**-0.6**
DVD				*e*S	**Sn**	**06 16 01.8**	**-1.0**
FITO	**Golfito**	**0.40**	**308**	*e*P	**Pn**	**06 15 53.7**	**-2.6**
MLIR3	**Monte Lirio, C**	**0.41**	**2**	*e*P	**Pn**	**06 15 55.9**	**-0.8**
MLIR3				*e*S	**Sn**	**06 16 02.1**	**-1.3**
PEDE3	**Pedregal, Chir**	**0.41**	**89**	*e*P	**Pn**	**06 15 55.8**	**-0.7**
LOCO3	**Loma Colorada,**	**0.42**	**86**	*e*P	**Pn**	**06 15 56.0**	**-0.6**
LOCO3				*e*S	**Sn**	**06 16 02.9**	**-0.4**
EDAD	**Golfito**	**0.42**	**310**	*e*P	**Pn**	**06 15 54.1**	**-2.6**
BRU2	**Volcan**	**0.44**	**20**	*e*P	**Pn**	**06 15 56.2**	**-0.9**
BRU2	**Volcan**	**0.44**	**20**	P	Pn	06 16 03.9	+6.8
BRU2	**Volcan**	**0.44**	**20**	⇓*i*P	**Pn**	**06 15 56.2**	**-0.9**
BRU2				*e*S	**Sn**	**06 16 02.7**	**-1.4**
LOMA3	**Las Lomas, Chi**	**0.45**	**83**	*e*P	**Pn**	**06 15 56.3**	**-0.8**
SCLRA	**Santa Clara, W**	**0.45**	**7**	*e*P	**Pn**	**06 15 56.5**	**-0.8**
VITO	**San Vito**	**0.46**	**344**	*e*P	**Pn**	**06 15 56.2**	**-1.1**
PTAR3	**Potrerillos Ar**	**0.46**	**48**	*e*P	**Pn**	**06 15 56.7**	**-0.7**
BC3P	**Paso Ancho**	**0.49**	**28**	⇓*i*P	**Pn**	**06 15 56.9**	**-1.1**
CHIR3	**Chiriqui UPA,**	**0.51**	**88**	*e*P	**Pn**	**06 15 57.1**	**-0.9**
BQSF3	**Alto Boquete,**	**0.54**	**48**	⇓*i*P	**Pn**	**06 15 57.6**	**-1.1**
BQSF3				*e*S	**Sn**	**06 16 05.8**	**-0.7**
PSOM3	**Paja de Sombre**	**0.60**	**59**	*e*P	**Pn**	**06 15 58.2**	**-1.2**
EDP2	**Potrero Grande**	**0.71**	**332**	*e*P	**Pn**	**06 15 59.7**	**-1.2**
PBNVO	**Pueblo Nuevo,**	**0.82**	**52**	*e*P	**Pn**	**06 16 01.3**	**-1.0**
PANP	**Palmar Norte**	**0.84**	**313**	*e*P	**Pn**	**06 16 00.9**	**-1.7**
BURE	**Buenos Aires**	**0.93**	**328**	*e*P	**Pn**	**06 16 02.6**	**-1.3**
DRK0	**Durika**	**0.96**	**336**	*e*P	**Pn**	**06 16 03.1**	**-1.3**
DRK0	**Durika**	**0.96**	**336**	P	**Pn**	**06 16 02.8**	**-1.6**
DRK0	**Durika**	**0.96**	**336**	*e*P	**Pn**	**06 16 03.2**	**-1.3**
DRK0				*e*S	**Sn**	**06 16 15.8**	**-1.3**
RMDIO	**Remedios, Chir**	**1.01**	**99**	*e*P	**Pn**	**06 16 04.9**	**0.0**
EDPE	**Pejibaye, P**	**1.06**	**317**	*e*P	**Pn**	**06 16 04.5**	**-1.1**
KKNTU	**Kakintº**	**1.12**	**66**	*e*P	**Pn**	**06 16 06.0**	**-0.5**
SAJE	**San Jernim**	**1.17**	**326**	*e*P	**Pn**	**06 16 06.0**	**-1.3**
LCR2	**La Lucha 2**	**1.78**	**320**	*e*P	**Pn**	**06 16 15.8**	**+0.1**
ABE2	**San Pablo**	**1.78**	**318**	*e*P	**Pn**	**06 16 16.3**	**+0.6**
PCAYA	**Pacayas**	**1.80**	**328**	*e*P	**Pn**	**06 16 16.6**	**+0.5**
VTCV	**VTCV, Calle Va**	**1.82**	**331**	*e*P	**Pn**	**06 16 16.7**	**+0.4**
RESJ	**San Isidro (Tu**	**1.82**	**334**	*e*P	**Pn**	**06 16 17.0**	**+0.8**
VTR0	**Volcan Turrial**	**1.86**	**331**	*e*P	**Pn**	**06 16 17.7**	**+0.6**
ACOS	**Acosta**	**1.92**	**317**	*e*P	**Pn**	**06 16 18.3**	**+0.7**
AMPA	**Desamparados**	**1.93**	**321**	*e*P	**Pn**	**06 16 19.0**	**+1.3**
BELE	**Belen**	**2.07**	**320**	*e*P	**Pn**	**06 16 20.8**	**+1.2**
TCS1	**Tacares**	**2.19**	**319**	P	**Pn**	**06 16 21.6**	**+0.3**
TCS1	**Tacares**	**2.19**	**319**	S	**Sn**	**06 16 52.0**	**+4.8**
ATEO	**Atenas**	**2.20**	**316**	*e*P	**Pn**	**06 16 22.2**	**+0.8**
TRT2	**Tortugero**	**2.34**	**338**	P	**Pn**	**06 16 22.8**	**-0.4**
TRT2	**Tortugero**	**2.34**	**338**	S	**Sn**	**06 16 53.8**	**+3.1**
CBL1	**Cabuya**	**2.53**	**299**	*e*P	**Pn**	**06 16 24.7**	**-1.1**
FORC	**Fortuna**	**2.75**	**319**	*e*P	**Pn**	**06 16 30.9**	**+2.0**
ARE1	**Arenal 1**	**2.78**	**318**	*e*P	**Pn**	**06 16 31.5**	**+2.2**
VARE2	**V. Arenal**	**2.78**	**318**	*e*P	**Pn**	**06 16 31.6**	**+2.3**
COVE	**Coope Vega, Sa**	**2.79**	**327**	P	**Pn**	**06 16 29.7**	**+0.2**
JTS	**Las Juntas de**	**2.82**	**313**	*e*P	**Pn**	**06 16 30.0**	**+0.1**
INDI	**Punta indio, G**	**3.02**	**300**	P	**Pn**	**06 16 31.9**	**-0.6**
INDI	**Punta indio, G**	**3.02**	**300**	S	**Sn**	**06 17 04.6**	**-2.8**
CMARA	**Lajas Hojancha**	**3.03**	**303**	P	**Pn**	**06 16 32.1**	**-0.7**
CMARA	**Lajas Hojancha**	**3.03**	**303**	S	**Sn**	**06 17 06.6**	**-1.2**
ACON	**Acoyapa**	**4.24**	**327**	P	**Pn**	**06 16 49.8**	**+0.4**

UCR ***26*** *06:16:18.0±0.5, 8°.28N×82°.85W, h25^{km}±4^{km}, MW3.9*
UPA ***26*** *06:16:19.8±0.9, 8°.41N×82°.80W, h23^{km}±5^{km}, MW3.7*
ISC 26 06:16:15.1±2.6**, 8°.2N**±0°.1×**82°.85W**±0°.04**, h10**^{km}±14^{km}**, n22,** σ**0**^{s}**62**/31**, 4C-5D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LESP3	**La Esperanza,**	**0.26**	**14**	⇓*i*P	**Pn**	**06 16 24.0**	**-1.0**
LESP3				*e*S	**Sb**	**06 16 26.5**	**+0.1**
PEDE3	**Pedregal, Chir**	**0.48**	**62**	⇓*e*P	**Pn**	**06 16 27.5**	**-0.6**
PEDE3				*e*S	**Sb**	**06 16 33.9**	**+1.0**
DVD	**David**	**0.49**	**55**	⇓*e*P	**Pn**	**06 16 27.4**	**-0.7**
DVD				*e*S	**Sb**	**06 16 34.0**	**+1.0**
LOCO3	**Loma Colorada,**	**0.50**	**60**	*e*P	**Pn**	**06 16 27.8**	**-0.5**
NELY	**Ciudad Neily**	**0.50**	**349**	*e*P	**Pb**	**06 16 26.3**	**+0.3**
NELY				*e*S	**Sg**	**06 16 32.5**	**+1.0**
LOMA3	**Las Lomas, Chi**	**0.53**	**59**	⇓*e*P	**Pn**	**06 16 28.5**	**-0.3**
LOMA3				*e*S	**Sb**	**06 16 34.8**	**+0.4**
FITO	**Golfito**	**0.55**	**327**	*e*P	**Pb**	**06 16 26.9**	**0.0**
CHIR3	**Chiriqui UPA,**	**0.57**	**65**	*e*S	**Sb**	**06 16 36.7**	**+1.3**
EDAD	**Golfito**	**0.58**	**328**	*e*P	**Pb**	**06 16 27.2**	**-0.2**
MLIR3	**Monte Lirio, C**	**0.63**	**3**	⇓*e*P	**Pb**	**06 16 28.8**	**+0.4**
PTAR3	**Potrerillos Ar**	**0.64**	**34**	⇑*e*P	**Pb**	**06 16 28.8**	**+0.3**
PTAR3				*e*S	**Sg**	**06 16 35.5**	**-0.5**
BRU2	**Volcan**	**0.65**	**14**	*e*P	**Pb**	**06 16 28.5**	**-0.2**
BRU2				*e*S	**Sg**	**06 16 36.2**	**-0.2**
VITO	**San Vito**	**0.67**	**350**	*e*P	**Pb**	**06 16 29.2**	**+0.2**
SCLRA	**Santa Clara, W**	**0.68**	**6**	*e*P	**Pb**	**06 16 29.1**	**-0.1**
BC3P	**Paso Ancho**	**0.70**	**20**	⇑*e*P	**Pg**	**06 16 29.1**	**+0.4**
BQSF3	**Alto Boquete,**	**0.71**	**35**	⇑*e*P	**Pb**	**06 16 29.6**	**-0.1**
BQSF3				*e*S	**Sg**	**06 16 36.9**	**-1.4**
PSOM3	**Paja de Sombre**	**0.74**	**45**	⇑*e*P	**Pb**	**06 16 30.1**	**-0.1**
PSOM3				*e*S	**Sg**	**06 16 39.0**	**-0.2**
EDP2	**Potrero Grande**	**0.91**	**339**	*e*P	**Pb**	**06 16 33.0**	**-0.1**
PANP	**Palmar Norte**	**1.00**	**323**	*e*P	**Pg**	**06 16 34.4**	**+0.1**
EDPE	**Pejibaye, P**	**1.22**	**325**	*e*P	**Pn**	**06 16 38.0**	**-0.3**
KKNTU	**Kakintº**	**1.24**	**57**	*e*P	**Pn**	**06 16 38.2**	**-0.4**

UCR ***26*** *06:19:58.3±1.0, 8°.33N×82°.86W, h19^{km}±3^{km}, MW4.3, Fault plane solution: NP1:φ$_{s}$334.07000°, δ40.26000°, λ82.25000°.*
CATAC ***26*** *06:19:58.5±1.2, 8°N±9°×8°3W±°, h3^{km}±4^{km}, M4.1/13, MLv4.1/13, Error ellipse: s-maj=19.0km s-min=6.8km az=10.9, confirmed*
UPA ***26*** *06:19:59.5±1.1, 8°.40N×82°.81W, h23^{km}±4^{km}, MW4.4, Fault plane solution: NP1:φ$_{s}$136.00000°, δ38.00000°, λ100.00000°.*
ISC 26 06:19:58.4±0.9**, 8°.37N**±0°.03×**82°.87W**±0°.02**, h28**^{km}±5^{km}**, n93,** σ**0**^{s}**89**/119**, 10C-36D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LESP3	**La Esperanza,**	**0.09**	**62**	⇑*i*P	**Pb**	**06 20 03.1**	**-0.4**
LESP3				*e*S	**Sb**	**06 20 06.4**	**-0.4**
LPPC	**Paso Canoas**	**0.17**	**10**	⇑*e*P	**Pb**	**06 20 03.8**	**-0.3**
LPPC				*e*S	**Sb**	**06 20 08.0**	**0.0**
CDITO	**Canoas**	**0.21**	**359**	P	**Pb**	**06 20 03.6**	**-0.9**
LMNES	**Limones**	**0.26**	**178**	⇑*e*P	**Pb**	**06 20 05.3**	**+0.1**
LMNES	**Limones**	**0.26**	**178**	*e*P	**Pn**	**06 20 07.1**	**+0.6**
LMNES				*e*S	**Sn**	**06 20 12.2**	**+0.6**
NELY	**Ciudad Neily**	**0.29**	**345**	⇑*e*P	**Pb**	**06 20 05.4**	**-0.2**
NELY				*e*S	**Sb**	**06 20 11.0**	**+0.5**
MCANO	**Manzana, Boque**	**0.35**	**55**	⇓*e*P	**Pb**	**06 20 06.6**	**0.0**
MCANO	**Manzana, Boque**	**0.35**	**55**	⇓*i*P	**Pb**	**06 20 06.6**	**0.0**
FITO	**Golfito**	**0.38**	**312**	⇑*e*P	**Pb**	**06 20 05.9**	**-1.0**
FITO				*e*S	**Sb**	**06 20 11.6**	**-1.2**
EDAD	**Golfito**	**0.41**	**314**	⇑*e*P	**Pb**	**06 20 06.4**	**-1.0**
EDAD				*e*S	**Sb**	**06 20 12.3**	**-1.2**
DVD	**David**	**0.42**	**80**	⇓*i*P	**Pb**	**06 20 07.3**	**-0.2**
DVD				*e*S	**Sb**	**06 20 14.0**	**+0.3**
CSTBL	**De las Acacias**	**0.42**	**84**	⇓*e*P	**Pb**	**06 20 07.4**	**-0.2**
CSTBL				*e*S	**Sb**	**06 20 13.6**	**-0.2**
CSTBL	**De las Acacias**	**0.42**	**84**	⇓*i*P	**Pb**	**06 20 07.4**	**-0.2**
MLIR3	**Monte Lirio, C**	**0.43**	**6**	⇓*i*P	**Pb**	**06 20 08.1**	**+0.3**
LOCO3	**Loma Colorada,**	**0.45**	**84**	⇓*i*P	**Pb**	**06 20 07.8**	**-0.2**
LOCO3				*e*S	**Sb**	**06 20 13.9**	**-0.5**
RSRNO	**Rio Sereno**	**0.45**	**1**	⇓*e*P	**Pb**	**06 20 08.4**	**+0.3**
RSRNO	**Rio Sereno**	**0.45**	**1**	⇓*i*P	**Pb**	**06 20 08.4**	**+0.3**
RSRNO				*e*S	**Sb**	**06 20 15.4**	**+0.8**
CLLRA	**Cordillera,**	**0.45**	**34**	⇓*e*P	**Pb**	**06 20 08.0**	**-0.1**
CLLRA	**Cordillera,**	**0.45**	**34**	⇓*i*P	**Pb**	**06 20 08.1**	**-0.1**
BRU2	**Volcan**	**0.46**	**22**	⇓*e*P	**Pb**	**06 20 08.1**	**-0.1**
BRU2				*e*S	**Sb**	**06 20 15.7**	**+0.7**
BRU2	**Volcan**	**0.46**	**22**	P	**Pb**	**06 20 07.9**	**-0.3**
BRU2	**Volcan**	**0.46**	**22**	⇓*i*P	**Pb**	**06 20 08.2**	**-0.1**
BRU2				*e*S	**Sn**	**06 20 16.3**	**-0.4**
VITO	**San Vito**	**0.46**	**347**	⇑*e*P	**Pb**	**06 20 08.5**	**+0.2**
SCLRA	**Santa Clara, W**	**0.47**	**10**	⇓*e*P	**Pb**	**06 20 08.7**	**+0.2**
SCLRA				*e*S	**Sn**	**06 20 17.0**	**+0.1**
SCLRA	**Santa Clara, W**	**0.47**	**10**	⇓*i*P	**Pb**	**06 20 08.7**	**+0.2**
SCLRA				*e*S	**Sn**	**06 20 17.2**	**+0.2**
TBS2		**0.47**	**26**	⇓*e*P	**Pn**	**06 20 09.3**	**-0.2**
LOMA3	**Las Lomas, Chi**	**0.48**	**82**	⇓*i*P	**Pb**	**06 20 08.1**	**-0.3**
PTAR3	**Potrerillos Ar**	**0.49**	**48**	⇓*i*P	**Pb**	**06 20 08.6**	**-0.1**
BC3P	**Paso Ancho**	**0.51**	**30**	⇓*i*P	**Pb**	**06 20 08.9**	**-0.3**
BC3P				*e*S	**Sn**	**06 20 17.9**	**-0.2**
BQTLY	**Boquete Panama**	**0.56**	**46**	⇓*e*P	**Pb**	**06 20 09.4**	**-0.4**
BQTLY	**Boquete Panama**	**0.56**	**46**	⇓*i*P	**Pb**	**06 20 09.5**	**-0.4**
BQSF3	**Alto Boquete,**	**0.57**	**49**	⇓*i*P	**Pb**	**06 20 09.6**	**-0.5**
BQSF3				*e*S	**Sb**	**06 20 18.0**	**+0.1**
ALCO	**Alturas Coton,**	**0.58**	**3**	⇓*e*P	**Pb**	**06 20 09.8**	**-0.5**
PSOM3	**Paja de Sombre**	**0.63**	**60**	⇓*i*P	**Pb**	**06 20 10.2**	**-0.7**
PSOM3				*e*S	**Sb**	**06 20 19.4**	**0.0**
EDP2	**Potrero Grande**	**0.71**	**335**	⇑*e*P	**Pb**	**06 20 12.2**	**-0.2**
PANP	**Palmar Norte**	**0.83**	**315**	*e*P	**Pn**	**06 20 13.5**	**-0.8**
PBNVO	**Pueblo Nuevo,**	**0.85**	**52**	⇓*e*P	**Pn**	**06 20 13.5**	**-1.0**
PBNVO				*e*S	**Sb**	**06 20 24.8**	**-0.8**
RBALA	**Bur**	**0.87**	**54**	⇓*e*P	**Pn**	**06 20 14.2**	**-0.6**
RBALA				*e*S	**Sb**	**06 20 25.8**	**-0.5**
RBALA	**Bur**	**0.87**	**54**	⇓*i*P	**Pn**	**06 20 14.2**	**-0.6**
RBALA				*e*S	**Sb**	**06 20 26.1**	**-0.2**
BURE	**Buenos Aires**	**0.93**	**330**	*e*P	**Pn**	**06 20 15.5**	**-0.2**
BURE				*e*S	**Sb**	**06 20 28.4**	**+0.5**
DRK0	**Durika**	**0.97**	**337**	*e*P	**Pn**	**06 20 16.0**	**-0.3**
DRK0				*e*S	**Sn**	**06 20 28.9**	**-0.3**
DRK0	**Durika**	**0.97**	**337**	P	**Pn**	**06 20 15.7**	**-0.6**
DRK0	**Durika**	**0.97**	**337**	S	**Sn**	**06 20 29.1**	**-0.1**
DRK0	**Durika**	**0.97**	**337**	*e*P	**Pn**	**06 20 16.1**	**-0.3**
DRK0				*e*S	**Sn**	**06 20 28.9**	**-0.3**
RMDIO	**Remedios, Chir**	**1.03**	**98**	*e*P	**Pn**	**06 20 16.6**	**-0.5**
RMDIO	**Remedios, Chir**	**1.03**	**98**	⇓*i*P	**Pn**	**06 20 16.8**	**-0.3**
RMDIO				*e*S	**Sn**	**06 20 30.5**	**-0.1**
EDPE	**Pejibaye, P**	**1.05**	**319**	*e*P	**Pn**	**06 20 17.1**	**-0.3**
EDPE				*e*S	**Sb**	**06 20 32.0**	**+0.5**
OCHAL	**Ojochal**	**1.06**	**313**	P	**Pn**	**06 20 17.3**	**-0.1**
OCHAL	**Ojochal**	**1.06**	**313**	S	**Sn**	**06 20 31.6**	**+0.4**
KKNTU	**Kakintº**	**1.15**	**66**	⇓*e*P	**Pn**	**06 20 17.9**	**-0.8**
KKNTU	**Kakintº**	**1.15**	**66**	⇓*i*P	**Pn**	**06 20 17.9**	**-0.8**
KKNTU				*e*S	**Sn**	**06 20 32.8**	**-0.7**
PDCAN	**Manzana , Fuen**	**1.16**	**94**	⇓*e*P	**Pn**	**06 20 17.7**	**-1.1**
PDCAN	**Manzana , Fuen**	**1.16**	**94**	⇑*i*P	**Pn**	**06 20 18.5**	**-0.3**
SAJE	**San Jernim**	**1.16**	**327**	*e*P	**Pn**	**06 20 18.9**	**-0.1**
ISBTO	**Bastimentos Is**	**1.17**	**34**	⇓*e*P	**Pb**	**06 20 20.3**	**+0.3**
ISBTO	**Bastimentos Is**	**1.17**	**34**	⇓*i*P	**Pb**	**06 20 20.5**	**+0.4**
BRIBI	**Bribri**	**1.25**	**2**	*e*P	**Pb**	**06 20 21.9**	**+0.5**
LLNJ	**Naranjito**	**1.64**	**312**	*e*P	**Pn**	**06 20 26.4**	**+0.9**
PIEC	**Cerro El Cedra**	**1.65**	**319**	*e*P	**Pn**	**06 20 26.9**	**+1.1**
GMAL	**Guarumal, Vera**	**1.73**	**110**	*e*P	**Pn**	**06 20 25.8**	**-0.8**
GMAL	**Guarumal, Vera**	**1.73**	**110**	*e*P	**Pn**	**06 20 25.9**	**-0.7**
TURIB	**Turrialba**	**1.73**	**332**	*e*P	**Pn**	**06 20 27.8**	**+1.0**
VINA	**Juan Vinas**	**1.75**	**330**	*e*P	**Pn**	**06 20 28.2**	**+1.1**
PISJ	**San Jernim**	**1.77**	**316**	*e*P	**Pn**	**06 20 27.9**	**+0.6**
VERB	**Verbena**	**1.77**	**333**	*e*P	**Pn**	**06 20 28.5**	**+1.2**
LCR2	**La Lucha 2**	**1.77**	**321**	*e*P	**Pn**	**06 20 27.9**	**+0.6**
LCR2	**La Lucha 2**	**1.77**	**321**	P	**Pb**	**06 20 29.9**	**-0.5**
LCR2	**La Lucha 2**	**1.77**	**321**	S	**Sb**	**06 20 51.4**	**-0.8**
ABE2	**San Pablo**	**1.77**	**319**	*e*P	**Pb**	**06 20 29.9**	**-0.5**
PCAYA	**Pacayas**	**1.80**	**329**	*e*P	**Pn**	**06 20 29.4**	**+1.6**
PICV	**PH. Pirrs**	**1.81**	**314**	*e*P	**Pb**	**06 20 29.7**	**-1.3**
VTCV	**VTCV, Calle Va**	**1.82**	**332**	*e*P	**Pn**	**06 20 29.5**	**+1.5**
RESJ	**San Isidro (Tu**	**1.82**	**335**	*e*P	**Pn**	**06 20 29.7**	**+1.6**
PAR1A	**Puntarenas Pro**	**1.83**	**312**	⇓*e*P	**Pb**	**06 20 29.9**	**-1.5**
CVTV	**Tajo**	**1.85**	**332**	*e*P	**Pb**	**06 20 30.3**	**-1.4**
ACOS	**Acosta**	**1.91**	**318**	*e*P	**Pn**	**06 20 30.5**	**+1.2**
BELE	**Belen**	**2.06**	**321**	*e*P	**Pb**	**06 20 33.5**	**-1.8**
TCS1	**Tacares**	**2.19**	**320**	P	**Pb**	**06 20 35.9**	**-1.5**
TRB2	**Turrubares**	**2.19**	**315**	*e*P	**Pn**	**06 20 34.5**	**+1.5**
CACAO	**El Cacao, Vera**	**2.23**	**117**	*e*P	**Pn**	**06 20 34.8**	**+1.2**
TRT2	**Tortugero**	**2.34**	**339**	*e*P	**Pn**	**06 20 37.0**	**+1.9**
TRT2	**Tortugero**	**2.34**	**339**	P	**Pn**	**06 20 36.8**	**+1.8**
CBL1	**Cabuya**	**2.51**	**299**	⇓*e*P	**Pn**	**06 20 37.6**	**+0.2**
AZU	**Azuero**	**2.63**	**102**	⇑*i*P	**Pn**	**06 20 41.1**	**+2.1**
COVE	**Coope Vega, Sa**	**2.79**	**327**	P	**Pb**	**06 20 45.6**	**-2.0**
JTS	**Las Juntas de**	**2.81**	**313**	*e*P	**Pn**	**06 20 42.8**	**+1.3**
INDI	**Punta indio, G**	**3.00**	**300**	P	**Pn**	**06 20 44.6**	**+0.5**
CMARA	**Lajas Hojancha**	**3.01**	**303**	*e*P	**Pn**	**06 20 45.8**	**+1.4**
CMARA	**Lajas Hojancha**	**3.01**	**303**	P	**Pn**	**06 20 45.6**	**+1.2**
ALIBA	**Liberia Airpor**	**3.45**	**310**	⇓*e*P	**Pn**	**06 20 53.5**	**+3.2**
BLUN	**Bluefields**	**3.73**	**346**	P	**Pn**	**06 20 55.4**	**+1.3**
ESPN	**Las Esperanzas**	**4.06**	**340**	P	**Pn**	**06 21 00.7**	**+2.0**
ACON	**Acoyapa**	**4.24**	**328**	P	**Pn**	**06 21 02.7**	**+1.5**

UCR ***26*** *06:24:22.8±0.8, 8°.35N×82°.86W, h30^{km}±2^{km}, MW3.5*
UPA ***26*** *06:24:23.3±0.8, 8°.39N×82°.85W, h30^{km}±7^{km}, MW3.7, Fault plane solution: NP1:φ$_{s}$136.00000°, δ88.00000°, λ-42.00000°.*
ISC 26 06:24:22.8±1.1**, 8°.37N**±0°.05×**82°.87W**±0°.03**, h32**^{km}±7^{km}**, n36,** σ**0**^{s}**45**/51**, 9C-7D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LESP3	**La Esperanza,**	**0.08**	**65**	⇑*i*P	**Pb**	**06 24 28.1**	**-0.2**
LMNES	**Limones**	**0.27**	**179**	*e*P	**Pb**	**06 24 30.4**	**+0.4**
NELY	**Ciudad Neily**	**0.29**	**344**	*e*P	**Pb**	**06 24 30.2**	**-0.1**
NELY				*e*S	**Sn**	**06 24 36.1**	**0.0**
MCANO	**Manzana, Boque**	**0.35**	**56**	*e*P	**Pb**	**06 24 31.3**	**+0.2**
FITO	**Golfito**	**0.38**	**311**	*e*P	**Pb**	**06 24 30.6**	**-0.9**
FITO				*e*S	**Sb**	**06 24 37.0**	**-0.4**
EDAD	**Golfito**	**0.41**	**313**	*e*P	**Pb**	**06 24 31.1**	**-0.8**
EDAD				*e*S	**Sb**	**06 24 37.6**	**-0.5**
DVD	**David**	**0.42**	**81**	⇑*i*P	**Pb**	**06 24 31.9**	**0.0**
DVD				⇓*i*P	**Pb**	**06 24 32.0**	**0.0**
DVD				*e*S	**Sb**	**06 24 38.1**	**-0.2**
MLIR3	**Monte Lirio, C**	**0.42**	**6**	⇑*i*P	**Pb**	**06 24 32.7**	**+0.5**
CSTBL	**De las Acacias**	**0.42**	**85**	⇓*e*P	**Pb**	**06 24 32.1**	**0.0**
PEDE3	**Pedregal, Chir**	**0.44**	**88**	⇓*i*P	**Pb**	**06 24 32.2**	**-0.1**
PEDE3				*e*S	**Sb**	**06 24 39.3**	**+0.4**
LOCO3	**Loma Colorada,**	**0.45**	**85**	⇓*i*P	**Pb**	**06 24 32.5**	**0.0**
LOCO3				*e*S	**Sb**	**06 24 39.0**	**0.0**
CLLRA	**Cordillera,**	**0.45**	**34**	*e*P	**Pb**	**06 24 32.7**	**+0.1**
BRU2	**Volcan**	**0.45**	**22**	*e*P	**Pb**	**06 24 32.8**	**+0.1**
BRU2	**Volcan**	**0.45**	**22**	⇑*i*P	**Pb**	**06 24 32.8**	**+0.1**
BRU2				*e*S	**Sn**	**06 24 40.8**	**+0.4**
VITO	**San Vito**	**0.46**	**347**	*e*P	**Pb**	**06 24 33.0**	**+0.3**
VITO				*e*S	**Sn**	**06 24 41.2**	**+0.8**
SCLRA	**Santa Clara, W**	**0.47**	**10**	*e*P	**Pb**	**06 24 33.2**	**+0.3**
LOMA3	**Las Lomas, Chi**	**0.47**	**83**	⇓*i*P	**Pb**	**06 24 32.8**	**-0.1**
PTAR3	**Potrerillos Ar**	**0.49**	**49**	⇑*i*P	**Pb**	**06 24 33.3**	**+0.1**
PTAR3				*e*S	**Sb**	**06 24 40.7**	**+0.5**
BC3P	**Paso Ancho**	**0.51**	**30**	⇑*i*P	**Pb**	**06 24 33.5**	**-0.1**
BC3P				*e*S	**Sn**	**06 24 42.0**	**+0.2**
CHIR3	**Chiriqui UPA,**	**0.53**	**87**	⇓*i*P	**Pb**	**06 24 33.5**	**-0.2**
CHIR3				*e*S	**Sn**	**06 24 42.0**	**0.0**
BQTLY	**Boquete Panama**	**0.56**	**46**	*e*P	**Pb**	**06 24 33.9**	**-0.4**
BQSF3	**Alto Boquete,**	**0.56**	**49**	⇑*i*P	**Pb**	**06 24 34.1**	**-0.3**
BQSF3				*e*S	**Sb**	**06 24 42.3**	**-0.1**
ALCO	**Alturas Coton,**	**0.58**	**3**	⇑*e*P	**Pb**	**06 24 34.3**	**-0.4**
PSOM3	**Paja de Sombre**	**0.62**	**60**	⇓*i*P	**Pb**	**06 24 34.8**	**-0.5**
PSOM3				*e*S	**Sb**	**06 24 43.0**	**-0.9**
EDP2	**Potrero Grande**	**0.71**	**334**	*e*P	**Pb**	**06 24 36.6**	**-0.2**
PANP	**Palmar Norte**	**0.83**	**315**	*e*P	**Pn**	**06 24 38.1**	**-0.1**
PBNVO	**Pueblo Nuevo,**	**0.84**	**52**	*e*P	**Pn**	**06 24 37.9**	**-0.5**
RBALA	**Bur**	**0.87**	**54**	*e*P	**Pn**	**06 24 38.6**	**-0.2**
BURE	**Buenos Aires**	**0.92**	**330**	*e*P	**Pn**	**06 24 39.5**	**-0.1**
DRK0	**Durika**	**0.96**	**337**	*e*P	**Pn**	**06 24 39.9**	**-0.4**
DRK0	**Durika**	**0.96**	**337**	⇑*i*P	**Pn**	**06 24 40.2**	**-0.1**
DRK0				*e*S	**Sn**	**06 24 52.7**	**-0.3**
EDPE	**Pejibaye, P**	**1.05**	**318**	*e*P	**Pn**	**06 24 41.6**	**+0.2**
KKNTU	**Kakintº**	**1.15**	**66**	*e*P	**Pn**	**06 24 42.2**	**-0.4**
SAJE	**San Jernim**	**1.16**	**327**	*e*P	**Pn**	**06 24 43.0**	**+0.1**
BRIBI	**Bribri**	**1.24**	**2**	*e*P	**Pb**	**06 24 45.7**	**+0.1**
ABRB	**Las Abras (San**	**1.83**	**333**	*e*P	**Pn**	**06 24 54.1**	**+1.8**

UCR ***26*** *06:25:15.1±0.7, 8°.33N×82°.83W, h32^{km}±3^{km}, MW3.5*
UPA ***26*** *06:25:16.0±1.0, 8°.39N×82°.81W, h26^{km}±5^{km}, MW2.7*
ISC 26 06:25:15.1±1.2**, 8°.36N**±0°.05×**82°.84W**±0°.04**, h32**^{km}±7^{km}**, n23,** σ**0**^{s}**38**/36**, 1C-8D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LESP3	**La Esperanza,**	**0.07**	**44**	⇓*i*P	**Pb**	**06 25 20.7**	**+0.1**
LESP3				*e*S	**Sb**	**06 25 23.7**	**-0.5**
LMNES	**Limones**	**0.26**	**185**	*e*P	**Pb**	**06 25 22.7**	**+0.5**
NELY	**Ciudad Neily**	**0.31**	**340**	*e*P	**Pb**	**06 25 23.0**	**+0.1**
NELY				*e*S	**Sn**	**06 25 29.2**	**+0.3**
MCANO	**Manzana, Boque**	**0.34**	**51**	*e*P	**Pb**	**06 25 23.5**	**+0.2**
DVD	**David**	**0.39**	**78**	⇓*i*P	**Pb**	**06 25 24.1**	**+0.2**
DVD				*e*S	**Sn**	**06 25 30.8**	**-0.1**
PEDE3	**Pedregal, Chir**	**0.41**	**86**	⇓*i*P	**Pb**	**06 25 24.3**	**0.0**
PEDE3				*e*S	**Sb**	**06 25 31.0**	**+0.5**
FITO	**Golfito**	**0.41**	**310**	*e*P	**Pb**	**06 25 23.8**	**-0.4**
FITO				*e*S	**Sb**	**06 25 30.2**	**-0.3**
LOCO3	**Loma Colorada,**	**0.42**	**83**	⇓*i*P	**Pb**	**06 25 24.5**	**+0.2**
LOCO3				*e*S	**Sb**	**06 25 30.6**	**-0.1**
MLIR3	**Monte Lirio, C**	**0.43**	**2**	⇓*i*P	**Pn**	**06 25 25.5**	**+0.3**
MLIR3				*e*S	**Sb**	**06 25 31.4**	**+0.1**
EDAD	**Golfito**	**0.44**	**312**	*e*P	**Pb**	**06 25 24.1**	**-0.6**
EDAD				*e*S	**Sb**	**06 25 31.2**	**-0.2**
CLLRA	**Cordillera,**	**0.44**	**30**	*e*P	**Pb**	**06 25 24.6**	**-0.3**
LOMA3	**Las Lomas, Chi**	**0.45**	**81**	⇓*i*P	**Pb**	**06 25 24.8**	**0.0**
BRU2	**Volcan**	**0.46**	**18**	*e*P	**Pb**	**06 25 25.6**	**+0.5**
BRU2				*e*S	**Sn**	**06 25 32.8**	**0.0**
BRU2	**Volcan**	**0.46**	**18**	*e*P	**Pb**	**06 25 25.6**	**+0.5**
BRU2				*e*S	**Sn**	**06 25 32.9**	**+0.2**
PTAR3	**Potrerillos Ar**	**0.47**	**45**	⇓*i*P	**Pb**	**06 25 25.5**	**+0.2**
PTAR3				*e*S	**Sb**	**06 25 32.6**	**+0.2**
VITO	**San Vito**	**0.48**	**344**	*e*P	**Pb**	**06 25 25.9**	**+0.5**
BC3P	**Paso Ancho**	**0.51**	**26**	⇑*i*P	**Pb**	**06 25 25.9**	**0.0**
BC3P				*e*S	**Sn**	**06 25 34.7**	**+0.6**
BQSF3	**Alto Boquete,**	**0.55**	**46**	⇓*i*P	**Pb**	**06 25 26.4**	**-0.2**
BQSF3				*e*S	**Sb**	**06 25 33.6**	**-0.8**
PSOM3	**Paja de Sombre**	**0.60**	**57**	*e*P	**Pb**	**06 25 26.8**	**-0.5**
EDP2	**Potrero Grande**	**0.74**	**333**	*e*P	**Pb**	**06 25 29.9**	**+0.4**
PBNVO	**Pueblo Nuevo,**	**0.83**	**50**	*e*P	**Pn**	**06 25 30.1**	**-0.5**
RBALA	**Bur**	**0.85**	**52**	*e*P	**Pn**	**06 25 30.8**	**-0.1**
KKNTU	**Kakintº**	**1.13**	**65**	*e*P	**Pn**	**06 25 34.4**	**-0.3**

UCR ***26*** *06:25:43.8±0.8, 8°.36N×82°.86W, h25^{km}±5^{km}, MW3.8*
UPA ***26*** *06:25:44.3±0.7, 8°.38N×82°.86W, h24^{km}±3^{km}, MW2.9, Fault plane solution: NP1:φ$_{s}$0.00000°, δ34.00000°, λ78.00000°.*
ISC 26 06:25:43.9±1.1**, 8°.38N**±0°.04×**82°.87W**±0°.03**, h28**^{km}±7^{km}**, n34,** σ**0**^{s}**52**/50**, 2C-15D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LESP3	**La Esperanza,**	**0.09**	**71**	⇑*i*P	**Pb**	**06 25 48.6**	**-0.4**
LESP3				*e*S	**Sb**	**06 25 51.9**	**-0.5**
LMNES	**Limones**	**0.28**	**177**	*e*P	**Pb**	**06 25 50.9**	**0.0**
LMNES	**Limones**	**0.28**	**177**	⇓*e*P	**Pb**	**06 25 51.1**	**+0.2**
LMNES				*e*S	**Sb**	**06 25 56.3**	**+0.6**
NELY	**Ciudad Neily**	**0.28**	**345**	*e*P	**Pb**	**06 25 50.8**	**-0.2**
NELY				*e*S	**Sb**	**06 25 56.4**	**+0.6**
MCANO	**Manzana, Boque**	**0.35**	**57**	*e*P	**Pb**	**06 25 52.0**	**-0.1**
MCANO	**Manzana, Boque**	**0.35**	**57**	⇓*i*P	**Pb**	**06 25 52.1**	**+0.1**
FITO	**Golfito**	**0.37**	**311**	*e*P	**Pb**	**06 25 51.2**	**-1.1**
FITO				*e*S	**Sb**	**06 25 57.0**	**-0.9**
EDAD	**Golfito**	**0.40**	**313**	*e*P	**Pb**	**06 25 51.8**	**-0.9**
MLIR3	**Monte Lirio, C**	**0.41**	**7**	⇑*e*P	**Pb**	**06 25 53.8**	**+0.7**
MLIR3				*e*S	**Sn**	**06 26 01.6**	**+0.7**
DVD	**David**	**0.42**	**82**	⇓*e*P	**Pb**	**06 25 52.9**	**-0.1**
DVD				*e*S	**Sb**	**06 25 59.7**	**+0.5**
CSTBL	**De las Acacias**	**0.43**	**86**	⇓*i*P	**Pb**	**06 25 53.0**	**-0.1**
CSTBL				*e*S	**Sb**	**06 25 59.5**	**0.0**
RSRNO	**Rio Sereno**	**0.44**	**2**	*e*S	**Sn**	**06 26 02.5**	**+1.0**
CLLRA	**Cordillera,**	**0.44**	**35**	*e*P	**Pb**	**06 25 52.9**	**-0.6**
PEDE3	**Pedregal, Chir**	**0.45**	**89**	⇓*i*P	**Pb**	**06 25 53.1**	**-0.3**
PEDE3				*e*S	**Sb**	**06 25 59.4**	**-0.5**
VITO	**San Vito**	**0.45**	**348**	*e*P	**Pb**	**06 25 53.8**	**+0.2**
BRU2	**Volcan**	**0.45**	**23**	*e*P	**Pb**	**06 25 53.4**	**-0.2**
BRU2	**Volcan**	**0.45**	**23**	⇓*i*P	**Pb**	**06 25 53.7**	**+0.1**
BRU2				*e*S	**Sn**	**06 26 01.6**	**-0.3**
LOCO3	**Loma Colorada,**	**0.45**	**86**	⇓*i*P	**Pb**	**06 25 53.4**	**-0.1**
LOCO3				*e*S	**Sb**	**06 26 00.3**	**+0.3**
SCLRA	**Santa Clara, W**	**0.46**	**11**	*e*P	**Pb**	**06 25 53.9**	**+0.1**
SCLRA	**Santa Clara, W**	**0.46**	**11**	*e*S	**Sn**	**06 26 01.9**	**-0.2**
LOMA3	**Las Lomas, Chi**	**0.48**	**84**	⇓*i*P	**Pb**	**06 25 53.7**	**-0.3**
LOMA3				*e*S	**Sb**	**06 26 01.4**	**+0.6**
PTAR3	**Potrerillos Ar**	**0.49**	**50**	⇓*i*P	**Pb**	**06 25 54.2**	**0.0**
PTAR3				*e*S	**Sb**	**06 26 01.2**	**+0.1**
BC3P	**Paso Ancho**	**0.51**	**31**	⇓*i*P	**Pb**	**06 25 54.4**	**-0.1**
CHIR3	**Chiriqui UPA,**	**0.54**	**88**	⇓*i*P	**Pb**	**06 25 54.5**	**-0.4**
BQTLY	**Boquete Panama**	**0.56**	**47**	⇓*i*P	**Pb**	**06 25 54.7**	**-0.6**
BQTLY				*e*S	**Sn**	**06 26 04.7**	**+0.2**
BQSF3	**Alto Boquete,**	**0.56**	**50**	⇓*i*P	**Pb**	**06 25 55.1**	**-0.4**
BQSF3				*e*S	**Sb**	**06 26 04.1**	**+0.8**
PSOM3	**Paja de Sombre**	**0.62**	**61**	⇓*i*P	**Pb**	**06 25 55.8**	**-0.5**
PSOM3				*e*S	**Sb**	**06 26 05.1**	**+0.3**
EDP2	**Potrero Grande**	**0.70**	**335**	*e*P	**Pn**	**06 25 58.5**	**+0.5**
PANP	**Palmar Norte**	**0.82**	**315**	*e*P	**Pb**	**06 25 59.2**	**-0.4**
PBNVO	**Pueblo Nuevo,**	**0.84**	**53**	*e*P	**Pb**	**06 25 59.0**	**-1.0**
RBALA	**Bur**	**0.87**	**55**	*e*P	**Pb**	**06 25 59.5**	**-0.9**
RBALA	**Bur**	**0.87**	**55**	⇓*i*P	**Pb**	**06 25 59.8**	**-0.6**
RBALA				*e*S	**Sb**	**06 26 11.8**	**+0.1**
EDPE	**Pejibaye, P**	**1.04**	**318**	*e*P	**Pn**	**06 26 02.9**	**+0.2**

KKNTU	Kakintº	1.15	66	eP	Pn	06 26 03.5	-0.7

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*UCR **26** 06:28:00.3±1.3, 8°.33N×82°.86W, h22^{km}±2^{km}, MW3.7*

*UPA **26** 06:28:01.0±1.1, 8°.42N×82°.87W, h26^{km}±3^{km}, MW3.8, Fault plane solution: NP1:ϕ_s0.00000°, δ37.00000°, λ58.00000°.*

ISC 26 06:28:00.6±0.9, **8°.36N**±0°.03×**82°.88W**±0°.02, **h30**^{km}±6^{km}, **n98**, σ**1ˢ.19**/127, **19C-12D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.10	63	⇑iP	Pb	06 28 05.9	-0.1
LESP3				eS	Sb	06 28 09.1	-0.6
LMNES	Limones	0.26	176	⇑eP	Pn	06 28 08.3	-0.2
LMNES	Limones	0.26	176	⇓eP	Pn	06 28 08.2	-0.2
LMNES				eS	Sn	06 28 14.1	+0.7
NELY	Ciudad Neily	0.30	347	⇑iP	Pb	06 28 07.5	-0.5
NELY				eS	Sn	06 28 13.7	-0.6
MCANO	Manzana, Boque	0.37	55	⇓iP	Pb	06 28 08.9	-0.2
FITO	Golfito	0.38	314	⇑iP	Pb	06 28 07.9	-1.3
FITO				eS	Sb	06 28 13.9	-1.1
EDAD	Golfito	0.41	316	⇑eP	Pb	06 28 08.4	-1.2
EDAD				eS	Sb	06 28 14.8	-1.0
DVD	David	0.43	80	iP	Pb	06 28 09.7	-0.3
DVD				iS	Sn	06 28 16.8	-0.8
MLIR3	Monte Lirio, C	0.43	7	iP	Pb	06 28 10.0	-0.1
MLIR3				eS	Sb	06 28 16.0	-0.6
CSTBL	De las Acacias	0.44	83	⇓iP	Pb	06 28 09.8	-0.3
CSTBL	De las Acacias	0.44	83	⇓iP	Pb	06 28 09.8	-0.3
PEDE3	Pedregal, Chir	0.45	87	iP	Pb	06 28 09.9	-0.5
PEDE3				iS	Sb	06 28 16.7	-0.3
RSRNO	Rio Sereno	0.46	2	⇑eP	Pb	06 28 10.4	-0.1
RSRNO				eS	Sn	06 28 19.3	+0.9
RSRNO	Rio Sereno	0.46	2	⇑iP	Pb	06 28 10.4	-0.1
LOCO3	Loma Colorada,	0.46	84	iP	Pb	06 28 10.1	-0.3
LOCO3				iS	Sb	06 28 16.9	-0.2
CLLRA	Cordillera,	0.46	35	⇑eP	Pb	06 28 10.2	-0.5
CLLRA	Cordillera,	0.46	35	⇑iP	Pb	06 28 10.2	-0.5
VITO	San Vito	0.47	349	⇑iP	Pb	06 28 10.3	-0.3
VITO				eS	Sn	06 28 18.4	-0.3
BRU2	Volcan	0.47	23	⇑iP	Pb	06 28 10.2	-0.5
BRU2				eS	Sn	06 28 18.2	-0.6
BRU2	Volcan	0.47	23	iP	Pb	06 28 10.3	-0.5
BRU2				iS	Sn	06 28 18.3	-0.6
SCLRA	Santa Clara, W	0.48	12	⇑iP	Pb	06 28 10.7	-0.2
TBS2		0.48	27	eP	Pn	06 28 11.4	-0.3
PTAR3	Potrerillos Ar	0.50	49	iP	Pb	06 28 10.7	-0.5
PTAR3				iS	Sn	06 28 19.2	-0.4
BC3P	Paso Ancho	0.53	30	iP	Pb	06 28 10.9	-0.7
BC3P				iS	Sb	06 28 19.2	0.0
CHIR3	Chiriqui UPA,	0.55	86	iP	Pb	06 28 11.2	-0.6
BQTLY	Boquete Panama	0.57	46	⇓eP	Pb	06 28 11.5	-0.8
BQTLY	Boquete Panama	0.57	46	iP	Pb	06 28 11.6	-0.8
ALCO	Alturas Coton,	0.59	4	⇑iP	Pb	06 28 11.7	-1.0
PSOM3	Paja de Sombre	0.64	60	iP	Pb	06 28 12.3	-1.1
PSOM3				eS	Sn	06 28 22.2	-0.7
EDP2	Potrero Grande	0.71	336	⇑iP	Pb	06 28 13.8	-0.8
EDP2				eS	Sn	06 28 24.8	+0.2
PANP	Palmar Norte	0.83	316	⇓eP	Pb	06 28 15.2	-1.3
PBNVO	Pueblo Nuevo,	0.86	52	⇓eP	Pb	06 28 15.4	-1.7
RBALA	Bur	0.89	54	⇓iP	Pb	06 28 16.1	-1.4
BURE	Buenos Aires	0.93	331	⇑eP	Pb	06 28 16.7	-1.5
DRK0	Durika	0.97	338	eP	Pb	06 28 16.9	-2.1
DRK0	Durika	0.97	338	iP	Pb	06 28 16.9	-2.1
DRK0				eP	Pn	06 28 17.1	-1.2
DRK0				eS	Sb	06 28 30.0	-1.5
RMDIO	Remedios, Chir	1.05	97	⇑iP	Pn	06 28 19.0	-0.3
KKNTU	Kakintº	1.17	66	⇓iP	Pn	06 28 19.9	-1.0
KKNTU				eS	Sn	06 28 34.9	-0.8
ISBTO	Bastimentos Is	1.18	34	eP	Pb	06 28 22.1	-0.5
BRIBI	Bribri	1.25	3	eP	Pb	06 28 23.3	-0.4
BRIBI				eS	Sb	06 28 41.7	+2.2
RAZU	San Marcos de	1.71	319	eP	Pn	06 28 29.7	+1.1
PITB	Pirrs, San	1.72	319	eP	Pn	06 28 30.0	+1.3
TURIB	Turrialba	1.73	333	⇑eP	Pn	06 28 29.0	+0.3
TURIB				eS	Sn	06 28 50.7	+0.8
GMAL	Guarumal, Vera	1.73	110	eP	Pn	06 28 27.9	-0.8
GMAL	Guarumal, Vera	1.73	110	iP	Pn	06 28 28.5	-0.2
GMAL				iS	Sn	06 28 50.5	+0.7
VINA	Juan Vinas	1.75	331	⇓iP	Pn	06 28 29.7	+0.7
VINA				eS	Sn	06 28 52.2	+1.8
REPA	Paraso	1.75	326	eP	Pn	06 28 29.7	+0.5
PISJ	San Jernim	1.76	316	eP	Pn	06 28 30.6	+1.4
LCR2	La Lucha 2	1.77	321	eP	Pn	06 28 29.3	0.0
ABE2	San Pablo	1.77	319	eP	Pn	06 28 29.9	+0.5
PCAYA	Pacayas	1.80	329	eP	Pn	06 28 30.3	+0.4
PCAYA				eS	Sn	06 28 53.5	+1.7
PICV	PH. Pirrs	1.81	314	eP	Pn	06 28 30.9	+1.2
PICV				eS	Sn	06 28 54.0	+2.3
VTCV	VTCV, Calle Va	1.82	333	eP	Pn	06 28 30.9	+0.8
IRES	Siquirres	1.83	340	⇑eP	Pn	06 28 31.0	+0.9
RAFA	San Farael, Vo	1.83	330	eP	Pn	06 28 30.9	+0.5
CVTV	Tajo	1.85	332	eP	Pn	06 28 31.2	+0.7
CVTQ	Turrialba Volc	1.85	332	eP	Pn	06 28 31.5	+0.8
VTLA	Turrialba Volc	1.86	332	eP	Pn	06 28 31.6	+0.9
VTR0	Volcan Turrial	1.86	332	eP	Pn	06 28 31.6	+0.7
RVLA	Villa Bonita	1.87	338	⇓eP	Pn	06 28 31.8	+1.2
RVLA				eS	Sn	06 28 55.5	+2.2
VICA	Volcano Irazu	1.88	330	eP	Pn	06 28 32.0	+0.9
TRIO	Tres Rios	1.89	324	eP	Pn	06 28 32.3	+1.3
ACOS	Acosta	1.91	318	eP	Pn	06 28 31.3	0.0
CORON	Coronado	1.95	325	eP	Pn	06 28 32.2	+0.3
LUJA	Lujan	1.95	323	eP	Pn	06 28 32.6	+0.7
CALO3	Calobre, Verag	2.02	91	eP	Pb	06 28 34.7	-1.9
SANTA	Santa Ana	2.03	321	eP	Pn	06 28 33.7	+0.9
HDC	Heredia	2.04	323	eP	Pn	06 28 33.7	+0.7
HEME	Heredia, Merce	2.04	323	eP	Pn	06 28 34.5	+1.4
PURI	Puriscal	2.04	316	eP	Pn	06 28 34.6	+1.5
BELE	Belen	2.06	321	eP	Pn	06 28 34.8	+1.5
VBV1	V. Barva	2.12	325	eP	Pn	06 28 36.4	+2.2
CARI	Cariari	2.16	337	eP	Pn	06 28 35.4	+0.8
POAS	San Pedro de P	2.17	322	eP	Pb	06 28 37.5	-1.9
TCS1	Tacares	2.18	320	eP	Pn	06 28 37.2	+2.2
TRB2	Turrubares	2.19	315	eP	Pn	06 28 35.4	+0.4
ATEO	Atenas	2.19	317	eP	Pn	06 28 36.8	+1.8
CACAO	El Cacao, Vera	2.24	117	iP	Pn	06 28 36.2	+0.5
CACAO				eS	Sn	06 29 03.7	+1.4
SARCI	Sarchi	2.25	320	eP	Pn	06 28 37.2	+1.3
SRA1	San Ramn	2.33	317	eP	Pb	06 28 40.8	-1.3
TRT2	Tortugero	2.34	339	eP	Pn	06 28 38.1	+1.0
SARA	Sarapiqu	2.36	332	eP	Pn	06 28 38.5	+1.2
TRT1	Tortuguero	2.37	340	eP	Pn	06 28 38.4	+1.0
VPL2	V. Platanar	2.44	323	eP	Pn	06 28 41.4	+2.9
CHIT3	Chitre	2.47	99	eP	Pn	06 28 33.7	-5.1
CHIT3				eS	Sn	06 29 10.0	+2.0
CBL1	Cabuya	2.50	299	⇑iP	Pn	06 28 38.8	-0.5
AZU	Azuero	2.64	102	⇓iP	Pn	06 28 43.6	+2.4
AZU				eS	Sn	06 29 15.1	+2.8
JCR1	Jicaral	2.66	304	eP	Pn	06 28 43.0	+1.6
FORC	Fortuna	2.74	320	eP	Pn	06 28 45.1	+2.6
VACR	Volcan Arenal	2.75	320	eP	Pn	06 28 45.8	+3.1
ARE1	Arenal 1	2.77	319	eP	Pb	06 28 46.9	-2.5
JUNT	Juntas	2.80	313	eP	Pn	06 28 44.2	+0.7
JTS	Las Juntas de	2.81	313	eP	Pn	06 28 43.9	+0.4
JTS	Las Juntas de	2.81	313	iP	Pn	06 28 44.3	+0.8
CMARA	Lajas Hojancha	3.00	303	eP	Pn	06 28 46.4	+0.1
BCIP	Isla Barro Col	3.11	75	eP	Pn	06 28 48.2	+0.6
PLVR	Palo Verde	3.14	309	eP	Pn	06 28 49.8	+1.6
CUI	Cuipilapa	3.21	316	eP	Pn	06 28 50.3	+1.3

KRSC 26 06:31:50.9±1.8, **56°.24N×164°.11E, h49**^{km}±20^{km}, **Ml3.7, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.72	268	eP	Pn	06 32 04.2	-0.6
KBTR				eS	Sn	06 32 13.6	-1.3
KBG	Krutoberegovo	0.78	271	eP	Pn	06 32 05.1	-0.4
KBG				eS	Sn	06 32 15.3	-1.0
BKI	Bering	1.48	134	eP	Pn	06 32 17.7	+2.7
BKI				eS	Sn	06 32 36.7	+3.5
SMKR	Semkarok	1.50	284	eP	Pn	06 32 17.8	+2.3
SMKR				eS	Sn	06 32 37.1	+3.2
BDR	Baidarnaya	1.64	283	eS	Sn	06 32 40.6	+3.3
ZLN	Zelenaya	1.86	264	eP	Pn	06 32 23.9	+3.6
ZLN				eS	Sn	06 32 47.0	+4.3
CIRR	Tsirk	1.88	267	eP	Pn	06 32 24.1	+3.4
LGNR	Loginova	1.92	267	eP	Pn	06 32 24.3	+3.0
KLY	Klyuchi	1.93	274	eP	Pn	06 32 22.9	+1.7
KLY				eS	Sn	06 32 45.3	+1.1
BZGR	Bezymyannyi-Gr	1.94	262	eP	Pn	06 32 24.6	+3.3
BZGR				eS	Sn	06 32 48.3	+3.8
KRSR	Krestovskiy	1.98	271	eP	Pn	06 32 24.6	+2.6
BZWR	Bezymyannyi-We	2.04	264	eP	Pn	06 32 25.8	+2.9
BZMR	Bezymyannaya	2.05	263	eP	Pn	06 32 26.1	+3.2
BZMR				eS	Sn	06 32 51.4	+4.0
KIRR	Kirishev	2.13	264	eP	Pn	06 32 27.6	+3.5
KIRR				eS	Sn	06 32 53.3	+4.0
MKZ	Mys Kozlova	2.17	220	eP	Pn	06 32 26.0	+1.6
MKZ				eS	Sn	06 32 51.3	+1.3
KPT	Kopyto	2.19	264	eP	Pn	06 32 28.7	+3.8
KMNR	Kamenistaya	2.23	259	eP	Pn	06 32 29.6	+4.2
TUMD	Tumrok D	2.34	245	eP	Pn	06 32 29.9	+3.1
TUMD				eS	Sn	06 32 58.0	+3.6
KOZ	Kozyrevsk	2.38	267	eP	Pn	06 32 31.0	+3.7
SRDR	Sredinnyy	2.45	274	eP	Pn	06 32 32.2	+3.8
OSSR	Ossora	3.07	350	eP	Pn	06 32 38.8	+2.1
OSSR				eS	Sn	06 33 12.2	+0.1
KII	Karymskiy	3.47	232	eP	Pn	06 32 45.6	+3.3
KII				eS	Sn	06 33 25.8	+3.6
SPN	Mys Shipunski	3.94	219	eP	Pn	06 32 50.5	+1.8
SPN				eS	Sn	06 33 32.3	-1.4
SDLR	Sedlovina	4.24	228	eP	Pn	06 32 56.6	+3.6
KRER	Koryakskii	4.28	229	eP	Pn	06 32 57.3	+3.8
KRX	Arik	4.28	230	eP	Pn	06 32 57.4	+3.9
SMAR	Somma	4.29	228	eP	Pn	06 32 57.3	+3.6
SMAR				eS	Sn	06 33 46.0	+3.6
AVH	Avacha	4.31	228	eP	Pn	06 32 57.9	+4.0
UGLR	Uglovaya	4.32	227	eP	Pn	06 32 57.7	+3.8
UGLR				eS	Sn	06 33 45.2	+2.2
KOK	Koryaka	4.33	229	eP	Pn	06 32 58.4	+4.2
GNL	Ganaly	4.37	237	eP	Pn	06 32 58.7	+3.9
DALK	Dalny	4.47	226	eP	Pn	06 32 59.4	+3.4
KRMR	Karymshinskiy	4.88	228	eP	Pn	06 33 06.8	+5.2
KRMR				eS	Sn	06 34 02.7	+6.0
RUS	Russkaya	5.03	223	eP	Pn	06 33 07.0	+3.4
GRL	Gorelyy	5.11	226	eP	Pn	06 33 09.7	+4.8
MTVR	Mutnovka	5.12	225	eP	Pn	06 33 09.3	+4.4
ASAK	Asacha	5.30	226	eP	Pn	06 33 12.2	+4.7

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*CATAC **26** 06:35:03.9±0.6, 8°N±4°×8°3W±°, h1^{km}, M3.6/13, MLv3.6/13, Error ellipse: s-maj=7.8km s-min=4.9km az=162.1, confirmed*

*UPA **26** 06:35:06.4±0.8, 8°.39N×82°.83W, h32^{km}±3^{km}, MW3.2, Fault plane solution: NP1:ϕ_s18.00000°, δ70.00000°, λ-162.00000°.*

ISC 26 06:35:06.4±1.0, **8°.39N**±0°.04×**82°.84W**±0°.04, **h32**^{km}±7^{km}, **n40**, σ**0ˢ.77**/48, **4C-14D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.05	67	⇓iP	Pb	06 35 11.7	-0.1
LESP3				eS	Sb	06 35 15.2	-0.3
CDITO	Canoas	0.19	349	P	Pb	06 35 12.6	-0.2
CDITO	Canoas	0.19	349	S	Sn	06 35 18.0	+0.7
LMNES	Limones	0.29	185	⇑iP	Pb	06 35 13.7	-0.2
LMNES				eS	Sb	06 35 19.1	+0.2
MCANO	Manzana, Boque	0.32	55	⇓iP	Pb	06 35 14.4	0.0
DVD	David	0.38	83	⇑iP	Pb	06 35 15.0	-0.2
DVD				⇓iP	Pb	06 35 15.0	-0.2
CSTBL	De las Acacias	0.39	86	⇓iP	Pb	06 35 15.1	-0.2
CSTBL				eS	Sb	06 35 21.6	+0.2
MLIR3	Monte Lirio, C	0.40	2	eS	Sn	06 35 22.7	0.0
PEDE3	Pedregal, Chir	0.41	90	⇓eP	Pb	06 35 15.1	-0.5
LOCO3	Loma Colorada,	0.41	87	⇓iP	Pb	06 35 15.4	-0.3
CLLRA	Cordillera,	0.42	32	⇓iP	Pb	06 35 15.8	-0.1
RSRNO	Rio Sereno	0.43	357	⇑iP	Pn	06 35 16.5	-0.1
RSRNO				eS	Sn	06 35 23.0	-0.4
BRU2	Volcan	0.43	19	P	Pb	06 35 15.8	-0.3
BRU2	Volcan	0.43	19	⇓iP	Pb	06 35 15.9	-0.1
BRU2				eS	Sn	06 35 23.6	+0.2
LOMA3	Las Lomas, Chi	0.44	84	⇓iP	Pb	06 35 15.7	-0.4
SCLRA	Santa Clara, W	0.45	7	⇑iP	Pn	06 35 16.7	-0.1
SCLRA				eS	Sb	06 35 22.6	-0.4
PTAR3	Potrerillos Ar	0.45	48	⇓iP	Pb	06 35 16.2	-0.1
BC3P	Paso Ancho	0.48	28	iP	Pb	06 35 16.5	-0.4
CHIR3	Chiriqui UPA,	0.50	89	⇓iP	Pb	06 35 16.4	-0.6
BQTLY	Boquete Panama	0.52	45	⇓iP	Pb	06 35 17.1	-0.4
BQSF3	Alto Boquete,	0.53	48	⇓iP	Pb	06 35 17.1	-0.5
PSOM3	Paja de Sombre	0.59	60	⇓iP	Pb	06 35 17.7	-0.7
DRK0	Durika	0.96	335	S	Sn	06 35 36.9	+0.3
DRK0	Durika	0.96	335	P	Pn	06 35 23.0	-0.9
DRK0	Durika	0.96	335	eP	Pn	06 35 23.1	-0.8
OCHAL	Ojochal	1.07	311	P	Pn	06 35 23.0	-2.2
OCHAL	Ojochal	1.07	311	S	Sn	06 35 39.6	+0.6
LCR2	La Lucha 2	1.77	319	P	Pn	06 35 34.4	-0.8
LCR2	La Lucha 2	1.77	319	S	Sb	06 35 60.0	-0.5
HDC	Heredia	2.04	322	P	Pn	06 35 40.2	+1.4
HDC				S	Sb	06 36 07.5	-0.6
TCS1	Tacares	2.19	319	P	Pn	06 35 42.6	+1.8
TCS1	Tacares	2.19	319	S	Sb	06 36 12.3	0.0
TRT2	Tortugero	2.33	338	P	Pn	06 35 43.8	+1.2
TRT2	Tortugero	2.33	338	S	Sb	06 36 15.7	-0.5
COVE	Coope Vega, Sa	2.79	326	P	Pn	06 35 49.5	+0.6
INDI	Punta indio, G	3.02	299	P	Pn	06 35 52.6	+0.5
INDI	Punta indio, G	3.02	299	S	Sn	06 36 26.4	-0.8
CMARA	Lajas Hojancha	3.03	303	P	Pn	06 35 52.4	+0.1
CMARA	Lajas Hojancha	3.03	303	S	Sn	06 36 27.9	+0.4
ACON	Acoyapa	4.24	327	P	Pn	06 36 11.4	+2.5

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*AEIC **26** 06:35:13.6±1.1, 54°.1N±0°.1×165°.1W±0°.1, h70^{km}±6^{km}, Error ellipse: s-maj=22.4km s-min=4.0km az=156.0*

NEIC 26 06:35:13.5±0.4, **54°.1N**±0°.2×**165°.0W**±0°.2, **h76**^{km}±10^{km}, **ML3.0**/12, **ML3.0**(AEIC), **Error ellipse: s-maj=31.8km s-min=4.1km az=154.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKUT	Akutan	0.45	281		Pn	06 35 26.1	-0.3
AKUT	comp=E,830nm,0.3s			IAML		06 35 36.5	
AKUT	Akutan	0.45	281		Sn	06 35 35.9	0.0
AHB	Akutan Harbor	0.47	279		Pn	06 35 26.4	-0.2
AHB					Sn	06 35 36.4	+0.1
WESE	West Dahl East	0.50	31		Pn	06 35 26.9	0.0
WESE					Sn	06 35 36.8	0.0
WECS	Westdahl Cape	0.51	17		Pn	06 35 27.1	+0.1
WECS					Sn	06 35 37.0	+0.1
AKMO	Akutan Morgan	0.58	275		Pn	06 35 27.4	-0.2
AKMO					Sn	06 35 37.8	-0.3
AKGG	Akutan Green G	0.59	285		Pn	06 35 27.7	0.0
AKGG					Sn	06 35 38.3	+0.1
LVA	Lava Point	0.60	281	Pn	Pn	06 35 27.6	-0.3
LVA	comp=N,619nm,0.7s			IAML		06 35 40.6	
SSLS	Shishaldin Sou	0.90	42		Pn	06 35 31.1	-0.1
SSLS					Sn	06 35 44.6	+0.4
UNV	Unalaska Valle	0.90	257		Pn	06 35 30.7	-0.4
UNV	comp=N,353nm,0.5s			IAML		06 35 43.7	
UNV	comp=E,296nm,0.5s			IAML		06 35 43.9	
UNV	Unalaska Valle	0.90	257		Sn	06 35 43.2	-0.9
MTBL	Makushin Table	0.98	266		Pn	06 35 32.1	-0.1
MTBL					Sn	06 35 46.0	0.0
ISLZ	Isanotski Laza	1.02	48		Pn	06 35 32.7	+0.1
MREP	Makushin Rep't	1.04	258		Sn	06 35 47.2	-0.2
ISNN	Isanotski Nort	1.07	42		Sn	06 35 49.8	+1.9
FALS	False Pass	1.24	49		Pn	06 35 35.8	+0.5
FALS					Sn	06 35 52.5	+0.9
OKFG	Magazine Ridge	1.83	251		Pn	06 35 43.3	+0.3
OKTU	Okmok Mt. Tuli	1.91	251		Pn	06 35 44.7	+0.6
OKNC	Okmok New Cone	1.93	253		Pn	06 35 44.6	+0.2
S12K	Black Hills	2.38	45	Pn	Pn	06 35 50.4	0.0
NIKH	Nikolski High	2.53	246	Pn	Pn	06 35 53.7	+1.4
NIKH	comp=N,70nm,1.5s			IAML		06 36 30.1	
NIKH	comp=E,61nm,0.9s			IAML		06 36 31.7	

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*UCR **26** 06:37:19.4±1.0, 8°.32N×82°.86W, h28^{km}±3^{km}, MW3.6*

*UPA **26** 06:37:20.2±0.8, 8°.40N×82°.86W, h34^{km}±3^{km}, MW2.9*

ISC 26 06:37:20.0±1.0, **8°.37N**±0°.04×**82°.87W**±0°.03, **h33**^{km}±6^{km}, **n69**, σ**0ˢ.68**/86, **2C-15D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.08	66	⇓iP	Pb	06 37 25.9	+0.3
LESP3				eS	Sb	06 37 29.6	+0.1
LMNES	Limones	0.27	179	eS	Sn	06 37 33.6	+1.2
NELY	Ciudad Neily	0.29	344	eP	Pb	06 37 27.2	-0.3
NELY				eS	Sn	06 37 33.6	+0.8
MCANO	Manzana, Boque	0.35	56	eP	Pb	06 37 28.3	-0.1
FITO	Golfito	0.38	311	eP	Pb	06 37 27.7	-1.1
FITO				eS	Sb	06 37 33.9	-0.9
EDAD	Golfito	0.41	313	eP	Pb	06 37 28.1	-1.1
EDAD				eS	Sb	06 37 34.8	-0.8
DVD	David	0.41	81	⇓iP	Pb	06 37 29.1	-0.1
DVD				eS	Sn	06 37 36.1	-0.2
MLIR3	Monte Lirio, C	0.42	6	eP	Pn	06 37 29.6	-0.3
MLIR3				eS	Sb	06 37 36.1	+0.2
CSTBL	De las Acacias	0.42	85	⇓iP	Pb	06 37 29.3	-0.1
PEDE3	Pedregal, Chir	0.44	89	⇓iP	Pb	06 37 29.3	-0.3
PEDE3				eS	Sb	06 37 36.3	+0.1
RSRNO	Rio Sereno	0.44	1	eP	Pn	06 37 29.9	-0.2
RSRNO	Rio Sereno	0.44	1	⇑iP	Pn	06 37 30.1	-0.1
LOCO3	Loma Colorada,	0.44	85	⇓iP	Pb	06 37 29.6	-0.1
CLLRA	Cordillera,	0.45	34	⇓iP	Pb	06 37 29.7	-0.1
BRU2	Volcan	0.45	22	⇓iP	Pb	06 37 29.8	-0.2
BRU2				eS	Sn	06 37 37.7	+0.3
VITO	San Vito	0.46	347	eP	Pb	06 37 30.0	0.0
VITO				eS	Sn	06 37 38.3	+0.9
SCLRA	Santa Clara, W	0.46	10	eP	Pb	06 37 30.1	0.0
SCLRA	Santa Clara, W	0.46	10	⇑iP	Pb	06 37 30.2	0.0
TBS2		0.47	26	eP	Pn	06 37 30.9	+0.3
LOMA3	Las Lomas, Chi	0.47	83	eP	Pb	06 37 29.9	-0.2
LOMA3				eS	Sn	06 37 37.9	+0.2
PTAR3	Potrerillos Ar	0.48	49	⇓iP	Pb	06 37 30.2	-0.2
PTAR3				eS	Sb	06 37 37.4	-0.1
BC3P	Paso Ancho	0.51	30	⇓iP	Pb	06 37 30.4	-0.4
BC3P				eS	Sb	06 37 38.4	+0.1
CHIR3	Chiriqui UPA,	0.53	88	eP	Pb	06 37 30.6	-0.4
CHIR3				eS	Sn	06 37 39.4	+0.3
BQTLY	Boquete Panama	0.55	46	⇓iP	Pb	06 37 31.1	-0.5
BQSF3	Alto Boquete,	0.56	49	⇓iP	Pb	06 37 31.1	-0.6
BQSF3				eS	Sb	06 37 39.5	-0.2
ALCO	Alturas Coton,	0.57	3	eP	Pb	06 37 30.9	-1.0
PSOM3	Paja de Sombre	0.62	60	⇓iP	Pb	06 37 31.8	-0.8
PSOM3				eS	Sn	06 37 41.2	-0.2
EDP2	Potrero Grande	0.71	334	eP	Pn	06 37 33.3	-0.4
EDP2				eS	Sn	06 37 44.2	+0.7
PANP	Palmar Norte	0.83	315	eP	Pn	06 37 34.6	-0.7
RBALA	Bur	0.86	54	eP	Pn	06 37 35.5	-0.4
RBALA	Bur	0.86	54	⇓iP	Pn	06 37 35.5	-0.4
BURE	Buenos Aires	0.92	330	eP	Pn	06 37 36.1	-0.6
DRK0	Durika	0.96	337	eP	Pn	06 37 36.4	-0.9
DRK0	Durika	0.96	337	eP	Pn	06 37 36.6	-0.8
DRK0				eS	Sn	06 37 49.9	-0.1
RMDIO	Remedios, Chir	1.03	98	⇓iP	Pn	06 37 38.3	+0.1
EDPE	Pejibaye, P	1.05	318	eP	Pn	06 37 38.0	-0.4
KKNTU	Kakintº	1.15	66	⇓iP	Pn	06 37 39.3	-0.5
SAJE	San Jernim	1.16	327	eP	Pn	06 37 39.3	-0.8
ISBTO	Bastimentos Is	1.17	34	eP	Pb	06 37 41.4	-0.2
PIEC	Cerro El Cedra	1.65	319	eP	Pn	06 37 47.0	+0.1
PITB	Pirrs, San	1.72	318	eP	Pn	06 37 48.3	+0.6
GMAL	Guarumal, Vera	1.73	110	eP	Pn	06 37 47.2	-0.6
TURIB	Turrialba	1.73	332	eP	Pn	06 37 48.4	+0.6
VINA	Juan Vinas	1.75	330	eP	Pn	06 37 49.2	+1.1
REPA	Paraso	1.75	326	eP	Pn	06 37 48.8	+0.5
PISJ	San Jernim	1.76	315	eP	Pn	06 37 48.8	+0.5
LCR2	La Lucha 2	1.77	320	eP	Pn	06 37 48.2	-0.2
ABE2	San Pablo	1.77	318	eP	Pn	06 37 49.0	+0.4
PCAYA	Pacayas	1.80	329	eP	Pn	06 37 49.6	+0.8
VTCV	VTCV, Calle Va	1.81	332	eP	Pn	06 37 50.0	+0.9
PAR1A	Puntarenas Pro	1.83	312	eP	Pn	06 37 50.4	+1.2
CVTV	Tajo	1.84	332	eP	Pn	06 37 50.5	+0.9
CVTQ	Turrialba Volc	1.85	331	eP	Pn	06 37 50.8	+1.0
VTLA	Turrialba Volc	1.85	331	eP	Pn	06 37 50.9	+1.1
VTR0	Volcan Turrial	1.86	332	eP	Pn	06 37 51.0	+1.0
RVLA	Villa Bonita	1.87	338	eP	Pn	06 37 51.1	+1.4
VICA	Volcano Irazu	1.87	329	eP	Pn	06 37 50.8	+0.7
ACOS	Acosta	1.91	318	eP	Pn	06 37 50.5	+0.1
SANTA	Santa Ana	2.02	320	eP	Pn	06 37 52.7	+0.8
HDC	Heredia	2.03	323	eP	Pn	06 37 54.0	+1.9
PURI	Puriscal	2.04	316	eP	Pn	06 37 53.1	+0.9
BELE	Belen	2.06	321	eP	Pn	06 37 53.3	+0.9
ATEO	Atenas	2.19	317	eP	Pn	06 37 53.8	-0.3
TRB2	Turrubares	2.19	315	eP	Pn	06 37 54.8	+0.7
TRT2	Tortugero	2.33	338	eP	Pn	06 37 57.0	+0.9
ARE1	Arenal 1	2.77	319	eP	Pn	06 38 03.6	+1.6
CMARA	Lajas Hojancha	3.01	303	eP	Pn	06 38 05.6	+0.2
CUI	Cuipilapa	3.21	315	eP	Pn	06 38 09.0	+0.9
BLUN	Bluefields	3.72	346	eP	Pn	06 38 15.2	+0.1

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*KRSC **26** 06:42:09.1±1.3, 55°.97N×164°.12E, h9^{km}±20^{km}, Ml3.5*

*IDC **26** 06:42:12.0±24.0, 56°.15N×165°.23E, h0^{km}, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=604.6km s-min=131.7km az=102.0*

ISC 26 06:42:07.9±1.8, **56°.08N**±0°.06×**164°.23E**±0°.05, **h2**^{km}±13^{km}, **n25**, σ**1ˢ.76**/32, **mb3.6**/3, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.80	280	eP	Pg	06 42 23.2	0.0
KBTR				eS	Sg	06 42 34.3	+0.7
KBG	Krutoberegovo	0.87	283	eP	Pg	06 42 24.7	+0.1
KBG				eS	Sg	06 42 36.6	+0.7
BKI	Bering	1.32	131	eP	Pn	06 42 33.5	+0.2
BKI				eS	Sn	06 42 51.2	-0.3
SMKR	Semkarok	1.62	289	eP	Pn	06 42 36.9	-0.7
SMKR				eS	Sg	06 43 00.1	+0.3
BZGR	Bezymyannyi-Gr	1.99	268	eP	Pn	06 42 43.1	+0.4
MKZ	Mys Kozlova	2.09	224	eP	Pb	06 42 44.2	-2.2
MKZ				eS	Sb	06 43 10.2	-2.6
BZWR	Bezymyannyi-We	2.10	269	eP	Pb	06 42 45.2	-1.5
BZMR	Bezymyannaya	2.10	268	eP	Pn	06 42 44.8	+0.5
KIRR	Kirishev	2.19	268	eP	Pb	06 42 46.8	-1.4
KPT	Kopyto	2.25	269	eP	Pb	06 42 48.3	-1.1
KMNR	Kamenistaya	2.27	264	eP	Pb	06 42 48.3	-1.4
KOZ	Kozyrevsk	2.44	271	eP	Pb	06 42 51.9	-0.7
KOZ				eS	Sb	06 43 23.0	0.0
SPN	Mys Shipunski	3.86	221	eP	Pn	06 43 09.3	+1.0
SPN				eS	Sn	06 43 52.0	-2.1
SDLR	Sedlovina	4.18	230	eP	Pn	06 43 15.8	+3.1
KRER	Koryakskii	4.22	231	eP	Pb	06 43 17.9	-5.1
KRX	Arik	4.23	232	eP	Pn	06 43 16.8	+3.3
SMAR	Somma	4.23	230	eP	Pn	06 43 15.5	+2.0
SMAR				eS	Sn	06 44 03.5	0.0
UGLR	Uglovaya	4.25	230	eP	Pn	06 43 15.9	+2.1
RUS	Russkaya	4.95	225	eP	Pn	06 43 25.1	+1.8
GRL	Gorelyy	5.04	228	eP	Pn	06 43 27.8	+3.2
MTVR	Mutnovka	5.05	227	eP	Pn	06 43 27.5	+2.8
ASAK	Asacha	5.24	228	eP	Pn	06 43 30.3	+3.0
ILAR	Eielson Array 0.3nm,0.7s,baz=271,slow=8.6,SNR=3.2 0.3nm,0.7s	25.02	50	P	P	06 47 33.0	+0.1
PDAR	Pinedale Array 0.4nm,0.6s,baz=336,slow=3.3,SNR=5.1 0.4nm,0.6s	54.02	65	P	P	06 51 33.5	-0.2
TXAR	Lajitas Array 0.4nm,0.7s,baz=304,slow=4.9,SNR=6.0 0.4nm,0.7s	67.32	71	P	P	06 53 05.5	+1.2

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*UCR **26** 06:43:59.2±0.9, 8°.36N×82°.88W, h30^{km}±1^{km}, MW3.7*

*UPA **26** 06:43:59.0±0.6, 8°.39N×82°.87W, h39^{km}±3^{km}, MW3.6, Fault plane solution: NP1:ϕ_s128.00000°, δ48.00000°, λ38.00000°.*

ISC 26 06:43:59.6±1.1, **8°.39N**±0°.04×**82°.88W**±0°.03, **h33**^{km}±7^{km}, **n73**, σ**0ˢ.86**/90, **2C-9D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.09	76	⇑iP	Pb	06 44 05.0	-0.3
LESP3				eS	Sb	06 44 10.0	+0.8
NELY	Ciudad Neily	0.27	345	eP	Pb	06 44 06.4	-0.6
NELY				eS	Sb	06 44 12.5	+0.5
LMNES	Limones	0.28	177	eP	Pb	06 44 07.1	-0.1
FITO	Golfito	0.36	311	eP	Pb	06 44 06.8	-1.4
FITO				eS	Sb	06 44 12.9	-1.2
EDAD	Golfito	0.39	313	eP	Pb	06 44 07.2	-1.4

EDAD				eS	Sb	06 44 13.8	-0.9
MLIR3	Monte Lirio, C	0.41	7	⇓iP	Pb	06 44 08.8	-0.1
MLIR3				eS	Sb	06 44 15.5	+0.2
DVD	David	0.42	83	⇓iP	Pb	06 44 08.5	-0.5
DVD				eS	Sb	06 44 15.7	+0.2
RSRNO	Rio Sereno	0.43	2	eP	Pb	06 44 09.2	0.0
CSTBL	De las Acacias	0.43	87	eP	Pb	06 44 08.6	-0.6
CLLRA	Cordillera,	0.44	36	eP	Pb	06 44 08.9	-0.5
VITO	San Vito	0.44	348	eP	Pb	06 44 09.1	-0.3
VITO				eS	Sn	06 44 17.4	+0.7
BRU2	Volcan	0.45	24	eP	Pb	06 44 09.0	-0.5
BRU2				eS	Sn	06 44 17.1	+0.3
BRU2	Volcan	0.45	24	⇓iP	Pb	06 44 09.1	-0.5
BRU2				eS	Sn	06 44 17.1	+0.3
PEDE3	Pedregal, Chir	0.45	90	⇓iP	Pb	06 44 08.8	-0.6
PEDE3				eS	Sb	06 44 16.0	-0.1
LOCO3	Loma Colorada,	0.45	87	⇓iP	Pb	06 44 08.9	-0.6
LOCO3				eS	Sb	06 44 15.9	-0.3
LOMA3	Las Lomas, Chi	0.48	85	eP	Pb	06 44 09.3	-0.6
LOMA3				eS	Sb	06 44 16.4	-0.6
PTAR3	Potrerillos Ar	0.48	51	⇓iP	Pb	06 44 09.6	-0.5
PTAR3				eS	Sn	06 44 17.6	-0.1
BC3P	Paso Ancho	0.50	31	⇓iP	Pb	06 44 09.7	-0.7
BC3P				eS	Sn	06 44 18.4	+0.1
BQTLY	Boquete Panama	0.55	48	eP	Pb	06 44 10.3	-0.8
BQSF3	Alto Boquete,	0.56	51	⇓iP	Pb	06 44 10.4	-0.9
BQSF3				eS	Sn	06 44 19.6	0.0
PSOM3	Paja de Sombre	0.62	61	⇓iP	Pb	06 44 11.1	-1.1
PSOM3				eS	Sb	06 44 19.9	-1.0
EDP2	Potrero Grande	0.69	335	eP	Pb	06 44 12.5	-0.9
EDP2				eS	Sb	06 44 23.3	+0.6
PANP	Palmar Norte	0.81	315	eP	Pn	06 44 13.9	-0.8
BURE	Buenos Aires	0.91	330	eP	Pn	06 44 15.2	-0.9
DRK0	Durika	0.95	337	eP	Pn	06 44 15.6	-1.2
DRK0	Durika	0.95	337	⇑iP	Pn	06 44 15.7	-1.0
BRIBI	Bribri	1.23	3	eP	Pn	06 44 21.6	+1.1
QUEP	Quepos	1.64	309	eP	Pn	06 44 26.6	+0.4
RAZU	San Marcos de	1.70	318	eP	Pn	06 44 28.4	+1.3
PITB	Pirrs, San	1.70	318	eP	Pn	06 44 27.4	+0.3
TURIB	Turrialba	1.71	332	eP	Pn	06 44 27.5	+0.3
VINA	Juan Vinas	1.73	330	eP	Pn	06 44 27.9	+0.4
REPA	Paraso	1.74	326	eP	Pn	06 44 28.2	+0.6
GMAL	Guarumal, Vera	1.74	111	eP	Pn	06 44 27.0	-0.5
PISJ	San Jernim	1.75	315	eP	Pn	06 44 28.2	+0.4
LCR2	La Lucha 2	1.75	320	eP	Pn	06 44 27.4	-0.5
ABE2	San Pablo	1.75	318	eP	Pn	06 44 28.1	+0.2
PCAYA	Pacayas	1.78	329	eP	Pn	06 44 28.9	+0.6
PICV	PH. Pirrs	1.79	314	eP	Pn	06 44 28.7	+0.4
VTCV	VTCV, Calle Va	1.80	332	eP	Pn	06 44 29.0	+0.5
IRES	Siquirres	1.81	340	eP	Pn	06 44 29.4	+0.9
CVTV	Tajo	1.83	332	eP	Pn	06 44 29.6	+0.6
CVTQ	Turrialba Volc	1.83	331	eP	Pn	06 44 29.9	+0.8
VTLA	Turrialba Volc	1.84	331	eP	Pn	06 44 29.8	+0.6
VTR0	Volcan Turrial	1.84	332	eP	Pn	06 44 29.8	+0.5
RVLA	Villa Bonita	1.85	338	eP	Pn	06 44 30.1	+1.0
VICA	Volcano Irazu	1.85	329	eP	Pn	06 44 29.7	+0.2
ACOS	Acosta	1.89	318	eP	Pn	06 44 29.7	-0.1
AMPA	Desamparados	1.90	322	eP	Pn	06 44 30.1	+0.2
ECI	Escuela Centro	1.93	323	eP	Pn	06 44 31.4	+1.1
LUJA	Lujan	1.93	322	eP	Pn	06 44 30.7	+0.4
SJS	Escuela Geolog	1.93	323	eP	Pn	06 44 31.5	+1.2
LUPE	Guadalupe	1.94	323	eP	Pn	06 44 31.6	+1.2
SANTA	Santa Ana	2.01	320	eP	Pn	06 44 31.7	+0.3
HDC	Heredia	2.02	323	eP	Pn	06 44 31.9	+0.4
HEME	Heredia, Merce	2.03	322	eP	Pn	06 44 32.5	+0.9
BELE	Belen	2.04	321	eP	Pn	06 44 32.9	+1.0
VBV1	V. Barva	2.10	325	eP	Pn	06 44 33.2	+0.5
POAS	San Pedro de P	2.15	321	eP	Pn	06 44 35.8	+2.4
ATEO	Atenas	2.17	317	eP	Pn	06 44 34.2	+0.6
TRB2	Turrubares	2.17	314	eP	Pn	06 44 33.7	+0.2
SRA1	San Ramn	2.32	317	eP	Pn	06 44 37.0	+1.4
TRT2	Tortugero	2.32	339	eP	Pn	06 44 36.2	+0.7
TRT1	Tortuguero	2.34	340	eP	Pn	06 44 36.3	+0.5
ARZA	Esparza	2.38	312	eP	Pn	06 44 38.0	+1.6
ARE1	Arenal 1	2.75	319	eP	Pn	06 44 43.2	+1.8
JTS	Las Juntas de	2.79	313	eP	Pn	06 44 42.1	+0.1
CMARA	Lajas Hojancha	2.99	303	eP	Pn	06 44 45.0	+0.1
BCIP	Isla Barro Col	3.10	75	eP	Pn	06 44 47.4	+1.1
PLVR	Palo Verde	3.13	309	eP	Pn	06 44 47.6	+0.9
ALIBA	Liberia Airpor	3.43	310	eP	Pn	06 44 53.2	+2.5
ELI1	Hacienda Flor	3.47	311	eP	Pn	06 44 53.6	+2.4
BLUN	Bluefields	3.71	346	eP	Pn	06 44 54.9	+0.3

UPA 26 06:49:52.9±1.1,**8°.35N**×**82°.82W,h37**km±7km,**MW3.7, 4C-5D,Fault plane solution: NP1:**φs93.00000°, δ58.00000°,λ-2.00000°.,**Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LMNES	Limones	0.26	189	eS	Sn	06 50 05.9	-3.1
CSTBL	De las Acacias	0.38	81	⇑iP	Pn	06 50 02.1	+0.5
CSTBL				eS	Sn	06 50 08.2	-0.2
CLLRA	Cordillera,	0.44	28	⇓iP	Pn	06 50 02.7	0.0
BRU2	Volcan	0.46	16	⇓iP	Pn	06 50 02.8	-0.1
BRU2				eS	Sn	06 50 10.9	+0.8
RSRNO	Rio Sereno	0.46	355	⇑iP	Pn	06 50 03.4	+0.4
RSRNO				eS	Sn	06 50 10.3	+0.1
SCLRA	Santa Clara, W	0.48	4	⇑iP	Pn	06 50 03.6	+0.3
BQTLY	Boquete Panama	0.54	41	⇓iP	Pn	06 50 04.0	-0.3
RBALA	Bur	0.84	52	⇓iP	Pn	06 50 08.5	+0.3
RBALA				eS	Sn	06 50 20.1	+0.7
RMDIO	Remedios, Chir	0.99	97	⇑iP	Pn	06 50 11.1	+0.9
KKNTU	Kakintº	1.11	64	⇓iP	Pn	06 50 12.1	+0.1

UCR ***26*** *06:51:58.1±1.1, 7°.09N×82°.39W, h10km±17km, MW3.8*
UPA ***26*** *06:52:01.1±1.7, 7°.09N×82°.14W, h8km±83km, ML3.8*
ISC 26 06:51:54.9±2.5,**7°.0N**±0°.2×**82°.37W**±0°.07,**h10**km±15km,**n23,** σ**1s.19**/28,**South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RMDIO	Remedios, Chir	1.37	23	eP	Pn	06 52 20.6	+0.5
GMAL	Guarumal, Vera	1.39	55	eP	Pb	06 52 21.3	+0.4
GMAL				eS	Sn	06 52 38.1	-0.6
GMAL	Guarumal, Vera	1.39	55	eP	Pb	06 52 21.3	+0.4
GMAL				AMP		06 52 22.0	
	comp=Z,2μm,0.1s						
GMAL				eS	Sn	06 52 37.7	-1.0
PDCAN	Manzana , Fuen	1.49	27	eP	Pn	06 52 22.1	+0.4
CACAO	El Cacao, Vera	1.55	75	eP	Pg	06 52 24.5	-0.1
CACAO				eS	Sn	06 52 42.8	+0.1
MCANO	Manzana, Boque	1.62	353	eP	Pn	06 52 23.5	0.0
MESA3	La Mesa, Verag	1.67	45	eP	Pb	06 52 25.5	-0.2
NELY	Ciudad Neily	1.78	341	eP	Pn	06 52 26.2	+0.5
STIA3	Santiago, Vera	1.79	51	eP	Pb	06 52 28.1	+0.2
FITO	Golfito	1.83	335	eP	Pn	06 52 26.4	0.0
BRU2	Volcan	1.85	350	eP	Pn	06 52 27.4	+0.5
RBALA	Bur	1.92	6	eP	Pn	06 52 29.1	+1.4
VITO	San Vito	1.94	342	eP	Pn	06 52 29.3	+1.2
ALCO	Alturas Coton,	2.03	347	eP	Pn	06 52 29.8	+0.4
CHIT3	Chitre	2.18	63	eP	Pb	06 52 33.7	-0.7
ACHO3	Achotines, Los	2.23	78	eP	Pb	06 52 33.4	-1.9
ACHO3				eS	Sn	06 52 57.8	-1.8
AZU	Azuero	2.24	68	eP	Pb	06 52 34.8	-0.7
AZU	Azuero	2.24	68	eP	Pb	06 52 34.7	-0.7
AZU				eS	Sn	06 52 59.3	-0.5
BRIBI	Bribri	2.68	351	eP	Pb	06 52 41.4	-1.6
PAR1A	Puntarenas Pro	3.22	325	eP	Pn	06 52 47.1	+1.6
BCIP	Isla Barro Col	3.33	49	eP	Pn	06 52 49.7	+2.6
LUJA	Lujan	3.40	330	eP	Pn	06 52 50.5	+2.4
BLUN	Bluefields	5.20	345	eP	Pn	06 53 14.3	+1.5

IDC ***26*** *07:02:33.6±0.6, 56°.12N×164°.14E, h0km, mb4.0/27, mbtmp4.1/29, ML3.8/2, MS3.6/3, Error ellipse: s-maj=17.3km s-min=11.3km az=156.0*
KRSC ***26*** *07:02:34.2±1.1, 56°.20N×164°.39E, h50km±20km, Mc5.0, Ml4.7*
NEIC ***26*** *07:02:36.7±2.1, 56°.4N±0°.1×163°.7E±0°.2, h10km±1km, mb4.4/155, Error ellipse: s-maj=22.7km s-min=13.5km az=158.0*
MOS ***26*** *07:02:38.7±1.0, 56°.16N×164°.01E, h52km, mb4.5/13, Error ellipse: s-maj=7.6km s-min=4.3km az=57.8*
ISC 26 07:02:36.2±1.3,**56°.22N**±0°.04×**163°.98E**±0°.04,**h10**km±8km, **n271,**σ**1s.45**/218,**mb4.4**/109,**7C-3D,Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.65	269	PN	Pg	07 02 49.5	+0.8
KBTR	Krutoberegovo	0.65	269	eP	Pg	07 02 49.6	+0.8
KBG	Krutoberegovo	0.71	273	PN	Pb	07 02 50.7	0.0
KBG				S	Sn	07 03 02.8	-0.6
KBG	Krutoberegovo	0.71	273	eP	Pb	07 02 50.7	0.0
KBG				eS	Sn	07 03 02.8	-0.6
SMKR	Semkarok	1.44	286	PN	Pg	07 03 03.1	-0.8
SMKR	Semkarok	1.44	286	eP	Pg	07 03 03.1	-0.8
BKI	Bering	1.52	131	PN	Pn	07 02 59.3	-4.1
BKI				S	Sn	07 03 16.9	-6.3
BKI	Bering	1.52	131	i P	Pn	07 02 59.4	-4.1
BKI				eS	Sn	07 03 16.9	-6.3
BDR	Baidarnaya	1.58	284	eS	Sg	07 03 28.1	+1.1
ZLN	Zelenaya	1.79	265	PN	Pb	07 03 08.8	-0.3
ZLN	Zelenaya	1.79	265	eP	Pb	07 03 08.9	-0.3
CIRR	Tsirk	1.81	268	PN	Pb	07 03 09.0	-0.5
CIRR	Tsirk	1.81	268	eP	Pb	07 03 09.0	-0.5
KLY	Klyuchi	1.86	274	PN	Pn	07 03 07.6	-0.5
KLY				S	Sb	07 03 32.4	-1.2
KLY	Klyuchi	1.86	274	eP	Pn	07 03 07.6	-0.5
KLY				eS	Sb	07 03 32.4	-1.2
BZGR	Bezymyannyi-Gr	1.86	263	PN	Pn	07 03 09.7	+1.4
BZGR	Bezymyannyi-Gr	1.86	263	eP	Pn	07 03 09.8	+1.4
KRSR	Krestovskiy	1.91	271	PN	Pn	07 03 09.8	+0.9
KRSR				S	Sg	07 03 37.2	-0.3
KRSR	Krestovskiy	1.91	271	i P	Pn	07 03 09.8	+0.9
KRSR				eS	Sg	07 03 37.2	-0.3
BZWR	Bezymyannyi-We	1.97	264	PN	Pn	07 03 11.3	+1.5
BZWR	Bezymyannyi-We	1.97	264	eP	Pn	07 03 11.4	+1.5
BZMR	Bezymyannaya	1.98	263	PN	Pn	07 03 11.4	+1.5
BZMR	Bezymyannaya	1.98	263	eP	Pn	07 03 11.5	+1.5
KIRR	Kirishev	2.06	264	PN	Pn	07 03 12.6	+1.7
KIRR	Kirishev	2.06	264	eP	Pn	07 03 12.7	+1.7
MKZ	Mys Kozlova	2.11	219	PN	Pn	07 03 10.6	-0.8
MKZ				S	Sn	07 03 37.1	-0.6
MKZ	Mys Kozlova	2.11	219	eP	Pn	07 03 10.7	-0.8
MKZ				eS	Sn	07 03 37.1	-0.6
KPT	Kopyto	2.12	265	PN	Pb	07 03 13.9	-0.9
KPT	Kopyto	2.12	265	eP	Pb	07 03 14.0	-0.9
KMNR	Kamenistaya	2.16	259	PN	Pn	07 03 14.4	+2.1
KMNR	Kamenistaya	2.16	259	eP	Pn	07 03 14.4	+2.1
TUMD	Tumrok D	2.27	245	PN	Pn	07 03 14.9	+1.1
TUMD				S	Sb	07 03 45.2	-0.2
TUMD	Tumrok D	2.27	245	eP	Pn	07 03 15.0	+1.1
TUMD				eS	Sb	07 03 45.3	-0.2
KOZ	Kozyrevsk	2.31	268	PN	Pb	07 03 16.4	-1.4
KOZ	Kozyrevsk	2.31	268	eP	Pb	07 03 16.5	-1.4
SRDR	Sredinnyy	2.38	274	PN	Pb	07 03 17.3	-1.8
SRDR				S	Sb	07 03 48.2	-0.4
SRDR	Sredinnyy	2.38	274	eP	Pb	07 03 17.4	-1.8
SRDR				eS	Sb	07 03 48.3	-0.4
ESO	Esso	2.98	266	PN	Pn	07 03 25.1	+1.6
ESO	Esso	2.98	266	eP	Pn	07 03 25.2	+1.6
OSSR	Ossora	3.08	351	PN	Pn	07 03 22.7	-2.1
OSSR	Ossora	3.08	351	eP	Pn	07 03 22.8	-2.1
KII	Karymskiy	3.40	232	PN	Pn	07 03 30.0	+0.7
KII	Karymskiy	3.40	232	eP	Pn	07 03 30.1	+0.7
PALN	Palana	3.59	325	PN	Pn	07 03 33.4	+1.5
PALN	Palana	3.59	325	eP	Pn	07 03 33.5	+1.5
SPN	Mys Shipunski	3.88	218	PN	Pn	07 03 35.1	-0.8
SPN	Mys Shipunski	3.88	218	eP	Pn	07 03 35.1	-0.8
NLC	Nalytchevo	4.07	223	PN	Pn	07 03 38.9	+0.4
NLC				S	Sn	07 04 26.2	0.0
NLC	Nalytchevo	4.07	223	eP	Pn	07 03 38.9	+0.4
NLC				eS	Sn	07 04 26.2	0.0
SDLR	Sedlovina	4.17	227	PN	Pn	07 03 41.0	+1.0
SDLR	Sedlovina	4.17	227	eP	Pn	07 03 41.1	+1.0
KRER	Koryakskii	4.21	228	PN	Pn	07 03 42.0	+1.4
KRER	Koryakskii	4.21	228	eP	Pn	07 03 42.0	+1.4
KRX	Arik	4.21	229	PN	Pn	07 03 42.4	+1.8
KRX	Arik	4.21	229	eP	Pn	07 03 42.4	+1.8
SMAR	Somma	4.22	228	PN	Pn	07 03 41.6	+0.9
SMAR	Somma	4.22	228	eP	Pn	07 03 41.7	+0.9
AVH	Avacha	4.24	228	PN	Pn	07 03 42.1	+1.2
AVH	Avacha	4.24	228	eP	Pn	07 03 42.1	+1.2
UGLR	Uglovaya	4.25	227	PN	Pn	07 03 42.4	+1.4
UGLR	Uglovaya	4.25	227	eP	Pn	07 03 42.4	+1.4
KOK	Koryaka	4.27	229	PN	Pn	07 03 42.8	+1.6
KOK	Koryaka	4.27	229	eP	Pn	07 03 42.9	+1.6
GNL	Ganaly	4.30	236	PN	Pn	07 03 43.8	+2.0
GNL	Ganaly	4.30	236	eP	Pn	07 03 43.9	+2.0
TILK	Tilichiki	4.39	14	PN	Pn	07 03 41.7	-1.0
TILK	Tilichiki	4.39	14	eP	Pn	07 03 41.8	-1.0
DALK	Dalny	4.41	226	PN	Pn	07 03 43.7	+0.6
DALK	Dalny	4.41	226	eP	Pn	07 03 43.8	+0.6
INSR	Institute	4.44	227	PN	Pn	07 03 46.1	+2.5
INSR	Institute	4.44	227	eP	Pn	07 03 46.1	+2.5
PET	Petropavlovsk	4.46	226		Pn	07 03 44.6	+0.8
PET	Petropavlovsk	4.46	226	c iPN	Pn	07 03 44.7	+0.9
PET				pmax	pmax		
	comp=Z,144nm,1.3s						
PET	Petropavlovsk	4.46	226	eP	Pn	07 03 44.7	+0.9
PEA0B	Petropavlovsk-	4.80	232		Pn	07 03 49.9	+1.4
PEA0B	Petropavlovsk-	4.80	232	PN	Pn	07 03 51.5	+3.0
PETK	Petropavlovsk-	4.80	232		Pn	07 03 49.3	+0.8
PETK	Petropavlovsk-	4.80	232	Pn	Pn	07 03 48.7	+0.2
	comp=Z,6.0nm,0.3s,baz=34,slow=15,SNR=60						
PETK				Sn	Sn	07 04 49.7	+5.6
	comp=Z,1.6nm,0.3s,baz=79,slow=32,SNR=3.9						
PETK				LR	LR	07 05 58.1	
	comp=Z,1μm,20.7s,baz=343,slow=42						
	comp=Z,14nm,0.5s						
PETK	Petropavlovsk-	4.80	232	PN	Pn	07 03 49.3	+0.8
KRMR	Karymshinskiy	4.81	228	PN	Pn	07 03 50.0	+1.4
KRMR	Karymshinskiy	4.81	228	eP	Pn	07 03 50.0	+1.4
RUS	Russkaya	4.96	222	PN	Pn	07 03 51.4	+0.7
RUS	Russkaya	4.96	222	eP	Pn	07 03 51.4	+0.7
GRL	Gorelyy	5.04	226	PN	Pn	07 03 54.1	+2.2
GRL	Gorelyy	5.04	226	eP	Pn	07 03 54.2	+2.2
MTVR	Mutnovka	5.05	225	PN	Pn	07 03 53.6	+1.5
MTVR	Mutnovka	5.05	225	eP	Pn	07 03 53.7	+1.5
APC	Apacha	5.16	233	PN	Pn	07 03 55.8	+2.3
APC	Apacha	5.16	233	eP	Pn	07 03 55.8	+2.3
ASAK	Asacha	5.24	225	PN	Pn	07 03 56.7	+2.1
ASAK	Asacha	5.24	225	eP	Pn	07 03 56.8	+2.1
KMSK	Kamenskaya	6.37	9	PN	Pn	07 04 09.0	-0.9
KMSK	Kamenskaya	6.37	9	eP	Pn	07 04 09.0	-0.9
PAU	Pauzhetka	6.38	225	PN	Pn	07 04 11.4	+1.3
PAU	Pauzhetka	6.38	225	eP	Pn	07 04 11.4	+1.3
SKR	Severo-Kuril’s	7.27	224	PN	Pn	07 04 23.0	+0.7
SKR	Severo-Kuril’s	7.27	224	eP	Pn	07 04 23.1	+0.7
SEY	Seymchan	8.93	324	LR	LR	07 08 24.6	
	comp=Z,626nm,21.3s,baz=146,slow=39						
BILL	Bilibino	11.91	4	i PN	Pn	07 05 25.6	-0.2
ADK	Adak	12.15	103	Pn	Pn	07 05 32.7	+3.5
ADK	Adak	12.15	103	PN	Pn	07 05 32.7	+3.5
NIKH	Nikolski High	16.03	90		Pn	07 06 25.1	+3.6
YSS	Yuzhno-Sakhali	16.07	244	eP	Pn	07 06 17.9	-4.1
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				MLR	MLR		
	comp=Z,900nm,14.0s						
L14K	Kuka Creek	17.88	60		Pn	07 06 46.3	+1.6
JKA	Kamikawa-asahi	18.19	237		Pn	07 06 49.3	+0.6
JKA				IAmb	IAmb	07 06 50.7	
	comp=Z,38nm,0.9s						
ASAJ	Asahikawa	18.19	237	P	Pn	07 06 48.8	+0.1
	comp=Z,1.0nm,0.3s,baz=28,slow=8.8,SNR=11						
	comp=Z,28nm,0.8s						
ASAJ	Asahikawa	18.19	237	P	Pn	07 06 49.3	+0.6
ASAJ				pmax	pmax		
	comp=Z,38nm,0.9s						
YAK	Yakutsk	18.37	303	eP	P	07 06 54.8	+4.0
YAK				pmax	pmax		
	comp=Z,14nm,0.7s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,11nm,1.1s						
C16K	Lisburne Hills	18.43	37		P	07 06 52.0	+0.6
L16K	Owhat River	19.43	59	P	P	07 07 03.5	+1.1
ERM	Erimo	19.58	232	P	P	07 07 03.1	-1.1
ERM				IAmb	IAmb	07 07 16.8	
	comp=Z,26nm,0.9s						
ERM	Erimo	19.58	232	P	P	07 07 03.1	-1.1
ERM				pmax	pmax		
	comp=Z,26nm,0.9s						
E18K	Tukpahlearik C	19.80	41		P	07 07 07.1	+0.8
C18K	Utukok River	19.99	38		P	07 07 08.7	+0.2
C18K				IAmb	IAmb	07 07 17.6	
	comp=Z,19nm,1.1s						
H18K	Honhosa River	20.18	48	P	P	07 07 11.7	+1.2
M17K	Holitna River	20.41	59		P	07 07 14.2	+1.1
M17K				IAmb	IAmb	07 07 45.0	
	comp=Z,16nm,0.9s						
KLR	Kul'dur	20.59	264	P	P	07 07 13.9	-1.3
	comp=Z,3.4nm,0.8s,baz=69,slow=12,SNR=4.8						
	comp=Z,3.4nm,0.8s						
KLR	Kul'dur	20.59	264	ceP	P	07 07 14.6	-0.5
KLR				pmax	pmax		
	comp=Z,10.0nm,1.7s						
C19K	Lookout Ridge	20.70	37	P	P	07 07 16.5	+0.3
F19K	Shaleruckik Mo	20.72	44		P	07 07 17.6	+1.3
L18K	Granite Mounta	20.74	57	P	P	07 07 17.3	+0.7
G19K	Purcell Mounta	20.86	46		P	07 07 19.3	+1.4
D19K	Kuna River	21.01	39		P	07 07 20.2	+0.7
D19K				IAmb	IAmb	07 07 59.6	
	comp=Z,17nm,1.1s						
E19K	Redstone River	21.06	42	P	P	07 07 21.0	+1.0
E19K				IAmb	IAmb	07 07 54.8	
	comp=Z,16nm,1.0s						
J19K	Poorman	21.24	52		P	07 07 22.0	0.0
TIXI	Tiksi	21.34	330	P	P	07 07 24.0	+1.1
	comp=Z,6.8nm,0.7s,baz=122,slow=11,SNR=13						
	comp=Z,6.8nm,0.7s						
D20K	Etivluk River	21.60	39	P	P	07 07 26.3	+0.4
D20K				IAmb	IAmb	07 07 33.5	
	comp=Z,23nm,1.2s						
P18K	Big Mountain,	21.71	65	IAmb	IAmb	07 07 57.1	
	comp=Z,16nm,1.1s						
IMAR	Indian Mountai	22.18	47	P	P	07 07 33.1	+1.0
HEH	HeiHe	22.49	270	eP	P	07 07 33.0	-2.5
HEH				pmax	pmax		
	comp=Z,14nm,0.7s						
H21K	Melozitna Rive	22.54	48	IAmb	IAmb	07 08 21.1	
	comp=Z,13nm,1.1s						
E22K	Anaktuvuk Pass	23.21	42	IAmb	IAmb	07 08 26.4	
	comp=Z,11nm,1.0s						
BPAW	Bear Paw Mtn.	23.28	52	IAmb	IAmb	07 07 57.6	
	comp=Z,10nm,1.1s						
MLY	Manley	23.38	49		P	07 07 44.3	-0.5
KDAK	Kodiak Island	23.41	68	P	P	07 07 45.8	+0.8
KDAK				IAmb	IAmb	07 07 55.8	
	comp=Z,8.0nm,0.8s						
KDAK	Kodiak Island	23.41	68	⇓iP	P	07 07 44.9	-0.1
KDAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
USA0B	Ussuriysk Arra	23.51	253	⇑iP	P	07 07 45.8	-0.3
TRF	Thorofare Moun	23.62	53	IAmb	IAmb	07 07 57.5	
	comp=Z,14nm,0.9s						
COLD	Coldfoot	23.71	44	IAmb	IAmb	07 08 22.1	
	comp=Z,8.1nm,0.9s						
H23K	Yukon River	23.90	47	IAmb	IAmb	07 08 06.9	
	comp=Z,8.7nm,1.1s						
C23K	Itkillik River	23.94	37		P	07 07 50.5	+0.5
C23K				IAmb	IAmb	07 08 32.8	
	comp=Z,12nm,0.9s						
I23K	Minto, Yukon-K	23.97	49	IAmb	IAmb	07 08 17.8	
	comp=Z,11nm,1.1s						
E23K	Chandalar	24.02	42	IAmb	IAmb	07 07 57.3	
	comp=Z,12nm,0.9s						
MCK	McKinley	24.21	53	IAmb	IAmb	07 08 04.1	
	comp=Z,9.1nm,0.9s						
RND	Reindeer	24.27	53		P	07 07 52.2	-1.1
RND	Reindeer	24.27	53	P	P	07 07 52.2	-1.1
RND				pmax	pmax		
	comp=Z,7.0nm,0.9s						
E24K	Your Creek	24.44	42	IAmb	IAmb	07 08 04.5	
	comp=Z,9.2nm,0.8s						
D24K	Happy Valley	24.44	39	IAmb	IAmb	07 08 29.1	
	comp=Z,9.7nm,0.9s						
WRH	Wood River Hil	24.53	51	IAmb	IAmb	07 08 05.0	
	comp=Z,13nm,1.0s						
COLA	College	24.62	50	i P	P	07 07 55.1	-1.2
COLA				pmax	pmax		
	comp=Z,13nm,2.8s						
CCB	Clear Creek Bu	24.65	50	IAmb	IAmb	07 08 06.0	
	comp=Z,8.4nm,0.8s						
DHY	Denali Highway	24.97	54	IAmb	IAmb	07 08 23.9	
	comp=Z,7.1nm,1.0s						
JSD	Sado	25.00	234		P	07 08 00.1	+0.1
JSD				IAmb	IAmb	07 08 00.6	
	comp=Z,9.7nm,0.8s						
IL31		25.03	50	IAmb	IAmb	07 08 26.3	
	comp=Z,8.6nm,0.9s						
ILAR	Eielson Array	25.03	50	P	P	07 08 00.6	+0.5
ILAR	Eielson Array	25.03	50	P	P	07 07 58.0	-2.1
	comp=Z,0.9nm,0.7s,baz=264,slow=9.2,SNR=18						
	comp=Z,0.9nm,0.7s						
D25K	Kavik River	25.33	39	IAmb	IAmb	07 08 42.3	
	comp=Z,12nm,0.9s						
F25K	Christian Rive	25.49	43	IAmb	IAmb	07 08 35.8	
	comp=Z,8.0nm,0.9s						
PRP	Porcupine Dome	25.57	48	IAmb	IAmb	07 08 11.9	
	comp=Z,6.1nm,0.8s						
FYU	Fort Yukon	25.65	46	IAmb	IAmb	07 08 26.3	
	comp=Z,11nm,1.0s						
BMAR	Burnt Mountain	25.90	44		P	07 08 07.5	-0.4
RIDG	Independent Ri	26.02	52	IAmb	IAmb	07 08 25.5	
	comp=Z,7.6nm,1.0s						
G26K	Porcupine Rive	26.21	45	IAmb	IAmb	07 08 22.1	
	comp=Z,8.9nm,0.9s						
MJA0	Matsu Arr-Jizo	26.24	232	eP	P	07 08 10.6	-0.7
MJA0				pmax	pmax		
	comp=Z,13nm,0.8s						
MJB9	Matsu-Tunnel	26.26	232	P	P	07 08 10.8	-0.6
MAJO	Matsushiro	26.26	232		P	07 08 10.8	-0.6
MAJO	Matsushiro	26.26	232	c iP	P	07 08 11.5	+0.1
MAJO				pmax	pmax		
	comp=Z,37nm,1.0s						
MJAR	Matsushiro Arr	26.26	232	P	P	07 08 09.3	-2.1
	comp=Z,13nm,0.8s,baz=20,slow=8.7,SNR=31						
	comp=Z,13nm,0.8s						
SCRK	Sand Creek	26.36	52	IAmb	IAmb	07 08 22.2	
	comp=Z,7.4nm,0.9s						
H27K	Steamboat Moun	27.16	46	IAmb	IAmb	07 08 39.6	
	comp=Z,9.9nm,1.2s						
K27K	Chicken	27.19	51	IAmb	IAmb	07 08 41.1	
	comp=Z,5.8nm,0.9s						
L27K	Beaver Creek,	27.46	53	IAmb	IAmb	07 08 33.8	
	comp=Z,6.6nm,1.0s						
BCAR	Beaver Creek A	27.48	53	P	P	07 08 21.6	-0.7
M27K	Edge Creek, AK	27.58	55	IAmb	IAmb	07 08 38.9	
	comp=Z,6.9nm,0.9s						
H29M	Whitestone	28.43	46	IAmb	IAmb	07 09 09.9	
	comp=Z,6.0nm,1.1s						
G29M	Pine Creek	28.48	45	IAmb	IAmb	07 08 37.6	
	comp=Z,7.5nm,0.9s						
I29M	Ogilvie Camp,	28.58	48	IAmb	IAmb	07 08 46.8	
	comp=Z,6.0nm,1.1s						
L29M	L29M	29.10	52	IAmb	IAmb	07 08 48.2	
	comp=Z,6.2nm,0.8s						
KSRS	Korea Array	30.50	247	P	P	07 08 47.1	-2.1
	comp=Z,1.0nm,0.5s,baz=41,slow=8.8,SNR=6.1						
	comp=Z,1.0nm,0.5s						
KSRS	Korea Array	30.50	247	eP	P	07 08 49.9	+0.7
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.4s						
M31M	Drury Creek, Y	31.01	53	IAmb	IAmb	07 09 11.8	
	comp=Z,4.4nm,0.9s						
MMPY	Sheldon Lake,	32.26	52	IAmb	IAmb	07 09 16.4	
	comp=Z,6.1nm,1.1s						
DLBC	Dease Lake	34.41	58	LR	LR	07 24 12.1	
	comp=Z,28nm,18.2s,baz=312,slow=38						
ULN	Ulaanbaatar	35.07	281	⇑iP	P	07 09 29.2	-0.1
ULN				pmax	pmax		
	comp=Z,9.0nm,1.4s						
SONM	Songino Array	35.45	281	P	P	07 09 32.2	-0.3
	comp=Z,2.0nm,0.7s,baz=63,slow=8.5,SNR=9.4						
SONM				PcP	PcP	07 12 01.5	-0.4
	comp=Z,0.6nm,0.6s,baz=27,slow=2.7,SNR=4.2						
	comp=Z,2.0nm,0.7s						
H11N2	WAKE ISLAND Hy	36.50	175	T	T	07 48 22.6	
	baz=357,slow=76,SNR=509						
H11N3	WAKE ISLAND Hy	36.51	175	T	T	07 48 41.1	
	baz=357,slow=76,SNR=345						
H11N1	WAKE ISLAND Hy	36.52	175	T	T	07 48 23.8	
	baz=357,slow=76,SNR=329						
EUNU	Eureka	38.35	15	IAmb	IAmb	07 10 02.9	
	comp=Z,5.9nm,0.8s						
YKA	Yellowknife Ar	39.34	46	P	P	07 10 03.9	-1.2
	comp=Z,1.2nm,0.6s,baz=291,slow=15,SNR=12						
	comp=Z,1.2nm,0.6s						
ZAA0	Zalesovo Array	43.02	302		P	07 10 31.6	-3.9
ZALV	Zalesovo Beam	43.02	302		P	07 10 32.3	-3.2

ZALV	Zalesovo Beam	43.02	302	P	P	07 10 32.3	-3.2
SPITS	Spitsbergen Ar	44.41	351	P	P	07 10 45.0	-1.4
	comp=Z,9.3nm,0.9s,baz=60,slow=6.8,SNR=6.6						
	comp=Z,9.3nm,0.9s						
SPB2	Spitsbergen Ar	44.41	351		P	07 10 46.9	+0.6
GTA	Gaotai	44.52	276	*e*P	P	07 10 47.3	-0.6
GTA				pP	pP	07 10 53.3	+3.2
GTA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
LZH	Lanzhou	44.63	269	*e*P	P	07 10 51.5	+2.7
LZH				pP	sP	07 10 56.5	+4.8
LZH				pmax	pmax		
	comp=Z,19nm,1.4s						
BLKN	Baker Lake	45.23	37		P	07 10 51.4	-1.6
B08A	Colville Reser	45.26	66		P	07 10 53.1	-0.4
B08A				IAmb	IAmb	07 10 59.8	
	comp=Z,5.6nm,1.0s						
ILON	Igloolik, Nuna	46.01	27		P	07 10 58.7	-0.4
ILON				IAmb	IAmb	07 11 04.8	
	comp=Z,3.6nm,0.8s						
YBH	Yreka Blue Hor	47.92	75	IAmb	IAmb	07 11 49.4	
	comp=Z,6.9nm,1.4s						
BMO	Blue Mountains	48.64	68	IAmb	IAmb	07 11 25.8	
	comp=Z,3.6nm,1.0s						
MK31	Makanchi Array	48.84	295	*i* P	P	07 11 21.5	0.0
MKAR	Makanchi Array	48.84	295	P	P	07 11 20.6	-0.9
	comp=Z,0.4nm,0.4s,baz=46,slow=6.2,SNR=5.3						
	comp=Z,0.4nm,0.4s						
MSO	Missoula	49.01	64	IAmb	IAmb	07 11 24.6	
	comp=Z,2.8nm,0.8s						
PLID	Pearl Lake	49.15	67	IAmb	IAmb	07 11 30.2	
	comp=Z,3.9nm,1.1s						
BVAR	Borovoye Array	50.22	308	P	P	07 11 31.6	-0.3
	comp=Z,1.3nm,0.6s,baz=46,slow=6.4,SNR=7.0						
	comp=Z,1.3nm,0.6s						
DLMT	Dillon	50.70	65	IAmb	IAmb	07 11 41.9	
	comp=Z,4.2nm,1.0s						
YHL	Hebgen Lake	51.77	64	IAmb	IAmb	07 12 00.9	
	comp=Z,5.7nm,1.2s						
YNE	Yellowstone No	52.25	64	IAmb	IAmb	07 11 53.8	
	comp=Z,5.1nm,0.9s						
NVAR	Mina Array Bea	52.64	75	P	P	07 11 50.8	+0.3
NVAR	Mina Array Bea	52.64	75	P	P	07 11 49.3	-1.2
	comp=Z,1.2nm,0.8s,baz=304,slow=6.4,SNR=8.3						
	comp=Z,1.2nm,0.8s						
LHV	Little Huntoon	52.66	75	IAmb	IAmb	07 11 57.3	
	comp=Z,7.1nm,1.2s						
ARTI	Arti	52.71	318	P	P	07 11 50.5	0.0
	comp=Z,1.5nm,0.6s,baz=28,slow=6.3,SNR=4.4						
	comp=Z,1.5nm,0.6s						
ARTI	Arti	52.71	318	*d* *i*P	P	07 11 53.3	+2.8
ARTI						07 13 49.2	
ARTI				S	S	07 19 26.8	+8.9
ARTI				pmax	pmax		
	comp=Z,9.0nm,1.5s						
FXWY	Fox Creek	52.71	65	IAmb	IAmb	07 11 57.6	
	comp=Z,3.6nm,0.8s						
TPAW	Teton Pass	52.86	65		P	07 11 50.8	-1.3
TPAW				IAmb	IAmb	07 11 58.8	
	comp=Z,5.6nm,1.1s						
LOHW	Long Hollow	52.95	65	IAmb	IAmb	07 11 59.4	
	comp=Z,5.3nm,1.0s						
HWUT	Hardware Ranch	53.90	67	IAmb	IAmb	07 12 05.8	
	comp=Z,5.4nm,1.1s						
BW06	Boulder Array	54.09	65	IAmb	IAmb	07 12 07.3	
	comp=Z,5.0nm,1.0s						
PD31	Pinedale Array	54.09	65	IAmb	IAmb	07 12 07.3	
	comp=Z,4.5nm,0.9s						
PDAR	Pinedale Array	54.09	65		P	07 11 59.5	-1.6
PDAR	Pinedale Array	54.09	65	P	P	07 11 58.8	-2.3
	comp=Z,1.4nm,0.9s,baz=331,slow=2.7,SNR=11						
	comp=Z,1.4nm,0.9s						
SPR3	Spring Creek 3	54.35	72	IAmb	IAmb	07 12 06.5	
	comp=Z,4.6nm,0.8s						
S11A	Rachel	54.59	74	IAmb	IAmb	07 12 07.3	
	comp=Z,4.2nm,0.8s						
ULM	Lac du Bonnet	55.05	50	IAmb	IAmb	07 12 13.0	
	comp=Z,4.4nm,0.8s						
ULM	Lac du Bonnet	55.05	50	P	P	07 12 06.8	-0.9
	comp=Z,2.1nm,0.6s,baz=314,slow=8.2,SNR=4.9						
	comp=Z,2.1nm,0.6s						
BSUT	Blindstream Ca	55.09	68	IAmb	IAmb	07 12 15.1	
	comp=Z,5.3nm,1.1s						
PRN	Pahroc Range	55.14	73	IAmb	IAmb	07 12 15.0	
	comp=Z,4.1nm,0.8s						
GWY	Greenwater Val	55.17	76	IAmb	IAmb	07 12 11.8	
	comp=Z,3.8nm,1.0s						
KLMR	Klimovskoe	55.35	331	*e*P	P	07 12 08.3	-1.4
KLMR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AAK	Ala-Archa	55.70	297	*c* *i*P	P	07 12 12.7	0.0
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
RSSD	Black Hills	55.84	60	P	P	07 12 12.9	-0.8
RSSD				IAmb	IAmb	07 12 19.6	
	comp=Z,4.6nm,0.8s						
RSSD	Black Hills	55.84	60	P	P	07 12 12.9	-0.8
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.9s						
P18A	Preston Nutter	56.03	68	IAmb	IAmb	07 12 27.2	
	comp=Z,5.5nm,1.1s						
KSH	Kashi	57.27	293	P	P	07 12 29.0	+5.1
KSH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AKTO	Aktyubinsk	57.36	313	P	P	07 12 24.4	+0.3
	comp=Z,1.9nm,0.7s,baz=39,slow=8.0,SNR=4.1						
	comp=Z,1.9nm,0.7s						
ABKAR	Akbulak array	57.46	311		P	07 12 24.6	-0.3
ABKAR	Akbulak array	57.46	311	IAmb	IAmb	07 12 31.6	
	comp=Z,9.4nm,1.4s						
PV22	Blue Mesa, Par	57.60	68	IAmb	IAmb	07 12 32.2	
	comp=Z,3.9nm,0.8s						
PV04	Paradox Valley	57.65	68	IAmb	IAmb	07 12 55.7	
	comp=Z,4.9nm,1.0s						
PV03	Paradox Valley	57.78	68	IAmb	IAmb	07 12 34.0	
	comp=Z,3.8nm,1.0s						
PV05	Paradox Valley	57.78	69	IAmb	IAmb	07 12 33.6	
	comp=Z,5.2nm,0.9s						
PV13	Radium Mtn., P	57.87	68	IAmb	IAmb	07 12 34.2	
	comp=Z,4.6nm,1.0s						
PV01	Paradox Valley	58.02	68	IAmb	IAmb	07 12 35.3	
	comp=Z,6.1nm,1.3s						
FINES	FINESS Array B	58.11	338	P	P	07 12 28.7	-0.5
	comp=Z,1.0nm,0.8s,baz=50,slow=10,SNR=6.0						
	comp=Z,1.0nm,0.8s						
ISCO	Idaho Springs	58.28	65	IAmb	IAmb	07 12 38.3	
	comp=Z,3.1nm,0.9s						
CMAR	Chiang Mai Arr	61.00	260	P	P	07 12 50.0	+0.2
	comp=Z,2.3nm,0.7s,baz=17,slow=6.8,SNR=14						
	comp=Z,2.3nm,0.7s						
OBN	Obninsk	61.06	329	⇓*e*P	P	07 12 47.7	-1.9
OBN						07 13 33.0	
OBN				S	S	07 21 12.0	+4.0
OBN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,184nm,18.0s						
NB2	NORSAR Subarra	61.13	345	P	P	07 12 49.4	-0.7
	comp=Z,2.5nm,0.8s,baz=18,slow=6.9						
NOA	NORSAR Array B	61.13	345	P	P	07 12 49.3	-0.8
	comp=Z,0.6nm,0.7s,baz=18,slow=6.8,SNR=5.2						
	comp=Z,0.6nm,0.7s						
ANMO	Albuquerque	61.54	69	⇑*i*P	P	07 12 52.6	-0.9
ANMO				pmax	pmax		
	comp=Z,6.0nm,3.9s						
HFS	Hagfors	61.62	344	P	P	07 12 52.6	-0.8
	comp=Z,0.7nm,0.8s,baz=34,slow=9.0,SNR=4.5						
	comp=Z,0.7nm,0.8s						
SCHQ	Schefferville	61.81	31	P	P	07 12 53.0	-1.8
	comp=Z,1.6nm,0.6s,baz=330,slow=6.2,SNR=7.3						
	comp=Z,1.6nm,0.6s						
LPSR	Galich'ya Gora	62.51	326	*e*P	P	07 13 01.7	+2.3
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSR	Storozhevoye	63.62	325	*e*P	P	07 13 06.9	0.0
VSR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KAN08	Anthony NE Sta	64.07	61	P	P	07 13 10.5	+0.5
MNTX	Cornudas Mount	64.63	71		P	07 13 13.7	-0.1
VHRN	Van Horn	65.56	71		P	07 13 20.3	+0.3
AKASG	Malin Array Be	67.04	331	P	P	07 13 28.2	-0.8
	comp=Z,0.4nm,0.5s,baz=29,slow=6.5,SNR=11						
	comp=Z,0.4nm,0.5s						
AKBB	Malin Array Si	67.04	331	*i* P	P	07 13 29.5	+0.5
AKBB				pmax	pmax		
	comp=Z,4.0nm,1.5s						
TXAR	Lajitas Array	67.40	71	P	P	07 13 31.4	-0.4
	comp=Z,3.2nm,0.6s,baz=301,slow=4.4,SNR=40						
	comp=Z,3.2nm,0.6s						
KBZ	Khabaz	68.76	318	P	P	07 13 40.7	+0.8
	comp=Z,2.7nm,1.1s,baz=6.8,slow=4.4,SNR=9.7						
	comp=Z,2.7nm,1.1s						
KBZ	Khabaz	68.76	318	*e*P	P	07 13 40.9	+1.0
KBZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GERES	GERESS Array B	72.41	340	P	P	07 14 03.0	+0.7
	comp=Z,0.2nm,0.3s,baz=20,slow=4.3,SNR=5.6						
	comp=Z,0.2nm,0.3s						
GERES	GERESS Array B	72.41	340	P	P	07 14 03.0	+0.7
BR131	Keskin Array S	75.57	323	*i* P	P	07 14 20.3	-0.7
BRTR	Keskin Array B	75.57	323	P	P	07 14 21.3	+0.3
	comp=Z,0.7nm,0.8s,baz=66,slow=6.0,SNR=6.3						
	comp=Z,0.7nm,0.8s						
ASAR	Alice Springs	83.56	208	P	P	07 15 02.5	-1.8
	comp=Z,4.0nm,0.9s,baz=4.3,slow=5.5,SNR=7.2						
	comp=Z,4.0nm,0.9s						
ESDC	Sonseca Array	83.92	351	P	P	07 15 06.7	+0.5
	comp=Z,1.1nm,1.1s,baz=358,slow=6.1,SNR=7.7						
	comp=Z,1.1nm,1.1s						
QSPA	South Pole Qui	145.97	180	PKPbc	PKPdf	07 22 12.9	-0.9
	comp=Z,2.1nm,0.6s,baz=139,slow=0.7,SNR=16						

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*ASRS **26** 07:04:33.0±1.4,54°.21N×87°.11E,h0^{km},M2.6,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 26 07:04:33.4±3.0**,54°.24N**×**87°.35E,h0**^{km}**,mbtmp3.0**/2**,ML2.7**/2**,Error ellipse: s-maj=25.9km s-min=17.3km az=58.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.52	260	I	I	07 13 00.0	
	baz=78,slow=320,SNR=6.2						
ZALV	Zalesovo Beam	1.52	260	Pg	Pn	07 04 59.4	-2.3
	1.8nm,0.3s,baz=78,slow=12,SNR=11						
ZALV				Lg	Lg	07 05 22.7	
	1.1nm,0.3s,baz=80,slow=25,SNR=5.2						
KURBB	Kurchatov Arra	6.49	240	Pn	Pn	07 06 10.4	+0.3
	0.1nm,0.3s,baz=56,slow=14,SNR=12						
KURBB				Lg	Lg	07 07 58.2	
	baz=59,slow=28,SNR=1.8						
	0.7nm,0.3s						
MKAR	Makanchi Array	8.12	205	Pn	Pn	07 06 34.2	+1.8
	0.2nm,0.3s,baz=25,slow=13,SNR=6.2						
MKAR				Sn	Sn	07 08 04.6	-0.2
	0.2nm,0.3s,baz=27,slow=26,SNR=5.2						
MKAR				Lg	Lg	07 08 49.3	
	0.1nm,0.3s,baz=24,slow=29,SNR=2.4						
	0.3nm,0.4s						

KRSC 26 07:06:34.1±1.1**,55°.94N**×**164°.11E,h10**^{km}±26^{km}**,Ml3.7,Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.77	291	*e*P	Pg	07 06 48.5	-0.5
KBTR				*e*S	Sg	07 06 59.4	+0.3
KBG	Krutoberegovo	0.85	293	*e*P	Pb	07 06 51.2	+0.3
KBG				*e*S	Sb	07 07 01.9	-0.4
BKI	Bering	1.29	124	*e*P	Pn	07 06 57.9	-0.2
BKI				*e*S	Sg	07 07 16.5	+0.9
SMKR	Semkarok	1.61	295	*e*P	Pb	07 07 03.3	-0.6
SMKR				*e*S	Sn	07 07 23.6	+0.2
BDR	Baidarnaya	1.74	292	*e*S	Sn	07 07 26.9	+0.3
MKZ	Mys Kozlova	1.94	225	*e*P	Pb	07 07 09.2	-0.4
MKZ				*e*S	Sb	07 07 34.9	+1.1
KLY	Klyuchi	1.97	282	*e*S	Sn	07 07 30.9	-1.4
BZWR	Bezymyannyi-We	2.03	272	*e*P	Pb	07 07 10.8	-0.4
TUMD	Tumrok D	2.23	252	*e*P	Pb	07 07 13.5	-1.0
TUMD				*e*S	Sb	07 07 43.5	+1.4
SPN	Mys Shipunski	3.71	222	*e*P	Pn	07 07 33.6	+2.1
SPN				*e*S	Sn	07 08 16.2	+1.1
SDLR	Sedlovina	4.04	231	*e*P	Pn	07 07 39.6	+3.6
SDLR				*e*S	Sn	07 08 28.8	+5.4
SMAR	Somma	4.09	231	*e*P	Pn	07 07 39.9	+3.1
UGLR	Uglovaya	4.12	231	*e*P	Pn	07 07 40.4	+3.4
KOK	Koryaka	4.14	232	*e*P	Pn	07 07 41.6	+4.2
ASAK	Asacha	5.10	228	*e*P	Pn	07 07 55.2	+4.7

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*CATAC **26** 07:08:46.7±0.8,8°N±5°×8°3W±°,h17^{km}±4^{km},M3.4/7,MLv3.4/7,Error ellipse: s-maj=13.1km s-min=10.8km az=61.2,confirmed*

*UPA **26** 07:08:48.4±1.2,8°.45N×82°.77W,h14^{km}±3^{km},MW3.0,Fault plane solution: NP1:ϕ_s130.00000°,δ68.00000°,λ-62.00000°.*

ISC 26 07:08:47.2±1.0**,8°.39N**±0°.05×**82°.83W**±0°.04**,h29**^{km}±5^{km}**,n26,**σ**0^{s}.96**/37**,3C-7D,Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.04	73	⇓*i*P	Pb	07 08 52.3	+0.2
LESP3				*e*S	Sb	07 08 53.0	-2.4
CDITO	Canoas	0.18	347	P	Pb	07 08 53.1	-0.1
CDITO	Canoas	0.18	347	S	Sn	07 08 58.4	+1.3
DVD	David	0.38	84	⇓*i*P	Pb	07 08 55.4	-0.2
DVD				*e*S	Sb	07 09 01.3	-0.1
PEDE3	Pedregal, Chir	0.40	91	⇓*i*P	Pb	07 08 55.6	-0.5
PEDE3				*e*S	Sb	07 09 01.8	-0.3
LOCO3	Loma Colorada,	0.41	88	⇓*i*P	Pb	07 08 55.8	-0.3
LOCO3				*e*S	Sb	07 09 02.0	-0.2
BRU2	Volcan	0.42	19	P	Pb	07 08 56.2	-0.3
BRU2	Volcan	0.42	19	S	Sn	07 09 03.9	-0.4
BRU2	Volcan	0.42	19	⇑*i*P	Pb	07 08 56.4	-0.1
BRU2				*e*S	Sn	07 09 04.1	-0.3
LOMA3	Las Lomas, Chi	0.44	85	⇓*i*P	Pb	07 08 56.1	-0.4
LOMA3				*e*S	Sb	07 09 02.0	-0.9
PTAR3	Potrerillos Ar	0.44	48	⇑*i*P	Pb	07 08 56.7	-0.1
PTAR3				*e*S	Sb	07 09 02.8	-0.6
BC3P	Paso Ancho	0.47	27	⇑*i*P	Pb	07 08 57.0	-0.3
BC3P				*e*S	Sb	07 09 03.6	-0.5
CHIR3	Chiriqui UPA,	0.49	90	⇓*i*P	Pb	07 08 56.9	-0.6
CHIR3				*e*S	Sb	07 09 04.3	-0.2
DRK0	Durika	0.96	335	P	Pn	07 09 04.2	-0.6
DRK0	Durika	0.96	335	S	Sb	07 09 17.4	-0.2
OCHAL	Ojochal	1.07	311	P	Pn	07 09 05.7	-0.5
OCHAL	Ojochal	1.07	311	S	Sb	07 09 21.4	+0.7
GMAL	Guarumal, Vera	1.70	112	*e*P	Pb	07 09 16.5	-1.3
GMAL				*e*S	Sb	07 09 37.5	-1.4
LCR2	La Lucha 2	1.77	319	P	Pn	07 09 15.5	-0.6
TCS1	Tacares	2.19	319	P	Pn	07 09 23.6	+1.8
CACAO	El Cacao, Vera	2.21	118	⇓*e*P	Pn	07 09 23.5	+1.5
CACAO				*e*S	Sn	07 09 50.3	+1.9
COVE	Coope Vega, Sa	2.78	326	P	Pn	07 09 32.0	+2.1
INDI	Punta indio, G	3.02	299	S	Sn	07 10 07.5	-0.8
INDI	Punta indio, G	3.02	299	P	Pn	07 09 33.0	-0.1
CMARA	Lajas Hojancha	3.03	302	P	Pn	07 09 33.5	+0.2
CMARA	Lajas Hojancha	3.03	302	S	Sn	07 10 09.0	+0.4

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*HLW **26** 07:09:48.6,27°.65N×34°.29E,h16^{km}±5^{km},Ml3.0*

*GII **26** 07:09:49.2±0.0,27°.34N±0°.06×34°.52E±0°.02,h1^{km},Mws3.6,confirmed*

*SGS **26** 07:09:50.3,27°.78N×34°.41E,h11^{km},Ml2.4*

ISC 26 07:09:48.3±1.0**,27°.65N**±0°.04×**34°.36E**±0°.03**,h12**^{km}**,n55,**σ**1^{s}.42**/56**,Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TR1	Tor 1	0.51	314	P	Pg	07 09 58.0	-0.3
RSHS		0.75	31	P	Pg	07 10 02.3	-0.6
HHRG	Al Ghardaqah	0.82	239	P	Pg	07 10 04.3	+0.1
KRABS	KRABS	0.91	60	P	Pg	07 10 05.2	-0.6
KRABS	KRABS	0.91	60	S	Sg	07 10 16.2	-1.6
TR2	Tor 2	0.93	322	P	Pg	07 10 05.3	-0.9
HKAT	Jabal Katrina	0.93	340	P	Pg	07 10 05.8	-0.4
HKAT				S	Sg	07 10 17.6	-0.9
AYUS	\`Aynunah	0.96	56	S	Sg	07 10 18.3	-1.2
AYUS	\`Aynunah	0.96	56	P	Pg	07 10 06.1	-0.8
TAYS	Tayyib Ism	1.00	27	S	Sg	07 10 18.3	-2.5
TAYS	Tayyib Ism	1.00	27	P	Pb	07 10 05.9	-1.7
BDAS	Al Bad\`	1.01	40	P	Pg	07 10 06.3	-1.6
MWLHS	Almuwaylih	1.03	84	P	Pg	07 10 07.3	-0.8
WTBKS	WTBKS	1.44	72	S	Sn	07 10 31.5	-1.7
WTBKS	WTBKS	1.44	72	P	Pn	07 10 13.9	-0.4
JLOS		1.47	42	P	Pn	07 10 13.4	-1.3
HAQS	Haql	1.48	19	P	Pn	07 10 13.1	-1.7
GRB	Gharib	1.52	294	P	Pn	07 10 13.3	-2.2
JMOS	Jabal al Moall	1.65	23	P	Pn	07 10 15.7	-1.4
HQLS		1.76	20	P	Pn	07 10 17.0	-1.6
TBKS	Tabuk	2.01	73	P	Pn	07 10 22.6	+0.6
EIL	Elat	2.08	14	P	Pg	07 10 28.5	+0.3
EIL	Elat	2.08	14	P	Pg	07 10 28.8	+0.6
EIL	Elat	2.08	14	S	Sg	07 10 58.8	+3.6
URD06	Shuwaq	2.14	95	P	Pn	07 10 24.5	+0.5
AQBJ	Aqaba	2.16	16	P	Pg	07 10 29.4	-0.3
MBRI	Mt Berech	2.19	13	P	Pg	07 10 30.1	-0.2
MBRI	Mt Berech	2.19	13	P	Pg	07 10 30.8	+0.5
MBRI	Mt Berech	2.19	13	S	Sg	07 11 01.5	+2.8
NADB	Abo Dabab	2.30	177	P	Pn	07 10 25.3	-0.8
URD05	Al Faraah	2.35	100	P	Pn	07 10 27.3	+0.5
URD12	Shuwaq	2.39	87	P	Pn	07 10 28.3	+0.8
BIDS	Bi'r al Bayda'	2.44	108	P	Pn	07 10 28.4	+0.5
HRFI	Mount Harif	2.45	14	P	Pb	07 10 33.7	+1.4
HRFI	Mount Harif	2.45	14	P	Pb	07 10 34.5	+2.1
HRFI	Mount Harif	2.45	14	S	Sg	07 11 08.3	+1.3
URD10	Hayder	2.48	77	P	Pn	07 10 29.0	+0.4
KRMI	Paran Flat	2.48	7	P	Pb	07 10 34.3	+1.5
KRMI	Paran Flat	2.48	7	P	Pb	07 10 34.6	+1.7
KRMI	Paran Flat	2.48	7	S	Sg	07 11 08.3	+0.3
EWJHS	Al Wajh	2.53	125	P	Pn	07 10 28.9	-0.3
URD04	Abu Rakah	2.64	102	P	Pn	07 10 31.8	+0.9
PRNI	Paran	2.75	12	P	Pb	07 10 37.9	+0.5
PRNI	Paran	2.75	12	P	Pb	07 10 38.3	+0.8
PRNI	Paran	2.75	12	S	Sg	07 11 15.6	-1.1
URD11	Tayma	2.76	83	P	Pn	07 10 33.2	+0.8
URD15	Abu Rakah	2.78	98	P	Pn	07 10 30.7	-2.1
URD03	Al Ula	2.92	109	P	Pn	07 10 36.0	+1.4
ZFRI	Zfri	2.98	14	P	Pb	07 10 41.1	-0.2
ZFRI	Zfri	2.98	14	P	Pb	07 10 41.9	+0.6
ZFRI	Zfri	2.98	14	S	Sg	07 11 21.9	-2.1
KZIT	Kziot	3.25	1	P	Pb	07 10 45.1	-0.8
KZIT	Kziot	3.25	1	P	Pb	07 10 46.2	+0.3
KZIT	Kziot	3.25	1	S	Sb	07 11 29.5	+4.1
RYAN	Fayoum	3.87	293	P	Pn	07 10 47.1	-0.6

NNC 26 07:09:51.5±0.8**,50°.32N**×**79°.46E,h0**^{km}**,mb3.4,mpv3.2,18C-7D,Error ellipse: s-maj=12.9km s-min=3.0km az=39.0,Suspected Mining explosion.,Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR14	Kurchatov Arra	0.63	298	⇑P	Pg	07 10 04.0	+0.5
KUR14				⇓S	Sg	07 10 12.5	+0.9
KUR15	Kurchatov Arra	0.65	298	⇑P	Pg	07 10 04.2	+0.2
KUR15				⇑S	Sg	07 10 12.8	+0.5
KUR07	Kurchatov Arra	0.66	294	⇑P	Pg	07 10 03.7	-0.4
KUR07				⇑S	Sg	07 10 12.8	+0.2
KUR06	Kurchatov Arra	0.66	295	⇑P	Pg	07 10 04.0	-0.2
KUR06				⇑S	Sg	07 10 14.1	+1.3
KURK	Kurchatov	0.67	306	⇑P	Pb	07 10 05.8	-0.2
KURK				⇑S	Sb	07 10 16.0	+0.2
KURBB	Kurchatov Arra	0.67	297	⇑P	Pg	07 10 04.3	0.0
	12nm,0.5s						
KURBB				⇑S	Sg	07 10 14.2	+1.2
	86nm,0.7s						
KUR05	Kurchatov Arra	0.67	299	⇑P	Pg	07 10 04.2	-0.2
KUR05				⇑S	Sg	07 10 14.0	+0.9
KUR04	Kurchatov Arra	0.68	300	⇑P	Pg	07 10 04.9	+0.4
KUR04				⇑S	Sg	07 10 14.5	+1.2
KUR16	Kurchatov Arra	0.69	297	⇓P	Pg	07 10 04.5	-0.1
KUR16				⇓S	Sg	07 10 13.9	+0.3
KUR17	Kurchatov Arra	0.71	296	⇓P	Pg	07 10 04.7	-0.4
KUR17				⇑S	Sg	07 10 14.3	+0.1
MAKZ	Makanchi	3.89	154	⇑Pg	Pb	07 11 02.1	+1.1
	3.2nm,0.9s						
MAKZ				⇓Lg	Lg	07 11 54.1	
	8.6nm,0.6s						
MK31	Makanchi Array	4.00	151	⇓Pn	Pn	07 10 54.6	+0.6
	0.1nm,0.1s,baz=322,slow=10,SNR=28						
MK31				⇑Pg	Pb	07 11 04.6	+1.8
	0.1nm,0.2s,baz=327,slow=14,SNR=12						
MK31				⇓Lg	Lg	07 11 59.6	
	5.8nm,0.6s,baz=327,slow=23,SNR=16						
KNOS	Konyrlen	5.97	182	Pg	Pg	07 11 42.9	-2.9
	2.7nm,0.7s						
KNOS				Lg	Lg	07 12 57.1	
	4.6nm,0.7s						
ARXS	Arharly	6.21	191	Pg	Pg	07 11 46.0	-4.5
	0.9nm,0.3s						
ARXS				Lg	Lg	07 13 02.8	
	7.9nm,0.6s						
BLB	Baldybastay	6.26	187	Pg	Pg	07 11 47.3	-4.2
	9.4nm,0.8s						
BLB				Lg	Lg	07 13 05.0	
	15nm,0.8s						
BTLS	Baital	6.42	217	Pg	Pb	07 11 47.3	+3.1
	1.6nm,0.4s						
BTLS				Lg	Lg	07 13 04.7	
	2.8nm,0.4s						
KUU	Kurty	6.78	200	Pg	Pb	07 11 55.1	+5.0
	3.3nm,0.1s						
KUU				Lg	Lg	07 13 18.2	
	7.8nm,0.1s						
KPKS	Kokpek	6.88	185	Pg	Pg	07 12 00.5	-2.8
	0.5nm,0.1s						
KPKS				Lg	Lg	07 13 27.1	
	6.2nm,0.8s						

KRSC 26 07:10:05.9±1.2**,55°.94N**×**164°.05E,h7**^{km}±25^{km}**,Ml3.6,Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.74	292	*e*P	Pg	07 10 20.2	+0.1
KBTR				*e*S	Sg	07 10 30.0	+0.2
KBG	Krutoberegovo	0.82	293	*e*P	Pg	07 10 21.4	-0.2
KBG				*e*S	Sb	07 10 33.8	+0.2
BKI	Bering	1.32	123	*e*P	Pn	07 10 30.5	-0.2
BKI				*e*S	Sn	07 10 49.4	+0.9
SMKR	Semkarok	1.58	295	*e*P	Pn	07 10 34.0	-0.4
BZGR	Bezymyannyi-Gr	1.89	271	*e*P	Pb	07 10 40.5	-0.2
MKZ	Mys Kozlova	1.92	225	*e*P	Pb	07 10 40.9	-0.3
MKZ				*e*S	Sb	07 11 05.8	+0.5
KRSR	Krestovskiy	1.97	280	*e*P	Pb	07 10 41.3	-0.9
BZWR	Bezymyannyi-We	2.00	272	*e*P	Pb	07 10 42.0	-0.7
BZMR	Bezymyannaya	2.00	271	*e*P	Pb	07 10 42.1	-0.6
KIRR	Kirishev	2.09	272	*e*P	Pb	07 10 43.1	-1.0
KPT	Kopyto	2.15	272	*e*P	Pb	07 10 44.4	-0.8
KMNR	Kamenistaya	2.16	267	*e*P	Pb	07 10 44.8	-0.5
TUMD	Tumrok D	2.20	252	*e*P	Pb	07 10 45.3	-0.7
TUMD				*e*S	Sb	07 11 14.1	+0.6
KOZ	Kozyrevsk	2.35	275	*e*P	Pb	07 10 47.3	-1.2
SRDR	Sredinnyy	2.46	281	*e*P	Pn	07 10 48.2	+1.8
SPN	Mys Shipunski	3.69	221	*e*P	Pn	07 11 04.9	+1.5
SPN				*e*S	Sn	07 11 48.8	+1.7
SDLR	Sedlovina	4.02	231	*e*P	Pn	07 11 11.3	+3.4
KRER	Koryakskii	4.06	232	*e*P	Pn	07 11 12.9	+4.3
KRER				*e*S	Sb	07 12 02.4	-4.7
SMAR	Somma	4.06	231	*e*P	Pn	07 11 11.9	+3.3
KRX	Arik	4.07	233	*e*P	Pn	07 11 12.5	+3.8
UGLR	Uglovaya	4.09	230	*e*P	Pn	07 11 12.3	+3.4
KRMR	Karymshinskiy	4.66	230	*e*P	Pn	07 11 21.3	+4.8
RUS	Russkaya	4.79	225	*e*P	Pn	07 11 21.6	+3.3
MTVR	Mutnovka	4.88	227	*e*P	Pn	07 11 23.7	+3.9
ASAK	Asacha	5.08	228	*e*P	Pn	07 11 26.8	+4.3

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*IDC **26** 07:10:29.8±0.7,7°.16S×123°.29E,h608^{km}±9^{km},mb3.6/19,mbtmp4.6/25,Error ellipse: s-maj=14.6km s-min=7.3km az=78.0*

*NEIC **26** 07:10:29.6±1.5,7°.20S±0°.09×123°.23E±0°.10,h601^{km}±8^{km},mb4.3/21,Error ellipse: s-maj=17.0km s-min=8.9km az=47.0*

*DJA **26** 07:10:29.1±0.2,7°S±2°×12°3E±°,h592^{km}±3^{km},M4.7/25,mb4.7/25,mB5.2/18,MLv4.9/24,Mw(mB)4.6/18*

ISC 26 07:10:29.0±0.3**,7°.24S**±0°.05×**123°.25E**±0°.06**,h600**^{km}**,n151,**σ**1^{s}.12**/157**,mb4.2**/33**,1D,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	1.71	216		P	07 11 42.6	+0.4
MMRI	Maumere	1.71	216	P	P	07 11 42.9	+0.6
MMRI	Maumere	1.71	216	S	S	07 12 41.8	0.0
MMRI	Maumere	1.71	216	P	P	07 11 41.8	-0.5
BBSI	Bau Bau	1.87	339	P	P	07 11 43.0	+0.1

BBSI				S	S	07 12 43.1	+0.3
EDFI	Ende, Flores	2.15	226	P	P	07 11 43.2	-0.9
EDFI				S	S	07 12 42.0	-3.2
SOEI	Soe	2.69	158		P	07 11 47.4	+0.7
SOEI	Soe	2.69	158	P	P	07 11 47.8	+1.1
SOEI	Soe	2.69	158	S	S	07 12 50.2	+0.3
SOEI	Soe	2.69	158	P	P	07 11 46.4	-0.3
BSSI	Bau Bau, Buton	2.95	291	P	P	07 11 48.5	+0.6
BATI	Baumata	2.98	172	P	P	07 11 49.8	+1.7
	1µm,0.4s,baz=12,slow=0.4,SNR=88						
BATI				S	S	07 12 48.2	-4.3
	494nm,0.6s,baz=2.1,slow=7.9,SNR=6.4						
BATI	Baumata	2.98	172	P	P	07 11 47.3	-0.8
WSI	Waingapu	3.79	230	P	P	07 11 52.3	-0.8
BASI	Baing, Sumba	3.97	222	P	P	07 11 54.5	+0.2
KAPI	Kappang	4.12	302		P	07 11 57.3	+1.9
KAPI	Kappang	4.12	302	P	P	07 11 57.0	+1.6
	168nm,0.4s,baz=140,slow=3.2,SNR=83						
KAPI				S	S	07 13 07.4	+1.7
	53nm,0.9s,baz=256,slow=21,SNR=8.6						
BNSI	Bone	4.21	312	P	P	07 11 56.1	+0.1
WBSI	Waikabubak, Su	4.50	238	P	P	07 11 57.5	-0.7
SPSI	Sidrap Palu	4.75	313	P	P	07 12 01.0	+1.0
TTSI	Tana Toraja	5.39	320	P	P	07 12 06.2	+1.1
	0.4nm131nm,0.9s						
NLAI	Namlea	5.52	44	P	P	07 12 06.5	+0.3
PLAI	Plampang	5.65	253	P	P	07 12 06.8	-0.4
PLAI	Plampang	5.65	253	S	S	07 13 26.8	-0.6
PLAI	Plampang	5.65	253	P	P	07 12 06.1	-1.1
SANI	Sanana	5.83	28	P	P	07 12 09.2	+0.4
SANI	Sanana	5.83	28	P	P	07 12 08.4	-0.4
AAI	Ambon	6.05	55	P	P	07 12 09.9	-0.8
	1.0nm124nm,0.7s						
LUWI	Luwuk	6.17	356		P	07 12 12.3	+0.6
LUWI	Luwuk	6.17	356	P	P	07 12 13.0	+1.2
LUWI	Luwuk	6.17	356	P	P	07 12 12.6	+0.8
	1.2nm4µm369nm,1.0s						
TWSI	Taliwang, Sumb	6.48	256	P	P	07 12 13.7	-0.7
	1.2nm4µm281nm,0.6s						
APSI	Ampana	6.49	346	P	P	07 12 14.9	+0.4
	0.7nm171nm,0.9s						
PCI	Palu	7.15	331	P	P	07 12 21.8	+1.3
MRSI	Marisa	7.78	350	P	P	07 12 26.1	-0.2
KMSI	Cibinong	7.80	5	P	P	07 12 27.3	+0.8
MPSI	Mapaga	8.24	336	P	P	07 12 30.8	+0.1
	145nm,0.8s						
TOLI2	Tolitoli	8.65	343		P	07 12 34.4	-0.2
TNTI	Ternate	8.95	27		P	07 12 36.8	-0.8
TNTI	Ternate	8.95	27	P	P	07 12 36.1	-1.5
	98nm,1.0s						
JAGI	Jajag, Banyuwa	9.10	262		P	07 12 37.5	-1.4
JAGI	Jajag, Banyuwa	9.10	262	P	P	07 12 37.7	-1.3
JAGI	Jajag, Banyuwa	9.10	262	P	P	07 12 36.5	-2.5
	223nm,0.7s						
DRS	Darwin Rock St	9.13	125	P	P	07 12 40.6	+1.3
MTN	Manton Dam	9.55	126		P	07 12 44.2	+0.8
MTN	Manton Dam	9.55	126	P	P	07 12 44.2	+0.8
FAKI	Fak Fak	9.94	65	P	P	07 12 46.8	-0.4
FAKI	Fak Fak	9.94	65	P	P	07 12 48.0	+0.8
KNRA	Kununurra	9.97	148		P	07 12 47.9	+0.4
FITZ	Fitzroy Crossi	11.04	168	P	P	07 12 58.2	+0.1
FITZ	Fitzroy Crossi	11.04	168	P	P	07 12 58.9	+0.8
	36nm,0.5s,baz=356,slow=7.2,SNR=155						
FITZ				S	S	07 15 00.6	-0.1
	27nm,0.7s,baz=5.9,slow=12,SNR=9.7						
SGSI	Sangihe	11.09	12	P	P	07 12 57.8	-0.9
MYLDM	Lahad Datu	13.22	339	P	P	07 13 20.9	+0.8
MBWA	Marble Bar	14.25	193		P	07 13 30.8	+0.5
MBWA	Marble Bar	14.25	193	P	P	07 13 31.1	+0.8
PSA00	Pilbara Seismi	14.62	193		P	07 13 34.4	+0.7
PSA00	Pilbara Seismi	14.62	193	P	P	07 13 33.4	-0.3
PSA00	Pilbara Seismi	14.62	193	P	P	07 13 34.8	+1.0
KKM	Kota Kinabalu	14.95	332	P	P	07 13 36.6	-0.3
BBJI	Bungbulang	15.48	268	P	P	07 13 42.2	+0.5
LEM	Lembang	15.52	271	P	P	07 13 42.5	+0.3
	20nm,0.4s,baz=184,slow=16,SNR=3.6						
WB0	Warramunga Arr	16.49	140	P	P	07 13 51.5	+0.5
WRA	Warramunga Arr	16.59	141	P	P	07 13 51.9	+0.1
WRA	Warramunga Arr	16.59	141	P	P	07 13 52.5	+0.7
	17nm,0.8s,baz=319,slow=10,SNR=246						
WRA				S	S	07 16 34.9	-2.0
	7.7nm,0.9s,baz=315,slow=18,SNR=7.3						
WRA				ScP	ScP	07 20 41.5	-2.1
	2.6nm,1.0s,baz=321,slow=2.7,SNR=4.5						
WRAB	Tennant Creek	16.59	141	P	P	07 13 52.6	+0.8
WR8	Warramunga Arr	16.70	140	P	P	07 13 53.5	+0.7
GENI	Genyem	17.47	76	P	P	07 13 59.5	-0.5
	3µm68nm,0.6s						
GIRL	Giralia	17.61	209	P	P	07 14 02.1	+1.1
JAY	Jayapura	18.01	76	P	P	07 14 04.7	-0.3
	26nm,1.0s,baz=224,slow=7.0,SNR=6.0						
JAY	Jayapura	18.01	76	P	P	07 14 05.3	+0.4
	37nm,0.8s						
AS31	Alice Springs	19.27	149	IAmb	IAmb	07 14 22.9	
	comp=Z,6.1nm,0.5s						
ASAR	Alice Springs	19.27	149	P	P	07 14 17.0	+0.8
ASAR	Alice Springs	19.27	149	P	P	07 14 17.3	+1.0
	comp=Z,11nm,0.5s,baz=331,slow=9.1,SNR=144						
ASAR				S	S	07 17 18.4	-1.8
	comp=Z,3.2nm,0.8s,baz=315,slow=14,SNR=7.6						
ASAR				ScP	ScP	07 20 48.1	-1.3
	comp=Z,2.3nm,0.8s,baz=327,slow=2.0,SNR=7.7						
AS01	Alice Springs	19.30	149	P	P	07 14 17.6	+1.1
MEEK	Meekatharra	19.79	192	P	P	07 14 21.8	+0.9
QIS	Mount Isa	20.64	132	P	P	07 14 30.3	+1.7
COEN	Coen	20.68	110	P	P	07 14 29.2	+0.2
MORW	Morawa	22.75	197	P	P	07 14 48.4	+1.0
PMG	Port Moresby	23.75	97	P	P	07 14 56.1	-0.3
	comp=Z,9.4nm,0.5s,baz=192,slow=21,SNR=2.3						
	comp=Z,9.4nm,0.5s						
BLDU	Ballidu	24.05	194	P	P	07 14 59.5	+0.7
KLBR	Kellerberrin	24.77	191	P	P	07 15 06.0	+0.9
MUN	Mundaring	25.48	194	P	P	07 15 12.3	+0.9
NWAO	Narrogin (SRO)	26.16	192	P	P	07 15 18.4	+0.9
	comp=Z,25nm,0.4s,baz=19,slow=7.6,SNR=45						
	comp=Z,25nm,0.4s						
NWAO	Narrogin (SRO)	26.16	192	P	P	07 15 18.4	+0.9
NWAO	Narrogin (SRO)	26.16	192	P	P	07 15 18.3	+0.9
BBOO	Buckleboo	28.09	157	P	P	07 15 34.4	+0.2
BBOO	Buckleboo	28.09	157	P	P	07 15 35.1	+0.9
HTT	Hallett	29.83	153	P	P	07 15 51.1	+1.8
STKA	Stephens Creek	29.89	148	P	P	07 15 50.4	+0.6
STKA	Stephens Creek	29.89	148	P	P	07 15 51.2	+1.5
	comp=Z,34nm,0.5s,baz=317,slow=9.4,SNR=97						
STKA				S	S	07 20 05.4	-0.8
	comp=Z,2.6nm,0.7s,baz=102,slow=14,SNR=6.5						
	comp=Z,34nm,0.5s						
STKA	Stephens Creek	29.89	148	P	P	07 15 51.3	+1.5
CMSA	Cobar Meteorol	31.99	142	P	P	07 16 09.7	+2.0
CMAR	Chiang Mai Arr	35.03	317	P	P	07 16 34.0	+0.7
	comp=Z,0.9nm,0.3s,baz=135,slow=6.2,SNR=5.3						
	comp=Z,0.9nm,0.3s						
TATA	Tatamba Isabel	36.22	94	P	P	07 16 44.0	+0.8
CAN	Canberra	36.60	143	P	P	07 16 47.1	+1.0
CAN				IAmb	IAmb	07 16 49.2	
	comp=Z,15nm,0.7s						
CNB	Canberra Magne	36.81	143	P	P	07 16 49.0	+1.2
ALEG	Aligegeo Malai	37.10	95	P	P	07 16 51.2	+0.8
PZH	PanZhiHua	39.50	329	P	P	07 17 11.3	+1.5
XAN	Xi'an	43.24	343	⇓P	P	07 17 38.3	-0.6
XAN				pmax	pmax		
	comp=Z,26nm,0.6s						
KSRS	Korea Array	44.67	5	P	P	07 17 50.3	+0.5
	comp=Z,5.0nm,0.8s,baz=180,slow=8.4,SNR=23						
	comp=Z,5.0nm,0.8s						
MJAR	Matsushiro Arr	45.76	17	P	P	07 17 57.1	-1.0
	comp=Z,11nm,0.7s,baz=191,slow=8.3,SNR=23						
	comp=Z,11nm,0.7s						
JSD	Sado	47.17	16	P	P	07 18 08.2	-0.5
JSD				IAmb	IAmb	07 18 09.3	
	comp=Z,9.8nm,0.7s						
HHC	Hu-ho-hao-te	49.05	348	eP	P	07 18 25.3	+2.6
HHC				pmax	pmax		
	comp=Z,19nm,0.6s						
HHC				pmax	pmax		
	comp=Z,270nm,4.8s						
EVN	Everest	49.63	316	P	P	07 18 27.9	0.0
EVN				IAmb	IAmb	07 18 29.1	
	comp=Z,13nm,0.5s						
CN2	Changchun	50.84	2	P	P	07 18 34.5	-1.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
XLT	XiLinHaoTe	51.31	353	eP	P	07 18 38.8	-0.3
XLT				pmax	pmax		
	comp=Z,11nm,0.7s						
USRK	Ussuriysk Ar.	51.80	8	P	P	07 18 42.4	-0.1
	comp=Z,9.5nm,0.5s,baz=191,slow=7.1,SNR=22						
	comp=Z,9.5nm,0.5s						
KLR	Kul'dur	56.72	7	P	P	07 19 16.5	-0.3
	comp=Z,1.1nm,0.4s,baz=273,slow=4.8,SNR=4.0						
	comp=Z,1.1nm,0.4s						
SONM	Songino Array	56.82	347	P	P	07 19 17.0	-0.7
SONM	Songino Array	56.82	347	P	P	07 19 17.1	-0.6
	comp=Z,3.6nm,0.6s,baz=168,slow=8.3,SNR=18						
	comp=Z,3.6nm,0.6s						
HEH	HeiHe	57.37	3	eP	P	07 19 21.0	-0.2
HEH				pmax	pmax		
	comp=Z,20nm,0.9s						
CASY	Casey	59.60	186	P	P	07 19 36.7	+0.8
CASY				IAmb	IAmb	07 19 37.4	
	comp=Z,6.4nm,0.8s						
MKAR	Makanchi Array	64.92	330		P	07 20 10.0	-0.6
MKAR	Makanchi Array	64.92	330	P	P	07 20 10.8	+0.1
	comp=Z,3.8nm,0.6s,baz=133,slow=7.7,SNR=47						
	comp=Z,3.8nm,0.6s						
MAKZ	Makanchi	65.09	330	P	P	07 20 11.9	+0.2
PETK	Petropavlovsk-	66.83	22	P	P	07 20 21.8	-0.5
	comp=Z,5.9nm,0.8s,baz=203,slow=2.8,SNR=10						
	comp=Z,5.9nm,0.8s						
ZALV	Zalesovo Beam	69.00	337		P	07 20 34.1	-1.3
ZALV	Zalesovo Beam	69.00	337	P	P	07 20 34.6	-0.7
	comp=Z,2.6nm,0.5s,baz=123,slow=5.5,SNR=9.8						
	comp=Z,2.6nm,0.5s						
KURBB	Kurchatov Arra	69.36	331	P	P	07 20 37.7	+0.1
	comp=Z,1.9nm,0.7s,baz=142,slow=5.1,SNR=21						
	comp=Z,1.9nm,0.7s						
KURK	Kurchatov	69.38	331	P	P	07 20 37.8	+0.1
KURK				IAmb	IAmb	07 20 38.4	
	comp=Z,3.6nm,0.9s						
MAW	Mawson	72.33	200	P	P	07 20 55.1	+0.5
	comp=Z,4.2nm,0.7s,baz=75,slow=6.1,SNR=5.9						
	comp=Z,4.2nm,0.7s						
VNDA	Vanda	73.09	172		P	07 20 59.3	+0.4
VNDA				IAmb	IAmb	07 21 00.4	
	comp=Z,3.3nm,0.8s						
VNDA	Vanda	73.09	172	P	P	07 20 59.8	+0.9
	comp=Z,2.6nm,0.6s,baz=319,slow=6.8,SNR=19						
	comp=Z,2.6nm,0.6s						
BVAR	Borovoye Array	74.81	330	P	P	07 21 08.8	-0.2
	comp=Z,1.4nm,0.6s,baz=116,slow=6.8,SNR=7.7						
	comp=Z,1.4nm,0.6s						
ABKAR	Akbulak array	78.61	323		P	07 21 28.8	-1.0
ABKAR	Akbulak array	78.61	323	IAmb	IAmb	07 21 29.9	
	comp=Z,2.0nm,0.7s						
TIXI	Tiksi	78.81	2		P	07 21 29.3	-1.1
TIXI				IAmb	IAmb	07 21 30.3	
	comp=Z,4.6nm,0.8s						
QSPA	South Pole Qui	82.74	180	P	P	07 21 51.3	+0.3
	comp=Z,2.9nm,0.7s,baz=202,slow=0.9,SNR=22						
	comp=Z,2.9nm,0.7s						
G19K	Purcell Mounta	92.40	24	IAmb	IAmb	07 22 36.4	
	comp=Z,3.3nm,0.8s						
H19K	Roundabout Mou	92.53	24	P	P	07 22 36.9	0.0
H19K				IAmb	IAmb	07 23 11.2	
	comp=Z,11nm,1.4s						
E19K	Redstone River	92.63	22	P	P	07 22 37.0	-0.3
E19K				IAmb	IAmb	07 22 37.9	
	comp=Z,5.7nm,0.9s						
SNAA	Sanae	93.79	195	P	P	07 22 42.9	+0.2
	comp=Z,1.0nm,0.8s,baz=157,slow=8.5,SNR=6.8						
	comp=Z,1.0nm,0.8s						
ILAR	Eielson Array	96.44	26	P	P	07 22 52.4	-2.3
	comp=Z,1.0nm,1.0s,baz=250,slow=4.6,SNR=7.2						
	comp=Z,1.0nm,1.0s						
SPITS	Spitsbergen Ar	100.48	348	P	Pdif	07 23 10.7	-1.7
	comp=Z,3.9nm,0.9s,baz=127,slow=7.7,SNR=4.2						
YKA	Yellowknife Ar	110.85	25	PKiKP	PKiKP	07 27 53.4	-1.1
	comp=Z,0.5nm,0.8s,baz=296,slow=2.4,SNR=4.4						
NVAR	Mina Array Bea	116.66	51	PP	PP	07 29 30.3	+4.7
	comp=Z,1.0nm,0.9s,baz=289,slow=10,SNR=4.0						
HLID	Hailey	118.15	44		PKiKP	07 28 10.1	+0.7
EGMT	Eagleton	119.57	38		PKPdf	07 28 11.7	-0.1
PDAR	Pinedale Array	121.76	44	PKP	PKPdf	07 28 15.9	-0.5
	comp=Z,0.3nm,0.4s,baz=100,slow=1.2,SNR=6.9						
TORD	Torodi Ar. Bea	122.28	281	PKP	PKPdf	07 28 17.4	-0.4
	comp=Z,0.2nm,0.5s,baz=74,slow=5.6,SNR=4.0						
PV20	West Nyswonger	123.73	48		PKiKP	07 28 21.6	+1.0
PV18	Skein Mesa, Pa	123.81	48		PKPdf	07 28 20.8	+0.4
ULM	Lac du Bonnet	126.16	30	PKP	PKPdf	07 28 23.4	-0.9
	comp=Z,0.4nm,0.4s,baz=250,slow=5.6,SNR=3.5						
TXAR	Lajitas Array	130.75	57	PKP	PKiKP	07 28 34.9	+0.2
	comp=Z,0.4nm,0.5s,baz=190,slow=2.6,SNR=9.6						
TXAR				SKPbc	SKPbc	07 31 01.9	-0.8
	comp=Z,1.5nm,0.8s,baz=251,slow=2.8,SNR=19						
Q56A	Snyder Ridge,	142.44	29		PKPdf	07 28 51.8	-3.1
MVL	Millersville	142.95	25		PKPdf	07 28 53.7	-2.0
BRAL	Brewton	143.01	46		PKPdf	07 28 55.0	-1.0
250A	Grady	143.10	44		PKPab	07 28 53.8	-0.4
BLA	Blacksburg	143.21	32		PKPab	07 28 54.1	-0.4
LPAZ	La Paz	154.05	154	PKPab	PKPab	07 29 40.5	+0.6
	comp=Z,1.1nm,0.5s,baz=205,slow=3.1,SNR=6.3						
SIV	San Ignacio	156.53	170	PKPab	PKPab	07 29 50.0	+0.2
	comp=Z,1.4nm,0.5s,baz=192,slow=5.3,SNR=11						

SOME 26 07:10:56.6, 48°.28N×73°.87E, h15km, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRZS	Berezniki	1.87	336	S	Sb	07 11 53.5	-0.2
	1.8nm,0.1s						
BRZS	Berezniki	1.87	336	eP	Pb	07 11 29.6	-0.9
	0.7nm,0.1s						
BRZS				eS	Sb	07 11 53.5	-0.2
	1.8nm,0.1s						
BTLS	Baital	3.25	178	eP	Pb	07 11 54.0	+0.1
	1.1nm,0.2s						
BTLS				eS	Sb	07 12 34.8	+1.6
	3.1nm,0.4s						

HLW 26 07:11:11.4, 27°.67N×34°.10E, h11km±5km, Md2.6, Ml2.8

SGS 26 07:11:12.4, 27°.78N×34°.46E, h14km, Ml2.3

GII 26 07:11:14.0±0.0, 27°.58N×34°.20E, h1km, Mws3.5/5, confirmed

ISC 26 07:11:09.0±1.0, 27°.65N±0°.04×34°.35E±0°.04, h10km, n48, σ1s.24/50, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSHS		0.75	31	S	Sg	07 11 33.1	-0.3
RSHS				P	Pg	07 11 23.6	0.0
HHRG	Al Ghardaqah	0.82	238	P	Pb	07 11 26.0	+0.6
KRABS	KRABS	0.91	61	S	Sg	07 11 37.3	-1.2
KRABS				P	Pg	07 11 26.6	0.0
TR2	Tor 2	0.92	323	P	Pg	07 11 26.8	+0.1
HKAT	Jabal Katrina	0.92	340	P	Pb	07 11 27.3	+0.1
AYUS	\`Aynunah	0.97	56	P	Pg	07 11 27.4	-0.3
AYUS	\`Aynunah	0.97	56	S	Sg	07 11 38.8	-1.5
TAYS	Tayyib Ism	1.00	27	P	Pg	07 11 27.2	-1.1
BDAS	Al Bad\`	1.02	40	P	Pg	07 11 27.6	-1.0
MWLHS	Almuwaylih	1.03	85	P	Pg	07 11 28.6	-0.3
MWLHS	Almuwaylih	1.03	85	S	Sg	07 11 40.6	-1.7
NUB	Nuweibaa	1.39	11	P	Pg	07 11 35.5	-0.2
WTBKS	WTBKS	1.44	72	S	Sn	07 11 52.2	-2.2
WTBKS	WTBKS	1.44	72	P	Pn	07 11 35.2	-0.1
JLOS		1.47	43	P	Pn	07 11 34.8	-0.9
HAQS	Haql	1.48	20	S	Sg	07 11 58.1	+1.5
HAQS	Haql	1.48	20	P	Pn	07 11 34.5	-1.2
GRB	Gharib	1.52	294	P	Pn	07 11 34.7	-1.5
HBST	Basata	1.59	12	P	Pg	07 11 40.0	+0.4
DESA	DESA	1.61	95	P	Pn	07 11 37.8	+0.3
DESA	DESA	1.61	95	S	Sn	07 11 56.7	-1.8
JMOS	Jabal al Moall	1.65	24	P	Pn	07 11 37.2	-0.8
TBKS	Tabuk	2.02	73	P	Pn	07 11 43.8	+0.8
TBKS	Tabuk	2.02	73	S	Sn	07 12 08.2	-0.2
EIL	Elat	2.08	14	P	Pg	07 11 50.0	+1.2
EIL	Elat	2.08	14	P	Pg	07 11 50.3	+1.5
EIL	Elat	2.08	14	S	Sg	07 12 19.4	+3.6
URD06	Shuwaq	2.15	95	P	Pn	07 11 46.1	+1.0
AQBJ	Aqaba	2.16	16	P	Pg	07 11 51.1	+0.8
MBRI	Mt Berech	2.19	13	P	Pg	07 11 51.5	+0.5
MBRI	Mt Berech	2.19	13	P	Pg	07 11 52.3	+1.4
MBRI	Mt Berech	2.19	13	S	Sg	07 12 22.1	+2.7
URD05	Al Faraah	2.35	100	P	Pn	07 11 48.6	+0.8
BIDS	Bi'r al Bayda'	2.45	108	P	Pn	07 11 50.0	+1.0
HRFI	Mount Harif	2.45	14	P	Pg	07 11 55.2	-0.8
HRFI	Mount Harif	2.45	14	P	Pg	07 11 56.3	+0.4
HRFI	Mount Harif	2.45	14	S	Sg	07 12 28.4	+0.7
KRMI	Paran Flat	2.48	7	P	Pg	07 11 55.4	-1.1
KRMI	Paran Flat	2.48	7	P	Pg	07 11 56.8	+0.4
KRMI	Paran Flat	2.48	7	S	Sg	07 12 28.9	+0.3
EWJHS	Al Wajh	2.54	125	P	Pn	07 11 50.4	+0.2
URD04	Abu Rakah	2.65	102	P	Pn	07 11 53.4	+1.6
PRNI	Paran	2.75	12	P	Pb	07 11 59.2	+0.9
PRNI	Paran	2.75	12	P	Pg	07 12 00.3	-1.3
PRNI	Paran	2.75	12	S	Sg	07 12 36.6	-0.7
URD03	Al Ula	2.93	109	P	Pn	07 11 57.5	+1.8
ZFRI	Zfri	2.98	14	P	Pb	07 12 03.9	+1.7
ZFRI	Zfri	2.98	14	S	Sg	07 12 43.1	-1.6

UPA 26 07:20:42.8±0.9, 8°.36N×82°.79W, h27km±5km, MW3.0, Fault plane solution: NP1:φs110.00000°, δ68.00000°, λ58.00000°.

CATAC 26 07:20:43.7±0.9, 8°N±6°×8°3W±°, h10km±4km, M3.1/7, MLv3.1/7, Error ellipse: s-maj=12.7km s-min=10.4km az=39.5, confirmed

ISC 26 07:20:42.6±1.0, 8°.36N±0°.04×82°.78W±0°.03, h32km±9km, n29, σ0s.75/40, 1C-11D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDITO	Canoas	0.23	337	P	Pn	07 20 49.2	-0.7
CDITO	Canoas	0.23	337	S	Sn	07 20 54.2	-0.2
LMNES	Limones	0.27	197	⇑iP	Pn	07 20 49.5	-0.9
LMNES				eS	Sb	07 20 54.4	-0.4
MCANO	Manzana, Boque	0.29	45	⇓iP	Pn	07 20 50.4	-0.3
MCANO				eS	Sn	07 20 56.0	0.0
CSTBL	De las Acacias	0.34	82	⇓iP	Pb	07 20 50.9	+0.2
CSTBL				eS	Sb	07 20 56.3	-0.1
PEDE3	Pedregal, Chir	0.36	86	⇓iP	Pb	07 20 51.0	0.0
PEDE3				eS	Sb	07 20 56.6	-0.1
LOCO3	Loma Colorada,	0.36	82	iP	Pb	07 20 51.2	+0.2
LOCO3				eS	Sb	07 20 57.0	+0.2
LOMA3	Las Lomas, Chi	0.39	80	⇓iP	Pb	07 20 51.6	+0.1
LOMA3				eS	Sb	07 20 58.0	+0.4
CLLRA	Cordillera,	0.41	24	iP	Pn	07 20 52.1	-0.5
CLLRA				eS	Sb	07 20 57.9	-0.5
PTAR3	Potrerillos Ar	0.43	41	⇓iP	Pn	07 20 52.4	-0.3
BRU2	Volcan	0.44	12	S	Sn	07 21 00.1	+0.2
BRU2	Volcan	0.44	12	P	Pn	07 20 52.4	-0.5
BRU2	Volcan	0.44	12	⇓iP	Pn	07 20 52.3	-0.6
BRU2				eS	Sn	07 20 59.9	+0.1
RSRNO	Rio Sereno	0.46	350	⇓iP	Pn	07 20 52.8	-0.3
SCLRA	Santa Clara, W	0.47	360	⇓iP	Pn	07 20 52.9	-0.4
SCLRA				eS	Sn	07 21 01.3	+0.7
BC3P	Paso Ancho	0.48	21	⇓iP	Pb	07 20 52.8	-0.2
BQTLY	Boquete Panama	0.51	39	⇓iP	Pb	07 20 53.3	-0.1
BQTLY				eS	Sn	07 21 02.1	+0.6
PSOM3	Paja de Sombre	0.56	55	iP	Pb	07 20 53.8	-0.3
PSOM3				eS	Sb	07 21 01.7	-0.3
RBALA	Bur	0.81	50	eP	Pn	07 20 48.8	-9.0
RBALA				eS	Sb	07 20 57.7	-11
DRK0	Durika	1.01	333	P	Pb	07 21 01.0	-0.6
DRK0	Durika	1.01	333	S	Sb	07 21 14.3	-0.3
KKNTU	Kakintº	1.07	64	⇓iP	Pn	07 21 01.3	-0.2
OCHAL	Ojochal	1.12	311	S	Sb	07 21 18.5	+0.7
OCHAL	Ojochal	1.12	311	P	Pb	07 21 02.2	-1.3
LCR2	La Lucha 2	1.83	319	P	Pb	07 21 14.6	-0.9
LCR2	La Lucha 2	1.83	319	S	Sn	07 21 34.2	0.0
HDC	Heredia	2.09	321	P	Pb	07 21 18.7	-1.3
HDC				S	Sb	07 21 46.6	+0.9
CMARA	Lajas Hojancha	3.08	302	P	Pn	07 21 31.8	+2.6
CMARA	Lajas Hojancha	3.08	302	S	Sn	07 22 06.8	+1.8

GCG 26 07:21:49.2±1.5, 14°.19N×93°.05W, h37km±9km, MD4.5, ML3.5

MEX 26 07:21:51.1±0.7, 14°.34N×93°.02W, h8km±42km, MD4.2

ISC 26 07:21:49.9±2.2, 14°.25N±0°.07×92°.97W±0°.03, h31km±17km, n30, σ2s.45/53, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.94	46	eP	Pn	07 22 06.3	-0.7
THIG				eS	Sb	07 22 20.2	+0.2
THIG		0.94	46	iP	Pn	07 22 06.4	-0.7
THIG				iS	Sn	07 22 20.5	+1.0
THIG				IAML		07 22 23.5	
	comp=E,659nm,0.4s						
SMCA	Catarina	1.05	55	iP	Pn	07 22 08.4	-0.2
SMCA				iS	Sn	07 22 23.5	+1.3
PATR	El Naranjo	1.12	39	eP	Pn	07 22 08.6	-1.1
PATR				eS	Sn	07 22 22.8	-1.3
PAVE	Pavencul	1.21	39	eP	Pn	07 22 10.1	-0.8
PAVE				eS	Sn	07 22 24.2	-2.2
RTAL	Retalhuleu	1.27	77	eP	Pn	07 22 11.7	+0.2
RTAL				eS	Sn	07 22 26.8	-0.6
PCIG		1.47	351	eP	Pn	07 22 12.3	-1.9
PCIG				eS	Sn	07 22 27.4	-4.9
STG8	El Palmar, Qui	1.58	83	iP	Pn	07 22 13.9	-2.2
STG8				iS	Sn	07 22 34.2	-1.4
STG8				IAML		07 22 45.6	
	comp=E,2µm,0.3s						
STG0	El Palmar, Qui	1.59	83	iP	Pn	07 22 13.7	-2.4
STG0				iS	Sn	07 22 33.5	-2.1
STG0				IAML		07 22 42.6	
	comp=E,2µm,0.6s						
SOKI	Kika Raxquin	1.62	69	iP	Pn	07 22 18.0	+1.3
SOKI				IAML		07 22 45.7	
	comp=E,259nm,1.0s						
HUEH	Huehuetenango	1.77	53	eP	Pn	07 22 19.8	+1.2
HUEH				eS	Sn	07 22 42.0	+1.8
HUEH	Huehuetenango	1.77	53	iP	Pn	07 22 20.2	+1.6
HUEH				iS	Sb	07 22 44.2	+0.4
HUEH				IAML		07 22 49.2	
	comp=N,462nm,0.5s						
CCIG	Comitan	2.17	22	eP	Pn	07 22 26.1	+2.0
CCIG				eS	Sb	07 22 54.8	-0.6
CCIG	Comitan	2.17	22	iP	Pn	07 22 26.1	+2.0
CCIG				iS	Sb	07 22 53.4	-1.9
TGIG		2.52	357	eP	Pn	07 22 29.0	+0.2
TGIG				eS	Sn	07 22 58.8	+0.3
TGIG		2.52	357	iP	Pn	07 22 29.3	+0.5
TGIG				iS	Sn	07 22 59.3	+0.8
TGIG				IAML		07 23 05.0	
	comp=E,110nm,0.3s						
HUIG	Huatulco	3.39	297	eP	Pn	07 22 41.2	+0.5
HUIG				eS	Sn	07 23 13.5	-6.3
PETF	Flores	4.00	48	eP	Pn	07 22 50.6	+1.6
PETF				eS	Sn	07 23 38.4	+3.5
PEIG	Puerto Escondi	4.39	294	eP	Pn	07 22 56.7	+2.2
PEIG				eS	Sn	07 23 48.9	+4.2
VHO	Vista Hermosa	4.58	308	eP	Pn	07 22 57.1	-0.2
VHO				eS	Sn	07 23 47.4	-2.2
YOIG	Yosondua	5.12	301	eP	Pn	07 23 08.3	+3.6
YOIG				eS	Sn	07 24 01.9	-1.0
PNIG	Pinotepa	5.41	294	eP	Pn	07 23 08.8	+0.2
PNIG				eS	Sn	07 24 05.8	-4.1
TOIG	Toxpalan	5.49	315	eP	Pn	07 23 09.4	-0.2
TOIG				eS	Sn	07 24 09.3	-2.5
TXIG	Tlaxiaco	5.50	304	eP	Pn	07 23 11.1	+1.1
TXIG				eS	Sn	07 24 13.7	+1.3
HLIG	Huajuapan de L	5.85	308	eP	Pb	07 23 24.2	-7.2
TPIG	Tehuac#an	5.91	315	eS	Sn	07 24 24.5	+2.1
FTIG	Fresnillo de T	6.15	307	eP	Pn	07 23 22.4	+3.6
FTIG				eS	Sn	07 24 24.8	-3.4
MGIG	Malinaltepec	6.21	299	eS	Sn	07 24 20.1	-10
JAUV	Jalcomulco	6.27	325	eP	Pn	07 23 22.9	+2.5
JAUV				eS	Sn	07 24 26.6	-4.5
TLIG	Tlapa	6.31	302	eS	Sn	07 24 38.4	+6.2

UPA 26 07:23:06.6±0.6, 8°.44N×82°.77W, h18km±1km, MW2.4, 3C-2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.04	214	⇑iP	Pg	07 23 09.9	+0.1
LESP3				eS	Sg	07 23 12.4	+0.4
DVD	David	0.31	91	⇑iP	Pb	07 23 13.7	0.0
DVD				eS	Sb	07 23 19.2	+0.7
LOCO3	Loma Colorada,	0.35	95	⇑iP	Pg	07 23 14.1	+0.1
LOCO3				eS	Sb	07 23 19.8	+0.3
PEDE3	Pedregal, Chir	0.35	99	eS	Sb	07 23 20.0	+0.5
MLIR3	Monte Lirio, C	0.36	351	eP	Pb	07 23 15.1	+0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MLIR3				eS	Sb	07 23 20.8	+1.0
BRU2	Volcan	0.36	12	⇓eP	Pb	07 23 14.9	+0.3
PTAR3	Potrerillos Ar	0.37	47	⇓iP	Pb	07 23 15.1	+0.3
PTAR3				eS	Sb	07 23 21.3	+1.1
LOMA3	Las Lomas, Chi	0.37	91	eS	Sb	07 23 20.6	+0.4
BC3P	Paso Ancho	0.41	23	eP	Pb	07 23 15.5	0.0
BC3P				eS	Sb	07 23 22.2	+0.8
BQSF3	Alto Boquete,	0.45	48	eP	Pb	07 23 16.1	0.0
BQSF3				eS	Sb	07 23 24.1	+1.6
PSOM3	Paja de Sombre	0.50	61	eP	Pg	07 23 16.6	-0.2
PSOM3				eS	Sb	07 23 24.8	+0.8

UPA 26 07:25:08.3±1.1, 8°.47N×82°.75W, h10km±7km, MW2.6, 1C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.07	214	⇓iP	Pg	07 25 11.1	+0.6
LESP3				eS	Sg	07 25 12.4	+0.3
DVD	David	0.30	96	eP	Pg	07 25 14.5	+0.2
DVD				eS	Sb	07 25 21.0	+0.3
BRU2	Volcan	0.33	10	⇑iP	Pg	07 25 15.7	+0.7
BRU2				eS	Sb	07 25 22.2	+0.4
BRU2	Volcan	0.33	10	eP	Pg	07 25 15.7	+0.7
BRU2				eS	Sb	07 25 22.6	+0.8
LOCO3	Loma Colorada,	0.33	100	⇓eP	Pg	07 25 14.8	-0.2
LOCO3				eS	Sb	07 25 21.0	-0.7
PTAR3	Potrerillos Ar	0.34	48	⇓iP	Pg	07 25 15.7	+0.6
PTAR3				eS	Sb	07 25 21.7	-0.3
PSOM3	Paja de Sombre	0.47	63	eP	Pg	07 25 17.0	-0.6
PSOM3				eS	Sb	07 25 25.4	-0.5

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*UCR **26** 07:25:26.5±0.9, 8°.40N×82°.89W, h28km±2km, MW3.5*
*UPA **26** 07:25:27.7±1.4, 8°.43N×82°.80W, h14km±3km, MW3.3*
ISC 26 07:25:27.0±0.9, 8°.44N±0°.03×82°.83W±0°.02, h17km±6km, n44, σ1ˢ22/62, 2C-7D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.05	125	⇓iP	Pg	07 25 30.3	+0.2
LESP3				eS	Sg	07 25 31.9	-0.2
NELY	Ciudad Neily	0.24	332	eP	Pg	07 25 32.4	-0.1
NELY				eS	Sb	07 25 38.7	+1.7
MCANO	Manzana, Boque	0.29	62	⇓iP	Pg	07 25 32.9	-0.4
MCANO				eS	Sb	07 25 38.6	+0.2
LMNES	Limones	0.33	185	eP	Pg	07 25 34.5	+0.4
LMNES	Limones	0.33	185	eP	Pg	07 25 34.5	+0.4
LMNES				eS	Sb	07 25 41.0	+1.4
MLIR3	Monte Lirio, C	0.36	1	⇑iP	Pb	07 25 35.7	+0.7
MLIR3				eS	Sb	07 25 41.2	+0.8
FITO	Golfito	0.37	301	eP	Pg	07 25 33.1	-1.6
FITO				eS	Sg	07 25 39.2	-0.7
CLLRA	Cordillera,	0.38	35	eP	Pb	07 25 36.1	+0.8
CLLRA	Cordillera,	0.38	35	eP	Pb	07 25 36.1	+0.8
CLLRA				eS	Sb	07 25 41.9	+1.0
DVD	David	0.38	90	⇓eP	Pg	07 25 33.5	-1.3
DVD				eS	Sb	07 25 42.9	+2.0
RSRNO	Rio Sereno	0.38	356	eP	Pg	07 25 35.2	+0.3
RSRNO	Rio Sereno	0.38	356	eS	Sb	07 25 44.1	+3.1
BRU2	Volcan	0.38	21	eP	Pb	07 25 36.0	+0.5
BRU2	Volcan	0.38	21	⇓iP	Pb	07 25 36.1	+0.6
BRU2				eS	Sb	07 25 43.5	+2.4
CSTBL	De las Acacias	0.39	94	eP	Pg	07 25 33.6	-1.4
CSTBL	De las Acacias	0.39	94	⇓iP	Pg	07 25 33.6	-1.4
CSTBL				eS	Sg	07 25 40.0	-0.4
EDAD	Golfito	0.39	303	eP	Pg	07 25 33.5	-1.7
EDAD				eS	Sg	07 25 39.9	-0.7
TBS2		0.40	26	eP	Pb	07 25 37.2	+1.5
SCLRA	Santa Clara, W	0.40	7	eP	Pb	07 25 36.4	+0.7
VITO	San Vito	0.41	340	eP	Pg	07 25 35.2	-0.2
VITO				eS	Sb	07 25 43.7	+1.9
PEDE3	Pedregal, Chir	0.41	97	eP	Pb	07 25 37.1	+1.4
PEDE3				eS	Sb	07 25 43.3	+1.5
LOCO3	Loma Colorada,	0.41	93	⇓iP	Pg	07 25 33.9	-1.5
LOCO3				eS	Sb	07 25 43.4	+1.6
PTAR3	Potrerillos Ar	0.42	52	⇑iP	Pb	07 25 36.9	+0.8
PTAR3				eS	Sb	07 25 42.7	+0.5
LOMA3	Las Lomas, Chi	0.44	90	eS	Sb	07 25 43.5	+0.9
BQTLY	Boquete Panama	0.49	49	eP	Pb	07 25 38.7	+1.4
BQTLY				eS	Sb	07 25 46.5	+2.3
ALCO	Alturas Coton,	0.51	360	eP	Pg	07 25 37.1	-0.2
PSOM3	Paja de Sombre	0.56	64	⇓iP	Pg	07 25 38.5	+0.3
PSOM3				eS	Sb	07 25 46.7	+0.5
EDP2	Potrero Grande	0.67	329	eP	Pg	07 25 38.8	-1.4
PBNVO	Pueblo Nuevo,	0.78	54	eP	Pg	07 25 41.4	-0.8
RBALA	Bur	0.80	57	eP	Pg	07 25 42.2	-0.5
KKNTU	Kakintº	1.09	68	eP	Pb	07 25 46.1	-1.3
KKNTU	Kakintº	1.09	68	eP	Pb	07 25 46.2	-1.3
KKNTU				eS	Sb	07 26 01.4	-0.1
ISBTO	Bastimentos Is	1.09	34	eP	Pb	07 25 48.1	+0.6
ISBTO	Bastimentos Is	1.09	34	eP	Pb	07 25 48.3	+0.8
BRIBI	Bribri	1.18	1	eP	Pn	07 25 49.0	+0.3
TURIB	Turrialba	1.69	330	eP	Pn	07 25 54.3	-1.6
VINA	Juan Vinas	1.71	328	eP	Pn	07 25 54.5	-1.7
RESJ	San Isidro (Tu	1.77	333	eP	Pn	07 25 56.1	-0.9
PICV	PH. Pirrs	1.79	311	eP	Pn	07 25 55.5	-1.8
PAR1A	Puntarenas Pro	1.82	310	eP	Pn	07 25 56.2	-1.3
VTR0	Volcan Turrial	1.82	330	eP	Pn	07 25 56.4	-1.5
ACOS	Acosta	1.89	316	eP	Pn	07 25 58.3	-0.4
HEME	Heredia, Merce	2.02	320	eP	Pn	07 26 00.8	+0.4
JTS	Las Juntas de	2.79	312	eP	Pn	07 26 10.5	-0.5

SSNC 26 07:28:20.3±3.6, 21°.13N×79°.05W, h20km±999km, Cuba region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LMGC	Las Mercedes	2.19	119	eP	Pn	07 28 55.8	+0.2
LMGC	Las Mercedes	2.19	119	eP	Pn	07 28 56.0	+0.5
YAR	Yar	2.63	106	eP	Pb	07 29 07.2	+0.5
YAR	Yar	2.63	106	eP	Pb	07 29 07.1	+0.4
CHIV	Chivirico	2.72	115	eP	Pn	07 29 02.0	-0.9
CHIV	Chivirico	2.72	115	eP	Pn	07 29 02.4	-0.5
PINC	Pinares de May	3.12	101	eP	Pb	07 29 14.7	-0.3
MARVS	Santiago de Cu	3.16	110	eP	Pn	07 29 08.3	-0.6
MARVS	Santiago de Cu	3.16	110	eP	Pn	07 29 05.8	-3.1
RCC	Rio Carpintero	3.34	109	eP	Pn	07 29 11.2	-0.3
RCC	Rio Carpintero	3.34	109	eP	Pn	07 29 11.5	+0.1
GTBY	Guantanamo Bay	3.88	107	eP	Pn	07 29 18.3	-0.6
MASC	Masc	4.61	101	eP	Pn	07 29 31.5	+2.6

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*IDC **26** 07:29:41.7±1.5, 29°.50S×71°.67W, h0km, mb3.9/3, mbtmp3.7/6, ML3.6/3, Error ellipse: s-maj=59.0km s-min=25.3km az=106.0*
*SJA **26** 07:29:43.7±0.7, 29°.42S×71°.43W, h5km±3km, ML3.9, MW3.5*
*GUC **26** 07:29:47.6±0.7, 29°.43S×71°.29W, h48km±3km, ML4.2*
*NEIC **26** 07:29:48.5±1.0, 29°.44S±0°.04×71°.4W±0°.1, h39km±6km, mb4.4/2, Mwr4.2(GUC), Error ellipse: s-maj=17.3km s-min=5.8km az=94.0*
ISC 26 07:29:47.4±1.2, 29°.42S±0°.02×71°.46W±0°.05, h27km±10km, n73, σ1ˢ97/89, 1C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CO05	La Serena	0.53	159		Pb	07 29 58.7	+0.4
CO05	La Serena	0.53	159	⇓eP	Pb	07 29 58.5	+0.3
CO05				IAML		07 30 08.5	
	comp=E,13µm,0.6s						
LCO	Las Campanas	0.77	59		Pn	07 30 01.4	-1.3
LCO	Las Campanas	0.77	59	eP	Pn	07 30 01.0	-1.7
LCO				eS	Sb	07 30 10.7	-2.0
LCO				IAML		07 30 12.3	
	comp=E,51µm,0.3s						
LCO	Las Campanas	0.77	59	eP	Pn	07 30 00.4	-2.3
LCO				eS	Sb	07 30 10.3	-2.4
LCO				IAML		07 30 12.2	
	comp=Z,22µm,0.2s						
GO04	Tololo Observa	0.94	143		Pn	07 30 04.0	-1.1
GO04	Tololo Observa	0.94	143	⇓eP	Pn	07 30 04.0	-1.1
GO04				eS	Sn	07 30 15.3	-2.5
GO04				IAML		07 30 17.3	
	comp=N,24µm,0.3s						
GO04	Tololo Observa	0.94	143	eP	Pn	07 30 03.8	-1.3
GO04				eS	Sn	07 30 16.0	-1.8
AC04	Llanos de Chal	1.25	16		Pn	07 30 09.5	+0.4
AC04	Llanos de Chal	1.25	16	eP	Pn	07 30 09.4	+0.4
AC04				IAML		07 30 27.4	
	comp=E,5µm,0.1s						
AC04	Llanos de Chal	1.25	16	eP	Pn	07 30 04.0	-5.2
AC04				eS	Sn	07 30 21.4	-3.6
AC04				IAML		07 30 26.2	
	comp=Z,1µm,0.3s						
CO06	Fray Jorge	1.26	187		Pn	07 30 09.6	+0.3
CO06	Fray Jorge	1.26	187	eP	Pn	07 30 09.5	+0.3
CO01	Juntas del Tor	1.31	116		Pn	07 30 09.5	-0.6
CO01	Juntas del Tor	1.31	116	⇓iP	Pn	07 30 09.5	-0.6
CO01				eS	Sn	07 30 24.7	-2.2
CO01	Juntas del Tor	1.31	116	eP	Pn	07 30 09.3	-0.8
CO01				eS	Sn	07 30 26.0	-0.8
CO01				IAML		07 30 26.3	
	comp=Z,2µm,0.3s						
CO03	El Pedregal	1.56	155		Pn	07 30 13.0	-0.5
CO03	El Pedregal	1.56	155	eP	Pn	07 30 12.7	-0.8
CO03				IAML		07 30 32.5	
	comp=E,3µm,0.3s						
CO03	El Pedregal	1.56	155	eP	Pn	07 30 12.8	-0.7
CO03				eS	Sn	07 30 32.2	-0.7
CO03				IAML		07 30 33.5	
	comp=Z,1µm,0.3s						
CO02	Combarbal	1.82	168		Pn	07 30 16.6	-0.4
CO02	Combarbal	1.82	168	⇓iP	Pn	07 30 16.6	-0.4
CO02				IAML		07 30 46.9	
	comp=E,3µm,0.3s						
CO02	Combarbal	1.82	168	eP	Pn	07 30 16.7	-0.4
CO02				eS	Sn	07 30 23.4	-16
CO02				IAML		07 31 00.8	
	comp=Z,1µm,0.3s						
AROD	Rodeo	1.88	114	eP	Pn	07 30 19.0	+1.0
AROD				eS	Sn	07 30 36.4	-4.5
GO03	Copiapo	2.11	31		Pn	07 30 21.4	+0.4
GO03	Copiapo	2.11	31	eP	Pn	07 30 20.9	-0.1
GO03				IAML		07 30 55.4	
	comp=E,1µm,0.5s						
GO03	Copiapo	2.11	31	eP	Pn	07 30 21.1	+0.2
GO03				eS	Sb	07 30 50.4	-0.4
ACDV	Cuesta del Vie	2.17	111	eP	Pn	07 30 22.9	+1.2
ACDV				eS	Sb	07 30 52.1	-0.3
ACDV				IAML		07 30 53.1	
	comp=Z,489nm,0.5s						
AC06	Mina Casimiro	2.27	26		Pn	07 30 23.4	+0.3
AC06	Mina Casimiro	2.27	26	⇑eP	Pn	07 30 23.4	+0.3
AC06				IAML		07 30 58.8	
	comp=E,2µm,0.3s						
ACCO	Cerro Coronel	2.38	120	eP	Pn	07 30 26.5	+1.6
ACCO				eS	Sn	07 30 41.1	-12
AGUA	GUANDACOL	2.59	92	eP	Pn	07 30 29.8	+2.2
AGUA				eS	Sb	07 31 05.4	+0.9
AGUA				IAML		07 31 10.6	
	comp=Z,1µm,0.4s						
VCA	Vinchina	2.92	77	eP	Pn	07 30 13.8	-18
VCA				eS	Sn	07 31 10.2	+3.6
VCA				IAML		07 31 20.8	
	comp=Z,792nm,0.5s						
RTLS	Leoncito	3.02	142	eP	Pn	07 30 35.8	+2.2
RTLS				eS	Sb	07 31 14.3	-2.8
RTLS				IAML		07 31 24.3	
	comp=Z,999nm,0.3s						
VA06	Catapilco	3.14	178		Pn	07 30 35.2	+0.2
ZON	Zonda	3.20	132		Pn	07 30 37.4	+1.4
ZON	Zonda	3.20	132	eP	Pn	07 30 37.5	+1.6
ZON				eS	Sn	07 31 16.9	+3.6
ZON				IAML		07 31 32.5	
	comp=Z,146nm,0.6s						
RTLL	Cerro Villicun	3.20	127	eP	Pn	07 30 37.3	+1.3
RTLL				eS	Sn	07 31 15.9	+2.6
SJA	San Juan	3.27	131	eP	Pn	07 30 38.4	+1.6
SJA				IAML		07 31 27.2	
	comp=Z,165nm,0.6s						
AC02	Maricunga	3.29	39		Pn	07 30 38.5	+0.9
AC02	Maricunga	3.29	39	eP	Pn	07 30 38.5	+0.9
AC02				IAML		07 31 34.2	
	comp=E,650nm,0.4s						
AC02	Maricunga	3.29	39	eP	Pn	07 30 38.7	+1.1
AC02				eS	Sn	07 31 20.5	+4.4
AC02				IAML		07 31 32.9	
	comp=Z,334nm,0.3s						
AC01	Pan de Azucar	3.34	13	eP	Pn	07 30 36.6	-1.3
AC01				eS	Sn	07 31 20.9	+4.2
AC01				IAML		07 31 35.3	
	comp=Z,169nm,0.7s						
VA03	San Esteban	3.42	167		Pn	07 30 40.0	+0.9
VA03	San Esteban	3.42	167	eP	Pn	07 30 39.7	+0.7
VA03				eS	Sn	07 31 24.5	+5.7
VA03				IAML		07 31 44.1	
	comp=Z,361nm,0.3s						
ROCH	El Roble	3.56	174	eP	Pn	07 30 41.5	+0.4
ROCH				IAML		07 31 41.9	
	comp=N,716nm,0.4s						
VA01	Torpederas	3.60	183		Pn	07 30 41.6	+0.2
AVFE	Valle Fertil	3.68	111	eP	Pn	07 30 43.4	+0.9
AVFE				eS	Sn	07 31 26.6	+1.4
AVFE				IAML		07 31 32.5	
	comp=Z,353nm,0.5s						
MT02	Curacav	3.84	176		Pn	07 30 44.7	-0.1
MT02	Curacav	3.84	176	eP	Pn	07 30 44.6	-0.1
MT02				eS	Sn	07 31 33.8	+4.9
MT02				IAML		07 31 43.4	
	comp=Z,166nm,0.3s						
ASAL	Salagasta	3.88	145	eP	Pn	07 30 47.3	+2.0
ASAL				eS	Sn	07 31 35.6	+5.6
ACLC	CERRO LA CRUZ	3.93	91	eP	Pn	07 30 46.7	+0.6
ACLC				eS	Sn	07 31 34.8	+3.4
ACLC				IAML		07 31 40.8	
	comp=Z,235nm,1.1s						
MT05	Renca	4.01	171	eP	Pn	07 30 48.4	+1.4
MT05				eS	Sb	07 31 43.5	-1.9
MT05				IAML		07 31 53.3	
	comp=Z,259nm,0.5s						
MT04	Ro Olivares	4.13	165	eP	Pn	07 30 51.0	+2.1
MT04				IAML		07 31 58.1	
	comp=Z,104nm,0.9s						
MT03	Universidad Ad	4.14	169	eP	Pn	07 30 50.7	+1.7
MT03				IAML		07 31 57.6	
	comp=Z,172nm,0.4s						
BO02	Sierra Bellavi	5.39	174		Pn	07 31 06.9	+0.8
H03N1	Juan Fernandez	7.53	236	T	T	07 39 23.1	
	baz=65,slow=72,SNR=1735						
H03N2	Juan Fernandez	7.54	236	T	T	07 39 19.5	
	baz=65,slow=72,SNR=1218						
H03N3	Juan Fernandez	7.54	236	T	T	07 39 22.1	
	baz=65,slow=72,SNR=1404						
TRQA	Tornquist	11.68	140	Pn	Pn	07 32 30.6	-1.5
CPUP	Villa Florida	12.87	80	Pn	Pn	07 32 50.4	+1.9
	comp=Z,0.1nm,0.3s,baz=107,slow=13,SNR=4.0						
	comp=Z,0.7nm,0.9s						
LPAZ	La Paz	13.42	14	Pn	Pn	07 32 58.0	+1.4
LPAZ	La Paz	13.42	14	Pn	Pn	07 32 57.8	+1.1
	comp=Z,0.1nm,0.3s,baz=194,slow=4.2,SNR=1.8						
	comp=Z,0.3nm,0.4s						
SIV	San Ignacio	16.43	38	Pn	Pn	07 33 37.3	+1.2
	baz=212,slow=13,SNR=4.5						
	comp=Z,1.2nm,0.9s						
SNAA	Sanae	55.65	159	P	P	07 39 19.5	-1.2
SNAA				IAmb	IAmb	07 39 35.6	
	comp=Z,4.5nm,1.2s						
SNAA	Sanae	55.65	159	P	P	07 39 19.0	-1.6
	comp=Z,1.0nm,0.5s,baz=282,slow=8.5,SNR=12						
	comp=Z,1.0nm,0.5s						
QSPA	South Pole Qui	60.81	180	P	P	07 39 56.1	-0.8
QSPA				IAmb	IAmb	07 40 03.5	
	comp=Z,4.0nm,1.4s						
QSPA	South Pole Qui	60.81	180	P	P	07 39 55.5	-1.3
	comp=Z,1.1nm,0.8s,baz=303,slow=0.7,SNR=7.3						
	comp=Z,1.1nm,0.8s						
TORD	Torodi Ar. Bea	82.19	70	P	P	07 42 04.8	-1.5
	comp=Z,0.5nm,0.5s,baz=235,slow=3.7,SNR=4.5						
	comp=Z,0.5nm,0.5s						
H11S2	WAKE ISLAND Hy	126.22	272	T	T	10 07 36.3	
	baz=115,slow=75,SNR=20						
H11S1	WAKE ISLAND Hy	126.23	272	T	T	10 07 37.3	
	baz=115,slow=75,SNR=31						
H11S3	WAKE ISLAND Hy	126.23	272	T	T	10 07 37.8	
	baz=115,slow=75,SNR=30						
KURBB	Kurchatov Arra	149.08	38	PKPbc	PKPbc	07 49 30.9	-1.7
	comp=Z,0.5nm,0.4s,baz=294,slow=3.1,SNR=5.2						
ZALV	Zalesovo Beam	150.03	28	PKPbc	PKPbc	07 49 34.0	-0.9
	comp=Z,1.7nm,0.4s,baz=300,slow=2.9,SNR=6.0						

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*IDC **26** 07:30:18.2±3.5, 54°.21N×87°.46E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=30.2km s-min=20.1km az=38.0*
ASRS 26 07:30:17.0±1.0, 54°.16N×87°.19E, h0km, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.41	262	I	I	07 39 10.0	
	baz=81,slow=315,SNR=5.8						
ZALV	Zalesovo Beam	1.41	262	Pg	Pb	07 30 45.5	+1.3
	1.6nm,0.3s,baz=82,slow=16,SNR=12						
ZALV				Lg	Lg	07 31 09.2	
	4.8nm,0.3s,baz=82,slow=30,SNR=16						
KURBB	Kurchatov Arra	6.37	240	Pn	Pn	07 31 55.4	+3.3
	baz=54,slow=14,SNR=2.4						
KURBB				Lg	Lg	07 33 45.8	
	baz=51,slow=29,SNR=5.2						
	0.2nm,0.3s						
MKAR	Makanchi Array	8.01	205	Pn	Pn	07 32 19.2	+4.7
	0.1nm,0.3s,baz=23,slow=14,SNR=1.9						
	0.1nm,0.2s						

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*IDC **26** 07:34:20.0±8.3, 36°.26N×70°.95E, h117km±71km, mb3.4/4, mbtmp3.6/7, Error ellipse: s-maj=61.1km s-min=29.3km az=35.0*
*NNC **26** 07:34:27.4±2.0, 37°.01N×70°.92E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=17.4km s-min=14.5km az=48.0*
ISC 26 07:34:28.4±1.5, 36°.7N±0°.1×71°.0E±0°.1, h188km, n10, σ1ˢ69/13, mb3.3/3, 2C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.36	357	⇑P	Pn	07 35 59.1	-1.0
	1.2nm,0.3s,baz=176,slow=12,SNR=22						
KK31				⇓S	Sn	07 37 10.1	-2.6
	1.1nm,0.3s,baz=189,slow=24,SNR=5.5						
AAK	Ala-Archa	6.47	24	P	Pn	07 35 59.5	-2.2
	5.3nm,0.5s,baz=180,slow=10,SNR=6.3						
AAK				S	Sn	07 37 15.7	+0.1
	4.3nm,0.5s,baz=173,slow=22,SNR=4.3						
TKM2	Tokmak 2	7.11	28	⇓P	Pn	07 36 09.8	-0.4
	2.0nm,0.5s						
TKM2				⇓S	Sn	07 37 31.0	+0.3
	2.1nm,0.6s						
MK31	Makanchi Array	13.10	36	⇑P	P	07 37 32.0	+1.1
	0.8nm,0.8s,baz=198,slow=8.9,SNR=5.7						
MKAR	Makanchi Array	13.10	36	P	Pn	07 37 27.1	-0.3
	0.1nm,0.5s,baz=208,slow=9.0,SNR=5.6						
KURBB	Kurchatov Arra	14.89	19	P	P	07 37 52.0	+1.3
	0.2nm,0.4s,baz=206,slow=11,SNR=2.6						
ZALV	Zalesovo Beam	19.70	25	P	P	07 38 45.5	+2.5
	3.9nm,0.4s,baz=215,slow=11,SNR=10.0						
	3.9nm,0.4s						
FINES	FINESS Array B	37.28	326	P	P	07 41 23.2	+1.4
	0.3nm,0.4s,baz=95,slow=8.6,SNR=1.6						
	0.3nm,0.4s						
HFS	Hagfors	42.87	322	P	P	07 42 08.9	+1.1
	0.8nm,0.5s,baz=82,slow=14,SNR=4.5						
	0.8nm,0.5s						
WRA	Warramunga Arr	82.12	122	P	P	07 46 26.4	-1.8
	0.2nm,0.5s,baz=324,slow=4.9,SNR=5.2						
	0.2nm,0.5s						

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*JMA **26** 07:38:56.0±0.1, 23°.2N±0°.5×12°1E±°, h27km±1km, MV3.3/14, TAIWAN REGION*
*TAP **26** 07:38:56.8, 23°.22N×121°.40E, h22km, ML3.7, B*
ISC 26 07:38:56.5±0.9, 23°.19N±0°.02×121°.48E±0°.02, h27km±4km, n128, σ0ˢ99/196, 6C-21D, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHKH	Chenggong	0.08	273	⇑iP	Pb	07 39 00.9	-0.3
CHKH				eS	Sb	07 39 03.9	-0.6
ECBN	Changbin	0.13	347	⇑iP	Pb	07 39 01.7	0.0
ECBN				eS	Sb	07 39 05.2	+0.1
CHKT	Chengkung	0.14	231	⇑iP	Pb	07 39 01.8	+0.1
CHKT				S	Sb	07 39 05.3	+0.2
FULB	Fuli	0.17	274	⇑iP	Pb	07 39 01.4	-0.7
FULB				eS	Sb	07 39 05.6	-0.3
EYUL	Yuli	0.22	317	⇓iP	Pb	07 39 02.2	-0.4
TWF1	Yuli	0.24	314	⇓iP	Pb	07 39 02.1	-0.8
TWF1				eS	Sb	07 39 06.3	-0.9
EHD	Haiduan	0.26	261	⇓iP	Pb	07 39 02.3	-0.8
EHD				S	Sb	07 39 06.5	-1.1
ECS	Chishang	0.26	249	⇓iP	Pb	07 39 03.1	0.0
ECS				eS	Sn	07 39 08.9	-0.9
YULB	Yu-li	0.27	320	P	Pb	07 39 02.4	-0.9
YULB	Yu-li	0.27	320	⇓iP	Pb	07 39 02.3	-0.9
YULB				eS	Sb	07 39 06.5	-1.3
EDH	Donghe	0.27	218	eP	Pb	07 39 03.5	+0.2
EDH				eS	Sb	07 39 08.5	+0.7
HGSD	Ruisui	0.31	350	⇑iP	Pb	07 39 03.3	-0.5
EHYH	Wanrong	0.33	338	⇓P	Pb	07 39 03.4	-0.8
EHYH				eS	Sb	07 39 08.8	-0.6
EHY	Hungye	0.35	335	⇓iP	Pb	07 39 03.4	-1.0
ELDTW	Lidau	0.43	270	⇓iP	Pb	07 39 04.3	-1.4
ELDTW				S	Sb	07 39 09.3	-2.7
LONT	Longtian	0.43	229	⇓iP	Pb	07 39 05.3	-0.4
LONT				eS	Sb	07 39 11.4	-0.4
EGFH	Guangfu	0.48	354	eP	Pb	07 39 06.0	-0.6
TEGC	Jichi Village	0.52	6	eP	Pn	07 39 07.9	-0.3
TEGC				eS	Sn	07 39 16.4	+0.2
TWGBT	Beinan	0.52	225	P	Pb	07 39 06.9	-0.3
TWGBT	Beinan	0.52	225	S	Sb	07 39 14.0	-0.4
TWGBT	Beinan	0.52	225	eP	Pb	07 39 06.4	-0.7
TWG	Pinlang	0.53	226	eP	Pb	07 39 06.5	-0.7
TWG				eS	Sb	07 39 13.3	-1.2
TTN	Taitung	0.53	216	eP	Pn	07 39 08.5	+0.2
WARBT	Fenglin Townsh	0.54	351	eP	Pb	07 39 06.0	-1.4
SHUL	Shoufeng	0.60	7	eP	Pn	07 39 08.9	-0.4
SHUL				eS	Sn	07 39 18.2	0.0
ESL	Shilin	0.62	356	eP	Pb	07 39 07.3	-1.6
VWDT	VWDT	0.65	331	⇓iP	Pb	07 39 08.2	-1.0
VWDT				eS	Sb	07 39 16.2	-1.6
STYH	Taoyuan	0.65	269	⇓eP	Pb	07 39 08.2	-1.0
STYH				eS	Sb	07 39 16.2	-1.8
TEYL	Yanliau Villag	0.69	9	eP	Pn	07 39 10.5	0.0
TEYL				eS	Sn	07 39 21.4	+1.2
ALS	Alishan	0.70	297	⇓iP	Pb	07 39 09.5	-0.9
ALS				eS	Sb	07 39 17.9	-1.9
ECL	Taimali	0.76	220	eP	Pb	07 39 09.9	-1.3
ECL				eS	Sb	07 39 19.9	-1.3
WHYT	Xinyi Township	0.77	311	⇓P	Pb	07 39 10.4	-0.9
WHYT				eS	Sb	07 39 20.2	-1.2
SSLB	Suanglung	0.77	321	P	Pb	07 39 10.0	-1.3
SSLB	Suanglung	0.77	321	eP	Pb	07 39 09.8	-1.5
ETM	Tongmen	0.77	1	eP	Pb	07 39 09.8	-1.6
TPUB	Ta-pu	0.79	278	P	Pb	07 39 11.1	-0.6
TPUB	Ta-pu	0.79	278	S	Sb	07 39 21.6	-0.5
TPUB	Ta-pu	0.79	278	⇓iP	Pb	07 39 11.1	-0.6
TPUB				eS	Sb	07 39 20.9	-1.2
WTP	Ta-pu	0.80	274	⇓iP	Pb	07 39 11.4	-0.5
WTP				S	Sb	07 39 21.7	-0.7
OWD	Renai	0.81	340	⇓P	Pb	07 39 10.7	-1.5
CHN5	Tsauling	0.84	299	⇓iP	Pb	07 39 12.2	-0.5
CHN5				eS	Sb	07 39 22.6	-1.1
WCKO	Fanlu	0.84	287	eP	Pb	07 39 12.3	-0.3
WCKO				eS	Sb	07 39 23.2	-0.4
WUSB	Renai	0.87	337	⇓iP	Pb	07 39 11.7	-1.4
WUSB				eS	Sb	07 39 21.8	-2.6
SMLT	Sun Moon Lake	0.88	322	⇓iP	Pb	07 39 12.1	-1.1
CHN1	Nanshi	0.88	270	⇓iP	Pb	07 39 12.9	-0.2
CHN1				eS	Sb	07 39 24.1	-0.5
TWD	Chiawan	0.89	7	eP	Pb	07 39 12.1	-1.4
SSD	Sandimen	0.90	241	eP	Pb	07 39 12.8	-0.7
SNST	Tainan City	0.91	272	eP	Pb	07 39 13.3	-0.3
SNST				eS	Sn	07 39 25.6	-0.1
TSMG	Majia	0.91	238	eP	Pb	07 39 13.3	-0.4
TYC	Yuchr	0.92	321	eP	Pb	07 39 12.7	-1.1
TYC				eS	Sb	07 39 24.8	-0.7
TWK	Hsinying	0.92	275	⇓iP	Pb	07 39 13.4	-0.5
TWK				eS	Sb	07 39 25.3	-0.4
WJS	Zhushan	0.94	313	i P	Pn	07 39 14.2	+0.3
WJS				eS	Sn	07 39 26.8	+0.3
SCST	Cishan	0.96	252	eP	Pn	07 39 15.0	+0.8
SCST				eS	Sn	07 39 28.1	+1.1
MASBT	Mashibuluo	0.97	234	eP	Pb	07 39 13.6	-1.1
WHF	Hehuan Shan	0.97	348	⇑P	Pb	07 39 13.7	-1.3
ETL	Fush Village	0.98	8	eP	Pb	07 39 13.3	-1.5
WGK	Gukeng	0.98	301	eP	Pn	07 39 14.8	+0.2

CHN2	**Minshiung**	**0.99**	**291**	*e*P	**Pn**	**07 39 15.4**	**+0.8**
CHN2				*e*S	**Sn**	**07 39 28.6**	**+0.9**
NACB	**Ninganchiao**	**0.99**	**6**	P	**Pb**	**07 39 13.2**	**-1.8**
NACB	**Ninganchiao**	**0.99**	**6**	S	**Sn**	**07 39 28.4**	**+0.7**
NACB	**Ninganchiao**	**0.99**	**6**	*e*P	**Pb**	**07 39 12.9**	**-2.1**
TAW	**Tawu**	**0.99**	**213**	*e*P	**Pb**	**07 39 13.9**	**-1.1**
TAW				*e*S	**Sb**	**07 39 24.6**	**-3.0**
WDLH	**Douliu**	**1.00**	**300**	*e*P	**Pn**	**07 39 15.5**	**+0.7**
WDLH				*e*S	**Sn**	**07 39 28.6**	**+0.5**
WNT	**Mingjian**	**1.00**	**313**	*e*P	**Pn**	**07 39 15.3**	**+0.4**
WNT				*i* S	**Sn**	**07 39 28.8**	**+0.6**
TAWH	**Dawu Township**	**1.01**	**213**	*e*P	**Pb**	**07 39 13.9**	**-1.4**
TAWH				*e*S	**Sb**	**07 39 26.2**	**-1.9**
WCS	**Beigang Elemen**	**1.01**	**329**	*e*P	**Pb**	**07 39 14.6**	**-0.8**
WCS				*e*S	**Sb**	**07 39 26.9**	**-1.5**
ETLH	**Xiulin Townshi**	**1.01**	**360**	*e*P	**Pb**	**07 39 13.6**	**-2.0**
CHY	**Chiayi**	**1.02**	**288**	*i* P	**Pb**	**07 39 15.6**	**0.0**
CHY				*e*S	**Sn**	**07 39 28.7**	**+0.2**
CHN3	**Shinhua**	**1.03**	**264**	P	**Pb**	**07 39 17.2**	**+1.4**
CHN3				*e*S	**Sn**	**07 39 31.1**	**+2.3**
TWT	**Tachien**	**1.10**	**345**	*e*P	**Pn**	**07 39 15.9**	**-0.4**
TDCB	**Techi**	**1.10**	**344**	*e*P	**Pn**	**07 39 15.8**	**-0.6**
ICHU	**Yijhu**	**1.12**	**279**	*e*P	**Pb**	**07 39 17.0**	**-0.2**
ICHU				S	**Sn**	**07 39 31.8**	**+0.8**
WTK	**Tuku**	**1.12**	**297**	*e*P	**Pb**	**07 39 17.5**	**+0.3**
SCZT	**Fangliau**	**1.14**	**225**	*e*P	**Pb**	**07 39 17.2**	**-0.3**
LAY	**Lan-yu**	**1.15**	**177**	*e*P	**Pn**	**07 39 16.1**	**-0.7**
EAHA	**Aohua**	**1.16**	**12**	*e*P	**Pb**	**07 39 18.3**	**+0.4**
CHN8	**Yiju**	**1.18**	**278**	*e*P	**Pb**	**07 39 18.2**	**0.0**
CHN8				*e*S	**Sn**	**07 39 34.0**	**+1.5**
LYUB	**Lan-yu**	**1.18**	**175**	*e*P	**Pn**	**07 39 15.9**	**-1.4**
WHP	**Taichung City**	**1.19**	**336**	*e*P	**Pb**	**07 39 18.6**	**+0.1**
WSL	**Shuilin Townsh**	**1.20**	**286**	P	**Pb**	**07 39 18.2**	**-0.3**
WSL				*e*S	**Sb**	**07 39 34.5**	**+0.8**
EOS4	**EOS4**	**1.20**	**39**	*e*P	**Pb**	**07 39 17.7**	**-0.7**
EOS4				S	**Sn**	**07 39 32.8**	**+0.2**
TCU	**Taichung**	**1.21**	**322**	*e*P	**Pb**	**07 39 19.2**	**+0.5**
WCHH	**Zhanghua**	**1.23**	**317**	*e*P	**Pb**	**07 39 18.9**	**-0.1**
WCHH				S	**Sb**	**07 39 35.4**	**+0.9**
NNSB	**Datong**	**1.24**	**356**	*e*P	**Pn**	**07 39 17.4**	**-0.8**
NNSB				*e*S	**Sn**	**07 39 32.7**	**-1.4**
WSF	**Szhu**	**1.24**	**291**	*e*P	**Pb**	**07 39 18.8**	**-0.5**
WSF				*e*S	**Sb**	**07 39 34.8**	**0.0**
WSSB	**Gushan**	**1.25**	**244**	*e*P	**Pb**	**07 39 20.7**	**+1.2**
WSSB				*e*S	**Sb**	**07 39 36.9**	**+1.8**
ENA	**Nanau**	**1.26**	**11**	*e*P	**Pn**	**07 39 18.7**	**+0.3**
EWUT	**Wuta**	**1.28**	**12**	*e*P	**Pb**	**07 39 19.2**	**-0.7**
TSCK	**Chigu Township**	**1.29**	**268**	*e*P	**Pb**	**07 39 19.9**	**-0.1**
TSCK				*i* S	**Sb**	**07 39 37.1**	**+0.9**
SMST	**Manzhou Townsh**	**1.31**	**207**	*e*P	**Pn**	**07 39 19.2**	**+0.2**
SMST				*e*S	**Sn**	**07 39 35.5**	**0.0**
TWQ1	**Liyutan**	**1.32**	**331**	*e*P	**Pb**	**07 39 20.9**	**+0.1**
TWQ1				*e*S	**Sb**	**07 39 38.2**	**+0.8**
EOS3	**EOS3**	**1.33**	**35**	*e*P	**Pb**	**07 39 20.1**	**-0.7**
EOS3				*e*S	**Sb**	**07 39 37.0**	**-0.4**
LATG	**Datong**	**1.34**	**2**	*e*P	**Pn**	**07 39 19.2**	**-0.4**
TWKBT	**Hengchun**	**1.39**	**207**	*e*P	**Pn**	**07 39 20.2**	**+0.1**
TWKBT				*e*S	**Sn**	**07 39 37.9**	**+0.3**
TWK1	**Hengchun**	**1.39**	**207**	*e*P	**Pn**	**07 39 20.9**	**+0.7**
WDJ	**Dajia District**	**1.39**	**326**	*e*P	**Pb**	**07 39 21.7**	**-0.1**
WDJ				*e*S	**Sb**	**07 39 40.4**	**+1.3**
NSY	**Sanyi**	**1.39**	**332**	*e*P	**Pb**	**07 39 22.7**	**+0.8**
NSY				S	**Sb**	**07 39 41.0**	**+1.8**
EOS2	**EOS2**	**1.41**	**29**	*e*P	**Pb**	**07 39 21.0**	**-1.0**
ENTT	**Nioudou**	**1.45**	**3**	*e*P	**Pn**	**07 39 21.7**	**+0.7**
TWC	**Suao**	**1.45**	**13**	*e*P	**Pb**	**07 39 22.1**	**-0.8**
NDS	**Dongshan**	**1.46**	**8**	*e*P	**Pn**	**07 39 21.5**	**+0.4**
NFF	**Wufeng Townshi**	**1.48**	**347**	*e*P	**Pb**	**07 39 22.7**	**-0.7**
NFF				S	**Sb**	**07 39 42.4**	**+0.7**
YHNB	**Yeheng**	**1.48**	**356**	P	**Pn**	**07 39 22.1**	**+0.7**
YHNB	**Yeheng**	**1.48**	**356**	*e*P	**Pn**	**07 39 22.2**	**+0.7**
NMLH	**Miaoli**	**1.48**	**335**	*e*P	**Pb**	**07 39 23.6**	**+0.2**
NMLH				*e*S	**Sb**	**07 39 42.8**	**+0.9**
NSK	**Sanguang**	**1.49**	**356**	*e*P	**Pn**	**07 39 22.0**	**+0.4**
NSK				*e*S	**Sn**	**07 39 40.6**	**+0.4**
NSTT	**Nanjuang**	**1.50**	**343**	*e*P	**Pb**	**07 39 23.2**	**-0.6**
NSTT				*e*S	**Sb**	**07 39 42.4**	**0.0**
LIOB	**Emei**	**1.51**	**344**	*e*P	**Pb**	**07 39 23.9**	**-0.1**
TWE	**Neicheng**	**1.54**	**6**	*e*P	**Pb**	**07 39 23.8**	**-0.6**
FUSB	**Fushanzhiwuyua**	**1.57**	**3**	*e*P	**Pn**	**07 39 23.2**	**+0.5**
KSHI	**Guanxi Townshi**	**1.61**	**350**	*e*P	**Pb**	**07 39 25.7**	**+0.2**
KSHI				*e*S	**Sb**	**07 39 45.4**	**0.0**
WDGT	**Dungji**	**1.68**	**273**	*e*P	**Pn**	**07 39 24.4**	**+0.2**
TIPB	**Shuangxi**	**1.80**	**10**	*e*P	**Pb**	**07 39 27.3**	**-1.6**
PNG	**Penghu**	**1.81**	**282**	*e*P	**Pn**	**07 39 26.1**	**+0.2**
JYNG	**Yonagunijimaku**	**1.84**	**47**	*e*P	**Pn**	**07 39 27.5**	**+1.2**
JYNG				*e*S	**Sn**	**07 39 49.7**	**+1.0**
VCHM	**Qimei**	**1.89**	**271**	*e*P	**Pn**	**07 39 27.7**	**+0.7**
YOJ	**Yonaguni jima**	**1.89**	**48**	P	**Pn**	**07 39 28.4**	**+1.4**
YOJ	**Yonaguni jima**	**1.89**	**48**	*e*P	**Pn**	**07 39 28.2**	**+1.2**
YOJ				*e*S	**Sn**	**07 39 51.0**	**+1.0**
YOJ	**Yonaguni jima**	**1.89**	**48**	*e*P	**Pn**	**07 39 28.3**	**+1.2**
SXI1	**Grass Mountain**	**1.93**	**11**	*e*P	**Pb**	**07 39 29.2**	**-1.9**
ZUZH	**Zhuzihu**	**1.97**	**2**	*e*P	**Pb**	**07 39 29.9**	**-1.8**
HATJ	**Hateruma jima**	**2.30**	**67**	*e*P	**Pn**	**07 39 33.6**	**+0.9**
HATJ				*e*S	**Sn**	**07 40 00.8**	**+0.7**
IRIF	**Iriomote-Funau**	**2.35**	**61**	*e*P	**Pn**	**07 39 34.6**	**+1.1**
IRIF				*e*S	**Sn**	**07 40 02.9**	**+1.4**
JKRS	**Kuro-shima**	**2.54**	**65**	*e*P	**Pn**	**07 39 37.1**	**+1.1**
JKRS				*e*S	**Sn**	**07 40 07.4**	**+1.3**
JIJ	**Ishigaki jima**	**2.70**	**64**	*e*P	**Pn**	**07 39 39.4**	**+1.1**
JIJ				*e*S	**Sn**	**07 40 10.7**	**+0.6**
PTMZ	**Houxiangcun**	**2.84**	**311**	*e*P	**Pn**	**07 39 39.8**	**-0.3**
JISG	**Ishigakijimahi**	**2.94**	**61**	*e*P	**Pn**	**07 39 42.5**	**+1.0**
JISG				*e*S	**Sn**	**07 40 15.9**	**0.0**
JTJ	**Tarama**	**3.28**	**63**	*e*P	**Pn**	**07 39 47.5**	**+1.3**
JTJ				*e*S	**Sn**	**07 40 25.7**	**+1.3**

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*NEIC **26** 07:42:16.9±0.7, 58°.97N±0°.04×154°.89W±0°.07, h142^{km}±6^{km}, Error ellipse: s-maj=6.3km s-min=5.6km az=169.0*

AEIC 26 07:42:17.5±0.7**, 58°.94N**±0°.04×**154°.89W**±0°.08**, h142**^{km}±5^{km}**, ML2.9, ML3.0**/114(NEIC)**, Error ellipse: s-maj=6.6km s-min=5.5km az=207.0, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAHC	**Katmai Hardscr**	**0.30**	**192**		Pn	07 42 36.4	-0.9
KAHC					Sn	07 42 51.3	-1.0
KAHC	**Katmai Hardscr**	**0.30**	**192**		Pn	07 42 36.5	-0.9
KAHC					Sn	07 42 51.7	-0.6
KAPH	**Katmai Pasha**	**0.44**	**140**		Pn	07 42 37.3	-0.5
KAPH					Sn	07 42 53.1	-0.1
KAHG	**Katmai Hook Gl**	**0.48**	**158**		Pn	07 42 37.4	-0.6
KAHG					Sn	07 42 52.9	-0.6
P18K	**Big Mountain,**	**0.49**	**339**		Sn	07 42 51.8	-1.8
P18K	**Big Mountain,**	**0.49**	**339**		Pn	07 42 36.7	-1.2
P18K				IAML		07 42 52.2	
	comp=E,127nm,0.6s						
P18K				IAML		07 42 52.2	
	comp=N,99nm,0.6s						
Q19K	**Cape Douglas,**	**0.64**	**90**		Sn	07 42 54.8	-0.2
Q19K	**Cape Douglas,**	**0.64**	**90**		Pn	07 42 38.1	-0.8
Q19K				IAML		07 42 55.4	
	comp=E,198nm,0.7s						
Q19K				IAML		07 43 02.0	
	comp=N,175nm,1.0s						
ACHA	**Angle Creek He**	**0.77**	**198**		Pn	07 42 39.0	-0.8
ANCK	**Angle Creek**	**0.81**	**203**		Pn	07 42 39.6	-0.5
ANCK					Sn	07 42 56.8	-0.4
P17K	**Kvichak River**	**0.84**	**288**		Pn	07 42 39.4	-0.8
CNTC	**Contact Creek**	**0.85**	**218**		Pn	07 42 39.7	-0.8
AUCH	**Augustine Cone**	**0.86**	**60**		Pn	07 42 40.0	-0.4
CAHL	**Cahill**	**0.92**	**194**		Sn	07 42 59.0	+0.3
O18K	**Koktuh Hills**	**0.93**	**350**		Pn	07 42 40.0	-1.0
O18K				IAML		07 42 58.1	
	comp=N,114nm,1.1s						
Q16K	**King Salmon**	**0.96**	**255**		Pn	07 42 40.5	-0.6
Q16K					Sn	07 42 58.8	-0.2
P19K	**Oil Pt**	**1.11**	**49**		Sn	07 43 01.6	-0.2
P19K	**Oil Pt**	**1.11**	**49**		Pn	07 42 42.2	-0.4
P19K				IAML		07 43 02.0	
	comp=E,184nm,0.7s						
P19K				IAML		07 43 04.1	
	comp=N,149nm,0.4s						
O19K	**Port Alsworth**	**1.29**	**13**		Pn	07 42 43.1	-1.2
O19K				IAML		07 43 04.2	
	comp=N,155nm,0.5s						
O19K				IAML		07 43 04.8	
	comp=E,171nm,0.4s						
SYI	**Shuyak Island**	**1.34**	**103**		Pn	07 42 44.2	-0.5
SYI				IAML		07 43 05.6	
	comp=E,113nm,0.2s						
SYI				IAML		07 43 07.2	
	comp=N,102nm,0.3s						
ILSW	**Iliamna Southw**	**1.38**	**40**		Pn	07 42 44.3	-1.0
ILSW				IAML		07 43 05.8	
	comp=N,74nm,0.9s						
ILSW				IAML		07 43 07.1	
	comp=E,69nm,0.7s						
R18K	**Karluk**	**1.40**	**170**		Pn	07 42 43.9	-1.4
O17K	**Koliganek Bris**	**1.41**	**307**		Pn	07 42 44.5	-1.0
IVE	**Iliamna Volcan**	**1.44**	**41**		Pn	07 42 45.3	-0.6
PLK1	**Peulik 1**	**1.46**	**219**		Pn	07 42 45.6	-0.4
PLBL	**Peulik Blue Cr**	**1.61**	**220**		Pn	07 42 47.2	-0.5
P16K	**Nushagak River**	**1.61**	**275**		Pn	07 42 47.1	-0.5
P16K	**Nushagak River**	**1.61**	**275**	IAML		07 43 10.7	
	comp=N,141nm,0.8s						
P16K				IAML		07 43 11.3	
	comp=E,214nm,0.8s						
KDAK	**Kodiak Island**	**1.68**	**133**		Pn	07 42 47.1	-1.3
KDAK				IAML		07 43 12.5	
	comp=E,132nm,0.3s						
KDAK				IAML		07 43 12.7	
	comp=E,103nm,0.3s						
O16K	**Kokwok River B**	**1.77**	**293**		Pn	07 42 48.7	-0.8
O16K				IAML		07 43 13.4	
	comp=N,37nm,0.5s						
O16K				IAML		07 43 13.5	
	comp=E,42nm,0.8s						
HOM	**Homer**	**1.81**	**65**	Pn	Pn	07 42 51.1	+1.1
HOM				IAML		07 43 16.0	
	comp=E,205nm,0.4s						
HOM				IAML		07 43 17.3	
	comp=N,265nm,0.3s						
N18K	**Kilae Creek**	**1.82**	**344**		Pn	07 42 49.3	-0.8
RED	**Redoubt Volcan**	**1.83**	**35**		Pn	07 42 49.2	-1.1
RED				IAML		07 43 15.9	
	comp=N,47nm,1.2s						
RED				IAML		07 43 22.1	
	comp=E,31nm,1.2s						
N19K	**Bonanza Creek**	**1.89**	**6**		Pn	07 42 50.1	-0.9
OHAK	**Old Harbor**	**1.92**	**153**		Pn	07 42 49.7	-1.5
OHAK				IAML		07 43 14.9	
	comp=N,213nm,0.4s						
OHAK				IAML		07 43 16.1	
	comp=E,123nm,0.2s						
OHAK	**Old Harbor**	**1.92**	**153**	P	Pn	07 42 44.1	-7.1
CNPM	**China Poot**	**1.97**	**71**		Pn	07 42 51.6	-0.1
CNPM				IAML		07 43 16.6	
	comp=N,172nm,0.6s						
CNPM				IAML		07 43 17.5	
	comp=E,182nm,0.5s						
N17K	**Nushagak Hills**	**1.97**	**325**	IAML		07 43 17.7	
	comp=N,32nm,0.8s						
SII	**Sitkinak Islan**	**2.42**	**171**		Pn	07 42 55.7	-1.5
SII	**Sitkinak Islan**	**2.42**	**171**	P	Pn	07 42 51.7	-5.5
ANNE	**Aniakchak Nort**	**2.64**	**221**		Pn	07 42 59.4	-0.7
SLKM	**Skilak Lake**	**2.84**	**54**		Pn	07 43 02.0	-0.5
SLKM				IAML		07 43 36.3	
	comp=N,114nm,0.4s						
SLKM				IAML		07 43 37.2	
	comp=E,94nm,0.2s						
N15K	**Kwethluk River**	**2.92**	**297**		Pn	07 43 03.3	-0.2
STLK	**Strandline Lak**	**2.99**	**29**		Pn	07 43 03.9	-0.5
STLK				IAML		07 43 49.1	
	comp=N,15nm,0.5s						
SEW	**Seward**	**3.01**	**65**		Pn	07 43 03.9	-0.7
SEW				IAML		07 43 39.3	
	comp=N,60nm,0.2s						
SEW				IAML		07 43 40.2	
	comp=E,55nm,0.4s						
CHIR	**Chirikof Islan**	**3.15**	**188**	P	Pn	07 43 04.4	-2.1
CHIR	**Chirikof Islan**	**3.15**	**188**	S	Sn	07 43 40.4	-3.9
SUA	**Susitna One**	**3.27**	**37**	IAML		07 43 46.1	
	comp=N,32nm,0.4s						
SUA				IAML		07 43 47.8	
	comp=E,37nm,0.6s						
L18K	**Granite Mounta**	**3.41**	**346**		Pn	07 43 08.9	-0.8
M15K	**Kasigluk River**	**3.42**	**303**		Pn	07 43 09.2	-0.7
SKT	**Skwentna**	**3.48**	**27**		Pn	07 43 09.8	-0.8
SKT				IAML		07 43 52.8	
	comp=N,9.6nm,1.0s						
SKT				IAML		07 43 54.5	
	comp=E,8.6nm,0.3s						
L16K	**Owhat River**	**3.60**	**323**		Pn	07 43 11.5	-0.6
PMR	**Palmer**	**3.91**	**45**		Pn	07 43 14.7	-1.6
PMR				IAML		07 43 59.1	
	comp=N,21nm,0.2s						
PMR				IAML		07 43 59.8	
	comp=E,20nm,0.2s						
PMR	**Palmer**	**3.91**	**45**	P	Pn	07 43 13.9	-2.4
KNK	**Knik Glacier**	**4.06**	**50**		Pn	07 43 16.5	-1.8
KNK	**Knik Glacier**	**4.06**	**50**	IAML		07 44 04.3	
	comp=N,45nm,0.4s						
GHO	**Glory Hole Cre**	**4.11**	**44**	IAML		07 44 05.8	
	comp=E,35nm,0.4s						
GHO				IAML		07 44 08.7	
	comp=N,33nm,0.5s						
CUT	**Chulitna**	**4.15**	**31**	IAML		07 45 38.3	
	comp=E,44nm,0.4s						
PPLA	**Purkeypile**	**4.18**	**17**		Pn	07 43 19.1	-0.9
PPLA	**Purkeypile**	**4.18**	**17**	IAML		07 44 59.1	
	comp=N,5.1nm,1.3s						
L14K	**Kuka Creek**	**4.58**	**305**		Pn	07 43 25.1	0.0
L14K				IAML		07 44 04.1	
	comp=E,10nm,1.5s						
L14K				IAML		07 45 59.0	
	comp=N,13nm,1.4s						
CAST	**Castle Rocks**	**4.70**	**16**		Pn	07 43 25.7	-0.9
SDPT	**Sand Point**	**4.71**	**223**	P	Pn	07 43 24.8	-2.1
SCM	**Sheep Creek Mo**	**4.74**	**49**		Pn	07 43 25.3	-2.1
SCM	**Sheep Creek Mo**	**4.74**	**49**	IAML		07 44 21.8	
	comp=N,26nm,0.5s						
SCM				IAML		07 44 24.4	
	comp=E,27nm,0.5s						
CHNA	**Chernabura Isl**	**4.86**	**214**	P	Pn	07 43 26.2	-2.6
EYAK	**Cordova Ski Ar**	**4.90**	**67**	IAML		07 44 24.9	
	comp=N,20nm,0.7s						
EYAK	**Cordova Ski Ar**	**4.90**	**67**	P	Pn	07 43 27.8	-1.5
KTH	**Kantishna Hill**	**5.01**	**21**	IAML		07 45 06.2	
	comp=E,3.3nm,1.4s						
KTH				IAML		07 45 36.0	
	comp=N,3.7nm,1.5s						
TRF	**Thorofare Moun**	**5.04**	**24**	IAML		07 44 29.3	
	comp=E,5.6nm,1.4s						
TRF				IAML		07 44 30.4	
	comp=N,5.5nm,1.4s						
DIV	**Divide**	**5.07**	**60**		Pn	07 43 29.7	-2.0
J19K	**Poorman**	**5.09**	**356**		Pn	07 43 30.7	-1.1
J19K				IAML		07 44 18.0	
	comp=N,2.9nm,1.5s						
KLU	**Klutina**	**5.15**	**56**		Pn	07 43 31.3	-1.5
J20K	**Nowinta River**	**5.27**	**4**	IAML		07 44 40.4	
	comp=E,2.6nm,1.2s						
M24K	**Tolsona, Glenn**	**5.35**	**50**		Pn	07 43 33.8	-1.6
M24K	**Tolsona, Glenn**	**5.35**	**50**	IAML		07 44 45.5	
	comp=N,17nm,1.1s						
RND	**Reindeer**	**5.35**	**31**	IAML		07 44 32.6	
	comp=E,3.4nm,1.0s						
RND				IAML		07 44 40.0	
	comp=N,4.0nm,1.3s						
RAGM	**Ragged Mountai**	**5.38**	**70**	Pn	Pn	07 43 35.1	-0.7
HMT	**Hamilton**	**5.57**	**71**		Pn	07 43 36.9	-1.5
NICHA	**Nichawak Mount**	**5.70**	**72**		Pn	07 43 38.6	-1.5
N25K	**Chitina, Valde**	**5.78**	**58**		Pn	07 43 39.5	-1.6
BERG	**Berg Lake**	**5.85**	**71**		Pn	07 43 40.8	-1.3
HARP	**HAARP**	**5.91**	**50**		Pn	07 43 41.4	-1.4
WACK	**Wrangell Chich**	**6.05**	**55**		Pn	07 43 43.7	-1.2
GLB	**Gilahina Butte**	**6.07**	**61**		Pn	07 43 43.3	-1.6
WAX	**Waxell Ridge**	**6.28**	**71**		Pn	07 43 46.5	-1.3
MLY	**Manley**	**6.42**	**16**		Pn	07 43 47.2	-2.5
K24K	**Donnelly Dome**	**6.55**	**38**		Pn	07 43 50.5	-1.0
PTPK	**Patty Peak**	**6.61**	**65**		Pn	07 43 51.3	-1.1
COLA	**College**	**6.82**	**26**	P	Pn	07 43 52.3	-2.6
ILAR	**Eielson Array**	**6.96**	**29**		Pn	07 43 54.2	-2.6
DOT	**Dot Lake**	**7.03**	**43**	Pn	Pn	07 43 55.9	-1.9
IMAR	**Indian Mountai**	**7.09**	**4**	Pn	Pn	07 43 57.5	-1.1
NIKH	**Nikolski High**	**9.84**	**239**	P	Pn	07 44 34.8	-0.6

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*UCR **26** 07:48:09.6±0.9, 8°.25N×82°.86W, h24^{km}±3^{km}, MW3.8*

*UPA **26** 07:48:10.6±1.0, 8°.40N×82°.84W, h33^{km}±6^{km}, MW3.6, Fault plane solution: NP1:φ$_s$147.00000°, δ48.00000°, λ104.00000°.*

ISC 26 07:48:10.8±1.0**, 8°.36N**±0°.04×**82°.81W**±0°.03**, h31**^{km}±7^{km}**, n38, σ0^{s}.71**/54**, 1C-12D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPPC	**Paso Canoas**	**0.18**	**352**	*e*P	**Pb**	**07 48 16.5**	**-0.5**
LPPC				*e*S	**Sb**	**07 48 21.5**	**+0.3**
LMNES	**Limones**	**0.26**	**190**	⇓*i*P	**Pn**	**07 48 18.0**	**-0.6**
LMNES				*e*S	**Sb**	**07 48 23.6**	**+1.0**
MCANO	**Manzana, Boque**	**0.32**	**48**	*e*P	**Pb**	**07 48 18.4**	**-0.3**
MCANO	**Manzana, Boque**	**0.32**	**48**	⇓*i*P	**Pb**	**07 48 18.5**	**-0.2**
NELY	**Ciudad Neily**	**0.32**	**336**	*e*P	**Pb**	**07 48 17.6**	**-1.0**
NELY				*e*S	**Sb**	**07 48 24.1**	**+0.2**
DVD	**David**	**0.37**	**78**	⇓*i*P	**Pb**	**07 48 19.1**	**-0.2**
DVD				*e*S	**Sn**	**07 48 26.0**	**-0.2**
CSTBL	**De las Acacias**	**0.37**	**82**	*e*P	**Pb**	**07 48 19.1**	**-0.2**
CSTBL	**De las Acacias**	**0.37**	**82**	*e*S	**Pb**	**07 48 19.2**	**-0.2**
PEDE3	**Pedregal, Chir**	**0.39**	**86**	⇓*i*P	**Pb**	**07 48 19.3**	**-0.3**
LOCO3	**Loma Colorada,**	**0.39**	**82**	⇓*i*P	**Pb**	**07 48 19.5**	**-0.2**
LOMA3	**Las Lomas, Chi**	**0.42**	**80**	⇓*i*P	**Pb**	**07 48 19.8**	**-0.4**
FITO	**Golfito**	**0.43**	**308**	*e*P	**Pb**	**07 48 18.3**	**-1.9**
FITO				*e*S	**Sb**	**07 48 25.0**	**-1.7**
CLLRA	**Cordillera,**	**0.43**	**27**	*e*S	**Sb**	**07 48 27.5**	**+0.5**
MLIR3	**Monte Lirio, C**	**0.43**	**359**	*e*S	**Sn**	**07 48 28.8**	**+0.8**
BRU2	**Volcan**	**0.45**	**16**	⇑*i*P	**Pb**	**07 48 20.3**	**-0.4**
BRU2				*e*S	**Sb**	**07 48 28.0**	**+0.6**
PTAR3	**Potrerillos Ar**	**0.46**	**43**	⇓*i*P	**Pb**	**07 48 20.4**	**-0.3**
PTAR3				*e*S	**Sn**	**07 48 28.6**	**0.0**
RSRNO	**Rio Sereno**	**0.46**	**354**	*i* P	**Pb**	**07 48 20.5**	**-0.3**
RSRNO				*e*S	**Sn**	**07 48 29.3**	**+0.7**
SCLRA	**Santa Clara, W**	**0.47**	**4**	⇓*i*P	**Pb**	**07 48 20.8**	**-0.2**
SCLRA				*e*S	**Sn**	**07 48 29.9**	**+0.9**
BC3P	**Paso Ancho**	**0.50**	**24**	*e*P	**Pb**	**07 48 20.4**	**-1.1**
BC3P				*e*S	**Sb**	**07 48 28.5**	**-0.3**
BQTLY	**Boquete Panama**	**0.53**	**41**	⇓*i*P	**Pb**	**07 48 21.2**	**-0.7**
BQTLY				*e*S	**Sb**	**07 48 29.6**	**+0.1**
PSOM3	**Paja de Sombre**	**0.58**	**56**	⇓*i*P	**Pb**	**07 48 21.9**	**-0.9**
PSOM3				*e*S	**Sb**	**07 48 30.7**	**-0.1**
RBALA	**Bur**	**0.83**	**51**	*e*P	**Pn**	**07 48 25.6**	**-0.8**
RBALA	**Bur**	**0.83**	**51**	⇓*i*P	**Pn**	**07 48 25.7**	**-0.8**
RBALA				*e*S	**Sb**	**07 48 37.2**	**-0.5**
KKNTU	**Kakintº**	**1.10**	**64**	⇓*i*P	**Pn**	**07 48 29.4**	**-0.8**
KKNTU				*e*S	**Sn**	**07 48 43.8**	**-0.6**
MESA3	**La Mesa, Verag**	**1.62**	**97**	*e*P	**Pn**	**07 48 37.9**	**+0.6**
MESA3				*e*S	**Sn**	**07 48 58.5**	**+1.2**
LLNJ	**Naranjito**	**1.69**	**311**	*e*P	**Pn**	**07 48 38.5**	**+0.3**
VINA	**Juan Vinas**	**1.79**	**329**	*e*P	**Pn**	**07 48 40.0**	**+0.3**
VINA				*e*S	**Sn**	**07 49 02.9**	**+1.5**
VERB	**Verbena**	**1.80**	**331**	*e*P	**Pn**	**07 48 40.6**	**+0.7**
PISJ	**San Jernim**	**1.81**	**315**	*e*P	**Pn**	**07 48 41.0**	**+0.9**
PCAYA	**Pacayas**	**1.84**	**328**	*e*P	**Pn**	**07 48 40.5**	**0.0**
VTCV	**VTCV, Calle Va**	**1.85**	**331**	*e*P	**Pn**	**07 48 40.9**	**+0.3**
RESJ	**San Isidro (Tu**	**1.85**	**334**	*e*P	**Pn**	**07 48 41.3**	**+0.7**
PICV	**PH. Pirrs**	**1.86**	**313**	*e*P	**Pn**	**07 48 41.2**	**+0.5**
ABRB	**Las Abras (San**	**1.87**	**331**	*e*P	**Pn**	**07 48 41.5**	**+0.6**
PAR1A	**Puntarenas Pro**	**1.88**	**311**	*e*P	**Pn**	**07 48 41.2**	**+0.4**
CVTQ	**Turrialba Volc**	**1.89**	**330**	*e*P	**Pn**	**07 48 41.7**	**+0.4**
VTR0	**Volcan Turrial**	**1.90**	**331**	*e*P	**Pn**	**07 48 42.0**	**+0.6**
LUJA	**Lujan**	**1.99**	**322**	*e*P	**Pn**	**07 48 42.9**	**+0.3**

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*UCR **26** 07:55:17.9±1.0, 8°.31N×82°.86W, h27^{km}±3^{km}, MW3.6*

*CATAC **26** 07:55:18.8±0.8, 8°N±5°×8°3W±°, h17^{km}±4^{km}, M3.6/8, MLv3.6/8, Error ellipse: s-maj=11.8km s-min=10.7km az=63.2, confirmed*

*UPA **26** 07:55:18.8±1.1, 8°.39N×82°.78W, h37^{km}±6^{km}, MW3.2*

ISC 26 07:55:18.3±1.0**, 8°.37N**±0°.03×**82°.85W**±0°.02**, h31**^{km}±5^{km}**, n66, σ1^{s}.11**/82**, 3C-9D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CDITO	**Canoas**	**0.21**	**352**	P	**Pn**	**07 55 24.8**	**-0.6**
CDITO	**Canoas**	**0.21**	**352**	S	**Sn**	**07 55 30.4**	**+0.6**
LMNES	**Limones**	**0.26**	**183**	*e*P	**Pn**	**07 55 25.8**	**-0.3**
LMNES	**Limones**	**0.26**	**183**	⇑*i*P	**Pn**	**07 55 26.8**	**+0.7**
LMNES				*e*S	**Sn**	**07 55 32.5**	**+1.4**
NELY	**Ciudad Neily**	**0.30**	**341**	*e*P	**Pb**	**07 55 25.7**	**-0.2**
NELY				*e*S	**Sn**	**07 55 32.0**	**-0.1**
MCANO	**Manzana, Boque**	**0.34**	**53**	⇓*i*P	**Pb**	**07 55 26.3**	**-0.1**
DVD	**David**	**0.40**	**80**	⇓*i*P	**Pb**	**07 55 26.9**	**-0.3**
DVD				*e*S	**Sn**	**07 55 33.5**	**-0.8**
FITO	**Golfito**	**0.40**	**310**	*e*P	**Pb**	**07 55 26.4**	**-0.9**
FITO				*e*S	**Sb**	**07 55 32.5**	**-0.8**
CSTBL	**De las Acacias**	**0.40**	**83**	*e*P	**Pb**	**07 55 26.9**	**-0.3**
CSTBL	**De las Acacias**	**0.40**	**83**	⇓*i*P	**Pb**	**07 55 27.0**	**-0.3**
CSTBL				*e*S	**Sb**	**07 55 33.2**	**-0.2**
PEDE3	**Pedregal, Chir**	**0.42**	**87**	⇓*i*P	**Pb**	**07 55 27.0**	**-0.5**
PEDE3				*e*S	**Sb**	**07 55 33.3**	**-0.5**
LOCO3	**Loma Colorada,**	**0.42**	**84**	*e*S	**Sb**	**07 55 34.0**	**0.0**
MLIR3	**Monte Lirio, C**	**0.43**	**3**	*e*P	**Pn**	**07 55 28.0**	**-0.4**
MLIR3				*e*S	**Sn**	**07 55 34.8**	**-0.5**
EDAD	**Golfito**	**0.43**	**312**	*e*P	**Pb**	**07 55 26.9**	**-0.8**
EDAD				*e*S	**Sb**	**07 55 33.3**	**-0.8**
CLLRA	**Cordillera,**	**0.44**	**31**	*e*P	**Pb**	**07 55 27.7**	**-0.3**
RSRNO	**Rio Sereno**	**0.45**	**358**	*e*P	**Pn**	**07 55 28.4**	**-0.3**
RSRNO	**Rio Sereno**	**0.45**	**358**	⇓*e*P	**Pn**	**07 55 28.2**	**-0.5**
BRU2	**Volcan**	**0.45**	**20**	*e*P	**Pb**	**07 55 27.9**	**-0.2**
BRU2				*e*S	**Sn**	**07 55 36.7**	**+0.7**
BRU2	**Volcan**	**0.45**	**20**	S	**Sn**	**07 55 37.1**	**+1.0**
BRU2	**Volcan**	**0.45**	**20**	P	**Pn**	**07 55 28.9**	**+0.1**
BRU2	**Volcan**	**0.45**	**20**	⇑*i*P	**Pb**	**07 55 27.9**	**-0.2**
BRU2				*e*S	**Sn**	**07 55 36.6**	**+0.6**
VITO	**San Vito**	**0.47**	**345**	*e*P	**Pn**	**07 55 28.6**	**-0.4**
VITO				*e*S	**Sn**	**07 55 37.0**	**+0.7**
SCLRA	**Santa Clara, W**	**0.47**	**8**	⇓*e*P	**Pn**	**07 55 29.2**	**+0.1**
BC3P	**Paso Ancho**	**0.50**	**27**	⇓*i*P	**Pn**	**07 55 29.4**	**-0.2**
BC3P				*e*S	**Sn**	**07 55 37.8**	**+0.4**
BQTLY	**Boquete Panama**	**0.55**	**44**	*e*P	**Pb**	**07 55 29.0**	**-0.6**
BQTLY	**Boquete Panama**	**0.55**	**44**	⇓*i*P	**Pb**	**07 55 29.0**	**-0.6**
BQTLY				*e*P	**Pn**	**07 55 30.0**	**-0.1**
BQTLY				*e*S	**Sb**	**07 55 34.1**	**-3.3**
EDP2	**Potrero Grande**	**0.72**	**333**	*e*P	**Pn**	**07 55 32.1**	**-0.3**
PANP	**Palmar Norte**	**0.85**	**314**	*e*P	**Pn**	**07 55 33.5**	**-0.6**
PANP				*e*S	**Sb**	**07 55 45.4**	**-0.2**
RBALA	**Bur**	**0.85**	**53**	⇓*i*P	**Pn**	**07 55 33.5**	**-0.7**
BURE	**Buenos Aires**	**0.94**	**329**	*e*P	**Pn**	**07 55 35.0**	**-0.5**
DRK0	**Durika**	**0.98**	**336**	*e*P	**Pn**	**07 55 35.5**	**-0.6**
DRK0	**Durika**	**0.98**	**336**	P	**Pn**	**07 55 35.6**	**-0.5**
DRK0	**Durika**	**0.98**	**336**	S	**Sb**	**07 55 49.4**	**-0.1**
RMDIO	**Remedios, Chir**	**1.01**	**98**	⇑*i*P	**Pn**	**07 55 36.0**	**-0.4**
OCHAL	**Ojochal**	**1.07**	**313**	S	**Sb**	**07 55 51.8**	**-0.3**
OCHAL	**Ojochal**	**1.07**	**313**	P	**Pn**	**07 55 37.0**	**-0.3**
KKNTU	**Kakintº**	**1.13**	**65**	*e*P	**Pn**	**07 55 37.1**	**-0.9**
KKNTU				*e*S	**Sn**	**07 55 52.5**	**-0.1**
ISBTO	**Bastimentos Is**	**1.16**	**33**	*e*S	**Sb**	**07 55 59.9**	**+5.4**
BRIBI	**Bribri**	**1.25**	**1**	*e*P	**Pb**	**07 55 41.6**	**+0.3**
LCR2	**La Lucha 2**	**1.78**	**320**	*e*P	**Pn**	**07 55 47.2**	**-0.1**
LCR2	**La Lucha 2**	**1.78**	**320**	P	**Pn**	**07 55 47.6**	**+0.3**
LCR2	**La Lucha 2**	**1.78**	**320**	S	**Sb**	**07 56 11.9**	**-0.7**
ABE2	**San Pablo**	**1.79**	**318**	*e*P	**Pn**	**07 55 47.7**	**+0.4**
PCAYA	**Pacayas**	**1.81**	**328**	*e*P	**Pn**	**07 55 48.7**	**+1.0**
VTCV	**VTCV, Calle Va**	**1.83**	**332**	*e*P	**Pn**	**07 55 48.9**	**+1.1**
PICV	**PH. Pirrs**	**1.83**	**313**	*e*P	**Pn**	**07 55 48.5**	**+0.8**
IRES	**Siquirres**	**1.84**	**339**	*e*P	**Pb**	**07 55 49.3**	**-2.1**
RAFA	**San Farael, Vo**	**1.85**	**329**	*e*P	**Pn**	**07 55 49.0**	**+0.8**
CVTV	**Tajo**	**1.86**	**331**	*e*P	**Pn**	**07 55 49.4**	**+1.1**
CVTQ	**Turrialba Volc**	**1.87**	**331**	*e*P	**Pn**	**07 55 49.5**	**+1.0**
VTLA	**Turrialba Volc**	**1.87**	**331**	*e*P	**Pn**	**07 55 49.5**	**+1.0**
VTR0	**Volcan Turrial**	**1.87**	**331**	*e*P	**Pn**	**07 55 49.7**	**+1.0**
ACOS	**Acosta**	**1.93**	**318**	*e*P	**Pn**	**07 55 49.5**	**+0.4**
AMPA	**Desamparados**	**1.94**	**322**	*e*P	**Pn**	**07 55 49.9**	**+0.6**
CORON	**Coronado**	**1.96**	**325**	*e*P	**Pn**	**07 55 50.9**	**+1.2**
HDC	**Heredia**	**2.05**	**322**	*e*P	**Pn**	**07 55 51.9**	**+1.0**
PURI	**Puriscal**	**2.06**	**316**	*e*P	**Pn**	**07 55 51.4**	**+0.3**
TCS1	**Tacares**	**2.20**	**319**	P	**Pn**	**07 55 54.8**	**+2.0**
TRT2	**Tortugero**	**2.35**	**338**	P	**Pn**	**07 55 56.8**	**+2.0**
TRT2	**Tortugero**	**2.35**	**338**	S	**Sn**	**07 56 24.6**	**+2.0**
COVE	**Coope Vega, Sa**	**2.80**	**327**	S	**Sb**	**07 56 38.8**	**-2.8**
COVE	**Coope Vega, Sa**	**2.80**	**327**	P	**Pn**	**07 56 02.8**	**+1.8**
JTS	**Las Juntas de**	**2.83**	**313**	*e*P	**Pn**	**07 56 02.0**	**+0.6**
CMARA	**Lajas Hojancha**	**3.03**	**303**	P	**Pn**	**07 56 05.7**	**+1.5**
CMARA	**Lajas Hojancha**	**3.03**	**303**	S	**Sn**	**07 56 39.6**	**0.0**
BLUN	**Bluefields**	**3.73**	**346**	P	**Pn**	**07 56 14.8**	**+0.9**

IDC 26 07:57:50.4±890.0**, 55°.26N**×**39°.65E, h0**^{km}**, Error ellipse:**

s-maj=339.8km s-min=52.5km az=137.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	2.00	318	I	I	08 08 50.0	
	0.1nm,0.8s,baz=136,slow=316,SNR=1.8						
I37NO	I37NO	16.84	334	I	I	09 43 50.0	
	baz=134,slow=323,SNR=0.6						
I26DE	FREYUNG INFRAS	17.13	259	I	I	09 41 00.0	
	baz=59,slow=317,SNR=1.1						

KRSC 26 07:58:23.7±0.8, 55°.95N×164°.24E, h11^{km}±12^{km}, Ml3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.84	289	eP	Pg	07 58 39.1	-0.7
KBTR				eS	Sg	07 58 50.2	-0.6
KBG	Krutoberegovo	0.91	290	eP	Pg	07 58 40.2	-1.1
KBG				eS	Sb	07 58 54.1	+0.4
BKI	Bering	1.23	126	eP	Pn	07 58 46.6	-0.3
BKI				eS	Sn	07 59 03.7	+0.1
MKZ	Mys Kozlova	2.00	227	eP	Pb	07 58 59.1	-1.0
KLY	Klyuchi	2.04	282	eP	Pn	07 58 56.8	-1.2
KLY				eS	Sn	07 59 22.4	-1.0
KRSR	Krestovskiy	2.08	279	eP	Pb	07 59 00.3	-1.1
BZWR	Bezymyannyi-We	2.10	272	eP	Pb	07 59 00.9	-1.1
KIRR	Kirishev	2.19	272	eP	Pb	07 59 02.0	-1.4
KPT	Kopyto	2.26	272	eP	Pb	07 59 03.4	-1.1
KMNR	Kamenistaya	2.27	267	eP	Pb	07 59 03.6	-1.1
KOZ	Kozyrevsk	2.45	274	eP	Pb	07 59 06.8	-1.0
SRDR	Sredinnyy	2.56	280	eP	Pn	07 59 07.4	+2.2
SDLR	Sedlovina	4.11	232	eP	Pn	07 59 29.5	+3.1
SMAR	Somma	4.15	232	eP	Pn	07 59 30.4	+3.2
KRX	Arik	4.16	234	eP	Pn	07 59 30.8	+3.6
UGLR	Uglovaya	4.18	231	eP	Pn	07 59 30.8	+3.3
KOK	Koryaka	4.21	233	eP	Pn	07 59 31.9	+4.1
MTVR	Mutnovka	4.97	228	eP	Pn	07 59 42.4	+4.0
ASAK	Asacha	5.16	229	eP	Pn	07 59 45.0	+4.1

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*IDC **26** 08:00:22.9±0.9, 2°.74S×138°.68E, h0^{km}, mb3.9/6, mbtmp3.9/9, ML4.0/4, Error ellipse: s-maj=21.8km s-min=15.0km az=165.0*

ISC 26 08:00:27.8±0.8, **2°.8S**±0°.1×**138°.8E**±0°.1, **h35^{km}, n10,** σ**0^{s}.77**/10, **mb3.8**/6, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	1.96	81	Pn	Pn	08 00 58.5	-0.1
	7.7nm,0.3s,baz=245,slow=6.6,SNR=27						
JAY				Lg	Lg	08 01 28.8	
	15nm,0.3s,baz=84,slow=21,SNR=5.3						
	40nm,0.3s						
BATI	Baumata	16.70	243	Pn	Pn	08 04 18.2	-0.9
	5.4nm,0.3s,baz=333,slow=2.3,SNR=4.2						
WRA	Warramunga Arr	17.55	194	P	Pn	08 04 29.2	-0.7
	0.9nm,0.3s,baz=17,slow=12,SNR=30						
	2.6nm,0.5s						
FITZ	Fitzroy Crossi	19.90	219	P	P	08 04 56.7	+0.3
	0.2nm,0.3s,baz=56,slow=15,SNR=2.2						
	3.7nm,0.8s						
ASAR	Alice Springs	21.25	192	P	P	08 05 11.8	+0.8
	4.2nm,0.9s,baz=20,slow=10,SNR=21						
	4.2nm,0.9s						
MKAR	Makanchi Array	69.92	322	P	P	08 11 36.2	+0.8
	0.5nm,0.8s,baz=110,slow=5.7,SNR=4.0						
	0.5nm,0.8s						
KURBB	Kurchatov Arra	73.86	325	P	P	08 11 59.3	+0.4
	1.1nm,1.0s,baz=110,slow=5.4,SNR=1.7						
	1.1nm,1.0s						
BVAR	Borovoye Array	79.44	325	P	P	08 12 30.7	+0.2
	0.9nm,0.7s,baz=123,slow=5.5,SNR=4.3						
	0.9nm,0.7s						
ILAR	Eielson Array	85.91	24	P	P	08 13 02.9	-1.0
	0.5nm,0.7s,baz=260,slow=4.8,SNR=6.1						
	0.5nm,0.7s						
QSPA	South Pole Qui	87.12	180	P	P	08 13 10.4	+0.5
	1.2nm,0.7s,baz=273,slow=0.9,SNR=7.3						
	1.2nm,0.7s						

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*NOU **26** 08:00:54.9, 25°.32S×177°.16E, h267^{km}, mb4.2/13, South of Fiji Islands*

*IDC **26** 08:00:58.1±2.3, 25°.35S×179°.81E, h484^{km}±25^{km}, mb3.3/5, mbtmp4.2/7, Error ellipse: s-maj=30.6km s-min=18.3km az=145.0*

*NEIC **26** 08:00:58.8±1.5, 25°.35S±0°.07×179°.9E±0°.2, h486^{km}±9^{km}, mb4.2/14, Error ellipse: s-maj=21.4km s-min=6.1km az=111.0*

ISC 26 08:00:58.9±0.6, **25°.38S**±0°.06×**179°.82E**±0°.10, **h493^{km}, n91,** σ**1^{s}.75**/106, **mb4.0**/13, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	4.35	153	P	P	08 02 18.7	-1.0
GLKZ	Green Lake	4.36	153	P	P	08 02 22.9	+3.1
GLKZ				S	S	08 03 27.9	+2.2
LKBA	Tubou, Lakemba	7.22	10	P	P	08 02 46.4	-0.8
MSVF	Nonsavu	7.78	347	P	P	08 02 51.6	-1.5
MSVF	Nonsavu	7.78	347	P	P	08 02 51.4	-1.7
	16nm,0.4s,baz=252,slow=23,SNR=11						
TAVE	Taveuni	8.63	2	P	P	08 03 01.7	-0.2
DGTI	Dogotuki	9.03	359	P	P	08 03 05.4	-0.7
OUZ	Omahuta	11.19	207	P	P	08 03 33.1	+4.4
WCZ	Waipu Caves	11.53	203	P	P	08 03 36.5	+4.2
PINNC	Pines Island,	11.64	281	P	P	08 03 34.6	+0.9
KUZ	Kuaotunu	11.86	196	P	P	08 03 38.8	+2.9
WIAZ	Waiheke Island	12.07	198	P	P	08 03 41.5	+3.5
MXZ	Matakaoa Point	12.22	186	P	P	08 03 38.4	-1.2
MXZ	Matakaoa Point	12.22	186	P	P	08 03 41.1	+1.5
MXZ	Matakaoa Point	12.22	186	P	P	08 03 40.1	+0.5
MKAZ	Moumakai	12.35	198	P	P	08 03 44.0	+2.9
WMGZ	Waiomatatini S	12.46	185	P	P	08 03 43.8	+1.5
HAZ	Te Kaha	12.46	188	P	P	08 03 42.4	+0.2
PKGZ	Pakihiroa	12.54	186	P	P	08 03 43.9	+0.8
PKGZ				S	S	08 05 57.4	-1.1
RUGZ	Raukumara Rang	12.68	188	P	P	08 03 45.1	+0.4
RUGZ				S	S	08 06 02.0	+0.6
PUZ	Puketiti	12.73	186	P	P	08 03 44.8	-0.3
PUZ				S	S	08 06 00.3	-1.8
TOZ	Tahuroa Road	12.85	196	P	P	08 03 48.4	+2.0
TWGZ	Tauwhareparae	12.86	187	P	P	08 03 46.2	-0.3
TWGZ				S	S	08 06 02.7	-2.0
KMRZ	Kaimai	12.86	194	P	P	08 03 49.2	+2.6
URZ	Urewera	13.05	189	P	P	08 03 46.6	-1.8
	7.1nm,0.4s,baz=254,slow=4.1,SNR=15						
URZ				S	S	08 06 08.7	+0.4
	14nm,0.6s,baz=86,slow=20,SNR=14						
URZ	Urewera	13.05	189	P	P	08 03 49.6	+1.2
URZ	Urewera	13.05	189	P	P	08 03 47.5	-1.0
MWZ	Matawai	13.07	188	P	P	08 03 50.1	+1.4
MWZ				S	S	08 06 06.7	-2.0
TKGZ	Te Karaka	13.13	187	P	P	08 03 50.3	+0.9
TKGZ				S	S	08 06 07.2	-2.7
CNGZ	Carnagh Statio	13.14	186	P	P	08 03 51.9	+2.4
RAGZ	Rawiri	13.24	188	P	P	08 03 50.7	+0.1
RAGZ				S	S	08 06 09.7	-2.5
MUGZ	Murupara	13.32	190	P	P	08 03 51.4	+0.1
RIGZ	Rimuhau	13.40	187	P	P	08 03 55.0	+2.8
TLZ	Tolley Road	13.42	195	P	P	08 03 54.6	+2.2
RTZ	Ruatahuna	13.42	190	P	P	08 03 53.8	+1.4
RTZ	Ruatahuna	13.42	190	P	P	08 03 53.2	+0.7
RTZ				S	S	08 06 14.5	-1.1
RAHZ	Arahi	13.70	189	P	P	08 03 56.0	+0.7
RAHZ				S	S	08 06 18.8	-2.1
HIZ	Hauiti	13.76	197	P	P	08 03 54.4	-1.6
HIZ	Hauiti	13.76	197	P	P	08 03 59.4	+3.5
BKZ	Black Stump Fm	14.03	191	P	P	08 03 59.6	+0.7
BKZ	Black Stump Fm	14.03	191	P	P	08 03 58.5	-0.4
BKZ				S	S	08 06 27.1	-0.4
TSZ	Takapari Road	14.99	192	P	P	08 04 07.6	-1.4
TSZ				S	S	08 06 43.0	-2.9
BFZ	Birch Farm	15.55	190	P	P	08 04 13.5	-1.3
BFZ				S	S	08 06 53.0	-3.5
MRZ	Mangatainoka R	15.65	192	P	P	08 04 13.7	-2.1
MRZ				S	S	08 06 54.3	-4.1
SNZO	South Karori	16.45	194	P	P	08 04 25.6	+1.4
QRZ	Quartz Range	16.56	200	P	P	08 04 25.1	-0.4
QRZ	Quartz Range	16.56	200	P	P	08 04 25.6	+0.1
TKNZ	Takaka Hill	16.63	198	P	P	08 04 26.3	+0.2
NNZ	Nelson	16.68	197	P	P	08 04 25.7	-1.0
NNZ				S	S	08 07 14.1	-3.3
TUWZ	Tuamarina	16.74	196	P	P	08 04 27.7	+0.5
THZ	Tophouse	17.32	198	P	P	08 04 32.5	-0.6
THZ				S	S	08 07 24.4	-4.0
DSZ	Denniston Nort	17.63	200	P	P	08 04 36.6	+0.6
KHZ	Kahutara	17.77	195	P	P	08 04 37.8	+0.5
KHZ	Kahutara	17.77	195	P	P	08 04 36.6	-0.6
KHZ				S	S	08 07 31.6	-4.1
GVZ	Greta Valley S	18.41	196	P	P	08 04 42.1	-1.1
LTZ	Lake Taylor	18.44	198	P	P	08 04 42.6	-0.9
INZ	Inchbonnie	18.63	200	P	P	08 04 45.5	+0.3
INZ	Inchbonnie	18.63	200	P	P	08 04 45.0	-0.2
OXZ	Oxford	19.01	198	P	P	08 04 48.1	-0.6
WVZ	Waitaha Valley	19.16	201	P	P	08 04 49.7	-0.3
MQZ	McQueen's Vall	19.20	196	P	P	08 04 49.5	-0.8
RPZ	Rata Peaks	19.65	199	P	P	08 04 57.3	+2.8
FOZ	Fox Glacier	19.88	202	P	P	08 04 57.1	+0.6
JCZ	Jackson Bay	20.71	203	P	P	08 05 06.4	+2.2
JCZ	Jackson Bay	20.71	203	P	P	08 05 04.5	+0.3
EIDS	Eidsvold	25.95	264	P	P	08 05 50.8	-0.5
EIDS				IAmb	IAmb	08 05 58.2	
	comp=Z,27nm,1.4s						
CTAO	Charters Tower	31.35	273	P	P	08 06 38.5	0.0
CTAO				IAmb	IAmb	08 06 40.0	
	comp=Z,12nm,0.9s						
STKA	Stephens Creek	34.05	250	P	P	08 07 02.3	+1.0
STKA	Stephens Creek	34.05	250	P	P	08 07 01.9	+0.6
	comp=Z,1.7nm,0.9s,baz=96,slow=13,SNR=2.8						
	comp=Z,1.7nm,0.9s						
INKA	Innaminka	34.94	257	P	P	08 07 07.6	-1.2
COEN	Coen	36.22	281	P	P	08 07 20.2	+0.6
COEN				IAmb	IAmb	08 07 34.2	
	comp=Z,11nm,1.0s						
BBOO	Buckleboo	38.74	249	P	P	08 07 40.3	+0.1
AS31	Alice Springs	41.66	262	P	P	08 08 03.7	-0.1
AS31				IAmb	IAmb	08 08 04.7	
	comp=Z,1.6nm,0.4s						
ASAR	Alice Springs	41.66	262	P	P	08 08 03.2	-0.5
ASAR	Alice Springs	41.66	262	P	P	08 08 03.8	+0.1
	comp=Z,1.6nm,0.4s,baz=91,slow=7.3,SNR=19						
	comp=Z,1.6nm,0.4s						
WB0	Warramunga Arr	42.17	268	P	P	08 08 06.8	-0.9
WB0				IAmb	IAmb	08 08 32.2	
	comp=Z,14nm,1.1s						
WRA	Warramunga Arr	42.17	268	P	P	08 08 07.2	-0.6
WRA	Warramunga Arr	42.17	268	P	P	08 08 07.1	-0.6
	comp=Z,2.8nm,0.6s,baz=103,slow=8.0,SNR=22						
	comp=Z,2.8nm,0.6s						
QSPA	South Pole Qui	64.71	180	P	P	08 10 48.7	+1.0
NVAR	Mina Array Bea	85.92	44	P	P	08 12 47.2	+0.8
	comp=Z,0.7nm,0.7s,baz=224,slow=7.7,SNR=6.6						
	comp=Z,0.7nm,0.7s						
PINE	Pine Mountain	87.64	39	P	P	08 12 54.7	+0.3
PINE				IAmb	IAmb	08 12 56.6	
	comp=Z,5.0nm,1.0s						
I07A	Izee	88.63	39	P	P	08 12 59.8	+0.8
I07A				IAmb	IAmb	08 13 00.5	
	comp=Z,1.7nm,0.8s						
J08A	Circle Bar Ran	88.78	40	P	P	08 13 00.6	+0.9
J08A				IAmb	IAmb	08 13 02.5	
	comp=Z,5.0nm,1.3s						
TXAR	Lajitas Array	91.35	58	P	P	08 13 13.2	+1.4
	comp=Z,0.6nm,0.7s,baz=214,slow=6.6,SNR=8.4						
	comp=Z,0.6nm,0.7s						
FINES	FINESS Array B	139.78	341	PKhKP	PKPpre	08 19 21.6	
	comp=Z,1.0nm,0.8s,baz=48,slow=2.8,SNR=3.4						
FINES				PKP	PKPdf	08 19 28.2	-1.4
	comp=Z,2.2nm,1.1s,baz=95,slow=4.0,SNR=4.3						
NB2	NORSAR Subarra	143.51	351	PKP	PKPab	08 19 34.0	-0.7
	comp=Z,0.5nm,0.5s,baz=12,slow=3.2						
NOA	NORSAR Array B	143.51	351	PKP	PKPab	08 19 34.0	-0.8
	comp=Z,0.6nm,0.4s,baz=9.2,slow=2.3,SNR=5.0						
HFS	Hagfors	143.95	348	PKP	PKPbc	08 19 35.2	-1.1
	comp=Z,3.7nm,0.4s,baz=46,slow=4.3,SNR=24						
MMAI	Mount Meron Ar	148.13	292	PKPbc	PKPbc	08 19 49.6	+0.5
	comp=Z,1.1nm,0.4s,baz=100,slow=4.8,SNR=1.7						
EKA	Eskdalemuir Ar	149.99	3	PKPbc	PKPbc	08 19 51.6	-1.2
	comp=Z,0.4nm,0.4s,baz=355,slow=3.1,SNR=4.1						
BUR08	Bucovina Ar. S	150.07	324		PKPdf	08 19 45.2	-2.7

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*UCR **26** 08:01:36.0±0.8, 8°.35N×82°.87W, h32^{km}±2^{km}, MW3.7*

*UPA **26** 08:01:37.4±1.0, 8°.41N×82°.81W, h19^{km}±4^{km}, MW3.4, Fault plane solution: NP1:ϕ_s133.00000°, δ48.00000°, λ-179.00000°.*

ISC 26 08:01:36.5±1.0, **8°.39N**±0°.03×**82°.85W**±0°.03, **h30^{km}**±7^{km}, **n44,** σ**0^{s}.53**/64, **12C-7D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NELY	Ciudad Neily	0.28	340	eP	Pb	08 01 43.5	-0.2
NELY				eS	Sn	08 01 49.6	-0.1
LMNES	Limones	0.29	182	eP	Pb	08 01 44.0	+0.1
LMNES	Limones	0.29	182	⇓iP	Pb	08 01 44.0	+0.1
LMNES				eS	Sn	08 01 50.5	+0.6
MCANO	Manzana, Boque	0.33	56	eP	Pb	08 01 44.6	+0.1
MCANO	Manzana, Boque	0.33	56	⇑iP	Pb	08 01 44.7	+0.3
FITO	Golfito	0.38	308	eP	Pb	08 01 43.9	-1.3
FITO				eS	Sb	08 01 50.2	-0.9
DVD	David	0.40	83	⇑iP	Pb	08 01 45.4	+0.1
DVD				eS	Sb	08 01 51.9	+0.5
MLIR3	Monte Lirio, C	0.40	3	⇓iP	Pn	08 01 46.0	-0.3
MLIR3				eS	Sb	08 01 52.3	+0.5
CSTBL	De las Acacias	0.40	87	eP	Pb	08 01 45.5	0.0
CSTBL	De las Acacias	0.40	87	⇑iP	Pb	08 01 45.6	0.0
CSTBL				eS	Sb	08 01 51.1	-0.5
EDAD	Golfito	0.41	310	eP	Pb	08 01 44.4	-1.2
PEDE3	Pedregal, Chir	0.42	90	⇑iP	Pb	08 01 45.6	-0.1
PEDE3				eS	Sb	08 01 51.8	-0.2
CLLRA	Cordillera,	0.42	33	eP	Pb	08 01 46.0	+0.1
CLLRA	Cordillera,	0.42	33	⇓iP	Pb	08 01 46.1	+0.1
CLLRA				eS	Sn	08 01 54.0	+0.5
LOCO3	Loma Colorada,	0.43	87	⇑iP	Pb	08 01 45.7	-0.1
LOCO3				eS	Sb	08 01 52.3	+0.2
RSRNO	Rio Sereno	0.43	358	⇓iP	Pn	08 01 46.4	-0.3
BRU2	Volcan	0.43	21	eP	Pb	08 01 46.1	+0.1
BRU2				eS	Sn	08 01 54.1	+0.3
BRU2	Volcan	0.43	21	⇓eP	Pb	08 01 46.2	+0.1
BRU2				eS	Sn	08 01 53.8	+0.1
TBS2		0.45	25	eP	Pn	08 01 47.0	0.0
VITO	San Vito	0.45	344	eP	Pb	08 01 46.3	+0.1
VITO				eS	Sn	08 01 54.6	+0.6
SCLRA	Santa Clara, W	0.45	8	eP	Pb	08 01 46.5	+0.3
SCLRA	Santa Clara, W	0.45	8	⇓iP	Pb	08 01 46.6	+0.3
LOMA3	Las Lomas, Chi	0.45	85	⇑iP	Pb	08 01 45.8	-0.4
LOMA3				eS	Sb	08 01 53.0	+0.1
PTAR3	Potrerillos Ar	0.46	49	i P	Pb	08 01 46.5	0.0
PTAR3				eS	Sb	08 01 52.7	-0.6
BC3P	Paso Ancho	0.49	29	⇓iP	Pb	08 01 46.8	-0.2
BC3P				eS	Sb	08 01 54.4	+0.4
CHIR3	Chiriqui UPA,	0.51	89	⇑iP	Pb	08 01 46.9	-0.3
CHIR3				eS	Sb	08 01 54.2	-0.2
BQTLY	Boquete Panama	0.53	46	⇑iP	Pb	08 01 47.4	-0.2
BQTLY				eS	Sn	08 01 56.0	-0.2
ALCO	Alturas Coton,	0.56	1	eP	Pb	08 01 47.6	-0.5
PSOM3	Paja de Sombre	0.60	60	⇑iP	Pb	08 01 48.1	-0.6
PSOM3				eS	Sb	08 01 56.3	-0.6
EDP2	Potrero Grande	0.70	333	eP	Pn	08 01 49.8	-0.7
PBNVO	Pueblo Nuevo,	0.82	52	eP	Pn	08 01 51.2	-0.8
RBALA	Bur	0.84	55	eP	Pn	08 01 51.8	-0.5
RBALA	Bur	0.84	55	⇑iP	Pn	08 01 51.9	-0.4
RBALA				eS	Sb	08 02 03.7	0.0
BURE	Buenos Aires	0.92	328	eP	Pn	08 01 52.7	-0.7
RMDIO	Remedios, Chir	1.02	99	⇑eP	Pn	08 01 54.6	-0.1
EDPE	Pejibaye, P	1.05	317	eP	Pn	08 01 54.8	-0.4
KKNTU	Kakintº	1.12	66	eP	Pn	08 01 55.7	-0.5
KKNTU	Kakintº	1.12	66	⇑iP	Pn	08 01 55.7	-0.5
KKNTU				eS	Sn	08 02 10.6	-0.1
BRIBI	Bribri	1.23	1	eP	Pb	08 01 59.1	0.0
TURIB	Turrialba	1.72	331	eP	Pn	08 02 05.1	+0.6
ABE2	San Pablo	1.77	318	eP	Pn	08 02 06.5	+1.2
ABRB	Las Abras (San	1.82	332	eP	Pn	08 02 07.2	+1.2
RVLA	Villa Bonita	1.86	337	eP	Pn	08 02 07.5	+1.2
CARI	Cariari	2.15	336	eP	Pn	08 02 11.7	+1.3

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*IDC **26** 08:03:53.6±6.0, 8°.81S×110°.71E, h0^{km}, mb4.1/5, mbtmp4.1/5, Error ellipse: s-maj=150.1km s-min=89.6km az=151.0*

*DJA **26** 08:04:02.1±0.6, 9°S±5°×11°1E±°, h10^{km}, M4.1/11, MLv4.1/11*

ISC 26 08:03:59.7±1.3, **9°.2S**±0°.1×**110°.3E**±0°.1, **h51^{km}, n17,** σ**1^{s}.61**/14, **mb4.0**/5, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	Pacitan	1.31	39	P	Pn	08 04 19.6	-2.1
UGM	Wanagama	1.31	8	P	Pn	08 04 22.9	+1.2
WOJI	Wonogiri, Jawa	1.49	23	P	Pn	08 04 23.7	-0.4
NGJI	Ngawi	2.15	31	P	Pn	08 04 34.7	+1.6
SMRI	Semarang	2.16	3	P	Pn	08 04 35.3	+2.0
SMRI				S	Sn	08 04 59.8	+0.9
CMJI	Cimerak	2.36	307	P	Pn	08 04 41.0	+5.0
GMJI	Gumukmas	3.21	73	P	Pn	08 04 48.7	+1.1
JAGI	Jajag, Banyuwa	3.84	79	P	Pn	08 04 57.2	+0.9
ABJI	Asem Bagus	4.10	70	P	Pn	08 05 02.3	+2.4
H08S2	Diego Garcia H	37.46	269	T	T	08 51 29.3	
	baz=94						
H08S3	Diego Garcia H	37.47	269	T	T	08 51 27.0	
	baz=94,SNR=3.5						
H08S1	Diego Carcia H	37.48	269	T	T	08 51 22.8	
	baz=94						
SONM	Songino Array	56.91	357	P	P	08 13 38.7	-0.9
	0.6nm,0.4s,baz=178,slow=7.8,SNR=1.9						
	0.6nm,0.4s						
MKAR	Makanchi Array	61.12	338	P	P	08 14 07.7	-1.1
	0.8nm,0.4s,baz=156,slow=7.6,SNR=11						
	0.8nm,0.4s						
BVAR	Borovoye Array	70.72	336	P	P	08 15 09.8	-0.4
	0.6nm,0.5s,baz=134,slow=8.5,SNR=3.9						
	0.6nm,0.5s						
TIXI	Tiksi	81.63	6	P	P	08 16 10.4	-1.4
	1.8nm,0.3s,baz=188,slow=2.1,SNR=6.6						
	1.8nm,0.3s						
BRTR	Keskin Array B	85.77	311	P	P	08 16 35.7	+1.8
	0.5nm,0.6s,baz=96,slow=7.4,SNR=3.8						
	0.5nm,0.6s						

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*KRSC **26** 08:06:10.5±1.0, 56°.00N×164°.16E, h9^{km}±19^{km}, Ml3.7*

*IDC **26** 08:06:11.1±1.8, 54°.81N×165°.37E, h0^{km}, mb3.5/2, mbtmp3.4/3, ML2.3/1, Error ellipse: s-maj=209.9km s-min=32.5km az=161.0*

ISC 26 08:06:10.0±1.9, **56°.16N**±0°.06×**164°.24E**±0°.04, **h3^{km}**±13^{km}, **n38,** σ**1^{s}.33**/50, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.80	274	eP	Pg	08 06 25.8	+0.6
KBTR				eS	Sb	08 06 36.8	-0.8
KBG	Krutoberegovo	0.86	277	eP	Pg	08 06 27.0	+0.5
KBG				eS	Sb	08 06 39.2	-0.4
BKI	Bering	1.37	134	eP	Pn	08 06 35.3	-0.8
BKI				eS	Sb	08 06 53.0	-1.2
SMKR	Semkarok	1.60	286	eP	Pn	08 06 39.4	+0.1
SMKR				eS	Sn	08 07 00.1	-0.4
BDR	Baidarnaya	1.73	285	eS	Sb	08 07 03.9	-0.9
SRKR	Sorokina	1.78	287	eS	Sn	08 07 04.5	-0.3
ZLN	Zelenaya	1.93	267	eP	Pn	08 06 44.4	+0.5
BZGR	Bezymyannyi-Gr	2.00	265	eP	Pn	08 06 45.3	+0.5
BZGR				eS	Sb	08 07 11.6	-0.8
KLY	Klyuchi	2.01	276	eP	Pn	08 06 43.7	-1.1
KLY				eS	Sn	08 07 07.9	-2.5
KRSR	Krestovskiy	2.05	273	eP	Pn	08 06 45.8	+0.3
BZWR	Bezymyannyi-We	2.11	266	eP	Pn	08 06 47.1	+0.8
BZMR	Bezymyannaya	2.12	265	eP	Pn	08 06 47.3	+0.9
BZMR				eS	Sb	08 07 13.8	-2.0
MKZ	Mys Kozlova	2.15	223	eP	Pn	08 06 46.6	-0.2
MKZ				eS	Sn	08 07 12.9	-1.1
KIRR	Kirishev	2.20	266	eP	Pn	08 06 48.1	+0.6
KPT	Kopyto	2.26	267	eP	Pn	08 06 49.6	+1.2
KMNR	Kamenistaya	2.29	261	eP	Pb	08 06 50.3	-1.7
KOZ	Kozyrevsk	2.45	269	eP	Pn	08 06 52.5	+1.6
KOZ				eS	Sb	08 07 23.4	-1.8
SRDR	Sredinnyy	2.53	275	eP	Pn	08 06 53.3	+1.3
SRDR				eS	Sn	08 07 24.7	+1.3
KII	Karymskiy	3.48	234	eP	Pn	08 07 06.2	+1.1
NLC	Nalytchevo	4.13	226	eS	Sn	08 08 02.0	-0.6
SDLR	Sedlovina	4.24	229	eP	Pn	08 07 17.0	+1.4
SDLR				eS	Sn	08 08 05.2	-0.4
KRER	Koryakskii	4.28	230	eP	Pn	08 07 17.8	+1.6
KRX	Arik	4.29	231	eP	Pn	08 07 18.0	+1.7
SMAR	Somma	4.29	230	eP	Pn	08 07 17.9	+1.5
SMAR				eS	Sn	08 08 06.6	-0.3
AVH	Avacha	4.31	230	eP	Pn	08 07 18.0	+1.4
UGLR	Uglovaya	4.32	229	eP	Pn	08 07 18.0	+1.4
KOK	Koryaka	4.34	231	eP	Pn	08 07 18.4	+1.5
GNL	Ganaly	4.39	238	eP	Pn	08 07 19.7	+2.0
DALK	Dalny	4.47	228	eP	Pn	08 07 19.6	+1.0
PET	Petropavlovsk	4.52	228	eP	Pn	08 07 20.8	+1.5
PETK	Petropavlovsk-	4.88	234	Pn	Pn	08 07 25.1	+0.8
	0.7nm,0.3s,baz=68,slow=18,SNR=16						
	2.8nm,0.6s						
KRMR	Karymshinskiy	4.88	229	eP	Pn	08 07 26.2	+1.9
RUS	Russkaya	5.02	224	eP	Pn	08 07 27.5	+1.4
GRL	Gorelyy	5.11	227	eP	Pn	08 07 29.9	+2.5
MTVR	Mutnovka	5.11	226	eP	Pn	08 07 29.5	+1.9
ASAK	Asacha	5.30	227	eP	Pn	08 07 32.5	+2.3
PDAR	Pinedale Array	53.98	65	P	P	08 15 36.2	+1.0
	0.3nm,0.6s,baz=296,slow=5.6,SNR=4.3						
	0.3nm,0.6s						
TXAR	Lajitas Array	67.28	71	P	P	08 17 06.8	+0.8
	0.4nm,0.5s,baz=300,slow=5.3,SNR=9.0						
	0.4nm,0.5s						

UPA 26 08:24:21.9±0.3, **8°.09N**×**83°.14W, h56^{km}**±8^{km}, **MW2.8, 2C-10D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMNES	Limones	0.27	87	⇓iP	Pn	08 24 39.6	+8.2
MCANO	Manzana, Boque	0.73	49	⇓iP	Pn	08 24 36.0	-0.5
CSTBL	De las Acacias	0.76	65	⇓iP	Pn	08 24 36.5	-0.2
DVD	David	0.76	63	⇑iP	Pn	08 24 36.5	-0.3
DVD				eS	Sn	08 24 47.2	-0.3
MLIR3	Monte Lirio, C	0.77	24	eS	Sn	08 24 50.3	+2.5
PEDE3	Pedregal, Chir	0.77	67	⇓iP	Pn	08 24 36.6	-0.2
RSRNO	Rio Sereno	0.78	21	eP	Pn	08 24 39.3	+2.3
LOCO3	Loma Colorada,	0.78	66	⇓iP	Pn	08 24 36.8	-0.1
LOMA3	Las Lomas, Chi	0.81	65	⇓iP	Pn	08 24 37.1	-0.2
BRU2	Volcan	0.83	32	i P	Pn	08 24 37.8	+0.1
BRU2				eS	Sn	08 24 50.1	+0.7
BRU2	Volcan	0.83	32	⇑iP	Pn	08 24 38.0	+0.2
BRU2				eS	Sn	08 24 45.0	-4.3
CLLRA	Cordillera,	0.83	38	⇓iP	Pn	08 24 37.6	-0.2
BQTLY	Boquete Panama	0.94	45	⇓iP	Pn	08 24 38.9	-0.3
PSOM3	Paja de Sombre	1.00	54	⇓iP	Pn	08 24 39.1	-0.8
RBALA	Bur	1.25	51	⇓iP	Pn	08 24 43.3	+0.2

MEX 26 08:30:44.2±0.6, **15°.99N**×**92°.88W, h162^{km}**±7^{km}, **MD3.9, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		0.44	229	eP	Pn	08 31 05.0	-1.6
PCIG				eS	Sn	08 31 21.8	-2.0
CCIG	Comitan	0.77	68	eP	Pn	08 31 06.9	-1.8
CCIG				eS	Sn	08 31 24.5	-2.9
TGIG		0.82	343	eP	Pn	08 31 07.5	-1.3
TGIG				eS	Sn	08 31 25.4	-2.4
PAVE	Pavencul	1.04	140	eP	Pn	08 31 09.7	-1.1
PAVE				eS	Sn	08 31 29.2	-1.9
PATR	El Naranjo	1.07	144	eP	Pn	08 31 09.3	-1.7
PATR				eS	Sn	08 31 28.6	-2.9
THIG		1.23	151	eS	Sn	08 31 32.0	-1.6
RTAL	Retalhuleu	1.85	142	eS	Sn	08 31 39.6	-5.2
HUIG	Huatulco	3.12	266	eP	Pn	08 31 29.0	-4.6
HUIG				eS	Sn	08 32 04.6	-7.2
VHO	Vista Hermosa	3.85	287	eP	Pn	08 31 46.1	+3.0
VHO				eS	Sn	08 32 25.4	-3.5
PEIG	Puerto Escondi	4.11	271	eP	Pn	08 31 41.6	-4.6
PEIG				eS	Sn	08 32 30.4	-4.1
TOIG	Toxpalan	4.52	298	eP	Pn	08 31 59.7	+8.0
TOIG				eS	Sn	08 32 39.4	-4.9
YOIG	Yosondua	4.56	282	eP	Pn	08 31 55.3	+2.9
YOIG				eS	Sn	08 32 36.4	-9.1
TXIG	Tlaxiaco	4.85	286	eP	Pn	08 31 56.5	+0.3
TXIG				eS	Sn	08 32 43.6	-8.8
HLIG	Huajuapan de L	5.06	292	eP	Pn	08 31 57.8	-1.0
HLIG				eS	Sn	08 32 52.0	-5.1

PNIG	Pinotepa	5.06	275	eP	Pn	08 31 56.4	-2.3
PNIG				eS	Sn	08 32 53.0	-3.9
FTIG	Fresnillo de T	5.38	291	eP	Pn	08 32 03.9	+0.9
FTIG				eS	Sn	08 32 57.6	-6.9

CATAC ***26*** *08:32:53.3±0.7, 13°N±3°×8°8W±°, h28^{km}±6^{km}, M3.4/21, MLv3.4/21, Error ellipse: s-maj=7.8km s-min=3.1km az=31.5, confirmed*
SNET ***26*** *08:32:53.5±1.1, 12°.72N×88°.52W, h20^{km}±6^{km}, ML3.4*
GCG ***26*** *08:32:54.5±2.7, 12°.70N×88°.55W, h61^{km}±170^{km}, MD4.0, ML3.2*
ISC 26 08:32:52.6±1.5**, 12°.68N**±0°.06×**88°.48W**±0°.03**, h23**^{km}±14^{km}**, n63,** σ**0^{s}29**/74**, 3C-13D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALJI	Alcalda de J	0.65	352	⇓P	Pn	08 33 06.8	+0.4
BLLM	Bellamira	0.79	17	eP	Pn	08 33 08.2	-0.2
TECA	Tecapa	0.81	358	eP	Pn	08 33 08.6	-0.2
TECA				eP	Pn	08 33 08.6	-0.2
CNRM	Centro Naciona	0.84	21	eS	Sn	08 33 21.0	+0.2
CNRM	Centro Naciona	0.84	21	P	Pb	08 33 08.8	+0.2
CNRM	Centro Naciona	0.84	21	S	Sn	08 33 20.9	+0.2
LCND	La Caada	0.84	43	eP	Pb	08 33 08.7	0.0
LCND				eS	Sn	08 33 20.8	-0.1
LCND	La Caada	0.84	43	⇓P	Pb	08 33 08.6	0.0
CNCH	Conchagua	0.86	47	eP	Pb	08 33 09.0	0.0
CNCH				eS	Sn	08 33 22.2	+0.7
CNCH	Conchagua	0.86	47	⇓P	Pb	08 33 08.8	-0.2
TECO	Alcaldia de Te	0.90	341	⇓P	Pb	08 33 09.4	-0.1
TECO	Alcaldia de Te	0.90	341	S	Sb	08 33 21.4	+0.3
PQSS	Presa 15 de Se	0.94	355	i P	Pn	08 33 10.4	-0.1
PQSS				eS	Sn	08 33 22.9	-0.3
PQSS	Presa 15 de Se	0.94	355	⇑P	Pn	08 33 10.4	-0.1
UESV	Universidad de	0.99	342	eP	Pn	08 33 11.0	-0.2
UESV	Universidad de	0.99	342	⇑P	Pn	08 33 11.1	-0.2
UESV	Universidad de	0.99	342	S	Sb	08 33 24.1	+0.3
POTN	Potosi Cosigui	1.00	72	⇓P	Pn	08 33 11.1	-0.2
POTN				S	Sb	08 33 24.4	+0.4
COEG	Centro de Oper	1.01	337	eP	Pn	08 33 11.3	-0.3
COEG				eS	Sb	08 33 24.5	+0.1
COEG				IAML		08 33 28.0	
	comp=Z,2µm,0.2s						
COEG	Centro de Oper	1.01	337	⇓P	Pn	08 33 11.2	-0.3
SCLA	Alcaldia de Sa	1.04	347	eP	Pn	08 33 12.0	0.0
SCLA	Alcaldia de Sa	1.04	347	⇓P	Pn	08 33 11.9	0.0
SCLA	Alcaldia de Sa	1.04	347	S	Sn	08 33 25.8	0.0
LFRS	El Faro	1.09	329	eP	Pn	08 33 12.6	-0.1
CAHU	Cacacuatique	1.11	14	eP	Pn	08 33 12.9	-0.1
PAVA	Las Pavas	1.12	336	eP	Pn	08 33 13.2	+0.2
PAVA	Las Pavas	1.12	336	S	Sb	08 33 27.8	+0.3
LALI	Alcalda de L	1.15	314	i P	Pb	08 33 13.7	-0.1
LALI				IAML		08 33 35.0	
	comp=E,62nm,0.2s						
LOMA	Loma Larga	1.17	325	eP	Pn	08 33 13.6	-0.1
LOMA				eS	Sn	08 33 28.9	-0.2
LOMA	Loma Larga	1.17	325	P	Pn	08 33 13.6	-0.1
LOMA	Loma Larga	1.17	325	S	Sb	08 33 29.5	+0.4
LFU	La Fuente	1.23	330	eS	Sb	08 33 30.5	-0.1
UESS	Universidad de	1.25	326	eP	Pn	08 33 15.1	+0.3
UEES	Universidad Ev	1.27	324	P	Pn	08 33 15.2	+0.1
PIC2	El Picacho	1.30	324	eP	Pb	08 33 16.3	-0.2
BOQS	Boqueron	1.30	323	eP	Pb	08 33 16.3	-0.3
PMON	Piamonte	1.31	322	eP	Pn	08 33 15.9	+0.2
PMON	Piamonte	1.31	322	P	Pn	08 33 15.8	+0.2
JAYA	Jayaque - finc	1.35	316	eP	Pn	08 33 16.4	+0.1
JAYA				eS	Sb	08 33 34.1	-0.2
JAYA				IAML		08 33 35.9	
	comp=Z,402nm,0.2s						
JAYA	Jayaque - finc	1.35	316	i P	Pn	08 33 16.5	+0.2
JAYA				i S	Sn	08 33 33.2	-0.4
JAYA	Jayaque - finc	1.35	316	P	Pn	08 33 16.3	0.0
CRIN	San Cristobal	1.39	89	⇓P	Pn	08 33 17.3	+0.5
PKGN	Cerro Pekin	1.47	90	⇓P	Pn	08 33 17.7	0.0
CHOHN	Orocuina	1.51	58	⇓P	Pn	08 33 17.9	-0.5
SBLS	San Blas	1.60	316	eP	Pb	08 33 20.8	-0.9
POLN	Al Sur del Vol	1.63	91	⇓P	Pn	08 33 19.8	-0.1
PLRN	Geotermica Pol	1.67	93	P	Pn	08 33 20.5	-0.1
ILCN	San Idelfonso	1.74	93	P	Pn	08 33 21.5	0.0
CNGA	Al SSO del Vol	1.75	96	⇑P	Pn	08 33 21.5	-0.1
CNGN	Cerro Negro	1.75	96	P	Pn	08 33 21.5	-0.1
NUBE	Las Nubes	1.75	314	eP	Pn	08 33 22.4	+0.6
NUBE				eS	Sn	08 33 43.9	+0.4
NUBE	Las Nubes	1.75	314	i P	Pn	08 33 22.1	+0.3
NUBE				i S	Sn	08 33 43.7	+0.2
NUBE	Las Nubes	1.75	314	P	Pn	08 33 22.1	+0.3
TGUH	Tegucigalpa,Un	1.80	41	⇓P	Pn	08 33 22.2	-0.2
SLOZ	Alcaldia de Sa	1.84	317	P	Pn	08 33 23.5	+0.6
FAME	Alcaldia de Sa	1.89	308	P	Pn	08 33 23.9	+0.4
MTO3	Montecristo	1.91	333	eP	Pn	08 33 24.0	-0.1
MTO3	Montecristo	1.91	333	i P	Pn	08 33 24.4	+0.4
COPN	Copaltepe	1.91	105	P	Pn	08 33 23.5	-0.3
MOMN	Momotombo	1.91	98	P	Pn	08 33 23.8	-0.1
YUSH	Yuscaran	2.03	51	⇓P	Pn	08 33 25.5	-0.1
SARH	Santa Rosa de	2.10	353	P	Pn	08 33 26.1	-0.4
MATN	Matagalpa	2.50	84	P	Pn	08 33 31.8	-0.3

CNRM ***26*** *08:33:27.0, 36°.04N×8°.48W, h31^{km}, ML3.7*
MDD ***26*** *08:33:28.9±0.5, 36°.13N×8°.51W, h23^{km}±4^{km}, mb_Lg3.8/70, Error ellipse: s-maj=4.0km s-min=2.3km az=52.0*
SFS ***26*** *08:33:30.4, 36°.17N×8°.45W, h30^{km}, mb4.4/5, ML4.0/18, ML4.2/27, MLv3.9/27*
IGIL ***26*** *08:33:30.8, 36°.16N×8°.48W, h30^{km}, ML3.2*
INMG ***26*** *08:33:31.0±1.3, 36°.16N×8°.51W, h33^{km}±21^{km}, ML3.1, Error ellipse: s-maj=3.1km s-min=1.9km az=62.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE Cabo S.Vicente*
ISC 26 08:33:28.3±1.2**, 36°.14N**±0°.04×**8°.42W**±0°.04**, h35**^{km}**, n152,** σ**1^{s}85**/231**, 3C-14D, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALBU	Albufeira	0.97	8	eP	Pn	08 33 47.2	+1.8
PALBU				eS	Sn	08 33 59.4	+1.5
PALBU				i AML	AML	08 33 59.9	
PALBU				i AML	AML	08 34 01.0	
PALBU				i AML	AML	08 34 06.8	
PFARO	Faro	0.97	24	eP	Pn	08 33 47.2	+1.8
PFARO				eS	Sn	08 33 59.4	+1.3
PFARO				i AML	AML	08 34 02.7	
PFARO				i AML	AML	08 34 04.5	
PFARO				i AML	AML	08 34 04.9	
PLAGO	Lagos	0.98	347	eP	Pn	08 33 46.6	+1.0
PLAGO				eS	Sn	08 33 58.9	+0.6
PLAGO				i AML	AML	08 34 00.5	
PLAGO				i AML	AML	08 34 01.0	
PLAGO				i AML	AML	08 34 02.7	
PPOR	Portimao	1.00	355	eS	Sn	08 33 59.7	+1.0
PPOR				i AML	AML	08 34 00.3	
PPOR				i AML	AML	08 34 04.9	
PSVI	Cabo S. Vicent	1.00	332	eP	Pn	08 33 46.4	+0.6
PSVI				eS	Sn	08 33 58.4	-0.4
PSVI				i AML	AML	08 33 59.0	
PSVI				i AML	AML	08 33 59.5	
PSVI				i AML	AML	08 34 04.2	
PFVI	Vila Bisbo	1.05	342	Pg	Pn	08 33 47.3	+0.8
PFVI	Vila Bisbo	1.05	342	⇓iP	Pn	08 33 47.3	+0.8
PFVI				eS	Sn	08 33 59.8	-0.1
PFVI				i AML	AML	08 34 00.2	
PFVI				i AML	AML	08 34 00.3	
PFVI				i AML	AML	08 34 00.4	
PFVI	Vila Bisbo	1.05	342	P	Pn	08 33 46.4	-0.2
PFVI	Vila Bisbo	1.05	342	S	Sn	08 34 00.5	+0.6
PTAV	Tavira	1.16	32	eS	Sn	08 34 04.2	+1.5
PBDV	Barranco-do-Ve	1.17	19	⇓iP	Pn	08 33 49.9	+1.7
PBDV				eS	Sn	08 34 03.9	+0.9
PBDV				i AML	AML	08 34 06.3	
PBDV				i AML	AML	08 34 08.3	
PBDV				i AML	AML	08 34 14.4	
MORF	Marmelete	1.18	351	eP	Pn	08 33 49.3	+0.9
MORF				eS	Sn	08 34 03.2	-0.1
MORF				IAML		08 34 04.1	
	comp=E,532nm,0.1s						
MORF	Marmelete	1.18	351	⇓iP	Pn	08 33 49.3	+0.9
MORF				eS	Sn	08 34 03.4	+0.1
MORF				i AML	AML	08 34 07.1	
MORF				i AML	AML	08 34 07.5	
MORF				i AML	AML	08 34 08.7	
PALJ	Aljezur	1.22	346	eP	Pn	08 33 49.8	+1.0
PALJ				eS	Sn	08 34 04.1	0.0
PALJ				i AML	AML	08 34 04.6	
PALJ				i AML	AML	08 34 04.7	
PVAQ	Vaqueiros	1.39	24	Pg	Pn	08 33 52.7	+1.6
PVAQ	Vaqueiros	1.39	24	eP	Pn	08 33 52.8	+1.6
PVAQ				eS	Sn	08 34 08.8	+0.5
PVAQ				i AML	AML	08 34 09.9	
PVAQ				i AML	AML	08 34 10.9	
PVAQ				i AML	AML	08 34 11.8	
PVAQ	Vaqueiros	1.39	24	P	Pn	08 33 52.3	+1.2
PVAQ	Vaqueiros	1.39	24	S	Sn	08 34 11.4	+3.2
PTEO	Sao Teotonio	1.43	350	⇓iP	Pn	08 33 52.8	+1.1
PTEO				eS	Sn	08 34 09.7	+0.3
PTEO				i AML	AML	08 34 11.2	
PTEO				i AML	AML	08 34 11.6	
PTEO				i AML	AML	08 34 12.4	
PCVE	Castro Verde	1.52	11	Sn	Sn	08 34 11.7	0.0
PCVE				Pn	Pn	08 33 54.8	+1.7
PCVE	Castro Verde	1.52	11	⇓iP	Pn	08 33 54.8	+1.7
PCVE				eS	Sn	08 34 12.2	+0.5
PCVE				i AML	AML	08 34 15.0	
PCVE				i AML	AML	08 34 15.3	
PCVE				i AML	AML	08 34 18.5	
EGRO	El Granado	1.58	28	Sn	Sn	08 34 13.2	0.0
EGRO				Pn	Pn	08 33 55.8	+2.0
EGRO	El Granado	1.58	28	⇓P	Pn	08 33 55.9	+2.0
EGRO				S	Sn	08 34 12.7	-0.4
EGRO				i IVmb_Lg		08 34 14.8	
ARNO	Arenosillo	1.66	54	Pn	Pn	08 33 57.6	+2.6
ARNO				Sn	Sn	08 34 17.0	+2.0
MESJ	Messejana	1.71	5	eP	Pn	08 33 57.1	+1.5
MESJ				eS	Sn	08 34 16.0	-0.2
MESJ				IAML		08 34 19.1	
	comp=N,124nm,0.2s						
PSINE	Sines	1.85	349	eP	Pn	08 33 58.4	+0.8
PSINE				eS	Sn	08 34 20.2	+0.5
PSINE				i AML	AML	08 34 20.8	
PSINE				i AML	AML	08 34 21.8	
PSINE				i AML	AML	08 34 22.9	
CNIL	Conil	1.93	82	Pn	Pn	08 34 01.8	+3.3
PBEJ	Beja	1.94	13	⇓eP	Pn	08 34 00.1	+1.3
PBEJ				eS	Sn	08 34 22.2	+0.3
PBEJ				i AML	AML	08 34 24.5	
PBEJ				i AML	AML	08 34 24.5	
PBEJ				i AML	AML	08 34 24.6	
EMIN	Mina Concepcio	2.15	40	Sn	Sn	08 34 25.7	-1.4
EMIN				Pn	Pn	08 34 03.3	+1.7
EMIN	Mina Concepcio	2.15	40	⇓P	Pn	08 34 03.3	+1.7
EMIN				S	Sn	08 34 26.8	-0.3
EMIN				i IVmb_Lg		08 34 28.2	
ESPR	Espera	2.19	70	Sn	Sn	08 34 28.6	+0.6
ESPR				Pn	Pn	08 34 04.5	+2.3
ESPR	Espera	2.19	70	⇑P	Pn	08 34 04.5	+2.3
ESPR				S	Sn	08 34 28.4	+0.3
ESPR				i IVmb_Lg		08 34 31.8	
PBAR	Barrancos	2.31	28	Sn	Sn	08 34 31.2	0.0
PBAR				Pn	Pn	08 34 05.5	+1.5
PBAR	Barrancos	2.31	28	eP	Pn	08 34 05.4	+1.5
PBAR				eS	Sn	08 34 31.2	0.0
PBAR				i AML	AML	08 34 33.4	
PBAR				i AML	AML	08 34 35.6	
PBAR				i AML	AML	08 34 35.9	
EJIF	Jimena Fronter	2.40	82	P	Pn	08 34 08.2	+3.0
EJIF				S	Sn	08 34 30.9	-2.4
EVO	Evora	2.41	8	Sn	Sn	08 34 33.2	-0.4
EVO				Pn	Pn	08 34 06.5	+1.2
EVO	Evora	2.41	8	⇓iP	Pn	08 34 06.5	+1.2
EVO				eS	Sn	08 34 33.4	-0.3
EVO				i AML	AML	08 34 34.8	
EVO				i AML	AML	08 34 35.2	
EVO				i AML	AML	08 34 35.2	
RSA	Sarsar	2.46	120	P	Pn	08 34 06.2	+0.2
RSA	Sarsar	2.46	120	S	Sn	08 34 34.7	-0.2
CHEFC	Chefchaouen	2.71	111	P	Pn	08 34 08.0	-1.4
CHEFC	Chefchaouen	2.71	111	S	Sn	08 34 41.2	+0.1
PARRA	Arraiolos	2.72	350	⇓iP	Pn	08 34 10.3	+0.7
PARRA				eS	Sn	08 34 40.5	-0.7
PARRA				i AML	AML	08 34 42.3	
PARRA				i AML	AML	08 34 42.5	
PARRA				i AML	AML	08 34 42.7	
PESTR	Estremoz	2.81	13	Pn	Pn	08 34 11.8	+1.1
PESTR	Estremoz	2.81	13	eP	Pn	08 34 11.8	+1.1
PESTR				eS	Sn	08 34 42.2	-1.1
PESTR				i AML	AML	08 34 43.9	
PESTR				i AML	AML	08 35 10.3	
PESTR				i AML	AML	08 35 11.4	
PESTR	Estremoz	2.81	13	P	Pn	08 34 10.6	-0.1
PESTR	Estremoz	2.81	13	S	Sn	08 34 46.6	+3.3
EBAD	Badajoz	2.84	23	Sn	Sn	08 34 43.8	-0.4
EBAD				Pn	Pn	08 34 12.4	+1.2
EBAD	Badajoz	2.84	23	P	Pn	08 34 12.4	+1.2
EBAD				S	Sn	08 34 42.9	-1.4
EBAD				i IVmb_Lg		08 34 46.3	
PMAFR	Mafra	2.90	347	Sn	Sn	08 34 45.4	-0.2
PMAFR				Pn	Pn	08 34 13.1	+1.2
PMAFR	Mafra	2.90	347	⇑iP	Pn	08 34 13.1	+1.2
PMAFR				eS	Sn	08 34 45.4	-0.2
PMAFR				i AML	AML	08 34 47.9	
PMAFR				i AML	AML	08 34 48.0	
PMAFR				i AML	AML	08 34 48.0	
PMTG	Montargil	2.93	3	⇓iP	Pn	08 34 13.4	+1.0
PMTG				eS	Sn	08 34 45.5	-0.9
PMTG				i AML	AML	08 34 48.1	
PMTG				i AML	AML	08 34 48.2	
PMTG				i AML	AML	08 34 48.2	
AVE	Averroes	2.95	163	Pn	Pn	08 34 14.5	+1.8
AVE	Averroes	2.95	163	P	Pn	08 34 10.4	-2.3
AVE	Averroes	2.95	163	S	Sn	08 34 45.5	-1.4
EMIJ	Mijas	2.97	81	Sn	Sn	08 34 47.4	-0.1
EMIJ				Pn	Pn	08 34 14.7	+1.7
EMIJ	Mijas	2.97	81	P	Pn	08 34 14.3	+1.3
EMIJ				S	Sn	08 34 44.9	-2.6
EMIJ				i IVmb_Lg		08 34 52.5	
ZHG	ZHG	3.06	151	P	Pn	08 34 15.1	+0.9
ZHG	ZHG	3.06	151	S	Sn	08 34 49.4	-0.2
ECAB	El Cabril	3.08	50	P		08 34 16.6	
ECAB				Pn	Pn	08 34 16.6	+2.1
ECAB				Sn	Sn	08 34 48.8	-1.4
ECAB	El Cabril	3.08	50	⇑P	Pn	08 34 16.6	+2.1
ECAB				S	Sn	08 34 48.4	-1.8
ECAB				i IVmb_Lg		08 34 53.1	
EMAL	Malaga-Limoner	3.28	78	Pn	Pn	08 34 20.0	+2.9
EMAL				Sn	Sn	08 34 56.0	+1.1
PMRV	Marv??o	3.39	14	⇓iP	Pn	08 34 19.9	+1.3
PMRV				eS	Sn	08 34 57.1	-0.6
PMRV				i AML	AML	08 34 57.7	
PMRV				i AML	AML	08 34 59.9	
PMRV				i AML	AML	08 35 03.9	
PSBE	So Bento	3.39	355	eP	Pn	08 34 20.1	+1.4
PSBE				eS	Sn	08 34 56.0	-1.7
PSBE				i AML	AML	08 34 58.6	
PSBE				i AML	AML	08 34 58.8	
PSBE				i AML	AML	08 35 03.3	
PSARD	Sardoal	3.46	3	⇓iP	Pn	08 34 21.0	+1.2
PSARD				eS	Sn	08 34 59.0	-0.6
PSARD				i AML	AML	08 35 01.0	
PSARD				i AML	AML	08 35 01.1	
PSARD				i AML	AML	08 35 01.4	
EGOR	Sierra Gorda,	3.60	73	Pn	Pn	08 34 24.4	+2.6
EGOR				Sn	Sn	08 35 03.1	0.0
EGOR	Sierra Gorda,	3.60	73	P	Pn	08 34 24.3	+2.6
EGOR				S	Sn	08 35 02.8	-0.3
EGOR				i IVmb_Lg		08 35 07.7	
EADA	Adamuz	3.68	55	Pn	Pn	08 34 24.8	+2.1
EADA				Sn	Sn	08 35 04.5	-0.4
EADA	Adamuz	3.68	55	⇓P	Pn	08 34 24.8	+2.1
EADA				S	Sn	08 35 04.0	-0.9
EADA				i IVmb_Lg		08 35 06.8	
PALE	Palemas	3.76	103	P	Pn	08 34 23.2	-0.6
PALE	Palemas	3.76	103	S	Sn	08 35 07.2	+0.4
PCBR	Castelo Branco	3.77	11	eP	Pn	08 34 25.4	+1.4
PCBR				eS	Sn	08 35 06.9	-0.3
PCBR				i AML	AML	08 35 07.4	
PCBR				i AML	AML	08 35 08.5	
PCBR				i AML	AML	08 35 09.0	
LCRM	LCR	3.81	129	P	Pn	08 34 24.1	-0.6
LCRM	LCR	3.81	129	S	Sn	08 35 07.4	-0.9
PCAS	Casmilo, Conde	3.91	359	eP	Pn	08 34 27.2	+1.3
PCAS				eS	Sn	08 35 08.7	-1.9
PCAS				i AML	AML	08 35 11.2	
PCAS				i AML	AML	08 35 11.7	
PCAS				i AML	AML	08 35 12.5	
ELGU	Los Guajares,	3.93	78	Pn	Pn	08 34 29.1	+2.9
ELGU	Los Guajares,	3.93	78	P	Pn	08 34 28.2	+2.0
ELGU				S	Sn	08 35 10.5	-0.7
ELGU				i IVmb_Lg		08 35 20.9	
AKLM	AKL	4.06	112	P	Pn	08 34 25.8	-2.2
AKLM	AKL	4.06	112	S	Sn	08 35 11.0	-3.5
COI	Coimbra	4.07	0	eP	Pn	08 34 29.1	+1.1
COI				eS	Sn	08 35 12.2	-2.1
COI				i AML	AML	08 35 14.2	
COI				i AML	AML	08 35 15.1	
COI				i AML	AML	08 35 17.0	
EQTA	Presa de Quent	4.14	74	Pn	Pn	08 34 32.1	+3.0
EQTA				Sn	Sn	08 35 16.6	+0.2
EQUE	Quentar	4.14	74	P	Pn	08 34 31.9	+2.8
EQUE				S	Sn	08 35 16.7	+0.3
EQUE				i IVmb_Lg		08 35 20.8	
E0803	Jimena (Jaen)	4.31	65	P	Pn	08 34 33.4	+2.0
E0803				S	Sn	08 35 19.9	-0.5
MTE	Manteigas	4.31	9	eP	Pn	08 34 32.6	+1.1
MTE				eS	Sn	08 35 19.6	-1.0
MTE				i AML	AML	08 35 20.5	
MTE				i AML	AML	08 35 21.9	
MTE				i AML	AML	08 35 22.2	
EPLA	Plasencia	4.33	24	P	Pn	08 34 33.0	+1.3
EPLA				S	Sn	08 35 18.6	-2.4
EPLA				i IVmb_Lg		08 35 21.3	
EALB	Alboran	4.37	91	Sn	Sn	08 35 19.0	-2.7
EALB	Alboran	4.37	91	P	Pn	08 34 32.5	+0.4
EALB				S	Sn	08 35 20.0	-1.8
EALB				i IVmb_Lg		08 35 30.9	
MD31	MD31	4.45	136	P	Pn	08 34 31.9	-1.4
MD31	MD31	4.45	136	S	Sn	08 35 22.6	-1.2
GOG	Mont Gurugu	4.51	100	P	Pn	08 34 32.4	-1.7
GOG	Mont Gurugu	4.51	100	S	Sn	08 35 25.0	-0.4
MDT	Midelt	4.57	135	P	Pn	08 34 33.6	-1.4
MDT	Midelt	4.57	135	S	Sn	08 35 25.3	-1.6
PSIM	Granatula de C	4.58	53	P	Pn	08 34 37.0	+1.9
PSIM				S	Sn	08 35 25.5	-1.5
PVIS	Viseu	4.59	5	eP	Pn	08 34 36.6	+1.3
PVIS				eS	Sn	08 35 26.3	-1.1
EQES	Quesada	4.59	67	P	Pn	08 34 36.5	+1.1
EQES				S	Sn	08 35 26.8	-0.7
EQES				i IVmb_Lg		08 35 30.9	
PAB	San Pablo	4.69	42	P	Pn	08 34 38.2	+1.6
PAB				S	Sn	08 35 26.5	-3.3
PAB				i IVmb_Lg		08 35 29.4	
OUK	Oukaimeden	4.94	174	P	Pn	08 34 38.6	-1.7
OUK	Oukaimeden	4.94	174	S	Sn	08 35 34.0	-2.3
ESDC	Sonseca Array	4.99	44	P	Pn	08 34 42.3	+1.6
ESDC				S	Sn	08 35 33.6	-3.6
ESDC				i IVmb_Lg		08 35 36.6	
ESBB	Sonseca Array	4.99	44	P	Pn	08 34 42.4	+1.6
ESBB				S	Sn	08 35 33.5	-3.8
PTO	Porto	5.00	358	eP	Pn	08 34 40.5	-0.2
PTO				eS	Sn	08 35 32.9	-4.4
ENIJ	Nijar	5.07	79	S	Sn	08 35 38.5	-0.7
ENIJ				i IVmb_Lg		08 35 45.4	
MVO	Moncorvo	5.14	12	eP	Pn	08 34 43.7	+0.9
MVO				eS	Sn	08 35 38.7	-2.2
MVO				i AML	AML	08 35 40.6	
MVO				i AML	AML	08 35 41.0	
MVO				i AML	AML	08 35 41.8	
PVRL	Vila Real	5.16	6	eP	Pn	08 34 44.3	+1.2
PVRL				i AML	AML	08 35 42.4	
PVRL				i AML	AML	08 35 43.4	
PVRL				i AML	AML	08 35 44.6	
POLO	Lamas de Olo	5.25	5	eP	Pn	08 34 45.4	+1.0
POLO				eS	Sn	08 35 40.9	-2.9
POLO				i AML	AML	08 35 43.9	
POLO				i AML	AML	08 35 44.1	
POLO				i AML	AML	08 35 44.5	
GOLM	Goulmima	5.28	146	P	Pn	08 34 43.8	-1.0
GOLM	Goulmima	5.28	146	S	Sn	08 35 46.6	+2.2
TIO	Tiouine	5.28	169	Pn	Pn	08 34 46.4	+1.5
TIO	Tiouine	5.28	169	P	Pn	08 34 42.6	-2.3
TIO	Tiouine	5.28	169	S	Sn	08 35 42.8	-1.9
EJUZ	Juzbado, Salam	5.33	21	P	Pn	08 34 46.4	+1.0
EJUZ				S	Sn	08 35 43.2	-2.3
OUZM	OUZ	5.39	165	P	Pn	08 34 46.5	+0.1
TTIG	Tnine Tigouga,	5.57	180	P	Pn	08 34 46.0	-2.9
PCAB	Cabril	5.58	3	eP	Pn	08 34 50.0	+1.2
PCAB				eS	Sn	08 35 48.8	-2.8
PCAB				i AML	AML	08 35 52.0	
PCAB				i AML	AML	08 35 53.1	
PCAB				i AML	AML	08 35 53.7	
GUD	Guadarrama	5.61	35	P	Pn	08 34 51.0	+1.7
GUD				S	Sn	08 35 51.6	-1.0
GUD				i IVmb_Lg		08 35 53.1	
CGR	Cap Guir	5.62	193	P	Pn	08 34 46.5	-2.9
CGR	Cap Guir	5.62	193	S	Sn	08 35 51.0	-1.8
EZAR	Zarzadilla de	5.66	70	P	Pn	08 34 52.0	+2.1
EZAR				S	Sn	08 35 52.7	-1.0
EZAR				i IVmb_Lg		08 35 56.9	
ELOB	Lobios	5.73	3	P	Pn	08 34 51.6	+0.7
ELOB				S	Sn	08 35 52.8	-2.7
ELOB				i IVmb_Lg		08 35 55.9	
PBRG	Braganca	5.81	12	eP	Pn	08 34 53.0	+1.0
PBRG				eS	Sn	08 35 53.5	-3.9
PBRG				i AML	AML	08 35 57.3	
PBRG				i AML	AML	08 35 58.0	
PBRG				i AML	AML	08 35 58.3	
PGAV	Gavieira, Arco	5.82	1	eP	Pn	08 34 52.9	+0.7
PGAV				eS	Sn	08 35 54.3	-3.5
PGAV				i AML	AML	08 35 59.7	
PGAV				i AML	AML	08 36 00.1	
PGAV				i AML	AML	08 36 02.1	
UCM	Universidad Co	5.83	43	Pn	Pn	08 34 54.7	+2.5
UCM				Sn	Sn	08 35 54.9	-2.9
TZRR	Tazzarine	5.84	155	P	Pn	08 34 50.9	-1.6
TZRR	Tazzarine	5.84	155	S	Sn	08 35 58.0	-0.3
ARF	Arif	5.85	142	P	Pn	08 34 51.9	-0.7
ARF	Arif	5.85	142	S	Sn	08 35 58.4	-0.1
ECAL	Calabor	5.94	12	Pn	Pn	08 34 55.0	+1.1
ECAL				Sn	Sn	08 35 58.0	-2.8
ECAL	Calabor	5.94	12	P	Pn	08 34 55.0	+1.1
ECAL				S	Sn	08 35 59.4	-1.3
ECAL				i IVmb_Lg		08 36 00.7	
EZAM	Zamans	6.01	358	P	Pn	08 34 55.8	+1.1
EZAM				S	Sn	08 35 59.4	-2.8
EZAM				i IVmb_Lg		08 36 01.6	
CART	Cartagena	6.12	74	Pn	Pn	08 34 56.9	+0.7
CART				Sn	Sn	08 36 01.7	-3.3
ZGR	Zagora	6.44	158	P	Pn	08 34 58.1	-2.7
EVIV	Cofrentes, Val	6.58	59	S	Sn	08 36 14.3	-2.0
EVIV				i IVmb_Lg		08 36 16.9	
EAGO	Agolada(Pontev	6.66	2	P	Pn	08 35 04.6	+0.9
EAGO				S	Sn	08 36 14.8	-3.6
EAGO				i IVmb_Lg		08 36 19.9	
EMAZ	Mazaricos	6.82	357	P	Pn	08 35 06.6	+0.8
EMAZ				S	Sn	08 36 18.8	-3.4
EMAZ				i IVmb_Lg		08 36 22.4	
ECHE	Chera	6.83	57	Pn	Pn	08 35 07.8	+1.8
ECHE				Sn	Sn	08 36 19.7	-2.8
ECHE	Chera	6.83	57	P	Pn	08 35 07.8	+1.8
ECHE				S	Sn	08 36 19.4	-3.1
ECHE				i IVmb_Lg		08 36 28.6	
ETOR	Torete	6.84	45	P	Pn	08 35 08.3	+2.1
ETOR				S	Sn	08 36 21.4	-1.4
ETOR				i IVmb_Lg		08 36 25.2	
EBEN2	Beniarda presa	7.02	66	S	Sn	08 36 24.5	-2.7
EBEN2				i IVmb_Lg		08 36 26.9	
E0901	Celadas (Terue	7.19	51	P	Pn	08 35 12.8	+1.8
E0901				S	Sn	08 36 28.5	-2.9
E0901				i IVmb_Lg		08 36 34.4	
PMPST	Porto Santo, M	7.20	247	eP	Pn	08 35 10.9	-0.1
PMPST				eS	Sn	08 36 23.1	-8.6
PMPST				i AML	AML	08 36 27.0	
PMPST				i AML	AML	08 36 29.0	
PMPST				i AML	AML	08 36 29.6	
EPON	Pontenova	7.25	7	P	Pn	08 35 13.1	+1.3
EPON				S	Sn	08 36 30.0	-2.8
EPON				i IVmb_Lg		08 36 48.3	
EMOS	Mosqueruela	7.54	54	S	Sn	08 36 37.8	-2.4
EMOS				i IVmb_Lg		08 36 39.9	

EARI	Arriondas	7.57	18	P	Pn	08 35 17.9	+1.7
EARI				S	Sn	08 36 36.9	-3.9
EARI				*i* IVmb_Lg		08 36 52.7	
ELAN	Lanestosa	8.06	27	P	Pn	08 35 23.4	+0.6
ELAN				S	Sn	08 36 49.0	-3.8
ELAN				*i* IVmb_Lg		08 37 01.1	
EIBI	Ibiza	8.27	67	Sn	Sn	08 36 53.8	-4.1
EIBI	Ibiza	8.27	67	S	Sn	08 36 53.4	-4.4
EIBI				*i* IVmb_Lg		08 36 59.0	
ESAC	San Caprasio	8.33	46	P	Pn	08 35 27.1	+0.4
ESAC				S	Sn	08 36 55.3	-4.2
ESAC				*i* IVmb_Lg		08 37 05.8	
EORO	Oroz-Betelu	8.70	37	P	Pn	08 35 32.6	+0.9
EORO				S	Sn	08 37 05.1	-3.4
EORO				*i* IVmb_Lg		08 37 08.1	
EALK	Alkurruntz	8.85	35	P	Pn	08 35 34.1	+0.3
EALK				S	Sn	08 37 07.6	-4.7
EALK				*i* IVmb_Lg		08 37 10.3	
EPOB	Poblet	9.06	52	P	Pn	08 35 36.5	-0.2
EPOB				S	Sn	08 37 13.1	-4.4
ECHI	Chisagues Biel	9.32	43	P	Pn	08 35 41.4	+1.2
ECHI				S	Sn	08 37 20.0	-3.9
ETOS	Mallorca	9.58	64	Sn	Sn	08 37 24.5	-5.7

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*KRSC **26** 08:33:35.9±1.8, 56°.26N×164°.55E, h47^{km}±20^{km}, Ml3.8*

*IDC **26** 08:33:37.5±2.0, 54°.81N×165°.56E, h0^{km}, mb3.4/2, mbtmp3.4/3, ML1.7/1, Error ellipse: s-maj=124.0km s-min=33.1km az=157.0*

ISC 26 08:33:36.3±1.1, 56°.26N±0°.06×164°.48E±0°.04, h10^{km}, n35, σ1^{s}.50/47, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.93	268	*e*P	Pg	08 33 53.3	-0.9
KBTR				*e*S	Sg	08 34 04.4	-1.8
KBG	Krutoberegovo	0.99	271	*e*P	Pg	08 33 54.0	-1.3
KBG				*e*S	Sg	08 34 06.8	-1.4
BKI	Bering	1.35	141	*e*P	Pg	08 34 01.2	-1.0
BKI				*e*S	Sn	08 34 18.3	-0.8
SMKR	Semkarok	1.71	282	*e*P	Pn	08 34 06.2	0.0
SMKR				*e*S	Sn	08 34 27.6	-0.4
BDR	Baidarnaya	1.84	281	*e*S	Sn	08 34 31.9	+0.4
SRKR	Sorokina	1.88	284	*e*S	Sn	08 34 32.4	+0.1
ZLN	Zelenaya	2.07	265	*e*P	Pn	08 34 12.1	+0.9
ZLN				*e*S	Sn	08 34 37.8	+0.7
CIRR	Tsirk	2.09	268	*e*S	Sn	08 34 37.9	+0.3
LGNR	Loginova	2.13	267	*e*S	Sn	08 34 39.0	+0.3
KLY	Klyuchi	2.13	273	*e*P	Pn	08 34 11.1	-0.8
KLY				*e*S	Sn	08 34 35.6	-2.9
BZGR	Bezymyannyi-Gr	2.14	263	*e*P	Pn	08 34 13.4	+1.2
BZGR				*e*S	Sn	08 34 39.0	+0.1
KRSR	Krestovskiy	2.19	271	*e*P	Pn	08 34 13.5	+0.8
KRSR				*e*S	Sn	08 34 39.3	-0.6
BZWR	Bezymyannyi-We	2.25	264	*e*P	Pn	08 34 14.5	+0.8
BZMR	Bezymyannaya	2.26	263	*e*P	Pn	08 34 14.7	+0.9
BZMR				*e*S	Sn	08 34 41.8	0.0
MKZ	Mys Kozlova	2.32	224	*e*P	Pn	08 34 13.6	-0.8
MKZ				*e*S	Sn	08 34 38.8	-4.1
KIRR	Kirishev	2.34	264	*e*P	Pn	08 34 16.6	+1.7
KIRR				*e*S	Sn	08 34 44.4	+0.7
KMNR	Kamenistaya	2.44	260	*e*P	Pn	08 34 17.8	+1.6
TUMD	Tumrok D	2.54	247	*e*P	Pn	08 34 18.1	+0.5
KOZ	Kozyrevsk	2.58	267	*e*P	Pn	08 34 20.0	+1.8
KOZ				*e*S	Sn	08 34 51.7	+2.1
SRDR	Sredinnyy	2.66	273	*e*P	Pn	08 34 21.0	+1.9
SRDR				*e*S	Sn	08 34 52.2	+0.8
OSSR	Ossora	3.10	346	*e*S	Sn	08 34 58.9	-3.2
SDLR	Sedlovina	4.41	230	*e*P	Pn	08 34 44.1	+0.8
KRX	Arik	4.45	232	*e*P	Pn	08 34 44.8	+0.9
SMAR	Somma	4.45	230	*e*P	Pn	08 34 44.9	+0.9
AVH	Avacha	4.48	230	*e*P	Pn	08 34 45.2	+1.0
KOK	Koryaka	4.50	231	*e*P	Pn	08 34 46.1	+1.5
GNL	Ganaly	4.56	238	*e*P	Pn	08 34 46.9	+1.5
DALK	Dalny	4.64	228	*e*P	Pn	08 34 46.8	+0.5
PETK	Petropavlovsk- 0.1nm,0.3s,baz=67,slow=17,SNR=5.7 3.9nm,0.9s	5.04	234	Pn	Pn	08 34 53.0	+1.1
RUS	Russkaya	5.18	225	*e*P	Pn	08 34 54.4	+0.6
GRL	Gorelyy	5.27	228	*e*P	Pn	08 34 56.9	+1.7
MTVR	Mutnovka	5.28	227	*e*P	Pn	08 34 57.1	+1.8
ASAK	Asacha	5.47	227	*e*P	Pn	08 35 00.9	+3.1
ILAR	Eielson Array 0.9nm,1.2s,baz=274,slow=8.4,SNR=3.3 0.9nm,1.2s	24.80	50	P	P	08 39 05.2	+7.2
TXAR	Lajitas Array 0.4nm,0.7s,baz=306,slow=4.9,SNR=5.6 0.4nm,0.7s	67.13	71	P	P	08 44 32.1	+2.0

UPA 26 08:33:59.0±0.9, 8°.47N×82°.89W, h37^{km}±12^{km}, MW2.7, 3C-4D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCANO	Manzana, Boque	0.33	71	⇓*i*P	Pn	08 34 07.2	-0.2
MLIR3	Monte Lirio, C	0.33	10	*e*P	Pn	08 34 07.6	+0.1
MLIR3				*e*S	Sn	08 34 13.7	-0.7
RSRNO	Rio Sereno	0.35	4	*e*S	Sn	08 34 14.2	-0.4
LMNES	Limones	0.36	176	⇑*i*P	Pn	08 34 06.8	-0.8
BRU2	Volcan	0.38	30	⇑*i*P	Pn	08 34 08.2	+0.3
BRU2				*e*S	Sn	08 34 15.6	+0.7
BRU2	Volcan	0.38	30	⇑*i*P	Pn	08 34 08.2	+0.2
BRU2				*e*S	Sn	08 34 15.8	+0.9
SCLRA	Santa Clara, W	0.38	16	*i* P	Pn	08 34 08.5	+0.5
SCLRA				*e*S	Sn	08 34 14.5	-0.4
CLLRA	Cordillera,	0.39	44	⇓*i*P	Pn	08 34 08.3	+0.3
DVD	David	0.43	94	*e*P	Pn	08 34 08.5	0.0
DVD				*e*S	Sn	08 34 15.3	-0.1
BC3P	Paso Ancho	0.44	38	*e*P	Pn	08 34 09.1	+0.2
BC3P				*e*S	Sn	08 34 16.2	+0.2
CSTBL	De las Acacias	0.44	97	*e*S	Sn	08 34 15.8	+0.1
LOCO3	Loma Colorada,	0.47	97	*e*S	Sn	08 34 16.5	+0.3
PEDE3	Pedregal, Chir	0.47	100	*e*P	Pn	08 34 09.4	+0.4
PEDE3				*e*S	Sn	08 34 16.2	0.0
BQTLY	Boquete Panama	0.51	55	*e*P	Pn	08 34 09.8	-0.1
BQTLY				*e*S	Sn	08 34 19.5	+1.9
CHIR3	Chiriqui UPA,	0.55	97	*e*S	Sn	08 34 19.9	+1.5
PSOM3	Paja de Sombre	0.60	69	*e*P	Pn	08 34 10.7	-0.5
PSOM3				*e*S	Sn	08 34 20.4	+0.7
RBALA	Bur	0.83	60	⇓*i*P	Pn	08 34 14.4	+0.2
KKNTU	Kakintº	1.13	71	⇓*i*P	Pn	08 34 18.4	+0.2

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*UCR **26** 08:41:16.4±1.0, 8°.34N×82°.88W, h26^{km}±3^{km}, MW3.5*

*CATAC **26** 08:41:17.3±0.9, 8°N±6°×8°3W±°, h5^{km}±3^{km}, M3.5/8, MLv3.5/8, Error ellipse: s-maj=13.2km s-min=6.4km az=16.2, confirmed*

ISC 26 08:41:16.7±1.0, 8°.37N±0°.04×82°.90W±0°.03, h13^{km}, n50, σ1^{s}.13/52, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDITO	Canoas	0.21	8	P	Pg	08 41 22.6	+1.3
CDITO	Canoas	0.21	8	S	Sg	08 41 27.1	+2.7
LMNES	Limones	0.27	171	*e*P	Pg	08 41 23.9	+1.6
NELY	Ciudad Neily	0.28	351	*e*P	Pg	08 41 23.5	+0.9
NELY				*e*S	Sb	08 41 29.3	+0.9
FITO	Golfito	0.36	316	*e*P	Pg	08 41 24.0	0.0
MCANO	Manzana, Boque	0.38	58	*e*P	Pg	08 41 24.8	+0.4
EDAD	Golfito	0.39	317	*e*P	Pg	08 41 24.5	0.0
RSRNO	Rio Sereno	0.45	5	*e*P	Pg	08 41 26.3	+0.6
VITO	San Vito	0.46	352	*e*P	Pg	08 41 26.4	+0.7
CSTBL	De las Acacias	0.46	84	*e*P	Pg	08 41 25.7	-0.1
CLLRA	Cordillera,	0.47	37	*e*P	Pg	08 41 26.1	0.0
BRU2	Volcan	0.47	26	*e*P	Pg	08 41 26.3	+0.1
BRU2				*e*S	Sg	08 41 34.0	+1.5
BRU2	Volcan	0.47	26	P	Pg	08 41 26.4	+0.3
SCLRA	Santa Clara, W	0.48	14	*e*P	Pg	08 41 26.8	+0.5
TBS2		0.49	30	*e*P	Pg	08 41 27.3	+0.9
ALCO	Alturas Coton,	0.58	7	*e*P	Pg	08 41 27.8	-0.4
ALCO				*e*S	Sg	08 41 36.7	+0.7
BQTLY	Boquete Panama	0.58	48	*e*P	Pg	08 41 27.6	-0.7
EDP2	Potrero Grande	0.70	337	*e*P	Pg	08 41 30.2	-0.2
EDP2				*e*S	Sb	08 41 41.0	+0.6
RBALA	Bur	0.90	55	*e*P	Pb	08 41 32.1	-2.1
BURE	Buenos Aires	0.91	332	*e*P	Pg	08 41 33.2	-1.2
DRK0	Durika	0.95	339	*e*P	Pg	08 41 33.7	-1.5
DRK0	Durika	0.95	339	P	Pg	08 41 33.8	-1.4
DRK0	Durika	0.95	339	S	Sg	08 41 47.1	-0.7
EDPE	Pejibaye, P	1.03	320	*e*P	Pb	08 41 35.0	-1.4
OCHAL	Ojochal	1.03	315	S	Sg	08 41 50.4	+0.2
OCHAL	Ojochal	1.03	315	P	Pb	08 41 35.5	-1.0
RMDIO	Remedios, Chir	1.07	97	*e*P	Pb	08 41 35.0	-2.1
SAJE	San Jernim	1.14	328	*e*P	Pb	08 41 35.8	-2.7
KKNTU	Kakintº	1.18	66	*e*P	Pn	08 41 36.1	-2.9
BRIBI	Bribri	1.25	4	*e*P	Pn	08 41 39.9	0.0
PIEC	Cerro El Cedra	1.63	320	*e*P	Pn	08 41 44.4	-1.0
LCR2	La Lucha 2	1.75	322	P	Pn	08 41 47.0	0.0
LCR2	La Lucha 2	1.75	322	S	Sb	08 42 10.9	+0.2
ABE2	San Pablo	1.75	320	*e*P	Pn	08 41 46.4	-0.6
GMAL	Guarumal, Vera	1.76	110	*e*P	Pn	08 41 45.1	-1.8
PCAYA	Pacayas	1.78	330	*e*P	Pn	08 41 47.1	-0.4
VTCV	VTCV, Calle Va	1.80	333	*e*P	Pn	08 41 47.1	-0.6
RESJ	San Isidro (Tu	1.81	336	*e*P	Pn	08 41 47.6	-0.1
PAR1A	Puntarenas Pro	1.81	313	*e*P	Pn	08 41 47.8	+0.1
ABRB	Las Abras (San	1.82	334	*e*P	Pn	08 41 47.8	-0.2
CVTQ	Turrialba Volc	1.84	332	*e*P	Pn	08 41 47.5	-0.9
VTR0	Volcan Turrial	1.85	333	*e*P	Pn	08 41 47.9	-0.6
ACOS	Acosta	1.89	319	*e*P	Pn	08 41 48.2	-0.6
TCS1	Tacares	2.16	320	P	Pn	08 41 53.8	+1.3
TRT2	Tortugero	2.33	339	S	Sn	08 42 24.6	+1.3
TRT2	Tortugero	2.33	339	P	Pn	08 41 56.4	+1.6
COVE	Coope Vega, Sa	2.77	328	S	Sn	08 42 36.8	+2.7
COVE	Coope Vega, Sa	2.77	328	P	Pn	08 42 02.6	+1.8
CMARA	Lajas Hojancha	2.98	304	P	Pn	08 42 04.1	+0.3
CMARA	Lajas Hojancha	2.98	304	S	Sn	08 42 39.2	-0.3

IDC 26 08:45:32.0±51.0, 17°.91S×178°.21W, h627^{km}±91^{km}, mb2.9/3, mbtmp4.0/4, Error ellipse: s-maj=981.5km s-min=122.7km az=81.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu 19nm,0.6s,baz=57,slow=2.5,SNR=16	3.57	272	P	P	08 46 56.7	-0.1
STKA	Stephens Creek 2.8nm,0.9s,baz=77,slow=14,SNR=3.6 2.8nm,0.9s	38.79	241	P	P	08 52 05.2	0.0
WRA	Warramunga Arr 0.6nm,0.4s,baz=95,slow=7.0,SNR=24 0.6nm,0.4s	44.82	260	P	P	08 52 52.5	0.0
ASAR	Alice Springs 1.6nm,0.4s,baz=91,slow=7.7,SNR=34 1.6nm,0.4s	44.97	254	P	P	08 52 53.6	0.0

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*UCR **26** 08:47:16.0±0.9, 8°.32N×82°.84W, h17^{km}±5^{km}, MW3.8*

*CATAC **26** 08:47:16.5±0.8, 8°N±5°×8°3W±°, h10^{km}±4^{km}, M3.9/8, MLv3.9/8, Error ellipse: s-maj=13.3km s-min=8.8km az=44.8, confirmed*

ISC 26 08:47:14.8±1.2, 8°.30N±0°.07×82°.86W±0°.04, h13^{km}, n73, σ1^{s}.22/77, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDITO	Canoas	0.28	358	P	Pb	08 47 22.8	+1.2
BRU2	Volcan	0.52	19	P	Pb	08 47 26.3	+0.3
BQTLY	Boquete Panama	0.61	41	*e*P	Pb	08 47 27.5	+0.1
EDP2	Potrero Grande	0.78	337	*e*P	Pb	08 47 30.6	+0.3
EDP2				*e*S	Sb	08 47 41.7	+1.0
PANP	Palmar Norte	0.88	318	*e*P	Pg	08 47 32.0	0.0
PBNVO	Pueblo Nuevo,	0.89	48	*e*P	Pg	08 47 31.2	-0.8
RBALA	Bur	0.91	50	*e*P	Pg	08 47 31.9	-0.5
BURE	Buenos Aires	0.99	332	*e*P	Pb	08 47 33.5	-0.4
BURE				*e*S	Sb	08 47 46.7	-0.1
RMDIO	Remedios, Chir	1.02	94	*e*P	Pb	08 47 34.4	-0.1
DRK0	Durika	1.03	339	*e*P	Pb	08 47 34.0	-0.7
DRK0	Durika	1.03	339	P	Pb	08 47 33.9	-0.7
DRK0	Durika	1.03	339	S	Sb	08 47 47.5	-0.7
EDPE	Pejibaye, P	1.11	321	*e*P	Pb	08 47 35.5	-0.4
EDPE				*e*S	Sb	08 47 50.2	-0.1
OCHAL	Ojochal	1.11	316	P	Pb	08 47 35.4	-0.5
OCHAL	Ojochal	1.11	316	S	Sg	08 47 50.9	+0.1
KKNTU	Kakintº	1.18	63	*e*P	Pn	08 47 35.5	-1.5
SAJE	San Jernim	1.22	329	*e*P	Pn	08 47 36.6	-1.2
SAJE				*e*S	Sb	08 47 52.5	-1.2
BRIBI	Bribri	1.31	2	*e*P	Pb	08 47 39.9	+0.4
GMAL	Guarumal, Vera	1.70	108	*e*P	Pn	08 47 45.0	+0.8
PIEC	Cerro El Cedra	1.70	321	*e*P	Pn	08 47 44.6	+0.1
TURIB	Turrialba	1.79	333	*e*P	Pn	08 47 45.7	+0.1
VINA	Juan Vinas	1.81	331	*e*P	Pn	08 47 46.4	+0.5
PISJ	San Jernim	1.82	317	*e*P	Pn	08 47 46.4	+0.4
LCR2	La Lucha 2	1.83	322	*e*P	Pn	08 47 45.7	-0.5
LCR2	La Lucha 2	1.83	322	P	Pn	08 47 45.5	-0.6
LCR2	La Lucha 2	1.83	322	S	Sn	08 48 10.3	+1.0
ABE2	San Pablo	1.83	320	*e*P	Pn	08 47 46.6	+0.4
PCAYA	Pacayas	1.86	330	*e*P	Pn	08 47 47.1	+0.4
PICV	PH. Pirrs	1.86	315	*e*P	Pn	08 47 47.0	+0.5
PAR1A	Puntarenas Pro	1.89	313	*e*P	Pn	08 47 47.9	+1.1
RESJ	San Isidro (Tu	1.89	336	*e*P	Pn	08 47 47.9	+1.0
ABRB	Las Abras (San	1.90	334	*e*P	Pn	08 47 48.0	+0.8
CVTV	Tajo	1.91	333	*e*P	Pn	08 47 47.8	+0.4
CVTQ	Turrialba Volc	1.92	332	*e*P	Pn	08 47 48.1	+0.6
VTLA	Turrialba Volc	1.92	332	*e*P	Pn	08 47 48.2	+0.6
VTR0	Volcan Turrial	1.93	333	*e*P	Pn	08 47 48.3	+0.5
VICA	Volcano Irazu	1.94	330	*e*P	Pn	08 47 48.3	+0.4
RVLA	Villa Bonita	1.94	338	*e*P	Pn	08 47 48.6	+1.1
ACOS	Acosta	1.97	319	*e*P	Pn	08 47 48.2	+0.1
SJS3	Mercedes San J	2.01	324	*e*P	Pn	08 47 50.0	+1.4
LUJA	Lujan	2.01	324	*e*P	Pn	08 47 49.2	+0.5
SJS	Escuela Geolog	2.01	324	*e*P	Pn	08 47 49.9	+1.2
DOMI	Santo Domingo	2.07	324	*e*P	Pn	08 47 50.1	+0.6
SANTA	Santa Ana	2.08	321	*e*P	Pn	08 47 50.4	+0.8
HDC	Heredia	2.10	324	*e*P	Pn	08 47 50.5	+0.7
HEME	Heredia, Merce	2.10	323	*e*P	Pn	08 47 50.7	+0.8
BELE	Belen	2.12	322	*e*P	Pn	08 47 50.7	+0.5
VBV1	V. Barva	2.18	326	*e*P	Pn	08 47 51.5	+0.4
TCS1	Tacares	2.24	321	*e*P	Pn	08 47 53.3	+1.5
TCS1	Tacares	2.24	321	P	Pn	08 47 53.5	+1.7
TRB2	Turrubares	2.24	316	*e*P	Pn	08 47 53.5	+1.8
ATEO	Atenas	2.25	318	*e*P	Pn	08 47 52.4	+0.6
SRA1	San Ramn	2.39	318	*e*P	Pn	08 47 56.0	+2.2
TRT2	Tortugero	2.41	339	*e*P	Pn	08 47 54.7	+0.7
TRT2	Tortugero	2.41	339	P	Pn	08 47 54.6	+0.7
TRT1	Tortuguero	2.43	340	*e*P	Pn	08 47 55.3	+1.0
AZU	Azuero	2.61	101	*e*P	Pn	08 47 58.4	+1.6
JCR1	Jicaral	2.71	305	*e*P	Pn	08 48 00.3	+2.2
ARE1	Arenal 1	2.83	320	*e*P	Pn	08 48 02.4	+2.6
VARE2	V. Arenal	2.83	320	*e*P	Pn	08 48 02.0	+2.2
CEDE	Laguna Cedeo	2.83	320	*e*P	Pb	08 48 03.0	-2.4
COVE	Coope Vega, Sa	2.85	328	P	Pn	08 48 01.9	+1.9
JTS	Las Juntas de	2.86	314	*e*P	Pn	08 48 00.8	+0.6
INDI	Punta indio, G	3.04	301	P	Pn	08 48 01.9	-0.7
INDI	Punta indio, G	3.04	301	S	Sn	08 48 36.9	-2.0
CMARA	Lajas Hojancha	3.05	304	P	Pn	08 48 03.3	+0.4
PLVR	Palo Verde	3.19	310	*e*P	Pn	08 48 06.2	+1.3
BAGA	Bagaces	3.24	313	*e*P	Pn	08 48 08.2	+2.7
CUI	Cuipilapa	3.26	316	*e*P	Pn	08 48 08.6	+2.8
ALIBA	Liberia Airpor	3.49	311	*e*P	Pn	08 48 11.6	+2.6
LAPC	Finca la Perla	3.53	314	*e*P	Pn	08 48 11.7	+2.3
ACON	Acoyapa	4.30	328	*e*P	Pn	08 48 20.9	+0.9
ACON	Acoyapa	4.30	328	P	Pn	08 48 22.5	+2.4

ASRS 26 08:49:33.0±0.7, 54°.21N×86°.40E, h0^{km}, M2.3, 1C, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKTO	Aktyubinsk 1.2nm,1.0s	17.70	269	⇑S	S	08 57 10.2	+4.2

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*IDC **26** 08:49:54.5±3.7, 54°.50N×87°.24E, h0^{km}, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=32.9km s-min=21.2km az=44.0*

ASRS 26 08:49:54.0±0.7, 54°.38N×86°.99E, h0^{km}, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA baz=70,slow=319,SNR=24	1.35	252	I	I	08 58 10.0	
ZALV	Zalesovo Beam 1.2nm,0.3s,baz=69,slow=17,SNR=4.9	1.35	252	Pg	Pb	08 50 20.9	+0.8
ZALV 0.9nm,0.3s,baz=68,slow=31,SNR=3.7				Lg	Lg	08 50 44.1	
KURBB	Kurchatov Arra 0.1nm,0.3s,baz=55,slow=14,SNR=4.9 0.8nm,0.4s	6.39	237	Pn	Pn	08 51 32.1	+2.8
MKAR	Makanchi Array 0.1nm,0.3s,baz=24,slow=15,SNR=4.0 0.2nm,0.3s	8.16	203	Pn	Pn	08 51 58.6	+4.9

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*SGS **26** 08:53:35.1, 31°.79N×34°.77E, h20^{km}, Ml4.3*

*JSO **26** 08:53:42.1±0.2, 31°N±1°×3°5E±°, h5^{km}, M4.4/25, MLv4.4/25*

*GII **26** 08:53:42.1±0.0, 31°.18N±0°.02×35°.494E±0°.007, h5^{km}, Mws3.8, confirmed*

*GRAL **26** 08:53:43.4±0.6, 31°.17N×35°.47E, h8^{km}±8^{km}, MD4.1*

ISC 26 08:53:42.4±0.8, 31°.17N±0°.01×35°.50E±0°.02, h13^{km}±4^{km}, n113, σ0^{s}.66/126, 2C-5D, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LISJ	El Lisan	0.07	350	P	Pg	08 53 44.6	-0.4
NVZR	Neve Zohar	0.11	260	P	Pg	08 53 45.2	-0.4
GHAJ	Ghor Haditha	0.14	25	P	Pg	08 53 45.5	-0.5
GHAJ	Ghor Haditha	0.14	25	⇑P	Pg	08 53 45.7	-0.3
GHAJ	Ghor Haditha	0.14	25	S	Sg	08 53 48.7	+0.2
MDBI	Mazsada	0.18	320	P	Pg	08 53 46.4	-0.2
MDBI	Mazsada	0.18	320	P	Pg	08 53 46.3	-0.2
MDBI	Mazsada	0.18	320	S	Sg	08 53 48.8	-0.6
MSBI	Mazada	0.18	320	⇓P	Pg	08 53 46.6	0.0
ARADI	Arad	0.25	288	P	Pg	08 53 47.8	+0.1
ARADI				S	Sb	08 53 52.6	-0.5
NTKR	Neot Hakikar	0.26	203	P	Pg	08 53 48.4	+0.5
NTKR				S	Sb	08 53 52.6	-0.7
KEGD	Kibutz Ein-Ged	0.29	341	P	Pg	08 53 48.4	-0.1
YTIR	Yattir	0.38	300	P	Pg	08 53 49.9	-0.1
YTIR	Yattir	0.38	300	⇓P	Pg	08 53 49.9	-0.1
YTIR	Yattir	0.38	300	S	Sb	08 53 56.6	-0.2
IDAN	Idan	0.39	209	P	Pg	08 53 50.4	+0.2
MZS	Mizpe Shalem	0.40	348	P	Pg	08 53 50.5	0.0
DSI	Dead Sea	0.41	346	P	Pg	08 53 50.9	+0.3
DSI	Dead Sea	0.41	346	⇓P	Pb	08 53 51.1	-0.4
DSI	Dead Sea	0.41	346	S	Sb	08 53 58.2	+0.5
HZVA	Hazeva	0.45	205	P	Pg	08 53 51.5	+0.3
SWQJ	Swaqa	0.49	82	P	Pb	08 53 52.9	0.0
AMAZ	Amatzia	0.61	306	⇓P	Pg	08 53 54.3	-0.1
AMAZ	Amatzia	0.61	306	S	Sb	08 54 04.1	+0.5
ALMO	Almog	0.61	357	P	Pb	08 53 54.9	-0.2
ALMO				S	Sb	08 54 03.7	0.0
MSPR	Moshav SAPIR	0.62	206	P	Pg	08 53 54.4	0.0
MSPR				S	Sb	08 54 04.3	+0.7
KARV	Kedem Haarava	0.63	0	P	Pg	08 53 54.4	-0.4
JER	Jerusalem	0.65	337	P	Pg	08 53 54.8	-0.3
JER				S	Sb	08 54 04.7	0.0
VJRH	Vered Jericho	0.65	355	P	Pg	08 53 55.2	0.0
VJRH				S	Sb	08 54 04.7	0.0
ZFRI	Zfri	0.68	204	P	Pg	08 53 55.5	0.0
ZFRI	Zfri	0.68	204	P	Pg	08 53 55.2	-0.3
ZFRI	Zfri	0.68	204	S	Sb	08 54 05.3	+0.1
NAAM	Naama	0.73	358	P	Pg	08 53 56.8	+0.2
NAAM				S	Sb	08 54 07.4	+0.5
ZUKM	Zukim	0.74	203	P	Pg	08 53 56.8	+0.1
YITV	Yitav	0.77	355	P	Pg	08 53 57.2	-0.2
UJAP	Al Uja	0.78	358	P	Pg	08 53 57.4	-0.1
MEFR	Maale Efrayim	0.90	355	P	Pg	08 53 59.1	-0.7
MEFR				S	Sn	08 54 13.0	-0.6
PRNI	Paran	0.92	207	P	Pg	08 53 59.6	-0.6
PRNI	Paran	0.92	207	P	Pg	08 53 59.7	-0.6
PRNI	Paran	0.92	207	S	Sn	08 54 13.6	-0.6
HSNJ	Maan	0.93	170	P	Pg	08 53 59.5	-0.9
SALP	Salfit	0.93	344	P	Pg	08 53 59.8	-0.6
SALP	Salfit	0.93	344	P	Pg	08 53 59.8	-0.6
SALP	Salfit	0.93	344	S	Sb	08 54 13.7	+0.9
KZIT	Kziot	0.98	255	⇑P	Pb	08 54 00.3	-0.9
KZIT	Kziot	0.98	255	S	Sg	08 54 14.6	+0.4
HMRA	Hamra	1.02	357	P	Pb	08 54 01.2	-0.8
HMRA				S	Sg	08 54 16.2	+0.6
ROII	Roi	1.07	360	P	Pb	08 54 02.4	-0.4
HMDT	Nahal Hemdat	1.08	1	P	Pb	08 54 02.4	-0.5
HMDT	Nahal Hemdat	1.08	1	P	Pb	08 54 02.6	-0.4
HMDT	Nahal Hemdat	1.08	1	S	Sn	08 54 18.3	+0.3
HSUJ	Al Zarqa	1.10	32	P	Pb	08 54 02.1	-1.3
SLTI	Sal'it	1.13	340	P	Pb	08 54 03.5	-0.4
SLTI	Sal'it	1.13	340	⇓P	Pb	08 54 03.3	-0.5
SLTI	Sal'it	1.13	340	S	Sn	08 54 20.0	+0.6
QRNJ	Al-Qirein	1.16	3	P	Pb	08 54 03.9	-0.4
HRFI	Mount Harif	1.20	199	P	Pn	08 54 04.4	-0.5
HRFI	Mount Harif	1.20	199	P	Pn	08 54 04.5	-0.5
HRFI	Mount Harif	1.20	199	S	Sg	08 54 22.3	+1.1
LOTA	Lotan	1.23	197	P	Pn	08 54 05.2	-0.1
KRMI	Paran Flat	1.24	212	P	Pn	08 54 04.9	-0.6
KRMI	Paran Flat	1.24	212	P	Pn	08 54 05.1	-0.4
KRMI	Paran Flat	1.24	212	S	Sg	08 54 23.0	+0.5
MMLI	Mount Malkishu	1.26	357	P	Pn	08 54 05.4	-0.4
MMLI	Mount Malkishu	1.26	357	S	Sg	08 54 23.9	+0.7
YTVT	Yotvata	1.33	197	P	Pn	08 54 06.6	0.0
SAMR	Samar	1.40	197	P	Pn	08 54 07.8	+0.2
ELFZ	Elifaz	1.43	197	P	Pn	08 54 08.3	+0.2
MBRI	Mt Berech	1.46	200	P	Pn	08 54 08.7	+0.1
MBRI	Mt Berech	1.46	200	P	Pn	08 54 08.7	+0.1
MBRI	Mt Berech	1.46	200	S	Sg	08 54 29.3	-0.3
AQBJ	Aqaba	1.49	195	P	Pn	08 54 08.8	-0.1
OFRI	\`Ofer	1.51	343	P	Pn	08 54 09.6	+0.4
OFRI	\`Ofer	1.51	343	P	Pn	08 54 09.3	+0.1
OFRI	\`Ofer	1.51	343	S	Sg	08 54 30.6	-0.5
ASF	Jabal al Asfar	1.56	50	P	Pn	08 54 09.0	-0.9
EIL	Elat	1.57	198	P	Pn	08 54 10.1	+0.1
EIL	Elat	1.57	198	S	Sb	08 54 31.8	+0.7
BLGI	Bet Lehem HaGe	1.58	351	P	Pn	08 54 10.7	+0.6
BLGI	Bet Lehem HaGe	1.58	351	P	Pn	08 54 10.7	+0.6
BLGI	Bet Lehem HaGe	1.58	351	S	Sb	08 54 31.8	+0.5
KNHM	Kefar Nahum	1.71	2	P	Pn	08 54 12.6	+0.7
QREAT	Al Qurrayyat	1.80	79	S	Sb	08 54 38.6	+0.8
QREAT	Al Qurrayyat	1.80	79	P	Pn	08 54 12.6	-0.7
KSHT	Keshet	1.82	8	P	Pn	08 54 14.2	+0.6
MMA0B	Mount Meron ar	1.84	358	P	Pn	08 54 14.2	+0.5
MMC7	Mount Meron ar	1.85	357	P	Pn	08 54 14.8	+0.9
HQLS		1.90	191	S	Sb	08 54 41.7	+1.0
HQLS				P	Pn	08 54 14.0	-0.7
HNTI	Hanita	1.92	352	P	Pn	08 54 16.0	+1.1
JMOS	Jabal al Moall	2.03	190	P	Pn	08 54 15.8	-0.5
JMOS	Jabal al Moall	2.03	190	S	Sb	08 54 45.6	+1.4
GEM	Giv'at Ha'Em	2.04	4	P	Pn	08 54 17.3	+0.9
GEM	Giv'at Ha'Em	2.04	4	P	Pn	08 54 16.8	+0.4
NATI	Neve Ativ	2.09	6	P	Pn	08 54 17.9	+0.7
NATI	Neve Ativ	2.09	6	P	Pn	08 54 17.6	+0.4
HAQS	Haql	2.17	193	P	Pn	08 54 17.4	-0.9
SHBL	Chebaa	2.18	5	*e*P	Pn	08 54 18.6	+0.1
SHBL				*e*S	Sn	08 54 45.6	+0.1
RCY	Rachaya	2.33	7	*e*P	Pn	08 54 21.1	+0.4
QRWL	Qaraoun	2.37	4	*e*P	Pn	08 54 21.8	+0.6
JLOS		2.43	180	P	Pn	08 54 21.5	-0.5
JLOS				S	Sb	08 54 56.8	+0.8
HANO	Al Hamad	2.44	84	P	Pn	08 54 21.7	-0.3
HANO	Al Hamad	2.44	84	S	Sb	08 54 56.5	+0.4
DQRL	Deir Qamar	2.53	1	*e*P	Pn	08 54 24.4	+1.2
BHL	Bhannes	2.73	3	*e*P	Pn	08 54 26.5	+0.5
BHL				*e*S	Sn	08 54 57.9	-1.0
BDAS	Al Bad\`	2.75	187	P	Pn	08 54 25.2	-1.1
AYUS	\`Aynunah	2.98	184	P	Pn	08 54 29.1	-0.3
TBKS	Tabuk	3.08	163	P	Pn	08 54 30.5	-0.2
TBKS	Tabuk	3.08	163	S	Sb	08 55 17.7	+3.1
HWQ	Hawqa	3.12	7	*e*P	Pn	08 54 32.3	+0.9
JOFS	JOFS	3.21	122	S	Sb	08 55 20.8	+2.3
JOFS	JOFS	3.21	122	P	Pn	08 54 32.1	-0.5
BEIL	Beino	3.41	10	*e*P	Pn	08 54 36.1	+0.7
BIDS	Bi'r al Bayda'	4.48	163	P	Pn	08 54 49.6	-0.4

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*IDC **26** 08:53:54.6±1.0, 2°.62S×138°.43E, h0^{km}, mb3.9/5, mbtmp3.9/7, ML3.7/2, MS3.5/1, Error ellipse: s-maj=23.4km s-min=17.3km az=177.0*

*DJA **26** 08:53:59.8±0.8, 2°S±7°×13°9E±°, h15^{km}±7^{km}, M3.7/6, MLv3.7/6*

ISC 26 08:53:58.5±0.8, 2°.61S±0°.08×138°.47E±0°.06, h32^{km}, n12, σ1^{s}.77/14, mb3.9/5, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.66	21	P	Pb	08 54 08.9	-2.8
GENI	Genyem	1.69	89	P	Pn	08 54 27.1	+1.3
JAY	Jayapura 10nm,0.3s,baz=242,slow=9.3,SNR=26	2.23	88	Pn	Pn	08 54 33.9	+0.6

JAY				Lg	Lg	08 55 07.3	
	18nm,0.3s,baz=93,slow=20,SNR=4.0						
	49nm,0.5s						
JAY	Jayapura	2.23	88	P	Pn	08 54 33.5	+0.2
SRPI	Serui, Papua	2.35	288	P	Pb	08 54 38.8	-1.4
SRPI				S	Sb	08 55 09.3	+0.5
BAKI	Biak	2.75	301	P	Pb	08 54 45.2	-1.9
WRA	Warramunga Arr	17.69	193	P	Pn	08 58 01.7	-0.9
	0.4nm,0.3s,baz=11,slow=13,SNR=24						
WRA				S	Sn	09 01 15.4	-3.4
	0.6nm,0.6s,baz=7.3,slow=23,SNR=4.6						
	0.8nm,0.3s						
ASAR	Alice Springs	21.39	192	P	P	08 58 44.1	+0.4
	1.8nm,0.5s,baz=20,slow=10,SNR=34						
ASAR				LR	LR	09 07 37.0	
	comp=Z,132nm,20.2s,slow=38						
	1.8nm,0.5s						
MKAR	Makanchi Array	69.57	322	P	P	09 05 05.9	+1.5
	0.9nm,0.8s,baz=103,slow=8.1,SNR=6.0						
	0.9nm,0.8s						
KURBB	Kurchatov Arra	73.51	325	P	P	09 05 29.7	+1.6
	0.5nm,0.7s,baz=111,slow=4.7,SNR=3.9						
	0.5nm,0.7s						
ILAR	Eielson Array	85.84	24	P	P	09 06 34.9	+0.2
	1.1nm,0.9s,baz=267,slow=4.4,SNR=8.0						
	1.1nm,0.9s						
QSPA	South Pole Qui	87.33	180	P	P	09 06 43.4	+1.3
	0.7nm,0.6s,baz=300,slow=1.4,SNR=11						
	0.7nm,0.6s						

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*JSO **26** 08:57:18.3±0.3, 31°N±2°×3°5E±°, h8^{km}, M2.6/12, Md4.6/12, Mjma2.9/9, ML2.7/12, MLv2.6/12, MLv2.6/12*
*GII **26** 08:57:18.9±0.0, 31°.174N±0°.002×35°.483E±0°.001, h12^{km}, Mws2.6/5, confirmed*
ISC 26 08:57:18.8±0.8**, 31°.17N**±0°.02×**35°.49E**±0°.03**, h15**^{km}±5^{km}**, n58, σ0^{s}.49**/72**, Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LISJ	El Lisan	0.07	354	P	Pg	08 57 21.1	-0.5
NVZR	Neve Zohar	0.11	259	P	Pg	08 57 21.9	-0.2
NVZR				S	Sg	08 57 25.1	+0.8
GHAJ	Ghor Haditha	0.14	27	P	Pg	08 57 21.8	-0.8
GHAJ	Ghor Haditha	0.14	27	P	Pg	08 57 22.0	-0.6
GHAJ	Ghor Haditha	0.14	27	S	Sg	08 57 25.4	+0.3
MDBI	Mazsada	0.18	321	P	Pg	08 57 22.6	-0.4
MDBI	Mazsada	0.18	321	P	Pg	08 57 22.7	-0.3
MDBI	Mazsada	0.18	321	S	Sg	08 57 25.7	-0.2
MSBI	Mazada	0.18	321	P	Pg	08 57 22.8	-0.3
MSBI	Mazada	0.18	321	S	Sg	08 57 26.2	+0.3
ARADI	Arad	0.24	288	P	Pg	08 57 24.0	-0.2
ARADI				S	Sg	08 57 28.7	+0.9
NTKR	Neot Hakikar	0.26	202	P	Pg	08 57 24.4	+0.1
NTKR				S	Sb	08 57 29.9	+0.5
KEGD	Kibutz Ein-Ged	0.29	342	P	Pg	08 57 25.1	+0.2
KEGD				S	Sg	08 57 28.6	-0.5
YTIR	Yattir	0.37	301	P	Pg	08 57 26.0	-0.4
YTIR	Yattir	0.37	301	P	Pg	08 57 26.0	-0.4
YTIR	Yattir	0.37	301	S	Sb	08 57 32.2	-0.6
MZS	Mizpe Shalem	0.40	349	P	Pg	08 57 26.9	0.0
MZS				S	Sb	08 57 33.2	-0.4
DSI	Dead Sea	0.41	347	P	Pb	08 57 27.2	-0.5
DSI	Dead Sea	0.41	347	P	Pb	08 57 27.4	-0.3
DSI	Dead Sea	0.41	347	S	Sb	08 57 33.9	+0.2
SWQJ	Swaqa	0.49	82	P	Pb	08 57 29.3	+0.1
AMAZ	Amatzia	0.61	306	P	Pg	08 57 30.8	0.0
AMAZ	Amatzia	0.61	306	S	Sb	08 57 39.6	+0.1
MSPR	Moshav SAPIR	0.61	205	P	Pg	08 57 30.7	-0.2
MSPR				S	Sb	08 57 39.6	-0.1
VJRH	Vered Jericho	0.65	356	P	Pg	08 57 31.6	0.0
VJRH				S	Sb	08 57 40.9	+0.1
ZFRI	Zfri	0.67	204	P	Pg	08 57 31.4	-0.5
ZFRI	Zfri	0.67	204	S	Sg	08 57 41.0	+0.2
ZUKM	Zukim	0.73	202	P	Pg	08 57 32.9	-0.2
ZUKM				S	Sb	08 57 43.2	+0.1
YITV	Yitav	0.77	356	P	Pg	08 57 33.7	-0.1
YITV				S	Sb	08 57 44.8	+0.5
MEFR	Maale Efrayim	0.90	355	P	Pb	08 57 36.2	+0.1
MEFR				S	Sb	08 57 48.8	+0.9
PRNI	Paran	0.92	207	P	Pg	08 57 35.9	-0.7
PRNI	Paran	0.92	207	P	Pg	08 57 35.7	-0.9
PRNI	Paran	0.92	207	S	Sb	08 57 49.0	+0.5
SALP	Salfit	0.93	344	P	Pg	08 57 36.0	-0.8
SALP	Salfit	0.93	344	P	Pb	08 57 36.8	+0.2
SALP	Salfit	0.93	344	S	Sb	08 57 49.7	+0.9
KZIT	Kziot	0.97	254	P	Pg	08 57 37.2	-0.5
KZIT	Kziot	0.97	254	S	Sg	08 57 50.2	-0.2
HMRA	Hamra	1.02	357	P	Pg	08 57 37.6	-1.0
HMRA				S	Sb	08 57 52.4	+0.9
ROII	Roi	1.07	360	P	Pg	08 57 39.1	-0.4
ROII				S	Sb	08 57 53.8	+0.9
HMDT	Nahal Hemdat	1.08	2	P	Pg	08 57 38.6	-1.0
HMDT	Nahal Hemdat	1.08	2	S	Sn	08 57 54.0	0.0
SLTI	Sal'it	1.13	340	P	Pb	08 57 39.2	-0.9
SLTI	Sal'it	1.13	340	P	Pb	08 57 39.9	-0.2
SLTI	Sal'it	1.13	340	S	Sn	08 57 55.8	+0.4
HRFI	Mount Harif	1.20	199	P	Pb	08 57 40.7	-0.5
HRFI	Mount Harif	1.20	199	S	Sg	08 57 57.6	0.0
LOTA	Lotan	1.23	196	P	Pn	08 57 41.7	+0.2
LOTA				S	Sg	08 57 58.2	-0.3
KRMI	Paran Flat	1.24	212	P	Pn	08 57 41.2	-0.5
KRMI	Paran Flat	1.24	212	P	Pn	08 57 41.3	-0.4
KRMI	Paran Flat	1.24	212	S	Sb	08 57 58.5	+0.7
MMLI	Mount Malkishu	1.26	357	P	Pn	08 57 42.0	+0.1
MMLI	Mount Malkishu	1.26	357	S	Sn	08 57 59.3	+0.6
SAMR	Samar	1.40	197	P	Pn	08 57 44.1	+0.4
SAMR				S	Sn	08 58 02.3	+0.4
MBRI	Mt Berech	1.46	200	P	Pn	08 57 45.0	+0.3
MBRI	Mt Berech	1.46	200	S	Sn	08 58 04.1	+0.4
AQBJ	Aqaba	1.49	195	P	Pn	08 57 45.0	0.0
ASF	Jabal al Asfar	1.56	50	P	Pn	08 57 46.1	0.0

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*VKMS **26** 09:00:06.0, 52°.28N×35°.41E, h0^{km}, M2.9, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*
IDC 26 09:00:06.4±3.9**, 52°.16N×35°.38E, h0**^{km}**, mbtmp3.6**/2**, ML2.8**/3**, Error ellipse: s-maj=44.1km s-min=18.1km az=113.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OBN	Obninsk	3.04	13	Sn	Sn	09 01 33.9	+1.2
	10nm,0.3s,baz=276,slow=23,SNR=5.2						
AKASG	Malin Array Be	4.12	252	Pn	Pn	09 01 08.8	-1.6
	0.2nm,0.3s,baz=71,slow=13,SNR=1.6						
AKASG				Lg	Lg	09 02 20.1	
	2.8nm,0.3s,baz=71,slow=29,SNR=4.7						
FINES	FINESS Array B	10.60	335	Pn	Pn	09 02 35.3	-4.0
	0.2nm,0.3s,baz=149,slow=13,SNR=1.8						
FINES				Sn	Sn	09 04 26.7	-12
	0.1nm,0.3s,baz=155,slow=22,SNR=1.6						
	0.7nm,0.3s						
I26DE	FREYUNG INFRAS	14.17	265	I	I	10 18 50.8	
	baz=70,slow=315,SNR=7.2						
ARCES	ARCESS Array B	18.04	349	P	P	09 04 19.1	+0.5
	0.1nm,0.3s,baz=168,slow=13,SNR=4.8						
	1.3nm,0.6s						

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*IDC **26** 09:00:14.3±2.0, 2°.48S×138°.37E, h0^{km}, mb3.4/2, mbtmp3.4/4, ML3.5/2, Error ellipse: s-maj=35.8km s-min=19.7km az=162.0*
*DJA **26** 09:00:18.9±0.5, 3°S±3°×13°9E±°, h10^{km}, M3.3/5, MLv3.3/5*
ISC 26 09:00:18.3±1.0**, 2°.5S**±0°.1×**138°.36E**±0°.08**, h32**^{km}**, n8, σ0^{s}.67**/8**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.60	36	P	Pb	09 00 29.9	-0.5
GENI	Genyem	1.81	94	P	Pn	09 00 47.3	0.0
JAY	Jayapura	2.34	91	Pn	Pn	09 00 54.5	-0.2
	4.4nm,0.3s,baz=247,slow=11,SNR=19						
JAY				Lg	Lg	09 01 28.3	
	2.1nm,0.3s,baz=110,slow=8.0,SNR=4.3						
	8.1nm,0.3s						
JAY	Jayapura	2.34	91	P	Pn	09 00 55.0	+0.3
BAKI	Biak	2.59	299	P	Pb	09 01 03.7	-0.4
WRA	Warramunga Arr	17.80	192	P	Pn	09 04 22.9	-0.8
	0.2nm,0.3s,baz=17,slow=13,SNR=11						
	0.5nm,0.6s						
ASAR	Alice Springs	21.50	191	P	P	09 05 05.2	+0.5
	1.1nm,0.6s,baz=18,slow=11,SNR=8.6						
	1.1nm,0.6s						
ILAR	Eielson Array	85.77	24	P	P	09 12 55.0	+0.9
	0.3nm,0.8s,baz=269,slow=5.1,SNR=2.7						
	0.3nm,0.8s						

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*SGS **26** 09:01:51.5, 31°.52N×35°.04E, h7^{km}, Ml3.1*
*JSO **26** 09:01:54.4±0.0, 31°N±1°×3°6E±°, h8^{km}±1^{km}, M3.3/19, Md3.6/19, ML3.3/19, MLv3.3/19, MLv3.3/19*
*GII **26** 09:01:54.1±0.0, 31°.17N±0°.02×35°.497E±0°.007, h5^{km}, Mws3.1/15, confirmed*
ISC 26 09:01:54.5±0.8**, 31°.17N**±0°.01×**35°.51E**±0°.03**, h12**^{km}±5^{km}**, n99, σ0^{s}.68**/119**, Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LISJ	El Lisan	0.08	341	P	Pg	09 01 56.7	-0.4
LISJ				S	Sg	09 01 58.6	-0.4
NVZR	Neve Zohar	0.12	264	P	Pg	09 01 57.6	-0.1
NVZR				S	Sg	09 02 01.0	+1.0
GHAJ	Ghor Haditha	0.14	19	P	Pg	09 01 57.6	-0.4
GHAJ	Ghor Haditha	0.14	19	P	Pg	09 01 57.7	-0.4
GHAJ	Ghor Haditha	0.14	19	S	Sg	09 02 00.4	-0.2
MDBI	Mazsada	0.20	318	P	Pg	09 01 58.5	-0.3
MDBI	Mazsada	0.20	318	P	Pg	09 01 58.3	-0.5
MDBI	Mazsada	0.20	318	S	Sg	09 02 00.9	-0.9
MSBI	Mazada	0.20	318	P	Pg	09 01 58.4	-0.4
MSBI	Mazada	0.20	318	S	Sg	09 02 01.5	-0.3
NTKR	Neot Hakikar	0.26	207	P	Pg	09 01 59.9	0.0
NTKR				S	Sg	09 02 03.9	+0.4
ARADI	Arad	0.26	288	P	Pg	09 01 59.8	-0.2
ARADI				S	Sg	09 02 03.7	-0.1
KEGD	Kibutz Ein-Ged	0.30	339	P	Pg	09 02 00.7	0.0
KEGD				S	Sg	09 02 04.5	-0.5
YTIR	Yattir	0.39	300	P	Pg	09 02 01.9	-0.4
YTIR	Yattir	0.39	300	P	Pg	09 02 01.9	-0.4
YTIR	Yattir	0.39	300	S	Sg	09 02 08.0	+0.4
MZS	Mizpe Shalem	0.41	347	P	Pg	09 02 02.6	-0.1
MZS				S	Sb	09 02 09.3	-0.6
DSI	Dead Sea	0.42	345	P	Pb	09 02 03.1	-0.7
DSI	Dead Sea	0.42	345	P	Pg	09 02 02.9	+0.1
DSI	Dead Sea	0.42	345	S	Sb	09 02 10.2	+0.1
SWQJ	Swaqa	0.48	81	P	Pb	09 02 05.0	+0.1
MSPR	Moshav SAPIR	0.62	207	P	Pg	09 02 06.4	-0.1
MSPR				S	Sb	09 02 16.0	+0.2
AMAZ	Amatzia	0.63	306	P	Pg	09 02 06.3	-0.4
AMAZ	Amatzia	0.63	306	S	Sb	09 02 15.9	-0.2
JER	Jerusalem	0.66	336	P	Pg	09 02 06.9	-0.5
JER				S	Sb	09 02 17.6	+0.4
VJRH	Vered Jericho	0.66	354	P	Pg	09 02 07.1	-0.2
VJRH				S	Sb	09 02 17.3	+0.3
ZFRI	Zfri	0.67	205	P	Pg	09 02 07.4	-0.2
ZFRI	Zfri	0.67	205	P	Pg	09 02 07.3	-0.3
ZFRI	Zfri	0.67	205	S	Sb	09 02 17.4	0.0
ZUKM	Zukim	0.73	204	P	Pg	09 02 08.6	-0.2
ZUKM				S	Sb	09 02 19.5	+0.4
NAAM	Naama	0.74	357	P	Pg	09 02 08.7	-0.2
NAAM				S	Sb	09 02 19.8	+0.5
YITV	Yitav	0.78	355	P	Pg	09 02 09.3	-0.3
YITV				S	Sb	09 02 21.2	+0.6
UJAP	Al Uja	0.78	357	P	Pg	09 02 09.0	-0.7
UJAP	Al Uja	0.78	357	S	Sb	09 02 21.1	+0.5
MEFR	Maale Efrayim	0.91	354	P	Pg	09 02 11.3	-0.7
MEFR				S	Sb	09 02 24.9	+0.8
HSNJ	Maan	0.92	170	P	Pg	09 02 11.3	-1.0
PRNI	Paran	0.92	208	P	Pg	09 02 11.8	-0.5
PRNI	Paran	0.92	208	P	Pg	09 02 12.0	-0.3
PRNI	Paran	0.92	208	S	Sb	09 02 25.3	+0.7
SALP	Salfit	0.94	343	P	Pg	09 02 11.9	-0.8
SALP	Salfit	0.94	343	P	Pg	09 02 11.6	-1.1
SALP	Salfit	0.94	343	S	Sb	09 02 25.8	+0.6
KZIT	Kziot	0.99	255	P	Pg	09 02 12.4	-1.2
KZIT	Kziot	0.99	255	S	Sg	09 02 26.1	-0.4
HMRA	Hamra	1.03	356	P	Pg	09 02 13.3	-1.1
HMRA				S	Sb	09 02 28.3	+0.6
ROII	Roi	1.08	359	P	Pg	09 02 14.5	-0.8
ROII				S	Sb	09 02 30.1	+1.0
HMDT	Nahal Hemdat	1.08	1	P	Pg	09 02 14.5	-0.9
HMDT	Nahal Hemdat	1.08	1	P	Pg	09 02 14.3	-1.1
HMDT	Nahal Hemdat	1.08	1	S	Sn	09 02 30.3	-0.1
HSUJ	Al Zarqa	1.10	32	P	Pg	09 02 14.0	-1.7
SLTI	Sal'it	1.14	340	P	Pg	09 02 15.5	-1.0
SLTI	Sal'it	1.14	340	P	Pg	09 02 15.2	-1.3
SLTI	Sal'it	1.14	340	S	Sn	09 02 32.0	+0.2
HRFI	Mount Harif	1.20	200	P	Pg	09 02 16.1	-1.5
HRFI	Mount Harif	1.20	200	P	Pg	09 02 16.4	-1.2
HRFI	Mount Harif	1.20	200	S	Sn	09 02 33.7	+0.5
LOTA	Lotan	1.23	197	P	Pg	09 02 17.7	-0.5
LOTA				S	Sn	09 02 35.0	+1.0
KRMI	Paran Flat	1.25	213	P	Pb	09 02 17.0	-0.9
KRMI	Paran Flat	1.25	213	P	Pb	09 02 17.1	-0.9
KRMI	Paran Flat	1.25	213	S	Sn	09 02 35.1	+0.7
MMLI	Mount Malkishu	1.27	357	P	Pn	09 02 17.4	-0.7
MMLI	Mount Malkishu	1.27	357	S	Sn	09 02 36.2	+1.1
YTVT	Yotvata	1.33	197	P	Pn	09 02 18.9	+0.1
YTVT				S	Sn	09 02 37.4	+1.0
SAMR	Samar	1.40	198	P	Pn	09 02 20.0	+0.3
SAMR				S	Sg	09 02 38.9	-0.5
ELFZ	Elifaz	1.43	198	P	Pn	09 02 20.3	0.0
ELFZ				S	Sg	09 02 39.8	-0.7
MBRI	Mt Berech	1.46	201	P	Pn	09 02 20.1	-0.6
MBRI	Mt Berech	1.46	201	P	Pn	09 02 20.6	-0.2
MBRI	Mt Berech	1.46	201	S	Sg	09 02 41.0	-0.6
AQBJ	Aqaba	1.49	196	P	Pn	09 02 21.2	+0.2
OFRI	\`Ofer	1.52	343	P	Pn	09 02 21.9	+0.4
OFRI	\`Ofer	1.52	343	S	Sb	09 02 42.1	+0.3
ASF	Jabal al Asfar	1.55	49	P	Pn	09 02 21.0	-1.0
EIL	Elat	1.57	198	P	Pn	09 02 22.1	0.0
EIL	Elat	1.57	198	S	Sn	09 02 43.2	+0.8
BLGI	Bet Lehem HaGe	1.58	350	P	Pn	09 02 22.5	+0.1
BLGI	Bet Lehem HaGe	1.58	350	P	Pn	09 02 22.4	+0.1
BLGI	Bet Lehem HaGe	1.58	350	S	Sb	09 02 44.3	+0.6
KNHM	Kefar Nahum	1.71	2	P	Pn	09 02 24.7	+0.5
KNHM				S	Sn	09 02 46.6	+0.7
QREAT	Al Qurrayyat	1.79	79	P	Pn	09 02 26.3	+1.0
KSHT	Keshet	1.83	8	P	Pn	09 02 26.4	+0.7
KSHT	Keshet	1.83	8	S	Sn	09 02 49.9	+1.1
MMA0B	Mount Meron ar	1.84	357	P	Pn	09 02 26.7	+0.6
MMA0B	Mount Meron ar	1.84	357	S	Sn	09 02 50.3	+1.0
HQLS		1.90	192	S	Sb	09 02 53.9	+1.1
HQLS		1.90	192	P	Pn	09 02 27.3	+0.6
HNTI	Hanita	1.93	352	P	Pn	09 02 27.6	+0.5
JMOS	Jabal al Moall	2.02	190	P	Pn	09 02 27.5	-0.8
GEM	Giv'at Ha'Em	2.04	4	P	Pn	09 02 29.1	+0.5
GEM	Giv'at Ha'Em	2.04	4	S	Sn	09 02 55.2	+1.1
NATI	Neve Ativ	2.10	5	P	Pn	09 02 30.2	+0.8
NATI	Neve Ativ	2.10	5	S	Sn	09 02 56.8	+1.4
HAQS	Haql	2.17	194	P	Pn	09 02 30.6	+0.2
JLOS		2.42	180	P	Pn	09 02 33.9	-0.1
HANO	Al Hamad	2.42	84	P	Pn	09 02 33.7	-0.3
HANO	Al Hamad	2.42	84	S	Sb	09 03 08.8	+0.9
BDAS	Al Bad\`	2.75	188	P	Pn	09 02 39.6	+1.2
AYUS	\`Aynunah	2.98	184	P	Pb	09 02 47.5	+0.1
WTBKS	WTBKS	3.09	173	P	Pn	09 02 43.1	0.0
JOFS	JOFS	3.20	122	P	Pn	09 02 44.1	-0.5

NEIC 26 09:12:33.7±0.8**, 37°.41N**±0°.03×**104°.22W**±0°.02**, h5**^{km}±1^{km}**, ML1.5**/8**, Error ellipse: s-maj=5.4km s-min=3.2km az=352.0, Colorado**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T25A	Trinidad	0.31	210	Pg	Pg	09 12 40.4	+0.6
T25A				Sg	Sg	09 12 44.7	+0.7
T25A				IAML		09 12 44.9	
	comp=E,54nm,0.2s						
SDCO	Great Sand Dun	1.07	289	Pg	Pg	09 12 54.3	0.0
SDCO				IAML		09 13 08.8	
	comp=E,12nm,0.1s						
RTBA	Rita Blanca	1.53	129		Pb	09 13 02.4	-0.2
Q24A	Divide	1.72	335		Pn	09 13 05.0	+0.4
ANMO	Albuquerque	3.05	217	Pn	Pn	09 13 22.4	-0.5

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*MEX **26** 09:14:06.5±0.6, 14°.45N×93°.07W, h3^{km}±18^{km}, MD3.9*
*GCG **26** 09:14:07.5±1.6, 14°.36N×92°.88W, h50^{km}±274^{km}, MD4.0, ML2.7*
ISC 26 09:13:59.7±3.5**, 14°.2N**±0°.1×**93°.1W**±0°.1**, h1**^{km}±14^{km}**, n13, σ1^{s}.27**/15**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.08	51	*e*P	Pg	09 14 21.4	+1.0
THIG				*e*S	Sg	09 14 34.4	0.0
THIG		1.08	51	IAML		09 14 39.1	
	comp=E,158nm,0.3s						
PATR	El Naranjo	1.24	44	*e*P	Pg	09 14 24.0	+0.6
PATR				*e*S	Sg	09 14 38.7	-0.9
PAVE	Pavencul	1.33	44	*e*P	Pn	09 14 25.6	0.0
PAVE				*e*S	Sg	09 14 40.2	-2.4
RTAL	Retalhuleu	1.42	78	*e*P	Pn	09 14 27.9	+1.2
RTAL				*e*S	Sg	09 14 45.6	+0.1
PCIG		1.47	357	*e*P	Pn	09 14 27.4	+0.1
PCIG				*e*S	Sn	09 14 42.1	-5.2
STG8	El Palmar, Qui	1.74	83	*e*P	Pn	09 14 29.9	-1.4
STG0	El Palmar, Qui	1.75	83	*i* P	Pn	09 14 29.5	-1.8
STG0				*e*S	Sn	09 14 47.8	-6.6
STG0				IAML		09 14 53.0	
	comp=E,394nm,0.3s						
HUEH	Huehuetenango	1.91	55	*e*P	Pn	09 14 35.5	+1.8
HUEH				*e*S	Sn	09 14 59.3	+0.8
CCIG	Comitan	2.26	25	*e*P	Pn	09 14 41.3	+3.0
CCIG				*e*S	Sn	09 15 08.1	+1.1
CCIG	Comitan	2.26	25	*e*P	Pn	09 14 41.5	+3.1
CCIG				IAML		09 15 14.6	
	comp=N,42nm,0.3s						
TGIG		2.54	0	*e*P	Pn	09 14 43.3	+1.3
TGIG				*e*S	Sn	09 15 12.6	-1.1
TGIG		2.54	0	*i* P	Pn	09 14 44.6	+2.5
TGIG				*e*S	Sn	09 15 13.9	+0.2
TGIG				IAML		09 15 16.7	
	comp=E,28nm,0.5s						

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*NEIC **26** 09:16:23.1±1.2, 42°.02N±0°.02×111°.49W±0°.02, h4^{km}±7^{km}, Error ellipse: s-maj=2.9km s-min=2.3km az=144.0*
UUSS 26 09:16:23.2±0.9**, 41°.99N**±0°.02×**111°.47W**±0°.02**, h1**^{km}±2^{km}**, ML2.5**/16**, ML2.5**/80(NEIC)**, Error ellipse: s-maj=2.8km s-min=2.4km az=154.0, Utah**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BMUT	Black Mountain	0.18	99		Pg	09 16 27.2	+0.4
BEI	Bear River Ran	0.27	299		Pg	09 16 28.9	+0.5
HDU	Hyde Park	0.28	230		Pg	09 16 29.0	+0.3
RSUT	Red Spur Mount	0.35	173		Pg	09 16 30.5	+0.5
HWUT	Hardware Ranch	0.39	190		Pg	09 16 30.8	+0.2
HWUT				IAML		09 16 39.9	
	316nm,0.6s						
MLI	Malad Range	0.49	275		Pg	09 16 32.9	+0.3
WVUT	Wellsville	0.52	224		Pg	09 16 33.8	+0.6
MCU	Monte Cristo P	0.53	183		Pg	09 16 33.5	+0.2
PTU	Portage	0.64	265		Pg	09 16 35.8	+0.3
LTU	Little Mountai	0.70	236		Pg	09 16 36.8	+0.1
NPI	North Pocatell	0.80	282		Pg	09 16 38.5	0.0
AHID	Auburn Hatcher	0.83	19		Pg	09 16 39.3	+0.2
AHID				IAML		09 16 56.8	
	151nm,0.3s						
AHID				IAML		09 16 59.3	
	142nm,0.7s						
TCUT	Toone Canyon	0.87	177		Pb	09 16 41.5	+0.3
EPU	East Promontor	0.92	230		Pg	09 16 40.9	0.0
HVU	Hansel Valley	0.99	258		Pg	09 16 42.0	-0.3
HVU				IAML		09 17 00.9	
	comp=N,206nm,0.7s						
NAIU	Northern Antel	1.12	211		Pg	09 16 45.1	+0.3
SAIU	Southern Antel	1.25	205		Pg	09 16 47.2	0.0
CTU	Camp Tracy	1.31	189		Pb	09 16 48.6	-0.1
CTU				IAML		09 17 10.3	
	comp=N,96nm,0.5s						
CTU				IAML		09 17 10.6	
	comp=E,111nm,0.4s						
JLU	Jordanelle	1.38	179		Pb	09 16 50.5	+0.5
JLU				IAML		09 17 13.4	
	comp=N,99nm,0.4s						
JLU				IAML		09 17 13.6	
	comp=E,94nm,0.6s						
BSUT	Blindstream Ca	1.54	159		Pn	09 16 52.3	+0.1
BSUT				IAML		09 17 15.6	
	comp=N,67nm,0.7s						
BSUT				IAML		09 17 27.7	
	comp=E,41nm,0.7s						
TPAW	Teton Pass	1.55	14		Pn	09 16 51.6	-0.6
TPAW				IAML		09 17 19.4	
	comp=E,40nm,0.8s						
SNOW	Snow King Moun	1.57	19		Pn	09 16 52.3	-0.1
SNOW				IAML		09 17 17.1	
	comp=E,47nm,0.8s						
SNOW				IAML		09 17 19.4	
	comp=E,77nm,1.0s						
BGU	Big Grassy Mou	1.58	228		Pn	09 16 52.5	0.0
BGU				IAML		09 17 15.3	
	comp=E,66nm,0.5s						
BGU				IAML		09 17 15.9	
	comp=N,56nm,0.8s						
BW06	Boulder Array	1.62	61		Pn	09 16 53.4	+0.3
BW06				IAML		09 17 15.9	
	comp=N,34nm,0.6s						
PD31	Pinedale Array	1.62	61		Pn	09 16 53.0	-0.1
PDAR	Pinedale Array	1.62	61		Pn	09 16 53.2	+0.1
FXWY	Fox Creek	1.68	11		Pn	09 16 53.7	-0.3
FXWY				IAML		09 17 19.8	
	comp=N,26nm,0.9s						
LOHW	Long Hollow	1.75	21		Pn	09 16 54.8	-0.1
LOHW				IAML		09 17 19.4	
	comp=N,31nm,0.6s						
LOHW				IAML		09 17 19.8	
	comp=N,33nm,0.5s						
MPU	Maple Canyon	1.97	184		Pn	09 16 58.5	+0.6
DUG	Dugway, Tooele	2.06	210		Pn	09 16 59.3	+0.3
YFT	Old Faithful	2.51	10	Pn	Pn	09 17 07.1	+1.8
P18A	Preston Nutter	2.53	158		Pn	09 17 06.6	+0.9
P18A				IAML		09 17 44.3	
	comp=N,34nm,0.5s						
HLID	Hailey	2.68	307		Pn	09 17 09.6	+2.0
HLID				IAML		09 17 48.4	
	comp=N,12nm,0.9s						
TMUT	Trail Mountain	2.69	176		Pn	09 17 09.5	+1.5
TMUT				IAML		09 17 58.2	
	comp=E,28nm,0.6s						
TMUT				IAML		09 17 58.8	
	comp=N,18nm,0.8s						
YHB	Horse Butte	2.77	4		Pn	09 17 09.8	+0.9
YHL	Hebgen Lake	2.87	4		Pn	09 17 10.9	+0.5
SRU	San Rafael Swe	2.96	166		Pn	09 17 12.3	+0.7
SRU				IAML		09 18 11.4	
	comp=E,24nm,0.9s						
SRU				IAML		09 18 15.0	
	comp=N,21nm,0.7s						
MCMT	McKenzie Canyo	3.01	341		Pn	09 17 14.4	+2.1
O20A	White River Ci	3.06	126		Pn	09 17 14.2	+1.3
Q16A	Castle Valley	3.07	176		Pn	09 17 14.5	+1.5
Q16A				IAML		09 18 10.9	
	comp=N,8.3nm,1.2s						
Q16A				IAML		09 18 11.1	
	comp=E,9.9nm,1.1s						
DLMT	Dillon	3.47	347		Pn	09 17 20.7	+2.2
DLMT				IAML		09 18 29.8	
	comp=E,8.1nm,2.8s						
DLMT				IAML		09 19 10.1	
	comp=E,5.9nm,4.6s						
MFID	Camas Ranch	3.51	295		Pn	09 17 21.6	+2.6
MFID				IAML		09 18 15.6	
	comp=E,10nm,0.7s						
MFID				IAML		09 18 15.7	
	comp=E,11nm,0.9s						
MVU	Marysvale	3.52	189		Pn	09 17 19.5	+0.2
MVU				IAML		09 18 08.6	
	comp=N,8.8nm,1.5s						
MVU				IAML		09 18 29.0	
	comp=E,8.4nm,2.2s						
BOZ	Bozeman (W)	3.61	358		Pn	09 17 22.2	+1.8
SPR3	Spring Creek 3	3.70	217		Pn	09 17 23.0	+1.3
SPR3				IAML		09 18 06.6	
	comp=N,4.7nm,4.9s						
K22A	Casper	3.73	78		Pn	09 17 23.2	+1.2
PSUT	Pine Spring	3.90	209		Pn	09 17 25.4	+0.9
PSUT				IAML		09 18 55.0	
	comp=N,5.0nm,4.9s						
PV23	Carpenter Ridg	4.00	151		Pn	09 17 26.3	+0.4
PV22	Blue Mesa, Par	4.01	148		Pn	09 17 26.2	+0.2
PV07	Paradox Valley	4.15	148		Pn	09 17 29.1	+1.1
ISCO	Idaho Springs	4.95	114	Pn	Pn	09 17 38.9	0.0

ISCO				IAML		09 18 16.8	
	comp=N,4.5nm,3.8s						
ISCO				IAML		09 19 12.7	
	comp=N,3.9nm,3.5s						
BMO	Blue Mountains	5.12	306		Pn	09 17 43.0	+1.8
BMO				IAML		09 18 50.4	
	comp=N,3.4nm,3.7s						
BMO				IAML		09 20 36.2	
	comp=N,3.0nm,4.4s						
RSSD	Black Hills	5.85	66	Pn	Pn	09 17 50.8	-0.4

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*MOS **26** 09:21:57.3±0.8, 36°.51N×70°.29E, h216^{km}, mb4.3/16, Error ellipse: s-maj=8.3km s-min=4.2km az=78.4*
*BJI **26** 09:21:57.9, 36°.57N×70°.36E, h215^{km}, mB4.5/3, mb4.5/12*
*NEIC **26** 09:21:58.4±1.0, 36°.53N±0°.06×70°.32E±0°.09, h209^{km}±7^{km}, mb4.3/47, Error ellipse: s-maj=11.0km s-min=8.8km az=74.0*
*IDC **26** 09:21:58.9±0.7, 36°.38N×70°.27E, h223^{km}±6^{km}, mb3.7/28, mbtmp4.4/33, Error ellipse: s-maj=11.5km s-min=8.2km az=20.0*
*NNC **26** 09:22:02.1±1.6, 36°.88N×70°.25E, h218^{km}±13^{km}, mb3.8, mpv5.0, Error ellipse: s-maj=14.5km s-min=10.0km az=20.0*
ISC 26 09:21:58.4±0.6**, 36°.50N**±0°.05×**70°.31E**±0°.05**, h214**^{km}±5^{km}**, h214**^{km}**:pP-P, n425,** σ0^{s}89/427**, mb4.2**/55**, 12C-8D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	2.21	208		Pn	09 22 40.0	-0.4
KBL	Kabul	2.21	208	PN	Pn	09 22 40.0	-0.4
SIMJ	Simiganj	2.38	335		Pn	09 22 41.7	-0.3
DRK	Karamyk	3.20	21		Pn	09 22 51.4	+0.1
DRK	Karamyk	3.20	21	PN	Pn	09 22 51.4	+0.1
NIL	Nilore	3.73	139		Pn	09 22 58.3	+0.8
NIL	Nilore	3.73	139	PN	Pn	09 22 58.3	+0.8
ARSB	Arslanbob	5.25	23		Pn	09 23 16.1	-0.2
ARSB	Arslanbob	5.25	23	PN	Pn	09 23 16.1	-0.2
JMU	Jammu	5.35	134	eP	Pn	09 23 07.8	-10
JMU				eS	S	09 24 02.1	-18
JMU				IAML		09 24 18.6	
	comp=N,443nm,0.2s						
JMU				IAML		09 24 20.1	
	comp=E,487nm,0.4s						
KSH	Kashi	5.39	54	P	Pn	09 23 13.8	-4.3
KSH				S	S	09 24 09.5	-12
KSH				smax	smax		
	comp=E,540nm,0.5s						
KSH				smax	smax		
	comp=E,600nm,0.6s						
IUG	Iuzhnay	5.64	358	ePN	Pn	09 23 21.4	+0.2
IUG	Iuzhnay	5.64	358	eP	Pn	09 23 21.5	+0.2
CHM	Chimkent	5.83	355	ePN	Pn	09 23 23.9	+0.3
CHM	Chimkent	5.83	355	eP	Pn	09 23 23.9	+0.3
THN	Thein Dam	6.04	131	eP	Pn	09 23 18.4	-7.9
THN				eS	S	09 24 20.4	-15
THN				IAmL		09 24 34.9	
	comp=E,341nm,0.3s						
THN				IAmL		09 24 36.7	
	comp=N,349nm,0.3s						
AML	Almayashu	6.20	24	P	Pn	09 23 28.7	0.0
	SNR=236						
DZA	Taraz	6.43	7	ePN	Pn	09 23 31.3	0.0
DZA	Taraz	6.43	7	eP	Pn	09 23 31.3	0.0
DHRM	DHARAMSHALA	6.52	129	eP	Pn	09 23 24.0	-8.8
DHRM				eS	S	09 24 30.7	-17
DHRM				IAmL		09 24 47.5	
	comp=N,348nm,0.4s						
BRLS	Borolday	6.53	357	ePN	Pn	09 23 28.9	-3.6
BRLS	Borolday	6.53	357	eP	Pn	09 23 28.9	-3.6
UCH	Uchtor	6.58	28	P	Pn	09 23 33.9	+0.3
	SNR=22						
KK31	Karatay Array	6.59	1		Pn	09 23 32.9	-0.4
KK31	Karatay Array	6.59	1	⇑P	Pn	09 23 33.0	-0.4
	comp=N,26nm,0.3s,baz=190,slow=13,SNR=577						
KK31				⇑S	S	09 24 44.2	-4.7
	comp=N,54nm,0.6s,baz=189,slow=16,SNR=5.9						
KK31	Karatay Array	6.59	1	PN	Pn	09 23 32.9	-0.4
KKAR	Karatay Array	6.59	1		Pn	09 23 33.0	-0.4
KKAR	Karatay Array	6.59	1		Pn	09 23 32.9	-0.4
KKAR	Karatay Array	6.59	1	PN	Pn	09 23 32.9	-0.4
NRN	Naryn	6.62	40		Pn	09 23 32.4	-1.7
NRN	Naryn	6.62	40	PN	Pn	09 23 32.4	-1.7
EKS2	Erkin-Say	6.71	22	P	Pn	09 23 35.2	+0.2
	SNR=161						
AAK	Ala-Archa	6.93	27	P	Pn	09 23 38.0	+0.3
	SNR=68						
AAK	Ala-Archa	6.93	27		Pn	09 23 37.4	-0.4
AAK	Ala-Archa	6.93	27	P	Pn	09 23 38.1	+0.3
	comp=N,96nm,0.4s,baz=174,slow=5.3,SNR=101						
AAK	Ala-Archa	6.93	27	⇓P	Pn	09 23 38.1	+0.3
AAK				⇑S	S	09 24 54.6	-2.3
KBK	Karagaybulak	7.11	29	P	Pn	09 23 40.9	+0.6
	SNR=52						
FRU1	Bishkek	7.12	27		Pn	09 23 39.5	-0.8
FRU1	Bishkek	7.12	27	PN	Pn	09 23 39.5	-0.8
BHK	Bhakra	7.18	133	eP	Pn	09 23 36.9	-4.2
BHK				eS	S	09 24 52.3	-10
BHK				IAML		09 25 04.0	
	comp=E,243nm,0.2s						
CHMS	Chumysh	7.33	26	P	Pn	09 23 42.8	-0.1
	SNR=29						
CHMS	Chumysh	7.33	26	⇑P	Pn	09 23 42.2	-0.7
	comp=E,65nm,0.7s						
CHMS				⇓S	S	09 25 03.7	-2.5
	comp=E,86nm,0.8s						
ULHL	Ulahol	7.35	37	P	Pn	09 23 43.7	+0.4
	SNR=53						
BOOM	Boomskoye usch	7.39	34	Pn	Pn	09 23 42.6	-1.2
BOOM	Boomskoye usch	7.39	34	PN	Pn	09 23 42.6	-1.2
USP	Ospenovka	7.48	24	P	Pn	09 23 44.2	-0.7
	SNR=80						
TKM2	Tokmak 2	7.59	31	P	Pn	09 23 46.5	+0.1
	SNR=161						
TKM2	Tokmak 2	7.59	31	⇓P	Pn	09 23 46.3	-0.2
	comp=E,116nm,0.7s						
SGDS	Sogindy	7.69	24	eP	Pn	09 23 46.9	-0.7
	comp=E,7.9nm,0.4s						
KDJ	Kajisay	7.74	41		Pn	09 23 47.9	-0.4
KDJ	Kajisay	7.74	41	PN	Pn	09 23 47.9	-0.4
TARG	Taragay, Kyrgy	7.82	46		Pn	09 23 48.6	-1.0
TARG	Taragay, Kyrgy	7.82	46	PN	Pn	09 23 48.6	-1.0
SMLA	Simla	7.83	131	eP	Pn	09 23 41.1	-8.3
SMLA				eS	S	09 24 59.7	-18
SMLA				IAML		09 25 15.1	
	comp=N,323nm,0.3s						
SMLA				IAML		09 25 18.7	
	comp=E,270nm,0.4s						
AAA	Alma-Ata	8.40	35	ePN	Pn	09 23 57.2	+0.5
AAA	Alma-Ata	8.40	35	eP	Pn	09 23 57.3	+0.5
DDI	Dehra Dun	8.94	131	eP	Pn	09 23 55.7	-8.2
DDI				eS	S	09 25 24.6	-20
DDI				IAML		09 25 45.7	
	comp=N,215nm,0.4s						
DDI				IAML		09 25 47.2	
	comp=E,269nm,0.5s						
BTLS	Baital	8.99	17	ePN	Pn	09 24 03.8	-0.4
BTLS				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BTLS	Baital	8.99	17	eP	Pn	09 24 03.9	-0.4
	comp=Z,6.0nm,0.6s						
SATY	Saty	9.04	41	eP	Pn	09 24 04.6	-0.4
SATY				pmax	pmax		
	comp=Z,14nm,0.7s						
SATY	Saty	9.04	41	eP	Pn	09 24 04.7	-0.4
	comp=Z,14nm,0.7s						
UZB	Uzynbulak	9.43	43	eP	Pn	09 24 09.9	-0.2
UZB				pmax	pmax		
	comp=Z,14nm,0.7s						
UZB	Uzynbulak	9.43	43	eP	Pn	09 24 09.1	-1.0
	comp=Z,14nm,0.7s						
KPKS	Kokpek	9.47	40	eP	Pn	09 24 10.4	-0.1
KPKS	Kokpek	9.47	40	eP	Pn	09 24 10.4	-0.1
SHLS	Shalkode	9.68	44	eP	Pn	09 24 15.9	+2.7
SHLS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SHLS	Shalkode	9.68	44	eP	Pn	09 24 15.9	+2.7
	comp=Z,9.5nm,0.6s						
NDI	New Delhi	9.73	141	eP	Pn	09 24 05.5	-8.5
NDI				eS	S	09 25 41.8	-21
NDI				IAML		09 25 56.8	
	comp=E,89nm,0.7s						
NDI				IAML		09 25 56.9	
	comp=N,59nm,0.7s						
NPLP	NPLP New Delhi	9.74	142	eP	Pn	09 24 05.5	-8.7
NPLP				eS	S	09 25 41.7	-22
NPLP				IAML		09 25 57.2	
	comp=N,183nm,0.3s						
NPLP				IAML		09 26 05.6	
	comp=E,210nm,0.3s						
PDGK	Podgornoye	9.80	43	⇑P	Pn	09 24 14.8	-0.1
	comp=E,36nm,0.9s						
KUDL	Kundal	9.84	146	eP	Pn	09 24 06.6	-8.7
KUDL				eS	S	09 25 43.6	-22
KUDL				IAML		09 25 59.6	
	comp=E,102nm,0.3s						
KUDL				IAML		09 26 03.7	
	comp=N,73nm,0.5s						
SONA	Sohna	10.02	143	eP	Pn	09 24 08.9	-8.8
SONA				eS	S	09 25 48.2	-22
SONA				IAML		09 26 03.3	
	comp=E,174nm,0.5s						
SONA				IAML		09 26 05.6	
	comp=N,67nm,0.3s						
AJM	Ajmer	10.65	158	eP	Pn	09 24 17.5	-8.4
AJM				eS	S	09 26 02.6	-23
OTUK	Ortayu	11.83	7	⇑P	Pn	09 24 40.1	-0.5
	comp=N,25nm,0.7s						
JHNI	Jhansi	13.07	145	eP	Pn	09 24 49.9	-6.4
JHNI				eS	S	09 26 58.5	-23
JHNI				IAmL		09 27 17.4	
	comp=E,72nm,1.0s						
JHNI				IAmL		09 27 29.6	
	comp=N,45nm,0.7s						
MAKZ	Makanchi	13.48	37	P	Pn	09 25 00.5	-0.7
MAKZ	Makanchi	13.48	37	⇓P	Pn	09 25 00.9	-0.3
	comp=N,29nm,0.5s						
MAKZ	Makanchi	13.48	37	P	Pn	09 25 00.5	-0.7
BRZS	Berezniki	13.58	7	eP	Pn	09 25 02.2	-0.2
BRZS	Berezniki	13.58	7	eP	Pn	09 25 02.2	-0.2
MK31	Makanchi Array	13.62	37	P	Pn	09 25 02.6	-0.4
	comp=N,11nm,0.7s,baz=228,slow=8.2,SNR=75						
MK31	Makanchi Array	13.62	37	ceP	Pn	09 25 02.8	-0.2
MKAR	Makanchi Array	13.62	37	P	Pn	09 25 02.6	-0.3
MKAR	Makanchi Array	13.62	37	P	Pn	09 25 02.8	-0.2
	comp=N,7.6nm,0.6s,baz=228,slow=13,SNR=90						
AB31	Akbulak array	14.82	333	P	Pn	09 25 16.8	-0.7
AB31	Akbulak array	14.82	333	⇓P	Pn	09 25 16.4	-1.2
	comp=N,6.9nm,0.4s,baz=158,slow=11,SNR=304						
AB31				S	S	09 27 56.8	-4.6
	comp=N,6.1nm,0.5s,baz=154,slow=22,SNR=3.9						
ABKAR	Akbulak array	14.82	333	P	Pn	09 25 15.6	-1.9
ABKAR	Akbulak array	14.82	333	P	Pn	09 25 15.8	-1.8
WMQ	Urumqi	15.15	56	eP	P	09 25 22.0	0.0
KURBB	Kurchatov Arra	15.30	20	P	Pn	09 25 22.9	-0.6
	comp=N,9.8nm,0.7s,baz=210,slow=10,SNR=54						
KURBB	Kurchatov Arra	15.30	20	⇓P	Pn	09 25 22.4	-1.1
	comp=N,14nm,0.6s						
KURK	Kurchatov	15.41	20	P	P	09 25 23.5	-1.2
KURK				IAmb	IAmb	09 25 27.6	
	comp=Z,10nm,0.8s						
KURK	Kurchatov	15.41	20	ceP	P	09 25 24.2	-0.5
KURK				pmax	pmax		
	comp=Z,11nm,0.7s						
EVN	Everest	16.35	117	P	P	09 25 35.5	-0.4
EVN				IAmb	IAmb	09 25 47.3	
	comp=Z,10nm,0.6s						
AKTO	Aktyubinsk	16.50	331	P	Pn	09 25 37.9	0.0
	comp=Z,6.8nm,0.3s,baz=143,slow=8.2,SNR=28						
AKTO	Aktyubinsk	16.50	331	⇓P	Pn	09 25 37.2	-0.6
	comp=Z,11nm,0.8s						
BVA0	Borovoye Array	16.52	0	P	Pn	09 25 37.9	-0.1
	comp=Z,11nm,0.5s,baz=157,slow=10,SNR=42						
BVAR	Borovoye Array	16.52	0	P	Pn	09 25 37.8	-0.2
	comp=Z,16nm,0.4s,baz=155,slow=10.0,SNR=39						
BRVK	Borovoye	16.55	360		Pn	09 25 38.7	+0.3
BRVK	Borovoye	16.55	360	P	Pn	09 25 38.7	+0.3
BRVK				pmax	pmax		
	comp=Z,16nm,0.8s						
UOSS	Minazif	16.70	230	P	P	09 25 38.8	-0.4
UOSS				IAmb	IAmb	09 25 54.2	
	comp=Z,15nm,1.0s						
ZAA0	Zalesovo Array	20.15	25	P	P	09 26 16.2	+0.1
ZAA0	Zalesovo Array	20.15	25	⇑P	P	09 26 16.2	+0.1
	comp=Z,1.8nm,0.6s						
ZALV	Zalesovo Beam	20.15	25	P	P	09 26 15.4	-0.7
ZALV	Zalesovo Beam	20.15	25	P	P	09 26 16.6	+0.5
	comp=Z,6.1nm,0.3s,baz=220,slow=10,SNR=22						
	comp=Z,6.1nm,0.3s						
GNI	Garni	20.36	288	P	P	09 26 19.2	+0.4
GNI	Garni	20.36	288	P	P	09 26 19.5	+0.7
	comp=Z,11nm,0.6s,baz=55,slow=1.4,SNR=8.6						
	comp=Z,11nm,0.6s						
ARTI	Arti	21.46	342	P	P	09 26 29.1	-0.7
ARTI	Arti	21.46	342	P	P	09 26 30.6	+0.8
	comp=Z,6.8nm,0.4s,baz=156,slow=9.8,SNR=9.9						
	comp=Z,6.8nm,0.4s						
ARTI	Arti	21.46	342	d iP	P	09 26 29.9	+0.1
ARTI						09 27 10.4	
ARTI				S	S	09 30 15.1	+1.7
ARTI				pmax	pmax		
	comp=Z,12nm,1.0s						
KBZ	Khabaz	22.10	298	P	P	09 26 35.5	-0.6
	comp=Z,2.1nm,0.8s,baz=118,slow=9.7,SNR=4.8						
	comp=Z,2.1nm,0.8s						
KIV	Kislovodsk	22.29	298	eP	P	09 26 38.3	+0.2
KIV				eS	S	09 30 28.1	+0.9
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GURO	Guroymak-BITLI	22.48	284	P	P	09 26 41.6	+1.7
BELG	Belogornoye	22.54	322	P	P	09 26 40.0	-0.1
	comp=Z,16nm,0.5s,baz=305,slow=2.2,SNR=4.8						
	comp=Z,16nm,0.5s						
BELG	Belogornoye	22.54	322	P	P	09 26 40.0	-0.1
RAYN	Ar Rayn	24.99	246	P	P	09 27 01.9	-0.7
RAYN				IAmb	IAmb	09 27 04.3	
	comp=Z,6.7nm,0.9s						
RAYN	Ar Rayn	24.99	246	P	P	09 27 01.9	-0.7
RAYN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ARPR	Arapgir-MALATY	25.33	286	P	P	09 27 07.5	+1.8
ARPR				IAmb	IAmb	09 27 09.2	
	comp=Z,10nm,1.2s						
KIRV	Kirov	26.00	335	P	P	09 27 12.2	+1.0
	comp=Z,16nm,0.5s,baz=28,slow=4.4,SNR=4.8						
	comp=Z,16nm,0.5s						
SONM	Songino Array	28.79	55	P	P	09 27 38.4	+2.0
	comp=Z,2.2nm,0.7s,baz=271,slow=9.5,SNR=7.9						
	comp=Z,2.2nm,0.7s						
BR131	Keskin Array S	28.90	288	P	P	09 27 37.6	+0.1
BR131	Keskin Array S	28.90	288	P	P	09 27 37.6	+0.1
BR131				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRTR	Keskin Array B	28.90	288	P	P	09 27 38.5	+1.0
	comp=Z,1.1nm,0.6s,baz=97,slow=8.8,SNR=7.3						
	comp=Z,1.1nm,0.6s						
CMAR	Chiang Mai Arr	30.95	118	P	P	09 27 55.3	-0.2
CMAR	Chiang Mai Arr	30.95	118	P	P	09 27 56.4	+0.8
	comp=Z,1.8nm,0.4s,baz=303,slow=7.7,SNR=10						
	comp=Z,1.8nm,0.4s						
CMAR	Chiang Mai Arr	30.95	118	i P	P	09 27 57.2	+1.7
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KLMR	Klimovskoe	31.21	331	eP	P	09 27 56.5	-0.8
KLMR				e		09 29 07.5	
KLMR				pmax	pmax		
	comp=Z,14nm,1.1s						
HHC	Hu-ho-hao-te	32.28	69	eP	P	09 28 08.0	+0.9
HHC				pmax	pmax		
	comp=Z,15nm,0.7s						
HHC				pmax	pmax		
	comp=Z,43nm,4.0s						
AKASG	Malin Array Be	32.51	309	P	P	09 28 08.5	-0.3
	comp=Z,0.4nm,0.4s,baz=81,slow=7.5,SNR=7.7						
	comp=Z,0.4nm,0.4s						
AKBB	Malin Array Si	32.51	309	i P	P	09 28 08.3	-0.5
AKBB				pmax	pmax		
	comp=Z,10.0nm,2.0s						
FINES	FINESS Array B	37.17	326	P	P	09 28 48.5	0.0
FINES	FINESS Array B	37.17	326	P	P	09 28 49.1	+0.6
	comp=Z,4.3nm,0.7s,baz=108,slow=12,SNR=14						
	comp=Z,4.3nm,0.7s						
KEV	Kevo	40.59	338	P	P	09 29 17.1	+0.4
KEV				IAmb	IAmb	09 29 17.8	
	comp=Z,10nm,0.9s						
KEV	Kevo	40.59	338	P	P	09 29 17.1	+0.4
KEV				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ARCES	ARCESS Array B	40.93	338	P	P	09 29 19.6	+0.1
ARCES				IAmb	IAmb	09 29 21.2	
	comp=Z,7.9nm,0.8s						
ARCES	ARCESS Array B	40.93	338	P	P	09 29 20.6	+1.1
	comp=Z,6.9nm,0.6s,baz=115,slow=7.9,SNR=30						
	comp=Z,6.9nm,0.6s						
HEH	HeiHe	42.69	53	eP	P	09 29 35.5	+1.5
HEH				pmax	pmax		
	comp=Z,14nm,0.8s						
HFS	Hagfors	42.72	322	P	P	09 29 33.9	-0.1
	comp=Z,4.3nm,0.7s,baz=96,slow=13,SNR=18						
HFS				pP	pP	09 30 21.9	+2.2
	comp=Z,3.1nm,0.6s,baz=94,slow=9.7,SNR=4.3						
	comp=Z,4.3nm,0.7s						
NC303	NORSAR Array S	43.99	323	P	P	09 29 44.1	-0.1
NC303				IAmb	IAmb	09 29 45.2	
	comp=Z,12nm,1.0s						
NB2	NORSAR Subarra	44.04	323	P	P	09 29 44.3	-0.4
	comp=Z,8.1nm,1.0s,baz=99,slow=7.9						
NB2				pP	pP	09 30 32.6	+2.0
	comp=Z,1.8nm,0.7s,baz=96,slow=8.6						
NOA	NORSAR Array B	44.04	323	P	P	09 29 44.6	-0.1
	comp=Z,5.5nm,0.9s,baz=104,slow=7.3,SNR=16						
NOA				pP	pP	09 30 32.8	+2.2
	comp=Z,1.8nm,0.7s,baz=97,slow=8.1,SNR=4.2						
	comp=Z,5.5nm,0.9s						
NBO00	NORSAR Array S	44.25	323	P	P	09 29 45.6	-0.7
NBO00				IAmb	IAmb	09 29 46.9	
	comp=Z,8.3nm,0.9s						
YAK	Yakutsk	44.29	36	ceP	P	09 29 47.9	+1.4
YAK				pmax	pmax		
	comp=Z,19nm,0.8s						
KSRS	Korea Array	45.41	71	P	P	09 29 55.9	+0.2
	comp=Z,1.4nm,0.5s,baz=272,slow=7.3,SNR=7.9						
	comp=Z,1.4nm,0.5s						
TIXI	Tiksi	45.98	22	P	P	09 30 00.3	+0.7
TIXI	Tiksi	45.98	22	ceP	P	09 30 00.8	+1.1
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.5s						
LODK	Lodwar	46.02	233	P	P	09 30 02.4	+1.5
USRK	Ussuriysk Ar.	46.65	61	P	P	09 30 05.9	+0.5
	comp=Z,1.2nm,0.6s,baz=292,slow=7.6,SNR=3.3						
	comp=Z,1.2nm,0.6s						
SPB2	Spitsbergen Ar	47.36	347	P	P	09 30 11.5	+1.2
SPITS	Spitsbergen Ar	47.36	347	P	P	09 30 12.0	+1.6
	comp=Z,4.4nm,0.6s,baz=116,slow=11,SNR=9.1						
	comp=Z,4.4nm,0.6s						
SPITS	Spitsbergen Ar	47.36	347	P	P	09 30 12.0	+1.6
KIBK	Kibwezi	48.95	225	P	P	09 30 23.2	-0.1
KIBK				IAmb	IAmb	09 30 24.8	
	comp=Z,5.0nm,0.6s						
EKA	Eskdalemuir Ar	51.90	316	P	P	09 30 44.2	-0.6
	comp=Z,3.2nm,0.7s,baz=82,slow=8.5,SNR=5.7						
	comp=Z,3.2nm,0.7s						
MBAR	Mbarara	52.06	234	ceP	P	09 30 47.7	+1.0
MBAR				pmax	pmax		
	comp=Z,14nm,1.7s						
JSD	Sado	52.97	66	P	P	09 30 52.6	-0.3
MJAR	Matsushiro Arr	53.47	68	P	P	09 30 56.8	+0.2
	comp=Z,1.0nm,0.5s,baz=277,slow=11,SNR=4.0						
	comp=Z,1.0nm,0.5s						
ESDC	Sonseca Array	56.96	298	P	P	09 31 20.3	-1.2
	comp=Z,0.4nm,0.7s,baz=67,slow=5.9,SNR=4.8						
ESDC				pP	pP	09 32 10.7	+1.0
	comp=Z,0.6nm,0.7s,baz=60,slow=7.0,SNR=2.7						
	comp=Z,0.4nm,0.7s						
ABPO	Ambohimpanom	59.37	206	P	P	09 31 39.0	+0.5
ABPO	Ambohimpanom	59.37	206	P	P	09 31 39.0	+0.5
ABPO				pmax	pmax		
	comp=Z,18nm,1.5s						
SUMG	Summit	60.88	341	P	P	09 31 49.2	+0.9
SUMG	Summit	60.88	341	P	P	09 31 49.2	+0.9
SUMG				pmax	pmax		
	comp=Z,18nm,1.3s						
VOI	Vohitsoka	62.20	205	P	P	09 31 56.8	-0.6
EUNU	Eureka	62.96	356	P	P	09 32 03.0	+1.3
TORD	Torodi Ar. Bea	65.16	268	P	P	09 32 14.9	-1.9
	comp=Z,1.4nm,0.4s,baz=49,slow=6.8,SNR=7.2						
	comp=Z,1.4nm,0.4s						
A19K	Wainwright	67.32	17	P	P	09 32 30.1	+0.5
	baz=317						
A21K	Barrow	67.45	15	P	P	09 32 30.6	+0.1
	baz=320						
C16K	Lisburne Hills	67.64	19	P	P	09 32 31.9	+0.2
	baz=314						
B18K	Kokolik River	67.77	18	P	P	09 32 32.3	-0.1
	baz=317						
A22K	Sinclair Lake	68.04	15	P	P	09 32 34.0	-0.1
	baz=322						
C17K	DeLong Mountai	68.06	19	P	P	09 32 34.8	+0.4
	baz=316						
B20K	Meade River	68.36	16	P	P	09 32 36.3	+0.2
	baz=320						
C18K	Utukok River	68.44	18	P	P	09 32 36.8	0.0
	baz=317						
C19K	Lookout Ridge	68.49	17	P	P	09 32 37.4	+0.3
	baz=318						
D17K	Noatak River	68.65	19	P	P	09 32 37.8	-0.1
	baz=316						
GAMB	Gambell	68.74	25	P	P	09 32 38.5	0.0
	baz=310						
B22K	Teshekpuk Lake	68.88	15	P	P	09 32 40.4	+1.0
	baz=323						
B21K	Ikpikpuk River	69.21	15	P	P	09 32 41.4	0.0
	baz=322						
D19K	Kuna River	69.31	17		P	09 32 42.8	+0.7
D19K				IAmb	IAmb	09 32 43.5	
	comp=Z,5.2nm,0.8s						
D19K	Kuna River	69.31	17	P	P	09 32 42.3	+0.2
	baz=320,SNR=5.7						
F14K	Arctic Creek	69.31	22	P	P	09 32 42.0	-0.1
	baz=314						
E17K	Hotham Inlet	69.43	19	P	P	09 32 42.8	0.0
	baz=317						
D20K	Etivluk River	69.49	17	P	P	09 32 43.4	+0.2
	baz=321						
E18K	Tukpahlearik C	69.50	19	P	P	09 32 43.7	+0.5
	baz=318						
C21K	Knifeblade Rid	69.55	16	P	P	09 32 44.1	+0.6
	baz=322						
F15K	North Star Dit	69.64	21	P	P	09 32 44.7	+0.6
	baz=315						
C23K	Itkillik River	69.85	14	P	P	09 32 45.5	+0.2
	baz=326						
E20K	Nigu River	69.94	17	P	P	09 32 46.4	+0.4
	baz=322						
F17K	Baldwin Pennin	70.06	20	P	P	09 32 46.9	+0.3
	baz=318						
D22K	Ayikyak River	70.22	15	P	P	09 32 48.1	+0.5
	baz=324						
ANM	Nome	70.24	22	P	P	09 32 48.2	+0.4
	baz=315						
E21K	Killik River	70.30	16	P	P	09 32 48.5	+0.3
	baz=323						
C24K	Franklin Bluff	70.32	13	P	P	09 32 48.7	+0.6
	baz=327						
E19K	Redstone River	70.32	18	P	P	09 32 47.7	-0.5
	baz=321						
G15K	Niukluk	70.34	22	P	P	09 32 48.3	-0.1
	baz=316						
F18K	Selawik	70.37	19	P	P	09 32 48.2	-0.3
	baz=319						
G16K	Koyuk River	70.53	21	P	P	09 32 49.0	-0.5
	baz=317						
D23K	Nanushuk River	70.56	15	P	P	09 32 49.6	-0.1
	baz=326						
F19K	Shaleruckik Mo	70.67	18	P	P	09 32 50.5	+0.2
	baz=321						
D24K	Happy Valley	70.77	14	P	P	09 32 51.3	+0.4
	baz=327						
C26K	Camden Bay	70.82	12	P	P	09 32 51.6	+0.4
	baz=330						
G17K	Kiwalik Mounta	70.93	20	P	P	09 32 52.3	+0.4
	baz=319						
F20K	Avaraart Lake	71.01	17	P	P	09 32 52.4	+0.1
	baz=322						
E22K	Anaktuvuk Pass	71.02	15	P	P	09 32 52.9	+0.4
	baz=325						
TOLK	Toolik Lake Re	71.06	14		P	09 32 53.4	+0.7
TOLK	Toolik Lake Re	71.06	14	P	P	09 32 53.1	+0.4
	baz=327						
D25K	Kavik River	71.08	13	P	P	09 32 52.1	-0.8
	baz=329						
H16K	Elim	71.12	21	P	P	09 32 52.4	-0.6
	baz=318						
A36M	Sachs Harbour	71.25	5	P	P	09 32 53.7	0.0
	baz=347						
C27K	Jago River	71.28	12	P	P	09 32 54.7	+0.7

	baz=332						
G19K	Purcell Mounta	71.38	18	P	P	09 32 55.0	+0.4
	baz=321						
F21K	Alatna River	71.39	17		P	09 32 54.9	+0.1
F21K	Alatna River	71.39	17	P	P	09 32 55.2	+0.4
	baz=324						
F22K	John River	71.45	16	P	P	09 32 55.6	+0.6
	baz=325						
E23K	Chandalar	71.54	15	P	P	09 32 56.5	+0.8
	baz=327						
H17K	Granite Mounta	71.56	20	P	P	09 32 56.2	+0.5
	baz=319						
E24K	Your Creek	71.75	14	P	P	09 32 57.4	+0.5
	baz=328						
H18K	Honhosa River	71.82	20	P	P	09 32 57.1	-0.1
	baz=320						
G21K	Allakaket	71.96	17	P	P	09 32 58.0	-0.1
	baz=324						
H19K	Roundabout Mou	72.03	19	P	P	09 32 59.2	+0.7
	baz=322						
D27M	Malcolm River	72.07	11	P	P	09 32 58.6	-0.2
	baz=334						
G22K	Bettles	72.09	16	P	P	09 32 59.3	+0.5
	baz=326						
COLD	Coldfoot	72.12	15	P	P	09 33 00.2	+1.3
COLD				IAmb	IAmb	09 33 00.7	
	comp=Z,5.6nm,1.0s						
COLD	Coldfoot	72.12	15	P	P	09 32 59.6	+0.6
	baz=327						
I17K	Unalakleet	72.14	21	P	P	09 32 59.7	+0.6
	baz=319						
E25K	Arctic Village	72.28	13	P	P	09 33 00.3	+0.3
	baz=330						
F24K	Squaw Lake	72.35	14	P	P	09 33 00.9	+0.5
	baz=328						
K13K	Kusilvak Mount	72.36	24	P	P	09 33 00.2	-0.2
	baz=316						
H20K	Anotleneega Mo	72.46	18	P	P	09 33 01.8	+0.8
	baz=323						
GCSA	Galena City Sc	72.53	19	P	P	09 33 01.6	+0.2
	baz=322						
G23K	Bananza Creek	72.59	16	P	P	09 33 02.8	+1.0
	baz=327						
J16K	Anvik River	72.62	22	P	P	09 33 02.3	+0.3
	baz=319						
F25K	Christian Rive	72.72	14	P	P	09 33 03.1	+0.5
	baz=330						
H21K	Melozitna Rive	72.83	17	P	P	09 33 04.4	+1.1
	baz=325						
E28M	Babbage River	72.87	11	P	P	09 33 04.6	+1.2
	baz=335						
F26K	Sheenjek River	72.91	13	P	P	09 33 04.4	+0.7
	baz=332						
E27K	Coleen River	72.92	12	P	P	09 33 04.5	+0.8
	baz=334						
M11K	Mekoryuk	72.95	26	P	P	09 33 04.9	+0.9
	baz=315						
H22K	Ishtalitna Cre	72.97	17	P	P	09 33 05.3	+1.2
	baz=326						
J17K	VABM Dome	72.98	21	P	P	09 33 04.9	+0.8
	baz=320						
K15K	Wolf Creek Mou	73.09	23	P	P	09 33 05.8	+1.0
	baz=319						
I20K	Naaghedeneel	73.12	18	P	P	09 33 05.9	+1.1
	baz=324						
G24K	Hadweenzic Riv	73.14	15	P	P	09 33 05.8	+0.8
G24K	Hadweenzic Riv	73.14	15	P	P	09 33 06.1	+1.1
	baz=329						
E29M	Blow River	73.31	11	P	P	09 33 06.7	+0.7
E29M				IAmb	IAmb	09 33 07.7	
	comp=Z,3.3nm,0.7s						
E29M	Blow River	73.31	11	P	P	09 33 07.1	+1.1
	baz=337						
G25K	Bearman Lake	73.36	14	P	P	09 33 07.2	+1.0
	baz=330						
I21K	Tanana	73.42	17	P	P	09 33 07.4	+0.7
	baz=326						
L14K	Kuka Creek	73.43	24	P	P	09 33 07.1	+0.4
	baz=318						
H23K	Yukon River	73.44	16	P	P	09 33 07.7	+0.9
H23K				IAmb	IAmb	09 33 08.9	
	comp=Z,3.8nm,0.8s						
H23K	Yukon River	73.44	16	P	P	09 33 07.9	+1.1
	baz=327						
J19K	Poorman	73.47	19		P	09 33 07.4	+0.5
J19K				IAmb	IAmb	09 33 08.7	
	comp=Z,7.0nm,1.1s						
J19K	Poorman	73.47	19	P	P	09 33 08.3	+1.3
	baz=323,SNR=5.3						
L15K	Ungalak Mounta	73.56	23	P	P	09 33 08.5	+0.9
	baz=319						
G26K	Porcupine Rive	73.64	13	P	P	09 33 09.1	+1.2
	baz=332						
J20K	Nowinta River	73.71	19	P	P	09 33 08.7	+0.3
J20K				IAmb	IAmb	09 33 10.1	
	comp=Z,4.6nm,0.7s						
J20K	Nowinta River	73.71	19	P	P	09 33 09.6	+1.3
	baz=324						
F28M	Old Crow	73.72	12	P	P	09 33 09.0	+0.6
	baz=335						
K17K	Iditarod	73.73	21	P	P	09 33 08.2	-0.3
	baz=321						
H24K	Noodor Dome	73.79	15	P	P	09 33 09.6	+0.7
H24K	Noodor Dome	73.79	15	P	P	09 33 09.6	+0.7
	baz=329						
MLY	Manley	73.84	17	P	P	09 33 09.8	+0.6
	baz=327						
H25L	Birch Creek	73.85	14	P	P	09 33 08.9	-0.2
	baz=330						
INK	Inuvik	73.99	9	P	P	09 33 10.3	+0.5
INK				IAmb	IAmb	09 33 11.2	
	comp=Z,5.8nm,0.7s						
INK	Inuvik	73.99	9	P	P	09 33 10.3	+0.5
INK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
INK	Inuvik	73.99	9	P	P	09 33 10.7	+0.9
	baz=340						
I23K	Minto, Yukon-K	74.06	16	P	P	09 33 11.3	+0.9
	baz=328						
M14K	Bethel	74.11	24	P	P	09 33 11.4	+0.7
	baz=318						
G27K	Doyon Strip	74.15	13	P	P	09 33 12.2	+1.3
G27K				IAmb	IAmb	09 33 13.0	
	comp=Z,4.2nm,0.7s						
G27K	Doyon Strip	74.15	13	P	P	09 33 12.0	+1.1
	baz=334,SNR=6.5						
L16K	Owhat River	74.16	22	P	P	09 33 12.1	+1.1
	baz=320						
F30M	Barrier River	74.34	10	P	P	09 33 13.0	+1.0
	baz=338						
P08K	Saint George I	74.35	30	P	P	09 33 12.5	+0.3
	baz=314						
K20K	Telida	74.39	19	P	P	09 33 13.3	+1.0
	baz=324						
CHUM	Lake Minchumin	74.41	18	P	P	09 33 13.6	+1.2
	baz=326						
BPAW	Bear Paw Mtn.	74.56	17	P	P	09 33 13.4	+0.1
	baz=326						
PRP	Porcupine Dome	74.56	15	P	P	09 33 14.1	+0.6
	baz=331						
M15K	Kasigluk River	74.56	23	P	P	09 33 13.6	+0.2
	baz=320						
L18K	Granite Mounta	74.59	21	P	P	09 33 13.4	0.0
	baz=322						
NEA2	Nenana	74.59	16	P	P	09 33 13.9	+0.5
NEA2				IAmb	IAmb	09 33 14.6	
	comp=Z,6.2nm,0.7s						
NEA2	Nenana	74.59	16	P	P	09 33 13.8	+0.3
	baz=328						
COLA	College	74.63	16	P	P	09 33 14.1	+0.5
	baz=329						
G29M	Pine Creek	74.66	11	P	P	09 33 14.4	+0.6
	baz=337						
H27K	Steamboat Moun	74.69	13	P	P	09 33 14.8	+0.7
	baz=334,SNR=6.1						
F31M	Tsiigehtchic	74.78	9	P	P	09 33 15.0	+0.5
	baz=340						
N14K	Kuskokwak Cree	74.82	24	P	P	09 33 14.1	-0.7
	baz=319						
M16K	Timber Creek	74.85	22	P	P	09 33 15.4	+0.4
	baz=321						
CAST	Castle Rocks	74.86	18	P	P	09 33 15.0	-0.1
	baz=326						
G30M	tAoh Zraii Nji	74.87	10	P	P	09 33 15.2	+0.2
	baz=338						
ILAR	Eielson Array	74.93	16	P	P	09 33 15.3	0.0
	comp=Z,1.3nm,0.8s,baz=309,slow=4.8,SNR=17						
ILAR				pP	pP	09 34 08.6	+1.7
	comp=Z,0.9nm,0.9s,baz=283,slow=2.6,SNR=4.3						
	comp=Z,1.3nm,0.8s						
M17K	Holitna River	75.02	22	P	P	09 33 16.1	+0.2
	baz=322						
L19K	White Mountain	75.14	20	P	P	09 33 17.1	+0.5
	baz=324						
N15K	Kwethluk River	75.16	23	P	P	09 33 16.5	-0.3
	baz=320						
L20K	Farewell, AK	75.16	20	P	P	09 33 17.3	+0.5
	baz=324						
G31M	Satah River	75.20	10	P	P	09 33 17.1	+0.3
	baz=340						
I26K	Coal Creek Min	75.22	14	P	P	09 33 17.4	+0.3
	baz=333						
HDA	Harding Lake	75.23	16	P	P	09 33 17.1	0.0
	baz=330						
H29M	Whitestone	75.24	12	P	P	09 33 17.6	+0.4
	baz=336						
I27K	Kandik River	75.24	13	P	P	09 33 18.2	+0.9
	baz=334						
PPLA	Purkeypile	75.26	19	P	P	09 33 18.1	+0.6
	baz=326						
TRF	Thorofare Moun	75.27	18	P	P	09 33 18.6	+1.0
	baz=327						
N16K	Nishlik Lake	75.34	23	P	P	09 33 18.8	+1.0
	baz=321						
FITZ	Fitzroy Crossi	75.34	126	P	P	09 33 17.9	-0.4
	comp=Z,2.3nm,0.8s,baz=27,slow=18,SNR=1.6						
	comp=Z,2.3nm,0.8s						
MCK	McKinley	75.36	17	P	P	09 33 18.2	+0.3
	baz=328						
EPYK	Eagle Plains	75.36	11	P	P	09 33 17.9	+0.1
	baz=338						
J25K	Salcha River,	75.39	15	P	P	09 33 18.3	+0.2
	baz=331,SNR=5.2						
M18K	Stony River	75.42	21	P	P	09 33 18.9	+0.7
	baz=323						
O14K	Tigyukauivet M	75.47	25	P	P	09 33 19.4	+0.9
	baz=319						
M19K	Big River Lodg	75.49	20	P	P	09 33 18.4	-0.3
	baz=324						
RND	Reindeer	75.66	17	P	P	09 33 19.3	-0.3
RND				IAmb	IAmb	09 33 20.0	
	comp=Z,3.8nm,0.6s						
RND	Reindeer	75.66	17	P	P	09 33 19.3	-0.3
RND				pmax	pmax		
	comp=Z,4.0nm,0.6s						
I28M	Miner Creek	75.68	13	P	P	09 33 20.2	+0.4
	baz=335,SNR=6.7						
N17K	Nushagak Hills	75.78	22	P	P	09 33 21.0	+0.7
	baz=322						
M20K	Styx River	75.85	20	P	P	09 33 21.1	+0.3
	baz=325						
J26L	Joseph Creek	75.86	14	P	P	09 33 21.5	+0.7
	baz=332,SNR=6.5						
O15K	Ungalikthiuk R	76.01	24	P	P	09 33 21.6	0.0
	baz=320						
K24K	Donnelly Dome	76.01	16	P	P	09 33 21.6	0.0
K24K	Donnelly Dome	76.01	16	P	P	09 33 21.8	+0.2
	baz=331,SNR=5.7						
I29M	Ogilvie Camp,	76.04	12	P	P	09 33 21.8	+0.1
	baz=337						
N18K	Kilae Creek	76.05	21	P	P	09 33 22.3	+0.5
	baz=323						
CUT	Chulitna	76.16	18	P	P	09 33 23.2	+0.8
	baz=327						
SKT	Skwentna	76.20	19	P	P	09 33 22.8	+0.2
	baz=326						
WAT1	Susitna Watana	76.22	17	P	P	09 33 22.9	+0.1
	baz=329						
SCRK	Sand Creek	76.24	15	P	P	09 33 23.2	+0.3
	baz=332,SNR=6.1						
H31M	Peel River	76.24	10	P	P	09 33 23.2	+0.3
H31M				IAmb	IAmb	09 33 24.0	
	comp=Z,5.1nm,0.8s						
H31M	Peel River	76.24	10	P	P	09 33 23.4	+0.5
	baz=340						
O16K	Kokwok River B	76.24	23	P	P	09 33 21.8	-1.0
	baz=322						
RIDG	Independent Ri	76.27	15	P	P	09 33 23.5	+0.5
	baz=332						
DHY	Denali Highway	76.29	17		P	09 33 23.6	+0.3
DHY				IAmb	IAmb	09 33 24.2	
	comp=Z,5.1nm,0.7s						
DHY	Denali Highway	76.29	17	P	P	09 33 23.8	+0.5
	baz=330,SNR=6.6						
N19K	Bonanza Creek	76.35	21	P	P	09 33 23.2	-0.4
	baz=324						
O17K	Koliganek Bris	76.41	23	P	P	09 33 23.0	-0.8
	baz=322						
I30M	Mount Dempster	76.48	11	P	P	09 33 24.0	-0.3
	baz=338						
K27K	Chicken	76.57	14	P	P	09 33 24.3	-0.4
	baz=334						
WAT6	Susitna Watana	76.63	17	P	P	09 33 25.3	+0.1
	baz=329						
M22K	Willow	76.75	18	P	P	09 33 24.7	-1.0
	baz=328						
PAX	Paxson	76.81	16	P	P	09 33 26.6	+0.4
	baz=331,SNR=7.5						
O18K	Koktuh Hills	76.92	22	P	P	09 33 26.6	-0.1
	baz=324						
DAWY	Dawson	77.04	13	P	P	09 33 27.7	+0.3
DAWY	Dawson	77.04	13	P	P	09 33 27.1	-0.3
	baz=336						
P17K	Kvichak River	77.07	23	P	P	09 33 28.3	+0.8
	baz=323						
J30M	Hart River	77.09	11	P	P	09 33 28.0	+0.2
J30M	Hart River	77.09	11	P	P	09 33 28.1	+0.4
	baz=338						
PMR	Palmer	77.14	18	P	P	09 33 28.0	+0.1
	baz=328						
NIKH	Nikolski High	77.18	32	P	P	09 33 29.0	+0.8
	baz=315						
L26K	Log Cabin Wild	77.22	15	P	P	09 33 28.6	+0.3
	baz=333						
P18K	Big Mountain,	77.29	22	P	P	09 33 28.6	-0.2
	baz=324						
M23K	Glacier View	77.31	17	P	P	09 33 28.7	-0.2
	baz=329						
SCM	Sheep Creek Mo	77.37	17	P	P	09 33 29.4	+0.1
	baz=330						
HARP	HAARP	77.38	16	P	P	09 33 29.5	+0.3
	baz=331						
BOSA	Boshof	77.39	220	P	P	09 33 29.2	-0.6
	comp=Z,5.2nm,0.9s,baz=31,slow=2.3,SNR=4.8						
	comp=Z,5.2nm,0.9s						
M24K	Tolsona, Glenn	77.41	17	P	P	09 33 29.7	+0.2
	baz=331						
RC01	Rabbit Creek A	77.41	19	P	P	09 33 30.1	+0.6
	baz=328						
Q16K	King Salmon	77.42	23	P	P	09 33 30.4	+0.9
	baz=323						
KNK	Knik Glacier	77.46	18	P	P	09 33 30.3	+0.6
	baz=329						
O20K	Slope Mountain	77.48	20	P	P	09 33 29.4	-0.5
	baz=326						
L27K	Beaver Creek,	77.49	14	P	P	09 33 30.7	+0.8
	baz=334						
BCAR	Beaver Creek A	77.50	14	P	P	09 33 30.4	+0.5
UNV	Unalaska Valle	77.54	31	P	P	09 33 30.5	+0.3
	baz=316						
K29M	Barlow Dome	77.58	12	P	P	09 33 30.7	+0.3
	baz=337						
P19K	Oil Pt	77.66	21	P	P	09 33 30.4	-0.4
	baz=325						
Q18K	Katmai Hardscr	77.96	22	P	P	09 33 32.0	-0.7
	baz=324						
PWL	Port Wells	77.97	18	P	P	09 33 33.0	+0.5
	baz=329						
Q17K	Contact Creek	78.00	23	P	P	09 33 33.1	+0.3
	baz=324						
KLU	Klutina	78.00	17	P	P	09 33 32.3	-0.5
	baz=331						
HOM	Homer	78.11	20	P	P	09 33 33.2	0.0
	baz=327						
M27K	Edge Creek, AK	78.12	15	P	P	09 33 34.2	+0.7
M27K				IAmb	IAmb	09 33 35.4	
	comp=Z,4.8nm,0.8s						
M27K	Edge Creek, AK	78.12	15	P	P	09 33 34.3	+0.8
	baz=334						
Q19K	Cape Douglas,	78.14	22	P	P	09 33 33.5	0.0
	baz=325						
L29M	L29M	78.15	13	P	P	09 33 34.2	+0.7
	baz=337						
N25K	Chitina, Valde	78.21	16	P	P	09 33 33.4	-0.5
	baz=332						
GLI	Glacier Island	78.26	18	P	P	09 33 33.7	-0.4
	baz=330						
BVCY	Beaver Creek	78.27	14	P	P	09 33 34.2	0.0
	baz=335						
BRSE	Bradley Lake S	78.29	20	P	P	09 33 33.5	-0.8
	baz=327						
M29M	Somme Creek	78.70	13	P	P	09 33 36.8	+0.1
	baz=337						
BMRM	Bremner River	78.77	17	P	P	09 33 37.0	+0.1
	baz=332						
EYAK	Cordova Ski Ar	78.87	17	P	P	09 33 37.8	+0.4
	baz=331						
BLKN	Baker Lake	78.93	354		P	09 33 37.3	-0.4
BLKN				IAmb	IAmb	09 33 38.6	
	comp=Z,5.5nm,0.8s						
YUK3	Moose Creek	78.93	14	P	P	09 33 38.2	+0.1
	baz=335						
P23K	Montague Islan	78.95	18	P	P	09 33 38.2	+0.4
	baz=330						
R18K	Karluk	79.01	23	P	P	09 33 38.1	-0.1
	baz=325						
KDAK	Kodiak Island	79.40	22	P	P	09 33 40.3	0.0
	baz=326						
CHNA	Chernabura Isl	79.47	27	P	P	09 33 40.7	0.0
	baz=321						
CTG	Chitna Glacier	79.49	15	P	P	09 33 41.4	+0.4
	baz=335						
M31M	Drury Creek, Y	79.63	11	P	P	09 33 41.7	+0.1
	baz=340						
OHAK	Old Harbor	79.65	22	P	P	09 33 41.6	0.0
	baz=326						
YUK4	Talbot Arm	79.68	14	P	P	09 33 41.7	-0.3
	baz=337						
MMPY	Sheldon Lake,	79.70	10	P	P	09 33 41.6	-0.4
	baz=342						
Q23K	Middleton Isla	79.71	18	P	P	09 33 41.7	-0.2
	baz=331						
FARO	Faro, Yukon	79.77	11	P	P	09 33 42.4	+0.1
	baz=341						
BGLC	Bering Glacier	79.83	16	P	P	09 33 42.6	+0.1
	baz=333						
N30M	Aishikik Lake	79.87	13	P	P	09 33 43.1	+0.2
	baz=338						
O28M	Mount Upton	79.90	15	P	P	09 33 43.4	0.0
	baz=336						
WRGLY	Wrigley	80.00	6	P	P	09 33 44.5	+1.1
	baz=349						
CHIR	Chirikof Islan	80.06	24	P	P	09 33 45.1	+1.2
	baz=324						
MESA	MESA	80.07	16	P	P	09 33 44.7	+0.6
	baz=334						
N31M	Braeburn, Yuko	80.07	12	P	P	09 33 44.4	+0.5
	baz=339						
YUK6	Outpost Mounta	80.11	14	P	P	09 33 44.0	-0.4
	baz=337						
HYT	Haines Junctio	80.38	13	P	P	09 33 45.6	-0.1
	baz=338						
PINM	Pinnacle	80.51	15	P	P	09 33 46.3	-0.1
	baz=336						
O30N	Mendenhall	80.69	13	P	P	09 33 47.1	-0.1
	baz=339						
N32M	Quiet Lake	80.83	11	P	P	09 33 47.6	-0.4
	baz=341						
WHY	Whitehorse	81.00	12	P	P	09 33 48.4	-0.6
	baz=340						
PNL	Peninsula	81.08	15	P	P	09 33 48.7	-0.6
	baz=336						
P30M	Million Dollar	81.13	13	P	P	09 33 48.8	-0.8
	baz=338						
YKA	Yellowknife Ar	81.27	2	P	P	09 33 50.5	+0.4
	comp=Z,2.6nm,0.8s,baz=350,slow=5.9,SNR=16						
YKA				pP	pP	09 34 43.5	+1.3
	comp=Z,2.7nm,0.7s,baz=350,slow=6.0,SNR=14						
	comp=Z,2.6nm,0.8s						
YKAW1	Yellowknife Wh	81.28	2		P	09 33 50.1	-0.2
YKAW1				IAmb	IAmb	09 33 51.4	
	comp=Z,4.3nm,0.8s						
P29M	Windy Craggy	81.44	14	P	P	09 33 51.5	+0.3
	baz=338						
P33M	Teslin, Yukon	81.77	11	P	P	09 33 53.1	+0.1
	baz=341						
PLBC	Pleasant Camp	81.86	13	P	P	09 33 53.6	+0.3
	baz=339						
SCHQ	Schefferville	81.87	337	P	P	09 33 53.2	-0.3
	comp=Z,2.6nm,0.7s,baz=49,slow=6.7,SNR=5.2						
	comp=Z,2.6nm,0.7s						
SKAG	Skagway	82.05	13	P	P	09 33 54.5	+0.2
	baz=339						
WTLY	Watson Lake, Y	82.45	10	P	P	09 33 56.9	+0.4
	baz=345						
WRA	Warramunga Arr	82.47	121	P	P	09 33 55.2	-1.9
	comp=Z,2.3nm,0.7s,baz=325,slow=4.9,SNR=29						
WRA				PKKPbc	PKKPbc	09 52 21.5	+0.3
	comp=Z,0.5nm,0.6s,baz=123,slow=2.2,SNR=7.9						
	comp=Z,2.3nm,0.7s						
BEAVL	Fort Liard	82.83	8	P	P	09 33 58.9	+0.5
	baz=348						
R33M	Jennings River	82.83	11	P	P	09 33 58.5	0.0
	baz=343						
Q32M	Nakina River	83.05	12	P	P	09 33 59.6	-0.1
	baz=342						
S31K	Pelican	83.29	14	P	P	09 34 01.0	+0.3
	baz=339						
R32K	Eaglecrest	83.31	13	P	P	09 34 01.2	+0.3
	baz=340						
TOAD	Toad River Com	84.12	8	P	P	09 34 05.6	+0.6
	baz=348						
S34M	Telegraph Cree	84.23	11	P	P	09 34 06.0	+0.5
	baz=343						
ASAR	Alice Springs	84.72	124	P	P	09 34 06.8	-1.6
	comp=Z,2.4nm,0.8s,baz=313,slow=4.8,SNR=31						
	comp=Z,2.4nm,0.8s						
CRAG	Craig	86.22	13	P	P	09 34 15.8	+0.5
	baz=341						
QSPA	South Pole Qui	126.30	180	PKP	PKPdf	09 40 33.1	-1.4
	comp=Z,1.3nm,0.7s,baz=114,slow=0.9,SNR=11						
CPUP	Villa Florida	134.66	268	PKP	PKPdf	09 40 50.2	-1.2
	comp=Z,0.2nm,0.4s,baz=236,slow=1.6,SNR=3.1						
PLCA	Paso Flores	149.30	250	PKPbc	PKPbc	09 41 21.1	-0.5
	comp=Z,1.8nm,0.8s,baz=120,slow=4.7,SNR=3.5						

UCR 26 09:24:05.2±0.7**, 8°.32N**×**82°.81W, h26**^{km}±2^{km}**, MW3.5,**
Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMNES	Limones	0.23	192	*e*P	Pb	09 24 11.9	+0.6
MCANO	Manzana, Boque	0.34	44	*e*P	Pb	09 24 13.2	+0.2
NELY	Ciudad Neily	0.35	338	*e*P	Pb	09 24 12.9	-0.2
NELY				*e*S	Sb	09 24 19.1	+0.6
CSTBL	De las Acacias	0.38	76	*e*P	Pb	09 24 13.7	+0.2
FITO	Golfito	0.45	312	*e*P	Pb	09 24 13.7	-1.0
FITO				*e*S	Sb	09 24 20.2	-0.9
CLLRA	Cordillera,	0.46	25	*e*P	Pb	09 24 14.9	-0.1
EDAD	Golfito	0.48	313	*e*P	Pb	09 24 14.1	-1.1
EDAD				*e*S	Sb	09 24 21.0	-0.9
BRU2	Volcan	0.48	14	*e*P	Pb	09 24 15.1	-0.2
TBS2		0.49	18	*e*P	Pn	09 24 16.2	-0.5
RSRNO	Rio Sereno	0.49	354	*e*P	Pb	09 24 15.7	+0.3
SCLRA	Santa Clara, W	0.51	3	*e*P	Pb	09 24 15.8	0.0
VITO	San Vito	0.52	343	*e*P	Pb	09 24 15.9	+0.1
BQTLY	Boquete Panama	0.56	39	*e*P	Pb	09 24 16.2	-0.4
ALCO	Alturas Coton,	0.62	358	*e*P	Pb	09 24 16.9	-0.8
EDP2	Potrero Grande	0.78	332	*e*P	Pb	09 24 19.7	-0.5
PBNVO	Pueblo Nuevo,	0.83	47	*e*P	Pb	09 24 19.9	-1.2
RBALA	Bur	0.86	50	*e*P	Pb	09 24 20.6	-0.8
RMDIO	Remedios, Chir	0.98	95	*e*P	Pn	09 24 22.9	-0.4
DRK0	Durika	1.03	335	*e*P	Pn	09 24 23.4	-0.7
PDCAN	Manzana , Fuen	1.10	92	*e*P	Pn	09 24 24.1	-1.0
EDPE	Pejibaye, P	1.12	318	*e*P	Pn	09 24 24.6	-0.6
KKNTU	Kakintº	1.12	63	*e*P	Pn	09 24 24.2	-1.0
BRIBI	Bribri	1.29	360	*e*P	Pb	09 24 28.8	0.0
PIEC	Cerro El Cedra	1.72	319	*e*P	Pn	09 24 34.3	+0.6

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*JSO **26** 09:35:50.9±0.4, 31°N±3°×3°6E±°, h6^{km}±5^{km}, M2.4/11,*
Md2.8/10, ML2.2/11, MLv2.2/11, MLv2.2/11
*GII **26** 09:35:51.3±0.0, 31°.16N±0°.02×35°.480E±0°.009, h6^{km},*
Mws2.2, confirmed
ISC 26 09:35:51.5±0.9**, 31°.16N**±0°.02×**35°.50E**±0°.04**, h14**^{km}±5^{km}**,**
n45, σ**0^{s}.68**/53**, Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVZR	Neve Zohar	0.11	267	P	Pg	09 35 54.8	0.0
NVZR				S	Sg	09 35 57.4	+0.4
GHAJ	Ghor Haditha	0.15	23	P	Pg	09 35 54.8	-0.6

GHAJ	**Ghor Haditha**	**0.15**	**23**	P	**Pg**	**09 35 54.8**	**-0.6**
MDBI	**Mazsada**	**0.19**	**322**	P	**Pg**	**09 35 55.6**	**-0.4**
MDBI				S	**Sg**	**09 35 58.9**	**-0.1**
MDBI	**Mazsada**	**0.19**	**322**	P	**Pg**	**09 35 55.6**	**-0.4**
MDBI	**Mazsada**	**0.19**	**322**	S	**Sg**	**09 35 59.5**	**+0.5**
MSBI	**Mazada**	**0.19**	**322**	P	**Pg**	**09 35 55.8**	**-0.2**
MSBI	**Mazada**	**0.19**	**322**	P	**Pg**	**09 35 55.6**	**-0.4**
MSBI	**Mazada**	**0.19**	**322**	S	**Sg**	**09 35 58.0**	**-1.0**
NTKR	**Neot Hakikar**	**0.25**	**205**	P	**Pg**	**09 35 57.3**	**+0.5**
ARADI	**Arad**	**0.25**	**291**	P	**Pg**	**09 35 57.1**	**0.0**
ARADI				S	**Sb**	**09 36 01.6**	**-0.6**
KEGD	**Kibutz Ein-Ged**	**0.31**	**342**	P	**Pg**	**09 35 57.7**	**-0.3**
KEGD				S	**Sg**	**09 36 01.5**	**-0.8**
IDAN	**Idan**	**0.38**	**210**	P	**Pb**	**09 35 59.3**	**-0.6**
YTIR	**Yattir**	**0.38**	**302**	P	**Pg**	**09 35 59.0**	**-0.4**
YTIR	**Yattir**	**0.38**	**302**	P	**Pg**	**09 35 59.0**	**-0.4**
YTIR	**Yattir**	**0.38**	**302**	S	**Sg**	**09 36 05.1**	**+0.5**
MZS	**Mizpe Shalem**	**0.42**	**349**	P	**Pb**	**09 36 00.7**	**+0.1**
MZS				S	**Sb**	**09 36 06.6**	**-0.3**
DSI	**Dead Sea**	**0.42**	**346**	P	**Pb**	**09 36 00.2**	**-0.5**
DSI	**Dead Sea**	**0.42**	**346**	P	**Pb**	**09 36 00.3**	**-0.5**
DSI	**Dead Sea**	**0.42**	**346**	S	**Sb**	**09 36 07.4**	**+0.4**
SWQJ	**Swaqa**	**0.49**	**80**	P	**Pb**	**09 36 02.0**	**0.0**
MSPR	**Moshav SAPIR**	**0.61**	**206**	P	**Pb**	**09 36 03.5**	**-0.4**
MSPR				S	**Sb**	**09 36 13.0**	**+0.8**
AMAZ	**Amatzia**	**0.62**	**307**	P	**Pg**	**09 36 02.8**	**-0.9**
ALMO	**Almog**	**0.63**	**357**	P	**Pg**	**09 36 03.4**	**-0.4**
ZFRI	**Zfri**	**0.66**	**204**	P	**Pg**	**09 36 03.6**	**-0.9**
ZFRI	**Zfri**	**0.66**	**204**	P	**Pb**	**09 36 04.8**	**-0.1**
ZFRI	**Zfri**	**0.66**	**204**	S	**Sb**	**09 36 13.7**	**-0.2**
YITV	**Yitav**	**0.79**	**355**	P	**Pg**	**09 36 06.2**	**-0.7**
YITV				S	**Sb**	**09 36 18.5**	**+1.0**
PRNI	**Paran**	**0.91**	**208**	P	**Pg**	**09 36 08.7**	**-0.5**
PRNI	**Paran**	**0.91**	**208**	P	**Pg**	**09 36 08.8**	**-0.4**
PRNI	**Paran**	**0.91**	**208**	S	**Sb**	**09 36 22.2**	**+1.2**
KZIT	**Kziot**	**0.98**	**255**	P	**Pg**	**09 36 10.0**	**-0.4**
KZIT	**Kziot**	**0.98**	**255**	S	**Sb**	**09 36 23.6**	**+0.6**
HMRA	**Hamra**	**1.04**	**357**	P	**Pg**	**09 36 11.0**	**-0.6**
HMRA				S	**Sb**	**09 36 25.5**	**+0.8**
HMDT	**Nahal Hemdat**	**1.09**	**1**	P	**Pg**	**09 36 12.2**	**-0.4**
HMDT	**Nahal Hemdat**	**1.09**	**1**	S	**Sb**	**09 36 27.0**	**+0.8**
SLTI	**Sal'it**	**1.15**	**340**	P	**Pg**	**09 36 13.0**	**-0.6**
SLTI	**Sal'it**	**1.15**	**340**	S	**Sb**	**09 36 29.1**	**+1.3**
HRFI	**Mount Harif**	**1.19**	**200**	P	**Pg**	**09 36 13.7**	**-0.8**
HRFI	**Mount Harif**	**1.19**	**200**	S	**Sn**	**09 36 30.8**	**+1.1**
KRMI	**Paran Flat**	**1.23**	**213**	P	**Pg**	**09 36 13.9**	**-1.4**
KRMI	**Paran Flat**	**1.23**	**213**	P	**Pg**	**09 36 14.0**	**-1.4**
KRMI	**Paran Flat**	**1.23**	**213**	S	**Sn**	**09 36 31.8**	**+1.0**
MBRI	**Mt Berech**	**1.45**	**200**	P	**Pn**	**09 36 17.4**	**0.0**
MBRI	**Mt Berech**	**1.45**	**200**	S	**Sg**	**09 36 37.7**	**-0.6**

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*UCR **26** 09:40:53.9±0.8, 8°.36N×82°.87W, h28^{km}±2^{km}, MW3.6*

*CATAC **26** 09:40:54.6±0.9, 8°N±6°×8°3W±°, h17^{km}±4^{km}, M3.5/9, MLv3.5/9, Error ellipse: s-maj=12.5km s-min=11.5km az=12.0, confirmed*

ISC 26 09:40:54.3±1.1**, 8°.38N**±0°.05×**82°.87W**±0°.03**, h29**^{km}±7^{km}**, n62, σ0^{s}.74**/66**, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDITO	**Canoas**	**0.19**	**358**	P	**Pb**	**09 41 00.5**	**+0.1**
CDITO	**Canoas**	**0.19**	**358**	S	**Sb**	**09 41 05.1**	**+0.7**
NELY	**Ciudad Neily**	**0.28**	**343**	*e*P	**Pb**	**09 41 01.1**	**-0.2**
NELY				*e*S	**Sn**	**09 41 07.2**	**-0.4**
LMNES	**Limones**	**0.28**	**179**	*e*P	**Pb**	**09 41 01.7**	**+0.3**
MCANO	**Manzana, Boque**	**0.34**	**57**	*e*P	**Pb**	**09 41 02.3**	**0.0**
FITO	**Golfito**	**0.37**	**310**	*e*P	**Pb**	**09 41 01.5**	**-1.2**
FITO				*e*S	**Sb**	**09 41 07.6**	**-0.9**
EDAD	**Golfito**	**0.40**	**312**	*e*P	**Pb**	**09 41 01.8**	**-1.3**
EDAD				*e*S	**Sb**	**09 41 08.5**	**-0.7**
CSTBL	**De las Acacias**	**0.42**	**86**	*e*P	**Pb**	**09 41 03.3**	**-0.2**
RSRNO	**Rio Sereno**	**0.43**	**1**	*e*P	**Pb**	**09 41 03.9**	**+0.2**
CLLRA	**Cordillera,**	**0.44**	**35**	*e*P	**Pb**	**09 41 03.7**	**-0.1**
BRU2	**Volcan**	**0.44**	**23**	*e*P	**Pb**	**09 41 03.8**	**-0.1**
BRU2	**Volcan**	**0.44**	**23**	S	**Sn**	**09 41 12.0**	**+0.1**
BRU2	**Volcan**	**0.44**	**23**	P	**Pb**	**09 41 04.0**	**+0.1**
VITO	**San Vito**	**0.45**	**347**	*e*P	**Pb**	**09 41 03.9**	**0.0**
VITO				*e*S	**Sn**	**09 41 12.1**	**+0.3**
SCLRA	**Santa Clara, W**	**0.45**	**11**	*e*P	**Pb**	**09 41 04.1**	**+0.1**
TBS2		**0.46**	**27**	*e*P	**Pn**	**09 41 04.8**	**-0.1**
BQTLY	**Boquete Panama**	**0.55**	**47**	*e*P	**Pb**	**09 41 05.1**	**-0.5**
ALCO	**Alturas Coton,**	**0.56**	**3**	*e*P	**Pb**	**09 41 05.2**	**-0.7**
EDP2	**Potrero Grande**	**0.70**	**334**	*e*P	**Pn**	**09 41 07.3**	**-0.9**
PANP	**Palmar Norte**	**0.82**	**314**	*e*P	**Pn**	**09 41 08.6**	**-1.2**
PBNVO	**Pueblo Nuevo,**	**0.84**	**53**	*e*P	**Pn**	**09 41 08.9**	**-1.1**
RBALA	**Bur**	**0.86**	**55**	*e*P	**Pn**	**09 41 09.6**	**-0.8**
BURE	**Buenos Aires**	**0.91**	**329**	*e*P	**Pn**	**09 41 10.1**	**-1.0**
DRK0	**Durika**	**0.95**	**337**	*e*P	**Pn**	**09 41 10.5**	**-1.3**
DRK0	**Durika**	**0.95**	**337**	P	**Pn**	**09 41 10.8**	**-1.0**
RMDIO	**Remedios, Chir**	**1.04**	**99**	*e*P	**Pn**	**09 41 12.5**	**-0.3**
EDPE	**Pejibaye, P**	**1.04**	**318**	*e*P	**Pn**	**09 41 11.9**	**-0.9**
OCHAL	**Ojochal**	**1.05**	**313**	S	**Sb**	**09 41 26.8**	**-0.4**
OCHAL	**Ojochal**	**1.05**	**313**	P	**Pn**	**09 41 12.0**	**-1.0**
KKNTU	**Kakintº**	**1.14**	**67**	*e*P	**Pn**	**09 41 13.3**	**-1.0**
ISBTO	**Bastimentos Is**	**1.16**	**34**	*e*P	**Pb**	**09 41 15.5**	**-0.2**
BRIBI	**Bribri**	**1.23**	**2**	*e*P	**Pb**	**09 41 16.6**	**-0.3**
PIEC	**Cerro El Cedra**	**1.64**	**319**	*e*P	**Pn**	**09 41 21.1**	**-0.3**
PITB	**Pirrs, San**	**1.71**	**318**	*e*P	**Pn**	**09 41 22.3**	**+0.1**
VINA	**Juan Vinas**	**1.73**	**330**	*e*P	**Pn**	**09 41 23.1**	**+0.5**
REPA	**Paraso**	**1.74**	**325**	*e*P	**Pn**	**09 41 22.8**	**+0.1**
PISJ	**San Jernim**	**1.75**	**315**	*e*P	**Pn**	**09 41 23.0**	**+0.1**
LCR2	**La Lucha 2**	**1.76**	**320**	*e*P	**Pn**	**09 41 22.2**	**-0.7**
LCR2	**La Lucha 2**	**1.76**	**320**	P	**Pn**	**09 41 23.5**	**+0.6**
LCR2	**La Lucha 2**	**1.76**	**320**	S	**Sn**	**09 41 45.8**	**+1.4**
ABE2	**San Pablo**	**1.76**	**318**	*e*P	**Pn**	**09 41 22.9**	**-0.1**
PCAYA	**Pacayas**	**1.79**	**329**	*e*P	**Pn**	**09 41 23.7**	**+0.4**
PICV	**PH. Pirrs**	**1.80**	**313**	*e*P	**Pn**	**09 41 23.7**	**+0.3**
RESJ	**San Isidro (Tu**	**1.81**	**335**	*e*P	**Pn**	**09 41 24.3**	**+0.8**
ABRB	**Las Abras (San**	**1.82**	**333**	*e*P	**Pn**	**09 41 24.6**	**+0.7**
PAR1A	**Puntarenas Pro**	**1.82**	**311**	*e*P	**Pn**	**09 41 24.1**	**+0.5**
CVTV	**Tajo**	**1.83**	**332**	*e*P	**Pn**	**09 41 24.6**	**+0.5**
CVTQ	**Turrialba Volc**	**1.84**	**331**	*e*P	**Pn**	**09 41 24.7**	**+0.5**
VTLA	**Turrialba Volc**	**1.84**	**331**	*e*P	**Pn**	**09 41 24.7**	**+0.5**
VTR0	**Volcan Turrial**	**1.85**	**332**	*e*P	**Pn**	**09 41 24.9**	**+0.5**
RVLA	**Villa Bonita**	**1.86**	**337**	*e*P	**Pn**	**09 41 25.2**	**+1.1**
VICA	**Volcano Irazu**	**1.86**	**329**	*e*P	**Pn**	**09 41 24.8**	**+0.3**
HDC	**Heredia**	**2.02**	**323**	*e*P	**Pn**	**09 41 26.7**	**+0.2**
BELE	**Belen**	**2.05**	**321**	*e*P	**Pn**	**09 41 27.4**	**+0.5**
TCS1	**Tacares**	**2.17**	**319**	P	**Pn**	**09 41 28.7**	**+0.2**
ATEO	**Atenas**	**2.18**	**317**	*e*P	**Pn**	**09 41 29.2**	**+0.6**
TRT2	**Tortugero**	**2.32**	**338**	P	**Pn**	**09 41 32.0**	**+1.5**
TRT2	**Tortugero**	**2.32**	**338**	S	**Sn**	**09 41 59.4**	**+1.3**
SOCE	**Pocosol**	**2.63**	**319**	P	**Pn**	**09 41 36.5**	**+1.6**
COVE	**Coope Vega, Sa**	**2.77**	**327**	P	**Pn**	**09 41 37.8**	**+1.1**
CMARA	**Lajas Hojancha**	**3.00**	**303**	P	**Pn**	**09 41 40.9**	**+0.9**
CMARA	**Lajas Hojancha**	**3.00**	**303**	S	**Sn**	**09 42 15.6**	**+0.6**

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*IDC **26** 09:45:06.2±3.6, 53°.62N×88°.06E, h0^{km}, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=35.4km s-min=20.1km az=52.0*

ASRS 26 09:45:06.0±1.4**, 53°.59N×87°.91E, h0**^{km}**, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.87**	**282**	I	I	09 56 40.0	
	0.1nm,0.9s,baz=100,slow=317,SNR=6.1						
ZALV	**Zalesovo Beam**	**1.87**	**282**	Pn	Pb	09 45 41.0	0.0
	0.3nm,0.3s,baz=95,slow=16,SNR=5.4						
ZALV				Lg	Lg	09 46 08.1	
	1.5nm,0.3s,baz=95,slow=29,SNR=7.8						
KURBB	**Kurchatov Arra**	**6.50**	**247**	Pn	Pn	09 46 44.5	+1.7
	0.1nm,0.3s,baz=62,slow=14,SNR=3.6 0.4nm,0.3s						
MKAR	**Makanchi Array**	**7.70**	**210**	Pn	Pn	09 47 01.5	+2.2
	0.1nm,0.3s,baz=24,slow=16,SNR=2.0 0.1nm,0.3s						

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*IDC **26** 09:56:13.2±0.7, 56°.05N×164°.24E, h0^{km}, mb3.7/15, mbtmp3.7/16, ML2.7/1, MS3.0/6, Error ellipse: s-maj=22.1km s-min=15.1km az=156.0*

*KRSC **26** 09:56:14.5±1.3, 56°.18N×164°.45E, h51^{km}±22^{km}, Ml4.1*

ISC 26 09:56:18.4±0.6**, 56°.18N**±0°.05×**164°.40E**±0°.05**, h35**^{km}**, n63, σ1^{s}.36**/56**, mb3.8**/15**, MS3.3**/4**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.88**	**272**	*e*P	**Pn**	**09 56 30.5**	**-3.8**
KBG	**Krutoberegovo**	**0.95**	**275**	*e*P	**Pn**	**09 56 31.7**	**-3.4**
BKI	**Bering**	**1.33**	**137**	*i* P	**Pn**	**09 56 38.3**	**-2.0**
BKI				*e*S	**Sn**	**09 56 55.5**	**-1.2**
SMKR	**Semkarok**	**1.68**	**285**	*e*P	**Pn**	**09 56 43.5**	**-1.8**
BDR	**Baidarnaya**	**1.82**	**284**	*e*S	**Sn**	**09 57 09.3**	**+0.3**
ZLN	**Zelenaya**	**2.02**	**267**	*e*P	**Pn**	**09 56 50.0**	**0.0**
BZGR	**Bezymyannyi-Gr**	**2.09**	**265**	*e*P	**Pn**	**09 56 50.1**	**-0.9**
KLY	**Klyuchi**	**2.10**	**275**	*e*P	**Pn**	**09 56 48.4**	**-2.5**
KRSR	**Krestovskiy**	**2.14**	**272**	*e*P	**Pn**	**09 56 51.6**	**0.0**
BZWR	**Bezymyannyi-We**	**2.20**	**266**	*e*P	**Pn**	**09 56 51.9**	**-0.6**
BZMR	**Bezymyannaya**	**2.21**	**265**	*e*P	**Pn**	**09 56 52.1**	**-0.5**
MKZ	**Mys Kozlova**	**2.23**	**224**	*e*P	**Pn**	**09 56 50.7**	**-2.1**
KIRR	**Kirishev**	**2.29**	**266**	*e*P	**Pn**	**09 56 53.4**	**-0.3**
KPT	**Kopyto**	**2.35**	**266**	*e*P	**Pn**	**09 56 54.2**	**-0.3**
KMNR	**Kamenistaya**	**2.38**	**261**	*e*P	**Pn**	**09 56 55.0**	**+0.1**
TUMD	**Tumrok D**	**2.47**	**248**	*e*P	**Pn**	**09 56 55.3**	**-0.8**
TUMD				*e*S	**Sn**	**09 57 23.7**	**-1.3**
KOZ	**Kozyrevsk**	**2.54**	**269**	*e*P	**Pn**	**09 56 57.2**	**+0.2**
SRDR	**Sredinnyy**	**2.62**	**275**	*e*P	**Pn**	**09 56 58.7**	**+0.5**
OSSR	**Ossora**	**3.16**	**347**	*e*P	**Pn**	**09 57 03.1**	**-2.4**
ESO	**Esso**	**3.21**	**268**	*e*P	**Pn**	**09 57 06.6**	**+0.4**
KII	**Karymskiy**	**3.57**	**235**	*e*P	**Pn**	**09 57 11.3**	**+0.1**
SPN	**Mys Shipunski**	**4.00**	**221**	*e*P	**Pn**	**09 57 15.7**	**-1.5**
NLC	**Nalytchevo**	**4.21**	**226**	*e*P	**Pn**	**09 57 19.7**	**-0.2**
SDLR	**Sedlovina**	**4.32**	**230**	*e*P	**Pn**	**09 57 21.2**	**-0.4**
KRER	**Koryakskii**	**4.36**	**231**	*e*P	**Pn**	**09 57 23.6**	**+1.3**
KRX	**Arik**	**4.37**	**232**	*e*P	**Pn**	**09 57 23.3**	**+1.0**
SMAR	**Somma**	**4.37**	**230**	*e*P	**Pn**	**09 57 21.7**	**-0.6**
AVH	**Avacha**	**4.39**	**231**	*e*P	**Pn**	**09 57 23.6**	**+1.0**
UGLR	**Uglovaya**	**4.40**	**230**	*e*P	**Pn**	**09 57 22.6**	**-0.1**
KOK	**Koryaka**	**4.42**	**231**	*e*P	**Pn**	**09 57 24.5**	**+1.5**
GNL	**Ganaly**	**4.48**	**239**	*e*P	**Pn**	**09 57 24.1**	**+0.3**
DALK	**Dalny**	**4.55**	**228**	*e*P	**Pn**	**09 57 24.0**	**-0.7**
KRMR	**Karymshinskiy**	**4.96**	**230**	*e*P	**Pn**	**09 57 31.0**	**+0.7**
PETK	**Petropavlovsk-**	**4.96**	**234**	Pn	**Pn**	**09 57 28.4**	**-1.9**
	1.5nm,0.3s,baz=72,slow=14,SNR=11 1.5nm,0.3s						
RUS	**Russkaya**	**5.10**	**225**	*e*P	**Pn**	**09 57 31.7**	**-0.5**
GRL	**Gorelyy**	**5.19**	**228**	*e*P	**Pn**	**09 57 34.3**	**+0.8**
MTVR	**Mutnovka**	**5.19**	**227**	*e*P	**Pn**	**09 57 33.8**	**+0.2**
ASAK	**Asacha**	**5.38**	**228**	*e*P	**Pn**	**09 57 36.8**	**+0.6**
MA2	**Magadan**	**8.02**	**301**	LR	LR	10 01 07.9	
	comp=Z,52nm,19.6s,baz=91,slow=37						
SEY	**Seymchan**	**9.10**	**323**	LR	LR	10 01 54.3	
	comp=Z,38nm,19.6s,baz=38,slow=37						
KLR	**Kul'dur**	**20.82**	**264**	LR	LR	10 10 15.6	
	comp=Z,38nm,18.0s,baz=116,slow=41						
TIXI	**Tiksi**	**21.48**	**330**	P	**P**	**10 01 05.1**	**+1.7**
	1.0nm,0.3s,baz=302,slow=1.0,SNR=4.1 1.0nm,0.3s						
ILAR	**Eielson Array**	**24.88**	**50**	P	**P**	**10 01 37.4**	**+0.1**
	0.5nm,0.8s,baz=262,slow=7.4,SNR=7.2 0.5nm,0.8s						
MJAR	**Matsushiro Arr**	**26.42**	**233**	P	**P**	**10 01 48.3**	**-3.3**
	1.9nm,0.7s,baz=32,slow=8.2,SNR=6.1 1.9nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**36.45**	**176**	T	T	10 42 10.0	
	baz=357,slow=76,SNR=381						
H11N3	**WAKE ISLAND Hy**	**36.46**	**176**	T	T	10 42 20.8	
	baz=357,slow=76,SNR=160						
H11N1	**WAKE ISLAND Hy**	**36.46**	**176**	T	T	10 42 13.3	
	baz=357,slow=76,SNR=105						
ZALV	**Zalesovo Beam**	**43.24**	**302**	LR	LR	10 22 00.1	
	comp=Z,50nm,18.4s,baz=94,slow=36						
KURBB	**Kurchatov Arra**	**48.33**	**302**	P	**P**	**10 04 54.7**	**-1.2**
	0.3nm,0.5s,baz=56,slow=8.3,SNR=2.9 0.3nm,0.5s						
MKAR	**Makanchi Array**	**49.07**	**296**	P	**P**	**10 05 01.9**	**+0.1**
	0.2nm,0.5s,baz=54,slow=6.2,SNR=4.0 0.2nm,0.5s						
BVAR	**Borovoye Array**	**50.42**	**309**	P	**P**	**10 05 11.5**	**-0.4**
	0.9nm,0.5s,baz=56,slow=11,SNR=5.1 0.9nm,0.5s						
NVAR	**Mina Array Bea**	**52.43**	**75**	P	**P**	**10 05 29.0**	**+1.6**
	0.2nm,0.5s,baz=321,slow=10.0,SNR=2.6 0.2nm,0.5s						
ARTI	**Arti**	**52.90**	**318**	LR	LR	10 30 57.4	
	comp=Z,22nm,19.3s,baz=160,slow=39						
PDAR	**Pinedale Array**	**53.89**	**65**	P	**P**	**10 05 38.8**	**+0.7**
	0.5nm,0.7s,baz=339,slow=3.8,SNR=6.2 0.5nm,0.7s						
ULM	**Lac du Bonnet**	**54.90**	**51**	P	**P**	**10 05 45.5**	**+0.6**
	4.0nm,1.1s,baz=262,slow=3.0,SNR=3.7 4.0nm,1.1s						
CMAR	**Chiang Mai Arr**	**61.23**	**260**	P	**P**	**10 06 29.1**	**-0.5**
	0.7nm,0.4s,baz=28,slow=6.8,SNR=4.7 0.7nm,0.4s						
HFS	**Hagfors**	**61.72**	**344**	P	**P**	**10 06 34.6**	**+2.2**
	0.8nm,0.8s,baz=202,slow=7.5,SNR=4.1 0.8nm,0.8s						
TXAR	**Lajitas Array**	**67.19**	**71**	P	**P**	**10 07 10.4**	**+1.6**
	0.7nm,0.7s,baz=297,slow=4.3,SNR=11 0.7nm,0.7s						
GNI	**Garni**	**71.31**	**315**	LR	LR	10 41 47.2	
	comp=Z,18nm,18.0s,baz=242,slow=38						
BRTR	**Keskin Array B**	**75.75**	**323**	P	**P**	**10 08 00.3**	**0.0**
	0.3nm,0.4s,baz=298,slow=8.3,SNR=3.7 0.3nm,0.4s						
WRA	**Warramunga Arr**	**79.97**	**209**	P	**P**	**10 08 23.0**	**-0.6**
	0.9nm,0.9s,baz=6.8,slow=6.6,SNR=5.4 0.9nm,0.9s						
ASAR	**Alice Springs**	**83.64**	**208**	P	**P**	**10 08 43.5**	**+0.6**
	0.6nm,0.8s,baz=14,slow=4.4,SNR=4.4 0.6nm,0.8s						
QSPA	**South Pole Qui**	**145.94**	**180**	PKPbc	**PKPab**	**10 15 52.0**	**-1.2**
	0.9nm,0.5s,baz=286,slow=0.5,SNR=18						

JMA 26 09:57:31.7±0.1**, 38°.9N**±0°.2×**140°.7E**±0°.2**, h4**^{km}±1^{km}**, MV0.6**/21**, NORTHERN MIYAGI PREF, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.30**	**280**	P	Pg	09 57 37.7	+0.3
JYK				S	Sg	09 57 41.5	+0.2
JOFO	**Osakifurukawao**	**0.30**	**152**	*e*S	Sg	09 57 42.1	+0.8
JMK	**Ichinoseki**	**0.39**	**77**	P	Pg	09 57 39.2	+0.1
JMK				*e*S	Sg	09 57 44.6	+0.4
JRG	**Rokugo**	**0.54**	**352**	*e*S	Sb	09 57 50.4	-1.3

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*CATAC **26** 10:01:04.5±0.9, 8°N±5°×8°3W±°, h12^{km}±3^{km}, M4.2/10, MLv4.2/10, Error ellipse: s-maj=13.6km s-min=9.7km az=46.6, confirmed*

*UCR **26** 10:01:06.1±0.8, 8°.34N×82°.82W, h29^{km}±1^{km}, MW4.1, Fault plane solution: NP1:φ$_s$244.06000°, δ50.73000°, λ-77.04000°.*

*UPA **26** 10:01:06.8±1.1, 8°.41N×82°.81W, h29^{km}±4^{km}, MW3.6*

*RSNC **26** 10:01:07.9±1.8, 8°N±11°×8°3W±°, h28^{km}±24^{km}, M3.0, mb4.8, ML3.0*

ISC 26 10:01:05.9±1.0**, 8°.35N**±0°.04×**82°.83W**±0°.02**, h33**^{km}±2^{km}**, n110, σ1^{s}.13**/135**, 28C-28D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LESP3	**La Esperanza,**	**0.07**	**37**	⇓*i*P	**Pb**	**10 01 11.7**	**+0.1**
LESP3				*e*S	**Sb**	**10 01 14.9**	**-0.6**
LPPC	**Paso Canoas**	**0.18**	**358**	⇓*e*P	**Pb**	**10 01 12.3**	**-0.1**
LPPC				*e*S	**Sb**	**10 01 17.2**	**+0.4**
CDITO	**Canoas**	**0.23**	**350**	P	**Pn**	**10 01 12.5**	**+0.1**
CDITO	**Canoas**	**0.23**	**350**	S	**Sb**	**10 01 18.0**	**+0.5**
NELY	**Ciudad Neily**	**0.32**	**340**	⇑*e*P	**Pb**	**10 01 13.7**	**-0.2**
NELY				*e*S	**Sn**	**10 01 19.8**	**+0.4**
MCANO	**Manzana, Boque**	**0.34**	**49**	⇓*e*P	**Pb**	**10 01 14.3**	**0.0**
MCANO	**Manzana, Boque**	**0.34**	**49**	⇓*i*P	**Pb**	**10 01 14.3**	**0.0**
DVD	**David**	**0.39**	**77**	⇓*i*P	**Pb**	**10 01 14.8**	**0.0**
DVD				*e*S	**Sn**	**10 01 21.5**	**+0.1**
CSTBL	**De las Acacias**	**0.39**	**81**	⇓*e*P	**Pb**	**10 01 14.9**	**0.0**
CSTBL	**De las Acacias**	**0.39**	**81**	⇓*i*P	**Pb**	**10 01 15.0**	**0.0**
PEDE3	**Pedregal, Chir**	**0.41**	**85**	⇓*i*P	**Pb**	**10 01 15.1**	**-0.1**
PEDE3				*e*S	**Sb**	**10 01 21.4**	**-0.1**
LOCO3	**Loma Colorada,**	**0.41**	**82**	⇓*i*P	**Pb**	**10 01 15.3**	**0.0**
FITO	**Golfito**	**0.42**	**311**	⇑*e*P	**Pb**	**10 01 14.4**	**-0.9**
FITO				*e*S	**Sb**	**10 01 21.1**	**-0.7**
MLIR3	**Monte Lirio, C**	**0.44**	**1**	*i* P	**Pn**	**10 01 16.0**	**-0.1**
MLIR3				*e*S	**Sn**	**10 01 22.6**	**-0.3**
LOMA3	**Las Lomas, Chi**	**0.45**	**79**	⇓*i*P	**Pb**	**10 01 15.5**	**-0.2**
LOMA3				*e*S	**Sb**	**10 01 21.3**	**-1.1**
EDAD	**Golfito**	**0.45**	**313**	⇑*e*P	**Pb**	**10 01 14.9**	**-0.9**
EDAD				*e*S	**Sb**	**10 01 21.8**	**-0.7**
CLLRA	**Cordillera,**	**0.45**	**29**	⇓*e*P	**Pb**	**10 01 15.6**	**-0.2**
CLLRA	**Cordillera,**	**0.45**	**29**	⇓*i*P	**Pb**	**10 01 15.7**	**-0.2**
BRU2	**Volcan**	**0.46**	**18**	⇓*e*P	**Pb**	**10 01 15.8**	**-0.3**
BRU2				*e*S	**Sb**	**10 01 23.2**	**0.0**
BRU2	**Volcan**	**0.46**	**18**	P	**Pb**	**10 01 16.1**	**0.0**
BRU2	**Volcan**	**0.46**	**18**	⇓*i*P	**Pb**	**10 01 15.8**	**-0.3**
BRU2				⇓*i*P	**Pb**	**10 01 15.8**	**-0.3**
BRU2				*e*S	**Sb**	**10 01 23.2**	**0.0**
BRU2				*e*S	**Sn**	**10 01 23.5**	**-0.1**
RSRNO	**Rio Sereno**	**0.47**	**357**	⇑*e*P	**Pn**	**10 01 16.3**	**0.0**
RSRNO	**Rio Sereno**	**0.47**	**357**	⇑*i*P	**Pn**	**10 01 16.4**	**0.0**
TBS2		**0.47**	**21**	*e*P	**Pn**	**10 01 16.9**	**+0.3**
PTAR3	**Potrerillos Ar**	**0.48**	**44**	⇓*i*P	**Pb**	**10 01 16.1**	**-0.1**
PTAR3				*e*S	**Sb**	**10 01 23.5**	**0.0**
SCLRA	**Santa Clara, W**	**0.48**	**6**	*e*P	**Pb**	**10 01 16.4**	**-0.1**
SCLRA	**Santa Clara, W**	**0.48**	**6**	⇓*e*P	**Pb**	**10 01 16.5**	**+0.1**
SCLRA				*e*S	**Sn**	**10 01 25.3**	**+1.3**
VITO	**San Vito**	**0.49**	**344**	⇑*e*P	**Pb**	**10 01 16.5**	**+0.1**
BQTLY	**Boquete Panama**	**0.55**	**42**	⇓*e*P	**Pb**	**10 01 16.9**	**-0.5**
BQTLY	**Boquete Panama**	**0.55**	**42**	⇓*i*P	**Pb**	**10 01 17.0**	**-0.5**
BQTLY				*e*S	**Sb**	**10 01 24.2**	**-1.2**
ALCO	**Alturas Coton,**	**0.60**	**360**	⇑*e*P	**Pb**	**10 01 17.5**	**-0.7**
PSOM3	**Paja de Sombre**	**0.61**	**56**	⇓*i*P	**Pb**	**10 01 17.6**	**-0.7**
PSOM3				*e*S	**Sb**	**10 01 25.9**	**-0.8**
EDP2	**Potrero Grande**	**0.74**	**333**	⇑*e*P	**Pn**	**10 01 20.1**	**-0.1**
PBNVO	**Pueblo Nuevo,**	**0.83**	**50**	⇓*e*P	**Pn**	**10 01 20.8**	**-0.5**
RBALA	**Bur**	**0.85**	**52**	⇓*e*P	**Pn**	**10 01 21.5**	**-0.2**
RBALA	**Bur**	**0.85**	**52**	⇓*i*P	**Pn**	**10 01 21.4**	**-0.2**
PANP	**Palmar Norte**	**0.87**	**315**	⇑*e*P	**Pn**	**10 01 21.4**	**-0.4**
BURE	**Buenos Aires**	**0.96**	**329**	⇑*e*P	**Pn**	**10 01 22.8**	**-0.3**
DRK0	**Durika**	**1.00**	**336**	⇑*e*P	**Pn**	**10 01 23.2**	**-0.5**
DRK0	**Durika**	**1.00**	**336**	P	**Pn**	**10 01 23.1**	**-0.6**
DRK0	**Durika**	**1.00**	**336**	S	**Sb**	**10 01 38.4**	**+0.7**
DRK0	**Durika**	**1.00**	**336**	*i* P	**Pn**	**10 01 23.4**	**-0.4**
DRK0				*e*S	**Sn**	**10 01 35.3**	**-1.4**
RMDIO	**Remedios, Chir**	**1.00**	**97**	*e*P	**Pn**	**10 01 23.7**	**+0.1**
RMDIO	**Remedios, Chir**	**1.00**	**97**	*e*P	**Pn**	**10 01 23.9**	**+0.3**
EDPE	**Pejibaye, P**	**1.09**	**318**	⇑*e*P	**Pn**	**10 01 24.8**	**0.0**
OCHAL	**Ojochal**	**1.09**	**313**	P	**Pn**	**10 01 24.8**	**-0.2**
OCHAL	**Ojochal**	**1.09**	**313**	S	**Sb**	**10 01 40.7**	**+0.3**
PDCAN	**Manzana , Fuen**	**1.13**	**93**	*e*P	**Pn**	**10 01 24.9**	**-0.5**
KKNTU	**Kakintº**	**1.13**	**64**	⇓*e*P	**Pn**	**10 01 25.0**	**-0.3**
KKNTU	**Kakintº**	**1.13**	**64**	⇓*i*P	**Pn**	**10 01 25.1**	**-0.3**
ISBTO	**Bastimentos Is**	**1.17**	**32**	*e*P	**Pb**	**10 01 27.6**	**0.0**
SAJE	**San Jernim**	**1.20**	**326**	⇑*e*P	**Pn**	**10 01 26.0**	**-0.4**
BRIBI	**Bribri**	**1.26**	**1**	*e*P	**Pb**	**10 01 28.9**	**-0.4**
MESA3	**La Mesa, Verag**	**1.64**	**97**	⇑*i*P	**Pn**	**10 01 33.4**	**+1.0**
MESA3				*e*S	**Sn**	**10 01 54.0**	**+1.6**
PIEC	**Cerro El Cedra**	**1.68**	**319**	*e*P	**Pn**	**10 01 33.6**	**+0.3**
GMAL	**Guarumal, Vera**	**1.69**	**110**	P	**Pn**	**10 01 33.0**	**-0.1**
GMAL				S	**Sn**	**10 01 48.5**	**-5.1**
RSUS3	**Rio de Jesus,**	**1.70**	**102**	*i* P	**Pn**	**10 01 33.8**	**+0.6**
RSUS3				*e*S	**Sn**	**10 01 54.6**	**+0.9**
TURIB	**Turrialba**	**1.76**	**332**	⇑*e*P	**Pn**	**10 01 35.1**	**+0.9**
VINA	**Juan Vinas**	**1.78**	**330**	*e*P	**Pn**	**10 01 35.3**	**+0.8**
VERB	**Verbena**	**1.80**	**332**	⇑*e*P	**Pn**	**10 01 35.8**	**+1.0**
LCR2	**La Lucha 2**	**1.81**	**320**	⇑*e*P	**Pn**	**10 01 35.2**	**+0.3**
LCR2	**La Lucha 2**	**1.81**	**320**	P	**Pn**	**10 01 35.5**	**+0.6**
LCR2	**La Lucha 2**	**1.81**	**320**	S	**Sb**	**10 01 59.8**	**-1.0**
ABE2	**San Pablo**	**1.81**	**318**	*e*P	**Pn**	**10 01 35.8**	**+0.9**
PCAYA	**Pacayas**	**1.83**	**328**	*e*P	**Pn**	**10 01 36.5**	**+1.2**
VTCV	**VTCV, Calle Va**	**1.85**	**332**	⇑*e*P	**Pn**	**10 01 36.6**	**+1.1**
STIA3	**Santiago, Vera**	**1.86**	**98**	*i* P	**Pn**	**10 01 36.7**	**+1.3**
STIA3				*e*S	**Sn**	**10 01 59.1**	**+1.3**
ABRB	**Las Abras (San**	**1.86**	**332**	⇑*e*P	**Pn**	**10 01 37.1**	**+1.4**
RAFA	**San Farael, Vo**	**1.87**	**329**	*e*P	**Pn**	**10 01 36.6**	**+0.8**
PAR1A	**Puntarenas Pro**	**1.87**	**312**	⇓*e*P	**Pn**	**10 01 37.3**	**+1.7**
CVTV	**Tajo**	**1.88**	**331**	⇑*e*P	**Pn**	**10 01 37.3**	**+1.3**
CVTQ	**Turrialba Volc**	**1.89**	**331**	⇑*e*P	**Pn**	**10 01 37.4**	**+1.2**
VTLA	**Turrialba Volc**	**1.89**	**331**	⇑*e*P	**Pn**	**10 01 37.4**	**+1.2**
VTR0	**Volcan Turrial**	**1.89**	**331**	⇑*e*P	**Pn**	**10 01 37.6**	**+1.3**
VICA	**Volcano Irazu**	**1.91**	**329**	⇑*e*P	**Pn**	**10 01 37.3**	**+0.7**
ACOS	**Acosta**	**1.95**	**318**	*e*P	**Pn**	**10 01 37.5**	**+0.7**
CORON	**Coronado**	**1.98**	**325**	*e*P	**Pn**	**10 01 38.9**	**+1.5**
LUJA	**Lujan**	**1.99**	**322**	*e*P	**Pn**	**10 01 38.7**	**+1.3**
SJS	**Escuela Geolog**	**1.99**	**323**	*e*P	**Pn**	**10 01 38.3**	**+0.9**
CVIMO	**Finca Echandi**	**1.99**	**327**	⇑*e*P	**Pn**	**10 01 38.5**	**+1.0**
DOMI	**Santo Domingo**	**2.04**	**323**	*e*P	**Pn**	**10 01 39.7**	**+1.6**
HDC	**Heredia**	**2.07**	**322**	*e*P	**Pn**	**10 01 39.6**	**+1.1**
HEME	**Heredia, Merce**	**2.08**	**322**	*e*P	**Pn**	**10 01 40.2**	**+1.6**
BELE	**Belen**	**2.10**	**321**	*e*P	**Pn**	**10 01 40.0**	**+1.2**
CARI	**Cariari**	**2.19**	**336**	*e*P	**Pn**	**10 01 41.8**	**+1.7**
CACAO	**El Cacao, Vera**	**2.19**	**117**	P	**Pn**	**10 01 41.1**	**+1.1**
TCS1	**Tacares**	**2.22**	**319**	S	**Sb**	**10 02 11.8**	**-0.8**
TCS1	**Tacares**	**2.22**	**319**	P	**Pb**	**10 01 43.4**	**-2.1**
ATEO	**Atenas**	**2.23**	**317**	*e*P	**Pn**	**10 01 41.7**	**+1.1**
TRB2	**Turrubares**	**2.23**	**314**	⇓*e*P	**Pn**	**10 01 41.7**	**+1.1**
TRT2	**Tortugero**	**2.37**	**338**	⇑*e*P	**Pn**	**10 01 43.5**	**+1.1**
TRT2	**Tortugero**	**2.37**	**338**	P	**Pn**	**10 01 44.7**	**+2.2**
TOSI3	**Tonosi**	**2.55**	**111**	⇑*i*P	**Pb**	**10 01 49.6**	**-1.3**
CBL1	**Cabuya**	**2.55**	**299**	*e*P	**Pn**	**10 01 45.2**	**+0.3**
AZU	**Azuero**	**2.59**	**102**	P	**Pn**	**10 01 48.1**	**+2.6**
SOCE	**Pocosol**	**2.68**	**319**	P	**Pn**	**10 01 49.9**	**+3.1**
SOCE	**Pocosol**	**2.68**	**319**	S	**Sb**	**10 02 22.7**	**-3.1**
JUNT	**Juntas**	**2.84**	**313**	*e*P	**Pn**	**10 01 50.2**	**+1.2**
JTS	**Las Juntas de**	**2.85**	**313**	*e*P	**Pn**	**10 01 49.9**	**+0.8**
JTS	**Las Juntas de**	**2.85**	**313**	P	**Pn**	**10 01 50.2**	**+1.1**
JTS				S	**Sn**	**10 02 24.2**	**+2.0**
BCIP	**Isla Barro Col**	**3.07**	**74**	*e*P	**Pn**	**10 01 53.6**	**+1.4**
BCIP	**Isla Barro Col**	**3.07**	**74**	P	**Pn**	**10 01 53.5**	**+1.4**
ALIBA	**Liberia Airpor**	**3.48**	**310**	⇑*e*P	**Pn**	**10 02 01.0**	**+3.2**
LCRUZ	**La Cruz**	**3.87**	**315**	*e*P	**Pn**	**10 02 05.8**	**+2.7**
ACON	**Acoyapa**	**4.27**	**328**	⇓*e*P	**Pn**	**10 02 09.8**	**+1.2**
ACON	**Acoyapa**	**4.27**	**328**	P	**Pn**	**10 02 09.6**	**+1.0**
ACON	**Acoyapa**	**4.27**	**328**	P	**Pn**	**10 02 10.1**	**+1.5**
SAIC	**Isla e San And**	**4.31**	**15**	P	**Pn**	**10 02 09.3**	**+0.2**
SAIC				S	**Sn**	**10 02 57.4**	**-0.8**
BOAB	**BOACO BROADBAN**	**4.94**	**326**	P	**Pn**	**10 02 20.1**	**+2.3**
PRVC	**Isla de Provid**	**5.20**	**16**	P	**Pn**	**10 02 22.2**	**+0.8**
PRVC				S	**Sn**	**10 03 20.4**	**+0.1**

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*NEIC **26** 10:06:15.7±0.6, 19°.21N±0°.03×155°.50W±0°.02, h41^{km}±2^{km}, Error ellipse: s-maj=4.9km s-min=2.7km az=188.0*

HVO 26 10:06:17.3±0.8**, 19°.17N**±0°.05×**155°.48W**±0°.05**, h35**^{km}±2^{km}**, ML2.8**/41**, ML2.9**/40(NEIC)**, Error ellipse: s-maj=8.0km s-min=4.9km az=138.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTC	**Hot Caves**	**0.10**	**52**		Pb	10 06 22.9	-0.5
HPO	**Honuapo**	**0.11**	**219**		Pb	10 06 22.8	-0.5
KHU	**Kahuku**	**0.14**	**300**		Pn	10 06 22.9	+0.2
KHU				Sg	Sb	10 06 27.1	-1.3
AIN	**Ainahou**	**0.20**	**7**		Pn	10 06 23.6	-0.1
AIN				IAML		10 06 28.4	
	comp=E,1μm,0.4s						
HLP	**Hilina Pali**	**0.21**	**54**		Pn	10 06 23.6	-0.2
HLP				IAML		10 06 31.2	
	comp=N,1μm,0.2s						
HLP				IAML		10 06 33.3	
	comp=E,1μm,0.4s						
SDHHI	**Sand Hill**	**0.28**	**40**		Pn	10 06 24.1	-0.9
SDHHI					Sn	10 06 29.1	-0.8
WRMHI	**West Rim**	**0.29**	**37**		Pn	10 06 24.1	-1.1
WRMHI					Sn	10 06 29.3	-0.9
RIM	**Rim**	**0.30**	**42**		Pn	10 06 24.2	-1.1
RIM					Sn	10 06 29.3	-1.0
KKO	**Keanakako'i**	**0.30**	**43**		Pn	10 06 24.3	-1.1
KKO					Sn	10 06 29.6	-0.9
UWE	**Uwekahuna**	**0.31**	**36**		Pn	10 06 24.2	-1.2
UWE				IAML		10 06 33.3	
	comp=N,1μm,0.3s						
UWE				IAML		10 06 38.1	
	comp=E,1μm,0.3s						
OBL	**Observatory Le**	**0.31**	**38**		Pn	10 06 24.2	-1.2
OBL					Sn	10 06 29.6	-1.1
UWB	**Uwekahuna Bluf**	**0.32**	**38**		Pn	10 06 24.2	-1.3
UWB					Sn	10 06 29.6	-1.3
BYL	**Byron's Ledge**	**0.32**	**42**		Pn	10 06 24.3	-1.3
BYL				IAML		10 06 39.2	
	comp=E,678nm,0.4s						
PUH	**Pauahi**	**0.32**	**52**		Pn	10 06 24.4	-1.2
PUH				IAML		10 06 29.9	
	comp=E,1μm,0.3s						
PUH				IAML		10 06 30.1	
	comp=N,866nm,0.2s						
SBLHI	**Steaming Bluff**	**0.33**	**39**		Pn	10 06 24.3	-1.4
SBLHI					Sn	10 06 29.7	-1.4
HATHI	**Halema‘uma‘u T**	**0.33**	**40**		Pn	10 06 24.3	-1.4

HATHI				IAML		10 06 30.1	
	comp=E,787nm,0.3s						
HATHI				IAML		10 06 30.9	
	comp=N,684nm,0.4s						
MWH	Mokuaweoweo	0.33	341		Pn	10 06 24.5	-1.5
MLH	Mauna Loa	0.33	16		Pn	10 06 24.7	-1.2
MLH				IAML		10 06 30.5	
	comp=E,1µm,0.4s						
MLH				IAML		10 06 30.8	
	comp=N,1µm,0.3s						
RSD	Rainshed	0.35	34		Pb	10 06 23.8	-2.2
RSD	Rainshed	0.35	34		Sn	10 06 30.9	-0.9
KNHH	Kane Nui o Ham	0.36	55		Pb	10 06 24.7	-1.5
ALEP	Alea Permanent	0.40	338		Pb	10 06 25.2	-1.7
ALEP					Sn	10 06 31.0	-2.3
STCH	Steam Cracks	0.40	58		Pb	10 06 25.2	-1.4
STCH				IAML		10 06 31.4	
	comp=E,704nm,0.1s						
NPOC	North of Pu‘u	0.42	58		Pb	10 06 25.4	-1.4
NPOC					Sb	10 06 31.5	-1.9
JCUZ	Jacuzzi	0.42	60		Pb	10 06 25.5	-1.4
JCUZ					Sb	10 06 31.6	-1.8
HMH	Humu‘ula Sheep	0.43	0		Pb	10 06 25.9	-1.3
HMH				IAML		10 06 33.3	
	comp=E,1µm,0.1s						
CPH	Captain Cook	0.52	307		Pn	10 06 26.3	-1.9
JOKA	Jonika Flow	0.52	60		Pn	10 06 26.5	-1.8
JOKA				IAML		10 06 35.0	
	comp=N,517nm,0.4s						
POHA	Pohakuloa	0.58	355		Pn	10 06 27.1	-2.2
HUH	Hualalai	0.61	327		Pn	10 06 28.0	-1.7
HUH				IAML		10 06 37.4	
	comp=E,757nm,0.1s						
KKH	Kailua Kona	0.70	314	Pn	Pn	10 06 28.6	-2.1
WMR	Waimanalo Ridg	2.97	316		Pn	10 06 59.4	-2.6
WMR					Sn	10 07 32.2	-4.2

*IDC **26** 10:10:46.6±1.0, 38°.62N×99°.28E, h0^{km}, mb3.5/6, mbtmp3.6/9, ML3.5/3, MS3.0/6, Error ellipse: s-maj=26.4km s-min=18.2km az=77.0*

ISC 26 10:10:47.8±1.1**, 38°.6N**±0°.1×**99°.2E**±0°.1**, h10^{km}, n14, σ1ˢ02**/10**, mb3.6**/5**, MS2.9**/4**, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	10.61	27	Pn	Pn	10 13 21.1	+1.2
	3.2nm,0.3s,baz=210,slow=15,SNR=41						
SONM				Sn	Sn	10 15 18.1	-0.8
	0.6nm,0.3s,baz=223,slow=21,SNR=2.8						
SONM				Lg	Lg	10 16 20.7	
	0.6nm,0.3s,baz=222,slow=32,SNR=8.1						
	7.6nm,0.4s						
MKAR	Makanchi Array	14.82	309	Pn	Pn	10 14 16.5	-1.0
	0.1nm,0.3s,baz=121,slow=14,SNR=3.1						
MKAR				Lg	Lg	10 18 37.8	
	0.1nm,0.3s,baz=114,slow=27,SNR=3.5						
MKAR				LR	LR	10 20 39.9	
	comp=Z,32nm,21.9s,baz=116,slow=40						
ZALV	Zalesovo Beam	18.20	332	P	P	10 15 00.3	-0.2
	0.5nm,0.3s,baz=123,slow=10,SNR=3.9						
	0.6nm,0.3s						
KURBB	Kurchatov Arra	18.89	316	P	Pn	10 15 08.7	-0.1
	baz=118,slow=12,SNR=10						
KURBB				Lg	Lg	10 20 43.0	
	baz=116,slow=29,SNR=1.5						
	0.8nm,0.7s						
AAK	Ala-Archa	19.12	290	LR	LR	10 23 20.5	
	comp=Z,42nm,18.9s,baz=82,slow=39						
CMAR	Chiang Mai Arr	20.09	181	P	Pn	10 15 21.9	-1.6
	0.4nm,0.3s,baz=348,slow=11,SNR=5.1						
CMAR				LR	LR	10 23 38.6	
	comp=Z,33nm,20.4s,baz=270,slow=38						
	0.4nm,0.3s						
KSRS	Korea Array	22.65	84	P	P	10 15 48.5	-0.5
	1.3nm,0.9s,baz=285,slow=8.7,SNR=5.8						
	1.3nm,0.9s						
BVAR	Borovoye Array	24.47	315	P	P	10 16 08.8	+1.9
	0.5nm,0.4s,baz=111,slow=7.9,SNR=1.7						
	0.5nm,0.4s						
JNU	Nakatsue	26.21	92	LR	LR	10 27 37.5	
	comp=Z,38nm,19.2s,baz=334,slow=39						
YAK	Yakutsk	29.97	29	LR	LR	10 29 47.4	
	comp=Z,35nm,19.8s,baz=196,slow=38						
AKTO	Aktyubinsk	31.22	306	LR	LR	10 30 35.8	
	comp=Z,24nm,19.0s,baz=34,slow=38						
ILAR	Eielson Array	64.83	26	P	P	10 21 26.1	-0.4
	0.3nm,0.7s,baz=305,slow=5.5,SNR=2.0						
	0.3nm,0.7s						
WRA	Warramunga Arr	66.95	144	P	P	10 21 40.2	-0.5
	1.0nm,0.9s,baz=345,slow=6.6,SNR=5.3						
	1.0nm,0.9s						
ASAR	Alice Springs	70.00	146	P	P	10 21 60.0	+0.3
	0.7nm,0.8s,baz=332,slow=5.7,SNR=5.2						
	0.7nm,0.8s						

KRSC 26 10:10:54.0±1.7**, 56°.21N**×**164°.29E, h48^{km}**±21^{km}**, Ml3.5, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.82	270	*e*P	Pn	10 11 09.0	-0.3
KBTR				*e*S	Sn	10 11 19.8	-0.6
KBG	Krutoberegovo	0.88	274	*e*P	Pn	10 11 09.7	-0.3
KBG				*e*S	Sn	10 11 22.1	+0.2
BKI	Bering	1.39	136	*e*P	Pn	10 11 18.9	+2.0
BKI				*e*S	Sn	10 11 36.7	+2.6
SMKR	Semkarok	1.61	285	*e*P	Pn	10 11 22.1	+2.0
BDR	Baidarnaya	1.75	283	*e*S	Sn	10 11 47.1	+4.1
ZLN	Zelenaya	1.96	266	*e*P	Pn	10 11 27.7	+2.8
ZLN				*e*S	Sn	10 11 52.1	+3.8
BZGR	Bezymyannyi-Gr	2.03	264	*e*P	Pn	10 11 29.1	+3.2
KLY	Klyuchi	2.03	274	*e*S	Sn	10 11 50.8	+1.0
KRSR	Krestovskiy	2.08	272	*e*P	Pn	10 11 29.2	+2.7
BZWR	Bezymyannyi-We	2.14	265	*e*P	Pn	10 11 30.9	+3.5
BZMR	Bezymyannaya	2.15	264	*e*P	Pn	10 11 31.1	+3.7
MKZ	Mys Kozlova	2.21	222	*e*P	Pn	10 11 30.4	+2.3
MKZ				*e*S	Sn	10 11 56.3	+2.1
KIRR	Kirishev	2.23	265	*e*P	Pn	10 11 32.1	+3.5
KPT	Kopyto	2.29	266	*e*P	Pn	10 11 33.0	+3.6
KMNR	Kamenistaya	2.32	260	*e*P	Pn	10 11 33.6	+3.8
TUMD	Tumrok D	2.42	247	*e*P	Pn	10 11 34.4	+3.3
KOZ	Kozyrevsk	2.48	268	*e*P	Pn	10 11 35.6	+3.8
SRDR	Sredinnyy	2.55	274	*e*P	Pn	10 11 37.4	+4.4
OSSR	Ossora	3.12	348	*e*S	Sn	10 12 16.6	+0.1
ESO	Esso	3.15	267	*e*P	Pn	10 11 46.7	+5.7
KII	Karymskiy	3.53	234	*e*P	Pn	10 11 50.4	+4.1
SPN	Mys Shipunski	3.98	220	*e*S	Sn	10 12 36.5	-1.4
SDLR	Sedlovina	4.29	229	*e*P	Pn	10 12 00.5	+3.7
KRX	Arik	4.34	231	*e*P	Pn	10 12 01.6	+4.1
SMAR	Somma	4.34	229	*e*P	Pn	10 12 00.5	+3.0
AVH	Avacha	4.36	230	*e*P	Pn	10 12 02.1	+4.3
UGLR	Uglovaya	4.37	229	*e*P	Pn	10 12 02.2	+4.4
KOK	Koryaka	4.39	231	*e*P	Pn	10 12 02.7	+4.5
GRL	Gorelyy	5.16	227	*e*P	Pn	10 12 13.8	+5.1

*UCR **26** 10:16:23.3±1.4, 8°.26N×82°.83W, h19^{km}±3^{km}, MW3.8*

*CATAC **26** 10:16:23.3±1.0, 8°N±6°×8°3W±°, h19^{km}±3^{km}, M3.8/6, MLv3.8/6, Error ellipse: s-maj=14.8km s-min=11.7km az=44.9, confirmed*

ISC 26 10:16:21.7±1.3**, 8°.23N**±0°.05×**82°.85W**±0°.02**, h19^{km}**±3^{km}**, n122, σ1ˢ38**/161**, 18C-8D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPPC	Paso Canoas	0.31	1	⇑*i*P	Pn	10 16 30.2	-0.9
LPPC				*e*S	Sn	10 16 35.3	-1.8
CDITO	Canoas	0.35	356	P	Pb	10 16 30.5	+1.2
CDITO	Canoas	0.35	356	S	Sb	10 16 36.0	+1.6
NELY	Ciudad Neily	0.43	347	⇑*i*P	Pb	10 16 31.7	+0.9
NELY				*e*S	Sb	10 16 38.0	+1.1
MCANO	Manzana, Boque	0.44	38	⇓*i*P	Pn	10 16 32.2	-0.8
CSTBL	De las Acacias	0.44	65	⇓*i*P	Pn	10 16 32.8	-0.2
CSTBL				*e*S	Sn	10 16 39.0	-1.4
FITO	Golfito	0.50	323	⇑*i*P	Pg	10 16 32.3	+0.4
FITO				*e*S	Sb	10 16 39.3	+0.5
EDAD	Golfito	0.53	323	⇑*i*P	Pg	10 16 32.8	+0.3
EDAD				*e*S	Sg	10 16 39.9	+0.2
CLLRA	Cordillera,	0.56	24	⇑*i*P	Pg	10 16 33.6	+0.4
CLLRA				*e*S	Sg	10 16 41.3	+0.4
BRU2	Volcan	0.59	15	⇑*i*P	Pg	10 16 33.8	+0.2
BRU2				*e*S	Sg	10 16 41.5	0.0
BRU2	Volcan	0.59	15	P	Pg	10 16 33.8	+0.2
RSRNO	Rio Sereno	0.59	359	⇑*i*P	Pg	10 16 34.4	+0.8
VITO	San Vito	0.60	348	⇑*i*P	Pg	10 16 34.5	+0.7
VITO				*e*S	Sn	10 16 43.2	-1.4
SCLRA	Santa Clara, W	0.61	6	⇑*i*P	Pg	10 16 34.4	+0.5
SCLRA				*e*S	Sg	10 16 43.0	+0.9
BQTLY	Boquete Panama	0.65	36	*e*P	Pg	10 16 34.9	+0.1
ALCO	Alturas Coton,	0.72	1	⇑*i*P	Pb	10 16 35.5	-0.3
ALCO				*e*S	Sb	10 16 45.0	-0.3
EDP2	Potrero Grande	0.85	338	⇑*i*P	Pb	10 16 38.0	+0.1
EDP2				*e*S	Sg	10 16 49.4	-0.3
PBNVO	Pueblo Nuevo,	0.93	44	⇓*i*P	Pb	10 16 38.6	-0.5
PBNVO				*e*S	Sb	10 16 49.8	-1.3
RBALA	Bur	0.94	47	⇓*i*P	Pb	10 16 39.3	-0.2
RBALA				*e*S	Sb	10 16 50.9	-0.7
PANP	Palmar Norte	0.95	320	*e*P	Pb	10 16 39.4	-0.1
PANP				*e*S	Sb	10 16 52.0	+0.3
RMDIO	Remedios, Chir	1.01	90	*e*P	Pg	10 16 41.9	+0.6
BURE	Buenos Aires	1.06	333	*e*P	Pb	10 16 41.0	-0.5
BURE				*e*S	Sb	10 16 54.2	-0.7
DRK0	Durika	1.10	339	⇑*e*P	Pb	10 16 41.2	-1.1
DRK0				*e*S	Sb	10 16 54.2	-2.2
DRK0	Durika	1.10	339	P	Pb	10 16 41.3	-1.1
EDPE	Pejibaye, P	1.17	322	⇑*e*P	Pn	10 16 43.0	-0.1
EDPE				*e*S	Sb	10 16 56.9	-1.3
OCHAL	Ojochal	1.17	318	P	Pn	10 16 42.9	-0.2
OCHAL	Ojochal	1.17	318	S	Sn	10 16 58.4	-0.1
KKNTU	Kakintº	1.20	59	⇓*i*P	Pn	10 16 42.8	-0.6
KKNTU				*e*S	Sb	10 16 57.8	-1.1
ISBTO	Bastimentos Is	1.28	30	*e*P	Pb	10 16 45.6	+0.4
SAJE	San Jernim	1.29	330	⇑*e*P	Pn	10 16 44.1	-0.7
SAJE				*e*S	Sn	10 16 59.7	-2.0
BRIBI	Bribri	1.39	1	⇑*i*P	Pb	10 16 47.0	0.0
BRIBI				*e*S	Sg	10 17 05.8	-0.8
GMAL	Guarumal, Vera	1.66	106	*e*P	Pb	10 16 52.1	+0.4
LLNJ	Naranjito	1.75	315	*e*P	Pn	10 16 51.9	+0.8
QUEP	Quepos	1.77	313	*e*P	Pn	10 16 50.8	-0.5
QUEP				*e*S	Sb	10 17 14.7	-0.6
PIEC	Cerro El Cedra	1.77	322	*e*P	Pn	10 16 51.9	+0.3
RAZU	San Marcos de	1.84	321	*e*P	Pb	10 16 53.9	-1.0
RAZU				*e*S	Sb	10 17 16.7	-0.8
PITB	Pirrs, San	1.84	321	*e*P	Pn	10 16 53.6	+1.2
TURIB	Turrialba	1.87	334	*e*P	Pn	10 16 53.0	+0.4
TURIB				*e*S	Sn	10 17 15.4	-0.3
PISJ	San Jernim	1.88	318	*e*P	Pb	10 16 54.6	-0.9
VINA	Juan Vinas	1.88	332	⇓*e*P	Pn	10 16 54.1	+1.1
VINA				*e*S	Sn	10 17 16.8	+0.5
REPA	Paraso	1.89	328	*e*P	Pn	10 16 53.6	+0.6
LCR2	La Lucha 2	1.89	323	*e*P	Pn	10 16 53.3	+0.1
LCR2	La Lucha 2	1.89	323	P	Pn	10 16 54.1	+0.9
LCR2	La Lucha 2	1.89	323	S	Sb	10 17 18.4	-0.7
ABE2	San Pablo	1.89	321	*e*P	Pb	10 16 54.7	-1.1
VERB	Verbena	1.90	334	⇓*i*P	Pn	10 16 54.2	+1.0
VERB				*e*S	Sn	10 17 17.6	+0.8
PICV	PH. Pirrs	1.93	316	*e*P	Pb	10 16 55.1	-1.2
PICV				*e*S	Sb	10 17 19.4	-0.6
PCAYA	Pacayas	1.93	331	*e*P	Pn	10 16 54.6	+0.8
PCAYA				*e*S	Sn	10 17 18.3	+0.7
PAR1A	Puntarenas Pro	1.95	315	*e*P	Pb	10 16 55.3	-1.3
VTCV	VTCV, Calle Va	1.95	334	*e*P	Pn	10 16 54.5	+0.5
RESJ	San Isidro (Tu	1.96	336	*e*P	Pn	10 16 54.7	+0.7
RESJ				*e*S	Sb	10 17 19.5	-1.4
ABRB	Las Abras (San	1.97	334	⇑*i*P	Pn	10 16 55.6	+1.4
ABRB				*e*S	Sn	10 17 19.6	+1.1
RAFA	San Farael, Vo	1.97	331	*e*P	Pn	10 16 55.1	+0.8
RAFA				*e*S	Sn	10 17 18.7	+0.1
IRES	Siquirres	1.97	341	*e*P	Pn	10 16 55.0	+1.0
IRES				*e*S	Sb	10 17 20.8	-0.3
CVTV	Tajo	1.98	333	⇑*e*P	Pn	10 16 55.4	+0.9
CVTV				*e*S	Sn	10 17 20.0	+1.1
CVTQ	Turrialba Volc	1.99	333	*e*P	Pn	10 16 55.5	+0.9
VTLA	Turrialba Volc	1.99	333	*e*P	Pn	10 16 55.3	+0.6
VTR0	Volcan Turrial	2.00	333	⇓*e*P	Pn	10 16 55.7	+0.9
VTR0				*e*S	Sb	10 17 20.8	-1.5
VICA	Volcano Irazu	2.01	331	*e*P	Pn	10 16 55.5	+0.6
RVLA	Villa Bonita	2.01	339	*e*P	Pn	10 16 55.5	+0.9
RVLA				*e*S	Sb	10 17 21.0	-1.3
TRIO	Tres Rios	2.02	326	*e*P	Pb	10 16 56.6	-1.3
ACOS	Acosta	2.03	320	*e*P	Pn	10 16 56.5	+1.5
ACOS				*e*S	Sb	10 17 21.8	-1.3
AMPA	Desamparados	2.05	324	*e*P	Pn	10 16 56.1	+0.9
ECI	Escuela Centro	2.08	325	*e*P	Pb	10 16 57.4	-1.5
SJS3	Mercedes San J	2.08	325	*e*P	Pb	10 16 57.9	-0.9
CORON	Coronado	2.08	327	*e*P	Pn	10 16 56.9	+1.2
LUJA	Lujan	2.08	324	*e*P	Pn	10 16 57.2	+1.5
SJS	Escuela Geolog	2.08	325	*e*P	Pb	10 16 57.5	-1.4
LUPE	Guadalupe	2.09	325	*e*P	Pb	10 16 58.4	-0.6
CVIMO	Finca Echandi	2.09	329	*e*P	Pn	10 16 57.3	+1.4
DOMI	Santo Domingo	2.13	325	*e*P	Pb	10 16 58.4	-1.5
SANTA	Santa Ana	2.15	322	*e*P	Pn	10 16 58.2	+1.6
HDC	Heredia	2.16	325	*e*P	Pb	10 16 59.1	-1.2
HDC				*e*S	Sb	10 17 26.4	-0.4
HEME	Heredia, Merce	2.17	324	*e*P	Pb	10 16 59.3	-1.2
BELE	Belen	2.19	323	*e*P	Pn	10 16 58.3	+1.2
VBV1	V. Barva	2.25	327	*e*P	Pn	10 16 59.0	+0.9
POAS	San Pedro de P	2.30	323	*e*P	Pn	10 17 00.6	+1.9
CARI	Cariari	2.30	338	*e*P	Pn	10 16 59.8	+1.2
TCS1	Tacares	2.31	322	*e*P	Pn	10 17 00.7	+1.9
TRB2	Turrubares	2.31	317	*e*P	Pn	10 16 60.0	+1.3
ATEO	Atenas	2.31	319	*e*P	Pn	10 17 00.5	+1.7
SARCI	Sarchi	2.37	322	*e*P	Pb	10 17 02.3	-1.6
VPS8	V Poas	2.38	325	*e*P	Pb	10 17 02.6	-1.6
SRA1	San Ramn	2.45	319	*e*P	Pb	10 17 03.5	-1.8
TRT2	Tortugero	2.48	339	*e*P	Pn	10 17 02.0	+0.9
TRT1	Tortuguero	2.50	340	*e*P	Pn	10 17 02.1	+0.7
ARZA	Esparza	2.51	314	*e*P	Pb	10 17 04.4	-1.8
VPL1	V. Platanar	2.51	324	*e*P	Pn	10 17 03.7	+2.0
VPL2	V. Platanar	2.56	324	*e*P	Pn	10 17 04.0	+1.6
CBL1	Cabuya	2.60	302	*e*P	Pn	10 17 03.0	+0.3
CBL1				*e*S	Sn	10 17 32.4	-1.4
QUEU	Ciudad Quesada	2.61	323	*e*P	Pn	10 17 05.5	+2.6
ITAL	Pital	2.62	328	*e*P	Pn	10 17 05.3	+2.2
JCR1	Jicaral	2.76	306	*e*P	Pn	10 17 05.1	+0.1
SOCE	Pocosol	2.77	321	*e*P	Pn	10 17 07.1	+2.1
TUNA	La Fortuna	2.85	322	*e*P	Pn	10 17 08.3	+2.1
MTEVE	Monteverde	2.85	317	*e*P	Pn	10 17 08.0	+1.6
FORC	Fortuna	2.86	321	*e*P	Pn	10 17 09.3	+2.9
VACR	Volcan Arenal	2.87	321	*e*P	Pn	10 17 07.0	+0.5
CASO	Castillo	2.88	320	*e*P	Pn	10 17 08.1	+1.5
ARE1	Arenal 1	2.89	320	⇑*i*P	Pn	10 17 09.5	+2.8
VARE2	V. Arenal	2.89	320	*e*P	Pn	10 17 09.5	+2.7
CEDE	Laguna Cedeo	2.90	321	*e*P	Pn	10 17 09.6	+2.7
JUNT	Juntas	2.92	315	*e*P	Pn	10 17 07.9	+0.8
JUNT				*e*S	Sn	10 17 41.6	-0.1
JTS	Las Juntas de	2.92	315	*e*P	Pn	10 17 08.0	+0.8
TABAC	Tabacon	2.95	320	*e*P	Pb	10 17 11.7	-2.0
TILA	Tilaran	3.06	317	*e*P	Pn	10 17 09.5	+0.4
CMARA	Lajas Hojancha	3.11	305	*e*P	Pn	10 17 10.9	+1.2
CNAS	Canas	3.12	315	*e*P	Pn	10 17 11.7	+1.9
BCIP	Isla Barro Col	3.12	72	*e*P	Pn	10 17 11.7	+1.9
QUEB	Quebradon, Cot	3.12	320	*e*P	Pn	10 17 13.4	+3.4
INVE	Universidad In	3.13	316	*e*P	Pn	10 17 13.2	+3.2
INVE				*e*S	Sn	10 17 47.4	+0.5
TIMP	Tierras Morena	3.17	318	*e*P	Pn	10 17 13.1	+2.4
TENO	El Achiote	3.24	320	*e*P	Pn	10 17 14.8	+3.3
BAGA	Bagaces	3.30	314	*e*P	Pn	10 17 15.0	+2.6
CUI	Cuipilapa	3.33	317	*e*P	Pn	10 17 15.0	+2.2
LCHIL	Los Chiles	3.35	327	*e*P	Pn	10 17 15.5	+2.5
COLC	Colonia	3.36	316	*e*P	Pn	10 17 16.1	+2.9
MESS	Mesas	3.41	317	*e*P	Pn	10 17 16.4	+2.5
LAPC	Finca la Perla	3.59	315	*e*P	Pn	10 17 18.3	+1.9
BUAI	Buenos Aires	3.60	317	*e*P	Pn	10 17 19.4	+2.9
PG27	Guanacaste Pro	3.61	316	*e*P	Pn	10 17 19.7	+3.0
ACON	Acoyapa	4.37	329	P	Pn	10 17 28.5	+1.4

IDC 26 10:25:04.7±4.0**, 5°.23S**×**151°.98E, h0^{km}, mb3.4**/3**, mbtmp3.4**/3**, Error ellipse: s-maj=140.4km s-min=53.7km az=122.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.55	228	P	P	10 30 06.5	-0.2
	0.3nm,0.8s,baz=54,slow=9.9,SNR=6.4						
	0.3nm,0.8s						
ASAR	Alice Springs	25.29	222	P	P	10 30 33.1	0.0
	0.3nm,0.7s,baz=46,slow=8.5,SNR=4.7						
	0.3nm,0.7s						
FITZ	Fitzroy Crossi	28.74	241	P	P	10 31 04.0	-0.2
	3.1nm,1.0s,baz=45,slow=10.0,SNR=1.6						
	3.1nm,1.0s						
TORD	Torodi Ar. Bea	149.66	287	PKPbc	PKPbc	10 44 57.3	-0.2
	0.3nm,0.4s,baz=72,slow=2.2,SNR=2.0						

*FUNV **26** 10:32:53.8, 7°.75N×71°.96W, h1^{km}, MW3.1*

*RSNC **26** 10:32:54.6±0.0, 8°N±1°×7°2W±°, h11^{km}±3^{km}, M2.6, ML2.3*

ISC 26 10:32:52.0±1.3**, 7°.74N**±0°.04×**71°.98W**±0°.03**, h5^{km}**±11^{km}**, n13, σ0ˢ71**/25**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	Capacho	0.35	290	*e*P	Pb	10 33 00.7	-0.1
CAPV				*e*S	Sb	10 33 06.7	-0.1
PAMC	Pamplona, Colo	0.82	241	P	Pg	10 33 07.7	0.0
PAMC				S	Sg	10 33 18.0	-0.4
SOCV	Socops	1.24	64	*e*P	Pg	10 33 16.2	+0.4
SOCV				*e*S	Sn	10 33 33.7	+0.7
TAMC	Tame, Arauca	1.31	172	P	Pn	10 33 17.0	0.0
TAMC				S	Sb	10 33 34.1	-0.2
OCAC	Ocana	1.41	290	P	Pg	10 33 19.2	+0.1
OCAC				S	Sg	10 33 37.8	+0.3
BARC	Barichara	1.65	226	P	Pn	10 33 22.4	+0.6
BARC				S	Sn	10 33 42.7	-0.8
SDV	Santo Domingo	1.75	50	P	Pg	10 33 25.2	-0.4
SDV				S	Sg	10 33 48.3	-0.1
RUSC	La Rusia	2.14	211	P	Pn	10 33 29.8	+1.1
RUSC				S	Sn	10 33 56.3	+0.4
PTBC	PUERTO BERRIO,	2.73	244	P	Pn	10 33 34.9	-1.6
PTBC				S	Sb	10 34 15.1	0.0
ZARC	Zaragoza, Cauc	2.86	265	P	Pn	10 33 38.2	-0.1
ZARC				S	Sn	10 34 14.3	+1.2
CRJC	Cerrejon, Guaj	3.38	345	P	Pn	10 33 45.5	+0.1
CRJC				S	Sn	10 34 26.0	+0.1
BAUV	El Baul	4.08	73	*e*P	Pn	10 33 55.7	+0.7
BAUV				*e*S	Sn	10 34 41.5	-1.6
BENV	Beln	4.86	63	*e*P	Pn	10 34 05.9	0.0

*CATAC **26** 10:34:36.2±1.3, 8°N±8°×8°3W±°, h2^{km}±4^{km}, M3.7/7, MLv3.7/7, Error ellipse: s-maj=17.5km s-min=8.1km az=17.7, confirmed*

*UCR **26** 10:34:37.9±1.4, 8°.26N×82°.89W, h17^{km}±3^{km}, MW3.7*

ISC 26 10:34:36.3±1.7**, 8°.22N**±0°.06×**82°.91W**±0°.03**, h14^{km}**±9^{km}**, n115, σ1ˢ20**/152**, 15C-8D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPPC	Paso Canoas	0.32	12	*e*P	Pn	10 34 45.4	-1.2
LPPC				*e*S	Sb	10 34 50.6	+1.8
CDITO	Canoas	0.35	6	P	Pb	10 34 45.3	+0.9
NELY	Ciudad Neily	0.43	355	⇑*i*P	Pb	10 34 46.5	+0.8
NELY				*e*S	Sb	10 34 52.6	+0.5
FITO	Golfito	0.47	329	⇑*e*P	Pb	10 34 46.8	+0.4
FITO				*e*S	Sb	10 34 53.0	-0.3
MCANO	Manzana, Boque	0.48	44	⇓*i*P	Pb	10 34 47.6	+1.0
CSTBL	De las Acacias	0.50	68	⇓*i*P	Pn	10 34 48.5	-0.6
EDAD	Golfito	0.50	329	⇑*e*P	Pb	10 34 47.3	+0.3
EDAD				*e*S	Sb	10 34 53.8	-0.4
RSRNO	Rio Sereno	0.59	4	⇑*i*P	Pb	10 34 49.2	+0.6
CLLRA	Cordillera,	0.59	29	⇓*i*P	Pb	10 34 49.0	+0.3
VITO	San Vito	0.60	354	⇑*i*P	Pb	10 34 49.2	+0.5
VITO				*e*S	Sb	10 34 57.6	+0.6
BRU2	Volcan	0.61	21	⇓*i*P	Pg	10 34 48.9	+0.7
BRU2				*e*S	Sg	10 34 56.9	+0.5
BRU2	Volcan	0.61	21	P	Pg	10 34 49.0	+0.7
BRU2	Volcan	0.61	21	S	Sb	10 34 57.4	0.0
SCLRA	Santa Clara, W	0.62	12	⇑*e*P	Pb	10 34 49.3	+0.2
SCLRA				*e*S	Sb	10 34 58.3	+0.6
BQTLY	Boquete Panama	0.69	40	⇓*i*P	Pg	10 34 50.2	+0.4
ALCO	Alturas Coton,	0.73	6	⇑*i*P	Pg	10 34 50.3	-0.2
ALCO				*e*S	Sg	10 34 59.1	-1.1
EDP2	Potrero Grande	0.83	341	⇑*i*P	Pb	10 34 52.5	-0.1
EDP2				*e*S	Sb	10 35 03.3	-0.4
PANP	Palmar Norte	0.91	323	⇑*i*P	Pb	10 34 53.8	-0.2
PANP				*e*S	Sb	10 35 05.5	-0.6
PBNVO	Pueblo Nuevo,	0.97	47	⇓*i*P	Pb	10 34 54.1	-0.9
PBNVO				*e*S	Sb	10 35 05.3	-2.4
RBALA	Bur	0.99	49	⇓*i*P	Pb	10 34 54.8	-0.6
RBALA				*e*S	Sb	10 35 06.8	-1.5
BURE	Buenos Aires	1.04	336	⇑*i*P	Pb	10 34 55.4	-0.8
BURE				*e*S	Sb	10 35 08.0	-1.6
RMDIO	Remedios, Chir	1.06	90	*e*P	Pn	10 34 57.3	+0.4
DRK0	Durika	1.09	342	⇑*e*P	Pb	10 34 55.7	-1.4
DRK0	Durika	1.09	342	P	Pb	10 34 55.7	-1.4
DRK0	Durika	1.09	342	S	Sb	10 35 09.3	-1.9
OCHAL	Ojochal	1.14	320	P	Pn	10 34 57.0	-0.9
OCHAL	Ojochal	1.14	320	S	Sb	10 35 11.5	-1.0
EDPE	Pejibaye, P	1.14	325	⇑*e*P	Pn	10 34 57.2	-0.8
EDPE				*e*S	Sb	10 35 11.7	-1.0
PDCAN	Manzana , Fuen	1.20	87	*e*P	Pn	10 34 58.5	-0.3
KKNTU	Kakintº	1.25	60	⇓*i*P	Pn	10 34 58.5	-1.0
SAJE	San Jernim	1.27	332	⇑*e*P	Pn	10 34 58.5	-1.4
SAJE				*e*S	Sb	10 35 13.5	-2.9
ISBTO	Bastimentos Is	1.31	32	*e*P	Pn	10 35 00.8	+0.4
BRIBI	Bribri	1.39	4	*e*P	Pn	10 35 01.8	+0.4
BRIBI				*e*S	Sg	10 35 21.0	-0.2
LLNJ	Naranjito	1.71	317	*e*P	Pn	10 35 06.6	+0.7
GMAL	Guarumal, Vera	1.72	105	*e*P	Pn	10 35 06.7	+0.8
QUEP	Quepos	1.73	314	*e*P	Pn	10 35 06.3	+0.3
QUEP				*e*S	Sn	10 35 27.8	-0.1
PIEC	Cerro El Cedra	1.74	323	*e*P	Pn	10 35 06.1	-0.3
RAZU	San Marcos de	1.80	322	*e*P	Pb	10 35 08.6	-0.7
PITB	Pirrs, San	1.81	322	*e*P	Pn	10 35 07.8	+0.5
TURIB	Turrialba	1.84	335	*e*P	Pn	10 35 07.7	0.0
TURIB				*e*S	Sn	10 35 29.6	-1.3
PISJ	San Jernim	1.84	319	*e*P	Pn	10 35 08.3	+0.5
REPA	Paraso	1.86	329	*e*P	Pn	10 35 08.3	+0.3
REPA				*e*S	Sb	10 35 33.3	-0.1
ABE2	San Pablo	1.86	323	*e*P	Pn	10 35 08.1	0.0
ABE2				*e*S	Sb	10 35 33.2	-0.3
LCR2	La Lucha 2	1.86	324	*e*P	Pn	10 35 07.4	-0.7
LCR2				*e*S	Sn	10 35 31.9	+0.4
LCR2	La Lucha 2	1.86	324	P	Pn	10 35 07.2	-0.9
VERB	Verbena	1.88	336	*e*P	Pn	10 35 08.5	+0.3
VERB				*e*S	Sn	10 35 31.4	-0.5
PICV	PH. Pirrs	1.89	318	*e*P	Pn	10 35 09.4	+1.1
PICV				*e*S	Sn	10 35 32.6	+0.6
PAR1A	Puntarenas Pro	1.91	316	*e*P	Pn	10 35 09.3	+0.8
PAR1A				*e*S	Sn	10 35 33.1	+0.7
PCAYA	Pacayas	1.91	332	*e*P	Pn	10 35 08.6	-0.1
VTCV	VTCV, Calle Va	1.93	335	*e*P	Pn	10 35 09.0	0.0
RESJ	San Isidro (Tu	1.94	338	*e*P	Pn	10 35 09.7	+0.7
RESJ				*e*S	Sn	10 35 34.1	+0.9
RAFA	San Farael, Vo	1.94	333	*e*P	Pn	10 35 09.2	-0.1
RAFA				*e*S	Sn	10 35 34.0	+0.3
ABRB	Las Abras (San	1.94	336	*e*P	Pn	10 35 09.8	+0.5
ABRB				*e*S	Sn	10 35 34.0	+0.4
IRES	Siquirres	1.95	342	*e*P	Pn	10 35 09.4	+0.3
CVTV	Tajo	1.96	335	*e*P	Pn	10 35 09.7	+0.2
CVTQ	Turrialba Volc	1.96	334	⇑*e*P	Pn	10 35 09.8	+0.2
VTLA	Turrialba Volc	1.97	334	*e*P	Pn	10 35 09.9	+0.3
VTR0	Volcan Turrial	1.97	335	⇑*e*P	Pn	10 35 09.9	+0.1
VICA	Volcano Irazu	1.98	332	*e*P	Pn	10 35 10.2	+0.3
ACOS	Acosta	2.00	322	*e*P	Pn	10 35 09.7	-0.2
ACOS				*e*S	Sn	10 35 35.4	+0.6
AMPA	Desamparados	2.02	326	*e*P	Pn	10 35 10.8	+0.6
AMPA				*e*S	Sn	10 35 35.0	-0.3
ECI	Escuela Centro	2.05	327	*e*P	Pn	10 35 11.3	+0.7
CORON	Coronado	2.05	328	*e*P	Pn	10 35 12.2	+1.5
LUPE	Guadalupe	2.06	327	*e*P	Pn	10 35 11.2	+0.5
LUPE				*e*S	Sn	10 35 37.3	+1.1
CVIMO	Finca Echandi	2.06	330	*e*P	Pn	10 35 12.3	+1.5
PAVB	Pavas, San Jos	2.08	325	*e*S	Sn	10 35 38.0	+1.1
DOMI	Santo Domingo	2.10	326	*e*S	Sb	10 35 39.7	-0.8
SANTA	Santa Ana	2.12	324	*e*P	Pn	10 35 11.6	+0.1
PURI	Puriscal	2.13	319	*e*P	Pn	10 35 12.9	+1.2
HDC	Heredia	2.13	326	*e*P	Pn	10 35 12.2	+0.4
HDC				*e*S	Sb	10 35 40.0	-1.3
HEME	Heredia, Merce	2.14	326	*e*P	Pn	10 35 12.1	+0.3
BELE	Belen	2.15	324	*e*P	Pn	10 35 11.9	-0.1
BELE				*e*S	Sn	10 35 39.7	+1.1
VBV1	V. Barva	2.22	328	*e*P	Pn	10 35 13.5	+0.4
POAS	San Pedro de P	2.27	324	*e*P	Pb	10 35 15.9	-1.3
TRB2	Turrubares	2.27	318	*e*P	Pn	10 35 13.9	+0.4
ATEO	Atenas	2.27	320	*e*P	Pn	10 35 14.4	+0.8
VPS8	V Poas	2.35	326	*e*P	Pn	10 35 16.7	+1.8
VPS5	V. Poas	2.35	326	*e*P	Pb	10 35 18.3	-0.4

SRA1	San Ramn	2.42	320	eP	Pn	10 35 17.8	+2.1
TRT2	Tortugero	2.46	341	eP	Pn	10 35 16.2	+0.1
TRT2	Tortugero	2.46	341	P	Pn	10 35 16.2	+0.1
TRT2	Tortugero	2.46	341	S	Sn	10 35 48.1	+2.1
ARZA	Esparza	2.47	315	eP	Pn	10 35 17.9	+1.6
VPL1	V. Platanar	2.48	325	eP	Pb	10 35 21.5	+0.5
TRT1	Tortuguero	2.49	342	eP	Pn	10 35 16.3	-0.2
VPL2	V. Platanar	2.53	325	eP	Pn	10 35 19.0	+1.8
CBL1	Cabuya	2.55	302	eP	Pn	10 35 16.9	-0.4
ITAL	Pital	2.59	329	eP	Pn	10 35 19.2	+1.2
JCR1	Jicaral	2.71	307	eP	Pn	10 35 20.1	+0.4
SOCE	Pocosol	2.73	322	eP	Pn	10 35 22.1	+2.2
SOCE	Pocosol	2.73	322	S	Sb	10 35 56.4	-2.1
TUNA	La Fortuna	2.81	323	eP	Pb	10 35 24.9	-1.6
MTEVE	Monteverde	2.82	318	eP	Pn	10 35 23.2	+2.0
FORC	Fortuna	2.83	322	eP	Pn	10 35 23.3	+2.0
VACR	Volcan Arenal	2.84	322	eP	Pn	10 35 24.2	+2.8
ARE1	Arenal 1	2.85	321	eP	Pn	10 35 23.3	+1.7
VARE2	V. Arenal	2.85	321	eP	Pn	10 35 23.3	+1.7
CEDE	Laguna Cedeo	2.87	322	eP	Pn	10 35 24.7	+2.9
JUNT	Juntas	2.88	315	eP	Pn	10 35 22.1	+0.2
JUNT				eS	Sn	10 35 55.6	-0.8
JTS	Las Juntas de	2.88	316	eP	Pn	10 35 22.0	+0.1
JTS				eS	Sn	10 35 55.4	-1.1
TABAC	Tabacon	2.91	321	eP	Pn	10 35 24.7	+2.2
TILA	Tilaran	3.02	318	eP	Pn	10 35 26.6	+2.7
CMARA	Lajas Hojancha	3.06	306	eP	Pn	10 35 25.5	+1.0
INVE	Universidad In	3.09	317	eP	Pn	10 35 27.5	+2.7
QUEB	Quebradon, Cot	3.09	321	eP	Pn	10 35 27.7	+2.9
TIMP	Tierras Morena	3.14	319	eP	Pn	10 35 26.9	+1.4
TENO	El Achiote	3.20	321	eP	Pn	10 35 29.1	+2.7
PLVR	Palo Verde	3.21	311	eP	Pn	10 35 28.4	+1.9
PLVR				eS	Sn	10 36 03.9	-0.8
CUI	Cuipilapa	3.29	318	eP	Pn	10 35 29.4	+1.8
CUI				eS	Sn	10 36 07.3	+0.7
COLC	Colonia	3.32	317	eP	Pn	10 35 30.6	+2.6
MESS	Mesas	3.37	318	eP	Pn	10 35 29.9	+1.2
ALIBA	Liberia Airpor	3.51	312	eP	Pn	10 35 33.3	+2.8
ALIBA				eS	Sn	10 36 12.3	+0.4
VRLE	La Escondida,	3.52	317	eP	Pn	10 35 32.1	+1.3
LAPC	Finca la Perla	3.55	316	eP	Pn	10 35 34.1	+3.0
ACON	Acoyapa	4.34	329	eP	Pn	10 35 42.9	+0.9

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*IDC **26** 10:36:16.5±0.8, 2°.70S×138°.48E, h0^{km}, mb4.0/7, mbtmp4.0/10, ML3.6/3, MS3.3/3, Error ellipse: s-maj=19.4km s-min=16.1km az=179.0*

*NEIC **26** 10:36:18.0±1.9, 2°.74S±0°.07×138°.55E±0°.07, h10^{km}±2^{km}, mb4.0/11, Error ellipse: s-maj=14.3km s-min=9.7km az=47.0*

*DJA **26** 10:36:20.1±0.7, 2°S±5°×13°9E±°, h12^{km}±8^{km}, M4.3/7, mb4.9/1, MLv4.0/7*

ISC 26 10:36:17.5±0.6, **2°.71S**±0°.06×**138°.56E**±0°.05, **h10**^{km}, **n35**, σ**0**^{s}**.92**/33, **mb4.0**/8, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.73	12	P	Pg	10 36 30.6	-1.1
GENI	Genyem	1.61	86	P	Pb	10 36 48.4	+0.9
JAY	Jayapura	2.15	85	Pn	Pb	10 36 55.7	-1.0
	14nm,0.3s,baz=226,slow=10,SNR=47						
JAY				Lg	Lg	10 37 26.6	
	6.1nm,0.3s,baz=315,slow=20,SNR=3.9						
JAY				LR	LR	10 37 56.3	
	comp=Z,401nm,19.9s,baz=286,slow=45						
	43nm,0.4s						
JAY	Jayapura	2.15	85	P	Pn	10 36 55.2	+1.6
SRPI	Serui, Papua	2.46	290	P	Pn	10 36 58.0	+0.3
BAKI	Biak	2.87	302	P	Pn	10 37 04.8	+1.3
FAKI	Fak Fak	6.30	268	Pn	Pn	10 37 51.3	+0.7
PMG	Port Moresby	10.84	128	Pn	Pn	10 38 50.9	-1.9
COEN	Coen	12.07	158		Pn	10 39 08.9	-1.0
MTN	Manton Dam	12.46	216	Pn	Pn	10 39 15.2	+0.1
SOEI	Soe	15.83	243		Pn	10 39 59.9	-0.9
SOEI	Soe	15.83	243	P	P	10 40 04.9	+0.3
KNRA	Kununurra	16.10	216	Pn	Pn	10 40 03.7	-0.5
KNRA				IAmb	IAmb	10 40 21.9	
	comp=Z,16nm,1.1s						
GUMO	Guam	17.36	21	LR	LR	10 46 48.7	
	comp=Z,52nm,18.8s,baz=184,slow=36						
WB0	Warramunga Arr	17.44	193	P	Pn	10 40 20.9	-0.2
WB0				IAmb	IAmb	10 40 33.0	
	comp=Z,7.6nm,0.6s						
WR8	Warramunga Arr	17.59	193	P	Pn	10 40 22.7	-0.3
WR8				IAmb	IAmb	10 40 33.4	
	comp=Z,9.4nm,0.9s						
WRAB	Tennant Creek	17.61	193	P	Pn	10 40 23.5	+0.3
WRAB				IAmb	IAmb	10 40 49.6	
	comp=Z,11nm,0.8s						
WRA	Warramunga Arr	17.62	193	P	Pn	10 40 23.1	-0.3
WRA	Warramunga Arr	17.62	193	P	Pn	10 40 22.1	-1.3
	comp=Z,0.4nm,0.3s,baz=15,slow=12,SNR=17						
	comp=Z,3.8nm,0.8s						
CTAO	Charters Tower	18.84	157	P	P	10 40 36.8	-1.0
CTAO				IAmb	IAmb	10 40 42.2	
	comp=Z,15nm,1.2s						
FITZ	Fitzroy Crossi	19.86	219	P	P	10 40 47.7	-1.2
FITZ	Fitzroy Crossi	19.86	219	P	P	10 40 49.6	+0.7
	comp=Z,0.1nm,0.3s,baz=45,slow=13,SNR=2.3						
	comp=Z,3.1nm,0.9s						
AS31	Alice Springs	21.32	192	P	P	10 41 05.4	+0.7
AS31				IAmb	IAmb	10 41 14.0	
	comp=Z,5.3nm,0.8s						
ASAR	Alice Springs	21.32	192	P	P	10 41 05.0	+0.2
ASAR	Alice Springs	21.32	192	P	P	10 41 04.7	-0.1
	comp=Z,5.7nm,0.7s,baz=21,slow=10,SNR=61						
	comp=Z,5.7nm,0.7s						
KSRS	Korea Array	41.16	347	P	P	10 44 02.0	-0.1
	comp=Z,0.6nm,0.6s,baz=160,slow=9.7,SNR=2.3						
	comp=Z,0.6nm,0.6s						
CMAR	Chiang Mai Arr	44.30	300	P	P	10 44 28.0	0.0
	comp=Z,0.5nm,0.4s,baz=100,slow=8.1,SNR=2.2						
	comp=Z,0.5nm,0.4s						
MKAR	Makanchi Array	69.69	322	P	P	10 47 28.3	+0.7
	comp=Z,0.7nm,0.7s,baz=115,slow=8.6,SNR=5.6						
	comp=Z,0.7nm,0.7s						
VNDA	Vanda	75.80	175	P	P	10 48 04.8	+1.5
VNDA				IAmb	IAmb	10 48 12.2	
	comp=Z,3.5nm,1.2s						
VNDA	Vanda	75.80	175	P	P	10 48 04.6	+1.3
	comp=Z,1.1nm,0.6s,baz=319,slow=7.0,SNR=6.3						
	comp=Z,1.1nm,0.6s						
BVAR	Borovoye Array	79.22	325	P	P	10 48 22.5	-0.4
	comp=Z,0.8nm,0.4s,baz=101,slow=7.5,SNR=3.8						
	comp=Z,0.8nm,0.4s						
QSPA	South Pole Qui	87.24	180	P	P	10 49 04.7	+0.5
QSPA	South Pole Qui	87.24	180	P	P	10 49 04.3	+0.1
	comp=Z,3.6nm,1.0s,baz=276,slow=0.6,SNR=10.0						
	comp=Z,3.6nm,1.0s						
INK	Inuvik	91.72	22	LR	LR	11 25 13.0	
	comp=Z,47nm,20.9s,baz=256,slow=32						
LPAZ	La Paz	147.57	126	PKPbc	PKPbc	10 56 05.2	+1.2
	comp=Z,1.0nm,0.7s,baz=254,slow=3.5,SNR=4.1						

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*DJA **26** 10:38:58.8±1.3, 3°S±3°×13°7E±°, h29^{km}±13^{km}, M4.5/8, mB5.0/1, mb4.7/1, MLv4.5/8, Mw(mB)4.3/1*

*IDC **26** 10:38:59.9±3.4, 3°.10S×137°.11E, h68^{km}±38^{km}, mb3.7/10, mbtmp4.1/14, ML4.2/3, Error ellipse: s-maj=28.8km s-min=15.9km az=115.0*

ISC 26 10:38:55.9±0.6, **3°.24S**±0°.06×**137°.03E**±0°.05, **h32**^{km}, **n21**, σ**2**^{s}**.37**/27, **mb4.1**/9, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRPI	Serui, Papua	1.57	330	P	Pn	10 39 22.2	+0.6
SRPI				S	Sn	10 39 41.2	+0.3
BAKI	Biak	2.23	336	P	Pn	10 39 32.5	+1.8
BAKI				S	Sn	10 39 58.0	+0.8
GENI	Genyem	3.20	79	P	Pn	10 39 46.6	+2.6
GENI				S	Sb	10 40 25.4	-5.2
RKPI	Ransiki, Papua	3.33	301	P	Pn	10 39 46.3	+0.5
RKPI				S	Sn	10 40 23.9	-0.4
JAY	Jayapura	3.74	79	P	Pn	10 39 53.6	+2.1
	11nm,0.3s,baz=220,slow=10,SNR=9.5						
JAY				S	Sn	10 40 36.2	+1.8
	28nm,0.7s,baz=221,slow=20,SNR=1.5						
	41nm,0.5s						
JAY	Jayapura	3.74	79	P	Pn	10 39 53.8	+2.3
FAKI	Fak Fak	4.79	274	P	Pn	10 40 06.8	+0.9
SWI	Sorong	6.23	292	P	Pn	10 40 26.9	+1.2
PMG	Port Moresby	11.78	122	P	Pn	10 41 43.9	+2.0
	10.0nm,0.7s,baz=315,slow=14,SNR=2.2						
WRA	Warramunga Arr	16.81	189	P	P	10 42 53.1	+2.1
	0.8nm,0.3s,baz=10,slow=12,SNR=14						
WRA				S	Sn	10 45 47.7	-7.3
	1.0nm,0.4s,baz=13,slow=24,SNR=5.5						
	3.0nm,0.5s						
FITZ	Fitzroy Crossi	18.51	216	P	Pn	10 43 13.1	+3.0
	0.7nm,0.3s,baz=40,slow=11,SNR=10						
FITZ				S	Sn	10 46 24.7	-12
	2.6nm,0.7s,baz=353,slow=17,SNR=3.5						
	3.9nm,0.8s						
ASAR	Alice Springs	20.54	188	P	Pn	10 43 34.7	+0.5
	2.2nm,0.4s,baz=14,slow=10,SNR=15						
ASAR				S	S	10 47 19.8	-0.3
	0.8nm,0.8s,baz=9.8,slow=23,SNR=2.8						
	2.2nm,0.4s						
KSRS	Korea Array	41.36	349	P	P	10 46 38.2	-0.7
	1.3nm,0.8s,baz=164,slow=8.9,SNR=4.6						
	1.3nm,0.8s						
CMAR	Chiang Mai Arr	43.26	301	P	P	10 46 55.0	+0.2
	1.0nm,0.6s,baz=118,slow=6.2,SNR=6.8						
	1.0nm,0.6s						
USRK	Ussuriysk Ar.	47.44	355	P	P	10 47 27.6	+0.1
	1.7nm,0.5s,baz=186,slow=8.2,SNR=6.6						
	1.7nm,0.5s						
KLR	Kul'dur	52.45	356	P	P	10 48 05.5	0.0
	2.1nm,0.6s,baz=128,slow=11,SNR=4.3						
	2.1nm,0.6s						
MKAR	Makanchi Array	69.19	323	P	P	10 49 59.2	-0.3
	1.0nm,0.6s,baz=107,slow=8.2,SNR=6.8						
	1.0nm,0.6s						
ZALV	Zalesovo Beam	71.56	330	P	P	10 50 11.5	-2.3
	1.1nm,0.6s,baz=106,slow=11,SNR=4.1						
	1.1nm,0.6s						
BVAR	Borovoye Array	78.79	326	P	P	10 50 55.0	-0.5
	2.0nm,0.6s,baz=101,slow=7.7,SNR=9.1						
	2.0nm,0.6s						
QSPA	South Pole Qui	86.71	180	P	P	10 51 37.6	+1.0
	1.1nm,0.8s,baz=255,slow=1.7,SNR=2.9						
	1.1nm,0.8s						
ILAR	Eielson Array	87.00	25	P	P	10 51 36.2	-1.7
	0.9nm,1.1s,baz=276,slow=3.5,SNR=2.7						
	0.9nm,1.1s						

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*IDC **26** 10:42:55.9±0.7, 56°.23N×164°.15E, h0^{km}, mb4.0/18, mbtmp4.0/20, ML3.5/2, MS3.3/10, Error ellipse: s-maj=20.1km s-min=12.6km az=151.0*

*KRSC **26** 10:42:56.5±1.6, 56°.20N×164°.33E, h51^{km}±22^{km}, Mc4.7, Ml4.5*

*NEIC **26** 10:42:58.0±2.0, 56°.25N±0°.10×164°.06E±0°.08, h10^{km}±1^{km}, mb4.3/46, Error ellipse: s-maj=17.5km s-min=5.4km az=198.0*

*MOS **26** 10:42:58.6±0.9, 56°.20N×164°.28E, h35^{km}, mb4.2/5, Error ellipse: s-maj=7.1km s-min=5.1km az=59.9*

ISC 26 10:42:59.2±0.8, **56°.22N**±0°.04×**164°.09E**±0°.03, **h20**^{km}±3^{km}, **n383**, σ**0**^{s}**.92**/395, **mb4.2**/34, **MS3.1**/11, **8C-4D**, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.71	269	PN	Pb	10 43 11.9	-1.0
KBTR				S	Sg	10 43 22.4	-0.3
KBTR	Krutoberegovo	0.71	269	eP	Pb	10 43 12.0	-1.0
KBTR				eS	Sg	10 43 22.4	-0.3
KBG	Krutoberegovo	0.78	273	PN	Pb	10 43 12.9	-1.1
KBG				S	Sg	10 43 24.3	-0.4
KBG	Krutoberegovo	0.78	273	eP	Pb	10 43 12.9	-1.1
KBG				eS	Sg	10 43 24.3	-0.4
BKI	Bering	1.47	133	PN	Pn	10 43 21.9	-2.7
BKI				S	Sn	10 43 39.2	-4.1
BKI	Bering	1.47	133	eP	Pn	10 43 21.9	-2.7
BKI				eS	Sn	10 43 39.2	-4.1
SMKR	Semkarok	1.50	285	PN	Pn	10 43 25.2	+0.1
SMKR				S	Sb	10 43 45.4	+0.3
SMKR	Semkarok	1.50	285	eP	Pn	10 43 25.3	+0.1
SMKR				eS	Sb	10 43 45.5	+0.3
BDR	Baidarnaya	1.64	283	eS	Sb	10 43 49.6	+0.5
SRKR	Sorokina	1.68	286	eP	Pn	10 43 28.3	+0.8
SRKR				eS	Sb	10 43 50.5	+0.2
ZLN	Zelenaya	1.85	265	PN	Pn	10 43 29.9	0.0
ZLN				S	Sb	10 43 55.8	+0.6
ZLN	Zelenaya	1.85	265	eP	Pn	10 43 30.0	0.0
ZLN				eS	Sb	10 43 55.8	+0.6
CIRR	Tsirk	1.87	268	PN	Pn	10 43 31.3	+1.1
CIRR				S	Sb	10 43 55.8	0.0
CIRR	Tsirk	1.87	268	eP	Pn	10 43 31.4	+1.1
CIRR				eS	Sb	10 43 55.8	0.0
LGNR	Loginova	1.91	267	PN	Pn	10 43 32.0	+1.1
LGNR	Loginova	1.91	267	eP	Pn	10 43 32.0	+1.1
KLY	Klyuchi	1.92	274	PN	Pn	10 43 29.8	-0.9
KLY				S	Sn	10 43 53.7	-0.6
KLY	Klyuchi	1.92	274	eP	Pn	10 43 29.8	-0.9
KLY				eS	Sn	10 43 53.7	-0.6
BZGR	Bezymyannyi-Gr	1.93	263	PN	Pn	10 43 31.6	+0.7
BZGR				S	Sb	10 43 56.6	-0.7
BZGR	Bezymyannyi-Gr	1.93	263	eP	Pn	10 43 31.6	+0.7
BZGR				eS	Sb	10 43 56.6	-0.7
KRSR	Krestovskiy	1.97	271	PN	Pn	10 43 31.9	+0.4
KRSR				S	Sb	10 43 58.4	-0.2
KRSR	Krestovskiy	1.97	271	eP	Pn	10 43 31.9	+0.4
KRSR				eS	Sb	10 43 58.4	-0.2
BZWR	Bezymyannyi-We	2.03	264	PN	Pn	10 43 33.4	+1.0
BZWR	Bezymyannyi-We	2.03	264	eP	Pn	10 43 33.5	+1.0
BZMR	Bezymyannaya	2.04	263	PN	Pn	10 43 33.4	+0.9
BZMR				S	Sb	10 43 59.6	-1.0
BZMR	Bezymyannaya	2.04	263	eP	Pn	10 43 33.5	+0.9
BZMR				eS	Sb	10 43 59.6	-1.0
KIRR	Kirishev	2.12	264	PN	Pn	10 43 34.3	+0.7
KIRR				S	Sb	10 44 01.1	-1.8
KIRR	Kirishev	2.12	264	eP	Pn	10 43 34.4	+0.7
KIRR				eS	Sb	10 44 01.2	-1.8
MKZ	Mys Kozlova	2.15	220	PN	Pn	10 43 32.7	-1.1
MKZ				S	Sn	10 43 57.6	-2.2
MKZ	Mys Kozlova	2.15	220	eP	Pn	10 43 32.8	-1.1
MKZ				eS	Sn	10 43 57.7	-2.2
KPT	Kopyto	2.18	265	PN	Pn	10 43 35.9	+1.5
KPT				S	Sb	10 44 04.3	-0.4
KPT	Kopyto	2.18	265	eP	Pn	10 43 36.0	+1.5
KPT				eS	Sb	10 44 04.3	-0.4
KMNR	Kamenistaya	2.22	259	PN	Pn	10 43 36.0	+1.1
KMNR	Kamenistaya	2.22	259	eP	Pn	10 43 36.1	+1.1
TUMD	Tumrok D	2.33	245	PN	Pn	10 43 36.9	+0.5
TUMD	Tumrok D	2.33	245	eP	Pn	10 43 36.9	+0.5
KOZ	Kozyrevsk	2.37	268	PN	Pn	10 43 38.6	+1.7
KOZ				S	Sb	10 44 09.3	-0.6
KOZ	Kozyrevsk	2.37	268	eP	Pn	10 43 38.6	+1.7
KOZ				eS	Sb	10 44 09.3	-0.6
SRDR	Sredinnyy	2.44	274	PN	Pn	10 43 39.5	+1.6
SRDR				S	Sb	10 44 10.3	-1.8
SRDR	Sredinnyy	2.44	274	eP	Pn	10 43 39.6	+1.6
SRDR				eS	Sb	10 44 10.3	-1.8
ESO	Esso	3.04	267	PN	Pn	10 43 47.4	+1.3
ESO	Esso	3.04	267	eP	Pn	10 43 47.5	+1.3
OSSR	Ossora	3.09	350	PN	Pn	10 43 45.3	-1.4
OSSR	Ossora	3.09	350	eP	Pn	10 43 45.3	-1.4
OSSR				eS	Sn	10 44 19.0	-4.0
KII	Karymskiy	3.45	233	PN	Pn	10 43 52.5	+0.7
KII	Karymskiy	3.45	233	eP	Pn	10 43 52.6	+0.7
PALN	Palana	3.63	324	PN	Pn	10 43 54.7	+0.5
PALN	Palana	3.63	324	eP	Pn	10 43 54.8	+0.5
SPN	Mys Shipunski	3.92	219	PN	Pn	10 43 56.9	-1.4
SPN	Mys Shipunski	3.92	219	eP	Pn	10 43 56.9	-1.4
SPN				eS	Sn	10 44 39.8	-3.8
NLC	Nalytchevo	4.12	224	PN	Pn	10 44 01.3	+0.5
NLC	Nalytchevo	4.12	224	eP	Pn	10 44 01.4	+0.5
NLC				eS	Sn	10 44 47.6	-0.8
SDLR	Sedlovina	4.22	228	PN	Pn	10 44 03.1	+0.7
SDLR	Sedlovina	4.22	228	eP	Pn	10 44 03.1	+0.7
KRER	Koryakskii	4.26	229	PN	Pn	10 44 04.3	+1.3
KRER	Koryakskii	4.26	229	eP	Pn	10 44 04.4	+1.3
SMAR	Somma	4.26	228	PN	Pn	10 44 04.0	+0.9
SMAR	Somma	4.26	228	eP	Pn	10 44 04.1	+0.9
UGLR	Uglovaya	4.29	228	PN	Pn	10 44 04.4	+0.9
UGLR	Uglovaya	4.29	228	eP	Pn	10 44 04.5	+0.9
KOK	Koryaka	4.31	229	PN	Pn	10 44 04.6	+0.9
KOK	Koryaka	4.31	229	eP	Pn	10 44 04.6	+0.9
PET	Petropavlovsk	4.50	227		Pn	10 44 06.3	+0.1
PET	Petropavlovsk	4.50	227	c iPN	Pn	10 44 06.7	+0.5
PEA0B	Petropavlovsk-	4.85	233		Pn	10 44 11.4	+0.4
PEA0B	Petropavlovsk-	4.85	233	d iPN	Pn	10 44 11.7	+0.7
PETK	Petropavlovsk-	4.85	233		Pn	10 44 11.4	+0.5
PETK	Petropavlovsk-	4.85	233	Pn	Pn	10 44 12.6	+1.6
	3.4nm,0.3s,baz=71,slow=17,SNR=41						
PETK				Sn	Sn	10 45 10.5	+4.0
	2.0nm,0.3s,baz=24,slow=18,SNR=5.2						
	20nm,0.7s						
GRL	Gorelyy	5.09	226	PN	Pn	10 44 15.5	+1.1
GRL	Gorelyy	5.09	226	eP	Pn	10 44 15.6	+1.1
MTVR	Mutnovka	5.10	225	PN	Pn	10 44 15.2	+0.7
MTVR	Mutnovka	5.10	225	eP	Pn	10 44 15.3	+0.7
ASAK	Asacha	5.29	226	PN	Pn	10 44 18.5	+1.5
ASAK	Asacha	5.29	226	eP	Pn	10 44 18.6	+1.5
SMY	Shemya	6.80	117	Pn	Pn	10 44 37.8	+0.1
SMY	Shemya	6.80	117	PN	Pn	10 44 37.8	+0.1
SKR	Severo-Kuril's	7.31	224	⇑iPN	Pn	10 44 45.7	+1.0
MA2	Magadan	7.85	301	⇑iPN	Pn	10 44 54.1	+1.9
SEY	Seymchan	8.96	323	⇑iPN	Pn	10 45 10.4	+3.0
SEY				pmax	pmax		
	comp=Z,2.0nm,1.0s						
AMKA	Amchitka	10.21	112	Pn	Pn	10 45 24.5	0.0
BILL	Bilibino	11.90	4	⇑iPN	Pn	10 45 48.9	+1.3
ADK	Adak	12.09	103	Pn	Pn	10 45 48.4	-1.8
ADK	Adak	12.09	103	PN	Pn	10 45 48.4	-1.8
ATKA	Atka Island	13.31	99	Pn	Pn	10 46 01.4	-5.4
SPIA	Saint Paul Isl	14.10	75	P	Pn	10 46 18.6	+1.0
	baz=277						
GAMB	Gambell	14.20	48	P	Pn	10 46 19.5	+0.6
	baz=249						
NIKH	Nikolski High	15.97	90	Pn	Pn	10 46 41.7	-0.7
K13K	Kusilvak Mount	16.93	57	P	Pn	10 46 55.2	+0.7
K13K				IAmb	IAmb	10 47 06.2	
	comp=Z,48nm,1.4s						
K13K	Kusilvak Mount	16.93	57	P	Pn	10 46 55.5	+0.9
	baz=265						
F14K	Arctic Creek	16.96	45	P	Pn	10 46 55.1	+0.2
	baz=251						
L14K	Kuka Creek	17.83	60	P	P	10 47 08.4	+2.0
L14K				IAmb	IAmb	10 47 10.8	
	comp=Z,26nm,0.7s						
L14K	Kuka Creek	17.83	60	P	Pn	10 47 06.1	+0.3
	baz=268,SNR=8.1						
M14K	Bethel	18.18	62	P	P	10 47 12.1	+1.9
M14K				IAmb	IAmb	10 47 13.2	
	comp=Z,19nm,1.0s						
M14K	Bethel	18.18	62	P	Pn	10 47 10.0	0.0
	baz=271						
JKA	Kamikawa-asahi	18.24	237		Pn	10 47 09.7	-1.3
ASAJ	Asahikawa	18.25	237	P	P	10 47 11.2	0.0
	comp=Z,0.4nm,0.3s,baz=30,slow=6.6,SNR=11						
ASAJ				LR	LR	10 54 53.1	
	comp=Z,113nm,18.8s,baz=5.0,slow=39						
	comp=Z,28nm,0.9s						
C16K	Lisburne Hills	18.40	37	P	Pn	10 47 12.9	+0.3
	baz=244						
H16K	Elim	18.41	49	P	Pn	10 47 13.3	+0.4
	baz=259						
L15K	Ungalak Mounta	18.41	59	P	Pn	10 47 13.6	+0.6
	baz=268						
K15K	Wolf Creek Mou	18.42	57	P	Pn	10 47 13.7	+0.6
	baz=267						
G16K	Koyuk River	18.53	47	P	Pn	10 47 14.8	+0.4
	baz=256						
M15K	Kasigluk River	18.80	62	P	Pn	10 47 18.1	+0.4
	baz=272						
S12K	Black Hills	18.85	77	P	Pn	10 47 19.2	+0.9
	baz=286						
J16K	Anvik River	18.93	54	P	P	10 47 18.8	+0.3
J16K				IAmb	IAmb	10 47 48.6	
	comp=Z,27nm,1.5s						
D17K	Noatak River	18.95	40	P	Pn	10 47 20.0	+0.6
	baz=249						
I17K	Unalakleet	18.95	52	P	P	10 47 17.0	-1.8
I17K				IAmb	IAmb	10 47 33.0	
	comp=Z,37nm,1.4s						
I17K	Unalakleet	18.95	52	P	Pn	10 47 19.7	+0.3
	baz=263						
N15K	Kwethluk River	19.12	63	P	Pn	10 47 22.2	+0.6
	baz=274						
RDOG	Red Dog Mine	19.14	39	P	Pn	10 47 22.1	+0.3
	baz=248						
E17K	Hotham Inlet	19.20	42	P	Pn	10 47 22.6	+0.2
	baz=252						
C17K	DeLong Mountai	19.21	37	P	Pn	10 47 22.2	-0.3
	baz=247						
F17K	Baldwin Pennin	19.23	44	P	P	10 47 21.9	+0.1
	baz=255						
L16K	Owhat River	19.37	59	P	Pn	10 47 24.5	0.0
	baz=270						
H17K	Granite Mounta	19.45	49	P	P	10 47 24.8	+0.6
H17K				IAmb	IAmb	10 47 36.7	
	comp=Z,18nm,1.1s						
H17K	Granite Mounta	19.45	49	P	Pn	10 47 25.8	+0.4
	baz=261						
J17K	VABM Dome	19.62	53	P	P	10 47 26.6	+0.5
J17K				IAmb	IAmb	10 47 43.9	
	comp=Z,17nm,1.2s						
J17K	VABM Dome	19.62	53	P	Pn	10 47 27.4	-0.1
	baz=266						
ERM	Erimo	19.63	232	P	P	10 47 24.8	-1.5
ERM	Erimo	19.63	232	⇑iP	P	10 47 25.8	-0.5
M16K	Timber Creek	19.64	61	P	Pn	10 47 27.5	-0.2
	baz=273						
E18K	Tukpahlearik C	19.75	41		P	10 47 28.2	+0.7
E18K				IAmb	IAmb	10 47 41.4	
	comp=Z,28nm,1.3s						
E18K	Tukpahlearik C	19.75	41	P	Pn	10 47 28.6	-0.5
	baz=253,SNR=7.6						
N16K	Nishlik Lake	19.76	62	P	Pn	10 47 29.4	+0.3
	baz=274						
SDPT	Sand Point	19.81	78	P	Pn	10 47 30.2	+0.4
	baz=287						
F18K	Selawik	19.89	44	P	Pn	10 47 30.9	+0.2
	baz=256						
L17K	Donlin	19.93	57	P	Pn	10 47 31.7	+0.5
	baz=270						
K17K	Iditarod	19.94	56	P	Pn	10 47 31.4	+0.2
	baz=268						
C18K	Utukok River	19.95	38		P	10 47 29.9	+0.2
C18K				IAmb	IAmb	10 47 41.2	
	comp=Z,14nm,1.0s						
C18K	Utukok River	19.95	38	P	Pn	10 47 31.7	+0.2
	baz=249,SNR=5.9						
B18K	Kokolik River	20.02	35	P	Pn	10 47 32.0	-0.2
	baz=246						
S14K	Fog Glacier	20.05	75	P	Pn	10 47 32.5	-0.2
	baz=285						
H18K	Honhosa River	20.13	48	P	Pn	10 47 32.8	-0.7
H18K				IAmb	IAmb	10 47 43.3	
	comp=Z,13nm,0.8s						
H18K	Honhosa River	20.13	48	P	Pn	10 47 33.5	0.0
	baz=262						
O16K	Kokwok River B	20.18	65	P	Pn	10 47 33.8	-0.3
	baz=277						
P16K	Nushagak River	20.31	66	P	Pn	10 47 35.5	-0.2
	baz=279						
M17K	Holitna River	20.36	59		Pn	10 47 36.2	+0.1
M17K	Holitna River	20.36	59	P	Pn	10 47 35.9	-0.3
	baz=273						
N17K	Nushagak Hills	20.54	62	P	Pn	10 47 37.6	-0.7
	baz=275						
KLR	Kul'dur	20.65	264	LR	LR	10 56 00.5	
	comp=Z,67nm,18.4s,baz=64,slow=38						
KLR	Kul'dur	20.65	264	⇑iP	P	10 47 37.6	+0.2
KLR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
C19K	Lookout Ridge	20.66	37	P	P	10 47 38.6	+1.3
	baz=250,SNR=13						
F19K	Shaleruckik Mo	20.67	44	P	P	10 47 38.3	+0.8
F19K	Shaleruckik Mo	20.67	44	P	P	10 47 38.4	+1.0
	baz=258,SNR=8.7						
L18K	Granite Mounta	20.68	57	P	Pn	10 47 39.3	-0.7
	baz=271						
GCSA	Galena City Sc	20.71	50	P	P	10 47 38.5	+0.7
	baz=264,SNR=5.9						
G19K	Purcell Mounta	20.81	46		P	10 47 38.8	-0.2
G19K	Purcell Mounta	20.81	46	P	P	10 47 40.0	+1.1
	baz=260						
D19K	Kuna River	20.97	39		P	10 47 39.4	-1.4
D19K	Kuna River	20.97	39	P	P	10 47 41.2	+0.5
	baz=253						
H19K	Roundabout Mou	20.98	48	P	P	10 47 40.7	0.0
H19K				IAmb	IAmb	10 47 47.6	
	comp=Z,24nm,1.4s						
H19K	Roundabout Mou	20.98	48	P	P	10 47 42.0	+1.2
	baz=263						
E19K	Redstone River	21.02	42	P	P	10 47 41.5	+0.3
E19K				IAmb	IAmb	10 47 57.8	

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      comp=Z,17nm,0.9s
E19K  Redstone River     21.02  42  P         P         10 47 42.1 +0.9
      baz=257,SNR=15
Q16K  King Salmon        21.05  67  P         P         10 47 43.4 +1.8
      baz=280
P17K  Kvichak River      21.08  65  P         P         10 47 43.3 +1.4
      baz=279
M18K  Stony River        21.12  59  P         P         10 47 43.5 +1.1
      baz=274
N18K  Kilae Creek        21.16  61  P         P         10 47 44.2 +1.4
      baz=276
J19K  Poorman            21.20  52            P         10 47 43.8 +0.7
J19K  Poorman            21.20  52  P         P         10 47 44.4 +1.2
      baz=268,SNR=7.4
TIXI  Tiksi              21.36 330            P         10 47 45.2 +0.4
TIXI                                IAmb      IAmb      10 47 48.5
      comp=Z,9.6nm,0.8s
TIXI  Tiksi              21.36 330  P         P         10 47 45.4 +0.6
      comp=Z,6.5nm,0.5s,baz=126,slow=9.0,SNR=22
TIXI                                LR        LR        10 55 43.2
      comp=Z,75nm,19.6s,baz=154,slow=36
      comp=Z,6.5nm,0.5s
TIXI  Tiksi              21.36 330⇓iP         P         10 47 45.5 +0.6
TIXI                                pmax      pmax
      comp=Z,11nm,0.8s
F20K  Avaraart Lake      21.51  44  P         P         10 47 47.4 +1.0
      baz=260
L19K  White Mountain     21.55  57  P         P         10 47 49.0 +2.0
      baz=273
D20K  Etivluk River      21.56  39  P         P         10 47 48.2 +1.2
      baz=254,SNR=8.6
E20K  Nigu River         21.59  40  P         P         10 47 48.2 +0.8
      baz=256,SNR=7.6
O18K  Koktuh Hills       21.60  63  P         P         10 47 48.8 +1.3
      baz=278
H20K  Anotleneega Mo     21.62  48  P         P         10 47 49.0 +1.3
      baz=264
P18K  Big Mountain,      21.66  65  P         P         10 47 49.6 +1.4
      baz=280
I20K  Naaghedeneel       21.73  50  P         P         10 47 49.9 +1.0
      baz=267
B20K  Meade River        21.77  35  P         P         10 47 49.6 +0.4
      baz=251
M19K  Big River Lodg     21.78  58  P         P         10 47 49.5 +0.1
      baz=274
N19K  Bonanza Creek      21.83  61  P         P         10 47 51.6 +1.5
      baz=277
J20K  Nowinta River      21.85  52  P         P         10 47 51.8 +1.7
      baz=268
K20K  Telida             21.87  54  P         P         10 47 52.1 +1.7
      baz=271
Q18K  Katmai Hardscr     21.91  67  P         P         10 47 52.1 +1.2
      baz=282
L20K  Farewell, AK       21.98  56  P         P         10 47 53.5 +1.9
      baz=273
O19K  Port Alsworth      21.99  62  P         P         10 47 53.2 +1.6
      baz=278
IMAR  Indian Mountai     22.14  47  P         P         10 47 53.1 -0.1
G21K  Allakaket          22.30  45  P         P         10 47 56.0 +1.1
G21K  Allakaket          22.30  45  P         P         10 47 55.7 +0.8
      baz=263
CHIR  Chirikof Islan     22.30  74  P         P         10 47 56.4 +1.4
      baz=288
C21K  Knifeblade Rid     22.31  38  P         P         10 47 56.3 +1.2
      baz=256,SNR=5.1
M20K  Styx River         22.38  58  P         P         10 47 56.8 +0.9
      baz=275
F21K  Alatna River       22.40  44            P         10 47 57.1 +1.0
F21K  Alatna River       22.40  44  P         P         10 47 56.6 +0.6
      baz=262
A21K  Barrow             22.40  32  P         P         10 47 56.1 +0.1
      baz=248
R18K  Karluk             22.43  69  P         P         10 47 57.5 +1.0
      baz=284
E21K  Killik River       22.44  40  P         P         10 47 57.2 +0.8
      baz=258
B21K  Ikpikpuk River     22.49  37  P         P         10 47 58.3 +1.4
B21K  Ikpikpuk River     22.49  37  P         P         10 47 57.4 +0.5
      baz=255
H21K  Melozitna Rive     22.50  48  P         P         10 47 56.7 -0.4
H21K  Melozitna Rive     22.50  48  P         P         10 47 57.8 +0.7
      baz=266
Q19K  Cape Douglas,      22.55  65  P         P         10 47 58.5 +0.8
      baz=282
HEH   HeiHe              22.55 270  eP        P         10 47 55.0 -2.7
CHUM  Lake Minchumin     22.65  52  P         P         10 47 59.9 +1.2
      baz=271
PPLA  Purkeypile         22.74  55  P         P         10 47 59.4 -0.4
PPLA                                IAmb      IAmb      10 48 14.7
      comp=Z,12nm,1.1s
PPLA  Purkeypile         22.74  55  P         P         10 48 00.5 +0.7
      baz=273
CAST  Castle Rocks       22.77  54            P         10 47 59.1 -0.9
CAST                                IAmb      IAmb      10 48 12.3
      comp=Z,12nm,1.2s
CAST  Castle Rocks       22.77  54  P         P         10 48 00.9 +0.9
      baz=272
A22K  Sinclair Lake      22.79  34  P         P         10 48 01.0 +0.9
      baz=251
I21K  Tanana             22.82  49  P         P         10 48 01.3 +0.9
      baz=268
O20K  Slope Mountain     22.85  62  P         P         10 48 01.4 +0.5
      baz=280
D22K  Ayikyak River      22.99  39  P         P         10 48 02.6 +0.3
      baz=259
B22K  Teshekpuk Lake     23.09  36  P         P         10 48 03.2 +0.1
      baz=254
H22K  Ishtalitna Cre     23.10  47  P         P         10 48 04.4 +1.0
      baz=267
SKT   Skwentna           23.12  57  P         P         10 48 04.1 +0.5
SKT   Skwentna           23.12  57  P         P         10 48 04.4 +0.8
      baz=276
G22K  Bettles            23.13  45  P         P         10 48 04.0 +0.4
      baz=264
OHAK  Old Harbor         23.13  70  P         P         10 48 04.4 +0.6
      baz=286
E22K  Anaktuvuk Pass     23.17  41            P         10 48 03.3 -0.8
E22K                                IAmb      IAmb      10 48 17.4
      comp=Z,8.1nm,0.9s
E22K  Anaktuvuk Pass     23.17  41  P         P         10 48 03.9 -0.2
      baz=261
BPAW  Bear Paw Mtn.      23.23  52            P         10 48 04.6 -0.2
BPAW  Bear Paw Mtn.      23.23  52  P         P         10 48 05.4 +0.6
      baz=272
MLY   Manley             23.34  49            P         10 48 06.5 +0.7
MLY                                 IAmb      IAmb      10 48 24.6
      comp=Z,10nm,1.3s
MLY   Manley             23.34  49  P         P         10 48 06.3 +0.5
      baz=270
KDAK  Kodiak Island      23.35  68  LR        LR        10 57 01.2
      comp=Z,40nm,18.5s,baz=278,slow=36
KDAK  Kodiak Island      23.35  68  P         P         10 48 06.9 +0.9
      baz=285
HOM   Homer              23.41  63  P         P         10 48 08.0 +1.5
      baz=281
CAPN  Captain Cook N     23.46  60  P         P         10 48 07.6 +0.7
      baz=279
SUA   Susitna One        23.55  58  P         P         10 48 08.8 +0.7
      baz=278
USRK  Ussuriysk Ar.      23.57 253  LR        LR        10 58 03.5
      comp=Z,68nm,19.8s,baz=90,slow=38
TRF   Thorofare Moun     23.57  53  P         P         10 48 08.2  0.0
TRF                                 IAmb      IAmb      10 48 19.0
      comp=Z,11nm,0.9s
TRF   Thorofare Moun     23.57  53  P         P         10 48 09.5 +1.2
      baz=274
COLD  Coldfoot           23.67  44  P         P         10 48 09.9 +0.9
      baz=265
G23K  Bananza Creek      23.70  45  P         P         10 48 09.9 +0.6
      baz=266
D23K  Nanushuk River     23.72  40  P         P         10 48 10.2 +0.7
      baz=261
M22K  Willow             23.81  58  P         P         10 48 11.3 +1.0
      baz=278
BRSE  Bradley Lake S     23.84  63  P         P         10 48 11.1 +0.4
      baz=282
H23K  Yukon River        23.85  47  P         P         10 48 11.4 +0.6
      baz=269,SNR=6.0
C23K  Itkillik River     23.90  37  P         P         10 48 11.7 +0.5
      baz=259
I23K  Minto, Yukon-K     23.92  49  P         P         10 48 10.7 -0.7
I23K  Minto, Yukon-K     23.92  49  P         P         10 48 11.6 +0.2
      baz=270
E23K  Chandalar          23.98  42  P         P         10 48 11.2 -0.8
E23K                                IAmb      IAmb      10 48 28.9
      comp=Z,7.5nm,0.8s
E23K  Chandalar          23.98  42  P         P         10 48 11.9 -0.1
      baz=264
NEA2  Nenana             24.06  51  P         P         10 48 13.4 +0.7
      baz=272
TOLK  Toolik Lake Re     24.07  41  P         P         10 48 12.9 +0.1
      baz=262
RC01  Rabbit Creek A     24.09  59  P         P         10 48 14.3 +1.3
      baz=279
MCK   McKinley           24.16  53  P         P         10 48 14.2 +0.5
      baz=274
O22K  Cooper Landing     24.20  61  P         P         10 48 14.8 +0.8
      baz=281
PMR   Palmer             24.30  58  P         P         10 48 15.5 +0.5
      baz=279
E24K  Your Creek         24.40  42  P         P         10 48 16.3 +0.4
      baz=265
SEW   Seward             24.40  61  P         P         10 48 16.3 +0.5
      baz=282
D24K  Happy Valley       24.41  39  P         P         10 48 15.7 -0.1
      baz=262
WAT1  Susitna Watana     24.41  55  P         P         10 48 16.2 +0.2
      baz=276
C24K  Franklin Bluff     24.53  38  P         P         10 48 17.1 +0.2
      baz=261
H24K  Noodor Dome        24.54  47  P         P         10 48 17.5 +0.3
      baz=270
COLA  College            24.57  50  P         P         10 48 17.4  0.0
      baz=272
F24K  Squaw Lake         24.58  43  P         P         10 48 17.3 -0.3
      baz=267
KNK   Knik Glacier       24.65  58  P         P         10 48 18.6 +0.4
      baz=280
G24K  Hadweenzic Riv     24.71  45  P         P         10 48 18.2 -0.4
      baz=269
PWL   Port Wells         24.80  59  P         P         10 48 18.5 -1.0
      baz=281
WAT6  Susitna Watana     24.81  55  P         P         10 48 19.3 -0.5
      baz=278
DHY   Denali Highway     24.92  54  P         P         10 48 20.1 -0.7
      baz=277
M23K  Glacier View       24.93  57  P         P         10 48 20.6 -0.1
      baz=279
HDA   Harding Lake       24.98  51  P         P         10 48 21.7 +0.6
      baz=274
ILAR  Eielson Array      24.98  50  P         P         10 48 20.1 -1.1
      comp=Z,1.0nm,0.8s,baz=265,slow=7.5,SNR=14
      comp=Z,1.0nm,0.8s
SCM   Sheep Creek Mo     25.11  57  P         P         10 48 22.6 +0.2
      baz=279,SNR=6.8
G25K  Bearman Lake       25.26  45  P         P         10 48 23.5  0.0
      baz=270
D25K  Kavik River        25.29  39  P         P         10 48 23.8 -0.2
      baz=264
H25L  Birch Creek        25.37  46  P         P         10 48 25.4 +0.8
      baz=271
GLI   Glacier Island     25.39  59  P         P         10 48 25.5 +0.7
      baz=282
P23K  Montague Islan     25.43  61  P         P         10 48 26.1 +0.9
      baz=283
F25K  Christian Rive     25.45  43  P         P         10 48 24.7 -0.6
      baz=269,SNR=5.5
E25K  Arctic Village     25.50  42  P         P         10 48 25.5 -0.2
      baz=268
PRP   Porcupine Dome     25.52  48  P         P         10 48 26.3 +0.1
      baz=273
K24K  Donnelly Dome      25.55  52  P         P         10 48 26.9 +0.6
      baz=276
M24K  Tolsona, Glenn     25.60  56  P         P         10 48 27.1 +0.3
      baz=280,SNR=6.5
J25K  Salcha River,      25.65  50  P         P         10 48 27.0 -0.2
      baz=275,SNR=6.5
PAX   Paxson             25.79  54  P         P         10 48 28.8 +0.2
      baz=278
KLU   Klutina            25.83  57  P         P         10 48 29.2 +0.3
      baz=281
C26K  Camden Bay         25.86  38  P         P         10 48 29.1 +0.1
      baz=264
RIDG  Independent Ri     25.97  52  P         P         10 48 30.6 +0.5
      baz=277
F26K  Sheenjek River     26.02  43  P         P         10 48 30.5  0.0
      baz=270
HARP  HAARP              26.02  55  P         P         10 48 31.6 +1.0
      baz=280
Q23K  Middleton Isla     26.09  62  P         P         10 48 31.4 +0.3
      baz=285
EYAK  Cordova Ski Ar     26.11  60  P         P         10 48 32.0 +0.7
      baz=283
G26K  Porcupine Rive     26.17  45  P         P         10 48 32.2 +0.4
      baz=272
C27K  Jago River         26.25  39  P         P         10 48 32.5 -0.1
      baz=266
MJA0  Matsu Arr-Jizo     26.29 232  eP        P         10 48 33.7 +0.5
MJA0                                pmax      pmax
      comp=Z,9.0nm,0.9s
MJB9  Matsu-Tunnel       26.31 233  P         P         10 48 33.4 +0.1
MAJO  Matsushiro         26.31 232  P         P         10 48 33.7 +0.3
MAJO  Matsushiro         26.31 232  P         P         10 48 33.7 +0.3
MAJO                                pmax      pmax
      comp=Z,17nm,0.9s
MJAR  Matsushiro Arr     26.31 232  P         P         10 48 33.3  0.0
      comp=Z,9.3nm,0.9s,baz=20,slow=8.9,SNR=20
MJAR                                LR        LR        10 59 05.3
      comp=Z,74nm,20.4s,baz=49,slow=37
      comp=Z,9.3nm,0.9s
SCRK  Sand Creek         26.32  52  P         P         10 48 32.6 -0.7
      baz=278
DOT   Dot Lake           26.33  52  P         P         10 48 32.0 -1.3
DOT                                 IAmb      IAmb      10 48 44.9
      comp=Z,5.3nm,0.8s
N25K  Chitina, Valde     26.43  57  P         P         10 48 35.5 +1.1
      baz=282
J26L  Joseph Creek       26.43  50  P         P         10 48 34.8 +0.4
J26L  Joseph Creek       26.43  50  P         P         10 48 34.9 +0.5
      baz=277
I26K  Coal Creek Min     26.52  48  P         P         10 48 35.3 +0.3
I26K  Coal Creek Min     26.52  48  P         P         10 48 35.3 +0.3
      baz=276
BMRM  Bremner River      26.56  58  P         P         10 48 35.5 -0.1
      baz=283
L26K  Log Cabin Wild     26.74  54  P         P         10 48 37.2 +0.1
      baz=280
E27K  Coleen River       26.98  42  P         P         10 48 39.6 +0.4
      baz=271
M26K  Nabesna, AK        27.01  55  P         P         10 48 39.7 +0.1
      baz=281
G27K  Doyon Strip        27.02  45  P         P         10 48 38.9 -0.6
G27K  Doyon Strip        27.02  45  P         P         10 48 39.8 +0.3
      baz=274
H27K  Steamboat Moun     27.11  46  P         P         10 48 40.2 -0.2
H27K  Steamboat Moun     27.11  46  P         P         10 48 40.6 +0.3
      baz=275
I27K  Kandik River       27.13  48  P         P         10 48 40.9 +0.3
      baz=276
K27K  Chicken            27.14  51  P         P         10 48 39.7 -1.0
K27K                                IAmb      IAmb      10 48 54.0
      comp=Z,6.9nm,0.9s
K27K  Chicken            27.14  51  P         P         10 48 40.3 -0.3
      baz=279
D27M  Malcolm River      27.21  40  P         P         10 48 40.9 -0.4
      baz=270
MCARA McCarthy VSAT      27.22  57  P         P         10 48 41.6 +0.3
      baz=283
CRQE  Cirque             27.33  58  P         P         10 48 42.9 +0.4
      baz=284
BGLC  Bering Glacier     27.40  60  P         P         10 48 43.5 +0.5
      baz=286
L27K  Beaver Creek,      27.42  53  P         P         10 48 43.7 +0.5
      baz=281
BCAR  Beaver Creek A     27.43  53  P         P         10 48 43.4  0.0
M27K  Edge Creek, AK     27.53  55  P         P         10 48 44.4 +0.1
M27K  Edge Creek, AK     27.53  55  P         P         10 48 45.2 +0.9
      baz=282
I28M  Miner Creek        27.85  48  P         P         10 48 46.9 -0.1
      baz=278
CTG   Chitna Glacier     28.11  58  P         P         10 48 49.4 -0.1
      baz=285
DAWY  Dawson             28.30  51  P         P         10 48 51.5 +0.4
      baz=281
YUK3  Moose Creek        28.32  56  P         P         10 48 50.6 -0.8
      baz=284
H29M  Whitestone         28.38  46  P         P         10 48 51.6 -0.1
      baz=278
G29M  Pine Creek         28.44  45  P         P         10 48 52.2  0.0
      baz=277
O28M  Mount Upton        28.70  58  P         P         10 48 54.8 -0.2
      baz=286
PINM  Pinnacle           28.87  59  P         P         10 48 55.7 -0.5
      baz=287
EPYK  Eagle Plains       29.02  46  P         P         10 48 56.7 -0.7
      baz=279
L29M  L29M               29.05  52  P         P         10 48 58.0 +0.2
      baz=284
M29M  Somme Creek        29.06  54  P         P         10 48 57.7 -0.2
      baz=284
G30M  tAoh Zraii Nji     29.13  44  P         P         10 48 57.3 -1.1
      baz=278
F30M  Barrier River      29.22  43  P         P         10 48 59.5 +0.5
      baz=277
I30M  Mount Dempster     29.36  48  P         P         10 49 00.7 +0.2
      baz=281
PNL   Peninsula          29.41  60  P         P         10 48 59.7 -1.3
      baz=289
J30M  Hart River         29.51  49  P         P         10 49 01.4 -0.5
      baz=282
YUK6  Outpost Mounta     29.51  57  P         P         10 49 02.3 +0.2
      baz=287
HYT   Haines Junctio     29.95  57  P         P         10 49 05.6 -0.2
      baz=288
INK   Inuvik             29.97  41  P         P         10 49 05.7  0.0
      baz=278
H31M  Peel River         30.08  46  P         P         10 49 07.1 +0.4
      baz=282
N31M  Braeburn, Yuko     30.55  55  P         P         10 49 10.8 -0.1
      baz=288
KSRS  Korea Array        30.56 247  P         P         10 49 10.0 -1.2
      comp=Z,1.0nm,0.7s,baz=40,slow=9.9,SNR=4.3
      comp=Z,1.0nm,0.7s
O30N  Mendenhall         30.62  56  P         P         10 49 11.5 -0.2
      baz=289
PLBC  Pleasant Camp      30.94  59  P         P         10 49 15.4 +1.1
      baz=291
M31M  Drury Creek, Y     30.96  53  P         P         10 49 15.3 +0.8
      baz=288
WHY   Whitehorse         31.22  56  P         P         10 49 17.5 +0.5
      baz=290
FARO  Faro, Yukon        31.41  53  P         P         10 49 19.3 +0.7
      baz=288
SKAG  Skagway            31.43  59  P         P         10 49 19.5 +0.9
      baz=291
MMPY  Sheldon Lake,      32.21  52  P         P         10 49 26.1 +0.5
      baz=289
R32K  Eaglecrest         32.27  60  P         P         10 49 26.3 +0.2
      baz=294
P33M  Teslin, Yukon      32.34  56  P         P         10 49 26.9 +0.1
      baz=292
JNU   Nakatsue           32.52 239  LR        LR        11 02 07.5
      comp=Z,56nm,20.0s,baz=24,slow=35
Q32M  Nakina River       33.08  58  P         P         10 49 33.8 +0.4
      baz=294
R33M  Jennings River     33.52  57  P         P         10 49 38.1 +0.9
      baz=294
S34M  Telegraph Cree     34.06  60  P         P         10 49 42.6 +0.9
      baz=296
WRAK  Wrangell Islan     34.13  62  P         P         10 49 43.2 +1.0
      baz=297
DLBC  Dease Lake         34.36  58  LR        LR        11 04 06.0
      comp=Z,5.3nm,18.7s,baz=289,slow=37
T35M  Bob Quinn          34.90  61  P         P         10 49 49.8 +0.8
      baz=297
V35K  Ketchikan          35.00  64  P         P         10 49 50.6 +0.8
      baz=299
SONM  Songino Array      35.51 281  P         P         10 49 54.5  0.0
      comp=Z,0.7nm,0.4s,baz=64,slow=6.7,SNR=1.5
      comp=Z,0.7nm,0.4s
BEAVL Fort Liard         35.90  54  P         P         10 49 57.9 +0.4
      baz=296
TOAD  Toad River Com     36.42  56  P         P         10 50 03.1 +1.1
      baz=298
H11N2 WAKE ISLAND Hy     36.50 176  T         T         11 28 49.6
      baz=357,slow=76,SNR=410
H11N3 WAKE ISLAND Hy     36.51 176  T         T         11 28 50.0
      baz=357,slow=76,SNR=280
H11N1 WAKE ISLAND Hy     36.51 176  T         T         11 28 50.3
      baz=357,slow=76,SNR=296
HHC   Hu-ho-hao-te       37.04 268  eP        P         10 50 07.3 -0.3
HHC                                 pmax      pmax
      comp=Z,14nm,0.6s
HHC                                 pmax      pmax
      comp=Z,140nm,4.4s
HHC                                 LR        LR
      comp=N,180nm,14.5s
HHC                                 LR        LR
      comp=E,150nm,14.8s
HHC                                 LR        LR
      comp=Z,140nm,15.3s
YKA   Yellowknife Ar     39.30  46  P         P         10 50 25.8 -0.4
      comp=Z,0.8nm,0.7s,baz=301,slow=9.0,SNR=8.0
      comp=Z,0.8nm,0.7s
SPITS Spitsbergen Ar     44.42 351  P         P         10 51 08.2 +0.3
      comp=Z,8.0nm,0.8s,baz=83,slow=4.5,SNR=5.7
      comp=Z,8.0nm,0.8s
NEW   Newport            46.39  65  LR        LR        11 10 13.3
      comp=Z,23nm,19.4s,baz=288,slow=35
MKAR  Makanchi Array     48.90 296  P         P         10 51 42.5 -0.8
      comp=Z,0.2nm,0.4s,baz=32,slow=8.0,SNR=2.7
      comp=Z,0.2nm,0.4s
BVAR  Borovoye Array     50.26 308  P         P         10 51 53.2 -0.5
      comp=Z,3.0nm,0.7s,baz=54,slow=7.7,SNR=10
      comp=Z,3.0nm,0.7s
NVAR  Mina Array Bea     52.58  75  P         P         10 52 10.8 -0.6
      comp=Z,0.6nm,0.8s,baz=302,slow=8.5,SNR=4.3
      comp=Z,0.6nm,0.8s
ARTI  Arti               52.75 318diP         P         10 52 12.0 -0.2
ARTI                                                    10 53 19.9
ARTI                                                    10 54 06.5
ARTI                                S         S         10 59 42.0 +3.1
ARTI                                SS        SS        11 03 17.1 +0.3
ARTI                                pmax      pmax
      comp=Z,3.0nm,0.6s
JMIC  Jan Mayen          52.98 357  LR        LR        11 14 30.7
      comp=Z,218nm,19.7s,baz=180,slow=36
PZH   PanZhiHua          53.10 263  P         P         10 52 16.8 +1.5
PDAR  Pinedale Array     54.03  65  P         P         10 52 21.7 -0.4
      comp=Z,1.0nm,0.8s,baz=324,slow=2.2,SNR=9.2
      comp=Z,1.0nm,0.8s
KKAR  Karatay Array      57.37 300            P         10 52 45.2 -0.6
KKAR  Karatay Array      57.37 300  P         P         10 52 45.2 -0.6
AB31  Akbulak array      57.51 311  P         P         10 52 46.5 -0.1
AB31                                IAmb      IAmb      10 52 46.8
      comp=Z,1.8nm,0.7s
ABKAR Akbulak array      57.51 311            P         10 52 46.5 -0.1
ABKAR                               IAmb      IAmb      10 52 46.8
      comp=Z,1.8nm,0.7s
CMAR  Chiang Mai Arr     61.06 260  P         P         10 53 11.6 -0.1
      comp=Z,0.6nm,0.3s,baz=20,slow=7.7,SNR=5.9
      comp=Z,0.6nm,0.3s
CMAR  Chiang Mai Arr     61.06 260  eP        P         10 53 11.8 +0.2
CMAR                                pmax      pmax
      comp=Z,1.0nm,0.7s
OBN   Obninsk            61.09 329⇓eP         P         10 53 11.0 -0.2
OBN                                 *SP       sP        10 53 18.0 -0.5
OBN                                                     10 53 53.0
OBN                                 pmax      pmax
      comp=Z,18nm,0.4s
OBN                                 MLR       MLR
      comp=Z,29nm,18.0s
NB2   NORSAR Subarra     61.14 345  P         P         10 53 10.9 -0.7
      comp=Z,0.4nm,0.5s,baz=18,slow=6.9
NOA   NORSAR Array B     61.14 345  P         P         10 53 11.1 -0.5
      comp=Z,0.5nm,0.5s,baz=18,slow=6.9,SNR=3.2
      comp=Z,0.5nm,0.5s
NOA   NORSAR Array B     61.14 345  eP        P         10 53 11.4 -0.2
HFS   Hagfors            61.64 344  P         P         10 53 14.3 -0.6
      comp=Z,0.8nm,0.4s,baz=74,slow=11,SNR=2.6
      comp=Z,0.8nm,0.4s
AKASG Malin Array Be     67.07 331  P         P         10 53 49.8 -0.8
      comp=Z,0.6nm,0.4s,baz=29,slow=6.5,SNR=3.2
      comp=Z,0.6nm,0.4s
AKBB  Malin Array Si     67.07 331⇑iP         P         10 53 51.4 +0.8
AKBB                                pmax      pmax
      comp=Z,1.0nm,0.9s
TXAR  Lajitas Array      67.34  71  P         P         10 53 53.0 +0.2
      comp=Z,1.1nm,0.7s,baz=306,slow=4.4,SNR=11
      comp=Z,1.1nm,0.7s
KBZ   Khabaz             68.80 318  P         P         10 54 02.5 +1.0
      comp=Z,2.0nm,0.9s,baz=277,slow=3.0,SNR=4.2
      comp=Z,2.0nm,0.9s
ASAR  Alice Springs      83.59 208  P         P         10 55 25.9 +0.1
      comp=Z,1.2nm,1.0s,baz=16,slow=5.5,SNR=6.0
      comp=Z,1.2nm,1.0s
QSPA  South Pole Qui    145.98 180  PKPbc     PKPdf     11 02 34.6 -0.5
      comp=Z,0.8nm,0.7s,baz=276,slow=1.5,SNR=5.8
```

IDC ***26*** *10:47:29.0±1.3, 56˚.13N×164˚.51E, h0*^{km}*, mb3.5/7, mbtmp3.5/8, ML2.3/1, MS3.1/4, Error ellipse: s-maj=38.5km s-min=19.7km az=171.0*

*KRSC **26** 10:47:30.4±1.3, 55°.93N×164°.41E, h16^{km}±30^{km}, Ml4.0*

ISC 26 10:47:30.7±0.7**, 56°.07N**±0°.06×**164°.61E**±0°.05**, h16**^{km}**, n45, σ1^{s}.67**/43**, mb3.5**/7**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	1.01	278	eP	Pb	10 47 47.4	-2.4
KBG	Krutoberegovo	1.08	280	eP	Pb	10 47 48.4	-2.6
BKI	Bering	1.17	138	eP	Pn	10 47 51.0	-1.3
BKI				eS	Sb	10 48 06.8	-0.4
SMKR	Semkarok	1.82	288	eP	Pn	10 48 00.3	-1.1
ZLN	Zelenaya	2.14	270	eP	Pn	10 48 06.3	+0.6
BZGR	Bezymyannyi-Gr	2.20	268	eP	Pn	10 48 06.3	-0.4
KLY	Klyuchi	2.23	278	eP	Pn	10 48 04.8	-2.0
MKZ	Mys Kozlova	2.24	228	eP	Pn	10 48 06.5	-0.6
MKZ				eS	Sn	10 48 32.8	-1.5
KRSR	Krestovskiy	2.27	275	eP	Pn	10 48 07.7	+0.1
KIRR	Kirishev	2.40	269	eP	Pn	10 48 09.2	-0.2
KPT	Kopyto	2.46	269	eP	Pn	10 48 11.0	+0.7
KMNR	Kamenistaya	2.48	264	eP	Pn	10 48 11.4	+0.9
TUMD	Tumrok D	2.54	252	eP	Pn	10 48 12.2	+0.9
KOZ	Kozyrevsk	2.66	272	eP	Pn	10 48 12.7	-0.1
SRDR	Sredinnyy	2.75	277	eP	Pn	10 48 14.9	+0.9
ESO	Esso	3.32	270	eP	Pn	10 48 23.9	+2.0
KII	Karymskiy	3.60	238	eP	Pn	10 48 28.2	+2.3
SPN	Mys Shipunski	4.00	224	eP	Pn	10 48 30.7	-0.6
SPN				eS	Sn	10 49 14.5	-3.3
NLC	Nalytchevo	4.22	229	eS	Sn	10 49 21.3	-1.8
SDLR	Sedlovina	4.35	232	eP	Pn	10 48 37.3	+1.2
KRER	Koryakskii	4.39	233	eP	Pn	10 48 39.2	+2.4
SMAR	Somma	4.39	233	eP	Pn	10 48 38.1	+1.2
KRX	Arik	4.40	234	eP	Pn	10 48 39.5	+2.6
AVH	Avacha	4.42	233	eP	Pn	10 48 37.2	+0.1
UGLR	Uglovaya	4.42	232	eP	Pn	10 48 39.8	+2.7
KOK	Koryaka	4.45	234	eP	Pn	10 48 39.8	+2.3
GNL	Ganaly	4.53	241	eP	Pn	10 48 41.2	+2.6
DALK	Dalny	4.57	231	eP	Pn	10 48 40.4	+1.3
PETK	Petropavlovsk-	5.00	236	Pn	Pn	10 48 45.2	+0.2
	0.6nm,0.3s,baz=68,slow=16,SNR=5.5						
PETK				Sn	Sn	10 49 45.9	+3.5
	0.5nm,0.3s,baz=30,slow=24,SNR=1.8						
PETK				LR	LR	10 50 40.7	
	comp=Z,132nm,20.8s,baz=55,slow=38						
	0.8nm,0.4s						
RUS	Russkaya	5.11	227	eP	Pn	10 48 46.7	+0.3
GRL	Gorelyy	5.20	230	eP	Pn	10 48 49.9	+2.0
MTVR	Mutnovka	5.21	229	eP	Pn	10 48 49.3	+1.3
MA2	Magadan	8.18	301	LR	LR	10 52 49.8	
	comp=Z,140nm,18.5s,baz=116,slow=40						
SEY	Seymchan	9.26	323	LR	LR	10 53 34.1	
	comp=Z,146nm,18.2s,baz=74,slow=40						
YAK	Yakutsk	18.75	303	LR	LR	10 59 19.1	
	comp=Z,43nm,19.1s,baz=91,slow=38						
TIXI	Tiksi	21.64	330	P	P	10 52 20.9	+1.1
	1.7nm,0.3s,baz=111,slow=10,SNR=4.1						
	1.7nm,0.3s						
ILAR	Eielson Array	24.86	50	P	P	10 52 52.4	+0.3
	0.8nm,0.9s,baz=270,slow=8.6,SNR=6.1						
	0.8nm,0.9s						
H11N2	WAKE ISLAND Hy	36.33	176	T	T	11 33 29.6	
	baz=357,slow=76,SNR=5.0						
H11N3	WAKE ISLAND Hy	36.34	176	T	T	11 33 36.6	
	baz=357,slow=76,SNR=5.0						
H11N1	WAKE ISLAND Hy	36.34	176	T	T	11 33 36.9	
	baz=357,slow=76,SNR=3.8						
MKAR	Makanchi Array	49.22	296	P	P	10 56 17.4	-0.6
	0.2nm,0.4s,baz=52,slow=5.7,SNR=3.4						
	0.2nm,0.4s						
BVAR	Borovoye Array	50.58	309	P	P	10 56 27.9	-0.2
	1.3nm,0.7s,baz=44,slow=8.7,SNR=6.6						
	1.3nm,0.7s						
NVAR	Mina Array Bea	52.34	75	P	P	10 56 43.5	+1.7
	0.4nm,0.7s,baz=308,slow=8.4,SNR=2.4						
	0.4nm,0.7s						
PDAR	Pinedale Array	53.83	65	P	P	10 56 53.6	+0.9
	0.2nm,0.5s,baz=315,slow=7.7,SNR=2.6						
	0.2nm,0.5s						
TXAR	Lajitas Array	67.12	71	P	P	10 58 24.6	+1.2
	0.3nm,0.5s,baz=278,slow=2.3,SNR=3.6						
	0.3nm,0.5s						

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*JMA **26** 10:54:14.8±0.1, 24°.3N±0°.5×122°.1E±0°.3, h23^{km}±2^{km}, MV3.1/16, TAIWAN REGION*

*ASIES **26** 10:54:15.1, 24°.35N×122°.01E, h20^{km}, ML3.6, Mw3.7, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}-3.73; $M_{\theta\theta}$2.31; $M_{\phi\phi}$-0.47; $M_{r\theta}$-2.91; $M_{\theta\phi}$-0.09; $M_{\phi r}$1.88; Fault plane solution: $M_0$4.66631×10^{21} NP1: ϕ_s257.79000°, δ24.09000°, λ-123.25000°. NP2: ϕ_s113.48000°, δ70.04000°, λ-76.22000°. Principal axes: T Plg23.8380°, Azm192.8690°; N Plg12.9320°, Azm288.6920°; P Plg62.4850°, Azm44.8480°;*

*TAP **26** 10:54:15.1, 24°.35N×122°.01E, h20^{km}, ML3.6, B*

ISC 26 10:54:14.8±0.9**, 24°.33N**±0°.02×**122°.04E**±0°.02**, h19**^{km}±2^{km}**, n151, σ0^{s}.74**/216**, 13C-9D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS2	EOS2	0.19	64	eP	Pg	10 54 20.6	+1.0
EOS3	EOS3	0.26	100	eP	Pb	10 54 21.6	+1.0
EWUT	Wuta	0.27	295	⇓P	Pg	10 54 20.9	+0.1
EWUT				iS	Sg	10 54 24.9	-0.1
EHP	Heping Village	0.28	265	eP	Pg	10 54 21.0	0.0
EHP				eS	Sg	10 54 25.6	+0.3
EAHA	Aohua	0.28	269	iP	Pg	10 54 20.9	0.0
EAHA				S	Sg	10 54 26.0	+0.7
ENA	Nanau	0.29	289	⇓iP	Pg	10 54 21.3	0.0
ENA				S	Sg	10 54 25.6	-0.1
ESAO	Su ao	0.30	323	⇑P	Pg	10 54 21.5	0.0
ESAO				iS	Sg	10 54 25.8	-0.2
TWC	Suao	0.33	328	⇑iP	Pb	10 54 21.9	-0.2
TWC				S	Sb	10 54 26.3	-0.7
EOS4	EOS4	0.33	130	eP	Pg	10 54 22.0	+0.4
EOS4				eS	Sg	10 54 27.4	+1.1
ETL	Fush Village	0.42	246	P	Pg	10 54 23.4	0.0
ETL				eS	Sb	10 54 30.5	+0.7
NDS	Dongshan	0.42	315	⇑iP	Pg	10 54 22.7	-0.8
NDS				eS	Sg	10 54 28.1	-1.3
NACB	Ninganchiao	0.44	249	P	Pg	10 54 23.6	-0.2
NACB	Ninganchiao	0.44	249	⇓iP	Pg	10 54 23.6	-0.2
NACB				eS	Sn	10 54 31.5	-2.0
TWD	Chiawan	0.48	238	eP	Pg	10 54 24.8	+0.3
TWD				eS	Sn	10 54 33.1	-1.5
ILA	Ilan	0.51	328	eP	Pg	10 54 25.4	+0.3
ILA				iS	Sg	10 54 32.9	+0.9
LATG	Datong	0.51	293	⇓iP	Pg	10 54 25.2	+0.1
LATG				eS	Sb	10 54 31.9	-0.5
TWE	Neicheng	0.52	319	⇑iP	Pg	10 54 25.4	+0.1
TWE				iS	Sg	10 54 31.9	-0.3
EGS		0.52	349	P	Pg	10 54 25.6	+0.3
EGS				eS	Sg	10 54 33.0	+0.6
ETLH	Xiulin Townshi	0.53	256	⇑iP	Pg	10 54 25.4	0.0
ETLH				eS	Sg	10 54 33.8	+1.2
ENTT	Nioudou	0.53	305	⇓P	Pg	10 54 25.7	+0.2
ENTT				eS	Sg	10 54 32.7	0.0
HWA	Hwalien	0.53	228	eP	Pn	10 54 27.8	+0.4
FUSB	Fushanzhiwuyua	0.59	316	⇑iP	Pg	10 54 26.9	+0.3
FUSB				eS	Sg	10 54 34.3	-0.4
NNSB	Datong	0.61	279	⇓iP	Pg	10 54 26.9	0.0
NNSB				eS	Sg	10 54 35.1	-0.1
TEYL	Yanliau Villag	0.61	221	eP	Pn	10 54 28.0	-0.5
TEYL				eS	Sn	10 54 37.7	-0.2
NNS	Nan Shan	0.62	280	⇓iP	Pg	10 54 27.2	0.0
NNS				S	Sg	10 54 35.2	-0.3
ETM	Tongmen	0.62	234	eP	Pg	10 54 27.5	+0.3
ETM				eS	Sn	10 54 37.5	-0.6
LXIB	Xiulin Townshi	0.65	242	eP	Pg	10 54 27.7	0.0
LXIB				eS	Sn	10 54 39.1	0.0
NWLT	Wulai	0.66	312	eP	Pn	10 54 28.4	-0.9
NWLT				iS	Sg	10 54 36.6	-0.2
TIPB	Shuangxi	0.67	343	⇑iP	Pg	10 54 28.2	+0.2
TIPB				eS	Sb	10 54 36.5	-0.3
TWB1	Santiao Chiao	0.68	356	eP	Pg	10 54 28.3	+0.2
TWB1				eS	Sg	10 54 37.5	+0.3
YHNB	Yeheng	0.69	299	P	Pg	10 54 28.8	+0.2
YHNB	Yeheng	0.69	299	S	Sg	10 54 38.2	+0.4
YHNB	Yeheng	0.69	299	⇓iP	Pg	10 54 28.7	+0.2
YHNB				eS	Sg	10 54 37.2	-0.6
SHUL	Shoufeng	0.70	219	eP	Pn	10 54 30.1	+0.5
SHUL				eS	Sn	10 54 39.9	0.0
NSK	Sanguang	0.71	299	⇓iP	Pg	10 54 28.9	+0.1
NSK				eS	Sg	10 54 37.9	-0.4
WHF	Hehuan Shan	0.73	255	eP	Pg	10 54 29.2	-0.1
ESL	Shilin	0.76	227	⇑iP	Pg	10 54 30.0	+0.3
ESL				eS	Sn	10 54 41.9	+0.4
TWA	Mucha	0.77	327	eP	Pn	10 54 30.2	-0.5
NWF	Wu-fen Shan	0.77	342	eP	Pn	10 54 30.7	-0.1
NWF				eS	Sg	10 54 40.7	+0.4
TEGC	Jichi Village	0.77	217	eP	Pg	10 54 30.4	+0.5
WFSB	Wu-fen Shan	0.77	342	eP	Pn	10 54 30.4	-0.3
WFSB				eS	Sg	10 54 40.6	+0.4
SXI1	Grass Mountain	0.77	349	eP	Pn	10 54 30.6	-0.3
NHDH	Xindian Distri	0.78	323	eP	Pn	10 54 30.9	0.0
NHDH				S	Sg	10 54 40.7	+0.1
TWT	Tachien	0.79	264	eP	Pn	10 54 30.9	-0.3
TWT				eS	Sn	10 54 42.4	-0.2
TDCB	Techi	0.81	265	eP	Pg	10 54 30.6	-0.1
TDCB				iS	Sn	10 54 41.8	-1.2
TATO	Taipei	0.81	322	P	Pn	10 54 31.2	-0.1
TATO	Taipei	0.81	322	S	Sn	10 54 41.9	-1.0
JYNG	Yonagunijimaku	0.83	82	eP	Pb	10 54 30.4	-0.3
TNOU	National Taiwa	0.85	343	eP	Pn	10 54 31.6	-0.2
TNOU				eS	Sg	10 54 42.5	-0.1
WARBT	Fenglin Townsh	0.86	225	⇑iP	Pb	10 54 31.3	+0.1
EGFH	Guangfu	0.87	220	eP	Pb	10 54 31.4	+0.1
OWD	Renai	0.88	245	eP	Pg	10 54 31.9	0.0
OWD				eS	Sn	10 54 45.2	+0.6
NFF	Wufeng Townshi	0.89	290	eP	Pn	10 54 32.5	0.0
NFF				iS	Sn	10 54 44.3	-0.6
YOJ	Yonaguni jima	0.89	82	P	Pb	10 54 31.5	-0.2
YOJ	Yonaguni jima	0.89	82	S	Sb	10 54 43.5	+0.2
YOJ	Yonaguni jima	0.89	82	eP	Pb	10 54 31.5	-0.2
YOJ	Yonaguni jima	0.89	82	eP	Pb	10 54 31.5	-0.2
KSHI	Guanxi Townshi	0.90	299	eP	Pn	10 54 33.4	+0.8
WUSB	Renai	0.91	248	P	Pn	10 54 33.0	+0.3
WUSB				eS	Sn	10 54 45.9	+0.5
YM01	YM01	0.92	332	eP	Pn	10 54 33.4	+0.6
YM01				eS	Sg	10 54 44.4	-0.4
ZUZH	Zhuzihu	0.94	331	eP	Pg	10 54 34.1	+0.9
YM08	YM08	0.95	334	eP	Pg	10 54 33.5	+0.2
TWS1	Kuangyinshan	0.95	324	eP	Pg	10 54 34.7	+1.4
TWS1				eS	Sn	10 54 46.5	+0.2
ANP	Anpu	0.97	331	eP	Pg	10 54 34.5	+0.7
LIOB	Emei	0.98	289	eP	Pg	10 54 34.7	+0.7
NTST	Danshui	0.99	327	eP	Pg	10 54 35.4	+1.3
NSTT	Nanjuang	0.99	288	eP	Pg	10 54 34.8	+0.6
NSTT				eS	Sg	10 54 47.1	-0.1
WHP	Taichung City	1.00	267	⇑iP	Pg	10 54 35.0	+0.7
WHP				eS	Sn	10 54 47.7	+0.1
NCUH	Zhongli	1.00	309	eP	Pg	10 54 35.6	+1.3
NCUH				eS	Sg	10 54 48.4	+0.8
VWDT	VWDT	1.00	235	⇑P	Pg	10 54 34.4	+0.1
HGSD	Ruisui	1.01	214	eP	Pb	10 54 33.5	-0.2
TWY	Chenhua	1.02	337	eP	Pg	10 54 35.0	+0.4
EHYH	Wanrong	1.05	217	eP	Pb	10 54 34.3	-0.1
EHY	Hungye	1.05	219	⇑eP	Pb	10 54 33.8	-0.7
SBCB	Hsinchu	1.06	296	eP	Pg	10 54 36.1	+0.6
WCS	Beigang Elemen	1.07	255	eP	Pg	10 54 35.6	+0.1
HSN	Hsinchu	1.08	296	eP	Pg	10 54 37.0	+1.1
HSN				eS	Sg	10 54 49.8	-0.3
SSLB	Suanglung	1.13	242	P	Pb	10 54 36.2	+0.3
SSLB	Suanglung	1.13	242	S	Sg	10 54 53.2	+1.6
SSLB	Suanglung	1.13	242	eP	Pb	10 54 36.1	+0.3
SSLB				eS	Sg	10 54 51.1	-0.5
SMLT	Sun Moon Lake	1.14	247	eP	Pg	10 54 37.0	+0.2
ECBN	Changbin	1.15	208	eP	Pn	10 54 35.1	-0.8
TWQ1	Liyutan	1.16	271	eP	Pg	10 54 38.5	+1.2
NMLH	Miaoli	1.16	280	eP	Pg	10 54 38.5	+1.2
NMLH				eS	Sg	10 54 53.6	+1.2
YULB	Yu-li	1.16	216	P	Pn	10 54 35.0	-1.1
YULB	Yu-li	1.16	216	⇑P	Pn	10 54 35.1	-0.9
TYC	Yuchr	1.16	249	P	Pg	10 54 37.4	+0.1
NSY	Sanyi	1.17	274	eP	Pg	10 54 38.4	+0.9
TWF1	Yuli	1.19	215	eP	Pn	10 54 35.7	-0.8
WHYT	Xinyi Township	1.26	240	iP	Pg	10 54 39.0	-0.2
WHYT				eS	Sg	10 54 56.2	+0.6
TCU	Taichung	1.26	262	eP	Pg	10 54 39.5	+0.3
CHKH	Chenggong	1.28	208	eP	Pn	10 54 37.6	-0.1
PCYT	Pengchaiyu	1.29	1	eP	Pb	10 54 38.3	-0.2
WJS	Zhushan	1.30	247	iP	Pg	10 54 40.5	+0.5
WJS				eS	Sg	10 54 59.5	+2.4
FULB	Fuli	1.32	211	eP	Pn	10 54 37.9	-0.4
WNT	Mingjian	1.32	250	eP	Pg	10 54 40.8	+0.5
WNT				eS	Sg	10 55 00.4	+2.8
CHKT	Chengkung	1.38	207	eP	Pn	10 54 38.0	-1.1
WCHH	Zhanghua	1.38	260	eP	Pg	10 54 41.6	+0.2
ALS	Alishan	1.40	234	eP	Pb	10 54 40.8	+0.3
EHD	Haiduan	1.41	213	eP	Pn	10 54 39.3	-0.2
ECS	Chishang	1.44	212	eP	Pb	10 54 41.0	-0.1
CHN5	Tsauling	1.45	240	eP	Pg	10 54 42.6	-0.2
ELDTW	Lidau	1.48	220	eP	Pn	10 54 40.9	+0.4
EDH	Donghe	1.51	207	P	Pn	10 54 40.2	-0.8
EDH				S	Sn	10 54 59.7	-0.5
WDLH	Douliu	1.52	245	iP	Pg	10 54 43.7	-0.4
IRIF	Iriomote-Funau	1.54	90	eP	Pn	10 54 40.8	-0.5
IRIF				eS	Sn	10 54 58.8	-2.0
WCKO	Fanlu	1.59	236	eP	Pg	10 54 44.6	-0.8
HATJ	Hateruma jima	1.63	99	eP	Pn	10 54 43.1	+0.5
STYH	Taoyuan	1.64	225	eP	Pb	10 54 43.6	-0.8
STYH				eS	Sb	10 55 05.9	+1.2
CHN2	Minshiung	1.64	241	eP	Pg	10 54 45.9	-0.5
WTK	Tuku	1.64	247	iP	Pb	10 54 45.3	+0.8
WTK				eS	Sg	10 55 07.9	+0.1
LONT	Longtian	1.65	211	eP	Pn	10 54 42.7	-0.1
TPUB	Ta-pu	1.65	232	P	Pb	10 54 44.5	-0.2
TPUB	Ta-pu	1.65	232	P	Pb	10 54 44.7	0.0
TPUB				eS	Sb	10 55 05.9	+0.7
WTP	Ta-pu	1.70	231	eP	Pb	10 54 45.4	-0.1
WTP				eS	Sb	10 55 07.6	+1.1
CHY	Chiayi	1.70	241	eP	Pb	10 54 46.1	+0.7
CHY				eS	Sb	10 55 07.5	+1.1
TWGBT	Beinan	1.75	211	P	Pn	10 54 45.0	+0.8
TWGBT	Beinan	1.75	211	eP	Pn	10 54 44.3	+0.1
TWG	Pinlang	1.75	211	eP	Pn	10 54 44.1	-0.1
TWK	Hsinying	1.77	234	eP	Pb	10 54 46.4	-0.4
TWK				eS	Sg	10 55 10.8	-1.3
CHN1	Nanshi	1.80	231	eP	Pb	10 54 46.9	-0.3
CHN1				eS	Sg	10 55 11.5	-1.3
SNST	Tainan City	1.80	232	eP	Pb	10 54 46.6	-0.5
SNST				eS	Sg	10 55 10.9	-1.9
JKRS	Kuro-shima	1.80	93	eP	Pn	10 54 45.0	+0.1
JKRS				eS	Sn	10 55 06.1	-1.0
WSF	Szhu	1.80	248	eP	Pb	10 54 47.4	+0.1
WSF				eS	Sb	10 55 10.8	+1.3
WSL	Shuilin Townsh	1.84	244	eP	Pb	10 54 47.8	-0.1
ICHU	Yijhu	1.88	239	eP	Pb	10 54 48.2	-0.4
JIJ	Ishigaki jima	1.92	89	eP	Pn	10 54 45.8	-0.7
JIJ				eS	Sn	10 55 08.9	-1.2
CHN8	Yiju	1.94	240	eP	Pb	10 54 49.4	-0.2
ECL	Taimali	2.00	210	eP	Pn	10 54 46.6	-0.9
SCST	Cishan	2.02	225	eP	Pb	10 54 51.1	+0.1
SSD	Sandimen	2.04	220	eP	Pb	10 54 50.1	-1.3
JISG	Ishigakijimahi	2.08	83	P	Pn	10 54 48.1	-0.7
MASBT	Mashibuluo	2.15	217	eP	Pn	10 54 50.5	+0.9
TSCK	Chigu Township	2.15	237	eP	Pb	10 54 51.6	-1.4
EAST	Anshuo	2.23	210	eP	Pn	10 54 50.9	+0.1
TAWH	Dawu Township	2.25	208	eP	Pn	10 54 50.5	-0.6
PNG	Penghu	2.40	252	eP	Pn	10 54 54.0	+0.8
PHUB	P'eng-hu	2.40	251	eP	Pn	10 54 54.4	+1.2
PHUB				iS	Sb	10 55 24.6	-2.1
WDGT	Dungji	2.43	244	eP	Pn	10 54 55.0	+1.5
WDGT				eS	Sb	10 55 26.4	-1.1
JTJ	Tarama	2.44	82	eP	Pn	10 54 53.9	+0.1
VWUC	VWUC	2.45	286	eP	Pn	10 54 53.6	-0.2
MATB	Ma-tsu	2.62	314	eP	Pn	10 54 56.6	+0.4
VCHM	Qimei	2.64	245	eP	Pn	10 54 57.4	+1.0
PTMZ	Houxiangcun	2.75	285	eP	Pn	10 54 58.7	+0.8
JIRB	Irabujima	2.89	80	eP	Pn	10 55 00.1	+0.1
JMJ	Miyako jima 2	3.00	80	P	Pn	10 55 02.8	+1.4
JMJ2	Miyako jima3	3.02	82	eP	Pn	10 55 02.5	+0.8
KNMB	Chin-men Tao	3.33	273	eP	Pn	10 55 06.0	0.0
AXDP	Jialang	3.75	280	eP	Pn	10 55 12.4	+0.7
ZPLA	Ao Xicun	3.94	265	eP	Pn	10 55 15.4	+1.1
DSXP	Dongshan	4.27	263	eP	Pn	10 55 19.7	+0.9

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*KRSC **26** 10:57:20.9±1.1, 56°.16N×164°.70E, h50^{km}±19^{km}, Ml4.6*

*IDC **26** 10:57:20.6±0.6, 56°.23N×164°.44E, h0^{km}, mb4.1/25, mbtmp4.1/29, ML3.8/4, MS3.3/9, Error ellipse: s-maj=15.9km s-min=10.3km az=168.0*

*NEIC **26** 10:57:22.3±1.3, 56°.19N±0°.07×164°.45E±0°.09, h10^{km}±1^{km}, mb4.6/50, Error ellipse: s-maj=12.8km s-min=6.6km az=145.0*

*MOS **26** 10:57:23.4±0.8, 56°.15N×164°.57E, h38^{km}, mb4.7/15, Error ellipse: s-maj=7.1km s-min=4.6km az=55.2*

ISC 26 10:57:21.9±0.4**, 56°.15N**±0°.05×**164°.53E**±0°.04**, h10**^{km}**, n462, σ0^{s}.92**/460**, mb4.4**/58**, MS3.8**/11**, 5C-3D, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.96	274	PN	Pg	10 57 39.1	-1.2
KBTR	Krutoberegovo	0.96	274	eP	Pg	10 57 39.2	-1.2
KBG	Krutoberegovo	1.03	277	PN	Pg	10 57 39.8	-1.8
KBG	Krutoberegovo	1.03	277	eP	Pg	10 57 39.9	-1.8
BKI	Bering	1.25	139	PN	Pn	10 57 43.0	-2.4
BKI				S	Sb	10 57 58.6	-3.0
BKI	Bering	1.25	139	eP	Pn	10 57 43.0	-2.4
BKI				eS	Sb	10 57 58.6	-3.0
SMKR	Semkarok	1.76	286	PN	Pn	10 57 52.2	-0.3
SMKR	Semkarok	1.76	286	eP	Pn	10 57 52.2	-0.3
SRKR	Sorokina	1.94	287	PN	Pn	10 57 55.2	+0.3
SRKR	Sorokina	1.94	287	eP	Pn	10 57 55.3	+0.3
ZLN	Zelenaya	2.09	268	PN	Pn	10 57 58.0	+0.9
ZLN	Zelenaya	2.09	268	eP	Pn	10 57 58.0	+0.9
CIRR	Tsirk	2.12	271	PN	Pn	10 57 58.3	+0.8
CIRR	Tsirk	2.12	271	eP	Pn	10 57 58.3	+0.8
BZGR	Bezymyannyi-Gr	2.16	266	PN	Pn	10 57 58.3	+0.2
BZGR	Bezymyannyi-Gr	2.16	266	eP	Pn	10 57 58.3	+0.2
KLY	Klyuchi	2.17	276	PN	Pn	10 57 56.6	-1.4
KLY	Klyuchi	2.17	276	eP	Pn	10 57 56.7	-1.4
MKZ	Mys Kozlova	2.26	226	PN	Pn	10 57 58.4	-0.8
MKZ	Mys Kozlova	2.26	226	eP	Pn	10 57 58.4	-0.8
BZWR	Bezymyannyi-We	2.27	267	PN	Pn	10 58 00.5	+0.9
BZWR	Bezymyannyi-We	2.27	267	eP	Pn	10 58 00.5	+0.9
BZMR	Bezymyannaya	2.28	266	PN	Pn	10 57 59.9	+0.2
BZMR	Bezymyannaya	2.28	266	eP	Pn	10 57 60.0	+0.2
KIRR	Kirishev	2.36	267	PN	Pn	10 58 01.6	+0.8
KIRR	Kirishev	2.36	267	eP	Pn	10 58 01.6	+0.8
KPT	Kopyto	2.42	268	PN	Pn	10 58 02.4	+0.8
KPT	Kopyto	2.42	268	eP	Pn	10 58 02.5	+0.8
KMNR	Kamenistaya	2.45	263	PN	Pn	10 58 03.0	+1.1
KMNR	Kamenistaya	2.45	263	eP	Pn	10 58 03.1	+1.1
TUMD	Tumrok D	2.52	250	PN	Pn	10 58 03.3	+0.4
TUMD	Tumrok D	2.52	250	eP	Pn	10 58 03.4	+0.4
KOZ	Kozyrevsk	2.61	270	PN	Pn	10 58 05.6	+1.5
KOZ	Kozyrevsk	2.61	270	eP	Pn	10 58 05.6	+1.5
SRDR	Sredinnyy	2.69	276	PN	Pn	10 58 06.5	+1.2
SRDR	Sredinnyy	2.69	276	eP	Pn	10 58 06.5	+1.2
ESO	Esso	3.28	269	PN	Pn	10 58 13.8	+0.5
ESO	Esso	3.28	269	eP	Pn	10 58 13.9	+0.5
KII	Karymskiy	3.61	236	PN	Pn	10 58 18.8	+0.9
KII	Karymskiy	3.61	236	eP	Pn	10 58 18.8	+0.9
SPN	Mys Shipunski	4.02	222	PN	Pn	10 58 22.8	-0.7
SPN	Mys Shipunski	4.02	222	eP	Pn	10 58 22.9	-0.7
NLC	Nalytchevo	4.24	227	PN	Pn	10 58 28.6	+2.2
NLC	Nalytchevo	4.24	227	eP	Pn	10 58 28.7	+2.2
SDLR	Sedlovina	4.36	231	PN	Pn	10 58 29.0	+0.8
SDLR	Sedlovina	4.36	231	eP	Pn	10 58 29.1	+0.8
TILK	Tilichiki	4.40	10	PN	Pn	10 58 27.7	-0.9
TILK	Tilichiki	4.40	10	eP	Pn	10 58 27.7	-0.9
KRER	Koryakskii	4.40	232	PN	Pn	10 58 30.5	+1.6
KRER	Koryakskii	4.40	232	eP	Pn	10 58 30.5	+1.6
SMAR	Somma	4.40	231	PN	Pn	10 58 29.8	+0.9
SMAR	Somma	4.40	231	eP	Pn	10 58 29.9	+0.9
KRX	Arik	4.41	233	PN	Pn	10 58 30.6	+1.7
KRX	Arik	4.41	233	eP	Pn	10 58 30.7	+1.7
AVH	Avacha	4.43	232	PN	Pn	10 58 31.0	+1.8
AVH	Avacha	4.43	232	eP	Pn	10 58 31.0	+1.8
UGLR	Uglovaya	4.43	231	PN	Pn	10 58 30.7	+1.5
UGLR	Uglovaya	4.43	231	eP	Pn	10 58 30.8	+1.5
KOK	Koryaka	4.46	233	PN	Pn	10 58 30.9	+1.3
KOK	Koryaka	4.46	233	eP	Pn	10 58 30.9	+1.3
GNL	Ganaly	4.53	240	PN	Pn	10 58 32.3	+1.8
GNL	Ganaly	4.53	240	eP	Pn	10 58 32.3	+1.8
DALK	Dalny	4.59	230	PN	Pn	10 58 31.8	+0.6
DALK	Dalny	4.59	230	eP	Pn	10 58 31.9	+0.6
PET	Petropavlovsk	4.63	230		Pn	10 58 32.5	+0.6
PET	Petropavlovsk	4.63	230	cePN	Pn	10 58 31.6	-0.3
PET				pmax	pmax		
	comp=Z,116nm,1.7s						
PET	Petropavlovsk	4.63	230	eP	Pn	10 58 33.6	+1.7
KRMR	Karymshinskiy	5.00	231	PN	Pn	10 58 39.2	+2.3
KRMR	Karymshinskiy	5.00	231	eP	Pn	10 58 39.2	+2.3
PEA0B	Petropavlovsk-	5.00	235		Pn	10 58 37.9	+0.9
PEA0B	Petropavlovsk-	5.00	235	iPN	Pn	10 58 37.6	+0.6
PETK	Petropavlovsk-	5.00	235		Pn	10 58 37.1	+0.1
PETK	Petropavlovsk-	5.00	235	Pn	Pn	10 58 38.0	+1.0
	comp=Z,2.1nm,0.3s,baz=72,slow=17,SNR=19						
PETK				Sn	Sn	10 59 38.4	+3.5
	comp=Z,0.4nm,0.3s,baz=64,slow=19,SNR=0.9						
	comp=Z,11nm,0.6s						
RUS	Russkaya	5.12	226	PN	Pn	10 58 39.2	+0.6
RUS	Russkaya	5.12	226	eP	Pn	10 58 39.3	+0.6
GRL	Gorelyy	5.22	229	PN	Pn	10 58 41.9	+1.9
GRL	Gorelyy	5.22	229	eP	Pn	10 58 41.9	+1.9
MTVR	Mutnovka	5.22	228	PN	Pn	10 58 41.4	+1.3
MTVR	Mutnovka	5.22	228	eP	Pn	10 58 41.4	+1.3
ASAK	Asacha	5.41	229	PN	Pn	10 58 44.1	+1.4
ASAK	Asacha	5.41	229	eP	Pn	10 58 44.2	+1.4
SMY	Shemya	6.55	118	Pn	Pn	10 58 58.9	+0.8
SMY	Shemya	6.55	118	PN	Pn	10 58 58.9	+0.8
SKR	Severo-Kuril's	7.43	226	cePN	Pn	10 59 11.1	+0.9
MA2	Magadan	8.10	301	Pn	Pn	10 59 18.9	-0.5
MA2	Magadan	8.10	301	Pn	Pn	10 59 18.1	-1.3
	comp=Z,0.4nm,0.3s,baz=108,slow=20,SNR=3.9						
MA2				LR	LR	11 02 51.2	
	comp=Z,291nm,18.1s,baz=114,slow=41						
	comp=Z,4.8nm,0.6s						
SEY	Seymchan	9.17	323	Pn	Pn	10 59 34.3	+0.2
	comp=Z,0.2nm,0.3s,baz=114,slow=18,SNR=4.5						
SEY				LR	LR	11 03 16.7	
	comp=Z,324nm,19.6s,baz=118,slow=39						
	comp=Z,0.4nm,0.3s						
SEY	Seymchan	9.17	323	iPN	Pn	10 59 33.3	-0.8
AMKA	Amchitka	9.96	112	Pn	Pn	10 59 45.9	+1.0
BILL	Bilibino	11.96	3	iPN	Pn	11 00 13.3	+1.0
ATKA	Atka Island	13.05	99	Pn	Pn	11 00 25.0	-2.2
SPIA	Saint Paul Isl	13.88	75	P	Pn	11 00 40.3	+1.8
	baz=277						
GAMB	Gambell	14.07	47	P	Pn	11 00 42.4	+1.4
	baz=248						
P08K	Saint George I	14.34	77	P	Pn	11 00 46.0	+1.2
	baz=279						
NIKH	Nikolski High	15.72	91	Pn	Pn	11 01 02.5	-0.7
NIKH	Nikolski High	15.72	91	P	Pn	11 01 04.5	+1.3
	baz=292						
M11K	Mekoryuk	15.89	62	P	Pn	11 01 06.4	+1.0
	baz=268						
TNA	Tin City	16.25	43	P	Pn	11 01 10.9	+0.9
	baz=248						
YSS	Yuzhno-Sakhali	16.31	245	eP	Pn	11 01 09.3	-1.5
YSS				pmax	pmax		
	comp=Z,30nm,1.4s						
YSS				MLR	MLR		
	comp=Z,4µm,11.0s						
UNV	Unalaska Valle	16.72	86		Pn	11 01 17.8	+1.8
UNV	Unalaska Valle	16.72	86	P	Pn	11 01 16.8	+0.8
	baz=290						
K13K	Kusilvak Mount	16.76	57	Pn	Pn	11 01 17.3	+0.8
K13K	Kusilvak Mount	16.76	57	P	Pn	11 01 17.8	+1.3
	baz=264						
F14K	Arctic Creek	16.84	45	P	Pn	11 01 18.6	+1.1
	baz=250						
ANM	Nome	16.95	48	P	Pn	11 01 19.5	+0.7
	baz=254						
F15K	North Star Dit	17.58	45		Pn	11 01 26.4	-0.3
F15K	North Star Dit	17.58	45	P	Pn	11 01 27.5	+0.9
	baz=252						
G15K	Niukluk	17.61	47	P	Pn	11 01 27.9	+0.8
	baz=255						
L14K	Kuka Creek	17.66	59	P	Pn	11 01 28.1	+0.5
	baz=268						
M14K	Bethel	18.00	61	P	P	11 01 34.3	+2.0
M14K				IAmb	IAmb	11 02 03.9	
	comp=Z,37nm,1.1s						
M14K	Bethel	18.00	61	P	Pn	11 01 32.7	+0.9
	baz=270						
N14K	Kuskokwak Cree	18.16	64	P	Pn	11 01 34.2	+0.4
	baz=273						
L15K	Ungalak Mounta	18.24	58	P	P	11 01 35.7	+0.6
	baz=268						

K15K	Wolf Creek Mou	18.26	56	P	P	11 01 36.3	+1.0
	baz=266						
H16K	Elim	18.28	49	P	P	11 01 36.2	+0.8
	baz=258						
C16K	Lisburne Hills	18.31	36	P	P	11 01 36.4	+0.7
	baz=244						
G16K	Koyuk River	18.40	46	P	Pn	11 01 37.8	+1.0
	baz=256						
JKA	Kamikawa-asahi	18.41	238		P	11 01 37.8	+0.7
ASAJ	Asahikawa	18.41	238	P	P	11 01 37.5	+0.5
	comp=Z,1.1nm,0.3s,baz=70,slow=6.9,SNR=13						
ASAJ				LR	LR	11 08 23.8	
	comp=Z,103nm,20.6s,baz=360,slow=36						
	comp=Z,24nm,0.7s						
O14K	Tigyukauivet M	18.42	66	P	Pn	11 01 37.8	+0.8
	baz=275						
M15K	Kasigluk River	18.62	61	P	Pn	11 01 40.2	+0.7
	baz=272						
S12K	Black Hills	18.62	77	P	Pn	11 01 40.8	+1.2
	baz=286						
YAK	Yakutsk	18.67	303	LR	LR	11 08 48.5	
	comp=Z,85nm,19.1s,baz=94,slow=37						
YAK	Yakutsk	18.67	303	*e*P	P	11 01 38.8	-0.9
YAK				*e*S	Sn	11 05 08.2	-0.4
YAK				pmax	pmax		
	comp=Z,16nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,132nm,4.2s						
YAK				pmax	pmax		
	comp=N,41nm,3.5s						
YAK				pmax	pmax		
	comp=E,98nm,4.0s						
YAK				smax	smax		
	comp=E,61nm,2.3s						
YAK				smax	smax		
	comp=N,63nm,2.8s						
YAK				MLR	MLR		
	comp=Z,104nm,15.0s						
J16K	Anvik River	18.77	53	P	P	11 01 41.2	+0.3
	baz=264						
I17K	Unalakleet	18.81	52	P	Pn	11 01 42.2	+0.5
I17K				IAmb	IAmb	11 01 46.2	
	comp=Z,44nm,1.4s						
I17K	Unalakleet	18.81	52	P	Pn	11 01 42.0	+0.3
	baz=262						
D17K	Noatak River	18.85	39	P	P	11 01 42.0	+0.3
	baz=248						
N15K	Kwethluk River	18.94	63		Pn	11 01 44.6	+1.2
N15K				IAmb	IAmb	11 01 50.9	
	comp=Z,22nm,0.8s						
N15K	Kwethluk River	18.94	63	P	P	11 01 43.0	+0.3
	baz=274						
RDOG	Red Dog Mine	19.05	38	P	P	11 01 44.5	+0.6
	baz=248						
E17K	Hotham Inlet	19.09	42	P	P	11 01 45.0	+0.7
	baz=252						
F17K	Baldwin Pennin	19.12	44	P	P	11 01 44.5	-0.1
	baz=254						
G17K	Kiwalik Mounta	19.12	47	P	P	11 01 44.9	+0.2
	baz=258						
C17K	DeLong Mountai	19.12	37	P	P	11 01 44.9	+0.2
	baz=246,SNR=7.1						
O15K	Ungalikthiuk R	19.16	66	P	P	11 01 45.3	+0.1
	baz=277						
L16K	Owhat River	19.20	58	P	P	11 01 46.1	+0.5
	baz=270						
H17K	Granite Mounta	19.31	48	P	P	11 01 47.2	+0.4
	baz=260						
M16K	Timber Creek	19.46	60	P	P	11 01 48.7	+0.3
	baz=272						
J17K	VABM Dome	19.47	53	P	Pn	11 01 49.9	+0.2
J17K	VABM Dome	19.47	53	P	P	11 01 48.8	+0.3
	baz=265						
N16K	Nishlik Lake	19.58	62	P	P	11 01 50.2	+0.5
	baz=274						
SDPT	Sand Point	19.59	78	P	P	11 01 50.9	+1.1
	baz=287						
E18K	Tukpahlearik C	19.65	41	P	P	11 01 51.1	+0.6
	baz=252,SNR=6.6						
L17K	Donlin	19.77	57	P	P	11 01 52.5	+0.8
	baz=270						
F18K	Selawik	19.78	44	P	P	11 01 52.3	+0.5
	baz=256						
K17K	Iditarod	19.78	55	P	P	11 01 52.0	+0.1
	baz=268						
ERM	Erimo	19.78	233	*i* P	P	11 01 52.0	0.0
S14K	Fog Glacier	19.84	75	P	P	11 01 53.7	+1.0
	baz=285						
C18K	Utukok River	19.86	37	P	Pn	11 01 54.0	-0.4
	baz=248,SNR=12						
B18K	Kokolik River	19.94	35	P	P	11 01 54.1	+0.5
	baz=246,SNR=6.2						
O16K	Kokwok River B	19.99	65	P	P	11 01 55.3	+1.1
	baz=277						
H18K	Honhosa River	20.00	48	P	P	11 01 54.8	+0.5
	baz=261,SNR=5.5						
P16K	Nushagak River	20.12	66	P	P	11 01 56.7	+1.1
	baz=278						
M17K	Holitna River	20.18	59		P	11 01 57.4	+1.1
M17K				IAmb	IAmb	11 02 02.9	
	comp=Z,26nm,0.8s						
M17K	Holitna River	20.18	59	P	P	11 01 57.2	+0.9
	baz=272,SNR=12						
CHNA	Chernabura Isl	20.23	79	P	Pn	11 01 58.8	0.0
	baz=289						
N17K	Nushagak Hills	20.36	62	P	P	11 01 59.7	+1.5
	baz=275						
O17K	Koliganek Bris	20.48	64	P	P	11 02 00.7	+1.2
	baz=277						
L18K	Granite Mounta	20.52	57	P	P	11 02 00.8	+0.8
L18K	Granite Mounta	20.52	57	P	P	11 02 01.0	+1.1
	baz=271						
A19K	Wainwright	20.53	33	P	P	11 02 00.8	+0.8
	baz=244						
F19K	Shaleruckik Mo	20.56	44	P	P	11 02 01.2	+0.9
	baz=257,SNR=17						
GCSA	Galena City Sc	20.57	50	P	P	11 02 00.8	+0.4
	baz=264,SNR=11						
C19K	Lookout Ridge	20.57	37	P	P	11 02 01.1	+0.6
	baz=249,SNR=29						
G19K	Purcell Mounta	20.69	46	P	P	11 02 02.1	+0.4
	baz=260						
H19K	Roundabout Mou	20.85	47	P	P	11 02 03.7	+0.2
	baz=262,SNR=6.7						
Q16K	King Salmon	20.86	67	P	P	11 02 04.3	+0.7
	baz=280						
D19K	Kuna River	20.87	39	P	P	11 02 04.6	+0.9
	baz=253,SNR=12						
P17K	Kvichak River	20.89	65	P	P	11 02 04.8	+0.9
	baz=279						
KLR	Kul'dur	20.89	265	*i* P	Pn	11 02 05.6	-0.9
KLR				pmax	pmax		
	comp=Z,32nm,2.8s						
E19K	Redstone River	20.91	42	P	P	11 02 04.3	+0.1
	baz=256,SNR=12						
M18K	Stony River	20.95	59	P	P	11 02 05.1	+0.4
	baz=273						
N18K	Kilae Creek	20.98	61	P	P	11 02 05.8	+0.9
	baz=275						
J19K	Poorman	21.05	52	P	P	11 02 06.3	+0.7
	baz=267,SNR=7.8						
Q17K	Contact Creek	21.33	68	P	P	11 02 09.5	+0.6
	baz=282,SNR=6.5						
L19K	White Mountain	21.38	57	P	P	11 02 09.5	+0.2
	baz=272						
ZEA	Zeya	21.38	279	*e*P	P	11 02 08.3	-1.0
F20K	Avaraart Lake	21.39	43	P	P	11 02 09.8	+0.5
	baz=259						
O18K	Koktuh Hills	21.41	63	P	P	11 02 11.0	+1.3
	baz=278,SNR=6.7						
D20K	Etivluk River	21.46	39	P	P	11 02 11.0	+0.9
	baz=254,SNR=15						
P18K	Big Mountain,	21.47	65	P	P	11 02 11.1	+0.9
	baz=279						
H20K	Anotleneega Mo	21.49	48	P	P	11 02 11.0	+0.6
	baz=264,SNR=6.2						
E20K	Nigu River	21.49	40	P	P	11 02 11.2	+0.7
	baz=255,SNR=10						
TIXI	Tiksi	21.55	330		P	11 02 11.3	+0.3
TIXI	Tiksi	21.55	330	P	P	11 02 10.9	-0.1
	comp=Z,8.0nm,0.7s,baz=119,slow=9.7,SNR=23						
	comp=Z,8.0nm,0.7s						
I20K	Naaghedeneel	21.60	50	P	P	11 02 12.0	+0.5
	baz=266						
M19K	Big River Lodg	21.61	58	P	P	11 02 12.1	+0.4
	baz=273						
N19K	Bonanza Creek	21.66	61	P	P	11 02 12.5	+0.2
	baz=276						
B20K	Meade River	21.69	35	P	P	11 02 12.9	+0.4
	baz=250						
J20K	Nowinta River	21.70	51	P	P	11 02 13.4	+0.7
	baz=268						
JTM	Tenmabayashi	21.71	235	P	P	11 02 12.8	-0.1
JTM				IAmb	IAmb	11 02 23.9	
	comp=Z,30nm,0.8s						
Q18K	Katmai Hardscr	21.71	67	P	P	11 02 13.8	+0.9
	baz=281						
K20K	Telida	21.72	54	P	P	11 02 13.8	+0.9
	baz=270						
O19K	Port Alsworth	21.81	62	P	P	11 02 15.2	+1.4
	baz=278						
L20K	Farewell, AK	21.82	56	P	P	11 02 14.5	+0.4
	baz=272						
CHIR	Chirikof Islan	22.08	74	P	P	11 02 16.5	-0.3
	baz=288						
G21K	Allakaket	22.17	45	P	P	11 02 18.6	+0.9
	baz=263						
M20K	Styx River	22.21	58	P	P	11 02 19.1	+0.9
	baz=274						
C21K	Knifeblade Rid	22.22	38	P	P	11 02 18.8	+0.6
	baz=255						
F21K	Alatna River	22.29	43	P	P	11 02 19.4	+0.5
	baz=261						
E21K	Killik River	22.34	40	P	P	11 02 19.6	+0.1
	baz=258						
A21K	Barrow	22.34	32	P	P	11 02 19.9	+0.5
	baz=248						
Q19K	Cape Douglas,	22.35	65	P	P	11 02 20.7	+0.9
	baz=281						
H21K	Melozitna Rive	22.37	48	P	P	11 02 20.6	+0.8
	baz=266,SNR=6.8						
B21K	Ikpikpuk River	22.41	37	P	P	11 02 20.6	+0.5
	baz=254,SNR=8.0						
P19K	Oil Pt	22.43	63	P	P	11 02 21.2	+0.7
	baz=280						
CHUM	Lake Minchumin	22.51	52	P	P	11 02 21.9	+0.6
	baz=270						
PPLA	Purkeypile	22.59	55	P	P	11 02 22.8	+0.5
	baz=273						
CAST	Castle Rocks	22.61	53	P	P	11 02 22.7	+0.2
	baz=272						
SII	Sitkinak Islan	22.64	72	P	P	11 02 22.8	0.0
	baz=287						
O20K	Slope Mountain	22.66	62	P	P	11 02 23.5	+0.4
	baz=279						
I21K	Tanana	22.68	49	P	P	11 02 22.9	-0.2
	baz=268						
N20K	Mount Spurr	22.71	59	P	P	11 02 23.2	-0.4
	baz=277						
SPCR	Spurr Chakacha	22.71	59	P	P	11 02 23.5	-0.1
	baz=277						
A22K	Sinclair Lake	22.72	33	P	P	11 02 23.2	-0.2
	baz=250						
HEH	HeiHe	22.79	271	*e*P	P	11 02 21.5	-2.9
HEH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HEH				LR	LR		
	comp=N,330nm,12.4s						
HEH				LR	LR		
	comp=E,290nm,12.9s						
HEH				LR	LR		
	comp=Z,560nm,13.7s						
F22K	John River	22.83	43	P	P	11 02 24.8	+0.1
	baz=262						
D22K	Ayikyak River	22.89	39		P	11 02 25.3	-0.1
D22K	Ayikyak River	22.89	39	P	P	11 02 25.0	-0.3
	baz=258						
OHAK	Old Harbor	22.93	70	P	P	11 02 25.0	-0.8
OHAK	Old Harbor	22.93	70	P	P	11 02 25.6	-0.2
	baz=286						
SKT	Skwentna	22.95	57	P	P	11 02 26.0	-0.1
	baz=276,SNR=5.9						
H22K	Ishtalitna Cre	22.97	47	P	P	11 02 26.3	+0.1
	baz=266						
B22K	Teshekpuk Lake	23.00	35		P	11 02 27.0	+0.6
B22K				IAmb	IAmb	11 02 51.8	
	comp=Z,24nm,1.2s						
B22K	Teshekpuk Lake	23.00	35	P	P	11 02 25.9	-0.5
	baz=254						
G22K	Bettles	23.01	44	P	P	11 02 25.5	-1.0
	baz=264						
Q20K	Shuyak Island	23.06	66	P	P	11 02 26.9	-0.2
	baz=283						
SYI	Shuyak Island	23.06	66	P	P	11 02 26.9	-0.1
E22K	Anaktuvuk Pass	23.07	41		P	11 02 27.4	+0.3
E22K				IAmb	IAmb	11 02 28.7	
	comp=Z,11nm,0.9s						
E22K	Anaktuvuk Pass	23.07	41	P	P	11 02 26.9	-0.2
	baz=261,SNR=9.2						
BPAW	Bear Paw Mtn.	23.09	52	P	P	11 02 26.7	-0.8
	baz=271,SNR=6.2						
KDAK	Kodiak Island	23.15	68	P	P	11 02 27.6	-0.5
KDAK				IAmb	IAmb	11 02 29.6	
	comp=Z,14nm,0.8s						
KDAK	Kodiak Island	23.15	68	P	P	11 02 27.4	-0.7
	comp=Z,7.7nm,0.6s,baz=223,slow=1.7,SNR=26						
	comp=Z,7.7nm,0.6s						
KDAK	Kodiak Island	23.15	68	*i* P	P	11 02 26.3	-1.8
KDAK				pmax	pmax		
	comp=Z,20nm,1.0s						
KDAK	Kodiak Island	23.15	68	P	P	11 02 27.8	-0.3
	baz=285						
MLY	Manley	23.20	49	P	P	11 02 28.1	-0.5
	baz=269						
HOM	Homer	23.22	63	P	P	11 02 28.1	-0.7
	baz=281						
CAPN	Captain Cook N	23.28	60	P	P	11 02 29.2	-0.1
	baz=279						
SUA	Susitna One	23.38	58	P	P	11 02 30.9	+0.3
SUA				IAmb	IAmb	11 02 31.9	
	comp=Z,12nm,0.5s						
SUA	Susitna One	23.38	58	P	P	11 02 30.5	0.0
	baz=277						
TRF	Thorofare Moun	23.42	53	P	P	11 02 31.1	+0.1
	baz=273,SNR=5.3						
CNPM	China Poot	23.45	63	P	P	11 02 30.4	-0.7
CUT	Chulitna	23.50	56	P	P	11 02 31.6	0.0
	baz=276						
COLD	Coldfoot	23.55	44	P	P	11 02 31.9	-0.2
	baz=264,SNR=5.9						
G23K	Bananza Creek	23.58	45		P	11 02 33.1	+0.8
G23K	Bananza Creek	23.58	45	P	P	11 02 32.0	-0.3
	baz=266						
D23K	Nanushuk River	23.62	39	P	P	11 02 33.3	+0.6
D23K	Nanushuk River	23.62	39	P	P	11 02 33.3	+0.6
	baz=260						
M22K	Willow	23.64	58	P	P	11 02 33.4	+0.5
	baz=277						
BRSE	Bradley Lake S	23.66	63	P	P	11 02 32.5	-0.7
	baz=281,SNR=5.8						
H23K	Yukon River	23.72	47	P	P	11 02 34.4	+0.6
	baz=268,SNR=8.9						
USRK	Ussuriysk Ar.	23.78	254	LR	LR	11 12 46.0	
	comp=Z,64nm,19.3s,baz=52,slow=39						
I23K	Minto, Yukon-K	23.79	49	P	P	11 02 34.7	+0.5
	baz=270,SNR=9.1						
C23K	Itkillik River	23.81	37	P	P	11 02 34.4	-0.1
	baz=258,SNR=5.4						
E23K	Chandalar	23.87	42	P	P	11 02 34.5	-0.7
	baz=263,SNR=11						
NEA2	Nenana	23.91	50	P	P	11 02 35.8	+0.3
	baz=272						
RC01	Rabbit Creek A	23.92	59	P	P	11 02 35.7	+0.1
	baz=279						
TOLK	Toolik Lake Re	23.96	40	P	P	11 02 36.3	+0.3
	baz=262,SNR=10						
MCK	McKinley	24.01	53	P	P	11 02 36.8	+0.3
	baz=274						
O22K	Cooper Landing	24.02	61	P	P	11 02 36.8	+0.2
	baz=280						
PMR	Palmer	24.13	58	P	P	11 02 37.8	+0.2
	baz=278						
SEW	Seward	24.23	61	P	P	11 02 37.7	-0.7
	baz=281,SNR=8.9						
WAT1	Susitna Watana	24.25	55	P	P	11 02 38.3	-0.5
	baz=276						
E24K	Your Creek	24.29	42	P	P	11 02 39.0	-0.1
	baz=264						
D24K	Happy Valley	24.31	39	P	P	11 02 39.2	0.0
	baz=262,SNR=7.4						
H24K	Noodor Dome	24.41	47	P	P	11 02 40.7	+0.5
	baz=270						
COLA	College	24.43	50	*i* P	P	11 02 40.5	+0.3
COLA				pmax	pmax		
	comp=Z,11nm,1.0s						
COLA	College	24.43	50	P	P	11 02 40.6	+0.3
	baz=272						
C24K	Franklin Bluff	24.44	38	P	P	11 02 40.1	-0.2
	baz=260						
F24K	Squaw Lake	24.47	43	P	P	11 02 40.9	+0.2
	baz=266						
KNK	Knik Glacier	24.48	58	P	P	11 02 40.9	+0.1
	baz=279						
G24K	Hadweenzic Riv	24.59	45	P	P	11 02 41.8	0.0
	baz=268,SNR=7.5						
PWL	Port Wells	24.63	59	P	P	11 02 41.5	-0.7
	baz=280,SNR=22						
WAT6	Susitna Watana	24.65	55	P	P	11 02 42.0	-0.5
	baz=277						
DHY	Denali Highway	24.76	54	P	P	11 02 43.0	-0.5
	baz=276						
M23K	Glacier View	24.77	57	P	P	11 02 43.6	+0.2
	baz=279,SNR=6.9						
HDA	Harding Lake	24.84	51	P	P	11 02 43.8	-0.3
	baz=274						
ILAR	Eielson Array	24.85	50	P	P	11 02 44.7	+0.6
ILAR	Eielson Array	24.85	50	P	P	11 02 43.6	-0.5
	comp=Z,4.7nm,1.0s,baz=264,slow=9.0,SNR=24						
ILAR				LR	LR	11 13 45.6	
	comp=Z,86nm,18.1s,baz=286,slow=40						
	comp=Z,4.7nm,1.0s						
SCM	Sheep Creek Mo	24.95	57	P	P	11 02 44.8	-0.3
	baz=279,SNR=20						
G25K	Bearman Lake	25.14	45	P	P	11 02 46.6	0.0
	baz=269						
D25K	Kavik River	25.20	39	P	P	11 02 46.5	-0.7
	baz=264,SNR=10						
GLI	Glacier Island	25.22	59	P	P	11 02 47.0	-0.5
	baz=281						
H25L	Birch Creek	25.25	46	P	P	11 02 47.5	-0.1
	baz=271						
P23K	Montague Islan	25.25	61	P	P	11 02 47.3	-0.5
	baz=283						
BNX	BinXian	25.30	261	⇓P	P	11 02 46.8	-1.5
BNX				pmax	pmax		
	comp=Z,10.0nm,1.1s						
F25K	Christian Rive	25.34	43	P	P	11 02 48.5	0.0
	baz=268						
E25K	Arctic Village	25.39	42	P	P	11 02 49.0	0.0
	baz=267						
PRP	Porcupine Dome	25.39	48	P	P	11 02 48.2	-0.9
	baz=273						
K24K	Donnelly Dome	25.40	52	P	P	11 02 49.2	+0.1
	baz=276						
M24K	Tolsona, Glenn	25.44	56	P	P	11 02 49.5	0.0
	baz=279,SNR=6.4						
FYU	Fort Yukon	25.48	46	P	P	11 02 49.8	0.0
FYU				IAmb	IAmb	11 03 01.3	
	comp=Z,11nm,0.8s						
J25K	Salcha River,	25.51	50	P	P	11 02 49.7	-0.5
	baz=275						
HIN	Hinchinbrook I	25.61	60	P	P	11 02 50.4	-0.6
HIN				IAmb	IAmb	11 02 53.0	
	comp=Z,11nm,0.8s						
PAX	Paxson	25.64	54	P	P	11 02 51.1	-0.2
	baz=278						
KLU	Klutina	25.67	57	P	P	11 02 51.7	0.0
	baz=281						
C26K	Camden Bay	25.77	38	P	P	11 02 51.7	-0.7
	baz=264						
RIDG	Independent Ri	25.82	52	P	P	11 02 52.6	-0.3
	baz=277						
HARP	HAARP	25.87	55	P	P	11 02 53.6	+0.2
	baz=279						
Q23K	Middleton Isla	25.91	62	P	P	11 02 53.8	+0.2
	baz=285						
F26K	Sheenjek River	25.91	43	P	P	11 02 53.6	-0.2
	baz=269						
EYAK	Cordova Ski Ar	25.94	60	P	P	11 02 54.0	+0.1
	baz=283						
G26K	Porcupine Rive	26.05	45	P	P	11 02 55.2	+0.3
	baz=271						
C27K	Jago River	26.16	39	P	P	11 02 55.3	-0.6
	baz=266						
SCRK	Sand Creek	26.17	51	P	P	11 02 55.2	-1.0
	baz=277,SNR=6.4						
N25K	Chitina, Valde	26.27	57	P	P	11 02 57.1	0.0
	baz=281						
J26L	Joseph Creek	26.30	50	P	P	11 02 57.2	-0.1
	baz=276						
I26K	Coal Creek Min	26.39	48	P	P	11 02 58.2	+0.1
	baz=275						
BMRM	Bremner River	26.39	58	P	P	11 02 58.3	+0.1
	baz=283,SNR=8.4						
MJB9	Matsu-Tunnel	26.46	233	P	P	11 02 59.2	+0.3
MAJO	Matsushiro	26.46	233	P	P	11 02 57.6	-1.3
MAJO	Matsushiro	26.46	233	*i* P	P	11 02 57.0	-1.9
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MJAR	Matsushiro Arr	26.46	233	P	P	11 02 59.0	+0.1
	comp=Z,2.9nm,0.7s,baz=24,slow=9.0,SNR=9.0						
	comp=Z,2.9nm,0.7s						
L26K	Log Cabin Wild	26.59	54	P	P	11 03 00.0	+0.1
	baz=279						
KAIM	Kayak Island	26.73	61	P	P	11 03 01.2	0.0
	baz=285						
M26K	Nabesna, AK	26.86	55	P	P	11 03 02.7	+0.3
	baz=281						
E27K	Coleen River	26.88	42	P	P	11 03 02.7	+0.3
	baz=271						
G27K	Doyon Strip	26.90	45	P	P	11 03 03.1	+0.5
	baz=273						
H27K	Steamboat Moun	26.99	46	P	P	11 03 03.7	+0.3
	baz=275						
K27K	Chicken	27.00	51	P	P	11 03 03.7	+0.1
	baz=278						
I27K	Kandik River	27.00	48	P	P	11 03 03.8	+0.1
	baz=276						
MCARA	McCarthy VSAT	27.05	57	P	P	11 03 04.5	+0.4
	baz=283						
D27M	Malcolm River	27.11	40	P	P	11 03 04.5	0.0
	baz=269						
CRQE	Cirque	27.16	58	P	P	11 03 05.4	+0.2
	baz=284						
BGLC	Bering Glacier	27.23	60	P	P	11 03 05.8	+0.2
	baz=285						
L27K	Beaver Creek,	27.27	53	P	P	11 03 06.2	+0.2
	baz=280,SNR=10						
M27K	Edge Creek, AK	27.38	55	P	P	11 03 07.1	0.0
	baz=282						
F28M	Old Crow	27.55	43	P	P	11 03 08.1	-0.3
	baz=273						
E28M	Babbage River	27.63	41	P	P	11 03 09.2	0.0
	baz=272						
I28M	Miner Creek	27.72	48	P	P	11 03 09.3	-0.8
	baz=277						
BVCY	Beaver Creek	27.83	54	P	P	11 03 10.9	-0.1
	baz=282						
CTG	Chitna Glacier	27.94	58	P	P	11 03 12.4	+0.2
	baz=285						
YUK3	Moose Creek	28.16	56	P	P	11 03 13.8	-0.3
	baz=284						
DAWY	Dawson	28.16	51	P	P	11 03 14.3	+0.4
	baz=280						
E29M	Blow River	28.24	41	P	P	11 03 13.9	-0.8
	baz=274						
H29M	Whitestone	28.26	46	P	P	11 03 14.1	-0.8
	baz=277						
G29M	Pine Creek	28.32	44	P	P	11 03 14.9	-0.4
	baz=276						
I29M	Ogilvie Camp,	28.40	48	P	P	11 03 16.3	+0.1
	baz=279						
O28M	Mount Upton	28.54	58	P	P	11 03 17.4	-0.3
	baz=286						
YUK8	Steele Glacier	28.60	56	P	P	11 03 17.3	-0.9
	baz=285						
PINM	Pinnacle	28.70	59	P	P	11 03 18.7	-0.2
	baz=287						
EPYK	Eagle Plains	28.90	45	P	P	11 03 20.3	-0.2
	baz=278						
L29M	L29M	28.90	52	P	P	11 03 20.2	-0.4
	baz=283,SNR=5.4						
M29M	Somme Creek	28.91	54	P	P	11 03 19.8	-0.9
	baz=284						
K29M	Barlow Dome	29.01	51	P	P	11 03 20.3	-1.3
	baz=282						
G30M	tAoh Zraii Nji	29.02	44	P	P	11 03 20.8	-0.7
	baz=278						
F30M	Barrier River	29.11	43	P	P	11 03 21.5	-0.8
	baz=277						

YUK4	Talbot Arm	29.11	56	P	P	11 03 22.1	-0.5
	baz=286						
I30M	Mount Dempster	29.23	48	P	P	11 03 23.1	-0.5
	baz=281						
PNL	Peninsula	29.24	60	P	P	11 03 23.5	-0.1
	baz=288						
YUK6	Outpost Mounta	29.35	57	P	P	11 03 24.1	-0.7
	baz=287						
O29M	Mount Kennedy	29.44	58	P	P	11 03 25.1	-0.4
	baz=288						
G31M	Satah River	29.78	44	P	P	11 03 28.2	-0.1
	baz=279						
HYT	Haines Junctio	29.79	57	P	P	11 03 27.7	-0.8
	baz=287,SNR=5.2						
N30M	Aishikik Lake	29.79	55	P	P	11 03 28.7	+0.1
	baz=287						
INK	Inuvik	29.87	41	P	P	11 03 28.6	-0.3
	baz=278						
F31M	Tsiigehtchic	29.91	43	P	P	11 03 29.1	-0.2
	baz=279						
H31M	Peel River	29.95	46	P	P	11 03 29.9	+0.1
	baz=281						
P29M	Windy Craggy	30.05	59	P	P	11 03 30.6	-0.2
	baz=289						
P30M	Million Dollar	30.26	58	P	P	11 03 32.6	-0.1
	baz=289						
N31M	Braeburn, Yuko	30.39	55	P	P	11 03 33.3	-0.4
	baz=287						
O30N	Mendenhall	30.46	56	P	P	11 03 34.1	-0.3
	baz=288						
KSRS	Korea Array	30.76	248	P	P	11 03 36.8	-0.4
	comp=Z,0.5nm,0.5s,baz=42,slow=9.2,SNR=8.0						
	comp=Z,0.5nm,0.5s						
PLBC	Pleasant Camp	30.77	59	P	P	11 03 37.8	+0.8
	baz=290						
M31M	Drury Creek, Y	30.81	53	P	P	11 03 38.1	+0.7
	baz=287						
WHY	Whitehorse	31.06	56	P	P	11 03 40.4	+0.6
	baz=289						
SKAG	Skagway	31.26	59	P	P	11 03 42.2	+0.8
	baz=291						
FARO	Faro, Yukon	31.27	53	P	P	11 03 41.5	+0.1
	baz=288						
S31K	Pelican	31.38	62	P	P	11 03 43.5	+1.1
	baz=293						
MMPY	Sheldon Lake,	32.07	52	P	P	11 03 49.3	+0.8
	baz=288						
R32K	Eaglecrest	32.09	60	P	P	11 03 49.6	+0.8
	baz=293						
A36M	Sachs Harbour	32.16	33	P	P	11 03 50.3	+1.1
	baz=279						
P33M	Teslin, Yukon	32.18	56	P	P	11 03 50.8	+1.3
	baz=291						
SIT	Sitka	32.19	63	P	P	11 03 50.8	+1.3
	baz=294						
S32K	Killisnoo	32.39	62	P	P	11 03 52.6	+1.4
	baz=294						
XLT	XiLinHaoTe	32.76	269	eP	P	11 03 54.0	-0.8
XLT				pmax	pmax		
	comp=Z,16nm,0.5s						
XLT				LR	LR		
	comp=N,18nm,13.7s						
XLT				LR	LR		
	comp=E,220nm,17.0s						
Q32M	Nakina River	32.91	58	P	P	11 03 56.8	+0.7
Q32M	Nakina River	32.91	58	P	P	11 03 57.6	+1.4
	baz=293						
R33M	Jennings River	33.35	57	P	P	11 04 01.4	+1.5
	baz=293						
T33K	Petersburg	33.47	62	P	P	11 04 01.7	+1.0
	baz=296						
U33K	Whale Pass	33.69	63	P	P	11 04 03.9	+1.2
	baz=297						
TGTN	Hyland Airport	33.77	53	P	P	11 04 05.0	+1.6
	baz=292						
S34M	Telegraph Cree	33.88	60	P	P	11 04 06.0	+1.7
	baz=295						
WRAK	Wrangell Islan	33.94	63	P	P	11 04 06.6	+1.7
	baz=297						
CRAG	Craig	33.99	64	P	P	11 04 07.1	+1.9
	baz=298						
WTLY	Watson Lake, Y	34.08	55	P	P	11 04 07.8	+1.8
	baz=294						
DLBC	Dease Lake	34.19	58	LR	LR	11 18 07.0	
	comp=E,8.7nm,19.8s,baz=281,slow=36						
T35M	Bob Quinn	34.72	61	P	P	11 04 13.1	+1.4
	baz=297						
V35K	Ketchikan	34.81	64	P	P	11 04 13.9	+1.5
	baz=298						
WRGLY	Wrigley	35.20	48	P	P	11 04 17.2	+1.5
	baz=293						
ULN	Ulaanbaatar	35.38	281	ceP	P	11 04 17.0	-0.7
ULN				pmax	pmax		
	comp=Z,7.0nm,1.7s						
LIRD	Liard River Hi	35.61	55	P	P	11 04 21.0	+1.7
	baz=296						
BEAVL	Fort Liard	35.74	54	P	P	11 04 22.2	+1.7
	baz=296						
SONM	Songino Array	35.76	282	P	P	11 04 20.2	-0.7
	comp=Z,1.8nm,0.6s,baz=62,slow=8.1,SNR=11						
	comp=Z,1.8nm,0.6s						
KOTAN	Kotaneelee Air	36.22	53	P	P	11 04 25.9	+1.4
	baz=296						
TOAD	Toad River Com	36.26	56	P	P	11 04 26.5	+1.6
	baz=297,SNR=11						
H11N2	WAKE ISLAND Hy	36.40	176	T	T	11 43 24.7	
	baz=357,slow=76,SNR=59						
H11N3	WAKE ISLAND Hy	36.42	176	T	T	11 43 23.6	
	baz=357,slow=76,SNR=107						
H11N1	WAKE ISLAND Hy	36.42	176	T	T	11 43 02.7	
	baz=357,slow=76,SNR=83						
HHC	Hu-ho-hao-te	37.28	269	eP	P	11 04 34.3	+0.4
HHC				pmax	pmax		
	comp=Z,16nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,4.7s						
HHC				LR	LR		
	comp=N,220nm,14.5s						
HHC				LR	LR		
	comp=E,150nm,13.8s						
HHC				LR	LR		
	comp=Z,84nm,13.8s						
YKA	Yellowknife Ar	39.17	47	P	P	11 04 49.7	+0.3
	comp=Z,1.8nm,0.8s,baz=304,slow=15,SNR=20						
	comp=Z,1.8nm,0.8s						
NJ2	Nanjing	39.67	252	eP	P	11 04 55.0	+1.1
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
SPITS	Spitsbergen Ar	44.53	351	P	P	11 05 32.4	-0.6
	comp=Z,1.5nm,0.6s,baz=45,slow=15,SNR=4.5						
	comp=Z,1.5nm,0.6s						
GTA	Gaotai	44.83	276	eP	P	11 05 35.8	-0.2
GTA				pP	pwP	11 05 43.0	-0.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				LR	LR		
	comp=N,180nm,12.7s						
GTA				LR	LR		
	comp=E,200nm,13.9s						
GTA				LR	LR		
	comp=Z,180nm,15.1s						
LZH	Lanzhou	44.93	270	eP	P	11 05 39.0	+2.1
LZH				sP	pwP	11 05 47.5	+3.2
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
LZH				LR	LR		
	comp=N,170nm,17.2s						
LZH				LR	LR		
	comp=E,210nm,16.5s						
LZH				LR	LR		
	comp=Z,140nm,14.8s						
L04D	Klamath Falls	47.53	75		P	11 05 58.2	+0.9
KURK	Kurchatov	48.31	302		P	11 06 02.8	-0.2
KURK				IAmb	IAmb	11 06 04.3	
	comp=Z,5.3nm,0.8s						
KURK	Kurchatov	48.31	302	P	P	11 06 02.8	-0.2
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KURBB	Kurchatov Arra	48.42	302	P	P	11 06 03.0	-0.8
	comp=Z,3.1nm,0.5s,baz=53,slow=7.8,SNR=17						
	comp=Z,3.1nm,0.5s						
MK31	Makanchi Array	49.15	296	ceP	P	11 06 09.5	-0.1
MKAR	Makanchi Array	49.15	296	P	P	11 06 09.0	-0.6
MKAR	Makanchi Array	49.15	296	P	P	11 06 08.6	-1.0
	comp=Z,1.7nm,0.6s,baz=54,slow=6.5,SNR=12						
	comp=Z,1.7nm,0.6s						
LYMT	Lyon Mountain	49.50	63	P	P	11 06 12.3	-0.2
BVAR	Borovoye Array	50.50	309	P	P	11 06 19.6	-0.1
	comp=Z,8.4nm,0.6s,baz=54,slow=7.8,SNR=37						
	comp=Z,8.4nm,0.6s						
H17A	Grant Village	52.16	65	P	P	11 06 33.8	+1.2
H17A				IAmb	IAmb	11 06 35.5	
	comp=Z,5.0nm,1.0s						
NVAR	Mina Array Bea	52.37	75	P	P	11 06 35.1	+1.0
	comp=Z,1.8nm,0.8s,baz=300,slow=8.0,SNR=13						
	comp=Z,1.8nm,0.8s						
LOHW	Long Hollow	52.70	65	P	P	11 06 36.8	+0.3
LOHW				IAmb	IAmb	11 06 38.4	
	comp=Z,4.9nm,1.0s						
ARTI	Arti	52.97	318	P	P	11 06 37.7	-0.4
ARTI				IAmb	IAmb	11 06 39.0	
	comp=Z,7.1nm,0.8s						
ARTI	Arti	52.97	318	d iP	P	11 06 38.1	0.0
ARTI						11 08 32.7	
ARTI				S	S	11 14 08.6	+1.5
ARTI				SS	SS	11 17 42.0	-3.4
ARTI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PZH	PanZhiHua	53.33	263	P	P	11 06 42.5	+1.2
PDAR	Pinedale Array	53.84	65	P	P	11 06 45.3	+0.3
	comp=Z,2.8nm,0.8s,baz=327,slow=2.9,SNR=26						
	comp=Z,2.8nm,0.8s						
KIRV	Kirov	54.44	324	eP	P	11 06 48.5	-0.3
ULM	Lac du Bonnet	54.86	51	P	P	11 06 51.6	-0.3
	comp=Z,2.0nm,0.7s,baz=236,slow=17,SNR=3.2						
	comp=Z,2.0nm,0.7s						
KDJ	Kajisay	55.03	295	P	P	11 06 53.8	+0.2
KDJ				IAmb	IAmb	11 06 55.0	
	comp=Z,4.8nm,0.8s						
KDJ	Kajisay	55.03	295	P	P	11 06 53.8	+0.2
KDJ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AAK	Ala-Archa	56.01	297	P	P	11 07 00.6	0.0
AAK				IAmb	IAmb	11 07 10.9	
	comp=Z,6.8nm,0.9s						
AAK	Ala-Archa	56.01	297	P	P	11 07 00.6	0.0
AAK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PV05	Paradox Valley	57.52	69	P	P	11 07 12.5	+1.0
PV05				IAmb	IAmb	11 07 13.3	
	comp=Z,8.3nm,1.2s						
PV13	Radium Mtn., P	57.61	69	P	P	11 07 13.1	+1.0
PV13				IAmb	IAmb	11 07 22.3	
	comp=Z,7.0nm,1.1s						
KK31	Karatay Array	57.62	300		P	11 07 11.8	0.0
KK31	Karatay Array	57.62	300	P	P	11 07 11.8	0.0
KK31				pmax	pmax		
	comp=Z,12nm,1.0s						
KKAR	Karatay Array	57.62	300	P	P	11 07 11.5	-0.3
KKAR	Karatay Array	57.62	300		P	11 07 11.5	-0.3
KKAR	Karatay Array	57.62	300	P	P	11 07 11.5	-0.3
ARSB	Arslanbob	57.74	297	P	P	11 07 12.1	-0.8
ARSB				IAmb	IAmb	11 07 24.1	
	comp=Z,12nm,1.5s						
ARSB	Arslanbob	57.74	297	P	P	11 07 12.1	-0.8
ARSB				pmax	pmax		
	comp=Z,12nm,1.5s						
AB31	Akbulak array	57.74	311	P	P	11 07 12.6	0.0
AB31				IAmb	IAmb	11 07 22.5	
	comp=Z,3.8nm,1.1s						
ABKAR	Akbulak array	57.74	311		P	11 07 12.3	-0.2
ABKAR				IAmb	IAmb	11 07 22.5	
	comp=Z,3.8nm,1.1s						
ABKAR	Akbulak array	57.74	311	P	P	11 07 12.7	+0.2
FINES	FINESS Array B	58.30	338	P	P	11 07 15.3	-0.9
	comp=Z,1.0nm,0.7s,baz=335,slow=6.2,SNR=1.8						
	comp=Z,1.0nm,0.7s						
BTK	Batken	59.77	298	IAmb	IAmb	11 07 27.9	
	comp=Z,6.7nm,0.8s						
EVN	Everest	60.54	277	P	P	11 07 31.9	-1.1
EVN				IAmb	IAmb	11 07 44.8	
	comp=Z,5.1nm,0.8s						
NB2	NORSAR Subarra	61.28	346	P	P	11 07 36.5	-0.3
	comp=Z,0.6nm,0.5s,baz=17,slow=6.9						
NOA	NORSAR Array B	61.28	346	P	P	11 07 36.6	-0.2
	comp=Z,0.6nm,0.5s,baz=18,slow=6.8,SNR=5.8						
	comp=Z,0.6nm,0.5s						
OBN	Obninsk	61.28	329	⇓eP	P	11 07 37.5	+0.7
OBN				e		11 07 48.5	
OBN				e		11 08 20.6	
OBN				eS	S	11 15 59.1	+2.6
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,32nm,15.0s						
CMAR	Chiang Mai Arr	61.29	260	P	P	11 07 37.9	+0.5
	comp=Z,1.2nm,0.4s,baz=20,slow=7.4,SNR=12						
	comp=Z,1.2nm,0.4s						
SCHQ	Schefferville	61.72	31	P	P	11 07 38.8	-1.1
	comp=Z,1.1nm,0.6s,baz=82,slow=7.0,SNR=1.8						
	comp=Z,1.1nm,0.6s						
SIMJ	Simiganj	61.75	298		P	11 07 40.2	-0.2
HFS	Hagfors	61.78	344	P	P	11 07 39.7	-0.5
	comp=Z,1.6nm,0.5s,baz=64,slow=6.8,SNR=9.2						
	comp=Z,1.6nm,0.5s						
KBL	Kabul	64.94	295	P	P	11 08 00.3	-1.5
KBL	Kabul	64.94	295	P	P	11 08 00.3	-1.5
KBL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WMOK	Wichita Mounta	65.39	64	P	P	11 08 04.3	-0.1
WMOK				IAmb	IAmb	11 08 05.2	
	comp=Z,3.4nm,1.0s						
WMOK	Wichita Mounta	65.39	64	P	P	11 08 04.3	-0.1
WMOK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TXAR	Lajitas Array	67.14	71	P	P	11 08 16.2	+0.4
	comp=Z,1.9nm,0.7s,baz=301,slow=4.7,SNR=26						
TXAR				LR	LR	11 35 00.7	
	comp=Z,11nm,20.6s,baz=312,slow=34						
	comp=Z,1.9nm,0.7s						
AKASG	Malin Array Be	67.26	331	P	P	11 08 15.7	-0.4
	comp=Z,0.2nm,0.3s,baz=30,slow=7.2,SNR=3.0						
AKASG				LR	LR	11 41 29.8	
	comp=Z,57nm,19.4s,baz=48,slow=39						
	comp=Z,0.2nm,0.3s						
KBZ	Khabaz	69.02	319	P	P	11 08 27.8	+0.6
	comp=Z,2.4nm,0.9s,baz=226,slow=1.4,SNR=5.5						
	comp=Z,2.4nm,0.9s						
KBZ	Khabaz	69.02	319	ceP	P	11 08 27.1	-0.1
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRTR	Keskin Array B	75.82	323	P	P	11 09 07.2	-0.9
	comp=Z,0.6nm,0.6s,baz=44,slow=5.5,SNR=2.3						
	comp=Z,0.6nm,0.6s						
ASAR	Alice Springs	83.64	208	P	P	11 09 51.5	+1.2
	comp=Z,0.6nm,0.9s,baz=16,slow=4.9,SNR=3.4						
	comp=Z,0.6nm,0.9s						
ESDC	Sonseca Array	84.05	351	P	P	11 09 52.9	+0.4
	comp=Z,0.4nm,0.7s,baz=356,slow=5.9,SNR=2.2						
	comp=Z,0.4nm,0.7s						
QSPA	South Pole Qui	145.90	180	PKPbc	PKPdf	11 16 59.1	-0.2
	comp=Z,2.0nm,1.0s,baz=11,slow=1.7,SNR=6.7						

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*HEL **26** 11:00:21.8±0.1, 68°15N×33°16E, h0^{km}, ML1.7, Suspected explosion*

*KOLA **26** 11:00:22.5, 68°15N×33°24E, h0^{km}, ML2.2, Error ellipse: s-maj=2.2km s-min=1.4km az=90.0, Olenegorsk City, Mines*

*IDC **26** 11:00:24.4±3.1, 68°15N×32°42E, h0^{km}, mbtmp2.5/2, ML2.6/2, Error ellipse: s-maj=40.5km s-min=14.4km az=59.0*

ISC 26 11:00:21.1±0.8**, 68°17N**±0°03×**33°20E**±0°03**, h0^{km}, n33, σ1^{s}04**/52**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA0	Apatity Array	0.57	188	P	Pg	11 00 31.5	-0.6
APA0				S	Sg	11 00 39.7	+0.2
APA	Apatity	0.61	172	P	Pg	11 00 32.3	-0.4
APA				S	Sg	11 00 41.2	+0.6
LVZ	Lovozero	0.61	116	P	Pg	11 00 32.5	-0.3
LVZ				S	Sg	11 00 40.5	-0.3
LVZ	Lovozero	0.61	116	PG	Pg	11 00 33.2	+0.4
LVZ				SG	Sg	11 00 40.4	-0.3
TERR	Teriberka	1.25	33	P	Pg	11 00 44.4	-0.7
TERR				S	Sb	11 01 02.4	+0.2
VRF	Varrio	1.42	254	PG	Pn	11 00 47.0	-1.1
VRF				MSG		11 01 04.0	
	comp=Z,6.5nm,0.2s						
VRF				SG	Sg	11 01 05.5	-1.1
KVDA	Kovda	1.49	185	P	Pn	11 00 48.1	-1.0
KVDA				S	Sn	11 01 09.2	+0.1
RAJF	Raja-Jooseppi	1.84	282	PG	Pn	11 00 54.5	+0.6
RAJF				SN	Sn	11 01 18.0	+0.2
OLKF	Oulanka, Finla	2.37	220	PN	Pn	11 01 02.1	+0.9
OLKF				MSG		11 01 31.2	
	comp=Z,3.1nm,0.2s						
OLKF				SG	Sb	11 01 34.4	0.0
VADS	Vadso	2.39	327	P	Pb	11 01 03.8	-1.1
VADS				S	Sb	11 01 34.0	-1.0
VADS	Vadso	2.39	327	eP	Pn	11 01 01.9	+0.5
KU6	Riekki	2.51	213	PN	Pn	11 01 04.2	+1.1
KU6				MSG		11 01 35.4	
	comp=Z,1.9nm,0.2s						
KU6				SG	Sb	11 01 38.5	+0.1
KEV	Kevo	2.74	308	eP	Pn	11 01 07.6	+1.3
KEV	Kevo	2.74	308	PB	Pn	11 01 08.3	+2.0
KEV				MSG		11 01 42.6	
	comp=Z,3.8nm,0.2s						
KEV				SB	Sn	11 01 42.7	+2.6
MSF	Maaselka	2.79	218	PN	Pn	11 01 08.4	+1.4
MSF				SG	Sb	11 01 47.5	+0.9
KU1	Kurvinen	2.99	210	PN	Pn	11 01 11.2	+1.6
ARA0	ARCESS Array S	3.11	300	PN	Pn	11 01 12.2	+0.8
ARA0				SG	Sb	11 01 57.0	+1.5
ARCES	ARCESS Array B	3.11	300	Pn	Pn	11 01 11.8	+0.5
	comp=Z,0.1nm,0.3s,baz=117,slow=14,SNR=10						
ARCES				Lg	Lg	11 01 53.9	
	comp=Z,0.1nm,0.3s,baz=111,slow=27,SNR=5.4						
	comp=Z,0.5nm,0.5s						
ARCES	ARCESS Array B	3.11	300	P	Pn	11 01 11.7	+0.3
ARCES				S	Sn	11 01 49.2	+0.2
KU2	Taivalkoski	3.15	221	PN	Pn	11 01 13.8	+1.9
	baz=37						
RNF	Rovaniemi	3.19	244	PN	Pn	11 01 12.4	0.0
	baz=56						
RNF				SN	Sn	11 01 51.3	+0.3
RANF	Ranua	3.31	232	PN	Pn	11 01 14.6	+0.5
HEF	Hetta	3.55	278	PN	Pn	11 01 17.3	-0.1
	baz=89						
HEF				SN	Sn	11 02 00.6	+0.5
KLF	Kolari	3.64	259	PN	Pn	11 01 19.2	+0.5
PAJU	Pajala	4.03	258	PG	Pb	11 01 33.8	+1.0
TOF	Tornio	4.05	243	PG	Pb	11 01 33.9	+0.7
TOF				SN	Sn	11 02 11.7	-0.5
RMF	Romuvaara	4.18	200	PN	Pn	11 01 25.8	-0.3
KALU	Kalix	4.50	244	PN	Pn	11 01 30.3	-0.1
ERTU	Ertsjaerv	4.55	254	PN	Pn	11 01 31.3	+0.1
ERTU				SN	Sn	11 02 23.9	-0.8
KIF	Kilpisjarvi	4.62	286	PN	Pn	11 01 32.5	+0.4
KIF				SN	Sn	11 02 25.5	-0.7
I37NO	I37NO	5.41	286	I	I	11 33 30.0	
	baz=93,slow=320,SNR=3.3						
FAUS	Fauske	6.83	272	S	Sn	11 03 17.3	-3.5
FINES	FINESS Array B	7.40	208	Pn	Pn	11 02 08.9	-1.3
	comp=Z,0.8nm,0.3s,baz=31,slow=12,SNR=2.1						
	comp=Z,0.6nm,0.6s						

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*KRSC **26** 11:02:15.7±1.2, 56°16N×164°74E, h48^{km}±21^{km}, Ml4.1*

*IDC **26** 11:02:15.6±0.6, 56°20N×164°53E, h0^{km}, mb3.8/17, mbtmp3.8/19, ML3.3/2, Error ellipse: s-maj=20.2km s-min=13.2km az=155.0*

*NEIC **26** 11:02:17.8±1.9, 56°16N±0°05×164°6E±0°1, h10^{km}±1^{km}, mb4.2/19, Error ellipse: s-maj=12.4km s-min=8.3km az=80.0*

*MOS **26** 11:02:19.4±1.1, 56°12N×164°51E, h52^{km}, mb4.2/7, Error ellipse: s-maj=7.9km s-min=5.0km az=55.2*

ISC 26 11:02:17.9±0.4**, 56°12N**±0°04×**164°63E**±0°04**, h16^{km}, n389, σ0^{s}94**/393**, mb4.1**/31**, 2C, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	1.02	276	PN	Pb	11 02 34.2	-2.9
KBTR	Krutoberegovo	1.02	276	eP	Pb	11 02 34.2	-2.9
KBG	Krutoberegovo	1.08	278	PN	Pb	11 02 35.3	-2.9
KBG	Krutoberegovo	1.08	278	eP	Pb	11 02 35.3	-2.9
BKI	Bering	1.19	140	PN	Pn	11 02 38.0	-1.8
BKI				S	Sb	11 02 53.8	-1.4
BKI	Bering	1.19	140	eP	Pn	11 02 38.1	-1.8
BKI				eS	Sb	11 02 53.8	-1.4
SMKR	Semkarok	1.82	286	PN	Pn	11 02 47.4	-1.2
SMKR	Semkarok	1.82	286	eP	Pn	11 02 47.4	-1.2
BDR	Baidarnaya	1.96	285	eS	Sn	11 03 15.2	+0.5
ZLN	Zelenaya	2.15	269	PN	Pn	11 02 52.5	-0.6
ZLN	Zelenaya	2.15	269	eP	Pn	11 02 52.6	-0.6
CIRR	Tsirk	2.17	272	PN	Pn	11 02 54.3	+0.8
CIRR	Tsirk	2.17	272	eP	Pn	11 02 54.3	+0.8
BZGR	Bezymyannyi-Gr	2.21	267	PN	Pn	11 02 54.1	+0.1
BZGR	Bezymyannyi-Gr	2.21	267	eP	Pn	11 02 54.1	+0.1
KLY	Klyuchi	2.23	277	PN	Pn	11 02 51.9	-2.2
KLY	Klyuchi	2.23	277	eP	Pn	11 02 51.9	-2.2
KRSR	Krestovskiy	2.27	274	PN	Pn	11 02 54.6	-0.3
KRSR	Krestovskiy	2.27	274	eP	Pn	11 02 54.6	-0.3
MKZ	Mys Kozlova	2.28	228	PN	Pn	11 02 53.6	-1.2
MKZ				S	Sn	11 03 20.4	-2.1
MKZ	Mys Kozlova	2.28	228	eP	Pn	11 02 53.6	-1.2
MKZ				eS	Sn	11 03 20.4	-2.1
BZWR	Bezymyannyi-We	2.32	268	PN	Pn	11 02 56.0	+0.4
BZWR	Bezymyannyi-We	2.32	268	eP	Pn	11 02 56.0	+0.4
BZMR	Bezymyannaya	2.33	267	PN	Pn	11 02 55.8	+0.1
BZMR	Bezymyannaya	2.33	267	eP	Pn	11 02 55.8	+0.1
KIRR	Kirishev	2.41	268	PN	Pn	11 02 56.9	+0.1
KIRR	Kirishev	2.41	268	eP	Pn	11 02 57.0	+0.1
KPT	Kopyto	2.48	268	PN	Pn	11 02 57.6	0.0
KPT	Kopyto	2.48	268	eP	Pn	11 02 57.6	0.0
KMNR	Kamenistaya	2.50	263	PN	Pn	11 02 58.4	+0.5
KMNR	Kamenistaya	2.50	263	eP	Pn	11 02 58.5	+0.5
TUMD	Tumrok D	2.57	251	PN	Pn	11 02 59.1	+0.3
TUMD	Tumrok D	2.57	251	eP	Pn	11 02 59.2	+0.3
KOZ	Kozyrevsk	2.67	271	PN	Pn	11 02 59.9	-0.3
KOZ	Kozyrevsk	2.67	271	eP	Pn	11 02 59.9	-0.3
OSSR	Ossora	3.25	346	PN	Pn	11 03 05.9	-2.2
OSSR	Ossora	3.25	346	eP	Pn	11 03 06.0	-2.2
ESO	Esso	3.33	269	PN	Pn	11 03 10.4	+1.1
ESO	Esso	3.33	269	eP	Pn	11 03 10.5	+1.1
KII	Karymskiy	3.63	237	PN	Pn	11 03 15.5	+2.0
KII	Karymskiy	3.63	237	eP	Pn	11 03 15.6	+2.0
SPN	Mys Shipunski	4.04	223	PN	Pn	11 03 18.9	-0.1
SPN	Mys Shipunski	4.04	223	eP	Pn	11 03 18.9	-0.1
SDLR	Sedlovina	4.38	232	PN	Pn	11 03 23.8	0.0
SDLR	Sedlovina	4.38	232	eP	Pn	11 03 23.9	0.0
KRER	Koryakskii	4.42	233	PN	Pn	11 03 25.5	+1.0
KRER	Koryakskii	4.42	233	eP	Pn	11 03 25.6	+1.0
SMAR	Somma	4.43	232	PN	Pn	11 03 24.2	-0.3
SMAR	Somma	4.43	232	eP	Pn	11 03 24.2	-0.3
KRX	Arik	4.43	234	PN	Pn	11 03 26.4	+1.9
KRX	Arik	4.43	234	eP	Pn	11 03 26.4	+1.9
AVH	Avacha	4.46	233	PN	Pn	11 03 26.7	+1.9
AVH	Avacha	4.46	233	eP	Pn	11 03 26.7	+1.9
UGLR	Uglovaya	4.46	232	PN	Pn	11 03 26.7	+1.9
UGLR	Uglovaya	4.46	232	eP	Pn	11 03 26.7	+1.9
KOK	Koryaka	4.48	233	PN	Pn	11 03 26.2	+1.0
KOK	Koryaka	4.48	233	eP	Pn	11 03 26.2	+1.0
GNL	Ganaly	4.56	241	PN	Pn	11 03 27.1	+0.9
GNL	Ganaly	4.56	241	eP	Pn	11 03 27.2	+0.9
DALK	Dalny	4.61	230	PN	Pn	11 03 26.0	-0.8
DALK	Dalny	4.61	230	eP	Pn	11 03 26.1	-0.8
PET	Petropavlovsk	4.66	231		Pn	11 03 26.3	-1.1
PET	Petropavlovsk	4.66	231	PN	Pn	11 03 27.8	+0.3
PET	Petropavlovsk	4.66	231	eP	Pn	11 03 27.8	+0.3
PEA0B	Petropavlovsk-	5.03	236	Pn	Pn	11 03 32.6	0.0
PEA0B	Petropavlovsk-	5.03	236	PN	Pn	11 03 32.6	0.0
PETK	Petropavlovsk-	5.03	236	Pn	Pn	11 03 33.2	+0.5
PETK	Petropavlovsk-	5.03	236	Pn	Pn	11 03 33.9	+1.2
	1.0nm,0.3s,baz=69,slow=17,SNR=9.5						
PETK				Sn	Sn	11 04 34.3	+3.9
	baz=113,slow=15						
	2.7nm,0.4s						
RUS	Russkaya	5.14	227	PN	Pn	11 03 33.5	-0.7
RUS	Russkaya	5.14	227	eP	Pn	11 03 33.5	-0.7
GRL	Gorelyy	5.24	230	PN	Pn	11 03 36.6	+1.0
GRL	Gorelyy	5.24	230	eP	Pn	11 03 36.6	+1.0
MTVR	Mutnovka	5.24	229	PN	Pn	11 03 36.2	+0.5
MTVR	Mutnovka	5.24	229	eP	Pn	11 03 36.2	+0.5
ASAK	Asacha	5.44	229	PN	Pn	11 03 39.5	+1.3
ASAK	Asacha	5.44	229	eP	Pn	11 03 39.6	+1.3
KMSK	Kamenskaya	6.42	7	PN	Pn	11 03 51.3	-0.3
KMSK	Kamenskaya	6.42	7	eP	Pn	11 03 51.3	-0.3
SMY	Shemya	6.48	118	Pn	Pn	11 03 51.9	-0.7
SMY	Shemya	6.48	118	PN	Pn	11 03 51.9	-0.7
SKR	Severo-Kuril's	7.45	227	i PN	Pn	11 04 06.4	+0.6

MA2	Magadan	8.16	301	Pn	Pn	11 04 14.7	-0.9
MA2	Magadan	8.16	301	PN	Pn	11 04 14.7	-0.9
AMKA	Amchitka	9.90	113	Pn	Pn	11 04 39.7	+0.4
ADK	Adak	11.77	103	Pn	Pn	11 05 03.9	-1.1
ADK	Adak	11.77	103	PN	Pn	11 05 03.9	-1.1
ATKA	Atka Island	13.00	99	Pn	Pn	11 05 19.6	-2.0
SPIA	Saint Paul Isl	13.84	75	P	Pn	11 05 33.9	+0.7
	baz=276						
GAMB	Gambell	14.05	47	P	Pn	11 05 36.8	+0.9
	baz=248						
P08K	Saint George I	14.30	77	P	Pn	11 05 40.2	+0.8
	baz=279						
NIKH	Nikolski High	15.66	90	P	Pn	11 05 59.0	+1.3
	baz=292						
M11K	Mekoryuk	15.86	62	P	Pn	11 06 00.5	+0.3
	baz=267						
TNA	Tin City	16.23	43	P	Pn	11 06 05.6	+0.6
	baz=248						
UNV	Unalaska Valle	16.67	86	P	Pn	11 06 11.3	+0.8
	baz=290						
K13K	Kusilvak Mount	16.73	57	P	Pn	11 06 11.9	+0.6
	baz=264						
F14K	Arctic Creek	16.82	44	P	Pn	11 06 13.0	+0.6
	baz=250						
ANM	Nome	16.93	48	P	Pn	11 06 14.4	+0.6
	baz=254						
F15K	North Star Dit	17.56	44	P	Pn	11 06 22.2	+0.6
	baz=252						
G15K	Niukluk	17.59	47	P	Pn	11 06 22.7	+0.6
	baz=254						
L14K	Kuka Creek	17.62	59	P	Pn	11 06 23.1	+0.6
	baz=268						
M14K	Bethel	17.96	61	P	Pn	11 06 27.1	+0.5
	baz=270						
N14K	Kuskokwak Cree	18.12	64	P	P	11 06 29.5	+0.7
	baz=273						
L15K	Ungalak Mounta	18.21	58	P	P	11 06 30.6	+0.8
	baz=268						
K15K	Wolf Creek Mou	18.23	56	P	P	11 06 30.9	+0.9
	baz=266						
H16K	Elim	18.26	49	P	P	11 06 31.8	+1.5
	baz=258						
C16K	Lisburne Hills	18.30	36	P	P	11 06 32.5	+1.7
	baz=243						
O14K	Tigyukauivet M	18.38	66	P	P	11 06 32.1	+0.4
	baz=275						
G16K	Koyuk River	18.39	46	P	P	11 06 32.1	+0.4
	baz=255						
ASAJ	Asahikawa	18.44	239	P	Pn	11 06 33.4	+0.8
	0.5nm,0.3s,baz=6.3,slow=7.4,SNR=5.8						
	10nm,0.8s						
S12K	Black Hills	18.58	77	P	P	11 06 34.5	+0.6
	baz=285						
M15K	Kasigluk River	18.59	61	P	P	11 06 34.4	+0.4
	baz=271						
J16K	Anvik River	18.75	53	P	Pn	11 06 36.5	+0.3
	baz=264						
I17K	Unalakleet	18.79	51	P	Pn	11 06 37.1	+0.5
	baz=262						
D17K	Noatak River	18.84	39	P	Pn	11 06 37.8	+0.5
	baz=248						
N15K	Kwethluk River	18.91	63	P	P	11 06 38.2	+0.7
	baz=273						
RDOG	Red Dog Mine	19.04	38	P	P	11 06 39.6	+0.7
	baz=247						
E17K	Hotham Inlet	19.08	41	P	Pn	11 06 40.4	+0.2
	baz=251						
G17K	Kiwalik Mounta	19.10	47	P	Pn	11 06 40.7	+0.2
	baz=257						
F17K	Baldwin Pennin	19.10	44	P	Pn	11 06 40.5	+0.1
	baz=254						
C17K	DeLong Mountai	19.11	37	P	Pn	11 06 40.5	-0.1
	baz=246						
O15K	Ungalikthiuk R	19.12	66	P	Pn	11 06 41.1	+0.3
	baz=276						
L16K	Owhat River	19.17	58	P	Pn	11 06 41.6	+0.3
	baz=269						
H17K	Granite Mounta	19.29	48	P	P	11 06 42.5	+0.8
	baz=260						
M16K	Timber Creek	19.43	60	P	P	11 06 44.2	+1.1
	baz=272						
J17K	VABM Dome	19.44	53	P	Pn	11 06 44.9	+0.3
	baz=265						
SDPT	Sand Point	19.54	78	P	P	11 06 45.7	+1.3
	baz=287						
N16K	Nishlik Lake	19.54	62	P	Pn	11 06 46.2	+0.4
	baz=274						
E18K	Tukpahlearik C	19.64	41	P	P	11 06 46.0	+0.6
	baz=252						
L17K	Donlin	19.74	57	P	P	11 06 47.1	+0.6
	baz=269						
K17K	Iditarod	19.75	55	P	P	11 06 47.4	+0.7
	baz=268						
F18K	Selawik	19.76	44	P	Pn	11 06 48.1	-0.2
	baz=255						
S14K	Fog Glacier	19.79	75	P	P	11 06 48.4	+1.1
	baz=285						
C18K	Utukok River	19.85	37		Pn	11 06 49.0	-0.4
C18K	Utukok River	19.85	37	P	Pn	11 06 49.4	-0.1
	baz=248,SNR=5.4						
B18K	Kokolik River	19.94	35	P	Pn	11 06 50.3	-0.1
	baz=245						
O16K	Kokwok River B	19.96	65	P	Pn	11 06 50.6	-0.1
	baz=276						
H18K	Honhosa River	19.98	48	P	P	11 06 50.2	+1.0
	baz=261						
P16K	Nushagak River	20.08	66	P	P	11 06 51.6	+1.3
	baz=278						
M17K	Holitna River	20.15	59	P	P	11 06 52.2	+1.1
	baz=272						
CHNA	Chernabura Isl	20.18	79	P	P	11 06 52.5	+1.0
	baz=288						
N17K	Nushagak Hills	20.32	62	P	P	11 06 54.1	+1.1
	baz=274						
O17K	Koliganek Bris	20.44	64	P	P	11 06 55.4	+1.2
	baz=277						
L18K	Granite Mounta	20.49	57	P	P	11 06 55.9	+1.1
	baz=270						
A19K	Wainwright	20.53	33	P	P	11 06 56.1	+1.1
	baz=244						
F19K	Shaleruckik Mo	20.54	43		P	11 06 56.3	+1.0
F19K				IAmb	IAmb	11 06 58.0	
	comp=Z,16nm,1.1s						
F19K	Shaleruckik Mo	20.54	43	P	P	11 06 56.5	+1.3
	baz=257,SNR=9.0						
GCSA	Galena City Sc	20.55	50	P	P	11 06 56.5	+1.2
	baz=263						
C19K	Lookout Ridge	20.56	37	P	P	11 06 56.5	+0.9
C19K	Lookout Ridge	20.56	37	P	Pn	11 06 57.2	-0.6
	baz=249,SNR=14						
G19K	Purcell Mounta	20.67	46	P	P	11 06 57.8	+1.1
	baz=260						
Q16K	King Salmon	20.82	67	P	P	11 06 59.5	+1.2
	baz=280						
H19K	Roundabout Mou	20.83	47	P	P	11 06 59.5	+1.1
	baz=262						
P17K	Kvichak River	20.85	65	P	P	11 06 59.5	+0.8
	baz=279						
D19K	Kuna River	20.86	39		P	11 06 59.5	+0.7
D19K				IAmb	IAmb	11 07 01.0	
	comp=Z,15nm,1.2s						
D19K	Kuna River	20.86	39	P	P	11 06 59.5	+0.7
	baz=252						
E19K	Redstone River	20.90	42	P	P	11 07 00.1	+1.0
E19K				IAmb	IAmb	11 07 02.2	
	comp=Z,12nm,1.2s						
E19K	Redstone River	20.90	42	P	P	11 07 00.3	+1.2
	baz=256,SNR=5.9						
M18K	Stony River	20.92	59	P	P	11 07 00.4	+1.0
	baz=273						
N18K	Kilae Creek	20.95	61	P	P	11 07 00.8	+1.1
	baz=275						
J19K	Poorman	21.02	52	P	P	11 07 01.2	+0.7
J19K	Poorman	21.02	52	P	P	11 07 01.7	+1.2
	baz=267						
Q17K	Contact Creek	21.29	68	P	P	11 07 04.7	+1.1
	baz=281						
L19K	White Mountain	21.35	57	P	P	11 07 05.3	+1.2
	baz=272						
O18K	Koktuh Hills	21.38	63	P	P	11 07 05.6	+1.2
	baz=278						
F20K	Avaraart Lake	21.38	43	P	P	11 07 05.6	+1.4
	baz=259						
P18K	Big Mountain,	21.43	65	P	P	11 07 06.3	+1.3
	baz=279						
D20K	Etivluk River	21.45	39	P	P	11 07 06.1	+1.0
D20K				IAmb	IAmb	11 07 07.2	
	comp=Z,17nm,1.2s						
D20K	Etivluk River	21.45	39	P	P	11 07 06.5	+1.4
	baz=254,SNR=8.5						
H20K	Anotleneega Mo	21.47	48	P	P	11 07 07.0	+1.7
	baz=264						
E20K	Nigu River	21.48	40	P	P	11 07 06.9	+1.5
	baz=255,SNR=5.7						
I20K	Naaghedeneel	21.57	50	P	P	11 07 07.9	+1.5
	baz=266						
M19K	Big River Lodg	21.58	58	P	P	11 07 08.0	+1.4
	baz=273						
TIXI	Tiksi	21.61	330	P	P	11 07 07.3	+0.6
TIXI	Tiksi	21.61	330	P	P	11 07 07.1	+0.4
	comp=Z,3.6nm,0.7s,baz=117,slow=9.0,SNR=8.9						
	comp=Z,3.6nm,0.7s						
TIXI	Tiksi	21.61	330	P	P	11 07 07.3	+0.6
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.4s						
N19K	Bonanza Creek	21.62	61	P	P	11 07 08.0	+0.9
	baz=276						
Q18K	Katmai Hardscr	21.67	66	P	P	11 07 08.4	+0.8
	baz=281						
B20K	Meade River	21.68	35	P	P	11 07 08.9	+1.4
	baz=250						
J20K	Nowinta River	21.68	51	P	P	11 07 08.1	+0.5
	baz=268						
L20K	Farewell, AK	21.80	56	P	P	11 07 10.4	+1.5
	baz=272						
IMAR	Indian Mountai	21.99	47	P	P	11 07 11.3	+0.4
CHIR	Chirikof Islan	22.04	74	P	P	11 07 12.4	+0.9
	baz=288						
G21K	Allakaket	22.16	45	P	P	11 07 13.1	+0.5
	baz=262						
M20K	Styx River	22.18	58	P	P	11 07 13.3	+0.3
	baz=274						
R18K	Karluk	22.19	69	P	P	11 07 12.7	-0.3
	baz=284						
C21K	Knifeblade Rid	22.21	38	P	P	11 07 14.1	+0.8
	baz=255						
F21K	Alatna River	22.27	43	P	P	11 07 13.4	-0.5
	baz=261						
Q19K	Cape Douglas,	22.32	65	P	P	11 07 14.7	+0.2
	baz=281						
E21K	Killik River	22.32	40	P	P	11 07 15.0	+0.5
	baz=257						
A21K	Barrow	22.33	32	P	P	11 07 15.0	+0.5
	baz=247						
H21K	Melozitna Rive	22.35	48	P	P	11 07 15.4	+0.7
	baz=265						
ILSW	Iliamna Southw	22.39	63	P	P	11 07 16.3	+1.0
ILSW				IAmb	IAmb	11 07 18.8	
	comp=Z,14nm,1.1s						
P19K	Oil Pt	22.40	63	P	P	11 07 16.0	+0.7
	baz=280						
B21K	Ikpikpuk River	22.40	37	P	P	11 07 16.0	+0.8
	baz=254						
CHUM	Lake Minchumin	22.48	52	P	P	11 07 16.6	+0.5
	baz=270						
PPLA	Purkeypile	22.56	55	P	P	11 07 17.4	+0.3
	baz=272						
CAST	Castle Rocks	22.59	53	P	P	11 07 17.6	+0.3
	baz=271						
SII	Sitkinak Islan	22.59	72	P	P	11 07 17.8	+0.4
	baz=286						
O20K	Slope Mountain	22.63	62	P	P	11 07 18.2	+0.4
	baz=279						
I21K	Tanana	22.66	49	P	P	11 07 18.5	+0.5
	baz=267						
SPCR	Spurr Chakacha	22.68	59	P	P	11 07 18.9	+0.5
	baz=277						
A22K	Sinclair Lake	22.71	33	P	P	11 07 19.4	+0.8
	baz=250						
D22K	Ayikyak River	22.88	39	P	P	11 07 20.8	+0.4
	baz=258						
OHAK	Old Harbor	22.89	70	P	P	11 07 21.0	+0.6
	baz=285						
SKT	Skwentna	22.93	57	P	P	11 07 21.3	+0.4
	baz=275						
H22K	Ishtalitna Cre	22.95	47	P	P	11 07 21.6	+0.4
	baz=266						
G22K	Bettles	23.00	44	P	P	11 07 22.0	+0.5
	baz=264						
B22K	Teshekpuk Lake	23.00	35	P	P	11 07 22.1	+0.6
	baz=253						
Q20K	Shuyak Island	23.02	66	P	P	11 07 22.5	+0.7
	baz=283						
E22K	Anaktuvuk Pass	23.05	41		P	11 07 22.3	+0.2
E22K				IAmb	IAmb	11 07 27.5	
	comp=Z,6.7nm,1.1s						
E22K	Anaktuvuk Pass	23.05	41	P	P	11 07 22.5	+0.3
	baz=260						
BPAW	Bear Paw Mtn.	23.07	52		P	11 07 22.7	+0.4
BPAW				IAmb	IAmb	11 07 24.2	
	comp=Z,14nm,1.4s						
BPAW	Bear Paw Mtn.	23.07	52	P	P	11 07 22.7	+0.4
	baz=271						
KTH	Kantishna Hill	23.11	53	P	P	11 07 23.7	+0.9
KTH				IAmb	IAmb	11 07 39.0	
	comp=Z,8.4nm,1.3s						
KDAK	Kodiak Island	23.11	68	⇑iP	P	11 07 23.6	+0.8
KDAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KDAK	Kodiak Island	23.11	68	P	P	11 07 23.4	+0.6
	baz=284						
MLY	Manley	23.18	49	P	P	11 07 24.3	+0.8
	baz=269						
HOM	Homer	23.19	63	P	P	11 07 24.7	+1.1
	baz=281						
SUA	Susitna One	23.35	58	P	P	11 07 25.8	+0.5
	baz=277						
TRF	Thorofare Moun	23.39	53	P	P	11 07 26.2	+0.4
TRF				IAmb	IAmb	11 07 27.7	
	comp=Z,19nm,1.4s						
TRF	Thorofare Moun	23.39	53	P	P	11 07 26.6	+0.8
	baz=273						
CUT	Chulitna	23.48	56	P	P	11 07 27.4	+1.0
	baz=275						
COLD	Coldfoot	23.54	44	P	P	11 07 27.1	+0.1
	baz=264						
G23K	Bananza Creek	23.56	45	P	P	11 07 27.2	0.0
	baz=266						
D23K	Nanushuk River	23.61	39	P	P	11 07 27.8	+0.2
	baz=260						
M22K	Willow	23.61	58	P	P	11 07 28.3	+0.6
	baz=277						
BRSE	Bradley Lake S	23.62	63	P	P	11 07 28.2	+0.3
	baz=281						
H23K	Yukon River	23.70	47	P	P	11 07 29.1	+0.5
	baz=268						
I23K	Minto, Yukon-K	23.76	49	P	P	11 07 31.0	+1.9
	baz=270,SNR=6.4						
C23K	Itkillik River	23.80	37	P	P	11 07 30.4	+0.9
	baz=258						
USA0B	Ussuriysk Arra	23.83	254	eP	P	11 07 30.6	+0.7
USRK	Ussuriysk Ar.	23.83	254	P	P	11 07 30.7	+0.8
USRK	Ussuriysk Ar.	23.83	254	P	P	11 07 30.7	+0.8
E23K	Chandalar	23.86	42	P	P	11 07 29.6	-0.5
E23K				IAmb	IAmb	11 07 32.0	
	comp=Z,7.1nm,1.1s						
E23K	Chandalar	23.86	42	P	P	11 07 31.0	+0.8
	baz=263,SNR=5.3						
RC01	Rabbit Creek A	23.89	59	P	P	11 07 31.2	+0.8
	baz=279						
NEA2	Nenana	23.89	50	P	P	11 07 31.3	+0.9
	baz=271						
TOLK	Toolik Lake Re	23.95	40	P	P	11 07 31.9	+1.0
	baz=262,SNR=10						
MCK	McKinley	23.98	52	P	P	11 07 31.8	+0.5
	baz=273						
O22K	Cooper Landing	23.99	61	P	P	11 07 31.6	+0.3
	baz=280						
PMR	Palmer	24.10	58	P	P	11 07 32.5	+0.1
	baz=278						
SEW	Seward	24.19	61	P	P	11 07 33.3	+0.1
	baz=281						
WAT1	Susitna Watana	24.23	55	P	P	11 07 33.5	-0.1
	baz=276						
E24K	Your Creek	24.28	42	P	P	11 07 33.7	-0.4
	baz=264						
D24K	Happy Valley	24.30	39	P	P	11 07 34.5	+0.4
	baz=261						
H24K	Noodor Dome	24.39	47	P	P	11 07 35.5	+0.4
	baz=270						
COLA	College	24.41	50	eP	P	11 07 36.4	+1.3
COLA				pmax	pmax		
	comp=Z,6.0nm,1.5s						
COLA	College	24.41	50	P	P	11 07 35.6	+0.5
	baz=272						
C24K	Franklin Bluff	24.43	38	P	P	11 07 35.9	+0.5
	baz=260						
KNK	Knik Glacier	24.45	58	P	P	11 07 36.2	+0.6
	baz=279						
F24K	Squaw Lake	24.45	43	P	P	11 07 36.2	+0.6
	baz=266						
G24K	Hadweenzic Riv	24.57	45	P	P	11 07 36.9	+0.3
	baz=268						
PWL	Port Wells	24.60	59	P	P	11 07 36.6	-0.4
	baz=280,SNR=7.3						
WAT6	Susitna Watana	24.63	55	P	P	11 07 37.1	-0.3
	baz=277						
DHY	Denali Highway	24.74	54	P	P	11 07 38.7	+0.3
	baz=276						
M23K	Glacier View	24.74	57	P	P	11 07 38.9	+0.7
	baz=278						
HDA	Harding Lake	24.82	51	P	P	11 07 40.2	+1.3
	baz=274						
ILAR	Eielson Array	24.82	50	P	P	11 07 38.7	-0.3
	comp=Z,2.2nm,1.0s,baz=262,slow=8.6,SNR=11						
ILAR				PcP	PcP	11 11 13.0	-1.5
	comp=Z,0.2nm,0.5s,baz=255,slow=2.7,SNR=2.0						
	comp=Z,2.2nm,1.0s						
SCM	Sheep Creek Mo	24.92	57	P	P	11 07 40.3	+0.4
	baz=279,SNR=6.7						
G25K	Bearman Lake	25.12	45	P	P	11 07 41.9	+0.3
	baz=269						
D25K	Kavik River	25.18	39	P	P	11 07 42.7	+0.5
	baz=263						
GLI	Glacier Island	25.19	59	P	P	11 07 42.8	+0.5
	baz=281						
P23K	Montague Islan	25.22	61	P	P	11 07 43.2	+0.7
	baz=283						
H25L	Birch Creek	25.23	46	P	P	11 07 43.2	+0.7
	baz=270						
JSD	Sado	25.23	235	P	P	11 07 43.9	+1.0
JSD				IAmb	IAmb	11 07 57.1	
	comp=Z,4.2nm,1.0s						
F25K	Christian Rive	25.32	43	P	P	11 07 44.3	+0.8
	baz=268						
PRP	Porcupine Dome	25.37	48	P	P	11 07 44.2	+0.2
	baz=272						
E25K	Arctic Village	25.37	42	P	P	11 07 44.5	+0.6
	baz=267						
K24K	Donnelly Dome	25.38	52	P	P	11 07 44.6	+0.6
	baz=276						
M24K	Tolsona, Glenn	25.41	56	P	P	11 07 44.7	+0.3
	baz=279						
J25K	Salcha River,	25.48	50	P	P	11 07 45.7	+0.7
	baz=274						
PAX	Paxson	25.61	54	P	P	11 07 46.9	+0.7
	baz=278						
KLU	Klutina	25.64	57	P	P	11 07 47.1	+0.6
	baz=280						
C26K	Camden Bay	25.76	38	P	P	11 07 48.0	+0.7
	baz=264						
RIDG	Independent Ri	25.80	52	P	P	11 07 48.2	+0.4
	baz=277						
HARP	HAARP	25.84	55	P	P	11 07 48.5	+0.4
	baz=279						
Q23K	Middleton Isla	25.87	62	P	P	11 07 49.1	+0.7
	baz=284						
F26K	Sheenjek River	25.89	43	P	P	11 07 49.1	+0.4
	baz=269						
EYAK	Cordova Ski Ar	25.91	60	P	P	11 07 49.4	+0.7
	baz=282						
G26K	Porcupine Rive	26.03	45	P	P	11 07 50.5	+0.6
	baz=271						
SCRK	Sand Creek	26.15	51	P	P	11 07 51.3	+0.2
	baz=277						
C27K	Jago River	26.15	39	P	P	11 07 51.5	+0.6
	baz=265						
N25K	Chitina, Valde	26.24	57	P	P	11 07 52.4	+0.5
	baz=281						
J26L	Joseph Creek	26.27	50	P	P	11 07 52.6	+0.5
	baz=276						
BMRM	Bremner River	26.36	58	P	P	11 07 53.6	+0.6
	baz=282						
I26K	Coal Creek Min	26.37	48	P	P	11 07 53.6	+0.7
	baz=275						
MAJO	Matsushiro	26.48	233	iP	P	11 07 53.7	-0.5
MAJO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MJAR	Matsushiro Arr	26.48	233	P	P	11 07 54.5	+0.3
	comp=Z,1.1nm,0.6s,baz=20,slow=9.7,SNR=4.1						
	comp=Z,1.1nm,0.6s						
L26K	Log Cabin Wild	26.56	54	P	P	11 07 55.5	+0.8
	baz=279						
KAIM	Kayak Island	26.70	61	P	P	11 07 56.3	+0.4
	baz=285						
M26K	Nabesna, AK	26.83	55	P	P	11 07 57.7	+0.5
	baz=281						
E27K	Coleen River	26.86	42	P	P	11 07 58.0	+0.6
	baz=270						
G27K	Doyon Strip	26.88	45	P	P	11 07 57.7	+0.2
	baz=273						
H27K	Steamboat Moun	26.97	46	P	P	11 07 58.8	+0.4
	baz=274						
K27K	Chicken	26.98	51	P	P	11 07 58.6	+0.2
	baz=278						
I27K	Kandik River	26.98	48	P	P	11 07 58.8	+0.3
	baz=276						
D27M	Malcolm River	27.10	40	P	P	11 08 00.4	+0.8
	baz=269						
CRQE	Cirque	27.13	58	P	P	11 08 00.8	+0.8
	baz=284						
BGLC	Bering Glacier	27.20	60	P	P	11 08 01.9	+1.5
	baz=285						
L27K	Beaver Creek,	27.24	53	P	P	11 08 01.8	+1.0
	baz=280,SNR=5.4						
M27K	Edge Creek, AK	27.35	55	P	P	11 08 02.9	+1.0
	baz=282						
F28M	Old Crow	27.53	43	P	P	11 08 04.0	+0.6
	baz=273						
E28M	Babbage River	27.62	41	P	P	11 08 05.1	+1.0
	baz=271						
I28M	Miner Creek	27.70	48	P	P	11 08 05.0	+0.1
	baz=277						
BVCY	Beaver Creek	27.80	54	P	P	11 08 05.9	0.0
	baz=282						
D28M	Stokes Point	27.89	39	P	P	11 08 06.6	+0.1
	baz=271						
CTG	Chitna Glacier	27.91	57	P	P	11 08 07.4	+0.4
	baz=284						
YUK3	Moose Creek	28.13	56	P	P	11 08 08.8	-0.2
	baz=284						
DAWY	Dawson	28.14	51	P	P	11 08 08.7	-0.1
	baz=280						
E29M	Blow River	28.23	41	P	P	11 08 09.9	+0.3
	baz=273						
H29M	Whitestone	28.24	46	P	P	11 08 09.9	+0.2
	baz=277						
G29M	Pine Creek	28.30	44	P	P	11 08 10.2	-0.1
	baz=276						
I29M	Ogilvie Camp,	28.38	48	P	P	11 08 10.7	-0.3
	baz=279						
O28M	Mount Upton	28.51	58	P	P	11 08 12.2	-0.3
	baz=286						
YUK8	Steele Glacier	28.57	56	P	P	11 08 12.9	-0.1
	baz=285						
L29M	L29M	28.88	52	P	P	11 08 15.0	-0.5
	baz=283						
M29M	Somme Creek	28.88	54	P	P	11 08 16.1	+0.5
	baz=284						
EPYK	Eagle Plains	28.88	45	P	P	11 08 14.7	-0.8
	baz=278						
K29M	Barlow Dome	28.99	51	P	P	11 08 16.9	+0.4
	baz=282						
G30M	tAoh Zraii Nji	29.00	44	P	P	11 08 16.8	+0.3
	baz=277						
YUK4	Talbot Arm	29.08	56	P	P	11 08 17.9	+0.5
	baz=286						
F30M	Barrier River	29.09	43	P	P	11 08 17.6	+0.4
	baz=277						
PNL	Peninsula	29.21	60	P	P	11 08 18.8	+0.5
	baz=288						
I30M	Mount Dempster	29.21	48	P	P	11 08 18.9	+0.5
	baz=280						
YUK6	Outpost Mounta	29.32	57	P	P	11 08 19.8	+0.2
	baz=286						
J30M	Hart River	29.35	49	P	P	11 08 20.2	+0.5
	baz=282						
O29M	Mount Kennedy	29.41	58	P	P	11 08 20.3	0.0
	baz=287						
MAYO	Mayo, Yukon	29.75	51	P	P	11 08 23.0	-0.1
	baz=284						
HYT	Haines Junctio	29.76	57	P	P	11 08 24.1	+0.8
	baz=287						
N30M	Aishikik Lake	29.77	55	P	P	11 08 24.0	+0.6
	baz=286						

G31M	Satah River	29.77	44	P	P	11 08 24.0	+0.9
	baz=279						
INK	Inuvik	29.85	41	P	P	11 08 24.6	+0.6
	baz=277						
F31M	Tsiigehtchic	29.89	43	P	P	11 08 25.1	+0.9
	baz=279						
H31M	Peel River	29.93	46	P	P	11 08 25.5	+0.8
	baz=281						
P29M	Windy Craggy	30.02	59	P	P	11 08 25.9	+0.3
	baz=289						
P30M	Million Dollar	30.23	58	P	P	11 08 28.0	+0.5
	baz=289						
N31M	Braeburn, Yuko	30.36	55	P	P	11 08 29.2	+0.7
	baz=287						
O30N	Mendenhall	30.43	56	P	P	11 08 29.4	+0.2
	baz=288						
PLBC	Pleasant Camp	30.73	59	P	P	11 08 32.3	+0.5
	baz=290						
M31M	Drury Creek, Y	30.78	53	P	P	11 08 32.1	-0.2
	baz=287						
WHY	Whitehorse	31.03	56	P	P	11 08 34.8	+0.2
	baz=289						
SKAG	Skagway	31.23	59	P	P	11 08 36.9	+0.7
	baz=291						
FARO	Faro, Yukon	31.24	53	P	P	11 08 36.7	+0.4
	baz=288						
MMPY	Sheldon Lake,	32.04	52	P	P	11 08 44.1	+0.6
	baz=288						
R32K	Eaglecrest	32.06	60	P	P	11 08 44.3	+0.8
	baz=293						
P33M	Teslin, Yukon	32.15	56	P	P	11 08 44.9	+0.5
	baz=291						
S32K	Killisnoo	32.35	62	P	P	11 08 46.7	+0.7
	baz=294						
Q32M	Nakina River	32.88	58	P	P	11 08 51.4	+0.5
	baz=293						
R33M	Jennings River	33.32	57	P	P	11 08 55.5	+0.7
	baz=293						
U33K	Whale Pass	33.66	63	P	P	11 08 58.2	+0.8
	baz=297						
S34M	Telegraph Cree	33.85	60	P	P	11 08 59.7	+0.6
	baz=295						
WRAK	Wrangell Islan	33.91	63	P	P	11 09 00.2	+0.6
	baz=297						
CRAG	Craig	33.95	64	P	P	11 09 00.9	+0.9
	baz=298						
T35M	Bob Quinn	34.69	61	P	P	11 09 07.3	+0.8
	baz=297						
SONM	Songino Array	35.82	282	P	P	11 09 14.5	-2.0
	comp=Z,0.6nm,0.5s,baz=46,slow=10,SNR=2.7						
	comp=Z,0.6nm,0.5s						
TOAD	Toad River Com	36.23	56	P	P	11 09 20.6	+0.9
	baz=297						
H11N2	WAKE ISLAND Hy	36.37	176	T	T	11 47 16.9	
	baz=359,slow=76,SNR=29						
H11N3	WAKE ISLAND Hy	36.38	176	T	T	11 47 18.1	
	baz=359,slow=76,SNR=28						
H11N1	WAKE ISLAND Hy	36.39	176	T	T	11 47 18.4	
	baz=359,slow=76,SNR=30						
HHC	Hu-ho-hao-te	37.34	269	*e*P	P	11 09 30.3	+0.9
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,82nm,4.7s						
HHC				LR	LR		
	comp=N,150nm,12.2s						
HHC				LR	LR		
	comp=E,140nm,12.8s						
HHC				LR	LR		
	comp=Z,170nm,12.8s						
YKA	Yellowknife Ar	39.15	47	P	P	11 09 44.8	+0.5
	comp=Z,0.6nm,0.8s,baz=304,slow=15,SNR=8.4						
	comp=Z,0.6nm,0.8s						
SPITS	Spitsbergen Ar	44.57	351	P	P	11 10 27.9	-0.5
	comp=Z,4.3nm,0.9s,baz=45,slow=10,SNR=2.0						
	comp=Z,4.3nm,0.9s						
J05D	Fort Rock, OR	47.33	73		P	11 10 50.9	+0.2
L04D	Klamath Falls	47.48	75	P	P	11 10 53.2	+1.3
K05A	Summer Lake	47.90	73	P	P	11 10 56.7	+1.5
KURK	Kurchatov	48.37	302	P	P	11 10 58.7	+0.2
KURBB	Kurchatov Arra	48.48	302	P	P	11 10 58.7	-0.7
	comp=Z,0.7nm,0.3s,baz=55,slow=7.9,SNR=4.0						
	comp=Z,0.7nm,0.3s						
PLID	Pearl Lake	48.86	68	P	P	11 11 03.6	+0.9
MK31	Makanchi Array	49.21	296	*e*P	P	11 11 03.2	-1.9
MKAR	Makanchi Array	49.21	296	P	P	11 11 04.5	-0.6
MKAR	Makanchi Array	49.21	296	P	P	11 11 04.0	-1.0
	comp=Z,0.5nm,0.6s,baz=46,slow=6.9,SNR=5.1						
	comp=Z,0.5nm,0.6s						
MKAR	Makanchi Array	49.21	296	P	P	11 11 04.5	-0.6
BPMT	Black Pine Rid	49.25	65		P	11 11 06.2	+0.5
BVAR	Borovoye Array	50.56	309	P	P	11 11 14.8	-0.4
	comp=Z,2.6nm,0.7s,baz=67,slow=8.2,SNR=7.3						
	comp=Z,2.6nm,0.7s						
NVAR	Mina Array Bea	52.32	75	P	P	11 11 29.9	+1.0
	comp=Z,0.6nm,0.7s,baz=302,slow=8.2,SNR=5.8						
	comp=Z,0.6nm,0.7s						
ARTI	Arti	53.03	318	*c i*P	P	11 11 33.5	-0.1
ARTI						11 13 28.8	
ARTI				S	S	11 19 05.0	+2.7
ARTI				SS	SS	11 22 41.3	+0.5
ARTI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PZH	PanZhiHua	53.38	264	P	P	11 11 39.3	+2.6
PDAR	Pinedale Array	53.80	66	P	P	11 11 40.4	+0.6
	comp=Z,0.5nm,0.4s,baz=337,slow=3.4,SNR=10						
	comp=Z,0.5nm,0.4s						
NB2	NORSAR Subarra	61.32	346	P	P	11 12 32.0	-0.1
	comp=Z,0.6nm,0.6s,baz=17,slow=6.9						
NOA	NORSAR Array B	61.32	346	P	P	11 12 32.0	-0.1
	comp=Z,0.9nm,0.7s,baz=16,slow=6.9,SNR=3.8						
	comp=Z,0.9nm,0.7s						
NOA	NORSAR Array B	61.32	346	*e*P	P	11 12 32.6	+0.5
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CMAR	Chiang Mai Arr	61.34	260	P	P	11 12 33.1	+0.3
	comp=Z,0.6nm,0.4s,baz=18,slow=6.5,SNR=5.4						
	comp=Z,0.6nm,0.4s						
CMAR	Chiang Mai Arr	61.34	260	*i* P	P	11 12 33.4	+0.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
HFS	Hagfors	61.82	344	P	P	11 12 34.1	-1.3
	comp=Z,1.0nm,0.7s,baz=33,slow=8.6,SNR=2.1						
	comp=Z,1.0nm,0.7s						
TXAR	Lajitas Array	67.09	71	P	P	11 13 11.3	+0.8
	comp=Z,0.8nm,0.7s,baz=295,slow=4.1,SNR=7.2						
	comp=Z,0.8nm,0.7s						
KBZ	Khabaz	69.08	319	*i* P	P	11 13 19.8	-2.8
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	Warramunga Arr	79.97	209	P	P	11 14 26.4	+0.4
	comp=Z,0.4nm,0.8s,baz=3.2,slow=5.3,SNR=2.4						
	comp=Z,0.4nm,0.8s						
ASAR	Alice Springs	83.64	208	P	P	11 14 45.9	+0.6
	comp=Z,0.3nm,0.7s,baz=14,slow=6.1,SNR=1.9						
	comp=Z,0.3nm,0.7s						
QSPA	South Pole Qui	145.87	180	PKPbc	PKPdf	11 21 53.8	-0.4
	comp=Z,0.8nm,0.5s,baz=309,slow=3.1,SNR=15						

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*MOS **26** 11:06:58.8±0.9, 56°.18N×164°.63E, h11^{km}, mb4.4/7, Error ellipse: s-maj=7.9km s-min=5.5km az=49.1*

*KRSC **26** 11:06:59.3±1.2, 56°.13N×164°.62E, h47^{km}±18^{km}, Ml4.3*

*IDC **26** 11:06:59.4±0.6, 56°.20N×164°.62E, h0^{km}, mb3.8/19, mbtmp3.9/21, ML3.5/2, MS3.6/20, Error ellipse: s-maj=19.4km s-min=12.6km az=152.0*

*NEIC **26** 11:07:01.8±2.1, 56°.20N±0°.05×164°.6E±0°.1, h10^{km}±1^{km}, mb4.3/97, Error ellipse: s-maj=12.7km s-min=7.8km az=248.0*

ISC 26 11:07:00.9±0.4**, 56°.15N**±0°.05×**164°.56E**±0°.03**, h16^{km}, n212, σ1.57**/182**, mb4.3**/63**, MS3.7**/18**, 1C-2D, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.98	274	PN	Pb	11 07 17.1	-2.3
KBTR				S	Sb	11 07 30.0	-2.0
KBTR	Krutoberegovo	0.98	274	*e*P	Pb	11 07 17.1	-2.3
KBTR				*e*S	Sb	11 07 30.1	-2.0
KBG	Krutoberegovo	1.04	276	PN	Pb	11 07 18.2	-2.3
KBG				S	Sb	11 07 31.7	-2.2
KBG	Krutoberegovo	1.04	276	*e*P	Pb	11 07 18.3	-2.3
KBG				*e*S	Sb	11 07 31.7	-2.2
BKI	Bering	1.24	139	PN	Pn	11 07 21.2	-2.3
BKI				S	Sb	11 07 37.0	-2.6
BKI	Bering	1.24	139	*e*P	Pn	11 07 21.2	-2.3
BKI				*e*S	Sb	11 07 37.0	-2.6
SMKR	Semkarok	1.77	285	PN	Pn	11 07 30.5	-0.5
SMKR	Semkarok	1.77	285	*e*P	Pn	11 07 30.6	-0.5
ZLN	Zelenaya	2.11	268	PN	Pn	11 07 35.6	0.0
ZLN	Zelenaya	2.11	268	*e*P	Pn	11 07 35.6	0.0
BZGR	Bezymyannyi-Gr	2.18	266	PN	Pn	11 07 36.5	-0.1
BZGR				S	Sn	11 08 03.5	+0.2
BZGR	Bezymyannyi-Gr	2.18	266	*e*P	Pn	11 07 36.6	-0.1
BZGR				*e*S	Sn	11 08 03.5	+0.2
KLY	Klyuchi	2.19	276	PN	Pn	11 07 34.9	-1.7
KLY	Klyuchi	2.19	276	*e*P	Pn	11 07 34.9	-1.7
KRSR	Krestovskiy	2.24	273	PN	Pn	11 07 36.9	-0.4
KRSR	Krestovskiy	2.24	273	*e*P	Pn	11 07 37.0	-0.4
MKZ	Mys Kozlova	2.28	226	PN	Pn	11 07 36.5	-1.3
MKZ	Mys Kozlova	2.28	226	*e*P	Pn	11 07 36.5	-1.3
BZWR	Bezymyannyi-We	2.29	267	PN	Pn	11 07 38.5	+0.4
BZWR	Bezymyannyi-We	2.29	267	*e*P	Pn	11 07 38.6	+0.4
BZMR	Bezymyannaya	2.30	266	PN	Pn	11 07 38.6	+0.4
BZMR	Bezymyannaya	2.30	266	*e*P	Pn	11 07 38.6	+0.4
KIRR	Kirishev	2.38	267	PN	Pn	11 07 39.8	+0.5
KIRR				S	Sn	11 08 08.1	-0.1
KIRR	Kirishev	2.38	267	*e*P	Pn	11 07 39.9	+0.5
KIRR				*e*S	Sn	11 08 08.2	-0.1
KPT	Kopyto	2.44	267	PN	Pn	11 07 40.7	+0.6
KPT	Kopyto	2.44	267	*e*P	Pn	11 07 40.8	+0.6
KMNR	Kamenistaya	2.46	262	PN	Pn	11 07 41.3	+0.8
KMNR	Kamenistaya	2.46	262	*e*P	Pn	11 07 41.3	+0.8
TUMD	Tumrok D	2.54	250	PN	Pn	11 07 41.6	+0.1
TUMD	Tumrok D	2.54	250	*e*P	Pn	11 07 41.7	+0.1
SRDR	Sredinnyy	2.71	275	PN	Pn	11 07 45.0	+1.2
SRDR	Sredinnyy	2.71	275	*e*P	Pn	11 07 45.1	+1.2
OSSR	Ossora	3.21	346	PN	Pn	11 07 50.1	-0.4
OSSR	Ossora	3.21	346	*e*P	Pn	11 07 50.2	-0.4
ESO	Esso	3.30	268	PN	Pn	11 07 52.7	+0.9
ESO	Esso	3.30	268	*e*P	Pn	11 07 52.7	+0.9
SPN	Mys Shipunski	4.04	223	*e*S	Sn	11 08 46.2	-2.8
SDLR	Sedlovina	4.38	231	PN	Pn	11 08 07.2	+0.5
SDLR	Sedlovina	4.38	231	*e*P	Pn	11 08 07.2	+0.5
SMAR	Somma	4.42	231	PN	Pn	11 08 07.6	+0.1
SMAR	Somma	4.42	231	*e*P	Pn	11 08 07.6	+0.1
KRX	Arik	4.42	233	PN	Pn	11 08 09.0	+1.6
KRX	Arik	4.42	233	*e*P	Pn	11 08 09.0	+1.6
UGLR	Uglovaya	4.45	231	PN	Pn	11 08 09.3	+1.6
UGLR	Uglovaya	4.45	231	*e*P	Pn	11 08 09.4	+1.6
KOK	Koryaka	4.47	233	PN	Pn	11 08 09.6	+1.5
KOK	Koryaka	4.47	233	*e*P	Pn	11 08 09.6	+1.5
GNL	Ganaly	4.54	240	PN	Pn	11 08 10.2	+1.2
GNL	Ganaly	4.54	240	*e*P	Pn	11 08 10.3	+1.2
DALK	Dalny	4.60	230	PN	Pn	11 08 10.3	+0.6
DALK	Dalny	4.60	230	*e*P	Pn	11 08 10.4	+0.6
PET	Petropavlovsk	4.65	230		Pn	11 08 11.8	+1.4
PET	Petropavlovsk	4.65	230	PN	Pn	11 08 10.9	+0.5
PET	Petropavlovsk	4.65	230	*e*P	Pn	11 08 11.0	+0.5
PEA0B	Petropavlovsk-	5.02	235	Pn	Pn	11 08 17.8	+2.3
PEA0B	Petropavlovsk-	5.02	235	PN	Pn	11 08 17.8	+2.3
PETK	Petropavlovsk-	5.02	235	Pn	Pn	11 08 16.4	+0.8
PETK	Petropavlovsk-	5.02	235	Pn	Pn	11 08 18.5	+3.0
	1.1nm,0.3s,baz=73,slow=19,SNR=2.3						
PETK				Sn	Sn	11 09 16.4	+3.2
	0.7nm,0.3s,baz=41,slow=27,SNR=1.4						
PETK				LR	LR	11 10 11.1	
	comp=Z,289nm,22.0s,baz=43,slow=38						
	4.3nm,0.6s						
RUS	Russkaya	5.14	226	PN	Pn	11 08 17.2	+0.1
RUS	Russkaya	5.14	226	*e*P	Pn	11 08 17.2	+0.1
GRL	Gorelyy	5.24	229	PN	Pn	11 08 20.2	+1.7
GRL	Gorelyy	5.24	229	*e*P	Pn	11 08 20.3	+1.7
MTVR	Mutnovka	5.24	228	PN	Pn	11 08 20.0	+1.4
MTVR	Mutnovka	5.24	228	*e*P	Pn	11 08 20.0	+1.4
ASAK	Asacha	5.43	229	PN	Pn	11 08 22.8	+1.6
ASAK	Asacha	5.43	229	*e*P	Pn	11 08 22.9	+1.6
SMY	Shemya	6.53	118	Pn	Pn	11 08 38.3	+2.0
SMY	Shemya	6.53	118	PN	Pn	11 08 38.3	+2.0
SKR	Severo-Kuril's	7.45	226	*i* PN	Pn	11 08 47.0	-1.8
SEY	Seymchan	9.18	323	⇓*i*PN	Pn	11 09 08.4	-4.0
ADK	Adak	11.82	103	Pn	Pn	11 09 47.9	-0.7
ADK	Adak	11.82	103	PN	Pn	11 09 47.9	-0.7
BILL	Bilibino	11.96	3	*i* PN	Pn	11 09 47.5	-2.9
ATKA	Atka Island	13.04	99	Pn	Pn	11 10 03.8	-1.5
NIKH	Nikolski High	15.70	91	Pn	P	11 10 42.2	-2.9
L14K	Kuka Creek	17.64	59	P	P	11 11 08.2	+1.7
M14K	Bethel	17.98	61	P	P	11 11 10.2	0.0
M14K				IAmb	IAmb	11 11 27.4	
	comp=Z,33nm,1.1s						
C16K	Lisburne Hills	18.29	36	P	P	11 11 14.4	+0.7
JKA	Kamikawa-asahi	18.43	238		Pn	11 11 16.7	+1.2
JKA				IAmb	IAmb	11 11 25.7	
	comp=Z,23nm,0.9s						
ASAJ	Asahikawa	18.43	238	P	Pn	11 11 17.1	+1.6
	comp=Z,0.6nm,0.3s,baz=86,slow=13,SNR=9.0						
	comp=Z,12nm,0.8s						
YAK	Yakutsk	18.68	303	LR	LR	11 18 28.8	
	comp=Z,133nm,21.2s,baz=95,slow=37						
N15K	Kwethluk River	18.92	63		Pn	11 11 23.6	+2.3
N15K				IAmb	IAmb	11 11 31.0	
	comp=Z,15nm,0.8s						
RDOG	Red Dog Mine	19.03	38	P	Pn	11 11 24.2	+1.6
RDOG				IAmb	IAmb	11 12 03.9	
	comp=Z,9.7nm,0.5s						
O15K	Ungalikthiuk R	19.14	66	P	Pn	11 11 24.1	+0.1
O15K				IAmb	IAmb	11 11 35.1	
	comp=Z,16nm,1.1s						
L16K	Owhat River	19.18	58	P	Pn	11 11 24.5	0.0
H17K	Granite Mounta	19.30	49	P	Pn	11 11 24.7	-1.1
M16K	Timber Creek	19.44	60	P	Pn	11 11 27.0	-0.5
J17K	VABM Dome	19.45	53	P	Pn	11 11 27.6	0.0
J17K				IAmb	IAmb	11 11 34.2	
	comp=Z,21nm,1.5s						
K17K	Iditarod	19.76	55	P	Pn	11 11 30.4	-1.0
K17K				IAmb	IAmb	11 11 42.1	
	comp=Z,18nm,1.1s						
ERM	Erimo	19.80	233	P	Pn	11 11 31.4	-0.5
ERM	Erimo	19.80	233	P	Pn	11 11 31.4	-0.5
ERM				pmax	pmax		
	comp=Z,21nm,0.9s						
C18K	Utukok River	19.84	37		Pn	11 11 31.3	-1.1
C18K				IAmb	IAmb	11 11 34.9	
	comp=Z,12nm,0.9s						
O16K	Kokwok River B	19.97	65	P	Pn	11 11 34.6	+0.7
O16K				IAmb	IAmb	11 11 47.6	
	comp=Z,14nm,1.2s						
H18K	Honhosa River	19.98	48	P	Pn	11 11 34.5	+0.6
H18K				IAmb	IAmb	11 12 18.6	
	comp=Z,18nm,1.4s						
M17K	Holitna River	20.16	59		Pn	11 11 35.7	-0.4
M17K				IAmb	IAmb	11 11 42.5	
	comp=Z,17nm,0.9s						
L18K	Granite Mounta	20.50	57	P	Pn	11 11 39.2	-0.8
F19K	Shaleruckik Mo	20.54	44		Pn	11 11 41.1	+0.7
F19K				IAmb	IAmb	11 11 43.1	
	comp=Z,16nm,1.1s						
C19K	Lookout Ridge	20.55	37	P	Pn	11 11 41.0	+0.3
H19K	Roundabout Mou	20.83	47	P	Pn	11 11 43.7	-0.1
D19K	Kuna River	20.86	39		Pn	11 11 43.4	-0.8
D19K				IAmb	IAmb	11 11 58.7	
	comp=Z,28nm,1.4s						
E19K	Redstone River	20.89	42	P	Pn	11 11 44.5	-0.1
KLR	Kul'dur	20.91	265	LR	LR	11 20 00.7	
	comp=Z,84nm,19.3s,baz=65,slow=37						
KLR	Kul'dur	20.91	265	*e*P	P	11 11 42.3	-0.1
N18K	Kilae Creek	20.96	61	P	Pn	11 11 45.8	+0.3
J19K	Poorman	21.03	52			11 11 45.0	
F20K	Avaraart Lake	21.38	43		P	11 11 50.0	+2.8
D20K	Etivluk River	21.45	39	P	P	11 11 48.9	+0.8
D20K				IAmb	IAmb	11 12 00.7	
	comp=Z,24nm,1.4s						
P18K	Big Mountain,	21.45	65	P	P	11 11 50.0	+1.9
TIXI	Tiksi	21.56	330		P	11 11 49.8	+0.7
TIXI	Tiksi	21.56	330	P	P	11 11 51.1	+2.0
	comp=Z,1.2nm,0.6s,baz=122,slow=8.7,SNR=5.2						
TIXI				LR	LR	11 21 06.8	
	comp=Z,116nm,19.5s,baz=138,slow=39						
	comp=Z,1.2nm,0.6s						
ACHA	Angle Creek He	21.61	68	P	P	11 11 51.6	+1.7
N19K	Bonanza Creek	21.64	61	P	P	11 11 52.3	+2.1
N19K				IAmb	IAmb	11 12 16.5	
	comp=Z,14nm,1.3s						
JTM	Tenmabayashi	21.73	235	P	P	11 11 51.5	+0.3
E21K	Killik River	22.32	40	P	P	11 11 58.6	+1.2
H21K	Melozitna Rive	22.35	48	P	P	11 12 00.4	+2.7
H21K				IAmb	IAmb	11 12 38.8	
	comp=Z,14nm,1.4s						
B21K	Ikpikpuk River	22.39	37		P	11 12 00.2	+2.1
B21K				IAmb	IAmb	11 12 02.7	
	comp=Z,15nm,1.0s						
ILSW	Iliamna Southw	22.40	63	P	P	11 12 01.1	+2.6
RED	Redoubt Volcan	22.52	61	P	P	11 12 02.5	+2.8
PPLA	Purkeypile	22.57	55	P	P	11 12 02.6	+2.4
PPLA				IAmb	IAmb	11 12 28.5	
	comp=Z,15nm,1.2s						
B22K	Teshekpuk Lake	22.99	35		P	11 12 06.1	+1.7
B22K				IAmb	IAmb	11 12 50.3	
	comp=Z,10nm,1.0s						
E22K	Anaktuvuk Pass	23.05	41		P	11 12 06.3	+1.2
BPAW	Bear Paw Mtn.	23.07	52		P	11 12 08.4	+3.0
BPAW				IAmb	IAmb	11 12 52.2	
	comp=Z,17nm,1.4s						
KDAK	Kodiak Island	23.13	68	P	P	11 12 06.2	+0.2
KDAK				IAmb	IAmb	11 12 16.9	
	comp=Z,8.7nm,0.9s						
KDAK	Kodiak Island	23.13	68	P	P	11 12 06.2	+0.2
KDAK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SUA	Susitna One	23.36	58	P	P	11 12 09.7	+1.2
SUA				IAmb	IAmb	11 12 11.9	
	comp=Z,9.1nm,1.0s						
TRF	Thorofare Moun	23.40	53	IAmb	IAmb	11 12 37.6	
	comp=Z,8.3nm,1.0s						
CNPM	China Poot	23.43	63	P	P	11 12 09.1	0.0
CNPM				IAmb	IAmb	11 12 19.3	
	comp=Z,9.5nm,0.8s						
G23K	Bananza Creek	23.56	45	P	P	11 12 11.9	+1.6
BRLK	Bradley Lake	23.56	63	IAmb	IAmb	11 12 14.3	
	comp=Z,10.0nm,0.9s						
H23K	Yukon River	23.70	47	IAmb	IAmb	11 12 38.5	
	comp=Z,9.4nm,1.1s						
I23K	Minto, Yukon-K	23.77	49	IAmb	IAmb	11 12 58.4	
	comp=Z,15nm,1.1s						
USA0B	Ussuriysk Arra	23.80	254	*e*P	P	11 12 09.4	-3.3
E23K	Chandalar	23.85	42	IAmb	IAmb	11 12 45.7	
	comp=Z,10nm,1.1s						
TOLK	Toolik Lake Re	23.95	40		P	11 12 14.5	+0.5
TOLK				IAmb	IAmb	11 12 17.0	
	comp=Z,12nm,1.2s						
GHO	Glory Hole Cre	24.19	57	IAmb	IAmb	11 12 22.3	
	comp=Z,6.5nm,1.0s						
SEW	Seward	24.21	61	IAmb	IAmb	11 12 26.1	
	comp=Z,10nm,0.9s						
E24K	Your Creek	24.27	42	P	P	11 12 18.7	+1.7
E24K				IAmb	IAmb	11 12 29.7	
	comp=Z,6.3nm,0.8s						
C24K	Franklin Bluff	24.43	38	P	P	11 12 19.6	+1.3
C24K				IAmb	IAmb	11 12 21.4	
	comp=Z,11nm,1.0s						
CCB	Clear Creek Bu	24.44	50		P	11 12 20.5	+2.0
KNK	Knik Glacier	24.46	58	IAmb	IAmb	11 12 22.4	
	comp=Z,8.5nm,0.8s						
G24K	Hadweenzic Riv	24.57	45		P	11 12 21.2	+1.5
PWL	Port Wells	24.61	59	P	P	11 12 19.8	-0.3
IL31		24.83	50	P	P	11 12 22.6	+0.6
IL31				IAmb	IAmb	11 13 08.3	
	comp=Z,11nm,1.2s						
ILAR	Eielson Array	24.83	50	P	P	11 12 22.7	+0.7
ILAR	Eielson Array	24.83	50	P	P	11 12 22.0	0.0
	comp=Z,1.6nm,0.9s,baz=266,slow=8.8,SNR=13						
ILAR				PcP	PcP	11 15 58.4	+0.8
	comp=Z,0.1nm,0.5s,baz=296,slow=3.1,SNR=1.3						
	comp=Z,1.6nm,0.9s						
SCM	Sheep Creek Mo	24.93	57	P	P	11 12 23.9	+0.9
SCM	Sheep Creek Mo	24.93	57	P	P	11 12 23.9	+0.9
SCM				pmax	pmax		
	comp=Z,19nm,0.9s						
D25K	Kavik River	25.18	39	IAmb	IAmb	11 12 38.0	
	comp=Z,7.3nm,1.1s						
JSD	Sado	25.23	235		P	11 12 26.6	+0.8
F25K	Christian Rive	25.32	43	IAmb	IAmb	11 12 40.2	
	comp=Z,7.1nm,1.1s						
E25K	Arctic Village	25.37	42	IAmb	IAmb	11 12 46.6	
	comp=Z,10nm,1.2s						
M24K	Tolsona, Glenn	25.42	56	P	P	11 12 29.5	+2.0
J25K	Salcha River,	25.49	50	IAmb	IAmb	11 13 15.6	
	comp=Z,8.6nm,1.3s						
KLU	Klutina	25.65	57	IAmb	IAmb	11 12 36.1	
	comp=Z,4.3nm,0.7s						
MJB9	Matsu-Tunnel	26.48	233	P	P	11 12 39.5	+2.4
MAJO	Matsushiro	26.48	233		P	11 12 39.1	+2.0
MAJO	Matsushiro	26.48	233	P	P	11 12 39.2	+2.0
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MJAR	Matsushiro Arr	26.48	233	P	P	11 12 37.6	+0.4
	comp=Z,3.0nm,0.6s,baz=32,slow=8.2,SNR=9.6						
MJAR				LR	LR	11 23 07.3	
	comp=Z,72nm,22.0s,baz=38,slow=36						
	comp=Z,3.0nm,0.6s						
H27K	Steamboat Moun	26.97	46	IAmb	IAmb	11 13 15.3	
	comp=Z,6.3nm,1.1s						
K27K	Chicken	26.98	51	IAmb	IAmb	11 13 10.4	
	comp=Z,5.7nm,1.0s						
BCAR	Beaver Creek A	27.27	53	P	P	11 12 44.3	+0.2
M27K	Edge Creek, AK	27.36	55	P	P	11 12 46.4	+1.3
M27K				IAmb	IAmb	11 13 02.3	
	comp=Z,5.4nm,1.0s						
I29M	Ogilvie Camp,	28.39	48	IAmb	IAmb	11 13 27.1	
	comp=Z,6.7nm,1.2s						
KSRS	Korea Array	30.77	248	P	P	11 13 17.2	+1.9
	comp=Z,0.4nm,0.3s,baz=38,slow=8.6,SNR=1.3						
	comp=Z,0.4nm,0.3s						
M31M	Drury Creek, Y	30.79	53	IAmb	IAmb	11 13 26.9	
	comp=Z,4.9nm,1.2s						
XLT	XiLinHaoTe	32.78	269	*e*P	P	11 13 29.8	-3.3
XLT				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NRIK	Noril'sk	34.97	323	LR	LR	11 28 52.3	
	comp=Z,129nm,21.1s,baz=72,slow=38						
SONM	Songino Array	35.78	282	P	P	11 13 59.9	+0.8
	comp=Z,1.0nm,0.8s,baz=44,slow=11,SNR=2.4						
SONM				LR	LR	11 29 51.8	
	comp=Z,124nm,19.1s,baz=50,slow=38						
	comp=Z,1.0nm,0.8s						
H11N2	WAKE ISLAND Hy	36.41	176	T	T	11 52 55.3	
	baz=357,slow=76,SNR=43						
H11N3	WAKE ISLAND Hy	36.42	176	T	T	11 53 00.5	
	baz=357,slow=76,SNR=41						
H11N1	WAKE ISLAND Hy	36.43	176	T	T	11 52 58.3	
	baz=357,slow=76,SNR=43						
YKA	Yellowknife Ar	39.16	47	P	P	11 14 26.9	-0.3
	comp=Z,0.6nm,0.8s,baz=301,slow=8.6,SNR=5.0						
YKA				LR	LR	11 32 08.1	
	comp=Z,81nm,18.4s,baz=260,slow=38						
	comp=Z,0.6nm,0.8s						
YKA	Yellowknife Ar	39.16	47	P	P	11 14 27.0	-0.3
ZALV	Zalesovo Beam	43.33	302	LR	LR	11 35 11.3	
	comp=Z,93nm,19.7s,baz=44,slow=39						
SPITS	Spitsbergen Ar	44.53	351	P	P	11 15 11.8	+0.8
	comp=Z,3.2nm,0.8s,baz=12,slow=7.4,SNR=1.8						
	comp=Z,3.2nm,0.8s						
B08A	Colville Reser	44.99	66		P	11 15 16.2	+1.1
B08A				IAmb	IAmb	11 15 18.7	
	comp=Z,3.8nm,1.0s						
BLKN	Baker Lake	45.09	37		P	11 15 16.1	+0.5
J05D	Fort Rock, OR	47.35	73		P	11 15 35.3	+1.4
KURK	Kurchatov	48.32	302	P	P	11 15 42.8	+1.7
KURBB	Kurchatov Arra	48.43	302	P	P	11 15 42.8	+0.8
	comp=Z,0.6nm,0.3s,baz=50,slow=7.2,SNR=4.1						
KURBB				LR	LR	11 37 23.6	
	comp=Z,87nm,18.3s,baz=172,slow=38						
	comp=Z,0.6nm,0.3s						
MKAR	Makanchi Array	49.16	296	P	P	11 15 47.5	-0.2
	comp=Z,0.3nm,0.6s,baz=58,slow=8.7,SNR=3.7						
MKAR				LR	LR	11 37 54.2	
	comp=Z,54nm,19.8s,baz=56,slow=38						
	comp=Z,0.3nm,0.6s						
BVAR	Borovoye Array	50.51	309	P	P	11 15 58.4	+0.5
	comp=Z,1.0nm,0.5s,baz=51,slow=7.8,SNR=5.4						
BVAR				LR	LR	11 40 18.1	
	comp=Z,121nm,18.7s,baz=42,slow=40						
	comp=Z,1.0nm,0.5s						
NVAR	Mina Array Bea	52.35	75	P	P	11 16 12.8	+0.7
	comp=Z,1.3nm,0.9s,baz=313,slow=7.7,SNR=6.3						
	comp=Z,1.3nm,0.9s						
ARTI	Arti	52.98	318	LR	LR	11 42 22.3	
	comp=Z,96nm,19.6s,baz=27,slow=40						
ARTI	Arti	52.98	318	*d i*P	P	11 16 11.1	-5.1
ARTI				S	S	11 23 40.6	-4.0
ARTI				pmax	pmax		
	comp=Z,5.0nm,1.9s						
PDAR	Pinedale Array	53.82	66	P	P	11 16 24.1	+1.3
	comp=Z,1.5nm,0.8s,baz=321,slow=3.8,SNR=11						
	comp=Z,1.5nm,0.8s						

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
SPR3	**Spring Creek 3**	54.06	72		**P**	**11 16 27.1**	**+2.3**
SPR3				IAmb	IAmb	11 16 36.4	
	comp=Z,3.3nm,1.0s						
SFJD	**Kangerlussuaq**	54.38	16	LR	LR	11 41 30.1	
	comp=Z,23nm,19.6s,baz=346,slow=38						
KIRV	**Kirov**	54.45	324	LR	LR	11 41 20.7	
	comp=Z,74nm,19.0s,baz=36,slow=38						
TMUT	**Trail Mountain**	55.50	70	IAmb	IAmb	11 16 46.0	
	comp=Z,2.8nm,0.9s						
MVU	**Marysvale**	55.55	71	IAmb	IAmb	11 16 46.7	
	comp=Z,2.2nm,1.0s						
AAK	**Ala-Archa**	56.02	297	⇑iP	**P**	**11 16 38.0**	**-0.7**
AAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KKAR	**Karatay Array**	57.63	300		**P**	**11 16 51.5**	**+1.6**
KKAR	**Karatay Array**	57.63	300	P	**P**	**11 16 51.5**	**+1.6**
AKTO	**Aktyubinsk**	57.64	313	LR	LR	11 41 53.6	
	comp=Z,81nm,19.7s,baz=182,slow=36						
ABKAR	**Akbulak array**	57.75	311	P	**P**	**11 16 51.3**	**+0.7**
BELG	**Belogornoye**	60.03	321	i P	**P**	**11 17 02.5**	**-3.8**
BELG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NB2	**NORSAR Subarra**	61.27	346	P	**P**	**11 17 15.2**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=18,slow=6.9						
NOA	**NORSAR Array B**	61.27	346	P	**P**	**11 17 15.2**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=18,slow=6.9,SNR=4.4						
	comp=Z,1.2nm,0.8s						
CMAR	**Chiang Mai Arr**	61.31	260	P	**P**	**11 17 16.9**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=14,slow=7.1,SNR=4.3						
	comp=Z,0.4nm,0.3s						
CMAR	**Chiang Mai Arr**	61.31	260	P	**P**	**11 17 17.0**	**+1.4**
HFS	**Hagfors**	61.78	344	P	**P**	**11 17 17.7**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=20,slow=4.6,SNR=4.7						
	comp=Z,0.9nm,0.5s						
VORR	**Voronezh**	63.46	325	eP	**P**	**11 17 30.3**	**+0.8**
VORR				pmax	pmax		
	comp=Z,24nm,1.4s						
TXAR	**Lajitas Array**	67.12	71	P	**P**	**11 17 54.9**	**+1.2**
	comp=Z,1.0nm,0.7s,baz=302,slow=4.6,SNR=9.3						
	comp=Z,1.0nm,0.7s						
AKBB	**Malin Array Si**	67.26	331	i P	**P**	**11 17 51.2**	**-2.9**
AKBB				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KBZ	**Khabaz**	69.03	319	P	**P**	**11 18 07.9**	**+2.6**
	comp=Z,1.7nm,0.8s,baz=18,slow=7.3,SNR=4.0						
KBZ				LR	LR	11 51 34.1	
	comp=Z,104nm,19.7s,baz=24,slow=39						
	comp=Z,1.7nm,0.8s						
GNI	**Garni**	71.40	315	LR	LR	11 54 06.2	
	comp=Z,123nm,19.6s,baz=25,slow=40						
WRA	**Warramunga Arr**	79.99	209	P	**P**	**11 19 10.3**	**+1.2**
	comp=Z,0.6nm,0.9s,baz=32,slow=5.8,SNR=4.8						
	comp=Z,0.6nm,0.9s						
PPT	**Papeete**	82.93	136	LR	LR	11 47 47.1	
	comp=Z,34nm,20.8s,baz=318,slow=30						
ASAR	**Alice Springs**	83.66	208	P	**P**	**11 19 30.4**	**+2.0**
	comp=Z,0.5nm,0.7s,baz=15,slow=6.8,SNR=7.1						
	comp=Z,0.5nm,0.7s						
EIL	**Elat**	84.39	318	LR	LR	12 01 17.0	
	comp=Z,42nm,18.1s,baz=65,slow=39						
QSPA	**South Pole Qui**	145.91	180	PKPbc	**PKPbc**	**11 26 37.3**	**-0.7**
	comp=Z,2.9nm,1.0s,baz=355,slow=2.4,SNR=5.3						

KRNET ***26*** *11:10:29.2±0.1, 41°.20N×69°.57E, h20km, mb2.7*

ISC 26 11:10:33.1±2.2**, 41°.13N**±0°.04×**69°.73E**±0°.09**, h5**km±15km**,**
n8,σ**1.s24**/14**, 8C-6D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRKS	**Terek-Say**	1.14	69	⇓iP	Pg	11 10 52.5	-2.4
TRKS				⇓iS	**Sg**	**11 11 09.2**	**-0.5**
BTK	**Batken**	1.35	142	⇑iP	Pn	11 10 56.5	-2.3
BTK				⇑iS	**Sg**	**11 11 16.5**	**0.0**
ARK	**Arkit**	1.81	68	⇓eP	**Pn**	**11 11 03.8**	**-1.3**
ARK				⇓eS	**Sn**	**11 11 29.3**	**+0.8**
KK31	**Karatay Array**	2.06	16	Pn	**Pb**	**11 11 11.1**	**+0.1**
	1.7nm,0.3s,baz=201,slow=14,SNR=23						
KK31				Sn	**Sg**	**11 11 41.3**	**+2.0**
	6.4nm,0.4s,baz=206,slow=28,SNR=22						
GAR	**Garm**	2.17	168	⇑iP	**Pn**	**11 11 08.9**	**-1.1**
GAR				⇑iS	**Sn**	**11 11 37.9**	**+0.5**
DRK	**Karamyk**	2.29	135	⇑eP	**Pn**	**11 11 11.3**	**-0.5**
DRK				⇑eS	**Sn**	**11 11 42.2**	**+1.7**
OHH	**Osh**	2.40	104	⇓eP	**Pn**	**11 11 12.9**	**-0.2**
OHH				⇓eS	**Sn**	**11 11 44.2**	**+1.2**
MNAS	**Manas**	2.48	56	⇑eP	**Pn**	**11 11 12.9**	**-1.4**
MNAS				⇑eS	**Sn**	**11 11 44.6**	**-0.5**

IDC ***26*** *11:28:13.3±2.2, 6°.61S×130°.71E, h0km, mb3.8/1,*
mbtmp3.7/4, ML3.7/3, Error ellipse: s-maj=85.9km
s-min=28.2km az=78.0

ISC 26 11:28:20.8±0.9**, 6°.53S**±0°.05×**131°.1E**±0°.1**, h100**km**, n14,**
σ**2.s23**/14**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	1.45	172	P	**Pn**	**11 28 47.9**	**+1.4**
BNDI	**Bandanaira**	2.33	329	P	**Pn**	**11 28 57.3**	**-0.4**
FAKI	**Fak Fak**	3.77	18	P	**Pn**	**11 29 16.8**	**-0.1**
FAKI	**Fak Fak**	3.77	18	S	**Sn**	**11 29 59.3**	**-1.0**
DRS	**Darwin Rock St**	5.86	182	P	**Pn**	**11 29 46.0**	**+0.7**
DRS	**Darwin Rock St**	5.86	182	S	**Sn**	**11 30 50.0**	**-1.2**
KDU	**Kakadu**	6.26	168	P	**Pn**	**11 29 50.4**	**-0.3**
MTN	**Manton Dam**	6.27	180	P	**Pn**	**11 29 51.2**	**+0.4**
FITZ	**Fitzroy Crossi**	12.67	204	Pn	**Pn**	**11 31 13.3**	**-4.2**
	0.6nm,0.3s,baz=23,slow=12,SNR=24						
FITZ				Sn	Sn	11 33 24.5	-12
	0.8nm,0.3s,baz=167,slow=18,SNR=7.4						
	1.9nm,0.4s						
FITZ	**Fitzroy Crossi**	12.67	204	P	**Pn**	**11 31 15.0**	**-2.5**
WRA	**Warramunga Arr**	13.69	167	Pn	**Pn**	**11 31 28.0**	**-2.9**
	0.3nm,0.3s,baz=347,slow=13,SNR=24						
WRA				Sn	Sn	11 33 50.2	-11
	0.8nm,0.3s,baz=336,slow=24,SNR=11						
	0.9nm,0.6s						
COEN	**Coen**	13.97	123	P	**Pn**	**11 31 34.8**	**+0.2**
ASAR	**Alice Springs**	17.25	171	P	**Pn**	**11 32 15.3**	**-0.2**
	0.3nm,0.3s,baz=347,slow=9.7,SNR=31						
ASAR				S	Sn	11 35 15.5	-12
	1.0nm,0.8s,baz=359,slow=27,SNR=7.4						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	68.44	326	P	**P**	**11 39 16.3**	**+4.2**
	0.4nm,0.4s,baz=118,slow=6.9,SNR=7.1						
	0.4nm,0.4s						

CATAC ***26*** *11:31:55.5±0.8, 8°N±4°×8°3W±°, h1km, M3.7/8, MLv3.7/8,*
Error ellipse: s-maj=9.3km s-min=6.5km az=161.8,
confirmed

UCR ***26*** *11:31:56.5±1.4, 8°.28N×82°.81W, h15km±6km, MW3.7*

ISC 26 11:31:55.3±1.5**, 8°.23N**±0°.07×**82°.85W**±0°.04**, h17**km±9km**,**
n51,σ**1.s12**/56**, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDITO	**Canoas**	0.34	355	P	**Pb**	**11 32 03.4**	**+0.5**
NELY	**Ciudad Neily**	0.42	347	eP	**Pg**	**11 32 04.6**	**+0.6**
NELY				eS	**Sb**	**11 32 11.0**	**+0.4**
MCANO	**Manzana, Boque**	0.43	39	eP	**Pb**	**11 32 05.0**	**+0.4**
CSTBL	**De las Acacias**	0.44	66	eP	**Pb**	**11 32 05.5**	**+0.8**
FITO	**Golfito**	0.49	322	eP	**Pg**	**11 32 05.3**	**+0.1**
FITO				eS	**Sg**	**11 32 12.5**	**+0.6**
EDAD	**Golfito**	0.52	323	eP	**Pg**	**11 32 05.8**	**0.0**
EDAD				eS	**Sg**	**11 32 13.2**	**+0.3**
BRU2	**Volcan**	0.58	15	P	**Pg**	**11 32 06.6**	**-0.2**
BRU2				S	**Sg**	**11 32 14.2**	**-0.5**
RSRNO	**Rio Sereno**	0.58	359	eP	**Pg**	**11 32 06.7**	**-0.2**
TBS2		0.59	19	eP	**Pb**	**11 32 07.8**	**+0.5**
VITO	**San Vito**	0.59	348	eP	**Pg**	**11 32 07.5**	**+0.3**
BQTLY	**Boquete Panama**	0.65	36	eP	**Pg**	**11 32 07.8**	**-0.4**
ALCO	**Alturas Coton,**	0.71	1	eP	**Pg**	**11 32 08.4**	**-1.0**
EDP2	**Potrero Grande**	0.84	337	eP	**Pg**	**11 32 11.2**	**-0.6**
EDP2				eS	**Sg**	**11 32 22.7**	**-0.3**
PBNVO	**Pueblo Nuevo,**	0.92	45	eP	**Pb**	**11 32 11.5**	**-1.3**
RBALA	**Bur**	0.94	47	eP	**Pb**	**11 32 12.2**	**-1.0**
PANP	**Palmar Norte**	0.94	320	eP	**Pb**	**11 32 12.7**	**-0.6**
RMDIO	**Remedios, Chir**	1.00	90	eP	**Pb**	**11 32 14.6**	**+0.2**
BURE	**Buenos Aires**	1.05	332	eP	**Pb**	**11 32 14.3**	**-0.9**
DRK0	**Durika**	1.10	339	eP	**Pb**	**11 32 14.7**	**-1.3**
DRK0	**Durika**	1.10	339	P	**Pb**	**11 32 14.5**	**-1.5**
DRK0	**Durika**	1.10	339	S	**Sb**	**11 32 28.0**	**-2.1**
PDCAN	**Manzana , Fuen**	1.14	87	eP	**Pb**	**11 32 15.6**	**-1.0**
OCHAL	**Ojochal**	1.17	317	P	**Pn**	**11 32 16.1**	**-0.9**
OCHAL	**Ojochal**	1.17	317	S	**Sb**	**11 32 31.6**	**-0.4**
KKNTU	**Kakintº**	1.19	60	eP	**Pb**	**11 32 15.7**	**-1.8**
SAJE	**San Jernim**	1.28	329	eP	**Pn**	**11 32 17.4**	**-1.3**
BRIBI	**Bribri**	1.38	1	eP	**Pn**	**11 32 20.6**	**+0.7**
PIEC	**Cerro El Cedra**	1.76	322	eP	**Pn**	**11 32 25.1**	**-0.3**
VINA	**Juan Vinas**	1.88	332	eP	**Pn**	**11 32 27.3**	**+0.4**
PISJ	**San Jernim**	1.88	318	eP	**Pn**	**11 32 28.3**	**+1.5**
LCR2	**La Lucha 2**	1.89	323	P	**Pn**	**11 32 27.6**	**+0.5**
LCR2	**La Lucha 2**	1.89	323	S	**Sn**	**11 32 51.4**	**+0.8**
ABE2	**San Pablo**	1.89	321	eP	**Pn**	**11 32 28.8**	**+1.7**
PICV	**PH. Pirrs**	1.92	316	eP	**Pn**	**11 32 28.5**	**+1.1**
PCAYA	**Pacayas**	1.93	330	eS	**Sn**	**11 32 51.9**	**+0.3**
PAR1A	**Puntarenas Pro**	1.94	314	eP	**Pn**	**11 32 28.5**	**+0.9**
VTCV	**VTCV, Calle Va**	1.94	333	eP	**Pn**	**11 32 28.2**	**+0.4**
CVTV	**Tajo**	1.97	333	eP	**Pn**	**11 32 28.9**	**+0.5**
CVTQ	**Turrialba Volc**	1.98	333	eP	**Pn**	**11 32 29.1**	**+0.6**
HDC	**Heredia**	2.16	325	eP	**Pn**	**11 32 33.1**	**+2.4**
HEME	**Heredia, Merce**	2.17	324	eP	**Pn**	**11 32 33.0**	**+2.2**
BELE	**Belen**	2.18	323	eP	**Pn**	**11 32 32.6**	**+1.6**
TRT2	**Tortugero**	2.47	339	P	**Pn**	**11 32 35.4**	**+0.5**
TRT2	**Tortugero**	2.47	339	S	**Sb**	**11 33 10.4**	**+0.9**
CBL1	**Cabuya**	2.59	301	eP	**Pn**	**11 32 36.5**	**-0.1**
ITAL	**Pital**	2.61	328	eP	**Pn**	**11 32 39.0**	**+2.2**
SOCE	**Pocosol**	2.76	321	P	**Pn**	**11 32 41.0**	**+2.1**
SOCE	**Pocosol**	2.76	321	S	**Sb**	**11 33 18.6**	**+0.7**
COVE	**Coope Vega, Sa**	2.91	328	P	**Pn**	**11 32 43.5**	**+2.6**
INDI	**Punta indio, G**	3.08	302	P	**Pn**	**11 32 43.5**	**+0.2**
INDI	**Punta indio, G**	3.08	302	S	**Sn**	**11 33 18.7**	**-1.1**

IDC ***26*** *11:55:02.5±1.4, 56°.25N×164°.16E, h0km, mb3.6/7,*
mbtmp3.6/8, ML2.1/1, MS2.8/4, Error ellipse:
s-maj=102.4km s-min=17.6km az=140.0

KRSC ***26*** *11:55:03.0±1.7, 56°.21N×164°.42E, h50km±22km, Ml3.9*

ISC 26 11:55:02.6±1.6**, 56°.22N**±0°.04×**164°.32E**±0°.03**, h4**km±10km**,**
n51,σ**1.s62**/64**, mb3.6**/7**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	0.84	270	eP	**Pg**	**11 55 19.1**	**+0.4**
KBTR				eS	**Sg**	**11 55 30.4**	**+0.8**
KBG	**Krutoberegovo**	0.90	273	eP	**Pg**	**11 55 20.0**	**+0.1**
KBG				eS	**Sb**	**11 55 32.7**	**-0.4**
BKI	**Bering**	1.38	137	eP	**Pb**	**11 55 27.7**	**-1.3**
BKI				eS	**Sb**	**11 55 44.8**	**-2.1**
SMKR	**Semkarok**	1.63	284	eP	**Pb**	**11 55 32.3**	**-0.9**
SMKR				eS	**Sn**	**11 55 52.6**	**-0.9**
BDR	**Baidarnaya**	1.77	283	eS	**Sb**	**11 55 57.3**	**-0.8**
SRKR	**Sorokina**	1.81	285	eP	**Pb**	**11 55 35.8**	**-0.5**
SRKR				eS	**Sb**	**11 55 58.2**	**-1.0**
ZLN	**Zelenaya**	1.98	266	eP	**Pb**	**11 55 38.2**	**-1.1**
ZLN				eS	**Sb**	**11 56 03.5**	**-0.8**
CIRR	**Tsirk**	2.00	268	eP	**Pb**	**11 55 38.6**	**-1.0**
LGNR	**Loginova**	2.04	268	eP	**Pb**	**11 55 38.7**	**-1.6**
LGNR				eS	**Sb**	**11 56 04.6**	**-1.5**
KLY	**Klyuchi**	2.05	274	eP	**Pn**	**11 55 37.0**	**-0.8**
KLY				eS	**Sn**	**11 56 01.5**	**-2.3**
BZGR	**Bezymyannyi-Gr**	2.05	264	eP	**Pb**	**11 55 39.1**	**-1.4**
BZGR				eS	**Sb**	**11 56 04.9**	**-1.4**
KRSR	**Krestovskiy**	2.10	271	eP	**Pn**	**11 55 39.4**	**+0.8**
KRSR				eS	**Sn**	**11 56 05.4**	**+0.2**
BZWR	**Bezymyannyi-We**	2.16	265	eP	**Pb**	**11 55 40.5**	**-1.8**
BZMR	**Bezymyannaya**	2.17	264	eP	**Pb**	**11 55 40.8**	**-1.7**
BZMR				eS	**Sb**	**11 56 08.0**	**-1.7**
MKZ	**Mys Kozlova**	2.23	223	eP	**Pn**	**11 55 39.7**	**-0.6**
MKZ				eS	**Sn**	**11 56 05.7**	**-2.5**
KIRR	**Kirishev**	2.25	265	eP	**Pb**	**11 55 42.2**	**-1.6**
KIRR				eS	**Sb**	**11 56 10.2**	**-1.8**
KMNR	**Kamenistaya**	2.34	260	eP	**Pb**	**11 55 43.9**	**-1.6**
TUMD	**Tumrok D**	2.44	247	eP	**Pn**	**11 55 44.0**	**+0.7**
TUMD				eS	**Sn**	**11 56 13.9**	**+0.4**
KOZ	**Kozyrevsk**	2.50	268	eP	**Pn**	**11 55 45.3**	**+1.4**
SRDR	**Sredinnyy**	2.57	274	eP	**Pb**	**11 55 46.8**	**-2.5**
SRDR				eS	**Sn**	**11 56 18.0**	**+1.2**
OSSR	**Ossora**	3.11	348	eP	**Pn**	**11 55 51.8**	**-0.6**
OSSR				eS	**Sn**	**11 56 26.2**	**-3.8**
ESO	**Esso**	3.17	267	eP	**Pn**	**11 55 55.5**	**+2.3**
KII	**Karymskiy**	3.55	234	eP	**Pn**	**11 55 60.0**	**+1.4**
SPN	**Mys Shipunski**	4.00	220	eP	**Pn**	**11 56 05.0**	**+0.4**
SPN				eS	**Sn**	**11 56 47.2**	**-4.7**
SDLR	**Sedlovina**	4.32	229	eP	**Pn**	**11 56 09.8**	**+0.7**
KRX	**Arik**	4.36	231	eP	**Pn**	**11 56 11.1**	**+1.4**
SMAR	**Somma**	4.36	229	eP	**Pn**	**11 56 10.6**	**+0.8**
AVH	**Avacha**	4.39	230	eP	**Pn**	**11 56 11.3**	**+1.3**
KOK	**Koryaka**	4.41	231	eP	**Pn**	**11 56 11.8**	**+1.4**
GNL	**Ganaly**	4.46	238	eP	**Pn**	**11 56 12.7**	**+1.6**
DALK	**Dalny**	4.55	228	eP	**Pn**	**11 56 13.1**	**+1.0**
DALK				eS	**Sn**	**11 57 02.8**	**-2.6**
PET	**Petropavlovsk**	4.59	228	eP	**Pn**	**11 56 14.7**	**+2.0**
PET				eS	**Sn**	**11 57 05.8**	**-0.7**
PETK	**Petropavlovsk-**	4.95	234	Pn	**Pn**	**11 56 19.0**	**+1.3**
	0.4nm,0.3s,baz=82,slow=17,SNR=5.7						
PETK				Sn	**Sn**	**11 57 15.6**	**+0.3**
	0.5nm,0.3s,baz=77,slow=18,SNR=3.5						
	3.6nm,0.7s						
GRL	**Gorelyy**	5.18	227	eP	**Pn**	**11 56 23.1**	**+2.2**
MTVR	**Mutnovka**	5.19	226	eP	**Pn**	**11 56 24.1**	**+3.0**
ASAK	**Asacha**	5.38	227	eP	**Pn**	**11 56 25.7**	**+2.1**
MA2	**Magadan**	7.96	301	LR	LR	11 59 44.2	
	comp=Z,24nm,21.0s,baz=134,slow=36						
SEY	**Seymchan**	9.04	323	LR	LR	12 00 53.7	
	comp=Z,46nm,18.4s,baz=294,slow=39						
ILAR	**Eielson Array**	24.89	50	P	**P**	**12 00 26.3**	**+0.2**
	0.5nm,0.9s,baz=255,slow=9.3,SNR=5.2						
	0.5nm,0.9s						
H11N2	**WAKE ISLAND Hy**	36.48	176	T	T	12 40 54.4	
	baz=357,slow=76,SNR=23						
H11N3	**WAKE ISLAND Hy**	36.50	176	T	T	12 41 06.3	
	baz=357,slow=76,SNR=69						
H11N1	**WAKE ISLAND Hy**	36.50	176	T	T	12 41 03.9	
	baz=357,slow=76,SNR=88						
YKA	**Yellowknife Ar**	39.21	47	P	**P**	**12 02 32.4**	**+1.1**
	0.4nm,0.7s,baz=300,slow=9.0,SNR=4.3						
	0.4nm,0.7s						
RES	**Resolute Bay**	39.48	24	LR	LR	12 18 37.0	
	comp=Z,19nm,21.2s,baz=329,slow=36						
NVAR	**Mina Array Bea**	52.46	75	P	**P**	**12 04 18.5**	**+2.1**
	0.2nm,0.4s,baz=337,slow=11,SNR=2.7						
	0.2nm,0.4s						
PDAR	**Pinedale Array**	53.91	65	P	**P**	**12 04 27.8**	**+0.6**
	0.6nm,0.8s,baz=2.9,slow=3.0,SNR=5.2						
	0.6nm,0.8s						
TXAR	**Lajitas Array**	67.22	71	P	**P**	**12 05 59.4**	**+1.4**
	1.0nm,0.7s,baz=306,slow=3.9,SNR=10						
	1.0nm,0.7s						
GERES	**GERESS Array B**	72.47	340	LR	LR	12 42 33.1	
	comp=Z,21nm,18.2s,baz=170,slow=39						
WRA	**Warramunga Arr**	79.98	209	P	**P**	**12 07 12.8**	**0.0**
	0.8nm,0.8s,baz=12,slow=5.7,SNR=6.3						
	0.8nm,0.8s						
ASAR	**Alice Springs**	83.65	208	P	**P**	**12 07 32.7**	**+0.6**
	1.0nm,1.0s,baz=5.9,slow=7.8,SNR=5.0						
	1.0nm,1.0s						
QSPA	**South Pole Qui**	145.97	180	PKPbc	**PKPab**	**12 14 41.3**	**-1.3**
	1.0nm,0.5s,baz=294,slow=0.7,SNR=21						

IDC 26 11:58:05.9±4.3**, 5°.48N**×**147°.76E, h0**km**, mb3.6**/4**,**
mbtmp3.8/5**, ML3.7**/1**, Error ellipse: s-maj=144.2km**
s-min=25.1km az=93.0, Eastern Caroline Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	**Jayapura**	10.62	222	Pn	Pn	12 00 39.9	+0.4
	0.5nm,0.3s,baz=68,slow=5.4,SNR=1.8						
	7.6nm,0.7s						
H11S3	**WAKE ISLAND Hy**	22.55	53	T	T	12 25 56.3	
	baz=236,slow=75,SNR=5.3						
H11S2	**WAKE ISLAND Hy**	22.56	53	T	T	12 25 52.9	
	baz=236,slow=75,SNR=7.8						
H11S1	**WAKE ISLAND Hy**	22.57	53	T	T	12 25 59.9	
	baz=236,slow=75,SNR=6.0						
WRA	**Warramunga Arr**	28.51	207	P	P	12 04 03.5	+0.2
	1.2nm,0.8s,baz=31,slow=9.9,SNR=6.4						
	1.2nm,0.8s						
ASAR	**Alice Springs**	31.97	205	P	P	12 04 33.5	-0.4
	0.2nm,0.6s,baz=24,slow=9.1,SNR=5.9						
	0.2nm,0.6s						
SONM	**Songino Array**	55.01	327	P	P	12 07 39.2	-0.1
	1.5nm,1.0s,baz=123,slow=5.3,SNR=5.9						
	1.5nm,1.0s						
MKAR	**Makanchi Array**	69.33	318	P	P	12 09 15.5	+0.1
	0.4nm,0.6s,baz=99,slow=6.9,SNR=4.6						
	0.4nm,0.6s						

IDC ***26*** *11:58:20.1±1.9, 34°.33N×141°.36E, h0km, mb3.5/3,*
mbtmp3.7/6, ML3.2/2, Error ellipse: s-maj=60.1km
s-min=19.9km az=69.0

JMA ***26*** *11:58:24.1±0.3, 34°.3N±0°.9×14°1E±°, h42km±1km,*
MV3.3/35, FAR SE OFF BOSO PEN

ISC 26 11:58:24.0±1.6**, 34°.27N**±0°.04×**141°.34E**±0°.07**, h32**km±12km**,**
n31,σ**1.s36**/38**, mb3.6**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	0.48	323	i P	**Pb**	**11 58 34.2**	**+0.3**
BSO2	**Boso 2**	0.68	315	eX		11 58 47.1	
BSO3	**Boso 3**	0.86	308	i P	**Pb**	**11 58 39.8**	**-0.6**
BSO3				eX		11 58 50.7	
BSO4	**Boso 4**	1.09	312	i P	**Pn**	**11 58 43.5**	**+0.5**
BSO4				eS	**Sn**	**11 58 57.7**	**+0.6**
KTR	**Katsuura**	1.22	317	eP	**Pn**	**11 58 44.8**	**+0.1**
JKUC	**kamogawauchiur**	1.29	314	P	**Pn**	**11 58 45.8**	**-0.1**
JKUC				eS	**Sn**	**11 59 01.1**	**-1.0**
TATJ	**Tateyama 2**	1.41	303	P	**Pn**	**11 58 47.8**	**+0.3**
TATJ				eS	**Sn**	**11 59 06.3**	**+1.2**
JMKN	**Mikurajimanish**	1.50	256	i P	**Pn**	**11 58 48.8**	**+0.1**
JMKN				eS	**Sn**	**11 59 05.6**	**-1.5**
JMYK	**Miyake Tsubota**	1.50	263	P	**Pn**	**11 58 48.7**	**+0.1**
JMYK				eS	**Sn**	**11 59 05.8**	**-1.3**
JIM2	**Oshima 3**	1.64	286	eP	**Pn**	**11 58 49.8**	**-0.8**
JHJ2	**Mitsune**	1.71	228	P	**Pn**	**11 58 52.9**	**+1.3**
JHJ2	**Mitsune**	1.71	228	S	**Sn**	**11 59 13.5**	**+1.1**
JHJ2	**Mitsune**	1.71	228	P	**Pn**	**11 58 52.8**	**+1.1**
JTHY	**Toshimahigashi**	1.71	279	eP	**Pn**	**11 58 51.6**	**0.0**
JKO	**Kozu shima**	1.82	268	P	**Pn**	**11 58 53.1**	**0.0**
KTJ3	**Kamata3**	1.98	290	eP	**Pn**	**11 58 54.4**	**-0.9**
KTJ3				eS	**Sn**	**11 59 15.2**	**-3.9**
JIZS	**Izushimoda**	2.08	283	P	**Pn**	**11 58 56.3**	**-0.3**
JOD2	**Odawara 2**	2.10	299	P	**Pn**	**11 58 56.4**	**-0.6**
MJAR	**Matsushiro Arr**	3.42	313	Pn	**Pn**	**11 59 15.4**	**+0.3**
	0.7nm,0.3s,baz=148,slow=12,SNR=26						
MJAR				Sn	**Sn**	**11 59 53.8**	**-0.7**
	0.9nm,0.3s,baz=166,slow=31,SNR=7.6						
	2.4nm,0.3s						
MAJO	**Matsushiro**	3.42	313	P	**Pn**	**11 59 16.8**	**+1.7**
MAJO	**Matsushiro**	3.42	313	S	**Sn**	**11 59 54.6**	**0.0**
JMM	**Marumori**	3.62	353	P	**Pn**	**11 59 18.4**	**+0.6**
INU	**Inuyama**	3.71	288	P	**Pn**	**11 59 18.4**	**-0.7**
JSD	**Sado**	4.51	327	P	**Pn**	**11 59 30.8**	**+0.7**
JTM	**Tenmabayashi**	6.51	358	P	**Pn**	**11 59 58.9**	**+1.3**
JCJ	**Chichijima**	7.19	174	Pn	**Pn**	**12 00 06.4**	**-0.5**
	18nm,0.3s,baz=45,slow=0.0						
JCJ				Sn	**Sn**	**12 01 23.1**	**-4.4**
	baz=0.0,slow=0.0						
JCJ	**Chichijima**	7.19	174	P	**Pn**	**12 00 07.9**	**+1.0**
ASAJ	**Asahikawa**	9.88	5	Pn	**Pn**	**12 00 42.3**	**-1.5**
	0.5nm,0.3s,baz=224,slow=16,SNR=6.8						
ASAJ				Sn	Sn	12 02 23.9	-10
	0.2nm,0.3s,baz=243,slow=16,SNR=1.6						
	5.1nm,0.8s						
MKAR	**Makanchi Array**	45.58	304	P	**P**	**12 06 41.1**	**+0.1**
	0.3nm,0.6s,baz=80,slow=9.1,SNR=2.7						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	54.32	188	P	**P**	**12 07 48.6**	**+1.2**
	0.4nm,0.3s,baz=5.4,slow=7.4,SNR=18						
	0.4nm,0.3s						
ASAR	**Alice Springs**	58.05	188	P	**P**	**12 08 15.7**	**+1.7**
	0.3nm,0.5s,baz=7.5,slow=8.0,SNR=5.5						
	0.3nm,0.5s						

UCR ***26*** *12:01:43.2±1.2, 8°.32N×82°.83W, h8km±4km, MW3.6*

UPA ***26*** *12:01:44.4±0.7, 8°.42N×82°.80W, h20km±3km, MW3.1*

ISC 26 12:01:42.6±1.1**, 8°.32N**±0°.05×**82°.84W**±0°.03**, h32**km±6km**,**
n53,σ**0.s90**/83**, 4C-25D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	**La Esperanza,**	0.10	33	⇑iP	**Pb**	**12 01 48.0**	**-0.3**
LESP3				eS	**Sb**	**12 01 50.7**	**-1.4**
NELY	**Ciudad Neily**	0.34	343	⇑iP	**Pb**	**12 01 50.7**	**-0.1**
NELY				eS	**Sb**	**12 01 56.5**	**+0.1**
MCANO	**Manzana, Boque**	0.36	48	⇓iP	**Pb**	**12 01 51.3**	**+0.2**
MCANO	**Manzana, Boque**	0.36	48	⇓iP	**Pb**	**12 01 51.3**	**+0.2**
MCANO				eS	**Sb**	**12 01 56.3**	**-0.7**
DVD	**David**	0.41	74	⇓iP	**Pb**	**12 01 51.9**	**+0.2**
DVD				eS	**Sb**	**12 01 58.2**	**+0.3**
CSTBL	**De las Acacias**	0.41	78	⇓eP	**Pb**	**12 01 51.9**	**+0.2**
CSTBL				eS	**Sb**	**12 01 57.8**	**-0.2**
CSTBL	**De las Acacias**	0.41	78	⇓iP	**Pb**	**12 01 52.0**	**+0.2**
CSTBL				eS	**Sb**	**12 01 57.9**	**-0.2**
PEDE3	**Pedregal, Chir**	0.42	82	⇓iP	**Pb**	**12 01 52.1**	**+0.1**
PEDE3				eS	**Sb**	**12 01 58.0**	**-0.4**
FITO	**Golfito**	0.43	314	⇓eP	**Pb**	**12 01 51.4**	**-0.7**
FITO				eS	**Sb**	**12 01 57.6**	**-0.9**
LOCO3	**Loma Colorada,**	0.43	79	⇓iP	**Pb**	**12 01 52.4**	**+0.3**
LOCO3				eS	**Sb**	**12 01 58.5**	**-0.1**
EDAD	**Golfito**	0.46	316	⇓eP	**Pb**	**12 01 51.9**	**-0.7**
EDAD				eS	**Sb**	**12 01 58.6**	**-0.7**
LOMA3	**Las Lomas, Chi**	0.46	77	⇓iP	**Pb**	**12 01 52.6**	**+0.1**
LOMA3				eS	**Sb**	**12 01 59.4**	**0.0**
MLIR3	**Monte Lirio, C**	0.47	2	eP	**Pb**	**12 01 53.1**	**+0.4**
MLIR3				eS	**Sb**	**12 01 58.8**	**-0.8**
CLLRA	**Cordillera,**	0.48	29	⇓iP	**Pb**	**12 01 52.9**	**0.0**
CLLRA				eS	**Sb**	**12 01 59.0**	**-1.0**
CLLRA	**Cordillera,**	0.48	29	⇓iP	**Pb**	**12 01 52.9**	**0.0**
CLLRA				eS	**Sb**	**12 01 59.4**	**-0.6**
RSRNO	**Rio Sereno**	0.49	358	eS	**Sn**	**12 02 01.6**	**+0.7**
BRU2	**Volcan**	0.49	18	⇓iP	**Pb**	**12 01 53.1**	**-0.1**
BRU2				eS	**Sb**	**12 02 00.7**	**+0.3**
BRU2	**Volcan**	0.49	18	⇓iP	**Pb**	**12 01 53.2**	**0.0**
BRU2				eS	**Sb**	**12 02 00.7**	**+0.3**
PTAR3	**Potrerillos Ar**	0.50	43	⇓iP	**Pb**	**12 01 53.3**	**0.0**
PTAR3				eS	**Sb**	**12 01 59.4**	**-1.3**
VITO	**San Vito**	0.51	346	eP	**Pb**	**12 01 53.6**	**+0.3**
VITO				eS	**Sn**	**12 02 02.0**	**+0.6**
SCLRA	**Santa Clara, W**	0.51	7	eP	**Pb**	**12 01 53.7**	**+0.3**
SCLRA				eS	**Sn**	**12 02 01.8**	**+0.3**
SCLRA	**Santa Clara, W**	0.51	7	i P	**Pb**	**12 01 53.8**	**+0.3**
SCLRA				eS	**Sn**	**12 02 01.8**	**+0.3**
BC3P	**Paso Ancho**	0.54	25	⇓iP	**Pb**	**12 01 53.7**	**-0.2**
BC3P				eS	**Sb**	**12 02 01.0**	**-0.8**
BQTLY	**Boquete Panama**	0.57	41	⇓eP	**Pb**	**12 01 54.2**	**-0.3**
BQTLY				eS	**Sb**	**12 02 02.5**	**-0.1**
BQTLY	**Boquete Panama**	0.57	41	⇓iP	**Pb**	**12 01 54.2**	**-0.3**
BQTLY				eS	**Sb**	**12 02 01.4**	**-1.2**
ALCO	**Alturas Coton,**	0.62	1	⇓iP	**Pb**	**12 01 54.9**	**-0.4**
ALCO				eS	**Sb**	**12 02 03.9**	**-0.1**
PSOM3	**Paja de Sombre**	0.63	55	⇓iP	**Pb**	**12 01 54.8**	**-0.5**
PSOM3				eS	**Sb**	**12 02 03.5**	**-0.5**
EDP2	**Potrero Grande**	0.76	334	eP	**Pn**	**12 01 57.6**	**+0.5**
EDP2				eS	**Sn**	**12 02 08.7**	**+1.1**
PBNVO	**Pueblo Nuevo,**	0.86	49	⇓eP	**Pn**	**12 01 58.0**	**-0.4**
PBNVO				eS	**Sn**	**12 02 09.3**	**-0.5**
PANP	**Palmar Norte**	0.88	316	eP	**Pn**	**12 01 58.9**	**+0.2**
RBALA	**Bur**	0.88	51	⇓iP	**Pn**	**12 01 58.8**	**+0.1**
RBALA				eS	**Sn**	**12 02 10.5**	**+0.1**
RBALA	**Bur**	0.88	51	i P	**Pn**	**12 01 58.8**	**+0.1**
RBALA				eS	**Sn**	**12 02 07.5**	**-2.9**
RMDIO	**Remedios, Chir**	1.01	95	eP	**Pn**	**12 02 01.0**	**+0.5**
RMDIO	**Remedios, Chir**	1.01	95	⇓iP	**Pb**	**12 02 01.3**	**-0.3**
DRK0	**Durika**	1.01	337	eP	**Pn**	**12 02 01.2**	**+0.4**
EDPE	**Pejibaye, P**	1.10	319	⇑eP	**Pn**	**12 02 02.8**	**+1.0**
EDPE				eS	**Sn**	**12 02 16.6**	**+0.8**
PDCAN	**Manzana , Fuen**	1.14	92	⇓eP	**Pn**	**12 02 03.1**	**+0.8**
KKNTU	**Kakintº**	1.15	63	⇓eP	**Pn**	**12 02 02.5**	**+0.1**
BRIBI	**Bribri**	1.29	1	eP	**Pb**	**12 02 07.0**	**+0.7**
PIEC	**Cerro El Cedra**	1.69	320	eP	**Pb**	**12 02 13.5**	**+0.1**
LCR2	**La Lucha 2**	1.82	321	eP	**Pb**	**12 02 14.4**	**-1.0**
ABE2	**San Pablo**	1.82	319	eP	**Pb**	**12 02 14.9**	**-0.5**
PICV	**PH. Pirrs**	1.86	314	eP	**Pb**	**12 02 15.3**	**-0.7**
RESJ	**San Isidro (Tu**	1.87	335	eP	**Pb**	**12 02 15.6**	**-0.5**
ABRB	**Las Abras (San**	1.88	333	eP	**Pb**	**12 02 15.4**	**-1.0**
PAR1A	**Puntarenas Pro**	1.88	312	eP	**Pb**	**12 02 15.4**	**-0.9**
CVTV	**Tajo**	1.89	332	eP	**Pb**	**12 02 15.7**	**-1.0**
CVTQ	**Turrialba Volc**	1.90	331	eP	**Pb**	**12 02 15.6**	**-1.3**
ACOS	**Acosta**	1.96	318	eP	**Pb**	**12 02 16.9**	**-0.8**
VACR	**Volcan Arenal**	2.80	320	eP	**Pb**	**12 02 30.2**	**-1.8**
ARE1	**Arenal 1**	2.82	319	eP	**Pb**	**12 02 29.9**	**-2.4**
JTS	**Las Juntas de**	2.85	313	eP	**Pb**	**12 02 30.7**	**-2.2**
LAPC	**Finca la Perla**	3.52	314	⇑iP	**Pn**	**12 02 39.1**	**+4.0**

IDC 26 12:06:44.0±2.4**,53°.32N×63°.11E,h0^{km},mb3.0**/1**,mbtmp3.2**/3**,ML2.8**/2**,2C-5D,Error ellipse: s-maj=68.0km s-min=19.3km az=17.0,Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKTO	Aktyubinsk	4.28	230	⇓Lg	Lg	12 08 48.6	
	1.1nm,0.4s						
I31KZ	AKTYUBINSK INF	4.29	229	I	I	12 30 20.0	
	0.1nm,0.6s,baz=46,slow=309,SNR=1.8						
BVA0	Borovoye Array	4.39	91	⇓Pn	Pn	12 07 52.5	+0.5
	1.0nm,0.3s,baz=283,slow=14,SNR=13						
BVA0				Lg	Lg	12 08 33.7	
	0.4nm,0.5s,baz=122,slow=29,SNR=8.8						
BVAR	Borovoye Array	4.39	91	Pn	Pn	12 07 52.5	+0.6
	0.3nm,0.3s,baz=285,slow=13,SNR=19						
BVAR				Lg	Lg	12 09 02.6	
	0.2nm,0.3s,baz=276,slow=25,SNR=2.8						
	3.1nm,0.3s						
AB31	Akbulak array	4.53	207	⇓Pn	Pb	12 08 01.8	-2.5
	0.6nm,0.5s,baz=25,slow=14,SNR=8.1						
AB31				⇑Sn	Sn	12 08 38.6	-8.4
	0.3nm,0.2s,baz=78,slow=6.4,SNR=2.5						
AB31				⇓Lg	Lg	12 08 51.7	
	0.8nm,0.3s,baz=24,slow=23,SNR=3.2						
MAKZ	Makanchi	13.74	111	⇑Lg	Lg	12 10 53.4	
	4.9nm,1.0s						
MK31	Makanchi Array	13.92	110	⇓Lg	Lg	12 10 58.4	
	2.7nm,0.8s,baz=323,slow=24,SNR=7.7						
MKAR	Makanchi Array	13.92	110	Pn	Pn	12 09 59.6	-2.9
	0.1nm,0.3s,baz=300,slow=10,SNR=2.2						
	0.1nm,0.3s						
FINES	FINESS Array B	21.29	307	P	P	12 11 31.7	-0.1
	0.4nm,0.5s,baz=90,slow=14,SNR=6.1						
	0.4nm,0.5s						

UCR ***26*** *12:09:45.5±1.3,8°.35N×82°.88W,h23^{km}±3^{km},MW3.6*
CATAC ***26*** *12:09:45.2±1.1,8°N±9°×8°3W±°,h23^{km}±5^{km},M3.7/6,MLv3.7/6,Error ellipse: s-maj=24.1km s-min=12.7km az=44.8,confirmed*
ISC 26 12:09:45.5±1.3**,8°.35N**±0°.07×**82°.88W**±0°.03**,h31**^{km}±7^{km}**,n69,**σ1^s**42**/84**,12C-13D,Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDITO	Canoas	0.22	2	P	Pb	12 09 51.6	-0.6
CDITO	Canoas	0.22	2	S	Sb	12 09 57.3	+0.7
NELY	Ciudad Neily	0.31	348	⇑*i*P	Pb	12 09 52.6	-0.6
NELY				*e*S	Sb	12 09 58.4	0.0
MCANO	Manzana, Boque	0.38	54	⇓*i*P	Pb	12 09 54.0	-0.2
FITO	Golfito	0.39	316	⇓*e*P	Pb	12 09 53.0	-1.3
FITO				*e*S	Sb	12 09 59.1	-1.1
EDAD	Golfito	0.41	317	⇓*e*P	Pb	12 09 53.6	-1.2
EDAD				*e*S	Sb	12 09 59.9	-1.1
CSTBL	De las Acacias	0.44	82	⇓*i*P	Pb	12 09 54.9	-0.2
CSTBL				*e*S	Sb	12 10 02.0	+0.4
RSRNO	Rio Sereno	0.47	2	⇑*i*P	Pb	12 09 55.4	-0.2
CLLRA	Cordillera,	0.47	34	⇓*i*P	Pb	12 09 55.2	-0.5
VITO	San Vito	0.48	349	⇑*i*P	Pb	12 09 55.4	-0.3
VITO				*e*S	Sb	12 10 03.5	+0.8
BRU2	Volcan	0.48	23	⇓*e*P	Pb	12 09 55.3	-0.6
BRU2				*e*S	Sb	12 10 03.2	+0.3
BRU2	Volcan	0.48	23	P	Pb	12 09 55.1	-0.8
SCLRA	Santa Clara, W	0.49	11	⇓*e*P	Pb	12 09 55.8	-0.2
BQTLY	Boquete Panama	0.58	45	⇓*i*P	Pb	12 09 56.6	-0.8
ALCO	Alturas Coton,	0.60	4	⇑*i*P	Pb	12 09 56.6	-1.2
ALCO				*e*S	Sb	12 10 05.2	-0.9
EDP2	Potrero Grande	0.73	336	⇑*i*P	Pb	12 09 58.8	-1.0
EDP2				*e*S	Sb	12 10 09.1	-0.3
PANP	Palmar Norte	0.83	317	⇑*e*P	Pb	12 10 00.1	-1.5
PANP				*e*S	Sb	12 10 11.7	-0.8
PBNVO	Pueblo Nuevo,	0.87	52	⇓*i*P	Pb	12 10 00.4	-1.7
RBALA	Bur	0.89	54	⇓*i*P	Pb	12 10 01.2	-1.3
BURE	Buenos Aires	0.94	331	⇑*i*P	Pn	12 10 01.6	-1.1
BURE				*e*S	Sb	12 10 14.1	-1.3
DRK0	Durika	0.98	338	⇑*e*P	Pn	12 10 02.1	-1.2
DRK0				*e*S	Sb	12 10 14.8	-1.9
DRK0	Durika	0.98	338	P	Pn	12 10 01.7	-1.7
RMDIO	Remedios, Chir	1.04	97	*e*P	Pn	12 10 04.0	-0.1
EDPE	Pejibaye, P	1.06	320	⇑*e*P	Pn	12 10 03.5	-0.8
EDPE				*e*S	Sn	12 10 17.8	-0.2
OCHAL	Ojochal	1.06	315	P	Pn	12 10 03.1	-1.3
OCHAL	Ojochal	1.06	315	S	Sn	12 10 18.0	-0.1
KKNTU	Kakintº	1.17	65	⇓*i*P	Pn	12 10 05.0	-0.8
SAJE	San Jernim	1.17	328	⇑*e*P	Pn	12 10 04.8	-1.2
SAJE				*e*S	Sn	12 10 19.5	-1.5
PDCAN	Manzana , Fuen	1.17	93	*e*P	Pn	12 10 05.1	-0.8
BRIBI	Bribri	1.27	3	*e*P	Pn	12 10 08.4	+1.2
PIEC	Cerro El Cedra	1.65	320	*e*P	Pn	12 10 12.5	-0.2
PISJ	San Jernim	1.77	316	*e*P	Pn	12 10 15.0	+0.8
LCR2	La Lucha 2	1.78	321	*e*P	Pn	12 10 13.7	-0.6
LCR2	La Lucha 2	1.78	321	P	Pn	12 10 13.8	-0.6
LCR2	La Lucha 2	1.78	321	S	Sn	12 10 37.8	+1.8
ABE2	San Pablo	1.78	319	*e*P	Pn	12 10 15.5	+1.1
PCAYA	Pacayas	1.81	330	*e*P	Pn	12 10 15.8	+0.9
PICV	PH. Pirrs	1.82	314	*e*P	Pn	12 10 15.6	+0.9
VTCV	VTCV, Calle Va	1.83	333	*e*P	Pn	12 10 15.5	+0.5
RESJ	San Isidro (Tu	1.83	336	⇑*e*P	Pn	12 10 15.9	+0.9
PAR1A	Puntarenas Pro	1.84	313	*e*P	Pn	12 10 15.5	+0.5
ABRB	Las Abras (San	1.84	333	⇓*e*P	Pn	12 10 16.0	+0.7
ABRB				*e*S	Sn	12 10 40.3	+2.5
RAFA	San Farael, Vo	1.84	330	*e*P	Pn	12 10 16.1	+0.7
CVTV	Tajo	1.86	333	⇑*e*P	Pn	12 10 16.0	+0.4
CVTV				*e*S	Sn	12 10 39.7	+1.5
CVTQ	Turrialba Volc	1.86	332	*e*P	Pn	12 10 16.2	+0.5
VTLA	Turrialba Volc	1.87	332	*e*P	Pn	12 10 16.4	+0.7
VTR0	Volcan Turrial	1.87	332	*e*P	Pn	12 10 16.4	+0.6
RVLA	Villa Bonita	1.88	338	⇓*e*P	Pn	12 10 16.7	+1.0
VICA	Volcano Irazu	1.89	330	*e*P	Pn	12 10 18.5	+2.4
SANTA	Santa Ana	2.04	321	*e*P	Pn	12 10 19.4	+1.6
HDC	Heredia	2.04	324	*e*P	Pn	12 10 19.9	+1.9
BELE	Belen	2.07	322	*e*P	Pn	12 10 19.7	+1.4
VBV1	V. Barva	2.13	326	*e*P	Pn	12 10 19.6	+0.3
TRT2	Tortugero	2.35	339	*e*P	Pn	12 10 21.2	-0.9
TRT1	Tortuguero	2.38	340	*e*P	Pn	12 10 23.2	+0.7
SOCE	Pocosol	2.65	320	*e*P	Pn	12 10 29.4	+3.1
SOCE	Pocosol	2.65	320	P	Pn	12 10 29.6	+3.3
VACR	Volcan Arenal	2.76	320	*e*P	Pn	12 10 30.8	+3.1
ARE1	Arenal 1	2.77	319	*e*P	Pn	12 10 30.2	+2.2
VARE2	V. Arenal	2.77	319	*e*P	Pn	12 10 29.9	+1.8
CEDE	Laguna Cedeo	2.79	320	*e*P	Pn	12 10 30.2	+2.1
JTS	Las Juntas de	2.81	314	*e*P	Pn	12 10 29.7	+1.2
TABAC	Tabacon	2.83	319	*e*P	Pn	12 10 32.6	+3.8
QUEB	Quebradon, Cot	3.01	319	*e*P	Pn	12 10 34.0	+2.8
TIMP	Tierras Morena	3.06	317	*e*P	Pn	12 10 34.2	+2.2
BCIP	Isla Barro Col	3.12	75	*e*P	Pn	12 10 33.4	+0.8
COLC	Colonia	3.25	315	*e*P	Pn	12 10 36.8	+2.3
VRLE	La Escondida,	3.45	315	*e*P	Pn	12 10 39.2	+2.0
LAPC	Finca la Perla	3.48	314	*e*P	Pn	12 10 39.2	+1.6

UCR 26 12:15:16.1±1.4**,8°.27N×82°.82W,h16**^{km}±4^{km}**,MW3.7,8C-6D,Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCANO	Manzana, Boque	0.39	39	⇓*i*P	Pb	12 15 25.0	+0.3
NELY	Ciudad Neily	0.40	342	⇑*i*P	Pg	12 15 24.4	+0.1
NELY				*e*S	Sb	12 15 30.6	-0.1
FITO	Golfito	0.48	317	⇑*i*P	Pg	12 15 25.0	-0.8
FITO				*e*S	Sg	12 15 31.8	-0.5
EDAD	Golfito	0.51	318	*e*P	Pg	12 15 25.4	-0.9
EDAD				*e*S	Sg	12 15 32.5	-0.7
CLLRA	Cordillera,	0.52	23	*e*P	Pg	12 15 26.3	-0.1
CLLRA				*e*S	Sb	12 15 33.9	-0.3
BRU2	Volcan	0.54	14	*e*P	Pg	12 15 26.0	-0.9
BRU2				*e*S	Sg	12 15 34.1	-0.1
RSRNO	Rio Sereno	0.55	356	*e*P	Pb	12 15 27.2	-0.2
RSRNO				*e*S	Sb	12 15 36.2	+1.1
SCLRA	Santa Clara, W	0.56	4	⇑*e*P	Pg	12 15 27.4	0.0
VITO	San Vito	0.57	345	⇑*i*P	Pg	12 15 27.2	-0.2
VITO				*e*S	Sb	12 15 35.8	+0.2
BQTLY	Boquete Panama	0.60	36	⇑*i*P	Pg	12 15 27.8	-0.3
BQTLY				*e*S	Sg	12 15 35.7	-0.5
ALCO	Alturas Coton,	0.68	359	⇑*i*P	Pg	12 15 28.4	-1.1
ALCO				*e*S	Sg	12 15 37.6	-0.9
EDP2	Potrero Grande	0.82	335	⇑*i*P	Pb	12 15 30.8	-1.3
EDP2				*e*S	Sb	12 15 42.2	-0.7
PBNVO	Pueblo Nuevo,	0.88	45	*e*P	Pb	12 15 31.5	-1.5
PBNVO				*e*S	Sb	12 15 42.5	-2.0
RBALA	Bur	0.90	47	⇓*e*P	Pb	12 15 32.2	-1.1
RBALA				*e*S	Sb	12 15 43.6	-1.5
PANP	Palmar Norte	0.93	318	*e*P	Pb	12 15 32.0	-1.9
PANP				*e*S	Sb	12 15 45.0	-1.1
DRK0	Durika	1.07	337	*e*P	Pb	12 15 34.1	-2.4
DRK0				*e*S	Sb	12 15 48.0	-2.3
EDPE	Pejibaye, P	1.15	320	⇓*e*P	Pn	12 15 35.8	-1.8
EDPE				*e*S	Sb	12 15 50.8	-1.7
KKNTU	Kakintº	1.15	60	⇑*i*P	Pn	12 15 35.9	-1.7
KKNTU				*e*S	Sb	12 15 50.1	-2.3
BRIBI	Bribri	1.34	0	⇓*i*P	Pn	12 15 39.8	-0.4
BRIBI				*e*S	Sg	12 15 59.0	-0.5
PIEC	Cerro El Cedra	1.75	320	*e*P	Pn	12 15 44.8	-1.3
RAZU	San Marcos de	1.82	319	*e*P	Pn	12 15 48.0	+1.1
VINA	Juan Vinas	1.86	331	*e*P	Pn	12 15 46.9	-0.6
VINA				*e*S	Sn	12 16 09.9	-0.7
REPA	Paraso	1.86	326	*e*P	Pn	12 15 47.8	+0.3
PISJ	San Jernim	1.87	317	*e*P	Pn	12 15 47.6	+0.1
LCR2	La Lucha 2	1.87	321	*e*P	Pn	12 15 46.8	-0.9
PICV	PH. Pirrs	1.91	315	*e*P	Pn	12 15 47.8	-0.3
VTCV	VTCV, Calle Va	1.92	332	*e*P	Pn	12 15 47.7	-0.7
RESJ	San Isidro (Tu	1.93	335	*e*P	Pn	12 15 47.9	-0.4
PAR1A	Puntarenas Pro	1.93	313	⇓*e*P	Pn	12 15 47.9	-0.5
ABRB	Las Abras (San	1.94	333	⇓*e*P	Pn	12 15 48.3	-0.4
ABRB				*e*S	Sn	12 16 12.5	-0.4
CVTV	Tajo	1.95	332	*e*P	Pn	12 15 47.9	-1.0
CVTQ	Turrialba Volc	1.96	332	*e*P	Pn	12 15 48.4	-0.6
VTLA	Turrialba Volc	1.96	331	*e*P	Pn	12 15 48.4	-0.7
VTR0	Volcan Turrial	1.97	332	*e*P	Pn	12 15 48.6	-0.6
ACOS	Acosta	2.02	319	*e*P	Pn	12 15 49.1	-0.5
ACOS				*e*S	Sn	12 16 15.0	+0.4
SANTA	Santa Ana	2.13	321	*e*P	Pn	12 15 51.5	+0.3
BELE	Belen	2.17	322	*e*P	Pn	12 15 51.6	-0.1
VBV1	V. Barva	2.23	326	*e*P	Pn	12 15 53.0	+0.4
TCS1	Tacares	2.29	320	*e*P	Pb	12 15 56.7	-0.4
SOCE	Pocosol	2.75	320	*e*P	Pn	12 16 02.1	+2.5
FORC	Fortuna	2.85	320	*e*P	Pn	12 16 02.0	+1.1
VACR	Volcan Arenal	2.85	320	*e*P	Pn	12 16 02.0	+1.0
ARE1	Arenal 1	2.87	319	*e*P	Pn	12 16 02.1	+0.8
VARE2	V. Arenal	2.87	319	*e*P	Pn	12 16 01.8	+0.4
CEDE	Laguna Cedeo	2.88	320	*e*P	Pn	12 16 03.0	+1.5
JTS	Las Juntas de	2.91	314	*e*P	Pn	12 16 00.8	-1.0
JTS				*e*S	Sn	12 16 34.4	-2.1
TABAC	Tabacon	2.93	319	*e*P	Pn	12 16 04.8	+2.7
TENO	El Achiote	3.22	319	*e*P	Pn	12 16 07.4	+1.3

IDC ***26*** *12:17:23.5±1.0,56°.15N×164°.74E,h0^{km},mb3.6/9,mbtmp3.7/11,ML3.3/2,MS3.0/9,Error ellipse: s-maj=28.0km s-min=18.1km az=164.0*
KRSC ***26*** *12:17:23.1±1.0,56°.15N×164°.67E,h50^{km}±18^{km},Ml4.1*
ISC 26 12:17:25.4±0.7**,56°.14N**±0°.05×**164°.66E**±0°.05**,h16**^{km}**,n57,**σ1^s**41**/49**,mb3.7**/9**,MS3.1**/6**,Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	1.03	274	*e*P	Pb	12 17 41.3	-3.5
KBG	Krutoberegovo	1.10	277	*e*P	Pn	12 17 42.8	-3.2
BKI	Bering	1.20	141	*e*P	Pn	12 17 45.5	-1.9
BKI				*e*S	Sb	12 18 01.1	-1.8
SMKR	Semkarok	1.83	285	*e*P	Pn	12 17 54.6	-1.6
ZLN	Zelenaya	2.16	268	*e*P	Pn	12 17 58.4	-2.5
CIRR	Tsirk	2.19	271	*e*P	Pn	12 17 59.8	-1.4
BZGR	Bezymyannyi-Gr	2.23	266	*e*P	Pn	12 18 00.4	-1.4
KLY	Klyuchi	2.24	276	*e*P	Pn	12 17 59.2	-2.6
MKZ	Mys Kozlova	2.31	228	*e*P	Pn	12 17 60.0	-2.7
BZWR	Bezymyannyi-We	2.34	267	*e*P	Pn	12 18 02.8	-0.6
BZMR	Bezymyannaya	2.35	267	*e*P	Pn	12 18 02.1	-1.3
KIRR	Kirishev	2.43	267	*e*P	Pn	12 18 04.1	-0.4
KPT	Kopyto	2.50	268	*e*P	Pn	12 18 04.6	-0.7
KMNR	Kamenistaya	2.52	263	*e*P	Pn	12 18 05.4	-0.3
TUMD	Tumrok D	2.59	250	*e*P	Pn	12 18 05.5	-1.1
KOZ	Kozyrevsk	2.68	270	*e*P	Pn	12 18 08.0	+0.1
SRDR	Sredinnyy	2.76	276	*e*P	Pn	12 18 08.7	-0.3
OSSR	Ossora	3.23	345	*e*P	Pn	12 18 13.8	-1.5
ESO	Esso	3.35	269	*e*P	Pn	12 18 15.4	-1.6
PALN	Palana	3.88	321	*e*P	Pn	12 18 24.5	+0.1
SPN	Mys Shipunski	4.07	223	*e*P	Pn	12 18 25.4	-1.5
SDLR	Sedlovina	4.41	232	*e*P	Pn	12 18 31.3	-0.3
KRER	Koryakskii	4.45	233	*e*P	Pn	12 18 32.4	0.0
SMAR	Somma	4.46	232	*e*P	Pn	12 18 31.9	-0.6
KRX	Arik	4.46	234	*e*P	Pn	12 18 32.3	-0.1
AVH	Avacha	4.48	232	*e*P	Pn	12 18 32.6	0.0
UGLR	Uglovaya	4.48	231	*e*P	Pn	12 18 32.7	0.0
KOK	Koryaka	4.51	233	*e*P	Pn	12 18 32.8	-0.3
GNL	Ganaly	4.59	240	*e*P	Pn	12 18 35.0	+0.9
DALK	Dalny	4.64	230	*e*P	Pn	12 18 34.6	-0.1
PET	Petropavlovsk	4.69	231	*e*P	Pn	12 18 35.1	-0.2
PETK	Petropavlovsk-	5.06	236	Pn	Pn	12 18 42.2	+1.7
	0.9nm,0.3s,baz=71,slow=18,SNR=15						
PETK				Sn	Sn	12 19 40.2	+1.6
	baz=80,slow=21						
	1.5nm,0.5s						
RUS	Russkaya	5.17	227	*e*P	Pn	12 18 42.9	+0.9
GRL	Gorelyy	5.27	230	*e*P	Pn	12 18 42.5	-1.0
MTVR	Mutnovka	5.27	229	*e*P	Pn	12 18 43.7	+0.1
ASAK	Asacha	5.46	229	*e*P	Pn	12 18 47.2	+1.0
MA2	Magadan	8.16	301	LR	LR	12 23 01.9	
	comp=Z,53nm,19.4s,baz=104,slow=41						
SEY	Seymchan	9.22	323	LR	LR	12 23 20.0	
	comp=Z,70nm,22.0s,baz=72,slow=39						
ASAJ	Asahikawa	18.47	239	P	Pn	12 21 42.2	+1.8
	0.5nm,0.3s,baz=51,slow=13,SNR=5.4						
	5.9nm,0.9s						
YAK	Yakutsk	18.73	303	LR	LR	12 29 25.1	
	comp=Z,38nm,19.1s,baz=105,slow=38						
TIXI	Tiksi	21.59	330	P	P	12 22 16.3	+2.4
	1.0nm,0.3s,baz=130,slow=11,SNR=1.5						
TIXI				LR	LR	12 30 47.6	
	comp=Z,40nm,20.1s,baz=164,slow=37						
	1.0nm,0.3s						
ILAR	Eielson Array	24.79	50	P	P	12 22 46.4	+0.3
	0.7nm,0.9s,baz=272,slow=10,SNR=7.0						
	0.7nm,0.9s						
MJAR	Matsushiro Arr	26.51	233	LR	LR	12 33 30.2	
	comp=Z,29nm,21.9s,baz=92,slow=36						
NRIK	Noril'sk	35.01	323	LR	LR	12 39 41.0	
	comp=Z,30nm,18.0s,baz=78,slow=38						
H11N2	WAKE ISLAND Hy	36.40	176	T	T	13 03 22.0	
	baz=357,slow=76,SNR=164						
H11N3	WAKE ISLAND Hy	36.41	176	T	T	13 03 25.6	
	baz=357,slow=76,SNR=113						
H11N1	WAKE ISLAND Hy	36.41	176	T	T	13 03 25.8	
	baz=357,slow=76,SNR=117						
SPITS	Spitsbergen Ar	44.54	351	P	P	12 25 36.0	+0.4
	3.7nm,0.8s,baz=45,slow=6.3,SNR=2.2						
	3.7nm,0.8s						
KURBB	Kurchatov Arra	48.48	302	P	P	12 26 08.3	+1.5
	0.2nm,0.5s,baz=58,slow=7.9,SNR=2.8						
	0.2nm,0.5s						
BVAR	Borovoye Array	50.56	309	P	P	12 26 22.4	-0.2
	0.6nm,0.4s,baz=44,slow=8.6,SNR=4.1						
BVAR				LR	LR	12 49 10.8	
	comp=Z,29nm,19.3s,baz=26,slow=38						
	0.6nm,0.4s						
NVAR	Mina Array Bea	52.30	75	P	P	12 26 37.6	+1.5
	0.2nm,0.5s,baz=284,slow=7.4,SNR=2.1						
	0.2nm,0.5s						
ARTI	Arti	53.02	318	LR	LR	12 52 28.7	
	comp=Z,28nm,18.2s,baz=59,slow=40						
PDAR	Pinedale Array	53.77	66	P	P	12 26 46.8	-0.2
	0.3nm,0.6s,baz=306,slow=4.0,SNR=5.1						
	0.3nm,0.6s						
HFS	Hagfors	61.80	344	P	P	12 27 42.3	-0.5
	0.7nm,0.5s,baz=4.6,slow=7.2,SNR=1.7						
	0.7nm,0.5s						
TXAR	Lajitas Array	67.07	71	P	P	12 28 18.7	+0.9
	0.3nm,0.5s,baz=292,slow=4.1,SNR=4.7						
	0.3nm,0.5s						
VRAC	Vranov	71.60	339	LR	LR	13 04 11.1	
	comp=Z,13nm,18.2s,baz=76,slow=39						
QSPA	South Pole Qui	145.90	180	PKPbc	PKPdf	12 37 00.9	-0.9
	1.4nm,1.0s,baz=119,slow=5.9,SNR=2.3						

AEIC ***26*** *12:22:54.0±0.8,52°.0N±0°.2×175°.41W±0°.06,h76^{km}±5^{km},Error ellipse: s-maj=26.8km s-min=2.8km az=170.0*
NEIC 26 12:22:54.1±0.7**,51°.8N**±0°.1×**175°.33W**±0°.07**,h75**^{km}±10^{km}**,ML3.5**/6**,ML3.0**(AEIC)**,Error ellipse: s-maj=18.9km s-min=1.0km az=161.0,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSCK	Great Sitkin C	0.54	289		Pn	12 23 07.8	0.0
GSCK					Sn	12 23 18.1	+0.2
GSSP	Great Sitkin S	0.58	296		Pn	12 23 06.8	-1.3
GSSP					Sn	12 23 17.6	-0.9
ATKA	Atka Island	0.79	62		Pn	12 23 10.4	0.0
ATKA					Sn	12 23 22.4	0.0
ATKA				IAML		12 23 24.4	
	comp=N,585nm,0.5s						
ADAG	Mount Adagdak	0.80	280		Pn	12 23 10.6	+0.1
ADK	Adak	0.84	273	Pn	Pn	12 23 10.9	-0.1
ADK					Sn	12 23 23.1	-0.3
ADK	Adak	0.84	273	IAML		12 23 24.6	
	comp=N,3µm,0.2s						
KIRH	Kanaga Island	1.09	274		Pn	12 23 14.2	+0.2
KIRH					Sn	12 23 28.8	-0.1
KINC	Kanaga Island	1.12	275		Pn	12 23 14.4	+0.1
KINC					Sn	12 23 30.1	+0.7
TAPA	Tanaga Point A	1.54	270		Pn	12 23 19.8	0.0
TASE	Tanaga Southea	1.68	271		Pn	12 23 21.8	+0.1
TASE					Sn	12 23 41.9	-0.6
GANE	Gareloi Northe	2.14	271		Pn	12 23 27.8	+0.1
GANE					Sn	12 23 53.1	-0.3
GANO	Gareloi North	2.15	271		Pn	12 23 28.1	+0.1
GASW	Gareloi Southw	2.19	270		Pn	12 23 28.8	+0.5
CEPE	Semis' Perret	3.11	274		Pn	12 23 40.6	-0.3
CERB	Semis' Cerberu	3.12	274		Pn	12 23 40.4	-0.7
AMKA	Amchitka	3.38	264		Pn	12 23 44.1	-0.3
LSPA	Little Sitkin	3.78	274		Pn	12 23 49.7	-0.2
LSSE	Little Sitkin	3.78	274		Pn	12 23 49.9	-0.1
LSNW	Little Sitkin	3.81	274		Pn	12 23 49.9	-0.4
NIKH	Nikolski High	4.12	72	Pn	Pn	12 23 53.7	-0.9
NIKH				IAML		12 24 57.7	
	comp=N,79nm,0.7s						
NIKH				IAML		12 24 58.2	
	comp=E,46nm,0.8s						
UNV	Unalaska Valle	5.71	66	Pn	Pn	12 24 16.9	+0.7
P08K	Saint George I	5.85	33	Pn	Pn	12 24 18.4	+0.4
SPIA	Saint Paul Isl	6.11	27	Pn	Pn	12 24 22.3	+0.7
SMY	Shemya	6.55	282	Pn	Pn	12 24 27.6	0.0
SDPT	Sand Point	9.50	62	Pn	Pn	12 25 06.7	-1.2

IDC ***26*** *12:22:56.8±1.8,2°.87S×139°.57E,h0^{km},mb3.5/3,mbtmp3.7/4,ML3.8/1,Error ellipse: s-maj=111.3km s-min=29.0km az=113.0*
DJA ***26*** *12:23:00.1±0.4,2°S±3°×13°8E±°,h10^{km},M3.5/6,MLv3.5/6*
ISC 26 12:22:59.4±0.9**,2°.63S**±0°.09×**138°.48E**±0°.06**,h10**^{km}**,n9,**σ1^s**73**/9**,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.67	20	P	Pg	12 23 12.2	-0.3
GENI	Genyem	1.68	89	P	Pn	12 23 29.3	+0.4
JAY	Jayapura	2.22	87	P	Pn	12 23 38.0	+1.6
SRPI	Serui, Papua	2.37	289	P	Pn	12 23 38.5	+0.2
BAKI	Biak	2.77	301	Pg	Pb	12 23 50.0	+0.9
WRA	Warramunga Arr	17.68	193	P	Pn	12 27 05.1	-0.8
	0.3nm,0.3s,baz=18,slow=12,SNR=15						
	1.0nm,0.5s						
FITZ	Fitzroy Crossi	19.87	218	P	Pn	12 27 35.4	+2.8
	2.9nm,0.9s,baz=46,slow=13,SNR=1.5						
	2.9nm,0.9s						
ASAR	Alice Springs	21.38	192	P	P	12 27 45.8	-1.6
	1.4nm,0.7s,baz=21,slow=10,SNR=11						
	1.4nm,0.7s						
ILAR	Eielson Array	85.85	24	P	P	12 35 37.4	-1.7
	0.4nm,0.9s,baz=260,slow=5.3,SNR=4.1						
	0.4nm,0.9s						

IDC ***26*** *12:36:39.1±0.6,56°.24N×164°.14E,h0^{km},mb3.7/19,mbtmp3.7/21,ML3.1/2,MS3.1/10,Error ellipse: s-maj=20.5km s-min=12.8km az=155.0*
MOS ***26*** *12:36:39.5±0.9,56°.22N×164°.27E,h15^{km},mb4.2/7,Error ellipse: s-maj=8.1km s-min=5.1km az=48.5*
KRSC ***26*** *12:36:40.9±1.3,55°.95N×164°.09E,h16^{km}±28^{km},Ml4.2*
NEIC ***26*** *12:36:41.6±1.7,56°.5N±0°.1×163°.7E±0°.2,h10^{km}±2^{km},mb4.0/67,Error ellipse: s-maj=24.0km s-min=13.1km az=340.0*
ISC 26 12:36:40.5±0.4**,56°.13N**±0°.05×**164°.15E**±0°.03**,h10**^{km}**,n199,**σ1^s**53**/189**,mb4.0**/51**,MS3.3**/5**,1C,Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.75	276	PN	Pg	12 36 54.2	-0.7
KBTR	Krutoberegovo	0.75	276	*e*P	Pg	12 36 54.3	-0.7
KBG	Krutoberegovo	0.81	279	PN	Pg	12 36 55.3	-0.9
KBG	Krutoberegovo	0.81	279	*e*P	Pg	12 36 55.4	-0.9
BKI	Bering	1.39	131	PN	Pn	12 37 04.2	-1.7
BKI				S	Sb	12 37 21.6	-2.7
BKI	Bering	1.39	131	*e*P	Pn	12 37 04.2	-1.7
BKI				*e*S	Sb	12 37 21.7	-2.7
SMKR	Semkarok	1.56	288	PN	Pn	12 37 07.6	-0.7
SMKR	Semkarok	1.56	288	*e*P	Pn	12 37 07.7	-0.7
ZLN	Zelenaya	1.88	268	PN	Pn	12 37 13.4	+0.7
ZLN	Zelenaya	1.88	268	*e*P	Pn	12 37 13.5	+0.7
CIRR	Tsirk	1.90	271	PN	Pb	12 37 15.4	0.0
CIRR	Tsirk	1.90	271	*e*P	Pb	12 37 15.4	0.0
BZGR	Bezymyannyi-Gr	1.95	266	PN	Pn	12 37 14.2	+0.5
BZGR	Bezymyannyi-Gr	1.95	266	*e*P	Pn	12 37 14.3	+0.5
KLY	Klyuchi	1.96	277	PN	Pn	12 37 12.4	-1.4
KLY	Klyuchi	1.96	277	*e*P	Pn	12 37 12.4	-1.4
KRSR	Krestovskiy	2.00	274	PN	Pn	12 37 15.8	+1.3
KRSR	Krestovskiy	2.00	274	*e*P	Pn	12 37 15.8	+1.3
BZWR	Bezymyannyi-We	2.06	267	PN	Pn	12 37 16.4	+1.2
BZWR	Bezymyannyi-We	2.06	267	*e*P	Pn	12 37 16.4	+1.2
BZMR	Bezymyannaya	2.06	266	PN	Pn	12 37 16.4	+1.1
BZMR	Bezymyannaya	2.06	266	*e*P	Pn	12 37 16.4	+1.1
MKZ	Mys Kozlova	2.10	222	PN	Pn	12 37 15.1	-0.5
MKZ				S	Sb	12 37 40.4	-4.3
MKZ	Mys Kozlova	2.10	222	*e*P	Pn	12 37 15.1	-0.5
MKZ				*e*S	Sb	12 37 40.4	-4.3
KIRR	Kirishev	2.14	267	PN	Pn	12 37 17.1	+0.7
KIRR	Kirishev	2.14	267	*e*P	Pn	12 37 17.2	+0.7
KPT	Kopyto	2.21	267	PN	Pb	12 37 19.1	-1.5
KPT	Kopyto	2.21	267	*e*P	Pb	12 37 19.1	-1.5
KMNR	Kamenistaya	2.23	262	PN	Pb	12 37 19.2	-1.7
KMNR	Kamenistaya	2.23	262	*e*P	Pb	12 37 19.3	-1.7
TUMD	Tumrok D	2.32	248	PN	Pn	12 37 19.3	+0.6
TUMD	Tumrok D	2.32	248	*e*P	Pn	12 37 19.3	+0.6
KOZ	Kozyrevsk	2.40	270	PN	Pn	12 37 21.3	+1.5
KOZ	Kozyrevsk	2.40	270	*e*P	Pn	12 37 21.3	+1.5
SRDR	Sredinnyy	2.48	276	PN	Pn	12 37 22.5	+1.5
SRDR	Sredinnyy	2.48	276	*e*P	Pn	12 37 22.6	+1.5
ESO	Esso	3.06	268	PN	Pn	12 37 30.9	+2.0
ESO	Esso	3.06	268	*e*P	Pn	12 37 31.0	+2.0
KII	Karymskiy	3.42	234	PN	Pn	12 37 35.6	+1.7
KII	Karymskiy	3.42	234	*e*P	Pn	12 37 35.7	+1.7
SPN	Mys Shipunski	3.87	220	PN	Pn	12 37 39.4	-0.6
SPN	Mys Shipunski	3.87	220	*e*P	Pn	12 37 39.5	-0.6
NLC	Nalytchevo	4.07	225	*e*S	Sn	12 38 29.4	-1.0
SDLR	Sedlovina	4.18	229	PN	Pn	12 37 45.5	+1.1
SDLR	Sedlovina	4.18	229	*e*P	Pn	12 37 45.5	+1.1
KRER	Koryakskii	4.22	230	PN	Pb	12 37 48.3	-6.6
KRER	Koryakskii	4.22	230	*e*P	Pb	12 37 48.4	-6.6
KRX	Arik	4.23	231	PN	Pn	12 37 47.5	+2.5
KRX	Arik	4.23	231	*e*P	Pn	12 37 47.6	+2.5
SMAR	Somma	4.23	229	PN	Pn	12 37 46.1	+1.0
SMAR	Somma	4.23	229	*e*P	Pn	12 37 46.2	+1.0
AVH	Avacha	4.25	230	PN	Pn	12 37 47.2	+1.8
AVH	Avacha	4.25	230	*e*P	Pn	12 37 47.2	+1.8
KOK	Koryaka	4.28	231	PN	Pn	12 37 49.0	+3.3
KOK	Koryaka	4.28	231	*e*P	Pn	12 37 49.1	+3.3
GNL	Ganaly	4.33	238	PN	Pn	12 37 48.3	+1.8
GNL	Ganaly	4.33	238	*e*P	Pn	12 37 48.4	+1.8
DALK	Dalny	4.42	227	PN	Pn	12 37 48.2	+0.7
DALK	Dalny	4.42	227	*e*P	Pn	12 37 48.2	+0.7
PET	Petropavlovsk	4.46	228		Pn	12 37 48.9	+0.8
PET				Sn	Sn	12 38 41.3	+1.2
PET	Petropavlovsk	4.46	228	⇑*i*PN	Pn	12 37 49.0	+0.8
PET	Petropavlovsk	4.46	228	*e*P	Pn	12 37 48.6	+0.5
PEA0B	Petropavlovsk-	4.82	234		Pn	12 37 55.9	+2.8
PEA0B	Petropavlovsk-	4.82	234	PN	Pn	12 37 56.7	+3.6
PETK	Petropavlovsk-	4.82	234		Pn	12 37 55.2	+2.2
PETK	Petropavlovsk-	4.82	234	Pn	Pn	12 37 55.0	+1.9
	1.5nm,0.3s,baz=73,slow=18,SNR=27						
PETK				Sn	Sn	12 38 52.9	+3.9

	baz=82,slow=39						
PETK				LR	LR	12 40 09.0	
	comp=Z,95nm,18.3s,baz=34,slow=43						
	2.3nm,0.4s						
KRMR	Karymshinskiy	4.82	229	PN	Pn	12 37 55.2	+2.1
KRMR	Karymshinskiy	4.82	229	eP	Pn	12 37 55.3	+2.1
RUS	Russkaya	4.96	224	PN	Pn	12 37 55.6	+0.6
RUS	Russkaya	4.96	224	eP	Pn	12 37 55.6	+0.6
GRL	Gorelyy	5.05	227	PN	Pn	12 37 58.4	+2.1
GRL	Gorelyy	5.05	227	eP	Pn	12 37 58.4	+2.1
MTVR	Mutnovka	5.06	226	PN	Pn	12 37 58.2	+1.8
MTVR	Mutnovka	5.06	226	eP	Pn	12 37 58.3	+1.8
ASAK	Asacha	5.25	227	PN	Pn	12 38 01.2	+2.2
ASAK	Asacha	5.25	227	eP	Pn	12 38 01.2	+2.2
SMY	Shemya	6.73	116	Pn	Pn	12 38 25.5	+6.2
SMY	Shemya	6.73	116	PN	Pn	12 38 25.5	+6.2
MA2	Magadan	7.92	301	LR	LR	12 41 52.4	
	comp=Z,65nm,20.4s,baz=110,slow=40						
MA2	Magadan	7.92	301	i PN	Pn	12 38 36.4	+0.8
SEY	Seymchan	9.05	324	LR	LR	12 42 40.0	
	comp=Z,102nm,19.4s,baz=121,slow=40						
SEY	Seymchan	9.05	324	i PN	Pn	12 38 49.0	-2.1
SEY				pmax	pmax		
	comp=Z,1.0nm,1.4s						
AMKA	Amchitka	10.15	112	Pn	Pn	12 39 12.7	+6.5
ADK	Adak	12.04	103	Pn	Pn	12 39 31.9	-0.1
ADK	Adak	12.04	103	PN	Pn	12 39 31.9	-0.1
ATKA	Atka Island	13.27	98	Pn	Pn	12 39 46.9	-1.8
UNV	Unalaska Valle	16.94	85	P	P	12 40 43.8	+4.5
K13K	Kusilvak Mount	16.95	57		P	12 40 43.0	+3.6
JKA	Kamikawa-asahi	18.22	238		P	12 40 54.9	+1.4
ASAJ	Asahikawa	18.22	238	P	P	12 40 54.7	+1.1
	comp=Z,0.2nm,0.3s,baz=162,slow=32,SNR=1.4						
ASAJ				LR	LR	12 48 22.9	
	comp=Z,44nm,18.5s,baz=27,slow=38						
	comp=Z,3.9nm,0.8s						
ASAJ	Asahikawa	18.22	238	P	P	12 40 54.9	+1.3
ASAJ				pmax	pmax		
	comp=Z,27nm,1.0s						
K15K	Wolf Creek Mou	18.45	56	P	Pn	12 40 58.4	+2.5
YAK	Yakutsk	18.50	303	LR	LR	12 48 22.9	
	comp=Z,26nm,18.9s,baz=110,slow=38						
YAK	Yakutsk	18.50	303	i P	P	12 40 54.6	-1.8
N15K	Kwethluk River	19.14	63	P	Pn	12 41 06.4	+2.0
N15K				IAmb	IAmb	12 41 33.4	
	comp=Z,12nm,0.9s						
O15K	Ungalikthiuk R	19.36	66	P	P	12 41 07.0	+1.1
O15K				IAmb	IAmb	12 41 08.2	
	comp=Z,19nm,1.2s						
L16K	Owhat River	19.39	58	P	P	12 41 06.9	+0.7
J17K	VABM Dome	19.65	53	P	P	12 41 09.6	+0.6
J17K				IAmb	IAmb	12 41 35.2	
	comp=Z,10nm,1.3s						
E18K	Tukpahlearik C	19.80	41	P	P	12 41 10.4	-0.3
K17K	Iditarod	19.96	55	P	P	12 41 14.7	+2.2
K17K				IAmb	IAmb	12 41 37.0	
	comp=Z,14nm,1.4s						
C18K	Utukok River	20.00	38	P	P	12 41 13.8	+0.8
C18K				IAmb	IAmb	12 41 29.9	
	comp=Z,11nm,1.2s						
H18K	Honhosa River	20.17	48	P	P	12 41 16.6	+1.8
M17K	Holitna River	20.37	59	P	P	12 41 19.4	+2.5
M17K				IAmb	IAmb	12 41 23.1	
	comp=Z,10nm,1.1s						
KLR	Kul'dur	20.67	264	i P	P	12 41 20.2	-0.1
KLR				pmax	pmax		
	comp=Z,2.0nm,1.5s						
L18K	Granite Mounta	20.71	57	P	P	12 41 20.7	+0.2
L18K				IAmb	IAmb	12 41 44.3	
	comp=Z,10nm,1.4s						
C19K	Lookout Ridge	20.71	37	P	P	12 41 19.1	-1.5
C19K				IAmb	IAmb	12 41 29.1	
	comp=Z,8.6nm,0.8s						
J18K	Innoko River	20.71	53	P	P	12 41 20.2	-0.5
F19K	Shaleruckik Mo	20.72	44	P	P	12 41 20.0	-0.7
H19K	Roundabout Mou	21.02	48	P	P	12 41 25.3	+1.5
D19K	Kuna River	21.02	39	P	P	12 41 24.9	+1.0
E19K	Redstone River	21.06	42	P	P	12 41 25.7	+1.3
N18K	Kilae Creek	21.18	61	P	P	12 41 26.9	+1.2
N18K				IAmb	IAmb	12 41 41.3	
	comp=Z,6.5nm,1.2s						
J19K	Poorman	21.23	52		P	12 41 27.1	+0.9
TIXI	Tiksi	21.46	330	P	P	12 41 24.5	-4.0
TIXI				IAmb	IAmb	12 41 37.7	
	comp=Z,5.1nm,0.8s						
TIXI	Tiksi	21.46	330	P	P	12 41 28.8	+0.3
	comp=Z,6.1nm,0.8s,baz=108,slow=7.9,SNR=11						
TIXI				LR	LR	12 50 33.0	
	comp=Z,49nm,20.1s,baz=149,slow=39						
	comp=Z,6.1nm,0.8s						
JTM	Tenmabayashi	21.52	234	P	P	12 41 30.9	+1.4
P18K	Big Mountain,	21.67	64	P	P	12 41 32.1	+1.1
P18K				IAmb	IAmb	12 42 10.9	
	comp=Z,12nm,1.4s						
M19K	Big River Lodg	21.80	58	P	P	12 41 34.3	+2.0
M19K				IAmb	IAmb	12 41 53.7	
	comp=Z,9.2nm,1.4s						
B20K	Meade River	21.82	35		P	12 41 31.1	-1.4
ACHA	Angle Creek He	21.84	68	P	P	12 41 34.3	+1.4
J20K	Nowinta River	21.88	51	P	P	12 41 33.9	+0.7
K20K	Telida	21.90	54	P	P	12 41 34.5	+1.0
G21K	Allakaket	22.34	45	P	P	12 41 38.4	+0.4
G21K				IAmb	IAmb	12 41 40.3	
	comp=Z,7.3nm,1.4s						
H21K	Melozitna Rive	22.54	48	P	P	12 41 39.5	-0.7
Q19K	Cape Douglas,	22.55	65	P	P	12 41 41.1	+0.7
P19K	Oil Pt	22.63	63	P	P	12 41 42.9	+1.7
CAST	Castle Rocks	22.80	53	P	P	12 41 44.4	+1.4
D22K	Ayikyak River	23.04	39	P	P	12 41 44.8	-0.7
D22K				IAmb	IAmb	12 42 09.0	
	comp=Z,4.5nm,1.1s						
OHAK	Old Harbor	23.14	69	P	P	12 41 46.6	+0.2
OHAK				IAmb	IAmb	12 41 56.3	
	comp=Z,8.8nm,1.0s						
B22K	Teshekpuk Lake	23.14	36	P	P	12 41 44.6	-1.8
B22K				IAmb	IAmb	12 41 56.9	
	comp=Z,7.3nm,1.1s						
E22K	Anaktuvuk Pass	23.22	41	P	P	12 41 47.1	-0.2
E22K				IAmb	IAmb	12 42 04.0	
	comp=Z,5.1nm,1.1s						
KDAK	Kodiak Island	23.36	68	P	P	12 41 48.5	-0.2
KDAK	Kodiak Island	23.36	68	P	P	12 41 48.5	-0.2
KDAK				pmax	pmax		
	comp=Z,36nm,1.5s						
SUA	Susitna One	23.57	58	P	P	12 41 51.2	+0.2
SUA				IAmb	IAmb	12 42 14.5	
	comp=Z,8.7nm,1.3s						
TRF	Thorofare Moun	23.60	53	P	P	12 41 53.2	+1.9
TRF				IAmb	IAmb	12 42 07.2	
	comp=Z,4.1nm,1.0s						
CNPM	China Poot	23.65	63	P	P	12 41 50.9	-0.8
CNPM				IAmb	IAmb	12 42 01.3	
	comp=Z,7.1nm,0.8s						
G23K	Bananza Creek	23.74	45	P	P	12 41 52.3	-0.2
H23K	Yukon River	23.89	47	P	P	12 41 54.3	+0.4
H23K				IAmb	IAmb	12 42 03.0	
	comp=Z,6.4nm,1.1s						
C23K	Itkillik River	23.95	37	P	P	12 41 53.4	-1.0
I23K	Minto, Yukon-K	23.96	49	P	P	12 41 54.6	+0.1
I23K				IAmb	IAmb	12 42 01.7	
	comp=Z,9.2nm,1.4s						
RND	Reindeer	24.25	53	P	P	12 41 58.0	+0.7
RND				IAmb	IAmb	12 42 05.0	
	comp=Z,2.6nm,0.8s						
RND	Reindeer	24.25	53	P	P	12 41 58.1	+0.7
RND				pmax	pmax		
	comp=Z,3.0nm,0.8s						
E24K	Your Creek	24.45	42	P	P	12 41 58.9	-0.2
E24K				IAmb	IAmb	12 42 09.2	
	comp=Z,4.8nm,1.0s						
C24K	Franklin Bluff	24.59	38	P	P	12 42 00.3	+0.1
CCB	Clear Creek Bu	24.63	50		P	12 42 00.5	-0.2
G24K	Hadweenzic Riv	24.75	45		P	12 42 02.0	+0.2
G24K				IAmb	IAmb	12 42 09.8	
	comp=Z,3.5nm,0.8s						
PWL	Port Wells	24.82	59	P	P	12 42 02.1	-0.4
DHY	Denali Highway	24.95	54	P	P	12 42 03.4	-0.3
DHY				IAmb	IAmb	12 42 06.8	
	comp=Z,4.1nm,1.2s						
ILAR	Eielson Array	25.02	50	P	P	12 42 03.9	-0.3
ILAR	Eielson Array	25.02	50	P	P	12 42 03.5	-0.7
	comp=Z,0.8nm,0.9s,baz=261,slow=8.5,SNR=7.2						
	comp=Z,0.8nm,0.9s						
ILAR	Eielson Array	25.02	50	P	P	12 42 03.9	-0.3
SCM	Sheep Creek Mo	25.14	57	P	P	12 42 04.7	-0.7
SCM	Sheep Creek Mo	25.14	57	P	P	12 42 04.7	-0.7
SCM				pmax	pmax		
	comp=Z,8.0nm,0.9s						
D25K	Kavik River	25.34	39	P	P	12 42 06.8	-0.4
D25K				IAmb	IAmb	12 42 23.0	
	comp=Z,3.5nm,0.8s						
F25K	Christian Rive	25.49	43	P	P	12 42 08.3	-0.3
F25K				IAmb	IAmb	12 42 17.1	
	comp=Z,3.3nm,0.9s						
E25K	Arctic Village	25.54	42	P	P	12 42 09.3	+0.3
E25K				IAmb	IAmb	12 42 49.2	
	comp=Z,4.6nm,1.4s						
BMAR	Burnt Mountain	25.90	44	P	P	12 42 12.4	+0.2
F26K	Sheenjek River	26.07	43	P	P	12 42 13.6	-0.2
F26K				IAmb	IAmb	12 42 19.7	
	comp=Z,7.6nm,1.4s						
G26K	Porcupine Rive	26.21	45	P	P	12 42 15.1	+0.1
G26K				IAmb	IAmb	12 42 21.6	
	comp=Z,3.8nm,1.1s						
MAJO	Matsushiro	26.28	233		P	12 42 19.4	+3.5
MAJO	Matsushiro	26.28	233	P	P	12 42 19.4	+3.5
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
DOT	Dot Lake	26.36	52	P	P	12 42 15.1	-1.3
K27K	Chicken	27.17	51	P	P	12 42 23.0	-0.7
K27K				IAmb	IAmb	12 42 30.1	
	comp=Z,4.2nm,1.1s						
JGF	Kuroka	27.44	233	P	P	12 42 30.0	+3.6
M27K	Edge Creek, AK	27.56	55	P	P	12 42 27.5	+0.1
M27K				IAmb	IAmb	12 42 28.7	
	comp=Z,3.3nm,1.1s						
F28M	Old Crow	27.70	43	P	P	12 42 28.7	+0.3
F28M				IAmb	IAmb	12 42 46.4	
	comp=Z,2.7nm,1.1s						
I28M	Miner Creek	27.89	48	P	P	12 42 29.7	-0.5
I28M				IAmb	IAmb	12 42 38.1	
	comp=Z,3.8nm,1.4s						
KSRS	Korea Array	30.55	248	P	P	12 42 54.5	+0.6
	comp=Z,0.2nm,0.3s,baz=34,slow=8.7,SNR=1.4						
	comp=Z,0.2nm,0.3s						
NRIK	Noril'sk	34.84	323	LR	LR	12 59 17.2	
	comp=Z,12nm,18.7s,baz=60,slow=39						
SONM	Songino Array	35.55	281	P	P	12 43 36.6	-1.1
	comp=Z,0.4nm,0.4s,baz=64,slow=6.6,SNR=3.9						
	comp=Z,0.4nm,0.4s						
H11N2	WAKE ISLAND Hy	36.41	176	T	T	13 22 35.5	
	baz=357,slow=76,SNR=479						
H11N3	WAKE ISLAND Hy	36.42	176	T	T	13 22 36.4	
	baz=357,slow=76,SNR=376						
H11N1	WAKE ISLAND Hy	36.42	176	T	T	13 22 32.5	
	baz=357,slow=76,SNR=448						
YKA	Yellowknife Ar	39.34	46	P	P	12 44 09.4	+0.1
	comp=Z,0.7nm,0.7s,baz=300,slow=8.7,SNR=8.3						
	comp=Z,0.7nm,0.7s						
SPITS	Spitsbergen Ar	44.51	351	P	P	12 44 50.6	-0.9
	comp=Z,1.6nm,0.6s,baz=42,slow=5.1,SNR=5.1						
	comp=Z,1.6nm,0.6s						
KURK	Kurchatov	48.13	302	P	P	12 45 21.8	+1.6
KURBB	Kurchatov Arra	48.24	302	P	P	12 45 21.8	+0.7
	comp=Z,0.4nm,0.7s,baz=53,slow=8.0,SNR=3.5						
	comp=Z,0.4nm,0.7s						
MKAR	Makanchi Array	48.96	296	P	P	12 45 25.9	-0.8
	comp=Z,0.2nm,0.4s,baz=62,slow=7.8,SNR=4.4						
	comp=Z,0.2nm,0.4s						
MKAR	Makanchi Array	48.96	296	i P	P	12 45 30.7	+4.0
BVAR	Borovoye Array	50.34	308	P	P	12 45 36.1	-1.0
	comp=Z,1.0nm,0.6s,baz=31,slow=9.0,SNR=4.6						
	comp=Z,1.0nm,0.6s						
NVAR	Mina Array Bea	52.58	75	P	P	12 45 55.0	+0.7
	comp=Z,0.2nm,0.5s,baz=312,slow=7.4,SNR=8.3						
	comp=Z,0.2nm,0.5s						
ARTI	Arti	52.84	318	LR	LR	13 08 29.3	
	comp=Z,28nm,19.1s,baz=44,slow=36						
PDAR	Pinedale Array	54.04	65	P	P	12 46 04.9	-0.2
	comp=Z,0.4nm,0.5s,baz=340,slow=4.3,SNR=6.4						
	comp=Z,0.4nm,0.5s						
ULM	Lac du Bonnet	55.04	50	P	P	12 46 11.2	-0.7
	comp=Z,1.6nm,0.5s,baz=313,slow=8.3,SNR=5.9						
	comp=Z,1.6nm,0.5s						
ULM	Lac du Bonnet	55.04	50	i P	P	12 46 11.4	-0.5
AAK	Ala-Archa	55.83	297	i P	P	12 46 18.5	+0.7
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
PFO	Pinyon Flats O	57.14	78	i P	P	12 46 26.6	-0.7
CMAR	Chiang Mai Arr	61.08	260	P	P	12 46 55.1	+0.5
	comp=Z,0.4nm,0.5s,baz=50,slow=7.8,SNR=1.7						
	comp=Z,0.4nm,0.5s						
NOA	NORSAR Array B	61.23	345	P	P	12 46 54.4	-0.7
	comp=Z,0.2nm,0.3s,baz=21,slow=6.2,SNR=1.6						
	comp=Z,0.2nm,0.3s						
BRDH	Bariadhala	61.77	269	LR	LR	13 17 19.1	
	comp=Z,96nm,19.0s,baz=133,slow=40						
SCHQ	Schefferville	61.84	31	P	P	12 46 58.5	-0.7
	comp=Z,0.9nm,0.5s,baz=359,slow=7.5,SNR=5.9						
	comp=Z,0.9nm,0.5s						
AKASG	Malin Array Be	67.16	331	P	P	12 47 33.6	-0.5
	comp=Z,0.2nm,0.3s,baz=31,slow=6.1,SNR=1.7						
	comp=Z,0.2nm,0.3s						
AKBB	Malin Array Si	67.16	331	i P	P	12 47 33.7	-0.4
AKBB				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR	Lajitas Array	67.34	71	P	P	12 47 35.6	-0.1
	comp=Z,0.3nm,0.5s,baz=307,slow=5.4,SNR=5.1						
	comp=Z,0.3nm,0.5s						
KBZ	Khabaz	68.89	318	eP	P	12 47 44.8	-0.2
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GNI	Garni	71.25	315	LR	LR	13 23 28.6	
	comp=Z,25nm,18.5s,baz=43,slow=40						
WRA	Warramunga Arr	79.86	208	P	P	12 48 50.4	+1.3
	comp=Z,0.3nm,0.8s,baz=14,slow=5.4,SNR=1.7						
	comp=Z,0.3nm,0.8s						
ASAR	Alice Springs	83.53	208	P	P	12 49 08.7	+0.4
	comp=Z,0.3nm,0.7s,baz=28,slow=4.9,SNR=5.5						
	comp=Z,0.3nm,0.7s						
QSPA	South Pole Qui	145.89	180	PKPbc	PKPdf	12 56 17.5	-0.4
	comp=Z,0.5nm,0.6s,baz=240,slow=1.2,SNR=7.6						

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*IDC **26** 12:39:02.9±9.0, 14°.38N×92°.07W, h0^{km}, mb3.6/3,*
mbtmp3.5/4, ML3.7/1, MS2.4/2, Error ellipse:
s-maj=210.3km s-min=104.4km az=19.0
*MEX **26** 12:39:09.5±1.1, 14°.33N×93°.05W, h15^{km}±41^{km}, MD4.2*
*GCG **26** 12:39:09.4±1.6, 14°.29N×92°.91W, h29^{km}±8^{km}, MD4.2,*
ML4.1, MW3.4
*CATAC **26** 12:39:09.2±1.3, 14°N±7°×9°3W±1°0, h22^{km}±17^{km}, M4.0/6,*
MLv4.0/6, Error ellipse: s-maj=21.6km s-min=15.0km
az=102.2, confirmed
ISC 26 12:39:05.9±1.7**, 14°.39N**±0°.05×**93°.00W**±0°.03**, h7**^{km}±10^{km}**,**
n47, σ2^{s}.66/72**, mb3.7**/3**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.88	54	eP	Pn	12 39 24.6	-0.1
THIG				i S	Sn	12 39 36.2	-1.5
THIG		0.88	54	i P	Pn	12 39 24.6	-0.1
THIG				i S	Sn	12 39 37.2	-0.4
THIG				i S	Sb	12 39 37.7	+2.3
THIG				IAML		12 39 40.4	
	comp=E,3μm,0.4s						
SMCA	Catarina	1.01	62	i P	Pn	12 39 26.5	0.0
SMCA				i S	Sn	12 39 40.5	-0.4
PATR	El Naranjo	1.03	45	eP	Pn	12 39 26.9	-0.1
PATR				i S	Sn	12 39 39.8	-2.1
PAVE	Pavencul	1.13	45	i P	Pn	12 39 28.5	+0.1
PAVE				i S	Sn	12 39 42.4	-1.8
RTAL	Retalhuleu	1.27	84	eP	Pn	12 39 29.8	-0.3
RTAL				i S	Sb	12 39 45.5	-1.2
RTAL	Retalhuleu	1.27	84	P	Pn	12 39 29.7	-0.3
RTAL	Retalhuleu	1.27	84	S	Sg	12 39 47.2	+0.5
PCIG		1.33	351	eP	Pb	12 39 31.0	-0.1
PCIG				eS	Sb	12 39 45.9	-2.5
STG8	El Palmar, Qui	1.60	88	i P	Pn	12 39 31.7	-3.1
STG8				IAML		12 39 53.1	
	comp=N,4μm,0.2s						
SOKI	Kika Raxquin	1.60	74	i P	Pb	12 39 36.3	+0.2
SOKI				i S	Sg	12 39 57.6	+0.1
SOKI				IAML		12 40 09.1	
	comp=E,1μm,0.3s						
STG0	El Palmar, Qui	1.60	88	i S	Sn	12 39 48.9	-7.0
STG0				IAML		12 39 52.1	
	comp=N,3μm,0.3s						
HUEH	Huehuetenango	1.71	57	i P	Pb	12 39 38.0	+0.1
HUEH				i S	Sg	12 40 00.3	-0.8
HUEH	Huehuetenango	1.71	57	i P	Pb	12 39 38.3	+0.4
HUEH				i S	Sg	12 40 00.4	-0.8
HUEH				IAML		12 40 08.6	
	comp=E,3μm,0.7s						
HUEH	Huehuetenango	1.71	57	P	Pb	12 39 38.3	+0.4
CCIG	Comitan	2.06	24	eP	Pb	12 39 44.2	+0.5
CCIG				i S	Sg	12 40 09.9	-2.2
CCIG	Comitan	2.06	24	i P	Pg	12 39 44.5	-0.9
CCIG				i S	Sg	12 40 11.3	-0.7
CCIG				IAML		12 40 18.5	
	comp=N,909nm,0.5s						
ESSG	Sabana Grande	2.10	90	i P	Pn	12 39 41.9	+0.3
ESSG				IAML		12 40 13.0	
	comp=E,612nm,0.5s						
TGIG		2.38	357	i P	Pb	12 39 47.8	-1.4
TGIG				eS	Sb	12 40 18.2	-0.6
TGIG		2.38	357	i P	Pb	12 39 47.9	-1.3
TGIG				i S	Sb	12 40 18.1	-0.6
TGIG				IAML		12 40 20.9	
	comp=E,403nm,0.5s						
FG16	Alotenango, Sa	2.41	92	i P	Pn	12 39 41.2	-4.8
FG16				i S	Sn	12 40 06.2	-10
FG16				IAML		12 40 14.2	
	comp=E,4μm,0.1s						
NUBE	Las Nubes	3.16	98	i P	Pn	12 39 56.8	+0.6
NUBE	Las Nubes	3.16	98	P	Pn	12 39 56.8	+0.6
NUBE	Las Nubes	3.16	98	S	Sn	12 40 30.8	-3.4
CMIG	Matias Romero	3.24	326	LR	LR	12 40 54.3	
	comp=E,18nm,20.3s,baz=154,slow=29						
JAYA	Jayaque - finc	3.52	102	i P	Pn	12 40 02.4	+1.2
JAYA				i S	Sn	12 40 40.5	-2.8
MTO3	Montecristo	3.52	89	P	Pn	12 40 01.6	+0.3
PMON	Piamonte	3.64	100	P	Pn	12 40 04.3	+1.5
PMON	Piamonte	3.64	100	S	Sn	12 40 42.9	-3.1
PETF	Flores	3.92	50	i P	Pn	12 40 09.8	+3.2
PETF				i S	Sn	12 40 53.0	0.0
PETF	Flores	3.92	50	P	Pn	12 40 09.4	+2.8
PEIG	Puerto Escondi	4.32	292	eP	Pn	12 40 14.9	+2.9
PEIG				i S	Sn	12 40 54.5	-8.2
VHO	Vista Hermosa	4.48	307	i P	Pn	12 40 15.1	+0.7
VHO				i S	Sn	12 41 04.2	-2.8
YOIG	Yosondua	5.02	300	eP	Pn	12 40 26.0	+4.0
YOIG				i S	Sn	12 41 19.4	-1.0
PNIG	Pinotepa	5.33	293	eP	Pn	12 40 27.2	+1.2
PNIG				i S	Sn	12 41 20.7	-7.1
TOIG	Toxpalan	5.37	314	eP	Pn	12 40 28.9	+2.3
TOIG				i S	Sn	12 41 22.6	-6.2
TXIG	Tlaxiaco	5.40	302	eP	Pn	12 40 28.5	+1.3
TXIG				i S	Sn	12 41 30.4	+0.5
HLIG	Huajuapan de L	5.75	307	eP	Pn	12 40 33.7	+1.8
HLIG				i S	Sn	12 41 39.3	+1.0
FTIG	Fresnillo de T	6.05	306	eP	Pn	12 40 36.7	+0.7
FTIG				i S	Sn	12 41 45.4	-0.2
MGIG	Malinaltepec	6.12	298	eP	Pn	12 40 40.2	+3.2
MGIG				i S	Sn	12 41 44.2	-3.2
JAUV	Jalcomulco	6.15	324	eP	Pn	12 40 38.1	+0.9
JAUV				i S	Sn	12 41 45.7	-2.1
CXUV	Coxquihui	7.23	323	i P	Pn	12 40 55.8	+3.6
CXUV				i S	Sn	12 42 06.1	-8.5
TXAR	Lajitas Array	17.85	328	P	P	12 43 19.0	+3.3
	comp=E,0.1nm,0.3s,baz=134,slow=14,SNR=6.5						
	comp=E,0.9nm,0.8s						
SJG	San Juan	26.03	78	LR	LR	12 54 21.4	
	comp=E,24nm,18.6s,baz=160,slow=36						
NVAR	Mina Array Bea	32.77	322	P	P	12 45 42.9	+3.0
	comp=E,0.8nm,0.7s,baz=143,slow=9.6,SNR=7.5						
	comp=E,0.8nm,0.7s						
YKA	Yellowknife Ar	50.43	347	P	P	12 48 03.4	-0.5
	comp=E,0.8nm,0.8s,baz=158,slow=6.9,SNR=1.4						
	comp=E,0.8nm,0.8s						
ILAR	Eielson Array	62.10	337	P	P	12 49 27.9	+0.7
	comp=E,0.2nm,0.7s,baz=125,slow=6.0,SNR=4.4						
	comp=E,0.2nm,0.7s						

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*IDC **26** 12:48:05.7±1.9, 53°.52N×163°.78W, h0^{km}, mb3.6/6,*
mbtmp3.5/7, ML2.4/1, MS3.3/2, Error ellipse: s-maj=46.5km
s-min=29.0km az=177.0
*NEIC **26** 12:48:05.7±1.2, 53°.35N±0°.03×163°.53W±0°.06, h10^{km}±2^{km},*
ML3.2/16, ML3.1(AEIC), Error ellipse: s-maj=7.1km
s-min=4.3km az=240.0
*AEIC **26** 12:48:08.0±1.0, 53°.36N±0°.03×163°.56W±0°.05, h30^{km}±6^{km},*
Error ellipse: s-maj=5.2km s-min=3.2km az=123.0
ISC 26 12:48:06.4±2.4**, 53°.39N**±0°.07×**163°.61W**±0°.05**, h9**^{km}±14^{km}**,**
n59, σ0^{s}.78/60**, mb3.8**/6**, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESE	West Dahl East	1.23	332		Pb	12 48 29.8	0.0
WESE					Sn	12 48 47.2	+0.6
WECS	Westdahl Cape	1.34	329		Pn	12 48 31.2	0.0
WECS					Sg	12 48 50.1	+0.6
ISLZ	Isanotski Laza	1.34	357		Pn	12 48 30.8	-0.5
ISLZ					Sb	12 48 48.5	-0.4
SSLS	Shishaldin Sou	1.35	350		Pn	12 48 31.0	-0.3
SSLS					Sg	12 48 50.4	+0.7
WEBT	Westdahl Beart	1.38	331		Pn	12 48 31.6	-0.2
WEBT					Sb	12 48 50.7	+0.6
ISNN	Isanotski Nort	1.45	356		Pb	12 48 33.3	-0.3
ISNN					Sg	12 48 53.0	0.0
FALS	False Pass	1.48	4		Pn	12 48 32.4	-0.6
AKUT	Akutan	1.49	301		Pn	12 48 33.3	0.0
AKUT				IAML		12 48 59.5	
	comp=E,219nm,1.0s						
AKBBA	Akutan Broad B	1.55	298		Pn	12 48 34.1	0.0
AKBBA					Sn	12 48 54.7	+0.3
AKGG	Akutan Green G	1.63	301		Sn	12 48 55.0	-1.4
LVA	Lava Point	1.64	299	Pn	Pn	12 48 35.0	-0.3
LVA				IAML		12 49 09.5	
	comp=E,208nm,1.3s						
UNV	Unalaska Valle	1.79	286		Pn	12 48 37.2	-0.1
MREP	Makushin Rep’t	1.92	284		Sb	12 49 05.6	+0.1
MTBL	Makushin Table	1.92	289		Pb	12 48 40.2	-1.3
MTBL					Sn	12 49 02.6	-0.9
MGOD	Makushin Gods	1.99	283		Pn	12 48 40.6	+0.5
MAPS	Pakushin South	2.03	283		Pn	12 48 41.6	+0.9
MAPS					Sn	12 49 07.1	+0.9
HAG	Hague Volcano	2.17	27		Pn	12 48 42.8	+0.1
PS1A	Pavlof South-1	2.31	27		Pn	12 48 45.5	+0.9
S12K	Black Hills	2.49	21		Pn	12 48 46.7	-0.3
S12K				IAML		12 49 27.8	
	comp=N,120nm,1.5s						
S12K				IAML		12 49 37.6	
	comp=E,100nm,1.9s						
OKTU	Okmok Mt. Tuli	2.66	272		Pn	12 48 50.2	+0.8
SDPT	Sand Point	2.69	42		Pn	12 48 49.8	+0.1
SDPT				IAML		12 49 42.0	
	comp=N,108nm,1.7s						
SDPT				IAML		12 49 54.3	
	comp=E,94nm,1.3s						
CNBA	Chernabura Isl	2.77	57		Pn	12 48 50.4	-0.4
CNBA				IAML		12 49 23.1	
	comp=E,89nm,0.5s						
OKSP	Okmok Steeple	2.81	269		Pn	12 48 51.9	+0.4
NIKH	Nikolski High	3.19	265		Pn	12 48 57.0	+0.4
NIKH				IAML		12 50 02.2	
	comp=E,72nm,2.5s						
O14K	Tigyukauivet M	6.02	12	Pn	Pn	12 49 35.2	-0.3
O15K	Ungalikthiuk R	6.17	18	Pn	Pn	12 49 36.4	-1.2
SII	Sitkinak Islan	6.29	56	Pn	Pn	12 49 38.3	-0.9
ACHA	Angle Creek He	6.72	41	Pn	Pn	12 49 44.7	-0.4
O16K	Kokwok River B	6.93	24	Pn	Pn	12 49 47.3	-0.7
OHAK	Old Harbor	7.03	53	Pn	Pn	12 49 47.6	-1.7
N15K	Kwethluk River	7.07	14	Pn	Pn	12 49 49.6	-0.2
M14K	Bethel	7.44	6	Pn	Pn	12 49 53.7	-1.2
KDAK	Kodiak Island	7.64	50	Pn	Pn	12 49 57.5	-0.2
Q19K	Cape Douglas,	7.85	41	Pn	Pn	12 50 00.6	-0.1
ADK	Adak	8.10	265	Pn	Pn	12 50 04.8	+0.8
N18K	Kilae Creek	8.43	27	Pn	Pn	12 50 07.7	-0.8
M17K	Holitna River	8.69	20	Pn	Pn	12 50 10.8	-1.3
N19K	Bonanza Creek	8.94	30	Pn	Pn	12 50 15.1	-0.5
CNPM	China Poot	9.20	43	Pn	Pn	12 50 17.5	-1.5
L18K	Granite Mounta	9.59	20	Pn	Pn	12 50 23.7	-0.7
K17K	Iditarod	9.76	15	Pn	Pn	12 50 26.0	-0.8
L19K	White Mountain	9.97	24	Pn	Pn	12 50 28.8	-0.8
J17K	VABM Dome	10.31	11	Pn	Pn	12 50 34.2	-0.1
SUA	Susitna One	10.64	35	Pn	Pn	12 50 38.6	-0.2
ILAR	Eielson Array	14.22	30	Pn	Pn	12 51 26.0	-1.7
	baz=219,slow=11,SNR=1.7						
	comp=E,0.2nm,0.6s						
TIXI	Tiksi	33.69	328	LR	LR	13 10 40.3	
	comp=E,33nm,19.1s,baz=133,slow=40						

H11N2	**WAKE ISLAND Hy**	**40.55**	**226**	T	T	13 39 14.8	
	baz=26						
H11N3	**WAKE ISLAND Hy**	**40.56**	**225**	T	T	13 39 26.0	
	baz=26						
H11N1	**WAKE ISLAND Hy**	**40.57**	**226**	T	T	13 39 20.8	
	baz=26						
H11S1	**WAKE ISLAND Hy**	**41.72**	**225**	T	T	13 40 54.7	
	baz=25,slow=76,SNR=9.7						
H11S2	**WAKE ISLAND Hy**	**41.73**	**225**	T	T	13 40 56.3	
	baz=25,slow=76,SNR=8.3						
H11S3	**WAKE ISLAND Hy**	**41.74**	**225**	T	T	13 40 56.4	
	baz=25,slow=76,SNR=7.2						
FRB	**Frobisher Bay**	**46.07**	**38**	LR	LR	13 18 38.2	
	comp=E,38nm,18.0s,baz=22,slow=40						
TXAR	**Lajitas Array**	**49.29**	**94**	P	**P**	**12 56 57.0**	**+1.5**
	comp=E,0.2nm,0.7s,baz=325,slow=7.0,SNR=2.2						
	comp=E,0.2nm,0.7s						
SONM	**Songino Array**	**53.72**	**303**	P	**P**	**12 57 28.1**	**-0.4**
	comp=E,0.8nm,0.8s,baz=51,slow=7.6,SNR=4.0						
	comp=E,0.8nm,0.8s						
KURBB	**Kurchatov Arra**	**63.96**	**321**	P	**P**	**12 58 39.6**	**+0.2**
	comp=E,0.5nm,0.8s,baz=44,slow=6.7,SNR=4.0						
	comp=E,0.5nm,0.8s						
MKAR	**Makanchi Array**	**65.56**	**316**	P	**P**	**12 58 49.0**	**-0.9**
	comp=E,0.3nm,0.7s,baz=35,slow=5.5,SNR=3.2						
	comp=E,0.3nm,0.7s						
HFS	**Hagfors**	**66.81**	**1**	P	**P**	**12 58 56.7**	**-1.0**
	comp=E,0.6nm,0.4s,baz=347,slow=5.9,SNR=2.1						
	comp=E,0.6nm,0.4s						
BRTR	**Keskin Array B**	**86.07**	**347**	P	**P**	**13 00 48.5**	**+1.1**
	comp=E,1.1nm,1.0s,baz=7.1,slow=3.5,SNR=4.4						
	comp=E,1.1nm,1.0s						

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*KRSC **26** 12:48:26.7±1.2, 56°.17N×164°.34E, h46^{km}±18^{km}, Ml4.1*
*IDC **26** 12:48:26.1±1.1, 56°.14N×164°.25E, h0^{km}, mb3.6/8, mbtmp3.7/10, ML3.4/2, MS2.5/3, Error ellipse: s-maj=32.1km s-min=23.7km az=158.0*
ISC 26 12:48:25.6±1.8, **56°.19N**±0°.05×**164°.37E**±0°.05, **h1**^{km}±11^{km}, **n55**, σ**1^{s}.11**/58, **mb3.7**/8, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.86**	**272**	*e*P	**Pg**	**12 48 42.2**	**+0.1**
KBTR				*e*S	**Sg**	**12 48 53.5**	**+0.1**
KBG	**Krutoberegovo**	**0.93**	**275**	*e*P	**Pb**	**12 48 43.2**	**-1.3**
KBG				*e*S	**Sg**	**12 48 55.4**	**0.0**
BKI	**Bering**	**1.34**	**137**	*e*P	**Pn**	**12 48 51.2**	**-0.2**
BKI				*e*S	**Sn**	**12 49 08.4**	**-1.4**
SMKR	**Semkarok**	**1.66**	**285**	*e*P	**Pn**	**12 48 55.5**	**-0.3**
SMKR				*e*S	**Sn**	**12 49 16.0**	**-1.8**
SRKR	**Sorokina**	**1.84**	**286**	*e*P	**Pn**	**12 48 57.8**	**-0.5**
ZLN	**Zelenaya**	**2.00**	**266**	*e*P	**Pn**	**12 49 01.0**	**+0.4**
CIRR	**Tsirk**	**2.03**	**269**	*e*P	**Pn**	**12 49 01.2**	**+0.3**
BZGR	**Bezymyannyi-Gr**	**2.07**	**265**	*e*P	**Pn**	**12 49 02.0**	**+0.5**
BZGR				*e*S	**Sn**	**12 49 26.9**	**-1.1**
KLY	**Klyuchi**	**2.08**	**275**	*e*P	**Pn**	**12 49 00.1**	**-1.4**
BZWR	**Bezymyannyi-We**	**2.18**	**266**	*e*P	**Pn**	**12 49 03.2**	**+0.1**
MKZ	**Mys Kozlova**	**2.23**	**224**	*e*P	**Pn**	**12 49 03.0**	**-0.5**
MKZ				*e*S	**Sn**	**12 49 28.3**	**-3.3**
KIRR	**Kirishev**	**2.27**	**266**	*e*P	**Pn**	**12 49 04.7**	**+0.5**
KPT	**Kopyto**	**2.33**	**266**	*e*P	**Pn**	**12 49 06.2**	**+1.1**
KMNR	**Kamenistaya**	**2.36**	**261**	*e*P	**Pn**	**12 49 06.2**	**+0.7**
TUMD	**Tumrok D**	**2.46**	**248**	*e*P	**Pn**	**12 49 07.3**	**+0.6**
KOZ	**Kozyrevsk**	**2.52**	**269**	*e*P	**Pn**	**12 49 09.0**	**+1.4**
SRDR	**Sredinnyy**	**2.60**	**275**	*e*P	**Pn**	**12 49 09.8**	**+1.1**
SRDR				*e*S	**Sn**	**12 49 40.6**	**-0.3**
OSSR	**Ossora**	**3.15**	**348**	*e*P	**Pn**	**12 49 15.4**	**-0.7**
ESO	**Esso**	**3.19**	**268**	*e*P	**Pn**	**12 49 17.3**	**+0.5**
KII	**Karymskiy**	**3.56**	**235**	*e*P	**Pn**	**12 49 22.3**	**+0.4**
PALN	**Palana**	**3.75**	**323**	*e*P	**Pn**	**12 49 25.7**	**+1.4**
SPN	**Mys Shipunski**	**4.00**	**221**	*e*P	**Pn**	**12 49 27.0**	**-0.9**
NLC	**Nalytchevo**	**4.20**	**226**	*e*P	**Pn**	**12 49 31.5**	**+0.9**
SDLR	**Sedlovina**	**4.32**	**230**	*e*P	**Pn**	**12 49 33.3**	**+0.9**
KRER	**Koryakskii**	**4.36**	**231**	*e*P	**Pn**	**12 49 34.2**	**+1.2**
KRX	**Arik**	**4.36**	**232**	*e*P	**Pn**	**12 49 34.1**	**+1.1**
SMAR	**Somma**	**4.36**	**230**	*e*P	**Pn**	**12 49 34.0**	**+0.9**
AVH	**Avacha**	**4.39**	**230**	*e*P	**Pn**	**12 49 34.4**	**+1.1**
UGLR	**Uglovaya**	**4.39**	**229**	*e*P	**Pn**	**12 49 34.1**	**+0.7**
KOK	**Koryaka**	**4.41**	**231**	*e*P	**Pn**	**12 49 34.7**	**+1.1**
GNL	**Ganaly**	**4.47**	**239**	*e*P	**Pn**	**12 49 35.7**	**+1.2**
DALK	**Dalny**	**4.55**	**228**	*e*P	**Pn**	**12 49 35.6**	**+0.2**
PET	**Petropavlovsk**	**4.59**	**229**	*e*P	**Pn**	**12 49 36.5**	**+0.5**
PETK	**Petropavlovsk-**	**4.95**	**234**	Pn	**Pn**	**12 49 41.4**	**+0.4**
	2.7nm,0.3s,baz=65,slow=17,SNR=23						
PETK				Sn	**Sn**	**12 50 38.3**	**-0.6**
	baz=70,slow=22,SNR=1.0						
PETK				LR	LR	12 51 50.8	
	comp=Z,51nm,21.4s,baz=59,slow=42						
	5.1nm,0.4s						
KRMR	**Karymshinskiy**	**4.95**	**230**	*e*P	**Pn**	**12 49 42.5**	**+1.5**
RUS	**Russkaya**	**5.09**	**225**	*e*P	**Pn**	**12 49 43.6**	**+0.8**
GRL	**Gorelyy**	**5.18**	**228**	*e*P	**Pn**	**12 49 46.1**	**+1.9**
MTVR	**Mutnovka**	**5.18**	**227**	*e*P	**Pn**	**12 49 46.1**	**+1.8**
APC	**Apacha**	**5.32**	**235**	*e*P	**Pn**	**12 49 48.7**	**+2.6**
ASAK	**Asacha**	**5.38**	**227**	*e*P	**Pn**	**12 49 48.8**	**+2.0**
MA2	**Magadan**	**8.00**	**301**	LR	LR	12 53 45.5	
	comp=Z,32nm,19.0s,baz=138,slow=40						
SEY	**Seymchan**	**9.08**	**323**	LR	LR	12 54 37.7	
	comp=Z,35nm,18.3s,baz=32,slow=41						
ASAJ	**Asahikawa**	**18.36**	**238**	P	**P**	**12 52 41.4**	**+0.1**
	0.3nm,0.3s,baz=72,slow=9.2,SNR=5.2						
	5.8nm,0.7s						
MJAR	**Matsushiro Arr**	**26.41**	**233**	P	**P**	**12 54 03.5**	**+0.1**
	2.7nm,0.7s,baz=23,slow=7.9,SNR=9.1						
	2.7nm,0.7s						
SONM	**Songino Array**	**35.66**	**282**	P	**P**	**12 55 24.5**	**-0.5**
	0.6nm,0.4s,baz=66,slow=7.0,SNR=1.4						
	0.6nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**36.45**	**176**	T	T	13 34 23.8	
	baz=357,slow=76,SNR=380						
H11N3	**WAKE ISLAND Hy**	**36.47**	**176**	T	T	13 34 29.7	
	baz=357,slow=76,SNR=360						
H11N1	**WAKE ISLAND Hy**	**36.47**	**176**	T	T	13 34 24.4	
	baz=357,slow=76,SNR=29						
KURBB	**Kurchatov Arra**	**48.31**	**302**	P	**P**	**12 57 09.0**	**+0.9**
	0.2nm,0.3s,baz=57,slow=8.2,SNR=2.8						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**49.05**	**296**	P	**P**	**12 57 14.6**	**+0.8**
	0.1nm,0.3s,baz=61,slow=7.1,SNR=2.0						
	0.1nm,0.3s						
CMAR	**Chiang Mai Arr**	**61.21**	**260**	P	**P**	**12 58 41.5**	**-0.4**
	0.6nm,0.6s,baz=21,slow=6.9,SNR=4.1						
	0.6nm,0.6s						
TXAR	**Lajitas Array**	**67.21**	**71**	P	**P**	**12 59 22.7**	**+1.4**
	0.2nm,0.7s,baz=312,slow=3.1,SNR=2.0						
	0.2nm,0.7s						
WRA	**Warramunga Arr**	**79.97**	**209**	P	**P**	**13 00 36.7**	**+0.6**
	0.3nm,0.6s,baz=1.9,slow=5.7,SNR=4.7						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**83.64**	**208**	P	**P**	**13 00 55.7**	**+0.3**
	0.5nm,0.8s,baz=11,slow=4.5,SNR=5.0						
	0.5nm,0.8s						
QSPA	**South Pole Qui**	**145.94**	**180**	PKPbc	**PKPbc**	**13 08 04.8**	**-0.5**
	0.8nm,0.5s,baz=226,slow=0.7,SNR=13						

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*UCR **26** 12:57:20.7±1.4, 8°.31N×82°.84W, h10^{km}±6^{km}, MW3.9*
*CATAC **26** 12:57:23.1±0.7, 9°N±5°×8°3W±°, h9^{km}±2^{km}, M3.6/9, MLv3.6/9, Error ellipse: s-maj=9.9km s-min=6.8km az=11.1, confirmed*
ISC 26 12:57:18.9±1.4, **8°.25N**±0°.05×**82°.86W**±0°.03, **h15**^{km}±9^{km}, **n79**, σ**1^{s}.34**/86, **13C-11D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CDITO	**Canoas**	**0.32**	**357**	P	**Pb**	**12 57 27.2**	**+0.9**
CDITO				S	**Sg**	**12 57 30.3**	**+0.3**
NELY	**Ciudad Neily**	**0.40**	**347**	⇑*i*P	**Pb**	**12 57 28.4**	**+0.6**
NELY				*e*S	**Sb**	**12 57 34.2**	**+0.4**
MCANO	**Manzana, Boque**	**0.42**	**42**	*e*P	**Pb**	**12 57 29.2**	**+1.1**
CSTBL	**De las Acacias**	**0.44**	**69**	⇓*i*P	**Pb**	**12 57 30.1**	**+1.7**
FITO	**Golfito**	**0.47**	**321**	*e*P	**Pb**	**12 57 29.0**	**+0.1**
FITO				*e*S	**Sb**	**12 57 35.2**	**-0.5**
EDAD	**Golfito**	**0.50**	**322**	*e*P	**Pb**	**12 57 29.4**	**-0.1**
EDAD				*e*S	**Sg**	**12 57 36.0**	**+0.4**
CLLRA	**Cordillera,**	**0.54**	**26**	*e*P	**Pb**	**12 57 30.7**	**+0.4**
RSRNO	**Rio Sereno**	**0.56**	**360**	⇑*i*P	**Pb**	**12 57 31.1**	**+0.6**
BRU2	**Volcan**	**0.56**	**17**	*e*P	**Pb**	**12 57 30.8**	**+0.2**
BRU2				*e*S	**Sb**	**12 57 38.5**	**0.0**
BRU2	**Volcan**	**0.56**	**17**	P	**Pb**	**12 57 30.9**	**+0.4**
BRU2				S	**Sg**	**12 57 37.1**	**-0.5**
TBS2		**0.57**	**20**	⇑*e*P	**Pb**	**12 57 32.0**	**+1.2**
VITO	**San Vito**	**0.57**	**349**	⇑*i*P	**Pb**	**12 57 31.2**	**+0.5**
SCLRA	**Santa Clara, W**	**0.58**	**7**	⇑*i*P	**Pb**	**12 57 31.4**	**+0.5**
BQTLY	**Boquete Panama**	**0.64**	**38**	*e*P	**Pb**	**12 57 32.0**	**+0.2**
ALCO	**Alturas Coton,**	**0.69**	**2**	⇑*i*P	**Pg**	**12 57 32.5**	**0.0**
EDP2	**Potrero Grande**	**0.82**	**337**	⇑*i*P	**Pg**	**12 57 34.9**	**0.0**
EDP2				*e*S	**Sb**	**12 57 46.0**	**+0.2**
PBNVO	**Pueblo Nuevo,**	**0.91**	**46**	⇓*e*P	**Pg**	**12 57 36.1**	**-0.5**
PANP	**Palmar Norte**	**0.92**	**320**	⇓*e*P	**Pg**	**12 57 36.3**	**-0.4**
RBALA	**Bur**	**0.93**	**48**	*e*P	**Pg**	**12 57 36.6**	**-0.3**
RMDIO	**Remedios, Chir**	**1.02**	**91**	*e*P	**Pb**	**12 57 39.1**	**+0.9**
DRK0	**Durika**	**1.07**	**339**	⇑*e*P	**Pb**	**12 57 38.3**	**-1.0**
DRK0	**Durika**	**1.07**	**339**	P	**Pb**	**12 57 38.7**	**-0.6**
DRK0	**Durika**	**1.07**	**339**	S	**Sb**	**12 57 49.8**	**-3.5**
EDPE	**Pejibaye, P**	**1.14**	**322**	⇓*e*P	**Pb**	**12 57 40.0**	**-0.4**
OCHAL	**Ojochal**	**1.15**	**317**	S	**Sb**	**12 57 53.5**	**-1.6**
OCHAL	**Ojochal**	**1.15**	**317**	P	**Pb**	**12 57 40.0**	**-0.4**
PDCAN	**Manzana , Fuen**	**1.15**	**88**	*e*P	**Pb**	**12 57 40.3**	**-0.2**
KKNTU	**Kakintº**	**1.19**	**61**	⇓*e*P	**Pn**	**12 57 40.3**	**-0.7**
BRIBI	**Bribri**	**1.36**	**2**	*e*P	**Pb**	**12 57 44.2**	**+0.1**
GMAL	**Guarumal, Vera**	**1.68**	**107**	*e*P	**Pn**	**12 57 48.4**	**+0.6**
RAZU	**San Marcos de**	**1.81**	**321**	*e*P	**Pb**	**12 57 51.6**	**-0.3**
PITB	**Pirrs, San**	**1.81**	**321**	*e*P	**Pb**	**12 57 51.7**	**-0.2**
PISJ	**San Jernim**	**1.85**	**318**	⇓*e*P	**Pn**	**12 57 51.9**	**+1.5**
LCR2	**La Lucha 2**	**1.86**	**323**	*e*P	**Pn**	**12 57 51.3**	**+0.8**
LCR2	**La Lucha 2**	**1.86**	**323**	P	**Pn**	**12 57 51.5**	**+1.0**
LCR2	**La Lucha 2**	**1.86**	**323**	S	**Sn**	**12 58 12.6**	**-1.3**
ABE2	**San Pablo**	**1.86**	**321**	*e*P	**Pb**	**12 57 52.3**	**-0.5**
PICV	**PH. Pirrs**	**1.90**	**316**	⇓*e*P	**Pn**	**12 57 52.1**	**+1.3**
PCAYA	**Pacayas**	**1.90**	**330**	*e*P	**Pn**	**12 57 51.5**	**+0.4**
VTCV	**VTCV, Calle Va**	**1.92**	**334**	*e*P	**Pn**	**12 57 52.2**	**+0.9**
ABRB	**Las Abras (San**	**1.94**	**334**	⇓*e*P	**Pn**	**12 57 52.4**	**+0.8**
RAFA	**San Farael, Vo**	**1.94**	**331**	*e*P	**Pb**	**12 57 53.8**	**-0.3**
CVTV	**Tajo**	**1.95**	**333**	⇑*e*P	**Pn**	**12 57 52.6**	**+0.8**
CVTQ	**Turrialba Volc**	**1.96**	**333**	*e*P	**Pn**	**12 57 52.8**	**+0.8**
VTLA	**Turrialba Volc**	**1.96**	**333**	⇓*i*P	**Pn**	**12 57 52.8**	**+0.8**
VTR0	**Volcan Turrial**	**1.97**	**333**	*e*P	**Pn**	**12 57 52.9**	**+0.8**
VICA	**Volcano Irazu**	**1.98**	**331**	*e*P	**Pn**	**12 57 52.6**	**+0.4**
RVLA	**Villa Bonita**	**1.98**	**339**	*e*P	**Pn**	**12 57 52.5**	**+0.6**
ACOS	**Acosta**	**2.00**	**320**	*e*P	**Pn**	**12 57 54.0**	**+1.7**
CVIMO	**Finca Echandi**	**2.06**	**329**	*e*P	**Pb**	**12 57 55.3**	**-0.8**
SANTA	**Santa Ana**	**2.12**	**322**	⇓*e*P	**Pn**	**12 57 56.0**	**+2.0**
HDC	**Heredia**	**2.13**	**325**	*e*P	**Pb**	**12 57 56.3**	**-1.1**
BELE	**Belen**	**2.16**	**323**	*e*P	**Pn**	**12 57 55.8**	**+1.4**
TCS1	**Tacares**	**2.28**	**321**	*e*P	**Pb**	**12 57 59.2**	**-0.6**
TRT2	**Tortugero**	**2.45**	**339**	⇓*i*P	**Pn**	**12 57 59.0**	**+0.6**
TRT2	**Tortugero**	**2.45**	**339**	P	**Pn**	**12 57 59.4**	**+1.1**
TRT2	**Tortugero**	**2.45**	**339**	S	**Sn**	**12 58 27.9**	**-0.2**
AZU	**Azuero**	**2.60**	**100**	*e*P	**Pb**	**12 58 03.9**	**-1.3**
SOCE	**Pocosol**	**2.74**	**321**	*e*P	**Pn**	**12 58 04.8**	**+2.4**
SOCE	**Pocosol**	**2.74**	**321**	S	**Sn**	**12 58 35.0**	**-0.3**
SOCE	**Pocosol**	**2.74**	**321**	P	**Pn**	**12 58 03.7**	**+1.4**
VACR	**Volcan Arenal**	**2.84**	**321**	*e*P	**Pn**	**12 58 06.8**	**+3.0**
ARE1	**Arenal 1**	**2.86**	**320**	⇑*i*P	**Pn**	**12 58 06.8**	**+2.8**
VARE2	**V. Arenal**	**2.86**	**320**	⇑*i*P	**Pn**	**12 58 06.9**	**+2.8**
CEDE	**Laguna Cedeo**	**2.87**	**321**	*e*P	**Pn**	**12 58 06.7**	**+2.5**
COVE	**Coope Vega, Sa**	**2.89**	**328**	S	**Sn**	**12 58 38.5**	**-0.4**
COVE	**Coope Vega, Sa**	**2.89**	**328**	P	**Pn**	**12 58 05.7**	**+1.4**
JTS	**Las Juntas de**	**2.89**	**315**	*e*P	**Pn**	**12 58 04.7**	**+0.2**
TABAC	**Tabacon**	**2.92**	**320**	*e*P	**Pn**	**12 58 07.8**	**+2.9**
INDI	**Punta indio, G**	**3.06**	**302**	P	**Pn**	**12 58 08.6**	**+1.8**
INDI	**Punta indio, G**	**3.06**	**302**	S	**Sn**	**12 58 43.3**	**0.0**
INVE	**Universidad In**	**3.10**	**316**	*e*P	**Pn**	**12 58 10.2**	**+2.9**
PLVR	**Palo Verde**	**3.22**	**310**	*e*P	**Pn**	**12 58 10.7**	**+1.5**
CUI	**Cuipilapa**	**3.30**	**317**	*e*P	**Pn**	**12 58 12.8**	**+2.7**
COLC	**Colonia**	**3.33**	**316**	*e*P	**Pn**	**12 58 12.8**	**+2.3**
ALIBA	**Liberia Airpor**	**3.53**	**311**	⇑*i*P	**Pn**	**12 58 16.1**	**+2.9**
VRLE	**La Escondida,**	**3.53**	**316**	*e*P	**Pn**	**12 58 15.1**	**+1.7**
LAPC	**Finca la Perla**	**3.56**	**315**	⇑*e*P	**Pn**	**12 58 15.8**	**+2.0**
BLUN	**Bluefields**	**3.84**	**346**	P	**Pn**	**12 58 18.1**	**+0.7**

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*JMA **26** 12:59:51.0±0.3, 25°N±2°×122°.2E±0°.8, h166^{km}±2^{km}, MV2.1/13, TAIWAN REGION*
*TAP **26** 12:59:50.0, 25°.17N×122°.22E, h173^{km}, ML2.9, D*
ISC 26 12:59:49.9±2.0, **25°.10N**±0°.09×**122°.22E**±0°.04, **h173**^{km}±11^{km}, **n55**, σ**0^{s}.77**/100, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.23**	**246**	*e*P	**Pn**	**13 00 12.9**	**-0.1**
SXI1	**Grass Mountain**	**0.31**	**269**	*e*P	**Pn**	**13 00 13.0**	**-0.3**
TIPB	**Shuangxi**	**0.38**	**250**	P	**Pn**	**13 00 13.5**	**0.0**
TWC	**Suao**	**0.59**	**214**	P	**Pn**	**13 00 14.4**	**0.0**
TWC				*e*S	**Sn**	**13 00 31.9**	**-1.2**
TWE	**Neicheng**	**0.63**	**233**	P	**Pn**	**13 00 15.3**	**+0.8**
TWE				*e*S	**Sn**	**13 00 34.3**	**+1.0**
FUSB	**Fushanzhiwuyua**	**0.66**	**239**	P	**Pn**	**13 00 15.0**	**+0.2**
FUSB				*e*S	**Sn**	**13 00 33.5**	**-0.3**
EOS2	**EOS2**	**0.68**	**179**	*e*P	**Pn**	**13 00 15.7**	**+1.0**
EOS2				*e*S	**Sn**	**13 00 34.6**	**+1.0**
ENTT	**Nioudou**	**0.75**	**232**	P	**Pn**	**13 00 15.4**	**+0.2**
ENTT				*e*S	**Sn**	**13 00 35.5**	**+0.8**
EWUT	**Wuta**	**0.77**	**211**	*e*P	**Pn**	**13 00 15.6**	**+0.3**
EWUT				*e*S	**Sn**	**13 00 34.2**	**-0.6**
ENA	**Nanau**	**0.80**	**213**	P	**Pn**	**13 00 16.2**	**+0.6**
ENA				S	**Sn**	**13 00 35.1**	**0.0**
EOS3	**EOS3**	**0.82**	**173**	*e*P	**Pn**	**13 00 16.5**	**+1.1**
EOS3				*e*S	**Sn**	**13 00 36.2**	**+1.0**
LATG	**Datong**	**0.84**	**228**	*e*P	**Pn**	**13 00 16.7**	**+0.8**
LATG				*e*S	**Sn**	**13 00 36.2**	**+0.2**
YHNB	**Yeheng**	**0.88**	**241**	P	**Pn**	**13 00 16.1**	**0.0**
YHNB				S	**Sn**	**13 00 35.1**	**-1.1**
NSK	**Sanguang**	**0.89**	**242**	P	**Pn**	**13 00 16.0**	**-0.2**
NSK				S	**Sn**	**13 00 35.1**	**-1.2**
JYNG	**Yonagunijimaku**	**0.93**	**134**	*e*S	**Sn**	**13 00 36.2**	**-0.5**
YOJ	**Yonaguni jima**	**0.96**	**131**	*e*S	**Sn**	**13 00 36.8**	**-0.4**
YOJ	**Yonaguni jima**	**0.96**	**131**	*e*S	**Sn**	**13 00 36.9**	**-0.2**
EOS4	**EOS4**	**0.98**	**175**	*e*P	**Pn**	**13 00 17.3**	**+1.0**
EOS4				*e*S	**Sn**	**13 00 36.7**	**-0.1**
KSHI	**Guanxi Townshi**	**1.00**	**251**	*e*P	**Pn**	**13 00 16.9**	**0.0**
KSHI				*e*S	**Sn**	**13 00 38.3**	**+0.7**
NNS	**Nan Shan**	**1.01**	**230**	P	**Pn**	**13 00 17.5**	**+0.4**
NNS				S	**Sn**	**13 00 38.3**	**+0.2**
NNSB	**Datong**	**1.01**	**229**	P	**Pn**	**13 00 17.4**	**+0.2**
NNSB				*e*S	**Sn**	**13 00 37.7**	**-0.4**
ETL	**Fush Village**	**1.08**	**210**	*e*P	**Pn**	**13 00 17.6**	**0.0**
ETL				*e*S	**Sn**	**13 00 38.6**	**-0.3**
NACB	**Ninganchiao**	**1.08**	**212**	*e*P	**Pn**	**13 00 17.3**	**-0.3**
NACB				*e*S	**Sn**	**13 00 37.6**	**-1.3**
NFF	**Wufeng Townshi**	**1.10**	**245**	*e*P	**Pn**	**13 00 17.5**	**-0.3**
NFF				*e*S	**Sn**	**13 00 38.0**	**-1.2**
ETLH	**Xiulin Townshi**	**1.11**	**217**	P	**Pn**	**13 00 17.9**	**0.0**
ETLH				*e*S	**Sn**	**13 00 38.5**	**-1.0**
TWD	**Chiawan**	**1.16**	**209**	*e*P	**Pn**	**13 00 17.9**	**-0.3**
TWD				*e*S	**Sn**	**13 00 38.5**	**-1.5**
LIOB	**Emei**	**1.18**	**248**	*e*P	**Pn**	**13 00 18.7**	**+0.3**
LIOB				*e*S	**Sn**	**13 00 39.9**	**-0.4**
NSTT	**Nanjuang**	**1.20**	**247**	*e*P	**Pn**	**13 00 18.5**	**-0.1**
NSTT				*e*S	**Sn**	**13 00 39.8**	**-0.7**
FUSS	**Fushou**	**1.23**	**226**	*e*P	**Pn**	**13 00 20.0**	**+0.9**
FUSS				*e*S	**Sn**	**13 00 42.3**	**+0.8**
WHF	**Hehuan Shan**	**1.29**	**222**	*e*P	**Pn**	**13 00 20.3**	**+0.5**
WHF				*e*S	**Sn**	**13 00 43.0**	**+0.2**
LXIB	**Xiulin Townshi**	**1.30**	**214**	*e*P	**Pn**	**13 00 19.4**	**-0.2**
LXIB				*e*S	**Sn**	**13 00 41.9**	**-0.6**
ETM	**Tongmen**	**1.31**	**210**	*e*P	**Pn**	**13 00 18.6**	**-0.9**
ETM				*e*S	**Sn**	**13 00 41.5**	**-0.8**
WHP	**Taichung City**	**1.42**	**235**	*e*P	**Pn**	**13 00 21.0**	**+0.4**
WHP				*e*S	**Sn**	**13 00 43.5**	**-0.8**
SHUL	**Shoufeng**	**1.44**	**205**	*e*P	**Pn**	**13 00 20.9**	**+0.2**
SHUL				*e*S	**Sn**	**13 00 44.8**	**+0.3**
ESL	**Shilin**	**1.47**	**209**	*e*P	**Pn**	**13 00 20.1**	**-0.9**
ESL				*e*S	**Sn**	**13 00 43.6**	**-1.3**
OWD	**Renai**	**1.48**	**220**	*e*P	**Pn**	**13 00 21.9**	**+0.6**
OWD				*e*S	**Sn**	**13 00 45.5**	**0.0**
WUSB	**Renai**	**1.49**	**222**	*e*P	**Pn**	**13 00 22.4**	**+1.0**
WUSB				*e*S	**Sn**	**13 00 46.0**	**+0.4**
WARBT	**Fenglin Townsh**	**1.57**	**209**	*e*P	**Pn**	**13 00 21.3**	**-0.8**
WARBT				*e*S	**Sn**	**13 00 45.4**	**-1.5**
IRIF	**Iriomote-Funau**	**1.57**	**119**	P	**Pn**	**13 00 23.0**	**+1.0**
WCS	**Beigang Elemen**	**1.58**	**229**	P	**Pn**	**13 00 22.7**	**+0.6**
WCS				S	**Sn**	**13 00 46.3**	**-0.6**
VWDT	**VWDT**	**1.66**	**216**	P	**Pn**	**13 00 24.1**	**+1.2**
VWDT				*e*S	**Sn**	**13 00 48.2**	**-0.1**
SMLT	**Sun Moon Lake**	**1.71**	**225**	*e*P	**Pn**	**13 00 24.1**	**+0.6**
SSLB	**Suanglung**	**1.74**	**222**	*e*P	**Pn**	**13 00 24.2**	**+0.5**
SSLB				*e*S	**Sn**	**13 00 49.7**	**-0.3**
HGSD	**Ruisui**	**1.76**	**204**	*e*P	**Pn**	**13 00 24.8**	**+0.8**
HGSD				*e*S	**Sn**	**13 00 50.0**	**-0.2**
EHY	**Hungye**	**1.79**	**207**	*e*P	**Pn**	**13 00 22.9**	**-1.3**
JKRS	**Kuro-shima**	**1.84**	**117**	*e*P	**Pn**	**13 00 25.5**	**+0.7**
JKRS				S	**Sn**	**13 00 51.2**	**-0.5**
WHYT	**Xinyi Township**	**1.87**	**222**	*e*P	**Pn**	**13 00 25.7**	**+0.5**
WHYT				*e*S	**Sn**	**13 00 52.7**	**+0.3**
YULB	**Yu-li**	**1.90**	**206**	*e*P	**Pn**	**13 00 24.5**	**-0.9**
JIJ	**Ishigaki jima**	**1.90**	**112**	P	**Pn**	**13 00 25.8**	**+0.4**
JIJ				S	**Sn**	**13 00 51.1**	**-1.7**
JISG	**Ishigakijimahi**	**1.97**	**105**	*e*P	**Pn**	**13 00 26.3**	**+0.2**
JISG				*e*S	**Sn**	**13 00 53.4**	**-0.8**
ALS	**Alishan**	**2.04**	**219**	*e*P	**Pn**	**13 00 27.8**	**+0.5**
ALS				*e*S	**Sn**	**13 00 56.2**	**+0.1**
CHN5	**Tsauling**	**2.05**	**223**	*e*P	**Pn**	**13 00 27.6**	**+0.4**
CHN5				*e*S	**Sn**	**13 00 56.2**	**+0.2**
JTJ	**Tarama**	**2.30**	**101**	P	**Pn**	**13 00 30.9**	**+1.0**
JTJ				S	**Sn**	**13 00 59.3**	**-1.6**
JIRB	**Irabujima**	**2.70**	**95**	*e*P	**Pn**	**13 00 35.7**	**+1.1**
JIRB				S	**Sn**	**13 01 08.4**	**-0.8**
JMJ2	**Miyako jima3**	**2.85**	**97**	*e*P	**Pn**	**13 00 37.9**	**+1.5**
JMJ2				*e*S	**Sn**	**13 01 10.8**	**-1.7**

KRSC 26 13:07:53.6±1.7, **56°.25N**×**164°.33E**, **h46**^{km}±20^{km}, **Ml3.6, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.84**	**268**	*e*P	Pn	13 08 09.0	-0.1
KBTR				*e*S	Sn	13 08 19.3	-1.1
KBG	**Krutoberegovo**	**0.91**	**271**	*e*P	Pn	13 08 09.9	+0.1
KBG				*e*S	Sn	13 08 21.2	-0.6
BKI	**Bering**	**1.40**	**138**	*e*P	Pn	13 08 18.7	+2.1
BKI				*e*S	Sn	13 08 36.2	+2.3
SMKR	**Semkarok**	**1.62**	**283**	*e*P	Pn	13 08 21.8	+2.0
SMKR				*e*S	Sn	13 08 42.2	+2.7
BDR	**Baidarnaya**	**1.76**	**282**	*e*S	Sn	13 08 47.1	+4.2
SRKR	**Sorokina**	**1.80**	**284**	*e*S	Sn	13 08 47.6	+3.8
ZLN	**Zelenaya**	**1.99**	**265**	*e*P	Pn	13 08 28.0	+3.2
CIRR	**Tsirk**	**2.01**	**268**	*e*P	Pn	13 08 28.4	+3.3
CIRR				*e*S	Sn	13 08 52.5	+3.5
LGNR	**Loginova**	**2.04**	**267**	*e*P	Pn	13 08 27.9	+2.3
KLY	**Klyuchi**	**2.05**	**273**	*e*P	Pn	13 08 26.9	+1.4
KLY				*e*S	Sn	13 08 50.7	+0.8
BZGR	**Bezymyannyi-Gr**	**2.06**	**263**	*e*P	Pn	13 08 28.2	+2.5
BZGR				*e*S	Sn	13 08 52.1	+1.8
KRSR	**Krestovskiy**	**2.10**	**271**	*e*P	Pn	13 08 28.8	+2.4
KRSR				*e*S	Sn	13 08 53.7	+2.4
BZWR	**Bezymyannyi-We**	**2.17**	**264**	*e*P	Pn	13 08 30.4	+3.1
BZMR	**Bezymyannaya**	**2.17**	**263**	*e*P	Pn	13 08 30.7	+3.3
BZMR				*e*S	Sn	13 08 56.3	+3.2
MKZ	**Mys Kozlova**	**2.25**	**222**	*e*P	Pn	13 08 30.1	+1.8
MKZ				*e*S	Sn	13 08 55.7	+0.9
KIRR	**Kirishev**	**2.25**	**264**	*e*P	Pn	13 08 31.8	+3.4
KPT	**Kopyto**	**2.32**	**265**	*e*P	Pn	13 08 32.3	+3.0
KMNR	**Kamenistaya**	**2.35**	**260**	*e*P	Pn	13 08 34.0	+4.3
TUMD	**Tumrok D**	**2.46**	**246**	*e*P	Pn	13 08 34.3	+3.1
TUMD				*e*S	Sn	13 09 03.5	+3.6
KOZ	**Kozyrevsk**	**2.50**	**267**	*e*P	Pn	13 08 35.7	+4.0
KOZ				*e*S	Sn	13 09 06.5	+5.6
SRDR	**Sredinnyy**	**2.57**	**273**	*e*P	Pn	13 08 36.5	+3.8
SRDR				*e*S	Sn	13 09 07.5	+4.7
OSSR	**Ossora**	**3.09**	**348**	*e*P	Pn	13 08 42.0	+2.4
OSSR				*e*S	Sn	13 09 16.0	+0.7
ESO	**Esso**	**3.17**	**266**	*e*P	Pn	13 08 45.8	+4.9
SPN	**Mys Shipunski**	**4.03**	**220**	*e*S	Sn	13 09 38.0	-0.5
SDLR	**Sedlovina**	**4.34**	**229**	*e*P	Pn	13 09 00.7	+3.7
KRX	**Arik**	**4.38**	**231**	*e*P	Pn	13 09 02.3	+4.7
SMAR	**Somma**	**4.38**	**229**	*e*P	Pn	13 09 01.1	+3.4
AVH	**Avacha**	**4.41**	**230**	*e*P	Pn	13 09 02.8	+4.9
KOK	**Koryaka**	**4.43**	**230**	*e*P	Pn	13 09 04.2	+6.0
DALK	**Dalny**	**4.57**	**227**	*e*P	Pn	13 09 04.9	+4.8
RUS	**Russkaya**	**5.12**	**224**	*e*P	Pn	13 09 11.1	+3.6
GRL	**Gorelyy**	**5.20**	**227**	*e*P	Pn	13 09 13.4	+4.6
MTVR	**Mutnovka**	**5.21**	**226**	*e*P	Pn	13 09 12.9	+3.9
ASAK	**Asacha**	**5.40**	**227**	*e*P	Pn	13 09 16.0	+4.4

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*ISK **26** 13:29:17.8, 38°.36N×41°.99E, h7^{km}, ML2.0/5*
*AFAD **26** 13:29:18.6, 38°.39N×41°.95E, h6^{km}±1^{km}, ML2.5*
ISC 26 13:29:18.5±1.0, **38°.37N**±0°.04×**41°.97E**±0°.03, **h9**^{km}±8^{km}, **n11**, σ**0^{s}.49**/20, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLIS	**Bitlis-Merkez**	**0.12**	**69**	P	**Pg**	**13 29 21.4**	**-0.1**
BLIS				*i* IAML		13 29 23.0	
	comp=E,2µm,0.3s						
BLIS				S	**Sg**	**13 29 23.6**	**+0.1**
BLIS				*i* IAML		13 29 24.0	
	comp=N,1µm,0.4s						
GURO	**Guroymak-BITLI**	**0.19**	**16**	Pg	**Pg**	**13 29 22.5**	**0.0**
GURO				Sg	**Sg**	**13 29 25.4**	**+0.2**
MUSM	**Mu-Merkez**	**0.50**	**315**	P	**Pg**	**13 29 28.0**	**-0.3**
MUSM				S	**Sg**	**13 29 35.5**	**+0.6**
PERV	**Siirt/Pervari-**	**0.62**	**133**	P	**Pb**	**13 29 31.2**	**-0.4**
PERV				S	**Sb**	**13 29 41.7**	**+1.2**
PERV				*i* IAML		13 29 42.0	
	comp=N,802nm,0.7s						
PERV				*i* IAML		13 29 45.0	
	comp=E,582nm,0.4s						
SVAN	**Silvan-Diyarba**	**0.64**	**250**	Pg	**Pg**	**13 29 30.8**	**-0.2**
SVAN				Sg	**Sb**	**13 29 40.4**	**-0.7**
BTMN	**Batman**	**0.73**	**229**	P	**Pb**	**13 29 33.2**	**-0.3**
BTMN				*i* IAML		13 29 47.0	
	comp=N,154nm,0.5s						
BTMN				*i* IAML		13 29 50.0	
	comp=E,142nm,0.6s						
ADCV	**BITLIS_Adilcev**	**0.74**	**53**	P	**Pg**	**13 29 32.6**	**-0.2**
ADCV				S	**Sb**	**13 29 43.7**	**-0.3**
AKDM	**Akdamar-Van**	**0.80**	**93**	Pg	**Pg**	**13 29 33.2**	**-0.7**
AKDM				Sg	**Sg**	**13 29 44.6**	**+0.3**
MIDY	**Mardin/Midyat-**	**1.06**	**205**	P	**Pb**	**13 29 39.2**	**+0.1**
MIDY				S	**Sn**	**13 29 54.9**	**+0.2**
MIDY				*i* IAML		13 29 56.0	
	comp=N,118nm,0.6s						
MIDY				*i* IAML		13 29 56.0	
	comp=E,133nm,0.6s						
BNGB	**Bingl**	**1.18**	**302**	Pn	**Pb**	**13 29 41.1**	**-0.2**
BNGB				Sn	**Sn**	**13 29 58.3**	**+0.5**
AGRB	**Hanur-Agry**	**1.44**	**33**	Pn	**Pb**	**13 29 45.5**	**-0.2**

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*IDC **26** 13:39:32.9±1.0, 56°.18N×164°.32E, h0^{km}, mb3.5/7, mbtmp3.5/8, ML2.8/1, MS3.1/3, Error ellipse: s-maj=34.0km s-min=20.2km az=161.0*
ISC 26 13:39:35.5±0.9, **56°.2N**±0°.2×**164°.3E**±0°.1, **h16**^{km}, **n13**, σ**0^{s}.78**/9, **mb3.5**/7, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**4.95**	**234**	Pn	**Pn**	**13 40 49.8**	**+0.6**
	2.0nm,0.3s,baz=76,slow=18,SNR=10						
PETK				LR	LR	13 42 55.7	
	comp=Z,158nm,19.8s,baz=63,slow=41						
	1.1nm,0.4s						
ILAR	**Eielson Array**	**24.89**	**50**	P	**P**	**13 44 57.8**	**+0.7**
	0.3nm,0.7s,baz=267,slow=7.6,SNR=2.2						
ILAR				LR	LR	13 54 48.6	
	comp=Z,37nm,18.4s,baz=306,slow=37						
	0.3nm,0.7s						
MJAR	**Matsushiro Arr**	**26.41**	**233**	P	**P**	**13 45 10.7**	**-0.5**
	0.9nm,0.7s,baz=25,slow=9.4,SNR=5.6						
	0.9nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**36.48**	**176**	T	T	14 25 28.9	
	baz=357,slow=76,SNR=36						
H11N3	**WAKE ISLAND Hy**	**36.50**	**176**	T	T	14 25 32.5	
	baz=357,slow=76,SNR=22						
H11N1	**WAKE ISLAND Hy**	**36.50**	**176**	T	T	14 25 36.9	
	baz=357,slow=76,SNR=20						
MKAR	**Makanchi Array**	**49.02**	**296**	P	**P**	**13 48 21.7**	**+0.5**
	0.2nm,0.5s,baz=62,slow=8.0,SNR=5.3						
	0.2nm,0.5s						
BVAR	**Borovoye Array**	**50.37**	**309**	P	**P**	**13 48 31.1**	**-0.3**
	0.4nm,0.4s,baz=52,slow=7.7,SNR=13						
	0.4nm,0.4s						
PDAR	**Pinedale Array**	**53.91**	**65**	P	**P**	**13 48 58.2**	**+0.1**
	0.2nm,0.6s,baz=332,slow=7.5,SNR=3.5						
	0.2nm,0.6s						
AKTO	**Aktyubinsk**	**57.50**	**313**	P	**P**	**13 49 22.8**	**-0.7**
	0.5nm,0.3s,baz=68,slow=4.6,SNR=3.9						
	0.5nm,0.3s						
TXAR	**Lajitas Array**	**67.22**	**71**	P	**P**	**13 50 29.1**	**+0.1**
	0.4nm,0.7s,baz=319,slow=6.6,SNR=3.0						

	0.4nm,0.7s						
GNI	Garni	71.26	315	LR	LR	14 26 07.8	
	comp=Z,19nm,19.6s,baz=70,slow=39						
QSPA	South Pole Qui	145.97	180	PKPbc	PKPdf	13 59 10.7	-1.3
	0.8nm,0.8s,baz=243,slow=6.9,SNR=1.5						

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*IDC **26** 13:46:56.6±1.6, 36°.79N×140°.58E, h0km, mb3.8/3, mbtmp3.8/4, ML3.2/1, Error ellipse: s-maj=29.7km s-min=23.1km az=93.0*

*NIED **26** 13:46:58.0, 36°.71N×140°.61E, h10km, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.70; $M_{\theta\theta}$0.49; $M_{\phi\phi}$1.22; $M_{r\theta}$-0.61; $M_{\theta\phi}$-0.59; $M_{\phi r}$0.45; Fault plane solution: $M_0$1.79000×10^{14} NP1: ϕ_s338.00000°, δ34.00000°, λ-76.00000°. NP2: ϕ_s142.00000°, δ57.00000°, λ-99.00000°.*

*JMA **26** 13:46:58.0±0.0, 36°.71N±0°.07×140°.6E±0°.2, h10km, MV3.5/20, NORTHERN IBARAKI PREF*

JMA Felt II J1 at NORTHERN IBARAKI PREF .

ISC 26 13:46:57.9±0.9, 36°.70N±0°.03×140°.58E±0°.04, h10km±6km, n32, σ0s.92/33, mb3.8/3, 1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.09	186	P	Pg	13 47 00.5	+0.2
JHO				S	Sg	13 47 02.4	+0.3
JHYU	Hitachinakayam	0.36	179	*i* P	Pg	13 47 05.4	+0.3
JHYU				S	Sg	13 47 10.4	+0.6
JFFD	Fukushimafurud	0.39	358	P	Pg	13 47 05.4	-0.2
JFFD				S	Sg	13 47 10.9	+0.1
ONAJ	Iwakimizuishiy	0.43	23	P	Pg	13 47 06.4	0.0
ONAJ				S	Sg	13 47 12.1	-0.2
JYT	Yasato	0.57	214	P	Pg	13 47 09.1	+0.2
JYT				S	Sg	13 47 16.5	+0.2
JSB	Shiboa	0.59	297	P	Pb	13 47 10.3	-0.1
JSB				*e*S	Sb	13 47 18.6	-0.3
JFK	Kawauchi	0.70	19	P	Pg	13 47 11.0	-0.5
JFK				S	Sg	13 47 20.2	-0.6
JOTO	OTAMA OYAMA	0.88	347	P	Pb	13 47 14.8	-0.5
JOTO				S	Sg	13 47 26.0	-0.3
JAG	Ashikaga	0.95	253	P	Pg	13 47 15.4	-0.8
JFY	Yanaizu	0.99	315	⇓P	Pb	13 47 17.1	-0.1
JMM	Marumori	1.17	8	P	Pb	13 47 19.7	-0.6
JMM	Marumori	1.17	8	S	Sb	13 47 34.8	-0.8
MJAR	Matsushiro Arr	1.92	266	Pn	Pn	13 47 30.8	+0.1
	3.1nm,0.3s,baz=80,slow=12,SNR=156						
MJAR				Sn	Sn	13 47 55.5	+0.7
	3.9nm,0.3s,baz=98,slow=25,SNR=20						
MAJO	Matsushiro	1.92	266	P	Pb	13 47 32.0	-1.0
JSD	Sado	2.28	306	P	Pn	13 47 36.0	+0.4
JGF	Kuroka	2.83	248	P	Pn	13 47 45.1	+1.8
JHJ2	Mitsune	3.64	190	P	Pb	13 47 59.9	-2.4
JTM	Tenmabayashi	4.10	5	P	Pn	13 48 02.6	+2.0
JTM	Tenmabayashi	4.10	5	S	Sn	13 48 50.7	+2.1
ASAJ	Asahikawa	7.56	11	Pn	Pn	13 48 48.0	-0.2
	0.4nm,0.3s,baz=244,slow=17,SNR=4.7						
ASAJ				Sn	Sn	13 50 13.1	-0.9
	0.1nm,0.3s,baz=75,slow=20,SNR=1.9						
	4.6nm,0.8s						
H11N2	WAKE ISLAND Hy	28.56	119	T	T	14 22 38.2	
	baz=313,slow=75,SNR=166						
H11N1	WAKE ISLAND Hy	28.57	119	T	T	14 22 38.8	
	baz=313,slow=75,SNR=163						
H11N3	WAKE ISLAND Hy	28.58	119	T	T	14 22 39.6	
	baz=313,slow=75,SNR=154						
H11S1	WAKE ISLAND Hy	29.25	121	T	T	14 23 29.7	
	baz=314,slow=75,SNR=900						
H11S3	WAKE ISLAND Hy	29.25	121	T	T	14 23 28.4	
	baz=314,slow=75,SNR=628						
H11S2	WAKE ISLAND Hy	29.27	121	T	T	14 23 32.1	
	baz=314,slow=75,SNR=545						
ZALV	Zalesovo Beam	41.65	313	P	P	13 54 45.9	-0.3
	0.9nm,0.5s,baz=90,slow=7.2,SNR=3.9						
	0.9nm,0.5s						
KURBB	Kurchatov Arra	45.68	308	P	P	13 55 17.9	-0.8
	0.6nm,0.5s,baz=84,slow=7.9,SNR=11						
	0.6nm,0.5s						
WRA	Warramunga Arr	56.65	187	P	P	13 56 42.0	+0.7
	0.7nm,0.8s,baz=6.0,slow=7.1,SNR=33						
	0.7nm,0.8s						
H03N2	Juan Fernandez	147.65	96	T	T	16 51 35.3	
	baz=291,slow=76,SNR=9.9						
H03N3	Juan Fernandez	147.66	96	T	T	16 51 36.9	
	baz=291,slow=76,SNR=13						
H03N1	Juan Fernandez	147.67	96	T	T	16 51 36.0	
	baz=291,slow=76,SNR=11						

IDC 26 13:52:22.8±1.2, 28°.10N×104°.76E, h0km, mb3.5/5, mbtmp3.5/5, MS3.0/1, Error ellipse: s-maj=48.3km s-min=22.2km az=53.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	21.55	58	P	P	13 57 13.1	-0.6
	0.5nm,0.6s,baz=241,slow=11,SNR=1.9						
	0.5nm,0.6s						
MKAR	Makanchi Array	25.66	323	P	P	13 57 54.6	+0.3
	1.0nm,0.7s,baz=134,slow=8.3,SNR=8.9						
	1.0nm,0.7s						
AAK	Ala-Archa	28.45	309	LR	LR	14 11 57.8	
	comp=Z,27nm,18.4s,baz=200,slow=41						
KURBB	Kurchatov Arra	30.00	326	P	P	13 58 32.8	-0.3
	0.6nm,0.8s,baz=132,slow=9.7,SNR=8.0						
	0.6nm,0.8s						
WRA	Warramunga Arr	55.67	146	P	P	14 02 01.4	+0.4
	0.6nm,0.8s,baz=334,slow=7.7,SNR=2.8						
	0.6nm,0.8s						
ASAR	Alice Springs	58.64	148	P	P	14 02 21.6	-0.4
	0.4nm,0.7s,baz=328,slow=6.9,SNR=5.2						
	0.4nm,0.7s						

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*PRE **26** 13:56:20.5±1.0, 25°.62S×28°.79E, h0km, ML2.7, Suspected explosion*

*BGSI **26** 13:56:22.5±1.2, 25°.61S×28°.95E, h0km±38km, ML2.9*

*BUL **26** 13:56:25.6±1.8, 25°.46S×28°.81E, h10km, MD3.2*

ISC 26 13:56:20.7±0.9, 25°.60S±0°.03×28°.81E±0°.03, h0km, n28, σ1s.56/53, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HRAO	HartRAO	1.05	254	*e*P	Pg	13 56 40.2	-0.6
HRAO				*e*S	Sg	13 56 54.9	+0.4
HRAO				IAML		13 56 59.4	
	comp=Z,201nm,0.3s						
CRLN	Carolina, Mapu	1.17	110	*e*P	Pg	13 56 42.3	-0.8
CRLN				*e*S	Sb	13 56 59.4	-0.3
CRLN				IAML		13 57 11.7	
	comp=Z,46nm,0.3s						
WDLM	Western Deep L	1.49	236	*e*P	Pn	13 56 48.6	-0.4
WDLM				*e*S	Sg	13 57 09.1	+0.4
WDLM				IAML		13 57 12.2	
	comp=Z,447nm,0.3s						
PRYS	Parys	1.85	224	*e*P	Pn	13 56 53.8	-0.1
PRYS				*e*S	Sn	13 57 17.6	-0.5
PRYS				IAML		13 57 23.8	
	comp=Z,65nm,0.3s						
LEPH	Lephalale, Lim	1.96	332	*e*P	Pn	13 56 55.4	+0.1
LEPH				*e*S	Sn	13 57 21.4	+0.6
LEPH				IAML		13 57 23.1	
	comp=Z,144nm,0.3s						
HOED	Hoedspruit, Li	2.26	59	*e*P	Pn	13 57 00.6	+1.1
HOED				*e*S	Sn	13 57 29.3	+1.1
HOED				IAML		13 57 36.6	
	comp=Z,51nm,0.2s						
NWCL	Newcastle	2.34	156	*e*P	Pn	13 57 01.9	+1.3
NWCL				*e*S	Sn	13 57 30.4	+0.3
NWCL				IAML		13 57 41.5	
	comp=Z,54nm,0.6s						
SNKL	Senekal, Frees	2.82	199	*e*P	Pn	13 57 08.2	+1.0
SNKL				*e*S	Sn	13 57 41.4	-0.6
SNKL				IAML		13 57 56.9	
	comp=Z,56nm,0.5s						
LBTB	Lobatse	2.96	281	*e*P	Pn	13 57 09.9	+0.8
LBTB				*e*S	Sn	13 57 45.4	0.0
LBTB				IAML		13 57 54.0	
	comp=Z,39nm,0.3s						
LBTB	Lobatse	2.96	281	*i* P	Pn	13 57 11.2	+2.0
LBTB				*i* S	Sn	13 57 46.8	+1.3
POGA	Pongola	3.13	124	*e*P	Pn	13 57 11.6	+0.3
POGA				*e*S	Sn	13 57 49.6	+0.1
POGA				IAML		13 58 06.6	
	comp=Z,64nm,0.5s						
MOPA	Mopani	3.14	49	*e*P	Pn	13 57 12.5	+1.0
MOPA				*e*S	Sn	13 57 50.7	+0.9
MOPA				IAML		13 58 04.6	
	comp=Z,87nm,0.6s						
MOPA	Mopani	3.14	49	*i* P	Pn	13 57 13.2	+1.6
MOPA				*i* S	Sn	13 57 49.8	0.0
MUSN	Musina, Limpop	3.44	17	*e*P	Pn	13 57 16.3	+0.7
MUSN				*e*S	Sn	13 57 57.2	+0.1
MUSN				IAML		13 58 11.3	
	comp=Z,36nm,0.5s						
MUSN	Musina, Limpop	3.44	17	*i* P	Pn	13 57 16.3	+0.7
MUSN				*i* S	Sn	13 57 54.7	-2.4
LPHEP	Lephephe	3.49	309	*i* P	Pn	13 57 17.1	+0.7
LPHEP				*i* S	Sn	13 57 58.2	-0.3
LPHEP				IAML		13 58 12.3	
	comp=N,39nm,0.6s						
SWZ	Schweizer	3.49	242	*e*P	Pn	13 57 17.4	+1.0
SWZ				*e*S	Sn	13 57 57.8	-0.8
SWZ				IAML		13 58 13.6	
	comp=Z,53nm,0.3s						
MAKGR	Makgori	3.62	266	*i* P	Pn	13 57 19.6	+1.4
MAKGR				IAML		13 58 20.3	
	comp=N,154nm,0.2s						
PMBG	Pietermaritzbu	4.18	159	*e*P	Pn	13 57 26.5	+0.6
PMBG				*e*S	Sn	13 58 13.9	-1.6
PMBG				IAML		13 58 36.4	
	comp=Z,28nm,0.7s						
BOSA	Boshof	4.36	226	*e*P	Pn	13 57 29.7	+1.3
BOSA				*e*S	Sn	13 58 18.3	-1.7
BOSA				IAML		13 58 44.1	
	comp=Z,13nm,0.6s						
BOSA	Boshof	4.36	226	*i* P	Pn	13 57 32.4	+4.0
BOSA				*i* S	Sn	13 58 23.0	+3.0
KDWAN	Kaudwane	4.38	299	*i* P	Pn	13 57 30.5	+2.0
KDWAN				*i* S	Sn	13 58 20.3	0.0
KDWAN				IAML		13 58 43.9	
	comp=N,40nm,1.1s						
BROLN	Tlhalogang	4.68	343	*i* P	Pn	13 57 33.3	+0.6
BROLN				*i* S	Sn	13 58 25.2	-2.6
BROLN				IAML		13 58 48.5	
	comp=E,30nm,0.9s						
KSTD	Kokstad	5.02	175	*e*P	Pn	13 57 37.6	+0.1
KSTD				*e*S	Sn	13 58 34.0	-2.3
KSTD				IAML		13 58 57.4	
	comp=Z,4.6nm,0.4s						
BLWY	Bulawayo	5.44	358	*i* P	Pn	13 57 44.6	+1.4
BLWY				*i* S	Sn	13 58 41.7	-5.0
CHIPN	CHIPINGE	6.41	34	*i* P	Pn	13 57 56.7	+0.1
CHIPN				*i* S	Sn	13 59 08.3	-2.2
ALKP	Alkanpan, Nort	7.24	232	*e*P	Pn	13 58 09.1	+1.2
ALKP				*e*S	Sn	13 59 27.7	-3.3
ALKP				IAML		14 00 07.1	
	comp=Z,13nm,0.9s						
KRI	Karoi	8.76	5	*i* P	Pn	13 58 22.4	-6.5
KRI				*i* S	Sn	13 59 47.1	-21

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*WEL **26** 14:01:05.4±0.5, 39°S±4°×17°5E±°, h22km±5km, M3.3/12, ML3.6/12, MLv3.3/12, Error ellipse: s-maj=5.1km s-min=2.9km az=3.0, confirmed*

*NOU **26** 14:01:06.0, 39°.18S×174°.72E, h27km, MLv3.4/14, North Island, New Zealand*

ISC 26 14:01:06.1±0.9, 39°.20S±0°.02×174°.78E±0°.02, h32km±6km, n117, σ0s.90/128, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRZ	Vera Road	0.07	345	P	Pb	14 01 11.3	-0.3
VRZ				S	Sb	14 01 15.8	+0.4
MHEZ	Mangahewa	0.38	288	P	Pn	14 01 15.1	-0.2
MHEZ				S	Sn	14 01 22.0	+0.5
LREZ	Lake Rotokare	0.40	228	P	Pb	14 01 14.5	-0.6
LREZ				S	Sn	14 01 21.7	-0.2
PKVZ	Pokaka	0.45	102	P	Pb	14 01 15.2	-0.8
DREZ	Durham Road	0.45	271	P	Pb	14 01 15.6	-0.3
DREZ				S	Sn	14 01 24.1	+0.7
INHS	Inglewood High	0.46	275	P	Pn	14 01 16.2	-0.3
INHS				S	Sn	14 01 24.0	+0.4
PREZ	Palmer Road	0.51	253	P	Pb	14 01 16.5	-0.3
PREZ				S	Sn	14 01 25.6	+0.8
TWVZ	Taurewa	0.52	77	P	Pb	14 01 16.3	-0.9
NEZ	North Egmont	0.54	262	P	Pb	14 01 16.9	-0.5
NEZ				S	Sn	14 01 27.4	+1.8
MTVZ	Mangateitei	0.57	110	P	Pb	14 01 16.8	-1.0
MTVZ				S	Sb	14 01 25.8	0.0
WAZ	Wanganui	0.58	164	P	Pb	14 01 16.9	-1.1
WAZ				S	Sb	14 01 25.8	-0.4
COVZ	Chateau Observ	0.59	91	P	Pb	14 01 17.3	-0.9
COVZ				S	Sb	14 01 26.2	-0.3
FWVZ	Far West T-bar	0.60	96	P	Pb	14 01 17.5	-0.9
TRVZ	Turoa	0.60	100	P	Pb	14 01 17.6	-0.9
TRVZ				S	Sb	14 01 26.0	-1.0
KHEZ	Kahui Hut	0.60	260	P	Pn	14 01 18.3	-0.2
KHEZ	Kahui Hut	0.60	260	S	Sn	14 01 27.9	+0.6
KHEZ	Kahui Hut	0.60	260	P	Pn	14 01 18.1	-0.5
MAVZ	Matarangi	0.61	97	P	Pb	14 01 17.8	-0.9
PKE	Pukeiti	0.62	270	P	Pn	14 01 18.3	-0.4
WHVZ	Whangaehu Hut	0.63	98	P	Pb	14 01 17.9	-1.1
WTVZ	West Tongariro	0.63	83	P	Pb	14 01 18.0	-0.9
NGZ	Ngauruhoe	0.64	89	P	Pb	14 01 18.1	-0.9
WNVZ	Wahianoa	0.65	102	P	Pb	14 01 18.3	-0.9
NNVZ	North Ngauruho	0.65	85	P	Pb	14 01 18.4	-0.8
SNVZ	South Ngauruho	0.67	90	P	Pb	14 01 18.8	-0.7
KRVZ	Karewarewa	0.68	82	P	Pb	14 01 18.8	-0.8
TUVZ	Tukino	0.68	96	P	Pb	14 01 19.1	-0.7
HIZ	Hauiti	0.68	5	P	Pb	14 01 19.2	-0.5
HIZ	Hauiti	0.68	5	S	Sn	14 01 29.5	+0.4
HIZ	Hauiti	0.68	5	P	Pb	14 01 19.2	-0.5
OTVZ	Oturere	0.69	88	P	Pb	14 01 19.1	-0.7
NTVZ	North Tongarir	0.70	82	P	Pb	14 01 19.3	-0.8
NBEZ	Newall Road No	0.71	264	P	Pb	14 01 19.6	-0.5
TMVZ	Te Maari	0.72	84	P	Pb	14 01 19.6	-0.7
ETVZ	East Tongariro	0.72	86	P	Pb	14 01 19.6	-0.8
NMEZ	Namu Road	0.73	252	P	Pb	14 01 19.8	-0.7
KATZ	Kakaramea	0.74	73	P	Pb	14 01 20.0	-0.7
MOVZ	Moawhango	0.78	106	P	Pb	14 01 20.2	-1.1
RATZ	Rangitukua	0.84	67	P	Pb	14 01 21.6	-0.7
RITZ	Rihia Road	0.86	76	P	Pb	14 01 22.2	-0.5
WATZ	Wairara	0.89	57	P	Pb	14 01 22.3	-0.8
TLZ	Tolley Road	1.05	35	P	Pn	14 01 24.3	-0.3
WHTZ	Whakaora	1.06	60	P	Pb	14 01 25.7	-0.3
HATZ	Hinemaiaia	1.06	74	P	Pn	14 01 24.7	-0.1
KUTZ	Kaahu Road	1.08	49	P	Pn	14 01 25.0	+0.1
OHWZ	Ohakea	1.09	158	P	Pn	14 01 25.3	+0.1
TSZ	Takapari Road	1.25	134	P	Pn	14 01 27.3	-0.1
WPRZ	Whakapapatarin	1.27	58	P	Pn	14 01 27.5	-0.2
KWHZ	Kaweka Forest	1.29	101	P	Pn	14 01 28.2	+0.2
KRHZ	Kereru	1.31	110	P	Pn	14 01 28.4	+0.2
PNHZ	Pukenui	1.31	124	P	Pn	14 01 28.2	0.0
MRHZ	Matea Rd	1.32	75	P	Pn	14 01 28.3	-0.1
BKZ	Black Stump Fm	1.33	89	P	Pn	14 01 28.5	0.0
BKZ	Black Stump Fm	1.33	89	P	Pn	14 01 28.4	0.0
GRRZ	Galatos Road	1.34	51	P	Pn	14 01 27.0	-1.6
POWZ	Post Office Ro	1.42	148	P	Pn	14 01 30.1	+0.5
HSRZ	Hossack Road	1.44	53	P	Pn	14 01 30.3	+0.3
MCHZ	McNeill Hill	1.50	100	P	Pb	14 01 32.6	-0.9
DVHZ	Dannevirke	1.53	136	P	Pb	14 01 32.6	-1.3
WPHZ	Waipukurau	1.55	125	P	Pb	14 01 33.2	-1.0
NGRZ	Ngongotaha	1.55	46	P	Pn	14 01 31.6	0.0
TOZ	Tahuroa Road	1.57	21	P	Pn	14 01 31.8	+0.1
NMHZ	Naumai	1.58	87	P	Pn	14 01 33.0	+1.1
MRZ	Mangatainoka R	1.59	158	P	Pn	14 01 32.5	+0.5
PRWZ	Pori Road	1.64	146	P	Pb	14 01 34.3	-1.4
MTHZ	Maungataniwha	1.64	79	P	Pn	14 01 33.1	+0.3
OGWZ	Otaki Gorge	1.65	170	P	Pn	14 01 33.3	+0.5
KIW	Kapiti Island	1.67	177	P	Pn	14 01 33.2	+0.1
MUGZ	Murupara	1.71	66	P	Pn	14 01 34.1	+0.5
KAHZ	Kahuranaki	1.73	111	P	Pb	14 01 36.1	-1.1
DUWZ	D’Urville Isla	1.74	202	P	Pn	14 01 34.3	+0.3
PRHZ	Porangahau	1.79	127	P	Pb	14 01 36.7	-1.5
HOWZ	Holdsworth Sta	1.79	162	P	Pn	14 01 36.0	+1.2
TIWZ	Tintock	1.79	152	P	Pn	14 01 36.2	+1.3
PXZ	Pawanui	1.81	118	P	Pb	14 01 40.0	+1.4
RTZ	Ruatahuna	1.81	72	P	Pn	14 01 35.3	+0.2
RAHZ	Arahi	1.81	82	P	Pn	14 01 35.9	+0.7
BFZ	Birch Farm	1.86	143	P	Pn	14 01 36.6	+0.8
BFZ	Birch Farm	1.86	143	P	Pn	14 01 36.6	+0.8
TGRZ	Tauranga	1.87	39	P	Pn	14 01 35.8	0.0
CAW	Cannon Point	1.92	174	P	Pn	14 01 37.2	+0.6
SNGZ	Shannon Statio	2.04	79	P	Pb	14 01 40.6	-1.9
MTW	Mount Morrison	2.04	165	P	Pn	14 01 39.6	+1.4
URZ	Urewera	2.05	64	P	Pn	14 01 40.3	+2.1
URZ	Urewera	2.05	64	P	Pn	14 01 40.4	+2.1
TCW	Tory Channel	2.05	191	P	Pn	14 01 38.3	0.0
WEL	Wellington	2.09	180	P	Pn	14 01 39.8	+0.9
TMWZ	Te Maipa	2.09	156	P	Pn	14 01 39.9	+1.0
MKAZ	Moumakai	2.11	8	P	Pn	14 01 39.5	+0.4
SNZO	South Karori	2.11	182	P	Pn	14 01 39.9	+0.7
AWAZ	Awhitu Peninsu	2.13	357	P	Pn	14 01 39.8	+0.4
RAGZ	Rawiri	2.17	72	P	Pb	14 01 42.6	-2.2
PAWZ	Paruwai Farm	2.24	167	P	Pn	14 01 42.5	+1.5
ETAZ	East Tamaki Re	2.24	3	P	Pn	14 01 41.5	+0.6
MSWZ	Moikau Station	2.25	171	P	Pn	14 01 43.2	+2.1
WTAZ	Waiatarua	2.27	356	P	Pn	14 01 42.1	+0.7
NNZ	Nelson	2.29	208	P	Pn	14 01 42.2	+0.6
TKNZ	Takaka Hill	2.31	217	P	Pn	14 01 41.9	0.0
MWZ	Matawai	2.31	69	P	Pn	14 01 42.5	+0.5
TUWZ	Tuamarina	2.32	196	P	Pn	14 01 42.1	+0.1
RIGZ	Rimuhau	2.37	79	P	Pn	14 01 45.3	+2.5
QRZ	Quartz Range	2.38	226	P	Pn	14 01 41.9	-0.9
QRZ	Quartz Range	2.38	226	P	Pn	14 01 42.0	-0.8
PLWZ	Palliser	2.40	172	P	Pn	14 01 44.2	+1.1
WIAZ	Waiheke Island	2.41	7	P	Pn	14 01 43.9	+0.5
MBAZ	Motutapu North	2.42	2	P	Pn	14 01 43.8	+0.4
PRGZ	Paritu Road	2.43	85	P	Pn	14 01 44.8	+1.3
TKGZ	Te Karaka	2.51	73	P	Pn	14 01 46.7	+2.0
KUZ	Kuaotunu	2.56	17	P	Pn	14 01 45.1	-0.2
KUZ	Kuaotunu	2.56	17	P	Pn	14 01 44.9	-0.4
RUGZ	Raukumara Rang	2.58	62	P	Pn	14 01 46.7	+1.0
MRNZ	Matariki Terra	2.69	214	P	Pn	14 01 47.4	+0.2
HAZ	Te Kaha	2.76	60	P	Pn	14 01 49.0	+1.0
MXZ	Matakaoa Point	3.21	61	P	Pn	14 01 56.3	+2.0
KHZ	Kahutara	3.35	196	P	Pn	14 01 56.7	+0.5
OUZ	Omahuta	4.08	346	P	Pn	14 02 06.7	+0.5
JCZ	Jackson Bay	6.63	221	P	Pn	14 02 41.3	0.0

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*MEX **26** 14:02:48.2±0.9, 13°.96N×93°.46W, h11km±88km, MD4.1*

*GCG **26** 14:02:51.1±0.9, 14°.12N×93°.23W, h35km±999km, MD4.3, ML3.5*

ISC 26 14:02:44.5±3.2, 14°.01N±0°.08×93°.43W±0°.03, h17km±23km, n20, σ2s.17/36, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.44	52	*i* P	Pb	14 03 10.8	-0.1
THIG				*i* S	Sb	14 03 28.4	-0.6
THIG		1.44	52	*e*S	Sn	14 03 27.7	-0.7
PATR	El Naranjo	1.60	46	*e*P	Pb	14 03 13.6	-0.1
PATR				*i* S	Sn	14 03 31.0	-1.7
PAVE	Pavencul	1.69	46	*e*P	Pb	14 03 15.2	-0.1
PAVE				*i* S	Sn	14 03 32.6	-2.3
PCIG		1.69	7	*e*P	Pn	14 03 14.2	+0.8
PCIG				*e*S	Sb	14 03 36.0	-0.3
RTAL	Retalhuleu	1.76	73	*e*P	Pb	14 03 15.7	-0.7
RTAL				*i* S	Sn	14 03 36.6	+0.2
STG8	El Palmar, Qui	2.06	78	*e*P	Pn	14 03 19.1	+0.4
STG8				IAML		14 03 47.1	
	comp=E,382nm,0.3s						
STG0	El Palmar, Qui	2.07	78	*i* P	Pn	14 03 19.1	+0.4
STG0				IAML		14 03 52.5	
	comp=E,710nm,0.3s						
HUEH	Huehuetenango	2.27	55	*e*P	Pn	14 03 23.4	+1.9
HUEH				*i* S	Sn	14 03 49.4	0.0
CCIG	Comitan	2.58	29	*e*P	Pb	14 03 29.2	-1.3
CCIG				*i* S	Sn	14 03 57.1	+0.3
CCIG	Comitan	2.58	29	*i* P	Pb	14 03 29.3	-1.2
CCIG				IAML		14 04 08.1	
	comp=N,258nm,0.6s						
TGIG		2.77	6	*i* P	Pb	14 03 31.5	-2.2
TGIG				*i* S	Sn	14 04 03.2	+1.8
TGIG		2.77	6	*i* P	Pb	14 03 31.4	-2.2
TGIG				*e*S	Sn	14 04 03.1	+1.8
TGIG				IAML		14 04 08.7	
	comp=E,192nm,0.5s						
HUIG	Huatulco	3.12	304	*e*P	Pn	14 03 34.8	+1.7
HUIG				*e*S	Sn	14 04 04.0	-6.0
PEIG	Puerto Escondi	4.10	299	*e*P	Pn	14 03 49.9	+3.4
PEIG				*e*S	Sn	14 04 29.4	-4.8
YOIG	Yosondua	4.87	306	*e*P	Pn	14 04 01.5	+4.1
YOIG				*e*S	Sn	14 04 50.7	-2.9
PNIG	Pinotepa	5.11	298	*e*P	Pn	14 04 02.4	+1.9
PNIG				*i* S	Sn	14 05 00.0	+0.8
TXIG	Tlaxiaco	5.28	308	*e*P	Pn	14 04 04.1	+1.2
TXIG				*i* S	Sn	14 05 04.4	+0.8
TOIG	Toxpalan	5.36	320	*e*P	Pn	14 04 05.7	+1.8
TOIG				*i* S	Sn	14 05 06.5	+1.2
FTIG	Fresnillo de T	5.95	311	*e*P	Pn	14 04 14.2	+2.1
FTIG				*i* S	Sn	14 05 21.8	+1.8

KRSC 26 14:03:16.3±1.8, 56°.18N×164°.32E, h51km±24km, Ml3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.84	272	*e*P	Pn	14 03 31.3	-0.6
KBTR				*e*S	Sn	14 03 42.1	-1.1
KBG	Krutoberegovo	0.90	275	*e*P	Pn	14 03 32.5	-0.2
KBG				*e*S	Sn	14 03 44.7	-0.1
BKI	Bering	1.36	136	*e*P	Pn	14 03 41.8	+3.0
BKI				*e*S	Sn	14 04 00.5	+4.9
SMKR	Semkarok	1.64	285	*e*P	Pn	14 03 44.7	+2.0
SMKR				*e*S	Sn	14 04 07.0	+4.4
BDR	Baidarnaya	1.77	284	*e*S	Sn	14 04 10.4	+4.4
ZLN	Zelenaya	1.98	267	*e*P	Pn	14 03 50.0	+2.7
ZLN				*e*S	Sn	14 04 15.3	+4.3
CIRR	Tsirk	2.00	270	*e*P	Pn	14 03 50.6	+2.9
BZGR	Bezymyannyi-Gr	2.05	265	*e*P	Pn	14 03 51.4	+3.1
BZGR				*e*S	Sn	14 04 19.2	+6.5
KLY	Klyuchi	2.05	275	*e*P	Pn	14 03 49.5	+1.2
KLY				*e*S	Sn	14 04 12.9	+0.3
KRSR	Krestovskiy	2.10	272	*e*P	Pn	14 03 51.6	+2.6
BZWR	Bezymyannyi-We	2.15	266	*e*P	Pn	14 03 52.7	+2.8
BZMR	Bezymyannaya	2.16	265	*e*P	Pn	14 03 53.2	+3.3
MKZ	Mys Kozlova	2.20	223	*e*P	Pn	14 03 52.5	+2.2
MKZ				*e*S	Sn	14 04 17.9	+1.7
KIRR	Kirishev	2.24	266	*e*P	Pn	14 03 54.4	+3.4
KIRR				*e*S	Sn	14 04 22.7	+5.1
KPT	Kopyto	2.31	266	*e*P	Pn	14 03 55.6	+3.7
KMNR	Kamenistaya	2.33	261	*e*P	Pn	14 03 56.2	+3.9
TUMD	Tumrok D	2.43	248	*e*P	Pn	14 03 56.6	+3.1
TUMD				*e*S	Sn	14 04 25.6	+3.7
KOZ	Kozyrevsk	2.49	269	*e*P	Pn	14 03 58.2	+3.9
KOZ				*e*S	Sn	14 04 30.1	+6.5
SRDR	Sredinnyy	2.57	275	*e*P	Pn	14 03 59.2	+3.7
OSSR	Ossora	3.15	348	*e*P	Pn	14 04 05.7	+2.5
OSSR				*e*S	Sn	14 04 40.5	+0.9
KII	Karymskiy	3.53	234	*e*P	Pn	14 04 12.5	+3.9
SPN	Mys Shipunski	3.97	221	*e*P	Pn	14 04 17.2	+2.6
SPN				*e*S	Sn	14 04 58.9	-1.0
NLC	Nalytchevo	4.17	226	*e*S	Sn	14 05 07.4	+2.5
SDLR	Sedlovina	4.29	230	*e*P	Pn	14 04 22.9	+3.9
SDLR				*e*S	Sn	14 05 09.9	+2.1
KRER	Koryakskii	4.33	231	*e*S	Sn	14 05 13.6	+4.7
KRX	Arik	4.33	232	*e*P	Pn	14 04 23.9	+4.2
SMAR	Somma	4.33	230	*e*P	Pn	14 04 23.5	+3.7
AVH	Avacha	4.36	230	*e*P	Pn	14 04 24.0	+4.0
AVH				*e*S	Sn	14 05 14.7	+5.2
KOK	Koryaka	4.38	231	*e*P	Pn	14 04 24.3	+3.9
GNL	Ganaly	4.44	239	*e*P	Pn	14 04 25.6	+4.4
DALK	Dalny	4.52	228	*e*P	Pn	14 04 25.2	+3.1
DALK				*e*S	Sn	14 05 15.1	+1.8
PET	Petropavlovsk	4.57	228	*e*P	Pn	14 04 26.1	+3.4
PET				*e*S	Sn	14 05 16.3	+1.8
KRMR	Karymshinskiy	4.93	230	*e*S	Sn	14 05 26.9	+3.6
RUS	Russkaya	5.07	225	*e*P	Pn	14 04 33.3	+3.7
GRL	Gorelyy	5.15	228	*e*P	Pn	14 04 35.4	+4.5
MTVR	Mutnovka	5.16	227	*e*P	Pn	14 04 35.7	+4.7
APC	Apacha	5.29	235	*e*P	Pn	14 04 36.3	+3.6
ASAK	Asacha	5.35	227	*e*P	Pn	14 04 38.3	+4.7

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*UCR **26** 14:06:13.5±1.2, 10°.30N×86°.39W, h6km±11km, MW4.2*

*CATAC **26** 14:06:18.2±0.8, 10°N±4°×8°6W±°, h27km±9km, M3.1/10, MLv3.1/10, Error ellipse: s-maj=8.8km s-min=7.0km az=47.6, confirmed*

ISC 26 14:06:15.4±1.4, 10°.44N±0°.04×86°.28W±0°.05, h7km±11km,

n52, σ1§31/70, 12C-1D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALIBA	**Liberia Airpor**	**0.74**	**78**	⇑iP	**Pb**	**14 06 31.5**	**+0.8**
ALIBA				eS	**Sn**	**14 06 44.1**	**+0.3**
ELI1	**Hacienda Flor**	**0.74**	**74**	⇑iP	**Pb**	**14 06 32.0**	**+1.3**
ELI1				eS	**Sn**	**14 06 44.1**	**+0.1**
LAPC	**Finca la Perla**	**0.89**	**69**	⇑iP	**Pg**	**14 06 33.4**	**+0.8**
PLVR	**Palo Verde**	**0.92**	**96**	eP	**Pg**	**14 06 32.7**	**-0.4**
PLVR				eS	**Sb**	**14 06 47.1**	**+0.8**
CMARA	**Lajas Hojancha**	**0.94**	**116**	eP	**Pg**	**14 06 32.7**	**-0.9**
CMARA				eS	**Sg**	**14 06 44.1**	**-1.7**
GPS3	**Bodega del ICE**	**0.95**	**71**	⇑iP	**Pn**	**14 06 35.9**	**+0.6**
GPS3				eS	**Sn**	**14 06 51.4**	**+2.2**
INDI	**Punta indio, G**	**0.95**	**127**	S	**Sg**	**14 06 44.6**	**-1.7**
INDI	**Punta indio, G**	**0.95**	**127**	P	**Pb**	**14 06 33.5**	**-0.8**
VRLE	**La Escondida,**	**0.96**	**69**	⇑eP	**Pb**	**14 06 34.5**	**0.0**
VRLE				eS	**Sn**	**14 06 49.4**	**-0.2**
GPS1	**Guardaparques**	**0.97**	**70**	⇑eP	**Pb**	**14 06 34.7**	**0.0**
GPS1				eS	**Sn**	**14 06 50.2**	**+0.4**
VORI	**VORI**	**0.99**	**68**	eP	**Pb**	**14 06 34.6**	**-0.5**
BUAI	**Buenos Aires**	**1.03**	**65**	eP	**Pb**	**14 06 36.0**	**+0.4**
CARN	**Rivas**	**1.05**	**45**	⇑eP	**Pb**	**14 06 36.0**	**0.0**
CARN				eS	**Sn**	**14 06 55.0**	**+3.4**
CARN	**Rivas**	**1.05**	**45**	P	**Pb**	**14 06 35.3**	**-0.7**
CARN				S	**Sb**	**14 06 48.4**	**-1.6**
PEJA	**Penjamo Buenos**	**1.05**	**65**	eP	**Pb**	**14 06 36.2**	**+0.2**
COLC	**Colonia**	**1.08**	**78**	eP	**Pb**	**14 06 35.6**	**-0.9**
MESS	**Mesas**	**1.11**	**74**	eP	**Pb**	**14 06 36.6**	**-0.4**
MESS				eS	**Sn**	**14 06 54.0**	**+1.0**
HORNC	**Hornillas**	**1.12**	**76**	⇑eP	**Pb**	**14 06 36.7**	**-0.5**
HORNC				eS	**Sn**	**14 06 53.4**	**+0.1**
CUI	**Cuipilapa**	**1.12**	**79**	⇓iP	**Pb**	**14 06 36.9**	**-0.3**
CUI				eS	**Sb**	**14 06 52.6**	**+0.6**
INVE	**Universidad In**	**1.20**	**88**	eP	**Pn**	**14 06 37.4**	**-1.3**
INVE				eS	**Sg**	**14 06 56.2**	**+2.2**
TIMP	**Tierras Morena**	**1.25**	**83**	eP	**Pn**	**14 06 38.3**	**-1.1**
TIMP				eS	**Sg**	**14 06 57.2**	**+1.6**
MORN	**Al O del Volca**	**1.26**	**29**	P	**Pn**	**14 06 38.3**	**-1.2**
MORN				S	**Sb**	**14 06 50.9**	**-5.2**
TILA	**Tilaran**	**1.29**	**89**	eP	**Pn**	**14 06 40.4**	**+0.4**
TENO	**El Achiote**	**1.31**	**78**	eP	**Pn**	**14 06 38.8**	**-1.5**
TENO				eS	**Sn**	**14 06 58.2**	**+0.2**
JTS	**Las Juntas de**	**1.31**	**96**	⇑eP	**Pn**	**14 06 38.8**	**-1.5**
QUEB	**Quebradon, Cot**	**1.37**	**82**	⇑eP	**Pn**	**14 06 40.5**	**-0.6**
CBL1	**Cabuya**	**1.45**	**126**	eP	**Pb**	**14 06 43.2**	**+0.5**
TABAC	**Tabacon**	**1.49**	**88**	eP	**Pn**	**14 06 42.8**	**+0.1**
NANN	**Nandasmo**	**1.50**	**6**	P	**Pn**	**14 06 42.2**	**-0.6**
CASO	**Castillo**	**1.52**	**90**	eP	**Pn**	**14 06 42.1**	**-1.1**
ARE1	**Arenal 1**	**1.54**	**89**	⇑iP	**Pn**	**14 06 43.3**	**0.0**
VARE2	**V. Arenal**	**1.54**	**89**	⇑eP	**Pn**	**14 06 43.2**	**-0.1**
CEDE	**Laguna Cedeo**	**1.55**	**88**	eP	**Pn**	**14 06 43.6**	**0.0**
SOCE	**Pocosol**	**1.64**	**92**	eP	**Pn**	**14 06 44.3**	**-0.4**
SOCE	**Pocosol**	**1.64**	**92**	P	**Pn**	**14 06 44.6**	**-0.1**
COPN	**Copaltepe**	**1.75**	**350**	eP	**Pn**	**14 06 46.6**	**+0.2**
COPN	**Copaltepe**	**1.75**	**350**	P	**Pn**	**14 06 47.1**	**+0.8**
ACON	**Acoyapa**	**1.86**	**35**	eP	**Pn**	**14 06 47.7**	**-0.1**
ACON	**Acoyapa**	**1.86**	**35**	P	**Pn**	**14 06 46.7**	**-1.2**
MOMN	**Momotombo**	**1.97**	**353**	P	**Pn**	**14 06 50.3**	**+0.9**
MOMN				S	**Sn**	**14 07 13.6**	**-0.8**
MOM2	**El Cardon**	**1.99**	**354**	P	**Pn**	**14 06 50.5**	**+0.9**
MOM2				S	**Sn**	**14 07 14.6**	**-0.2**
CNGA	**Al SSO del Vol**	**2.08**	**349**	P	**Pb**	**14 06 55.3**	**+1.7**
BOAB	**BOACO BROADBAN**	**2.08**	**17**	S	**Sn**	**14 07 14.3**	**-2.8**
BOAB	**BOACO BROADBAN**	**2.08**	**17**	P	**Pn**	**14 06 50.6**	**-0.2**
PAR1A	**Puntarenas Pro**	**2.17**	**113**	eP	**Pn**	**14 06 52.9**	**+0.9**
PLRN	**Geotermica Pol**	**2.18**	**347**	P	**Pg**	**14 06 57.7**	**+0.4**
POLN	**Al Sur del Vol**	**2.26**	**347**	P	**Pn**	**14 06 53.5**	**+0.3**
VICA	**Volcano Irazu**	**2.44**	**101**	eP	**Pn**	**14 06 56.8**	**+0.6**
ABRB	**Las Abras (San**	**2.56**	**100**	eP	**Pn**	**14 06 59.9**	**+2.2**
ESPN	**Las Esperanzas**	**2.61**	**48**	P	**Pn**	**14 07 00.6**	**+2.5**
SAJE	**San Jernim**	**2.94**	**111**	eP	**Pn**	**14 07 05.4**	**+2.6**
DRK0	**Durika**	**3.21**	**111**	eP	**Pn**	**14 07 06.4**	**-0.1**

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*IDC **26** 14:07:05.8±1.9, 56°.20N×164°.23E, h0km, mb3.3/3, mbtmp3.3/4, ML2.7/1, Error ellipse: s-maj=184.7km s-min=25.2km az=145.0*

*KRSC **26** 14:07:06.8±1.4, 56°.10N×164°.18E, h50km±23km, Ml3.9*

ISC 26 14:07:06.3±0.9, **56°.13N**±0°.05×**164°.25E**±0°.05, **h10**km, **n41, σ1§39**/43, **mb3.4**/3, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.81**	**276**	eP	**Pg**	**14 07 20.5**	**-1.4**
KBG	**Krutoberegovo**	**0.88**	**279**	eP	**Pg**	**14 07 21.9**	**-1.2**
BKI	**Bering**	**1.35**	**133**	eP	**Pn**	**14 07 30.9**	**-0.3**
BKI				eS	**Sb**	**14 07 48.9**	**+0.1**
SMKR	**Semkarok**	**1.61**	**287**	eP	**Pn**	**14 07 34.6**	**-0.4**
SRKR	**Sorokina**	**1.79**	**288**	eP	**Pn**	**14 07 37.1**	**-0.3**
ZLN	**Zelenaya**	**1.94**	**268**	eP	**Pn**	**14 07 39.2**	**-0.2**
BZGR	**Bezymyannyi-Gr**	**2.01**	**266**	eP	**Pn**	**14 07 41.0**	**+0.6**
KLY	**Klyuchi**	**2.02**	**277**	eP	**Pn**	**14 07 38.5**	**-1.9**
BZWR	**Bezymyannyi-We**	**2.12**	**267**	eP	**Pn**	**14 07 42.2**	**+0.3**
MKZ	**Mys Kozlova**	**2.14**	**223**	eP	**Pn**	**14 07 41.1**	**-0.9**
MKZ				eS	**Sn**	**14 08 06.5**	**-2.0**
KIRR	**Kirishev**	**2.20**	**267**	eP	**Pn**	**14 07 44.0**	**+0.9**
KPT	**Kopyto**	**2.27**	**267**	eP	**Pn**	**14 07 45.1**	**+1.2**
KMNR	**Kamenistaya**	**2.29**	**262**	eP	**Pn**	**14 07 45.0**	**+0.7**
TUMD	**Tumrok D**	**2.37**	**249**	eP	**Pn**	**14 07 45.7**	**+0.4**
TUMD				eS	**Sn**	**14 08 14.4**	**-0.1**
KOZ	**Kozyrevsk**	**2.46**	**270**	eP	**Pn**	**14 07 47.6**	**+1.2**
SRDR	**Sredinnyy**	**2.54**	**276**	eP	**Pn**	**14 07 48.3**	**+0.6**
ESO	**Esso**	**3.12**	**269**	eP	**Pn**	**14 07 58.0**	**+2.4**
OSSR	**Ossora**	**3.19**	**349**	eP	**Pn**	**14 07 55.8**	**-0.7**
SPN	**Mys Shipunski**	**3.91**	**221**	eP	**Pn**	**14 08 05.7**	**-0.7**
SPN				eS	**Sn**	**14 08 47.6**	**-4.7**
NLC	**Nalytchevo**	**4.11**	**226**	eP	**Pn**	**14 08 09.8**	**+0.6**
SDLR	**Sedlovina**	**4.23**	**230**	eP	**Pn**	**14 08 11.5**	**+0.7**
KRER	**Koryakskii**	**4.27**	**231**	eP	**Pn**	**14 08 13.0**	**+1.5**
SMAR	**Somma**	**4.27**	**230**	eP	**Pn**	**14 08 12.1**	**+0.6**
AVH	**Avacha**	**4.30**	**230**	eP	**Pn**	**14 08 13.6**	**+1.7**
UGLR	**Uglovaya**	**4.30**	**229**	eP	**Pn**	**14 08 13.3**	**+1.4**
KOK	**Koryaka**	**4.33**	**231**	eP	**Pn**	**14 08 13.1**	**+0.9**
GNL	**Ganaly**	**4.38**	**239**	eP	**Pn**	**14 08 14.9**	**+1.8**
DALK	**Dalny**	**4.46**	**228**	eP	**Pn**	**14 08 14.3**	**+0.4**
PET	**Petropavlovsk**	**4.51**	**229**	eP	**Pn**	**14 08 14.9**	**+0.4**
PETK	**Petropavlovsk-**	**4.87**	**234**	Pn	**Pn**	**14 08 21.1**	**+1.6**
	1.7nm,0.3s,baz=64,slow=16,SNR=26						
PETK				Sn	**Sn**	**14 09 17.6**	**+1.8**
	0.8nm,0.3s,baz=304,slow=20,SNR=5.3						
	2.5nm,0.5s						
KRMR	**Karymshinskiy**	**4.87**	**230**	eP	**Pn**	**14 08 21.2**	**+1.7**
RUS	**Russkaya**	**5.00**	**225**	eP	**Pn**	**14 08 21.8**	**+0.4**
GRL	**Gorelyy**	**5.09**	**228**	eP	**Pn**	**14 08 24.5**	**+1.8**
MTVR	**Mutnovka**	**5.10**	**227**	eP	**Pn**	**14 08 24.0**	**+1.2**
ASAK	**Asacha**	**5.29**	**227**	eP	**Pn**	**14 08 27.0**	**+1.6**
ILAR	**Eielson Array**	**24.98**	**50**	P	**P**	**14 12 30.6**	**+1.0**
	0.7nm,1.0s,baz=269,slow=9.0,SNR=4.1						
	0.7nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**36.40**	**176**	T	T	14 52 45.6	
	baz=357,slow=76,SNR=47						
H11N3	**WAKE ISLAND Hy**	**36.41**	**176**	T	T	14 52 49.2	
	baz=357,slow=76,SNR=26						
H11N1	**WAKE ISLAND Hy**	**36.41**	**176**	T	T	14 52 47.2	
	baz=357,slow=76,SNR=36						
PDAR	**Pinedale Array**	**53.99**	**65**	P	**P**	**14 16 30.8**	**+0.3**
	0.3nm,0.7s,baz=303,slow=10,SNR=1.9						
	0.3nm,0.7s						
TXAR	**Lajitas Array**	**67.29**	**71**	P	**P**	**14 18 02.3**	**+1.2**
	0.2nm,0.4s,baz=319,slow=6.6,SNR=2.9						
	0.2nm,0.4s						

IDC 26 14:11:57.4±1.7, **33°.92N**×**25°.28E, h0**km, **mb3.7**/3, **mbtmp3.6**/4, **ML3.1**/1, **MS2.6**/2, **Error ellipse: s-maj=61.7km s-min=29.6km az=143.0, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEST	**Kesra**	**13.22**	**282**	LR	LR	14 21 04.7	
	comp=Z,19nm,19.5s,baz=357,slow=41						
GERES	**GERESS Array B**	**17.23**	**333**	P	Pn	14 15 59.4	+0.1
	baz=142,slow=14,SNR=2.2						
	0.3nm,0.3s						
HFS	**Hagfors**	**27.30**	**347**	LR	LR	14 30 06.7	
	comp=Z,16nm,18.6s,baz=354,slow=40						
TORD	**Torodi Ar. Bea**	**29.78**	**232**	P	P	14 18 05.9	0.0
	1.1nm,0.3s,baz=35,slow=7.8,SNR=1.5						
	1.1nm,0.3s						
KURBB	**Kurchatov Arra**	**41.83**	**50**	P	P	14 19 48.6	-0.2
	0.3nm,0.5s,baz=274,slow=9.1,SNR=3.2						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**44.38**	**55**	P	P	14 20 09.5	-0.1
	0.3nm,0.6s,baz=275,slow=7.1,SNR=4.2						
	0.3nm,0.6s						

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*UCR **26** 14:16:42.2±1.4, 8°.30N×82°.87W, h18km±6km, MW3.6*

*UPA **26** 14:16:43.9±1.2, 8°.48N×82°.83W, h16km±3km, MW3.2*

*CATAC **26** 14:16:46.5±0.6, 9°N±5°×8°3W±°, h1km±2km, M3.3/7, MLv3.3/7, Error ellipse: s-maj=12.0km s-min=4.1km az=28.3, confirmed*

ISC 26 14:16:42.8±1.1, **8°.41N**±0°.05×**82°.88W**±0°.02, **h31**km±5km, **n58, σ1§23**/85, **8C-17D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LESP3	**La Esperanza,**	**0.08**	**91**	eP	**Pb**	**14 16 47.9**	**-0.2**
LESP3				eS	**Sb**	**14 16 49.2**	**-2.6**
CDITO	**Canoas**	**0.17**	**1**	P	**Pb**	**14 16 48.6**	**-0.2**
CDITO	**Canoas**	**0.17**	**1**	S	**Sb**	**14 16 53.8**	**+0.9**
NELY	**Ciudad Neily**	**0.25**	**344**	⇑iP	**Pb**	**14 16 49.7**	**0.0**
NELY				eS	**Sn**	**14 16 55.1**	**-0.2**
MCANO	**Manzana, Boque**	**0.34**	**62**	⇓iP	**Pb**	**14 16 51.0**	**0.0**
MCANO				eS	**Sb**	**14 16 54.7**	**-1.7**
FITO	**Golfito**	**0.35**	**308**	⇑iP	**Pb**	**14 16 50.0**	**-1.0**
FITO				eS	**Sb**	**14 16 56.3**	**-0.3**
EDAD	**Golfito**	**0.38**	**310**	⇑iP	**Pb**	**14 16 50.5**	**-0.9**
EDAD				eS	**Sb**	**14 16 57.5**	**+0.2**
MLIR3	**Monte Lirio, C**	**0.39**	**8**	⇑iP	**Pb**	**14 16 51.0**	**-0.7**
MLIR3				eS	**Sb**	**14 16 55.9**	**-1.7**
VITO	**San Vito**	**0.42**	**347**	⇑iP	**Pb**	**14 16 52.6**	**+0.5**
VITO				eS	**Sn**	**14 17 00.9**	**+1.3**
DVD	**David**	**0.42**	**86**	⇓iP	**Pb**	**14 16 51.7**	**-0.3**
DVD				eS	**Sb**	**14 16 57.9**	**-0.4**
CLLRA	**Cordillera,**	**0.42**	**38**	⇓iP	**Pb**	**14 16 52.3**	**+0.1**
CLLRA				eS	**Sb**	**14 16 59.3**	**+0.7**
CLLRA	**Cordillera,**	**0.42**	**38**	⇓iP	**Pb**	**14 16 52.3**	**+0.1**
BRU2	**Volcan**	**0.42**	**25**	eP	**Pb**	**14 16 52.5**	**+0.3**
BRU2				eS	**Sn**	**14 17 00.3**	**+0.5**
BRU2	**Volcan**	**0.42**	**25**	P	**Pb**	**14 16 52.5**	**+0.3**
BRU2	**Volcan**	**0.42**	**25**	⇓iP	**Pb**	**14 16 52.4**	**+0.2**
BRU2				eS	**Sb**	**14 16 57.3**	**-1.4**
CSTBL	**De las Acacias**	**0.43**	**89**	⇓iP	**Pb**	**14 16 51.8**	**-0.3**
CSTBL				eS	**Sb**	**14 16 58.5**	**-0.1**
CSTBL	**De las Acacias**	**0.43**	**89**	⇓iP	**Pb**	**14 16 51.8**	**-0.3**
CSTBL				eS	**Sb**	**14 16 58.4**	**-0.2**
SCLRA	**Santa Clara, W**	**0.43**	**12**	eP	**Pb**	**14 16 52.9**	**+0.6**
SCLRA				eS	**Sn**	**14 17 01.2**	**+1.2**
SCLRA	**Santa Clara, W**	**0.43**	**12**	⇑eP	**Pb**	**14 16 52.5**	**+0.1**
SCLRA				eS	**Sb**	**14 16 56.9**	**-2.0**
TBS2		**0.44**	**29**	eP	**Pn**	**14 16 53.5**	**+0.3**
PEDE3	**Pedregal, Chir**	**0.45**	**93**	eS	**Sb**	**14 16 58.6**	**-0.5**
LOCO3	**Loma Colorada,**	**0.45**	**90**	eP	**Pb**	**14 16 52.2**	**-0.3**
LOCO3				eS	**Sb**	**14 16 58.8**	**-0.4**
PTAR3	**Potrerillos Ar**	**0.47**	**53**	⇓iP	**Pb**	**14 16 52.9**	**0.0**
PTAR3				eS	**Sb**	**14 16 58.8**	**-1.0**
LOMA3	**Las Lomas, Chi**	**0.48**	**87**	eS	**Sb**	**14 16 59.8**	**-0.1**
BC3P	**Paso Ancho**	**0.48**	**33**	⇓iP	**Pb**	**14 16 53.0**	**-0.1**
BC3P				eS	**Sb**	**14 16 58.9**	**-1.4**
BQTLY	**Boquete Panama**	**0.54**	**50**	⇓iP	**Pb**	**14 16 53.7**	**-0.3**
BQTLY				eS	**Sb**	**14 17 02.4**	**+0.8**
PSOM3	**Paja de Sombre**	**0.61**	**63**	⇓iP	**Pb**	**14 16 54.4**	**-0.7**
PSOM3				eS	**Sb**	**14 17 04.0**	**+0.4**
EDP2	**Potrero Grande**	**0.67**	**334**	⇑iP	**Pb**	**14 16 56.0**	**-0.1**
EDP2				eS	**Sn**	**14 17 06.7**	**+0.9**
PANP	**Palmar Norte**	**0.80**	**314**	⇓eP	**Pb**	**14 16 57.8**	**-0.3**
PANP				eS	**Sn**	**14 17 09.6**	**+0.8**
PBNVO	**Pueblo Nuevo,**	**0.83**	**55**	⇓eP	**Pb**	**14 16 57.6**	**-1.1**
PBNVO				eS	**Sb**	**14 17 09.6**	**0.0**
RBALA	**Bur**	**0.85**	**57**	⇓iP	**Pb**	**14 16 58.3**	**-0.9**
DRK0	**Durika**	**0.93**	**337**	eP	**Pb**	**14 16 59.6**	**-0.8**
DRK0				eS	**Sb**	**14 17 12.9**	**+0.4**
DRK0	**Durika**	**0.93**	**337**	P	**Pb**	**14 17 00.1**	**-0.4**
DRK0	**Durika**	**0.93**	**337**	S	**Sb**	**14 17 08.7**	**-3.8**
EDPE	**Pejibaye, P**	**1.01**	**317**	eP	**Pn**	**14 17 01.1**	**+0.1**
EDPE				eS	**Sn**	**14 17 15.8**	**+1.6**
OCHAL	**Ojochal**	**1.02**	**312**	S	**Sb**	**14 17 10.9**	**-4.3**
OCHAL	**Ojochal**	**1.02**	**312**	P	**Pn**	**14 17 01.0**	**-0.1**
SAJE	**San Jernim**	**1.12**	**326**	eP	**Pn**	**14 17 02.4**	**-0.2**
KKNTU	**Kakintº**	**1.14**	**68**	⇓eP	**Pn**	**14 17 01.9**	**-0.7**
KKNTU				eS	**Sn**	**14 17 17.0**	**-0.3**
KKNTU	**Kakintº**	**1.14**	**68**	⇓iP	**Pn**	**14 17 02.1**	**-0.6**
KKNTU				eS	**Sn**	**14 17 16.9**	**-0.4**
PIEC	**Cerro El Cedra**	**1.61**	**319**	eP	**Pn**	**14 17 10.2**	**+0.8**
PISJ	**San Jernim**	**1.73**	**315**	eP	**Pn**	**14 17 12.8**	**+1.9**
LCR2	**La Lucha 2**	**1.73**	**320**	eP	**Pn**	**14 17 12.2**	**+1.2**
LCR2	**La Lucha 2**	**1.73**	**320**	P	**Pb**	**14 17 13.9**	**-0.2**
LCR2	**La Lucha 2**	**1.73**	**320**	S	**Sn**	**14 17 33.4**	**+1.2**
ABE2	**San Pablo**	**1.74**	**318**	eP	**Pb**	**14 17 13.8**	**-0.5**
PICV	**PH. Pirrs**	**1.78**	**313**	eP	**Pn**	**14 17 13.4**	**+1.9**
ABRB	**Las Abras (San**	**1.79**	**332**	eP	**Pn**	**14 17 12.9**	**+1.1**
PAR1A	**Puntarenas Pro**	**1.80**	**311**	⇓eP	**Pn**	**14 17 13.5**	**+1.7**
CVTV	**Tajo**	**1.81**	**332**	⇑eP	**Pn**	**14 17 13.7**	**+1.6**
CVTQ	**Turrialba Volc**	**1.81**	**331**	eP	**Pn**	**14 17 13.9**	**+1.6**
VTR0	**Volcan Turrial**	**1.82**	**331**	eP	**Pn**	**14 17 13.6**	**+1.2**
VICA	**Volcano Irazu**	**1.84**	**329**	eP	**Pb**	**14 17 15.1**	**-1.0**
TRT2	**Tortugero**	**2.30**	**338**	P	**Pb**	**14 17 22.2**	**-1.4**
SOCE	**Pocosol**	**2.61**	**319**	P	**Pb**	**14 17 27.3**	**-1.6**
ARE1	**Arenal 1**	**2.73**	**318**	eP	**Pb**	**14 17 28.7**	**-2.4**
PLVR	**Palo Verde**	**3.11**	**308**	eP	**Pn**	**14 17 32.4**	**+2.5**
LAPC	**Finca la Perla**	**3.44**	**313**	eP	**Pn**	**14 17 37.6**	**+3.2**

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*IDC **26** 14:23:27.9±0.6, 56°.20N×163°.93E, h0km, mb4.0/25, mbtmp4.1/27, ML3.5/2, MS3.2/31, Error ellipse: s-maj=17.2km s-min=11.4km az=147.0*

*KRSC **26** 14:23:29.0±1.2, 56°.11N×164°.26E, h48km±20km, Mc4.6, Ml4.4*

*NEIC **26** 14:23:29.9±1.9, 56°.15N±0°.07×163°.9E±0°.1, h10km±1km, mb4.4/31, Error ellipse: s-maj=15.5km s-min=6.2km az=140.0*

*MOS **26** 14:23:32.3±0.9, 56°.10N×164°.05E, h51km, mb4.4/16, Error ellipse: s-maj=7.0km s-min=4.5km az=59.3*

ISC 26 14:23:29.7±1.4, **56°.13N**±0°.04×**164°.12E**±0°.03, **h12**km±8km, **n205, σ1§27**/195, **mb4.3**/47, **MS3.1**/26, **2C-1D, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.73**	**277**	PN	**Pg**	**14 23 43.1**	**-0.8**
KBTR	**Krutoberegovo**	**0.73**	**277**	eP	**Pg**	**14 23 43.2**	**-0.8**
KBG	**Krutoberegovo**	**0.80**	**280**	PN	**Pg**	**14 23 44.3**	**-0.9**
KBG				S	**Sb**	**14 23 56.5**	**+0.2**
KBG	**Krutoberegovo**	**0.80**	**280**	eP	**Pg**	**14 23 44.3**	**-0.9**
KBG				eS	**Sb**	**14 23 56.6**	**+0.2**
BKI	**Bering**	**1.40**	**131**	PN	**Pn**	**14 23 53.5**	**-1.5**
BKI				S	**Sn**	**14 24 11.7**	**-1.6**
BKI	**Bering**	**1.40**	**131**	eP	**Pn**	**14 23 53.5**	**-1.5**
BKI				eS	**Sn**	**14 24 11.7**	**-1.6**
SMKR	**Semkarok**	**1.54**	**288**	PN	**Pn**	**14 23 56.7**	**-0.4**
SMKR	**Semkarok**	**1.54**	**288**	eP	**Pn**	**14 23 56.8**	**-0.4**
SRKR	**Sorokina**	**1.73**	**289**	PN	**Pn**	**14 23 59.9**	**+0.3**
SRKR	**Sorokina**	**1.73**	**289**	eP	**Pn**	**14 23 60.0**	**+0.3**
ZLN	**Zelenaya**	**1.86**	**268**	PN	**Pn**	**14 24 02.5**	**+1.0**
ZLN	**Zelenaya**	**1.86**	**268**	eP	**Pn**	**14 24 02.5**	**+1.0**
CIRR	**Tsirk**	**1.89**	**271**	PN	**Pn**	**14 24 02.5**	**+0.6**
CIRR	**Tsirk**	**1.89**	**271**	eP	**Pn**	**14 24 02.5**	**+0.6**
LGNR	**Loginova**	**1.92**	**270**	PN	**Pn**	**14 24 03.7**	**+1.2**
LGNR	**Loginova**	**1.92**	**270**	eP	**Pn**	**14 24 03.7**	**+1.2**
BZGR	**Bezymyannyi-Gr**	**1.93**	**266**	PN	**Pn**	**14 24 03.0**	**+0.6**
BZGR	**Bezymyannyi-Gr**	**1.93**	**266**	eP	**Pn**	**14 24 03.1**	**+0.6**
KLY	**Klyuchi**	**1.95**	**277**	PN	**Pn**	**14 24 01.4**	**-1.1**
KLY	**Klyuchi**	**1.95**	**277**	eP	**Pn**	**14 24 01.4**	**-1.1**
KRSR	**Krestovskiy**	**1.99**	**274**	PN	**Pn**	**14 24 03.3**	**0.0**
KRSR	**Krestovskiy**	**1.99**	**274**	eP	**Pn**	**14 24 03.3**	**0.0**
BZWR	**Bezymyannyi-We**	**2.04**	**267**	PN	**Pn**	**14 24 04.8**	**+0.8**
BZWR	**Bezymyannyi-We**	**2.04**	**267**	eP	**Pn**	**14 24 04.8**	**+0.8**
BZMR	**Bezymyannaya**	**2.05**	**266**	PN	**Pn**	**14 24 05.0**	**+0.9**
BZMR	**Bezymyannaya**	**2.05**	**266**	eP	**Pn**	**14 24 05.0**	**+0.9**
MKZ	**Mys Kozlova**	**2.08**	**222**	PN	**Pn**	**14 24 03.9**	**-0.5**
MKZ				S	**Sn**	**14 24 29.2**	**-1.0**
MKZ	**Mys Kozlova**	**2.08**	**222**	eP	**Pn**	**14 24 04.0**	**-0.5**
MKZ				eS	**Sn**	**14 24 29.3**	**-1.0**
KIRR	**Kirishev**	**2.13**	**267**	PN	**Pn**	**14 24 06.2**	**+1.0**
KIRR				S	**Sb**	**14 24 34.2**	**-0.4**
KIRR	**Kirishev**	**2.13**	**267**	eP	**Pn**	**14 24 06.2**	**+1.0**
KIRR				eS	**Sb**	**14 24 34.2**	**-0.4**
KPT	**Kopyto**	**2.19**	**267**	PN	**Pn**	**14 24 07.1**	**+1.1**
KPT	**Kopyto**	**2.19**	**267**	eP	**Pn**	**14 24 07.1**	**+1.1**
KMNR	**Kamenistaya**	**2.21**	**262**	PN	**Pn**	**14 24 07.7**	**+1.3**
KMNR	**Kamenistaya**	**2.21**	**262**	eP	**Pn**	**14 24 07.7**	**+1.3**
TUMD	**Tumrok D**	**2.30**	**248**	PN	**Pn**	**14 24 08.2**	**+0.8**
TUMD				S	**Sn**	**14 24 37.2**	**+1.5**
TUMD	**Tumrok D**	**2.30**	**248**	eP	**Pn**	**14 24 08.3**	**+0.8**
TUMD				eS	**Sn**	**14 24 37.3**	**+1.5**
KOZ	**Kozyrevsk**	**2.38**	**270**	PN	**Pn**	**14 24 10.1**	**+1.6**
KOZ	**Kozyrevsk**	**2.38**	**270**	eP	**Pn**	**14 24 10.1**	**+1.6**
SRDR	**Sredinnyy**	**2.47**	**276**	PN	**Pn**	**14 24 11.0**	**+1.2**
SRDR	**Sredinnyy**	**2.47**	**276**	eP	**Pn**	**14 24 11.0**	**+1.2**
ESO	**Esso**	**3.05**	**268**	PN	**Pn**	**14 24 18.7**	**+1.0**
ESO	**Esso**	**3.05**	**268**	eP	**Pn**	**14 24 18.8**	**+1.0**
OSSR	**Ossora**	**3.19**	**350**	PN	**Pn**	**14 24 18.4**	**-1.1**
OSSR	**Ossora**	**3.19**	**350**	eP	**Pn**	**14 24 18.5**	**-1.1**
KII	**Karymskiy**	**3.40**	**234**	PN	**Pn**	**14 24 23.9**	**+1.2**
KII	**Karymskiy**	**3.40**	**234**	eP	**Pn**	**14 24 23.9**	**+1.2**
PALN	**Palana**	**3.72**	**325**	PN	**Pn**	**14 24 29.7**	**+2.9**
PALN	**Palana**	**3.72**	**325**	eP	**Pn**	**14 24 29.7**	**+2.9**
SPN	**Mys Shipunski**	**3.86**	**220**	PN	**Pn**	**14 24 28.2**	**-0.6**
SPN	**Mys Shipunski**	**3.86**	**220**	eP	**Pn**	**14 24 28.2**	**-0.6**
NLC	**Nalytchevo**	**4.06**	**225**	PN	**Pn**	**14 24 32.1**	**+0.6**
NLC	**Nalytchevo**	**4.06**	**225**	eP	**Pn**	**14 24 32.2**	**+0.6**
SDLR	**Sedlovina**	**4.17**	**229**	PN	**Pn**	**14 24 34.4**	**+1.2**
SDLR	**Sedlovina**	**4.17**	**229**	eP	**Pn**	**14 24 34.4**	**+1.2**
KRER	**Koryakskii**	**4.21**	**230**	PN	**Pn**	**14 24 35.5**	**+1.7**
KRER	**Koryakskii**	**4.21**	**230**	eP	**Pn**	**14 24 35.5**	**+1.7**
KRX	**Arik**	**4.21**	**231**	PN	**Pn**	**14 24 35.4**	**+1.6**
KRX	**Arik**	**4.21**	**231**	eP	**Pn**	**14 24 35.4**	**+1.6**
SMAR	**Somma**	**4.21**	**229**	PN	**Pn**	**14 24 35.0**	**+1.1**
SMAR	**Somma**	**4.21**	**229**	eP	**Pn**	**14 24 35.1**	**+1.1**
AVH	**Avacha**	**4.24**	**230**	PN	**Pn**	**14 24 35.8**	**+1.7**
AVH	**Avacha**	**4.24**	**230**	eP	**Pn**	**14 24 35.8**	**+1.7**
UGLR	**Uglovaya**	**4.24**	**229**	PN	**Pn**	**14 24 35.8**	**+1.6**
UGLR	**Uglovaya**	**4.24**	**229**	eP	**Pn**	**14 24 35.8**	**+1.6**
KOK	**Koryaka**	**4.26**	**231**	PN	**Pn**	**14 24 35.8**	**+1.3**
KOK	**Koryaka**	**4.26**	**231**	eP	**Pn**	**14 24 35.8**	**+1.3**
DALK	**Dalny**	**4.40**	**227**	PN	**Pn**	**14 24 37.1**	**+0.9**
DALK	**Dalny**	**4.40**	**227**	eP	**Pn**	**14 24 37.1**	**+0.9**
PET	**Petropavlovsk**	**4.45**	**228**		**Pn**	**14 24 37.9**	**+1.0**
PET	**Petropavlovsk**	**4.45**	**228**	i PN	**Pn**	**14 24 37.7**	**+0.8**
PET	**Petropavlovsk**	**4.45**	**228**	eP	**Pn**	**14 24 37.8**	**+0.8**
PEA0B	**Petropavlovsk-**	**4.80**	**234**		**Pn**	**14 24 43.1**	**+1.3**
PEA0B	**Petropavlovsk-**	**4.80**	**234**	PN	**Pn**	**14 24 45.5**	**+3.7**
PETK	**Petropavlovsk-**	**4.80**	**234**		**Pn**	**14 24 43.4**	**+1.6**
PETK	**Petropavlovsk-**	**4.80**	**234**	Pn	**Pn**	**14 24 42.8**	**+1.0**
	4.6nm,0.3s,baz=69,slow=18,SNR=69						
PETK				Sn	**Sn**	**14 25 39.1**	**+1.8**
	1.3nm,0.3s,baz=53,slow=46,SNR=3.2						
PETK				LR	LR	14 26 55.2	
	comp=Z,334nm,18.4s,baz=54,slow=44						
	16nm,0.6s						
KRMR	**Karymshinskiy**	**4.81**	**229**	PN	**Pn**	**14 24 43.8**	**+2.0**
KRMR	**Karymshinskiy**	**4.81**	**229**	eP	**Pn**	**14 24 43.9**	**+2.0**
RUS	**Russkaya**	**4.95**	**224**	PN	**Pn**	**14 24 44.8**	**+1.1**
RUS	**Russkaya**	**4.95**	**224**	eP	**Pn**	**14 24 44.9**	**+1.1**
GRL	**Gorelyy**	**5.03**	**227**	PN	**Pn**	**14 24 47.4**	**+2.4**
GRL	**Gorelyy**	**5.03**	**227**	eP	**Pn**	**14 24 47.5**	**+2.4**
MTVR	**Mutnovka**	**5.04**	**226**	PN	**Pn**	**14 24 46.7**	**+1.5**
MTVR	**Mutnovka**	**5.04**	**226**	eP	**Pn**	**14 24 46.7**	**+1.5**
APC	**Apacha**	**5.17**	**235**	PN	**Pn**	**14 24 49.1**	**+2.3**
APC	**Apacha**	**5.17**	**235**	eP	**Pn**	**14 24 49.2**	**+2.3**
ASAK	**Asacha**	**5.23**	**227**	PN	**Pn**	**14 24 50.0**	**+2.3**
ASAK	**Asacha**	**5.23**	**227**	eP	**Pn**	**14 24 50.1**	**+2.3**
PAU	**Pauzhetka**	**6.36**	**226**	PN	**Pn**	**14 25 05.2**	**+2.0**
PAU	**Pauzhetka**	**6.36**	**226**	eP	**Pn**	**14 25 05.2**	**+2.0**
SMY	**Shemya**	**6.74**	**116**	Pn	**Pn**	**14 25 10.9**	**+2.5**
SMY	**Shemya**	**6.74**	**116**	PN	**Pn**	**14 25 10.9**	**+2.5**
SKR	**Severo-Kuril's**	**7.25**	**225**	PN	**Pn**	**14 25 15.8**	**+0.5**
SKR	**Severo-Kuril's**	**7.25**	**225**	eP	**Pn**	**14 25 15.9**	**+0.5**
MA2	**Magadan**	**7.92**	**301**	LR	LR	14 28 30.0	
	comp=Z,92nm,20.1s,baz=109,slow=39						
SEY	**Seymchan**	**9.05**	**324**	LR	LR	14 29 18.7	
	comp=Z,157nm,18.7s,baz=156,slow=39						
AMKA	**Amchitka**	**10.16**	**112**	Pn	**Pn**	**14 25 57.4**	**+2.1**
BILL	**Bilibino**	**12.00**	**4**		**Pn**	**14 26 22.5**	**+2.2**
BILL	**Bilibino**	**12.00**	**4**	i PN	**Pn**	**14 26 20.0**	**-0.3**
YSS	**Yuzhno-Sakhali**	**16.09**	**244**	eP	**P**	**14 27 17.3**	**-1.6**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YSS				MLR	MLR		
	comp=Z,500nm,17.0s						
UNV	**Unalaska Valle**	**16.95**	**85**	P	**P**	**14 27 29.0**	**+0.6**
JKA	**Kamikawa-asahi**	**18.20**	**238**		**Pn**	**14 27 39.0**	**-3.0**
JKA				IAmb	IAmb	14 27 44.4	
	comp=Z,29nm,0.9s						
ASAJ	**Asahikawa**	**18.21**	**238**	P	**Pn**	**14 27 42.0**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=14,slow=9.0,SNR=12						
ASAJ				LR	LR	14 34 35.9	
	comp=Z,59nm,20.6s,baz=47,slow=37						
	comp=Z,26nm,0.9s						
ASAJ	**Asahikawa**	**18.21**	**238**	P	**Pn**	**14 27 42.0**	**-0.1**
K15K	**Wolf Creek Mou**	**18.46**	**56**	P	**Pn**	**14 27 46.4**	**+1.3**
K15K				IAmb	IAmb	14 28 06.3	
	comp=Z,40nm,1.5s						
YAK	**Yakutsk**	**18.49**	**303**	LR	LR	14 34 58.9	
	comp=Z,29nm,18.7s,baz=76,slow=38						
YAK	**Yakutsk**	**18.49**	**303**	eP	**P**	**14 27 45.2**	**-0.1**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.5s						
N15K	**Kwethluk River**	**19.16**	**63**	P	**Pn**	**14 27 55.1**	**+1.6**
L16K	**Owhat River**	**19.41**	**58**	P	**Pn**	**14 27 57.1**	**+0.6**
ERM	**Erimo**	**19.58**	**233**	P	**P**	**14 27 55.1**	**-2.3**
ERM	**Erimo**	**19.58**	**233**	i P	**P**	**14 27 57.2**	**-0.2**
M16K	**Timber Creek**	**19.67**	**60**	P	**Pn**	**14 27 59.4**	**-0.3**
E18K	**Tukpahlearik C**	**19.82**	**41**	P	**Pn**	**14 28 00.6**	**-0.8**
E18K				IAmb	IAmb	14 28 12.2	
	comp=Z,20nm,1.1s						
H18K	**Honhosa River**	**20.18**	**48**	P	Pn	14 28 06.5	+0.8
H18K				IAmb	IAmb	14 28 16.5	
	comp=Z,24nm,1.4s						
KLR	**Kul'dur**	**20.66**	**264**	LR	LR	14 36 39.9	
	comp=Z,38nm,20.1s,baz=70,slow=38						
C19K	**Lookout Ridge**	**20.73**	**37**	P	**P**	**14 28 10.7**	**+0.9**
C19K				IAmb	IAmb	14 28 19.1	
	comp=Z,34nm,1.1s						
J19K	**Poorman**	**21.24**	**52**	P	**P**	**14 28 15.4**	**+0.2**
J19K				IAmb	IAmb	14 28 28.6	
	comp=Z,14nm,1.1s						
TIXI	**Tiksi**	**21.46**	**330**		**P**	**14 28 17.8**	**+0.4**
TIXI	**Tiksi**	**21.46**	**330**	P	**P**	**14 28 17.9**	**+0.5**
	comp=Z,4.1nm,0.7s,baz=126,slow=8.9,SNR=23						
TIXI				LR	LR	14 37 13.9	
	comp=Z,73nm,21.4s,baz=172,slow=39						
	comp=Z,4.1nm,0.7s						
JTM	**Tenmabayashi**	**21.51**	**234**	P	**P**	**14 28 16.7**	**-1.6**
JTM				IAmb	IAmb	14 28 31.3	
	comp=Z,29nm,1.4s						
D20K	**Etivluk River**	**21.63**	**39**	P	**P**	**14 28 20.3**	**+0.9**
D20K				IAmb	IAmb	14 28 32.4	
	comp=Z,24nm,1.4s						
E21K	**Killik River**	**22.50**	**40**	P	**P**	**14 28 29.6**	**+0.8**
E21K				IAmb	IAmb	14 28 37.7	
	comp=Z,12nm,1.2s						
E22K	**Anaktuvuk Pass**	**23.23**	**41**		**P**	**14 28 36.7**	**+0.3**
E22K				IAmb	IAmb	14 28 44.7	
	comp=Z,13nm,1.0s						
KDAK	**Kodiak Island**	**23.37**	**68**	LR	LR	14 37 05.3	
	comp=Z,37nm,21.0s,baz=245,slow=35						
MLY	**Manley**	**23.39**	**49**		**P**	**14 28 38.7**	**+0.7**
USRK	**Ussuriysk Ar.**	**23.55**	**253**	LR	LR	14 39 19.5	
	comp=Z,80nm,18.2s,baz=51,slow=40						
G23K	**Bananza Creek**	**23.75**	**45**	P	**P**	**14 28 41.8**	**+0.2**
H23K	**Yukon River**	**23.91**	**47**	P	**P**	**14 28 43.7**	**+0.7**
H23K				IAmb	IAmb	14 29 10.2	
	comp=Z,10nm,1.2s						
JMM	**Marumori**	**24.02**	**230**	P	**P**	**14 28 44.5**	**+0.3**
RND	**Reindeer**	**24.27**	**53**		**P**	**14 28 46.1**	**-0.3**
RND	**Reindeer**	**24.27**	**53**	P	**P**	**14 28 46.1**	**-0.3**
RND				pmax	pmax		
	comp=Z,4.0nm,0.8s						
E24K	**Your Creek**	**24.46**	**42**	P	**P**	**14 28 48.5**	**+0.3**
E24K				IAmb	IAmb	14 28 50.5	
	comp=Z,8.7nm,0.8s						
COLA	**College**	**24.62**	**50**	i P	**P**	**14 28 49.3**	**-0.2**
COLA				pmax	pmax		
	comp=Z,7.0nm,1.0s						

G24K	Hadweenzic Riv	24.77	45		P	14 28 51.8	+0.9
JSD	Sado	25.01	235	P	P	14 28 53.4	+0.1
JSD				IAmb	IAmb	14 28 54.3	
	comp=Z,4.6nm,0.6s						
ILAR	Eielson Array	25.04	50	P	P	14 28 53.5	+0.2
	comp=Z,3.6nm,0.9s,baz=271,slow=8.9,SNR=31						
ILAR				LR	LR	14 38 58.2	
	comp=Z,58nm,19.2s,baz=266,slow=37						
	comp=Z,3.6nm,0.9s						
MSHR	Mys Shultsa	25.10	251	*i* P	P	14 28 53.5	-0.5
MJA0	Matsu Arr-Jizo	26.24	233	*e*P	P	14 29 05.2	+0.7
MJA0				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MJB9	Matsu-Tunnel	26.26	233	P	P	14 29 03.8	-0.9
MAJO	Matsushiro	26.26	233		P	14 29 03.5	-1.2
MAJO	Matsushiro	26.26	233	*i* P	P	14 29 04.2	-0.4
MAJO				pmax	pmax		
	comp=Z,16nm,0.9s						
MJAR	Matsushiro Arr	26.26	233	P	P	14 29 04.4	-0.2
	comp=Z,8.7nm,0.9s,baz=26,slow=8.3,SNR=18						
MJAR				LR	LR	14 40 56.6	
	comp=Z,52nm,21.9s,baz=34,slow=40						
	comp=Z,8.7nm,0.9s						
BCAR	Beaver Creek A	27.48	53	P	P	14 29 16.5	+1.1
KSRS	Korea Array	30.54	248	P	P	14 29 41.3	-1.4
	comp=Z,0.7nm,0.7s,baz=51,slow=9.6,SNR=2.5						
	comp=Z,0.7nm,0.7s						
MMPY	Sheldon Lake,	32.26	51		P	14 29 58.5	+0.7
MMPY				IAmb	IAmb	14 30 07.2	
	comp=Z,4.9nm,1.0s						
JNU	Nakatsue	32.48	239	LR	LR	14 43 49.2	
	comp=Z,35nm,18.2s,baz=34,slow=38						
DLBC	Dease Lake	34.40	58	LR	LR	14 44 29.3	
	comp=Z,6.0nm,18.8s,baz=290,slow=37						
NRIK	Noril'sk	34.84	323	LR	LR	14 45 45.0	
	comp=Z,36nm,18.3s,baz=90,slow=38						
ULN	Ulaanbaatar	35.16	281	*ce*P	P	14 30 24.8	+1.6
ULN				pmax	pmax		
	comp=Z,6.0nm,2.5s						
SONM	Songino Array	35.54	281	P	P	14 30 26.2	-0.3
	comp=Z,0.6nm,0.4s,baz=54,slow=7.3,SNR=2.5						
	comp=Z,0.6nm,0.4s						
H11N2	WAKE ISLAND Hy	36.40	176	T	T	15 09 17.8	
	baz=357,slow=76,SNR=384						
H11N3	WAKE ISLAND Hy	36.41	176	T	T	15 09 21.6	
	baz=357,slow=76,SNR=339						
H11N1	WAKE ISLAND Hy	36.41	176	T	T	15 09 15.1	
	baz=357,slow=76,SNR=336						
YKA	Yellowknife Ar	39.35	46	P	P	14 30 57.1	-1.3
	comp=Z,2.4nm,0.9s,baz=54,slow=8.5,SNR=11						
YKA				LR	LR	14 47 41.6	
	comp=Z,44nm,19.6s,baz=346,slow=37						
	comp=Z,2.4nm,0.9s						
YKA	Yellowknife Ar	39.35	46	*i* P	P	14 30 58.0	-0.4
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
RES	Resolute Bay	39.61	24	LR	LR	14 47 02.0	
	comp=Z,24nm,21.1s,baz=72,slow=36						
SPITS	Spitsbergen Ar	44.52	351	P	P	14 31 39.7	-0.7
	comp=Z,9.4nm,1.0s,baz=59,slow=7.2,SNR=4.4						
	comp=Z,9.4nm,1.0s						
GUMO	Guam	44.97	207	LR	LR	14 47 31.3	
	comp=Z,18nm,21.7s,baz=89,slow=32						
NEW	Newport	46.42	65	LR	LR	14 51 32.8	
	comp=Z,20nm,18.1s,baz=244,slow=36						
KURK	Kurchatov	48.13	302	*e*P	P	14 32 09.8	+0.7
KURK				pmax	pmax		
	comp=Z,4.0nm,1.5s						
KURBB	Kurchatov Arra	48.23	302	P	P	14 32 08.4	-1.5
	comp=Z,0.7nm,0.6s,baz=56,slow=8.1,SNR=5.5						
	comp=Z,0.7nm,0.6s						
O02D	Mt. Diablo Mer	48.91	77	P	P	14 32 15.1	-0.3
MK31	Makanchi Array	48.95	296	*i* P	P	14 32 13.3	-2.2
MKAR	Makanchi Array	48.95	296	P	P	14 32 14.3	-1.2
	comp=Z,0.3nm,0.4s,baz=52,slow=5.9,SNR=6.3						
	comp=Z,0.3nm,0.4s						
SUMG	Summit	50.63	9	P	P	14 32 28.4	0.0
SUMG				IAmb	IAmb	14 32 36.6	
	comp=Z,9.4nm,1.2s						
SUMG	Summit	50.63	9	P	P	14 32 28.4	0.0
SUMG				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ARCES	ARCESS Array B	51.11	343	LR	LR	14 57 51.4	
	comp=Z,16nm,18.0s,baz=342,slow=40						
NVAR	Mina Array Bea	52.59	75	P	P	14 32 44.9	+1.6
	comp=Z,1.0nm,0.8s,baz=305,slow=7.9,SNR=6.7						
	comp=Z,1.0nm,0.8s						
ARTI	Arti	52.84	318	*d i*P	P	14 32 45.4	+0.8
ARTI						14 34 38.8	
ARTI				S	S	14 40 14.2	+1.7
ARTI				SS	SS	14 43 47.0	-3.5
ARTI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PZH	PanZhiHua	53.10	263	P	P	14 32 47.5	+0.4
FRB	Frobisher Bay	53.77	26	LR	LR	14 59 29.6	
	comp=Z,32nm,18.4s,baz=300,slow=40						
PDAR	Pinedale Array	54.06	65	P	P	14 32 55.1	+1.1
	comp=Z,2.6nm,0.8s,baz=326,slow=3.2,SNR=19						
	comp=Z,2.6nm,0.8s						
KIRV	Kirov	54.32	324	LR	LR	14 59 14.9	
	comp=Z,27nm,18.4s,baz=47,slow=40						
SFJD	Kangerlussuaq	54.48	16	LR	LR	14 59 19.7	
	comp=Z,22nm,18.2s,baz=342,slow=40						
ULM	Lac du Bonnet	55.05	50	P	P	14 33 01.4	+0.5
	comp=Z,2.6nm,0.6s,baz=339,slow=10,SNR=5.1						
	comp=Z,2.6nm,0.6s						
KLMR	Klimovskoe	55.47	331	*e*P	P	14 33 01.4	-2.3
KLMR				*e*		14 34 00.6	
KLMR				SS	SS	14 44 29.6	-2.2
KLMR				pmax	pmax		
	comp=Z,9.0nm,1.2s						
AAK	Ala-Archa	55.81	297	*i* P	P	14 33 06.2	-0.5
AAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
AB31	Akbulak array	57.58	311	P	P	14 33 18.5	-0.5
AB31				IAmb	IAmb	14 33 19.8	
	comp=Z,9.1nm,1.4s						
ABKAR	Akbulak array	57.58	311		P	14 33 18.7	-0.2
ABKAR				IAmb	IAmb	14 33 19.8	
	comp=Z,9.1nm,1.4s						
FINES	FINESS Array B	58.23	338	P	P	14 33 23.1	-0.1
	comp=Z,1.3nm,0.8s,baz=22,slow=7.0,SNR=4.0						
	comp=Z,1.3nm,0.8s						
FINES	FINESS Array B	58.23	338	*i* P	P	14 33 24.2	+1.0
FINES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BELG	Belogornoye	59.89	321	*i* P	P	14 33 35.1	+0.2
BELG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CMAR	Chiang Mai Arr	61.06	260	P	P	14 33 42.6	-0.7
	comp=Z,1.2nm,0.7s,baz=27,slow=6.4,SNR=8.9						
CMAR				LR	LR	15 00 42.6	
	comp=Z,27nm,21.7s,baz=50,slow=37						
	comp=Z,1.2nm,0.7s						
CMAR	Chiang Mai Arr	61.06	260	*e*P	P	14 33 43.7	+0.4
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NB2	NORSAR Subarra	61.24	345	P	P	14 33 44.0	0.0
	comp=Z,0.5nm,0.6s,baz=17,slow=7.4						
NOA	NORSAR Array B	61.24	345	P	P	14 33 44.0	0.0
	comp=Z,0.8nm,0.7s,baz=18,slow=6.8,SNR=4.1						
NOA				LR	LR	15 02 03.9	
	comp=Z,9.9nm,19.2s,baz=355,slow=38						
	comp=Z,0.8nm,0.7s						
HFS	Hagfors	61.74	344	P	P	14 33 46.7	-0.6
	comp=Z,1.9nm,0.8s,baz=15,slow=6.0,SNR=3.0						
HFS				LR	LR	15 01 52.0	
	comp=Z,14nm,19.0s,baz=16,slow=37						
	comp=Z,1.9nm,0.8s						
SCHQ	Schefferville	61.86	31	P	P	14 33 47.6	-0.7
	comp=Z,4.1nm,0.6s,baz=337,slow=4.4,SNR=5.9						
SCHQ				LR	LR	15 02 14.9	
	comp=Z,38nm,19.4s,baz=260,slow=38						
	comp=Z,4.1nm,0.6s						
HNR	Honiara	65.41	185	LR	LR	14 57 09.1	
	comp=Z,80nm,19.6s,baz=62,slow=31						
AKASG	Malin Array Be	67.16	331	P	P	14 34 22.7	-0.3
	comp=Z,0.7nm,0.4s,baz=28,slow=6.3,SNR=5.3						
AKASG				LR	LR	15 07 43.6	
	comp=Z,53nm,18.1s,baz=44,slow=40						
	comp=Z,0.7nm,0.4s						
AKBB	Malin Array Si	67.16	331	*ce*P	P	14 34 22.2	-0.8
AKBB				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TXAR	Lajitas Array	67.36	71	P	P	14 34 25.9	+1.2
	comp=Z,1.5nm,0.6s,baz=297,slow=4.3,SNR=14						
	comp=Z,1.5nm,0.6s						
EKA	Eskdalemuir Ar	68.42	352	P	P	14 34 31.4	+0.6
	comp=Z,2.2nm,0.8s,baz=8.9,slow=7.0,SNR=3.8						
	comp=Z,2.2nm,0.8s						
KBZ	Khabaz	68.88	318	P	P	14 34 32.8	-1.1
	comp=Z,2.2nm,0.9s,baz=263,slow=4.4,SNR=4.2						
	comp=Z,2.2nm,0.9s						
KBZ	Khabaz	68.88	318	*e*P	P	14 34 33.6	-0.3
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
VRAC	Vranov	71.50	338	LR	LR	15 08 38.7	
	comp=Z,15nm,20.6s,baz=26,slow=38						
TKL	Tuckaleechee C	71.99	53	LR	LR	15 08 15.2	
	comp=Z,32nm,18.6s,baz=340,slow=37						
GERES	GERESS Array B	72.52	340	P	P	14 34 55.5	-0.6
	comp=Z,0.2nm,0.3s,baz=20,slow=6.3,SNR=2.1						
	comp=Z,0.2nm,0.3s						
MLR	Muntele Rosu	72.82	331	LR	LR	15 09 30.3	
	comp=Z,40nm,18.9s,baz=58,slow=38						
BRTR	Keskin Array B	75.70	323	P	P	14 35 12.8	-2.0
	comp=Z,0.5nm,0.4s,baz=104,slow=5.2,SNR=3.6						
	comp=Z,0.5nm,0.4s						
BRTR	Keskin Array B	75.70	323	*e*P	P	14 35 15.4	+0.5
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	Warramunga Arr	79.85	208	P	P	14 35 37.7	-0.1
	comp=Z,1.9nm,1.0s,baz=26,slow=6.1,SNR=6.1						
	comp=Z,1.9nm,1.0s						
WRA	Warramunga Arr	79.85	208	*i* P	P	14 35 38.0	+0.2
WRA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ASAR	Alice Springs	83.51	208	P	P	14 35 57.6	+0.5
	comp=Z,2.1nm,0.9s,baz=18,slow=4.5,SNR=14						
	comp=Z,2.1nm,0.9s						
COCO	West Island	87.85	244	*i* P	P	14 36 20.9	+2.1
QSPA	South Pole Qui	145.88	180	PKPbc	PKPdf	14 43 06.6	-0.2
	comp=Z,2.4nm,0.6s,baz=298,slow=1.1,SNR=32						

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*ASIES **26** 14:24:04.7,25°.02N×122°.24E,h137km,ML4.5,Mw3.8, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}-5.62; $M_{\theta\theta}$2.26; $M_{\phi\phi}$3.36; $M_{r\theta}$-0.56; $M_{\theta\phi}$2.75; $M_{\phi r}$-0.33; Fault plane solution: $M_0$5.65487×10^{21} NP1: ϕ_s217.02000°,δ41.95000°,λ-93.42000°. NP2:ϕ_s41.62000°, δ48.15000°,λ-86.93000°. Principal axes: T Plg3.0980°, Azm129.4410°; N Plg2.2850°, Azm219.5650°; P Plg86.1490°, Azm345.9230°;*

*NEIC **26** 14:24:04.4±1.9,24°.99N±0°.08×122°.26E±0°.07, h145km±4km,mb4.1/12 Error ellipse: s-maj=11.9km s-min=9.3km az=172.0*

*TAP **26** 14:24:04.7,25°.02N×122°.24E,h137km,ML4.5,C*

*IDC **26** 14:24:05.3±4.1,25°.13N×122°.38E,h150km±42km, mb3.6/11,mbtmp4.1/12,Error ellipse: s-maj=34.7km s-min=12.8km az=66.0*

*JMA **26** 14:24:05.0±0.2,25°N±1°×122°.2E±0°.5,h136km±1km, MV3.4/18,TAIWAN REGION*

ISC 26 14:24:03.9±0.6**,25°.00N**±0°.03×**122°.21E**±0°.02**,h142**km±4km**,** **n211,**σ**0ˢ.92**/346**,mb4.0**/15**,3C-37D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.20	273	⇓*i*P	Pn	14 24 23.7	+0.5
TWB1				*e*S	Sn	14 24 37.5	-0.4
EGS		0.29	239	⇓P	Pn	14 24 24.0	+0.5
EGS				*e*S	Sn	14 24 38.3	0.0
SXI1	Grass Mountain	0.32	288	⇓*i*P	Pn	14 24 24.0	+0.4
SXI1				*e*S	Sn	14 24 37.9	-0.8
TIPB	Shuangxi	0.35	266	⇓*i*P	Pn	14 24 24.2	+0.5
TIPB				*e*S	Sn	14 24 37.6	-1.1
NWF	Wu-fen Shan	0.39	281	*e*P	Pn	14 24 24.4	+0.4
NWF				*e*S	Sn	14 24 38.7	-0.5
WFSB	Wu-fen Shan	0.39	281	*e*P	Pn	14 24 24.4	+0.5
WFSB				*e*S	Sn	14 24 38.7	-0.3
TNOU	National Taiwa	0.42	291	⇓P	Pn	14 24 24.6	+0.6
TNOU				*e*S	Sn	14 24 38.7	-0.5
ILA	Ilan	0.48	241	*e*P	Pn	14 24 24.8	+0.5
ILA				*e*S	Sn	14 24 39.9	+0.3
TWC	Suao	0.51	220	⇓P	Pn	14 24 24.7	+0.3
ESAO	Su ao	0.54	218	⇓P	Pn	14 24 24.9	+0.3
ESAO				*e*S	Sn	14 24 39.1	-1.1
TWE	Neicheng	0.56	241	*e*P	Pn	14 24 25.1	+0.4
TWE				*e*S	Sn	14 24 40.5	0.0
TWA	Mucha	0.57	268	⇓P	Pn	14 24 25.1	+0.3
TWA				*e*S	Sn	14 24 39.7	-0.9
NDS	Dongshan	0.58	231	*e*P	Pn	14 24 24.7	-0.1
NDS				*e*S	Sn	14 24 40.0	-0.6
EOS2	EOS2	0.58	178	*e*P	Pn	14 24 25.6	+0.9
EOS2				*e*S	Sn	14 24 40.9	+0.5
YM08	YM08	0.59	289	⇓P	Pn	14 24 25.3	+0.4
YM08				*e*S	Sn	14 24 39.8	-1.0
YM01	YM01	0.60	284	⇓P	Pn	14 24 25.4	+0.4
YM01				*e*S	Sn	14 24 40.4	-0.6
FUSB	Fushanzhiwuyua	0.61	247	⇓*i*P	Pn	14 24 25.4	+0.3
FUSB				*e*S	Sn	14 24 40.8	-0.4
TWY	Chenhua	0.62	297	⇓P	Pn	14 24 25.8	+0.8
TWY				*e*S	Sn	14 24 40.8	-0.2
NHDH	Xindian Distri	0.62	267	*e*P	Pn	14 24 25.6	+0.5
NHDH				*e*S	Sn	14 24 41.5	+0.5
ZUZH	Zhuzihu	0.62	285	P	Pn	14 24 25.6	+0.5
ZUZH				*e*S	Sn	14 24 40.4	-0.8
PCYT	Pengchaiyu	0.64	349	⇓P	Pn	14 24 26.1	+1.0
ANP	Anpu	0.65	287	*e*P	Pn	14 24 25.9	+0.5
TATO	Taipei	0.65	268		Pn	14 24 25.2	0.0
TATO	Taipei	0.65	268	P	Pn	14 24 25.6	+0.3
TATO	Taipei	0.65	268	S	Sn	14 24 42.2	+0.7
EWUT	Wuta	0.68	215	⇓*e*P	Pn	14 24 26.1	+0.7
EWUT				*e*S	Sn	14 24 41.7	-0.1
NWLT	Wulai	0.68	251	*e*P	Pn	14 24 25.8	+0.4
NWLT				*e*S	Sn	14 24 41.2	-0.6
ENTT	Nioudou	0.68	239	⇓*i*P	Pn	14 24 26.2	+0.6
ENTT				*e*S	Sn	14 24 42.2	+0.3
NTST	Danshui	0.71	284	*e*P	Pn	14 24 26.4	+0.8
NTST				*e*S	Sn	14 24 42.9	+0.8
ENA	Nanau	0.71	217	⇓P	Pn	14 24 26.5	+0.8
ENA				*e*S	Sn	14 24 42.2	0.0
EOS3	EOS3	0.72	172	⇓P	Pn	14 24 26.6	+1.1
EOS3				*e*S	Sn	14 24 42.3	+0.3
TWS1	Kuangyinshan	0.72	278	*e*P	Pn	14 24 26.5	+0.8
TWS1				*i* S	Sn	14 24 43.6	+1.3
LATG	Datong	0.77	233	⇓*i*P	Pn	14 24 27.4	+1.1
LATG				*e*S	Sn	14 24 43.4	+0.2
EAHA	Aohua	0.79	213	*e*P	Pn	14 24 26.8	+0.6
EAHA				*e*S	Sn	14 24 43.6	+0.4
YHNB	Yeheng	0.82	247	Pn	Pn	14 24 26.9	+0.3
YHNB	Yeheng	0.82	247	P	Pn	14 24 27.1	+0.5
YHNB	Yeheng	0.82	247	S	Sn	14 24 43.2	-0.6
YHNB	Yeheng	0.82	247	⇓*i*P	Pn	14 24 27.2	+0.5
YHNB				*e*S	Sn	14 24 42.9	-0.9
NSK	Sanguang	0.84	248	⇓*i*P	Pn	14 24 27.2	+0.5
NSK				*e*S	Sn	14 24 42.7	-1.3
JYNG	Yonagunijimaku	0.86	129	*i* P	Pn	14 24 27.2	+0.3
JYNG				S	Sn	14 24 43.6	-0.6
EOS4	EOS4	0.88	173	*e*P	Pn	14 24 27.0	+0.4
EOS4				*e*S	Sn	14 24 43.7	-0.1
YOJ	Yonaguni jima	0.91	126		Pn	14 24 27.1	0.0
YOJ	Yonaguni jima	0.91	126	P	Pn	14 24 27.6	+0.5
YOJ	Yonaguni jima	0.91	126	P	Pn	14 24 27.7	+0.6
YOJ				S	Sn	14 24 44.2	-0.6
YOJ	Yonaguni jima	0.91	126	⇓P	Pn	14 24 27.5	+0.3
YOJ				*e*S	Sn	14 24 44.1	-0.6
NCU	National Centr	0.93	268	*e*P	Pn	14 24 25.6	-1.7
NCU				*e*S	Sn	14 24 42.9	-2.2
NCUH	Zhongli	0.93	268	*e*P	Pn	14 24 28.3	+0.9
NCUH				*e*S	Sn	14 24 45.4	+0.3
NNS	Nan Shan	0.94	234	⇓P	Pn	14 24 28.5	+0.9
NNS				S	Sn	14 24 45.6	0.0
NNSB	Datong	0.94	233	⇓P	Pn	14 24 28.5	+0.9
NNSB				*e*S	Sn	14 24 45.2	-0.4
KSHI	Guanxi Townshi	0.96	257	*e*P	Pn	14 24 28.7	+1.1
KSHI				*e*S	Sn	14 24 46.3	+0.6
ETL	Fush Village	0.99	213	*e*P	Pn	14 24 28.2	+0.2
ETL				*e*S	Sn	14 24 45.5	-0.7
NACB	Ninganchiao	0.99	214		Pn	14 24 27.6	-0.3
NACB	Ninganchiao	0.99	214	P	Pn	14 24 28.0	+0.1
NACB	Ninganchiao	0.99	214	⇓P	Pn	14 24 28.1	+0.2
NACB				*e*S	Sn	14 24 45.4	-0.8
ETLH	Xiulin Townshi	1.03	220	*e*P	Pn	14 24 28.9	+0.5
ETLH				*e*S	Sn	14 24 46.5	-0.4
NFF	Wufeng Townshi	1.06	250	⇓P	Pn	14 24 29.1	+0.6
NFF				*e*S	Sn	14 24 46.5	-0.8
TWD	Chiawan	1.07	211	*e*P	Pn	14 24 28.7	+0.1
TWD				*e*S	Sn	14 24 46.5	-0.9
SBCB	Hsinchu	1.13	260	*e*P	Pn	14 24 30.2	+1.1
SBCB				*e*S	Sn	14 24 47.9	-0.4
LIOB	Emei	1.14	252	⇓P	Pn	14 24 30.1	+0.9
LIOB				*e*S	Sn	14 24 48.1	-0.4
HSN	Hsinchu	1.14	260	*e*P	Pn	14 24 29.9	+0.6
HSN				*e*S	Sn	14 24 48.1	-0.4
FUSS	Fushou	1.15	230	⇓P	Pn	14 24 30.9	+1.3
FUSS				*e*S	Sn	14 24 49.6	+0.4
HWA	Hwalien	1.16	208	*e*P	Pn	14 24 30.2	+0.8
HWA				*e*S	Sn	14 24 49.5	+0.7
NSTT	Nanjuang	1.16	252	⇓P	Pn	14 24 30.2	+0.8
NSTT				*e*S	Sn	14 24 47.9	-0.9
TWT	Tachien	1.20	232	⇓*e*P	Pn	14 24 31.5	+1.5
TWT				S	Sn	14 24 50.3	+0.5
WHF	Hehuan Shan	1.21	225	⇓*e*P	Pn	14 24 31.2	+0.9
WHF				*e*S	Sn	14 24 50.3	-0.2
TDCB	Techi	1.21	232	⇓*e*P	Pn	14 24 31.5	+1.4
TDCB				*e*S	Sn	14 24 50.2	+0.2
LXIB	Xiulin Townshi	1.21	217	⇓P	Pn	14 24 30.2	0.0
LXIB				*e*S	Sn	14 24 49.0	-1.1
ETM	Tongmen	1.22	212	P	Pn	14 24 30.0	0.0
ETM				*e*S	Sn	14 24 48.6	-1.3
TEYL	Yanliau Villag	1.26	206	*e*P	Pn	14 24 30.9	+0.5
TEYL				*e*S	Sn	14 24 50.3	-0.2
SHUL	Shoufeng	1.34	206	*e*P	Pn	14 24 32.0	+0.7
SHUL				*e*S	Sn	14 24 52.4	+0.4
WHP	Taichung City	1.35	238	*e*P	Pn	14 24 32.7	+1.2
WHP				*e*S	Sn	14 24 52.4	-0.1
NMLH	Miaoli	1.37	251	*e*P	Pn	14 24 32.8	+1.3
NMLH				*e*S	Sn	14 24 52.8	+0.3
ESL	Shilin	1.38	211	*e*P	Pn	14 24 31.4	-0.2
ESL				*e*S	Sn	14 24 50.8	-1.9
OWD	Renai	1.40	222	*e*P	Pn	14 24 33.1	+1.1
OWD				*e*S	Sn	14 24 53.7	+0.2
WUSB	Renai	1.41	225	⇓P	Pn	14 24 33.5	+1.4
WUSB				*e*S	Sn	14 24 53.9	+0.3
TEGC	Jichi Village	1.42	206	*e*P	Pn	14 24 32.8	+0.7
TEGC				*e*S	Sn	14 24 53.7	+0.2
NSY	Sanyi	1.44	246	*e*P	Pn	14 24 34.0	+1.7
NSY				*e*S	Sn	14 24 54.4	+0.5
TWQ1	Liyutan	1.46	244	*e*P	Pn	14 24 33.4	+0.9
TWQ1				*e*S	Sn	14 24 53.8	-0.5
WARBT	Fenglin Townsh	1.48	211	⇓P	Pn	14 24 32.3	-0.4
WARBT				*e*S	Sn	14 24 53.0	-1.7
EGFH	Guangfu	1.50	208	*e*P	Pn	14 24 33.0	0.0
EGFH				*e*S	Sn	14 24 53.8	-1.3
WCS	Beigang Elemen	1.51	232	*e*P	Pn	14 24 34.3	+1.3
WCS				*e*S	Sn	14 24 55.6	+0.4
IRIF	Iriomote-Funau	1.54	115	*i* P	Pn	14 24 33.5	+0.3
IRIF				S	Sn	14 24 55.4	-0.2
WDJ	Dajia District	1.57	246	*e*P	Pn	14 24 34.8	+1.2
WDJ				*e*S	Sn	14 24 56.6	+0.3
VWDT	VWDT	1.58	218	⇓P	Pn	14 24 35.1	+1.4
VWDT				*e*S	Sn	14 24 57.0	+0.5
SMLT	Sun Moon Lake	1.63	227	*e*P	Pn	14 24 35.8	+1.3
SMLT				*e*S	Sn	14 24 57.7	0.0
TCU	Taichung	1.63	239	*e*P	Pn	14 24 35.4	+1.1
TCU				*e*S	Sn	14 24 57.2	-0.4
TYC	Yuchr	1.64	229	*e*P	Pn	14 24 35.8	+1.3
TYC				*e*S	Sn	14 24 58.1	+0.3
HGSD	Ruisui	1.66	206	⇓P	Pn	14 24 35.4	+0.7
HGSD				*e*S	Sn	14 24 58.8	+0.6
SSLB	Suanglung	1.66	224		Pn	14 24 35.7	+1.0
SSLB	Suanglung	1.66	224	P	Pn	14 24 36.1	+1.4
SSLB	Suanglung	1.66	224	*e*P	Pn	14 24 36.1	+1.4
SSLB				*e*S	Sn	14 24 58.6	+0.3
EHY	Hungye	1.69	209	*e*P	Pn	14 24 34.7	-0.3
EHY				*e*S	Sn	14 24 57.5	-1.4
EHYH	Wanrong	1.69	208	*e*P	Pn	14 24 35.1	0.0
EHYH				*e*S	Sn	14 24 56.7	-2.1
HATJ	Hateruma jima	1.73	122	*e*P	Pn	14 24 36.5	+1.0
HATJ				S	Sn	14 25 00.0	+0.4
WCHH	Zhanghua	1.76	239	*e*P	Pn	14 24 36.7	+1.0
WCHH				*e*S	Sn	14 25 00.4	+0.2
WNT	Mingjian	1.78	232	*e*P	Pn	14 24 37.3	+1.3
WNT				*e*S	Sn	14 25 01.3	+0.7
WJS	Zhushan	1.79	229	*e*P	Pn	14 24 37.6	+1.4
WJS				*e*S	Sn	14 25 01.5	+0.8
WHYT	Xinyi Township	1.79	224	*e*P	Pn	14 24 37.6	+1.4
WHYT				*e*S	Sn	14 25 01.5	+0.6
YULB	Yu-li	1.80	208		Pn	14 24 35.1	-1.2
YULB	Yu-li	1.80	208	P	Pn	14 24 35.9	-0.4
YULB	Yu-li	1.80	208	⇓P	Pn	14 24 35.9	-0.4
YULB				*e*S	Sn	14 24 59.3	-1.9
JKRS	Kuro-shima	1.81	114	P	Pn	14 24 37.1	+0.8
JKRS				S	Sn	14 25 01.3	+0.2
ECBN	Changbin	1.81	203	*e*P	Pn	14 24 37.0	+0.5
ECBN				*e*S	Sn	14 25 00.6	-0.7
TWF1	Yuli	1.84	207	*e*P	Pn	14 24 36.5	-0.3
TWF1				*e*S	Sn	14 24 59.9	-2.0
JIJ	Ishigaki jima	1.87	109	*i* P	Pn	14 24 37.4	+0.3
JIJ				S	Sn	14 25 01.8	-0.6
CHKH	Chenggong	1.95	203	*e*P	Pn	14 24 38.4	+0.4
CHKH				*e*S	Sn	14 25 03.4	-0.7
JISG	Ishigakijimahi	1.96	102	*i* P	Pn	14 24 38.2	+0.2
JISG				S	Sn	14 25 03.6	-0.5
ALS	Alishan	1.96	221	*e*P	Pn	14 24 39.7	+1.2
ALS				*e*S	Sn	14 25 05.1	+0.3
CHN5	Tsauling	1.97	225	*e*P	Pn	14 24 39.8	+1.4
CHN5				*e*S	Sn	14 25 04.8	+0.1
FULB	Fuli	1.98	205	*e*P	Pn	14 24 38.8	+0.4
FULB				*e*S	Sn	14 25 05.3	+0.6
WDL	Douliou City	1.99	230	*e*S	Sn	14 25 06.0	+1.1
WGK	Gukeng	1.99	229	*e*P	Pn	14 24 39.7	+1.2
WGK				*e*S	Sn	14 25 06.0	+1.1
WDLH	Douliu	2.00	230	*e*P	Pn	14 24 39.8	+1.1
WDLH				*e*S	Sn	14 25 05.5	+0.2
CHKT	Chengkung	2.04	202	*e*P	Pn	14 24 39.4	+0.3
CHKT				*e*S	Sn	14 25 04.5	-1.6
EHD	Haiduan	2.06	207	*e*P	Pn	14 24 38.9	-0.5
EHD				*e*S	Sn	14 25 04.7	-1.7
WTCT	Ta-ch'eng	2.09	238	*e*S	Sn	14 25 06.9	-0.1
ECS	Chishang	2.10	206	*e*P	Pn	14 24 40.3	+0.5
ECS				*e*S	Sn	14 25 07.3	0.0
ELDTW	Lidau	2.10	211	*e*P	Pn	14 24 40.3	+0.3
ELDTW				*e*S	Sn	14 25 06.7	-0.9
WTK	Tuku	2.11	232	*e*P	Pn	14 24 40.8	+0.9
WTK				*e*S	Sn	14 25 08.2	+0.7
WCKO	Fanlu	2.13	224	*e*P	Pn	14 24 41.7	+1.5
WCKO				*e*S	Sn	14 25 08.4	+0.3
CHN2	Minshiung	2.15	228	*e*S	Sn	14 25 08.9	+0.5
EDH	Donghe	2.18	202	*e*P	Pn	14 24 41.0	+0.2
EDH				*e*S	Sn	14 25 08.1	-1.0
CHY	Chiayi	2.21	228	*e*P	Pn	14 24 42.0	+0.9
CHY				*e*S	Sn	14 25 09.5	-0.2
TPUB	Ta-pu	2.22	221		Pn	14 24 42.0	+0.7
TPUB	Ta-pu	2.22	221	P	Pn	14 24 42.8	+1.5
TPUB	Ta-pu	2.22	221	S	Sn	14 25 10.5	+0.5
TPUB	Ta-pu	2.22	221	*e*P	Pn	14 24 42.2	+0.9
TPUB				*e*S	Sn	14 25 09.9	-0.1
STYH	Taoyuan	2.24	216	*e*P	Pn	14 24 43.6	+2.1
STYH				*e*S	Sn	14 25 10.8	+0.5
WSF	Szhu	2.26	234	*e*P	Pn	14 24 42.5	+0.7
WSF				*e*S	Sn	14 25 10.7	0.0
WTP	Ta-pu	2.27	220	*e*P	Pn	14 24 43.1	+1.1
WTP				*e*S	Sn	14 25 11.0	-0.1
JTJ	Tarama	2.29	98	P	Pn	14 24 43.1	+1.0
JTJ				S	Sn	14 25 11.3	-0.1
LONT	Longtian	2.31	206	*e*P	Pn	14 24 42.4	+0.1
LONT				*e*S	Sn	14 25 11.1	-0.6
WSL	Shuilin Townsh	2.33	231	*e*P	Pn	14 24 43.4	+0.8
WSL				*e*S	Sn	14 25 11.7	-0.5
TWK	Hsinying	2.33	223	*e*P	Pn	14 24 43.7	+1.0
TWK				*e*S	Sn	14 25 12.3	-0.2
MATB	Ma-tsu	2.34	300	⇑P	Pn	14 24 42.9	+0.2
SNST	Tainan City	2.36	222	*e*P	Pn	14 24 43.9	+0.9
SNST				*e*S	Sn	14 25 12.8	-0.2
CHN1	Nanshi	2.37	221	*e*P	Pn	14 24 44.2	+1.1
CHN1				*e*S	Sn	14 25 13.0	-0.2
ICHU	Yijhu	2.40	228	*e*P	Pn	14 24 44.4	+0.9
ICHU				*e*S	Sn	14 25 13.9	+0.1
TWGBT	Beinan	2.40	206	P	Pn	14 24 44.1	+0.6
TWGBT	Beinan	2.40	206	S	Sn	14 25 13.1	-0.9
TWGBT	Beinan	2.40	206	*e*P	Pn	14 24 43.8	+0.2
TWGBT				*e*S	Sn	14 25 12.4	-1.6
TWG	Pinlang	2.41	206		Pn	14 24 43.1	-0.4
TWG	Pinlang	2.41	206	*e*P	Pn	14 24 44.0	+0.5
TWG				*e*S	Sn	14 25 12.5	-1.5
TTN	Taitung	2.44	204	*e*P	Pn	14 24 45.2	+1.3

TTN				eS	Sn	14 25 14.4	-0.2
CHN8	Yiju	2.46	228	eP	Pn	14 24 45.1	+1.0
CHN8				eS	Sn	14 25 15.0	-0.1
VWUC	VWUC	2.50	270	⇑iP	Pn	14 24 45.1	+0.5
VWUC				eS	Sn	14 25 14.5	-1.6
CHN3	Shinhua	2.55	222	eS	Sn	14 25 18.7	+1.5
SSHA	Shanhua	2.55	224	eS	Sn	14 25 18.1	+0.9
SCLT	Jiali	2.58	226	eS	Sn	14 25 18.1	+0.2
SCST	Cishan	2.62	217	eP	Pn	14 24 48.0	+1.8
XPSS	Dashiqiu	2.65	317	eP	Pn	14 24 46.7	+0.3
ECL	Taimali	2.65	206	eP	Pn	14 24 46.0	-0.5
ECL				eS	Sn	14 25 17.1	-2.4
SSD	Sandimen	2.67	213	eP	Pn	14 24 48.5	+1.7
SSD				eS	Sn	14 25 20.3	+0.5
TSCK	Chigu Township	2.68	227	eP	Pn	14 24 48.4	+1.5
TSCK				eS	Sn	14 25 19.9	-0.1
JIRB	Irabujima	2.70	93	P	Pn	14 24 47.9	+0.8
SGLT	Jiouru	2.76	215	eS	Sn	14 25 24.8	+3.1
JIKM	Ikemajima	2.76	91	P	Pn	14 24 49.2	+1.3
MASBT	Mashibuluo	2.78	212	eP	Pn	14 24 49.8	+1.6
MASBT				eS	Sn	14 25 22.5	+0.2
PTMZ	Houxiangcun	2.80	271	⇑iP	Pn	14 24 49.0	+0.6
PTMZ				eS	Sn	14 25 21.6	-1.1
JMJ	Miyako jima 2	2.81	93	P	Pn	14 24 50.6	+2.1
PNG	Penghu	2.81	240	eP	Pn	14 24 48.7	+0.1
PNG				eS	Sn	14 25 20.7	-2.3
PHUB	P'eng-hu	2.82	239	eP	Pn	14 24 48.8	0.0
PHUB				eS	Sn	14 25 21.3	-2.0
JMJ2	Miyako jima3	2.85	95	P	Pn	14 24 50.3	+1.3
EAST	Anshuo	2.89	206	eP	Pn	14 24 49.8	+0.2
EAST				eS	Sn	14 25 25.3	+0.4
WDGT	Dungji	2.90	234	eP	Pn	14 24 50.0	+0.3
WDGT				eS	Sn	14 25 22.6	-2.5
TAWH	Dawu Township	2.91	205	eP	Pn	14 24 50.2	+0.4
JOGS	Gusukube	2.92	94	P	Pn	14 24 51.6	+1.8
SCZT	Fangliau	2.99	209	eP	Pn	14 24 52.3	+1.4
SCZT				eS	Sn	14 25 27.6	+0.4
SLIU	Shizi	3.06	205	eP	Pn	14 24 53.0	+1.2
SLIU				eS	Sn	14 25 28.7	0.0
MHZQ	Yeshan	3.07	292	eP	Pn	14 24 52.2	+0.3
VCHM	Qimei	3.10	236	eP	Pn	14 24 52.6	+0.4
VCHM				eS	Sn	14 25 28.2	-1.4
TWK1	Hengchun	3.30	203	eP	Pn	14 24 55.9	+1.0
KNM	Kinmen	3.48	261	eP	Pn	14 24 58.9	+1.7
KNM				eS	Sn	14 25 40.5	+2.1
KNMB	Chin-men Tao	3.51	262	Pn	Pn	14 24 57.6	0.0
KNMB	Chin-men Tao	3.51	262	eP	Pn	14 24 58.0	+0.4
KNMB				eS	Sn	14 25 38.5	-0.7
AXDP	Jialang	3.85	269	eP	Pn	14 25 02.7	+0.8
AXDP				eS	Sn	14 25 46.3	-0.6
ZPLA	Ao Xicun	4.20	256	eP	Pn	14 25 07.5	+0.9
SXFK	Yanhouchang	4.35	290	eP	Pn	14 25 09.2	+0.7
DSXP	Dongshan	4.55	255	eP	Pn	14 25 12.2	+1.0
JOW	Kunigami	5.76	70		Pn	14 25 26.2	-1.2
JOW	Kunigami	5.76	70	P	Pn	14 25 26.5	-0.8
	19nm,0.4s,baz=143,slow=18,SNR=12						
JOW				S	Sn	14 26 29.6	-2.8
	6.9nm,0.3s,baz=121,slow=26,SNR=1.4						
KSRS	Korea Array	13.34	20	P	P	14 27 12.7	+0.6
	6.7nm,0.6s,baz=202,slow=12,SNR=32						
SONM	Songino Array	26.00	335		P	14 29 23.5	-0.1
SONM				IAmb	IAmb	14 29 25.5	
	comp=Z,3.8nm,0.8s						
SONM	Songino Array	26.00	335	P	P	14 29 24.3	+0.7
	comp=Z,4.9nm,0.8s,baz=146,slow=9.2,SNR=14						
	comp=Z,4.9nm,0.8s						
MYKOM	Kota Tinggi	29.09	220	P	P	14 29 47.1	-4.1
MKAR	Makanchi Array	38.41	315	P	P	14 31 11.6	+0.1
MKAR	Makanchi Array	38.41	315	P	P	14 31 12.4	+0.9
	comp=Z,0.7nm,0.4s,baz=109,slow=9.6,SNR=13						
	comp=Z,0.7nm,0.4s						
MAKZ	Makanchi	38.62	315	P	P	14 31 13.9	+0.6
ZAA0	Zalesovo Array	40.08	326	P	P	14 31 24.4	-0.8
ZAA0				IAmb	IAmb	14 31 25.8	
	comp=Z,2.5nm,0.8s						
ZALV	Zalesovo Beam	40.08	326	P	P	14 31 24.8	-0.4
ZALV	Zalesovo Beam	40.08	326	P	P	14 31 25.0	-0.2
	comp=Z,2.4nm,0.5s,baz=112,slow=6.6,SNR=8.7						
	comp=Z,2.4nm,0.5s						
ZALV	Zalesovo Beam	40.08	326	P	P	14 31 25.0	-0.2
KURBB	Kurchatov Arra	42.10	319	P	P	14 31 42.1	+0.4
	comp=Z,0.4nm,0.4s,baz=115,slow=8.4,SNR=8.3						
	comp=Z,0.4nm,0.4s						
WB0	Warramunga Arr	46.05	164	P	P	14 32 13.5	0.0
WB0				IAmb	IAmb	14 32 53.9	
	comp=Z,9.1nm,1.2s						
WRA	Warramunga Arr	46.20	164	P	P	14 32 15.7	+0.9
	comp=Z,1.2nm,0.7s,baz=347,slow=8.4,SNR=10						
	comp=Z,1.2nm,0.7s						
TIXI	Tiksi	46.83	3	P	P	14 32 19.2	+0.2
TIXI				IAmb	IAmb	14 32 20.1	
	comp=Z,3.0nm,0.8s						
TIXI	Tiksi	46.83	3	P	P	14 32 18.7	-0.3
	comp=Z,2.1nm,0.5s,baz=180,slow=3.4,SNR=7.7						
	comp=Z,2.1nm,0.5s						
BVAR	Borovoye Array	47.64	320	P	P	14 32 25.9	+0.3
	comp=Z,1.4nm,0.4s,baz=101,slow=7.7,SNR=5.7						
	comp=Z,1.4nm,0.4s						
BVAR	Borovoye Array	47.64	320	P	P	14 32 25.9	+0.3
BRVK	Borovoye	47.71	320	P	P	14 32 26.4	+0.3
AS31	Alice Springs	49.69	166	P	P	14 32 42.2	+0.7
ASAR	Alice Springs	49.69	166	P	P	14 32 42.3	+0.8
ASAR	Alice Springs	49.69	166	P	P	14 32 42.8	+1.3
	comp=Z,0.6nm,0.4s,baz=348,slow=6.6,SNR=17						
	comp=Z,0.6nm,0.4s						
AB31	Akbulak array	53.55	314	P	P	14 33 10.0	+0.2
ABKAR	Akbulak array	53.55	314	P	P	14 33 10.7	+0.8
ABKAR	Akbulak array	53.55	314	P	P	14 33 10.4	+0.6
D19K	Kuna River	63.22	24	P	P	14 34 17.3	+0.6
D19K				IAmb	IAmb	14 34 41.9	
	comp=Z,5.5nm,1.4s						
E21K	Killik River	64.75	24	P	P	14 34 27.4	+0.7
E21K				IAmb	IAmb	14 34 59.1	
	comp=Z,3.8nm,1.2s						
SPITS	Spitsbergen Ar	68.89	348	P	P	14 34 52.2	-0.5
	comp=Z,3.5nm,1.0s,baz=71,slow=9.3,SNR=1.7						
	comp=Z,3.5nm,1.0s						
ARCES	ARCESS Array B	69.13	338	P	P	14 34 54.5	+0.2
	comp=Z,0.7nm,0.5s,baz=56,slow=3.1,SNR=3.9						
	comp=Z,0.7nm,0.5s						
FINES	FINESS Array B	71.22	330	P	P	14 35 07.1	0.0
	comp=Z,1.0nm,0.8s,baz=327,slow=35,SNR=1.9						
	comp=Z,1.0nm,0.8s						

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*IDC **26** 14:31:25.5±2.1, 58°.80S×25°.01W, h0^{km}, mb4.3/1, mbtmp4.3/1, Error ellipse: s-maj=120.0km s-min=86.2km az=136.0*

ISC 26 14:31:20.7±1.8**, 57°.3S**±0°.3×**25°.5W**±0°.6**, h10^{km}, n12, σ0^{s}.81**/6**, 4C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	15.30	158	⇑P	Pn	14 34 56.0	-0.4
	comp=Z,1.0nm,0.2s						
VNA3	Neumayer Olymp	15.51	161	⇑P	Pn	14 34 59.1	-0.2
	comp=Z,0.7nm,0.2s						
VNA2	Neumayer--Watz	15.69	158	⇑P	Pn	14 35 01.1	-0.5
	comp=Z,1.0nm,0.2s,baz=324,slow=13						
SNAA	Sanae	17.23	156	⇑P	Pn	14 35 22.4	+1.2
	comp=Z,14nm,0.2s						
H04S2	CROZET ISLANDS	46.22	112	T	T	15 30 23.3	
	baz=228						
H04S3	CROZET ISLANDS	46.23	112	T	T	15 30 25.2	
	baz=228						
H04S1	CROZET ISLANDS	46.23	112	T	T	15 30 24.3	
	baz=228						
H10S2	ASCENSION HYDR	48.95	14	T	T	15 34 48.5	
	baz=187,slow=74,SNR=3.8						
H10S3	ASCENSION HYDR	48.95	14	T	T	15 34 54.8	
	baz=33,slow=74,SNR=2.7						
TORD	Torodi Ar. Bea	73.71	28	P	P	14 43 08.0	+14
	comp=Z,1.0nm,0.3s,baz=193,slow=6.4,SNR=1.7						
	comp=Z,1.0nm,0.3s						
SONM	Songino Array	149.88	87	PKPbc	PKPab	14 51 15.6	-0.3
	comp=Z,0.4nm,0.4s,baz=228,slow=3.7,SNR=2.3						
ILAR	Eielson Array	151.62	310	PKPbc	PKPab	14 51 22.5	+0.1
	comp=Z,0.2nm,0.4s,baz=130,slow=1.4,SNR=5.6						

UCR 26 14:36:23.1±1.2**, 8°.31N×82°.87W, h10^{km}**±3^{km}**, MW3.5, 5C-8D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NELY	Ciudad Neily	0.35	348	⇑iP	Pg	14 36 30.6	+0.5
NELY				eS	Sb	14 36 36.2	-0.8
MCANO	Manzana, Boque	0.40	49	⇓iP	Pb	14 36 31.7	-0.6
MCANO				eS	Sb	14 36 38.5	0.0
FITO	Golfito	0.42	319	eP	Pg	14 36 30.8	-0.5
FITO				eS	Sg	14 36 36.6	-0.3
CSTBL	De las Acacias	0.44	77	⇓iP	Pb	14 36 32.5	-0.5
CSTBL				eS	Sb	14 36 38.9	-0.8
EDAD	Golfito	0.45	320	eP	Pg	14 36 31.4	-0.5
EDAD				eS	Sg	14 36 37.7	-0.1
CLLRA	Cordillera,	0.50	31	⇓iP	Pg	14 36 33.3	+0.3
BRU2	Volcan	0.52	21	⇓eP	Pg	14 36 33.2	0.0
BRU2				eS	Sb	14 36 41.3	-0.7
VITO	San Vito	0.52	349	eP	Pb	14 36 35.2	+0.8
VITO				eS	Sb	14 36 41.2	-0.8
BQTLY	Boquete Panama	0.61	42	⇓iP	Pg	14 36 34.7	-0.2
BQTLY				eS	Sb	14 36 43.9	-0.7
ALCO	Alturas Coton,	0.64	4	⇓eP	Pg	14 36 35.0	-0.6
ALCO				eS	Sg	14 36 43.6	-0.3
EDP2	Potrero Grande	0.76	337	eP	Pg	14 36 37.3	-0.6
EDP2				eS	Sg	14 36 48.2	+0.3
PBNVO	Pueblo Nuevo,	0.89	49	⇓iP	Pg	14 36 38.7	-1.5
PBNVO				eS	Sg	14 36 50.4	-1.5
RBALA	Bur	0.91	51	⇓iP	Pg	14 36 39.4	-1.3
RBALA				eS	Sg	14 36 51.2	-1.3
DRK0	Durika	1.02	339	⇑eP	Pg	14 36 41.2	-1.6
DRK0				eS	Sg	14 36 54.1	-1.9
EDPE	Pejibaye, P	1.09	321	eP	Pg	14 36 42.7	-1.4
EDPE				eS	Sg	14 36 57.5	-0.8
KKNTU	Kakintº	1.18	63	⇑iP	Pb	14 36 43.3	-2.3
KKNTU				eS	Sb	14 36 57.9	-3.1
SAJE	San Jernim	1.21	329	eP	Pb	14 36 43.9	-2.3
PIEC	Cerro El Cedra	1.69	321	eP	Pn	14 36 52.0	-1.0
PISJ	San Jernim	1.80	317	eP	Pn	14 36 54.9	+0.4
LCR2	La Lucha 2	1.81	322	eP	Pn	14 36 54.5	-0.1
ABE2	San Pablo	1.81	320	eP	Pn	14 36 50.7	-4.0
PICV	PH. Pirrs	1.85	315	⇑eP	Pn	14 36 55.0	0.0
PAR1A	Puntarenas Pro	1.87	313	⇑iP	Pn	14 36 55.4	+0.1
ABRB	Las Abras (San	1.88	334	eP	Pn	14 36 55.3	-0.3
CVTV	Tajo	1.89	333	eP	Pn	14 36 56.1	+0.3
VTR0	Volcan Turrial	1.91	333	eP	Pn	14 36 55.4	-0.8

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*KRSC **26** 14:51:23.2±1.6, 56°.24N×164°.58E, h48^{km}±20^{km}, Ml3.8*

*IDC **26** 14:51:29.0±1.1, 56°.41N×163°.64E, h0^{km}, mb3.5/5, mbtmp3.5/6, ML2.1/1, MS2.7/5, Error ellipse: s-maj=54.1km s-min=20.9km az=147.0*

ISC 26 14:51:30.0±2.0**, 56°.01N**±0°.06×**163°.76E**±0°.07**, h9^{km}**±11^{km}**, n50, σ1^{s}.54**/51**, mb3.5**/5**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.56	291	eP	Pg	14 51 40.4	-0.4
KBTR				eS	Sn	14 51 52.1	-1.5
KBG	Krutoberegovo	0.64	293	eP	Pg	14 51 41.2	-1.1
KBG				eS	Sn	14 51 54.6	-0.9
SMKR	Semkarok	1.40	295	eP	Pn	14 51 53.7	-2.1
SMKR				eS	Sg	14 52 16.1	+1.2
BKI	Bering	1.50	122	eP	Pn	14 51 48.3	-8.7
BKI				eS	Sn	14 52 05.2	-11
BDR	Baidarnaya	1.53	293	eS	Sg	14 52 19.7	+0.7
SRKR	Sorokina	1.58	295	eS	Sb	14 52 20.2	+0.7
ZLN	Zelenaya	1.66	271	eP	Pn	14 51 59.6	+0.2
ZLN				eS	Sg	14 52 25.4	+2.2
BZGR	Bezymyannyi-Gr	1.72	269	eP	Pn	14 52 00.3	0.0
LGNR	Loginova	1.72	274	eP	Pn	14 52 00.2	-0.2
KLY	Klyuchi	1.76	281	eP	Pn	14 51 58.3	-2.4
KLY				eS	Sb	14 52 23.9	-0.8
KRSR	Krestovskiy	1.80	278	eP	Pn	14 52 01.5	+0.1
BZWR	Bezymyannyi-We	1.83	270	eP	Pn	14 52 02.0	+0.2
BZMR	Bezymyannaya	1.84	269	eP	Pn	14 52 02.5	+0.6
BZMR				eS	Sg	14 52 31.7	+2.7
MKZ	Mys Kozlova	1.86	219	eP	Pn	14 52 00.7	-1.3
KIRR	Kirishev	1.92	270	eP	Pn	14 52 03.4	+0.4
KPT	Kopyto	1.99	270	eP	Pn	14 52 04.4	+0.5
KMNR	Kamenistaya	2.00	264	eP	Pn	14 52 04.8	+0.7
TUMD	Tumrok D	2.07	248	eP	Pn	14 52 05.4	+0.5
TUMD				eS	Sg	14 52 35.5	-0.9
KOZ	Kozyrevsk	2.18	273	eP	Pn	14 52 07.2	+0.7
KOZ				eS	Sg	14 52 39.9	0.0
SRDR	Sredinnyy	2.28	279	eP	Pn	14 52 08.0	+0.1
SRDR				eS	Sb	14 52 40.2	+0.6
ESO	Esso	2.84	270	eP	Pn	14 52 16.6	+1.0
KII	Karymskiy	3.17	233	eP	Pn	14 52 20.3	+0.1
OSSR	Ossora	3.27	354	eP	Pn	14 52 13.6	-7.8
OSSR				eS	Sn	14 52 48.0	-12
SDLR	Sedlovina	3.94	228	eP	Pn	14 52 31.1	+0.4
KRER	Koryakskii	3.98	229	eP	Pn	14 52 32.8	+1.4
KRX	Arik	3.98	230	eP	Pn	14 52 33.5	+2.2
SMAR	Somma	3.98	228	eP	Pn	14 52 31.9	+0.4
AVH	Avacha	4.01	229	eP	Pn	14 52 32.5	+0.9
UGLR	Uglovaya	4.01	228	eP	Pn	14 52 32.2	+0.5
KOK	Koryaka	4.03	230	eP	Pn	14 52 32.7	+0.7
DALK	Dalny	4.17	226	eP	Pn	14 52 33.5	-0.3
PET	Petropavlovsk	4.22	227	eP	Pn	14 52 36.5	+2.0
PETK	Petropavlovsk-	4.57	233	Pn	Pn	14 52 41.5	+2.2
	0.4nm,0.3s,baz=49,slow=18,SNR=9.0						
PETK				Sn	Sb	14 53 39.3	-6.2
	baz=62,slow=20						
PETK				LR	LR	14 54 45.5	
	comp=Z,72nm,18.3s,baz=76,slow=41						
	3.0nm,0.7s						
RUS	Russkaya	4.72	223	eP	Pn	14 52 41.4	+0.1
GRL	Gorelyy	4.80	226	eP	Pn	14 52 42.8	+0.1
MTVR	Mutnovka	4.81	225	eP	Pn	14 52 44.3	+1.5
ASAK	Asacha	5.00	226	eP	Pn	14 52 46.9	+1.6
MA2	Magadan	7.80	303	LR	LR	14 56 39.7	
	comp=Z,56nm,18.8s,baz=82,slow=41						
SEY	Seymchan	9.03	325	LR	LR	14 56 59.5	
	comp=Z,50nm,18.1s,baz=142,slow=38						
ASAJ	Asahikawa	17.97	237	LR	LR	15 02 22.4	
	comp=Z,15nm,19.7s,baz=182,slow=36						
YAK	Yakutsk	18.38	303	LR	LR	15 01 59.2	
	comp=Z,24nm,18.6s,baz=96,slow=35						
ILAR	Eielson Array	25.27	50	P	P	14 56 53.3	-2.8
	0.3nm,0.8s,baz=271,slow=9.5,SNR=1.9						
	0.3nm,0.8s						
MJAR	Matsushiro Arr	26.03	232	P	P	14 57 04.7	+1.4
	1.3nm,0.7s,baz=37,slow=7.3,SNR=4.1						
	1.3nm,0.7s						
SONM	Songino Array	35.36	281	P	P	14 58 25.3	-0.5
	0.3nm,0.4s,baz=60,slow=6.8,SNR=2.2						
	0.3nm,0.4s						
H11N2	WAKE ISLAND Hy	36.30	175	T	T	15 37 22.1	
	baz=357,slow=76,SNR=177						
H11N3	WAKE ISLAND Hy	36.31	175	T	T	15 37 33.5	
	baz=357,slow=76,SNR=146						
H11N1	WAKE ISLAND Hy	36.32	175	T	T	15 37 27.4	
	baz=357,slow=76,SNR=138						
TXAR	Lajitas Array	67.59	71	P	P	15 02 27.6	+0.6
	0.2nm,0.6s,baz=312,slow=5.8,SNR=2.7						
	0.2nm,0.6s						
ASAR	Alice Springs	83.32	207	P	P	15 03 58.9	+1.9
	0.6nm,0.9s,baz=19,slow=4.8,SNR=5.1						
	0.6nm,0.9s						
QSPA	South Pole Qui	145.76	180	PKPbc	PKPab	15 11 09.8	+1.4
	0.7nm,0.7s,baz=45,slow=1.4,SNR=1.8						

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*UCR **26** 14:57:34.7±1.2, 8°.30N×82°.91W, h20^{km}±3^{km}, MW3.9*

*CATAC **26** 14:57:35.7±0.7, 8°N±4°×8°3W±°, h12^{km}±3^{km}, M3.8/9, MLv3.8/9, Error ellipse: s-maj=8.9km s-min=8.2km az=5.3, confirmed*

*UPA **26** 14:57:35.8±0.9, 8°.41N×82°.85W, h37^{km}±8^{km}, MW3.5*

ISC 26 14:57:31.3±1.7**, 8°.22N**±0°.06×**82°.93W**±0°.02**, h7^{km}**±10^{km}**, n73, σ0^{s}.88**/100**, 17C-10D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDITO	Canoas	0.35	9	P	Pb	14 57 41.5	+1.5
CDITO	Canoas	0.35	9	S	Sb	14 57 45.8	+0.1
NELY	Ciudad Neily	0.42	358	⇑iP	Pb	14 57 42.2	+1.0
NELY				eS	Sb	14 57 48.0	+0.1
FITO	Golfito	0.46	331	⇑iP	Pb	14 57 42.5	+0.8
FITO				eS	Sb	14 57 48.4	-0.3
EDAD	Golfito	0.49	331	⇑iP	Pb	14 57 43.1	+0.8
EDAD				eS	Sb	14 57 49.4	-0.2
MCANO	Manzana, Boque	0.49	46	⇓eP	Pb	14 57 44.0	+1.6
MCANO				eS	Sb	14 57 49.5	-0.4
MCANO	Manzana, Boque	0.49	46	iP	Pb	14 57 44.0	+1.6
CSTBL	De las Acacias	0.52	69	⇓iP	Pn	14 57 45.0	-0.2
CSTBL	De las Acacias	0.52	69	⇓iP	Pn	14 57 45.0	-0.2
CSTBL				eS	Sb	14 57 51.9	+1.4
VITO	San Vito	0.59	356	⇑iP	Pb	14 57 45.1	+0.9
VITO				eS	Sb	14 57 53.3	+0.4
RSRNO	Rio Sereno	0.59	7	⇑iP	Pb	14 57 45.2	+1.0
RSRNO				eS	Sb	14 57 53.1	+0.3
RSRNO	Rio Sereno	0.59	7	⇑iP	Pb	14 57 45.2	+1.0
RSRNO				eS	Sb	14 57 52.3	-0.5
CLLRA	Cordillera,	0.60	31	⇓iP	Pb	14 57 45.2	+0.9
CLLRA				eS	Sb	14 57 53.2	+0.1
CLLRA	Cordillera,	0.60	31	⇓iP	Pb	14 57 45.2	+0.9
CLLRA				eS	Sb	14 57 53.5	+0.3
BRU2	Volcan	0.61	23	⇑eP	Pb	14 57 45.2	+0.7
BRU2				eS	Sb	14 57 53.0	-0.5
BRU2	Volcan	0.61	23	S	Sb	14 57 53.2	-0.3
BRU2	Volcan	0.61	23	P	Pb	14 57 45.2	+0.7
BRU2	Volcan	0.61	23	⇑iP	Pb	14 57 45.2	+0.7
BRU2				eS	Sb	14 57 53.0	-0.5
SCLRA	Santa Clara, W	0.62	14	⇑iP	Pb	14 57 45.6	+0.9
SCLRA				eS	Sb	14 57 53.7	0.0
SCLRA	Santa Clara, W	0.62	14	⇑iP	Pb	14 57 45.5	+0.9
SCLRA				eS	Sg	14 57 52.3	+0.7
TBS2		0.63	25	eP	Pn	14 57 46.5	-0.4
BQTLY	Boquete Panama	0.71	41	⇓eP	Pb	14 57 46.7	+0.6
BQTLY				eS	Sb	14 57 56.0	-0.1
BQTLY	Boquete Panama	0.71	41	⇓iP	Pb	14 57 46.7	+0.6
BQTLY				eS	Sb	14 57 56.0	-0.1
ALCO	Alturas Coton,	0.73	8	⇑iP	Pb	14 57 46.5	0.0
ALCO				eS	Sg	14 57 55.0	0.0
EDP2	Potrero Grande	0.82	343	⇑iP	Pb	14 57 48.6	+0.6
EDP2				eS	Sb	14 57 59.1	-0.3
PANP	Palmar Norte	0.90	324	eP	Pb	14 57 49.8	+0.5
PANP				eS	Sb	14 58 01.4	-0.1
PBNVO	Pueblo Nuevo,	0.99	48	⇓iP	Pg	14 57 50.6	+0.3
PBNVO				eS	Sg	14 58 02.1	-1.1
RBALA	Bur	1.01	50	⇓iP	Pg	14 57 51.3	+0.6
RBALA				eS	Sg	14 58 02.3	-1.5
DRK0	Durika	1.08	343	⇑eP	Pg	14 57 51.8	-0.3
DRK0	Durika	1.08	343	P	Pg	14 57 52.0	-0.1
DRK0	Durika	1.08	343	S	Sg	14 58 05.0	-1.2
RMDIO	Remedios, Chir	1.09	90	eP	Pn	14 57 54.0	+0.9
RMDIO	Remedios, Chir	1.09	90	⇑iP	Pn	14 57 54.4	+1.4
OCHAL	Ojochal	1.12	321	S	Sb	14 58 07.7	-0.2
OCHAL	Ojochal	1.12	321	P	Pb	14 57 53.3	+0.3
EDPE	Pejibaye, P	1.12	326	⇑eP	Pb	14 57 53.5	+0.3
EDPE				eS	Sb	14 58 08.0	0.0
PDCAN	Manzana , Fuen	1.22	87	eP	Pn	14 57 52.8	-2.2
SAJE	San Jernim	1.25	333	⇑eP	Pn	14 57 54.7	-0.8
SAJE				eS	Sb	14 58 10.3	-1.6
KKNTU	Kakintº	1.27	61	eP	Pn	14 57 55.3	-0.3
KKNTU	Kakintº	1.27	61	iP	Pn	14 57 55.2	-0.3
KKNTU				eS	Sb	14 58 09.3	-2.9
PIEC	Cerro El Cedra	1.72	324	eP	Pn	14 58 02.4	+0.4
PISJ	San Jernim	1.83	320	eP	Pb	14 58 05.2	0.0
ABE2	San Pablo	1.84	323	eP	Pb	14 58 05.8	+0.3
ABE2				eS	Sg	14 58 30.1	-0.6
LCR2	La Lucha 2	1.84	325	eP	Pb	14 58 05.4	-0.2
LCR2	La Lucha 2	1.84	325	P	Pn	14 58 04.2	+0.6
LCR2	La Lucha 2	1.84	325	S	Sn	14 58 26.1	-1.3
VINA	Juan Vinas	1.85	334	eP	Pn	14 58 04.6	+1.0
PICV	PH. Pirrs	1.87	318	eP	Pb	14 58 05.8	-0.1
PAR1A	Puntarenas Pro	1.89	316	eP	Pb	14 58 05.9	-0.3
PCAYA	Pacayas	1.90	333	eP	Pn	14 58 05.2	+0.9
VTCV	VTCV, Calle Va	1.92	336	eP	Pn	14 58 05.3	+0.7
RESJ	San Isidro (Tu	1.93	339	eP	Pb	14 58 06.1	-0.8
ABRB	Las Abras (San	1.93	336	⇓iP	Pn	14 58 06.1	+1.2
ABRB				eS	Sn	14 58 29.8	+0.2
CVTV	Tajo	1.95	335	⇑eP	Pn	14 58 06.0	+0.9
CVTV				eS	Sn	14 58 29.6	-0.5
CVTQ	Turrialba Volc	1.95	335	eP	Pn	14 58 06.2	+0.9
VTLA	Turrialba Volc	1.96	335	eP	Pn	14 58 06.2	+0.9
VTR0	Volcan Turrial	1.96	335	eP	Pn	14 58 06.4	+1.0
VICA	Volcano Irazu	1.97	333	eP	Pn	14 58 05.9	+0.4
CVIMO	Finca Echandi	2.05	331	eP	Pb	14 58 08.6	-0.5
HDC	Heredia	2.12	327	eP	Pn	14 58 08.2	+0.8
TRT2	Tortugero	2.45	341	P	Pn	14 58 13.2	+1.4
TRT2	Tortugero	2.45	341	S	Sn	14 58 42.0	0.0
CBL1	Cabuya	2.53	303	eP	Pn	14 58 13.4	+0.6
SOCE	Pocosol	2.72	322	eP	Pb	14 58 20.6	+0.3
SOCE	Pocosol	2.72	322	S	Sn	14 58 48.3	-0.3
ARE1	Arenal 1	2.84	322	eP	Pb	14 58 21.7	-0.7
VARE2	V. Arenal	2.84	322	eP	Pb	14 58 21.9	-0.5
JTS	Las Juntas de	2.87	316	eP	Pn	14 58 19.1	+1.6
COVE	Coope Vega, Sa	2.87	330	S	Sn	14 58 52.1	-0.4
COVE	Coope Vega, Sa	2.87	330	P	Pn	14 58 19.3	+1.7
INDI	Punta indio, G	3.02	303	S	Sn	14 58 55.8	-0.3
INDI	Punta indio, G	3.02	303	P	Pn	14 58 21.3	+1.7
CMARA	Lajas Hojancha	3.04	306	P	Pn	14 58 21.9	+1.9

UPA 26 15:08:35.4±1.4**, 8°.72N×82°.32W, h61^{km}**±9^{km}**, MW3.6, Fault plane solution: NP1:**φ$_{s}$0.00000°**,** δ18.00000°, λ-145.00000°.**, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RBALA	Bur	0.23	46	eS	Sn	15 08 52.4	+0.1
MCANO	Manzana, Boque	0.29	240	eP	Pn	15 08 45.1	-0.6
MCANO				eS	Sn	15 08 53.1	+0.1
CLLRA	Cordillera,	0.29	275	eP	Pn	15 08 46.4	+0.6
CLLRA				eS	Sn	15 08 54.2	+0.9
CSTBL	De las Acacias	0.33	202	iP	Pn	15 08 46.3	+0.4
CSTBL				eS	Sn	15 08 52.7	-0.8
BRU2	Volcan	0.38	282	eP	Pn	15 08 46.7	+0.2
BRU2				eS	Sn	15 08 54.4	-0.1
SCLRA	Santa Clara, W	0.47	284	eP	Pn	15 08 46.7	-0.6
SCLRA				eS	Sn	15 08 55.2	-0.8
KKNTU	Kakintº	0.52	76	eS	Sn	15 08 56.4	-0.4
KKNTU	Kakintº	0.52	76	eP	Sn	15 08 56.0	-0.7

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*UCR **26** 15:08:49.6±1.3, 8°.28N×82°.91W, h17^{km}±5^{km}, MW3.6*

*UPA **26** 15:08:50.8±1.0, 8°.42N×82°.90W, h30^{km}±5^{km}, MW3.0*

ISC 26 15:08:50.1±1.2**, 8°.38N**±0°.05×**82°.91W**±0°.03**, h33^{km}**±3^{km}**, n57, σ0^{s}.93**/81**, 9C-8D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.12	78	iP	Pb	15 08 56.3	+0.3
LESP3				eS	Sb	15 09 00.1	0.0
NELY	Ciudad Neily	0.27	352	eP	Pb	15 08 57.5	-0.1
NELY				eS	Sb	15 09 03.0	+0.5
FITO	Golfito	0.34	315	eP	Pb	15 08 57.7	-0.8
FITO				eS	Sb	15 09 03.6	-0.5
EDAD	Golfito	0.37	317	eP	Pb	15 08 58.3	-0.5
EDAD				eS	Sb	15 09 04.6	-0.2
MCANO	Manzana, Boque	0.38	60	eP	Pb	15 08 59.3	+0.3
MCANO	Manzana, Boque	0.38	60	⇑iP	Pb	15 08 59.3	+0.3
MCANO				eS	Sb	15 09 05.1	+0.1
MLIR3	Monte Lirio, C	0.42	12	⇓iP	Pn	15 09 00.1	+0.1
MLIR3				eS	Sb	15 09 05.6	-0.4
RSRNO	Rio Sereno	0.44	6	⇑iP	Pn	15 09 00.5	+0.3
RSRNO				eS	Sn	15 09 08.6	+1.5
RSRNO	Rio Sereno	0.44	6	⇓iP	Pn	15 09 00.4	+0.3
VITO	San Vito	0.44	352	eP	Pn	15 09 00.3	0.0
DVD	David	0.46	83	⇑iP	Pb	15 09 00.2	+0.2
DVD				eS	Sn	15 09 07.7	+0.4
BRU2	Volcan	0.46	28	eP	Pb	15 09 00.4	+0.1
BRU2				eS	Sn	15 09 08.1	+0.3
BRU2	Volcan	0.46	28	⇓iP	Pb	15 09 00.4	+0.1
BRU2				eS	Sn	15 09 08.2	+0.4
CLLRA	Cordillera,	0.46	39	eP	Pb	15 09 00.3	0.0
CLLRA	Cordillera,	0.46	39	⇑iP	Pn	15 09 00.7	0.0
CSTBL	De las Acacias	0.46	86	eP	Pb	15 08 59.9	-0.3
CSTBL	De las Acacias	0.46	86	⇓iP	Pn	15 09 00.5	0.0
SCLRA	Santa Clara, W	0.47	16	eP	Pb	15 09 00.6	+0.2
SCLRA				eS	Sn	15 09 09.2	+1.4
SCLRA	Santa Clara, W	0.47	16	⇓iP	Pn	15 09 00.7	0.0
TBS2		0.48	31	eP	Pn	15 09 01.6	+0.7
PEDE3	Pedregal, Chir	0.48	90	⇑iP	Pb	15 09 00.3	-0.1
PEDE3				eS	Sn	15 09 07.8	-0.2
LOCO3	Loma Colorada,	0.49	87	eP	Pb	15 09 00.1	-0.4
LOCO3				eS	Sn	15 09 08.7	+0.6
PTAR3	Potrerillos Ar	0.51	53	eS	Sb	15 09 08.5	0.0
LOMA3	Las Lomas, Chi	0.51	84	⇑iP	Pb	15 09 00.6	-0.4
LOMA3				eS	Sb	15 09 08.5	+0.1
BC3P	Paso Ancho	0.52	34	⇓iP	Pb	15 09 01.2	-0.1
BC3P				eS	Sb	15 09 09.0	+0.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALCO	Alturas Coton,	0.57	7	⇓eP	Pb	15 09 01.7	-0.3
ALCO				eS	Sb	15 09 10.2	+0.1
BQTLY	Boquete Panama	0.58	50	eP	Pn	15 09 02.9	+0.7
BQTLY				eS	Sn	15 09 10.9	+0.2
BQSF3	Alto Boquete,	0.59	53	⇓iP	Pb	15 09 02.0	-0.3
BQSF3				eS	Sn	15 09 11.0	+0.2
GUAL3	Gualaca, Chiri	0.62	76	eS	Sn	15 09 11.9	+0.4
PSOM3	Paja de Sombre	0.65	62	⇑iP	Pn	15 09 02.6	-0.5
PSOM3				eS	Sb	15 09 11.4	-0.8
EDP2	Potrero Grande	0.68	337	eP	Pn	15 09 01.4	-2.2
EDP2				eS	Sb	15 09 14.1	+1.1
PANP	Palmar Norte	0.79	317	⇑iP	Pn	15 09 05.0	0.0
PANP				eS	Sb	15 09 16.3	+0.3
PBNVO	Pueblo Nuevo,	0.87	54	eP	Pn	15 09 03.7	-2.3
RBALA	Bur	0.90	56	eP	Pn	15 09 04.7	-1.7
DRK0	Durika	0.94	339	eP	Pn	15 09 06.6	-0.5
DRK0	Durika	0.94	339	⇑iP	Pn	15 09 06.7	-0.5
DRK0				eS	Sn	15 09 19.3	-0.2
SAJE	San Jernim	1.13	328	eP	Pn	15 09 10.6	+0.8
KKNTU	Kakintº	1.18	67	eS	Pn	15 09 10.4	+0.1
KKNTU	Kakintº	1.18	67	iP	Pn	15 09 10.4	+0.1
KKNTU				eS	Sn	15 09 25.5	+0.2
REPA	Paraso	1.72	327	eP	Pb	15 09 21.1	-0.1
PISJ	San Jernim	1.73	316	eP	Pb	15 09 20.1	-1.3
LCR2	La Lucha 2	1.73	321	eP	Pn	15 09 19.9	+1.7
ABE2	San Pablo	1.73	319	eP	Pb	15 09 21.2	-0.3
ABE2				eS	Sb	15 09 42.9	-0.2
PICV	PH. Pirrs	1.77	314	eP	Pb	15 09 20.6	-1.4
VTCV	VTCV, Calle Va	1.79	333	eP	Pb	15 09 21.0	-1.3
ABRB	Las Abras (San	1.80	334	eP	Pb	15 09 21.1	-1.6
CVTV	Tajo	1.81	333	eP	Pn	15 09 21.0	+1.6
CVTQ	Turrialba Volc	1.82	332	eP	Pn	15 09 20.9	+1.4
VTLA	Turrialba Volc	1.82	332	eP	Pn	15 09 21.3	+1.8
VTR0	Volcan Turrial	1.83	333	eP	Pn	15 09 21.2	+1.6
VICA	Volcano Irazu	1.84	330	eP	Pb	15 09 22.9	-0.6
BELE	Belen	2.03	322	eP	Pb	15 09 24.5	-1.9
TRT1	Tortuguero	2.34	341	eP	Pb	15 09 29.4	-2.2
CBL1	Cabuya	2.47	299	eP	Pn	15 09 28.5	+0.5
VACR	Volcan Arenal	2.71	320	eP	Pb	15 09 36.0	-2.0
JTS	Las Juntas de	2.77	313	eP	Pn	15 09 34.4	+2.2
PLVR	Palo Verde	3.10	309	eP	Pn	15 09 38.7	+1.8

IDC 26 15:18:50.5±3.5**, 31°.35S**×**177°.15W, h0^{km}, mb3.6**/2**, mbtmp3.6**/3**, ML3.0**/1**, Error ellipse: s-maj=83.9km s-min=49.9km az=121.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.35	213	Pn	Pn	15 20 52.4	-0.4
	0.2nm,0.3s,baz=341,slow=23,SNR=1.5						
URZ				Sn	Sn	15 22 24.8	-2.9
	0.4nm,0.3s,baz=212,slow=19,SNR=2.2						
	3.3nm,0.9s						
ASAR	Alice Springs	43.80	268	P	P	15 26 58.2	0.0
	0.3nm,0.5s,baz=106,slow=7.5,SNR=4.9						
	0.3nm,0.5s						
WRA	Warramunga Arr	44.87	273	P	P	15 27 06.7	-0.2
	0.4nm,0.3s,baz=111,slow=8.1,SNR=6.2						
	0.4nm,0.3s						
FINES	FINESS Array B	146.29	340	PKPbc	PKPdf	15 38 31.5	+0.4
	0.4nm,0.6s,baz=22,slow=4.8,SNR=1.1						

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*IPEC **26** 15:27:15.9±0.1, 50°.14N×19°.12E, h1^{km}, ML2.6/3, Error ellipse: s-maj=1.8km s-min=0.8km az=1.0*

*VIE **26** 15:27:15.8±0.7, 49°.93N×19°.24E, h0^{km}, mb2.7/3, ml2.4/4, ms3.1/1, Error ellipse: s-maj=13.4km s-min=2.5km az=155.0 39 km SSE of Sosnowice Suspected Mining induced.*

*PRU **26** 15:27:16.6, 50°.19N×19°.08E, h0^{km}*

ISC 26 15:27:15.8±0.9**, 50°.15N**±0°.04×**19°.11E**±0°.03**, h0^{km}, n27, σ1^{s}70**/42**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.45	81	ePg	Pg	15 27 24.8	+0.4
OJC				eSg	Sg	15 27 31.1	+0.9
OKC	Ostrava-Krasne	0.69	244	ePG	Pb	15 27 29.8	-1.0
OKC				eSG	Sb	15 27 39.5	-1.4
	comp=Z,61nm,0.4s						
STEB	Steborice	0.89	256	ePG	Pb	15 27 33.5	-0.6
STEB				eSG	Sb	15 27 45.8	-0.6
	comp=Z,91nm,0.6s						
LANS	Liptovska Anna	1.03	167	ePG	Pb	15 27 35.8	-0.7
NIE	Niedzica	1.06	133	ePg	Pg	15 27 35.9	-0.3
NIE				eSg	Sb	15 27 51.3	-0.2
MORC	Moravsky Berou	1.08	250	ePg	Pb	15 27 36.7	-0.6
	baz=70						
MORC				eSg	Sg	15 27 49.8	-0.6
	102nm,0.5s,baz=70						
KRLC	Kraliky	1.50	268	eSG	Sb	15 28 03.7	-0.4
	comp=Z,40nm,0.4s						
STHS	Stebnicka Huta	1.57	117	ePG	Pg	15 27 46.6	+0.8
JAVC	Velka Javorina	1.60	216	ePn	Pn	15 27 44.9	-0.4
	baz=36						
JAVC	Velka Javorina	1.60	216	ePN	Pn	15 27 45.0	-0.4
VYHS	Vyhne	1.67	186	ePG	Pn	15 27 45.8	-0.5
VYHS				eSG	Sn	15 28 06.9	-1.4
DPC	Dobruska-Polom	1.80	277	ePG	Pn	15 27 48.4	+0.3
DPC				eSG	Sb	15 28 12.9	+0.2
	comp=Z,30nm,0.6s						
VRAC	Vranov	1.84	244	ePn	Pn	15 27 48.5	-0.1
	baz=62						
VRAC				eSg	Sg	15 28 13.6	-1.1
	36nm,0.6s,baz=62						
KECS	Kecovo	1.90	151	ePG	Pb	15 27 50.1	-1.1
OSTC	Ostas	1.90	283	ePG	Pn	15 27 49.7	+0.3
OSTC				eSG	Sb	15 28 15.9	+0.4
	comp=Z,23nm,0.6s						
KSP	Ksiaz	1.93	292	ePg	Pg	15 27 52.7	0.0
KSP				eSg	Sg	15 28 18.5	+0.9
KRUC	Moravsky	2.07	239	ePn	Pn	15 27 51.7	-0.1
	baz=58						
KRUC				eSg	Sg	15 28 21.1	-1.3
	34nm,0.6s,baz=58						
MODS	Modra-Piesok	2.15	215	ePG	Pn	15 27 53.0	+0.2
MODS				eSG	Sb	15 28 21.8	-0.8
MODS				eLG	Lg	15 28 23.0	
KOLS	Kolonicke sedl	2.40	119	ePG	Pg	15 28 02.5	+0.9
CONA	Conrad Observa	3.08	225	Pn	Pn	15 28 04.2	-1.6
	1.1nm,0.3s						
CONA				eSn	Sn	15 28 41.4	-2.0
	3.3nm,0.5s						
BRG	Berggiesshubel	3.38	284	Pg	Pg	15 28 20.1	-0.4
BRG				Sg	Sg	15 29 04.6	+0.4
BRG				Amp		15 29 11.0	
	comp=Z,5.9nm,0.5s						
KHC	Kasperske Hory	3.74	256	ePN	Pn	15 28 14.2	-0.5
KHC				ePG	Pb	15 28 23.0	+0.4
KHC				eSG	Sg	15 29 14.6	-1.1
	comp=Z,8.0nm,0.6s						
ARSA	Arzberg	3.75	221	eSg	Sg	15 29 20.9	+4.8
BIOA	Bad Ischl, Aus	4.37	238	eSn	Sn	15 29 16.1	+1.2
	comp=Z,2.4nm,0.4s						
LESA	Schwarzleotal	5.05	240	eSg	Sg	15 30 03.2	+5.3
	comp=Z,2.7nm,0.5s						
WTTA	Wattenberg	5.73	243	eSg	Sg	15 30 25.7	+6.0
	comp=Z,3.0nm,0.5s						
MILM	Milestii Mici	7.21	113	eL	L	15 31 15.0	
MILM				LRM	MLR	15 41 47.0	
	comp=Z,500nm,20.0s						

IDC 26 15:32:04.9±4.4**, 6°.40S**×**129°.18E, h198^{km}**±41^{km}**, mb2.7**/1**, mbtmp3.9**/5**, Error ellipse: s-maj=44.1km s-min=19.3km az=65.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.64	235	P	Pn	15 33 41.9	+1.4
	13nm,0.4s,baz=81,slow=21,SNR=2.0						
BATI				S	Sn	15 34 54.8	-1.5
	14nm,0.3s,baz=334,slow=20,SNR=1.3						
FITZ	Fitzroy Crossi	12.13	196	P	Pn	15 34 51.5	0.0
	2.8nm,0.5s,baz=25,slow=13,SNR=23						
FITZ				S	Sn	15 36 58.4	-8.4
	2.2nm,0.4s,baz=118,slow=23,SNR=5.8						
WRA	Warramunga Arr	14.37	160	P	Pn	15 35 19.1	-0.4
	0.7nm,0.4s,baz=341,slow=10,SNR=22						
WRA				S	S	15 37 52.6	-6.9
	1.1nm,0.4s,baz=330,slow=22,SNR=6.8						
ASAR	Alice Springs	17.76	166	P	Pn	15 35 59.6	-0.6
	3.2nm,0.5s,baz=344,slow=11,SNR=69						
ASAR				S	S	15 39 12.5	+0.1
	0.5nm,0.9s,baz=349,slow=24,SNR=2.3						
MKAR	Makanchi Array	67.28	327	P	P	15 42 37.9	-0.3
	0.1nm,0.5s,baz=128,slow=8.0,SNR=1.7						
	0.1nm,0.5s						

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*NEIC **26** 15:35:05.1±0.5, 35°.781N±0°.007×96°.69W±0°.01, h5^{km}±1^{km}, mb_Lg2.3/12, ML2.5/30, ML2.5/34, Error ellipse: s-maj=2.6km s-min=1.6km az=69.0*

NEIC 26 15:35:05.2±0.8**, 35°.787N**±0°.009×**96°.69W**±0°.01**, h8^{km}**±2^{km}**, Error ellipse: s-maj=1.8km s-min=1.2km az=122.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DEOK	Depew	0.17	70	Pg	Pg	15 35 09.1	+0.4
DEOK				Sg	Sg	15 35 11.8	+0.7
DEOK				IAML		15 35 12.7	
	comp=E,890nm,0.2s						
OK052	Battle Ridge R	0.23	337	Pg	Pg	15 35 10.1	+0.3
OK052				Sg	Sg	15 35 13.5	+0.7
OK052				IAML		15 35 13.7	
	comp=E,1µm,0.2s						
OK029	Liberty Lake	0.62	271	Pg	Pg	15 35 17.1	-0.1
OK029				Sg	Sg	15 35 25.8	+0.5
OK029				IAML		15 35 26.1	
	comp=E,240nm,0.5s						
OK048	Pawnee Station	0.66	342	Pg	Pg	15 35 17.9	0.0
OK048				Sg	Sg	15 35 26.6	+0.1
OK048				IAML		15 35 27.4	
	comp=E,202nm,0.3s						
OK051	E0350 and S346	0.73	351	Pg	Pg	15 35 19.2	0.0
OK051				Sg	Sg	15 35 28.9	+0.3
TUL3	Leonard	0.74	80	Pg	Pg	15 35 19.3	-0.2
TUL3				Sg	Sg	15 35 29.3	+0.1
BCOK	Bluff Creek, N	0.76	260		Pg	15 35 20.0	+0.2
BCOK					Sg	15 35 30.1	+0.5
FNO	Franklin	0.78	228	Pg	Pg	15 35 20.2	-0.1
FNO				Sg	Sg	15 35 30.6	+0.2
FNO				IAML		15 35 31.2	
	comp=E,256nm,0.2s						
FNO				IAML		15 35 31.2	
	comp=N,191nm,0.2s						
BLOK	Blackwell	1.06	337		Pg	15 35 25.3	-0.3
BLOK					Sg	15 35 39.5	+0.2
T35A	Sooner Cattle	1.14	7	Pg	Pg	15 35 26.2	-0.9
T35A				Sg	Sg	15 35 41.7	-0.1
T35A				IAML		15 35 42.1	
	comp=N,116nm,0.2s						
T35A				IAML		15 35 42.3	
	comp=N,119nm,0.2s						
CROK	Carrier	1.27	305		Pn	15 35 28.4	-0.9
RLO	Rose Lookout	1.41	74		Pn	15 35 30.1	-1.1
GC02	Grant County #	1.42	319		Pn	15 35 31.4	-0.1
X34A	Smith Ranch, M	1.51	219		Pn	15 35 32.2	-0.4
KAN17	Caldwell West	1.52	326	IAmb_Lg		15 35 52.2	
	comp=Z,18nm,0.9s						
KAN14	Manchester OK	1.55	319		Pn	15 35 32.5	-0.8
CSTR	Hydro, Custer	1.63	266		Pn	15 35 33.1	-1.3
U38A	Gravette	1.98	70	Pn	Pn	15 35 39.9	+0.8
WMOK	Wichita Mounta	2.00	239	Pn	Pn	15 35 39.8	+0.4
WMOK				IAmb_Lg		15 36 09.1	
	comp=Z,15nm,0.8s						
R40A	Maddies Statio	4.33	53	IAmb_Lg		15 37 22.7	
	comp=Z,7.4nm,0.8s						
T42A	Van Buren	4.68	73	IAmb_Lg		15 37 43.7	
	comp=Z,5.8nm,0.7s						
BRDY	Brady	4.88	204	Pn	Pn	15 36 16.7	-2.4
P40A	Paris	5.25	43	IAmb_Lg		15 37 59.5	
	comp=Z,4.2nm,0.7s						
CGM3	Cape Girardeau	5.86	73	IAmb_Lg		15 38 13.0	
	comp=Z,5.1nm,0.8s						

IDC 26 15:35:19.4±10.0**, 18°.05S**×**177°.96W, h515^{km}**±113^{km}**, mb2.9**/5**, mbtmp3.8**/5**, Error ellipse: s-maj=49.3km s-min=40.6km az=91.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.03	260	P	P	15 42 48.8	-0.2
	0.6nm,0.5s,baz=96,slow=7.3,SNR=9.4						
WRA				PcP	PcP	15 44 18.9	-0.3
	0.1nm,0.3s,baz=93,slow=3.2,SNR=1.5						
	0.6nm,0.5s						
ASAR	Alice Springs	45.17	254	P	P	15 42 49.9	-0.1
	2.5nm,0.6s,baz=87,slow=9.0,SNR=22						
ASAR				PcP	PcP	15 44 18.9	-0.7
	0.2nm,0.4s,baz=98,slow=3.8,SNR=5.3						
	2.5nm,0.6s						
FITZ	Fitzroy Crossi	53.43	261	P	P	15 43 51.5	+0.4
	1.6nm,0.8s,baz=88,slow=11,SNR=1.6						
	1.6nm,0.8s						
QSPA	South Pole Qui	72.01	180	P	P	15 45 50.7	+0.2
	0.5nm,1.0s,baz=72,slow=3.2,SNR=0.6						
	0.5nm,1.0s						
ILAR	Eielson Array	85.93	13	P	P	15 47 04.1	0.0
	0.2nm,0.4s,baz=202,slow=4.5,SNR=5.0						
	0.2nm,0.4s						

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*IDC **26** 15:44:08.0±2.0, 2°.83N×128°.39E, h0^{km}, mb3.4/5, mbtmp3.5/5, Error ellipse: s-maj=126.3km s-min=21.5km az=72.0*

*DJA **26** 15:44:11.4±1.1, 3°N±5°×12°9E±°, h16^{km}±9^{km}, M3.6/7, MLv3.6/7*

ISC 26 15:44:12.3±1.6**, 2°.9N**±0°.1×**128°.8E**±0°.2**, h35^{km}, n13, σ0^{s}88**/8**, mb3.4**/5**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.56	215	P	Pn	15 44 51.4	+0.1
SGSI	Sangihe	3.38	284	P	Pn	15 45 02.8	+0.1
SGSI				S	Sn	15 45 41.8	+0.1
FITZ	Fitzroy Crossi	21.09	188	P	P	15 48 52.6	-1.2
	1.4nm,0.9s,baz=354,slow=10,SNR=1.2						
	1.4nm,0.9s						
WRA	Warramunga Arr	23.32	167	P	P	15 49 17.8	+0.3
	0.2nm,0.4s,baz=345,slow=9.6,SNR=2.4						
	0.2nm,0.4s						
ASAR	Alice Springs	26.85	170	P	P	15 49 51.0	+1.1
	0.5nm,0.8s,baz=348,slow=9.4,SNR=4.2						
	0.5nm,0.8s						
H11S3	WAKE ISLAND Hy	40.18	65	T	T	16 35 05.6	
	baz=252,slow=75,SNR=13						
H11S2	WAKE ISLAND Hy	40.19	65	T	T	16 34 57.6	
	baz=252,slow=75,SNR=10						
H11S1	WAKE ISLAND Hy	40.19	65	T	T	16 34 56.1	
	baz=252,slow=75,SNR=6.6						
H11N1	WAKE ISLAND Hy	40.75	63	T	T	16 35 39.6	
	baz=250,slow=75						
H11N2	WAKE ISLAND Hy	40.76	63	T	T	16 35 40.8	
	baz=250						
H11N3	WAKE ISLAND Hy	40.77	63	T	T	16 35 41.0	
	baz=250,slow=75						
MKAR	Makanchi Array	59.44	325	P	P	15 54 12.2	+0.5
	0.3nm,0.3s,baz=111,slow=8.2,SNR=6.0						
	0.3nm,0.3s						
KURBB	Kurchatov Arra	63.58	327	P	P	15 54 38.6	-0.9
	0.4nm,0.4s,baz=126,slow=5.8,SNR=4.6						
	0.4nm,0.4s						

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*NEIC **26** 15:54:25.4±1.1, 45°.81N±0°.04×106°.76W±0°.08, h0^{km}±1^{km}, ML2.8/24, Error ellipse: s-maj=9.5km s-min=6.8km az=115.0*

*IDC **26** 15:54:26.0±2.3, 45°.82N×106°.89W, h0^{km}, mbtmp3.0/2, ML3.0/2, Error ellipse: s-maj=88.5km s-min=10.2km az=133.0*

ISC 26 15:54:26.4±1.0**, 45°.84N**±0°.06×**106°.73W**±0°.07**, h0^{km}, n34, σ0^{s}70**/34**, Montana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAO	LASA Array	0.92	22		Pg	15 54 44.0	-0.1
RLMT	Red Lodge	1.92	249	Pn	Pn	15 55 01.4	+0.8
RLMT				IAML		15 55 30.4	
	81nm,0.3s						
GCMT	Greycliff	2.05	270	Pn	Pn	15 55 02.6	+0.2
YNE	Yellowstone No	2.45	251	Pn	Pn	15 55 08.2	+0.3
YNE				IAML		15 55 43.9	
	comp=N,55nm,0.5s						
YNE				IAML		15 55 46.7	
	comp=E,52nm,0.6s						
RSSD	Black Hills	2.57	131	Pn	Pn	15 55 09.4	-0.1
RSSD				IAML		15 55 47.0	
	comp=E,55nm,0.6s						
RSSD				IAML		15 55 47.5	
	comp=E,51nm,0.5s						
YMP	Mirror Lake Pl	2.65	247	Pn	Pn	15 55 11.5	+0.7
EGMT	Eagleton	3.01	318	Pn	Pn	15 55 16.2	+0.7
YHH	Holmes Hill	3.09	252	Pn	Pn	15 55 17.6	+0.9
DGMT	Dagmar	3.15	32	Pn	Pn	15 55 17.9	+0.6
K22A	Casper	3.19	177	Pn	Pn	15 55 18.0	0.0
K22A				IAML		15 56 08.9	
	comp=E,23nm,0.3s						
K22A				IAML		15 56 15.9	
	comp=E,26nm,0.3s						
YHL	Hebgen Lake	3.29	254	Pn	Pn	15 55 17.7	-1.7
YHL				IAML		15 56 18.2	
	comp=N,18nm,0.7s						
YHL				IAML		15 56 22.2	
	comp=E,22nm,0.6s						
BOZ	Bozeman (W)	3.44	268	Pn	Pn	15 55 21.9	+0.5
BOZ				IAML		15 56 21.0	
	comp=E,14nm,2.6s						
PD31	Pinedale Array	3.68	214	Pn	Pn	15 55 25.0	+0.2
PDAR	Pinedale Array	3.68	214	Pn	Pn	15 55 24.8	0.0
PDAR	Pinedale Array	3.68	214	Pn	Pn	15 55 26.7	+1.9
	comp=E,1.4nm,0.3s,baz=39,slow=12,SNR=6.7						
PDAR				Pg	Pb	15 55 32.7	+0.3
	comp=E,1.3nm,0.3s,baz=41,slow=19,SNR=8.1						
PDAR				Lg	Lg	15 56 18.7	
	comp=E,2.6nm,0.3s,baz=28,slow=33,SNR=4.5						
	comp=E,0.4nm,0.3s						
BW06	Boulder Array	3.68	214	Pn	Pn	15 55 24.1	-0.7
LRM	Limekiln Ridge	4.00	272	Pn	Pn	15 55 28.4	-0.8
LYMT	Lyon Mountain	4.01	288	Pn	Pn	15 55 29.1	-0.1
DLMT	Dillon	4.14	266	Pn	Pn	15 55 30.5	-0.6
DLMT				IAML		15 56 29.9	
	comp=E,7.7nm,3.5s						
DLMT				IAML		15 56 49.2	
	comp=E,8.1nm,2.2s						
OVMT	Ovando	4.50	288	Pn	Pn	15 55 35.4	-0.5
BPMT	Black Pine Rid	4.70	280	Pn	Pn	15 55 38.6	-0.2
PV22	Blue Mesa, Par	7.46	193	Pn	Pn	15 56 15.5	-1.1
PV21	Cone Mtn., Par	7.46	194	Pn	Pn	15 56 16.1	-0.6
I56US	NEWPORT INFRAS	7.50	293	I	I	16 34 56.2	
	baz=105,slow=309,SNR=11						
PV07	Paradox Valley	7.53	192	Pn	Pn	15 56 17.3	-0.4
PV15	Paradox Valley	7.60	190	Pn	Pn	15 56 18.6	-0.1
PV04	Paradox Valley	7.61	193	Pn	Pn	15 56 18.4	-0.3
PV10	Paradox Valley	7.65	194	Pn	Pn	15 56 19.8	+0.4
PV14	Lion Creek, Pa	7.65	194	Pn	Pn	15 56 19.3	-0.1
PV20	West Nyswonger	7.67	193	Pn	Pn	15 56 18.7	-0.9
PV11	David Mesa, Pa	7.70	193	Pn	Pn	15 56 20.0	0.0
PV18	Skein Mesa, Pa	7.76	193	Pn	Pn	15 56 20.5	-0.2
PV02	Paradox Valley	7.77	192	Pn	Pn	15 56 20.3	-0.7
ULM	Lac du Bonnet	8.51	55	Pn	Pn	15 56 30.7	-0.1
	comp=E,0.3nm,0.3s,baz=241,slow=13,SNR=2.0						
ULM				Lg	Lg	15 58 47.8	
	comp=E,0.3nm,0.3s,baz=314,slow=22,SNR=1.9						
	comp=E,1.0nm,0.4s						

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*NOU **26** 16:03:18.9, 34°.73S×179°.78E, h297^{km}, ML4.3/13, South of Kermadec Islands*

*WEL **26** 16:03:33.4±0.6, 35°S±7°×17°9E±°, h229^{km}±10^{km}, M4.0/39, ML4.1/46, MLv4.0/39, Error ellipse: s-maj=11.2km s-min=7.2km az=124.7, confirmed*

ISC 26 16:03:31.4±3.5**, 35°.7S**±0°.2×**179°.1E**±0°.1**, h275^{km}**±12^{km}**, n136, σ1^{s}07**/164**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.00	199	P	Pn	16 04 16.1	+0.1
MXZ	Matakaoa Point	2.00	199	P	Pn	16 04 16.0	+0.1
MXZ				S	S	16 04 47.9	-3.4
WMGZ	Waiomatatini S	2.22	195	P	Pn	16 04 18.9	+1.1
HAZ	Te Kaha	2.35	207	P	Pn	16 04 18.5	-0.5
HAZ				S	S	16 04 53.7	-3.1
PKGZ	Pakihiroa	2.35	201	P	Pn	16 04 19.6	+0.6
PKGZ				S	S	16 04 57.3	+0.4
PUZ	Puketiti	2.50	196	P	Pn	16 04 21.2	+0.7
PUZ				S	S	16 04 59.0	-0.5
RUGZ	Raukumara Rang	2.57	207	P	Pn	16 04 20.9	-0.3
TWGZ	Tauwhareparae	2.67	200	P	Pn	16 04 23.4	+1.3
TWGZ				S	S	16 05 03.0	+0.5
CNGZ	Carnagh Statio	2.90	195	P	Pn	16 04 26.2	+1.8
TKGZ	Te Karaka	2.95	200	P	Pn	16 04 25.8	+1.0
MWZ	Matawai	2.95	205	P	Pn	16 04 25.5	+0.5
MWZ				S	S	16 05 07.2	-0.5
KUZ	Kuaotunu	2.96	248	P	Pn	16 04 21.1	-3.9
OPRZ	Ohinepanea	3.00	223	P	Pn	16 04 25.4	-0.1
MARZ	Manawahe	3.04	220	P	Pn	16 04 26.1	+0.3
URZ	Urewera	3.05	211	P	Pn	16 04 25.5	-0.4
URZ	Urewera	3.05	211	P	Pn	16 04 25.7	-0.2
TGRZ	Tauranga	3.09	228	P	Pn	16 04 26.2	-0.1
RAGZ	Rawiri	3.14	205	P	Pn	16 04 27.8	+0.9
RIGZ	Rimuhau	3.22	199	P	Pn	16 04 28.7	+1.0
TARZ	Mount Tarawera	3.31	219	P	Pn	16 04 30.5	+1.7
KMRZ	Kaimai	3.36	229	P	Pn	16 04 29.6	+0.4
MUGZ	Murupara	3.38	213	P	Pn	16 04 29.6	+0.1
PRGZ	Paritu Road	3.40	197	P	Pn	16 04 31.0	+1.4
RTZ	Ruatahuna	3.41	210	P	Pn	16 04 29.5	-0.3
SNGZ	Shannon Statio	3.42	204	P	Pn	16 04 30.9	+1.1
KNZ	Kokohu	3.54	199	P	Pn	16 04 32.0	+0.9
TOZ	Tahuroa Road	3.57	234	P	Pn	16 04 32.0	+0.5
MHGZ	Mahia Peninsul	3.61	195	P	Pn	16 04 33.7	+1.7
RAHZ	Arahi	3.63	206	P	Pn	16 04 33.1	+0.9
ALRZ	Allen Road	3.65	217	P	Pn	16 04 33.2	+0.8
MTHZ	Maungataniwha	3.67	209	P	Pn	16 04 33.1	+0.5
WHHZ	Waihua	3.72	203	P	Pn	16 04 34.8	+1.7
MRHZ	Matea Rd	3.83	214	P	Pn	16 04 34.7	+0.2
KUTZ	Kaahu Road	3.86	222	P	Pn	16 04 36.3	+1.5
NMHZ	Naumai	3.89	208	P	Pn	16 04 36.2	+1.0
NMHZ				S	S	16 05 26.3	+0.3
TLZ	Tolley Road	3.92	226	P	Pn	16 04 36.5	+1.1
ARHZ	Aropaoanui	3.97	205	P	Pn	16 04 37.3	+1.4
ARHZ				S	S	16 05 28.4	+1.0
WATZ	Wairara	4.07	221	P	Pn	16 04 38.5	+1.4
BKZ	Black Stump Fm	4.07	210	P	Pn	16 04 37.9	+0.7
BKZ	Black Stump Fm	4.07	210	P	Pn	16 04 37.6	+0.5
BKZ				S	S	16 05 28.2	-1.6
RATZ	Rangitukua	4.17	219	P	Pn	16 04 39.6	+1.4
RITZ	Rihia Road	4.21	217	P	Pn	16 04 39.9	+1.1
MCHZ	McNeill Hill	4.24	206	P	Pn	16 04 40.1	+1.1
MCHZ				S	S	16 05 34.2	+1.2
KATZ	Kakaramea	4.29	219	P	Pn	16 04 40.6	+0.9
CKHZ	Cape Kidnapper	4.30	202	P	Pn	16 04 40.4	+0.7
CKHZ				S	S	16 05 35.7	+1.3
KWHZ	Kaweka Forest	4.32	209	P	Pn	16 04 40.7	+0.7
KWHZ				S	S	16 05 33.6	-1.4
TMVZ	Te Maari	4.39	217	P	Pn	16 04 41.2	+0.3
TMVZ				S	S	16 05 36.8	+0.3
NTVZ	North Tongarir	4.39	218	P	Pn	16 04 41.9	+0.9
NTVZ				S	S	16 05 37.1	+0.6
ETVZ	East Tongariro	4.40	217	P	Pn	16 04 41.3	+0.3
KRVZ	Karewarewa	4.41	218	P	Pn	16 04 42.2	+1.1
HIZ	Hauiti	4.44	229	P	Pn	16 04 43.1	+1.7
HIZ	Hauiti	4.44	229	P	Pn	16 04 43.1	+1.7
OTVZ	Oturere	4.45	217	P	Pn	16 04 41.9	+0.3
OTVZ				S	S	16 05 37.3	-0.4
NNVZ	North Ngauruho	4.45	218	P	Pn	16 04 42.6	+1.0
WTVZ	West Tongariro	4.45	218	P	Pn	16 04 42.6	+1.0
SNVZ	South Ngauruho	4.48	217	P	Pn	16 04 42.3	+0.3
SNVZ				S	S	16 05 39.2	+0.8
KAHZ	Kahuranaki	4.49	203	P	Pn	16 04 43.2	+1.2
KAHZ				S	S	16 05 41.3	+2.9
NGZ	Ngauruhoe	4.49	218	P	Pn	16 04 42.9	+0.9
TWVZ	Taurewa	4.49	220	P	Pn	16 04 42.7	+0.6
KRHZ	Kereru	4.53	208	P	Pn	16 04 42.8	+0.3
KRHZ				S	S	16 05 38.2	-1.1
TUVZ	Tukino	4.53	217	P	Pn	16 04 43.1	+0.5
TUVZ				S	S	16 05 40.2	+0.7
COVZ	Chateau Observ	4.54	218	P	Pn	16 04 43.7	+1.1
OUZ	Omahuta	4.54	274	P	Pn	16 04 36.8	-5.8
OUZ	Omahuta	4.54	274	P	Pn	16 04 36.4	-6.2
FWVZ	Far West T-bar	4.57	217	P	Pn	16 04 43.2	+0.1
WHVZ	Whangaehu Hut	4.58	217	P	Pn	16 04 43.5	+0.3
MAVZ	Matarangi	4.58	217	P	Pn	16 04 43.7	+0.4
MOVZ	Moawhango	4.60	215	P	Pn	16 04 42.9	-0.4
MOVZ				S	S	16 05 39.3	-1.4
WNVZ	Wahianoa	4.61	217	P	Pn	16 04 43.7	+0.2
WNVZ				S	S	16 05 41.1	0.0

TRVZ	Turoa	4.61	217	P	Pn	16 04 44.1	+0.5
PKVZ	Pokaka	4.70	219	P	Pn	16 04 45.1	+0.6
PXZ	Pawanui	4.71	202	P	Pn	16 04 44.8	+0.3
PXZ				S	S	16 05 43.1	+0.1
MTVZ	Mangateitei	4.71	217	P	Pn	16 04 44.9	+0.2
MTVZ				S	S	16 05 46.3	+3.1
PNHZ	Pukenui	4.83	208	P	Pn	16 04 45.9	-0.1
PNHZ				S	S	16 05 44.0	-1.7
WPHZ	Waipukurau	4.88	205	P	Pn	16 04 46.2	-0.3
WPHZ				S	S	16 05 47.5	+0.9
VRZ	Vera Road	4.90	224	P	Pn	16 04 48.4	+1.6
PRHZ	Porangahau	5.00	203	P	Pn	16 04 49.0	+1.1
PRHZ				S	S	16 05 48.6	-0.5
TSZ	Takapari Road	5.05	209	P	Pn	16 04 48.5	-0.1
TSZ				S	S	16 05 48.4	-2.0
DVHZ	Dannevirke	5.18	206	P	Pn	16 04 50.1	0.0
DVHZ				S	S	16 05 49.9	-3.3
ANWZ	Angora Road	5.22	203	P	Pn	16 04 52.0	+1.5
ANWZ				S	S	16 05 54.5	+0.5
WAZ	Wanganui	5.24	218	P	Pn	16 04 51.0	+0.2
WAZ				S	S	16 05 54.0	-0.5
LREZ	Lake Rotokare	5.33	223	P	Pn	16 04 53.7	+1.8
NEZ	North Egmont	5.38	227	P	Pn	16 04 54.7	+2.1
PREZ	Palmer Road	5.39	226	P	Pn	16 04 54.7	+2.0
PKE	Pukeiti	5.40	228	P	Pn	16 04 54.9	+2.2
POWZ	Post Office Ro	5.41	208	P	Pn	16 04 53.4	+0.6
OHWZ	Ohakea	5.44	213	P	Pn	16 04 54.1	+0.9
OHWZ				S	S	16 05 57.8	-1.0
KHEZ	Kahui Hut	5.45	227	P	Pn	16 04 55.3	+2.0
KHEZ	Kahui Hut	5.45	227	P	Pn	16 04 55.4	+2.0
PRWZ	Pori Road	5.48	206	P	Pn	16 04 54.9	+1.2
BFZ	Birch Farm	5.50	204	P	Pn	16 04 54.3	+0.5
BFZ	Birch Farm	5.50	204	P	Pn	16 04 54.4	+0.5
TIWZ	Tintock	5.70	206	P	Pn	16 04 57.1	+0.7
MRZ	Mangatainoka R	5.71	208	P	Pn	16 04 56.0	-0.6
HOWZ	Holdsworth Sta	5.94	208	P	Pn	16 04 59.0	-0.3
TMWZ	Te Maipa	6.00	204	P	Pn	16 05 01.1	+1.1
OGWZ	Otaki Gorge	6.01	210	P	Pn	16 04 59.6	-0.5
KIW	Kapiti Island	6.16	211	P	Pn	16 05 01.0	-0.9
MTW	Mount Morrison	6.18	206	P	Pn	16 05 02.1	-0.1
CAW	Cannon Point	6.30	209	P	Pn	16 05 02.9	-0.8
TRWZ	Traveller	6.32	204	P	Pn	16 05 04.4	+0.4
PAWZ	Paruwai Farm	6.40	206	P	Pn	16 05 05.0	+0.1
MSWZ	Moikau Station	6.49	207	P	Pn	16 05 06.1	+0.1
DUWZ	D'Urville Isla	6.56	217	P	Pn	16 05 05.9	-1.0
SNZO	South Karori	6.62	210	P	Pn	16 05 07.1	-0.4
PLWZ	Palliser	6.63	206	P	Pn	16 05 07.6	-0.1
BHW	Baring Head	6.63	209	P	Pn	16 05 07.6	-0.1
TCW	Tory Channel	6.72	213	P	Pn	16 05 07.5	-1.2
TUWZ	Tuamarina	7.04	214	P	Pn	16 05 11.8	-1.0
TKNZ	Takaka Hill	7.22	220	P	Pn	16 05 13.9	-1.2
BSWZ	Blackbirch Sta	7.30	213	P	Pn	16 05 15.5	-0.5
QRZ	Quartz Range	7.31	223	P	Pn	16 05 15.7	-0.5
THZ	Tophouse	7.79	217	P	Pn	16 05 21.4	-0.8
KHZ	Kahutara	8.02	211	P	Pn	16 05 24.5	-0.4
KHZ	Kahutara	8.02	211	P	Pn	16 05 24.4	-0.4
GVZ	Greta Valley S	8.68	211	P	Pn	16 05 32.9	-0.3
LTZ	Lake Taylor	8.87	215	P	Pn	16 05 34.6	-1.0
AMCZ	Amberley	9.02	212	P	Pn	16 05 37.6	+0.3
INZ	Inchbonnie	9.23	218	P	Pn	16 05 39.2	-0.8
OKCZ	Okains Bay	9.30	208	P	Pn	16 05 41.3	+0.4
OXZ	Oxford	9.40	213	P	Pn	16 05 41.4	-0.8
MQZ	McQueen's Vall	9.45	210	P	Pn	16 05 41.8	-0.9
RACZ	Rakaia	9.68	212	P	Pn	16 05 44.7	-0.9
MHCZ	Mount Hutt	9.78	214	P	Pn	16 05 46.6	-0.3
WACZ	Wakanui South	9.98	212	P	Pn	16 05 49.7	+0.3
RPZ	Rata Peaks	10.16	215	P	Pn	16 05 51.6	0.0
RPZ	Rata Peaks	10.16	215	P	Pn	16 05 51.4	-0.1
GCSZ	Gaunt Creek Bo	10.22	219	P	Pn	16 05 52.2	-0.1
ARCZ	Arundel	10.28	214	P	Pn	16 05 53.2	+0.1
FOZ	Fox Glacier	10.64	220	P	Pn	16 05 56.9	-0.6
TMZ	Timaru	10.70	213	P	Pn	16 05 58.3	0.0
LBZ	Lake Benmore	11.08	215	P	Pn	16 06 02.9	-0.1
ODZ	Otahua Downs	11.38	212	P	Pn	16 06 08.3	+1.7
ODZ	Otahua Downs	11.38	212	P	Pn	16 06 07.8	+1.2
JCZ	Jackson Bay	11.55	220	P	Pn	16 06 09.6	+0.7
JCZ	Jackson Bay	11.55	220	P	Pn	16 06 08.6	-0.3

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*WEL **26** 16:10:24.2±1.2, 33°S±7°×18°0E±1°6, h12^{km}, M4.5/12, mB5.2/7, ML4.3/15, MLv4.4/12, Mw(mB)4.5/7, Error ellipse: s-maj=20.8km s-min=9.1km az=97.3, confirmed*

*NOU **26** 16:10:29.5, 34°.16S×179°.91W, h321^{km}, MLv4.3/15, South of Kermadec Islands*

ISC 26 16:10:29.4±3.7, **33°.9S**±0°.2×**179°.7E**±0°.2, **h300^{km}, n62,** σ**1^{s}46**/69, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.85	197	P	Pn	16 11 33.1	-0.7
MXZ	Matakaoa Point	3.85	197	S	S	16 12 25.1	-0.3
MXZ	Matakaoa Point	3.85	197	P	Pn	16 11 33.0	-0.8
MXZ				S	S	16 12 27.4	+2.0
WMGZ	Waiomatatini S	4.07	195	P	Pn	16 11 35.9	-0.3
HAZ	Te Kaha	4.17	202	P	Pn	16 11 37.4	0.0
HAZ				S	S	16 12 33.5	+1.6
PKGZ	Pakihiroa	4.19	198	P	Pn	16 11 37.1	-0.5
PUZ	Puketiti	4.34	196	P	Pn	16 11 38.4	-0.9
PUZ				S	S	16 12 37.4	+2.0
KUZ	Kuaotunu	4.35	228	P	Pn	16 11 39.3	-0.1
RUGZ	Raukumara Rang	4.40	202	P	Pn	16 11 39.5	-0.6
RUGZ				S	S	16 12 37.0	+0.2
TWGZ	Tauwhareparae	4.51	198	P	Pn	16 11 42.3	+1.0
TWGZ				S	S	16 12 43.1	+4.2
OPRZ	Ohinepanea	4.72	212	P	Pn	16 11 43.3	-0.2
CNGZ	Carnagh Statio	4.75	195	P	Pn	16 11 43.8	-0.1
MWZ	Matawai	4.79	201	P	Pn	16 11 43.4	-1.0
MWZ				S	S	16 12 46.5	+2.0
TKGZ	Te Karaka	4.79	198	P	Pn	16 11 43.2	-1.2
URZ	Urewera	4.86	205	P	Pn	16 11 44.9	-0.2
URZ	Urewera	4.86	205	S	S	16 12 46.6	+0.7
URZ	Urewera	4.86	205	P	Pn	16 11 44.3	-0.8
URZ				S	S	16 12 48.8	+2.8
WCZ	Waipu Caves	4.88	244	P	Pn	16 11 43.4	-2.1
MKAZ	Moumakai	4.92	228	P	Pn	16 11 46.3	+0.4
RAGZ	Rawiri	4.97	202	P	Pn	16 11 46.2	-0.3
TARZ	Mount Tarawera	5.07	210	P	Pn	16 11 49.9	+2.2
TOZ	Tahuroa Road	5.16	221	P	Pn	16 11 50.2	+1.6
MUGZ	Murupara	5.17	207	P	Pn	16 11 49.3	+0.5
RTZ	Ruatahuna	5.22	205	P	Pn	16 11 47.6	-1.8
PRGZ	Paritu Road	5.24	196	P	Pn	16 11 51.5	+1.8
SNGZ	Shannon Statio	5.25	201	P	Pn	16 11 49.2	-0.6
PRRZ	Plateau Road	5.34	210	P	Pn	16 11 51.5	+0.7
KNZ	Kokohu	5.39	197	P	Pn	16 11 51.9	+0.6
ALRZ	Allen Road	5.41	210	P	Pn	16 11 52.8	+1.1
RAHZ	Arahi	5.46	202	P	Pn	16 11 51.4	-0.8
MTHZ	Maungataniwha	5.48	204	P	Pn	16 11 52.2	-0.2
TLZ	Tolley Road	5.59	216	P	Pn	16 11 56.0	+2.3
MRHZ	Matea Rd	5.62	208	P	Pn	16 11 54.3	+0.2
NMHZ	Naumai	5.71	204	P	Pn	16 11 54.6	-0.6
BKZ	Black Stump Fm	5.88	205	P	Pn	16 11 56.1	-1.1
BKZ	Black Stump Fm	5.88	205	P	Pn	16 11 56.2	-1.1
HIZ	Hauiti	6.07	219	P	Pn	16 12 01.9	+2.4
HIZ	Hauiti	6.07	219	P	Pn	16 12 02.3	+2.9
NGZ	Ngauruhoe	6.24	211	P	Pn	16 12 02.4	+0.8
PWZ	Pawanui	6.55	200	P	Pn	16 12 05.3	+0.1
PXZ	Pawanui	6.55	200	P	Pn	16 12 05.2	+0.1
VRZ	Vera Road	6.59	216	P	Pn	16 12 07.0	+1.3
WAZ	Wanganui	6.99	212	P	Pn	16 12 10.4	-0.1
NEZ	North Egmont	7.03	219	P	Pn	16 12 13.5	+2.3
BFZ	Birch Farm	7.33	201	P	Pn	16 12 14.1	-0.5
BFZ	Birch Farm	7.33	201	S	S	16 13 39.1	-0.7
MRZ	Mangatainoka R	7.53	205	P	Pn	16 12 14.6	-2.4
SNZO	South Karori	8.42	207	P	Pn	16 12 26.1	-1.8
SNZO	South Karori	8.42	207	S	S	16 14 02.8	-1.4
NNZ	Nelson	8.89	213	P	Pn	16 12 32.1	-1.6
QRZ	Quartz Range	8.99	218	P	Pn	16 12 33.1	-1.9
QRZ	Quartz Range	8.99	218	S	S	16 14 17.4	+0.2
QRZ	Quartz Range	8.99	218	P	Pn	16 12 33.3	-1.7
THZ	Tophouse	9.54	213	P	Pn	16 12 41.1	-0.7
KHZ	Kahutara	9.81	208	P	Pn	16 12 43.4	-1.6
KHZ	Kahutara	9.81	208	S	S	16 14 33.2	-2.5
KHZ	Kahutara	9.81	208	P	Pn	16 12 44.1	-0.9
DSZ	Denniston Nort	10.04	216	P	Pn	16 12 46.5	-1.4
GVZ	Greta Valley S	10.48	208	P	Pn	16 12 51.9	-1.3
LTZ	Lake Taylor	10.64	211	P	Pn	16 12 53.5	-1.7
INZ	Inchbonnie	10.96	214	P	Pn	16 12 57.1	-2.1
ODZ	Otahua Downs	13.16	209	P	Pn	16 13 25.3	-0.4

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*DJA **26** 16:16:53.4±0.5, 8°S±7°×11°7E±°, h284^{km}±7^{km}, M4.1/11, mB5.0/1, mb4.2/3, MLv4.0/11, Mw(mB)4.4/1*

*IDC **26** 16:16:53.1±5.3, 7°.21S×117°.81E, h298^{km}±50^{km}, mb2.9/5, mbtmp3.6/7, Error ellipse: s-maj=91.7km s-min=18.4km az=61.0*

ISC 26 16:16:52.6±0.9, **7°.63S**±0°.09×**117°.45E**±0°.08, **h306^{km}, n18,** σ**2^{s}19**/21, **mb3.3**/4, **Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	1.23	165	P	Pn	16 17 33.5	-1.3
WBSI	Waikabubak, Su	2.77	136	P	Pn	16 17 44.8	-1.8
WBSI				S	S	16 18 25.1	-4.7
BSSI	Bau Bau, Buton	3.36	64	P	Pn	16 17 52.9	+0.5
JAGI	Jajag, Banyuwa	3.37	255	P	Pn	16 17 51.9	-0.7
WSI	Waingapu	3.47	126	P	Pn	16 17 51.9	-1.6
BASI	Baing, Sumba	4.02	130	P	Pn	16 17 58.7	-0.7
GMJI	Gumukmas	4.02	261	P	Pn	16 17 58.6	-0.8
BNSI	Bone	4.16	40	P	Pn	16 18 01.7	+0.8
EDFI	Ende, Flores	4.34	105	P	Pn	16 18 02.3	-0.8
PCJI	Pacitan	6.24	264	P	Pn	16 18 24.3	-0.7
	71nm,1.1s						
WOJI	Wonogiri, Jawa	6.47	268	P	Pn	16 18 28.0	+0.2
BATI	Baumata	6.65	113	P	Pn	16 18 29.6	-0.3
	5.7nm,0.5s,baz=260,slow=23,SNR=1.3						
BATI				S	S	16 19 44.7	-3.9
	17nm,0.4s,baz=206,slow=17,SNR=8.8						
FITZ	Fitzroy Crossi	13.11	143	P	P	16 19 51.0	+2.5
	1.5nm,0.7s,baz=331,slow=13,SNR=1.3						
FITZ				S	S	16 22 18.4	+5.0
	1.5nm,0.5s,baz=222,slow=20,SNR=6.9						
WRA	Warramunga Arr	20.44	128	P	P	16 21 08.5	+0.7
	0.4nm,0.4s,baz=306,slow=11,SNR=8.5						
	0.4nm,0.4s						
ASAR	Alice Springs	22.43	137	P	P	16 21 28.4	+2.1
	0.3nm,0.5s,baz=311,slow=9.2,SNR=9.4						
	0.3nm,0.5s						
SONM	Songino Array	56.08	351	P	P	16 26 00.4	-0.2
	1.1nm,0.6s,baz=174,slow=7.7,SNR=4.4						
	1.1nm,0.6s						
MKAR	Makanchi Array	62.55	334	P	P	16 26 44.0	-0.5
	0.3nm,0.4s,baz=147,slow=7.7,SNR=5.4						
	0.3nm,0.4s						
ZALV	Zalesovo Beam	67.23	340	P	P	16 27 13.2	-1.1
	0.5nm,0.4s,baz=150,slow=6.0,SNR=2.5						
	0.5nm,0.4s						

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*IDC **26** 16:31:01.1±41.0, 23°.12S×179°.84W, h588^{km}±416^{km}, mb3.2/5, mbtmp4.2/5, Error ellipse: s-maj=302.8km s-min=53.7km az=52.0*

ISC 26 16:31:04.6±2.1, **23°.7S**±0°.2×**180°.0E**±0°.2, **h600^{km}, n36,** σ**1^{s}64**/42, **mb4.0**/5, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	5.84	161	S	S	16 34 07.3	+1.6
HAZ	Te Kaha	14.13	187	P	P	16 34 02.4	-2.1
HAZ				S	S	16 36 30.2	-1.4
PKGZ	Pakihiroa	14.21	186	P	P	16 34 06.1	+0.8
PKGZ				S	S	16 36 32.2	-0.9
RUGZ	Raukumara Rang	14.35	187	P	P	16 34 05.8	-1.0
TOZ	Tahuroa Road	14.50	194	P	P	16 34 09.3	+1.4
TWGZ	Tauwhareparae	14.53	186	P	P	16 34 05.9	-2.4
TWGZ				S	S	16 36 39.9	+1.6
URZ	Urewera	14.71	189	P	P	16 34 07.1	-2.8
URZ				S	S	16 36 39.2	-2.0
MWZ	Matawai	14.73	188	P	P	16 34 09.0	-1.1
MWZ				S	S	16 36 41.3	-0.3
TLZ	Tolley Road	15.06	193	P	P	16 34 13.9	+0.8
HIZ	Hauiti	15.39	195	P	P	16 34 20.1	+4.0
BKZ	Black Stump Fm	15.70	190	P	P	16 34 13.0	-6.0
BKZ				S	S	16 36 55.0	-2.5
NTVZ	North Tongarir	15.78	192	P	P	16 34 20.0	+0.2
TMVZ	Te Maari	15.79	192	P	P	16 34 19.6	-0.3
ETVZ	East Tongariro	15.80	192	P	P	16 34 20.3	+0.2
OTVZ	Oturere	15.84	192	P	P	16 34 19.3	-1.1
NGZ	Ngauruhoe	15.87	192	P	P	16 34 21.8	+1.2
SNVZ	South Ngauruho	15.87	192	P	P	16 34 20.4	-0.2
SNVZ				S	S	16 37 03.5	+3.0
FWVZ	Far West T-bar	15.95	193	P	P	16 34 21.0	-0.5
VRZ	Vera Road	16.00	195	P	P	16 34 22.8	+1.1
WNVZ	Wahianoa	16.01	192	P	P	16 34 20.4	-1.6
KAHZ	Kahuranaki	16.26	188	P	P	16 34 21.9	-2.2
PNHZ	Pukenui	16.47	190	P	P	16 34 24.2	-1.9
TSZ	Takapari Road	16.66	191	P	P	16 34 26.0	-1.7
BFZ	Birch Farm	17.22	190	P	P	16 34 31.4	-1.4
MRZ	Mangatainoka R	17.31	191	P	P	16 34 30.3	-3.3
QRZ	Quartz Range	18.18	198	P	P	16 34 41.7	+0.1
THZ	Tophouse	18.95	196	P	P	16 34 48.3	-0.3
KHZ	Kahutara	19.41	194	P	P	16 34 53.4	+0.6
GVZ	Greta Valley S	20.05	195	P	P	16 35 00.0	+1.5
LTZ	Lake Taylor	20.07	197	P	P	16 34 59.4	+0.7
OXZ	Oxford	20.64	197	P	P	16 35 03.8	0.0
STKA	Stephens Creek	34.76	248	P	P	16 37 06.6	+0.2
	1.6nm,0.4s,baz=94,slow=11,SNR=4.2						
	1.6nm,0.4s						
ASAR	Alice Springs	42.02	260	P	P	16 38 04.8	-0.5
	4.0nm,0.8s,baz=100,slow=7.0,SNR=45						
	4.0nm,0.8s						
WRA	Warramunga Arr	42.38	266	P	P	16 38 06.9	-1.1
	4.1nm,0.6s,baz=103,slow=7.9,SNR=60						
	4.1nm,0.6s						
QSPA	South Pole Qui	66.38	180	P	P	16 40 56.5	+1.5
	1.3nm,0.6s,baz=42,slow=0.7,SNR=9.6						
	1.3nm,0.6s						
SNAA	Sanae	84.87	179	P	P	16 42 36.4	-0.3
	0.7nm,0.7s,baz=212,slow=11,SNR=5.1						
	0.7nm,0.7s						

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*UCR **26** 16:47:57.4±1.3, 8°.32N×82°.81W, h25^{km}±4^{km}, MW3.5*

ISC 26 16:47:57.0±1.3, **8°.35N**±0°.07×**82°.82W**±0°.03, **h10^{km}, n31,** σ**1^{s}20**/45, **5C-2D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NELY	Ciudad Neily	0.33	337⇑	eP	Pg	16 48 04.9	+1.4
NELY				eS	Sb	16 48 11.3	+1.0
DVD	David	0.37	76	eS	Sg	16 48 09.7	+0.4
CSTBL	De las Acacias	0.38	80	eP	Pb	16 48 05.8	+0.1
CSTBL				eS	Sb	16 48 12.5	+0.8
FITO	Golfito	0.43	310	eP	Pg	16 48 05.7	+0.2
FITO				eS	Sg	16 48 12.4	+1.2
CLLRA	Cordillera,	0.44	27⇑	eP	Pg	16 48 06.8	+1.1
CLLRA				eS	Sb	16 48 14.1	+0.4
EDAD	Golfito	0.46	311	eP	Pg	16 48 06.3	+0.3
EDAD				eS	Sg	16 48 13.3	+1.2
BRU2	Volcan	0.46	16	eP	Pg	16 48 07.0	+1.0
BRU2				eS	Sb	16 48 14.4	+0.1
BRU2	Volcan	0.46	16	eS	Sg	16 48 13.6	+1.3
SCLRA	Santa Clara, W	0.49	4	eP	Pg	16 48 07.7	+1.2
VITO	San Vito	0.49	342	eP	Pg	16 48 07.8	+1.2
VITO				eS	Sb	16 48 16.2	+1.1
BC3P	Paso Ancho	0.51	24	eS	Sg	16 48 12.4	-1.3
BQTLY	Boquete Panama	0.54	41	eP	Pg	16 48 08.6	+1.0
ALCO	Alturas Coton,	0.60	358⇑	eP	Pg	16 48 08.7	0.0
ALCO				eS	Sg	16 48 18.3	+1.6
EDP2	Potrero Grande	0.76	332⇑	iP	Pg	16 48 11.6	+0.1
EDP2				eS	Sg	16 48 22.7	+1.2
PBNVO	Pueblo Nuevo,	0.82	49	eP	Pg	16 48 11.8	-1.1
PBNVO				eS	Sg	16 48 22.6	-0.9
RBALA	Bur	0.84	51⇓	eP	Pg	16 48 12.5	-0.7
RBALA				eS	Sg	16 48 23.8	-0.5
DRK0	Durika	1.00	335⇑	eP	Pg	16 48 14.8	-1.6
DRK0				eS	Sg	16 48 28.1	-1.3
DRK0	Durika	1.00	335	eP	Pg	16 48 14.8	-1.6
DRK0				eS	Sg	16 48 27.8	-1.7
EDPE	Pejibaye, P	1.10	317⇓	eP	Pb	16 48 16.6	-1.5
EDPE				eS	Sg	16 48 32.1	-0.3
SAJE	San Jernim	1.21	326	eP	Pn	16 48 17.6	-2.5
PIEC	Cerro El Cedra	1.70	318	eP	Pn	16 48 25.6	-1.3
PISJ	San Jernim	1.82	315	eP	Pn	16 48 27.8	-0.7
LCR2	La Lucha 2	1.82	320	eP	Pn	16 48 27.8	-0.8
ABE2	San Pablo	1.82	318	eP	Pn	16 48 28.7	+0.1
VTCV	VTCV, Calle Va	1.86	331	eP	Pn	16 48 28.0	-1.1
PICV	PH. Pirrs	1.86	313	eP	Pn	16 48 28.9	-0.1
PAR1A	Puntarenas Pro	1.89	311	eP	Pn	16 48 28.8	-0.4
VICA	Volcano Irazu	1.92	328	eP	Pn	16 48 30.0	-0.1
CASO	Castillo	2.81	318	eP	Pn	16 48 44.1	+2.1
ARE1	Arenal 1	2.82	318	eP	Pn	16 48 44.4	+2.3
VARE2	V. Arenal	2.82	318	eP	Pn	16 48 44.2	+2.0

IDC 26 17:09:59.2±4.3, **47°.75N**×**93°.51W, h0^{km}, mbtmp2.4**/1, **ML1.0**/1, **Error ellipse: s-maj=65.3km s-min=26.3km az=59.0, Minnesota**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULM	Lac du Bonnet	2.95	329	Pn	Pn	17 10 46.6	-0.7
	0.4nm,0.3s,baz=148,slow=16,SNR=4.1						
ULM				Sn	Sn	17 11 19.8	-3.7
	0.5nm,0.3s,baz=132,slow=14,SNR=4.8						
ULM				Lg	Lg	17 11 30.8	
	1.5nm,0.3s,baz=246,slow=22,SNR=12						
	1.3nm,0.4s						
I10CA	LAC DU BONNET	2.96	327	I	I	17 29 55.0	
	0.2nm,1.1s,baz=145,slow=320,SNR=25						
I56US	NEWPORT INFRAS	15.80	281	I	I	18 48 00.0	
	baz=84,slow=315,SNR=2.2						

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*NEIC **26** 17:24:21.9±1.9, 18°.2S±0°.1×178°.4W±0°.2, h493^{km}±11^{km}, mb4.3/22, Error ellipse: s-maj=32.3km s-min=8.4km az=56.0*

*IDC **26** 17:24:21.6±1.2, 17°.90S×178°.40W, h502^{km}±10^{km}, mb3.2/9, mbtmp4.0/10, Error ellipse: s-maj=19.5km s-min=16.3km az=145.0*

ISC 26 17:24:20.8±0.7, **18°.08S**±0°.10×**178°.3W**±0°.1, **h500^{km}, n43,** σ**1^{s}56**/45, **mb4.0**/18, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.48	275	P	P	17 25 34.1	-1.2
MSVF	Nonsavu	3.48	275	P	P	17 25 34.7	-0.6
	14nm,0.5s,baz=116,slow=13,SNR=14						
MSVF				S	S	17 26 36.6	+0.8
	19nm,0.9s,baz=86,slow=19,SNR=7.8						
FUTU	Fugatoga	3.76	3	P	P	17 25 32.1	-5.3
TOZ	Tahuroa Road	20.31	194	P	P	17 28 23.2	+1.1
TOZ				IAmb	IAmb	17 28 26.4	
	comp=Z,9.0nm,0.7s						
URZ	Urewera	20.50	190	P	P	17 28 21.4	-2.4
	comp=Z,8.7nm,0.7s,baz=356,slow=3.4,SNR=6.1						
URZ				S	S	17 31 34.2	-6.8
	comp=Z,2.3nm,0.7s,baz=267,slow=12,SNR=1.0						
RTZ	Ruatahuna	20.87	190	P	P	17 28 25.4	-1.8
RTZ				IAmb	IAmb	17 28 35.4	
	comp=Z,17nm,1.2s						
BKZ	Black Stump Fm	21.49	191	P	P	17 28 33.0	+0.2
MRZ	Mangatainoka R	23.11	192	P	P	17 28 45.6	-1.7
TKNZ	Takaka Hill	24.07	196	P	P	17 28 55.2	-0.7
MLZ	Mavora Lakes	29.46	200	P	P	17 29 44.7	+1.4
WHZ	Wether Hill Ro	29.99	199	P	P	17 29 48.1	+0.3
CTAO	Charters Tower	33.51	261	P	P	17 30 17.3	-1.0
CTAO				IAmb	IAmb	17 30 45.4	
	comp=Z,25nm,1.4s						
TOO	Toolangi	37.13	231	P	P	17 30 50.0	+1.6
COEN	Coen	37.20	271	P	P	17 30 49.3	+0.1
COEN				IAmb	IAmb	17 31 11.5	
	comp=Z,16nm,1.1s						
MANU	Manus Island	37.24	291	P	P	17 30 50.4	+0.8
MANU				IAmb	IAmb	17 30 57.2	
	comp=Z,24nm,1.2s						
STKA	Stephens Creek	38.62	241	P	P	17 31 01.6	+0.9
	comp=Z,2.4nm,0.7s,baz=90,slow=10,SNR=3.3						
	comp=Z,2.4nm,0.7s						
BBOO	Buckleboo	43.40	241	P	P	17 31 39.4	+0.7
WR8	Warramunga Arr	44.54	260	P	P	17 31 47.2	-0.5
WB0	Warramunga Arr	44.66	260	P	P	17 31 46.7	-1.9
WB0				IAmb	IAmb	17 32 29.5	
	comp=Z,13nm,1.4s						
WRA	Warramunga Arr	44.69	260	P	P	17 31 46.7	-2.2
WRA	Warramunga Arr	44.69	260	P	P	17 31 48.1	-0.8
	comp=Z,0.7nm,0.3s,baz=95,slow=7.4,SNR=18						
	comp=Z,0.7nm,0.3s						
AS31	Alice Springs	44.83	254	P	P	17 31 50.1	+0.1
AS31				IAmb	IAmb	17 31 50.8	
	comp=Z,2.5nm,0.6s						
ASAR	Alice Springs	44.83	254	P	P	17 31 49.6	-0.4
ASAR	Alice Springs	44.83	254	P	P	17 31 50.2	+0.3
	comp=Z,7.6nm,0.6s,baz=93,slow=7.7,SNR=204						
ASAR				PcP	pP	17 33 22.5	+0.5
	comp=Z,0.5nm,0.5s,baz=88,slow=4.6,SNR=2.1						
ASAR				S	S	17 37 51.0	+0.2
	comp=Z,0.8nm,1.1s,baz=85,slow=15,SNR=5.1						
	comp=Z,7.6nm,0.6s						
MTN	Manton Dam	48.88	269	P	P	17 32 20.2	-0.5
MTN				IAmb	IAmb	17 32 21.4	
	comp=Z,9.2nm,0.8s						
FORT	Forrest	50.01	245	P	P	17 32 27.8	-1.1
FORT				IAmb	IAmb	17 32 31.4	
	comp=Z,27nm,1.4s						
KNRA	Kununurra	50.56	264	P	P	17 32 32.1	-0.9
KNRA				IAmb	IAmb	17 33 14.0	
	comp=Z,17nm,1.3s						
FITZ	Fitzroy Crossi	53.09	261	P	P	17 32 51.7	+0.4
VNDA	Vanda	60.28	185	P	P	17 33 41.6	+1.7
VNDA	Vanda	60.28	185	P	P	17 33 41.7	+1.9
	comp=Z,0.8nm,0.6s,baz=22,slow=7.7,SNR=4.0						
	comp=Z,0.8nm,0.6s						
MJAR	Matsushiro Arr	68.10	323	P	P	17 34 29.2	-1.1
	comp=Z,1.7nm,0.7s,baz=162,slow=6.3,SNR=6.0						
	comp=Z,1.7nm,0.7s						
QSPA	South Pole Qui	71.97	180	P	P	17 34 54.7	+1.7
QSPA				IAmb	IAmb	17 34 55.7	
	comp=Z,9.5nm,1.2s						
QSPA	South Pole Qui	71.97	180	P	P	17 34 54.8	+1.7
	comp=Z,3.4nm,0.8s,baz=70,slow=5.6,SNR=11						
	comp=Z,3.4nm,0.8s						
KSRS	Korea Array	74.89	318	P	P	17 35 11.0	+1.0
	comp=Z,0.5nm,0.7s,baz=121,slow=7.1,SNR=2.5						
	comp=Z,0.5nm,0.7s						
BELA	Belgrano 2	81.98	173	P	P	17 35 48.1	+0.6
BELA				IAmb	IAmb	17 35 50.2	
	comp=Z,2.9nm,0.7s						
TXAR	Lajitas Array	86.01	58	P	P	17 36 08.1	-0.2
	comp=Z,0.6nm,0.8s,baz=242,slow=5.2,SNR=5.9						
	comp=Z,0.6nm,0.8s						
ILAR	Eielson Array	86.04	13	P	P	17 36 06.0	-1.5
	comp=Z,0.2nm,0.6s,baz=208,slow=6.1,SNR=1.9						
	comp=Z,0.2nm,0.6s						
MKAR	Makanchi Array	109.32	314	PKiKP	PKiKP	17 41 52.7	-1.1
	comp=Z,0.1nm,0.5s,baz=90,slow=1.9,SNR=1.8						
BVAR	Borovoye Array	117.04	321	PKP	PKPdf	17 42 07.6	-0.7
	comp=Z,0.6nm,0.5s,baz=57,slow=5.3,SNR=4.4						
FINES	FINESS Array B	133.38	344	SKP		17 45 25.5	
	comp=Z,0.4nm,0.5s,baz=29,slow=3.2,SNR=4.4						
BRTR	Keskin Array B	144.97	315	PKP	PKPdf	17 43 01.1	0.0
	comp=Z,0.9nm,0.8s,baz=157,slow=3.8,SNR=5.0						
MMAI	Mount Meron Ar	146.31	303	PKPbc	PKPbc	17 43 06.5	+0.8
	comp=Z,0.5nm,0.3s,baz=83,slow=4.5,SNR=3.8						
GERES	GERESS Array B	147.80	345	PKPbc	PKPbc	17 43 09.3	+0.2
	comp=Z,0.2nm,0.4s,baz=22,slow=1.1,SNR=4.3						

IDC 26 17:29:37.5±4.7, **11°.56S**×**112°.78E, h0^{km}, mb3.3**/4, **mbtmp3.3**/4, **Error ellipse: s-maj=239.0km s-min=25.5km az=44.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.34	115	P	P	17 34 37.2	0.0
	0.3nm,0.5s,baz=291,slow=9.8,SNR=4.6						
	0.3nm,0.5s						
ASAR	Alice Springs	23.42	124	P	P	17 34 48.4	-0.1
	0.2nm,0.5s,baz=301,slow=9.6,SNR=4.4						
	0.2nm,0.5s						
H08S2	Diego Garcia H	39.89	272	T	T	18 20 34.3	
	baz=96						
H08S3	Diego Garcia H	39.90	272	T	T	18 20 43.7	
	baz=96						
H08S1	Diego Carcia H	39.91	272	T	T	18 20 49.5	
	baz=96						
MKAR	Makanchi Array	64.18	337	P	P	17 40 13.5	-0.4
	0.2nm,0.4s,baz=148,slow=8.3,SNR=2.6						
	0.2nm,0.4s						
ZALV	Zalesovo Beam	69.44	343	P	P	17 40 47.9	+0.5
	0.5nm,0.5s,baz=134,slow=8.3,SNR=1.9						
	0.5nm,0.5s						

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*UCR **26** 17:34:38.5±1.4, 8°.95N×83°.89W, h24^{km}±8^{km}, MW3.5*

*CATAC **26** 17:34:40.6±0.4, 9°N±3°×8°4W±°, h9^{km}±2^{km}, M3.1/8, MLv3.1/8, Error ellipse: s-maj=7.9km s-min=3.5km az=44.7, confirmed*

ISC 26 17:34:38.8±1.3, **9°.04N**±0°.05×**83°.85W**±0°.03, **h12^{km}**±11^{km}, **n42,** σ**0^{s}84**/45, **Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCHAL	**Ojochal**	**0.21**	**73**	P	**Pb**	**17 34 44.7**	**0.0**
OCHAL				S	**Sb**	**17 34 48.2**	**+1.7**
PIEC	**Cerro El Cedra**	**0.59**	**350**	*e*P	**Pg**	**17 34 50.6**	**+0.1**
DRK0	**Durika**	**0.64**	**69**	S	**Sg**	**17 34 58.4**	**-1.3**
DRK0	**Durika**	**0.64**	**69**	P	**Pg**	**17 34 51.5**	**+0.2**
RAZU	**San Marcos de**	**0.64**	**345**	*e*P	**Pg**	**17 34 52.1**	**+0.7**
PISJ	**San Jernim**	**0.65**	**336**	*e*P	**Pg**	**17 34 51.6**	**+0.1**
PICV	**PH. Pirrs**	**0.68**	**330**	*e*P	**Pg**	**17 34 52.1**	**+0.1**
PAR1A	**Puntarenas Pro**	**0.68**	**324**	*e*P	**Pg**	**17 34 52.2**	**+0.1**
ABE2	**San Pablo**	**0.69**	**343**	*e*P	**Pg**	**17 34 52.8**	**+0.4**
ABE2				*e*S	**Sb**	**17 35 03.7**	**+1.0**
LCR2	**La Lucha 2**	**0.72**	**348**	*e*P	**Pg**	**17 34 52.6**	**-0.2**
LCR2				*e*S	**Sb**	**17 35 03.4**	**+0.1**
LCR2	**La Lucha 2**	**0.72**	**348**	P	**Pg**	**17 34 52.5**	**-0.2**
LCR2	**La Lucha 2**	**0.72**	**348**	S	**Sg**	**17 35 02.7**	**+0.4**
REPA	**Paraso**	**0.79**	**359**	*e*P	**Pg**	**17 34 54.1**	**0.0**
ACOS	**Acosta**	**0.81**	**338**	*e*P	**Pb**	**17 34 53.9**	**-1.2**
LUJA	**Lujan**	**0.91**	**346**	*e*P	**Pg**	**17 34 57.3**	**+0.8**
VICA	**Volcano Irazu**	**0.94**	**0**	*e*P	**Pb**	**17 34 56.9**	**-0.5**
VTCV	**VTCV, Calle Va**	**0.95**	**7**	*e*P	**Pb**	**17 34 57.1**	**-0.3**
VTLA	**Turrialba Volc**	**0.96**	**4**	*e*P	**Pb**	**17 34 57.4**	**-0.3**
CVTQ	**Turrialba Volc**	**0.96**	**5**	*e*P	**Pb**	**17 34 57.4**	**-0.3**
VTR0	**Volcan Turrial**	**0.98**	**5**	*e*P	**Pb**	**17 34 57.7**	**-0.3**
HDC	**Heredia**	**0.99**	**345**	*e*P	**Pn**	**17 34 59.1**	**+0.4**
RESJ	**San Isidro (Tu**	**1.01**	**12**	*e*P	**Pb**	**17 34 58.2**	**-0.1**
ALCO	**Alturas Coton,**	**1.01**	**95**	*e*P	**Pb**	**17 34 57.7**	**-0.7**
CDITO	**Canoas**	**1.07**	**115**	P	**Pn**	**17 34 59.6**	**-0.1**
CDITO	**Canoas**	**1.07**	**115**	S	**Sn**	**17 35 14.7**	**+0.2**
ATEO	**Atenas**	**1.07**	**331**	*e*P	**Pb**	**17 34 58.6**	**-0.8**
TCS1	**Tacares**	**1.09**	**336**	*e*P	**Pb**	**17 35 00.1**	**+0.3**
RVLA	**Villa Bonita**	**1.10**	**14**	*e*P	**Pb**	**17 34 59.7**	**-0.1**
VBV1	**V. Barva**	**1.10**	**347**	*e*P	**Pb**	**17 34 59.3**	**-0.7**
BRU2	**Volcan**	**1.17**	**102**	S	**Sg**	**17 35 17.0**	**+0.4**
BRU2	**Volcan**	**1.17**	**102**	P	**Pg**	**17 35 02.4**	**+1.0**
CBL1	**Cabuya**	**1.34**	**294**	*e*P	**Pn**	**17 35 01.1**	**-2.3**
JCR1	**Jicaral**	**1.48**	**303**	*e*P	**Pn**	**17 35 03.3**	**-2.2**
TRT2	**Tortugero**	**1.52**	**4**	P	**Pn**	**17 35 05.8**	**0.0**
TRT2	**Tortugero**	**1.52**	**4**	S	**Sb**	**17 35 25.5**	**-0.6**
SOCE	**Pocosol**	**1.54**	**331**	*e*P	**Pn**	**17 35 06.4**	**+0.2**
SOCE	**Pocosol**	**1.54**	**331**	S	**Sb**	**17 35 27.4**	**+0.7**
SOCE	**Pocosol**	**1.54**	**331**	P	**Pn**	**17 35 06.5**	**+0.4**
COVE	**Coope Vega, Sa**	**1.76**	**342**	P	**Pn**	**17 35 09.9**	**+0.7**
COVE	**Coope Vega, Sa**	**1.76**	**342**	S	**Sb**	**17 35 33.2**	**+0.1**
INDI	**Punta indio, G**	**1.83**	**297**	P	**Pb**	**17 35 13.1**	**+0.9**
INDI	**Punta indio, G**	**1.83**	**297**	S	**Sb**	**17 35 37.1**	**+2.0**

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*IDC **26** 17:40:32.6±0.7, 56°.37N×163°.91E, h0^{km}, mb3.7/15, mbtmp3.8/18, ML4.1/2, MS2.9/8, Error ellipse: s-maj=24.1km s-min=13.4km az=159.0*

*KRSC **26** 17:40:34.1±1.1, 55°.97N×164°.06E, h15^{km}±20^{km}, Ml4.1*

ISC 26 17:40:34.7±0.5**, 56°.17N**±0°.06×**164°.19E**±0°.04**, h19**^{km}**, n62,** σ**1**^{s}**54**/62**, mb3.9**/16**, MS2.9**/5**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.76**	**273**	*e*P	**Pb**	**17 40 47.7**	**-1.7**
KBTR				*e*S	**Sb**	**17 40 58.1**	**-1.2**
KBG	**Krutoberegovo**	**0.83**	**276**	*e*P	**Pb**	**17 40 48.6**	**-1.9**
BKI	**Bering**	**1.40**	**133**	*e*P	**Pn**	**17 40 58.0**	**-1.2**
BKI				*e*S	**Sn**	**17 41 16.0**	**-1.1**
SMKR	**Semkarok**	**1.57**	**286**	*e*P	**Pn**	**17 41 00.9**	**-0.6**
SRKR	**Sorokina**	**1.75**	**287**	*e*P	**Pn**	**17 41 04.8**	**+0.8**
ZLN	**Zelenaya**	**1.90**	**267**	*e*P	**Pn**	**17 41 06.8**	**+0.7**
CIRR	**Tsirk**	**1.92**	**270**	*e*P	**Pn**	**17 41 06.7**	**+0.2**
BZGR	**Bezymyannyi-Gr**	**1.97**	**265**	*e*P	**Pn**	**17 41 07.4**	**+0.3**
KLY	**Klyuchi**	**1.98**	**276**	*e*P	**Pn**	**17 41 05.7**	**-1.3**
KRSR	**Krestovskiy**	**2.02**	**273**	*e*P	**Pn**	**17 41 07.7**	**-0.1**
BZWR	**Bezymyannyi-We**	**2.08**	**266**	*e*P	**Pn**	**17 41 09.8**	**+1.2**
MKZ	**Mys Kozlova**	**2.14**	**222**	*e*P	**Pn**	**17 41 08.6**	**-0.7**
MKZ				*e*S	**Sn**	**17 41 34.2**	**-1.1**
KIRR	**Kirishev**	**2.17**	**266**	*e*P	**Pn**	**17 41 10.9**	**+1.1**
KPT	**Kopyto**	**2.23**	**266**	*e*P	**Pn**	**17 41 11.4**	**+0.8**
KMNR	**Kamenistaya**	**2.26**	**261**	*e*P	**Pn**	**17 41 12.5**	**+1.4**
TUMD	**Tumrok D**	**2.35**	**247**	*e*P	**Pn**	**17 41 12.6**	**+0.3**
TUMD				*e*S	**Sn**	**17 41 39.5**	**-1.1**
KOZ	**Kozyrevsk**	**2.42**	**269**	*e*P	**Pn**	**17 41 14.7**	**+1.5**
SRDR	**Sredinnyy**	**2.50**	**275**	*e*P	**Pn**	**17 41 15.5**	**+1.2**
ESO	**Esso**	**3.09**	**268**	*e*P	**Pn**	**17 41 24.2**	**+1.9**
SPN	**Mys Shipunski**	**3.91**	**220**	*e*P	**Pn**	**17 41 32.9**	**-0.8**
SPN				*e*S	**Sn**	**17 42 15.4**	**-3.6**
NLC	**Nalytchevo**	**4.11**	**225**	*e*P	**Pn**	**17 41 37.1**	**+0.7**
NLC				*e*S	**Sn**	**17 42 23.8**	**-0.2**
SDLR	**Sedlovina**	**4.22**	**229**	*e*P	**Pn**	**17 41 39.0**	**+0.9**
KRX	**Arik**	**4.27**	**231**	*e*P	**Pn**	**17 41 41.4**	**+2.8**
SMAR	**Somma**	**4.27**	**229**	*e*P	**Pn**	**17 41 40.2**	**+1.4**
AVH	**Avacha**	**4.29**	**230**	*e*P	**Pn**	**17 41 40.5**	**+1.5**
UGLR	**Uglovaya**	**4.30**	**229**	*e*P	**Pn**	**17 41 39.0**	**-0.1**
KOK	**Koryaka**	**4.32**	**230**	*e*P	**Pn**	**17 41 40.6**	**+1.3**
DALK	**Dalny**	**4.46**	**227**	*e*P	**Pn**	**17 41 42.0**	**+0.9**
PET	**Petropavlovsk**	**4.50**	**228**	*e*P	**Pn**	**17 41 42.4**	**+0.7**
PETK	**Petropavlovsk-**	**4.86**	**234**	Pn	**Pn**	**17 41 47.1**	**+0.5**
	3.3nm,0.4s,baz=74,slow=19,SNR=22						
PETK				Sn	**Sn**	**17 42 46.6**	**+4.2**
	0.5nm,0.3s,baz=37,slow=29,SNR=4.8						
PETK				LR	LR	17 44 01.0	
	comp=Z,103nm,18.5s,baz=51,slow=43						
KRMR	**Karymshinskiy**	**4.86**	**229**	*e*P	**Pn**	**17 41 49.1**	**+2.4**
RUS	**Russkaya**	**5.00**	**224**	*e*P	**Pn**	**17 41 49.6**	**+1.0**
GRL	**Gorelyy**	**5.09**	**227**	*e*P	**Pn**	**17 41 52.1**	**+2.2**
MTVR	**Mutnovka**	**5.10**	**226**	*e*P	**Pn**	**17 41 51.8**	**+1.7**
APC	**Apacha**	**5.22**	**234**	*e*P	**Pn**	**17 41 55.1**	**+3.4**
ASAK	**Asacha**	**5.29**	**227**	*e*P	**Pn**	**17 41 54.7**	**+2.1**
SEY	**Seymchan**	**9.04**	**323**	LR	LR	17 45 57.1	
	comp=Z,28nm,21.9s,baz=178,slow=37						
ASAJ	**Asahikawa**	**18.26**	**238**	P	**Pn**	**17 44 47.1**	**+0.4**
	0.2nm,0.3s,baz=299,slow=32,SNR=2.4						
ASAJ				LR	LR	17 52 25.9	
	comp=Z,53nm,19.9s,baz=53,slow=39 7.1nm,0.9s						
YAK	**Yakutsk**	**18.49**	**303**	P	**P**	**17 44 47.8**	**-1.4**
	2.0nm,0.3s,baz=54,slow=0.8,SNR=6.0 9.2nm,0.5s						
TIXI	**Tiksi**	**21.43**	**330**	P	**P**	**17 45 21.9**	**+0.8**
	3.6nm,0.8s,baz=118,slow=11,SNR=21						
TIXI				LR	LR	17 53 32.6	
	comp=Z,22nm,20.4s,baz=198,slow=37						
KDAK	**Kodiak Island**	**23.32**	**68**	LR	LR	17 53 31.6	
	comp=Z,40nm,19.5s,baz=192,slow=33						
USRK	**Ussuriysk Ar.**	**23.60**	**253**	LR	LR	17 54 12.0	
	comp=Z,31nm,20.1s,baz=166,slow=35						
ILAR	**Eielson Array**	**24.98**	**50**	P	**P**	**17 45 57.5**	**+0.9**
	0.8nm,0.8s,baz=273,slow=8.1,SNR=6.7 0.8nm,0.8s						
MJAR	**Matsushiro Arr**	**26.32**	**233**	P	**P**	**17 46 10.0**	**+1.0**
	2.8nm,0.9s,baz=30,slow=9.0,SNR=5.8						
MJAR				LR	LR	17 58 00.6	
	comp=Z,32nm,18.4s,baz=95,slow=40 2.8nm,0.9s						
NRIK	**Noril'sk**	**34.83**	**323**	LR	LR	18 01 50.9	
	comp=Z,27nm,19.5s,baz=110,slow=37						
SONM	**Songino Array**	**35.57**	**281**	P	**P**	**17 47 30.1**	**-0.4**
	0.5nm,0.6s,baz=58,slow=5.6,SNR=3.9 0.5nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**36.44**	**176**	T	T	18 26 21.6	
	baz=357,slow=76,SNR=246						
H11N3	**WAKE ISLAND Hy**	**36.45**	**176**	T	T	18 26 31.5	
	baz=357,slow=76,SNR=155						
H11N1	**WAKE ISLAND Hy**	**36.46**	**176**	T	T	18 26 22.7	
	baz=357,slow=76,SNR=166						
YKA	**Yellowknife Ar**	**39.30**	**46**	P	**P**	**17 48 02.6**	**+0.9**
	1.0nm,0.8s,baz=298,slow=8.6,SNR=4.1 1.0nm,0.8s						
KURBB	**Kurchatov Arra**	**48.24**	**302**	P	**P**	**17 49 10.8**	**-2.9**
	0.2nm,0.4s,baz=58,slow=8.6,SNR=1.2 0.2nm,0.4s						
MKAR	**Makanchi Array**	**48.97**	**296**	P	**P**	**17 49 17.9**	**-1.5**
	0.2nm,0.5s,baz=62,slow=7.0,SNR=3.0 0.2nm,0.5s						
BVAR	**Borovoye Array**	**50.34**	**308**	P	**P**	**17 49 29.1**	**-0.7**
	0.9nm,0.7s,baz=61,slow=12,SNR=3.6 0.9nm,0.7s						
NVAR	**Mina Array Bea**	**52.55**	**75**	P	**P**	**17 49 49.2**	**+2.4**
	0.7nm,0.7s,baz=307,slow=5.4,SNR=3.6 0.7nm,0.7s						
PDAR	**Pinedale Array**	**54.01**	**65**	P	**P**	**17 49 59.1**	**+1.6**
	1.1nm,0.6s,baz=316,slow=8.4,SNR=13 1.1nm,0.6s						
CMAR	**Chiang Mai Arr**	**61.10**	**260**	P	**P**	**17 50 48.2**	**+0.8**
	0.3nm,0.3s,baz=41,slow=6.0,SNR=2.4 0.3nm,0.3s						
NOA	**NORSAR Array B**	**61.20**	**345**	P	**P**	**17 50 48.2**	**+0.6**
	0.4nm,0.6s,baz=5.5,slow=9.0,SNR=1.6 0.4nm,0.6s						
HFS	**Hagfors**	**61.70**	**344**	P	**P**	**17 50 51.2**	**+0.3**
	0.7nm,0.5s,baz=342,slow=9.1,SNR=1.3 0.7nm,0.5s						
SCHQ	**Schefferville**	**61.80**	**31**	P	**P**	**17 50 51.6**	**-0.1**
	1.9nm,0.6s,baz=323,slow=5.1,SNR=3.8 1.9nm,0.6s						
AKASG	**Malin Array Be**	**67.14**	**331**	P	**P**	**17 51 24.8**	**-1.8**
	0.3nm,0.3s,baz=31,slow=6.4,SNR=3.3 0.3nm,0.3s						
TXAR	**Lajitas Array**	**67.31**	**71**	P	**P**	**17 51 28.9**	**+0.8**
	1.4nm,0.7s,baz=324,slow=6.3,SNR=12 1.4nm,0.7s						
QSPA	**South Pole Qui**	**145.92**	**180**	PKPbc	**PKPdf**	**18 00 11.6**	**+1.0**
	1.2nm,0.9s,baz=29,slow=0.8,SNR=9.9						

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*IDC **26** 17:47:26.6±0.7, 2°.69S×138°.58E, h0^{km}, mb4.0/9, mbtmp4.0/13, ML4.3/4, MS3.4/2, Error ellipse: s-maj=23.4km s-min=16.9km az=85.0*

*NEIC **26** 17:47:28.8±2.2, 2°.6S±0°.1×138°.58E±0°.02, h10^{km}±1^{km}, mb4.4/15, Error ellipse: s-maj=19.6km s-min=3.5km az=176.0*

*DJA **26** 17:47:30.7±0.7, 3°S±4°×13°9E±°, h12^{km}±7^{km}, M4.5/7, mb4.9/4, MLv4.4/7*

ISC 26 17:47:28.3±0.5**, 2°.73S**±0°.05×**138°.57E**±0°.04**, h10**^{km}**, n54,** σ**1**^{s}**99**/56**, mb4.2**/14**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.75**	**11**	P	**Pg**	**17 47 41.8**	**-0.9**
GENI	**Genyem**	**1.60**	**85**	P	**Pb**	**17 47 58.1**	**+0.1**
JAY	**Jayapura**	**2.14**	**84**	Pn	**Pn**	**17 48 05.2**	**+1.0**
	17nm,0.3s,baz=265,slow=12,SNR=109 63nm,0.4s						
JAY	**Jayapura**	**2.14**	**84**	P	**Pn**	**17 48 05.4**	**+1.3**
SRPI	**Serui, Papua**	**2.48**	**290**	P	**Pn**	**17 48 08.8**	**+0.1**
SRPI				S	**Sn**	**17 48 40.4**	**+1.3**
BAKI	**Biak**	**2.90**	**302**	P	**Pn**	**17 48 16.9**	**+2.4**
RKPI	**Ransiki, Papua**	**4.55**	**285**	P	**Pn**	**17 48 39.5**	**+2.2**
FAKI	**Fak Fak**	**6.32**	**268**		**Pn**	**17 49 03.2**	**+1.6**
FAKI	**Fak Fak**	**6.32**	**268**	P	**Pn**	**17 49 04.2**	**+2.6**
KDU	**Kakadu**	**11.59**	**211**	P	**Pn**	**17 50 15.2**	**+1.3**
COEN	**Coen**	**12.05**	**158**		**Pn**	**17 50 24.2**	**+4.0**
COEN	**Coen**	**12.05**	**158**	P	**Pn**	**17 50 22.8**	**+2.6**
DRS	**Darwin Rock St**	**12.27**	**218**	P	**Pn**	**17 50 26.8**	**+3.5**
MTN	**Manton Dam**	**12.46**	**216**		**Pn**	**17 50 28.6**	**+2.8**
MTN	**Manton Dam**	**12.46**	**216**	P	**Pn**	**17 50 29.0**	**+3.2**
SOEI	**Soe**	**15.83**	**243**		**Pn**	**17 51 13.6**	**+2.0**
SOEI	**Soe**	**15.83**	**243**	P	**P**	**17 51 15.8**	**+0.4**
	72nm,1.0s						
KNRA	**Kununurra**	**16.09**	**216**		**Pn**	**17 51 14.2**	**-0.5**
KNRA				IAmb	IAmb	17 51 29.1	
	comp=Z,32nm,1.3s						
MTSU	**Mount Surprise**	**16.32**	**160**	P	**P**	**17 51 21.3**	**+0.7**
BATI	**Baumata**	**16.56**	**243**	Pn	**Pn**	**17 51 22.5**	**+1.7**
	comp=Z,7.2nm,0.3s,baz=91,slow=2.2,SNR=11 comp=Z,15nm,0.5s						
WB0	**Warramunga Arr**	**17.42**	**193**		**Pn**	**17 51 31.6**	**+0.1**
WB0				IAmb	IAmb	17 51 39.9	
	comp=Z,30nm,1.1s						
WR8	**Warramunga Arr**	**17.58**	**193**		**Pn**	**17 51 32.7**	**-0.8**
WRAB	**Tennant Creek**	**17.59**	**193**		**Pn**	**17 51 33.1**	**-0.6**
WRAB				IAmb	IAmb	17 52 00.3	
	comp=Z,18nm,0.7s						
WRA	**Warramunga Arr**	**17.60**	**193**		**Pn**	**17 51 33.9**	**0.0**
WRA	**Warramunga Arr**	**17.60**	**193**	P	**Pn**	**17 51 32.8**	**-1.1**
	comp=Z,0.8nm,0.3s,baz=15,slow=12,SNR=27						
WRA				S	**Sn**	**17 54 43.5**	**-6.6**
	comp=Z,1.4nm,0.3s,baz=12,slow=24,SNR=5.4 comp=Z,1.7nm,0.4s						
QIS	**Mount Isa**	**17.75**	**177**	P	**P**	**17 51 38.3**	**+1.8**
FITZ	**Fitzroy Crossi**	**19.85**	**219**	P	**Pn**	**17 52 02.9**	**+1.7**
FITZ	**Fitzroy Crossi**	**19.85**	**219**	P	**P**	**17 52 00.7**	**+1.1**
	comp=Z,0.6nm,0.3s,baz=38,slow=11,SNR=12						
FITZ				S	**S**	**17 55 37.6**	**-5.7**
	comp=Z,2.3nm,0.5s,baz=73,slow=19,SNR=1.4 comp=Z,1.4nm,0.6s						
AS01	**Alice Springs**	**21.29**	**192**	P	**P**	**17 52 16.5**	**+1.3**
AS31	**Alice Springs**	**21.30**	**192**		**P**	**17 52 15.9**	**+0.7**
AS31				IAmb	IAmb	17 52 23.5	
	comp=Z,13nm,0.9s						
ASAR	**Alice Springs**	**21.30**	**192**		**P**	**17 52 15.2**	**-0.1**
ASAR	**Alice Springs**	**21.30**	**192**	P	**P**	**17 52 15.7**	**+0.3**
	comp=Z,5.8nm,0.7s,baz=21,slow=11,SNR=60						
ASAR				S	**S**	**17 56 09.5**	**-2.6**
	comp=Z,2.8nm,0.8s,baz=13,slow=23,SNR=4.7 comp=Z,5.8nm,0.7s						
TATA	**Tatamba Isabel**	**21.86**	**106**	P	**P**	**17 52 23.6**	**+2.2**
TGY	**Tagaytay City**	**24.19**	**314**	LR	LR	18 04 14.6	
	comp=Z,73nm,18.5s,baz=96,slow=42						
JOW	**Kunigami**	**31.02**	**342**	LR	LR	18 05 42.4	
	comp=Z,90nm,19.8s,baz=190,slow=35						
KSRS	**Korea Array**	**41.18**	**347**	P	**P**	**17 55 12.4**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=156,slow=7.8,SNR=4.9 comp=Z,0.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**44.33**	**300**	P	**P**	**17 55 39.5**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=106,slow=8.4,SNR=2.0 comp=Z,0.3nm,0.4s						
SONM	**Songino Array**	**57.68**	**335**	P	**P**	**17 57 16.9**	**-2.2**
	comp=Z,0.4nm,0.5s,baz=146,slow=7.8,SNR=2.7 comp=Z,0.4nm,0.5s						
YAK	**Yakutsk**	**64.94**	**355**	P	**P**	**17 58 07.5**	**-0.3**
MKAR	**Makanchi Array**	**69.72**	**322**		**P**	**17 58 37.3**	**-1.2**
MKAR	**Makanchi Array**	**69.72**	**322**	P	**P**	**17 58 38.6**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=110,slow=8.3,SNR=6.7 comp=Z,0.6nm,0.7s						
MAKZ	**Makanchi**	**69.92**	**322**	P	**P**	**17 58 38.4**	**-1.3**
MAKZ				IAmb	IAmb	17 58 46.8	
	comp=Z,5.2nm,1.3s						
BOOM	**Boomskoye usch**	**72.07**	**316**	P	**P**	**17 58 52.2**	**-0.9**
BOOM				IAmb	IAmb	17 58 54.9	
	comp=Z,2.3nm,0.8s						
KURBB	**Kurchatov Arra**	**73.66**	**325**	P	**P**	**17 59 02.4**	**+0.3**
	comp=Z,1.3nm,0.2s,baz=114,slow=4.5,SNR=4.5 comp=Z,1.3nm,0.2s						
VNDA	**Vanda**	**75.77**	**175**	P	**P**	**17 59 14.9**	**+1.0**
VNDA				IAmb	IAmb	17 59 49.9	
	comp=Z,5.7nm,1.5s						
VNDA	**Vanda**	**75.77**	**175**	P	**P**	**17 59 12.7**	**-1.2**
	comp=Z,0.6nm,0.3s,baz=342,slow=3.2,SNR=6.4 comp=Z,0.6nm,0.3s						
KK31	**Karatay Array**	**76.04**	**316**	P	**P**	**17 59 13.7**	**-2.5**
KK31				IAmb	IAmb	17 59 25.3	
	comp=Z,5.5nm,1.5s						
KKAR	**Karatay Array**	**76.04**	**316**	P	**P**	**17 59 15.4**	**-0.7**
KKAR	**Karatay Array**	**76.04**	**316**	P	**P**	**17 59 14.8**	**-1.3**
KKAR				IAmb	IAmb	17 59 25.3	
	comp=Z,5.7nm,1.5s						
BVAR	**Borovoye Array**	**79.25**	**325**	P	**P**	**17 59 33.7**	**-0.1**
	comp=Z,1.8nm,0.7s,baz=116,slow=6.6,SNR=9.7 comp=Z,1.8nm,0.7s						
E19K	**Redstone River**	**82.88**	**20**	P	**P**	**17 59 53.4**	**+0.6**
ILAR	**Eielson Array**	**85.91**	**24**	P	**P**	**18 00 07.3**	**-0.9**
	comp=Z,1.2nm,0.6s,baz=261,slow=5.7,SNR=13 comp=Z,1.2nm,0.6s						
LPAZ	**La Paz**	**147.55**	**126**	PKPbc	**PKPbc**	**18 07 15.2**	**+0.6**
	comp=Z,2.1nm,0.8s,baz=179,slow=1.1,SNR=5.4						
BDFB	**Brasilia**	**160.62**	**161**	PKPab	**PKPab**	**18 08 10.7**	**-0.3**
	comp=Z,2.5nm,0.4s,baz=114,slow=20,SNR=3.6						

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*IDC **26** 17:48:12.9±0.8, 2°.73S×138°.52E, h0^{km}, mb4.0/8, mbtmp4.2/12, ML4.4/4, Error ellipse: s-maj=19.9km s-min=15.8km az=169.0*

ISC 26 17:48:13.8±0.7**, 2°.8S**±0°.1×**138°.7E**±0°.1**, h10**^{km}**, n12,** σ**0**^{s}**94**/12**, mb4.0**/8**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.07**	**83**	Pn	**Pb**	**17 48 51.2**	**-0.3**
	14nm,0.3s,baz=300,slow=20,SNR=4.6						
JAY				Lg	Lg	17 49 24.3	
	12nm,0.3s,baz=322,slow=19,SNR=1.2 141nm,0.8s						
BATI	**Baumata**	**16.61**	**243**	Pn	**P**	**17 52 08.3**	**-1.1**
	9.3nm,0.3s,baz=64,slow=3.1,SNR=5.8 54nm,0.7s						
WRA	**Warramunga Arr**	**17.57**	**194**	P	**P**	**17 52 19.5**	**-0.5**
	2.0nm,0.3s,baz=15,slow=12,SNR=8.6 12nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.86**	**219**	P	**Pn**	**17 52 45.4**	**-1.3**
	0.7nm,0.3s,baz=40,slow=14,SNR=4.6 5.6nm,0.8s						
ASAR	**Alice Springs**	**21.26**	**192**	P	**P**	**17 53 01.1**	**+0.7**
	24nm,0.9s,baz=20,slow=11,SNR=8.2 24nm,0.9s						
CMAR	**Chiang Mai Arr**	**44.42**	**300**	P	**P**	**17 56 26.1**	**+0.9**
	0.4nm,0.7s,baz=116,slow=8.6,SNR=1.4 0.4nm,0.7s						
SONM	**Songino Array**	**57.76**	**335**	P	**P**	**17 58 04.8**	**-0.3**
	0.3nm,0.5s,baz=141,slow=7.1,SNR=2.1 0.3nm,0.5s						
MKAR	**Makanchi Array**	**69.81**	**322**	P	**P**	**17 59 25.3**	**+0.8**
	0.8nm,0.6s,baz=117,slow=7.7,SNR=3.8 0.8nm,0.6s						
VNDA	**Vanda**	**75.71**	**175**	P	**P**	**18 00 00.2**	**+1.1**
	1.5nm,0.8s,baz=345,slow=6.6,SNR=4.2 1.5nm,0.8s						
BVAR	**Borovoye Array**	**79.34**	**325**	P	**P**	**18 00 19.5**	**-0.2**
	0.8nm,0.6s,baz=99,slow=9.2,SNR=1.7 0.8nm,0.6s						
ILAR	**Eielson Array**	**85.93**	**24**	P	**P**	**18 00 52.8**	**-1.0**
	0.7nm,0.7s,baz=260,slow=5.3,SNR=4.1 0.7nm,0.7s						
QSPA	**South Pole Qui**	**87.16**	**180**	P	**P**	**18 01 00.7**	**+0.7**
	3.2nm,0.8s,baz=338,slow=0.2,SNR=6.2 3.2nm,0.8s						

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*CATAC **26** 18:00:08.7±0.8, 8°N±5°×8°3W±°, h21^{km}±4^{km}, M3.6/7, MLv3.6/7, Error ellipse: s-maj=11.6km s-min=10.3km az=91.8, confirmed*

*UCR **26** 18:00:09.2±1.2, 8°.38N×82°.85W, h25^{km}±3^{km}, MW3.6*

ISC 26 18:00:06.6±1.4**, 8°.28N**±0°.07×**82°.92W**±0°.04**, h13**^{km}**, n54,** σ**1**^{s}**08**/56**, 2C, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDITO	**Canoas**	**0.30**	**10**	P	**Pb**	**18 00 15.0**	**+1.1**
CDITO	**Canoas**	**0.30**	**10**	S	**Sb**	**18 00 20.5**	**+1.7**
NELY	**Ciudad Neily**	**0.37**	**357**	*e*P	**Pb**	**18 00 16.1**	**+1.0**
NELY				*e*S	**Sn**	**18 00 22.2**	**-2.7**
FITO	**Golfito**	**0.41**	**327**	⇑*e*P	**Pb**	**18 00 16.5**	**+0.7**
FITO				*e*S	**Sb**	**18 00 23.3**	**+1.2**
EDAD	**Golfito**	**0.44**	**327**	*e*P	**Pb**	**18 00 17.1**	**+0.7**
CSTBL	**De las Acacias**	**0.50**	**74**	*e*P	**Pb**	**18 00 17.7**	**+0.5**
VITO	**San Vito**	**0.54**	**355**	*e*P	**Pb**	**18 00 18.9**	**+0.8**
CLLRA	**Cordillera,**	**0.56**	**33**	*e*P	**Pb**	**18 00 18.3**	**-0.1**
BRU2	**Volcan**	**0.56**	**24**	*e*P	**Pb**	**18 00 18.5**	**0.0**
BRU2	**Volcan**	**0.56**	**24**	S	**Sb**	**18 00 26.2**	**-0.3**
BRU2	**Volcan**	**0.56**	**24**	P	**Pb**	**18 00 18.4**	**0.0**
BQTLY	**Boquete Panama**	**0.66**	**44**	*e*P	**Pb**	**18 00 19.6**	**-0.5**
ALCO	**Alturas Coton,**	**0.68**	**8**	*e*P	**Pb**	**18 00 20.1**	**-0.4**
EDP2	**Potrero Grande**	**0.78**	**341**	⇑*e*P	**Pb**	**18 00 22.4**	**+0.3**
BURE	**Buenos Aires**	**0.98**	**335**	*e*P	**Pg**	**18 00 25.3**	**-0.3**
DRK0	**Durika**	**1.03**	**342**	*e*P	**Pg**	**18 00 25.7**	**-0.9**
DRK0	**Durika**	**1.03**	**342**	P	**Pg**	**18 00 25.6**	**-0.9**
DRK0	**Durika**	**1.03**	**342**	S	**Sb**	**18 00 39.2**	**-0.8**
OCHAL	**Ojochal**	**1.08**	**319**	S	**Sg**	**18 00 42.2**	**+0.4**
OCHAL	**Ojochal**	**1.08**	**319**	P	**Pb**	**18 00 27.0**	**-0.3**
EDPE	**Pejibaye, P**	**1.09**	**324**	*e*P	**Pb**	**18 00 27.2**	**-0.2**
BRIBI	**Bribri**	**1.34**	**4**	*e*P	**Pg**	**18 00 31.9**	**-0.6**
GMAL	**Guarumal, Vera**	**1.75**	**107**	*e*P	**Pn**	**18 00 37.2**	**+0.5**
VINA	**Juan Vinas**	**1.80**	**333**	*e*P	**Pn**	**18 00 38.2**	**+0.6**
ABE2	**San Pablo**	**1.81**	**322**	*e*P	**Pn**	**18 00 38.8**	**+1.1**
LCR2	**La Lucha 2**	**1.81**	**324**	*e*P	**Pn**	**18 00 37.8**	**+0.1**
LCR2	**La Lucha 2**	**1.81**	**324**	P	**Pn**	**18 00 37.7**	**0.0**
LCR2	**La Lucha 2**	**1.81**	**324**	S	**Sn**	**18 01 00.1**	**-0.5**
VTCV	**VTCV, Calle Va**	**1.87**	**335**	*e*P	**Pn**	**18 00 39.2**	**+0.6**
ABRB	**Las Abras (San**	**1.89**	**336**	*e*P	**Pn**	**18 00 39.9**	**+1.1**
CVTQ	**Turrialba Volc**	**1.91**	**334**	*e*P	**Pn**	**18 00 39.9**	**+0.7**
VTLA	**Turrialba Volc**	**1.91**	**334**	⇑*e*P	**Pn**	**18 00 40.0**	**+0.8**
VTR0	**Volcan Turrial**	**1.92**	**335**	*e*P	**Pn**	**18 00 40.1**	**+0.7**
VICA	**Volcano Irazu**	**1.93**	**332**	*e*P	**Pn**	**18 00 40.2**	**+0.7**
ACOS	**Acosta**	**1.94**	**321**	*e*P	**Pn**	**18 00 40.6**	**+1.1**
SANTA	**Santa Ana**	**2.06**	**323**	*e*P	**Pb**	**18 00 43.5**	**-0.6**
HEME	**Heredia, Merce**	**2.09**	**325**	*e*P	**Pb**	**18 00 44.0**	**-0.4**
BELE	**Belen**	**2.10**	**324**	*e*P	**Pn**	**18 00 41.5**	**-0.2**
VBV1	**V. Barva**	**2.16**	**328**	*e*P	**Pb**	**18 00 45.1**	**-0.8**
TRT2	**Tortugero**	**2.41**	**341**	*e*P	**Pn**	**18 00 46.3**	**+0.6**
TRT2	**Tortugero**	**2.41**	**341**	P	**Pn**	**18 00 46.6**	**+0.9**
TRT2	**Tortugero**	**2.41**	**341**	S	**Sn**	**18 01 14.9**	**-0.1**
CBL1	**Cabuya**	**2.51**	**302**	*e*P	**Pn**	**18 00 47.2**	**0.0**
SOCE	**Pocosol**	**2.68**	**322**	*e*P	**Pb**	**18 00 53.0**	**-1.6**
FORC	**Fortuna**	**2.78**	**322**	*e*P	**Pn**	**18 00 54.0**	**+3.1**
ARE1	**Arenal 1**	**2.80**	**321**	*e*P	**Pb**	**18 00 55.5**	**-1.1**
VARE2	**V. Arenal**	**2.80**	**321**	*e*P	**Pb**	**18 00 54.8**	**-1.8**
CEDE	**Laguna Cedeo**	**2.81**	**322**	*e*P	**Pb**	**18 00 54.9**	**-1.9**
JTS	**Las Juntas de**	**2.83**	**315**	*e*P	**Pn**	**18 00 53.9**	**+2.3**
INDI	**Punta indio, G**	**3.00**	**302**	P	**Pn**	**18 00 55.2**	**+1.3**
INDI	**Punta indio, G**	**3.00**	**302**	S	**Sn**	**18 01 29.2**	**-0.5**
CMARA	**Lajas Hojancha**	**3.02**	**305**	P	**Pn**	**18 00 55.3**	**+1.1**
CMARA	**Lajas Hojancha**	**3.02**	**305**	S	**Sn**	**18 01 30.6**	**+0.3**
CUI	**Cuipilapa**	**3.24**	**317**	*e*P	**Pn**	**18 00 59.3**	**+2.0**

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*IDC **26** 18:00:16.8±1.4, 50°.99N×130°.10W, h0^{km}, mb3.5/2, mbtmp3.3/8, ML3.4/5, MS2.7/3, Error ellipse: s-maj=14.7km s-min=8.7km az=108.0*

ISC 26 18:00:16.0±1.1**, 51°.03N**±0°.09×**130°.2W**±0°.1**, h10**^{km}**, n16,** σ**1**^{s}**50**/12**, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBB	**Bella Bella**	**1.76**	**48**	Pg	**Pb**	**18 00 48.0**	**-0.4**
	22nm,0.3s,baz=234,slow=15,SNR=197						
BBB				Lg	Lg	18 01 10.9	
	204nm,0.3s,baz=272,slow=17,SNR=25						
H02S1	**DAWSON INLET T**	**2.58**	**329**	Pn	**Pn**	**18 00 56.7**	**-1.1**
H02S1				Sn	Sn	18 01 22.8	-6.4
DLBC	**Dease Lake**	**7.43**	**1**	Pn	**Pn**	**18 02 06.8**	**+2.3**
	0.1nm,0.3s,baz=173,slow=19,SNR=3.4						
DLBC				Lg	Lg	18 04 16.2	
	baz=184,slow=14,SNR=1.5						
DLBC				LR	LR	18 04 58.3	
	comp=Z,9.2nm,21.1s,baz=164,slow=38 0.2nm,0.3s						
NEW	**Newport**	**8.95**	**103**	Pn	**Pn**	**18 02 26.5**	**+1.2**
	0.3nm,0.3s,baz=297,slow=14,SNR=3.0						
NEW				Lg	Lg	18 04 55.5	
	0.2nm,0.3s,baz=264,slow=9.2,SNR=5.6 1.2nm,0.5s						
YBH	**Yreka Blue Hor**	**10.64**	**148**	Pn	**Pn**	**18 02 50.4**	**+1.8**
	baz=351,slow=13,SNR=4.2						
YKA	**Yellowknife Ar**	**14.28**	**30**	Pn	**Pn**	**18 03 38.1**	**0.0**
	0.1nm,0.3s,baz=229,slow=11,SNR=1.9 0.3nm,0.7s						
KDAK	**Kodiak Island**	**14.62**	**306**	LR	LR	18 07 59.0	
	comp=Z,70nm,20.5s,baz=134,slow=31						
ELK	**Elko**	**14.62**	**129**	Pn	**P**	**18 03 47.6**	**-2.0**
	0.1nm,0.3s,baz=325,slow=7.6,SNR=3.2						
ELK				LR	LR	18 08 45.1	
	comp=Z,64nm,21.2s,baz=276,slow=35 0.2nm,0.3s						
NVAR	**Mina Array Bea**	**15.15**	**142**	Pn	**Pn**	**18 03 49.8**	**-0.5**
	0.1nm,0.3s,baz=333,slow=14,SNR=2.9						
ILAR	**Eielson Array**	**16.29**	**334**	Pn	**P**	**18 04 08.9**	**+1.3**
	0.2nm,0.7s,baz=140,slow=10,SNR=1.9						
PDAR	**Pinedale Array**	**16.33**	**112**	Pn	**P**	**18 04 07.1**	**-1.4**
	0.1nm,0.3s,baz=311,slow=14,SNR=30 3.4nm,0.8s						
ULM	**Lac du Bonnet**	**21.70**	**79**	P	**P**	**18 05 07.2**	**+0.3**
	2.1nm,0.5s,baz=287,slow=11,SNR=3.2 2.1nm,0.5s						
TXAR	**Lajitas Array**	**29.41**	**127**	P	**P**	**18 06 20.5**	**+0.9**
	0.1nm,0.3s,baz=325,slow=8.0,SNR=2.4 0.1nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**57.89**	**262**	T	T	19 12 30.3	
	baz=42,slow=76,SNR=1828						
H11N3	**WAKE ISLAND Hy**	**57.89**	**262**	T	T	19 12 33.4	
	baz=42,slow=76,SNR=2200						
H11N1	**WAKE ISLAND Hy**	**57.91**	**262**	T	T	19 12 34.7	
	baz=42,slow=76,SNR=1434						

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*MOS **26** 18:06:28.5±1.1, 30°.88S×177°.49W, h10^{km}, mb5.3/17, MS5.2/5, Error ellipse: s-maj=12.6km s-min=8.8km az=115.6*

*IDC **26** 18:06:28.3±0.4, 30°.85S×177°.39W, h0^{km}, mb4.9/23, mbtmp4.9/23, MS5.0/50, Error ellipse: s-maj=16.0km s-min=13.0km az=73.0*

*BJI **26** 18:06:28.4, 30°.93S×177°.23W, h13^{km}, mB5.8/31, mb5.2/41, Ms5.2/44, Ms7 5.0/46*

*NEIC **26** 18:06:30.1, 30°.91S×177°.33W, h14^{km}*

*NEIC **26** 18:06:30.1±2.1, 30°.89S±0°.10×177°.3W±0°.2, h10^{km}±1^{km},* *mb5.2/154, Mww5.3/28, Error ellipse: s-maj=22.8km s-min=14.9km az=69.0*

*NEIC **26** 18:06:30.1, 31°.01S×176°.86W, h14^{km}, Moment Tensor Solution. Duration: 2^s2 Moment tensor: Scale 10^{17}Nm; M_{rr}0.87; $M_{\theta\theta}$0.01; $M_{\phi\phi}$-0.88; $M_{r\theta}$-0.15; $M_{\theta\phi}$-0.39; $M_{\phi r}$0.43; Fault plane solution: $M_0$1.06000×10^{17} NP1: ϕ_s218.27000°, δ37.75000°, λ118.89000°. NP2: ϕ_s3.36000°, δ57.59000°, λ69.49000°. Principal axes: T 1.0261, Plg70.0000°, Azm228.0000°; N 0.0649, Plg17.0000°, Azm15.0000°; P -1.0910, Plg10.0000°, Azm108.0000°;*

*GCMT **26** 18:06:34.1±0.1, 30°.96S±0°.01×176°.93W±0°.01, h12^{km}, MW5.4/151, Moment Tensor Solution. s114,c193; s151,c268; Duration: 1^s2 Moment tensor: Scale 10^{17} Nm; M_{rr}1.01±.01; $M_{\theta\theta}$-0.13±.01; $M_{\phi\phi}$-0.88±.01; $M_{r\theta}$0.24±.03; $M_{\theta\phi}$-0.38±.01; $M_{\phi r}$0.86±.03; Best double couple: $M_0$1.35800×10^{17} NP1: ϕ_s207.00000°, δ25.00000°, λ98.00000°. NP2: ϕ_s18.00000°, δ66.00000°, λ86.00000°. Principal axes: T 1.3460, Plg69.0000°, Azm280.0000°; N 0.0210, Plg3.0000°, Azm20.0000°; P -1.3710, Plg20.0000°, Azm111.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 18:06:30.1±0.7, **31°.03S**±0°.04×**177°.19W**±0°.05, **h16**^{km}±3^{km}, **n500,** σ**2^{s}20**/448, **mb5.2**/142, **MS5.1**/70, **12C-5D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.87	340	P	Pn	18 06 59.3	-2.1
GLKZ				S	Sn	18 07 22.0	-2.7
RAO	Raoul Island	1.88	340		Pn	18 06 59.1	-2.4
RAO	Raoul Island	1.88	340	Pn	Pn	18 06 59.3	-2.2
	408nm,0.3s,baz=166,slow=12,SNR=38						
RAO				Sn	Sn	18 07 23.0	-1.9
	1μm,0.3s,baz=150,slow=20,SNR=3.7						
RAO				LR	LR	18 07 35.0	
	comp=Z,13μm,18.6s,baz=128,slow=40						
RIZ	Raoul Island	1.89	340	P	Pn	18 06 59.7	-1.9
RIZ				S	Sn	18 07 22.9	-2.3
MXZ	Matakaoa Point	7.50	209	Pn	Pn	18 08 16.4	-2.5
MXZ	Matakaoa Point	7.50	209	P	Pn	18 08 15.5	-3.4
WMGZ	Waiomatatini S	7.68	207	P	Pn	18 08 18.3	-3.0
WMGZ				S	Sn	18 09 46.4	-1.6
PKGZ	Pakihiroa	7.86	208	P	Pn	18 08 19.5	-4.2
HAZ	Te Kaha	7.89	210	P	Pn	18 08 20.7	-3.5
HAZ				S	Sn	18 09 51.9	-1.2
PUZ	Puketiti	7.96	207	P	Pn	18 08 20.3	-4.9
PUZ				S	Sn	18 09 51.9	-3.1
GRZ	Great Barrier	8.04	228	P	Pn	18 08 27.7	+1.5
RUGZ	Raukumara Rang	8.11	210	P	Pn	18 08 23.7	-3.6
RUGZ				S	Sn	18 09 56.3	-2.4
TWGZ	Tauwhareparae	8.16	208	P	Pn	18 08 23.7	-4.3
TWGZ				S	Sn	18 09 57.7	-2.2
CNGZ	Carnagh Statio	8.34	206	P	Pn	18 08 25.7	-4.7
CNGZ				S	Sn	18 10 01.7	-2.6
TKGZ	Te Karaka	8.44	208	P	Pn	18 08 29.4	-2.3
TKGZ				S	Sn	18 10 02.8	-4.0
MWZ	Matawai	8.48	209	P	Pn	18 08 27.9	-4.4
OPRZ	Ohinepanea	8.54	216	P	Pn	18 08 31.0	-2.0
WCZ	Waipu Caves	8.60	233	P	Pn	18 08 38.1	+4.2
URZ	Urewera	8.60	211	Pn	Pn	18 08 30.2	-3.8
	1.2nm,0.3s,baz=22,slow=8.0,SNR=17						
URZ				Sn	Sn	18 10 03.8	-6.8
	15nm,0.3s,baz=113,slow=18,SNR=8.0						
URZ	Urewera	8.60	211	P	Pn	18 08 30.0	-4.0
RAGZ	Rawiri	8.67	209	P	Pn	18 08 31.4	-3.5
RIGZ	Rimuhau	8.71	207	P	Pn	18 08 31.0	-4.4
MKAZ	Moumakai	8.77	224	P	Pn	18 08 38.9	+2.7
OUZ	Omahuta	8.78	239	P	Pn	18 08 41.5	+5.1
OMRZ	Omania	8.83	215	P	Pn	18 08 41.2	+4.1
SNGZ	Shannon Statio	8.94	209	P	Pn	18 08 34.7	-3.9
RTZ	Ruatahuna	8.96	211		Pn	18 08 33.8	-5.0
RTZ	Ruatahuna	8.96	211	P	Pn	18 08 36.2	-2.7
TOZ	Tahuroa Road	9.01	220	Pn	Pn	18 08 37.5	-2.0
RAHZ	Arahi	9.16	209	P	Pn	18 08 38.8	-2.9
MTHZ	Maungataniwha	9.21	210	P	Pn	18 08 38.6	-3.7
NMHZ	Naumai	9.43	210	P	Pn	18 08 43.3	-2.0
BKZ	Black Stump Fm	9.62	211		Pn	18 08 44.1	-3.9
BKZ	Black Stump Fm	9.62	211	P	Pn	18 08 43.6	-4.3
MCHZ	McNeill Hill	9.77	209	P	Pn	18 08 47.4	-2.5
NTVZ	North Tongarir	9.95	214	P	Pn	18 08 50.9	-1.5
TMVZ	Te Maari	9.95	214	P	Pn	18 08 48.8	-3.7
ETVZ	East Tongariro	9.96	214	P	Pn	18 08 51.1	-1.6
NNVZ	North Ngauruho	10.00	214	P	Pn	18 08 54.6	+1.4
SNVZ	South Ngauruho	10.03	214	P	Pn	18 08 52.3	-1.4
NGZ	Ngauruhoe	10.04	214	P	Pn	18 08 56.8	+3.0
KRHZ	Kereru	10.07	210	P	Pn	18 08 50.4	-3.7
TUVZ	Tukino	10.09	213	P	Pn	18 08 55.7	+1.3
FWVZ	Far West T-bar	10.13	214	P	Pn	18 08 53.7	-1.3
WNVZ	Wahianoa	10.16	213	P	Pn	18 08 54.8	-0.7
PNHZ	Pukenui	10.37	209	P	Pn	18 08 52.4	-5.8
VRZ	Vera Road	10.42	217	P	Pn	18 09 02.9	+4.1
TSZ	Takapari Road	10.59	210	P	Pn	18 08 55.8	-5.5
POWZ	Post Office Ro	10.95	210	P	Pn	18 09 05.5	-0.6
BFZ	Birch Farm	11.00	207	Pn	Pn	18 09 02.1	-4.7
BFZ	Birch Farm	11.00	207	P	Pn	18 09 00.9	-5.9
MRZ	Mangatainoka R	11.25	209		Pn	18 09 05.3	-4.9
HOWZ	Holdsworth Sta	11.48	209	P	Pn	18 09 09.0	-4.4
OGWZ	Otaki Gorge	11.56	210	P	Pn	18 09 10.9	-3.5
KIW	Kapiti Island	11.71	211	P	Pn	18 09 12.5	-3.9
DUWZ	D'Urville Isla	12.12	214	P	Pn	18 09 18.5	-3.6
BHW	Baring Head	12.17	210	P	Pn	18 09 24.6	+1.8
TCW	Tory Channel	12.27	212	P	Pn	18 09 19.4	-4.8
TUWZ	Tuamarina	12.60	212		Pn	18 09 24.1	-4.5
TUWZ	Tuamarina	12.60	212	P	Pn	18 09 24.7	-3.9
QRZ	Quartz Range	12.83	218	P	Pn	18 09 31.5	-0.3
MRNZ	Matariki Terra	13.14	215		Pn	18 09 35.0	-1.1
MRNZ	Matariki Terra	13.14	215	P	Pn	18 09 33.8	-2.2
THZ	Tophouse	13.34	214		Pn	18 09 35.8	-3.1
THZ	Tophouse	13.34	214	P	Pn	18 09 33.9	-4.9
KHZ	Kahutara	13.57	211		Pn	18 09 37.8	-4.1
KHZ	Kahutara	13.57	211	P	Pn	18 09 35.9	-6.0
MSVF	Nonsavu	13.92	341	Pn	Pn	18 09 46.2	-0.7
	0.5nm,0.3s,baz=149,slow=12,SNR=4.0						
MSVF				LR	LR	18 13 41.9	
	comp=Z,2μm,18.6s,baz=162,slow=32						
GVZ	Greta Valley S	14.23	210		Pn	18 09 51.6	+0.7
GVZ	Greta Valley S	14.23	210	P	Pn	18 09 47.4	-3.6
LTZ	Lake Taylor	14.43	213		Pn	18 09 51.3	-2.4
LTZ	Lake Taylor	14.43	213	P	Pn	18 09 48.7	-5.0
AMCZ	Amberley	14.57	211	P	Pn	18 09 56.3	+0.7
INZ	Inchbonnie	14.78	215		Pn	18 09 57.5	-0.9
INZ	Inchbonnie	14.78	215	P	Pn	18 09 55.5	-3.0
OXZ	Oxford	14.96	212		Pn	18 09 56.5	-4.4
OXZ				IAmb	IAmb	18 10 10.2	
	comp=Z,121nm,0.9s						
MQZ	McQueen's Vall	14.99	210	P	Pn	18 09 58.9	-2.4
RACZ	Rakaia	15.23	211	P	Pn	18 10 01.1	-3.3
MHCZ	Mount Hutt	15.34	212	P	Pn	18 10 02.1	-3.8
WVZ	Waitaha Valley	15.39	215	P	Pn	18 10 02.8	-3.7
RPZ	Rata Peaks	15.71	213	Pn	Pn	18 10 04.1	-6.6
	comp=Z,2.9nm,0.3s,baz=49,slow=4.9,SNR=17						
RPZ				Sn	Sn	18 12 49.8	-15
	comp=Z,1.3nm,0.3s,baz=0.0,slow=20,SNR=3.7						
RPZ				LR	LR	18 16 40.9	
	comp=Z,9μm,18.7s,baz=34,slow=39						
ARCZ	Arundel	15.84	212	P	Pn	18 10 07.3	-5.1
FOZ	Fox Glacier	16.18	216		Pn	18 10 14.8	-1.9
ODZ	Otahua Downs	16.93	211		Pn	18 10 25.7	-0.5
ONTNC	Ouen Toro	16.99	297		P	18 10 27.9	-1.0
DZM	Mont Dzumac	17.13	297		P	18 10 30.0	-0.6
DZM	Mont Dzumac	17.13	297	*e*Pn	P	18 10 30.8	+0.2
	comp=Z,365nm,1.4s						
DZM				*e*LR	LR	18 14 24.6	
	comp=Z,12μm,25.4s						
DZM	Mont Dzumac	17.13	297	Pn	P	18 10 31.9	+1.3
	comp=Z,0.9nm,0.3s,baz=117,slow=18,SNR=11						
DZM				LR	LR	18 15 33.1	
	comp=Z,8μm,20.2s,baz=158,slow=32						
MLZ	Mavora Lakes	18.35	215		Pn	18 10 42.2	-1.6
RAR	Rarotonga	18.42	62		P	18 10 43.5	-1.3
RAR	Rarotonga	18.42	62	P	P	18 10 40.6	-4.2
	comp=Z,44nm,0.7s,baz=228,slow=8.9,SNR=7.7						
RAR				S	Sn	18 13 48.6	-22
	comp=Z,19nm,0.6s,baz=242,slow=15,SNR=2.6						
RAR				LR	LR	18 17 07.2	
	comp=Z,6μm,19.7s,baz=276,slow=35						
RAR	Rarotonga	18.42	62	P	P	18 10 43.5	-1.3
RAR				pmax	pmax		
	comp=Z,51nm,0.8s						
WHZ	Wether Hill Ro	18.81	214		P	18 10 48.7	-0.2
TBI	Tubuai	25.78	80	*e*P	P	18 12 04.6	+4.2
	comp=Z,842nm,22.8s						
TBI				*e*S	S	18 16 28.2	-0.9
	comp=Z,20μm,25.2s						
TBI				*e*LR	LR	18 18 14.9	
	comp=Z,4μm,21.2s						
TBI				*e*LR	LR	18 18 33.4	
	comp=Z,15μm,21.0s						
ARMA	Armidale	26.77	263	P	P	18 12 11.3	+1.9
ARMA	Armidale	26.77	263	P	P	18 12 11.4	+2.0
	comp=Z,0.0nmcomp=Z,42nm,0.9s						
PPT2	Papeete2	28.41	68	*e*P	P	18 12 21.6	-2.5
	comp=Z,171nm,24.0s						
PPT2				*e*S	S	18 17 07.7	-3.1
	comp=Z,4μm,24.8s						
PPT2				*e*LR	LR	18 19 27.7	
	comp=Z,3μm,21.0s						
PPT2				*e*LR	LR	18 19 39.9	
	comp=Z,3μm,20.8s						
PPT	Papeete	28.42	68	LR	LR	18 21 54.7	
	comp=Z,4μm,18.6s,baz=252,slow=32						
EIDS	Eidsvold	28.46	273	P	P	18 12 24.1	-0.4
EIDS				IAmb	IAmb	18 12 27.0	
	comp=Z,59nm,1.2s						
EIDS	Eidsvold	28.46	273	P	P	18 12 24.8	+0.3
	comp=Z,51nm,1.1s						
CAN	Canberra	28.54	252	P	P	18 12 25.9	+0.8
CAN				IAmb	IAmb	18 12 28.4	
	comp=Z,47nm,1.1s						
CAN	Canberra	28.54	252	P	P	18 12 25.9	+0.8
CAN				pmax	pmax		
	comp=Z,47nm,1.1s						
YNG	Young	29.07	254	P	P	18 12 31.0	+1.1
	comp=Z,37nm,1.0s						
HNR	Honiara	30.23	310	LR	LR	18 22 40.4	
	comp=Z,1μm,20.3s,baz=185,slow=32						
MOO	Moorlands	30.52	238	P	P	18 12 43.0	+0.4
TOO	Toolangi	31.36	248	P	P	18 12 48.6	-1.5
TOO	Toolangi	31.36	248	P	P	18 12 50.1	0.0
	comp=Z,18nm,1.1s						
TOO	Toolangi	31.36	248	P	P	18 12 48.6	-1.5
TOO				pmax	pmax		
	comp=Z,20nm,1.1s						
CMSA	Cobar Meteorol	31.63	259	P	P	18 12 52.9	+0.5
	comp=Z,57nm,1.2s						
QLP	Quilpie	33.97	268	P	P	18 13 13.4	+0.4
	comp=Z,117nm,1.5s						
CTAO	Charters Tower	34.59	280	P	P	18 13 18.3	-0.1
CTAO	Charters Tower	34.59	280	P	P	18 13 18.3	-0.1
CTAO				pmax	pmax		
	comp=Z,107nm,1.2s						
STKA	Stephens Creek	35.02	258	P	P	18 13 21.9	-0.2
STKA	Stephens Creek	35.02	258	P	P	18 13 22.8	+0.8
	comp=Z,327nm,1.5s						
STKA	Stephens Creek	35.02	258	P	P	18 13 22.3	+0.3
	comp=Z,60nm,1.1s,baz=99,slow=13,SNR=24						
STKA				S	S	18 18 52.4	-1.3
	comp=Z,1.6nm,0.7s,baz=156,slow=20,SNR=1.5						
STKA				LR	LR	18 27 31.4	
	comp=Z,4μm,18.0s,baz=97,slow=36						
	comp=Z,60nm,1.1s						
HTT	Hallett	37.00	254	P	P	18 13 38.2	-0.9
	comp=Z,18nm,1.1s						
MTSU	Mount Surprise	37.09	281	P	P	18 13 41.1	+1.1
	comp=Z,36nm,0.9s						
BBOO	Buckleboo	39.47	255	P	P	18 13 58.1	-1.7
BBOO				IAmb	IAmb	18 14 00.9	
	comp=Z,59nm,0.9s						
BBOO	Buckleboo	39.47	255	P	P	18 13 59.0	-0.8
	comp=Z,75nm,1.1s						
PMG	Port Moresby	39.50	295	LR	LR	18 28 53.9	
	comp=Z,2μm,19.2s,baz=116,slow=34						
QIS	Mount Isa	40.05	275	P	P	18 14 04.6	-0.2
	comp=Z,25nm,2.0s						
COEN	Coen	40.11	286	P	P	18 14 06.1	+0.8
	comp=Z,29nm,1.2s						
TAOE	Nuku Hiva Isla	40.93	65	*e*S	S	18 20 16.2	-7.4
	comp=Z,594nm,23.7s						
TAOE				*e*LR	LR	18 25 26.0	
	comp=Z,2μm,21.0s						
AS31	Alice Springs	43.77	267	P	P	18 14 34.6	-0.6
	comp=Z,11nm,1.0s						
ASAR	Alice Springs	43.77	267	P	P	18 14 30.9	-4.4
ASAR	Alice Springs	43.77	267	P	P	18 14 33.7	-1.5
	comp=Z,9.9nm,0.7s,baz=109,slow=8.0,SNR=57						
ASAR				PcP	PcP	18 16 23.2	+1.3
	comp=Z,4.9nm,0.8s,baz=104,slow=3.7,SNR=4.6						
ASAR				ScP	ScP	18 20 15.3	+2.3
	comp=Z,1.5nm,0.8s,baz=103,slow=4.7,SNR=4.4						
ASAR				S	S	18 21 00.6	-4.8
	comp=Z,0.8nm,0.9s,baz=107,slow=16,SNR=3.2						
ASAR				LR	LR	18 33 00.8	
	comp=Z,3μm,18.5s,slow=36						
	comp=Z,9.9nm,0.7s						
WR8	Warramunga Arr	44.67	272	P	P	18 14 41.3	-1.2
WR8				IAmb	IAmb	18 14 43.5	
	comp=Z,39nm,1.0s						
WRAB	Tennant Creek	44.81	272	P	P	18 14 42.4	-1.2
WRAB				IAmb	IAmb	18 15 00.8	
	comp=Z,40nm,1.0s						
WRAB	Tennant Creek	44.81	272	P	P	18 14 42.4	-1.2
WRAB				pmax	pmax		
	comp=Z,40nm,1.0s						
WRA	Warramunga Arr	44.81	272	P	P	18 14 42.7	-0.9
WRA	Warramunga Arr	44.81	272	P	P	18 14 42.0	-1.6
	comp=Z,26nm,0.8s,baz=112,slow=8.1,SNR=47						
WRA				PcP	PcP	18 16 26.5	+1.0
	comp=Z,10.0nm,1.1s,baz=110,slow=4.1,SNR=3.1						
WRA				ScP	ScP	18 20 19.6	+2.3
	comp=Z,3.1nm,0.9s,baz=113,slow=4.0,SNR=6.7						
WRA				S	S	18 21 18.7	-1.8
	comp=Z,0.6nm,0.8s,baz=116,slow=14,SNR=1.9						
WRA				LR	LR	18 33 21.8	
	comp=Z,6μm,18.2s,baz=120,slow=36						
	comp=Z,26nm,0.8s						
WB0	Warramunga Arr	44.84	273		P	18 14 42.6	-1.2
WB0				IAmb	IAmb	18 14 44.8	
	comp=Z,46nm,1.0s						
SBA	Scott Base	47.47	185	P	P	18 15 07.8	+4.1
SBA	Scott Base	47.47	185	P	P	18 15 07.8	+4.1
SBA				pmax	pmax		
	comp=Z,42nm,1.2s						
VNDA	Vanda	47.54	186	P	P	18 15 07.4	+3.1
	comp=Z,3.2nm,0.9s,baz=15,slow=7.5,SNR=9.5						
VNDA				PcP	PcP	18 16 36.5	+2.5
	comp=Z,5.5nm,0.9s,baz=35,slow=1.9,SNR=4.4						
VNDA				S	S	18 22 01.7	+3.4
	comp=Z,0.3nm,0.3s,baz=34,slow=3.6,SNR=1.4						
	comp=Z,3.2nm,0.9s						
WRKA	Warakurna	48.09	263	P	P	18 15 08.0	-1.4
	comp=Z,28nm,1.2s						
JAY	Jayapura	48.80	297	P	P	18 15 14.6	-0.3
	comp=Z,19nm,1.0s,baz=122,slow=5.5,SNR=6.2						
JAY				LR	LR	18 33 37.8	
	comp=Z,552nm,19.7s,baz=124,slow=34						
	comp=Z,19nm,1.0s						
KDU	Kakadu	49.71	280	P	P	18 15 20.5	-1.2
	comp=Z,32nm,1.8s						
MTN	Manton Dam	50.77	279		P	18 15 28.3	-1.5
MTN				IAmb	IAmb	18 15 30.9	
	comp=Z,42nm,1.1s						
MTN	Manton Dam	50.77	279	P	P	18 15 28.6	-1.2
	comp=Z,43nm,1.9s						
KNRA	Kununurra	51.44	274	P	P	18 15 34.2	-0.6
	comp=Z,26nm,1.7s						
FITZ	Fitzroy Crossi	53.05	270	P	P	18 15 45.4	-1.4
	comp=Z,8.1nm,1.6s						
FITZ	Fitzroy Crossi	53.05	270	P	P	18 15 45.1	-1.7
	comp=Z,14nm,0.9s,baz=118,slow=11,SNR=13						
FITZ				PcP	PcP	18 16 56.3	+1.1
	comp=Z,5.7nm,1.0s,baz=136,slow=5.7,SNR=3.4						
FITZ				LR	LR	18 38 40.4	
	comp=Z,5μm,18.5s,baz=110,slow=36						
	comp=Z,14nm,0.9s						
NWAO	Narrogin (SRO)	54.83	250	LR	LR	18 36 26.3	
	comp=Z,1μm,20.4s,baz=93,slow=33						
CASY	Casey	54.91	208	P	P	18 15 59.2	-0.5
MEEK	Meekatharra	55.72	257	P	P	18 16 05.0	-1.2
	comp=Z,78nm,1.3s						
MBWA	Marble Bar	56.85	264	P	P	18 16 11.6	-2.7
GUMO	Guam	57.41	315	LR	LR	18 38 27.5	
	comp=Z,924nm,20.6s,baz=120,slow=34						
BATI	Baumata	58.42	277	P	P	18 16 26.3	+0.9
	comp=Z,25nm,0.6s,baz=149,slow=5.9,SNR=4.1						
BATI				LR	LR	18 42 20.9	
	comp=Z,6μm,18.3s,baz=142,slow=37						
	comp=Z,25nm,0.6s						
QSPA	South Pole Qui	59.09	180	P	P	18 16 30.4	+1.0
QSPA	South Pole Qui	59.09	180	P	P	18 16 31.4	+2.0
	comp=Z,40nm,1.0s,baz=41,slow=4.3,SNR=79						
QSPA				S	S	18 24 41.6	+5.9
	comp=Z,1.2nm,0.9s,baz=56,slow=3.6,SNR=2.1						
	comp=Z,40nm,1.0s						
MMRI	Maumere	60.42	278	P	P	18 16 38.5	-0.7
MMRI	Maumere	60.42	278	P	P	18 16 39.0	-0.2
EDFI	Ende, Flores	60.83	278	P	P	18 16 40.1	-2.0
	comp=Z,558nmcomp=Z,20nm,0.7s						
KAPI	Kappang	64.40	280	P	P	18 17 06.1	+0.3
	comp=Z,4.4nm,0.5s,baz=115,slow=17,SNR=3.8						
KAPI				LR	LR	18 45 17.5	
	comp=Z,739nm,18.0s,baz=117,slow=36						
	comp=Z,4.4nm,0.5s						
PCI	Palu	66.54	284	P	P	18 17 17.8	-1.9
	comp=Z,26nm,0.9s						
JAGI	Jajag, Banyuwa	67.41	274	P	P	18 17 24.0	-1.2
JAGI	Jajag, Banyuwa	67.41	274	P	P	18 17 23.9	-1.3
GMJI	Gumukmas	68.11	273	P	P	18 17 27.8	-1.9
	comp=Z,56nm,1.1s						
SMAI	San Martin Ant	68.59	158	IAmb	IAmb	18 17 37.0	
	comp=Z,19nm,1.1s						
BELA	Belgrano 2	69.07	172	P	P	18 17 34.7	0.0
BELA				IAmb	IAmb	18 17 50.6	
	comp=Z,24nm,1.1s						
JCJ	Chichijima	69.61	322	LR	LR	18 45 02.3	
	comp=Z,228nm,19.3s,baz=312,slow=33						
PCJI	Pacitan	70.09	272	P	P	18 17 40.2	-1.8
PMSA	Palmer Station	71.41	155	LR	LR	18 45 00.2	
	comp=Z,2μm,18.7s,baz=242,slow=32						
MAW	Mawson	71.97	200	P	P	18 17 54.2	+1.8
	comp=Z,17nm,1.0s,baz=132,slow=8.5,SNR=7.4						
MAW				LR	LR	18 49 57.7	
	comp=Z,2μm,18.6s,baz=113,slow=36						
	comp=Z,17nm,1.0s						
LEM	Lembang	73.83	272	LR	LR	18 52 26.1	
	comp=Z,1μm,18.6s,baz=144,slow=37						
STKI	Sintang	74.08	280	P	P	18 18 05.9	0.0
	comp=Z,45nm,1.5s						
TGY	Tagaytay City	74.42	297	LR	LR	18 50 49.2	
	comp=Z,267nm,18.9s,baz=112,slow=36						
DBJI	Dramaga	74.71	272	P	P	18 18 08.3	-1.3
	comp=Z,3μmcomp=Z,85nm,1.7s						
ESPZ	Base Esperanza	74.72	156	IAmb	IAmb	18 18 21.4	
	comp=Z,44nm,1.2s						
USHA	Ushuaia	75.01	145	LR	LR	18 43 51.2	
	comp=Z,844nm,19.9s,baz=210,slow=30						
KSM	Kuching	75.82	280	P	P	18 18 14.8	-1.1
KSM				IAmb	IAmb	18 18 17.0	
	comp=Z,31nm,1.3s						
SYO	Syowa Base	76.66	193	⇑*e*P	P	18 18 20.0	+0.2
SYO	Syowa Base	76.66	193	⇑*e*sP	sP	18 18 26.0	+2.1
TROLL	Troll, Antarti	77.25	180	⇑P	P	18 18 24.1	+0.8
	comp=Z,787nm,0.9s						
SNAA	Sanae	77.51	178	⇑P	P	18 18 25.6	+1.0
	comp=Z,220nm,1.0s						
SNAA	Sanae	77.51	178	P	P	18 18 24.7	+0.1
SNAA	Sanae	77.51	178	P	P	18 18 25.5	+0.9
	comp=Z,17nm,1.1s,baz=192,slow=5.7,SNR=21						
SNAA				LR	LR	18 49 56.0	
	comp=Z,1μm,19.7s,baz=204,slow=34						
	comp=Z,17nm,1.1s						
JOW	Kunigami	77.60	312	LR	LR	18 48 08.8	
	comp=Z,482nm,21.4s,baz=151,slow=32						
VNA3	Neumayer Olymp	77.63	176	⇑P	P	18 18 25.7	+0.5
	comp=Z,34nm,0.8s						
MDSI	Maura Dua	77.96	272	P	P	18 18 26.3	-1.7
COYC	Coyhaique	78.00	136		P	18 18 29.1	+1.3
VNA2	Neumayer--Watz	78.08	177	⇑P	P	18 18 26.2	-1.5
	comp=Z,24nm,0.8s,baz=178,slow=5.3						
VNA1	Neumayer--Stat	78.30	176	⇑P	P	18 18 29.7	+0.8
	comp=Z,29nm,0.9s						
MJAR	Matsushiro Arr	79.15	325	P	P	18 18 32.0	-2.0
	comp=Z,12nm,1.1s,baz=160,slow=5.5,SNR=16						
MJAR				S	S	18 28 31.7	-1.4
	comp=Z,0.6nm,0.6s,baz=116,slow=19,SNR=1.7						
MJAR				LR	LR	18 53 47.3	
	comp=Z,296nm,18.0s,baz=128,slow=36						
	comp=Z,12nm,1.1s						
MJAR	Matsushiro Arr	79.15	325	P	P	18 18 32.0	-2.0
MAJO	Matsushiro	79.15	325	P	P	18 18 32.6	-1.4
MAJO				IAmb	IAmb	18 18 34.8	
	comp=Z,23nm,1.3s						
MAJO	Matsushiro	79.15	325	P	P	18 18 32.6	-1.4
MAJO				pmax	pmax		
	comp=Z,23nm,1.3s						
H03S2	Juan Fernandez	79.54	123	T	T	19 46 12.4	
	baz=238						
H03S1	Juan Fernandez	79.55	123	T	T	19 46 06.1	
	baz=238,slow=74						
H03S3	Juan Fernandez	79.56	123	T	T	19 46 14.1	
	baz=238,slow=74						
H03N3	Juan Fernandez	79.73	123	T	T	19 46 30.8	
	baz=237						
H03N2	Juan Fernandez	79.74	123	T	T	19 46 16.2	
	baz=237						
H03N1	Juan Fernandez	79.75	123	T	T	19 46 20.5	
	baz=237						
JSD	Sado	80.31	326	P	P	18 18 39.5	-0.7
JNU	Nakatsue	80.49	318	LR	LR	18 50 02.4	
	comp=Z,154nm,21.8s,baz=99,slow=33						
JTM	Tenmabayashi	81.22	329	P	P	18 18 45.1	+0.1
MYKOM	Kota Tinggi	81.46	277	P	P	18 18 46.9	-0.2
MYKOM				IAmb	IAmb	18 18 49.2	
	comp=Z,24nm,1.1s						
PLCA	Paso Flores	81.57	133	P	P	18 18 48.4	+1.1
	comp=Z,7.4nm,1.1s,baz=233,slow=9.0,SNR=5.3						
PLCA				LR	LR	18 47 38.9	
	comp=Z,1μm,19.6s,baz=242,slow=30						
	comp=Z,7.4nm,1.1s						
ADK	Adak	82.56	0	P	P	18 18 51.3	-0.4
ADK	Adak	82.56	0	P	P	18 18 51.3	-0.4
ADK				pmax	pmax		
	comp=Z,48nm,1.3s						
QZH	Quanzhou	82.88	305	P	P	18 18 53.5	-0.6
QZH				S	S	18 29 10.5	-1.8
QZH				pmax	pmax		
	comp=Z,380nm,6.3s						
QZH				LR	LR		
	comp=Z,440nm,17.5s						
QZH				LR	LR		
	comp=Z,410nm,15.1s						
QZH				LR	LR		
	comp=Z,620nm,17.2s						
ASAJ	Asahikawa	83.32	332	P	P	18 18 56.7	+0.7
	comp=Z,19nm,1.1s,baz=156,slow=12,SNR=3.6						
ASAJ				LR	LR	18 51 26.4	
	comp=Z,1μm,20.5s,baz=160,slow=32						
	comp=Z,19nm,1.1s						
LPIG	La Paz	84.28	58	LR	LR	18 49 13.2	
	comp=Z,3μm,19.6s,baz=219,slow=30						
SKR	Severo-Kuril's	84.71	343	*e*P	P	18 18 49.1	-14
SKR				pmax	pmax		
	comp=Z,400nm,4.8s						
BO02	Sierra Bellavi	84.74	128	P	P	18 19 04.8	+1.0
BO02				IAmb	IAmb	18 19 09.5	
	comp=Z,19nm,1.1s						
TJN	Taejon	84.83	318	*i* P	P	18 19 02.1	-1.7
MT01	Popeta	84.94	127	P	P	18 19 05.7	+0.9
BCW	Bitter Crk WRg	85.20	44	IAmb	IAmb	18 19 32.4	
	comp=Z,28nm,1.2s						
KSRS	Korea Array	85.27	319	P	P	18 19 05.7	-0.3
	comp=Z,4.5nm,1.0s,baz=142,slow=5.6,SNR=12						
KSRS				S	SKSac	18 29 30.5	+0.3
	comp=Z,0.3nm,0.4s,baz=155,slow=35,SNR=1.4						
	comp=Z,4.5nm,1.0s						
KSAR	Wonju Array Be	85.29	319	P	P	18 19 05.9	-0.2
KSAR	Wonju Array Be	85.29	319	P	P	18 19 05.9	-0.2
ELS	Elsinore Mount	85.54	46	IAmb	IAmb	18 19 12.9	
	comp=Z,21nm,1.5s						
YSS	Yuzhno-Sakhali	85.61	334	*e*P	P	18 19 07.5	0.0
YSS				*e*S	S	18 29 39.2	+0.5
YSS				pmax	pmax		
	comp=Z,30nm,1.1s						
YSS				pmax	pmax		
	comp=Z,400nm,6.0s						
YSS				MLR	MLR		
	comp=Z,700nm,18.0s						
YSS				MLR	MLR		
	comp=N,600nm,17.0s						
YSS				MLR	MLR		
	comp=E,400nm,15.0s						
LMEL	Las Melosas	85.67	127	IAmb	IAmb	18 19 19.8	
	comp=Z,22nm,1.2s						
PEL	Peldehue	85.73	126	P	P	18 19 09.7	+0.9

PEL	Peldehue	85.73	126	P	P	18 19 09.7	+0.9
PEL				pmax	pmax		
	comp=Z,79nm,1.6s						
QIZ	Qiongzhong	85.89	295	P	P	18 19 09.5	0.0
QIZ				S	SKSac	18 29 38.3	+3.3
QIZ				SS	SS	18 35 21.5	+0.9
QIZ				pmax	pmax		
	comp=Z,25nm,1.6s						
QIZ				pmax	pmax		
	comp=Z,280nm,6.7s						
QIZ				LR	LR		
	comp=Z,280nm,19.6s						
QIZ				LR	LR		
	comp=Z,430nm,32.7s						
HOPS	Hopland Field	85.95	39	IAmb	IAmb	18 19 13.1	
	comp=Z,22nm,1.1s						
GDXM	Geysers	85.97	40	IAmb	IAmb	18 19 13.6	
	comp=Z,15nm,1.2s						
PFO	Pinyon Flats O	86.12	47	P	P	18 19 12.5	+2.0
PFO	Pinyon Flats O	86.12	47	LR	LR	18 52 25.9	
	comp=Z,2μm,18.5s,baz=233,slow=32						
PFO	Pinyon Flats O	86.12	47	P	P	18 19 12.5	+2.0
PFO				pmax	pmax		
	comp=Z,12nm,1.3s						
KCPM	Cahto Peak	86.17	39	IAmb	IAmb	18 19 16.2	
	comp=Z,34nm,1.3s						
ISA	Isabella, Lake	86.26	44	IAmb	IAmb	18 19 14.9	
	comp=Z,22nm,1.1s						
KMRM	Mail Ridge	86.49	38	IAmb	IAmb	18 19 17.8	
	comp=Z,26nm,1.1s						
PETK	Petropavlovsk-	86.59	345	P	P	18 19 12.4	+0.2
	comp=Z,12nm,0.9s,baz=160,slow=5.9,SNR=11						
	comp=Z,12nm,0.9s						
CMB	Columbia Colle	86.77	41	IAmb	IAmb	18 19 18.5	
	comp=Z,22nm,1.1s						
KHMM	Horse Mountain	86.95	38	IAmb	IAmb	18 19 22.8	
	comp=Z,28nm,1.2s						
GSC	Goldstone, Bar	87.03	45	IAmb	IAmb	18 19 20.3	
	comp=Z,16nm,1.1s						
AFDM	Forest Hills D	87.07	40	IAmb	IAmb	18 19 19.8	
	comp=Z,12nm,1.0s						
NJ2	Nanjing	87.18	310	eP	P	18 19 17.0	+1.5
NJ2				S	S	18 30 00.0	+5.4
NJ2				pmax	pmax		
	comp=Z,14nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,340nm,10.7s						
NJ2				LR	LR		
	comp=Z,440nm,17.0s						
NJ2				LR	LR		
	comp=Z,230nm,16.6s						
NJ2				LR	LR		
	comp=Z,460nm,18.5s						
QSM	Queen of Sheba	87.43	45	IAmb	IAmb	18 19 20.2	
	comp=Z,18nm,1.3s						
WAKR	Walker	87.63	42	IAmb	IAmb	18 19 22.2	
	comp=Z,18nm,1.2s						
GWY	Greenwater Val	87.70	45	IAmb	IAmb	18 19 41.4	
	comp=Z,22nm,1.6s						
LHV	Little Huntoon	88.00	42	IAmb	IAmb	18 19 27.1	
	comp=Z,18nm,1.0s						
USA0B	Ussuriysk Arra	88.07	326	eP	P	18 19 18.5	-1.0
USRK	Ussuriysk Ar.	88.07	326	P	P	18 19 19.2	-0.3
	comp=Z,6.1nm,0.8s,baz=122,slow=5.2,SNR=8.9						
USRK				LR	LR	18 52 31.2	
	comp=Z,427nm,21.8s,baz=147,slow=32						
	comp=Z,6.1nm,0.8s						
GMN	Gold Mountain	88.08	44	IAmb	IAmb	18 19 25.3	
	comp=Z,12nm,1.2s						
YBH	Yreka Blue Hor	88.10	38	IAmb	IAmb	18 19 34.6	
	comp=Z,12nm,1.1s						
YBH	Yreka Blue Hor	88.10	38	LR	LR	18 54 21.4	
	comp=Z,113nm,18.7s,baz=243,slow=33						
NVAR	Mina Array Bea	88.23	42	P	P	18 19 21.9	+1.2
	comp=Z,12nm,1.1s,baz=240,slow=4.2,SNR=27						
NVAR				LR	LR	18 52 17.4	
	comp=Z,2μm,19.2s,baz=230,slow=31						
	comp=Z,12nm,1.1s						
RYN	Ryan	88.24	42	IAmb	IAmb	18 19 25.7	
	comp=Z,16nm,1.3s						
CFA	Coronel Fontan	88.31	126	LR	LR	18 52 52.6	
	comp=Z,686nm,18.3s,baz=186,slow=31						
NV11	Mina Array Sit	88.32	42	IAmb	IAmb	18 19 26.1	
	comp=Z,16nm,1.2s						
TPNV	Topopah Spring	88.45	44	IAmb	IAmb	18 19 45.5	
	comp=Z,16nm,1.1s						
PAHR	Pah Rah Range	88.49	41	IAmb	IAmb	18 19 26.6	
	comp=Z,14nm,1.3s						
V12A	Nelson	88.51	46	IAmb	IAmb	18 19 26.0	
	comp=Z,14nm,1.2s						
L04D	Klamath Falls	88.66	37	IAmb	IAmb	18 19 25.8	
	comp=Z,22nm,1.3s						
TYV	Tymovskoe	88.91	336	eP	P	18 19 25.2	+1.9
TYV				eS	S	18 30 12.9	+2.7
TYV				pmax	pmax		
	comp=Z,15nm,1.4s						
TYV				pmax	pmax		
	comp=Z,100nm,2.4s						
TYV				smax	smax		
	comp=N,100nm,2.4s						
TYV				smax	smax		
	comp=E,200nm,2.4s						
TUC	Tucson	88.96	51	P	P	18 19 25.7	+1.5
TUC				IAmb	IAmb	18 20 00.5	
	comp=Z,34nm,1.8s						
TUC	Tucson	88.96	51	P	P	18 19 25.7	+1.5
TUC				pmax	pmax		
	comp=Z,34nm,1.8s						
I03D	Drain, OR	89.18	36	IAmb	IAmb	18 19 30.7	
	comp=Z,19nm,1.1s						
MDJ	Mudanjiang	89.53	325	IAmb	IAmb	18 19 29.0	
	comp=Z,16nm,1.2s						
MDJ	Mudanjiang	89.53	325	P	P	18 19 28.0	+1.6
MDJ				SKS	SKSac	18 29 56.5	+0.6
MDJ				S	ScS	18 30 23.8	+2.8
MDJ				pmax	pmax		
	comp=Z,15nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,390nm,10.3s						
MDJ				LR	LR		
	comp=Z,470nm,20.6s						
MDJ				LR	LR		
	comp=Z,470nm,23.4s						
MDJ				LR	LR		
	comp=Z,980nm,20.6s						
X16A	Lo Mia Camp, P	89.84	49	IAmb	IAmb	18 19 53.2	
	comp=Z,14nm,1.0s						
J05D	Fort Rock, OR	89.97	37	IAmb	IAmb	18 19 34.0	
	comp=Z,20nm,1.2s						
LCMT	Little Creek M	90.33	46	IAmb	IAmb	18 19 36.2	
	comp=Z,13nm,1.3s						
H04A	Detroit Lake	90.47	36	IAmb	IAmb	18 19 52.0	
	comp=Z,29nm,1.3s						
PINE	Pine Mountain	90.48	37	IAmb	IAmb	18 19 36.5	
	comp=Z,24nm,1.1s						
U15A	North Rim	90.55	47	IAmb	IAmb	18 19 37.7	
	comp=Z,18nm,1.0s						
KNB	Kanab	90.59	46	IAmb	IAmb	18 19 37.6	
	comp=Z,20nm,1.2s						
KDAK	Kodiak Island	90.86	13	LR	LR	18 57 13.4	
	comp=Z,813nm,18.5s,baz=210,slow=34						
X18A	Snowflake	90.87	50	IAmb	IAmb	18 19 57.9	
	comp=Z,7.9nm,0.8s						
TIA	Tai'an	90.91	313	P	P	18 19 33.8	+0.7
TIA				SKS	SKSac	18 30 06.3	+2.0
TIA				S	ScS	18 30 35.3	+2.5
TIA				pmax	pmax		
	comp=Z,28nm,1.1s						
TIA				pmax	pmax		
	comp=Z,370nm,10.8s						
TIA				LR	LR		
	comp=Z,130nm,13.1s						
TIA				LR	LR		
	comp=Z,330nm,14.4s						
TIA				LR	LR		
	comp=Z,510nm,20.5s						
CN2	Changchun	91.06	322	P	P	18 19 34.0	+0.4
CN2				SKS	SKSac	18 30 03.8	-1.0
CN2				S	S	18 30 29.8	-0.8
CN2				pmax	pmax		
	comp=Z,30nm,1.1s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,500nm,16.0s						
CN2				LR	LR		
	comp=Z,400nm,16.0s						
CN2				LR	LR		
	comp=Z,600nm,18.0s						
W18A	Petrified Fore	91.37	49	IAmb	IAmb	18 19 41.1	
	comp=Z,16nm,1.3s						
BNX	BinXian	91.42	325	⇑P	P	18 19 36.3	+1.1
BNX				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BNX				pmax	pmax		
	comp=Z,170nm,3.5s						
BNX				LR	LR		
	comp=Z,410nm,20.6s						
BNX				LR	LR		
	comp=Z,410nm,19.2s						
BNX				LR	LR		
	comp=Z,770nm,20.0s						
I07A	Izee	91.43	38	IAmb	IAmb	18 19 40.5	
	comp=Z,14nm,1.2s						
J08A	Circle Bar Ran	91.48	39	IAmb	IAmb	18 19 40.6	
	comp=Z,17nm,1.1s						
ELK	Elko	91.54	42	LR	LR	18 53 51.8	
	comp=Z,2μm,19.8s,baz=234,slow=31						
NLWA	Neilton Lookou	91.60	33	P	P	18 19 36.9	+0.9
NLWA				IAmb	IAmb	18 19 39.8	
	comp=Z,14nm,1.2s						
G06A	Carlson Farm,	91.64	36	P	P	18 19 36.8	+0.5
G06A				IAmb	IAmb	18 19 41.2	
	comp=Z,16nm,1.0s						
MVU	Marysvale	91.90	45	IAmb	IAmb	18 23 09.4	
	comp=Z,15nm,1.3s						
KLR	Kul'dur	91.93	329	P	P	18 19 37.8	+0.4
	comp=Z,3.9nm,0.9s,baz=128,slow=8.1,SNR=4.6						
KLR				LR	LR	18 56 18.8	
	comp=Z,926nm,21.0s,baz=140,slow=33						
	comp=Z,3.9nm,0.9s						
TX31	Lajitas Ar. Si	92.14	57	IAmb	IAmb	18 20 02.7	
	comp=Z,13nm,1.6s						
TXAR	Lajitas Array	92.15	57	P	P	18 19 41.5	+2.4
	comp=Z,3.6nm,1.2s,baz=242,slow=4.8,SNR=12						
TXAR				LR	LR	18 55 34.0	
	comp=Z,924nm,18.5s,baz=224,slow=32						
	comp=Z,3.6nm,1.2s						
CMIG	Matias Romero	92.29	72	LR	LR	18 52 45.2	
	comp=Z,719nm,19.5s,baz=177,slow=30						
O18K	Koktuh Hills	92.35	11	IAmb	IAmb	18 20 01.3	
	comp=Z,14nm,1.1s						
G08A	Pilot Rock	92.54	37	IAmb	IAmb	18 19 44.3	
	comp=Z,20nm,1.2s						
NNA	Nana	92.58	106	LR	LR	18 52 59.8	
	comp=Z,804nm,19.4s,baz=227,slow=30						
MXC	Moxie City	92.75	35	IAmb	IAmb	18 19 46.4	
	comp=Z,15nm,1.2s						
ALPN	Alpine	92.75	56	IAmb	IAmb	18 20 10.6	
	comp=Z,13nm,1.5s						
ILSW	Iliamna Southw	92.82	12	IAmb	IAmb	18 19 44.8	
	comp=Z,17nm,1.3s						
LYN	LuoYang	92.93	309	P	P	18 19 42.8	+0.3
LYN				SKS	SKSac	18 30 16.0	+0.2
LYN				S	S	18 30 48.5	+0.7
LYN				pmax	pmax		
	comp=Z,290nm,3.9s						
LYN				LR	LR		
	comp=Z,340nm,17.8s						
LYN				LR	LR		
	comp=Z,560nm,17.8s						
LYN				LR	LR		
	comp=Z,710nm,18.8s						
MFID	Camas Ranch	92.95	40	IAmb	IAmb	18 19 47.2	
	comp=Z,16nm,1.1s						
E07A	Sunnyside	92.95	36	IAmb	IAmb	18 19 47.5	
	comp=Z,14nm,1.1s						
HAWA	Hanford	93.00	36	IAmb	IAmb	18 19 47.6	
	comp=Z,14nm,1.1s						
TMUT	Trail Mountain	93.01	45	IAmb	IAmb	18 19 48.5	
	comp=Z,7.8nm,1.1s						
HNS	HongShan	93.16	312	⇓P	P	18 19 45.3	+1.9
HNS				SKS	SKSac	18 30 19.0	+2.1
HNS				S	ScS	18 30 53.8	+2.3
HNS				pmax	pmax		
	comp=Z,16nm,1.3s						
HNS				LR	LR		
	comp=Z,420nm,19.4s						
HNS				LR	LR		
	comp=Z,380nm,19.2s						
HNS				LR	LR		
	comp=Z,450nm,18.0s						
WAH2	Wahluke Slope	93.23	36	IAmb	IAmb	18 19 48.5	
	comp=Z,9.9nm,0.9s						
BBB	Bella Bella	93.32	28	LR	LR	18 56 35.9	
	comp=Z,1μm,18.7s,baz=211,slow=32						
ANMO	Albuquerque	93.43	51	P	P	18 19 45.5	+0.4
ANMO	Albuquerque	93.43	51	IAmb	IAmb	18 19 49.8	
	comp=Z,5.7nm,1.2s						
ANMO	Albuquerque	93.43	51	LR	LR	18 57 09.0	
	comp=Z,2μm,18.3s,baz=324,slow=32						
ANMO	Albuquerque	93.43	51	P	P	18 19 45.5	+0.4
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.2s						
HVU	Hansel Valley	93.62	43	IAmb	IAmb	18 19 49.5	
	comp=Z,14nm,1.1s						
D08A	Wollman Farm,	93.76	36	IAmb	IAmb	18 19 50.9	
	comp=Z,26nm,1.6s						
E09A	Wood Farm, Sta	93.79	36	IAmb	IAmb	18 19 50.6	
	comp=Z,14nm,1.2s						
ATAH	Atahualpa	93.84	101	LR	LR	18 54 46.0	
	comp=Z,640nm,18.9s,baz=270,slow=31						
BJI	Beijing	93.86	315	P	P	18 19 48.0	+1.4
BJI				sS	sS	18 31 02.0	+1.2
BJI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BJI				pmax	pmax		
	comp=Z,88nm,9.6s						
BJI				LR	LR		
	comp=Z,220nm,19.5s						
BJI				LR	LR		
	comp=Z,110nm,21.0s						
BJI				LR	LR		
	comp=Z,230nm,17.5s						
PLID	Pearl Lake	93.96	38	IAmb	IAmb	18 19 51.7	
	comp=Z,12nm,1.1s						
MA2	Magadan	94.08	344	LR	LR	19 01 33.7	
	comp=Z,569nm,18.5s,baz=152,slow=35						
CMAR	Chiang Mai Arr	94.26	289	P	P	18 19 49.4	+0.4
	comp=Z,3.3nm,1.1s,baz=116,slow=4.5,SNR=13						
CMAR				PP	PP	18 23 36.2	-0.1
	comp=Z,0.6nm,0.9s,baz=125,slow=5.8,SNR=4.1						
	comp=Z,3.3nm,1.1s						
CHTO	Chiang Mai	94.44	289	P	P	18 19 49.7	-0.1
CHTO	Chiang Mai	94.44	289	P	P	18 19 49.7	-0.1
CHTO				pmax	pmax		
	comp=Z,9.0nm,1.3s						
HEH	HeiHe	94.61	328	eP	P	18 19 48.5	-1.3
HEH				sP	pwP	18 20 04.0	+2.3
HEH				SKS	SKSac	18 30 24.5	+0.3
HEH				S	ScS	18 31 06.3	+3.4
HEH				pmax	pmax		
	comp=Z,5.0nm,1.4s						
HEH				LR	LR		
	comp=Z,600nm,18.0s						
HEH				LR	LR		
	comp=Z,220nm,18.1s						
HEH				LR	LR		
	comp=Z,770nm,19.0s						
KMI	Kunming	94.72	296	⇑P	P	18 19 52.0	+0.8
KMI				PP	PP	18 23 37.5	-2.5
KMI				SKS	SKSac	18 30 27.0	+0.5
KMI				S	S	18 31 03.3	-1.1
KMI				SS	SS	18 37 27.3	-1.6
KMI				pmax	pmax		
	comp=Z,16nm,1.4s						
KMI				LR	LR		
	comp=Z,470nm,16.6s						
KMI				LR	LR		
	comp=Z,310nm,17.3s						
KMI				LR	LR		
	comp=Z,340nm,23.2s						
GHO	Glory Hole Cre	95.27	13	IAmb	IAmb	18 20 36.2	
	comp=Z,17nm,1.4s						
NEW	Newport	95.48	36	LR	LR	18 55 47.6	
	comp=Z,2μm,20.3s,baz=220,slow=31						
PDAR	Pinedale Array	96.11	43	P	P	18 19 57.8	+0.6
	comp=Z,2.1nm,1.0s,baz=236,slow=5.0,SNR=7.3						
PDAR				LR	LR	18 58 17.3	
	comp=Z,926nm,18.6s,baz=227,slow=32						
	comp=Z,2.1nm,1.0s						
PZH	PanZhiHua	96.21	297	P	P	18 19 59.0	+1.1
PZH				PP	PP	18 23 55.5	+4.0
PZH				SKS	SKSac	18 30 33.5	-0.6
PZH				S	S	18 31 16.0	-1.1
PZH				pmax	pmax		
	comp=Z,6.0nm,1.3s						
PZH				pmax	pmax		
	comp=Z,110nm,5.9s						
PZH				LR	LR		
	comp=Z,250nm,17.1s						
PZH				LR	LR		
	comp=Z,280nm,17.9s						
PZH				LR	LR		
	comp=Z,400nm,20.2s						
YHL	Hebgen Lake	96.45	41	IAmb	IAmb	18 20 05.0	
	comp=Z,13nm,1.2s						
BOZ	Bozeman (W)	96.66	40	IAmb	IAmb	18 20 04.4	
	comp=Z,8.9nm,1.2s						
SEY	Seymchan	96.75	347	LR	LR	19 03 24.6	
	comp=Z,833nm,18.2s,baz=160,slow=35						
SEY	Seymchan	96.75	347	i P	P	18 19 57.4	-1.8
SEY				pmax	pmax		
	comp=Z,5.0nm,1.5s						
HHC	Hu-ho-hao-te	97.17	314	eP	Pdif	18 20 03.0	+1.1
HHC				sP	pwP	18 20 10.8	-3.0
HHC				SKS	SKSac	18 30 39.0	+0.6
HHC				S	ScS	18 31 25.5	+0.5
HHC				pmax	pmax		
	comp=Z,16nm,0.6s						
HHC				pmax	pmax		
	comp=Z,100nm,4.5s						
HHC				LR	LR		
	comp=Z,170nm,15.3s						
HHC				LR	LR		
	comp=Z,230nm,16.8s						
HHC				LR	LR		
	comp=Z,310nm,16.8s						
YNE	Yellowstone No	97.20	41	IAmb	IAmb	18 20 07.2	
	comp=Z,8.2nm,1.2s						
LPAZ	La Paz	97.26	114	P	Pdif	18 20 07.0	+3.3
	comp=Z,0.7nm,0.6s,baz=208,slow=17,SNR=2.3						
LPAZ				LR	LR	18 56 53.1	
	comp=Z,451nm,18.8s,baz=250,slow=31						
	comp=Z,0.7nm,0.6s						
LPAZ	La Paz	97.26	114	P	Pdif	18 20 07.0	+3.4
DLBC	Dease Lake	97.43	23	LR	LR	18 55 48.0	
	comp=Z,51nm,21.3s,baz=194,slow=30						
TNCH	TengChong	97.95	294	P	P	18 20 05.5	-0.3
TNCH				PP	PP	18 24 07.8	+2.9
TNCH				SKS	SKSac	18 30 43.0	-0.3
TNCH				S	S	18 31 30.0	-2.2
TNCH				pmax	pmax		
	comp=Z,11nm,1.9s						
TNCH				LR	LR		
	comp=Z,290nm,20.1s						
TNCH				LR	LR		
	comp=Z,430nm,18.8s						
TNCH				LR	LR		
	comp=Z,440nm,18.3s						
BTO	Baotou	98.00	313	eP	P	18 20 03.5	-2.1
BTO				PP	PP	18 24 06.5	+1.6
BTO				SKS	SKSac	18 30 42.5	-0.2
BTO				S	S	18 31 29.0	-2.7
BTO				pmax	pmax		
	comp=Z,13nm,0.6s						
BTO				pmax	pmax		
	comp=Z,320nm,4.0s						
BTO				LR	LR		
	comp=Z,380nm,13.9s						
BTO				LR	LR		
	comp=Z,440nm,15.7s						
BTO				LR	LR		
	comp=Z,580nm,12.7s						
ILAR	Eielson Array	98.38	13	LR	LR	19 00 23.3	
	comp=Z,560nm,19.4s,baz=196,slow=33						
J25K	Salcha River,	98.53	13	IAmb	IAmb	18 20 34.4	
	comp=Z,8.6nm,1.6s						
CPUP	Villa Florida	99.05	128	LR	LR	18 59 04.9	
	comp=Z,207nm,18.5s,baz=90,slow=32						
BILL	Bilibino	99.54	354	i P	Pdif	18 20 10.5	-1.2
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s						
LZH	Lanzhou	99.65	306	eP	Pdif	18 20 12.3	-0.9
LZH				SKS	SKSac	18 30 53.3	+2.0
LZH				S	S	18 31 50.5	+4.4
LZH				pmax	pmax		
	comp=Z,100nm,3.9s						
LZH				LR	LR		
	comp=Z,290nm,14.3s						
LZH				LR	LR		
	comp=Z,440nm,16.8s						
LZH				LR	LR		
	comp=Z,580nm,17.1s						
WMQ	Urumqi	114.16	308	ePKP	PKiKP	18 25 09.8	+1.2
WMQ				LR	LR		
	comp=Z,250nm,19.9s						
ZSN	Zaisan	117.20	311	ePKIKP	PKPdf	18 25 12.4	-1.9
ZSN	Zaisan	117.20	311	ePKP	PKPdf	18 25 12.4	-1.9
RES	Resolute Bay	117.64	17		PKiKP	18 25 14.8	+0.5
RES	Resolute Bay	117.64	17	PKIKP	PKiKP	18 25 14.8	+0.5
MK31	Makanchi Array	118.71	310c	iPKIKP	PKPdf	18 25 16.8	-0.4
MKAR	Makanchi Array	118.71	310		PKPdf	18 25 15.5	-1.8
MKAR	Makanchi Array	118.71	310	PKP	PKPdf	18 25 16.6	-0.6
	comp=Z,3.6nm,1.1s,baz=90,slow=2.9,SNR=13						
MKAR				PKKPbc	PKKPab	18 35 35.4	+1.4
	comp=Z,0.4nm,0.7s,baz=290,slow=4.2,SNR=4.3						
MAKZ	Makanchi	118.92	310		PKPdf	18 25 15.7	-1.9
MAKZ	Makanchi	118.92	310	PKIKP	PKPdf	18 25 15.7	-1.9
ZALV	Zalesovo Beam	118.96	318		PKPdf	18 25 16.4	-1.0
ZALV	Zalesovo Beam	118.96	318	PKP	PKPdf	18 25 16.6	-0.8
	comp=Z,0.7nm,0.6s,baz=120,slow=5.2,SNR=4.3						
SHLS	Shalkode	119.64	305	ePKIKP	PKPdf	18 25 16.4	-2.8
SHLS	Shalkode	119.64	305	ePKP	PKPdf	18 25 16.5	-2.8
MAKGR	Makgori	119.69	203		PKPdf	18 25 20.0	-0.1
UZB	Uzynbulak	119.95	305	ePKIKP	PKPdf	18 25 17.6	-2.3
UZB	Uzynbulak	119.95	305	ePKP	PKPdf	18 25 17.7	-2.3
KPKS	Kokpek	120.27	305	ePKIKP	PKPdf	18 25 18.2	-2.2
KPKS	Kokpek	120.27	305	ePKP	PKPdf	18 25 18.2	-2.2
SATY	Saty	120.36	305	ePKIKP	PKPdf	18 25 18.3	-2.3
SATY	Saty	120.36	305	ePKP	PKPdf	18 25 18.4	-2.3
NRIK	Noril'sk	120.49	336	PKP	PKiKP	18 25 20.0	0.0
	comp=Z,3.2nm,0.8s,baz=139,slow=5.0,SNR=2.2						
NRIK	Noril'sk	120.49	336	PKIKP	PKiKP	18 25 20.0	0.0
KURK	Kurchatov	121.98	313		PKPdf	18 25 21.9	-1.5
KURK	Kurchatov	121.98	313c	ePKIKP	PKPdf	18 25 23.1	-0.2
KURK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KURBB	Kurchatov Arra	122.02	313	PKP	PKPdf	18 25 22.4	-1.0
	comp=Z,3.0nm,0.8s,baz=104,slow=1.8,SNR=36						
POIN	Pond Inlet	122.05	20		PKPdf	18 25 22.7	-0.1
AAK	Ala-Archa	123.04	303		PKPdf	18 25 25.9	0.0
AAK	Ala-Archa	123.04	303	PKIKP	PKPdf	18 25 25.9	0.0
KGCAE	Kacgae	123.29	202		PKiKP	18 25 27.8	+0.5
KOOLE	Kule	123.76	199		PKPdf	18 25 28.0	+0.1
BTLS	Baital	123.88	306	ePKIKP	PKPdf	18 25 25.1	-2.0
BTLS	Baital	123.88	306	ePKP	PKPdf	18 25 25.2	-2.0
GRTLG	Ghanzi	124.99	201		PKiKP	18 25 30.9	+0.3
BRZS	Berezniki	125.62	312	ePKIKP	PKPdf	18 25 28.4	-1.9
BRZS	Berezniki	125.62	312	ePKP	PKPdf	18 25 28.5	-1.9
KKAR	Karatay Array	126.00	303		PKPdf	18 25 30.3	-1.1
KKAR	Karatay Array	126.00	303	PKIKP	PKPdf	18 25 30.3	-1.1
IUG	Iuzhnay	126.16	302	ePKIKP	PKPdf	18 25 29.4	-2.4
IUG	Iuzhnay	126.16	302	ePKP	PKPdf	18 25 29.5	-2.4
SIMJ	Simiganj	126.18	297		PKiKP	18 25 32.5	+0.1
SCHQ	Schefferville	126.24	42	PKP	PKPdf	18 25 31.6	+0.2
	comp=Z,10nm,1.2s,baz=208,slow=2.9,SNR=3.8						
BRLS	Borolday	126.47	303	ePKIKP	PKPdf	18 25 30.2	-2.1
BRLS	Borolday	126.47	303	ePKP	PKPdf	18 25 30.2	-2.1
BVAR	Borovoye Array	127.34	315	PKP	PKPdf	18 25 33.7	+0.1
	comp=Z,5.6nm,0.9s,baz=116,slow=3.4,SNR=20						
BRVK	Borovoye	127.40	315		PKPdf	18 25 32.9	-0.8
BRVK	Borovoye	127.40	315	PKIKP	PKPdf	18 25 32.9	-0.8
SUMG	Summit	133.12	16		PKiKP	18 25 45.5	-0.2
SUMG	Summit	133.12	16	PKIKP	PKiKP	18 25 45.5	-0.2
ABKAR	Akbulak array	133.84	310		PKPdf	18 25 45.1	-0.9
ARTI	Arti	134.12	320		PKPdf	18 25 46.0	-0.3
ARTI	Arti	134.12	320	i PKIKP	PKPdf	18 25 44.6	-1.7
ARTI						18 28 14.2	
ARTI				MLR	MLR		
	comp=Z,665nm,21.0s						
KIRV	Kirov	138.23	325	i PKIKP	PKPdf	18 25 51.2	-2.6
ARCES	ARCESS Array B	139.35	348	PKP	PKPdf	18 25 55.9	+0.3
	comp=Z,6.6nm,1.0s,baz=30,slow=2.6,SNR=9.8						
BELG	Belogornoye	141.12	317	i PKIKP	PKPdf	18 25 57.5	-1.8
RAYN	Ar Rayn	141.50	270		PKPdf	18 26 00.1	-0.9
RAYN	Ar Rayn	141.50	270	PKIKP	PKPdf	18 26 00.1	-0.9
KLMR	Klimovskoe	141.64	332	ePKIKP	PKPdf	18 25 59.6	-0.4

KLMR				pmax	pmax		
	comp=Z,13nm,1.2s						
AKT	**Akhty**	**142.67**	**299**	*e*PKIKP	**PKPdf**	**18 26 02.0**	**-0.6**
AKT				pmax	pmax		
	comp=Z,18nm,1.2s						
MAK	**Makhachkala**	**142.77**	**301**	*e*PKHKP	PKPpre	18 25 57.0	
MAK				*e*		18 33 07.4	
MAK				*e*SS	SS	18 47 41.0	-7.9
MAK				pmax	pmax		
	comp=Z,118nm,1.4s						
GNI	**Garni**	**144.97**	**297**		PKPbc	18 26 06.1	+0.1
GNI	**Garni**	**144.97**	**297**	PKIKP	PKPbc	18 26 06.1	0.0
VRH	**Novokhopyorsk**	**144.97**	**316**	*e*PKIKP	**PKPab**	**18 26 04.6**	**-0.8**
VRH				pmax	pmax		
	comp=Z,10µm,1.0s						
MOS	**Moscow**	**145.24**	**325**	*i* PKIKP	**PKPbc**	**18 26 03.6**	**-2.6**
MOS				pmax	pmax		
	comp=Z,97nm,1.3s						
GOF	**Gofitskoye**	**145.72**	**306**	*ce*PKIKP	**PKPdf**	**18 26 07.6**	**0.0**
FIA1	**FINESS Array S**	**145.97**	**340**		**PKPdf**	**18 26 07.1**	**-0.4**
FINES	**FINESS Array B**	**145.97**	**340**		**PKPdf**	**18 26 06.9**	**-0.6**
FINES	**FINESS Array B**	**145.97**	**340**	PKPbc	**PKPdf**	**18 26 07.6**	**+0.1**
	comp=Z,30nm,0.9s,baz=44,slow=3.6,SNR=70						
KBZ	**Khabaz**	**146.04**	**303**	PKPbc	**PKPbc**	**18 26 08.7**	**-0.3**
	comp=Z,38nm,1.2s,baz=79,slow=4.6,SNR=37						
LPSR	**Galich'ya Gora**	**146.04**	**320**	*e*PKP2	**PKPdf**	**18 26 07.1**	**-0.8**
LPSR				pmax	pmax		
	comp=Z,80nm,1.0s						
OBN	**Obninsk**	**146.08**	**325**		**PKPdf**	**18 26 08.0**	**+0.1**
OBN	**Obninsk**	**146.08**	**325**	⇓*i*PKP2	**PKPdf**	**18 26 07.7**	**-0.2**
OBN				*i* SS	SS	18 48 20.4	-5.1
OBN				pmax	pmax		
	comp=Z,173nm,1.7s						
OBN				pmax	pmax		
	comp=Z,96nm,1.3s						
OBN				MLR	MLR		
	comp=Z,403nm,19.0s						
KIV	**Kislovodsk**	**146.15**	**304**		**PKPdf**	**18 26 08.5**	**0.0**
KIV	**Kislovodsk**	**146.15**	**304**	*i* PKIKP	**PKPdf**	**18 26 06.0**	**-2.6**
KIV				pmax	pmax		
	comp=Z,25nm,1.1s						
SHA1	**Shidzhatmaz**	**146.21**	**303**	*i* PKIKP	**PKPdf**	**18 26 06.8**	**-2.0**
VORR	**Voronezh**	**146.26**	**318**	*e*PKP2	**PKPbc**	**18 26 09.5**	**0.0**
VORR				pmax	pmax		
	comp=Z,69nm,1.1s						
VSR	**Storozhevoye**	**146.47**	**318**	*e*PKIKP	**PKPdf**	**18 26 07.7**	**-1.0**
VSR				pmax	pmax		
	comp=Z,40nm,1.0s						
VORD	**Divnogorie**	**146.49**	**317**	*e*PKIKP	**PKPdf**	**18 26 07.9**	**-0.8**
VORD				pmax	pmax		
	comp=Z,40nm,1.1s						
ERBR	**Yeremizino-Bor**	**147.35**	**307**	*i* PKP2	**PKPbc**	**18 26 13.4**	**+0.6**
ERBR				pmax	pmax		
	comp=Z,146nm,1.1s						
SOC	**Sochi**	**148.34**	**304**	*e*PKIKP	**PKPdf**	**18 26 11.2**	**-0.9**
SOC				*e*		18 29 47.5	
SOC				*e*PPP	PPP	18 32 59.6	
SOC				*e*SS	SS	18 48 48.8	-3.4
NB2	**NORSAR Subarra**	**149.47**	**352**	PKP	**PKPbc**	**18 26 18.1**	**+0.2**
	comp=Z,78nm,1.7s,baz=15,slow=2.6						
NB2	**NORSAR Subarra**	**149.47**	**352**	PKP	**PKPbc**	**18 26 18.1**	**+0.2**
	baz=15,slow=2.6						
NOA	**NORSAR Array B**	**149.47**	**352**	PKPbc	**PKPbc**	**18 26 17.1**	**-0.8**
	comp=Z,13nm,1.0s,baz=15,slow=2.7,SNR=22						
ANN	**Anapa**	**149.66**	**307**	*i* PKHKP	PKPpre	18 26 17.2	
ANN				pmax	pmax		
	comp=Z,51nm,0.8s						
HFS	**Hagfors**	**149.99**	**349**	PKPbc	**PKPbc**	**18 26 18.7**	**-0.5**
	comp=Z,21nm,1.0s,baz=22,slow=1.6,SNR=20						
MNK	**Minsk**	**150.47**	**330**	*i* PKiKP	**PKiKP**	**18 26 21.2**	**0.0**
	comp=E,12nm,0.7s						
MNK				*i* PKiKP	**PKiKP**	**18 26 21.2**	**0.0**
	comp=N,12nm,0.8s						
MNK				*i* PKiKP	**PKiKP**	**18 26 21.2**	**0.0**
	comp=Z,53nm,1.1s,baz=49						
MNK				*i* PP	**PP**	**18 29 56.0**	**-0.3**
MNK				*i* PPP	PPP	18 33 18.6	
MNK				*i* SKS	**SKSdf**	**18 33 23.7**	**+1.7**
MNK				*i* SS	SS	18 49 25.9	+11
MNK				*i* SSS	SSS	18 55 06.0	
MNK				*i* LQ	LQ	19 26 07.3	
MNK	**Minsk**	**150.47**	**330**	*i* PKIKP	**PKiKP**	**18 26 21.2**	**0.0**
MNK				*i*		18 29 56.0	
MNK				*i* PPP	PPP	18 33 18.6	
MNK				*i*		18 33 23.7	
MNK				pmax	pmax		
	comp=E,12nm,0.7s						
MNK				pmax	pmax		
	comp=N,12nm,0.8s						
MNK				pmax	pmax		
	comp=Z,53nm,1.1s						
NACGM	**Naroch**	**150.66**	**331**	*e*PKiKP	**PKiKP**	**18 26 21.6**	**0.0**
KONO	**Kongsberg**	**151.01**	**353**		**PKPbc**	**18 26 21.4**	**-0.2**
KONO	**Kongsberg**	**151.01**	**353**	PKIKP	**PKPbc**	**18 26 21.4**	**-0.2**
BEIL	**Beino**	**151.79**	**286**	*e*P	**PKiKP**	**18 26 24.9**	**+0.3**
SIM	**Simferopol'**	**151.88**	**308**	*e*PKIKP	**PKPbc**	**18 26 24.0**	**-0.1**
SIM				pmax	pmax		
	comp=Z,38nm,1.1s						
HWQ	**Hawqa**	**151.98**	**286**	*e*P	**PKiKP**	**18 26 25.9**	**+0.7**
GHAJ	**Ghor Haditha**	**152.02**	**279**		**PKPab**	**18 26 32.6**	**-1.6**
RCY	**Rachaya**	**152.03**	**284**	*e*P	**PKiKP**	**18 26 25.4**	**+0.1**
SHBL	**Chebaa**	**152.09**	**284**	*e*P	**PKiKP**	**18 26 25.5**	**+0.1**
BHL	**Bhannes**	**152.20**	**285**	*e*P	**PKiKP**	**18 26 25.7**	**+0.1**
AKASG	**Malin Array Be**	**152.22**	**323**		**PKPbc**	**18 26 24.0**	**-0.6**
AKASG	**Malin Array Be**	**152.22**	**323**	PKPbc	**PKPbc**	**18 26 24.1**	**-0.5**
	comp=Z,14nm,0.9s,baz=49,slow=3.5,SNR=31						
KIEV	**Kiev**	**152.23**	**323**		**PKPbc**	**18 26 23.6**	**-1.0**
KIEV	**Kiev**	**152.23**	**323**	PKIKP	**PKPbc**	**18 26 23.6**	**-1.0**
DQRL	**Deir Qamar**	**152.26**	**284**	*e*P	**PKiKP**	**18 26 25.9**	**+0.2**
MMAI	**Mount Meron Ar**	**152.35**	**283**	PKPbc	**PKiKP**	**18 26 26.8**	**+0.9**
	comp=Z,18nm,0.8s,baz=85,slow=3.3,SNR=21						
BRTR	**Keskin Array B**	**153.51**	**298**		**PKPdf**	**18 26 19.8**	**-0.6**
BRTR	**Keskin Array B**	**153.51**	**298**	PKP	**PKPdf**	**18 26 20.9**	**+0.5**
	comp=Z,1.6nm,1.0s,baz=63,slow=0.6,SNR=4.9						
BRTR				PKPbc	**PKiKP**	**18 26 28.9**	**+0.8**
	comp=Z,4.9nm,1.0s,baz=121,slow=1.8,SNR=14						
BRTR				PKPab	**PKPab**	**18 26 39.6**	**-0.9**
	comp=Z,4.7nm,0.9s,baz=126,slow=3.7,SNR=5.8						
MILM	**Milestii Mici**	**154.46**	**316**	*e*PKP	**PKPdf**	**18 26 18.6**	**-2.6**
MILM	**Milestii Mici**	**154.46**	**316**	*e*PKIKP	**PKPdf**	**18 26 19.0**	**-2.2**
MILM				MLR	MLR		
	comp=Z,500nm,20.0s						
BURAR	**Bucovina Array**	**156.15**	**320**		**PKPab**	**18 26 50.7**	**-0.7**
KOLS	**Kolonicke sedl**	**156.83**	**326**	*e*PKP2	**PKPab**	**18 26 54.5**	**+0.4**
KOLS	**Kolonicke sedl**	**156.83**	**326**	*e*PKP	**PKPab**	**18 26 54.5**	**+0.4**
MORC	**Moravsky Berou**	**158.24**	**334**	*e*PKP	**PKPab**	**18 27 01.1**	**+0.9**
CLL	**Collm**	**158.37**	**342**	*e*PKIKP	**PKPdf**	**18 26 25.0**	**-1.2**
CLL				*i*		18 27 00.1	
CLL				pmax	pmax		
	comp=Z,12nm,1.1s						
CLL				MLR	MLR		
	comp=Z,600nm,19.8s						
CLL	**Collm**	**158.37**	**342**	*e*PKPdf	**PKPdf**	**18 26 25.0**	**-1.2**
CLL				*i* PKPab	**PKPab**	**18 27 00.1**	**-0.5**
	comp=Z,12nm,1.1s						
CLL				*e*x	x	18 27 14.0	
CLL				*e*PP	**PP**	**18 30 42.0**	**+1.7**
CLL				*e*PSKS		18 41 14.0	
CLL				*e*PPS	PPS	18 43 49.0	
CLL				*e*SS	SS	18 50 35.0	-4.9
CLL				*e*x	x	18 51 53.0	
CLL				*e*SSS	SSS	18 56 48.0	
CLL				*e*SSSS		19 00 48.0	
CLL				AMS	AMS	19 43 00.0	
	comp=Z,600nm,19.8s						
CLL				AMS	AMS	19 45 00.0	
	comp=N,400nm,19.5s						
CLL				AMS	AMS	19 45 00.0	
	comp=E,500nm,21.4s						
BRG	**Berggiesshubel**	**158.51**	**340**	Amp		18 27 02.4	
	comp=Z,5.7nm,1.1s						
BRG	**Berggiesshubel**	**158.51**	**340**	*e*PKP	**PKPab**	**18 27 02.0**	**+0.7**
VYHS	**Vyhne**	**158.72**	**330**	*e*PKP2	**PKPab**	**18 27 02.6**	**+0.3**
VYHS	**Vyhne**	**158.72**	**330**	*e*PKP	**PKPab**	**18 27 02.6**	**+0.3**
JAVC	**Velka Javorina**	**158.92**	**332**	*e*PKP	**PKPab**	**18 27 04.8**	**+1.6**
VRAC	**Vranov**	**158.98**	**334**	*e*PKP	**PKPab**	**18 27 04.4**	**+1.0**
KRUC	**Moravsky**	**159.26**	**334**	*e*PKP	**PKPab**	**18 27 05.3**	**+0.7**
MOX	**Moxa**	**159.33**	**344**	*e*L	L	19 48 19.2	
	comp=Z,635nm,18.3s						
KHC	**Kasperske Hory**	**160.16**	**339**	*e*PKPAB	**PKPab**	**18 27 09.5**	**+0.9**
KHC	**Kasperske Hory**	**160.16**	**339**	*e*PKP2	**PKPab**	**18 27 09.5**	**+0.9**
MEM	**Membach**	**160.29**	**354**	*d*PKP	**PKPab**	**18 27 07.7**	**-1.3**
GRF	**Grafenberg Arr**	**160.31**	**344**	*e*PKP	**PKPab**	**18 27 09.2**	**0.0**
	baz=22,slow=4.0						
GRF				*e*L	L	19 43 42.9	
	comp=Z,745nm,19.5s						
GERES	**GERESS Array B**	**160.38**	**338**		**PKPab**	**18 27 09.3**	**-0.3**
GERES	**GERESS Array B**	**160.38**	**338**	PKPab	**PKPab**	**18 27 08.8**	**-0.8**
	comp=Z,1.8nm,0.9s,baz=35,slow=3.6,SNR=7.7						
CONA	**Conrad Observa**	**160.39**	**333**	*e*PKP	**PKPab**	**18 27 09.4**	**-0.3**
	comp=Z,6.8nm,1.1s						
RONA	**Rosalia, Austr**	**160.40**	**332**	*e*PKP	**PKPab**	**18 27 10.2**	**+0.5**
	comp=Z,7.7nm,1.1s						
BGES	**Gesves**	**160.59**	**356**	*d*PKPdf	**PKPdf**	**18 26 29.4**	**+0.6**
BGES				*d*PKP	**PKPab**	**18 27 09.3**	**-1.0**
ARSA	**Arzberg**	**161.07**	**332**	*e*PKP	**PKPab**	**18 27 14.2**	**+1.6**
	comp=Z,2.0nm,0.5s						
BIOA	**Bad Ischl, Aus**	**161.40**	**337**	*i* pPKP	**PKPab**	**18 27 16.2**	**+2.2**
	comp=Z,6.3nm,1.1s						
SOKA	**Soboth**	**161.74**	**332**	*i* PKP	**PKPab**	**18 27 17.0**	**+1.4**
	comp=Z,7.4nm,1.2s						
LESA	**Schwarzleotal**	**161.95**	**338**	*i* PKP	**PKPab**	**18 27 17.9**	**+1.4**
	comp=Z,6.5nm,1.2s						
TORD	**Torodi Ar. Bea**	**162.18**	**176**		**PKPdf**	**18 26 30.2**	**-1.3**
TORD					**PKPab**	**18 27 18.0**	**0.0**
TORD	**Torodi Ar. Bea**	**162.18**	**176**	PKP	**PKPdf**	**18 26 31.1**	**-0.4**
	comp=Z,1.8nm,0.3s,baz=203,slow=1.1,SNR=1.9						
TORD				PKPab	**PKPab**	**18 27 19.1**	**+1.1**
	comp=Z,1.2nm,0.4s,baz=175,slow=2.9,SNR=3.5						
MYKA	**Terra Mystica**	**162.31**	**335**	*e*PKP	**PKPab**	**18 27 19.0**	**+1.0**
	comp=Z,5.5nm,1.0s						
WATA	**Walderalm**	**162.37**	**340**	*e*pPKP	**PKPab**	**18 27 20.5**	**+2.1**
	comp=Z,9.6nm,1.3s						
WTTA	**Wattenberg**	**162.42**	**340**	*e*PKP	**PKPab**	**18 27 19.4**	**+0.7**
	comp=Z,7.6nm,1.1s						
RETA	**Reutte**	**162.46**	**342**	*e*PKP	**PKPab**	**18 27 19.4**	**+0.7**
	comp=Z,4.3nm,0.7s						
MOTA	**Moosalm**	**162.50**	**341**	*e*PKP	**PKPab**	**18 27 19.1**	**+0.1**
	comp=Z,2.9nm,0.5s						
SQTA	**Sankt Quirin**	**162.58**	**341**	*e*PKP	**PKPab**	**18 27 19.3**	**0.0**
	comp=Z,2.3nm,0.5s						
ABTA	**Abfaltersbach**	**162.60**	**337**	*e*PKP	**PKPab**	**18 27 19.4**	**+0.1**
	comp=Z,5.3nm,1.1s						
DAVA	**Damuels**	**162.88**	**343**	*e*PKP	**PKPab**	**18 27 18.9**	**-1.7**
	comp=Z,5.4nm,1.2s						
FETA	**Feichten**	**162.90**	**341**	*e*PKP	**PKPab**	**18 27 19.4**	**-1.3**
	comp=Z,4.7nm,0.9s						
PMOZ	**Porto Moniz, M**	**162.92**	**79**	*e*PKPab	**PKPab**	**18 27 16.1**	**-5.3**
PMOZ				*e*PP	**PP**	**18 31 10.8**	**+4.2**
PMOZ				*e*LR	LR	19 28 00.2	
PMOZ				*i* AMs_20		19 41 17.3	
	comp=Z,637nm,18.0s						
PMAR	**Madeira**	**163.16**	**79**	*e*PKPab	**PKPab**	**18 27 15.1**	**-7.4**
PMPST	**Porto Santo, M**	**163.64**	**78**	*e*PKPab	PKPab	18 27 16.3	-8.1
PMPS	**Porto Santo**	**163.64**	**78**	*e*PKPab	PKPab	18 27 16.4	-8.0
PGAV	**Gavieira, Arco**	**165.93**	**36**	*e*PKPdf	PKPdf	18 27 02.7	+28
PGAV				*e*PP	**PP**	**18 31 27.1**	**+5.9**
PGAV				*e*LR	LR	19 31 36.4	
PGAV				*i* AMs_20		19 35 07.4	
	comp=Z,821nm,20.0s						
POLO	**Lamas de Olo**	**166.60**	**37**	*e*PKPdf	PKPdf	18 26 46.1	+11
PBRG	**Braganca**	**166.79**	**33**	*e*PKPdf	**PKPdf**	**18 26 39.9**	**+5.0**
PVIS	**Viseu**	**167.02**	**39**	*e*PKPdf	PKPdf	18 26 46.7	+12
COI	**Coimbra**	**167.08**	**42**	*e*PKPdf	**PKPdf**	**18 26 42.7**	**+7.6**
PCAS	**Casmilo, Conde**	**167.13**	**43**	*e*PKPdf	PKPdf	18 26 46.7	+12
MVO	**Moncorvo**	**167.14**	**35**	*e*PKPdf	**PKPdf**	**18 26 42.7**	**+7.5**
MVO				*e*LR	LR	19 30 50.8	
MVO				*i* AMs_20		19 36 48.4	
	comp=Z,963nm,20.0s						
MTE	**Manteigas**	**167.43**	**39**	*e*PKPdf	PKPdf	18 26 46.2	+11
MTE				*e*PP	PP	18 32 01.6	+33
MTE				*e*SS	SS	18 52 22.9	+7.9
MTE				*e*LR	LR	19 31 26.9	
MTE				*i* AMs_20		19 40 12.9	
	comp=Z,752nm,20.0s						
PSARD	**Sardoal**	**167.62**	**43**	*e*PKPdf	PKPdf	18 26 46.4	+11
PMTG	**Montargil**	**167.92**	**45**	*e*PKPdf	PKPdf	18 26 47.8	+12
PMRV	**Marv??o**	**168.19**	**42**	*e*PKPab	PKPab	18 27 16.7	-27
PMRV				*e*PP	**PP**	**18 31 38.9**	**+6.0**
PMRV				*e*SS	SS	18 52 34.1	+11
PMRV				*e*LR	LR	19 31 17.3	
PMRV				*i* AMs_20		19 41 24.3	
	comp=Z,733nm,18.0s						
EVO	**Evora**	**168.38**	**47**	*e*PKPdf	PKPdf	18 26 48.0	+12
PESTR	**Estremoz**	**168.43**	**45**	*e*PKPdf	PKPdf	18 26 44.6	+8.5
PTEO	**Sao Teotonio**	**168.46**	**53**	*e*PKPdf	**PKPdf**	**18 26 41.6**	**+5.5**
PFVI	**Vila Bisbo**	**168.60**	**55**	*e*PKPdf	**PKPdf**	**18 26 41.9**	**+5.7**
MORF	**Marmelete**	**168.63**	**54**	*e*PKPab	PKPab	18 27 22.8	-24
PCVE	**Castro Verde**	**168.88**	**51**	*e*PKPdf	**PKPdf**	**18 26 41.6**	**+5.1**
PBDV	**Barranco-do-Ve**	**169.16**	**52**	*e*PKPdf	PKPdf	18 26 49.4	+13
PBAR	**Barrancos**	**169.21**	**46**	*e*PKPdf	PKPdf	18 26 44.9	+8.3
PVAQ	**Vaqueiros**	**169.22**	**51**	*e*PKPdf	**PKPdf**	**18 26 42.0**	**+5.3**
PVAQ				*e*PP	PP	18 32 09.6	+31
PVAQ				*e*SS	SS	18 52 49.1	+16
PVAQ				*e*LR	LR	19 32 35.0	
PVAQ				*i* AMs_20		19 44 55.6	
	comp=Z,844nm,18.0s						
ESDC	**Sonseca Array**	**169.76**	**31**		**PKPab**	**18 27 52.0**	**+0.9**
ESDC	**Sonseca Array**	**169.76**	**31**	PKP	**PKPdf**	**18 26 36.4**	**-0.6**
	comp=Z,1.0nm,0.9s,baz=338,slow=2.9,SNR=5.4						
ESDC				PKPab	**PKPab**	**18 27 51.5**	**+0.4**
	comp=Z,2.5nm,1.1s,baz=316,slow=3.7,SNR=6.5						
KEST	**Kesra**	**172.79**	**312**	PKPab	**PKPab**	**18 28 02.1**	**-2.7**
	comp=Z,2.8nm,0.8s,baz=61,slow=1.3,SNR=2.7						

IDC 26 18:17:17.5±3.4, 31°.14S×177°.75W, h0^{km}, mb3.3/2, mbtmp3.3/2, Error ellipse: s-maj=74.2km s-min=29.3km az=113.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.89**	**356**	Pn	Pn	18 17 51.6	+0.6
	66nm,0.3s,baz=128,slow=19,SNR=1.4						
RAO				Sn	Sn	18 18 16.0	+0.5
	92nm,0.3s,baz=180,slow=20,SNR=2.0						
URZ	**Urewera**	**8.26**	**209**	Sn	Sn	18 20 47.0	-5.7
	0.6nm,0.3s,baz=137,slow=22,SNR=1.5						
ASAR	**Alice Springs**	**43.29**	**268**	P	P	18 25 21.1	-0.1
	0.1nm,0.3s,baz=112,slow=7.8,SNR=7.9						
	0.1nm,0.3s						
WRA	**Warramunga Arr**	**44.34**	**273**	P	P	18 25 29.7	0.0
	0.2nm,0.4s,baz=113,slow=7.9,SNR=4.9						
	0.2nm,0.4s						
FINES	**FINESS Array B**	**145.91**	**340**	PKPbc	PKPdf	18 36 56.9	-0.6
	0.6nm,0.6s,baz=43,slow=4.7,SNR=4.8						

WEL 26 18:17:42.5±1.1, 33°S±24°×17°9E±3°6, h289^{km}±40^{km}, M4.1/7, ML4.2/7, MLv4.1/7, Error ellipse: s-maj=53.1km s-min=18.1km az=121.4, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.32**	**191**	P	Pn	18 18 51.5	-0.1
MXZ				S	S	18 19 47.4	+0.4
WMGZ	**Waiomatatini S**	**4.55**	**190**	P	Pn	18 18 54.6	+0.3
WMGZ				S	S	18 19 51.7	-0.1
HAZ	**Te Kaha**	**4.61**	**196**	P	Pn	18 18 55.9	+1.0
HAZ				S	S	18 19 54.0	+1.1
PKGZ	**Pakihiroa**	**4.65**	**193**	P	Pn	18 18 55.6	+0.1
PKGZ				S	S	18 19 54.4	+0.5
PUZ	**Puketiti**	**4.82**	**191**	P	Pn	18 18 57.4	0.0
PUZ				S	S	18 19 57.6	0.0
RUGZ	**Raukumara Rang**	**4.83**	**196**	P	Pn	18 18 57.2	-0.4
RUGZ				S	S	18 19 57.4	-0.5
TWGZ	**Tauwhareparae**	**4.97**	**193**	P	Pn	18 18 59.3	0.0
TWGZ				S	S	18 20 01.5	+0.8
MWZ	**Matawai**	**5.22**	**196**	P	Pn	18 19 02.0	-0.2
MWZ				S	S	18 20 07.1	+1.1
TKGZ	**Te Karaka**	**5.25**	**193**	P	Pn	18 19 02.5	+0.1
TKGZ				S	S	18 20 06.8	+0.2
URZ	**Urewera**	**5.26**	**200**	P	Pn	18 19 02.5	0.0
URZ				S	S	18 20 06.6	-0.1
RTZ	**Ruatahuna**	**5.63**	**200**	P	Pn	18 19 06.1	-0.9
RTZ				S	S	18 20 14.1	-0.8
SNGZ	**Shannon Statio**	**5.69**	**196**	P	Pn	18 19 07.5	-0.2
SNGZ				S	S	18 20 16.7	+0.5
MTHZ	**Maungataniwha**	**5.89**	**200**	P	Pn	18 19 10.0	0.0
MTHZ				S	S	18 20 22.1	+1.5

ROM 26 18:24:50.0±0.1, 42°.797N±0°.003×13°.118E±0°.004, h10^{km}, ML1.4/36, 3C, Error ellipse: s-maj=0.3km s-min=0.3km az=309.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.04**	**356**	P	Pg	18 24 52.3	+0.3
NRCA				S	Sg	18 24 53.5	0.0
NRCA				AML	AML		
	comp=E,5555µm,0.2s						
NRCA				AML	AML		
	comp=N,6215µm,0.1s						
NRCA				AML	AML		
	comp=E,5715µm,0.2s						
NRCA				AML	AML		
	comp=N,7465µm,0.1s						
MC2	**Monte Cornacci**	**0.13**	**25**	P	Pg	18 24 53.6	+0.5
MC2				S	Sg	18 24 56.2	+0.7
MMO1	**Montemonaco**	**0.18**	**56**	⇑P	Pg	18 24 54.5	+0.5
MMO1				S	Sg	18 24 57.8	+1.0
GAVE	**Gavelli**	**0.20**	**238**	P	Pg	18 24 54.7	+0.6
GAVE				S	Sg	18 24 58.3	+1.3
GAVE				AML	AML		
	comp=E,440µm,0.2s						
GAVE				AML	AML		
	comp=N,292µm,0.2s						
LNSS	**Leonessa**	**0.20**	**196**	P	Pg	18 24 55.0	+0.7
LNSS				S	Sg	18 24 58.4	+1.2
LNSS				AML	AML		
	comp=N,249µm,1.4s						
LNSS				AML	AML		
	comp=E,294µm,0.3s						
LNSS				AML	AML		
	comp=N,250µm,1.4s						
LNSS				AML	AML		
	comp=E,294µm,1.7s						
LNSS				AML	AML		
	comp=N,250µm,0.6s						
MTRA	**Matera**	**0.21**	**101**	P	Pg	18 24 54.9	+0.5
MTRA				S	Sg	18 24 58.8	+1.4
MTRA				AML	AML		
	comp=E,214µm,1.1s						
MTRA				AML	AML		
	comp=N,275µm,0.3s						
SMA1	**SAN MARTINO**	**0.23**	**136**	⇑P	Pg	18 24 55.4	+0.6
SMA1				S	Sg	18 24 59.4	+1.3
SMA1				AML	AML		
	comp=E,164µm,0.5s						
SMA1				AML	AML		
	comp=N,166µm,0.2s						
SMA1				AML	AML		
	comp=N,166µm,1.8s						
FDMO	**Fiordimonte**	**0.24**	**355**	P	Pg	18 24 55.5	+0.6
FDMO				S	Sg	18 24 59.3	+1.1
FDMO				AML	AML		
	comp=E,118µm,0.5s						
FDMO				AML	AML		
	comp=N,148µm,0.1s						
CESI	**CESI - Serrava**	**0.26**	**323**	P	Pg	18 24 55.7	+0.4
CESI				S	Sg	18 25 00.0	+1.1
CESI				AML	AML		
	comp=N,272µm,1.3s						
CESI				AML	AML		
	comp=E,175µm,0.2s						
CESI				AML	AML		
	comp=N,272µm,0.7s						
RM33	**Pellescritta (**	**0.30**	**166**	⇑P	Pg	18 24 56.6	+0.6
RM33				S	Sb	18 25 01.6	-0.8
RM33				AML	AML		
	comp=N,69µm,1.2s						
RM33				AML	AML		
	comp=E,78µm,1.0s						
MF5	**Montefalcone A**	**0.32**	**53**	P	Pb	18 24 57.2	-0.5
MF5				S	Sb	18 25 02.8	-0.2
CAMP	**Campotosto**	**0.34**	**140**	P	Pg	18 24 57.1	+0.4
CAMP				S	Sb	18 25 02.5	-1.1
CAMP				AML	AML		
	comp=E,37µm,1.6s						
CAMP				AML	AML		
	comp=N,28µm,0.7s						
CAMP				AML	AML		
	comp=E,37µm,0.4s						
CAMP				AML	AML		
	comp=N,28µm,1.3s						
ARRO	**Arrone**	**0.34**	**230**	P	Pg	18 24 57.3	+0.6
ARRO				S	Sb	18 25 03.1	-0.5
ARRO				AML	AML		
	comp=E,53µm,0.2s						
ARRO				AML	AML		
	comp=N,73µm,0.6s						
ARRO				AML	AML		
	comp=N,73µm,1.4s						
TERO	**Teramo**	**0.40**	**116**	P	Pg	18 24 58.0	+0.2
TERO				S	Sb	18 25 04.3	-1.0
TERO				AML	AML		
	comp=E,75µm,0.1s						
TERO				AML	AML		
	comp=N,88µm,0.1s						
MOMA	**Monte Martano**	**0.40**	**271**	P	Pg	18 24 58.3	+0.4
MOMA				S	Sb	18 25 05.3	-0.2
MOMA				AML	AML		
	comp=E,89µm,0.2s						
MOMA				AML	AML		
	comp=N,60µm,0.2s						
ASSB	**Assisi San Ben**	**0.42**	**306**	P	Pg	18 24 58.4	+0.2
ASSB				AML	AML		
	comp=E,62µm,0.4s						
ASSB				AML	AML		
	comp=N,64µm,1.0s						
ASSB				AML	AML		
	comp=N,64µm,1.0s						

CATAC 26 18:49:34.3±0.6, 12°N±3°×8°8W±°, h18^{km}±4^{km}, M3.8/21, MLv3.8/21, 6C-2D, Error ellipse: s-maj=6.3km s-min=3.6km az=35.5, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**1.06**	**59**	⇑P	Pb	18 49 54.0	-0.2
CRIN	**San Cristobal**	**1.16**	**24**	S	Sb	18 50 10.5	-0.1
CRIN	**San Cristobal**	**1.16**	**24**	⇓P	Pn	18 49 55.8	+0.1
PKGN	**Cerro Pekin**	**1.16**	**28**	⇑P	Pn	18 49 55.5	-0.3
PKGN				S	Sn	18 50 10.9	-0.2
CNGA	**Al SSO del Vol**	**1.18**	**43**	P	Pn	18 49 55.9	-0.1
CNGA				S	Sn	18 50 11.4	-0.2
CNGN	**Cerro Negro**	**1.18**	**43**	S	Sn	18 50 11.7	-0.1
CNGN	**Cerro Negro**	**1.18**	**43**	P	Pn	18 49 55.7	-0.4
SAPS	**Ciudad Sandino**	**1.22**	**64**	P	Pn	18 49 56.4	-0.1
SAPS	**Ciudad Sandino**	**1.22**	**64**	S	Sn	18 50 13.2	+0.6
POLN	**Al Sur del Vol**	**1.23**	**35**	⇑P	Pn	18 49 54.3	-2.4
POLN				S	Sb	18 50 12.1	-0.5
MOMN	**Momotombo**	**1.23**	**51**	⇓P	Pn	18 49 56.0	-0.7
MOMN				S	Sb	18 50 12.9	+0.1
MOM2	**El Cardon**	**1.29**	**52**	P	Pn	18 49 57.2	-0.3
MOM2				S	Sb	18 50 14.7	+0.2
APQ3	**Volcan Apoyequ**	**1.30**	**61**	⇑P	Pn	18 49 57.7	+0.1
APQ3				S	Sb	18 50 15.4	+0.7
UNAN	**Cigeo UNAN**	**1.32**	**69**	P	Pn	18 49 57.7	-0.2
UNAN				S	Sb	18 50 15.9	+0.7
POTN	**Potosi Cosigui**	**1.36**	**1**	⇑P	Pn	18 49 58.1	-0.4
POTN				S	Sb	18 50 16.4	+0.1
SABN	**Sabanita**	**1.37**	**76**	P	Pb	18 49 59.3	-0.3
MAS3	**Al N del Volca**	**1.38**	**74**	P	Pn	18 49 58.2	-0.6
MAS3				S	Sb	18 50 17.4	+0.4
NANN	**Nandasmo**	**1.41**	**77**	S	Sb	18 50 18.3	+0.5
NANN	**Nandasmo**	**1.41**	**77**	P	Pb	18 49 59.7	-0.4
WILN	**Americas 2**	**1.41**	**68**	P	Pn	18 49 58.7	-0.5
WILN				S	Sb	18 50 18.4	+0.6
CNCH	**Conchagua**	**1.66**	**350**	S	Sb	18 50 24.5	-0.6
CNCH	**Conchagua**	**1.66**	**350**	⇑P	Pn	18 50 02.4	-0.3
LCND	**La Caada**	**1.70**	**348**	P	Pn	18 50 03.0	-0.2
PACA	**Pacayal**	**1.98**	**337**	S	Sn	18 50 32.7	+1.0
PACA	**Pacayal**	**1.98**	**337**	P	Pn	18 50 07.6	+0.4
BOAB	**BOACO BROADBAN**	**1.99**	**66**	S	Sn	18 50 32.4	+0.7
BOAB	**BOACO BROADBAN**	**1.99**	**66**	P	Pn	18 50 06.7	-0.5
MATN	**Matagalpa**	**2.03**	**50**	S	Sn	18 50 32.7	0.0
MATN	**Matagalpa**	**2.03**	**50**	P	Pn	18 50 07.1	-0.7
ACON	**Acoyapa**	**2.33**	**82**	S	Sn	18 50 39.9	-0.1
ACON	**Acoyapa**	**2.33**	**82**	P	Pn	18 50 11.9	+0.1
RCVN	**Varillal2**	**2.33**	**34**	S	Sn	18 50 41.8	+1.4
RCVN	**Varillal2**	**2.33**	**34**	P	Pn	18 50 12.6	+0.6
RCPN	**Sur Rio San Ju**	**2.34**	**36**	P	Pn	18 50 11.9	-0.2

IDC ***26*** *18:49:34.3±0.8, 56°.26N×163°.89E, h0^{km}, mb3.4/8,* *mbtmp3.4/9, ML2.3/1, Error ellipse: s-maj=44.3km s-min=18.0km az=151.0*

*KRSC **26** 18:49:35.1±1.5, 56°.20N×164°.25E, h52^{km}±20^{km}, Ml3.6*

ISC 26 18:49:34.8±1.9, **56°.21N**±0°.05×**164°.24E**±0°.04, **h6**^{km}±12^{km}, **n50**, σ**1^{s}54**/55, **mb3.5**/8, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.79	270	eP	Pg	18 49 49.7	-0.2
KBTR				eS	Sb	18 50 00.6	-1.4
KBG	Krutoberegovo	0.86	273	eP	Pg	18 49 50.6	-0.5
KBG				eS	Sb	18 50 03.0	-0.8
BKI	Bering	1.41	135	eP	Pn	18 50 00.1	-0.9
BKI				eS	Sn	18 50 17.7	-2.1
SMKR	Semkarok	1.58	285	eP	Pn	18 50 03.0	-0.5
SMKR				eS	Sn	18 50 23.3	-0.9
BDR	Baidarnaya	1.72	283	eS	Sn	18 50 26.0	-1.7
SRKR	Sorokina	1.76	286	eS	Sn	18 50 27.8	-0.9
ZLN	Zelenaya	1.93	266	eP	Pn	18 50 09.1	+0.8
KLY	Klyuchi	2.00	274	eP	Pn	18 50 07.8	-1.3
KLY				eS	Sn	18 50 32.1	-2.4
BZGR	Bezymyannyi-Gr	2.00	264	eP	Pn	18 50 09.9	+0.6
BZGR				eS	Sn	18 50 34.7	0.0
KRSR	Krestovskiy	2.05	272	eP	Pn	18 50 10.0	+0.1
BZWR	Bezymyannyi-We	2.11	265	eP	Pn	18 50 11.4	+0.7
BZMR	Bezymyannaya	2.12	264	eP	Pn	18 50 11.5	+0.6
KIRR	Kirishev	2.20	265	eP	Pn	18 50 12.9	+0.9
KPT	Kopyto	2.26	265	eP	Pn	18 50 14.1	+1.3
KMNR	Kamenistaya	2.29	260	eP	Pn	18 50 14.1	+0.9
TUMD	Tumrok D	2.40	247	eP	Pn	18 50 15.1	+0.5
TUMD				eS	Sn	18 50 44.6	+0.4
KOZ	Kozyrevsk	2.45	268	eP	Pn	18 50 16.7	+1.5
SRDR	Sredinnyy	2.52	274	eP	Pn	18 50 17.7	+1.3
OSSR	Ossora	3.11	349	eP	Pn	18 50 24.0	-0.4
OSSR				eS	Sn	18 50 59.3	-2.5
ESO	Esso	3.12	267	eP	Pn	18 50 26.0	+1.5
SPN	Mys Shipunski	3.97	220	eP	Pn	18 50 35.2	-0.9
SPN				eS	Sn	18 51 17.8	-5.1
NLC	Nalytchevo	4.16	225	eP	Pn	18 50 39.5	+0.7
NLC				eS	Sn	18 51 24.8	-3.0
SDLR	Sedlovina	4.27	229	eP	Pn	18 50 41.3	+0.8
KRER	Koryakskii	4.31	230	eP	Pn	18 50 43.0	+1.9
KRX	Arik	4.32	231	eP	Pn	18 50 42.3	+1.3
SMAR	Somma	4.32	229	eP	Pn	18 50 42.1	+0.9
AVH	Avacha	4.34	229	eP	Pn	18 50 42.8	+1.4
UGLR	Uglovaya	4.35	228	eP	Pn	18 50 42.3	+0.9
KOK	Koryaka	4.37	230	eP	Pn	18 50 42.9	+1.2
PETK	Petropavlovsk-	4.91	233	Pn	Pn	18 50 49.2	+0.2
	0.7nm,0.3s,baz=70,slow=18,SNR=13						
PETK				Sn	Sn	18 51 47.4	+1.3
	baz=72,slow=15						
	2.0nm,0.5s						
KRMR	Karymshinskiy	4.91	229	eP	Pn	18 50 50.8	+1.7
RUS	Russkaya	5.05	224	eP	Pn	18 50 51.2	+0.1
GRL	Gorelyy	5.14	227	eP	Pn	18 50 54.2	+1.9
MTVR	Mutnovka	5.15	226	eP	Pn	18 50 53.8	+1.4
ASAK	Asacha	5.34	227	eP	Pn	18 50 56.8	+1.8
ILAR	Eielson Array	24.93	50	P	P	18 54 59.0	+0.7
	0.2nm,0.6s,baz=271,slow=7.3,SNR=2.3						
	0.2nm,0.6s						
H11N2	WAKE ISLAND Hy	36.48	176	T	T	19 35 23.4	
	baz=357,slow=76,SNR=51						
H11N3	WAKE ISLAND Hy	36.49	176	T	T	19 35 30.3	
	baz=357,slow=76,SNR=45						
H11N1	WAKE ISLAND Hy	36.50	176	T	T	19 35 29.5	
	baz=357,slow=76,SNR=38						
H11S1	WAKE ISLAND Hy	37.69	176	T	T	19 36 59.8	
	baz=359						
H11S3	WAKE ISLAND Hy	37.70	176	T	T	19 37 12.3	
	baz=359						
H11S2	WAKE ISLAND Hy	37.71	176	T	T	19 37 06.1	
	baz=359						
MKAR	Makanchi Array	48.97	296	P	P	18 58 19.9	-1.9
	0.2nm,0.7s,baz=48,slow=6.3,SNR=2.4						
	0.2nm,0.7s						
NVAR	Mina Array Bea	52.51	75	P	P	18 58 52.1	+3.4
	0.4nm,0.6s,baz=310,slow=8.1,SNR=1.7						
	0.4nm,0.6s						
PDAR	Pinedale Array	53.96	65	P	P	18 59 00.5	+1.1
	0.4nm,0.6s,baz=309,slow=7.7,SNR=5.0						
	0.4nm,0.6s						
CMAR	Chiang Mai Arr	61.14	260	P	P	18 59 50.1	+0.2
	0.3nm,0.7s,baz=48,slow=7.5,SNR=2.6						
	0.3nm,0.7s						
TXAR	Lajitas Array	67.27	71	P	P	19 00 32.3	+2.1
	0.2nm,0.4s,baz=318,slow=7.5,SNR=4.0						
	0.2nm,0.4s						
WRA	Warramunga Arr	79.95	208	P	P	19 01 43.4	-1.1
	0.5nm,0.9s,baz=19,slow=6.1,SNR=2.2						
	0.5nm,0.9s						
ASAR	Alice Springs	83.62	208	P	P	19 02 03.2	-0.6
	0.3nm,0.9s,baz=16,slow=4.8,SNR=1.8						
	0.3nm,0.9s						
QSPA	South Pole Qui	145.97	180	PKPbc	PKPdf	19 09 13.0	0.0
	0.6nm,0.5s,baz=349,slow=5.2,SNR=6.8						

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*UCR **26** 19:06:00.0±1.2, 8°.35N×82°.85W, h29^{km}±2^{km}, MW4.0, Fault plane solution: NP1:ϕ_s275.34000°, δ65.60000°, λ-32.73000°.*

*UPA **26** 19:06:00.4±0.8, 8°.39N×82°.84W, h30^{km}±3^{km}, MW4.1, Fault plane solution: NP1:ϕ_s7.00000°, δ78.00000°, λ-162.00000°.*

*CATAC **26** 19:06:02.2±0.5, 9°N±4°×8°3W±°, h11^{km}±2^{km}, M4.0/10, MLv4.0/10, Error ellipse: s-maj=8.9km s-min=5.8km az=25.7, confirmed*

ISC 26 19:06:00.4±0.9, **8°.40N**±0°.03×**82°.85W**±0°.02, **h32**^{km}±5^{km}, **n99**, σ**0^{s}93**/124, **31C-29D**, **Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.06	81	⇓iP	Pb	19 06 05.6	-0.3
LESP3				eS	Sb	19 06 09.1	-0.4
LPPC	Paso Canoas	0.14	5	⇓eP	Pb	19 06 06.1	-0.2
LPPC				eS	Sb	19 06 11.1	+0.8
CDITO	Canoas	0.18	353	P	Pb	19 06 06.4	-0.3
CDITO	Canoas	0.18	353	S	Sb	19 06 10.9	0.0
NELY	Ciudad Neily	0.27	340	⇑eP	Pb	19 06 07.4	-0.3
NELY				eS	Sn	19 06 13.6	+0.3
LIMO3	Limones	0.29	182	⇑iP	Pb	19 06 07.5	-0.5
LIMO3				eS	Sn	19 06 15.7	+1.9
LMNES	Limones	0.29	182	⇑eP	Pb	19 06 07.5	-0.6
LMNES	Limones	0.29	182	⇑iP	Pb	19 06 07.5	-0.6
MCANO	Manzana, Boque	0.33	58	⇓eP	Pb	19 06 08.2	-0.2
MCANO	Manzana, Boque	0.33	58	⇓iP	Pb	19 06 08.2	-0.2
FITO	Golfito	0.38	307	⇑eP	Pb	19 06 07.8	-1.3
FITO				eS	Sb	19 06 14.3	-0.7
MLIR3	Monte Lirio, C	0.40	4	⇑eP	Pb	19 06 09.8	+0.3
MLIR3				eS	Sn	19 06 19.2	+2.7
DVD	David	0.40	84	⇓eP	Pb	19 06 08.9	-0.6
DVD				eS	Sn	19 06 18.7	+2.2
EDAD	Golfito	0.40	309	⇑eP	Pb	19 06 08.3	-1.2
EDAD				eS	Sb	19 06 15.2	-0.5
CSTBL	De las Acacias	0.41	88	⇓eP	Pb	19 06 08.9	-0.6
CSTBL	De las Acacias	0.41	88	⇓iP	Pb	19 06 09.0	-0.6
CLLRA	Cordillera,	0.42	34	⇓eP	Pb	19 06 09.6	-0.3
CLLRA	Cordillera,	0.42	34	⇓iP	Pb	19 06 09.6	-0.3
RSRNO	Rio Sereno	0.42	359	⇑eP	Pb	19 06 10.1	+0.3
RSRNO	Rio Sereno	0.42	359	⇑iP	Pb	19 06 10.2	+0.3
PEDE3	Pedregal, Chir	0.42	92	⇓iP	Pb	19 06 09.1	-0.7
PEDE3				eS	Sb	19 06 15.9	-0.4
BRU2	Volcan	0.43	22	⇓eP	Pb	19 06 09.7	-0.3
BRU2				eS	Sn	19 06 17.5	+0.2
BRU2	Volcan	0.43	22	P	Pn	19 06 10.3	-0.2
BRU2	Volcan	0.43	22	⇓iP	Pb	19 06 09.8	-0.3
BRU2				⇑eP	Pn	19 06 09.8	-0.7
BRU2				eS	Sn	19 06 17.8	+0.5
LOCO3	Loma Colorada,	0.43	88	⇓iP	Pb	19 06 09.3	-0.6
LOCO3				eS	Sb	19 06 15.8	-0.6
VITO	San Vito	0.44	344	⇑eP	Pb	19 06 10.2	+0.1
VITO				eS	Sn	19 06 18.6	+1.1
SCLRA	Santa Clara, W	0.44	9	⇓eP	Pb	19 06 10.2	0.0
SCLRA	Santa Clara, W	0.44	9	⇓iP	Pb	19 06 10.2	0.0
LOMA3	Las Lomas, Chi	0.46	86	⇓eP	Pb	19 06 09.6	-0.7
LOMA3				eS	Sb	19 06 16.9	-0.2
PTAR3	Potrerillos Ar	0.46	50	⇓iP	Pb	19 06 10.1	-0.3
PTAR3				eS	Sn	19 06 17.8	-0.3
BC3P	Paso Ancho	0.48	30	⇓iP	Pb	19 06 10.3	-0.5
BC3P				eS	Sn	19 06 18.6	-0.1
CHIR3	Chiriqui UPA,	0.52	90	⇓eP	Pb	19 06 10.4	-0.9
BQTLY	Boquete Panama	0.53	47	⇓eP	Pb	19 06 10.8	-0.6
BQTLY	Boquete Panama	0.53	47	⇓iP	Pb	19 06 10.9	-0.6
BQSF3	Alto Boquete,	0.54	50	⇓eP	Pb	19 06 10.9	-0.7
BQSF3				eS	Sb	19 06 19.6	+0.2
ALCO	Alturas Coton,	0.55	2	⇑eP	Pb	19 06 11.3	-0.7
GUAL3	Gualaca, Chiri	0.56	76	⇓eP	Pb	19 06 11.0	-1.0
GUAL3				eS	Sb	19 06 20.2	+0.2
PSOM3	Paja de Sombre	0.60	61	⇓iP	Pb	19 06 11.6	-1.0
PSOM3				eS	Sb	19 06 20.7	-0.2
EDP2	Potrero Grande	0.69	332	⇑eP	Pn	19 06 13.6	-0.5
PBNVO	Pueblo Nuevo,	0.82	53	⇓eP	Pn	19 06 14.8	-1.0
PANP	Palmar Norte	0.82	313	⇑eP	Pn	19 06 15.0	-0.8
PANP				eS	Sb	19 06 27.2	+0.1
RBALA	Bur	0.84	55	⇓eP	Pn	19 06 15.4	-0.7
RBALA	Bur	0.84	55	⇓iP	Pn	19 06 15.4	-0.7
BURE	Buenos Aires	0.91	328	⇑eP	Pn	19 06 16.4	-0.6
DRK0	Durika	0.94	336	⇑eP	Pn	19 06 16.8	-0.9
DRK0	Durika	0.94	336	P	Pn	19 06 17.0	-0.8
DRK0	Durika	0.94	336	S	Sn	19 06 26.9	-3.3
DRK0	Durika	0.94	336	⇑eP	Pn	19 06 16.9	-0.8
DRK0				eS	Sb	19 06 30.7	0.0
RMDIO	Remedios, Chir	1.02	99	eP	Pn	19 06 17.6	-1.0
RMDIO	Remedios, Chir	1.02	99	⇑eP	Pn	19 06 17.9	-0.7
EDPE	Pejibaye, P	1.04	317	⇑eP	Pn	19 06 18.2	-0.6
OCHAL	Ojochal	1.05	312	S	Sn	19 06 29.8	-2.7
OCHAL	Ojochal	1.05	312	P	Pn	19 06 18.4	-0.5
SAJE	San Jernim	1.15	326	⇑eP	Pn	19 06 19.6	-0.9
VERH	Veragua Rainfo	1.56	348	⇑eP	Pn	19 06 26.4	+0.4
PIEC	Cerro El Cedra	1.64	318	eP	Pn	19 06 27.2	0.0
MESA3	La Mesa, Verag	1.67	98	⇑eP	Pn	19 06 27.4	0.0
MESA3				eS	Sb	19 06 50.6	-0.6
TURIB	Turrialba	1.71	331	eP	Pn	19 06 28.5	+0.4
GMAL	Guarumal, Vera	1.72	111	eP	Pn	19 06 27.4	-0.8
GMAL	Guarumal, Vera	1.72	111	⇑eP	Pn	19 06 27.4	-0.8
RSUS3	Rio de Jesus,	1.72	104	⇑eP	Pn	19 06 28.6	+0.4
RSUS3				eS	Sn	19 06 49.7	+0.5
VINA	Juan Vinas	1.73	329	eP	Pn	19 06 29.4	+0.9
LCR2	La Lucha 2	1.76	320	eP	Pn	19 06 28.1	-0.8
LCR2	La Lucha 2	1.76	320	P	Pn	19 06 29.0	+0.2
LCR2	La Lucha 2	1.76	320	S	Sn	19 06 49.7	-0.6
PISJ	San Jernim	1.76	314	eP	Pn	19 06 29.4	+0.6
ABE2	San Pablo	1.76	318	eP	Pn	19 06 30.2	+1.2
PCAYA	Pacayas	1.78	328	eP	Pn	19 06 29.9	+0.6
RESJ	San Isidro (Tu	1.80	334	eP	Pn	19 06 30.5	+1.1
ABRB	Las Abras (San	1.81	332	⇑eP	Pn	19 06 30.6	+0.9
PAR1A	Puntarenas Pro	1.83	311	eP	Pn	19 06 30.4	+0.7
CVTQ	Turrialba Volc	1.84	331	⇑eP	Pn	19 06 30.7	+0.6
VTLA	Turrialba Volc	1.84	330	⇑eP	Pn	19 06 30.7	+0.6
VTR0	Volcan Turrial	1.84	331	⇑eP	Pn	19 06 31.1	+0.8
VICA	Volcano Irazu	1.86	328	eP	Pn	19 06 30.8	+0.3
SFRA3	San Francisco,	1.87	94	eP	Pn	19 06 28.8	-1.4
ACOS	Acosta	1.90	317	eP	Pn	19 06 31.7	+0.9
CALO3	Calobre, Verag	1.99	92	⇑eP	Pn	19 06 30.4	-1.6
BELE	Belen	2.05	320	eP	Pn	19 06 34.2	+1.4
TCS1	Tacares	2.17	319	P	Pn	19 06 35.3	+0.8
CACAO	El Cacao, Vera	2.23	118	⇑eP	Pn	19 06 36.0	+0.8
TRT2	Tortugero	2.32	338	eP	Pn	19 06 37.1	+0.6
TRT2	Tortugero	2.32	338	P	Pn	19 06 37.4	+1.0
TRT2	Tortugero	2.32	338	S	Sn	19 07 04.7	+0.8
TRT1	Tortuguero	2.34	339	eP	Pn	19 06 37.5	+0.7
AZU	Azuero	2.62	103	eP	Pn	19 06 41.9	+1.3
AZU	Azuero	2.62	103	⇑eP	Pn	19 06 42.3	+1.7
SOCE	Pocosol	2.63	319	S	Sn	19 07 12.2	+0.5
SOCE	Pocosol	2.63	319	P	Pn	19 06 41.9	+1.1
ARE1	Arenal 1	2.76	318	eP	Pn	19 06 44.1	+1.6
COVE	Coope Vega, Sa	2.77	327	P	Pn	19 06 43.4	+0.7
COVE	Coope Vega, Sa	2.77	327	S	Sn	19 07 15.6	+0.6
JTS	Las Juntas de	2.80	312	eP	Pn	19 06 44.6	+1.5
JTS	Las Juntas de	2.80	312	eP	Pn	19 06 45.7	+2.6
JTS				eS	Sn	19 07 16.9	+1.1
INDI	Punta indio, G	3.00	299	P	Pn	19 06 46.0	+0.3
INDI	Punta indio, G	3.00	299	S	Sn	19 07 20.0	-0.6
CMARA	Lajas Hojancha	3.01	303	P	Pn	19 06 46.9	+1.0
BCIP	Isla Barro Col	3.08	75	⇓eP	Pn	19 06 47.7	+0.8
BCIP	Isla Barro Col	3.08	75	⇓eP	Pn	19 06 47.6	+0.8

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*UCR **26** 19:12:28.8±0.7, 8°.35N×82°.87W, h20^{km}±2^{km}, MW5.0, Fault plane solution: NP1:ϕ_s296.51000°, δ55.15000°, λ83.90000°.*

*UPA **26** 19:12:29.6±1.2, 8°.42N×82°.85W, h19^{km}±2^{km}, MW4.8*

*CATAC **26** 19:12:32.1±0.4, 9°N±3°×8°3W±°, h16^{km}±3^{km}, M4.8/10, MLv4.8/10, Error ellipse: s-maj=7.5km s-min=6.4km az=39.6, confirmed*

*NEIC **26** 19:12:33.7±2.5, 8°.66N±0°.10×82°.84W±0°.07, h37^{km}±7^{km}, mb4.6/18, Error ellipse: s-maj=14.1km s-min=9.5km az=196.0*

*IDC **26** 19:12:36.6±2.7, 8°.93N×82°.91W, h65^{km}±23^{km}, mb3.5/5, mbtmp3.9/8, MS3.8/10, Error ellipse: s-maj=71.2km s-min=24.6km az=36.0*

ISC 26 19:12:29.4±0.7, **8°.41N**±0°.03×**82°.89W**±0°.02, **h28**^{km}±4^{km}, **n156**, σ**1^{s}31**/170, **mb4.6**/14, **MS3.6**/8, **8C-30D**, **Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.10	92	⇑eP	Pb	19 12 33.5	-0.8
LESP3				eS	Sb	19 12 37.3	-0.4
LPPC	Paso Canoas	0.13	21	⇑eP	Pb	19 12 34.0	-0.6
LPPC				eS	Sb	19 12 38.2	-0.1
CDITO	Canoas	0.16	4	S	Sb	19 12 39.5	+0.8
CDITO	Canoas	0.16	4	P	Pb	19 12 35.0	0.0
NELY	Ciudad Neily	0.25	346	⇑eP	Pb	19 12 35.6	-0.3
NELY				eS	Sb	19 12 41.1	+0.7
LIMO3	Limones	0.31	176	eP	Pb	19 12 36.2	-0.5
LIMO3				eS	Sn	19 12 43.1	-0.5
LMNES	Limones	0.31	175	⇑eP	Pb	19 12 35.8	-1.0
FITO	Golfito	0.34	309	⇑eP	Pb	19 12 36.1	-1.1
FITO				eS	Sb	19 12 41.7	-0.9
MCANO	Manzana, Boque	0.35	63	eP	Pb	19 12 36.8	-0.6
EDAD	Golfito	0.37	311	⇑eP	Pb	19 12 36.6	-1.1
EDAD				eS	Sb	19 12 42.8	-0.6
MLIR3	Monte Lirio, C	0.39	9	eP	Pb	19 12 38.5	+0.4
MLIR3				eS	Sb	19 12 43.9	0.0
RSRNO	Rio Sereno	0.41	3	⇓eP	Pb	19 12 38.6	+0.2
RSRNO	Rio Sereno	0.41	3	⇓eP	Pb	19 12 38.8	+0.5
VITO	San Vito	0.42	348	⇓eP	Pb	19 12 38.6	+0.1
CLLRA	Cordillera,	0.43	39	⇓eP	Pb	19 12 38.1	-0.6
CLLRA	Cordillera,	0.43	39	⇓eP	Pb	19 12 38.4	-0.4
BRU2	Volcan	0.43	27		Pb	19 12 38.0	-0.7
BRU2					Sb	19 12 45.8	+0.7
BRU2	Volcan	0.43	27	⇓eP	Pb	19 12 38.3	-0.4
BRU2				eS	Sb	19 12 45.5	+0.5
BRU2	Volcan	0.43	27	S	Sn	19 12 46.2	-0.8
BRU2	Volcan	0.43	27	P	Pb	19 12 38.9	+0.2
BRU2	Volcan	0.43	27	⇓iP	Pb	19 12 38.5	-0.2
BRU2				eS	Sb	19 12 45.7	+0.7
DVD	David	0.43	86	eP	Pb	19 12 37.7	-0.9
DVD				eS	Sb	19 12 44.9	0.0
SCLRA	Santa Clara, W	0.43	14	eP	Pb	19 12 38.4	-0.4
SCLRA	Santa Clara, W	0.43	14	⇓eP	Pb	19 12 39.0	+0.2
CSTBL	De las Acacias	0.44	90	⇓eP	Pb	19 12 37.6	-1.1
CSTBL	De las Acacias	0.44	90	⇓eP	Pb	19 12 37.8	-1.0
PEDE3	Pedregal, Chir	0.46	93	eP	Pb	19 12 38.0	-1.1
PEDE3				eS	Sb	19 12 45.5	-0.2
LOCO3	Loma Colorada,	0.46	90	eP	Pb	19 12 38.2	-1.0
LOCO3				eS	Sb	19 12 45.1	-0.7
PTAR3	Potrerillos Ar	0.48	54	⇓iP	Pb	19 12 38.9	-0.6
PTAR3				eS	Sb	19 12 46.7	+0.4
BC3P	Paso Ancho	0.49	34	⇓iP	Pb	19 12 39.2	-0.5
BC3P				eS	Sn	19 12 47.4	-1.1
LOMA3	Las Lomas, Chi	0.49	87	eP	Pb	19 12 38.5	-1.1
LOMA3				eS	Sb	19 12 46.0	-0.4
ALCO	Alturas Coton,	0.54	5	⇓eP	Pb	19 12 39.9	-0.7
BQTLY	Boquete Panama	0.55	50	⇓eP	Pb	19 12 39.7	-0.9
BQTLY	Boquete Panama	0.55	50	⇓eP	Pb	19 12 39.8	-0.8
BQSF3	Alto Boquete,	0.56	53	⇓iP	Pb	19 12 39.8	-1.0
BQSF3				eS	Sn	19 12 49.2	-0.8
GUAL3	Gualaca, Chiri	0.59	78	eP	Pb	19 12 40.1	-1.2
PSOM3	Paja de Sombre	0.62	64	⇓iP	Pb	19 12 40.6	-1.2
PSOM3				iS	Sb	19 12 50.3	+0.1
EDP2	Potrero Grande	0.67	335	⇓eP	Pb	19 12 42.5	-0.1
PANP	Palmar Norte	0.79	314	⇑eP	Pb	19 12 43.6	-1.0
PBNVO	Pueblo Nuevo,	0.84	55	⇓eP	Pb	19 12 43.8	-1.6
RBALA	Bur	0.86	57	⇓eP	Pn	19 12 44.5	-1.2
RBALA	Bur	0.86	57	⇓eP	Pn	19 12 44.5	-1.2
BURE	Buenos Aires	0.88	330	eP	Pn	19 12 45.6	-0.4
DRK0	Durika	0.92	337	⇓eP	Pn	19 12 45.9	-0.8
DRK0	Durika	0.92	337	P	Pn	19 12 46.2	-0.5
DRK0	Durika	0.92	337	S	Sb	19 12 56.0	-2.9
DRK0	Durika	0.92	337	iP	Pn	19 12 46.2	-0.5
DRK0				iS	Sn	19 12 59.3	+0.2
EDPE	Pejibaye, P	1.01	318	eP	Pn	19 12 47.3	-0.4
OCHAL	Ojochal	1.02	312	P	Pn	19 12 48.2	+0.3
OCHAL	Ojochal	1.02	312	S	Sn	19 13 01.0	-0.3
SAJE	San Jernim	1.12	327	⇓eP	Pn	19 12 48.8	-0.6
PDCAN	Manzana , Fuen	1.18	96	eP	Pn	19 12 49.0	-1.1
BRIBI	Bribri	1.21	3	eP	Pb	19 12 52.1	+0.5
VERH	Veragua Rainfo	1.54	349	⇓eP	Pn	19 12 55.8	+0.7
LLNJ	Naranjito	1.60	311	eP	Pn	19 12 57.0	+1.1
PIEC	Cerro El Cedra	1.60	319	⇑eP	Pn	19 12 56.8	+0.6
MESA3	La Mesa, Verag	1.70	99	eP	Pn	19 12 57.1	-0.2
VINA	Juan Vinas	1.70	330	eP	Pn	19 12 58.5	+1.1
VERB	Verbena	1.72	332	eP	Pn	19 12 59.1	+1.4
LCR2	La Lucha 2	1.73	320		Pn	19 12 57.6	-0.2
LCR2	La Lucha 2	1.73	320	eP	Pn	19 12 57.9	0.0
LCR2	La Lucha 2	1.73	320	P	Pn	19 12 58.4	+0.6
LCR2	La Lucha 2	1.73	320	S	Sn	19 13 20.5	+1.4
PCAYA	Pacayas	1.75	329	eP	Pn	19 12 59.6	+1.4
GMAL	Guarumal, Vera	1.76	111	eP	Pb	19 13 00.3	-0.7
GMAL				eS	Sb	19 13 23.2	+0.5
RSUS3	Rio de Jesus,	1.76	104	eP	Pb	19 12 59.6	-1.4
VTCV	VTCV, Calle Va	1.77	332	⇓eP	Pn	19 12 59.4	+1.0
RESJ	San Isidro (Tu	1.78	335	eP	Pb	19 12 60.0	-1.4
IRES	Siquirres	1.79	340	eP	Pb	19 13 00.3	-1.2
ABRB	Las Abras (San	1.79	333	⇓eP	Pn	19 12 59.9	+1.2
PAR1A	Puntarenas Pro	1.79	311	eP	Pn	19 12 59.9	+1.4
CVTQ	Turrialba Volc	1.81	331	⇓eP	Pn	19 13 00.2	+1.1
VTLA	Turrialba Volc	1.81	331	⇓eP	Pn	19 13 00.1	+1.0
VTR0	Volcan Turrial	1.82	332	⇓eP	Pn	19 13 00.5	+1.2
RVLA	Villa Bonita	1.83	338	eP	Pn	19 13 00.4	+1.4
VICA	Volcano Irazu	1.83	329	⇓eP	Pn	19 13 00.1	+0.7
ACOS	Acosta	1.87	318	eP	Pn	19 13 00.9	+1.1
SFRA3	San Francisco,	1.90	95	eP	Pn	19 13 01.3	+1.3
STIA3	Santiago, Vera	1.92	99	eP	Pb	19 13 05.5	+1.8
HDC	Heredia	1.99	323	Pn	Pn	19 13 01.8	+0.4
HDC	Heredia	1.99	323	eP	Pn	19 13 03.1	+1.6
BELE	Belen	2.02	321	eP	Pn	19 13 03.1	+1.3
CALO3	Calobre, Verag	2.02	92	eP	Pb	19 13 05.5	0.0
VBV1	V. Barva	2.08	325	eP	Pn	19 13 04.1	+1.4
CRIS3	El Cristo, Coc	2.25	94	eP	Pn	19 13 05.9	+1.0
CACAO	El Cacao, Vera	2.27	118	eP	Pn	19 13 06.9	+1.9
TRT2	Tortugero	2.29	339	S	Sb	19 13 36.0	-2.1
TRT2	Tortugero	2.29	339	P	Pn	19 13 06.1	+0.7
TRT1	Tortuguero	2.32	340	eP	Pn	19 13 07.0	+1.2
CBL1	Cabuya	2.47	298	eP	Pn	19 13 08.4	+0.4
TOSI3	Tonosi	2.62	112	eP	Pb	19 13 13.6	-2.1
AZU	Azuero	2.66	103	eP	Pb	19 13 14.2	-2.2
COVE	Coope Vega, Sa	2.74	327	S	Sn	19 13 42.2	-1.7
COVE	Coope Vega, Sa	2.74	327	P	Pn	19 13 12.8	+1.2
JTS	Las Juntas de	2.77	313	Pn	Pn	19 13 13.4	+1.4
JTS	Las Juntas de	2.77	313	P	Pn	19 13 13.0	+1.0
	202nm,0.4s,baz=88,slow=5.4,SNR=74						
JTS				S	Sn	19 13 45.6	+1.1
	530nm,0.5s,baz=120,slow=16,SNR=6.5						
JTS				LR	LR	19 14 22.3	
	comp=Z,938nm,21.9s,baz=136,slow=44						
JTS	Las Juntas de	2.77	313	eP	Pn	19 13 14.3	+2.3
JTS				eS	Sn	19 13 46.2	+1.7
INDI	Punta indio, G	2.96	299	P	Pn	19 13 16.6	+2.0
INDI	Punta indio, G	2.96	299	S	Sn	19 13 50.5	+1.2
BCIP	Isla Barro Col	3.11	76	Pn	Pn	19 13 19.6	+3.0
BCIP	Isla Barro Col	3.11	76	eP	Pn	19 13 17.2	+0.6
BCIP				eS	Sn	19 13 53.2	+0.4
UPA	Univ. de Panam	3.36	80	eS	Sb	19 14 13.7	+4.9
ESPN	Las Esperanzas	4.01	340	Pn	Pn	19 13 29.0	-0.1
ACON	Acoyapa	4.19	328	Pn	Pn	19 13 33.5	+1.9
ACON	Acoyapa	4.19	328	eP	Pn	19 13 33.4	+1.9
ACON	Acoyapa	4.19	328	P	Pn	19 13 34.2	+2.6
ACON	Acoyapa	4.19	328	S	Sn	19 14 17.8	-1.9
BOAB	BOACO BROADBAN	4.86	326	Pn	Pn	19 13 42.6	+1.8
BOAB	BOACO BROADBAN	4.86	326	S	Sn	19 14 33.4	-2.7
BOAB	BOACO BROADBAN	4.86	326	P	Pn	19 13 42.5	+1.8
MGAN	Managua	4.97	319	Pn	Pn	19 13 43.7	+1.4
MOMN	Momotombo	5.36	318	P	Pn	19 13 39.4	-8.3
CNGN	Cerro Negro	5.53	318	Pn	Pn	19 13 52.5	+2.4
POLN	Al Sur del Vol	5.71	318	P	Pn	19 13 48.0	-4.5
CRIN	San Cristobal	5.91	317	Pn	Pn	19 13 57.6	+2.3
ESQI	Esquipulas	8.80	315	Pn	Pn	19 14 37.8	+2.9
ROSC	El Rosal	9.22	112	P	Pn	19 14 51.4	+10
	5.5nm,0.4s,baz=270,slow=20,SNR=3.6						
SDV	Santo Domingo	12.12	87	LR	LR	19 20 47.4	
	comp=Z,526nm,18.1s,baz=258,slow=40						
CMIG	Matias Romero	14.53	308	P	Pn	19 15 55.6	+2.3
	2.6nm,0.6s,baz=112,slow=19,SNR=1.9						
PCRV	Puerto La Cruz	18.10	83	LR	LR	19 25 10.9	
	comp=Z,475nm,18.4s,slow=42						
146A	Union	24.78	348		P	19 17 50.9	+1.9
LRAL	Lakeview Retre	24.80	352		P	19 17 51.3	+2.1
LRAL				IAmb	IAmb	19 17 53.9	
	comp=Z,40nm,1.4s						
Z47A	Carrollton	25.13	350	P	P	19 17 54.1	+2.0
Y52A	Lilburn	25.36	358	P	P	19 17 54.0	-0.2
Y52A				IAmb	IAmb	19 18 07.5	
	comp=Z,32nm,1.3s						
X51A	Calhoun	26.10	356	P	P	19 18 01.3	+0.4
X51A				IAmb	IAmb	19 18 21.7	
	comp=Z,8.9nm,0.7s						
FPAL	Fort Paine	26.13	355	P	P	19 18 02.0	+0.7
CPCT	Cooper Cave	26.96	357	P	P	19 18 09.7	+1.0
TKL	Tuckaleechee C	27.14	358	LR	LR	19 28 33.5	
	comp=Z,299nm,20.4s,baz=208,slow=36						
WHAR	Wooly Hollow	28.11	344	P	P	19 18 19.2	+0.3
WHAR				IAmb	IAmb	19 18 21.5	
	comp=Z,13nm,1.1s						
LCAR	Lake Charles	28.55	346	P	P	19 18 22.6	-0.4
LCAR				IAmb	IAmb	19 18 25.4	
	comp=Z,16nm,1.3s						
LPAZ	La Paz	28.56	149	LR	LR	19 29 50.2	
	comp=Z,135nm,18.7s,baz=312,slow=36						
T42A	Van Buren	29.45	347	P	P	19 18 30.2	-0.7
WCI	Wyandotte Cave	29.85	355	P	P	19 18 34.2	-0.2
WCI				IAmb	IAmb	19 18 36.2	
	comp=Z,12nm,0.9s						
OLIL	Olney	30.56	352	P	P	19 18 41.4	+0.8
OLIL				IAmb	IAmb	19 19 00.7	
	comp=Z,12nm,0.6s						
O48B	Farmland	31.78	357	P	P	19 18 51.4	-0.1
O48B				IAmb	IAmb	19 18 52.9	
	comp=Z,10nm,0.9s						
N38A	Joes South For	33.54	346	P	P	19 19 06.1	-0.7
ANMO	Albuquerque	34.13	324	LR	LR	19 33 28.7	
	comp=Z,99nm,21.8s,baz=34,slow=37						
PDAR	Pinedale Array	41.47	330	P	P	19 20 14.3	0.0
	comp=Z,0.2nm,0.7s,baz=115,slow=6.2,SNR=1.2						
PDAR				LR	LR	19 39 40.6	
	comp=Z,89nm,18.0s,baz=330,slow=40						
	comp=Z,0.2nm,0.7s						
CPUP	Villa Florida	42.53	145	LR	LR	19 39 46.7	
	comp=Z,56nm,19.2s,baz=136,slow=38						
ULM	Lac du Bonnet	43.09	348	P	P	19 20 25.2	-1.8
ULM				IAmb	IAmb	19 20 27.0	
	comp=Z,10nm,1.2s						
ULM	Lac du Bonnet	43.09	348	P	P	19 20 24.6	-2.4
	comp=Z,6.3nm,1.1s,baz=158,slow=6.7,SNR=5.1						
	comp=Z,6.3nm,1.1s						
NVAR	Mina Array Bea	43.68	319	P	P	19 20 34.0	+1.7
NVAR	Mina Array Bea	43.68	319	P	P	19 20 33.2	+0.9
	comp=Z,1.6nm,0.9s,baz=129,slow=7.4,SNR=6.7						
	comp=Z,1.6nm,0.9s						
MCMT	McKenzie Canyo	44.60	330	P	P	19 20 40.4	+0.8
YBH	Yreka Blue Hor	48.31	320	LR	LR	19 45 58.9	
	comp=Z,5.7nm,18.6s,baz=322,slow=42						
YKA	Yellowknife Ar	58.71	343	P	P	19 22 24.3	0.0
	comp=Z,0.5nm,0.6s,baz=126,slow=7.1,SNR=4.7						
YKA				LR	LR	19 49 03.6	
	comp=Z,108nm,19.9s,baz=112,slow=38						
	comp=Z,0.5nm,0.6s						
BCAR	Beaver Creek A	68.77	335	P	P	19 23 30.6	-0.2
SUMG	Summit	69.43	13	P	P	19 23 33.8	-1.3
SUMG				IAmb	IAmb	19 23 35.6	
	comp=Z,6.7nm,1.0s						
ILAR	Eielson Array	71.51	336	P	P	19 23 47.9	+0.4
ILAR	Eielson Array	71.51	336	P	P	19 23 47.7	+0.2
	comp=Z,0.5nm,0.7s,baz=118,slow=4.7,SNR=5.2						
	comp=Z,0.5nm,0.7s						
KDAK	Kodiak Island	72.15	328	LR	LR	19 56 19.7	
	comp=Z,93nm,20.4s,baz=84,slow=37						
MKAR	Makanchi Array	123.48	12	PKP	PKiKP	19 31 25.7	+1.0
	comp=Z,0.1nm,0.4s,baz=0.0,slow=1.4,SNR=2.6						
KSH	Kashi	128.44	21	PKP	PKiKP	19 31 38.5	+3.6
ASAR	Alice Springs	141.67	242	PKP	PKPdf	19 31 59.0	-0.2

	comp=Z,0.5nm,0.9s,baz=123,slow=3.2,SNR=1.7						
WRA	Warramunga Arr	142.22	248	PKP	PKiKP	19 32 03.0	-0.3
	comp=Z,1.2nm,1.1s,baz=100,slow=2.8,SNR=3.1						
CMAR	Chiang Mai Arr	153.24	356	PKPbc	PKPbc	19 32 25.8	-0.1
	comp=Z,0.3nm,0.4s,baz=340,slow=2.5,SNR=4.3						
CMAR				PKPab	PKPab	19 32 37.6	+0.3
	comp=Z,1.0nm,0.9s,baz=342,slow=2.4,SNR=4.6						

IDC 26 19:21:19.6±1.1, 30°.66S×179°.49W, h0^{km}, mb3.8/4, mbtmp3.9/5, ML3.2/1, Error ellipse: s-maj=30.7km s-min=24.7km az=121.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.96	45	Pn	Pn	19 21 54.4	+0.3
	86nm,0.3s,baz=243,slow=18,SNR=6.3						
URZ	Urewera	8.08	199	Pn	Pn	19 23 19.3	+1.2
	0.3nm,0.3s,baz=352,slow=9.4,SNR=2.0						
	13nm,1.2s						
ASAR	Alice Springs	41.81	268	P	P	19 29 11.2	-0.1
	0.6nm,0.7s,baz=96,slow=8.0,SNR=5.6						
	0.6nm,0.7s						
WRA	Warramunga Arr	42.82	273	P	P	19 29 19.4	-0.1
	0.9nm,0.8s,baz=111,slow=8.0,SNR=6.0						
	0.9nm,0.8s						
QSPA	South Pole Qui	59.45	180	P	P	19 31 23.8	-0.1
	1.6nm,0.8s,baz=12,slow=2.8,SNR=10						
	1.6nm,0.8s						
SNAA	Sanae	77.92	179	P	P	19 33 18.4	-0.6
	1.8nm,1.0s,baz=211,slow=5.9,SNR=3.8						
	1.8nm,1.0s						
H03S2	Juan Fernandez	81.39	124	T	T	21 03 06.8	
	baz=238,slow=74,SNR=28						
H03S1	Juan Fernandez	81.40	124	T	T	21 03 18.7	
	baz=238,slow=74,SNR=24						
H03S3	Juan Fernandez	81.41	124	T	T	21 03 16.2	
	baz=238,slow=74,SNR=25						
FINES	FINESS Array B	144.94	339	PKP	PKPdf	19 40 57.9	0.0
	1.2nm,0.8s,baz=56,slow=3.5,SNR=7.7						
HFS	Hagfors	149.23	347	PKPab	PKPab	19 41 13.5	-0.4
	1.3nm,0.8s,baz=38,slow=5.1,SNR=1.7						

IDC 26 19:22:55.4±1.7, 5°.78S×148°.35E, h0^{km}, mb3.8/5, mbtmp3.8/6, ML2.9/1, MS3.4/4, Error ellipse: s-maj=64.5km s-min=28.0km az=95.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	19.59	223	P	P	19 27 25.3	0.0
	baz=50,slow=10,SNR=5.6						
	1.6nm,1.1s						
ASAR	Alice Springs	22.57	217	P	P	19 27 56.9	-0.7
	0.3nm,0.7s,baz=53,slow=9.0,SNR=5.1						
	0.3nm,0.7s						
KAPI	Kappang	28.48	270	LR	LR	19 41 44.8	
	comp=Z,62nm,18.8s,baz=63,slow=40						
TGY	Tagaytay City	33.62	306	LR	LR	19 42 17.1	
	comp=Z,76nm,20.1s,baz=141,slow=35						
JNU	Nakatsue	42.10	338	LR	LR	19 46 44.9	
	comp=Z,93nm,18.4s,baz=184,slow=34						
CMAR	Chiang Mai Arr	54.34	297	LR	LR	19 57 02.2	
	comp=Z,20nm,18.4s,baz=130,slow=38						
ZALV	Zalesovo Beam	79.55	327	P	P	19 35 04.3	+0.1
	0.5nm,0.3s,baz=102,slow=5.5,SNR=2.0						
	0.5nm,0.3s						
KURBB	Kurchatov Arra	81.87	323	P	P	19 35 17.0	+0.3
	0.1nm,0.3s,baz=101,slow=5.0,SNR=2.3						
	0.1nm,0.3s						
QSPA	South Pole Qui	84.18	180	P	P	19 35 29.0	+0.5
	1.4nm,0.5s,baz=356,slow=5.5,SNR=13						
	1.4nm,0.5s						
BVAR	Borovoye Array	87.39	324	P	P	19 35 44.1	-0.5
	0.8nm,0.7s,baz=119,slow=5.2,SNR=4.0						
	0.8nm,0.7s						

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*JMA **26** 19:24:52.7±0.1, 23°.8N±0°.6×122°.9E±0°.5, h43^{km}, MV3.1/14, NEAR ISHIGAKIJIMA ISLAND*

*TAP **26** 19:24:52.7, 23°.78N×123°.00E, h46^{km}, ML3.7, D*

ISC 26 19:24:50.2±1.4, 23°.74N±0°.03×122°.95E±0°.02, h14^{km}±11^{km}, n130, σ0^{s}.94/190, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS4	EOS4	0.69	304	i P	Pn	19 25 06.3	+1.0
EOS4				i S	Sn	19 25 16.8	+1.1
JYNG	Yonagunijimaku	0.71	360	P	Pn	19 25 06.0	+0.1
JYNG				S	Sn	19 25 15.0	-1.7
YOJ	Yonaguni jima	0.73	4	eP	Pn	19 25 06.4	+0.4
YOJ				S	Sn	19 25 15.9	-1.1
YOJ	Yonaguni jima	0.73	4	⇑iP	Pn	19 25 06.4	+0.4
YOJ				i S	Sn	19 25 16.3	-0.6
EOS3	EOS3	0.80	314	i P	Pn	19 25 08.2	+1.3
EOS3				i S	Sn	19 25 19.5	+1.0
HATJ	Hateruma jima	0.85	68	P	Pn	19 25 08.6	+0.9
HATJ				S	Sn	19 25 19.4	-0.5
IRIF	Iriomote-Funau	0.93	50	P	Pn	19 25 09.6	+0.8
IRIF				eS	Sn	19 25 22.4	+0.4
EOS2	EOS2	0.95	316	i P	Pn	19 25 11.0	+2.1
EOS2				i S	Sn	19 25 24.8	+2.6
JKRS	Kuro-shima	1.09	62	P	Pn	19 25 12.3	+1.2
JKRS				eS	Sn	19 25 25.8	-0.1
TEYL	Yanliau Villag	1.25	276	P	Pb	19 25 13.7	+0.2
TEYL				S	Sb	19 25 29.7	+0.4
EAHA	Aohua	1.25	298	P	Pg	19 25 15.3	+1.0
EAHA				S	Sn	19 25 31.1	+1.1
JIJ	Ishigaki jima	1.26	60	eP	Pg	19 25 14.0	-0.4
JIJ				eS	Sn	19 25 30.2	+0.2
SHUL	Shoufeng	1.27	273	eP	Pb	19 25 14.1	+0.2
SHUL				eS	Sn	19 25 31.0	+0.6
EWUT	Wuta	1.28	304	P	Pg	19 25 14.7	-0.2
EWUT				S	Sn	19 25 32.0	+1.3
ETL	Fush Village	1.28	289	eP	Pg	19 25 14.6	-0.3
ETL				eS	Sb	19 25 29.9	-0.7
TWD	Chiawan	1.29	286	eP	Pn	19 25 13.8	+0.1
TWD				S	Sb	19 25 29.1	-1.4
TEGC	Jichi Village	1.29	269	eP	Pg	19 25 15.5	+0.4
TEGC				eS	Sb	19 25 31.0	+0.3
ENA	Nanau	1.30	302	i P	Pg	19 25 15.2	0.0
ENA				S	Sn	19 25 31.3	+0.1
ESAO	Su ao	1.31	310	eP	Pg	19 25 15.0	-0.4
NACB	Ninganchiao	1.31	290	P	Pb	19 25 14.7	0.0
NACB	Ninganchiao	1.31	290	P	Pb	19 25 14.6	0.0
NACB				S	Sb	19 25 29.3	-2.1
TWC	Suao	1.33	311	P	Pg	19 25 15.8	0.0
TWC				S	Sn	19 25 31.8	-0.1
ETM	Tongmen	1.35	280	eP	Pn	19 25 15.1	+0.4
ETM				eS	Sb	19 25 30.5	-2.0
ESL	Shilin	1.39	274	P	Pb	19 25 16.0	0.0
ESL				eS	Sn	19 25 32.3	-1.1
EGFH	Guangfu	1.40	268	eP	Pg	19 25 17.3	+0.2
EGFH				eS	Sn	19 25 32.6	-0.9
HGSD	Ruisui	1.42	261	P	Pn	19 25 16.2	+0.6
HGSD				S	Sn	19 25 32.7	-1.4
ETLH	Xiulin Townshi	1.42	290	P	Pb	19 25 16.4	-0.2
ETLH				i S	Sn	19 25 33.8	-0.5
WARBT	Fenglin Townsh	1.43	270	eP	Pn	19 25 15.9	+0.1
WARBT				S	Sn	19 25 33.3	-1.1
LXIB	Xiulin Townshi	1.44	282	P	Pn	19 25 16.3	+0.3
LXIB				S	Sn	19 25 33.6	-1.1
ECBN	Changbin	1.44	253	eP	Pg	19 25 17.6	-0.2
ECBN				eS	Sn	19 25 33.4	-1.1
NDS	Dongshan	1.44	309	eP	Pg	19 25 18.5	+0.7
NDS				eS	Sb	19 25 34.8	-0.2
EGS		1.44	320	eP	Pg	19 25 17.9	0.0
EHYH	Wanrong	1.49	261	P	Pn	19 25 17.5	+0.9
EHYH				S	Sn	19 25 35.8	-0.1
JISG	Ishigakijimahi	1.50	55	P	Pb	19 25 17.2	-0.7
EHY	Hungye	1.51	262	i P	Pn	19 25 17.7	+0.9
EHY				eS	Sn	19 25 35.6	-0.7
LATG	Datong	1.52	302	eP	Pg	19 25 18.6	-0.9
CHKH	Chenggong	1.53	250	eP	Pn	19 25 17.8	+0.7
CHKH				eS	Sn	19 25 34.9	-1.8
TWE	Neicheng	1.53	310	eP	Pg	19 25 18.9	-0.7
TWB1	Santiao Chiao	1.54	326	eP	Pg	19 25 19.0	-0.8
EYUL	Yuli	1.54	256	eP	Pn	19 25 18.4	+1.1
EYUL				eS	Sn	19 25 37.1	-0.1
ENTT	Nioudou	1.55	306	eP	Pg	19 25 19.2	-0.8
ENTT				i S	Sb	19 25 38.6	+0.3
YULB	Yu-li	1.55	258	P	Pn	19 25 18.3	+0.9
YULB	Yu-li	1.55	258	eP	Pn	19 25 18.3	+0.9
YULB				S	Sn	19 25 37.0	-0.4
TWF1	Yuli	1.56	256	P	Pn	19 25 18.1	+0.6
TWF1				S	Sn	19 25 37.7	+0.1
NNSB	Datong	1.59	296	i P	Pb	19 25 19.4	0.0
NNSB				eS	Sn	19 25 37.8	-0.7
WHF	Hehuan Shan	1.59	285	eP	Pn	19 25 18.7	+0.3
WHF				eS	Sn	19 25 38.0	-1.0
TIPB	Shuangxi	1.60	320	eP	Pb	19 25 19.7	+0.1
NNS	Nan Shan	1.60	296	i P	Pb	19 25 19.6	-0.1
NNS				eS	Sn	19 25 38.2	-0.6
FUSB	Fushanzhiwuyua	1.61	310	eP	Pg	19 25 20.3	-0.8
FULB	Fuli	1.61	251	eP	Pn	19 25 18.7	+0.5
FULB				S	Sn	19 25 37.1	-1.7
OWD	Renai	1.64	278	i P	Pn	19 25 19.5	+0.8
OWD				S	Sn	19 25 38.8	-0.9
FUSS	Fushou	1.64	288	eP	Pb	19 25 20.3	0.0
FUSS				S	Sn	19 25 40.0	0.0
VWDT	VWDT	1.66	271	i P	Pn	19 25 20.0	+1.2
VWDT				eS	Sn	19 25 40.1	+0.2
SXI1	Grass Mountain	1.67	324	eP	Pb	19 25 20.6	-0.2
NWLT	Wulai	1.68	308	eP	Pb	19 25 20.4	-0.5
EDH	Donghe	1.69	244	eP	Pn	19 25 20.5	+1.2
EDH				i S	Sn	19 25 39.5	-1.3
WUSB	Renai	1.70	279	eP	Pn	19 25 20.6	+1.1
WUSB				eS	Sn	19 25 40.1	-1.1
TWT	Tachien	1.70	288	eP	Pb	19 25 21.3	0.0
EHD	Haiduan	1.70	250	eP	Pn	19 25 20.3	+0.7
EHD				S	Sn	19 25 39.5	-1.6
NWF	Wu-fen Shan	1.70	322	eP	Pb	19 25 21.3	0.0
WFSB	Wu-fen Shan	1.70	322	eP	Pb	19 25 21.3	0.0
YHNB	Yeheng	1.71	303	P	Pb	19 25 21.4	-0.1
YHNB	Yeheng	1.71	303	eP	Pb	19 25 21.5	-0.1
TDCB	Techi	1.72	288	eP	Pb	19 25 21.4	-0.2
TDCB				eS	Sn	19 25 41.8	+0.1
NSK	Sanguang	1.73	303	eP	Pb	19 25 21.3	-0.4
NSK				eS	Sn	19 25 42.5	+0.6
TWA	Mucha	1.76	315	eP	Pg	19 25 22.7	-1.2
TWA				eS	Sb	19 25 44.1	-0.1
TNOU	National Taiwa	1.77	323	eP	Pn	19 25 21.1	+0.7
TNOU				eS	Sb	19 25 43.8	-0.7
TATO	Taipei	1.82	313	P	Pg	19 25 23.8	-1.3
SSLB	Suanglung	1.83	272	P	Pn	19 25 22.3	+1.0
SSLB	Suanglung	1.83	272	S	Sn	19 25 44.4	+0.1
SSLB	Suanglung	1.83	272	eP	Pb	19 25 23.6	+0.1
JTJ	Tarama	1.84	60	eP	Pb	19 25 22.4	-1.1
ELDTW	Lidau	1.86	253	eP	Pn	19 25 22.6	+0.9
ELDTW				S	Sn	19 25 43.8	-1.3
LONT	Longtian	1.86	244	eP	Pn	19 25 22.4	+0.6
SMLT	Sun Moon Lake	1.88	275	eP	Pb	19 25 23.6	-0.8
YM01	YM01	1.89	318	eP	Pb	19 25 23.5	-1.0
WCS	Beigang Elemen	1.89	280	eP	Pb	19 25 23.8	-0.7
NFF	Wufeng Townshi	1.90	298	i P	Pb	19 25 25.0	+0.4
NFF				S	Sb	19 25 47.4	-0.8
YM08	YM08	1.91	320	eP	Pb	19 25 23.6	-1.1
WHP	Taichung City	1.91	287	eP	Pb	19 25 25.7	+0.8
WHP				S	Sn	19 25 47.2	+0.9
ZUZH	Zhuzihu	1.91	318	eP	Pb	19 25 25.0	+0.1
WHYT	Xinyi Township	1.92	269	eP	Pb	19 25 25.9	+0.8
KSHI	Guanxi Townshi	1.92	303	P	Pb	19 25 25.4	+0.4
KSHI				S	Sb	19 25 49.0	+0.1
TTN	Taitung	1.92	240	eP	Pb	19 25 24.9	-0.1
TTN				eS	Sn	19 25 45.9	-0.6
ANP	Anpu	1.95	318	eP	Pb	19 25 25.4	-0.1
TWGBT	Beinan	1.95	242	P	Pb	19 25 25.1	-0.3
TWGBT	Beinan	1.95	242	eP	Pn	19 25 23.6	+0.8
TWGBT				eS	Sn	19 25 46.7	-0.4
TWS1	Kuangyinshan	1.95	315	eP	Pn	19 25 23.9	+1.1
TWG	Pinlang	1.95	243	eP	Pn	19 25 24.4	+1.5
TWG				S	Sn	19 25 46.1	-1.1
TWY	Chenhua	1.97	322	eP	Pb	19 25 25.3	-0.5
NTST	Danshui	1.97	316	eP	Pb	19 25 25.2	-0.7
ALS	Alishan	1.98	264	eP	Pb	19 25 25.8	-0.4
LIOB	Emei	1.98	298	i P	Pb	19 25 26.2	+0.1
NSTT	Nanjuang	1.99	297	eP	Pb	19 25 26.4	+0.2
PCYT	Pengchaiyu	2.05	337	eP	Pb	19 25 26.1	-1.1
STYH	Taoyuan	2.07	255	eP	Pn	19 25 26.5	+2.0
WNT	Mingjian	2.08	274	eP	Pb	19 25 27.5	-0.2
WNT				eS	Sb	19 25 52.7	-0.7
TWQ1	Liyutan	2.08	287	eP	Pb	19 25 27.7	-0.1
CHN5	Tsauling	2.09	267	eP	Pb	19 25 28.2	+0.3
TCU	Taichung	2.12	282	eP	Pb	19 25 28.2	-0.2
LAY	Lan-yu	2.12	218	eP	Pn	19 25 25.9	+0.6
NMLH	Miaoli	2.13	292	eP	Pb	19 25 28.4	-0.1
LYUB	Lan-yu	2.14	216	eP	Pn	19 25 26.1	+0.7
ECL	Taimali	2.16	239	eP	Pn	19 25 26.4	+0.7
ECL				S	Sn	19 25 51.0	-1.3
WCKO	Fanlu	2.17	263	eP	Pb	19 25 29.0	-0.3
TPUB	Ta-pu	2.17	259	P	Pb	19 25 28.8	-0.5
TPUB	Ta-pu	2.17	259	P	Pb	19 25 29.0	-0.3
WGK	Gukeng	2.19	269	eP	Pb	19 25 29.8	+0.3
WTP	Ta-pu	2.20	258	eP	Pb	19 25 29.4	-0.3
CHN1	Nanshi	2.29	257	eP	Pb	19 25 31.7	+0.4
TWK	Hsinying	2.31	259	eP	Pb	19 25 31.4	-0.2
SNST	Tainan City	2.31	258	eP	Pb	19 25 31.7	0.0
SSD	Sandimen	2.35	246	eP	Pn	19 25 30.6	+2.2
WTK	Tuku	2.35	269	eP	Pb	19 25 32.2	-0.1
EAST	Anshuo	2.36	236	eP	Pn	19 25 29.6	+1.1
JMJ	Miyako jima 2	2.39	63	P	Pg	19 25 38.1	+2.0
MASBT	Mashibuluo	2.41	243	eP	Pn	19 25 30.4	+1.2
SCST	Cishan	2.41	250	eP	Pb	19 25 33.0	-0.4
ICHU	Yijhu	2.48	262	eP	Pb	19 25 33.2	-1.3
SLIU	Shizi	2.49	233	eP	Pn	19 25 31.4	+1.0
WSF	Szhu	2.50	268	eP	Pb	19 25 34.3	-0.6
WSL	Shuilin Townsh	2.50	266	eP	Pb	19 25 33.4	-1.6
WSL				i S	Sn	19 26 02.9	+2.0
SCZT	Fangliau	2.54	238	eP	Pn	19 25 33.4	+2.5
TSCK	Chigu Township	2.69	258	eP	Pn	19 25 35.3	+2.2
WDGT	Dungji	3.06	262	eP	Pn	19 25 40.7	+2.6
PHUB	P'eng-hu	3.11	267	eP	Pn	19 25 41.3	+2.5
PNG	Penghu	3.12	268	eP	Pn	19 25 41.3	+2.3
VWUC	VWUC	3.43	292	eP	Pn	19 25 43.9	+0.7
PTMZ	Houxiangcun	3.73	291	eP	Pn	19 25 48.2	+0.9
XPSS	Dashiqiu	4.04	322	eP	Pn	19 25 52.2	+0.6

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*IDC **26** 19:25:12.8±1.8, 30°.88S×177°.38W, h0^{km}, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=45.3km s-min=25.5km az=82.0*

ISC 26 19:25:16.9±1.6, 30°.94S±0°.08×177°.7W±0°.3, h27^{km}, n11, σ2^{s}.16/7, mb3.8/3, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.69	353	Pn	Pn	19 25 43.2	-1.5
	92nm,0.3s,baz=84,slow=22,SNR=1.7						
RAO				Sn	Sb	19 26 07.8	-0.5
	145nm,0.3s,baz=180,slow=20,SNR=4.1						
URZ	Urewera	8.46	209	Sn	Sn	19 28 49.5	-2.8
	1.5nm,0.3s,baz=186,slow=21,SNR=7.8						
ASAR	Alice Springs	43.34	267	P	P	19 33 19.0	+2.0
	0.5nm,0.6s,baz=106,slow=7.5,SNR=10						
	0.5nm,0.6s						
WRA	Warramunga Arr	44.38	273	P	P	19 33 27.3	+2.0
	0.5nm,0.4s,baz=112,slow=8.0,SNR=13						
	0.5nm,0.4s						
SNAA	Sanae	77.61	178	P	P	19 37 11.0	+0.7
	2.1nm,1.3s,baz=225,slow=5.7,SNR=1.8						
	2.1nm,1.3s						
H10S2	ASCENSION HYDR	37.13	155	T	T	22 15 18.9	
	baz=205,slow=74,SNR=10						
H10S3	ASCENSION HYDR	37.13	155	T	T	22 15 22.2	
	baz=15,slow=74,SNR=12						
H10N3	ASCENSION HYDR	38.21	155	T	T	22 16 44.8	
	baz=203,slow=75,SNR=17						
H10N1	ASCENSION HYDR	38.21	155	T	T	22 16 44.8	
	baz=203,slow=75,SNR=18						
H10N2	ASCENSION HYDR	38.23	155	T	T	22 16 44.8	
	baz=203,slow=75,SNR=21						
FINES	FINESS Array B	145.74	340	PKPbc	PKPdf	19 44 52.2	0.0
	0.7nm,0.5s,baz=49,slow=3.4,SNR=8.1						

KRSC 26 19:25:50.9±1.0, 55°.98N×164°.17E, h16^{km}±18^{km}, Ml4.0, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.79	288	eP	Pb	19 26 05.9	-0.4
KBTR				eS	Sg	19 26 16.9	+0.2
KBG	Krutoberegovo	0.87	289	eP	Pb	19 26 06.7	-0.8
KBG				eS	Sb	19 26 18.9	0.0
BKI	Bering	1.28	126	eP	Pn	19 26 13.9	-0.2
BKI				eS	Sb	19 26 30.6	-0.1
SMKR	Semkarok	1.63	293	eP	Pn	19 26 19.1	+0.2
SMKR				eS	Sn	19 26 39.4	-0.1
BDR	Baidarnaya	1.76	291	eS	Sb	19 26 43.8	-0.8
SRKR	Sorokina	1.81	293	eS	Sn	19 26 44.5	+0.5
ZLN	Zelenaya	1.89	273	eP	Pb	19 26 24.7	-0.3
CIRR	Tsirk	1.93	276	eP	Pb	19 26 24.9	-0.7
BZGR	Bezymyannyi-Gr	1.96	270	eP	Pb	19 26 24.9	-1.2
MKZ	Mys Kozlova	1.99	226	eP	Pb	19 26 25.8	-0.8
MKZ				eS	Sb	19 26 51.7	+0.4
KLY	Klyuchi	2.00	281	eP	Pn	19 26 23.7	-0.2
KLY				eS	Sn	19 26 47.7	-0.9
BZWR	Bezymyannyi-We	2.07	271	eP	Pb	19 26 26.9	-1.2
KIRR	Kirishev	2.15	271	eP	Pb	19 26 28.6	-0.9
KPT	Kopyto	2.22	271	eP	Pb	19 26 29.7	-0.9
KMNR	Kamenistaya	2.23	266	eP	Pb	19 26 29.4	-1.3
TUMD	Tumrok D	2.28	252	eP	Pb	19 26 30.6	-1.0
KOZ	Kozyrevsk	2.42	274	eP	Pb	19 26 32.5	-1.4
SRDR	Sredinnyy	2.52	280	eP	Pn	19 26 33.0	+1.9
SRDR				eS	Sb	19 27 04.3	-2.1
ESO	Esso	3.08	271	eP	Pn	19 26 40.6	+1.8
SPN	Mys Shipunski	3.76	222	eP	Pn	19 26 50.6	+2.4
SPN				eS	Sn	19 27 33.6	+1.6
NLC	Nalytchevo	3.97	227	eS	Sn	19 27 41.4	+4.2
SDLR	Sedlovina	4.09	231	eP	Pn	19 26 56.6	+3.8
SMAR	Somma	4.14	231	eP	Pn	19 26 57.3	+3.8
KRX	Arik	4.14	233	eP	Pn	19 26 57.7	+4.2
AVH	Avacha	4.17	232	eP	Pb	19 26 59.1	-4.6
UGLR	Uglovaya	4.17	231	eP	Pn	19 26 57.1	+3.3
KOK	Koryaka	4.19	232	eP	Pn	19 26 58.4	+4.2
KRMR	Karymshinskiy	4.73	231	eP	Pn	19 27 05.3	+3.9
RUS	Russkaya	4.86	225	eP	Pn	19 27 07.0	+3.8
GRL	Gorelyy	4.95	229	eP	Pn	19 27 09.8	+5.2
MTVR	Mutnovka	4.96	228	eP	Pn	19 27 09.5	+4.8
ASAK	Asacha	5.15	228	eP	Pn	19 27 12.3	+5.0

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*IDC **26** 19:30:28.3±3.9, 12°.82S×165°.72E, h59^{km}±32^{km}, mb3.5/8, mbtmp3.9/10, ML3.9/2, MS3.4/2, Error ellipse: s-maj=34.5km s-min=24.8km az=83.0*

ISC 26 19:30:25.8±1.1, 12°.8S±0°.1×165°.8E±0°.2, h35^{km}, n12, σ1^{s}.32/10, mb3.7/8, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.62	299	P	Pn	19 32 02.1	+1.5
	10nm,0.3s,baz=137,slow=4.4,SNR=7.4						
	42nm,0.4s						
DZM	Mont Dzumac	9.29	176	P	Pn	19 32 38.8	+1.4
	0.2nm,0.3s,baz=323,slow=20,SNR=2.1						
	11nm,1.1s						
RAO	Raoul Island	22.33	140	LR	LR	19 42 26.8	
	comp=Z,183nm,18.2s,baz=126,slow=32						
STKA	Stephens Creek	29.27	226	P	P	19 36 24.2	-0.6
	1.5nm,0.6s,baz=54,slow=12,SNR=3.9						
	1.5nm,0.6s						
WRA	Warramunga Arr	30.98	252	P	P	19 36 39.7	-0.4
	0.9nm,0.8s,baz=80,slow=8.2,SNR=5.3						
	0.9nm,0.8s						
ASAR	Alice Springs	32.10	246	P	P	19 36 49.6	-0.3
	1.1nm,0.7s,baz=70,slow=9.0,SNR=15						
	1.1nm,0.7s						
GUMO	Guam	33.39	321	LR	LR	19 49 41.0	
	comp=Z,27nm,20.4s,baz=141,slow=34						
CMAR	Chiang Mai Arr	72.84	294	P	P	19 41 51.8	+0.2
	0.8nm,0.8s,baz=120,slow=4.4,SNR=4.5						
	0.8nm,0.8s						
QSPA	South Pole Qui	77.27	180	P	P	19 42 15.4	-1.0
	0.6nm,0.8s,baz=321,slow=5.9,SNR=1.6						
	0.6nm,0.8s						
SONM	Songino Array	80.06	324	P	P	19 42 31.3	-0.8
	0.2nm,0.4s,baz=147,slow=3.4,SNR=2.1						
	0.2nm,0.4s						
ILAR	Eielson Array	85.11	18	P	P	19 42 59.3	+1.5
	0.2nm,0.7s,baz=215,slow=4.0,SNR=2.1						
	0.2nm,0.7s						
MKAR	Makanchi Array	94.79	317	P	P	19 43 42.1	-1.8
	0.4nm,0.6s,baz=106,slow=5.4,SNR=5.6						
	0.4nm,0.6s						

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*UCR **26** 19:36:57.3±1.3, 8°.35N×82°.81W, h24^{km}±3^{km}, MW3.7*

*UPA **26** 19:36:57.7±1.7, 8°.39N×82°.83W, h19^{km}±3^{km}, MW3.6*

*CATAC **26** 19:36:58.0±0.7, 8°N±5°×8°3W±°, h17^{km}±4^{km}, M3.7/9, MLv3.7/9, Error ellipse: s-maj=10.2km s-min=9.9km az=79.0, confirmed*

ISC 26 19:36:57.4±1.0, 8°.38N±0°.03×82°.85W±0°.02, h18^{km}±3^{km}, n90, σ1^{s}.18/102, 2C-6D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LESP3	La Esperanza,	0.06	68	eP	Pg	19 37 02.4	+1.7
LESP3				eS	Sg	19 37 03.7	+0.7
CDITO	Canoas	0.19	352	P	Pg	19 37 03.6	+1.4
CDITO	Canoas	0.19	352	S	Sg	19 37 07.7	+2.2
LIMO3	Limones	0.28	184	⇑iP	Pb	19 37 04.4	+0.6
LIMO3				eS	Sb	19 37 09.5	+1.4
LMNES	Limones	0.28	183	eP	Pb	19 37 04.4	+0.5
NELY	Ciudad Neily	0.28	340	eP	Pb	19 37 04.6	+0.7
NELY				eS	Sn	19 37 10.8	-1.7
MCANO	Manzana, Boque	0.33	56	eP	Pb	19 37 05.1	+0.4
FITO	Golfito	0.39	308	eP	Pg	19 37 05.2	-0.2
FITO				eS	Sb	19 37 12.1	+0.6
DVD	David	0.40	82	eP	Pg	19 37 05.7	+0.1
MLIR3	Monte Lirio, C	0.41	3	eP	Pb	19 37 06.9	+0.7
MLIR3				eS	Sn	19 37 17.1	+1.4
EDAD	Golfito	0.41	310	eP	Pg	19 37 05.7	-0.3
PEDE3	Pedregal, Chir	0.42	90	⇓iP	Pg	19 37 05.9	-0.2
PEDE3				eS	Sb	19 37 13.3	+0.9
LOCO3	Loma Colorada,	0.42	86	⇓iP	Pg	19 37 06.1	0.0
CLLRA	Cordillera,	0.43	33	eP	Pg	19 37 06.5	+0.2
RSRNO	Rio Sereno	0.43	358	eP	Pb	19 37 07.5	+0.9
BRU2	Volcan	0.44	21	eP	Pb	19 37 07.0	+0.3
BRU2	Volcan	0.44	21	P	Pb	19 37 07.2	+0.4
BRU2	Volcan	0.44	21	eP	Pb	19 37 07.1	+0.4
BRU2				eS	Sn	19 37 14.9	-1.6
VITO	San Vito	0.45	344	eP	Pb	19 37 07.4	+0.5
SCLRA	Santa Clara, W	0.45	8	eP	Pb	19 37 07.4	+0.5
LOMA3	Las Lomas, Chi	0.45	84	⇓eP	Pg	19 37 06.4	-0.2
PTAR3	Potrerillos Ar	0.46	48	⇓iP	Pg	19 37 07.0	+0.1
PTAR3				eS	Sb	19 37 14.7	+1.0
PTAR3				i S	Sb	19 37 14.7	+1.0
BC3P	Paso Ancho	0.49	28	eP	Pg	19 37 07.3	-0.1
BC3P				eS	Sn	19 37 17.9	+0.1
BQTLY	Boquete Panama	0.53	46	eP	Pg	19 37 08.0	-0.2
BQSF3	Alto Boquete,	0.54	49	⇓eP	Pg	19 37 07.9	-0.5
BQSF3				eS	Sb	19 37 16.4	+0.5
GUAL3	Gualaca, Chiri	0.56	75	eP	Pb	19 37 07.9	-0.8
PSOM3	Paja de Sombre	0.60	60	⇓eP	Pb	19 37 08.4	-0.9
EDP2	Potrero Grande	0.71	333	eP	Pb	19 37 11.0	-0.2
PBNVO	Pueblo Nuevo,	0.82	52	eP	Pb	19 37 11.8	-1.3
PANP	Palmar Norte	0.83	313	eP	Pb	19 37 12.4	-1.0
RBALA	Bur	0.84	54	eP	Pb	19 37 12.3	-1.2
BURE	Buenos Aires	0.92	328	eP	Pb	19 37 13.5	-1.4
DRK0	Durika	0.96	336	eP	Pb	19 37 14.2	-1.4
DRK0	Durika	0.96	336	P	Pb	19 37 14.2	-1.4
DRK0	Durika	0.96	336	S	Sb	19 37 27.4	-0.6
DRK0	Durika	0.96	336	eP	Pb	19 37 14.2	-1.4
EDPE	Pejibaye, P	1.05	317	eP	Pb	19 37 15.8	-1.3
OCHAL	Ojochal	1.06	312	S	Sb	19 37 29.4	-1.4
OCHAL	Ojochal	1.06	312	P	Pb	19 37 15.8	-1.4
PDCAN	Manzana , Fuen	1.14	95	eP	Pn	19 37 15.8	-2.7
SAJE	San Jernim	1.16	326	eP	Pn	19 37 17.2	-1.7
BRIBI	Bribri	1.23	1	eP	Pb	19 37 20.1	0.0
PIEC	Cerro El Cedra	1.65	318	eP	Pn	19 37 25.0	-0.7
MESA3	La Mesa, Verag	1.66	98	eP	Pn	19 37 24.4	-1.2
MESA3				eS	Sn	19 37 46.2	-0.2
GMAL	Guarumal, Vera	1.71	111	eP	Pn	19 37 23.7	-2.6
GMAL	Guarumal, Vera	1.71	111	eP	Pn	19 37 24.2	-2.1
RSUS3	Rio de Jesus,	1.72	103	eP	Pn	19 37 25.5	-0.8
RSUS3				eS	Sn	19 37 48.3	+0.4
VINA	Juan Vinas	1.75	329	eP	Pn	19 37 26.8	-0.1
PISJ	San Jernim	1.77	315	eP	Pn	19 37 27.9	+0.7
LCR2	La Lucha 2	1.77	320	eP	Pn	19 37 26.9	-0.4
LCR2	La Lucha 2	1.77	320	S	Sn	19 37 47.2	-2.3
LCR2	La Lucha 2	1.77	320	P	Pn	19 37 25.8	-1.5
ABE2	San Pablo	1.77	318	eP	Pn	19 37 27.6	+0.3
VTCV	VTCV, Calle Va	1.81	331	eP	Pn	19 37 27.6	-0.2
PICV	PH. Pirrs	1.82	313	eP	Pn	19 37 27.7	-0.1
ABRB	Las Abras (San	1.83	332	⇑eP	Pn	19 37 28.5	+0.4
RAFA	San Farael, Vo	1.83	329	eP	Pn	19 37 28.0	-0.3

PAR1A	Puntarenas Pro	1.84	311	eP	Pn	19 37 28.1	0.0
CVTV	Tajo	1.84	331	eP	Pn	19 37 28.3	-0.1
CVTQ	Turrialba Volc	1.85	331	eP	Pn	19 37 28.5	-0.1
VTLA	Turrialba Volc	1.85	330	eP	Pn	19 37 28.5	-0.1
VTR0	Volcan Turrial	1.86	331	eP	Pn	19 37 28.7	0.0
RVLA	Villa Bonita	1.86	337	eP	Pn	19 37 28.8	+0.4
VICA	Volcano Irazu	1.87	328	eP	Pn	19 37 28.7	-0.2
ACOS	Acosta	1.91	317	eP	Pn	19 37 28.0	-1.3
CALO3	Calobre, Verag	1.98	92	i P	Pn	19 37 30.0	-0.1
HDC	Heredia	2.04	322	eP	Pn	19 37 26.4	-4.5
BELE	Belen	2.06	320	eP	Pb	19 37 33.4	-1.0
VBV1	V. Barva	2.12	324	eP	Pn	19 37 33.1	+0.9
CACAO	El Cacao, Vera	2.22	118	eP	Pn	19 37 32.2	-1.1
TRT2	Tortugero	2.33	338	P	Pn	19 37 35.2	+0.3
TRT2	Tortugero	2.33	338	S	Sn	19 38 02.8	-0.2
TRT1	Tortuguero	2.36	339	eP	Pn	19 37 35.3	+0.1
AZU	Azuero	2.61	103	eP	Pn	19 37 39.3	+0.6
AZU	Azuero	2.61	103	eP	Pn	19 37 39.0	+0.3
SOCE	Pocosol	2.65	319	eP	Pn	19 37 42.0	+2.8
SOCE	Pocosol	2.65	319	S	Sn	19 38 09.9	-1.0
SOCE	Pocosol	2.65	319	P	Pn	19 37 39.2	-0.1
ARE1	Arenal 1	2.77	318	eP	Pn	19 37 43.6	+2.7
VARE2	V. Arenal	2.77	318	eP	Pn	19 37 43.7	+2.7
JTS	Las Juntas de	2.81	313	eP	Pn	19 37 42.4	+0.9
JTS	Las Juntas de	2.81	313	eP	Pn	19 37 42.5	+0.9
QUEB	Quebradon, Cot	3.01	318	eP	Pn	19 37 47.5	+3.3
INDI	Punta indio, G	3.01	300	P	Pn	19 37 43.5	-0.6
INDI	Punta indio, G	3.01	300	S	Sn	19 38 17.7	-2.0
INVE	Universidad In	3.02	314	eP	Pn	19 37 46.5	+2.1
CMARA	Lajas Hojancha	3.02	303	P	Pn	19 37 43.4	-1.0
BCIP	Isla Barro Col	3.07	75	eP	Pb	19 37 51.5	-0.1
LAPC	Finca la Perla	3.48	313	eP	Pn	19 37 53.2	+2.5
BLUN	Bluefields	3.71	346	P	Pn	19 37 53.6	-0.3

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*SKHL **26** 19:38:51.8±0.3, 42°.60N×148°.30E, h38^{km}±3^{km}, mb3.8/2*

JMA 26 19:38:50.8±0.5**, 45˚N**±4˚×**14˚7E**±˚**, h164**^{km}**, MV2.3**/13**,**
NEAR ETOROFU ISLAND, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHO	Shikotan	0.82	204	eP	Pn	19 39 17.9	+2.3
SHO				AMB	AMB	19 39 18.6	
	10.0nm,0.2s						
SHO				eS	Sn	19 39 37.3	+2.8
SHO				A	A	19 39 39.4	
	20nm,0.3s						
SHO				A	A	19 39 39.4	
	20nm,0.3s						
YUK	Yuzh-Kuril'sk	1.18	241	eP	Pn	19 39 27.5	+9.1
YUK				AMB	AMB	19 39 32.4	
	20nm,0.3s						
YUK				eS	Sn	19 39 52.0	+12
YUK				A	A	19 39 54.2	
	60nm,0.4s						
YUK				A	A	19 39 54.2	
	50nm,0.4s						
NEM2	Nemuro 2	1.68	222	eP	Pn	19 39 23.8	+0.5
NEM2				eS	Sn	19 39 47.5	-0.8
NMR	Nemuro--Hokkai	1.69	223	eP	Pn	19 39 23.6	+0.3
NMR				eS	Sn	19 39 47.7	-0.7
JNSB	Nemuroshibetsu	1.85	244	eS	Sn	19 39 53.1	+1.6
JKHN	Kushirohamanak	2.18	226	eS	Sn	19 39 59.5	+1.3
AKK	Akkeshi	2.39	229	eS	Sn	19 40 01.2	-1.4
JAK	Akkeshi	2.48	230	eP	Pn	19 39 32.8	+0.4
JAK				eS	Sn	19 40 04.4	-0.2
JAR	Ashorobuto	2.87	244	eS	Sn	19 40 14.8	+1.8
JOB	Onbets	3.04	237	eP	Pn	19 39 39.9	+0.7
JOB				eS	Sn	19 40 16.5	-0.2
JCH	Churui	3.49	236	eP	Pn	19 39 45.3	+0.5
JCH				eS	Sn	19 40 24.9	-2.0
MYR	Moyori	3.73	233	eP	Pn	19 39 48.3	+0.3
MYR				eS	Sn	19 40 28.9	-3.6

IDC 26 19:44:49.6±2.4**, 15°.38S**×**173°.57W, h0**^{km}**, mb3.9**/3**,**
mbtmp3.9/3**, Error ellipse: s-maj=66.4km s-min=50.7km**
az=22.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	49.69	257	P	P	19 53 43.8	-0.1
	0.6nm,0.6s,baz=91,slow=6.6,SNR=17						
	0.6nm,0.6s						
ASAR	Alice Springs	49.96	252	P	P	19 53 45.6	-0.3
	2.0nm,0.7s,baz=88,slow=8.2,SNR=26						
	2.0nm,0.7s						
QSPA	South Pole Qui	74.66	180	P	P	19 56 30.9	0.0
	1.3nm,1.0s,baz=68,slow=3.2,SNR=3.2						
	1.3nm,1.0s						
BRTR	Keskin Array B	146.04	321	PKPbc	PKPdf	20 04 31.3	+0.1
	0.5nm,0.7s,baz=58,slow=3.7,SNR=4.3						

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*ISK **26** 19:53:08.9, 38°.46N×26°.36E, h12^{km}, ML2.2/12*
*THE **26** 19:53:09.6, 38˚N±2˚×2˚6E±˚, h3^{km}±7^{km}, M2.5/5, MLh2.5/5*
*AFAD **26** 19:53:09.1, 38°.44N×26°.34E, h7^{km}±4^{km}, ML2.1*
*ATH **26** 19:53:09.5, 38°.45N×26°.33E, h16^{km}±3^{km}, ML2.5/3,*
Manual Solution by M.Kolligri First location: 2019/06/26
19:54:49, This location: 2019/06/26 21:02:59 ML
Amplitudes are expressed in micrometers, All distances
are expressed in degrees Latitude uncertainty: 1 km;
Longitude uncertainty: 1 km

ISC 26 19:53:09.4±0.8**, 38°.45N**±0°.02×**26°.35E**±0°.02**, h15**^{km}±6^{km}**,**
n37, σ0^{s}.56/62**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CESE	eme	0.13	198	Pg	Pg	19 53 12.7	-0.3
CESE				Sg	Sg	19 53 14.9	-0.5
EAG2	Marmaro, Chios	0.21	295	P	Pg	19 53 14.3	+0.1
EAG2				S	Sg	19 53 17.4	+0.1
KARB	zmir-Karabur	0.21	13	P	Pg	19 53 14.3	0.0
URLA	Izmir	0.21	116	Pg	Pg	19 53 14.2	-0.1
URLA				Sg	Sg	19 53 17.6	0.0
URLA	Izmir	0.21	116	P	Pg	19 53 13.9	-0.3
URLA				S	Sg	19 53 17.3	-0.3
URLA				i IAML		19 53 18.0	
	comp=E,294nm,0.4s						
CHOS	Chios island	0.24	254	Pg	Pg	19 53 14.9	+0.2
CHOS				Sg	Sg	19 53 18.5	+0.1
CHOS	Chios island	0.24	254	P	Pg	19 53 14.7	0.0
CHOS				S	Sg	19 53 18.5	+0.1
CHOS	Chios island	0.24	254	P	Pg	19 53 15.0	+0.2
CHOS				S	Sg	19 53 18.1	-0.2
ZEYE	Izmir, Urla-Ze	0.25	151	P	Pg	19 53 14.3	-0.4
ZEYE				S	Sg	19 53 18.1	-0.3
ZEYE				i IAML		19 53 19.0	
	comp=N,537nm,0.4s						
ZEYE				i IAML		19 53 19.0	
	comp=E,565nm,0.2s						
FOCM	Foa	0.40	49	Pg	Pg	19 53 17.4	0.0
FOCM				Sg	Sg	19 53 23.3	+0.5
BLCB	Balcova	0.55	97	Pg	Pg	19 53 19.9	-0.3
BLCB	Balcova	0.55	97	P	Pg	19 53 19.7	-0.6
DGB	zmir	0.58	134	P	Pg	19 53 20.0	-0.8
GMLD	Gumuldur	0.58	130	Pg	Pg	19 53 20.7	-0.2
GMLD				Sg	Sg	19 53 28.6	0.0
IZMD	zmir-Dikili-	0.70	40	P	Pg	19 53 22.4	-0.6
DKL	Dikili	0.75	35	Pg	Pg	19 53 23.9	-0.2
DKL	Dikili	0.75	35	P	Pg	19 53 23.7	-0.4
DKL				S	Sb	19 53 34.4	+0.1
ZEDA	zmir-Bergama	0.77	48	P	Pb	19 53 24.7	+0.3
ZEDA				S	Sb	19 53 35.6	+0.9
ZEDA				i IAML		19 53 37.0	
	comp=E,60nm,0.4s						
PRK	Paraskevi	0.79	356	P	Pg	19 53 24.5	-0.3
PRK				S	Sb	19 53 36.3	+0.8
SMG	Samos	0.84	153	P	Pg	19 53 25.0	-0.6
SMG				S	Sb	19 53 37.6	+0.9
SMG	Samos	0.84	153	P	Pg	19 53 25.0	-0.6
SMG				S	Sb	19 53 36.9	+0.2
SIGR	SIGRI	0.85	333	Pg	Pg	19 53 25.9	0.0
SIGR				Sg	Sb	19 53 37.9	+0.9
SIGR	SIGRI	0.85	333	P	Pg	19 53 25.6	-0.3
SIGR				S	Sb	19 53 38.0	+0.9
SIGR	SIGRI	0.85	333	P	Pg	19 53 25.7	-0.1
SIGR				S	Sb	19 53 37.5	+0.5
AYVA	Ayvalik	0.89	17	P	Pg	19 53 25.5	-1.2
AYVA				S	Sg	19 53 38.5	+0.1
GCAM	G?zelcaml?	1.03	137	Pg	Pb	19 53 29.1	+0.2
GCAM				Sg	Sn	19 53 43.7	+0.3
GCAM	G?zelcaml?	1.03	137	P	Pn	19 53 29.5	+0.2
GCAM				S	Sb	19 53 42.5	+0.4
GCAM				i IAML		19 53 44.0	
	comp=N,104nm,0.5s						
BUHA	Balikesir, Bur	1.19	28	P	Pn	19 53 30.9	-0.7
BUHA				S	Sb	19 53 45.9	-1.0
AKHS	Akhisar	1.22	69	P	Pg	19 53 33.2	+0.3
BAYC	CANAKKALE_Bayr	1.29	7	P	Pn	19 53 31.4	-1.6
BAYC				S	Sb	19 53 49.2	-0.7
IZMR	zmir-demi	1.30	104	P	Pn	19 53 33.1	+0.1
IZMR				S	Sb	19 53 50.0	0.0
AYDB	Zeytinkoy-Aydi	1.32	112	Pn	Pn	19 53 33.2	-0.2
ODEM	Odemis-Izmir	1.37	97	Pn	Pn	19 53 33.8	-0.2
STEP	BALIKESIR_Sava	1.41	49	P	Pn	19 53 34.8	+0.3
GORD	Gordes-Manisa	1.50	72	Pn	Pn	19 53 36.4	+0.5
GORD				Sn	Sb	19 53 56.3	+0.4
APE	Apeiranthos	1.53	205	P	Pn	19 53 34.6	-1.6
BODT	Bodrum	1.58	151	Pn	Pn	19 53 37.9	+0.9

IDC 26 19:55:33.8±3.1**, 29°.76S**×**178°.17W, h0**^{km}**, mb3.5**/3**,**
mbtmp3.5/3**, Error ellipse: s-maj=90.6km s-min=40.3km**
az=40.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.00	266	P	P	20 03 33.9	-1.3
	0.4nm,0.8s,baz=114,slow=7.9,SNR=2.1						
	0.4nm,0.8s						
WRA	Warramunga Arr	43.93	272	P	P	20 03 43.6	+0.9
	0.3nm,0.4s,baz=111,slow=7.9,SNR=4.5						
	0.3nm,0.4s						
QSPA	South Pole Qui	60.35	180	P	P	20 05 44.4	0.0
	0.4nm,0.5s,baz=90,slow=2.0,SNR=5.6						
	0.4nm,0.5s						
FINES	FINESS Array B	144.50	340	PKP	PKPbc	20 15 10.6	+0.7
	0.9nm,0.9s,baz=40,slow=3.9,SNR=4.4						

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*SNET **26** 19:56:56.7±1.1, 13°.11N×89°.63W, h33^{km}, ML3.6*
*CATAC **26** 19:56:56.7±0.5, 13˚N±3˚×9˚0W±˚, h23^{km}±3^{km}, M3.7/20,*
MLv3.7/20, Error ellipse: s-maj=6.4km s-min=3.9km
az=17.9, confirmed
*GCG **26** 19:56:58.1±1.4, 13°.21N×89°.67W, h35^{km}±65^{km}, MD3.9,*
ML3.6, MW3.2

ISC 26 19:56:58.6±1.5**, 13°.20N**±0°.06×**89°.55W**±0°.04**, h25**^{km}±13^{km}**,**
n67, σ1^{s}.00/81**, 1D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.36	38	eP	Pn	19 57 07.6	-0.7
LALI				eS	Sn	19 57 14.8	+0.2
LALI	Alcalda de L	0.36	38	i P	Pn	19 57 07.5	-0.7
LALI				i S	Sn	19 57 14.8	+0.2
LALI				IAML		19 57 16.1	
	comp=E,1µm,0.5s						
LALI	Alcalda de L	0.36	38	P	Pn	19 57 07.6	-0.7
JAYA	Jayaque - finc	0.46	12	eP	Pn	19 57 08.6	-1.2
JAYA				eS	Sn	19 57 17.7	+0.4
JAYA	Jayaque - finc	0.46	12	i P	Pn	19 57 08.6	-1.2
JAYA				i S	Sn	19 57 16.8	-0.5
JAYA	Jayaque - finc	0.46	12	P	Pn	19 57 08.7	-1.1
ITCA	Escuela Especi	0.54	29	P	Pn	19 57 09.7	-1.1
ITCA	Escuela Especi	0.54	29	S	Sn	19 57 19.7	+0.5
PANCS	Alcalda de	0.54	41	eP	Pb	19 57 09.8	+0.2
PANCS				eS	Sn	19 57 19.5	+0.3
PANCS	Alcalda de	0.54	41	P	Pb	19 57 09.6	0.0
PMON	Piamonte	0.55	24	eP	Pn	19 57 10.0	-1.1
PMON	Piamonte	0.55	24	P	Pn	19 57 10.0	-1.1
PMON	Piamonte	0.55	24	S	Sn	19 57 19.9	+0.3
LOMA	Loma Larga	0.57	40	eP	Pn	19 57 10.4	-1.0
LOMA	Loma Larga	0.57	40	S	Sn	19 57 20.7	+0.7
LOMA	Loma Larga	0.57	40	P	Pn	19 57 10.3	-1.0
BOQS	Boqueron	0.59	26	eP	Pn	19 57 10.7	-0.9
UEES	Universidad Ev	0.59	30	P	Pn	19 57 10.6	-1.0
UEES	Universidad Ev	0.59	30	S	Sn	19 57 21.1	+0.6
UTEC	Universidad Te	0.60	34	P	Pn	19 57 10.8	-0.8
UTEC	Universidad Te	0.60	34	S	Sn	19 57 21.1	+0.5
CEDA	San Andres	0.61	14	S	Sn	19 57 21.0	+0.1
CEDA	San Andres	0.61	14	P	Pn	19 57 10.9	-0.9
CEVE	Cerro Verde	0.62	353	eP	Pb	19 57 10.9	-0.2
CEVE				eS	Sn	19 57 21.9	+0.4
CEVE	Cerro Verde	0.62	353	P	Pb	19 57 10.8	-0.3
IGN	Direccin Gen	0.63	36	P	Pb	19 57 11.0	0.0
IGN	Direccin Gen	0.63	36	S	Sn	19 57 22.0	+0.7
LFRS	El Faro	0.63	49	eP	Pb	19 57 11.2	+0.1
UDBS	Universidad Do	0.64	37	S	Sn	19 57 22.2	+0.7
UDBS	Universidad Do	0.64	37	P	Pn	19 57 11.2	-0.9
LFU	La Fuente	0.69	38	eP	Pn	19 57 12.2	-0.7
NUBE	Las Nubes	0.73	342	eP	Pb	19 57 11.8	-1.0
NUBE				eS	Sb	19 57 22.7	+0.2
NUBE	Las Nubes	0.73	342	i P	Pb	19 57 11.8	-1.0
NUBE				i S	Sb	19 57 22.5	+0.1
NUBE	Las Nubes	0.73	342	P	Pb	19 57 11.8	-1.0
COEG	Centro de Oper	0.77	57	⇓iP	Pb	19 57 13.0	-0.5
COEG				eS	Sn	19 57 25.0	+0.1
COEG	Centro de Oper	0.77	57	P	Pb	19 57 13.0	-0.5
COEG	Centro de Oper	0.77	57	S	Sn	19 57 25.1	+0.2
UNIC	Universidad Ca	0.77	360	S	Sn	19 57 25.0	+0.1
UNIC	Universidad Ca	0.77	360	P	Pb	19 57 13.2	-0.3
FAME	Alcaldia de Sa	0.78	325	P	Pb	19 57 11.9	-1.7
PAVA	Las Pavas	0.78	49	eP	Pn	19 57 13.8	-0.4
PAVA				eS	Sn	19 57 26.4	+1.3
PAVA	Las Pavas	0.78	49	P	Pn	19 57 13.7	-0.5
TECO	Alcaldia de Te	0.82	66	S	Sn	19 57 25.9	-0.1
TECO	Alcaldia de Te	0.82	66	P	Pb	19 57 13.2	-1.0
LOAL	Lomas de Alarc	0.82	344	S	Sb	19 57 25.1	+0.1
LOAL	Lomas de Alarc	0.82	344	P	Pb	19 57 13.6	-0.7
SLOZ	Alcaldia de Sa	0.85	344	P	Pb	19 57 13.7	-1.0
SLOZ	Alcaldia de Sa	0.85	344	S	Sn	19 57 26.9	+0.1
UESV	Universidad de	0.86	60	S	Sn	19 57 27.3	+0.4
UESV	Universidad de	0.86	60	P	Pb	19 57 14.2	-0.6
SCLA	Alcaldia de Sa	0.94	58	P	Pn	19 57 15.9	-0.4
SCLA	Alcaldia de Sa	0.94	58	S	Sn	19 57 30.2	+1.2
LLGN	La Laguna	1.12	32	S	Sn	19 57 34.8	+1.3
LLGN	La Laguna	1.12	32	P	Pn	19 57 18.1	-0.7
MTO3	Montecristo	1.20	9	i P	Pn	19 57 18.9	-1.2
MTO3	Montecristo	1.20	9	P	Pn	19 57 19.4	-0.7
MTO3	Montecristo	1.20	9	S	Sb	19 57 35.8	-0.3
PACA	Pacayal	1.22	77	eP	Pn	19 57 19.9	-0.4
PACA				eS	Sn	19 57 36.7	+0.7
PACA	Pacayal	1.22	77	P	Pn	19 57 20.1	-0.2
BLLM	Bellamira	1.30	79	eP	Pn	19 57 20.5	-0.7
FG16	Alotenango, Sa	1.42	319	eP	Pb	19 57 26.4	+1.9
	comp=Z,350nm,0.3s						
FG16				i S	Sb	19 57 47.8	+5.5
FG16				IAML		19 57 57.7	
	comp=N,3µm,0.2s						
LCND	La Caada	1.62	86	eP	Pn	19 57 24.7	-0.9
CNCH	Conchagua	1.67	87	eP	Pn	19 57 25.4	-1.1
SARH	Santa Rosa de	1.74	26	i P	Pn	19 57 27.3	-0.1
MARCA	Marcala la Paz	1.75	57	i P	Pn	19 57 26.8	-0.8
STG0	El Palmar, Qui	2.12	305	eP	Pb	19 57 35.4	-1.2
STG0				i S	Sb	19 58 03.3	+0.7
STG0				IAML		19 58 08.3	
	comp=E,1µm,0.2s						
STG8	El Palmar, Qui	2.15	305	eP	Pb	19 57 36.3	-0.7
STG8				i S	Sb	19 58 03.8	+0.6
STG8				IAML		19 58 08.6	
	comp=N,283nm,0.1s						

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*MEX **26** 19:59:57.4±0.5, 13°.73N×92°.33W, h16^{km}±999^{km}, MD3.9*
*GCG **26** 19:59:59.7±0.3, 14°.34N×92°.00W, h97^{km}±74^{km}, MD3.9,*
ML3.4

ISC 26 19:59:54.4±2.9**, 13°.7N**±0°.1×**92°.25W**±0°.08**, h28**^{km}±16^{km}**, n9,**
σ1^{s}.25/16**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	Retalhuleu	0.96	34	eP	Pb	20 00 13.4	+0.9
RTAL				eS	Sn	20 00 24.4	-0.3
STG0	El Palmar, Qui	1.12	52	eP	Pb	20 00 16.2	+0.9
STG0				IAML		20 00 40.1	
	comp=E,848nm,0.2s						
STG8	El Palmar, Qui	1.13	50	eP	Pb	20 00 16.6	+1.1
STG8				i S	Sb	20 00 29.8	-0.1
STG8				IAML		20 00 35.4	
	comp=N,564nm,0.2s						
PATR	El Naranjo	1.38	1	eP	Pn	20 00 18.3	+0.3
PATR				eS	Sn	20 00 35.0	-0.5
PAVE	Pavencul	1.46	3	eP	Pn	20 00 19.8	+0.7
PAVE				eS	Sn	20 00 37.5	+0.1
FG16	Alotenango, Sa	1.77	72	i P	Pn	20 00 22.0	-1.4
FG16				IAML		20 00 47.3	
	comp=N,2µm,0.3s						
PCIG		2.18	335	i Pg	Pn	20 00 29.9	+1.1
PCIG				eS	Sn	20 00 54.5	-0.3
CCIG	Comitan	2.54	2	eP	Pb	20 00 38.4	-1.1
CCIG				eS	Sb	20 01 09.2	-1.3
TGIG		3.15	345	eP	Pb	20 00 48.5	-1.3
TGIG				eS	Sn	20 01 21.6	+2.7

IDC 26 20:19:54.8±3.4**, 31°.16S**×**177°.26W, h0**^{km}**, mb3.4**/2**,**
mbtmp3.5/3**, ML3.3**/1**, Error ellipse: s-maj=80.9km**
s-min=38.6km az=115.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	8.46	212	Pn	Pn	20 21 59.3	+0.8
	0.4nm,0.3s,baz=339,slow=12,SNR=1.1						
URZ				Sn	Sn	20 23 33.1	-1.6
	0.8nm,0.3s,baz=121,slow=23,SNR=2.7						
	2.3nm,0.4s						
ASAR	Alice Springs	43.70	267	P	P	20 28 02.5	+0.7
	0.6nm,0.9s,baz=109,slow=8.4,SNR=2.7						
	0.6nm,0.9s						
WRA	Warramunga Arr	44.76	273	P	P	20 28 09.7	-0.6
	0.5nm,0.8s,baz=111,slow=8.1,SNR=6.6						
	0.5nm,0.8s						
FINES	FINESS Array B	146.08	340	PKPbc	PKPdf	20 39 34.9	-0.2
	1.1nm,0.9s,baz=64,slow=4.8,SNR=3.6						

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*IDC **26** 20:26:22.1±1.9, 24°.26S×179°.90E, h522^{km}±20^{km},*
mb3.3/11, mbtmp4.2/14, Error ellipse: s-maj=18.2km
s-min=14.5km az=114.0
*NEIC **26** 20:26:22.3±1.3, 24°.4S±0°.1×180°.0E±0°.2, h522^{km}±8^{km},*
mb4.4/22, Error ellipse: s-maj=20.6km s-min=17.1km
az=95.0

ISC 26 20:26:21.3±0.5**, 24°.31S**±0°.08×**179°.93E**±0°.08**, h517**^{km}**, n55,**
σ1^{s}.06/57**, mb4.2**/24**, 4C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	6.78	345		P	20 28 05.9	-0.3
MSVF	Nonsavu	6.78	345	P	P	20 28 05.5	-0.6
	15nm,0.5s,baz=170,slow=12,SNR=10						
DZM	Mont Dzumac	12.60	277	P	P	20 29 08.5	+2.2
	15nm,0.7s,baz=98,slow=15,SNR=11						
URZ	Urewera	14.11	189	P	P	20 29 22.1	+0.3
	5.5nm,0.6s,baz=52,slow=8.1,SNR=2.7						
URZ				S	S	20 31 49.5	-1.1
	9.0nm,0.8s,baz=34,slow=11,SNR=8.8						
QRZ	Quartz Range	17.59	199	P	P	20 29 56.8	-0.1
RAR	Rarotonga	18.97	85	S	S	20 33 14.0	-1.7
	14nm,0.7s,baz=309,slow=19,SNR=2.2						
EIDS	Eidsvold	26.18	262	P	P	20 31 15.1	+0.7
EIDS				IAmb	IAmb	20 31 23.5	
	comp=Z,24nm,1.4s						
CTAO	Charters Tower	31.42	271	P	P	20 32 01.1	+1.1
STKA	Stephens Creek	34.51	249	P	P	20 32 26.4	+0.3
STKA	Stephens Creek	34.51	249	P	P	20 32 26.6	+0.5
	comp=Z,1.9nm,0.5s,baz=95,slow=11,SNR=11						
	comp=Z,1.9nm,0.5s						
COEN	Coen	36.12	280	P	P	20 32 40.4	+0.7
COEN				IAmb	IAmb	20 32 49.6	
	comp=Z,15nm,1.2s						
BBOO	Buckleboo	39.23	247	P	P	20 33 04.7	-0.2
BBOO				IAmb	IAmb	20 33 31.9	
	comp=Z,30nm,1.4s						
AS31	Alice Springs	41.91	261	P	P	20 33 26.4	-0.1
ASAR	Alice Springs	41.91	261	P	P	20 33 26.4	-0.2
	comp=Z,2.0nm,0.5s,baz=94,slow=6.7,SNR=40						
ASAR				S	S	20 39 05.3	-2.0
	comp=Z,0.3nm,0.4s,baz=198,slow=24,SNR=2.8						
	comp=Z,2.0nm,0.5s						
WR8	Warramunga Arr	42.17	267	P	P	20 33 27.9	-0.7
WB0	Warramunga Arr	42.31	267	P	P	20 33 29.4	-0.3
WB0				IAmb	IAmb	20 33 30.0	
	comp=Z,7.6nm,0.6s						
WRA	Warramunga Arr	42.32	267	P	P	20 33 29.4	-0.3
WRA	Warramunga Arr	42.32	267	P	P	20 33 29.5	-0.3
	comp=Z,5.9nm,0.5s,baz=98,slow=8.3,SNR=138						
WRA				S	S	20 39 09.8	-3.5
	comp=Z,0.5nm,0.9s,baz=111,slow=14,SNR=4.7						
	comp=Z,5.9nm,0.5s						
FORT	Forrest	46.11	250	P	P	20 33 58.3	-0.7
FORT				IAmb	IAmb	20 34 06.5	
	comp=Z,11nm,1.0s						
MTN	Manton Dam	47.42	275	P	P	20 34 07.5	-1.6
MTN				IAmb	IAmb	20 34 17.1	
	comp=Z,20nm,1.2s						
KNRA	Kununurra	48.62	270	P	P	20 34 18.3	+0.3
KNRA				IAmb	IAmb	20 34 19.0	
	comp=Z,10nm,0.9s						
FAKI	Fak Fak	50.64	287	P	P	20 34 33.1	+0.1
FITZ	Fitzroy Crossi	50.74	266	P	P	20 34 33.8	+0.3
VNDA	Vanda	53.96	185	P	P	20 34 57.4	+1.6
	comp=Z,0.5nm,0.6s,baz=24,slow=5.2,SNR=2.2						
	comp=Z,0.5nm,0.6s						
QSPA	South Pole Qui	65.77	180	P	P	20 36 15.2	+0.5
QSPA				IAmb	IAmb	20 36 17.8	
	comp=Z,5.0nm,0.8s						
QSPA	South Pole Qui	65.77	180	P	P	20 36 15.7	+1.0
	comp=Z,3.5nm,0.6s,baz=26,slow=0.5,SNR=26						
	comp=Z,3.5nm,0.6s						
ADK	Adak	75.92	2	P	P	20 37 14.1	-0.3
ADK				IAmb	IAmb	20 37 33.1	
	comp=Z,24nm,1.4s						
BELA	Belgrano 2	76.03	173	P	P	20 37 14.4	-0.3
PETK	Petropavlovsk-	79.48	347	P	P	20 37 34.5	+0.9
	comp=Z,3.3nm,0.9s,baz=157,slow=5.6,SNR=2.1						
	comp=Z,3.3nm,0.9s						
TROLL	Troll, Antarti	83.92	181	⇑P	P	20 37 56.5	+0.1
	comp=Z,176nm,0.3s						
SNAA	Sanae	84.26	179	⇑P	P	20 37 57.6	-0.4
	comp=Z,18nm,0.4s						
SNAA	Sanae	84.26	179	P	P	20 37 57.4	-0.6
	comp=Z,0.7nm,0.5s,baz=211,slow=8.7,SNR=27						
	comp=Z,0.7nm,0.5s						
VNA3	Neumayer Olymp	84.47	177	⇑P	P	20 37 58.5	-0.4
	comp=Z,1.6nm,0.3s						
VNA2	Neumayer--Watz	84.88	178	⇑P	P	20 38 00.3	-0.6
	comp=Z,3.0nm,0.5s,baz=174,slow=4.4						
NVAR	Mina Array Bea	85.09	44	P	P	20 38 02.6	-0.1
	comp=Z,0.5nm,0.5s,baz=240,slow=4.2,SNR=3.8						
	comp=Z,0.5nm,0.5s						
G08A	Pilot Rock	88.79	38	P	P	20 38 20.6	+0.8
G08A				IAmb	IAmb	20 38 21.7	
	comp=Z,5.5nm,1.2s						
A04D	Lummi Island	88.91	34	P	P	20 38 20.6	+0.5
TX31	Lajitas Ar. Si	90.70	58	P	P	20 38 29.7	+0.6
TX31				IAmb	IAmb	20 38 31.5	
	comp=Z,3.7nm,1.1s						
TXAR	Lajitas Array	90.70	58	P	P	20 38 29.4	+0.3
TXAR	Lajitas Array	90.70	58	P	P	20 38 30.2	+1.1
	comp=Z,1.8nm,0.7s,baz=210,slow=6.5,SNR=18						
	comp=Z,1.8nm,0.7s						
BSUT	Blindstream Ca	91.11	45	P	P	20 38 31.3	+0.3
BSUT				IAmb	IAmb	20 38 32.3	
	comp=Z,2.8nm,0.7s						
ILAR	Eielson Array	92.45	14	P	P	20 38 37.5	+1.3
	comp=Z,0.5nm,0.9s,baz=211,slow=4.6,SNR=5.5						
	comp=Z,0.5nm,0.9s						
PDAR	Pinedale Array	93.03	44	P	P	20 38 38.6	-1.0
	comp=Z,0.2nm,0.4s,baz=233,slow=0.7,SNR=4.0						
	comp=Z,0.2nm,0.4s						
KURBB	Kurchatov Arra	115.50	316	PKP	PKPdf	20 44 02.9	-1.2
	comp=Z,0.3nm,0.5s,baz=115,slow=1.9,SNR=4.6						
BVAR	Borovoye Array	120.71	319	PKP	PKPdf	20 44 13.5	-0.5
	comp=Z,0.9nm,0.6s,baz=60,slow=3.6,SNR=6.3						
ARCES	ARCESS Array B	132.28	348	PKP	PKPdf	20 44 33.7	-2.0
	comp=Z,3.9nm,0.9s,baz=26,slow=1.8,SNR=5.8						
FINES	FINESS Array B	138.82	341	PKhKP	PKPpre	20 44 38.7	
	comp=Z,0.6nm,0.6s,baz=35,slow=7.0,SNR=5.4						
FINES				PKP	PKPdf	20 44 46.8	-1.1
	comp=Z,0.8nm,0.8s,baz=72,slow=6.6,SNR=4.1						
HFS	Hagfors	142.94	349	PKP	PKPdf	20 44 52.4	-3.0
	comp=Z,3.7nm,0.4s,baz=64,slow=3.4,SNR=45						
PABE	Paberze	144.17	337		PKPbc	20 44 56.8	-0.3
AKASG	Malin Array Be	145.28	327	PKPbc	PKPdf	20 45 00.3	+0.6
	comp=Z,1.3nm,0.5s,baz=46,slow=3.7,SNR=11						
BRTR	Keskin Array B	147.78	307	PKPbc	PKPbc	20 45 07.8	-0.3
	comp=Z,0.7nm,0.7s,baz=356,slow=5.3,SNR=4.9						

MMAI	Mount Meron Ar	147.81	294	PKPbc	PKPbc	20 45 09.1	+0.7
	comp=Z,1.4nm,0.5s,baz=72,slow=5.4,SNR=8.4						
EKA	Eskdalemuir Ar	148.93	3	PKPbc	PKPbc	20 45 09.5	-0.8
	comp=Z,0.7nm,0.4s,baz=348,slow=2.8,SNR=13						
CLL	Collm	151.23	343		PKPbc	20 45 15.6	-0.2
CLL	Collm	151.23	343	*i* PKPbc	PKPbc	20 45 15.8	0.0
	comp=Z,6.0nm,0.7s						

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*NEIC **26** 20:27:24.1±1.3, 38.°14N±0.°05×72.°93E±0.°08, h119^{km}±11^{km}, mb4.4/6, Error ellipse: s-maj=10.5km s-min=5.8km az=60.0*

*IDC **26** 20:27:25.9±7.2, 38.°29N×72.°86E, h128^{km}±51^{km}, mb3.6/7, mbtmp4.2/12, Error ellipse: s-maj=59.8km s-min=24.8km az=8.0*

*NNC **26** 20:27:27.5±2.7, 38.°50N×72.°76E, h180^{km}±32^{km}, mb3.5, mpv4.3, Error ellipse: s-maj=28.6km s-min=14.2km az=12.0*

ISC 26 20:27:22.3±0.6**, 38.°06N**±0.°05×**72.°87E**±0.°06**, h127^{km}, n64,** σ**2.ˢ08**/78**, mb3.8**/6**, 5C-6D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.64	330		Pn	20 27 53.3	+1.2
DRK				Sn	Sn	20 28 11.6	-3.2
BTK	Batken	2.55	322		Pn	20 28 04.7	+1.7
BTK				Sn	Sn	20 28 34.3	-0.1
SIMJ	Simiganj	3.09	282		Pn	20 28 10.5	+0.5
SIMJ				Sn	Sn	20 28 45.5	-1.4
ARSB	Arslanbob	3.26	2		Pn	20 28 12.6	+0.3
ARSB				Sn	Sn	20 28 47.6	-3.3
AML	Almayashu	4.11	9	P	Pn	20 28 24.7	+0.9
	SNR=314						
NRN	Naryn	4.14	35		Pn	20 28 24.1	0.0
UCH	Uchtor	4.35	16	P	Pn	20 28 28.3	+1.4
	SNR=16						
NIL	Nilore	4.42	176		Pn	20 28 30.3	+2.8
EKS2	Erkin-Say	4.64	8	P	Pn	20 28 31.6	+1.0
	SNR=144						
KBL	Kabul	4.68	222		Pn	20 28 34.2	+3.1
AAK	Ala-Archa	4.74	15	P	Pn	20 28 33.5	+1.6
	SNR=74						
AAK	Ala-Archa	4.74	15		Pn	20 28 32.8	+1.0
AAK	Ala-Archa	4.74	15	P	Pn	20 28 33.1	+1.3
	49nm,0.3s,baz=189,slow=8.4,SNR=64						
AAK				S	Sn	20 29 25.4	-0.6
	25nm,0.4s,baz=148,slow=23,SNR=19						
AAK	Ala-Archa	4.74	15	⇓P	Pn	20 28 33.4	+1.6
AAK				⇑S	Sn	20 29 26.6	+0.7
KBK	Karagaybulak	4.86	18	P	Pn	20 28 35.0	+1.5
	SNR=28						
ULHL	Ulahol	4.91	31	P	Pn	20 28 35.2	+1.0
	SNR=28						
FRU1	Bishkek	4.93	15		Pn	20 28 34.8	+0.4
BOOM	Boomskoye usch	5.01	27		Pn	20 28 36.5	+1.0
CHMS	Chumysh	5.13	16	P	Pn	20 28 38.3	+1.2
	SNR=83						
CHMS	Chumysh	5.13	16	⇓P	Pn	20 28 38.4	+1.2
	41nm,0.5s						
CHMS				⇓S	Sn	20 29 33.2	-2.1
	41nm,0.8s						
KDJ	Kajisay	5.24	38		Pn	20 28 39.1	+0.5
TARG	Taragay, Kyrgy	5.28	45		Pn	20 28 40.0	+0.7
TKM2	Tokmak 2	5.28	22	P	Pn	20 28 40.2	+1.0
	SNR=17						
TKM2	Tokmak 2	5.28	22	⇑P	Pn	20 28 39.9	+0.7
	7.3nm,0.4s						
KK31	Karatay Array	5.34	341		Pn	20 28 40.3	+0.4
KK31	Karatay Array	5.34	341	⇑P	Pn	20 28 40.5	+0.7
	37nm,0.3s,baz=166,slow=14,SNR=896						
KK31				S	Sn	20 29 36.9	-3.5
	74nm,0.3s,baz=157,slow=20,SNR=11						
KKAR	Karatay Array	5.34	341		Pn	20 28 40.3	+0.5
KKAR	Karatay Array	5.34	341		Pn	20 28 40.4	+0.5
USP	Ospenovka	5.34	13	P	Pn	20 28 40.9	+1.0
	SNR=62						
JMU	Jammu	5.59	162	*e*P	Pn	20 28 44.6	+1.4
JMU				*e*S	Sn	20 29 43.0	-3.3
JMU				IAML		20 29 50.1	
	comp=E,106nm,0.2s						
PRZ	Przheval'sk	6.11	42		Pn	20 28 52.5	+2.1
DHRM	DHARAMSHALA	6.45	153	*e*P	Pn	20 28 56.8	+1.9
DHRM				*e*S	Sn	20 30 04.6	-2.8
DHRM				IAML		20 30 11.4	
	comp=E,103nm,0.7s						
PDGK	Podgornoye	7.28	42	⇓P	Pn	20 29 06.2	+0.2
	comp=E,12nm,0.8s						
SMLA	Simla	7.77	152	*e*P	Pn	20 29 14.8	+2.2
SMLA				*e*S	Sn	20 30 35.4	-3.7
SMLA				IAML		20 30 37.9	
	comp=E,193nm,0.7s						
KLP	Kalpa	7.88	144	*e*P	Pn	20 29 16.4	+2.0
KLP				*e*S	Sn	20 30 38.0	-4.1
KLP				IAML		20 30 44.4	
	comp=E,173nm,0.6s						
KUDL	Kundal	10.35	162	*e*P	Pn	20 29 49.8	+2.5
KUDL				*e*S	Sn	20 31 34.5	-7.0
KUDL				IAML		20 31 34.9	
	comp=E,115nm,0.9s						
PTH	Pithoragarh	10.46	142	*e*P	Pn	20 29 49.8	+0.8
PTH				*e*S	Sn	20 31 36.8	-7.6
PTH				IAML		20 31 39.2	
	comp=N,101nm,0.9s						
PTH				IAML		20 31 41.5	
	comp=E,101nm,0.9s						
MAKZ	Makanchi	11.02	35		Pn	20 29 56.7	+0.5
MAKZ	Makanchi	11.02	35	⇓P	Pn	20 29 55.4	-0.8
	comp=E,10nm,1.1s						
MK31	Makanchi Array	11.15	36	P	Pn	20 29 58.4	+0.4
	comp=E,2.6nm,0.7s,baz=212,slow=15,SNR=23						
MKAR	Makanchi Array	11.15	36		Pn	20 29 58.0	0.0
MKAR	Makanchi Array	11.15	36	P	Pn	20 29 58.5	+0.5
	comp=E,3.0nm,0.9s,baz=216,slow=14,SNR=22						
KURBB	Kurchatov Arra	13.19	16	P	Pn	20 30 22.5	-2.0
	comp=E,3.9nm,0.7s,baz=207,slow=12,SNR=25						
KURBB	Kurchatov Arra	13.19	16	⇓P	Pn	20 30 21.8	-2.7
	comp=E,6.4nm,0.7s						
AB31	Akbulak array	14.56	324	Pn	Pn	20 30 40.4	-1.6
AB31	Akbulak array	14.56	324	P	Pn	20 30 40.3	-1.6
	comp=E,8.1nm,0.5s,baz=138,slow=12,SNR=251						
AB31				S	Sn	20 33 15.9	-6.9
	comp=E,7.8nm,0.4s,baz=133,slow=25,SNR=8.0						
ABKAR	Akbulak array	14.56	324		Pn	20 30 40.3	-1.7
BVA0	Borovoye Array	15.06	354	⇑P	Pn	20 30 47.0	-1.2
	comp=E,6.6nm,0.7s,baz=158,slow=12,SNR=43						
BVAR	Borovoye Array	15.06	354	P	Pn	20 30 47.4	-0.9
	comp=E,6.7nm,0.6s,baz=163,slow=12,SNR=44						
BRVK	Borovoye	15.10	354	P	Pn	20 30 47.0	-1.8
BRVK				IAmb	IAmb	20 30 54.2	
	comp=Z,24nm,1.2s						
AKTO	Aktyubinsk	16.27	324	P	Pn	20 31 03.3	0.0
	comp=Z,16nm,0.4s,baz=106,slow=8.5,SNR=33						
AKTO	Aktyubinsk	16.27	324	⇑P	Pn	20 31 03.6	+0.3
	comp=Z,28nm,1.0s						
LSA	Lhasa	17.30	113	P	P	20 31 15.8	-0.2
LSA				IAmb	IAmb	20 31 38.9	
	comp=Z,13nm,0.4s						
ZALV	Zalesovo Beam	17.88	23		P	20 31 22.3	+0.7
ZALV	Zalesovo Beam	17.88	23	P	P	20 31 22.9	+1.2
	comp=Z,4.4nm,0.6s,baz=213,slow=11,SNR=17						
ARTI	Arti	20.72	337		P	20 31 53.1	+0.8
ARTI				IAmb	IAmb	20 31 54.7	
	comp=Z,14nm,0.6s						
ARTI	Arti	20.72	337	P	P	20 31 53.4	+1.1
	comp=Z,11nm,0.8s,baz=144,slow=6.1,SNR=22						
	comp=Z,11nm,0.8s						
BELG	Belogornoye	22.68	317	P	P	20 32 16.0	+3.3
	comp=Z,9.1nm,0.5s,baz=150,slow=5.6,SNR=6.9						
	comp=Z,9.1nm,0.5s						
SONM	Songino Array	26.23	57	P	P	20 32 48.1	+2.7
	comp=Z,0.6nm,0.7s,baz=252,slow=11,SNR=3.6						
	comp=Z,0.6nm,0.7s						
FINES	FINESS Array B	37.05	324	P	P	20 34 20.9	+1.4
	comp=Z,1.2nm,0.7s,baz=123,slow=11,SNR=7.1						
	comp=Z,1.2nm,0.7s						
ARCES	ARCESS Array B	40.29	336	P	P	20 34 48.6	+2.2
	comp=Z,1.7nm,0.9s,baz=116,slow=9.3,SNR=1.4						
	comp=Z,1.7nm,0.9s						
HFS	Hagfors	42.78	321	P	P	20 35 09.0	+2.2
	comp=Z,1.1nm,0.5s,baz=106,slow=11,SNR=10						
	comp=Z,1.1nm,0.5s						
NB2	NORSAR Subarra	44.05	322	P	P	20 35 18.8	+1.7
	comp=Z,0.4nm,0.5s,baz=92,slow=8.6						
NOA	NORSAR Array B	44.05	322	P	P	20 35 18.9	+1.8
	comp=Z,0.7nm,0.6s,baz=92,slow=7.8,SNR=4.5						
	comp=Z,0.7nm,0.6s						

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*UCR **26** 20:31:30.9±1.2, 8.°38N×82.°90W, h26^{km}±3^{km}, MW4.0*

*CATAC **26** 20:31:31.1±0.8, 8°N±5°×8°3W±°, h1^{km}±3^{km}, M3.9/9, MLv3.9/9, Error ellipse: s-maj=12.2km s-min=5.6km az=18.8, confirmed*

ISC 26 20:31:30.5±1.2**, 8.°42N**±0.°05×**82.°94W**±0.°03**, h32^{km}**±9^{km}**, n46,** σ**0.ˢ95**/51**, 8C-6D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPPC	Paso Canoas	0.15	39	⇑*e*P	Pn	20 31 36.5	-0.1
CDITO	Canoas	0.17	21	P	Pn	20 31 36.8	-0.1
NELY	Ciudad Neily	0.23	357	⇑*e*P	Pn	20 31 37.5	-0.3
NELY				*e*S	Sn	20 31 42.9	+0.6
FITO	Golfito	0.30	314	*e*P	Pb	20 31 37.8	-0.4
FITO				*e*S	Sn	20 31 43.6	-0.4
LMNES	Limones	0.32	167	⇓*e*P	Pn	20 31 38.8	-0.2
EDAD	Golfito	0.33	316	*e*P	Pb	20 31 38.3	-0.4
EDAD				*e*S	Sn	20 31 44.5	-0.3
VITO	San Vito	0.40	355	⇑*e*P	Pn	20 31 40.2	0.0
RSRNO	Rio Sereno	0.41	10	*e*P	Pn	20 31 40.5	+0.2
SCLRA	Santa Clara, W	0.44	20	⇑*e*P	Pn	20 31 40.6	-0.1
BRU2	Volcan	0.45	33	⇑*e*P	Pb	20 31 40.4	0.0
BRU2				*e*S	Sn	20 31 48.0	+0.1
BRU2	Volcan	0.45	33	P	Pn	20 31 40.6	-0.3
BRU2				S	Sb	20 31 47.2	0.0
CLLRA	Cordillera,	0.46	44	⇑*e*P	Pb	20 31 40.5	0.0
CSTBL	De las Acacias	0.49	91	*e*P	Pb	20 31 40.4	-0.5
ALCO	Alturas Coton,	0.54	11	⇑*e*P	Pb	20 31 41.6	-0.3
BQTLY	Boquete Panama	0.58	54	⇓*e*P	Pb	20 31 42.1	-0.4
EDP2	Potrero Grande	0.64	338	*e*P	Pn	20 31 43.7	+0.3
PANP	Palmar Norte	0.75	316	⇓*e*P	Pb	20 31 45.1	-0.1
BURE	Buenos Aires	0.85	332	*e*P	Pb	20 31 46.6	-0.3
PBNVO	Pueblo Nuevo,	0.87	57	⇓*e*P	Pn	20 31 45.9	-0.6
DRK0	Durika	0.90	340	*e*P	Pn	20 31 46.9	-0.1
DRK0	Durika	0.90	340	S	Sb	20 32 00.2	+0.7
DRK0	Durika	0.90	340	P	Pb	20 31 47.5	-0.3
RBALA	Bur	0.90	59	⇓*e*P	Pn	20 31 46.6	-0.3
EDPE	Pejibaye, P	0.97	320	*e*P	Pb	20 31 48.6	-0.3
OCHAL	Ojochal	0.98	314	P	Pb	20 31 48.5	-0.5
OCHAL	Ojochal	0.98	314	S	Sb	20 32 01.4	-0.2
SAJE	San Jernim	1.08	329	⇑*e*P	Pn	20 31 49.8	+0.1
BRIBI	Bribri	1.20	6	*e*P	Pb	20 31 53.7	+1.0
LCR2	La Lucha 2	1.69	321	S	Sb	20 32 23.0	+0.8
LCR2	La Lucha 2	1.69	321	P	Pb	20 32 00.8	-0.4
PICV	PH. Pirrs	1.73	314	*e*P	Pb	20 32 00.6	-1.2
VTCV	VTCV, Calle Va	1.74	333	*e*P	Pb	20 32 00.8	-1.2
RESJ	San Isidro (Tu	1.75	336	*e*P	Pb	20 32 01.2	-0.9
PAR1A	Puntarenas Pro	1.75	312	*e*P	Pb	20 32 00.9	-1.1
CVTV	Tajo	1.77	333	*e*P	Pb	20 32 01.6	-1.0
CVTQ	Turrialba Volc	1.78	333	*e*P	Pb	20 32 01.8	-1.0
VTR0	Volcan Turrial	1.79	333	*e*P	Pb	20 32 01.6	-1.3
VICA	Volcano Irazu	1.80	330	⇓*e*P	Pn	20 32 00.9	+1.2
TCS1	Tacares	2.10	320	P	Pb	20 32 07.3	-0.9
TRT2	Tortugero	2.27	340	P	Pb	20 32 10.1	-0.8
TRT2	Tortugero	2.27	340	S	Sb	20 32 37.8	-0.8
SOCE	Pocosol	2.56	320	S	Sb	20 32 44.2	-2.9
SOCE	Pocosol	2.56	320	P	Pb	20 32 13.9	-2.0
INDI	Punta indio, G	2.92	300	S	Sn	20 32 51.4	+2.8
INDI	Punta indio, G	2.92	300	P	Pn	20 32 16.7	+2.0
BCIP	Isla Barro Col	3.15	76	*e*P	Pn	20 32 19.0	+1.1

UCR 26 20:33:20.7±1.1**, 8.°36N**×**82.°83W, h30^{km}**±2^{km}**, MW3.6, 1C-6D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPPC	Paso Canoas	0.18	358	*e*P	Pb	20 33 26.9	+0.3
LPPC				*e*S	Sb	20 33 31.7	+1.0
LMNES	Limones	0.26	186	⇑*e*P	Pn	20 33 28.3	-0.2
NELY	Ciudad Neily	0.31	339	*e*P	Pb	20 33 28.1	-0.3
NELY				*e*S	Sn	20 33 34.2	-0.7
CSTBL	De las Acacias	0.39	82	⇓*e*P	Pb	20 33 29.6	+0.1
FITO	Golfito	0.41	310	*e*P	Pb	20 33 28.8	-1.0
FITO				*e*S	Sb	20 33 35.2	-0.7
EDAD	Golfito	0.44	312	*e*P	Pb	20 33 29.2	-1.1
CLLRA	Cordillera,	0.44	29	⇓*e*P	Pb	20 33 30.1	-0.2
VITO	San Vito	0.48	344	*e*P	Pb	20 33 30.9	0.0
BQTLY	Boquete Panama	0.54	43	*e*P	Pb	20 33 31.5	-0.4
ALCO	Alturas Coton,	0.59	0	*e*P	Pb	20 33 32.0	-0.8
EDP2	Potrero Grande	0.74	333	*e*P	Pb	20 33 34.4	-0.7
PBNVO	Pueblo Nuevo,	0.83	50	⇓*e*P	Pn	20 33 35.4	-1.0
RBALA	Bur	0.85	52	⇓*e*P	Pn	20 33 36.0	-0.7
PANP	Palmar Norte	0.86	314	*e*P	Pn	20 33 36.0	-0.8
DRK0	Durika	0.99	336	*e*P	Pn	20 33 37.7	-1.1
EDPE	Pejibaye, P	1.08	318	⇓*e*P	Pn	20 33 39.4	-0.5
SAJE	San Jernim	1.19	326	*e*P	Pn	20 33 40.5	-1.0
VTCV	VTCV, Calle Va	1.84	331	*e*P	Pn	20 33 51.2	+0.7
RESJ	San Isidro (Tu	1.85	334	⇓*e*P	Pn	20 33 51.7	+1.2
CVTV	Tajo	1.87	331	*e*P	Pn	20 33 52.0	+0.9
CVTQ	Turrialba Volc	1.88	331	*e*P	Pn	20 33 52.0	+0.8

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*IDC **26** 20:35:18.9±1.6, 12.°90S×77.°70W, h0^{km}, mb3.8/3, mbtmp3.8/4, ML3.9/1, MS3.2/3, Error ellipse: s-maj=71.6km s-min=28.8km az=38.0*

ISC 26 20:35:23.4±1.4**, 13.°1S**±0.°4×**77.°9W**±0.°2**, h35^{km}, n18,** σ**1.ˢ54**/8**, mb3.7**/3**, Off coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	Atahualpa	5.93	355	LR	LR	20 38 54.6	
	comp=Z,135nm,19.3s,baz=151,slow=37						
LPAZ	La Paz	9.95	110	Pn	Pn	20 37 43.3	-1.1
	0.5nm,0.3s,baz=293,slow=11,SNR=8.7						
LPAZ				Sn	Sn	20 39 36.8	+1.6
	baz=238,slow=19,SNR=1.7						
LPAZ				LR	LR	20 41 48.3	
	comp=Z,116nm,19.4s,baz=332,slow=40						
	1.3nm,0.4s						
H03N1	Juan Fernandez	20.29	183	T	T	21 00 53.6	
	baz=5.3,slow=74,SNR=88						
H03N2	Juan Fernandez	20.29	183	T	T	21 01 05.1	
	baz=5.3,slow=74,SNR=71						
H03N3	Juan Fernandez	20.30	183	T	T	21 00 53.6	
	baz=5.3,slow=74,SNR=85						
BDFB	Brasilia	29.02	99	LR	LR	20 53 31.8	
	comp=Z,80nm,21.2s,baz=351,slow=38						
PDAR	Pinedale Array	62.72	334	P	P	20 45 45.7	+0.6
	0.2nm,0.4s,baz=143,slow=3.7,SNR=2.4						
	0.2nm,0.4s						
NVAR	Mina Array Bea	63.69	325	P	P	20 45 54.0	+2.4
	0.5nm,0.8s,baz=154,slow=4.8,SNR=2.4						
	0.5nm,0.8s						
ULM	Lac du Bonnet	65.01	347	P	P	20 45 58.6	-1.2
	4.7nm,0.8s,baz=126,slow=2.9,SNR=5.0						
	4.7nm,0.8s						
H11N3	WAKE ISLAND Hy	117.81	286	T	T	23 03 31.0	
	baz=96,slow=74,SNR=9.4						
H11N2	WAKE ISLAND Hy	117.83	286	T	T	23 03 30.3	
	baz=96,slow=74,SNR=5.1						
H11N1	WAKE ISLAND Hy	117.83	286	T	T	23 03 25.4	
	baz=96,slow=74,SNR=5.8						
H11S2	WAKE ISLAND Hy	117.90	284	T	T	23 03 41.7	
	baz=93,slow=74,SNR=44						
H11S1	WAKE ISLAND Hy	117.91	284	T	T	23 03 38.5	
	baz=93,slow=74,SNR=30						
H11S3	WAKE ISLAND Hy	117.92	284	T	T	23 03 39.2	
	baz=93,slow=74,SNR=30						
ASAR	Alice Springs	132.05	221	PKP	PKiKP	20 54 35.3	0.0
	0.4nm,0.8s,baz=108,slow=1.9,SNR=2.2						
WRA	Warramunga Arr	134.37	225	PKP	PKiKP	20 54 39.5	-0.5
	0.4nm,0.5s,baz=128,slow=2.0,SNR=6.1						
SONM	Songino Array	145.17	355	PKPbc	PKPbc	20 54 56.5	-0.6
	1.4nm,0.8s,baz=350,slow=5.2,SNR=9.9						

IDC 26 20:35:33.4±1.2**, 17.°36N**×**122.°82E, h0^{km}, mb3.7**/4**, mbtmp3.7**/4**, Error ellipse: s-maj=71.4km s-min=26.9km az=69.0, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.19	165	P	P	20 43 28.0	-0.2
	0.7nm,0.5s,baz=338,slow=9.2,SNR=11						
	0.7nm,0.5s						
MKAR	Makanchi Array	44.42	320	P	P	20 43 45.0	-1.1
	0.2nm,0.5s,baz=112,slow=7.6,SNR=3.9						
	0.2nm,0.5s						
ILAR	Eielson Array	74.58	26	P	P	20 47 13.8	-0.3
	0.2nm,0.6s,baz=259,slow=5.3,SNR=2.1						
	0.2nm,0.6s						
FINES	FINESS Array B	78.10	331	P	P	20 47 34.9	+0.8
	1.4nm,0.5s,baz=70,slow=1.6,SNR=11						
	1.4nm,0.5s						

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*IDC **26** 20:55:51.5±0.8, 28.°40N×104.°75E, h0^{km}, mb3.9/12, mbtmp3.9/13, ML3.8/1, Error ellipse: s-maj=28.5km s-min=15.4km az=55.0*

ISC 26 20:55:55.0±0.8**, 28.°6N**±0.°1×**104.°9E**±0.°2**, h19^{km}, n14,** σ**0.ˢ86**/15**, mb3.9**/12**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.44	210	Pn	Pn	20 58 38.8	+1.3
	0.1nm,0.3s,baz=17,slow=12,SNR=5.7						
SONM	Songino Array	19.28	3	P	Pn	21 00 20.1	+0.5
	0.3nm,0.3s,baz=188,slow=12,SNR=7.4						
	0.9nm,0.5s						
KSRS	Korea Array	21.21	59	P	P	21 00 40.6	+1.1
	4.4nm,0.8s,baz=248,slow=10,SNR=16						
	4.4nm,0.8s						
MKAR	Makanchi Array	25.37	322	P	P	21 01 21.6	+0.6
	1.7nm,0.6s,baz=128,slow=11,SNR=20						
	1.7nm,0.6s						
USRK	Ussuriysk Ar.	26.66	47	P	P	21 01 33.5	+1.0
	3.2nm,0.6s,baz=251,slow=10.0,SNR=8.1						
	3.2nm,0.6s						
ZALV	Zalesovo Beam	29.31	336	P	P	21 01 56.7	+0.6
	1.1nm,0.6s,baz=152,slow=8.2,SNR=4.6						
	1.1nm,0.6s						
KURBB	Kurchatov Arra	29.69	325	P	P	21 01 59.7	+0.2
	0.6nm,0.6s,baz=129,slow=10.0,SNR=13						
	0.6nm,0.6s						
BVAR	Borovoye Array	35.22	324	P	P	21 02 47.7	-0.3
	0.3nm,0.4s,baz=123,slow=16,SNR=2.4						
	0.3nm,0.4s						
NRIK	Noril'sk	42.04	351	P	P	21 03 44.8	-0.1
	4.0nm,0.7s,baz=157,slow=6.5,SNR=6.2						
	4.0nm,0.7s						
WRA	Warramunga Arr	55.99	146	P	P	21 05 31.4	-0.9
	0.9nm,0.7s,baz=337,slow=8.2,SNR=12						
	0.9nm,0.7s						
ASAR	Alice Springs	58.97	149	P	P	21 05 52.3	-1.1
	0.5nm,0.6s,baz=332,slow=7.2,SNR=7.8						
ASAR				PcP	PcP	21 06 41.9	-0.5
	0.4nm,0.7s,baz=334,slow=4.2,SNR=4.1						
	0.5nm,0.6s						
AKASG	Malin Array Be	59.63	314	P	P	21 05 56.5	-1.2
	0.4nm,0.6s,baz=74,slow=7.0,SNR=2.1						
	0.4nm,0.6s						
ARCES	ARCESS Array B	59.85	336	P	P	21 05 58.7	-0.2
	0.9nm,0.7s,baz=83,slow=8.5,SNR=5.2						
	0.9nm,0.7s						
FINES	FINESS Array B	60.06	327	P	P	21 06 00.3	-0.1
	0.8nm,0.7s,baz=86,slow=6.3,SNR=4.3						
	0.8nm,0.7s						

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*IDC **26** 20:56:11.3±1.7, 1.°87N×126.°92E, h0^{km}, mb3.4/4, mbtmp3.5/5, ML3.2/1, MS3.3/2, Error ellipse: s-maj=121.0km s-min=19.5km az=70.0*

ISC 26 20:56:17.6±1.9**, 1.°9N**±0.°3×**126.°9E**±0.°8**, h63^{km}, n7,** σ**3.ˢ02**/6**, mb3.4**/4**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	13.46	334	Pn	Pn	20 59 23.2	-2.6
	100nm,0.3s,baz=144,slow=19,SNR=4.3						
FITZ	Fitzroy Crossi	19.93	183	P	Pn	21 00 45.6	-0.9
	0.1nm,0.3s,baz=5.2,slow=11,SNR=1.5						
	2.3nm,1.0s						
WRA	Warramunga Arr	22.92	162	P	P	21 01 14.6	-1.9
	0.3nm,0.3s,baz=338,slow=10,SNR=7.2						
WRA				LR	LR	21 10 25.5	
	comp=Z,144nm,19.4s,baz=20,slow=37						
	0.3nm,0.3s						
ASAR	Alice Springs	26.33	165	P	P	21 01 49.3	+1.5
	0.6nm,0.9s,baz=343,slow=11,SNR=5.0						
	0.6nm,0.9s						
USRK	Ussuriysk Ar.	42.35	5	LR	LR	21 21 58.3	
	comp=Z,21nm,21.0s,baz=33,slow=36						
MKAR	Makanchi Array	59.13	326	P	P	21 06 14.7	+2.9
	0.3nm,0.4s,baz=115,slow=8.0,SNR=5.4						
	0.3nm,0.4s						
KURBB	Kurchatov Arra	63.34	328	P	P	21 06 42.4	+2.3
	0.2nm,0.3s,baz=129,slow=6.5,SNR=5.2						
	0.2nm,0.3s						

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*NEIC **26** 21:06:06.4±1.2, 48.°52N±0.°01×122.°14W±0.°02, h5^{km}±2^{km}, Error ellipse: s-maj=3.0km s-min=2.2km az=40.0*

SEA 26 21:06:06.6±1.5**, 48.°54N**±0.°02×**122.°12W**±0.°02**, h7^{km}**±6^{km}**, ML2.0**/6**, ML1.9**/18(NEIC)**, Error ellipse: s-maj=2.9km s-min=1.5km az=205.0, Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
B05A	Bryant	0.28	177		Pg	21 06 11.9	-0.2
MBW	Mount Baker	0.28	31		Pg	21 06 12.2	0.0
JCW	Jim Creek	0.37	161		Pg	21 06 13.5	-0.4
RPW	Rockport	0.41	103		Pg	21 06 14.3	-0.3
RPW					Sg	21 06 20.3	+0.3
A04D	Lummi Island	0.43	294		Pg	21 06 14.5	-0.5
A04D				Sg	Sg	21 06 21.5	+0.8
A04D				IAML		21 06 23.8	
	comp=N,111nm,0.6s						
A04D				IAML		21 06 24.2	
	comp=E,102nm,0.3s						
MCW	Mount Constitu	0.49	286		Pg	21 06 15.7	-0.5
HTW	Haystack Looko	0.78	163		Pg	21 06 20.4	-1.2
GPW	Glacier Peak	0.78	123		Pg	21 06 20.7	-0.9
VGZ	Gonzales	0.81	261		Pg	21 06 21.5	-0.8
VGZ					Sg	21 06 32.0	-0.8
B011	North Saanich	0.89	277		Pg	21 06 22.4	-1.3
PGC	Sidney	0.89	277		Pg	21 06 22.4	-1.4
PGC					Sg	21 06 34.4	-1.0
PGC				IAML		21 06 34.9	
	comp=N,56nm,0.4s						
PGC				IAML		21 06 35.2	
	comp=E,39nm,0.3s						
GNW	Green Mountain	1.09	206	Pg	Pg	21 06 26.1	-1.4
GNW				Sg	Sg	21 06 41.1	-0.6
D05A	Enumclaw	1.36	176	Pn	Pn	21 06 31.3	-0.7
D05A				Sn	Sb	21 06 50.1	+0.1
D05A				IAML		21 06 57.0	
	comp=E,19nm,0.6s						
CLRS	Cowichan Lake	1.36	282	Pn	Pn	21 06 29.9	-2.2
CLRS				Sn	Sb	21 06 47.1	-3.0
LTY	Liberty	1.61	142	Pn	Pn	21 06 35.4	-0.2
LTY				IAML		21 06 58.4	
	comp=N,16nm,0.7s						
LTY				IAML		21 06 59.2	
	comp=E,11nm,0.5s						
LON	Longmire	1.81	173	Pn	Pn	21 06 37.6	-0.6
LON				IAML		21 07 02.4	
	comp=N,14nm,0.2s						
B08A	Colville Reser	1.86	95	Pn	Pn	21 06 39.2	+0.3
B08A				IAML		21 07 07.3	
	comp=E,10nm,0.3s						
B08A				IAML		21 07 07.6	
	comp=N,8.5nm,0.3s						
LLLB	Lillooet	2.07	4	Pn	Pn	21 06 42.9	+1.0
OZB	Mount Ozzard	2.27	282	Pn	Pn	21 06 44.7	+0.1
MXC	Moxie City	2.32	147	Pn	Pn	21 06 45.6	+0.3

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*NEIC **26** 21:16:30.6±2.2, 30.°98S±0.°07×177.°7W±0.°2, h12^{km}±5^{km}, mb4.7/14, Error ellipse: s-maj=29.4km s-min=9.8km az=86.0*

*IDC **26** 21:16:35.1±2.4, 30.°98S×177.°72W, h58^{km}±19^{km}, mb3.9/10, mbtmp4.2/10, MS3.8/15, Error ellipse: s-maj=23.1km s-min=15.3km az=102.0*

ISC 26 21:16:29.4±0.5**, 31.°08S**±0.°04×**177.°9W**±0.°1**, h10^{km}, n90,** σ**1.ˢ69**/78**, mb4.5**/19**, MS4.0**/15**, 5C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.81	358	P	Pn	21 17 00.1	-0.5
GLKZ				S	Sg	21 17 27.1	-0.6
RAO	Raoul Island	1.82	358		Pn	21 17 00.3	-0.5
RAO				Sn	Sn	21 17 22.2	-1.7
RAO	Raoul Island	1.82	358	P	Pn	21 17 00.8	0.0
	454nm,0.2s,baz=127,slow=22,SNR=4.6						
RAO				S	Sb	21 17 24.4	-1.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	2µm,0.4s,baz=270,slow=20,SNR=4.9						
RIZ	**Raoul Island**	**1.83**	**358**	P	**Pn**	**21 17 00.5**	**-0.4**
RIZ				S	**Sg**	**21 17 29.7**	**+1.5**
MXZ	**Matakaoa Point**	**7.21**	**205**	S	**Sn**	**21 19 33.8**	**-2.8**
PKGZ	**Pakihiroa**	**7.56**	**205**	P	Pn	21 18 17.0	-2.6
HAZ	**Te Kaha**	**7.57**	**207**	P	Pn	21 18 16.8	-3.0
HAZ				S	**Sn**	**21 19 45.5**	**-0.2**
PUZ	**Puketiti**	**7.68**	**204**	P	Pn	21 18 17.1	-4.2
PUZ				S	**Sn**	**21 19 44.2**	**-4.0**
RUGZ	**Raukumara Rang**	**7.80**	**207**	P	Pn	21 18 19.7	-3.2
RUGZ				S	**Sn**	**21 19 49.4**	**-2.0**
WCZ	**Waipu Caves**	**8.12**	**231**	P	Pn	21 18 37.2	+10
MWZ	**Matawai**	**8.18**	**206**	P	Pn	21 18 25.8	-2.3
MWZ				S	**Sn**	**21 19 57.4**	**-3.2**
URZ	**Urewera**	**8.28**	**209**	P	Pn	21 18 25.2	-4.2
	5.8nm,0.4s,baz=350,slow=5.7,SNR=5.8						
URZ				S	Sn	21 19 57.0	-6.0
	52nm,0.8s,baz=338,slow=18,SNR=8.8						
URZ	**Urewera**	**8.28**	**209**	P	Pn	21 18 26.2	-3.2
OUZ	**Omahuta**	**8.28**	**238**	P	Pn	21 18 35.9	+6.5
RAGZ	**Rawiri**	**8.36**	**206**	P	Pn	21 18 28.3	-2.3
RAGZ				S	Sn	21 19 60.0	-5.2
MUGZ	**Murupara**	**8.60**	**209**	P	Pn	21 18 29.1	-4.9
MUGZ				S	**Sn**	**21 20 07.4**	**-3.6**
RTZ	**Ruatahuna**	**8.63**	**208**	P	Pn	21 18 30.9	-3.5
CTZ	**Chatham Island**	**12.67**	**176**	Pn	**Pn**	**21 19 32.1**	**+2.6**
DZM	**Mont Dzumac**	**16.66**	**299**		**P**	**21 20 27.5**	**+2.0**
DZM				IAmb	IAmb	21 20 34.4	
	comp=Z,34nm,1.2s						
EIDS	**Eidsvold**	**27.91**	**274**	P	**P**	**21 22 19.9**	**+0.2**
EIDS				IAmb	IAmb	21 22 23.0	
	comp=Z,36nm,1.4s						
PPT	**Papeete**	**28.96**	**69**	LR	LR	21 33 06.7	
	comp=Z,38nm,18.9s,baz=242,slow=34						
HNR	**Honiara**	**29.85**	**311**	LR	LR	21 32 53.6	
	comp=Z,158nm,19.5s,baz=197,slow=33						
TOO	**Toolangi**	**30.82**	**248**	P	**P**	**21 22 46.9**	**+1.3**
TOO				IAmb	IAmb	21 23 00.5	
	comp=Z,5.1nm,1.1s						
CTAO	**Charters Tower**	**34.04**	**280**	P	**P**	**21 23 15.6**	**+1.7**
STKA	**Stephens Creek**	**34.46**	**258**	P	**P**	**21 23 19.4**	**+2.0**
STKA	**Stephens Creek**	**34.46**	**258**	P	**P**	**21 23 19.6**	**+2.3**
	comp=Z,5.4nm,0.9s,baz=93,slow=11,SNR=7.3						
STKA				LR	LR	21 36 24.8	
	comp=Z,237nm,18.3s,baz=63,slow=34						
	comp=Z,5.4nm,0.9s						
BBOO	**Buckleboo**	**38.92**	**255**	P	**P**	**21 23 55.1**	**-0.3**
BBOO				IAmb	IAmb	21 24 10.8	
	comp=Z,12nm,0.8s						
AS31	**Alice Springs**	**43.21**	**268**	P	**P**	**21 24 31.4**	**+0.6**
ASAR	**Alice Springs**	**43.21**	**268**	P	**P**	**21 24 31.7**	**+0.8**
	comp=Z,6.2nm,0.8s,baz=111,slow=7.7,SNR=40						
ASAR				PcP	**PcP**	**21 26 19.8**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=120,slow=4.2,SNR=2.0						
ASAR				LR	LR	21 42 19.7	
	comp=Z,166nm,18.7s,slow=36						
	comp=Z,6.2nm,0.8s						
WRA	**Warramunga Arr**	**44.26**	**273**	P	**P**	**21 24 39.7**	**+0.4**
WRA	**Warramunga Arr**	**44.26**	**273**	P	**P**	**21 24 39.8**	**+0.4**
	comp=Z,3.9nm,0.6s,baz=111,slow=8.0,SNR=51						
WRA				LR	LR	21 42 51.2	
	comp=Z,238nm,18.1s,baz=52,slow=36						
	comp=Z,3.9nm,0.6s						
WB0	**Warramunga Arr**	**44.28**	**273**	P	**P**	**21 24 39.8**	**+0.3**
WB0				IAmb	IAmb	21 24 52.4	
	comp=Z,12nm,0.7s						
VNDA	**Vanda**	**47.43**	**186**	P	**P**	**21 25 04.3**	**+0.8**
	comp=Z,0.8nm,0.9s,baz=7.1,slow=5.0,SNR=3.0						
VNDA				LR	LR	21 40 41.4	
	comp=Z,47nm,21.4s,baz=20,slow=30						
	comp=Z,0.8nm,0.9s						
KNRA	**Kununurra**	**50.89**	**275**	P	**P**	**21 25 31.2**	**+0.4**
KNRA				IAmb	IAmb	21 25 33.3	
	comp=Z,8.6nm,1.0s						
FITZ	**Fitzroy Crossi**	**52.49**	**270**	P	**P**	**21 25 43.0**	**+0.1**
FITZ	**Fitzroy Crossi**	**52.49**	**270**	LR	LR	21 47 24.9	
	comp=Z,218nm,18.3s,baz=134,slow=35						
CASY	**Casey**	**54.60**	**208**	P	**P**	**21 25 56.8**	**-0.9**
CASY				IAmb	IAmb	21 26 10.3	
	comp=Z,15nm,0.9s						
BATI	**Baumata**	**57.87**	**278**	LR	LR	21 50 52.6	
	comp=Z,242nm,18.3s,baz=140,slow=36						
QSPA	**South Pole Qui**	**59.03**	**180**	P	**P**	**21 26 30.2**	**+0.9**
QSPA	**South Pole Qui**	**59.03**	**180**	P	**P**	**21 26 30.0**	**+0.8**
	comp=Z,7.1nm,1.1s,baz=76,slow=1.4,SNR=13						
	comp=Z,7.1nm,1.1s						
KAPI	**Kappang**	**63.86**	**280**	LR	LR	21 54 18.3	
	comp=Z,55nm,20.2s,baz=108,slow=35						
MAW	**Mawson**	**71.72**	**201**	LR	LR	21 58 49.2	
	comp=Z,90nm,19.0s,baz=94,slow=35						
LEM	**Lembang**	**73.27**	**272**	LR	LR	22 02 04.0	
	comp=Z,81nm,18.6s,baz=172,slow=37						
TROLL	**Troll, Antarti**	**77.19**	**180**	⇑P	**P**	**21 28 21.9**	**-1.3**
	comp=Z,163nm,0.8s						
SNAA	**Sanae**	**77.47**	**178**	⇑P	**P**	**21 28 23.8**	**-0.9**
	comp=Z,86nm,0.9s						
SNAA	**Sanae**	**77.47**	**178**	P	**P**	**21 28 23.7**	**-1.0**
SNAA				IAmb	IAmb	21 28 40.7	
	comp=Z,11nm,1.4s						
SNAA	**Sanae**	**77.47**	**178**	P	**P**	**21 28 23.4**	**-1.2**
	comp=Z,2.2nm,0.9s,baz=157,slow=4.5,SNR=6.2						
	comp=Z,2.2nm,0.9s						
VNA3	**Neumayer Olymp**	**77.62**	**176**	⇑P	**P**	**21 28 23.9**	**-1.5**
	comp=Z,12nm,0.8s						
VNA2	**Neumayer--Watz**	**78.05**	**177**	⇑P	**P**	**21 28 27.1**	**-0.7**
	comp=Z,5.7nm,0.7s,baz=171,slow=4.7						
VNA1	**Neumayer--Stat**	**78.28**	**176**	⇑P	**P**	**21 28 28.1**	**-0.9**
	comp=Z,7.1nm,0.8s						
MJAR	**Matsushiro Arr**	**78.88**	**325**	P	**P**	**21 28 31.5**	**-1.2**
	comp=Z,0.9nm,0.6s,baz=156,slow=7.0,SNR=2.2						
	comp=Z,0.9nm,0.6s						
JNU	**Nakatsue**	**80.15**	**318**	LR	LR	21 58 33.5	
	comp=Z,44nm,21.7s,baz=36,slow=31						
PLCA	**Paso Flores**	**81.95**	**133**	LR	LR	21 57 01.8	
	comp=Z,64nm,20.8s,baz=221,slow=30						
LPIG	**La Paz**	**84.78**	**58**	LR	LR	22 02 56.8	
	comp=Z,83nm,18.2s,baz=217,slow=33						
KSRS	**Korea Array**	**84.95**	**320**	P	**P**	**21 29 04.8**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=144,slow=4.7,SNR=4.6						
	comp=Z,1.0nm,0.7s						
NVAR	**Mina Array Bea**	**88.65**	**43**	P	**P**	**21 29 23.0**	**0.0**
	comp=Z,1.3nm,0.8s,baz=216,slow=7.3,SNR=6.4						
	comp=Z,1.3nm,0.8s						
TXAR	**Lajitas Array**	**92.64**	**57**	P	**P**	**21 29 41.8**	**+0.2**
	comp=Z,0.4nm,0.9s,baz=239,slow=10.0,SNR=3.3						
	comp=Z,0.4nm,0.9s						
CMAR	**Chiang Mai Arr**	**93.75**	**289**	LR	LR	22 17 20.0	
	comp=Z,13nm,18.0s,baz=195,slow=39						
MKAR	**Makanchi Array**	**118.31**	**310**	PKP	**PKPdf**	**21 35 15.3**	**-1.4**
	comp=Z,0.6nm,0.7s,baz=144,slow=1.2,SNR=5.2						
KURBB	**Kurchatov Arra**	**121.65**	**313**	PKP	**PKPdf**	**21 35 21.2**	**-1.8**
	comp=Z,1.2nm,0.7s,baz=102,slow=1.9,SNR=11						
BVAR	**Borovoye Array**	**126.98**	**315**	PKP	**PKPdf**	**21 35 32.3**	**-0.8**
	comp=Z,0.8nm,0.4s,baz=150,slow=3.3,SNR=5.4						
ARTI	**Arti**	**133.80**	**320**	PKP	**PKPdf**	**21 35 43.3**	**-2.6**
	comp=Z,1.6nm,0.7s,baz=54,slow=4.2,SNR=3.0						
AKTO	**Aktyubinsk**	**134.66**	**312**	PKP	**PKPdf**	**21 35 45.9**	**-1.8**
	comp=Z,1.9nm,0.9s,baz=168,slow=1.8,SNR=3.9						
ARCES	**ARCESS Array B**	**139.28**	**348**	PKP	**PKPdf**	**21 35 55.3**	**-0.5**
	comp=Z,2.5nm,0.8s,baz=62,slow=2.9,SNR=4.4						
KBZ	**Khabaz**	**145.60**	**303**	PKPbc	**PKPdf**	**21 36 06.3**	**-1.4**
	comp=Z,6.0nm,1.1s,baz=83,slow=3.2,SNR=8.8						
KIV	**Kislovodsk**	**145.72**	**304**	PKPdf	**PKPdf**	**21 36 08.1**	**+0.1**
KARS	**Kars**	**145.75**	**298**		**PKPdf**	**21 36 07.9**	**-0.4**
OBN	**Obninsk**	**145.80**	**325**		**PKPdf**	**21 36 07.2**	**-0.5**
GEVA	**Gevas**	**145.82**	**294**		**PKPdf**	**21 36 08.1**	**-0.4**
FIA1	**FINESS Array S**	**145.83**	**340**		**PKPdf**	**21 36 06.3**	**-1.3**
FINES	**FINESS Array B**	**145.83**	**340**	PKPbc	**PKPdf**	**21 36 06.9**	**-0.7**
	comp=Z,22nm,1.0s,baz=46,slow=5.5,SNR=33						
GURO	**Guroymak-BITLI**	**146.62**	**294**	PKPbc	**PKPdf**	**21 36 11.5**	**+1.6**
KOPT	**Kop Dagi**	**147.76**	**297**	PKPbc	**PKPbc**	**21 36 15.2**	**+0.5**
NB2	**NORSAR Subarra**	**149.44**	**351**	PKP	**PKPdf**	**21 36 16.7**	**+3.1**
	comp=Z,9.6nm,1.4s,baz=23,slow=2.8						
NOA	**NORSAR Array B**	**149.44**	**351**	PKPbc	**PKPdf**	**21 36 15.0**	**+1.3**
	comp=Z,1.5nm,0.8s,baz=15,slow=4.2,SNR=7.0						
ARPR	**Arapgir-MALATY**	**149.49**	**295**		**PKPbc**	**21 36 19.2**	**+0.2**
HFS	**Hagfors**	**149.94**	**348**	PKPbc	**PKPdf**	**21 36 17.4**	**+3.0**
	comp=Z,4.0nm,0.8s,baz=76,slow=2.3,SNR=6.3						
GAZ	**Gaziantep**	**150.47**	**291**		**PKPbc**	**21 36 21.1**	**-0.3**
BNN	**Bunyan**	**151.44**	**295**		**PKPbc**	**21 36 22.6**	**-1.1**
BALJ	**Balqa**	**151.52**	**281**		**PKPbc**	**21 36 23.5**	**-0.5**
MMAI	**Mount Meron Ar**	**151.82**	**283**	PKPbc	**PKPbc**	**21 36 24.6**	**0.0**
	comp=Z,15nm,0.9s,baz=86,slow=3.4,SNR=20						
AKASG	**Malin Array Be**	**151.92**	**322**	PKPbc	**PKPbc**	**21 36 23.2**	**-1.0**
AKASG	**Malin Array Be**	**151.92**	**322**	PKPbc	**PKPdf**	**21 36 21.8**	**+4.1**
	comp=Z,2.8nm,0.7s,baz=48,slow=2.4,SNR=17						
AKBB	**Malin Array Si**	**151.92**	**322**		**PKPdf**	**21 36 22.1**	**+4.4**
KIEV	**Kiev**	**151.93**	**322**		**PKPdf**	**21 36 22.1**	**+4.4**
BR131	**Keskin Array S**	**153.03**	**297**		**PKPbc**	**21 36 26.1**	**-1.2**
BRTR	**Keskin Array B**	**153.03**	**297**	PKPbc	**PKPbc**	**21 36 25.8**	**-1.5**
	comp=Z,3.6nm,1.0s,baz=116,slow=2.9,SNR=12						
CLL	**Collm**	**158.25**	**341**	*i* PKPdf	**PKPdf**	**21 36 25.7**	**-0.6**
	comp=Z,12nm,1.6s						
CLL				*i* PKPab	**PKPab**	**21 36 59.4**	**-0.9**
	comp=Z,10.0nm,1.4s						
BRG	**Berggiesshubel**	**158.37**	**339**	P	**PKPab**	**21 37 00.3**	**-0.6**
BRG				Amp		21 37 01.8	
	comp=Z,3.3nm,1.0s						
GERES	**GERESS Array B**	**160.21**	**337**	PKPab	**PKPab**	**21 37 06.3**	**-2.8**
	comp=Z,1.1nm,0.9s,baz=6.9,slow=4.4,SNR=6.0						

SDD 26 21:28:47.4±2.1, 20°.04N×71°.05W, h11^{km}±28^{km}, MD2.9, ML2.0, MW2.6, 5C-2D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUDR	**Luperon**	**0.17**	**148**	⇑*e*Pg	Pg	21 28 49.2	-1.9
LUDR				*e*Sg	Sg	21 28 53.5	-0.2
LUDR				IAML		21 28 54.3	
	comp=N,1µm,0.4s						
LUDR	**Luperon**	**0.17**	**148**	⇓*e*Pg	Pg	21 28 49.9	-1.2
MADR	**Mao Valverde**	**0.47**	**186**	⇑*e*Pg	Pg	21 28 54.3	-2.3
MADR				⇑*e*Sg	Sg	21 29 02.5	-0.3
MADR				IAML		21 29 06.6	
	comp=N,150nm,0.7s						
MCDR	**Montecristi**	**0.59**	**256**	*e*Pg	Pg	21 28 57.8	-1.1
MCDR				IAML		21 29 17.5	
	comp=N,36nm,0.8s						
SDDR	**Presa de Saban**	**1.07**	**192**	⇑*e*Pg	Pb	21 29 06.6	-1.4
SDDR				⇑*e*Sg	Sg	21 29 19.0	-3.0
SDDR				IAML		21 29 23.4	
	comp=N,23nm,0.3s						
SDDR	**Presa de Saban**	**1.07**	**192**	⇓*e*Sg	Sb	21 29 22.1	+0.1
SDDR				IAML		21 29 22.3	
	comp=E,18nm,0.3s						
GRTK	**Grand Turk**	**1.47**	**357**	*e*Pg	Pn	21 29 12.8	-1.0
GRTK				*e*Sg	Sg	21 29 34.7	-0.1
GRTK				IAML		21 29 35.7	
	comp=E,26nm,0.1s						
GRTK				IAML		21 29 39.7	
	comp=N,33nm,0.2s						

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*NEIC **26** 21:29:18.2±1.1, 34°.917N±0°.010×97°.38W±0°.01, h7^{km}±5^{km}, mb_Lg2.4/38, ML2.3/13, ML2.4/32, Error ellipse: s-maj=1.6km s-min=1.5km az=95.0*

NEIC 26 21:29:18.5±0.9, 34°.921N±0°.007×97°.389W±0°.010, h5^{km}±1^{km}, Error ellipse: s-maj=2.9km s-min=1.8km az=96.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNO	**Franklin**	**0.34**	**358**		Pg	21 29 25.1	+0.1
FNO					Sg	21 29 30.5	+1.1
FNO				IAML		21 29 36.3	
	comp=E,368nm,0.7s						
X34A	**Smith Ranch, M**	**0.48**	**229**		Pg	21 29 28.4	+0.6
X34A					Sb	21 29 35.7	-1.2
X34A				IAML		21 29 36.2	
	comp=E,323nm,0.4s						
X34A				IAML		21 29 36.2	
	comp=N,224nm,0.3s						
OK029	**Liberty Lake**	**0.88**	**356**		Pg	21 29 34.8	-0.5
OK029				IAML		21 29 58.4	
	comp=N,103nm,0.5s						
WMOK	**Wichita Mounta**	**1.16**	**261**		Pg	21 29 39.2	-1.5
DEOK	**Depew**	**1.17**	**38**	Pg	Pg	21 29 40.3	-0.7
DEOK				IAML		21 30 07.9	
	comp=N,113nm,0.6s						
OK052	**Battle Ridge R**	**1.17**	**24**	Pg	Pg	21 29 40.4	-0.6
CSTR	**Hydro, Custer**	**1.29**	**305**		Pg	21 29 42.8	-0.3
QUOK	**Quay**	**1.37**	**24**		Pn	21 29 43.3	-0.9
WTFS	**Witchita Falls**	**1.46**	**218**		Pn	21 29 44.9	-0.5
WTFS					Sb	21 30 04.4	-0.4
OK048	**Pawnee Station**	**1.54**	**14**		Pn	21 29 46.0	-0.5
Z35A	**Perchaven, San**	**1.59**	**176**		Pn	21 29 46.7	-0.6
CROK	**Carrier**	**1.65**	**343**		Pn	21 29 48.1	0.0
FW06	**Azle**	**1.95**	**184**		Pn	21 29 53.0	+0.8
FW03	**Perrin-Whitt E**	**1.96**	**197**		Pn	21 29 51.0	-1.4
GC02	**Grant County #**	**1.96**	**349**		Pn	21 29 52.6	+0.1
T35A	**Sooner Cattle**	**2.11**	**19**		Pn	21 29 54.7	+0.2
FW07	**Weatherford**	**2.24**	**189**		Pn	21 29 57.1	+1.0
PLPT	**Palo Pinto**	**2.24**	**200**		Pn	21 29 55.7	-0.5
RLO	**Rose Lookout**	**2.29**	**57**	Pn	Pn	21 29 57.1	+0.1
RLO				IAmb_Lg		21 30 34.3	
	comp=Z,16nm,0.8s						
SMWD	**Samnorwood**	**2.35**	**275**		Pn	21 29 58.4	+0.7
SMWD				IAmb_Lg		21 30 38.4	
	comp=Z,13nm,0.8s						
APMT	**Aspermont**	**2.77**	**236**		Pn	21 30 03.6	+0.1
U38A	**Gravette**	**2.88**	**57**		Pn	21 30 06.1	+1.1
U38A				IAmb_Lg		21 30 55.1	
	comp=Z,19nm,1.2s						
HHAR	**Hobbs**	**3.12**	**63**		Pn	21 30 08.2	-0.2
HHAR				IAmb_Lg		21 31 03.3	
	comp=Z,15nm,1.0s						
MIAR	**Mount Ida**	**3.16**	**96**		Pn	21 30 09.4	+0.5
MIAR				IAmb_Lg		21 31 05.1	
	comp=Z,11nm,0.8s						
DKNS	**Dickens**	**3.18**	**248**	IAmb_Lg		21 31 07.6	
	comp=Z,8.2nm,0.9s						
AMTX	**Amarillo**	**3.53**	**271**	IAmb_Lg		21 31 16.2	
	comp=Z,8.3nm,0.7s						
SN05	**Snyder 5**	**3.55**	**236**	IAmb_Lg		21 31 15.8	
	comp=Z,8.2nm,0.7s						
X40A	**Basin Creek Fa**	**3.78**	**95**	IAmb_Lg		21 31 28.5	
	comp=Z,6.6nm,0.8s						
BRDY	**Brady**	**3.87**	**201**		Pn	21 30 18.4	-0.2
POST	**Post**	**3.88**	**243**	IAmb_Lg		21 31 25.5	
	comp=Z,7.5nm,1.0s						
UALR	**University of**	**4.15**	**91**	IAmb_Lg		21 31 37.0	
	comp=Z,17nm,1.1s						
WHAR	**Wooly Hollow**	**4.20**	**84**		Pn	21 30 23.0	-0.1
WHAR				IAmb_Lg		21 31 42.8	
	comp=Z,7.2nm,0.8s						
SGCY	**Sterling City**	**4.33**	**227**	Pn	Pn	21 30 25.0	-0.1
JCT	**Junction City**	**4.87**	**205**	IAmb_Lg		21 31 59.9	
	comp=Z,13nm,0.8s						
OZNA	**Ozona**	**5.08**	**219**	IAmb_Lg		21 32 00.4	
	comp=Z,12nm,1.2s						
R40A	**Maddies Statio**	**5.32**	**49**	IAmb_Lg		21 32 11.9	
	comp=Z,9.6nm,0.9s						
HNDO	**Hondo**	**5.61**	**197**	IAmb_Lg		21 32 21.5	
	comp=Z,8.2nm,0.9s						
P38A	**Dawn**	**5.61**	**32**	IAmb_Lg		21 32 29.8	
	comp=Z,6.0nm,0.9s						
CCM	**Cathedral Cave**	**5.86**	**56**	IAmb_Lg		21 32 37.2	
	comp=Z,5.9nm,0.7s						
CGM3	**Cape Girardeau**	**6.69**	**67**	IAmb_Lg		21 32 59.0	
	comp=Z,4.9nm,1.0s						
ANMO	**Albuquerque**	**7.45**	**273**	IAmb_Lg		21 33 15.3	
	comp=Z,3.4nm,0.8s						

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*IDC **26** 21:33:18.9±0.8, 36°.50N×71°.07E, h0^{km}, mb4.0/17, mbtmp4.1/21, ML3.9/4, MS2.8/6, Error ellipse: s-maj=18.7km s-min=13.3km az=28.0*

*MOS **26** 21:33:30.7±1.0, 36°.88N×71°.07E, h102^{km}, mb4.3/14, Error ellipse: s-maj=7.7km s-min=4.2km az=80.0*

*NEIC **26** 21:33:32.6±1.3, 36°.84N±0°.05×71°.02E±0°.09, h101^{km}±8^{km}, mb4.4/29, Error ellipse: s-maj=10.6km s-min=7.2km az=108.0*

*BJI **26** 21:33:32.1, 36°.98N×71°.13E, h108^{km}, mB4.6/4, mb4.4/18*

*NNC **26** 21:33:36.4±1.9, 37°.19N×71°.15E, h174^{km}±23^{km}, mb3.8, mpv4.9, Error ellipse: s-maj=17.7km s-min=11.2km az=20.0*

ISC 26 21:33:30.4±0.4, 36°.82N±0°.04×71°.16E±0°.04, h88^{km}, n191, σ2^{s}.06/216, mb4.2/39, 7C-8D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIMJ	**Simiganj**	**2.50**	**318**		**Pn**	**21 34 09.4**	**+0.1**
SIMJ				Sn	**Sn**	**21 34 37.5**	**-1.6**
DRK	**Karamyk**	**2.70**	**11**	Pn	**Pn**	**21 34 15.5**	**+3.3**
DRK				Sn	**Sn**	**21 34 48.1**	**+3.9**
KBL	**Kabul**	**2.85**	**218**		**Pn**	**21 34 16.1**	**+1.9**
KBL				Sn	**Sn**	**21 34 49.0**	**+1.3**
KBL	**Kabul**	**2.85**	**218**	PN	**Pn**	**21 34 16.1**	**+1.9**
KBL						21 34 49.0	
BTK	**Batken**	**3.24**	**355**	Pn	**Pn**	**21 34 22.1**	**+2.9**
BTK				Sn	**Sn**	**21 34 59.6**	**+2.7**
NIL	**Nilore**	**3.60**	**151**		**Pn**	**21 34 27.3**	**+3.2**
NIL	**Nilore**	**3.60**	**151**	PN	**Pn**	**21 34 27.3**	**+3.2**
SRNI	**Srinagar**	**4.06**	**131**	*e*P	**Pn**	**21 34 32.1**	**+1.9**
SRNI				*e*S	**Sn**	**21 35 16.3**	**-0.3**
KSH	**Kashi**	**4.65**	**53**	P	**Pn**	**21 34 37.5**	**-0.9**
KSH				S	**Sn**	**21 35 24.5**	**-6.7**
ARSB	**Arslanbob**	**4.71**	**17**		**Pn**	**21 34 41.0**	**+1.8**
ARSB	**Arslanbob**	**4.71**	**17**	PN	**Pn**	**21 34 41.1**	**+1.8**
JMU	**Jammu**	**5.13**	**142**	*e*P	**Pn**	**21 34 44.8**	**+0.1**
JMU				*e*S	**Sn**	**21 35 38.5**	**-4.0**
IUG	**Iuzhnay**	**5.39**	**351**	*e*PN	**Pn**	**21 34 49.7**	**+1.4**
IUG	**Iuzhnay**	**5.39**	**351**	*e*P	**Pn**	**21 34 49.7**	**+1.4**
CHM	**Chimkent**	**5.62**	**348**	*e*PN	**Pn**	**21 34 52.9**	**+1.5**
CHM	**Chimkent**	**5.62**	**348**	*e*P	**Pn**	**21 34 53.0**	**+1.5**
AML	**Almayashu**	**5.65**	**20**	P	**Pn**	**21 34 54.6**	**+2.4**
	SNR=426						
NRN	**Naryn**	**5.95**	**38**		**Pn**	**21 34 57.9**	**+1.7**
NRN	**Naryn**	**5.95**	**38**	PN	**Pn**	**21 34 57.9**	**+1.7**
UCH	**Uchtor**	**5.99**	**25**	P	**Pn**	**21 34 59.6**	**+2.7**
	SNR=17						
DZA	**Taraz**	**6.06**	**1**	*e*PN	**Pn**	**21 34 59.3**	**+1.8**
DZA	**Taraz**	**6.06**	**1**	*e*P	**Pn**	**21 34 59.3**	**+1.8**
EKS2	**Erkin-Say**	**6.17**	**18**	P	**Pn**	**21 35 01.6**	**+2.6**
	SNR=204						
DHRM	**DHARAMSHALA**	**6.23**	**136**	*e*P	**Pn**	**21 35 01.6**	**+1.6**
DHRM				*e*S	**Sn**	**21 36 06.7**	**-3.2**
BRLS	**Borolday**	**6.28**	**351**	*e*PN	**Pn**	**21 34 58.0**	**-2.4**
BRLS	**Borolday**	**6.28**	**351**	*e*P	**Pn**	**21 34 58.0**	**-2.4**
KK31	**Karatay Array**	**6.29**	**356**		**Pn**	**21 35 01.7**	**+1.1**
KK31	**Karatay Array**	**6.29**	**356**	P	**Pn**	**21 35 02.1**	**+1.5**
	59nm,0.2s,baz=176,slow=12,SNR=2850						
KK31				S	**Sn**	**21 36 10.8**	**-0.2**
	116nm,0.5s,baz=186,slow=23,SNR=10.0						
KK31	**Karatay Array**	**6.29**	**356**	PN	**Pn**	**21 35 01.7**	**+1.1**
KKAR	**Karatay Array**	**6.29**	**356**		**Pn**	**21 35 01.7**	**+1.1**
KKAR	**Karatay Array**	**6.29**	**356**		**Pn**	**21 35 01.7**	**+1.1**
KKAR	**Karatay Array**	**6.29**	**356**	PN	**Pn**	**21 35 01.7**	**+1.1**
AAK	**Ala-Archa**	**6.35**	**23**	P	**Pn**	**21 35 04.4**	**+2.8**
	SNR=182						
AAK	**Ala-Archa**	**6.35**	**23**		**Pn**	**21 35 04.3**	**+2.8**
AAK	**Ala-Archa**	**6.35**	**23**	Pn	**Pn**	**21 35 03.8**	**+2.3**
	71nm,0.3s,baz=189,slow=6.4,SNR=245						
AAK				Sn	**Sn**	**21 36 12.9**	**+0.3**
	6.0nm,0.3s,baz=120,slow=20,SNR=1.6						
AAK				LR	LR	21 37 31.6	
	comp=Z,37nm,18.3s,baz=190,slow=38						
AAK	**Ala-Archa**	**6.35**	**23**	⇑P	**Pn**	**21 35 04.0**	**+2.5**
AAK				⇓S	**Sn**	**21 36 13.1**	**+0.5**
AAK	**Ala-Archa**	**6.35**	**23**	PN	**Pn**	**21 35 04.4**	**+2.8**
KBK	**Karagaybulak**	**6.52**	**25**	P	**Pn**	**21 35 06.8**	**+3.0**
	SNR=83						
FRU1	**Bishkek**	**6.55**	**23**		**Pn**	**21 35 07.2**	**+3.1**
FRU1	**Bishkek**	**6.55**	**23**	PN	**Pn**	**21 35 07.2**	**+3.1**
ULHL	**Ulahol**	**6.69**	**34**	P	**Pn**	**21 35 08.4**	**+2.2**
	SNR=27						
BOOM	**Boomskoye usch**	**6.76**	**32**		**Pn**	**21 35 09.4**	**+2.4**
BOOM	**Boomskoye usch**	**6.76**	**32**	PN	**Pn**	**21 35 09.4**	**+2.4**
CHMS	**Chumysh**	**6.76**	**23**	P	**Pn**	**21 35 09.3**	**+2.3**
	SNR=218						
CHMS	**Chumysh**	**6.76**	**23**	⇓P	**Pn**	**21 35 09.3**	**+2.3**
	120nm,0.3s						
CHMS				⇓S	**Sn**	**21 36 22.1**	**-0.3**
	29nm,0.6s						
USP	**Ospenovka**	**6.93**	**21**	P	**Pn**	**21 35 11.1**	**+1.8**
	SNR=70						
BHK	**Bhakra**	**6.94**	**140**	*e*P	Pn	21 35 15.1	+5.6
BHK				IAML		21 36 28.8	
	comp=N,116nm,0.1s						
BHK				IAML		21 36 29.2	
	comp=E,173nm,0.1s						
BHK				*e*S	**Sn**	**21 36 29.8**	**+3.0**
TKM2	**Tokmak 2**	**6.98**	**28**	P	**Pn**	**21 35 12.7**	**+2.5**
	SNR=33						
TKM2	**Tokmak 2**	**6.98**	**28**	⇓P	**Pn**	**21 35 12.7**	**+2.5**
	comp=E,31nm,0.4s						
KDJ	**Kajisay**	**7.06**	**39**		**Pn**	**21 35 13.6**	**+2.4**
KDJ	**Kajisay**	**7.06**	**39**	PN	**Pn**	**21 35 13.6**	**+2.4**
TARG	**Taragay, Kyrgy**	**7.11**	**44**		**Pn**	**21 35 15.0**	**+2.9**
TARG	**Taragay, Kyrgy**	**7.11**	**44**	PN	**Pn**	**21 35 15.0**	**+2.9**
SGDS	**Sogindy**	**7.13**	**21**	*e*P	**Pn**	**21 35 13.7**	**+1.5**
SMLA	**Simla**	**7.56**	**137**	*e*P	**Pn**	**21 35 19.5**	**+1.6**
SMLA				IAML		21 36 42.7	
	comp=E,143nm,0.2s						
SMLA				*e*S	**Sn**	**21 36 43.5**	**+1.5**
SMLA				IAML		21 36 44.1	
	comp=N,136nm,0.1s						
KLP	**Kalpa**	**7.90**	**130**	*e*P	**Pn**	**21 35 23.5**	**+0.7**
KLP				*e*S	**Sn**	**21 36 45.5**	**-5.3**
KLP				IAML		21 36 50.2	
	comp=N,108nm,0.6s						
KLP				IAML		21 36 54.1	
	comp=E,154nm,0.1s						
PRZ	**Przheval'sk**	**7.95**	**42**		**Pn**	**21 35 26.0**	**+2.7**
PRZ	**Przheval'sk**	**7.95**	**42**	PN	**Pn**	**21 35 26.0**	**+2.7**
SATY	**Saty**	**8.35**	**40**	*e*PN	**Pn**	**21 35 29.6**	**+0.9**
SATY	**Saty**	**8.35**	**40**	*e*P	**Pn**	**21 35 29.6**	**+0.9**
BTLS	**Baital**	**8.50**	**14**	*e*PN	**Pn**	**21 35 31.2**	**+0.7**
BTLS	**Baital**	**8.50**	**14**	*e*P	**Pn**	**21 35 31.3**	**+0.7**
DDI	**Dehra Dun**	**8.67**	**136**	*e*P	**Pn**	**21 35 34.0**	**+0.9**
DDI				*e*S	**Sn**	**21 37 03.0**	**-6.1**
DDI				IAML		21 37 13.9	
	comp=N,141nm,0.3s						
DDI				IAML		21 37 14.0	
	comp=E,110nm,0.1s						
UZB	**Uzynbulak**	**8.73**	**41**	*e*PN	**Pn**	**21 35 34.7**	**+0.7**
UZB	**Uzynbulak**	**8.73**	**41**	*e*P	**Pn**	**21 35 34.8**	**+0.7**
KPKS	**Kokpek**	**8.79**	**39**	*e*PN	**Pn**	**21 35 35.3**	**+0.7**
KPKS	**Kokpek**	**8.79**	**39**	*e*P	**Pn**	**21 35 35.4**	**+0.7**
BKNR	**BIKANER**	**8.96**	**168**	*e*P	**Pn**	**21 35 34.4**	**-2.6**
BKNR				*e*S	Sn	21 37 04.1	-12
BKNR				IAML		21 37 11.4	
	comp=N,259nm,0.8s						
BKNR				IAML		21 37 11.7	
	comp=E,253nm,0.3s						
SHLS	**Shalkode**	**8.98**	**43**	*e*P	**Pn**	**21 35 40.8**	**+3.5**
SHLS	**Shalkode**	**8.98**	**43**	*e*P	**Pn**	**21 35 40.9**	**+3.5**
PDGK	**Podgornoye**	**9.11**	**42**	⇓P	**Pn**	**21 35 39.5**	**+0.4**
	comp=E,4.2nm,0.6s						
JOSI	**Joshimath**	**9.38**	**129**	*e*P	**Pn**	**21 35 43.6**	**+0.7**
JOSI				*e*S	**Sn**	**21 37 19.8**	**-7.0**
JOSI				IAML		21 37 27.0	
	comp=E,114nm,0.4s						
JOSI				IAML		21 37 27.5	
	comp=N,119nm,0.1s						
KUDL	**Kundal**	**9.75**	**151**	*e*P	**Pn**	**21 35 47.9**	**+0.1**
KUDL				*e*S	**Sn**	**21 37 27.4**	**-8.2**
KUDL				IAML		21 37 31.9	
	comp=E,118nm,0.3s						
KUDL				IAML		21 37 33.1	
	comp=N,67nm,0.6s						
TDK	**Taldyqorghan**	**9.84**	**32**	*e*P	**Pn**	**21 35 49.5**	**+0.6**
TDK	**Taldyqorghan**	**9.84**	**32**	*e*P	**Pn**	**21 35 49.6**	**+0.6**
PTH	**Pithoragarh**	**10.49**	**131**	IAML		21 37 49.0	
	comp=E,62nm,0.5s						
PTH				IAML		21 37 52.7	
	comp=N,67nm,0.4s						
OTUK	**Ortayu**	**11.45**	**4**	⇓P	**Pn**	**21 36 09.9**	**-0.9**
	comp=N,14nm,0.7s						
MAKZ	**Makanchi**	**12.82**	**36**		**Pn**	**21 36 28.2**	**-1.0**
MAKZ	**Makanchi**	**12.82**	**36**	⇓P	**Pn**	**21 36 28.6**	**-0.6**
	comp=N,2.9nm,0.6s						
MAKZ	**Makanchi**	**12.82**	**36**	P	**Pn**	**21 36 28.2**	**-1.0**
MK31	**Makanchi Array**	**12.96**	**36**	P	**Pn**	**21 36 30.3**	**-0.8**
	comp=N,2.1nm,0.6s,baz=220,slow=14,SNR=22						
MK31	**Makanchi Array**	**12.96**	**36**	*ce*P	**Pn**	**21 36 30.3**	**-0.8**
MKAR	**Makanchi Array**	**12.96**	**36**		**Pn**	**21 36 29.8**	**-1.3**
MKAR	**Makanchi Array**	**12.96**	**36**	Pn	**Pn**	**21 36 29.0**	**-2.0**
	comp=N,0.4nm,0.3s,baz=220,slow=14,SNR=23						
MKAR				LR	LR	21 41 30.2	
	comp=N,35nm,18.0s,baz=157,slow=37						
	comp=N,2.5nm,0.7s						
MKAR	**Makanchi Array**	**12.96**	**36**	*i* P	**Pn**	**21 36 31.7**	**+0.7**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
JHNI	**Jhansi**	**12.96**	**149**	*e*P	**Pn**	**21 36 31.6**	**+0.4**
JHNI				*e*P	Sn	21 38 42.7	-11
JHNI				*e*S	Sn	21 38 43.1	-11
WMQ	**Urumqi**	**14.41**	**56**	*e*P	**P**	**21 36 53.3**	**-1.1**
KURBB	**Kurchatov Arra**	**14.78**	**19**	Pn	**Pn**	**21 36 51.4**	**-3.2**
	comp=Z,0.1nm,0.3s,baz=212,slow=11,SNR=12						

	comp=Z,0.7nm,0.5s						
KURBB	Kurchatov Arra	14.78	19	⇑P	Pn	21 36 52.4	-2.3
	comp=Z,8.1nm,0.7s						
AB31	Akbulak array	14.86	330		Pn	21 36 53.2	-2.5
AB31	Akbulak array	14.86	330	P	Pn	21 36 53.5	-2.3
	comp=Z,3.6nm,0.3s,baz=137,slow=13,SNR=501						
AB31				⇑S	Sn	21 39 33.9	-5.5
	comp=Z,2.3nm,0.4s,baz=153,slow=22,SNR=9.2						
ABKAR	Akbulak array	14.86	330		Pn	21 36 53.5	-2.3
KURK	Kurchatov	14.88	19		Pn	21 36 55.4	-0.6
KURK	Kurchatov	14.88	19	ceP	Pn	21 36 55.7	-0.3
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NRDN	NARMADA NAGAR	14.99	158	eP	Pn	21 36 58.7	+1.1
NRDN				IAML		21 39 41.1	
	comp=E,15nm,0.3s						
NRDN				IAML		21 39 41.2	
	comp=N,19nm,0.5s						
NRDN				eS	Sn	21 39 44.0	+1.2
EVN	Everest	15.89	119		Pn	21 37 07.3	-2.2
EVN				IAmb	IAmb	21 37 19.1	
	comp=Z,10nm,0.6s						
BVA0	Borovoye Array	16.21	358	P	Pn	21 37 11.8	-0.9
	comp=Z,6.6nm,0.5s,baz=264,slow=37,SNR=53						
BVAR	Borovoye Array	16.21	358	Pn	Pn	21 37 11.9	-0.8
	comp=Z,0.4nm,0.3s,baz=163,slow=11,SNR=22						
BVAR				Sn	Sn	21 40 05.4	-6.5
	comp=Z,0.1nm,0.3s,baz=166,slow=24,SNR=4.7						
BRVK	Borovoye	16.25	358		Pn	21 37 12.7	-0.4
BRVK	Borovoye	16.25	358	P	Pn	21 37 12.7	-0.4
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
AKTO	Aktyubinsk	16.57	329	Pn	Pn	21 37 14.3	-2.8
	comp=Z,3.2nm,0.3s,baz=135,slow=6.3,SNR=29						
AKTO				Sn	Sn	21 40 08.6	-12
	comp=Z,0.9nm,0.3s,baz=114,slow=20,SNR=5.0						
AKTO				LR	LR	21 44 31.1	
	comp=Z,37nm,19.2s,baz=56,slow=40						
	comp=Z,11nm,0.3s						
AKTO	Aktyubinsk	16.57	329	⇓P	Pn	21 37 15.7	-1.4
	comp=Z,11nm,0.6s						
LSA	Lhasa	18.15	107		Pn	21 37 38.3	+1.2
LSA				IAmb	IAmb	21 37 41.6	
	comp=Z,10nm,0.4s						
LSA	Lhasa	18.15	107	P	Pn	21 37 38.3	+1.2
LSA				pmax	pmax		
	comp=Z,10.0nm,0.4s						
AKT	Akhty	18.73	292	eP	P	21 37 39.8	-2.5
AKT				eS	S	21 41 10.1	-0.6
AKT				pmax	pmax		
	comp=Z,13nm,1.3s						
ZAA0	Zalesovo Array	19.57	25		P	21 37 51.1	+0.1
ZAA0				IAmb	IAmb	21 37 59.6	
	comp=Z,7.3nm,0.6s						
ZALV	Zalesovo Beam	19.57	25		P	21 37 51.8	+0.8
ZALV	Zalesovo Beam	19.57	25	P	P	21 37 51.0	-0.1
	comp=Z,2.1nm,0.3s,baz=215,slow=11,SNR=28						
ZALV				S	S	21 41 26.0	-1.2
	comp=Z,0.6nm,0.3s,baz=219,slow=20,SNR=1.7						
ZALV				LR	LR	21 46 01.5	
	comp=Z,19nm,20.6s,baz=94,slow=38						
	comp=Z,6.0nm,0.5s						
ZALV	Zalesovo Beam	19.57	25	i P	P	21 37 51.9	+0.8
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.4s						
GNI	Garni	20.91	287	P	P	21 38 07.6	+1.7
GNI				IAmb	IAmb	21 38 14.3	
	comp=Z,18nm,1.0s						
GNI	Garni	20.91	287	P	Pn	21 38 08.0	-1.3
	comp=Z,12nm,0.8s,baz=90,slow=12,SNR=5.9						
GNI	Garni	20.91	287	P	P	21 38 07.6	+1.7
GNI				pmax	pmax		
	comp=Z,18nm,1.0s						
GNI	Garni	20.91	287	P	Pn	21 38 08.6	-0.7
	comp=Z,16nm,1.0s						
SVE	Sverdlovsk	21.22	344	eP	P	21 38 09.3	+0.5
SVE				eS	S	21 42 04.5	+4.9
SVE				pmax	pmax		
	comp=Z,14nm,0.8s						
ARTI	Arti	21.38	340	P	P	21 38 10.6	0.0
ARTI	Arti	21.38	340	P	P	21 38 11.0	+0.5
	comp=Z,11nm,0.4s,baz=155,slow=6.8,SNR=35						
ARTI				S	S	21 41 59.8	-3.0
	comp=Z,1.5nm,0.5s,baz=147,slow=23,SNR=1.7						
ARTI				LR	LR	21 47 25.1	
	comp=Z,45nm,18.1s,baz=118,slow=39						
	comp=Z,11nm,0.4s						
ARTI	Arti	21.38	340c	iP	P	21 38 11.4	+0.9
ARTI						21 38 44.3	
ARTI				S	S	21 42 05.2	+2.4
ARTI				pmax	pmax		
	comp=Z,11nm,0.6s						
KBZ	Khabaz	22.57	297	P	P	21 38 22.4	-0.8
	comp=Z,3.2nm,0.8s,baz=118,slow=8.1,SNR=5.1						
KBZ				S	S	21 42 28.8	+4.6
	comp=Z,0.8nm,0.4s,baz=157,slow=15,SNR=2.4						
	comp=Z,3.2nm,0.8s						
GTA	Gaotai	22.66	75	eP	P	21 38 26.0	+1.5
GTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BELG	Belogornoye	22.72	321	i P	P	21 38 23.6	-1.1
BELG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KIV	Kislovodsk	22.75	297	P	P	21 38 24.4	-0.9
KIV	Kislovodsk	22.75	297	eP	P	21 38 24.4	-0.9
KIV				eS	S	21 42 26.1	-1.3
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
RAYN	Ar Rayn	25.74	246	P	P	21 38 51.5	-1.3
RAYN	Ar Rayn	25.74	246	P	P	21 38 51.5	-1.3
RAYN				pmax	pmax		
	comp=Z,1.0nm,0.7s						
PZH	PanZhiHua	27.89	103	P	P	21 39 15.5	+3.3
SONM	Songino Array	28.05	56	P	P	21 39 14.7	+1.2
	comp=Z,1.5nm,0.6s,baz=255,slow=9.6,SNR=9.6						
	comp=Z,1.5nm,0.6s						
ULN	Ulaanbaatar	28.49	56	ceP	P	21 39 19.6	+2.2
ULN				pmax	pmax		
	comp=Z,6.0nm,2.5s						
BR104	Keskin Array S	29.46	287	P	P	21 39 27.2	+1.2
	comp=Z,1.5nm,0.7s						
BR131	Keskin Array S	29.46	287	P	P	21 39 24.7	-1.3
BR131	Keskin Array S	29.46	287	P	P	21 39 24.7	-1.3
BR131				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BRTR	Keskin Array B	29.46	287	P	P	21 39 25.3	-0.8
BRTR	Keskin Array B	29.46	287	P	P	21 39 26.6	+0.6
	comp=Z,1.5nm,0.6s,baz=95,slow=8.8,SNR=9.6						
	comp=Z,1.5nm,0.6s						
BR105	Keskin Array S	29.47	287	P	P	21 39 27.6	+1.4
	comp=Z,3.5nm,0.8s						
BR105				pP	pP	21 39 47.9	+0.9
	comp=Z,3.5nm,0.8s						
CMAR	Chiang Mai Arr	30.50	119	P	P	21 39 34.4	-0.9
	comp=Z,0.9nm,0.8s,baz=294,slow=9.2,SNR=7.5						
	comp=Z,0.9nm,0.8s						
CMAR	Chiang Mai Arr	30.50	119	i P	P	21 39 37.2	+1.9
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KLMR	Klimovskoe	31.26	330	eP	P	21 39 39.9	-1.6
HHC	Hu-ho-hao-te	31.54	70	eP	P	21 39 48.0	+3.7
HHC				pmax	pmax		
	comp=Z,15nm,0.6s						
HHC				pmax	pmax		
	comp=Z,94nm,5.4s						
AK09	Malin Array Si	32.79	308	P	P	21 39 56.0	+1.0
AK10	Malin Array Si	32.81	308	P	P	21 39 56.0	+0.8
AK07	Malin Array Si	32.83	308	P	P	21 39 56.2	+0.8
AKASG	Malin Array Be	32.84	308	P	P	21 39 55.5	0.0
AKASG	Malin Array Be	32.84	308	P	P	21 39 54.9	-0.6
	comp=Z,0.6nm,0.3s,baz=84,slow=7.1,SNR=14						
	comp=Z,0.6nm,0.3s						
AKASG	Malin Array Be	32.84	308	i P	P	21 39 56.0	+0.5
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKBB	Malin Array Si	32.84	308	P	P	21 39 55.2	-0.2
AKBB				IAmb	IAmb	21 39 56.7	
	comp=Z,3.3nm,0.8s						
AKBB	Malin Array Si	32.84	308	P	P	21 39 55.2	-0.2
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AK05	Malin Array Si	32.84	308	P	P	21 39 56.3	+0.8
AK02	Malin Array Si	32.85	308	P	P	21 39 56.2	+0.7
KIEV	Kiev	32.85	308	P	P	21 39 56.0	+0.5
	comp=Z,19nm,0.7s						
ELL	Elmali	32.85	283	P	P	21 39 55.7	-0.2
ELL				IAmb	IAmb	21 40 15.0	
	comp=Z,12nm,1.5s						
ELL	Elmali	32.85	283	P	P	21 39 55.7	-0.2
ELL				pmax	pmax		
	comp=Z,12nm,1.5s						
AK12	Malin Array Si	32.88	308	P	P	21 39 56.5	+0.7
SORM	Soroca	33.13	304	P	P	21 39 58.4	+0.4
LUBAR	Lubar, Ukraine	33.67	307	P	P	21 40 02.8	+0.1
NDNU	Novodnistrovsk	33.81	304	P	P	21 40 05.1	+1.1
BURAR	Bucovina Array	35.22	303	P	P	21 40 16.3	+0.1
BUR08	Bucovina Ar. S	35.23	303	P	P	21 40 16.7	+0.4
BUR08				IAmb	IAmb	21 40 43.4	
	comp=Z,6.2nm,1.5s						
LVZ	Lovozero	37.21	338	P	P	21 40 32.6	-0.2
LVZ	Lovozero	37.21	338	P	P	21 40 32.6	-0.2
LVZ				pmax	pmax		
	comp=Z,18nm,1.3s						
FIA1	FINESS Array S	37.28	326	P	P	21 40 33.8	+0.3
FINES	FINESS Array B	37.29	326	P	P	21 40 34.2	+0.7
FINES	FINESS Array B	37.29	326	P	P	21 40 34.1	+0.6
	comp=Z,1.6nm,0.4s,baz=116,slow=8.4,SNR=15						
	comp=Z,1.6nm,0.4s						
FINES	FINESS Array B	37.29	326	P	P	21 40 34.2	+0.7
ARCES	ARCESS Array B	40.89	337	P	P	21 41 04.0	+0.6
ARCES				IAmb	IAmb	21 41 24.0	
	comp=Z,10nm,1.4s						
ARCES	ARCESS Array B	40.89	337	P	P	21 41 04.4	+0.9
	comp=Z,1.6nm,0.3s,baz=115,slow=9.0,SNR=37						
ARCES				LR	LR	21 59 10.9	
	comp=Z,32nm,19.0s,baz=110,slow=38						
	comp=Z,1.6nm,0.3s						
HEH	HeiHe	41.95	53	eP	P	21 41 13.5	+1.1
HEH				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GERES	GERESS Array B	42.85	305	P	P	21 41 19.4	-0.4
	comp=Z,0.2nm,0.5s,baz=77,slow=8.0,SNR=2.1						
	comp=Z,0.2nm,0.5s						
HFS	Hagfors	42.89	322	P	P	21 41 20.4	+0.6
	comp=Z,4.1nm,0.5s,baz=96,slow=11,SNR=26						
	comp=Z,4.1nm,0.5s						
CUC	Castrocucco	42.89	292	P	P	21 41 20.0	-0.2
CUC				IAmb	IAmb	21 41 22.9	
	comp=Z,5.4nm,0.7s						
NC405	NORSAR Array S	43.96	323	P	P	21 41 28.6	+0.1
NC405				IAmb	IAmb	21 41 35.2	
	comp=Z,6.3nm,1.0s						
NB2	NORSAR Subarra	44.20	323	P	P	21 41 30.7	+0.3
	comp=Z,1.1nm,0.5s,baz=96,slow=7.9						
NOA	NORSAR Array B	44.20	323	P	P	21 41 30.5	+0.1
	comp=Z,1.5nm,0.5s,baz=97,slow=7.8,SNR=12						
	comp=Z,1.5nm,0.5s						
KONO	Kongsberg	44.91	321	P	P	21 41 36.0	0.0
KONO	Kongsberg	44.91	321	P	P	21 41 36.0	0.0
KONO				pmax	pmax		
	comp=Z,25nm,1.5s						
TIXI	Tiksi	45.43	22	P	P	21 41 40.8	+0.9
TIXI				IAmb	IAmb	21 41 41.8	
	comp=Z,4.2nm,0.8s						
TIXI	Tiksi	45.43	22	P	P	21 41 40.8	+0.9
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
EKA	Eskdalemuir Ar	52.14	316	P	P	21 42 30.7	-0.8
	comp=Z,0.7nm,0.6s,baz=96,slow=6.9,SNR=4.6						
	comp=Z,0.7nm,0.6s						
ESDC	Sonseca Array	57.42	298	P	P	21 43 10.1	+0.1
	comp=Z,0.9nm,0.7s,baz=53,slow=7.4,SNR=9.6						
	comp=Z,0.9nm,0.7s						
TORD	Torodi Ar. Bea	65.85	269	P	P	21 44 05.8	-1.1
C18K	Utukok River	67.93	18	P	P	21 44 19.7	+0.4
C18K				IAmb	IAmb	21 44 29.7	
	comp=Z,10nm,1.4s						
TOLK	Toolik Lake Re	70.58	15	P	P	21 44 36.9	+1.2
IMAR	Indian Mountai	71.83	18	P	P	21 44 43.7	+0.5
ILAR	Eielson Array	74.44	16	P	P	21 44 59.6	+1.1
	comp=Z,0.3nm,0.5s,baz=351,slow=8.7,SNR=2.0						
	comp=Z,0.3nm,0.5s						
LBTB	Lobatse	75.00	222	P	P	21 45 02.5	+0.1
LBTB	Lobatse	75.00	222	P	P	21 45 02.5	+0.1
LBTB				pmax	pmax		
	comp=Z,18nm,1.5s						
BOSA	Boshof	78.07	220	P	P	21 45 19.5	-0.2
BOSA	Boshof	78.07	220	P	P	21 45 19.5	-0.2
BOSA				pmax	pmax		
	comp=Z,14nm,1.2s						
YKA	Yellowknife Ar	80.92	3	P	P	21 45 36.0	+1.4
	comp=Z,0.7nm,0.5s,baz=359,slow=18,SNR=5.1						
	comp=Z,0.7nm,0.5s						
YKA	Yellowknife Ar	80.92	3	P	P	21 45 36.0	+1.4
WRA	Warramunga Arr	82.06	122	P	P	21 45 40.0	-1.2
	comp=Z,1.8nm,0.5s,baz=324,slow=4.9,SNR=30						
	comp=Z,1.8nm,0.5s						
WRA	Warramunga Arr	82.06	122	i P	P	21 45 40.4	-0.8
WRA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ASAR	Alice Springs	84.34	125	P	P	21 45 51.9	-1.0
	comp=Z,1.6nm,0.6s,baz=311,slow=5.1,SNR=26						
	comp=Z,1.6nm,0.6s						

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*KRSC **26** 21:47:05.3±1.1, 56°.17N×164°.49E, h41^{km}±17^{km}, Ml4.1*

*IDC **26** 21:47:12.0±0.8, 56°.23N×163°.98E, h0^{km}, mb3.7/13, mbtmp3.7/15, ML3.0/2, MS3.0/7, Error ellipse: s-maj=24.2km s-min=14.8km az=155.0*

ISC 26 21:47:11.9±0.7**, 56°.06N**±0°.07×**164°.17E**±0°.06**, h10**^{km}**, n50, σ3^{s}.11**/40**, mb3.6**/13**, MS3.0**/4**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.77	282	eP	Pg	21 47 21.5	-5.3
KBG	Krutoberegovo	0.85	284	eP	Pg	21 47 22.9	-5.3
KBG				eS	Sg	21 47 35.4	-3.8
BKI	Bering	1.33	129	eP	Pn	21 47 28.7	-7.8
BKI				eS	Sb	21 47 45.6	-8.4
SMKR	Semkarok	1.60	290	eP	Pn	21 47 34.8	-5.5
ZLN	Zelenaya	1.89	270	eP	Pn	21 47 40.6	-3.8
CIRR	Tsirk	1.92	273	eP	Pn	21 47 41.0	-3.8
BZGR	Bezymyannyi-Gr	1.96	268	eP	Pn	21 47 41.3	-4.0
KLY	Klyuchi	1.99	279	eP	Pn	21 47 39.1	-6.4
KRSR	Krestovskiy	2.03	276	eP	Pn	21 47 42.0	-4.2
MKZ	Mys Kozlova	2.05	224	eP	Pn	21 47 41.9	-4.5
BZWR	Bezymyannyi-We	2.07	269	eP	Pn	21 47 42.9	-3.9
BZMR	Bezymyannaya	2.07	268	eP	Pn	21 47 42.7	-4.2
KIRR	Kirishev	2.15	269	eP	Pn	21 47 44.2	-3.8
KPT	Kopyto	2.22	269	eP	Pn	21 47 45.2	-3.7
KMNR	Kamenistaya	2.24	264	eP	Pn	21 47 45.9	-3.2
TUMD	Tumrok D	2.31	250	eP	Pn	21 47 46.3	-3.6
TUMD				eS	Sn	21 48 15.9	-2.4
KOZ	Kozyrevsk	2.41	272	eP	Pn	21 47 49.2	-2.2
SRDR	Sredinnyy	2.50	278	eP	Pn	21 47 49.8	-3.0
ESO	Esso	3.08	270	eP	Pn	21 47 58.8	-1.7
OSSR	Ossora	3.26	350	eP	Pn	21 47 55.0	-7.9
SPN	Mys Shipunski	3.83	221	eP	Pn	21 48 08.4	-2.4
SMAR	Somma	4.19	230	eP	Pn	21 48 12.8	-3.2
UGLR	Uglovaya	4.22	230	eP	Pn	21 48 14.9	-1.4
KOK	Koryaka	4.24	232	eP	Pn	21 48 14.1	-2.6
GNL	Ganaly	4.31	239	eP	Pn	21 48 15.3	-2.2
PETK	Petropavlovsk-	4.79	235	Pn	Pn	21 48 23.6	-0.5
	0.4nm,0.3s,baz=92,slow=20,SNR=6.3						
PETK				Sn	Sn	21 49 24.4	+4.8
	0.4nm,0.3s,baz=65,slow=21,SNR=1.3						
PETK				LR	LR	21 50 36.8	
	comp=Z,267nm,18.7s,baz=60,slow=43						
	2.4nm,0.7s						
RUS	Russkaya	4.92	225	eP	Pn	21 48 22.5	-3.3
GRL	Gorelyy	5.01	228	eP	Pn	21 48 25.9	-1.3
MTVR	Mutnovka	5.01	227	eP	Pn	21 48 24.9	-2.3
ASAK	Asacha	5.21	228	eP	Pn	21 48 28.0	-1.9
MA2	Magadan	7.98	302	LR	LR	21 52 21.1	
	comp=Z,116nm,20.8s,baz=112,slow=40						
ASAJ	Asahikawa	18.20	238	P	Pn	21 51 26.9	+2.5
	0.2nm,0.3s,baz=120,slow=1.5,SNR=4.6						
	7.2nm,1.0s						
YAK	Yakutsk	18.55	303	LR	LR	21 58 52.0	
	comp=Z,41nm,19.5s,baz=60,slow=38						
TIXI	Tiksi	21.53	330	P	P	21 52 00.7	0.0
	4.5nm,0.8s,baz=116,slow=9.1,SNR=14						
TIXI				LR	LR	21 59 51.4	
	comp=Z,54nm,20.8s,baz=175,slow=36						
	4.5nm,0.8s						
USRK	Ussuriysk Ar.	23.56	253	P	P	21 52 23.6	+1.3
	1.6nm,0.7s,baz=44,slow=11,SNR=1.7						
	1.6nm,0.7s						
ILAR	Eielson Array	25.06	50	P	P	21 52 38.2	+2.2
	0.5nm,0.7s,baz=275,slow=9.3,SNR=6.6						
ILAR				LR	LR	22 02 39.7	
	comp=Z,60nm,18.3s,baz=220,slow=37						
	0.5nm,0.7s						
MJAR	Matsushiro Arr	26.24	233	P	P	21 52 49.4	+2.4
	1.3nm,0.5s,baz=19,slow=8.2,SNR=7.3						
MJAR				LR	LR	22 03 12.9	
	comp=Z,58nm,22.0s,baz=54,slow=37						
	1.3nm,0.5s						
DLBC	Dease Lake	34.41	58	LR	LR	22 07 53.5	
	comp=Z,4.7nm,19.3s,baz=245,slow=36						
SONM	Songino Array	35.58	282	P	P	21 54 09.7	+0.4
	0.4nm,0.5s,baz=68,slow=9.4,SNR=2.9						
	0.4nm,0.5s						
H11N2	WAKE ISLAND Hy	36.33	176	T	T	22 33 00.7	
	baz=357,slow=76,SNR=246						
H11N3	WAKE ISLAND Hy	36.34	176	T	T	22 33 01.7	
	baz=357,slow=76,SNR=260						
H11N1	WAKE ISLAND Hy	36.34	176	T	T	22 33 07.3	
	baz=357,slow=76,SNR=256						
SPITS	Spitsbergen Ar	44.59	351	P	P	21 55 23.7	+0.2
	6.2nm,0.7s,baz=334,slow=9.6,SNR=2.4						
	6.2nm,0.7s						
KURBB	Kurchatov Arra	48.29	302	P	P	21 55 52.3	-0.5
	0.3nm,0.7s,baz=50,slow=7.6,SNR=4.2						
	0.3nm,0.7s						
MKAR	Makanchi Array	49.01	296	P	P	21 55 58.1	-0.4
	0.3nm,0.6s,baz=55,slow=6.4,SNR=4.9						
	0.3nm,0.6s						
BVAR	Borovoye Array	50.40	309	P	P	21 56 09.1	+0.1
	3.1nm,0.8s,baz=57,slow=11,SNR=9.4						
	3.1nm,0.8s						
NVAR	Mina Array Bea	52.58	75	P	P	21 56 26.5	+0.7
	0.4nm,0.4s,baz=333,slow=9.7,SNR=2.3						
	0.4nm,0.4s						
PDAR	Pinedale Array	54.06	65	P	P	21 56 39.5	+3.0
	0.6nm,1.0s,baz=320,slow=4.4,SNR=3.7						
	0.6nm,1.0s						
TXAR	Lajitas Array	67.35	71	P	P	21 58 08.3	+1.1
	0.3nm,0.6s,baz=332,slow=4.8,SNR=4.3						
	0.3nm,0.6s						
WRA	Warramunga Arr	79.80	208	P	P	21 59 22.7	+2.6
	0.6nm,0.9s,baz=19,slow=5.7,SNR=2.9						
	0.6nm,0.9s						

KRSC 26 21:48:37.8±1.4**, 56°.25N×164°.32E, h52**^{km}±22^{km}**, Ml3.7, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.84	268	eP	Pn	21 48 53.5	+0.1
KBTR				eS	Sn	21 49 03.1	-1.7
KBG	Krutoberegovo	0.90	271	eP	Pn	21 48 54.8	+0.6
KBG				eS	Sn	21 49 06.6	+0.4
BKI	Bering	1.40	137	eP	Pn	21 49 03.3	+2.4
BKI				eS	Sn	21 49 21.0	+2.8
SMKR	Semkarok	1.62	283	eP	Pn	21 49 08.0	+4.1
SMKR				eS	Sn	21 49 28.4	+4.6
BDR	Baidarnaya	1.76	282	eS	Sn	21 49 32.0	+4.8
MKZ	Mys Kozlova	2.25	222	eP	Pn	21 49 14.7	+2.2
KMNR	Kamenistaya	2.34	260	eP	Pn	21 49 18.8	+4.9
TUMD	Tumrok D	2.45	246	eP	Pn	21 49 19.0	+3.7
OSSR	Ossora	3.09	348	eP	Pn	21 49 27.2	+3.2
OSSR				eS	Sn	21 50 00.9	+1.4
SPN	Mys Shipunski	4.02	220	eP	Pn	21 49 39.4	+2.7
SPN				eS	Sn	21 50 22.9	+0.4
SMAR	Somma	4.38	229	eP	Pn	21 49 45.7	+3.9
RUS	Russkaya	5.11	224	eP	Pn	21 49 55.3	+3.6
GRL	Gorelyy	5.20	227	eP	Pn	21 49 58.2	+5.2
MTVR	Mutnovka	5.20	226	eP	Pn	21 49 57.8	+4.7
ASAK	Asacha	5.39	227	eP	Pn	21 50 00.5	+4.8

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*JMA **26** 21:55:03.9±0.8, 45°N±4°×14°9E±°, h30^{km}, MV4.3/11, NEAR ETOROFU ISLAND*

*SKHL **26** 21:55:07.8±0.8, 44°.80N×148°.70E, h50^{km}±4^{km}, mb4.3/3*

ISC 26 21:55:06.1±2.8**, 44°.62N**±0°.07×**148°.5E**±0°.1**, h9**^{km}±12^{km}**, n15, σ1^{s}.39**/28**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.75	326	eP	Pg	21 55 20.6	+0.1
KUR				AMB	AMB	21 55 21.2	
	180nm,0.4s						
KUR				eS	Sg	21 55 30.8	+0.6
KUR				A	A	21 55 32.3	
	260nm,0.3s						
KUR				A	A	21 55 32.3	
	600nm,0.3s						
SHO	Shikotan	1.39	238	eP	Pg	21 55 33.2	+0.5
SHO				AMB	AMB	21 55 33.8	
	50nm,0.3s						
SHO				eS	Sg	21 55 51.7	+1.0
SHO				A	A	21 55 56.3	
	470nm,0.4s						
SHO				A	A	21 55 56.3	
	370nm,0.4s						
YUK	Yuzh-Kuril'sk	1.95	254	eP	Pb	21 55 40.7	-1.1
YUK				AMB	AMB	21 55 41.3	
	150nm,0.3s						
YUK				eS	Sb	21 56 05.3	-0.9
YUK				A	A	21 56 08.8	
	790nm,0.4s						
YUK				A	A	21 56 08.8	
	890nm,0.4s						
GLVR	Golovnino	2.29	249	eP	Pb	21 55 46.0	-1.5
GLVR				eS	Sb	21 56 15.2	-0.7
NEM2	Nemuro 2	2.32	238	eP	Pn	21 55 44.9	+0.4
NEM2				eS	Sn	21 56 13.6	+0.5
NMR	Nemuro--Hokkai	2.33	239	eP	Pn	21 55 44.9	+0.3
NMR				eS	Sn	21 56 14.4	+1.1
JRA	Rausu	2.49	255	eP	Pn	21 55 48.1	+1.3
JRA				eS	Sb	21 56 21.9	+0.2
JNK	Nakash	2.88	250	P	Pn	21 55 53.1	+0.9
JNK				eS	Sn	21 56 29.4	+2.4
AKK	Akkeshi	3.07	240	eP	Pn	21 55 54.9	+0.2
JAK	Akkeshi	3.17	241	eP	Pn	21 55 56.2	+0.1
JAK				eS	Sn	21 56 35.4	+1.4
JTKR	Abashiri--Toko	3.33	260	eP	Pn	21 55 58.0	-0.3
JAR	Ashorobuto	3.63	250	P	Pn	21 56 04.2	+1.7
JAR				eS	Sb	21 56 50.6	-4.0
JOB	Onbets	3.76	245	eP	Pn	21 56 05.0	+0.8
JOB				eS	Sn	21 56 49.2	+0.6
JCH	Churui	4.21	243	P	Pn	21 56 11.1	+0.8
JCH				eS	Sn	21 56 58.2	-1.4
JNBK	Urakawa-nobuka	4.76	243	eP	Pn	21 56 17.2	-0.8
JNBK				eS	Sn	21 57 15.6	+2.2

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*MOS **26** 22:01:07.9±0.9, 36°.42N×70°.95E, h135^{km}, mb4.5/26, Error ellipse: s-maj=6.8km s-min=3.8km az=85.2*

*IDC **26** 22:01:07.8±2.9, 36°.32N×71°.01E, h124^{km}±27^{km}, mb3.9/21, mbtmp4.4/25, Error ellipse: s-maj=16.3km s-min=10.8km az=22.0*

*NEIC **26** 22:01:09.7±0.9, 36°.46N±0°.05×70°.86E±0°.08, h133^{km}±7^{km}, mb4.5/41, Error ellipse: s-maj=9.2km s-min=7.3km az=90.0*

*BJI **26** 22:01:09.6, 36°.57N×71°.02E, h139^{km}, mB4.6/6, mb4.5/30*

*NNC **26** 22:01:13.0±2.8, 36°.78N×70°.80E, h155^{km}±35^{km}, mb4.1, mpv4.9, Error ellipse: s-maj=22.7km s-min=15.6km az=21.0*

ISC 26 22:01:10.6±0.3**, 36°.48N**±0°.04×**70°.87E**±0°.04**, h150**^{km}**, n295, σ1^{s}.91**/333**, mb4.4**/52**, 18C-8D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.44	218		Pn	22 01 49.1	-2.2
KBL				Sn	Sn	22 02 18.9	-3.7
KBL	Kabul	2.44	218	P	Pn	22 01 49.4	-1.8
	SNR=222						
KBL				S	Sn	22 02 18.9	-3.7
KBL	Kabul	2.44	218	PN	Pn	22 01 49.1	-2.2
KBL						22 02 18.9	
SIMJ	Simiganj	2.63	326		Pn	22 01 51.9	-1.5
SIMJ				Sn	Sn	22 02 23.0	-3.5
DRK	Karamyk	3.08	14		Pn	22 01 59.0	-0.3
DRK				Sn	Sn	22 02 34.6	-2.3
NIL	Nilore	3.44	145		Pn	22 02 01.7	-1.9
NIL				Sn	Sn	22 02 42.2	-2.4
NIL	Nilore	3.44	145	P	Pn	22 02 02.1	-1.4
BTK	Batken	3.57	359	Pn	Pn	22 02 04.9	-0.4
BTK	Batken	3.57	359	PN	Pn	22 02 04.9	-0.4
JMU	Jammu	5.02	137	eP	Pn	22 02 20.9	-3.3

JMU				*e*S	Sn	22 03 13.4	-8.2
JMU				IAML		22 03 18.7	
	comp=N,1µm,0.6s						
JMU				IAML		22 03 19.2	
	comp=E,696nm,0.2s						
KSH	Kashi	5.04	52	P	Pn	22 02 19.3	-5.3
KSH				S	Sn	22 03 10.3	-12
ARSB	Arslanbob	5.11	18		Pn	22 02 24.1	-1.4
ARSB	Arslanbob	5.11	18	PN	Pn	22 02 24.1	-1.4
IUG	Iuzhnay	5.69	354	*e*PN	Pn	22 02 32.0	-1.2
IUG	Iuzhnay	5.69	354	*e*P	Pn	22 02 32.0	-1.2
CHM	Chimkent	5.91	351	*e*PN	Pn	22 02 35.0	-1.0
CHM	Chimkent	5.91	351	*e*P	Pn	22 02 35.1	-1.0
AML	Almayashu	6.05	20	P	Pn	22 02 37.2	-1.1
	SNR=173						
DHRM	DHARAMSHALA	6.16	132	*e*P	Pn	22 02 37.2	-2.5
DHRM				IAML		22 03 45.4	
	comp=E,1µm,0.5s						
DHRM				*e*S	Sn	22 03 47.9	-1.5
NRN	Naryn	6.36	37	Pn	Pn	22 02 40.1	-2.2
NRN	Naryn	6.36	37	PN	Pn	22 02 40.1	-2.2
UCH	Uchtor	6.39	25	P	Pn	22 02 43.5	+0.6
	SNR=18						
DZA	Taraz	6.41	3	*e*PN	Pn	22 02 41.4	-1.3
DZA	Taraz	6.41	3	*e*P	Pn	22 02 41.5	-1.3
EKS2	Erkin-Say	6.57	19	P	Pn	22 02 44.3	-0.6
	SNR=75						
BRLS	Borolday	6.59	353	*e*PN	Pn	22 02 40.5	-4.6
BRLS	Borolday	6.59	353	*e*P	Pn	22 02 40.5	-4.6
KK31	Karatay Array	6.62	358		Pn	22 02 44.6	-0.9
KK31	Karatay Array	6.62	358	⇑P	Pn	22 02 44.4	-1.1
	comp=E,27nm,0.3s,baz=175,slow=11,SNR=1386						
KK31				S	Sn	22 03 55.6	-4.2
	comp=E,116nm,0.6s,baz=190,slow=22,SNR=11						
KK31	Karatay Array	6.62	358	PN	Pn	22 02 44.6	-0.9
KKAR	Karatay Array	6.62	358		Pn	22 02 44.6	-0.9
KKAR	Karatay Array	6.62	358	PN	Pn	22 02 44.6	-0.9
AAK	Ala-Archa	6.75	23	P	Pn	22 02 46.7	-0.7
	SNR=130						
AAK	Ala-Archa	6.75	23		Pn	22 02 46.7	-0.7
AAK	Ala-Archa	6.75	23	P	Pn	22 02 45.7	-1.7
	comp=E,119nm,0.3s,baz=182,slow=4.6,SNR=67						
AAK				S	Sn	22 04 00.1	-3.2
	comp=E,56nm,0.5s,baz=326,slow=22,SNR=14						
AAK	Ala-Archa	6.75	23	P	Pn	22 02 47.1	-0.3
AAK				S	Sn	22 04 01.2	-2.1
AAK	Ala-Archa	6.75	23	⇑P	Pn	22 02 47.1	-0.3
AAK				⇑S	Sn	22 04 00.5	-2.8
AAK	Ala-Archa	6.75	23	*ce*PN	Pn	22 02 46.9	-0.5
AAK				pmax	pmax		
	comp=Z,103nm,0.6s						
AAK	Ala-Archa	6.75	23	P	Pn	22 02 46.5	-0.9
KBK	Karagaybulak	6.92	26	P	Pn	22 02 49.3	-0.4
	SNR=49						
FRU1	Bishkek	6.95	23		Pn	22 02 49.0	-1.0
FRU1	Bishkek	6.95	23	PN	Pn	22 02 49.0	-1.0
ULHL	Ulahol	7.10	34	P	Pn	22 02 51.0	-1.1
	SNR=26						
CHMS	Chumysh	7.16	23	P	Pn	22 02 51.6	-1.1
	SNR=30						
CHMS	Chumysh	7.16	23	⇓P	Pn	22 02 51.9	-0.9
	comp=Z,62nm,0.5s						
CHMS				⇑S	Sn	22 04 08.7	-4.2
	comp=Z,68nm,0.7s						
BOOM	Boomskoye usch	7.17	32		Pn	22 02 51.9	-1.0
BOOM	Boomskoye usch	7.17	32	PN	Pn	22 02 51.9	-1.0
USP	Ospenovka	7.33	21	P	Pn	22 02 53.7	-1.2
	SNR=24						
TKM2	Tokmak 2	7.39	28	P	Pn	22 02 54.9	-1.0
	SNR=14						
TKM2	Tokmak 2	7.39	28	⇓P	Pn	22 02 54.6	-1.3
	comp=Z,54nm,0.7s						
TKM2				⇓S	Sn	22 04 17.5	-1.2
	comp=Z,44nm,0.6s						
SMLA	Simla	7.48	134	*e*P	Pn	22 02 54.4	-2.6
SMLA				IAML		22 04 17.8	
	comp=E,498nm,0.1s						
SMLA				*e*S	Sn	22 04 19.4	-1.2
TARG	Taragay, Kyrgy	7.52	44		Pn	22 02 56.4	-1.4
TARG	Taragay, Kyrgy	7.52	44	PN	Pn	22 02 56.4	-1.4
SGDS	Sogindy	7.54	21	*e*P	Pn	22 02 56.2	-1.6
KLP	Kalpa	7.87	127	IAML		22 04 23.9	
	comp=E,472nm,0.3s						
PRZ	Przheval'sk	8.35	42		Pn	22 03 08.1	-0.7
PRZ	Przheval'sk	8.35	42	PN	Pn	22 03 08.1	-0.7
DDI	Dehra Dun	8.59	134	*e*P	Pn	22 03 10.4	-1.6
DDI				*e*S	Sn	22 04 46.0	-1.5
DDI				IAML		22 04 46.1	
	comp=E,308nm,0.7s						
CHKK	Chushkaly	8.72	31	*e*PN	Pn	22 03 12.1	-1.4
CHKK	Chushkaly	8.72	31	*e*P	Pn	22 03 12.1	-1.4
SATY	Saty	8.76	39	*e*PN	Pn	22 03 12.4	-1.7
SATY	Saty	8.76	39	*e*P	Pn	22 03 12.4	-1.7
BTLS	Baital	8.88	15	*e*PN	Pn	22 03 13.8	-1.8
BTLS	Baital	8.88	15	*e*P	Pn	22 03 13.8	-1.8
UZB	Uzynbulak	9.14	41	*e*P	Pn	22 03 17.5	-1.7
UZB	Uzynbulak	9.14	41	*e*P	Pn	22 03 17.6	-1.7
KPKS	Kokpek	9.20	38	*e*P	Pn	22 03 18.2	-1.7
KPKS	Kokpek	9.20	38	*e*P	Pn	22 03 18.2	-1.7
SHLS	Shalkode	9.38	42	*e*P	Pn	22 03 23.6	+1.2
SHLS	Shalkode	9.38	42	*e*P	Pn	22 03 23.7	+1.2
PDGK	Podgornoye	9.52	41	⇓P	Pn	22 03 22.0	-2.2
	comp=E,37nm,0.6s						
KUDL	Kundal	9.57	149	*e*P	Pn	22 03 23.5	-1.5
KUDL				IAML		22 05 00.6	
	comp=E,99nm,0.3s						
KUDL				*e*S	Sn	22 05 10.6	-0.5
TDK	Taldyqorghan	10.25	32	*e*P	Pn	22 03 32.3	-1.4
TDK	Taldyqorghan	10.25	32	*e*P	Pn	22 03 32.4	-1.4
PTH	Pithoragarh	10.45	129	*e*P	Pn	22 03 34.6	-2.1
PTH				IAML		22 05 23.5	
	comp=E,47nm,0.4s						
PTH				*e*S	Sn	22 05 30.4	-2.1
OTUK	Ortayu	11.80	5	⇑P	Pn	22 03 51.9	-2.3
	comp=E,5.6nm,0.8s						
MAKZ	Makanchi	13.23	35		Pn	22 04 11.4	-1.2
MAKZ	Makanchi	13.23	35	⇑P	Pn	22 04 11.9	-0.7
	comp=E,57nm,1.1s						
MAKZ	Makanchi	13.23	35	P	Pn	22 04 11.4	-1.2
MK31	Makanchi Array	13.37	36	P	Pn	22 04 14.8	+0.4
	comp=E,26nm,0.8s,baz=229,slow=18,SNR=112						
MK31	Makanchi Array	13.37	36	*ce*P	Pn	22 04 14.9	+0.6
MKAR	Makanchi Array	13.37	36		Pn	22 04 12.8	-1.5
MKAR	Makanchi Array	13.37	36	P	Pn	22 04 12.1	-2.2
	comp=E,12nm,0.7s,baz=231,slow=18,SNR=68						
MKAR	Makanchi Array	13.37	36	*i* P	Pn	22 04 14.1	-0.2
MKAR				pmax	pmax		
	comp=Z,11nm,0.7s						
BRZS	Berezniki	13.56	5	*e*P	Pn	22 04 15.8	-0.9
BRZS	Berezniki	13.56	5	*e*P	Pn	22 04 15.9	-0.9
NRDN	NARMADA NAGAR	14.76	157	*e*P	Pn	22 04 31.6	-0.5
NRDN				IAML		22 07 15.8	
	comp=N,9.6nm,0.3s						
NRDN				*e*S	Sn	22 07 17.2	+1.2
WMQ	Urumqi	14.79	55	*e*P	Pn	22 04 31.3	-1.1
WMQ				pmax	pmax		
	comp=N,20nm,1.1s						
AB31	Akbulak array	15.05	331		Pn	22 04 34.0	-1.4
AB31				IAmb	IAmb	22 04 41.4	
	comp=Z,13nm,0.4s						
AB31	Akbulak array	15.05	331	⇑P	Pn	22 04 34.2	-1.2
	comp=Z,3.9nm,0.3s,baz=143,slow=12,SNR=239						
AB31				S	Sn	22 07 14.4	-8.0
	comp=Z,5.2nm,0.4s,baz=154,slow=23,SNR=12						
ABKAR	Akbulak array	15.05	331		Pn	22 04 33.9	-1.5
ABKAR	Akbulak array	15.05	331		Pn	22 04 34.0	-1.5
ABKAR				IAmb	IAmb	22 04 41.4	
	comp=Z,13nm,0.4s						
ZSN	Zaisan	15.09	39	*e*P	Pn	22 04 35.5	-0.4
ZSN	Zaisan	15.09	39	*e*P	Pn	22 04 35.6	-0.4
KURBB	Kurchatov Arra	15.17	19	P	Pn	22 04 34.5	-2.4
	comp=Z,5.0nm,0.5s,baz=206,slow=11,SNR=21						
KURBB	Kurchatov Arra	15.17	19	⇓P	Pn	22 04 34.6	-2.4
	comp=Z,17nm,0.6s						
KURK	Kurchatov	15.28	19		Pn	22 04 35.6	-2.6
KURK				IAmb	IAmb	22 04 42.0	
	comp=Z,30nm,1.1s						
KURK	Kurchatov	15.28	19	P	P	22 04 40.8	+1.2
KURK	Kurchatov	15.28	19	*ce*P	Pn	22 04 37.3	-0.9
KURK				pmax	pmax		
	comp=Z,27nm,1.0s						
EVN	Everest	15.94	118		Pn	22 04 43.3	-3.8
SHME	Shamm	16.31	235	P	P	22 04 51.1	-0.2
	SNR=9.6						
SHME	Shamm	16.31	235	*i* P	P	22 04 50.8	-0.5
	SNR=9.4						
BVA0	Borovoye Array	16.54	359	⇑P	Pn	22 04 54.0	+0.3
	comp=Z,6.9nm,0.7s,baz=163,slow=9.7,SNR=34						
BVAR	Borovoye Array	16.54	359	P	Pn	22 04 53.8	+0.1
	comp=Z,6.1nm,0.4s,baz=167,slow=11,SNR=24						
BVAR				S	S	22 07 50.7	-6.7
	comp=Z,2.6nm,0.5s,baz=168,slow=23,SNR=3.8						
BRVK	Borovoye	16.58	359	P	Pn	22 04 53.8	-0.3
BRVK	Borovoye	16.58	359	P	Pn	22 04 53.8	-0.3
BRVK				pmax	pmax		
	comp=Z,11nm,0.9s						
MDH	Madha	16.73	232	P	Pn	22 04 55.1	-1.2
MDH	Madha	16.73	232	P	P	22 04 54.7	-1.3
AKTO	Aktyubinsk	16.74	330	P	Pn	22 04 56.2	0.0
	comp=Z,39nm,0.8s,baz=140,slow=8.2,SNR=72						
AKTO				S	S	22 07 51.5	-11
	comp=Z,8.3nm,0.7s,baz=215,slow=20,SNR=6.8						
AKTO	Aktyubinsk	16.74	330	⇓P	Pn	22 04 56.2	0.0
	comp=Z,20nm,0.8s						
MASF	Masafi	16.77	233	P	Pn	22 04 56.7	0.0
WSAR	Wadi Sarin	16.92	222	P	P	22 04 56.8	-1.2
	baz=52,slow=20,SNR=2.2						
UOSS	Minazif	17.04	232	P	Pn	22 04 58.7	-1.3
UOSS	Minazif	17.04	232	P	Pn	22 04 59.3	-0.7
UOSS	Minazif	17.04	232	P	Pn	22 04 58.7	-1.3
HATD	Hatta, Dubai	17.17	232	P	Pn	22 05 02.2	+0.6
HATD	Hatta, Dubai	17.17	232	P	Pn	22 05 01.3	-0.3
ASHO	Ashiyiah	17.32	231	P	Pn	22 05 04.0	+0.6
	SNR=15						
ASHO				P	Pn	22 05 04.0	+0.6
	SNR=12						
ASHO	Ashiyiah	17.32	231	*i* P	Pn	22 05 03.4	0.0
	SNR=15						
NAZ	Nazwa, Dubai	17.36	233	P	Pn	22 05 03.7	-0.1
NAZ	Nazwa, Dubai	17.36	233	P	Pn	22 05 03.6	-0.1
HOQ	Hoqain	17.39	226	P	P	22 05 02.3	-0.8
SOHO	SOHO	17.43	229	P	Pn	22 05 05.3	+0.7
SOHO	SOHO	17.43	229	P	Pn	22 05 05.3	+0.7
FAQ	Al Faqa, Dubai	17.57	233	P	Pn	22 05 06.6	+0.2
ASUD	Al Ashush, Dub	17.83	233	P	Pn	22 05 09.7	+0.3
ASUD	Al Ashush, Dub	17.83	233	P	Pn	22 05 09.1	-0.3
JMDO	Jabal Madar	17.90	222	P	Pn	22 05 12.2	+1.9
ALNE	Al Ain	17.97	231	P	Pn	22 05 10.3	-0.7
	SNR=7.4						
ALNE				P	Pn	22 05 10.3	-0.7
	SNR=22						
ALNE	Al Ain	17.97	231	*i* P	Pn	22 05 10.1	-1.0
	SNR=7.4						
ARQ	Araqi	18.04	227	P	Pn	22 05 11.1	-0.7
AJN	Ajban	18.09	233	P	Pn	22 05 11.8	-0.7
AJN	Ajban	18.09	233	P	Pn	22 05 11.5	-1.0
BSY	Bisya	18.10	225	P	Pn	22 05 11.6	-1.0
LSA	Lhasa	18.27	106		Pn	22 05 13.8	-1.3
LSA				IAmb	IAmb	22 05 18.9	
	comp=Z,14nm,0.6s						
LSA	Lhasa	18.27	106	P	Pn	22 05 13.8	-1.3
LSA				pmax	pmax		
	comp=Z,14nm,0.6s						
AKT	Akhty	18.65	293	*e*P	Pn	22 05 18.2	-0.8
AKT				*e*S	Sn	22 08 45.3	-3.6
AKT				pmax	pmax		
	comp=Z,17nm,1.0s						
JRN	Qarnain Island	19.26	238	P	P	22 05 23.0	-0.5
UMZA	Um Al Zommool	19.32	229	P	P	22 05 24.5	+0.2
GHWR	Ruwais	19.89	236	P	P	22 05 29.8	-0.6
ZAA0	Zalesovo Array	19.97	25		P	22 05 31.6	+0.7
ZALV	Zalesovo Beam	19.97	25		P	22 05 31.3	+0.3
ZALV	Zalesovo Beam	19.97	25	P	P	22 05 31.5	+0.6
	comp=Z,44nm,0.4s,baz=221,slow=11,SNR=227						
	comp=Z,44nm,0.4s						
ZALV	Zalesovo Beam	19.97	25	P	P	22 05 31.3	+0.3
MZR	Muzera	20.17	233	P	P	22 05 32.4	-0.9
MZR	Muzera	20.17	233	*i* P	P	22 05 32.2	-1.1
	SNR=19						
SAKB	Bahrain	20.26	245	P	P	22 05 33.7	-0.6
TRNA	Turayna	20.53	241	P	P	22 05 36.0	-1.2
	SNR=16						
SLWR	Sila	20.63	238	P	P	22 05 36.7	-1.5
KBD	Kabd	20.77	256	P	P	22 05 40.0	+0.3
GNI	Garni	20.80	288	P	P	22 05 40.9	+0.7
GNI				IAmb	IAmb	22 05 48.8	
	comp=Z,30nm,0.9s						
GNI	Garni	20.80	288	P	Pn	22 05 41.8	-2.6
	comp=Z,10nm,0.8s,baz=147,slow=2.6,SNR=6.9						
	comp=Z,10nm,0.8s						
GNI	Garni	20.80	288	P	P	22 05 40.9	+0.7
GNI				pmax	pmax		
	comp=Z,30nm,1.0s						
GNI	Garni	20.80	288	P	Pn	22 05 43.0	-1.4
	comp=Z,422nmcomp=Z,40nm,1.2s						
SMRA	Abu-Samra	20.80	241	P	P	22 05 38.8	-1.3
SVE	Sverdlovsk	21.48	345	*e*P	P	22 05 48.6	+1.5
SVE				*e*S	S	22 09 42.5	+6.7
ARTI	Arti	21.62	341	P	P	22 05 48.6	+0.1
ARTI				IAmb	IAmb	22 05 52.9	
	comp=Z,30nm,1.2s						
ARTI	Arti	21.62	341	P	P	22 05 49.0	+0.4
	comp=Z,12nm,0.8s,baz=160,slow=5.3,SNR=19						
ARTI				S	S	22 09 43.4	+5.1
	comp=Z,1.1nm,0.5s,baz=179,slow=20,SNR=1.5						
	comp=Z,12nm,0.8s						
ARTI	Arti	21.62	341	*d i*P	P	22 05 50.2	+1.6
ARTI						22 06 24.0	
ARTI				S	S	22 09 41.4	+3.1
ARTI				SS		22 10 27.8	
ARTI				pmax	pmax		
	comp=Z,24nm,1.1s						
KBZ	Khabaz	22.52	297	P	P	22 05 58.2	+0.6
	comp=Z,2.8nm,0.7s,baz=138,slow=7.7,SNR=6.8						
	comp=Z,2.8nm,0.7s						
GOF	Gofitskoye	22.66	301	*ce*P	P	22 06 01.0	+2.0
SHA1	Shidzhatmaz	22.69	297	*i* P	P	22 06 00.6	+1.0
KIV	Kislovodsk	22.70	298	P	P	22 06 00.2	+0.6
KIV	Kislovodsk	22.70	298	*e*P	P	22 06 00.7	+1.2
KIV				*e*S	S	22 10 00.5	+4.0
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BELG	Belogornoye	22.84	321	*i* P	P	22 06 00.7	+0.2
BELG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GTA	Gaotai	22.97	74	*e*P	P	22 06 02.8	+0.7
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
DOK	Doka	23.11	224	P	P	22 06 03.6	+0.2
	SNR=11						
DMTO	DMTO	23.40	221	P	P	22 06 06.2	+0.2
	SNR=6.7						
WHFO	Wadi Hawf	23.87	224	P	P	22 06 10.1	-0.3
	SNR=29						
RBK	Rabkut	23.97	222	P	P	22 06 11.1	-0.2
ABTO	Aybut	24.59	224	P	P	22 06 16.6	-0.3
	SNR=6.7						
RAYN	Ar Rayn	25.39	246	P	P	22 06 23.5	-0.7
RAYN	Ar Rayn	25.39	246	P	P	22 06 24.2	0.0
RAYN	Ar Rayn	25.39	246	P	P	22 06 23.5	-0.7
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
RAYN	Ar Rayn	25.39	246	P	P	22 06 23.9	-0.2
MOY	Mondy	26.19	45	*e*P	P	22 06 34.7	+3.5
KIRV	Kirov	26.21	334	*ce*P	P	22 06 33.5	+2.5
TNCH	TengChong	26.27	108	P	P	22 06 33.8	+1.6
TNCH				pP	pP	22 06 58.8	-5.9
TNCH				pmax	pmax		
	comp=Z,11nm,0.7s						
VSR	Storozhevoye	26.94	313	*e*P	P	22 06 37.8	+0.1
VSR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VORR	Voronezh	27.08	314	*e*P	P	22 06 37.8	-1.1
VORR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LPSR	Galich'ya Gora	27.59	316	*e*P	P	22 06 42.8	-0.7
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH	PanZhiHua	28.04	102	P	P	22 06 48.3	+0.4
SONM	Songino Array	28.43	55	P	P	22 06 51.7	+0.5
SONM	Songino Array	28.43	55	P	P	22 06 51.1	-0.1
	comp=Z,2.6nm,0.7s,baz=258,slow=9.6,SNR=10						
	comp=Z,2.6nm,0.7s						
ULN	Ulaanbaatar	28.87	55	*ce*P	P	22 06 57.4	+2.3
ULN				pmax	pmax		
	comp=Z,5.0nm,1.7s						
BRTR	Keskin Array B	29.34	288	P	P	22 07 00.9	+1.6
	comp=Z,1.1nm,0.7s,baz=97,slow=9.5,SNR=6.5						
	comp=Z,1.1nm,0.7s						
BRTR	Keskin Array B	29.34	288	P	P	22 07 01.0	+1.6
MOS	Moscow	29.61	321	*e*P	P	22 07 02.5	+1.2
OBN	Obninsk	29.88	319	⇓*e*P	P	22 07 05.8	+2.1
OBN				*PP	pP	22 07 32.0	-4.0
OBN						22 08 06.0	
OBN				*e*		22 10 03.9	
OBN				S	S	22 11 45.0	-4.5
OBN				SS	SnSn	22 13 44.0	+4.9
OBN				pmax	pmax		
	comp=Z,6.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,24nm,16.0s						
CMAR	Chiang Mai Arr	30.54	118	P	P	22 07 09.1	-0.8
	comp=Z,2.1nm,0.8s,baz=297,slow=8.2,SNR=11						
CMAR				PKKP	PKKPdf	22 32 34.4	-0.4
	comp=Z,1.2nm,0.3s,baz=335,slow=6.3,SNR=4.0						
	comp=Z,2.1nm,0.8s						
KLMR	Klimovskoe	31.44	331	*e*P	P	22 07 17.6	+0.2
KLMR				*e**PP	pP	22 07 45.4	-4.3
KLMR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC	Hu-ho-hao-te	31.87	70	*e*P	P	22 07 22.8	+1.3
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,67nm,5.0s						
ELL	Elmali	32.70	283	P	P	22 07 29.9	+1.0
ELL	Elmali	32.70	283	P	P	22 07 29.9	+1.0
ELL				pmax	pmax		
	comp=Z,16nm,0.9s						
AK10	Malin Array Si	32.84	309	P	P	22 07 31.2	+1.5
AK08	Malin Array Si	32.84	309	P	P	22 07 31.1	+1.4
AK07	Malin Array Si	32.86	309	P	P	22 07 31.3	+1.4
AK06	Malin Array Si	32.87	309	P	P	22 07 31.3	+1.3
AKASG	Malin Array Be	32.87	309	P	P	22 07 30.7	+0.7
AKASG	Malin Array Be	32.87	309	P	P	22 07 30.8	+0.7
	comp=Z,2.2nm,0.7s,baz=84,slow=6.8,SNR=15						
	comp=Z,2.2nm,0.7s						
AKASG	Malin Array Be	32.87	309	P	P	22 07 30.7	+0.7
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKBB	Malin Array Si	32.87	309	P	P	22 07 30.4	+0.4
AKBB				IAmb	IAmb	22 07 31.9	
	comp=Z,5.6nm,0.7s						
AKBB	Malin Array Si	32.87	309	*ce*P	P	22 07 31.7	+1.7
AKBB				pmax	pmax		
	comp=Z,13nm,1.5s						
KIEV	Kiev	32.88	309	P	P	22 07 30.4	+0.3
KIEV				IAmb	IAmb	22 07 31.9	
	comp=Z,5.0nm,0.8s						
KIEV	Kiev	32.88	309	P	P	22 07 30.4	+0.3
KIEV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NDNU	Novodnistrovsk	33.82	305	P	P	22 07 39.6	+1.4
NRIK	Noril'sk	34.16	10	P	P	22 07 42.3	+1.4
NRIK				IAmb	IAmb	22 07 45.5	
	comp=Z,5.1nm,0.7s						
NRIK	Noril'sk	34.16	10	P	P	22 07 42.1	+1.2
	comp=Z,4.4nm,0.6s,baz=207,slow=8.3,SNR=5.7						
	comp=Z,4.4nm,0.6s						
NRIK	Noril'sk	34.16	10	P	P	22 07 42.3	+1.4
NRIK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MNK	Minsk	34.44	315	*i* P	P	22 07 45.5	+2.0
	comp=E,13nm,0.8s						
MNK				*i* P	P	22 07 45.5	+2.0
	comp=Z,12nm,0.8s,baz=104						
MNK				*i* pP	pP	22 08 13.9	-2.4
MNK				*i* PP	PP	22 09 05.5	+1.1
MNK				*i* S	S	22 13 05.3	+5.0
MNK				*i* sS	sS	22 13 56.4	-2.0
MNK				*i* SS	SnSn	22 15 28.9	+0.2
MNK				*i* LR	LR	22 20 48.3	
MNK	Minsk	34.44	315	*i* P	P	22 07 45.4	+2.0
MNK				*i* *PP	pP	22 08 13.8	-2.4
MNK				*i*		22 09 05.5	
MNK				*i* S	S	22 13 05.3	+5.0
MNK				*i* *SS	sS	22 13 56.4	-2.0
MNK				*i* SS	SnSn	22 15 28.9	+0.2
MNK				pmax	pmax		
	comp=N,9.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,12nm,0.8s						
MNK				pmax	pmax		
	comp=E,13nm,0.8s						
BURAR	Bucovina Array	35.21	303	P	P	22 07 51.2	+0.9
VSU	Vasula	36.13	322	*ce*P	P	22 07 58.9	+1.0
VSU				pmax	pmax		
	comp=Z,14nm,1.0s						
VSU	Vasula	36.13	322	*e*P	P	22 07 58.5	+0.6
PABE	Paberze	36.86	316	P	P	22 08 05.3	+1.2
PABE	Paberze	36.86	316	*e*P	P	22 08 05.8	+1.7
LVZ	Lovozero	37.44	338	P	P	22 08 10.2	+1.3
LVZ				IAmb	IAmb	22 08 50.9	
	comp=Z,23nm,1.5s						
LVZ	Lovozero	37.44	338	P	P	22 08 10.2	+1.3
LVZ				pmax	pmax		
	comp=Z,23nm,1.5s						
FIA1	FINESS Array S	37.44	326	P	P	22 08 10.2	+1.3
FINES	FINESS Array B	37.44	326	P	P	22 08 10.3	+1.4
FINES	FINESS Array B	37.44	326	P	P	22 08 10.4	+1.5
	comp=Z,4.3nm,0.4s,baz=119,slow=9.0,SNR=79						
	comp=Z,4.3nm,0.4s						
FINES	FINESS Array B	37.44	326	*i* P	P	22 08 10.6	+1.7
FINES				pmax	pmax		
	comp=Z,4.0nm,0.4s						
MTSE	Matsula	37.67	321	*e*P	P	22 08 12.7	+1.9
MEF	Metsahovi	37.81	324	*e*P	P	22 08 13.9	+1.8
PBUR	Paburge	38.08	317	*e*P	P	22 08 16.1	+1.7
KEF	Keuruu	38.23	327	*e*P	P	22 08 16.8	+1.2
NIE	Niedzica	38.50	306	P	P	22 08 20.4	+2.4
RAF	Rauma	39.29	324	*e*P	P	22 08 25.9	+1.6
NJ2	Nanjing	39.58	82	*e*P	P	22 08 28.0	+0.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
VADS	Vadso	40.29	339	*e*P	P	22 08 34.7	+2.1
KEV	Kevo	40.78	338	P	P	22 08 37.1	+0.6
KEV				IAmb	IAmb	22 08 57.1	
	comp=Z,16nm,1.2s						
KEV	Kevo	40.78	338	P	P	22 08 37.1	+0.6
KEV				pmax	pmax		
	comp=Z,16nm,1.2s						
ARA0	ARCESS Array S	41.12	338	*e*P	P	22 08 40.5	+1.2
ARCES	ARCESS Array B	41.12	338	P	P	22 08 40.4	+1.1
ARCES				IAmb	IAmb	22 08 44.9	
	comp=Z,14nm,1.2s						
ARCES	ARCESS Array B	41.12	338	P	P	22 08 41.1	+1.8
	comp=Z,7.0nm,0.6s,baz=110,slow=8.0,SNR=54						
	comp=Z,7.0nm,0.6s						
BLEU	Blekinge	41.51	316	*e*P	P	22 08 44.0	+1.3
HAMF	Hammerfest	42.20	339	*e*P	P	22 08 50.9	+2.8
HEH	HeiHe	42.34	53	*e*P	P	22 08 52.3	+2.8
HEH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BRG	Berggiesshubel	42.55	308	*e*P	P	22 08 53.6	+2.3
BRG				Amp		22 08 54.1	
	comp=Z,2.5nm,0.7s						
BRG	Berggiesshubel	42.55	308	P	P	22 08 59.8	+8.6
BRG				Amp		22 09 00.5	
	comp=Z,2.5nm,0.8s						
DEL	Delary	42.60	317	*e*P	P	22 08 52.9	+1.4
BNX	BinXian	42.79	59	⇑P	P	22 08 51.5	-1.7
BNX				pmax	pmax		
	comp=Z,2.0nm,0.3s						
LUNU	Lund	42.80	315	*e*P	P	22 08 55.0	+1.8
GERES	GERESS Array B	42.85	305	P	P	22 08 55.6	+1.8
	comp=Z,0.5nm,0.9s,baz=78,slow=7.0,SNR=3.8						
	comp=Z,0.5nm,0.9s						
HFS	Hagfors	43.02	322	P	P	22 08 56.3	+1.5
	comp=Z,15nm,0.6s,baz=98,slow=11,SNR=62						
	comp=Z,15nm,0.6s						
BJUU	Bjuv	43.06	316	*e*P	P	22 08 55.4	+0.2
CLL	Collm	43.12	309	*i* P	P	22 08 56.9	+1.1
CLL	Collm	43.12	309	*i* P	P	22 08 56.9	+1.1
TRO	Tromso	43.24	336	*e*P	P	22 08 58.4	+1.9
FABU	Falkenberg	43.26	317	*e*P	P	22 08 58.3	+1.5
BORU	Boraas	43.27	318	*e*P	P	22 08 58.4	+1.6
ONAU	Onsala	43.72	318	*i* P	P	22 09 01.4	+1.0
FAUS	Fauske	43.77	333	*e*P	P	22 09 02.7	+1.9
MOR8	Moi Rana	43.78	331	*e*P	P	22 09 02.0	+1.1
STEI	Steigen	43.94	333	*e*P	P	22 09 04.0	+1.9
NC303	NORSAR Array S	44.27	323	P	P	22 09 06.3	+1.4
NB2	NORSAR Subarra	44.33	323	P	P	22 09 05.9	+0.5
	comp=Z,7.8nm,0.6s,baz=97,slow=7.9						

NB2	**NORSAR Subarra**	**44.33**	**323**	P	**P**	**22 09 05.9**	**+0.5**
	baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.33**	**323**	P	**P**	**22 09 06.3**	**+1.0**
	comp=Z,11nm,0.7s,baz=97,slow=7.8,SNR=57						
	comp=Z,11nm,0.7s						
VAGH	**Vaagaholmen**	**44.37**	**331**	*e*P	**P**	**22 09 08.1**	**+2.6**
KONS	**Konsvik**	**44.38**	**331**	*e*P	**P**	**22 09 07.4**	**+1.8**
STOK	**Stokkvaagen**	**44.38**	**331**	*e*P	**P**	**22 09 05.3**	**-0.3**
LOF	**Lofoten**	**44.61**	**333**	*e*P	**P**	**22 09 09.3**	**+1.9**
KSAR	**Wonju Array Be**	**44.96**	**71**	P	**P**	**22 09 11.1**	**+0.5**
KSAR	**Wonju Array Be**	**44.96**	**71**	P	**P**	**22 09 11.1**	**+0.5**
KSRS	**Korea Array**	**44.98**	**71**	P	**P**	**22 09 10.2**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=276,slow=6.8,SNR=6.2						
	comp=Z,1.1nm,0.6s						
KONO	**Kongsberg**	**45.03**	**321**	P	**P**	**22 09 11.9**	**+1.0**
KONO				IAmb	IAmb	22 09 13.1	
	comp=Z,7.2nm,0.8s						
KONO	**Kongsberg**	**45.03**	**321**	P	**P**	**22 09 11.9**	**+1.0**
KONO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HOMB	**Homborsund**	**45.56**	**319**	*e*P	**P**	**22 09 16.4**	**+1.4**
TIXI	**Tiksi**	**45.83**	**22**	*i* P	**P**	**22 09 18.2**	**+1.2**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MSHR	**Mys Shultsa**	**46.04**	**63**	*ce*P	**P**	**22 09 19.3**	**+0.3**
MSHR				pmax	pmax		
	comp=Z,45nm,2.5s						
LODK	**Lodwar**	**46.37**	**233**	P	**P**	**22 09 22.5**	**+0.5**
SPITS	**Spitsbergen Ar**	**47.48**	**347**	P	**P**	**22 09 32.0**	**+2.2**
	comp=Z,5.3nm,0.9s,baz=130,slow=9.9,SNR=7.8						
	comp=Z,5.3nm,0.9s						
EKA	**Eskdalemuir Ar**	**52.23**	**316**	P	**P**	**22 10 06.7**	**+0.8**
	comp=Z,1.0nm,0.5s,baz=74,slow=6.9,SNR=10						
	comp=Z,1.0nm,0.5s						
MBAR	**Mbarara**	**52.41**	**234**	P	**P**	**22 10 07.9**	**-0.1**
MBAR				IAmb	IAmb	22 10 09.1	
	comp=Z,8.3nm,0.7s						
MBAR	**Mbarara**	**52.41**	**234**	P	**P**	**22 10 07.9**	**-0.1**
MBAR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ABPO	**Ambohimpanom**	**59.55**	**206**	P	**P**	**22 10 59.1**	**+0.6**
ABPO	**Ambohimpanom**	**59.55**	**206**	P	**P**	**22 10 59.1**	**+0.6**
ABPO				pmax	pmax		
	comp=Z,17nm,1.3s						
SUMG	**Summit**	**61.04**	**341**	P	**P**	**22 11 10.4**	**+2.1**
SUMG				IAmb	IAmb	22 11 11.5	
	comp=Z,4.7nm,0.6s						
SUMG	**Summit**	**61.04**	**341**	P	**P**	**22 11 10.4**	**+2.1**
SUMG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TORD	**Torodi Ar. Bea**	**65.61**	**269**	P	**P**	**22 11 37.2**	**-1.6**
C18K	**Utukok River**	**68.32**	**18**	P	**P**	**22 11 56.3**	**+1.2**
C18K				IAmb	IAmb	22 12 24.4	
	comp=Z,14nm,1.5s						
C19K	**Lookout Ridge**	**68.38**	**17**	P	**P**	**22 11 56.8**	**+1.3**
C19K				IAmb	IAmb	22 12 02.7	
	comp=Z,3.1nm,0.7s						
TOLK	**Toolik Lake Re**	**70.97**	**15**	P	**P**	**22 12 12.7**	**+1.4**
TOLK				IAmb	IAmb	22 12 18.1	
	comp=Z,2.7nm,0.6s						
MREMI	**Moremi**	**71.63**	**222**	P	**P**	**22 12 16.1**	**+0.2**
MREMI				IAmb	IAmb	22 12 42.8	
	comp=Z,18nm,1.5s						
IMAR	**Indian Mountai**	**72.22**	**18**	P	**P**	**22 12 19.4**	**+0.6**
LBTB	**Lobatse**	**74.59**	**222**	P	**P**	**22 12 34.1**	**+0.8**
LBTB				IAmb	IAmb	22 12 40.9	
	comp=Z,14nm,1.4s						
LBTB	**Lobatse**	**74.59**	**222**	P	**P**	**22 12 34.1**	**+0.8**
LBTB				pmax	pmax		
	comp=Z,14nm,1.4s						
KGCAE	**Kacgae**	**74.79**	**226**	P	**P**	**22 12 35.0**	**+0.5**
ILAR	**Eielson Array**	**74.82**	**16**	P	**P**	**22 12 34.2**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=319,slow=4.8,SNR=5.9						
	comp=Z,0.6nm,0.8s						
DHY	**Denali Highway**	**76.17**	**17**	P	**P**	**22 12 43.4**	**+1.5**
LKGWB	**Lokgwabe**	**76.33**	**226**	P	**P**	**22 12 42.0**	**-1.2**
BOSA	**Boshof**	**77.67**	**220**	P	**P**	**22 12 50.4**	**-0.2**
	comp=Z,2.9nm,0.9s,baz=40,slow=5.4,SNR=5.6						
	comp=Z,2.9nm,0.9s						
WRA	**Warramunga Arr**	**82.07**	**122**	P	**P**	**22 13 12.9**	**-1.5**
	comp=Z,0.4nm,0.5s,baz=324,slow=4.9,SNR=14						
	comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**84.33**	**125**	P	**P**	**22 13 24.4**	**-1.5**
	comp=Z,0.5nm,0.5s,baz=309,slow=5.3,SNR=6.3						
	comp=Z,0.5nm,0.5s						

KRSC 26 22:11:04.2±1.3, 56°.19N×164°.12E, h56^{km}±17^{km}, Ml3.5, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.73**	**272**	*e*P	Pn	22 11 19.1	+0.6
KBTR				*e*S	Sn	22 11 30.0	+1.0
KBG	**Krutoberegovo**	**0.79**	**276**	*e*P	Pn	22 11 20.6	+1.3
KBG				*e*S	Sn	22 11 32.1	+1.7
BKI	**Bering**	**1.44**	**132**	*e*S	Sn	22 11 47.8	+2.1
ZLN	**Zelenaya**	**1.87**	**266**	*e*S	Sn	22 11 58.9	+2.6
KLY	**Klyuchi**	**1.94**	**275**	*e*S	Sn	22 11 59.2	+1.3
MKZ	**Mys Kozlova**	**2.13**	**221**	*e*S	Sn	22 12 04.5	+2.0
TUMD	**Tumrok D**	**2.33**	**246**	*e*S	Sn	22 12 12.3	+4.8
OSSR	**Ossora**	**3.12**	**350**	*e*S	Sn	22 12 30.1	+3.2
SPN	**Mys Shipunski**	**3.90**	**219**	*e*S	Sn	22 12 45.3	-0.8
RUS	**Russkaya**	**4.99**	**223**	*e*P	Pn	22 12 20.4	+4.0
GRL	**Gorelyy**	**5.08**	**227**	*e*P	Pn	22 12 23.1	+5.4
MTVR	**Mutnovka**	**5.08**	**226**	*e*P	Pn	22 12 22.2	+4.4
ASAK	**Asacha**	**5.27**	**226**	*e*P	Pn	22 12 25.9	+5.5

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*IDC **26** 22:12:55.9±0.4, 84°.45N×105°.77E, h0^{km}, mb4.2/33, mbtmp4.2/33, MS3.8/63, Error ellipse: s-maj=12.0km s-min=9.7km az=145.0*

*BJI **26** 22:12:56.0, 84°.50N×106°.10E, h10^{km}, mB5.3/10, mb4.7/40, Ms4.4/19, Ms7 4.2/20*

*MOS **26** 22:12:56.1±1.1, 84°.44N×105°.66E, h10^{km}, mb5.0/74, MS4.0/10, Error ellipse: s-maj=41.6km s-min=4.9km az=88.8*

*NEIC **26** 22:12:58.1±1.1, 84°.46N±0°.08×105°.5E±0°.8, h10^{km}±1^{km}, mb5.0/190, Error ellipse: s-maj=14.6km s-min=12.8km az=43.0*

*GCMT **26** 22:12:59.1±0.2, 84°.51N±0°.02×105°.7E±0°.2, h12^{km}, MW4.9/122, Moment Tensor Solution. s30,c37; s122,c192; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.53±.05; $M_{\theta\theta}$1.25±.05; $M_{\phi\phi}$1.28±.05; $M_{r\theta}$-0.18±.20; $M_{\theta\phi}$-1.08±.04; $M_{\phi r}$-0.21±.23; Best double couple: $M_0$2.45200×10^{16} NP1:ϕ_s130.00000°,δ45.00000°, λ-98.00000°. NP2:ϕ_s321.00000°,δ46.00000°, λ-82.00000°. Principal axes: T 2.3450, Plg0.0000°, Azm45.0000°; N 0.2130, Plg6.0000°, Azm135.0000°; P -2.5580, Plg84.0000°, Azm312.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*FCIAR **26** 22:13:01.0, 84°.12N×101°.85E, h10^{km}, station SVZ has station magnitude of 4.10 station OMEGA has station magnitude of 4.00 station ZFI2 has station magnitude of 4.00*

ISC 26 22:12:58.1±0.6, 84°.41N±0°.04×105°.83E±0°.04, h11^{km}±3^{km}, h11^{km}:pP-P, n777, σ1^{s}.29/726, mb4.9/225, MS3.8/87, 22C-4D, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVZ	**Severnaya Zeml**	**5.19**	**189**	*e*P	**Pn**	**22 14 12.5**	**-3.1**
SVZ				*e*S	**Sn**	**22 15 08.6**	**-6.8**
	147nm,0.6s						
ZFI2	**Zemlya Franca-**	**7.88**	**275**	*e*P	**Pn**	**22 14 49.1**	**-3.4**
ZFI2				*e*S	Sn	22 16 09.9	-12
	37nm,0.8s						
OMEGA	**Omega**	**7.90**	**275**	*e*P	**Pn**	**22 14 49.1**	**-3.5**
OMEGA				*e*S	Sn	22 16 09.9	-12
	45nm,0.7s						
NOR	**Nord**	**12.42**	**325**	*i* P	**Pn**	**22 15 56.0**	**+1.6**
NOR				IAmb	IAmb	22 16 01.2	
	comp=Z,14nm,1.1s						
KBS	**Kingsbay**	**12.81**	**300**	Pn	**Pn**	**22 15 58.0**	**-1.7**
KBS	**Kingsbay**	**12.81**	**300**	P	**Pn**	**22 15 58.1**	**-1.7**
SPA0	**Spitsbergen Ar**	**13.10**	**295**	*e*P	**Pn**	**22 15 59.4**	**-4.3**
SPA0				*e*S	Sn	22 18 13.4	-16
SPITS	**Spitsbergen Ar**	**13.10**	**295**	Pn	**Pn**	**22 15 59.7**	**-4.1**
	baz=42,slow=13						
SPITS				Sn	Sn	22 18 18.3	-11
	baz=65,slow=14						
SPITS	**Spitsbergen Ar**	**13.10**	**295**	P	**Pn**	**22 16 01.2**	**-2.5**
SPB2	**Spitsbergen Ar**	**13.10**	**295**	Pn	**Pn**	**22 16 00.6**	**-3.1**
TIXI	**Tiksi**	**13.46**	**148**		**Pn**	**22 16 06.5**	**-2.1**
TIXI	**Tiksi**	**13.46**	**148**	Pn	**Pn**	**22 16 07.3**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=21,slow=11,SNR=8.3						
TIXI				LR	LR	22 21 01.3	
	comp=Z,196nm,21.1s,baz=8.5,slow=36						
TIXI	**Tiksi**	**13.46**	**148**	*i* P	**Pn**	**22 16 11.2**	**+2.6**
TIXI				pmax	pmax		
	comp=Z,11nm,1.0s						
NRIK	**Noril'sk**	**15.54**	**205**	Pn	**Pn**	**22 16 32.4**	**-4.3**
NRIK	**Noril'sk**	**15.54**	**205**	Pn	**Pn**	**22 16 32.0**	**-4.7**
	comp=Z,1.6nm,0.3s,baz=13,slow=12,SNR=9.0						
NRIK				Sn	Sn	22 19 14.0	-14
	comp=Z,0.2nm,0.3s,baz=304,slow=7.3,SNR=1.2						
NRIK				LR	LR	22 23 03.2	
	comp=Z,792nm,21.0s,baz=15,slow=39						
NRIK	**Noril'sk**	**15.54**	**205**	P	**Pn**	**22 16 32.4**	**-4.3**
NRIK				pmax	pmax		
	comp=Z,32nm,0.9s						
EUNU	**Eureka**	**15.56**	**8**		**Pn**	**22 16 32.4**	**-4.7**
DAG	**Danmarks Havn**	**17.13**	**320**	*i* P	**Pn**	**22 16 57.0**	**0.0**
DAG				IAmb	IAmb	22 17 05.4	
	comp=Z,12nm,0.9s						
NEEM	**North Greenlan**	**17.95**	**344**	*i* P	**Pn**	**22 17 05.4**	**-2.1**
NEEM				IAmb	IAmb	22 17 08.2	
	comp=Z,46nm,1.2s						
TULEG	**Thule**	**19.16**	**356**	P	**P**	**22 17 18.0**	**-3.0**
VADS	**Vadso**	**19.44**	**272**	*e*P	**P**	**22 17 23.5**	**-0.6**
BILL	**Bilibino**	**19.90**	**106**	P	**Pn**	**22 17 30.2**	**-0.5**
BILL	**Bilibino**	**19.90**	**106**	*i* P	**P**	**22 17 27.9**	**-1.2**
BILL				pmax	pmax		
	comp=Z,44nm,1.0s						
A21K	**Barrow**	**20.29**	**67**	P	**P**	**22 17 34.0**	**+0.7**
	baz=344						
ARA0	**ARCESS Array S**	**20.38**	**275**	*e*P	**P**	**22 17 33.9**	**-0.4**
ARCES	**ARCESS Array B**	**20.38**	**275**	P	**P**	**22 17 32.6**	**-1.8**
ARCES	**ARCESS Array B**	**20.38**	**275**	P	**P**	**22 17 31.8**	**-2.5**
	comp=Z,9.2nm,0.9s,baz=29,slow=2.8,SNR=18						
ARCES				PcP	**PcP**	**22 21 46.5**	**+0.4**
	comp=Z,4.1nm,0.9s,baz=40,slow=2.1,SNR=7.3						
ARCES				LR	LR	22 25 41.6	
	comp=Z,167nm,19.9s,baz=14,slow=38						
	comp=Z,9.2nm,0.9s						
A22K	**Sinclair Lake**	**20.75**	**66**	P	Pn	22 17 39.4	-1.2
	baz=345,SNR=12						
RES	**Resolute Bay**	**20.77**	**15**		**P**	**22 17 38.1**	**-0.4**
RES	**Resolute Bay**	**20.77**	**15**	P	**P**	**22 17 36.5**	**-2.0**
	comp=Z,4.2nm,0.8s,baz=311,slow=2.3,SNR=6.1						
RES				LR	LR	22 25 58.4	
	comp=Z,420nm,18.5s,baz=358,slow=38						
	comp=Z,4.2nm,0.8s						
RES	**Resolute Bay**	**20.77**	**15**	P	**P**	**22 17 38.1**	**-0.4**
RES				pmax	pmax		
	comp=Z,27nm,1.3s						
JETT	**Jettan, Norway**	**20.86**	**280**	*e*P	**P**	**22 17 40.3**	**+0.8**
A19K	**Wainwright**	**20.96**	**72**	P	Pn	22 17 42.0	-1.1
	baz=344						
KULLO	**Kullorsuaq**	**20.97**	**347**	*i* P	Pn	22 17 44.8	+1.6
KULLO				IAmb	IAmb	22 17 52.2	
	comp=Z,42nm,1.0s						
LVZ	**Lovozero**	**21.07**	**265**		**P**	**22 17 39.5**	**-2.3**
LVZ				IAmb	IAmb	22 17 51.3	
	comp=Z,38nm,0.8s						
LVZ	**Lovozero**	**21.07**	**265**	*i* P	**P**	**22 17 40.6**	**-1.2**
LVZ				pmax	pmax		
	comp=Z,54nm,0.9s						
APA	**Apatity**	**21.51**	**266**	⇓*i*P	**P**	**22 17 47.5**	**+1.0**
APA				*i* S	**S**	**22 21 43.0**	**-1.4**
APA				pmax	pmax		
	comp=Z,15nm,0.8s						
B20K	**Meade River**	**21.51**	**69**	P	**P**	**22 17 45.7**	**-0.8**
B20K	**Meade River**	**21.51**	**69**	P	**P**	**22 17 47.7**	**+1.2**
	baz=345,SNR=11						
B22K	**Teshekpuk Lake**	**21.53**	**65**		**P**	**22 17 46.4**	**-0.2**
B22K	**Teshekpuk Lake**	**21.53**	**65**	P	**P**	**22 17 47.8**	**+1.2**
	baz=345,SNR=9.2						
B18K	**Kokolik River**	**21.70**	**73**	P	**P**	**22 17 50.2**	**+1.7**
	baz=345,SNR=8.4						
A36M	**Sachs Harbour**	**22.09**	**40**		**P**	**22 17 52.4**	**-0.3**
A36M	**Sachs Harbour**	**22.09**	**40**	P	**P**	**22 17 52.3**	**-0.3**
	baz=349						
B21K	**Ikpikpuk River**	**22.12**	**67**	P	**P**	**22 17 52.1**	**-0.9**
B21K				IAmb	IAmb	22 18 05.3	
	comp=Z,80nm,1.1s						
B21K	**Ikpikpuk River**	**22.12**	**67**	P	**P**	**22 17 54.3**	**+1.3**
	baz=346,SNR=8.4						
C19K	**Lookout Ridge**	**22.16**	**71**		**P**	**22 17 53.8**	**+0.3**
C19K	**Lookout Ridge**	**22.16**	**71**	P	**P**	**22 17 54.9**	**+1.3**
	baz=345,SNR=22						
C23K	**Itkillik River**	**22.26**	**63**		**P**	**22 17 55.2**	**+0.7**
C23K				IAmb	IAmb	22 18 06.4	
	comp=Z,60nm,1.1s						
C23K	**Itkillik River**	**22.26**	**63**	P	**P**	**22 17 55.4**	**+0.9**
	baz=346,SNR=21						
SUMG	**Summit**	**22.34**	**332**		**P**	**22 17 55.0**	**-0.8**
SUMG				IAmb	IAmb	22 18 08.2	
	comp=Z,68nm,1.4s						
SUMG	**Summit**	**22.34**	**332**	P	**P**	**22 17 55.0**	**-0.8**
SUMG				pmax	pmax		
	comp=Z,68nm,1.4s						
C16K	**Lisburne Hills**	**22.43**	**77**	P	**P**	**22 17 56.3**	**0.0**
C16K				IAmb	IAmb	22 18 09.1	
	comp=Z,94nm,1.4s						
C16K	**Lisburne Hills**	**22.43**	**77**	P	**P**	**22 17 57.4**	**+1.1**
	baz=346						
C17K	**DeLong Mountai**	**22.44**	**75**	P	**P**	**22 17 57.9**	**+1.5**
	baz=346,SNR=7.9						
C18K	**Utukok River**	**22.46**	**73**	P	**P**	**22 17 57.5**	**+0.8**
	baz=346						
C24K	**Franklin Bluff**	**22.54**	**61**	P	**P**	**22 17 58.2**	**+0.7**
	baz=346						
C21K	**Knifeblade Rid**	**22.55**	**67**	P	**P**	**22 17 58.8**	**+1.1**
	baz=346,SNR=18						
D20K	**Etivluk River**	**22.82**	**69**	P	**P**	**22 18 00.1**	**-0.4**
D20K				IAmb	IAmb	22 18 10.8	
	comp=Z,105nm,1.7s						
D20K	**Etivluk River**	**22.82**	**69**	P	**P**	**22 18 01.5**	**+1.0**
	baz=346,SNR=7.6						
RDOG	**Red Dog Mine**	**22.87**	**75**	P	**P**	**22 18 01.1**	**+0.1**
RDOG				IAmb	IAmb	22 18 12.4	
	comp=Z,108nm,1.3s						
RDOG	**Red Dog Mine**	**22.87**	**75**	P	**P**	**22 18 02.0**	**+0.9**
	baz=346						
D19K	**Kuna River**	**22.89**	**70**	P	**P**	**22 18 01.6**	**+0.3**
D19K	**Kuna River**	**22.89**	**70**	P	**P**	**22 18 01.9**	**+0.7**
	baz=346,SNR=22						
STEI	**Steigen**	**22.93**	**284**	*e*P	**P**	**22 18 04.5**	**+2.9**
LSH	**Leshukonskoye**	**22.95**	**252**	*e*P	**P**	**22 18 05.3**	**+3.5**
LSH				*e*S	**S**	**22 22 06.7**	**-4.8**
D22K	**Ayikyak River**	**23.01**	**65**	P	**P**	**22 18 03.0**	**+0.5**
D22K	**Ayikyak River**	**23.01**	**65**	P	**P**	**22 18 03.5**	**+1.0**
	baz=346,SNR=30						
POIN	**Pond Inlet**	**23.03**	**3**		**P**	**22 18 01.8**	**-0.8**
C27K	**Jago River**	**23.05**	**57**	P	**P**	**22 18 02.8**	**-0.1**
C27K				IAmb	IAmb	22 18 13.9	
	comp=Z,64nm,0.9s						
C27K	**Jago River**	**23.05**	**57**	P	**P**	**22 18 03.7**	**+0.8**
	baz=347,SNR=14						
YAK	**Yakutsk**	**23.08**	**151**	P	**P**	**22 18 03.7**	**+0.5**
YAK				IAmb	IAmb	22 18 06.0	
	comp=Z,44nm,0.8s						
YAK	**Yakutsk**	**23.08**	**151**	LR	LR	22 27 21.3	
	comp=Z,227nm,21.2s,baz=349,slow=37						
YAK	**Yakutsk**	**23.08**	**151**	*e*P	**P**	**22 18 03.7**	**+0.5**
YAK				*e*		22 18 29.6	
YAK				*e*PPP	PPP	22 18 39.4	
YAK				*e*		22 21 48.9	
YAK				*e*S	**S**	**22 22 13.0**	**-0.7**
YAK				*e*SS	**SnSn**	**22 22 49.5**	**+3.7**
YAK				*e*		22 29 11.9	
YAK				pmax	pmax		
	comp=Z,55nm,1.1s						
YAK				pmax	pmax		
	comp=N,20nm,1.2s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,86nm,3.2s						
YAK				pmax	pmax		
	comp=N,26nm,2.0s						
YAK				pmax	pmax		
	comp=E,37nm,2.2s						
YAK				smax	smax		
	comp=E,56nm,4.0s						
YAK				smax	smax		
	comp=N,36nm,2.8s						
D24K	**Happy Valley**	**23.08**	**62**	P	**P**	**22 18 03.2**	**0.0**
D24K				IAmb	IAmb	22 18 13.8	
	comp=Z,68nm,1.4s						
D24K	**Happy Valley**	**23.08**	**62**	P	**P**	**22 18 04.3**	**+1.0**
	baz=346,SNR=8.8						
D23K	**Nanushuk River**	**23.11**	**63**	P	**P**	**22 18 03.8**	**+0.3**
D23K				IAmb	IAmb	22 18 14.9	
	comp=Z,50nm,1.1s						
D23K	**Nanushuk River**	**23.11**	**63**	P	**P**	**22 18 04.7**	**+1.2**
	baz=346,SNR=18						
D25K	**Kavik River**	**23.13**	**59**	P	**P**	**22 18 03.9**	**+0.1**
D25K				IAmb	IAmb	22 18 15.1	
	comp=Z,44nm,0.9s						
D25K	**Kavik River**	**23.13**	**59**	P	**P**	**22 18 04.1**	**+0.4**
	baz=347,SNR=18						
D17K	**Noatak River**	**23.20**	**76**	P	**P**	**22 18 05.8**	**+1.4**
	baz=346,SNR=14						
E20K	**Nigu River**	**23.30**	**69**	P	**P**	**22 18 06.0**	**+0.5**
	baz=346						
E21K	**Killik River**	**23.32**	**67**	P	**P**	**22 18 05.6**	**0.0**
E21K	**Killik River**	**23.32**	**67**	P	**P**	**22 18 06.1**	**+0.4**
	baz=346,SNR=7.8						
SCO	**Scoresbysund**	**23.50**	**318**	P	**P**	**22 18 07.1**	**-0.2**
SCO				IAmb	IAmb	22 18 18.1	
	comp=Z,132nm,2.0s						
SCO	**Scoresbysund**	**23.50**	**318**	P	**P**	**22 18 07.1**	**-0.2**
SCO				pmax	pmax		
	comp=Z,132nm,2.0s						
TOLK	**Toolik Lake Re**	**23.52**	**63**		**P**	**22 18 07.8**	**+0.2**
TOLK				IAmb	IAmb	22 18 19.0	
	comp=Z,61nm,1.1s						
TOLK	**Toolik Lake Re**	**23.52**	**63**	P	**P**	**22 18 08.6**	**+0.9**
	baz=347,SNR=11						
D27M	**Malcolm River**	**23.65**	**55**	P	**P**	**22 18 08.3**	**-0.7**
D27M	**Malcolm River**	**23.65**	**55**	P	**P**	**22 18 09.1**	**+0.1**
	baz=347						
SEY	**Seymchan**	**23.68**	**124**	LR	LR	22 27 51.8	
	comp=Z,137nm,19.9s,baz=7.5,slow=38						
SEY	**Seymchan**	**23.68**	**124**	*i* P	**P**	**22 18 11.0**	**+1.8**
SEY				pmax	pmax		
	comp=Z,32nm,1.7s						
E18K	**Tukpahlearik C**	**23.71**	**73**	P	**P**	**22 18 10.6**	**+1.2**
	baz=346,SNR=11						
D28M	**Stokes Point**	**23.74**	**53**	P	**P**	**22 18 10.2**	**+0.5**
	baz=348						
E22K	**Anaktuvuk Pass**	**23.82**	**65**	P	**P**	**22 18 11.3**	**+0.8**
	baz=347,SNR=12						
NUUG	**Nuugaatsiaq**	**23.92**	**344**	*i* P	**P**	**22 18 13.7**	**+2.4**
NUUG				IAmb	IAmb	22 18 22.2	
	comp=Z,36nm,1.2s						
E19K	**Redstone River**	**23.98**	**70**	P	**P**	**22 18 13.2**	**+1.1**
	baz=346,SNR=8.9						
E23K	**Chandalar**	**24.08**	**63**	P	**P**	**22 18 13.6**	**+0.5**
	baz=347,SNR=33						
E24K	**Your Creek**	**24.17**	**62**	P	**P**	**22 18 14.4**	**+0.6**
	baz=347,SNR=19						
E25K	**Arctic Village**	**24.37**	**59**	P	**P**	**22 18 16.5**	**+0.8**
	baz=347,SNR=9.2						
E28M	**Babbage River**	**24.39**	**54**	P	**P**	**22 18 15.9**	**0.0**
E28M				IAmb	IAmb	22 18 25.6	
	comp=Z,35nm,1.1s						
E28M	**Babbage River**	**24.39**	**54**	P	**P**	**22 18 16.2**	**+0.3**
	baz=348,SNR=10						
F22K	**John River**	**24.39**	**66**	P	**P**	**22 18 17.0**	**+1.1**
	baz=347,SNR=6.2						
F20K	**Avaraart Lake**	**24.52**	**69**		**P**	**22 18 16.8**	**-0.2**
F20K				IAmb	IAmb	22 18 28.5	
	comp=Z,31nm,1.1s						
F20K	**Avaraart Lake**	**24.52**	**69**	P	**P**	**22 18 17.8**	**+0.8**
	baz=347,SNR=13						
F19K	**Shaleruckik Mo**	**24.54**	**71**		**P**	**22 18 16.8**	**-0.4**
F19K				IAmb	IAmb	22 18 29.8	
	comp=Z,62nm,1.6s						
F19K	**Shaleruckik Mo**	**24.54**	**71**	P	**P**	**22 18 18.2**	**+1.0**
	baz=347,SNR=6.8						
F21K	**Alatna River**	**24.56**	**67**	P	**P**	**22 18 18.1**	**+0.8**
	baz=347,SNR=9.6						
F18K	**Selawik**	**24.60**	**73**	P	**P**	**22 18 18.6**	**+1.0**
	baz=347,SNR=9.4						
F17K	**Baldwin Pennin**	**24.60**	**75**	P	**P**	**22 18 17.6**	**-0.1**
F17K				IAmb	IAmb	22 18 28.2	
	comp=Z,58nm,0.9s						
F17K	**Baldwin Pennin**	**24.60**	**75**	P	**P**	**22 18 18.7**	**+1.0**
	baz=347						
E27K	**Coleen River**	**24.64**	**56**	P	**P**	**22 18 18.4**	**+0.3**
	baz=348,SNR=17						
E29M	**Blow River**	**24.73**	**53**	P	**P**	**22 18 19.6**	**+0.7**
	baz=348,SNR=22						
F24K	**Squaw Lake**	**24.76**	**62**	P	**P**	**22 18 20.2**	**+0.9**
	baz=347,SNR=12						
TNA	**Tin City**	**24.82**	**81**	P	**P**	**22 18 20.9**	**+1.2**
	baz=347						
COLD	**Coldfoot**	**24.84**	**64**	P	**P**	**22 18 20.1**	**+0.1**
COLD				IAmb	IAmb	22 18 30.7	
	comp=Z,18nm,0.8s						
COLD	**Coldfoot**	**24.84**	**64**	P	**P**	**22 18 20.7**	**+0.7**
	baz=347,SNR=9.2						
F25K	**Christian Rive**	**24.88**	**60**	P	**P**	**22 18 20.9**	**+0.6**
	baz=348						
F26K	**Sheenjek River**	**24.91**	**58**	P	**P**	**22 18 21.2**	**+0.6**
	baz=348,SNR=12						
F15K	**North Star Dit**	**24.99**	**78**	P	**P**	**22 18 22.5**	**+1.2**
	baz=347						
G22K	**Bettles**	**25.03**	**65**	P	**P**	**22 18 22.4**	**+0.9**
	baz=347						
F14K	**Arctic Creek**	**25.06**	**80**	P	**P**	**22 18 23.2**	**+1.4**
	baz=347						
BMAR	**Burnt Mountain**	**25.13**	**59**	P	**P**	**22 18 22.9**	**+0.3**
INK	**Inuvik**	**25.14**	**49**		**P**	**22 18 22.4**	**-0.2**
INK	**Inuvik**	**25.14**	**49**	P	**P**	**22 18 21.5**	**-1.1**
	comp=Z,16nm,1.0s,baz=342,slow=13,SNR=12						
INK				LR	LR	22 29 17.2	
	comp=Z,234nm,20.3s,baz=10,slow=39						
	comp=Z,16nm,1.0s						
INK	**Inuvik**	**25.14**	**49**	P	**P**	**22 18 22.4**	**-0.2**
INK				pmax	pmax		
	comp=Z,84nm,1.2s						
INK	**Inuvik**	**25.14**	**49**	P	**P**	**22 18 23.0**	**+0.4**
	baz=349,SNR=8.4						
G21K	**Allakaket**	**25.25**	**67**	P	**P**	**22 18 24.7**	**+1.1**
	baz=347,SNR=13						
G19K	**Purcell Mounta**	**25.28**	**71**	P	**P**	**22 18 25.0**	**+1.1**
	baz=347						
F28M	**Old Crow**	**25.34**	**55**	P	**P**	**22 18 24.8**	**+0.4**
	baz=348,SNR=7.8						
G23K	**Bananza Creek**	**25.37**	**64**	P	**P**	**22 18 25.6**	**+0.9**
	baz=348,SNR=31						
G18K	**Tagagawik**	**25.38**	**73**	P	**P**	**22 18 25.6**	**+0.8**
	baz=347						
G16K	**Koyuk River**	**25.52**	**76**	P	**P**	**22 18 26.6**	**+0.6**
	baz=347						
G17K	**Kiwalik Mounta**	**25.58**	**75**	P	**P**	**22 18 27.4**	**+0.9**
	baz=347						
G24K	**Hadweenzic Riv**	**25.60**	**62**	P	**P**	**22 18 27.4**	**+0.6**
	baz=348,SNR=23						
G25K	**Bearman Lake**	**25.65**	**61**	P	**P**	**22 18 28.5**	**+1.3**
	baz=348,SNR=39						
F30M	**Barrier River**	**25.66**	**51**	P	**P**	**22 18 28.0**	**+0.7**
	baz=349,SNR=12						
G26K	**Porcupine Rive**	**25.67**	**58**	P	**P**	**22 18 28.1**	**+0.8**
	baz=348,SNR=15						
IMAR	**Indian Mountai**	**25.75**	**68**	P	**P**	**22 18 28.3**	**+0.2**
G15K	**Niukluk**	**25.75**	**78**	P	**P**	**22 18 29.4**	**+1.3**
	baz=347						
ICESG	**Greenland Ices**	**25.87**	**332**	*i* P	**P**	**22 18 30.4**	**+0.8**
ICESG				IAmb	IAmb	22 18 40.9	
	comp=Z,20nm,0.9s						
H19K	**Roundabout Mou**	**25.94**	**71**	P	**P**	**22 18 31.1**	**+1.3**
	baz=348,SNR=14						
F31M	**Tsiigehtchic**	**25.98**	**49**	P	**P**	**22 18 30.7**	**+0.6**
	baz=349,SNR=12						
G27K	**Doyon Strip**	**25.98**	**57**	P	**P**	**22 18 30.9**	**+0.6**
	baz=348,SNR=42						
ANM	**Nome**	**26.04**	**80**	P	**P**	**22 18 32.0**	**+1.3**
	baz=347						
H22K	**Ishtalitna Cre**	**26.05**	**66**	P	**P**	**22 18 31.8**	**+0.9**
	baz=348,SNR=15						
H20K	**Anotleneega Mo**	**26.12**	**69**	P	**P**	**22 18 32.3**	**+0.8**
	baz=348,SNR=7.4						
H18K	**Honhosa River**	**26.13**	**73**	P	**P**	**22 18 32.5**	**+0.9**
	baz=348						
H21K	**Melozitna Rive**	**26.15**	**67**	P	**P**	**22 18 33.0**	**+1.2**
	baz=348,SNR=16						
H25L	**Birch Creek**	**26.17**	**61**	P	**P**	**22 18 33.0**	**+1.2**
	baz=348,SNR=20						

G29M	Pine Creek	26.17	53	P	P	22 18 32.2	+0.2
	baz=349,SNR=14						
GAMB	Gambell	26.20	86	P	P	22 18 33.8	+1.6
	baz=348						
H17K	Granite Mounta	26.20	74	P	P	22 18 32.1	-0.1
H17K				IAmb	IAmb	22 18 45.4	
	comp=Z,44nm,1.2s						
H17K	Granite Mounta	26.20	74	P	P	22 18 33.3	+1.1
	baz=348						
G30M	tAoh Zraii Nji	26.25	52	P	P	22 18 32.6	0.0
	baz=349,SNR=41						
H16K	Elim	26.27	77	P	P	22 18 34.0	+1.2
	baz=348						
H23K	Yukon River	26.28	64	P	P	22 18 34.4	+1.5
	baz=348,SNR=23						
ILON	Igloolik, Nuna	26.35	6		P	22 18 32.1	-1.3
ILON				IAmb	IAmb	22 18 42.0	
	comp=Z,21nm,0.9s						
H24K	Noodor Dome	26.41	63	P	P	22 18 35.7	+1.5
	baz=348,SNR=27						
G31M	Satah River	26.45	50	P	P	22 18 35.0	+0.5
	baz=349						
H27K	Steamboat Moun	26.56	57	P	P	22 18 37.0	+1.4
	baz=349,SNR=22						
GCSA	Galena City Sc	26.67	71	P	P	22 18 37.6	+1.2
	baz=348						
I21K	Tanana	26.69	67	P	P	22 18 38.2	+1.6
	baz=348,SNR=10.0						
EPYK	Eagle Plains	26.81	52	P	P	22 18 37.2	-0.6
EPYK	Eagle Plains	26.81	52	P	P	22 18 38.0	+0.2
	baz=349,SNR=19						
H29M	Whitestone	26.83	54	P	P	22 18 38.3	+0.4
	baz=349,SNR=16						
I20K	Naaghedeneel	26.84	69	P	P	22 18 39.1	+1.2
	baz=348						
MA2	Magadan	26.88	127	LR	LR	22 28 37.3	
	comp=Z,66nm,21.4s,baz=355,slow=35						
MA2	Magadan	26.88	127	*i* P	P	22 18 38.8	+0.5
MA2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PRP	Porcupine Dome	26.93	61		P	22 18 39.2	+0.3
PRP				IAmb	IAmb	22 18 54.9	
	comp=Z,34nm,1.2s						
PRP	Porcupine Dome	26.93	61	P	P	22 18 40.1	+1.1
	baz=348,SNR=20						
MLY	Manley	26.95	66	P	P	22 18 39.2	+0.1
MLY				IAmb	IAmb	22 18 50.6	
	comp=Z,24nm,1.1s						
MLY	Manley	26.95	66	P	P	22 18 40.6	+1.5
	baz=348,SNR=15						
I23K	Minto, Yukon-K	26.96	64	P	P	22 18 40.8	+1.8
	baz=348						
I17K	Unalakleet	27.15	75	P	P	22 18 42.1	+1.4
	baz=348						
I27K	Kandik River	27.17	57	P	P	22 18 42.2	+1.2
	baz=349,SNR=23						
I26K	Coal Creek Min	27.34	59	P	P	22 18 43.8	+1.4
	baz=349,SNR=13						
COLA	College	27.36	63	P	P	22 18 43.5	+0.9
COLA				IAmb	IAmb	22 18 53.5	
	comp=Z,59nm,1.3s						
COLA	College	27.36	63	P	P	22 18 43.5	+0.9
COLA				pmax	pmax		
	comp=Z,59nm,1.3s						
COLA	College	27.36	63	P	P	22 18 43.9	+1.3
	baz=348						
I28M	Miner Creek	27.46	56	P	P	22 18 44.5	+0.8
	baz=349,SNR=9.3						
J20K	Nowinta River	27.48	69	P	P	22 18 45.0	+1.2
	baz=348						
KLMR	Klimovskoe	27.49	256	*e*P	P	22 18 44.3	+0.5
KLMR	Klimovskoe	27.49	256	*e*P	P	22 18 41.8	-2.0
KLMR				S	S	22 23 23.0	-1.0
KLMR				pmax	pmax		
	comp=Z,34nm,1.4s						
J19K	Poorman	27.52	71	P	P	22 18 44.9	+0.8
	baz=348						
NEA2	Nenana	27.53	64	P	P	22 18 44.2	+0.1
NEA2	Nenana	27.53	64	P	P	22 18 44.7	+0.5
	baz=348						
IL31		27.55	62	P	P	22 18 45.1	+0.9
IL31				IAmb	IAmb	22 18 55.7	
	comp=Z,54nm,1.3s						
ILAR	Eielson Array	27.55	62	P	P	22 18 45.1	+0.8
ILAR	Eielson Array	27.55	62	P	P	22 18 44.2	-0.1
	comp=Z,5.4nm,1.0s,baz=347,slow=8.3,SNR=35						
ILAR				PcP	PcP	22 22 01.6	0.0
	comp=Z,1.9nm,1.0s,baz=325,slow=3.7,SNR=5.3						
ILAR				LR	LR	22 28 42.9	
	comp=Z,229nm,21.7s,baz=356,slow=34						
	comp=Z,5.4nm,1.0s						
H31M	Peel River	27.55	51	P	P	22 18 44.5	+0.1
	baz=350						
CCB	Clear Creek Bu	27.59	63	P	P	22 18 45.1	+0.4
CCB				IAmb	IAmb	22 18 56.1	
	comp=Z,40nm,1.3s						
I29M	Ogilvie Camp,	27.68	54	P	P	22 18 45.6	+0.1
	baz=349,SNR=7.3						
J16K	Anvik River	27.75	76	P	P	22 18 46.5	+0.3
J16K				IAmb	IAmb	22 18 57.9	
	comp=Z,52nm,1.5s						
J16K	Anvik River	27.75	76	P	P	22 18 47.0	+0.8
	baz=348						
J17K	VABM Dome	27.79	74	P	P	22 18 47.3	+0.8
	baz=348						
J25K	Salcha River,	27.83	61	P	P	22 18 47.7	+0.7
	baz=349,SNR=5.5						
BPAW	Bear Paw Mtn.	27.84	66	P	P	22 18 47.2	+0.2
BPAW				IAmb	IAmb	22 18 57.8	
	comp=Z,40nm,1.4s						
BPAW	Bear Paw Mtn.	27.84	66	P	P	22 18 48.1	+1.1
	baz=348,SNR=6.6						
HDA	Harding Lake	27.90	62	P	P	22 18 47.2	-0.2
HDA				IAmb	IAmb	22 18 58.0	
	comp=Z,24nm,1.0s						
HDA	Harding Lake	27.90	62	P	P	22 18 48.4	+0.9
	baz=349						
BWN	Browne	27.91	65	P	P	22 18 48.5	+0.9
CHUM	Lake Minchumin	27.94	68	P	P	22 18 49.3	+1.5
	baz=348						
J18K	Innoko River	27.94	72	P	P	22 18 48.8	+0.9
	baz=348						
I30M	Mount Dempster	27.97	53	P	P	22 18 48.0	-0.2
	baz=350,SNR=12						
J14K	Nanvaranak Lak	28.00	79	P	P	22 18 49.4	+1.1
	baz=348						
J26L	Joseph Creek	28.09	59	P	P	22 18 50.1	+0.8
	baz=349,SNR=8.5						
FIA1	FINESS Array S	28.22	270		P	22 18 49.3	-1.0
FIA1				IAmb	IAmb	22 19 00.3	
	comp=Z,36nm,0.9s						
FINES	FINESS Array B	28.22	270		P	22 18 49.8	-0.5
FINES	FINESS Array B	28.22	270	P	P	22 18 49.0	-1.3
	comp=Z,6.0nm,0.8s,baz=25,slow=9.1,SNR=16						
FINES				PcP	PcP	22 22 03.2	0.0
	comp=Z,2.2nm,0.6s,baz=69,slow=6.3,SNR=6.0						
	comp=Z,6.0nm,0.8s						
K20K	Telida	28.29	69	P	P	22 18 52.0	+1.0
	baz=349						
MCK	McKinley	28.39	65	P	P	22 18 52.7	+0.8
	baz=349						
SFJD	Kangerlussuaq	28.39	341	LR	LR	22 29 30.1	
	comp=Z,158nm,19.0s,baz=358,slow=35						
CAST	Castle Rocks	28.41	68	P	P	22 18 52.8	+0.7
CAST				IAmb	IAmb	22 19 03.6	
	comp=Z,34nm,1.5s						
CAST	Castle Rocks	28.41	68	P	P	22 18 53.2	+1.1
	baz=349						
K17K	Iditarod	28.53	74	P	P	22 18 54.2	+1.2
	baz=348						
TRF	Thorofare Moun	28.54	66	P	P	22 18 53.5	+0.1
TRF				IAmb	IAmb	22 19 04.1	
	comp=Z,27nm,1.1s						
TRF	Thorofare Moun	28.54	66	P	P	22 18 54.3	+0.9
	baz=349,SNR=5.5						
SCRK	Sand Creek	28.58	60	P	P	22 18 54.0	+0.3
	baz=349,SNR=5.4						
K24K	Donnelly Dome	28.59	62	P	P	22 18 53.9	+0.1
	baz=349						
J30M	Hart River	28.61	53	P	P	22 18 53.9	-0.1
	baz=350						
K15K	Wolf Creek Mou	28.64	77	P	P	22 18 54.9	+0.9
	baz=348						
K27K	Chicken	28.68	58	P	P	22 18 54.8	+0.3
	baz=349						
K13K	Kusilvak Mount	28.69	80	P	P	22 18 55.3	+0.8
	baz=348						

RIDG	Independent Ri	28.74	61	P	P	22 18 55.0	0.0
RIDG	Independent Ri	28.74	61	P	P	22 18 55.3	+0.3
	baz=349						
KIRV	Kirov	28.82	245	LR	LR	22 31 34.8	
	comp=Z,253nm,21.0s,baz=25,slow=39						
KIRV	Kirov	28.82	245	*i* P	P	22 18 55.7	+0.1
DAWY	Dawson	28.87	56	P	P	22 18 55.8	-0.3
DAWY				IAmb	IAmb	22 19 05.7	
	comp=Z,17nm,1.0s						
DAWY	Dawson	28.87	56	P	P	22 18 56.3	+0.1
	baz=350,SNR=6.0						
PPLA	Purkeypile	28.92	68	P	P	22 18 57.1	+0.4
PPLA	Purkeypile	28.92	68	P	P	22 18 56.8	+0.1
	baz=349						
L17K	Donlin	29.10	74	P	P	22 18 59.0	+0.8
	baz=349						
BORG	Borgarnes	29.13	315	LR	LR	22 28 32.9	
	comp=Z,36nm,19.4s,baz=354,slow=32						
L18K	Granite Mounta	29.17	72	P	P	22 18 58.9	+0.1
L18K	Granite Mounta	29.17	72	P	P	22 18 59.5	+0.7
	baz=349						
DHY	Denali Highway	29.17	63	P	P	22 18 59.3	+0.3
	baz=349,SNR=5.4						
L20K	Farewell, AK	29.17	70	P	P	22 18 59.3	+0.5
	baz=349						
K29M	Barlow Dome	29.24	54	P	P	22 18 59.9	+0.3
	baz=350,SNR=6.0						
L15K	Ungalak Mounta	29.25	77	P	P	22 19 00.4	+0.9
	baz=349						
WAT1	Susitna Watana	29.31	65	P	P	22 19 00.3	+0.2
	baz=349						
AKN	Aaknes	29.33	289	*e*P	P	22 19 09.7	+9.4
L19K	White Mountain	29.38	71	P	P	22 19 01.0	+0.3
	baz=349						
L16K	Owhat River	29.41	75	P	P	22 19 01.5	+0.7
	baz=349						
PAX	Paxson	29.44	62	P	P	22 19 02.0	+0.7
	baz=349,SNR=9.0						
L14K	Kuka Creek	29.46	78	P	P	22 19 02.1	+0.8
	baz=349						
SVE	Sverdlovsk	29.62	232	*e*P	P	22 19 03.7	+0.9
SVE				*e*S	S	22 24 02.7	+5.1
SVE				pmax	pmax		
	comp=Z,11nm,0.8s						
SVE				MLR	MLR		
	comp=Z,473nm,18.0s						
WAT6	Susitna Watana	29.63	64	P	P	22 19 03.5	+0.5
	baz=349						
BCAR	Beaver Creek A	29.66	58	P	P	22 19 03.9	+0.7
L27K	Beaver Creek,	29.66	58	P	P	22 19 04.0	+0.8
	baz=350,SNR=11						
M19K	Big River Lodg	29.69	70	P	P	22 19 04.3	+0.8
	baz=349						
M20K	Styx River	29.83	69	P	P	22 19 05.3	+0.6
	baz=349						
SKT	Skwentna	29.88	68	P	P	22 19 05.7	+0.6
	baz=349						
M17K	Holitna River	29.90	73	P	P	22 19 06.3	+1.0
	baz=349						
L29M	L29M	29.92	55	P	P	22 19 05.8	+0.3
	baz=350,SNR=7.6						
NC405	NORSAR Array S	29.94	284	P	P	22 19 05.8	+0.2
M18K	Stony River	29.97	72	P	P	22 19 06.7	+0.9
	baz=349,SNR=5.1						
HARP	HAARP	30.03	62	P	P	22 19 06.9	+0.4
	baz=350						
NB2	NORSAR Subarra	30.06	284	P	P	22 19 07.1	+0.4
	comp=Z,17nm,1.1s,baz=11,slow=9.3						
NB2	NORSAR Subarra	30.06	284	P	P	22 19 07.1	+0.4
	baz=11,slow=9.3						
NOA	NORSAR Array B	30.06	284	P	P	22 19 06.6	-0.1
	comp=Z,2.2nm,0.9s,baz=9.3,slow=8.6,SNR=9.8						
NOA				LR	LR	22 31 04.3	
	comp=Z,63nm,21.2s,baz=10.0,slow=36						
	comp=Z,2.2nm,0.9s						
M11K	Mekoryuk	30.06	82	P	P	22 19 07.9	+1.2
	baz=349						
M14K	Bethel	30.11	78	P	P	22 19 08.2	+1.1
	baz=349						
M16K	Timber Creek	30.13	75	P	P	22 19 08.4	+1.1
	baz=349						
M26K	Nabesna, AK	30.21	60	P	P	22 19 08.3	+0.1
	baz=350						
M24K	Tolsona, Glenn	30.23	63	P	P	22 19 08.2	-0.1
	baz=350,SNR=5.1						
ARTI	Arti	30.23	234		P	22 19 08.0	-0.3
ARTI	Arti	30.23	234	P	P	22 19 07.9	-0.3
	comp=Z,4.5nm,0.7s,baz=34,slow=5.9,SNR=11						
ARTI				LR	LR	22 32 46.9	
	comp=Z,873nm,19.9s,baz=12,slow=39						
	comp=Z,4.5nm,0.7s						
ARTI	Arti	30.23	234	P	P	22 19 07.6	-0.6
ARTI						22 20 01.8	
ARTI				S	S	22 24 10.2	+3.0
ARTI				SS	SnSn	22 25 42.2	+1.7
ARTI				MLR	MLR		
	comp=Z,881nm,20.0s						
M15K	Kasigluk River	30.29	77	P	P	22 19 09.6	+1.0
	baz=349						
M13K	Dall Lake	30.31	79	P	P	22 19 10.1	+1.2
	baz=349						
GHO	Glory Hole Cre	30.32	65	P	P	22 19 09.3	+0.2
GHO				IAmb	IAmb	22 19 19.5	
	comp=Z,25nm,1.0s						
M27K	Edge Creek, AK	30.35	59	P	P	22 19 10.0	+0.6
	baz=350,SNR=6.3						
BVCY	Beaver Creek	30.38	58	P	P	22 19 10.3	+0.8
	baz=350						
SCM	Sheep Creek Mo	30.40	64	P	P	22 19 09.5	-0.3
SCM	Sheep Creek Mo	30.40	64	P	P	22 19 09.5	-0.3
SCM				pmax	pmax		
	comp=Z,60nm,0.9s						
SCM	Sheep Creek Mo	30.40	64	P	P	22 19 10.5	+0.7
	baz=350,SNR=8.6						
M23K	Glacier View	30.41	64	P	P	22 19 10.6	+0.9
	baz=350						
M29M	Somme Creek	30.55	56	P	P	22 19 12.5	+1.4
	baz=350,SNR=21						
N20K	Mount Spurr	30.59	69	P	P	22 19 12.5	+1.1
	baz=349						
SPCR	Spurr Chakacha	30.59	69	P	P	22 19 12.9	+1.5
	baz=349						
SKAR	Skarslia	30.69	287	*e*P	P	22 19 15.5	+3.2
N16K	Nishlik Lake	30.69	75	P	P	22 19 13.7	+1.4
	baz=349						
HFS	Hagfors	30.71	282	P	P	22 19 11.7	-0.7
	comp=Z,5.5nm,0.9s,baz=11,slow=1.5,SNR=6.4						
HFS				LR	LR	22 32 05.8	
	comp=Z,58nm,18.8s,baz=12,slow=38						
	comp=Z,5.5nm,0.9s						
KNK	Knik Glacier	30.71	65	P	P	22 19 13.5	+1.0
	baz=350						
N18K	Kilae Creek	30.76	72	P	P	22 19 13.9	+1.1
	baz=349						
N19K	Bonanza Creek	30.76	71	P	P	22 19 14.1	+1.2
	baz=349						
N17K	Nushagak Hills	30.79	74	P	P	22 19 14.0	+0.9
	baz=349						
KLU	Klutina	30.86	63	P	P	22 19 13.9	+0.1
KLU	Klutina	30.86	63	P	P	22 19 14.5	+0.7
	baz=350,SNR=11						
N25K	Chitina, Valde	30.86	61	P	P	22 19 14.6	+0.8
	baz=350,SNR=6.6						
N15K	Kwethluk River	30.86	76	P	P	22 19 14.9	+1.1
	baz=349						
RC01	Rabbit Creek A	30.92	66	P	P	22 19 15.5	+1.3
	baz=350						
MMPY	Sheldon Lake,	30.93	49	P	P	22 19 15.0	+0.6
	baz=351						
N14K	Kuskokwak Cree	30.95	78	P	P	22 19 15.5	+0.9
	baz=349						
ZAA0	Zalesovo Array	31.04	204	P	P	22 19 15.7	+0.3
ZALV	Zalesovo Beam	31.04	204	P	P	22 19 15.5	+0.1
ZALV	Zalesovo Beam	31.04	204	P	P	22 19 14.4	-0.9
	comp=Z,2.5nm,0.8s,baz=357,slow=9.2,SNR=9.0						
ZALV				PcP	PcP	22 22 10.3	-0.2
	comp=Z,1.4nm,0.9s,baz=70,slow=12,SNR=2.7						
ZALV				LR	LR	22 32 54.3	
	comp=Z,275nm,20.1s,baz=356,slow=39						
	comp=Z,2.5nm,0.8s						
YUK3	Moose Creek	31.05	58	P	P	22 19 16.3	+0.7
	baz=350,SNR=7.2						
VSU	Vasula	31.09	268	*i* P	P	22 19 13.7	-2.0
VSU				pmax	pmax		
	comp=Z,16nm,0.9s						
CAPN	Captain Cook N	31.11	68	P	P	22 19 17.0	+1.1
	baz=350						

M31M	Drury Creek, Y	31.11	52	P	P	22 19 16.6	+0.7
	baz=351,SNR=5.9						
BLKN	Baker Lake	31.12	18	P	P	22 19 14.6	-1.4
BLKN				IAmb	IAmb	22 19 24.1	
	comp=Z,26nm,1.1s						
FARO	Faro, Yukon	31.16	51	P	P	22 19 17.4	+1.0
	baz=351						
MCARA	McCarthy VSAT	31.22	60	P	P	22 19 16.5	-0.4
MCARA				IAmb	IAmb	22 19 27.7	
	comp=Z,23nm,1.1s						
MCARA	McCarthy VSAT	31.22	60	P	P	22 19 17.5	+0.6
	baz=350						
DIV	Divide	31.23	63	P	P	22 19 17.4	+0.3
DIV				IAmb	IAmb	22 19 27.8	
	comp=Z,40nm,1.2s						
ZEA	Zeya	31.26	155	*e*P	P	22 19 19.1	+1.8
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA				MLR	MLR		
	comp=Z,100nm,17.0s						
PWL	Port Wells	31.27	65	P	P	22 19 18.2	+0.8
	baz=350,SNR=5.9						
GLI	Glacier Island	31.36	64	P	P	22 19 19.2	+1.0
	baz=350						
BMRM	Bremner River	31.49	62	P	P	22 19 20.5	+1.1
	baz=350						
O17K	Koliganek Bris	31.54	74	P	P	22 19 21.0	+1.3
	baz=350						
KONO	Kongsberg	31.58	285	*e*P	P	22 19 18.2	-1.9
KONO				pmax	pmax		
	comp=Z,17nm,1.3s						
YUK8	Steele Glacier	31.59	57	P	P	22 19 21.1	+0.7
	baz=350						
O16K	Kokwok River B	31.62	75	P	P	22 19 21.3	+0.9
	baz=350						
N30M	Aishikik Lake	31.63	55	P	P	22 19 21.3	+0.7
	baz=351,SNR=11						
O18K	Koktuh Hills	31.64	72	P	P	22 19 21.1	+0.5
	baz=350						
O20K	Slope Mountain	31.65	69	P	P	22 19 21.6	+0.8
	baz=350						
O14K	Tigyukauivet M	31.66	78	P	P	22 19 21.5	+0.8
	baz=350						
N31M	Braeburn, Yuko	31.71	53	P	P	22 19 21.4	+0.1
	baz=351,SNR=6.4						
CTG	Chitna Glacier	31.77	59	P	P	22 19 21.9	0.0
	baz=350						
EYAK	Cordova Ski Ar	31.81	63	P	P	22 19 22.8	+0.7
	baz=350						
CRQE	Cirque	31.83	60	P	P	22 19 22.7	+0.2
	baz=350						
O15K	Ungalikthiuk R	31.87	77	P	P	22 19 23.2	+0.6
	baz=350						
FRB	Frobisher Bay	32.02	355	LR	LR	22 32 09.9	
	comp=Z,131nm,19.2s,baz=324,slow=36						
YUK6	Outpost Mounta	32.04	56	P	P	22 19 25.6	+1.2
	baz=351,SNR=6.2						
O28M	Mount Upton	32.06	58	P	P	22 19 25.3	+0.7
	baz=351						
P18K	Big Mountain,	32.09	72	P	P	22 19 25.3	+0.7
	baz=350						
YKA	Yellowknife Ar	32.14	34	P	P	22 19 23.3	-1.7
YKA	Yellowknife Ar	32.14	34	P	P	22 19 24.9	-0.1
	comp=Z,0.8nm,0.5s,baz=350,slow=8.2,SNR=7.1						
YKA				PcP	PcP	22 22 12.0	-1.4
	comp=Z,0.7nm,0.6s,baz=351,slow=7.8,SNR=2.9						
YKA				LR	LR	22 32 47.0	
	comp=Z,398nm,18.9s,baz=310,slow=37						
	comp=Z,0.8nm,0.5s						
BRSE	Bradley Lake S	32.16	68	P	P	22 19 25.9	+0.7
	baz=350						
HOM	Homer	32.16	69	P	P	22 19 25.7	+0.5
	baz=350						
P17K	Kvichak River	32.17	73	P	P	22 19 26.0	+0.8
	baz=350						
P23K	Montague Islan	32.20	65	P	P	22 19 26.1	+0.5
	baz=350						
HYT	Haines Junctio	32.23	55	P	P	22 19 26.1	+0.2
HYT	Haines Junctio	32.23	55	P	P	22 19 25.9	0.0
	baz=351						
O30N	Mendenhall	32.39	54	P	P	22 19 27.8	+0.5
	baz=351,SNR=12						
KAIM	Kayak Island	32.54	62	P	P	22 19 28.8	+0.3
	baz=350						
WHY	Whitehorse	32.60	53	P	P	22 19 28.8	-0.3
WHY				IAmb	IAmb	22 19 38.3	
	comp=Z,24nm,1.2s						
WHY	Whitehorse	32.60	53	P	P	22 19 29.3	+0.2
	baz=351						
O29M	Mount Kennedy	32.66	56	P	P	22 19 30.3	+0.6
	baz=351,SNR=6.4						
Q16K	King Salmon	32.66	74	P	P	22 19 30.2	+0.7
	baz=350						
BRVK	Borovoye	32.69	221	P	P	22 19 30.4	+0.5
BRVK	Borovoye	32.69	221	P	P	22 19 30.4	+0.5
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BVAR	Borovoye Array	32.71	220	P	P	22 19 30.4	+0.3
	comp=Z,1.8nm,0.7s,baz=23,slow=7.8,SNR=7.4						
BVAR				PcP	PcP	22 22 14.5	-0.6
	comp=Z,1.4nm,0.8s,baz=316,slow=4.0,SNR=2.1						
BVAR				LR	LR	22 35 28.2	
	comp=Z,660nm,18.4s,baz=13,slow=41						
	comp=Z,1.8nm,0.7s						
MOS	Moscow	32.72	256	*e*P	P	22 19 28.0	-2.1
PINM	Pinnacle	32.72	58	P	P	22 19 30.4	+0.2
	baz=351						
SPIA	Saint Paul Isl	32.83	87	P	P	22 19 32.3	+1.3
	baz=350						
Q18K	Katmai Hardscr	32.84	72	P	P	22 19 32.1	+0.8
	baz=350						
MOY	Mondy	32.91	186	*e*P	P	22 19 32.2	+0.2
MOY				pmax	pmax		
	comp=Z,14nm,1.4s						
P30M	Million Dollar	32.97	55	P	P	22 19 32.7	+0.4
	baz=351						
Q20K	Shuyak Island	33.12	70	P	P	22 19 34.6	+1.0
	baz=350						
Q17K	Contact Creek	33.14	73	P	P	22 19 34.9	+1.0
	baz=350						
P33M	Teslin, Yukon	33.20	51	P	P	22 19 34.8	+0.4
	baz=352						
PNL	Peninsula	33.22	57	P	P	22 19 35.0	+0.5
	baz=351						
OBN	Obninsk	33.44	257	LR	LR	22 34 39.0	
	comp=Z,282nm,21.9s,baz=333,slow=39						
OBN	Obninsk	33.44	257⇑	*e*P	P	22 19 38.5	+2.2
OBN						22 20 45.0	
OBN						22 22 17.0	
OBN				*e*S	S	22 24 55.7	-1.4
OBN				*i* SS	SnSn	22 26 54.3	-3.9
OBN				SSS	SSS	22 27 23.0	
OBN				pmax	pmax		
	comp=Z,44nm,2.1s						
OBN				MLR	MLR		
	comp=Z,235nm,21.0s						
P08K	Saint George I	33.47	87	P	P	22 19 37.8	+1.2
	baz=350						
ONAU	Onsala	33.58	282	*i* P	P	22 19 40.4	+2.8
PLBC	Pleasant Camp	33.67	55	P	P	22 19 39.1	+0.7
	baz=351,SNR=6.1						
R17L	Mt. Peulik Vol	33.72	74	P	P	22 19 39.5	+0.6
	baz=350						
P32M	Atlin	33.75	52	P	P	22 19 39.4	+0.3
	baz=352						
SKAG	Skagway	33.75	54	P	P	22 19 39.6	+0.6
	baz=351						
PETK	Petropavlovsk-	33.85	122	P	P	22 19 40.8	+0.8
PETK	Petropavlovsk-	33.85	122	LR	LR	22 34 10.8	
	comp=Z,91nm,18.2s,baz=10,slow=38						
PETK	Petropavlovsk-	33.85	122	P	P	22 19 40.8	+0.8
FABU	Falkenberg	33.90	282	*i* P	P	22 19 47.3	+7.0
KDAK	Kodiak Island	33.92	70	LR	LR	22 32 59.4	
	comp=Z,143nm,22.0s,baz=350,slow=36						
R18K	Karluk	33.96	72	P	P	22 19 41.6	+0.7
	baz=350						
NRS	Narsarsuaq	34.04	335	P	P	22 19 40.8	-0.7
NRS	Narsarsuaq	34.04	335	P	P	22 19 40.8	-0.7
NRS				pmax	pmax		
	comp=Z,105nm,1.4s						
R33M	Jennings River	34.15	50	P	P	22 19 43.2	+0.5
	baz=352,SNR=6.3						
PABE	Paberze	34.28	270		P	22 19 43.5	-0.1
PABE				IAmb	IAmb	22 19 53.7	
	comp=Z,25nm,0.8s						
BLEU	Blekinge	34.28	278	*i* P	P	22 19 47.1	+3.4
DEL	Delary	34.31	280	*i* P	P	22 19 52.8	+8.9

OHAK	**Old Harbor**	**34.41**	**71**	P	**P**	**22 19 45.4**	**+0.6**
	baz=350						
Q32M	**Nakina River**	**34.48**	**51**	P	**P**	**22 19 45.8**	**+0.1**
	baz=352						
KURK	**Kurchatov**	**34.55**	**211**	P	**P**	**22 19 46.9**	**+0.8**
KURK				IAmb	IAmb	22 19 56.8	
	comp=Z,34nm,2.0s						
KURK	**Kurchatov**	**34.55**	**211**	P	**P**	**22 19 46.0**	**0.0**
KURK						22 22 20.8	
NACGM	**Naroch**	**34.59**	**267**	*e*P	**P**	**22 19 45.8**	**-0.6**
KURBB	**Kurchatov Arra**	**34.64**	**211**	P	**P**	**22 19 46.0**	**-0.9**
	comp=Z,0.9nm,0.7s,baz=23,slow=7.7,SNR=10						
KURBB				PcP	**PcP**	**22 22 20.8**	**+0.2**
	comp=Z,1.1nm,0.9s,baz=0.9,slow=2.7,SNR=4.7						
KURBB				LR	LR	22 36 60.0	
	comp=Z,171nm,19.2s,baz=242,slow=42						
	comp=Z,0.9nm,0.7s						
S14K	**Fog Glacier**	**34.75**	**77**	P	**P**	**22 19 48.8**	**+1.0**
	baz=350						
HEH	**HeiHe**	**34.75**	**156**	*e*P	**P**	**22 19 49.0**	**+1.2**
HEH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BJUU	**Bjuv**	**34.78**	**281**	*i* P	P	22 19 57.6	+10
MNK	**Minsk**	**34.88**	**266**	*i* P	**P**	**22 19 49.3**	**+0.4**
	comp=E,10.0nm,0.9s						
MNK				*i* P	**P**	**22 19 49.3**	**+0.4**
	comp=N,11nm,1.2s						
MNK				*i* P	**P**	**22 19 49.3**	**+0.4**
	comp=Z,23nm,0.9s,baz=9.5						
MNK				*i* PP	**PnPn**	**22 21 05.5**	**+0.4**
MNK				*i* PPP	PPP	22 21 18.2	
MNK				*i* S	**S**	**22 25 21.8**	**+2.3**
MNK				*i* SS	**SnSn**	**22 27 33.1**	**-0.2**
MNK				*i* SSS	SSS	22 27 53.8	
MNK				*i* LQ	LQ	22 30 52.7	
MNK				*i* LR	LR	22 33 47.2	
MNK				*i* LRM	MLR	22 35 38.2	
	comp=Z,84nm,17.8s						
MNK				*i* LRM	MLR	22 35 39.6	
	comp=N,360nm,19.4s						
MNK				*i* LRM	MLR	22 35 40.4	
	comp=E,167nm,17.3s						
MNK	**Minsk**	**34.88**	**266**	*i* P	**P**	**22 19 49.3**	**+0.4**
MNK				*i*		22 21 05.5	
MNK				*i* PPP	PPP	22 21 18.1	
MNK				*i* S	**S**	**22 25 21.7**	**+2.3**
MNK				*i* SS	**SnSn**	**22 27 33.0**	**-0.2**
MNK				*i* SSS	SSS	22 27 53.7	
MNK				pmax	pmax		
	comp=N,11nm,1.2s						
MNK				pmax	pmax		
	comp=Z,23nm,0.9s						
MNK				pmax	pmax		
	comp=E,10.0nm,0.9s						
MNK				MLR	MLR		
	comp=Z,84nm,18.0s						
MNK				MLR	MLR		
	comp=N,360nm,19.0s						
MNK				MLR	MLR		
	comp=E,167nm,17.0s						
R32K	**Eaglecrest**	**34.99**	**53**	P	**P**	**22 19 50.2**	**+0.4**
	baz=352						
S12K	**Black Hills**	**35.08**	**80**	P	**P**	**22 19 51.6**	**+1.0**
	baz=350						
BELG	**Belogornoye**	**35.10**	**245**	P	**P**	**22 19 49.0**	**-1.8**
	comp=E,16nm,0.9s,baz=97,slow=7.6,SNR=4.2						
BELG				LR	LR	22 36 39.7	
	comp=E,203nm,18.3s,baz=99,slow=40						
	comp=E,16nm,0.9s						
BELG	**Belogornoye**	**35.10**	**245**	*i* P	**P**	**22 19 50.4**	**-0.4**
BELG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
S31K	**Pelican**	**35.16**	**55**	P	**P**	**22 19 51.4**	**+0.2**
	baz=352						
DLBC	**Dease Lake**	**35.17**	**49**	LR	LR	22 34 00.6	
	comp=Z,11nm,22.0s,baz=335,slow=36						
LUNU	**Lund**	**35.18**	**280**	*i* P	P	22 20 00.1	+8.7
HIA	**Hailar**	**35.48**	**164**	P	**P**	**22 19 54.0**	**-0.1**
HIA	**Hailar**	**35.48**	**164**	P	**P**	**22 19 54.1**	**-0.1**
HIA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CHIR	**Chirikof Islan**	**35.58**	**74**	P	**P**	**22 19 56.1**	**+1.2**
	baz=351						
SDPT	**Sand Point**	**35.58**	**78**	P	**P**	**22 19 55.8**	**+0.9**
	baz=351						
S34M	**Telegraph Cree**	**35.61**	**50**	P	**P**	**22 19 55.8**	**+0.6**
	baz=352,SNR=7.3						
LPSR	**Galich'ya Gora**	**35.70**	**254**	*e*P	**P**	**22 19 54.6**	**-1.3**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
S32K	**Killisnoo**	**35.79**	**53**	P	**P**	**22 19 56.8**	**+0.2**
	baz=352						
KLR	**Kul'dur**	**35.97**	**151**	LR	LR	22 35 29.6	
	comp=Z,90nm,18.6s,baz=355,slow=38						
KLR	**Kul'dur**	**35.97**	**151**	*i* P	**P**	**22 19 59.3**	**+1.0**
KLR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SIT	**Sitka**	**36.13**	**54**	P	**P**	**22 20 00.5**	**+0.9**
	baz=352						
AKTO	**Aktyubinsk**	**36.17**	**233**	LR	LR	22 36 03.7	
	comp=Z,499nm,21.6s,baz=22,slow=38						
UNV	**Unalaska Valle**	**36.48**	**85**	P	**P**	**22 20 04.1**	**+1.5**
	baz=351						
VORR	**Voronezh**	**36.59**	**254**	*e*P	**P**	**22 20 02.9**	**-0.7**
VORR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
T35M	**Bob Quinn**	**36.60**	**50**	P	**P**	**22 20 04.2**	**+0.5**
	baz=352						
ULN	**Ulaanbaatar**	**36.70**	**179**	P	**P**	**22 20 05.5**	**+0.9**
ULN	**Ulaanbaatar**	**36.70**	**179**	P	**P**	**22 20 05.6**	**+0.9**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.5s						
SONM	**Songino Array**	**36.73**	**179**	P	**P**	**22 20 05.6**	**+0.7**
SONM	**Songino Array**	**36.73**	**179**	P	**P**	**22 20 05.2**	**+0.2**
	comp=Z,3.2nm,1.0s,baz=355,slow=8.1,SNR=7.1						
SONM				PcP	**PcP**	**22 22 27.3**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=318,slow=1.9,SNR=2.7						
SONM				LR	LR	22 35 26.4	
	comp=Z,102nm,20.1s,baz=320,slow=37						
	comp=Z,3.2nm,1.0s						
FCC	**Fort Churchill**	**36.75**	**17**	P	**P**	**22 20 04.2**	**-0.6**
FCC				IAmb	IAmb	22 20 13.5	
	comp=Z,26nm,1.2s						
FCC	**Fort Churchill**	**36.75**	**17**	P	**P**	**22 20 04.2**	**-0.6**
FCC				pmax	pmax		
	comp=Z,26nm,1.2s						
VRH	**Novokhopyorsk**	**36.82**	**251**	*e*P	**P**	**22 20 03.5**	**-2.0**
VRH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
WRAK	**Wrangell Islan**	**37.00**	**52**	P	**P**	**22 20 07.8**	**+0.8**
	baz=352						
EKA	**Eskdalemuir Ar**	**37.02**	**296**	P	**P**	**22 20 07.3**	**+0.1**
	comp=Z,3.4nm,1.0s,baz=24,slow=6.4,SNR=3.7						
	comp=Z,3.4nm,1.0s						
VSR	**Storozhevoye**	**37.05**	**253**	*e*P	**P**	**22 20 04.9**	**-2.5**
VSR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NIKH	**Nikolski High**	**37.12**	**87**	P	**P**	**22 20 09.4**	**+1.4**
	baz=351						
BSEG	**Bad Segeberg**	**37.16**	**283**	*e*P	P	22 20 18.0	+10
	comp=Z,23nm,1.0s,baz=9.7,slow=8.4						
ABKAR	**Akbulak array**	**37.20**	**231**		**P**	**22 20 09.2**	**+0.5**
ABKAR	**Akbulak array**	**37.20**	**231**		**P**	**22 20 08.4**	**-0.3**
U33K	**Whale Pass**	**37.24**	**52**	P	**P**	**22 20 09.7**	**+0.7**
	baz=352						
VORD	**Divnogorie**	**37.28**	**253**	*e*P	**P**	**22 20 07.5**	**-1.9**
VORD				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ATKA	**Atka Island**	**37.35**	**93**		**P**	**22 20 10.5**	**+0.5**
ADK	**Adak**	**37.43**	**95**		**P**	**22 20 10.5**	**-0.2**
ADK				IAmb	IAmb	22 20 12.8	
	comp=Z,27nm,1.1s						
ADK	**Adak**	**37.43**	**95**	P	**P**	**22 20 10.5**	**-0.2**
ADK				pmax	pmax		
	comp=Z,27nm,1.2s						
CRAG	**Craig**	**37.88**	**53**	P	**P**	**22 20 14.8**	**+0.3**
	baz=352						
GORT1	**Trebel**	**37.99**	**282**	*e*P	P	22 20 25.6	+10
	comp=Z,26nm,1.2s,baz=9.7,slow=8.4						
V35K	**Ketchikan**	**38.14**	**51**	P	**P**	**22 20 17.0**	**+0.4**
	baz=353						
MAKZ	**Makanchi**	**38.29**	**207**	P	**P**	**22 20 18.2**	**+0.2**
MAKZ	**Makanchi**	**38.29**	**207**	P	**P**	**22 20 18.2**	**+0.2**
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
MK31	**Makanchi Array**	**38.29**	**206**	*i* P	**P**	**22 20 17.6**	**-0.5**

MKAR	**Makanchi Array**	**38.29**	**206**		**P**	**22 20 17.8**	**-0.3**
MKAR	**Makanchi Array**	**38.29**	**206**	P	**P**	**22 20 17.2**	**-0.8**
	comp=Z,4.7nm,0.8s,baz=6.5,slow=6.0,SNR=23						
MKAR				LR	LR	22 37 19.0	
	comp=Z,191nm,19.7s,baz=348,slow=38						
	comp=Z,4.7nm,0.8s						
MKAR	**Makanchi Array**	**38.29**	**206**	*i* P	**P**	**22 20 17.8**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
RETH	**Rethem/Aller,**	**38.43**	**284**	*e*P	P	22 20 28.7	+10
	comp=Z,14nm,1.1s,baz=9.7,slow=8.4						
MI28	**Mi28,Pidlybu**	**38.44**	**265**	P	**P**	**22 20 19.4**	**+0.2**
AK21	**Malin Array Si**	**38.45**	**264**	P	**P**	**22 20 19.4**	**+0.1**
AK22	**Malin Array Si**	**38.47**	**264**	P	**P**	**22 20 19.3**	**-0.1**
AK03	**Malin Array Si**	**38.49**	**263**	P	**P**	**22 20 19.4**	**-0.2**
AK20	**Malin Array Si**	**38.49**	**264**	P	**P**	**22 20 19.5**	**-0.1**
AK04	**Malin Array Si**	**38.49**	**264**	P	**P**	**22 20 19.6**	**-0.1**
AK04				pP	**pwP**	**22 20 28.7**	**+1.9**
AK18	**Malin Array Si**	**38.51**	**264**	P	**P**	**22 20 19.7**	**-0.1**
AKASG	**Malin Array Be**	**38.51**	**263**	P	**P**	**22 20 18.6**	**-1.2**
	comp=Z,3.1nm,0.7s,baz=11,slow=8.7,SNR=12						
AKASG				PcP	**PcP**	**22 22 31.6**	**-0.7**
	comp=Z,2.1nm,1.0s,baz=17,slow=5.4,SNR=4.7						
AKASG				LR	LR	22 38 40.8	
	comp=Z,218nm,20.7s,baz=12,slow=40						
	comp=Z,3.1nm,0.7s						
AKBB	**Malin Array Si**	**38.51**	**263**	*i* P	**P**	**22 20 17.8**	**-2.0**
AKBB				pmax	pmax		
	comp=Z,12nm,0.9s						
AKBB	**Malin Array Si**	**38.51**	**263**	P	**P**	**22 20 19.5**	**-0.3**
AKBB				pP	**pwP**	**22 20 28.7**	**+1.8**
KIEV	**Kiev**	**38.52**	**263**		**P**	**22 20 19.3**	**-0.5**
KIEV	**Kiev**	**38.52**	**263**	P	**P**	**22 20 19.3**	**-0.5**
KIEV				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KIEV	**Kiev**	**38.52**	**263**	P	**P**	**22 20 19.5**	**-0.4**
AK02	**Malin Array Si**	**38.56**	**263**	P	**P**	**22 20 20.0**	**-0.2**
AK02				pP	**pwP**	**22 20 29.3**	**+2.0**
NRDL	**Niedersach Rie**	**38.60**	**283**	*e*P	P	22 20 30.3	+10
	comp=Z,19nm,1.1s,baz=9.7,slow=8.4						
FLTG	**Flechtingen**	**38.65**	**282**	*e*P	P	22 20 30.6	+10
	comp=Z,15nm,1.0s,baz=9.7,slow=8.4						
ASSE	**Asse, Remlinge**	**38.91**	**282**	*e*P	P	22 20 32.9	+10
	comp=Z,28nm,1.1s,baz=9.7,slow=8.4						
IBBN	**Ibbenburen**	**39.01**	**285**	*e*P	P	22 20 34.0	+10
	comp=Z,14nm,1.0s,baz=9.7,slow=8.4						
CLZ	**Clausthal**	**39.22**	**282**	*e*P	P	22 20 35.2	+9.4
	comp=Z,26nm,1.0s,baz=9.7,slow=8.4						
BNX	**BinXian**	**39.26**	**156**	⇓P	**P**	**22 20 27.0**	**+0.9**
BNX				pmax	pmax		
	comp=Z,18nm,0.8s						
CLL	**Collm**	**39.50**	**280**	P	**P**	**22 20 28.0**	**0.0**
CLL	**Collm**	**39.50**	**280**	*i* P	**P**	**22 20 29.0**	**+1.0**
CLL				*i*		22 20 37.1	
CLL	**Collm**	**39.50**	**280**	*e*P	P	22 20 37.3	+9.2
	comp=Z,16nm,1.1s,baz=9.7,slow=8.4						
CLL	**Collm**	**39.50**	**280**	*i* P	**P**	**22 20 29.0**	**+1.0**
CLL				*i* x	x	22 20 37.1	
	comp=Z,18nm,1.2s						
CLL				*e*PcP	**PcP**	**22 22 35.0**	**-0.4**
CLL				*e*SS	SS	22 29 30.0	+6.5
CLL				AMS	AMS	22 35 00.0	
	comp=Z,100nm,21.9s						
CLL				AMS	AMS	22 42 00.0	
	comp=Z,100nm,18.7s						
GTTG	**Gottingen**	**39.55**	**283**	*e*P	P	22 20 38.8	+10
	comp=Z,32nm,1.2s,baz=9.7,slow=8.4						
BRG	**Berggiesshubel**	**39.84**	**279**	*e*P	P	22 20 40.0	+9.2
	comp=Z,18nm,1.3s,baz=9.7,slow=8.4						
BRG	**Berggiesshubel**	**39.84**	**279**	*e*P	**P**	**22 20 31.9**	**+1.0**
BRG				Amp		22 20 33.2	
	comp=Z,3.3nm,0.9s						
BRG	**Berggiesshubel**	**39.84**	**279**	P	P	22 20 35.8	+5.0
BRG				Amp		22 20 36.2	
	comp=Z,4.9nm,0.9s						
BRG	**Berggiesshubel**	**39.84**	**279**	S	**S**	**22 26 43.0**	**+8.3**
BRG	**Berggiesshubel**	**39.84**	**279**	SS	SS	22 29 30.0	-0.3
OJC	**Ojcow**	**39.91**	**273**	P	**P**	**22 20 32.0**	**+0.5**
OJC	**Ojcow**	**39.91**	**273**	P	**P**	**22 20 32.0**	**+0.5**
CHVC	**Chvalec**	**39.91**	**277**	*e*P	**P**	**22 20 33.3**	**+1.7**
CHVC	**Chvalec**	**39.91**	**277**	*e*P	**P**	**22 20 33.3**	**+1.7**
BUG	**Bochum--Univer**	**39.91**	**285**	*e*P	P	22 20 41.3	+10
	comp=Z,38nm,1.1s,baz=9.7,slow=8.4						
OSTC	**Ostas**	**39.93**	**276**	AMS	AMS	22 40 20.0	
	comp=Z,200nm,20.5s						
UPC	**Upice**	**40.00**	**277**	AMS	AMS	22 40 40.0	
	comp=Z,100nm,17.8s						
KASTN	**Kahler Asten**	**40.04**	**284**	*e*P	P	22 20 42.4	+10
	comp=Z,22nm,1.0s,baz=9.7,slow=8.4						
DPC	**Dobruska-Polom**	**40.12**	**276**	*e*P	**P**	**22 20 34.5**	**+1.2**
DPC				*e*pP	**sP**	**22 20 38.0**	**+1.7**
DPC	**Dobruska-Polom**	**40.12**	**276**	*e*P	**P**	**22 20 34.5**	**+1.2**
DPC				*e*		22 20 38.0	
UBBA	**Unterbreizbach**	**40.27**	**283**	*e*P	P	22 20 44.0	+10
	comp=Z,15nm,1.4s,baz=9.7,slow=8.4						
MOX	**Moxa**	**40.29**	**281**	*e*P	P	22 20 44.3	+10
	comp=Z,33nm,1.2s,baz=9.7,slow=8.4						
KRLC	**Kraliky**	**40.35**	**276**	*e*P	**P**	**22 20 36.3**	**+1.1**
KRLC				*e*pP	**sP**	**22 20 40.0**	**+1.8**
KRLC				AMS	AMS	22 37 50.0	
	comp=Z,100nm,15.7s						
KRLC	**Kraliky**	**40.35**	**276**	*e*P	**P**	**22 20 36.3**	**+1.1**
KRLC				*e*		22 20 40.0	
KRLC				MLR	MLR		
	comp=Z,100nm,15.7s						
STEB	**Steborice**	**40.39**	**275**	*e*P	**P**	**22 20 35.9**	**+0.4**
STEB				*e*pP	**sP**	**22 20 39.8**	**+1.3**
TANN	**Tannenbergstha**	**40.43**	**280**	*e*P	P	22 20 45.6	+10
	comp=Z,20nm,1.4s,baz=9.7,slow=8.4						
OKC	**Ostrava-Krasne**	**40.45**	**274**	AMS	AMS	22 40 20.0	
	comp=Z,200nm,14.3s						
MDJ	**Mudanjiang**	**40.47**	**154**	P	**P**	**22 20 37.0**	**+0.8**
MDJ				pmax	pmax		
	comp=Z,13nm,1.1s						
FFC	**Flin Flon**	**40.51**	**25**	P	**P**	**22 20 36.5**	**+0.1**
FFC	**Flin Flon**	**40.51**	**25**	P	**P**	**22 20 36.5**	**+0.1**
FFC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
STHS	**Stebnicka Huta**	**40.56**	**271**	*e*P	P	22 20 46.1	+9.1
STHS				pmax	pmax		
	comp=Z,12nm,1.0s						
STHS	**Stebnicka Huta**	**40.56**	**271**	*e*P	P	22 20 46.1	+9.1
MORC	**Moravsky Berou**	**40.57**	**275**	P	**P**	**22 20 37.4**	**+0.4**
MORC	**Moravsky Berou**	**40.57**	**275**	*e*P	**P**	**22 20 37.5**	**+0.4**
MORC	**Moravsky Berou**	**40.57**	**275**	P	**P**	**22 20 37.4**	**+0.4**
MORC				pmax	pmax		
	comp=Z,15nm,1.1s						
PRA	**Prague**	**40.58**	**278**	AMS	AMS	22 41 50.0	
	comp=Z,200nm,20.5s						
PRU	**Pruhonice**	**40.65**	**278**	AMS	AMS	22 42 10.0	
	comp=Z,200nm,22.8s						
MANZ	**Manzenberg**	**40.89**	**280**	*e*P	P	22 20 49.5	+10
	comp=Z,4.2nm,1.3s,baz=9.7,slow=8.4						
SCHQ	**Schefferville**	**40.94**	**354**	P	**P**	**22 20 44.7**	**+4.7**
	comp=Z,2.2nm,0.5s,baz=8.1,slow=7.8,SNR=5.7						
SCHQ				LR	LR	22 36 22.5	
	comp=Z,104nm,20.1s,baz=334,slow=34						
KOLS	**Kolonicke sedl**	**40.94**	**270**	*e*P	P	22 20 48.7	+8.6
KOLS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KOLS	**Kolonicke sedl**	**40.94**	**270**	*e*P	P	22 20 48.7	+8.6
USRK	**Ussuriysk Ar.**	**41.00**	**151**	P	**P**	**22 20 40.8**	**+0.3**
	comp=Z,3.2nm,0.8s,baz=345,slow=8.1,SNR=6.1						
USRK				LR	LR	22 38 27.9	
	comp=Z,89nm,20.4s,baz=353,slow=37						
	comp=Z,3.2nm,0.8s						
TNS	**Taunus Mts**	**41.01**	**284**	*e*P	P	22 20 50.8	+10
	comp=Z,14nm,1.0s,baz=9.7,slow=8.4						
WMQ	**Urumqi**	**41.05**	**200**	*e*P	**P**	**22 20 43.8**	**+2.7**
WMQ				LR	LR		
	comp=Z,200nm,18.3s						
WMQ				LR	LR		
	comp=Z,340nm,23.9s						
WMQ				LR	LR		
	comp=Z,320nm,22.9s						
ROTZ	**Rotzenmuhle**	**41.10**	**280**	*e*P	P	22 20 51.3	+10
	comp=Z,6.7nm,1.2s,baz=9.7,slow=8.4						
CN2	**Changchun**	**41.12**	**158**	P	**P**	**22 20 40.0**	**-1.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VRAC	**Vranov**	**41.13**	**276**	P	**P**	**22 20 42.2**	**+0.6**
	comp=Z,5.5nm,0.9s,baz=17,slow=13,SNR=4.8						
VRAC				LR	LR	22 39 13.8	
	comp=Z,100nm,20.0s,baz=11,slow=38						
	comp=Z,5.5nm,0.9s						

VRAC	**Vranov**	**41.13**	**276**	*e*P	**P**	**22 20 42.3**	**+0.7**
SORM	**Soroca**	**41.14**	**264**	⇑P	**P**	**22 20 42.0**	**+0.3**
SORM	**Soroca**	**41.14**	**264**	⇑P	**P**	**22 20 42.0**	**+0.3**
ZVC	**Zvikov**	**41.23**	**278**	*e*P	**P**	**22 20 47.1**	**+4.7**
ZVC				AMS	AMS	22 41 50.0	
	comp=Z,200nm,20.8s						
GRA1	**Grafenberg Arr**	**41.27**	**281**	P	**P**	**22 20 42.9**	**+0.2**
GRA1				IAmb	IAmb	22 20 54.8	
	comp=Z,25nm,0.9s						
GRF	**Grafenberg Arr**	**41.27**	**281**	P	**P**	**22 20 42.9**	**+0.2**
GRF				pmax	pmax		
	comp=Z,25nm,0.9s						
GRF	**Grafenberg Arr**	**41.27**	**281**	*e*P	P	22 20 52.9	+10
	comp=Z,34nm,1.1s,baz=9.7,slow=8.4						
GRFO	**Grafenberg**	**41.27**	**281**	P	**P**	**22 20 43.3**	**+0.6**
GRFO				IAmb	IAmb	22 20 54.2	
	comp=Z,30nm,1.1s						
GRFO	**Grafenberg**	**41.27**	**281**	P	**P**	**22 20 43.3**	**+0.6**
GRFO				pmax	pmax		
	comp=Z,31nm,1.1s						
KRUC	**Moravsky**	**41.39**	**276**	*e*P	**P**	**22 20 45.0**	**+1.3**
JAVC	**Velka Javorina**	**41.47**	**275**	*e*P	**P**	**22 20 45.6**	**+1.2**
BBB	**Bella Bella**	**41.53**	**49**	LR	LR	22 38 59.4	
	comp=Z,77nm,20.6s,baz=0.5,slow=38						
KHC	**Kasperske Hory**	**41.59**	**279**	*e*P	**P**	**22 20 46.7**	**+1.2**
KHC				*e*pP	**pwP**	**22 20 51.5**	**-1.0**
KHC				AMS	AMS	22 42 30.0	
	comp=Z,200nm,19.6s						
KHC	**Kasperske Hory**	**41.59**	**279**	*e*P	**P**	**22 20 46.7**	**+1.2**
KHC				*e*		22 20 51.5	
KHC				MLR	MLR		
	comp=Z,200nm,19.6s						
WET	**Wettzell**	**41.65**	**279**	*e*P	P	22 20 55.9	+10
	comp=Z,7.6nm,1.0s,baz=9.7,slow=8.4						
ASAJ	**Asahikawa**	**41.67**	**140**	LR	LR	22 38 51.7	
	comp=Z,88nm,20.2s,baz=358,slow=37						
VYHS	**Vyhne**	**41.71**	**273**	*e*P	**P**	**22 20 47.0**	**+0.6**
VYHS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VYHS	**Vyhne**	**41.71**	**273**	*e*P	**P**	**22 20 47.0**	**+0.6**
CKRC	**Cesky Krumlov**	**41.83**	**278**	AMS	AMS	22 42 40.0	
	comp=Z,200nm,21.9s						
GEC2	**GERESS Array S**	**41.87**	**278**	P	**P**	**22 20 48.1**	**+0.3**
GEC2	**GERESS Array S**	**41.87**	**278**	*e*P	P	22 20 57.6	+10
	comp=Z,18nm,1.3s,baz=9.7,slow=8.4						
GERES	**GERESS Array B**	**41.87**	**278**	P	**P**	**22 20 48.4**	**+0.7**
GERES	**GERESS Array B**	**41.87**	**278**	P	**P**	**22 20 46.6**	**-1.1**
	comp=Z,1.9nm,0.9s,baz=352,slow=8.1,SNR=10						
GERES				PcP	**PcP**	**22 22 43.0**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=22,slow=4.3,SNR=4.8						
	comp=Z,1.9nm,0.9s						
BUR08	**Bucovina Ar. S**	**41.93**	**267**	P	**P**	**22 20 48.5**	**+0.2**
BURAR	**Bucovina Array**	**41.96**	**267**		**P**	**22 20 48.5**	**0.0**
MODS	**Modra-Piesok**	**41.98**	**275**	*e*P	**P**	**22 20 49.8**	**+1.2**
MODS				pmax	pmax		
	comp=Z,14nm,1.1s						
MODS	**Modra-Piesok**	**41.98**	**275**	*e*P	**P**	**22 20 49.8**	**+1.2**
PSZ	**Piszkesteto**	**42.18**	**272**	P	**P**	**22 20 50.8**	**+0.5**
PSZ				IAmb	IAmb	22 21 01.8	
	comp=Z,39nm,1.4s						
PSZ	**Piszkesteto**	**42.18**	**272**	P	**P**	**22 20 50.8**	**+0.5**
PSZ				pmax	pmax		
	comp=Z,39nm,1.4s						
STU	**Stuttgart**	**42.37**	**283**	P	**P**	**22 20 51.9**	**+0.1**
STU				IAmb	IAmb	22 21 03.6	
	comp=Z,19nm,0.8s						
STU	**Stuttgart**	**42.37**	**283**	P	**P**	**22 20 51.9**	**+0.1**
STU				pmax	pmax		
	comp=Z,19nm,0.8s						
STU	**Stuttgart**	**42.37**	**283**	*e*P	P	22 21 02.2	+10
	comp=Z,45nm,0.8s,baz=9.7,slow=8.4						
CONA	**Conrad Observa**	**42.56**	**276**	*e*pP	pP	22 20 55.0	-0.6
	comp=Z,2.9nm,1.0s,SNR=5.3						
RONA	**Rosalia, Austr**	**42.75**	**276**	*i* pP	pP	22 20 56.7	-0.3
	comp=Z,2.3nm,0.8s,SNR=5.4						
MOA	**Molln**	**42.80**	**278**	*i* pP	pP	22 20 56.8	-0.6
	comp=Z,2.6nm,1.0s,SNR=5.1						
AAK	**Ala-Archa**	**42.82**	**214**	P	**P**	**22 20 56.9**	**+1.2**
AAK	**Ala-Archa**	**42.82**	**214**	LR	LR	22 42 15.3	
	comp=Z,335nm,18.7s,baz=10,slow=41						
AAK	**Ala-Archa**	**42.82**	**214**	P	**P**	**22 20 56.9**	**+1.2**
AAK				pmax	pmax		
	comp=Z,12nm,1.3s						
BOOM	**Boomskoye usch**	**42.89**	**213**	P	**P**	**22 20 57.1**	**+0.8**
BOOM	**Boomskoye usch**	**42.89**	**213**	P	**P**	**22 20 57.1**	**+0.8**
BOOM				pmax	pmax		
	comp=Z,11nm,0.9s						
BFO	**Black Forest**	**42.89**	**284**	P	**P**	**22 20 56.5**	**+0.4**
BFO	**Black Forest**	**42.89**	**284**	P	**P**	**22 20 56.5**	**+0.4**
BFO				pmax	pmax		
	comp=Z,13nm,1.1s						
BFO	**Black Forest**	**42.89**	**284**	*e*P	P	22 21 05.9	+10
	comp=Z,15nm,1.2s,baz=9.7,slow=8.4						
TESR	**Tescani**	**42.91**	**265**	⇑P	**P**	**22 20 56.2**	**+0.1**
BIOA	**Bad Ischl, Aus**	**43.01**	**278**	*i* P	**P**	**22 20 57.2**	**+0.2**
	comp=Z,2.9nm,0.9s						
SNY	**Shenyang**	**43.03**	**160**	⇑P	**P**	**22 20 58.0**	**+0.9**
SNY				pmax	pmax		
	comp=Z,23nm,0.7s						
MARR	**Marisel-Cluj**	**43.09**	**269**	⇑P	**P**	**22 20 58.3**	**+0.6**
ECH	**Echery**	**43.12**	**285**	P	**P**	**22 20 57.9**	**0.0**
ECH	**Echery**	**43.12**	**285**	P	**P**	**22 20 57.9**	**0.0**
ECH				pmax	pmax		
	comp=Z,17nm,1.0s						
KDJ	**Kajisay**	**43.18**	**211**		**P**	**22 20 59.2**	**+0.5**
KDJ	**Kajisay**	**43.18**	**211**	P	**P**	**22 20 59.2**	**+0.5**
KDJ				pmax	pmax		
	comp=Z,11nm,0.9s						
LESA	**Schwarzleotal**	**43.37**	**279**	*i* P	**P**	**22 20 60.0**	**0.0**
	comp=Z,4.8nm,1.4s						
TURR	**Turia**	**43.42**	**266**	⇑P	**P**	**22 21 01.4**	**+1.0**
RETA	**Reutte**	**43.49**	**281**	*i* pP	pP	22 21 02.3	-0.8
	comp=Z,2.0nm,0.8s						
LLLB	**Lillooet**	**43.53**	**43**	P	**P**	**22 21 01.9**	**+0.7**
VRI	**Vrincioaia**	**43.54**	**265**	⇑P	**P**	**22 21 02.3**	**+1.0**
VRI	**Vrincioaia**	**43.54**	**265**	⇑P	**P**	**22 21 02.3**	**+1.0**
TARG	**Taragay, Kyrgy**	**43.55**	**211**	P	**P**	**22 21 03.0**	**+1.1**
TARG	**Taragay, Kyrgy**	**43.55**	**211**	P	**P**	**22 21 03.0**	**+1.1**
TARG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ANN	**Anapa**	**43.57**	**254**	*e*P	**P**	**22 20 58.9**	**-2.5**
ANN				*e*S	**S**	**22 27 36.3**	**+6.3**
ANN				pmax	pmax		
	comp=Z,44nm,0.9s						
ANN				MLR	MLR		
	comp=Z,342nm,24.0s						
WATA	**Walderalm**	**43.57**	**280**	*i* pP	pP	22 21 03.8	0.0
	comp=Z,2.8nm,0.6s						
MOTA	**Moosalm**	**43.60**	**281**	*i* pP	pP	22 21 03.8	-0.3
	comp=Z,3.9nm,1.1s						
WTTA	**Wattenberg**	**43.63**	**280**	*i* pP	pP	22 21 04.9	+0.6
	comp=Z,1.5nm,0.5s						
SIRR	**Siria**	**43.64**	**270**	⇑P	**P**	**22 21 04.0**	**+2.0**
SQTA	**Sankt Quirin**	**43.72**	**281**	*e*P	**P**	**22 21 03.0**	**+0.2**
	comp=Z,1.0nm,0.4s						
DAVA	**Damuels**	**43.78**	**282**	*i* pP	pP	22 21 04.7	-0.8
	comp=Z,3.2nm,0.9s,SNR=6.2						
CBB	**Campbell River**	**43.87**	**46**	P	**P**	**22 21 03.7**	**-0.2**
SOKA	**Soboth**	**43.88**	**277**	*e*pP	pP	22 21 05.5	-0.8
	comp=Z,1.9nm,0.8s						
KVAR	**Kislovodsk Arr**	**43.91**	**248**	LR	LR	22 43 32.9	
	comp=Z,48nm,18.2s,baz=273,slow=42						
KIV	**Kislovodsk**	**43.92**	**248**		**P**	**22 21 04.6**	**+0.2**
KIV				IAmb	IAmb	22 21 25.0	
	comp=Z,20nm,1.0s						
KIV	**Kislovodsk**	**43.92**	**248**	⇓P	**P**	**22 21 06.0**	**+1.6**
KIV	**Kislovodsk**	**43.92**	**248**	*e*P	**P**	**22 21 05.1**	**+0.7**
KIV				pmax	pmax		
	comp=Z,14nm,1.1s						
KIV				MLR	MLR		
	comp=Z,67nm,16.0s						
BEHE	**Becsehely**	**43.92**	**275**	P	**P**	**22 21 04.8**	**+0.5**
BEHE				IAmb	IAmb	22 21 16.1	
	comp=Z,28nm,1.4s						
FETA	**Feichten**	**43.96**	**281**	*e*pP	pP	22 21 07.8	+0.8
	comp=Z,2.4nm,1.0s						
BTO	**Baotou**	**43.97**	**175**	*e*P	**P**	**22 21 03.5**	**-1.4**
BTO				PP	**PP**	**22 22 44.8**	**-2.2**
BTO				S	**S**	**22 27 36.0**	**-0.2**
BTO				pmax	pmax		
	comp=Z,15nm,0.7s						
BTO				pmax	pmax		
	comp=Z,270nm,4.8s						
BTO				LR	LR		
	comp=Z,170nm,6.0s						

BTO				LR	LR		
	comp=Z,300nm,9.1s						
BTO				LR	LR		
	comp=Z,160nm,8.0s						
MLR	**Muntele Rosu**	**43.99**	**266**	P	**P**	**22 21 05.8**	**+0.7**
MLR	**Muntele Rosu**	**43.99**	**266**	LR	LR	22 42 19.9	
	comp=Z,163nm,19.0s,baz=38,slow=40						
MLR	**Muntele Rosu**	**43.99**	**266**	P	**P**	**22 21 05.8**	**+0.7**
MLR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ABTA	**Abfaltersbach**	**44.06**	**279**	*i* pP	pP	22 21 07.5	-0.2
	comp=Z,5.5nm,1.4s						
MYKA	**Terra Mystica**	**44.06**	**278**	*i* pP	pP	22 21 07.6	-0.1
	comp=Z,1.2nm,0.5s						
OBKA	**Obir**	**44.10**	**277**	*i* pP	**P**	**22 21 06.5**	**+0.7**
	comp=Z,5.2nm,1.0s						
SURR	**Surduc**	**44.10**	**269**	⇑P	**P**	**22 21 07.1**	**+1.4**
KBZ	**Khabaz**	**44.12**	**248**	P	**P**	**22 21 06.2**	**+0.2**
	comp=Z,2.1nm,0.7s,baz=12,slow=4.1,SNR=5.6						
KBZ				PcP	**PP**	**22 22 48.7**	**+0.3**
	comp=Z,3.7nm,0.9s,baz=340,slow=4.5,SNR=3.8						
KBZ				LR	LR	22 41 48.7	
	comp=Z,58nm,20.6s,baz=2.0,slow=39						
	comp=Z,2.1nm,0.7s						
PRED	**Cave del Predi**	**44.26**	**278**	P	**P**	**22 21 07.0**	**-0.1**
DAVOX	**Davos/Dischmat**	**44.28**	**282**	LR	LR	22 40 43.5	
	comp=Z,81nm,19.1s,baz=24,slow=38						
BZS	**Buzias**	**44.29**	**270**	⇑P	**P**	**22 21 08.8**	**+1.6**
BZS	**Buzias**	**44.29**	**270**	⇑P	**P**	**22 21 08.8**	**+1.6**
GZR	**Gura Zlata**	**44.40**	**269**	⇑P	**P**	**22 21 09.2**	**+1.0**
GZR	**Gura Zlata**	**44.40**	**269**	⇑P	**P**	**22 21 09.2**	**+1.0**
FUORN	**Ofenpass-Fuorn**	**44.40**	**281**	P	**P**	**22 21 09.4**	**+1.0**
FUORN				IAmb	IAmb	22 21 20.5	
	comp=Z,24nm,1.0s						
MAK	**Makhachkala**	**44.47**	**243**	*d i*P	**P**	**22 21 04.1**	**-4.6**
MAK				*e*PPP	PPP	22 23 30.0	
MAK				*e*S	**S**	**22 27 37.6**	**-5.6**
MAK				*e*SS	**ScS**	**22 31 06.1**	**+0.1**
MAK				*e*SSS	SSS	22 31 47.0	
MAK				pmax	pmax		
	comp=Z,127nm,1.1s						
MAK				MLR	MLR		
	comp=Z,168nm,13.0s						
STAL	**STALIGIAL**	**44.52**	**279**	P	**P**	**22 21 09.7**	**+0.5**
STAL				IAmb	IAmb	22 21 19.8	
	comp=Z,23nm,1.4s						
SOC	**Sochi**	**44.56**	**251**	*e*P	P	22 21 00.9	-8.5
SOC				*e*		22 22 49.0	
SOC				*e*PPP	PPP	22 23 28.6	
SOC				*e*SS	SS	22 31 01.7	-2.0
SOC				*e*SSS	SSS	22 31 50.7	
SOC				MLR	MLR		
	comp=Z,380nm,20.0s						
HARR	**Harsova**	**44.59**	**263**	⇑P	**P**	**22 21 10.5**	**+0.9**
HARR	**Harsova**	**44.59**	**263**	⇑P	**P**	**22 21 10.5**	**+0.9**
BJI	**Beijing**	**44.62**	**169**	P	**P**	**22 21 12.3**	**+2.4**
BJI				ScS	ScS	22 31 11.5	+4.5
BJI				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BJI				pmax	pmax		
	comp=Z,57nm,4.8s						
BJI				LR	LR		
	comp=Z,80nm,21.4s						
BJI				LR	LR		
	comp=Z,67nm,15.4s						
BJI				LR	LR		
	comp=Z,100nm,15.6s						
TUE	**Stuetta**	**44.64**	**282**	P	**P**	**22 21 11.2**	**+0.9**
TUE				IAmb	IAmb	22 21 22.2	
	comp=Z,30nm,1.0s						
BJT	**Baijiatuau**	**44.64**	**169**	P	**P**	**22 21 11.0**	**+0.9**
BJT				IAmb	IAmb	22 21 13.1	
	comp=Z,33nm,1.8s						
BJT	**Baijiatuau**	**44.64**	**169**	P	**P**	**22 21 11.0**	**+0.9**
BJT				pmax	pmax		
	comp=Z,33nm,1.8s						
SENIN	**Lac Senin/Sane**	**44.94**	**284**	P	**P**	**22 21 12.8**	**+0.1**
SENIN				IAmb	IAmb	22 21 24.2	
	comp=Z,13nm,0.9s						
CLRS	**Cowichan Lake**	**45.16**	**46**	P	**P**	**22 21 14.7**	**+0.5**
GTA	**Gaotai**	**45.18**	**187**	*e*P	**P**	**22 21 15.5**	**+0.9**
GTA				sP	pwP	22 21 23.5	+1.6
GTA				PP	**PP**	**22 23 05.0**	**+5.1**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				LR	LR		
	comp=Z,370nm,17.1s						
GTA				LR	LR		
	comp=Z,340nm,18.7s						
GTA				LR	LR		
	comp=Z,460nm,17.9s						
ULM	**Lac du Bonnet**	**45.21**	**20**	P	**P**	**22 21 14.9**	**+0.3**
ULM				IAmb	IAmb	22 21 22.4	
	comp=Z,14nm,1.0s						
ULM	**Lac du Bonnet**	**45.21**	**20**	P	**P**	**22 21 12.6**	**-2.0**
	comp=Z,2.8nm,0.6s,baz=19,slow=4.5,SNR=3.5						
ULM				LR	LR	22 40 25.6	
	comp=Z,258nm,19.4s,baz=8.0,slow=36						
	comp=Z,2.8nm,0.6s						
ULM	**Lac du Bonnet**	**45.21**	**20**	P	**P**	**22 21 14.9**	**+0.3**
ULM				pmax	pmax		
	comp=Z,14nm,1.0s						
PGC	**Sidney**	**45.38**	**45**	P	**P**	**22 21 15.7**	**-0.1**
PGC				IAmb	IAmb	22 21 26.1	
	comp=Z,37nm,1.3s						
BTK	**Batken**	**45.60**	**218**	P	**P**	**22 21 19.0**	**+1.1**
BTK				IAmb	IAmb	22 21 29.5	
	comp=Z,16nm,1.0s						
BTK	**Batken**	**45.60**	**218**	P	**P**	**22 21 19.0**	**+1.1**
BTK				pmax	pmax		
	comp=Z,15nm,1.0s						
KSH	**Kashi**	**45.85**	**212**	P	P	22 21 25.3	+5.4
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KSH				LR	LR		
	comp=Z,290nm,20.6s						
KSH				LR	LR		
	comp=Z,240nm,16.5s						
KSH				LR	LR		
	comp=Z,380nm,13.7s						
EPLO	**Experimental L**	**45.85**	**18**	P	**P**	**22 21 20.0**	**+0.4**
EPLO				IAmb	IAmb	22 21 27.5	
	comp=Z,16nm,0.8s						
AKT	**Akhty**	**45.92**	**243**	*e*P	**P**	**22 21 21.3**	**+0.9**
AKT				*e*		22 22 57.7	
AKT				*e*		22 23 09.5	
AKT				*e*PPP	PPP	22 23 47.8	
AKT				*e*S	**S**	**22 28 09.0**	**+4.5**
AKT				pmax	pmax		
	comp=Z,21nm,1.0s						
AKT				MLR	MLR		
	comp=Z,333nm,17.0s						
B08A	**Colville Reser**	**45.95**	**41**	P	**P**	**22 21 20.1**	**-0.3**
DRK	**Karamyk**	**46.12**	**217**	P	**P**	**22 21 23.3**	**+1.1**
DRK	**Karamyk**	**46.12**	**217**	P	**P**	**22 21 23.3**	**+1.1**
DRK				pmax	pmax		
	comp=Z,86nm,0.3s						
NEW	**Newport**	**46.18**	**39**	P	**P**	**22 21 22.3**	**0.0**
NEW	**Newport**	**46.18**	**39**	LR	LR	22 41 14.9	
	comp=Z,330nm,20.4s,baz=359,slow=37						
NEW	**Newport**	**46.18**	**39**	P	**P**	**22 21 22.3**	**0.0**
NEW				pmax	pmax		
	comp=Z,92nm,1.5s						
ZCCA	**Zocca**	**46.58**	**280**	P	**P**	**22 21 26.4**	**+0.9**
NLWA	**Neilton Lookou**	**46.60**	**45**	P	**P**	**22 21 25.9**	**+0.3**
NLWA				IAmb	IAmb	22 21 35.7	
	comp=Z,27nm,1.1s						
EGMT	**Eagleton**	**46.84**	**32**	P	**P**	**22 21 26.6**	**-0.9**
JTMT	**Jette**	**46.87**	**37**	P	**P**	**22 21 27.5**	**-0.3**
KARS	**Kars**	**47.18**	**247**	P	**P**	**22 21 31.4**	**+1.1**
KARS				IAmb	IAmb	22 21 41.7	
	comp=Z,18nm,1.2s						
KARS	**Kars**	**47.18**	**247**	P	**P**	**22 21 31.5**	**+1.1**
HNS	**HongShan**	**47.23**	**170**	⇑P	**P**	**22 21 32.5**	**+2.0**
HNS				pmax	pmax		
	comp=Z,11nm,0.8s						
HNS				LR	LR		
	comp=Z,110nm,12.5s						
HNS				LR	LR		
	comp=Z,110nm,12.6s						
HNS				LR	LR		
	comp=Z,94nm,12.9s						
LON	**Longmire**	**47.38**	**44**	P	**P**	**22 21 31.2**	**-0.5**
LON	**Longmire**	**47.38**	**44**	P	**P**	**22 21 31.2**	**-0.5**
LON				pmax	pmax		
	comp=Z,49nm,1.4s						
JSD	**Sado**	**47.47**	**145**		**P**	**22 21 32.4**	**0.0**
JSD				IAmb	IAmb	22 21 34.0	
	comp=Z,11nm,1.1s						
GNI	**Garni**	**47.51**	**245**	LR	LR	22 46 06.4	
	comp=Z,98nm,18.4s,baz=12,slow=42						
GNI	**Garni**	**47.51**	**245**	*i* P	**P**	**22 21 32.5**	**-0.4**
GNI				pmax	pmax		
	comp=Z,15nm,1.2s						
KSRS	**Korea Array**	**47.55**	**156**	P	**P**	**22 21 33.0**	**0.0**
	comp=Z,1.6nm,0.8s,baz=354,slow=7.1,SNR=8.6						
	comp=Z,1.6nm,0.8s						
KSAR	**Wonju Array Be**	**47.56**	**156**	P	**P**	**22 21 32.5**	**-0.6**
KSAR	**Wonju Array Be**	**47.56**	**156**	P	**P**	**22 21 32.5**	**-0.6**
EYMN	**Ely**	**47.65**	**16**	P	**P**	**22 21 32.4**	**-1.3**
EYMN				IAmb	IAmb	22 21 42.1	
	comp=Z,15nm,0.8s						
LYMT	**Lyon Mountain**	**47.75**	**35**	P	**P**	**22 21 34.8**	**-0.1**
MSO	**Missoula**	**47.80**	**36**	P	**P**	**22 21 34.4**	**-0.6**
E08A	**Dider Farm, El**	**47.82**	**41**	P	**P**	**22 21 35.2**	**+0.1**
LDAQ	**Lac Daran**	**47.85**	**357**	P	**P**	**22 21 34.5**	**-0.9**
LDAQ				IAmb	IAmb	22 21 44.7	
	comp=Z,17nm,1.0s						
TIA	**Tai'an**	**48.46**	**168**	P	**P**	**22 21 41.3**	**+1.2**
TIA				pmax	pmax		
	comp=Z,15nm,1.1s						
LZH	**Lanzhou**	**48.47**	**182**	*e*P	**P**	**22 21 42.0**	**+1.6**
LZH				pP	pwP	22 21 47.3	-0.4
LZH				pmax	pmax		
	comp=Z,13nm,0.8s						
LZH				LR	LR		
	comp=Z,260nm,16.8s						
LZH				LR	LR		
	comp=Z,180nm,16.5s						
LZH				LR	LR		
	comp=Z,180nm,17.2s						
E28A	**Huff**	**48.71**	**24**	P	**P**	**22 21 41.2**	**-0.7**
MAJO	**Matsushiro**	**48.95**	**145**	*ce*P	**P**	**22 21 44.9**	**+1.0**
MAJO				pmax	pmax		
	comp=Z,9.0nm,1.7s						
MJAR	**Matsushiro Arr**	**48.95**	**145**	P	**P**	**22 21 44.6**	**+0.7**
MJAR	**Matsushiro Arr**	**48.95**	**145**	P	**P**	**22 21 43.8**	**-0.1**
	comp=Z,3.2nm,0.9s,baz=352,slow=8.2,SNR=13						
MJAR				LR	LR	22 43 36.2	
	comp=Z,33nm,18.0s,baz=18,slow=38						
	comp=Z,3.2nm,0.9s						
MJAR	**Matsushiro Arr**	**48.95**	**145**	P	**P**	**22 21 44.6**	**+0.7**
MJAR				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BR131	**Keskin Array S**	**48.96**	**257**		**P**	**22 21 44.7**	**+0.6**
BR131	**Keskin Array S**	**48.96**	**257**	P	**P**	**22 21 44.7**	**+0.6**
BR131				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BRTR	**Keskin Array B**	**48.96**	**257**		**P**	**22 21 44.9**	**+0.8**
BRTR	**Keskin Array B**	**48.96**	**257**	P	**P**	**22 21 43.4**	**-0.7**
	comp=Z,2.3nm,0.8s,baz=8.7,slow=4.8,SNR=12						
BRTR				PcP	**PcP**	**22 23 08.8**	**+0.8**
	comp=Z,1.7nm,0.8s,baz=58,slow=2.0,SNR=4.0						
BRTR				LR	LR	22 46 23.8	
	comp=Z,81nm,19.4s,baz=336,slow=41						
	comp=Z,2.3nm,0.8s						
ARPR	**Arapgir-MALATY**	**49.14**	**252**	P	**P**	**22 21 45.6**	**+0.1**
ARPR				IAmb	IAmb	22 21 57.5	
	comp=Z,32nm,1.3s						
BOZ	**Bozeman (W)**	**49.16**	**34**	P	**P**	**22 21 45.1**	**-0.5**
BOZ	**Bozeman (W)**	**49.16**	**34**	P	**P**	**22 21 45.1**	**-0.5**
BOZ				pmax	pmax		
	comp=Z,29nm,0.8s						
GEVA	**Gevas**	**49.48**	**247**	P	**P**	**22 21 48.5**	**+0.3**
RLMT	**Red Lodge**	**49.76**	**32**	P	**P**	**22 21 50.3**	**0.0**
RLMT				IAmb	IAmb	22 22 00.2	
	comp=Z,22nm,1.4s						
YNE	**Yellowstone No**	**49.84**	**33**	P	**P**	**22 21 50.4**	**-0.5**
JGF	**Kuroka**	**49.84**	**146**	P	**P**	**22 21 51.2**	**+0.5**
JGF				IAmb	IAmb	22 21 51.6	
	comp=Z,36nm,1.9s						
LMN	**Caledonia Moun**	**49.90**	**351**	P	**P**	**22 21 50.1**	**-0.9**
LMN				IAmb	IAmb	22 21 59.9	
	comp=Z,23nm,0.9s						
GBN	**Guysborough**	**50.29**	**348**	P	**P**	**22 21 54.0**	**0.0**
GBN				IAmb	IAmb	22 22 04.4	
	comp=Z,28nm,1.2s						
PBRG	**Braganca**	**50.75**	**297**	*e*P	**P**	**22 21 58.6**	**+1.1**
J05D	**Fort Rock, OR**	**50.87**	**44**	P	**P**	**22 21 58.2**	**-0.4**
PCAB	**Cabril**	**50.95**	**298**	*e*P	**P**	**22 22 00.7**	**+1.6**
RSSD	**Black Hills**	**51.01**	**27**	P	**P**	**22 21 59.1**	**-0.7**
RSSD	**Black Hills**	**51.01**	**27**	P	**P**	**22 21 59.1**	**-0.7**
RSSD				pmax	pmax		
	comp=Z,86nm,0.9s						
SADO	**Sadowa**	**51.03**	**5**	LR	LR	22 43 52.6	
	comp=Z,209nm,18.1s,baz=345,slow=36						
MFID	**Camas Ranch**	**51.09**	**38**	P	**P**	**22 22 00.5**	**+0.3**
MFID				IAmb	IAmb	22 22 09.7	
	comp=Z,24nm,1.1s						
GAZ	**Gaziantep**	**51.15**	**253**	P	**P**	**22 22 00.9**	**+0.3**
GAZ				IAmb	IAmb	22 22 12.4	
	comp=Z,32nm,1.5s						
KBL	**Kabul**	**51.20**	**219**	P	**P**	**22 22 01.5**	**+0.2**
KBL	**Kabul**	**51.20**	**219**	P	**P**	**22 22 01.5**	**+0.2**
KBL				pmax	pmax		
	comp=Z,7.0nm,1.1s						
POLO	**Lamas de Olo**	**51.27**	**298**	*e*P	**P**	**22 22 03.3**	**+1.7**
MVO	**Moncorvo**	**51.41**	**297**	*e*P	**P**	**22 22 03.6**	**+1.1**
MVO				*i* Amb		22 22 29.8	
	comp=Z,18nm,1.6s						
ECSD	**EROS Data Cent**	**51.70**	**21**	P	**P**	**22 22 03.0**	**-1.6**
ECSD				IAmb	IAmb	22 22 12.6	
	comp=Z,17nm,0.9s						
NIL	**Nilore**	**51.84**	**215**	P	**P**	**22 22 06.3**	**+0.5**
NIL				IAmb	IAmb	22 22 17.1	
	comp=Z,13nm,0.8s						
NIL	**Nilore**	**51.84**	**215**	P	**P**	**22 22 06.3**	**+0.5**
NIL				pmax	pmax		
	comp=Z,13nm,0.8s						
WVOR	**Wild Horse Val**	**51.89**	**41**	P	**P**	**22 22 06.4**	**+0.2**
WVOR				IAmb	IAmb	22 22 16.5	
	comp=Z,23nm,1.0s						
WVOR	**Wild Horse Val**	**51.89**	**41**	P	**P**	**22 22 06.4**	**+0.2**
WVOR				pmax	pmax		
	comp=Z,23nm,1.0s						
JNU	**Nakatsue**	**51.99**	**153**	LR	LR	22 44 26.3	
	comp=Z,38nm,19.2s,baz=3.5,slow=36						
PDAR	**Pinedale Array**	**52.09**	**33**	P	**P**	**22 22 07.0**	**-0.9**
PDAR	**Pinedale Array**	**52.09**	**33**	P	**P**	**22 22 06.8**	**-1.1**
	comp=Z,1.3nm,0.7s,baz=40,slow=4.8,SNR=12						
PDAR				LR	LR	22 46 16.9	
	comp=Z,42nm,18.2s,baz=354,slow=38						
	comp=Z,1.3nm,0.7s						
MTE	**Manteigas**	**52.21**	**297**	*e*P	**P**	**22 22 09.4**	**+0.8**
YBH	**Yreka Blue Hor**	**52.31**	**45**	LR	LR	22 46 47.8	
	comp=Z,6.8nm,18.6s,baz=340,slow=39						
ESDC	**Sonseca Array**	**52.62**	**294**	P	**P**	**22 22 11.8**	**+0.3**
ESDC	**Sonseca Array**	**52.62**	**294**	P	**P**	**22 22 11.4**	**-0.2**
	comp=Z,2.3nm,0.8s,baz=1.8,slow=7.8,SNR=21						
ESDC				PcP	**PcP**	**22 23 22.1**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=357,slow=5.0,SNR=1.5						
	comp=Z,2.3nm,0.8s						
PCAS	**Casmilo, Conde**	**52.64**	**298**	*e*P	**P**	**22 22 13.2**	**+1.5**
PCAS				*i* Amb		22 22 23.9	
	comp=Z,24nm,1.8s						
NJ2	**Nanjing**	**52.65**	**166**	*e*P	**P**	**22 22 13.0**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,11nm,0.7s						
JFWS	**Jewell Farm**	**52.71**	**15**	P	**P**	**22 22 10.6**	**-1.5**
JFWS				IAmb	IAmb	22 22 20.1	
	comp=Z,16nm,0.8s						
JFWS	**Jewell Farm**	**52.71**	**15**	P	**P**	**22 22 10.6**	**-1.5**
JFWS				pmax	pmax		
	comp=Z,16nm,0.8s						
PCBR	**Castelo Branco**	**52.76**	**297**	*e*P	**P**	**22 22 13.3**	**+0.8**
PAB	**San Pablo**	**52.78**	**294**	P	**P**	**22 22 13.3**	**+0.6**
PAB				IAmb	IAmb	22 22 23.8	
	comp=Z,32nm,2.0s						
PAB	**San Pablo**	**52.78**	**294**	⇑P	**P**	**22 22 14.0**	**+1.2**
HVU	**Hansel Valley**	**52.90**	**36**	P	**P**	**22 22 13.7**	**0.0**
HVU				IAmb	IAmb	22 22 23.7	
	comp=Z,17nm,0.9s						
HVU	**Hansel Valley**	**52.90**	**36**	P	**P**	**22 22 13.7**	**0.0**
HVU				pmax	pmax		
	comp=Z,17nm,0.9s						
VAE	**Valguarnera**	**53.06**	**276**	LR	LR	22 45 49.7	
	comp=Z,82nm,21.1s,baz=322,slow=37						
PMTG	**Montargil**	**53.59**	**298**	*e*P	**P**	**22 22 19.4**	**+0.8**
PESTR	**Estremoz**	**53.74**	**297**	*e*P	**P**	**22 22 20.6**	**+0.8**
PESTR				*i* Amb		22 22 37.1	
	comp=Z,14nm,1.7s						
ELK	**Elko**	**53.78**	**38**	P	**P**	**22 22 20.2**	**-0.1**
ELK	**Elko**	**53.78**	**38**	P	**P**	**22 22 20.2**	**-0.1**
ELK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
O02D	**Mt. Diablo Mer**	**53.86**	**45**	P	**P**	**22 22 20.5**	**-0.2**
ENH	**Enshi**	**54.28**	**176**	P	**P**	**22 22 24.4**	**+0.6**
ENH				IAmb	IAmb	22 22 37.5	
	comp=Z,17nm,1.2s						
KCPM	**Cahto Peak**	**54.29**	**46**	P	**P**	**22 22 23.7**	**-0.2**
LSA	**Lhasa**	**55.03**	**196**	P	**P**	**22 22 30.5**	**+0.7**
LSA	**Lhasa**	**55.03**	**196**	P	**P**	**22 22 30.5**	**+0.7**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HDIL	**Hopedale**	**55.09**	**14**	P	**P**	**22 22 29.4**	**-0.1**
AFDM	**Forest Hills D**	**55.20**	**44**	P	**P**	**22 22 29.9**	**-0.5**
AFDM				IAmb	IAmb	22 22 40.5	
	comp=Z,27nm,1.1s						
ISCO	**Idaho Springs**	**55.25**	**29**	P	**P**	**22 22 30.3**	**-0.8**
ISCO				IAmb	IAmb	22 22 40.5	
	comp=Z,12nm,0.9s						
ISCO	**Idaho Springs**	**55.25**	**29**	P	**P**	**22 22 30.3**	**-0.8**
ISCO				pmax	pmax		
	comp=Z,12nm,0.9s						
KEST	**Kesra**	**55.28**	**280**	P	**P**	**22 22 31.3**	**+0.2**
KEST	**Kesra**	**55.28**	**280**	P	**P**	**22 22 30.5**	**-0.5**
	comp=Z,10nm,0.8s,baz=354,slow=4.4,SNR=14						
	comp=Z,10nm,0.8s						
MMAI	**Mount Meron Ar**	**55.44**	**254**	P	**P**	**22 22 31.2**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=30,slow=5.1,SNR=3.7						
MMAI				LR	LR	22 49 55.1	
	comp=Z,58nm,19.7s,baz=14,slow=40						
	comp=Z,0.5nm,0.4s						
ACSO	**Alum Creek Sta**	**55.53**	**8**	P	**P**	**22 22 32.0**	**-0.7**
SPR3	**Spring Creek 3**	**55.58**	**38**	P	**P**	**22 22 33.6**	**+0.2**
NVAR	**Mina Array Bea**	**55.90**	**41**	P	**P**	**22 22 35.7**	**+0.1**
NVAR	**Mina Array Bea**	**55.90**	**41**	P	**P**	**22 22 33.8**	**-1.9**
	comp=Z,1.1nm,0.8s,baz=5.3,slow=5.1,SNR=4.6						
NVAR				LR	LR	22 47 07.8	
	comp=Z,97nm,21.7s,baz=16,slow=37						
	comp=Z,1.1nm,0.8s						
ASF	**Jabal al Asfar**	**56.13**	**252**	LR	LR	22 50 05.5	
	comp=Z,74nm,20.1s,baz=62,slow=40						
TPH	**Tonopah**	**56.32**	**40**	P	**P**	**22 22 38.6**	**0.0**
TPH	**Tonopah**	**56.32**	**40**	P	**P**	**22 22 38.7**	**0.0**
TPH				pmax	pmax		
	comp=Z,65nm,0.9s						
BALJ	**Balqa**	**56.34**	**254**	P	**P**	**22 22 39.1**	**+0.5**
BALJ				IAmb	IAmb	22 22 49.8	
	comp=Z,17nm,1.2s						
SDCO	**Great Sand Dun**	**57.30**	**29**	P	**P**	**22 22 45.2**	**-0.5**
SDCO				IAmb	IAmb	22 22 55.4	
	comp=Z,14nm,1.1s						
CCM	**Cathedral Cave**	**57.53**	**16**	P	**P**	**22 22 46.3**	**-0.7**
CCM				IAmb	IAmb	22 22 54.3	
	comp=Z,16nm,1.0s						
CCM	**Cathedral Cave**	**57.53**	**16**	P	**P**	**22 22 46.3**	**-0.7**
CCM				pmax	pmax		
	comp=Z,16nm,1.0s						
PZH	**PanZhiHua**	**58.03**	**184**	P	**P**	**22 22 53.8**	**+3.0**
JOW	**Kunigami**	**58.14**	**156**	LR	LR	22 48 27.7	
	comp=Z,69nm,18.6s,baz=303,slow=37						
EIL	**Elat**	**58.80**	**254**	LR	LR	22 51 42.7	
	comp=Z,53nm,21.6s,baz=66,slow=40						
HHAR	**Hobbs**	**59.22**	**19**	P	**P**	**22 22 56.6**	**-2.2**
WVT	**Waverly**	**59.53**	**13**	P	**P**	**22 23 00.1**	**-0.8**
WVT				IAmb	IAmb	22 23 09.1	
	comp=Z,12nm,0.9s						
WVT	**Waverly**	**59.53**	**13**	P	**P**	**22 23 00.1**	**-0.8**
WVT				pmax	pmax		
	comp=Z,12nm,0.9s						
ANMO	**Albuquerque**	**60.05**	**30**	P	**P**	**22 23 04.0**	**-0.7**
ANMO				IAmb	IAmb	22 23 14.3	
	comp=Z,18nm,1.0s						
ANMO	**Albuquerque**	**60.05**	**30**	LR	LR	22 49 18.2	
	comp=Z,339nm,19.9s,baz=72,slow=36						
ANMO	**Albuquerque**	**60.05**	**30**	P	**P**	**22 23 04.0**	**-0.7**
ANMO				pmax	pmax		
	comp=Z,18nm,1.0s						
TKL	**Tuckaleechee C**	**60.08**	**9**	P	**P**	**22 23 04.2**	**-0.5**
TKL	**Tuckaleechee C**	**60.08**	**9**	LR	LR	22 48 51.0	
	comp=Z,299nm,19.3s,baz=3.5,slow=36						
TKL	**Tuckaleechee C**	**60.08**	**9**	P	**P**	**22 23 04.2**	**-0.5**
TKL				pmax	pmax		
	comp=Z,25nm,1.0s						
CPCT	**Cooper Cave**	**60.28**	**10**	P	**P**	**22 23 06.0**	**-0.1**
CPCT				IAmb	IAmb	22 23 15.0	
	comp=Z,21nm,1.4s						
WMOK	**Wichita Mounta**	**60.59**	**23**	P	**P**	**22 23 07.6**	**-0.7**
WMOK				IAmb	IAmb	22 23 17.3	
	comp=Z,21nm,1.1s						
WMOK	**Wichita Mounta**	**60.59**	**23**	P	**P**	**22 23 07.6**	**-0.7**
WMOK				pmax	pmax		
	comp=Z,21nm,1.1s						
BG3	**Lake Jocassee**	**60.76**	**8**	P	**P**	**22 23 08.6**	**-0.8**
BG3				IAmb	IAmb	22 23 18.0	
	comp=Z,19nm,1.0s						
PFO	**Pinyon Flats O**	**60.81**	**40**	P	**P**	**22 23 09.8**	**0.0**
PFO				IAmb	IAmb	22 23 19.3	
	comp=Z,11nm,1.1s						
PFO	**Pinyon Flats O**	**60.81**	**40**	LR	LR	22 50 48.9	
	comp=Z,121nm,18.8s,baz=340,slow=37						
PFO	**Pinyon Flats O**	**60.81**	**40**	P	**P**	**22 23 10.3**	**+0.4**
PFO				pmax	pmax		
	comp=Z,19nm,1.1s						
OXF	**Oxford**	**61.11**	**14**	P	**P**	**22 23 11.2**	**-0.5**
OXF	**Oxford**	**61.11**	**14**	P	**P**	**22 23 11.3**	**-0.5**
OXF				pmax	pmax		
	comp=Z,55nm,0.9s						
BIRD	**Birdtown, Kers**	**61.13**	**6**	P	**P**	**22 23 10.8**	**-1.0**
FPAL	**Fort Paine**	**61.16**	**11**	P	**P**	**22 23 10.9**	**-1.2**
FPAL				IAmb	IAmb	22 23 20.1	
	comp=Z,7.9nm,1.0s						
UOSS	**Minazif**	**61.63**	**232**	P	**P**	**22 23 15.2**	**-0.2**
UOSS				IAmb	IAmb	22 23 27.6	
	comp=Z,9.0nm,0.9s						
YUH	**Yuha Desert**	**61.80**	**40**	P	**P**	**22 23 16.7**	**+0.3**
YUH				IAmb	IAmb	22 23 26.3	
	comp=Z,12nm,1.1s						
BRDH	**Bariadhala**	**62.01**	**195**	LR	LR	22 51 50.1	
	comp=Z,157nm,19.3s,baz=343,slow=38						
TUC	**Tucson**	**62.44**	**35**	P	**P**	**22 23 21.0**	**+0.1**
TUC				IAmb	IAmb	22 23 35.7	
	comp=Z,16nm,1.5s						
TUC	**Tucson**	**62.44**	**35**	P	**P**	**22 23 21.0**	**+0.1**
TUC				pmax	pmax		
	comp=Z,17nm,1.5s						
Z47A	**Carrollton**	**62.45**	**13**	P	**P**	**22 23 20.6**	**-0.1**
MNTX	**Cornudas Mount**	**63.33**	**30**	P	**P**	**22 23 26.5**	**-0.2**
MNTX				IAmb	IAmb	22 23 35.9	
	comp=Z,14nm,1.2s						
RAYN	**Ar Rayn**	**63.93**	**243**		**P**	**22 23 31.0**	**+0.3**
RAYN				IAmb	IAmb	22 23 42.4	
	comp=Z,5.6nm,0.8s						
RAYN	**Ar Rayn**	**63.93**	**243**	P	**P**	**22 23 31.0**	**+0.3**
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
VHRN	**Van Horn**	**64.26**	**29**	P	**P**	**22 23 32.7**	**-0.3**
JCT	**Junction City**	**64.79**	**24**	P	**P**	**22 23 35.1**	**-1.2**
JCT	**Junction City**	**64.79**	**24**	P	**P**	**22 23 35.1**	**-1.2**
JCT				pmax	pmax		
	comp=Z,24nm,0.9s						
TXAR	**Lajitas Array**	**65.77**	**28**	P	**P**	**22 23 42.0**	**-0.7**
TXAR	**Lajitas Array**	**65.77**	**28**	P	**P**	**22 23 41.4**	**-1.3**
	comp=Z,1.1nm,0.5s,baz=0.5,slow=4.6,SNR=28						
TXAR				LR	LR	22 53 59.1	
	comp=Z,113nm,18.3s,baz=15,slow=38						
	comp=Z,1.1nm,0.5s						
TXAR	**Lajitas Array**	**65.77**	**28**	P	**P**	**22 23 42.1**	**-0.7**
CMAR	**Chiang Mai Arr**	**66.07**	**187**	P	**P**	**22 23 42.8**	**-1.8**
	comp=Z,1.6nm,0.6s,baz=350,slow=7.4,SNR=12						
CMAR				LR	LR	22 54 13.2	
	comp=Z,114nm,21.1s,baz=10.0,slow=38						
	comp=Z,1.6nm,0.6s						
CMAR	**Chiang Mai Arr**	**66.07**	**187**	*i* P	**P**	**22 23 44.9**	**+0.2**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
HPIG		**68.06**	**30**	P	**P**	**22 23 57.5**	**0.0**
HPIG				IAmb	IAmb	22 24 07.2	
	comp=Z,16nm,1.2s						
LPIG	**La Paz**	**70.63**	**35**	LR	LR	22 58 19.1	
	comp=Z,76nm,18.2s,baz=26,slow=39						
PALK	**Pallekele**	**77.69**	**206**	LR	LR	23 02 07.9	
	comp=Z,86nm,20.7s,baz=354,slow=38						
TORD	**Torodi Ar. Bea**	**78.37**	**285**	P	**P**	**22 24 57.4**	**-0.8**
TORD	**Torodi Ar. Bea**	**78.37**	**285**	P	**P**	**22 24 56.1**	**-2.1**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	comp=Z,2.7nm,0.3s,baz=12,slow=7.8,SNR=2.4						
	comp=Z,2.7nm,0.3s						
DBIC	Dimbokro	85.39	291	LR	LR	23 05 41.7	
	comp=Z,29nm,20.5s,baz=20,slow=37						
BAUV	El Baul	86.72	354	P	P	22 25 41.7	0.0
HNR	Honiara	96.04	126	LR	LR	23 05 04.8	
	comp=Z,34nm,21.7s,baz=357,slow=33						
PPT2	Papeete2	108.81	77	eLR	LR	23 03 21.8	
	comp=Z,184nm,22.5s						
PPT2				eLR	LR	23 03 24.0	
	comp=Z,150nm,23.0s						
TBI	Tubuai	114.53	78	eLR	LR	23 05 57.2	
	comp=Z,618nm,25.5s						
TBI				eLR	LR	23 05 58.8	
	comp=Z,1μm,26.0s						
PLCA	Paso Flores	136.16	356	PKP	PKPdf	22 32 16.5	-1.7
	comp=Z,2.8nm,0.8s,baz=354,slow=1.0,SNR=4.4						
SYO	Syowa Base	156.07	234	⇑epPKPdf	pPKPdf	22 32 54.0	+1.5
SYO	Syowa Base	156.07	234	⇑ePKPab	PKPab	22 33 18.4	+0.5
SNAA	Sanae	162.55	271	PKPab	PKPab	22 33 46.9	+0.7
	comp=Z,2.5nm,1.0s,baz=333,slow=2.3,SNR=5.1						
VNDA	Vanda	163.62	140	PKPab	PKPab	22 33 50.2	-0.5
	comp=Z,0.6nm,0.8s,baz=309,slow=8.2,SNR=3.6						
QSPA	South Pole Qui	174.31	180	PKPab	PKPab	22 34 37.9	-0.5
	comp=Z,1.6nm,1.0s,baz=57,slow=4.6,SNR=2.7						

*IDC **26** 22:15:52.8±0.9, 49°.29S×116°.56E, h0^{km}, mb3.9/8, mbtmp4.0/9, ML2.3/1, MS3.5/1, Error ellipse: s-maj=51.6km s-min=17.2km az=100.0*

*NEIC **26** 22:15:54.2±1.1, 49°.16S±0°.08×116°.2E±0°.2, h10^{km}±1^{km}, mb4.6/10, Error ellipse: s-maj=28.4km s-min=10.0km az=68.0*

ISC 26 22:15:54.0±0.6**, 49°.20S**±0°.09×**116°.5E**±0°.2**, h10**^{km}**, n32, σ0**^{s}**.83**/27**, mb4.2**/13**, 4C, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	14.39	352	T	T	22 33 59.4	
	baz=173,slow=74,SNR=66						
H01W1	Cape Leeuwin H	14.39	352	T	T	22 33 59.5	
	baz=173,slow=74,SNR=83						
H01W3	Cape Leeuwin H	14.40	352	T	T	22 34 00.3	
	baz=173,slow=74,SNR=117						
NWAO	Narrogin (SRO)	16.26	2	Pn	Pn	22 19 42.5	+0.1
NWAO				IAmb	IAmb	22 19 52.2	
	comp=Z,81nm,1.4s						
NWAO	Narrogin (SRO)	16.26	2	Pn	P	22 19 45.1	-0.4
	comp=Z,0.6nm,0.3s,baz=179,slow=12,SNR=7.7						
	comp=Z,18nm,0.7s						
BBOO	Buckleboo	21.95	49	P	P	22 20 47.5	-0.2
BBOO				IAmb	IAmb	22 20 52.7	
	comp=Z,38nm,1.4s						
ASAR	Alice Springs	28.94	35	P	P	22 21 54.2	+0.8
	comp=Z,0.9nm,0.8s,baz=203,slow=8.1,SNR=7.2						
	comp=Z,0.9nm,0.8s						
FITZ	Fitzroy Crossi	31.90	17	P	P	22 22 19.8	+0.4
FITZ	Fitzroy Crossi	31.90	17	P	P	22 22 21.1	+1.6
	comp=Z,2.8nm,0.9s,baz=186,slow=11,SNR=3.7						
	comp=Z,2.8nm,0.9s						
WRA	Warramunga Arr	32.51	32	P	P	22 22 24.9	0.0
	comp=Z,1.1nm,0.8s,baz=202,slow=8.9,SNR=5.0						
WRA				PcP	PcP	22 25 12.0	+0.4
	comp=Z,0.6nm,1.0s,baz=216,slow=2.2,SNR=1.5						
	comp=Z,1.1nm,0.8s						
WB0	Warramunga Arr	32.69	32	P	P	22 22 26.6	+0.1
VNDA	Vanda	33.19	164	P	P	22 22 31.7	+1.5
VNDA				IAmb	IAmb	22 22 45.1	
	comp=Z,6.0nm,1.4s						
VNDA	Vanda	33.19	164	P	P	22 22 30.1	-0.1
	comp=Z,2.4nm,1.2s,baz=308,slow=10.0,SNR=3.6						
VNDA				LR	LR	22 34 30.8	
	comp=Z,71nm,18.3s,baz=355,slow=34						
	comp=Z,2.4nm,1.2s						
QSPA	South Pole Qui	40.93	180	P	P	22 23 36.5	+0.2
QSPA	South Pole Qui	40.93	180	P	P	22 23 34.8	-1.5
	comp=Z,0.8nm,0.6s,baz=258,slow=0.9,SNR=5.7						
	comp=Z,0.8nm,0.6s						
TROLL	Troll, Antarti	50.60	202	⇑P	P	22 24 52.9	+0.4
	comp=Z,129nm,0.8s						
BELA	Belgrano 2	51.95	187	P	P	22 25 02.5	+0.1
BELA				IAmb	IAmb	22 25 10.5	
	comp=Z,7.7nm,1.0s						
SNAA	Sanae	52.09	200	⇑P	P	22 25 04.8	+1.2
	comp=Z,136nm,1.1s						
SNAA	Sanae	52.09	200	P	P	22 25 03.8	+0.2
SNAA				IAmb	IAmb	22 25 13.2	
	comp=Z,7.8nm,1.0s						
SNAA	Sanae	52.09	200	P	P	22 25 03.9	+0.2
	comp=Z,2.4nm,0.9s,baz=164,slow=14,SNR=8.6						
	comp=Z,2.4nm,0.9s						
VNA2	Neumayer--Watz	53.66	200	⇑P	P	22 25 15.3	+0.2
	comp=Z,3.3nm,0.7s,baz=130,slow=8.2						
VNA3	Neumayer Olymp	53.91	199	⇑P	P	22 25 17.7	+0.7
	comp=Z,2.4nm,0.7s						
H08S2	Diego Garcia H	55.41	303	T	T	23 25 11.1	
	baz=147,slow=76,SNR=4.3						
H08S1	Diego Carcia H	55.42	303	T	T	23 25 12.1	
	baz=147,slow=76,SNR=5.5						
H08S3	Diego Garcia H	55.43	303	T	T	23 25 09.8	
	baz=147,slow=76,SNR=13						
CMAR	Chiang Mai Arr	69.13	342	P	P	22 27 01.1	+0.9
	comp=Z,0.4nm,0.3s,baz=182,slow=5.9,SNR=4.6						
	comp=Z,0.4nm,0.3s						
EVN	Everest	81.24	334	P	P	22 28 09.7	-1.0
EVN				IAmb	IAmb	22 28 29.2	
	comp=Z,6.7nm,1.1s						
LSA	Lhasa	81.73	338	P	P	22 28 12.3	-0.7
KSRS	Korea Array	86.87	9	P	P	22 28 38.6	+0.4
	comp=Z,0.6nm,0.6s,baz=108,slow=23,SNR=1.7						
	comp=Z,0.6nm,0.6s						
TXAR	Lajitas Array	143.69	108	PKP	PKPdf	22 35 27.6	-1.4
	comp=Z,0.5nm,1.1s,baz=234,slow=2.5,SNR=2.4						
PDAR	Pinedale Array	147.79	84	PKPbc	PKiKP	22 35 39.7	-1.0
	comp=Z,0.1nm,0.4s,baz=208,slow=5.2,SNR=1.7						
YKA	Yellowknife Ar	149.30	45	PKPbc	PKPbc	22 35 41.0	-0.6
	comp=Z,1.2nm,0.6s,baz=284,slow=8.2,SNR=4.1						

*IDC **26** 22:16:01.7±2.4, 36°.99N×141°.29E, h0^{km}, mb3.7/3, mbtmp3.6/4, ML2.3/1, Error ellipse: s-maj=57.9km s-min=29.4km az=66.0*

*JMA **26** 22:16:13.7±0.1, 36°.7N±0°.2×140°.5E±0°.4, h73^{km}, MV3.4/38, NORTHERN IBARAKI PREF*

JMA Felt I J1 at NORTHERN IBARAKI PREF .

ISC 26 22:16:13.3±1.0**, 36°.74N**±0°.05×**140°.59E**±0°.06**, h75**^{km}±7^{km}**, n18, σ0**^{s}**.57**/29**, mb3.7**/3**, 5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.13	188	iP	Pn	22 16 24.4	+0.1
JHO				S	Sn	22 16 32.1	-0.2
JFFD	Fukushimafurud	0.35	356	iP	Pn	22 16 25.5	0.0
JFFD				S	Sn	22 16 34.0	-0.4
JHYU	Hitachinakayam	0.40	180	⇓iP	Pn	22 16 26.1	+0.3
JHYU				⇓S	Sn	22 16 35.2	+0.3
ONAJ	Iwakimizuishiy	0.40	25	iP	Pn	22 16 26.1	+0.2
ONAJ				S	Sn	22 16 35.4	+0.3
JFK	Kawauchi	0.67	20	iP	Pn	22 16 28.5	+0.2
JFK				S	Sn	22 16 39.8	+0.3
JOTO	OTAMA OYAMA	0.84	346	iP	Pn	22 16 30.5	+0.2
JOTO				eS	Sn	22 16 43.0	+0.1
JAG	Ashikaga	0.97	251	iP	Pn	22 16 31.7	0.0
JAG				eS	Sn	22 16 44.6	-0.8
JFY	Yanaizu	0.97	314	iP	Pn	22 16 31.9	+0.1
JFY				eS	Sn	22 16 45.7	+0.1
JKT	Katashina	1.08	272	iP	Pn	22 16 33.4	+0.3
JMM	Marumori	1.14	8	⇓iP	Pn	22 16 34.0	+0.2
JMM				⇓S	Sn	22 16 49.1	0.0
JUON	Uonuma	1.31	291	P	Pn	22 16 36.2	+0.1
JUON				S	Sn	22 16 52.8	-0.3
JNS	Sasagawa	1.48	317	P	Pn	22 16 38.1	-0.1
JYS	Shirataka	1.54	344	⇓iP	Pn	22 16 39.5	+0.5
JRY	Ryogami san	1.54	243	iP	Pn	22 16 39.2	+0.1
MJAR	Matsushiro Arr	1.93	265	Pn	Pn	22 16 43.6	-0.5
	0.7nm,0.3s,baz=78,slow=18,SNR=24						
MJAR				Sn	Sn	22 17 09.9	+2.4
	0.9nm,0.3s,baz=92,slow=18,SNR=3.3						
	4.0nm,0.4s						
ZALV	Zalesovo Beam	41.63	313	P	P	22 23 53.5	-0.3
	0.9nm,0.5s,baz=101,slow=7.2,SNR=3.2						
	0.9nm,0.5s						
KURBB	Kurchatov Arra	45.66	308	P	P	22 24 25.8	-0.4
	0.5nm,0.5s,baz=82,slow=7.8,SNR=4.8						
	0.5nm,0.5s						
WRA	Warramunga Arr	56.68	187	P	P	22 25 49.0	0.0
	0.3nm,0.5s,baz=3.6,slow=7.1,SNR=8.1						
	0.3nm,0.5s						

ATH 26 22:19:01.1, 37°.55N×20°.61E, h12^{km}±3^{km}**, ML2.0**/6**, Manual Solution by M.Charalampakis First location: 2019/06/26 22:20:03, This location: 2019/06/27 04:25:07 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ORTH	Orthonies,Zaky	0.30	13	P	Pg	22 19 07.6	+0.3
ORTH				S	Sg	22 19 11.6	0.0
CLEM	Kyllini,Ilia,G	0.53	51	P	Pg	22 19 11.6	+0.1
CLEM				S	Sg	22 19 18.7	+0.1
PSDA	Pessada-Kefalo	0.56	358	P	Pg	22 19 12.2	+0.1
PSDA				S	Sg	22 19 19.7	+0.2
VLS	Valsamata	0.62	358	P	Pg	22 19 13.0	-0.3
VLS				S	Sg	22 19 21.7	+0.2
DMLN	Damoulianata-K	0.71	345	P	Pg	22 19 14.9	0.0
YRMI	Loutra Irminis	0.80	47	P	Pg	22 19 16.0	-0.6
AMT	Artemida-Makis	0.87	91	P	Pg	22 19 17.9	-0.1
AXS	Araxos	0.88	43	P	Pg	22 19 17.5	-0.7
FSK	Fiskardo	0.91	358	P	Pg	22 19 17.7	-0.9
DRO	Drossia	0.96	65	P	Pg	22 19 18.9	-0.6
EVGI	Lefkada island	1.07	2	P	Pb	22 19 20.6	-1.0
ITM	Ithomi	1.11	109	P	Pn	22 19 22.6	+0.1
NYDR	Nydri-Lefkada	1.16	3	P	Pb	22 19 22.1	-1.0
LKD2	Lefkada island	1.23	2	P	Pn	22 19 23.6	-0.6
PVO	Paravola	1.28	34	P	Pn	22 19 24.9	0.0
KLV	Kalavryta, Ach	1.31	68	P	Pn	22 19 25.3	0.0
GUR	Goura	1.42	74	P	Pb	22 19 27.4	-0.2
SERG	Sergoula	1.43	53	P	Pn	22 19 26.9	0.0
ANX	Ano Chora	1.47	44	P	Pn	22 19 27.8	+0.3

*UCR **26** 22:19:33.2±1.2, 8°.34N×82°.81W, h26^{km}±4^{km}, MW3.5*

*UPA **26** 22:19:33.1±0.4, 8°.38N×82°.81W, h34^{km}±2^{km}, MW3.1, Fault plane solution: NP1:ϕ_s25.00000°, δ78.00000°, λ-123.00000°.*

ISC 26 22:19:33.3±1.1**, 8°.38N**±0°.05×**82°.81W**±0°.03**, h33**^{km}±6^{km}**, n36, σ0**^{s}**.72**/44**, 3C-9D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.03	27	⇓iP	Pb	22 19 38.5	-0.3
LESP3				eS	Sb	22 19 42.6	+0.1
LIMO3	Limones	0.28	192	⇓iP	Pb	22 19 40.5	-0.3
LMNES	Limones	0.28	191	eP	Pb	22 19 40.5	-0.3
NELY	Ciudad Neily	0.30	333	eP	Pb	22 19 40.7	-0.4
NELY				eS	Sn	22 19 47.2	+0.3
DVD	David	0.36	80	⇓iP	Pb	22 19 41.5	-0.2
DVD				eS	Sb	22 19 47.7	+0.2
CSTBL	De las Acacias	0.36	85	eP	Pb	22 19 41.6	-0.2
PEDE3	Pedregal, Chir	0.38	89	⇓iP	Pb	22 19 41.7	-0.4
LOCO3	Loma Colorada,	0.39	85	⇓iP	Pb	22 19 41.9	-0.2
CLLRA	Cordillera,	0.41	27	eP	Pb	22 19 42.5	-0.2
LOMA3	Las Lomas, Chi	0.41	82	⇑iP	Pb	22 19 42.3	-0.3
MLIR3	Monte Lirio, C	0.41	357	⇑iP	Pb	22 19 43.0	+0.2
FITO	Golfito	0.42	306	eP	Pb	22 19 41.4	-1.4
BRU2	Volcan	0.43	15	eP	Pb	22 19 42.7	-0.3
BRU2				eS	Sn	22 19 50.4	+0.2
BRU2	Volcan	0.43	15	⇑iP	Pb	22 19 42.8	-0.2
BRU2				eS	Sn	22 19 50.3	+0.1
PTAR3	Potrerillos Ar	0.44	44	⇓iP	Pb	22 19 43.0	-0.1
PTAR3				eS	Sb	22 19 50.3	+0.5
EDAD	Golfito	0.45	308	eP	Pb	22 19 41.9	-1.3
VITO	San Vito	0.47	340	eP	Pb	22 19 43.5	0.0
BC3P	Paso Ancho	0.48	24	⇓iP	Pb	22 19 43.3	-0.5
BC3P				eS	Sn	22 19 52.1	+0.6
BQTLY	Boquete Panama	0.51	42	eP	Pb	22 19 43.8	-0.4
BQSF3	Alto Boquete,	0.52	45	⇓iP	Pb	22 19 43.8	-0.5
BQSF3				eS	Sb	22 19 52.1	+0.3
GUAL3	Gualaca, Chiri	0.53	73	iP	Pb	22 19 43.6	-0.7
PSOM3	Paja de Sombre	0.57	57	⇓iP	Pb	22 19 44.3	-0.7
ALCO	Alturas Coton,	0.57	357	eP	Pb	22 19 44.4	-0.8
EDP2	Potrero Grande	0.73	330	eP	Pb	22 19 47.1	-0.7
PBNVO	Pueblo Nuevo,	0.79	50	eP	Pn	22 19 47.5	-0.7
RBALA	Bur	0.82	52	eP	Pn	22 19 48.2	-0.4
DRK0	Durika	0.98	334	eP	Pn	22 19 50.5	-0.5
EDPE	Pejibaye, P	1.08	316	eP	Pn	22 19 52.1	-0.2
SAJE	San Jernim	1.19	324	eP	Pn	22 19 53.2	-0.6
PIEC	Cerro El Cedra	1.68	317	eP	Pn	22 20 01.1	+0.4
PITB	Pirrs, San	1.75	317	eP	Pb	22 20 04.1	-1.0
PISJ	San Jernim	1.80	314	eP	Pn	22 20 03.7	+1.4
ABE2	San Pablo	1.81	317	eP	Pn	22 20 04.0	+1.6
CVTV	Tajo	1.87	330	eP	Pn	22 20 04.4	+1.1
PAR1A	Puntarenas Pro	1.87	310	eP	Pn	22 20 04.1	+1.0
CVTQ	Turrialba Volc	1.88	330	eP	Pn	22 20 05.2	+1.8

RSNC 26 22:22:45.9±1.0**, 3°N**±10°×**8°2W**±°**, h0**^{km}**, M3.6, mB5.2, mb4.4, ML3.2, Mw(mB)4.5, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GR1C	Gorgona, Isla	4.10	89	P	Pn	22 23 48.4	-1.5
GR1C				S	Sn	22 24 37.6	-1.0
MALC	Bahia Malaga	5.05	77	P	Pn	22 24 02.2	-0.7
MALC				S	Sn	22 25 04.3	+2.3
BBAC	Balboa, Cauca	5.10	100	P	Pn	22 24 03.3	-0.5
	22nm,0.6s						
GCUF	Volcan Galeras	5.20	109	P	Pn	22 24 05.3	-0.1
POPC	Popayan, Colom	5.60	94	P	Pn	22 24 10.5	-0.2
	8.9nm,0.7s						
YOTC	Yotoco, Valle	6.01	80	P	Pn	22 24 15.5	-0.8
	10nm,0.6s						
YOTC				S	Sn	22 25 23.5	-2.4
	10nm,0.6s						
PLMC	San Jos del P	6.29	71	P	Pn	22 24 18.7	-1.4
	970nm47nm,0.7s						
PLMC				S	Sn	22 25 35.8	+2.9
	970nm47nm,0.7s						
HELC	Santa Helena	7.47	64	P	Pn	22 24 35.8	-0.7

KRSC 26 22:24:38.8±1.3**, 56°.05N**×**164°.17E, h20**^{km}±20^{km}**, Ml3.9, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.78	283	eP	Pb	22 24 53.5	-0.2
KBTR				eS	Sb	22 25 02.7	-1.0
KBG	Krutoberegovo	0.85	285	eP	Pb	22 24 54.8	-0.1
KBG				eS	Sb	22 25 05.1	-0.7
BKI	Bering	1.32	129	eP	Pb	22 25 03.4	+0.4
BKI				eS	Sb	22 25 20.5	+0.9
SMKR	Semkarok	1.60	291	eP	Pb	22 25 07.6	-0.1
ZLN	Zelenaya	1.89	270	eP	Pb	22 25 13.0	+0.3
CIRR	Tsirk	1.92	273	eP	Pb	22 25 12.9	-0.4
BZGR	Bezymyannyi-Gr	1.96	268	eP	Pb	22 25 13.5	-0.3
KLY	Klyuchi	1.99	279	eP	Pn	22 25 11.9	+0.6
KLY				eS	Sn	22 25 33.6	-2.0
MKZ	Mys Kozlova	2.05	224	eP	Pb	22 25 14.0	-1.3
MKZ				eS	Sn	22 25 38.4	+1.4
BZWR	Bezymyannyi-We	2.07	269	eP	Pb	22 25 15.0	-0.8
BZMR	Bezymyannaya	2.07	268	eP	Pb	22 25 15.0	-0.8
KIRR	Kirishev	2.15	269	eP	Pb	22 25 16.8	-0.4
KPT	Kopyto	2.22	270	eP	Pb	22 25 18.0	-0.4
KMNR	Kamenistaya	2.24	264	eP	Pb	22 25 18.2	-0.4
TUMD	Tumrok D	2.30	250	eP	Pb	22 25 18.6	-1.1
TUMD				eS	Sb	22 25 45.6	-2.1
SRDR	Sredinnyy	2.51	278	eP	Pb	22 25 21.5	-1.7
OSSR	Ossora	3.27	350	eP	Pn	22 25 28.7	-0.2
SPN	Mys Shipunski	3.82	221	eP	Pn	22 25 38.6	+2.2
NLC	Nalytchevo	4.02	226	eP	Pn	22 25 42.5	+3.2
SMAR	Somma	4.18	230	eP	Pn	22 25 45.2	+3.5
KRX	Arik	4.19	232	eP	Pn	22 25 46.7	+5.1
AVH	Avacha	4.21	231	eP	Pb	22 25 47.2	-5.0
UGLR	Uglovaya	4.21	230	eP	Pn	22 25 46.6	+4.6
KOK	Koryaka	4.24	232	eP	Pn	22 25 46.2	+3.8
GNL	Ganaly	4.30	239	eP	Pn	22 25 47.1	+3.9
DALK	Dalny	4.37	228	eP	Pn	22 25 47.2	+3.2
RUS	Russkaya	4.91	225	eP	Pn	22 25 54.8	+3.3
GRL	Gorelyy	5.00	228	eP	Pn	22 25 57.4	+4.5
MTVR	Mutnovka	5.01	227	eP	Pn	22 25 57.2	+4.2
ASAK	Asacha	5.20	228	eP	Pn	22 26 00.0	+4.5

KRSC 26 22:45:54.5±1.0**, 55°.95N**×**164°.03E, h16**^{km}±16^{km}**, Ml3.6, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.73	292	eP	Pg	22 46 07.8	-1.0
KBTR				eS	Sg	22 46 18.1	-0.2
KBG	Krutoberegovo	0.81	293	eP	Pb	22 46 09.4	-0.7
KBG				eS	Sg	22 46 20.5	-0.3
BKI	Bering	1.33	123	eP	Pn	22 46 18.2	-0.3
BKI				eS	Sb	22 46 36.1	+0.2
SMKR	Semkarok	1.57	295	eP	Pn	22 46 21.1	-0.7
BDR	Baidarnaya	1.69	293	eS	Sb	22 46 46.2	-0.2
BZGR	Bezymyannyi-Gr	1.88	271	eP	Pb	22 46 28.0	-0.4
MKZ	Mys Kozlova	1.92	224	eP	Pb	22 46 28.6	-0.4
MKZ				eS	Sb	22 46 53.5	+0.7
KRSR	Krestovskiy	1.96	279	eP	Pn	22 46 28.3	+1.1
BZWR	Bezymyannyi-We	1.99	272	eP	Pb	22 46 29.6	-0.8
BZMR	Bezymyannaya	1.99	271	eP	Pb	22 46 29.6	-0.8
KIRR	Kirishev	2.07	272	eP	Pb	22 46 30.4	-1.5
KPT	Kopyto	2.14	272	eP	Pb	22 46 31.8	-1.2
KMNR	Kamenistaya	2.15	267	eP	Pb	22 46 31.9	-1.2
SRDR	Sredinnyy	2.44	281	eP	Pn	22 46 35.7	+1.9
SPN	Mys Shipunski	3.69	221	eP	Pn	22 46 53.6	+2.8
SPN				eS	Sn	22 47 34.8	+0.8
AVH	Avacha	4.08	231	eP	Pb	22 47 01.2	-4.8
KOK	Koryaka	4.11	232	eP	Pn	22 47 00.9	+4.2
GNL	Ganaly	4.18	240	eP	Pn	22 47 01.8	+4.1
RUS	Russkaya	4.78	225	eP	Pn	22 47 09.2	+3.4
GRL	Gorelyy	4.87	228	eP	Pn	22 47 11.9	+4.7
MTVR	Mutnovka	4.88	227	eP	Pn	22 47 11.7	+4.3
ASAK	Asacha	5.07	228	eP	Pn	22 47 14.4	+4.5

*UCR **26** 22:47:18.1±0.8, 8°.33N×82°.79W, h28^{km}±1^{km}, MW4.4, Fault plane solution: NP1:ϕ_s109.57000°, δ57.39000°, λ13.47000°.*

*UPA **26** 22:47:18.9±1.2, 8°.39N×82°.77W, h24^{km}±4^{km}, MW4.1, Fault plane solution: NP1:ϕ_s42.00000°, δ29.00000°, λ-147.00000°.*

*CATAC **26** 22:47:20.0±0.6, 8°N±3°×8°3W±°, h24^{km}±1^{km}, M4.5/16, MLv4.5/16, Error ellipse: s-maj=7.4km s-min=5.5km az=165.0, confirmed*

ISC 26 22:47:18.1±1.0**, 8°.34N**±0°.03×**82°.79W**±0°.02**, h33**^{km}±3^{km}**, n127, σ0**^{s}**.94**/151**, 35C-25D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.07	357	⇓iP	Pb	22 47 23.5	-0.3
LESP3				eS	Sb	22 47 26.0	-1.6
LPPC	Paso Canoas	0.20	345	⇓eP	Pb	22 47 24.3	-0.5
LPPC				eS	Sb	22 47 29.2	-0.1
LIMO3	Limones	0.25	198	⇑iP	Pn	22 47 25.4	+0.1
LIMO3				eS	Sb	22 47 30.7	+0.6
LMNES	Limones	0.25	197	⇑eP	Pn	22 47 25.4	+0.2
LMNES	Limones	0.25	197	iP	Pn	22 47 25.5	+0.2
LMNES				eS	Sb	22 47 32.2	+2.2
CDITO	Canoas	0.25	340	P	Pb	22 47 24.8	-0.5
CDITO	Canoas	0.25	340	S	Sb	22 47 29.9	-0.3
DVD	David	0.35	73	⇓iP	Pb	22 47 26.5	-0.1
DVD				eS	Sn	22 47 32.6	+0.1
NELY	Ciudad Neily	0.35	333	⇑eP	Pb	22 47 26.0	-0.6
NELY				eS	Sb	22 47 32.2	-0.1
CSTBL	De las Acacias	0.35	78	⇓eP	Pb	22 47 26.4	-0.1
CSTBL	De las Acacias	0.35	78	⇓iP	Pb	22 47 26.5	-0.1
PEDE3	Pedregal, Chir	0.36	83	⇓iP	Pb	22 47 26.6	-0.2
LOCO3	Loma Colorada,	0.37	79	⇓iP	Pb	22 47 26.8	0.0
LOMA3	Las Lomas, Chi	0.40	76	⇓iP	Pb	22 47 27.1	-0.2
CLLRA	Cordillera,	0.44	23	⇓eP	Pb	22 47 27.6	-0.4
CLLRA	Cordillera,	0.44	23	⇑iP	Pb	22 47 27.8	-0.2
CHIR3	Chiriqui UPA,	0.46	83	⇓iP	Pb	22 47 27.9	-0.2
MLIR3	Monte Lirio, C	0.46	355	⇑iP	Pb	22 47 28.0	-0.1
PTAR3	Potrerillos Ar	0.46	39	⇓iP	Pb	22 47 28.0	-0.2
PTAR3				eS	Sb	22 47 35.0	-0.1
FITO	Golfito	0.46	308	⇑eP	Pb	22 47 26.9	-1.3
FITO				eS	Sb	22 47 33.5	-1.5
BRU2	Volcan	0.46	12	⇑eP	Pb	22 47 27.9	-0.5
BRU2				eS	Sb	22 47 35.3	0.0
BRU2	Volcan	0.46	12	P	Pb	22 47 27.9	-0.5
BRU2	Volcan	0.46	12	⇑iP	Pb	22 47 27.9	-0.5
BRU2				eS	Sb	22 47 35.5	+0.2
RSRNO	Rio Sereno	0.48	351	eP	Pb	22 47 28.6	0.0
RSRNO	Rio Sereno	0.48	351	⇓iP	Pb	22 47 28.8	+0.2
RSRNO				eS	Sb	22 47 35.4	-0.4
EDAD	Golfito	0.49	310	⇑eP	Pb	22 47 27.3	-1.3
EDAD				eS	Sb	22 47 34.5	-1.4
SCLRA	Santa Clara, W	0.49	0	eP	Pb	22 47 28.3	-0.5
SCLRA	Santa Clara, W	0.49	0	iP	Pb	22 47 28.4	-0.4
BC3P	Paso Ancho	0.51	20	⇓eP	Pb	22 47 28.5	-0.5
VITO	San Vito	0.51	339	⇑eP	Pb	22 47 28.8	-0.3
BQTLY	Boquete Panama	0.53	38	⇓eP	Pb	22 47 28.8	-0.5
BQTLY	Boquete Panama	0.53	38	⇓iP	Pb	22 47 28.9	-0.5
BQTLY				eS	Sb	22 47 36.0	-1.0
BQSF3	Alto Boquete,	0.53	41	⇓iP	Pb	22 47 28.8	-0.6
BQSF3				eS	Sb	22 47 35.9	-1.2
PSOM3	Paja de Sombre	0.57	53	⇓iP	Pb	22 47 29.3	-0.7
PSOM3				eS	Sb	22 47 37.7	-0.4
ALCO	Alturas Coton,	0.61	356	⇑eP	Pb	22 47 29.6	-1.1
EDP2	Potrero Grande	0.78	330	⇑eP	Pb	22 47 32.5	-0.8
PBNVO	Pueblo Nuevo,	0.81	47	⇓eP	Pb	22 47 32.5	-1.2
RBALA	Bur	0.83	49	⇓eP	Pn	22 47 33.2	-0.3
RBALA	Bur	0.83	49	⇓iP	Pn	22 47 33.2	-0.3
RBALA				eS	Sb	22 47 44.8	-0.2
PANP	Palmar Norte	0.91	313	⇑eP	Pn	22 47 34.0	-0.6
RMDIO	Remedios, Chir	0.95	97	⇓eP	Pn	22 47 35.3	+0.1
RMDIO	Remedios, Chir	0.95	97	⇑iP	Pn	22 47 35.6	+0.4
BURE	Buenos Aires	0.99	327	eP	Pn	22 47 35.5	-0.4
DRK0	Durika	1.03	334	⇑eP	Pn	22 47 35.7	-0.7
DRK0	Durika	1.03	334	P	Pn	22 47 35.9	-0.5
DRK0	Durika	1.03	334	S	Sn	22 47 50.0	+0.2
PDCAN	Manzana , Fuen	1.08	92	eP	Pn	22 47 36.7	-0.3
KKNTU	Kakintº	1.09	63	⇓eP	Pn	22 47 36.6	-0.6
KKNTU	Kakintº	1.09	63	⇓iP	Pn	22 47 36.7	-0.4
EDPE	Pejibaye, P	1.13	317	⇑eP	Pn	22 47 37.3	-0.4
OCHAL	Ojochal	1.14	312	S	Sn	22 47 53.2	+0.9
OCHAL	Ojochal	1.14	312	P	Pn	22 47 38.2	+0.4
ISBTO	Bastimentos Is	1.15	30	eP	Pb	22 47 39.5	-0.1
SAJE	San Jernim	1.23	325	⇑eP	Pn	22 47 38.7	-0.5
BRIBI	Bribri	1.28	359	⇑eP	Pb	22 47 41.2	-0.4
MESA3	La Mesa, Verag	1.60	97	⇑iP	Pn	22 47 44.9	+0.8
MESA3				eS	Sn	22 48 04.3	+0.7
VERH	Veragua Rainfo	1.63	346	⇑eP	Pn	22 47 45.3	+0.7
GMAL	Guarumal, Vera	1.64	110	eP	Pn	22 47 44.3	-0.4
RSUS3	Rio de Jesus,	1.65	102	⇑iP	Pn	22 47 45.3	+0.5
RSUS3				eS	Sb	22 48 08.0	-0.4
LLNJ	Naranjito	1.72	311	eP	Pn	22 47 46.1	+0.3
PIEC	Cerro El Cedra	1.72	318	⇑eP	Pn	22 47 46.1	0.0
TURIB	Turrialba	1.80	330	eP	Pn	22 47 47.3	+0.3
STIA3	Santiago, Vera	1.81	97	⇑iP	Pn	22 47 48.2	+1.2
STIA3				eS	Sb	22 48 12.1	-0.9
VINA	Juan Vinas	1.81	329	eP	Pn	22 47 48.0	+0.8
REPA	Paraso	1.83	324	eP	Pn	22 47 48.0	+0.6
VERB	Verbena	1.83	331	⇑eP	Pn	22 47 48.5	+1.0
LCR2	La Lucha 2	1.84	319	⇑eP	Pn	22 47 47.7	0.0
LCR2	La Lucha 2	1.84	319	P	Pn	22 47 48.0	+0.3
LCR2	La Lucha 2	1.84	319	S	Sn	22 48 10.3	+0.3
PCAYA	Pacayas	1.87	327	eP	Pn	22 47 48.9	+0.8
VTCV	VTCV, Calle Va	1.88	330	⇑eP	Pn	22 47 49.1	+0.9
RESJ	San Isidro (Tu	1.88	333	eP	Pn	22 47 49.9	+1.7
IRES	Siquirres	1.89	338	eP	Pn	22 47 49.5	+1.4
PICV	PH. Pirrs	1.89	313	eP	Pn	22 47 48.6	+0.4
ABRB	Las Abras (San	1.90	331	⇑eP	Pn	22 47 49.6	+1.2
RAFA	San Farael, Vo	1.90	328	⇑eP	Pn	22 47 49.4	+0.7
CVTV	Tajo	1.91	330	⇑eP	Pn	22 47 49.8	+1.1
PAR1A	Puntarenas Pro	1.92	311	eP	Pn	22 47 49.4	+0.9
CVTQ	Turrialba Volc	1.92	330	⇑eP	Pn	22 47 49.9	+1.1
VTLA	Turrialba Volc	1.92	330	⇑eP	Pn	22 47 49.9	+1.0
CALO3	Calobre, Verag	1.93	90	eP	Pn	22 47 49.7	+1.1
VTR0	Volcan Turrial	1.93	330	⇑eP	Pn	22 47 50.1	+1.1
VICA	Volcano Irazu	1.94	328	eP	Pn	22 47 49.8	+0.5
ACOS	Acosta	1.99	317	eP	Pn	22 47 50.1	+0.5
AMPA	Desamparados	2.00	321	eP	Pn	22 47 50.7	+1.0
LUJA	Lujan	2.03	321	eP	Pn	22 47 51.1	+1.0
HDC	Heredia	2.11	322	eP	Pn	22 47 52.1	+0.8
HDC	Heredia	2.11	322	P	Pn	22 47 52.6	+1.3

HDC				S	Sn	22 48 16.8	+0.3
HEME	Heredia, Merce	2.12	321	eP	Pn	22 47 52.8	+1.4
CRIS3	El Cristo, Coc	2.15	92	⇓iP	Pn	22 47 53.4	+1.7
VBV1	V. Barva	2.19	324	eP	Pn	22 47 53.4	+0.8
CARI	Cariari	2.22	335	eP	Pn	22 47 54.2	+1.5
TCS1	Tacares	2.26	319	P	Pn	22 47 54.9	+1.6
TRT2	Tortugero	2.40	337	⇑eP	Pn	22 47 55.6	+0.5
TRT2	Tortugero	2.40	337	P	Pn	22 47 56.6	+1.5
TRT2	Tortugero	2.40	337	S	Sn	22 48 23.4	+0.1
TRT1	Tortuguero	2.42	338	eP	Pn	22 47 56.2	+0.8
TOSI3	Tonosi	2.50	112	⇑iP	Pb	22 48 00.7	-1.7
TOSI3				eS	Sb	22 48 31.0	-1.8
AZU	Azuero	2.55	102	eP	Pn	22 47 59.0	+1.9
AZU	Azuero	2.55	102	⇓iP	Pn	22 47 59.6	+2.4
AZU				eS	Sb	22 48 33.1	-1.0
CBL1	Cabuya	2.59	299	eP	Pn	22 47 57.6	-0.2
SOCE	Pocosol	2.72	319	S	Sn	22 48 31.5	+0.1
SOCE	Pocosol	2.72	319	P	Pn	22 48 01.2	+1.6
ACHO3	Achotines, Los	2.75	109	eP	Pb	22 48 03.6	-3.0
ARE1	Arenal 1	2.84	318	eP	Pn	22 48 02.9	+1.6
VARE2	V. Arenal	2.84	318	eP	Pn	22 48 02.9	+1.5
COVE	Coope Vega, Sa	2.85	326	P	Pn	22 48 03.1	+1.7
COVE	Coope Vega, Sa	2.85	326	S	Sn	22 48 34.9	+0.3
JTS	Las Juntas de	2.89	312	eP	Pn	22 48 02.3	+0.4
JTS	Las Juntas de	2.89	312	eS	Sn	22 48 36.7	+1.1
BCIP	Isla Barro Col	3.03	74	eP	Pn	22 48 05.0	+1.2
BCIP	Isla Barro Col	3.03	74	iP	Pn	22 48 05.6	+1.8
BCIP				eS	Sn	22 48 41.3	+2.3
INDI	Punta indio, G	3.08	300	P	Pn	22 48 05.4	+0.8
INDI	Punta indio, G	3.08	300	S	Sn	22 48 41.4	+1.1
CMARA	Lajas Hojancha	3.10	303	P	Pn	22 48 06.1	+1.3
CMARA	Lajas Hojancha	3.10	303	S	Sn	22 48 41.2	+0.5
UPA	Univ. de Panam	3.28	78	⇑iP	Pb	22 48 12.8	-2.9
LAPC	Finca la Perla	3.56	313	eP	Pn	22 48 12.4	+1.3
BLUN	Bluefields	3.77	345	P	Pn	22 48 15.2	+1.2
BLUN				S	Sn	22 48 57.2	-0.1
CARN	Rivas	3.91	317	P	Pn	22 48 17.3	+1.3
CARN				S	Sn	22 49 01.1	+0.3
ESPN	Las Esperanzas	4.11	339	S	Sn	22 49 06.2	+0.4
ESPN	Las Esperanzas	4.11	339	P	Pn	22 48 19.5	+0.8
ACON	Acoyapa	4.31	327	eP	Pn	22 48 22.1	+0.6
ACON	Acoyapa	4.31	327	S	Sn	22 49 11.9	+1.4
ACON	Acoyapa	4.31	327	P	Pn	22 48 22.0	+0.6
BOAB	BOACO BROADBAN	4.97	326	P	Pn	22 48 32.1	+1.6
BOAB	BOACO BROADBAN	4.97	326	S	Sn	22 49 27.2	+0.2

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*NEIC **26** 22:53:57.7±1.4, 3°.23N±0°.08×82°.92W±0°.09, h10^{km}±1^{km}, mb4.6/24, Error ellipse: s-maj=17.4km s-min=11.1km az=234.0*

*IDC **26** 22:53:59.3±1.1, 3°.37N×83°.00W, h0^{km}, mb3.7/6, mbtmp4.0/10, ML3.2/3, MS3.5/20, Error ellipse: s-maj=37.0km s-min=18.8km az=50.0*

*RSNC **26** 22:54:05.4±0.6, 3°N±3°×8°2W±°, h0^{km}, M4.0, mB5.1, mb4.6, ML3.2, Mw(mB)4.4*

*UCR **26** 22:54:13.3±1.5, 4°.41N×82°.96W, h13^{km}, MW4.0, MB4.6(NEIC)*

ISC 26 22:54:00.2±0.6, **3°.29N**±0°.06×**82°.89W**±0°.06, **h24**^{km}, **n108**, σ1^{s}.**96**/97, **mb4.5**/17, **MS3.5**/17, **South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAPC	Malpelo	1.47	61	P	Pn	22 54 22.3	-2.9
MAPC				S	Sn	22 54 38.7	-4.9
GR1C	Gorgona, Isla	4.73	93	P	Pn	22 55 10.2	+0.2
GR1C				S	Sn	22 56 00.1	-4.0
PAC1	Pacto, Paraso	5.08	126	P	Pn	22 55 09.3	-5.7
PAC1				S	Sn	22 56 11.7	-1.4
OTAV	Otavalo	5.38	124	Pn	Pn	22 55 14.6	-4.8
OTAV				Sn	Sn	22 56 17.1	-3.7
OTAV	Otavalo	5.38	124	eP	Pn	22 55 17.9	-1.5
OTAV				eS	Sn	22 56 19.0	-1.8
OTAV	Otavalo	5.38	124	P	Pn	22 55 18.9	-0.5
OTAV				S	Sn	22 56 17.6	-3.2
BRU2	Volcan	5.47	2	Pn	Pn	22 55 17.4	-3.0
MALC	Bahia Malaga	5.59	82	P	Pn	22 55 23.7	+1.8
MALC				S	Sn	22 56 25.1	-0.4
GCUF	Volcan Galeras	5.91	110	P	Pn	22 55 29.0	+2.2
	45nm,0.6s						
GCUF				S	Sn	22 56 33.4	-0.6
	45nm,0.6s						
DRK0	Durika	5.95	357	eP	Pn	22 55 25.1	-1.8
SAJE	San Jernim	6.05	354	eP	Pn	22 55 27.0	-1.4
JAMC	Jamundi, Valle	6.21	91	P	Pn	22 55 31.3	+0.7
	452nm18nm,0.6s						
JAMC				S	Sn	22 56 38.8	-2.2
	452nm18nm,0.6s						
POPC	Popayan, Colom	6.25	97	P	Pn	22 55 32.5	+1.3
	19nm,0.7s						
POPC				S	Sn	22 56 40.3	-1.8
	19nm,0.7s						
ABE2	San Pablo	6.48	350	eP	Pn	22 55 33.0	-1.3
LCR2	La Lucha 2	6.50	350		Pn	22 55 32.3	-2.4
LCR2	La Lucha 2	6.50	350	eP	Pn	22 55 33.4	-1.3
YOTC	Yotoco, Valle	6.57	84	P	Pn	22 55 36.7	+1.2
	26nm,0.9s						
YOTC				S	Sn	22 56 49.4	-0.4
	26nm,0.9s						
BCIP	Isla Barro Col	6.58	27		Pn	22 55 35.4	-0.1
BCIP	Isla Barro Col	6.58	27	eP	Pn	22 55 37.2	+1.7
ABRB	Las Abras (San	6.72	353	eP	Pn	22 55 37.6	-0.1
CVTV	Tajo	6.72	353	eP	Pn	22 55 38.4	+0.6
COHC	Cochancay	6.78	148		Pn	22 55 37.5	-0.7
HDC	Heredia	6.78	350		Pn	22 55 37.6	-0.8
HDC	Heredia	6.78	350	eP	Pn	22 55 42.2	+3.9
PLMC	San Jos del P	6.79	76	P	Pn	22 55 40.1	+1.7
	2µm71nm,0.7s						
PLMC				S	Sn	22 56 57.0	+2.0
	2µm71nm,0.7s						
JCR1	Jicaral	6.88	341	eP	Pn	22 55 39.4	-0.3
JTS	Las Juntas de	7.25	344	Pn	Pn	22 55 43.3	-1.4
JTS	Las Juntas de	7.25	344	Pn	Pn	22 55 43.8	-0.9
	37nm,0.3s,baz=91,slow=12,SNR=24						
JTS				Sn	Sn	22 57 04.7	-1.7
	3.3nm,0.3s,baz=108,slow=19,SNR=1.8						
JTS	Las Juntas de	7.25	344	eP	Pn	22 55 43.5	-1.2
SOCE	Pocosol	7.25	346	Pn	Pn	22 55 44.8	0.0
CASO	Castillo	7.33	346	eP	Pn	22 55 47.1	+1.2
FLOC	Florencia	7.43	103		Pn	22 55 48.1	+0.9
ANIL	Santa Ana	7.57	81	P	Pn	22 55 53.5	+4.2
	1µm57nm,0.7s						
ORTC	Ortega, Tolima	7.66	85	P	Pn	22 55 54.4	+4.1
	35nm,1.2s						
HELC	Santa Helena	7.88	68	P	Pn	22 55 57.3	+3.5
	949nm106nm,0.9s						
PRAC	Prado	8.00	87	P	Pn	22 55 58.6	+3.5
	36nm,1.2s						
NORC	Norcasia	8.31	74	P	Pn	22 56 04.1	+4.7
ROSC	El Rosal	8.69	80	Pn	Pn	22 56 09.9	+5.1
	2.4nm,0.3s,baz=180,slow=9.9,SNR=5.3						
	8.3nm,0.5s						
ACON	Acoyapa	8.91	345	Pn	Pn	22 56 05.2	-2.4
ESPN	Las Esperanzas	8.96	351	Pn	Pn	22 56 06.8	-1.3
BOAB	BOACO BROADBAN	9.51	343	Pn	Pn	22 56 12.4	-3.2
CNGN	Cerro Negro	9.90	338	Pn	Pn	22 56 19.4	-1.7
HERN	Volcan Telica	10.05	337	Pn	Pn	22 56 21.3	-1.9
RUSC	La Rusia	10.11	75	Pn	Pn	22 56 23.9	-0.6
ATAH	Atahualpa	11.29	157	Pn	Pn	22 56 44.1	+3.6
	0.7nm,0.3s,baz=50,slow=6.9,SNR=3.5						
ATAH				LR	LR	23 00 55.1	
	comp=Z,818nm,19.2s,baz=326,slow=36						
	4.2nm,0.5s						
ESQI	Esquipulas	12.88	331	Pn	Pn	22 57 01.1	-0.9
SDV	Santo Domingo	13.39	65	Pn	Pn	22 57 08.6	-0.5
SDV	Santo Domingo	13.39	65	Pn	Pn	22 57 12.1	+3.0
	0.9nm,0.3s,baz=212,slow=13,SNR=7.9						
SDV				LR	LR	23 02 12.9	
	comp=Z,295nm,21.8s,baz=256,slow=37						
	6.8nm,0.3s						
SDV	Santo Domingo	13.39	65	eP	Pn	22 57 11.7	+2.6
CZSB	Cruzeiro do Su	14.94	137	Pn	Pn	22 57 27.1	-2.9
CZSB	Cruzeiro do Su	14.94	137	eP	Pn	22 57 29.4	-0.6
BAUV	El Baul	15.79	68	Pn	Pn	22 57 39.2	-2.0
PCRV	Puerto La Cruz	19.37	68	LR	LR	23 07 37.5	
	comp=Z,134nm,19.4s,slow=42						
TEFE	Tefe	19.46	110	eP	P	22 58 25.6	+0.2
SC01	Santiago de lo	19.96	36	P	P	22 58 30.4	-0.5
TLIG	Tlapa	20.92	314	P	P	22 58 40.3	-1.1
SJG	San Juan	22.05	47	LR	LR	23 07 10.8	
	comp=Z,115nm,21.7s,baz=248,slow=36						
HUMP	Col San Antoni	22.29	47	P	P	22 58 55.3	-0.6
HUMP				IAmb	IAmb	22 59 05.8	
	comp=Z,39nm,1.5s						
LPAZ	La Paz	24.32	144	P	P	22 59 13.0	-3.9
LPAZ				IAmb	IAmb	22 59 22.6	
	comp=Z,11nm,1.1s						
LPAZ	La Paz	24.32	144	P	P	22 59 20.4	+3.4
	comp=Z,5.7nm,0.9s,baz=340,slow=10,SNR=15						
LPAZ				LR	LR	23 09 31.8	
	comp=Z,207nm,20.7s,baz=304,slow=38						
	comp=Z,5.7nm,0.9s						
LPAZ	La Paz	24.32	144	eP	P	22 59 16.4	-0.5
SIV	San Ignacio	28.86	132	LR	LR	23 12 24.9	
	comp=Z,226nm,18.7s,baz=278,slow=38						
BBSD	Serra de San D	29.96	133	eP	P	23 00 07.4	+0.5
PTLB	Pontes e Lacer	29.99	129	eP	P	23 00 07.8	+0.6
MDP	Montagnes des	30.22	86	LR	LR	23 12 47.0	
	comp=Z,103nm,18.4s,baz=282,slow=37						
HODGE	Hodges	30.79	1	P	P	23 00 13.6	-0.5
JCT	Junction City	31.42	331	P	P	23 00 18.4	-1.3
JCT				IAmb	IAmb	23 00 23.8	
	comp=Z,9.7nm,1.2s						
KMSC	Kings Mountain	31.73	2	P	P	23 00 22.0	-0.3
KMSC				IAmb	IAmb	23 00 25.0	
	comp=Z,6.3nm,0.9s						
TKL	Tuckaleechee C	32.22	359	LR	LR	23 14 07.0	
	comp=Z,67nm,18.0s,baz=183,slow=38						
TXAR	Lajitas Array	32.56	325	P	P	23 00 30.9	+1.1
	comp=Z,0.4nm,0.9s,baz=139,slow=8.9,SNR=2.5						
	comp=Z,0.4nm,0.9s						
SGCY	Sterling City	33.24	331	P	P	23 00 35.1	-0.6
SGCY				IAmb	IAmb	23 00 39.3	
	comp=Z,11nm,1.1s						
LCAR	Lake Charles	33.50	348	P	P	23 00 37.0	-0.8
SN05	Snyder 5	33.92	332	P	P	23 00 40.6	-0.9
SN07	Snyder 07	34.10	332	P	P	23 00 41.7	-1.4
SN07				IAmb	IAmb	23 00 46.6	
	comp=Z,7.2nm,1.1s						
S51A	Beattyville	34.19	359	P	P	23 00 43.5	-0.3
S51A				IAmb	IAmb	23 00 46.1	
	comp=Z,6.7nm,0.8s						
T42A	Van Buren	34.41	348	P	P	23 00 45.6	-0.1
T42A				IAmb	IAmb	23 00 47.6	
	comp=Z,4.7nm,0.8s						
DKNS	Dickens	34.59	333	P	P	23 00 45.5	-1.9
CCM	Cathedral Cave	35.44	349	P	P	23 00 53.6	-1.0
CCM				IAmb	IAmb	23 00 56.6	
	comp=Z,7.8nm,0.8s						
MSTX	Muleshoe	35.71	331	P	P	23 00 56.4	-0.7
MSTX				IAmb	IAmb	23 01 00.5	
	comp=Z,8.2nm,0.9s						
AMTX	Amarillo	35.95	333	P	P	23 00 59.0	-0.1
AMTX				IAmb	IAmb	23 01 02.6	
	comp=Z,9.1nm,0.9s						
H03N2	Juan Fernandez	36.72	174	T	T	23 40 18.0	
	baz=354,slow=76,SNR=5.8						
H03N1	Juan Fernandez	36.73	174	T	T	23 40 15.6	
	baz=354,slow=76,SNR=8.0						
H03N3	Juan Fernandez	36.74	174	T	T	23 40 10.9	
	baz=354,slow=76,SNR=9.3						
P40A	Paris	37.02	348	P	P	23 01 07.6	-0.5
N41A	Harden Midland	37.94	350	P	P	23 01 15.0	-0.8
ANMO	Albuquerque	38.35	328		P	23 01 19.3	-0.3
CPUP	Villa Florida	38.45	141	LR	LR	23 18 17.6	
	comp=Z,46nm,20.4s,baz=204,slow=38						
BDFB	Brasilia	39.30	120	LR	LR	23 17 10.8	
	comp=Z,90nm,19.5s,baz=126,slow=35						
SADO	Sadowa	41.44	4	LR	LR	23 19 20.5	
	comp=Z,46nm,18.7s,baz=168,slow=37						
PLCA	Paso Flores	45.24	167	LR	LR	23 18 45.0	
	comp=Z,94nm,18.5s,baz=324,slow=33						
PDAR	Pinedale Array	45.93	333	P	P	23 02 22.9	+1.5
	comp=Z,1.0nm,0.9s,baz=138,slow=7.5,SNR=1.2						
PDAR				LR	LR	23 22 34.9	
	comp=Z,41nm,20.8s,baz=166,slow=38						
	comp=Z,1.0nm,0.9s						
ELK	Elko	47.32	326	LR	LR	23 22 40.3	
	comp=Z,66nm,20.1s,baz=168,slow=36						
NVAR	Mina Array Bea	47.60	322	P	P	23 02 34.3	-0.2
NVAR	Mina Array Bea	47.60	322	P	P	23 02 37.4	+2.9
	comp=Z,2.2nm,0.7s,baz=119,slow=6.2,SNR=9.4						
NVAR				LR	LR	23 22 15.1	
	comp=Z,82nm,19.0s,baz=166,slow=36						
	comp=Z,2.2nm,0.7s						
YBH	Yreka Blue Hor	52.28	323	LR	LR	23 24 18.9	
	comp=Z,5.8nm,20.9s,baz=175,slow=35						
NEW	Newport	53.56	332	LR	LR	23 27 17.9	
	comp=Z,35nm,18.0s,baz=158,slow=37						
J26L	Joseph Creek	74.75	337		P	23 05 38.1	+0.1
ILAR	Eielson Array	76.17	337	P	P	23 05 48.2	+2.1
	comp=Z,0.4nm,0.8s,baz=111,slow=6.4,SNR=4.3						
ILAR				LR	LR	23 41 39.3	
	comp=Z,38nm,19.0s,baz=86,slow=38						
	comp=Z,0.4nm,0.8s						
RND	Reindeer	76.47	335		P	23 05 47.4	-0.5
RND				IAmb	IAmb	23 05 51.2	
	comp=Z,5.2nm,1.0s						
ESDC	Sonseca Array	79.39	50	P	P	23 06 07.3	+2.7
	comp=Z,0.4nm,1.0s,baz=267,slow=4.8,SNR=1.7						
	comp=Z,0.4nm,1.0s						
SPITS	Spitsbergen Ar	88.70	12	LR	LR	23 47 01.8	
	comp=Z,25nm,21.6s,baz=252,slow=36						
SNAA	Sanae	89.97	162	P	P	23 06 57.0	-0.2
VRAC	Vranov	93.70	40	LR	LR	23 44 34.6	
	comp=Z,8.7nm,19.2s,baz=318,slow=32						
ASAR	Alice Springs	139.09	237	PKP	PKiKP	23 13 29.6	+1.5
	comp=Z,0.5nm,0.7s,baz=100,slow=2.7,SNR=4.8						
WRA	Warramunga Arr	140.10	243	PKP	PKiKP	23 13 31.3	+1.1
	comp=Z,0.7nm,0.9s,baz=100,slow=1.9,SNR=2.9						
H01W1	Cape Leeuwin H	144.79	205	T	T	01 56 05.9	
	baz=149						
H01W2	Cape Leeuwin H	144.80	205	T	T	01 56 03.7	
	baz=149						
H01W3	Cape Leeuwin H	144.81	205	T	T	01 56 08.8	
	baz=149						

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*IDC **26** 22:57:29.3±1.9, 32°.42S×178°.48W, h0^{km}, mb3.9/3, mbtmp3.9/4, ML3.3/1, Error ellipse: s-maj=47.5km s-min=37.1km az=67.0*

*WEL **26** 22:57:34.6±1.3, 33°S±28°×17°9W±5°0, h33^{km}, mB4.5/5, ML4.3/8, MLv4.1/6, Mw(mB)3.7/5, Error ellipse: s-maj=74.3km s-min=9.6km az=118.2, confirmed*

ISC 26 22:57:35.3±1.6, **33°.0S**±0°.1×**178°.3W**±0°.2, **h35**^{km}, **n17**, σ1^{s}.**77**/27, **mb4.0**/3, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	5.34	210	P	Pn	22 58 51.1	-1.4
MXZ				S	Sn	22 59 53.8	+0.9
PKGZ	Pakihiroa	5.70	210	P	Pn	22 58 57.0	-0.5
PKGZ				S	Sn	23 00 03.8	+2.2
HAZ	Te Kaha	5.73	213	P	Pn	22 58 59.3	+1.4
RUGZ	Raukumara Rang	5.95	212	P	Pn	22 59 00.4	-0.7
RUGZ				S	Sn	23 00 09.4	+1.3
CNGZ	Carnagh Statio	6.18	206	P	Pn	22 59 03.4	-0.7
TKGZ	Te Karaka	6.28	209	P	Pn	22 59 05.9	+0.5
TKGZ				S	Sn	23 00 17.4	+1.5
MWZ	Matawai	6.33	211	P	Pn	22 59 04.7	-1.4
MWZ				S	Sn	23 00 18.1	+1.0
URZ	Urewera	6.45	214	Pn	Pn	22 59 11.6	+3.8
	0.6nm,0.3s,baz=347,slow=21,SNR=1.1						
URZ				Sn	Sn	23 00 21.0	+0.9
	0.9nm,0.3s,baz=94,slow=21,SNR=1.7						
	2.8nm,0.3s						
SNGZ	Shannon Statio	6.78	210	P	Pn	22 59 12.2	-0.2
SNGZ				S	Sn	23 00 26.9	-1.4
RTZ	Ruatahuna	6.80	213	P	Pn	22 59 11.8	-0.9
RTZ				S	Sn	23 00 28.2	-0.7
MTHZ	Maungataniwha	7.06	212	P	Pn	22 59 16.3	+0.1
MTHZ				S	Sn	23 00 34.9	-0.2
OUZ	Omahuta	7.07	249	P	Pn	22 59 17.9	+1.6
PNHZ	Pukenui	8.21	211	P	Pn	22 59 30.9	-1.1
PNHZ				S	Sn	23 00 59.3	-4.2
ASAR	Alice Springs	42.76	270	P	P	23 05 27.4	-2.2
	0.3nm,0.3s,baz=107,slow=8.1,SNR=4.5						
	0.3nm,0.3s						
WRA	Warramunga Arr	43.98	275	P	P	23 05 37.0	-2.5
	1.3nm,0.5s,baz=115,slow=7.8,SNR=17						
	1.3nm,0.5s						
QSPA	South Pole Qui	57.14	180	P	P	23 07 20.9	+2.6
	2.0nm,1.0s,baz=63,slow=2.3,SNR=3.3						
	2.0nm,1.0s						
FINES	FINESS Array B	147.44	338	PKPbc	PKPdf	23 17 12.5	+0.3
	0.5nm,0.4s,baz=25,slow=4.6,SNR=12						

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*SOME **26** 23:10:50.1, 43°.12N×80°.15E, h20^{km}*

*NNC **26** 23:10:51.6±0.5, 43°.23N×80°.00E, h5^{km}±1^{km}, mb3.6, mpv3.4, Error ellipse: s-maj=3.4km s-min=2.1km az=161.0*

*KRNET **26** 23:10:51.8±0.1, 43°.24N×80°.00E, h10^{km}, mb3.1*

ISC 26 23:10:51.2±0.9, **43°.18N**±0°.03×**79°.93E**±0°.03, **h10**^{km}, **n41**, σ1^{s}.**41**/67, **10C-10D**, **Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	Shalkode	0.34	266	P	Pg	23 10 55.5	-2.6
	1µm,0.1s						
SHLS				S	Sg	23 10 58.3	-4.4
	807nm,0.1s						
SHLS	Shalkode	0.34	266	eP	Pg	23 10 55.5	-2.6
	1µm,0.1s						
SHLS				eS	Sg	23 10 58.3	-4.4
	807nm,0.1s						
PDGK	Podgornoye	0.36	295	⇓P	Pb	23 10 59.9	+0.2
	17nm,0.3s						
PDGK				⇓S	Sb	23 11 05.8	+0.4
	45nm,0.2s						
KTMS	Ketmen	0.41	49	P	Pg	23 10 58.3	-1.0
	132nm,0.1s						
KTMS				S	Sg	23 11 03.1	-1.5
	236nm,0.1s						
KTMS	Ketmen	0.41	49	eP	Pg	23 10 58.3	-1.0
KTMS				eS	Sg	23 11 03.1	-1.5
KTMS	Ketmen	0.41	49	eP	Pg	23 10 58.3	-1.0
	132nm,0.1s						
KTMS				eS	Sg	23 11 03.1	-1.5
	236nm,0.1s						
UZB	Uzynbulak	0.67	268	P	Pb	23 11 05.5	+0.5
	16nm,0.1s						
UZB				S	Sb	23 11 15.5	+1.2
	208nm,0.3s						
KPKS	Kokpek	0.95	288	P	Pn	23 11 10.6	-0.2
	1.2nm,0.1s						
KPKS				S	Sn	23 11 24.1	-0.3
	107nm,0.2s						
KPKS	Kokpek	0.95	288	eP	Pn	23 11 10.6	-0.2
KPKS				eS	Sn	23 11 24.2	-0.3
SATY	Saty	1.12	264	P	Pn	23 11 13.7	+0.6
	5.2nm,0.1s						
SATY				S	Sn	23 11 29.6	+0.9
	371nm,0.2s						
DJR	Jarkent	1.16	355	P	Pg	23 11 13.1	-0.3
	9.4nm,0.1s						
DJR				S	Sb	23 11 28.5	0.0
	67nm,0.2s						
DJR	Jarkent	1.16	355	eP	Pg	23 11 13.1	-0.3
	9.4nm,0.1s						
DJR				eS	Sb	23 11 28.5	0.0
	67nm,0.2s						
KNOS	Konyrlen	1.30	335	P	Pg	23 11 16.0	-0.2
	2.9nm,0.1s						
KNOS				S	Sn	23 11 33.8	+0.7
	62nm,0.3s						
PRZ	Przheval'sk	1.32	239	⇑iP	Pg	23 11 18.0	+1.4
PRZ				⇑iS	Sg	23 11 37.1	+3.3
BLB	Baldybastay	1.40	311	P	Pg	23 11 17.9	-0.1
	8.0nm,0.2s						
BLB				S	Sg	23 11 37.0	+0.8
	44nm,0.3s						
ARXS	Arharly	1.84	305	P	Pb	23 11 25.8	+0.7
	2.5nm,0.1s						
ARXS				S	Sg	23 11 50.6	+0.2
	28nm,0.5s						
KOTS	Kotyrbulak	2.06	272	Pg	Pg	23 11 30.2	-0.5
	13nm,0.2s						
KOTS				Lg	Lg	23 11 58.4	
	78nm,0.4s						
KOTS	Kotyrbulak	2.06	272	eP	Pg	23 11 30.2	-0.5
KOTS				eS	Sg	23 11 58.4	+0.9
KOTS	Kotyrbulak	2.06	272	eP	Pg	23 11 30.2	-0.5
	13nm,0.2s						
KOTS				eS	Sg	23 11 58.4	+0.9
	78nm,0.4s						
TDK	Taldyqorghan	2.13	329	Pg	Pb	23 11 30.6	+0.7
	16nm,0.3s						
TDK				Lg	Lg	23 11 58.5	
	98nm,0.3s						
TDK	Taldyqorghan	2.13	329	eP	Pb	23 11 30.6	+0.7
	16nm,0.3s						
TDK				eS	Sg	23 11 58.5	-1.1
	98nm,0.3s						
TARG	Taragay, Kyrgy	2.14	228	⇓iP	Pb	23 11 31.6	+1.3
TARG				⇓iS	Sg	23 12 00.6	+0.6
KDJ	Kajisay	2.29	244	⇑iP	Pb	23 11 33.7	+1.1
KDJ				⇑iS	Sg	23 12 04.3	-0.3
KTBS	Karatobe	2.43	284	Pg	Pb	23 11 36.5	+1.5
	4.1nm,0.3s						
KTBS				Lg	Lg	23 12 08.6	
	25nm,0.3s						
KTBS	Karatobe	2.43	284	eP	Pb	23 11 36.5	+1.5
KTBS				eS	Sg	23 12 08.6	-0.5
MTBS	Maitube	2.56	270	Pg	Pb	23 11 39.0	+1.7
	3.0nm,0.2s						
MTBS				Lg	Lg	23 12 12.9	
	22nm,0.3s						
MTBS	Maitube	2.56	270	eP	Pb	23 11 39.0	+1.7
	3.0nm,0.2s						
MTBS				eS	Sg	23 12 12.9	-0.6
	22nm,0.3s						
KUU	Kurty	2.71	286	Pg	Pb	23 11 40.9	+1.2
	2.6nm,0.1s						
KUU				Lg	Lg	23 12 16.2	
	16nm,0.2s						
KUU	Kurty	2.71	286	eP	Pb	23 11 40.9	+1.2
KUU				eS	Sg	23 12 16.2	-2.0
KUU	Kurty	2.71	286	eP	Pb	23 11 40.9	+1.2
	2.6nm,0.1s						
KUU				eS	Sg	23 12 16.2	-2.0
	16nm,0.2s						
ULHL	Ulahol	2.88	252	⇓iP	Pb	23 11 42.3	-0.4
ULHL				⇓iS	Sb	23 12 19.1	+1.1
KST	Kastek	2.91	269	Pg	Pg	23 11 46.1	-0.8
	2.7nm,0.1s						
KST				Lg	Lg	23 12 25.1	
	13nm,0.4s						
KST	Kastek	2.91	269	eP	Pg	23 11 46.1	-0.8
	2.7nm,0.1s						
KST				eS	Sg	23 12 25.1	+0.5
	13nm,0.4s						
BOOM	Boomskoye usch	3.02	258	⇑eP	Pb	23 11 44.0	-1.1
BOOM				⇑eS	Sb	23 12 22.3	+0.3
KRBS	Karabastau	3.14	281	Pg	Pb	23 11 48.3	+1.2
	0.5nm,0.3s						
KRBS				Lg	Lg	23 12 28.9	
	5.9nm,0.2s						
TKM2	Tokmak 2	3.19	267	⇑Pg	Pb	23 11 48.8	+0.7
	1.5nm,0.5s						
TKM2				⇓Lg	Lg	23 12 34.1	
	7.5nm,0.4s						
NRN	Naryn	3.40	240	⇑eP	Pb	23 11 49.5	-2.2
NRN				⇑eS	Sb	23 12 31.5	-1.7
CHMS	Chumysh	3.80	269	⇓Lg	Lg	23 12 52.0	
	7.3nm,0.8s						
MAKZ	Makanchi	3.91	21	⇑Lg	Lg	23 12 54.1	
	5.1nm,0.8s						
MK31	Makanchi Array	3.98	24	Pn	Pn	23 11 53.7	+1.4
	baz=202,slow=13,SNR=21						
MK31				⇓Lg	Lg	23 12 57.0	
	1.0nm,0.3s,baz=210,slow=29,SNR=6.0						
KK31	Karatay Array	6.89	273	⇓Lg	Lg	23 14 30.4	
	0.5nm,0.5s,baz=82,slow=28,SNR=4.3						

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*IDC **26** 23:15:20.5±1.0, 49°.28S×106°.29E, h0^{km}, mb4.2/8, mbtmp4.2/8, MS3.8/24, Error ellipse: s-maj=37.8km s-min=18.0km az=109.0*

*NEIC **26** 23:15:21.3±0.9, 49°.2S±0°.1×105°.9E±0°.2, h10^{km}±1^{km}, mb4.5/10, Error ellipse: s-maj=22.9km s-min=15.0km az=314.0*

*GCMT **26** 23:15:24.3±0.4, 49°.16S±0°.02×105°.92E±0°.04, h16^{km}±2^{km}, MW4.8/72, Moment Tensor Solution. s15,c17; s72,c89; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.01±.10; $M_{\theta\theta}$1.19±.10; $M_{\phi\phi}$-1.19±.09; $M_{r\theta}$0.50±.31; $M_{\theta\phi}$1.32±.08; $M_{\phi r}$-0.27±.27; Best double couple: $M_0$1.86500×10^{16} NP1:ϕ_s21.00000°, δ72.00000°, λ-178.00000°. NP2: ϕ_s291.00000°, δ88.00000°, λ-18.00000°. Principal axes: T 1.8440, Plg11.0000°, Azm337.0000°; N 0.0490, Plg72.0000°, Azm105.0000°; P -1.8860, Plg14.0000°, Azm245.0000°; nsta1 refers to body waves, cutoff=40s.*

nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 26 23:15:21.6±0.6**, 49°.25S**±0°.10×**106°.1E**±0°.2**, h10^{km}, n48, σ1ˢ.53**/27**, mb4.3**/14**, MS3.9**/24**, 5C, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	15.52	25	T	T	23 34 43.3	
	baz=199,slow=74,SNR=127						
H01W1	Cape Leeuwin H	15.54	26	T	T	23 34 46.5	
	baz=199,slow=74,SNR=161						
H01W3	Cape Leeuwin H	15.54	25	T	T	23 34 46.8	
	baz=199,slow=74,SNR=152						
CASY	Casey	17.23	174		Pn	23 19 21.6	-0.5
STKA	Stephens Creek	31.70	70	P	P	23 21 45.0	-0.4
	2.5nm,0.7s,baz=250,slow=3.5,SNR=3.4						
STKA				LR	LR	23 32 19.5	
	comp=Z,147nm,20.6s,baz=208,slow=32						
	2.5nm,0.7s						
ASAR	Alice Springs	33.60	51	P	P	23 22 01.8	-0.3
	1.4nm,0.7s,baz=210,slow=8.0,SNR=10						
ASAR				LR	LR	23 33 37.5	
	comp=Z,235nm,20.2s,slow=33						
	1.4nm,0.7s						
FITZ	Fitzroy Crossi	34.86	34	P	P	23 22 12.4	-0.6
FITZ	Fitzroy Crossi	34.86	34	LR	LR	23 35 19.3	
	comp=Z,202nm,18.7s,baz=242,slow=34						
VNDA	Vanda	35.16	162	P	P	23 22 15.3	+0.3
VNDA				IAmb	IAmb	23 22 18.9	
	comp=Z,7.6nm,0.9s						
VNDA	Vanda	35.16	162	P	P	23 22 14.7	-0.3
	comp=Z,6.0nm,0.8s,baz=287,slow=9.6,SNR=22						
VNDA				LR	LR	23 35 34.5	
	comp=Z,367nm,19.1s,baz=304,slow=35						
	comp=Z,6.0nm,0.8s						
WRA	Warramunga Arr	36.95	48	P	P	23 22 30.7	-0.2
	comp=Z,2.3nm,0.9s,baz=212,slow=8.1,SNR=6.2						
	comp=Z,2.3nm,0.9s						
WR8	Warramunga Arr	37.02	48	P	P	23 22 31.4	-0.1
WR8				IAmb	IAmb	23 23 03.8	
	comp=Z,13nm,1.4s						
WB0	Warramunga Arr	37.13	48	P	P	23 22 31.8	-0.6
WB0				IAmb	IAmb	23 22 33.6	
	comp=Z,7.9nm,1.1s						
QSPA	South Pole Qui	40.88	180	P	P	23 23 03.4	-0.1
QSPA				IAmb	IAmb	23 23 07.1	
	comp=Z,11nm,1.3s						
QSPA	South Pole Qui	40.88	180	P	P	23 23 03.4	-0.1
	comp=Z,4.9nm,1.1s,baz=318,slow=4.9,SNR=8.9						
	comp=Z,4.9nm,1.1s						
LEM	Lembang	42.30	2	LR	LR	23 38 05.5	
	comp=Z,123nm,19.4s,baz=202,slow=32						
KAPI	Kappang	45.58	19	LR	LR	23 39 41.4	
	comp=Z,63nm,20.9s,baz=202,slow=32						
TROLL	Troll, Antarti	47.91	204	⇑P	P	23 24 00.2	+0.6
	comp=Z,68nm,0.8s						
SNAA	Sanae	49.50	203	⇑P	P	23 24 13.6	+1.9
	comp=Z,79nm,0.8s						
SNAA	Sanae	49.50	203	P	P	23 24 12.2	+0.4
SNAA				IAmb	IAmb	23 24 19.0	
	comp=Z,7.5nm,1.2s						
SNAA	Sanae	49.50	203	P	P	23 24 13.0	+1.3
	comp=Z,1.0nm,0.6s,baz=144,slow=13,SNR=11						
SNAA				LR	LR	23 42 20.1	
	comp=Z,93nm,19.4s,baz=102,slow=33						
	comp=Z,1.0nm,0.6s						
BELA	Belgrano 2	50.87	190	P	P	23 24 21.7	-0.2
BELA				IAmb	IAmb	23 24 23.6	
	comp=Z,5.0nm,0.8s						
VNA2	Neumayer--Watz	51.13	203	⇑P	P	23 24 25.7	+1.8
	comp=Z,2.9nm,0.7s,baz=127,slow=7.9						
VNA3	Neumayer Olymp	51.49	202	⇑P	P	23 24 28.1	+1.4
	comp=Z,2.1nm,0.8s						
VNA1	Neumayer--Stat	51.52	203	⇑P	P	23 24 28.0	+1.1
	comp=Z,5.3nm,0.8s						
DZM	Mont Dzumac	54.35	83	LR	LR	23 44 54.3	
	comp=Z,75nm,18.5s,baz=282,slow=33						
JAY	Jayapura	55.13	44	LR	LR	23 46 59.5	
	comp=Z,157nm,20.9s,baz=350,slow=34						
HNR	Honiara	59.72	67	LR	LR	23 48 28.0	
	comp=Z,93nm,20.1s,baz=108,slow=33						
PALK	Pallekele	60.51	331	LR	LR	23 45 55.4	
	comp=Z,122nm,19.3s,baz=140,slow=30						
BOSA	Boshof	63.15	257	P	P	23 25 46.8	-3.0
BOSA	Boshof	63.15	257	LR	LR	23 47 33.1	
	comp=Z,73nm,19.9s,baz=184,slow=30						
LBTB	Lobatse	65.42	260	LR	LR	23 49 17.5	
	comp=Z,48nm,18.5s,baz=165,slow=31						
PMSA	Palmer Station	66.05	185	LR	LR	23 55 04.8	
	comp=Z,63nm,18.2s,baz=176,slow=36						
MATP	Matopo	66.78	265	LR	LR	23 51 30.6	
	comp=Z,35nm,19.7s,baz=154,slow=32						
CMAR	Chiang Mai Arr	67.70	353	P	P	23 26 17.5	-1.4
CMAR	Chiang Mai Arr	67.70	353	P	P	23 26 19.3	+0.3
	comp=Z,0.7nm,0.3s,baz=200,slow=4.8,SNR=5.9						
CMAR				LR	LR	23 52 01.9	
	comp=Z,40nm,21.2s,baz=190,slow=32						
	comp=Z,0.7nm,0.3s						
LSZ	Lusaka	70.71	269	LR	LR	23 51 22.1	
	comp=Z,80nm,19.8s,baz=176,slow=30						
BRDH	Bariadhala	72.75	346	LR	LR	23 55 40.2	
	comp=Z,68nm,19.1s,baz=152,slow=33						
TSUM	Tsumeb	74.74	258	LR	LR	23 53 43.1	
	comp=Z,80nm,19.7s,baz=158,slow=31						
NIL	Nilore	87.56	333	P	P	23 28 09.5	+0.1
MJAR	Matsushiro Arr	90.05	25	LR	LR	00 14 42.0	
	comp=Z,10nm,18.0s,baz=160,slow=40						
PLCA	Paso Flores	90.34	183	LR	LR	00 08 26.1	
	comp=Z,74nm,18.3s,baz=218,slow=35						
AAK	Ala-Archa	95.62	337	LR	LR	00 08 17.9	
	comp=Z,47nm,18.5s,baz=144,slow=33						
SONM	Songino Array	96.71	0	P	P	23 28 52.8	+1.2
	comp=Z,0.4nm,0.4s,baz=172,slow=4.2,SNR=2.6						
SONM				LR	LR	00 11 47.4	
	comp=Z,26nm,20.2s,baz=225,slow=35						
	comp=Z,0.4nm,0.4s						
MKAR	Makanchi Array	97.87	344	LR	LR	00 11 25.3	
	comp=Z,36nm,21.0s,baz=126,slow=34						
GERES	GERESS Array B	125.81	306	PKP	PKiKP	23 34 28.4	+5.2
	comp=Z,0.6nm,0.8s,baz=222,slow=1.8,SNR=5.0						
NVAR	Mina Array Bea	146.65	92	PKPbc	PKPab	23 35 04.5	0.0
	comp=Z,1.7nm,0.6s,baz=173,slow=3.9,SNR=3.8						
TXAR	Lajitas Array	149.87	120	PKPbc	PKPbc	23 35 09.9	-2.0
	comp=Z,1.0nm,0.9s,baz=195,slow=3.9,SNR=7.5						

IDC ***26*** *23:18:58.3±1.8, 31°.02S×177°.29W, h0^{km}, mb4.1/3, mbtmp4.0/4, ML3.5/1, Error ellipse: s-maj=45.4km s-min=34.5km az=60.0*

ISC 26 23:19:03.2±1.6**, 31°.15S**±0°.09×**177°.7W**±0°.3**, h27^{km}, n6, σ2ˢ.26**/7**, mb4.0**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.90	354	Sn	Sn	23 19 54.8	-2.0
	93nm,0.3s,baz=96,slow=21,SNR=4.3						
URZ	Urewera	8.28	210	Pn	Pn	23 21 01.6	0.0
	0.6nm,0.3s,baz=43,slow=18,SNR=1.5						
URZ				Sn	Sn	23 22 31.4	-2.8
	3.2nm,0.3s,baz=91,slow=16,SNR=7.9						
	2.4nm,0.5s						
ASAR	Alice Springs	43.33	268	P	P	23 27 05.2	+2.0
	1.2nm,0.7s,baz=102,slow=7.3,SNR=12						
	1.2nm,0.7s						
WRA	Warramunga Arr	44.39	273	P	P	23 27 13.6	+1.9
	0.8nm,0.3s,baz=111,slow=8.0,SNR=12						
	0.8nm,0.3s						
QSPA	South Pole Qui	58.97	180	P	P	23 29 00.6	+0.5
	4.5nm,1.1s,baz=28,slow=3.6,SNR=7.0						
	4.5nm,1.1s						
FINES	FINESS Array B	145.93	340	PKPbc	PKPdf	23 38 37.9	-0.9
	0.9nm,0.4s,baz=40,slow=2.6,SNR=22						

RSNC 26 23:23:13.7±0.9**, 3°N**±11°×**8°2W**±°**, h0^{km}, M4.2, mB4.9, mb4.6, ML3.2, Mw(mB)4.2, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MALC	Bahia Malaga	5.14	80	P	Pn	23 24 30.8	-1.2
MALC				S	Sn	23 25 32.4	+0.3
YOTC	Yotoco, Valle	6.11	82	P	Pn	23 24 43.9	-1.6
	7.7nm,1.0s						
YOTC				S	Sn	23 25 54.9	-1.4
	7.7nm,1.0s						
PLMC	San Jos del P	6.36	74	P	Pn	23 24 47.7	-1.2
	2µm37nm,0.5s						
PLMC				S	Sn	23 26 03.1	+0.8
	2µm37nm,0.5s						
CBOC	Ciudad Bolivar	6.93	67	P	Pn	23 24 54.7	-2.1
	918nm26nm,0.5s						
CBOC				S	Sn	23 26 14.7	-1.8
	918nm26nm,0.5s						
GUY2C	Guyana, Caldas	7.33	73	P	Pn	23 25 02.4	-0.1
HELC	Santa Helena	7.50	66	P	Pn	23 25 04.2	-0.6
	423nm35nm,0.8s						
HELC				S	Sn	23 26 32.0	+1.2
	423nm35nm,0.8s						
NORC	Norcasia	7.90	72	P	Pn	23 25 11.0	+1.0
PTBC	PUERTO BERRIO,	8.62	67	P	Pn	23 25 21.0	+1.2
PTBC				S	Sn	23 26 59.3	+1.4

IDC 26 23:24:25.3±1.2**, 28°.43N**×**104°.92E, h0^{km}, mb3.7**/5**, mbtmp3.7**/5**, MS3.3**/3**, Error ellipse: s-maj=46.8km s-min=22.1km az=57.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.33	210	LR	LR	23 32 18.0	
	comp=Z,16nm,20.7s,baz=180,slow=42						
MKAR	Makanchi Array	25.50	322	P	P	23 29 55.7	+0.4
	0.9nm,0.6s,baz=113,slow=11,SNR=7.8						
	0.9nm,0.6s						
USRK	Ussuriysk Ar.	26.73	47	P	P	23 30 06.7	+0.2
	1.6nm,0.6s,baz=253,slow=7.7,SNR=4.4						
	1.6nm,0.6s						
KURBB	Kurchatov Arra	29.82	325	P	P	23 30 33.3	-0.6
	0.5nm,0.5s,baz=131,slow=9.3,SNR=6.5						
	0.5nm,0.5s						
MA2	Magadan	43.96	32	LR	LR	23 51 21.9	
	comp=Z,116nm,19.9s,baz=85,slow=37						
WRA	Warramunga Arr	55.86	146	P	P	23 34 04.5	-0.3
	0.4nm,0.5s,baz=336,slow=8.2,SNR=5.7						
	0.4nm,0.5s						
ASAR	Alice Springs	58.84	149	P	P	23 34 26.0	+0.1
	0.3nm,0.4s,baz=333,slow=8.7,SNR=4.1						
	0.3nm,0.4s						
MDT	Midelt	89.57	307	LR	LR	00 25 07.7	
	comp=Z,31nm,18.3s,baz=201,slow=41						

TEH ***26*** *23:29:01.1, 26°.90N×53°.89E, h22^{km}±24^{km}*

DSN ***26*** *23:29:04.9±1.7, 26°.84N×53°.76E, h10^{km}, ML2.4/9, Error ellipse: s-maj=18.1km s-min=11.9km az=169.0*

OMAN ***26*** *23:29:08.5±0.1, 26°.75N×53°.97E, h22^{km}, ml2.6/14, Error ellipse: s-maj=1.4km s-min=0.7km az=355.0*

ISC 26 23:29:02.9±0.8**, 27°.01N**±0°.03×**53°.94E**±0°.03**, h19^{km}, n37, σ1ˢ.90**/52**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	LAR	0.76	30	Pg	Pb	23 29 17.0	-0.6
LMD1	Lamerd	0.77	296	Pg	Pb	23 29 15.6	-2.0
LMD1				Sg	Sb	23 29 26.2	-1.6
JHRM	Jahrom	1.53	348	Pg	Pg	23 29 31.0	-1.3
QIR1	Qir	1.67	332	Pg	Pb	23 29 32.3	-0.7
GENO	Geno	2.02	78	Pn	Pb	23 29 37.7	-1.4
SHME	Shamm	2.19	115	P	Pb	23 29 42.0	+0.1
SHME				S	Sn	23 30 06.1	+1.3
SHME	Shamm	2.19	115	P	Pg	23 29 43.9	-1.0
JRN	Qarnain Island	2.28	206	P	Pb	23 29 43.5	+0.1
JRN				S	Sn	23 30 07.7	+0.7
NAZ	Nazwa, Dubai	2.54	142	P	Pb	23 29 46.4	-1.4
NAZ	Nazwa, Dubai	2.54	142	P	Pb	23 29 46.2	-1.6
MASF	Masafi	2.57	129	P	Pb	23 29 47.5	-1.0
ASUD	Al Ashush, Dub	2.68	152	P	Pb	23 29 48.8	-1.4
ASUD				S	Sn	23 30 15.5	-1.5
ASUD	Al Ashush, Dub	2.68	152	P	Pb	23 29 48.3	-2.0
FAQ	Al Faqa, Dubai	2.70	146	P	Pb	23 29 49.3	-1.3
MDH	Madha	2.72	128	P	Pn	23 29 46.9	+1.4
UOSS	Minazif	2.89	135	P	Pn	23 29 50.0	+2.1
UOSS	Minazif	2.89	135	P	Pn	23 29 49.7	+1.8
HATD	Hatta, Dubai	2.93	137	P	Pn	23 29 51.0	+2.5
HATD	Hatta, Dubai	2.93	137	P	Pn	23 29 50.7	+2.2
ASHO	Ashiyiah	3.00	140	P	Pn	23 29 52.1	+2.7
	SNR=14						
ASHO				S	Sn	23 30 27.9	+3.0
ASHO	Ashiyiah	3.00	140	P	Pn	23 29 51.9	+2.5
ASHO				S	Sb	23 30 29.5	-2.4
TRNA	Turayna	3.34	228	P	Pb	23 29 59.9	-1.6
TRNA				S	Sn	23 30 35.7	+2.4
ALNE	Al Ain	3.36	151	P	Pn	23 29 57.4	+3.0
ALNE	Al Ain	3.36	151	P	Pn	23 29 56.8	+2.4
NGRK	Negar Kerman	3.60	42	Pn	Pn	23 30 00.2	+2.2
SMRA	Abu-Samra	3.60	232	P	Pn	23 29 59.8	+2.1
SMRA				S	Sn	23 30 42.7	+3.1
SOHO	SOHO	3.70	140	P	Pn	23 30 01.1	+2.1
MZR	Muzera	4.01	186	P	Pn	23 30 04.1	+0.8
MZR				S	Sn	23 30 50.1	+0.3
MZR	Muzera	4.01	186	P	Pn	23 30 03.7	+0.3
ARQ	Araqi	4.34	147	P	Pn	23 30 10.2	+2.4
	SNR=13						
ARQ				S	Sn	23 30 59.7	+1.8
UMZA	Um Al Zommool	4.42	165	P	Pn	23 30 11.5	+2.7
UMZA				S	Sn	23 30 59.6	-0.2
HOQ	Hoqain	4.57	137	P	Pn	23 30 14.0	+2.9
	SNR=5.6						
HOQ				S	Sn	23 31 03.5	-0.2
IRAM	Ramesheh	4.97	344	Pn	Pn	23 30 18.6	+1.8
BSY	Bisya	5.17	144	P	Pn	23 30 21.7	+2.4
BSY				S	Sn	23 31 18.6	0.0
SMDO	Samad	5.42	136	P	Pn	23 30 25.3	+2.5
SMDO				S	Sn	23 31 24.6	0.0
WSAR	Wadi Sarin	5.67	130	P	Pn	23 30 28.8	+2.6
MHTO	MHTO	7.03	148	P	Pn	23 30 46.7	+1.9
MHTO				S	Sn	23 32 03.8	-0.5

KRSC ***26*** *23:46:08.8±1.4, 56°.11N×164°.34E, h51^{km}±25^{km}, Ml3.9*

IDC ***26*** *23:46:10.7±1.9, 57°.30N×161°.95E, h0^{km}, mb3.6/3, mbtmp3.5/4, ML2.1/1, MS3.3/6, Error ellipse: s-maj=157.7km s-min=26.2km az=135.0*

ISC 26 23:46:10.1±1.8**, 56°.3N**±0°.1×**164°.48E**±0°.07**, h35^{km}, n31, σ1ˢ.30**/26**, mb3.6**/3**, MS3.3**/6**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.93	267	*e*P	Pn	23 46 23.6	-3.0
BKI	Bering	1.36	141	*e*P	Pn	23 46 31.9	-0.7
BKI				*e*S	Sn	23 46 49.1	-0.2
SMKR	Semkarok	1.70	282	*e*P	Pn	23 46 36.5	-0.8
ZLN	Zelenaya	2.07	265	*e*P	Pn	23 46 42.3	-0.2
CIRR	Tsirk	2.09	267	*e*P	Pn	23 46 43.1	+0.3
KLY	Klyuchi	2.13	273	*e*P	Pn	23 46 42.1	-1.1
BZGR	Bezymyannyi-Gr	2.14	263	*e*P	Pn	23 46 43.2	-0.2
KRSR	Krestovskiy	2.18	270	*e*P	Pn	23 46 44.3	+0.3
BZWR	Bezymyannyi-We	2.25	264	*e*P	Pn	23 46 44.4	-0.6
MKZ	Mys Kozlova	2.32	224	*e*P	Pn	23 46 45.1	-0.7
KIRR	Kirishev	2.34	264	*e*P	Pn	23 46 46.9	+0.7
KPT	Kopyto	2.40	265	*e*P	Pn	23 46 48.2	+1.2
KMNR	Kamenistaya	2.44	260	*e*P	Pn	23 46 47.9	+0.5
TUMD	Tumrok D	2.54	247	*e*P	Pn	23 46 49.4	+0.6
TUMD				*e*S	Sn	23 47 19.3	+0.7
KOZ	Kozyrevsk	2.58	267	*e*P	Pn	23 46 49.1	-0.3
SRDR	Sredinnyy	2.65	273	*e*P	Pn	23 46 50.8	+0.4
SPN	Mys Shipunski	4.09	221	*e*S	Sn	23 47 53.4	-3.3
SMAR	Somma	4.46	230	*e*P	Pn	23 47 16.3	+1.0
KOK	Koryaka	4.51	231	*e*P	Pn	23 47 14.5	-1.4
GNL	Ganaly	4.56	238	*e*P	Pn	23 47 18.1	+1.4
PETK	Petropavlovsk-	5.05	234	Pn	Pn	23 47 25.0	+1.7
	0.4nm,0.3s,baz=31,slow=14,SNR=6.0						
	2.4nm,0.8s						
MTVR	Mutnovka	5.28	227	*e*P	Pn	23 47 26.9	+0.3
ASAK	Asacha	5.47	227	*e*P	Pn	23 47 28.5	-0.6
KLR	Kul'dur	20.87	264	LR	LR	23 58 16.5	
	comp=Z,51nm,21.2s,baz=77,slow=37						
ILAR	Eielson Array	24.79	50	P	P	23 51 37.6	+9.3
	0.3nm,0.7s,baz=274,slow=9.7,SNR=4.0						
	0.3nm,0.7s						
MJAR	Matsushiro Arr	26.50	233	P	P	23 51 45.9	+1.8
	1.1nm,0.7s,baz=22,slow=11,SNR=6.1						
MJAR				LR	LR	00 04 03.3	
	comp=Z,31nm,18.6s,baz=116,slow=41						
	1.1nm,0.7s						
NEW	Newport	46.18	65	LR	LR	00 15 18.0	
	comp=Z,25nm,18.0s,baz=228,slow=37						
ARTI	Arti	52.86	318	LR	LR	00 19 25.1	
	comp=Z,52nm,19.0s,baz=106,slow=39						
SFJD	Kangerlussuaq	54.29	16	LR	LR	00 20 50.8	
	comp=Z,30nm,19.6s,baz=7.0,slow=39						
GNI	Garni	71.28	315	LR	LR	00 31 51.3	
	comp=Z,25nm,18.7s,baz=40,slow=39						
ASAR	Alice Springs	83.73	208	P	P	23 58 43.0	+7.8
	1.0nm,1.0s,baz=4.1,slow=6.9,SNR=4.1						
	1.0nm,1.0s						

NEIC ***27*** *00:03:16.8±0.6, 19°.23N±0°.03×155°.460W±0°.009, h19^{km}±1^{km}, Error ellipse: s-maj=4.2km s-min=1.2km az=185.0*

HVO 27 00:03:17.6±1.0**, 19°.22N**±0°.01×**155°.456W**±0°.009**, h11^{km}**±2^{km}**, ML3.0**/43**, ML3.0**/42(NEIC)**, Error ellipse: s-maj=1.8km s-min=1.0km az=149.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTC	Hot Caves	0.06	74		Pg	00 03 20.1	+0.3
AIN	Ainahou	0.15	359		Pg	00 03 21.6	+0.5
AIN				Sg	Sg	00 03 24.7	+1.0
AIN				IAML		00 03 24.9	
	comp=E,7µm,0.3s						
KHU	Kahuku	0.15	279		Pg	00 03 21.4	+0.2
KHU				Sg	Sg	00 03 24.4	+0.6
KHU				IAML		00 03 24.7	
	comp=E,3µm,0.6s						
HLP	Hilina Pali	0.16	62		Pg	00 03 21.7	+0.5
HLP				IAML		00 03 26.6	
	comp=N,3µm,0.3s						
HLP				IAML		00 03 27.5	
	comp=E,3µm,0.2s						
HPO	Honuapo	0.16	215		Pg	00 03 21.1	-0.1
SDHHI	Sand Hill	0.23	42		Pg	00 03 22.4	0.0
SDHHI					Sg	00 03 26.6	+1.0
WRMHI	West Rim	0.23	39		Pg	00 03 22.5	0.0
WRMHI					Sg	00 03 26.5	+0.6
RIM	Rim	0.24	45		Pg	00 03 22.6	0.0
KKO	Keanakako'i	0.25	46		Pg	00 03 22.8	0.0
KKO					Sg	00 03 26.9	+0.5
UWE	Uwekahuna	0.25	38		Pg	00 03 22.8	-0.1
UWE				Sg	Sg	00 03 26.9	+0.5
UWE				IAML		00 03 30.2	
	comp=E,4µm,0.3s						
OBL	Observatory Le	0.25	40		Pg	00 03 22.8	-0.1
OBL					Sg	00 03 27.1	+0.7
UWB	Uwekahuna Bluf	0.26	40		Pg	00 03 22.9	-0.2
UWB					Sg	00 03 27.5	+0.8
BYL	Byron's Ledge	0.26	44		Pg	00 03 22.9	-0.2
BYL				Sg	Sg	00 03 27.1	+0.4
BYL				IAML		00 03 27.9	
	comp=N,2µm,0.4s						
BYL				IAML		00 03 29.9	
	comp=E,2µm,0.2s						
HATHI	Halemaʻumaʻu T	0.27	43		Pg	00 03 23.1	-0.1
HATHI				Sg	Sg	00 03 27.5	+0.5
HATHI				IAML		00 03 27.9	
	comp=N,3µm,0.3s						
HATHI				IAML		00 03 28.0	
	comp=E,3µm,0.4s						
PUH	Pauahi	0.27	56		Pg	00 03 23.1	-0.1
PUH				Sg	Sg	00 03 27.2	+0.2
PUH				IAML		00 03 27.8	
	comp=N,3µm,0.3s						
MLH	Mauna Loa	0.28	14		Pg	00 03 23.5	+0.1
MLH				Sg	Sg	00 03 27.4	+0.1
MLH				IAML		00 03 31.9	
	comp=E,1µm,0.2s						
MLH				IAML		00 03 32.6	
	comp=N,2µm,0.4s						
RSD	Rainshed	0.29	35		Pg	00 03 22.5	-1.1
MWH	Mokuaweoweo	0.29	333	Pg	Pg	00 03 23.4	-0.4
MWH				IAML		00 03 34.0	
	comp=E,1µm,0.5s						
KNHH	Kane Nui o Ham	0.31	60		Pg	00 03 23.7	-0.2
STCH	Steam Cracks	0.35	62		Pg	00 03 24.3	-0.4
STCH					Sg	00 03 28.6	-0.8
STCH				IAML		00 03 29.8	
	comp=N,1µm,0.7s						
STCH				IAML		00 03 30.0	
	comp=E,1µm,0.3s						
NPOC	North of Puʻu	0.37	62		Pg	00 03 24.5	-0.4
NPOC					Sg	00 03 30.0	+0.2
JCUZ	Jacuzzi	0.37	64		Pg	00 03 24.6	-0.4
JCUZ					Sg	00 03 29.9	-0.1
HMH	Humuʻula Sheep	0.38	356		Pg	00 03 25.2	0.0
HMH					Sg	00 03 30.8	+0.4
HMH				IAML		00 03 31.3	
	comp=E,2µm,0.2s						
JOKA	Jonika Flow	0.47	64		Pg	00 03 26.1	-0.8
JOKA	Jonika Flow	0.47	64		Sg	00 03 33.6	+0.4
CPH	Captain Cook	0.51	301		Pg	00 03 26.9	-0.7
POHA	Pohakuloa	0.54	352		Pg	00 03 26.5	-1.6
POHA				IAML		00 03 39.9	
	comp=E,850nm,0.6s						
POHA	Pohakuloa	0.54	352		Sg	00 03 34.0	-1.3
HUH	Hualalai	0.58	322		Pg	00 03 28.4	-0.7

IDC ***27*** *00:06:29.3±1.3, 2°.98S×119°.45E, h0^{km}, mb3.5/4, mbtmp3.6/5, ML3.5/1, MS2.7/1, Error ellipse: s-maj=66.6km s-min=14.7km az=76.0*

DJA ***27*** *00:06:30.2±0.4, 3°S±2°×12°0E±°, h10^{km}, M3.8/8, MLv3.8/8*

ISC 27 00:06:30.5±0.9**, 2°.93S**±0°.05×**119°.6E**±0°.1**, h10^{km}, n13, σ0ˢ.80**/13**, mb3.6**/4**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTSI	Tana Toraja	0.29	113	P	Pg	00 06 36.5	+0.2
SPSI	Sidrap Palu	1.05	168	P	Pg	00 06 49.7	-1.0
SPSI				S	Sb	00 07 04.6	+0.1
BNSI	Bone	1.56	159	P	Pb	00 06 59.1	-0.4
PCI	Palu	2.04	8	P	Pn	00 07 05.5	+0.6
KAPI	Kappang	2.08	175	Pn	Pn	00 07 05.7	+0.3
	17nm,0.3s,baz=355,slow=12,SNR=81						
KAPI				Lg	Lg	00 07 33.7	
	47nm,0.3s,baz=36,slow=24,SNR=11						
	119nm,0.5s						
APSI	Ampana	2.90	46	P	Pn	00 07 16.2	-0.6
MPSI	Mapaga	3.27	6	P	Pn	00 07 21.3	-0.5
BSSI	Bau Bau, Buton	3.32	164	P	Pn	00 07 23.1	+0.5
DAV	Davao City (W)	11.62	31	LR	LR	00 13 41.3	
	comp=Z,35nm,18.9s,baz=192,slow=37						
WRA	Warramunga Arr	22.23	141	P	P	00 11 26.7	-0.9
	1.3nm,1.1s,baz=312,slow=13,SNR=3.3						
	1.3nm,1.1s						
ASAR	Alice Springs	24.85	147	P	P	00 11 55.1	+1.7
	0.7nm,0.8s,baz=328,slow=9.6,SNR=5.7						
	0.7nm,0.8s						
SONM	Songino Array	51.86	349	P	P	00 15 39.4	+0.2
	0.5nm,0.4s,baz=162,slow=6.1,SNR=2.8						
	0.5nm,0.4s						
MKAR	Makanchi Array	59.39	331	P	P	00 16 33.3	+0.1
	0.5nm,0.7s,baz=140,slow=7.6,SNR=3.8						
	0.5nm,0.7s						

CATAC ***27*** *00:08:56.4±0.4, 10°N±3°×8°6W±°, h21^{km}±3^{km}, M3.5/16, MLv3.5/16, Error ellipse: s-maj=7.9km s-min=3.1km az=44.4, confirmed*

UCR ***27*** *00:08:57.3±1.2, 10°.30N×85°.79W, h24^{km}±3^{km}, MW3.8*

ISC 27 00:08:57.6±1.1**, 10°.28N**±0°.03×**85°.79W**±0°.04**, h28^{km}**±7^{km}**, n77, σ0ˢ.80**/111**, 23C-9D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SACU	Santa Cruz	0.20	96	⇓*i*P	Pb	00 09 03.5	-0.1
SACU				*e*S	Sb	00 09 08.2	+0.4
ALIBA	Liberia Airpor	0.39	38	⇑*i*P	Pn	00 09 06.6	-0.8
ALIBA				*e*S	Sn	00 09 14.0	0.0
ELI1	Hacienda Flor	0.43	33	⇑*i*P	Pn	00 09 07.4	-0.5
ELI1				*e*S	Sn	00 09 15.3	+0.5
PLVR	Palo Verde	0.44	82	*e*P	Pb	00 09 06.6	-0.5
PLVR				*e*S	Sb	00 09 13.7	+0.2
CMARA	Lajas Hojancha	0.45	126	⇓*i*P	Pb	00 09 06.6	-0.5
CMARA				*e*S	Sn	00 09 14.3	-1.1
CMARA	Lajas Hojancha	0.45	126	P	Pb	00 09 06.8	-0.3
ERIA	Liberia	0.49	45	⇑*i*P	Pb	00 09 07.9	+0.1
ERIA				*e*S	Sn	00 09 15.9	-0.5
INDI	Punta indio, G	0.50	146	P	Pb	00 09 07.5	-0.5
INDI	Punta indio, G	0.50	146	S	Sb	00 09 15.3	+0.2
BAGA	Bagaces	0.57	65	⇑*i*P	Pb	00 09 08.9	-0.3
BAGA				*e*S	Sb	00 09 17.8	+0.7

LAPC	Finca la Perla	0.59	36	⇑iP	Pb	00 09 09.2	-0.4
LAPC				eS	Sb	00 09 17.7	0.0
GPS3	Bodega del ICE	0.63	42	⇓eP	Pn	00 09 11.5	+0.7
GPS3				eS	Sn	00 09 19.5	-0.4
GPS2	Hotel Rincn d	0.63	43	⇑iP	Pb	00 09 09.8	-0.4
GPS2				eS	Sb	00 09 19.1	+0.2
GPS1	Guardaparques	0.65	42	⇑iP	Pb	00 09 10.1	-0.4
GPS1				eS	Sb	00 09 19.4	0.0
VRLE	La Escondida,	0.65	40	⇑iP	Pb	00 09 10.1	-0.5
PG27	Guanacaste Pro	0.68	36	eP	Pb	00 09 10.6	-0.3
PG27				eS	Sb	00 09 20.1	+0.1
VORI	VORI	0.69	39	⇑iP	Pb	00 09 10.7	-0.5
VORI				eS	Sb	00 09 20.3	-0.2
COLC	Colonia	0.69	57	eP	Pb	00 09 10.6	-0.6
COLC				eS	Sb	00 09 20.4	0.0
CUI	Cuipilapa	0.72	59	⇑iP	Pb	00 09 11.2	-0.5
CUI				eS	Sb	00 09 21.2	0.0
HORNC	Hornillas	0.74	55	⇑iP	Pb	00 09 11.3	-0.6
HORNC				eS	Sb	00 09 21.4	-0.4
INVE	Universidad In	0.74	75	⇑eP	Pb	00 09 11.5	-0.5
INVE				eS	Sb	00 09 22.0	+0.2
MESS	Mesas	0.74	52	⇑iP	Pb	00 09 11.4	-0.6
MESS				eS	Sb	00 09 21.9	0.0
BUAI	Buenos Aires	0.74	37	⇑eP	Pb	00 09 11.6	-0.4
PEJA	Penjamo Buenos	0.77	38	⇑eP	Pb	00 09 12.3	-0.2
JCR1	Jicaral	0.80	123	⇓eP	Pb	00 09 11.7	-1.2
LCRUZ	La Cruz	0.81	11	⇑iP	Pn	00 09 13.2	+0.1
LCRUZ				eS	Sn	00 09 25.3	+1.1
MOTZ	Rio Naranjo	0.81	60	⇑iP	Pb	00 09 12.8	-0.4
MOTZ				eS	Sn	00 09 24.5	+0.1
TIMP	Tierras Morena	0.81	69	⇑iP	Pb	00 09 12.4	-0.8
TIMP				eS	Sb	00 09 23.6	-0.3
JTS	Las Juntas de	0.82	89	⇓eP	Pb	00 09 12.4	-1.0
JTS				eS	Sb	00 09 23.6	-0.6
TILA	Tilaran	0.83	77	⇓eP	Pb	00 09 12.9	-0.6
TILA				eS	Sb	00 09 24.2	0.0
CHIK	Chiripa	0.88	80	eP	Pb	00 09 13.8	-0.6
CHIK				eS	Sn	00 09 26.2	0.0
TENO	El Achiote	0.90	62	⇑eP	Pb	00 09 13.0	-1.7
TENO				eS	Sb	00 09 24.4	-2.0
CARN	Rivas	0.94	16	eP	Pb	00 09 14.6	-0.6
CARN				eS	Sn	00 09 28.9	+1.5
CARN	Rivas	0.94	16	P	Pb	00 09 14.5	-0.7
CARN				S	Sn	00 09 28.9	+1.5
QUEB	Quebradon, Cot	0.94	69	⇑eP	Pb	00 09 14.7	-0.7
QUEB				eS	Sn	00 09 27.7	+0.1
MTEVE	Monteverde	0.95	88	eP	Pb	00 09 14.6	-0.9
CBL1	Cabuya	0.97	135	eP	Pb	00 09 14.4	-1.5
UPAL	Upala	0.98	51	⇑iP	Pb	00 09 15.1	-0.9
TABAC	Tabacon	1.03	78	⇑eP	Pb	00 09 16.4	-0.5
CASO	Castillo	1.05	82	eP	Pb	00 09 16.7	-0.5
CASO				eS	Sb	00 09 30.5	-0.1
VARE2	V. Arenal	1.07	80	⇓eP	Pb	00 09 17.1	-0.4
CEDE	Laguna Cedeo	1.09	79	⇑eP	Pb	00 09 17.5	-0.4
CEDE				eS	Sn	00 09 32.4	+1.1
VACR	Volcan Arenal	1.11	80	⇓eP	Pb	00 09 18.0	-0.2
FORC	Fortuna	1.12	81	eP	Pb	00 09 17.7	-0.6
SOCE	Pocosol	1.16	85	eP	Pn	00 09 18.2	+0.3
SOCE	Pocosol	1.16	85	P	Pb	00 09 18.4	-0.6
SOCE	Pocosol	1.16	85	S	Sn	00 09 33.6	+0.6
ARIN	Rivas	1.16	358	S	Sb	00 09 34.2	+0.4
ARIN	Rivas	1.16	358	P	Pn	00 09 17.9	-0.1
MORN	Al O del Volca	1.26	6	P	Pb	00 09 20.0	-0.9
MORN				S	Sn	00 09 36.0	+0.4
LCHIL	Los Chiles	1.29	55	eP	Pb	00 09 20.9	-0.4
COVE	Coope Vega, Sa	1.43	72	S	Sn	00 09 40.6	+0.9
COVE	Coope Vega, Sa	1.43	72	P	Pb	00 09 22.7	-0.9
NADN	Granada	1.48	351	P	Pn	00 09 22.8	+0.5
NADN				S	Sn	00 09 41.2	+0.5
PAR1A	Puntarenas Pro	1.66	114	eP	Pn	00 09 24.0	-0.9
HDC	Heredia	1.67	100	P	Pn	00 09 24.9	-0.3
HDC				S	Sn	00 09 46.6	+0.8
NANN	Nandasmo	1.68	349	S	Sb	00 09 47.7	-0.9
NANN	Nandasmo	1.68	349	P	Pn	00 09 24.3	-0.8
PICV	PH. Pirrs	1.70	112	eP	Pb	00 09 31.8	+3.5
ACON	Acoyapa	1.78	20	⇓eP	Pn	00 09 26.2	-0.3
ACON	Acoyapa	1.78	20	P	Pn	00 09 26.7	+0.2
ACON	Acoyapa	1.78	20	S	Sn	00 09 49.6	+1.4
ABE2	San Pablo	1.80	108	eP	Pn	00 09 27.6	+0.6
LCR2	La Lucha 2	1.84	107	eP	Pn	00 09 28.3	+0.8
LCR2	La Lucha 2	1.84	107	P	Pn	00 09 26.9	-0.6
LCR2	La Lucha 2	1.84	107	S	Sn	00 09 50.6	+0.6
UNAN	Cigeo UNAN	1.88	345	P	Pn	00 09 27.7	-0.2
UNAN				S	Sn	00 09 51.6	+0.9
PIEC	Cerro El Cedra	1.92	110	eP	Pn	00 09 29.1	+0.3
SAPS	Ciudad Sandino	1.97	342	P	Pn	00 09 29.0	-0.1
SAPS	Ciudad Sandino	1.97	342	S	Sn	00 09 53.6	+0.7
TRT2	Tortugero	2.04	82	P	Pn	00 09 30.0	-0.1
TRT2	Tortugero	2.04	82	S	Sn	00 09 56.5	+1.9
TRT1	Tortuguero	2.08	81	eP	Pb	00 09 33.3	-1.4
BOAB	BOACO BROADBAN	2.15	3	S	Sn	00 09 59.8	+2.2
BOAB	BOACO BROADBAN	2.15	3	P	Pn	00 09 31.4	-0.3
POLN	Al Sur del Vol	2.56	337	P	Pn	00 09 36.7	-0.6
DRK0	Durika	2.71	112	P	Pn	00 09 39.3	-0.1

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*IDC **27** 00:24:53.1±0.8, 2.°09S×82.°34E, h0km, mb3.8/9, mbtmp3.9/10, ML4.5/1, MS3.3/13, Error ellipse: s-maj=36.4km s-min=19.3km az=63.0*

*NEIC **27** 00:24:55.2±1.5, 2.°01S±0.°07×82.°31E±0.°07, h10km±1km, mb4.5/11, Error ellipse: s-maj=16.1km s-min=5.2km az=132.0*

ISC 27 00:24:54.6±0.6, **2.°0S**±0.°1×**82.°3E**±0.°1, **h10km, n51,** σ**0.s74**/32, **mb4.2**/13, **MS3.4**/12, **South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	9.38	350		Pn	00 27 08.8	-1.1
PALK	Pallekele	9.38	350	Pn	Pn	00 27 09.0	-1.0
	4.5nm,0.3s,baz=174,slow=13,SNR=21						
PALK				Sn	Sn	00 28 43.4	-12
	22nm,0.3s,baz=125,slow=16,SNR=13						
PALK				LR	LR	00 30 28.0	
	comp=Z,133nm,19.6s,baz=133,slow=36						
	8.8nm,0.3s						
KAAM	Kaadhehdhoo	9.68	285		Pn	00 27 13.1	-0.9
H08S2	Diego Garcia H	11.29	240	T	T	00 39 30.5	
	baz=66,slow=74						
H08S3	Diego Garcia H	11.29	240	T	T	00 39 37.1	
	baz=66,slow=74						
H08S1	Diego Carcia H	11.31	240	T	T	00 39 34.6	
	baz=66,slow=74						
HMDM	Hanimaadhoo	12.65	314	Pn	Pn	00 27 54.7	0.0
GSI	Gunungsitoli	15.58	78	Pn	Pn	00 28 34.7	+0.1
GSI				IAmb	IAmb	00 28 57.7	
	comp=Z,27nm,1.0s						
CMAR	Chiang Mai Arr	26.10	38	LR	LR	00 40 03.4	
	comp=Z,28nm,20.6s,baz=245,slow=35						
DAV	Davao City (W)	44.08	78	LR	LR	00 53 05.1	
	comp=Z,20nm,18.3s,baz=184,slow=38						
H01W3	Cape Leeuwin H	44.09	142	T	T	01 19 28.6	
	baz=312,slow=75,SNR=8.0						
H01W2	Cape Leeuwin H	44.09	142	T	T	01 19 39.5	
	baz=312,slow=75,SNR=5.9						
H01W1	Cape Leeuwin H	44.10	141	T	T	01 19 17.3	
	baz=312,slow=75,SNR=7.9						
AAK	Ala-Archa	45.02	352	LR	LR	00 52 31.7	
	comp=Z,44nm,18.6s,baz=196,slow=37						
FITZ	Fitzroy Crossi	45.36	114	P	P	00 33 12.9	-0.6
FITZ				IAmb	IAmb	00 33 55.2	
	comp=Z,3.5nm,1.5s						
KKAR	Karatay Array	46.17	348	P	P	00 33 19.3	-0.2
KNRA	Kununurra	47.70	109	P	P	00 33 32.4	+0.5
MKAR	Makanchi Array	48.61	360	P	P	00 33 37.6	-0.8
MKAR	Makanchi Array	48.61	360	P	P	00 33 40.0	+1.5
	comp=Z,0.3nm,0.7s,baz=186,slow=9.3,SNR=1.8						
MKAR				LR	LR	00 54 59.2	
	comp=Z,32nm,21.9s,baz=188,slow=37						
	comp=Z,0.3nm,0.7s						
H04N2	CROZET ISLANDS	51.44	207	T	T	01 29 16.8	
	baz=41						
H04N1	CROZET ISLANDS	51.44	207	T	T	01 29 21.1	
	baz=41						
H04N3	CROZET ISLANDS	51.45	207	T	T	01 29 06.0	
	baz=41						
KURBB	Kurchatov Arra	52.54	357	P	P	00 34 09.4	+1.3
	comp=Z,0.1nm,0.4s,baz=187,slow=6.5,SNR=1.9						
	comp=Z,0.1nm,0.4s						
KURK	Kurchatov	52.63	357	P	P	00 34 08.5	-0.2
KURK				IAmb	IAmb	00 34 24.4	
	comp=Z,2.8nm,0.9s						
WRA	Warramunga Arr	53.79	113	P	P	00 34 18.3	+0.5
WRA	Warramunga Arr	53.79	113	P	P	00 34 18.0	+0.1
	comp=Z,2.2nm,0.8s,baz=275,slow=8.0,SNR=10						
	comp=Z,2.2nm,0.8s						
WB0	Warramunga Arr	53.80	113	P	P	00 34 18.2	+0.3
WB0				IAmb	IAmb	00 34 57.5	
	comp=Z,11nm,1.4s						
ASAR	Alice Springs	54.29	118	P	P	00 34 21.6	0.0
	comp=Z,1.1nm,0.6s,baz=299,slow=7.6,SNR=8.5						
ASAR				PcP	PcP	00 35 25.1	-0.6
	comp=Z,0.7nm,0.5s,baz=309,slow=4.5,SNR=2.8						
	comp=Z,1.1nm,0.6s						
ABKAR	Akbulak array	54.63	342	P	P	00 34 23.9	+0.5
ASF	Jabal al Asfar	54.83	312	LR	LR	00 57 16.5	
	comp=Z,56nm,18.9s,baz=233,slow=35						
EIL	Elat	55.14	309	LR	LR	00 56 26.5	
	comp=Z,50nm,18.3s,baz=63,slow=34						
BVAR	Borovoye Array	55.76	351	LR	LR	00 58 41.5	
	comp=Z,33nm,20.5s,baz=159,slow=36						
ZALV	Zalesovo Beam	55.81	2	LR	LR	01 00 22.3	
	comp=Z,24nm,18.7s,baz=178,slow=38						
MMAI	Mount Meron Ar	56.34	312	LR	LR	00 57 25.5	
	comp=Z,52nm,20.8s,baz=140,slow=35						
ARTI	Arti	61.39	345	LR	LR	01 03 00.5	
	comp=Z,35nm,18.6s,baz=103,slow=37						
BELG	Belogornoye	61.59	337	LR	LR	01 06 43.9	
	comp=Z,21nm,18.2s,baz=123,slow=41						
STKA	Stephens Creek	63.05	125	P	P	00 35 21.8	-0.6
	comp=Z,1.2nm,0.4s,baz=312,slow=16,SNR=3.0						
	comp=Z,1.2nm,0.4s						
AKASG	Malin Array Be	69.25	327	P	P	00 36 01.9	+0.2
	comp=Z,0.1nm,0.3s,baz=109,slow=5.0,SNR=5.1						
	comp=Z,0.1nm,0.3s						
BURAR	Bucovina Array	70.05	323	P	P	00 36 07.6	+0.7
BUR08	Bucovina Ar. S	70.07	323	P	P	00 36 07.3	+0.2
BUR08				IAmb	IAmb	00 36 16.7	
	comp=Z,5.9nm,1.4s						
SUW	Suwalki	74.09	328	P	P	00 36 32.2	+1.3
FIA1	FINESS Array S	76.35	336	P	P	00 36 44.0	+0.2
FINES	FINESS Array B	76.35	336	P	P	00 36 45.5	+1.8
FINES	FINESS Array B	76.35	336	LR	LR	01 12 34.5	
	comp=Z,27nm,21.5s,baz=93,slow=37						
VNDA	Vanda	85.77	168	P	P	00 37 33.7	0.0
	comp=Z,0.3nm,0.6s,baz=287,slow=1.9,SNR=1.6						
	comp=Z,0.3nm,0.6s						
SNAA	Sanae	86.57	198	P	P	00 37 38.2	+0.4
SNAA				IAmb	IAmb	00 38 01.5	
	comp=Z,7.0nm,1.5s						
SNAA	Sanae	86.57	198	P	P	00 37 38.2	+0.4
	comp=Z,1.2nm,0.9s,baz=95,slow=6.2,SNR=3.9						
	comp=Z,1.2nm,0.9s						
QSPA	South Pole Qui	87.96	180	P	P	00 37 44.3	-0.5
QSPA				IAmb	IAmb	00 37 45.9	
	comp=Z,6.1nm,1.3s						
QSPA	South Pole Qui	87.96	180	P	P	00 37 44.2	-0.5
	comp=Z,2.5nm,1.1s,baz=324,slow=2.0,SNR=4.1						
	comp=Z,2.5nm,1.1s						
LPAZ	La Paz	145.63	237	PKPbc	PKPdf	00 44 35.0	-0.1
	comp=Z,0.9nm,0.8s,baz=101,slow=5.2,SNR=3.9						
TXAR	Lajitas Array	152.24	11	PKPbc	PKPbc	00 44 51.2	-0.3
	comp=Z,0.6nm,0.6s,baz=12,slow=2.3,SNR=7.6						

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*UCR **27** 00:53:12.1±0.7, 8.°34N×82.°85W, h28km±1km, MW3.6*

*UPA **27** 00:53:12.5±0.9, 8.°39N×82.°83W, h29km±9km, MW3.5, Fault plane solution: NP1:φs108.00000°, δ58.00000°, λ57.00000°.*

*CATAC **27** 00:53:14.1±0.7, 8°N±4°×8°3W±°, h8km±3km, M3.5/8, MLv3.5/8, Error ellipse: s-maj=9.6km s-min=7.5km az=12.8, confirmed*

ISC 27 00:53:12.4±0.9, **8.°38N**±0.°03×**82.°84W**±0.°02, **h32km**±6km, **n107,** σ**1.s17**/142, **10C-17D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPPC	Paso Canoas	0.15	0	eP	Pb	00 53 17.9	-0.5
LPPC				eS	Sn	00 53 22.2	-0.1
CDITO	Canoas	0.20	351	P	Pb	00 53 16.7	-2.1
CDITO	Canoas	0.20	351	S	Sn	00 53 23.5	+0.1
SCZRO	Santa Cruz, Re	0.28	17	⇓iP	Pn	00 53 20.9	+0.5
SCZRO				eS	Sn	00 53 27.5	+2.0
LMNES	Limones	0.28	184	eP	Pb	00 53 19.5	-0.3
LMNES	Limones	0.28	184	⇑iP	Pb	00 53 19.5	-0.3
LMNES				eS	Sn	00 53 25.9	+0.5
LMNES	Limones	0.28	184	⇑iP	Pb	00 53 19.5	-0.3
NELY	Ciudad Neily	0.29	339	eP	Pb	00 53 19.4	-0.5
NELY				eS	Sb	00 53 25.2	+0.3
NELY	Ciudad Neily	0.29	339	⇑iP	Pb	00 53 19.4	-0.5
NELY				eS	Sb	00 53 24.8	-0.2
DVD	David	0.39	82	eP	Pb	00 53 20.8	-0.4
DVD				eS	Sb	00 53 27.7	+0.4
CSTBL	De las Acacias	0.40	85	eP	Pb	00 53 21.0	-0.3
CSTBL	De las Acacias	0.40	85	⇓iP	Pb	00 53 21.1	-0.3
CSTBL				eS	Sb	00 53 26.8	-0.6
CSTBL	De las Acacias	0.40	85	⇓iP	Pb	00 53 21.1	-0.3
CSTBL				eS	Sb	00 53 26.8	-0.6
MLIR3	Monte Lirio, C	0.41	2	eP	Pb	00 53 20.9	-0.8
MLIR3				eS	Sb	00 53 27.4	-0.6
PEDE3	Pedregal, Chir	0.41	89	eP	Pb	00 53 21.1	-0.4
PEDE3				eS	Sb	00 53 27.5	-0.4
LOCO3	Loma Colorada,	0.42	86	eP	Pb	00 53 21.4	-0.3
LOCO3				eS	Sb	00 53 27.8	-0.3
EDAD	Golfito	0.42	310	eP	Pb	00 53 20.6	-1.1
EDAD				eS	Sb	00 53 27.1	-1.0
EDAD	Golfito	0.42	310	⇑eP	Pb	00 53 20.6	-1.1
EDAD				eS	Sb	00 53 27.2	-1.0
CLLRA	Cordillera,	0.43	32	eP	Pb	00 53 21.8	-0.1
CLLRA	Cordillera,	0.43	32	⇓iP	Pb	00 53 21.8	-0.1
CLLRA				eS	Sb	00 53 28.5	+0.1
CLLRA	Cordillera,	0.43	32	⇓iP	Pb	00 53 21.8	-0.1
RSRNO	Rio Sereno	0.44	357	eS	Sn	00 53 29.2	-0.3
BRU2	Volcan	0.44	20	eP	Pb	00 53 21.9	-0.1
BRU2				eS	Sn	00 53 29.5	-0.1
BRU2	Volcan	0.44	20	⇓iP	Pb	00 53 21.9	-0.1
BRU2				eS	Sn	00 53 29.3	-0.2
BRU2	Volcan	0.44	20	P	Pn	00 53 22.5	-0.1
BRU2	Volcan	0.44	20	eP	Pb	00 53 21.9	-0.1
BRU2				⇓iP	Pb	00 53 22.0	-0.1
BRU2				eS	Sn	00 53 29.6	-0.1
TBS2		0.45	24	⇓eP	Pn	00 53 23.0	+0.2
SCLRA	Santa Clara, W	0.46	7	eP	Pb	00 53 22.5	+0.2
SCLRA	Santa Clara, W	0.46	7	eP	Pb	00 53 22.3	-0.1
SCLRA				eS	Sn	00 53 30.9	+0.9
SCLRA	Santa Clara, W	0.46	7	⇓iP	Pb	00 53 22.5	+0.2
SCLRA				eS	Sn	00 53 30.9	+0.9
VITO	San Vito	0.46	344	eP	Pb	00 53 22.4	+0.1
VITO				eS	Sn	00 53 30.5	+0.6
VITO	San Vito	0.46	344	⇑iP	Pb	00 53 22.4	+0.1
VITO				eS	Sn	00 53 31.1	+1.1
PTAR3	Potrerillos Ar	0.46	47	eP	Pb	00 53 22.2	-0.2
PTAR3				eS	Sb	00 53 29.7	+0.4
BC3P	Paso Ancho	0.49	28	eP	Pb	00 53 22.5	-0.4
BC3P				eS	Sn	00 53 31.2	+0.3
BQTLY	Boquete Panama	0.53	45	eP	Pb	00 53 23.2	-0.3
BQTLY	Boquete Panama	0.53	45	⇓iP	Pb	00 53 23.2	-0.3
BQTLY				eS	Sb	00 53 30.9	-0.3
BQTLY	Boquete Panama	0.53	45	i P	Pb	00 53 23.2	-0.3
BQTLY				eS	Sb	00 53 31.2	+0.1
ALCO	Alturas Coton,	0.57	1	eP	Pb	00 53 23.6	-0.5
ALCO				eS	Sb	00 53 32.2	0.0
ALCO	Alturas Coton,	0.57	1	⇑eP	Pb	00 53 23.6	-0.5
ALCO				eS	Sn	00 53 32.9	+0.1
PSOM3	Paja de Sombre	0.60	59	eP	Pb	00 53 23.8	-0.7
PSOM3				eS	Sn	00 53 33.7	+0.4
EDP2	Potrero Grande	0.71	332	eP	Pn	00 53 26.1	-0.1
EDP2	Potrero Grande	0.71	332	⇑iP	Pn	00 53 26.2	-0.1
EDP2				eS	Sn	00 53 37.2	+1.0
PBNVO	Pueblo Nuevo,	0.82	52	eP	Pn	00 53 27.1	-0.6
PBNVO	Pueblo Nuevo,	0.82	52	⇓eP	Pn	00 53 27.1	-0.6
PANP	Palmar Norte	0.84	313	eP	Pn	00 53 27.5	-0.5
PANP	Palmar Norte	0.84	313	eP	Pn	00 53 27.2	-0.8
PANP				eS	Sn	00 53 39.4	+0.1
RBALA	Bur	0.84	54	⇓eP	Pn	00 53 27.7	-0.3
RBALA				eS	Sn	00 53 39.0	-0.3
RBALA	Bur	0.84	54	⇓iP	Pn	00 53 27.8	-0.3
BURE	Buenos Aires	0.93	328	eP	Pn	00 53 29.2	-0.1
BURE	Buenos Aires	0.93	328	eP	Pn	00 53 29.2	-0.1
DRK0	Durika	0.96	336	eP	Pn	00 53 29.6	-0.3
DRK0	Durika	0.96	336	⇑eP	Pn	00 53 29.7	-0.2
DRK0	Durika	0.96	336	P	Pn	00 53 29.8	-0.2
DRK0	Durika	0.96	336	S	Sn	00 53 41.4	-1.2
DRK0	Durika	0.96	336	eP	Pn	00 53 29.7	-0.2
DRK0				eS	Sb	00 53 43.1	-0.2
RMDIO	Remedios, Chir	1.01	99	eP	Pb	00 53 31.6	+0.2
EDPE	Pejibaye, P	1.06	317	eP	Pn	00 53 31.1	0.0
EDPE	Pejibaye, P	1.06	317	⇑iP	Pn	00 53 31.0	-0.1
EDPE				eS	Sn	00 53 44.9	+0.1
OCHAL	Ojochal	1.07	312	P	Pn	00 53 31.2	+0.1
OCHAL	Ojochal	1.07	312	S	Sb	00 53 45.8	-0.2
KKNTU	Kakintº	1.12	66	eP	Pn	00 53 31.4	-0.5
KKNTU	Kakintº	1.12	66	⇓iP	Pn	00 53 31.4	-0.5
KKNTU				eS	Sn	00 53 46.3	+0.1
PDCAN	Manzana , Fuen	1.14	94	eP	Pn	00 53 31.8	-0.3
PDCAN	Manzana , Fuen	1.14	94	eP	Pn	00 53 31.8	-0.3
PDCAN	Manzana , Fuen	1.14	94	⇓iP	Pn	00 53 32.0	-0.1
SAJE	San Jernim	1.17	326	eP	Pn	00 53 32.6	0.0
BRIBI	Bribri	1.23	1	eP	Pb	00 53 35.5	+0.3
BRIBI	Bribri	1.23	1	eP	Pb	00 53 35.4	+0.3
VERH	Veragua Rainfo	1.58	347	eP	Pn	00 53 39.4	+1.2
PIEC	Cerro El Cedra	1.66	318	eP	Pn	00 53 40.2	+0.7
PIEC	Cerro El Cedra	1.66	318	eP	Pn	00 53 40.4	+0.8
GMAL	Guarumal, Vera	1.71	111	eP	Pn	00 53 39.1	-0.8
REPA	Paraso	1.76	325	eP	Pb	00 53 44.2	0.0
LCR2	La Lucha 2	1.78	320	eP	Pn	00 53 41.8	+0.7
LCR2	La Lucha 2	1.78	320	eP	Pn	00 53 41.6	+0.5
LCR2	La Lucha 2	1.78	320	P	Pb	00 53 43.2	-1.3
LCR2	La Lucha 2	1.78	320	S	Sb	00 54 05.0	-1.5
ABE2	San Pablo	1.78	318	eP	Pb	00 53 44.5	-0.1
VTCV	VTCV, Calle Va	1.82	331	eP	Pn	00 53 43.3	+1.6
RESJ	San Isidro (Tu	1.82	334	eP	Pn	00 53 43.3	+1.7
PICV	PH. Pirrs	1.82	313	eP	Pb	00 53 45.2	0.0
ABRB	Las Abras (San	1.83	332	eP	Pn	00 53 43.6	+1.7
RAFA	San Farael, Vo	1.84	329	eP	Pn	00 53 43.0	+1.0
PAR1A	Puntarenas Pro	1.85	311	eP	Pb	00 53 44.1	-1.4
CVTV	Tajo	1.85	331	⇓iP	Pb	00 53 44.2	-1.5
CVTQ	Turrialba Volc	1.86	331	eP	Pb	00 53 44.2	-1.7
VTR0	Volcan Turrial	1.86	331	eP	Pn	00 53 44.2	+1.7
RVLA	Villa Bonita	1.87	337	eP	Pn	00 53 43.8	+1.6
TRT2	Tortugero	2.34	338	S	Sb	00 54 19.5	-2.9
TRT2	Tortugero	2.34	338	P	Pn	00 53 51.0	+2.4
SOCE	Pocosol	2.65	319	eP	Pn	00 53 55.5	+2.5
SOCE	Pocosol	2.65	319	P	Pb	00 53 57.0	-2.3
SOCE	Pocosol	2.65	319	S	Sn	00 54 27.6	+3.4
FORC	Fortuna	2.75	319	eP	Pb	00 53 58.7	-2.2
VACR	Volcan Arenal	2.76	319	eP	Pb	00 53 59.3	-1.8
CASO	Castillo	2.77	318	eP	Pb	00 53 58.3	-2.9
ARE1	Arenal 1	2.78	318	⇑eP	Pb	00 53 58.3	-3.1
VARE2	V. Arenal	2.78	318	eP	Pb	00 53 58.5	-2.9
JTS	Las Juntas de	2.82	313	eP	Pn	00 53 56.9	+1.6
JTS	Las Juntas de	2.82	313	eP	Pn	00 53 56.0	+0.8
QUEB	Quebradon, Cot	3.01	318	eP	Pb	00 54 01.8	-3.6
INDI	Punta indio, G	3.02	300	P	Pn	00 54 00.2	+2.3
INDI	Punta indio, G	3.02	300	S	Sn	00 54 35.0	+2.0
CMARA	Lajas Hojancha	3.03	303	P	Pn	00 54 00.5	+2.3
CMARA	Lajas Hojancha	3.03	303	S	Sn	00 54 35.9	+2.5
CUI	Cuipilapa	3.22	315	⇓iP	Pn	00 54 04.9	+4.0
LAPC	Finca la Perla	3.49	313	eP	Pn	00 54 06.7	+2.2

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*NEIC **27** 01:04:45.9±0.8, 33.°1S±0.°1×177.°7W±0.°2, h10km±1km, mb4.3/10, Error ellipse: s-maj=29.3km s-min=19.5km az=112.0*

*IDC **27** 01:04:48.3±1.9, 32.°73S×178.°42W, h0km, mb4.1/2, mbtmp4.0/3, ML3.8/1, MS3.7/1, Error ellipse: s-maj=61.9km s-min=37.3km az=139.0*

ISC 27 01:04:49.3±0.9, **33.°1S**±0.°1×**177.°8W**±0.°2, **h34km, n25,** σ**1.s31**/25, **mb4.3**/8, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	5.48	214	Pn	Pn	01 06 07.6	-0.9
URZ	Urewera	6.61	217	Pn	Pn	01 06 25.9	+1.8
	2.0nm,0.3s,baz=260,slow=4.3,SNR=16						
URZ				Sn	Sn	01 07 39.7	+1.5
	2.5nm,0.3s,baz=250,slow=20,SNR=5.6						
	4.2nm,0.3s						
RTZ	Ruatahuna	6.95	216		Pn	01 06 26.8	-2.0
BFZ	Birch Farm	8.95	210	Pn	Pn	01 06 55.4	-0.8
MRZ	Mangatainoka R	9.23	213	Pn	Pn	01 07 00.7	+0.7
THZ	Tophouse	11.38	218	Pn	Pn	01 07 30.6	+1.3
STKA	Stephens Creek	34.12	261	LR	LR	01 24 46.9	
	comp=Z,106nm,18.3s,baz=192,slow=36						
ASAR	Alice Springs	43.19	270	P	P	01 12 47.1	-0.1
	0.6nm,0.3s,baz=107,slow=8.2,SNR=5.6						
	0.6nm,0.3s						
WR8	Warramunga Arr	44.28	275	P	P	01 12 55.8	-0.1
WR8				IAmb	IAmb	01 13 03.1	
	comp=Z,7.2nm,1.2s						
WRA	Warramunga Arr	44.42	275	P	P	01 12 56.7	-0.3
WRA	Warramunga Arr	44.42	275	P	P	01 12 56.5	-0.5
	comp=Z,2.4nm,0.5s,baz=115,slow=7.9,SNR=28						
	comp=Z,2.4nm,0.5s						
WB0	Warramunga Arr	44.46	275	P	P	01 12 57.0	-0.3
WB0				IAmb	IAmb	01 13 08.9	
	comp=Z,6.7nm,1.1s						
VNDA	Vanda	45.45	186	P	P	01 13 03.9	-0.5
VNDA				IAmb	IAmb	01 13 21.7	
	comp=Z,0.5nm,0.8s						
KNRA	Kununurra	51.12	276	P	P	01 13 48.8	-0.1
KNRA				IAmb	IAmb	01 14 07.2	
	comp=Z,14nm,1.4s						
FITZ	Fitzroy Crossi	52.56	272	P	P	01 13 59.4	-0.3
FITZ				IAmb	IAmb	01 14 19.4	
	comp=Z,3.7nm,1.4s						
PSA00	Pilbara Seismi	55.85	265	P	P	01 14 21.7	-2.0
QSPA	South Pole Qui	57.03	180	P	P	01 14 31.1	-0.5
QSPA				IAmb	IAmb	01 14 34.5	
	comp=Z,4.7nm,1.4s						
SNAA	Sanae	75.48	178	P	P	01 16 29.6	0.0
AIS	Amsterdam Isla	80.58	231	P	P	01 16 57.7	-0.7
MKAR	Makanchi Array	119.60	309	PKPdf	PKiKP	01 23 35.0	-0.3
FINES	FINESS Array B	147.71	339	PKPab	PKiKP	01 24 31.3	-0.2
FINES	FINESS Array B	147.71	339	PKPbc	PKPab	01 24 31.9	0.0
	comp=Z,2.6nm,0.7s,baz=27,slow=3.7,SNR=10						
NC303	NORSAR Array S	151.22	351	PKPbc	PKiKP	01 24 39.4	+0.6
HFS	Hagfors	151.90	348	PKPbc	PKiKP	01 24 42.8	+2.6
	comp=Z,0.5nm,0.4s,baz=123,slow=5.3,SNR=5.7						
MMAI	Mount Meron Ar	152.22	279	PKPbc	PKiKP	01 24 45.4	+3.5
	comp=Z,0.4nm,0.3s,baz=63,slow=6.6,SNR=2.6						

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*IDC **27** 01:09:01.8±0.8, 29.°91N×142.°83E, h0km, mb3.9/14, mbtmp3.9/17, ML3.1/2, MS2.5/3, Error ellipse: s-maj=30.1km s-min=16.0km az=78.0*

*NEIC **27** 01:09:03.2±1.0, 29.°89N±0.°05×142.°7E±0.°1, h10km±1km, mb4.5/23, Error ellipse: s-maj=21.8km s-min=8.5km az=85.0*

ISC 27 01:09:06.7±0.6, **29.°90N**±0.°06×**142.°7E**±0.°1, **h35km, n53,** σ**1.s20**/55, **mb4.2**/27, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	2.82	189		Pn	01 09 47.8	-1.5
JCJ				Sn	Sn	01 10 21.9	-0.2
JCJ	Chichijima	2.82	189	Pn	Pn	01 09 47.1	-2.2
	39nm,0.4s						
JCJ				Sn	Sn	01 10 20.3	-1.8
JHJ2	Mitsune	4.02	324	Pn	Pn	01 10 04.6	-1.2
MJAR	Matsushiro Arr	7.60	332	Pn	Pn	01 10 53.9	-1.1
MJAR	Matsushiro Arr	7.60	332	Pn	Pn	01 10 54.6	-0.4
	0.3nm,0.3s,baz=149,slow=11,SNR=10						
MJAR				Sn	Sn	01 12 17.0	-2.9
	0.2nm,0.3s,baz=152,slow=17,SNR=6.2						
MJAR				LR	LR	01 13 27.8	
	comp=Z,24nm,21.2s,baz=146,slow=35						
	2.7nm,0.6s						
MAJO	Matsushiro	7.60	332		Pn	01 10 54.0	-1.0
MJB9	Matsu-Tunnel	7.61	332		Pn	01 10 54.1	-1.0
JMM	Marumori	8.10	349		Pn	01 10 59.3	-2.4
ASAJ	Asahikawa	14.19	360	LR	LR	01 18 47.3	
	comp=Z,23nm,21.6s,baz=164,slow=41						
KSRS	Korea Array	14.39	305	Pn	Pn	01 12 30.2	+2.5
	0.1nm,0.3s,baz=115,slow=13,SNR=5.3						
	0.7nm,0.3s						
SSLB	Suanglung	20.28	258		P	01 13 39.3	-0.2
PETK	Petropavlovsk-	25.68	21	P	P	01 14 32.4	-0.8
SONM	Songino Array	33.05	313	P	P	01 15 38.3	-0.6
SONM	Songino Array	33.05	313	P	P	01 15 38.1	-0.8
	1.1nm,0.7s,baz=113,slow=8.4,SNR=6.5						
	1.1nm,0.7s						
CMAR	Chiang Mai Arr	41.25	264	LR	LR	01 33 57.7	
	comp=Z,12nm,20.0s,baz=175,slow=36						
ZALV	Zalesovo Beam	47.68	317	PcP	PcP	01 19 08.1	-0.4
	0.9nm,0.4s,baz=97,slow=3.4,SNR=4.2						

MKAR	Makanchi Array	49.05	308	P	P	01 17 51.2	+0.9
MKAR	Makanchi Array	49.05	308	P	P	01 17 52.4	+2.1
	0.9nm,0.7s,baz=91,slow=10,SNR=6.2						
	0.9nm,0.7s						
K17K	Iditarod	49.76	31	P	P	01 17 56.1	+0.7
N17K	Nushagak Hills	49.85	34	P	P	01 17 57.1	+0.9
N17K				IAmb	IAmb	01 18 02.0	
	comp=Z,7.4nm,1.2s						
M17K	Holitna River	49.89	33	P	P	01 17 56.0	-0.4
WB0	Warramunga Arr	50.02	190	P	P	01 17 57.9	+0.1
WB0				IAmb	IAmb	01 18 12.2	
	comp=Z,9.4nm,1.1s						
WR8	Warramunga Arr	50.18	190	P	P	01 17 59.1	+0.1
WR8				IAmb	IAmb	01 18 03.5	
	comp=Z,4.7nm,0.9s						
WRA	Warramunga Arr	50.20	190	P	P	01 17 57.1	-2.1
WRA	Warramunga Arr	50.20	190	P	P	01 17 59.7	+0.5
	comp=Z,1.5nm,0.5s,baz=9.7,slow=8.1,SNR=20						
WRA				PcP	PcP	01 19 19.7	+1.6
	comp=Z,0.4nm,0.7s,baz=4.3,slow=3.8,SNR=5.6						
	comp=Z,1.5nm,0.5s						
C18K	Utukok River	50.31	23	P	P	01 17 59.7	+0.2
C18K				IAmb	IAmb	01 18 29.9	
	comp=Z,7.0nm,1.4s						
H18K	Honhosa River	50.31	28	P	P	01 17 59.7	+0.1
H18K				IAmb	IAmb	01 18 36.3	
	comp=Z,9.9nm,1.2s						
FITZ	Fitzroy Crossi	50.46	201	P	P	01 18 01.4	+0.3
P18K	Big Mountain,	50.66	36	P	P	01 18 02.3	0.0
P18K				IAmb	IAmb	01 18 38.4	
	comp=Z,11nm,1.4s						
O18K	Koktuh Hills	50.73	35	P	P	01 18 03.8	+1.0
O18K				IAmb	IAmb	01 18 05.0	
	comp=Z,5.1nm,0.8s						
C19K	Lookout Ridge	51.01	23	P	P	01 18 04.8	-0.1
C19K				IAmb	IAmb	01 18 15.6	
	comp=Z,13nm,1.5s						
D19K	Kuna River	51.33	24	P	P	01 18 07.8	+0.6
D19K				IAmb	IAmb	01 18 19.8	
	comp=Z,6.7nm,1.3s						
KURBB	Kurchatov Arra	51.41	313	P	P	01 18 09.1	+1.0
	comp=Z,1.4nm,0.6s,baz=91,slow=7.2,SNR=16						
	comp=Z,1.4nm,0.6s						
SUA	Susitna One	53.08	33	P	P	01 18 17.8	-2.7
SUA				IAmb	IAmb	01 18 34.9	
	comp=Z,5.1nm,0.9s						
E22K	Anaktuvuk Pass	53.52	25	P	P	01 18 23.8	+0.3
E22K				IAmb	IAmb	01 18 25.6	
	comp=Z,2.9nm,0.9s						
ASAR	Alice Springs	53.92	190	P	P	01 18 27.1	+0.3
	comp=Z,0.7nm,0.8s,baz=7.1,slow=6.7,SNR=4.4						
	comp=Z,0.7nm,0.8s						
G23K	Bananza Creek	53.97	27	P	P	01 18 27.0	+0.2
G23K				IAmb	IAmb	01 18 29.0	
	comp=Z,2.0nm,0.8s						
ILAR	Eielson Array	55.07	30	P	P	01 18 34.1	-0.7
	comp=Z,0.6nm,0.8s,baz=253,slow=5.5,SNR=7.9						
	comp=Z,0.6nm,0.8s						
BVAR	Borovoye Array	56.29	316	P	P	01 18 45.2	+1.6
	comp=Z,1.1nm,0.5s,baz=91,slow=8.6,SNR=4.3						
	comp=Z,1.1nm,0.5s						
J26L	Joseph Creek	56.49	30	P	P	01 18 44.8	-0.2
J26L				IAmb	IAmb	01 19 23.7	
	comp=Z,3.9nm,1.4s						
KK31	Karatay Array	57.81	305		P	01 18 53.8	-0.8
KKAR	Karatay Array	57.81	305		P	01 18 53.6	-1.1
KKAR	Karatay Array	57.81	305		P	01 18 54.4	-0.3
SIMJ	Simiganj	60.00	300		P	01 19 10.2	+0.1
FINES	FINESS Array B	75.63	334	P	P	01 20 48.3	+0.5
	comp=Z,0.4nm,0.4s,baz=65,slow=4.7,SNR=9.1						
	comp=Z,0.4nm,0.4s						
KBZ	Khabaz	76.41	313	P	P	01 20 54.5	+2.0
	comp=Z,1.9nm,0.8s,baz=15,slow=6.0,SNR=4.1						
	comp=Z,1.9nm,0.8s						
THZ	Tophouse	76.58	157	P	P	01 20 53.2	-0.2
AKASG	Malin Array Be	80.61	324	P	P	01 21 16.1	+0.4
	comp=Z,0.3nm,0.4s,baz=54,slow=4.8,SNR=4.3						
	comp=Z,0.3nm,0.4s						
HFS	Hagfors	81.02	337	P	P	01 21 18.1	+0.4
	comp=Z,3.3nm,1.0s,baz=8.5,slow=2.9,SNR=2.7						
	comp=Z,3.3nm,1.0s						
NOA	NORSAR Array B	81.17	338	P	P	01 21 18.6	+0.1
	comp=Z,0.4nm,0.6s,baz=41,slow=5.2,SNR=3.3						
	comp=Z,0.4nm,0.6s						
BRTR	Keskin Array B	84.41	313	P	P	01 21 37.5	+1.6
	comp=Z,0.5nm,0.6s,baz=148,slow=3.7,SNR=4.6						
	comp=Z,0.5nm,0.6s						
TXAR	Lajitas Array	93.60	53	P	P	01 22 20.9	+1.1
	comp=Z,0.4nm,0.7s,baz=301,slow=5.8,SNR=4.1						
	comp=Z,0.4nm,0.7s						
QSPA	South Pole Qui	119.66	180	PKP	PKiKP	01 27 52.4	+0.2
	comp=Z,0.5nm,0.8s,baz=292,slow=6.1,SNR=1.3						

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*GCG **27** 01:18:08.2±0.3, 12°.73N×90°.42W, h50^{km}, MD3.6*
*SNET **27** 01:18:16.3±0.8, 13°.20N×89°.99W, h32^{km}±3^{km}, ML3.1*
ISC 27 01:18:15.3±3.7, **13°.2N**±0°.2×**90°.0W**±0°.2, **h29**^{km}**, n13, σ0^{s}.54**/15, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	0.74	50	eP	Pb	01 18 30.0	+0.1
JAYA				eS	Sb	01 18 39.7	-0.1
JAYA				IAML		01 18 41.2	
	comp=Z,784nm,0.2s						
JAYA	Jayaque - finc	0.74	50	eP	Pb	01 18 30.1	+0.2
CEVE	Cerro Verde	0.76	32	eP	Pb	01 18 30.8	+0.5
NUBE	Las Nubes	0.76	19	eP	Pb	01 18 30.7	+0.5
NUBE	Las Nubes	0.76	19	eP	Pb	01 18 30.7	+0.5
SBLS	San Blas	0.77	31	eP	Pb	01 18 30.5	+0.1
SNJE	San Jose	0.81	31	eP	Pb	01 18 31.1	+0.1
RTR	El Retiro	0.81	28	eP	Pb	01 18 31.4	+0.4
PMON	Piamonte	0.88	53	eP	Pn	01 18 31.7	-0.2
PMON				eS	Sn	01 18 44.4	+0.6
COEG	Centro de Oper	1.21	68	eP	Pn	01 18 36.4	0.0
TECO	Alcaldia de Te	1.27	73	eP	Pn	01 18 37.1	-0.2
MTO3	Montecristo	1.38	28	eP	Pb	01 18 39.6	-1.0
MTO3	Montecristo	1.38	28	eP	Pb	01 18 39.7	-1.0

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*NIED **27** 01:32:32.7, 32°.27N×130°.51E, h7^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.16; $M_{\theta\theta}$1.90; $M_{\phi\phi}$-1.74; $M_{r\theta}$-0.54; $M_{\theta\phi}$1.85; $M_{\phi r}$0.73; Fault plane solution: $M_0$2.76000×10^{14} NP1: ϕ_s204.00000°, δ74.00000°, λ-170.00000°. NP2: ϕ_s111.00000°, δ80.00000°, λ-16.00000°.*
JMA 27 01:32:32.7±0.0, **32°.3N**±0°.1×**130°.5E**±0°.1, **h7**^{km}**, MV3.5**/20, **6D, SOUTHERN KUMAMOTO PREF, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JZO	Okuchi	0.15	149	P	Pg	01 32 35.9	+0.1
JZO				eS	Sg	01 32 38.3	+0.4
JHD	Hondo	0.37	302	P	Pg	01 32 40.3	+0.3
JHD				eS	Sg	01 32 45.7	+0.8
JIU3	Izumi3	0.38	42	⇓iP	Pg	01 32 40.0	-0.1
JIU3				⇓eS	Sg	01 32 45.9	+0.7
JTZ	Takazaki	0.61	126	i P	Pg	01 32 44.8	+0.2
JTZ				S	Sg	01 32 53.1	+0.6
JTA	Tamana	0.69	2	⇓iP	Pg	01 32 46.1	0.0
JSU	Suzuyama	0.76	184	i P	Pg	01 32 47.2	-0.2
JSU				S	Sg	01 32 57.3	+0.1
JTSN	Tsuno	0.84	91	⇓iP	Pg	01 32 49.1	+0.2
JSJ	Shimokoshiki	0.90	229	⇓iP	Pg	01 32 48.8	-1.1
JSJ				⇓S	Sg	01 33 00.8	-0.7

NOU 27 01:55:40.5, 11°.22S×165°.58E, h13^{km}**, mb4.4**/14, **Santa Cruz Islands, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUES	Luesalemba Tem	0.64	31	P	Pg	01 55 52.0	-1.1
LUES	Luesalemba Tem	0.64	31	S	Sn	01 56 04.7	-0.7
VLAKA	Lakatoro	5.18	160	P	Pn	01 56 56.8	-0.9
VLAKA	Lakatoro	5.18	160	S	Sn	01 57 57.6	+0.3
ALEG	Aligegeo Malai	5.40	297	P	Pn	01 57 00.1	-0.7
ALEG	Aligegeo Malai	5.40	297	S	Sn	01 58 04.1	+1.2
NGOA	Tingoa Renbel	5.42	266	P	Pn	01 57 02.9	+1.8
NGOA	Tingoa Renbel	5.42	266	S	Sn	01 58 04.2	+0.8
TATA	Tatamba Isabel	6.35	296	P	Pn	01 57 13.9	0.0
TATA	Tatamba Isabel	6.35	296	S	Sn	01 58 27.4	+1.1
DZM	Mont Dzumac	10.82	176	P	Pn	01 58 15.8	+0.5
DZM	Mont Dzumac	10.82	176	P	Sn	02 00 19.0	+2.6
YATNC	Mamie plateau,	10.85	174	P	Pn	01 58 14.7	-0.9
OUENC	Ouen Island, N	11.20	174	P	Pn	01 58 20.7	+0.3

IDC 27 01:57:26.8±3.0, **31°.21S×177°.25W, h0**^{km}**, mb3.6**/2, **mbtmp3.6**/3, **ML3.4**/1, **Error ellipse: s-maj=78.7km s-min=45.5km az=126.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.42	212	Pn	Pn	01 59 29.3	-0.8
	0.5nm,0.3s,baz=34,slow=8.1,SNR=3.2						
URZ				Sn	Sn	02 01 03.9	-2.0
	1.2nm,0.3s,baz=133,slow=21,SNR=6.6						
	5.0nm,0.8s						
ASAR	Alice Springs	43.72	267	P	P	02 05 33.7	-0.3
	0.3nm,0.4s,baz=113,slow=8.5,SNR=1.9						
	0.3nm,0.4s						
WRA	Warramunga Arr	44.78	273	P	P	02 05 42.7	+0.2
	0.5nm,0.5s,baz=112,slow=7.8,SNR=6.3						
	0.5nm,0.5s						
FINES	FINESS Array B	146.13	340	PKPbc	PKPdf	02 17 07.3	+0.1
	0.8nm,0.6s,baz=59,slow=3.6,SNR=12						

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*CATAC **27** 02:11:45.4±1.0, 8°N±6°×8°3W±°, h16^{km}±5^{km}, M3.4/6, MLv3.4/6, Error ellipse: s-maj=14.2km s-min=11.7km az=53.4, confirmed*
*UCR **27** 02:11:46.1±1.2, 8°.35N×82°.86W, h22^{km}±2^{km}, MW3.6*
*UPA **27** 02:11:46.7±1.1, 8°.41N×82°.85W, h21^{km}±6^{km}, ML3.6*
ISC 27 02:11:46.3±0.9, **8°.38N**±0°.03×**82°.85W**±0°.02, **h30**^{km}±6^{km}, **n78, σ0^{s}.86**/104, **5C-18D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.07	65	eP	Pb	02 11 51.3	-0.2
LESP3				AMP		02 11 52.7	
	comp=Z,14μm,0.1s						
CDITO	Canoas	0.20	354	P	Pb	02 11 51.9	-0.7
CDITO	Canoas	0.20	354	S	Sb	02 11 57.1	+0.3
LIMO3	Limones	0.27	182	eP	Pb	02 11 53.4	0.0
LIMO3				AMP		02 11 53.7	
	comp=Z,8μm,0.1s						
LIMO3				eS	Sn	02 11 59.0	-0.4
LMNES	Limones	0.28	181	⇓iP	Pb	02 11 53.4	-0.1
LMNES				eS	Sn	02 11 59.0	-0.4
NELY	Ciudad Neily	0.29	341	⇑iP	Pb	02 11 53.0	-0.7
NELY				eS	Sb	02 11 58.9	+0.3
DVD	David	0.40	82	eP	Pb	02 11 55.0	-0.2
DVD				eS	Sn	02 12 02.2	-0.3
CSTBL	De las Acacias	0.41	85	⇓eP	Pb	02 11 55.1	-0.2
CSTBL				eS	Sb	02 12 01.5	0.0
EDAD	Golfito	0.41	312	⇑iP	Pb	02 11 53.9	-1.6
EDAD				eS	Sb	02 12 00.7	-1.0
MLIR3	Monte Lirio, C	0.41	4	eP	Pb	02 11 55.9	+0.3
PEDE3	Pedregal, Chir	0.43	89	eP	Pb	02 11 55.2	-0.4
PEDE3				eS	Sb	02 12 02.4	+0.4
LOCO3	Loma Colorada,	0.43	86	eP	Pb	02 11 55.5	-0.2
LOCO3				eS	Sb	02 12 02.2	+0.1
CLLRA	Cordillera,	0.43	33	⇓iP	Pb	02 11 55.6	-0.3
RSRNO	Rio Sereno	0.44	359	eP	Pb	02 11 55.9	0.0
RSRNO				eS	Sb	02 12 02.2	-0.2
BRU2	Volcan	0.45	21	⇓eP	Pb	02 11 55.6	-0.4
BRU2				eS	Sn	02 12 03.8	-0.1
BRU2	Volcan	0.45	21	P	Pb	02 11 55.7	-0.3
BRU2	Volcan	0.45	21	⇓iP	Pb	02 11 55.7	-0.4
BRU2				eS	Sn	02 12 03.8	-0.1
VITO	San Vito	0.46	345	⇑iP	Pb	02 11 55.8	-0.4
VITO				eS	Sb	02 12 03.5	+0.7
TBS2		0.46	25	⇓eP	Pn	02 11 56.7	-0.2
SCLRA	Santa Clara, W	0.46	9	⇓eP	Pb	02 11 56.1	-0.1
SCLRA				eS	Sn	02 12 04.7	+0.6
LOMA3	Las Lomas, Chi	0.46	83	eP	Pb	02 11 56.3	+0.2
LOMA3				eS	Sb	02 12 02.6	-0.3
PTAR3	Potrerillos Ar	0.47	48	i P	Pb	02 11 56.2	-0.2
BC3P	Paso Ancho	0.50	29	⇓iP	Pb	02 11 56.3	-0.5
BC3P				eS	Sb	02 12 04.6	+0.5
CHIR3	Chiriqui UPA,	0.52	88	⇓iP	Pb	02 11 56.4	-0.6
BQTLY	Boquete Panama	0.54	46	⇓iP	Pb	02 11 56.9	-0.6
BQTLY				eS	Sb	02 12 05.4	+0.1
BQSF3	Alto Boquete,	0.55	49	⇓iP	Pb	02 11 57.0	-0.7
BQSF3				eS	Sb	02 12 05.0	-0.5
ALCO	Alturas Coton,	0.57	2	⇓eP	Pb	02 11 57.1	-1.0
ALCO				eS	Sb	02 12 05.8	-0.3
PSOM3	Paja de Sombre	0.61	60	⇓iP	Pb	02 11 57.7	-0.9
PSOM3				AMP		02 11 58.6	
	comp=Z,4μm,0.1s						
EDP2	Potrero Grande	0.71	333	eP	Pn	02 11 59.3	-1.0
EDP2				eS	Sn	02 12 10.1	-0.2
PBNVO	Pueblo Nuevo,	0.83	52	⇓iP	Pn	02 12 00.9	-1.0
PBNVO				eS	Sn	02 12 12.5	-0.6
PANP	Palmar Norte	0.83	314	eP	Pn	02 12 00.8	-1.1
PANP				eS	Sn	02 12 12.7	-0.5
RBALA	Bur	0.85	54	⇓eP	Pn	02 12 01.6	-0.7
DRK0	Durika	0.96	336	eP	Pn	02 12 02.7	-1.2
DRK0	Durika	0.96	336	P	Pn	02 12 02.9	-1.0
DRK0	Durika	0.96	336	eP	Pn	02 12 02.7	-1.2
DRK0				eS	Sn	02 12 16.3	-0.4
RMDIO	Remedios, Chir	1.02	98	eP	Pn	02 12 04.1	-0.5
EDPE	Pejibaye, P	1.05	318	⇑eP	Pn	02 12 04.1	-0.9
EDPE				eS	Sn	02 12 18.9	+0.3
OCHAL	Ojochal	1.06	313	S	Sn	02 12 18.9	+0.1
OCHAL	Ojochal	1.06	313	P	Pn	02 12 04.2	-0.9
KKNTU	Kakintº	1.13	66	⇓eP	Pn	02 12 05.4	-0.7
PDCAN	Manzana , Fuen	1.15	94	eP	Pn	02 12 05.4	-0.9
SAJE	San Jernim	1.16	326	eP	Pn	02 12 05.2	-1.4
BRIBI	Bribri	1.24	2	⇓eP	Pb	02 12 09.1	0.0
BRIBI				eS	Sb	02 12 27.6	+2.9
PIEC	Cerro El Cedra	1.65	319	⇓eP	Pn	02 12 13.2	-0.2
GMAL	Guarumal, Vera	1.72	111	eP	Pn	02 12 14.4	+0.3
GMAL	Guarumal, Vera	1.72	111	eP	Pn	02 12 14.8	+0.7
GMAL				eS	Sn	02 12 35.9	+0.9
RAZU	San Marcos de	1.72	318	eP	Pn	02 12 15.7	+1.4
PITB	Pirrs, San	1.72	318	eP	Pb	02 12 15.9	-1.5
VINA	Juan Vinas	1.75	330	eP	Pn	02 12 15.1	+0.4
REPA	Paraso	1.76	325	eP	Pn	02 12 16.2	+1.4
LCR2	La Lucha 2	1.77	320	eP	Pn	02 12 15.2	+0.2
LCR2	La Lucha 2	1.77	320	S	Sn	02 12 36.8	+0.1
LCR2	La Lucha 2	1.77	320	P	Pn	02 12 15.6	+0.5
ABE2	San Pablo	1.77	318	eP	Pn	02 12 16.6	+1.5
VTCV	VTCV, Calle Va	1.81	332	eP	Pn	02 12 16.1	+0.4
PICV	PH. Pirrs	1.82	313	eP	Pn	02 12 16.3	+0.7
RESJ	San Isidro (Tu	1.82	335	eP	Pn	02 12 16.5	+0.9
ABRB	Las Abras (San	1.83	332	eP	Pn	02 12 16.6	+0.7
PAR1A	Puntarenas Pro	1.84	311	eP	Pn	02 12 16.4	+0.6
CVTV	Tajo	1.84	331	⇑eP	Pn	02 12 16.8	+0.7
CVTQ	Turrialba Volc	1.85	331	eP	Pn	02 12 16.8	+0.4
VTLA	Turrialba Volc	1.85	331	eP	Pn	02 12 17.2	+0.9
VTR0	Volcan Turrial	1.86	331	eP	Pn	02 12 17.1	+0.6
RVLA	Villa Bonita	1.87	337	eP	Pn	02 12 17.0	+0.8
VICA	Volcano Irazu	1.87	329	eP	Pn	02 12 17.6	+0.9
CVIMO	Finca Echandi	1.96	327	eP	Pb	02 12 21.3	-0.1
SANTA	Santa Ana	2.03	320	eP	Pn	02 12 19.8	+1.3
HDC	Heredia	2.04	322	eP	Pb	02 12 21.0	-1.8
HEME	Heredia, Merce	2.05	322	eP	Pn	02 12 20.5	+1.7
BELE	Belen	2.06	320	i P	Pn	02 12 20.1	+1.0
TRT2	Tortugero	2.33	338	P	Pn	02 12 23.7	+1.1
TRT1	Tortuguero	2.36	339	eP	Pn	02 12 24.3	+1.3
ARE1	Arenal 1	2.77	319	eP	Pn	02 12 30.4	+1.7
VARE2	V. Arenal	2.77	319	eP	Pn	02 12 31.0	+2.3
CEDE	Laguna Cedeo	2.78	319	eP	Pn	02 12 30.7	+1.9
JTS	Las Juntas de	2.81	313	eP	Pn	02 12 30.1	+0.9
JTS	Las Juntas de	2.81	313	eP	Pn	02 12 30.0	+0.7
JTS				eS	Sn	02 13 03.2	+1.0
CMARA	Lajas Hojancha	3.02	303	S	Sn	02 13 07.3	0.0

UPA 27 02:19:53.7±0.9, **8°.39N×82°.85W, h34**^{km}±5^{km}, **ML3.7, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.06	77	i P	Pb	02 19 59.1	-0.3
LESP3				AMP		02 19 59.2	
	comp=Z,11μm,0.1s						
LESP3				eS	Sb	02 20 03.3	-0.1
LIMO3	Limones	0.29	183	eP	Pn	02 20 01.2	-0.1
LIMO3				eS	Sb	02 20 07.1	+0.4
DVD	David	0.39	84	eP	Pb	02 20 02.4	-0.4
DVD				AMP		02 20 02.6	
	comp=Z,5μm,0.1s						
DVD				eS	Sn	02 20 09.5	+0.3
MLIR3	Monte Lirio, C	0.40	3	eP	Pn	02 20 03.4	+0.2
MLIR3				eS	Sn	02 20 09.8	+0.4
PEDE3	Pedregal, Chir	0.42	91	eP	Pb	02 20 02.7	-0.5
PEDE3				eS	Sb	02 20 09.1	-0.6
BRU2	Volcan	0.43	21	eP	Pb	02 20 03.1	-0.3
BRU2				eS	Sn	02 20 11.0	+0.8
LOMA3	Las Lomas, Chi	0.45	85	eP	Pb	02 20 03.2	-0.5
LOMA3				eS	Sn	02 20 11.2	+0.5
PTAR3	Potrerillos Ar	0.46	49	eP	Pb	02 20 03.6	-0.2
PTAR3				eS	Sn	02 20 10.9	-0.1
BC3P	Paso Ancho	0.48	29	eP	Pb	02 20 03.9	-0.4
BC3P				eS	Sn	02 20 12.7	+1.0
PSOM3	Paja de Sombre	0.59	61	eP	Pn	02 20 05.2	-0.5

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*SJA **27** 02:34:22.2±0.6, 32°.76S×69°.77W, h10^{km}, ML3.9, MW3.8*
*NEIC **27** 02:34:24.0±1.4, 32°.80S±0°.03×69°.81W±0°.02, h10^{km}±4^{km}, mb4.4/8, Mwr3.8/41, ML3.6(GUC), Error ellipse: s-maj=3.8km s-min=2.1km az=161.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}5.55; $M_{\theta\theta}$0.47; $M_{\phi\phi}$-6.02; $M_{r\theta}$-1.54; $M_{\theta\phi}$-1.74; $M_{\phi r}$-1.27; Fault plane solution: $M_0$6.37000×10^{14} NP1: ϕ_s0.97000°, δ39.00000°, λ69.68000°. NP2: ϕ_s206.45000°, δ53.83000°, λ105.71000°. Principal axes: T 6.0312, Plg75.0000°, Azm165.0000°; N 0.6380, Plg13.0000°, Azm17.0000°; P -6.6692, Plg8.0000°, Azm285.0000°;*
*GUC **27** 02:34:24.4±0.8, 32°.80S×69°.83W, h20^{km}±2^{km}, ML3.6*
*NEIC **27** 02:34:24, 32°.80S×69°.81W, h10^{km}*
*IDC **27** 02:34:30.3±2.5, 32°.77S×69°.51W, h54^{km}±20^{km}, mb3.9/6, mbtmp4.0/10, ML3.7/4, MS3.6/2, Error ellipse: s-maj=30.6km s-min=13.9km az=109.0*
*VAO **27** 02:34:32.0±3.1, 32°.83S×69°.51W, h84^{km}±15^{km}, mb4.3*
ISC 27 02:34:23.5±1.0, **32°.79S**±0°.02×**69°.80W**±0°.03, **h10**^{km}±7^{km}, **n129, σ1^{s}.09**/163, **mb4.3**/9, **5C-16D, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA03	San Esteban	0.63	272		Pg	02 34 35.8	-0.1
VA03				Sg	Sg	02 34 44.5	+0.3
VA03	San Esteban	0.63	272	⇓eP	Pg	02 34 35.7	-0.1
VA03				eS	Sg	02 34 44.3	+0.2
VA03				IAML		02 34 46.0	
	comp=N,5μm,0.5s						
VA03	San Esteban	0.63	272	eP	Pg	02 34 35.0	-0.8
VA03				IAML		02 34 45.7	
	comp=Z,4μm,0.6s						
MT04	Ro Olivares	0.67	205	eP	Pg	02 34 36.7	0.0
MT04				eS	Sg	02 34 45.8	+0.3
MT04	Ro Olivares	0.67	205	eP	Pg	02 34 36.6	0.0
FCH	Farellones	0.68	218	⇓eP	Pg	02 34 36.7	+0.1
FCH				eS	Sg	02 34 46.5	+0.9
FCH				IAML		02 34 47.2	
	comp=N,4μm,0.4s						
MT08	Bocatoma Ro	0.68	196		Pg	02 34 36.4	-0.3
MT08				Sg	Sg	02 34 44.7	-0.9
MT08	Bocatoma Ro	0.68	196	⇑eP	Pg	02 34 36.4	-0.3
MT08				eS	Sg	02 34 46.0	+0.4
MT08	Bocatoma Ro	0.68	196	eP	Pg	02 34 36.6	-0.1
MT10	Hacienda Santa	0.78	232	⇓eP	Pg	02 34 38.8	+0.1
MT10				eS	Sg	02 34 49.6	+0.6
MT10				IAML		02 34 51.3	
	comp=N,15μm,0.4s						
PEL	Peldehue	0.82	245		Pg	02 34 39.0	-0.4
PEL				Sg	Sg	02 34 50.9	+0.7
PEL	Peldehue	0.82	245	⇓eP	Pg	02 34 39.0	-0.4
PEL				eS	Sg	02 34 50.9	+0.7
PEL				IAML		02 34 55.1	
	comp=E,2μm,0.4s						
MT14	Cerro Cal¡n	0.86	226	⇓eP	Pg	02 34 40.3	+0.2
MT14				eS	Sg	02 34 51.4	-0.1
MT14				i S	Sb	02 34 52.4	+0.1
MT14				IAML		02 34 54.4	
	comp=N,8μm,0.3s						
MT16	CCHEN	0.88	224		Pg	02 34 39.9	-0.6
MT16				Sg	Sb	02 34 53.5	+0.8
MT03	Universidad Ad	0.92	220		Pb	02 34 41.0	-0.6
MT03				Sg	Sg	02 34 54.2	+1.0
MT03	Universidad Ad	0.92	220	⇓eP	Pb	02 34 41.0	-0.6
MT03				eS	Sg	02 34 53.7	+0.4
MT03				IAML		02 34 54.9	
	comp=E,3μm,0.4s						
MT03	Universidad Ad	0.92	220	eP	Pb	02 34 40.5	-1.1
MT03				IAML		02 34 55.9	
	comp=Z,1μm,0.6s						
MT05	Renca	0.99	233		Pb	02 34 42.2	-0.5
MT05				Sn	Sg	02 34 56.9	+1.4
MT05	Renca	0.99	233	⇓eP	Pb	02 34 42.5	-0.2
MT05				eS	Sb	02 34 55.1	-0.8
MT05				IAML		02 34 57.8	
	comp=N,4μm,0.4s						
MT05	Renca	0.99	233	eP	Pb	02 34 41.9	-0.8
MT15	Las Vizcachas	1.00	216	eP	Pb	02 34 42.3	-0.6
MT15				eS	Sb	02 34 55.3	-0.9
MT15				IAML		02 34 57.7	
	comp=N,2μm,0.2s						
ROCH	El Roble	1.04	260	⇓eP	Pb	02 34 42.9	-0.7
ROCH				eS	Sb	02 34 57.3	-0.1
ROCH				IAML		02 35 01.9	
	comp=N,2μm,0.4s						
ROC1	El Roble	1.04	260	eP	Pb	02 34 42.9	-0.8
ROC1				eS	Sb	02 34 58.6	+1.1
RTLS	Leoncito	1.08	23	eP	Pb	02 34 42.5	-1.8
RTLS				IAML		02 35 02.7	
	comp=Z,3μm,0.7s						
LMEL	Las Melosas	1.11	198		Pb	02 34 44.3	-0.4
LMEL	Las Melosas	1.11	198	i P	Pb	02 34 44.4	-0.4
LMEL				i S	Sb	02 34 59.0	-0.3
LMEL				IAML		02 35 03.2	
	comp=N,625nm,0.2s						
LMEL	Las Melosas	1.11	198	eP	Pb	02 34 44.5	-0.3
LMEL				eS	Sn	02 35 00.3	-0.2
MT02	Curacav	1.22	247		Pn	02 34 46.1	-0.5
MT02	Curacav	1.22	247	⇓eP	Pn	02 34 45.9	-0.7
MT02				eS	Sb	02 35 01.6	-0.8
MT02				IAML		02 35 10.4	
	comp=E,523nm,0.5s						
MT02	Curacav	1.22	247	eP	Pn	02 34 45.1	-1.5
VA06	Catapilco	1.28	280		Pn	02 34 46.8	-0.6
VA06	Catapilco	1.28	280	⇓eP	Pn	02 34 46.8	-0.6
VA06				eS	Sb	02 35 04.1	-0.2
VA06				IAML		02 35 06.0	
	comp=N,2μm,0.5s						
BO04	La Punta	1.37	209		Pn	02 34 48.7	0.0
BO04	La Punta	1.37	209	eP	Pn	02 34 48.8	+0.1
BO04				eS	Sn	02 35 07.2	+0.2
BO04				IAML		02 35 09.1	
	comp=N,763nm,0.7s						
MT09	Talagante	1.40	225		Pn	02 34 49.2	0.0
MT09	Talagante	1.40	225	⇓eP	Pn	02 34 49.3	+0.2
MT09				eS	Sn	02 35 08.1	+0.3
MT09				IAML		02 35 09.5	
	comp=E,3μm,0.4s						
MT09				IAML		02 35 09.8	
	comp=N,3μm,0.2s						
ZON	Zonda	1.56	38		Pb	02 34 51.8	-0.7
ZON	Zonda	1.56	38	eP	Pn	02 34 50.5	-0.8
ZON				IAML		02 35 19.5	
	comp=Z,564nm,0.4s						
VA01	Torpederas	1.57	261		Pn	02 34 51.7	+0.3
VA01	Torpederas	1.57	261	⇓eP	Pn	02 34 51.9	+0.5
VA01				eS	Sn	02 35 12.1	+0.4
VA01				IAML		02 35 14.5	
	comp=N,1μm,0.4s						
VA01	Torpederas	1.57	261	eP	Pn	02 34 51.4	0.0
VA01				IAML		02 35 18.4	
	comp=Z,650nm,0.7s						
MT01	Popeta	1.62	228		Pn	02 34 52.4	+0.3
MT01	Popeta	1.62	228	⇓eP	Pn	02 34 52.8	+0.8
MT01				eS	Sb	02 35 14.2	+0.2
MT01				IAML		02 35 15.5	
	comp=N,3μm,0.2s						
MT01	Popeta	1.62	228	eP	Pn	02 34 52.1	+0.1
MT01				IAML		02 35 15.4	
	comp=Z,1μm,0.1s						
VA05	Santo Domingo	1.75	240		Pn	02 34 54.2	+0.3
VA05	Santo Domingo	1.75	240	⇓eP	Pn	02 34 55.0	+1.2
VA05				eS	Sb	02 35 17.9	+0.3
VA05				IAML		02 35 20.6	
	comp=E,4μm,0.4s						

CFA	Coronel Fontan	1.77	49	P	Pb	02 34 55.9	-0.2
	comp=E,104nm,0.4s,baz=238,slow=18,SNR=148						
CFA				S	Sn	02 35 15.8	-1.1
	baz=295,slow=18						
CFA	Coronel Fontan	1.77	49	eP	Pn	02 34 52.3	-1.9
CO02	Combarbal	1.88	327		Pn	02 34 56.2	+0.4
CO02	Combarbal	1.88	327	⇓eP	Pn	02 34 57.0	+1.2
CO02				eS	Sb	02 35 22.4	+0.8
CO02				IAML		02 35 30.4	
	comp=E,3µm,0.5s						
CO02	Combarbal	1.88	327	eP	Pn	02 34 56.4	+0.6
CO02				IAML		02 35 30.4	
	comp=Z,801nm,0.4s						
BO01	Tunca	1.92	214		Pn	02 34 56.7	+0.5
BO01	Tunca	1.92	214	eP	Pb	02 34 58.2	-0.4
BO01				eS	Sg	02 35 24.9	-0.4
BO01				IAML		02 35 29.8	
	comp=Z,490nm,0.5s						
DOCA	Reserva Natura	1.94	19	eP	Pn	02 34 57.3	+0.6
CO03	El Pedregal	2.09	338		Pn	02 34 59.6	+1.0
CO03	El Pedregal	2.09	338	eP	Pb	02 35 01.0	-0.5
CO03				eS	Sb	02 35 28.8	+1.2
CO03				IAML		02 35 34.8	
	comp=N,999nm,0.7s						
CO03	El Pedregal	2.09	338	eP	Pn	02 35 00.4	+1.8
CO03				IAML		02 35 34.6	
	comp=Z,1µm,0.7s						
BO02	Sierra Bellavi	2.16	202		Pn	02 35 01.0	+1.5
BO02	Sierra Bellavi	2.16	202	eP	Pb	02 35 02.3	-0.3
BO02				IAML		02 35 44.2	
	comp=Z,431nm,0.5s						
ACAN	Cantantal	2.26	78	eP	Pn	02 35 01.9	+1.0
RFA	San Rafael	2.26	151	eP	Pn	02 35 01.9	+0.9
ACCO	Cerro Coronel	2.29	16	eP	Pb	02 35 04.2	-0.8
CO06	Fray Jorge	2.63	323		Pn	02 35 06.7	+0.8
CO06	Fray Jorge	2.63	323	⇓eP	Pb	02 35 09.1	-1.6
CO06				eS	Sb	02 35 42.7	-0.3
CO06				IAML		02 35 46.6	
	comp=E,875nm,0.2s						
AROD	Rodeo	2.63	6	eP	Pb	02 35 09.8	-1.1
ACDV	Cuesta del Vie	2.68	13	eP	Pb	02 35 11.2	-0.3
ACDV				IAML		02 35 49.4	
	comp=Z,626nm,0.5s						
GO04	Tololo Observa	2.75	342		Pn	02 35 08.6	+0.8
GO04	Tololo Observa	2.75	342	i P	Pb	02 35 11.2	-1.7
GO04				i S	Sb	02 35 45.8	-0.9
GO04	Tololo Observa	2.75	342	eP	Pb	02 35 11.0	-1.8
GO04				eS	Sb	02 35 49.4	+2.7
CO01	Juntas del Tor	2.82	355		Pn	02 35 10.6	+1.8
CO01	Juntas del Tor	2.82	355	eP	Pb	02 35 13.7	-0.3
CO01				IAML		02 36 03.3	
	comp=Z,234nm,1.9s						
AVFE	Valle Fertil	2.92	44	eP	Pb	02 35 12.7	-2.9
AVFE				IAML		02 35 53.5	
	comp=Z,443nm,0.6s						
CO05	La Serena	3.12	336		Pn	02 35 13.5	+0.9
ACHE	Chepes	3.12	59	eP	Pn	02 35 14.8	+1.9
ML02	Panimavida	3.25	204		Pn	02 35 14.9	+0.4
MRA	San Martin	3.46	85	eP	Pn	02 35 18.6	+1.1
MRA				IAML		02 36 11.3	
	comp=Z,526nm,0.6s						
AGUA	GUANDACOL	3.48	19	eP	Pb	02 35 22.0	-3.2
AGUA				IAML		02 36 24.9	
	comp=Z,338nm,0.6s						
LCO	Las Campanas	3.85	348		Pn	02 35 23.5	+0.6
LCO	Las Campanas	3.85	348	eP	Pn	02 35 25.5	+2.6
LCO				IAML		02 36 27.9	
	comp=Z,302nm,0.6s						
ACLC	CERRO LA CRUZ	4.15	37	eP	Pn	02 35 30.2	+3.1
ACLC				IAML		02 36 49.3	
	comp=Z,150nm,0.8s						
VCA	Vinchina	4.27	19	eP	Pn	02 35 31.7	+3.0
VCA				IAML		02 36 40.5	
	comp=Z,210nm,0.3s						
TCA	Tanti	4.65	73	eP	Pn	02 35 34.5	+0.7
TCA				IAML		02 36 52.1	
	comp=Z,350nm,0.4s						
AC04	Llanos de Chal	4.70	346		Pn	02 35 34.9	+0.4
AC04	Llanos de Chal	4.70	346	eP	Pn	02 35 38.0	+3.6
AC04				eS	Sb	02 36 47.1	+4.5
AC04				IAML		02 36 59.8	
	comp=Z,125nm,0.8s						
GO03	Copiapo	5.19	356		Pn	02 35 41.6	+0.3
AC06	Mina Casimiro	5.44	355		Pn	02 35 47.3	+2.7
AC02	Maricunga	5.96	6		Pn	02 35 52.9	+0.6
GO02	Mina Guanaco	7.60	1		Pn	02 36 14.8	+0.2
PLCA	Paso Flores	7.95	184	P	Pn	02 36 25.0	+5.9
	comp=Z,0.2nm,0.3s,baz=12,slow=15,SNR=4.0						
PLCA				LR	LR	02 39 43.9	
	comp=Z,175nm,19.9s,baz=0.5,slow=39						
	comp=Z,2.1nm,0.7s						
TRQA	Tornquist	8.26	132		Pn	02 36 23.3	-0.1
ITQB	Itaqui	11.70	78	eP	Pn	02 37 12.6	+2.2
CPUP	Villa Florida	12.61	63	P	Pn	02 37 22.8	-0.2
	baz=254,slow=18,SNR=3.7						
	comp=Z,0.9nm,0.9s						
MURT	Porto Murtinho	15.49	47	eP	P	02 38 04.0	-2.5
LPAZ	La Paz	16.50	6		Pn	02 38 15.8	+0.1
LPAZ	La Paz	16.50	6	P	P	02 38 18.3	0.0
	comp=Z,0.2nm,0.3s,baz=163,slow=4.8,SNR=12						
	comp=Z,5.7nm,0.8s						
LPAZ	La Paz	16.50	6	eP	P	02 38 18.6	+0.2
SIV	San Ignacio	18.50	27	P	Pn	02 38 39.9	-0.2
	baz=204,slow=9.3,SNR=12						
	comp=Z,3.3nm,0.8s						
RPRD	Ribas do Rio P	18.88	53	eP	Pn	02 38 44.9	+0.4
PTLB	Pontes e Lacer	19.80	32		P	02 38 54.3	+0.3
PTLB				IAmb	IAmb	02 39 00.6	
	comp=Z,22nm,1.3s						
PTLB	Pontes e Lacer	19.80	32	eP	Pn	02 38 55.2	-0.3
SALV	Santo Antonio	21.12	41	eP	P	02 39 07.2	-1.2
VILB	Vilhena	21.61	26		P	02 39 14.2	+0.5
VILB				IAmb	IAmb	02 39 19.1	
	comp=Z,23nm,1.1s						
VILB	Vilhena	21.61	26	eP	P	02 39 14.2	+0.5
ITRB	Iturama	21.72	58	eP	P	02 39 14.2	-0.7
PDRB	Porto dos Gac	24.26	33	eP	P	02 39 40.4	-0.4
CZSB	Cruzeiro do Su	25.08	353	eP	P	02 39 49.7	+1.4
CLDB	Colider	25.34	34	eP	P	02 39 51.2	+0.6
BDFB	Brasilia	26.11	54	P	P	02 39 57.0	-0.7
	comp=Z,2.9nm,0.6s,baz=268,slow=2.8,SNR=5.0						
	comp=Z,2.9nm,0.6s						
SNDB	Serra Nova Dou	26.79	44	eP	P	02 40 02.3	-1.4
RUSC	La Rusia	38.60	355	P	P	02 41 46.2	-1.1
VNA3	Neumayer Olymp	49.78	158	⇑P	P	02 43 15.9	+0.1
	comp=Z,3.2nm,0.8s						
VNA2	Neumayer--Watz	50.41	158	⇑P	P	02 43 20.9	+0.3
	comp=Z,2.4nm,0.6s,baz=279,slow=7.9						
SNAA	Sanae	52.00	158	⇑P	P	02 43 32.3	-0.3
	comp=Z,34nm,0.9s						
SNAA	Sanae	52.00	158	P	P	02 43 32.9	+0.3
SNAA				IAmb	IAmb	02 43 34.7	
	comp=Z,10nm,1.5s						
SNAA	Sanae	52.00	158	P	P	02 43 32.9	+0.3
	comp=Z,1.9nm,0.9s,baz=257,slow=6.8,SNR=13						
	comp=Z,1.9nm,0.9s						
TROLL	Troll, Antarti	53.72	158	⇑P	P	02 43 45.3	0.0
	comp=Z,82nm,0.7s						
QSPA	South Pole Qui	57.44	180	P	P	02 44 13.4	+1.2
QSPA				IAmb	IAmb	02 44 19.5	
	comp=Z,3.7nm,0.8s						
QSPA	South Pole Qui	57.44	180	P	P	02 44 13.5	+1.2
	comp=Z,4.8nm,0.8s,baz=142,slow=1.5,SNR=31						
	comp=Z,4.8nm,0.8s						
TXAR	Lajitas Array	69.64	329	P	P	02 45 34.1	+1.0
	comp=Z,0.4nm,0.8s,baz=152,slow=8.9,SNR=4.2						
	comp=Z,0.4nm,0.8s						
DBIC	Dimbokro	73.01	70	P	P	02 45 53.5	-0.2
BOSA	Boshof	78.96	117	P	P	02 46 26.7	-1.0
	comp=Z,4.4nm,1.1s,baz=282,slow=9.3,SNR=3.7						
	comp=Z,4.4nm,1.1s						
TORD	Torodi Ar. Bea	82.03	69	P	P	02 46 43.8	-0.4
TORD				IAmb	IAmb	02 46 48.0	
	comp=Z,3.9nm,1.2s						
TORD	Torodi Ar. Bea	82.03	69	P	P	02 46 43.9	-0.4
	comp=Z,1.0nm,0.3s,baz=259,slow=4.4,SNR=3.8						
	comp=Z,1.0nm,0.3s						
ELK	Elko	84.34	327	LR	LR	03 22 32.2	
	comp=Z,72nm,21.0s,baz=126,slow=34						
WRA	Warramunga Arr	122.71	207	PKP	PKPdf	02 53 19.5	-0.6
	comp=Z,0.5nm,1.0s,baz=164,slow=1.6,SNR=2.4						
BVAR	Borovoye Array	145.12	43	PKP	PKPdf	02 54 01.1	+0.5
	comp=Z,2.1nm,0.6s,baz=318,slow=3.0,SNR=12						
KURBB	Kurchatov Arra	150.71	43	PKPbc	PKiKP	02 54 15.9	-0.1
	comp=Z,2.1nm,0.8s,baz=298,slow=3.1,SNR=18						
ZALV	Zalesovo Beam	152.20	33	PKPbc	PKiKP	02 54 19.2	+0.2
	comp=Z,5.7nm,0.5s,baz=310,slow=3.3,SNR=17						
MKAR	Makanchi Array	154.56	48	PKPab	PKPab	02 54 38.8	0.0
	comp=Z,0.7nm,0.7s,baz=272,slow=4.0,SNR=6.2						

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*MOS **27** 02:38:15.7±1.5, 49°.84N×155°.59E, h20^{km}, mb4.1/3, Error ellipse: s-maj=16.2km s-min=4.7km az=73.8*

*KRSC **27** 02:38:20.4±1.4, 49°.99N×157°.01E, h20^{km}±24^{km}, Ml4.3*

*IDC **27** 02:38:23.2±4.1, 49°.97N×155°.76E, h63^{km}±35^{km}, mb3.3/6, mbtmp3.5/7, ML2.2/1, MS2.3/1, Error ellipse: s-maj=42.5km s-min=25.8km az=110.0*

ISC 27 02:38:17.6±0.9**, 49°.7N**±0°.1×**156°.24E**±0°.08**, h38**^{km}±4^{km}**, n65, σ2^{s}.17**/66**, mb3.6**/9**, 1C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.97	356	⇑iPN	Pn	02 38 36.5	+1.9
SKR				i S	Sn	02 38 47.9	+0.7
SKR				pmax	pmax		
	comp=Z,1µm,0.3s						
SKR				smax	smax		
	comp=N,10µm,0.5s						
SKR				smax	smax		
	comp=E,7µm,0.2s						
SKR	Severo-Kuril's	0.97	356	eP	Pn	02 38 36.4	+1.7
SKR				eS	Sn	02 38 48.2	+1.0
PAU	Pauzhetka	1.79	12	PN	Pn	02 38 47.0	+1.1
PAU				S	Sn	02 39 06.6	-0.7
PAU	Pauzhetka	1.79	12	eP	Pn	02 38 47.0	+1.1
PAU				eS	Sn	02 39 06.7	-0.7
MIPR	Malaya Ipel'ka	2.58	7	PN	Pn	02 38 58.6	+1.8
MIPR	Malaya Ipel'ka	2.58	7	eP	Pn	02 38 58.6	+1.8
ASAK	Asacha	2.87	21	PN	Pn	02 39 02.1	+1.3
ASAK	Asacha	2.87	21	eP	Pn	02 39 02.2	+1.3
MTVR	Mutnovka	3.03	23	PN	Pn	02 39 04.0	+1.0
MTVR	Mutnovka	3.03	23	eP	Pn	02 39 04.0	+1.0
MTVR				eS	Sn	02 39 36.1	-2.0
GRL	Gorelyy	3.07	21	PN	Pn	02 39 05.0	+1.5
GRL	Gorelyy	3.07	21	eP	Pn	02 39 05.1	+1.5
GRL				eS	Sn	02 39 37.9	-1.1
RUS	Russkaya	3.08	27	PN	Pn	02 39 03.2	-0.3
RUS	Russkaya	3.08	27	eP	Pn	02 39 03.3	-0.3
RUS				eS	Sn	02 39 35.2	-3.8
APC	Apacha	3.27	10	PN	Pn	02 39 08.8	+2.7
APC	Apacha	3.27	10	eP	Pn	02 39 08.9	+2.7
KRMR	Karymshinskiy	3.34	20	PN	Pn	02 39 09.0	+1.9
KRMR	Karymshinskiy	3.34	20	eP	Pn	02 39 09.0	+1.9
PEA0B	Petropavlovsk-	3.52	15	ePN	Pn	02 39 11.9	+2.3
PETK	Petropavlovsk-	3.52	15	P	Pn	02 39 11.8	+2.1
	comp=E,1.2nm,0.3s,baz=204,slow=14,SNR=11						
PETK				S	Sn	02 39 53.3	+3.3
	comp=E,5.3nm,0.6s,baz=201,slow=14,SNR=4.5						
PETK				LR	LR	02 40 40.1	
	comp=E,44nm,19.6s,baz=187,slow=41						
	comp=E,1.8nm,0.3s						
PET	Petropavlovsk	3.64	24	ePN	Pn	02 39 15.1	+3.8
PET	Petropavlovsk	3.64	24	eP	Pn	02 39 12.6	+1.3
PET				eS	Sn	02 39 51.4	-1.5
DALK	Dalny	3.68	24	PN	Pn	02 39 12.8	+1.1
DALK	Dalny	3.68	24	eP	Pn	02 39 12.8	+1.1
DALK				eS	Sn	02 39 51.9	-1.9
UGLR	Uglovaya	3.85	24	PN	Pn	02 39 16.7	+2.4
UGLR	Uglovaya	3.85	24	eP	Pn	02 39 16.7	+2.4
AVH	Avacha	3.88	23	PN	Pn	02 39 17.0	+2.3
AVH	Avacha	3.88	23	eP	Pn	02 39 17.0	+2.3
KOK	Koryaka	3.88	22	PN	Pn	02 39 17.7	+3.0
KOK	Koryaka	3.88	22	eP	Pn	02 39 17.8	+3.0
SMAR	Somma	3.90	23	PN	Pn	02 39 17.3	+2.3
SMAR	Somma	3.90	23	eP	Pn	02 39 17.3	+2.3
SDLR	Sedlovina	3.93	24	PN	Pn	02 39 16.5	+1.1
SDLR	Sedlovina	3.93	24	eP	Pn	02 39 16.6	+1.1
KRX	Arik	3.95	22	PN	Pn	02 39 18.3	+2.7
KRX	Arik	3.95	22	eP	Pn	02 39 18.3	+2.7
GNL	Ganaly	4.12	14	PN	Pn	02 39 21.3	+3.3
GNL	Ganaly	4.12	14	eP	Pn	02 39 21.3	+3.3
SPN	Mys Shipunski	4.13	34	PN	Pn	02 39 18.7	+0.7
SPN	Mys Shipunski	4.13	34	eP	Pn	02 39 18.7	+0.7
SPN				eS	Sn	02 40 01.4	-3.7
SEY	Seymchan	13.42	352	i PN	Pn	02 41 25.9	+0.8
KLR	Kul'dur	15.91	278	i P	Pn	02 41 55.8	-2.6
USA0B	Ussuriysk Arra	17.41	261	i P	Pn	02 42 15.4	-1.9
MAJO	Matsushiro	18.55	232	i P	P	02 42 28.9	-2.0
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.4s						
MSHR	Mys Shultsa	18.73	257	i P	P	02 42 30.7	-2.0
MSHR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BILL	Bilibino	19.05	12	i P	Pn	02 42 37.0	-0.1
BILL				pmax	pmax		
	comp=Z,4.0nm,1.3s						
YAK	Yakutsk	19.16	320	i P	P	02 42 35.0	-2.3
YAK				pmax	pmax		
	comp=Z,10.0nm,0.4s						
H11N2	WAKE ISLAND Hy	31.11	160	T	T	03 17 59.4	
	baz=348,slow=76,SNR=27						
H11N1	WAKE ISLAND Hy	31.12	160	T	T	03 17 37.4	
	baz=348,slow=76,SNR=30						
H11N3	WAKE ISLAND Hy	31.12	160	T	T	03 17 37.5	
	baz=348,slow=76,SNR=57						
H11S1	WAKE ISLAND Hy	32.25	161	T	T	03 19 02.2	
	baz=348,slow=76,SNR=77						
H11S3	WAKE ISLAND Hy	32.26	161	T	T	03 19 10.0	
	baz=348,slow=76,SNR=156						
H11S2	WAKE ISLAND Hy	32.27	161	T	T	03 19 11.2	
	baz=348,slow=76,SNR=100						
NRIK	Noril'sk	37.35	327	i P	P	02 45 24.1	-1.7
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURK	Kurchatov	47.49	303	i P	P	02 46 46.6	-1.8
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
PDAR	Pinedale Array	61.34	57	P	P	02 48 31.6	+2.2
	comp=Z,0.2nm,0.4s,baz=300,slow=4.8,SNR=2.3						
	comp=Z,0.2nm,0.4s						
OBN	Obninsk	64.02	326	eP	P	02 48 44.8	-1.9
OBN				e		02 49 22.5	
OBN				e		02 51 08.6	
OBN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
HFS	Hagfors	66.38	341	P	P	02 49 02.2	+0.3
	comp=Z,1.5nm,0.8s,baz=28,slow=3.4,SNR=1.6						
	comp=Z,1.5nm,0.8s						
WRA	Warramunga Arr	72.02	202	P	P	02 49 40.6	+3.3
	comp=Z,0.4nm,0.8s,baz=14,slow=5.8,SNR=2.2						
	comp=Z,0.4nm,0.8s						
EKA	Eskdalemuir Ar	73.91	348	P	P	02 49 49.1	+0.9
	comp=Z,0.4nm,0.5s,baz=28,slow=5.1,SNR=4.6						
	comp=Z,0.4nm,0.5s						
TXAR	Lajitas Array	74.25	63	P	P	02 49 56.0	+5.3
	comp=Z,0.2nm,0.6s,baz=310,slow=3.0,SNR=2.6						
	comp=Z,0.2nm,0.6s						
ASAR	Alice Springs	75.71	201	P	P	02 50 03.5	+4.7
	comp=Z,0.4nm,0.7s,baz=14,slow=5.2,SNR=2.1						
	comp=Z,0.4nm,0.7s						
H03N2	Juan Fernandez	136.66	89	T	T	05 29 48.3	
	baz=313,slow=77,SNR=10						
H03N1	Juan Fernandez	136.67	89	T	T	05 29 49.6	
	baz=313,slow=77,SNR=12						
H03N3	Juan Fernandez	136.67	89	T	T	05 29 41.5	
	baz=313,slow=77,SNR=10.0						

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*ATH **27** 02:48:05.5, 36°.59N×28°.54E, h57^{km}±4^{km}, ML2.3/4, Manual Solution by I.Dede First location: 2019/06/27 02:49:43, This location: 2019/06/27 07:45:18 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 4 km; Longitude uncertainty: 5 km*

*THE **27** 02:48:06.4, 37°N±6°×2°9E±°, h0^{km}±6^{km}, M2.4/5, MLh2.4/5*

*ISK **27** 02:48:06.5, 36°.55N×28°.68E, h8^{km}, ML2.5/18*

*AFAD **27** 02:48:06.6, 36°.56N×28°.67E, h7^{km}±3^{km}, ML2.2*

ISC 27 02:48:06.6±1.0**, 36°.57N**±0°.02×**28°.68E**±0°.02**, h8**^{km}±9^{km}**, n47, σ0^{s}.90**/72**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FETY	Fethiye	0.33	79	Pg	Pg	02 48 12.9	-0.3
FETY				Sg	Sb	02 48 18.8	-1.5
FETY	Fethiye	0.33	79	P	Pg	02 48 12.8	-0.3
FETY				S	Sg	02 48 18.3	+0.7
FETY	Fethiye	0.33	79	P	Pg	02 48 13.7	+0.5
FETY				S	Sb	02 48 19.4	-0.9
SABU	Mula-Dalaman	0.34	43	P	Pg	02 48 13.2	-0.1
SABU				S	Sb	02 48 18.9	-1.7
SABU				i IAML		02 48 19.0	
	comp=N,175nm,0.3s						
SABU				i IAML		02 48 20.0	
	comp=E,409nm,0.2s						
TURN	Turunc	0.40	300	Pg	Pg	02 48 14.7	+0.3
TURN				Sg	Sb	02 48 21.4	-0.8
TURN	Turunc	0.40	300	P	Pg	02 48 14.5	+0.1
TURN				S	Sb	02 48 20.9	-1.2
TURN				i IAML		02 48 21.0	
	comp=N,354nm,0.5s						
TURN				i IAML		02 48 24.0	
	comp=E,110nm,0.4s						
ARG	Arkhangelos	0.57	231	Pg	Pg	02 48 17.7	+0.1
ARG				Sg	Sb	02 48 26.4	-0.6
ARG	Arkhangelos	0.57	231	P	Pg	02 48 17.4	-0.2
ARG				S	Sb	02 48 27.0	0.0
ARG	Arkhangelos	0.57	231	P	Pg	02 48 17.3	-0.2
ARG				S	Sg	02 48 25.8	+0.8
CAME	Cameli-Denizli	0.62	54	Pg	Pg	02 48 18.5	-0.2
CAME				Sg	Sb	02 48 28.9	+0.1
MULA	Mugla, Merkez-	0.74	337	P	Pb	02 48 21.8	0.0
CAEL	Denizli, Camel	0.75	43	P	Pg	02 48 20.7	-0.4
DNZT	Denizli-Tavas-	0.76	22	P	Pb	02 48 21.8	-0.3
KNIK	Mula-Seydike	0.77	69	P	Pg	02 48 21.3	-0.2
KNIK				S	Sb	02 48 33.1	+0.1
KNIK				i IAML		02 48 38.0	
	comp=E,61nm,0.3s						
AKAS	Kas	0.82	114	Pg	Pg	02 48 22.4	-0.1
AKAS				Sg	Sb	02 48 34.5	0.0
AKAS	Kas	0.82	114	P	Pg	02 48 22.8	+0.3
AKAS				S	Sb	02 48 34.1	-0.4
AKAS				i IAML		02 48 37.0	
	comp=N,113nm,0.5s						
AKAS				i IAML		02 48 43.0	
	comp=E,114nm,0.4s						
KSL	Kastellorizon	0.85	120	P	Pg	02 48 22.7	-0.1
KSL	Kastellorizon	0.85	120	P	Pg	02 48 22.7	-0.1
KSL				S	Sb	02 48 35.6	+0.6
DAT	Datca	0.90	280	Pg	Pg	02 48 23.9	+0.1
DAT				Sg	Sb	02 48 37.3	+0.7
TAVA	DENIZLI_Tavas	0.91	12	P	Pn	02 48 25.1	-0.7
GOLH	Golhisar	0.97	47	P	Pg	02 48 24.9	-0.4
GOLH				S	Sn	02 48 41.1	+0.5
GOLH				i IAML		02 48 43.0	
	comp=N,86nm,0.5s						
YAZI	Mula-Dat§a-	0.99	277	P	Pb	02 48 26.0	+0.1
ELL	Elmali	1.01	80	Pg	Pg	02 48 25.5	-0.5
ELL				Sg	Sn	02 48 41.2	-0.4
ELL	Elmali	1.01	80	P	Pg	02 48 25.2	-0.7
ELL				S	Sb	02 48 39.8	0.0
MLSB	Milas	1.02	315	Pg	Pn	02 48 27.1	-0.1
APMY	Acipayam-Deniz	1.03	29	Pg	Pn	02 48 27.0	-0.4
APMY				Sg	Sn	02 48 42.2	+0.2
DNIZ	Denizli-Tavas-	1.09	15	P	Pn	02 48 28.2	0.0
BDRM	Kayabasi	1.10	297	P	Pg	02 48 27.7	-0.1
BDRM				S	Sg	02 48 41.3	-0.8
BDRM				i IAML		02 48 48.0	
	comp=E,64nm,0.3s						
BODT	Bodrum	1.20	294	Pn	Pn	02 48 30.3	+0.6
BODT	Bodrum	1.20	294	P	Pg	02 48 29.4	-0.2
BODT				S	Sn	02 48 46.4	+0.3
ESEN	Aydn-Nazilli	1.25	348	P	Pn	02 48 29.8	-0.5
ESEN				S	Sb	02 48 45.9	-0.8
INCE	Denizli-Bozkur	1.34	32	P	Pg	02 48 32.8	+0.4
INCE				S	Sn	02 48 51.3	+1.5
INCE				i IAML		02 48 54.0	
	comp=N,39nm,0.5s						
INCE				i IAML		02 48 57.0	
	comp=E,39nm,0.5s						
AKUM	Antalya-Kumluc	1.37	100	P	Pg	02 48 33.7	+0.9
KORT	Korkueli	1.41	72	P	Pg	02 48 36.0	+2.3
NAZL	Nazilli-Aydin	1.42	348	Pn	Pg	02 48 33.8	-0.1
AYDB	Zeytinkoy-Aydi	1.51	336	Pn	Pb	02 48 34.8	-0.1
KARP	Karpathos	1.60	231	Pn	Pn	02 48 35.8	+0.6
KARP	Karpathos	1.60	231	P	Pn	02 48 35.7	+0.6
KARP				S	Sg	02 48 58.6	+0.6
KARP	Karpathos	1.60	231	P	Pn	02 48 30.6	-4.6
GCAM	G?zelcaml?	1.61	315	Pn	Pb	02 48 36.6	+0.1
KIRA	zmir-Kiraz	1.63	352	P	Pb	02 48 36.9	-0.2
ODEM	Odemis-Izmir	1.77	344	Pn	Pb	02 48 38.5	-0.8
SMG	Samos	1.85	308	P	Pn	02 48 39.0	+0.3
SMG				S	Sb	02 49 03.3	-0.8
KULA	Kula-Manisa	1.94	360	Pn	Pb	02 48 40.9	-1.3
BLCB	Balcova	2.23	325	Pn	Pn	02 48 45.1	+1.3
GORD	Gordes-Manisa	2.36	351	Pn	Pn	02 48 46.9	+1.2
CHOS	Chios island	2.76	312	Pn	Pn	02 48 52.8	+1.6

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*IDC **27** 02:59:58.0±0.6, 2°.61S×138°.55E, h0^{km}, mb4.2/11, mbtmp4.2/14, ML4.0/3, MS3.6/23, Error ellipse: s-maj=16.5km s-min=14.1km az=28.0*

*NEIC **27** 02:59:60.0±1.2, 2°.67S±0°.08×138°.55E±0°.05, h10^{km}±1^{km}, mb4.7/39, Error ellipse: s-maj=15.7km s-min=5.9km az=333.0*

*DJA **27** 03:00:00.7±0.3, 3°S±3°×13°9E±°, h10^{km}, M4.5/10, mb4.5/10, mB5.4/3, MLv4.4/7, Mw(mB)4.9/3*

ISC 27 03:00:02.9±0.5**, 2°.66S**±0°.06×**138°.52E**±0°.04**, h32**^{km}**, n97, σ1^{s}.47**/82**, mb4.6**/34**, MS3.6**/17**, 1C, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.69	16	P	Pn	03 00 12.0	-4.5
GENI	Genyem	1.64	88	P	Pn	03 00 29.7	+0.1
GENI	Genyem	1.64	88	P	Pn	03 00 29.4	-0.2
GENI				S	Sb	03 00 56.8	+3.8
JAY	Jayapura	2.18	86	Pn	Pn	03 00 37.0	0.0
	17nm,0.3s,baz=281,slow=7.4,SNR=86						
JAY				Lg	Lg	03 01 06.2	
	13nm,0.3s,baz=143,slow=20,SNR=7.2						
JAY				LR	LR	03 01 24.0	
	comp=Z,912nm,20.4s,baz=332,slow=40						
	243nm,0.7s						
JAY	Jayapura	2.18	86	P	Pn	03 00 37.0	0.0
SRPI	Serui, Papua	2.41	289	P	Pn	03 00 39.7	-0.5
SRPI				S	Sn	03 01 10.5	+1.8
BAKI	Biak	2.82	301	P	Pn	03 00 45.7	-0.1
FAKI	Fak Fak	6.27	268	Pn	Pn	03 01 34.2	+0.9
KDU	Kakadu	11.62	211	P	Pn	03 02 48.7	+2.0
COEN	Coen	12.13	158		Pn	03 02 54.0	+0.3
COEN	Coen	12.13	158	P	Pn	03 02 53.1	-0.5
MTN	Manton Dam	12.48	215		Pn	03 02 58.4	-0.1
MTN	Manton Dam	12.48	215	P	Pn	03 02 59.7	+1.2
SOEI	Soe	15.82	243		P	03 03 45.4	-1.7
SOEI	Soe	15.82	243	P	P	03 03 49.9	+2.8
SOEI	Soe	15.82	243	P	Pn	03 03 45.2	+1.6
	61nm,1.2s						
DAV	Davao City (W)	16.14	307	LR	LR	03 11 02.1	
	comp=Z,127nm,18.1s,baz=152,slow=41						
APSI	Ampana	16.96	276	P	P	03 03 59.0	-0.6
	944nm64nm,1.5s						
GUMO	Guam	17.33	21	LR	LR	03 10 19.3	
	comp=Z,128nm,19.6s,baz=158,slow=36						
WB0	Warramunga Arr	17.47	193	Pn	Pn	03 04 02.3	-2.0
WB0				IAmb	IAmb	03 04 14.9	
	comp=Z,50nm,1.4s						
WR8	Warramunga Arr	17.63	193	Pn	Pn	03 04 04.4	-1.9
WRAB	Tennant Creek	17.64	193		P	03 04 07.2	+0.1
WRA	Warramunga Arr	17.66	193		Pn	03 04 04.9	-1.7
WRA	Warramunga Arr	17.66	193	P	Pn	03 04 04.5	-2.1
	comp=Z,0.8nm,0.3s,baz=12,slow=12,SNR=20						
WRA				S	Sn	03 07 14.5	-8.0
	comp=Z,1.4nm,0.8s,baz=7.9,slow=25,SNR=2.4						
WRA				LR	LR	03 11 24.5	
	comp=Z,424nm,21.0s,baz=323,slow=39						
	comp=Z,4.6nm,0.7s						
QIS	Mount Isa	17.82	177	P	P	03 04 10.0	+0.9
TOLI2	Tolitoli	18.13	282		Pn	03 04 12.2	-0.3
TTSI	Tana Toraja	18.69	268	P	Pn	03 04 36.3	+17
KAPI	Kappang	18.87	262	LR	LR	03 11 47.8	
	comp=Z,70nm,20.2s,baz=90,slow=38						
FITZ	Fitzroy Crossi	19.87	219	P	P	03 04 32.3	+0.6
	comp=Z,0.3nm,0.3s,baz=44,slow=8.5,SNR=6.4						
FITZ				LR	LR	03 11 24.1	
	comp=Z,214nm,21.7s,baz=31,slow=34						
	comp=Z,2.5nm,0.7s						
FITZ	Fitzroy Crossi	19.87	219	P	Pn	03 04 36.4	+3.0
ASAR	Alice Springs	21.36	192		P	03 04 47.2	-0.5
ASAR	Alice Springs	21.36	192	P	P	03 04 47.0	-0.6
	comp=Z,7.6nm,0.9s,baz=21,slow=10,SNR=25						
	comp=Z,7.6nm,0.9s						

STKA	Stephens Creek	29.20	175	LR	LR	03 19 06.4	
	comp=Z,206nm,20.8s,baz=354,slow=39						
JNU	Nakatsue	36.32	349	LR	LR	03 21 24.7	
	comp=Z,105nm,20.1s,baz=178,slow=36						
MJAR	Matsushiro Arr	39.00	360	LR	LR	03 21 27.8	
	comp=Z,59nm,20.2s,baz=162,slow=33						
KSRS	Korea Array	41.11	347	P	P	03 07 43.7	-0.2
	comp=Z,1.3nm,0.7s,baz=160,slow=8.8,SNR=4.3						
	comp=Z,1.3nm,0.7s						
CMAR	Chiang Mai Arr	44.25	300	P	P	03 08 10.1	+0.3
	comp=Z,2.0nm,0.8s,baz=114,slow=6.6,SNR=8.1						
CMAR				LR	LR	03 28 13.6	
	comp=Z,30nm,18.4s,baz=170,slow=38						
	comp=Z,2.0nm,0.8s						
ASAJ	Asahikawa	46.71	4	LR	LR	03 26 11.4	
	comp=Z,44nm,21.9s,baz=168,slow=34						
BNX	BinXian	49.19	350	⇑P	P	03 08 48.3	+0.3
BNX				pmax	pmax		
	comp=Z,7.0nm,1.0s						
LZH	Lanzhou	50.33	323	eP	P	03 08 58.3	+1.2
LZH				pP	pP	03 09 07.0	+0.1
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
XLT	XiLinHaoTe	50.54	339	eP	P	03 09 03.5	+5.1
XLT				pP	pP	03 09 07.5	-0.7
XLT				sP	sP	03 09 11.5	-0.7
XLT				pmax	pmax		
	comp=Z,8.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,81nm,6.6s						
KLR	Kul'dur	52.02	354	LR	LR	03 29 41.1	
	comp=Z,58nm,18.8s,baz=196,slow=34						
GTA	Gaotai	54.92	324	eP	P	03 09 32.0	+1.1
GTA				sP	pP	03 09 39.0	-1.9
GTA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SONM	Songino Array	57.60	335	P	P	03 09 50.2	+0.3
	comp=Z,1.3nm,0.8s,baz=142,slow=7.5,SNR=5.6						
SONM				LR	LR	03 33 34.6	
	comp=Z,93nm,20.9s,baz=136,slow=35						
	comp=Z,1.3nm,0.8s						
PETK	Petropavlovsk-	57.86	14	LR	LR	03 30 23.2	
	comp=Z,45nm,21.6s,baz=192,slow=32						
MA2	Magadan	62.80	7	LR	LR	03 35 26.7	
	comp=Z,29nm,20.7s,baz=148,slow=34						
MKAR	Makanchi Array	69.64	322		P	03 11 09.2	-0.1
MKAR	Makanchi Array	69.64	322	P	P	03 11 09.6	+0.3
	comp=Z,4.7nm,0.9s,baz=123,slow=8.0,SNR=27						
	comp=Z,4.7nm,0.9s						
MAKZ	Makanchi	69.83	322		P	03 11 10.4	-0.1
MAKZ				IAmb	IAmb	03 11 12.0	
	comp=Z,7.9nm,1.0s						
ZALV	Zalesovo Beam	71.80	330	P	P	03 11 21.4	-0.9
	comp=Z,0.6nm,0.3s,baz=106,slow=3.2,SNR=3.9						
ZALV				LR	LR	03 44 27.8	
	comp=Z,18nm,18.8s,baz=113,slow=37						
	comp=Z,0.6nm,0.3s						
BOOM	Boomskoye usch	71.99	316		P	03 11 24.0	+0.2
BOOM				IAmb	IAmb	03 11 32.1	
	comp=Z,4.8nm,1.0s						
AAK	Ala-Archa	73.04	316	LR	LR	03 47 47.3	
	comp=Z,24nm,18.8s,baz=126,slow=39						
KURK	Kurchatov	73.57	325		P	03 11 32.9	+0.1
KURBB	Kurchatov Arra	73.58	325	P	P	03 11 32.6	-0.3
	comp=Z,1.9nm,0.9s,baz=114,slow=5.7,SNR=14						
	comp=Z,1.9nm,0.9s						
TIXI	Tiksi	74.44	357		P	03 11 36.9	-0.6
TIXI				IAmb	IAmb	03 11 38.7	
	comp=Z,11nm,1.5s						
VNDA	Vanda	75.84	175	P	P	03 11 45.5	0.0
VNDA				IAmb	IAmb	03 11 50.8	
	comp=Z,6.4nm,1.4s						
VNDA	Vanda	75.84	175	P	P	03 11 46.0	+0.5
	comp=Z,0.9nm,0.6s,baz=346,slow=5.4,SNR=7.0						
	comp=Z,0.9nm,0.6s						
KK31	Karatay Array	75.96	316	P	P	03 11 46.8	-0.1
KKAR	Karatay Array	75.96	316	P	P	03 11 46.4	-0.5
KKAR	Karatay Array	75.96	316	P	P	03 11 46.8	-0.1
KKAR				IAmb	IAmb	03 12 02.3	
	comp=Z,4.5nm,1.3s						
BVAR	Borovoye Array	79.17	325	P	P	03 12 04.3	-0.3
	comp=Z,1.7nm,0.6s,baz=108,slow=8.3,SNR=9.3						
	comp=Z,1.7nm,0.6s						
NRIK	Noril'sk	79.62	344	LR	LR	03 50 22.2	
	comp=Z,23nm,18.2s,baz=148,slow=38						
KDAK	Kodiak Island	81.16	30	LR	LR	03 45 29.7	
	comp=Z,59nm,18.9s,baz=214,slow=34						
MAW	Mawson	82.10	202	LR	LR	03 46 21.9	
	comp=Z,58nm,19.2s,baz=82,slow=34						
E19K	Redstone River	82.83	20		P	03 12 24.6	+0.9
E19K				IAmb	IAmb	03 12 31.5	
	comp=Z,4.1nm,0.8s						
RND	Reindeer	84.66	26	IAmb	IAmb	03 12 33.8	
	comp=Z,4.7nm,0.9s						
RND					P	03 12 34.4	+1.1
E22K	Anaktuvuk Pass	84.99	21		P	03 12 35.7	+0.8
E22K				IAmb	IAmb	03 12 36.8	
	comp=Z,4.9nm,1.1s						
G23K	Bananza Creek	85.18	22	P	P	03 12 36.8	+1.0
G23K				IAmb	IAmb	03 12 40.6	
	comp=Z,5.7nm,1.2s						
DHY	Denali Highway	85.21	26		P	03 12 36.0	-0.2
DHY				IAmb	IAmb	03 12 37.0	
	comp=Z,4.7nm,0.9s						
WRH	Wood River Hil	85.28	25	P	P	03 12 35.9	-0.4
WRH				IAmb	IAmb	03 12 36.3	
	comp=Z,4.9nm,1.0s						
CCB	Clear Creek Bu	85.45	24		P	03 12 36.0	-1.2
CCB				IAmb	IAmb	03 12 37.5	
	comp=Z,4.2nm,0.9s						
D23K	Nanushuk River	85.66	20		P	03 12 39.4	+1.2
E23K	Chandalar	85.75	21	P	P	03 12 39.6	+0.9
IL31		85.86	24	P	P	03 12 37.9	-1.3
ILAR	Eielson Array	85.86	24	P	P	03 12 37.7	-1.5
ILAR	Eielson Array	85.86	24	P	P	03 12 37.6	-1.6
	comp=Z,1.7nm,0.8s,baz=259,slow=4.9,SNR=25						
	comp=Z,1.7nm,0.8s						
TOLK	Toolik Lake Re	85.94	20		P	03 12 40.0	+0.4
F24K	Squaw Lake	86.22	22		P	03 12 41.1	+0.1
F24K				IAmb	IAmb	03 12 43.0	
	comp=Z,5.0nm,1.1s						
J25K	Salcha River,	86.46	25	P	P	03 12 42.0	-0.3
J25K				IAmb	IAmb	03 12 45.0	
	comp=Z,7.8nm,1.5s						
FYU	Fort Yukon	86.98	23	P	P	03 12 44.8	+0.2
F25K	Christian Rive	87.07	22	P	P	03 12 45.8	+0.6
J26L	Joseph Creek	87.19	25	P	P	03 12 46.2	+0.4
J26L				IAmb	IAmb	03 12 47.8	
	comp=Z,5.3nm,1.4s						
QSPA	South Pole Qui	87.28	180		P	03 12 45.7	-0.6
QSPA	South Pole Qui	87.28	180	P	P	03 12 46.4	0.0
	comp=Z,5.4nm,1.0s,baz=338,slow=3.3,SNR=11						
QSPA				LR	LR	03 52 22.5	
	comp=Z,64nm,18.8s,baz=14,slow=36						
	comp=Z,5.4nm,1.0s						
BMAR	Burnt Mountain	87.43	22	P	P	03 12 47.4	+0.5
G26K	Porcupine Rive	87.62	23		P	03 12 48.6	+0.9
F26K	Sheenjek River	87.65	22	P	P	03 12 48.3	+0.4
F26K				IAmb	IAmb	03 12 51.0	
	comp=Z,6.7nm,1.4s						
L27K	Beaver Creek,	87.67	27	P	P	03 12 48.1	0.0
L27K				IAmb	IAmb	03 12 49.7	
	comp=Z,4.1nm,1.1s						
K27K	Chicken	87.74	26	P	P	03 12 48.9	+0.5
K27K				IAmb	IAmb	03 12 50.4	
	comp=Z,5.6nm,1.1s						
H27K	Steamboat Moun	88.37	24		P	03 12 51.7	+0.4
I28M	Miner Creek	88.88	24		P	03 12 54.0	+0.1
I28M				IAmb	IAmb	03 12 57.9	
	comp=Z,6.6nm,1.2s						
DAWY	Dawson	88.91	26	P	P	03 12 54.1	+0.2
DAWY				IAmb	IAmb	03 12 55.5	
	comp=Z,5.9nm,0.9s						
I29M	Ogilvie Camp,	89.55	25	P	P	03 12 56.9	-0.1
I29M				IAmb	IAmb	03 12 58.2	
	comp=Z,6.8nm,1.2s						
KIRV	Kirov	91.78	328	LR	LR	03 54 44.4	
	comp=Z,56nm,21.8s,baz=121,slow=36						
BELG	Belogornoye	92.64	322	LR	LR	03 58 58.7	
	comp=Z,24nm,19.0s,baz=54,slow=38						
CPUP	Villa Florida	147.35	153	PKPbc	PKPab	03 19 46.0	0.0
	comp=Z,0.7nm,0.9s,baz=175,slow=1.4,SNR=2.9						
LPAZ	La Paz	147.62	126	PKPbc	PKPbc	03 19 45.7	-0.2
	comp=Z,1.8nm,0.7s,baz=292,slow=5.4,SNR=4.2						

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*UCR **27** 03:13:22.8±1.0, 8°.36N×82°.83W, h30^{km}±1^{km}, MW4.0, Fault plane solution: NP1:φ$_s$283.12000°, δ48.36000°, λ18.88000°.*

*CATAC **27** 03:13:23.7±0.8, 8°N±5°×8°3W±°, h11^{km}±3^{km}, M3.8/7, MLv3.8/7, Error ellipse: s-maj=10.9km s-min=8.7km az=29.1, confirmed*

*UPA **27** 03:13:23.1±0.9, 8°.38N×82°.84W, h31^{km}±4^{km}, MW3.8, Fault plane solution: NP1:φ$_s$0.00000°, δ90.00000°, λ-162.00000°.*

ISC 27 03:13:22.8±1.0, **8°.36N**±0°.03×**82°.85W**±0°.03, **h33**^{km}±5^{km}, **n72,** σ**0^s.87**/89, **14C-22D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.07	50	⇓iP	Pb	03 13 28.3	-0.1
LESP3				eS	Sb	03 13 31.7	-0.6
LPPC	Paso Canoas	0.17	3	⇑eP	Pb	03 13 28.8	-0.4
LPPC				eS	Sb	03 13 33.8	+0.3
CDITO	Canoas	0.22	354	P	Pb	03 13 29.2	-0.4
CDITO	Canoas	0.22	354	S	Sb	03 13 32.7	-1.5
LIMO3	Limones	0.26	184	⇓iP	Pn	03 13 30.5	+0.3
LIMO3				eS	Sb	03 13 35.6	+0.8
LMNES	Limones	0.26	183	eP	Pn	03 13 30.4	+0.2
NELY	Ciudad Neily	0.31	342	⇑eP	Pb	03 13 30.1	-0.6
NELY				eS	Sb	03 13 36.1	+0.1
DVD	David	0.40	79	⇓iP	Pb	03 13 31.6	-0.3
DVD				eS	Sb	03 13 38.5	+0.4
FITO	Golfito	0.40	311	⇑eP	Pb	03 13 30.6	-1.3
FITO				eS	Sb	03 13 37.1	-1.1
CSTBL	De las Acacias	0.41	82	⇓eP	Pb	03 13 31.6	-0.4
PEDE3	Pedregal, Chir	0.42	86	⇓iP	Pb	03 13 31.8	-0.4
PEDE3				eS	Sb	03 13 38.5	-0.2
EDAD	Golfito	0.43	313	⇑eP	Pb	03 13 31.1	-1.3
EDAD				eS	Sb	03 13 38.1	-0.9
LOCO3	Loma Colorada,	0.43	83	⇓iP	Pb	03 13 32.1	-0.2
LOCO3				eS	Sb	03 13 38.6	-0.2
MLIR3	Monte Lirio, C	0.43	3	⇓iP	Pb	03 13 32.6	+0.1
MLIR3				eS	Sb	03 13 38.7	-0.4
CLLRA	Cordillera,	0.45	31	⇓eP	Pb	03 13 32.3	-0.5
RSRNO	Rio Sereno	0.46	358	⇑eP	Pb	03 13 32.9	0.0
LOMA3	Las Lomas, Chi	0.46	81	⇓iP	Pb	03 13 32.3	-0.5
LOMA3				eS	Sb	03 13 39.4	-0.2
BRU2	Volcan	0.46	20	⇓eP	Pb	03 13 32.4	-0.6
BRU2	Volcan	0.46	20	S	Sb	03 13 40.5	+0.6
BRU2	Volcan	0.46	20	P	Pb	03 13 32.5	-0.4
BRU2	Volcan	0.46	20	iP	Pb	03 13 32.5	-0.4
BRU2				eS	Sn	03 13 41.1	+0.6
TBS2		0.47	24	⇓eP	Pb	03 13 33.5	+0.4
VITO	San Vito	0.47	345	⇑eP	Pb	03 13 32.9	-0.2
VITO				eS	Sn	03 13 41.3	+0.6
SCLRA	Santa Clara, W	0.48	8	⇓eP	Pb	03 13 32.9	-0.2
PTAR3	Potrerillos Ar	0.48	46	⇓iP	Pb	03 13 32.9	-0.4
BC3P	Paso Ancho	0.51	27	⇓iP	Pb	03 13 33.1	-0.7
BC3P				eS	Sn	03 13 42.3	+0.5
CHIR3	Chiriqui UPA,	0.51	86	⇓iP	Pb	03 13 33.1	-0.5
CHIR3				eS	Sb	03 13 40.4	-0.7
BQTLY	Boquete Panama	0.55	44	⇓eP	Pb	03 13 33.6	-0.8
BQSF3	Alto Boquete,	0.56	47	⇓iP	Pb	03 13 33.7	-0.8
ALCO	Alturas Coton,	0.59	1	eP	Pb	03 13 34.0	-1.0
PSOM3	Paja de Sombre	0.61	58	⇓iP	Pb	03 13 34.4	-0.9
EDP2	Potrero Grande	0.73	334	⇑eP	Pb	03 13 36.4	-0.8
EDP2				eS	Sb	03 13 47.3	+0.3
PBNVO	Pueblo Nuevo,	0.84	51	⇓eP	Pn	03 13 37.5	-0.8
PANP	Palmar Norte	0.85	315	eP	Pn	03 13 37.8	-0.7
RBALA	Bur	0.86	53	⇓eP	Pn	03 13 38.1	-0.5
BURE	Buenos Aires	0.94	329	eP	Pn	03 13 39.4	-0.4
DRK0	Durika	0.98	336	⇑eP	Pn	03 13 39.6	-0.9
DRK0	Durika	0.98	336	P	Pn	03 13 39.9	-0.5
DRK0	Durika	0.98	336	⇑iP	Pn	03 13 39.7	-0.8
DRK0				eS	Sn	03 13 53.4	0.0
RMDIO	Remedios, Chir	1.01	97	eP	Pn	03 13 40.6	-0.2
EDPE	Pejibaye, P	1.07	318	⇑eP	Pn	03 13 41.1	-0.4
OCHAL	Ojochal	1.08	313	P	Pn	03 13 41.2	-0.4
OCHAL	Ojochal	1.08	313	S	Sn	03 13 55.9	+0.4
KKNTU	Kakintº	1.14	65	⇓eP	Pn	03 13 41.7	-0.8
PDCAN	Manzana , Fuen	1.14	93	eP	Pn	03 13 41.8	-0.8
ISBTO	Bastimentos Is	1.17	33	eP	Pb	03 13 44.2	-0.3
SAJE	San Jernim	1.18	326	⇑eP	Pn	03 13 42.4	-0.8
VERH	Veragua Rainfo	1.59	348	eP	Pn	03 13 49.4	+0.6
PIEC	Cerro El Cedra	1.67	319	eP	Pn	03 13 50.1	+0.1
GMAL	Guarumal, Vera	1.71	110	eP	Pn	03 13 50.1	-0.2
LCR2	La Lucha 2	1.79	320	eP	Pn	03 13 51.4	-0.2
LCR2	La Lucha 2	1.79	320	S	Sn	03 14 15.5	+2.2
LCR2	La Lucha 2	1.79	320	P	Pn	03 13 52.6	+1.0
ABE2	San Pablo	1.79	318	eP	Pn	03 13 53.1	+1.4
PCAYA	Pacayas	1.82	329	eP	Pn	03 13 52.9	+0.8
VTCV	VTCV, Calle Va	1.83	332	⇑eP	Pn	03 13 53.1	+0.9
RESJ	San Isidro (Tu	1.84	335	⇑eP	Pn	03 13 53.4	+1.2
IRES	Siquirres	1.84	339	eP	Pn	03 13 53.7	+1.5
ABRB	Las Abras (San	1.85	332	eP	Pn	03 13 53.8	+1.3
PAR1A	Puntarenas Pro	1.85	312	⇓eP	Pn	03 13 53.5	+1.1
CVTV	Tajo	1.86	332	⇑eP	Pn	03 13 53.8	+1.0
CVTQ	Turrialba Volc	1.87	331	eP	Pn	03 13 54.0	+1.2
VTLA	Turrialba Volc	1.87	331	eP	Pn	03 13 53.7	+0.8
VTR0	Volcan Turrial	1.88	331	eP	Pn	03 13 54.1	+1.1
VICA	Volcano Irazu	1.89	329	eP	Pn	03 13 53.9	+0.6
TRT2	Tortugero	2.35	338	P	Pn	03 14 00.9	+1.7
TRT1	Tortuguero	2.38	339	eP	Pn	03 14 01.0	+1.4
SOCE	Pocosol	2.66	319	P	Pb	03 14 07.1	-2.8
SOCE	Pocosol	2.66	319	S	Sn	03 14 36.6	+1.9
COVE	Coope Vega, Sa	2.80	327	P	Pn	03 14 06.8	+1.5
COVE	Coope Vega, Sa	2.80	327	S	Sn	03 14 39.0	+0.9
CMARA	Lajas Hojancha	3.03	303	P	Pn	03 14 09.6	+1.0

KRSC 27 03:19:16.3±1.3, **53°.15N**×**157°.32E, h289**^{km}±13^{km}, **Ml3.9, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GNL	Ganaly	0.66	34	eP	Pn	03 19 54.7	+0.5
GNL				eS	S	03 20 24.5	+0.3
KOK	Koryaka	0.80	79	eP	Pn	03 19 55.8	+1.1
PET	Petropavlovsk	0.81	98	eP	Pn	03 19 55.4	+0.8
KRX	Arik	0.83	75	eP	Pn	03 19 55.8	+1.0
ASAK	Asacha	0.84	155	eP	Pn	03 19 56.2	+1.2
MTVR	Mutnovka	0.85	141	eP	Pn	03 19 56.2	+1.2
AVH	Avacha	0.86	82	eP	Pn	03 19 56.2	+1.3
DALK	Dalny	0.87	97	eP	Pn	03 19 56.1	+1.2
KRER	Koryakskii	0.87	79	eP	Pn	03 19 56.2	+1.1
SMAR	Somma	0.90	82	eP	Pn	03 19 56.5	+1.2
UGLR	Uglovaya	0.91	85	eP	Pn	03 19 56.7	+1.5
MIPR	Malaya Ipel'ka	0.94	202	eP	Pn	03 19 55.8	+0.5
RUS	Russkaya	1.02	134	eP	Pn	03 19 56.0	+0.4
RUS				eS	S	03 20 26.1	-0.6
SPN	Mys Shipunski	1.63	91	eP	Pn	03 19 59.4	+0.3
SPN				eS	S	03 20 31.4	-1.9
MKZ	Mys Kozlova	2.97	60	eP	Pn	03 20 11.1	+0.3
MKZ				eS	S	03 20 50.4	-3.9
BZMR	Bezymyannaya	3.35	32	eP	Pn	03 20 16.4	+1.5
KBTR	Krutoberegovo	4.42	44	eP	Pn	03 20 26.8	+0.2
BKI	Bering	5.48	64	eP	Pn	03 20 40.8	+1.9
BKI				eS	S	03 21 43.1	-2.2

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*STR **27** 03:20:09.7±1.6, 48°N±16°×1°2E±°, h5^{km}, MLv2.9/6, Error ellipse: s-maj=0.0km s-min=0.0km az=1.7, preliminary*

*VIE **27** 03:20:11.9±0.2, 47°.50N×11°.18E, h4^{km}±2^{km}, mb1.7/16, ml2.2/18, Error ellipse: s-maj=1.4km s-min=0.7km az=9.0 6 km E of Garmisch Partenkirchen*

*BGR **27** 03:20:12.4±0.3, 47°.51N×11°.22E, h2^{km}, ML2.1/10, Error ellipse: s-maj=4.4km s-min=4.4km az=102.0*

*PRU **27** 03:20:13.4, 47°.51N×11°.25E, h1^{km}, Garmisch Partenkirchen*

ISC 27 03:20:12.1±1.1, **47°.52N**±0°.02×**11°.22E**±0°.02, **h1**^{km}±10^{km}, **n50,** σ**1^s.05**/70, **Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PART	Garmisch-Parte	0.07	254	ePg	Pg	03 20 13.2	-0.4
MOTA	Moosalm	0.19	204	ePg	Pg	03 20 15.3	-0.5
	64nm,0.1s,SNR=193						
MOTA				iSg	Sg	03 20 18.3	+0.1
	172nm,0.1s						
SQTA	Sankt Quirin	0.30	181	ePg	Pg	03 20 17.4	-0.4
	22nm,0.1s						
SQTA				eSg	Sg	03 20 21.4	-0.2
	156nm,0.1s						
WATA	Walderalm	0.30	127	ePg	Pg	03 20 17.8	-0.2
	8.1nm,0.1s						
WATA				eSg	Sg	03 20 22.6	+0.7
	60nm,0.2s						
RETA	Reutte	0.31	264	ePg	Pg	03 20 17.5	-0.6
	16nm,0.1s,SNR=69						
RETA				iSg	Sg	03 20 21.9	-0.2
	28nm,0.2s						
WTTA	Wattenberg	0.38	132	iPg	Pg	03 20 19.2	-0.2
	2.5nm,0.1s						
WTTA				iSg	Sg	03 20 25.6	+1.3
	28nm,0.3s						
WTTA	Wattenberg	0.38	132	ePg	Pg	03 20 19.2	-0.2
WTTA				eSg	Sg	03 20 25.3	+0.9
FETA	Feichten	0.60	214	ePg	Pg	03 20 22.7	-0.8
	2.9nm,0.2s,SNR=14						
FETA				eSg	Sg	03 20 30.0	-1.3
	1.2nm,0.1s,SNR=5.6						
OBER	Oberstdorf	0.64	260	ePg	Pg	03 20 24.1	-0.2
DAVA	Damuels	0.94	256	ePg	Pg	03 20 29.7	-0.4
	3.6nm,0.2s,SNR=22						
DAVA				eSg	Sg	03 20 42.1	-0.1
	14nm,0.5s						
DAVA	Damuels	0.94	256	ePg	Pg	03 20 28.5	-1.6
LESA	Schwarzleotal	0.99	95	ePg	Pg	03 20 31.4	+0.3
	5.2nm,0.2s,SNR=14						
LESA				iSg	Sb	03 20 46.0	+0.2
	7.8nm,0.2s						
RJOB	Jochberg	1.09	78	ePn	Pn	03 20 34.6	0.0
ABTA	Abfaltersbach	1.17	131	ePg	Pn	03 20 35.5	-0.3
	0.6nm,0.1s,SNR=5.5						
ABTA				eSg	Sn	03 20 51.2	-1.2
	1.0nm,0.1s						
NORI	Noerdlinger Ri	1.27	342	ePg	Pn	03 20 37.3	+0.3
GUT	Gutenstein	1.52	292	Pg	Pn	03 20 41.2	+0.7
BIOA	Bad Ischl, Aus	1.65	83	ePg	Pg	03 20 44.7	+1.0
	2.4nm,0.2s,SNR=4.3						
BIOA				eSg	Sg	03 21 07.4	+2.4
	4.3nm,0.2s						
ZUR	Degenried	1.79	266	Pn	Pb	03 20 45.9	+0.2
ZUR	Degenried	1.79	266	Sn	Sg	03 21 10.8	+1.0
SLE	Schleitheim	1.86	279	Pg	Pb	03 20 47.3	+0.5
SLE	Schleitheim	1.86	279	Sg	Sg	03 21 12.1	+0.3
MYKA	Terra Mystica	1.88	117	ePn	Pn	03 20 45.0	-0.4
	1.1nm,0.1s						
MYKA				eSg	Sg	03 21 14.5	+2.0
	4.5nm,0.5s						
WET	Wettzell	1.97	34	ePn	Pn	03 20 46.2	-0.4
WET				eSg	Sg	03 21 14.9	-0.5
MOA	Molln	2.09	80	ePg	Pg	03 20 51.9	-0.2
	0.5nm,0.1s						
MOA				Sg	Sg	03 21 19.9	+0.8
	2.4nm,0.2s,SNR=7.6						
MOA	Molln	2.09	80	ePg	Pg	03 20 51.4	-0.7
SULZ	Cheisacher	2.10	271	Pn	Pb	03 20 50.7	-0.4
SULZ	Cheisacher	2.10	271	Sn	Sb	03 21 18.0	+0.3
BFO	Black Forest	2.10	294	ePn	Pn	03 20 49.0	+0.5
BFO				eSg	Sg	03 21 20.0	+0.3
GRF	Grafenberg Arr	2.18	0	ePg	Pg	03 20 54.8	+1.0
GRF				eSg	Sg	03 21 22.3	+0.3
FELD	Feldberg im Sc	2.20	281	Pn	Pn	03 20 51.2	+1.3
FELD	Feldberg im Sc	2.20	281	Sn	Sb	03 21 20.5	-0.1
KHC	Kasperske Hory	2.26	43	ePG	Pb	03 20 53.1	-0.6
KHC				eSG	Sg	03 21 24.4	-0.2
	comp=Z,5.3nm,0.4s						
OPP	Oppenau	2.26	297	Pn	Pn	03 20 51.4	+0.8
OPP	Oppenau	2.26	297	Sn	Sn	03 21 21.0	+2.0
KIZ	Kirchzarten	2.27	282	Pn	Pn	03 20 51.7	+0.9
KIZ	Kirchzarten	2.27	282	Sn	Sb	03 21 22.6	+0.1
ROTZ	Rotzenmuhle	2.34	16	ePn	Pn	03 20 49.9	-1.9
ROTZ				eSg	Sb	03 21 26.1	+1.5
ENDD	Endenburg	2.36	276	Pn	Pn	03 20 53.5	+1.4
ENDD	Endenburg	2.36	276	Sn	Sb	03 21 24.5	-0.6
BALST	Balsthal	2.40	267	Pn	Pn	03 20 54.0	+1.4
BALST	Balsthal	2.40	267	Sn	Sb	03 21 25.7	-0.5
CKRC	Cesky Krumlov	2.45	57	eSG	Sg	03 21 30.8	+0.1
OBKA	Obir	2.49	113	ePn	Pn	03 20 55.1	+1.2
	1.3nm,0.4s						
OBKA				eSg	Sg	03 21 34.0	+1.8
	1.8nm,0.5s						
MANZ	Manzenberg	2.54	13	eSg	Sg	03 21 32.4	-1.3
SOKA	Soboth	2.74	106	ePn	Pn	03 20 57.1	-0.2
	0.6nm,0.3s						
SOKA				eSg	Sg	03 21 37.9	-2.2
	1.2nm,0.4s						
MOX	Moxa	3.14	5	eSn	Sn	03 21 38.5	-2.3
TREC	Trest	3.35	56	eSG	Sg	03 21 57.7	-2.1
GOPC	GO Pecny, Ondr	3.37	43	eSG	Sg	03 22 00.9	+0.7
KRUC	Moravsky	3.79	64	eSN	Sg	03 22 11.6	-2.1
CLL	Collm	3.97	16	eSg	Sg	03 22 21.0	+1.5
	comp=Z,8.0nm,1.5s						

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*GCG **27** 03:25:49.4±0.8, 15°.48N×92°.22W, h166^{km}±7^{km}, MD4.2, ML3.7*

*MEX **27** 03:25:49.4±0.8, 15°.55N×92°.20W, h177^{km}±8^{km}, MD4.1*

ISC 27 03:25:45.7±1.3, **15°.41N**±0°.05×**92°.33W**±0°.04, **h195**^{km}±7^{km}, **n35,** σ**2^s.10**/51, **Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAVE	Pavencul	0.26	146	iP	Pn	03 26 12.1	+0.4
PAVE				eS	Sn	03 26 30.2	-1.6
PATR	El Naranjo	0.30	163	iP	Pn	03 26 12.0	+0.1
PATR				eS	Sn	03 26 29.7	-2.4
THIG		0.50	173	iP	Pn	03 26 13.4	+1.3
THIG				eS	Sn	03 26 31.9	-0.8
THIG		0.50	173	iP	Pn	03 26 13.3	+1.1
THIG				iS	Sn	03 26 31.9	-0.8
THIG				IAML		03 26 32.5	
	comp=N,4µm,0.4s						
SMCA	Catarina	0.60	156	iP	Pn	03 26 13.4	+0.8
SMCA				iS	Sn	03 26 32.1	-1.4
SMCA				IAML		03 26 36.1	
	comp=N,1µm,0.2s						
HUEH	Huehuetenango	0.80	96	eP	Pn	03 26 14.4	+0.5
HUEH				eS	Sn	03 26 38.1	+2.5
CCIG	Comitan	0.89	12	iP	Pn	03 26 15.8	+1.4
CCIG				eS	Sn	03 26 34.2	-2.5
CCIG	Comitan	0.89	12	iP	Pn	03 26 15.8	+1.4
CCIG				eS	Sn	03 26 35.0	-1.7
CCIG				IAML		03 26 36.9	
	comp=N,590nm,0.3s						
PCIG		0.91	289	iP	Pn	03 26 15.9	+1.6
PCIG				iS	Sn	03 26 35.7	-0.6
RTAL	Retalhuleu	1.07	145	eP	Pn	03 26 16.7	+1.3
RTAL				eS	Sn	03 26 37.5	-1.0
STG8	El Palmar, Qui	1.34	135	eP	Pn	03 26 15.8	-2.0
STG8				IAML		03 26 49.2	
	comp=N,1µm,0.2s						
STG0	El Palmar, Qui	1.36	136	eP	Pn	03 26 16.1	-1.9
STG0				IAML		03 26 45.9	
	comp=E,3µm,0.2s						
TGIG		1.56	331	iP	Pn	03 26 21.6	+2.0
TGIG				eS	Sn	03 26 44.0	-1.9
TGIG		1.56	331	iP	Pn	03 26 21.4	+1.8
TGIG				iS	Sn	03 26 45.7	-0.3
TGIG				IAML		03 26 47.5	
	comp=E,26nm,0.6s						
PETF	Flores	2.80	57	eP	Pn	03 26 30.0	-2.7
PETF				eS	Sn	03 27 07.3	-2.1
CMIG	Matias Romero	2.97	305	eP	Pn	03 26 37.7	+3.0
CMIG				eS	Sn	03 27 11.9	-1.2
HUIG	Huatulco	3.66	276	eP	Pn	03 26 42.1	-1.0
HUIG				eS	Sn	03 27 23.5	-4.6
VHO	Vista Hermosa	4.54	292	eP	Pn	03 26 57.9	+3.5
VHO				eS	Sn	03 27 44.2	-4.1
PEIG	Puerto Escondi	4.68	278	eP	Pn	03 26 56.4	+0.5
PEIG				eS	Sn	03 27 47.3	-3.8
YOIG	Yosondua	5.22	287	eP	Pn	03 27 06.1	+3.1
YOIG				eS	Sn	03 28 02.2	-1.7
TOIG	Toxpalan	5.27	301	eP	Pn	03 27 07.2	+3.7
TOIG				eS	Sn	03 28 06.6	+1.8
TXIG	Tlaxiaco	5.54	290	eP	Pn	03 27 12.1	+5.0
TXIG				eS	Sn	03 28 11.9	+0.6
PNIG	Pinotepa	5.67	281	eP	Pn	03 27 11.9	+3.3
PNIG				eS	Sn	03 28 14.5	+0.5
HLIG	Huajuapan de L	5.78	295	eP	Pn	03 27 13.4	+3.3
HLIG				eS	Sn	03 28 17.4	+0.5
JAUV	Jalcomulco	5.81	313	eP	Pn	03 27 11.6	+1.2
JAUV				eS	Sn	03 28 14.7	-2.8
FTIG	Fresnillo de T	6.09	295	eP	Pn	03 27 19.4	+5.2
FTIG				eS	Sn	03 28 25.1	+0.9

MGIG	Malinaltepec	6.32	288	eP	Pn	03 27 19.4	+2.2
MGIG				eS	Sn	03 28 31.0	+1.4
TLIG	Tlapa	6.36	291	eP	Pn	03 27 15.7	-2.0
TLIG				eS	Sn	03 28 31.7	+1.3
CRIG	Cruz Grande	6.67	282	eP	Pn	03 27 24.7	+3.0
CRIG				eS	Sn	03 28 39.2	+1.6
PBCV	Popocatepetl	6.94	302	eP	Pn	03 27 32.0	+6.6
PBPN	Popocatepetl	7.02	302	eP	Pn	03 27 34.4	+7.7
PBPN				eP		03 27 34.6	
PBXN	Popocatepetl	7.03	302	eP	Pn	03 27 33.9	+7.2
PPM	Popocatepetl	7.03	302	eP	Pn	03 27 32.1	+5.3
PPM				eS	Sn	03 28 39.2	-7.7
YAIG	Yautepec	7.30	299	eP	Pn	03 27 36.6	+6.6
ARIG	Puente Sto Nin	8.19	292	eP	Pn	03 27 49.3	+7.7

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*NOU **27** 03:32:57.6, 22°.12S×179°.19W, h612km, mb4.1/14, South of Fiji Islands*

*IDC **27** 03:33:00.6±1.3, 22°.18S×179°.69W, h598km±13km, mb3.3/10, mbtmp4.2/12, Error ellipse: s-maj=18.5km s-min=11.8km az=152.0*

*NEIC **27** 03:33:01.2±1.9, 22°.2S±0°.1×179°.7W±0°.1, h602km±7km, mb4.4/66, Error ellipse: s-maj=16.4km s-min=12.9km az=142.0*

ISC 27 03:32:59.7±0.4**, 22°.37S**±0°.05×**179°.55W**±0°.07**, h600**km**, n125, σ1s.56**/136**, mb4.3**/39**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.13	334	P	P	03 34 32.4	-1.4
MSVF	Nonsavu	5.13	334	P	P	03 34 32.1	-1.6
	99nm,0.5s,baz=174,slow=10,SNR=128						
MSVF				S	S	03 35 48.1	-2.4
	16nm,0.9s,baz=301,slow=23,SNR=0.7						
MSVF	Nonsavu	5.13	334	P	P	03 34 32.2	-1.6
MSVF	Nonsavu	5.13	334	S	S	03 35 49.2	-1.3
RAO	Raoul Island	7.01	168	S	S	03 36 15.0	-4.8
	213nm,0.3s,baz=279,slow=24,SNR=2.2						
GLKZ	Green Lake	7.02	168	P	P	03 34 47.4	-2.3
GLKZ				S	S	03 36 16.1	-3.8
MARNC	Mare, Loyalty	11.56	272	P	P	03 35 34.3	+0.3
PINNC	Pines Island,	12.02	266	P	P	03 35 39.0	+0.4
DZM	Mont Dzumac	12.97	269	P	P	03 35 49.1	+0.8
DZM	Mont Dzumac	12.97	269	P	P	03 35 48.9	+0.6
	7.0nm,0.5s,baz=94,slow=18,SNR=11						
DZM	Mont Dzumac	12.97	269	P	P	03 35 50.4	+2.0
FUNA	Funafuti	13.81	355	P	P	03 35 54.9	-2.0
OUZ	Omahuta	14.14	204	P	P	03 36 01.2	+1.5
OUZ	Omahuta	14.14	204	P	P	03 36 00.2	+0.5
KUZ	Kuaotunu	14.90	195	P	P	03 36 07.7	+1.0
KUZ	Kuaotunu	14.90	195	P	P	03 36 02.6	-4.2
WIAZ	Waiheke Island	15.10	197	P	P	03 36 09.7	+1.2
MBAZ	Motutapu North	15.14	197	P	P	03 36 08.8	-0.1
MKAZ	Moumakai	15.38	196	P	P	03 36 12.5	+1.4
AWAZ	Awhitu Peninsu	15.48	198	P	P	03 36 13.3	+1.3
HAZ	Te Kaha	15.51	188	P	P	03 36 11.3	-1.0
HAZ				S	S	03 38 46.9	-2.4
RUGZ	Raukumara Rang	15.73	188	P	P	03 36 13.3	-1.2
RUGZ				S	S	03 38 49.0	-4.3
TOZ	Tahuroa Road	15.89	194	P	P	03 36 17.5	+1.7
TOZ				IAmb	IAmb	03 36 18.9	
	comp=Z,15nm,0.7s						
TOZ	Tahuroa Road	15.89	194	P	P	03 36 17.5	+1.7
TWGZ	Tauwhareparae	15.90	187	P	P	03 36 17.0	+1.0
TWGZ				S	S	03 38 55.3	-0.7
URZ	Urewera	16.10	190	P	P	03 36 15.8	-1.9
	comp=Z,8.1nm,0.3s,baz=271,slow=3.1,SNR=22						
URZ				S	S	03 38 54.1	-5.0
	comp=Z,21nm,0.9s,baz=163,slow=19,SNR=12						
URZ	Urewera	16.10	190	P	P	03 36 17.4	-0.3
URZ	Urewera	16.10	190	P	P	03 36 15.8	-1.9
URZ				S	S	03 38 56.6	-2.4
MWZ	Matawai	16.11	188	P	P	03 36 16.3	-1.5
MWZ				S	S	03 38 56.0	-3.4
MUGZ	Murupara	16.36	190	P	P	03 36 18.8	-1.3
MUGZ				S	S	03 38 58.9	-4.5
RIGZ	Rimuhau	16.45	187	S	S	03 39 03.3	-1.6
RTZ	Ruatahuna	16.47	190	P	P	03 36 19.9	-1.3
RTZ				IAmb	IAmb	03 36 26.1	
	comp=Z,13nm,0.8s						
RTZ	Ruatahuna	16.47	190	P	P	03 36 19.8	-1.3
SNGZ	Shannon Statio	16.58	189	S	S	03 39 06.1	-0.9
HIZ	Hauiti	16.79	195	P	P	03 36 24.8	+0.7
BFZ	Birch Farm	18.60	190	P	P	03 36 39.7	-0.8
BFZ				IAmb	IAmb	03 36 48.5	
	comp=Z,17nm,1.1s						
BFZ	Birch Farm	18.60	190	P	P	03 36 40.3	-0.2
MRZ	Mangatainoka R	18.70	192	P	P	03 36 41.1	-0.4
MRZ				IAmb	IAmb	03 37 01.7	
	comp=Z,20nm,1.2s						
SNZO	South Karori	19.50	193	P	P	03 36 50.4	+1.8
SNZO	South Karori	19.50	193	P	P	03 36 48.9	+0.3
SNZO	South Karori	19.50	193	S	S	03 39 56.9	+3.0
TKNZ	Takaka Hill	19.66	197	P	P	03 36 51.4	+1.3
DSZ	Denniston Nort	20.64	199	P	P	03 36 59.9	+0.9
KHZ	Kahutara	20.81	195	P	P	03 37 01.2	+0.8
JCZ	Jackson Bay	23.70	201	P	P	03 37 27.0	+0.7
TATA	Tatamba Isabel	24.23	302	P	P	03 37 30.2	-1.1
MLZ	Mavora Lakes	25.06	201	P	P	03 37 39.4	+1.1
DCZ	Deep Cove	25.48	202	P	P	03 37 43.0	+1.2
CTAO	Charters Tower	31.91	268	P	P	03 38 38.7	+0.8
TOO	Toolangi	33.64	235	P	P	03 38 53.8	+1.6
COEN	Coen	36.31	277	P	P	03 39 13.4	-1.2
COEN				IAmb	IAmb	03 39 39.7	
	comp=Z,17nm,1.3s						
BBOO	Buckleboo	40.44	245	P	P	03 39 48.4	+0.7
ASAR	Alice Springs	42.71	259	P	P	03 40 05.8	+0.1
ASAR	Alice Springs	42.71	259	P	P	03 40 06.5	+0.8
	comp=Z,7.5nm,0.8s,baz=97,slow=7.8,SNR=63						
ASAR				S	S	03 45 47.3	+0.1
	comp=Z,1.8nm,0.9s,baz=100,slow=16,SNR=6.8						
	comp=Z,7.5nm,0.8s						
WR0	Warramunga Arr	42.75	264	P	P	03 40 05.8	-0.2
WR8	Warramunga Arr	42.79	264	P	P	03 40 05.5	-0.8
WR8				IAmb	IAmb	03 40 28.8	
	comp=Z,14nm,1.4s						
WB0	Warramunga Arr	42.93	265	P	P	03 40 07.5	+0.1
WB0				IAmb	IAmb	03 40 08.2	
	comp=Z,11nm,0.6s						
WB2	Warramunga Arr	42.93	264	P	P	03 40 07.5	+0.1
WB2				IAmb	IAmb	03 40 08.3	
	comp=Z,12nm,0.8s						
WRA	Warramunga Arr	42.94	264	P	P	03 40 07.4	-0.1
WRA	Warramunga Arr	42.94	264	P	P	03 40 07.6	+0.1
	comp=Z,5.7nm,0.6s,baz=96,slow=7.7,SNR=82						
WRA				S	S	03 45 49.3	-1.2
	comp=Z,0.7nm,1.0s,baz=92,slow=14,SNR=2.3						
	comp=Z,5.7nm,0.6s						
FORT	Forrest	47.24	248	P	P	03 40 40.8	+0.8
FORT				IAmb	IAmb	03 41 08.3	
	comp=Z,13nm,1.0s						
MLH	Mauna Loa	47.84	31	P	P	03 40 44.9	+0.1
STCH	Steam Cracks	47.87	32	P	P	03 40 44.8	-0.1
HMH	Humu'ula Sheep	47.89	31	P	P	03 40 45.3	0.0
KNRA	Kununurra	49.12	268	P	P	03 40 54.8	+0.6
KNRA				IAmb	IAmb	03 41 22.2	
	comp=Z,15nm,1.1s						
FITZ	Fitzroy Crossi	51.37	264	P	P	03 41 11.5	+1.0
VNDA	Vanda	55.93	185	P	P	03 41 44.3	+2.7
VNDA	Vanda	55.93	185	P	P	03 41 44.4	+2.7
	comp=Z,0.5nm,0.7s,baz=15,slow=13,SNR=2.4						
	comp=Z,0.5nm,0.7s						
MBWA	Marble Bar	56.05	259	P	P	03 41 42.9	-0.5
QSPA	South Pole Qui	67.71	180	P	P	03 43 00.5	+2.3
QSPA	South Pole Qui	67.71	180	P	P	03 43 00.1	+1.9
	comp=Z,1.3nm,0.6s,baz=36,slow=8.7,SNR=6.3						
	comp=Z,1.3nm,0.6s						
MAJO	Matsushiro	70.88	325	P	P	03 43 15.4	-2.0
AMKA	Amchitka	73.43	359	P	P	03 43 31.6	-0.1
ADK	Adak	73.97	2	P	P	03 43 34.6	-0.2
ADK				IAmb	IAmb	03 43 35.1	
	comp=Z,6.6nm,0.8s						
GSTR	Great Sitkin T	74.20	2	P	P	03 43 36.3	+0.2
ATKA	Atka Island	74.40	3	P	P	03 43 35.8	-1.3
ATKA				IAmb	IAmb	03 43 37.5	
	comp=Z,17nm,0.9s						
SMAI	San Martin Ant	77.39	159	P	P	03 43 55.6	+2.1
PEA0B	Petropavlovsk-	77.71	346	P	P	03 43 54.9	-0.4
PETK	Petropavlovsk-	77.71	346	P	P	03 43 55.1	-0.2
	comp=Z,1.5nm,0.6s,baz=177,slow=6.2,SNR=2.1						
	comp=Z,1.5nm,0.6s						
KMRM	Mail Ridge	81.11	40		P	03 44 14.6	+1.0
KMRM				IAmb	IAmb	03 44 16.7	
	comp=Z,15nm,0.8s						
ESJX	Sierra Juarez	81.37	50	P	P	03 44 16.6	+1.3
SII	Sitkinak Islan	81.49	14	P	P	03 44 15.1	0.0
SLBS	Sierra La Lagu	81.69	60	P	P	03 44 18.5	+1.6
SLBS				IAmb	IAmb	03 44 45.7	
	comp=Z,23nm,1.5s						
KRMB	Red Mountain	81.81	39	P	P	03 44 19.0	+1.8
KRMB				IAmb	IAmb	03 44 51.2	
	comp=Z,19nm,1.4s						
PLK4	Peulik 4	82.03	12	P	P	03 44 17.8	-0.1
PLK4				IAmb	IAmb	03 44 42.4	
	comp=Z,9.4nm,0.9s						
KSXB	Camp Six Broad	82.03	39	P	P	03 44 19.7	+1.4
KSXB				IAmb	IAmb	03 45 02.9	
	comp=Z,15nm,1.3s						
DSP	Deep Springs	82.98	45		P	03 44 24.4	+1.5
NVAR	Mina Array Bea	83.37	44	P	P	03 44 26.2	+1.0
	comp=Z,1.6nm,0.7s,baz=221,slow=8.5,SNR=11						
	comp=Z,1.6nm,0.7s						
O18K	Koktuh Hills	84.32	12		P	03 44 29.0	-0.1
O18K				IAmb	IAmb	03 44 30.0	
	comp=Z,11nm,0.9s						
J05D	Fort Rock, OR	84.46	39		P	03 44 31.8	+1.5
J05D				IAmb	IAmb	03 44 32.9	
	comp=Z,13nm,1.2s						
PINE	Pine Mountain	84.94	38		P	03 44 34.1	+1.4
PINE				IAmb	IAmb	03 44 34.9	
	comp=Z,4.1nm,0.7s						
TUC	Tucson	85.26	52		P	03 44 36.1	+1.7
319A	Douglas	85.92	54		P	03 44 38.4	+0.8
319A				IAmb	IAmb	03 44 40.6	
	comp=Z,6.3nm,0.9s						
SNAA	Sanae	86.19	179	P	P	03 44 38.2	+0.1
	comp=Z,1.3nm,1.2s,baz=229,slow=9.3,SNR=1.7						
	comp=Z,1.3nm,1.2s						
U15A	North Rim	86.28	48		P	03 44 41.0	+1.6
U15A				IAmb	IAmb	03 44 41.9	
	comp=Z,4.2nm,0.8s						
L19K	White Mountain	86.54	11	P	P	03 44 40.3	+0.6
L19K				IAmb	IAmb	03 44 41.2	
	comp=Z,4.6nm,0.8s						
SUA	Susitna One	86.70	13	P	P	03 44 40.4	-0.1
G08A	Pilot Rock	86.97	38		P	03 44 43.5	+1.3
G08A				IAmb	IAmb	03 44 44.4	
	comp=Z,8.2nm,1.2s						
BMO	Blue Mountains	87.67	39		P	03 44 46.6	+1.1
CAST	Castle Rocks	88.19	12		P	03 44 46.6	-0.7
CAST				IAmb	IAmb	03 44 47.6	
	comp=Z,5.8nm,0.7s						
TMUT	Trail Mountain	88.49	46		P	03 44 51.3	+1.6
TMUT				IAmb	IAmb	03 44 52.2	
	comp=Z,3.6nm,0.8s						
PLID	Pearl Lake	88.57	39		P	03 44 50.7	+0.9
PLID				IAmb	IAmb	03 44 51.7	
	comp=Z,6.8nm,1.5s						
TRF	Thorofare Moun	88.57	13		P	03 44 49.0	-0.4
HLID	Hailey	88.68	41		P	03 44 51.3	+1.0
HLID				IAmb	IAmb	03 44 52.6	
	comp=Z,3.0nm,0.9s						
HVU	Hansel Valley	88.75	43		P	03 44 51.8	+1.1
HVU				IAmb	IAmb	03 44 52.7	
	comp=Z,3.7nm,1.0s						
RND	Reindeer	88.83	13		P	03 44 50.6	+0.2
MNTX	Cornudas Mount	89.00	55		P	03 44 53.3	+1.4
MNTX				IAmb	IAmb	03 44 54.2	
	comp=Z,3.8nm,0.8s						
TX31	Lajitas Ar. Si	89.27	58		P	03 44 55.2	+1.9
TX31				IAmb	IAmb	03 44 56.1	
	comp=Z,3.7nm,1.1s						
TXAR	Lajitas Array	89.27	58	P	P	03 44 55.2	+1.9
	comp=Z,1.6nm,0.8s,baz=213,slow=6.4,SNR=13						
	comp=Z,1.6nm,0.8s						
BSUT	Blindstream Ca	89.41	45		P	03 44 55.4	+1.4
BSUT				IAmb	IAmb	03 44 56.3	
	comp=Z,6.6nm,0.9s						
ANMO	Albuquerque	89.69	52		P	03 44 56.6	+1.3
ANMO	Albuquerque	89.69	52		P	03 44 56.5	+1.3
ANMO				IAmb	IAmb	03 44 57.2	
	comp=Z,1.9nm,0.8s						
ILAR	Eielson Array	90.45	13	P	P	03 44 57.0	-0.8
	comp=Z,0.7nm,0.8s,baz=219,slow=4.8,SNR=6.9						
	comp=Z,0.7nm,0.8s						
J26L	Joseph Creek	90.97	15	P	P	03 45 00.7	+0.4
J26L				IAmb	IAmb	03 45 01.5	
	comp=Z,4.7nm,1.4s						
PDAR	Pinedale Array	91.31	44	P	P	03 45 03.2	+0.6
	comp=Z,0.7nm,0.6s,baz=224,slow=4.1,SNR=7.7						
	comp=Z,0.7nm,0.6s						
BVAR	Borovoye Array	119.56	319	PKP	PKiKP	03 50 42.0	0.0
	comp=Z,1.0nm,0.3s,baz=129,slow=2.0,SNR=5.0						
ARCES	ARCESS Array B	130.47	349	PKP	PKiKP	03 51 02.9	-0.3
	comp=Z,2.6nm,0.9s,baz=36,slow=2.1,SNR=2.0						
HFS	Hagfors	141.12	349	PKhKP	PKPpre	03 51 17.4	
	comp=Z,1.6nm,0.4s,baz=72,slow=4.8,SNR=21						
AKASG	Malin Array Be	143.90	329	PKP	PKPab	03 51 26.7	-0.4
	comp=Z,1.8nm,0.5s,baz=44,slow=4.1,SNR=13						
BRTR	Keskin Array B	146.96	309	PKPbc	PKPbc	03 51 36.5	+0.2
	comp=Z,0.3nm,0.4s,baz=12,slow=9.4,SNR=3.7						
EKA	Eskdalemuir Ar	146.97	4	PKPbc	PKPbc	03 51 35.4	-0.2
	comp=Z,0.6nm,0.4s,baz=358,slow=2.2,SNR=12						
MMAI	Mount Meron Ar	147.42	297	PKPbc	PKiKP	03 51 39.3	+0.2
	comp=Z,0.7nm,0.3s,baz=106,slow=4.7,SNR=2.3						
CLL	Collm	149.50	344	i PKPbc	PKiKP	03 51 42.9	+0.2
	comp=Z,7.0nm,0.5s						
CLL				ePKPab	PKPab	03 51 50.0	+0.5
GERES	GERESS Array B	151.55	341	PKPbc	PKiKP	03 51 47.4	+0.2
	comp=Z,0.5nm,0.4s,baz=57,slow=4.9,SNR=5.0						
GERES				PKPab	PKPab	03 51 58.8	+0.4
	comp=Z,0.4nm,0.6s,baz=16,slow=7.6,SNR=2.6						
ESDC	Sonseca Array	162.34	11	PKPab	PKPab	03 52 45.0	-0.3
	comp=Z,0.8nm,0.9s,baz=1.9,slow=4.6,SNR=5.5						

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*NNC **27** 03:44:56.6±0.3, 43°.39N×77°.25E, h0km, mb2.2, mpv2.9, Error ellipse: s-maj=3.0km s-min=1.9km az=179.0*

*SOME **27** 03:44:57.9, 43°.42N×77°.23E, h15km*

*KRNET **27** 03:44:57.3±0.1, 43°.42N×77°.23E, h18km, mb2.4*

ISC 27 03:44:57.2±1.0**, 43°.42N**±0°.03×**77°.24E**±0°.02**, h15**km±9km**, n23, σ0s.38**/46**, 10C, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKK	Chushkaly	0.47	337	P	Pg	03 45 07.0	+0.3
	6.2nm,0.1s						
CHKK				S	Sg	03 45 13.3	+0.2
	49nm,0.2s						
CHKK	Chushkaly	0.47	337	eP	Pg	03 45 07.0	+0.3
CHKK				eS	Sg	03 45 13.3	+0.2
CHKK	Chushkaly	0.47	337	eP	Pg	03 45 07.0	+0.3
	6.2nm,0.1s						
CHKK				eS	Sg	03 45 13.3	+0.2
	49nm,0.2s						
KTBS	Karatobe	0.50	306	P	Pg	03 45 07.3	+0.1
	12nm,0.1s						
KTBS				S	Sg	03 45 13.5	-0.4
	54nm,0.2s						
KTBS	Karatobe	0.50	306	eP	Pg	03 45 07.3	+0.1
KTBS				eS	Sg	03 45 13.5	-0.4
MTBS	Maitube	0.66	245	P	Pg	03 45 10.0	-0.1
	8.7nm,0.1s						
MTBS				S	Sg	03 45 18.8	0.0
	30nm,0.2s						
MTBS	Maitube	0.66	245	eP	Pg	03 45 10.0	-0.1
MTBS				eS	Sg	03 45 18.6	-0.2
MTBS	Maitube	0.66	245	eP	Pg	03 45 10.0	-0.1
	8.7nm,0.1s						
MTBS				eS	Sg	03 45 18.8	0.0
	30nm,0.2s						
ARXS	Arharly	0.90	28	P	Pb	03 45 14.3	-0.4
	1.5nm,0.1s						
ARXS				S	Sb	03 45 26.1	-0.5
	4.4nm,0.1s						
SATY	Saty	0.92	112	P	Pb	03 45 14.4	-0.6
	7.6nm,0.1s						
SATY				S	Sb	03 45 26.0	-1.1
	24nm,0.1s						
KST	Kastek	1.00	249	eP	Pb	03 45 16.3	-0.1
KST				eS	Sb	03 45 29.3	-0.2
KPKS	Kokpek	1.05	87	P	Pb	03 45 17.2	0.0
	0.4nm,0.2s						
KPKS				S	Sb	03 45 30.8	-0.1
	8.2nm,0.2s						
KPKS	Kokpek	1.05	87	eP	Pb	03 45 17.2	0.0
KPKS				eS	Sb	03 45 30.8	-0.1
BLB	Baldybastay	1.13	52	P	Pb	03 45 18.3	-0.2
	4.4nm,0.1s						
BLB				S	Sb	03 45 33.0	-0.1
	7.1nm,0.3s						
KRBS	Karabastau	1.17	284	P	Pn	03 45 18.7	-0.5
	1.2nm,0.1s						
KRBS				S	Sb	03 45 34.4	+0.1
	6.0nm,0.2s						
KDJ	Kajisay	1.28	182	⇑iP	Pb	03 45 21.2	0.0
KDJ				⇑iS	Sg	03 45 38.6	-0.1
TKM2	Tokmak 2	1.30	248	⇑P	Pn	03 45 21.0	-0.1
	0.2nm,0.2s						
TKM2				⇑S	Sn	03 45 38.5	+0.2
	0.8nm,0.2s						
TKM2	Tokmak 2	1.30	248	⇑iP	Pn	03 45 21.2	+0.1
TKM2				⇑iS	Sn	03 45 38.5	+0.2
UZB	Uzynbulak	1.33	101	P	Pn	03 45 21.7	+0.4
	4.0nm,0.2s						
UZB				S	Sb	03 45 38.9	+0.1
	8.8nm,0.2s						
UZB	Uzynbulak	1.33	101	eP	Pn	03 45 21.8	+0.4
UZB				eS	Sb	03 45 38.9	+0.1
BOOM	Boomskoye usch	1.33	226	⇑eP	Pn	03 45 21.7	+0.3
BOOM				⇑eS	Sn	03 45 39.2	+0.2
KNOS	Konyrlen	1.69	55	P	Pb	03 45 28.8	+0.7
	0.5nm,0.1s						
KNOS				S	Sg	03 45 50.6	-1.0
	9.7nm,0.3s						
TARG	Taragay, Kyrgy	1.74	166	⇑iP	Pb	03 45 28.9	-0.1
TARG				⇑iS	Sb	03 45 51.8	+1.0

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*IDC **27** 03:46:26.5±0.8, 2°.63S×138°.54E, h0km, mb3.8/7, mbtmp3.8/10, ML3.5/3, MS3.0/2, Error ellipse: s-maj=20.1km s-min=15.9km az=178.0*

*DJA **27** 03:46:30.2±0.8, 2°S±6°×13°9E±°, h13km±7km, M4.0/6, MLv4.0/6*

ISC 27 03:46:30.7±0.7**, 2°.57S**±0°.06×**138°.58E**±0°.05**, h32**km**, n16, σ1s.84**/18**, mb4.0**/7**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.59	13	P	Pb	03 46 40.4	-2.3
SMPI				S	Sb	03 46 47.9	-3.0
GENI	Genyem	1.59	91	P	Pn	03 46 58.3	+1.7
JAY	Jayapura	2.13	89	Pn	Pn	03 47 05.5	+1.5
	7.7nm,0.3s,baz=264,slow=8.6,SNR=27						
JAY				Lg	Lg	03 47 34.0	
	4.7nm,0.3s,baz=61,slow=13,SNR=4.2						
JAY				LR	LR	03 47 51.8	
	comp=Z,220nm,19.3s,baz=5.5,slow=39						
	65nm,0.6s						
JAY	Jayapura	2.13	89	P	Pn	03 47 05.3	+1.3
SRPI	Serui, Papua	2.44	287	P	Pn	03 47 07.9	-0.3
SRPI				S	Sn	03 47 38.5	+1.6
BAKI	Biak	2.82	299	P	Pn	03 47 15.6	+2.0
WRA	Warramunga Arr	17.75	193	P	Pn	03 50 34.0	-1.6
	0.2nm,0.3s,baz=4.4,slow=12,SNR=9.4						
WRA				S	Sn	03 53 49.5	-3.1
	3.5nm,0.3s,baz=2.4,slow=24,SNR=12						
	2.1nm,0.9s						
FITZ	Fitzroy Crossi	19.98	219	P	P	03 51 00.6	+0.1
	0.1nm,0.3s,baz=52,slow=12,SNR=1.8						
	2.5nm,1.0s						
ASAR	Alice Springs	21.45	192	P	P	03 51 14.8	-1.6
	2.1nm,0.7s,baz=20,slow=11,SNR=13						
	2.1nm,0.7s						
MJAR	Matsushiro Arr	38.91	360	LR	LR	04 09 29.5	
	comp=Z,30nm,19.5s,baz=138,slow=36						
SONM	Songino Array	57.54	335	P	P	03 56 18.7	+1.5
	0.3nm,0.5s,baz=155,slow=7.8,SNR=2.2						
	0.3nm,0.5s						
MKAR	Makanchi Array	69.60	322	P	P	03 57 38.1	+1.3
	1.2nm,0.9s,baz=136,slow=7.6,SNR=9.5						
	1.2nm,0.9s						
KURBB	Kurchatov Arra	73.54	325	P	P	03 58 01.1	+0.7
	0.2nm,0.4s,baz=106,slow=4.4,SNR=2.6						
	0.2nm,0.4s						
BVAR	Borovoye Array	79.12	325	P	P	03 58 33.6	+1.6
	1.2nm,0.7s,baz=100,slow=8.3,SNR=5.6						
	1.2nm,0.7s						
ILAR	Eielson Array	85.76	24	P	P	03 59 06.3	-0.2
	0.7nm,0.7s,baz=269,slow=4.5,SNR=9.2						
	0.7nm,0.7s						
QSPA	South Pole Qui	87.37	180	P	P	03 59 15.7	+1.2
	0.7nm,0.3s,baz=294,slow=1.7,SNR=5.3						
	0.7nm,0.3s						

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*GII **27** 03:51:31.9±0.0, 29°.015N±0°.003×34°.788E±0°.001, h1km, Mws2.1, confirmed*

*HLW **27** 03:51:31.7, 28°.92N×34°.89E, h12km±1km, Md2.3, Ml2.6*

*SGS **27** 03:51:32.8, 28°.98N×34°.78E, h15km, Ml1.8*

ISC 27 03:51:32.7±0.9**, 28°.97N**±0°.02×**34°.79E**±0°.04**, h17**km±6km**, n31, σ0s.67**/35**, Egypt**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAQS	Haql	0.14	54	P	Pg	03 51 36.6	-0.2
HAQS	Haql	0.14	54	S	Sg	03 51 39.4	-0.1
NUB	Nuweibaa	0.14	295	P	Pg	03 51 36.6	-0.1
HBST	Basata	0.25	348	P	Pg	03 51 38.3	-0.1
HBST				S	Sb	03 51 43.2	+0.3
HDHB	Dhahab	0.29	212	P	Pg	03 51 38.7	-0.4
JMOS	Jabal al Moall	0.34	54	P	Pg	03 51 39.5	-0.4
JMOS	Jabal al Moall	0.34	54	S	Sg	03 51 45.0	+0.2
HQLS		0.41	35	P	Pg	03 51 40.5	-0.6
TAYS	Tayyib Ism	0.42	171	P	Pg	03 51 41.1	-0.2
BDAS	Al Bad`	0.60	153	P	Pg	03 51 44.1	-0.5
JLOS		0.66	111	P	Pg	03 51 45.0	-0.7
EIL	Elat	0.71	11	P	Pg	03 51 45.9	-0.8
EIL	Elat	0.71	11	S	Sg	03 51 56.1	-0.1
AQBJ	Aqaba	0.79	16	P	Pg	03 51 47.3	-0.9
AQBJ				S	Sg	03 51 58.0	-0.6
MBRI	Mt Berech	0.83	7	P	Pg	03 51 48.2	-0.7
MBRI	Mt Berech	0.83	7	P	Pg	03 51 47.9	-1.0
MBRI	Mt Berech	0.83	7	S	Sb	03 52 00.3	+0.7
HKAT	Jabal Katrina	0.83	238	P	Pg	03 51 48.1	-0.9
HKAT				S	Sb	03 52 00.7	+0.9
AYUS	`Aynunah	0.88	152	P	Pb	03 51 48.9	-0.6
KRABS	KRABS	0.95	155	P	Pb	03 51 50.3	-0.5
HRFI	Mount Harif	1.08	11	P	Pb	03 51 52.4	-0.7
HRFI	Mount Harif	1.08	11	S	Sb	03 52 07.3	+0.4
TR2	Tor 2	1.11	239	P	Pb	03 51 52.9	-0.5
KRMI	Paran Flat	1.15	357	P	Pb	03 51 53.5	-0.6
KRMI	Paran Flat	1.15	357	P	Pb	03 51 53.2	-0.9
KRMI	Paran Flat	1.15	357	S	Sn	03 52 09.6	+0.3
PRNI	Paran	1.39	8	P	Pb	03 51 58.1	-0.2
PRNI				S	Sg	03 52 16.8	-0.9
PRNI	Paran	1.39	8	P	Pn	03 51 58.0	+0.6
PRNI	Paran	1.39	8	S	Sg	03 52 17.1	-0.6
HSNJ	Maan	1.50	31	P	Pb	03 52 00.9	+0.7
KZIT	Kziot	1.96	350	P	Pn	03 52 06.5	+1.3

IDC 27 03:57:37.4±7.5**, 30°.33S**×**177°.84W, h0**km**, mb3.7**/2**, mbtmp3.7**/2**, Error ellipse: s-maj=312.7km s-min=56.7km az=156.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.25	267	P	P	04 05 40.6	-0.3
	0.3nm,0.3s,baz=100,slow=8.4,SNR=4.6						
	0.3nm,0.3s						
WRA	Warramunga Arr	44.23	272	P	P	04 05 48.8	0.0
	0.6nm,0.3s,baz=112,slow=8.0,SNR=14						
	0.6nm,0.3s						
FINES	FINESS Array B	145.13	340	PKPbc	PKPbc	04 17 14.9	-0.8
	0.7nm,0.5s,baz=49,slow=4.2,SNR=7.7						

HEL 27 04:08:06.1±0.5**, 67°.81N**×**20°.21E, h0**km**, ML1.0, Suspected explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIF	Kilpisjarvi	1.22	10	PG	Pg	04 08 28.5	-1.0
KIF				SG	Sg	04 08 43.5	-1.8
KIF				MSG		04 08 44.2	
	comp=Z,1.5nm,0.2s						
PAJU	Pajala	1.37	124	PG	Pg	04 08 30.4	-1.9
	baz=303						
PAJU				SN	Sg	04 08 49.4	-0.6
HEF	Hetta	1.43	63	PN	Pb	04 08 33.5	0.0
HEF				MSG		04 08 49.1	
	comp=Z,0.8nm,0.2s						

HEF				SN	Sn	04 08 53.3	+0.6
ERTU	Ertsjaerv	1.48	148	PN	Pn	04 08 33.8	-0.1
ERTU				SN	Sg	04 08 53.4	0.0
TRO	Tromso	1.89	346	SG	Sn	04 09 04.5	+0.4
TOF	Tornio	2.37	135	MSG		04 09 16.3	
	comp=Z,0.5nm,0.2s						
TOF				SG	Sb	04 09 19.3	0.0
RNF	Rovaniemi	2.56	115	PG	Pn	04 08 50.6	+1.8
RNF				SG	Sb	04 09 23.9	-0.8
ARA0	ARCESS Array S	2.60	46	SG	Sn	04 09 23.6	+2.0
KEV	Kevo	3.15	49	SG	Sb	04 09 39.6	-2.1

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*IDC **27** 04:18:03.5±1.4, 26°.37S×178°.46W, h261^{km}±11^{km}, mb3.9/11, mbtmp4.5/12, Error ellipse: s-maj=17.7km s-min=12.1km az=72.0*

*NEIC **27** 04:18:04.2±1.7, 26°.48S±0°.09×178°.4W±0°.1, h264^{km}±6^{km}, mb4.5/26, Error ellipse: s-maj=18.0km s-min=10.3km az=53.0*

ISC 27 04:18:02.8±0.5**, 26°.54S**±0°.05×**178°.71W**±0°.09**, h250**^{km}**, n75,** σ2^{s}46/83**, mb4.5**/23**, 5C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIZ	Raoul Island	2.78	166	P	Pn	04 18 54.9	+2.0
RIZ				S	S	04 19 41.0	+8.3
RAO	Raoul Island	2.79	166	P	Pn	04 18 55.0	+2.0
	2µm,0.2s,baz=76,slow=8.9,SNR=42						
RAO				S	S	04 19 36.4	+3.6
	992nm,0.3s,baz=270,slow=23,SNR=4.0						
GLKZ	Green Lake	2.80	166	P	Pn	04 18 54.7	+1.6
GLKZ				S	S	04 19 37.2	+4.3
MSVF	Nonsavu	9.26	340		Pn	04 20 13.7	+1.4
MSVF	Nonsavu	9.26	340	P	Pn	04 20 13.5	+1.2
	207nm,0.7s,baz=156,slow=11,SNR=104						
OUZ	Omahuta	10.89	216	P	P	04 20 39.4	+2.5
NIUE	Niue	10.98	49	S	S	04 22 19.4	-17
WCZ	Waipu Caves	11.09	211	P	P	04 20 41.6	+2.4
MXZ	Matakaoa Point	11.28	192	P	Pn	04 20 31.0	-6.3
MXZ				S	S	04 22 35.2	-8.1
TWGZ	Tauwhareparae	11.94	193	P	Pn	04 20 44.6	-0.9
TWGZ				S	S	04 22 51.6	-7.0
URZ	Urewera	12.21	196	P	Pn	04 20 48.5	-0.3
	9.3nm,0.4s,baz=264,slow=4.6,SNR=27						
URZ				S	S	04 22 58.9	-5.9
	34nm,0.3s,baz=252,slow=7.7,SNR=12						
MTHZ	Maungataniwha	12.84	196	P	Pn	04 20 56.9	+0.3
NMHZ	Naumai	13.08	196	P	Pn	04 20 58.1	-1.5
NMHZ				S	S	04 23 18.9	-6.0
HIZ	Hauiti	13.11	203		P	04 21 02.8	+1.2
ARHZ	Aropaoanui	13.19	195	P	Pn	04 21 00.2	-0.8
ARHZ				S	S	04 23 21.2	-6.1
AFI	Afiamalu	14.14	29	P	Pn	04 21 07.3	-5.5
DZM	Mont Dzumac	14.25	285	P	Pn	04 21 13.0	-1.2
	baz=77,slow=14						
BFZ	Birch Farm	14.71	195	P	P	04 21 16.6	-2.8
MRZ	Mangatainoka R	14.86	197		P	04 21 17.7	-3.3
TUWZ	Tuamarina	16.05	200	P	P	04 21 32.3	-1.7
THZ	Tophouse	16.68	202	P	P	04 21 41.5	+0.4
THZ				IAmb	IAmb	04 21 42.7	
	comp=Z,17nm,1.2s						
LTZ	Lake Taylor	17.80	202	P	P	04 21 52.4	-0.8
LTZ				IAmb	IAmb	04 22 33.9	
	comp=Z,28nm,1.5s						
MLZ	Mavora Lakes	21.55	206	P	P	04 22 35.1	+2.6
STKA	Stephens Creek	34.92	252	P	P	04 24 33.9	+2.8
STKA				IAmb	IAmb	04 24 42.5	
	comp=Z,27nm,1.1s						
STKA	Stephens Creek	34.92	252	P	P	04 24 34.5	+3.3
	comp=Z,2.1nm,0.8s,baz=94,slow=9.9,SNR=4.6						
	comp=Z,2.1nm,0.8s						
BBOO	Buckleboo	39.57	250	P	P	04 25 12.1	+2.1
BBOO				IAmb	IAmb	04 25 40.3	
	comp=Z,47nm,1.3s						
ASAR	Alice Springs	42.82	263	P	P	04 25 37.5	+0.9
	comp=Z,1.1nm,0.5s,baz=111,slow=8.0,SNR=12						
ASAR				PcP	PP	04 27 22.5	+0.9
	comp=Z,0.8nm,0.5s,baz=109,slow=3.7,SNR=3.3						
ASAR				ScP	ScP	04 30 49.1	-0.8
	comp=Z,0.6nm,0.7s,baz=82,slow=4.1,SNR=3.3						
	comp=Z,1.1nm,0.5s						
WR8	Warramunga Arr	43.31	269	P	P	04 25 41.2	+0.7
WB2	Warramunga Arr	43.44	268	P	P	04 25 42.7	+1.1
WB2				IAmb	IAmb	04 26 02.5	
	comp=Z,17nm,1.5s						
WRA	Warramunga Arr	43.45	268	P	P	04 25 41.5	-0.2
WRA	Warramunga Arr	43.45	268	P	P	04 25 41.8	+0.1
	comp=Z,1.2nm,0.7s,baz=106,slow=6.0,SNR=15						
WRA				PcP	PcP	04 27 25.9	+0.8
	comp=Z,1.5nm,0.8s,baz=116,slow=3.1,SNR=6.2						
WRA				ScP	ScP	04 30 52.4	0.0
	comp=Z,0.6nm,0.7s,baz=99,slow=3.6,SNR=4.7						
	comp=Z,1.2nm,0.7s						
WB0	Warramunga Arr	43.46	269	P	P	04 25 42.9	+1.2
FORT	Forrest	46.55	252	P	P	04 26 07.4	+1.6
FORT				IAmb	IAmb	04 26 49.0	
	comp=Z,19nm,1.2s						
SBA	Scott Base	51.83	184	P	P	04 26 46.8	+1.9
SBA				IAmb	IAmb	04 26 51.2	
	comp=Z,12nm,1.2s						
FITZ	Fitzroy Crossi	51.84	267	P	P	04 26 45.8	-0.1
VNDA	Vanda	51.87	185	P	P	04 26 46.1	+0.9
VNDA	Vanda	51.87	185	P	P	04 26 47.2	+2.0
	comp=Z,2.3nm,0.7s,baz=6.8,slow=7.6,SNR=19						
	comp=Z,2.3nm,0.7s						
MORW	Morawa	57.11	251	P	P	04 27 24.9	+1.3
CASY	Casey	58.27	207	P	P	04 27 31.9	+0.9
CASY				IAmb	IAmb	04 27 32.5	
	comp=Z,11nm,0.8s						
QSPA	South Pole Qui	63.56	180	P	P	04 28 08.0	+1.3
QSPA				IAmb	IAmb	04 28 08.9	
	comp=Z,19nm,1.1s						
QSPA	South Pole Qui	63.56	180	P	P	04 28 07.4	+0.7
	comp=Z,10nm,0.9s,baz=26,slow=0.7,SNR=49						
	comp=Z,10nm,0.9s						
SMAI	San Martin Ant	73.23	159		P	04 29 05.9	-0.3
BELA	Belgrano 2	73.68	173	P	P	04 29 08.2	-0.5
BELA				IAmb	IAmb	04 29 09.3	
	comp=Z,11nm,0.8s						
MJAR	Matsushiro Arr	74.73	325	P	P	04 29 14.4	-0.8
	comp=Z,7.0nm,0.6s,baz=160,slow=5.2,SNR=5.3						
	comp=Z,7.0nm,0.6s						
MAW	Mawson	75.70	200	P	P	04 29 21.6	+1.2
	comp=Z,12nm,0.5s,baz=137,slow=5.2,SNR=53						
	comp=Z,12nm,0.5s						
KSRS	Korea Array	81.01	320	P	P	04 29 50.6	+0.9
	comp=Z,2.7nm,0.6s,baz=132,slow=6.1,SNR=10						
	comp=Z,2.7nm,0.6s						
TROLL	Troll, Antarti	81.72	180	⇑P	P	04 29 53.4	+0.2
	comp=Z,880nm,0.4s						
SNAA	Sanae	82.02	179	⇑P	P	04 29 54.5	-0.2
	comp=Z,209nm,0.9s						
SNAA	Sanae	82.02	179	P	P	04 29 54.5	-0.2
SNAA				IAmb	IAmb	04 29 55.0	
	comp=Z,6.6nm,0.7s						
SNAA	Sanae	82.02	179	P	P	04 29 54.5	-0.2
	comp=Z,6.4nm,0.6s,baz=203,slow=10.0,SNR=114						
	comp=Z,6.4nm,0.6s						
VNA3	Neumayer Olymp	82.18	176	⇑P	P	04 29 55.2	-0.3
	comp=Z,46nm,0.7s						
VNA2	Neumayer--Watz	82.61	177	⇑P	P	04 29 57.8	+0.1
	comp=Z,60nm,0.6s,baz=175,slow=4.9						
VNA1	Neumayer--Stat	82.85	177	⇑P	P	04 29 59.0	+0.2
	comp=Z,29nm,0.5s						
PLCA	Paso Flores	85.60	134	P	P	04 30 12.7	-0.7
	comp=Z,4.8nm,0.9s,baz=233,slow=5.5,SNR=5.5						
	comp=Z,4.8nm,0.9s						
SHPR	Sheep Range	86.66	46	P	P	04 30 17.6	-0.9
SHPR				IAmb	IAmb	04 30 55.7	
	comp=Z,7.3nm,1.1s						
TUC	Tucson	87.20	52		P	04 30 19.8	-1.3
TUC				IAmb	IAmb	04 31 04.8	
	comp=Z,7.6nm,1.0s						
PRN	Pahroc Range	87.26	46	P	P	04 30 20.5	-0.8
LCMT	Little Creek M	88.20	47	P	P	04 30 24.4	-1.4
TXAR	Lajitas Array	90.84	58	P	P	04 30 36.4	-1.8
	comp=Z,0.7nm,0.8s,baz=252,slow=4.5,SNR=6.0						
	comp=Z,0.7nm,0.8s						
BPAW	Bear Paw Mtn.	92.92	12	P	P	04 30 44.3	-2.6
BPAW				IAmb	IAmb	04 31 24.8	
	comp=Z,7.5nm,1.2s						
MKAR	Makanchi Array	114.79	312	PKP	PKPdf	04 36 11.8	-1.7
	comp=Z,0.5nm,0.7s,baz=66,slow=1.7,SNR=2.2						
MKAR				PKKPbc	PKKPbc	04 46 50.6	-1.7
	comp=Z,0.4nm,0.4s,baz=288,slow=3.5,SNR=5.6						
KURBB	Kurchatov Arra	117.95	315	PKP	PKPdf	04 36 18.0	-1.3
	comp=Z,0.4nm,0.5s,baz=118,slow=1.9,SNR=2.6						
BOSA	Boshof	120.53	204	PKP	PKPdf	04 36 24.6	-0.7
	comp=Z,1.5nm,0.8s,baz=198,slow=3.2,SNR=3.7						
BVAR	Borovoye Array	123.18	318	PKP	PKPdf	04 36 28.2	-1.1
	comp=Z,1.4nm,0.5s,baz=126,slow=1.5,SNR=4.8						
ARCES	ARCESS Array B	134.70	348	PKP	PKPdf	04 36 49.3	-1.4
	comp=Z,2.0nm,0.8s,baz=69,slow=1.0,SNR=8.8						
ARCES				SKPbc	SKPbc	04 39 53.6	-3.4
	comp=Z,3.6nm,0.9s,baz=15,slow=2.4,SNR=4.8						
FINES	FINESS Array B	141.31	341	PKhKP	PKPpre	04 36 55.4	
	comp=Z,1.3nm,0.8s,baz=68,slow=5.9,SNR=1.8						
NB2	NORSAR Subarra	144.85	352	PKP	PKPbc	04 37 07.8	-1.3
	comp=Z,0.7nm,0.5s,baz=15,slow=4.1						
NOA	NORSAR Array B	144.85	352	PKP	PKPbc	04 37 07.2	-1.9
	comp=Z,1.1nm,0.7s,baz=16,slow=5.0,SNR=6.0						
HFS	Hagfors	145.35	349	PKPbc	PKPdf	04 37 09.0	-1.2
	comp=Z,1.9nm,0.5s,baz=65,slow=5.2,SNR=13						
AKASG	Malin Array Be	147.81	326	PKPbc	PKPdf	04 37 16.7	+2.1
	comp=Z,0.7nm,0.4s,baz=46,slow=3.4,SNR=5.6						
MMAI	Mount Meron Ar	149.79	291	PKPbc	PKPbc	04 37 24.0	+0.5
	comp=Z,2.8nm,0.5s,baz=74,slow=6.2,SNR=4.8						
BRTR	Keskin Array B	150.06	304	PKPbc	PKPbc	04 37 23.6	-0.5
	comp=Z,0.8nm,0.7s,baz=112,slow=2.9,SNR=3.4						
EKA	Eskdalemuir Ar	151.05	5	PKPbc	PKPbc	04 37 24.1	-1.6
	comp=Z,1.1nm,0.4s,baz=330,slow=2.2,SNR=17						
CLL	Collm	153.71	343	*i* PKPbc	PKPbc	04 37 30.6	-1.1
	comp=Z,4.0nm,0.7s						
TORD	Torodi Ar. Bea	166.67	182	PKP	PKPdf	04 37 37.5	-1.5
	comp=Z,1.4nm,0.6s,baz=338,slow=1.6,SNR=7.5						
TORD				PKPab	pPKPdf	04 38 42.7	+0.2
	comp=Z,3.7nm,0.6s,baz=172,slow=2.6,SNR=17						

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*BJI **27** 04:20:45.0, 56°.20N×164°.30E, h10^{km}, mB5.2/41, mb4.9/61, Ms5.9/76, Ms7 5.5/76*

*IDC **27** 04:20:46.6±0.4, 56°.19N×164°.24E, h0^{km}, mb4.9/37, mbtmp5.0/42, ML4.9/5, MS5.1/78, Error ellipse: s-maj=10.0km s-min=8.1km az=143.0*

*KRSC **27** 04:20:47.5±1.3, 56°.17N×164°.43E, h57^{km}±20^{km}, Mc5.9, Ml5.8, Felt [III-IV] at Krutoberegovo, Ust-Kamchatsk; [III] at Nikolskoe.*

*NEIC **27** 04:20:48.8, 56°.21N×164°.31E, h10^{km}*

*ISC-PP **27** 04:20:48, 56°.22N×164°.30E, h22^{km}, Mwppsm5.6, Moment Tensor Solution. s58 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.37±.10; M$_{\theta\theta}$-0.15±.17; M$_{\phi\phi}$0.51±.16; M$_{r\theta}$-0.26±.14; M$_{\theta\phi}$-0.42±.17; M$_{\phi r}$0.22±.10; Fault plane solution: M$_0$3.35000×10^{17} NP1:φ$_s$31.70000°, δ69.10000°, λ285.40000°. NP2:φ$_s$174.00000°, δ25.70000°, λ-124.90000°.*

*NEIC **27** 04:20:48.1±1.2, 56°.22N±0°.07×164°.3E±0°.1, h10^{km}±1^{km}, mb5.4/821, Ms_20 5.2/855, Mwb5.6/79, Mww5.7/62 Error ellipse: s-maj=11.4km s-min=9.9km az=185.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.03; M$_{\theta\theta}$-1.47; M$_{\phi\phi}$1.49; M$_{r\theta}$-0.53; M$_{\theta\phi}$-2.24; M$_{\phi r}$0.14; Fault plane solution: M$_0$2.74000×10^{17} NP1:φ$_s$16.66000°, δ78.49000°, λ-0.54000°. NP2:φ$_s$106.77000°, δ89.47000°, λ-168.49000°. Principal axes: T 2.7522, Plg8.0000°, Azm241.0000°; N -0.0172, Plg78.0000°, Azm109.0000°; P -2.7350, Plg8.0000°, Azm332.0000°;*

*NEIC **27** 04:20:48.8, 56°.01N×164°.48E, h24^{km}, Moment Tensor Solution. Duration: 3^{s}3 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.12; M$_{\theta\theta}$-1.72; M$_{\phi\phi}$1.83; M$_{r\theta}$0.64; M$_{\theta\phi}$-3.59; M$_{\phi r}$-0.57; Fault plane solution: M$_0$4.10000×10^{17} NP1: φ$_s$193.63000°, δ79.77000°, λ5.08000°. NP2:φ$_s$102.73000°, δ85.00000°, λ169.73000°. Principal axes: T 4.2244, Plg11.0000°, Azm58.0000°; N -0.2608, Plg79.0000°, Azm257.0000°; P -3.9636, Plg4.0000°, Azm149.0000°;*

*IPGP **27** 04:20:48.0, 56°.20N×164°.31E, h14^{km}, Mw5.6, Fault plane solution: NP1:φ$_s$109.00000°, δ87.00000°, λ-168.00000°. NP2:φ$_s$18.00000°, δ78.00000°, λ-4.00000°.*

*NEIC **27** 04:20:48.8, 56°.21N×164°.30E, h24^{km}*

*MOS **27** 04:20:49.6±1.0, 56°.19N×164°.36E, h35^{km}, mb5.5/66, MS5.2/44, Error ellipse: s-maj=5.0km s-min=3.6km az=80.5*

*GCMT **27** 04:20:53.1±0.1, 56°.25N±0°.01×164°.39E±0°.01, h18^{km}, MW5.7/175, Moment Tensor Solution. s154,c321; s175,c370; Duration: 1^{s}7 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.33±.04; M$_{\theta\theta}$-2.81±.04; M$_{\phi\phi}$2.48±.04; M$_{r\theta}$-0.26±.10; M$_{\theta\phi}$-3.66±.04; M$_{\phi r}$-0.42±.09; Best double couple: M$_0$4.54200×10^{17} NP1:φ$_s$108.00000°, δ84.00000°, λ-179.00000°. NP2:φ$_s$18.00000°, δ89.00000°, λ-6.00000°. Principal axes: T 4.3670, Plg4.0000°, Azm63.0000°; N 0.3450, Plg84.0000°, Azm190.0000°; P -4.7170, Plg5.0000°, Azm333.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **27** 04:20:54.5, 56°.77N×164°.29E, h38^{km}±1^{km}, mb5.2, Ms5.3*

ISC 27 04:20:49.5±0.5**, 56°.15N**±0°.03×**164°.24E**±0°.02**, h20**^{km}±1^{km}**, h20**^{km}**:pP-P, n1712,** σ1^{s}57/1457**, mb5.4**/499**, MS5.2**/541**, 32C-27D, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.80	275	PN	Pb	04 21 03.8	-0.9
KBTR	Krutoberegovo	0.80	275	*e*P	Pb	04 21 03.8	-0.9
KBG	Krutoberegovo	0.86	278	PN	Pb	04 21 04.7	-1.1
KBG				S	Sb	04 21 16.7	-0.2
KBG	Krutoberegovo	0.86	278	*e*P	Pb	04 21 04.7	-1.1
KBG				*e*S	Sb	04 21 16.8	-0.2
BKI	Bering	1.36	133	PN	Pn	04 21 11.6	-1.8
BKI				S	Sn	04 21 28.8	-2.1
BKI	Bering	1.36	133	*e*P	Pn	04 21 11.7	-1.8
BKI				*e*S	Sn	04 21 28.9	-2.1
SMKR	Semkarok	1.60	287	PN	Pn	04 21 16.8	0.0
SMKR	Semkarok	1.60	287	*e*P	Pn	04 21 16.9	0.0
SRKR	Sorokina	1.78	288	PN	Pn	04 21 20.2	+1.0
SRKR				S	Sb	04 21 43.0	-0.4
SRKR	Sorokina	1.78	288	*e*P	Pn	04 21 20.2	+1.0
SRKR				*e*S	Sb	04 21 43.0	-0.4
ZLN	Zelenaya	1.93	267	PN	Pn	04 21 22.8	+1.5
ZLN	Zelenaya	1.93	267	*e*P	Pn	04 21 22.8	+1.5
CIRR	Tsirk	1.95	270	PN	Pn	04 21 22.9	+1.2
CIRR	Tsirk	1.95	270	*e*P	Pn	04 21 23.0	+1.2
LGNR	Loginova	1.99	270	PN	Pn	04 21 23.5	+1.2
LGNR	Loginova	1.99	270	*e*P	Pn	04 21 23.6	+1.2
BZGR	Bezymyannyi-Gr	2.00	265	PN	Pn	04 21 23.5	+1.3
BZGR				S	Sb	04 21 48.8	-0.9
BZGR	Bezymyannyi-Gr	2.00	265	*e*P	Pn	04 21 23.6	+1.3
BZGR				*e*S	Sb	04 21 48.8	-0.9
KLY	Klyuchi	2.01	276	PN	Pn	04 21 21.7	-0.6
KLY				S	Sn	04 21 46.2	-0.6
KLY	Klyuchi	2.01	276	*e*P	Pn	04 21 21.8	-0.6
KLY				*e*S	Sn	04 21 46.2	-0.6
KRSR	Krestovskiy	2.05	273	PN	Pn	04 21 23.7	+0.7
KRSR	Krestovskiy	2.05	273	*e*P	Pn	04 21 23.8	+0.7
BZWR	Bezymyannyi-We	2.11	266	PN	Pn	04 21 25.2	+1.4
BZWR	Bezymyannyi-We	2.11	266	*e*P	Pn	04 21 25.3	+1.4
BZMR	Bezymyannaya	2.11	266	PN	Pn	04 21 25.2	+1.3
BZMR	Bezymyannaya	2.11	266	*e*P	Pn	04 21 25.3	+1.3
MKZ	Mys Kozlova	2.15	223	PN	Pn	04 21 24.0	-0.2
MKZ				S	Sn	04 21 49.8	-0.3
MKZ	Mys Kozlova	2.15	223	*e*P	Pn	04 21 24.0	-0.2
MKZ				*e*S	Sn	04 21 49.9	-0.3
KIRR	Kirishev	2.19	266	PN	Pn	04 21 26.4	+1.4
KIRR				S	Sb	04 21 54.3	-1.1
KIRR	Kirishev	2.19	266	*e*P	Pn	04 21 26.5	+1.4
KIRR				*e*S	Sb	04 21 54.3	-1.1
KPT	Kopyto	2.26	267	PN	Pn	04 21 27.3	+1.5
KPT	Kopyto	2.26	267	*e*P	Pn	04 21 27.4	+1.5
KMNR	Kamenistaya	2.29	262	PN	Pn	04 21 27.4	+1.2
KMNR	Kamenistaya	2.29	262	*e*P	Pn	04 21 27.4	+1.2
TUMD	Tumrok D	2.37	248	PN	Pn	04 21 28.7	+1.4
TUMD	Tumrok D	2.37	248	*e*P	Pn	04 21 28.7	+1.4
KOZ	Kozyrevsk	2.45	270	PN	Pn	04 21 30.2	+1.9
KOZ				S	Sb	04 22 01.1	-1.4
KOZ	Kozyrevsk	2.45	270	*e*P	Pn	04 21 30.3	+1.9
KOZ				*e*S	Sb	04 22 01.1	-1.4
SRDR	Sredinnyy	2.53	276	PN	Pn	04 21 31.2	+1.7
SRDR	Sredinnyy	2.53	276	*e*P	Pn	04 21 31.2	+1.7
ESO	Esso	3.12	268	PN	Pn	04 21 38.8	+1.3
ESO	Esso	3.12	268	*e*P	Pn	04 21 38.9	+1.3
OSSR	Ossora	3.17	349	PN	Pn	04 21 36.6	-1.6
OSSR	Ossora	3.17	349	*e*P	Pn	04 21 36.7	-1.6
OSSR				*e*S	Sn	04 22 10.2	-5.3
PALN	Palana	3.74	324	PN	Pn	04 21 45.5	-0.5
PALN	Palana	3.74	324	*e*P	Pn	04 21 45.5	-0.5
SPN	Mys Shipunski	3.92	220	PN	Pn	04 21 48.0	-0.5
SPN	Mys Shipunski	3.92	220	*e*P	Pn	04 21 48.0	-0.5
SPN				*e*S	Sn	04 22 31.9	-2.0
NLC	Nalytchevo	4.12	226	PN	Pn	04 21 52.2	+0.9
NLC	Nalytchevo	4.12	226	*e*P	Pn	04 21 52.3	+0.9
NLC				*e*S	Sn	04 22 38.0	-0.9
SDLR	Sedlovina	4.23	229	PN	Pn	04 21 54.4	+1.5
SDLR	Sedlovina	4.23	229	*e*P	Pn	04 21 54.5	+1.5
KRX	Arik	4.28	231	PN	Pn	04 21 55.6	+2.0
KRX	Arik	4.28	231	*e*P	Pn	04 21 55.7	+2.0
SMAR	Somma	4.28	230	PN	Pn	04 21 55.2	+1.5
SMAR	Somma	4.28	230	*e*P	Pn	04 21 55.2	+1.5
UGLR	Uglovaya	4.31	229	PN	Pn	04 21 55.4	+1.4
UGLR	Uglovaya	4.31	229	*e*P	Pn	04 21 55.5	+1.4
KOK	Koryaka	4.33	231	PN	Pn	04 21 56.0	+1.7
KOK	Koryaka	4.33	231	*e*P	Pn	04 21 56.0	+1.7
GNL	Ganaly	4.39	238	PN	Pn	04 21 57.5	+2.4
GNL	Ganaly	4.39	238	*e*P	Pn	04 21 57.5	+2.4
TILK	Tilichiki	4.42	12	PN	Pn	04 21 55.0	-0.4
TILK	Tilichiki	4.42	12	*e*P	Pn	04 21 55.0	-0.4
TILK				*e*S	Sn	04 22 43.1	-3.2
DALK	Dalny	4.46	228	PN	Pn	04 21 57.3	+1.3
DALK	Dalny	4.46	228	*e*P	Pn	04 21 57.3	+1.3
DALK				*e*S	Sn	04 22 47.8	+0.4
INSR	Institute	4.50	229	PN	Pn	04 22 00.0	+3.5
INSR	Institute	4.50	229	*e*P	Pn	04 22 00.0	+3.5
PET	Petropavlovsk	4.51	228		Pn	04 21 57.8	+1.1
PET	Petropavlovsk	4.51	228	P	Pn	04 21 57.8	+1.1
PET	Petropavlovsk	4.51	228	*e*PN	Pn	04 21 58.3	+1.6
PET				*e*S	Sn	04 22 51.3	+2.8
PET				pmax	pmax		
	comp=Z,860nm,0.6s						
PET				smax	smax		
	comp=E,2µm,0.5s						
PET				smax	smax		
	comp=N,2µm,0.6s						
PET				MLR	MLR		
	comp=Z,16µm,12.0s						
PET	Petropavlovsk	4.51	228	*e*P	Pn	04 21 58.1	+1.4
PET				*e*S	Sn	04 22 49.0	+0.5
PEA0B	Petropavlovsk-	4.87	234		Pn	04 22 03.4	+1.7
PEA0B	Petropavlovsk-	4.87	234	*i* PN	Pn	04 22 03.5	+1.9
PETK	Petropavlovsk-	4.87	234		Pn	04 22 02.4	+0.8
PETK	Petropavlovsk-	4.87	234	Pn	Pn	04 22 03.0	+1.3
	comp=Z,36nm,0.3s,baz=310,slow=17,SNR=200						
PETK				Sn	Sn	04 23 01.2	+3.8
	comp=Z,56nm,0.3s,baz=75,slow=23,SNR=9.2						
	comp=Z,65nm,0.4s						
KRMR	Karymshinskiy	4.87	229	PN	Pn	04 22 03.0	+1.4
KRMR	Karymshinskiy	4.87	229	*e*P	Pn	04 22 03.1	+1.4
RUS	Russkaya	5.01	224	PN	Pn	04 22 04.7	+1.2
RUS	Russkaya	5.01	224	*e*P	Pn	04 22 04.8	+1.2
RUS				*e*S	Sn	04 23 01.0	+0.1
GRL	Gorelyy	5.10	228	PN	Pn	04 22 07.3	+2.4
GRL	Gorelyy	5.10	228	*e*P	Pn	04 22 07.3	+2.4
MTVR	Mutnovka	5.11	226	PN	Pn	04 22 06.5	+1.5
MTVR	Mutnovka	5.11	226	*e*P	Pn	04 22 06.5	+1.5
APC	Apacha	5.24	235	PN	Pn	04 22 09.1	+2.5
APC	Apacha	5.24	235	*e*P	Pn	04 22 09.1	+2.5
ASAK	Asacha	5.29	227	PN	Pn	04 22 10.1	+2.6
ASAK	Asacha	5.29	227	*e*P	Pn	04 22 10.2	+2.6
MIPR	Malaya Ipel'ka	5.86	232	PN	Pn	04 22 18.3	+3.1
MIPR	Malaya Ipel'ka	5.86	232	*e*P	Pn	04 22 18.3	+3.1
KMSK	Kamenskaya	6.42	8	PN	Pn	04 22 22.4	-0.3
KMSK	Kamenskaya	6.42	8	*e*P	Pn	04 22 22.5	-0.3
KMSK				*e*S	Sn	04 23 32.5	-2.8
SMY	Shemya	6.69	117		Pn	04 22 25.7	-0.9
SMY	Shemya	6.69	117	P	Pn	04 22 26.6	0.0
SMY	Shemya	6.69	117	PN	Pn	04 22 25.7	-0.9
SKR	Severo-Kuril's	7.31	225	⇑*i*PN	Pn	04 22 37.0	+1.9
SKR				pmax	pmax		
	comp=Z,927nm,0.6s						
SKR	Severo-Kuril's	7.31	225	*e*P	Pn	04 22 36.9	+1.7
MA2	Magadan	7.96	301		Pn	04 22 42.9	-1.0
MA2	Magadan	7.96	301	Pn	Pn	04 22 45.5	+1.6
	comp=Z,2.5nm,0.3s,baz=100,slow=10,SNR=20						
MA2				Lg	Lg	04 24 56.1	
	baz=342,slow=19						
MA2				LR	LR	04 25 51.3	
	comp=Z,14µm,19.1s,baz=110,slow=38						
	comp=Z,28nm,0.8s						
SEY	Seymchan	9.07	323	Pn	Pn	04 22 59.2	+0.1
	comp=Z,2.0nm,0.3s,baz=140,slow=14,SNR=14						
SEY				Sn	Sn	04 24 39.5	-1.1
	comp=Z,0.6nm,0.3s,baz=117,slow=15,SNR=4.0						
SEY				Lg	Lg	04 25 33.0	
	baz=356,slow=4.6						
SEY				LR	LR	04 27 08.3	
	comp=Z,11µm,19.3s,baz=116,slow=42						
	comp=Z,5.3nm,0.3s						
AMKA	Amchitka	10.11	112		Pn	04 23 13.1	-0.4
BILL	Bilibino	11.97	4		Pn	04 23 39.5	+0.7
BILL	Bilibino	11.97	4	*ce*PN	Pn	04 23 37.4	-1.4
BILL				pmax	pmax		
	comp=Z,177nm,1.7s						
ADK	Adak	11.99	103		Pn	04 23 37.4	-1.8
ADK	Adak	11.99	103	P	Pn	04 23 37.5	-1.8
ADK	Adak	11.99	103	PN	Pn	04 23 37.4	-1.8
GSTR	Great Sitkin T	12.24	101	Pn	Pn	04 23 41.3	-1.3
OKH	Okha	12.54	267	*c i*PN	Pn	04 23 44.3	-2.3
OKH				*i* S	Sn	04 26 12.8	+7.2
OKH				pmax	pmax		
	comp=Z,700nm,8.0s						
OKH				smax	smax		
	comp=E,2µm,14.0s						
OKH				MLR	MLR		
	comp=Z,9µm,12.0s						
OKH				MLR	MLR		
	comp=E,8µm,13.0s						
ATKA	Atka Island	13.22	98		Pn	04 23 53.3	-2.5
ATKA	Atka Island	13.22	98	P	Pn	04 23 54.2	-1.7
TYV	Tymovskoe	13.86	257	*e*P	P	04 24 09.5	-3.4
TYV				*e*S	S	04 26 49.2	-11
TYV				pmax	pmax		
	comp=Z,97nm,1.4s						
TYV				pmax	pmax		
	comp=Z,700nm,2.4s						
TYV				smax	smax		
	comp=N,21nm,1.7s						
TYV				smax	smax		
	comp=E,17nm,1.7s						
TYV				smax	smax		
	comp=N,1µm,4.6s						
TYV				smax	smax		
	comp=E,1µm,4.6s						
TYV				MLR	MLR		
	comp=N,20µm,17.0s						
TYV				MLR	MLR		
	comp=E,5µm,17.0s						
TYV				MLR	MLR		
	comp=Z,7µm,18.0s						
TYV	Tymovskoe	13.86	257	*e*P	Pn	04 24 07.8	+3.1
NKL	Nikolayevsk	13.94	267	*e*P	Pn	04 24 04.3	-1.5
NKL				*e*S	Sn	04 26 41.6	+1.8
NKL				pmax	pmax		
	comp=N,135nm,1.0s						
NKL				pmax	pmax		
	comp=E,74nm,1.5s						
NKL				pmax	pmax		
	comp=Z,232nm,1.5s						
NKL				smax	smax		
	comp=E,1µm,8.5s						
NKL				smax	smax		
	comp=N,341nm,4.0s						
NKL				MLR	MLR		
	comp=E,59µm,15.0s						
NKL				MLR	MLR		
	comp=N,20µm,17.0s						
NKL				MLR	MLR		
	comp=Z,9µm,16.0s						
SPIA	Saint Paul Isl	14.04	75		Pn	04 24 06.8	-0.3
SPIA	Saint Paul Isl	14.04	75	P	Pn	04 24 07.4	+0.3
	baz=277,SNR=9.6						
GAMB	Gambell	14.19	48		Pn	04 24 07.6	-1.4
GAMB	Gambell	14.19	48	P	Pn	04 24 09.1	0.0
	baz=249						
GAMB				S	Sn	04 26 45.6	-0.1
	baz=249						
P08K	Saint George I	14.50	77		Pn	04 24 13.3	0.0
P08K	Saint George I	14.50	77	P	Pn	04 24 14.0	+0.6
	baz=279,SNR=9.6						
KUR	Kuril'sk	15.02	230	⇑*i*P	Pn	04 24 19.7	-0.8

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KUR                               pmax      pmax
      comp=Z,117nm,1.0s
UGL   Uglegorsk         15.17 251deP        Pn        04 24 17.1 -5.3
UGL                               pmax      pmax
      comp=Z,321nm,0.9s
UGL                               MLR       MLR
      comp=N,14µm,13.0s
UGL                               MLR       MLR
      comp=E,15µm,13.0s
UGL                               MLR       MLR
      comp=Z,8µm,13.0s
NIKH  Nikolski High     15.88  90           Pn        04 24 31.2 -0.5
NIKH  Nikolski High     15.88  90 P         Pn        04 24 32.3 +0.6
NIKH  Nikolski High     15.88  90 P         Pn        04 24 32.4 +0.6
      baz=292,SNR=8.9
NIKH                              S         Sn        04 27 27.3 +0.3
      baz=292
M11K  Mekoryuk          16.04  62           Pn        04 24 33.5 -0.2
M11K                              IAmb      IAmb      04 24 41.4
      comp=Z,504nm,1.2s
M11K  Mekoryuk          16.04  62 P         Pn        04 24 34.4 +0.8
      baz=268
YSS   Yuzhno-Sakhali    16.16 244           Pn        04 24 35.7 +0.4
YSS   Yuzhno-Sakhali    16.16 244c iP       Pn        04 24 36.6 +1.3
YSS                              eS         Sn        04 27 36.2 +2.3
YSS                               pmax      pmax
      comp=Z,2µm,5.8s
YSS                               pmax      pmax
      comp=N,1µm,5.2s
YSS                               pmax      pmax
      comp=E,1µm,5.1s
YSS                               pmax      pmax
      comp=Z,130nm,1.0s
YSS                               smax      smax
      comp=N,2µm,6.6s
YSS                               smax      smax
      comp=E,1µm,7.2s
YSS                               MLR       MLR
      comp=Z,10µm,13.0s
YSS                               MLR       MLR
      comp=N,8µm,14.0s
YSS                               MLR       MLR
      comp=E,14µm,14.0s
YUK   Yuzh-Kuril'sk     16.84 232 eP        Pn        04 24 40.9 -3.1
YUK                               eS        S         04 27 56.6 -4.2
YUK                               pmax      pmax
      comp=Z,607nm,0.4s
YUK                               pmax      pmax
      comp=N,219nm,0.2s
UNV   Unalaska Valle    16.89  86           Pn        04 24 43.9 -0.5
UNV                               IAmb      IAmb      04 24 50.0
      comp=Z,205nm,0.8s
UNV   Unalaska Valle    16.89  86 P         Pn        04 24 45.0 +0.6
      baz=290,SNR=8.3
UNV                               S         Sn        04 27 53.2 +2.0
      baz=290
K13K  Kusilvak Mount    16.90  57 Pn        Pn        04 24 43.6 -0.9
K13K  Kusilvak Mount    16.90  57 P         Pn        04 24 45.4 +0.9
      baz=264
K13K                              S         Sn        04 27 53.2 +1.6
      baz=264
F14K  Arctic Creek      16.95  45 P         P         04 24 46.6 -0.5
      baz=251
F14K                              S         Sn        04 27 55.9 +3.1
      baz=251
LVA   Lava Point        17.04  84           Pn        04 24 46.1 -0.3
LVA                               IAmb      IAmb      04 24 54.9
      comp=Z,306nm,0.7s
ANM   Nome              17.07  48           Pn        04 24 46.0 -0.6
ANM                               IAmb      IAmb      04 24 50.2
      comp=Z,358nm,1.4s
ANM   Nome              17.07  48 P         Pn        04 24 46.1 -0.6
ANM                               pmax      pmax
      comp=Z,358nm,1.4s
ANM   Nome              17.07  48 P         P         04 24 47.8 -0.6
      baz=255
AKUT  Akutan            17.20  84 Pn        Pn        04 24 46.8 -1.5
AKUT                              IAmb      IAmb      04 24 54.9
      comp=Z,488nm,1.0s
GRNR  Gornyy            17.35 264⇑iP        P         04 24 51.2 -0.3
GRNR                              pmax      pmax
      comp=Z,10.0nm,0.7s
GRNR                              MLR       MLR
      comp=N,4µm,12.0s
GRNR                              MLR       MLR
      comp=E,3µm,12.0s
GRNR                              MLR       MLR
      comp=Z,5µm,13.0s
M13K  Dall Lake         17.45  62 Pn        Pn        04 24 50.4 -1.1
M13K  Dall Lake         17.45  62 P         P         04 24 53.2 +0.6
      baz=270
J14K  Nanvaranak Lak    17.50  55 Pn        Pn        04 24 51.0 -1.1
J14K  Nanvaranak Lak    17.50  55 P         P         04 24 53.3 +0.2
      baz=263
J14K                              S         Sn        04 28 09.4 +3.3
      baz=263
F15K  North Star Dit    17.69  45           Pn        04 24 53.7 -0.7
F15K                              IAmb      IAmb      04 25 01.2
      comp=Z,364nm,1.4s
F15K  North Star Dit    17.69  45 P         P         04 24 56.6 +1.4
      baz=252,SNR=26
F15K                              S         Sn        04 28 12.1 +1.5
      baz=252
G15K  Niukluk           17.73  47 P         P         04 24 56.6 +0.9
      baz=255,SNR=13
L14K  Kuka Creek        17.80  59           Pn        04 24 55.7  0.0
L14K                              IAmb      IAmb      04 25 02.3
      comp=Z,196nm,0.7s
L14K  Kuka Creek        17.80  59 P         P         04 24 58.2 +1.9
      baz=268,SNR=66
L14K                              S         S         04 28 16.8 -3.1
      baz=268
M14K  Bethel            18.14  61           Pn        04 24 59.1 -0.8
M14K                              IAmb      IAmb      04 25 04.0
      comp=Z,351nm,1.1s
M14K  Bethel            18.14  61 P         P         04 25 02.4 +2.3
      baz=270,SNR=33
JKA   Kamikawa-asahi    18.27 238 P         Pn        04 25 01.1 -0.6
JKA                               IAmb      IAmb      04 25 07.0
      comp=Z,321nm,0.9s
ASAJ  Asahikawa         18.27 238 P         Pn        04 25 01.7  0.0
      comp=Z,9.6nm,0.3s,baz=44,slow=6.1,SNR=35
ASAJ                              S         Sn        04 28 26.2 +1.2
      comp=Z,3.9nm,0.6s,baz=233,slow=10,SNR=1.0
ASAJ                              LR        LR        04 32 55.2
      comp=Z,13µm,19.3s,baz=48,slow=40
      comp=Z,353nm,0.9s
FALS  False Pass        18.28  81           Pn        04 25 00.8 -0.9
FALS                              IAmb      IAmb      04 25 06.4
      comp=Z,605nm,1.3s
FALS  False Pass        18.28  81 P         P         04 25 02.9 +1.2
FALS  False Pass        18.28  81 P         P         04 25 03.2 +1.4
      baz=288
N14K  Kuskokwak Cree    18.30  64           Pn        04 25 00.9 -1.0
N14K                              IAmb      IAmb      04 25 08.2
      comp=Z,311nm,1.4s
N14K  Kuskokwak Cree    18.30  64 P         P         04 25 04.1 +2.1
      baz=273,SNR=12
N14K                              S         Sn        04 28 27.6 +2.1
      baz=273
L15K  Ungalak Mounta    18.38  58 P         Pn        04 25 04.7 +1.8
      baz=268,SNR=49
L15K                              S         Sn        04 28 28.1 +0.7
      baz=268
K15K  Wolf Creek Mou    18.39  56 P         Pn        04 25 04.7 +1.7
      baz=266
K15K                              S         S         04 28 31.3 -0.7
      baz=266
H16K  Elim              18.40  49 P         Pn        04 25 04.9 +1.8
      baz=258,SNR=22
H16K                              S         S         04 28 31.9 -0.2
      baz=258
C16K  Lisburne Hills    18.41  37           P         04 25 01.0 -2.0
C16K  Lisburne Hills    18.41  37 P         Pn        04 25 04.5 +1.4
      baz=244,SNR=19
C16K                              S         S         04 28 31.2 -0.9
      baz=244
G16K  Koyuk River       18.52  47 P         Pn        04 25 06.1 +1.6
      baz=256,SNR=15
G16K                              S         S         04 28 34.6 +0.1
      baz=256
YAK   Yakutsk           18.53 303           P         04 25 04.3 -0.1
YAK   Yakutsk           18.53 303 P         P         04 25 03.1 -1.3
      comp=Z,8.6nm,0.3s,baz=92,slow=8.2,SNR=9.6
YAK                               LR        LR        04 32 18.7
      comp=Z,4µm,18.8s,baz=95,slow=37
      comp=Z,84nm,0.6s
YAK   Yakutsk           18.53 303deP        P         04 25 03.5 -0.9
YAK                               eS        Sn        04 28 28.6 -2.4
YAK                               pmax      pmax
      comp=Z,55nm,1.0s
YAK                               pmax      pmax
      comp=E,17nm,0.8s
YAK                               pmax      pmax
      comp=Z,495nm,2.5s
YAK                               pmax      pmax
      comp=N,78nm,2.8s
YAK                               pmax      pmax
      comp=E,587nm,2.5s
YAK                               smax      smax
      comp=N,2µm,5.6s
YAK                               smax      smax
      comp=E,1µm,7.4s
YAK                               MLR       MLR
      comp=N,17µm,25.0s
YAK                               MLR       MLR
      comp=E,2µm,12.0s
YAK                               MLR       MLR
      comp=Z,6µm,21.0s
O14K  Tigyukauivet M    18.56  66 IAmb      IAmb      04 25 14.3
      comp=Z,397nm,1.4s
O14K  Tigyukauivet M    18.56  66 P         Pn        04 25 05.9 +0.8
      baz=276
O14K                              S         S         04 28 36.8 +1.3
      baz=276
M15K  Kasigluk River    18.77  61 P         Pn        04 25 09.0 +1.4
      baz=272,SNR=43
M15K                              S         S         04 28 40.5 +0.9
      baz=272
S12K  Black Hills       18.79  77 P         Pn        04 25 09.1 +1.2
      baz=286,SNR=36
S12K                              S         S         04 28 39.8 -0.3
      baz=286
J16K  Anvik River       18.90  53 P         Pn        04 25 10.2 +1.0
      baz=264,SNR=20
J16K                              S         S         04 28 42.7 +0.4
      baz=264
I17K  Unalakleet        18.93  52 P         Pn        04 25 11.5 +2.0
      baz=262,SNR=64
I17K                              S         S         04 28 43.6 +0.7
      baz=262
D17K  Noatak River      18.95  39 P         Pn        04 25 10.5 +0.8
      baz=248,SNR=93
D17K                              S         S         04 28 44.0 +0.9
      baz=248
N15K  Kwethluk River    19.08  63 P         Pn        04 25 11.9 +0.5
      baz=274,SNR=40
N15K                              S         S         04 28 47.3 +1.3
      baz=274
RDOG  Red Dog Mine      19.14  38 P         P         04 25 11.7 +0.5
RDOG                              IAmb      IAmb      04 25 16.3
      comp=Z,282nm,1.3s
RDOG  Red Dog Mine      19.14  38 P         Pn        04 25 12.7 +0.5
      baz=248,SNR=16
RDOG                              S         S         04 28 47.7 +0.6
      baz=248
E17K  Hotham Inlet      19.20  42 P         Pn        04 25 13.8 +1.1
      baz=252,SNR=113
E17K                              S         S         04 28 49.3 +1.1
      baz=252
C17K  DeLong Mountai    19.22  37 P         Pn        04 25 13.7 +0.7
      baz=246,SNR=60
C17K                              S         S         04 28 49.0 +0.4
      baz=246
F17K  Baldwin Pennin    19.23  44 IAmb      IAmb      04 25 18.0
      comp=Z,391nm,1.4s
F17K  Baldwin Pennin    19.23  44 P         Pn        04 25 13.7 +0.6
      baz=254,SNR=33
F17K                              S         S         04 28 50.4 +1.7
      baz=254
G17K  Kiwalik Mounta    19.24  47 P         Pn        04 25 13.5 +0.3
      baz=258,SNR=20
G17K                              S         S         04 28 51.0 +2.0
      baz=258
O15K  Ungalikthiuk R    19.31  66 P         Pn        04 25 13.8 -0.3
      baz=277,SNR=24
O15K                              S         S         04 28 51.6 +1.1
      baz=277
L16K  Owhat River       19.34  58 IAmb      IAmb      04 25 20.5
      comp=Z,614nm,1.7s
L16K  Owhat River       19.34  58 P         Pn        04 25 15.2 +0.7
      baz=270,SNR=54
L16K                              S         S         04 28 52.4 +1.3
      baz=270
H17K  Granite Mounta    19.43  49 IAmb      IAmb      04 25 20.4
      comp=Z,428nm,1.3s
H17K  Granite Mounta    19.43  49 P         Pn        04 25 16.2 +0.7
      baz=260
H17K                              S         S         04 28 55.7 +2.8
      baz=260
J17K  VABM Dome         19.60  53 IAmb      IAmb      04 25 22.6
      comp=Z,430nm,1.6s
J17K  VABM Dome         19.60  53 P         Pn        04 25 17.8 +0.3
      baz=265,SNR=35
J17K                              S         Sn        04 28 59.1 +2.3
      baz=265
M16K  Timber Creek      19.60  60 IAmb      IAmb      04 25 21.6
      comp=Z,224nm,1.3s
M16K  Timber Creek      19.60  60 P         Pn        04 25 17.4 -0.2
      baz=272
M16K                              S         Sn        04 28 58.9 +2.0
      baz=272
ERM   Erimo             19.65 233 P         P         04 25 15.3 -1.6
ERM                               IAmb      IAmb      04 25 25.4
      comp=Z,240nm,1.3s
ERM   Erimo             19.65 233 P         P         04 25 16.9  0.0
ERM   Erimo             19.65 233ceP        P         04 25 15.5 -1.4
ERM                               pmax      pmax
      comp=Z,50nm,0.5s
JEM   Erimo             19.65 233 P         P         04 25 16.9 +0.1
N16K  Nishlik Lake      19.72  62 P         Pn        04 25 19.6 +0.5
      baz=274,SNR=35
N16K                              S         S         04 28 59.4 +0.6
      baz=274
SDPT  Sand Point        19.75  78 P         Pn        04 25 18.7 -0.7
SDPT  Sand Point        19.75  78 P         P         04 25 18.3 +0.5
      baz=287,SNR=13
SDPT                              S         S         04 28 59.1 -0.3
      baz=287
E18K  Tukpahlearik C    19.75  41 IAmb      IAmb      04 25 24.1
      comp=Z,422nm,1.4s
E18K  Tukpahlearik C    19.75  41 P         Pn        04 25 20.1 +0.7
      baz=252,SNR=117
E18K                              S         Sn        04 29 01.3 +0.8
      baz=252
F18K  Selawik           19.89  44 P         Pn        04 25 20.6 -0.3
      baz=256
F18K                              S         Sn        04 29 04.8 +1.2
      baz=256
L17K  Donlin            19.90  57 P         Pn        04 25 21.6 +0.4
      baz=270,SNR=78
L17K                              S         Sn        04 29 04.2 +0.1
      baz=270
K17K  Iditarod          19.91  55 P         Pn        04 25 20.7 -0.6
      baz=268
K17K                              S         Sn        04 29 05.1 +0.8
      baz=268
C18K  Utukok River      19.96  37 P         P         04 25 20.0 -0.1
C18K                              IAmb      IAmb      04 25 25.9
      comp=Z,367nm,1.4s
C18K  Utukok River      19.96  37 P         P         04 25 21.0 +0.9
      baz=248,SNR=89
C18K                              S         S         04 29 04.0 +0.5
      baz=248
S14K  Fog Glacier       19.99  74 P         Pn        04 25 21.8 -0.6
      baz=285,SNR=58
B18K  Kokolik River     20.04  35 P         Pn        04 25 22.1 -0.6
      baz=246,SNR=62
B18K                              S         Sn        04 29 06.4 -0.7
      baz=246
H18K  Honhosa River     20.12  48 IAmb      IAmb      04 25 28.4
      comp=Z,320nm,1.1s
H18K  Honhosa River     20.12  48 P         Pn        04 25 23.2 -0.5
      baz=261,SNR=62
H18K                              S         Sn        04 29 08.3 -0.9
      baz=261
G18K  Tagagawik         20.13  46 IAmb      IAmb      04 25 28.4
      comp=Z,210nm,1.1s
G18K  Tagagawik         20.13  46 P         P         04 25 22.8 +0.8
      baz=259
G18K                              S         Sn        04 29 09.5  0.0
      baz=259
O16K  Kokwok River B    20.14  65 P         P         04 25 22.4 +0.3
      baz=277,SNR=29
O16K                              S         Sn        04 29 09.1 -0.7
      baz=277
P16K  Nushagak River    20.27  66 P         P         04 25 23.9 +0.4
      baz=278,SNR=36
P16K                              S         Sn        04 29 13.6 +0.8
      baz=278
M17K  Holitna River     20.32  59 P         P         04 25 25.0 +0.9
      baz=272,SNR=104
M17K                              S         Sn        04 29 13.7 -0.5
      baz=272
CHNA  Chernabura Isl    20.39  79 P         Pn        04 25 26.9 -0.1
CHNA  Chernabura Isl    20.39  79 P         P         04 25 24.8 -0.1
      baz=289,SNR=8.9
CNBA  Chernabura Isl    20.40  79 IAmb      IAmb      04 25 38.4
      comp=Z,154nm,0.8s
N17K  Nushagak Hills    20.50  62 IAMs_20   IAMs_20   04 33 12.3
      comp=Z,6µm,18.0s
N17K  Nushagak Hills    20.50  62 P         Pn        04 25 27.4 -0.8
      baz=275,SNR=97
N17K                              S         Sn        04 29 16.9 -1.6
      baz=275
A19K  Wainwright        20.62  33 P         P         04 25 28.4 +1.3
      baz=245,SNR=15
A19K                              S         S         04 29 17.4 +1.0
      baz=245
TEY   Ternei            20.62 249 eP        P         04 25 25.6 -1.8
O17K  Koliganek Bris    20.62  64 P         Pn        04 25 28.6 -1.0
      baz=277,SNR=31
O17K                              S         S         04 29 18.7 +2.1
      baz=277
L18K  Granite Mounta    20.66  57 IAmb      IAmb      04 25 39.9
      comp=Z,169nm,1.0s
L18K  Granite Mounta    20.66  57 P         P         04 25 28.7 +1.1
      baz=271,SNR=58
L18K                              S         S         04 29 17.0 -0.3
      baz=271
J18K  Innoko River      20.66  53 P         P         04 25 28.4 +0.7
      baz=267
J18K                              S         S         04 29 19.7 +2.2
      baz=267
C19K  Lookout Ridge     20.67  37 IAMs_20   IAMs_20   04 34 02.5
      comp=Z,7µm,19.0s
C19K  Lookout Ridge     20.67  37 P         P         04 25 28.8 +1.0
      baz=249,SNR=164
C19K                              S         S         04 29 19.3 +1.8
      baz=249
F19K  Shaleruckik Mo    20.67  44 IAmb      IAmb      04 25 39.7
      comp=Z,226nm,1.0s
F19K  Shaleruckik Mo    20.67  44 P         P         04 25 28.6 +0.9
      baz=257,SNR=98
F19K                              S         S         04 29 19.8 +2.3
      baz=257
GCSA  Galena City Sc    20.69  50 P         Pn        04 25 29.3 -1.1
      baz=264,SNR=29
GCSA                              S         S         04 29 20.0 +2.1
      baz=264
KLR   Kul'dur           20.73 264 P         P         04 25 28.9 +0.3
      comp=Z,20nm,1.0s,baz=58,slow=12,SNR=18
KLR                               LR        LR        04 34 03.0
      comp=Z,7µm,18.5s,baz=66,slow=38
      comp=Z,20nm,1.0s
KLR   Kul'dur           20.73 264ceP        P         04 25 29.7 +1.2
KLR                               pmax      pmax
      comp=Z,39nm,1.3s
R16K  Pilot Point       20.75  70 P         P         04 25 29.0 +0.3
      baz=282
R16K                              S         Sn        04 29 22.8 -1.6
      baz=282
G19K  Purcell Mounta    20.80  46 P         Pn        04 25 30.6 -1.1
      baz=260,SNR=74
H19K  Roundabout Mou    20.97  48 P         Pn        04 25 32.6 -0.9
      baz=262,SNR=92
H19K                              S         S         04 29 23.5 +0.1
      baz=262
D19K  Kuna River        20.97  39           P         04 25 30.1 -1.0
D19K                              IAmb      IAmb      04 25 42.6
      comp=Z,310nm,1.2s
D19K  Kuna River        20.97  39 P         P         04 25 31.7 +0.6
      baz=253,SNR=135
D19K                              S         S         04 29 23.6  0.0
      baz=253
Q16K  King Salmon       21.01  67 P         P         04 25 32.4 +1.0
      baz=280,SNR=32
E19K  Redstone River    21.02  42           P         04 25 30.4 -1.1
E19K                              IAmb      IAmb      04 25 43.8
      comp=Z,240nm,1.1s
E19K  Redstone River    21.02  42 P         P         04 25 32.9 +1.4
      baz=256,SNR=91
E19K                              S         S         04 29 24.6 +0.1
      baz=256
P17K  Kvichak River     21.03  65 P         P         04 25 32.5 +0.8
      baz=279,SNR=39
P17K                              S         S         04 29 27.8 +3.1
      baz=279
M18K  Stony River       21.09  59 P         P         04 25 32.6 +0.3
      baz=273,SNR=64
M18K                              S         S         04 29 26.9 +1.0
      baz=273
N18K  Kilae Creek       21.12  61 IAMs_20   IAMs_20   04 33 31.8
      comp=Z,7µm,18.0s
N18K  Kilae Creek       21.12  61 P         P         04 25 33.4 +0.7
      baz=276,SNR=26
N18K                              S         S         04 29 26.7 +0.1
      baz=276
J19K  Poorman           21.18  52           P         04 25 32.5 -0.8
J19K                              IAmb      IAmb      04 25 40.5
      comp=Z,265nm,1.1s
J19K  Poorman           21.18  52 P         P         04 25 34.0 +0.7
      baz=267,SNR=88
J19K                              S         S         04 29 29.8 +2.2
      baz=267
ZEA   Zeya              21.22 279 eP        P         04 25 32.2 -1.6
ZEA                               e                   04 25 52.2
ZEA                               e                   04 29 24.8
ZEA                               pmax      pmax
      comp=N,20nm,0.7s
ZEA                               pmax      pmax
      comp=E,20nm,0.7s
ZEA                               pmax      pmax
      comp=Z,30nm,0.7s
ZEA                               MLR       MLR
      comp=N,12µm,15.0s
ZEA                               MLR       MLR
      comp=Z,5µm,17.0s
R17L  Mt. Peulik Vol    21.37  70 P         P         04 25 36.2 +0.8
      baz=283,SNR=99
R17L                              S         S         04 29 33.5 +2.0
      baz=283
PLK4  Peulik 4          21.37  70 P         P         04 25 35.1 -0.4
TIXI  Tiksi             21.47 330 P         P         04 25 36.5 +0.2
TIXI                              IAmb      IAmb      04 25 41.2
      comp=Z,131nm,0.8s
TIXI                              IAMs_20   IAMs_20   04 33 48.6
      comp=Z,7µm,20.0s
TIXI  Tiksi             21.47 330 P         P         04 25 36.9 +0.6
      comp=Z,101nm,0.7s,baz=131,slow=12,SNR=76
TIXI                              LR        LR        04 34 31.2
      comp=Z,6µm,18.7s,baz=138,slow=38
      comp=Z,101nm,0.7s
TIXI  Tiksi             21.47 330 P         P         04 25 37.0 +0.7
Q17K  Contact Creek     21.48  68 P         P         04 25 37.8 +1.0
      baz=282,SNR=62
Q17K                              S         S         04 29 36.3 +2.3
      baz=282
F20K  Avaraart Lake     21.50  43 P         P         04 25 35.0 -1.7
F20K                              IAmb      IAmb      04 25 54.2
      comp=Z,448nm,2.0s
F20K  Avaraart Lake     21.50  43 P         P         04 25 37.9 +1.2
      baz=259
F20K                              S         S         04 29 34.9 +0.9
      baz=259
L19K  White Mountain    21.52  57 P         P         04 25 36.1 -0.8
L19K  White Mountain    21.52  57 P         P         04 25 37.2 +0.2
      baz=272,SNR=51
L19K                              S         S         04 29 32.0 -2.4
      baz=272
O18K  Koktuh Hills      21.56  63           P         04 25 36.4 -1.0
O18K                              IAmb      IAmb      04 25 42.9
      comp=Z,296nm,1.3s
O18K                              IAMs_20   IAMs_20   04 33 26.3
      comp=Z,7µm,19.0s
O18K  Koktuh Hills      21.56  63 P         P         04 25 38.2 +0.8
      baz=278,SNR=72
O18K                              S         S         04 29 37.0 +1.8
      baz=278
D20K  Etivluk River     21.56  39           P         04 25 36.0 -1.4
D20K  Etivluk River     21.56  39 P         P         04 25 37.9 +0.5
      baz=254,SNR=108
D20K                              S         S         04 29 36.6 +1.3
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	baz=254						
JTM	Tenmabayashi	21.57	234	P	P	04 25 36.6	-1.1
JTM				IAmb	IAmb	04 25 42.6	
	comp=Z,169nm,1.0s						
JTM	Tenmabayashi	21.57	234	P	P	04 25 38.7	+1.0
E20K	Nigu River	21.60	40	P	P	04 25 38.6	+0.8
	baz=256,SNR=82						
E20K				S	S	04 29 36.9	+1.0
	baz=256						
H20K	Anotleneega Mo	21.61	48	P	P	04 25 38.5	+0.6
	baz=264,SNR=118						
H20K				S	S	04 29 37.0	+0.9
	baz=264						
P18K	Big Mountain,	21.61	65		P	04 25 37.0	-1.0
P18K	Big Mountain,	21.61	65	P	P	04 25 38.8	+0.7
	baz=279,SNR=54						
P18K				S	S	04 29 37.6	+1.3
	baz=279						
I20K	Naaghedeneel	21.72	50	P	P	04 25 38.6	-0.5
I20K				IAmb	IAmb	04 25 52.2	
	comp=Z,282nm,1.1s						
I20K	Naaghedeneel	21.72	50	P	P	04 25 40.0	+1.0
	baz=266,SNR=28						
M19K	Big River Lodg	21.75	58		P	04 25 38.0	-1.5
M19K	Big River Lodg	21.75	58	P	P	04 25 40.4	+1.0
	baz=274,SNR=60						
M19K				S	S	04 29 42.6	+3.7
	baz=274						
B20K	Meade River	21.78	35	P	P	04 25 38.4	-1.3
B20K	Meade River	21.78	35	P	P	04 25 40.2	+0.6
	baz=250						
B20K				S	S	04 29 38.4	-1.0
	baz=250						
N19K	Bonanza Creek	21.80	61		P	04 25 39.0	-1.0
N19K				IAMs_20	IAMs_20	04 33 54.6	
	comp=Z,6µm,18.0s						
N19K	Bonanza Creek	21.80	61	P	P	04 25 41.1	+1.0
	baz=276,SNR=64						
N19K				S	S	04 29 40.1	+0.1
	baz=276						
J20K	Nowinta River	21.83	51		P	04 25 38.8	-1.4
J20K				IAmb	IAmb	04 25 56.6	
	comp=Z,248nm,1.4s						
J20K	Nowinta River	21.83	51	P	P	04 25 41.0	+0.7
	baz=268,SNR=70						
J20K				S	S	04 29 39.9	-0.5
	baz=268						
K20K	Telida	21.85	54		P	04 25 39.5	-1.1
K20K	Telida	21.85	54	P	P	04 25 41.4	+0.9
	baz=270,SNR=97						
K20K				S	S	04 29 39.6	-1.3
	baz=270						
Q18K	Katmai Hardscr	21.86	66	P	P	04 25 41.6	+0.9
	baz=281,SNR=31						
Q18K				S	S	04 29 42.8	+1.5
	baz=281						
O19K	Port Alsworth	21.95	62	P	P	04 25 42.1	+0.5
	baz=278,SNR=12						
O19K				S	S	04 29 43.8	+1.0
	baz=278						
L20K	Farewell, AK	21.96	56	P	P	04 25 42.1	+0.4
	baz=272						
L20K				S	S	04 29 44.8	+1.8
	baz=272						
IMAR	Indian Mountai	22.13	47	P	P	04 25 43.0	-0.4
G21K	Allakaket	22.29	45		P	04 25 44.1	-1.1
G21K				IAmb	IAmb	04 25 49.4	
	comp=Z,289nm,1.4s						
G21K	Allakaket	22.29	45	P	P	04 25 45.8	+0.6
	baz=263,SNR=103						
G21K				S	S	04 29 47.8	-1.3
	baz=263						
C21K	Knifeblade Rid	22.32	38	P	P	04 25 46.3	+0.8
	baz=255,SNR=85						
C21K				S	S	04 29 48.7	-1.0
	baz=255						
M20K	Styx River	22.34	58	P	P	04 25 45.7	-0.2
M20K				IAmb	IAmb	04 26 05.5	
	comp=Z,263nm,1.6s						
M20K	Styx River	22.34	58	P	P	04 25 46.6	+0.7
	baz=275						
M20K				S	S	04 29 49.5	-1.0
	baz=275						
R18K	Karluk	22.38	69	P	P	04 25 45.1	-1.1
	baz=284						
R18K				S	S	04 29 49.4	-1.5
	baz=284						
F21K	Alatna River	22.40	43		P	04 25 44.7	-1.7
F21K				IAmb	IAmb	04 25 51.0	
	comp=Z,135nm,1.1s						
F21K	Alatna River	22.40	43	P	P	04 25 46.5	+0.2
	baz=261,SNR=158						
F21K				S	S	04 29 50.0	-1.2
	baz=261						
A21K	Barrow	22.42	32	P	P	04 25 46.9	+0.4
	baz=248						
A21K				S	S	04 29 49.8	-1.7
	baz=248						
E21K	Killik River	22.44	40	P	P	04 25 45.4	-1.4
E21K				IAmb	IAmb	04 25 49.5	
	comp=Z,139nm,1.2s						
E21K	Killik River	22.44	40	P	P	04 25 47.0	+0.2
	baz=258						
H21K	Melozitna Rive	22.48	48	P	P	04 25 46.3	-1.0
H21K				IAmb	IAmb	04 25 51.0	
	comp=Z,156nm,1.2s						
H21K	Melozitna Rive	22.48	48	P	P	04 25 47.8	+0.4
	baz=266,SNR=113						
H21K				S	S	04 29 50.9	-1.9
	baz=266						
Q19K	Cape Douglas,	22.50	65	P	P	04 25 47.4	-0.1
Q19K	Cape Douglas,	22.50	65	P	P	04 25 47.6	0.0
	baz=281,SNR=34						
Q19K				S	S	04 29 51.7	-1.6
	baz=281						
B21K	Ikpikpuk River	22.50	37		P	04 25 47.0	-0.4
B21K	Ikpikpuk River	22.50	37	P	P	04 25 48.5	+1.1
	baz=254,SNR=55						
B21K				S	S	04 29 54.2	+1.2
	baz=254						
ILSW	Iliamna Southw	22.57	63	P	P	04 25 48.3	0.0
P19K	Oil Pt	22.58	63		P	04 25 47.9	-0.5
P19K				IAMs_20	IAMs_20	04 34 41.3	
	comp=Z,6µm,19.0s						
P19K	Oil Pt	22.58	63	P	P	04 25 48.6	+0.3
	baz=280,SNR=29						
P19K				S	S	04 29 55.5	+0.9
	baz=280						
HEH	HeiHe	22.63	270	*e*P	P	04 25 46.5	-2.4
HEH				S	S	04 29 49.0	-6.6
HEH				ScP	ScP	04 33 20.5	+3.2
HEH				pmax	pmax		
	comp=Z,26nm,0.6s						
HEH				LR	LR		
	comp=Z,30µm,17.4s						
HEH				LR	LR		
	comp=Z,19µm,17.7s						
HEH				LR	LR		
	comp=Z,11µm,17.1s						
CHUM	Lake Minchumin	22.63	52	P	P	04 25 49.3	+0.4
	baz=270,SNR=34						
CHUM				S	S	04 29 56.6	+1.1
	baz=270						
RED	Redoubt Volcan	22.68	61	P	P	04 25 48.3	-1.2
PPLA	Purkeypile	22.72	55	P	P	04 25 48.5	-1.4
PPLA	Purkeypile	22.72	55	P	P	04 25 51.0	+1.0
	baz=273,SNR=45						
PPLA				S	S	04 29 57.5	+0.2
	baz=273						
CAST	Castle Rocks	22.74	53	P	P	04 25 49.7	-0.4
CAST	Castle Rocks	22.74	53	P	P	04 25 50.6	+0.5
	baz=272,SNR=58						
CAST				S	S	04 29 57.7	+0.2
	baz=272						
SII	Sitkinak Islan	22.79	72	P	P	04 25 49.6	-1.1
SII	Sitkinak Islan	22.79	72	P	P	04 25 50.8	+0.2
SII	Sitkinak Islan	22.79	72	P	P	04 25 50.3	-0.4
	baz=287						
SII				S	S	04 29 57.3	-1.1
	baz=287						
I21K	Tanana	22.80	49	P	P	04 25 49.6	-1.0
I21K				IAmb	IAmb	04 26 03.1	
	comp=Z,276nm,1.5s						
I21K	Tanana	22.80	49	P	P	04 25 50.9	+0.3
	baz=268						
A22K	Sinclair Lake	22.81	33	P	P	04 25 50.8	+0.2
	baz=250						
A22K				S	S	04 30 02.0	+3.6
	baz=250						
O20K	Slope Mountain	22.81	62	P	P	04 25 52.0	+1.2
	baz=279,SNR=31						
O20K				S	S	04 30 06.1	+7.3
	baz=279						
N20K	Mount Spurr	22.85	59	P	P	04 25 51.8	+0.6
	baz=277						
N20K				S	S	04 30 01.4	+1.9
	baz=277						
SPCR	Spurr Chakacha	22.85	59	P	P	04 25 51.8	+0.6
	baz=277,SNR=14						
SPCR				S	S	04 30 00.4	+0.9
	baz=277						
SPU	Mount Spurr	22.93	59	P	P	04 25 51.7	-0.4
F22K	John River	22.94	43	P	P	04 25 52.5	+0.4
	baz=262						
F22K				S	S	04 29 59.8	-1.1
	baz=262						
D22K	Ayikyak River	22.99	39	P	P	04 25 51.1	-1.5
D22K	Ayikyak River	22.99	39	P	P	04 25 52.5	-0.1
	baz=258						
D22K				S	S	04 30 02.9	+1.2
	baz=258						
STLK	Strandline Lak	23.00	58	P	P	04 25 52.8	0.0
STLK				IAmb	IAmb	04 25 56.0	
	comp=Z,147nm,1.3s						
OHAK	Old Harbor	23.08	70		P	04 25 51.7	-1.9
OHAK	Old Harbor	23.08	70	P	P	04 25 53.6	0.0
OHAK	Old Harbor	23.08	70	P	P	04 25 53.0	-0.6
	baz=286,SNR=14						
OHAK				S	S	04 30 00.9	-2.4
	baz=286						
H22K	Ishtalitna Cre	23.09	47	P	P	04 25 53.8	+0.2
	baz=266,SNR=77						
H22K				S	S	04 30 02.9	-0.5
	baz=266						
SKT	Skwentna	23.09	57	P	P	04 25 52.2	-1.5
SKT				IAmb	IAmb	04 26 06.3	
	comp=Z,94nm,0.9s						
SKT				IAMs_20	IAMs_20	04 35 58.8	
	comp=Z,6µm,18.0s						
SKT	Skwentna	23.09	57	P	P	04 25 53.9	+0.2
	baz=276,SNR=39						
SKT				S	S	04 30 05.5	+2.0
	baz=276						
B22K	Teshekpuk Lake	23.10	36	P	P	04 25 53.0	-0.6
B22K	Teshekpuk Lake	23.10	36	P	P	04 25 53.6	0.0
	baz=254						
B22K				S	S	04 30 02.5	-0.9
	baz=254						
G22K	Bettles	23.12	44	P	P	04 25 54.0	+0.1
	baz=264						
G22K				S	S	04 30 01.2	-2.7
	baz=264						
E22K	Anaktuvuk Pass	23.17	41		P	04 25 53.2	-1.2
E22K	Anaktuvuk Pass	23.17	41	P	P	04 25 54.4	-0.1
	baz=261,SNR=163						
E22K				S	S	04 30 03.2	-1.6
	baz=261						
Q20K	Shuyak Island	23.20	66	P	P	04 25 54.0	-0.8
	baz=283,SNR=18						
Q20K				S	S	04 30 01.6	-3.7
	baz=283						
SYI	Shuyak Island	23.21	66		P	04 25 53.9	-0.9
BPAW	Bear Paw Mtn.	23.22	52	IAmb	IAmb	04 25 57.3	
	comp=Z,226nm,1.5s						
BPAW	Bear Paw Mtn.	23.22	52	P	P	04 25 54.5	-0.4
	baz=271,SNR=66						
BPAW				S	S	04 30 05.2	-0.3
	baz=271						
KTH	Kantishna Hill	23.26	53	IAmb	IAmb	04 26 14.0	
	comp=Z,124nm,1.0s						
KDAK	Kodiak Island	23.30	68	P	P	04 25 53.8	-2.0
KDAK				IAmb	IAmb	04 26 06.2	
	comp=Z,100nm,0.9s						
KDAK	Kodiak Island	23.30	68	P	P	04 25 53.8	-2.0
KDAK				pmax	pmax		
	comp=Z,100nm,0.9s						
KDAK				MLR	MLR		
	comp=Z,4µm,20.0s						
KDAK	Kodiak Island	23.30	68	P	P	04 25 54.8	-1.0
	baz=285						
KDAK				S	S	04 30 05.7	-1.3
	baz=285						
MLY	Manley	23.32	49	IAmb	IAmb	04 26 14.7	
	comp=Z,158nm,1.2s						
MLY	Manley	23.32	49	P	P	04 25 56.0	0.0
	baz=269,SNR=65						
MLY				S	S	04 30 06.8	-0.5
	baz=269						
HOM	Homer	23.37	63	P	P	04 25 56.1	-0.3
	baz=281,SNR=7.1						
HOM				S	S	04 30 08.9	+0.8
	baz=281						
CAPN	Captain Cook N	23.42	60	P	P	04 25 57.0	+0.1
	baz=279						
CAPN				S	S	04 30 13.0	+4.2
	baz=279						
SUA	Susitna One	23.52	58	IAmb	IAmb	04 26 11.7	
	comp=Z,128nm,0.9s						
SUA	Susitna One	23.52	58	P	P	04 25 57.9	-0.1
	baz=277						
SUA				S	S	04 30 10.0	-0.8
	baz=277						
TRF	Thorofare Moun	23.55	53	IAmb	IAmb	04 26 10.2	
	comp=Z,160nm,0.9s						
TRF	Thorofare Moun	23.55	53	P	P	04 25 58.6	+0.2
	baz=273,SNR=44						
TRF				S	S	04 30 11.3	0.0
	baz=273						
USRK	Ussuriysk Ar.	23.62	253	P	P	04 25 57.4	-1.7
USRK	Ussuriysk Ar.	23.62	253	P	P	04 25 57.6	-1.5
	comp=Z,2.9nm,0.5s,baz=59,slow=9.2,SNR=7.4						
	comp=Z,2.9nm,0.5s						
CUT	Chulitna	23.64	56	P	P	04 25 59.2	+0.1
	baz=276						
CUT				S	S	04 30 12.3	-0.1
	baz=276						
COLD	Coldfoot	23.66	44	IAmb	IAmb	04 26 11.5	
	comp=Z,104nm,1.0s						
COLD	Coldfoot	23.66	44	P	P	04 25 59.2	-0.1
	baz=264,SNR=67						
COLD				S	S	04 30 12.5	-0.3
	baz=264						
G23K	Bananza Creek	23.69	45	IAmb	IAmb	04 26 11.5	
	comp=Z,82nm,0.9s						
G23K	Bananza Creek	23.69	45	P	P	04 25 59.3	-0.3
	baz=266,SNR=69						
G23K				S	S	04 30 11.7	-1.5
	baz=266						
D23K	Nanushuk River	23.72	39	IAmb	IAmb	04 26 12.0	
	comp=Z,211nm,1.4s						
D23K	Nanushuk River	23.72	39	P	P	04 26 00.1	+0.3
	baz=260						
D23K				S	S	04 30 11.0	-2.6
	baz=260						
M22K	Willow	23.78	58	IAmb	IAmb	04 26 17.5	
	comp=Z,128nm,1.0s						
M22K	Willow	23.78	58	P	P	04 25 59.4	-1.0
	baz=277,SNR=9.9						
M22K				S	S	04 30 15.7	+1.1
	baz=277						
BRSE	Bradley Lake S	23.80	63	P	P	04 25 59.8	-0.9
	baz=281,SNR=12						
BRSE				S	S	04 30 13.8	-1.2
	baz=281						
H23K	Yukon River	23.84	47	IAmb	IAmb	04 26 13.2	
	comp=Z,125nm,0.9s						
H23K	Yukon River	23.84	47	P	P	04 26 01.0	-0.1
	baz=268,SNR=30						
H23K				S	S	04 30 14.1	-1.5
	baz=268						
I23K	Minto, Yukon-K	23.91	49	IAmb	IAmb	04 26 18.9	
	comp=Z,221nm,1.3s						
I23K	Minto, Yukon-K	23.91	49	P	P	04 26 01.6	0.0
	baz=270,SNR=92						
I23K				S	S	04 30 15.8	-0.8
	baz=270						
C23K	Itkillik River	23.91	37		P	04 25 60.0	-1.6
C23K				IAmb	IAmb	04 26 18.8	
	comp=Z,118nm,0.9s						
C23K	Itkillik River	23.91	37	P	P	04 26 01.3	-0.3
	baz=258,SNR=43						
C23K				S	S	04 30 15.8	-0.7
	baz=258						
SLKM	Skilak Lake	23.92	61	IAmb	IAmb	04 26 28.5	
	comp=Z,164nm,1.6s						
E23K	Chandalar	23.98	42	IAmb	IAmb	04 26 05.3	
	comp=Z,120nm,1.1s						
E23K	Chandalar	23.98	42	P	P	04 26 02.1	-0.2
	baz=263,SNR=74						
E23K				S	S	04 30 15.9	-2.0
	baz=263						
NEA2	Nenana	24.04	50	IAmb	IAmb	04 26 14.3	
	comp=Z,87nm,0.8s						
NEA2	Nenana	24.04	50	P	P	04 26 02.8	-0.1
	baz=272,SNR=68						
NEA2				S	S	04 30 18.0	-0.8
	baz=272						
RC01	Rabbit Creek A	24.06	59	P	P	04 26 02.0	-1.0
	baz=279,SNR=14						
RC01				S	S	04 30 18.7	-0.4
	baz=279						
TOLK	Toolik Lake Re	24.07	40	P	P	04 26 03.5	+0.4
	baz=262,SNR=95						
TOLK				S	S	04 30 18.2	-1.0
	baz=262						
JMM	Marumori	24.09	230	P	P	04 26 05.1	+1.6
MCK	McKinley	24.14	53	IAmb	IAmb	04 26 21.2	
	comp=Z,117nm,0.9s						
MCK	McKinley	24.14	53	P	P	04 26 03.8	0.0
	baz=274,SNR=16						
MCK				S	S	04 30 19.9	-0.5
	baz=274						
O22K	Cooper Landing	24.16	61	IAMs_20	IAMs_20	04 35 39.2	
	comp=Z,7µm,18.0s						
O22K	Cooper Landing	24.16	61	P	P	04 26 02.9	-1.1
	baz=280						
O22K				S	S	04 30 17.1	-3.6
	baz=280						
RND	Reindeer	24.20	53	IAmb	IAmb	04 26 15.5	
	comp=Z,161nm,1.3s						
PMR	Palmer	24.27	58	P	P	04 26 03.9	-1.1
	baz=278,SNR=13						
PMR				S	S	04 30 20.1	-2.3
	baz=278						
SEW	Seward	24.37	61	IAmb	IAmb	04 26 28.6	
	comp=Z,70nm,0.8s						
SEW				IAMs_20	IAMs_20	04 35 26.6	
	comp=Z,7µm,18.0s						
SEW	Seward	24.37	61	P	P	04 26 05.2	-0.7
	baz=281,SNR=13						
SEW				S	S	04 30 22.5	-1.5
	baz=281						
WAT1	Susitna Watana	24.39	55	P	P	04 26 05.0	-1.1
	baz=276						
WAT1				S	S	04 30 20.1	-4.3
	baz=276						
E24K	Your Creek	24.40	42	IAmb	IAmb	04 26 18.5	
	comp=Z,104nm,0.8s						
E24K	Your Creek	24.40	42	P	P	04 26 06.0	-0.2
	baz=264						
E24K				S	S	04 30 23.8	-0.8
	baz=264						
D24K	Happy Valley	24.41	39	IAmb	IAmb	04 26 08.5	
	comp=Z,119nm,1.0s						
D24K	Happy Valley	24.41	39	P	P	04 26 06.4	+0.1
	baz=262,SNR=65						
D24K				S	S	04 30 20.8	-3.8
	baz=262						
WRH	Wood River Hil	24.47	51	IAmb	IAmb	04 26 09.0	
	comp=Z,151nm,1.0s						
H24K	Noodor Dome	24.53	47	P	P	04 26 07.8	+0.4
	baz=270,SNR=53						
H24K				S	S	04 30 24.9	-1.7
	baz=270						
C24K	Franklin Bluff	24.54	38	P	P	04 26 07.0	-0.4
	baz=260						
C24K				S	S	04 30 24.1	-2.6
	baz=260						
COLA	College	24.55	50	P	P	04 26 06.5	-1.0
COLA				IAmb	IAmb	04 26 21.1	
	comp=Z,106nm,0.7s						
COLA	College	24.55	50	P	P	04 26 06.5	-1.0
COLA				pmax	pmax		
	comp=Z,106nm,0.7s						
COLA	College	24.55	50	P	P	04 26 07.3	-0.2
	baz=272						
COLA				S	S	04 30 27.7	+0.8
	baz=272						
F24K	Squaw Lake	24.58	43	IAmb	IAmb	04 26 24.3	
	comp=Z,150nm,1.6s						
F24K	Squaw Lake	24.58	43	P	P	04 26 07.6	-0.3
	baz=266,SNR=28						
F24K				S	S	04 30 25.4	-2.0
	baz=266						
KNK	Knik Glacier	24.61	58	IAmb	IAmb	04 26 10.8	
	comp=Z,174nm,1.1s						
KNK	Knik Glacier	24.61	58	P	P	04 26 07.5	-0.7
	baz=279,SNR=23						
KNK				S	S	04 30 23.2	-4.9
	baz=279						
MDJ	Mudanjiang	24.65	257	IAMs_20	IAMs_20	04 35 38.9	
	comp=Z,8µm,20.0s						
MDJ	Mudanjiang	24.65	257	P	P	04 26 07.5	-1.1
MDJ				PP	PnPn	04 26 42.5	+2.3
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MDJ				LR	LR		
	comp=Z,16µm,16.1s						
MDJ				LR	LR		
	comp=Z,17µm,16.8s						
MDJ				LR	LR		
	comp=Z,8µm,19.2s						
G24K	Hadweenzic Riv	24.70	45	P	P	04 26 08.8	-0.2
	baz=268,SNR=176						
G24K				S	S	04 30 28.6	-0.8
	baz=268						
PWL	Port Wells	24.77	59	IAMs_20	IAMs_20	04 35 24.2	
	comp=Z,7µm,22.0s						
PWL	Port Wells	24.77	59	P	P	04 26 09.1	-0.5
	baz=280,SNR=76						
PWL				S	S	04 30 27.2	-3.4
	baz=280						
WAT6	Susitna Watana	24.79	55	P	P	04 26 09.0	-0.8
	baz=277,SNR=40						
WAT6				S	S	04 30 30.4	-0.7
	baz=277						
DHY	Denali Highway	24.89	54	IAmb	IAmb	04 26 29.5	
	comp=Z,85nm,0.9s						
DHY	Denali Highway	24.89	54	P	P	04 26 09.9	-1.0
	baz=276,SNR=19						
DHY				S	S	04 30 30.8	-2.0
	baz=276						
M23K	Glacier View	24.90	57	P	P	04 26 10.1	-0.7
	baz=279,SNR=52						
M23K				S	S	04 30 31.4	-1.3
	baz=279						
HDA	Harding Lake	24.96	51	IAmb	IAmb	04 26 23.9	
	comp=Z,69nm,0.7s						
HDA	Harding Lake	24.96	51	P	P	04 26 10.6	-0.7
	baz=274,SNR=29						
HDA				S	S	04 30 31.5	-2.2
	baz=274						
IL31		24.97	50	IAmb	IAmb	04 26 25.1	
	comp=Z,106nm,0.9s						
ILAR	Eielson Array	24.97	50	P	P	04 26 10.3	-1.0
	comp=Z,29nm,0.9s,baz=264,slow=7.8,SNR=119						
ILAR				LR	LR	04 36 43.2	
	comp=Z,4µm,18.0s,baz=246,slow=38						
	comp=Z,29nm,0.9s						
JSD	Sado	25.07	235	P	P	04 26 12.5	0.0
JSD				IAmb	IAmb	04 26 15.3	
	comp=Z,97nm,0.9s						
JSD	Sado	25.07	235	P	P	04 26 14.0	+1.5
SCM	Sheep Creek Mo	25.08	57	P	P	04 26 11.8	-0.7
	baz=279,SNR=104						
SCM				S	S	04 30 34.6	-1.1
	baz=279						
BNX	BinXian	25.14	261	⇓P	P	04 26 11.5	-1.5
BNX				pP	pP	04 26 15.3	-2.6
BNX				S	S	04 30 38.3	+1.6
BNX				pmax	pmax		
	comp=Z,20nm,1.2s						
BNX				pmax	pmax		
	comp=Z,280nm,2.7s						
BNX				LR	LR		
	comp=Z,10µm,17.3s						
BNX				LR	LR		
	comp=Z,9µm,18.4s						
BNX				LR	LR		
	comp=Z,10µm,14.7s						
G25K	Bearman Lake	25.25	45	P	P	04 26 13.5	-0.3
	baz=270,SNR=36						
G25K				S	S	04 30 39.6	+1.6

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            baz=270
D25K  Kavik River       25.30  39  P        P        04 26 13.6 -0.7
            baz=264,SNR=134
D25K                               S        S        04 30 37.5 -1.4
            baz=264
GLI   Glacier Island    25.36  59  P        P        04 26 14.1 -0.8
            baz=281,SNR=12
GLI                                S        S        04 30 38.6 -1.3
            baz=281
H25L  Birch Creek       25.36  46  P        P        04 26 14.7 -0.2
            baz=271,SNR=36
H25L                               S        S        04 30 40.2 +0.3
            baz=271
P23K  Montague Islan    25.39  61  IAMs_20  IAMs_20  04 36 25.6
            comp=Z,5µm,18.0s
P23K  Montague Islan    25.39  61  P        P        04 26 14.5 -0.7
            baz=283
P23K                               S        S        04 30 39.0 -1.6
            baz=283
F25K  Christian Rive    25.45  43  IAmb     IAmb     04 26 19.1
            comp=Z,96nm,1.1s
F25K  Christian Rive    25.45  43  P        P        04 26 15.3 -0.4
            baz=268,SNR=122
F25K                               S        S        04 30 37.8 -3.5
            baz=268
E25K  Arctic Village    25.50  42  P        P        04 26 16.1 +0.1
            baz=267,SNR=116
E25K                               S        S        04 30 39.3 -2.8
            baz=267
PRP   Porcupine Dome    25.51  48  IAmb     IAmb     04 26 18.2
            comp=Z,136nm,1.2s
PRP   Porcupine Dome    25.51  48  P        P        04 26 15.8 -0.6
            baz=273,SNR=138
PRP                                S        S        04 30 40.9 -1.6
            baz=273
K24K  Donnelly Dome     25.53  52  P        P        04 26 15.9 -0.6
            baz=276,SNR=17
K24K                               S        S        04 30 39.1 -3.6
            baz=276
M24K  Tolsona, Glenn    25.58  56  P        P        04 26 17.0  0.0
            baz=279,SNR=20
M24K                               S        S        04 30 42.6 -0.9
            baz=279
J25K  Salcha River,     25.63  50  IAmb     IAmb     04 26 29.4
            comp=Z,76nm,0.9s
J25K  Salcha River,     25.63  50  P        P        04 26 16.2 -1.2
            baz=275,SNR=35
J25K                               S        S        04 30 42.1 -2.3
            baz=275
FID   Port Fidalgo      25.68  59  IAmb     IAmb     04 26 30.6
            comp=Z,72nm,0.9s
FID                                IAMs_20  IAMs_20  04 36 02.0
            comp=Z,6µm,19.0s
HIN   Hinchinbrook I    25.75  60  IAmb     IAmb     04 26 50.8
            comp=Z,142nm,1.3s
HIN                                IAMs_20  IAMs_20  04 36 49.0
            comp=Z,7µm,18.0s
PAX   Paxson            25.77  54  IAmb     IAmb     04 26 37.8
            comp=Z,74nm,1.0s
PAX   Paxson            25.77  54  P        P        04 26 18.6 -0.1
            baz=278,SNR=20
PAX                                S        S        04 30 41.8 -4.8
            baz=278
KLU   Klutina           25.80  57  IAmb     IAmb     04 26 36.9
            comp=Z,100nm,0.9s
KLU                                IAMs_20  IAMs_20  04 37 18.5
            comp=Z,5µm,18.0s
KLU   Klutina           25.80  57  P        P        04 26 19.0  0.0
            baz=281,SNR=20
KLU                                S        S        04 30 44.1 -3.0
            baz=281
BMAR  Burnt Mountain    25.85  44  P        P        04 26 18.7 -0.7
C26K  Camden Bay        25.87  38  P        P        04 26 19.1 -0.3
            baz=264,SNR=16
C26K                               S        S        04 30 48.8 +1.0
            baz=264
DIV   Divide            25.94  58  IAMs_20  IAMs_20  04 36 23.2
            comp=Z,5µm,20.0s
RIDG  Independent Ri    25.95  52  IAmb     IAmb     04 26 21.4
            comp=Z,137nm,1.3s
RIDG  Independent Ri    25.95  52  P        P        04 26 19.3 -1.0
            baz=277,SNR=56
RIDG                               S        S        04 30 49.0 -0.3
            baz=277
HARP  HAARP             26.00  55  P        P        04 26 20.5 -0.2
            baz=280,SNR=8.1
HARP                               S        S        04 30 49.5 -0.6
            baz=280
F26K  Sheenjek River    26.02  43  P        P        04 26 20.7 -0.2
            baz=269,SNR=50
F26K                               S        S        04 30 49.1 -1.2
            baz=269
Q23K  Middleton Isla    26.05  62  P        P        04 26 20.0 -1.1
            baz=285
Q23K                               S        S        04 30 52.0 +1.2
            baz=285
EYAK  Cordova Ski Ar    26.08  59  IAMs_20  IAMs_20  04 36 52.8
            comp=Z,8µm,18.0s
EYAK  Cordova Ski Ar    26.08  59  P        P        04 26 22.6 +1.2
EYAK  Cordova Ski Ar    26.08  59  P        P        04 26 20.5 -0.9
            baz=283,SNR=7.4
EYAK                               S        S        04 30 48.7 -2.6
            baz=283
G26K  Porcupine Rive    26.16  45  IAmb     IAmb     04 26 35.3
            comp=Z,161nm,1.4s
G26K  Porcupine Rive    26.16  45  P        P        04 26 21.5 -0.6
            baz=271,SNR=87
G26K                               S        S        04 30 51.4 -1.1
            baz=271
C27K  Jago River        26.26  39  IAmb     IAmb     04 26 24.9
            comp=Z,80nm,1.1s
C27K  Jago River        26.26  39  P        P        04 26 22.3 -0.7
            baz=266
C27K                               S        S        04 30 51.3 -2.8
            baz=266
SCRK  Sand Creek        26.30  51  IAmb     IAmb     04 26 24.0
            comp=Z,96nm,1.1s
SCRK  Sand Creek        26.30  51  P        P        04 26 22.0 -1.5
            baz=277,SNR=128
SCRK                               S        S        04 30 51.1 -3.9
            baz=277
DOT   Dot Lake          26.31  52  IAmb     IAmb     04 26 36.0
            comp=Z,51nm,0.8s
MJB9  Matsu-Tunnel      26.33 233  P        P        04 26 24.2 +0.3
MAJO  Matsushiro        26.33 233  P        P        04 26 24.0 +0.1
MAJO  Matsushiro        26.33 233  IAMs_20  IAMs_20  04 37 18.9
            comp=Z,7µm,21.0s
MAJO  Matsushiro        26.33 233  P        P        04 26 25.2 +1.3
MAJO  Matsushiro        26.33 233  P        P        04 26 25.4 +1.5
MJAR  Matsushiro Arr    26.33 233  P        P        04 26 24.8 +0.9
            comp=Z,77nm,0.8s,baz=24,slow=7.8,SNR=127
MJAR                               LR       LR       04 37 29.8
            comp=Z,7µm,20.7s,baz=39,slow=38
            comp=Z,77nm,0.8s
N25K  Chitina, Valde    26.40  57  IAmb     IAmb     04 26 27.0
            comp=Z,108nm,1.4s
N25K  Chitina, Valde    26.40  57  P        P        04 26 23.7 -0.7
            baz=282,SNR=24
N25K                               S        S        04 30 55.1 -1.5
            baz=282
J26L  Joseph Creek      26.42  50  P        P        04 26 22.8 -1.7
            baz=276,SNR=18
J26L                               S        S        04 30 52.7 -4.1
            baz=276
I26K  Coal Creek Min    26.51  48  P        P        04 26 24.0 -1.3
            baz=275
I26K                               S        S        04 30 55.1 -3.0
            baz=275
BMRM  Bremner River     26.53  58  IAMs_20  IAMs_20  04 36 30.8
            comp=Z,6µm,21.0s
BMRM  Bremner River     26.53  58  P        P        04 26 25.4 -0.2
            baz=283,SNR=16
BMRM                               S        S        04 30 57.9 -0.8
            baz=283
RAGM  Ragged Mountai    26.63  60  IAMs_20  IAMs_20  04 37 20.4
            comp=Z,7µm,18.0s
L26K  Log Cabin Wild    26.72  53  IAMs_20  IAMs_20  04 38 01.4
            comp=Z,4µm,18.0s
L26K  Log Cabin Wild    26.72  53  P        P        04 26 26.6 -0.7
            baz=280
L26K                               S        S        04 31 02.0 +0.6
            baz=280
GLB   Gilahina Butte    26.81  57  IAMs_20  IAMs_20  04 37 59.0
            comp=Z,4µm,18.0s
HMT   Hamilton          26.84  60  IAmb     IAmb     04 26 30.4
            comp=Z,92nm,1.1s
HMT                                IAMs_20  IAMs_20  04 37 45.1
            comp=Z,7µm,18.0s
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KAIM  Kayak Island      26.87  60  IAMs_20  IAMs_20  04 37 25.8
            comp=Z,6µm,18.0s
KAIM  Kayak Island      26.87  60  P        P        04 26 27.8 -0.7
            baz=285,SNR=8.1
KAIM                               S        S        04 31 04.5 +0.6
            baz=285
BOD   Bodaibo           26.92 295  eP       P        04 26 30.9 +1.9
BOD                                pmax     pmax
            comp=Z,58nm,1.6s
E27K  Coleen River      26.98  42  P        P        04 26 29.2 -0.3
            baz=271,SNR=39
E27K                               S        S        04 31 04.4 -1.2
            baz=271
M26K  Nabesna, AK       26.99  55  IAmb     IAmb     04 26 32.9
            comp=Z,131nm,1.3s
M26K  Nabesna, AK       26.99  55  P        P        04 26 29.4 -0.2
            baz=281,SNR=57
M26K                               S        S        04 31 05.0 -0.8
            baz=281
G27K  Doyon Strip       27.01  45  P        P        04 26 29.5 -0.3
            baz=273,SNR=71
G27K                               S        S        04 31 06.2 +0.2
            baz=273
VRDI  Verde Repeater    27.02  57  IAMs_20  IAMs_20  04 38 04.7
            comp=Z,4µm,18.0s
BERG  Berg Lake         27.10  59  IAmb     IAmb     04 26 33.4
            comp=Z,115nm,1.2s
BERG                               IAMs_20  IAMs_20  04 37 36.8
            comp=Z,7µm,18.0s
H27K  Steamboat Moun    27.10  46  IAmb     IAmb     04 26 33.8
            comp=Z,172nm,1.2s
H27K  Steamboat Moun    27.10  46  P        P        04 26 30.4 -0.2
            baz=275,SNR=162
H27K                               S        S        04 31 08.5 +1.0
            baz=275
I27K  Kandik River      27.12  48  P        P        04 26 30.0 -0.8
            baz=276,SNR=18
I27K                               S        S        04 31 08.2 +0.3
            baz=276
K27K  Chicken           27.12  51  IAmb     IAmb     04 26 45.9
            comp=Z,83nm,0.9s
K27K  Chicken           27.12  51  P        P        04 26 30.0 -0.9
            baz=278
K27K                               S        S        04 31 04.1 -3.6
            baz=278
SUCK  Suckling Hills    27.14  60  IAMs_20  IAMs_20  04 36 49.0
            comp=Z,7µm,20.0s
MCARA McCarthy VSAT     27.19  57  IAmb     IAmb     04 26 45.4
            comp=Z,100nm,1.0s
MCARA McCarthy VSAT     27.19  57  P        P        04 26 31.3 -0.1
            baz=283,SNR=22
MCARA                              S        S        04 31 08.3 -0.5
            baz=283
D27M  Malcolm River     27.21  40  IAmb     IAmb     04 26 33.5
            comp=Z,81nm,1.1s
D27M                               IAMs_20  IAMs_20  04 38 20.2
            comp=Z,4µm,18.0s
D27M  Malcolm River     27.21  40  P        P        04 26 31.3 -0.3
            baz=269
D27M                               S        S        04 31 07.0 -2.3
            baz=269
CRQM  Cirque            27.28  58  IAMs_20  IAMs_20  04 36 55.2
            comp=Z,9µm,22.0s
CRQE  Cirque            27.30  58  P        P        04 26 32.4 -0.2
            baz=284,SNR=24
BGLC  Bering Glacier    27.37  60  P        P        04 26 32.9 -0.1
            baz=285
L27K  Beaver Creek,     27.39  53  IAmb     IAmb     04 26 36.1
            comp=Z,140nm,1.2s
L27K  Beaver Creek,     27.39  53  P        P        04 26 33.1 -0.2
            baz=281,SNR=140
L27K                               S        S        04 31 10.1 -2.0
            baz=281
BCAR  Beaver Creek A    27.41  53  P        P        04 26 32.8 -0.7
TGL   Tana Glacier      27.43  58  IAmb     IAmb     04 26 59.2
            comp=Z,79nm,1.0s
TGL                                IAMs_20  IAMs_20  04 36 58.5
            comp=Z,8µm,22.0s
CN2   Changchun         27.45 260  P        P        04 26 27.3 -6.6
CN2                                S        S        04 31 06.0 -7.2
CN2                                pmax     pmax
            comp=Z,10.0nm,0.6s
CN2                                LR       LR
            comp=N,11µm,14.0s
CN2                                LR       LR
            comp=E,7µm,14.0s
CN2                                LR       LR
            comp=Z,6µm,15.0s
JGF   Kuroka            27.49 233  P        P        04 26 36.7 +2.3
WAX   Waxell Ridge      27.49  59  IAmb     IAmb     04 26 37.1
            comp=Z,111nm,1.2s
WAX                                IAMs_20  IAMs_20  04 37 12.2
            comp=Z,7µm,20.0s
M27K  Edge Creek, AK    27.51  55  IAmb     IAmb     04 26 51.3
            comp=Z,76nm,0.8s
M27K  Edge Creek, AK    27.51  55  P        P        04 26 34.3 -0.1
            baz=282,SNR=64
M27K                               S        S        04 31 13.2 -1.0
            baz=282
F28M  Old Crow          27.66  43  IAmb     IAmb     04 26 38.4
            comp=Z,92nm,1.2s
F28M  Old Crow          27.66  43  P        P        04 26 35.2 -0.3
            baz=273,SNR=64
F28M                               S        S        04 31 17.0 +0.9
            baz=273
ISLE  Juniper Island    27.70  58  IAmb     IAmb     04 26 42.0
            comp=Z,80nm,1.1s
ISLE                               IAMs_20  IAMs_20  04 37 18.6
            comp=Z,5µm,22.0s
E28M  Babbage River     27.74  41  P        P        04 26 36.0 -0.3
            baz=272,SNR=31
E28M                               S        S        04 31 16.2 -1.1
            baz=272
I28M  Miner Creek       27.84  48  IAmb     IAmb     04 26 39.6
            comp=Z,80nm,1.2s
I28M  Miner Creek       27.84  48  P        P        04 26 36.8 -0.5
            baz=278,SNR=70
I28M                               S        S        04 31 14.6 -4.6
            baz=278
INU   Inuyama           27.86 233           P        04 26 37.5 -0.1
INU                                IAMs_20  IAMs_20  04 38 16.2
            comp=Z,5µm,20.0s
INU   Inuyama           27.86 233  P        P        04 26 38.4 +0.8
BARN  Barnard Glacie    27.91  57  IAmb     IAmb     04 26 54.2
            comp=Z,60nm,0.7s
JSG   Sagara            27.91 231  IAMs_20  IAMs_20  04 36 48.7
            comp=Z,4µm,21.0s
GRNC  Granite Creek     27.94  58  IAmb     IAmb     04 26 41.3
            comp=Z,121nm,1.3s
GRNC                               IAMs_20  IAMs_20  04 37 15.1
            comp=Z,6µm,22.0s
BVCY  Beaver Creek      27.96  54  P        P        04 26 38.1 -0.2
            baz=282,SNR=14
BVCY                               S        S        04 31 20.8 -0.3
            baz=282
MESA  MESA              28.00  59  IAMs_20  IAMs_20  04 37 28.6
            comp=Z,7µm,21.0s
MESA  MESA              28.00  59  P        P        04 26 39.0 +0.1
            baz=286,SNR=12
MESA                               S        S        04 31 23.7 +1.7
            baz=286
D28M  Stokes Point      28.00  39  P        P        04 26 38.0 -0.6
            baz=271
D28M                               S        S        04 31 20.1 -1.3
            baz=271
YAH   Yahtse            28.05  59  IAmb     IAmb     04 26 42.4
            comp=Z,123nm,1.2s
YAH                                IAMs_20  IAMs_20  04 37 18.8
            comp=Z,8µm,22.0s
CTG   Chitna Glacier    28.08  57  P        P        04 26 39.5  0.0
            baz=285,SNR=15
CTG                                S        S        04 31 21.9 -1.3
            baz=285
CTGM  Chitina Glacie    28.08  57  IAmb     IAmb     04 26 41.9
            comp=Z,64nm,1.2s
CTGM                               IAMs_20  IAMs_20  04 37 30.7
            comp=Z,6µm,22.0s
LOGN  Logan Glacier     28.28  58  IAMs_20  IAMs_20  04 37 24.9
            comp=Z,5µm,22.0s
DAWY  Dawson            28.28  51  P        P        04 26 41.1 -0.2
            baz=280,SNR=30
DAWY                               S        S        04 31 24.1 -2.0
            baz=280
YUK3  Moose Creek       28.29  56  P        P        04 26 41.4 -0.1
            baz=284,SNR=19
YUK3                               S        S        04 31 27.8 +1.2
            baz=284
TABL  Table Mountain    28.31  58  IAmb     IAmb     04 26 43.7
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            comp=Z,66nm,1.1s
TABL                               IAMs_20  IAMs_20  04 37 50.9
            comp=Z,6µm,21.0s
E29M  Blow River        28.35  41  IAmb     IAmb     04 26 44.5
            comp=Z,90nm,1.4s
E29M  Blow River        28.35  41  P        P        04 26 41.3 -0.4
            baz=274,SNR=43
E29M                               S        S        04 31 26.7 -0.2
            baz=274
H29M  Whitestone        28.38  46  IAmb     IAmb     04 26 44.2
            comp=Z,74nm,1.1s
H29M  Whitestone        28.38  46  P        P        04 26 41.9 -0.1
            baz=277,SNR=41
H29M                               S        S        04 31 27.0 -0.5
            baz=277
G29M  Pine Creek        28.43  44  P        P        04 26 42.5  0.0
            baz=276,SNR=87
G29M                               S        S        04 31 30.0 +1.7
            baz=276
I29M  Ogilvie Camp,     28.52  48  IAmb     IAmb     04 26 45.5
            comp=Z,105nm,1.1s
I29M  Ogilvie Camp,     28.52  48  P        P        04 26 43.0 -0.3
            baz=279,SNR=50
I29M                               S        S        04 31 29.3 -0.5
            baz=279
O28M  Mount Upton       28.67  58  IAmb     IAmb     04 26 47.7
            comp=Z,111nm,1.4s
O28M  Mount Upton       28.67  58  P        P        04 26 44.7 -0.3
            baz=286,SNR=22
O28M                               S        S        04 31 31.2 -1.6
            baz=286
J29N  Klondike Camp     28.72  50  P        P        04 26 44.5 -0.6
            baz=281
YUK8  Steele Glacier    28.74  56  P        P        04 26 45.1 -0.4
            baz=285,SNR=7.3
YUK8                               S        S        04 31 35.3 +1.6
            baz=285
PCA   Pinnacle          28.83  59  IAMs_20  IAMs_20  04 39 10.7
            comp=Z,7µm,18.0s
PINM  Pinnacle          28.84  59  P        P        04 26 46.1 -0.1
            baz=287,SNR=19
PINM                               S        S        04 31 33.2 -1.8
            baz=287
HHU   Hamhung           28.98 252  P        P        04 26 46.1 -1.4
HHU                                S        S        04 31 36.0 -1.3
HHU                                AmB
            comp=Z,216nm,1.8s
HHU                                AMS      AMS
            comp=Z,4µm,13.6s
EPYK  Eagle Plains      29.02  45  IAmb     IAmb     04 26 49.7
            comp=Z,126nm,1.4s
EPYK  Eagle Plains      29.02  45  P        P        04 26 47.1 -0.6
            baz=278,SNR=36
EPYK                               S        S        04 31 35.2 -2.4
            baz=278
L29M  L29M              29.03  52  IAmb     IAmb     04 26 50.5
            comp=Z,104nm,1.1s
L29M  L29M              29.03  52  P        P        04 26 48.1 +0.2
            baz=283,SNR=106
L29M                               S        S        04 31 36.9 -1.0
            baz=283
M29M  Somme Creek       29.04  54  P        P        04 26 48.5 +0.4
            baz=284,SNR=35
M29M                               S        S        04 31 35.9 -2.2
            baz=284
G30M  tAoh Zraii Nji    29.13  44  IAmb     IAmb     04 26 50.4
            comp=Z,73nm,1.3s
G30M  tAoh Zraii Nji    29.13  44  P        P        04 26 48.2 -0.5
            baz=278,SNR=27
G30M                               S        S        04 31 39.7 +0.4
            baz=278
K29M  Barlow Dome       29.14  51  P        P        04 26 48.4 -0.5
            baz=282,SNR=23
K29M                               S        S        04 31 37.3 -2.4
            baz=282
BCPM  Bancas Point      29.18  59  IAMs_20  IAMs_20  04 39 29.7
            comp=Z,7µm,19.0s
F30M  Barrier River     29.21  43  IAmb     IAmb     04 26 52.0
            comp=Z,123nm,1.2s
F30M  Barrier River     29.21  43  P        P        04 26 49.5 +0.1
            baz=277,SNR=42
F30M                               S        S        04 31 41.5 +0.9
            baz=277
YUK4  Talbot Arm        29.24  56  P        P        04 26 49.9 -0.1
            baz=286,SNR=12
YUK4                               S        S        04 31 44.5 +3.0
            baz=286
I30M  Mount Dempster    29.35  48  IAmb     IAmb     04 26 52.2
            comp=Z,70nm,1.1s
I30M  Mount Dempster    29.35  48  P        P        04 26 49.9 -0.8
            baz=281,SNR=68
I30M                               S        S        04 31 41.7 -1.3
            baz=281
PNL   Peninsula         29.38  59  P        P        04 26 52.9 +1.9
PNL   Peninsula         29.38  59  P        P        04 26 49.5 -1.4
            baz=288,SNR=10
PNL                                S        S        04 31 45.0 +1.7
            baz=288
YUK6  Outpost Mounta    29.48  57  P        P        04 26 51.5 -0.6
            baz=287,SNR=10
YUK6                               S        S        04 31 45.5 +0.1
            baz=287
J30M  Hart River        29.49  49  P        P        04 26 51.7 -0.4
            baz=282,SNR=12
J30M                               S        S        04 31 45.5 +0.3
            baz=282
O29M  Mount Kennedy     29.57  58  IAMs_20  IAMs_20  04 38 31.8
            comp=Z,6µm,21.0s
O29M  Mount Kennedy     29.57  58  P        P        04 26 52.4 -0.4
            baz=288,SNR=7.9
O29M                               S        S        04 31 45.8 -0.8
            baz=288
SNY   Shenyang          29.79 259 ⇑P        P        04 26 54.3 -0.4
SNY                                S        S        04 31 54.8 +4.9
SNY                                pmax     pmax
            comp=Z,15nm,0.7s
SNY                                pmax     pmax
            comp=Z,140nm,3.5s
SNY                                LR       LR
            comp=Z,7µm,14.5s
SNY                                LR       LR
            comp=Z,6µm,13.8s
SNY                                LR       LR
            comp=Z,6µm,18.2s
G31M  Satah River       29.89  44  IAmb     IAmb     04 26 57.7
            comp=Z,91nm,1.4s
G31M  Satah River       29.89  44  P        P        04 26 55.2 -0.2
            baz=279,SNR=20
G31M                               S        S        04 31 50.6 -0.6
            baz=279
MAYO  Mayo, Yukon       29.90  51  P        P        04 26 54.7 -0.8
MAYO                               IAmb     IAmb     04 27 33.7
            comp=Z,46nm,0.8s
MAYO  Mayo, Yukon       29.90  51  P        P        04 26 55.6 +0.1
            baz=284
HYT   Haines Junctio    29.92  57  IAmb     IAmb     04 26 59.0
            comp=Z,69nm,1.1s
HYT   Haines Junctio    29.92  57  P        P        04 26 55.8 -0.1
            baz=288,SNR=37
HYT                                S        S        04 31 50.3 -1.7
            baz=288
N30M  Aishikik Lake     29.93  55  P        P        04 26 54.8 -1.0
            baz=287,SNR=10
N30M                               S        S        04 31 52.4 +0.4
            baz=287
INK   Inuvik            29.97  41  IAmb     IAmb     04 26 59.9
            comp=Z,105nm,1.4s
INK   Inuvik            29.97  41  LR       LR       04 40 55.3
            comp=Z,2µm,19.2s,baz=272,slow=40
INK   Inuvik            29.97  41  P        P        04 26 56.0 -0.1
            baz=278,SNR=28
INK                                S        S        04 31 50.7 -1.6
            baz=278
F31M  Tsiigehtchic      30.02  43  IAmb     IAmb     04 26 58.1
            comp=Z,81nm,1.1s
F31M  Tsiigehtchic      30.02  43  P        P        04 26 55.5 -1.0
            baz=279,SNR=12
F31M                               S        S        04 31 52.1 -0.9
            baz=279
H31M  Peel River        30.07  46  P        P        04 26 56.3 -0.7
            baz=281,SNR=30
H31M                               S        S        04 31 53.6 -0.4
            baz=281
P29M  Windy Craggy      30.19  59  IAMs_20  IAMs_20  04 40 01.0
            comp=Z,6µm,18.0s
P29M  Windy Craggy      30.19  59  P        P        04 26 57.4 -0.8
            baz=289,SNR=12
P29M                               S        S        04 31 54.7 -1.3
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	baz=289						
P30M	Million Dollar	30.40	58	P	P	04 26 59.7	-0.3
	baz=289						
P30M				S	S	04 31 57.6	-1.8
	baz=289						
SUJ	Sinuiju	30.48	255	P	P	04 26 59.4	-1.4
SUJ				S	S	04 31 59.1	-1.8
SUJ				AmB			
	comp=Z,68nm,1.3s						
SUJ				AMS	AMS		
	comp=Z,8µm,12.9s						
N31M	Braeburn, Yuko	30.52	55	IAMs_20	IAMs_20	04 40 03.7	
	comp=Z,4µm,18.0s						
N31M	Braeburn, Yuko	30.52	55	P	P	04 27 00.9	-0.2
	baz=288,SNR=13						
N31M				S	S	04 32 00.2	-1.0
	baz=288						
O30N	Mendenhall	30.60	56	P	P	04 27 01.7	-0.1
	baz=288,SNR=16						
O30N				S	S	04 31 59.9	-2.6
	baz=288						
KS19	Wonju Array Si	30.60	248	P	P	04 27 01.7	-0.2
KSRS	Korea Array	30.61	248	P	P	04 27 00.8	-1.2
	comp=Z,11nm,0.8s,baz=37,slow=8.9,SNR=32						
	comp=Z,11nm,0.8s						
KSAR	Wonju Array Be	30.64	248		P	04 27 01.4	-0.8
KSAR	Wonju Array Be	30.64	248	P	P	04 27 01.4	-0.8
PLBC	Pleasant Camp	30.90	59	P	P	04 27 05.3	+0.9
	baz=290,SNR=6.6						
PLBC				S	S	04 32 07.7	+0.5
	baz=290						
M31M	Drury Creek, Y	30.93	53	IAmb	IAmb	04 27 07.5	
	comp=Z,68nm,1.1s						
M31M				IAMs_20	IAMs_20	04 40 38.7	
	comp=Z,3µm,18.0s						
M31M	Drury Creek, Y	30.93	53	P	P	04 27 05.2	+0.5
	baz=287,SNR=73						
M31M				S	S	04 32 08.4	+0.7
	baz=287						
WHY	Whitehorse	31.20	56		P	04 27 07.2	+0.1
WHY	Whitehorse	31.20	56	P	P	04 27 06.6	-0.6
	baz=289,SNR=47						
WHY				S	S	04 32 10.2	-1.8
	baz=289						
INCN	Inchon	31.26	249	IAMs_20	IAMs_20	04 40 43.8	
	comp=Z,5µm,19.0s						
HJU	Haeju	31.32	251	P	P	04 27 07.0	-1.2
HJU				S	S	04 32 12.3	-1.6
HJU				AmB			
	comp=Z,926nm,4.1s						
HJU				AMS	AMS		
	comp=Z,6µm,13.5s						
FARO	Faro, Yukon	31.39	53	IAmb	IAmb	04 27 12.0	
	comp=Z,63nm,1.2s						
FARO				IAMs_20	IAMs_20	04 40 43.8	
	comp=Z,4µm,20.0s						
FARO	Faro, Yukon	31.39	53	P	P	04 27 08.6	-0.1
	baz=288,SNR=50						
SKAG	Skagway	31.40	58	IAmb	IAmb	04 27 12.5	
	comp=Z,86nm,1.2s						
SKAG				IAMs_20	IAMs_20	04 40 49.0	
	comp=Z,5µm,20.0s						
SKAG	Skagway	31.40	58	P	P	04 27 09.0	+0.3
	baz=291,SNR=14						
SKAG				S	S	04 32 16.0	+1.2
	baz=291						
S31K	Pelican	31.52	62	IAMs_20	IAMs_20	04 41 07.3	
	comp=Z,4µm,20.0s						
S31K	Pelican	31.52	62	P	P	04 27 09.9	+0.1
	baz=293						
S31K				S	S	04 32 18.1	+1.4
	baz=293						
TJN	Taejon	31.72	247	*i* P	P	04 27 11.0	-0.7
N32M	Quiet Lake	31.86	55	IAMs_20	IAMs_20	04 41 03.4	
	comp=Z,3µm,18.0s						
N32M	Quiet Lake	31.86	55	P	P	04 27 12.8	-0.1
	baz=290,SNR=11						
N32M				S	S	04 32 23.1	+0.9
	baz=290						
P32M	Atlin	32.12	58	IAMs_20	IAMs_20	04 40 20.0	
	comp=Z,6µm,20.0s						
P32M	Atlin	32.12	58	P	P	04 27 14.6	-0.5
	baz=292,SNR=14						
P32M				S	S	04 32 23.4	-2.9
	baz=292						
MMPY	Sheldon Lake,	32.19	52	IAmb	IAmb	04 27 18.6	
	comp=Z,58nm,1.1s						
MMPY	Sheldon Lake,	32.19	52	P	P	04 27 15.6	-0.2
	baz=289,SNR=57						
MMPY				S	S	04 32 25.5	-1.9
	baz=289						
R32K	Eaglecrest	32.23	60	P	P	04 27 16.0	-0.1
	baz=293,SNR=17						
A36M	Sachs Harbour	32.25	33	P	P	04 27 15.8	-0.3
	baz=279						
A36M				S	S	04 32 25.4	-2.5
	baz=279						
JIS	Juneau Island	32.30	60	P	P	04 27 19.5	+2.9
P33M	Teslin, Yukon	32.31	56		P	04 27 16.8	-0.1
P33M				IAmb	IAmb	04 27 19.7	
	comp=Z,54nm,1.2s						
P33M	Teslin, Yukon	32.31	56	P	P	04 27 16.5	-0.3
	baz=291,SNR=27						
P33M				S	S	04 32 26.6	-2.8
	baz=291						
SIT	Sitka	32.33	63	IAMs_20	IAMs_20	04 40 23.8	
	comp=Z,3µm,19.0s						
SIT	Sitka	32.33	63	P	P	04 27 19.4	+2.5
SIT	Sitka	32.33	63	P	P	04 27 17.0	+0.1
	baz=295,SNR=14						
S32K	Killisnoo	32.53	62	IAmb	IAmb	04 27 22.5	
	comp=Z,64nm,1.0s						
S32K				IAMs_20	IAMs_20	04 41 47.1	
	comp=Z,4µm,21.0s						
S32K	Killisnoo	32.53	62	P	P	04 27 19.0	+0.3
	baz=294,SNR=19						
JNU	Nakatsue	32.55	239	LR	LR	04 41 47.7	
	comp=Z,4µm,18.6s,baz=40,slow=39						
XLT	XiLinHaoTe	32.59	269	*e*P	P	04 27 20.3	+0.8
XLT				pP	pP	04 27 23.3	-1.1
XLT				sP	sP	04 27 27.0	+0.9
XLT				PP	PP	04 28 30.5	-2.6
XLT				S	S	04 32 33.8	-0.2
XLT				pmax	pmax		
	comp=Z,11nm,0.9s						
XLT				pmax	pmax		
	comp=Z,65nm,3.8s						
XLT				LR	LR		
	comp=Z,15µm,18.7s						
XLT				LR	LR		
	comp=Z,8µm,14.0s						
DL2	Dalian	32.89	257	P	P	04 27 21.3	-0.7
DL2				PP	PP	04 28 36.0	-0.3
DL2				S	S	04 32 41.5	+3.0
DL2				pmax	pmax		
	comp=Z,16nm,0.6s						
DL2				LR	LR		
	comp=Z,8µm,17.6s						
DL2				LR	LR		
	comp=Z,12µm,17.4s						
DL2				LR	LR		
	comp=Z,6µm,22.8s						
Q32M	Nakina River	33.05	58	IAmb	IAmb	04 27 27.0	
	comp=Z,72nm,1.2s						
Q32M				IAMs_20	IAMs_20	04 40 47.6	
	comp=Z,5µm,20.0s						
Q32M	Nakina River	33.05	58	P	P	04 27 23.6	+0.2
	baz=293,SNR=22						
Q32M				S	S	04 32 35.5	-5.5
	baz=293						
R33M	Jennings River	33.49	57	IAmb	IAmb	04 27 30.7	
	comp=Z,62nm,1.1s						
R33M				IAMs_20	IAMs_20	04 40 52.2	
	comp=Z,4µm,21.0s						
R33M	Jennings River	33.49	57	P	P	04 27 27.5	+0.2
	baz=294,SNR=37						
R33M				S	S	04 32 47.5	-0.2
	baz=294						
T33K	Petersburg	33.61	62	P	P	04 27 28.4	+0.2
	baz=296						
U33K	Whale Pass	33.84	63	P	P	04 27 31.1	+1.0
	baz=297,SNR=7.8						
TGTN	Hyland Airport	33.89	53	P	P	04 27 31.6	+1.0
	baz=292,SNR=8.5						
TGTN				S	S	04 32 54.5	+0.7
	baz=292						
S34M	Telegraph Cree	34.02	60	IAmb	IAmb	04 27 35.3	
	comp=Z,51nm,1.1s						
S34M				IAMs_20	IAMs_20	04 43 41.5	
	comp=Z,3µm,18.0s						
S34M	Telegraph Cree	34.02	60	P	P	04 27 32.0	+0.3
	baz=295,SNR=20						
S34M				S	S	04 32 57.7	+2.0
	baz=295						
WRAK	Wrangell Islan	34.09	62	IAmb	IAmb	04 27 36.6	
	comp=Z,75nm,1.1s						
WRAK				IAMs_20	IAMs_20	04 41 25.2	
	comp=Z,4µm,19.0s						
WRAK	Wrangell Islan	34.09	62	P	P	04 27 33.2	+0.9
	baz=297,SNR=17						
WRAK				S	S	04 32 59.3	+2.6
	baz=297						
CRAG	Craig	34.13	64	IAMs_20	IAMs_20	04 40 45.5	
	comp=Z,3µm,22.0s						
CRAG	Craig	34.13	64	P	P	04 27 33.1	+0.5
	baz=298						
CRAG				S	S	04 32 58.2	+0.8
	baz=298						
WTLY	Watson Lake, Y	34.21	55	IAMs_20	IAMs_20	04 42 27.2	
	comp=Z,4µm,18.0s						
WTLY	Watson Lake, Y	34.21	55	P	P	04 27 33.7	+0.3
	baz=294						
DLBC	Dease Lake	34.33	58	LR	LR	04 41 39.0	
	comp=Z,427nm,21.0s,baz=287,slow=36						
NRIK	Noril'sk	34.86	323	P	P	04 27 38.9	+0.1
NRIK	Noril'sk	34.86	323	P	P	04 27 38.5	-0.3
	comp=Z,10nm,0.8s,baz=87,slow=8.7,SNR=15						
NRIK				LR	LR	04 42 39.1	
	comp=Z,4µm,18.8s,baz=72,slow=38						
	comp=Z,10nm,0.8s						
NRIK	Noril'sk	34.86	323	P	P	04 27 38.9	+0.1
NRIK				pmax	pmax		
	comp=Z,36nm,1.2s						
T35M	Bob Quinn	34.86	61	IAMs_20	IAMs_20	04 43 55.2	
	comp=Z,4µm,18.0s						
T35M	Bob Quinn	34.86	61	P	P	04 27 39.9	+0.9
	baz=297,SNR=35						
T35M				S	S	04 33 09.5	+0.8
	baz=297						
V35K	Ketchikan	34.96	64	IAMs_20	IAMs_20	04 41 21.3	
	comp=Z,3µm,21.0s						
V35K	Ketchikan	34.96	64	P	P	04 27 39.3	-0.5
	baz=299,SNR=6.3						
V35K				S	S	04 33 12.9	+2.8
	baz=299						
BJT	Baijiatuau	35.12	263	IAMs_20	IAMs_20	04 43 20.8	
	comp=Z,4µm,18.0s						
ULN	Ulaanbaatar	35.22	281		P	04 27 42.1	-0.3
ULN	Ulaanbaatar	35.22	281	IAMs_20	IAMs_20	04 43 29.3	
	comp=Z,5µm,19.0s						
ULN	Ulaanbaatar	35.22	281	P	P	04 27 39.9	-2.5
ULN				S	S	04 33 09.7	-5.0
ULN	Ulaanbaatar	35.22	281	*ce*P	P	04 27 42.7	+0.3
ULN				pmax	pmax		
	comp=Z,24nm,1.3s						
WRGLY	Wrigley	35.32	48	IAmb	IAmb	04 27 46.3	
	comp=Z,60nm,1.1s						
WRGLY				IAMs_20	IAMs_20	04 42 59.5	
	comp=Z,3µm,18.0s						
WRGLY	Wrigley	35.32	48	P	P	04 27 43.4	+0.6
	baz=293,SNR=15						
WRGLY				S	S	04 33 15.4	-0.2
	baz=293						
U35K	Hyder	35.47	62	IAMs_20	IAMs_20	04 41 22.8	
	comp=Z,4µm,22.0s						
U35K	Hyder	35.47	62	P	P	04 27 44.6	+0.4
	baz=299						
DIB	Dawson Inlet,	35.57	67		P	04 27 46.0	+0.9
DIB				IAmb	IAmb	04 27 49.0	
	comp=Z,81nm,1.2s						
DIB				IAMs_20	IAMs_20	04 42 52.7	
	comp=Z,3µm,18.0s						
SONM	Songino Array	35.60	282	P	P	04 27 44.8	-0.8
SONM	Songino Array	35.60	282	P	P	04 27 45.7	+0.1
	comp=Z,5.6nm,0.8s,baz=63,slow=7.9,SNR=31						
SONM				PcP	PcP	04 30 14.6	+0.6
	comp=Z,4.2nm,0.9s,baz=73,slow=2.9,SNR=3.6						
SONM				ScP	ScP	04 34 01.3	+2.8
	comp=Z,3.5nm,1.2s,baz=80,slow=1.7,SNR=6.0						
SONM				LR	LR	04 43 36.0	
	comp=Z,6µm,18.5s,baz=56,slow=38						
	comp=Z,5.6nm,0.8s						
LIRD	Liard River Hi	35.74	55	P	P	04 27 47.1	+0.5
	baz=296						
LIRD				S	S	04 33 23.6	+1.4
	baz=296						
ZAK	Zakamensk	35.85	287	*e*P	P	04 27 47.6	-0.1
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
MOBC	Moresby Island	35.87	67	IAmb	IAmb	04 27 51.0	
	comp=Z,57nm,1.1s						
MOBC				IAMs_20	IAMs_20	04 43 01.5	
	comp=Z,3µm,19.0s						
BEAVL	Fort Liard	35.88	54	P	P	04 27 48.2	+0.5
	baz=296,SNR=17						
BEAVL				S	S	04 33 25.8	+1.6
	baz=296						
RUBB	Prince Rupert	36.14	65	IAMs_20	IAMs_20	04 41 53.0	
	comp=Z,3µm,20.0s						
KOTAN	Kotaneelee Air	36.35	53	P	P	04 27 52.2	+0.4
	baz=296,SNR=9.0						
KOTAN				S	S	04 33 33.9	+2.4
	baz=296						
MOY	Mondy	36.36	290	*e*P	P	04 27 52.8	+0.7
MOY				pmax	pmax		
	comp=Z,15nm,2.7s						
TOAD	Toad River Com	36.39	56	P	P	04 27 52.1	-0.1
	baz=297,SNR=168						
TOAD				S	S	04 33 33.3	+1.0
	baz=297						
H11N2	WAKE ISLAND Hy	36.42	176	T	T	05 06 42.7	
	baz=357,slow=74						
H11N3	WAKE ISLAND Hy	36.43	176	T	T	05 06 44.6	
	baz=357,slow=74						
H11N1	WAKE ISLAND Hy	36.44	176	T	T	05 06 46.0	
	baz=357						
HHC	Hu-ho-hao-te	37.12	268	*e*P	P	04 27 58.0	-0.6
HHC				sP	pP	04 28 04.0	+0.4
HHC				PP	PnPn	04 29 25.0	+1.5
HHC				S	S	04 33 41.8	-2.0
HHC				ScS	ScS	04 38 09.3	-2.5
HHC				pmax	pmax		
	comp=Z,21nm,0.5s						
HHC				pmax	pmax		
	comp=Z,100nm,4.8s						
HHC				LR	LR		
	comp=Z,7µm,15.3s						
HHC				LR	LR		
	comp=Z,5µm,13.8s						
HHC				LR	LR		
	comp=Z,8µm,13.0s						
TIA	Tai'an	37.30	258	P	P	04 27 51.8	-8.3
TIA				S	S	04 33 42.0	-4.4
TIA				pmax	pmax		
	comp=Z,210nm,6.9s						
TIA				LR	LR		
	comp=N,6µm,17.2s						
TIA				LR	LR		
	comp=E,9µm,17.2s						
TIA				LR	LR		
	comp=Z,7µm,15.2s						
HNS	HongShan	37.77	262	⇓P	P	04 28 04.0	0.0
HNS				S	S	04 33 59.0	+5.6
HNS				SS	SnSn	04 36 25.3	-8.5
HNS				LR	LR		
	comp=Z,11µm,18.2s						
HNS				LR	LR		
	comp=Z,16µm,16.7s						
HNS				LR	LR		
	comp=Z,8µm,16.6s						
BTO	Baotou	38.15	269	*e*P	P	04 28 08.0	+0.7
BTO				pP	sP	04 28 13.0	-0.9
BTO				sP	pwP	04 28 15.5	-1.3
BTO				S	S	04 34 02.8	+3.4
BTO				pmax	pmax		
	comp=Z,79nm,0.8s						
BTO				pmax	pmax		
	comp=Z,370nm,4.7s						
BTO				LR	LR		
	comp=Z,35µm,17.9s						
BTO				LR	LR		
	comp=Z,28µm,16.0s						
BTO				LR	LR		
	comp=Z,7µm,17.8s						
BBB	Bella Bella	38.36	67	LR	LR	04 44 05.5	
	comp=Z,1µm,18.7s,baz=296,slow=36						
EUNU	Eureka	38.38	15	IAmb	IAmb	04 28 39.2	
	comp=Z,121nm,1.7s						
JOW	Kunigami	39.03	236	IAMs_20	IAMs_20	04 47 17.1	
	comp=Z,2µm,20.0s						
JOW	Kunigami	39.03	236	LR	LR	04 46 17.8	
	comp=Z,2µm,18.6s,baz=38,slow=39						
JOW	Kunigami	39.03	236	P	P	04 28 16.1	+1.4
SSE	Sheshan	39.04	248	P	P	04 28 14.0	-0.7
SSE				S	S	04 34 08.5	-4.2
SSE				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SSE				pmax	pmax		
	comp=Z,120nm,5.0s						
SSE				LR	LR		
	comp=Z,1µm,12.9s						
SSE				LR	LR		
	comp=Z,2µm,12.7s						
YKAW3	Yellowknife Wh	39.25	46	IAmb	IAmb	04 28 18.1	
	comp=Z,45nm,1.1s						
YKA	Yellowknife Ar	39.29	46	P	P	04 28 15.0	-1.4
YKA	Yellowknife Ar	39.29	46	P	P	04 28 16.3	-0.2
	comp=Z,17nm,0.8s,baz=304,slow=14,SNR=38						
	comp=Z,17nm,0.8s						
YKAW1	Yellowknife Wh	39.34	46	IAmb	IAmb	04 28 18.9	
	comp=Z,31nm,0.9s						
NJ2	Nanjing	39.52	252	*e*P	P	04 28 17.3	-1.4
NJ2				sP	pP	04 28 23.0	-0.6
NJ2				S	S	04 34 20.3	+0.4
NJ2				pmax	pmax		
	comp=Z,14nm,0.9s						
NJ2				LR	LR		
	comp=Z,5µm,21.4s						
NJ2				LR	LR		
	comp=Z,4µm,16.6s						
NJ2				LR	LR		
	comp=Z,6µm,16.8s						
RES	Resolute Bay	39.56	24	LR	LR	04 47 08.9	
	comp=Z,2µm,18.5s,baz=296,slow=40						
LYN	LuoYang	41.09	261	P	P	04 28 34.3	+2.6
LYN				pmax	pmax		
	comp=Z,15nm,0.9s						
CLRS	Cowichan Lake	42.40	68	P	P	04 28 41.7	-0.6
CLRS				IAMs_20	IAMs_20	04 46 39.6	
	comp=Z,2µm,20.0s						
LLLB	Lillooet	42.46	65	IAmb	IAmb	04 28 46.1	
	comp=Z,112nm,1.5s						
LLLB				IAMs_20	IAMs_20	04 44 18.2	
	comp=Z,2µm,20.0s						
PGC	Sidney	42.85	68	P	P	04 28 46.6	+0.7
PGC				IAmb	IAmb	04 29 00.1	
	comp=Z,150nm,2.0s						
PGC				IAMs_20	IAMs_20	04 43 53.7	
	comp=Z,2µm,22.0s						
WHN	Wuhan	43.10	255	P	P	04 28 48.3	+0.1
WHN				S	S	04 35 12.0	-1.1
WHN				LR	LR		
	comp=Z,22µm,16.8s						
WHN				LR	LR		
	comp=Z,29µm,18.1s						
WHN				LR	LR		
	comp=Z,17µm,15.8s						
ZALV	Zalesovo Beam	43.18	302	P	P	04 28 47.8	-0.7
	comp=Z,1.1nm,0.6s,baz=74,slow=11,SNR=3.7						
ZALV				PcP	PcP	04 30 37.3	-0.4
	comp=Z,3.4nm,0.7s,baz=46,slow=6.2,SNR=3.9						
ZALV				LR	LR	04 48 32.6	
	comp=Z,3µm,18.7s,baz=51,slow=39						
NLWA	Neilton Lookou	43.43	70	IAMs_20	IAMs_20	04 46 48.9	
	comp=Z,2µm,19.0s						
WISH	Wishkah	43.65	70	IAmb	IAmb	04 29 07.2	
	comp=Z,150nm,1.4s						
GNW	Green Mountain	43.86	69	P	P	04 28 55.1	+1.0
E03A	Lebam	44.13	71	IAmb	IAmb	04 28 59.4	
	comp=Z,97nm,1.2s						
E03A				IAMs_20	IAMs_20	04 47 27.5	
	comp=Z,3µm,19.0s						
KBS	Kingsbay	44.16	353	P	P	04 28 56.0	-0.2
KBS				IAmb	IAmb	04 28 59.3	
	comp=Z,86nm,1.2s						
KBS	Kingsbay	44.16	353	P	P	04 28 56.0	-0.2
KBS				pmax	pmax		
	comp=Z,86nm,1.2s						
NACB	Ninganchiao	44.48	242	IAMs_20	IAMs_20	04 47 39.5	
	comp=Z,3µm,22.0s						
SPITS	Spitsbergen Ar	44.50	351	P	P	04 28 59.3	+0.4
	comp=Z,143nm,0.8s,baz=91,slow=8.5,SNR=44						
SPITS				LR	LR	04 49 09.8	
	comp=Z,1µm,18.5s,baz=354,slow=38						
	comp=Z,143nm,0.8s						
KIP	Kipapa	44.50	126	P	P	04 28 59.2	-0.3
KIP	Kipapa	44.50	126	IAMs_20	IAMs_20	04 43 10.8	
	comp=Z,2µm,21.0s						
KIP	Kipapa	44.50	126	P	P	04 28 59.2	-0.3
KIP				pmax	pmax		
	comp=Z,118nm,1.1s						
SPB2	Spitsbergen Ar	44.50	351	P	P	04 28 59.0	+0.2
F03A	Seaside	44.53	71	IAMs_20	IAMs_20	04 47 35.1	
	comp=Z,2µm,18.0s						
POIN	Pond Inlet	44.54	22	P	P	04 28 59.0	-0.2
GTA	Gaotai	44.67	276	P	P	04 29 00.8	0.0
GTA				pP	sP	04 29 07.0	-0.5
GTA				S	S	04 35 31.0	-5.1
GTA				pmax	pmax		
	comp=Z,28nm,1.0s						
GTA				pmax	pmax		
	comp=Z,190nm,6.0s						
GTA				LR	LR		
	comp=Z,15µm,20.7s						
GTA				LR	LR		
	comp=Z,14µm,21.5s						
GTA				LR	LR		
	comp=Z,7µm,21.9s						
F04D	Rainier, OR	44.72	71	IAMs_20	IAMs_20	04 44 30.2	
	comp=Z,2µm,20.0s						
LZH	Lanzhou	44.77	270	*e*P	P	04 29 03.3	+1.6
LZH				pP	sP	04 29 08.3	-0.1
LZH				S	S	04 35 34.5	-3.2
LZH				SS	ScS	04 38 45.0	-13
LZH				pmax	pmax		
	comp=Z,46nm,1.3s						
LZH				pmax	pmax		
	comp=Z,170nm,4.8s						
LZH				LR	LR		
	comp=Z,14µm,16.8s						
LZH				LR	LR		
	comp=Z,14µm,17.1s						
LZH				LR	LR		
	comp=Z,7µm,16.2s						
GUMO	Guam	45.02	207	LR	LR	04 45 25.2	
	comp=Z,1µm,21.2s,baz=32,slow=33						
BLKN	Baker Lake	45.20	37	P	P	04 29 03.7	-0.9
YULB	Yu-li	45.29	242	IAMs_20	IAMs_20	04 50 04.8	
	comp=Z,3µm,20.0s						
COR	Corvallis	45.55	73	P	P	04 29 08.3	+0.8
COR				IAmb	IAmb	04 29 21.4	
	comp=Z,99nm,1.4s						
COR	Corvallis	45.55	73	P	P	04 29 08.4	+0.8
COR				pmax	pmax		
	comp=Z,99nm,1.4s						
G04A	Mulino	45.58	71	IAmb	IAmb	04 29 27.2	
	comp=Z,48nm,0.8s						
TPUB	Ta-pu	45.69	242	P	P	04 29 09.3	+0.3
MXC	Moxie City	45.82	69	IAmb	IAmb	04 29 12.4	
	comp=Z,55nm,1.4s						
KNMB	Chin-men Tao	45.85	246	IAMs_20	IAMs_20	04 48 26.7	
	comp=Z,2µm,21.0s						
TWG	Pinlang	45.88	242	P	P	04 29 11.1	+0.7
TWG				IAmb	IAmb	04 29 17.5	
	comp=Z,66nm,1.3s						
TWG				IAMs_20	IAMs_20	04 51 07.4	
	comp=Z,3µm,18.0s						
H04D	Lebanon	45.89	72	IAmb	IAmb	04 29 23.8	
	comp=Z,88nm,1.4s						
BUCK	Buck Mountain	45.98	73	IAMs_20	IAMs_20	04 47 35.5	
	comp=Z,2µm,22.0s						
ILON	Igloolik, Nuna	46.01	27	P	P	04 29 09.6	-1.3
E07A	Sunnyside	46.06	68	IAMs_20	IAMs_20	04 48 53.6	
	comp=Z,2µm,19.0s						
C09A	Chrisman Ranch	46.07	66	IAmb	IAmb	04 29 13.8	
	comp=Z,68nm,1.4s						
WAH2	Wahluke Slope	46.09	68	IAmb	IAmb	04 29 14.0	
	comp=Z,65nm,1.3s						
I03D	Drain, OR	46.12	74	IAMs_20	IAMs_20	04 48 18.3	
	comp=Z,2µm,19.0s						
J01E	Myrtle Point	46.16	75	IAmb	IAmb	04 29 26.4	

	comp=Z,71nm,1.1s						
G05A	**Wamic**	**46.17**	**71**	IAmb	IAmb	04 29 31.7	
	comp=Z,67nm,1.0s						
G05A				IAMs_20	IAMs_20	04 45 36.5	
	comp=Z,2µm,20.0s						
D08A	**Wollman Farm,**	**46.22**	**67**	IAMs_20	IAMs_20	04 50 24.7	
	comp=Z,2µm,18.0s						
HAWA	**Hanford**	**46.34**	**68**	IAmb	IAmb	04 29 16.2	
	comp=Z,47nm,1.2s						
HAWA				IAMs_20	IAMs_20	04 49 01.9	
	comp=Z,2µm,19.0s						
NEW	**Newport**	**46.35**	**65**	IAMs_20	IAMs_20	04 46 28.1	
	comp=Z,2µm,22.0s						
NEW	**Newport**	**46.35**	**65**	IAmb	IAmb	04 29 16.0	
	comp=Z,38nm,1.1s						
NEW	**Newport**	**46.35**	**65**	LR	LR	04 47 01.5	
	comp=Z,2µm,21.0s,baz=304,slow=34						
F07A	**Phinny Hill Vi**	**46.46**	**69**	IAmb	IAmb	04 29 28.7	
	comp=Z,51nm,0.8s						
F07A				IAMs_20	IAMs_20	04 45 43.2	
	comp=Z,2µm,21.0s						
E08A	**Dider Farm, El**	**46.52**	**68**	IAMs_20	IAMs_20	04 49 07.7	
	comp=Z,2µm,20.0s						
G06A	**Carlson Farm,**	**46.53**	**70**	IAMs_20	IAMs_20	04 46 10.1	
	comp=Z,2µm,20.0s						
E09A	**Wood Farm, Sta**	**46.98**	**67**	IAMs_20	IAMs_20	04 50 56.8	
	comp=Z,2µm,18.0s						
HUH	**Hualalai**	**47.01**	**124**	IAMs_20	IAMs_20	04 43 04.1	
	comp=Z,2µm,20.0s						
BBOR	**Butler Butte**	**47.03**	**74**	IAmb	IAmb	04 29 33.8	
	comp=Z,56nm,1.2s						
L02F	**Cave Junction**	**47.07**	**75**	IAmb	IAmb	04 29 33.3	
	comp=Z,34nm,1.1s						
KSXB	**Camp Six Broad**	**47.10**	**76**	IAmb	IAmb	04 29 23.2	
	comp=Z,41nm,1.1s						
ZSN	**Zaisan**	**47.26**	**295**	*e*P	**P**	**04 29 21.4**	**+0.4**
ZSN	**Zaisan**	**47.26**	**295**	*e*P	**P**	**04 29 21.4**	**+0.4**
MWH	**Mokuaweoweo**	**47.29**	**124**	IAMs_20	IAMs_20	04 44 15.6	
	comp=Z,2µm,22.0s						
PINE	**Pine Mountain**	**47.34**	**72**	IAmb	IAmb	04 29 24.8	
	comp=Z,53nm,1.0s						
PINE				IAMs_20	IAMs_20	04 50 24.5	
	comp=Z,2µm,18.0s						
G08A	**Pilot Rock**	**47.37**	**69**	IAMs_20	IAMs_20	04 46 21.3	
	comp=Z,2µm,22.0s						
MLH	**Mauna Loa**	**47.38**	**124**	P	**P**	**04 29 23.3**	**+0.8**
KHU	**Kahuku**	**47.49**	**124**	IAMs_20	IAMs_20	04 46 28.9	
	comp=Z,2µm,20.0s						
SEM	**Semipalatinsk**	**47.59**	**300**	*e*P	**P**	**04 29 24.0**	**+0.2**
SEM				MLR	MLR		
	comp=Z,1µm,14.0s						
SEM	**Semipalatinsk**	**47.59**	**300**	*e*P	**P**	**04 29 24.0**	**+0.2**
SEM				LR	LR	04 50 48.0	
	comp=Z,1µm,14.2s						
YBH	**Yreka Blue Hor**	**47.80**	**75**	IAmb	IAmb	04 29 28.6	
	comp=Z,28nm,0.9s						
YBH	**Yreka Blue Hor**	**47.80**	**75**	LR	LR	04 47 58.2	
	comp=Z,65nm,19.5s,baz=290,slow=34						
KHMM	**Horse Mountain**	**47.84**	**77**	P	**P**	**04 29 27.0**	**+1.2**
KHMM				IAmb	IAmb	04 29 29.2	
	comp=Z,70nm,1.3s						
KHMM				IAMs_20	IAMs_20	04 45 12.0	
	comp=Z,2µm,20.0s						
K05A	**Summer Lake**	**48.09**	**73**	IAmb	IAmb	04 29 30.9	
	comp=Z,48nm,1.1s						
KURK	**Kurchatov**	**48.17**	**302**	P	**P**	**04 29 27.4**	**-0.6**
KURK	**Kurchatov**	**48.17**	**302**	IAMs_20	IAMs_20	04 51 56.5	
	comp=Z,3µm,21.0s						
KURK	**Kurchatov**	**48.17**	**302**	P	**P**	**04 29 26.8**	**-1.2**
KURK				S	**S**	**04 36 21.1**	**-4.6**
KURK	**Kurchatov**	**48.17**	**302**	P	**P**	**04 29 28.4**	**+0.4**
WMQ	**Urumqi**	**48.23**	**289**	*e*P	**P**	**04 29 29.5**	**+0.8**
WMQ				sP	pwP	04 29 38.5	+0.6
WMQ				S	**S**	**04 36 29.0**	**+2.0**
WMQ				pmax	pmax		
	comp=Z,29nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,200nm,4.7s						
WMQ				LR	LR		
	comp=Z,25µm,17.5s						
WMQ				LR	LR		
	comp=Z,12µm,18.7s						
WMQ				LR	LR		
	comp=Z,3µm,21.1s						
KURBB	**Kurchatov Arra**	**48.27**	**302**	P	**P**	**04 29 28.4**	**-0.4**
	comp=Z,10nm,0.7s,baz=54,slow=8.0,SNR=74						
KURBB				PP	**PP**	**04 31 20.4**	**-0.5**
	comp=Z,6.2nm,0.8s,baz=51,slow=10,SNR=4.3						
KURBB				LR	LR	04 51 35.6	
	comp=Z,3µm,19.9s,baz=52,slow=38						
	comp=Z,10nm,0.7s						
KMRM	**Mail Ridge**	**48.31**	**77**	IAmb	IAmb	04 29 32.9	
	comp=Z,37nm,0.8s						
BMO	**Blue Mountains**	**48.53**	**68**	IAmb	IAmb	04 29 33.3	
	comp=Z,27nm,0.9s						
BMO				IAMs_20	IAMs_20	04 50 18.0	
	comp=Z,2µm,20.0s						
CD2	**Chengdu**	**48.65**	**265**	P	**P**	**04 29 31.5**	**-0.6**
CD2				S	**S**	**04 36 35.5**	**+2.4**
CD2				pmax	pmax		
	comp=Z,270nm,3.7s						
CD2				LR	LR		
	comp=Z,12µm,19.7s						
CD2				LR	LR		
	comp=Z,13µm,20.9s						
CD2				LR	LR		
	comp=Z,6µm,14.6s						
KCPM	**Cahto Peak**	**48.76**	**78**	IAmb	IAmb	04 29 47.8	
	comp=Z,62nm,1.7s						
O02D	**Mt. Diablo Mer**	**48.84**	**77**	IAMs_20	IAMs_20	04 45 55.5	
	comp=Z,2µm,22.0s						
MSO	**Missoula**	**48.91**	**64**	IAmb	IAmb	04 29 36.0	
	comp=Z,68nm,1.4s						
MSO				IAMs_20	IAMs_20	04 48 19.9	
	comp=Z,2µm,22.0s						
J08A	**Circle Bar Ran**	**48.95**	**71**	IAMs_20	IAMs_20	04 47 45.9	
	comp=Z,2µm,20.0s						
MK31	**Makanchi Array**	**49.00**	**296**	*ce*P	**P**	**04 29 34.3**	**-0.2**
MKAR	**Makanchi Array**	**49.00**	**296**	P	**P**	**04 29 33.9**	**-0.6**
	comp=Z,6.4nm,0.8s,baz=56,slow=6.5,SNR=35						
MKAR				LR	LR	04 53 12.3	
	comp=Z,2µm,18.5s,baz=28,slow=40						
	comp=Z,6.4nm,0.8s						
MKAR	**Makanchi Array**	**49.00**	**296**	P	**P**	**04 29 34.0**	**-0.6**
PLID	**Pearl Lake**	**49.05**	**67**	IAMs_20	IAMs_20	04 52 20.6	
	comp=Z,2µm,19.0s						
HATC	**Hat Creek Radi**	**49.12**	**75**	IAmb	IAmb	04 29 38.4	
	comp=Z,48nm,1.1s						
MAKZ	**Makanchi**	**49.15**	**296**	P	**P**	**04 29 35.7**	**+0.1**
MAKZ				IAMs_20	IAMs_20	04 49 36.8	
	comp=Z,2µm,19.0s						
MAKZ	**Makanchi**	**49.15**	**296**	P	**P**	**04 29 35.7**	**+0.1**
MAKZ				pmax	pmax		
	comp=Z,19nm,1.1s						
FFC	**Flin Flon**	**49.18**	**50**	P	**P**	**04 29 35.0**	**-0.7**
FFC				IAmb	IAmb	04 29 37.4	
	comp=Z,40nm,1.1s						
FFC	**Flin Flon**	**49.18**	**50**	P	**P**	**04 29 35.0**	**-0.7**
FFC				pmax	pmax		
	comp=Z,40nm,1.1s						
GULI	**GuiLin**	**49.40**	**254**	P	**P**	**04 29 38.3**	**+0.6**
GULI				S	**S**	**04 36 41.3**	**-2.3**
GULI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GULI				pmax	pmax		
	comp=Z,280nm,4.9s						
GULI				LR	LR		
	comp=Z,5µm,16.8s						
GULI				LR	LR		
	comp=Z,4µm,15.4s						
GULI				LR	LR		
	comp=Z,5µm,18.2s						
PATS	**Pohnpei**	**49.41**	**188**	IAMs_20	IAMs_20	04 44 56.3	
	comp=Z,2µm,20.0s						
WVOR	**Wild Horse Val**	**49.50**	**72**	IAMs_20	IAMs_20	04 49 53.7	
	comp=Z,2µm,20.0s						
HOPS	**Hopland Field**	**49.52**	**78**	IAmb	IAmb	04 30 09.7	
	comp=Z,74nm,1.4s						
HOPS				IAMs_20	IAMs_20	04 51 33.6	
	comp=Z,2µm,18.0s						
FCC	**Fort Churchill**	**49.59**	**42**	IAMs_20	IAMs_20	04 52 10.0	
	comp=Z,2µm,21.0s						
GOMU	**GeErMu**	**49.73**	**277**	P	**P**	**04 29 40.3**	**-0.3**
GOMU				sP	pP	04 29 44.5	-1.0
GOMU				PcP	**PcP**	**04 31 02.3**	**+0.8**
GOMU				PP	**PP**	**04 31 33.3**	**-1.7**
GOMU				S	**S**	**04 36 49.3**	**+0.6**
GOMU				pmax	pmax		
	comp=Z,16nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,200nm,6.2s						
GOMU				LR	LR		
	comp=Z,9µm,19.6s						
GOMU				LR	LR		
	comp=Z,8µm,19.2s						
GOMU				LR	LR		
	comp=Z,2µm,19.6s						
GDXM	**Geysers**	**49.81**	**78**	IAMs_20	IAMs_20	04 52 02.1	
	comp=Z,2µm,18.0s						
EGMT	**Eagleton**	**50.18**	**61**	IAmb	IAmb	04 29 45.2	
	comp=Z,51nm,1.1s						
MCCM	**Marconi Confer**	**50.24**	**79**	IAMs_20	IAMs_20	04 48 16.5	
	comp=Z,2µm,19.0s						
MFID	**Camas Ranch**	**50.29**	**69**	IAMs_20	IAMs_20	04 48 13.6	
	comp=Z,2µm,21.0s						
BVAR	**Borovoye Array**	**50.37**	**309**	P	**P**	**04 29 44.5**	**-0.3**
	comp=Z,44nm,0.7s,baz=53,slow=7.9,SNR=135						
BVAR				LR	LR	04 53 08.5	
	comp=Z,4µm,18.3s,baz=52,slow=39						
	comp=Z,44nm,0.7s						
BRVK	**Borovoye**	**50.40**	**309**	P	**P**	**04 29 44.7**	**-0.3**
BRVK	**Borovoye**	**50.40**	**309**	P	**P**	**04 29 44.7**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,65nm,0.9s						
DLMT	**Dillon**	**50.60**	**65**	IAmb	IAmb	04 30 14.1	
	comp=Z,44nm,1.1s						
SUMG	**Summit**	**50.60**	**9**	IAmb	IAmb	04 30 05.2	
	comp=Z,38nm,0.9s						
SUMG				IAMs_20	IAMs_20	04 52 09.5	
	comp=Z,2µm,20.0s						
KEV	**Kevo**	**50.66**	**342**	IAMs_20	IAMs_20	04 53 59.5	
	comp=Z,2µm,19.0s						
LVZ	**Lovozero**	**50.79**	**338**	IAMs_20	IAMs_20	04 54 01.1	
	comp=Z,3µm,21.0s						
LVZ	**Lovozero**	**50.79**	**338**	*ce*P	**P**	**04 29 48.9**	**+1.1**
LVZ				pmax	pmax		
	comp=Z,47nm,2.5s						
LVZ	**Lovozero**	**50.79**	**338**	P	**P**	**04 29 48.0**	**+0.2**
	comp=Z,27nm,1.4s						
BOZ	**Bozeman (W)**	**50.93**	**64**	IAMs_20	IAMs_20	04 51 17.1	
	comp=Z,2µm,21.0s						
HLID	**Hailey**	**50.93**	**68**	IAMs_20	IAMs_20	04 51 55.3	
	comp=Z,3µm,20.0s						
ARA0	**ARCESS Array S**	**51.11**	**343**	*e*P	**P**	**04 29 51.3**	**+1.1**
ARCES	**ARCESS Array B**	**51.11**	**343**	P	**P**	**04 29 50.4**	**+0.2**
ARCES				IAmb	IAmb	04 29 52.8	
	comp=Z,145nm,1.9s						
ARCES	**ARCESS Array B**	**51.11**	**343**	P	**P**	**04 29 50.4**	**+0.2**
	comp=Z,9.6nm,0.8s,baz=27,slow=8.3,SNR=13						
ARCES				LR	LR	04 55 48.6	
	comp=Z,2µm,18.4s,baz=42,slow=41						
	comp=Z,9.6nm,0.8s						
APA	**Apatity**	**51.33**	**338**	⇓*i*P	**P**	**04 29 50.8**	**-1.0**
APA				*i*		04 31 10.2	
APA				*i*		04 31 50.0	
APA				*i* S	**S**	**04 37 05.0**	**-4.4**
APA				*i*		04 39 36.0	
APA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PNTR	**Pine Nut**	**51.35**	**75**	IAmb	IAmb	04 29 55.5	
	comp=Z,51nm,0.8s						
BRZS	**Berezniki**	**51.46**	**304**	*e*P	**P**	**04 29 53.4**	**+0.4**
BRZS	**Berezniki**	**51.46**	**304**	*e*P	**P**	**04 29 53.5**	**+0.4**
YHL	**Hebgen Lake**	**51.67**	**65**	IAMs_20	IAMs_20	04 53 49.9	
	comp=Z,2µm,18.0s						
CMB	**Columbia Colle**	**51.68**	**77**	IAMs_20	IAMs_20	04 53 23.6	
	comp=Z,2µm,18.0s						
SVE	**Sverdlovsk**	**51.69**	**317**	*ce*P	**P**	**04 29 55.3**	**+0.7**
SVE				*e*S	**S**	**04 37 14.9**	**+0.3**
SVE				*e*SS	**SS**	**04 40 47.8**	**-2.5**
SVE				pmax	pmax		
	comp=Z,106nm,1.9s						
SVE				MLR	MLR		
	comp=Z,4µm,14.0s						
YHB	**Horse Butte**	**51.74**	**65**	IAmb	IAmb	04 29 57.8	
	comp=Z,45nm,0.8s						
YHB				IAMs_20	IAMs_20	04 52 32.6	
	comp=Z,2µm,20.0s						
WAKR	**Walker**	**51.85**	**76**	IAmb	IAmb	04 29 59.5	
	comp=Z,36nm,0.9s						
YNM	**Yellowstone No**	**52.00**	**64**	IAMs_20	IAMs_20	04 52 40.6	
	comp=Z,2µm,18.0s						
SAO	**San Andreas Ge**	**52.02**	**79**	IAMs_20	IAMs_20	04 50 58.7	
	comp=Z,2µm,18.0s						
YNR	**Norris Junctio**	**52.02**	**64**	IAmb	IAmb	04 30 01.2	
	comp=Z,73nm,1.5s						
YNR				IAMs_20	IAMs_20	04 52 41.2	
	comp=Z,2µm,18.0s						
YFT	**Old Faithful**	**52.13**	**65**	IAmb	IAmb	04 30 01.9	
	comp=Z,44nm,0.8s						
YNE	**Yellowstone No**	**52.16**	**64**	IAmb	IAmb	04 30 00.9	
	comp=Z,46nm,0.9s						
YNE				IAMs_20	IAMs_20	04 52 13.6	
	comp=Z,2µm,21.0s						
YMP	**Mirror Lake Pl**	**52.27**	**64**	IAmb	IAmb	04 30 02.2	
	comp=Z,48nm,1.0s						
YMP				IAMs_20	IAMs_20	04 52 10.7	
	comp=Z,2µm,21.0s						
H17A	**Grant Village**	**52.30**	**65**	IAmb	IAmb	04 30 03.5	
	comp=Z,56nm,1.0s						
H17A				IAMs_20	IAMs_20	04 52 50.5	
	comp=Z,2µm,19.0s						
BBGB	**Big Mountain B**	**52.38**	**79**	IAmb	IAmb	04 30 14.3	
	comp=Z,66nm,0.9s						
BBGB				IAMs_20	IAMs_20	04 53 36.2	
	comp=Z,2µm,18.0s						
RLMT	**Red Lodge**	**52.44**	**63**	IAMs_20	IAMs_20	04 52 44.2	
	comp=Z,2µm,20.0s						
ELK	**Elko**	**52.49**	**71**	IAMs_20	IAMs_20	04 53 52.9	
	comp=Z,2µm,19.0s						
ELK	**Elko**	**52.49**	**71**	LR	LR	04 50 08.7	
	comp=Z,2µm,21.3s,baz=315,slow=34						
NVAR	**Mina Array Bea**	**52.52**	**75**	P	**P**	**04 30 00.6**	**-0.8**
NVAR	**Mina Array Bea**	**52.52**	**75**	P	**P**	**04 30 02.2**	**+0.8**
	comp=Z,19nm,0.8s,baz=297,slow=7.6,SNR=80						
NVAR				LR	LR	04 50 11.7	
	comp=Z,1µm,20.7s,baz=312,slow=34						
	comp=Z,19nm,0.8s						
DGMT	**Dagmar**	**52.52**	**57**	IAmb	IAmb	04 30 02.9	
	comp=Z,64nm,1.0s						
LHV	**Little Huntoon**	**52.54**	**75**	IAmb	IAmb	04 30 04.9	
	comp=Z,44nm,1.0s						
LHV				IAMs_20	IAMs_20	04 48 19.4	
	comp=Z,2µm,22.0s						
FXWY	**Fox Creek**	**52.61**	**65**	IAmb	IAmb	04 30 04.6	
	comp=Z,32nm,0.8s						
TPAW	**Teton Pass**	**52.76**	**66**	IAmb	IAmb	04 30 06.0	
	comp=Z,36nm,0.8s						
PMPB	**Monarch Peak**	**52.77**	**79**	IAMs_20	IAMs_20	04 53 29.7	
	comp=Z,2µm,18.0s						
LAO	**LASA Array**	**52.83**	**60**	IAMs_20	IAMs_20	04 53 06.2	
	comp=Z,2µm,19.0s						
Q09A	**Carvers**	**52.84**	**74**	IAMs_20	IAMs_20	04 54 40.1	
	comp=Z,1µm,19.0s						
LOHW	**Long Hollow**	**52.85**	**65**	IAmb	IAmb	04 30 06.5	
	comp=Z,40nm,0.9s						
ARTI	**Arti**	**52.86**	**318**	P	**P**	**04 30 03.3**	**0.0**
ARTI	**Arti**	**52.86**	**318**	LR	LR	04 55 42.9	
	comp=Z,4µm,18.5s,baz=47,slow=40						
ARTI	**Arti**	**52.86**	**318**	*c i*P	**P**	**04 30 03.0**	**-0.3**
ARTI						04 31 13.2	
ARTI						04 31 59.2	
ARTI				PPP	PPP	04 33 08.0	
ARTI				S	**S**	**04 37 33.0**	**+2.3**
ARTI				SS	**SS**	**04 41 06.2**	**-2.6**
ARTI				pmax	pmax		
	comp=Z,73nm,0.9s						
ARTI				MLR	MLR		
	comp=Z,4µm,18.0s						
SNOW	**Snow King Moun**	**52.88**	**65**	IAMs_20	IAMs_20	04 55 43.8	
	comp=Z,2µm,18.0s						
SHLS	**Shalkode**	**52.98**	**294**	*e*P	**P**	**04 30 03.2**	**-1.4**
SHLS				pmax	pmax		
	comp=Z,19nm,0.8s						
SHLS	**Shalkode**	**52.98**	**294**	*e*P	**P**	**04 30 03.2**	**-1.4**
	comp=Z,19nm,0.8s						
ARXS	**Arharly**	**53.05**	**296**	*e*P	**P**	**04 30 04.8**	**-0.2**
JMIC	**Jan Mayen**	**53.05**	**357**	LR	LR	04 50 35.9	
	comp=Z,564nm,20.0s,baz=2.5,slow=34						
KPKS	**Kokpek**	**53.15**	**295**	*e*P	**P**	**04 30 06.1**	**+0.3**
KPKS	**Kokpek**	**53.15**	**295**	*e*P	**P**	**04 30 06.2**	**+0.3**
PZH	**PanZhiHua**	**53.17**	**263**	P	**P**	**04 30 07.8**	**+1.6**
PZH				S	**S**	**04 37 35.8**	**-0.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PZH				pmax	pmax		
	comp=Z,180nm,6.7s						
PZH				LR	LR		
	comp=Z,5µm,15.7s						
PZH				LR	LR		
	comp=Z,7µm,17.2s						
PZH				LR	LR		
	comp=Z,4µm,16.3s						
AHID	**Auburn Hatcher**	**53.20**	**66**	IAMs_20	IAMs_20	04 53 37.4	
	comp=Z,2µm,20.0s						
UZB	**Uzynbulak**	**53.21**	**294**	*e*P	**P**	**04 30 06.3**	**0.0**
UZB				*e*S	**S**	**04 37 38.8**	**+2.7**
UZB	**Uzynbulak**	**53.21**	**294**	*e*P	**P**	**04 30 06.3**	**0.0**
UZB				*e*S	**S**	**04 37 38.9**	**+2.7**
TGY	**Tagaytay City**	**53.43**	**236**	LR	LR	04 54 04.9	
	comp=Z,903nm,21.3s,baz=30,slow=37						
DSP	**Deep Springs**	**53.48**	**76**	IAMs_20	IAMs_20	04 50 21.1	
	comp=Z,1µm,19.0s						
SATY	**Saty**	**53.59**	**295**	*e*P	**P**	**04 30 09.1**	**+0.1**
SATY	**Saty**	**53.59**	**295**	*e*P	**P**	**04 30 09.2**	**+0.1**
SCO	**Scoresbysund**	**53.59**	**3**	IAMs_20	IAMs_20	04 54 26.5	
	comp=Z,2µm,18.0s						
KMI	**Kunming**	**53.70**	**261**	P	**P**	**04 30 09.0**	**-1.2**
KMI				S	**S**	**04 37 41.3**	**-2.0**
KMI				ScS	**ScS**	**04 39 56.0**	**-2.7**
KMI				pmax	pmax		
	comp=Z,11nm,1.4s						
KMI				pmax	pmax		
	comp=Z,280nm,6.5s						
KMI				LR	LR		
	comp=Z,11µm,22.6s						
KMI				LR	LR		
	comp=Z,9µm,19.8s						
KMI				LR	LR		
	comp=Z,4µm,19.2s						
FRB	**Frobisher Bay**	**53.72**	**26**	LR	LR	04 56 16.4	
	comp=Z,2µm,18.2s,baz=323,slow=40						
HWUT	**Hardware Ranch**	**53.80**	**68**	IAmb	IAmb	04 30 13.4	
	comp=Z,31nm,0.8s						
HWUT				IAMs_20	IAMs_20	04 53 36.2	
	comp=Z,1µm,19.0s						
BW06	**Boulder Array**	**53.99**	**65**	IAmb	IAmb	04 30 14.4	
	comp=Z,41nm,0.9s						
BW06				IAMs_20	IAMs_20	04 54 09.1	
	comp=Z,2µm,20.0s						
PD31	**Pinedale Array**	**53.99**	**65**	IAmb	IAmb	04 30 14.4	
	comp=Z,44nm,0.9s						
PDAR	**Pinedale Array**	**53.99**	**65**	P	**P**	**04 30 11.6**	**-0.5**
PDAR	**Pinedale Array**	**53.99**	**65**	P	**P**	**04 30 12.4**	**+0.3**
	comp=Z,29nm,0.8s,baz=326,slow=2.7,SNR=178						
PDAR				LR	LR	04 54 10.8	
	comp=Z,1µm,20.3s,baz=316,slow=37						
	comp=Z,29nm,0.8s						
GRAC	**Grapevine Rang**	**54.08**	**76**	IAMs_20	IAMs_20	04 47 45.0	
	comp=Z,2µm,22.0s						
DUG	**Dugway, Tooele**	**54.17**	**70**	IAmb	IAmb	04 30 16.2	
	comp=Z,30nm,0.9s						
DUG				IAMs_20	IAMs_20	04 53 44.2	
	comp=Z,2µm,19.0s						
TCUT	**Toone Canyon**	**54.23**	**68**	IAMs_20	IAMs_20	04 53 48.7	
	comp=Z,1µm,21.0s						
AAA	**Alma-Ata**	**54.23**	**296**	*e*P	**P**	**04 30 13.8**	**+0.1**
AAA				pmax	pmax		
	comp=Z,13nm,0.5s						
AAA	**Alma-Ata**	**54.23**	**296**	*e*P	**P**	**04 30 13.8**	**+0.1**
	comp=Z,13nm,0.5s						
AAA				LR	LR	04 55 32.5	
SPR3	**Spring Creek 3**	**54.24**	**72**	IAMs_20	IAMs_20	04 53 06.1	
	comp=Z,1µm,21.0s						
BTLS	**Baital**	**54.33**	**299**	*e*P	**P**	**04 30 14.0**	**-0.3**
BTLS	**Baital**	**54.33**	**299**	*e*P	**P**	**04 30 14.0**	**-0.3**
KIRV	**Kirov**	**54.34**	**324**	LR	LR	04 55 15.4	
	comp=Z,3µm,20.4s,baz=35,slow=38						
KIRV	**Kirov**	**54.34**	**324**	*ce*P	**P**	**04 30 15.0**	**+0.9**
SFJD	**Kangerlussuaq**	**54.44**	**16**	IAMs_20	IAMs_20	04 55 42.8	
	comp=Z,3µm,19.0s						
ISA	**Isabella, Lake**	**54.46**	**77**	IAMs_20	IAMs_20	04 54 31.2	
	comp=Z,2µm,18.0s						
S11A	**Rachel**	**54.47**	**74**	IAMs_20	IAMs_20	04 55 42.4	
	comp=Z,2µm,18.0s						
BCW	**Bitter Crk WRg**	**54.48**	**79**	IAMs_20	IAMs_20	04 54 28.8	
	comp=Z,1µm,18.0s						
WCT	**Wildcat Mounta**	**54.63**	**75**	IAMs_20	IAMs_20	04 53 21.5	
	comp=Z,2µm,19.0s						
FAUS	**Fauske**	**54.63**	**346**	*e*P	**P**	**04 30 16.5**	**+0.4**
TPNV	**Topopah Spring**	**54.72**	**75**	IAmb	IAmb	04 30 20.4	
	comp=Z,62nm,1.2s						
TPNV				IAMs_20	IAMs_20	04 51 26.9	
	comp=Z,2µm,20.0s						
QIZ	**Qiongzhong**	**54.77**	**250**	IAMs_20	IAMs_20	04 55 29.2	
	comp=Z,2µm,19.0s						
QIZ	**Qiongzhong**	**54.77**	**250**	P	**P**	**04 30 19.0**	**+1.2**
QIZ				PP	**PP**	**04 32 22.5**	**+2.1**
QIZ				S	**S**	**04 37 58.5**	**+1.1**
QIZ				ScS	**ScS**	**04 40 07.5**	**+1.6**
QIZ				pmax	pmax		
	comp=Z,370nm,3.5s						
QIZ				LR	LR		
	comp=Z,3µm,18.1s						
QIZ				LR	LR		
	comp=Z,3µm,15.0s						
PSUT	**Pine Spring**	**54.83**	**72**	IAmb	IAmb	04 30 21.2	
	comp=Z,39nm,1.1s						
PSUT				IAMs_20	IAMs_20	04 54 15.8	
	comp=Z,1µm,20.0s						
TARG	**Taragay, Kyrgy**	**54.86**	**294**	IAMs_20	IAMs_20	04 54 07.9	
	comp=Z,2µm,20.0s						
MPU	**Maple Canyon**	**54.92**	**69**	IAmb	IAmb	04 30 21.7	
	comp=Z,36nm,1.0s						
ULM	**Lac du Bonnet**	**54.99**	**51**	P	**P**	**04 30 18.6**	**-0.4**
	comp=Z,54nm,0.9s,baz=320,slow=7.2,SNR=70						
ULM				LR	LR	04 55 41.4	
	comp=Z,2µm,18.1s,baz=326,slow=38						
	comp=Z,54nm,0.9s						
BSUT	**Blindstream Ca**	**54.99**	**68**	IAmb	IAmb	04 30 22.6	
	comp=Z,54nm,1.1s						
PRN	**Pahroc Range**	**55.02**	**74**	IAmb	IAmb	04 30 22.7	
	comp=Z,60nm,0.9s						
GWY	**Greenwater Val**	**55.05**	**76**	IAmb	IAmb	04 30 22.7	
	comp=Z,51nm,0.9s						
CCAC	**Calif City Air**	**55.09**	**78**	IAMs_20	IAMs_20	04 50 57.8	
	comp=Z,2µm,20.0s						
MDND	**Maddock**	**55.10**	**55**	IAMs_20	IAMs_20	04 52 58.2	
	comp=Z,2µm,21.0s						
TKM2	**Tokmak 2**	**55.10**	**296**	P	**P**	**04 30 19.6**	**-0.6**
	SNR=12						
QSM	**Queen of Sheba**	**55.11**	**76**	IAmb	IAmb	04 30 23.1	
	comp=Z,72nm,1.3s						
QSM				IAMs_20	IAMs_20	04 55 25.3	
	comp=Z,2µm,18.0s						
SGDS	**Sogindy**	**55.20**	**298**	*e*P	**P**	**04 30 20.9**	**+0.2**
ULHL	**Ulahol**	**55.27**	**295**	P	**P**	**04 30 21.9**	**+0.5**
	SNR=5.5						
USP	**Ospenovka**	**55.40**	**297**	P	**P**	**04 30 22.6**	**+0.5**
	SNR=33						
KLMR	**Klimovskoe**	**55.48**	**331**	*e*P	**P**	**04 30 20.5**	**-1.9**
KLMR				*e*		04 32 25.0	
KLMR				S	**S**	**04 38 07.2**	**+1.3**
KLMR				SS	**SS**	**04 41 54.7**	**+4.8**
KLMR				pmax	pmax		
	comp=Z,72nm,1.1s						
KLMR				MLR	MLR		
	comp=Z,2µm,15.0s						
E28A	**Huff**	**55.54**	**56**	IAMs_20	IAMs_20	04 54 48.8	
	comp=Z,2µm,20.0s						
K22A	**Casper**	**55.60**	**63**	IAmb	IAmb	04 30 25.8	
	comp=Z,38nm,1.1s						
K22A				IAMs_20	IAMs_20	04 54 52.8	
	comp=Z,1µm,20.0s						
KBK	**Karagaybulak**	**55.62**	**297**	P	**P**	**04 30 24.7**	**+0.8**
	SNR=12						
GSC	**Goldstone, Bar**	**55.63**	**77**	IAmb	IAmb	04 30 26.9	
	comp=Z,42nm,0.9s						
TMUT	**Trail Mountain**	**55.67**	**69**	IAmb	IAmb	04 30 27.3	
	comp=Z,53nm,0.9s						
MVU	**Marysvale**	**55.73**	**71**	IAMs_20	IAMs_20	04 55 58.4	
	comp=Z,1µm,18.0s						
RSSD	**Black Hills**	**55.75**	**61**	P	**P**	**04 30 24.5**	**-0.3**
RSSD				IAmb	IAmb	04 30 26.8	
	comp=Z,44nm,0.9s						
RSSD	**Black Hills**	**55.75**	**61**	IAMs_20	IAMs_20	04 55 44.6	
	comp=Z,1µm,18.0s						
RSSD	**Black Hills**	**55.75**	**61**	P	**P**	**04 30 24.5**	**-0.3**
RSSD				pmax	pmax		
	comp=Z,44nm,0.9s						
RSSD				MLR	MLR		

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      comp=Z,1µm,18.0s
AAK   Ala-Archa         55.86 297    P        P         04 30 26.1 +0.5
      SNR=16
AAK   Ala-Archa         55.86 297    P        P         04 30 25.9 +0.3
AAK   Ala-Archa         55.86 297    LR       LR        04 54 03.4
      comp=Z,3µm,20.9s,baz=53,slow=36
AAK   Ala-Archa         55.86 297    P        P         04 30 24.6 -1.1
AAK   Ala-Archa         55.86 297ceP          P         04 30 26.2 +0.5
AAK                                  pmax     pmax
      comp=Z,19nm,0.7s
AAK   Ala-Archa         55.86 297  i P        P         04 30 26.1 +0.5
      SNR=17
MOR8  Moi Rana          55.89 346  eP         P         04 30 24.0 -1.2
P18A  Preston Nutter    55.93  68    IAmb     IAmb      04 30 29.3
      comp=Z,35nm,1.0s
P18A                                 IAMs_20  IAMs_20   04 54 40.6
      comp=Z,1µm,20.0s
Q16A  Castle Valley     55.97  70    IAmb     IAmb      04 30 29.5
      comp=Z,41nm,0.9s
Q16A                                 IAMs_20  IAMs_20   04 54 52.8
      comp=Z,1µm,19.0s
SLVN  Son La            56.08 257    P        P         04 30 27.4 +0.2
TNCH  TengChong         56.12 265    P        P         04 30 28.3 +0.6
TNCH                                 S        S         04 38 15.3 -0.4
TNCH                                 ScS      ScS       04 40 14.5 -1.4
TNCH                                 pmax     pmax
      comp=Z,290nm,5.9s
TNCH                                 LR       LR
      comp=Z,6µm,18.3s
TNCH                                 LR       LR
      comp=Z,4µm,17.4s
TNCH                                 LR       LR
      comp=Z,4µm,18.3s
EKS2  Erkin-Say         56.20 297    P        P         04 30 28.3 +0.3
      SNR=34
LCMT  Little Creek M    56.28  73    IAMs_20  IAMs_20   04 54 28.3
      comp=Z,2µm,19.0s
EPLO  Experimental L    56.34  50    IAMs_20  IAMs_20   04 58 48.9
      comp=Z,2µm,18.0s
V12A  Nelson            56.38  75    IAMs_20  IAMs_20   04 52 35.9
      comp=Z,2µm,20.0s
AGMN  Agassiz Nation    56.45  52    IAMs_20  IAMs_20   04 55 21.8
      comp=Z,3µm,20.0s
KNB   Kanab             56.51  72    IAMs_20  IAMs_20   04 54 46.1
      comp=Z,2µm,20.0s
O20A  White River Ci    56.59  67    IAMs_20  IAMs_20   04 55 32.0
      comp=Z,2µm,20.0s
LSA   Lhasa             56.62 275    IAmb     IAmb      04 30 34.3
      comp=Z,39nm,1.1s
LSA   Lhasa             56.62 275    P        P         04 30 32.2 +0.6
AML   Almayashu         56.64 297    P        P         04 30 32.2 +0.8
      SNR=18
PFO   Pinyon Flats O    57.09  78    P        P         04 30 33.6 -0.8
PFO   Pinyon Flats O    57.09  78    IAMs_20  IAMs_20   04 52 26.9
      comp=Z,1µm,20.0s
PFO   Pinyon Flats O    57.09  78    LR       LR        04 52 57.9
      comp=Z,1µm,18.4s,baz=300,slow=34
PFO   Pinyon Flats O    57.09  78    P        P         04 30 33.6 -0.8
PFO                                  pmax     pmax
      comp=Z,12nm,1.0s
U15A  North Rim         57.23  72    IAMs_20  IAMs_20   04 54 58.2
      comp=Z,2µm,19.0s
PV21  Cone Mtn., Par    57.38  68    IAmb     IAmb      04 30 39.0
      comp=Z,32nm,0.9s
KSH   Kashi             57.43 293    P        P         04 30 43.5 +6.8
KSH                                  S        S         04 38 37.0 +4.4
KSH                                  pmax     pmax
      comp=Z,13nm,1.5s
KSH                                  pmax     pmax
      comp=Z,180nm,7.4s
KSH                                  LR       LR
      comp=Z,5µm,15.8s
KSH                                  LR       LR
      comp=Z,6µm,14.1s
KSH                                  LR       LR
      comp=Z,4µm,15.5s
KK31  Karatay Array     57.48 300    IAmb     IAmb      04 30 39.6
      comp=Z,32nm,1.0s
KKAR  Karatay Array     57.48 300    P        P         04 30 36.6 -0.3
KKAR  Karatay Array     57.48 300    IAmb     IAmb      04 30 39.6
      comp=Z,34nm,1.0s
KKAR  Karatay Array     57.48 300    P        P         04 30 36.6 -0.3
PV14  Lion Creek, Pa    57.49  69    IAmb     IAmb      04 30 40.0
      comp=Z,54nm,1.2s
PV22  Blue Mesa, Par    57.50  68    IAmb     IAmb      04 30 39.9
      comp=Z,73nm,1.1s
AKTO  Aktyubinsk        57.51 313    LR       LR        04 56 17.7
      comp=Z,3µm,18.1s,baz=36,slow=37
PV16  Nyswonger Mesa    57.60  68    IAmb     IAmb      04 30 40.7
      comp=Z,59nm,1.0s
AB31  Akbulak array     57.62 311    IAmb     IAmb      04 30 40.0
      comp=Z,62nm,1.4s
ABKAR Akbulak array     57.62 311    P        P         04 30 37.3 -0.4
ABKAR Akbulak array     57.62 311    IAmb     IAmb      04 30 40.0
      comp=Z,63nm,1.4s
PV07  Paradox Valley    57.64  68    IAmb     IAmb      04 30 41.0
      comp=Z,50nm,1.0s
DAV   Davao City (W)    57.65 227    IAMs_20  IAMs_20   04 56 54.8
      comp=Z,1µm,21.0s
DAV   Davao City (W)    57.65 227    P        P         04 30 40.1 +1.7
PV03  Paradox Valley    57.67  68    IAmb     IAmb      04 30 41.2
      comp=Z,57nm,1.0s
BRLS  Borolday          57.86 300  eP         P         04 30 41.8 +2.2
BRLS  Borolday          57.86 300  eP         P         04 30 41.9 +2.2
SUSD  Miller            57.94  57    IAMs_20  IAMs_20   04 56 01.4
      comp=Z,2µm,20.0s
CBX   Cerro Bola        57.96  79    IAmb     IAmb      04 30 59.5
      comp=Z,59nm,1.4s
BLYC  Blythe            58.04  76    IAMs_20  IAMs_20   04 57 07.9
      comp=Z,1µm,18.0s
F33A  5 Mile Ranch,     58.11  54    IAmb     IAmb      04 30 43.8
      comp=Z,66nm,1.1s
ISCO  Idaho Springs     58.18  65    IAmb     IAmb      04 30 45.4
      comp=Z,41nm,1.0s
ISCO                                 IAMs_20  IAMs_20   04 57 05.1
      comp=Z,2µm,22.0s
FINES FINESS Array B    58.23 338    P        P         04 30 41.6 -0.2
FINES FINESS Array B    58.23 338    P        P         04 30 41.5 -0.4
      comp=Z,8.5nm,0.8s,baz=32,slow=7.6,SNR=18
FINES                                LR       LR        04 58 27.4
      comp=Z,2µm,21.9s,baz=32,slow=39
      comp=Z,8.5nm,0.8s
FINES FINESS Array B    58.23 338  i P        P         04 30 41.9 +0.1
FINES                                pmax     pmax
      comp=Z,9.0nm,0.8s
GLA   Glamis            58.40  77    IAMs_20  IAMs_20   04 53 39.6
      comp=Z,1µm,20.0s
IUG   Iuzhnay           58.43 299  eP         P         04 30 44.0 +0.3
IUG                                  pmax     pmax
      comp=Z,30nm,0.8s
IUG   Iuzhnay           58.43 299  eP         P         04 30 44.1 +0.3
      comp=Z,30nm,0.8s
CHM   Chimkent          58.51 300  eP         P         04 30 44.5 +0.4
CHM                                  pmax     pmax
      comp=Z,27nm,1.0s
CHM                                  MLR      MLR
      comp=Z,1µm,14.0s
CHM   Chimkent          58.51 300  eP         P         04 30 44.5 +0.4
      comp=Z,27nm,1.0s
CHM                                  LR       LR        04 58 53.5
      comp=Z,1µm,13.6s
KUQ   Kuujjuuaa         58.53  30    IAMs_20  IAMs_20   04 58 59.1
      comp=Z,1µm,18.0s
EYMN  Ely               58.61  50    IAMs_20  IAMs_20   05 00 17.0
      comp=Z,2µm,18.0s
TBO   Thunder Bay       58.95  48    IAmb     IAmb      04 30 48.3
      comp=Z,41nm,1.0s
TBO                                  IAMs_20  IAMs_20   04 58 11.8
      comp=Z,2µm,20.0s
K30B  Basset            58.97  59    IAMs_20  IAMs_20   04 55 59.7
      comp=Z,2µm,20.0s
Q24A  Divide            59.04  65    IAMs_20  IAMs_20   04 57 21.0
      comp=Z,1µm,21.0s
OGNE  Ogallala          59.10  62    IAMs_20  IAMs_20   04 57 44.4
      comp=Z,2µm,19.0s
X16A  Lo Mia Camp, P    59.20  73    IAMs_20  IAMs_20   04 55 01.5
      comp=Z,2µm,20.0s
BORG  Borgarnes         59.35   3    IAMs_20  IAMs_20   05 00 21.9
      comp=Z,1µm,18.0s
BORG  Borgarnes         59.35   3    LR       LR        04 58 11.0
      comp=Z,682nm,18.1s,baz=354,slow=38
RAF   Rauma             59.48 340  eP         P         04 30 51.5 +1.0
ECSD  EROS Data Cent    59.57  56    IAmb     IAmb      04 30 52.9
      comp=Z,27nm,0.9s
BTK   Batken            59.63 297    IAmb     IAmb      04 30 55.0
      comp=Z,26nm,0.9s
E38A  The Farm, Brul    59.63  51    IAMs_20  IAMs_20   04 58 01.8
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      comp=Z,2µm,19.0s
MEF   Metsahovi         59.70 338  eP         P         04 30 52.2 +0.2
SDCO  Great Sand Dun    59.79  67    IAMs_20  IAMs_20   04 57 43.8
      comp=Z,2µm,20.0s
X18A  Snowflake         59.91  72    IAmb     IAmb      04 30 57.4
      comp=Z,37nm,1.0s
X18A                                 IAMs_20  IAMs_20   05 00 23.2
      comp=Z,1µm,18.0s
BELG  Belogornoye       59.91 321    LR       LR        04 59 57.9
      comp=Z,2µm,18.7s,baz=38,slow=39
BELG  Belogornoye       59.91 321  i P        P         04 30 53.6  0.0
BELG                                 pmax     pmax
      comp=Z,33nm,1.1s
SPMN  Marine on St.     60.15  53    IAmb     IAmb      04 30 57.0
      comp=Z,39nm,0.9s
KSCO  Kaye Shedlock'    60.28  64    IAmb     IAmb      04 30 59.0
      comp=Z,36nm,0.8s
KSCO                                 IAMs_20  IAMs_20   04 57 45.7
      comp=Z,1µm,22.0s
214A  Organ Pipe Nat    60.34  76    IAmb     IAmb      04 31 00.2
      comp=Z,25nm,1.0s
MOS   Moscow            60.35 329  eP         P         04 30 55.7 -0.8
MOS                                e                    04 31 40.0
MOS                                eS         S         04 39 09.7  0.0
MOS                                  pmax     pmax
      comp=Z,100nm,0.9s
MOS                                  pmax     pmax
      comp=Z,55nm,0.8s
MOS                                  MLR      MLR
      comp=Z,2µm,15.0s
EVN   Everest           60.38 277    IAmb     IAmb      04 31 15.5
      comp=Z,25nm,0.8s
DOMB  Dombas            60.55 347  eP         P         04 30 57.6 -0.3
BGNE  Belgrade          60.64  59    IAMs_20  IAMs_20   04 57 52.9
      comp=Z,1µm,21.0s
NRS   Narsarsuaq        60.72  16    IAMs_20  IAMs_20   04 59 33.0
      comp=Z,2µm,19.0s
VSU   Vasula            60.78 336  i P        P         04 30 58.5 -0.9
VSU                                  pmax     pmax
      comp=Z,42nm,0.9s
VSU   Vasula            60.78 336  eP         P         04 31 00.1 +0.7
T25A  Trinidad          60.81  66    IAmb     IAmb      04 31 02.8
      comp=Z,25nm,1.0s
T25A                                 IAMs_20  IAMs_20   04 55 45.8
      comp=Z,1µm,20.0s
CHTO  Chiang Mai        60.84 260    P        P         04 31 00.8 +0.4
CHTO                                 IAmb     IAmb      04 31 03.1
      comp=Z,34nm,1.1s
CHTO  Chiang Mai        60.84 260    P        P         04 31 00.5  0.0
CHTO  Chiang Mai        60.84 260    P        P         04 31 00.8 +0.4
CHTO                                 pmax     pmax
      comp=Z,34nm,1.1s
CHTO                                 MLR      MLR
      comp=Z,3µm,19.0s
HNLY  HANLEY            60.96 286  eP         P         04 31 01.9 +0.1
NC303 NORSAR Array S    61.03 345    IAmb     IAmb      04 31 03.1
      comp=Z,33nm,1.0s
L34A  Svendsen Farm,    61.05  57    IAMs_20  IAMs_20   04 59 59.7
      comp=Z,2µm,18.0s
COWI  Conover           61.06  50    IAmb     IAmb      04 31 02.8
      comp=Z,46nm,1.1s
NC204 NORSAR Array S    61.07 346    IAmb     IAmb      04 31 03.4
      comp=Z,43nm,0.9s
NC405 NORSAR Array S    61.09 345    IAmb     IAmb      04 31 03.4
      comp=Z,31nm,0.9s
CM31  Chiang Mai Arr    61.13 260    P        P         04 31 03.1 +0.7
CM31                                 IAmb     IAmb      04 31 06.6
      comp=Z,30nm,1.1s
CM31  Chiang Mai Arr    61.13 260    P        P         04 31 02.8 +0.4
      SNR=5.9
CMAR  Chiang Mai Arr    61.13 260    P        P         04 31 03.2 +0.8
CMAR  Chiang Mai Arr    61.13 260    P        P         04 31 02.9 +0.5
      comp=Z,14nm,0.9s,baz=22,slow=7.3,SNR=36
CMAR                                 LR       LR        04 58 46.6
      comp=Z,3µm,18.7s,baz=30,slow=37
      comp=Z,14nm,0.9s
CMAR  Chiang Mai Arr    61.13 260  i P        P         04 31 03.4 +1.0
CMAR                                 pmax     pmax
      comp=Z,13nm,0.8s
TUC   Tucson            61.16  74    P        P         04 31 02.6  0.0
TUC   Tucson            61.16  74    P        P         04 31 02.6  0.0
TUC                                  pmax     pmax
      comp=Z,13nm,1.2s
TUC                                  MLR      MLR
      comp=Z,1µm,19.0s
MTSE  Matsula           61.19 338  eP         P         04 31 04.1 +1.9
OBN   Obninsk           61.19 329    LR       LR        05 01 17.1
      comp=Z,2µm,18.0s,baz=328,slow=40
OBN   Obninsk           61.19 329d iP         P         04 31 02.1 -0.2
OBN                                e                    04 31 13.4
OBN                                e                    04 31 43.0
OBN                                e                    04 33 18.3
OBN                                eS         S         04 39 22.7 +2.3
OBN                                eSS        SS        04 43 23.4 +3.8
OBN                                  pmax     pmax
      comp=Z,32nm,1.2s
OBN                                  MLR      MLR
      comp=Z,2µm,22.0s
NB2   NORSAR Subarra    61.23 345    P        P         04 31 01.9 -0.6
      comp=Z,50nm,1.0s,baz=17,slow=6.9
NB2   NORSAR Subarra    61.23 345    P        P         04 31 01.9 -0.6
      baz=17,slow=6.9
NOA   NORSAR Array B    61.23 345    P        P         04 31 02.0 -0.6
      comp=Z,13nm,0.7s,baz=17,slow=6.8,SNR=49
NOA                                  LR       LR        05 02 01.5
      comp=Z,786nm,18.2s,baz=5.0,slow=40
      comp=Z,13nm,0.7s
NOA   NORSAR Array B    61.23 345    P        P         04 31 02.0 -0.6
G40A  Rib Lake          61.26  51    IAMs_20  IAMs_20   04 59 45.1
      comp=Z,2µm,18.0s
NBO00 NORSAR Array S    61.30 346    IAmb     IAmb      04 31 04.8
      comp=Z,31nm,1.1s
DLV    Lat              61.41 247    IAMs_20  IAMs_20   04 57 08.6
      comp=Z,2µm,20.0s
ANMO  Albuquerque       61.44  69    P        P         04 31 04.2 -0.4
ANMO  Albuquerque       61.44  69    IAmb     IAmb      04 31 07.1
      comp=Z,16nm,0.9s
ANMO                                 IAMs_20  IAMs_20   05 02 24.5
      comp=Z,1µm,18.0s
ANMO  Albuquerque       61.44  69    LR       LR        04 57 22.2
      comp=Z,908nm,18.6s,baz=58,slow=36
ANMO  Albuquerque       61.44  69    P        P         04 31 04.2 -0.4
ANMO                                 pmax     pmax
      comp=Z,16nm,1.0s
ANMO                                 MLR      MLR
      comp=Z,1µm,20.0s
JAY   Jayapura          61.55 207    LR       LR        04 57 44.1
      comp=Z,454nm,19.0s,baz=6.5,slow=36
SIMJ  Simiganj          61.60 298    P        P         04 31 05.0 -0.5
SIMJ                                 IAmb     IAmb      04 31 08.7
      comp=Z,25nm,1.1s
HFS   Hagfors           61.73 344    P        P         04 31 04.6 -1.3
      comp=Z,12nm,0.8s,baz=46,slow=4.3,SNR=29
HFS                                  LR       LR        04 59 10.2
      comp=Z,2µm,20.8s,baz=22,slow=37
      comp=Z,12nm,0.8s
F42A  Maple Grove Fa    61.76  49    IAMs_20  IAMs_20   04 58 58.2
      comp=Z,2µm,19.0s
SCHQ  Schefferville     61.80  31    P        P         04 31 05.0 -1.4
      comp=Z,12nm,0.7s,baz=345,slow=7.3,SNR=20
SCHQ                                 LR       LR        05 00 21.3
      comp=Z,1µm,19.2s,baz=321,slow=38
      comp=Z,12nm,0.7s
BRDH  Bariadhala        61.82 269    LR       LR        04 58 42.2
      comp=Z,3µm,18.1s,baz=41,slow=37
Y22D  IRIS PASSCAL I    61.86  70    IAMs_20  IAMs_20   04 57 55.9
      comp=Z,2µm,22.0s
CBKS  Cedar Bluff       61.87  62    IAMs_20  IAMs_20   04 56 29.7
      comp=Z,2µm,22.0s
DUN6  Lazy B Ranch      61.88  73    IAmb     IAmb      04 31 10.4
      comp=Z,38nm,0.9s
I40A  Norwalk           62.17  52    IAmb     IAmb      04 31 10.3
      comp=Z,32nm,1.0s
N35A  Tabor             62.25  58    IAMs_20  IAMs_20   05 00 38.6
      comp=Z,2µm,18.0s
MYLDM Lahad Datu        62.40 234    P        P         04 31 11.6 +0.7
MYLDM                                IAmb     IAmb      04 31 16.0
      comp=Z,43nm,1.1s
MYLDM                                IAMs_20  IAMs_20   04 55 00.5
      comp=Z,2µm,22.0s
ASK   Askoy             62.53 348  eP         P         04 31 12.3 +1.1
SCIA  State Center      62.56  55    IAMs_20  IAMs_20   04 57 06.7
      comp=Z,2µm,22.0s
BER   Bergen            62.61 348  eP         P         04 31 12.7 +0.9
LPSR  Galich'ya Gora    62.65 326  eP         P         04 31 10.6 -1.5
LPSR                               eS         S         04 39 39.7 +0.8
LPSR                                 pmax     pmax
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      comp=Z,59nm,0.7s
LPSR                                 smax     smax
      comp=N,200nm,2.8s
R32A  Long Quarter,     62.68  61    IAMs_20  IAMs_20   04 56 54.1
      comp=Z,2µm,22.0s
KKM   Kota Kinabalu     62.68 236    IAMs_20  IAMs_20   05 00 04.9
      comp=Z,1µm,20.0s
319A  Douglas           62.69  74    IAmb     IAmb      04 31 15.8
      comp=Z,35nm,1.2s
319A                                 IAMs_20  IAMs_20   05 01 12.0
      comp=Z,1µm,18.0s
DHRM  DHARAMSHALA       62.80 288  eP         P         04 31 13.6 -0.1
KONO  Kongsberg         62.80 346    P        P         04 31 12.9 -0.1
KONO                                 IAmb     IAmb      04 31 15.1
      comp=Z,33nm,1.0s
KONO  Kongsberg         62.80 346    IAMs_20  IAMs_20   05 02 48.2
      comp=Z,1µm,19.0s
KONO  Kongsberg         62.80 346  i P        P         04 31 13.0  0.0
KONO                                 pmax     pmax
      comp=Z,39nm,1.0s
KONO  Kongsberg         62.80 346  eP         P         04 31 13.8 +0.8
E46A  Sault Ste Mari    62.86  46    IAmb     IAmb      04 31 14.0
      comp=Z,27nm,0.9s
I42A  Draeger Farm,     62.92  51    IAmb     IAmb      04 31 15.1
      comp=Z,21nm,0.9s
I42A                                 IAMs_20  IAMs_20   05 00 45.8
      comp=Z,2µm,19.0s
VRH   Novokhopyorsk     62.94 323  eP         P         04 31 12.4 -1.7
VRH                                eS         S         04 39 42.4 -0.2
VRH                                  pmax     pmax
      comp=Z,49nm,0.8s
VRH                                  smax     smax
      comp=N,2µm,13.6s
H43A  Windswept, Lux    62.95  50    IAMs_20  IAMs_20   05 02 58.6
      comp=Z,2µm,19.0s
STRU  Stroemstad        63.16 345  i P        P         04 31 16.2 +0.8
SMLA  Simla             63.20 286  eP         P         04 31 16.9 +0.8
NIL   Nilore            63.32 291    P        P         04 31 17.0 +0.1
NIL                                  IAmb     IAmb      04 31 52.8
      comp=Z,27nm,0.9s
NIL   Nilore            63.32 291    P        P         04 31 17.7 +0.8
NIL   Nilore            63.32 291    P        P         04 31 17.0 +0.1
NIL                                  pmax     pmax
      comp=Z,27nm,1.0s
NIL                                  MLR      MLR
      comp=Z,3µm,18.0s
L40A  Anamosa           63.35  54    IAmb     IAmb      04 31 17.5
      comp=Z,26nm,0.9s
L40A                                 IAMs_20  IAMs_20   04 57 53.4
      comp=Z,2µm,21.0s
VORR  Voronezh          63.36 325  eP         P         04 31 17.8 +1.0
VORR                                 pmax     pmax
      comp=Z,59nm,0.4s
BLS5  Blasjo            63.42 348  eP         P         04 31 17.4 +0.2
HSIG                    63.62  77    IAMs_20  IAMs_20   04 59 56.8
      comp=Z,941nm,18.0s
VSR   Storozhevoye      63.76 325  eP         P         04 31 17.6 -1.9
VSR                                  pmax     pmax
      comp=Z,70nm,1.0s
VSR                                  MLR      MLR
      comp=Z,2µm,15.0s
EPT   El Paso           63.87  72    IAmb     IAmb      04 31 23.2
      comp=Z,23nm,1.0s
VORD  Divnogorie        63.94 325  eP         P         04 31 19.7 -1.0
VORD                                 pmax     pmax
      comp=Z,30nm,0.9s
VORD                                 MLR      MLR
      comp=Z,1µm,13.0s
I45A  Fountain          63.95  49    IAMs_20  IAMs_20   05 00 14.1
      comp=Z,2µm,19.0s
AMTX  Amarillo          63.95  66    IAMs_20  IAMs_20   04 58 14.0
      comp=Z,1µm,21.0s
NACGM Naroch            63.99 334⇓iP          P         04 31 20.8 -0.2
      comp=Z,20nm,0.9s,baz=25
VLDQ  Val d'Or          64.07  41    IAMs_20  IAMs_20   05 01 21.3
      comp=Z,2µm,20.0s
MNK   Minsk             64.09 333  i P        P         04 31 17.7 -3.9
      comp=E,20nm,0.9s
MNK                                i P        P         04 31 17.7 -3.9
      comp=N,11nm,0.9s
MNK                                i P        P         04 31 17.7 -3.9
      comp=Z,33nm,0.9s,baz=25
MNK                                i PP       PP        04 33 37.8 -4.2
MNK                                i PPP      PPP       04 35 08.3
MNK                                i S        S         04 39 55.9 -0.9
MNK                                i SS       SS        04 44 05.4 +0.6
MNK                                i SSS      SSS       04 47 05.0
MNK                                i LQ       LQ        04 54 40.6
MNK                                i LR       LR        04 58 53.3
MNK                                i LRM      MLR       05 03 03.2
      comp=N,897nm,15.0s
MNK                                i LRM      MLR       05 03 09.9
      comp=Z,3µm,16.9s
MNK                                i LRM      MLR       05 03 13.6
      comp=E,2µm,15.2s
MNK   Minsk             64.09 333  i P        P         04 31 17.7 -3.9
MNK                                i S        S         04 39 55.9 -0.9
MNK                                i SS       SS        04 44 05.3 +0.6
MNK                                  pmax     pmax
      comp=N,11nm,0.9s
MNK                                  pmax     pmax
      comp=E,20nm,0.9s
MNK                                  pmax     pmax
      comp=Z,33nm,0.9s
MNK                                  MLR      MLR
      comp=N,897nm,15.0s
MNK                                  MLR      MLR
      comp=Z,3µm,17.0s
MNK                                  MLR      MLR
      comp=E,2µm,15.0s
L42A  Oliver, Polo      64.09  53    IAmb     IAmb      04 31 22.2
      comp=Z,26nm,0.8s
PABE  Paberze           64.10 336    P        P         04 31 21.2 -0.5
PABE  Paberze           64.10 336  eP         P         04 31 23.1 +1.4
MSTX  Muleshoe          64.11  67    IAmb     IAmb      04 31 24.1
      comp=Z,39nm,1.0s
MSTX                                 IAMs_20  IAMs_20   04 59 36.2
      comp=Z,1µm,21.0s
K43A  Burlington        64.12  51    IAmb     IAmb      04 31 22.6
      comp=Z,33nm,1.0s
OK038 West end E0370    64.19  63    IAMs_20  IAMs_20   05 00 54.0
      comp=Z,2µm,21.0s
P38A  Dawn              64.22  57    IAMs_20  IAMs_20   05 00 13.7
      comp=Z,2µm,19.0s
KAN17 Caldwell West     64.22  62    IAmb     IAmb      04 31 23.4
      comp=Z,32nm,0.8s
HOMB  Homborsund        64.28 346  i P        P         04 31 19.8 -3.0
SNART Snartemo          64.38 347  i P        P         04 31 24.4 +0.9
FAKI  Fak Fak           64.40 216    IAMs_20  IAMs_20   05 01 08.8
      comp=Z,1µm,20.0s
MNTX  Cornudas Mount    64.52  71    IAMs_20  IAMs_20   05 03 01.3
      comp=Z,1µm,18.0s
CROK  Carrier           64.54  62    IAmb     IAmb      04 31 25.7
      comp=Z,27nm,1.0s
CROK                                 IAMs_20  IAMs_20   05 04 51.4
      comp=Z,1µm,18.0s
KBL   Kabul             64.79 295    P        P         04 31 25.8 -1.0
KBL                                  IAmb     IAmb      04 31 28.1
      comp=Z,24nm,1.1s
KBL   Kabul             64.79 295    P        P         04 31 25.8 -1.0
      SNR=6.8
KBL   Kabul             64.79 295    P        P         04 31 25.8 -1.0
KBL                                  pmax     pmax
      comp=Z,24nm,1.1s
FABU  Falkenberg        64.88 343  i P        P         04 31 26.5 -0.2
T35A  Sooner Cattle     64.94  61    IAMs_20  IAMs_20   04 58 23.9
      comp=Z,2µm,21.0s
P40A  Paris             64.99  56    IAMs_20  IAMs_20   05 00 57.9
      comp=Z,2µm,19.0s
OK048 Pawnee Station    65.12  61    IAMs_20  IAMs_20   04 58 32.8
      comp=Z,2µm,22.0s
DEL   Delary            65.20 342  i P        P         04 31 29.6 +0.8
M44A  Midewin, Midew    65.31  52    IAmb     IAmb      04 31 30.4
      comp=Z,25nm,0.8s
M44A                                 IAMs_20  IAMs_20   05 02 10.2
      comp=Z,2µm,20.0s
OK029 Liberty Lake      65.36  62    IAmb     IAmb      04 31 31.4
      comp=Z,38nm,1.1s
OK029                                IAMs_20  IAMs_20   04 58 25.1
      comp=Z,1µm,21.0s
HDIL  Hopedale          65.42  53    IAMs_20  IAMs_20   05 00 39.3
      comp=Z,2µm,20.0s
HNR   Honiara           65.44 185    IAMs_20  IAMs_20   04 55 57.5
      comp=Z,2µm,19.0s
HNR   Honiara           65.44 185    LR       LR        04 56 07.4
      comp=Z,998nm,20.8s,baz=3.0,slow=32
I49A  Point Hope        65.45  47    IAmb     IAmb      04 31 31.5
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	comp=Z,40nm,0.9s						
OK052	**Battle Ridge R**	**65.53**	**62**	IAmb	IAmb	04 31 32.2	
	comp=Z,27nm,0.9s						
OK052				IAMs_20	IAMs_20	04 58 30.5	
	comp=Z,1µm,21.0s						
WMOK	**Wichita Mounta**	**65.54**	**64**	IAMs_20	IAMs_20	05 01 12.8	
	comp=Z,2µm,20.0s						
L46A	**Eue Claire**	**65.56**	**51**	IAMs_20	IAMs_20	05 01 52.9	
	comp=Z,2µm,20.0s						
BUKO	**Buck Lake**	**65.57**	**44**	IAmb	IAmb	04 31 31.6	
	comp=Z,29nm,1.0s						
SUW	**Suwalki**	**65.66**	**336**	*e*P	**P**	**04 31 31.8**	**-0.1**
SUW				*e*L	L	05 04 16.4	
	comp=Z,4µm,17.0s						
BJUU	**Bjuv**	**65.72**	**343**	*i* P	**P**	**04 31 32.0**	**-0.2**
DEOK	**Depew**	**65.80**	**62**	IAmb	IAmb	04 31 34.1	
	comp=Z,30nm,1.0s						
FNO	**Franklin**	**65.82**	**63**	IAmb	IAmb	04 31 34.7	
	comp=Z,37nm,1.0s						
FNO				IAMs_20	IAMs_20	05 03 42.1	
	comp=Z,2µm,18.0s						
S39A	**Bolivar**	**65.86**	**58**	IAMs_20	IAMs_20	05 01 23.9	
	comp=Z,2µm,18.0s						
R40A	**Maddies Statio**	**65.88**	**57**	IAMs_20	IAMs_20	05 00 29.5	
	comp=Z,2µm,20.0s						
KUDL	**Kundal**	**65.90**	**285**	*e*P	**P**	**04 31 34.1**	**+0.3**
LUNU	**Lund**	**66.07**	**342**	*i* P	**P**	**04 31 35.7**	**+1.2**
TUL3	**Leonard**	**66.09**	**61**	IAmb	IAmb	04 31 36.0	
	comp=Z,21nm,0.9s						
TUL3				IAMs_20	IAMs_20	05 02 19.3	
	comp=Z,2µm,20.0s						
X34A	**Smith Ranch, M**	**66.12**	**63**	IAmb	IAmb	04 31 37.3	
	comp=Z,28nm,1.0s						
SADO	**Sadowa**	**66.23**	**44**	LR	LR	05 02 36.8	
	comp=Z,2µm,18.3s,baz=346,slow=38						
ICQ	**Pointe Anglais**	**66.32**	**34**	IAMs_20	IAMs_20	05 01 43.2	
	comp=Z,1µm,21.0s						
U38A	**Gravette**	**66.35**	**60**	IAMs_20	IAMs_20	05 01 09.2	
	comp=Z,1µm,21.0s						
LDAQ	**Lac Daran**	**66.39**	**37**	IAmb	IAmb	04 31 38.3	
	comp=Z,33nm,1.1s						
LDAQ				IAMs_20	IAMs_20	05 02 34.1	
	comp=Z,2µm,20.0s						
K50A	**Casco**	**66.49**	**48**	IAmb	IAmb	04 31 38.2	
	comp=Z,26nm,1.0s						
CCM	**Cathedral Cave**	**66.55**	**56**	P	**P**	**04 31 36.8**	**-1.0**
CCM	**Cathedral Cave**	**66.55**	**56**	IAMs_20	IAMs_20	05 01 01.2	
	comp=Z,2µm,20.0s						
CCM	**Cathedral Cave**	**66.55**	**56**	P	**P**	**04 31 36.8**	**-1.0**
CCM				pmax	pmax		
	comp=Z,45nm,1.0s						
SFIN	**Lafayette**	**66.55**	**52**	IAmb	IAmb	04 31 38.4	
	comp=Z,29nm,1.3s						
HHAR	**Hobbs**	**66.69**	**59**	IAmb	IAmb	04 31 39.5	
	comp=Z,34nm,0.8s						
HHAR				IAMs_20	IAMs_20	05 05 46.2	
	comp=Z,1µm,20.0s						
TRQ	**Mont Tremblant**	**66.72**	**40**	IAmb	IAmb	04 31 39.4	
	comp=Z,46nm,1.1s						
TRQ				IAMs_20	IAMs_20	05 03 00.3	
	comp=Z,2µm,19.0s						
N47A	**Urbana**	**66.75**	**51**	IAmb	IAmb	04 31 39.4	
	comp=Z,29nm,1.0s						
N47A				IAMs_20	IAMs_20	05 00 40.3	
	comp=Z,2µm,21.0s						
Q44A	**Meyer Farm, Va**	**66.89**	**54**	IAmb	IAmb	04 31 40.9	
	comp=Z,28nm,1.0s						
JHNI	**Jhansi**	**66.90**	**281**	*e*P	**P**	**04 31 41.1**	**+0.8**
FVM	**French Village**	**66.98**	**56**	IAMs_20	IAMs_20	05 01 34.8	
	comp=Z,2µm,20.0s						
LMQ	**La Malbaie**	**67.06**	**37**	IAmb	IAmb	04 31 42.6	
	comp=Z,48nm,1.1s						
AKASG	**Malin Array Be**	**67.17**	**331**	P	**P**	**04 31 41.4**	**-0.3**
AKASG	**Malin Array Be**	**67.17**	**331**	P	**P**	**04 31 40.8**	**-0.8**
	comp=Z,8.2nm,0.6s,baz=28,slow=6.0,SNR=44						
AKASG				LR	LR	05 05 13.7	
	comp=Z,3µm,18.1s,baz=20,slow=40						
	comp=Z,8.2nm,0.6s						
AKASG	**Malin Array Be**	**67.17**	**331**	*i* P	**P**	**04 31 41.7**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,12nm,0.7s						
AKBB	**Malin Array Si**	**67.17**	**331**	IAmb	IAmb	04 31 43.2	
	comp=Z,26nm,1.0s						
AKBB	**Malin Array Si**	**67.17**	**331**	*i* P	**P**	**04 31 38.9**	**-2.7**
AKBB				pmax	pmax		
	comp=Z,32nm,1.0s						
KIEV	**Kiev**	**67.19**	**331**	P	**P**	**04 31 41.4**	**-0.3**
KIEV				IAmb	IAmb	04 31 43.2	
	comp=Z,24nm,1.0s						
KIEV	**Kiev**	**67.19**	**331**	⇓P	**P**	**04 31 41.1**	**-0.5**
KIEV	**Kiev**	**67.19**	**331**	P	**P**	**04 31 41.4**	**-0.3**
KIEV				pmax	pmax		
	comp=Z,24nm,1.0s						
KIEV				MLR	MLR		
	comp=Z,3µm,20.0s						
KIEV	**Kiev**	**67.19**	**331**	*i* P	**P**	**04 31 41.7**	**+0.1**
	SNR=13						
TXAR	**Lajitas Array**	**67.29**	**71**	P	**P**	**04 31 42.3**	**-0.5**
TXAR	**Lajitas Array**	**67.29**	**71**	P	**P**	**04 31 43.3**	**+0.5**
	comp=Z,38nm,0.8s,baz=300,slow=3.9,SNR=208						
	comp=Z,38nm,0.8s						
TXAR	**Lajitas Array**	**67.29**	**71**	P	**P**	**04 31 42.3**	**-0.5**
N49A	**Columbus Grove**	**67.37**	**50**	IAmb	IAmb	04 31 43.8	
	comp=Z,35nm,1.0s						
Z35A	**Perchaven, San**	**67.42**	**64**	IAMs_20	IAMs_20	05 02 22.7	
	comp=Z,2µm,20.0s						
OLIL	**Olney**	**67.44**	**54**	IAmb	IAmb	04 31 44.4	
	comp=Z,39nm,1.1s						
T42A	**Van Buren**	**67.44**	**57**	IAmb	IAmb	04 31 44.3	
	comp=Z,23nm,0.9s						
T42A				IAMs_20	IAMs_20	05 01 28.0	
	comp=Z,2µm,21.0s						
M50A	**Fremont**	**67.45**	**49**	IAmb	IAmb	04 31 44.2	
	comp=Z,26nm,1.0s						
M50A				IAMs_20	IAMs_20	05 02 40.8	
	comp=Z,2µm,19.0s						
O48B	**Farmland**	**67.50**	**51**	IAmb	IAmb	04 31 44.1	
	comp=Z,32nm,0.9s						
WBO	**Williamsburg**	**67.50**	**41**	IAmb	IAmb	04 31 43.9	
	comp=Z,29nm,1.2s						
WBO				IAMs_20	IAMs_20	05 03 26.8	
	comp=Z,2µm,20.0s						
MNTQ	**Montreal, Queb**	**67.68**	**40**	IAmb	IAmb	04 31 45.8	
	comp=Z,36nm,1.0s						
MNTQ				IAMs_20	IAMs_20	05 05 23.4	
	comp=Z,1µm,20.0s						
GOF	**Gofitskoye**	**67.72**	**319**	*ce*P	**P**	**04 31 46.2**	**+1.1**
S44A	**Carbondale**	**67.76**	**55**	IAmb	IAmb	04 31 46.5	
	comp=Z,37nm,0.9s						
S44A				IAMs_20	IAMs_20	05 00 18.2	
	comp=Z,2µm,22.0s						
PECO	**Prince Edward**	**67.76**	**43**	IAmb	IAmb	04 31 46.2	
	comp=Z,30nm,1.0s						
BLO	**Bloomington**	**67.79**	**52**	IAmb	IAmb	04 31 46.3	
	comp=Z,27nm,1.1s						
MAK	**Makhachkala**	**67.79**	**315**	*e*P	**P**	**04 31 42.2**	**-3.4**
MAK				*e*S	**S**	**04 40 38.1**	**-4.2**
MAK				*e*SS	**SS**	**04 45 01.7**	**-1.1**
MAK				pmax	pmax		
	comp=Z,89nm,1.0s						
MAK				MLR	MLR		
	comp=Z,4µm,17.0s						
MEDO	**Medina**	**67.85**	**45**	IAMs_20	IAMs_20	05 04 13.0	
	comp=Z,2µm,18.0s						
FCAR	**Ozark Folk Cen**	**67.88**	**58**	IAMs_20	IAMs_20	05 04 13.5	
	comp=Z,2µm,19.0s						
D62A	**Allapoint, All**	**67.89**	**36**	IAmb	IAmb	04 31 47.4	
	comp=Z,32nm,1.0s						
CGM3	**Cape Girardeau**	**67.90**	**56**	IAMs_20	IAMs_20	05 02 12.9	
	comp=Z,2µm,19.0s						
O49A	**Covington**	**67.91**	**50**	IAmb	IAmb	04 31 47.2	
	comp=Z,38nm,1.1s						
PBMO	**Poplar Bluff**	**67.96**	**57**	IAMs_20	IAMs_20	05 02 36.6	
	comp=Z,2µm,19.0s						
J55A	**Hilton**	**68.01**	**44**	IAmb	IAmb	04 31 47.3	
	comp=Z,42nm,1.1s						
J55A				IAMs_20	IAMs_20	05 02 06.4	
	comp=Z,2µm,21.0s						
P48A	**Milroy**	**68.03**	**52**	IAmb	IAmb	04 31 47.5	
	comp=Z,36nm,0.9s						
M52A	**Chesterland**	**68.04**	**47**	IAmb	IAmb	04 31 48.2	
	comp=Z,39nm,0.9s						
ERBR	**Yeremizino-Bor**	**68.07**	**321**	*e*P	**P**	**04 31 45.7**	**-1.7**
ERBR				*e*S	**S**	**04 40 46.7**	**+1.1**
ERBR				pmax	pmax		
	comp=Z,72nm,1.2s						
ERBR				MLR	MLR		
	comp=E,3µm,11.0s						
ERBR				MLR	MLR		
	comp=Z,2µm,16.0s						
ERBR				MLR	MLR		
	comp=N,8µm,16.0s						
LONY	**Lake Ozonia**	**68.08**	**41**	IAmb	IAmb	04 31 47.5	
	comp=Z,26nm,1.2s						
LONY				IAMs_20	IAMs_20	05 06 47.2	
	comp=Z,2µm,20.0s						
ERPA	**Erie**	**68.12**	**46**	IAmb	IAmb	04 31 48.5	
	comp=Z,27nm,0.9s						
ERPA				IAMs_20	IAMs_20	05 03 58.2	
	comp=Z,942nm,18.0s						
E62A	**Clayton Lake**	**68.13**	**37**	IAMs_20	IAMs_20	05 04 26.4	
	comp=Z,2µm,19.0s						
N51A	**Ashland**	**68.14**	**49**	IAMs_20	IAMs_20	05 03 11.9	
	comp=Z,2µm,19.0s						
LCAR	**Lake Charles**	**68.19**	**58**	IAMs_20	IAMs_20	05 01 40.8	
	comp=Z,1µm,19.0s						
BSEG	**Bad Segeberg**	**68.21**	**344**	*e*P	**P**	**04 31 49.0**	**+0.9**
	comp=Z,19nm,0.9s,baz=15,slow=6.1						
FRNY	**Flat Rock**	**68.26**	**40**	IAmb	IAmb	04 32 02.9	
	comp=Z,58nm,2.0s						
FRNY				IAMs_20	IAMs_20	05 03 54.9	
	comp=Z,2µm,19.0s						
MIAR	**Mount Ida**	**68.27**	**60**	IAMs_20	IAMs_20	05 05 22.9	
	comp=Z,1µm,18.0s						
PARMO	**Parma**	**68.37**	**56**	IAMs_20	IAMs_20	05 03 01.4	
	comp=Z,2µm,20.0s						
SLBS	**Sierra La Lagu**	**68.38**	**80**	P	**P**	**04 31 48.5**	**-1.2**
WHTX	**Lake Whitney,**	**68.39**	**65**	IAMs_20	IAMs_20	05 02 41.4	
	comp=Z,2µm,20.0s						
JCT	**Junction City**	**68.40**	**67**	IAMs_20	IAMs_20	05 02 37.8	
	comp=Z,2µm,19.0s						
EKA	**Eskdalemuir Ar**	**68.40**	**352**	P	**P**	**04 31 49.4**	**+0.1**
	comp=Z,18nm,0.7s,baz=17,slow=5.6,SNR=60						
	comp=Z,18nm,0.7s						
ESK	**Eskdalemuir**	**68.42**	**352**	P	**P**	**04 31 49.3**	**-0.1**
ESK				IAmb	IAmb	04 31 51.6	
	comp=Z,33nm,0.9s						
ESK	**Eskdalemuir**	**68.42**	**352**	P	**P**	**04 31 49.3**	**-0.1**
ESK				pmax	pmax		
	comp=Z,33nm,0.9s						
MMNY	**Mt. Morris Dam**	**68.43**	**44**	IAMs_20	IAMs_20	05 06 16.4	
	comp=Z,2µm,19.0s						
WVNY	**West Valley, N**	**68.43**	**45**	IAMs_20	IAMs_20	05 02 58.4	
	comp=Z,2µm,20.0s						
J57A	**Williamstown**	**68.59**	**43**	IAmb	IAmb	04 31 50.8	
	comp=Z,23nm,1.1s						
J57A				IAMs_20	IAMs_20	05 03 49.6	
	comp=Z,2µm,20.0s						
PVMO	**Portageville**	**68.60**	**56**	IAMs_20	IAMs_20	05 02 23.4	
	comp=Z,2µm,19.0s						
Z38A	**Mt. Pleasant**	**68.61**	**62**	IAMs_20	IAMs_20	05 02 15.1	
	comp=Z,1µm,20.0s						
WCI	**Wyandotte Cave**	**68.66**	**53**	P	**P**	**04 31 50.1**	**-1.1**
WCI				IAmb	IAmb	04 31 52.1	
	comp=Z,30nm,0.8s						
WCI	**Wyandotte Cave**	**68.66**	**53**	P	**P**	**04 31 50.1**	**-1.1**
WCI				pmax	pmax		
	comp=Z,31nm,0.9s						
WCI				MLR	MLR		
	comp=Z,3µm,20.0s						
X40A	**Basin Creek Fa**	**68.67**	**60**	IAmb	IAmb	04 31 52.2	
	comp=Z,34nm,1.0s						
X40A				IAMs_20	IAMs_20	05 00 53.6	
	comp=Z,1µm,20.0s						
UALR	**University of**	**68.68**	**59**	IAMs_20	IAMs_20	05 06 58.7	
	comp=Z,1µm,18.0s						
BATG	**Bathurst New B**	**68.68**	**34**	IAmb	IAmb	04 31 52.5	
	comp=Z,31nm,1.2s						
HICK	**Hickman**	**68.71**	**56**	IAMs_20	IAMs_20	05 02 37.5	
	comp=Z,2µm,19.0s						
PEBM	**Pemiscott Bayo**	**68.77**	**57**	IAMs_20	IAMs_20	05 06 50.9	
	comp=Z,1µm,19.0s						
KVAR	**Kislovodsk Arr**	**68.79**	**319**	LR	LR	05 03 39.9	
	comp=Z,2µm,19.1s,baz=268,slow=37						
KIV	**Kislovodsk**	**68.79**	**319**	P	**P**	**04 31 51.6**	**-0.4**
KIV				IAmb	IAmb	04 32 37.6	
	comp=Z,26nm,0.9s						
KIV	**Kislovodsk**	**68.79**	**319**	P	**P**	**04 31 51.4**	**-0.6**
KIV	**Kislovodsk**	**68.79**	**319**	*e*P	**P**	**04 31 53.2**	**+1.2**
KIV				*e*S	**S**	**04 40 57.6**	**+3.2**
KIV				pmax	pmax		
	comp=Z,15nm,1.1s						
KIV				MLR	MLR		
	comp=Z,784nm,17.0s						
KIV	**Kislovodsk**	**68.79**	**319**	*i* P	**P**	**04 31 53.0**	**+1.0**
	SNR=5.2						
GNAR	**Gosnell**	**68.81**	**57**	IAMs_20	IAMs_20	05 02 18.2	
	comp=Z,1µm,21.0s						
HBAR	**Harrisburg**	**68.85**	**58**	IAMs_20	IAMs_20	05 02 00.1	
	comp=Z,1µm,21.0s						
N53A	**Lisbon**	**68.87**	**48**	IAmb	IAmb	04 31 53.2	
	comp=Z,33nm,1.0s						
KBZ	**Khabaz**	**68.91**	**318**	P	**P**	**04 31 53.0**	**+0.4**
	comp=Z,18nm,0.9s,baz=44,slow=2.4,SNR=28						
KBZ				LR	LR	05 05 40.1	
	comp=Z,2µm,20.3s,baz=36,slow=39						
	comp=Z,18nm,0.9s						
KBZ	**Khabaz**	**68.91**	**318**	P	**P**	**04 31 53.0**	**+0.4**
LABN	**Labinsk**	**68.91**	**320**	*e*P	**P**	**04 31 50.1**	**-2.5**
LABN				*e*S	**S**	**04 40 54.7**	**-0.9**
LABN				pmax	pmax		
	comp=Z,19nm,0.5s						
LABN				MLR	MLR		
	comp=Z,2µm,16.0s						
LABN				MLR	MLR		
	comp=N,4µm,15.0s						
LABN				MLR	MLR		
	comp=E,957nm,10.0s						
IDGL	**Inch Island, C**	**68.93**	**355**	P	**P**	**04 31 53.6**	**+1.1**
LNXT	**Lenox**	**68.95**	**56**	IAMs_20	IAMs_20	05 03 18.8	
	comp=Z,2µm,20.0s						
AKT	**Akhty**	**68.95**	**314**	*e*P	**P**	**04 31 54.0**	**+0.9**
AKT				*e*		04 32 17.8	
AKT				*e*		04 34 25.4	
AKT				*e*S	**S**	**04 40 59.1**	**+2.7**
AKT				pmax	pmax		
	comp=Z,48nm,0.9s						
AKT				MLR	MLR		
	comp=Z,2µm,14.0s						
GORT1	**Trebel**	**68.96**	**343**	*e*P	**P**	**04 31 53.9**	**+1.1**
	comp=Z,70nm,1.5s,baz=15,slow=6.1						
GORT1				*e*pP	**pwP**	**04 32 04.8**	**+2.2**
K57A	**Scipio Center**	**68.97**	**44**	IAmb	IAmb	04 31 53.1	
	comp=Z,30nm,1.1s						
SHA1	**Shidzhatmaz**	**68.99**	**319**	*i* P	**P**	**04 31 54.0**	**+0.6**
VT1	**Waterbury**	**69.00**	**40**	IAMs_20	IAMs_20	05 04 19.6	
	comp=Z,2µm,20.0s						
G62A	**West of Eustis**	**69.01**	**38**	IAmb	IAmb	04 31 54.7	
	comp=Z,38nm,1.2s						
RUE	**Ruedersdorf**	**69.03**	**341**	*e*P	**P**	**04 31 53.9**	**+0.7**
	comp=Z,22nm,0.8s,baz=15,slow=6.1						
O52A	**Adamsville**	**69.03**	**49**	IAMs_20	IAMs_20	05 03 38.7	
	comp=Z,2µm,18.0s						
L56A	**Greenwood**	**69.07**	**45**	IAMs_20	IAMs_20	05 03 28.4	
	comp=Z,2µm,18.0s						
J59A	**Piesco**	**69.10**	**42**	IAMs_20	IAMs_20	05 05 27.2	
	comp=Z,1µm,19.0s						
R49A	**Shelbyville**	**69.11**	**52**	IAmb	IAmb	04 31 55.1	
	comp=Z,42nm,1.2s						
RAGD	**RAYAGADA**	**69.13**	**274**	*e*P	**P**	**04 31 54.9**	**+0.6**
HALT	**Halls**	**69.17**	**56**	IAMs_20	IAMs_20	05 03 23.7	
	comp=Z,2µm,20.0s						
O53A	**New Philadelph**	**69.18**	**48**	IAmb	IAmb	04 31 55.0	
	comp=Z,41nm,1.1s						
O53A				IAMs_20	IAMs_20	05 03 55.5	
	comp=Z,2µm,20.0s						
WLAR	**White Oak Lake**	**69.18**	**61**	IAMs_20	IAMs_20	05 04 33.2	
	comp=Z,1µm,18.0s						
F64A	**Sherman**	**69.19**	**36**	IAmb	IAmb	04 31 55.2	
	comp=Z,29nm,1.0s						
F64A				IAMs_20	IAMs_20	05 05 09.3	
	comp=Z,2µm,19.0s						
BHPL	**Bhopal**	**69.28**	**281**	*e*P	**P**	**04 31 55.5**	**+0.3**
435B	**Jarrell**	**69.30**	**66**	IAmb	IAmb	04 31 57.5	
	comp=Z,37nm,1.0s						
Q51A	**Peebles**	**69.30**	**50**	IAmb	IAmb	04 31 56.0	
	comp=Z,44nm,1.4s						
P52A	**Corning**	**69.31**	**49**	IAmb	IAmb	04 31 55.5	
	comp=Z,31nm,0.8s						
T47A	**Sharon Grove**	**69.32**	**54**	IAmb	IAmb	04 31 56.7	
	comp=Z,42nm,1.0s						
H62A	**Milan**	**69.36**	**39**	P	**P**	**04 31 54.4**	**-1.0**
H62A				IAmb	IAmb	04 31 56.7	
	comp=Z,32nm,0.9s						
LBNH	**Lisbon**	**69.38**	**40**	P	**P**	**04 31 54.4**	**-1.2**
LBNH				IAmb	IAmb	04 31 56.9	
	comp=Z,34nm,1.1s						
LBNH				IAMs_20	IAMs_20	05 06 26.3	
	comp=Z,2µm,19.0s						
LBNH	**Lisbon**	**69.38**	**40**	P	**P**	**04 31 54.4**	**-1.2**
LBNH				pmax	pmax		
	comp=Z,34nm,1.1s						
LBNH				MLR	MLR		
	comp=Z,2µm,19.0s						
PKME	**Peaks-Kenny Pk**	**69.40**	**37**	P	**P**	**04 31 55.2**	**-0.4**
PKME				IAmb	IAmb	04 31 56.9	
	comp=Z,24nm,1.1s						
ACCN	**Adirondack Com**	**69.48**	**41**	IAMs_20	IAMs_20	05 05 40.2	
	comp=Z,1µm,20.0s						
R50A	**Paris**	**69.49**	**51**	IAmb	IAmb	04 31 57.4	
	comp=Z,28nm,1.0s						
R50A				IAMs_20	IAMs_20	05 04 57.8	
	comp=Z,2µm,18.0s						
RETH	**Rethem/Aller,**	**69.52**	**344**	*e*P	**P**	**04 31 57.0**	**+0.8**
	comp=Z,34nm,1.3s,baz=15,slow=6.1						
MET	**Memphis--Engin**	**69.54**	**57**	IAMs_20	IAMs_20	05 02 30.5	
	comp=Z,1µm,20.0s						
FLTG	**Flechtingen**	**69.61**	**343**	*e*P	**P**	**04 31 57.0**	**+0.2**
	comp=Z,17nm,1.1s,baz=15,slow=6.1						
NRDL	**Niedersach Rie**	**69.64**	**343**	*e*P	**P**	**04 31 57.6**	**+0.7**
	comp=Z,9.8nm,0.9s,baz=15,slow=6.1						
NRDL				*e*pP	**pwP**	**04 32 08.8**	**+2.0**
CCAR	**Cane Creek**	**69.65**	**59**	IAMs_20	IAMs_20	05 05 24.4	
	comp=Z,1µm,18.0s						
Z41A	**Richland Creek**	**69.68**	**61**	IAmb	IAmb	04 31 58.3	
	comp=Z,32nm,0.9s						
Z41A				IAMs_20	IAMs_20	05 04 56.4	
	comp=Z,2µm,18.0s						
WVT	**Waverly**	**69.69**	**55**	P	**P**	**04 31 56.9**	**-0.7**
WVT	**Waverly**	**69.69**	**55**	IAMs_20	IAMs_20	05 01 27.4	
	comp=Z,2µm,22.0s						
WVT	**Waverly**	**69.69**	**55**	P	**P**	**04 31 56.9**	**-0.7**
WVT				pmax	pmax		
	comp=Z,49nm,1.0s						
SORM	**Soroca**	**69.74**	**330**	⇑P	**P**	**04 31 57.4**	**-0.3**
SORM	**Soroca**	**69.74**	**330**	P	**P**	**04 31 57.3**	**-0.3**
P53A	**Whipple**	**69.75**	**49**	IAmb	IAmb	04 31 58.6	
	comp=Z,44nm,1.2s						
Q52A	**Bidwell**	**69.81**	**50**	IAmb	IAmb	04 31 58.9	
	comp=Z,47nm,1.2s						
KWP	**Kalwaria Pacla**	**69.83**	**334**	*e*P	**P**	**04 31 59.7**	**+1.4**
KWP				*e*L	L	05 03 37.7	
	comp=Z,3µm,22.0s						
ASSE	**Asse, Remlinge**	**69.90**	**343**	*e*P	**P**	**04 31 59.3**	**+0.8**
	comp=Z,21nm,1.1s,baz=15,slow=6.1						
ASSE				*e*pP	**pwP**	**04 32 10.4**	**+2.0**
I62A	**Tamworth**	**69.90**	**39**	IAMs_20	IAMs_20	05 04 52.3	
	comp=Z,2µm,19.0s						
ILTH	**Belurgan, Co L**	**69.91**	**354**	P	**P**	**04 32 00.2**	**+1.6**
M57A	**Sunshine Farm,**	**69.92**	**45**	IAmb	IAmb	04 31 59.4	
	comp=Z,43nm,0.9s						
M57A				IAMs_20	IAMs_20	05 04 03.8	
	comp=Z,2µm,20.0s						
ANN	**Anapa**	**69.92**	**323**	*e*P	**P**	**04 31 55.6**	**-3.2**
ANN				*e*		04 34 31.0	
ANN				*e*S	**S**	**04 41 05.5**	**-1.9**
ANN				*e*SS	**SS**	**04 45 32.0**	**-3.4**
ANN				pmax	pmax		
	comp=Z,33nm,0.8s						
ANN				MLR	MLR		
	comp=Z,2µm,15.0s						
ANN				MLR	MLR		
	comp=E,2µm,16.0s						
ANN				MLR	MLR		
	comp=N,3µm,16.0s						
OJC	**Ojcow**	**69.96**	**337**	*e*P	**P**	**04 32 00.0**	**+1.0**
OJC				*e*S	**S**	**04 41 10.4**	**+2.6**
NATX	**Nacogdoches**	**69.98**	**63**	IAMs_20	IAMs_20	05 04 39.4	
	comp=Z,2µm,20.0s						
L59A	**Walton**	**70.00**	**43**	IAmb	IAmb	04 31 59.8	
	comp=Z,34nm,1.0s						
L59A				IAMs_20	IAMs_20	05 04 42.8	
	comp=Z,2µm,18.0s						
I63A	**Otisfield**	**70.02**	**39**	IAmb	IAmb	04 32 01.1	
	comp=Z,34nm,1.1s						
G65A	**Princeton**	**70.03**	**36**	IAmb	IAmb	04 32 01.9	
	comp=Z,65nm,1.4s						
TRY	**Troy**	**70.05**	**42**	IAMs_20	IAMs_20	05 03 18.2	
	comp=Z,1µm,20.0s						
NGP	**Nagpur**	**70.06**	**278**	*e*P	**P**	**04 32 00.5**	**+0.4**
KSP	**Ksiaz**	**70.11**	**339**	*e*P	**P**	**04 32 00.8**	**+0.9**
KSP				*e*L	L	05 04 06.8	
	comp=Z,3µm,21.0s						
IBBN	**Ibbenburen**	**70.18**	**345**	*e*P	**P**	**04 32 01.1**	**+0.8**
	comp=Z,34nm,0.9s,baz=15,slow=6.1						
IBBN				*e*pP	**pwP**	**04 32 12.2**	**+2.0**
SOC	**Sochi**	**70.19**	**320**	*e*P	**P**	**04 31 58.7**	**-1.8**
SOC				*e*		04 34 45.6	
SOC				*e*S	**S**	**04 41 11.5**	**+0.8**
SOC				*e*SSS	SSS	04 48 52.4	
SOC				MLR	MLR		
	comp=Z,2µm,19.0s						
SSPA	**Standing Stone**	**70.21**	**46**	P	**P**	**04 32 00.1**	**-0.7**
SSPA				IAmb	IAmb	04 32 01.3	
	comp=Z,31nm,1.1s						
SSPA	**Standing Stone**	**70.21**	**46**	IAMs_20	IAMs_20	05 07 50.7	
	comp=Z,2µm,20.0s						
CLZ	**Clausthal**	**70.23**	**343**	*e*P	**P**	**04 32 01.7**	**+1.0**
	comp=Z,38nm,1.2s,baz=15,slow=6.1						
CLZ				*e*pP	**pwP**	**04 32 12.5**	**+1.9**
MCWV	**Mont Chateau**	**70.24**	**48**	IAmb	IAmb	04 32 02.0	
	comp=Z,27nm,0.9s						
OXF	**Oxford**	**70.29**	**57**	IAMs_20	IAMs_20	05 02 53.2	
	comp=Z,2µm,20.0s						
CLL	**Collm**	**70.29**	**341**	IAmb	IAmb	04 32 03.0	
	comp=Z,41nm,1.3s						
CLL				IAMs_20	IAMs_20	05 07 37.6	
	comp=Z,1µm,19.0s						
CLL	**Collm**	**70.29**	**341**	*i* P	**P**	**04 32 01.5**	**+0.5**
CLL				*e*S	**S**	**04 41 13.0**	**+1.4**
CLL				pmax	pmax		
	comp=Z,50nm,1.4s						
CLL	**Collm**	**70.29**	**341**	*e*P	**P**	**04 32 01.3**	**+0.3**
	comp=Z,43nm,1.3s,baz=15,slow=6.1						
CLL				*e*pP	**pwP**	**04 32 12.4**	**+1.5**
CLL	**Collm**	**70.29**	**341**	*i* P	**P**	**04 32 01.5**	**+0.5**
	comp=Z,50nm,1.4s						
CLL				*e*PPP	PPP	04 36 24.0	
CLL				*e*S	**S**	**04 41 13.0**	**+1.4**
CLL				*e*PPS	PPS	04 41 49.0	
CLL				*e*SS	**SS**	**04 45 48.0**	**+7.2**
CLL				*e*SSS	SSS	04 49 06.0	
CLL				*e*SSSS		04 50 24.0	
CLL				AMS	AMS	05 10 00.0	
T50A	**Nancy**	**70.31**	**53**	IAmb	IAmb	04 32 02.5	
	comp=Z,30nm,1.1s						
U49A	**Red Boiling Sp**	**70.31**	**54**	IAmb	IAmb	04 32 02.6	
	comp=Z,30nm,1.2s						
833A	**Chaparral WMA,**	**70.34**	**68**	IAmb	IAmb	04 32 04.4	
	comp=Z,42nm,1.1s						
GGN	**Saint George**	**70.34**	**36**	IAmb	IAmb	04 32 02.5	
	comp=Z,45nm,1.1s						
GGN				IAMs_20	IAMs_20	05 06 26.8	
	comp=Z,2µm,19.0s						
S51A	**Beattyville**	**70.34**	**51**	IAMs_20	IAMs_20	05 05 26.5	
	comp=Z,1µm,18.0s						
STHS	**Stebnicka Huta**	**70.38**	**335**	*e*P	**P**	**04 32 03.0**	**+1.4**
STHS				pmax	pmax		
	comp=Z,20nm,0.9s						
STHS	**Stebnicka Huta**	**70.38**	**335**	*e*P	**P**	**04 32 03.0**	**+1.4**
OSTC	**Ostas**	**70.40**	**339**	AMS	AMS	05 03 50.0	
	comp=Z,3µm,19.4s						
CHVC	**Chvalec**	**70.40**	**339**	AMS	AMS	05 03 50.0	
	comp=Z,2µm,18.8s						
Q54A	**Coxs Mills**	**70.40**	**49**	IAmb	IAmb	04 32 02.9	
	comp=Z,36nm,1.2s						
CLTN	**Cedars of Leba**	**70.41**	**54**	IAMs_20	IAMs_20	05 04 53.3	
	comp=Z,1µm,19.0s						
V48A	**Smith Brothers**	**70.48**	**55**	IAmb	IAmb	04 32 03.7	
	comp=Z,33nm,0.9s						
V48A				IAMs_20	IAMs_20	05 02 04.1	
	comp=Z,2µm,21.0s						
UPC	**Upice**	**70.48**	**339**	AMS	AMS	05 03 50.0	
	comp=Z,3µm,19.8s						
N58A	**Sunbury**	**70.50**	**45**	IAmb	IAmb	04 32 02.8	
	comp=Z,27nm,0.9s						
EMMW	**East Machias**	**70.51**	**36**	IAMs_20	IAMs_20	05 07 17.1	
	comp=Z,2µm,19.0s						
PLAL	**Pickwick Lake**	**70.52**	**56**	IAMs_20	IAMs_20	05 04 15.5	
	comp=Z,2µm,19.0s						

BRG	**Berggiesshubel**	**70.53**	**341**	*e*P	**P**	**04 32 03.0**	**+0.4**
	comp=Z,24nm,1.3s,baz=15,slow=6.1						
BRG				*e*pP	**pwP**	**04 32 13.9**	**+1.5**
BRG	**Berggiesshubel**	**70.53**	**341**	*e*P	**P**	**04 32 03.8**	**+1.2**
BRG				Amp		04 32 05.5	
	comp=Z,24nm,1.3s						
BRG	**Berggiesshubel**	**70.53**	**341**	S	**S**	**04 41 17.0**	**+2.5**
BRG	**Berggiesshubel**	**70.53**	**341**	SS	SS	04 45 47.0	+2.4
DPC	**Dobruska-Polom**	**70.57**	**339**	*e*P	**P**	**04 32 03.9**	**+1.1**
DPC				*e*x	x	04 32 10.9	
DPC				AMS	AMS	05 04 00.0	
	comp=Z,3µm,20.9s						
DPC	**Dobruska-Polom**	**70.57**	**339**	*e*P	**P**	**04 32 03.9**	**+1.1**
DPC				*e*		04 32 10.9	
DPC				MLR	MLR		
	comp=Z,3µm,20.9s						
GTTG	**Gottingen**	**70.58**	**343**	*e*P	**P**	**04 32 03.5**	**+0.7**
	comp=Z,27nm,1.4s,baz=15,slow=6.1						
KOLS	**Kolonicke sedl**	**70.59**	**334**	*e*P	**P**	**04 32 04.8**	**+1.9**
KOLS				pmax	pmax		
	comp=Z,15nm,0.7s						
KOLS	**Kolonicke sedl**	**70.59**	**334**	*e*P	**P**	**04 32 04.8**	**+1.9**
NIE	**Niedzica**	**70.60**	**336**	*e*P	**P**	**04 32 04.4**	**+1.4**
NEUB	**Neuenburg**	**70.60**	**342**	*e*P	**P**	**04 32 03.4**	**+0.5**
	comp=Z,15nm,0.9s,baz=15,slow=6.1						
K62A	**Royalston**	**70.63**	**41**	IAMs_20	IAMs_20	05 05 14.6	
	comp=Z,2µm,19.0s						
KIS	**Kishinev**	**70.65**	**329**	*e*P	**P**	**04 32 01.0**	**-2.3**
KIS				*e*L	L	04 56 33.0	
KIS				LQM		05 02 03.0	
	comp=Z,1µm,16.5s						
KIS				LRM	MLR	05 07 16.0	
	comp=Z,700nm,16.0s						
KIS	**Kishinev**	**70.65**	**329**	*e*P	**P**	**04 32 01.0**	**-2.3**
KIS				*e*		04 41 16.0	
KIS				MLR	MLR		
	comp=Z,700nm,16.0s						
L61B	**Northampton**	**70.66**	**41**	IAMs_20	IAMs_20	05 08 02.2	
	comp=Z,2µm,18.0s						
STEB	**Steborice**	**70.67**	**338**	*e*P	**P**	**04 32 04.7**	**+1.3**
IGLA	**Glengowla, Co**	**70.67**	**356**	P	**P**	**04 32 04.4**	**+1.2**
OKC	**Ostrava-Krasne**	**70.68**	**337**	AMS	AMS	05 07 50.0	
	comp=Z,2µm,14.4s						
DSB	**Dublin**	**70.69**	**354**	IAmb	IAmb	04 32 05.7	
	comp=Z,29nm,0.8s						
DSB	**Dublin**	**70.69**	**354**	P	**P**	**04 32 04.9**	**+1.5**
MILM	**Milestii Mici**	**70.72**	**329**	*e*P	**P**	**04 32 01.0**	**-2.7**
MILM				*i* S	**S**	**04 41 10.0**	**-6.7**
MILM				*e*L	L	04 54 11.0	
MILM				LQM		05 01 58.0	
	comp=Z,3µm,18.5s						
MILM				LRM	MLR	05 07 10.0	
	comp=Z,2µm,16.0s						
MILM	**Milestii Mici**	**70.72**	**329**	*e*P	**P**	**04 32 01.0**	**-2.7**
MILM				*i* S	**S**	**04 41 10.0**	**-6.7**
MILM				MLR	MLR		
	comp=Z,2µm,16.0s						
735A	**Kenedy**	**70.73**	**67**	IAMs_20	IAMs_20	05 02 26.6	
	comp=Z,2µm,20.0s						
KRLC	**Kraliky**	**70.74**	**338**	*e*P	**P**	**04 32 04.9**	**+1.0**
KRLC				*e*x	x	04 32 11.5	
KRLC				AMS	AMS	05 08 20.0	
	comp=Z,2µm,13.2s						
KRLC	**Kraliky**	**70.74**	**338**	*e*P	**P**	**04 32 04.9**	**+1.0**
KRLC				*e*		04 32 11.5	
KRLC				MLR	MLR		
	comp=Z,2µm,13.2s						
PVCC	**Panska Ves**	**70.75**	**340**	AMS	AMS	05 10 10.0	
	comp=Z,2µm,14.6s						
Y45A	**Yeager Farm, C**	**70.75**	**58**	IAMs_20	IAMs_20	05 04 38.6	
	comp=Z,1µm,18.0s						
143A	**Socs Landing,**	**70.81**	**60**	IAMs_20	IAMs_20	05 02 12.3	
	comp=Z,1µm,20.0s						
RICC	**Richard**	**70.82**	**340**	AMS	AMS	05 07 50.0	
	comp=Z,2µm,14.5s						
HKT	**Hockley**	**70.86**	**65**	IAMs_20	IAMs_20	05 05 08.3	
	comp=Z,2µm,19.0s						
MORC	**Moravsky Berou**	**70.86**	**338**	IAmb	IAmb	04 32 07.5	
	comp=Z,26nm,1.0s						
MORC				IAMs_20	IAMs_20	05 05 18.9	
	comp=Z,1µm,20.0s						
MORC	**Moravsky Berou**	**70.86**	**338**	*e*P	**P**	**04 32 05.3**	**+0.7**
MORC				*e*S	**S**	**04 41 20.3**	**+1.8**
MORC	**Moravsky Berou**	**70.86**	**338**	⇑P	**P**	**04 32 05.5**	**+0.8**
MORC	**Moravsky Berou**	**70.86**	**338**	P	**P**	**04 32 05.4**	**+0.8**
SIM	**Simferopol'**	**70.89**	**325**	*e*P	**P**	**04 32 05.3**	**+0.5**
SIM				*e*S	**S**	**04 41 10.7**	**-8.0**
SIM				pmax	pmax		
	comp=Z,33nm,1.3s						
KAPI	**Kappang**	**70.99**	**228**	P	**P**	**04 32 05.5**	**-0.2**
KAPI				IAmb	IAmb	04 32 09.0	
	comp=Z,41nm,1.3s						
KAPI	**Kappang**	**70.99**	**228**	P	**P**	**04 32 07.0**	**+1.3**
	comp=Z,3.6nm,0.3s,baz=31,slow=0.3,SNR=4.7						
KAPI				LR	LR	05 04 06.6	
	comp=Z,296nm,20.4s,baz=18,slow=37						
	comp=Z,3.6nm,0.3s						
KAPI	**Kappang**	**70.99**	**228**	P	**P**	**04 32 08.1**	**+2.4**
KAPI	**Kappang**	**70.99**	**228**	P	**P**	**04 32 07.0**	**+1.3**
HRV	**Adam Dziewonsk**	**71.02**	**40**	P	**P**	**04 32 05.1**	**-0.5**
HRV	**Adam Dziewonsk**	**71.02**	**40**	IAMs_20	IAMs_20	05 05 35.7	
	comp=Z,2µm,19.0s						
HRV	**Adam Dziewonsk**	**71.02**	**40**	P	**P**	**04 32 05.1**	**-0.5**
HRV				pmax	pmax		
	comp=Z,22nm,1.1s						
HRV				MLR	MLR		
	comp=Z,2µm,19.0s						
LANS	**Liptovska Anna**	**71.04**	**336**	*e*P	**P**	**04 32 07.6**	**+1.9**
LANS				pmax	pmax		
	comp=Z,25nm,0.9s						
LANS	**Liptovska Anna**	**71.04**	**336**	*e*P	**P**	**04 32 07.6**	**+1.9**
BURAR	**Bucovina Array**	**71.07**	**332**	P	**P**	**04 32 05.8**	**-0.2**
BURAR	**Bucovina Array**	**71.07**	**332**	⇑P	**P**	**04 32 06.2**	**+0.2**
BURAR	**Bucovina Array**	**71.07**	**332**	P	**P**	**04 32 06.1**	**+0.2**
BUG	**Bochum--Univer**	**71.09**	**345**	*e*P	**P**	**04 32 06.3**	**+0.4**
	comp=Z,31nm,1.2s,baz=15,slow=6.1						
KULM	**Kulim**	**71.11**	**250**	IAmb	IAmb	04 32 09.4	
	comp=Z,48nm,1.4s						
KULM				IAMs_20	IAMs_20	05 05 14.7	
	comp=Z,1µm,20.0s						
KASTN	**Kahler Asten**	**71.15**	**344**	*e*P	**P**	**04 32 07.0**	**+0.7**
	comp=Z,32nm,1.4s,baz=15,slow=6.1						
KASTN				*e*pP	**pwP**	**04 32 17.9**	**+1.7**
MOX	**Moxa**	**71.17**	**342**	*e*P	**P**	**04 32 07.1**	**+0.6**
	comp=Z,22nm,1.1s,baz=15,slow=6.1						
MOX				*e*pP	**pwP**	**04 32 17.7**	**+1.4**
MOX				*e*L	L	05 05 44.6	
	comp=Z,2µm,21.0s						
MAUC	**Maruska**	**71.19**	**338**	*e*P	**P**	**04 32 08.7**	**+2.1**
WES	**Weston**	**71.21**	**40**	IAmb	IAmb	04 32 07.8	
	comp=Z,27nm,1.0s						
WES				IAMs_20	IAMs_20	05 05 43.8	
	comp=Z,2µm,20.0s						
PRA	**Prague**	**71.21**	**340**	AMS	AMS	05 10 40.0	
	comp=Z,2µm,13.7s						
LUPA	**Lehigh Univers**	**71.23**	**44**	IAmb	IAmb	04 32 07.3	
	comp=Z,32nm,1.1s						
LUPA				IAMs_20	IAMs_20	05 05 30.7	
	comp=Z,1µm,20.0s						
TANN	**Tannenbergstha**	**71.25**	**341**	*e*P	**P**	**04 32 07.7**	**+0.8**
	comp=Z,30nm,1.4s,baz=15,slow=6.1						
TANN				*e*pP	**pwP**	**04 32 18.4**	**+1.5**
PRU	**Pruhonice**	**71.27**	**340**	AMS	AMS	05 10 40.0	
	comp=Z,2µm,13.5s						
GNI	**Garni**	**71.27**	**315**	P	**P**	**04 32 07.7**	**+0.3**
GNI				IAmb	IAmb	04 32 36.4	
	comp=Z,43nm,0.9s						
GNI	**Garni**	**71.27**	**315**	LR	LR	05 06 21.8	
	comp=Z,4µm,20.9s,baz=35,slow=38						
GNI	**Garni**	**71.27**	**315**	P	**P**	**04 32 08.8**	**+1.5**
GNI	**Garni**	**71.27**	**315**	*i* P	**P**	**04 32 08.0**	**+0.6**
GNI				pmax	pmax		
	comp=Z,65nm,1.5s						
GNI	**Garni**	**71.27**	**315**	P	**P**	**04 32 09.2**	**+1.8**
UBBA	**Unterbreizbach**	**71.28**	**343**	*e*P	**P**	**04 32 07.7**	**+0.8**
	comp=Z,13nm,1.1s,baz=15,slow=6.1						
UBBA				*e*pP	**pwP**	**04 32 18.2**	**+1.4**
TZTN	**Tazewell**	**71.28**	**52**	IAmb	IAmb	04 32 08.6	
	comp=Z,29nm,1.0s						
GOPC	**GO Pecny, Ondr**	**71.29**	**340**	AMS	AMS	05 06 40.0	
	comp=Z,2µm,19.3s						
BCX	**Boston College**	**71.31**	**40**	IAMs_20	IAMs_20	05 05 46.4	
	comp=Z,1µm,18.0s						
SWET	**Sewanee**	**71.32**	**54**	IAmb	IAmb	04 32 08.4	
	comp=Z,41nm,0.9s						
SWET				IAMs_20	IAMs_20	05 02 30.3	
	comp=Z,2µm,22.0s						
MVL	**Millersville**	**71.37**	**45**	IAMs_20	IAMs_20	05 04 58.2	
	comp=Z,2µm,19.0s						
UCCT	**U. Connecticut**	**71.39**	**41**	IAMs_20	IAMs_20	05 06 48.7	
	comp=Z,1µm,20.0s						
X48A	**Hartselle**	**71.44**	**56**	IAmb	IAmb	04 32 09.2	
	comp=Z,40nm,1.1s						
X48A				IAMs_20	IAMs_20	05 04 10.7	
	comp=Z,1µm,20.0s						
PAL	**Palisades**	**71.45**	**43**	IAmb	IAmb	04 32 08.5	
	comp=Z,30nm,0.9s						
PAL				IAMs_20	IAMs_20	05 08 40.2	
	comp=Z,2µm,18.0s						
BRNJ	**Basking Ridge**	**71.47**	**43**	IAMs_20	IAMs_20	05 05 37.0	
	comp=Z,2µm,20.0s						
VRAC	**Vranov**	**71.51**	**338**	LR	LR	05 06 09.8	
	comp=Z,1µm,21.9s,baz=22,slow=38						
VRAC	**Vranov**	**71.51**	**338**	*e*P	**P**	**04 32 09.2**	**+0.7**
VRAC				*e*S	**S**	**04 41 28.2**	**+2.4**
VRAC	**Vranov**	**71.51**	**338**	⇑P	**P**	**04 32 09.4**	**+0.9**
VRAC	**Vranov**	**71.51**	**338**	P	**P**	**04 32 09.4**	**+0.9**
IWEX	**Carrickbyrne,**	**71.59**	**354**	P	**P**	**04 32 10.3**	**+1.5**
W50A	**Signal Mountai**	**71.61**	**54**	IAmb	IAmb	04 32 10.4	
	comp=Z,34nm,1.0s						
CPNY	**Central Park**	**71.61**	**43**	IAmb	IAmb	04 32 09.6	
	comp=Z,25nm,0.9s						
VBMS	**Vicksburg**	**71.64**	**60**	IAMs_20	IAMs_20	05 06 46.1	
	comp=Z,2µm,18.0s						
SDMD	**Soldier’s Deli**	**71.68**	**46**	IAMs_20	IAMs_20	05 04 58.4	
	comp=Z,860nm,19.0s						
N62A	**Caumsett State**	**71.68**	**42**	IAMs_20	IAMs_20	05 05 37.3	
	comp=Z,2µm,20.0s						
TESR	**Tescani**	**71.70**	**331**	⇑P	**P**	**04 32 10.5**	**+0.8**
JAVC	**Velka Javorina**	**71.70**	**337**	*e*P	**P**	**04 32 11.3**	**+1.6**
JAVC				*e*S	**S**	**04 41 31.4**	**+3.1**
WUPA	**West Chester U**	**71.72**	**44**	IAMs_20	IAMs_20	05 05 38.5	
	comp=Z,1µm,20.0s						
MANZ	**Manzenberg**	**71.72**	**341**	*e*P	**P**	**04 32 10.4**	**+0.6**
	comp=Z,4.9nm,1.1s,baz=15,slow=6.1						
MANZ				*e*pP	**pwP**	**04 32 21.0**	**+1.4**
KVTX	**Kingsville**	**71.75**	**68**	IAMs_20	IAMs_20	05 06 14.5	
	comp=Z,2µm,19.0s						
GBN	**Guysborough**	**71.75**	**32**	IAmb	IAmb	04 32 12.3	
	comp=Z,33nm,1.3s						
CPCT	**Cooper Cave**	**71.76**	**53**	IAmb	IAmb	04 32 11.2	
	comp=Z,34nm,1.1s						
L64A	**Middleborough**	**71.77**	**40**	IAmb	IAmb	04 32 11.1	
	comp=Z,35nm,1.1s						
L64A				IAMs_20	IAMs_20	05 06 00.8	
	comp=Z,1µm,19.0s						
KRUC	**Moravsky**	**71.78**	**338**	*e*P	**P**	**04 32 11.0**	**+0.9**
KRUC				*e*S	**S**	**04 41 30.6**	**+1.6**
VYHS	**Vyhne**	**71.80**	**337**	*e*P	**P**	**04 32 11.4**	**+1.2**
VYHS				pmax	pmax		
	comp=Z,17nm,1.0s						
VYHS	**Vyhne**	**71.80**	**337**	*e*P	**P**	**04 32 11.4**	**+1.2**
M63A	**Gales Ferry**	**71.80**	**41**	IAmb	IAmb	04 32 10.8	
	comp=Z,26nm,1.0s						
M63A				IAMs_20	IAMs_20	05 07 01.5	
	comp=Z,1µm,19.0s						
ZVC	**Zvikov**	**71.86**	**340**	*e*P	**P**	**04 32 11.9**	**+1.3**
ZVC				AMS	AMS	05 08 10.0	
	comp=Z,2µm,16.8s						
ROTZ	**Rotzenmuhle**	**71.91**	**341**	*e*P	**P**	**04 32 11.9**	**+1.0**
	comp=Z,7.5nm,1.3s,baz=15,slow=6.1						
ROTZ				*e*pP	**pwP**	**04 32 22.2**	**+1.3**
TKL	**Tuckaleechee C**	**71.92**	**53**	LR	LR	05 04 53.2	
	comp=Z,3µm,20.2s,baz=336,slow=37						
146A	**Union**	**71.99**	**58**	IAMs_20	IAMs_20	05 06 48.5	
	comp=Z,1µm,19.0s						
Z47A	**Carrollton**	**72.00**	**57**	IAMs_20	IAMs_20	05 05 26.5	
	comp=Z,1µm,19.0s						
FPAL	**Fort Paine**	**72.02**	**55**	IAmb	IAmb	04 32 13.0	
	comp=Z,33nm,0.9s						
FPAL				IAMs_20	IAMs_20	05 03 03.1	
	comp=Z,846nm,20.0s						
U54A	**Nelsons Funny**	**72.05**	**51**	IAMs_20	IAMs_20	05 03 42.6	
	comp=Z,2µm,22.0s						
BLA	**Blacksburg**	**72.07**	**49**	IAmb	IAmb	04 32 13.2	
	comp=Z,29nm,1.0s						
BLA				IAMs_20	IAMs_20	05 06 04.1	
	comp=Z,2µm,19.0s						
MEM	**Membach**	**72.08**	**346**	*d*P	**P**	**04 32 12.0**	**+0.1**
	comp=Z,30nm,1.0s						
BTNL	**Ternell**	**72.09**	**346**	*d*P	**P**	**04 32 12.9**	**+0.9**
	comp=Z,23nm,1.0s						
TNS	**Taunus Mts**	**72.10**	**344**	*e*P	**P**	**04 32 12.7**	**+0.6**
	comp=Z,11nm,0.9s,baz=15,slow=6.1						
TNS				*e*pP	**pwP**	**04 32 23.2**	**+1.2**
UCC	**Uccle**	**72.12**	**347**	IAMs_20	IAMs_20	05 09 33.7	
	comp=Z,1µm,19.0s						
UCC	**Uccle**	**72.12**	**347**	*d*P	**P**	**04 32 12.6**	**+0.5**
GRA1	**Grafenberg Arr**	**72.16**	**342**	IAmb	IAmb	04 32 15.2	
	comp=Z,34nm,1.0s						
GRF	**Grafenberg Arr**	**72.16**	**342**	*e*P	**P**	**04 32 13.5**	**+1.1**
	comp=Z,32nm,1.0s,baz=15,slow=6.1						
GRF				*e*pP	**pwP**	**04 32 23.8**	**+1.5**
GRF				*e*L	L	05 05 50.0	
	comp=Z,2µm,20.1s						
GRFO	**Grafenberg**	**72.16**	**342**	P	**P**	**04 32 11.9**	**-0.5**
GRFO				IAmb	IAmb	04 32 15.2	
	comp=Z,32nm,1.0s						
GRFO	**Grafenberg**	**72.16**	**342**	P	**P**	**04 32 11.9**	**-0.5**
GRFO				pmax	pmax		
	comp=Z,32nm,1.0s						
GRFO				MLR	MLR		
	comp=Z,2µm,20.0s						
BSTI	**Sart Tilman**	**72.17**	**346**	*d*P	**P**	**04 32 12.2**	**-0.2**
M65A	**Busby, Falmout**	**72.17**	**40**	IAMs_20	IAMs_20	05 06 12.3	
	comp=Z,1µm,20.0s						
M65A	**Busby, Falmout**	**72.17**	**40**	P	**P**	**04 32 13.3**	**+0.8**
	baz=331						
S57A	**Dark Hollow, R**	**72.22**	**48**	IAmb	IAmb	04 32 14.3	
	comp=Z,36nm,0.9s						
Y49A	**Blount Mountai**	**72.22**	**56**	IAmb	IAmb	04 32 14.0	
	comp=Z,48nm,0.9s						
Y49A				IAMs_20	IAMs_20	05 04 45.4	
	comp=Z,2µm,18.0s						
MODS	**Modra-Piesok**	**72.25**	**338**	*e*P	**P**	**04 32 13.8**	**+0.8**
MODS				pmax	pmax		
	comp=Z,89nm,1.6s						
MODS	**Modra-Piesok**	**72.25**	**338**	*e*P	**P**	**04 32 13.8**	**+0.8**
VRI	**Vrincioaia**	**72.27**	**330**	⇓P	**P**	**04 32 13.1**	**0.0**
VRI	**Vrincioaia**	**72.27**	**330**	P	**P**	**04 32 13.1**	**0.0**
KHC	**Kasperske Hory**	**72.27**	**340**	*e*P	**P**	**04 32 15.4**	**+2.3**
KHC				*e*x	x	04 34 53.0	
KHC				*e*S	**S**	**04 41 34.5**	**-0.2**
KHC				AMS	AMS	05 08 40.0	
	comp=Z,2µm,16.2s						
KHC	**Kasperske Hory**	**72.27**	**340**	*e*P	**P**	**04 32 15.4**	**+2.3**
KHC				*e*		04 34 53.0	
KHC				*e*S	**S**	**04 41 34.5**	**-0.2**
KHC				MLR	MLR		
	comp=Z,2µm,16.2s						
W52A	**Murphy**	**72.32**	**53**	IAmb	IAmb	04 32 14.8	
	comp=Z,30nm,0.9s						
X51A	**Calhoun**	**72.34**	**54**	IAmb	IAmb	04 32 14.9	
	comp=Z,36nm,1.0s						
BCLA	**Clavier**	**72.36**	**346**	*d*P	**P**	**04 32 14.9**	**+1.3**
WET	**Wettzell**	**72.39**	**341**	*e*P	**P**	**04 32 14.9**	**+1.1**
	comp=Z,35nm,1.2s,baz=15,slow=6.1						
WET				*e*pP	**pwP**	**04 32 25.2**	**+1.5**
MYKOM	**Kota Tinggi**	**72.42**	**246**	IAMs_20	IAMs_20	05 07 08.6	
	comp=Z,1µm,18.0s						
CKRC	**Cesky Krumlov**	**72.43**	**340**	*e*P	**P**	**04 32 15.9**	**+1.9**
CKRC				*e*S	**S**	**04 41 34.3**	**-2.2**
CKRC				AMS	AMS	05 08 10.0	
	comp=Z,2µm,16.4s						
CKRC	**Cesky Krumlov**	**72.43**	**340**	*e*P	**P**	**04 32 15.9**	**+1.9**
CKRC				*e*S	**S**	**04 41 34.3**	**-2.2**
CKRC				MLR	MLR		
	comp=Z,2µm,16.4s						
MARR	**Marisel-Cluj**	**72.48**	**333**	⇑P	**P**	**04 32 14.7**	**+0.2**
CFR	**Carcaliu**	**72.50**	**329**	⇓P	**P**	**04 32 15.1**	**+0.7**
CFR	**Carcaliu**	**72.50**	**329**	P	**P**	**04 32 15.1**	**+0.7**
GEC2	**GERESS Array S**	**72.52**	**340**	*e*P	**P**	**04 32 15.4**	**+0.7**
	comp=Z,20nm,1.1s,baz=15,slow=6.1						
GEC2				*e*pP	**pwP**	**04 32 26.1**	**+1.5**
GERES	**GERESS Array B**	**72.52**	**340**	P	**P**	**04 32 13.9**	**-0.8**
GERES	**GERESS Array B**	**72.52**	**340**	P	**P**	**04 32 14.3**	**-0.4**
	comp=Z,8.7nm,1.0s,baz=20,slow=4.3,SNR=31						
GERES				LR	LR	05 08 02.7	
	comp=Z,2µm,18.4s,baz=18,slow=39						
	comp=Z,8.7nm,1.0s						
BMRD	**Maredsous**	**72.55**	**346**	*d*P	**P**	**04 32 14.6**	**-0.1**
	comp=Z,11nm,1.0s						
LRAL	**Lakeview Retre**	**72.64**	**56**	IAMs_20	IAMs_20	05 04 46.2	
	comp=Z,2µm,20.0s						
TPGR	**Topolog**	**72.71**	**329**	⇓P	**P**	**04 32 15.4**	**-0.4**
U56A	**King**	**72.82**	**50**	IAmb	IAmb	04 32 17.8	
	comp=Z,40nm,1.1s						
346A	**Big Creek Wild**	**72.83**	**59**	IAMs_20	IAMs_20	05 09 56.6	
	comp=Z,1µm,18.0s						
MLR	**Muntele Rosu**	**72.83**	**331**	LR	LR	05 07 38.9	
	comp=Z,3µm,20.8s,baz=26,slow=39						
MLR	**Muntele Rosu**	**72.83**	**331**	⇓P	**P**	**04 32 16.9**	**+0.2**
MLR	**Muntele Rosu**	**72.83**	**331**	P	**P**	**04 32 16.8**	**+0.2**
V55A	**Taylorsville**	**72.88**	**51**	IAmb	IAmb	04 32 18.0	
	comp=Z,33nm,1.2s						
CONA	**Conrad Observa**	**72.97**	**338**	*i* pP	**P**	**04 32 19.2**	**+1.8**
	comp=Z,31nm,1.3s,SNR=17						
WLF	**Walferdange**	**72.98**	**345**	*d*P	**P**	**04 32 17.9**	**+0.6**
WLF	**Walferdange**	**72.98**	**345**	*e*P	**P**	**04 32 18.1**	**+0.8**
	comp=Z,20nm,1.1s,baz=15,slow=6.1						
WLF				*e*pP	**pwP**	**04 32 29.4**	**+2.3**
KOPT	**Kop Dagi**	**73.02**	**318**	IAmb	IAmb	04 32 36.9	
	comp=Z,35nm,0.8s						
TIRR	**Tirgusor**	**73.08**	**329**	⇓P	**P**	**04 32 18.9**	**+1.0**
TIRR	**Tirgusor**	**73.08**	**329**	P	**P**	**04 32 18.9**	**+1.0**
RONA	**Rosalia, Austr**	**73.10**	**338**	*e*pP	**P**	**04 32 19.9**	**+1.9**
	comp=Z,24nm,1.6s,SNR=7.7						
VOIR		**73.12**	**331**	⇓P	**P**	**04 32 19.7**	**+1.4**
VOIR		**73.12**	**331**	P	**P**	**04 32 19.7**	**+1.4**
ZAIG	**Zacatecas**	**73.13**	**74**	IAmb	IAmb	04 32 21.6	
	comp=Z,28nm,1.0s						
ZAIG				IAMs_20	IAMs_20	05 07 14.6	
	comp=Z,1µm,20.0s						
SIRR	**Siria**	**73.22**	**334**	⇑P	**P**	**04 32 19.3**	**+0.5**
Y52A	**Lilburn**	**73.29**	**54**	IAmb	IAmb	04 32 20.6	
	comp=Z,44nm,1.1s						
ARR	**Arges**	**73.30**	**332**	⇓P	**P**	**04 32 20.4**	**+1.1**
HYB	**Hyderabad**	**73.34**	**276**	*e*P	**P**	**04 32 20.2**	**+0.4**
HYB				*e*sP	**pP**	**04 32 25.1**	**+0.1**
HYB				*e*S	**SKiKP**	**04 41 50.0**	**+0.3**
MOA	**Molln**	**73.37**	**339**	*i* pP	**P**	**04 32 21.4**	**+1.8**
	comp=Z,19nm,1.6s,SNR=7.7						
STU	**Stuttgart**	**73.39**	**343**	IAMs_20	IAMs_20	05 06 40.5	
	comp=Z,2µm,20.0s						
STU	**Stuttgart**	**73.39**	**343**	*e*P	**P**	**04 32 20.2**	**+0.5**
	comp=Z,41nm,0.8s,baz=15,slow=6.1						
KMSC	**Kings Mountain**	**73.43**	**51**	IAmb	IAmb	04 32 21.1	
	comp=Z,38nm,1.0s						
PAULI	**Pauline**	**73.49**	**52**	IAmb	IAmb	04 32 21.4	
	comp=Z,39nm,1.4s						
KDU	**Kakadu**	**73.53**	**212**	P	**P**	**04 32 21.6**	**+0.8**
	comp=Z,45nm,1.0s						
SURR	**Surduc**	**73.59**	**333**	⇑P	**P**	**04 32 22.1**	**+1.2**
FUR	**Furstenfeldbru**	**73.62**	**342**	*e*P	**P**	**04 32 21.9**	**+0.8**
	comp=Z,20nm,1.0s,baz=15,slow=6.1						
BIOA	**Bad Ischl, Aus**	**73.64**	**340**	*i* pP	**P**	**04 32 23.3**	**+2.1**
	comp=Z,7.5nm,1.1s,SNR=5.4						
ARSA	**Arzberg**	**73.69**	**338**	*i* pP	**P**	**04 32 24.1**	**+2.6**
	comp=Z,20nm,1.2s,SNR=5.5						
GURO	**Guroymak-BITLI**	**73.71**	**316**	IAMs_20	IAMs_20	05 07 07.4	
	comp=Z,2µm,22.0s						
RJOB	**Jochberg**	**73.76**	**340**	*e*P	**P**	**04 32 22.9**	**+1.0**
	comp=Z,17nm,1.0s,baz=15,slow=6.1						
GZR	**Gura Zlata**	**73.76**	**333**	⇑P	**P**	**04 32 22.2**	**+0.2**
GZR	**Gura Zlata**	**73.76**	**333**	P	**P**	**04 32 22.2**	**+0.2**
HODGE	**Hodges**	**73.79**	**52**	IAmb	IAmb	04 32 23.4	
	comp=Z,34nm,0.8s						
V58A	**Windy Hill, Pi**	**73.83**	**49**	IAmb	IAmb	04 32 23.8	
	comp=Z,54nm,1.0s						
V58A				IAMs_20	IAMs_20	05 07 16.5	
	comp=Z,2µm,19.0s						
BZS	**Buzias**	**73.84**	**334**	⇑P	**P**	**04 32 23.5**	**+1.0**
BZS	**Buzias**	**73.84**	**334**	P	**P**	**04 32 23.4**	**+1.0**
250A	**Grady**	**73.85**	**57**	IAmb	IAmb	04 32 23.9	
	comp=Z,41nm,0.9s						
250A				IAMs_20	IAMs_20	05 05 03.6	
	comp=Z,1000nm,20.0s						
BFO	**Black Forest**	**73.96**	**344**	P	**P**	**04 32 22.6**	**-0.5**
BFO				IAMs_20	IAMs_20	05 06 47.5	
	comp=Z,1µm,21.0s						
BFO	**Black Forest**	**73.96**	**344**	P	**P**	**04 32 22.6**	**-0.5**
BFO				pmax	pmax		
	comp=Z,17nm,1.0s						
BFO				MLR	MLR		
	comp=Z,1µm,21.0s						
BFO	**Black Forest**	**73.96**	**344**	*e*P	**P**	**04 32 23.4**	**+0.3**
	comp=Z,15nm,0.9s,baz=15,slow=6.1						
152A	**Waverly Hall**	**73.99**	**55**	IAmb	IAmb	04 32 24.4	
	comp=Z,47nm,1.0s						
W57A	**Gilead**	**74.00**	**50**	IAmb	IAmb	04 32 24.5	
	comp=Z,39nm,1.0s						
LESA	**Schwarzleotal**	**74.08**	**340**	*e*pP	**P**	**04 32 25.3**	**+1.4**
	comp=Z,9.9nm,0.8s,SNR=10						
MTN	**Manton Dam**	**74.09**	**214**	P	**P**	**04 32 24.7**	**+0.7**
MTN				IAmb	IAmb	04 32 27.0	
	comp=Z,32nm,0.8s						
MTN	**Manton Dam**	**74.09**	**214**	P	**P**	**04 32 24.9**	**+0.8**
	comp=Z,49nm,1.1s						
PSI	**Prapat**	**74.12**	**251**	P	**P**	**04 32 24.8**	**+0.2**
	comp=Z,14nm,1.0s,baz=1.7,slow=6.9,SNR=9.5						
	comp=Z,14nm,1.0s						
BRAL	**Brewton**	**74.16**	**58**	IAMs_20	IAMs_20	05 06 56.8	
	comp=Z,1µm,18.0s						
TOKA	**Tokat**	**74.20**	**321**	IAMs_20	IAMs_20	05 09 23.2	
	comp=Z,2µm,22.0s						
BIRD	**Birdtown, Kers**	**74.23**	**51**	IAmb	IAmb	04 32 25.9	
	comp=Z,34nm,1.0s						
ECH	**Echery**	**74.25**	**344**	IAMs_20	IAMs_20	05 10 14.2	
	comp=Z,1µm,18.0s						
SOKA	**Soboth**	**74.33**	**339**	*i* pP	**P**	**04 32 27.3**	**+1.9**
	comp=Z,34nm,1.8s,SNR=13						
PERS	**Pernice**	**74.36**	**338**	*i* P	**P**	**04 32 26.8**	**+1.4**
RETA	**Reutte**	**74.37**	**342**	*i* pP	**P**	**04 32 27.1**	**+1.6**
	comp=Z,6.1nm,0.6s						
WATA	**Walderalm**	**74.37**	**341**	*i* pP	**P**	**04 32 26.7**	**+1.1**
	comp=Z,31nm,1.2s,SNR=7.6						
WTTA	**Wattenberg**	**74.43**	**341**	*i* pP	**P**	**04 32 27.4**	**+1.4**
	comp=Z,41nm,1.4s,SNR=10						
GROS	**Grobnik**	**74.44**	**338**	*e*P	**P**	**04 32 27.1**	**+1.2**
GROS				*e*S	**S**	**04 42 02.6**	**+3.1**
MOTA	**Moosalm**	**74.45**	**341**	*i* pP	**P**	**04 32 27.1**	**+1.0**
	comp=Z,28nm,1.1s,SNR=8.5						
ILGA	**Ilgaz**	**74.50**	**323**	IAMs_20	IAMs_20	05 07 26.9	
	comp=Z,1µm,22.0s						
MSVF	**Nonsavu**	**74.51**	**166**	LR	LR	04 59 55.6	
	comp=Z,809nm,19.8s,baz=7.4,slow=32						
SQTA	**Sankt Quirin**	**74.55**	**341**	*i* pP	**P**	**04 32 28.1**	**+1.5**
	comp=Z,36nm,1.0s,SNR=12						
OBKA	**Obir**	**74.59**	**339**	*i* pP	**P**	**04 32 28.2**	**+1.3**
	comp=Z,50nm,1.5s,SNR=24						
W59A	**Clinton**	**74.65**	**49**	IAMs_20	IAMs_20	05 10 00.2	
	comp=Z,1µm,20.0s						
MYKA	**Terra Mystica**	**74.66**	**339**	*e*pP	**P**	**04 32 28.6**	**+1.4**
	comp=Z,23nm,1.6s,SNR=7.6						
DAVA	**Damuels**	**74.72**	**342**	*i* pP	**P**	**04 32 29.3**	**+1.6**
	comp=Z,16nm,1.2s						
ABTA	**Abfaltersbach**	**74.76**	**340**	*i* pP	**P**	**04 32 29.2**	**+1.4**
	comp=Z,38nm,1.1s,SNR=18						
Y57A	**Sumter**	**74.79**	**51**	IAmb	IAmb	04 32 29.1	
	comp=Z,35nm,1.0s						
FETA	**Feichten**	**74.83**	**342**	*i* pP	**P**	**04 32 29.1**	**+0.8**
	comp=Z,25nm,1.0s,SNR=13						
352A	**Blakely**	**74.89**	**56**	IAmb	IAmb	04 32 30.0	
	comp=Z,44nm,0.8s						
352A				IAMs_20	IAMs_20	05 06 08.4	
	comp=Z,1µm,20.0s						
LEGS	**Legarje**	**74.97**	**338**	*i* P	**P**	**04 32 29.9**	**+0.9**
DAVOX	**Davos/Dischmat**	**75.21**	**342**	LR	LR	05 08 07.8	
	comp=Z,1µm,20.7s,baz=28,slow=38						
451A	**Vernon**	**75.23**	**57**	IAMs_20	IAMs_20	05 06 20.2	
	comp=Z,1µm,22.0s						
SABO	**M.te Sabotino**	**75.29**	**339**	IAMs_20	IAMs_20	05 08 19.6	
	comp=Z,2µm,20.0s						
FUORN	**Ofenpass-Fuorn**	**75.30**	**342**	P	**P**	**04 32 30.8**	**-0.4**
FUORN				IAMs_20	IAMs_20	05 08 22.9	
	comp=Z,1µm,20.0s						
GBRS	**Gornja Briga**	**75.47**	**338**	*e*S	**S**	**04 42 12.2**	**+1.3**
TIGA	**Tifton**	**75.54**	**55**	P	**P**	**04 32 32.1**	**-0.3**
TUE	**Stuetta**	**75.60**	**342**	IAMs_20	IAMs_20	05 08 08.9	
	comp=Z,2µm,21.0s						
BOVS	**Bovan**	**75.68**	**333**	⇓P	**P**	**04 32 33.4**	**+0.4**
BR131	**Keskin Array S**	**75.72**	**323**	P	**P**	**04 32 32.2**	**-1.3**
BR131	**Keskin Array S**	**75.72**	**323**	P	**P**	**04 32 33.6**	**+0.1**
	SNR=6.6						
BR131	**Keskin Array S**	**75.72**	**323**	P	**P**	**04 32 32.2**	**-1.3**
BR131				pmax	pmax		
	comp=Z,18nm,1.1s						
BRTR	**Keskin Array B**	**75.72**	**323**	P	**P**	**04 32 33.3**	**-0.2**

BRTR	Keskin Array B	75.72	323	P	P	04 32 33.6	+0.1
	comp=Z,5.7nm,0.8s,baz=48,slow=3.9,SNR=24						
BRTR				LR	LR	05 09 17.6	
	comp=Z,1µm,21.2s,baz=28,slow=38						
	comp=Z,5.7nm,0.8s						
BNN	Bunyan	75.73	321	IAmb	IAmb	04 32 36.1	
	comp=Z,54nm,1.0s						
KAD	Karad	75.84	280	*e*P	P	04 32 34.8	+0.3
ANTO	Ankara	75.87	323	P	P	04 32 33.9	-0.4
ANTO				IAmb	IAmb	04 32 37.1	
	comp=Z,38nm,1.3s						
ANTO	Ankara	75.87	323	P	P	04 32 35.1	+0.8
ANTO	Ankara	75.87	323	P	P	04 32 33.9	-0.4
ANTO				pmax	pmax		
	comp=Z,38nm,1.3s						
SENIN	Lac Senin/Sane	76.03	344	IAMs_20	IAMs_20	05 08 13.5	
	comp=Z,2µm,22.0s						
KIRS	Kirsehir-Merke	76.15	322	⇑P	P	04 32 37.1	+1.2
553A	Crawfordville	76.21	56	IAMs_20	IAMs_20	05 07 10.9	
	comp=Z,887nm,20.0s						
MOIG	Morelia	76.39	75	IAMs_20	IAMs_20	05 07 35.0	
	comp=Z,1µm,20.0s						
BORA	Eskisehir	76.62	325	IAMs_20	IAMs_20	05 12 36.0	
	comp=Z,1µm,20.0s						
GAZ	Gaziantep	76.74	319	IAmb	IAmb	04 32 53.6	
	comp=Z,27nm,0.8s						
RDO	Rodhopi	76.95	329	IAmb	IAmb	04 32 42.9	
	comp=Z,35nm,1.2s						
RDO				IAMs_20	IAMs_20	05 09 25.5	
	comp=Z,1µm,21.0s						
ZCCA	Zocca	77.36	341	IAmb	IAmb	04 32 46.9	
	comp=Z,47nm,0.9s						
PDG	Podgorica	77.42	334	IAMs_20	IAMs_20	05 09 36.5	
	comp=Z,1µm,19.0s						
JASK	Jask - Hormozg	77.44	298	P	P	04 32 43.8	+0.5
KNRA	Kununurra	77.50	215	P	P	04 32 43.6	+0.1
KNRA	Kununurra	77.50	215	P	P	04 32 44.8	+1.3
	comp=Z,28nm,1.9s						
SSB	Saint Sauveur	77.50	345	IAMs_20	IAMs_20	05 12 06.3	
	comp=Z,882nm,21.0s						
MSSA	Maissana	77.66	342	P	P	04 32 43.8	-0.6
UNM	Universidad Na	77.75	74	IAMs_20	IAMs_20	05 09 34.0	
	comp=Z,1µm,20.0s						
656A	Willston	77.78	55	P	P	04 32 44.4	-0.7
DZM	Mont Dzumac	77.93	178	*e*S	S	04 42 33.2	-4.8
	comp=Z,308nm,26.4s						
DZM				*e*SS	SS	04 47 42.3	+2.5
	comp=Z,246nm,24.3s						
DZM				*e*LQ	LQ	04 53 26.2	
	comp=Z,2µm,28.0s						
DZM				*e*LR	LR	04 56 59.2	
	comp=Z,1µm,23.1s						
LEM	Lembang	78.00	238	LR	LR	05 09 44.1	
	comp=Z,676nm,18.9s,baz=338,slow=38						
MURB	Monte Urbino	78.11	339	P	P	04 32 47.0	+0.1
SHME	Shamm	78.13	299	P	P	04 32 47.3	+0.2
SHME	Shamm	78.13	299	P	P	04 32 48.0	+0.9
BANOM	Banah	78.16	299	P	P	04 32 47.4	+0.1
BANOM	Banah	78.16	299	P	P	04 32 47.7	+0.3
FDMO	Fiordimonte	78.22	339	P	P	04 32 48.0	+0.6
FDMO				IAmb	IAmb	04 32 50.6	
	comp=Z,30nm,0.9s						
NRCA	Norcia	78.41	339	P	P	04 32 48.8	+0.3
MANT	Manisa	78.49	326	IAMs_20	IAMs_20	05 11 25.4	
	comp=Z,2µm,20.0s						
CAMP	Campotosto	78.63	338	P	P	04 32 50.3	+0.5
CAMP				IAmb	IAmb	04 32 53.0	
	comp=Z,46nm,1.2s						
MDH	Madha	78.69	299	P	P	04 32 50.4	+0.2
MDH	Madha	78.69	299	P	P	04 32 50.6	+0.4
MASF	Masafi	78.69	299	P	P	04 32 50.4	+0.1
MSFE	Esma-Masafi	78.70	299	P	P	04 32 51.5	+1.1
CESX	Cesi	78.73	339	P	P	04 32 50.5	+0.3
UMQ	Umm Al-Quwin	78.81	299	P	P	04 32 48.1	-2.8
UOSS	Minazif	79.03	298	P	P	04 32 51.6	-0.5
UOSS	Minazif	79.03	298	P	P	04 32 52.0	-0.1
UOSS	Minazif	79.03	298	*i* P	P	04 32 52.2	+0.1
	SNR=5.4						
INTR	Introdacqua	79.03	338	P	P	04 32 51.3	-0.7
HATD	Hatta, Dubai	79.16	298	P	P	04 32 52.9	0.0
	SNR=7.6						
HATD	Hatta, Dubai	79.16	298	*i* P	P	04 32 53.4	+0.5
	SNR=7.9						
WSAR	Wadi Sarin	79.24	296	LR	LR	05 11 48.3	
	comp=Z,11nm,19.3s,baz=77,slow=39						
WSAR	Wadi Sarin	79.24	296	P	P	04 32 53.4	+0.1
NAZ	Nazwa, Dubai	79.26	299	P	P	04 32 53.5	+0.1
NAZ	Nazwa, Dubai	79.26	299	P	P	04 32 53.6	+0.3
BIDO	Bidbid	79.26	296	P	P	04 32 54.5	+1.1
TAOE	Nuku Hiva Isla	79.31	124	*e*S	S	04 42 57.0	+3.9
	comp=Z,273nm,28.1s						
TAOE	Nuku Hiva Isla	79.31	124	*e*LR	LR	04 57 23.7	
	comp=Z,3µm,32.7s						
ASHO	Ashiyiah	79.32	298	P	P	04 32 53.8	+0.1
	SNR=6.8						
ASHO	Ashiyiah	79.32	298	*i* P	P	04 32 54.5	+0.7
	SNR=6.9						
KBD	Kabd	79.44	307	P	P	04 32 54.4	+0.1
FAQ	Al Faqa, Dubai	79.50	299	P	P	04 32 54.5	-0.1
TLIG	Tlapa	79.53	74	P	P	04 32 54.4	-0.7
TLIG				IAMs_20	IAMs_20	05 08 36.1	
	comp=Z,925nm,19.0s						
SOHO	SOHO	79.54	298	P	P	04 32 55.1	+0.1
WBK	Wadi Bani Khal	79.59	295	P	P	04 32 56.9	+1.7
HOQ	Hoqain	79.62	297	P	P	04 32 55.5	+0.2
	SNR=6.9						
SMDO	Samad	79.69	296	P	P	04 32 56.5	+0.7
WB0	Warramunga Arr	79.72	208	P	P	04 32 56.1	+0.5
WB0				IAmb	IAmb	04 32 59.2	
	comp=Z,68nm,1.7s						
ASUD	Al Ashush, Dub	79.72	299	P	P	04 32 56.2	+0.4
JLN	Jalan Bani Buh	79.75	294	P	P	04 32 54.3	-1.8
ACER	Acerenza	79.76	336	P	P	04 32 56.0	+0.1
ACER				IAmb	IAmb	04 32 58.7	
	comp=Z,102nm,1.5s						
KOD	Kodaikanal	79.79	273	*e*P	P	04 32 56.6	0.0
PAOL	Paolisi	79.83	337	IAMs_20	IAMs_20	05 11 01.2	
	comp=Z,1µm,21.0s						
WR0	Warramunga Arr	79.86	208	P	P	04 32 57.6	+1.2
WR8	Warramunga Arr	79.87	208	P	P	04 32 57.2	+0.7
WRAB	Tennant Creek	79.89	208	P	P	04 32 57.1	+0.5
WRAB	Tennant Creek	79.89	208	*i* P	P	04 32 57.4	+0.8
WRAB				pmax	pmax		
	comp=Z,25nm,1.2s						
WB2	Warramunga Arr	79.90	208	P	P	04 32 57.3	+0.6
WRA	Warramunga Arr	79.90	208	P	P	04 32 57.8	+1.1
WRA	Warramunga Arr	79.90	208	P	P	04 32 57.6	+0.9
	comp=Z,6.8nm,0.8s,baz=13,slow=5.8,SNR=32						
WRA				LR	LR	05 06 59.0	
	comp=Z,389nm,21.9s,baz=360,slow=35						
	comp=Z,6.8nm,0.8s						
WRA	Warramunga Arr	79.90	208	P	P	04 32 57.8	+1.1
WRA				pmax	pmax		
	comp=Z,4.0nm,1.7s						
ALNE	Al Ain	80.00	298	P	P	04 32 57.7	+0.3
	SNR=8.3						
CSS	Mathiatis	80.11	321	P	P	04 32 57.3	-0.5
CSS				IAMs_20	IAMs_20	05 14 27.5	
	comp=Z,1µm,19.0s						
ARQ	Araqi	80.22	297	P	P	04 32 58.9	+0.3
JMDO	Jabal Madar	80.23	296	P	P	04 32 59.2	+0.5
BSY	Bisya	80.37	296	P	P	04 32 59.8	+0.4
	SNR=6.2						
CEST	Esterri de Car	80.57	347	P	P	04 33 01.5	+1.2
CEST				IAMs_20	IAMs_20	05 14 07.1	
	comp=Z,1µm,20.0s						
JRN	Qarnain Island	80.66	301	P	P	04 33 01.1	+0.2
FITZ	Fitzroy Crossi	80.79	217	P	P	04 33 02.0	+0.6
FITZ	Fitzroy Crossi	80.79	217	P	P	04 33 02.3	+0.9
	comp=Z,16nm,1.0s,baz=32,slow=3.8,SNR=16						
FITZ				LR	LR	05 16 05.9	
	comp=Z,128nm,18.0s,baz=12,slow=41						
	comp=Z,16nm,1.0s						
SAKB	Bahrain	80.88	303	P	P	04 33 00.8	-1.3
TIP	Timpagrande	81.10	335	P	P	04 33 03.9	+0.7
TIP				IAMs_20	IAMs_20	05 12 45.9	
	comp=Z,1µm,20.0s						
TIP	Timpagrande	81.10	335	⇓P	P	04 33 04.7	+1.6
MMAI	Mount Meron Ar	81.11	319	P	P	04 33 03.9	+0.6
	comp=Z,7.2nm,0.8s,baz=50,slow=6.7,SNR=12						
MMAI				LR	LR	05 11 44.3	
	comp=Z,1µm,18.5s,baz=41,slow=38						
	comp=Z,7.2nm,0.8s						
ASF	Jabal al Asfar	81.30	317	LR	LR	05 14 47.7	
	comp=Z,1µm,18.8s,baz=61,slow=40						
UMZA	Um Al Zommool	81.41	298	P	P	04 33 05.2	+0.2
MHTO	MHTO	81.45	295	P	P	04 33 05.7	+0.5
	SNR=8.7						
GHWR	Ruwais	81.47	301	P	P	04 33 05.4	+0.1
061Z	Ochoppi	81.51	56	IAMs_20	IAMs_20	05 10 27.3	
	comp=Z,992nm,19.0s						
TRNA	Turayna	81.61	302	P	P	04 33 06.1	+0.1
ITM	Ithomi	81.66	330	IAMs_20	IAMs_20	05 09 46.9	
	comp=Z,1µm,21.0s						
SMRA	Abu-Samra	81.79	303	P	P	04 33 06.3	-0.7
BALJ	Balqa	81.85	318	P	P	04 33 05.8	-1.3
BALJ				IAmb	IAmb	04 33 10.1	
	comp=Z,42nm,0.9s						
BALJ				IAMs_20	IAMs_20	05 13 38.7	
	comp=Z,1µm,18.0s						
CMIG	Matias Romero	81.89	72	LR	LR	05 11 10.5	
	comp=Z,389nm,18.0s,baz=317,slow=37						
SLWR	Sila	81.95	302	P	P	04 33 07.9	+0.1
MZR	Muzera	82.00	300	P	P	04 33 08.3	+0.3
	SNR=6.0						
MZR	Muzera	82.00	300	*i* P	P	04 33 08.1	+0.1
	SNR=7.4						
PGAV	Gavieira, Arco	82.05	354	*e*P	P	04 33 09.9	+1.7
PGAV				*i* Amb		04 33 23.4	
	comp=Z,22nm,1.6s						
PGAV				*e*S	S	04 43 21.2	-0.2
PGAV				*e*SS	SS	04 48 49.3	+10
PGAV				*e*LQ	LQ	04 55 01.9	
PGAV				*e*LR	LR	05 00 07.2	
PGAV				*i* AMs_20		05 14 24.5	
	comp=Z,639nm,20.0s						
PBRG	Braganca	82.11	353	*e*P	P	04 33 11.2	+2.7
PBRG				*i* Amb		04 33 25.1	
	comp=Z,16nm,1.5s						
PCAB	Cabril	82.29	354	*e*P	P	04 33 11.3	+1.9
PCAB				*i* Amb		04 33 27.6	
	comp=Z,25nm,1.9s						
VSL	Villasalto	82.36	341	P	P	04 33 09.1	-0.6
VSL				IAMs_20	IAMs_20	05 12 13.6	
	comp=Z,917nm,22.0s						
BBSR	BB Station	82.50	40	P	P	04 33 09.8	-0.7
BBSR				IAmb	IAmb	04 33 12.7	
	comp=Z,30nm,0.9s						
BBSR	BB Station	82.50	40	IAMs_20	IAMs_20	05 12 26.3	
	comp=Z,767nm,20.0s						
DQM	DQM	82.56	295	P	P	04 33 11.1	+0.1
POLO	Lamas de Olo	82.61	354	*e*P	P	04 33 13.0	+1.9
POLO				*i* Amb		04 33 29.1	
	comp=Z,10nm,1.4s						
PVRL	Vila Real	82.70	354	*e*P	P	04 33 13.2	+1.6
PVRL				*i* Amb		04 33 29.6	
	comp=Z,23nm,1.2s						
TEIG	Tepich	82.71	65	P	P	04 33 10.6	-1.2
TEIG				IAmb	IAmb	04 33 14.3	
	comp=Z,39nm,1.2s						
TEIG				IAMs_20	IAMs_20	05 13 46.2	
	comp=Z,675nm,20.0s						
MVO	Moncorvo	82.77	353	*e*P	P	04 33 13.8	+1.9
MVO				*i* Amb		04 33 43.2	
	comp=Z,18nm,1.7s						
MVO				*e*S	S	04 43 29.4	+0.7
MVO				*e*SS	SS	04 49 02.7	+13
MVO				*e*LQ	LQ	04 55 55.8	
MVO				*e*LR	LR	05 03 32.2	
MVO				*i* AMs_20		05 14 40.0	
	comp=Z,851nm,18.0s						
MAHO	Mahon	82.82	345	IAMs_20	IAMs_20	05 11 53.7	
	comp=Z,1µm,22.0s						
RAR	Rarotonga	82.86	146	LR	LR	05 02 31.5	
	comp=Z,744nm,21.2s,baz=288,slow=30						
PPT	Papeete	83.05	136	LR	LR	05 02 09.6	
	comp=Z,920nm,21.5s,baz=312,slow=30						
PPT2	Papeete2	83.07	136	*e*S	S	04 43 27.2	-4.8
	comp=Z,314nm,26.0s						
PPT2				*e*SS	SS	04 49 00.5	+3.9
	comp=Z,511nm,26.8s						
PPT2				*e*LQ	LQ	04 55 17.7	
	comp=Z,2µm,27.0s						
PPT2				*e*LR	LR	04 58 52.6	
	comp=Z,3µm,30.2s						
PPT2				*e*LR	LR	04 59 16.6	
	comp=Z,5µm,28.2s						
VAE	Valguarnera	83.27	336	LR	LR	05 15 24.7	
	comp=Z,1µm,18.2s,baz=16,slow=39						
PVIS	Viseu	83.27	354	*e*P	P	04 33 16.5	+2.0
MTE	Manteigas	83.56	354	P	P	04 33 16.4	+0.3
MTE				IAmb	IAmb	04 33 18.7	
	comp=Z,66nm,1.8s						
MTE				IAMs_20	IAMs_20	05 15 50.0	
	comp=Z,941nm,21.0s						
MTE	Manteigas	83.56	354	*e*P	P	04 33 17.7	+1.7
MTE				*i* Amb		04 33 20.6	
	comp=Z,28nm,1.9s						
MTE				*e*S	S	04 43 37.5	+0.7
MTE				*e*SS	SS	04 49 15.8	+14
MTE				*e*LQ	LQ	04 55 29.8	
MTE				*e*LR	LR	05 01 19.1	
MTE				*i* AMs_20		05 16 09.3	
	comp=Z,795nm,20.0s						
MTE	Manteigas	83.56	354	*e*P	P	04 33 16.7	+0.7
ASAR	Alice Springs	83.57	208	P	P	04 33 16.7	+0.7
ASAR	Alice Springs	83.57	208	P	P	04 33 17.6	+1.7
	comp=Z,12nm,1.1s,baz=13,slow=5.0,SNR=26						
	comp=Z,12nm,1.1s						
ASAR	Alice Springs	83.57	208	P	P	04 33 16.7	+0.7
CAMR	Camarioca	83.69	58	P	P	04 33 17.7	+0.9
CAMR				IAmb	IAmb	04 33 19.6	
	comp=Z,162nm,0.9s						
CAMR				IAMs_20	IAMs_20	05 11 33.7	
	comp=Z,2µm,22.0s						
COI	Coimbra	83.81	354	IAMs_20	IAMs_20	05 16 15.4	
	comp=Z,1µm,18.0s						
PCAS	Casmilo, Conde	83.97	354	*e*P	P	04 33 20.1	+2.0
PCAS				*i* Amb		04 33 34.1	
	comp=Z,39nm,1.5s						
CCIG	Comitan	84.01	70	P	P	04 33 19.0	+0.3
ESBB	Sonseca Array	84.02	351	P	P	04 33 18.6	+0.3
ESBB				IAmb	IAmb	04 33 21.1	
	comp=Z,61nm,1.9s						
ESDC	Sonseca Array	84.02	351	P	P	04 33 19.1	+0.7
ESDC				IAmb	IAmb	04 33 21.2	
	comp=Z,52nm,1.9s						
ESDC	Sonseca Array	84.02	351	P	P	04 33 18.7	+0.3
	comp=Z,4.7nm,0.7s,baz=1.2,slow=5.6,SNR=44						
	comp=Z,4.7nm,0.7s						
PCBR	Castelo Branco	84.12	354	*e*P	P	04 33 20.6	+1.8
PCBR				*i* Amb		04 33 31.5	
	comp=Z,31nm,1.6s						
PAB	San Pablo	84.18	351	P	P	04 33 17.7	-1.5
PAB	San Pablo	84.18	351	P	P	04 33 17.7	-1.5
PAB				pmax	pmax		
	comp=Z,29nm,1.6s						
EIL	Elat	84.27	317	LR	LR	05 16 51.4	
	comp=Z,1µm,18.3s,baz=46,slow=40						
PSARD	Sardoal	84.40	354	*e*P	P	04 33 22.0	+1.7
PSARD				*i* Amb		04 33 23.2	
	comp=Z,22nm,2.2s						
PSBE	So Bento	84.52	355	*e*P	P	04 33 23.0	+2.1
PMRV	Marv??o	84.52	353	*e*P	P	04 33 22.5	+1.6
PMRV				*i* Amb		04 33 36.7	
	comp=Z,19nm,1.6s						
PMRV				*e*S	S	04 43 46.2	-0.1
PMRV				*e*LQ	LQ	04 56 14.8	
PMRV				*e*LR	LR	05 02 47.8	
PMRV				*i* AMs_20		05 17 47.1	
	comp=Z,658nm,18.0s						
PETF	Flores	84.67	68	P	P	04 33 22.7	+0.9
PETF				IAmb	IAmb	04 33 25.2	
	comp=Z,26nm,0.9s						
PETF				IAMs_20	IAMs_20	05 11 28.3	
	comp=Z,785nm,22.0s						
PMTG	Montargil	84.93	354	*e*P	P	04 33 24.5	+1.6
PMTG				*i* Amb		04 33 36.1	
	comp=Z,25nm,1.3s						
PESTR	Estremoz	85.09	354	P	P	04 33 23.9	+0.2
PESTR				IAmb	IAmb	04 33 26.1	
	comp=Z,16nm,0.8s						
PESTR				IAMs_20	IAMs_20	05 16 12.5	
	comp=Z,967nm,20.0s						
PESTR	Estremoz	85.09	354	*e*P	P	04 33 25.4	+1.7
PESTR				*i* Amb		04 33 37.0	
	comp=Z,32nm,1.5s						
RAYN	Ar Rayn	85.30	306	P	P	04 33 24.6	-0.4
RAYN				IAmb	IAmb	04 33 39.8	
	comp=Z,42nm,1.2s						
RAYN	Ar Rayn	85.30	306	P	P	04 33 25.2	+0.2
RAYN	Ar Rayn	85.30	306	P	P	04 33 24.6	-0.4
RAYN				pmax	pmax		
	comp=Z,43nm,1.2s						
RAYN				MLR	MLR		
	comp=Z,2µm,20.0s						
RAYN	Ar Rayn	85.30	306	*i* P	P	04 33 26.0	+0.9
	SNR=7.4						
DOK	Doka	85.38	297	P	P	04 33 23.4	-2.1
EVO	Evora	85.45	354	*e*P	P	04 33 27.1	+1.5
EVO				*i* Amb		04 33 41.4	
	comp=Z,34nm,1.2s						
MBWA	Marble Bar	85.69	221	P	P	04 33 27.7	+1.0
MBWA				IAmb	IAmb	04 33 28.9	
	comp=Z,36nm,0.9s						
MBWA	Marble Bar	85.69	221	P	P	04 33 28.9	+2.2
DMTO	DMTO	85.73	296	P	P	04 33 25.4	-1.8
PBAR	Barrancos	85.75	353	*e*P	P	04 33 27.6	+0.6
PBAR				*i* Amb		04 33 29.7	
	comp=Z,42nm,1.2s						
PBEJ	Beja	85.95	354	*e*P	P	04 33 30.0	+2.0
PBEJ				*i* Amb		04 33 42.2	
	comp=Z,30nm,1.5s						
KEST	Kesra	86.01	340	P	P	04 33 28.6	+0.2
KEST	Kesra	86.01	340	P	P	04 33 28.8	+0.3
	comp=Z,2.5nm,0.6s,baz=127,slow=3.7,SNR=6.3						
KEST				LR	LR	05 16 37.3	
	comp=Z,862nm,18.1s,baz=8.2,slow=39						
	comp=Z,2.5nm,0.6s						
KEST	Kesra	86.01	340	P	P	04 33 29.0	+0.6
PSA00	Pilbara Seismi	86.03	221	P	P	04 33 28.2	-0.2
PSA00	Pilbara Seismi	86.03	221	P	P	04 33 27.9	-0.5
PSA00				IAmb	IAmb	04 33 30.6	
	comp=Z,38nm,1.1s						
WHFO	Wadi Hawf	86.15	297	P	P	04 33 28.0	-1.3
MESJ	Messejana	86.16	354	*e*P	P	04 33 29.9	+0.8
MESJ				*e*SKSac	SKSac	04 43 55.7	+1.8
MESJ				IAMs_20	IAMs_20	05 17 48.9	
	comp=Z,1µm,18.9s						
PCVE	Castro Verde	86.35	354	*e*P	P	04 33 31.9	+1.9
PCVE				*i* Amb		04 33 44.3	
	comp=Z,27nm,1.6s						
RAO	Raoul Island	86.41	164	LR	LR	05 04 35.9	
	comp=Z,723nm,21.7s,baz=142,slow=30						
PVAQ	Vaqueiros	86.56	354	*e*P	P	04 33 32.9	+1.9
PVAQ				*i* Amb		04 33 34.4	
	comp=Z,27nm,1.8s						
PVAQ				*e*S	S	04 44 05.2	-1.2
PVAQ				*e*LQ	LQ	04 57 51.2	
PVAQ				*e*LR	LR	05 02 35.2	
PVAQ				*i* AMs_20		05 18 43.1	
	comp=Z,952nm,20.0s						
MORF	Marmelete	86.71	354	*e*P	P	04 33 32.7	+0.9
MORF				IAMs_20	IAMs_20	05 17 39.5	
	comp=E,1µm,15.1s						
MORF	Marmelete	86.71	354	*e*P	P	04 33 34.5	+2.7
MORF				*i* Amb		04 33 49.4	
	comp=E,25nm,1.3s						
MORF	Marmelete	86.71	354	*e*P	P	04 33 32.7	+0.9
MTO3	Montecristo	87.04	69	IAMs_20	IAMs_20	05 13 11.2	
	comp=Z,729nm,22.0s						
TBI	Tubuai	88.36	138	*e*S	S	04 44 17.7	-5.8
	comp=Z,2µm,28.5s						
TBI				*e*SS	SS	04 50 08.2	-5.8
	comp=Z,2µm,27.8s						
TBI				*e*LQ	LQ	04 57 04.9	
	comp=Z,9µm,41.8s						
TBI				*e*LR	LR	05 01 30.6	
	comp=Z,2µm,29.8s						
TBI				*e*LR	LR	05 01 32.6	
	comp=Z,7µm,25.2s						
CHIV	Chivirico	88.65	55	P	P	04 33 40.5	-0.8
CHIV				IAmb	IAmb	04 33 43.3	
	comp=Z,41nm,1.0s						
CHIV				IAMs_20	IAMs_20	05 15 17.1	
	comp=Z,2µm,19.0s						
NMDO	Nuevo Mundo	88.80	54	IAMs_20	IAMs_20	05 13 31.8	
	comp=Z,2µm,21.0s						
MTDJ	Mount Denham	89.65	57	IAMs_20	IAMs_20	05 16 46.7	
	comp=Z,1µm,20.0s						
CRIN	San Cristobal	89.67	68	IAMs_20	IAMs_20	05 11 34.3	
	comp=Z,583nm,19.0s						
STKA	Stephens Creek	89.78	199	P	P	04 33 46.3	+0.2
STKA	Stephens Creek	89.78	199	P	P	04 33 46.4	+0.4
	comp=Z,4.6nm,1.0s,baz=332,slow=3.5,SNR=5.7						
STKA				LR	LR	05 09 19.3	
	comp=Z,564nm,21.9s,baz=3.7,slow=32						
	comp=Z,4.6nm,1.0s						
STKA	Stephens Creek	89.78	199	P	P	04 33 46.3	+0.2
STKA				pmax	pmax		
	comp=Z,190nm,1.4s						
HERN	Volcan Telica	89.85	67	IAMs_20	IAMs_20	05 16 21.8	
	comp=Z,576nm,22.0s						
BOAB	BOACO BROADBA	90.59	67	IAMs_20	IAMs_20	05 18 29.2	
	comp=Z,958nm,20.0s						
PMOZ	Porto Moniz, M	91.37	1	*e*S	S	04 44 59.1	+7.2
PMOZ				*e*LR	LR	05 03 41.8	
PMOZ				*i* AMs_20		05 22 40.3	
	comp=Z,412nm,18.0s						
SDDR	Presa de Saban	91.82	51	IAMs_20	IAMs_20	05 23 31.8	
	comp=Z,694nm,21.0s						
JTS	Las Juntas de	92.78	67	LR	LR	05 18 22.0	
	comp=Z,358nm,21.7s,baz=320,slow=37						
HDC	Heredia	93.46	67	IAMs_20	IAMs_20	05 16 25.3	
	comp=Z,662nm,20.0s						
PRSN	Puerto Rico Se	94.27	48	IAMs_20	IAMs_20	05 23 05.5	
	comp=Z,607nm,21.0s						
CRPR	Cabo Rojo, PR	94.47	48	IAMs_20	IAMs_20	05 17 29.9	
	comp=Z,762nm,22.0s						
GCPR	Guaynabo City	94.63	47	IAMs_20	IAMs_20	05 17 46.9	
	comp=Z,600nm,20.0s						
CELP	Cerrillos	94.63	48	IAMs_20	IAMs_20	05 19 56.0	
	comp=Z,565nm,21.0s						
URZ	Urewera	94.68	170	LR	LR	05 13 30.3	
	comp=Z,285nm,18.8s,baz=5.5,slow=33						
SJG	San Juan	94.78	47	IAMs_20	IAMs_20	05 20 23.9	
	comp=Z,839nm,20.0s						
SJG	San Juan	94.78	47	LR	LR	05 17 58.9	
	comp=Z,658nm,21.8s,baz=334,slow=36						
HUMP	Col San Antoni	94.87	47	IAMs_20	IAMs_20	05 18 26.4	
	comp=Z,748nm,20.0s						
PDPR	Patillas Dam,	94.91	47	IAMs_20	IAMs_20	05 20 35.5	
	comp=Z,667nm,20.0s						
SABA	Saba	96.39	45	IAMs_20	IAMs_20	05 19 19.5	
	comp=Z,903nm,21.0s						
SEUS	St. Eustatius	96.61	45	IAMs_20	IAMs_20	05 21 44.3	
	comp=Z,974nm,20.0s						
ATD	Arta Tunnel	96.95	303	LR	LR	05 24 19.6	
	comp=Z,61nm,18.6s,baz=28,slow=39						
GDSD	La Dsirade Is	98.43	44	IAMs_20	IAMs_20	05 25 50.4	
	comp=Z,986nm,20.0s						
TAM	Tamanrasset	99.32	340	IAMs_20	IAMs_20	05 26 42.9	
	comp=Z,858nm,18.0s						
RPZ	Rata Peaks	99.66	175	LR	LR	05 12 06.5	
	comp=Z,548nm,21.8s,baz=338,slow=31						
FDF	Fort de France	99.83	44	IAMs_20	IAMs_20	05 21 31.7	
	comp=Z,786nm,20.0s						
SDV	Santo Domingo	101.01	55	IAMs_20	IAMs_20	05 22 43.7	
	comp=Z,1µm,21.0s						
GRGR	Grenville	102.00	46	IAMs_20	IAMs_20	05 24 43.1	
	comp=Z,951nm,19.0s						
TORD	Torodi Ar. Bea	109.43	342	PP	PP	04 39 45.1	-2.4
	comp=Z,1.8nm,0.9s,baz=7.4,slow=7.4,SNR=7.3						
ACRG	Accra	117.10	343	IAMs_20	IAMs_20	05 32 51.1	
	comp=Z,754nm,21.0s						
RCBR	Riachuelo	127.32	26	IAMs_20	IAMs_20	05 34 30.4	
	comp=Z,578nm,20.0s						
VNDA	Vanda	133.42	181	PKP	PKPdf	04 40 02.3	0.0
	comp=Z,0.3nm,0.6s,baz=43,slow=3.2,SNR=1.7						
VA03	San Esteban	135.91	82	IAMs_20	IAMs_20	05 43 42.2	
	comp=Z,658nm,21.0s						
BOSA	Boshof	140.00	296	PKP	PKPdf	04 40 15.9	-0.2
	comp=Z,3.6nm,0.9s,baz=342,slow=1.3,SNR=5.3						
BOSA	Boshof	140.00	296	PKIKP	PKPdf	04 40 16.0	-0.2
PLCA	Paso Flores	141.62	90	PKhKP	PKPpre	04 40 15.6	
	comp=Z,2.1nm,0.8s,baz=213,slow=5.8,SNR=3.0						
LL01	San Ignacio de	141.68	94		PKPdf	04 40 18.7	+0.1
MAW	Mawson	143.88	220	PKP	PKPbc	04 40 19.7	+0.2
	comp=Z,5.9nm,1.1s,baz=336,slow=4.8,SNR=4.4						
PLTB	Pedras Altas	144.15	63	*e*P	PKPab	04 40 12.3	-8.7
AY03	Cochrane	144.62	100		PKPdf	04 40 23.3	-0.3
QSPA	South Pole Qui	145.90	180	PKPbc	PKPdf	04 40 25.7	+0.4
	comp=Z,6.8nm,0.5s,baz=294,slow=0.7,SNR=70						
SYO	Syowa Base	152.59	220	⇓*e*PKPdf	PKPdf	04 40 37.0	+1.2
SYO	Syowa Base	152.59	220	⇓*e*pPKPdf	pPKPdf	04 40 41.4	+0.3
SYO	Syowa Base	152.59	220	⇓*i*PKPab	PKPab	04 40 55.0	+1.4

BELA	**Belgrano 2**	**157.22**	**170**		**PKPab**	**04 41 13.9**	**+0.7**
NVL	**N'lazarevskaya**	**161.13**	**208**	*e*PKP2	**PKPab**	**04 41 28.3**	**-2.0**
NVL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NVL				pmax	pmax		
	comp=E,251nm,18.4s						
TROLL	**Troll, Antarti**	**162.34**	**199**	⇑P	**PKPab**	**04 41 36.5**	**+0.8**
	comp=Z,215nm,0.8s						
SNAA	**Sanae**	**163.49**	**194**	⇑P	**PKPab**	**04 41 39.7**	**-1.0**
	comp=Z,42nm,1.0s						
SNAA	**Sanae**	**163.49**	**194**	PKPab	**PKPab**	**04 41 40.4**	**-0.3**
	comp=Z,1.7nm,0.9s,baz=83,slow=11,SNR=36						
VNA3	**Neumayer Olymp**	**164.62**	**187**	⇑P	**PKPab**	**04 41 44.7**	**-0.9**
	comp=Z,5.6nm,0.8s						
VNA2	**Neumayer--Watz**	**164.73**	**190**	⇑P	**PKPab**	**04 41 45.7**	**-0.4**
	comp=Z,4.4nm,0.8s,baz=177,slow=4.3						

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*UCR **27** 04:33:12.1±0.9, 8°.35N×82°.85W, h31^{km}±1^{km}, MW4.3, Fault plane solution: NP1:φs98.77000°, δ80.04000°, λ-0.88000°.*

*UPA **27** 04:33:12.6±0.7, 8°.40N×82°.85W, h29^{km}±2^{km}, MW4.2*

*RSNC **27** 04:33:13.4±1.0, 8°N±4°×8°3W±°, h31^{km}±14^{km}, M3.2, mb4.5, ML3.2*

*CATAC **27** 04:33:15.3±0.4, 9°N±4°×8°3W±°, h23^{km}±4^{km}, M4.5/12, mb5.0/2, mB5.4/2, MLv4.3/12, Mw(mB)4.9/2, Error ellipse: s-maj=10.3km s-min=6.3km az=125.1, confirmed*

ISC 27 04:33:12.5±0.9**, 8°.39N**±0°.03×**82°.85W**±0°.02**, h33**^{km}±4^{km}**, n113, σ0§84**/142**, 21C-23D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	**La Esperanza,**	**0.06**	**72**	⇓*i*P	**Pb**	**04 33 17.9**	**-0.2**
LESP3				*e*S	**Sb**	**04 33 21.5**	**-0.3**
LPPC	**Paso Canoas**	**0.14**	**4**	⇑*e*P	**Pb**	**04 33 18.3**	**-0.3**
LPPC				*e*S	**Sb**	**04 33 23.4**	**+0.7**
CDITO	**Canoas**	**0.19**	**353**	P	**Pb**	**04 33 18.7**	**-0.2**
CDITO	**Canoas**	**0.19**	**353**	S	**Sb**	**04 33 24.0**	**+0.7**
NELY	**Ciudad Neily**	**0.28**	**340**	⇑*e*P	**Pb**	**04 33 19.6**	**-0.4**
NELY				*e*S	**Sn**	**04 33 25.6**	**+0.4**
LIMO3	**Limones**	**0.28**	**183**	*e*P	**Pb**	**04 33 19.9**	**-0.1**
LIMO3				*e*S	**Sb**	**04 33 25.3**	**+0.1**
LMNES	**Limones**	**0.28**	**182**	⇑*e*P	**Pb**	**04 33 19.9**	**-0.2**
FITO	**Golfito**	**0.38**	**308**	⇑*e*P	**Pb**	**04 33 19.9**	**-1.4**
FITO				*e*S	**Sb**	**04 33 26.4**	**-1.1**
DVD	**David**	**0.40**	**83**	⇓*i*P	**Pb**	**04 33 21.2**	**-0.3**
DVD				*e*S	**Sb**	**04 33 28.0**	**+0.2**
CSTBL	**De las Acacias**	**0.40**	**87**	⇓*e*P	**Pb**	**04 33 21.3**	**-0.4**
MLIR3	**Monte Lirio, C**	**0.40**	**3**	⇑*i*P	**Pn**	**04 33 22.0**	**-0.2**
MLIR3				*e*S	**Sb**	**04 33 28.0**	**-0.1**
EDAD	**Golfito**	**0.41**	**310**	⇑*e*P	**Pb**	**04 33 20.5**	**-1.3**
EDAD				*e*S	**Sb**	**04 33 27.5**	**-0.7**
PEDE3	**Pedregal, Chir**	**0.42**	**90**	⇓*i*P	**Pb**	**04 33 21.4**	**-0.5**
PEDE3				*e*S	**Sb**	**04 33 27.9**	**-0.5**
CLLRA	**Cordillera,**	**0.42**	**33**	⇓*e*P	**Pb**	**04 33 21.8**	**-0.3**
LOCO3	**Loma Colorada,**	**0.43**	**87**	⇓*i*P	**Pb**	**04 33 21.7**	**-0.3**
LOCO3				*e*S	**Sb**	**04 33 28.3**	**-0.2**
RSRNO	**Rio Sereno**	**0.43**	**358**	⇑*e*P	**Pn**	**04 33 22.3**	**-0.2**
BRU2	**Volcan**	**0.43**	**21**	⇓*e*P	**Pb**	**04 33 22.0**	**-0.2**
BRU2				*e*S	**Sn**	**04 33 30.0**	**+0.5**
BRU2	**Volcan**	**0.43**	**21**	P	**Pb**	**04 33 22.1**	**-0.1**
BRU2	**Volcan**	**0.43**	**21**	⇓*i*P	**Pb**	**04 33 22.1**	**-0.2**
BRU2				*e*S	**Sn**	**04 33 29.9**	**+0.5**
TBS2		**0.45**	**25**	⇓*e*P	**Pn**	**04 33 23.0**	**+0.2**
VITO	**San Vito**	**0.45**	**344**	⇑*e*P	**Pb**	**04 33 22.4**	**0.0**
VITO				*e*S	**Sn**	**04 33 30.6**	**+0.9**
SCLRA	**Santa Clara, W**	**0.45**	**8**	⇓*e*P	**Pb**	**04 33 22.5**	**+0.1**
LOMA3	**Las Lomas, Chi**	**0.45**	**84**	⇓*i*P	**Pb**	**04 33 21.9**	**-0.5**
PTAR3	**Potrerillos Ar**	**0.46**	**49**	⇓*i*P	**Pb**	**04 33 22.4**	**-0.2**
BC3P	**Paso Ancho**	**0.49**	**29**	⇓*i*P	**Pb**	**04 33 22.6**	**-0.4**
BC3P				*e*S	**Sn**	**04 33 30.7**	**-0.1**
CHIR3	**Chiriqui UPA,**	**0.51**	**89**	*e*P	**Pb**	**04 33 22.6**	**-0.7**
CHIR3				*e*S	**Sn**	**04 33 31.1**	**-0.1**
BQTLY	**Boquete Panama**	**0.53**	**46**	⇓*e*P	**Pb**	**04 33 23.2**	**-0.5**
BQSF3	**Alto Boquete,**	**0.54**	**49**	⇓*i*P	**Pb**	**04 33 23.2**	**-0.6**
BQSF3				*e*S	**Sn**	**04 33 32.2**	**+0.1**
ALCO	**Alturas Coton,**	**0.56**	**1**	⇑*e*P	**Pb**	**04 33 23.4**	**-0.8**
ALCO				*e*S	**Sn**	**04 33 32.4**	**-0.3**
PSOM3	**Paja de Sombre**	**0.60**	**60**	⇓*e*P	**Pb**	**04 33 23.9**	**-0.8**
PSOM3				*e*S	**Sb**	**04 33 32.9**	**-0.2**
EDP2	**Potrero Grande**	**0.70**	**333**	⇑*e*P	**Pb**	**04 33 25.8**	**-0.7**
PBNVO	**Pueblo Nuevo,**	**0.82**	**52**	⇓*e*P	**Pn**	**04 33 27.1**	**-0.7**
PANP	**Palmar Norte**	**0.83**	**313**	⇑*e*P	**Pn**	**04 33 27.1**	**-0.8**
PANP				*e*S	**Sn**	**04 33 39.3**	**+0.3**
RBALA	**Bur**	**0.84**	**55**	⇓*e*P	**Pn**	**04 33 27.7**	**-0.4**
BURE	**Buenos Aires**	**0.92**	**328**	⇑*e*P	**Pn**	**04 33 28.6**	**-0.6**
BURE				*e*S	**Sb**	**04 33 41.3**	**-0.7**
DRK0	**Durika**	**0.95**	**336**	⇑*e*P	**Pn**	**04 33 28.9**	**-0.9**
DRK0	**Durika**	**0.95**	**336**	P	**Pn**	**04 33 29.2**	**-0.6**
DRK0	**Durika**	**0.95**	**336**	*e*P	**Pn**	**04 33 29.0**	**-0.9**
DRK0				*e*S	**Sn**	**04 33 41.9**	**-0.5**
RMDIO	**Remedios, Chir**	**1.02**	**99**	⇓*e*P	**Pn**	**04 33 30.3**	**-0.2**
EDPE	**Pejibaye, P**	**1.05**	**317**	⇑*e*P	**Pn**	**04 33 30.4**	**-0.5**
OCHAL	**Ojochal**	**1.06**	**312**	P	**Pn**	**04 33 30.7**	**-0.4**
OCHAL	**Ojochal**	**1.06**	**312**	S	**Sb**	**04 33 45.4**	**-0.5**
KKNTU	**Kakintº**	**1.12**	**66**	⇓*e*P	**Pn**	**04 33 31.4**	**-0.6**
PDCAN	**Manzana , Fuen**	**1.14**	**95**	⇓*e*P	**Pn**	**04 33 31.4**	**-0.9**
ISBTO	**Bastimentos Is**	**1.14**	**34**	⇓*e*P	**Pb**	**04 33 33.7**	**-0.1**
SAJE	**San Jernim**	**1.16**	**326**	⇑*e*P	**Pn**	**04 33 31.8**	**-0.8**
SAJE				*e*S	**Sn**	**04 33 47.2**	**-0.1**
PIEC	**Cerro El Cedra**	**1.65**	**318**	*e*P	**Pn**	**04 33 39.2**	**-0.3**
QUEP	**Quepos**	**1.66**	**309**	*e*P	**Pn**	**04 33 39.6**	**+0.2**
GMAL	**Guarumal, Vera**	**1.71**	**111**	P	**Pn**	**04 33 38.7**	**-1.4**
GMAL				S	**Sn**	**04 34 01.8**	**+0.9**
GMAL	**Guarumal, Vera**	**1.71**	**111**	*e*P	**Pn**	**04 33 39.4**	**-0.7**
RAZU	**San Marcos de**	**1.72**	**318**	*e*P	**Pn**	**04 33 40.8**	**+0.5**
VINA	**Juan Vinas**	**1.74**	**329**	*e*P	**Pn**	**04 33 41.1**	**+0.5**
REPA	**Paraso**	**1.75**	**325**	*e*P	**Pn**	**04 33 41.0**	**+0.2**
TAAN	**Batan**	**1.76**	**344**	*e*P	**Pn**	**04 33 41.9**	**+1.2**
LCR2	**La Lucha 2**	**1.77**	**320**	⇑*e*P	**Pn**	**04 33 40.8**	**-0.3**
LCR2	**La Lucha 2**	**1.77**	**320**	S	**Sn**	**04 34 02.3**	**-0.2**
LCR2	**La Lucha 2**	**1.77**	**320**	P	**Pn**	**04 33 41.1**	**0.0**
ABE2	**San Pablo**	**1.77**	**318**	*e*P	**Pn**	**04 33 41.3**	**+0.2**
PCAYA	**Pacayas**	**1.79**	**328**	*e*P	**Pn**	**04 33 42.1**	**+0.7**
VTCV	**VTCV, Calle Va**	**1.81**	**331**	⇑*e*P	**Pn**	**04 33 42.3**	**+0.7**
RESJ	**San Isidro (Tu**	**1.81**	**334**	⇑*e*P	**Pn**	**04 33 42.6**	**+1.1**
PICV	**PH. Pirrs**	**1.81**	**313**	*e*P	**Pn**	**04 33 41.9**	**+0.4**
TAGO	**Cartago**	**1.81**	**324**	*e*P	**Pn**	**04 33 42.5**	**+0.8**
IRES	**Siquirres**	**1.82**	**339**	*e*P	**Pn**	**04 33 42.8**	**+1.2**
ABRB	**Las Abras (San**	**1.82**	**332**	*e*P	**Pn**	**04 33 42.8**	**+1.0**
RAFA	**San Farael, Vo**	**1.83**	**329**	*e*P	**Pn**	**04 33 42.7**	**+0.7**
PAR1A	**Puntarenas Pro**	**1.84**	**311**	*e*P	**Pn**	**04 33 42.2**	**+0.4**
CVTV	**Tajo**	**1.84**	**331**	⇑*e*P	**Pn**	**04 33 42.9**	**+0.8**
CVTQ	**Turrialba Volc**	**1.85**	**331**	⇑*e*P	**Pn**	**04 33 43.0**	**+0.7**
VTR0	**Volcan Turrial**	**1.85**	**331**	*e*P	**Pn**	**04 33 43.2**	**+0.8**
VICA	**Volcano Irazu**	**1.87**	**328**	*e*P	**Pn**	**04 33 42.8**	**+0.2**
TRIO	**Tres Rios**	**1.89**	**323**	*e*P	**Pn**	**04 33 42.9**	**+0.3**
ACOS	**Acosta**	**1.91**	**317**	*e*P	**Pn**	**04 33 43.0**	**+0.1**
LUJA	**Lujan**	**1.95**	**322**	*e*P	**Pn**	**04 33 44.4**	**+0.9**
CVIMO	**Finca Echandi**	**1.95**	**326**	*e*P	**Pn**	**04 33 44.0**	**+0.4**
DOMI	**Santo Domingo**	**2.00**	**322**	*e*P	**Pn**	**04 33 45.2**	**+1.0**
HDC	**Heredia**	**2.03**	**322**	*e*P	**Pn**	**04 33 45.3**	**+0.7**
HDC	**Heredia**	**2.03**	**322**	*e*P	**Pn**	**04 33 45.3**	**+0.7**
PURI	**Puriscal**	**2.05**	**315**	*e*P	**Pn**	**04 33 45.4**	**+0.6**
BELE	**Belen**	**2.06**	**320**	*e*P	**Pn**	**04 33 45.7**	**+0.8**
CARI	**Cariari**	**2.15**	**336**	*e*P	**Pn**	**04 33 47.5**	**+1.4**
TCS1	**Tacares**	**2.18**	**319**	*e*P	**Pn**	**04 33 47.5**	**+0.9**
TRB2	**Turrubares**	**2.19**	**314**	*e*P	**Pn**	**04 33 47.2**	**+0.5**
CACAO	**El Cacao, Vera**	**2.22**	**118**	P	**Pn**	**04 33 47.3**	**+0.2**
CACAO	**El Cacao, Vera**	**2.22**	**118**	*e*P	**Pn**	**04 33 47.6**	**+0.5**
TRT2	**Tortugero**	**2.33**	**338**	⇑*e*P	**Pn**	**04 33 49.3**	**+0.7**
TRT2	**Tortugero**	**2.33**	**338**	P	**Pn**	**04 33 49.6**	**+1.1**
TRT1	**Tortuguero**	**2.35**	**339**	*e*P	**Pn**	**04 33 49.6**	**+0.7**
CBL1	**Cabuya**	**2.52**	**298**	*e*P	**Pn**	**04 33 50.4**	**-0.7**
AZU	**Azuero**	**2.62**	**103**	P	**Pn**	**04 33 53.7**	**+1.2**
AZU				S	**Sn**	**04 34 24.7**	**+1.5**
AZU	**Azuero**	**2.62**	**103**	*e*P	**Pn**	**04 33 53.7**	**+1.2**
SOCE	**Pocosol**	**2.64**	**319**	P	**Pn**	**04 33 54.5**	**+1.6**
COVE	**Coope Vega, Sa**	**2.78**	**327**	P	**Pn**	**04 33 56.3**	**+1.6**
JTS	**Las Juntas de**	**2.81**	**312**	⇓*e*P	**Pn**	**04 33 55.5**	**+0.2**
JTS	**Las Juntas de**	**2.81**	**312**	P	**Pn**	**04 33 55.4**	**+0.2**
JTS				S	**Sn**	**04 34 28.9**	**+0.9**
JTS	**Las Juntas de**	**2.81**	**312**	*e*P	**Pn**	**04 33 55.4**	**+0.2**
ACHO3	**Achotines, Los**	**2.82**	**110**	*e*P	**Pn**	**04 33 56.2**	**+0.9**
CMARA	**Lajas Hojancha**	**3.02**	**303**	*e*P	**Pn**	**04 33 58.2**	**+0.1**
BCIP	**Isla Barro Col**	**3.08**	**75**	*e*P	**Pn**	**04 33 59.9**	**+1.1**
BCIP	**Isla Barro Col**	**3.08**	**75**	P	**Pn**	**04 33 59.9**	**+1.1**
BCIP				S	**Sb**	**04 34 40.5**	**-3.2**
BLUN	**Bluefields**	**3.71**	**346**	P	**Pn**	**04 34 08.3**	**+0.7**
BLUN				S	**Sn**	**04 34 52.5**	**+2.3**
ESPN	**Las Esperanzas**	**4.04**	**339**	P	**Pn**	**04 34 12.6**	**+0.4**
ACON	**Acoyapa**	**4.23**	**327**	P	**Pn**	**04 34 16.2**	**+1.5**
ACON	**Acoyapa**	**4.23**	**327**	P	**Pn**	**04 34 15.6**	**+0.8**
ACON				S	**Sn**	**04 35 05.1**	**+2.0**
SAIC	**Isla e San And**	**4.27**	**15**	P	**Pn**	**04 34 15.5**	**+0.2**
SAIC				S	**Sn**	**04 35 03.7**	**-0.4**
BOAB	**BOACO BROADBAN**	**4.90**	**326**	P	**Pn**	**04 34 24.8**	**+0.9**
PRVC	**Isla de Provid**	**5.17**	**16**	P	**Pn**	**04 34 29.1**	**+1.5**
	70nm,0.9s						
PRVC				S	**Sn**	**04 35 24.6**	**-1.6**
	70nm,0.9s						
COPN	**Copaltepe**	**5.27**	**316**	P	**Pn**	**04 34 31.1**	**+2.1**
CNGA	**Al SSO del Vol**	**5.57**	**317**	P	**Pn**	**04 34 34.5**	**+1.2**
CNGN	**Cerro Negro**	**5.57**	**318**	P	**Pn**	**04 34 34.0**	**+0.8**
	601nm,1.5s						
RCVN	**Varillal2**	**6.12**	**328**	P	**Pn**	**04 34 41.5**	**+0.6**
APAC	**Apartado, Choc**	**6.22**	**94**	P	Pn	04 34 47.1	+4.9
	18nm,1.0s						
SJCC	**San Jacinto, C**	**7.72**	**78**	P	**Pn**	**04 35 05.0**	**+2.2**

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*NEIC **27** 04:34:54.9±1.5, 20°.5S±0°.1×177°.6W±0°.1, h493^{km}±7^{km}, mb4.3/60, Error ellipse: s-maj=19.8km s-min=15.9km az=128.0*

*IDC **27** 04:34:55.6±2.0, 20°.61S×177°.62W, h502^{km}±19^{km}, mb3.6/14, mbtmp4.4/17, Error ellipse: s-maj=20.9km s-min=14.2km az=140.0*

ISC 27 04:34:55.1±0.4**, 20°.52S**±0°.08×**177°.64W**±0°.07**, h500**^{km}**, n141, σ1§23**/140**, mb4.1**/40**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.93**	**303**	P	**P**	**04 36 21.7**	**0.0**
MSVF	**Nonsavu**	**4.93**	**303**	P	**P**	**04 36 22.9**	**+1.3**
	14nm,0.5s,baz=297,slow=23,SNR=14						
NIUE	**Niue**	**7.40**	**80**	S	**S**	**04 38 17.5**	**+1.7**
AFI	**Afiamalu**	**8.63**	**41**	P	**P**	**04 36 55.6**	**-2.8**
AFI	**Afiamalu**	**8.63**	**41**	P	**P**	**04 36 55.5**	**-2.8**
PINNC	**Pines Island,**	**14.04**	**259**	P	**P**	**04 37 57.0**	**+1.7**
DZM	**Mont Dzumac**	**14.92**	**261**	P	**P**	**04 38 04.7**	**+0.1**
	13nm,1.0s,baz=90,slow=18						
OUZ	**Omahuta**	**16.55**	**206**	P	**P**	**04 38 23.8**	**+2.3**
WCZ	**Waipu Caves**	**16.89**	**203**	P	**P**	**04 38 27.3**	**+2.4**
WIAZ	**Waiheke Island**	**17.40**	**200**	P	**P**	**04 38 32.1**	**+2.3**
MBAZ	**Motutapu North**	**17.45**	**200**	P	**P**	**04 38 32.7**	**+2.4**
HAZ	**Te Kaha**	**17.63**	**192**	P	**P**	**04 38 32.4**	**+0.5**
RUGZ	**Raukumara Rang**	**17.85**	**192**	P	**P**	**04 38 35.1**	**+1.0**
TWGZ	**Tauwhareparae**	**18.00**	**191**	P	**P**	**04 38 37.0**	**+1.6**
KMRZ	**Kaimai**	**18.14**	**197**	P	**P**	**04 38 39.2**	**+2.5**
TOZ	**Tahuroa Road**	**18.16**	**198**		**P**	**04 38 35.6**	**-1.1**
MWZ	**Matawai**	**18.24**	**192**	P	**P**	**04 38 36.3**	**-1.3**
URZ	**Urewera**	**18.25**	**193**	P	**P**	**04 38 36.1**	**-1.5**
	9.1nm,0.6s,baz=349,slow=4.8,SNR=8.0						
URZ				S	**S**	**04 41 34.8**	**-4.3**
	2.1nm,0.2s,baz=330,slow=20,SNR=1.6						
URZ	**Urewera**	**18.25**	**193**	P	**P**	**04 38 36.7**	**-0.9**
HRRZ	**Handcock Road**	**18.57**	**195**	P	**P**	**04 38 41.4**	**+0.8**
RTZ	**Ruatahuna**	**18.62**	**193**	P	**P**	**04 38 40.0**	**-1.1**
RTZ				IAmb	IAmb	04 39 20.2	
	comp=Z,11nm,0.9s						
RTZ	**Ruatahuna**	**18.62**	**193**	P	**P**	**04 38 39.7**	**-1.5**
TLZ	**Tolley Road**	**18.70**	**197**	P	**P**	**04 38 43.9**	**+2.1**
SNGZ	**Shannon Statio**	**18.71**	**192**	P	**P**	**04 38 41.6**	**-0.3**
RAHZ	**Arahi**	**18.89**	**193**	P	**P**	**04 38 43.1**	**-0.4**
HIZ	**Hauiti**	**19.07**	**198**	P	**P**	**04 38 47.8**	**+2.7**
NMHZ	**Naumai**	**19.12**	**193**	P	**P**	**04 38 45.8**	**+0.1**
NTVZ	**North Tongarir**	**19.39**	**196**	P	**P**	**04 38 48.3**	**+0.1**
TMVZ	**Te Maari**	**19.40**	**196**	P	**P**	**04 38 48.1**	**-0.2**
ETVZ	**East Tongariro**	**19.42**	**196**	P	**P**	**04 38 47.8**	**-0.7**
OTVZ	**Oturere**	**19.45**	**196**	P	**P**	**04 38 47.3**	**-1.5**
SNVZ	**South Ngauruho**	**19.48**	**196**	P	**P**	**04 38 48.2**	**-0.9**
KWHZ	**Kaweka Forest**	**19.52**	**194**	P	**P**	**04 38 48.5**	**-0.8**
BFZ	**Birch Farm**	**20.76**	**193**	P	**P**	**04 38 58.5**	**-2.0**
MRZ	**Mangatainoka R**	**20.89**	**195**	P	**P**	**04 38 59.8**	**-1.9**
MRZ				IAmb	IAmb	04 39 00.8	
	comp=Z,19nm,1.2s						
SNZO	**South Karori**	**21.72**	**196**	P	**P**	**04 39 08.6**	**-0.5**
TCW	**Tory Channel**	**21.74**	**197**		**P**	**04 39 05.6**	**-3.7**
QRZ	**Quartz Range**	**21.91**	**200**	P	**P**	**04 39 10.8**	**-0.1**
NNZ	**Nelson**	**22.00**	**198**	P	**P**	**04 39 11.0**	**-0.6**
TUWZ	**Tuamarina**	**22.03**	**197**		**P**	**04 39 10.2**	**-1.8**
THZ	**Tophouse**	**22.64**	**199**	P	**P**	**04 39 17.2**	**-0.3**
DSZ	**Denniston Nort**	**22.97**	**201**	P	**P**	**04 39 20.8**	**+0.4**
GVZ	**Greta Valley S**	**23.71**	**197**	P	**P**	**04 39 26.3**	**-0.7**
LTZ	**Lake Taylor**	**23.76**	**199**	P	**P**	**04 39 25.9**	**-1.6**
LTZ				IAmb	IAmb	04 39 29.8	
	comp=Z,9.0nm,0.8s						
WHZ	**Wether Hill Ro**	**27.94**	**202**	P	**P**	**04 40 05.3**	**+1.0**
EIDS	**Eidsvold**	**29.17**	**255**	P	**P**	**04 40 16.4**	**+1.0**
ARMA	**Armidale**	**29.36**	**244**	P	**P**	**04 40 18.6**	**+1.5**
ARMA				IAmb	IAmb	04 40 42.8	
	comp=Z,28nm,1.4s						
COEN	**Coen**	**37.92**	**274**	P	**P**	**04 41 28.1**	**-1.4**
COEN				IAmb	IAmb	04 42 05.5	
	comp=Z,22nm,1.2s						
STKA	**Stephens Creek**	**38.09**	**244**	P	**P**	**04 41 31.3**	**+0.7**
	comp=Z,2.7nm,0.8s,baz=90,slow=12,SNR=3.8						
	comp=Z,2.7nm,0.8s						
BBOO	**Buckleboo**	**42.84**	**244**	P	**P**	**04 42 08.9**	**+0.3**
WR0	**Warramunga Arr**	**44.75**	**262**	P	**P**	**04 42 23.8**	**+0.1**
WR0				IAmb	IAmb	04 43 01.1	
	comp=Z,13nm,1.4s						
WR8	**Warramunga Arr**	**44.78**	**262**	P	**P**	**04 42 23.9**	**-0.1**
WR8				IAmb	IAmb	04 42 34.6	
	comp=Z,9.0nm,1.4s						
ASAR	**Alice Springs**	**44.85**	**257**	P	**P**	**04 42 24.6**	**+0.2**
ASAR	**Alice Springs**	**44.85**	**257**	P	**P**	**04 42 24.8**	**+0.4**
	comp=Z,2.9nm,0.5s,baz=97,slow=7.6,SNR=31						
ASAR				PcP	**pP**	**04 43 56.4**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=98,slow=3.5,SNR=4.8						
ASAR				S	**S**	**04 48 21.6**	**-3.7**
	comp=Z,1.9nm,0.8s,baz=93,slow=14,SNR=8.8						
	comp=Z,2.9nm,0.5s						
WB0	**Warramunga Arr**	**44.91**	**262**	P	**P**	**04 42 24.9**	**0.0**
WB0				IAmb	IAmb	04 42 31.7	
	comp=Z,7.0nm,1.1s						
WB2	**Warramunga Arr**	**44.92**	**262**	P	**P**	**04 42 25.1**	**0.0**
WB2				IAmb	IAmb	04 42 34.4	
	comp=Z,11nm,1.2s						
WRAB	**Tennant Creek**	**44.93**	**262**	P	**P**	**04 42 24.9**	**-0.1**
WRAB				IAmb	IAmb	04 42 57.7	
	comp=Z,10nm,1.5s						
WRA	**Warramunga Arr**	**44.94**	**262**	P	**P**	**04 42 25.0**	**-0.2**
WRA	**Warramunga Arr**	**44.94**	**262**	P	**P**	**04 42 25.1**	**0.0**
	comp=Z,2.0nm,0.3s,baz=97,slow=8.6,SNR=38						
WRA				PcP	**PcP**	**04 43 56.0**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=102,slow=2.9,SNR=2.0						
WRA				S	**S**	**04 48 23.6**	**-3.0**
	comp=Z,2.0nm,1.0s,baz=95,slow=13,SNR=5.8						
	comp=Z,2.0nm,0.3s						
MTN	**Manton Dam**	**49.50**	**270**	P	**P**	**04 42 59.4**	**-0.2**
MTN				IAmb	IAmb	04 43 00.6	
	comp=Z,14nm,0.8s						
KNRA	**Kununurra**	**51.00**	**266**	P	**P**	**04 43 10.7**	**+0.1**
KNRA				IAmb	IAmb	04 43 37.1	
	comp=Z,16nm,1.2s						
FITZ	**Fitzroy Crossi**	**53.36**	**262**	P	**P**	**04 43 28.2**	**+0.6**
FITZ	**Fitzroy Crossi**	**53.36**	**262**	P	**P**	**04 43 28.0**	**+0.4**
	comp=Z,1.2nm,0.4s,baz=112,slow=2.5,SNR=9.6						
	comp=Z,1.2nm,0.4s						
SBA	**Scott Base**	**57.87**	**184**	P	**P**	**04 43 58.3**	**+0.3**
VNDA	**Vanda**	**57.92**	**185**	P	**P**	**04 43 58.9**	**+0.6**
JHJ2	**Mitsune**	**67.04**	**322**	P	**P**	**04 44 59.1**	**+1.0**
QSPA	**South Pole Qui**	**69.55**	**180**	P	**P**	**04 45 14.9**	**+1.8**
QSPA				IAmb	IAmb	04 45 35.9	
	comp=Z,5.5nm,1.2s						
MJAR	**Matsushiro Arr**	**70.43**	**323**	P	**P**	**04 45 18.9**	**+0.3**
MJAR				IAmb	IAmb	04 45 19.6	
	comp=Z,5.0nm,0.6s						
MJAR	**Matsushiro Arr**	**70.43**	**323**	P	**P**	**04 45 18.8**	**+0.2**
	comp=Z,6.6nm,0.6s,baz=155,slow=5.6,SNR=15						
	comp=Z,6.6nm,0.6s						
MAJO	**Matsushiro**	**70.43**	**323**	P	**P**	**04 45 19.5**	**+0.9**
PET	**Petropavlovsk**	**76.08**	**346**	P	**P**	**04 45 48.9**	**-1.6**
	comp=Z,33nm,2.5s						
PETK	**Petropavlovsk-**	**76.38**	**345**	P	**P**	**04 45 52.7**	**+0.5**
	comp=Z,3.6nm,0.7s,baz=174,slow=6.3,SNR=3.2						
	comp=Z,3.6nm,0.7s						
KSRS	**Korea Array**	**77.13**	**318**	P	**P**	**04 45 57.6**	**+1.0**
	comp=Z,1.7nm,0.5s,baz=125,slow=5.9,SNR=6.6						
	comp=Z,1.7nm,0.5s						
USRK	**Ussuriysk Ar.**	**79.17**	**326**	P	**P**	**04 46 08.4**	**+0.9**
	comp=Z,6.0nm,0.7s,baz=151,slow=3.0,SNR=8.8						
	comp=Z,6.0nm,0.7s						
NVAR	**Mina Array Bea**	**80.81**	**43**	P	**P**	**04 46 17.5**	**+1.0**
NVAR	**Mina Array Bea**	**80.81**	**43**	P	**P**	**04 46 17.4**	**+0.9**
	comp=Z,2.0nm,0.8s,baz=224,slow=9.1,SNR=11						
	comp=Z,2.0nm,0.8s						
K05A	**Summer Lake**	**81.77**	**39**		**P**	**04 46 22.5**	**+1.1**
K05A				IAmb	IAmb	04 46 23.9	
	comp=Z,5.7nm,0.5s						
J05D	**Fort Rock, OR**	**81.91**	**38**		**P**	**04 46 23.5**	**+1.4**
J05D				IAmb	IAmb	04 46 24.9	
	comp=Z,8.9nm,0.9s						
Y14A	**Wickenburg**	**81.94**	**49**		**P**	**04 46 22.5**	**+0.2**
PRN	**Pahroc Range**	**82.37**	**45**	P	**P**	**04 46 24.8**	**+0.3**
PINE	**Pine Mountain**	**82.39**	**38**		**P**	**04 46 24.8**	**+0.2**
PINE				IAmb	IAmb	04 46 27.5	
	comp=Z,8.0nm,0.8s						
WVOR	**Wild Horse Val**	**82.93**	**40**	P	**P**	**04 46 26.3**	**-0.9**
WVOR				IAmb	IAmb	04 46 29.8	
	comp=Z,5.9nm,1.2s						
NLWA	**Neilton Lookou**	**83.07**	**34**	P	**P**	**04 46 27.4**	**-0.2**
NLWA				IAmb	IAmb	04 46 30.2	
	comp=Z,6.4nm,1.1s						
X16A	**Lo Mia Camp, P**	**83.30**	**50**		**P**	**04 46 30.6**	**+1.3**
LCMT	**Little Creek M**	**83.37**	**47**	P	**P**	**04 46 31.5**	**+1.9**
319A	**Douglas**	**83.39**	**53**		**P**	**04 46 31.3**	**+1.5**
319A				IAmb	IAmb	04 46 33.7	
	comp=Z,4.9nm,0.9s						
I07A	**Izee**	**83.39**	**38**	P	**P**	**04 46 30.5**	**+1.0**
U15A	**North Rim**	**83.72**	**48**		**P**	**04 46 33.4**	**+1.9**
U15A				IAmb	IAmb	04 46 34.5	
	comp=Z,5.2nm,0.8s						
PSUT	**Pine Spring**	**83.77**	**45**		**P**	**04 46 31.6**	**0.0**
TMUT	**Trail Mountain**	**85.93**	**45**		**P**	**04 46 41.8**	**-0.4**
TMUT				IAmb	IAmb	04 46 46.5	
	comp=Z,3.0nm,0.8s						
MNTX	**Cornudas Mount**	**86.49**	**54**		**P**	**04 46 44.7**	**0.0**
TX31	**Lajitas Ar. Si**	**86.78**	**57**	P	**P**	**04 46 47.3**	**+1.1**
TXAR	**Lajitas Array**	**86.78**	**57**	P	**P**	**04 46 48.0**	**+1.7**
	comp=Z,1.4nm,0.8s,baz=217,slow=6.9,SNR=18						
	comp=Z,1.4nm,0.8s						
PV01	**Paradox Valley**	**87.15**	**48**	P	**P**	**04 46 48.3**	**+0.4**
MCMT	**McKenzie Canyo**	**87.75**	**40**		**P**	**04 46 51.3**	**+0.6**
CCB	**Clear Creek Bu**	**87.96**	**12**		**P**	**04 46 50.7**	**-0.1**
SNAA	**Sanae**	**87.98**	**178**	P	**P**	**04 46 51.0**	**-0.1**
	comp=Z,3.6nm,1.3s,baz=180,slow=2.0,SNR=2.3						
	comp=Z,3.6nm,1.3s						
ILAR	**Eielson Array**	**88.26**	**13**	P	**P**	**04 46 52.0**	**-0.3**
	comp=Z,1.3nm,0.5s,baz=222,slow=6.2,SNR=7.4						
	comp=Z,1.3nm,0.5s						
BW06	**Boulder Array**	**88.74**	**43**	P	**P**	**04 46 56.1**	**+0.8**
PDAR	**Pinedale Array**	**88.74**	**43**	P	**P**	**04 46 54.2**	**-1.2**
PDAR	**Pinedale Array**	**88.74**	**43**	P	**P**	**04 46 55.8**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=211,slow=2.9,SNR=11						
	comp=Z,0.9nm,0.7s						
BOZ	**Bozeman (W)**	**88.89**	**40**		**P**	**04 46 56.1**	**+0.3**
BOZ				IAmb	IAmb	04 46 58.4	
	comp=Z,2.7nm,0.8s						
L29M	**L29M**	**88.94**	**17**		**P**	**04 46 56.1**	**+0.6**
L29M				IAmb	IAmb	04 46 57.6	
	comp=Z,6.4nm,0.9s						
E19K	**Redstone River**	**89.02**	**8**	P	**P**	**04 46 56.2**	**+0.5**
E19K				IAmb	IAmb	04 46 57.5	
	comp=Z,3.9nm,0.8s						
DAWY	**Dawson**	**89.39**	**16**	P	**P**	**04 46 58.0**	**+0.4**
DAWY				IAmb	IAmb	04 46 59.1	
	comp=Z,3.4nm,0.7s						
YNE	**Yellowstone No**	**89.57**	**41**	P	**P**	**04 46 58.6**	**-0.6**
YNE				IAmb	IAmb	04 47 02.5	
	comp=Z,3.8nm,1.1s						
K29M	**Barlow Dome**	**89.70**	**17**		**P**	**04 46 59.7**	**+0.6**
K29M				IAmb	IAmb	04 47 01.0	
	comp=Z,3.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**90.44**	**289**	P	**P**	**04 47 05.2**	**+1.8**
	comp=Z,1.8nm,0.8s,baz=112,slow=2.6,SNR=8.6						
	comp=Z,1.8nm,0.8s						
ZALV	**Zalesovo Beam**	**110.72**	**321**	PKiKP	**PKiKP**	**04 52 29.5**	**-0.9**
	comp=Z,0.8nm,0.5s,baz=131,slow=4.1,SNR=4.1						
MKAR	**Makanchi Array**	**111.46**	**313**	PKiKP	**PKiKP**	**04 52 31.6**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=80,slow=0.7,SNR=11						
KURBB	**Kurchatov Arra**	**114.29**	**317**	PKiKP	PKPdf	04 52 36.6	-0.7
	comp=Z,1.0nm,0.6s,baz=96,slow=1.7,SNR=11						
BVAR	**Borovoye Array**	**119.31**	**320**	PKP	**PKPdf**	**04 52 46.7**	**-0.2**
	comp=Z,2.5nm,0.4s,baz=107,slow=1.5,SNR=12						
ARCES	**ARCESS Array B**	**129.00**	**350**	PKP	**PKPdf**	**04 53 04.9**	**-0.1**
	comp=Z,2.8nm,0.8s,baz=352,slow=1.8,SNR=9.6						
FINES	**FINESS Array B**	**135.89**	**344**	PKhKP	PKPpre	04 53 14.0	
	comp=Z,1.6nm,0.8s,baz=130,slow=2.2,SNR=3.7						
FINES				PKP	**PKPdf**	**04 53 18.8**	**+0.6**
	comp=Z,1.6nm,0.8s,baz=76,slow=4.4,SNR=1.8						
HFS	**Hagfors**	**139.61**	**351**	PKhKP	PKPpre	04 53 16.7	
	comp=Z,1.2nm,0.4s,baz=67,slow=3.7,SNR=11						
AKASG	**Malin Array Be**	**143.20**	**331**		PKPab	04 53 29.4	0.0
AKASG	**Malin Array Be**	**143.20**	**331**	PKhKP	PKPpre	04 53 29.2	
	comp=Z,4.7nm,0.4s,baz=44,slow=4.3,SNR=43						
RNPP5	**Staryi Chortor**	**144.23**	**335**	PKP	PKPbc	04 53 32.2	-0.9
EKA	**Eskdalemuir Ar**	**144.99**	**6**	PKPbc	PKPbc	04 53 35.2	-0.1
	comp=Z,1.3nm,0.4s,baz=1.5,slow=3.1,SNR=18						
BNN	**Bunyan**	**145.91**	**310**		**PKPdf**	**04 53 36.1**	**-0.9**
BR131	**Keskin Array S**	**147.11**	**313**	PKPdf	**PKPdf**	**04 53 37.6**	**-1.3**
BRTR	**Keskin Array B**	**147.11**	**313**	PKPbc	**PKPbc**	**04 53 41.5**	**-0.5**
	comp=Z,1.8nm,0.6s,baz=139,slow=4.1,SNR=11						
BUR08	**Bucovina Ar. S**	**147.23**	**331**		**PKPdf**	**04 53 39.7**	**+0.8**
BURAR	**Bucovina Array**	**147.25**	**331**		**PKPdf**	**04 53 39.0**	**+0.1**
MMAI	**Mount Meron Ar**	**148.12**	**300**	PKPbc	**PKiKP**	**04 53 45.5**	**-0.6**
	comp=Z,3.3nm,0.6s,baz=90,slow=1.7,SNR=4.9						
CLL	**Collm**	**148.16**	**347**	PKPdf	**PKPdf**	**04 53 38.5**	**-1.6**
CLL	**Collm**	**148.16**	**347**	*i* PKPbc	**PKPbc**	**04 53 44.5**	**+0.4**
	comp=Z,15nm,0.6s						
GERES	**GERESS Array B**	**150.31**	**345**	PKPbc	**PKPbc**	**04 53 49.5**	**0.0**
	comp=Z,1.8nm,0.7s,baz=354,slow=2.7,SNR=13						
CONA	**Conrad Observa**	**150.56**	**341**	*i* PKP	**PKiKP**	**04 53 50.7**	**+0.1**
	comp=Z,4.2nm,0.6s						
RONA	**Rosalia, Austr**	**150.63**	**341**	*i* PKP	**PKiKP**	**04 53 50.9**	**+0.2**
	comp=Z,7.0nm,0.5s						
MOA	**Molln**	**151.09**	**343**	*i* PKP	**PKPbc**	**04 53 51.0**	**-0.3**
	comp=Z,1.5nm,0.6s						
ARSA	**Arzberg**	**151.27**	**341**	*e*PKP	**PKiKP**	**04 53 52.9**	**+0.8**
	comp=Z,1.7nm,0.4s						
BIOA	**Bad Ischl, Aus**	**151.40**	**344**	*i* PKP	**PKiKP**	**04 53 52.2**	**-0.1**
	comp=Z,4.7nm,0.4s						
LESA	**Schwarzleotal**	**151.89**	**345**	*e*PKP	**PKiKP**	**04 53 53.4**	**0.0**
	comp=Z,2.3nm,0.7s						
OBKA	**Obir**	**152.23**	**342**	*e*PKP	**PKiKP**	**04 53 54.0**	**-0.1**
	comp=Z,4.0nm,1.4s						
WTTA	**Wattenberg**	**152.28**	**346**	*i* PKP	**PKiKP**	**04 53 54.4**	**+0.1**
	comp=Z,4.3nm,0.8s						
MOTA	**Moosalm**	**152.32**	**347**	*e*PKP	**PKiKP**	**04 53 54.2**	**-0.1**
	comp=Z,2.7nm,0.9s						
MYKA	**Terra Mystica**	**152.38**	**343**	*e*PKP	**PKPbc**	**04 53 53.7**	**-0.5**
	comp=Z,2.6nm,0.5s						
ABTA	**Abfaltersbach**	**152.56**	**345**	*i* PKP	**PKPbc**	**04 53 54.4**	**-0.2**
	comp=Z,3.4nm,0.5s						
FETA	**Feichten**	**152.70**	**347**	*e*PKP	**PKiKP**	**04 53 55.7**	**+0.6**
	comp=Z,3.7nm,1.0s						
TORD	**Torodi Ar. Bea**	**172.64**	**175**	PKP	**PKPdf**	**04 54 06.2**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=89,slow=2.7,SNR=4.3						

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*ASRS **27** 05:00:16.0±1.2, 54°.40N×86°.83E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 27 05:00:20.1±3.2**, 54°.38N**×**86°.66E, h0**^{km}**, mbtmp2.7**/2**, ML2.5**/2**, Error ellipse: s-maj=24.4km s-min=15.9km az=57.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.17**	**249**	I	I	05 08 20.0	
	0.1nm,0.9s,baz=68,slow=310,SNR=8.1						
ZALV	**Zalesovo Beam**	**1.17**	**249**	Pg	Pg	05 00 41.5	-0.9
	0.9nm,0.3s,baz=70,slow=17,SNR=4.6						
ZALV				Lg	Lg	05 00 57.7	
	1.1nm,0.3s,baz=65,slow=28,SNR=5.4						
KURBB	**Kurchatov Arra**	**6.23**	**236**	Pn	Pn	05 01 54.1	+0.9
	0.1nm,0.3s,baz=51,slow=14,SNR=6.8						
KURBB				Sn	Sn	05 03 05.0	-0.1
	baz=158,slow=18,SNR=1.5						
KURBB				Lg	Lg	05 03 38.7	
	baz=7.6,slow=17,SNR=1.6						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**8.09**	**202**	Pn	Pn	05 02 19.5	+0.7
	0.1nm,0.3s,baz=21,slow=13,SNR=2.8						
MKAR				Sn	Sn	05 03 50.6	-0.3
	baz=0.9,slow=19,SNR=2.2						
MKAR				Lg	Lg	05 04 36.1	

baz=21,slow=30,SNR=5.4
0.1nm,0.4s

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*IDC **27** 05:01:27.5±1.1, 2.°93S×138.°48E, h0^{km}, mb3.6/4, mbtmp3.5/7, ML3.4/3, MS4.5/1, Error ellipse: s-maj=27.1km s-min=21.8km az=144.0*

ISC 27 05:01:31.3±1.6, **3.°1S**±0.°2×**138.°4E**±0.°2, **h35^{km}, n8,** σ**2^{s}98**/6, **mb3.8**/3, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.40	77	Pn	Pn	05 02 07.6	-0.5
	6.7nm,0.3s,baz=235,slow=11,SNR=18						
JAY				Sn	Sn	05 02 36.3	0.0
	2.8nm,0.3s,baz=128,slow=19,SNR=1.8						
	25nm,0.4s						
WRA	Warramunga Arr	17.22	193	P	P	05 05 33.1	+2.6
	0.2nm,0.3s,baz=16,slow=12,SNR=8.5						
WRA				S	S	05 08 44.5	-3.7
	0.5nm,0.9s,baz=16,slow=23,SNR=2.0						
	0.1nm,0.4s						
FITZ	Fitzroy Crossi	19.46	219	P	Pn	05 05 56.3	-0.2
	0.1nm,0.3s,baz=49,slow=9.3,SNR=1.0						
	1.0nm,0.7s						
ASAR	Alice Springs	20.93	192	P	P	05 06 13.5	+2.4
	0.5nm,0.6s,baz=22,slow=11,SNR=11						
	0.5nm,0.6s						
MSVF	Nonsavu	41.53	113	LR	LR	05 24 08.7	
	comp=Z,564nm,18.6s,baz=158,slow=33						
CMAR	Chiang Mai Arr	44.32	300	P	P	05 09 40.9	+2.5
	0.6nm,0.3s,baz=104,slow=9.5,SNR=1.7						
	0.6nm,0.3s						
MKAR	Makanchi Array	69.87	323	P	P	05 12 40.7	+2.0
	0.4nm,0.6s,baz=114,slow=7.0,SNR=3.8						
	0.4nm,0.6s						
ILAR	Eielson Array	86.30	24	P	P	05 14 08.4	-0.9
	0.5nm,0.7s,baz=268,slow=5.8,SNR=4.5						
	0.5nm,0.7s						

DJA 27 05:04:33.5±1.1, **1°S**±3°×**12°1E**±°, **h21^{km}**±12^{km}, **M2.8**/6, **MLv2.8**/6, **Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APSI	Ampana	0.70	69	P	Pn	05 04 48.1	-0.1
PCI	Palu	1.18	282	P	Pn	05 04 53.6	-1.2
PCI				S	Sn	05 05 11.1	+0.8
MPSI	Mapaga	1.84	324	P	Pn	05 05 04.2	+0.3
MPSI	Mapaga	1.84	324	P	Pn	05 05 02.8	-1.1
MRSI	Marisa	1.88	30	P	Pn	05 05 04.1	-0.4
TTSI	Tana Toraja	2.21	212	P	Pn	05 05 09.9	+1.0
SPSI	Sidrap Palu	3.04	204	P	Pn	05 05 21.5	+1.1

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*NEIC **27** 05:05:23.5±1.1, 9.°42S±0.°04×117.°33E±0.°05, h91^{km}±8^{km}, mb4.4/20, Error ellipse: s-maj=8.5km s-min=2.2km az=126.0*

*DJA **27** 05:05:24.1±0.3, 10°S±4°×11°7E±°, h65^{km}±8^{km}, M4.7/22, mB5.1/5, mb4.8/10, MLv4.7/22, Mw(mB)4.5/5*

*IDC **27** 05:05:27.4±4.1, 9.°19S×117.°50E, h128^{km}±35^{km}, mb3.8/9, mbtmp4.3/12, Error ellipse: s-maj=43.3km s-min=14.5km az=70.0*

ISC 27 05:05:23.8±0.5, **9.°44S**±0.°05×**117.°38E**±0.°04, **h100^{km}, n85,** σ**1^{s}73**/91, **mb4.4**/16, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.73	33	P	Pn	05 05 41.5	0.0
PLAI	Plampang	0.73	33	P	Pn	05 05 41.5	0.0
PLAI				S	Sn	05 05 53.1	-1.6
TWSI	Taliwang, Sumb	0.86	325	P	Pn	05 05 42.2	-0.5
WBSI	Waikabubak, Su	2.00	96	P	Pn	05 05 56.4	+0.1
WBSI				S	Sn	05 06 20.6	-0.6
SRBI	Singaraja	2.53	302	P	Pn	05 06 03.3	0.0
SRBI				S	Sn	05 06 33.0	-0.6
WSI	Waingapu	2.89	95	P	Pn	05 06 08.7	+0.7
BASI	Baing, Sumba	3.25	104	P	Pn	05 06 13.7	+0.9
JAGI	Jajag, Banyuwa	3.33	287		Pn	05 06 13.5	-0.5
JAGI				Sn	Sn	05 06 51.1	-1.6
JAGI	Jajag, Banyuwa	3.33	287	P	Pn	05 06 14.0	0.0
JAGI	Jajag, Banyuwa	3.33	287	S	Sn	05 06 51.5	-1.3
JAGI	Jajag, Banyuwa	3.33	287	P	Pn	05 06 13.7	-0.3
GMJI	Gumukmas	4.06	286	P	Pn	05 06 23.0	-0.7
KMMI	Kalianget	4.13	305	P	Pn	05 06 26.5	+1.8
EDFI	Ende, Flores	4.31	81	P	Pn	05 06 28.1	+0.8
BSSI	Bau Bau, Buton	4.50	43	P	Pn	05 06 31.5	+1.7
BSSI	Bau Bau, Buton	4.50	43	P	Pn	05 06 31.4	+1.7
MMRI	Maumere	4.87	81		Pn	05 06 36.5	+1.8
MMRI	Maumere	4.87	81	P	Pn	05 06 36.6	+1.8
MMRI	Maumere	4.87	81	P	Pn	05 06 35.6	+0.9
KAPI	Kappang	4.99	28		Pn	05 06 38.3	+1.8
KAPI				Sn	Sn	05 07 31.9	-1.0
KAPI	Kappang	4.99	28	P	Pn	05 06 37.7	+1.3
	17nm,0.3s,baz=214,slow=16,SNR=12						
KAPI				S	Sn	05 07 31.2	-1.7
	48nm,0.3s,baz=280,slow=22,SNR=9.8						
KAPI	Kappang	4.99	28	P	Pn	05 06 39.2	+2.8
GRJI	Gresik	5.46	297	P	Pn	05 06 43.8	+1.0
	0.9nm181nm,1.1s						
BNSI	Bone	5.70	29	P	Pn	05 06 47.0	+1.0
	0.3nm954nm43nm,0.6s						
SPSI	Sidrap Palu	5.94	24	P	Pn	05 06 50.6	+1.3
	19nm,0.7s						
BATI	Baumata	6.24	97	P	Pn	05 06 54.2	+0.9
	137nm,0.3s,baz=306,slow=2.4,SNR=16						
BATI				S	Sn	05 08 03.1	-0.2
	33nm,0.3s,baz=18,slow=20,SNR=1.2						
BATI	Baumata	6.24	97	P	Pn	05 06 54.4	+1.0
PCJI	Pacitan	6.25	281	P	Pn	05 06 52.6	-0.9
	0.6nm63nm,1.0s						
WOJI	Wonogiri, Jawa	6.58	284	P	Pn	05 06 59.6	+1.6
	0.5nm44nm,0.7s						
SOEI	Soe	6.80	93		Pn	05 07 01.0	-0.1
SOEI	Soe	6.80	93	P	Pn	05 07 02.8	+1.7
SOEI	Soe	6.80	93	P	Pn	05 07 02.2	+1.1
	2µm182nm,0.8s						
TTSI	Tana Toraja	6.80	21	P	Pn	05 07 03.0	+2.0
UGM	Wanagama	6.95	282		Pn	05 07 00.9	-2.1
UGM	Wanagama	6.95	282	P	Pn	05 07 02.4	-0.6
UGM	Wanagama	6.95	282	P	Pn	05 07 02.7	-0.3
	0.6nm113nm,1.0s						
BBJI	Bungbulang	9.82	281	P	Pn	05 07 40.2	-2.0
FITZ	Fitzroy Crossi	11.76	138		Pn	05 08 08.5	+0.2
FITZ	Fitzroy Crossi	11.76	138	P	Pn	05 08 07.8	-0.5
	4.6nm,0.3s,baz=322,slow=5.7,SNR=33						
FITZ				S	Sn	05 10 09.1	-8.5
	25nm,0.6s,baz=238,slow=21,SNR=13						
FITZ	Fitzroy Crossi	11.76	138	P	Pn	05 08 08.3	0.0
MBWA	Marble Bar	11.87	169		Pn	05 08 09.2	-0.6
MBWA	Marble Bar	11.87	169	P	Pn	05 08 10.8	+1.1
PSA00	Pilbara Seismi	12.29	169	Pn	Pn	05 08 16.3	+0.9
KNRA	Kununurra	12.72	120		Pn	05 08 21.4	+0.3
GIRL	Giralia	13.47	193	P	Pn	05 08 30.7	-0.1
DRS	Darwin Rock St	13.60	104	P	Pn	05 08 32.7	+0.1
MTN	Manton Dam	13.91	105		Pn	05 08 35.7	-1.0
MTN	Manton Dam	13.91	105	P	Pn	05 08 35.6	-1.1
MNAI	Manna	15.18	288	Pn	Pn	05 08 50.6	-2.3
MNAI	Manna	15.18	288	P	Pn	05 08 51.2	-1.7
FAKI	Fak Fak	16.14	67	Pn	Pn	05 09 03.4	-1.5
WB0	Warramunga Arr	19.38	124	P	P	05 09 42.0	+0.1
WB0				IAmb	IAmb	05 09 46.9	
	comp=Z,14nm,0.9s						
WRA	Warramunga Arr	19.42	124	P	P	05 09 43.0	+0.7
WRA	Warramunga Arr	19.42	124	P	Pn	05 09 44.8	+0.3
	comp=Z,9.3nm,1.0s,baz=299,slow=12,SNR=39						
WRA				S	S	05 13 07.4	-9.4
	comp=Z,1.1nm,0.5s,baz=290,slow=23,SNR=6.1						
WB2	Warramunga Arr	19.43	124	P	P	05 09 43.4	+0.9
WB2				IAmb	IAmb	05 09 47.6	
	comp=Z,13nm,1.0s						
WR8	Warramunga Arr	19.56	124	P	P	05 09 44.3	+0.4
WR8				IAmb	IAmb	05 09 49.1	
	comp=Z,15nm,0.8s						
WR0	Warramunga Arr	19.60	124	P	P	05 09 45.5	+1.2
WR0				IAmb	IAmb	05 09 49.5	
	comp=Z,12nm,0.8s						
ASAR	Alice Springs	21.20	134	P	P	05 10 01.9	+0.4
ASAR	Alice Springs	21.20	134	P	P	05 10 04.5	+3.0
	comp=Z,5.9nm,0.7s,baz=314,slow=9.4,SNR=43						
ASAR				S	S	05 13 51.4	-0.4
	comp=Z,3.9nm,0.9s,baz=313,slow=24,SNR=9.0						
	comp=Z,5.9nm,0.7s						
IPM	Ipoh	21.38	310	P	P	05 10 02.5	-0.9
IPM				IAmb	IAmb	05 10 27.9	
	comp=Z,8.0nm,1.0s						
RPSI	Rantau Prapat	21.99	302	P	P	05 10 09.7	-0.2
NWAO	Narrogin (SRO)	23.37	180	P	P	05 10 41.2	+18
	comp=Z,20nm,0.5s,baz=40,slow=7.9,SNR=22						
NWAO				S	S	05 14 35.4	+6.6
	comp=Z,8.6nm,0.7s,baz=279,slow=13,SNR=1.3						
COEN	Coen	25.65	103	P	P	05 10 44.9	+0.5
COEN				IAmb	IAmb	05 10 59.6	
	comp=Z,20nm,1.2s						
PZH	PanZhiHua	38.83	337	P	P	05 12 41.8	+2.5
H08S2	Diego Garcia H	44.40	269	T	T	06 00 34.4	
	baz=95,slow=75,SNR=3.1						
H08S3	Diego Garcia H	44.41	269	T	T	06 00 31.0	
	baz=95,slow=75,SNR=8.0						
H08S1	Diego Carcia H	44.42	269	T	T	06 00 31.6	
	baz=95,slow=75,SNR=3.2						
EVN	Everest	47.51	322	P	P	05 13 49.4	-0.4
EVN				IAmb	IAmb	05 13 50.0	
	comp=Z,2.7nm,0.8s						
KSRS	Korea Array	47.69	11	P	P	05 13 49.9	-0.4
	comp=Z,0.8nm,0.6s,baz=180,slow=8.5,SNR=4.9						
	comp=Z,0.8nm,0.6s						
MJAR	Matsushiro Arr	49.76	22	P	P	05 14 04.0	-2.2
	comp=Z,2.1nm,0.7s,baz=188,slow=6.8,SNR=5.6						
	comp=Z,2.1nm,0.7s						
MJB9	Matsu-Tunnel	49.76	22	P	P	05 14 06.5	+0.3
MJB9				IAmb	IAmb	05 14 11.7	
	comp=Z,4.1nm,0.5s						
HHC	Hu-ho-hao-te	50.33	354	*e*P	P	05 14 14.3	+3.8
HHC				pmax	pmax		
	comp=Z,16nm,0.6s						
HHC				pmax	pmax		
	comp=Z,320nm,4.2s						
JSD	Sado	51.11	21	P	P	05 14 16.1	-0.2
JSD				IAmb	IAmb	05 14 16.7	
	comp=Z,6.1nm,0.7s						
JTM	Tenmabayashi	54.55	22	P	P	05 14 41.5	0.0
USRK	Ussuriysk Ar.	55.01	13	P	P	05 14 43.0	-1.8
	comp=Z,2.8nm,0.6s,baz=196,slow=7.9,SNR=4.8						
	comp=Z,2.8nm,0.6s						
SONM	Songino Array	57.85	351	P	P	05 15 05.3	+0.2
SONM				IAmb	IAmb	05 15 05.6	
	comp=Z,3.4nm,0.7s						
SONM	Songino Array	57.85	351	P	P	05 15 04.4	-0.7
	comp=Z,4.0nm,0.7s,baz=171,slow=8.8,SNR=15						
	comp=Z,4.0nm,0.7s						
MKAR	Makanchi Array	64.14	334	P	P	05 15 47.0	-0.5
	comp=Z,2.5nm,0.4s,baz=151,slow=6.6,SNR=42						
	comp=Z,2.5nm,0.4s						
KURBB	Kurchatov Arra	68.67	335	P	P	05 16 15.8	-0.5
	comp=Z,0.7nm,0.5s,baz=145,slow=5.6,SNR=9.9						
	comp=Z,0.7nm,0.5s						
ZALV	Zalesovo Beam	68.90	340	P	P	05 16 16.0	-1.6
	comp=Z,2.2nm,0.4s,baz=125,slow=5.3,SNR=8.3						
	comp=Z,2.2nm,0.4s						
YAK	Yakutsk	71.90	6	P	P	05 16 35.4	-0.3
BVAR	Borovoye Array	73.94	333	P	P	05 16 47.4	-0.6
	comp=Z,1.1nm,0.7s,baz=145,slow=6.2,SNR=7.2						
	comp=Z,1.1nm,0.7s						
AB31	Akbulak array	77.01	325	P	P	05 17 05.7	+0.1
ABKAR	Akbulak array	77.01	325	P	P	05 17 05.7	+0.1
ADK	Adak	83.03	35	P	P	05 17 38.7	+0.8

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*IDC **27** 05:08:16.4±0.8, 32.°60S×178.°40W, h0^{km}, mb4.1/6, mbtmp4.2/8, ML4.4/2, Error ellipse: s-maj=29.9km s-min=21.3km az=89.0*

*WEL **27** 05:08:16.3±0.8, 33°S±5°×17°8W±1°1, h33^{km}, M4.4/12, mB4.9/10, ML4.9/19, MLv4.6/12, Mw(mB)4.2/10, Error ellipse: s-maj=15.2km s-min=3.6km az=109.3, confirmed*

*NEIC **27** 05:08:17.4±0.6, 32.°6S±0.°1×178.°5W±0.°2, h10^{km}±1^{km}, mb4.5/18, Error ellipse: s-maj=27.9km s-min=18.6km az=94.0*

ISC 27 05:08:20.6±0.7, **32.°66S**±0.°06×**178.°6W**±0.°1, **h33^{km}, n69,** σ**1^{s}35**/85, **mb4.5**/15, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.44	10	P	Pn	05 09 10.5	-1.3
GLKZ				S	Sn	05 09 51.4	0.0
RAO	Raoul Island	3.45	10	Pn	Pn	05 09 10.7	-1.3
RAO	Raoul Island	3.45	10	Pn	Pn	05 09 10.8	-1.1
	113nm,0.3s,baz=270,slow=20,SNR=2.9						
RAO				Sn	Sn	05 09 49.2	-2.5
	51nm,0.3s,baz=41,slow=19,SNR=1.6						
	222nm,0.3s						
RIZ	Raoul Island	3.45	10	P	Pn	05 09 10.6	-1.4
MXZ	Matakaoa Point	5.51	207	P	Pn	05 09 39.8	-0.4
MXZ				S	Sn	05 10 43.2	+0.7
WMGZ	Waiomatatini S	5.70	205	P	Pn	05 09 41.0	-1.9
PKGZ	Pakihiroa	5.86	207	P	Pn	05 09 44.5	-0.7
PKGZ				S	Sn	05 10 51.7	+0.5
HAZ	Te Kaha	5.89	209	P	Pn	05 09 44.9	-0.5
HAZ				S	Sn	05 10 53.0	+1.2
PUZ	Puketiti	5.98	205	P	Pn	05 09 45.2	-1.6
PUZ				S	Sn	05 10 52.6	-1.6
RUGZ	Raukumara Rang	6.11	209	P	Pn	05 09 47.6	-1.0
RUGZ				S	Sn	05 10 58.3	+1.0
TWGZ	Tauwhareparae	6.17	206	P	Pn	05 09 49.8	+0.4
TWGZ				S	Sn	05 10 59.5	+0.6
TKGZ	Te Karaka	6.45	206	P	Pn	05 09 52.9	-0.3
TKGZ				S	Sn	05 11 04.1	-1.6
MWZ	Matawai	6.49	208	P	Pn	05 09 52.1	-1.6
MWZ				S	Sn	05 11 07.4	+0.8
URZ	Urewera	6.59	211	Pn	Pn	05 09 55.0	-0.2
	3.0nm,0.3s,baz=249,slow=3.8,SNR=43						
URZ				Sn	Sn	05 11 07.1	-2.1
	4.6nm,0.3s,baz=182,slow=22,SNR=5.6						
	7.0nm,0.3s						
RAGZ	Rawiri	6.67	208	P	Pn	05 09 54.7	-1.5
RAGZ				S	Sn	05 11 10.4	-0.8
WCZ	Waipu Caves	6.70	239	P	Pn	05 10 04.0	+7.4
RIGZ	Rimuhau	6.72	205	P	Pn	05 09 56.0	-0.9
RIGZ				S	Sn	05 11 11.2	-1.2
PRGZ	Paritu Road	6.87	204	S	Sn	05 11 15.3	-0.8
EPAZ	Eden Park BICE	6.91	231	S	Sb	05 11 31.6	-10
MUGZ	Murupara	6.92	212	P	Pn	05 09 59.5	-0.2
MUGZ				S	Sn	05 11 16.2	-1.2
SNGZ	Shannon Statio	6.95	207	P	Pn	05 09 59.7	-0.3
SNGZ				S	Sn	05 11 17.2	-0.7
OUZ	Omahuta	6.98	246	P	Pn	05 10 06.5	+6.1
MHGZ	Mahia Peninsul	7.07	203	P	Pn	05 09 57.8	-4.0
MHGZ				S	Sn	05 11 16.6	-4.4
RAHZ	Arahi	7.16	208	P	Pn	05 10 03.0	0.0
RAHZ				S	Sn	05 11 21.9	-1.2
NMHZ	Naumai	7.43	209	P	Pn	05 10 05.9	-0.8
NMHZ				S	Sn	05 11 28.7	-1.1
BKZ	Black Stump Fm	7.62	210	P	Pn	05 10 07.3	-1.9
BKZ				S	Sn	05 11 32.8	-1.6
KWHZ	Kaweka Forest	7.86	209	P	Pn	05 10 11.1	-1.5
NTVZ	North Tongarir	7.93	214	P	Pn	05 10 12.9	-0.8
NNVZ	North Ngauruho	7.99	214	P	Pn	05 10 16.7	+2.3
OTVZ	Oturere	7.99	214	P	Pn	05 10 13.4	-1.0
KAHZ	Kahuranaki	8.00	206	P	Pn	05 10 12.6	-1.9
SNVZ	South Ngauruho	8.02	214	P	Pn	05 10 14.2	-0.6
FWVZ	Far West T-bar	8.11	214	P	Pn	05 10 16.7	+0.5
WNVZ	Wahianoa	8.15	214	P	Pn	05 10 15.5	-1.2
PNHZ	Pukenui	8.37	209	P	Pn	05 10 16.2	-3.4
ARMA	Armidale	25.44	267	P	P	05 13 45.5	0.0
ARMA				IAmb	IAmb	05 14 01.2	
	comp=Z,13nm,1.2s						
EIDS	Eidsvold	27.43	277	P	P	05 14 02.8	-0.7
TOO	Toolangi	29.67	250	P	P	05 14 22.0	-1.2
TOO				IAmb	IAmb	05 14 36.5	
	comp=Z,6.7nm,1.4s						
STKA	Stephens Creek	33.54	260	P	P	05 14 57.0	-0.3
CTAO	Charters Tower	33.74	283	P	P	05 14 58.4	-0.7
CTAO				IAmb	IAmb	05 15 05.8	
	comp=Z,5.7nm,0.6s						
BBOO	Buckleboo	37.92	257	P	P	05 15 34.8	-0.1
BBOO				IAmb	IAmb	05 16 00.3	
	comp=Z,7.3nm,0.9s						
COEN	Coen	39.47	289	P	P	05 15 47.7	-0.3
COEN				IAmb	IAmb	05 16 06.3	
	comp=Z,13nm,1.1s						
ASAR	Alice Springs	42.54	270	P	P	05 16 15.6	+2.3
	comp=Z,1.3nm,0.4s,baz=108,slow=7.7,SNR=6.3						
	comp=Z,1.3nm,0.4s						
WR8	Warramunga Arr	43.59	275	P	P	05 16 21.6	-0.2
WR8				IAmb	IAmb	05 16 36.4	
	comp=Z,8.3nm,1.1s						
WRAB	Tennant Creek	43.73	275	P	P	05 16 23.0	+0.1
WRAB				IAmb	IAmb	05 16 25.9	
	comp=Z,5.8nm,0.7s						
WRA	Warramunga Arr	43.73	275	P	P	05 16 22.1	-0.9
WRA	Warramunga Arr	43.73	275	P	P	05 16 25.0	+2.0
	comp=Z,5.8nm,0.5s,baz=115,slow=7.6,SNR=23						
	comp=Z,5.8nm,0.5s						
WB0	Warramunga Arr	43.77	275	P	P	05 16 23.4	+0.2
FORT	Forrest	45.02	257	P	P	05 16 33.6	+0.5
FORT				IAmb	IAmb	05 16 41.0	
	comp=Z,9.0nm,0.9s						
VNDA	Vanda	45.80	186	P	P	05 16 38.5	-0.1
VNDA	Vanda	45.80	186	P	P	05 16 40.7	+2.0
	comp=Z,0.5nm,0.5s,baz=11,slow=5.2,SNR=7.4						
	comp=Z,0.5nm,0.5s						
VNDA	Vanda	45.80	186	P	P	05 16 38.5	+2.3
MTN	Manton Dam	49.88	281	P	P	05 17 10.8	-0.2
FITZ	Fitzroy Crossi	51.89	272	P	P	05 17 26.2	0.0
FITZ	Fitzroy Crossi	51.89	272	P	P	05 17 27.8	+1.6
	comp=Z,4.6nm,0.8s,baz=125,slow=6.2,SNR=6.0						
	comp=Z,4.6nm,0.8s						
CASY	Casey	52.91	209	P	P	05 17 33.6	+0.5
CASY				IAmb	IAmb	05 17 51.7	
	comp=Z,8.9nm,1.2s						
QSPA	South Pole Qui	57.45	180	P	P	05 18 06.5	+0.5
QSPA				IAmb	IAmb	05 18 23.4	
	comp=Z,2.3nm,0.7s						
QSPA	South Pole Qui	57.45	180	P	P	05 18 07.7	+1.7
	comp=Z,1.4nm,0.9s,baz=22,slow=1.3,SNR=5.8						
	comp=Z,1.4nm,0.9s						
BELA	Belgrano 2	67.62	172	P	P	05 19 13.8	+0.3
SNAA	Sanae	75.91	179	P	P	05 20 04.3	+0.8
	comp=Z,1.3nm,1.0s,baz=146,slow=3.6,SNR=2.4						
	comp=Z,1.3nm,1.0s						
MKAR	Makanchi Array	118.82	309	PKP	PKiKP	05 27 05.8	+0.6
	comp=Z,0.2nm,0.5s,baz=17,slow=1.3,SNR=3.9						
BVAR	Borovoye Array	127.65	315	PKP	PKiKP	05 27 22.1	-0.3
	comp=Z,0.9nm,0.5s,baz=96,slow=2.9,SNR=5.4						
FINES	FINESS Array B	147.07	338	PKPbc	PKiKP	05 28 00.5	-1.2
	comp=Z,5.0nm,0.7s,baz=45,slow=4.1,SNR=24						
NB2	NORSAR Subarra	150.90	350	PKP	PKiKP	05 28 10.2	+0.5
	comp=Z,0.4nm,0.5s,baz=16,slow=2.6						
NOA	NORSAR Array B	150.90	350	PKPbc	PKiKP	05 28 09.7	0.0
	comp=Z,0.7nm,0.6s,baz=15,slow=2.5,SNR=3.9						
HFS	Hagfors	151.34	347	PKPbc	PKiKP	05 28 09.9	-0.7
	comp=Z,1.4nm,0.5s,baz=48,slow=2.2,SNR=4.2						
MMAI	Mount Meron Ar	151.51	280	PKPbc	PKiKP	05 28 13.4	+1.6
	comp=Z,1.7nm,0.5s,baz=126,slow=2.5,SNR=3.7						
AKASG	Malin Array Be	152.74	320	PKPbc	PKiKP	05 28 14.7	+1.0
	comp=Z,0.6nm,0.4s,baz=46,slow=2.9,SNR=4.7						
BRTR	Keskin Array B	153.15	294	PKPbc	PKiKP	05 28 16.1	+0.9
	comp=Z,0.9nm,0.5s,baz=144,slow=3.8,SNR=4.5						

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*IDC **27** 05:14:17.3±0.8, 32.°63S×178.°41W, h0^{km}, mb4.2/4, mbtmp4.2/5, ML4.1/1, Error ellipse: s-maj=32.6km s-min=26.1km az=79.0*

*WEL **27** 05:14:18.2±1.5, 33°S±7°×17°8W±2°6, h33^{km}, M4.3/14, mB4.8/12, ML5.0/13, MLv4.9/13, Mw(mB)4.1/14, Error ellipse: s-maj=35.1km s-min=5.6km az=101.7, confirmed*

*NEIC **27** 05:14:19.0±0.8, 32.°8S±0.°1×178.°3W±0.°2, h10^{km}±2^{km}, mb4.5/17, Error ellipse: s-maj=24.6km s-min=22.3km az=111.0*

ISC 27 05:14:21.3±0.6, **32.°79S**±0.°06×**178.°3W**±0.°1, **h32^{km}, n66,** σ**1^{s}18**/71, **mb4.5**/14, **3C, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.52	5	P	Pn	05 15 11.9	-2.0
GLKZ				S	Sn	05 15 52.6	-1.8
PKGZ	Pakihiroa	5.89	210	P	Pn	05 15 46.0	-0.4
HAZ	Te Kaha	5.92	212	P	Pn	05 15 47.0	+0.2
PUZ	Puketiti	5.99	207	P	Pn	05 15 46.2	-1.6
RUGZ	Raukumara Rang	6.14	212	P	Pn	05 15 49.1	-0.9
TWGZ	Tauwhareparae	6.19	209	P	Pn	05 15 49.9	-0.7
WHRZ	Whale Island	6.38	216	P	Pn	05 15 54.0	+0.8
TKGZ	Te Karaka	6.47	208	P	Pn	05 15 53.7	-0.6
MWZ	Matawai	6.51	211	P	Pn	05 15 53.8	-1.2
URZ	Urewera	6.64	213	Pn	Pn	05 15 55.6	-1.1
	3.5nm,0.3s,baz=257,slow=3.8,SNR=32						
URZ				Sn	Sn	05 17 08.4	-2.8
	4.4nm,0.3s,baz=82,slow=20,SNR=8.2						
	8.2nm,0.2s						
URZ	Urewera	6.64	213	P	Pn	05 15 56.2	-0.5
URZ				S	Sn	05 17 09.6	-1.5
SNGZ	Shannon Statio	6.97	210	P	Pn	05 16 01.3	+0.1
SNGZ				S	Sn	05 17 18.6	-0.8
MUGZ	Murupara	6.97	214	P	Pn	05 16 00.7	-0.6
RTZ	Ruatahuna	6.99	212		Pn	05 16 00.7	-0.8
RTZ	Ruatahuna	6.99	212	P	Pn	05 16 00.8	-0.7
OUZ	Omahuta	7.19	248	P	Pn	05 16 06.7	+2.5
RAHZ	Arahi	7.19	210	P	Pn	05 16 04.5	+0.2
MTHZ	Maungataniwha	7.24	212	P	Pn	05 16 04.3	-0.7
MTHZ				S	Sn	05 17 24.1	-2.1
NMHZ	Naumai	7.46	211	P	Pn	05 16 08.0	0.0
BKZ	Black Stump Fm	7.66	212	P	Pn	05 16 09.2	-1.4
MCHZ	McNeill Hill	7.80	210	P	Pn	05 16 12.3	-0.3
KWHZ	Kaweka Forest	7.90	211	P	Pn	05 16 11.8	-2.2
TMVZ	Te Maari	7.99	216	P	Pn	05 16 13.9	-1.4
NTVZ	North Tongarir	7.99	216	P	Pn	05 16 14.0	-1.3
ETVZ	East Tongariro	8.00	216	P	Pn	05 16 14.3	-1.1
NNVZ	North Ngauruho	8.05	216	P	Pn	05 16 18.2	+2.1
OTVZ	Oturere	8.05	216	P	Pn	05 16 14.8	-1.2
SNVZ	South Ngauruho	8.08	216	P	Pn	05 16 15.8	-0.7
FWVZ	Far West T-bar	8.17	216	P	Pn	05 16 18.1	+0.2
WNVZ	Wahianoa	8.21	216	P	Pn	05 16 17.0	-1.3
PNHZ	Pukenui	8.40	211	P	Pn	05 16 18.0	-2.8
PRHZ	Porangahau	8.52	207	P	Pn	05 16 20.7	-1.7
LTZ	Lake Taylor	12.47	214	P	Pn	05 17 14.8	-1.7
ARMA	Armidale	25.72	267	P	P	05 19 48.5	-0.5
ARMA				IAmb	IAmb	05 19 56.0	
	comp=Z,7.8nm,1.1s						
EIDS	Eidsvold	27.73	277	P	P	05 20 05.6	-1.4
CTAO	Charters Tower	34.04	283	P	P	05 21 02.4	-0.3
COEN	Coen	39.77	289	P	P	05 21 51.1	-0.3
COEN				IAmb	IAmb	05 22 06.6	
	comp=Z,7.3nm,0.9s						
ASAR	Alice Springs	42.82	270	P	P	05 22 16.1	-0.3
	comp=Z,2.7nm,0.7s,baz=106,slow=7.6,SNR=24						
	comp=Z,2.7nm,0.7s						
WR8	Warramunga Arr	43.88	275	P	P	05 22 25.0	0.0
WR8				IAmb	IAmb	05 22 26.2	
	comp=Z,6.7nm,0.7s						
WRAB	Tennant Creek	44.02	275	P	P	05 22 26.2	+0.1
WRAB				IAmb	IAmb	05 22 34.4	
	comp=Z,12nm,1.1s						
WRA	Warramunga Arr	44.02	275	P	P	05 22 26.0	-0.1
WRA	Warramunga Arr	44.02	275	P	P	05 22 25.8	-0.4
	comp=Z,8.3nm,0.6s,baz=115,slow=7.8,SNR=110						
	comp=Z,8.3nm,0.6s						
WB0	Warramunga Arr	44.05	275	P	P	05 22 26.4	0.0
FORT	Forrest	45.27	257	P	P	05 22 35.8	-0.2
FORT				IAmb	IAmb	05 22 48.0	
	comp=Z,9.4nm,1.0s						
SBA	Scott Base	45.65	184	P	P	05 22 39.1	+0.8
VNDA	Vanda	45.71	186	P	P	05 22 39.0	+0.2
KNRA	Kununurra	50.71	276	P	P	05 23 18.3	+0.1
KNRA				IAmb	IAmb	05 23 42.0	
	comp=Z,7.9nm,1.0s						
FITZ	Fitzroy Crossi	52.17	272	P	P	05 23 29.1	-0.1
CASY	Casey	52.94	209	P	P	05 23 35.3	+1.2
CASY				IAmb	IAmb	05 23 53.6	
	comp=Z,5.9nm,1.0s						
NWAO	Narrogin (SRO)	53.38	251	P	P	05 23 37.8	-0.1
QSPA	South Pole Qui	57.33	180	P	P	05 24 06.6	+0.6
QSPA				IAmb	IAmb	05 24 20.7	
	comp=Z,8.5nm,1.1s						
QSPA	South Pole Qui	57.33	180	P	P	05 24 08.9	+2.8
	comp=Z,2.4nm,0.9s,baz=59,slow=1.2,SNR=6.8						
	comp=Z,2.4nm,0.9s						
BELA	Belgrano 2	67.46	172	P	P	05 25 14.2	+0.8
BELA				IAmb	IAmb	05 25 39.6	
	comp=Z,3.7nm,1.1s						
SNAA	Sanae	75.78	179	⇑P	P	05 26 03.8	+0.1
	comp=Z,24nm,0.7s						
SNAA	Sanae	75.78	179	P	P	05 26 05.2	+1.6
	comp=Z,0.7nm,1.0s,baz=168,slow=19,SNR=11						
	comp=Z,0.7nm,1.0s						
VNA3	Neumayer Olymp	75.95	176	⇑P	P	05 26 05.1	+0.6
	comp=Z,5.5nm,0.7s						
VNA2	Neumayer--Watz	76.38	177	⇑P	P	05 26 08.7	+1.7
	comp=Z,5.5nm,0.6s,baz=172,slow=5.4						
MKAR	Makanchi Array	119.12	309	PKP	PKiKP	05 33 07.2	+0.5
	comp=Z,0.5nm,0.6s,baz=219,slow=2.1,SNR=4.3						

KURBB	Kurchatov Arra	122.55	313	PKP	PKPdf	05 33 12.9	-0.1
	comp=Z,0.4nm,0.3s,baz=116,slow=1.6,SNR=5.6						
BVAR	Borovoye Array	127.93	314	PKP	PKiKP	05 33 24.4	+0.4
	comp=Z,1.2nm,0.6s,baz=72,slow=4.8,SNR=5.8						
FINES	FINESS Array B	147.29	339	PKPbc	PKPbc	05 34 01.8	+1.0
	comp=Z,11nm,0.9s,baz=45,slow=3.7,SNR=27						
NOA	NORSAR Array B	151.06	350	PKPbc	PKPbc	05 34 09.6	-0.8
	comp=Z,0.7nm,0.6s,baz=17,slow=4.2,SNR=3.8						
HFS	Hagfors	151.52	347	PKPbc	PKiKP	05 34 11.9	+0.1
	comp=Z,2.3nm,0.6s,baz=31,slow=3.5,SNR=3.8						
MMAI	Mount Meron Ar	151.80	280	PKPbc	PKiKP	05 34 13.9	+0.5
	comp=Z,1.2nm,0.3s,baz=88,slow=6.1,SNR=5.3						
AKASG	Malin Array Be	153.01	320	PKPbc	PKiKP	05 34 15.4	+0.3
	comp=Z,1.0nm,0.5s,baz=54,slow=3.1,SNR=6.3						
BRTR	Keskin Array B	153.46	294	PKPbc	PKiKP	05 34 16.9	+0.2
	comp=Z,1.2nm,0.5s,baz=138,slow=3.3,SNR=6.4						

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*IDC **27** 05:15:38.4±0.9, 32.°13S×178.°63W, h0^{km}, mb4.5/4, mbtmp4.5/4, Error ellipse: s-maj=37.9km s-min=29.7km az=55.0*

*WEL **27** 05:15:40.5±1.1, 33°S±10°×17°8W±2°1, h33^{km}, M4.7/11, mB5.1/6, ML5.2/12, MLv5.0/11, Mw(mB)4.5/8, Error ellipse: s-maj=29.1km s-min=6.5km az=111.9, confirmed*

*NEIC **27** 05:16:20.7±2.1, 33.°49S±0.°09×179.°3E±0.°2, h277^{km}±13^{km}, mb4.3/17, Error ellipse: s-maj=21.7km s-min=10.3km az=115.0*

ISC 27 05:15:40.5±0.9**, 32.°83S**±0.°07×**178.°2W**±0.°2**, h34**^{km}**, n54, σ1**^{s}**49**/49**, mb4.7**/14**, 4C, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.56	3	P	Pn	05 16 32.3	-1.1
GLKZ				S	Sn	05 17 11.7	-2.5
RAO	Raoul Island	3.57	3	Pn	Pb	05 17 35.3	+52
RUGZ	Raukumara Rang	6.15	212	P	Pn	05 17 10.4	+1.5
RUGZ				S	Sn	05 18 18.1	0.0
MWZ	Matawai	6.52	211	P	Pn	05 17 12.7	-1.3
MWZ				S	Sn	05 18 27.1	0.0
URZ	Urewera	6.65	214	Sn	Sn	05 18 29.8	-0.4
	8.5nm,0.3s,baz=145,slow=18,SNR=1.7						
SNGZ	Shannon Statio	6.97	210	P	Pn	05 17 19.7	-0.5
SNGZ				S	Sn	05 18 37.5	-0.8
MUGZ	Murupara	6.98	215	P	Pn	05 17 17.6	-2.7
MHGZ	Mahia Peninsul	7.07	206	P	Pn	05 17 20.2	-1.3
RAHZ	Arahi	7.19	211	P	Pn	05 17 24.3	+1.1
RAHZ				S	Sn	05 18 43.5	-0.2
OUZ	Omahuta	7.24	249	P	Pn	05 17 26.9	+3.0
NMHZ	Naumai	7.46	212	P	Pn	05 17 27.7	+0.6
NMHZ				S	Sn	05 18 50.3	-0.2
ARHZ	Aropaoanui	7.52	210	P	Pn	05 17 28.4	+0.7
BKZ	Black Stump Fm	7.66	213	P	Pn	05 17 31.6	+1.9
KWHZ	Kaweka Forest	7.90	212	P	Pn	05 17 33.7	+0.7
KWHZ				S	Sn	05 18 58.8	-2.5
OTVZ	Oturere	8.06	217	P	Pn	05 17 34.8	-0.4
KRHZ	Kereru	8.11	211	P	Pn	05 17 37.5	+1.7
KRHZ				S	Sn	05 19 01.4	-4.9
PLWZ	Palliser	10.18	209	Pn	Pn	05 18 28.0	+24
SNZO	South Karori	10.20	212	Pn	Pn	05 18 26.9	+23
TCW	Tory Channel	10.31	214	Pn	Pn	05 18 27.9	+22
RAR	Rarotonga	20.02	59	P	Pn	05 20 54.1	+42
EIDS	Eidsvold	27.81	277	P	P	05 21 26.2	-0.4
CTAO	Charters Tower	34.12	283	P	P	05 22 21.5	-0.8
BBOO	Buckleboo	38.23	257	P	P	05 22 55.6	-1.7
BBOO				IAmb	IAmb	05 23 24.8	
	comp=Z,8.3nm,0.9s						
COEN	Coen	39.86	289	P	P	05 23 11.9	+0.8
COEN				IAmb	IAmb	05 23 27.8	
	comp=Z,11nm,1.0s						
ASAR	Alice Springs	42.89	270	P	P	05 23 35.1	-0.9
ASAR	Alice Springs	42.89	270	P	P	05 23 35.4	-0.6
	comp=Z,6.5nm,0.8s,baz=114,slow=7.8,SNR=10						
	comp=Z,6.5nm,0.8s						
WR8	Warramunga Arr	43.96	275		P	05 23 44.8	+0.3
WR8				IAmb	IAmb	05 23 46.3	
	comp=Z,14nm,0.8s						
WRAB	Tennant Creek	44.10	275	P	P	05 23 45.9	+0.2
WRAB				IAmb	IAmb	05 23 46.9	
	comp=Z,13nm,0.7s						
WRA	Warramunga Arr	44.10	275		P	05 23 46.0	+0.3
WRA	Warramunga Arr	44.10	275	P	P	05 23 45.5	-0.2
	comp=Z,14nm,0.6s,baz=116,slow=7.6,SNR=28						
	comp=Z,14nm,0.6s						
WB0	Warramunga Arr	44.13	275		P	05 23 46.0	0.0
FORT	Forrest	45.34	257	P	P	05 23 53.4	-2.0
FORT				IAmb	IAmb	05 24 11.4	
	comp=Z,10nm,0.8s						
MTN	Manton Dam	50.26	281	P	P	05 24 32.5	-1.2
KNRA	Kununurra	50.79	276	P	P	05 24 36.5	-1.2
KNRA				IAmb	IAmb	05 24 48.1	
	comp=Z,13nm,1.1s						
FITZ	Fitzroy Crossi	52.25	272	P	P	05 24 48.0	-0.6
CASY	Casey	52.94	209	P	P	05 24 55.6	+2.5
CASY				IAmb	IAmb	05 24 55.8	
	comp=Z,6.1nm,0.8s						
MBWA	Marble Bar	55.85	265	P	P	05 25 13.4	-1.5
QSPA	South Pole Qui	57.29	180	P	P	05 25 35.2	+11
QSPA				IAmb	IAmb	05 25 51.3	
	comp=Z,13nm,1.1s						
QSPA	South Pole Qui	57.29	180	P	P	05 25 31.7	+7.1
	comp=Z,1.9nm,0.7s,baz=14,slow=3.4,SNR=5.9						
	comp=Z,1.9nm,0.7s						
BELA	Belgrano 2	67.41	172	P	P	05 26 44.3	+12
BELA				IAmb	IAmb	05 26 46.5	
	comp=Z,5.7nm,1.1s						
TROLL	Troll, Antarti	75.45	180	⇑P	P	05 27 31.2	+11
	comp=Z,265nm,1.1s						
SNAA	Sanae	75.74	178	⇑P	P	05 27 31.8	+10
	comp=Z,43nm,0.6s						
SNAA	Sanae	75.74	178	P	P	05 27 30.9	+8.6
	comp=Z,2.8nm,0.9s,baz=203,slow=7.7,SNR=5.9						
	comp=Z,2.8nm,0.9s						
VNA3	Neumayer Olymp	75.90	176	⇑P	P	05 27 34.0	+11
	comp=Z,14nm,0.7s						
VNA2	Neumayer--Watz	76.33	177	⇑P	P	05 27 35.0	+9.4
	comp=Z,8.2nm,0.6s,baz=173,slow=5.5						
MKAR	Makanchi Array	119.20	309	PKP	PKiKP	05 34 26.8	+1.1
	comp=Z,0.7nm,0.7s,baz=118,slow=5.2,SNR=5.1						
KURBB	Kurchatov Arra	122.64	313	PKP	PKiKP	05 34 32.9	+0.7
	comp=Z,1.3nm,0.7s,baz=112,slow=1.7,SNR=7.8						
BVAR	Borovoye Array	128.02	314	PKP	PKiKP	05 34 44.0	+1.0
	comp=Z,1.7nm,0.6s,baz=79,slow=3.1,SNR=7.3						
FINES	FINESS Array B	147.36	339	PKPbc	PKPab	05 35 21.5	-0.2
	comp=Z,16nm,0.8s,baz=57,slow=5.1,SNR=13						
NB2	NORSAR Subarra	151.12	351	PKP	PKiKP	05 35 31.1	+1.2
	comp=Z,2.7nm,0.8s,baz=14,slow=4.1						
NOA	NORSAR Array B	151.12	351	PKPbc	PKiKP	05 35 31.1	+1.2
	comp=Z,1.6nm,0.7s,baz=15,slow=2.5,SNR=5.9						
MMAI	Mount Meron Ar	151.89	280	PKPbc	PKiKP	05 35 34.4	+1.9
	comp=Z,3.2nm,0.5s,baz=83,slow=3.5,SNR=7.3						
AKASG	Malin Array Be	153.10	320	PKPbc	PKiKP	05 35 35.4	+1.2
	comp=Z,1.6nm,0.6s,baz=64,slow=2.1,SNR=7.0						
BRTR	Keskin Array B	153.55	294	PKPbc	PKiKP	05 35 36.9	+1.1
	comp=Z,1.7nm,0.6s,baz=145,slow=3.9,SNR=7.8						

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*NEIC **27** 05:31:25.5±0.6, 18.°3N±0.°3×67.°9W±0.°1, h118^{km}±13^{km}, ML2.1/20, Md3.0/14(RSPR), Error ellipse: s-maj=46.2km s-min=8.7km az=196.0*

*RSPR **27** 05:31:26.8, 18.°28N×67.°86W, h109^{km}±1^{km}, MD3.0/14*

*SDD **27** 05:31:27.9±1.2, 18.°05N×67.°98W, h86^{km}±14^{km}, MD3.1, ML1.9, MW2.2*

ISC 27 05:31:25.5±2.0**, 18.°2N**±0.°1×**67.°92W**±0.°05**, h110**^{km}±12^{km}**, n45, σ0**^{s}**80**/60**, 15C-1D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.46	65		Pn	05 31 42.4	+0.3
IDE					Sn	05 31 54.9	+0.3
IDE	Isla Desecheo	0.46	65	⇑eP	Pn	05 31 42.4	+0.3
IDE	Isla Desecheo	0.46	65	eS	Sn	05 31 54.9	+0.3
CRPR	Cabo Rojo, PR	0.79	103		Pn	05 31 45.1	+0.5
CRPR				IAML		05 31 56.9	
	comp=N,27nm,2.2s						
CRPR	Cabo Rojo, PR	0.79	103	⇑eP	Pn	05 31 45.0	+0.5
CRPR	Cabo Rojo, PR	0.79	103	eS	Sn	05 31 59.9	+0.9
CRPR	Cabo Rojo, PR	0.79	103	ePg	Pn	05 31 45.1	+0.5
CRPR				eSg	Sn	05 31 56.8	-2.2
CRPR				IAML		05 31 57.3	
	comp=N,28nm,2.2s						
AGPR	Aguadilla, PR	0.81	70		Pn	05 31 45.2	+0.4
AGPR					Sn	05 32 00.0	+0.6
AGPR				IAML		05 32 32.1	
	comp=E,62nm,1.1s						
AGPR				IAML		05 32 32.5	
	comp=N,53nm,2.0s						
AGPR	Aguadilla, PR	0.81	70	⇑eP	Pn	05 31 45.4	+0.6
AGPR	Aguadilla, PR	0.81	70	eS	Sn	05 31 59.4	0.0
AGPR	Aguadilla, PR	0.81	70	ePg	Pn	05 31 45.7	+0.8
AGPR				eSg	Sn	05 31 59.0	-0.4
AGPR				IAML		05 32 00.0	
	comp=N,63nm,2.0s						
HIDR	Higuey Centro	0.86	298	ePg	Pn	05 31 44.8	-0.5
HIDR				eSg	Sn	05 31 58.1	-2.1
HIDR				IAML		05 32 01.6	
	comp=N,49nm,0.2s						
MLPR	Magueyes Islan	0.86	105	⇑eP	Pn	05 31 45.7	+0.5
MLPR	Magueyes Islan	0.86	105	eS	Sn	05 32 00.4	+0.3
MLPR	Magueyes Islan	0.86	105	⇑ePg	Pn	05 31 44.5	-0.8
MLPR				eSg	Sn	05 31 58.5	-1.7
MLPR				IAML		05 32 10.1	
	comp=N,6.8nm,3.1s						
AOPR	Arecibo Observ	1.11	82		Pn	05 31 48.1	+0.2
AOPR					Sn	05 32 04.9	0.0
AOPR				IAML		05 32 07.0	
	comp=N,42nm,0.4s						
AOPR	Arecibo Observ	1.11	82	⇑eP	Pn	05 31 48.5	+0.5
AOPR	Arecibo Observ	1.11	82	eS	Sn	05 32 04.9	0.0
AOPR	Arecibo Observ	1.11	82	ePg	Pn	05 31 48.5	+0.5
AOPR				eSg	Sn	05 32 03.8	-1.1
AOPR				IAML		05 32 06.2	
	comp=N,32nm,0.1s						
UUPR	Utuado, UPR, P	1.14	87		Pn	05 31 48.2	0.0
UUPR					Sn	05 32 05.1	-0.2
UUPR	Utuado, UPR, P	1.14	87	⇑eP	Pn	05 31 49.3	+1.2
UUPR	Utuado, UPR, P	1.14	87	eS	Sn	05 32 05.1	-0.2
OBIP	Obispado Ponce	1.25	97		Pn	05 31 49.7	+0.2
OBIP					Sn	05 32 07.9	+0.3
OBIP				IAML		05 32 08.7	
	comp=N,21nm,2.2s						
OBIP	Obispado Ponce	1.25	97	⇑eP	Pn	05 31 50.9	+1.5
OBIP	Obispado Ponce	1.25	97	eS	Sn	05 32 08.0	+0.3
CELP	Cerrillos	1.28	95		Pn	05 31 49.6	-0.1
CELP					Sn	05 32 07.8	-0.2
CELP	Cerrillos	1.28	95	⇑eP	Pn	05 31 50.3	+0.6
CELP	Cerrillos	1.28	95	eS	Sn	05 32 08.6	+0.5
CELP	Cerrillos	1.28	95	⇓ePg	Pn	05 31 51.2	+1.5
CELP				eSg	Sn	05 32 07.5	-0.6
CELP				IAML		05 32 12.3	
	comp=N,10nm,0.1s						
MIDR	Miches	1.33	306	⇑eP	Pn	05 31 51.3	+0.9
MIDR	Miches	1.33	306	eS	Sn	05 32 10.1	+1.0
EMPR	Esperanza - Ma	1.35	78		Pn	05 31 49.4	-1.1
EMPR					Sn	05 32 08.9	-0.5
EMPR	Esperanza - Ma	1.35	78	⇑eP	Pn	05 31 50.0	-0.5
EMPR	Esperanza - Ma	1.35	78	eS	Sn	05 32 09.1	-0.3
ECPR	Experimental S	1.48	85	⇑eP	Pn	05 31 52.1	0.0
ECPR	Experimental S	1.48	85	eS	Sn	05 32 12.0	-0.3
GCPR	Guaynabo City	1.75	86		Pn	05 31 54.8	-0.5
GCPR				IAML		05 32 10.5	
	comp=N,13nm,2.6s						
GCPR					Sn	05 32 16.8	-1.3
GCPR				IAML		05 32 20.6	
	comp=E,11nm,1.3s						
GCPR	Guaynabo City	1.75	86	⇑eP	Pn	05 31 55.0	-0.3
GCPR	Guaynabo City	1.75	86	eS	Sn	05 32 16.3	-1.7
PDPR	Patillas Dam,	1.81	95	Pn	Pn	05 31 55.9	-0.2
PDPR				IAML		05 32 22.5	
	comp=N,9.8nm,0.5s						
PDPR	Patillas Dam,	1.81	95	⇑eP	Pn	05 31 56.7	+0.6
PDPR	Patillas Dam,	1.81	95	eS	Sn	05 32 20.2	+0.8
HUMP	Col San Antoni	1.96	91		Pn	05 31 57.6	-0.5
HUMP					Sn	05 32 23.0	+0.1
HUMP				IAML		05 32 25.3	
	comp=E,16nm,0.2s						
HUMP				IAML		05 33 13.1	
	comp=N,10nm,2.4s						
HUMP	Col San Antoni	1.96	91	⇑eP	Pn	05 31 59.0	+1.0
HUMP	Col San Antoni	1.96	91	eS	Sn	05 32 23.1	+0.2

KRSC 27 05:39:16.4±0.9**, 56.°01N**×**164.°11E, h15**^{km}±13^{km}**, Ml3.5, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.75	286	eP	Pg	05 39 30.5	-0.6
KBTR				eS	Sg	05 39 41.0	0.0
KBG	Krutoberegovo	0.83	288	eP	Pb	05 39 31.6	-0.8
KBG				eS	Sg	05 39 43.3	0.0
BKI	Bering	1.33	127	eP	Pn	05 39 40.1	-0.2
BKI				eS	Sb	05 39 57.9	+0.2
SMKR	Semkarok	1.58	292	eP	Pn	05 39 43.6	-0.3
ZLN	Zelenaya	1.86	272	eP	Pb	05 39 49.6	-0.6
BZGR	Bezymyannyi-Gr	1.92	269	eP	Pb	05 39 50.0	-1.2
KLY	Klyuchi	1.96	280	eP	Pn	05 39 47.7	-1.3
MKZ	Mys Kozlova	2.00	224	eP	Pn	05 39 49.8	+0.3
BZWR	Bezymyannyi-We	2.03	270	eP	Pb	05 39 52.9	-0.2
KIRR	Kirishev	2.12	270	eP	Pn	05 39 52.7	+1.3
KPT	Kopyto	2.19	270	eP	Pb	05 39 55.0	-0.7
KMNR	Kamenistaya	2.20	265	eP	Pb	05 39 55.2	-0.7
TUMD	Tumrok D	2.26	251	eS	Sb	05 40 22.7	-1.8
KOZ	Kozyrevsk	2.38	273	eP	Pn	05 39 56.4	+1.5
SRDR	Sredinnyy	2.48	279	eP	Pn	05 39 58.3	+2.1
SDLR	Sedlovina	4.09	230	eP	Pn	05 40 21.6	+3.2
SMAR	Somma	4.13	230	eP	Pn	05 40 22.7	+3.6
AVH	Avacha	4.16	231	eP	Pb	05 40 24.9	-4.4
KOK	Koryaka	4.19	232	eP	Pn	05 40 23.9	+4.2
RUS	Russkaya	4.86	225	eP	Pn	05 40 32.7	+3.8
MTVR	Mutnovka	4.96	227	eP	Pn	05 40 34.5	+4.1
ASAK	Asacha	5.15	228	eP	Pn	05 40 37.4	+4.5

IDC 27 05:45:25.0±2.0**, 27.°07N**×**97.°24E, h0**^{km}**, mb3.4**/4**, mbtmp3.5**/4**, Error ellipse: s-maj=77.5km s-min=28.4km az=62.0, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	21.93	17	P	P	05 50 20.1	0.0
	0.4nm,0.4s,baz=202,slow=11,SNR=2.3						
	0.4nm,0.4s						
MKAR	Makanchi Array	22.95	333	P	P	05 50 30.1	-0.8
	0.5nm,0.5s,baz=141,slow=10,SNR=7.6						
	0.5nm,0.5s						
KURBB	Kurchatov Arra	27.51	334	P	P	05 51 13.9	+0.9
	0.7nm,0.6s,baz=148,slow=9.4,SNR=2.7						
	0.7nm,0.6s						
WRA	Warramunga Arr	58.96	139	P	P	05 55 26.4	-0.1
	0.7nm,0.8s,baz=320,slow=7.7,SNR=2.3						
	0.7nm,0.8s						

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*DJA **27** 05:46:22.3±0.5, 6°S±4°×12°5E±°, h550^{km}±8^{km}, M4.5/21, mB5.0/13, mb4.8/18, MLv4.9/21, Mw(mB)4.3/13*

*IDC **27** 05:46:23.2±1.0, 6.°28S×125.°12E, h554^{km}±13^{km}, mb3.5/15, mbtmp4.5/21, Error ellipse: s-maj=20.5km s-min=8.1km az=66.0*

*NEIC **27** 05:46:23.3±1.4, 6.°27S±0.°07×125.°13E±0.°09, h552^{km}±11^{km}, mb4.6/42, Error ellipse: s-maj=16.6km s-min=2.5km az=125.0*

ISC 27 05:46:22.8±0.4**, 6.°31S**±0.°05×**125.°08E**±0.°07**, h550**^{km}**, n131, σ0**^{s}**98**/135**, mb4.4**/44**, 2C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBSI	Bau Bau	2.63	288	P	P	05 47 37.5	+1.9
SOEI	Soe	3.52	193		P	05 47 42.0	+0.6
SOEI	Soe	3.52	193	P	P	05 47 42.0	+0.6
SOEI	Soe	3.52	193	P	P	05 47 41.8	+0.5
MMRI	Maumere	3.65	230		P	05 47 42.2	+0.2
MMRI	Maumere	3.65	230	P	P	05 47 42.3	+0.2
MMRI	Maumere	3.65	230	P	P	05 47 42.0	-0.1
NLAI	Namlea	3.65	34	P	P	05 47 41.5	-0.7
AAI	Ambon	4.05	50	P	P	05 47 44.2	-0.9
BATI	Baumata	4.12	200	P	P	05 47 46.5	+0.9
	164nm,0.3s,baz=68,slow=1.3,SNR=17						
BATI				S	S	05 48 41.8	-11
	193nm,0.3s,baz=286,slow=2.3,SNR=4.1						
BATI	Baumata	4.12	200	P	P	05 47 45.4	-0.2
EDFI	Ende, Flores	4.14	234	P	P	05 47 44.8	-1.1
SANI	Sanana	4.33	12	P	P	05 47 46.8	-0.4
SANI	Sanana	4.33	12	P	P	05 47 46.0	-1.2
BSSI	Bau Bau, Buton	4.57	272	P	P	05 47 49.6	+0.5
BKSI	Bulukumba	5.03	281	P	P	05 47 53.1	+0.2
	0.1nm34nm,0.7s						
KAPI	Kappang	5.46	283		P	05 47 58.1	+1.6
KAPI	Kappang	5.46	283	P	P	05 47 57.8	+1.2
	48nm,0.4s,baz=94,slow=4.5,SNR=42						
KAPI				S	S	05 49 14.0	+0.9
	13nm,0.9s,baz=358,slow=23,SNR=7.3						
KAPI	Kappang	5.46	283	P	P	05 47 58.4	+1.8
SPSI	Sidrap Palu	5.78	294	P	P	05 47 59.4	0.0
WSI	Waingapu	5.79	235	P	P	05 47 58.1	-1.4
	3.0nm420nm,0.6s						
BASI	Baing, Sumba	5.91	229	P	P	05 47 59.9	-0.7
TTSI	Tana Toraja	6.16	301	P	P	05 48 13.7	+11
SAUI	Saumlaki	6.39	105	P	P	05 48 05.8	+0.8
WBSI	Waikabubak, Su	6.54	239	P	P	05 48 04.4	-2.0
	2.0nm6µm464nm,0.9s						
MRSI	Marisa	7.43	335	P	P	05 48 14.7	-0.3
	0.2nm55nm,0.7s						
PLAI	Plampang	7.66	250	P	P	05 48 16.4	-0.8
PLAI	Plampang	7.66	250	P	P	05 48 15.5	-1.7
	3µm374nm,0.8s						
FAKI	Fak Fak	7.90	65	P	P	05 48 18.6	-1.1
FAKI	Fak Fak	7.90	65	P	P	05 48 18.5	-1.1
	1.0nm2µm87nm,0.9s						
SWI	Sorong	8.20	49	P	P	05 48 22.8	+0.2
	0.6nm2µm160nm,1.0s						
DRS	Darwin Rock St	8.36	137	P	P	05 48 24.8	+0.7
MPSI	Mapaga	8.39	322	P	P	05 48 25.1	+0.7
TWSI	Taliwang, Sumb	8.48	253	P	P	05 48 24.3	-1.0
	2µm206nm,0.6s						
TOLI2	Tolitoli	8.53	330		P	05 48 25.4	-0.5
TOLI2	Tolitoli	8.53	330	P	P	05 48 25.4	-0.5
MTN	Manton Dam	8.82	138		P	05 48 29.1	+0.4
MTN	Manton Dam	8.82	138	P	P	05 48 29.0	+0.3
KDU	Kakadu	9.66	132	P	P	05 48 37.2	0.0
KNRA	Kununurra	9.99	159		P	05 48 41.3	+0.7
RKPI	Ransiki, Papua	10.25	63	P	P	05 48 43.7	+0.3
JAGI	Jajag, Banyuwa	11.05	258	P	P	05 48 50.6	-0.9
FITZ	Fitzroy Crossi	11.73	177		P	05 48 59.0	+0.4
FITZ	Fitzroy Crossi	11.73	177	P	P	05 48 58.2	-0.3
	9.3nm,0.5s,baz=10,slow=9.2,SNR=66						
FITZ				S	S	05 51 03.7	-2.9
	5.0nm,0.5s,baz=3.2,slow=18,SNR=7.2						
FITZ	Fitzroy Crossi	11.73	177	P	P	05 48 58.9	+0.4
KKM	Kota Kinabalu	15.13	324	P	P	05 49 34.8	+1.1
KKM				IAmb	IAmb	05 49 43.1	
	comp=Z,23nm,1.0s						
GENI	Genyem	15.49	77	P	P	05 49 38.2	+0.8
MBWA	Marble Bar	15.65	199		P	05 49 38.7	-0.1
MBWA	Marble Bar	15.65	199	P	P	05 49 38.5	-0.3
PSA00	Pilbara Seismi	16.00	198		P	05 49 42.4	+0.1
PSA00	Pilbara Seismi	16.00	198	P	P	05 49 43.4	+1.1
JAY	Jayapura	16.02	77	P	P	05 49 40.9	-1.8
	comp=Z,18nm,0.7s,baz=242,slow=7.2,SNR=8.9						
WB0	Warramunga Arr	16.15	147		P	05 49 43.5	-0.4
WB0				IAmb	IAmb	05 49 43.7	
	comp=Z,19nm,0.5s						
WRAB	Tennant Creek	16.27	147	P	P	05 49 44.7	-0.2
WRAB				IAmb	IAmb	05 49 45.9	
	comp=Z,15nm,0.7s						
WRA	Warramunga Arr	16.27	147		P	05 49 43.8	-1.1
WRA	Warramunga Arr	16.27	147	P	P	05 49 44.5	-0.4
	comp=Z,7.8nm,0.5s,baz=326,slow=11,SNR=272						
WRA				S	S	05 52 28.6	-1.2
	comp=Z,4.5nm,0.8s,baz=329,slow=16,SNR=7.7						
WR8	Warramunga Arr	16.36	147		P	05 49 45.7	-0.1
KSM	Kuching	16.65	297	P	P	05 49 48.3	-0.2
KSM	Kuching	16.65	297	P	P	05 49 49.3	+0.8
BBJI	Bungbulang	17.34	265	P	P	05 49 54.7	-0.1
ASAR	Alice Springs	19.23	155	P	P	05 50 13.0	+1.0
ASAR	Alice Springs	19.23	155	P	P	05 50 13.1	+1.1
	comp=Z,3.9nm,0.4s,baz=345,slow=15,SNR=91						
ASAR				S	S	05 53 17.5	-0.6
	comp=Z,2.6nm,0.7s,baz=337,slow=21,SNR=4.7						
AS01	Alice Springs	19.25	155	P	P	05 50 13.4	+1.3
GIRL	Giralia	19.32	212	P	P	05 50 14.2	+1.6
QIS	Mount Isa	19.98	137	P	P	05 50 19.5	+0.7
MEEK	Meekatharra	21.14	196	P	P	05 50 30.2	+1.1
MORW	Morawa	24.20	200	P	P	05 50 57.0	+0.6
MORW				IAmb	IAmb	05 50 59.3	
	comp=Z,28nm,1.3s						
KULM	Kulim	26.97	295	P	P	05 51 21.0	-0.1
KULM				IAmb	IAmb	05 51 36.5	
	comp=Z,18nm,1.2s						
NWAO	Narrogin (SRO)	27.47	194	P	P	05 51 26.0	+0.8
NWAO	Narrogin (SRO)	27.47	194	P	P	05 51 25.6	+0.4
	comp=Z,14nm,0.6s,baz=23,slow=7.3,SNR=13						
	comp=Z,14nm,0.6s						
RPSI	Rantau Prapat	27.61	288		P	05 51 27.1	+0.4
RPSI				IAmb	IAmb	05 51 27.6	
	comp=Z,18nm,0.8s						
PSI	Prapat	27.64	288	P	P	05 51 27.3	+0.2
SRIT	Nakonsritamara	29.40	300	P	P	05 51 43.2	+0.9
SRIT				IAmb	IAmb	05 51 43.2	
	comp=Z,12nm,0.6s						
TPUB	Ta-pu	29.75	352	P	P	05 51 44.2	-0.9
STKA	Stephens Creek	29.75	151	P	P	05 51 45.9	+0.8
	comp=Z,1.4nm,0.3s,baz=337,slow=13,SNR=3.6						
	comp=Z,1.4nm,0.3s						
SLVN	Son La	34.44	323		P	05 52 24.8	-0.4
SLVN				IAmb	IAmb	05 52 26.8	
	comp=Z,6.3nm,0.9s						
SLVN	Son La	34.44	323	P	P	05 52 25.6	+0.4
CMAR	Chiang Mai Arr	35.64	314	P	P	05 52 35.4	+0.3
CMAR	Chiang Mai Arr	35.64	314	P	P	05 52 35.6	+0.5
	comp=Z,4.1nm,0.7s,baz=144,slow=6.5,SNR=19						
	comp=Z,4.1nm,0.7s						
CM31	Chiang Mai Arr	35.64	314	P	P	05 52 35.3	+0.2
CM31				IAmb	IAmb	05 52 36.0	
	comp=Z,10nm,1.1s						
CHTO	Chiang Mai	35.88	315	P	P	05 52 37.6	+0.6
CHTO				IAmb	IAmb	05 52 37.8	
	comp=Z,5.3nm,0.8s						
WHN	Wuhan	38.06	345	P	P	05 52 55.5	+0.8
NJ2	Nanjing	38.60	352	eP	P	05 53 00.8	+1.7
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
ENH	Enshi	39.33	338	P	P	05 53 04.8	-0.3
ENH				IAmb	IAmb	05 53 05.2	
	comp=Z,16nm,0.5s						
PZH	PanZhiHua	39.70	326	P	P	05 53 10.5	+2.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,110nm,5.3s						
XAN	Xi'an	42.95	340	⇑P	P	05 53 32.8	-0.9
XAN				pmax	pmax		
	comp=Z,21nm,0.6s						
KSRS	Korea Array	43.62	3	P	P	05 53 39.2	+0.5
	comp=Z,0.7nm,0.5s,baz=183,slow=11,SNR=4.2						
	comp=Z,0.7nm,0.5s						
MJAR	Matsushiro Arr	44.37	15	P	P	05 53 44.0	-0.6
	comp=Z,1.1nm,0.3s,baz=184,slow=9.0,SNR=1.8						
	comp=Z,1.1nm,0.3s						
HNS	HongShan	44.55	348	⇑P	P	05 53 45.8	-0.1
HNS				pmax	pmax		
	comp=Z,15nm,0.8s						
PALK	Pallekele	46.28	286	P	P	05 53 56.8	-2.9
PALK				IAmb	IAmb	05 54 30.0	
	comp=Z,47nm,1.4s						
LZH	Lanzhou	46.65	336	eP	P	05 54 02.8	+0.6
LZH				sP	sP	05 56 39.8	-4.1
LZH				pmax	pmax		
	comp=Z,37nm,1.2s						
HHC	Hu-ho-hao-te	48.54	346	eP	P	05 54 20.8	+4.6
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,87nm,5.0s						
EVN	Everest	50.24	315		P	05 54 30.0	+0.3
EVN				IAmb	IAmb	05 54 30.7	
	comp=Z,16nm,0.6s						
XLT	XiLinHaoTe	50.63	352	eP	P	05 54 30.8	-0.7
XLT				PP	PP	05 56 33.3	-2.0
XLT				pmax	pmax		
	comp=Z,9.0nm,0.7s						
XLT				pmax	pmax		
	comp=Z,180nm,7.7s						
USRK	Ussuriysk Ar.	50.66	6	P	P	05 54 31.1	-0.4
	comp=Z,1.4nm,0.7s,baz=201,slow=7.7,SNR=1.5						
	comp=Z,1.4nm,0.7s						
GTA	Gaotai	51.14	335	P	P	05 54 36.5	+1.1
GTA				pmax	pmax		
	comp=Z,17nm,0.8s						
ULN	Ulaanbaatar	56.24	345		P	05 55 11.5	+0.3
HEH	HeiHe	56.37	2	eP	P	05 55 12.0	+0.2
SONM	Songino Array	56.38	345		P	05 55 12.0	-0.1

SONM	Songino Array	56.38	345	P	P	05 55 12.4	+0.3
	comp=Z,2.2nm,0.5s,baz=165,slow=8.0,SNR=14						
	comp=Z,2.2nm,0.5s						
WMQ	Urumqi	60.24	330	*e*P	P	05 55 39.5	+1.3
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
NIL	Nilore	63.11	313	P	P	05 55 57.1	-0.1
KSH	Kashi	64.27	320	P	P	05 56 05.3	+0.8
KSH				pmax	pmax		
	comp=Z,19nm,0.7s						
TARG	Taragay, Kyrgy	64.38	322		P	05 56 06.7	+1.2
TARG				IAmb	IAmb	05 56 08.9	
	comp=Z,5.7nm,0.6s						
KDJ	Kajisay	64.99	322		P	05 56 09.7	+0.6
KDJ				IAmb	IAmb	05 56 10.6	
	comp=Z,7.6nm,0.7s						
MKAR	Makanchi Array	65.05	329		P	05 56 09.5	+0.4
MKAR	Makanchi Array	65.05	329	P	P	05 56 09.4	+0.3
	comp=Z,16nm,0.5s,baz=124,slow=7.4,SNR=245						
	comp=Z,16nm,0.5s						
MAKZ	Makanchi	65.22	329		P	05 56 10.2	0.0
MAKZ				IAmb	IAmb	05 56 11.0	
	comp=Z,9.9nm,0.7s						
NRN	Naryn	65.32	321	P	P	05 56 11.1	-0.2
BOOM	Boomskoye usch	65.95	322		P	05 56 15.8	+0.7
BOOM				IAmb	IAmb	05 56 16.4	
	comp=Z,13nm,0.6s						
KBL	Kabul	66.62	312		P	05 56 19.9	+0.4
KBL				IAmb	IAmb	05 56 20.4	
	comp=Z,18nm,0.6s						
AAK	Ala-Archa	66.92	322	P	P	05 56 21.8	+0.7
AAK				IAmb	IAmb	05 56 22.5	
	comp=Z,8.7nm,0.8s						
DRK	Karamyk	66.99	318	P	P	05 56 22.6	+0.9
ARSB	Arslanbob	67.16	320	P	P	05 56 23.1	+0.6
ARSB				IAmb	IAmb	05 56 23.4	
	comp=Z,11nm,0.6s						
SIMJ	Simiganj	68.50	316		P	05 56 30.5	-0.2
ZAA0	Zalesovo Array	68.88	336		P	05 56 31.8	-0.7
ZALV	Zalesovo Beam	68.88	336	P	P	05 56 31.8	-0.7
	comp=Z,5.6nm,0.5s,baz=134,slow=4.3,SNR=20						
	comp=Z,5.6nm,0.5s						
KURBB	Kurchatov Arra	69.43	330	P	P	05 56 35.8	-0.1
	comp=Z,4.8nm,0.5s,baz=136,slow=5.1,SNR=36						
	comp=Z,4.8nm,0.5s						
KURK	Kurchatov	69.45	331		P	05 56 35.9	0.0
KURK				IAmb	IAmb	05 56 36.9	
	comp=Z,12nm,1.0s						
KK31	Karatay Array	69.65	320	P	P	05 56 38.0	+0.6
KKAR	Karatay Array	69.65	320	P	P	05 56 38.0	+0.6
KKAR	Karatay Array	69.65	320	P	P	05 56 37.9	+0.5
VNDA	Vanda	73.75	172	P	P	05 57 01.6	+0.9
	comp=Z,1.3nm,1.2s,baz=315,slow=7.4,SNR=1.9						
	comp=Z,1.3nm,1.2s						
BVAR	Borovoye Array	74.93	329	P	P	05 57 07.8	+0.2
	comp=Z,5.8nm,0.6s,baz=131,slow=6.7,SNR=29						
	comp=Z,5.8nm,0.6s						
AB31	Akbulak array	78.97	323	P	P	05 57 29.5	-0.2
ABKAR	Akbulak array	78.97	323		P	05 57 29.6	-0.1
NRIK	Noril'sk	79.76	347	P	P	05 57 33.5	+0.1
	comp=Z,2.2nm,0.5s,baz=126,slow=3.8,SNR=3.7						
	comp=Z,2.2nm,0.5s						
ARTI	Arti	82.65	329		P	05 57 48.0	-0.5
ARTI				IAmb	IAmb	05 57 49.0	
	comp=Z,6.3nm,0.5s						
RAYN	Ar Rayn	83.01	295		P	05 57 50.7	-0.5
ILAR	Eielson Array	94.82	25	P	P	05 58 44.5	-1.1
	comp=Z,0.2nm,0.9s,baz=262,slow=5.3,SNR=1.8						
	comp=Z,0.2nm,0.9s						
BRTR	Keskin Array B	95.09	309	P	P	05 58 46.6	-1.1
	comp=Z,0.7nm,0.8s,baz=104,slow=6.1,SNR=2.4						
	comp=Z,0.7nm,0.8s						

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*CATAC **27** 05:54:32.8±1.1, 8°N±8°×8°3W±°, h20^{km}±4^{km}, M2.9/6, MLv2.9/6, Error ellipse: s-maj=16.6km s-min=12.3km az=20.0, confirmed*

*UPA **27** 05:54:33.1±0.6, 8°.38N×82°.82W, h29^{km}±3^{km}, ML2.6*

ISC 27 05:54:33.1±1.6**, 8°.38N**±0°.10×**82°.81W**±0°.06**, h31**^{km}±7^{km}**, n15, σ0^{s}.49**/20**, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LESP3	La Esperanza,	0.04	42	*e*P	Pb	05 54 37.9	-0.3
LESP3				AMP		05 54 38.6	
	comp=Z,973nm,0.2s						
LESP3				*e*S	Sb	05 54 41.6	-0.2
CDITO	Canoas	0.20	343	P	Pb	05 54 39.0	-0.4
CDITO	Canoas	0.20	343	S	Sb	05 54 44.4	+0.7
DVD	David	0.36	81	*e*P	Pb	05 54 41.3	-0.2
DVD				*e*S	Sb	05 54 47.9	+0.7
BRU2	Volcan	0.43	16	P	Pb	05 54 42.7	+0.1
BRU2	Volcan	0.43	16	*e*P	Pb	05 54 42.5	-0.1
BRU2				*e*S	Sn	05 54 50.0	-0.2
BC3P	Paso Ancho	0.48	25	*e*P	Pb	05 54 43.1	-0.3
BC3P				*e*S	Sn	05 54 51.2	-0.3
BQSF3	Alto Boquete,	0.52	46	*e*P	Pb	05 54 43.6	-0.4
DRK0	Durika	0.98	334	P	Pn	05 54 50.5	-0.4
DRK0	Durika	0.98	334	S	Sb	05 55 04.2	0.0
DRK0	Durika	0.98	334	*e*P	Pn	05 54 50.3	-0.5
DRK0				*e*S	Sn	05 55 03.7	0.0
OCHAL	Ojochal	1.09	311	S	Sb	05 55 07.3	0.0
OCHAL	Ojochal	1.09	311	P	Pn	05 54 51.8	-0.4
LCR2	La Lucha 2	1.79	319	P	Pn	05 55 03.0	+0.8
SOCE	Pocosol	2.67	318	P	Pn	05 55 15.0	+0.9

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*IDC **27** 05:59:22.4±3.9, 53°.72N×88°.11E, h0^{km}, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=36.8km s-min=19.8km az=49.0*

ASRS 27 05:59:19.0±1.5**, 53°.74N**×**88°.27E, h0**^{km}**, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	2.06	277	I	I	06 11 41.1	
	0.1nm,1.0s,baz=93,slow=322,SNR=49						
ZALV	Zalesovo Beam	2.06	277	Pg	Pb	05 59 57.4	+0.2
	0.8nm,0.3s,baz=100,slow=16,SNR=6.8						
ZALV				Lg	Lg	06 00 24.9	
	1.4nm,0.3s,baz=100,slow=25,SNR=8.1						
KURBB	Kurchatov Arra	6.75	246	Pn	Pn	06 01 02.3	+3.0
	0.1nm,0.3s,baz=65,slow=15,SNR=2.4						
	0.5nm,0.4s						
MKAR	Makanchi Array	7.94	211	Pn	Pn	06 01 18.9	+3.4
	0.1nm,0.3s,baz=27,slow=14,SNR=2.3						
	0.2nm,0.4s						

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*KRSC **27** 06:02:36.5±1.3, 55°.96N×164°.27E, h15^{km}±26^{km}, Ml4.1*

*IDC **27** 06:02:37.0±1.0, 55°.69N×165°.13E, h0^{km}, mb3.9/14, mbtmp3.8/15, ML2.3/1, MS3.5/8, Error ellipse: s-maj=28.4km s-min=16.3km az=160.0*

*NEIC **27** 06:02:40.2±1.4, 56°.1N±0°.2×164°.84E±0°.06, h10^{km}±2^{km}, mb4.1/23, Error ellipse: s-maj=28.1km s-min=3.0km az=168.0*

*MOS **27** 06:02:41.5±0.9, 56°.01N×163°.69E, h12^{km}, mb4.6/10, Error ellipse: s-maj=7.2km s-min=5.9km az=136.6*

ISC 27 06:02:38.5±0.5**, 55°.99N**±0°.04×**164°.28E**±0°.04**, h16**^{km}**, n148, σ2^{s}.35**/113**, mb4.2**/37**, MS3.4**/7**, 6C-1D, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.85	286	PN	Pb	06 02 51.7	-3.1
KBTR	Krutoberegovo	0.85	286	*e*P	Pb	06 02 51.8	-3.1
KBG	Krutoberegovo	0.92	288	PN	Pb	06 02 52.7	-3.3
KBG	Krutoberegovo	0.92	288	*e*P	Pb	06 02 52.8	-3.3
BKI	Bering	1.24	129	PN	Pn	06 02 59.1	-2.1
BKI	Bering	1.24	129	*e*P	Pn	06 02 59.2	-2.1
BKI				*e*S	Sn	06 03 15.3	-2.2
SMKR	Semkarok	1.68	292	PN	Pn	06 03 04.8	-2.4
SMKR	Semkarok	1.68	292	*e*P	Pn	06 03 04.9	-2.4
BDR	Baidarnaya	1.81	290	*e*S	Sb	06 03 31.2	-2.5
SRKR	Sorokina	1.86	292	PN	Pn	06 03 09.0	-0.7
SRKR	Sorokina	1.86	292	*e*P	Pn	06 03 09.0	-0.7
ZLN	Zelenaya	1.95	272	PN	Pb	06 03 10.7	-3.0
ZLN	Zelenaya	1.95	272	*e*P	Pb	06 03 10.8	-3.0
CIRR	Tsirk	1.98	275	PN	Pn	06 03 10.6	-1.0
CIRR	Tsirk	1.98	275	*e*P	Pn	06 03 10.6	-1.0
BZGR	Bezymyannyi-Gr	2.02	270	PN	Pn	06 03 11.1	-0.8
BZGR	Bezymyannyi-Gr	2.02	270	*e*P	Pn	06 03 11.2	-0.8
LGNR	Loginova	2.02	274	PN	Pb	06 03 12.4	-2.5
LGNR	Loginova	2.02	274	*e*P	Pb	06 03 12.4	-2.5
MKZ	Mys Kozlova	2.05	226	PN	Pb	06 03 11.7	-3.5
MKZ	Mys Kozlova	2.05	226	*e*P	Pb	06 03 11.8	-3.5
KLY	Klyuchi	2.06	281	PN	Pn	06 03 09.6	-2.7
KLY	Klyuchi	2.06	281	*e*P	Pn	06 03 09.7	-2.7
KRSR	Krestovskiy	2.09	278	PN	Pb	06 03 13.0	-3.1
KRSR	Krestovskiy	2.09	278	*e*P	Pb	06 03 13.0	-3.1
BZWR	Bezymyannyi-We	2.13	271	PN	Pb	06 03 13.6	-3.1
BZWR	Bezymyannyi-We	2.13	271	*e*P	Pb	06 03 13.6	-3.1
BZMR	Bezymyannaya	2.13	270	PN	Pb	06 03 13.4	-3.4
BZMR	Bezymyannaya	2.13	270	*e*P	Pb	06 03 13.5	-3.4
KIRR	Kirishev	2.21	271	PN	Pb	06 03 15.9	-2.3
KIRR	Kirishev	2.21	271	*e*P	Pb	06 03 15.9	-2.3
KPT	Kopyto	2.28	271	PN	Pb	06 03 15.9	-3.4
KPT	Kopyto	2.28	271	*e*P	Pb	06 03 16.0	-3.4
KMNR	Kamenistaya	2.29	266	PN	Pb	06 03 16.1	-3.4
KMNR	Kamenistaya	2.29	266	*e*P	Pb	06 03 16.2	-3.4
TUMD	Tumrok D	2.34	252	PN	Pn	06 03 14.9	-1.4
TUMD	Tumrok D	2.34	252	*e*P	Pn	06 03 15.0	-1.4
SRDR	Sredinnyy	2.57	279	PN	Pn	06 03 19.6	+0.1
SRDR	Sredinnyy	2.57	279	*e*P	Pn	06 03 19.7	+0.1
ESO	Esso	3.14	271	PN	Pb	06 03 29.1	-4.8
ESO	Esso	3.14	271	*e*P	Pb	06 03 29.1	-4.8
SDLR	Sedlovina	4.15	231	PN	Pn	06 03 42.9	+1.7
SDLR	Sedlovina	4.15	231	*e*P	Pn	06 03 43.0	+1.7
KRER	Koryakskii	4.19	232	PN	Pn	06 03 42.6	+0.7
KRER	Koryakskii	4.19	232	*e*P	Pn	06 03 42.7	+0.7
SMAR	Somma	4.19	232	PN	Pn	06 03 43.4	+1.5
SMAR	Somma	4.19	232	*e*P	Pn	06 03 43.5	+1.5
KRX	Arik	4.20	233	PN	Pn	06 03 43.6	+1.7
KRX	Arik	4.20	233	*e*P	Pn	06 03 43.7	+1.7
AVH	Avacha	4.22	232	PN	Pn	06 03 43.0	+0.8
AVH	Avacha	4.22	232	*e*P	Pn	06 03 43.1	+0.8
UGLR	Uglovaya	4.22	231	PN	Pn	06 03 43.7	+1.5
UGLR	Uglovaya	4.22	231	*e*P	Pn	06 03 43.8	+1.5
KOK	Koryaka	4.25	233	PN	Pn	06 03 44.8	+2.2
KOK	Koryaka	4.25	233	*e*P	Pn	06 03 44.9	+2.2
GNL	Ganaly	4.32	241	PN	Pn	06 03 44.3	+0.7
GNL	Ganaly	4.32	241	*e*P	Pn	06 03 44.4	+0.7
PET	Petropavlovsk	4.42	230		Pb	06 03 52.4	-3.4
PET	Petropavlovsk	4.42	230	*e*PN	Pb	06 03 54.4	-1.4
PET	Petropavlovsk	4.42	230	*e*P	Pn	06 03 46.8	+1.8
KRMR	Karymshinskiy	4.79	231	PN	Pn	06 03 50.9	+1.0
KRMR	Karymshinskiy	4.79	231	*e*P	Pn	06 03 50.9	+1.0
PEA0B	Petropavlovsk-	4.79	236	Pn	Pb	06 03 57.0	-5.2
PEA0B	Petropavlovsk-	4.79	236	PN	Pn	06 03 52.8	+2.7
PETK	Petropavlovsk-	4.79	236	Pn	Pb	06 03 57.0	-5.1
PETK	Petropavlovsk-	4.79	236	Pn	Pn	06 03 52.9	+2.9
	0.6nm,0.3s,baz=84,slow=16,SNR=4.5						
PETK				Sn	Sb	06 04 52.6	-7.0
	baz=52,slow=24						
PETK				LR	LR	06 06 07.5	
	comp=Z,498nm,18.1s,baz=41,slow=42						
	2.8nm,0.7s						
GRL	Gorelyy	5.01	229	PN	Pn	06 03 55.1	+2.0
GRL	Gorelyy	5.01	229	*e*P	Pn	06 03 55.1	+2.0
MTVR	Mutnovka	5.01	228	PN	Pn	06 03 55.4	+2.3
MTVR	Mutnovka	5.01	228	*e*P	Pn	06 03 55.4	+2.3
ASAK	Asacha	5.20	229	PN	Pn	06 03 57.8	+2.1
ASAK	Asacha	5.20	229	*e*P	Pn	06 03 57.9	+2.1
SMY	Shemya	6.60	116	Pn	Pn	06 04 13.6	-1.2
SKR	Severo-Kuril's	7.22	226	*e*PN	Pn	06 04 30.3	+7.1
SEY	Seymchan	9.21	324	LR	LR	06 08 04.2	
	comp=Z,142nm,18.6s,baz=68,slow=34						
AMKA	Amchitka	10.03	111	Pn	Pn	06 05 02.6	+0.8
ADK	Adak	11.94	102	Pn	Pn	06 05 26.0	-1.8
GSTR	Great Sitkin T	12.19	100	Pn	Pn	06 05 29.1	-2.2
YSS	Yuzhno-Sakhali	16.11	245	*i* P	P	06 06 29.3	+1.9
YAK	Yakutsk	18.64	303	*e*P	Pn	06 06 57.2	+1.7
YAK				pmax	pmax		
	comp=Z,18nm,1.0s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.5s						
ERM	Erimo	19.57	233	*i* P	Pn	06 07 10.4	+3.5
ERM				pmax	pmax		
	comp=Z,16nm,1.0s						
C18K	Utukok River	20.07	37	P	Pn	06 07 11.0	-1.7
C18K				IAmb	IAmb	06 07 26.4	
	comp=Z,14nm,1.2s						
H18K	Honhosa River	20.21	48	P	P	06 07 11.2	-1.2
H18K				IAmb	IAmb	06 07 29.5	
	comp=Z,12nm,1.2s						
KLR	Kul'dur	20.73	265	*ce*P	Pn	06 07 22.1	+1.6
KLR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
F19K	Shaleruckik Mo	20.77	43		P	06 07 17.7	-0.7
C19K	Lookout Ridge	20.78	37		P	06 07 17.8	-0.7
ZEA	Zeya	21.27	279	*e*P	P	06 07 27.6	+3.8
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TIXI	Tiksi	21.62	330		P	06 07 30.2	+2.8
TIXI				IAmb	IAmb	06 07 35.5	
	comp=Z,8.2nm,0.8s						
TIXI	Tiksi	21.62	330	P	P	06 07 32.3	+4.9
	comp=Z,7.2nm,0.8s,baz=118,slow=12,SNR=9.9						
	comp=Z,7.2nm,0.8s						
TIXI	Tiksi	21.62	330	P	P	06 07 30.2	+2.8
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
D20K	Etivluk River	21.68	39	P	P	06 07 28.3	+0.2
D20K				IAmb	IAmb	06 08 06.5	
	comp=Z,14nm,1.4s						
M19K	Big River Lodg	21.82	57	P	P	06 07 28.6	-1.1
IMAR	Indian Mountai	22.22	46	P	P	06 07 33.4	-0.6
F21K	Alatna River	22.50	43	P	P	06 07 35.4	-1.5
E22K	Anaktuvuk Pass	23.28	41	P	P	06 07 43.6	-1.5
E23K	Chandalar	24.08	42	P	P	06 07 51.8	-1.1
TOLK	Toolik Lake Re	24.18	40	P	P	06 07 52.7	-1.0
TOLK				IAmb	IAmb	06 08 19.9	
	comp=Z,7.0nm,1.1s						
E24K	Your Creek	24.50	42	IAmb	IAmb	06 08 11.2	
	comp=Z,4.8nm,1.0s						
CCB	Clear Creek Bu	24.67	50	P	P	06 07 57.9	-0.2
CCB				IAmb	IAmb	06 08 30.0	
	comp=Z,5.5nm,1.1s						
G24K	Hadweenzic Riv	24.80	45		P	06 07 57.8	-1.5
ILAR	Eielson Array	25.06	50	P	P	06 08 00.0	-1.7
	comp=Z,0.4nm,0.8s,baz=263,slow=6.6,SNR=4.5						
ILAR				LR	LR	06 17 51.4	
	comp=Z,118nm,19.8s,baz=228,slow=37						
	comp=Z,0.4nm,0.8s						
SCM	Sheep Creek Mo	25.15	57	P	P	06 08 02.6	-0.1
SCM	Sheep Creek Mo	25.15	57	P	P	06 08 02.6	-0.1
SCM				pmax	pmax		
	comp=Z,13nm,1.2s						
D25K	Kavik River	25.41	39	P	P	06 08 03.4	-1.5
D25K				IAmb	IAmb	06 08 34.8	
	comp=Z,3.7nm,0.9s						
E25K	Arctic Village	25.60	42	P	P	06 08 05.3	-1.3
E25K				IAmb	IAmb	06 08 39.5	
	comp=Z,5.2nm,1.1s						
BMAR	Burnt Mountain	25.95	43	P	P	06 08 09.7	-0.2
MAJO	Matsushiro	26.25	233	*i* P	P	06 08 16.7	+4.0
MAJO				pmax	pmax		
	comp=Z,11nm,0.9s						
MJAR	Matsushiro Arr	26.25	233	P	P	06 08 15.1	+2.4
	comp=Z,1.1nm,0.6s,baz=25,slow=9.8,SNR=11						
MJAR				LR	LR	06 18 32.3	
	comp=Z,114nm,21.0s,baz=51,slow=36						
	comp=Z,1.1nm,0.6s						
GLB	Gilahina Butte	26.88	57	P	P	06 08 17.8	-0.4
GLB				IAmb	IAmb	06 08 32.7	
	comp=Z,4.6nm,1.0s						
I28M	Miner Creek	27.93	48	P	P	06 08 28.2	+0.6
I28M				IAmb	IAmb	06 09 07.5	
	comp=Z,5.1nm,1.3s						
LOGN	Logan Glacier	28.34	57	P	P	06 08 29.6	-1.9
G29M	Pine Creek	28.53	44	P	P	06 08 31.9	-1.0
G29M				IAmb	IAmb	06 08 50.1	
	comp=Z,3.2nm,1.0s						
G30M	tAoh Zraii Nji	29.23	44	P	P	06 08 38.8	-0.4
G30M				IAmb	IAmb	06 08 40.4	
	comp=Z,6.2nm,1.4s						
JNU	Nakatsue	32.48	239	LR	LR	06 21 06.9	
	comp=Z,62nm,21.4s,baz=351,slow=34						
XLT	XiLinHaoTe	32.61	269	*e*P	P	06 09 10.3	+1.0
XLT				pmax	pmax		
	comp=Z,11nm,0.7s						
DLBC	Dease Lake	34.40	58	LR	LR	06 22 35.4	
	comp=Z,10.0nm,18.8s,baz=314,slow=35						
ULN	Ulaanbaatar	35.28	281	*ce*P	P	06 09 36.3	+3.9
ULN				pmax	pmax		
	comp=Z,8.0nm,1.7s						
SONM	Songino Array	35.66	282	P	P	06 09 41.0	+5.4
	comp=Z,1.8nm,0.8s,baz=66,slow=8.5,SNR=7.3						
	comp=Z,1.8nm,0.8s						
H11N2	WAKE ISLAND Hy	36.25	176	T	T	06 48 30.2	
	baz=357,slow=76						
H11N3	WAKE ISLAND Hy	36.27	176	T	T	06 48 38.8	
	baz=357,slow=76						
H11N1	WAKE ISLAND Hy	36.27	176	T	T	06 48 41.1	
	baz=357,slow=76						
HHC	Hu-ho-hao-te	37.14	269	*e*P	P	06 09 52.8	+4.5
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,89nm,4.1s						
HHC				LR	LR		
	comp=N,260nm,14.5s						
HHC				LR	LR		
	comp=E,170nm,14.5s						
HHC				LR	LR		
	comp=Z,190nm,14.5s						
GTA	Gaotai	44.71	276	*e*P	P	06 10 56.5	+5.8
GTA				pP	pwP	06 11 05.8	+5.7
GTA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
KURK	Kurchatov	48.27	302	P	P	06 11 23.2	+4.8
WMQ	Urumqi	48.31	289	*e*P	P	06 11 28.8	+10
WMQ				pmax	pmax		
	comp=Z,17nm,0.7s						
KURBB	Kurchatov Arra	48.38	302	P	P	06 11 23.1	+4.0
	comp=Z,0.8nm,0.7s,baz=54,slow=8.0,SNR=6.3						
	comp=Z,0.8nm,0.7s						
MK31	Makanchi Array	49.09	296	*ce*P	P	06 11 29.6	+4.8
MKAR	Makanchi Array	49.09	296	P	P	06 11 28.8	+4.0
MKAR	Makanchi Array	49.09	296	P	P	06 11 29.0	+4.2
	comp=Z,0.5nm,0.7s,baz=62,slow=8.4,SNR=5.6						
	comp=Z,0.5nm,0.7s						
MKAR	Makanchi Array	49.09	296	*i* P	P	06 11 29.2	+4.4
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MAKZ	Makanchi	49.24	296	P	P	06 11 29.4	+3.5
MAKZ	Makanchi	49.24	296	P	P	06 11 29.5	+3.6
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BVAR	Borovoye Array	50.49	309	P	P	06 11 40.2	+4.9
	comp=Z,6.7nm,0.8s,baz=54,slow=7.3,SNR=5.0						
BVAR				LR	LR	06 35 40.2	
	comp=Z,115nm,19.0s,baz=34,slow=39						
	comp=Z,6.7nm,0.8s						
ARTI	Arti	53.00	318	*d i*P	P	06 11 59.2	+5.3
ARTI				S	S	06 19 28.6	+6.1
ARTI				SS	SS	06 22 57.8	-3.0
ARTI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PZH	PanZhiHua	53.17	263	P	P	06 12 01.8	+6.0
PDAR	Pinedale Array	54.03	65	P	P	06 12 00.2	-1.8
	comp=Z,0.2nm,0.6s,baz=311,slow=3.4,SNR=3.7						
	comp=Z,0.2nm,0.6s						
KIRV	Kirov	54.49	324	*ce*P	P	06 12 07.1	+2.3
KLMR	Klimovskoe	55.64	331	*e*P	P	06 12 15.9	+2.9
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.2s						
AAK	Ala-Archa	55.96	297	*ce*P	P	06 12 18.5	+2.6
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BELG	Belogornoye	60.05	321	*i* P	P	06 12 46.7	+2.5
BELG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CMAR	Chiang Mai Arr	61.12	260	P	P	06 12 56.9	+4.9
	comp=Z,0.9nm,0.3s,baz=34,slow=6.7,SNR=7.1						
	comp=Z,0.9nm,0.3s						
TXAR	Lajitas Array	67.32	71	P	P	06 13 31.4	-1.2
	comp=Z,0.4nm,0.7s,baz=305,slow=6.3,SNR=6.1						
	comp=Z,0.4nm,0.7s						
AKASG	Malin Array Be	67.33	331	P	P	06 13 36.8	+4.7
	comp=Z,1.2nm,0.8s,baz=29,slow=6.2,SNR=5.8						
	comp=Z,1.2nm,0.8s						
KBZ	Khabaz	69.04	318	P	P	06 13 49.2	+6.1
	comp=Z,3.3nm,0.8s,baz=68,slow=2.4,SNR=6.0						
	comp=Z,3.3nm,0.8s						
KBZ	Khabaz	69.04	318	*ce*P	P	06 13 47.2	+4.2
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GNI	Garni	71.40	315	LR	LR	06 49 06.9	
	comp=Z,105nm,21.1s,baz=222,slow=39						
BRTR	Keskin Array B	75.86	323	P	P	06 14 28.5	+4.5
	comp=Z,0.7nm,0.7s,baz=39,slow=3.4,SNR=2.8						
	comp=Z,0.7nm,0.7s						
ESDC	Sonseca Array	84.18	351	P	P	06 15 12.7	+3.9
	comp=Z,0.4nm,0.7s,baz=18,slow=3.9,SNR=4.9						
	comp=Z,0.4nm,0.7s						

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*UCR **27** 06:09:14.0±1.2, 8°.34N×82°.82W, h27^{km}±2^{km}, MW4.0, Fault plane solution: NP1:ϕ_s277.97000°, δ47.85000°, λ39.32000°.*

*CATAC **27** 06:09:14.2±0.8, 8°N±5°×8°3W±°, h7^{km}±3^{km}, M4.1/8, MLv4.1/8, Error ellipse: s-maj=11.5km s-min=9.2km az=42.5, confirmed*

*UPA **27** 06:09:14.5±0.7, 8°.39N×82°.81W, h29^{km}±2^{km}, ML4.2, MW3.9*

ISC 27 06:09:14.2±1.0**, 8°.37N**±0°.04×**82°.81W**±0°.03**, h32**^{km}±6^{km}**, n74, σ0^{s}.84**/90**, 8C-28D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LESP3	La Esperanza,	0.04	32	⇓*i*P	Pb	06 09 19.4	-0.2
LESP3				*e*S	Sb	06 09 23.1	-0.1
LPPC	Paso Canoas	0.16	351	⇓*e*P	Pb	06 09 20.1	-0.3
LPPC				*e*S	Sb	06 09 25.1	+0.5
CDITO	Canoas	0.21	344	P	Pb	06 09 20.5	-0.4
CDITO	Canoas	0.21	344	S	Sb	06 09 24.2	-1.1
LMNES	Limones	0.27	190	⇓*e*P	Pb	06 09 21.4	-0.2
NELY	Ciudad Neily	0.31	335	⇑*e*P	Pb	06 09 21.5	-0.5
NELY				*e*S	Sn	06 09 27.8	-0.3
DVD	David	0.36	80	⇓*i*P	Pb	06 09 22.6	-0.1
DVD				AMP		06 09 22.7	
	comp=Z,75µm,0.1s						
DVD				*e*S	Sn	06 09 29.3	0.0
CSTBL	De las Acacias	0.37	84	⇓*e*P	Pb	06 09 22.6	-0.2
PEDE3	Pedregal, Chir	0.39	88	⇓*i*P	Pb	06 09 22.8	-0.3
LOCO3	Loma Colorada,	0.39	84	⇓*i*P	Pb	06 09 23.0	-0.1
LOCO3				*e*S	Sb	06 09 29.2	0.0
CLLRA	Cordillera,	0.42	28	⇓*e*P	Pb	06 09 23.5	-0.2
MLIR3	Monte Lirio, C	0.42	359	*e*P	Pb	06 09 23.7	+0.1
FITO	Golfito	0.42	307	⇑*e*P	Pb	06 09 22.1	-1.5
LOMA3	Las Lomas, Chi	0.42	82	⇓*i*P	Pb	06 09 23.3	-0.3
BRU2	Volcan	0.44	16	⇓*e*P	Pb	06 09 23.6	-0.3
BRU2				*e*S	Sn	06 09 31.1	-0.4
BRU2	Volcan	0.44	16	P	Pb	06 09 23.7	-0.3
BRU2	Volcan	0.44	16	⇓*i*P	Pb	06 09 23.7	-0.3
BRU2				*e*S	Sn	06 09 31.4	0.0
RSRNO	Rio Sereno	0.45	354	⇓*e*P	Pb	06 09 24.1	0.0
EDAD	Golfito	0.45	309	⇑*e*P	Pb	06 09 22.6	-1.4
PTAR3	Potrerillos Ar	0.45	44	⇓*i*P	Pb	06 09 23.9	-0.1
SCLRA	Santa Clara, W	0.46	4	⇓*e*P	Pb	06 09 24.1	-0.2
VITO	San Vito	0.47	341	⇑*e*P	Pb	06 09 24.4	-0.1
VITO				*e*S	Sn	06 09 32.6	+0.4
CHIR3	Chiriqui UPA,	0.48	87	⇓*i*P	Pb	06 09 24.0	-0.4
CHIR3				*e*S	Sb	06 09 31.7	+0.3
BC3P	Paso Ancho	0.49	24	⇓*i*P	Pb	06 09 24.2	-0.5
BC3P				AMP		06 09 24.6	
	comp=Z,7µm,0.1s						
BC3P				*e*S	Sn	06 09 32.7	0.0
BQTLY	Boquete Panama	0.52	42	⇓*e*P	Pb	06 09 24.8	-0.5
BQSF3	Alto Boquete,	0.53	45	⇓*i*P	Pb	06 09 24.8	-0.5
BQSF3				AMP		06 09 24.9	
	comp=Z,13µm,0.1s						
BQSF3				*e*S	Sb	06 09 32.9	0.0
ALCO	Alturas Coton,	0.58	358	⇓*e*P	Pb	06 09 25.3	-0.8
PSOM3	Paja de Sombre	0.58	57	⇓*i*P	Pb	06 09 25.4	-0.7
EDP2	Potrero Grande	0.74	331	⇑*e*P	Pb	06 09 28.0	-0.7
EDP2				*e*S	Sn	06 09 39.2	+0.6
PBNVO	Pueblo Nuevo,	0.80	50	⇓*e*P	Pn	06 09 28.6	-0.8
RBALA	Bur	0.83	52	⇓*e*P	Pn	06 09 29.2	-0.5
PANP	Palmar Norte	0.87	313	⇑*e*P	Pn	06 09 29.4	-0.9
PANP				*e*S	Sb	06 09 41.7	-0.4
BURE	Buenos Aires	0.95	327	*e*P	Pn	06 09 30.9	-0.6
BURE				*e*S	Sn	06 09 43.9	-0.1
RMDIO	Remedios, Chir	0.98	98	*e*P	Pn	06 09 31.5	-0.3
DRK0	Durika	0.98	334	*e*P	Pn	06 09 31.4	-0.6

DRK0	Durika	0.98	334	P	Pn	06 09 31.8	-0.3
DRK0	Durika	0.98	334	eP	Pn	06 09 31.5	-0.6
DRK0				eS	Sn	06 09 44.8	-0.2
EDPE	Pejibaye, P	1.08	316	⇑eP	Pn	06 09 32.9	-0.3
OCHAL	Ojochal	1.10	311	S	Sn	06 09 47.6	+0.1
OCHAL	Ojochal	1.10	311	P	Pn	06 09 33.2	-0.2
KKNTU	Kakintº	1.10	65	⇓eP	Pn	06 09 32.8	-0.6
PDCAN	Manzana , Fuen	1.11	94	eP	Pn	06 09 32.8	-0.8
SAJE	San Jernim	1.19	325	⇓eP	Pn	06 09 34.2	-0.6
VERH	Veragua Rainfo	1.59	346	⇓eP	Pn	06 09 41.0	+0.7
GMAL	Guarumal, Vera	1.68	111	eP	Pn	06 09 40.9	-0.5
PIEC	Cerro El Cedra	1.68	318	eP	Pn	06 09 41.8	+0.1
VINA	Juan Vinas	1.77	329	⇓eP	Pn	06 09 44.0	+1.1
VERB	Verbena	1.79	331	eP	Pn	06 09 44.1	+1.0
LCR2	La Lucha 2	1.80	319	eP	Pn	06 09 43.1	-0.2
LCR2	La Lucha 2	1.80	319	P	Pn	06 09 44.2	+0.9
LCR2	La Lucha 2	1.80	319	S	Sb	06 10 08.5	-0.5
ABE2	San Pablo	1.81	317	eP	Pn	06 09 45.0	+1.6
PCAYA	Pacayas	1.83	327	eP	Pn	06 09 44.6	+0.9
VTCV	VTCV, Calle Va	1.84	331	⇓eP	Pn	06 09 44.3	+0.5
RESJ	San Isidro (Tu	1.84	334	eP	Pn	06 09 45.0	+1.3
PICV	PH. Pirrs	1.85	313	eP	Pn	06 09 44.7	+0.8
ABRB	Las Abras (San	1.85	331	eP	Pn	06 09 45.1	+1.0
CVTV	Tajo	1.87	330	eP	Pn	06 09 45.2	+0.9
PAR1A	Puntarenas Pro	1.87	311	eP	Pn	06 09 45.1	+1.0
VTR0	Volcan Turrial	1.89	330	eP	Pn	06 09 45.5	+0.8
SJS	Escuela Geolog	1.98	322	eP	Pn	06 09 47.7	+1.9
CACAO	El Cacao, Vera	2.19	118	eP	Pn	06 09 49.0	+0.7
TCS1	Tacares	2.22	319	P	Pn	06 09 50.8	+1.9
TRB2	Turrubares	2.23	314	eP	Pn	06 09 49.4	+0.4
TRT2	Tortugero	2.36	337	P	Pn	06 09 52.4	+1.7
TRT1	Tortuguero	2.38	339	eP	Pn	06 09 52.8	+1.8
AZU	Azuero	2.58	103	eP	Pn	06 09 54.6	+0.8
AZU				eS	Sn	06 10 24.4	+0.4
SOCE	Pocosol	2.68	318	eP	Pn	06 09 57.3	+2.0
SOCE	Pocosol	2.68	318	P	Pn	06 09 57.4	+2.2
VACR	Volcan Arenal	2.78	319	⇑eP	Pn	06 09 59.1	+2.4
COVE	Coope Vega, Sa	2.81	326	P	Pn	06 09 58.7	+1.7
JTS	Las Juntas de	2.85	312	eP	Pn	06 09 57.8	+0.3
CMARA	Lajas Hojancha	3.06	303	⇓eP	Pn	06 10 00.9	+0.5
CMARA	Lajas Hojancha	3.06	303	P	Pn	06 10 00.9	+0.5

IDC 27 06:09:19.7±2.6, 30°.73S×177°.30W, h0km, mb3.6/2, mbtmp3.6/3, ML3.0/1, Error ellipse: s-maj=60.5km s-min=25.9km az=93.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.56	340	Pn	Pn	06 09 47.7	-1.1
	61nm,0.3s,baz=105,slow=20,SNR=1.8						
RAO				Sn	Sg	06 10 12.6	+2.7
	92nm,0.3s,baz=108,slow=20,SNR=2.3						
URZ	Urewera	8.82	210	Pn	Pn	06 11 28.3	0.0
	0.2nm,0.3s,baz=336,slow=19,SNR=2.0						
URZ				Sn	Sn	06 13 04.2	-4.2
	0.2nm,0.3s,baz=122,slow=16,SNR=2.1						
	4.6nm,1.0s						
ASAR	Alice Springs	43.70	267	P	P	06 17 26.6	-0.1
	0.5nm,0.8s,baz=110,slow=7.5,SNR=2.8						
ASAR				PcP	PcP	06 19 14.6	+0.7
	0.4nm,0.6s,baz=126,slow=4.7,SNR=2.1						
	0.5nm,0.8s						
WRA	Warramunga Arr	44.71	272	P	P	06 17 34.4	-0.5
	0.5nm,0.4s,baz=112,slow=8.1,SNR=5.8						
	0.5nm,0.4s						
FINES	FINESS Array B	145.66	340	PKPbc	PKPdf	06 28 58.5	-0.8
	2.6nm,0.8s,baz=28,slow=3.3,SNR=6.2						

IDC 27 06:09:34.6±0.9, 2°.63S×138°.42E, h0km, mb3.8/6, mbtmp3.8/9, ML3.5/3, Error ellipse: s-maj=25.1km s-min=21.0km az=113.0

DJA 27 06:09:41.4±0.5, 2°S±8°×13°9E±°, h61km±11km, M3.8/5, MLv3.8/5

ISC 27 06:09:35.3±1.9, 2°.68S±0°.07×138°.43E±0°.04, h7km±13km, n14, σ1s.48/20, mb3.7/6, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.74	22	P	Pg	06 09 49.2	-0.5
SMPI				S	Sn	06 10 02.7	-1.1
GENI	Genyem	1.73	87	P	Pb	06 10 07.3	-0.3
GENI				S	Sn	06 10 27.7	-0.6
JAY	Jayapura	2.28	86	Pn	Pn	06 10 14.4	+0.9
	8.1nm,0.3s,baz=244,slow=7.7,SNR=16						
JAY				Sn	Sn	06 10 42.0	+0.2
	7.0nm,0.3s,baz=129,slow=15,SNR=4.8						
	33nm,0.5s						
JAY	Jayapura	2.28	86	P	Pn	06 10 14.3	+0.9
JAY				S	Sn	06 10 39.0	-2.8
SRPI	Serui, Papua	2.34	290	P	Pb	06 10 17.8	0.0
SRPI				S	Sb	06 10 47.0	+0.1
BAKI	Biak	2.76	302	P	Pb	06 10 24.1	-0.9
WRA	Warramunga Arr	17.61	193	P	Pn	06 13 41.4	-0.1
	0.3nm,0.3s,baz=17,slow=13,SNR=15						
WRA				S	Sn	06 16 54.0	-4.0
	0.5nm,0.8s,baz=12,slow=22,SNR=2.0						
	1.6nm,0.7s						
FITZ	Fitzroy Crossi	19.80	218	P	P	06 14 07.1	+0.6
	baz=35,slow=12,SNR=1.9						
	3.9nm,1.1s						
ASAR	Alice Springs	21.31	191	P	P	06 14 23.7	+0.7
	1.9nm,0.5s,baz=20,slow=11,SNR=22						
	1.9nm,0.5s						
MKAR	Makanchi Array	69.60	323	P	P	06 20 44.4	-1.0
	0.3nm,0.7s,baz=116,slow=6.6,SNR=4.1						
	0.3nm,0.7s						
VNDA	Vanda	75.83	175	P	P	06 21 23.5	+1.7
	0.5nm,0.6s,baz=343,slow=6.4,SNR=5.7						
	0.5nm,0.6s						
BVAR	Borovoye Array	79.13	325	P	P	06 21 42.1	+1.4
	0.4nm,0.4s,baz=107,slow=7.7,SNR=2.3						
	0.4nm,0.4s						
ILAR	Eielson Array	85.92	24	P	P	06 22 15.9	0.0
	0.3nm,0.6s,baz=262,slow=4.6,SNR=6.3						
	0.3nm,0.6s						
QSPA	South Pole Qui	87.26	180	P	P	06 22 22.4	-0.2
	2.2nm,1.0s,baz=333,slow=3.2,SNR=5.9						
	2.2nm,1.0s						

IDC 27 06:10:13.9±278.0, 19°.71N×157°.60W, h0km, Error ellipse: s-maj=101.3km s-min=35.8km az=94.0, Hawaiian Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I59US	HAWAII INFRASO	1.62	94	I	I	06 20 00.0	
	0.1nm,0.5s,baz=275,slow=322,SNR=8.0						
I58US	Midway Islands	19.93	299	I	I	08 18 40.0	
	0.1nm,0.7s,baz=112,slow=317,SNR=1.8						
I60US	Wake Island	33.70	275	I	I	09 32 30.0	
	baz=82,slow=312,SNR=1.1						

KEA 27 06:19:49.4, 38°.84N×125°.71E, h7km, ML3.8/2

IDC 27 06:19:51.6±1.1, 38°.72N×125°.65E, h0km, mb3.6/5, mbtmp3.7/8, ML3.4/3, Error ellipse: s-maj=24.9km s-min=11.5km az=43.0

NEIC 27 06:19:51.8±0.9, 38°.86N±0°.07×125°.68E±0°.09, h10km±2km, mb_Lg3.6/5, Error ellipse: s-maj=15.9km s-min=5.9km az=47.0

KMA 27 06:19:52.0±0.4, 38°.80N×125°.69E, h2km±2km, Error ellipse: s-maj=2.7km s-min=1.3km az=173.0

ISC 27 06:19:52.5±0.7, 38°.83N±0°.04×125°.68E±0°.04, h10km, n32, σ1s.35/39, mb3.7/5, North Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYS	Pyongsong	0.44	18	Pg	Pg	06 19 58.6	-2.4
PYS				Sg	Sg	06 20 04.2	-2.7
PYS				AML	AML		
	comp=N,16µm,0.2s						
PYS				AML	AML		
	comp=E,11µm,0.2s						
PYS				AML	AML		
	comp=Z,12µm,0.3s						
HJU	Haeju	0.79	178	Pg	Pg	06 20 05.6	-2.1
HJU				AML	AML		
	comp=N,6µm,0.7s						
HJU				AML	AML		
	comp=E,7µm,0.3s						
HJU				AML	AML		
	comp=Z,3µm,0.2s						
KSBAR	Backryungdo	1.15	222	P	Pb	06 20 13.3	-1.0
	SNR=509						
KSBAR				P	Pb	06 20 13.3	-1.0
	SNR=509						
KSBAR				S	Sg	06 20 29.4	+0.1
KSBAR				S	Sg	06 20 29.4	+0.1
YPDB	Yeonpyeongdo	1.22	179	P	Pn	06 20 14.9	-0.8
	SNR=315						
YPDB				P	Pn	06 20 14.9	-0.8
	SNR=315						
DACB	Daecheong-do R	1.26	218	P	Pn	06 20 15.5	-0.6
	SNR=189						
DACB				P	Pn	06 20 15.5	-0.6
	SNR=189						
KSMUS	Musan	1.27	138	P	Pb	06 20 16.0	-0.4
	SNR=22						
KSDDC	Dongducheon	1.43	130	P	Pn	06 20 18.1	-0.3
	SNR=33						
GMHB	Gimhwa	1.48	113	P	Pg	06 20 20.1	-0.9
	SNR=22						
INCN	Inchon	1.54	151	Pn	Pn	06 20 19.5	-0.5
INCN				Sn	Sn	06 20 40.1	0.0
INCN				IAmb_Lg		06 20 42.2	
	comp=Z,262nm,0.7s						
KSINC	Incheon	1.54	151	P	Pn	06 20 19.7	-0.4
	SNR=32						
GMPB	Gimpo	1.55	158	P	Pn	06 20 17.9	-2.2
	SNR=55						
GMPB				P	Pn	06 20 17.9	-2.2
	SNR=55						
SGMA	Sangmyun	1.61	128	P	Pn	06 20 20.8	-0.2
	SNR=57						
KSSOD	Songwoldong	1.62	141	P	Pb	06 20 21.8	-0.5
	SNR=11						
KSCWO	Cheorwon	1.62	117	P	Pn	06 20 21.0	-0.1
	SNR=51						
GODA	Kyodong	2.04	128	P	Pn	06 20 13.7	-13
	SNR=12						
GODA				S	Sn	06 20 28.6	-24
KS19	Wonju Array Si	2.17	127		Pn	06 20 29.1	+0.4
KSAR	Wonju Array Be	2.22	128		Pn	06 20 28.8	-0.5
KSRS	Korea Array	2.24	127	Pn	Pn	06 20 28.4	-1.2
	comp=Z,18nm,0.3s,baz=310,slow=14,SNR=239						
KSRS				Pg	Pb	06 20 32.3	-0.7
	comp=Z,35nm,0.3s,baz=306,slow=19,SNR=60						
KSRS				Lg	Lg	06 21 00.8	
	comp=Z,185nm,0.3s,baz=308,slow=30,SNR=51						
	comp=Z,65nm,0.5s						
TJN	Taejon	2.79	151		Pn	06 20 36.7	-0.5
MDJ	Mudanjiang	6.47	26	Pn	Pn	06 21 26.0	-1.8
MDJ				IAmb_Lg		06 23 21.8	
	comp=Z,160nm,1.0s						
JNU	Nakatsue	7.09	142	Pn	Pn	06 21 34.7	-1.6
JNU				IAmb_Lg		06 23 51.1	
	comp=Z,66nm,1.1s						
JNU	Nakatsue	7.09	142	Pn	Pn	06 21 35.0	-1.3
	comp=Z,0.5nm,0.3s,baz=319,slow=11,SNR=1.8						
JNU				Lg	Lg	06 23 33.4	
	comp=Z,1.0nm,0.3s,baz=257,slow=18,SNR=4.5						
	comp=Z,2.7nm,0.5s						
USA0B	Ussuriysk Arra	7.15	39	Pn	Pn	06 21 36.3	-0.8
USRK	Ussuriysk Ar.	7.15	39	Pn	Pn	06 21 35.3	-1.7
USRK	Ussuriysk Ar.	7.15	39	Pg	Pg	06 22 03.8	-5.5
	comp=Z,1.5nm,0.3s,baz=223,slow=15,SNR=11						
USRK				Lg	Lg	06 23 37.3	
	comp=Z,2.7nm,0.3s,baz=231,slow=26,SNR=7.1						
BJT	Baijiatuau	7.46	282		Pn	06 21 40.5	-0.9
KLR	Kul'dur	11.27	21	Pn	Pn	06 22 35.9	+2.4
	comp=Z,0.3nm,0.3s,baz=207,slow=17,SNR=4.5						
KLR				Lg	Lg	06 25 45.2	
	comp=Z,0.3nm,0.3s,baz=330,slow=20,SNR=7.1						
	comp=Z,1.2nm,0.4s						
KURBB	Kurchatov Arra	34.94	305	P	P	06 26 45.8	+1.4
	comp=Z,0.5nm,0.6s,baz=94,slow=9.4,SNR=3.4						
	comp=Z,0.5nm,0.6s						
BVAR	Borovoye Array	39.98	309	P	P	06 27 29.1	+2.2
	comp=Z,0.8nm,0.5s,baz=91,slow=8.8,SNR=5.1						
	comp=Z,0.8nm,0.5s						
ILAR	Eielson Array	54.60	32	P	P	06 29 23.1	+2.4
	comp=Z,0.3nm,0.8s,baz=284,slow=6.0,SNR=1.6						
	comp=Z,0.3nm,0.8s						
FINES	FINESS Array B	60.98	327	P	P	06 30 05.9	+0.4
	comp=Z,0.7nm,0.5s,baz=59,slow=4.9,SNR=3.3						
	comp=Z,0.7nm,0.5s						
NOA	NORSAR Array B	67.16	331	P	P	06 30 45.8	-0.4
	comp=Z,0.4nm,0.4s,baz=50,slow=6.5,SNR=2.3						
	comp=Z,0.4nm,0.4s						

ECX 27 06:21:20.1±0.5, 32°.34N×115°.27W, h8km±1km, MD3.1, ML3.3

PAS 27 06:21:20.5±2.0, 32°.28N±0°.02×115°.23W±0°.02, h27km±7km, ML3.2/63, ML3.1/30(NEIC), Error ellipse: s-maj=3.3km s-min=2.0km az=195.0

NEIC 27 06:21:21.2±1.8, 32°.32N±0°.02×115°.23W±0°.02, h24km±9km, Error ellipse: s-maj=2.7km s-min=2.2km az=183.0

ISC 27 06:21:21.3±0.8, 32°.34N±0°.02×115°.28W±0°.02, h17km±4km, n84, σ0s.99/114, 8C-11D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPBX	Cerro Prieto	0.08	345		Pg	06 21 23.6	-1.1
CPBX	Cerro Prieto	0.08	345	⇑eP	Pg	06 21 23.6	-1.1
CPBX				eS	Sg	06 21 27.0	0.0
CPBX				⇓e		06 21 31.6	
CPBX				IAML		06 21 31.6	
	comp=N,95µm,0.5s						
MBIG	Mexicali	0.09	48	⇑eP	Pg	06 21 23.4	-1.4
AGSX	Ej. Aguas Cali	0.13	128	⇓iP	Pg	06 21 24.5	-0.7
AGSX				eS	Sg	06 21 27.6	-0.2
GUVIX	Guadalupe Vict	0.18	103		Pg	06 21 25.7	-0.1
GUVIX					Sg	06 21 29.4	+0.6
GUVIX	Guadalupe Vict	0.18	103	⇓eP	Pg	06 21 25.8	-0.1
GUVIX				eS	Sg	06 21 29.5	+0.6
RHX	Rio Hardy	0.21	181	⇓eP	Pg	06 21 26.0	-0.3
PESCX	Ej. Pescaderos	0.28	72		Pb	06 21 27.3	-0.6
PESCX					Sb	06 21 32.4	+0.1
PESCX	Ej. Pescaderos	0.28	72	⇓eP	Pb	06 21 27.3	-0.6
YUCAX	Ej. Yucat¡n	0.30	31	⇓eP	Pb	06 21 28.0	-0.3
YUCAX				eS	Sb	06 21 33.6	+0.6
UABX	UABC, Campus M	0.32	335		Pb	06 21 28.6	+0.1
UABX					Sb	06 21 34.7	+1.3
UABX	UABC, Campus M	0.32	335	eP	Pb	06 21 28.5	+0.1
UABX				eS	Sb	06 21 34.5	+1.2
UABX				IAML		06 21 35.1	
	comp=E,7µm,0.3s						
UABX				⇑e		06 21 35.1	
UABX				IAML		06 21 35.1	
	comp=N,4µm,0.4s						
UABX				e		06 21 35.1	
JARAX	Ej. Heriberto	0.32	307	⇑eP	Pb	06 21 28.1	-0.4
JARAX				IAML		06 21 37.9	
	comp=E,5µm,0.3s						
JARAX				⇑e		06 21 37.9	
JARAX				⇑e		06 21 47.3	
JARAX				IAML		06 21 47.3	
	comp=N,5µm,0.7s						
RITX	Riito Sonora	0.32	123	⇓eP	Pb	06 21 28.6	0.0
5054	Holtville Bond	0.35	352		Pn	06 21 35.4	+3.8
ICBC	Inst. de Cultu	0.36	333	⇑eP	Pb	06 21 29.4	+0.2
ICBC				eS	Sb	06 21 35.8	+1.3
5053	Calexico	0.37	331		Pb	06 21 29.1	-0.3
5053					Sb	06 21 36.2	+1.3
EMSC	East Mesa	0.47	32		Pb	06 21 30.8	-0.3
EMSC					Sb	06 21 38.1	+0.5
EMSC	East Mesa	0.47	32	eP	Pb	06 21 30.7	-0.3
DREC	Desert Rsrch C	0.48	343		Pb	06 21 31.8	+0.5
DREC					Sb	06 21 40.1	+2.1
DREC	Desert Rsrch C	0.48	343	eP	Pb	06 21 31.7	+0.5
SGL	Mount Signal	0.48	309		Pb	06 21 31.1	-0.3
SGL					Sb	06 21 38.5	+0.3
SGL	Mount Signal	0.48	309	eP	Pb	06 21 31.1	-0.3
SGL				eS	Sb	06 21 38.5	+0.3
ALAMX	Rancho Alamar	0.49	227	⇓eP	Pb	06 21 31.9	+0.4
ALAMX				eS	Sb	06 21 40.2	+1.8
ALAMX				IAML		06 21 41.5	
	comp=N,2µm,0.2s						
ALAMX				⇓e		06 21 41.5	
ALAMX				IAML		06 21 43.4	
	comp=E,2µm,0.3s						
SNR	Schaffner Ranc	0.53	346		Pb	06 21 32.3	+0.1
SNR					Sb	06 21 40.9	+1.3
COA	Coachella	0.54	14		Pb	06 21 31.9	-0.3
COA					Sb	06 21 40.7	+1.1
COA	Coachella	0.54	14	eP	Pb	06 21 31.9	-0.3
WESC	Westside Schoo	0.56	317		Sb	06 21 40.7	+0.3
IMPE	Imperial	0.60	337		Pb	06 21 33.4	0.0
IMPE					Pn	06 21 43.4	+8.3
YUH2	Yuha Desert	0.62	299	⇑eP	Pb	06 21 33.5	-0.1
YUH	Yuha Desert	0.62	299		Pn	06 21 42.5	+7.1
YUH	Yuha Desert	0.62	299		Pb	06 21 33.5	-0.2
YUH	Yuha Desert	0.62	299	IAML		06 21 43.3	
	comp=E,379nm,0.5s						
YUH				IAML		06 21 44.3	
	comp=N,477nm,0.5s						
ESJX	Sierra Juarez	0.66	239		Pn	06 21 35.0	-1.0
ESJX				IAML		06 21 46.2	
	comp=N,2µm,0.2s						
RUN	Ruthven	0.68	22		Pb	06 21 33.6	-1.0
RUN					Sb	06 21 43.4	-0.4
RMX	La Rumorosa	0.72	291		Sg	06 21 44.1	-1.1
WEMD	Westmorland, C	0.74	340		Sn	06 21 47.0	-0.7
SWSC	Sam W. Stewart	0.74	324		Pb	06 21 35.0	-0.8
SWSC					Sb	06 21 45.8	+0.2
SUP	Superstition M	0.76	323		Sb	06 21 46.5	+0.3
IKP	In-Ko-Pah, Jac	0.76	294		Pb	06 21 36.3	+0.1
IKP	In-Ko-Pah, Jac	0.76	294	eP	Pb	06 21 36.2	+0.1
CRR	Carrizo Plain	0.80	313		Pb	06 21 36.2	-0.4
CRR					Sb	06 21 48.1	+1.0
CRR	Carrizo Plain	0.80	313	eP	Pb	06 21 36.2	-0.4
GLA	Glamis	0.80	28		Pg	06 21 35.5	-1.5
GLA				IAML		06 21 48.4	
	comp=E,1µm,0.5s						
GLA				IAML		06 21 56.8	
	comp=N,947nm,0.4s						
SJX	San Joaquin	0.82	225	⇓eP	Pg	06 21 34.9	-2.3
ECBX	El Chinero	0.89	167	⇓eP	Pb	06 21 37.8	-0.4
ECBX				eS	Sb	06 21 50.4	+0.6
SLVP	Salvation Pass	0.89	359		Pg	06 21 36.9	-1.8
SLVP					Sg	06 21 48.6	-1.8
ERRC	Elmore Ranch	0.90	329		Pb	06 21 37.9	-0.5
ERRC					Sn	06 21 51.2	-0.4
VTX	Valle De La Tr	1.04	204		Pn	06 21 41.4	+0.2
VTX					Sn	06 21 55.8	+0.5
SALN	Salton City	1.11	328		Sg	06 21 55.9	-1.3
MONP2	Monument Peak	1.11	300		Pg	06 21 41.4	-1.4
MONP2					Sb	06 21 56.8	+0.5
TKX	Tecate	1.14	282		Pn	06 21 43.0	+0.4
TKX				IAML		06 21 59.1	
	comp=E,415nm,0.5s						
CBX	Cerro Bola	1.17	269		Pn	06 21 43.4	+0.4
CBX					Sn	06 21 59.6	+0.9
CBX				IAML		06 22 02.4	
	comp=E,864nm,0.4s						
BAR	Barrett	1.22	286		Pg	06 21 44.3	-0.6
BAR					Sn	06 22 01.2	+1.4
CCX	Cicese	1.27	248		Pg	06 21 45.3	-0.4
DUZA	Dulzura	1.29	282		Pg	06 21 45.5	-0.7
DUZA					Sn	06 22 02.9	+1.5
JUEM	Julian Eagle M	1.33	304		Pn	06 21 44.6	-0.6
JUEM					Sn	06 22 04.5	+1.9
113A	Mohawk Valley,	1.35	71		Pn	06 21 43.9	-1.4
113A				IAML		06 22 18.8	
	comp=N,329nm,0.8s						
113A				IAML		06 22 31.0	
	comp=E,174nm,0.9s						
SFX	San Felipe	1.35	164		Pg	06 21 46.2	-1.2
SFX					Sg	06 22 04.7	-0.3
SFX				IAML		06 22 06.6	
	comp=N,281nm,0.5s						
SFX				IAML		06 22 15.7	
	comp=E,220nm,0.7s						
OLP	Otay Lakes Par	1.42	281		Sg	06 22 06.5	-0.7
EML	El Monte Cty P	1.43	293		Pg	06 21 48.0	-0.8
EML					Sg	06 22 06.7	-0.8
MATG	Mataguay Scout	1.43	307		Sg	06 22 07.9	+0.2
SDRC	San Diego Road	1.46	286		Pg	06 21 48.0	-1.4
SDRC					Sg	06 22 07.6	-0.8
TJX	Tijuana	1.51	277		Pg	06 21 49.6	-0.8
BLYC	Blythe	1.54	24		Pg	06 21 49.7	-1.3
BLYC				IAML		06 22 41.1	
	comp=E,199nm,0.8s						
BLYC				IAML		06 22 46.7	
	comp=N,171nm,0.8s						
DPP	Dos Picos Cty	1.55	295		Pg	06 21 50.2	-0.9
PFO	Pinyon Flats O	1.61	322		Pn	06 21 47.5	-1.5
SDMC	San Diego Miss	1.63	286		Sg	06 22 13.1	-0.7
CPE	Camp Elliot	1.63	290		Sg	06 22 12.9	-1.1
214A	Organ Pipe Nat	2.13	100		Pn	06 21 54.7	-1.4
ELS	Elsinore Mount	2.22	306	Pn	Pn	06 21 58.2	+0.7
ELS				IAML		06 22 32.7	
	comp=E,56nm,0.5s						
Y14A	Wickenburg	2.48	50		Pn	06 22 01.6	+0.5
W13A	Hualapai Mount	2.98	23	Pn	Pn	06 22 08.6	+0.5
TUC	Tucson	3.81	89	Pn	Pn	06 22 18.5	-0.7
TUC				IAML		06 23 47.2	
	comp=E,29nm,1.2s						
X16A	Lo Mia Camp, P	3.82	56		Pn	06 22 20.1	+0.6
WUAZ	Wupatki	4.53	45	Pn	Pn	06 22 30.7	+1.4
WUAZ				IAML		06 24 00.9	
	comp=E,36nm,1.1s						
WUAZ				IAML		06 24 28.5	
	comp=E,39nm,1.1s						
U15A	North Rim	4.76	30		Pn	06 22 34.1	+1.6
LCMT	Little Creek M	4.95	19	Pn	Pn	06 22 35.2	+0.3
X18A	Snowflake	4.96	62		Pn	06 22 35.9	+0.7
KNB	Kanab	5.08	23		Pn	06 22 38.5	+1.7
W18A	Petrified Fore	5.38	58	Pn	Pn	06 22 42.0	+1.0
LENM	Lemitar	7.19	73	Pn	Pn	06 23 07.1	+1.3
MVCO	Mesa Verde	7.39	47		Pn	06 23 09.2	+0.6
PV05	Paradox Valley	7.63	40	Pn	Pn	06 23 13.7	+1.8

CNRM 27 06:30:46.1, 36°.35N×12°.33W, h10km, ML3.6

MDD 27 06:30:49.6±0.9, 36°.90N×12°.27W, h0km, Mb4.2/16, M_mb3.5/16, Error ellipse: s-maj=7.6km s-min=5.6km az=56.0

IGIL 27 06:30:50.3, 36°.90N×12°.27W, h2km, ML2.2

INMG 27 06:30:51.2±1.2, 36°.67N×12°.60W, h11km±6km, ML2.5, Error ellipse: s-maj=4.0km s-min=2.1km az=128.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe

ISC 27 06:30:47.5±2.9, 36°.88N±0°.08×12°.3W±0°.1, h10km, n77, σ2s.06/112, 18C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	2.80	84	Pn	Pn	06 31 33.6	+1.3
PFVI				Sn	Sn	06 32 04.7	-1.5
PFVI	Vila Bisbo	2.80	84	⇑eP	Pn	06 31 33.6	+1.3
PFVI				eS	Sn	06 32 05.8	-0.3
PFVI				i AML	AML	06 32 07.3	
PFVI				i AML	AML	06 32 08.2	
PFVI				i AML	AML	06 32 08.7	
PFVI	Vila Bisbo	2.80	84	P	Pn	06 31 33.5	+1.3
PTEO	Sao Teotonio	2.94	76	eP	Pn	06 31 35.8	+1.6
PTEO				eS	Sn	06 32 09.0	-0.6
PTEO				i AML	AML	06 32 11.4	
PTEO				i AML	AML	06 32 12.1	
PTEO				i AML	AML	06 32 12.7	
MORF	Marmelete	2.96	81	eP	Pn	06 31 35.9	+1.4
MORF				eS	Sn	06 32 09.2	-0.9
MORF				IAML		06 32 11.4	
	comp=N,16nm,0.2s						
MORF	Marmelete	2.96	81	⇑eP	Pn	06 31 35.9	+1.4
MORF				eS	Sn	06 32 09.8	-0.3
MORF				i AML	AML	06 32 12.8	
MORF				i AML	AML	06 32 13.2	
MORF				i AML	AML	06 32 15.1	
PMAFR	Mafra	3.17	48	Sn	Sn	06 32 16.1	+0.8
PMAFR				Pn	Pn	06 31 39.6	+2.2
PMAFR	Mafra	3.17	48	⇑eP	Pn	06 31 39.6	+2.2
PMAFR				eS	Sn	06 32 16.1	+0.8
PMAFR				i AML	AML	06 32 17.4	
PMAFR				i AML	AML	06 32 17.6	
PMAFR				i AML	AML	06 32 17.8	
PARRA	Arraiolos	3.23	52	eP	Pg	06 31 48.9	-0.5
PARRA				eS	Sg	06 32 32.4	+1.1
PARRA				i AML	AML	06 32 38.7	
PARRA				i AML	AML	06 32 43.0	
PARRA				i AML	AML	06 32 44.8	
PACT	Alcochete	3.34	54	eP	Pn	06 31 42.3	+2.6
PACT				eS	Sn	06 32 21.1	+1.7
PACT				i AML	AML	06 32 24.5	

PACT				*i* AML	AML	06 32 24.5	
PACT				*i* AML	AML	06 32 26.7	
MESJ	**Messejana**	**3.40**	**72**	*e*P	**Pn**	**06 31 42.1**	**+1.6**
MESJ				*e*S	**Sn**	**06 32 19.6**	**-1.3**
MESJ				IAML		06 32 27.6	
	comp=N,4.3nm,0.2s						
PCVE	**Castro Verde**	**3.49**	**76**	Pn	**Pn**	**06 31 44.1**	**+2.3**
PCVE				Sn	**Sn**	**06 32 21.8**	**-1.4**
PCVE	**Castro Verde**	**3.49**	**76**	*e*P	**Pn**	**06 31 43.5**	**+1.7**
PCVE				*e*S	**Sn**	**06 32 22.1**	**-1.0**
PCVE				*i* AML	AML	06 32 23.8	
PCVE				*i* AML	AML	06 32 26.6	
PCVE				*i* AML	AML	06 32 28.2	
PBDV	**Barranco-do-Ve**	**3.52**	**83**	*e*P	**Pn**	**06 31 43.9**	**+1.6**
PBDV				*e*S	**Sn**	**06 32 23.6**	**-0.4**
PBDV				*i* AML	AML	06 32 26.3	
PBDV				*i* AML	AML	06 32 26.9	
PBDV				*i* AML	AML	06 32 33.2	
PVAQ	**Vaqueiros**	**3.71**	**80**	Pn	**Pn**	**06 31 46.9**	**+2.1**
PVAQ	**Vaqueiros**	**3.71**	**80**	*e*P	**Pn**	**06 31 46.5**	**+1.8**
PVAQ				*e*S	**Sn**	**06 32 28.0**	**-0.5**
PVAQ				*i* AML	AML	06 32 30.7	
PVAQ				*i* AML	AML	06 32 31.0	
PVAQ				*i* AML	AML	06 32 31.1	
PBEJ	**Beja**	**3.72**	**71**	*e*P	**Pn**	**06 31 47.0**	**+2.1**
PBEJ				*e*S	**Sn**	**06 32 28.1**	**-0.7**
PBEJ				*i* AML	AML	06 32 33.4	
PBEJ				*i* AML	AML	06 32 33.6	
PBEJ				*i* AML	AML	06 32 37.9	
EVO	**Evora**	**3.79**	**63**	Pn	**Pn**	**06 31 48.3**	**+2.4**
EVO				Sn	**Sn**	**06 32 29.9**	**-0.6**
EVO	**Evora**	**3.79**	**63**	*e*P	**Pn**	**06 31 47.7**	**+1.8**
EVO				*e*S	**Sn**	**06 32 30.2**	**-0.3**
EVO				*i* AML	AML	06 32 36.3	
EVO				*i* AML	AML	06 32 36.9	
EVO				*i* AML	AML	06 32 37.0	
PSBE	**So Bento**	**3.82**	**45**	*e*P	**Pn**	**06 31 49.0**	**+2.6**
PSBE				*e*S	**Sn**	**06 32 31.8**	**+0.4**
PSBE				*i* AML	AML	06 32 35.0	
PSBE				*i* AML	AML	06 32 38.8	
PSBE				*i* AML	AML	06 32 41.3	
PMTG	**Montargil**	**3.90**	**55**	*e*P	**Pn**	**06 31 49.2**	**+1.7**
PMTG				*e*S	**Sn**	**06 32 32.9**	**-0.4**
PMTG				*i* AML	AML	06 32 34.6	
PMTG				*i* AML	AML	06 32 38.2	
PMTG				*i* AML	AML	06 32 40.3	
EGRO	**El Granado**	**3.91**	**79**	Pn	**Pn**	**06 31 49.4**	**+1.9**
EGRO				Sn	**Sn**	**06 32 31.3**	**-2.2**
EGRO	**El Granado**	**3.91**	**79**	Pn	**Pn**	**06 31 49.1**	**+1.6**
EGRO				⇑*i*IVmb_VC		06 31 50.1	
	comp=N,213nm,SNR=4.4						
EGRO				Sn	**Sn**	**06 32 31.5**	**-2.0**
PESTR	**Estremoz**	**4.23**	**61**	Pn	**Pn**	**06 31 54.4**	**+2.4**
PESTR	**Estremoz**	**4.23**	**61**	*e*P	**Pn**	**06 31 54.0**	**+2.0**
PSARD	**Sardoal**	**4.25**	**49**	*e*P	**Pn**	**06 31 54.4**	**+2.1**
PSARD				*e*S	**Sn**	**06 32 41.8**	**-0.2**
PSARD				*i* AML	AML	06 32 45.2	
PSARD				*i* AML	AML	06 32 46.5	
PSARD				*i* AML	AML	06 32 49.0	
PCAS	**Casmilo, Conde**	**4.36**	**42**	*e*P	**Pn**	**06 31 56.1**	**+2.3**
PCAS				*e*S	**Sn**	**06 32 44.2**	**-0.4**
PCAS				*i* AML	AML	06 32 46.4	
PCAS				*i* AML	AML	06 32 49.5	
PCAS				*i* AML	AML	06 32 52.5	
PBAR	**Barrancos**	**4.39**	**71**	Pn	**Pn**	**06 31 56.1**	**+2.0**
PBAR				Sn	**Sn**	**06 32 42.6**	**-2.7**
PBAR	**Barrancos**	**4.39**	**71**	*e*P	**Pn**	**06 31 55.8**	**+1.7**
PBAR				*e*S	**Sn**	**06 32 43.6**	**-1.7**
PBAR				*i* AML	AML	06 32 46.5	
PBAR				*i* AML	AML	06 32 48.3	
PBAR				*i* AML	AML	06 32 54.8	
EMIN	**Mina Concepcio**	**4.58**	**77**	Pn	**Pn**	**06 31 58.1**	**+1.4**
EMIN				Sn	**Sn**	**06 32 48.6**	**-1.4**
EMIN	**Mina Concepcio**	**4.58**	**77**	Pn	**Pn**	**06 31 58.2**	**+1.4**
EMIN				⇑*i*IVmb_VC		06 31 59.2	
	comp=N,141nm,SNR=3.4						
EMIN				Sn	**Sn**	**06 32 48.3**	**-1.8**
EBAD	**Badajoz**	**4.59**	**64**	Pn	**Pn**	**06 31 58.7**	**+1.7**
EBAD				Sn	**Sn**	**06 32 49.1**	**-1.3**
EBAD	**Badajoz**	**4.59**	**64**	Pn	**Pn**	**06 31 58.7**	**+1.7**
EBAD				⇑*i*IVmb_VC		06 32 00.9	
	comp=N,273nm,SNR=6.0						
EBAD				Sn	**Sn**	**06 32 50.2**	**-0.2**
PMRV	**Marv??o**	**4.64**	**55**	*e*P	**Pn**	**06 31 59.2**	**+1.6**
PMRV				*e*S	**Sn**	**06 32 50.4**	**-1.1**
PMRV				*i* AML	AML	06 32 52.4	
PMRV				*i* AML	AML	06 32 52.8	
PMRV				*i* AML	AML	06 32 53.3	
PCBR	**Castelo Branco**	**4.81**	**51**	*e*P	**Pn**	**06 32 02.2**	**+2.2**
PCBR				*e*S	**Sn**	**06 32 55.0**	**-0.8**
PCBR				*i* AML	AML	06 33 00.9	
PCBR				*i* AML	AML	06 33 04.2	
PCBR				*i* AML	AML	06 33 10.3	
PMPST	**Porto Santo, M**	**5.03**	**222**	*e*P	Pn	06 31 55.7	-7.2
PMPST				*e*S	Sn	06 32 44.9	-16
PMPST				*i* AML	AML	06 32 45.8	
PMPST				*i* AML	AML	06 32 47.4	
PMPST				*i* AML	AML	06 32 49.3	
PMPS	**Porto Santo**	**5.04**	**222**	*e*P	Pn	06 31 56.3	-6.8
MTE	**Manteigas**	**5.13**	**45**	*e*P	**Pn**	**06 32 06.7**	**+2.3**
MTE				*e*S	**Sn**	**06 33 02.3**	**-1.4**
MTE				*i* AML	AML	06 33 05.7	
MTE				*i* AML	AML	06 33 05.8	
MTE				*i* AML	AML	06 33 06.5	
PVIS	**Viseu**	**5.16**	**41**	*e*P	**Pn**	**06 32 06.8**	**+2.0**
PVIS				*e*S	**Sn**	**06 33 03.0**	**-1.4**
ESPR	**Espera**	**5.17**	**88**	Pn	**Pn**	**06 32 06.1**	**+1.2**
ESPR	**Espera**	**5.17**	**88**	Pn	**Pn**	**06 32 06.3**	**+1.4**
ESPR				⇑*i*IVmb_VC		06 32 07.1	
	comp=N,260nm,SNR=3.9						
ESPR				Sn	**Sn**	**06 33 03.9**	**-0.8**
ECAB	**El Cabril**	**5.61**	**76**	Pn	**Pn**	**06 32 12.5**	**+1.5**
ECAB				Sn	**Sn**	**06 33 13.7**	**-1.8**
ECAB	**El Cabril**	**5.61**	**76**	Pn	**Pn**	**06 32 12.2**	**+1.2**
ECAB				⇑*i*IVmb_VC		06 32 13.5	
	comp=N,124nm,SNR=4.1						
ECAB				Sn	**Sn**	**06 33 12.4**	**-3.1**
PVRL	**Vila Real**	**5.66**	**38**	*e*P	**Pn**	**06 32 13.7**	**+2.0**
PVRL				*e*S	**Sn**	**06 33 14.8**	**-2.0**
PVRL				*i* AML	AML	06 33 17.5	
PVRL				*i* AML	AML	06 33 17.7	
PVRL				*i* AML	AML	06 33 18.2	
PMOZ	**Porto Moniz, M**	**5.70**	**226**	Pn	Pn	06 32 05.8	-6.4
PMOZ	**Porto Moniz, M**	**5.70**	**226**	*e*P	Pn	06 32 05.9	-6.4
PMOZ				*e*S	Sn	06 33 01.4	-16
PMOZ	**Porto Moniz, M**	**5.70**	**226**	P	Pn	06 32 06.0	-6.3
PMOZ	**Porto Moniz, M**	**5.70**	**226**	S	Sn	06 33 05.6	-12
POLO	**Lamas de Olo**	**5.70**	**37**	*e*P	**Pn**	**06 32 14.1**	**+1.8**
POLO				*e*S	**Sn**	**06 33 15.6**	**-2.2**
POLO				*i* AML	AML	06 33 19.2	
POLO				*i* AML	AML	06 33 19.4	
POLO				*i* AML	AML	06 33 20.5	
ZHG	**ZHG**	**5.77**	**125**	P	Pn	06 32 08.2	-4.9
ZHG	**ZHG**	**5.77**	**125**	S	Sn	06 33 10.1	-9.3
EPLA	**Plasencia**	**5.83**	**55**	Pn	**Pn**	**06 32 16.1**	**+2.1**
EPLA				⇑*i*IVmb_VC		06 32 16.5	
	comp=N,146nm,SNR=3.4						
EPLA				Sn	**Sn**	**06 33 18.8**	**-2.2**
PCAB	**Cabril**	**5.86**	**33**	*e*P	**Pn**	**06 32 17.2**	**+2.8**
PCAB				*e*S	**Sn**	**06 33 19.4**	**-2.2**
PCAB				*i* AML	AML	06 33 21.0	
PCAB				*i* AML	AML	06 33 22.1	
PCAB				*i* AML	AML	06 33 23.5	
MVO	**Moncorvo**	**5.94**	**42**	*e*P	**Pn**	**06 32 17.1**	**+1.7**
MVO				*e*S	**Sn**	**06 33 21.1**	**-2.5**
MVO				*i* AML	AML	06 33 23.9	
MVO				*i* AML	AML	06 33 25.7	
MVO				*i* AML	AML	06 33 25.9	
EZAM	**Zamans**	**5.96**	**27**	⇑*i*IVmb_VC		06 32 17.6	
	comp=N,152nm,SNR=1.4						
EZAM				Sn	**Sn**	**06 33 21.1**	**-3.0**
PGAV	**Gavieira, Arco**	**5.97**	**30**	*e*P	**Pn**	**06 32 18.2**	**+2.3**
PGAV				*e*S	**Sn**	**06 33 22.0**	**-2.4**
PGAV				*i* AML	AML	06 33 25.6	
PGAV				*i* AML	AML	06 33 26.1	
PGAV				*i* AML	AML	06 33 29.4	
ELOB	**Lobios**	**5.97**	**32**	Pn	**Pn**	**06 32 18.1**	**+2.1**
ELOB				⇑*i*IVmb_VC		06 32 19.0	
	comp=N,110nm,SNR=1.5						
ELOB				Sn	**Sn**	**06 33 21.5**	**-3.0**
EADA	**Adamuz**	**6.28**	**76**	Pn	**Pn**	**06 32 21.6**	**+1.4**
EADA				Sn	**Sn**	**06 33 30.0**	**-2.0**
EADA	**Adamuz**	**6.28**	**76**	Pn	**Pn**	**06 32 21.6**	**+1.4**
EADA				⇑*i*IVmb_VC		06 32 23.2	
	comp=N,89nm,SNR=2.4						
EADA				Sn	**Sn**	**06 33 30.2**	**-1.8**
EJUZ	**Juzbado, Salam**	**6.53**	**48**	Pn	**Pn**	**06 32 24.8**	**+1.2**
PBRG	**Braganca**	**6.55**	**40**	*e*S	**Sn**	**06 33 35.3**	**-3.2**
PBRG				*i* AML	AML	06 33 38.0	
PBRG				*i* AML	AML	06 33 41.1	
PBRG				*i* AML	AML	06 33 41.3	
EMAZ	**Mazaricos**	**6.58**	**22**	⇑*i*IVmb_VC		06 32 26.8	
	comp=N,142nm,SNR=1.3						
EMAZ				Sn	**Sn**	**06 33 33.9**	**-5.6**
ECAL	**Calabor**	**6.65**	**39**	Pn	**Pn**	**06 32 27.4**	**+2.2**
ECAL				Sn	**Sn**	**06 33 38.5**	**-2.6**
ECAL	**Calabor**	**6.65**	**39**	Pn	**Pn**	**06 32 27.1**	**+1.9**
ECAL				⇑*i*IVmb_VC		06 32 27.7	
	comp=N,62nm,SNR=1.0						
ECAL				Sn	**Sn**	**06 33 38.0**	**-3.1**
EAGO	**Agolada(Pontev**	**6.75**	**27**	Pn	**Pn**	**06 32 28.8**	**+2.2**
EAGO				⇑*i*IVmb_VC		06 32 30.2	
	comp=N,124nm,SNR=1.7						
EAGO				Sn	**Sn**	**06 33 38.4**	**-5.1**
PAB	**San Pablo**	**6.81**	**65**	Pn	**Pn**	**06 32 28.6**	**+1.1**
PAB				⇑*i*IVmb_VC		06 32 31.9	
	comp=N,63nm,SNR=2.6						
PAB				Sn	**Sn**	**06 33 43.5**	**-1.7**
PSIM	**Granatula de C**	**7.04**	**71**	Pn	**Pn**	**06 32 31.9**	**+1.3**
PSIM				Sn	**Sn**	**06 33 48.5**	**-2.2**
TTIG	**Tnine Tigouga,**	**7.09**	**152**	P	Pn	06 32 24.7	-6.6
AKLM	**AKL**	**7.27**	**106**	P	Pn	06 32 29.2	-4.6
AKLM	**AKL**	**7.27**	**106**	S	**Sn**	**06 33 49.9**	**-6.5**
MD31	**MD31**	**7.38**	**121**	P	Pn	06 32 30.5	-4.9
MDT	**Midelt**	**7.52**	**120**	P	Pn	06 32 34.2	-3.0
OUZM	**OUZ**	**7.53**	**141**	P	Pn	06 32 34.3	-3.1
OUZM	**OUZ**	**7.53**	**141**	S	Sn	06 33 52.7	-10
EPON	**Pontenova**	**7.56**	**30**	⇑*i*IVmb_VC		06 32 39.7	
	comp=N,110nm,SNR=0.8						
EPON				Sn	**Sn**	**06 33 59.1**	**-4.3**
ZGR	**Zagora**	**8.75**	**138**	P	Pn	06 32 48.1	-6.1
ETOR	**Torete**	**8.92**	**61**	Pn	**Pn**	**06 32 57.9**	**+1.5**
ETOR				⇑*i*IVmb_VC		06 33 00.8	
	comp=N,86nm,SNR=1.2						

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*JMA **27** 06:33:30.9±0.1, 23°.8N±0°.6×122°.9E±0°.4, h49^{km}, MV2.8/11,*
NEAR ISHIGAKIJIMA ISLAND

*TAP **27** 06:33:30.7, 23°.75N×122°.99E, h44^{km}, ML3.4, D*

ISC 27 06:33:27.9±1.1**, 23°.70N**±0°.02×**122°.94E**±0°.02**, h15**^{km}±9^{km}**,**
n99, σ0^{s}.86/198**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS4	**EOS4**	**0.71**	**306**	*i* P	**Pn**	**06 33 44.6**	**+1.6**
EOS4				S	**Sn**	**06 33 54.7**	**+1.3**
JYNG	**Yonagunijimaku**	**0.75**	**0**	P	**Pn**	**06 33 44.3**	**+0.5**
JYNG				S	**Sn**	**06 33 54.6**	**-0.3**
YOJ	**Yonaguni jima**	**0.76**	**5**	P	**Pn**	**06 33 44.4**	**+0.4**
YOJ				S	**Sn**	**06 33 54.7**	**-0.5**
YOJ	**Yonaguni jima**	**0.76**	**5**	⇑*i*P	**Pn**	**06 33 44.5**	**+0.4**
YOJ				S	**Sn**	**06 33 54.4**	**-0.9**
EOS3	**EOS3**	**0.82**	**316**	*i* P	**Pn**	**06 33 46.2**	**+1.5**
EOS3				*i* S	**Sn**	**06 33 57.8**	**+1.4**
HATJ	**Hateruma jima**	**0.86**	**66**	*e*P	**Pn**	**06 33 47.0**	**+1.6**
HATJ				*e*S	**Sn**	**06 33 59.0**	**+1.3**
IRIF	**Iriomote-Funau**	**0.96**	**49**	P	**Pn**	**06 33 48.1**	**+1.4**
IRIF				*e*S	**Sn**	**06 34 00.6**	**+0.5**
EOS2	**EOS2**	**0.97**	**318**	*i* P	**Pg**	**06 33 49.0**	**+2.4**
EOS2				S	**Sn**	**06 34 02.9**	**+2.8**
JKRS	**Kuro-shima**	**1.11**	**61**	*e*P	**Pg**	**06 33 50.8**	**+1.5**
JKRS				*e*S	**Sg**	**06 34 05.2**	**+1.4**
TEYL	**Yanliau Villag**	**1.24**	**278**	*e*P	**Pg**	**06 33 52.9**	**+1.0**
TEYL				S	**Sg**	**06 34 08.0**	**-0.2**
HWA	**Hwalien**	**1.26**	**283**	*e*P	**Pg**	**06 33 52.4**	**+0.3**
HWA				*e*S	**Sb**	**06 34 07.9**	**+0.7**
SHUL	**Shoufeng**	**1.27**	**274**	P	**Pg**	**06 33 52.9**	**+0.5**
SHUL				S	**Sn**	**06 34 07.0**	**-0.8**
JIJ	**Ishigaki jima**	**1.28**	**59**	P	**Pg**	**06 33 52.6**	**0.0**
JIJ				*e*S	**Sg**	**06 34 09.0**	**-0.2**
TEGC	**Jichi Village**	**1.29**	**271**	*e*P	**Pg**	**06 33 53.2**	**+0.6**
TEGC				*i* S	**Sb**	**06 34 08.7**	**+0.6**
TWD	**Chiawan**	**1.29**	**287**	*i* P	**Pb**	**06 33 52.1**	**+0.3**
TWD				S	**Sn**	**06 34 07.1**	**-1.2**
ETL	**Fush Village**	**1.29**	**291**	*e*P	**Pg**	**06 33 53.9**	**+1.1**
ETL				S	**Sb**	**06 34 08.2**	**-0.1**
EWUT	**Wuta**	**1.30**	**305**	*i* P	**Pg**	**06 33 52.5**	**-0.4**
EWUT				*e*S	**Sg**	**06 34 11.6**	**+1.8**
ENA	**Nanau**	**1.32**	**304**	P	**Pb**	**06 33 52.0**	**-0.3**
ENA				S	**Sg**	**06 34 10.6**	**+0.2**
NACB	**Ninganchiao**	**1.32**	**291**	*i* P	**Pb**	**06 33 52.5**	**+0.1**
NACB				S	**Sn**	**06 34 08.0**	**-1.1**
ESAO	**Su ao**	**1.33**	**311**	P	**Pg**	**06 33 53.9**	**+0.3**
ESAO				*e*S	**Sg**	**06 34 10.4**	**-0.5**
TWC	**Suao**	**1.35**	**312**	*i* P	**Pg**	**06 33 53.8**	**-0.1**
TWC				*e*S	**Sg**	**06 34 10.7**	**-0.8**
ETM	**Tongmen**	**1.35**	**281**	*i* P	**Pb**	**06 33 52.6**	**-0.3**
ETM				S	**Sn**	**06 34 07.7**	**-2.2**
ESL	**Shilin**	**1.39**	**275**	*e*P	**Pb**	**06 33 53.2**	**-0.3**
ESL				*e*S	**Sn**	**06 34 09.5**	**-1.2**
EGFH	**Guangfu**	**1.39**	**269**	*e*P	**Pb**	**06 33 54.2**	**+0.7**
EGFH				S	**Sn**	**06 34 10.6**	**-0.2**
HGSD	**Ruisui**	**1.41**	**262**	*i* P	**Pb**	**06 33 53.7**	**-0.2**
HGSD				*i* S	**Sn**	**06 34 10.0**	**-1.3**
ECBN	**Changbin**	**1.42**	**255**	*e*P	**Pb**	**06 33 55.0**	**+0.9**
ECBN				S	**Sn**	**06 34 09.8**	**-1.8**
WARBT	**Fenglin Townsh**	**1.43**	**271**	*i* P	**Pb**	**06 33 53.9**	**-0.3**
WARBT				*i* S	**Sn**	**06 34 10.8**	**-1.0**
ETLH	**Xiulin Townshi**	**1.43**	**291**	*i* P	**Pg**	**06 33 54.9**	**-0.5**
ETLH				*i* S	**Sn**	**06 34 11.3**	**-0.6**
LXIB	**Xiulin Townshi**	**1.44**	**283**	*i* P	**Pb**	**06 33 54.1**	**-0.3**
LXIB				*e*S	**Sn**	**06 34 11.3**	**-0.9**
NDS	**Dongshan**	**1.46**	**310**	*e*P	**Pg**	**06 33 55.2**	**-0.7**
NDS				*e*S	**Sg**	**06 34 13.7**	**-1.2**
EGS		**1.47**	**321**	*i* P	**Pg**	**06 33 55.8**	**-0.3**
EGS				*e*S	**Sb**	**06 34 12.9**	**-0.4**
EHYH	**Wanrong**	**1.48**	**262**	*i* P	**Pb**	**06 33 55.9**	**+0.8**
EHYH				S	**Sb**	**06 34 13.7**	**0.0**
EHY	**Hungye**	**1.50**	**263**	*i* P	**Pb**	**06 33 55.4**	**0.0**
EHY				S	**Sn**	**06 34 12.9**	**-0.7**
CHKH	**Chenggong**	**1.51**	**251**	*i* P	**Pb**	**06 33 55.1**	**-0.4**
CHKH				S	**Sn**	**06 34 12.6**	**-1.2**
JISG	**Ishigakijimahi**	**1.53**	**55**	*e*P	**Pg**	**06 33 55.6**	**-1.7**
JISG				*e*S	**Sg**	**06 34 14.4**	**-2.8**
LATG	**Datong**	**1.54**	**303**	*i* P	**Pb**	**06 33 56.2**	**0.0**
LATG				*e*S	**Sg**	**06 34 17.0**	**-0.5**
YULB	**Yu-li**	**1.54**	**259**	*i* P	**Pb**	**06 33 56.1**	**0.0**
YULB				*i* S	**Sn**	**06 34 14.8**	**+0.2**
TWE	**Neicheng**	**1.55**	**311**	*i* P	**Pg**	**06 33 56.9**	**-0.8**
TWE				*e*S	**Sb**	**06 34 16.1**	**+0.5**
TWF1	**Yuli**	**1.55**	**257**	*i* P	**Pb**	**06 33 55.9**	**-0.4**
TWF1				*i* S	**Sn**	**06 34 15.2**	**+0.4**
TWB1	**Santiao Chiao**	**1.57**	**326**	*i* P	**Pb**	**06 33 56.4**	**-0.1**
TWB1				*e*S	**Sg**	**06 34 16.6**	**-1.8**
ENTT	**Nioudou**	**1.57**	**307**	*i* P	**Pg**	**06 33 57.2**	**-0.9**
ENTT				*e*S	**Sb**	**06 34 16.7**	**+0.5**
CHKT	**Chengkung**	**1.57**	**248**	*e*P	**Pb**	**06 33 56.6**	**0.0**
CHKT				S	**Sn**	**06 34 15.4**	**+0.2**
FULB	**Fuli**	**1.60**	**252**	*i* P	**Pn**	**06 33 56.2**	**+0.7**
FULB				*i* S	**Sn**	**06 34 15.2**	**-0.7**
WHF	**Hehuan Shan**	**1.60**	**286**	*i* P	**Pb**	**06 33 57.2**	**-0.2**
WHF				*i* S	**Sn**	**06 34 15.4**	**-1.2**
NNSB	**Datong**	**1.60**	**297**	*i* P	**Pb**	**06 33 57.5**	**+0.3**
NNSB				S	**Sb**	**06 34 16.5**	**-0.7**
NNSH	**Datong**	**1.60**	**297**	*i* P	**Pb**	**06 33 57.2**	**0.0**
NNSH				S	**Sb**	**06 34 16.4**	**-0.9**
NNS	**Nan Shan**	**1.61**	**297**	*i* P	**Pb**	**06 33 57.6**	**+0.2**
NNS				S	**Sb**	**06 34 16.9**	**-0.7**
TIPB	**Shuangxi**	**1.62**	**321**	*i* P	**Pb**	**06 33 57.7**	**+0.1**
TIPB				*e*S	**Sb**	**06 34 16.7**	**-1.2**
FUSB	**Fushanzhiwuyua**	**1.63**	**311**	P	**Pb**	**06 33 57.5**	**-0.1**
FUSB				*e*S	**Sg**	**06 34 18.9**	**-1.4**
OWD	**Renai**	**1.64**	**279**	*i* P	**Pb**	**06 33 57.8**	**-0.1**
OWD				*i* S	**Sn**	**06 34 16.8**	**-0.4**
FUSS	**Fushou**	**1.65**	**290**	*i* P	**Pb**	**06 33 58.0**	**-0.1**
FUSS				S	**Sn**	**06 34 17.7**	**+0.2**
VWDT	**VWDT**	**1.65**	**272**	*i* P	**Pb**	**06 33 57.8**	**-0.2**
VWDT				S	**Sn**	**06 34 17.3**	**0.0**
EDH	**Donghe**	**1.67**	**245**	*i* P	**Pn**	**06 33 57.5**	**+0.9**
EDH				*i* S	**Sn**	**06 34 16.7**	**-1.0**
EHD	**Haiduan**	**1.69**	**251**	*e*P	**Pn**	**06 33 57.7**	**+0.8**
EHD				*i* S	**Sn**	**06 34 17.7**	**-0.5**
SXI1	**Grass Mountain**	**1.69**	**325**	*i* P	**Pb**	**06 33 58.4**	**-0.4**
SXI1				*e*S	**Sb**	**06 34 20.0**	**0.0**
NWLT	**Wulai**	**1.70**	**309**	*i* P	**Pb**	**06 33 59.1**	**+0.3**
NWLT				*e*S	**Sb**	**06 34 19.5**	**-0.4**
WUSB	**Renai**	**1.70**	**280**	*i* P	**Pb**	**06 33 58.4**	**-0.5**
WUSB				S	**Sn**	**06 34 18.7**	**+0.1**
TWT	**Tachien**	**1.71**	**289**	*e*P	**Pb**	**06 33 59.4**	**+0.3**
TWT				S	**Sb**	**06 34 19.5**	**-0.9**
YHNB	**Yeheng**	**1.73**	**304**	*i* P	**Pb**	**06 33 59.2**	**-0.1**
YHNB				*e*S	**Sb**	**06 34 19.8**	**-1.1**
NWF	**Wu-fen Shan**	**1.73**	**322**	*i* P	**Pb**	**06 33 59.3**	**0.0**
NWF				*e*S	**Sb**	**06 34 19.7**	**-1.2**
WFSB	**Wu-fen Shan**	**1.73**	**322**	*i* P	**Pb**	**06 33 59.3**	**0.0**
WFSB				*e*S	**Sb**	**06 34 20.9**	**0.0**
NSK	**Sanguang**	**1.74**	**304**	*i* P	**Pb**	**06 33 59.4**	**-0.3**
NSK				*e*S	**Sb**	**06 34 20.6**	**-0.8**
TWA	**Mucha**	**1.78**	**316**	*i* P	**Pb**	**06 33 60.0**	**-0.2**
TWA				*e*S	**Sb**	**06 34 22.0**	**-0.2**
SSLB	**Suanglung**	**1.82**	**273**	P	**Pb**	**06 34 01.6**	**+0.6**
SSLB				*e*S	**Sn**	**06 34 21.8**	**+0.1**
YUS	**Yu-Shan**	**1.84**	**264**	*i* P	**Pb**	**06 34 01.2**	**-0.3**
YUS				*i* S	**Sn**	**06 34 22.7**	**+0.1**
ELDTW	**Lidau**	**1.84**	**254**	P	**Pb**	**06 34 00.7**	**-0.7**
ELDTW				*e*S	**Sn**	**06 34 21.1**	**-1.0**
LONT	**Longtian**	**1.85**	**245**	P	**Pb**	**06 34 00.9**	**-0.4**
LONT				*e*S	**Sn**	**06 34 21.9**	**-0.1**
SMLT	**Sun Moon Lake**	**1.88**	**276**	*i* P	**Pb**	**06 34 02.0**	**0.0**
SMLT				S	**Sb**	**06 34 25.1**	**-0.3**
WCS	**Beigang Elemen**	**1.89**	**281**	P	**Pb**	**06 34 01.9**	**-0.2**
WCS				*e*S	**Sn**	**06 34 24.2**	**+0.9**
YM01	**YM01**	**1.91**	**319**	P	**Pb**	**06 34 01.4**	**-1.0**
YM01				*e*S	**Sn**	**06 34 23.5**	**-0.2**
NFF	**Wufeng Townshi**	**1.91**	**299**	*i* P	**Pb**	**06 34 02.9**	**+0.5**
NFF				S	**Sb**	**06 34 26.0**	**-0.1**
WHP	**Taichung City**	**1.92**	**288**	*i* P	**Pg**	**06 34 03.9**	**-0.8**
WHP				*i* S	**Sb**	**06 34 25.1**	**-1.2**
WHYT	**Xinyi Township**	**1.92**	**270**	*i* P	**Pb**	**06 34 03.2**	**+0.7**
WHYT				*e*S	**Sn**	**06 34 24.5**	**+0.7**
TYC	**Yuchr**	**1.92**	**276**	*i* P	**Pb**	**06 34 02.5**	**-0.1**
TYC				S	**Sn**	**06 34 24.5**	**+0.6**
TWGBT	**Beinan**	**1.93**	**243**	*e*P	**Pb**	**06 34 02.2**	**-0.5**
TWGBT				*e*S	**Sn**	**06 34 23.9**	**-0.2**
TWG	**Pinlang**	**1.93**	**243**	P	**Pb**	**06 34 02.5**	**-0.3**
TWG				*e*S	**Sn**	**06 34 24.3**	**+0.1**
ZUZH	**Zhuzihu**	**1.93**	**319**	P	**Pb**	**06 34 02.2**	**-0.6**
ZUZH				*e*S	**Sn**	**06 34 24.4**	**+0.1**
KSHI	**Guanxi Townshi**	**1.94**	**304**	*e*P	**Pb**	**06 34 02.7**	**-0.1**
KSHI				*e*S	**Sb**	**06 34 26.6**	**-0.3**
ALS	**Alishan**	**1.97**	**265**	*i* P	**Pb**	**06 34 03.5**	**-0.2**
ALS				*e*S	**Sb**	**06 34 27.1**	**-1.0**
TWY	**Chenhua**	**1.99**	**322**	P	**Pb**	**06 34 03.1**	**-0.6**
TWY				*e*S	**Sb**	**06 34 26.0**	**-2.4**
LIOB	**Emei**	**2.00**	**298**	*i* P	**Pb**	**06 34 04.1**	**+0.2**
LIOB				*e*S	**Sb**	**06 34 28.1**	**-0.5**
NSTT	**Nanjuang**	**2.00**	**298**	P	**Pb**	**06 34 03.5**	**-0.5**
NSTT				*i* S	**Sb**	**06 34 27.5**	**-1.2**
WJS	**Zhushan**	**2.03**	**274**	*e*P	**Pg**	**06 34 06.0**	**-1.0**
WJS				*e*S	**Sb**	**06 34 29.8**	**+0.2**
STYH	**Taoyuan**	**2.06**	**256**	*i* P	**Pb**	**06 34 04.1**	**-0.9**
STYH				S	**Sn**	**06 34 28.1**	**+0.7**
CHN5	**Tsauling**	**2.08**	**268**	*i* P	**Pb**	**06 34 06.1**	**+0.7**
CHN5				S	**Sb**	**06 34 31.5**	**+0.4**
LAY	**Lan-yu**	**2.10**	**218**	P	**Pb**	**06 34 04.3**	**-1.3**
LAY				*e*S	**Sn**	**06 34 26.9**	**-1.4**
LYUB	**Lan-yu**	**2.11**	**217**	P	**Pn**	**06 34 03.4**	**+0.8**
LYUB				S	**Sn**	**06 34 26.7**	**-1.8**
ECL	**Taimali**	**2.14**	**239**	P	**Pb**	**06 34 05.7**	**-0.6**
ECL				*i* S	**Sn**	**06 34 28.4**	**-0.8**
TPUB	**Ta-pu**	**2.16**	**260**	*i* P	**Pb**	**06 34 06.7**	**-0.1**
TPUB				S	**Sb**	**06 34 32.5**	**-0.8**
WCKO	**Fanlu**	**2.16**	**264**	*i* P	**Pb**	**06 34 07.7**	**+0.9**
WCKO				S	**Sb**	**06 34 33.8**	**+0.4**
WTP	**Ta-pu**	**2.19**	**258**	*i* P	**Pb**	**06 34 07.2**	**0.0**
WTP				S	**Sb**	**06 34 33.9**	**-0.2**
WDLH	**Douliu**	**2.21**	**270**	P	**Pb**	**06 34 08.2**	**+0.7**
WDLH				*i* S	**Sb**	**06 34 35.2**	**+0.6**
CHN1	**Nanshi**	**2.28**	**257**	*i* P	**Pb**	**06 34 08.9**	**+0.2**
CHN1				S	**Sb**	**06 34 37.7**	**+1.0**
TWK	**Hsinying**	**2.30**	**260**	P	**Pb**	**06 34 09.1**	**+0.1**
TWK				*i* S	**Sb**	**06 34 37.0**	**-0.3**
TAWH	**Dawu Township**	**2.33**	**235**	*e*P	**Pn**	**06 34 07.3**	**+1.7**
TAWH				*e*S	**Sn**	**06 34 34.4**	**+0.4**
SSD	**Sandimen**	**2.33**	**246**	P	**Pb**	**06 34 09.1**	**-0.4**
SSD				*e*S	**Sn**	**06 34 33.8**	**-0.2**
TSMG	**Majia**	**2.34**	**245**	*e*P	**Pb**	**06 34 08.5**	**-1.1**
TSMG				*e*S	**Sn**	**06 34 34.3**	**+0.1**
MASBT	**Mashibuluo**	**2.39**	**243**	P	**Pn**	**06 34 07.5**	**+1.1**
MASBT				*e*S	**Sn**	**06 34 36.5**	**+1.1**
SLIU	**Shizi**	**2.47**	**234**	P	**Pn**	**06 34 09.7**	**+2.1**
SLIU				*e*S	**Sn**	**06 34 37.8**	**+0.4**

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*TAP **27** 06:57:22.0, 23°.73N×122°.98E, h38^{km}, ML2.7, D*

*JMA **27** 06:57:22.6±0.2, 23°.8N±0°.8×122°.9E±0°.7, h39^{km}, MV2.1/10,*
NEAR ISHIGAKIJIMA ISLAND

ISC 27 06:57:17.8±1.3**, 23°.64N**±0°.03×**122°.92E**±0°.03**, h2**^{km}±10^{km}**,**
n51, σ0^{s}.93/97**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS4	**EOS4**	**0.73**	**311**	*i* P	**Pn**	**06 57 35.6**	**+0.7**
EOS4				*i* S	**Sn**	**06 57 46.0**	**-0.5**
JYNG	**Yonagunijimaku**	**0.81**	**2**	P	**Pn**	**06 57 35.6**	**-0.7**
JYNG				*e*S	**Sb**	**06 57 44.9**	**-1.1**
YOJ	**Yonaguni jima**	**0.82**	**6**	*e*P	**Pn**	**06 57 36.0**	**-0.5**
YOJ				*e*S	**Sb**	**06 57 45.2**	**-1.3**
YOJ	**Yonaguni jima**	**0.82**	**6**	P	**Pn**	**06 57 35.9**	**-0.6**
YOJ				*i* S	**Sb**	**06 57 46.5**	**+0.1**
EOS3	**EOS3**	**0.85**	**320**	P	**Pn**	**06 57 37.4**	**+0.7**
EOS3				*e*S	**Sn**	**06 57 48.9**	**-0.8**
EOS2	**EOS2**	**1.00**	**321**	P	**Pn**	**06 57 40.6**	**+1.8**
EOS2				*e*S	**Sn**	**06 57 54.2**	**+0.8**
IRIF	**Iriomote-Funau**	**1.01**	**47**	P	**Pn**	**06 57 39.4**	**+0.3**
IRIF				*e*S	**Sb**	**06 57 51.9**	**0.0**
JKRS	**Kuro-shima**	**1.16**	**59**	*e*P	**Pn**	**06 57 42.9**	**+1.7**
JKRS				*e*S	**Sn**	**06 57 57.0**	**-0.6**
SHUL	**Shoufeng**	**1.25**	**277**	*i* P	**Pn**	**06 57 43.5**	**+1.1**
SHUL				*e*S	**Sn**	**06 58 00.3**	**+0.4**
TWD	**Chiawan**	**1.29**	**290**	*e*P	**Pn**	**06 57 44.7**	**+1.8**
TWD				*e*S	**Sg**	**06 57 58.8**	**-0.5**
EWUT	**Wuta**	**1.32**	**308**	P	**Pn**	**06 57 44.4**	**+1.1**
EWUT				*e*S	**Sn**	**06 58 02.4**	**+1.0**
NACB	**Ninganchiao**	**1.32**	**294**	P	**Pn**	**06 57 43.7**	**+0.3**
NACB				*e*S	**Sg**	**06 57 59.1**	**-1.3**
JIJ	**Ishigaki jima**	**1.33**	**57**	*e*P	**Pn**	**06 57 44.2**	**+0.7**
ENA	**Nanau**	**1.33**	**306**	P	**Pn**	**06 57 45.2**	**+1.7**
ENA				*e*S	**Sb**	**06 58 01.2**	**0.0**
ETM	**Tongmen**	**1.35**	**284**	*e*P	**Pg**	**06 57 43.5**	**-0.2**
ETM				S	**Sg**	**06 58 00.5**	**-0.7**
ESAO	**Su ao**	**1.35**	**314**	P	**Pb**	**06 57 45.3**	**+1.4**
ESAO				*e*S	**Sn**	**06 58 03.3**	**+0.9**
EGFH	**Guangfu**	**1.37**	**272**	*e*P	**Pb**	**06 57 45.8**	**+1.6**
EGFH				S	**Sg**	**06 58 02.3**	**+0.4**
TWC	**Suao**	**1.38**	**315**	*e*P	**Pb**	**06 57 45.8**	**+1.5**
TWC				*e*S	**Sn**	**06 58 03.3**	**+0.4**
HGSD	**Ruisui**	**1.38**	**264**	*e*P	**Pn**	**06 57 44.6**	**+0.4**
HGSD				*e*S	**Sg**	**06 58 01.1**	**-1.2**
WARBT	**Fenglin Townsh**	**1.41**	**273**	P	**Pn**	**06 57 44.8**	**+0.2**
WARBT				S	**Sg**	**06 58 01.6**	**-1.5**
ETLH	**Xiulin Townshi**	**1.43**	**293**	*i* P	**Pb**	**06 57 46.5**	**+1.2**
ETLH				*e*S	**Sg**	**06 58 02.5**	**-1.3**
LXIB	**Xiulin Townshi**	**1.43**	**286**	P	**Pb**	**06 57 45.7**	**+0.4**
LXIB				*e*S	**Sg**	**06 58 02.6**	**-1.2**
EHYH	**Wanrong**	**1.45**	**265**	*i* P	**Pb**	**06 57 46.5**	**+0.8**
EHYH				S	**Sg**	**06 58 04.2**	**-0.3**
CHKH	**Chenggong**	**1.47**	**253**	P	**Pg**	**06 57 46.7**	**+0.7**
CHKH				*e*S	**Sg**	**06 58 03.1**	**-2.0**
EHY	**Hungye**	**1.47**	**265**	P	**Pb**	**06 57 46.9**	**+1.0**
YULB	**Yu-li**	**1.51**	**261**	*e*P	**Pg**	**06 57 47.4**	**+0.6**
YULB				S	**Sg**	**06 58 05.5**	**-0.9**
TWF1	**Yuli**	**1.52**	**259**	P	**Pb**	**06 57 47.2**	**+0.5**
TWF1				S	**Sg**	**06 58 06.7**	**0.0**
LATG	**Datong**	**1.56**	**305**	P	**Pg**	**06 57 48.7**	**+1.1**
LATG				*e*S	**Sg**	**06 58 06.8**	**-1.0**
FULB	**Fuli**	**1.56**	**254**	*i* P	**Pb**	**06 57 47.6**	**+0.1**
FULB				*e*S	**Sn**	**06 58 06.0**	**-1.5**
JISG	**Ishigakijimahi**	**1.58**	**53**	*e*P	**Pg**	**06 57 48.4**	**+0.3**

WHF	**Hehuan Shan**	**1.60**	**289**	P	**Pb**	**06 57 48.6**	**+0.3**
WHF				*e*S	**Sg**	**06 58 06.9**	**-2.2**
NNSB	**Datong**	**1.61**	**299**	P	**Pb**	**06 57 48.6**	**+0.2**
NNSB				*e*S	**Sn**	**06 58 07.0**	**-1.9**
EDH	**Donghe**	**1.63**	**246**	P	**Pb**	**06 57 48.9**	**+0.2**
EDH				S	**Sn**	**06 58 07.7**	**-1.5**
OWD	**Renai**	**1.63**	**281**	*e*P	**Pg**	**06 57 49.6**	**+0.5**
OWD				S	**Sn**	**06 58 08.1**	**-1.3**
VWDT	**VWDT**	**1.64**	**274**	*e*P	**Pn**	**06 57 47.9**	**+0.2**
VWDT				S	**Sn**	**06 58 08.1**	**-1.2**
FUSB	**Fushanzhiwuyua**	**1.65**	**313**	P	**Pg**	**06 57 49.8**	**+0.3**
FUSB				*e*S	**Sn**	**06 58 09.4**	**-0.4**
TIPB	**Shuangxi**	**1.66**	**323**	*e*P	**Pg**	**06 57 50.6**	**+1.0**
TIPB				*e*S	**Sg**	**06 58 11.4**	**+0.2**
WUSB	**Renai**	**1.69**	**282**	P	**Pg**	**06 57 50.4**	**+0.1**
WUSB				S	**Sn**	**06 58 10.1**	**-0.8**
SXI1	**Grass Mountain**	**1.73**	**327**	P	**Pb**	**06 57 49.9**	**-0.6**
SXI1				S	**Sn**	**06 58 11.1**	**-0.8**
YHNB	**Yeheng**	**1.74**	**306**	*i* P	**Pb**	**06 57 50.6**	**-0.1**
YHNB				*e*S	**Sn**	**06 58 10.5**	**-1.7**
SSLB	**Suanglung**	**1.81**	**275**	P	**Pb**	**06 57 51.8**	**0.0**
SSLB				*e*S	**Sn**	**06 58 12.3**	**-1.3**
YUS	**Yu-Shan**	**1.81**	**266**	P	**Pb**	**06 57 52.2**	**+0.1**
YUS				S	**Sn**	**06 58 13.8**	**-0.6**
SMLT	**Sun Moon Lake**	**1.87**	**278**	*e*P	**Pb**	**06 57 53.2**	**+0.4**
WCS	**Beigang Elemen**	**1.89**	**283**	*e*P	**Pb**	**06 57 53.5**	**+0.5**
WHYT	**Xinyi Township**	**1.90**	**272**	*e*P	**Pg**	**06 57 54.0**	**-0.2**
WHYT				*e*S	**Sb**	**06 58 17.9**	**+0.5**
TYC	**Yuchr**	**1.91**	**278**	P	**Pb**	**06 57 53.6**	**+0.2**
TYC				*e*S	**Sb**	**06 58 17.4**	**-0.3**
WHP	**Taichung City**	**1.92**	**290**	*e*P	**Pg**	**06 57 54.5**	**-0.1**
WHP				*e*S	**Sb**	**06 58 17.9**	**-0.1**
CHN5	**Tsauling**	**2.06**	**269**	P	**Pb**	**06 57 55.8**	**-0.2**
CHN5				*e*S	**Sb**	**06 58 22.0**	**-0.1**
TPUB	**Ta-pu**	**2.13**	**261**	P	**Pb**	**06 57 57.2**	**0.0**
TPUB				*e*S	**Sn**	**06 58 23.0**	**+1.4**
WTP	**Ta-pu**	**2.15**	**260**	P	**Pb**	**06 57 58.0**	**+0.4**
WTP				S	**Sb**	**06 58 24.4**	**-0.5**
CHN4	**Tsaushan**	**2.16**	**263**	*e*P	**Pb**	**06 57 57.6**	**-0.1**
CHN4				*e*S	**Sb**	**06 58 25.3**	**+0.5**

UPA 27 07:03:23.4±1.3**, 8°.49N**×**82°.80W, h1**^{km}±291^{km}**,**
Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LESP3	**La Esperanza,**	**0.09**	**175**	*e*P	Pg	07 03 24.2	-0.9
MLIR3	**Monte Lirio, C**	**0.30**	**355**	*e*P	Pg	07 03 29.9	+0.7
MLIR3	**Monte Lirio, C**	**0.30**	**355**	*e*P	Pb	07 03 32.0	+0.4
BRU2	**Volcan**	**0.32**	**19**	*e*P	Pg	07 03 30.6	+1.1
BRU2				*e*S	Sb	07 03 36.3	-1.4
PTAR3	**Potrerillos Ar**	**0.36**	**56**	*e*P	Pb	07 03 31.9	-0.7
BC3P	**Paso Ancho**	**0.37**	**30**	*e*P	Pb	07 03 32.1	-0.8
BQSF3	**Alto Boquete,**	**0.44**	**55**	*e*P	Pb	07 03 34.1	+0.1
BQSF3				*e*S	Sb	07 03 40.7	-0.4

ASRS ***27*** *07:04:36.0±0.8, 54°.19N×86°.39E, h0^{km}, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 27 07:04:39.6±2.6**, 54°.19N**×**86°.31E, h0**^{km}**, mbtmp2.8**/2**, ML2.5**/2**, Error ellipse: s-maj=19.6km s-min=11.8km az=60.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.91**	**255**	I	I	07 10 40.0	
	baz=74,slow=320,SNR=8.2						
ZALV	**Zalesovo Beam**	**0.91**	**255**	Pg	Pg	07 04 56.2	-0.9
	1.8nm,0.3s,baz=76,slow=18,SNR=9.9						
ZALV				Lg	Lg	07 05 10.3	
	4.6nm,0.3s,baz=73,slow=29,SNR=21						
KURBB	**Kurchatov Arra**	**5.95**	**236**	Pn	Pn	07 06 09.8	+0.8
	0.1nm,0.3s,baz=54,slow=13,SNR=5.7						
KURBB				Lg	Lg	07 07 48.6	
	baz=46,slow=32,SNR=1.6						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**7.84**	**201**	Pn	Pn	07 06 35.8	+1.0
	0.1nm,0.3s,baz=24,slow=13,SNR=6.3						
MKAR				Lg	Lg	07 08 48.2	
	baz=19,slow=37,SNR=2.5						
	0.2nm,0.3s						

PRE ***27*** *07:09:07.8±0.8, 21°.49S×35°.13E, h5^{km}, ML3.3*

ISC 27 07:09:22.8±2.5**, 22°.16S**±0°.05×**34°.6E**±0°.1**, h10**^{km}**, n15,** σ**2**^{s}**.61**/29**, Mozambique**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIPN	**CHIPINGE**	**2.62**	**317**	*i* P	**Pn**	**07 10 04.2**	**-1.1**
CHIPN				*i* S	**Sb**	**07 10 44.5**	**+2.4**
MOPA	**Mopani**	**3.21**	**245**	*e*P	**Pn**	**07 10 11.4**	**-1.9**
MOPA				*e*S	**Sb**	**07 10 56.9**	**-2.2**
MOPA				IAML		07 11 17.8	
	comp=Z,431nm,0.6s						
MUSN	**Musina, Limpop**	**4.35**	**267**	*e*P	**Pn**	**07 10 24.4**	**-4.6**
MUSN				*e*S	**Sn**	**07 11 19.3**	**-0.6**
MUSN				IAML		07 11 50.5	
	comp=Z,40nm,0.5s						
PILG	**Pilgrimsrest,**	**4.48**	**231**	*e*P	**Pn**	**07 10 28.4**	**-2.6**
PILG				*e*S	**Sn**	**07 11 28.0**	**+4.8**
PILG				IAML		07 11 56.5	
	comp=Z,90nm,0.7s						
POGA	**Pongola**	**5.77**	**206**	*e*P	**Pn**	**07 10 46.7**	**-1.8**
POGA				*e*S	**Sn**	**07 11 58.9**	**+4.0**
POGA				IAML		07 12 31.9	
	comp=Z,37nm,0.5s						
LEPH	**Lephalale, Lim**	**6.45**	**254**	*e*P	**Pn**	**07 10 54.7**	**-3.2**
LEPH				*e*S	**Sn**	**07 12 12.3**	**+0.6**
LEPH				IAML		07 12 31.7	
	comp=Z,14nm,0.5s						
MREMI	**Moremi**	**6.59**	**265**	*i* P	**Pn**	**07 11 00.8**	**+1.0**
MREMI				IAML		07 13 04.4	
	comp=N,204nm,0.5s						
BROLN	**Tlhalogang**	**6.80**	**278**	*i* P	**Pn**	**07 11 01.9**	**-0.8**
BROLN				*i* S	**Sn**	**07 12 24.1**	**+3.8**
BROLN				IAML		07 13 16.4	
	comp=E,31nm,0.8s						
NWCL	**Newcastle**	**6.98**	**216**	*e*P	**Pn**	**07 11 03.3**	**-1.8**
NWCL				*e*S	**Sn**	**07 12 29.3**	**+4.6**
NWCL				IAML		07 13 07.4	
	comp=Z,24nm,0.5s						
KRI	**Karoi**	**7.06**	**318**	*i* P	**Pn**	**07 11 04.3**	**-2.0**
KRI				*i* S	**Sn**	**07 12 25.3**	**-1.5**
HRAO	**HartRAO**	**7.29**	**238**	*e*P	**Pn**	**07 11 08.5**	**-1.0**
HRAO				*e*S	**Sn**	**07 12 35.4**	**+2.9**
HRAO				IAML		07 13 21.5	
	comp=Z,22nm,0.5s						
SOOWA	**Sowa**	**7.93**	**280**	*i* P	**Pn**	**07 11 18.4**	**+0.1**
SOOWA				*i* S	**Sn**	**07 12 49.1**	**+0.9**
SOOWA				IAML		07 13 55.1	
	comp=E,124nm,1.2s						
PRYS	**Parys**	**8.08**	**233**	*e*P	**Pn**	**07 11 18.3**	**-2.1**
PRYS				*e*S	**Sn**	**07 12 54.5**	**+2.5**
PRYS				IAML		07 13 43.3	
	comp=Z,14nm,0.6s						
LPHEP	**Lephephe**	**8.11**	**260**	*i* P	**Pn**	**07 11 21.3**	**+0.5**
LPHEP				*i* S	**Sn**	**07 12 54.1**	**+1.5**
LPHEP				IAML		07 13 58.5	
	comp=N,43nm,1.4s						
LBTB	**Lobatse**	**8.69**	**249**	*e*P	**Pn**	**07 11 25.5**	**-3.2**
LBTB				*e*S	**Sn**	**07 13 07.2**	**+0.3**
LBTB				IAML		07 13 39.7	
	comp=Z,7.1nm,0.6s						

IDC ***27*** *07:10:36.7±2.6, 36°.74S×179°.06E, h0^{km}, mb4.2/2, mbtmp4.2/3, ML4.2/1, MS2.9/1, Error ellipse: s-maj=66.4km s-min=39.8km az=132.0*

WEL ***27*** *07:10:40.3±1.0, 37°S±5°×17°9E±°, h12^{km}, M4.2/21, ML4.3/21, MLv4.2/21, Error ellipse: s-maj=10.8km s-min=6.1km az=97.2, confirmed*

NEIC ***27*** *07:10:42.4±2.3, 37°.2S±0°.1×179°.0E±0°.1, h30^{km}±10^{km}, mb4.2/9, Error ellipse: s-maj=18.9km s-min=9.2km az=140.0*

NOU ***27*** *07:10:44.7, 37°.47S×178°.89E, h38^{km}, MLv4.2/19, Off E. Coast of N. Island, N.Z.*

ISC 27 07:10:41.4±2.1**, 37°.30S**±0°.06×**179°.14E**±0°.09**, h31**^{km}±12^{km}**, n151,** σ**1**^{s}**.65**/157**, mb4.2**/7**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.72**	**248**		**Pb**	**07 10 54.8**	**-0.7**
MXZ					**Sb**	**07 11 04.9**	**-0.1**
MXZ	**Matakaoa Point**	**0.72**	**248**	P	**Pb**	**07 10 55.0**	**-0.4**
MXZ	**Matakaoa Point**	**0.72**	**248**	P	**Pb**	**07 10 55.2**	**-0.3**
MXZ				S	**Sb**	**07 11 05.0**	**0.0**
WMGZ	**Waiomatatini S**	**0.78**	**228**	P	**Pn**	**07 10 58.2**	**+2.0**
WMGZ				S	**Sn**	**07 11 10.4**	**+3.5**
PKGZ	**Pakihiroa**	**1.02**	**236**	P	**Pn**	**07 11 01.5**	**+1.9**
PKGZ				S	**Sb**	**07 11 16.2**	**+2.7**
PUZ	**Puketiti**	**1.04**	**222**	P	**Pn**	**07 11 01.8**	**+1.9**
HAZ	**Te Kaha**	**1.18**	**247**	P	**Pn**	**07 11 02.2**	**+0.5**
TWGZ	**Tauwhareparae**	**1.27**	**226**	P	**Pn**	**07 11 05.2**	**+2.0**
RUGZ	**Raukumara Rang**	**1.34**	**240**	P	**Pn**	**07 11 06.0**	**+1.9**
RUGZ				S	**Sb**	**07 11 24.4**	**+1.5**
TKGZ	**Te Karaka**	**1.53**	**222**	P	**Pn**	**07 11 08.3**	**+1.7**
WIZ	**White Island**	**1.57**	**261**	P	**Pn**	**07 11 08.7**	**+1.6**
WSRZ	**White Island S**	**1.58**	**261**	P	**Pn**	**07 11 08.8**	**+1.5**
MWZ	**Matawai**	**1.65**	**231**	P	**Pn**	**07 11 09.8**	**+1.6**
RIGZ	**Rimuhau**	**1.78**	**217**	P	**Pn**	**07 11 11.7**	**+1.7**
WHRZ	**Whale Island**	**1.81**	**251**	P	**Pn**	**07 11 11.9**	**+1.4**
RAGZ	**Rawiri**	**1.82**	**228**	P	**Pn**	**07 11 12.3**	**+1.7**
URZ	**Urewera**	**1.88**	**239**	Pn	**Pn**	**07 11 13.0**	**+1.7**
	79nm,0.3s,baz=247,slow=3.6,SNR=854						
URZ				Sn	**Sn**	**07 11 33.8**	**-0.2**
	127nm,0.3s,baz=227,slow=22,SNR=14						
URZ				LR	LR	07 12 16.0	
	comp=Z,282nm,19.7s,baz=32,slow=46						
	170nm,0.3s						
URZ	**Urewera**	**1.88**	**239**	P	**Pn**	**07 11 13.0**	**+1.7**
URZ	**Urewera**	**1.88**	**239**	P	**Pn**	**07 11 13.1**	**+1.7**
PRGZ	**Paritu Road**	**1.90**	**211**	P	**Pn**	**07 11 13.4**	**+1.7**
SNGZ	**Shannon Statio**	**2.06**	**223**	P	**Pn**	**07 11 15.2**	**+1.4**
EDRZ	**Edgecumbe**	**2.07**	**246**	P	**Pn**	**07 11 15.8**	**+1.7**
KNZ	**Kokohu**	**2.08**	**213**	P	**Pn**	**07 11 15.1**	**+1.0**
MARZ	**Manawahe**	**2.08**	**250**	P	**Pn**	**07 11 15.2**	**+1.1**
MHGZ	**Mahia Peninsul**	**2.09**	**207**	P	**Pn**	**07 11 16.1**	**+1.7**
OPRZ	**Ohinepanea**	**2.13**	**254**	P	**Pn**	**07 11 15.6**	**+0.8**
RTZ	**Ruatahuna**	**2.16**	**232**		**Pn**	**07 11 16.8**	**+1.5**
RTZ	**Ruatahuna**	**2.16**	**232**	P	**Pn**	**07 11 17.1**	**+1.8**
MUGZ	**Murupara**	**2.22**	**237**	P	**Pn**	**07 11 17.4**	**+1.3**
MKRZ	**Makatiti**	**2.28**	**248**	P	**Pn**	**07 11 18.9**	**+1.9**
RAHZ	**Arahi**	**2.29**	**224**	P	**Pn**	**07 11 18.3**	**+1.2**
TARZ	**Mount Tarawera**	**2.29**	**245**	P	**Pn**	**07 11 18.9**	**+1.7**
MYRZ	**Mayor Island**	**2.31**	**270**	P	**Pn**	**07 11 18.1**	**+0.8**
RRRZ	**Republican Roa**	**2.33**	**243**	P	**Pn**	**07 11 19.0**	**+1.5**
WHHZ	**Waihua**	**2.33**	**220**	P	**Pn**	**07 11 19.2**	**+1.6**
TGRZ	**Tauranga**	**2.33**	**258**	P	**Pn**	**07 11 18.5**	**+0.9**
OMRZ	**Omania**	**2.34**	**249**	P	**Pn**	**07 11 19.5**	**+1.7**
MTHZ	**Maungataniwha**	**2.39**	**229**	P	**Pn**	**07 11 20.2**	**+1.8**
HLRZ	**Highlands Stat**	**2.41**	**246**	P	**Pn**	**07 11 20.5**	**+1.8**
KARZ	**Kaharoa**	**2.41**	**252**	P	**Pn**	**07 11 20.0**	**+1.3**
NGRZ	**Ngongotaha**	**2.48**	**250**	P	**Pn**	**07 11 21.5**	**+1.8**
PRRZ	**Plateau Road**	**2.48**	**240**	P	**Pn**	**07 11 21.0**	**+1.3**
UTU	**Utuhina**	**2.50**	**249**	P	**Pn**	**07 11 22.5**	**+2.6**
HSRZ	**Hossack Road**	**2.51**	**245**	P	**Pn**	**07 11 22.2**	**+2.2**
HRRZ	**Handcock Road**	**2.51**	**243**	P	**Pn**	**07 11 21.6**	**+1.4**
ALRZ	**Allen Road**	**2.55**	**239**	P	**Pn**	**07 11 22.1**	**+1.5**
NMHZ	**Naumai**	**2.57**	**225**	P	**Pn**	**07 11 22.5**	**+1.5**
ARHZ	**Aropaoanui**	**2.59**	**220**	P	**Pn**	**07 11 22.6**	**+1.4**
KMRZ	**Kaimai**	**2.60**	**257**	P	**Pn**	**07 11 22.2**	**+0.8**
GRRZ	**Galatos Road**	**2.62**	**245**	P	**Pn**	**07 11 23.6**	**+1.9**
MRHZ	**Matea Rd**	**2.64**	**234**	P	**Pn**	**07 11 23.4**	**+1.5**
WPRZ	**Whakapapatarin**	**2.66**	**242**	P	**Pn**	**07 11 24.0**	**+2.0**
KUZ	**Kuaotunu**	**2.79**	**280**	P	**Pn**	**07 11 23.2**	**-0.7**
KUZ	**Kuaotunu**	**2.79**	**280**	P	**Pn**	**07 11 23.2**	**-0.7**
BKZ	**Black Stump Fm**	**2.80**	**227**		**Pn**	**07 11 24.8**	**+0.7**
BKZ	**Black Stump Fm**	**2.80**	**227**	P	**Pn**	**07 11 25.2**	**+1.1**
BKZ	**Black Stump Fm**	**2.80**	**227**	P	**Pn**	**07 11 25.2**	**+1.1**
CKHZ	**Cape Kidnapper**	**2.86**	**214**	P	**Pn**	**07 11 25.5**	**+0.7**
WHTZ	**Whakaora**	**2.86**	**241**	P	**Pn**	**07 11 27.1**	**+2.1**
MCHZ	**McNeill Hill**	**2.88**	**221**	P	**Pn**	**07 11 26.1**	**+0.9**
KUTZ	**Kaahu Road**	**2.88**	**245**	P	**Pn**	**07 11 26.8**	**+1.5**
TOZ	**Tahuroa Road**	**2.93**	**260**		**Pn**	**07 11 25.8**	**0.0**
TOZ	**Tahuroa Road**	**2.93**	**260**	P	**Pn**	**07 11 26.3**	**+0.5**
KWHZ	**Kaweka Forest**	**3.01**	**224**	P	**Pn**	**07 11 27.6**	**+0.6**
TLZ	**Tolley Road**	**3.04**	**249**	P	**Pn**	**07 11 28.6**	**+1.3**
KAHZ	**Kahuranaki**	**3.06**	**215**	P	**Pn**	**07 11 28.0**	**+0.3**
RITZ	**Rihia Road**	**3.08**	**236**	P	**Pn**	**07 11 29.7**	**+1.7**
RATZ	**Rangitukua**	**3.09**	**238**	P	**Pn**	**07 11 30.1**	**+2.0**
GRZ	**Great Barrier**	**3.14**	**288**	P	**Pn**	**07 11 28.4**	**-0.2**
MKAZ	**Moumakai**	**3.19**	**272**	P	**Pn**	**07 11 29.4**	**+0.1**
KATZ	**Kakaramea**	**3.19**	**237**	P	**Pn**	**07 11 29.7**	**+0.1**
KRHZ	**Kereru**	**3.20**	**222**	P	**Pn**	**07 11 29.8**	**+0.2**
WIAZ	**Waiheke Island**	**3.25**	**278**	P	**Pn**	**07 11 30.2**	**0.0**
PXZ	**Pawanui**	**3.26**	**212**	P	**Pn**	**07 11 30.3**	**-0.1**
TMVZ	**Te Maari**	**3.26**	**235**	P	**Pn**	**07 11 31.4**	**+0.8**
ETVZ	**East Tongariro**	**3.27**	**235**	P	**Pn**	**07 11 31.4**	**+0.8**
NTVZ	**North Tongarir**	**3.27**	**236**	P	**Pn**	**07 11 31.5**	**+0.9**
KRVZ	**Karewarewa**	**3.29**	**236**	P	**Pn**	**07 11 31.0**	**0.0**
TUVZ	**Tukino**	**3.38**	**233**	P	**Pn**	**07 11 33.2**	**+1.1**
ETAZ	**East Tamaki Re**	**3.39**	**275**	P	**Pn**	**07 11 32.6**	**+0.5**
MOVZ	**Moawhango**	**3.40**	**231**	P	**Pn**	**07 11 33.1**	**+0.7**
TWVZ	**Taurewa**	**3.42**	**238**	P	**Pn**	**07 11 34.4**	**+1.8**
WHVZ	**Whangaehu Hut**	**3.43**	**234**	P	**Pn**	**07 11 34.0**	**+1.1**
MAVZ	**Matarangi**	**3.44**	**234**	P	**Pn**	**07 11 34.3**	**+1.2**
MBAZ	**Motutapu North**	**3.44**	**278**	P	**Pn**	**07 11 33.3**	**+0.5**
WPHZ	**Waipukurau**	**3.48**	**217**	P	**Pn**	**07 11 33.2**	**-0.2**
PNHZ	**Pukenui**	**3.48**	**221**	P	**Pn**	**07 11 33.2**	**-0.3**
ABAZ	**Army Bay**	**3.52**	**280**	P	**Pn**	**07 11 34.7**	**+0.7**
EPAZ	**Eden Park BICE**	**3.54**	**275**	P	**Pn**	**07 11 36.1**	**+1.9**
PRHZ	**Porangahau**	**3.55**	**213**	P	**Pn**	**07 11 33.8**	**-0.7**
HBAZ	**Herne Bay Bore**	**3.56**	**276**	P	**Pn**	**07 11 36.1**	**+1.7**
AWAZ	**Awhitu Peninsu**	**3.60**	**272**	P	**Pn**	**07 11 35.8**	**+0.8**
HIZ	**Hauiti**	**3.60**	**249**		**Pn**	**07 11 37.0**	**+2.0**
HIZ	**Hauiti**	**3.60**	**249**	P	**Pn**	**07 11 37.1**	**+2.0**
HIZ	**Hauiti**	**3.60**	**249**	P	**Pn**	**07 11 37.2**	**+2.1**
WTAZ	**Waiatarua**	**3.67**	**274**	P	**Pn**	**07 11 36.9**	**+0.9**
TSZ	**Takapari Road**	**3.71**	**221**	P	**Pn**	**07 11 36.0**	**-0.6**
ANWZ	**Angora Road**	**3.78**	**213**	P	**Pn**	**07 11 36.8**	**-0.8**
DVHZ	**Dannevirke**	**3.79**	**217**	P	**Pn**	**07 11 37.0**	**-0.7**
VRZ	**Vera Road**	**3.91**	**241**	P	**Pn**	**07 11 41.0**	**+1.7**
POWZ	**Post Office Ro**	**4.06**	**219**	P	**Pn**	**07 11 41.8**	**+0.4**
BFZ	**Birch Farm**	**4.06**	**213**		**Pn**	**07 11 40.5**	**-0.9**
BFZ	**Birch Farm**	**4.06**	**213**	P	**Pn**	**07 11 40.1**	**-1.3**
BFZ	**Birch Farm**	**4.06**	**213**	S	**Sn**	**07 12 26.0**	**-1.9**
WAZ	**Wanganui**	**4.08**	**232**	P	**Pn**	**07 11 43.1**	**+1.5**
PRWZ	**Pori Road**	**4.09**	**216**	P	**Pn**	**07 11 41.3**	**-0.4**
WCZ	**Waipu Caves**	**4.09**	**288**	P	**Pn**	**07 11 42.4**	**+0.6**
TIWZ	**Tintock**	**4.30**	**215**	P	**Pn**	**07 11 44.8**	**0.0**
LREZ	**Lake Rotokare**	**4.31**	**238**	P	**Pn**	**07 11 46.8**	**+2.1**
DREZ	**Durham Road**	**4.33**	**243**	P	**Pn**	**07 11 48.1**	**+3.1**
MRZ	**Mangatainoka R**	**4.36**	**218**		**Pn**	**07 11 44.0**	**-1.5**
PREZ	**Palmer Road**	**4.42**	**241**	P	**Pn**	**07 11 49.2**	**+2.9**
NEZ	**North Egmont**	**4.43**	**242**	P	**Pn**	**07 11 49.1**	**+2.5**
PKE	**Pukeiti**	**4.48**	**243**	P	**Pn**	**07 11 49.6**	**+2.5**
KHEZ	**Kahui Hut**	**4.50**	**242**	P	**Pn**	**07 11 49.9**	**+2.4**
KHEZ	**Kahui Hut**	**4.50**	**242**	P	**Pn**	**07 11 50.0**	**+2.4**
NBEZ	**Newall Road No**	**4.59**	**243**	P	**Pn**	**07 11 51.7**	**+3.0**
OUZ	**Omahuta**	**4.94**	**293**	P	**Pn**	**07 11 53.9**	**+0.5**
OUZ	**Omahuta**	**4.94**	**293**	P	**Pn**	**07 11 54.2**	**+0.8**
MSWZ	**Moikau Station**	**5.10**	**215**	Pn	**Pn**	**07 11 53.4**	**-2.3**
SNZO	**South Karori**	**5.28**	**219**	P	**Pn**	**07 11 56.9**	**-1.2**
SNZO	**South Karori**	**5.28**	**219**	S	**Sn**	**07 12 54.7**	**-3.2**
TUWZ	**Tuamarina**	**5.77**	**223**		**Pn**	**07 12 02.5**	**-2.3**
BSWZ	**Blackbirch Sta**	**6.00**	**221**	P	**Pn**	**07 12 07.7**	**-0.4**
TKNZ	**Takaka Hill**	**6.08**	**230**		**Pn**	**07 12 06.8**	**-2.3**
QRZ	**Quartz Range**	**6.24**	**234**	P	**Pn**	**07 12 09.5**	**-1.8**
QRZ	**Quartz Range**	**6.24**	**234**	S	**Sn**	**07 13 18.0**	**-3.5**
KHZ	**Kahutara**	**6.69**	**218**	P	**Pn**	**07 12 17.7**	**+0.3**
KHZ	**Kahutara**	**6.69**	**218**	S	**Sn**	**07 13 27.9**	**-4.6**
GVZ	**Greta Valley S**	**7.34**	**218**	P	**Pn**	**07 12 25.5**	**-1.0**
LTZ	**Lake Taylor**	**7.60**	**222**	Pn	**Pn**	**07 12 27.5**	**-2.6**
MQZ	**McQueen's Vall**	**8.09**	**216**	Pn	**Pn**	**07 12 34.0**	**-2.6**
RPZ	**Rata Peaks**	**8.89**	**221**	Pn	**Pn**	**07 12 46.0**	**-1.6**
	1.0nm,0.3s,baz=33,slow=17,SNR=1.8						
RPZ				Sn	Sn	07 14 18.1	-8.6
	3.3nm,0.3s,baz=132,slow=22,SNR=13						
RPZ	**Rata Peaks**	**8.89**	**221**	P	**Pn**	**07 12 45.2**	**-2.4**
LBZ	**Lake Benmore**	**9.80**	**221**	Pn	Pn	07 12 56.9	-3.3
ODZ	**Otahua Downs**	**10.04**	**217**	P	**Pn**	**07 13 02.8**	**-0.6**
JCZ	**Jackson Bay**	**10.37**	**226**	P	**Pn**	**07 13 07.1**	**-0.9**
WHZ	**Wether Hill Ro**	**11.99**	**221**	Pn	**Pn**	**07 13 30.0**	**-0.1**
STKA	**Stephens Creek**	**31.24**	**269**	P	**P**	**07 16 58.3**	**+0.1**
COEN	**Coen**	**39.54**	**296**	P	**P**	**07 18 08.7**	**-1.0**
COEN				IAmb	IAmb	07 18 10.4	
	comp=Z,13nm,1.1s						
ASAR	**Alice Springs**	**40.91**	**276**	P	**P**	**07 18 18.2**	**-2.8**
ASAR	**Alice Springs**	**40.91**	**276**	P	**P**	**07 18 20.2**	**-0.8**
	comp=Z,2.8nm,0.6s,baz=121,slow=8.1,SNR=44						
	comp=Z,2.8nm,0.6s						
FORT	**Forrest**	**42.41**	**263**	P	**P**	**07 18 31.0**	**-2.1**
WRA	**Warramunga Arr**	**42.53**	**281**	P	**P**	**07 18 32.6**	**-1.7**
WRA	**Warramunga Arr**	**42.53**	**281**	P	**P**	**07 18 32.6**	**-1.7**
	comp=Z,1.5nm,0.5s,baz=120,slow=7.9,SNR=37						
WRA				PcP	**PcP**	**07 20 27.3**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=121,slow=2.9,SNR=2.6						
	comp=Z,1.5nm,0.5s						
WB0	**Warramunga Arr**	**42.59**	**282**	P	**P**	**07 18 32.8**	**-2.0**
WB0				IAmb	IAmb	07 18 39.9	
	comp=Z,2.8nm,0.9s						
KNRA	**Kununurra**	**49.32**	**282**	P	**P**	**07 19 26.2**	**-1.6**
KNRA				IAmb	IAmb	07 19 34.7	
	comp=Z,2.9nm,0.8s						
FITZ	**Fitzroy Crossi**	**50.40**	**277**	P	**P**	**07 19 34.6**	**-1.4**
BELA	**Belgrano 2**	**63.28**	**172**	P	**P**	**07 21 09.1**	**+2.6**
BELA				IAmb	IAmb	07 21 23.3	
	comp=Z,2.3nm,1.1s						
SNAA	**Sanae**	**71.32**	**179**	P	**P**	**07 21 59.9**	**+2.3**
SNAA				IAmb	IAmb	07 22 20.1	
	comp=Z,1.4nm,1.1s						
FINES	**FINESS Array B**	**150.55**	**334**	PKPbc	**PKPdf**	**07 30 27.2**	**+3.5**
	comp=Z,0.7nm,0.4s,baz=24,slow=5.0,SNR=7.6						

ASRS ***27*** *07:25:03.0±0.7, 54°.62N×86°.61E, h0^{km}, M2.9, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

NNC ***27*** *07:25:06.4±3.6, 54°.57N×86°.65E, h0^{km}, mb3.2, mpv3.1, Error ellipse: s-maj=48.0km s-min=20.6km az=159.0, Suspected Mining explosion.*

IDC ***27*** *07:25:08.6±2.4, 54°.48N×86°.49E, h0^{km}, mbtmp3.6/3, ML3.0/3, Error ellipse: s-maj=20.2km s-min=13.2km az=57.0*

ISC 27 07:25:08.0±3.7**, 54°.4N**±0°.2×**86°.6E**±0°.2**, h0**^{km}**, n9,** σ**1**^{s}**.87**/14**, 9C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.16**	**246**	I	I	07 32 55.4	
	baz=56,slow=316,SNR=4.7						
ZAA0	**Zalesovo Array**	**1.16**	**246**	⇑P	**Pg**	**07 25 28.7**	**-1.5**
	0.5nm,0.2s						
ZAA0				⇑S	**Sb**	**07 25 46.6**	**+0.1**
	0.7nm,0.2s						
ZALV	**Zalesovo Beam**	**1.16**	**246**	Pg	**Pg**	**07 25 28.9**	**-1.3**
	5.7nm,0.3s,baz=57,slow=17,SNR=47						
ZALV				Lg	Lg	07 25 46.2	
	6.6nm,0.3s,baz=58,slow=28,SNR=8.2						
KURK	**Kurchatov**	**6.13**	**236**	⇑Pn	**Pn**	**07 26 39.9**	**+0.2**
KURK				⇑Sn	**Sn**	**07 27 54.6**	**+4.1**
KURK				⇑Lg	Lg	07 28 24.9	
KURBB	**Kurchatov Arra**	**6.24**	**235**	Pn	**Pn**	**07 26 42.2**	**+1.1**
	0.5nm,0.3s,baz=51,slow=14,SNR=17						
KURBB				Sn	**Sn**	**07 27 50.9**	**-2.2**
	0.1nm,0.3s,baz=46,slow=20,SNR=4.0						
KURBB				Lg	Lg	07 28 28.1	
	0.2nm,0.3s,baz=54,slow=33,SNR=4.5						
	5.7nm,0.4s						
KURBB	**Kurchatov Arra**	**6.24**	**235**	⇑Pn	**Pn**	**07 26 41.9**	**+0.8**
	6.1nm,0.3s						
KURBB				⇑Sn	**Sn**	**07 27 54.6**	**+1.5**
	5.0nm,0.5s						
KURBB				⇑Lg	Lg	07 28 33.8	
	6.9nm,0.8s						
MK31	**Makanchi Array**	**8.13**	**201**	⇑Pn	**Pn**	**07 27 09.2**	**+2.0**
	0.3nm,0.3s,baz=25,slow=13,SNR=29						
MK31				⇓Sn	**Sn**	**07 28 39.2**	**-0.6**
	0.3nm,0.5s,baz=28,slow=28,SNR=2.6						
MK31				⇓Lg	Lg	07 29 23.9	
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**8.13**	**201**	Pn	**Pn**	**07 27 08.7**	**+1.4**
	0.6nm,0.3s,baz=25,slow=13,SNR=21						
MKAR				Sn	**Sn**	**07 28 38.1**	**-1.7**
	0.3nm,0.3s,baz=24,slow=25,SNR=5.7						
MKAR				Lg	Lg	07 29 29.6	
	baz=16,slow=33,SNR=1.9						
	0.8nm,0.3s						
BVAR	**Borovoye Array**	**9.72**	**268**	Pn	**Pn**	**07 27 28.8**	**-0.1**
	baz=69,slow=15,SNR=3.7						
	0.8nm,0.4s						

KRNET ***27*** *07:41:29.2±0.1, 42°.59N×72°.24E, h19^{km}, mb2.8*

SOME ***27*** *07:41:30.6, 42°.58N×72°.38E, h10^{km}*

NNC ***27*** *07:41:32.2±0.6, 42°.82N×72°.30E, h0^{km}, mb3.3, mpv3.3, Error ellipse: s-maj=11.4km s-min=3.3km az=177.0*

KNET ***27*** *07:41:33.5±0.6, 42°.61N×72°.52E, h6^{km}±3^{km}, ml2.0, Error ellipse: s-maj=3.8km s-min=3.3km az=50.0*

ISC 27 07:41:31.0±1.0**, 42°.56N**±0°.03×**72°.32E**±0°.02**, h8**^{km}±8^{km}**, n46,** σ**1**^{s}**.36**/85**, 41C-17D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAS	**Manas**	**0.15**	**120**	⇑*i*P	**Pg**	**07 41 34.1**	**-0.3**
MNAS				⇑*i*S	**Sg**	**07 41 37.3**	**+0.6**
MRKS	**Merke**	**0.69**	**74**	P	**Pg**	**07 41 44.7**	**+0.3**
	46nm,0.1s						
MRKS				S	**Sb**	**07 41 54.0**	**-1.1**
	63nm,0.2s						
MRKS	**Merke**	**0.69**	**74**	*e*P	**Pg**	**07 41 44.7**	**+0.3**
	46nm,0.1s						
MRKS				*e*S	**Sb**	**07 41 54.0**	**-1.1**
	63nm,0.2s						
ARK	**Arkit**	**0.81**	**199**	⇑*i*P	**Pg**	**07 41 44.5**	**-2.1**
ARK				⇑*i*S	**Sg**	**07 41 55.8**	**-1.4**
EKS2	**Erkin-Say**	**1.08**	**84**	⇑P	**Pg**	**07 41 51.6**	**-0.1**
	8.2nm,0.2s,SNR=7.6						
EKS2				⇓S	**Sb**	**07 42 05.6**	**-0.6**
	6.8nm,0.1s						
EKS2	**Erkin-Say**	**1.08**	**84**	⇓*i*P	**Pg**	**07 41 50.3**	**-1.4**
EKS2				⇓*i*S	**Sg**	**07 42 05.5**	**-0.3**
AML	**Almayashu**	**1.10**	**113**	⇑P	**Pg**	**07 41 52.5**	**+0.2**
	9.3nm,0.1s,SNR=28						
AML				⇑S	**Sg**	**07 42 07.4**	**+0.8**
	30nm,0.2s						
AML	**Almayashu**	**1.10**	**113**	⇑*i*P	**Pg**	**07 41 51.0**	**-1.3**
AML				⇑*i*S	**Sg**	**07 42 06.7**	**+0.1**
ARSB	**Arslanbob**	**1.33**	**158**	⇑*i*P	**Pn**	**07 41 54.6**	**-1.4**
ARSB				⇑*i*S	**Sb**	**07 42 13.0**	**-0.6**
TRKS	**Terek-Say**	**1.36**	**221**	⇑*e*P	**Pn**	**07 41 54.2**	**-2.2**
TRKS				⇑*e*S	**Sn**	**07 42 13.2**	**-1.4**
KK31	**Karatay Array**	**1.44**	**293**	⇓P	**Pn**	**07 41 57.2**	**-0.2**
	1.9nm,0.3s,baz=116,slow=17,SNR=32						
KK31				⇓S	**Sn**	**07 42 15.5**	**-0.9**
	3.9nm,0.2s,baz=116,slow=29,SNR=17						
KKAR	**Karatay Array**	**1.44**	**293**	⇑*i*P	**Pn**	**07 41 54.5**	**-2.9**
KKAR				⇑*i*S	**Sn**	**07 42 12.9**	**-3.5**
AAK	**Ala-Archa**	**1.60**	**87**	⇑P	**Pb**	**07 42 01.3**	**+0.3**
	15nm,0.1s,SNR=14						
AAK				⇑S	**Sg**	**07 42 23.0**	**+0.3**
	7.7nm,0.2s						
AAK	**Ala-Archa**	**1.60**	**87**	⇓*i*P	**Pn**	**07 41 59.7**	**-0.1**
AAK				⇓*i*S	**Sg**	**07 42 21.7**	**-0.9**
UCH	**Uchtor**	**1.66**	**101**	⇑P	**Pb**	**07 42 02.8**	**+0.7**
	2.3nm,0.1s						
UCH				⇓S	**Sg**	**07 42 24.5**	**+0.1**
	22nm,0.2s						
UCH	**Uchtor**	**1.66**	**101**	⇓*i*P	**Pn**	**07 42 00.8**	**0.0**
UCH				⇓*i*S	**Sb**	**07 42 23.5**	**+0.3**
USP	**Ospenovka**	**1.75**	**66**	⇓P	**Pb**	**07 42 03.0**	**-0.3**
	14nm,0.2s,SNR=26						
USP				⇑S	**Sg**	**07 42 26.1**	**-1.1**
	28nm,0.2s						
USP	**Ospenovka**	**1.75**	**66**	⇑*i*P	**Pn**	**07 42 01.9**	**+0.3**
USP				⇑*i*S	**Sb**	**07 42 25.5**	**+0.1**
IUG	**Iuzhnay**	**1.75**	**257**	P	**Pb**	**07 42 05.3**	**+1.9**
	29nm,0.3s						
IUG				S	**Sg**	**07 42 29.1**	**+1.9**
	67nm,0.4s						
CHMS	**Chumysh**	**1.84**	**76**	⇑P	**Pb**	**07 42 04.9**	**0.0**
	6.8nm,0.1s,SNR=9.2						
CHMS				⇑S	**Sg**	**07 42 29.7**	**-0.4**
	12nm,0.2s						
CHMS	**Chumysh**	**1.84**	**76**	P	**Pg**	**07 42 08.1**	**+1.8**
	78nm,0.1s						
CHMS				S	**Sg**	**07 42 33.9**	**+3.7**
	106nm,0.2s						
CHMS	**Chumysh**	**1.84**	**76**	⇓*i*P	**Pn**	**07 42 03.1**	**+0.2**
CHMS				⇓*i*S	**Sb**	**07 42 27.7**	**-0.4**
BRLS	**Borolday**	**1.89**	**285**	Pg	**Pb**	**07 42 07.5**	**+1.8**
	3.8nm,0.3s						
BRLS				Lg	Lg	07 42 33.0	
	18nm,0.3s						

BRLS	Borolday	1.89	285	eP	Pb	07 42 07.5	+1.8
	3.8nm,0.3s						
BRLS				eS	Sg	07 42 33.0	+1.3
	18nm,0.3s						
SGDS	Sogindy	1.91	62	P	Pb	07 42 05.9	-0.2
	9.7nm,0.1s						
SGDS				S	Sb	07 42 30.4	+0.2
	13nm,0.2s						
KBK	Karagaybulak	1.94	86	⇑P	Pb	07 42 07.4	+0.7
	12nm,0.1s						
KBK				⇓S	Sg	07 42 33.1	-0.3
	41nm,0.3s						
KBK	Karagaybulak	1.94	86	⇑iP	Pn	07 42 04.8	+0.4
KBK				⇑iS	Sb	07 42 30.7	-0.4
SALK	Salom-Alik	2.02	146	⇑eP	Pn	07 42 06.1	+0.6
SALK				⇑eS	Sn	07 42 32.9	+1.9
CHM	Chimkent	2.03	264	eP	Pn	07 42 08.1	+2.6
	78nm,0.1s						
CHM				eS	Sn	07 42 33.9	+2.9
	106nm,0.2s						
TKM2	Tokmak 2	2.44	80	⇓P	Pb	07 42 14.3	-0.9
	3.1nm,0.1s,SNR=12						
TKM2				⇑S	Sg	07 42 47.3	-2.0
	16nm,0.1s						
TKM2	Tokmak 2	2.44	80	⇑Pn	Pb	07 42 13.8	-1.5
	2.3nm,0.5s						
TKM2				⇑Sn	Sg	07 42 48.0	-1.3
	13nm,0.4s						
BOOM	Boomskoye usch	2.67	90	⇓iP	Pn	07 42 15.1	+0.6
BOOM				⇓iS	Sn	07 42 48.2	+1.0
KRBS	Karabastau	2.70	64	Pg	Pb	07 42 19.3	-0.3
	3.3nm,0.3s						
KRBS				Lg	Lg	07 42 53.4	
	9.0nm,0.3s						
KST	Kastek	2.72	79	Pg	Pb	07 42 20.7	+0.7
	3.5nm,0.2s						
KST				Lg	Lg	07 42 56.4	
	20nm,0.6s						
KST	Kastek	2.72	79	eP	Pb	07 42 20.7	+0.7
	3.5nm,0.2s						
KST				eS	Sg	07 42 56.4	-2.1
	20nm,0.6s						
BTLS	Baital	2.77	26	Pg	Pb	07 42 18.4	-2.4
	0.8nm,0.2s						
BTLS				Lg	Lg	07 42 51.6	
	6.2nm,0.2s						
BTLS	Baital	2.77	26	eP	Pb	07 42 20.2	-0.6
	1.1nm,0.2s						
BTLS				eS	Sb	07 42 55.8	+0.8
	5.8nm,0.3s						
JNKS	Jany-Kuch	2.91	120	⇑iP	Pn	07 42 18.3	+0.5
JNKS				⇑iS	Sn	07 42 54.0	+0.9
NRN	Naryn	2.96	111	⇑iP	Pn	07 42 18.8	+0.2
NRN				⇑iS	Sn	07 42 55.1	+0.6
MTBS	Maitube	3.07	78	Pg	Pg	07 42 28.2	-1.7
	2.6nm,0.1s						
MTBS				Lg	Lg	07 43 08.5	
	6.8nm,0.2s						
MTBS	Maitube	3.07	78	eP	Pg	07 42 28.1	-1.7
	2.6nm,0.1s						
MTBS				eS	Sg	07 43 08.5	-1.2
	6.8nm,0.2s						
KTBS	Karatobe	3.39	69	Pg	Pb	07 42 32.4	+1.1
	2.2nm,0.4s						
KTBS				Lg	Lg	07 43 15.8	
	10nm,0.5s						
KDJ	Kajisay	3.63	95	⇑iP	Pn	07 42 28.3	+0.7
KDJ				⇑iS	Sn	07 43 11.4	+0.7
GAR	Garm	3.87	204	⇑iP	Pn	07 42 30.7	-0.2
GAR				⇑iS	Sn	07 43 15.6	-1.0
TARG	Taragay, Kyrgy	4.16	100	⇑iP	Pn	07 42 35.7	+0.5
TARG				⇑iS	Sn	07 43 24.4	+0.2
KPKS	Kokpek	4.75	77	Pg	Pb	07 42 58.4	+3.8
	0.5nm,0.3s						

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*IDC **27** 07:47:39.5±0.9, 2°.67S×138°.46E, h0^{km}, mb3.7/7, mbtmp3.7/9, ML3.5/2, MS3.3/1, Error ellipse: s-maj=24.8km s-min=21.7km az=81.0*

ISC 27 07:47:44.4±0.9**, 2°.7S**±0°.1×**138°.5E**±0°.1**, h32^{km}, n10, σ0^{s}.91**/10**, mb3.6**/7**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	2.26	85	Pn	Pn	07 48 18.6	-1.0
	3.9nm,0.3s,baz=232,slow=10.0,SNR=14						
JAY				Sn	Sn	07 48 47.2	+0.8
	6.1nm,0.3s,baz=108,slow=12,SNR=5.5						
	14nm,0.3s						
WRA	Warramunga Arr	17.58	193	P	Pn	07 51 46.1	-1.0
	0.3nm,0.3s,baz=17,slow=13,SNR=14						
	1.3nm,0.7s						
ASAR	Alice Springs	21.28	192	P	P	07 52 28.5	+0.2
	2.4nm,0.7s,baz=21,slow=11,SNR=25						
	2.4nm,0.7s						
ASAJ	Asahikawa	46.78	4	LR	LR	08 16 11.1	
	comp=Z,34nm,18.4s,baz=180,slow=37						
MKAR	Makanchi Array	69.64	323	P	P	07 58 49.8	-1.0
	0.5nm,0.8s,baz=102,slow=6.1,SNR=5.3						
	0.5nm,0.8s						
KURBB	Kurchatov Arra	73.59	325	P	P	07 59 14.6	+0.2
	0.2nm,0.3s,baz=114,slow=5.1,SNR=1.3						
	0.2nm,0.3s						
VNDA	Vanda	75.79	175	P	P	07 59 27.2	+0.5
	0.3nm,0.5s,baz=346,slow=4.2,SNR=1.9						
	0.3nm,0.5s						
BVAR	Borovoye Array	79.18	325	P	P	07 59 47.2	+1.1
	0.4nm,0.5s,baz=93,slow=2.9,SNR=3.5						
	0.4nm,0.5s						
ILAR	Eielson Array	85.95	24	P	P	08 00 20.9	-0.2
	0.3nm,0.8s,baz=243,slow=4.0,SNR=4.6						
	0.3nm,0.8s						
QSPA	South Pole Qui	87.22	180	P	P	08 00 28.2	+0.7
	1.8nm,1.0s,baz=284,slow=4.2,SNR=3.6						
	1.8nm,1.0s						

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*ASRS **27** 07:50:05.0±1.1, 53°.75N×88°.18E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 27 07:50:10.1±3.1**, 53°.68N×88°.10E, h0^{km}, mbtmp2.9**/2**, ML2.5**/2**, Error ellipse: s-maj=24.8km s-min=17.0km az=63.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.96	279	I	I	08 02 27.4	
	0.2nm,1.2s,baz=92,slow=308,SNR=7.2						
ZALV	Zalesovo Beam	1.96	279	Pn	Pn	07 50 44.9	+0.3
	1.6nm,0.3s,baz=97,slow=12,SNR=25						
ZALV				Lg	Lg	07 51 12.5	
	3.1nm,0.3s,baz=96,slow=24,SNR=16						
ZALV				I	I	08 02 31.1	
	baz=76,slow=25,SNR=8.4						
KURBB	Kurchatov Arra	6.63	246	Pn	Pn	07 51 49.6	+0.9
	0.1nm,0.3s,baz=61,slow=14,SNR=3.5						
KURBB				Sn	Sn	07 53 03.5	-1.4
	baz=66,slow=28,SNR=1.5						
KURBB				Lg	Lg	07 53 40.6	
	baz=55,slow=32						
	1.0nm,0.5s						
MKAR	Makanchi Array	7.83	211	Pn	Pn	07 52 06.3	+1.1
	0.1nm,0.3s,baz=30,slow=14,SNR=3.0						
MKAR				Sn	Sn	07 53 33.9	-0.6
	0.2nm,0.3s,baz=36,slow=25,SNR=6.6						
MKAR				Lg	Lg	07 54 18.3	
	0.1nm,0.3s,baz=30,slow=32,SNR=4.1						
	0.2nm,0.5s						

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*GCG **27** 07:55:58.4±0.9, 14°.14N×91°.58W, h76^{km}±13^{km}, MD3.8, ML3.3*

*CATAC **27** 07:55:58.5±0.7, 14°N±5°×9°2W±°, h30^{km}±9^{km}, M3.1/12, MLv3.1/12, Error ellipse: s-maj=13.3km s-min=8.1km az=44.1, confirmed*

*SNET **27** 07:55:59.0±0.9, 13°.98N×91°.43W, h10^{km}±10^{km}, ML3.0*

ISC 27 07:55:56.0±2.3**, 13°.82N**±0°.08×**91°.71W**±0°.08**, h23^{km}**±17^{km}**, n37, σ1^{s}.53**/47**, 1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG0	El Palmar, Qui	0.70	30	eP	Pn	07 56 12.7	+2.0
STG0				i S	Sn	07 56 24.1	+3.1
STG0				IAML		07 56 27.7	
	comp=E,2µm,0.2s						
RTAL	Retalhuleu	0.70	1	eP	Pn	07 56 10.3	-0.3
RTAL				eS	Sn	07 56 19.6	-1.2
RTAL	Retalhuleu	0.70	1	P	Pn	07 56 10.2	-0.4
RTAL				S	Sn	07 56 20.2	-0.6
STG8	El Palmar, Qui	0.72	29	i P	Pn	07 56 13.1	+2.1
STG8				i S	Sn	07 56 24.9	+3.4
STG8				IAML		07 56 29.4	
	comp=E,1µm,0.1s						
SOKI	Kika Raxquin	1.04	16	i P	Pb	07 56 15.3	-0.3
SOKI				i S	Sn	07 56 28.3	-1.4
SOKI				IAML		07 56 29.0	
	comp=N,368nm,0.1s						
SMCA	Catarina	1.09	341	i P	Pn	07 56 15.9	0.0
SMCA				IAML		07 56 29.6	
	comp=E,56nm,0.1s						
THIG		1.21	334	i P	Pn	07 56 17.4	-0.2
THIG				⇓iS	Sn	07 56 32.8	-0.5
THIG				IAML		07 56 33.6	
	comp=N,208nm,0.4s						
FG16	Alotenango, Sa	1.25	68	i P	Pn	07 56 15.3	-3.0
FG16				i S	Sn	07 56 28.8	-5.7
FG16				IAML		07 56 33.9	
	comp=N,5µm,0.2s						
HUEH	Huehuetenango	1.51	8	eP	Pb	07 56 23.4	-0.1
HUEH				eS	Sb	07 56 42.2	-0.1
HUEH	Huehuetenango	1.51	8	P	Pn	07 56 21.9	+0.1
FAME	Alcaldia de Sa	1.65	89	P	Pn	07 56 23.8	+0.2
FAME	Alcaldia de Sa	1.65	89	S	Sn	07 56 43.5	-0.6
NUBE	Las Nubes	1.88	87	eP	Pn	07 56 26.9	0.0
NUBE				eS	Sn	07 56 47.9	-2.0
NUBE	Las Nubes	1.88	87	i P	Pn	07 56 27.0	+0.2
NUBE	Las Nubes	1.88	87	S	Sn	07 56 48.4	-1.5
NUBE	Las Nubes	1.88	87	P	Pn	07 56 26.6	-0.2
SLOZ	Alcaldia de Sa	1.88	83	eP	Pn	07 56 27.1	+0.3
SLOZ				eS	Sn	07 56 49.3	-0.6
SLOZ	Alcaldia de Sa	1.88	83	P	Pn	07 56 26.8	0.0
RTR	El Retiro	2.01	87	eP	Pn	07 56 29.5	+0.8
SBLS	San Blas	2.03	89	eP	Pn	07 56 29.4	+0.4
SNJE	San Jose	2.04	88	eP	Pn	07 56 29.5	+0.3
JAYA	Jayaque - finc	2.20	94	eP	Pn	07 56 31.9	+0.5
JAYA				IAML		07 56 58.8	
	comp=Z,196nm,0.2s						
JAYA	Jayaque - finc	2.20	94	i P	Pn	07 56 32.7	+1.3
JAYA	Jayaque - finc	2.20	94	P	Pn	07 56 31.6	+0.2
JAYA	Jayaque - finc	2.20	94	S	Sn	07 56 57.6	-0.4
PMON	Piamonte	2.33	92	eP	Pn	07 56 34.1	+1.1
PMON	Piamonte	2.33	92	P	Pn	07 56 34.5	+1.5
ESQI	Esquipulas	2.41	72	eP	Pn	07 56 34.5	+0.3
ESQI	Esquipulas	2.41	72	P	Pn	07 56 33.8	-0.4
COEG	Centro de Oper	2.76	94	eP	Pn	07 56 39.9	+1.0
COEG				IAML		07 57 17.6	
	comp=Z,40nm,0.3s						
COEG	Centro de Oper	2.76	94	P	Pn	07 56 40.2	+1.3
COEG	Centro de Oper	2.76	94	S	Sn	07 57 12.3	+0.7
TECO	Alcaldia de Te	2.86	95	S	Sn	07 57 15.2	+1.2
TECO	Alcaldia de Te	2.86	95	P	Pn	07 56 41.2	+1.0
SCLA	Alcaldia de Sa	2.90	92	P	Pn	07 56 42.3	+1.4
PETF	Flores	3.56	30	eP	Pn	07 56 50.8	+0.9
LCND	La Caada	3.75	97	P	Pn	07 56 54.2	+1.7

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*IDC **27** 08:01:20.1±0.8, 28°.32N×105°.11E, h0^{km}, mb4.0/11, mbtmp4.0/13, ML4.0/2, MS3.3/6, Error ellipse: s-maj=24.0km s-min=15.8km az=59.0*

ISC 27 08:01:23.3±0.8**, 28°.4N**±0°.1×**105°.1E**±0°.1**, h19^{km}, n17, σ0^{s}.70**/13**, mb4.0**/11**, MS3.3**/5**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	11.37	211	Pn	Pn	08 04 05.3	+0.5
	0.6nm,0.3s,baz=28,slow=12,SNR=8.0						
CMAR				LR	LR	08 08 56.0	
	comp=Z,91nm,18.6s,baz=20,slow=40						
	0.8nm,0.3s						
SONM	Songino Array	19.47	3	P	Pn	08 05 50.8	+0.6
	0.2nm,0.3s,baz=180,slow=12,SNR=7.9						
	2.5nm,0.8s						
KSRS	Korea Array	21.13	59	P	P	08 06 08.3	+1.3
	5.5nm,0.7s,baz=246,slow=9.8,SNR=27						
	5.5nm,0.7s						
JNU	Nakatsue	22.61	71	LR	LR	08 15 23.4	
	comp=Z,97nm,21.7s,baz=220,slow=37						
MKAR	Makanchi Array	25.66	322	P	P	08 06 51.5	-0.4
	7.3nm,0.9s,baz=125,slow=9.4,SNR=32						
	7.3nm,0.9s						
USRK	Ussuriysk Ar.	26.64	46	P	P	08 06 59.6	-1.1
	2.7nm,0.7s,baz=246,slow=8.8,SNR=4.6						
	2.7nm,0.7s						
MJAR	Matsushiro Arr	28.97	65	LR	LR	08 20 34.6	
	comp=Z,72nm,18.6s,baz=204,slow=40						
KLR	Kul'dur	29.15	37	LR	LR	08 20 37.8	
	comp=Z,69nm,18.4s,baz=200,slow=40						
ZALV	Zalesovo Beam	29.58	335	P	P	08 07 26.8	0.0
	2.1nm,0.7s,baz=127,slow=9.5,SNR=5.3						
	2.1nm,0.7s						
KURBB	Kurchatov Arra	29.98	325	P	P	08 07 30.5	+0.1
	1.9nm,0.8s,baz=132,slow=9.6,SNR=15						
	1.9nm,0.8s						
BVAR	Borovoye Array	35.51	324	P	P	08 08 17.9	-0.8
	0.6nm,0.5s,baz=99,slow=9.2,SNR=3.8						
BVAR				LR	LR	08 23 50.4	
	comp=Z,45nm,21.7s,baz=85,slow=38						
	0.6nm,0.5s						
WRA	Warramunga Arr	55.70	146	P	P	08 10 57.9	-0.7
	2.4nm,0.8s,baz=336,slow=8.4,SNR=20						
	2.4nm,0.8s						
ASF	Jabal al Asfar	58.16	292	LR	LR	08 39 33.6	
	comp=Z,33nm,18.4s,baz=62,slow=39						
ASAR	Alice Springs	58.69	149	P	P	08 11 19.4	-0.3
	1.2nm,0.6s,baz=332,slow=6.9,SNR=15						
	1.2nm,0.6s						
BRTR	Keskin Array B	58.90	301	P	P	08 11 21.5	+0.2
	0.6nm,0.6s,baz=90,slow=3.2,SNR=2.5						
	0.6nm,0.6s						
NOA	NORSAR Array B	67.45	328	P	P	08 12 17.3	-0.2
	1.5nm,0.9s,baz=70,slow=5.8,SNR=2.6						
	1.5nm,0.9s						
ILAR	Eielson Array	71.92	25	P	P	08 12 45.1	+0.1
	0.6nm,0.9s,baz=284,slow=4.3,SNR=6.0						
	0.6nm,0.9s						

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*ASRS **27** 08:04:27.0±0.8, 53°.58N×86°.90E, h0^{km}, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 27 08:04:29.5±3.0**, 53°.62N×86°.95E, h0^{km}, mbtmp2.6**/2**, ML2.2**/2**, Error ellipse: s-maj=28.0km s-min=16.0km az=72.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZALV	Zalesovo Beam	1.30	285	Pg	Pg	08 04 53.1	-1.3
	0.8nm,0.3s,baz=106,slow=14,SNR=9.5						
ZALV				Lg	Lg	08 05 11.7	
	1.3nm,0.3s,baz=107,slow=30,SNR=5.5						
I46RU	ZALESOVO INFRA	1.30	285	I	I	08 12 20.0	
	baz=104,slow=316,SNR=4.2						
KURBB	Kurchatov Arra	5.99	243	Pn	Pn	08 05 60.0	+0.7
	baz=63,slow=14,SNR=2.4						
	0.3nm,0.5s						
MKAR	Makanchi Array	7.46	205	Pn	Pn	08 06 21.2	+1.6
	0.1nm,0.3s,baz=26,slow=13,SNR=2.7						
MKAR				Lg	Lg	08 08 27.4	
	baz=27,slow=30						
	0.2nm,0.3s						

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*ASRS **27** 08:17:19.0±1.7, 53°.73N×90°.96E, h0^{km}, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 27 08:17:24.5±3.9**, 53°.66N×90°.90E, h0^{km}, mbtmp2.7**/3**, ML2.3**/3**, Error ellipse: s-maj=36.3km s-min=26.1km az=30.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	3.62	277	I	I	08 38 51.8	
	0.1nm,1.0s,baz=90,slow=313,SNR=39						
ZALV	Zalesovo Beam	3.62	277	Pn	Pn	08 18 23.2	+1.5
	0.5nm,0.3s,baz=91,slow=16,SNR=6.3						
ZALV				Pg	Pb	08 18 31.0	+1.8
	0.3nm,0.3s,baz=96,slow=14,SNR=3.9						
ZALV				Lg	Lg	08 19 17.1	
	0.4nm,0.3s,baz=93,slow=26,SNR=4.1						
	0.7nm,0.4s						
KURBB	Kurchatov Arra	8.19	253	Pn	Pn	08 19 23.6	-0.9
	baz=67,slow=15,SNR=3.2						
KURBB				Sn	Sn	08 20 56.9	-0.8
	baz=69,slow=27,SNR=9.7						
KURBB				Lg	Lg	08 21 45.1	
	baz=60,slow=32,SNR=7.8						
	0.2nm,0.3s						
MKAR	Makanchi Array	8.81	222	Pn	Pn	08 19 33.6	+0.6
	0.1nm,0.3s,baz=40,slow=14,SNR=2.5						
	0.2nm,0.5s						

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*GII **27** 08:21:18.8±0.0, 29°.151N±0°.003×32°.826E±0°.001, h1^{km}, Mws3.0/7, confirmed*

*HLW **27** 08:21:21.1, 29°.37N×32°.83E, h5^{km}±1^{km}, Md2.1, Ml2.5*

ISC 27 08:21:20.6±1.3**, 29°.30N**±0°.04×**32°.89E**±0°.04**, h1^{km}**±12^{km}**, n34, σ1^{s}.03**/38**, Egypt**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZNM	Zenema	0.08	349	P	Pg	08 21 21.5	-0.8
ZNM				S	Sg	08 21 24.0	+0.6
ZAF	Zafarana	0.30	268	P	Pg	08 21 26.7	+0.2
HRDS	Abu Rudays	0.68	149	P	Pn	08 21 35.9	-1.5
GRB	Gharib	1.02	185	P	Pn	08 21 42.1	-0.1
TR2	Tor 2	1.16	141	P	Pn	08 21 44.2	+0.1
HKAT	Jabal Katrina	1.23	128	P	Pg	08 21 44.8	+0.5
NUB	Nuweibaa	1.56	99	P	Pb	08 21 49.7	-0.6
HDHB	Dhahab	1.61	110	P	Pg	08 21 51.2	-0.5
KRMI	Paran Flat	1.79	62	P	Pn	08 21 51.6	-1.2
KRMI				S	Sb	08 22 16.0	-1.3
KRMI	Paran Flat	1.79	62	P	Pn	08 21 51.6	-1.2
KRMI	Paran Flat	1.79	62	S	Sb	08 22 17.1	-0.2
MBRI	Mt Berech	1.83	74	P	Pn	08 21 52.9	-0.4
MBRI				S	Sg	08 22 20.9	+1.4
MBRI	Mt Berech	1.83	74	P	Pn	08 21 53.2	-0.2
MBRI	Mt Berech	1.83	74	S	Sb	08 22 18.2	-0.3
EIL	Elat	1.83	78	P	Pn	08 21 52.9	-0.4
EIL				S	Sg	08 22 20.8	+1.2
EIL	Elat	1.83	78	P	Pn	08 21 52.8	-0.4
EIL	Elat	1.83	78	S	Sb	08 22 18.2	-0.3
AQBJ	Aqaba	1.93	77	P	Pn	08 21 54.2	-0.4
HRFI	Mount Harif	2.01	68	P	Pn	08 21 55.0	-0.7
HRFI	Mount Harif	2.01	68	P	Pn	08 21 55.1	-0.6
HRFI	Mount Harif	2.01	68	S	Sb	08 22 22.9	-0.6
KZIT	Kziot	2.07	39	P	Pn	08 21 56.6	0.0
KZIT	Kziot	2.07	39	S	Sb	08 22 25.0	-0.2
PRNI	Paran	2.12	60	P	Pn	08 21 56.7	-0.5
PRNI	Paran	2.12	60	P	Pn	08 21 57.1	-0.1
PRNI	Paran	2.12	60	S	Sb	08 22 26.3	-0.3
ZFRI	Zfri	2.35	57	P	Pn	08 22 00.5	+0.2
ZFRI	Zfri	2.35	57	S	Sb	08 22 31.2	-2.1
GHAJ	Ghor Haditha	3.06	48	P	Pn	08 22 10.8	+0.7
GHAJ	Ghor Haditha	3.06	48	S	Sn	08 22 48.9	+1.6
DSI	Dead Sea	3.12	43	P	Pn	08 22 11.9	+0.9
DSI	Dead Sea	3.12	43	S	Sb	08 22 52.4	-3.2
HMDT	Nahal Hemdat	3.72	37	P	Pn	08 22 19.8	+0.6
HMDT	Nahal Hemdat	3.72	37	S	Sn	08 23 05.3	+1.6

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*IDC **27** 08:22:55.5±1.5, 6°.41S×131°.12E, h0^{km}, mb4.0/4, mbtmp4.1/7, ML4.3/3, MS3.3/4, Error ellipse: s-maj=83.6km s-min=21.7km az=77.0*

*NEIC **27** 08:23:02.0±1.2, 6°.27S±0°.05×131°.3E±0°.1, h37^{km}±8^{km}, mb4.6/11, Error ellipse: s-maj=15.8km s-min=7.8km az=88.0*

ISC 27 08:23:03.5±0.7**, 6°.58S**±0°.06×**131°.0E**±0°.1**, h62^{km}, n33, σ2^{s}.35**/27**, mb4.3**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.43	168	Pn	Pn	08 23 28.9	+1.6
FAKI	Fak Fak	3.84	19		Pn	08 23 52.0	-8.2
MTN	Manton Dam	6.23	179		Pn	08 24 34.2	+1.3
SOEI	Soe	7.37	244	Pn	Pn	08 24 54.1	+5.5
TNTI	Ternate	8.15	333	Pn	Pn	08 24 56.6	-2.6
KNRA	Kununurra	9.30	193		Pn	08 25 16.1	+1.2
JAY	Jayapura	10.48	68	LR	LR	08 30 47.5	
	comp=Z,73nm,19.1s,baz=2.5,slow=46						
FITZ	Fitzroy Crossi	12.59	204		Pn	08 25 58.9	-0.9
FITZ	Fitzroy Crossi	12.59	204	Pn	Pn	08 26 00.1	+0.3
	1.5nm,0.3s,baz=24,slow=15,SNR=40						
FITZ				Sn	Sn	08 28 16.6	-1.7
	0.8nm,0.3s,baz=215,slow=11,SNR=4.5						
	3.3nm,0.3s						
WB0	Warramunga Arr	13.52	166		Pn	08 26 08.2	-4.3
WRA	Warramunga Arr	13.68	167	Pn	Pn	08 26 10.0	-4.6
WRA	Warramunga Arr	13.68	167	Pn	Pn	08 26 11.1	-3.6
	1.2nm,0.3s,baz=349,slow=14,SNR=34						
WRA				Sn	Sn	08 28 39.3	-5.6
	0.7nm,0.3s,baz=334,slow=22,SNR=5.0						
	3.1nm,0.6s						
COEN	Coen	14.04	122	Pn	Pn	08 26 12.8	-6.8
AS31	Alice Springs	17.22	171		Pn	08 26 57.5	-2.4
ASAR	Alice Springs	17.22	171	P	Pn	08 26 58.6	-1.3
	1.1nm,0.3s,baz=350,slow=12,SNR=52						
ASAR				S	Sn	08 30 06.0	-4.9
	1.3nm,0.8s,baz=354,slow=26,SNR=4.1						
ASAR				LR	LR	08 34 04.4	
	comp=Z,106nm,21.5s,baz=73,slow=38						
	3.1nm,0.5s						
MBWA	Marble Bar	18.14	216	P	Pn	08 27 12.7	+1.5
MBWA				IAmb	IAmb	08 27 32.6	
	comp=Z,24nm,1.2s						
PSA00	Pilbara Seismi	18.40	215	P	Pn	08 27 18.3	+3.9
FORT	Forrest	24.23	186	P	P	08 28 17.7	+3.1
FORT				IAmb	IAmb	08 28 30.4	
	comp=Z,28nm,1.2s						
BBOO	Buckleboo	26.52	170	P	P	08 28 37.9	+2.6
HNR	Honiara	28.80	98	LR	LR	08 40 24.8	
	comp=Z,66nm,18.9s,baz=187,slow=37						
NWAO	Narrogin (SRO)	29.18	204	LR	LR	08 42 60.0	
	comp=Z,89nm,19.6s,baz=38,slow=41						
NACB	Ninganchiao	31.91	344	P	P	08 29 21.5	-1.8
BKZ	Black Stump Fm	52.20	135	P	P	08 32 09.4	+1.1
BKZ				IAmb	IAmb	08 32 40.4	
	comp=Z,14nm,1.3s						
EVN	Everest	54.74	311	P	P	08 32 28.1	+0.4
EVN				IAmb	IAmb	08 32 30.6	
	comp=Z,10nm,1.4s						
MKAR	Makanchi Array	68.42	326		P	08 33 58.3	-0.5
MKAR	Makanchi Array	68.42	326	P	P	08 33 59.3	+0.5
	comp=Z,1.6nm,0.6s,baz=120,slow=8.1,SNR=24						
	comp=Z,1.6nm,0.6s						
ZALV	Zalesovo Beam	71.65	333	P	P	08 34 17.6	-0.8
ZALV	Zalesovo Beam	71.65	333	P	P	08 34 17.9	-0.4
	comp=Z,0.4nm,0.3s,baz=123,slow=5.3,SNR=2.1						
	comp=Z,0.4nm,0.3s						
KURBB	Kurchatov Arra	72.67	328	P	P	08 34 24.3	-0.3
	comp=Z,0.4nm,0.4s,baz=130,slow=5.0,SNR=8.8						
	comp=Z,0.4nm,0.4s						
SIMJ	Simiganj	72.87	314	P	P	08 34 26.9	+0.7
SIMJ				IAmb	IAmb	08 34 30.0	
	comp=Z,3.3nm,0.9s						
QSPA	South Pole Qui	83.40	180	P	P	08 35 26.7	+2.8
QSPA				IAmb	IAmb	08 35 38.3	
	comp=Z,6.1nm,1.4s						
QSPA	South Pole Qui	83.40	180	P	P	08 35 26.0	+2.1
	comp=Z,0.6nm,0.4s,baz=174,slow=2.2,SNR=7.9						
	comp=Z,0.6nm,0.4s						
GHO	Glory Hole Cre	91.07	28	P	P	08 36 00.5	-0.5
GHO				IAmb	IAmb	08 36 07.5	
	comp=Z,4.1nm,1.0s						

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*DJA **27** 08:27:37.3±0.8, 4°N±4°×9°6E±°, h17^{km}±7^{km}, M3.9/8, MLv3.9/8*

*IDC **27** 08:27:40.3±7.0, 3°.97N×95°.80E, h84^{km}±52^{km}, mb3.5/8, mbtmp3.8/10, ML3.1/1, Error ellipse: s-maj=86.3km s-min=14.7km az=59.0*

*NEIC **27** 08:27:41.1±1.8, 4°.2N±0°.1×96°.09E±0°.09, h75^{km}±9^{km}, mb4.2/7, Error ellipse: s-maj=19.8km s-min=3.4km az=221.0*

ISC 27 08:27:38.7±0.6**, 4°.02N**±0°.06×**95°.96E**±0°.06**, h50^{km}, n43, σ2^{s}.34**/45**, mb4.1**/13**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLSI	Meulaboh, Aceh	0.50	61	P	Pn	08 27 50.2	+0.3
MLSI				S	Sn	08 27 58.9	+0.9
LHMI	Lhok Sumawe	1.55	39	Pn	Pn	08 28 05.6	+1.7
LHMI	Lhok Sumawe	1.55	39	P	Pn	08 28 06.7	+2.9
SNSI	Sinabang, Aceh	1.65	167	P	Pn	08 28 04.9	-0.3
PSI	Prapat	3.19	112	P	Pn	08 28 30.4	+3.9

	1.9nm,0.3s,baz=318,slow=15,SNR=7.7						
PSI				S	Sn	08 29 10.4	+7.0
	20nm,0.6s,baz=221,slow=9.0,SNR=4.3						
	16nm,0.6s						
RPSI	Rantau Prapat	3.24	114		Pn	08 28 30.4	+3.5
RPSI	Rantau Prapat	3.24	114	Pn	Pn	08 28 29.3	+2.3
CMBY	CAMPBELL BAY	3.59	326	eP	Pn	08 28 36.2	+4.4
CMBY				eS	Sn	08 29 20.5	+7.4
CMBY				IAML		08 29 21.8	
	comp=N,603nm,0.6s						
CMBY				IAML		08 29 29.1	
	comp=E,572nm,0.7s						
KULM	Kulim	4.84	75		Pn	08 28 48.4	-0.6
IPM	Ipoh	5.07	85		Pn	08 28 52.4	+0.2
SRIT	Nakonsritamara	5.80	38	Pn	Pn	08 29 02.0	-0.2
DGPR	DIGLIPUR	9.58	342	eP	Pn	08 29 56.5	+2.5
DGPR				eS	Sn	08 31 41.8	+1.6
DGPR				IAML		08 31 45.4	
	comp=N,235nm,2.3s						
DGPR				IAML		08 31 48.2	
	comp=E,128nm,1.4s						
CMAR	Chiang Mai Arr	14.64	11	P	Pn	08 31 04.1	+1.2
	comp=E,0.5nm,0.3s,baz=192,slow=13,SNR=4.6						
MDRS	Chennai	17.94	301	eP	P	08 31 47.8	+3.1
MDRS				IAmb	IAmb	08 31 59.4	
	comp=Z,12nm,0.9s						
MDRS				eS	S	08 35 08.1	-0.1
VIS	Vishakhapatnam	18.40	319	eS	S	08 35 15.2	-2.2
KOD	Kodaikanal	19.36	290	eP	Pn	08 32 03.4	+1.3
KOD				IAmb	IAmb	08 32 06.6	
	comp=Z,178nm,2.7s						
KOD				eS	Sn	08 35 39.9	+1.3
RAGD	RAYAGADA	19.44	322	eP	Pn	08 32 04.1	+1.4
RAGD				IAmb	IAmb	08 32 29.5	
	comp=Z,28nm,1.4s						
RAGD				eS	Sn	08 35 39.6	-0.7
IMP	Imphal	20.78	355	eP	P	08 32 16.0	+0.3
IMP				IAmb	IAmb	08 32 32.4	
	comp=Z,12nm,0.1s						
IMP				eS	S	08 36 03.2	-1.9
KOHI	KOHIMA	21.65	355	eP	P	08 32 25.9	+0.8
KOHI				eS	S	08 36 21.7	-0.6
H08S2	Diego Garcia H	26.13	244	T	T	08 59 56.7	
	baz=63,slow=74,SNR=6.2						
H08S3	Diego Garcia H	26.13	244	T	T	08 59 55.5	
	baz=63,slow=74,SNR=28						
H08S1	Diego Carcia H	26.15	244	T	T	08 59 55.9	
	baz=63						
FITZ	Fitzroy Crossi	36.60	128	P	P	08 34 38.6	-1.7
	comp=Z,1.4nm,0.6s,baz=154,slow=18,SNR=1.6						
	comp=Z,1.4nm,0.6s						
SIMJ	Simiganj	42.31	328	P	P	08 35 25.3	-2.5
SIMJ				IAmb	IAmb	08 35 26.7	
	comp=Z,3.2nm,1.1s						
MKAR	Makanchi Array	44.22	347	P	P	08 35 40.6	-2.3
MKAR	Makanchi Array	44.22	347	P	P	08 35 41.3	-1.7
	comp=Z,0.4nm,0.4s,baz=164,slow=8.4,SNR=5.2						
	comp=Z,0.4nm,0.4s						
WB0	Warramunga Arr	44.56	123	P	P	08 35 44.3	-1.7
WB0				IAmb	IAmb	08 35 59.0	
	comp=Z,10nm,1.4s						
SONM	Songino Array	44.56	10	P	P	08 35 44.3	-1.5
	comp=Z,1.1nm,0.7s,baz=183,slow=7.2,SNR=2.8						
	comp=Z,1.1nm,0.7s						
WRA	Warramunga Arr	44.59	124	P	P	08 35 44.6	-1.7
WRA	Warramunga Arr	44.59	124	P	P	08 35 45.1	-1.2
	comp=Z,1.6nm,0.7s,baz=301,slow=9.2,SNR=13						
	comp=Z,1.6nm,0.7s						
ASAR	Alice Springs	46.09	129	P	P	08 35 57.3	-0.9
	comp=Z,0.5nm,0.6s,baz=302,slow=7.8,SNR=10						
	comp=Z,0.5nm,0.6s						
KURBB	Kurchatov Arra	48.70	345	P	P	08 36 16.2	-1.7
	comp=Z,0.5nm,0.4s,baz=166,slow=6.8,SNR=5.1						
	comp=Z,0.5nm,0.4s						
ZALV	Zalesovo Beam	50.60	351	P	P	08 36 29.9	-2.5
ZALV	Zalesovo Beam	50.60	351	P	P	08 36 30.6	-1.7
	comp=Z,1.6nm,0.6s,baz=169,slow=8.5,SNR=5.0						
	comp=Z,1.6nm,0.6s						
AB31	Akbulak array	54.46	332	P	P	08 36 59.4	-1.6
AB31				IAmb	IAmb	08 37 00.5	
	comp=Z,1.9nm,1.0s						
ABKAR	Akbulak array	54.46	332	P	P	08 36 59.5	-1.5
STKA	Stephens Creek	56.16	133	P	P	08 37 12.2	-1.3
	comp=Z,1.5nm,0.7s,baz=305,slow=11,SNR=3.0						
	comp=Z,1.5nm,0.7s						
H04N2	CROZET ISLANDS	63.43	213	T	T	09 45 46.9	
	baz=50,slow=75,SNR=12						
H04N1	CROZET ISLANDS	63.44	213	T	T	09 45 47.9	
	baz=50,slow=75,SNR=11						
H04N3	CROZET ISLANDS	63.45	213	T	T	09 45 45.5	
	baz=50,slow=75,SNR=14						
PEA0B	Petropavlovsk-	70.10	34	P	P	08 38 46.0	+0.3
AKBB	Malin Array Si	72.28	322	P	P	08 38 58.7	-0.2
AKBB				IAmb	IAmb	08 39 03.6	
	comp=Z,3.4nm,0.8s						
KIEV	Kiev	72.29	322	P	P	08 38 58.5	-0.4
KIEV				IAmb	IAmb	08 39 03.6	
	comp=Z,3.0nm,0.8s						

*IDC **27** 08:28:15.6±1.9, 0°.97N×123°.25E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=219.9km s-min=28.1km az=62.0*

*DJA **27** 08:28:37.1±0.6, 0°N±4°×12°2E±°, h138km±6km, M3.4/7, MLv3.4/7*

ISC 27 08:28:34.9±1.1**, 0°.27N**±0°.10×**122°.08E**±0°.09**, h148km, n8, σ2.ˢ64**/10**, mb3.5**/3**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	0.25	326	P	Pn	08 28 56.5	+1.5
MRSI				S	Sn	08 29 12.7	+2.3
APSI	Ampana	1.25	200	P	Pn	08 29 03.9	+2.1
LUWI	Luwuk	1.47	152	P	Pn	08 29 05.5	+1.5
LUWI				S	Sn	08 29 28.3	+1.9
KMSI	Cibinong	1.93	81	P	Pn	08 29 11.4	+2.4
MPSI	Mapaga	2.18	272	P	Pn	08 29 14.1	+2.1
WRA	Warramunga Arr	23.40	150	P	P	08 33 27.6	-3.1
	1.3nm,0.7s,baz=330,slow=11,SNR=8.7						
	1.3nm,0.7s						
ASAR	Alice Springs	26.42	155	P	P	08 33 55.1	-2.8
	0.4nm,0.6s,baz=336,slow=7.7,SNR=4.6						
	0.4nm,0.6s						
MKAR	Makanchi Array	57.91	329	P	P	08 38 09.6	-1.9
	0.2nm,0.4s,baz=132,slow=7.6,SNR=2.1						
	0.2nm,0.4s						

*IDC **27** 08:53:54.0±0.6, 2°.62S×138°.41E, h0km, mb4.1/10, mbtmp4.1/13, ML3.9/3, MS3.6/19, Error ellipse: s-maj=20.9km s-min=16.2km az=82.0*

*NEIC **27** 08:53:55.5±1.4, 2°.73S±0°.09×138°.47E±0°.03, h10km±1km, mb4.7/26, Error ellipse: s-maj=15.4km s-min=5.5km az=174.0*

*DJA **27** 08:53:59.6±0.8, 2°S±8°×13°9E±°, h23km±10km, M4.1/5, MLv4.1/5*

ISC 27 08:53:59.2±0.4**, 2°.79S**±0°.06×**138°.46E**±0°.05**, h35km, n76, σ1.ˢ44**/65**, mb4.6**/32**, MS3.7**/16**, 2C, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.83	17	P	Pn	08 54 08.4	-6.0
SMPI				S	Sn	08 54 24.5	-0.9
GENI	Genyem	1.72	84	P	Pn	08 54 25.5	-1.1
GENI				S	Sn	08 54 54.3	+7.0
JAY	Jayapura	2.26	83	Pn	Pn	08 54 33.6	-0.5
	23nm,0.3s,baz=246,slow=9.9,SNR=39						
JAY				Sn	Sn	08 55 03.9	+3.1
	32nm,0.3s,baz=109,slow=20,SNR=6.9						
JAY				LR	LR	08 55 20.2	
	comp=Z,748nm,20.4s,baz=294,slow=38						
	140nm,0.5s						
JAY	Jayapura	2.26	83	P	Pn	08 54 32.3	-1.8
SRPI	Serui, Papua	2.40	292	P	Pn	08 54 36.4	+0.4
BAKI	Biak	2.84	304	P	Pn	08 54 43.2	+1.2
FAKI	Fak Fak	6.21	269	Pn	Pn	08 55 28.4	0.0
COEN	Coen	12.04	158		Pn	08 56 47.9	-0.5
MTN	Manton Dam	12.35	216		Pn	08 56 52.0	-0.6
WB0	Warramunga Arr	17.34	193		Pn	08 57 58.0	-0.7
GUMO	Guam	17.47	21	LR	LR	09 04 33.0	
	comp=Z,74nm,18.4s,baz=208,slow=37						
WRA	Warramunga Arr	17.52	193		Pn	08 58 00.3	-0.6
WRA	Warramunga Arr	17.52	193	P	P	08 58 00.9	-0.8
	0.5nm,0.3s,baz=18,slow=12,SNR=19						
WRA				LR	LR	09 05 27.7	
	comp=Z,429nm,18.4s,baz=326,slow=39						
	7.5nm,0.9s						
KAPI	Kappang	18.80	263	LR	LR	09 07 31.6	
	comp=Z,51nm,18.3s,baz=84,slow=44						
FITZ	Fitzroy Crossi	19.74	219	P	P	08 58 26.5	+0.4
	0.3nm,0.3s,baz=47,slow=12,SNR=5.2						
	0.9nm,0.3s						
AS31	Alice Springs	21.22	192		P	08 58 41.9	-0.3
ASAR	Alice Springs	21.22	192		P	08 58 40.7	-1.5
ASAR	Alice Springs	21.22	192	P	P	08 58 43.4	+1.1
	9.0nm,0.9s,baz=20,slow=9.7,SNR=28						
	9.0nm,0.9s						
HNR	Honiara	22.35	108	LR	LR	09 06 35.3	
	comp=Z,93nm,21.3s,baz=200,slow=34						
EIDS	Eidsvold	25.53	153	P	P	08 59 23.5	-1.2
EIDS				IAmb	IAmb	08 59 47.5	
	comp=Z,21nm,1.1s						
PSA00	Pilbara Seismi	26.01	223	P	P	08 59 28.7	-0.5
PSA00				IAmb	IAmb	09 00 06.7	
	comp=Z,12nm,1.4s						
LEM	Lembang	30.99	261	LR	LR	09 17 01.6	
	comp=Z,172nm,18.4s,baz=184,slow=45						
NWAO	Narrogin (SRO)	35.99	211	LR	LR	09 16 20.5	
	comp=Z,184nm,21.4s,baz=342,slow=37						
JNU	Nakatsue	36.42	349	P	P	09 00 59.2	-1.5
JNU	Nakatsue	36.42	349	LR	LR	09 15 21.3	
	comp=Z,98nm,19.3s,baz=172,slow=36						
NJ2	Nanjing	39.33	333	eP	P	09 01 26.8	+1.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KSRS	Korea Array	41.22	347	P	P	09 01 40.3	-0.4
	comp=Z,0.7nm,0.7s,baz=159,slow=10,SNR=5.8						
	comp=Z,0.7nm,0.7s						
CMAR	Chiang Mai Arr	44.26	300	P	P	09 02 03.7	-2.0
CMAR	Chiang Mai Arr	44.26	300	P	P	09 02 06.5	+0.8
	comp=Z,0.6nm,0.4s,baz=114,slow=7.9,SNR=4.5						
CMAR				LR	LR	09 22 20.1	
	comp=Z,36nm,18.3s,baz=115,slow=39						
	comp=Z,0.6nm,0.4s						
LYN	LuoYang	44.46	329	P	P	09 02 07.8	+0.8
LYN				pmax	pmax		
	comp=Z,23nm,0.9s						
PZH	PanZhiHua	45.89	312	P	P	09 02 21.8	+3.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.4s						
XAN	Xi'an	45.99	325	⇑P	P	09 02 19.0	-0.3
XAN				pmax	pmax		
	comp=Z,12nm,1.4s						
ASAJ	Asahikawa	46.84	4	LR	LR	09 19 41.5	
	comp=Z,44nm,21.6s,baz=194,slow=33						
BNX	BinXian	49.30	350	⇑P	P	09 02 43.8	-0.9
BNX				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC	Hu-ho-hao-te	49.89	333	eP	P	09 02 50.5	+1.1
HHC				pmax	pmax		
	comp=Z,34nm,0.5s						
HHC				pmax	pmax		
	comp=Z,95nm,3.6s						
HHC				LR	LR		
	comp=N,120nm,16.0s						
HHC				LR	LR		
	comp=E,85nm,13.8s						
HHC				LR	LR		
	comp=Z,110nm,13.8s						
TUWZ	Tuamarina	49.95	145	P	P	09 02 49.6	-0.2
BKZ	Black Stump Fm	50.06	141	P	P	09 02 51.2	+0.4
BKZ				IAmb	IAmb	09 02 55.1	
	comp=Z,6.3nm,1.0s						
LZH	Lanzhou	50.39	323	eP	P	09 02 54.3	+0.9
LZH				sP	pP	09 03 02.3	-1.7
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
KLR	Kul'dur	52.13	354	LR	LR	09 23 37.9	
	comp=Z,35nm,18.7s,baz=184,slow=34						
ULN	Ulaanbaatar	57.43	335	P	P	09 03 43.3	-1.3
ULN				IAmb	IAmb	09 04 11.5	
	comp=Z,3.2nm,0.5s						
SONM	Songino Array	57.68	335	P	P	09 03 46.8	+0.4
PEA0B	Petropavlovsk-	57.99	14	P	P	09 03 48.1	-0.2
PETK	Petropavlovsk-	57.99	14	P	P	09 03 47.8	-0.4
PETK	Petropavlovsk-	57.99	14	P	P	09 03 48.5	+0.3
	comp=Z,2.7nm,0.9s,baz=151,slow=6.3,SNR=4.6						
PETK				LR	LR	09 26 58.0	
	comp=Z,43nm,20.6s,baz=191,slow=34						
	comp=Z,2.7nm,0.9s						
MA2	Magadan	62.93	7	LR	LR	09 29 30.0	
	comp=Z,27nm,19.9s,baz=166,slow=34						
WMQ	Urumqi	64.91	322	eP	P	09 04 37.5	+2.2
WMQ				pmax	pmax		
	comp=Z,25nm,0.7s						
YAK	Yakutsk	64.99	355	LR	LR	09 31 02.3	
	comp=Z,50nm,19.4s,baz=166,slow=34						
ADK	Adak	66.36	29	P	P	09 04 43.4	-0.9
MKAR	Makanchi Array	69.70	323		P	09 05 04.4	-1.1
MKAR	Makanchi Array	69.70	323	P	P	09 05 03.8	-1.7
	comp=Z,4.3nm,1.2s,baz=113,slow=8.0,SNR=12						
	comp=Z,4.3nm,1.2s						
MAKZ	Makanchi	69.89	322		P	09 05 06.2	-0.6
MAKZ				IAmb	IAmb	09 05 08.4	
	comp=Z,8.7nm,1.4s						
KURBB	Kurchatov Arra	73.65	325	P	P	09 05 27.7	-1.5
	comp=Z,0.3nm,0.3s,baz=125,slow=5.4,SNR=6.2						
	comp=Z,0.3nm,0.3s						
VNDA	Vanda	75.73	175	P	P	09 05 40.6	-0.2
VNDA	Vanda	75.73	175	P	P	09 05 41.9	+1.2
	comp=Z,1.2nm,0.8s,baz=301,slow=3.3,SNR=6.1						
VNDA				LR	LR	09 39 43.8	
	comp=Z,112nm,18.1s,baz=352,slow=36						
	comp=Z,1.2nm,0.8s						
M14K	Bethel	78.09	26	P	P	09 05 54.3	0.0
BVAR	Borovoye Array	79.23	325	P	P	09 05 60.0	-0.8
	comp=Z,1.1nm,0.4s,baz=124,slow=7.5,SNR=4.4						
BVAR				LR	LR	09 44 10.1	
	comp=Z,24nm,18.1s,baz=97,slow=38						
	comp=Z,1.1nm,0.4s						
J17K	VABM Dome	80.51	24	P	P	09 06 07.1	-0.4
J17K				IAmb	IAmb	09 06 31.1	
	comp=Z,13nm,1.4s						
KDAK	Kodiak Island	81.29	30	LR	LR	09 37 34.6	
	comp=Z,45nm,19.8s,baz=199,slow=32						
N19K	Bonanza Creek	81.44	27	P	P	09 06 11.4	-1.2
N19K				IAmb	IAmb	09 06 23.5	
	comp=Z,7.5nm,1.1s						
E18K	Tukpahlearik C	81.79	20	P	P	09 06 13.7	-0.4
E18K				IAmb	IAmb	09 06 16.4	
	comp=Z,11nm,1.4s						
MAW	Mawson	81.96	202	LR	LR	09 40 28.4	
	comp=Z,88nm,19.3s,baz=72,slow=34						
G19K	Purcell Mounta	82.47	22	P	P	09 06 17.7	-0.1
G19K				IAmb	IAmb	09 06 20.5	
	comp=Z,3.7nm,1.0s						
E19K	Redstone River	82.97	20	P	P	09 06 20.0	-0.3
E19K				IAmb	IAmb	09 06 23.2	
	comp=Z,10nm,1.4s						
F20K	Avaraart Lake	83.33	21		P	09 06 21.4	-0.8
F20K				IAmb	IAmb	09 06 24.2	
	comp=Z,4.7nm,1.1s						
KTH	Kantishna Hill	83.96	25	P	P	09 06 24.8	-0.8
MLY	Manley	84.51	24		P	09 06 27.4	-1.0
RND	Reindeer	84.80	26		P	09 06 28.8	-1.1
RND				IAmb	IAmb	09 06 30.7	
	comp=Z,6.2nm,1.0s						
ILAR	Eielson Array	86.00	24	P	P	09 06 34.0	-1.8
	comp=Z,1.4nm,0.7s,baz=265,slow=4.2,SNR=18						
	comp=Z,1.4nm,0.7s						
DOT	Dot Lake	86.94	26	P	P	09 06 39.4	-1.0
DOT				IAmb	IAmb	09 06 41.6	
	comp=Z,5.2nm,1.2s						
QSPA	South Pole Qui	87.16	180	P	P	09 06 43.5	+1.9
	comp=Z,2.2nm,0.6s,baz=294,slow=2.0,SNR=14						
	comp=Z,2.2nm,0.6s						
BMAR	Burnt Mountain	87.56	22		P	09 06 43.0	-0.4
G26K	Porcupine Rive	87.76	23		P	09 06 43.5	-0.8
H27K	Steamboat Moun	88.50	24		P	09 06 47.0	-0.9
H27K				IAmb	IAmb	09 06 49.5	
	comp=Z,4.9nm,1.0s						
KIRV	Kirov	91.86	328	LR	LR	09 48 50.6	
	comp=Z,37nm,21.9s,baz=76,slow=36						
CPUP	Villa Florida	147.27	153	PKPbc	PKPab	09 13 40.5	-1.0
	comp=Z,0.3nm,0.7s,baz=111,slow=2.3,SNR=3.5						
LPAZ	La Paz	147.60	127	PKPbc	PKPbc	09 13 41.3	-0.4
	comp=Z,2.5nm,0.8s,baz=260,slow=1.2,SNR=9.3						

HEL 27 08:58:17.6±0.7**, 70°.38N×28°.61E, h0km, ML1.0, Explosion, Northern Norway**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEV	Kevo	0.84	222	PG	Pg	08 58 33.3	-0.3
	baz=39						
KEV				MSG		08 58 43.5	
	comp=Z,1.4nm,0.2s						
KEV				SG	Sg	08 58 43.9	-0.5
ARA0	ARCESS Array S	1.37	233	PN	Pb	08 58 44.0	0.0
ARA0				SB	Sg	08 59 01.3	-0.2
RAJF	Raja-Jooseppi	1.92	183	PG	Pb	08 58 52.7	-0.8
RAJF				SG	Sb	08 59 18.0	+0.1
HEF	Hetta	2.65	224	MSG		08 59 35.6	
	comp=Z,0.4nm,0.2s						
HEF				SB	Sn	08 59 35.7	+1.5
VRF	Varrio	2.67	172	MSG		08 59 36.4	
	comp=Z,0.5nm,0.2s						
VRF				SG	Sb	08 59 40.5	+0.9
KU2	Taivalkoski	4.70	182	PN	Pn	08 59 28.5	-1.2

HEL 27 08:59:19.1±0.1**, 63°.10N×21°.79E, h0km, ML1.4, Explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UMAU	Umeaa	0.94	328	PB	Pg	08 59 36.3	-0.7
	baz=148						
UMAU				SB	Sg	08 59 49.1	0.0
KPF	Kankaanpaa	1.27	174	PG	Pg	08 59 42.1	-1.4
	baz=359						
KPF				SG	Sg	08 59 59.5	-0.5
KEF	Keuruu	1.70	122	PG	Pn	08 59 49.6	-0.4
	baz=309						
KEF				MSG		09 00 09.9	
	comp=Z,1.4nm,0.2s						
KEF				SG	Sn	09 00 11.6	-0.8
OBF0	Syolatti, Pyha	1.78	37	MSG		09 00 12.0	
	comp=Z,4.5nm,0.2s						
OBF0				SG	Sb	09 00 15.1	-0.2
OUF	Merijarvi	1.83	44	PG	Pn	08 59 51.9	+0.2
	baz=232						
OUF				MSG		09 00 13.5	
	comp=Z,6.3nm,0.2s						
OUF				SG	Sn	09 00 15.7	+0.2
SUF	Sumiainen	2.03	99	PG	Pn	08 59 55.2	+0.7
SUF				MSG		09 00 19.5	
	comp=Z,1.2nm,0.2s						
SUF				SG	Sb	09 00 22.0	-0.6
RAF	Rauma	2.08	180	PG	Pn	08 59 56.2	+1.1
RAF				MSG		09 00 20.8	
	comp=Z,3.3nm,0.2s						
RAF				SG	Sb	09 00 23.0	-1.0
OBF4	Vikkela, Lumij	2.26	39	MSG		09 00 26.0	
	comp=Z,1.1nm,0.2s						
OBF4				SG	Sb	09 00 28.9	-0.3
KAF	Kangasniemi	2.31	113	MSG		09 00 27.5	
	comp=Z,0.9nm,0.2s						
KAF				SB	Sb	09 00 29.7	-0.9
FIA0	FINESS Array S	2.60	128	PB	Pn	09 00 03.5	+1.2
	baz=310						
FIA0				MSG		09 00 35.8	
	comp=Z,0.6nm,0.2s						
FIA0				SB	Sb	09 00 36.9	-2.1
RANF	Ranua	3.64	34	SN	Sn	09 00 57.4	-2.7

*FUNV **27** 08:59:38.5, 10°.96N×62°.04W, h92km, MW3.5*

*TRN **27** 08:59:38.4, 10°.98N×62°.04W, h95km, MD3.2, North of the Paria peninsula.*

ISC 27 08:59:36.2±1.8**, 10°.95N**±0°.05×**62°.12W**±0°.06**, h107km**±17km**, n19, σ1.ˢ12**/33**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSMG	Mucurapo Girls	0.64	116	eP	Pn	08 59 54.5	+0.8
PSMG				eS	Sn	09 00 06.1	-0.9
PSKH	Kent House, Po	0.65	115	eP	Pn	08 59 54.6	+0.8
PSGH	Port of Spain	0.67	115	eP	Pn	08 59 54.8	+0.8
PSGH				eS	Sn	09 00 06.0	-1.3
TRN	Trinidad (W)	0.77	113	eP	Pn	08 59 55.4	+0.6
TRN				eS	Sn	09 00 07.0	-1.9
TPP	Pointe-a-Pierr	0.91	134	eP	Pn	08 59 58.0	+1.7
TPP				eS	Sn	09 00 10.4	-0.9
TBH	Brigand Hill	1.14	114	eP	Pn	08 59 59.7	+1.1
TBH				eS	Sn	09 00 15.0	-0.6
GRFF	Grenada Fort F	1.16	19	eP	Pn	08 59 59.4	+0.6
GRFF				eS	Sn	09 00 15.6	-0.3
GRGR	Grenville	1.26	21	eP	Pn	09 00 00.4	+0.4
GRGR				eS	Sn	09 00 17.7	-0.3
GRW	Mount Saint Ca	1.28	21	eP	Pn	09 00 01.6	+1.2
GRW				eS	Sn	09 00 18.9	+0.3
TPR	Prospect	1.34	80	eP	Pn	09 00 01.5	+0.5
TPR				eS	Sn	09 00 18.8	-0.9
GRSS	Sisters	1.43	20	eP	Pn	09 00 02.9	+1.0
GRSS				eS	Sn	09 00 21.2	-0.3
GCMP	Grenada, Carri	1.67	24	eP	Pn	09 00 05.2	+0.3
GCMP				eS	Sn	09 00 25.4	-1.3
SVOC	Richmond Hill,	2.36	22	eS	Sn	09 00 41.8	-0.6
SVT	Saint Vincent	2.37	21	eS	Sn	09 00 41.4	-1.2
SVB	Belmont	2.46	20	eP	Pn	09 00 15.5	+0.5
SVB				eS	Sn	09 00 44.1	-0.7
PCRV	Puerto La Cruz	2.59	253	eP	Pn	09 00 18.3	+1.6
PCRV				eS	Sn	09 00 47.2	-0.6
BENV	Beln	5.47	260	eP	Pn	09 00 56.6	+1.1
BENV				eS	Sn	09 01 55.6	-1.7
CACV	CAICARA DEL OR	5.51	233	eP	Pn	09 00 52.5	-3.4
CACV				eS	Sn	09 01 47.6	-10
BAUV	El Baul	6.16	252	eP	Pn	09 01 05.8	+1.0
BAUV				eS	Sn	09 02 11.4	-2.5

*IDC **27** 09:00:06.0±4.0, 53°.61N×87°.97E, h0km, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=40.9km s-min=19.0km az=47.0*

ASRS 27 09:00:05.0±1.2**, 53°.60N×87°.93E, h0km, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.88	282	I	I	09 11 40.0	
	0.1nm,0.9s,baz=99,slow=317,SNR=3.9						
ZALV	Zalesovo Beam	1.88	282	Pg	Pb	09 00 40.1	-0.1
	1.6nm,0.3s,baz=102,slow=14,SNR=16						
ZALV				Lg	Lg	09 01 06.9	
	2.4nm,0.3s,baz=116,slow=33,SNR=13						
KURBB	Kurchatov Arra	6.51	247	Pn	Pn	09 01 43.5	+1.5
	0.1nm,0.3s,baz=62,slow=14,SNR=9.4						
	1.1nm,0.5s						
MKAR	Makanchi Array	7.71	210	Pn	Pn	09 02 01.4	+2.9
	0.1nm,0.3s,baz=30,slow=15,SNR=2.0						
	0.2nm,0.3s						

KRSC 27 09:04:58.2±1.4**, 56°.19N×164°.26E, h50km**±20km**, Ml3.6, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.81	272	eP	Pn	09 05 13.3	0.0
KBTR				eS	Sn	09 05 24.0	-0.3
KBG	Krutoberegovo	0.87	275	eP	Pn	09 05 14.6	+0.5
KBG				eS	Sn	09 05 26.0	+0.1
BKI	Bering	1.39	135	eP	Pn	09 05 23.0	+1.9
BKI				eS	Sn	09 05 40.5	+2.4
SMKR	Semkarok	1.60	285	eP	Pn	09 05 26.7	+2.6
BDR	Baidarnaya	1.74	284	eS	Sn	09 05 51.1	+4.1
ZLN	Zelenaya	1.94	266	eP	Pn	09 05 32.4	+3.6
CIRR	Tsirk	1.97	269	eP	Pn	09 05 32.4	+3.3
BZGR	Bezymyannyi-Gr	2.01	264	eP	Pn	09 05 32.4	+2.7
KLY	Klyuchi	2.02	275	eP	Pn	09 05 31.1	+1.5
BZWR	Bezymyannyi-We	2.12	265	eP	Pn	09 05 34.3	+3.0
MKZ	Mys Kozlova	2.18	222	eP	Pn	09 05 34.2	+2.2
MKZ				eS	Sn	09 05 59.5	+1.8
KIRR	Kirishev	2.21	265	eP	Pn	09 05 36.4	+3.9
KPT	Kopyto	2.27	266	eP	Pn	09 05 36.8	+3.5
KMNR	Kamenistaya	2.30	261	eP	Pn	09 05 37.5	+3.7
TUMD	Tumrok D	2.40	247	eP	Pn	09 05 38.4	+3.4
TUMD				eS	Sn	09 06 04.6	+1.5
KOZ	Kozyrevsk	2.46	269	eP	Pn	09 05 39.3	+3.6
SRDR	Sredinnyy	2.54	275	eP	Pn	09 05 41.4	+4.5

ESO	Esso	3.13	267	eP	Pn	09 05 48.2	+3.3
OSSR	Ossora	3.13	349	eP	Pn	09 05 47.1	+2.1
OSSR				eS	Sn	09 06 22.0	+0.9
SPN	Mys Shipunski	3.96	220	eP	Pn	09 05 58.7	+2.4
SPN				eS	Sn	09 06 41.6	+0.2
SDLR	Sedlovina	4.27	229	eP	Pn	09 06 04.5	+3.8
SMAR	Somma	4.32	229	eP	Pn	09 06 05.3	+3.9
AVH	Avacha	4.34	230	eP	Pn	09 06 06.9	+5.3
UGLR	Uglovaya	4.34	229	eP	Pn	09 06 05.6	+3.9
KOK	Koryaka	4.37	231	eP	Pn	09 06 06.0	+4.0
RUS	Russkaya	5.05	224	eP	Pn	09 06 15.4	+4.2
GRL	Gorelyy	5.13	227	eP	Pn	09 06 16.8	+4.3
MTVR	Mutnovka	5.14	226	eP	Pn	09 06 17.2	+4.5
ASAK	Asacha	5.33	227	eP	Pn	09 06 20.2	+5.0

*IDC **27** 09:06:37.0±3.4, 53°.72N×88°.06E, h0^{km}, mbtmp3.0/2, ML2.8/2, Error ellipse: s-maj=32.4km s-min=17.7km az=52.0*

ASRS 27 09:06:35.0±1.2, 53°.71N×88°.19E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	2.01	278	I	I	09 18 50.0	
	0.3nm,1.0s,baz=94,slow=312,SNR=20						
ZALV	Zalesovo Beam	2.01	278	Pg	Pb	09 07 12.0	-0.4
	1.8nm,0.3s,baz=96,slow=19,SNR=20						
ZALV				Lg	Lg	09 07 38.6	
	3.5nm,0.3s,baz=99,slow=26,SNR=18						
KURBB	Kurchatov Arra	6.70	246	Pn	Pn	09 08 15.9	+1.4
	0.1nm,0.3s,baz=61,slow=14,SNR=8.3						
	1.0nm,0.4s						
MKAR	Makanchi Array	7.89	211	Pn	Pn	09 08 33.7	+2.8
	0.2nm,0.3s,baz=27,slow=13,SNR=6.3						
MKAR				Lg	Lg	09 10 47.0	
	baz=24,slow=28,SNR=7.4						
	0.2nm,0.3s						

*IDC **27** 09:12:43.7±3.8, 53°.80N×88°.13E, h0^{km}, mbtmp2.7/2, ML2.2/2, Error ellipse: s-maj=37.4km s-min=21.1km az=45.0*

ASRS 27 09:12:41.0±1.4, 53°.75N×88°.17E, h0^{km}, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	2.00	277	I	I	09 25 10.0	
	baz=92,slow=313,SNR=7.9						
ZALV	Zalesovo Beam	2.00	277	Pn	Pg	09 13 18.9	-0.3
	0.4nm,0.3s,baz=96,slow=13,SNR=6.8						
ZALV				Lg	Lg	09 13 46.4	
	1.0nm,0.3s,baz=93,slow=34,SNR=7.8						
KURBB	Kurchatov Arra	6.70	246	Pn	Pn	09 14 22.6	+2.0
	baz=63,slow=14,SNR=2.3						
	0.3nm,0.3s						
MKAR	Makanchi Array	7.92	211	Pn	Pn	09 14 42.1	+4.8
	0.1nm,0.3s,baz=32,slow=14,SNR=2.3						
	0.2nm,0.5s						

ISC 27 09:18:42.5±1.2, 48°.72N±0°.07×18°.08E±0°.05, h10^{km}, n5, σ0ˢ.76/8, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAVC	Velka Javorina	0.30	297	ePG	Pg	09 18 48.9	+0.3
JAVC				eSG	Sg	09 18 53.7	+1.0
VYHS	Vyhne	0.55	114	ePG	Pb	09 18 54.2	0.0
VYHS				eSG	Sb	09 19 02.2	+0.1
MODS	Modra-Piesok	0.64	237	ePG	Pb	09 18 55.8	+0.1
MODS				eSG	Sn	09 19 06.5	-1.2
MODS				eLG	Lg	09 19 09.7	
MORC	Moravsky Berou	1.11	342	ePG	Pb	09 19 03.5	-0.4
VRAC	Vranov	1.14	302	ePG	Pb	09 19 04.0	-0.3

STR 27 09:19:02.4±0.5, 46°N±2°×°±°, h0^{km}, MLv1.6/6, Error ellipse: s-maj=0.0km s-min=0.0km az=76.6, preliminary, France

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OG35	Corcelles	0.20	107	Pg	Pg	09 19 05.7	-0.6
OG35				Sg	Sg	09 19 09.0	+0.1
OGMY	Moye	0.47	118	Pg	Pg	09 19 12.3	+0.8
OGMY				Sg	Sg	09 19 17.5	-0.1
RIVEL	MONT RIVEL	0.79	33	Pg	Pg	09 19 16.6	-0.9
RIVEL				Sg	Sb	09 19 29.1	-1.2
GIMEL	St. Georges /	0.80	57	Pg	Pg	09 19 18.0	+0.2
PLYF	Puligny Montra	0.93	336	Pg	Pg	09 19 19.9	-0.5
PLYF				Sg	Sg	09 19 32.9	+0.5
SSB	Saint Sauveur	0.98	213	Pg	Pg	09 19 20.9	-0.2
RSL	Roselend	1.02	114	Pg	Pg	09 19 21.8	-0.1
COLF	Collangettes	1.26	243	Pg	Pg	09 19 26.3	-0.3

*UCR **27** 09:24:56.2±1.2, 8°.35N×82°.83W, h27^{km}±2^{km}, MW3.5*

*CATAC **27** 09:24:56.4±0.9, 8°N±5°×8°3W±°, h6^{km}±3^{km}, M3.4/7, MLv3.4/7, Error ellipse: s-maj=11.0km s-min=8.9km az=33.0, confirmed*

*UPA **27** 09:24:56.7±0.6, 8°.42N×82°.81W, h29^{km}±4^{km}, ML3.6, MW3.5*

ISC 27 09:24:56.5±0.9, 8°.39N±0°.03×82°.83W±0°.02, h30^{km}±6^{km}, n76, σ0ˢ.99/97, 12C-15D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.04	71	⇓iP	Pb	09 25 01.7	0.0
LESP3				AMP		09 25 01.7	
	comp=Z,31μm,0.1s						
CDITO	Canoas	0.18	347	P	Pb	09 25 02.5	-0.2
CDITO	Canoas	0.18	347	S	Sb	09 25 06.0	-0.8
NELY	Ciudad Neily	0.28	336	⇑iP	Pb	09 25 03.4	-0.4
NELY				eS	Sn	09 25 09.6	-0.2
LIMO3	Limones	0.29	186	⇑iP	Pb	09 25 03.7	-0.2
LMNES	Limones	0.29	186	⇑eP	Pb	09 25 03.8	-0.1
LMNES				eS	Sn	09 25 10.8	+0.7
DVD	David	0.38	83	⇓iP	Pb	09 25 05.0	-0.2
DVD				eS	Sb	09 25 10.6	-0.4
CSTBL	De las Acacias	0.39	87	⇓iP	Pb	09 25 05.1	-0.2
FITO	Golfito	0.40	306	⇑iP	Pb	09 25 03.9	-1.5
FITO				eS	Sb	09 25 10.5	-0.9
MLIR3	Monte Lirio, C	0.40	1	eP	Pb	09 25 05.8	+0.2
MLIR3				AMP		09 25 06.0	
	comp=Z,4μm,0.1s						
PEDE3	Pedregal, Chir	0.41	91	eP	Pb	09 25 05.2	-0.4
PEDE3				AMP		09 25 05.4	
	comp=Z,5μm,0.1s						
CLLRA	Cordillera,	0.41	32	⇓eP	Pb	09 25 05.7	-0.1
EDAD	Golfito	0.42	308	⇑iP	Pb	09 25 04.4	-1.4
EDAD				eS	Sb	09 25 11.2	-0.9
BRU2	Volcan	0.42	19	⇓eP	Pb	09 25 05.8	-0.1
BRU2				eS	Sn	09 25 13.7	+0.1
BRU2	Volcan	0.42	19	P	Pb	09 25 05.9	-0.1
BRU2	Volcan	0.42	19	⇓iP	Pb	09 25 05.8	-0.1
BRU2				eS	Sb	09 25 12.6	+0.3
RSRNO	Rio Sereno	0.42	356	⇓eP	Pb	09 25 06.4	+0.5
RSRNO				eS	Sn	09 25 14.7	+1.1
SCLRA	Santa Clara, W	0.44	6	⇑eP	Pb	09 25 06.3	+0.1
VITO	San Vito	0.45	342	⇑iP	Pb	09 25 06.2	-0.1
VITO				eS	Sn	09 25 15.0	+0.9
PTAR3	Potrerillos Ar	0.45	48	⇓iP	Pb	09 25 06.2	-0.1
PTAR3				eS	Sb	09 25 12.5	-0.4
BC3P	Paso Ancho	0.47	27	⇓iP	Pb	09 25 06.4	-0.4
BC3P				eS	Sb	09 25 13.8	+0.1
BQTLY	Boquete Panama	0.52	45	⇓eP	Pb	09 25 07.0	-0.4
BQTLY				eS	Sb	09 25 14.6	-0.2
BQSF3	Alto Boquete,	0.53	48	⇓iP	Pb	09 25 07.0	-0.5
BQSF3				eS	Sb	09 25 14.8	-0.2
ALCO	Alturas Coton,	0.56	360	⇑iP	Pb	09 25 07.4	-0.6
ALCO				eS	Sb	09 25 16.3	+0.4
PSOM3	Paja de Sombre	0.58	60	eP	Pb	09 25 07.7	-0.7
PSOM3				AMP		09 25 10.2	
	comp=Z,2μm,0.1s						
PSOM3				eS	Sb	09 25 16.0	-0.4
EDP2	Potrero Grande	0.71	331	⇑iP	Pn	09 25 09.7	-0.8
EDP2				eS	Sn	09 25 21.1	+0.7
PBNVO	Pueblo Nuevo,	0.80	52	⇓eP	Pn	09 25 10.8	-1.0
RBALA	Bur	0.83	54	⇓eP	Pn	09 25 11.6	-0.6
RBALA				eS	Sn	09 25 23.0	-0.3
PANP	Palmar Norte	0.84	312	eP	Pn	09 25 11.1	-1.2
PANP				eS	Sn	09 25 23.4	-0.2
BURE	Buenos Aires	0.92	327	⇑iP	Pn	09 25 12.5	-1.0
BURE				eS	Sn	09 25 25.6	-0.2
DRK0	Durika	0.96	335	eP	Pn	09 25 13.0	-1.1
DRK0	Durika	0.96	335	P	Pn	09 25 13.0	-1.1
DRK0	Durika	0.96	335	S	Sb	09 25 27.4	+0.3
DRK0	Durika	0.96	335	i P	Pn	09 25 13.0	-1.1
RMDIO	Remedios, Chir	1.00	99	eP	Pn	09 25 14.2	-0.4
EDPE	Pejibaye, P	1.06	316	⇑eP	Pn	09 25 14.5	-0.8
EDPE				eS	Sb	09 25 29.8	0.0
OCHAL	Ojochal	1.07	311	S	Sn	09 25 29.2	0.0
OCHAL	Ojochal	1.07	311	P	Pn	09 25 14.5	-0.9
KKNTU	Kakintº	1.11	66	⇓eP	Pn	09 25 15.2	-0.8
SAJE	San Jernim	1.16	325	⇑eP	Pn	09 25 15.7	-1.2
PIEC	Cerro El Cedra	1.65	318	eP	Pn	09 25 23.5	-0.3
RAZU	San Marcos de	1.72	317	eP	Pn	09 25 25.4	+0.8
PITB	Pirrs, San	1.73	317	eP	Pn	09 25 25.3	+0.6
TURIB	Turrialba	1.73	331	eP	Pn	09 25 24.5	-0.1
VINA	Juan Vinas	1.75	329	⇓iP	Pn	09 25 25.6	+0.7
VINA				eS	Sb	09 25 48.1	-1.5
REPA	Paraso	1.76	324	eP	Pn	09 25 24.8	-0.3
LCR2	La Lucha 2	1.77	319	eP	Pn	09 25 24.9	-0.4
LCR2	La Lucha 2	1.77	319	P	Pb	09 25 27.9	-0.7
LCR2	La Lucha 2	1.77	319	S	Sb	09 25 49.5	-1.0
PISJ	San Jernim	1.77	314	eP	Pn	09 25 25.7	+0.4
ABE2	San Pablo	1.78	317	eP	Pn	09 25 26.2	+0.8
PCAYA	Pacayas	1.80	328	eP	Pn	09 25 26.0	+0.3
VTCV	VTCV, Calle Va	1.81	331	eP	Pn	09 25 26.4	+0.5
RESJ	San Isidro (Tu	1.81	334	eP	Pn	09 25 26.5	+0.7
ABRB	Las Abras (San	1.83	331	eP	Pn	09 25 26.7	+0.6
RAFA	San Farael, Vo	1.83	328	eP	Pn	09 25 26.7	+0.4
CVTV	Tajo	1.84	331	eP	Pn	09 25 26.7	+0.3
PAR1A	Puntarenas Pro	1.84	311	eP	Pn	09 25 26.7	+0.6
CVTQ	Turrialba Volc	1.85	330	eP	Pn	09 25 27.2	+0.6
VTLA	Turrialba Volc	1.85	330	eP	Pn	09 25 26.9	+0.4
VTR0	Volcan Turrial	1.86	330	eP	Pn	09 25 27.5	+0.8
VICA	Volcano Irazu	1.87	328	eP	Pn	09 25 27.6	+0.7
ACOS	Acosta	1.92	317	eP	Pn	09 25 28.1	+0.8
SANTA	Santa Ana	2.03	319	eP	Pn	09 25 29.9	+1.0
HDC	Heredia	2.04	322	eP	Pn	09 25 30.5	+1.6
PURI	Puriscal	2.06	315	eP	Pb	09 25 31.5	-1.8
TRB2	Turrubares	2.20	314	eP	Pn	09 25 31.4	+0.3
SOCE	Pocosol	2.65	318	S	Sn	09 26 12.0	+3.6
SOCE	Pocosol	2.65	318	P	Pn	09 25 39.5	+2.3
VACR	Volcan Arenal	2.76	319	eP	Pn	09 25 41.4	+2.7
ARE1	Arenal 1	2.77	318	eP	Pn	09 25 42.2	+3.2
VARE2	V. Arenal	2.77	318	eP	Pn	09 25 41.4	+2.4
JTS	Las Juntas de	2.82	312	eP	Pn	09 25 42.0	+2.4
JTS	Las Juntas de	2.82	312	eP	Pn	09 25 40.0	+0.4
CMARA	Lajas Hojancha	3.03	302	S	Sn	09 26 18.7	+0.9
CMARA	Lajas Hojancha	3.03	302	P	Pn	09 25 43.9	+1.4

*CATAC **27** 09:31:00.2±1.0, 8°N±6°×8°3W±°, h19^{km}±3^{km}, M4.4/13, mb4.6/2, mB5.2/2, MLv4.3/13, Mw(mB)4.6/2, Error ellipse: s-maj=13.3km s-min=10.9km az=171.9, confirmed*

*UCR **27** 09:31:00.9±0.9, 8°.35N×82°.85W, h30^{km}±1^{km}, MW4.2, Fault plane solution: NP1:ϕ_s111.51000°, δ60.50000°, λ5.73000°.*

*UPA **27** 09:31:01.1±1.1, 8°.39N×82°.87W, h28^{km}±4^{km}, MW4.2*

ISC 27 09:31:01.0±1.0, 8°.36N±0°.04×82°.86W±0°.03, h32^{km}±6^{km}, n108, σ0ˢ.79/124, 27C-16D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.08	56	⇓iP	Pb	09 31 06.6	+0.1
LESP3				eS	Sb	09 31 09.7	-0.6
LPPC	Paso Canoas	0.17	7	⇑eP	Pb	09 31 07.0	-0.2
LPPC				eS	Sb	09 31 12.0	+0.5
CDITO	Canoas	0.21	357	P	Pb	09 31 07.3	-0.3
CDITO	Canoas	0.21	357	S	Sn	09 31 12.5	0.0
LMNES	Limones	0.26	180	⇑eP	Pn	09 31 08.6	-0.1
NELY	Ciudad Neily	0.30	344	⇑eP	Pb	09 31 08.2	-0.5
NELY				eS	Sb	09 31 14.2	+0.3
FITO	Golfito	0.39	312	⇑eP	Pb	09 31 08.7	-1.2
FITO				eS	Sb	09 31 15.1	-0.9
DVD	David	0.41	79	⇓iP	Pb	09 31 09.9	-0.3
DVD				eS	Sn	09 31 17.1	-0.3
CSTBL	De las Acacias	0.42	83	⇓eP	Pb	09 31 09.9	-0.3
EDAD	Golfito	0.42	314	⇑eP	Pb	09 31 09.1	-1.3
CLLRA	Cordillera,	0.45	32	⇓eP	Pb	09 31 10.5	-0.5
RSRNO	Rio Sereno	0.46	360	⇑eP	Pb	09 31 11.0	0.0
BRU2	Volcan	0.46	21	⇓eP	Pb	09 31 10.7	-0.4
BRU2				eS	Sb	09 31 18.4	+0.3
BRU2	Volcan	0.46	21	S	Sb	09 31 17.9	-0.1
BRU2	Volcan	0.46	21	P	Pb	09 31 10.8	-0.3
BRU2	Volcan	0.46	21	⇓iP	Pb	09 31 10.7	-0.4
BRU2				eS	Sn	09 31 18.6	-0.3
VITO	San Vito	0.47	347	⇑eP	Pb	09 31 11.0	-0.2
TBS2		0.48	25	⇓eP	Pn	09 31 11.8	-0.1
SCLRA	Santa Clara, W	0.48	9	⇑eP	Pb	09 31 11.2	-0.1
BC3P	Paso Ancho	0.52	29	⇓iP	Pb	09 31 11.3	-0.7
CHIR3	Chiriqui UPA,	0.53	86	⇓iP	Pb	09 31 11.4	-0.6
CHIR3				eS	Sb	09 31 19.3	-0.1
BQTLY	Boquete Panama	0.56	45	⇓eP	Pb	09 31 11.8	-0.8
BQSF3	Alto Boquete,	0.57	48	⇓iP	Pb	09 31 11.9	-0.8
ALCO	Alturas Coton,	0.59	3	⇑eP	Pb	09 31 12.2	-0.9
ALCO				eS	Sb	09 31 20.9	-0.4
EDP2	Potrero Grande	0.72	334	⇑eP	Pn	09 31 14.4	-0.7
EDP2				eS	Sn	09 31 25.2	0.0
PANP	Palmar Norte	0.84	315	⇑eP	Pn	09 31 15.7	-0.9
PANP				eS	Sn	09 31 27.8	-0.2
PBNVO	Pueblo Nuevo,	0.85	51	⇓eP	Pn	09 31 15.8	-1.0
RBALA	Bur	0.87	53	⇓eP	Pn	09 31 16.4	-0.7
BURE	Buenos Aires	0.94	330	⇑eP	Pn	09 31 17.3	-0.8
BURE				eS	Sn	09 31 29.8	-0.6
DRK0	Durika	0.97	337	⇑eP	Pn	09 31 17.6	-1.1
DRK0	Durika	0.97	337	P	Pn	09 31 17.9	-0.8
DRK0	Durika	0.97	337	eP	Pn	09 31 17.7	-1.1
DRK0				eS	Sn	09 31 30.6	-1.0
RMDIO	Remedios, Chir	1.03	97	eP	Pn	09 31 18.9	-0.4
EDPE	Pejibaye, P	1.06	319	⇑eP	Pn	09 31 19.1	-0.7
EDPE				eS	Sn	09 31 33.7	+0.2
OCHAL	Ojochal	1.07	313	P	Pn	09 31 19.3	-0.6
OCHAL	Ojochal	1.07	313	S	Sn	09 31 33.9	+0.2
KKNTU	Kakintº	1.15	65	⇓eP	Pn	09 31 20.0	-0.9
PDCAN	Manzana , Fuen	1.15	93	⇓eP	Pn	09 31 20.0	-1.0
SAJE	San Jernim	1.17	327	⇑eP	Pn	09 31 20.5	-0.9
ISBTO	Bastimentos Is	1.17	33	⇓eP	Pb	09 31 22.4	-0.4
VERH	Veragua Rainfo	1.59	348	⇑eP	Pn	09 31 27.2	+0.1
PIEC	Cerro El Cedra	1.66	319	eP	Pn	09 31 27.9	-0.3
GMAL	Guarumal, Vera	1.72	110	eP	Pn	09 31 28.0	-0.7
GMAL	Guarumal, Vera	1.72	110	eP	Pn	09 31 28.1	-0.6
GMAL				eS	Sn	09 31 49.5	-0.1
RAZU	San Marcos de	1.73	318	eP	Pn	09 31 29.2	+0.1
VINA	Juan Vinas	1.76	330	eP	Pn	09 31 29.9	+0.4
REPA	Paraso	1.77	326	eP	Pn	09 31 29.6	0.0
PISJ	San Jernim	1.78	315	eP	Pn	09 31 29.7	0.0
VERB	Verbena	1.78	332	eP	Pn	09 31 30.4	+0.6
LCR2	La Lucha 2	1.78	321	⇑eP	Pn	09 31 29.4	-0.4
LCR2	La Lucha 2	1.78	321	P	Pn	09 31 29.8	0.0
TAAN	Batan	1.78	344	eP	Pn	09 31 30.5	+0.9
ABE2	San Pablo	1.78	319	eP	Pn	09 31 30.0	+0.1
PCAYA	Pacayas	1.81	329	⇑eP	Pn	09 31 30.5	+0.3
VTCV	VTCV, Calle Va	1.83	332	⇑eP	Pn	09 31 30.9	+0.4
TAGO	Cartago	1.83	325	eP	Pn	09 31 31.1	+0.6
RESJ	San Isidro (Tu	1.83	335	⇑eP	Pn	09 31 31.2	+0.8
IRES	Siquirres	1.84	340	eP	Pn	09 31 31.6	+1.1
ABRB	Las Abras (San	1.84	333	⇑eP	Pn	09 31 31.4	+0.7
PAR1A	Puntarenas Pro	1.84	312	eP	Pn	09 31 31.0	+0.5
CVTV	Tajo	1.85	332	⇑eP	Pn	09 31 31.6	+0.6
CVTQ	Turrialba Volc	1.86	331	⇑eP	Pn	09 31 31.8	+0.7
VTLA	Turrialba Volc	1.87	331	⇑eP	Pn	09 31 31.6	+0.5
VTR0	Volcan Turrial	1.87	332	⇑eP	Pn	09 31 31.8	+0.6
RVLA	Villa Bonita	1.88	338	eP	Pn	09 31 31.9	+0.9
VICA	Volcano Irazu	1.89	329	eP	Pn	09 31 31.8	+0.3
ACOS	Acosta	1.92	318	eP	Pn	09 31 31.7	0.0
AMPA	Desamparados	1.93	322	eP	Pn	09 31 32.2	+0.4
CORON	Coronado	1.96	325	eP	Pn	09 31 32.9	+0.7
ECI	Escuela Centro	1.96	323	eP	Pn	09 31 32.8	+0.5
SJS	Escuela Geolog	1.96	323	eP	Pn	09 31 32.7	+0.4
LUPE	Guadalupe	1.97	323	eP	Pn	09 31 32.9	+0.5
DOMI	Santo Domingo	2.02	323	eP	Pn	09 31 33.8	+0.8
HDC	Heredia	2.05	323	eP	Pn	09 31 34.0	+0.6
HEME	Heredia, Merce	2.06	322	eP	Pn	09 31 34.4	+0.8
PURI	Puriscal	2.06	316	eP	Pn	09 31 33.9	+0.3
BELE	Belen	2.07	321	eP	Pn	09 31 34.2	+0.5
VBV1	V. Barva	2.13	325	eP	Pn	09 31 35.4	+0.7
CARI	Cariari	2.17	337	eP	Pn	09 31 36.1	+1.1
ATEO	Atenas	2.20	317	eP	Pn	09 31 35.9	+0.4
TRB2	Turrubares	2.20	315	eP	Pn	09 31 35.9	+0.4
CACAO	El Cacao, Vera	2.22	117	eP	Pn	09 31 36.1	+0.4
TRT2	Tortugero	2.35	339	⇑eP	Pn	09 31 38.0	+0.5
TRT2	Tortugero	2.35	339	P	Pn	09 31 38.4	+0.9
TRT2	Tortugero	2.35	339	S	Sn	09 32 07.9	+2.7
SARA	Sarapiqu	2.37	331	⇑eP	Pn	09 31 38.8	+1.0
CBL1	Cabuya	2.52	299	eP	Pn	09 31 38.9	-0.9
AZU	Azuero	2.62	102	eP	Pn	09 31 42.8	+1.6
AZU				eS	Sn	09 32 12.9	+1.0
SOCE	Pocosol	2.66	319	P	Pn	09 31 43.4	+1.7
FORC	Fortuna	2.75	320	eP	Pn	09 31 44.5	+1.5
CASO	Castillo	2.77	318	eP	Pn	09 31 44.5	+1.2
COVE	Coope Vega, Sa	2.79	327	P	Pn	09 31 44.6	+1.0
JTS	Las Juntas de	2.82	313	eP	Pn	09 31 44.1	+0.2
JTS	Las Juntas de	2.82	313	eP	Pn	09 31 44.1	+0.2
INDI	Punta indio, G	3.01	300	P	Pn	09 31 47.1	+0.6
CNAS	Canas	3.02	313	eP	Pn	09 31 47.8	+1.2
ZANG	Zanguenga, Cho	3.02	78	eP	Pn	09 31 47.8	+1.1
CMARA	Lajas Hojancha	3.02	303	eP	Pn	09 31 47.1	+0.3
PLVR	Palo Verde	3.15	309	eP	Pn	09 31 49.4	+0.7
SACU	Santa Cruz	3.29	305	eP	Pn	09 31 51.2	+0.8
ALIBA	Liberia Airpor	3.46	310	eP	Pn	09 31 54.9	+2.2
BUAI	Buenos Aires	3.49	316	eP	Pn	09 31 55.4	+2.1
BLUN	Bluefields	3.73	346	eP	Pn	09 31 56.8	+0.3
LCRUZ	La Cruz	3.84	315	eP	Pn	09 31 59.9	+1.9
ACON	Acoyapa	4.25	328	P	Pn	09 32 04.7	+1.1
BOAB	BOACO BROADBAN	4.91	326	P	Pn	09 32 13.7	+0.9
MATN	Matagalpa	5.45	327	P	Pn	09 32 19.9	-0.3
SIUN	Universidad Ur	5.64	341	P	Pn	09 32 23.1	+0.3

*NEIC **27** 09:31:06.4±1.3, 20°.7S±0°.1×178°.2W±0°.2, h564^{km}±9^{km}, mb4.5/19, Error ellipse: s-maj=23.7km s-min=15.5km az=74.0*

*IDC **27** 09:31:07.6±5.9, 20°.50S×178°.40W, h568^{km}±39^{km}, mb3.1/4, mbtmp4.0/5, Error ellipse: s-maj=133.8km s-min=25.9km az=140.0*

ISC 27 09:31:08.1±0.9, 20°.7S±0°.2×178°.4W±0°.2, h587^{km}, n30, σ0ˢ.95/32, mb4.4/13, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.44	310	P	P	09 32 33.5	-2.5
	6.5nm,0.5s,baz=222,slow=22,SNR=6.8						
BKZ	Black Stump Fm	18.98	192	P	P	09 34 51.1	-2.0
BKZ				IAmb	IAmb	09 34 59.8	
	comp=Z,21nm,1.5s						
MRZ	Mangatainoka R	20.60	193	P	P	09 35 07.0	-0.6
MRZ				IAmb	IAmb	09 35 15.0	
	comp=Z,21nm,1.4s						
TKNZ	Takaka Hill	21.61	198	P	P	09 35 15.9	-0.8
NNZ	Nelson	21.66	197	P	P	09 35 16.2	-0.9
NNZ				IAmb	IAmb	09 35 18.3	
	comp=Z,23nm,1.3s						
THZ	Tophouse	22.30	197	P	P	09 35 22.7	-0.2
THZ				IAmb	IAmb	09 35 23.1	
	comp=Z,17nm,1.3s						
DSZ	Denniston Nort	22.61	199	P	P	09 35 25.5	-0.2
LTZ	Lake Taylor	23.42	197	P	P	09 35 31.4	-1.5
EIDS	Eidsvold	28.46	255	P	P	09 36 17.6	+0.3
CTAO	Charters Tower	33.11	265	P	P	09 36 57.7	+0.5
CTAO				IAmb	IAmb	09 37 21.2	
	comp=Z,16nm,1.2s						
STKA	Stephens Creek	37.40	244	P	P	09 37 33.2	+0.7
STKA	Stephens Creek	37.40	244	P	P	09 37 33.5	+1.1
	comp=Z,0.9nm,0.5s,baz=116,slow=13,SNR=1.3						
	comp=Z,0.9nm,0.5s						
BBOO	Buckleboo	42.16	244	P	P	09 38 09.8	-0.7
BBOO				IAmb	IAmb	09 38 34.1	
	comp=Z,21nm,1.2s						
WR8	Warramunga Arr	44.07	262	P	P	09 38 25.4	-0.1
WR8				IAmb	IAmb	09 39 07.6	
	comp=Z,7.5nm,1.3s						
AS31	Alice Springs	44.13	257	P	P	09 38 26.2	+0.3
ASAR	Alice Springs	44.13	257	P	P	09 38 25.8	-0.2
ASAR				PcP	PcP	09 39 58.8	+0.9
ASAR	Alice Springs	44.13	257	P	P	09 38 26.6	+0.6
	comp=Z,3.3nm,0.5s,baz=96,slow=7.6,SNR=70						
ASAR				PcP	PcP	09 39 59.5	+1.6
	comp=Z,0.4nm,0.5s,baz=104,slow=3.7,SNR=5.1						
	comp=Z,3.3nm,0.5s						
WB0	Warramunga Arr	44.20	263		P	09 38 26.5	+0.1
WRAB	Tennant Creek	44.21	262	P	P	09 38 26.4	-0.1
WRAB				IAmb	IAmb	09 38 47.2	
	comp=Z,8.4nm,1.4s						
WRAB				PcP	PcP	09 39 57.6	-0.5
WRA	Warramunga Arr	44.22	262	P	P	09 38 28.2	+1.5
WRA	Warramunga Arr	44.22	262	P	P	09 38 27.0	+0.3
	comp=Z,1.6nm,0.3s,baz=97,slow=7.3,SNR=119						
	comp=Z,1.6nm,0.3s						
MTN	Manton Dam	48.80	271	P	P	09 39 01.4	+0.3
MTN				IAmb	IAmb	09 39 19.4	
	comp=Z,23nm,1.4s						
KNRA	Kununurra	50.28	266	P	P	09 39 12.6	+0.6
KNRA				IAmb	IAmb	09 39 36.4	
	comp=Z,20nm,1.5s						
FITZ	Fitzroy Crossi	52.65	263	P	P	09 39 29.9	+0.9
LHV	Little Huntoon	81.15	44	P	P	09 42 23.2	-0.1
LHV				IAmb	IAmb	09 42 26.3	
	comp=Z,12nm,0.8s						
ILAR	Eielson Array	88.54	13	P	P	09 42 59.0	+0.4
	comp=Z,0.2nm,0.4s,baz=207,slow=3.7,SNR=3.0						
	comp=Z,0.2nm,0.4s						
BVAR	Borovoye Array	118.96	320	PKP	PKiKP	09 48 51.5	+1.0
	comp=Z,0.7nm,0.4s,baz=90,slow=1.4,SNR=3.8						
AKASG	Malin Array Be	142.96	331	PKP		09 49 33.6	
	comp=Z,1.3nm,0.4s,baz=59,slow=1.8,SNR=9.2						
BRTR	Keskin Array B	146.67	312	PKPbc	PKPbc	09 49 45.7	+0.5
	comp=Z,0.4nm,0.5s,baz=70,slow=3.0,SNR=2.1						
MMAI	Mount Meron Ar	147.57	299	PKPbc	PKiKP	09 49 49.6	+0.4
	comp=Z,0.7nm,0.3s,baz=62,slow=3.4,SNR=1.4						

RSNC 27 09:41:09.6±0.0, 8°N±1°×7°7W±°, h78^{km}±4^{km}, M3.1, mb4.2, ML2.8, Panama-Colombia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APAC	Apartado, Choc	0.81	135	P	Pn	09 41 25.5	-0.9
APAC				S	Sn	09 41 36.9	-1.9
LCBC	Los crdobas,	0.87	64	P	Pn	09 41 26.5	-0.5
LCBC				S	Sn	09 41 41.3	+1.4
PTAC	Punta Ardita,	1.47	206	P	Pn	09 41 33.4	-1.1
PTAC				S	Sn	09 41 52.9	-0.4
DBBC	Dabeiba	1.73	147	P	Pn	09 41 37.3	-0.7
DBBC				S	Sn	09 41 58.7	-0.8
UREC	San Jos de Ur	1.77	114	P	Pn	09 41 37.7	-0.7
UREC				S	Sn	09 41 58.0	-2.2
SOLC	Bahia Solano	2.25	186	P	Pn	09 41 45.9	+1.0
SOLC				S	Sn	09 42 11.6	-0.2
SJCC	San Jacinto, C	2.41	54	P	Pn	09 41 46.1	-0.9
SJCC				S	Sn	09 42 14.7	-1.0
ZARC	Zaragoza, Cauc	2.48	113	P	Pn	09 41 47.5	-0.4
ZARC				S	Sn	09 42 15.3	-2.1
BCIP	Isla Barro Col	2.73	285	P	Pn	09 41 50.2	-1.1
BCIP				S	Sn	09 42 23.1	-0.3
HELC	Santa Helena	2.79	144	P	Pn	09 41 52.3	-0.2
HELC				S	Sn	09 42 24.8	-0.5
CBOC	Ciudad Bolivar	2.84	156	P	Pn	09 41 54.7	+1.8
CBOC				S	Sn	09 42 29.7	+3.5
AZU	Azuero	3.16	258	P	Pn	09 41 57.6	+0.5
AZU				S	Sn	09 42 32.5	-1.2
ARGC	Ariguani, Magd	3.19	64	P	Pn	09 41 56.3	-1.2
ARGC				S	Sn	09 42 33.8	-0.6
PTBC	PUERTO BERRIO,	3.30	126	P	Pn	09 41 58.2	-0.9
PTBC				S	Sn	09 42 35.8	-1.5
PLMC	San Jos del P	3.66	166	P	Pn	09 42 03.3	-0.7
PLMC				S	Sn	09 42 46.3	+0.3
NORC	Norcasia	3.68	142	P	Pn	09 42 05.2	+0.9
NORC				S	Sn	09 42 47.9	+1.3
GUY2C	Guyana, Caldas	3.69	151	P	Pn	09 42 07.2	+2.4
GUY2C				S	Sn	09 42 52.4	+5.0
OCAC	Ocana	3.81	93	P	Pn	09 42 06.1	0.0
OCAC				S	Sn	09 42 47.5	-2.3
SPBC	San Pablo de B	4.16	132	P	Pn	09 42 15.3	+4.5
SPBC				S	Sn	09 42 57.7	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BARC	Barichara	4.37	115	P	Pn	09 42 15.0	+1.2
BARC				S	Sn	09 43 02.5	-1.1
YOTC	Yotoco, Valle	4.54	170	P	Pn	09 42 16.3	+0.3
PAMC	Pamplona, Colo	4.56	104	P	Pn	09 42 18.0	+1.4
PAMC				S	Sn	09 43 08.7	0.0
RUSC	La Rusia	4.79	122	P	Pn	09 42 20.7	+0.9
RUSC				S	Sn	09 43 13.8	-0.5
CRJC	Cerrejon, Guaj	4.91	59	P	Pn	09 42 19.9	-1.2
CRJC				S	Sn	09 43 12.0	-4.8
URIC	Uribia, Colomb	6.01	57	P	Pn	09 42 35.3	-0.7
URIC				S	Sn	09 43 39.5	-4.0

NNC 27 09:42:03.3±2.5, 52°.11N×75°.78E, h0^{km}, mb3.6, mpv3.1, 2C-5D, Error ellipse: s-maj=73.6km s-min=11.5km az=30.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	Kurchatov	2.26	127	⇓Pg	Pb	09 42 44.1	-0.9
KURK				⇓Lg	Lg	09 43 16.2	
KURBB	Kurchatov Arra	2.28	130	⇑Pg	Pb	09 42 45.0	-0.3
	11nm,0.8s						
KURBB				⇓Lg	Lg	09 43 15.8	
	16nm,0.7s						
BVA0	Borovoye Array	3.41	288	⇓Lg	Lg	09 43 52.4	
	1.2nm,0.4s,baz=117,slow=28,SNR=4.5						
MK31	Makanchi Array	6.81	139	⇓Sn	Sn	09 45 04.9	+2.3
	0.5nm,0.5s,baz=319,slow=28,SNR=3.7						
MK31				⇑Lg	Lg	09 45 34.8	
	0.6nm,0.5s,baz=322,slow=24,SNR=4.2						

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*WEL **27** 09:43:55.9±0.4, 42°S±3°×17°4E±°, h5^{km}, M2.7/20, ML3.0/13, MLv2.7/20, Error ellipse: s-maj=3.9km s-min=3.0km az=124.0, confirmed*

*NOU **27** 09:43:55.4, 42°.33S×172°.95E, h13^{km}, MLv3.5/8, South Island, New Zealand*

ISC 27 09:43:55.1±1.1**, 42°.00S**±0°.03×**173°.75E**±0°.03**, h10^{km}**±9^{km}**, n52, σ0ˢ.82**/65**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSWZ	Blackbirch Sta	0.30	18	P	Pg	09 44 01.7	+0.5
BSWZ				S	Sg	09 44 06.5	+1.2
CMWZ	Cape Campbell	0.43	54	P	Pb	09 44 05.3	+0.6
KHZ	Kahutara	0.44	201	P	Pb	09 44 05.1	+0.1
KHZ	Kahutara	0.44	201	S	Sb	09 44 12.2	+0.5
KHZ	Kahutara	0.44	201	P	Pb	09 44 05.2	+0.1
KHZ				S	Sb	09 44 11.9	+0.2
TUWZ	Tuamarina	0.59	14	P	Pb	09 44 07.3	-0.3
TUWZ				S	Sb	09 44 15.9	-0.1
THZ	Tophouse	0.68	291	P	Pg	09 44 08.3	+0.1
THZ				S	Sg	09 44 16.7	-0.5
NNZ	Nelson	0.83	340	P	Pg	09 44 10.9	-0.3
TCW	Tory Channel	0.88	26	P	Pg	09 44 12.2	0.0
MRNZ	Matariki Terra	0.96	309	P	Pb	09 44 13.7	-0.2
MRNZ				S	Sb	09 44 26.8	+0.2
BHW	Baring Head	1.03	55	P	Pn	09 44 15.8	+0.2
WEL	Wellington	1.05	47	P	Pn	09 44 16.3	+0.5
WEL				S	Sn	09 44 31.7	+1.2
GVZ	Greta Valley S	1.10	209	P	Pn	09 44 17.0	+0.4
GVZ				S	Sn	09 44 33.2	+1.4
TKNZ	Takaka Hill	1.14	328	P	Pg	09 44 16.5	-0.5
TKNZ				S	Sb	09 44 32.1	+0.4
PLWZ	Palliser	1.20	69	P	Pg	09 44 17.6	-0.6
DUWZ	D'Urville Isla	1.21	6	P	Pg	09 44 17.5	-0.8
MSWZ	Moikau Station	1.26	63	P	Pg	09 44 18.5	-0.9
LTZ	Lake Taylor	1.35	234	P	Pb	09 44 20.5	+0.1
LTZ				S	Sn	09 44 39.1	+1.1
PAWZ	Paruwai Farm	1.40	64	P	Pn	09 44 20.3	-0.5
AMCZ	Amberley	1.43	214	P	Pn	09 44 21.2	+0.1
KIW	Kapiti Island	1.44	38	P	Pn	09 44 21.8	+0.5
DSZ	Denniston Nort	1.48	279	P	Pg	09 44 23.2	-0.3
DSZ				S	Sg	09 44 43.6	+0.9
QRZ	Quartz Range	1.50	322	P	Pn	09 44 22.3	+0.3
QRZ	Quartz Range	1.50	322	S	Sb	09 44 42.7	+0.7
QRZ	Quartz Range	1.50	322	P	Pn	09 44 22.5	+0.5
MTW	Mount Morrison	1.56	58	P	Pn	09 44 22.3	-0.6
OGWZ	Otaki Gorge	1.59	42	P	Pn	09 44 23.6	+0.2
OGWZ				S	Sn	09 44 45.1	+1.1
HOWZ	Holdsworth Sta	1.73	51	P	Pn	09 44 25.1	-0.1
OKCZ	Okains Bay	1.79	196	P	Pn	09 44 26.4	+0.3
OKCZ				S	Sn	09 44 49.1	+0.1
OXZ	Oxford	1.83	223	P	Pn	09 44 26.1	-0.5
OXZ				S	Sn	09 44 49.2	-0.6
TMWZ	Te Maipa	1.84	61	P	Pn	09 44 25.8	-1.0
INZ	Inchbonnie	1.86	246	P	Pb	09 44 28.3	-0.9
MQZ	McQueen's Vall	1.88	205	P	Pn	09 44 26.1	-1.2
MRZ	Mangatainoka R	1.92	46	P	Pn	09 44 27.5	-0.4
TIWZ	Tintock	2.02	53	P	Pn	09 44 29.2	0.0
RACZ	Rakaia	2.09	214	P	Pn	09 44 29.7	-0.5
PRWZ	Pori Road	2.21	50	P	Pn	09 44 32.2	+0.4
POWZ	Post Office Ro	2.21	44	P	Pn	09 44 31.7	-0.2
BFZ	Birch Farm	2.29	56	P	Pn	09 44 32.8	-0.2
WACZ	Wakanui South	2.39	215	P	Pn	09 44 34.0	-0.4
WAZ	Wanganui	2.43	23	P	Pb	09 44 39.6	+0.6
DVHZ	Dannevirke	2.49	48	P	Pn	09 44 35.4	-0.3
TSZ	Takapari Road	2.56	41	P	Pn	09 44 38.1	+1.4
LREZ	Lake Rotokare	2.59	11	P	Pb	09 44 41.5	-0.1
ARCZ	Arundel	2.71	223	P	Pn	09 44 38.2	-0.5
KHEZ	Kahui Hut	2.71	4	P	Pg	09 44 45.7	-1.4
KHEZ	Kahui Hut	2.71	4	P	Pb	09 44 43.0	-0.8
NEZ	North Egmont	2.74	6	P	Pb	09 44 43.6	-0.7
PNHZ	Pukenui	2.79	42	P	Pn	09 44 39.0	-0.9
BKZ	Black Stump Fm	3.52	37	P	Pb	09 44 58.7	+1.2
HIZ	Hauiti	3.59	14	P	Pb	09 44 55.6	-3.0
URZ	Urewera	4.54	36	P	Pb	09 45 12.6	-2.3

IDC 27 09:45:46.9±2.4**, 54°.66N×83°.71E, h0^{km}, mbtmp2.6**/2**, ML2.2**/2**, Error ellipse: s-maj=18.5km s-min=11.2km az=162.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.96	137	I	I	09 51 09.8	
	baz=318,slow=317,SNR=2.5						
ZALV	Zalesovo Beam	0.96	137	Pg	Pg	09 46 04.5	-0.8
	1.7nm,0.3s,baz=322,slow=17,SNR=5.2						
ZALV				Lg	Lg	09 46 19.4	
	7.1nm,0.3s,baz=316,slow=32,SNR=15						
KURBB	Kurchatov Arra	5.13	220	Pn	Pn	09 47 04.7	-0.1
	baz=40,slow=13,SNR=1.7						
KURBB				Lg	Lg	09 48 30.4	
	0.1nm,0.3s,baz=42,slow=31,SNR=5.5						
	0.2nm,0.3s						
MKAR	Makanchi Array	7.93	187	Pn	Pn	09 47 43.5	+0.2
	0.1nm,0.3s,baz=7.9,slow=12,SNR=3.7						
MKAR				Sn	Sn	09 49 13.0	-0.7
	0.1nm,0.3s,baz=8.8,slow=20,SNR=1.5						
MKAR				Lg	Lg	09 49 57.3	
	0.1nm,0.3s,baz=8.7,slow=30,SNR=3.6						
	0.3nm,0.6s						

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*NNC **27** 09:49:17.1±0.4, 43°.86N×78°.71E, h0^{km}, mpv2.5, Error ellipse: s-maj=4.1km s-min=2.8km az=50.0*

*SOME **27** 09:49:18.3, 43°.90N×78°.70E, h10^{km}*

ISC 27 09:49:17.6±0.9**, 43°.87N**±0°.03×**78°.74E**±0°.02**, h16^{km}**±8^{km}**, n14, σ0ˢ.45**/27**, 1C-1D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLB	Baldybastay	0.29	320	P	Pg	09 49 23.9	-0.1
	36nm,0.1s						
BLB				S	Sg	09 49 28.1	-0.2
	52nm,0.1s						
KPKS	Kokpek	0.41	185	P	Pg	09 49 26.0	+0.1
	1.1nm,0.1s						
KPKS				S	Sg	09 49 31.6	0.0
	37nm,0.1s						
KNOS	Konyrlen	0.58	33	P	Pb	09 49 29.3	-0.2
	2.9nm,0.1s						
KNOS				S	Sg	09 49 37.4	+0.5
	7.9nm,0.1s						
ARXS	Arharly	0.74	298	P	Pb	09 49 31.7	-0.4
	1.0nm,0.1s						
ARXS				S	Sb	09 49 41.5	-0.5
	10nm,0.2s						
UZB	Uzynbulak	0.76	164	P	Pg	09 49 32.4	+0.1
	3.1nm,0.1s						
UZB				S	Sg	09 49 42.6	+0.2
	3.6nm,0.1s						
PDGK	Podgornoye	0.77	135	⇓P	Pb	09 49 32.0	-0.7
	0.2nm,0.3s						
PDGK				⇑S	Sb	09 49 42.5	-0.5
	2.8nm,0.5s						
DJR	Jarkent	0.89	58	*e*P	Pg	09 49 34.9	+0.1
	1.7nm,0.1s						
DJR				*e*S	Sg	09 49 46.8	+0.3
	4.9nm,0.2s						
KTMS	Ketmen	1.25	109	P	Pb	09 49 40.9	+0.1
	0.4nm,0.1s						
KTMS				S	Sn	09 49 57.2	+0.2
	2.7nm,0.2s						
KTMS	Ketmen	1.25	109	*e*P	Pb	09 49 40.9	+0.1
	0.4nm,0.1s						
KTMS				*e*S	Sn	09 49 57.2	+0.2
	2.7nm,0.2s						
CHKK	Chushkaly	1.27	270	*e*P	Pb	09 49 41.2	+0.1
	6.8nm,0.1s						
CHKK				*e*S	Sn	09 49 57.6	+0.3
	13nm,0.2s						
KOTS	Kotyrbulak	1.34	242	*e*P	Pg	09 49 43.5	0.0
	3.6nm,0.3s						
KOTS				*e*S	Sg	09 50 01.5	+0.5
	22nm,0.3s						
KTBS	Karatobe	1.50	265	P	Pb	09 49 44.7	-0.3
	0.6nm,0.2s						
KTBS				S	Sb	09 50 03.8	0.0
	3.4nm,0.3s						
MTBS	Maitube	1.84	247	*e*P	Pb	09 49 51.7	+0.8
	1.1nm,0.1s						
MTBS				*e*S	Sg	09 50 15.5	-1.2
	11nm,0.3s						
KRBS	Karabastau	2.23	266	Pg	Pb	09 49 58.0	+0.6
	0.3nm,0.1s						
KRBS				Lg	Lg	09 50 26.5	
	1.6nm,0.4s						

IDC 27 09:56:43.9±7.4**, 30°.83S×177°.52W, h0^{km}, mb3.3**/2**, mbtmp3.3**/2**, Error ellipse: s-maj=306.4km s-min=63.5km az=156.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.50	267	P	P	10 04 49.1	-0.2
	0.3nm,0.7s,baz=112,slow=7.5,SNR=5.3						
	0.3nm,0.7s						
WRA	Warramunga Arr	44.52	272	P	P	10 04 57.4	-0.1
	0.2nm,0.4s,baz=111,slow=8.0,SNR=8.2						
	0.2nm,0.4s						
QSPA	South Pole Qui	59.28	180	P	P	10 06 58.4	+11
	0.9nm,0.8s,baz=146,slow=19,SNR=2.1						
FINES	FINESS Array B	145.69	340	PKPbc	PKPdf	10 16 23.1	-0.5
	1.9nm,1.1s,baz=42,slow=4.3,SNR=2.2						

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*NOU **27** 10:01:01.8, 33°.02S×177°.83W, h319^{km}, MLv4.5/8, South of Kermadec Islands*

WEL 27 10:01:19.6±1.3**, 33°S**±12°×**17°9E**±3°9**, h261^{km}, M3.8**/5**, mB4.0**/2**, MLv3.8**/5**, Mw(mB)3.1**/2**, Error ellipse: s-maj=52.8km s-min=10.0km az=103.7, confirmed, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.26	190	P	Pn	10 02 27.5	+0.7
MXZ				S	S	10 03 19.0	-1.5
WMGZ	Waiomatatini S	4.50	189	P	Pn	10 02 30.9	+1.3
WMGZ				S	S	10 03 26.7	+1.2
HAZ	Te Kaha	4.54	195	P	Pn	10 02 29.0	-1.1
HAZ				S	S	10 03 28.5	+2.0
PKGZ	Pakihiroa	4.59	192	P	Pn	10 02 28.9	-1.9
PKGZ				S	S	10 03 28.6	+1.0
PUZ	Puketiti	4.76	190	P	Pn	10 02 29.9	-2.9
PUZ				S	S	10 03 31.3	-0.1
RUGZ	Raukumara Rang	4.77	195	P	Pn	10 02 33.8	+0.8
RUGZ				S	S	10 03 30.4	-1.2
TWGZ	Tauwhareparae	4.91	192	P	Pn	10 02 36.4	+1.8
TWGZ				S	S	10 03 36.7	+2.1
MWZ	Matawai	5.15	196	P	Pn	10 02 35.8	-1.8
MWZ				S	S	10 03 39.8	-0.1
URZ	Urewera	5.19	199	P	Pn	10 02 39.2	+1.3
URZ	Urewera	5.19	199	P	Pn	10 02 39.1	+1.2
URZ				S	S	10 03 40.1	-0.5
TKGZ	Te Karaka	5.19	193	P	Pn	10 02 39.1	+1.2
TKGZ				S	S	10 03 40.1	-0.5
RAGZ	Rawiri	5.33	196	P	Pn	10 02 40.4	+0.6
RAGZ				S	S	10 03 44.8	+0.8
BKZ	Black Stump Fm	6.21	200	P	Pn	10 02 51.2	+0.7
BKZ	Black Stump Fm	6.21	200	P	Pn	10 02 51.4	+0.9
BKZ				S	S	10 04 04.2	+0.8
HIZ	Hauiti	6.26	214	P	Pn	10 02 56.8	+5.7
HIZ	Hauiti	6.26	214	P	Pn	10 02 57.1	+6.0
NTVZ	North Tongarir	6.42	206	P	Pn	10 02 55.5	+2.3
NTVZ				S	S	10 04 13.7	+5.5
TMVZ	Te Maari	6.42	206	P	Pn	10 02 55.2	+2.0
ETVZ	East Tongariro	6.43	206	P	Pn	10 02 55.3	+1.9
KWHZ	Kaweka Forest	6.47	200	P	Pn	10 02 54.4	+0.7
KWHZ				S	S	10 04 11.1	+1.8
OTVZ	Oturere	6.48	206	P	Pn	10 02 55.7	+1.8
OTVZ				S	S	10 04 15.5	+5.9
SNVZ	South Ngauruho	6.50	206	P	Pn	10 02 56.3	+2.0
TUVZ	Tukino	6.57	205	P	Pn	10 02 57.0	+1.8
FWVZ	Far West T-bar	6.60	206	P	Pn	10 02 57.3	+1.8
WNVZ	Wahianoa	6.64	205	P	Pn	10 02 57.5	+1.4
WNVZ				S	S	10 04 20.4	+6.9
KRHZ	Kereru	6.68	200	P	Pn	10 02 56.5	+0.2
KRHZ				S	S	10 04 13.9	-0.3
VRZ	Vera Road	6.80	211	P	Pn	10 03 02.5	+4.6
PXZ	Pawanui	6.93	196	P	Pn	10 02 59.4	0.0
PNHZ	Pukenui	6.98	200	P	Pn	10 02 59.8	-0.4
PNHZ				S	S	10 04 20.7	-0.3
TSZ	Takapari Road	7.19	201	P	Pn	10 03 02.5	-0.2
PKE	Pukeiti	7.21	215	P	Pn	10 03 08.8	+5.8
NEZ	North Egmont	7.22	214	P	Pn	10 03 08.6	+5.4
KHEZ	Kahui Hut	7.28	214	P	Pn	10 03 09.0	+5.1
KHEZ	Kahui Hut	7.28	214	P	Pn	10 03 09.1	+5.3
DVHZ	Dannevirke	7.35	199	P	Pn	10 03 04.3	-0.5
BFZ	Birch Farm	7.69	197	P	Pn	10 03 08.0	-0.9
BFZ	Birch Farm	7.69	197	P	Pn	10 03 08.2	-0.8
MRZ	Mangatainoka R	7.86	201	P	Pn	10 03 10.4	-0.6
TIWZ	Tintock	7.87	199	P	Pn	10 03 10.4	-0.8
HOWZ	Holdsworth Sta	8.09	201	P	Pn	10 03 13.0	-1.0
OGWZ	Otaki Gorge	8.12	203	P	Pn	10 03 13.7	-0.7
TMWZ	Te Maipa	8.18	198	P	Pn	10 03 14.3	-0.8
KIW	Kapiti Island	8.25	204	P	Pn	10 03 15.2	-0.8
DUWZ	D'Urville Isla	8.56	208	P	Pn	10 03 19.9	0.0
SNZO	South Karori	8.72	203	P	Pn	10 03 21.5	-0.3
TCW	Tory Channel	8.78	206	P	Pn	10 03 21.9	-0.7
TUWZ	Tuamarina	9.09	206	P	Pn	10 03 26.0	-0.5
NNZ	Nelson	9.13	209	P	Pn	10 03 26.7	-0.3
TKNZ	Takaka Hill	9.16	212	P	Pn	10 03 27.7	+0.3
QRZ	Quartz Range	9.19	214	P	Pn	10 03 30.9	+3.2
QRZ	Quartz Range	9.19	214	P	Pn	10 03 28.4	+0.7
KHZ	Kahutara	10.10	205	P	Pn	10 03 39.1	-0.1

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*AUST **27** 10:04:23.5±0.2, 33°S±2°×13°9E±°, h0^{km}, ML2.5/15, Error ellipse: s-maj=4.4km s-min=3.0km az=51.5*

*IDC **27** 10:04:27.8±7.2, 32°.54S×138°.60E, h0^{km}, mbtmp3.0/3, ML2.5/3, Error ellipse: s-maj=94.1km s-min=27.0km az=25.0*

ISC 27 10:04:22.6±1.0**, 33°.12S**±0°.03×**138°.66E**±0°.03**, h17^{km}**±9^{km}**, n19, σ2ˢ.00**/27**, Near coast of South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HTT	Hallett	0.38	145	P	Pg	10 04 29.8	-0.7
HTT				S	Sg	10 04 34.1	-1.6
NAPP	Napperby	0.44	262	P	Pg	10 04 31.3	-0.2
PTPS	Port Pirie	0.56	265	P	Pg	10 04 33.7	-0.1
WHYH	Whyalla	0.92	275	P	Pg	10 04 40.3	-0.1
WHYH				S	Sg	10 04 52.2	-0.3
YAPP	Yappala Statio	1.29	347	P	Pg	10 04 47.9	+0.5
YAPP				S	Sg	10 05 06.5	+2.3
SDAN	Sedan	1.49	158	P	Pb	10 04 49.6	-0.2
SDAN				S	Sg	10 05 09.8	-1.0
AUMBR	Murray Bridge	2.07	166	P	Pb	10 04 59.5	-0.2
AUMBR	Murray Bridge	2.07	166	S	Sb	10 05 25.7	+0.6
BBOO	Buckleboo	2.21	277	P	Pb	10 05 01.8	-0.3
BBOO	Buckleboo	2.21	277	S	Sb	10 05 30.4	+1.3
LCRK	Leigh Creek	2.69	352	P	Pb	10 05 08.5	-1.8
LCRK				S	Sb	10 05 42.4	-0.6
STKA	Stephens Creek	2.77	64	P	Pb	10 05 10.9	-0.6
STKA	Stephens Creek	2.77	64	Pn	Pb	10 05 11.0	-0.6
	0.6nm,0.3s,baz=252,slow=14,SNR=4.5						
STKA				Sn	Sb	10 05 46.8	+1.5
	2.4nm,0.3s,baz=307,slow=15,SNR=7.6						
	3.3nm,0.6s						
KELC	Kelly Hill Cav	3.20	206	P	Pn	10 05 14.5	+2.5
MULG	Mulgathing	4.84	305	P	Pn	10 05 37.1	+2.5
INKA	Innaminka	5.66	19	P	Pn	10 05 49.1	+3.3
CMSA	Cobar Meteorol	6.15	77	P	Pn	10 05 55.6	+3.0
ASAR	Alice Springs	10.31	335	Pn	Pn	10 06 50.1	+0.4
	baz=171,slow=7.6,SNR=6.0						
ASAR				Sn	Sn	10 08 42.7	-2.2
	0.1nm,0.3s,baz=156,slow=22,SNR=1.9						
	0.7nm,1.1s						
WRA	Warramunga Arr	13.68	343	Pn	Pn	10 07 34.7	-1.1
	baz=161,slow=12,SNR=1.2						
WRA				Sn	Sn	10 10 01.6	-5.9
	baz=163,slow=24,SNR=1.1						
	1.0nm,1.3s						

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*IDC **27** 10:07:39.4±2.3, 13°.41N×90°.91W, h0^{km}, mb3.9/2, mbtmp3.6/5, ML3.4/3, MS3.5/7, Error ellipse: s-maj=61.1km s-min=26.6km az=35.0*

*CATAC **27** 10:07:40.1±0.6, 13°N±4°×9°1W±°, h10^{km}, M3.6/13, MLv3.6/13, Error ellipse: s-maj=9.2km s-min=7.4km az=3.1, confirmed*

*SNET **27** 10:07:40.4±1.2, 13°.13N×91°.01W, h19^{km}±7^{km}, ML3.1*

*GCG **27** 10:07:43.3±0.5, 13°.51N×90°.87W, h91^{km}±12^{km}, MD4.4, ML3.9*

ISC 27 10:07:42.4±1.2**, 13°.15N**±0°.08×**90°.94W**±0°.05**, h33^{km}, n50, σ1ˢ.14**/48**, MS3.5**/7**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESSJ	San Jos, E	0.59	46	*e*P	Pn	10 07 57.6	+3.2
FAME	Alcaldia de Sa	1.13	53	P	Pn	10 08 01.5	-0.4
FG16	Alotenango, Sa	1.19	20	*i* P	Pn	10 08 03.2	+0.3
FG16				IAML		10 08 23.5	
	comp=N,4µm,0.3s						
STG0	El Palmar, Qui	1.32	343	*e*P	Pb	10 08 08.3	+1.5
STG0				IAML		10 08 36.6	
	comp=E,2µm,0.3s						
NUBE	Las Nubes	1.35	56	*e*P	Pn	10 08 04.6	-0.4
NUBE				*e*S	Sb	10 08 24.2	-0.1
NUBE	Las Nubes	1.35	56	*i* P	Pn	10 08 04.8	-0.2
NUBE	Las Nubes	1.35	56	S	Sb	10 08 25.5	+1.3
NUBE	Las Nubes	1.35	56	P	Pn	10 08 05.4	+0.3
LOAL	Lomas de Alarc	1.40	53	P	Pb	10 08 08.3	+0.2
SLOZ	Alcaldia de Sa	1.42	52	*e*P	Pn	10 08 05.8	-0.2
SLOZ				*e*S	Sb	10 08 25.4	-0.6
SLOZ	Alcaldia de Sa	1.42	52	P	Pn	10 08 06.9	+1.0
SLOZ	Alcaldia de Sa	1.42	52	S	Sb	10 08 28.0	+2.0
SBLS	San Blas	1.45	62	*e*P	Pn	10 08 07.0	+0.5
SNJE	San Jose	1.48	61	*e*P	Pn	10 08 06.7	-0.2
JAYA	Jayaque - finc	1.53	71	*e*P	Pn	10 08 07.7	+0.1
JAYA				*e*S	Sb	10 08 29.6	+0.1
JAYA				IAML		10 08 34.3	
	comp=Z,234nm,0.2s						
JAYA	Jayaque - finc	1.53	71	*i* P	Pn	10 08 08.1	+0.5
JAYA	Jayaque - finc	1.53	71	P	Pn	10 08 09.0	+1.4
RTAL	Retalhuleu	1.55	332	P	Pn	10 08 07.9	+0.2
PMON	Piamonte	1.67	70	*e*P	Pn	10 08 10.6	+1.1
PMON	Piamonte	1.67	70	P	Pn	10 08 11.1	+1.6
LOMA	Loma Larga	1.79	74	*e*P	Pn	10 08 11.4	+0.3
LOMA	Loma Larga	1.79	74	P	Pn	10 08 11.6	+0.5
MTO3	Montecristo	1.97	51	*e*P	Pn	10 08 14.5	+0.9
COEG	Centro de Oper	2.05	77	*e*P	Pn	10 08 15.4	+0.7
COEG	Centro de Oper	2.05	77	P	Pn	10 08 16.0	+1.3
ESQI	Esquipulas	2.09	48	*e*P	Pn	10 08 16.2	+1.0
ESQI	Esquipulas	2.09	48	P	Pn	10 08 16.2	+1.0
ESQI	Esquipulas	2.09	48	S	Sb	10 08 45.1	-0.2
SCLA	Alcaldia de Sa	2.22	76	P	Pb	10 08 20.0	-1.9
HUEH	Huehuetenango	2.22	346	*e*P	Pn	10 08 17.4	+0.2
PQSS	Presa 15 de Se	2.36	78	*e*P	Pn	10 08 19.2	+0.3
PQSS	Presa 15 de Se	2.36	78	P	Pn	10 08 20.3	+1.5
PQSS	Presa 15 de Se	2.36	78	S	Sb	10 08 50.6	-2.4
LCND	La Caada	2.97	87	*e*P	Pn	10 08 27.2	0.0
CNCH	Conchagua	3.02	87	*e*P	Pn	10 08 28.8	+0.7
CNCH	Conchagua	3.02	87	P	Pn	10 08 29.4	+1.3
POLN	Al Sur del Vol	4.05	97	P	Pn	10 08 43.9	+1.8
COPN	Copaltepe	4.35	102	P	Pn	10 08 47.3	+1.0
CMIG	Matias Romero	5.46	316	Pn	Pn	10 09 00.3	-1.3
	comp=Z,0.6nm,0.3s,baz=135,slow=8.6,SNR=6.6						
CMIG				Sn	Sn	10 10 02.0	-1.3
	comp=Z,1.2nm,0.3s,baz=127,slow=20,SNR=3.6						
	comp=Z,1.9nm,0.5s						
JTS	Las Juntas de	6.51	115	Pn	Pn	10 09 18.0	+2.0
	comp=Z,0.4nm,0.3s,baz=300,slow=20,SNR=1.3						
	comp=Z,6.0nm,1.0s						
TXAR	Lajitas Array	19.97	326	P	P	10 12 11.5	-0.6
	comp=Z,0.1nm,0.3s,baz=142,slow=11,SNR=10						
	comp=Z,0.6nm,0.8s						
TKL	Tuckaleechee C	23.32	15	P	P	10 12 46.6	-1.1
	comp=Z,2.3nm,0.8s,baz=191,slow=12,SNR=6.3						
TKL				LR	LR	10 22 47.2	
	comp=Z,70nm,19.1s,baz=259,slow=39						
	comp=Z,2.3nm,0.8s						
SADO	Sadowa	33.08	15	LR	LR	10 28 28.3	
	comp=Z,90nm,19.3s,baz=232,slow=38						
NVAR	Mina Array Bea	34.98	321	P	P	10 14 32.0	+0.1
	comp=Z,1.7nm,0.8s,baz=134,slow=8.1,SNR=12						
	comp=Z,1.7nm,0.8s						
LPAZ	La Paz	36.93	142	LR	LR	10 31 18.6	
	comp=Z,40nm,18.2s,baz=190,slow=38						
SCHQ	Schefferville	45.66	19	LR	LR	10 37 06.7	
	comp=Z,42nm,18.1s,baz=282,slow=39						
SFJD	Kangerlussuaq	60.01	17	LR	LR	10 44 54.1	
	comp=Z,67nm,18.8s,baz=270,slow=37						
BORG	Borgarnes	69.52	25	LR	LR	10 48 03.6	
	comp=Z,28nm,18.2s,baz=298,slow=35						
MDT	Midelt	79.95	59	LR	LR	10 52 12.0	
	comp=Z,23nm,18.1s,baz=30,slow=34						
CMAR	Chiang Mai Arr	147.11	343	PKPbc	PKPbc	10 27 23.5	+0.6
	comp=Z,0.4nm,0.3s,baz=14,slow=3.6,SNR=4.6						

IDC 27 10:25:10.5±2.5**, 6°.60S×130°.16E, h0^{km}, mb3.7**/1**, mbtmp3.3**/4**, ML3.3**/3**, Error ellipse: s-maj=106.3km s-min=29.8km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.25	201	Pn	Pn	10 28 07.1	+0.8
	0.1nm,0.3s,baz=28,slow=11,SNR=6.5						
FITZ				Sn	Sn	10 30 07.2	-17
	0.4nm,0.3s,baz=17,slow=17,SNR=8.0						
	1.8nm,0.9s						
WRA	Warramunga Arr	13.87	163	Pn	Pn	10 28 28.6	+0.1
	0.2nm,0.3s,baz=338,slow=14,SNR=21						
WRA				Sn	Sn	10 30 48.9	-15
	0.3nm,0.3s,baz=340,slow=22,SNR=8.8						
	0.1nm,0.2s						
ASAR	Alice Springs	17.35	168	P	Pn	10 29 13.5	-0.7
	0.1nm,0.3s,baz=344,slow=9.7,SNR=6.6						
ASAR				S	Sn	10 32 13.4	-15
	0.5nm,0.9s,baz=349,slow=28,SNR=1.7						
	0.1nm,0.6s						
MKAR	Makanchi Array	67.98	327	P	P	10 36 11.5	0.0
	0.4nm,0.5s,baz=123,slow=7.1,SNR=3.7						
	0.4nm,0.5s						

RSNC 27 10:30:49.8±0.0**, 7°N**±1°×**7°3W**±°**, h143^{km}**±2^{km}**, M3.3, mB4.7, mb3.7, ML3.0, Mw(mB)4.0, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.24	188	P	Pn	10 31 09.5	-0.2
BARC	Barichara	0.24	188	P	Pn	10 31 09.3	-0.4
BARC				S	Sn	10 31 24.1	-0.6
PAMC	Pamplona, Colo	0.68	41	P	Pn	10 31 12.2	+0.2
PAMC				S	Sn	10 31 29.0	+0.2
RUSC	La Rusia	0.93	176	P	Pn	10 31 13.2	-0.7
RUSC				S	Sn	10 31 31.4	-0.9
PTBC	PUERTO BERRIO,	1.33	258	P	Pn	10 31 16.0	-1.1
PTBC				P		10 31 16.1	
PTBC	PUERTO BERRIO,	1.33	258	P	Pn	10 31 15.9	-1.2
PTBC				S	Sn	10 31 36.2	-1.7
TAMC	Tame, Arauca	1.41	106	P	Pn	10 31 17.7	-0.2

TAMC				S	Sn	10 31 37.8	-1.5
OCAC	**Ocana**	**1.41**	**353**	P	Pn	10 31 17.6	-0.5
OCAC				S	Sn	10 31 39.2	-0.5
SPBC	**San Pablo de B**	**1.49**	**218**	P	Pn	10 31 18.3	-0.5
SPBC				P		10 31 18.4	
SPBC	**San Pablo de B**	**1.49**	**218**	P	Pn	10 31 18.2	-0.6
SPBC				S	Sn	10 31 40.0	-1.0
ZARC	**Zaragoza, Cauc**	**1.82**	**291**	P	Pn	10 31 22.3	-0.1
ZARC				P		10 31 22.4	
ZARC	**Zaragoza, Cauc**	**1.82**	**291**	P	Pn	10 31 22.0	-0.4
ZARC				S	Sn	10 31 48.3	+0.9
NORC	**Norcasia**	**2.12**	**234**	P	Pn	10 31 25.8	-0.2
NORC				P	Pn	10 31 25.8	-0.2
NORC				S	Sn	10 31 53.4	-0.5
NORC	**Norcasia**	**2.12**	**234**	P	Pn	10 31 25.6	-0.4
NORC				S	Sn	10 31 52.7	-1.2
CHIC	**Chingaza**	**2.26**	**195**	P	Pn	10 31 28.1	0.0
CHIC				P	P	10 31 28.3	+0.2
CHIC				P	P	10 31 28.3	+0.2
CHIC	**Chingaza**	**2.26**	**195**	P	Pn	10 31 28.0	-0.1
CHIC				S	Sn	10 31 56.9	-0.6
HELC	**Santa Helena**	**2.45**	**255**	P	Pn	10 31 29.8	-0.5
HELC				P		10 31 30.1	
HELC				P		10 31 30.5	
HELC	**Santa Helena**	**2.45**	**255**	P	Pn	10 31 29.6	-0.7
HELC				S	Sn	10 32 01.2	-0.2
CVER	**Cruz Verde, Cu**	**2.47**	**202**	P	Pn	10 31 31.7	+1.0
CVER				S	Sn	10 32 05.3	+3.1
UREC	**San Jos de Ur**	**2.54**	**291**	P	Pn	10 31 29.7	-1.3
UREC				P	P	10 31 29.9	-1.1
UREC				P	P	10 31 29.9	-1.1
UREC	**San Jos de Ur**	**2.54**	**291**	P	Pn	10 31 29.4	-1.6
UREC				S	Sn	10 32 01.4	-1.4
GUY2C	**Guyana, Caldas**	**2.72**	**234**	P	Pn	10 31 34.1	+0.3
GUY2C				P		10 31 34.3	
GUY2C				P		10 31 34.5	
GUY2C	**Guyana, Caldas**	**2.72**	**234**	P	Pn	10 31 33.7	-0.1
GUY2C				S	Sn	10 32 08.1	+0.4
VILC	**Villavicencio,**	**2.75**	**191**	P	Pn	10 31 33.9	0.0
VILC	**Villavicencio,**	**2.75**	**191**	P	Pn	10 31 33.8	-0.1
VILC				S	Sn	10 32 07.8	-0.2
NIZA	**Niza - Manizal**	**2.90**	**233**	P	Pn	10 31 35.5	-0.5
NIZA				S	Sn	10 32 12.1	+0.6
CBOC	**Ciudad Bolivar**	**3.00**	**252**	P	Pn	10 31 37.7	+0.6
CBOC				P		10 31 38.1	
CBOC				P		10 31 38.6	
CBOC	**Ciudad Bolivar**	**3.00**	**252**	P	Pn	10 31 37.3	+0.2
CBOC				S	Sn	10 32 13.1	-0.5
DBBC	**Dabeiba**	**3.04**	**274**	P	Pn	10 31 37.8	+0.3
DBBC				P		10 31 38.1	
DBBC				P		10 31 38.2	
DBBC	**Dabeiba**	**3.04**	**274**	P	Pn	10 31 37.1	-0.4
DBBC				S	Sn	10 32 13.1	-1.3
ARGC	**Ariguani, Magd**	**3.20**	**340**	P	Pn	10 31 39.7	+0.2
ARGC				S	Sn	10 32 17.3	-0.6
SDV	**Santo Domingo**	**3.22**	**51**	P	Pn	10 31 38.8	-1.2
SDV				S	Sn	10 32 15.4	-3.3
ANIL	**Santa Ana**	**3.23**	**224**	P	Pn	10 31 40.7	+0.6
ANIL				S	Sn	10 32 16.8	-2.2
PRAC	**Prado**	**3.55**	**209**	P	Pn	10 31 43.7	-0.3
PRAC				P	Pn	10 31 43.7	-0.3
PRAC				S	Sn	10 32 26.8	+0.8
PRAC	**Prado**	**3.55**	**209**	P	Pn	10 31 43.3	-0.7
PRAC				S	Sn	10 32 24.7	-1.3
APAC	**Apartado, Choc**	**3.56**	**288**	P	Pn	10 31 43.9	-0.3
APAC	**Apartado, Choc**	**3.56**	**288**	P	Pn	10 31 43.6	-0.6
APAC				S	Sn	10 32 25.7	-0.6
ORTC	**Ortega, Tolima**	**3.57**	**216**	P	Pn	10 31 44.5	+0.1
ORTC				P	P	10 31 44.7	+0.3
ORTC				P	P	10 31 44.7	+0.3
ORTC	**Ortega, Tolima**	**3.57**	**216**	P	Pn	10 31 43.8	-0.6
ORTC				S	Sn	10 32 26.9	+0.2
SJCC	**San Jacinto, C**	**3.65**	**327**	P	Pn	10 31 43.7	-1.7
SJCC				S	Sn	10 32 25.4	-3.1
SJCC	**San Jacinto, C**	**3.65**	**327**	P	Pn	10 31 43.4	-2.0
SJCC				S	Sn	10 32 24.3	-4.2
PLMC	**San Jos del P**	**3.66**	**239**	P	Pn	10 31 45.4	-0.1
PLMC				P	P	10 31 45.5	0.0
PLMC				P	P	10 31 45.5	0.0
PLMC	**San Jos del P**	**3.66**	**239**	P	Pn	10 31 45.3	-0.2
PLMC				S	Sn	10 32 27.6	-1.0
URMC	**La Uribe, Meta**	**3.76**	**199**	P	Pn	10 31 47.8	+0.9
URMC	**La Uribe, Meta**	**3.76**	**199**	P	Pn	10 31 46.9	0.0
URMC				S	Sn	10 32 30.1	-1.1
LCBC	**Los crdobas,**	**3.77**	**302**	P	Pn	10 31 46.5	-0.4
LCBC				S	Sn	10 32 31.2	0.0
CRJC	**Cerrejon, Guaj**	**4.17**	**4**	P	Pn	10 31 50.2	-2.1
CRJC				P		10 31 50.6	
CRJC	**Cerrejon, Guaj**	**4.17**	**4**	P	Pn	10 31 49.6	-2.7
CRJC				S	Sn	10 32 36.7	-4.1
YOTC	**Yotoco, Valle**	**4.26**	**229**	P	Pn	10 31 53.0	-0.4
YOTC	**Yotoco, Valle**	**4.26**	**229**	P	Pn	10 31 52.2	-1.2
YOTC				S	Sn	10 32 42.2	-0.6
GUVC	**San Jose del G**	**4.29**	**173**	P	Pn	10 31 50.3	-3.4
GUVC				S	Sn	10 32 39.9	-3.6
SMRC	**Santa Marta, M**	**4.43**	**346**	P	Pn	10 31 54.6	-1.0
SMRC				S	Sn	10 32 43.1	-3.8
PTAC	**Punta Ardita,**	**4.63**	**274**	P	Pn	10 31 56.4	-1.9
PTAC				S	Sn	10 32 50.7	-0.9
MACC	**Macarena, Meta**	**4.71**	**189**	P	Pn	10 31 56.6	-2.7
MACC				S	Sn	10 32 49.0	-4.4
URIC	**Uribia, Colomb**	**4.97**	**13**	P	Pn	10 31 54.0	-8.8
URIC				S	Sn	10 32 57.5	-2.2
JAMC	**Jamundi, Valle**	**5.02**	**225**	P	Pn	10 32 02.3	-1.3
	7.3nm,0.4s						
JAMC				S	Sn	10 32 59.6	-1.5
	7.3nm,0.4s						
GARC	**Garzon, Huila**	**5.17**	**207**	P	Pn	10 32 03.9	-1.8
GARC				S	Sn	10 33 01.1	-3.6
POPC	**Popayan, Colom**	**5.52**	**220**	P	Pn	10 32 09.5	-0.8
POPC				S	Sn	10 33 11.5	-1.7
FLOC	**Florencia**	**5.78**	**206**	P	Pn	10 32 11.5	-2.1
FLOC				S	Sn	10 33 18.2	-0.8
BCIP	**Isla Barro Col**	**7.02**	**290**	P	Pn	10 32 27.4	-2.7

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*IDC **27** 10:31:22.2±0.6, 0°.61S×121°.96E, h0^{km}, mb4.2/15, mbtmp4.2/17, ML4.4/2, MS3.5/13, Error ellipse: s-maj=27.4km s-min=12.2km az=76.0*

*DJA **27** 10:31:25.0±0.2, 1°S±2°×12°2E±°, h10^{km}, M4.6/25, mB5.1/6, mb4.9/6, MLv4.5/25, Mw(mB)4.5/6*

*NEIC **27** 10:31:27.1±1.8, 0°.69S±0°.07×121°.89E±0°.06, h26^{km}±7^{km}, mb4.5/19, Error ellipse: s-maj=11.5km s-min=7.0km az=214.0*

ISC 27 10:31:29.0±0.5, **0°.71S**±0°.05×**121°.85E**±0°.05, **h49**^{km}, **n95**, σ**1^s.34**/87, **mb4.4**/24, **MS3.4**/8, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APSI	**Ampana**	**0.28**	**225**	P	Pn	10 31 29.5	-8.4
LUWI	**Luwuk**	**0.98**	**110**		**Pn**	**10 31 44.7**	**-1.8**
LUWI	**Luwuk**	**0.98**	**110**	P	**Pn**	**10 31 45.0**	**-1.5**
LUWI	**Luwuk**	**0.98**	**110**	P	**Pn**	**10 31 44.7**	**-1.8**
MRSI	**Marisa**	**1.18**	**4**	P	Pn	10 31 42.6	-6.6
PCI	**Palu**	**2.02**	**264**	P	**Pn**	**10 31 58.8**	**-1.9**
TOLI2	**Tolitoli**	**2.10**	**329**		**Pn**	**10 31 58.6**	**-3.1**
MPSI	**Mapaga**	**2.21**	**298**	P	**Pn**	**10 32 00.2**	**-3.0**
KMSI	**Cibinong**	**2.48**	**59**	P	**Pn**	**10 32 09.2**	**+2.2**
TTSI	**Tana Toraja**	**3.08**	**221**	P	**Pn**	**10 32 14.8**	**-0.4**
KDI	**Kendari**	**3.32**	**167**	P	**Pn**	**10 32 16.4**	**-2.1**
SPSI	**Sidrap Palu**	**3.84**	**213**	P	**Pn**	**10 32 24.6**	**-1.1**
BNSI	**Bone**	**4.06**	**205**	P	**Pn**	**10 32 26.9**	**-1.8**
SANI	**Sanana**	**4.35**	**108**	P	**Pn**	**10 32 31.0**	**-1.6**
SANI	**Sanana**	**4.35**	**108**	P	**Pn**	**10 32 31.1**	**-1.6**
KAPI	**Kappang**	**4.76**	**206**		**Pn**	**10 32 37.4**	**-0.9**
KAPI	**Kappang**	**4.76**	**206**	Pn	**Pn**	**10 32 37.6**	**-0.7**
	77nm,0.3s,baz=18,slow=9.9,SNR=156						
KAPI				Sn	**Sn**	**10 33 34.0**	**+1.8**
	10nm,0.3s,baz=36,slow=19,SNR=1.6						
KAPI				LR	LR	10 34 11.3	
	comp=Z,258nm,18.2s,baz=77,slow=34						
	125nm,0.3s						
KAPI	**Kappang**	**4.76**	**206**	P	**Pn**	**10 32 37.5**	**-0.9**
BBSI	**Bau Bau**	**4.80**	**171**	P	**Pn**	**10 32 38.4**	**-0.5**
BKB	**Balikpapan**	**4.98**	**264**	Pn	**Pn**	**10 32 40.9**	**-0.4**
BKB	**Balikpapan**	**4.98**	**264**	P	**Pn**	**10 32 41.5**	**+0.2**
BKB	**Balikpapan**	**4.98**	**264**	P	**Pn**	**10 32 38.8**	**-2.5**
BSSI	**Bau Bau, Buton**	**5.57**	**194**	P	**Pn**	**10 32 48.7**	**-0.7**
LBMI	**Labuha**	**5.65**	**89**	P	**Pn**	**10 32 50.0**	**-0.5**
SGSI	**Sangihe**	**5.71**	**40**	P	**Pn**	**10 32 50.0**	**-1.3**
TNTI	**Ternate**	**5.71**	**75**	P	**Pn**	**10 32 51.8**	**+0.5**
NLAI	**Namlea**	**5.82**	**116**	P	**Pn**	**10 32 53.9**	**+1.1**
MYLDM	**Lahad Datu**	**6.74**	**330**		**Pn**	**10 33 06.5**	**+1.1**
MYLDM	**Lahad Datu**	**6.74**	**330**	P	**Pn**	**10 33 06.6**	**+1.2**
MMRI	**Maumere**	**7.88**	**177**		**Pn**	**10 33 20.1**	**-1.1**
MMRI	**Maumere**	**7.88**	**177**	P	**Pn**	**10 33 19.7**	**-1.5**
EDFI	**Ende, Flores**	**7.99**	**181**	P	**Pn**	**10 33 21.1**	**-1.6**
DAV	**Davao City (W)**	**8.58**	**26**	LR	LR	10 36 58.5	
	comp=Z,418nm,18.9s,baz=164,slow=40						
BATI	**Baumata**	**9.61**	**169**	LR	LR	10 37 28.2	
	comp=Z,368nm,20.3s,baz=42,slow=38						
FAKI	**Fak Fak**	**10.62**	**102**	Pn	**Pn**	**10 33 56.4**	**-2.3**
FAKI	**Fak Fak**	**10.62**	**102**	P	**Pn**	**10 33 57.1**	**-1.6**
TBJI	**Tambak Boyo**	**11.68**	**238**	P	**Pn**	**10 34 10.2**	**-2.9**
RKPI	**Ransiki, Papua**	**12.35**	**94**	P	**Pn**	**10 34 21.4**	**-0.9**
JCJI	**Jatiwangi**	**14.71**	**247**	P	**Pn**	**10 34 53.5**	**-0.8**
TGY	**Tagaytay City**	**14.74**	**357**	LR	LR	10 41 00.4	
	comp=Z,145nm,18.5s,baz=266,slow=40						
MTN	**Manton Dam**	**15.17**	**143**	P	**P**	**10 35 03.9**	**-0.5**
MTN				IAmb	IAmb	10 35 05.1	
	comp=Z,33nm,1.4s						
LEM	**Lembang**	**15.44**	**246**	LR	LR	10 42 03.9	
	comp=Z,232nm,20.1s,baz=305,slow=41						
KNRA	**Kununurra**	**16.36**	**156**		**P**	**10 35 16.1**	**-1.6**
FITZ	**Fitzroy Crossi**	**17.68**	**168**	P	**P**	**10 35 32.2**	**0.0**
FITZ	**Fitzroy Crossi**	**17.68**	**168**	P	**P**	**10 35 32.5**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=347,slow=9.5,SNR=9.5						
	comp=Z,1.7nm,0.4s						
GENI	**Genyem**	**18.41**	**96**	P	**Pn**	**10 35 40.1**	**-0.7**
MBWA	**Marble Bar**	**20.43**	**186**	P	**P**	**10 36 02.8**	**+0.4**
MBWA				IAmb	IAmb	10 36 03.2	
	comp=Z,29nm,1.5s						
PSA00	**Pilbara Seismi**	**20.83**	**185**		**P**	**10 36 06.7**	**0.0**
PSA00				IAmb	IAmb	10 36 07.6	
	comp=Z,20nm,0.9s						
PSA00	**Pilbara Seismi**	**20.83**	**185**	P	**P**	**10 36 06.0**	**-0.6**
PSA00				IAmb	IAmb	10 36 07.0	
	comp=Z,17nm,1.2s						
WB0	**Warramunga Arr**	**22.58**	**148**		**P**	**10 36 24.1**	**-1.3**
WB0				IAmb	IAmb	10 36 42.1	
	comp=Z,32nm,1.5s						
WRAB	**Tennant Creek**	**22.69**	**148**	P	**P**	**10 36 25.5**	**-1.1**
WRAB				IAmb	IAmb	10 36 27.1	
	comp=Z,16nm,1.3s						
WRA	**Warramunga Arr**	**22.69**	**148**		**P**	**10 36 25.1**	**-1.6**
WRA	**Warramunga Arr**	**22.69**	**148**	P	**P**	**10 36 24.9**	**-1.8**
	comp=Z,5.9nm,0.5s,baz=329,slow=9.9,SNR=84						
WRA				PcP	**PcP**	**10 40 18.0**	**+0.1**
	comp=Z,0.4nm,0.9s,baz=328,slow=2.0,SNR=1.2						
	comp=Z,5.9nm,0.5s						
WB1	**Warramunga Ar.**	**22.71**	**148**	P	**P**	**10 36 26.3**	**-0.6**
WR8	**Warramunga Arr**	**22.79**	**148**		**P**	**10 36 26.6**	**-1.0**
WR8				IAmb	IAmb	10 36 29.1	
	comp=Z,16nm,1.1s						
YULB	**Yu-li**	**23.96**	**359**	P	**P**	**10 36 41.3**	**+2.3**
SSLB	**Suanglung**	**24.36**	**358**	P	**P**	**10 36 43.0**	**+0.3**
COEN	**Coen**	**24.87**	**123**	P	**P**	**10 36 48.0**	**+0.7**
COEN				IAmb	IAmb	10 37 00.5	
	comp=Z,18nm,1.1s						
AS31	**Alice Springs**	**25.64**	**154**	P	**P**	**10 36 54.1**	**-0.2**
ASAR	**Alice Springs**	**25.64**	**154**	P	**P**	**10 36 55.3**	**+0.9**
ASAR	**Alice Springs**	**25.64**	**154**	P	**P**	**10 36 54.3**	**0.0**
	comp=Z,1.5nm,0.6s,baz=328,slow=7.9,SNR=30						
ASAR				PcP	**PcP**	**10 40 24.5**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=334,slow=2.2,SNR=6.0						
ASAR				LR	LR	10 47 57.2	
	comp=Z,87nm,20.3s,baz=300,slow=39						
	comp=Z,1.5nm,0.6s						
AS01	**Alice Springs**	**25.66**	**154**	P	**P**	**10 36 54.6**	**+0.1**
QIS	**Mount Isa**	**26.28**	**140**	P	**P**	**10 36 59.3**	**-0.8**
JOW	**Kunigami**	**28.07**	**12**	LR	LR	10 48 57.8	
	comp=Z,57nm,19.8s,baz=302,slow=38						
CMAR	**Chiang Mai Arr**	**29.49**	**311**	P	**P**	**10 37 29.3**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=130,slow=9.0,SNR=1.3						
	comp=Z,0.3nm,0.3s						
NWAO	**Narrogin (SRO)**	**32.34**	**187**	LR	LR	10 53 40.6	
	comp=Z,125nm,19.4s,baz=28,slow=41						
JNU	**Nakatsue**	**34.71**	**13**	LR	LR	10 54 17.0	
	comp=Z,42nm,18.0s,baz=160,slow=40						
STKA	**Stephens Creek**	**36.18**	**151**	P	**P**	**10 38 27.1**	**+0.1**
STKA	**Stephens Creek**	**36.18**	**151**	P	**P**	**10 38 27.1**	**+0.1**
	comp=Z,1.4nm,0.4s,baz=336,slow=11,SNR=7.1						
	comp=Z,1.4nm,0.4s						
STKA	**Stephens Creek**	**36.18**	**151**	P	**P**	**10 38 27.5**	**+0.4**
HTT	**Hallett**	**36.29**	**155**	P	**P**	**10 38 28.9**	**+0.9**
CMSA	**Cobar Meteorol**	**38.06**	**146**	P	**P**	**10 38 43.8**	**+0.8**
KSRS	**Korea Array**	**38.39**	**8**	P	**P**	**10 38 43.5**	**-2.1**
	comp=Z,0.2nm,0.4s,baz=196,slow=11,SNR=2.5						
	comp=Z,0.2nm,0.4s						
MJAR	**Matsushiro Arr**	**40.06**	**21**	P	**P**	**10 38 58.3**	**-1.3**
	comp=Z,1.3nm,0.6s,baz=193,slow=7.4,SNR=4.6						
MJAR				LR	LR	10 53 23.1	
	comp=Z,63nm,21.8s,baz=191,slow=33						
	comp=Z,1.3nm,0.6s						
PALK	**Pallekele**	**41.80**	**282**	LR	LR	10 56 06.2	
	comp=Z,58nm,21.7s,baz=109,slow=35						
EVN	**Everest**	**44.06**	**313**	P	**P**	**10 39 34.0**	**+0.8**
EVN				IAmb	IAmb	10 39 45.3	
	comp=Z,5.7nm,0.9s						
CN2	**Changchun**	**44.43**	**4**	P	**P**	**10 39 36.3**	**+1.2**
XLT	**XiLinHaoTe**	**44.71**	**354**	*e*P	**P**	**10 39 41.5**	**+4.1**
XLT				sP	pP	10 39 49.0	-1.6
XLT				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GTA	**Gaotai**	**44.74**	**336**	*e*P	**P**	**10 39 40.0**	**+2.2**
GTA				pP	pP	10 39 44.0	-7.0
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
USRK	**Ussuriysk Ar.**	**45.62**	**10**	LR	LR	10 57 41.1	
	comp=Z,45nm,21.2s,baz=188,slow=35						
ASAJ	**Asahikawa**	**48.32**	**20**	P	**P**	**10 40 04.1**	**-1.5**
	comp=Z,4.9nm,0.9s,baz=210,slow=20,SNR=2.3						
	comp=Z,4.9nm,0.9s						
SONM	**Songino Array**	**50.19**	**346**	P	**P**	**10 40 19.2**	**-0.8**
	comp=Z,2.8nm,0.8s,baz=166,slow=8.5,SNR=10.0						
SONM				LR	LR	11 02 30.1	
	comp=Z,64nm,20.3s,baz=70,slow=37						
	comp=Z,2.8nm,0.8s						
MKAR	**Makanchi Array**	**58.62**	**329**	P	**P**	**10 41 21.3**	**+0.2**
	comp=Z,3.7nm,0.8s,baz=129,slow=8.8,SNR=26						
	comp=Z,3.7nm,0.8s						
MAKZ	**Makanchi**	**58.79**	**329**		**P**	**10 41 22.0**	**-0.3**
MAKZ				IAmb	IAmb	10 41 30.8	
	comp=Z,5.2nm,1.0s						
PETK	**Petropavlovsk-**	**61.39**	**24**	P	**P**	**10 41 40.1**	**+0.1**
	comp=Z,2.0nm,0.7s,baz=219,slow=7.4,SNR=2.3						
	comp=Z,2.0nm,0.7s						
SIMJ	**Simiganj**	**62.27**	**315**		**P**	**10 41 46.7**	**+0.3**
ZAA0	**Zalesovo Array**	**62.49**	**336**		**P**	**10 41 46.4**	**-0.9**
ZAA0				IAmb	IAmb	10 41 51.9	
	comp=Z,4.2nm,0.9s						
ZALV	**Zalesovo Beam**	**62.49**	**336**		**P**	**10 41 46.7**	**-0.6**
ZALV	**Zalesovo Beam**	**62.49**	**336**	P	**P**	**10 41 46.6**	**-0.7**
	comp=Z,3.8nm,0.8s,baz=123,slow=5.3,SNR=8.4						
	comp=Z,3.8nm,0.8s						
KURBB	**Kurchatov Arra**	**63.00**	**331**	P	**P**	**10 41 50.4**	**-0.4**
	comp=Z,2.8nm,0.2s,baz=128,slow=6.1,SNR=14						
	comp=Z,2.8nm,0.2s						
KURK	**Kurchatov**	**63.02**	**331**		**P**	**10 41 50.8**	**-0.2**
KKAR	**Karatay Array**	**63.31**	**320**		**P**	**10 41 52.5**	**-0.6**
MA2	**Magadan**	**64.22**	**16**	P	**P**	**10 41 58.2**	**-0.5**
	comp=Z,3.6nm,0.7s,baz=202,slow=15,SNR=2.3						
	comp=Z,3.6nm,0.7s						
BVAR	**Borovoye Array**	**68.50**	**329**	P	**P**	**10 42 26.0**	**-0.1**
	comp=Z,1.8nm,0.8s,baz=132,slow=8.4,SNR=6.7						
	comp=Z,1.8nm,0.8s						
QSPA	**South Pole Qui**	**89.23**	**180**	P	**P**	**10 44 20.5**	**+0.9**
	comp=Z,1.6nm,0.5s,baz=329,slow=5.9,SNR=16						
	comp=Z,1.6nm,0.5s						

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*IDC **27** 10:45:11.2±0.9, 2°.54S×138°.42E, h0^{km}, mb3.9/7, mbtmp3.9/10, ML3.7/3, MS3.3/4, Error ellipse: s-maj=24.3km s-min=18.9km az=97.0*

*NEIC **27** 10:45:13.4±2.0, 2°.6S±0°.1×138°.43E±0°.06, h10^{km}±1^{km}, mb4.0/7, Error ellipse: s-maj=20.9km s-min=9.9km az=356.0*

*DJA **27** 10:45:15.6±0.3, 3°S±3°×13°9E±°, h10^{km}, M3.9/7, MLv3.9/7*

ISC 27 10:45:15.0±0.6, **2°.63S**±0°.06×**138°.40E**±0°.04, **h32**^{km}, **n27**, σ**1^s.96**/31, **mb3.9**/8, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.70**	**26**	P	**Pn**	**10 45 26.3**	**-2.4**
GENI	**Genyem**	**1.76**	**89**	P	**Pn**	**10 45 44.9**	**+1.6**
SRPI	**Serui, Papua**	**2.29**	**289**	P	**Pb**	**10 45 53.7**	**-2.0**
SRPI				S	**Sb**	**10 46 25.7**	**+2.1**
JAY	**Jayapura**	**2.30**	**87**	Pn	**Pn**	**10 45 51.7**	**+0.9**
	18nm,0.3s,baz=264,slow=9.8,SNR=51						
JAY				Sn	**Sn**	**10 46 19.0**	**+0.9**
	13nm,0.3s,baz=309,slow=21,SNR=5.8						
JAY				LR	LR	10 46 38.7	
	comp=Z,179nm,21.5s,baz=285,slow=38						
	49nm,0.4s						
JAY	**Jayapura**	**2.30**	**87**	P	**Pn**	**10 45 51.4**	**+0.6**
JAY				S	**Sb**	**10 46 22.8**	**-1.2**
BAKI	**Biak**	**2.70**	**302**	P	**Pb**	**10 46 00.6**	**-2.1**
FAKI	**Fak Fak**	**6.15**	**267**	Pn	**Pn**	**10 46 45.8**	**+2.1**
PMG	**Port Moresby**	**11.01**	**128**	LR	LR	10 52 34.7	
	comp=Z,1µm,19.5s,baz=203,slow=40						
COEN	**Coen**	**12.21**	**158**	Pn	**Pn**	**10 48 08.1**	**+1.3**
KNRA	**Kununurra**	**16.07**	**216**		**P**	**10 49 01.2**	**-0.7**
GUMO	**Guam**	**17.34**	**22**	LR	LR	10 56 07.8	
	comp=Z,29nm,18.1s,baz=226,slow=38						
WB0	**Warramunga Arr**	**17.48**	**193**		**Pn**	**10 49 16.7**	**+0.2**
WB0				IAmb	IAmb	10 49 26.8	
	comp=Z,10.0nm,0.8s						
WR8	**Warramunga Arr**	**17.64**	**192**		**Pn**	**10 49 18.9**	**+0.4**
WR8				IAmb	IAmb	10 49 27.7	
	comp=Z,8.7nm,0.7s						
WRAB	**Tennant Creek**	**17.65**	**193**		**P**	**10 49 19.9**	**+0.5**
WRAB				IAmb	IAmb	10 49 27.9	
	comp=Z,11nm,0.8s						
WRA	**Warramunga Arr**	**17.66**	**193**	Pn	**Pn**	**10 49 18.7**	**-0.1**
WRA	**Warramunga Arr**	**17.66**	**193**	P	**Pn**	**10 49 18.8**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=14,slow=12,SNR=19						
WRA				S	**Sn**	**10 52 29.9**	**-4.8**
	comp=Z,1.1nm,0.9s,baz=20,slow=22,SNR=3.1						
	comp=Z,4.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.83**	**218**	P	**Pn**	**10 49 45.2**	**+0.2**
FITZ				IAmb	IAmb	10 50 02.0	
	comp=Z,1.5nm,1.0s						
FITZ	**Fitzroy Crossi**	**19.83**	**218**	P	**Pn**	**10 49 45.2**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=42,slow=15,SNR=2.0						
FITZ				S	**S**	**10 53 18.9**	**-6.1**
	comp=Z,1.9nm,0.8s,baz=347,slow=19,SNR=1.6						
FITZ				LR	LR	10 57 36.8	
	comp=Z,156nm,19.6s,baz=16,slow=38						
	comp=Z,2.3nm,0.7s						
AS31	**Alice Springs**	**21.36**	**191**		**P**	**10 50 00.6**	**+0.7**
AS31				IAmb	IAmb	10 50 10.2	
	comp=Z,4.4nm,0.6s						
ASAR	**Alice Springs**	**21.37**	**191**		**P**	**10 49 57.9**	**-2.0**
ASAR	**Alice Springs**	**21.37**	**191**	P	**P**	**10 50 00.9**	**+1.0**
	comp=Z,5.2nm,0.8s,baz=20,slow=11,SNR=43						
ASAR				S	**S**	**10 53 54.8**	**-0.8**
	comp=Z,1.3nm,0.8s,baz=14,slow=28,SNR=4.0						
	comp=Z,5.2nm,0.8s						
MJAR	**Matsushiro Arr**	**38.97**	**360**	P	**P**	**10 52 37.1**	**-1.2**
	comp=Z,1.0nm,0.6s,baz=182,slow=10,SNR=2.4						
	comp=Z,1.0nm,0.6s						
KSRS	**Korea Array**	**41.05**	**347**	P	**P**	**10 52 55.7**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=165,slow=10,SNR=2.4						
	comp=Z,0.7nm,0.7s						
MKAR	**Makanchi Array**	**69.54**	**322**	P	**P**	**10 56 22.2**	**+1.4**
	comp=Z,0.5nm,0.7s,baz=123,slow=5.3,SNR=5.5						
	comp=Z,0.5nm,0.7s						
BVAR	**Borovoye Array**	**79.07**	**325**	P	**P**	**10 57 17.8**	**+1.6**
	comp=Z,0.6nm,0.5s,baz=104,slow=6.1,SNR=1.9						
	comp=Z,0.6nm,0.5s						
ILAR	**Eielson Array**	**85.88**	**24**	P	**P**	**10 57 51.7**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=255,slow=5.4,SNR=7.0						
	comp=Z,0.5nm,0.7s						
QSPA	**South Pole Qui**	**87.32**	**180**	P	**P**	**10 58 00.4**	**+1.8**
	comp=Z,1.1nm,0.6s,baz=333,slow=2.1,SNR=9.2						
	comp=Z,1.1nm,0.6s						

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*PRE **27** 10:50:18.0±0.7, 23°.73S×27°.53E, h0^{km}, ML2.5, Suspected explosion*

*BGSI **27** 10:50:20.5±2.0, 23°.65S×27°.69E, h0^{km}±25^{km}, ML2.4*

ISC 27 10:50:17.9±0.8, **23°.72S**±0°.03×**27°.51E**±0°.03, **h0**^{km}, **n13**, σ**0^s.85**/24, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEPH	**Lephalale, Lim**	**0.29**	**117**	*e*P	**Pg**	**10 50 23.4**	**-0.1**
LEPH				*e*S	**Sg**	**10 50 27.2**	**-0.1**
LEPH				IAML		10 50 33.6	
	comp=Z,1µm,0.6s						
MREMI	**Moremi**	**1.15**	**357**	*i* P	**Pg**	**10 50 40.4**	**+0.5**
MREMI				*i* S	**Sg**	**10 50 54.5**	**-0.4**
MREMI				IAML		10 50 57.3	
	comp=E,247nm,0.2s						
LPHEP	**Lephephe**	**1.56**	**283**	*i* P	**Pg**	**10 50 48.2**	**+0.4**
LPHEP				IAML		10 51 11.7	
	comp=N,60nm,0.6s						
HRAO	**HartRAO**	**2.16**	**176**	*e*P	**Pn**	**10 50 56.2**	**+0.9**
HRAO				*e*S	**Sn**	**10 51 23.3**	**+0.4**
HRAO				IAML		10 51 29.1	
	comp=Z,55nm,0.5s						
LBTB	**Lobatse**	**2.17**	**233**	*e*P	**Pn**	**10 50 56.7**	**+1.3**
LBTB				*e*S	**Sn**	**10 51 24.2**	**+1.2**
LBTB				IAML		10 51 28.1	
	comp=Z,26nm,0.4s						
MUSN	**Musina, Limpop**	**2.59**	**57**	*e*P	**Pn**	**10 51 02.0**	**+0.9**
MUSN				*e*S	**Sn**	**10 51 34.0**	**+0.6**
MUSN				IAML		10 51 43.0	
	comp=Z,27nm,0.5s						
BROLN	**Tlhalogang**	**2.62**	**356**	*i* P	**Pn**	**10 51 02.3**	**+0.8**
BROLN				IAML		10 51 45.2	
	comp=E,21nm,0.7s						
KDWAN	**Kaudwane**	**2.64**	**277**	*i* P	**Pb**	**10 51 04.8**	**-1.3**
KDWAN				*i* S	**Sb**	**10 51 38.2**	**-0.9**
KDWAN				IAML		10 51 41.5	
	comp=N,24nm,0.8s						
PILG	**Pilgrimsrest,**	**3.15**	**113**	*e*P	**Pn**	**10 51 09.6**	**+0.6**
PILG				*e*S	**Sn**	**10 51 48.0**	**+0.5**
PILG				IAML		10 52 02.4	
	comp=Z,17nm,0.5s						
PRYS	**Parys**	**3.19**	**182**	*e*P	**Pn**	**10 51 10.5**	**+1.1**
PRYS				*e*S	**Sn**	**10 51 48.9**	**+0.6**
PRYS				IAML		10 52 06.6	
	comp=Z,10nm,0.4s						
MOPA	**Mopani**	**3.57**	**87**	*e*P	**Pn**	**10 51 15.0**	**+0.5**
MOPA				*e*S	**Sn**	**10 51 56.6**	**-0.9**
MOPA				IAML		10 52 13.7	
	comp=Z,29nm,0.5s						
SWZ	**Schweizer**	**3.97**	**209**	*e*P	**Pn**	**10 51 20.5**	**+0.3**
SWZ				*e*S	**Sn**	**10 52 07.0**	**-0.4**
SWZ				IAML		10 52 33.7	
	comp=Z,17nm,0.5s						
BOSA	**Boshof**	**5.28**	**202**	*e*P	**Pn**	**10 51 39.0**	**+0.9**
BOSA				*e*S	**Sn**	**10 52 38.4**	**-1.3**
BOSA				IAML		10 53 08.5	
	comp=Z,9.6nm,0.5s						

IDC 27 10:54:48.9±4.2, **2°.79S**×**138°.60E**, **h0**^{km}, **mb3.2**/2, **mbtmp3.4**/4, **ML3.4**/2, **Error ellipse: s-maj=141.1km s-min=31.4km az=89.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.55**	**193**	P	Pn	10 58 55.2	+0.1
	0.2nm,0.3s,baz=14,slow=12,SNR=14						
	0.3nm,0.3s						
FITZ	**Fitzroy Crossi**	**19.82**	**219**	P	P	10 59 21.2	-0.1
	0.1nm,0.3s,baz=41,slow=9.3,SNR=1.4						
	1.9nm,1.0s						
ASAR	**Alice Springs**	**21.24**	**192**	P	P	10 59 36.8	0.0
	0.7nm,0.6s,baz=16,slow=10,SNR=7.6						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**69.78**	**322**	P	P	11 06 01.3	0.0
	0.2nm,0.7s,baz=111,slow=7.9,SNR=2.5						
	0.2nm,0.7s						

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*SOME **27** 10:58:37.3, 43°.32N×81°.95E, h15^{km}*

NNC 27 10:58:38.9±1.6, **43°.32N**×**81°.90E**, **h0**^{km}, **mb3.5**, **mpv3.3**, **2D**, **Error ellipse: s-maj=11.8km s-min=9.8km az=164.0, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.13**	**277**	P	Pg	10 58 59.8	-0.9
	3.4nm,0.2s						
KTMS				S	Sg	10 59 15.9	+0.6
	4.7nm,0.2s						

KTMS	**Ketmen**	**1.13**	**277**	*e*P	Pg	10 58 59.8	-0.8
	3.4nm,0.2s						
KTMS				*e*S	Sg	10 59 15.9	+0.6
	4.7nm,0.2s						
PDGK	**Podgornoye**	**1.76**	**271**	⇓P	Pn	10 59 11.4	+0.6
	13nm,0.3s						
PDGK				⇓S	Sg	10 59 35.3	-0.1
	14nm,0.4s						
SHLS	**Shalkode**	**1.79**	**265**	P	Pn	10 59 06.7	-4.5
	8.2nm,0.2s						
SHLS				S	Sn	10 59 27.7	-7.0
	24nm,0.2s						
SHLS	**Shalkode**	**1.79**	**265**	*e*P	Pn	10 59 06.7	-4.5
	8.2nm,0.2s						
SHLS				*e*S	Sn	10 59 27.7	-7.0
	24nm,0.2s						
DJR	**Jarkent**	**1.83**	**304**	P	Pn	10 59 12.3	+0.5
	6.8nm,0.5s						
DJR				S	Sg	10 59 37.4	-0.3
	20nm,0.3s						
DJR	**Jarkent**	**1.83**	**304**	*e*P	Pn	10 59 12.3	+0.5
	6.8nm,0.5s						
DJR				*e*S	Sg	10 59 37.4	-0.3
	20nm,0.3s						
UZB	**Uzynbulak**	**2.11**	**266**	Pg	Pb	10 59 17.4	-0.7
	20nm,0.3s						
UZB				Lg	Lg	10 59 46.2	
	20nm,0.3s						
KNOS	**Konyrlen**	**2.22**	**299**	Pg	Pb	10 59 18.9	-1.2
	6.3nm,0.2s						
KNOS				Lg	Lg	10 59 49.2	
	7.8nm,0.2s						
KPKS	**Kokpek**	**2.35**	**275**	Pg	Pb	10 59 21.8	-0.4
	1.1nm,0.5s						
KPKS				Lg	Lg	10 59 53.8	
	27nm,0.5s						
SATY	**Saty**	**2.57**	**265**	Pg	Pb	10 59 25.1	-0.8
	8.0nm,0.3s						
SATY				Lg	Lg	11 00 00.1	
	22nm,0.4s						
BLB	**Baldybastay**	**2.60**	**288**	Pg	Pb	10 59 24.8	-1.6
	29nm,0.4s						
BLB				Lg	Lg	10 59 59.2	
	10nm,0.5s						
KST	**Kastek**	**4.35**	**268**	Pg	Pb	10 59 57.1	+0.7
	3.2nm,0.6s						
KST				Lg	Lg	11 00 54.2	
	1.9nm,0.9s						
KST	**Kastek**	**4.35**	**268**	*e*P	Pb	10 59 57.1	+0.7
	3.2nm,0.6s						
KST				*e*S	Sg	11 00 54.2	-4.5
	1.9nm,0.9s						

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*IDC **27** 11:01:14.8±1.0, 51°.64N×177°.04W, h0^{km}, mb3.7/11, mbtmp3.7/12, ML4.1/1, Error ellipse: s-maj=35.9km s-min=16.6km az=168.0*

*NEIC **27** 11:01:20.8±1.1, 51°.46N±0°.08×176°.71W±0°.04, h40^{km}±13^{km}, mb3.7/19, ML3.6(AEIC), Error ellipse: s-maj=11.2km s-min=3.5km az=168.0*

*AEIC **27** 11:01:20.1±0.9, 51°.45N±0°.06×176°.71W±0°.06, h32^{km}±7^{km}, Error ellipse: s-maj=9.6km s-min=5.2km az=162.0*

ISC 27 11:01:21.3±1.3**, 51°.6N**±0°.1×**176°.76W**±0°.05**, h49**^{km}±9^{km}**,**
n72, σ0^{s}88/71**, mb3.8**/11**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADK	**Adak**	**0.34**	**8**		**Pn**	**11 01 30.1**	**-0.6**
ADK	**Adak**	**0.34**	**8**		**Sn**	**11 01 37.2**	**-0.2**
KIMD	**Kanaga Island**	**0.36**	**306**		**Pn**	**11 01 30.2**	**-0.7**
KIMD					**Sn**	**11 01 37.5**	**-0.3**
KIWB	**Kanaga Island**	**0.39**	**321**		**Pn**	**11 01 31.0**	**-0.3**
KIRH	**Kanaga Island**	**0.41**	**329**		**Pn**	**11 01 31.4**	**0.0**
KIKV	**Kanaga Island**	**0.42**	**322**		**Pn**	**11 01 31.3**	**-0.2**
KIKV					**Sn**	**11 01 39.5**	**+0.6**
ADAG	**Mount Adagdak**	**0.44**	**13**		**Pn**	**11 01 31.8**	**-0.1**
ADAG					**Sn**	**11 01 40.1**	**+0.8**
GSCK	**Great Sitkin C**	**0.59**	**38**		**Pn**	**11 01 32.9**	**-0.7**
GSCK					**Sn**	**11 01 42.8**	**+0.3**
GSTD	**Great Sitkin T**	**0.63**	**37**		**Pn**	**11 01 33.8**	**-0.4**
GSSP	**Great Sitkin S**	**0.65**	**33**		**Pn**	**11 01 34.3**	**-0.1**
GSSP					**Sn**	**11 01 44.5**	**+0.7**
GSMY	**Great Sitkin M**	**0.66**	**41**		**Pn**	**11 01 34.0**	**-0.5**
GSMY					**Sn**	**11 01 43.8**	**-0.2**
GSIG	**Igitkin Island**	**0.68**	**49**		**Pn**	**11 01 33.8**	**-0.9**
GSTR	**Great Sitkin T**	**0.70**	**38**		**Pn**	**11 01 34.9**	**-0.1**
TASE	**Tanaga Southea**	**0.85**	**290**		**Pn**	**11 01 37.0**	**0.0**
GALAA	**Gareloi Lava P**	**1.27**	**280**		**Pn**	**11 01 42.9**	**+0.2**
GANE	**Gareloi Northe**	**1.29**	**283**		**Pn**	**11 01 43.0**	**+0.1**
GANO	**Gareloi North**	**1.30**	**283**		**Pn**	**11 01 43.0**	**-0.1**
GASW	**Gareloi Southw**	**1.33**	**281**		**Pn**	**11 01 43.6**	**+0.2**
ATKA	**Atka Island**	**1.72**	**67**		**Pn**	**11 01 47.5**	**-1.2**
CEPE	**Semis' Perret**	**2.27**	**282**		**Pn**	**11 01 56.6**	**+0.2**
CEAP	**Semis' Anvil P**	**2.32**	**283**		**Pn**	**11 01 57.5**	**+0.5**
CETU	**Semis' Tuman**	**2.37**	**282**		**Pn**	**11 01 58.2**	**+0.5**
AMKA	**Amchitka**	**2.47**	**268**		**Pn**	**11 01 58.6**	**-0.4**
LSPA	**Little Sitkin**	**2.93**	**280**		**Pn**	**11 02 05.7**	**+0.4**
LSSE	**Little Sitkin**	**2.93**	**279**		**Pn**	**11 02 05.8**	**+0.5**
NIKH	**Nikolski High**	**5.06**	**71**	Pn	**Pn**	**11 02 35.5**	**+0.9**
SMY	**Shemya**	**5.75**	**285**	Pn	**Pn**	**11 02 43.7**	**-0.3**
UNV	**Unalaska Valle**	**6.64**	**66**	Pn	**Pn**	**11 02 57.0**	**+0.9**
CNBA	**Chernabura Isl**	**10.81**	**66**	Pn	**Pn**	**11 03 52.9**	**-0.3**
OHAK	**Old Harbor**	**14.76**	**58**	Pn	**Pn**	**11 04 46.8**	**0.0**
KDAK	**Kodiak Island**	**15.26**	**56**	Pn	**Pn**	**11 04 52.7**	**-0.6**
KDAK	**Kodiak Island**	**15.26**	**56**	Pn	**Pn**	**11 04 50.7**	**-2.6**
	0.7nm,0.3s,baz=254,slow=7.4,SNR=18						
KDAK				Sn	**Sn**	**11 07 41.0**	**0.0**
	0.2nm,0.3s,baz=330,slow=20,SNR=2.1						
	8.8nm,1.0s						
CNPM	**China Poot**	**16.42**	**51**	Pn	**Pn**	**11 05 08.2**	**+0.1**
SLKM	**Skilak Lake**	**17.22**	**48**	Pn	**Pn**	**11 05 17.8**	**-0.2**
SLKM				IAmb	IAmb	11 05 18.5	
	comp=Z,6.8nm,1.2s						
CAST	**Castle Rocks**	**17.66**	**38**	P	**P**	**11 05 25.1**	**+1.2**
CAST				IAmb	IAmb	11 05 45.8	
	comp=Z,6.5nm,1.3s						
KTH	**Kantishna Hill**	**18.18**	**39**	P	**Pn**	**11 05 31.0**	**+1.1**
KTH				IAmb	IAmb	11 05 51.0	
	comp=Z,4.4nm,0.8s						
TRF	**Thorofare Moun**	**18.38**	**39**	P	**Pn**	**11 05 32.9**	**+0.5**
BPAW	**Bear Paw Mtn.**	**18.43**	**37**	P	**Pn**	**11 05 34.3**	**+1.4**
E19K	**Redstone River**	**18.63**	**24**	P	**Pn**	**11 05 35.7**	**+0.6**
RND	**Reindeer**	**18.94**	**40**	P	**P**	**11 05 38.8**	**+0.8**
RND				IAmb	IAmb	11 05 42.3	
	comp=Z,4.2nm,0.8s						
MLY	**Manley**	**19.02**	**35**	P	**P**	**11 05 39.4**	**+0.7**
D19K	**Kuna River**	**19.23**	**21**	P	**Pn**	**11 05 42.9**	**+0.5**
D19K				IAmb	IAmb	11 05 47.4	
	comp=Z,4.0nm,1.1s						
DHY	**Denali Highway**	**19.41**	**42**	P	**P**	**11 05 43.8**	**+0.6**
I23K	**Minto, Yukon-K**	**19.57**	**35**	P	**P**	**11 05 45.9**	**+1.2**
I23K				IAmb	IAmb	11 05 57.0	
	comp=Z,3.6nm,0.8s						
D20K	**Etivluk River**	**19.74**	**22**	P	**Pn**	**11 05 48.2**	**-0.2**
CCB	**Clear Creek Bu**	**19.91**	**38**	P	**P**	**11 05 48.2**	**-0.2**
CCB				IAmb	IAmb	11 06 01.3	
	comp=Z,4.1nm,1.2s						
ILAR	**Eielson Array**	**20.32**	**38**	P	**P**	**11 05 53.7**	**+0.8**
ILAR	**Eielson Array**	**20.32**	**38**	P	**P**	**11 05 54.1**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=243,slow=11,SNR=9.5						
ILAR				PcP	**PcP**	**11 10 02.9**	**-1.2**
	comp=Z,0.2nm,0.4s,baz=281,slow=3.3,SNR=1.9						
	comp=Z,0.3nm,0.6s						
H24K	**Noodor Dome**	**20.46**	**35**	P	**P**	**11 05 55.6**	**+1.1**
H24K				IAmb	IAmb	11 06 07.2	
	comp=Z,3.0nm,0.7s						
RIDG	**Independent Ri**	**20.72**	**42**	P	**P**	**11 05 58.1**	**+0.9**
RIDG				IAmb	IAmb	11 06 31.3	
	comp=Z,4.3nm,1.0s						
D22K	**Ayikyak River**	**20.83**	**25**	P	**P**	**11 05 59.4**	**+1.0**
D22K				IAmb	IAmb	11 06 23.4	
	comp=Z,5.3nm,1.3s						
D23K	**Nanushuk River**	**21.42**	**26**	P	**P**	**11 06 06.0**	**+1.3**
D23K				IAmb	IAmb	11 06 20.3	
	comp=Z,2.3nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**34.25**	**208**	T	T	11 44 16.1	
	baz=18,slow=76,SNR=676						
H11N3	**WAKE ISLAND Hy**	**34.26**	**208**	T	T	11 44 22.5	
	baz=18,slow=76,SNR=680						
H11N1	**WAKE ISLAND Hy**	**34.27**	**208**	T	T	11 44 23.1	
	baz=18,slow=76,SNR=545						
H11S1	**WAKE ISLAND Hy**	**35.47**	**208**	T	T	11 45 54.5	
	baz=18,slow=76,SNR=450						
H11S2	**WAKE ISLAND Hy**	**35.48**	**208**	T	T	11 45 59.4	
	baz=18,slow=76,SNR=422						
H11S3	**WAKE ISLAND Hy**	**35.48**	**208**	T	T	11 45 59.5	
	baz=18,slow=76,SNR=262						
KSRS	**Korea Array**	**40.91**	**272**	P	**P**	**11 08 58.0**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=52,slow=6.7,SNR=2.5						
	comp=Z,0.4nm,0.5s						
PDAR	**Pinedale Array**	**45.04**	**74**	P	**P**	**11 09 33.4**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=308,slow=7.9,SNR=4.0						
	comp=Z,0.4nm,0.6s						
SONM	**Songino Array**	**47.71**	**298**	P	**P**	**11 09 53.4**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=71,slow=9.3,SNR=2.1						
	comp=Z,0.4nm,0.4s						
TXAR	**Lajitas Array**	**57.37**	**83**	P	**P**	**11 11 07.2**	**+2.6**
	comp=Z,0.2nm,0.4s,baz=325,slow=7.0,SNR=6.3						
	comp=Z,0.2nm,0.4s						
MKAR	**Makanchi Array**	**60.92**	**309**	P	**P**	**11 11 26.9**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=46,slow=7.8,SNR=2.2						
	comp=Z,0.1nm,0.3s						
BVAR	**Borovoye Array**	**61.57**	**321**	P	**P**	**11 11 32.4**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=43,slow=8.4,SNR=4.4						
	comp=Z,0.8nm,0.4s						
AKTO	**Aktyubinsk**	**68.27**	**326**	P	**P**	**11 12 16.4**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=0.0,slow=1.0,SNR=1.4						
	comp=Z,0.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**72.26**	**277**	P	**P**	**11 12 41.8**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=37,slow=6.6,SNR=4.1						
	comp=Z,0.6nm,0.4s						
BRTR	**Keskin Array B**	**85.30**	**337**	P	**P**	**11 13 50.9**	**-2.0**
	comp=Z,0.7nm,0.8s,baz=24,slow=7.7,SNR=2.8						
	comp=Z,0.7nm,0.8s						
FITZ	**Fitzroy Crossi**	**85.58**	**234**	P	**P**	**11 13 54.4**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=355,slow=4.0,SNR=7.3						
	comp=Z,1.2nm,0.5s						
H03N2	**Juan Fernandez**	**119.97**	**107**	T	T	13 31 44.2	
	baz=317,slow=77,SNR=38						
H03N1	**Juan Fernandez**	**119.98**	**107**	T	T	13 31 42.9	
	baz=317,slow=77,SNR=42						
H03N3	**Juan Fernandez**	**119.98**	**107**	T	T	13 31 42.1	
	baz=317,slow=77,SNR=41						
BOSA	**Boshof**	**151.78**	**316**	PKPbc	**PKPbc**	**11 21 09.0**	**-1.3**
	comp=Z,2.9nm,0.8s,baz=36,slow=4.3,SNR=3.6						

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*IDC **27** 11:04:54.6±0.3, 30°.37S×179°.18W, h0^{km}, mb5.0/31, mbtmp5.0/33, ML4.4/2, MS6.0/51, Error ellipse: s-maj=11.1km s-min=9.2km az=50.0*

*ISC-PP **27** 11:04:56, 30°.40S×179°.18W, h2^{km}, Mwppsm6.3, Moment Tensor Solution. s24 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.21±.10; M$_{\theta\theta}$0.27±.23; M$_{\phi\phi}$-0.12±.12; M$_{r\theta}$-0.35±.12; M$_{\theta\phi}$0.02±.13; M$_{\phi r}$0.56±.14; Fault plane solution: M$_0$3.27000×10^{18} NP1:φ$_s$95.40000°, δ81.40000°, λ325.60000°. NP2:φ$_s$191.20000°, δ56.00000°, λ-169.60000°.*

*NEIC **27** 11:04:56.3±2.3, 30°.40S±0°.07×179°.18W±0°.09, h10^{km}±1^{km}, mb5.7/226, Ms_20 6.3/1033, Mwb6.2/65, Mww6.3/24 Error ellipse: s-maj=15.0km s-min=9.5km az=130.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.02; M$_{\theta\theta}$-0.24; M$_{\phi\phi}$0.26; M$_{r\theta}$0.42; M$_{\theta\phi}$2.05; M$_{\phi r}$0.23; Fault plane solution: M$_0$2.12000×10^{18} NP1: φ$_s$355.97000°, δ78.42000°, λ174.90000°. NP2: φ$_s$87.00000°, δ85.00000°, λ11.62000°. Principal axes: T 2.1669, Plg12.0000°, Azm312.0000°; N -0.1050, Plg77.0000°, Azm110.0000°; P -2.0619, Plg5.0000°, Azm221.0000°;*

*NEIC **27** 11:04:56.2, 30°.31S×178°.78W, h22^{km}, Moment Tensor Solution. Duration: 8^{s}0 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.61; M$_{\theta\theta}$0.30; M$_{\phi\phi}$0.31; M$_{r\theta}$0.79; M$_{\theta\phi}$3.25; M$_{\phi r}$0.86; Fault plane solution: M$_0$3.49000×10^{18} NP1:φ$_s$90.99000°, δ78.71000°, λ9.45000°. NP2:φ$_s$359.12000°, δ80.74000°, λ168.56000°. Principal axes: T 3.8590, Plg15.0000°, Azm315.0000°; N -0.9097, Plg75.0000°, Azm141.0000°; P -2.9493, Plg1.0000°, Azm45.0000°;*

*NEIC **27** 11:04:56.2, 30°.41S×179°.13W, h22^{km}*

*BJI **27** 11:04:56.6, 30°.20S×179°.20W, h10^{km}, mB6.1/74, mb5.4/53, Ms6.2/83, Ms7 6.2/82*

*NEIC **27** 11:04:56.3, 30°.40S×179°.18W, h10^{km}*

*MOS **27** 11:04:56.2±1.2, 30°.44S×179°.34W, h14^{km}, mb5.9/25, MS6.2/37, Error ellipse: s-maj=10.2km s-min=7.6km az=123.5*

*IPGP **27** 11:04:57.0, 30°.39S×179°.23W, h13^{km}, Mw6.4, Fault plane solution: NP1:φ$_s$91.00000°, δ84.00000°, λ10.00000°.*

*NOU **27** 11:05:01.3, 30°.59S×179°.03W, h43^{km}, ML5.9/134, Kermadec Islands Region*

*GCMT **27** 11:05:01.3±0.0, 30°.34S×179°.22W, h12^{km}, MW6.3/170, Moment Tensor Solution. s165,c390; s170,c687; Duration: 3^{s}4 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.43±.01; M$_{\theta\theta}$0.44±.01; M$_{\phi\phi}$-0.01±.01; M$_{r\theta}$0.57±.04; M$_{\theta\phi}$3.19±.01; M$_{\phi r}$-0.77±.04; Best double couple: M$_0$3.35600×10^{18} NP1:φ$_s$271.00000°, δ76.00000°, λ-12.00000°. NP2:φ$_s$4.00000°, δ78.00000°, λ-166.00000°. Principal axes: T 3.4160, Plg2.0000°, Azm137.0000°; N -0.1210, Plg72.0000°, Azm42.0000°; P -3.2960, Plg18.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 27 11:04:57.3±0.4**, 30°.43S**±0°.03×**179°.10W**±0°.03**, h14**^{km}±2^{km}**,**
h14^{km}:pP-P, n1421, σ1^{s}91/969**, mb5.6**/226**, MS6.3**/609**,**
58C-45D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.55**	**42**	P	**Pn**	**11 05 20.9**	**-3.5**
RIZ	**Raoul Island**	**1.56**	**41**	P	**Pn**	**11 05 21.1**	**-3.4**
RAO	**Raoul Island**	**1.56**	**42**		**Pn**	**11 05 22.1**	**-2.4**
RAO	**Raoul Island**	**1.56**	**42**	Pn	**Pn**	**11 05 21.4**	**-3.2**
	663nm,0.3s,baz=178,slow=12,SNR=53						
RAO	**Raoul Island**	**1.56**	**42**	P	**Pg**	**11 05 26.6**	**-0.6**
RAO	**Raoul Island**	**1.56**	**42**	P	**Pn**	**11 05 22.1**	**-2.4**
RAO	**Raoul Island**	**1.56**	**42**	⇓P	**Pn**	**11 05 20.8**	**-3.7**
MXZ	**Matakaoa Point**	**7.43**	**196**		**Pn**	**11 06 45.5**	**+0.2**
MXZ	**Matakaoa Point**	**7.43**	**196**	P	**Pn**	**11 06 46.1**	**+0.8**
MXZ	**Matakaoa Point**	**7.43**	**196**	P	**Pn**	**11 06 45.2**	**0.0**
MXZ				T	T	11 13 52.3	
KUZ	**Kuaotunu**	**7.64**	**213**	P	**Pn**	**11 06 50.5**	**+2.4**
KUZ	**Kuaotunu**	**7.64**	**213**	P	**Pn**	**11 06 49.4**	**+1.3**
KUZ				T	T	11 13 45.6	
WMGZ	**Waiomatatini S**	**7.65**	**195**	P	**Pn**	**11 06 47.6**	**-0.7**
WIZ	**White Island**	**7.72**	**203**	P	**Pn**	**11 06 50.4**	**+1.2**
HAZ	**Te Kaha**	**7.75**	**199**	P	**Pn**	**11 06 49.4**	**-0.2**
WCZ	**Waipu Caves**	**7.77**	**223**	P	**Pn**	**11 06 49.6**	**-0.2**
PKGZ	**Pakihiroa**	**7.78**	**197**	P	**Pn**	**11 06 52.4**	**+2.4**
OUZ	**Omahuta**	**7.78**	**230**	P	**Pn**	**11 06 49.5**	**-0.6**
OUZ	**Omahuta**	**7.78**	**230**	P	**Pn**	**11 06 49.0**	**-1.1**
OUZ	**Omahuta**	**7.78**	**230**	⇓P	**Pn**	**11 06 49.0**	**-1.1**
PUZ	**Puketiti**	**7.93**	**195**	P	**Pn**	**11 06 51.0**	**-1.1**
RUGZ	**Raukumara Rang**	**7.98**	**199**	P	**Pn**	**11 06 53.5**	**+0.7**
WHRZ	**Whale Island**	**8.09**	**203**	P	**Pn**	**11 06 56.8**	**+2.5**
TWGZ	**Tauwhareparae**	**8.10**	**197**	P	**Pn**	**11 06 52.6**	**-1.9**
MKAZ	**Moumakai**	**8.19**	**214**	P	**Pn**	**11 06 57.5**	**+1.9**
OPRZ	**Ohinepanea**	**8.22**	**205**	P	**Pn**	**11 06 59.0**	**+2.9**
TGRZ	**Tauranga**	**8.23**	**207**	P	**Pn**	**11 06 59.6**	**+3.4**
MARZ	**Manawahe**	**8.31**	**204**	P	**Pn**	**11 06 59.9**	**+2.5**
MWZ	**Matawai**	**8.36**	**199**	P	**Pn**	**11 06 58.0**	**0.0**
TKGZ	**Te Karaka**	**8.38**	**197**	P	**Pn**	**11 06 58.8**	**+0.6**
TKGZ				S	Sn	11 08 44.2	+12
EDRZ	**Edgecumbe**	**8.39**	**203**	P	**Pn**	**11 07 02.6**	**+4.1**
URZ	**Urewera**	**8.41**	**201**	Pn	**Pn**	**11 06 58.9**	**+0.2**
	6.0nm,0.3s,baz=19,slow=9.0,SNR=33						
	100nm,0.4s						
URZ	**Urewera**	**8.41**	**201**	P	**Pn**	**11 06 59.5**	**+0.8**
URZ	**Urewera**	**8.41**	**201**	P	**Pn**	**11 06 59.3**	**+0.6**
URZ				S	**Sn**	**11 08 37.5**	**+4.0**
URZ	**Urewera**	**8.41**	**201**	⇑P	**Pn**	**11 06 58.9**	**+0.2**
KMRZ	**Kaimai**	**8.46**	**208**	P	**Pn**	**11 07 01.2**	**+1.8**
KARZ	**Kaharoa**	**8.49**	**206**	P	**Pn**	**11 07 02.2**	**+2.3**
MKRZ	**Makatiti**	**8.52**	**204**	P	**Pn**	**11 07 01.7**	**+1.4**
OMRZ	**Omania**	**8.52**	**205**	P	**Pn**	**11 07 03.7**	**+3.4**
RAGZ	**Rawiri**	**8.54**	**199**	P	**Pn**	**11 07 00.2**	**-0.4**
RAGZ				S	Sn	11 08 46.9	+10
TOZ	**Tahuroa Road**	**8.55**	**210**		**Pn**	**11 07 03.1**	**+2.6**
NGRZ	**Ngongotaha**	**8.59**	**206**	P	Pn	11 07 07.3	+6.1
TARZ	**Mount Tarawera**	**8.59**	**204**	P	**Pn**	**11 07 04.8**	**+3.6**
RIGZ	**Rimuhau**	**8.65**	**197**	P	**Pn**	**11 07 01.1**	**-0.9**
UTU	**Utuhina**	**8.65**	**205**	P	**Pn**	**11 07 04.3**	**+2.3**
HLRZ	**Highlands Stat**	**8.66**	**204**	P	**Pn**	**11 07 06.2**	**+4.1**
RRRZ	**Republican Roa**	**8.68**	**203**	P	**Pn**	**11 07 04.8**	**+2.3**
MUGZ	**Murupara**	**8.72**	**202**	P	**Pn**	**11 07 03.5**	**+0.6**
HSRZ	**Hossack Road**	**8.75**	**205**	P	**Pn**	**11 07 06.2**	**+2.9**
RTZ	**Ruatahuna**	**8.78**	**201**		**Pn**	**11 07 04.5**	**+0.6**
RTZ	**Ruatahuna**	**8.78**	**201**	P	**Pn**	**11 07 04.5**	**+0.6**
HRRZ	**Handcock Road**	**8.81**	**204**	P	**Pn**	**11 07 08.1**	**+4.0**
PRGZ	**Paritu Road**	**8.83**	**196**	P	**Pn**	**11 07 04.5**	**+0.1**
PRGZ				S	**Sn**	**11 08 47.4**	**+3.7**
SNGZ	**Shannon Statio**	**8.83**	**198**	P	**Pn**	**11 07 04.7**	**+0.2**
GRRZ	**Galatos Road**	**8.84**	**205**	P	**Pn**	**11 07 06.2**	**+1.7**
PRRZ	**Plateau Road**	**8.87**	**204**	P	**Pn**	**11 07 05.3**	**+0.4**
ALRZ	**Allen Road**	**8.94**	**204**	P	**Pn**	**11 07 08.7**	**+2.8**
WPRZ	**Whakapapatarin**	**8.97**	**205**	P	**Pn**	**11 07 09.3**	**+2.9**
KNZ	**Kokohu**	**8.97**	**196**	P	**Pn**	**11 07 08.2**	**+1.8**
RAHZ	**Arahi**	**9.03**	**199**	P	**Pn**	**11 07 06.4**	**-0.8**
RAHZ				S	Sn	11 08 58.1	+9.5
MTHZ	**Maungataniwha**	**9.04**	**201**	P	**Pn**	**11 07 08.9**	**+1.5**
MTHZ				S	**Sn**	**11 08 51.4**	**+2.4**
MHGZ	**Mahia Peninsul**	**9.04**	**195**	P	**Pn**	**11 07 06.7**	**-0.7**
MHGZ				S	**Sn**	**11 08 53.4**	**+4.4**
KUTZ	**Kaahu Road**	**9.06**	**206**	P	Pn	11 07 13.7	+6.0
WHHZ	**Waihua**	**9.14**	**198**	P	**Pn**	**11 07 10.3**	**+1.6**
MRHZ	**Matea Rd**	**9.16**	**203**	P	**Pn**	**11 07 07.8**	**-1.2**
WHTZ	**Whakaora**	**9.17**	**205**	P	**Pn**	**11 07 13.5**	**+4.3**
NMHZ	**Naumai**	**9.28**	**200**	P	**Pn**	**11 07 10.5**	**-0.1**
WATZ	**Wairara**	**9.29**	**206**	P	Pn	11 07 15.4	+4.6
ARHZ	**Aropaoanui**	**9.38**	**199**	P	**Pn**	**11 07 13.1**	**+1.2**
RATZ	**Rangitukua**	**9.41**	**205**	P	**Pn**	**11 07 14.3**	**+1.8**
BKZ	**Black Stump Fm**	**9.44**	**201**		**Pn**	**11 07 13.3**	**+0.5**
BKZ	**Black Stump Fm**	**9.44**	**201**	P	**Pn**	**11 07 14.4**	**+1.6**
BKZ	**Black Stump Fm**	**9.44**	**201**	P	**Pn**	**11 07 13.6**	**+0.8**
HIZ	**Hauiti**	**9.48**	**210**		**Pn**	**11 07 15.3**	**+2.0**
HIZ	**Hauiti**	**9.48**	**210**	P	**Pn**	**11 07 14.1**	**+0.8**
RITZ	**Rihia Road**	**9.48**	**205**	P	**Pn**	**11 07 16.1**	**+2.7**
NTVZ	**North Tongarir**	**9.65**	**205**	P	**Pn**	**11 07 17.0**	**+1.1**
TMVZ	**Te Maari**	**9.66**	**205**	P	**Pn**	**11 07 16.7**	**+0.8**
KRVZ	**Karewarewa**	**9.66**	**205**	P	**Pn**	**11 07 16.7**	**+0.7**
ETVZ	**East Tongariro**	**9.68**	**205**	P	**Pn**	**11 07 16.8**	**+0.7**
KWHZ	**Kaweka Forest**	**9.70**	**201**	P	**Pn**	**11 07 16.3**	**0.0**
KWHZ				S	Sn	11 09 16.4	+11
WTVZ	**West Tongariro**	**9.70**	**205**	P	**Pn**	**11 07 17.0**	**+0.5**
NNVZ	**North Ngauruho**	**9.71**	**205**	P	**Pn**	**11 07 17.3**	**+0.7**
TWVZ	**Taurewa**	**9.72**	**206**	P	**Pn**	**11 07 17.5**	**+0.8**
WHVZ	**Whangaehu Hut**	**9.85**	**205**	P	**Pn**	**11 07 21.4**	**+2.8**
TRVZ	**Turoa**	**9.88**	**205**	P	**Pn**	**11 07 21.9**	**+2.9**
KAHZ	**Kahuranaki**	**9.91**	**198**	P	**Pn**	**11 07 18.9**	**-0.3**
KRHZ	**Kereru**	**9.91**	**201**	P	**Pn**	**11 07 18.4**	**-0.9**
KRHZ				S	**Sn**	**11 09 16.1**	**+5.8**
PKVZ	**Pokaka**	**9.94**	**206**	P	**Pn**	**11 07 21.2**	**+1.4**
MTVZ	**Mangateitei**	**9.98**	**205**	P	Pn	11 07 25.6	+5.3
VRZ	**Vera Road**	**10.03**	**209**	P	**PKiKP**	**11 21 29.0**	**-1.8**
PXZ	**Pawanui**	**10.13**	**198**	P	**Pn**	**11 07 20.6**	**-1.6**
PXZ				S	**Sn**	**11 09 17.0**	**+1.4**
PNHZ	**Pukenui**	**10.21**	**201**	P	**Pn**	**11 07 21.3**	**-2.2**
PNHZ				S	**Sn**	**11 09 20.6**	**+2.9**
PRHZ	**Porangahau**	**10.41**	**198**	P	**Pn**	**11 07 23.8**	**-2.3**
TSZ	**Takapari Road**	**10.42**	**201**	P	**PKiKP**	**11 21 32.8**	**+1.8**
LREZ	**Lake Rotokare**	**10.46**	**209**	P	Pn	11 07 31.4	+4.6
PREZ	**Palmer Road**	**10.47**	**210**	P	Pn	11 07 31.6	+4.7
WAZ	**Wanganui**	**10.49**	**206**	P	**Pn**	**11 07 29.5**	**+2.3**
KHEZ	**Kahui Hut**	**10.49**	**211**	P	**Pn**	**11 07 27.7**	**+0.4**
DVHZ	**Dannevirke**	**10.58**	**200**	P	**Pn**	**11 07 27.7**	**-0.7**
DVHZ				S	**Sn**	**11 09 29.0**	**+2.4**
NMEZ	**Namu Road**	**10.65**	**211**	P	**Pn**	**11 07 33.6**	**+4.3**
BFZ	**Birch Farm**	**10.91**	**199**		**Pn**	**11 07 30.3**	**-2.6**
BFZ	**Birch Farm**	**10.91**	**199**	P	**Pn**	**11 07 30.8**	**-2.1**
BFZ	**Birch Farm**	**10.91**	**199**	P	**Pn**	**11 07 30.7**	**-2.1**
BFZ				S	**Sn**	**11 09 36.6**	**+1.9**
MRZ	**Mangatainoka R**	**11.09**	**202**		**Pn**	**11 07 31.6**	**-3.8**
MRZ	**Mangatainoka R**	**11.09**	**202**	P	**Pn**	**11 07 31.8**	**-3.5**
MRZ				S	**Sn**	**11 09 41.6**	**+2.5**
TIWZ	**Tintock**	**11.10**	**200**	P	**Pn**	**11 07 34.9**	**-0.7**
TIWZ				S	**Sn**	**11 09 42.0**	**+2.6**
CPWZ	**Castlepoint**	**11.13**	**199**	P	**Pn**	**11 07 35.8**	**-0.1**
HOWZ	**Holdsworth Sta**	**11.32**	**201**	P	**Pn**	**11 07 35.7**	**-2.9**
HOWZ				S	**Sn**	**11 09 46.8**	**+1.9**
NFK	**Norfolk Island**	**11.35**	**274**	P	**Pn**	**11 07 36.9**	**-2.1**
	comp=Z,0.0nmcomp=Z,291nm,1.2s						
NFK	**Norfolk Island**	**11.35**	**274**	⇑P	**Pn**	**11 07 36.9**	**-2.1**
OGWZ	**Otaki Gorge**	**11.36**	**203**	P	**Pn**	**11 07 36.1**	**-3.0**
OGWZ				S	**Sn**	**11 09 47.8**	**+2.0**
TMWZ	**Te Maipa**	**11.40**	**199**	P	**Pn**	**11 07 36.5**	**-3.2**
KIW	**Kapiti Island**	**11.49**	**203**	P	**Pn**	**11 07 38.5**	**-2.3**
MTW	**Mount Morrison**	**11.56**	**201**	P	**Pn**	**11 07 39.7**	**-2.2**
CAW	**Cannon Point**	**11.66**	**202**	P	**Pn**	**11 07 40.7**	**-2.5**
PAWZ	**Paruwai Farm**	**11.79**	**201**	P	**Pn**	**11 07 43.8**	**-1.2**
DUWZ	**D'Urville Isla**	**11.80**	**207**	P	**Pn**	**11 07 44.2**	**-0.9**
MSWZ	**Moikau Station**	**11.88**	**201**		**Pn**	**11 07 42.8**	**-3.4**
MSWZ	**Moikau Station**	**11.88**	**201**	P	**Pn**	**11 07 42.6**	**-3.5**
SNZO	**South Karori**	**11.96**	**203**		**Pn**	**11 07 44.5**	**-2.8**
SNZO	**South Karori**	**11.96**	**203**	P	**Pn**	**11 07 48.7**	**+1.5**
SNZO	**South Karori**	**11.96**	**203**	⇓P	**Pn**	**11 07 43.8**	**-3.5**
BHW	**Baring Head**	**11.99**	**202**		**Pn**	**11 07 46.1**	**-1.6**
PLWZ	**Palliser**	**12.02**	**201**		**Pn**	**11 07 44.5**	**-3.6**
PLWZ	**Palliser**	**12.02**	**201**	P	**Pn**	**11 07 44.0**	**-4.0**
PLWZ				S	**Sn**	**11 10 02.0**	**+0.1**
TCW	**Tory Channel**	**12.02**	**205**		**Pn**	**11 07 44.2**	**-3.9**
TCW	**Tory Channel**	**12.02**	**205**	P	**Pn**	**11 07 45.1**	**-3.0**
LKBA	**Tubou, Lakemba**	**12.14**	**1**	P	**Pn**	**11 07 53.5**	**+3.6**
TUWZ	**Tuamarina**	**12.33**	**205**		**Pn**	**11 07 48.4**	**-3.9**
TUWZ	**Tuamarina**	**12.33**	**205**	P	**Pn**	**11 07 48.1**	**-4.2**
NNZ	**Nelson**	**12.37**	**207**	P	**Pn**	**11 07 49.8**	**-3.0**
TKNZ	**Takaka Hill**	**12.38**	**209**		**Pn**	**11 07 51.0**	**-2.1**
TKNZ	**Takaka Hill**	**12.38**	**209**	P	**Pn**	**11 07 50.8**	**-2.4**
QRZ	**Quartz Range**	**12.40**	**211**		**Pn**	**11 07 51.7**	**-1.7**
QRZ	**Quartz Range**	**12.40**	**211**	P	**Pn**	**11 07 54.2**	**+0.9**
QRZ	**Quartz Range**	**12.40**	**211**	P	**Pn**	**11 07 51.6**	**-1.7**
CMWZ	**Cape Campbell**	**12.52**	**204**		**Pn**	**11 07 54.7**	**-0.2**
BSWZ	**Blackbirch Sta**	**12.61**	**205**		**Pn**	**11 07 54.2**	**-2.0**
MRNZ	**Matariki Terra**	**12.77**	**209**		**Pn**	**11 07 56.4**	**-2.0**
MSVF	**Nonsavu**	**12.90**	**348**	LR	LR	11 11 56.0	
	comp=Z,276µm,20.3s,baz=154,slow=33						
MSVF	**Nonsavu**	**12.90**	**348**	P	Pn	11 08 05.7	+5.4
MSVF	**Nonsavu**	**12.90**	**348**	*c i*P	**Pn**	**11 08 01.7**	**+1.4**
MSVF	**Nonsavu**	**12.90**	**348**	⇑P	**Pn**	**11 08 01.2**	**+0.9**
KHZ	**Kahutara**	**13.34**	**204**		Pn	11 08 00.3	-5.8
KHZ	**Kahutara**	**13.34**	**204**	⇓P	Pn	11 07 59.9	-6.2
CTZ	**Chatham Island**	**13.43**	**172**	P	**Pn**	**11 08 03.9**	**-3.4**
CTZ	**Chatham Island**	**13.43**	**172**	P	**Pn**	**11 08 03.9**	**-3.4**
DSZ	**Denniston Nort**	**13.46**	**211**		**Pn**	**11 08 08.8**	**+0.9**
TAVE	**Taveuni**	**13.68**	**357**	P	**P**	**11 08 15.9**	**-3.7**
GVZ	**Greta Valley S**	**14.00**	**205**		**Pn**	**11 08 10.5**	**-4.7**
NIUE	**Niue**	**14.03**	**38**	P	**Pn**	**11 08 16.9**	**+1.2**
DGTI	**Dogotuki**	**14.10**	**355**	P	**P**	**11 08 21.8**	**-2.6**
LTZ	**Lake Taylor**	**14.13**	**207**		**Pn**	**11 08 13.7**	**-3.3**
PINNC	**Pines Island,**	**14.33**	**300**		**Pn**	**11 08 20.0**	**+0.2**
PINNC	**Pines Island,**	**14.33**	**300**	P	**P**	**11 08 24.7**	**-2.1**
INZ	**Inchbonnie**	**14.42**	**209**		**Pn**	**11 08 17.9**	**-3.0**
MARNC	**Mare, Loyalty**	**14.60**	**305**	P	**P**	**11 08 27.9**	**-1.9**
OUENC	**Ouen Island, N**	**14.90**	**299**	P	**P**	**11 08 31.7**	**-1.4**
INH	**Isangel**	**15.10**	**313**	P	**P**	**11 08 35.0**	**-0.4**
ONTNC	**Ouen Toro**	**15.26**	**299**		**Pn**	**11 08 29.9**	**-2.4**
ONTNC				IAmb	IAmb	11 08 38.1	
	comp=Z,477nm,1.5s						
ONTNC	**Ouen Toro**	**15.26**	**299**	P	**P**	**11 08 34.3**	**-2.8**
RPZ	**Rata Peaks**	**15.40**	**208**	Pn	**Pn**	**11 08 27.2**	**-6.8**
	comp=Z,2.4nm,0.3s,baz=61,slow=17,SNR=16						
RPZ				Sn	**Sn**	**11 11 16.7**	**-7.7**
	comp=Z,0.8nm,0.3s,baz=29,slow=19,SNR=1.4						
RPZ				LR	LR	11 14 30.6	
	comp=Z,102µm,18.2s,baz=38,slow=37						
DZM	**Mont Dzumac**	**15.40**	**299**		**Pn**	**11 08 33.7**	**-0.6**
DZM	**Mont Dzumac**	**15.40**	**299**	*e*Pn	**Pn**	**11 08 32.5**	**-1.8**
	comp=Z,847nm,1.4s						
DZM				*e*LR	LR	11 11 57.5	
	comp=Z,328µm,26.8s						
DZM	**Mont Dzumac**	**15.40**	**299**	Pn	**Pn**	**11 08 32.4**	**-1.8**
	comp=Z,1.0nm,0.3s,baz=127,slow=15,SNR=20						
DZM				LR	LR	11 13 16.2	
	comp=Z,193µm,18.7s,baz=123,slow=33						
	comp=Z,67nm,0.9s						
DZM	**Mont Dzumac**	**15.40**	**299**	⇑P	**Pn**	**11 08 32.6**	**-1.6**
FOZ	**Fox Glacier**	**15.77**	**211**	P	**Pn**	**11 08 37.9**	**-1.0**
LBZ	**Lake Benmore**	**16.30**	**208**		**P**	**11 08 47.1**	**-1.6**
JCZ	**Jackson Bay**	**16.66**	**212**	P	**Pn**	**11 08 49.6**	**-0.8**
ODZ	**Otahua Downs**	**16.67**	**206**	P	**Pn**	**11 08 48.9**	**-1.5**
ODZ	**Otahua Downs**	**16.67**	**206**	P	**P**	**11 08 52.2**	**-0.5**
ODZ	**Otahua Downs**	**16.67**	**206**	⇑P	**Pn**	**11 08 44.9**	**-5.5**
WKZ	**Wanaka**	**17.15**	**210**	P	**P**	**11 08 58.4**	**+0.3**
EAZ	**Earnscleugh**	**17.36**	**208**	P	**P**	**11 09 03.1**	**+2.8**
AFI	**Afiamalu**	**17.77**	**24**	P	**Pn**	**11 09 03.8**	**-0.6**
KOUNC	**Koumac, New Ca**	**17.92**	**299**	P	**P**	**11 09 06.9**	**+0.3**

KOUNC	Koumac, New Ca	17.92	299	⇑P	P	11 09 05.6	-1.0
MLZ	Mavora Lakes	17.97	210		Pn	11 09 06.1	-0.5
WHZ	Wether Hill Ro	18.46	210		Pn	11 09 12.5	0.0
LHI	Lord Howe Isla	18.76	261	P	Pn	11 09 15.2	-1.1
LHI	Lord Howe Isla	18.76	261	P	P	11 09 14.3	-1.6
	comp=Z,0.0nmcomp=Z,322nm,1.5s						
VLAKA	Lakatoro	18.86	316	P	Pn	11 09 20.6	+3.1
RAR	Rarotonga	19.65	67	P	Pn	11 09 28.5	+1.4
	comp=Z,124nm,1.1s,baz=231,slow=14,SNR=4.2						
RAR				LR	LR	11 15 18.7	
	comp=Z,37µm,21.8s,baz=258,slow=32						
RAR	Rarotonga	19.65	67	P	P	11 09 25.6	0.0
FUNA	Funafuti	21.85	355	P	P	11 09 52.4	+2.9
NTLH	Newcastle Hard	24.94	257	P	P	11 10 22.5	+2.4
ARMA	Armidale	25.21	263		P	11 10 23.4	+0.7
ARMA				IAmb	IAmb	11 10 55.9	
	comp=Z,134nm,1.3s						
ARMA	Armidale	25.21	263	P	P	11 10 23.3	+0.5
	comp=Z,0.0nmcomp=Z,53nm,1.2s						
ARMA	Armidale	25.21	263	P	P	11 10 23.5	+0.7
ARMA	Armidale	25.21	263	⇑P	P	11 10 23.1	+0.4
RIV	Riverview	25.37	255	P	P	11 10 24.8	+0.8
	comp=Z,193nm,1.9s						
RIV	Riverview	25.37	255	P	P	11 10 25.8	+1.8
MGCD	Mangrove Creek	25.43	256	P	P	11 10 24.6	+0.1
	comp=Z,106nm,1.2s						
MGCD	Mangrove Creek	25.43	256	P	P	11 10 26.7	+2.2
WOLH	Wollongong Har	25.61	253	P	P	11 10 27.1	+1.0
SYDH	Sydney Hard Ro	25.72	255	P	P	11 10 28.2	+1.0
HURO	Huro Makira	26.59	314	P	P	11 10 36.1	+0.9
EIDS	Eidsvold	26.79	273		P	11 10 35.6	-1.3
EIDS	Eidsvold	26.79	273	P	P	11 10 37.3	+0.3
	comp=Z,0.0nmcomp=Z,65nm,1.1s						
EIDS	Eidsvold	26.79	273	P	P	11 10 39.8	+2.9
CNB	Canberra Magne	26.87	251	P	P	11 10 37.8	+0.2
	comp=Z,0.0nmcomp=Z,99nm,1.3s						
CNB	Canberra Magne	26.87	251	P	P	11 10 38.6	+1.0
NGOA	Tingoa Renbel	26.95	310	P	P	11 10 40.9	+2.5
CAN	Canberra	27.16	251		P	11 10 40.5	+0.2
CAN				IAmb	IAmb	11 10 54.2	
	comp=Z,153nm,1.2s						
CAN	Canberra	27.16	251	P	P	11 10 40.1	-0.2
	comp=Z,0.0nmcomp=Z,106nm,1.4s						
CAN	Canberra	27.16	251	P	P	11 10 40.9	+0.6
CAN	Canberra	27.16	251	P	P	11 10 40.5	+0.2
CAN				pmax	pmax		
	comp=Z,153nm,1.2s						
CAN				MLR	MLR		
	comp=Z,38µm,19.0s						
CAN	Canberra	27.16	251	⇑P	P	11 10 40.9	+0.6
TBI	Tubuai	27.31	82	*e*P	P	11 10 38.5	-3.1
	comp=Z,6µm,26.5s						
TBI	Tubuai	27.31	82	*e*P	P	11 10 47.7	+6.1
	comp=Z,297nm,1.0s						
TBI				*e*S	S	11 15 22.3	+1.5
	comp=Z,30µm,44.0s						
TBI				*e*LQ	LQ	11 16 13.8	
	comp=Z,748µm,25.2s						
TBI				*e*LR	LR	11 17 16.4	
	comp=Z,90µm,25.2s						
TBI				*e*LR	LR	11 17 19.4	
	comp=Z,20µm,22.0s						
YNG	Young	27.66	253	P	P	11 10 44.6	-0.1
	comp=Z,76nm,2.0s						
GLAD	Gladstone	28.56	239	P	P	11 10 54.8	+2.2
HNR	Honiara	28.61	313	P	P	11 10 52.3	-1.0
HNR	Honiara	28.61	313	LR	LR	11 20 28.6	
	comp=Z,39µm,20.2s,baz=160,slow=33						
HNR	Honiara	28.61	313	P	P	11 10 56.2	+3.0
HNR	Honiara	28.61	313	P	P	11 10 52.3	-1.0
HNR				pmax	pmax		
	comp=Z,496nm,1.3s						
ALEG	Aligegeo Malai	28.66	315	P	P	11 10 53.7	0.0
CORO	Coronation Par	29.29	239	P	P	11 11 00.1	+1.0
MOO	Moorlands	29.46	237	P	P	11 11 00.7	0.0
MOO	Moorlands	29.46	237	P	P	11 11 01.4	+0.8
TAU	Tasmania Unive	29.48	236		P	11 11 01.6	+0.8
TAU	Tasmania Unive	29.48	236	IAMs_20	IAMs_20	11 22 39.4	
	comp=Z,66µm,20.0s						
TAU	Tasmania Unive	29.48	236	P	P	11 11 01.7	+1.0
TAU	Tasmania Unive	29.48	236	P	P	11 11 01.6	+0.8
TAU				pmax	pmax		
	comp=Z,337nm,1.5s						
TAU				MLR	MLR		
	comp=Z,66µm,20.0s						
TAU	Tasmania Unive	29.48	236	⇑P	P	11 11 02.4	+1.7
TATA	Tatamba Isabel	29.50	314	P	P	11 11 03.6	+2.5
PAE	Paea	29.70	71	*e*P	P	11 11 04.3	+1.3
	comp=Z,89nm,1.1s						
PAE				*e*S	S	11 15 59.5	+0.9
	comp=Z,742nm,24.9s						
PAE				*e*LR	LR	11 18 46.8	
	comp=Z,5µm,21.7s						
PPT2	Papeete2	29.75	71	*e*P	P	11 10 58.8	-4.6
	comp=Z,2µm,24.2s						
PPT2	Papeete2	29.75	71	*e*P	P	11 11 07.4	+4.0
	comp=Z,335nm,1.2s						
PPT2				*e*S	S	11 15 58.4	-1.0
	comp=Z,15µm,41.2s						
PPT2				*e*LQ	LQ	11 17 09.2	
	comp=Z,135µm,25.0s						
PPT2				*e*LR	LR	11 18 28.3	
	comp=Z,35µm,28.0s						
PPT2				*e*LR	LR	11 18 37.9	
	comp=Z,45µm,25.0s						
PPTF	Pamatai, Papee	29.75	71	P	P	11 11 03.5	0.0
PPT	Papeete	29.76	71	P	P	11 11 06.8	+3.4
	comp=Z,293nm,1.1s,baz=240,slow=20,SNR=8.0						
PPT				LR	LR	11 22 16.1	
	comp=Z,18µm,18.2s,baz=246,slow=35						
TVO	Taravao	29.91	72	*e*P	P	11 11 05.9	+1.0
	comp=Z,127nm,1.3s						
TVO				*e*LR	LR	11 18 50.6	
	comp=Z,5µm,22.0s						
TOO	Toolangi	30.08	247		P	11 11 05.7	-0.5
TOO	Toolangi	30.08	247	P	P	11 11 05.8	-0.5
	comp=Z,0.0nmcomp=Z,38nm,1.3s						
TOO	Toolangi	30.08	247	P	P	11 11 05.7	-0.5
TOO				pmax	pmax		
	comp=Z,54nm,1.2s						
TOO				MLR	MLR		
	comp=Z,22µm,20.0s						
TOO	Toolangi	30.08	247	⇑P	P	11 11 06.6	+0.4
CMSA	Cobar Meteorol	30.13	259	P	P	11 11 05.9	-0.8
	comp=Z,0.0nmcomp=Z,72nm,1.2s						
CMSA	Cobar Meteorol	30.13	259	P	P	11 11 06.4	-0.3
MLBS	Spotswood, Mel	30.57	246	P	P	11 11 11.4	+1.0
GEXS	Deakin Univers	31.06	246	P	P	11 11 15.8	+1.0
QLP	Quilpie	32.36	268	P	P	11 11 25.2	-1.1
	comp=Z,68nm,1.5s						
QLP	Quilpie	32.36	268	P	P	11 11 25.6	-0.7
QLP	Quilpie	32.36	268	⇑P	P	11 11 25.4	-0.9
PMOR	Pomariorio Ree	32.48	69	*e*P	P	11 11 27.5	0.0
	comp=Z,406nm,1.4s						
PMOR				*e*S	S	11 16 44.4	+2.3
	comp=Z,5µm,23.7s						
PMOR				*e*LR	LR	11 20 03.8	
	comp=Z,45µm,21.7s						
VAH	Vaihoa	32.57	69	*e*P	P	11 11 28.7	+0.4
	comp=Z,420nm,1.3s						
VAH				*e*S	S	11 16 45.0	+1.5
	comp=Z,4µm,22.1s						
VAH				*e*LR	LR	11 20 06.3	
	comp=Z,29µm,21.8s						
CTAO	Charters Tower	32.87	280		P	11 11 29.6	-1.3
CTAO				IAmb	IAmb	11 11 41.5	
	comp=Z,114nm,0.9s						
CTAO	Charters Tower	32.87	280	IAMs_20	IAMs_20	11 22 46.0	
	comp=Z,56µm,19.0s						
CTAO	Charters Tower	32.87	280	P	P	11 11 30.2	-0.7
CTAO	Charters Tower	32.87	280	P	P	11 11 29.6	-1.3
CTAO				pmax	pmax		
	comp=Z,114nm,0.9s						
CTAO	Charters Tower	32.87	280	⇑P	P	11 11 30.0	-0.9
STKA	Stephens Creek	33.55	257	P	P	11 11 36.5	-0.2
	comp=Z,732nm,1.1s						
STKA	Stephens Creek	33.55	257	P	P	11 11 36.2	-0.5
	comp=Z,104nm,1.1s,baz=97,slow=12,SNR=39						
STKA				S	S	11 17 00.2	+1.7
	comp=Z,3.4nm,0.8s,baz=163,slow=20,SNR=1.7						
STKA				LR	LR	11 22 50.9	
	comp=Z,33µm,21.5s,baz=88,slow=32						
	comp=Z,104nm,1.1s						
STKA	Stephens Creek	33.55	257	P	P	11 11 36.4	-0.3
MTSU	Mount Surprise	35.37	282	P	P	11 11 52.1	-0.5
	comp=Z,24nm,1.3s						
MTSU	Mount Surprise	35.37	282	P	P	11 11 52.3	-0.3
HTT	Hallett	35.58	254	P	P	11 11 53.7	-0.6
	comp=Z,55nm,1.2s						
HTT	Hallett	35.58	254	P	P	11 11 53.9	-0.5
HTT	Hallett	35.58	254	⇓P	P	11 11 53.7	-0.6
PTPS	Port Pirie	36.38	254	P	P	11 12 01.3	+0.2
WHYH	Whyalla	36.75	254	P	P	11 12 03.5	-0.8
PMG	Port Moresby	37.76	296	P	P	11 12 13.1	+0.1
PMG				IAmb	IAmb	11 12 25.0	
	comp=Z,160nm,1.4s						
PMG	Port Moresby	37.76	296	P	P	11 12 13.5	+0.5
	comp=Z,28nm,0.7s,baz=123,slow=7.3,SNR=3.9						
PMG				S	S	11 18 03.5	+0.2
	comp=Z,20nm,1.1s,baz=170,slow=12,SNR=2.4						
	comp=Z,28nm,0.7s						
PMG	Port Moresby	37.76	296	P	P	11 12 15.4	+2.4
BBOO	Buckleboo	38.05	254	P	P	11 12 13.9	-1.3
	comp=Z,311nm,0.9s						
BBOO	Buckleboo	38.05	254	P	P	11 12 13.8	-1.5
COEN	Coen	38.37	287	P	P	11 12 16.9	-1.2
COEN	Coen	38.37	287	P	P	11 12 17.4	-0.8
	comp=Z,0.0nmcomp=Z,65nm,1.0s						
COEN	Coen	38.37	287	P	P	11 12 17.3	-0.8
COEN	Coen	38.37	287	⇓P	P	11 12 18.1	-0.1
QIS	Mount Isa	38.37	275	P	P	11 12 15.9	-2.2
	comp=Z,0.0nmcomp=Z,45nm,1.4s						
QIS	Mount Isa	38.37	275	P	P	11 12 16.2	-1.9
AS17	Alice Springs	42.08	268	P	P	11 12 47.4	-1.6
	comp=Z,85nm,0.8s						
AS01	Alice Springs	42.12	267	P	P	11 12 47.6	-1.6
ASAR	Alice Springs	42.16	267	P	P	11 12 47.7	-1.9
	comp=Z,30nm,0.9s,baz=111,slow=8.5,SNR=72						
ASAR				LR	LR	11 30 15.6	
	comp=Z,16µm,18.7s,baz=110,slow=36						
	comp=Z,30nm,0.9s						
TAOE	Nuku Hiva Isla	42.19	68	*e*P	P	11 12 44.0	-6.0
	comp=Z,590nm,1.3s						
TAOE				*e*S	S	11 19 08.2	-1.7
	comp=Z,5µm,25.2s						
TAOE				*e*SS	SS	11 22 19.2	+1.1
	comp=Z,82µm,27.2s						
TAOE				*e*LR	LR	11 24 24.9	
	comp=Z,42µm,25.3s						
MANU	Manus Island	42.49	305		P	11 12 50.8	-1.4
MANU	Manus Island	42.49	305	⇑P	P	11 12 52.5	+0.2
PATS	Pohnpei	42.92	326	IAMs_20	IAMs_20	11 26 41.8	
	comp=Z,50µm,21.0s						
PATS	Pohnpei	42.92	326	P	P	11 12 58.1	+2.4
WR0	Warramunga Arr	42.97	273	P	P	11 12 53.8	-2.4
WR8	Warramunga Arr	43.01	273	IAmb	IAmb	11 13 10.1	
	comp=Z,152nm,1.1s						
WRAB	Tennant Creek	43.14	273	P	P	11 12 54.7	-2.9
WRAB	Tennant Creek	43.14	273	*d i*P	P	11 12 55.6	-2.0
WRAB				pmax	pmax		
	comp=Z,227nm,1.4s						
WRAB				MLR	MLR		
	comp=Z,33µm,14.0s						
WRA	Warramunga Arr	43.15	273		P	11 12 55.1	-2.5
WRA	Warramunga Arr	43.15	273	P	P	11 12 55.5	-2.1
	comp=Z,43nm,0.9s,baz=112,slow=8.0,SNR=46						
WRA				LR	LR	11 30 18.6	
	comp=Z,27µm,18.4s,baz=108,slow=35						
	comp=Z,43nm,0.9s						
WRKA	Warakurna	46.53	263	P	P	11 13 22.0	-2.6
	comp=Z,74nm,1.4s						
JAY	Jayapura	47.07	298	P	P	11 13 27.1	-1.8
	comp=Z,23nm,0.8s,baz=132,slow=4.9,SNR=9.3						
JAY				S	S	11 20 23.7	+3.0
	comp=Z,2.8nm,0.7s,baz=168,slow=20,SNR=0.9						
JAY				LR	LR	11 31 27.1	
	comp=Z,6µm,20.4s,baz=115,slow=34						
	comp=Z,23nm,0.8s						
GENI	Genyem	47.43	298	P	P	11 13 32.6	+1.0
JOHN	Johnston Islan	47.79	12	IAMs_20	IAMs_20	11 29 50.5	
	comp=Z,27µm,21.0s						
VNDA	Vanda	47.97	185		P	11 13 34.8	-0.3
VNDA	Vanda	47.97	185	P	P	11 13 35.7	+0.7
	comp=Z,2.1nm,0.9s,baz=24,slow=9.5,SNR=7.6						
VNDA				S	S	11 20 36.8	+4.9
	comp=Z,0.8nm,0.8s,baz=72,slow=20,SNR=1.4						
VNDA				LR	LR	11 30 53.1	
	comp=Z,11µm,19.4s,baz=34,slow=32						
	comp=Z,2.1nm,0.9s						
KDU	Kakadu	47.99	281	P	P	11 13 33.9	-2.1
	comp=Z,0.0nmcomp=Z,102nm,1.4s						
KDU	Kakadu	47.99	281	P	P	11 13 34.1	-1.8
KDU	Kakadu	47.99	281	⇑P	P	11 13 34.0	-1.9
MTN	Manton Dam	49.05	280	IAmb	IAmb	11 13 59.9	
	comp=Z,52nm,0.8s						
MTN	Manton Dam	49.05	280	P	P	11 13 42.0	-2.2
	comp=Z,0.0nmcomp=Z,83nm,1.8s						
MTN	Manton Dam	49.05	280	P	P	11 13 42.4	-1.7
MTN	Manton Dam	49.05	280	⇑P	P	11 13 42.2	-1.9
DRS	Darwin Rock St	49.45	280	P	P	11 13 46.0	-1.2
KNRA	Kununurra	49.76	275	IAmb	IAmb	11 14 06.5	
	comp=Z,174nm,1.3s						
KNRA	Kununurra	49.76	275	P	P	11 13 48.0	-1.6
	comp=Z,118nm,1.5s						
KMBL	Kambalda	50.11	253	P	P	11 13 49.8	-2.3
	comp=Z,57nm,1.2s						
H11S2	WAKE ISLAND Hy	50.52	342	T	T	12 07 58.8	
	baz=166,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	50.53	342	T	T	12 07 55.1	
	baz=166,slow=76,SNR=8.6						
H11S1	WAKE ISLAND Hy	50.54	342	T	T	12 07 43.2	
	baz=166,slow=76,SNR=13						
FITZ	Fitzroy Crossi	51.41	270	P	P	11 14 00.3	-1.6
	comp=Z,38nm,1.3s						
FITZ	Fitzroy Crossi	51.41	270	P	P	11 14 00.3	-1.6
	comp=Z,76nm,0.9s,baz=113,slow=12,SNR=45						
FITZ				S	S	11 21 22.5	+1.0
	comp=Z,1.8nm,0.3s,baz=122,slow=19,SNR=1.2						
	comp=Z,76nm,0.9s						
FITZ	Fitzroy Crossi	51.41	270	P	P	11 14 00.1	-1.9
FITZ	Fitzroy Crossi	51.41	270	⇓P	P	11 14 00.4	-1.6
BAKI	Biak	51.45	296	P	P	11 14 05.3	+3.0
	comp=Z,8µmcomp=Z,5µmcomp=Z,234nm,1.7s						
RKGY	Rocky Gully	53.27	248	P	P	11 14 14.2	-1.4
	comp=Z,54nm,2.1s						
KLBR	Kellerberrin	53.44	251	P	P	11 14 14.9	-2.0
	comp=Z,245nm,1.0s						
KLBR	Kellerberrin	53.44	251	P	P	11 14 15.2	-1.7
FAKI	Fak Fak	53.46	291		P	11 14 16.1	-1.1
FAKI	Fak Fak	53.46	291	P	P	11 14 19.1	+1.9
FAKI	Fak Fak	53.46	291	⇓P	P	11 14 15.3	-2.0
NWAO	Narrogin (SRO)	53.50	250	IAMs_20	IAMs_20	11 36 35.2	
	comp=Z,20µm,19.0s						
NWAO	Narrogin (SRO)	53.50	250	P	P	11 14 16.9	-0.4
	comp=Z,163nm,3.0s						
NWAO	Narrogin (SRO)	53.50	250	P	P	11 14 14.7	-2.6
	comp=Z,6.2nm,0.8s,baz=106,slow=11,SNR=3.7						
	comp=Z,6.2nm,0.8s						
MEEK	Meekatharra	54.25	258	P	P	11 14 21.0	-2.0
	comp=Z,96nm,1.2s						
MEEK	Meekatharra	54.25	258	P	P	11 14 21.1	-1.9
BLDU	Ballidu	54.58	252	P	P	11 14 23.2	-2.1
	comp=Z,97nm,1.4s						
BLDU	Ballidu	54.58	252	P	P	11 14 26.4	+1.1
MUN	Mundaring	54.59	250	P	P	11 14 23.8	-1.6
	comp=Z,132nm,1.2s						
MUN	Mundaring	54.59	250	P	P	11 14 25.7	+0.3
CASY	Casey	54.67	208		P	11 14 24.8	-0.6
CASY	Casey	54.67	208	⇓P	P	11 14 24.9	-0.5
PSAC2	Pilbara Seismi	54.97	264	P	P	11 14 25.7	-2.5
	comp=Z,52nm,1.0s						
PSA00	Pilbara Seismi	55.02	264	P	P	11 14 26.0	-2.5
PSA00	Pilbara Seismi	55.02	264	IAmb	IAmb	11 14 39.7	
	comp=Z,58nm,1.0s						
PSA00	Pilbara Seismi	55.02	264	P	P	11 14 26.2	-2.4
MBWA	Marble Bar	55.28	264	P	P	11 14 27.3	-3.2
MBWA				IAmb	IAmb	11 14 41.5	
	comp=Z,82nm,1.0s						
MBWA				IAMs_20	IAMs_20	11 38 36.6	
	comp=Z,26µm,19.0s						
MBWA	Marble Bar	55.28	264	P	P	11 14 27.9	-2.5
	comp=Z,83nm,1.1s						
SWI	Sorong	55.47	292	P	P	11 14 30.1	-1.8
MORW	Morawa	55.61	254	P	P	11 14 30.8	-2.0
	comp=Z,70nm,1.1s						
MORW	Morawa	55.61	254	P	P	11 14 31.6	-1.2
MORW	Morawa	55.61	254	⇓P	P	11 14 31.6	-1.2
GUMO	Guam	55.84	316	IAMs_20	IAMs_20	11 34 15.0	
	comp=Z,25µm,22.0s						
GUMO	Guam	55.84	316	P	P	11 14 34.2	-0.2
	comp=Z,122nm,1.1s,baz=170,slow=11,SNR=3.9						
GUMO				LR	LR	11 34 37.2	
	comp=Z,22µm,21.8s,baz=91,slow=32						
	comp=Z,122nm,1.1s						
GUMO	Guam	55.84	316	P	P	11 14 34.8	+0.4
SOEI	Soe	56.42	279	P	P	11 14 39.1	+0.2
SOEI	Soe	56.42	279	P	P	11 14 38.8	0.0
SOEI	Soe	56.42	279	P	P	11 14 37.7	-1.1
	comp=Z,7µmcomp=Z,5µmcomp=Z,182nm,1.5s						
SOEI	Soe	56.42	279	⇑P	P	11 14 39.0	+0.2
BATI	Baumata	56.71	278	P	P	11 14 40.8	0.0
	comp=Z,21nm,0.4s,baz=112,slow=16,SNR=4.9						
BATI				S	S	11 22 33.5	+0.1
	comp=Z,13nm,0.4s,baz=127,slow=20,SNR=1.0						
BATI				LR	LR	11 39 26.3	
	comp=Z,54µm,18.6s,baz=132,slow=37						
	comp=Z,21nm,0.4s						
MIDW	Midway	58.34	2	IAMs_20	IAMs_20	11 34 52.6	
	comp=Z,27µm,21.0s						
MMRI	Maumere	58.71	279	P	P	11 14 56.2	+1.4
MMRI	Maumere	58.71	279	P	P	11 14 52.9	-1.9
	comp=Z,4µmcomp=Z,4µmcomp=Z,198nm,1.7s						
SANI	Sanana	59.06	288	P	P	11 14 58.0	+0.8
SANI	Sanana	59.06	288	P	P	11 14 59.2	+1.9
SANI	Sanana	59.06	288	P	P	11 14 59.4	+2.1
	comp=Z,7µmcomp=Z,4µmcomp=Z,173nm,1.6s						
EDFI	Ende, Flores	59.12	278	P	P	11 14 57.8	0.0
	comp=Z,2µmcomp=Z,87nm,1.8s						
GIRL	Giralia	59.41	260	IAMs_20	IAMs_20	11 41 53.0	
	comp=Z,27µm,20.0s						
GIRL	Giralia	59.41	260	P	P	11 14 58.5	-1.0
	comp=Z,279nm,1.2s						
GIRL	Giralia	59.41	260	P	P	11 15 00.4	+0.8
TNTI	Ternate	59.56	291	P	P	11 15 02.4	+1.7
QSPA	South Pole Qui	59.68	180	P	P	11 15 00.9	-0.1
QSPA	South Pole Qui	59.68	180	P	P	11 15 01.0	0.0
	comp=Z,238nm,1.1s,baz=33,slow=3.2,SNR=151						
QSPA				S	S	11 23 12.9	+2.0
	comp=Z,1.8nm,0.8s,baz=34,slow=3.6,SNR=7.2						
QSPA				LR	LR	11 38 18.2	
	comp=Z,14µm,19.2s,baz=45,slow=34						
QSPA				PKP2bc		11 44 38.9	
	comp=Z,5.5nm,1.0s,baz=205,slow=1.7,SNR=4.1						
LUWI	Luwuk	62.28	286	P	P	11 15 18.5	-0.7
LUWI	Luwuk	62.28	286	P	P	11 15 20.7	+1.5
PLAI	Plampang	62.44	276	P	P	11 15 18.5	-1.8
PLAI	Plampang	62.44	276	P	P	11 15 17.9	-2.4
	comp=Z,4µmcomp=Z,3µmcomp=Z,196nm,1.5s						
KAPI	Kappang	62.68	281	P	P	11 15 20.0	-1.9
KAPI	Kappang	62.68	281	P	P	11 15 20.6	-1.3
	comp=Z,7.2nm,0.5s,baz=123,slow=11,SNR=6.0						
KAPI				S	S	11 23 53.1	+2.8
	comp=Z,2.4nm,0.4s,baz=45,slow=20,SNR=1.0						
KAPI				LR	LR	11 41 22.4	
	comp=Z,8µm,20.9s,baz=120,slow=35						
	comp=Z,7.2nm,0.5s						
KAPI	Kappang	62.68	281	P	P	11 15 23.2	+1.3
BNSI	Bone	62.70	282	P	P	11 15 20.0	-2.0
	comp=Z,4µmcomp=Z,3µmcomp=Z,128nm,1.8s						
SPSI	Sidrap Palu	63.22	282	P	P	11 15 22.3	-3.1
	comp=Z,4µmcomp=Z,2µmcomp=Z,35nm,1.1s						
TWSI	Taliwang, Sumb	63.25	276	P	P	11 15 27.2	+1.5
	comp=Z,3µmcomp=Z,129nm,1.4s						
APSI	Ampana	63.29	286	P	P	11 15 34.7	+8.8
TTSI	Tana Toraja	63.66	283	P	P	11 15 25.6	-2.8
	comp=Z,2µmcomp=Z,60nm,1.7s						
DAV	Davao City (W)	64.78	296	P	P	11 15 35.8	+0.1
	comp=Z,100nm,0.4s,baz=98,slow=15,SNR=1.5						
DAV				LR	LR	11 43 24.1	
	comp=Z,5µm,20.4s,baz=142,slow=36						
PCI	Palu	64.80	285	P	P	11 15 34.0	-1.9
SRBI	Singaraja	65.00	275	P	P	11 15 38.4	+1.2
	comp=Z,4µmcomp=Z,175nm,1.7s						
TOLI2	Tolitoli	65.13	287	P	P	11 15 39.4	+1.4
MPSI	Mapaga	65.43	286	P	P	11 15 39.6	-0.4
JAGI	Jajag, Banyuwa	65.73	274	P	P	11 15 38.9	-3.0
JAGI				IAMs_20	IAMs_20	11 44 01.8	
	comp=Z,15µm,20.0s						
JAGI	Jajag, Banyuwa	65.73	274	P	P	11 15 39.5	-2.4
JAGI	Jajag, Banyuwa	65.73	274	P	P	11 15 39.7	-2.2
	comp=Z,2µmcomp=Z,139nm,1.4s						
JAGI	Jajag, Banyuwa	65.73	274	⇓P	P	11 15 40.0	-2.0
GMJI	Gumukmas	66.44	274	P	P	11 15 44.1	-2.3
	comp=Z,3µmcomp=Z,169nm,1.5s						
KMMI	Kalianget	66.59	276	P	P	11 15 46.9	-0.5
	comp=Z,3µmcomp=Z,134nm,1.6s						
BKB	Balikpapan	67.08	283	IAMs_20	IAMs_20	11 47 49.6	
	comp=Z,20µm,18.0s						
CBIJ	Chichi jima	68.13	323	P	P	11 15 58.6	+1.7
JCJ	Chichijima	68.13	323	P	P	11 15 54.8	-2.1
	comp=Z,16nm,0.8s,baz=180,slow=0.0						
JCJ				LR	LR	11 40 13.2	
	comp=Z,6µm,21.1s,baz=314,slow=31						
	comp=Z,16nm,0.8s						
PCJI	Pacitan	68.43	273	P	P	11 15 57.8	-1.3
WOJI	Wonogiri, Jawa	68.82	273	P	P	11 15 59.9	-1.6
UGM	Wanagama	69.13	273	P	P	11 16 04.6	+1.1
MYLDM	Lahad Datu	69.31	289	P	P	11 16 06.8	+2.3
SMAI	San Martin Ant	69.75	158	IAMs_20	IAMs_20	11 43 42.7	
	comp=Z,17µm,19.0s						
BELA	Belgrano 2	69.88	172	P	P	11 16 06.2	-0.9
CMJI	Cimerak	70.98	272	P	P	11 16 12.4	-2.4
KKM	Kota Kinabalu	71.66	289	P	P	11 16 20.7	+1.7
BBJI	Bungbulang	71.83	272	P	P	11 16 17.8	-2.2
MAW	Mawson	71.94	201	P	P	11 16 18.4	-1.3
	comp=Z,7.9nm,1.4s						
MAW	Mawson	71.94	201	P	P	11 16 19.6	-0.2
	comp=Z,5.8nm,0.9s,baz=135,slow=7.1,SNR=6.5						
MAW				LR	LR	11 48 09.7	
	comp=Z,13µm,18.4s,baz=112,slow=36						
	comp=Z,5.8nm,0.9s						
STKI	Sintang	72.36	281	P	P	11 16 17.3	-5.8
PMSA	Palmer Station	72.63	156	IAMs_20	IAMs_20	11 45 06.7	
	comp=Z,12µm,18.0s						
PMSA	Palmer Station	72.63	156	LR	LR	11 45 36.4	
	comp=Z,10µm,18.2s,baz=234,slow=34						
TGY	Tagaytay City	72.69	298	LR	LR	11 45 48.8	
	comp=Z,4µm,21.7s,baz=120,slow=34						
SBUM	Sibu	73.00	283	P	P	11 16 24.4	-2.5
DBJI	Dramaga	73.05	272	P	P	11 16 25.3	-2.0
CGJI	Cibinong	73.93	272	P	P	11 16 29.9	-2.5
	comp=Z,114nm,1.2s						
KSM	Kuching	74.09	281	IAmb	IAmb	11 16 45.0	
	comp=Z,61nm,1.2s						
KSM	Kuching	74.09	281	P	P	11 16 31.0	-2.4
JOW	Kunigami	75.98	313	IAMs_20	IAMs_20	11 43 50.8	
	comp=Z,16µm,22.0s						
JOW	Kunigami	75.98	313	P	P	11 16 42.5	-1.4
	comp=Z,12nm,0.8s,baz=136,slow=7.5,SNR=2.4						
JOW				LR	LR	11 44 45.9	
	comp=Z,13µm,21.4s,baz=132,slow=32						
	comp=Z,12nm,0.8s						
LWLI	Liwa	76.13	272	P	P	11 16 54.5	+9.2
JSG	Sagara	76.25	325	IAMs_20	IAMs_20	11 43 24.9	
	comp=Z,13µm,22.0s						
MDSI	Maura Dua	76.29	273	P	P	11 16 42.5	-3.6
	comp=Z,2µmcomp=Z,106nm,1.1s						
USHA	Ushuaia	76.43	146	LR	LR	11 44 28.0	
	comp=Z,7µm,19.5s,baz=223,slow=31						
JYT	Yasato	76.53	327	P	P	11 16 47.4	+0.6
SYO	Syowa Base	76.87	193	⇓*i*P	P	11 16 46.0	-2.4
SYO	Syowa Base	76.87	193	⇓*i*pP	P	11 16 49.0	+0.6
SYO	Syowa Base	76.87	193	⇓*e*sP	sP	11 16 52.0	-1.8
JRY	Ryogami san	76.97	326	P	P	11 16 49.5	+0.1
INU	Inuyama	77.37	324	IAmb	IAmb	11 17 15.5	
	comp=Z,79nm,1.2s						
INU				IAMs_20	IAMs_20	11 47 41.2	
	comp=Z,14µm,21.0s						
INU	Inuyama	77.37	324	P	P	11 16 52.7	+1.1
JGF	Kuroka	77.40	325	P	P	11 16 51.0	-0.8
JGF	Kuroka	77.40	325	P	P	11 16 52.1	+0.3
JGF	Kuroka	77.40	325	P	P	11 16 52.0	+0.2
MNAI	Manna	77.41	272	IAMs_20	IAMs_20	11 53 51.4	
	comp=Z,14µm,21.0s						
JMM	Marumori	77.59	329	IAMs_20	IAMs_20	11 49 18.4	
	comp=Z,14µm,21.0s						
JMM	Marumori	77.59	329	P	P	11 16 54.3	+1.5
MJAR	Matsushiro Arr	77.73	326	P	P	11 16 53.2	-0.4
	comp=Z,7.1nm,0.9s,baz=160,slow=5.0,SNR=11						
MJAR				LR	LR	11 45 05.6	
	comp=Z,8µm,21.9s,baz=135,slow=31						
	comp=Z,7.1nm,0.9s						
MAJO	Matsushiro	77.73	326	P	P	11 16 51.0	-2.6
MAJO				IAmb	IAmb	11 17 05.7	
	comp=Z,197nm,1.9s						
MAJO	Matsushiro	77.73	326	P	P	11 16 54.0	+0.4
MAJO	Matsushiro	77.73	326	*c i*P	P	11 16 51.9	-1.7
MAJO				pmax	pmax		

	comp=Z,105nm,1.8s						
MAJO				MLR	MLR		
	comp=Z,6µm,19.0s						
MAT	Matsushiro	77.73	326	P	P	11 16 53.3	-0.3
MJB9	Matsu-Tunnel	77.73	326	IAmb	IAmb	11 17 05.7	
	comp=Z,194nm,1.9s						
JMN	Monobe	77.75	321	IAMs_20	IAMs_20	11 45 17.4	
	comp=Z,19µm,22.0s						
TROLL	Troll, Antarti	77.84	181	⇑P	P	11 16 53.1	-0.9
	comp=Z,7µm,0.9s						
TROLL				⇓S	S	11 26 43.2	-2.8
JGN	Niukaw	77.91	325	P	P	11 16 55.0	+0.3
KSI	Kapahiang	78.08	273	P	P	11 17 00.5	+4.3
TWGBT	Beinan	78.09	305	P	P	11 16 56.8	+0.9
JWT	Wachi	78.14	323	P	P	11 16 56.1	+0.3
SNAA	Sanae	78.15	179	⇑P	P	11 16 54.1	-1.5
	comp=Z,1µm,1.0s						
SNAA				⇓S	S	11 26 49.0	-0.3
SNAA	Sanae	78.15	179	P	P	11 16 54.6	-1.0
SNAA	Sanae	78.15	179	P	P	11 16 54.2	-1.5
	comp=Z,48nm,1.1s,baz=190,slow=6.9,SNR=56						
SNAA				S	S	11 26 48.8	-0.5
	comp=Z,1.3nm,1.1s,baz=221,slow=19,SNR=12						
SNAA				LR	LR	11 51 11.9	
	comp=Z,7µm,18.5s,baz=193,slow=36						
	comp=Z,48nm,1.1s						
SNAA	Sanae	78.15	179	*d i*P	P	11 16 55.4	-0.2
SNAA				pmax	pmax		
	comp=Z,164nm,1.3s						
SNAA				MLR	MLR		
	comp=Z,8µm,17.0s						
YULB	Yu-li	78.31	306	P	P	11 16 58.7	+1.6
VNA3	Neumayer Olymp	78.34	177	⇑P	P	11 16 55.2	-1.4
	comp=Z,134nm,0.8s						
VNA3				⇓S	S	11 26 50.8	-0.4
AY03	Cochrane	78.36	138	IAmb	IAmb	11 17 19.9	
	comp=Z,78nm,1.2s						
AY03				IAMs_20	IAMs_20	11 42 41.5	
	comp=Z,15µm,22.0s						
JAD	Aida	78.52	322	P	P	11 16 59.7	+1.7
NACB	Ninganchiao	78.61	307	P	P	11 17 00.5	+1.8
JOM	Ohasama	78.70	330	P	P	11 16 59.5	+0.6
TPUB	Ta-pu	78.72	306	IAmb	IAmb	11 17 14.8	
	comp=Z,82nm,0.9s						
TPUB	Ta-pu	78.72	306	P	P	11 16 56.8	-2.6
VNA2	Neumayer--Watz	78.76	177	⇑P	P	11 16 57.8	-1.1
	comp=Z,88nm,0.7s,baz=168,slow=5.4						
VNA2				⇑S	S	11 26 54.0	-1.7
	baz=150,slow=0.2						
NVL	N'lazarevskaya	78.79	184	*e*P	P	11 17 02.1	+3.1
NVL				*e*		11 17 12.1	
NVL				*e*		11 19 58.1	
NVL				*e*PPP	PPP	11 21 48.8	
NVL				*e*S	S	11 26 56.5	+0.5
NVL				*e*SS	SS	11 31 58.6	-0.7
NVL				pmax	pmax		
	comp=Z,10.0nm,1.3s						
NVL				smax	smax		
	comp=E,2µm,12.6s						
NVL				MLR	MLR		
	comp=Z,161nm,20.0s						
SSLB	Suanglung	78.81	306	P	P	11 16 56.8	-3.1
SSLB				IAmb	IAmb	11 17 10.7	
	comp=Z,44nm,0.9s						
SSLB	Suanglung	78.81	306	P	P	11 16 57.6	-2.3
COCO	West Island	78.87	262	IAMs_20	IAMs_20	11 52 55.4	
	comp=Z,16µm,20.0s						
JSD	Sado	78.90	327	P	P	11 17 02.0	+2.0
JSD	Sado	78.90	327	P	P	11 16 58.8	-1.2
JNU	Nakatsue	78.95	319	P	P	11 16 59.0	-1.4
	comp=Z,13nm,0.9s,baz=117,slow=4.5,SNR=4.9						
JNU				LR	LR	11 46 43.6	
	comp=Z,12µm,22.0s,baz=136,slow=32						
	comp=Z,13nm,0.9s						
JNU	Nakatsue	78.95	319	P	P	11 17 02.3	+1.8
JNU	Nakatsue	78.95	319	P	P	11 17 03.0	+2.6
VNA1	Neumayer--Stat	79.00	177	⇑P	P	11 16 59.8	-0.4
	comp=Z,196nm,1.0s						
YHNB	Yeheng	79.08	307	P	P	11 17 02.6	+1.2
JHS	Saijyo	79.12	322	P	P	11 17 02.8	+1.4
COYC	Coyhaique	79.56	137	IAmb	IAmb	11 17 18.8	
	comp=Z,76nm,1.0s						
MYKOM	Kota Tinggi	79.76	278	IAmb	IAmb	11 17 17.0	
	comp=Z,192nm,1.9s						
MYKOM				IAMs_20	IAMs_20	11 57 53.5	
	comp=Z,12µm,19.0s						
MYKOM	Kota Tinggi	79.76	278	P	P	11 17 07.2	+1.9
JTM	Tenmabayashi	79.88	330	IAMs_20	IAMs_20	11 50 55.8	
	comp=Z,17µm,20.0s						
JTM	Tenmabayashi	79.88	330	P	P	11 17 05.6	+0.3
JTM	Tenmabayashi	79.88	330	P	P	11 17 04.9	-0.4
ERM	Erimo	80.04	332	P	P	11 17 08.1	+2.0
ERM	Erimo	80.04	332	*c i*P	P	11 17 06.9	+0.8
ERM				pmax	pmax		
	comp=Z,246nm,1.5s						
ERM				MLR	MLR		
	comp=Z,13µm,19.0s						
JEM	Erimo	80.04	332	P	P	11 17 07.3	+1.2
JEM	Erimo	80.04	332	P	P	11 17 09.8	+3.7
LL07	Hotel Espejo d	80.20	134	IAMs_20	IAMs_20	11 48 59.4	
	comp=Z,14µm,18.0s						
JOT	Ohata	80.38	331	P	P	11 17 08.8	+0.9
YUK	Yuzh-Kuril'sk	80.73	335	*d i*P	P	11 17 10.4	+0.6
YUK				*i* S	SKSac	11 27 22.5	-5.0
YUK				pmax	pmax		
	comp=Z,245nm,1.0s						
YUK				pmax	pmax		
	comp=Z,376nm,2.3s						
LL05	Los Muermos	80.97	133	IAMs_20	IAMs_20	11 44 25.8	
	comp=Z,12µm,21.0s						
LL02	Futaleuf	81.01	135	IAmb	IAmb	11 17 30.4	
	comp=Z,65nm,1.0s						
KUR	Kuril'sk	81.08	337	*e*P	P	11 17 13.9	+2.3
KUR				*i* S	SKSac	11 27 25.1	-4.7
KUR				pmax	pmax		
	comp=Z,3µm,6.9s						
KUR				pmax	pmax		
	comp=Z,257nm,1.1s						
KUR				MLR	MLR		
	comp=N,12µm,17.0s						
KUR				MLR	MLR		
	comp=E,2µm,17.0s						
KUR				MLR	MLR		
	comp=Z,11µm,17.0s						
LL01	San Ignacio de	81.10	134	IAMs_20	IAMs_20	11 49 46.4	
	comp=Z,11µm,18.0s						
QZH	Quanzhou	81.20	306	P	P	11 17 13.0	+0.3
QZH				PP	PP	11 20 20.0	+1.5
QZH				S	S	11 27 22.5	-0.1
QZH				LR	LR		
	comp=Z,3µm,19.6s						
QZH				LR	LR		
	comp=Z,7µm,19.2s						
QZH				LR	LR		
	comp=Z,8µm,20.6s						
H03S2	Juan Fernandez	81.24	124	T	T	12 46 57.6	
	baz=238,slow=74,SNR=6311						
H03S1	Juan Fernandez	81.25	124	T	T	12 46 58.8	
	baz=238,slow=74,SNR=5509						
H03S3	Juan Fernandez	81.26	124	T	T	12 46 57.7	
	baz=238,slow=74,SNR=6490						
BKNI	Bangkinang	81.42	275	P	P	11 17 13.3	-0.9
BKNI	Bangkinang	81.42	275	IAMs_20	IAMs_20	11 53 25.4	
	comp=Z,12µm,20.0s						
BKNI	Bangkinang	81.42	275	P	P	11 17 15.3	+1.1
BKNI	Bangkinang	81.42	275	P	P	11 17 23.1	+8.9
H03N3	Juan Fernandez	81.43	124	T	T	12 47 04.5	
	baz=242,slow=72,SNR=577						
H03N2	Juan Fernandez	81.44	124	T	T	12 47 11.1	
	baz=242,slow=72,SNR=684						
H03N1	Juan Fernandez	81.45	124	T	T	12 47 07.2	
	baz=242,slow=72,SNR=1192						
H06S1	SOCORRO T	81.73	63	T	T	12 47 19.8	
	SNR=7.6						
LL03	Petrohue	81.79	133	IAMs_20	IAMs_20	11 44 28.5	
	comp=Z,11µm,21.0s						
LR04	Corral	81.82	132	IAMs_20	IAMs_20	11 43 54.5	
	comp=Z,15µm,22.0s						
JSH	Shimam	81.84	331	P	P	11 17 16.1	+0.4
ADK	Adak	81.98	2	P	P	11 17 16.5	+0.3
ADK				IAMs_20	IAMs_20	11 46 39.6	
	comp=Z,14µm,21.0s						
ADK	Adak	81.98	2	P	P	11 17 17.2	+1.0
ADK	Adak	81.98	2	P	P	11 17 16.5	+0.3
ADK				pmax	pmax		
	comp=Z,139nm,1.1s						
JKA	Kamikawa-asahi	82.03	333	IAmb	IAmb	11 17 31.1	
	comp=Z,126nm,1.3s						
ASAJ	Asahikawa	82.03	333	P	P	11 17 16.7	0.0
	comp=Z,19nm,0.8s,baz=136,slow=2.4,SNR=7.9						
ASAJ				S	S	11 27 29.8	-0.6
	comp=Z,1.9nm,0.7s,baz=120,slow=20,SNR=1.1						
ASAJ				LR	LR	11 49 49.4	
	comp=Z,13µm,19.7s,baz=174,slow=33						
	comp=Z,19nm,0.8s						
ASAJ	Asahikawa	82.03	333	P	P	11 17 17.8	+1.1
ATKA	Atka Island	82.39	3	P	P	11 17 18.6	+0.2
ATKA	Atka Island	82.39	3	P	P	11 17 20.7	+2.4
LR05	Currie	82.54	132	IAMs_20	IAMs_20	11 44 42.5	
	comp=Z,12µm,21.0s						
LR03	Panguipulli	82.65	132	IAMs_20	IAMs_20	11 44 44.5	
	comp=Z,13µm,22.0s						
SMY	Shemya	83.02	356	P	P	11 17 24.3	+2.7
PLCA	Paso Flores	83.18	133	IAmb	IAmb	11 17 53.5	
	comp=Z,73nm,1.1s						
PLCA	Paso Flores	83.18	133	P	P	11 17 23.4	+0.3
	comp=Z,28nm,1.1s,baz=231,slow=6.3,SNR=23						
PLCA				LR	LR	11 49 04.1	
	comp=Z,8µm,18.2s,baz=242,slow=32						
	comp=Z,28nm,1.1s						
EFI	East Falkland	83.28	148	IAMs_20	IAMs_20	11 50 49.9	
	comp=Z,10µm,19.0s						
EFI	East Falkland	83.28	148	⇓*e*P	P	11 17 25.0	+1.7
EFI				pmax	pmax		
	comp=Z,177nm,1.6s						
EFI				MLR	MLR		
	comp=Z,3µm,7.0s						
TJN	Taejon	83.30	319	P	P	11 17 24.6	+1.1
TJN	Taejon	83.30	319	⇑*e*P	P	11 17 24.1	+0.6
SSE	Sheshan	83.41	312	P	P	11 17 21.8	-2.4
SSE				S	S	11 27 44.0	-1.1
SSE				pmax	pmax		
	comp=Z,15nm,0.7s						
SSE				pmax	pmax		
	comp=Z,520nm,7.6s						
SSE				LR	LR		
	comp=Z,2µm,28.0s						
SSE				LR	LR		
	comp=Z,2µm,23.9s						
NIKH	Nikolski High	83.53	6	IAMs_20	IAMs_20	11 46 32.6	
	comp=Z,16µm,22.0s						
NIKH	Nikolski High	83.53	6	P	P	11 17 26.6	+2.4
IPM	Ipoh	83.55	279	P	P	11 17 25.9	+0.5
SKR	Severo-Kuril's	83.68	344	*e*P	P	11 17 25.2	+0.2
SKR				*e*S	S	11 27 54.5	+7.7
SKR				*e*SS	SS	11 33 12.5	-2.1
SKR				pmax	pmax		
	comp=Z,800nm,7.2s						
SKR				smax	smax		
	comp=N,3µm,13.0s						
SKR				smax	smax		
	comp=E,4µm,12.4s						
SKR				MLR	MLR		
	comp=Z,10µm,17.0s						
BI05	Punta Hualpn	83.68	129	IAMs_20	IAMs_20	11 50 26.0	
	comp=Z,12µm,18.0s						
KSRS	Korea Array	83.76	320	P	P	11 17 25.0	-0.8
	comp=Z,3.6nm,0.8s,baz=140,slow=5.6,SNR=17						
KSRS				PP	PP	11 20 41.6	+2.3
	comp=Z,0.8nm,0.4s,baz=130,slow=8.1,SNR=4.7						
KSRS				LR	LR	11 49 45.6	
	comp=Z,4458µm,21.8s,baz=125,slow=32						
	comp=Z,3.6nm,0.8s						
KSRS	Korea Array	83.76	320	P	P	11 17 25.0	-0.8
KSAR	Wonju Array Be	83.77	320	P	P	11 17 24.9	-1.0
KSAR	Wonju Array Be	83.77	320	P	P	11 17 24.9	-1.0
KS19	Wonju Array Si	83.82	320	P	P	11 17 25.9	-0.3
GZH	Guangzhou	83.85	301	P	P	11 17 26.0	-0.6
GZH				PP	PP	11 20 43.5	+3.2
GZH				S	S	11 27 49.8	0.0
GZH				pmax	pmax		
	comp=Z,860nm,5.5s						
GZH				LR	LR		
	comp=Z,3µm,18.5s						
GZH				LR	LR		
	comp=Z,3µm,17.3s						
GZH				LR	LR		
	comp=Z,6µm,21.6s						
QIZ	Qiongzhong	84.15	296	P	P	11 17 27.0	-1.2
QIZ				SS	SS	11 33 24.3	+1.7
QIZ				pmax	pmax		
	comp=Z,790nm,8.2s						
QIZ				LR	LR		
	comp=Z,3µm,27.7s						
QIZ				LR	LR		
	comp=Z,12µm,38.8s						
KULM	Kulim	84.29	279	P	P	11 17 29.7	+0.6
YSS	Yuzhno-Sakhali	84.36	335	P	P	11 17 28.3	-0.4
YSS				IAMs_20	IAMs_20	11 48 00.4	
	comp=Z,11µm,22.0s						
YSS	Yuzhno-Sakhali	84.36	335	P	P	11 17 30.7	+2.1
YSS	Yuzhno-Sakhali	84.36	335	*e*P	P	11 17 28.6	0.0
YSS				*e*		11 17 38.2	
YSS				*e*		11 20 46.4	
YSS				*i* S	S	11 27 54.0	+0.1
YSS				*e*PPS	PPS	11 28 43.6	
YSS				pmax	pmax		
	comp=Z,40nm,0.8s						
YSS				pmax	pmax		
	comp=Z,700nm,6.2s						
YSS				pmax	pmax		
	comp=N,200nm,6.0s						
YSS				pmax	pmax		
	comp=E,100nm,4.1s						
YSS				pmax	pmax		
	comp=N,400nm,7.1s						
YSS				pmax	pmax		
	comp=E,300nm,7.4s						
YSS				MLR	MLR		
	comp=N,6µm,18.0s						
YSS				MLR	MLR		
	comp=E,6µm,18.0s						
YSS				MLR	MLR		
	comp=Z,7µm,18.0s						
RPSI	Rantau Prapat	84.44	276	P	P	11 17 27.3	-2.6
RPSI				IAmb	IAmb	11 17 41.3	
	comp=Z,137nm,1.7s						
RPSI				IAMs_20	IAMs_20	11 58 06.5	
	comp=Z,12µm,20.0s						
PSI	Prapat	84.49	276	P	P	11 17 30.9	+0.6
PSI	Prapat	84.49	276	P	P	11 17 27.3	-3.0
PSI				pmax	pmax		
	comp=Z,137nm,1.7s						
PSI				MLR	MLR		
	comp=Z,12µm,20.0s						
INCN	Inchon	84.50	320	P	P	11 17 31.3	+1.7
UNV	Unalaska Valle	84.63	7	IAMs_20	IAMs_20	11 47 13.8	
	comp=Z,16µm,22.0s						
GSI	Gunungsitoli	84.89	274	P	P	11 17 30.7	-1.5
GSI				IAMs_20	IAMs_20	11 56 22.5	
	comp=Z,16µm,20.0s						
GSI	Gunungsitoli	84.89	274	P	P	11 17 32.6	+0.4
GSI	Gunungsitoli	84.89	274	P	P	11 17 32.6	+0.4
	comp=Z,132nm,1.9s						
LVA	Lava Point	85.00	8	IAMs_20	IAMs_20	11 47 25.4	
	comp=Z,17µm,22.0s						
TEY	Ternei	85.24	330	⇓*e*P	P	11 17 40.3	+7.2
TEY				*e*		11 27 59.2	
TEY				pmax	pmax		
	comp=N,10.0nm,1.1s						
TEY				pmax	pmax		
	comp=Z,20nm,1.4s						
PET	Petropavlovsk	85.34	347	IAMs_20	IAMs_20	11 48 01.1	
	comp=Z,13µm,22.0s						
PET	Petropavlovsk	85.34	347	*e*P	P	11 17 33.8	+0.4
PET				*e*S	S	11 28 06.5	+3.2
PET				*e*PS	PnS	11 29 03.7	+3.5
PET				*e*SS	SS	11 33 41.2	+2.3
PET				pmax	pmax		
	comp=Z,37nm,1.4s						
PET				pmax	pmax		
	comp=Z,1µm,6.6s						
PET				pmax	pmax		
	comp=Z,700nm,6.7s						
PET				MLR	MLR		
	comp=Z,4µm,18.0s						
PET				MLR	MLR		
	comp=Z,4µm,17.0s						
LPIG	La Paz	85.36	59	LR	LR	11 46 28.4	
	comp=Z,11µm,21.0s,baz=230,slow=29						
SLBS	Sierra La Lagu	85.39	59	P	P	11 17 34.7	+0.2
SLBS	Sierra La Lagu	85.39	59	IAMs_20	IAMs_20	11 45 55.6	
	comp=Z,13µm,22.0s						
HJU	Haeju	85.40	319	P	P	11 17 34.0	-0.1
HJU				S	S	11 28 03.0	-1.6
HJU				AmB			
	comp=Z,861nm,4.0s						
HJU				AMS	AMS		
	comp=Z,11µm,25.2s						
ML02	Panimavida	85.42	129	IAMs_20	IAMs_20	11 51 46.0	
	comp=Z,10µm,18.0s						
NJ2	Nanjing	85.55	311	⇑P	P	11 17 35.3	+0.3
NJ2				sP	pwP	11 17 44.0	+1.9
NJ2				PP	PP	11 20 50.8	-3.2
NJ2				S	S	11 28 06.5	+0.2
NJ2				pmax	pmax		
	comp=Z,15nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,1µm,7.1s						
NJ2				LR	LR		
	comp=Z,4µm,20.0s						
NJ2				LR	LR		
	comp=Z,3µm,20.2s						
NJ2				LR	LR		
	comp=Z,8µm,22.1s						
PEA0B	Petropavlovsk-	85.61	346	IAmb	IAmb	11 18 07.1	
	comp=Z,102nm,1.2s						
PEA0B	Petropavlovsk-	85.61	346	⇓*e*P	P	11 17 35.6	+0.8
PETK	Petropavlovsk-	85.61	346	P	P	11 17 33.6	-1.1
PETK	Petropavlovsk-	85.61	346	P	P	11 17 34.5	-0.3
	comp=Z,22nm,0.8s,baz=176,slow=6.3,SNR=29						
PETK				LR	LR	11 48 33.1	
	comp=Z,13µm,21.7s,baz=166,slow=31						
	comp=Z,22nm,0.8s						
HHU	Hamhung	85.75	322	P	P	11 17 36.1	+0.3
HHU				S	S	11 28 06.9	-1.0
HHU				AmB			
	comp=Z,837nm,4.8s						
HHU				AMS	AMS		
	comp=Z,11µm,21.6s						
TJX	Tijuana	85.84	48	IAMs_20	IAMs_20	11 51 32.2	
	comp=Z,13µm,18.0s						
BCW	Bitter Crk WRg	85.94	45	IAmb	IAmb	11 17 49.0	
	comp=Z,66nm,0.9s						
BCW				IAMs_20	IAMs_20	11 46 53.7	
	comp=Z,14µm,21.0s						
SAO	San Andreas Ge	85.94	43	IAMs_20	IAMs_20	11 47 13.7	
	comp=Z,13µm,22.0s						
PMPB	Monarch Peak	85.95	44	IAMs_20	IAMs_20	11 47 01.0	
	comp=Z,13µm,22.0s						
VTX	Valle De La Tr	85.96	50	IAMs_20	IAMs_20	11 47 04.4	
	comp=Z,13µm,20.0s						
FALS	False Pass	86.00	9	IAMs_20	IAMs_20	11 48 39.1	
	comp=Z,14µm,21.0s						
BBGB	Big Mountain B	86.06	43	IAMs_20	IAMs_20	11 47 17.8	
	comp=Z,13µm,21.0s						
MCCM	Marconi Confer	86.06	41	IAMs_20	IAMs_20	11 48 31.8	
	comp=Z,9µm,20.0s						
TKX	Tecate	86.17	49	IAMs_20	IAMs_20	11 51 50.9	
	comp=Z,14µm,18.0s						
PASC	Pasadena Art C	86.19	47	IAmb	IAmb	11 17 50.0	
	comp=Z,72nm,1.4s						
ESJX	Sierra Juarez	86.24	49	IAmb	IAmb	11 17 51.2	
	comp=Z,93nm,1.5s						
ELS	Elsinore Mount	86.33	47	P	P	11 17 37.6	-1.3
ELS				IAmb	IAmb	11 18 03.2	
	comp=Z,65nm,1.3s						
ELS				IAMs_20	IAMs_20	11 51 10.3	
	comp=Z,12µm,19.0s						
SFX	San Felipe	86.36	51	IAMs_20	IAMs_20	11 51 32.0	
	comp=Z,13µm,19.0s						
BO02	Sierra Bellavi	86.40	128	IAMs_20	IAMs_20	11 48 11.9	
	comp=Z,10µm,20.0s						
UGL	Uglegorsk	86.40	336	*e*P	P	11 17 39.6	+0.9
UGL				*e*		11 20 59.4	
UGL				*e*S	S	11 28 13.4	-0.5
UGL				*e*SS	SS	11 33 53.0	-1.8
UGL				pmax	pmax		
	comp=Z,2µm,6.3s						
UGL				smax	smax		
	comp=E,3µm,11.0s						
UGL				smax	smax		
	comp=N,2µm,14.0s						
UGL				MLR	MLR		
	comp=N,8µm,19.0s						
UGL				MLR	MLR		
	comp=E,6µm,19.0s						
UGL				MLR	MLR		
	comp=Z,8µm,18.0s						
BO01	Tunca	86.42	128	IAMs_20	IAMs_20	11 47 50.6	
	comp=Z,10µm,21.0s						
VA05	Santo Domingo	86.47	127	IAmb	IAmb	11 17 53.5	
	comp=Z,85nm,1.2s						
VA05				IAMs_20	IAMs_20	11 45 52.0	
	comp=Z,10µm,22.0s						
CNBA	Chernabura Isl	86.55	11	IAMs_20	IAMs_20	11 50 47.8	
	comp=Z,10µm,20.0s						
MT01	Popeta	86.61	127	P	P	11 17 39.0	-1.5
YUH	Yuha Desert	86.66	49	IAmb	IAmb	11 17 52.8	
	comp=Z,76nm,1.4s						
USA0B	Ussuriysk Arra	86.66	327	*c i*P	P	11 17 40.5	+0.3
USRK	Ussuriysk Ar.	86.66	327	P	P	11 17 39.3	-0.9
	comp=Z,6.3nm,0.7s,baz=142,slow=5.4,SNR=8.3						
USRK				LR	LR	11 50 47.4	
	comp=Z,8µm,20.9s,baz=147,slow=32						
	comp=Z,6.3nm,0.7s						
MT09	Talagante	86.83	128	P	P	11 17 41.3	-0.4
MT09				IAmb	IAmb	11 18 14.1	
	comp=Z,88nm,1.2s						
SRIT	Nakonsritamara	86.88	282	P	P	11 17 44.1	+2.1
SDPT	Sand Point	86.91	11	P	P	11 17 43.2	+2.1
CPBX	Cerro Prieto	86.92	49	IAMs_20	IAMs_20	11 47 11.9	
	comp=Z,12µm,22.0s						
PFO	Pinyon Flats O	86.93	48	P	P	11 17 41.8	-0.1
PFO				IAmb	IAmb	11 17 58.7	
	comp=Z,61nm,1.4s						
PFO	Pinyon Flats O	86.93	48	LR	LR	11 52 25.5	
	comp=Z,14µm,18.0s,baz=244,slow=33						
PFO	Pinyon Flats O	86.93	48	*d i*P	P	11 17 42.8	+0.9
PFO				pmax	pmax		
	comp=Z,80nm,1.4s						
CCAC	Calif City Air	86.94	46	IAMs_20	IAMs_20	11 52 26.3	
	comp=Z,13µm,20.0s						
KMPM	Mount Pierce	86.96	39	IAMs_20	IAMs_20	11 49 10.6	
	comp=Z,11µm,20.0s						
BO04	La Punta	86.97	128	IAMs_20	IAMs_20	11 47 57.2	
	comp=Z,11µm,22.0s						
ISA	Isabella, Lake	86.99	45	P	P	11 17 42.4	+0.2
ISA				IAmb	IAmb	11 17 54.3	
	comp=Z,80nm,1.2s						
ISA				IAMs_20	IAMs_20	11 47 24.6	
	comp=Z,13µm,22.0s						
ISA	Isabella, Lake	86.99	45	P	P	11 17 42.4	+0.2
ISA				pmax	pmax		
	comp=Z,80nm,1.2s						
MT02	Curacav	87.03	127	IAmb	IAmb	11 18 15.4	
	comp=Z,65nm,1.1s						
KMRM	Mail Ridge	87.05	39	IAMs_20	IAMs_20	11 50 59.5	
	comp=Z,15µm,20.0s						
CNSH	ChangSha	87.18	305	P	P	11 17 43.5	+0.4
CNSH				S	S	11 28 17.8	-4.6
CNSH				pmax	pmax		
	comp=Z,800nm,11.1s						
CNSH				LR	LR		
	comp=Z,3µm,19.0s						
CNSH				LR	LR		
	comp=Z,3µm,21.6s						
CNSH				LR	LR		
	comp=Z,4µm,21.0s						
LMEL	Las Melosas	87.33	128	IAMs_20	IAMs_20	11 48 18.6	
	comp=Z,11µm,21.0s						
GULI	GuiLin	87.34	301	P	P	11 17 45.5	+1.6
GULI				pmax	pmax		
	comp=Z,30nm,1.6s						
GULI				pmax	pmax		
	comp=Z,930nm,8.1s						
GULI				LR	LR		
	comp=Z,2µm,20.6s						
GULI				LR	LR		
	comp=Z,5µm,20.4s						
GULI				LR	LR		
	comp=Z,8µm,20.4s						
PEL	Peldehue	87.40	127	P	P	11 17 43.7	-0.7
PEL				IAmb	IAmb	11 18 01.3	
	comp=Z,60nm,1.0s						
PEL	Peldehue	87.40	127	P	P	11 17 43.7	-0.7
PEL				pmax	pmax		
	comp=Z,60nm,1.0s						
CMB	Columbia Colle	87.42	42	IAmb	IAmb	11 17 55.7	

	comp=Z,72nm,1.6s						
CMB				IAMs_20	IAMs_20	11 47 26.9	
	comp=Z,11μm,22.0s						
KHMM	**Horse Mountain**	**87.50**	**39**	P	**P**	**11 17 44.6**	**0.0**
KHMM				IAmb	IAmb	11 17 56.7	
	comp=Z,54nm,1.3s						
KHMM				IAMs_20	IAMs_20	11 49 27.7	
	comp=Z,12μm,20.0s						
SUJ	**Sinuiju**	**87.52**	**320**	P	**P**	**11 17 44.8**	**+0.3**
SUJ				S	**S**	**11 28 23.0**	**-2.1**
SUJ				AmB			
	comp=Z,489nm,1.8s						
SUJ				AMS	AMS		
	comp=Z,10μm,24.5s						
WHN	**Wuhan**	**87.61**	**308**	⇑P	**P**	**11 17 45.3**	**+0.2**
WHN				S	**S**	**11 28 25.0**	**-1.4**
WHN				SS	**SS**	**11 34 15.3**	**+2.2**
WHN				pmax	pmax		
	comp=Z,490nm,1.9s						
WHN				LR	LR		
	comp=Z,6μm,14.4s						
WHN				LR	LR		
	comp=Z,5μm,15.9s						
WHN				LR	LR		
	comp=Z,13μm,17.7s						
GLA	**Glamis**	**87.63**	**49**	IAMs_20	IAMs_20	11 52 37.7	
	comp=Z,14μm,18.0s						
MT08	**Bocatoma Ro**	**87.69**	**128**	IAMs_20	IAMs_20	11 48 42.2	
	comp=Z,11μm,22.0s						
AFDM	**Forest Hills D**	**87.70**	**42**	P	**P**	**11 17 44.6**	**-0.8**
AFDM				IAMs_20	IAMs_20	11 48 41.2	
	comp=Z,12μm,21.0s						
TYV	**Tymovskoe**	**87.70**	**337**	*e*P	**P**	**11 17 46.7**	**+1.7**
TYV				*e*S	**S**	**11 28 28.2**	**+1.8**
TYV				pmax	pmax		
	comp=Z,32nm,0.9s						
TYV				pmax	pmax		
	comp=Z,400nm,3.1s						
TYV				smax	smax		
	comp=N,7.0nm,1.8s						
TYV				smax	smax		
	comp=E,13nm,1.8s						
TYV				smax	smax		
	comp=N,700nm,4.2s						
TYV				smax	smax		
	comp=E,1μm,4.2s						
GSC	**Goldstone, Bar**	**87.79**	**46**	IAmb	IAmb	11 17 57.6	
	comp=Z,49nm,1.0s						
GSC				IAMs_20	IAMs_20	11 52 52.8	
	comp=Z,15μm,19.0s						
HSIG		**87.80**	**54**	IAMs_20	IAMs_20	11 53 01.5	
	comp=Z,13μm,19.0s						
KSXB	**Camp Six Broad**	**88.09**	**38**	IAMs_20	IAMs_20	11 48 10.4	
	comp=Z,10μm,22.0s						
MDJ	**Mudanjiang**	**88.11**	**326**	IAMs_20	IAMs_20	11 55 05.1	
	comp=Z,9μm,19.0s						
MDJ	**Mudanjiang**	**88.11**	**326**	S	**S**	**11 28 22.3**	**-8.4**
MDJ	**Mudanjiang**	**88.11**	**326**	SS	SS	11 34 27.0	+6.9
MDJ				pmax	pmax		
	comp=Z,86nm,1.7s						
MDJ				LR	LR		
	comp=N,8μm,24.8s						
MDJ				LR	LR		
	comp=E,6μm,24.2s						
MDJ				LR	LR		
	comp=Z,12μm,22.5s						
MDJ	**Mudanjiang**	**88.11**	**326**	P	**P**	**11 17 47.9**	**+0.7**
CO06	**Fray Jorge**	**88.14**	**125**	IAMs_20	IAMs_20	11 46 50.4	
	comp=Z,11μm,21.0s						
113A	**Mohawk Valley,**	**88.15**	**50**	IAMs_20	IAMs_20	11 52 36.5	
	comp=Z,13μm,18.0s						
KBO	**Bosley Butte**	**88.17**	**37**	IAMs_20	IAMs_20	11 51 53.6	
	comp=Z,10μm,20.0s						
QSM	**Queen of Sheba**	**88.18**	**46**	IAmb	IAmb	11 17 59.8	
	comp=Z,87nm,1.3s						
QSM				IAMs_20	IAMs_20	11 55 53.1	
	comp=Z,14μm,18.0s						
BLYC	**Blythe**	**88.27**	**49**	IAMs_20	IAMs_20	11 47 52.5	
	comp=Z,13μm,22.0s						
WAKR	**Walker**	**88.29**	**43**	IAmb	IAmb	11 18 01.2	
	comp=Z,42nm,1.1s						
WAKR				IAMs_20	IAMs_20	11 48 59.9	
	comp=Z,13μm,21.0s						
DL2	**Dalian**	**88.33**	**318**	P	**P**	**11 17 48.5**	**+0.2**
DL2				pmax	pmax		
	comp=Z,24nm,1.6s						
DL2				pmax	pmax		
	comp=Z,1μm,10.3s						
DL2				LR	LR		
	comp=Z,9μm,21.8s						
DL2				LR	LR		
	comp=Z,5μm,23.9s						
DL2				LR	LR		
	comp=Z,15μm,24.3s						
DSP	**Deep Springs**	**88.41**	**44**	IAmb	IAmb	11 18 01.7	
	comp=Z,108nm,2.0s						
GWY	**Greenwater Val**	**88.44**	**46**	IAMs_20	IAMs_20	11 56 39.1	
	comp=Z,13μm,18.0s						
L02F	**Cave Junction**	**88.45**	**38**	IAmb	IAmb	11 18 13.4	
	comp=Z,41nm,1.3s						
L02F				IAMs_20	IAMs_20	11 48 22.1	
	comp=Z,10μm,22.0s						
MPK	**Martis Peak**	**88.47**	**42**	IAMs_20	IAMs_20	11 49 05.6	
	comp=Z,15μm,21.0s						
GRAC	**Grapevine Rang**	**88.54**	**45**	IAmb	IAmb	11 18 01.7	
	comp=Z,78nm,1.4s						
GRAC				IAMs_20	IAMs_20	11 48 37.5	
	comp=Z,13μm,21.0s						
KEBM	**Edson Butte**	**88.58**	**37**	IAMs_20	IAMs_20	11 48 46.4	
	comp=Z,11μm,22.0s						
PNTR	**Pine Nut**	**88.58**	**42**	IAMs_20	IAMs_20	11 48 58.7	
	comp=Z,14μm,21.0s						
PAYG	**Puerto Ayora**	**88.64**	**90**	IAMs_20	IAMs_20	11 52 28.7	
	comp=Z,9μm,19.0s						
YBH	**Yreka Blue Hor**	**88.64**	**39**	IAmb	IAmb	11 18 05.4	
	comp=Z,90nm,1.9s						
YBH	**Yreka Blue Hor**	**88.64**	**39**	LR	LR	11 49 03.8	
	comp=Z,554nm,21.8s,baz=255,slow=30						
BEKR	**Beckworth**	**88.67**	**41**	IAMs_20	IAMs_20	11 49 32.9	
	comp=Z,10μm,21.0s						
LHV	**Little Huntoon**	**88.67**	**43**	IAmb	IAmb	11 18 06.2	
	comp=Z,28nm,0.9s						
LHV				IAMs_20	IAMs_20	11 49 01.0	
	comp=Z,14μm,22.0s						
K02D	**Willamette Mer**	**88.81**	**37**	IAMs_20	IAMs_20	11 48 31.4	
	comp=Z,11μm,22.0s						
CO05	**La Serena**	**88.85**	**124**	IAMs_20	IAMs_20	11 47 10.2	
	comp=Z,13μm,22.0s						
WCT	**Wildcat Mounta**	**88.86**	**45**	IAmb	IAmb	11 18 04.0	
	comp=Z,64nm,1.6s						
WCT				IAMs_20	IAMs_20	11 48 57.1	
	comp=Z,14μm,20.0s						
NVAR	**Mina Array Bea**	**88.91**	**43**	P	**P**	**11 17 51.4**	**0.0**
NVAR	**Mina Array Bea**	**88.91**	**43**	P	**P**	**11 17 51.8**	**+0.4**
	comp=Z,4.5nm,0.8s,baz=247,slow=6.9,SNR=16						
NVAR				LR	LR	11 49 23.0	
	comp=Z,11μm,21.9s,baz=232,slow=30						
	comp=Z,4.5nm,0.8s						
RYN	**Ryan**	**88.91**	**43**	IAMs_20	IAMs_20	11 49 42.3	
	comp=Z,11μm,21.0s						
J01E	**Myrtle Point**	**89.00**	**37**	IAMs_20	IAMs_20	11 48 59.4	
	comp=Z,12μm,22.0s						
NV11	**Mina Array Sit**	**89.00**	**43**	IAmb	IAmb	11 18 04.0	
	comp=Z,46nm,1.2s						
GO04	**Tololo Observa**	**89.02**	**125**	IAmb	IAmb	11 17 57.4	
	comp=Z,36nm,1.0s						
PAHR	**Pah Rah Range**	**89.12**	**42**	IAmb	IAmb	11 18 03.8	
	comp=Z,42nm,1.3s						
PAHR				IAMs_20	IAMs_20	11 49 56.9	
	comp=Z,13μm,20.0s						
TPNV	**Topopah Spring**	**89.19**	**45**	IAmb	IAmb	11 18 04.9	
	comp=Z,57nm,1.4s						
TPNV				IAMs_20	IAMs_20	11 48 58.4	
	comp=Z,13μm,22.0s						
SII	**Sitkinak Islan**	**89.19**	**13**	IAMs_20	IAMs_20	11 50 14.6	
	comp=Z,15μm,21.0s						
L04D	**Klamath Falls**	**89.20**	**38**	IAmb	IAmb	11 18 16.5	
	comp=Z,74nm,1.3s						
SNY	**Shenyang**	**89.21**	**321**	⇓P	**P**	**11 17 53.3**	**+0.9**
SNY				pmax	pmax		
	comp=Z,52nm,1.5s						
SNY				pmax	pmax		
	comp=Z,680nm,7.1s						
SNY				LR	LR		
	comp=Z,4μm,27.3s						
SNY				LR	LR		
	comp=Z,6μm,23.5s						
SNY				LR	LR		
	comp=Z,12μm,25.0s						
V12A	**Nelson**	**89.29**	**47**	IAmb	IAmb	11 18 05.5	
	comp=Z,40nm,1.4s						
TIA	**Tai'an**	**89.30**	**313**	P	**P**	**11 17 52.3**	**-0.7**
TIA				SS	SS	11 34 39.0	+1.4
TIA				pmax	pmax		
	comp=Z,25nm,1.9s						
TIA				pmax	pmax		
	comp=Z,1μm,6.9s						
TIA				LR	LR		
	comp=Z,8μm,21.1s						
TIA				LR	LR		
	comp=Z,8μm,23.0s						
TIA				LR	LR		
	comp=Z,19μm,24.5s						
Y14A	**Wickenburg**	**89.37**	**49**	IAmb	IAmb	11 18 05.9	
	comp=Z,88nm,1.3s						
W13A	**Hualapai Mount**	**89.52**	**48**	IAmb	IAmb	11 18 06.8	
	comp=Z,48nm,1.2s						
W13A				IAMs_20	IAMs_20	11 53 55.4	
	comp=Z,12μm,18.0s						
SHPR	**Sheep Range**	**89.59**	**46**	IAmb	IAmb	11 18 07.9	
	comp=Z,50nm,1.6s						
CN2	**Changchun**	**89.59**	**323**	P	**P**	**11 17 53.0**	**-1.2**
CN2				S	**S**	**11 28 41.0**	**-3.6**
CN2				SS	**SS**	**11 34 42.0**	**+0.4**
CN2				pmax	pmax		
	comp=Z,30nm,1.6s						
CN2				pmax	pmax		
	comp=Z,900nm,6.0s						
CN2				LR	LR		
	comp=Z,6μm,21.0s						
CN2				LR	LR		
	comp=Z,8μm,21.0s						
CN2				LR	LR		
	comp=Z,13μm,24.0s						
I03D	**Drain, OR**	**89.68**	**37**	IAMs_20	IAMs_20	11 49 20.3	
	comp=Z,12μm,22.0s						
I02E	**Swisshome, OR**	**89.71**	**36**	IAMs_20	IAMs_20	11 49 44.1	
	comp=Z,16μm,22.0s						
ZON	**Zonda**	**89.71**	**127**	IAmb	IAmb	11 18 28.5	
	comp=Z,69nm,1.3s						
LCO	**Las Campanas**	**89.75**	**124**	P	**P**	**11 17 54.1**	**-1.7**
LCO				IAmb	IAmb	11 18 29.4	
	comp=Z,64nm,1.3s						
LCO	**Las Campanas**	**89.75**	**124**	IAMs_20	IAMs_20	11 48 11.1	
	comp=Z,13μm,22.0s						
LCO	**Las Campanas**	**89.75**	**124**	P	**P**	**11 17 54.1**	**-1.7**
LCO				pmax	pmax		
	comp=Z,64nm,1.3s						
PLK4	**Peulik 4**	**89.79**	**12**	IAMs_20	IAMs_20	11 50 38.1	
	comp=Z,13μm,21.0s						
Q09A	**Carvers**	**89.84**	**44**	IAMs_20	IAMs_20	11 49 37.9	
	comp=Z,11μm,22.0s						
TUC	**Tucson**	**89.88**	**52**	P	**P**	**11 17 56.0**	**+0.1**
TUC	**Tucson**	**89.88**	**52**	IAMs_20	IAMs_20	11 56 48.2	
	comp=Z,10μm,18.0s						
TUC	**Tucson**	**89.88**	**52**	P	**P**	**11 17 56.0**	**+0.1**
TUC				pmax	pmax		
	comp=Z,134nm,1.4s						
TUC				MLR	MLR		
	comp=Z,10μm,18.0s						
GRNR	**Gornyy**	**89.88**	**334**	⇓*i*P	**P**	**11 17 55.1**	**-0.3**
GRNR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MOIG	**Morelia**	**89.90**	**67**	IAMs_20	IAMs_20	11 47 54.0	
	comp=Z,10μm,22.0s						
AC04	**Llanos de Chal**	**89.94**	**123**	IAMs_20	IAMs_20	11 47 39.2	
	comp=Z,14μm,22.0s						
S11A	**Rachel**	**89.94**	**45**	IAmb	IAmb	11 18 08.1	
	comp=Z,31nm,1.0s						
S11A				IAMs_20	IAMs_20	11 49 42.7	
	comp=Z,12μm,21.0s						
CFA	**Coronel Fontan**	**89.98**	**127**	LR	LR	11 53 16.2	
	comp=Z,2μm,18.1s,baz=212,slow=32						
BNX	**BinXian**	**89.99**	**326**	⇑P	**P**	**11 17 54.5**	**-1.5**
BNX				pmax	pmax		
	comp=Z,830nm,6.9s						
BNX				LR	LR		
	comp=Z,3μm,17.9s						
BNX				LR	LR		
	comp=Z,8μm,19.1s						
BNX				LR	LR		
	comp=Z,8μm,18.8s						
OHAK	**Old Harbor**	**90.00**	**14**	IAMs_20	IAMs_20	11 50 39.8	
	comp=Z,11μm,21.0s						
OHAK	**Old Harbor**	**90.00**	**14**	P	**P**	**11 17 57.6**	**+1.9**
SLVN	**Son La**	**90.06**	**295**	P	**P**	**11 17 58.3**	**+1.3**
TRQA	**Tornquist**	**90.08**	**135**	P	**P**	**11 17 57.7**	**+0.8**
TRQA				IAmb	IAmb	11 18 03.0	
	comp=Z,106nm,1.6s						
TRQA				IAMs_20	IAMs_20	11 55 29.0	
	comp=Z,13μm,18.0s						
TRQA	**Tornquist**	**90.08**	**135**	P	**P**	**11 17 57.7**	**+0.8**
TRQA				pmax	pmax		
	comp=Z,106nm,1.6s						
BUCK	**Buck Mountain**	**90.21**	**37**	IAMs_20	IAMs_20	11 49 37.5	
	comp=Z,13μm,22.0s						
NKL	**Nikolayevsk**	**90.29**	**337**	*e*P	**P**	**11 17 56.2**	**-0.9**
NKL				*e*S	**SKSac**	**11 28 25.9**	**-1.5**
NKL				pmax	pmax		
	comp=N,16nm,0.9s						
NKL				pmax	pmax		
	comp=Z,164nm,1.2s						
NKL				smax	smax		
	comp=E,378nm,3.6s						
NKL				smax	smax		
	comp=N,825nm,3.7s						
NKL				MLR	MLR		
	comp=N,10μm,19.0s						
NKL				MLR	MLR		
	comp=E,26μm,18.0s						
NKL				MLR	MLR		
	comp=Z,36μm,18.0s						
K05A	**Summer Lake**	**90.31**	**39**	IAmb	IAmb	11 18 10.6	
	comp=Z,96nm,1.3s						
K05A				IAMs_20	IAMs_20	11 51 22.1	
	comp=Z,10μm,20.0s						
HPIG		**90.41**	**59**	IAmb	IAmb	11 18 11.3	
	comp=Z,50nm,1.5s						
HPIG				IAMs_20	IAMs_20	11 49 15.8	
	comp=Z,12μm,20.0s						
J05D	**Fort Rock, OR**	**90.50**	**38**	IAmb	IAmb	11 18 10.7	
	comp=Z,85nm,1.3s						
ACHA	**Angle Creek He**	**90.52**	**12**	IAMs_20	IAMs_20	11 51 00.7	
	comp=Z,12μm,22.0s						
HEBO	**Mount Hebo**	**90.53**	**36**	IAMs_20	IAMs_20	11 50 26.9	
	comp=Z,11μm,21.0s						
O14K	**Tigyukauivet M**	**90.57**	**9**	IAMs_20	IAMs_20	11 51 20.8	
	comp=Z,13μm,21.0s						
H04D	**Lebanon**	**90.57**	**37**	IAMs_20	IAMs_20	11 50 10.9	
	comp=Z,14μm,22.0s						
KLR	**Kul'dur**	**90.58**	**330**	P	**P**	**11 17 58.2**	**-0.5**
	comp=Z,6.6nm,0.8s,baz=110,slow=2.6,SNR=12						
KLR				LR	LR	11 57 14.6	
	comp=Z,10μm,18.5s,baz=153,slow=35						
	comp=Z,6.6nm,0.8s						
KLR	**Kul'dur**	**90.58**	**330*c***	*i*P	**P**	**11 17 59.3**	**+0.6**
KLR				pmax	pmax		
	comp=Z,90nm,1.6s						
KLR				MLR	MLR		
	comp=Z,9μm,18.0s						
KDAK	**Kodiak Island**	**90.66**	**14**	IAMs_20	IAMs_20	11 51 21.4	
	comp=Z,14μm,21.0s						
KDAK	**Kodiak Island**	**90.66**	**14**	LR	LR	11 51 32.7	
	comp=Z,13μm,21.6s,baz=213,slow=31						
X16A	**Lo Mia Camp, P**	**90.69**	**50**	IAmb	IAmb	11 18 12.6	
	comp=Z,54nm,1.1s						
X16A				IAMs_20	IAMs_20	11 49 40.8	
	comp=Z,13μm,21.0s						
O15K	**Ungalikthiuk R**	**90.70**	**10**	IAMs_20	IAMs_20	11 51 34.2	
	comp=Z,13μm,22.0s						
G03D	**McMinnville, O**	**90.78**	**36**	IAMs_20	IAMs_20	11 50 03.5	
	comp=Z,11μm,22.0s						
TLIG	**Tlapa**	**90.89**	**70**	IAMs_20	IAMs_20	11 51 19.7	
	comp=Z,9μm,20.0s						
GO03	**Copiapo**	**90.90**	**123**	IAMs_20	IAMs_20	11 51 49.6	
	comp=Z,9μm,19.0s						
AC06	**Mina Casimiro**	**90.95**	**123**	IAMs_20	IAMs_20	11 48 07.9	
	comp=Z,11μm,22.0s						
H04A	**Detroit Lake**	**90.96**	**37**	IAmb	IAmb	11 18 24.1	
	comp=Z,41nm,1.0s						
H04A				IAMs_20	IAMs_20	11 53 31.4	
	comp=Z,11μm,20.0s						
M11K	**Mekoryuk**	**91.10**	**6**	IAMs_20	IAMs_20	11 53 12.8	
	comp=Z,13μm,20.0s						
LCMT	**Little Creek M**	**91.10**	**47**	IAmb	IAmb	11 18 13.8	
	comp=Z,38nm,1.2s						
F03A	**Seaside**	**91.14**	**35**	IAMs_20	IAMs_20	11 50 21.8	
	comp=Z,9μm,21.0s						
N14K	**Kuskokwak Cree**	**91.16**	**9**	IAMs_20	IAMs_20	11 54 01.4	
	comp=Z,11μm,20.0s						
I05D	**Terrebonne, OR**	**91.17**	**37**	IAmb	IAmb	11 18 14.2	
	comp=Z,60nm,1.1s						
LYN	**LuoYang**	**91.28**	**310**	P	**P**	**11 18 04.5**	**+2.2**
LYN				sP	pwP	11 18 12.5	+3.0
LYN				pmax	pmax		
	comp=Z,58nm,0.6s						
LYN				pmax	pmax		
	comp=Z,1μm,6.7s						
LYN				LR	LR		
	comp=Z,7μm,22.0s						
LYN				LR	LR		
	comp=Z,6μm,26.1s						
LYN				LR	LR		
	comp=Z,16μm,22.0s						
UNM	**Universidad Na**	**91.32**	**68**	IAMs_20	IAMs_20	11 49 53.9	
	comp=Z,8μm,20.0s						
WVOR	**Wild Horse Val**	**91.35**	**40**	IAmb	IAmb	11 18 17.4	
	comp=Z,70nm,1.6s						
U15A	**North Rim**	**91.35**	**48**	IAmb	IAmb	11 18 15.4	
	comp=Z,52nm,1.1s						
U15A				IAMs_20	IAMs_20	11 49 27.2	
	comp=Z,12μm,22.0s						
KNB	**Kanab**	**91.37**	**47**	IAmb	IAmb	11 18 15.3	
	comp=Z,67nm,1.3s						
KNB				IAMs_20	IAMs_20	11 54 37.7	
	comp=Z,12μm,19.0s						
WUAZ	**Wupatki**	**91.40**	**49**	IAmb	IAmb	11 18 15.5	
	comp=Z,72nm,1.4s						
WUAZ				IAMs_20	IAMs_20	11 54 47.4	
	comp=Z,11μm,18.0s						
M13K	**Dall Lake**	**91.43**	**8**	IAMs_20	IAMs_20	11 53 32.6	
	comp=Z,12μm,20.0s						
HNS	**HongShan**	**91.55**	**313**	⇑P	**P**	**11 18 04.3**	**+0.9**
HNS				SKS	**SKSac**	**11 28 32.5**	**-3.0**
HNS				pmax	pmax		
	comp=Z,19nm,1.7s						
HNS				pmax	pmax		
	comp=Z,1μm,6.8s						
HNS				LR	LR		
	comp=Z,6μm,24.5s						
HNS				LR	LR		
	comp=Z,8μm,24.5s						
HNS				LR	LR		
	comp=Z,14μm,25.0s						
E03A	**Lebam**	**91.56**	**35**	IAMs_20	IAMs_20	11 51 05.2	
	comp=Z,9μm,20.0s						
N15K	**Kwethluk River**	**91.61**	**9**	IAmb	IAmb	11 18 19.5	
	comp=Z,47nm,1.1s						
N15K				IAMs_20	IAMs_20	11 52 03.4	
	comp=Z,15μm,22.0s						
P18K	**Big Mountain,**	**91.65**	**12**	IAmb	IAmb	11 18 34.5	
	comp=Z,46nm,1.4s						
P18K				IAMs_20	IAMs_20	11 53 48.5	
	comp=Z,12μm,21.0s						
SPR3	**Spring Creek 3**	**91.66**	**45**	IAmb	IAmb	11 18 15.7	
	comp=Z,40nm,1.4s						
SPR3				IAMs_20	IAMs_20	11 50 47.2	
	comp=Z,13μm,21.0s						
PSUT	**Pine Spring**	**91.66**	**45**	IAMs_20	IAMs_20	11 54 03.3	
	comp=Z,14μm,20.0s						
X18A	**Snowflake**	**91.75**	**51**	IAmb	IAmb	11 18 16.8	
	comp=Z,27nm,1.1s						
X18A				IAMs_20	IAMs_20	11 50 12.8	
	comp=Z,10μm,22.0s						
G05A	**Wamic**	**91.80**	**37**	IAMs_20	IAMs_20	11 51 01.4	
	comp=Z,15μm,22.0s						
M14K	**Bethel**	**91.93**	**8**	IAMs_20	IAMs_20	11 54 23.7	
	comp=Z,9μm,21.0s						
I07A	**Izee**	**91.97**	**38**	IAmb	IAmb	11 18 17.3	
	comp=Z,47nm,1.2s						
NLWA	**Neilton Lookou**	**92.01**	**34**	IAMs_20	IAMs_20	11 51 08.0	
	comp=Z,11μm,21.0s						
J08A	**Circle Bar Ran**	**92.05**	**39**	IAmb	IAmb	11 18 18.2	
	comp=Z,52nm,1.2s						
J08A				IAMs_20	IAMs_20	11 54 27.2	
	comp=Z,12μm,20.0s						
O18K	**Koktuh Hills**	**92.09**	**12**	IAMs_20	IAMs_20	11 54 00.1	
	comp=Z,10μm,21.0s						
AC02	**Maricunga**	**92.14**	**123**	IAmb	IAmb	11 18 41.4	
	comp=Z,77nm,1.6s						
AC02				IAMs_20	IAMs_20	11 52 48.4	
	comp=Z,10μm,19.0s						
G06A	**Carlson Farm,**	**92.14**	**37**	IAmb	IAmb	11 18 33.1	
	comp=Z,42nm,1.2s						
G06A				IAMs_20	IAMs_20	11 51 13.6	
	comp=Z,10μm,22.0s						
ELK	**Elko**	**92.21**	**43**	IAMs_20	IAMs_20	11 51 47.6	
	comp=Z,11μm,20.0s						
ELK	**Elko**	**92.21**	**43**	LR	LR	11 51 58.3	
	comp=Z,11μm,21.4s,baz=227,slow=31						
BJT	**Baijiatuau**	**92.27**	**316**	IAMs_20	IAMs_20	11 54 50.0	
	comp=Z,9μm,21.0s						
BJI	**Beijing**	**92.28**	**316**	P	**P**	**11 18 07.8**	**+1.1**
BJI				sP	**pwP**	**11 18 16.3**	**+2.4**
BJI				pmax	pmax		
	comp=Z,14nm,0.9s						
BJI				pmax	pmax		
	comp=Z,450nm,6.3s						
BJI				LR	LR		
	comp=Z,2μm,23.6s						
BJI				LR	LR		
	comp=Z,3μm,21.1s						
BJI				LR	LR		
	comp=Z,9μm,29.0s						
OZB	**Mount Ozzard**	**92.36**	**32**	IAMs_20	IAMs_20	11 51 20.2	
	comp=Z,9μm,21.0s						
L14K	**Kuka Creek**	**92.41**	**8**	IAMs_20	IAMs_20	11 54 01.6	
	comp=Z,10μm,20.0s						
PB14	**IPOC Station P**	**92.47**	**120**	P	**P**	**11 18 09.7**	**+1.0**
CMAR	**Chiang Mai Arr**	**92.51**	**290**	P	**P**	**11 18 07.1**	**-1.3**
CMAR	**Chiang Mai Arr**	**92.51**	**290**	P	**P**	**11 18 07.5**	**-0.9**
	comp=Z,2.0nm,1.1s,baz=114,slow=4.7,SNR=6.1						
CMAR				PKKPbc	**PKKPbc**	**11 35 25.8**	**+4.8**
	comp=Z,0.4nm,0.4s,baz=292,slow=3.8,SNR=4.5						
CMAR				LR	LR	11 58 59.1	
	comp=Z,2μm,21.9s,baz=125,slow=35						
	comp=Z,2.0nm,1.1s						
CMAR	**Chiang Mai Arr**	**92.51**	**290**	*i* P	**P**	**11 18 10.1**	**+1.7**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
EPT	**El Paso**	**92.52**	**54**	IAMs_20	IAMs_20	11 56 03.4	
	comp=Z,12μm,19.0s						
CNPM	**China Poot**	**92.54**	**14**	IAmb	IAmb	11 18 40.1	
	comp=Z,35nm,1.2s						
CNPM				IAMs_20	IAMs_20	11 52 42.1	
	comp=Z,12μm,20.0s						
O19K	**Port Alsworth**	**92.57**	**12**	IAmb	IAmb	11 18 16.8	
	comp=Z,58nm,1.3s						
O19K				IAMs_20	IAMs_20	11 54 26.7	
	comp=Z,10μm,21.0s						
HOM	**Homer**	**92.58**	**14**	IAMs_20	IAMs_20	11 52 14.1	
	comp=Z,11μm,22.0s						
ILSW	**Iliamna Southw**	**92.59**	**13**	IAmb	IAmb	11 18 23.3	
	comp=Z,39nm,1.2s						
M16K	**Timber Creek**	**92.59**	**10**	IAmb	IAmb	11 18 19.5	
	comp=Z,30nm,1.2s						
M16K				IAMs_20	IAMs_20	11 52 44.4	
	comp=Z,12μm,21.0s						
MVU	**Marysvale**	**92.66**	**46**	IAmb	IAmb	11 18 21.4	
	comp=Z,34nm,1.3s						
MVU				IAMs_20	IAMs_20	11 53 30.8	
	comp=Z,12μm,19.0s						
CHTO	**Chiang Mai**	**92.70**	**290**	P	**P**	**11 18 08.5**	**-0.7**
CHTO				IAmb	IAmb	11 18 22.8	
	comp=Z,64nm,1.9s						
CHTO	**Chiang Mai**	**92.70**	**290**	P	**P**	**11 18 10.6**	**+1.4**
CHTO	**Chiang Mai**	**92.70**	**290**	P	**P**	**11 18 08.5**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,64nm,2.0s						
K13K	**Kusilvak Mount**	**92.78**	**7**	IAMs_20	IAMs_20	11 53 35.1	
	comp=Z,13μm,20.0s						
BRLK	**Bradley Lake**	**92.83**	**14**	IAMs_20	IAMs_20	11 55 00.4	
	comp=Z,10μm,20.0s						
CLRS	**Cowichan Lake**	**92.89**	**33**	IAMs_20	IAMs_20	11 51 34.3	
	comp=Z,9μm,21.0s						
F07A	**Phinny Hill Vi**	**92.96**	**37**	IAMs_20	IAMs_20	11 51 48.1	
	comp=Z,12μm,22.0s						
KMI	**Kunming**	**92.99**	**297**	⇑P	**P**	**11 18 12.0**	**+1.3**
KMI				sP	pwP	11 18 22.0	+4.2
KMI				PP	**PP**	**11 21 56.0**	**+2.1**
KMI				pmax	pmax		
	comp=Z,33nm,1.8s						
KMI				pmax	pmax		
	comp=Z,390nm,8.3s						

KMI				LR	LR		
	comp=Z,1µm,22.5s						
KMI				LR	LR		
	comp=Z,3µm,22.0s						
KMI				LR	LR		
	comp=Z,3µm,19.8s						
PB10	**IPOC Station P**	**93.00**	**119**	IAMs_20	IAMs_20	11 49 07.4	
	comp=Z,10µm,22.0s						
G08A	**Pilot Rock**	**93.06**	**38**	IAmb	IAmb	11 18 22.8	
	comp=Z,56nm,1.3s						
MA2	**Magadan**	**93.07**	**345**	P	**P**	**11 18 08.3**	**-1.6**
MA2				IAMs_20	IAMs_20	11 54 18.7	
	comp=Z,10µm,21.0s						
MA2	**Magadan**	**93.07**	**345**	P	**P**	**11 18 10.1**	**+0.2**
	comp=Z,9.6nm,0.8s,baz=141,slow=11,SNR=6.8						
MA2				LR	LR	11 54 40.8	
	comp=Z,9µm,22.0s,baz=156,slow=32						
	comp=Z,9.6nm,0.8s						
MA2	**Magadan**	**93.07**	**345**	P	**P**	**11 18 10.1**	**+0.2**
N19K	**Bonanza Creek**	**93.12**	**12**	IAMs_20	IAMs_20	11 54 42.2	
	comp=Z,12µm,21.0s						
L16K	**Owhat River**	**93.18**	**9**	IAMs_20	IAMs_20	11 53 01.9	
	comp=Z,14µm,22.0s						
TIY	**Taiyuan**	**93.18**	**312**	P	**P**	**11 18 12.0**	**+0.9**
TIY				SKS	**SKSac**	**11 28 44.5**	**-0.3**
TIY				pmax	pmax		
	comp=Z,40nm,1.1s						
TIY				pmax	pmax		
	comp=Z,690nm,5.7s						
TIY				LR	LR		
	comp=Z,4µm,23.5s						
TIY				LR	LR		
	comp=Z,7µm,25.5s						
TIY				LR	LR		
	comp=Z,11µm,24.3s						
CBB	**Campbell River**	**93.19**	**31**	IAMs_20	IAMs_20	11 51 12.0	
	comp=Z,11µm,22.0s						
TX31	**Lajitas Ar. Si**	**93.21**	**58**	IAmb	IAmb	11 18 24.3	
	comp=Z,64nm,1.6s						
TXAR	**Lajitas Array**	**93.21**	**58**	P	**P**	**11 18 10.3**	**-1.2**
TXAR	**Lajitas Array**	**93.21**	**58**	P	**P**	**11 18 11.2**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=240,slow=4.7,SNR=8.1						
TXAR				PP	**PP**	**11 21 53.5**	**-1.9**
	comp=Z,1.3nm,1.2s,baz=234,slow=4.8,SNR=1.8						
TXAR				LR	LR	11 55 48.3	
	comp=Z,4µm,18.0s,baz=234,slow=33						
	comp=Z,0.2nm,0.3s						
MXC	**Moxie City**	**93.23**	**36**	IAMs_20	IAMs_20	11 51 44.1	
	comp=Z,14µm,21.0s						
HEH	**HeiHe**	**93.24**	**329**	*e*P	**P**	**11 18 11.0**	**+0.1**
HEH				sP	**pwP**	**11 18 20.0**	**+1.9**
HEH				pmax	pmax		
	comp=Z,12nm,1.7s						
HEH				pmax	pmax		
	comp=Z,670nm,7.3s						
HEH				LR	LR		
	comp=Z,7µm,20.8s						
HEH				LR	LR		
	comp=Z,4µm,22.0s						
HEH				LR	LR		
	comp=Z,9µm,19.4s						
HMU	**Henry Mountain**	**93.25**	**47**	IAMs_20	IAMs_20	11 55 00.4	
	comp=Z,10µm,19.0s						
MNTX	**Cornudas Mount**	**93.27**	**55**	IAmb	IAmb	11 18 23.4	
	comp=Z,35nm,1.6s						
MNTX				IAMs_20	IAMs_20	11 56 19.3	
	comp=Z,8µm,18.0s						
DUG	**Dugway, Tooele**	**93.32**	**45**	IAMs_20	IAMs_20	11 51 41.1	
	comp=Z,10µm,22.0s						
XAN	**Xi'an**	**93.38**	**308**	⇓P	**P**	**11 18 13.5**	**+1.4**
XAN				pmax	pmax		
	comp=Z,840nm,8.2s						
XAN				LR	LR		
	comp=Z,5µm,19.2s						
XAN				LR	LR		
	comp=Z,2µm,17.2s						
XAN				LR	LR		
	comp=Z,5µm,20.6s						
E07A	**Sunnyside**	**93.44**	**36**	IAMs_20	IAMs_20	11 52 01.8	
	comp=Z,14µm,21.0s						
SEW	**Seward**	**93.45**	**14**	IAMs_20	IAMs_20	11 55 15.1	
	comp=Z,9µm,20.0s						
K15K	**Wolf Creek Mou**	**93.48**	**8**	IAmb	IAmb	11 18 22.8	
	comp=Z,27nm,1.1s						
K15K				IAMs_20	IAMs_20	11 55 43.6	
	comp=Z,8µm,20.0s						
HAWA	**Hanford**	**93.49**	**37**	IAMs_20	IAMs_20	11 51 53.3	
	comp=Z,14µm,22.0s						
Y22D	**IRIS PASSCAL I**	**93.53**	**52**	IAMs_20	IAMs_20	11 57 18.1	
	comp=Z,12µm,18.0s						
Q23K	**Middleton Isla**	**93.55**	**16**	IAMs_20	IAMs_20	11 53 07.8	
	comp=Z,10µm,19.0s						
MFID	**Camas Ranch**	**93.56**	**41**	IAmb	IAmb	11 18 24.3	
	comp=Z,37nm,1.4s						
Q16A	**Castle Valley**	**93.56**	**46**	IAMs_20	IAMs_20	11 54 00.6	
	comp=Z,12µm,20.0s						
BBB	**Bella Bella**	**93.57**	**29**	IAMs_20	IAMs_20	11 55 20.1	
	comp=Z,9µm,19.0s						
BBB	**Bella Bella**	**93.57**	**29**	LR	LR	11 55 39.6	
	comp=Z,7µm,18.7s,baz=230,slow=32						
BGU	**Big Grassy Mou**	**93.63**	**44**	IAMs_20	IAMs_20	11 52 12.3	
	comp=Z,9µm,21.0s						
PB05	**IPOC Station P**	**93.64**	**119**	IAMs_20	IAMs_20	11 54 00.5	
	comp=Z,8µm,20.0s						
SLKM	**Skilak Lake**	**93.65**	**14**	IAmb	IAmb	11 18 24.1	
	comp=Z,28nm,1.1s						
BMO	**Blue Mountains**	**93.66**	**39**	IAmb	IAmb	11 18 25.1	
	comp=Z,50nm,1.9s						
BMO				IAMs_20	IAMs_20	11 53 09.9	
	comp=Z,9µm,20.0s						
CMIG	**Matias Romero**	**93.67**	**72**	LR	LR	11 52 37.1	
	comp=Z,5µm,19.6s,baz=244,slow=30						
O22K	**Cooper Landing**	**93.73**	**14**	IAMs_20	IAMs_20	11 56 14.6	
	comp=Z,8µm,20.0s						
TMUT	**Trail Mountain**	**93.76**	**46**	IAmb	IAmb	11 18 26.7	
	comp=Z,20nm,0.9s						
TMUT				IAMs_20	IAMs_20	11 54 07.9	
	comp=Z,10µm,20.0s						
E08A	**Dider Farm, El**	**93.80**	**37**	IAMs_20	IAMs_20	11 52 24.5	
	comp=Z,12µm,21.0s						
MPU	**Maple Canyon**	**93.93**	**45**	IAMs_20	IAMs_20	11 57 02.3	
	comp=Z,12µm,19.0s						
GAMB	**Gambell**	**94.07**	**3**	IAMs_20	IAMs_20	11 51 50.1	
	comp=Z,13µm,22.0s						
SRU	**San Rafael Swe**	**94.08**	**47**	IAmb	IAmb	11 18 26.9	
	comp=Z,31nm,1.3s						
SRU				IAMs_20	IAMs_20	11 53 45.4	
	comp=Z,11µm,20.0s						
M19K	**Big River Lodg**	**94.15**	**11**	IAMs_20	IAMs_20	11 55 13.6	
	comp=Z,8µm,20.0s						
CRAG	**Craig**	**94.16**	**24**	IAMs_20	IAMs_20	11 53 34.2	
	comp=Z,10µm,20.0s						
FIS	**Fire Island**	**94.23**	**14**	IAMs_20	IAMs_20	11 55 56.7	
	comp=Z,10µm,20.0s						
STLK	**Strandline Lak**	**94.24**	**13**	IAMs_20	IAMs_20	11 53 17.9	
	comp=Z,9µm,22.0s						
D08A	**Wollman Farm,**	**94.25**	**36**	IAmb	IAmb	11 18 27.0	
	comp=Z,59nm,1.9s						
D08A				IAMs_20	IAMs_20	11 52 26.3	
	comp=Z,13µm,21.0s						
CTU	**Camp Tracy**	**94.27**	**45**	IAMs_20	IAMs_20	11 52 11.2	
	comp=Z,11µm,22.0s						
MVCO	**Mesa Verde**	**94.27**	**49**	IAMs_20	IAMs_20	11 56 47.4	
	comp=Z,12µm,18.0s						
RC01	**Rabbit Creek A**	**94.28**	**14**	IAMs_20	IAMs_20	11 55 46.1	
	comp=Z,9µm,20.0s						
E09A	**Wood Farm, Sta**	**94.29**	**37**	IAMs_20	IAMs_20	11 52 29.5	
	comp=Z,9µm,21.0s						
HVU	**Hansel Valley**	**94.31**	**43**	IAMs_20	IAMs_20	11 51 37.2	
	comp=Z,9µm,22.0s						
K17K	**Iditarod**	**94.31**	**9**	IAMs_20	IAMs_20	11 53 46.7	
	comp=Z,14µm,21.0s						
NNA	**Nana**	**94.33**	**106**	IAMs_20	IAMs_20	11 49 55.7	
	comp=Z,10µm,21.0s						
NNA	**Nana**	**94.33**	**106**	LR	LR	11 50 18.5	
	comp=Z,9µm,21.8s,baz=234,slow=29						
NNA	**Nana**	**94.33**	**106**	⇓*i*P	**P**	**11 18 16.9**	**-0.1**
NNA				pmax	pmax		
	comp=Z,83nm,1.4s						
NNA				MLR	MLR		
	comp=Z,8µm,17.0s						
L19K	**White Mountain**	**94.33**	**11**	IAmb	IAmb	11 18 27.6	
	comp=Z,33nm,1.2s						
ANMO	**Albuquerque**	**94.34**	**52**	P	**P**	**11 18 16.4**	**-0.3**
ANMO	**Albuquerque**	**94.34**	**52**	IAMs_20	IAMs_20	11 52 00.5	
	comp=Z,9µm,20.0s						
ANMO	**Albuquerque**	**94.34**	**52**	LR	LR	11 52 12.0	
	comp=Z,11µm,21.7s,baz=319,slow=30						
ANMO	**Albuquerque**	**94.34**	**52**	⇓*e*P	**P**	**11 18 17.0**	**+0.3**
ANMO				pmax	pmax		
	comp=Z,17nm,1.3s						
ANMO				MLR	MLR		
	comp=Z,8µm,16.0s						
M20K	**Styx River**	**94.35**	**12**	IAMs_20	IAMs_20	11 55 33.0	
	comp=Z,13µm,22.0s						
PWL	**Port Wells**	**94.37**	**15**	IAmb	IAmb	11 18 27.5	
	comp=Z,32nm,1.4s						
PWL				IAMs_20	IAMs_20	11 55 30.5	
	comp=Z,11µm,20.0s						
HLID	**Hailey**	**94.45**	**41**	IAMs_20	IAMs_20	12 05 35.9	
	comp=Z,8µm,18.0s						
KAIM	**Kayak Island**	**94.45**	**17**	IAMs_20	IAMs_20	11 53 56.8	
	comp=Z,12µm,20.0s						
PZH	**PanZhiHua**	**94.48**	**298**	P	**P**	**11 18 17.0**	**-0.4**
PZH				PP	**PP**	**11 22 06.0**	**+0.6**
PZH				S	**S**	**11 29 27.3**	**-2.4**
PZH				sS	**sS**	**11 29 37.8**	**+1.6**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,370nm,8.6s						
PZH				LR	LR		
	comp=Z,4µm,22.6s						
PZH				LR	LR		
	comp=Z,4µm,24.5s						
PZH				LR	LR		
	comp=Z,5µm,22.8s						
PLID	**Pearl Lake**	**94.52**	**39**	IAmb	IAmb	11 18 29.2	
	comp=Z,37nm,1.2s						
PLID				IAMs_20	IAMs_20	11 53 37.7	
	comp=Z,11µm,20.0s						
J16K	**Anvik River**	**94.55**	**8**	IAMs_20	IAMs_20	11 56 26.0	
	comp=Z,10µm,20.0s						
V35K	**Ketchikan**	**94.59**	**25**	IAMs_20	IAMs_20	11 52 06.7	
	comp=Z,10µm,21.0s						
PV20	**West Nyswonger**	**94.62**	**48**	IAmb	IAmb	11 18 29.2	
	comp=Z,29nm,1.2s						
GLI	**Glacier Island**	**94.66**	**15**	IAMs_20	IAMs_20	11 53 59.2	
	comp=Z,11µm,20.0s						
U33K	**Whale Pass**	**94.66**	**24**	IAMs_20	IAMs_20	11 52 58.6	
	comp=Z,10µm,20.0s						
TCUT	**Toone Canyon**	**94.73**	**45**	IAMs_20	IAMs_20	11 52 37.4	
	comp=Z,12µm,22.0s						
XLT	**XiLinHaoTe**	**94.73**	**319**	*e*P	**P**	**11 18 18.5**	**+0.4**
XLT				pP	pwP	11 18 22.5	-2.8
XLT				PP	**PP**	**11 22 09.3**	**+2.2**
XLT				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,350nm,11.7s						
XLT				LR	LR		
	comp=Z,7µm,21.3s						
XLT				LR	LR		
	comp=Z,10µm,23.0s						
SKT	**Skwentna**	**94.74**	**13**	IAMs_20	IAMs_20	11 53 45.2	
	comp=Z,14µm,21.0s						
SUCK	**Suckling Hills**	**94.74**	**17**	IAMs_20	IAMs_20	11 54 16.3	
	comp=Z,13µm,20.0s						
BSUT	**Blindstream Ca**	**94.78**	**45**	IAMs_20	IAMs_20	12 01 50.7	
	comp=Z,7µm,18.0s						
KNK	**Knik Glacier**	**94.84**	**14**	IAMs_20	IAMs_20	11 53 58.9	
	comp=Z,11µm,22.0s						
J17K	**VABM Dome**	**94.85**	**9**	IAMs_20	IAMs_20	11 53 53.1	
	comp=Z,10µm,22.0s						
PMR	**Palmer**	**94.86**	**14**	P	**P**	**11 18 19.1**	**+1.0**
HWUT	**Hardware Ranch**	**94.92**	**44**	IAMs_20	IAMs_20	11 52 43.6	
	comp=Z,10µm,21.0s						
PB09	**IPOC Station P**	**94.97**	**119**	IAMs_20	IAMs_20	11 50 41.8	
	comp=Z,11µm,22.0s						
AF01	**San Pedro de A**	**95.10**	**120**	IAMs_20	IAMs_20	11 50 57.1	
	comp=Z,9µm,22.0s						
S31K	**Pelican**	**95.10**	**21**	IAMs_20	IAMs_20	11 55 28.1	
	comp=Z,8µm,19.0s						
I17K	**Unalakleet**	**95.12**	**8**	IAMs_20	IAMs_20	11 53 30.1	
	comp=Z,10µm,22.0s						
WRAK	**Wrangell Islan**	**95.17**	**24**	IAMs_20	IAMs_20	11 53 14.1	
	comp=Z,9µm,20.0s						
DIV	**Divide**	**95.19**	**16**	IAMs_20	IAMs_20	11 53 53.0	
	comp=Z,13µm,21.0s						
LLLB	**Lillooet**	**95.19**	**33**	IAMs_20	IAMs_20	11 52 56.0	
	comp=Z,9µm,21.0s						
PB01	**IPOC Station P**	**95.22**	**118**	IAMs_20	IAMs_20	11 50 12.4	
	comp=Z,9µm,21.0s						
S32K	**Killisnoo**	**95.24**	**22**	IAMs_20	IAMs_20	11 53 38.8	
	comp=Z,8µm,20.0s						
J18K	**Innoko River**	**95.25**	**10**	IAmb	IAmb	11 18 29.8	
	comp=Z,33nm,1.6s						
J18K				IAMs_20	IAMs_20	11 54 05.6	
	comp=Z,12µm,22.0s						
CD2	**Chengdu**	**95.30**	**303**	P	**P**	**11 18 22.0**	**+1.0**
CD2				PP	**PP**	**11 22 11.0**	**-0.7**
CD2				SKS	**SKSac**	**11 28 59.0**	**+2.4**
CD2				SS	**SS**	**11 36 05.0**	**+0.8**
CD2				pmax	pmax		
	comp=Z,620nm,7.0s						
CD2				LR	LR		
	comp=Z,4µm,20.3s						
CD2				LR	LR		
	comp=Z,3µm,19.0s						
CD2				LR	LR		
	comp=Z,7µm,21.6s						
MESA	**MESA**	**95.30**	**18**	IAMs_20	IAMs_20	11 55 51.2	
	comp=Z,13µm,19.0s						
BMRM	**Bremner River**	**95.32**	**16**	IAMs_20	IAMs_20	11 53 34.6	
	comp=Z,10µm,22.0s						
YKU2	**Yakutat**	**95.36**	**19**	IAMs_20	IAMs_20	11 52 28.7	
	comp=Z,12µm,21.0s						
SCM	**Sheep Creek Mo**	**95.46**	**15**	IAmb	IAmb	11 18 36.5	
	comp=Z,26nm,1.3s						
SCM				IAMs_20	IAMs_20	11 56 56.3	
	comp=Z,9µm,20.0s						
PPLA	**Purkeypile**	**95.46**	**12**	IAMs_20	IAMs_20	11 56 18.3	
	comp=Z,13µm,21.0s						
KLU	**Klutina**	**95.47**	**15**	IAMs_20	IAMs_20	11 54 34.6	
	comp=Z,12µm,20.0s						
YAH	**Yahtse**	**95.51**	**18**	IAMs_20	IAMs_20	11 56 06.6	
	comp=Z,13µm,20.0s						
ATAH	**Atahualpa**	**95.57**	**102**	LR	LR	11 55 48.0	
	comp=Z,4µm,18.0s,baz=245,slow=32						
HHC	**Hu-ho-hao-te**	**95.57**	**315**	*e*P	**P**	**11 18 23.8**	**+1.8**
HHC				sP	pwP	11 18 32.5	+3.3
HHC				PP	**PP**	**11 22 13.0**	**-0.7**
HHC				SKS	**SKSac**	**11 28 58.3**	**+0.6**
HHC				S	**S**	**11 29 37.3**	**-1.2**
HHC				sS	sS	11 29 44.5	-0.6
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,380nm,6.6s						
HHC				LR	LR		
	comp=Z,4µm,19.9s						
HHC				LR	LR		
	comp=Z,8µm,22.9s						
HHC				LR	LR		
	comp=Z,14µm,22.2s						
U35K	**Hyder**	**95.62**	**25**	IAMs_20	IAMs_20	11 53 01.0	
	comp=Z,14µm,22.0s						
PCA	**Pinnacle**	**95.68**	**18**	IAMs_20	IAMs_20	11 52 49.4	
	comp=Z,12µm,21.0s						
BCPM	**Bancas Point**	**95.73**	**19**	IAMs_20	IAMs_20	11 52 50.7	
	comp=Z,13µm,22.0s						
TABL	**Table Mountain**	**95.74**	**18**	IAMs_20	IAMs_20	11 56 14.7	
	comp=Z,12µm,20.0s						
SEY	**Seymchan**	**95.79**	**347**	P	**P**	**11 18 22.8**	**+0.5**
	comp=Z,5.4nm,0.8s,baz=152,slow=8.9,SNR=7.6						
SEY				LR	LR	11 57 59.8	
	comp=Z,16µm,20.3s,baz=150,slow=33						
	comp=Z,5.4nm,0.8s						
ZEA	**Zeya**	**95.81**	**331**	*e*P	**P**	**11 18 23.8**	**+1.2**
ZEA				*e*		11 29 03.4	
ZEA				*e*S	**S**	**11 29 44.1**	**+4.4**
ZEA				*e*PS	**PS**	**11 31 02.6**	**+2.2**
ZEA				*e*SSS	SSS	11 39 51.5	
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.5s						
ZEA				pmax	pmax		
	comp=Z,300nm,7.1s						
ZEA				smax	smax		
	comp=E,500nm,9.2s						
ZEA				smax	smax		
	comp=N,700nm,13.9s						
VRDI	**Verde Repeater**	**95.82**	**16**	IAMs_20	IAMs_20	11 54 10.9	
	comp=Z,9µm,21.0s						
GRNC	**Granite Creek**	**95.82**	**17**	IAMs_20	IAMs_20	11 54 39.9	
	comp=Z,11µm,20.0s						
N25K	**Chitina, Valde**	**95.88**	**16**	IAMs_20	IAMs_20	11 54 14.4	
	comp=Z,11µm,21.0s						
AHID	**Auburn Hatcher**	**95.89**	**43**	IAMs_20	IAMs_20	11 52 38.1	
	comp=Z,9µm,22.0s						
R32K	**Eaglecrest**	**95.90**	**22**	IAMs_20	IAMs_20	11 52 07.2	
	comp=Z,9µm,22.0s						
J19K	**Poorman**	**95.92**	**10**	IAMs_20	IAMs_20	11 54 26.2	
	comp=Z,10µm,22.0s						
GLB	**Gilahina Butte**	**95.92**	**16**	IAMs_20	IAMs_20	11 53 53.5	
	comp=Z,9µm,22.0s						
M24K	**Tolsona, Glenn**	**95.96**	**15**	IAMs_20	IAMs_20	11 56 58.4	
	comp=Z,8µm,20.0s						
NEW	**Newport**	**95.96**	**36**	LR	LR	11 53 50.1	
	comp=Z,15µm,21.7s,baz=222,slow=31						
CAST	**Castle Rocks**	**95.96**	**12**	IAMs_20	IAMs_20	11 56 42.8	
	comp=Z,11µm,20.0s						
P29M	**Windy Craggy**	**96.01**	**20**	IAMs_20	IAMs_20	11 53 02.0	
	comp=Z,9µm,22.0s						
MCARA	**McCarthy VSAT**	**96.06**	**17**	IAMs_20	IAMs_20	11 54 18.3	
	comp=Z,8µm,21.0s						
LOGN	**Logan Glacier**	**96.10**	**18**	IAMs_20	IAMs_20	11 56 26.1	
	comp=Z,11µm,19.0s						
CTGM	**Chitina Glacie**	**96.13**	**17**	IAMs_20	IAMs_20	11 54 51.1	
	comp=Z,10µm,21.0s						
HIA	**Hailar**	**96.19**	**325**	IAMs_20	IAMs_20	11 56 40.9	
	comp=Z,10µm,21.0s						
TNCH	**TengChong**	**96.21**	**295**	*e*P	**P**	**11 18 26.5**	**+1.1**
TNCH				PP	**PP**	**11 22 20.3**	**+1.3**
TNCH				SKS	**SKSac**	**11 29 01.8**	**-0.1**
TNCH				S	**S**	**11 29 43.0**	**-1.9**
TNCH				SS	**SS**	**11 36 18.8**	**+1.3**
TNCH				pmax	pmax		
	comp=Z,360nm,6.8s						
TNCH				LR	LR		
	comp=Z,1µm,19.3s						
TNCH				LR	LR		
	comp=Z,1µm,22.8s						
TNCH				LR	LR		
	comp=Z,8µm,22.5s						
H17K	**Granite Mounta**	**96.23**	**8**	IAMs_20	IAMs_20	11 56 40.3	
	comp=Z,9µm,20.0s						
O28M	**Mount Upton**	**96.27**	**18**	IAMs_20	IAMs_20	11 56 31.7	
	comp=Z,10µm,20.0s						
KTH	**Kantishna Hill**	**96.30**	**12**	IAMs_20	IAMs_20	11 56 34.3	
	comp=Z,10µm,21.0s						
T35M	**Bob Quinn**	**96.35**	**25**	IAMs_20	IAMs_20	11 55 13.2	
	comp=Z,11µm,20.0s						
MSTX	**Muleshoe**	**96.35**	**54**	IAMs_20	IAMs_20	11 58 16.8	
	comp=Z,11µm,18.0s						
BTO	**Baotou**	**96.39**	**314**	*e*P	**P**	**11 18 26.0**	**+0.2**
BTO				S	**S**	**11 29 45.8**	**+0.2**
BTO				SS	**SS**	**11 36 17.8**	**-1.6**
BTO				pmax	pmax		
	comp=Z,17nm,0.6s						
BTO				pmax	pmax		
	comp=Z,790nm,5.8s						
TPAW	**Teton Pass**	**96.41**	**43**	IAMs_20	IAMs_20	11 54 00.7	
	comp=Z,9µm,21.0s						
FXWY	**Fox Creek**	**96.45**	**43**	IAMs_20	IAMs_20	11 54 01.9	
	comp=Z,9µm,21.0s						
SNOW	**Snow King Moun**	**96.51**	**43**	IAMs_20	IAMs_20	11 53 53.4	
	comp=Z,8µm,21.0s						
SDCO	**Great Sand Dun**	**96.54**	**50**	IAMs_20	IAMs_20	11 53 08.6	
	comp=Z,9µm,21.0s						
RND	**Reindeer**	**96.56**	**13**	IAmb	IAmb	11 18 35.2	
	comp=Z,18nm,1.1s						
KVTX	**Kingsville**	**96.58**	**62**	IAMs_20	IAMs_20	12 03 31.2	
	comp=Z,8µm,18.0s						
DLMT	**Dillon**	**96.58**	**41**	IAMs_20	IAMs_20	11 59 01.2	
	comp=Z,10µm,18.0s						
SKAG	**Skagway**	**96.59**	**21**	IAMs_20	IAMs_20	11 58 50.4	
	comp=Z,10µm,19.0s						
H18K	**Honhosa River**	**96.63**	**9**	IAMs_20	IAMs_20	11 55 10.0	
	comp=Z,9µm,21.0s						
JCT	**Junction City**	**96.65**	**59**	IAMs_20	IAMs_20	11 52 53.0	
	comp=Z,11µm,22.0s						
LOHW	**Long Hollow**	**96.69**	**43**	IAmb	IAmb	11 18 39.5	
	comp=Z,24nm,1.6s						
S34M	**Telegraph Cree**	**96.75**	**24**	IAMs_20	IAMs_20	11 54 21.7	
	comp=Z,10µm,20.0s						
BW06	**Boulder Array**	**96.81**	**44**	IAMs_20	IAMs_20	11 52 58.7	
	comp=Z,12µm,22.0s						
PDAR	**Pinedale Array**	**96.81**	**44**	P	**P**	**11 18 26.7**	**-1.1**
PDAR	**Pinedale Array**	**96.81**	**44**	P	**P**	**11 18 28.1**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=244,slow=4.1,SNR=7.8						
PDAR				PP	**PP**	**11 22 22.7**	**-0.6**
	comp=Z,1.1nm,1.0s,baz=247,slow=5.1,SNR=4.2						
PDAR				PKKP	**PKKPdf**	**11 35 15.8**	**+2.8**
	comp=Z,0.6nm,0.6s,baz=76,slow=1.8,SNR=4.4						
PDAR				LR	LR	11 53 55.5	
	comp=Z,7µm,22.0s,baz=217,slow=30						
	comp=Z,0.8nm,0.8s						
I20K	**Naaghedeneel**	**96.85**	**10**	IAMs_20	IAMs_20	11 55 14.8	
	comp=Z,9µm,22.0s						
PAX	**Paxson**	**96.87**	**15**	IAMs_20	IAMs_20	11 55 00.7	
	comp=Z,12µm,21.0s						
M26K	**Nabesna, AK**	**96.95**	**16**	IAmb	IAmb	11 18 43.0	
	comp=Z,26nm,1.7s						
M26K				IAMs_20	IAMs_20	11 55 00.7	
	comp=Z,10µm,21.0s						
YHB	**Horse Butte**	**97.01**	**42**	IAMs_20	IAMs_20	11 54 32.7	
	comp=Z,8µm,21.0s						
YFT	**Old Faithful**	**97.04**	**42**	IAMs_20	IAMs_20	11 55 25.5	
	comp=Z,12µm,20.0s						
HYT	**Haines Junctio**	**97.05**	**19**	IAMs_20	IAMs_20	11 53 45.6	
	comp=Z,13µm,22.0s						
YHL	**Hebgen Lake**	**97.08**	**42**	IAmb	IAmb	11 18 42.0	
	comp=Z,29nm,1.4s						
YHL				IAMs_20	IAMs_20	11 54 35.4	
	comp=Z,9µm,22.0s						
H17A	**Grant Village**	**97.16**	**42**	IAMs_20	IAMs_20	11 53 42.6	
	comp=Z,11µm,22.0s						
Q32M	**Nakina River**	**97.17**	**22**	IAMs_20	IAMs_20	11 52 56.8	
	comp=Z,9µm,22.0s						
M27K	**Edge Creek, AK**	**97.18**	**17**	IAmb	IAmb	11 18 40.2	
	comp=Z,17nm,1.2s						
M27K				IAMs_20	IAMs_20	11 55 05.9	
	comp=Z,9µm,21.0s						
P32M	**Atlin**	**97.19**	**21**	IAMs_20	IAMs_20	11 58 06.5	
	comp=Z,8µm,19.0s						
MENT	**Mentasta**	**97.24**	**15**	IAMs_20	IAMs_20	11 56 30.4	
	comp=Z,11µm,21.0s						
MENT	**Mentasta**	**97.24**	**15**	P	Pdif	11 18 30.2	+1.1
H19K	**Roundabout Mou**	**97.24**	**9**	IAMs_20	IAMs_20	11 55 58.3	
	comp=Z,9µm,21.0s						
YNM	**Yellowstone No**	**97.28**	**42**	IAMs_20	IAMs_20	11 55 33.8	
	comp=Z,9µm,20.0s						
YNR	**Norris Junctio**	**97.29**	**42**	IAMs_20	IAMs_20	11 55 34.0	
	comp=Z,9µm,21.0s						
G18K	**Tagagawik**	**97.30**	**8**	IAMs_20	IAMs_20	11 58 03.7	
	comp=Z,10µm,20.0s						
L26K	**Log Cabin Wild**	**97.40**	**16**	IAMs_20	IAMs_20	11 56 26.7	
	comp=Z,12µm,20.0s						
Q24A	**Divide**	**97.44**	**49**	IAMs_20	IAMs_20	11 54 01.3	
	comp=Z,11µm,21.0s						
DLBC	**Dease Lake**	**97.53**	**24**	LR	LR	11 54 57.8	
	comp=Z,839nm,21.0s,baz=218,slow=31						
F17K	**Baldwin Pennin**	**97.53**	**7**	IAMs_20	IAMs_20	11 57 12.7	
	comp=Z,12µm,20.0s						
K24K	**Donnelly Dome**	**97.54**	**14**	IAMs_20	IAMs_20	11 55 31.2	
	comp=Z,11µm,21.0s						
ISCO	**Idaho Springs**	**97.59**	**48**	IAMs_20	IAMs_20	11 58 41.4	
	comp=Z,11µm,19.0s						
YMP	**Mirror Lake Pl**	**97.61**	**42**	IAMs_20	IAMs_20	11 54 52.4	
	comp=Z,13µm,21.0s						
N30M	**Aishikik Lake**	**97.69**	**19**	IAMs_20	IAMs_20	11 53 53.4	
	comp=Z,11µm,21.0s						
G19K	**Purcell Mounta**	**97.74**	**9**	IAMs_20	IAMs_20	11 55 33.4	
	comp=Z,9µm,22.0s						
DOT	**Dot Lake**	**97.78**	**15**	IAmb	IAmb	11 18 55.6	
	comp=Z,23nm,1.8s						
DOT				IAMs_20	IAMs_20	11 58 06.6	
	comp=Z,11µm,20.0s						
L27K	**Beaver Creek,**	**97.79**	**16**	IAMs_20	IAMs_20	11 55 59.0	
	comp=Z,11µm,20.0s						
HDA	**Harding Lake**	**97.84**	**13**	IAMs_20	IAMs_20	11 58 17.1	
	comp=Z,10µm,20.0s						
YNE	**Yellowstone No**	**97.85**	**42**	IAMs_20	IAMs_20	11 55 24.8	
	comp=Z,8µm,20.0s						
H21K	**Melozitna Rive**	**97.91**	**11**	IAMs_20	IAMs_20	11 55 60.0	
	comp=Z,8µm,22.0s						
R33M	**Jennings River**	**97.93**	**23**	IAMs_20	IAMs_20	11 53 20.1	
	comp=Z,8µm,22.0s						
P33M	**Teslin, Yukon**	**97.97**	**21**	IAMs_20	IAMs_20	11 59 34.8	
	comp=Z,8µm,19.0s						
LZH	**Lanzhou**	**97.98**	**307**	*e*P	Pdif	11 18 34.0	+0.8
LZH				sP	pwP	11 18 45.5	+5.2
LZH				S	**S**	**11 29 55.8**	**-3.7**

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LZH                                  pmax     pmax
      comp=Z,350nm,11.0s
LZH                                  LR       LR
      comp=Z,2µm,20.6s
LZH                                  LR       LR
      comp=Z,4µm,21.4s
LZH                                  LR       LR
      comp=Z,6µm,20.3s
I23K  Minto, Yukon-K     98.03  12   IAMs_20  IAMs_20  11 55 51.3
      comp=Z,12µm,22.0s
COLA  College            98.07  13   P        Pdif     11 18 33.0 +0.4
COLA  College            98.07  13⇑eP       Pdif     11 18 34.4 +1.8
COLA                                 pmax     pmax
      comp=Z,11nm,1.1s
COLA                                 MLR      MLR
      comp=Z,6µm,17.0s
SCRK  Sand Creek         98.08  15   IAMs_20  IAMs_20  11 55 59.6
      comp=Z,10µm,20.0s
N31M  Braeburn, Yuko     98.08  19   IAMs_20  IAMs_20  11 59 13.8
      comp=Z,9µm,19.0s
M29M  Somme Creek        98.12  18   IAMs_20  IAMs_20  11 58 20.8
      comp=Z,10µm,19.0s
ILAR  Eielson Array      98.17  13   P        Pdif     11 18 32.9  -0.2
ILAR  Eielson Array      98.17  13   P        P        11 18 32.2  -0.8
      comp=Z,0.7nm,0.9s,baz=213,slow=4.6,SNR=7.6
ILAR                                 PP       PP       11 22 29.5  -3.5
      comp=Z,1.6nm,1.1s,baz=206,slow=5.1,SNR=2.7
ILAR                                 PKKP     PKKPdf   11 35 11.9 +0.7
      comp=Z,1.1nm,0.9s,baz=18,slow=4.9,SNR=4.9
ILAR                                 LR       LR       11 56 13.9
      comp=Z,10µm,21.4s,baz=206,slow=31
      comp=Z,0.7nm,0.9s
ILAR  Eielson Array      98.17  13   P        Pdif     11 18 32.9  -0.2
HERN  Volcan Telica      98.20  80   IAMs_20  IAMs_20  11 52 45.4
      comp=Z,5µm,21.0s
F19K  Shaleruckik Mo     98.31   8   IAMs_20  IAMs_20  11 56 14.4
      comp=Z,9µm,22.0s
J25K  Salcha River,      98.34  14   IAMs_20  IAMs_20  12 03 56.4
      comp=Z,10µm,19.0s
RLMT  Red Lodge          98.34  42   IAMs_20  IAMs_20  11 55 55.9
      comp=Z,8µm,20.0s
K27K  Chicken            98.56  16   IAMs_20  IAMs_20  11 57 32.1
      comp=Z,9µm,20.0s
G21K  Allakaket          98.60  10   IAMs_20  IAMs_20  11 55 57.1
      comp=Z,12µm,22.0s
N32M  Quiet Lake         98.62  21   IAMs_20  IAMs_20  12 00 38.9
      comp=Z,9µm,19.0s
JTS   Las Juntas de      98.68  83   LR       LR       11 53 21.1
      comp=Z,5µm,21.0s,baz=236,slow=29
L29M  L29M               98.76  18   IAMs_20  IAMs_20  11 56 24.6
      comp=Z,12µm,20.0s
F20K  Avaraart Lake      98.78   9   IAMs_20  IAMs_20  11 58 38.8
      comp=Z,9µm,21.0s
ITQB  Itaqui             98.94 132   IAMs_20  IAMs_20  11 55 00.9
      comp=Z,10µm,22.0s
E19K  Redstone River     98.97   8   IAMs_20  IAMs_20  11 56 34.7
      comp=Z,10µm,22.0s
LPAZ  La Paz             99.00 115   P        Pdif     11 18 37.6  -1.2
LPAZ  La Paz             99.00 115   P        Pdif     11 18 39.5 +0.7
      comp=Z,2.3nm,1.1s,baz=242,slow=3.4,SNR=6.8
LPAZ                                 LR       LR       11 52 43.3
      comp=Z,4µm,22.0s,baz=217,slow=29
      comp=Z,2.3nm,1.1s
M31M  Drury Creek, Y     99.05  20   IAMs_20  IAMs_20  11 54 49.3
      comp=Z,9µm,22.0s
PRP   Porcupine Dome     99.10  13   IAMs_20  IAMs_20  11 56 41.6
      comp=Z,9µm,21.0s
WHTX  Lake Whitney,      99.15  58   IAMs_20  IAMs_20  11 54 32.1
      comp=Z,9µm,21.0s
WTLY  Watson Lake, Y     99.20  23   IAMs_20  IAMs_20  11 57 53.6
      comp=Z,8µm,20.0s
DAWY  Dawson             99.23  17   IAMs_20  IAMs_20  11 56 42.0
      comp=Z,8µm,20.0s
F21K  Alatna River       99.26  10   IAMs_20  IAMs_20  11 56 50.5
      comp=Z,9µm,20.0s
G23K  Bananza Creek      99.34  11   IAMs_20  IAMs_20  12 00 12.7
      comp=Z,8µm,20.0s
HKT   Hockley            99.35  61   IAMs_20  IAMs_20  12 01 21.5
      comp=Z,7µm,18.0s
FARO  Faro, Yukon        99.38  20   IAMs_20  IAMs_20  11 55 10.1
      comp=Z,8µm,22.0s
I26K  Coal Creek Min     99.41  14   IAMs_20  IAMs_20  11 56 50.5
      comp=Z,11µm,21.0s
K29M  Barlow Dome        99.52  17   IAMs_20  IAMs_20  11 57 48.7
      comp=Z,11µm,20.0s
MAYO  Mayo, Yukon        99.75  18   IAMs_20  IAMs_20  11 58 42.6
      comp=Z,11µm,21.0s
G24K  Hadweenzic Riv     99.78  12   IAMs_20  IAMs_20  11 56 43.2
      comp=Z,12µm,22.0s
D19K  Kuna River         99.85   8   IAMs_20  IAMs_20  12 01 13.0
      comp=Z,9µm,20.0s
FYU   Fort Yukon        100.08  13   IAMs_20  IAMs_20  11 58 52.3
      comp=Z,11µm,20.0s
I28M  Miner Creek       100.25  16   IAMs_20  IAMs_20  11 59 23.9
      comp=Z,10µm,20.0s
MMPY  Sheldon Lake,     100.30  20   IAMs_20  IAMs_20  12 02 09.3
      comp=Z,7µm,18.0s
E21K  Killik River      100.33   9   IAMs_20  IAMs_20  11 58 17.5
      comp=Z,8µm,20.0s
E22K  Anaktuvuk Pass    100.35  10   IAMs_20  IAMs_20  11 57 37.4
      comp=Z,11µm,22.0s
H27K  Steamboat Moun    100.56  15   IAMs_20  IAMs_20  11 57 36.9
      comp=Z,11µm,21.0s
I29M  Ogilvie Camp,     100.57  16   IAMs_20  IAMs_20  11 58 34.2
      comp=Z,10µm,20.0s
G26K  Porcupine Rive    100.70  13   IAMs_20  IAMs_20  11 58 49.7
      comp=Z,8µm,21.0s
FNO   Franklin          100.81  56   IAMs_20  IAMs_20  11 55 37.4
      comp=Z,8µm,21.0s
E24K  Your Creek        100.83  11   IAMs_20  IAMs_20  11 58 18.0
      comp=Z,12µm,22.0s
D22K  Ayikyak River     100.91   9   IAMs_20  IAMs_20  11 57 35.2
      comp=Z,8µm,22.0s
YAK   Yakutsk           100.92 338   IAMs_20  IAMs_20  11 57 31.3
      comp=Z,8µm,20.0s
YAK   Yakutsk           100.92 338  eP        Pdif     11 18 47.3 +2.0
YAK                                 e                  11 22 55.8
YAK                                 eS        SKSac    11 29 24.1 +0.6
YAK                                 e*SS      pS       11 30 19.4  -8.4
YAK                                 ePS       PS       11 31 55.7 +0.3
YAK                                 eSS       SS       11 37 23.1 +1.4
YAK                                 eSSS      SSS      11 41 19.1
YAK                                  pmax     pmax
      comp=N,4.0nm,2.7s
YAK                                  pmax     pmax
      comp=Z,3.0nm,0.8s
YAK                                  pmax     pmax
      comp=E,2.0nm,0.7s
YAK                                  pmax     pmax
      comp=Z,1µm,8.1s
YAK                                  pmax     pmax
      comp=N,363nm,8.4s
YAK                                  pmax     pmax
      comp=E,190nm,7.2s
YAK                                  smax     smax
      comp=N,196nm,4.3s
YAK                                  smax     smax
      comp=E,289nm,8.6s
I30M  Mount Dempster    100.93  17   IAMs_20  IAMs_20  11 57 45.8
      comp=Z,10µm,21.0s
CBKS  Cedar Bluff       100.95  51   IAMs_20  IAMs_20  11 55 38.0
      comp=Z,10µm,22.0s
OK029 Liberty Lake      101.04  55   IAMs_20  IAMs_20  12 01 35.4
      comp=Z,11µm,18.0s
NATX  Nacogdoches       101.11  60   IAMs_20  IAMs_20  12 02 37.4
      comp=Z,9µm,18.0s
TOLK  Toolik Lake Re    101.16  11   IAMs_20  IAMs_20  11 58 03.8
      comp=Z,8µm,22.0s
H29M  Whitestone        101.26  16   IAMs_20  IAMs_20  12 00 04.5
      comp=Z,10µm,20.0s
F26K  Sheenjek River    101.28  13   IAMs_20  IAMs_20  11 58 08.9
      comp=Z,12µm,20.0s
D23K  Nanushuk River    101.28  10   IAMs_20  IAMs_20  11 58 40.0
      comp=Z,10µm,20.0s
B21K  Ikpikpuk River    101.34   9   IAMs_20  IAMs_20  12 01 03.5
      comp=Z,8µm,20.0s
E25K  Arctic Village    101.38  12   IAMs_20  IAMs_20  11 57 21.6
      comp=Z,12µm,22.0s
B20K  Meade River       101.40   8   IAMs_20  IAMs_20  12 02 44.0
      comp=Z,9µm,19.0s
R32A  Long Quarter,     101.46  52   IAMs_20  IAMs_20  12 01 34.3
      comp=Z,9µm,19.0s
Z38A  Mt. Pleasant      101.59  58   IAMs_20  IAMs_20  12 01 41.1
      comp=Z,11µm,19.0s
OK052 Battle Ridge R    101.59  55   IAMs_20  IAMs_20  12 01 54.1
      comp=Z,9µm,19.0s
441A  DeRidder          101.73  61   IAMs_20  IAMs_20  12 03 27.0
      comp=Z,7µm,18.0s
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DEOK  Depew             101.74  55   IAMs_20  IAMs_20  12 03 10.9
      comp=Z,10µm,19.0s
D24K  Happy Valley      101.74  11   IAMs_20  IAMs_20  12 03 32.2
      comp=Z,8µm,19.0s
H31M  Peel River        101.91  17   IAMs_20  IAMs_20  12 00 20.7
      comp=Z,10µm,20.0s
ROCAM Rodrigues Isla    101.93 239   IAMs_20  IAMs_20  12 03 24.6
      comp=Z,6µm,18.0s
F28M  Old Crow          102.08  14   IAMs_20  IAMs_20  12 00 24.1
      comp=Z,11µm,20.0s
C23K  Itkillik River    102.09  10   IAMs_20  IAMs_20  11 59 06.3
      comp=Z,11µm,21.0s
B22K  Teshekpuk Lake    102.17   9   IAMs_20  IAMs_20  12 02 15.3
      comp=Z,7µm,20.0s
ULN   Ulaanbaatar       102.17 319   IAMs_20  IAMs_20  12 00 29.8
      comp=Z,8µm,22.0s
ULN   Ulaanbaatar       102.17 319⇓eP       Pdif     11 18 53.4 +1.9
ULN                                  pmax     pmax
      comp=Z,9.0nm,1.4s
D25K  Kavik River       102.30  11   IAMs_20  IAMs_20  11 58 41.8
      comp=Z,11µm,22.0s
G30M  tAoh Zraii Nji    102.38  16   IAMs_20  IAMs_20  11 58 00.2
      comp=Z,8µm,22.0s
SONM  Songino Array     102.53 318   PKKP              11 35 07.4
      comp=Z,1.2nm,0.8s,baz=264,slow=1.5,SNR=4.3
G31M  Satah River       102.81  17   IAMs_20  IAMs_20  11 59 12.4
      comp=Z,10µm,21.0s
E28M  Babbage River     102.97  14   IAMs_20  IAMs_20  12 06 32.7
      comp=Z,6µm,18.0s
F30M  Barrier River     102.99  16   IAMs_20  IAMs_20  12 01 17.2
      comp=Z,10µm,20.0s
C27K  Jago River        103.03  12   IAMs_20  IAMs_20  12 01 09.1
      comp=Z,11µm,20.0s
DGMT  Dagmar            103.09  41   IAMs_20  IAMs_20  12 03 52.0
      comp=Z,8µm,18.0s
E29M  Blow River        103.14  15   IAMs_20  IAMs_20  12 01 07.2
      comp=Z,11µm,20.0s
WLAR  White Oak Lake    103.17  59   IAMs_20  IAMs_20  12 02 24.0
      comp=Z,9µm,19.0s
D27M  Malcolm River     103.22  13   IAMs_20  IAMs_20  11 58 40.2
      comp=Z,9µm,22.0s
KSU1  Kansas State U    103.22  52   IAMs_20  IAMs_20  12 02 22.1
      comp=Z,10µm,19.0s
MIAR  Mount Ida         103.23  58   IAMs_20  IAMs_20  12 02 33.5
      comp=Z,10µm,19.0s
BGNE  Belgrade          103.29  50   IAMs_20  IAMs_20  11 57 39.7
      comp=Z,11µm,21.0s
F31M  Tsiigehtchic      103.34  16   IAMs_20  IAMs_20  12 02 31.5
      comp=Z,8µm,20.0s
U38A  Gravette          103.53  56   IAMs_20  IAMs_20  12 03 05.3
      comp=Z,9µm,19.0s
INK   Inuvik            104.07  16   IAMs_20  IAMs_20  12 02 00.7
      comp=Z,10µm,20.0s
E28A  Huff              104.19  44   IAMs_20  IAMs_20  12 06 06.2
      comp=Z,10µm,18.0s
UALR  University of     104.23  58   IAMs_20  IAMs_20  12 05 45.2
      comp=Z,8µm,18.0s
CCAR  Cane Creek        104.27  59   IAMs_20  IAMs_20  11 58 02.0
      comp=Z,8µm,21.0s
L34A  Svendsen Farm,    104.72  50   IAMs_20  IAMs_20  11 58 11.7
      comp=Z,10µm,22.0s
KAAM  Kaadhehdhoo       105.66 261   IAMs_20  IAMs_20  12 03 02.6
      comp=Z,11µm,22.0s
T42A  Van Buren         106.15  56   IAMs_20  IAMs_20  11 59 05.8
      comp=Z,8µm,22.0s
MET   Memphis--Engin    106.16  59   IAMs_20  IAMs_20  12 05 24.2
      comp=Z,8µm,18.0s
OXF   Oxford            106.28  59   IAMs_20  IAMs_20  12 05 05.4
      comp=Z,8µm,19.0s
F33A  5 Mile Ranch,     106.54  46   IAMs_20  IAMs_20  11 58 58.7
      comp=Z,9µm,22.0s
Z47A  Carrollton        106.72  61   IAMs_20  IAMs_20  12 05 16.0
      comp=Z,6µm,19.0s
SCIA  State Center      106.80  51   IAMs_20  IAMs_20  12 08 26.8
      comp=Z,7µm,18.0s
CGM3  Cape Girardeau    107.30  57   IAMs_20  IAMs_20  12 05 16.2
      comp=Z,10µm,19.0s
FFC   Flin Flon         107.39  36   IAMs_20  IAMs_20  12 00 12.4
      comp=Z,10µm,22.0s
PLAL  Pickwick Lake     107.48  59   IAMs_20  IAMs_20  12 00 11.0
      comp=Z,8µm,21.0s
I37A  Lemond, Waseca    107.59  49   IAMs_20  IAMs_20  12 04 36.6
      comp=Z,10µm,18.0s
CAMR  Camarioca         107.65  73   IAMs_20  IAMs_20  12 03 54.2
      comp=Z,21µm,19.0s
Y49A  Blount Mountai    108.25  61   IAMs_20  IAMs_20  12 06 43.6
      comp=Z,6µm,19.0s
P43A  Skaggs, Pawnee    108.38  54   IAMs_20  IAMs_20  12 05 52.7
      comp=Z,10µm,18.0s
SPMN  Marine on St.     108.49  48   IAMs_20  IAMs_20  12 02 04.3
      comp=Z,8µm,21.0s
HMDM  Hanimaadhoo       108.67 267   IAMs_20  IAMs_20  12 06 20.7
      comp=Z,7µm,21.0s
A36M  Sachs Harbour     108.69  15   IAMs_20  IAMs_20  12 05 10.8
      comp=Z,7µm,20.0s
V48A  Smith Brothers    108.72  59   IAMs_20  IAMs_20  12 07 18.0
      comp=Z,6µm,18.0s
HYB   Hyderabad         109.04 279  ePdif     Pdif     11 19 21.9  -0.8
HYB                                 ePKiKP    PKiKP    11 23 26.3  -0.8
HYB                                 epPKiKP   pPKiKP   11 23 29.4  -1.8
HYB                                 eSKSac    SKSac    11 30 01.2  -1.3
SPB   Sao Paulo         109.04 134   IAMs_20  IAMs_20  12 02 04.3
      comp=Z,9µm,22.0s
JFWS  Jewell Farm       109.22  51   IAMs_20  IAMs_20  12 03 46.8
      comp=Z,7µm,19.0s
L42A  Oliver, Polo      109.25  52   IAMs_20  IAMs_20  12 01 47.5
      comp=Z,8µm,20.0s
I40A  Norwalk           109.37  50   IAMs_20  IAMs_20  12 01 05.6
      comp=Z,9µm,21.0s
EPLO  Experimental L    109.75  43   IAMs_20  IAMs_20  12 06 18.3
      comp=Z,8µm,20.0s
E38A  The Farm, Brul    109.85  47   IAMs_20  IAMs_20  12 01 35.2
      comp=Z,11µm,21.0s
Y52A  Lilburn           110.04  62   IAMs_20  IAMs_20  12 02 09.9
      comp=Z,7µm,22.0s
GOGA  Godfrey           110.31  63   IAMs_20  IAMs_20  12 07 53.2
      comp=Z,8µm,19.0s
EYMN  Ely               110.41  46   IAMs_20  IAMs_20  12 02 34.0
      comp=Z,7µm,21.0s
K43A  Burlington        110.43  52   IAMs_20  IAMs_20  12 02 13.9
      comp=Z,8µm,21.0s
I42A  Draeger Farm,     110.50  51   IAMs_20  IAMs_20  12 01 28.6
      comp=Z,8µm,22.0s
L44A  Lake County Fo    110.51  53   IAMs_20  IAMs_20  12 07 33.1
      comp=Z,9µm,18.0s
W52A  Murphy            110.63  61   IAMs_20  IAMs_20  12 08 09.5
      comp=Z,6µm,18.0s
BG3   Lake Jocassee     111.34  61   IAMs_20  IAMs_20  12 08 44.4
      comp=Z,8µm,18.0s
TZTN  Tazewell          111.47  59   IAMs_20  IAMs_20  12 08 44.8
      comp=Z,7µm,18.0s
H43A  Windswept, Lux    111.48  50   IAMs_20  IAMs_20  12 02 10.5
      comp=Z,8µm,22.0s
VOI   Vohitsoka         111.80 226   IAMs_20  IAMs_20  12 00 44.7
      comp=Z,8µm,21.0s
TBO   Thunder Bay       111.97  46   IAMs_20  IAMs_20  12 03 39.2
      comp=Z,9µm,21.0s
PAULI Pauline           112.12  62   IAMs_20  IAMs_20  12 09 39.1
      comp=Z,7µm,18.0s
GRHM  Grahamstown, E    112.21 203   IAMs_20  IAMs_20  12 21 24.1
      comp=Z,7µm,19.0s
I45A  Fountain          112.35  51   IAMs_20  IAMs_20  12 10 24.5
      comp=Z,7µm,18.0s
WMQ   Urumqi            112.50 309   PKP      PKiKP    11 23 36.8 +3.9
WMQ                                  PP       PP       11 24 16.8  -2.9
WMQ                                  SS       SS       11 40 00.5 +0.2
WMQ                                  AMB      AMB
      comp=Z,620nm,6.9s
WMQ                                  LR       LR
      comp=Z,3µm,23.3s
WMQ                                  LR       LR
      comp=Z,3µm,21.5s
WMQ                                  LR       LR
      comp=Z,4µm,23.8s
KMSC  Kings Mountain    112.61  62   IAMs_20  IAMs_20  12 09 16.0
      comp=Z,8µm,18.0s
NHSC  New Hope          112.73  64   IAMs_20  IAMs_20  12 10 13.3
      comp=Z,6µm,19.0s
U54A  Nelsons Funny     112.75  60   IAMs_20  IAMs_20  12 10 11.8
      comp=Z,8µm,18.0s
CSU   Charleston Sou    112.77  64   IAMs_20  IAMs_20  12 10 17.3
      comp=Z,8µm,18.0s
V55A  Taylorsville      112.96  61   IAMs_20  IAMs_20  12 03 38.3
      comp=Z,7µm,21.0s
FCC   Fort Churchill    113.02  34   IAMs_20  IAMs_20  12 03 47.1
      comp=Z,9µm,22.0s
BIRD  Birdtown, Kers    113.09  62   IAMs_20  IAMs_20  12 10 48.7
      comp=Z,6µm,18.0s
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Q52A  Bidwell           113.31  57   IAMs_20  IAMs_20  12 08 44.4
      comp=Z,9µm,18.0s
W57A  Gilead            113.63  62   IAMs_20  IAMs_20  12 10 17.1
      comp=Z,7µm,18.0s
ABPO  Ambohimpanom      113.64 228   IAMs_20  IAMs_20  12 06 02.1
      comp=Z,6µm,20.0s
GLMI  Grayling          113.71  51   IAMs_20  IAMs_20  12 03 04.5
      comp=Z,6µm,22.0s
X58A  Rowland           113.92  63   IAMs_20  IAMs_20  12 11 33.7
      comp=Z,5µm,18.0s
E46A  Sault Ste Mari    114.43  49   IAMs_20  IAMs_20  12 04 24.5
      comp=Z,10µm,21.0s
V58A  Windy Hill, Pi    114.53  62   IAMs_20  IAMs_20  12 04 47.9
      comp=Z,8µm,22.0s
Y60A  Bolivia           114.58  64   IAMs_20  IAMs_20  12 10 41.4
      comp=Z,6µm,19.0s
I49A  Point Hope        114.62  52   IAMs_20  IAMs_20  12 11 11.9
      comp=Z,8µm,18.0s
SUR   Sutherland        114.74 198   IAMs_20  IAMs_20  12 05 20.0
      comp=Z,9µm,20.0s
W59A  Clinton           114.82  63   IAMs_20  IAMs_20  12 11 39.7
      comp=Z,8µm,18.0s
S57A  Dark Hollow, R    115.33  60   IAMs_20  IAMs_20  12 10 56.1
      comp=Z,8µm,18.0s
ZSN   Zaisan            115.58 312  ePKIKP    PKiKP    11 23 38.4  -0.2
ZSN   Zaisan            115.58 312  ePKP      PKiKP    11 23 38.4  -0.2
Q56A  Snyder Ridge,     115.59  58   IAMs_20  IAMs_20  12 09 49.8
      comp=Z,9µm,18.0s
T59A  Double "B" Far    116.12  61   IAMs_20  IAMs_20  12 12 52.9
      comp=Z,7µm,18.0s
V61A  Roper             116.47  62   IAMs_20  IAMs_20  12 13 34.2
      comp=Z,6µm,18.0s
CBN   Corbin Frederi    116.66  60   IAMs_20  IAMs_20  12 12 12.1
      comp=Z,7µm,18.0s
BOSA  Boshof            116.86 204   PKP      PKiKP    11 23 42.9 +0.9
      comp=Z,2.9nm,1.1s,baz=180,slow=1.0,SNR=1.6
MK31  Makanchi Array    117.06 310  i PKIKP   PKiKP    11 23 45.6 +4.1
MKAR  Makanchi Array    117.06 310   PKP      PKPdf    11 23 41.1  -0.4
      comp=Z,0.4nm,0.6s,baz=103,slow=3.1,SNR=5.0
MKAR                                 PKKPbc   PKKPbc   11 34 05.8  -1.3
      comp=Z,0.8nm,0.7s,baz=268,slow=4.2,SNR=5.5
MSEY  Mahe Island       117.27 246   IAMs_20  IAMs_20  12 08 25.7
      comp=Z,7µm,20.0s
MAKZ  Makanchi          117.28 310            PKPdf    11 23 40.0  -1.9
MAKZ  Makanchi          117.28 310   PKIKP    PKPdf    11 23 40.0  -1.9
ZALV  Zalesovo Beam     117.42 319            PKPdf    11 23 41.1  -0.8
ZALV  Zalesovo Beam     117.42 319   PKP      PKiKP    11 23 42.2 +0.3
      comp=Z,0.4nm,0.4s,baz=64,slow=3.4,SNR=1.6
SDMD  Soldier's Deli    117.44  59   IAMs_20  IAMs_20  12 11 05.6
      comp=Z,5µm,18.0s
RES   Resolute Bay      117.56  17   IAMs_20  IAMs_20  12 09 41.3
      comp=Z,7µm,20.0s
SHLS  Shalkode          117.96 306  ePKIKP    PKPdf    11 23 42.2  -1.3
SHLS                                e                  11 24 53.5
SHLS  Shalkode          117.96 306  ePKP      PKPdf    11 23 42.3  -1.3
SHLS                                ePP       PP       11 24 53.6  -4.7
R61A  Willards          118.22  60   IAMs_20  IAMs_20  12 12 37.5
      comp=Z,7µm,18.0s
UZB   Uzynbulak         118.26 306  ePKIKP    PKPdf    11 23 43.4  -0.7
UZB   Uzynbulak         118.26 306  ePKP      PKPdf    11 23 43.4  -0.7
WUPA  West Chester U    118.50  58   IAMs_20  IAMs_20  12 11 46.8
      comp=Z,7µm,19.0s
KPKS  Kokpek            118.59 306  ePKIKP    PKPdf    11 23 44.1  -0.5
KPKS  Kokpek            118.59 306  ePKP      PKPdf    11 23 44.1  -0.5
PECO  Prince Edward     118.64  54   IAMs_20  IAMs_20  12 12 15.2
      comp=Z,8µm,18.0s
SATY  Saty              118.67 305  ePKIKP    PKPdf    11 23 44.2  -0.7
SATY                                e                  11 25 01.0
SATY  Saty              118.67 305  ePKP      PKPdf    11 23 44.2  -0.7
SATY                                ePP       PP       11 25 01.0  -2.2
P61A  Hammonton         119.03  59   IAMs_20  IAMs_20  12 12 03.7
      comp=Z,7µm,18.0s
NRIK  Noril'sk          119.28 336   PKP      PKPdf    11 23 44.0  -1.0
      comp=Z,3.2nm,0.4s,baz=132,slow=1.8,SNR=1.8
NRIK  Noril'sk          119.28 336  i PKIKP   PKiKP    11 23 45.9 +0.8
NRIK                                 MLR      MLR
      comp=Z,6µm,20.0s
VLDQ  Val d'Or          119.40  49   IAMs_20  IAMs_20  12 06 28.2
      comp=Z,8µm,22.0s
KSH   Kashi             119.44 301   SS       SS       11 41 29.3  -2.2
KSH                                  AMB      AMB
      comp=Z,450nm,11.7s
KSH                                  LR       LR
      comp=N,3µm,24.7s
KSH                                  LR       LR
      comp=E,4µm,24.1s
KSH                                  LR       LR
      comp=Z,4µm,24.4s
WBO   Williamsburg      120.11  53   IAMs_20  IAMs_20  12 14 09.9
      comp=Z,8µm,18.0s
EUNU  Eureka            120.22  12            PKPdf    11 23 46.0  -0.7
KURK  Kurchatov         120.38 314            PKPdf    11 23 46.4  -1.3
KURK  Kurchatov         120.38 314⇑iPKIKP   PKiKP    11 23 47.7  -0.1
KURK                                 MLR      MLR
      comp=Z,5µm,19.0s
KURBB Kurchatov Arra    120.42 314   PKP      PKPdf    11 23 45.7  -2.1
      comp=Z,2.3nm,0.8s,baz=102,slow=1.9,SNR=17
KURBB                                PP       PP       11 25 15.3 +0.5
      comp=Z,4.3nm,1.0s,baz=102,slow=6.4,SNR=7.1
KURBB                                PKKPbc   PKKPbc   11 33 54.5  -0.3
      comp=Z,2.2nm,1.1s,baz=276,slow=4.6,SNR=7.1
KURBB                                SKKP              11 38 02.0
      comp=Z,1.3nm,1.0s,baz=264,slow=4.3,SNR=4.3
KURBB Kurchatov Arra    120.42 314   PKIKP    PKPdf    11 23 45.8  -2.0
ILON  Igloolik, Nuna    120.66  24            PKPdf    11 23 45.8  -1.9
TRQ   Mont Tremblant    120.88  52   IAMs_20  IAMs_20  12 13 33.5
      comp=Z,7µm,19.0s
AAK   Ala-Archa         121.34 304c iPKIKP    PKiKP    11 23 50.5 +0.3
AAK                                  MLR      MLR
      comp=Z,5µm,21.0s
MNTQ  Montreal, Queb    121.36  53   IAMs_20  IAMs_20  12 16 05.0
      comp=Z,8µm,18.0s
SGDS  Sogindy           121.44 305  ePKP      PKPdf    11 23 49.5  -0.6
J61A  Chester           121.61  55   IAMs_20  IAMs_20  12 08 55.9
      comp=Z,7µm,20.0s
VT1   Waterbury         121.70  54   IAMs_20  IAMs_20  12 13 59.1
      comp=Z,8µm,19.0s
BBGH  Gun Hill          121.92  93   IAMs_20  IAMs_20  12 07 04.6
      comp=Z,6µm,21.0s
POIN  Pond Inlet        122.06  20            PKPdf    11 23 48.5  -1.8
BTLS  Baital            122.20 307  ePKIKP    PKPdf    11 23 50.9  -0.5
BTLS  Baital            122.20 307  ePKP      PKPdf    11 23 50.9  -0.5
MATP  Matopo            122.89 211   PKP      PKPdf    11 23 52.4  -1.3
      comp=Z,2.6nm,1.0s,baz=153,slow=2.7,SNR=5.4
G62A  West of Eustis    123.43  53   IAMs_20  IAMs_20  12 17 56.4
      comp=Z,7µm,18.0s
DZA   Taraz             123.67 304  ePKIKP    PKPdf    11 23 53.7  -0.6
DZA   Taraz             123.67 304  ePKP      PKPdf    11 23 53.7  -0.6
TULEG Thule             124.06  15   IAMs_20  IAMs_20  12 14 48.3
      comp=Z,5µm,20.0s
KK31  Karatay Array     124.30 304  i PKIKP   PKPdf    11 23 54.0  -1.5
KKAR  Karatay Array     124.30 304            PKPdf    11 23 53.5  -2.0
KKAR  Karatay Array     124.30 304   PKIKP    PKPdf    11 23 53.5  -2.0
E62A  Clayton Lake      124.37  52            PKiKP    11 23 56.0 +0.2
IUG   Iuzhnay           124.45 303  ePKIKP    PKPdf    11 23 55.2  -0.7
IUG   Iuzhnay           124.45 303  ePKP      PKPdf    11 23 55.3  -0.7
BRLS  Borolday          124.77 304  ePKIKP    PKPdf    11 23 55.9  -0.5
BRLS                                e                  11 25 43.0
BRLS  Borolday          124.77 304  ePKP      PKPdf    11 23 56.0  -0.5
BRLS                                ePP       PP       11 25 43.0  -1.6
WIN   Windhoek          125.06 198   IAMs_20  IAMs_20  12 11 20.7
      comp=Z,8µm,22.0s
EMMW  East Machias      125.48  54   IAMs_20  IAMs_20  12 15 36.8
      comp=Z,6µm,20.0s
BVA0  Borovoye Array    125.76 316  i PKIKP   PKPdf    11 23 56.8  -1.2
BVAR  Borovoye Array    125.76 316   PKP      PKPdf    11 23 57.1  -0.9
      comp=Z,3.3nm,0.8s,baz=80,slow=1.6,SNR=12
BRVK  Borovoye          125.83 316            PKPdf    11 23 56.1  -2.0
BRVK  Borovoye          125.83 316c iPKIKP    PKPdf    11 23 57.6  -0.5
BRVK                                 MLR      MLR
      comp=Z,6µm,20.0s
BATG  Bathurst New B    126.82  52            PKPdf    11 23 57.5  -2.6
SCHQ  Schefferville     126.90  42   PKP      PKPdf    11 23 59.9  -0.2
      comp=Z,7.6nm,0.9s,baz=256,slow=3.6,SNR=9.0
LMN   Caledonia Moun    127.50  53            PKPdf    11 23 60.0  -1.6
LSZ   Lusaka            127.51 214   IAMs_20  IAMs_20  12 17 07.7
      comp=Z,6µm,20.0s
LSZ   Lusaka            127.51 214   PKP      PKPdf    11 24 02.0  -0.6
      comp=Z,1.3nm,0.3s,baz=148,slow=3.0,SNR=4.0
TSUM  Tsumeb            128.11 200   IAMs_20  IAMs_20  12 20 16.6
      comp=Z,8µm,19.0s
RCBR  Riachuelo         129.59 129   IAMs_20  IAMs_20  12 13 17.2
      comp=Z,7µm,22.0s
KBS   Kingsbay          131.17 357   IAMs_20  IAMs_20  12 16 48.0
      comp=Z,6µm,22.0s
KBS   Kingsbay          131.17 357  ePKPdf    PKiKP    11 24 09.0 +0.4
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KBS				*e*SS	SS	11 44 03.1	+6.9
KBS				IVMs_BB	IVMs_BB	12 07 40.2	
	comp=Z,2µm,31.5s						
SVE	**Sverdlovsk**	**131.32**	**321**	*i* PKIKP	**PKiKP**	**11 24 11.5**	**+2.1**
SVE				pmax	pmax		
	comp=Z,24nm,1.5s						
SVE				MLR	MLR		
	comp=Z,6µm,20.0s						
ILULI	**Ilulissat**	**131.34**	**22**	IAMs_20	IAMs_20	12 17 14.2	
	comp=Z,8µm,21.0s						
SPITS	**Spitsbergen Ar**	**131.66**	**356**	PKP	**PKiKP**	**11 24 09.6**	**0.0**
	comp=Z,5.2nm,0.8s,baz=27,slow=9.7,SNR=2.0						
KIBK	**Kibwezi**	**131.87**	**234**	IAMs_20	IAMs_20	12 22 49.9	
	comp=Z,5µm,19.0s						
AB31	**Akbulak array**	**132.21**	**311**	*i* PKIKP	**PKiKP**	**11 24 10.9**	**-0.5**
ABKAR	**Akbulak array**	**132.21**	**311**		**PKPdf**	**11 24 08.6**	**-1.7**
SFJD	**Kangerlussuaq**	**132.42**	**25**	IAMs_20	IAMs_20	12 24 31.9	
	comp=Z,6µm,19.0s						
HOPEN	**Hopen**	**132.45**	**353**	*e*SKPdf	**SKPdf**	**11 27 45.6**	**+0.8**
HOPEN				*e*SS	**SS**	**11 44 11.8**	**0.0**
HOPEN				IVMs_BB	IVMs_BB	12 14 04.1	
	comp=Z,2µm,25.0s						
ARTI	**Arti**	**132.61**	**320**	*i* PKIKP	**PKPdf**	**11 24 10.6**	**-0.3**
ARTI						11 26 31.7	
SUMG	**Summit**	**132.98**	**15**	IAMs_20	IAMs_20	12 17 37.0	
	comp=Z,8µm,22.0s						
SHEL	**Horse Pasture**	**133.44**	**171**	IAMs_20	IAMs_20	12 18 19.7	
	comp=Z,5µm,21.0s						
IVI	**Ivigtut**	**135.63**	**32**	IAMs_20	IAMs_20	12 20 12.4	
	comp=Z,8µm,20.0s						
KIRV	**Kirov**	**136.80**	**325**	*ce*PKIKP	**PKiKP**	**11 24 19.8**	**-0.6**
VADS	**Vadso**	**137.16**	**346**	*e*PKPdf	**PKiKP**	**11 24 20.5**	**-0.4**
ANGG	**Ammassalik, Gr**	**137.64**	**23**	IAMs_20	IAMs_20	12 23 02.7	
	comp=Z,7µm,20.0s						
HAMF	**Hammerfest**	**137.79**	**349**	*e*PKPdf	**PKiKP**	**11 24 21.5**	**-0.6**
HAMF				IVmBBB		11 24 26.1	
	comp=Z,1µm,3.0s						
HAMF				*e*SS	SS	11 45 18.3	+2.5
LODK	**Lodwar**	**137.80**	**237**	IAMs_20	IAMs_20	12 25 14.6	
	comp=Z,4µm,19.0s						
MBAR	**Mbarara**	**138.07**	**228**	IAMs_20	IAMs_20	12 18 13.9	
	comp=Z,6µm,22.0s						
APA	**Apatity**	**138.15**	**342**	⇓*i*PKIKP	**PKiKP**	**11 24 24.6**	**+1.7**
APA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ARA0	**ARCESS Array S**	**138.41**	**347**	*e*PKPdf	**PKiKP**	**11 24 22.9**	**-0.6**
ARCES	**ARCESS Array B**	**138.41**	**347**	PKP	**PKPdf**	**11 24 19.6**	**-1.8**
	comp=Z,3.7nm,0.9s,baz=44,slow=2.1,SNR=9.3						
FURI	**Furi**	**138.76**	**247**	IAMs_20	IAMs_20	12 19 36.1	
	comp=Z,7µm,21.0s						
JNW	**Jan Mayen West**	**139.02**	**5**	*e*pPKPdf	**pPKPdf**	**11 24 26.1**	**-0.5**
JNW				IVmBBB		11 24 40.1	
	comp=Z,1µm,2.7s						
JNW				*e*SS	SS	11 45 38.3	+7.9
JNE	**Jan Mayen East**	**139.07**	**5**	*e*PKPdf	**PKiKP**	**11 24 24.6**	**-0.1**
JNE				*e*SS	SS	11 45 38.9	+8.0
JNE				IVMs_BB	IVMs_BB	12 11 52.4	
	comp=Z,2µm,28.1s						
JMI	**Jan Mayen**	**139.10**	**5**	*e*PKPdf	**PKPdf**	**11 24 23.1**	**+0.6**
TRO	**Tromso**	**139.43**	**350**	*e*PKPdf	**PKiKP**	**11 24 24.9**	**-0.6**
TRO				*e*SS	SS	11 45 41.5	+6.3
BELG	**Belogornoye**	**139.56**	**317**	*c i*PKIKP	**PKPdf**	**11 24 23.5**	**-0.4**
KLMR	**Klimovskoe**	**140.34**	**331**	*e*PKIKP	**PKPdf**	**11 24 23.5**	**-1.6**
KLMR				*e*		11 27 22.8	
KLMR				pmax	pmax		
	comp=Z,58nm,1.5s						
AKT	**Akhty**	**140.95**	**300**	*e*PKIKP	**PKPdf**	**11 24 26.5**	**-0.5**
AKT				*e*		11 31 37.5	
AKT				pmax	pmax		
	comp=Z,33nm,1.7s						
AKT				MLR	MLR		
	comp=Z,6µm,26.0s						
MAK	**Makhachkala**	**141.06**	**302**	*d i*PKHKP	PKPpre	11 24 21.3	
MAK				*e*SS	SS	11 45 49.3	-7.3
MAK				pmax	pmax		
	comp=Z,186nm,1.2s						
STEI	**Steigen**	**141.52**	**351**	*e*PKPdf	**PKPdf**	**11 24 26.0**	**-1.0**
STEI				IVmB_BB		11 24 31.8	
	comp=Z,494nm,2.3s						
LOF	**Lofoten**	**141.53**	**352**	*e*PKPdf	**PKPdf**	**11 24 26.9**	**-0.1**
LOF				*e*SS	SS	11 46 06.3	+6.5
FAUS	**Fauske**	**142.03**	**351**	*e*PKPdf	**PKPdf**	**11 24 28.5**	**+0.5**
FAUS				*e*SS	SS	11 46 12.2	+6.6
FAUS				IVMs_BB	IVMs_BB	12 17 19.6	
	comp=Z,2µm,25.6s						
VAGH	**Vaagaholmen**	**142.91**	**352**	*e*PKPdf	**PKPdf**	**11 24 30.2**	**+0.7**
VAGH				IVMs_BB	IVMs_BB	12 18 35.0	
	comp=Z,2µm,33.8s						
GNI	**Garni**	**143.24**	**297**	*c i*PKIKP	PKPbc	11 24 27.6	-0.6
GNI				MLR	MLR		
	comp=Z,3µm,21.0s						
MOR8	**Moi Rana**	**143.29**	**351**	*e*pPKPdf	**PKiKP**	**11 24 33.7**	**+0.2**
MOR8				IVmB_BB		11 24 38.0	
	comp=Z,594nm,2.1s						
MOR8				*e*SS	SS	11 46 22.8	+2.6
MOR8				IVMs_BB	IVMs_BB	12 19 26.1	
	comp=Z,3µm,27.6s						
STOK	**Stokkvaagen**	**143.32**	**352**	*e*PKPdf	**PKPdf**	**11 24 30.0**	**-0.2**
STOK				IVmB_BB		11 24 36.0	
	comp=Z,881nm,3.6s						
STOK				*e*SS	SS	11 46 26.8	+6.4
VRH	**Novokhopyorsk**	**143.41**	**316**	*e*PKHKP	PKPpre	11 24 26.1	
VRH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VRH				MLR	MLR		
	comp=Z,7µm,23.0s						
LEIR	**Leirfjorden**	**143.52**	**352**	*e*PKPdf	**PKPdf**	**11 24 31.2**	**+0.6**
LEIR				IVmB_BB		11 24 37.9	
	comp=Z,557nm,2.4s						
LEIR				*e*SS	SS	11 46 28.3	+5.5
MOS	**Moscow**	**143.82**	**325**	*i* PKIKP	PKPab	11 24 28.2	-0.2
MOS				*e*		11 31 42.3	
MOS				pmax	pmax		
	comp=Z,97nm,1.4s						
NCK	**Nalchik**	**143.86**	**303**	⇑*e*PKIKP	**PKPdf**	**11 24 32.3**	**+0.3**
NCK				MLR	MLR		
	comp=Z,3µm,22.0s						
GOF	**Gofitskoye**	**144.04**	**306**	*ce*PKIKP	PKPbc	11 24 29.7	-0.5
KBZ	**Khabaz**	**144.34**	**304**	PKP	**PKPab**	**11 24 29.5**	**-1.3**
	comp=Z,15nm,1.1s,baz=90,slow=1.0,SNR=14						
KBZ	**Khabaz**	**144.34**	**304**	*c i*PKIKP	PKPbc	11 24 30.6	-0.5
KBZ				MLR	MLR		
	comp=Z,7µm,22.0s						
KIV	**Kislovodsk**	**144.46**	**304**		**PKPab**	**11 24 30.9**	**-0.4**
KIV	**Kislovodsk**	**144.46**	**304**	*i* PKIKP	PKPbc	11 24 31.5	-0.1
KIV				*e*SS	SS	11 46 26.6	-9.4
KIV				pmax	pmax		
	comp=Z,30nm,1.0s						
LPSR	**Galich'ya Gora**	**144.52**	**320**	*e*PKIKP	**PKPab**	**11 24 29.3**	**-1.9**
LPSR				pmax	pmax		
	comp=Z,35nm,0.8s						
PUL	**Pulkovo**	**144.62**	**335**	⇓*e*PKIKP	PKPbc	11 24 31.6	+0.1
PUL				MLR	MLR		
	comp=Z,7µm,20.0s						
OBN	**Obninsk**	**144.65**	**325**	*ce*PKIKP	PKPbc	11 24 31.5	-0.2
OBN				*i*		11 24 39.3	
OBN				*e*		11 27 49.8	
OBN				pmax	pmax		
	comp=Z,42nm,1.1s						
OBN				pmax	pmax		
	comp=Z,126nm,1.2s						
OBN				MLR	MLR		
	comp=Z,10µm,21.0s						
VORR	**Voronezh**	**144.72**	**318**	*e*PKIKP	PKPbc	11 24 32.2	+0.1
VORR				pmax	pmax		
	comp=Z,58nm,0.4s						
FINES	**FINESS Array B**	**144.84**	**339**		**PKPab**	**11 24 29.8**	**-2.3**
FINES	**FINESS Array B**	**144.84**	**339**	PKP	**PKPab**	**11 24 29.9**	**-2.1**
	comp=Z,33nm,0.7s,baz=46,slow=4.0,SNR=59						
VSR	**Storozhevoye**	**144.92**	**317**	*e*PKHKP	PKPpre	11 24 29.7	
VSR				pmax	pmax		
	comp=Z,60nm,1.0s						
VORD	**Divnogorie**	**144.93**	**317**	*e*PKIKP	**PKPab**	**11 24 30.0**	**-2.7**
VORD				pmax	pmax		
	comp=Z,20nm,0.9s						
VORD				MLR	MLR		
	comp=Z,6µm,22.0s						
NSS	**Namsos**	**145.18**	**352**	*e*PKPbc	**PKPdf**	**11 24 33.2**	**-0.3**
NSS				IVmB_BB		11 24 44.9	
	comp=Z,2µm,3.8s						
ERBR	**Yeremizino-Bor**	**145.69**	**308**	*i* PKIKP	**PKPdf**	**11 24 33.8**	**-1.2**
ERBR				*e*		11 24 36.9	
ERBR				pmax	pmax		
	comp=Z,160nm,1.2s						
LABN	**Labinsk**	**145.74**	**306**	*i* PKIKP	**PKPab**	**11 24 36.8**	**+0.8**
LABN				*e*		11 24 38.5	
LABN				pmax	pmax		
	comp=Z,34nm,0.7s						
VSLR	**Vesyoloye**	**146.44**	**304**	⇓*i*PKP2	**PKPdf**	**11 24 36.5**	**+0.1**
SOC	**Sochi**	**146.64**	**304**	*e*PKHKP	PKPpre	11 24 32.2	
VSU	**Vasula**	**146.86**	**335**	*d i*PKIKP	**PKPdf**	**11 24 35.3**	**-1.3**
VSU				MLR	MLR		
	comp=Z,3µm,18.0s						
MOL	**Molde**	**147.56**	**354**	*e*PKPbc	**PKPbc**	**11 24 41.0**	**+0.7**
MOL				IVmB_BB		11 24 52.6	
	comp=Z,1µm,2.3s						
MOL				*e*SS	SS	11 47 13.8	+5.1
MOL				IVMs_BB	IVMs_BB	12 21 57.3	
	comp=Z,2µm,29.4s						
DOMB	**Dombas**	**147.93**	**353**	*e*PKPbc	**PKPbc**	**11 24 41.5**	**+0.2**
DOMB				IVMs_BB	IVMs_BB	12 21 27.8	
	comp=Z,2µm,22.1s						
AKN	**Aaknes**	**147.99**	**355**	*e*PKPbc	**PKPbc**	**11 24 41.3**	**-0.2**
AKN				IVmB_BB		11 24 54.7	
	comp=Z,1µm,2.0s						
ANN	**Anapa**	**147.99**	**307**	*i* PKP2	**PKPbc**	**11 24 42.1**	**+0.1**
ANN				*e*		11 28 08.3	
ANN				*e*SSS	SSS	11 52 52.1	
ANN				pmax	pmax		
	comp=Z,86nm,1.1s						
ARPR	**Arapgir-MALATY**	**148.23**	**296**	IAMs_20	IAMs_20	12 36 44.0	
	comp=Z,5µm,21.0s						
NB2	**NORSAR Subarra**	**148.63**	**350**	PKP	**PKPbc**	**11 24 42.7**	**-0.5**
	comp=Z,58nm,1.4s,baz=15,slow=2.8						
NB2	**NORSAR Subarra**	**148.63**	**350**	PKP	**PKPbc**	**11 24 42.7**	**-0.5**
	baz=15,slow=2.8						
NOA	**NORSAR Array B**	**148.63**	**350**	PKPbc	**PKPbc**	**11 24 42.6**	**-0.7**
	comp=Z,8.1nm,0.8s,baz=16,slow=2.7,SNR=21						
FOO	**Floro**	**148.71**	**356**	*e*PKPdf	**PKPdf**	**11 24 40.9**	**+1.4**
FOO				IVmB_BB		11 24 52.6	
	comp=Z,799nm,1.4s						
FOO				*e*SS	SS	11 47 25.5	+3.9
FOO				IVMs_BB	IVMs_BB	12 17 02.5	
	comp=Z,2µm,36.2s						
HYA	**Hoyanger**	**149.06**	**355**	*e*PKPbc	**PKiKP**	**11 24 45.5**	**0.0**
HYA				IVmB_BB		11 24 50.6	
	comp=Z,501nm,2.5s						
HYA				*e*SS	SS	11 47 29.0	+3.5
HYA				*e*SS	**SS**	**11 47 29.3**	**+3.8**
HFS	**Hagfors**	**149.08**	**348**	PKPbc	**PKPbc**	**11 24 43.4**	**-0.9**
	comp=Z,18nm,0.8s,baz=43,slow=2.8,SNR=20						
MNK	**Minsk**	**149.12**	**329**	*i* PKiKP	**PKPbc**	**11 24 44.4**	**-0.2**
MNK				*i* PKiKP	**PKPbc**	**11 24 44.4**	**-0.2**
MNK				*i* PKiKP	**PKPbc**	**11 24 44.4**	**-0.2**
	comp=Z,66nm,0.9s,baz=50						
MNK				*i* PP	**PP**	**11 28 14.3**	**-1.7**
MNK				*i* PPP	PPP	11 31 34.2	
MNK				*i* SKS	**SKSdf**	**11 31 46.6**	**-1.3**
MNK				*i* SKKS	**SKKSdf**	**11 40 42.7**	**-2.5**
MNK				*i* SS	**SS**	**11 47 28.9**	**+1.7**
MNK				*i* SSS	SSS	11 53 05.1	
MNK	**Minsk**	**149.12**	**329**	*i* PKP2	**PKPbc**	**11 24 44.3**	**-0.2**
MNK				*i*		11 28 14.2	
MNK				*i* PPP	PPP	11 31 34.1	
MNK				*i*		11 31 46.6	
MNK				*i* SS	SS	11 47 28.9	+1.7
MNK				*i* SSS	SSS	11 53 05.1	
MNK				pmax	pmax		
	comp=Z,66nm,0.9s						
SUE	**Sulen**	**149.26**	**356**	*e*pPKPbc	**pPKPbc**	**11 24 47.2**	**-1.6**
SUE				IVmB_BB		11 24 54.2	
	comp=Z,1µm,2.3s						
SUE				*e*SS	SS	11 47 29.3	+1.5
SUE				IVMs_BB	IVMs_BB	12 17 02.5	
	comp=Z,2µm,28.3s						
NACGM	**Naroch**	**149.34**	**330**	*e*PKiKP	**PKPbc**	**11 24 44.8**	**-0.4**
SKAR	**Skarslia**	**149.34**	**353**	*e*pPKPdf	**pPKPdf**	**11 24 43.6**	**-1.2**
SKAR				IVmB_BB		11 24 55.6	
	comp=Z,947nm,2.8s						
SKAR				*e*SS	SS	11 47 32.8	+3.8
SKAR				IVMs_BB	IVMs_BB	12 23 36.5	
	comp=Z,2µm,31.5s						
ASK	**Askoy**	**149.81**	**356**	*e*PKPdf	**PKPdf**	**11 24 41.3**	**0.0**
BER	**Bergen**	**149.90**	**356**	*e*PKPdf	**PKPdf**	**11 24 40.9**	**-0.6**
BER				*e*SS	SS	11 47 42.1	+7.2
BER				IVMs_BB	IVMs_BB	12 17 53.0	
	comp=Z,2µm,32.0s						
KONO	**Kongsberg**	**150.19**	**351**	IAMs_20	IAMs_20	12 35 40.0	
	comp=Z,6µm,20.0s						
KONO	**Kongsberg**	**150.19**	**351**	⇑PKIKP	**PKiKP**	**11 24 47.8**	**-0.1**
KONO	**Kongsberg**	**150.19**	**351**	*e*PKPdf	**PKPdf**	**11 24 43.2**	**+1.3**
KONO				IVmB_BB		11 24 56.3	
	comp=Z,836nm,2.3s						
KONO				*e*SS	SS	11 47 45.1	+6.8
KONO				IVMs_BB	IVMs_BB	12 23 28.3	
	comp=Z,2µm,20.6s						
SIM	**Simferopol'**	**150.22**	**308**	*i* PKIKP	**PKPdf**	**11 24 43.8**	**+1.3**
SIM				*e*SS	SS	11 48 18.1	+37
SIM				pmax	pmax		
	comp=Z,167nm,1.4s						
LRW	**Lerwick**	**150.26**	**2**	*e*P	**PKPbc**	**11 24 45.0**	**-2.2**
LRW				IAMs_20	IAMs_20	12 35 02.1	
	comp=Z,6µm,20.8s						
ODD1	**Odda**	**150.26**	**354**	*e*pPKPdf	**pPKPdf**	**11 24 44.5**	**-1.8**
ODD1				IVmB_BB		11 24 49.1	
	comp=Z,1µm,3.0s						
STRU	**Stroemstad**	**150.55**	**349**	*e*	**PKPab**	**11 24 55.5**	**+0.9**
MMAI	**Mount Meron Ar**	**150.61**	**284**	PKPbc	**PKPbc**	**11 24 48.6**	**-0.5**
	comp=Z,16nm,0.9s,baz=80,slow=3.5,SNR=11						
AKASG	**Malin Array Be**	**150.74**	**322**		**PKPbc**	**11 24 47.0**	**-1.7**
AKASG	**Malin Array Be**	**150.74**	**322**	PKPbc	**PKPbc**	**11 24 46.7**	**-1.9**
	comp=Z,1.6nm,0.8s,baz=52,slow=2.8,SNR=4.9						
AKASG	**Malin Array Be**	**150.74**	**322**	PKIKP	**PKPbc**	**11 24 47.0**	**-1.7**
AKBB	**Malin Array Si**	**150.74**	**322**	*d i*PKIKP	**PKPdf**	**11 24 41.1**	**-2.0**
KIEV	**Kiev**	**150.75**	**322**		**PKPbc**	**11 24 47.6**	**-1.1**
KIEV	**Kiev**	**150.75**	**322**	IAMs_20	IAMs_20	12 35 32.4	
	comp=Z,6µm,20.0s						
KIEV	**Kiev**	**150.75**	**322**	PKIKP	**PKPbc**	**11 24 47.6**	**-1.1**
BLS5	**Blasjo**	**150.76**	**354**	*e*SS	SS	11 47 50.4	+5.8
KMY	**Karmoy**	**151.07**	**355**	*e*pPKPdf	**pPKPdf**	**11 24 46.2**	**-1.3**
KMY				*e*SS	SS	11 47 53.1	+5.2
SUW	**Suwalki**	**151.47**	**332**	IAMs_20	IAMs_20	12 35 59.5	
	comp=Z,6µm,20.0s						
BORU	**Boraas**	**151.58**	**347**	*i* P	**PKiKP**	**11 24 51.2**	**+0.4**
KIRS	**Kirsehir-Merke**	**151.65**	**297**	⇓P	**PKPbc**	**11 24 49.8**	**-1.5**
HOMB	**Homborsund**	**151.67**	**352**	*e*pPKPdf	pPKPdf	11 24 47.2	-1.2
HOMB	**Homborsund**	**151.67**	**352**	*i* P	**PKiKP**	**11 24 51.7**	**+0.7**
BIGH	**Upper Bighouse**	**151.75**	**5**	*e*P	**PKPdf**	**11 24 47.1**	**+2.7**
SNART	**Snartemo**	**151.76**	**353**	*i* P	**PKiKP**	**11 24 51.8**	**+0.6**
BRTR	**Keskin Array B**	**151.78**	**298**		**PKPbc**	**11 24 49.7**	**-2.0**
BRTR	**Keskin Array B**	**151.78**	**298**	PKPbc	**PKPbc**	**11 24 50.6**	**-1.1**
	comp=Z,2.2nm,0.8s,baz=129,slow=2.0,SNR=8.4						
BRTR				PKPab	**PKPab**	**11 24 58.0**	**-2.7**
	comp=Z,9.9nm,0.8s,baz=125,slow=2.3,SNR=13						
LEWI	**Lewis, Hebride**	**151.78**	**9**	*e*P	**PKPdf**	**11 24 47.3**	**+2.8**
LEWI				IAMs_20	IAMs_20	12 27 35.8	
	comp=Z,10µm,22.4s						
LINV	**Loch Inver, As**	**151.97**	**7**	*e*P	**PKPdf**	**11 24 46.9**	**+2.2**
LINV				IAMs_20	IAMs_20	12 24 32.4	
	comp=Z,7µm,22.5s						
ONAU	**Onsala**	**151.97**	**347**	*i* P	**PKiKP**	**11 24 51.5**	**-0.1**
BLEU	**Blekinge**	**152.08**	**342**	*i* P	**PKiKP**	**11 24 51.8**	**-0.1**
FABU	**Falkenberg**	**152.18**	**346**	*i* P	**PKPbc**	**11 24 51.5**	**-0.2**
ANTO	**Ankara**	**152.40**	**299**	IAMs_20	IAMs_20	12 39 33.9	
	comp=Z,5µm,21.0s						
CSS	**Mathiatis**	**152.41**	**288**	IAMs_20	IAMs_20	12 35 20.9	
	comp=Z,4µm,20.0s						
DEL	**Delary**	**152.41**	**344**	*e*	**PKiKP**	**11 24 52.5**	**-0.1**
SORM	**Soroca**	**152.57**	**318**	⇑P	**PKPbc**	**11 24 50.9**	**-2.0**
SORM	**Soroca**	**152.57**	**318**	⇑PKIKP	**PKPbc**	**11 24 50.9**	**-2.0**
MCD	**Coleburn Disti**	**152.70**	**5**	*e*P	**PKPdf**	**11 24 48.0**	**+2.1**
MCD				IAMs_20	IAMs_20	12 35 20.8	
	comp=Z,5µm,22.2s						
KPL	**Plockton**	**152.71**	**8**	*e*P	**PKPdf**	**11 24 49.0**	**+3.2**
KPL				IAMs_20	IAMs_20	12 28 30.7	
	comp=Z,6µm,22.7s						
MILM	**Milestii Mici**	**152.89**	**315**	*e*PKP	**PKPdf**	**11 24 43.0**	**-3.5**
MILM				*e*L	L	12 27 36.0	
MILM				LQM		12 30 07.0	
	comp=Z,3µm,20.5s						
MILM				LRM	MLR	12 36 20.0	
	comp=Z,5µm,20.0s						
MILM	**Milestii Mici**	**152.89**	**315**	*e*PKIKP	**PKPdf**	**11 24 43.0**	**-3.5**
BJUU	**Bjuv**	**152.97**	**345**	*e*	**PKiKP**	**11 24 54.2**	**+0.5**
DRUM	**Mains of Drumt**	**153.42**	**4**	*e*P	**PKPdf**	**11 24 49.9**	**+3.0**
DRUM				IAMs_20	IAMs_20	12 43 13.5	
	comp=Z,8µm,19.8s						
LAWE	**Loch Awe, Argy**	**153.80**	**8**	*e*P	**PKPdf**	**11 24 50.4**	**+2.9**
LAWE				IAMs_20	IAMs_20	12 30 12.3	
	comp=Z,8µm,21.8s						
TPGR	**Topolog**	**154.03**	**311**	⇓P	**PKiKP**	**11 25 02.4**	**+6.0**
CFR	**Carcaliu**	**154.08**	**312**	⇑P	**PKiKP**	**11 24 57.5**	**+1.1**
CFR	**Carcaliu**	**154.08**	**312**	⇑PKIKP	**PKiKP**	**11 24 57.5**	**+1.1**
PGBU	**Glenifferbraes**	**154.34**	**7**	*e*P	**PKPdf**	**11 24 51.0**	**+2.8**
PGBU				IAMs_20	IAMs_20	12 30 50.3	
	comp=Z,12µm,21.7s						
EDI	**Edinburgh**	**154.35**	**5**	*e*P	**PKPdf**	**11 24 50.9**	**+2.6**
EDI				IAMs_20	IAMs_20	12 42 33.5	
	comp=Z,6µm,20.6s						
TESR	**Tescani**	**154.39**	**316**	⇑P	**PKPab**	**11 25 06.2**	**-5.1**
HARR	**Harsova**	**154.42**	**311**	⇑P	**PKiKP**	**11 25 02.7**	**+5.6**
BURAR	**Bucovina Array**	**154.64**	**319**		**PKiKP**	**11 24 58.4**	**+0.8**
BURAR	**Bucovina Array**	**154.64**	**319**	⇓P	**PKiKP**	**11 24 59.1**	**+1.5**
VRI	**Vrincioaia**	**154.66**	**315**	⇓P	**PKPab**	**11 25 09.1**	**-3.3**
VRI	**Vrincioaia**	**154.66**	**315**	⇓PKP2	**PKPab**	**11 25 09.1**	**-3.3**
PLOR	**Plostina**	**154.71**	**315**	⇑P	**PKPab**	**11 25 12.4**	**-0.3**
PLOR	**Plostina**	**154.71**	**315**	⇑PKP2	**PKPab**	**11 25 12.4**	**-0.3**
BISRR	**Bisoca**	**154.82**	**314**	⇑P	**PKPab**	**11 25 12.8**	**-0.4**
ESK	**Eskdalemuir**	**154.95**	**6**	*e*P	**PKPdf**	**11 24 51.5**	**+2.4**
ESK				IAMs_20	IAMs_20	12 32 44.5	
	comp=Z,7µm,19.6s						
NEWG	**New Galloway**	**155.05**	**7**	*e*P	**PKPdf**	**11 24 51.2**	**+2.0**
NEWG				IAMs_20	IAMs_20	12 27 30.1	
	comp=Z,9µm,24.7s						
GAL1	**Galloway**	**155.25**	**8**	*e*P	**PKPdf**	**11 24 52.8**	**+3.3**
GAL1				IAMs_20	IAMs_20	12 28 30.6	
	comp=Z,9µm,25.0s						
MLR	**Muntele Rosu**	**155.32**	**315**	PKP	**PKPdf**	**11 24 50.5**	**+0.4**
	comp=Z,1.7nm,0.5s,baz=117,slow=2.3,SNR=4.9						
MLR				PKPab	**PKPab**	**11 25 14.6**	**-0.7**
	comp=Z,5.5nm,0.8s,baz=36,slow=4.1,SNR=4.2						
ACRG	**Accra**	**155.32**	**177**	IAMs_20	IAMs_20	12 44 22.9	
	comp=Z,5µm,21.0s						
PRD	**Provadia**	**155.38**	**308**	*i* P	**PKPab**	**11 25 17.1**	**+1.6**
KOLS	**Kolonicke sedl**	**155.40**	**325**	*e*PKP2	**PKPab**	**11 25 16.4**	**+0.9**
KOLS	**Kolonicke sedl**	**155.40**	**325**	*e*PKP	**PKPab**	**11 25 16.4**	**+0.9**
DOPR	**Dopca**	**155.42**	**316**	⇓P	**PKPab**	**11 25 08.9**	**-6.8**
EDMD	**Edmundbyers**	**155.53**	**4**	*e*P	**PKPdf**	**11 24 52.0**	**+2.0**
EDMD				IAMs_20	IAMs_20	12 47 18.4	
	comp=Z,6µm,16.7s						
STHS	**Stebnicka Huta**	**155.58**	**327**	*e*PKP2	**PKPab**	**11 25 16.7**	**+0.5**
STHS	**Stebnicka Huta**	**155.58**	**327**	*e*PKP	**PKPab**	**11 25 16.7**	**+0.5**
OJC	**Ojcow**	**155.66**	**330**	*e*PKP	PKPdf	11 24 59.9	+10
KESW	**Keswick, Cumbr**	**155.68**	**6**	*e*P	**PKPdf**	**11 24 53.2**	**+3.1**
KESW				IAMs_20	IAMs_20	12 44 24.6	
	comp=Z,5µm,20.7s						
DBIC	**Dimbokro**	**155.75**	**166**		**PKPab**	**11 25 17.2**	**-0.5**
DBIC	**Dimbokro**	**155.75**	**166**	PKPab	**PKPab**	**11 25 16.8**	**-1.0**
	comp=Z,17nm,1.0s,baz=187,slow=4.6,SNR=4.1						
DBIC	**Dimbokro**	**155.75**	**166**	PKP2	**PKPab**	**11 25 17.2**	**-0.5**
IOMK	**Kirk Michael**	**155.86**	**8**	*e*P	**PKPdf**	**11 24 53.4**	**+3.0**
IOMK				IAMs_20	IAMs_20	12 42 15.7	
	comp=Z,3µm,20.5s						
VOIR		**155.89**	**315**	⇑P	**PKPab**	**11 25 15.0**	**-2.8**
VOIR		**155.89**	**315**	⇑PKP2	**PKPab**	**11 25 15.0**	**-2.8**
GDLE	**Glaisdale, N Y**	**155.99**	**2**	*e*P	**PKPdf**	**11 24 52.8**	**+2.2**
ARR	**Arges**	**156.18**	**315**	⇓P	**PKPab**	**11 25 16.7**	**-2.3**
JMB	**Yambol**	**156.23**	**307**	*i* P	PKPab	11 25 27.0	+7.8
MARR	**Marisel-Cluj**	**156.35**	**320**	⇑P	**PKPab**	**11 25 15.4**	**-4.4**
HPK	**Haverah Park**	**156.41**	**4**	*e*P	**PKPdf**	**11 24 54.4**	**+3.2**
HPK				IAMs_20	IAMs_20	12 41 40.3	
	comp=Z,6µm,19.0s						
KSP	**Ksiaz**	**156.59**	**335**	*e*PKP	PKPdf	11 25 00.7	+9.2
OKC	**Ostrava-Krasne**	**156.66**	**331**	AMS	AMS	12 39 20.0	
	comp=Z,5µm,19.7s						
CHVC	**Chvalec**	**156.88**	**335**	AMS	AMS	12 34 00.0	
	comp=Z,7µm,21.4s						
MORC	**Moravsky Berou**	**156.95**	**332**	*e*PKP	**PKPdf**	**11 24 51.4**	**-0.6**
UPC	**Upice**	**156.97**	**335**	AMS	AMS	12 34 00.0	
	comp=Z,8µm,21.9s						
CMLA	**Cha da Macela**	**156.98**	**64**	IAMs_20	IAMs_20	12 33 07.6	
	comp=Z,6µm,21.0s						
DPC	**Dobruska-Polom**	**156.98**	**334**	*e*PKPDF	**PKPdf**	**11 24 50.4**	**-1.7**
DPC				*e*PKPAB	**pPKPab**	**11 25 23.4**	**-2.8**
DPC				*e*x	x	11 25 30.5	
DPC				AMS	AMS	12 41 10.0	
	comp=Z,6µm,19.9s						
DPC	**Dobruska-Polom**	**156.98**	**334**	*e*PKIKP	**PKPdf**	**11 24 50.4**	**-1.7**
DPC				MLR	MLR		
	comp=Z,6µm,19.9s						
KRLC	**Kraliky**	**157.02**	**333**	AMS	AMS	12 36 40.0	
	comp=Z,10µm,21.3s						
MAUC	**Maruska**	**157.15**	**331**	*e*PKPDF	**PKPdf**	**11 24 53.1**	**+0.8**
CLL	**Collm**	**157.28**	**340**	IAMs_20	IAMs_20	12 46 25.9	
	comp=Z,4µm,20.0s						
CLL	**Collm**	**157.28**	**340**	*e*PKIKP	**PKPdf**	**11 24 56.0**	**+3.7**
CLL				*e*		11 29 02.0	
CLL				pmax	pmax		
	comp=Z,19nm,0.8s						
CLL	**Collm**	**157.28**	**340**	*e*(PKPdf)	**PKPdf**	**11 24 56.0**	**+3.7**
CLL				*e*PKPdif	**sPKPdf**	**11 25 03.0**	**+5.1**
CLL				*e*x	x	11 25 12.0	
CLL				*i* PKPab	**PKPab**	**11 25 23.1**	**-0.3**
	comp=Z,19nm,0.8s						
CLL				*i* x	x	11 25 31.6	
	comp=Z,30nm,0.9s						
CLL				*e*PP	**PP**	**11 29 02.0**	**+0.2**
CLL				*e*x	x	11 29 13.0	
CLL				*e*PPP	PPP	11 32 24.0	
CLL				*e*SKKSac	SKKSac	11 35 54.0	+3.1
CLL				*e*SKKSdf	**SKKSdf**	**11 40 30.0**	**+0.9**
CLL				*e*PPS	PPS	11 42 12.0	
CLL				*e*x	x	11 44 54.0	
CLL				*e*SS	**SS**	**11 48 57.0**	**+1.1**
CLL				*e*SSS	SSS	11 55 00.0	
CLL				*e*x	x	11 57 54.0	
CLL				*e*SSSS		11 59 00.0	
CLL				*e*x	x	12 00 40.0	
CLL				AMS	AMS	12 37 00.0	
VYHS	**Vyhne**	**157.35**	**328**	*e*PKP2	**PKPab**	**11 25 23.3**	**-0.6**
VYHS	**Vyhne**	**157.35**	**328**	*e*PKP	**PKPab**	**11 25 23.3**	**-0.6**
BRG	**Berggiesshubel**	**157.37**	**338**	⇓*e*PKPf		11 24 53.0	
BRG				Amp		11 24 54.9	
	comp=Z,2.2nm,1.0s						
BRG	**Berggiesshubel**	**157.37**	**338**	P	PKPab	11 25 12.7	-11
BRG				Amp		11 25 13.6	
	comp=Z,12nm,1.1s						
BRG				PKPab	pPKPab	11 25 24.4	-3.4
BRG				Amp		11 25 26.3	
	comp=Z,14nm,1.0s						
BRG	**Berggiesshubel**	**157.37**	**338**	P	PKPab	11 25 33.0	+9.2
BRG				Amp		11 25 36.3	
	comp=Z,26nm,1.0s						
KARP	**Karpathos**	**157.42**	**290**	IAMs_20	IAMs_20	12 41 26.5	
	comp=Z,5µm,22.0s						
SURR	**Surduc**	**157.45**	**319**	⇑P	PKPab	11 25 11.0	-13
PVCC	**Panska Ves**	**157.46**	**337**	AMS	AMS	12 47 30.0	
	comp=Z,7µm,19.9s						
JAVC	**Velka Javorina**	**157.60**	**330**	*e*PKP	**PKPdf**	**11 24 53.2**	**+0.3**
RICC	**Richard**	**157.60**	**338**	AMS	AMS	12 33 50.0	
	comp=Z,8µm,21.5s						
VRAC	**Vranov**	**157.71**	**332**	PKPab	**PKPab**	**11 25 22.0**	**-3.4**
	comp=Z,6.0nm,0.7s,baz=34,slow=5.6,SNR=5.7						
VRAC	**Vranov**	**157.71**	**332**	*e*PKP	**PKPdf**	**11 24 52.5**	**-0.5**
VRAC	**Vranov**	**157.71**	**332**	PKP2	**PKPab**	**11 25 22.0**	**-3.4**
MPEP	**Malo Peshtene**	**157.72**	**312**	*i* P	**PKPab**	**11 25 27.0**	**+1.4**
PRA	**Prague**	**157.89**	**336**	AMS	AMS	12 39 50.0	
	comp=Z,8µm,19.9s						
GOPC	**GO Pecny, Ondr**	**157.90**	**336**	AMS	AMS	12 32 30.0	
	comp=Z,9µm,22.7s						
PRU	**Pruhonice**	**157.93**	**336**	AMS	AMS	12 31 40.0	
	comp=Z,10µm,24.3s						
PRU	**Pruhonice**	**157.93**	**336**	*e*PKIKP	**PKPdf**	**11 24 47.2**	**-6.0**
PRU				MLR	MLR		
	comp=Z,10µm,24.3s						
KRUC	**Moravsky**	**157.98**	**332**	*e*PKP	**PKPdf**	**11 24 52.5**	**-0.8**
TREC	**Trest**	**158.15**	**334**	AMS	AMS	12 34 10.0	
	comp=Z,8µm,22.8s						
MOX	**Moxa**	**158.27**	**341**	*e*L	L	12 32 34.9	
	comp=Z,4µm,21.1s						
MMB	**Musomishta**	**158.50**	**307**	*i* P	PKPab	11 25 37.9	+8.8
ZVC	**Zvikov**	**158.51**	**336**	*e*PKPAB	**PKPab**	**11 25 28.7**	**-0.1**
ZVC				AMS	AMS	12 36 10.0	
	comp=Z,9µm,21.9s						
BOVS	**Bovan**	**158.87**	**314**	⇓P	**PKPdf**	**11 25 01.9**	**+7.4**
CKRC	**Cesky Krumlov**	**158.99**	**335**	*e*PKPAB	**PKPab**	**11 25 29.6**	**-1.3**
CKRC				*e*x	x	11 25 38.5	
CKRC				AMS	AMS	12 36 00.0	
	comp=Z,6µm,21.2s						
CKRC	**Cesky Krumlov**	**158.99**	**335**	*e*PKP2	**PKPab**	**11 25 29.6**	**-1.3**
CKRC				MLR	MLR		
	comp=Z,6µm,21.2s						
KHC	**Kasperske Hory**	**158.99**	**336**	*e*PKPDF	**PKPdf**	**11 24 54.0**	**-0.6**

KHC				*e*PKPAB	**PKPab**	**11 25 29.9**	**-1.0**
KHC				*e*x	x	11 25 37.7	
KHC				AMS	AMS	12 33 40.0	
	comp=Z,13µm,23.3s						
KHC	**Kasperske Hory**	**158.99**	**336**	*e*PKIKP	**PKPdf**	**11 24 50.0**	**-4.6**
KHC				*e*		11 25 29.9	
KHC				MLR	MLR		
	comp=Z,13µm,23.3s						
RONA	**Rosalia, Austr**	**159.08**	**330**	*i* PKP	**PKPdf**	**11 24 54.4**	**-0.4**
	comp=Z,4.9nm,1.0s						
RONA				*e*PKP	**pPKPab**	**11 25 32.3**	**-3.1**
	comp=Z,23nm,1.3s						
CONA	**Conrad Observa**	**159.09**	**331**	*i* PKP	**PKPdf**	**11 24 54.5**	**-0.3**
	comp=Z,1.1nm,0.9s						
CONA				*e*PKP	**PKPab**	**11 25 31.0**	**-0.5**
	comp=Z,25nm,2.0s						
GERES	**GERESS Array B**	**159.18**	**336**	PKPab	**PKPab**	**11 25 30.9**	**-1.0**
	comp=Z,3.4nm,0.8s,baz=48,slow=3.2,SNR=7.8						
GRA1	**Grafenberg Arr**	**159.24**	**341**	IAMs_20	IAMs_20	12 46 17.6	
	comp=Z,6µm,20.0s						
GRF	**Grafenberg Arr**	**159.24**	**341**	*e*PKP	**PKPab**	**11 25 32.8**	**+0.8**
GRF				*e*PP	**PP**	**11 29 14.4**	**+1.8**
	baz=42,slow=5.5						
GRF				*e*L	L	12 41 08.5	
	comp=Z,5µm,21.3s						
ARSA	**Arzberg**	**159.76**	**330**	*i* PKP	**PKPdf**	**11 24 56.0**	**+0.5**
	comp=Z,0.1nm,0.2s						
ARSA				*e*pPKP	**pPKPab**	**11 25 36.0**	**-2.3**
	comp=Z,5.7nm,0.6s						
MOA	**Molln**	**159.80**	**333**	*i* PKP	**PKPdf**	**11 24 54.9**	**-0.6**
	comp=Z,1.3nm,0.5s						
MOA				*e*PKP	**pPKPab**	**11 25 35.8**	**-2.6**
	comp=Z,4.5nm,0.7s						
BIOA	**Bad Ischl, Aus**	**160.17**	**334**	*i* PKP	**PKPdf**	**11 24 55.8**	**-0.1**
	comp=Z,2.8nm,0.4s						
BIOA				*i* PKP	**PKPab**	**11 25 35.8**	**-0.3**
	comp=Z,20nm,1.4s						
SOKA	**Soboth**	**160.42**	**330**	*i* PKP	**PKPdf**	**11 24 56.2**	**-0.1**
	comp=Z,3.7nm,1.1s						
SOKA				*e*PKP	**pPKPab**	**11 25 38.3**	**-3.0**
	comp=Z,14nm,1.3s						
OHR	**Ohrid**	**160.69**	**309**	*i* P	**PKPdf**	**11 24 57.5**	**+0.7**
LESA	**Schwarzleotal**	**160.75**	**335**	*i* PKP	**PKPdf**	**11 24 56.4**	**-0.3**
	comp=Z,4.6nm,0.9s						
LESA				*e*pPKP	**pPKPab**	**11 25 40.7**	**-2.0**
	comp=Z,12nm,0.8s						
MOZS	**Mozjanca**	**160.97**	**330**	*e*PKPdf	**PKPdf**	**11 24 53.9**	**-3.0**
VNDS	**Vrh nad Dolski**	**161.01**	**329**	*e*PKPdf	**PKPdf**	**11 24 55.3**	**-1.6**
MYKA	**Terra Mystica**	**161.04**	**332**	*i* PKP	**PKPdf**	**11 24 56.1**	**-0.9**
	comp=Z,5.7nm,1.6s						
MYKA				*e*PKP	**PKPab**	**11 25 39.6**	**-0.3**
	comp=Z,12nm,1.3s						
WATA	**Walderalm**	**161.21**	**337**	*i* PKP	**PKPdf**	**11 24 57.3**	**0.0**
	comp=Z,2.4nm,0.5s						
WATA				*e*PKP	**pPKPab**	**11 25 41.8**	**-2.9**
	comp=Z,6.8nm,0.7s						
CRNS	**Crni Vrh**	**161.22**	**330**	*e*PKPdf	**PKPdf**	**11 24 55.6**	**-1.6**
BFO	**Black Forest**	**161.24**	**344**		**PKPab**	**11 25 40.8**	**+0.1**
BFO	**Black Forest**	**161.24**	**344**	PKP2	**PKPab**	**11 25 40.8**	**+0.1**
WTTA	**Wattenberg**	**161.26**	**337**	*i* PKP	**PKPdf**	**11 24 57.5**	**+0.2**
	comp=Z,5.0nm,0.9s						
WTTA				*e*PKP	**PKPab**	**11 25 40.2**	**-0.8**
	comp=Z,12nm,0.8s						
RETA	**Reutte**	**161.35**	**339**	*i* PKP	**PKPdf**	**11 24 56.4**	**-0.8**
	comp=Z,1.0nm,0.4s						
RETA				*e*PKP	**PKPab**	**11 25 41.5**	**+0.2**
	comp=Z,9.4nm,0.9s						
MOTA	**Moosalm**	**161.36**	**338**	*i* PKP	**PKPdf**	**11 24 57.0**	**-0.4**
	comp=Z,3.6nm,0.9s						
MOTA				*e*PKP	**PKPab**	**11 25 41.3**	**-0.1**
	comp=Z,16nm,1.0s						
ABTA	**Abfaltersbach**	**161.38**	**334**	*i* PKP	**PKPdf**	**11 24 57.3**	**0.0**
	comp=Z,3.0nm,0.8s						
ABTA				*e*PKP	**PKPab**	**11 25 39.7**	**-1.8**
	comp=Z,12nm,1.0s						
SQTA	**Sankt Quirin**	**161.44**	**337**	*i* PKP	**PKPdf**	**11 24 57.4**	**0.0**
	comp=Z,1.5nm,0.4s						
SQTA				*e*PKP	**PKPab**	**11 25 41.7**	**0.0**
	comp=Z,9.3nm,0.9s						
FETA	**Feichten**	**161.77**	**338**	*i* PKP	**PKPdf**	**11 24 58.0**	**+0.1**
	comp=Z,2.9nm,1.1s						
FETA				*e*PKP	**PKPab**	**11 25 43.8**	**+0.5**
	comp=Z,10nm,0.9s						
DAVA	**Damuels**	**161.79**	**340**	*i* PKP	**PKPdf**	**11 24 58.0**	**+0.1**
	comp=Z,1.6nm,0.4s						
DAVA				*e*PKP	**PKPab**	**11 25 43.6**	**+0.3**
	comp=Z,14nm,0.8s						
DAVOX	**Davos/Dischmat**	**162.25**	**339**	PKPab	**PKPab**	**11 25 44.2**	**-1.2**
	comp=Z,12nm,0.8s,baz=17,slow=10.0,SNR=10						
TORD	**Torodi Ar. Bea**	**162.79**	**183**	PKP	**PKPdf**	**11 25 00.2**	**+0.6**
	comp=Z,2.8nm,0.9s,baz=222,slow=2.6,SNR=10.0						
TORD				PKPab	**PKPab**	**11 25 48.0**	**-0.2**
	comp=Z,17nm,0.9s,baz=169,slow=3.3,SNR=11						
TORD				PP	**PP**	**11 29 30.1**	**-1.2**
	comp=Z,3.4nm,1.2s,baz=187,slow=1.3,SNR=3.0						
PMOZ	**Porto Moniz, M**	**164.40**	**77**	*e*PKPdf	**PKPdf**	**11 25 01.8**	**+1.1**
PMOZ				*e*SS	SS	11 50 26.2	+12
PMOZ				*e*LR	LR	12 21 21.9	
PMOZ				*i* AMs_20		12 42 52.0	
	comp=Z,3µm,20.0s						
PMAR	**Madeira**	**164.64**	**77**	*e*PKPdf	**PKPdf**	**11 25 01.4**	**+0.4**
PMPST	**Porto Santo, M**	**165.10**	**75**	*e*PKPdf	**PKPdf**	**11 25 05.4**	**+4.2**
PGAV	**Gavieira, Arco**	**166.32**	**30**	*e*PKPdf	**PKPdf**	**11 25 03.3**	**+1.2**
PGAV				*i* tx	tx	11 57 26.2	
PGAV				*e*LR	LR	12 22 53.4	
PGAV				*i* AMs_20		12 49 03.4	
	comp=Z,6µm,18.0s						
PCAB	**Cabril**	**166.64**	**30**	*e*PKPdf	**PKPdf**	**11 25 03.7**	**+1.4**
PCAB				*e*PP	PP	11 30 01.7	+10
POLO	**Lamas de Olo**	**167.01**	**30**	*e*PKPdf	**PKPdf**	**11 25 03.9**	**+1.3**
POLO				*e*PP	PP	11 30 11.6	+17
PBRG	**Braganca**	**167.08**	**26**	*e*PKPdf	**PKPdf**	**11 25 03.2**	**+0.7**
PBRG				*e*PP	PP	11 30 15.9	+22
PVRL	**Vila Real**	**167.13**	**30**	*e*PKPdf	**PKPdf**	**11 25 02.1**	**-0.5**
PVIS	**Viseu**	**167.50**	**32**	*e*PKPdf	**PKPdf**	**11 25 02.9**	**-0.1**
PVIS				*e*PP	PP	11 30 04.7	+8.1
MVO	**Moncorvo**	**167.51**	**29**	*e*PKPdf	**PKPdf**	**11 25 04.3**	**+1.3**
MVO				*e*PP	**PP**	**11 30 03.7**	**+7.2**
MVO				*e*SS	SS	11 50 54.8	+12
MVO				*i* tx	tx	11 57 40.6	
MVO				*e*LQ	LQ	12 15 32.5	
MVO				*e*LR	LR	12 23 24.6	
MVO				*i* AMs_20		12 37 25.3	
	comp=Z,6µm,20.0s						
COI	**Coimbra**	**167.64**	**35**	*e*PKPdf	**PKPdf**	**11 25 06.3**	**+3.4**
COI				*e*PP	PP	11 30 19.7	+22
PCAS	**Casmilo, Conde**	**167.71**	**36**	*e*PKPdf	**PKPdf**	**11 25 06.0**	**+3.0**
PCAS				*e*PP	PP	11 30 19.5	+22
MTE	**Manteigas**	**167.91**	**32**	*e*PKPdf	**PKPdf**	**11 25 04.7**	**+1.4**
MTE				*e*PP	PP	11 30 20.0	+21
MTE				*e*SS	SS	11 51 03.4	+16
MTE				*i* tx	tx	11 57 10.8	
MTE				*e*LQ	LQ	12 14 51.1	
MTE				*e*LR	LR	12 22 56.8	
MTE				*i* AMs_20		12 39 57.1	
	comp=Z,6µm,20.0s						
PSBE	**So Bento**	**167.95**	**39**	*e*PKPdf	**PKPdf**	**11 25 07.2**	**+4.0**
PSBE				*e*PP	PP	11 30 11.1	+12
PSARD	**Sardoal**	**168.22**	**37**	*e*PKPdf	**PKPdf**	**11 25 03.8**	**+0.4**
PSARD				*e*PP	PP	11 30 11.8	+12
LIS	**Lisbon**	**168.30**	**42**	*e*PKPdf	**PKPdf**	**11 25 03.4**	**0.0**
LIS				IAMs_20	IAMs_20	12 39 38.3	
	comp=Z,9µm,12.6s						
LIS	**Lisbon**	**168.30**	**42**	*e*PKIKP	**PKPdf**	**11 25 03.4**	**0.0**
PCBR	**Castelo Branco**	**168.38**	**34**	*e*PKPdf	**PKPdf**	**11 25 04.5**	**+1.0**
PCBR				*e*PP	PP	11 30 13.5	+12
PMTG	**Montargil**	**168.58**	**39**	*e*PKPdf	**PKPdf**	**11 25 02.3**	**-1.3**
PMTG				*e*PP	PP	11 30 13.8	+12
PMRV	**Marv??o**	**168.74**	**35**	*e*PKPdf	**PKPdf**	**11 25 05.0**	**+1.2**
PMRV				*e*PP	PP	11 30 14.4	+12
PMRV				*e*SS	SS	11 51 12.7	+17
PMRV				*i* tx	tx	11 57 57.5	
PMRV				*e*LQ	LQ	12 15 01.1	
PMRV				*e*LR	LR	12 23 34.4	
PMRV				*i* AMs_20		12 32 54.9	
	comp=Z,5µm,22.0s						
PESTR	**Estremoz**	**169.06**	**37**	PKP	**PKPdf**	**11 25 05.4**	**+1.4**
PESTR	**Estremoz**	**169.06**	**37**	*e*PKPdf	**PKPdf**	**11 25 04.9**	**+0.9**
PESTR				*e*PP	PP	11 30 15.6	+11
EVO	**Evora**	**169.08**	**40**	PKP	**PKPdf**	**11 25 05.5**	**+1.5**
EVO	**Evora**	**169.08**	**40**	*e*PKPdf	**PKPdf**	**11 25 05.5**	**+1.5**
PTEO	**Sao Teotonio**	**169.32**	**46**	*e*PKPdf	**PKPdf**	**11 25 06.1**	**+2.0**
MESJ	**Messejana**	**169.43**	**43**	*e*PKPdf	**PKPdf**	**11 25 04.2**	**0.0**
MESJ				IAMs_20	IAMs_20	12 52 30.2	
	comp=Z,10µm,19.3s						
MESJ	**Messejana**	**169.43**	**43**	*e*PKIKP	**PKPdf**	**11 25 04.2**	**0.0**
EBAD	**Badajoz**	**169.44**	**36**	PKP	**PKPdf**	**11 25 05.4**	**+1.2**
PFVI	**Vila Bisbo**	**169.51**	**48**	*e*PKPdf	**PKPdf**	**11 25 05.1**	**+0.8**
MORF	**Marmelete**	**169.51**	**47**	*e*PKPdf	**PKPdf**	**11 25 04.4**	**0.0**
MORF				IAMs_20	IAMs_20	12 42 27.4	
	comp=E,10µm,25.7s						
MORF	**Marmelete**	**169.51**	**47**	*e*PKPdf	**PKPdf**	**11 25 06.2**	**+1.9**
MORF	**Marmelete**	**169.51**	**47**	*e*PKIKP	**PKPdf**	**11 25 04.4**	**0.0**
PBEJ	**Beja**	**169.51**	**41**	*e*PKPdf	**PKPdf**	**11 25 06.0**	**+1.7**
PCVE	**Castro Verde**	**169.68**	**44**	*e*PKPdf	**PKPdf**	**11 25 06.1**	**+1.7**
PBAR	**Barrancos**	**169.87**	**38**	PKP	**PKPdf**	**11 25 06.7**	**+2.2**
PBAR	**Barrancos**	**169.87**	**38**	*e*PKPdf	**PKPdf**	**11 25 05.4**	**+1.0**
PBAR				*e*PP	PP	11 30 27.5	+19
ESDC	**Sonseca Array**	**169.95**	**22**	PKP	**PKPdf**	**11 25 03.9**	**-0.7**
	comp=E,1.8nm,1.0s,baz=358,slow=2.8,SNR=10.0						
ESDC				PKPab	**PKPab**	**11 26 19.8**	**+0.4**
	comp=E,9.4nm,1.3s,baz=335,slow=3.3,SNR=6.3						
PBDV	**Barranco-do-Ve**	**170.00**	**45**	*e*PKPdf	**PKPdf**	**11 25 09.2**	**+4.6**
PVAQ	**Vaqueiros**	**170.02**	**44**	*e*PKPdf	**PKPdf**	**11 25 06.1**	**+1.5**
PVAQ				*e*SS	SS	11 51 22.1	+13
PVAQ				*i* tx	tx	11 58 24.5	
PVAQ				*e*LQ	LQ	12 15 35.5	
PVAQ				*e*LR	LR	12 24 07.1	
PVAQ				*i* AMs_20		12 42 17.8	
	comp=E,8µm,18.0s						
EGRO	**El Granado**	**170.07**	**42**	PKP	**PKPdf**	**11 25 06.3**	**+1.7**
EMIN	**Mina Concepcio**	**170.36**	**39**	PKP	**PKPdf**	**11 25 06.5**	**+1.7**
EADA	**Adamuz**	**171.05**	**29**	PKP	**PKPdf**	**11 25 06.7**	**+1.5**
KEST	**Kesra**	**171.16**	**309**	PKP	**PKPdf**	**11 25 05.8**	**+0.5**
	comp=E,2.3nm,0.9s,baz=68,slow=5.4,SNR=4.0						
KEST				PKPab	**PKPab**	**11 26 24.7**	**-0.3**
	comp=E,4.1nm,1.0s,baz=47,slow=19,SNR=4.0						
ESPR	**Espera**	**171.46**	**39**	PKP	**PKPdf**	**11 25 07.5**	**+2.2**
EMAL	**Malaga-Limoner**	**172.28**	**34**	PKP	**PKPdf**	**11 25 06.5**	**+0.8**
ELGU	**Los Guajares,**	**172.55**	**29**	PKP	**PKPdf**	**11 25 07.1**	**+1.1**
MDT	**Midelt**	**174.74**	**62**	PKP	**PKPdf**	**11 25 08.2**	**+1.3**
	comp=E,4.7nm,1.0s,baz=292,slow=1.7,SNR=10.0						

*ISK **27** 11:06:33.8, 35°28N×24°18E, h3^{km}, ML3.2/13*

*IDC **27** 11:06:34.7±1.5, 34°96N×24°29E, h0^{km}, mb3.5/4, mbtmp3.5/8, ML3.2/4, MS2.6/1, Error ellipse: s-maj=37.1km s-min=20.7km az=153.0*

*ATH **27** 11:06:34.9, 35°29N×24°18E, h9^{km}±1^{km}, ML3.2/7, Manual Solution by I.Dede First location: 2019/06/27 11:07:23, This location: 2019/06/27 11:16:17 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

*THE **27** 11:06:34.8, 35°3N±0°7×24°2E±0°6, h0^{km}±2^{km}, M3.0/7, MLh3.0/7*

ISC 27 11:06:35.2±1.1**, 35°29N**±0°02×**24°19E**±0°02**, h1**^{km}±9^{km}**, n45, σ1^{s}06**/62**, mb3.4**/3**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNB	**Souda**	**0.22**	**332**	P	**Pg**	**11 06 39.5**	**+0.1**
CHNB				S	**Sg**	**11 06 43.1**	**+0.9**
IMMV	**Iera Moni Meta**	**0.24**	**314**	Pg	**Pg**	**11 06 39.5**	**-0.3**
IMMV				Sg	**Sg**	**11 06 43.6**	**+0.7**
IMMV	**Iera Moni Meta**	**0.24**	**314**	P	**Pg**	**11 06 39.5**	**-0.3**
IMMV	**Iera Moni Meta**	**0.24**	**314**	P	**Pg**	**11 06 39.8**	**0.0**
IMMV				S	**Sg**	**11 06 43.0**	**+0.1**
CHAN	**Chania**	**0.26**	**331**	P	**Pg**	**11 06 39.9**	**-0.2**
CHAN	**Chania**	**0.26**	**331**	P	**Pg**	**11 06 40.0**	**-0.2**
CHAN				S	**Sg**	**11 06 44.5**	**+1.0**
PRNS	**Prines Rethymn**	**0.26**	**74**	P	**Pg**	**11 06 39.3**	**-0.9**
PRNS				S	**Sg**	**11 06 42.9**	**-0.7**
PRNS	**Prines Rethymn**	**0.26**	**74**	P	**Pg**	**11 06 39.3**	**-0.9**
PRNS				S	**Sg**	**11 06 42.4**	**-1.2**
KNDR	**Palaiochora Ch**	**0.42**	**262**	Pg	**Pg**	**11 06 43.1**	**-0.1**
KNDR				Sg	**Sb**	**11 06 50.3**	**-1.9**
KNDR	**Palaiochora Ch**	**0.42**	**262**	P	**Pg**	**11 06 43.3**	**0.0**
KNDR				S	**Sb**	**11 06 50.5**	**-1.6**
KNDR	**Palaiochora Ch**	**0.42**	**262**	P	**Pg**	**11 06 42.9**	**-0.4**
KNDR				S	**Sg**	**11 06 49.9**	**+1.3**
GVD	**Gavdhos**	**0.46**	**191**	Pg	**Pg**	**11 06 43.3**	**-0.7**
GVD				Sg	**Sg**	**11 06 50.2**	**+0.2**
GVD	**Gavdhos**	**0.46**	**191**	P	**Pg**	**11 06 43.3**	**-0.7**
GVD				S	**Sg**	**11 06 50.4**	**+0.4**
GVD	**Gavdhos**	**0.46**	**191**	P	**Pg**	**11 06 43.7**	**-0.3**
GVD				S	**Sg**	**11 06 50.5**	**+0.5**
TMBK	**Timbaki Herakl**	**0.52**	**115**	P	**Pg**	**11 06 44.9**	**-0.2**
TMBK	**Timbaki Herakl**	**0.52**	**115**	P	**Pg**	**11 06 44.9**	**-0.2**
TMBK				S	**Sg**	**11 06 52.8**	**+1.0**
IDI	**Anoyia**	**0.57**	**90**	Pg	**Pg**	**11 06 45.7**	**-0.4**
IDI				Sg	**Sg**	**11 06 54.3**	**+0.8**
IDI	**Anoyia**	**0.57**	**90**	P	**Pg**	**11 06 45.3**	**-0.8**
IDI				S	**Sg**	**11 06 54.0**	**+0.5**
ANKY	**Antikythira Is**	**0.93**	**308**	P	**Pg**	**11 06 52.3**	**-0.6**
ANKY				S	**Sb**	**11 07 05.8**	**-0.9**
ANKY	**Antikythira Is**	**0.93**	**308**	P	**Pg**	**11 06 52.8**	**-0.1**
ANKY				S	**Sg**	**11 07 05.0**	**+0.1**
KTHA	**Kythira Island**	**1.33**	**317**	Pn	**Pg**	**11 07 00.4**	**-0.3**
KTHA	**Kythira Island**	**1.33**	**317**	P	**Pg**	**11 07 00.0**	**-0.7**
MHLO	**Agia Marina, M**	**1.40**	**7**	P	**Pn**	**11 07 01.8**	**-0.1**
MHLO				S	**Sg**	**11 07 20.3**	**0.0**
THR5	**Thira Island,**	**1.46**	**40**	P	**Pn**	**11 07 01.8**	**-0.9**
THERA	**Ancient Thera,**	**1.49**	**44**	P	**Pn**	**11 07 02.1**	**-1.0**
ZKR	**Zakros**	**1.67**	**96**	Pn	**Pn**	**11 07 04.8**	**-0.7**
VLI	**Veliai**	**1.75**	**325**	P	**Pn**	**11 07 05.7**	**-1.0**
VLI	**Veliai**	**1.75**	**325**	P	**Pn**	**11 07 05.6**	**-1.0**
APE	**Apeiranthos**	**2.08**	**31**	Pn	**Pn**	**11 07 09.9**	**-1.3**
APE	**Apeiranthos**	**2.08**	**31**	P	**Pn**	**11 07 09.6**	**-1.5**
KARP	**Karpathos**	**2.44**	**83**	Pn	**Pn**	**11 07 16.4**	**+0.3**
ITM	**Ithomi**	**2.63**	**316**	Pn	**Pn**	**11 07 18.9**	**+0.2**
ARG	**Arkhangelos**	**3.33**	**73**	Pn	**Pn**	**11 07 29.4**	**+1.1**
TURN	**Turunc**	**3.60**	**65**	Pn	**Pn**	**11 07 33.1**	**+1.1**
FETY	**Fethiye**	**4.19**	**70**	Pn	**Pn**	**11 07 41.5**	**+1.3**
CAME	**Cameli-Denizli**	**4.45**	**67**	Pn	**Pn**	**11 07 44.9**	**+1.0**
BRTR	**Keskin Array B**	**8.71**	**57**	Pn	**Pn**	**11 08 46.9**	**+4.5**
	0.2nm,0.3s,baz=243,slow=16,SNR=4.4						
	1.0nm,0.6s						
EIL	**Elat**	**10.67**	**119**	LR	LR	11 13 37.6	
	comp=Z,29nm,19.0s,baz=247,slow=40						
GERES	**GERESS Array B**	**15.60**	**333**	Pn	**P**	**11 10 22.3**	**+1.7**
	baz=142,slow=12,SNR=1.9						
	0.7nm,0.6s						
AKASG	**Malin Array Be**	**15.83**	**12**	Pn	**P**	**11 10 21.6**	**-1.4**
	0.3nm,0.3s,baz=202,slow=10.0,SNR=1.5						
	0.2nm,0.3s						
KBZ	**Khabaz**	**16.69**	**54**	Pn	**P**	**11 10 34.4**	**+1.9**
	0.1nm,0.3s,baz=245,slow=8.9,SNR=3.7						
	1.6nm,0.6s						
ESDC	**Sonseca Array**	**22.72**	**289**	P	**P**	**11 11 39.4**	**+0.9**
	1.2nm,0.9s,baz=90,slow=9.1,SNR=6.5						
	1.2nm,0.9s						
TORD	**Torodi Ar. Bea**	**29.98**	**228**	P	**P**	**11 12 44.2**	**-1.0**
	0.4nm,0.6s,baz=37,slow=8.9,SNR=4.4						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**41.65**	**51**	P	**P**	**11 14 25.5**	**+0.6**
	0.5nm,0.5s,baz=273,slow=8.6,SNR=2.7						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**44.36**	**57**	P	**P**	**11 14 46.2**	**-0.7**
	0.2nm,0.3s,baz=262,slow=8.3,SNR=2.3						
	0.2nm,0.3s						

*IDC **27** 11:11:13.1±1.1, 30°41S×179°35W, h0^{km}, mb4.3/5, mbtmp4.4/6, ML3.9/1, Error ellipse: s-maj=30.3km s-min=24.2km az=142.0*

ISC 27 11:11:14.4±0.9**, 30°4S**±0°1×**179°3W**±0°1**, h10**^{km}**, n8, σ1^{s}43**/8**, mb4.5**/5**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.63**	**46**	Pn	**Pg**	**11 11 45.4**	**-0.3**
	394nm,0.3s,baz=288,slow=20,SNR=6.9						
URZ	**Urewera**	**8.39**	**200**	Pn	**Pn**	**11 13 17.7**	**+1.6**
	1.6nm,0.3s,baz=13,slow=14,SNR=3.0						
URZ				Sn	**Sn**	**11 14 48.7**	**-2.2**
	2.9nm,0.3s,baz=0.0,slow=1.0,SNR=1.8						
	18nm,0.7s						
STKA	**Stephens Creek**	**33.42**	**257**	P	**P**	**11 17 54.3**	**+0.8**
	5.4nm,0.9s,baz=94,slow=12,SNR=3.5						
	5.4nm,0.9s						
ASAR	**Alice Springs**	**42.03**	**268**	P	**P**	**11 19 05.8**	**-0.5**
	1.5nm,0.9s,baz=114,slow=7.7,SNR=1.6						
	1.5nm,0.9s						
WRA	**Warramunga Arr**	**43.02**	**273**	P	**P**	**11 19 13.4**	**-1.0**
	1.4nm,0.7s,baz=112,slow=8.2,SNR=2.9						
	1.4nm,0.7s						
QSPA	**South Pole Qui**	**59.71**	**180**	P	**P**	**11 21 19.7**	**+0.7**
	15nm,0.9s,baz=34,slow=1.5,SNR=10.0						
	15nm,0.9s						
SNAA	**Sanae**	**78.18**	**179**	P	**P**	**11 23 13.0**	**-0.6**
	4.4nm,0.9s,baz=186,slow=10,SNR=9.5						
	4.4nm,0.9s						
FINES	**FINESS Array B**	**144.77**	**339**	PKP	PKPbc	11 30 48.4	-1.4
	2.2nm,0.5s,baz=46,slow=4.0,SNR=7.5						

*NEIC **27** 11:16:45.3±2.7, 6°38S±0°08×129°13E±0°08, h209^{km}±13^{km}, mb4.4/10, Error ellipse: s-maj=13.8km s-min=7.2km az=136.0*

*IDC **27** 11:16:50.6±4.6, 7°02S×129°18E, h194^{km}±45^{km}, mb3.4/2, mbtmp4.3/6, Error ellipse: s-maj=45.0km s-min=18.3km az=57.0*

ISC 27 11:16:50.1±1.1**, 7°0S**±0°1×**129°24E**±0°07**, h200**^{km}**, n28, σ1^{s}46**/30**, mb4.0**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.25**	**115**	Pn	**Pn**	**11 17 31.5**	**+0.2**
FAKI	**Fak Fak**	**5.06**	**36**	Pn	Pn	11 17 55.1	-10
SOEI	**Soe**	**5.62**	**241**	Pn	**Pn**	**11 18 11.9**	**-0.8**
MTN	**Manton Dam**	**6.08**	**162**		**Pn**	**11 18 21.4**	**+2.9**
BATI	**Baumata**	**6.36**	**240**	P	**Pn**	**11 18 21.9**	**-0.3**
	44nm,0.4s,baz=97,slow=4.6,SNR=8.4						
BATI				S	**Sn**	**11 19 33.5**	**-1.4**
	42nm,0.3s,baz=191,slow=19,SNR=8.8						
KNRA	**Kununurra**	**8.61**	**183**		**Pn**	**11 18 54.1**	**+2.7**
LUWI	**Luwuk**	**8.77**	**312**	Pn	Pn	11 18 41.7	-12
FITZ	**Fitzroy Crossi**	**11.55**	**197**	Pn	**Pn**	**11 19 31.3**	**+1.9**
FITZ	**Fitzroy Crossi**	**11.55**	**197**	P	**Pn**	**11 19 31.1**	**+1.6**
	14nm,0.5s,baz=22,slow=13,SNR=40						
FITZ				S	**S**	**11 21 39.8**	**+1.3**
	3.5nm,0.4s,baz=77,slow=18,SNR=2.3						
WB0	**Warramunga Arr**	**13.62**	**159**	Pn	**Pn**	**11 19 55.8**	**+0.3**
WRAB	**Tennant Creek**	**13.76**	**159**	Pn	**Pn**	**11 19 57.9**	**+0.7**
WRA	**Warramunga Arr**	**13.76**	**159**	Pn	**Pn**	**11 19 57.8**	**+0.5**
WRA	**Warramunga Arr**	**13.76**	**159**	P	**Pn**	**11 19 58.0**	**+0.7**
	1.2nm,0.5s,baz=341,slow=12,SNR=10						
WRA				S	**S**	**11 22 27.6**	**-3.1**
	7.9nm,0.9s,baz=339,slow=22,SNR=6.0						
WR8	**Warramunga Arr**	**13.83**	**159**	Pn	**Pn**	**11 19 58.4**	**+0.3**
COEN	**Coen**	**15.33**	**118**	P	**Pn**	**11 20 16.3**	**-0.3**
COEN				IAmb	IAmb	11 20 18.1	
	comp=Z,14nm,0.7s						
MBWA	**Marble Bar**	**16.80**	**212**	P	**P**	**11 20 33.1**	**+0.2**
MBWA				IAmb	IAmb	11 20 48.2	
	comp=Z,15nm,1.2s						
PSA00	**Pilbara Seismi**	**17.08**	**211**	P	**P**	**11 20 36.0**	**0.0**
PSA00				IAmb	IAmb	11 21 02.5	
	comp=Z,29nm,1.5s						
AS31	**Alice Springs**	**17.14**	**165**	P	**Pn**	**11 20 39.3**	**+1.0**
AS31				IAmb	IAmb	11 20 42.7	
	comp=Z,6.5nm,0.6s						
ASAR	**Alice Springs**	**17.14**	**165**	P	**Pn**	**11 20 38.2**	**-0.1**
ASAR	**Alice Springs**	**17.14**	**165**	P	**Pn**	**11 20 39.2**	**+1.0**
	comp=Z,15nm,0.5s,baz=337,slow=8.9,SNR=16						
ASAR				S	**S**	**11 23 48.1**	**+3.0**
	comp=Z,1.6nm,0.6s,baz=347,slow=20,SNR=8.1						
CTAO	**Charters Tower**	**21.00**	**130**	P	**P**	**11 21 18.3**	**0.0**
CTAO				IAmb	IAmb	11 21 51.7	
	comp=Z,32nm,1.5s						
INKA	**Innaminka**	**23.32**	**153**	P	**P**	**11 21 41.1**	**+0.7**
BBOO	**Buckleboo**	**26.43**	**167**	P	**P**	**11 22 08.4**	**-0.1**
STKA	**Stephens Creek**	**27.29**	**157**	P	**P**	**11 22 15.1**	**-1.0**
STKA	**Stephens Creek**	**27.29**	**157**	P	**P**	**11 22 15.9**	**-0.2**
	comp=Z,1.3nm,0.4s,baz=328,slow=9.5,SNR=4.1						
	comp=Z,1.3nm,0.4s						
CAN	**Canberra**	**33.51**	**150**	P	**P**	**11 23 10.9**	**+0.1**
CAN				IAmb	IAmb	11 23 19.9	
	comp=Z,12nm,1.2s						
MKAR	**Makanchi Array**	**67.83**	**327**	P	**P**	**11 27 28.0**	**+1.2**
	comp=Z,0.4nm,0.4s,baz=126,slow=7.3,SNR=5.1						
	comp=Z,0.4nm,0.4s						
VNDA	**Vanda**	**72.52**	**173**	P	**P**	**11 27 52.1**	**-2.5**

*IDC **27** 11:18:57.7±0.8, 30°27S×179°05W, h0^{km}, mb4.0/7, mbtmp4.0/8, ML4.0/1, Error ellipse: s-maj=24.3km s-min=18.8km az=134.0*

*NEIC **27** 11:18:59.4±1.1, 30°2S±0°1×179°0W±0°2, h10^{km}±1^{km}, mb4.7/12, Error ellipse: s-maj=30.9km s-min=11.6km az=308.0*

ISC 27 11:19:02.5±0.6**, 30°27S**±0°07×**178°9W**±0°1**, h35**^{km}**, n79, σ1^{s}91**/71**, mb4.4**/15**, 5C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**1.32**	**40**	P	**Pn**	**11 19 24.5**	**0.0**
RAO	**Raoul Island**	**1.32**	**40**		**Pn**	**11 19 23.9**	**-0.6**
RAO	**Raoul Island**	**1.32**	**40**	Pn	**Pn**	**11 19 24.5**	**0.0**
	300nm,0.3s,baz=253,slow=20,SNR=8.3						
GRZ	**Great Barrier**	**7.61**	**217**	P	**Pn**	**11 20 50.1**	**-0.8**
WMGZ	**Waiomatatini S**	**7.85**	**196**	P	**Pn**	**11 20 54.4**	**+0.3**
KUZ	**Kuaotunu**	**7.87**	**213**	P	**Pn**	**11 20 58.4**	**+4.0**
HAZ	**Te Kaha**	**7.96**	**199**	P	**Pn**	**11 20 56.0**	**+0.4**
PKGZ	**Pakihiroa**	**7.98**	**198**	P	**Pn**	**11 20 55.6**	**-0.3**
WCZ	**Waipu Caves**	**8.01**	**223**	P	**Pn**	**11 20 54.7**	**-1.6**
OUZ	**Omahuta**	**8.02**	**230**	P	**Pn**	**11 20 54.4**	**-2.1**
PUZ	**Puketiti**	**8.13**	**196**	P	**Pn**	**11 20 57.4**	**-0.6**
RUGZ	**Raukumara Rang**	**8.18**	**199**	P	**Pn**	**11 20 57.8**	**-1.0**
TWGZ	**Tauwhareparae**	**8.30**	**197**	P	**Pn**	**11 20 59.7**	**-0.6**
TWGZ				S	**Sn**	**11 22 36.0**	**+3.2**
OPRZ	**Ohinepanea**	**8.44**	**205**	P	**Pn**	**11 21 03.5**	**+1.2**
MWZ	**Matawai**	**8.57**	**199**	P	**Pn**	**11 21 03.6**	**-0.5**
TKGZ	**Te Karaka**	**8.58**	**197**	P	**Pn**	**11 21 03.3**	**-0.9**
URZ	**Urewera**	**8.63**	**201**	Pn	**Pn**	**11 21 03.6**	**-1.1**
	1.8nm,0.3s,baz=36,slow=13,SNR=7.3						
URZ				Sn	**Sn**	**11 22 43.7**	**+3.0**
	baz=30,slow=20						
	6.6nm,0.6s						
URZ	**Urewera**	**8.63**	**201**	P	**Pn**	**11 21 03.6**	**-1.1**
URZ				S	**Sn**	**11 22 43.1**	**+2.4**
KMRZ	**Kaimai**	**8.68**	**208**	P	**Pn**	**11 21 07.2**	**+1.6**
TOZ	**Tahuroa Road**	**8.77**	**211**		**Pn**	**11 21 05.9**	**-0.9**
TOZ	**Tahuroa Road**	**8.77**	**211**	P	**Pn**	**11 21 08.8**	**+2.0**
RIGZ	**Rimuhau**	**8.85**	**197**	P	**Pn**	**11 21 05.3**	**-2.7**
RIGZ				S	**Sn**	**11 22 44.2**	**-2.3**
RTZ	**Ruatahuna**	**8.99**	**201**	P	**Pn**	**11 21 12.3**	**+2.4**
SNGZ	**Shannon Statio**	**9.04**	**199**	P	**Pn**	**11 21 09.5**	**-1.0**
SNGZ				S	**Sn**	**11 22 50.3**	**-0.7**
RAHZ	**Arahi**	**9.24**	**200**	P	**Pn**	**11 21 11.9**	**-1.3**
MTHZ	**Maungataniwha**	**9.25**	**201**	P	**Pn**	**11 21 12.3**	**-1.1**
MTHZ				S	**Sn**	**11 23 02.2**	**+5.9**
NMHZ	**Naumai**	**9.49**	**201**	P	**Pn**	**11 21 15.5**	**-1.1**
BKZ	**Black Stump Fm**	**9.65**	**202**	P	**Pn**	**11 21 22.3**	**+3.5**
HIZ	**Hauiti**	**9.71**	**210**	P	**Pn**	**11 21 23.0**	**+3.5**
MCHZ	**McNeill Hill**	**9.84**	**200**	P	**Pn**	**11 21 20.9**	**-0.6**
MCHZ				S	**Sn**	**11 23 05.5**	**-5.1**
TMVZ	**Te Maari**	**9.88**	**205**	P	**Pn**	**11 21 20.8**	**-1.2**
ETVZ	**East Tongariro**	**9.89**	**205**	P	**Pn**	**11 21 20.8**	**-1.5**
KWHZ	**Kaweka Forest**	**9.91**	**202**	P	**Pn**	**11 21 23.0**	**+0.6**
PNHZ	**Pukenui**	**10.42**	**201**	P	**Pn**	**11 21 25.7**	**-3.8**
NEZ	**North Egmont**	**10.66**	**211**	P	**Pn**	**11 21 35.0**	**+2.2**
KHEZ	**Kahui Hut**	**10.72**	**211**	P	Pn	11 21 37.7	+4.1
BFZ	**Birch Farm**	**11.11**	**200**	P	Pn	11 21 34.1	-4.8
MRZ	**Mangatainoka R**	**11.30**	**202**	P	Pn	11 21 36.6	-4.8
OGWZ	**Otaki Gorge**	**11.57**	**203**	P	**Pn**	**11 21 45.4**	**+0.2**
TMWZ	**Te Maipa**	**11.61**	**200**	P	**Pn**	**11 21 45.3**	**-0.4**
THZ	**Tophouse**	**13.24**	**208**	Pn	**Pn**	**11 22 06.2**	**-1.7**
THZ	**Tophouse**	**13.24**	**208**	P	**Pn**	**11 22 07.3**	**-0.6**
LTZ	**Lake Taylor**	**14.35**	**207**	P	Pn	11 22 16.3	-6.8
TMZ	**Timaru**	**16.20**	**207**	P	**Pn**	**11 22 44.6**	**-2.7**
JCZ	**Jackson Bay**	**16.89**	**212**	P	**Pn**	**11 22 53.6**	**-2.6**
STKA	**Stephens Creek**	**33.76**	**257**	P	**P**	**11 25 40.3**	**-0.6**
STKA	**Stephens Creek**	**33.76**	**257**	P	**P**	**11 25 41.6**	**+0.8**
	1.6nm,0.7s,baz=97,slow=12,SNR=4.2						
	1.6nm,0.7s						
BBOO	**Buckleboo**	**38.26**	**254**	P	**P**	**11 26 19.0**	**-0.4**
ASAR	**Alice Springs**	**42.34**	**267**	P	**P**	**11 26 51.8**	**-1.6**
	0.7nm,0.7s,baz=108,slow=8.1,SNR=5.7						
	0.7nm,0.7s						
WR8	**Warramunga Arr**	**43.18**	**273**	P	**P**	**11 26 58.5**	**-1.7**
WR8				IAmb	IAmb	11 27 16.0	
	comp=Z,6.4nm,1.1s						
WRAB	**Tennant Creek**	**43.32**	**273**	P	**P**	**11 27 00.1**	**-1.1**
WRAB				IAmb	IAmb	11 27 28.2	
	comp=Z,6.7nm,0.9s						
WRA	**Warramunga Arr**	**43.32**	**272**	P	**P**	**11 26 59.9**	**-1.4**
WRA	**Warramunga Arr**	**43.32**	**272**	P	**P**	**11 26 59.7**	**-1.6**
	comp=Z,0.8nm,0.7s,baz=112,slow=8.1,SNR=7.3						

	comp=Z,0.8nm,0.7s						
WB0	Warramunga Arr	43.34	273	P	P	11 27 00.1	-1.4
WB0				IAmb	IAmb	11 27 08.4	
	comp=Z,28nm,1.4s						
FORT	Forrest	45.33	255	P	P	11 27 15.9	-1.4
KNRA	Kununurra	49.93	275	P	P	11 27 52.3	-0.7
KNRA				IAmb	IAmb	11 27 52.5	
	comp=Z,14nm,1.2s						
FITZ	Fitzroy Crossi	51.59	270	P	P	11 28 04.8	-0.7
FITZ	Fitzroy Crossi	51.59	270	P	P	11 28 05.2	-0.3
	comp=Z,3.5nm,0.9s,baz=124,slow=7.3,SNR=5.7						
	comp=Z,3.5nm,0.9s						
QSPA	South Pole Qui	59.84	180	P	P	11 29 05.5	+1.3
QSPA	South Pole Qui	59.84	180	P	P	11 29 05.3	+1.1
	comp=Z,4.1nm,0.8s,baz=11,slow=1.1,SNR=11						
	comp=Z,4.1nm,0.8s						
BELA	Belgrano 2	70.01	172	P	P	11 30 11.3	+1.2
BELA				IAmb	IAmb	11 30 27.1	
	comp=Z,9.0nm,1.2s						
TROLL	Troll, Antarti	78.00	180	⇑P	P	11 31 03.4	+6.5
	comp=Z,619nm,0.9s						
SNAA	Sanae	78.30	179	⇑P	P	11 31 03.7	+5.1
	comp=Z,163nm,0.9s						
SNAA	Sanae	78.30	179	P	P	11 30 59.1	+0.5
SNAA				IAmb	IAmb	11 31 05.5	
	comp=Z,11nm,1.0s						
SNAA	Sanae	78.30	179	P	P	11 30 58.6	0.0
	comp=Z,1.5nm,1.0s,baz=188,slow=4.9,SNR=20						
	comp=Z,1.5nm,1.0s						
VNA3	Neumayer Olymp	78.48	176	⇑P	P	11 31 04.8	+5.3
	comp=Z,26nm,0.8s						
VNA2	Neumayer--Watz	78.91	177	⇑P	P	11 31 07.9	+6.1
	comp=Z,20nm,0.7s,baz=168,slow=5.0						
VNA1	Neumayer--Stat	79.14	177	⇑P	P	11 31 09.5	+6.4
	comp=Z,20nm,0.9s						
H03S2	Juan Fernandez	81.18	124	T	T	13 00 50.1	
	baz=238,slow=74,SNR=11						
H03S1	Juan Fernandez	81.19	124	T	T	13 00 50.9	
	baz=238,slow=74,SNR=11						
H03S3	Juan Fernandez	81.19	124	T	T	13 00 56.5	
	baz=238,slow=74,SNR=10						
H03N3	Juan Fernandez	81.37	124	T	T	13 01 12.2	
	baz=242,slow=73,SNR=4.7						
H03N2	Juan Fernandez	81.37	124	T	T	13 01 04.7	
	baz=242,slow=73,SNR=4.4						
H03N1	Juan Fernandez	81.39	124	T	T	13 01 07.6	
	baz=242,slow=73,SNR=4.2						
NVAR	Mina Array Bea	88.67	43	P	P	11 31 54.7	+2.3
	comp=Z,0.5nm,0.8s,baz=279,slow=3.6,SNR=5.1						
	comp=Z,0.5nm,0.8s						
FINES	FINESS Array B	144.76	339	PKP	PKPdf	11 38 36.2	+1.4
	comp=Z,5.0nm,0.9s,baz=46,slow=4.0,SNR=7.1						
NB2	NORSAR Subarra	148.50	351	PKP	PKPab	11 38 51.1	+2.8
	comp=Z,1.0nm,0.7s,baz=16,slow=4.3						
AKASG	Malin Array Be	150.73	322	PKPab	PKPab	11 38 57.1	-0.6
	comp=Z,1.4nm,0.6s,baz=45,slow=3.1,SNR=1.9						
TORD	Torodi Ar. Bea	162.95	182	PKPab	PKPab	11 39 50.3	-0.6
	comp=Z,1.3nm,0.8s,baz=180,slow=3.1,SNR=4.4						

UPP 27 11:19:27.4±0.1, 58°.39N×13°.77E, h0^{km}, ML2.4, Unknown, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FKPU	Falk	0.23	187	P	Pg	11 19 32.0	+0.3
FKPU				S	Sg	11 19 35.2	+0.5
NASU	Vaermlandsnaes	0.62	331	P	Pg	11 19 39.1	-0.2
NASU				S	Sg	11 19 47.8	+0.4
ASKU	Askersund	0.75	47	P	Pg	11 19 41.6	-0.1
ASKU				S	Sg	11 19 51.7	+0.3
VANU	Vaenersborg	0.90	277	P	Pg	11 19 44.3	-0.3
VANU				S	Sg	11 19 56.7	+0.4
BORU	Boraas	0.93	216	P	Pg	11 19 44.7	-0.4
LNKU	Linkoeping	0.93	100	P	Pg	11 19 44.6	-0.5
LNKU				S	Sg	11 19 57.3	+0.1
GNOU	Gnosjoe	1.10	181	P	Pg	11 19 47.7	-0.8
EKSU	Eksjoe	1.15	134	P	Pg	11 19 48.8	-0.7
NRAU	Nora	1.35	28	P	Pg	11 19 52.6	-0.8
ONAU	Onsala	1.40	226	P	Pn	11 19 53.6	-0.6
STRU	Stroemstad	1.50	297	P	Pn	11 19 55.2	-0.3
VIKU	Vikbolandet	1.54	85	P	Pn	11 19 56.0	-0.1

DNK 27 11:19:30.5±1.6, 56°.17N×14°.06E, h0^{km}, ML1.2, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DEL	Delary	0.32	341	*e*P	Pg	11 19 35.8	-0.9
DEL				P	Pb	11 19 36.5	-2.7
	baz=160						
DEL				S	Sg	11 19 41.4	+0.5
DEL				*e*S	Sb	11 19 41.4	-3.5
BJUU	Bjuv	0.59	261	P	Pg	11 19 40.9	-0.8
BJUU				*e*P	Pb	11 19 41.2	-2.5
BJUU				*e*S	Sg	11 19 49.1	-0.2
BJUU				S	Sb	11 19 49.3	-3.2
VXJU	Vaexsjoe	0.90	32	P	Pg	11 19 46.6	-1.2
VXJU				S	Sg	11 19 58.9	-0.5
BLEU	Blekinge	0.99	81	P	Pg	11 19 47.5	-1.9
BLEU				*e*P	Pb	11 19 47.8	-2.7
BLEU				*e*S	Sb	11 20 03.7	-0.4

ATH 27 11:22:58.9, 35°.52N×24°.25E, h26^{km}±4^{km}, ML1.9/4, Manual Solution by I.Dede First location: 2019/06/27 11:24:26, This location: 2019/06/27 11:31:06 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 5 km; Longitude uncertainty: 1 km, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMMV	Iera Moni Meta	0.23	256	P	Pb	11 23 05.2	+0.2
IMMV				S	Sb	11 23 09.5	+0.2
PRNS	Prines Rethymn	0.25	127	P	Pb	11 23 04.9	-0.5
PRNS				S	Sb	11 23 09.2	-0.6
IDI	Anoyia	0.57	113	P	Pb	11 23 10.7	+0.3
IDI				S	Sb	11 23 18.5	+0.4
GVD	Gavdhos	0.69	191	P	Pb	11 23 12.4	+0.1
GVD				S	Sb	11 23 19.5	-1.9
ANKY	Antikythira Is	0.85	295	P	Pb	11 23 14.9	-0.1
ANKY				S	Sb	11 23 26.0	0.0

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*IDC **27** 11:24:03.1±2.1, 2°.62S×138°.28E, h0^{km}, mb3.7/2, mbtmp3.7/4, ML3.5/2, Error ellipse: s-maj=52.2km s-min=28.4km az=123.0*

*DJA **27** 11:24:10.1±0.8, 3°S±7°×13°9E±°, h13^{km}±8^{km}, M3.7/6, MLv3.7/6*

ISC 27 11:24:07.1±1.1, 2°.73S±0°.10×138°.16E±0°.06, h35^{km}, n9, σ1ˢ97/11, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.92	37	P	Pn	11 24 21.4	-2.1
SMPI				S	Sn	11 24 38.4	+3.0
GENI	Genyem	2.01	86	P	Pn	11 24 37.0	-1.6
GENI				S	Sn	11 25 00.8	-1.7
SRPI	Serui, Papua	2.10	294	P	Sn	11 25 03.5	-1.1
JAY	Jayapura	2.55	85	Pn	Pn	11 24 44.2	-1.9
	2.3nm,0.3s,baz=267,slow=13,SNR=13						
	15nm,0.6s						
JAY	Jayapura	2.55	85	P	Pn	11 24 44.7	-1.4
JAY				S	Sn	11 25 16.7	+0.8
BAKI	Biak	2.55	307	P	Pn	11 24 54.0	+8.0
WRA	Warramunga Arr	17.52	192	P	P	11 28 10.9	+1.3
	0.3nm,0.3s,baz=15,slow=12,SNR=6.0						
	2.0nm,0.7s						
ASAR	Alice Springs	21.22	191	P	P	11 28 51.8	+1.8
	1.8nm,0.7s,baz=18,slow=11,SNR=11						
	1.8nm,0.7s						
ILAR	Eielson Array	86.08	25	P	P	11 36 44.8	+0.8
	0.4nm,0.6s,baz=272,slow=5.3,SNR=3.8						
	0.4nm,0.6s						

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*NEIC **27** 11:45:34.5±2.4, 18°.44S±0°.04×70°.04W±0°.10, h73^{km}±8^{km}, mb4.1/4, Error ellipse: s-maj=13.5km s-min=4.5km az=77.0*

*GUC **27** 11:45:34.6±0.8, 18°.45S×70°.10W, h79^{km}±5^{km}, ML3.6*

*IDC **27** 11:45:37.4±3.0, 18°.32S×69°.60W, h122^{km}±25^{km}, mb3.4/7, mbtmp3.8/9, Error ellipse: s-maj=30.4km s-min=22.6km az=43.0*

ISC 27 11:45:34.1±0.6, 18°.39S±0°.05×69°.90W±0°.08, h100^{km}, n41, σ1ˢ79/38, mb3.6/7, 2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB16	IPOC Station P	0.38	81	Pn	Pn	11 45 48.2	-1.5
AP01	Chacalluta	0.42	273	Pn	Pn	11 45 46.8	-2.5
PX02	IPOC Station P	0.63	206	*e*P	Pn	11 45 47.5	-3.5
PX02				*e*S	Sn	11 45 58.9	-4.8
PX02				IAML		11 46 02.0	
	comp=N,3µm,0.3s						
PB18	Visviri	0.90	27	Pn	Pn	11 45 54.7	+0.7
PB18	Visviri	0.90	27	⇓*e*P	Pn	11 45 54.5	+0.5
PB18				IAML		11 46 19.3	
	comp=N,2µm,0.9s						
PB11	IPOC Station P	1.38	170	Pn	Pn	11 45 57.9	-1.1
PB11	IPOC Station P	1.38	170	⇓*e*P	Pn	11 45 57.8	-1.2
PB11				IAML		11 46 18.9	
	comp=N,2µm,0.4s						
GO01	Chusmiza	1.43	152	Pn	Pn	11 46 00.3	+0.3
GO01	Chusmiza	1.43	152	*e*P	Pn	11 46 00.3	+0.3
GO01				*e*S	Sn	11 46 20.4	+0.8
GO01				IAML		11 46 23.2	
	comp=E,2µm,0.4s						
HMBC	Humberstone	1.87	180	Pn	Pn	11 46 04.1	-1.1
PB08	IPOC Station P	1.88	158	Pn	Pn	11 46 05.8	+0.4
TA02	Huaiquique	1.88	187	Pn	Pn	11 46 03.9	-1.2
TA02	Huaiquique	1.88	187	*e*P	Pn	11 46 03.6	-1.5
TA02				IAML		11 46 31.7	
	comp=N,897nm,0.3s						
TA01	Diego Aracena	2.18	187	Pn	Pn	11 46 08.7	-0.3
TA01	Diego Aracena	2.18	187	*e*P	Pn	11 46 07.1	-1.8
TA01				IAML		11 46 38.5	
	comp=N,625nm,0.4s						
PATCX	Punta Patache	2.42	186	Pn	Pn	11 46 11.6	-0.7
PATCX	Punta Patache	2.42	186	*e*P	Pn	11 46 10.6	-1.7
PATCX				IAML		11 47 04.2	
	comp=E,451nm,0.4s						
PB01	IPOC Station P	2.66	172	Pn	Pn	11 46 15.1	-0.4
LPAZ	La Paz	2.69	39	P	Pn	11 46 18.6	+2.3
	comp=E,9.3nm,0.3s,baz=209,slow=4.9,SNR=84						
PB09	IPOC Station P	3.44	170	Pn	Pn	11 46 26.5	+0.6
AC02	Maricunga	8.43	175		Pn	11 47 31.3	-2.6
SIV	San Ignacio	8.77	76	P	Pn	11 47 36.3	-1.9
	comp=E,6.1nm,0.4s,baz=256,slow=13,SNR=35						
SIV				S	Sn	11 49 10.5	-4.8
	comp=E,1.5nm,0.6s,baz=261,slow=19,SNR=1.5						
VILB	Vilhena	10.79	61		Pn	11 48 05.3	-0.4
TRQA	Tornquist	20.78	162	P	P	11 50 07.8	+0.6
BOAV	Boa Vista	22.63	25	P	P	11 50 27.7	+0.8
RUSC	La Rusia	24.34	352	P	P	11 50 44.2	+0.9
RUSC				IAmb	IAmb	11 50 53.5	
	comp=Z,7.5nm,1.1s						
TXAR	Lajitas Array	57.56	325	P	P	11 55 14.0	+0.4
	comp=Z,0.3nm,0.6s,baz=146,slow=7.7,SNR=3.6						
	comp=Z,0.3nm,0.6s						
PDAR	Pinedale Array	70.97	330	P	P	11 56 41.5	+0.4
	comp=Z,0.2nm,0.4s,baz=146,slow=8.1,SNR=2.1						
	comp=Z,0.2nm,0.4s						
QSPA	South Pole Qui	71.78	180	P	P	11 56 47.0	+1.5
	comp=Z,1.0nm,0.5s,baz=129,slow=5.2,SNR=7.3						
	comp=Z,1.0nm,0.5s						
NVAR	Mina Array Bea	72.48	322	P	P	11 56 52.2	+2.0
	comp=Z,0.6nm,0.8s,baz=134,slow=5.1,SNR=4.2						
	comp=Z,0.6nm,0.8s						
TORD	Torodi Ar. Bea	77.23	71	P	P	11 57 16.3	-1.4
	comp=Z,0.3nm,0.4s,baz=252,slow=5.0,SNR=4.3						
	comp=Z,0.3nm,0.4s						
ESDC	Sonseca Array	84.30	45	P	P	11 57 56.0	+1.0
	comp=Z,0.6nm,0.8s,baz=256,slow=5.2,SNR=5.1						
	comp=Z,0.6nm,0.8s						
YKA	Yellowknife Ar	87.96	341	P	P	11 58 13.2	+0.9
	comp=Z,2.0nm,0.7s,baz=138,slow=4.1,SNR=8.1						
	comp=Z,2.0nm,0.7s						
H11S2	WAKE ISLAND Hy	126.50	280	T	T	14 23 27.5	
	baz=101,slow=75,SNR=27						
H11N3	WAKE ISLAND Hy	126.50	281	T	T	14 23 55.3	
	baz=100,slow=75,SNR=5.2						
H11S1	WAKE ISLAND Hy	126.51	280	T	T	14 23 27.3	
	baz=101,slow=75,SNR=12						
H11N2	WAKE ISLAND Hy	126.52	281	T	T	14 23 56.0	
	baz=100,slow=75,SNR=5.7						
H11S3	WAKE ISLAND Hy	126.52	280	T	T	14 23 28.3	
	baz=101,slow=75,SNR=15						
H11N1	WAKE ISLAND Hy	126.52	281	T	T	14 23 49.4	
	baz=100,slow=75,SNR=5.1						
WRA	Warramunga Arr	135.09	213	PKP	PKPdf	12 04 43.2	+0.6
	comp=Z,0.4nm,0.6s,baz=140,slow=1.9,SNR=7.1						
SONM	Songino Array	150.48	5	PKPbc	PKPbc	12 05 14.7	+0.5
	comp=Z,0.9nm,0.6s,baz=358,slow=4.8,SNR=3.7						

JMA 27 11:51:33.4±0.3, 25°N±3°×12°4E±°, h86^{km}±4^{km}, MV1.4/7, NW OFF ISHIGAKIJIMA IS, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JISG	Ishigakijimahi	0.46	128	P	Pn	11 51 47.5	+0.1
JISG				*e*S	Sn	11 51 58.1	+0.3
JIJ	Ishigaki jima	0.55	157	P	Pn	11 51 48.0	-0.1
JIJ				S	Sn	11 51 58.6	-0.4
IRIF	Iriomote-Funau	0.56	197	*e*P	Pn	11 51 48.1	-0.1
IRIF				*e*S	Sn	11 51 59.2	0.0
JKRS	Kuro-shima	0.64	172	P	Pn	11 51 49.2	+0.3
JKRS				*e*S	Sn	11 52 00.9	+0.5
JTJ	Tarama	0.76	107	P	Pn	11 51 50.5	+0.4
JTJ				*e*S	Sn	11 52 03.3	+0.7
JIRB	Irabujima	1.15	92	*e*P	Pn	11 51 54.2	-0.3

TAP 27 11:51:56.7, 24°.54N×121°.74E, h57^{km}, ML1.4, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EWUT	Wuta	0.10	161	*e*P	Pn	11 52 05.7	+0.3
EWUT				*e*S	Sn	11 52 13.3	+1.8
NDS	Dongshan	0.10	346	*e*P	Pn	11 52 06.1	+0.7
ENTT	Nioudou	0.19	303	P	Pn	11 52 06.4	+0.6
ENTT				S	Sn	11 52 13.3	+0.9
LATG	Datong	0.20	270	P	Pn	11 52 06.5	+0.6
LATG				S	Sn	11 52 13.5	+0.9
FUSB	Fushanzhiwuyua	0.26	327	P	Pn	11 52 06.7	+0.3
FUSB				S	Sn	11 52 14.3	+1.0
NNSB	Datong	0.35	252	P	Pn	11 52 07.2	+0.1
NNSB				S	Sn	11 52 14.9	+0.4
NNS	Nan Shan	0.35	254	*e*S	Sn	11 52 14.9	+0.4
YHNB	Yeheng	0.36	292	P	Pn	11 52 07.3	+0.2
YHNB				S	Sn	11 52 15.3	+0.7
NSK	Sanguang	0.38	292	P	Pn	11 52 07.4	+0.1
NSK				*e*S	Sn	11 52 15.2	+0.3
NACB	Ninganchiao	0.39	201	P	Pn	11 52 07.5	+0.3
NACB				*e*S	Sn	11 52 15.9	+1.0
TIPB	Shuangxi	0.44	10	P	Pn	11 52 08.7	+0.8
TIPB				*e*S	Sn	11 52 18.1	+2.2

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*IDC **27** 11:52:32.5±2.3, 30°.19S×179°.08W, h0^{km}, mb3.9/4, mbtmp3.9/5, ML2.9/1, Error ellipse: s-maj=61.6km s-min=30.5km az=46.0*

ISC 27 11:52:39.0±1.6, 30°.4S±0°.2×179°.3W±0°.3, h35^{km}, n15, σ0ˢ80/9, mb4.3/6, 3C, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.40	200	Pn	Pn	11 54 37.8	-0.4
	0.1nm,0.3s,baz=132,slow=14,SNR=1.6						
	7.6nm,1.0s						
ASAR	Alice Springs	41.98	268	P	P	12 00 26.9	0.0
	0.5nm,0.7s,baz=103,slow=7.9,SNR=4.8						
	0.5nm,0.7s						
WRA	Warramunga Arr	42.96	273	P	P	12 00 35.3	+0.4
	0.9nm,0.6s,baz=113,slow=8.2,SNR=10						
	0.9nm,0.6s						
QSPA	South Pole Qui	59.73	180	P	P	12 02 41.2	+1.1
	4.1nm,0.7s,baz=32,slow=5.0,SNR=17						
	4.1nm,0.7s						
TROLL	Troll, Antarti	77.89	181	⇑P	P	12 04 32.9	0.0
	comp=Z,82nm,0.7s						
SNAA	Sanae	78.20	179	P	P	12 04 33.2	-1.4
	comp=Z,1.3nm,0.9s,baz=178,slow=14,SNR=3.6						
	comp=Z,1.3nm,0.9s						
VNA3	Neumayer Olymp	78.40	177	⇑P	P	12 04 35.5	-0.1
	comp=Z,8.4nm,0.8s						
VNA2	Neumayer--Watz	78.82	177	⇑P	P	12 04 37.5	-0.3
	comp=Z,5.2nm,0.8s,baz=173,slow=5.8						
H03S2	Juan Fernandez	81.42	124	T	T	13 34 24.2	
	baz=238,slow=75,SNR=20						
H03S1	Juan Fernandez	81.43	124	T	T	13 34 25.4	
	baz=238,slow=75,SNR=26						
H03S3	Juan Fernandez	81.44	124	T	T	13 34 24.2	
	baz=238,slow=75,SNR=22						
H03N3	Juan Fernandez	81.62	124	T	T	13 34 47.5	
	baz=242						
H03N2	Juan Fernandez	81.62	124	T	T	13 34 43.6	
	baz=242						
H03N1	Juan Fernandez	81.63	124	T	T	13 34 46.8	
	baz=242						
FINES	FINESS Array B	144.73	339	PKP	PKPab	12 12 09.7	-0.5
	comp=Z,3.3nm,0.8s,baz=45,slow=2.2,SNR=6.0						

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*KRNET **27** 11:57:25.9±0.1, 41°.19N×69°.57E, h17^{km}, mb3.1*

*NNC **27** 11:57:26.9±2.1, 40°.80N×69°.87E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=15.4km s-min=9.3km az=36.0, Suspected Mining explosion.*

*SOME **27** 11:57:26.0, 40°.78N×69°.85E, h20^{km}*

*ISU **27** 11:57:28, 41°.06N×69°.57E, h14^{km}*

ISC 27 11:57:28.6±0.8, 41°.05N±0°.02×69°.70E±0°.03, h0^{km}, n31, σ1ˢ74/52, 17C-7D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NZBK	Nazarbek	0.47	292	S	Sg	11 57 43.1	-0.7
CHMG	Chimgan	0.55	25	P	Pg	11 57 38.9	-0.3
CHMG				S	Sg	11 57 46.9	+0.5
IUG	Iuzhnay	1.13	13	P	Pn	11 57 52.6	+0.9
	223nm,0.2s						
IUG				S	Sn	11 58 12.1	+4.1
	197nm,0.4s						
TRKS	Terek-Say	1.19	66	⇑*e*P	Pg	11 57 49.1	-2.2
TRKS				⇑*e*S	Sg	11 58 05.5	-1.2
CHM	Chimkent	1.27	357	*e*P	Pn	11 57 54.9	+1.3
	148nm,0.2s						
CHM				*e*S	Sn	11 58 16.1	+4.6
	496nm,0.5s						
BTK	Batken	1.31	139	⇑*i*P	Pg	11 57 53.1	-0.5
BTK				⇑*i*S	Sn	11 58 13.3	+1.0
CHMI	Chimion	1.59	119	P	Pn	11 57 58.3	+0.3
CHMI				S	Sn	11 58 19.5	+0.2
DZI	Dzhizak	1.71	238	P	Pn	11 57 59.0	-0.6
DZI				S	Sn	11 58 19.8	-2.3
ARK	Arkit	1.86	66	⇑*e*P	Pn	11 58 00.4	-1.4
ARK				⇑*e*S	Sn	11 58 26.1	0.0
BXML	Bakhmal	1.86	224	P	Pg	11 58 04.6	+0.3
BXML				S	Sg	11 58 29.6	+1.2
BRLS	Borolday	1.98	3	P	Pn	11 58 01.1	-2.3
	20nm,0.4s						
BRLS				S	Sn	11 58 27.0	-2.0
	104nm,0.4s						
BRLS	Borolday	1.98	3	*e*P	Pn	11 58 01.1	-2.3
	20nm,0.4s						
BRLS				*e*S	Sn	11 58 27.0	-2.0
	104nm,0.4s						
GAR	Garm	2.10	167	⇑*i*P	Pn	11 58 05.5	+0.4
GAR				⇑*i*S	Sb	11 58 34.1	-0.2
KK31	Karatay Array	2.14	16	⇓Pn	Pb	11 58 08.1	-0.1
	4.2nm,0.3s,baz=201,slow=14,SNR=65						
KK31				⇓Sn	Sg	11 58 38.0	+0.6
	42nm,0.6s,baz=201,slow=28,SNR=5.1						
TSTA	Tashata	2.16	102	S	Sb	11 58 35.7	-0.2
DZA	Taraz	2.21	33	*e*P	Pg	11 58 10.3	-0.5
	31nm,0.2s						
DZA				*e*S	Sg	11 58 42.4	+2.9
	201nm,0.2s						
DRK	Karamyk	2.24	134	⇑*i*P	Pn	11 58 07.4	+0.1
DRK				⇑*i*S	Sb	11 58 37.7	-0.9
ARSB	Arslanbob	2.49	83	⇑*e*P	Pn	11 58 09.7	-0.8
ARSB				⇑*e*S	Sn	11 58 42.2	+0.5
MNAS	Manas	2.54	55	⇓*e*P	Pn	11 58 09.3	-1.9
MNAS				⇓*e*S	Sn	11 58 41.3	-1.7
SFK	Sufi-Kurgan	3.08	108	⇓*e*P	Pn	11 58 18.7	0.0
SFK				⇓*e*S	Sn	11 58 56.9	+0.6
SALK	Salom-Alik	3.12	92	⇑*e*P	Pn	11 58 19.1	-0.1
SALK				⇑*e*S	Sn	11 58 57.5	+0.1
MRKS	Merke	3.13	56	Pg	Pb	11 58 24.5	-0.7
	2.7nm,0.5s						
MRKS				Lg	Lg	11 59 06.5	
	18nm,0.6s						
MRKS	Merke	3.13	56	*e*P	Pb	11 58 24.5	-0.7
	2.7nm,0.5s						
MRKS				*e*S	Sb	11 59 06.5	+2.6
	18nm,0.6s						
TMD	Tamdy-Bulak	3.87	282	S	Sn	11 59 13.4	-2.1
AAK	Ala-Archa	3.92	65	⇑Pg	Pb	11 58 38.4	-0.2
AAK				⇑Lg	Lg	11 59 34.8	
SGDS	Sogindy	4.38	55	Pg	Pb	11 58 47.3	+0.9
	1.6nm,0.8s						
SGDS				Lg	Lg	11 59 45.6	
	5.5nm,0.7s						
TKM2	Tokmak 2	4.78	65	⇓Pg	Pb	11 58 54.6	+1.3
	1.8nm,0.5s						
TKM2				⇑Lg	Lg	11 59 57.2	
	6.0nm,0.5s						
BTLS	Baital	5.11	37	Pg	Pb	11 59 00.4	+1.7
	1.3nm,0.5s						
BTLS				Lg	Lg	12 00 08.6	
	5.1nm,0.7s						
BTLS	Baital	5.11	37	*e*P	Pb	11 59 00.4	+1.7
	1.3nm,0.5s						
BTLS				*e*S	Sg	12 00 08.7	-3.9
	5.1nm,0.7s						
KRBS	Karabastau	5.16	57	Pg	Pb	11 59 00.5	+0.8
	0.8nm,0.4s						
KRBS				Lg	Lg	12 00 08.8	
	2.8nm,0.6s						
KTBS	Karatobe	5.82	60	Pg	Pb	11 59 14.9	+4.0
	1.4nm,0.7s						
KTBS				Lg	Lg	12 00 33.6	
	5.4nm,0.8s						

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*IDC **27** 12:09:14.6±0.5, 30°.49S×178°.75W, h0^{km}, mb4.3/16, mbtmp4.2/17, ML4.0/1, Error ellipse: s-maj=19.0km s-min=13.5km az=113.0*

*NEIC **27** 12:09:16.9±1.0, 30°.33S±0°.09×178°.9W±0°.1, h10^{km}±1^{km}, mb4.9/21, Error ellipse: s-maj=24.8km s-min=4.6km az=124.0*

ISC 27 12:09:19.8±0.4, 30°.26S±0°.06×178°.99W±0°.08, h35^{km}, n94, σ1ˢ01/89, mb4.8/29, 4C, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.37	43	P	Pn	12 09 40.5	-1.9
RAO	Raoul Island	1.38	43		Pn	12 09 42.4	-0.1
RAO	Raoul Island	1.38	43	Pn	Pn	12 09 42.6	+0.1
	239nm,0.3s,baz=131,slow=20,SNR=9.1						
RAO				Sn	Sn	12 10 00.7	+1.2
	226nm,0.3s,baz=287,slow=23,SNR=7.2						
MXZ	Matakaoa Point	7.62	196	P	Pn	12 11 07.5	-0.8
WMGZ	Waiomatatini S	7.84	195	P	Pn	12 11 11.5	+0.2
HAZ	Te Kaha	7.94	199	P	Pn	12 11 10.3	-2.3
OUZ	Omahuta	7.96	230	P	Pn	12 11 12.1	-0.9
PKGZ	Pakihiroa	7.96	197	P	Pn	12 11 12.7	-0.4
PUZ	Puketiti	8.12	196	P	Pn	12 11 14.0	-1.1
RUGZ	Raukumara Rang	8.16	199	P	Pn	12 11 15.8	-0.1
TWGZ	Tauwhareparae	8.28	197	P	Pn	12 11 17.5	+0.1
OPRZ	Ohinepanea	8.41	205	P	Pn	12 11 21.0	+1.8
MWZ	Matawai	8.55	199	P	Pn	12 11 20.5	-0.6
TKGZ	Te Karaka	8.56	197	P	Pn	12 11 20.0	-1.2
URZ	Urewera	8.60	201	Pn	Pn	12 11 20.6	-1.2
	1.9nm,0.3s,baz=78,slow=5.6,SNR=17						
URZ				Sn	Sn	12 12 57.8	+0.3
	baz=313,slow=20						
	7.5nm,0.4s						
URZ	Urewera	8.60	201	P	Pn	12 11 21.1	-0.7
RAGZ	Rawiri	8.73	199	P	Pn	12 11 22.7	-0.9
TOZ	Tahuroa Road	8.74	210		Pn	12 11 22.9	-0.7
RIGZ	Rimuhau	8.84	197	P	Pn	12 11 23.5	-1.5
RTZ	Ruatahuna	8.97	201		Pn	12 11 25.5	-1.4
RTZ	Ruatahuna	8.97	201	P	Pn	12 11 25.3	-1.6
SNGZ	Shannon Statio	9.02	199	P	Pn	12 11 26.7	-0.9
RAHZ	Arahi	9.22	199	P	Pn	12 11 28.8	-1.5
MTHZ	Maungataniwha	9.23	201	P	Pn	12 11 29.9	-0.5
NMHZ	Naumai	9.47	200	P	Pn	12 11 32.0	-1.7
BKZ	Black Stump Fm	9.63	201		Pn	12 11 34.3	-1.5
BKZ	Black Stump Fm	9.63	201	P	Pn	12 11 34.4	-1.5
HIZ	Hauiti	9.67	210	P	Pn	12 11 39.6	+3.1

TMVZ	Te Maari	9.85	205	P	Pn	12 11 39.8	+0.8
MSVF	Nonsavu	12.76	347	Pn	P	12 12 26.7	-2.7
	0.8nm,0.3s,baz=189,slow=23,SNR=1.5						
CTAO	Charters Tower	32.93	280	P	P	12 15 51.3	+0.2
STKA	Stephens Creek	33.67	257	P	P	12 15 58.5	+1.1
STKA	Stephens Creek	33.67	257	P	P	12 15 58.3	+0.9
	11nm,0.8s,baz=103,slow=10,SNR=9.8						
	11nm,0.8s						
BBOO	Buckleboo	38.18	254	P	P	12 16 36.4	+0.3
BBOO				IAmb	IAmb	12 16 38.9	
	comp=Z,25nm,0.8s						
AS31	Alice Springs	42.26	267	P	P	12 17 10.2	+0.2
ASAR	Alice Springs	42.26	267	P	P	12 17 08.7	-1.3
ASAR	Alice Springs	42.26	267	P	P	12 17 09.8	-0.2
	comp=Z,3.9nm,0.8s,baz=107,slow=8.0,SNR=28						
	comp=Z,3.9nm,0.8s						
WR8	Warramunga Arr	43.09	273		P	12 17 16.8	+0.1
WRAB	Tennant Creek	43.23	273	P	P	12 17 17.8	0.0
WRAB				IAmb	IAmb	12 18 03.7	
	comp=Z,47nm,2.0s						
WRA	Warramunga Arr	43.23	273		P	12 17 17.7	-0.2
WRA	Warramunga Arr	43.23	273	P	P	12 17 17.7	-0.2
	comp=Z,4.1nm,0.9s,baz=111,slow=7.8,SNR=20						
	comp=Z,4.1nm,0.9s						
WB0	Warramunga Arr	43.26	273		P	12 17 17.9	-0.2
FORT	Forrest	45.25	255	P	P	12 17 33.8	-0.1
FORT				IAmb	IAmb	12 18 29.8	
	comp=Z,13nm,1.1s						
VNDA	Vanda	48.15	185	P	P	12 17 55.7	-0.2
	comp=Z,0.3nm,0.5s,baz=315,slow=1.4,SNR=2.1						
	comp=Z,0.3nm,0.5s						
FITZ	Fitzroy Crossi	51.50	270	P	P	12 18 22.4	+0.2
MBWA	Marble Bar	55.38	264	P	P	12 18 50.5	-0.2
QSPA	South Pole Qui	59.85	180		P	12 19 22.5	+0.8
QSPA	South Pole Qui	59.85	180	P	P	12 19 22.1	+0.5
	comp=Z,41nm,1.0s,baz=33,slow=1.6,SNR=93						
BELA	Belgrano 2	70.03	172	P	P	12 20 27.1	-0.5
BELA				IAmb	IAmb	12 20 28.1	
	comp=Z,10nm,1.0s						
MJAR	Matsushiro Arr	77.64	326	P	P	12 21 12.6	0.0
	comp=Z,1.9nm,0.9s,baz=156,slow=5.9,SNR=4.8						
	comp=Z,1.9nm,0.9s						
SNAA	Sanae	78.31	179	⇑P	P	12 21 15.9	-0.1
	comp=Z,154nm,0.9s						
SNAA	Sanae	78.31	179		P	12 21 15.6	-0.3
SNAA	Sanae	78.31	179	P	P	12 21 15.3	-0.6
	comp=Z,12nm,1.1s,baz=192,slow=4.9,SNR=18						
	comp=Z,12nm,1.1s						
VNA3	Neumayer Olymp	78.50	176	⇑P	P	12 21 16.7	-0.2
	comp=Z,12nm,0.6s						
VNA2	Neumayer--Watz	78.92	177	⇑P	P	12 21 19.3	+0.1
	comp=Z,9.9nm,0.7s,baz=173,slow=5.2						
VNA1	Neumayer--Stat	79.16	177	⇑P	P	12 21 20.5	+0.1
	comp=Z,16nm,0.9s						
H03S2	Juan Fernandez	81.25	124	T	T	13 51 06.1	
	baz=238,slow=74,SNR=41						
H03S1	Juan Fernandez	81.27	124	T	T	13 51 07.3	
	baz=238,slow=74,SNR=34						
H03S3	Juan Fernandez	81.27	124	T	T	13 51 06.1	
	baz=238,slow=74,SNR=41						
H03N3	Juan Fernandez	81.45	124	T	T	13 50 58.0	
	baz=242						
H03N2	Juan Fernandez	81.45	124	T	T	13 51 32.5	
	baz=242,slow=74						
H03N1	Juan Fernandez	81.47	124	T	T	13 51 24.5	
	baz=242,slow=74						
PLCA	Paso Flores	83.23	133	P	P	12 21 43.0	+0.2
	comp=Z,5.5nm,1.1s,baz=207,slow=8.4,SNR=3.1						
	comp=Z,5.5nm,1.1s						
KSRS	Korea Array	83.69	320	P	P	12 21 46.6	+1.8
	comp=Z,0.8nm,0.7s,baz=126,slow=6.4,SNR=4.9						
	comp=Z,0.8nm,0.7s						
PETK	Petropavlovsk-	85.47	346	P	P	12 21 54.4	+1.0
	comp=Z,1.0nm,0.6s,baz=96,slow=7.4,SNR=1.8						
	comp=Z,1.0nm,0.6s						
USRK	Ussuriysk Ar.	86.58	327	P	P	12 21 59.6	+0.4
	comp=Z,2.1nm,0.8s,baz=153,slow=0.9,SNR=4.8						
	comp=Z,2.1nm,0.8s						
O02D	Mt. Diablo Mer	87.33	40		P	12 22 04.2	+1.2
O02D				IAmb	IAmb	12 22 13.9	
	comp=Z,8.9nm,1.1s						
NVAR	Mina Array Bea	88.72	43	P	P	12 22 10.5	+0.6
NVAR	Mina Array Bea	88.72	43	P	P	12 22 11.8	+1.9
	comp=Z,2.0nm,0.9s,baz=220,slow=7.4,SNR=8.0						
	comp=Z,2.0nm,0.9s						
TUC	Tucson	89.70	52	P	P	12 22 15.2	+0.8
TUC				IAmb	IAmb	12 22 25.6	
	comp=Z,8.2nm,1.2s						
CFA	Coronel Fontan	90.01	127	P	P	12 22 16.0	-0.1
	comp=Z,0.6nm,0.3s,baz=301,slow=8.0,SNR=1.9						
	comp=Z,0.6nm,0.3s						
X16A	Lo Mia Camp, P	90.52	50		P	12 22 18.9	+0.5
X16A				IAmb	IAmb	12 22 29.3	
	comp=Z,5.9nm,1.1s						
PINE	Pine Mountain	90.82	38		P	12 22 19.9	+0.3
PINE				IAmb	IAmb	12 22 29.8	
	comp=Z,8.1nm,1.0s						
U15A	North Rim	91.17	48	IAmb	IAmb	12 22 32.2	
	comp=Z,4.3nm,1.0s						
CMAR	Chiang Mai Arr	92.55	290	P	P	12 22 28.2	+0.3
	comp=Z,0.5nm,0.3s,baz=140,slow=3.4,SNR=4.8						
	comp=Z,0.5nm,0.3s						
G08A	Pilot Rock	92.87	38		P	12 22 31.4	+2.5
G08A				IAmb	IAmb	12 22 39.2	
	comp=Z,4.0nm,1.1s						
TXAR	Lajitas Array	93.04	58	P	P	12 22 30.6	+0.6
	comp=Z,0.6nm,0.9s,baz=252,slow=4.5,SNR=3.6						
	comp=Z,0.6nm,0.9s						
PDAR	Pinedale Array	96.63	44	P	P	12 22 47.3	+1.0
	comp=Z,0.1nm,0.3s,baz=235,slow=4.3,SNR=1.8						
	comp=Z,0.1nm,0.3s						
ILAR	Eielson Array	97.99	13	P	Pdif	12 22 53.7	+2.1
	comp=Z,0.7nm,1.1s,baz=200,slow=4.6,SNR=3.4						
	comp=Z,0.7nm,1.1s						
MKAR	Makanchi Array	117.03	310	PKP	PKiKP	12 28 01.2	+0.5
	comp=Z,0.2nm,0.8s,baz=183,slow=2.4,SNR=3.6						
ZALV	Zalesovo Beam	117.36	319	PKP	PKiKP	12 28 01.4	+0.3
	comp=Z,0.4nm,0.4s,baz=101,slow=1.5,SNR=1.9						
KURBB	Kurchatov Arra	120.37	314	PKP	PKPdf	12 28 06.1	-0.9
	comp=Z,0.4nm,0.6s,baz=102,slow=2.0,SNR=5.5						
BVAR	Borovoye Array	125.71	316	PKP	PKPdf	12 28 16.1	-1.0
	comp=Z,1.2nm,0.9s,baz=152,slow=6.7,SNR=4.0						
KBZ	Khabaz	144.32	304	PKP	PKPab	12 28 50.1	+0.1
	comp=Z,2.0nm,0.8s,baz=67,slow=3.1,SNR=3.9						
FINES	FINESS Array B	144.72	339	PKPbc	PKPab	12 28 50.0	-0.9
	comp=Z,2.9nm,0.6s,baz=55,slow=2.7,SNR=13						
NB2	NORSAR Subarra	148.48	351	PKP	PKPbc	12 29 02.1	0.0
	comp=Z,17nm,1.2s,baz=14,slow=4.3						
NOA	NORSAR Array B	148.48	351	PKPbc	PKPbc	12 29 01.5	-0.6
	comp=Z,4.7nm,1.1s,baz=14,slow=4.3,SNR=4.6						
HFS	Hagfors	148.93	348	PKPbc	PKPbc	12 29 02.4	-0.9
	comp=Z,2.1nm,0.7s,baz=28,slow=4.0,SNR=3.8						
MMAI	Mount Meron Ar	150.66	284	PKPbc	PKPbc	12 29 08.5	+0.1
	comp=Z,0.6nm,0.2s,baz=60,slow=10,SNR=2.2						
AKASG	Malin Array Be	150.67	322	PKPbc	PKPbc	12 29 06.9	-0.8
	comp=Z,1.0nm,0.5s,baz=48,slow=2.5,SNR=9.2						
BRTR	Keskin Array B	151.78	298	PKP	PKPdf	12 29 05.2	+0.7
	comp=Z,0.5nm,0.6s,baz=113,slow=2.8,SNR=3.6						
GERES	GERESS Array B	159.07	336	PKPab	PKPab	12 29 50.7	+0.1
	comp=Z,0.2nm,0.2s,baz=42,slow=6.3,SNR=1.5						
TORD	Torodi Ar. Bea	162.96	182	PKPab	PKPab	12 30 07.0	-1.3
	comp=Z,3.4nm,1.0s,baz=160,slow=4.6,SNR=5.1						
ESDC	Sonseca Array	169.77	22	PKP	PKPdf	12 29 23.4	-0.3
	comp=Z,1.5nm,1.3s,baz=328,slow=4.2,SNR=2.6						
ESDC				PKPab	PKPab	12 30 38.3	+0.4
	comp=Z,0.6nm,1.0s,baz=349,slow=1.3,SNR=4.4						

**HEL 27 12:12:10.3±0.4, 62°.84N×29°.34E, h0^{km}, ML1.1,
Suspected explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIF	Nilsia	0.89	309	PG	Pg	12 12 26.6	-0.8
	baz=123						
NIF				SG	Sg	12 12 37.4	-1.5
RMF	Romuvaara	1.41	11	PN	Pn	12 12 37.0	-0.2
RMF				MSG		12 12 52.8	
	comp=Z,1.1nm,0.2s						
RMF				SN	Sg	12 12 55.5	0.0
SUF	Sumiainen	1.47	267	PG	Pn	12 12 37.5	-0.6
SUF				MSG		12 12 54.6	
	comp=Z,0.5nm,0.2s						
FIA0	FINESS Array S	2.08	229	PG	Pn	12 12 47.3	+1.0
FIA0				MSG		12 13 12.0	
	comp=Z,0.9nm,0.2s						
FIA0				SG	Sb	12 13 15.1	0.0
KEF	Keuruu	2.18	254	PG	Pn	12 12 49.2	+1.4
KEF				MSG		12 13 15.1	
	comp=Z,0.7nm,0.2s						
VJF	Virojoki	2.46	201	MSG		12 13 22.9	
	comp=Z,1.7nm,0.2s						
VJF				SG	Sb	12 13 27.2	+1.0
OUF	Merijarvi	2.57	309	MSG		12 13 26.0	
	comp=Z,0.8nm,0.2s						
OUF				SG	Sb	12 13 28.8	-0.5
KPF	Kankaanpaa	3.54	257	SG	Sb	12 13 57.8	+0.6
KALU	Kalix	4.00	322	PG	Pb	12 13 22.1	+0.7
VSU	Vasula	4.58	197	PB	Pb	12 13 30.4	-0.9

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*IDC **27** 12:45:37.4±1.0, 2°.61S×138°.40E, h0^{km}, mb3.7/5,
mbtmp3.8/8, ML3.6/3, Error ellipse: s-maj=24.5km
s-min=21.9km az=115.0*

*DJA **27** 12:45:41.5±0.5, 2°S±3°×13°9E±°, h10^{km}, M3.8/5, MLv3.8/5*

ISC 27 12:45:42.2±0.8, **2°.65S**±0°.07×**138°.50E**±0°.05, **h32^{km}, n12,
σ1^{s}86**/16, **mb3.9**/5, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.68	18	P	Pn	12 45 52.5	-3.1
SMPI				S	Sn	12 46 08.1	+2.9
GENI	Genyem	1.67	88	P	Pn	12 46 08.9	-0.3
GENI				S	Sn	12 46 30.4	+0.9
JAY	Jayapura	2.21	87	Pn	Pn	12 46 17.6	+0.9
	12nm,0.3s,baz=226,slow=9.7,SNR=38						
JAY				Sn	Sn	12 46 46.6	+3.8
	9.4nm,0.3s,baz=210,slow=20,SNR=6.5						
	25nm,0.3s						
JAY	Jayapura	2.21	87	P	Pn	12 46 16.2	-0.4
JAY				S	Sb	12 46 48.7	+0.3
BAKI	Biak	2.79	301	P	Pn	12 46 26.8	+2.1
WRA	Warramunga Arr	17.67	193	P	Pn	12 49 45.2	-0.8
	0.6nm,0.3s,baz=16,slow=12,SNR=20						
	1.4nm,0.5s						
FITZ	Fitzroy Crossi	19.87	219	P	P	12 50 08.6	-2.2
	baz=45,slow=13,SNR=1.3						
	2.2nm,0.9s						
ASAR	Alice Springs	21.36	192	P	P	12 50 27.0	0.0
	2.9nm,0.6s,baz=21,slow=9.8,SNR=22						
	2.9nm,0.6s						
SONM	Songino Array	57.57	335	P	P	12 55 29.2	+0.2
	0.4nm,0.4s,baz=126,slow=7.3,SNR=1.9						
	0.4nm,0.4s						
MKAR	Makanchi Array	69.61	322	P	P	12 56 48.4	0.0
	0.4nm,0.7s,baz=116,slow=6.9,SNR=4.8						
	0.4nm,0.7s						
BVAR	Borovoye Array	79.14	325	P	P	12 57 43.7	0.0
	0.5nm,0.4s,baz=106,slow=14,SNR=2.0						
	0.5nm,0.4s						
ILAR	Eielson Array	85.86	24	P	P	12 58 17.8	-0.7
	0.5nm,0.7s,baz=257,slow=4.4,SNR=7.3						
	0.5nm,0.7s						

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*IDC **27** 12:47:12.0±0.8, 2°.36S×138°.36E, h0^{km}, mb3.8/11,
mbtmp3.8/13, ML3.5/2, Error ellipse: s-maj=23.0km
s-min=18.8km az=77.0*

ISC 27 12:47:16.4±0.6, **2°.4S**±0°.1×**138°.44E**±0°.08, **h32^{km}, n14,
σ0^{s}89**/15, **mb3.9**/10, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.26	93	Pn	Pn	12 47 52.0	+0.4
	6.7nm,0.3s,baz=215,slow=9.1,SNR=2.1						
JAY				Sn	Sb	12 48 24.2	-0.1
	2.7nm,0.3s,baz=294,slow=20,SNR=2.6						
	54nm,0.7s						
WRA	Warramunga Arr	17.88	193	P	Pn	12 51 22.1	-0.7
	0.2nm,0.3s,baz=14,slow=13,SNR=4.6						
	1.2nm,0.6s						
FITZ	Fitzroy Crossi	20.02	218	P	P	12 51 46.9	+0.2
	1.0nm,0.7s,baz=48,slow=5.7,SNR=1.8						
	1.0nm,0.7s						
ASAR	Alice Springs	21.58	191	P	P	12 52 03.5	-0.1
	4.2nm,0.8s,baz=16,slow=10,SNR=4.6						
	4.2nm,0.8s						
KSRS	Korea Array	40.85	347	P	P	12 54 53.4	-1.9
	0.7nm,0.7s,baz=156,slow=8.9,SNR=1.6						
	0.7nm,0.7s						
CMAR	Chiang Mai Arr	44.06	300	P	P	12 55 22.7	+0.9
	0.3nm,0.3s,baz=115,slow=9.0,SNR=1.5						
	0.3nm,0.3s						
SONM	Songino Array	57.34	335	P	P	12 57 01.1	-0.5
	0.3nm,0.3s,baz=146,slow=10,SNR=1.6						
	0.3nm,0.3s						
PETK	Petropavlovsk-	57.64	14	P	P	12 57 04.5	+1.1
	1.4nm,0.8s,baz=169,slow=6.2,SNR=1.8						
	1.4nm,0.8s						
MKAR	Makanchi Array	69.39	322	P	P	12 58 20.7	-0.6
	0.6nm,0.6s,baz=125,slow=7.7,SNR=7.1						
	0.6nm,0.6s						
KURBB	Kurchatov Arra	73.33	325	P	P	12 58 45.9	+1.0
	0.7nm,0.2s,baz=110,slow=4.2,SNR=1.3						
	0.7nm,0.2s						
BVAR	Borovoye Array	78.92	325	P	P	12 59 17.6	+0.9
	0.8nm,0.6s,baz=104,slow=12,SNR=3.6						
	0.8nm,0.6s						
ILAR	Eielson Array	85.67	24	P	P	12 59 51.0	-0.8
	0.6nm,0.7s,baz=257,slow=4.1,SNR=5.6						
	0.6nm,0.7s						
QSPA	South Pole Qui	87.53	180	P	P	13 00 01.1	+0.1
	1.1nm,0.9s,baz=14,slow=4.2,SNR=2.1						
	1.1nm,0.9s						
LPAZ	La Paz	147.83	126	PKPbc	PKiKP	13 07 01.8	-0.1
	1.1nm,0.8s,baz=222,slow=12,SNR=3.6						

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*IDC **27** 12:48:31.3±0.6, 2°.65S×138°.38E, h0^{km}, mb4.2/14,
mbtmp4.2/17, ML4.4/3, MS4.2/6, Error ellipse:
s-maj=15.7km s-min=13.5km az=55.0*

*NEIC **27** 12:48:34.1±2.0, 2°.65S±0°.09×138°.34E±0°.02, h10^{km}±1^{km},
mb5.2/97, Error ellipse: s-maj=15.2km s-min=2.9km
az=171.0*

*DJA **27** 12:48:37.1±0.5, 2°S±4°×13°9E±°, h72^{km}±8^{km}, M4.9/7,
mb5.3/1, MLv4.7/7*

ISC 27 12:48:33.5±0.3, **2°.72S**±0°.04×**138°.39E**±0°.04, **h10^{km}, n398,
σ1^{s}17**/358, **mb5.0**/81, **MS4.8**/3, **3C-1D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.79	24	P	Pg	12 48 46.0	-2.8
SMPI				S	Sn	12 49 01.9	-0.7
GENI	Genyem	1.78	86	P	Pn	12 49 05.4	+1.1
GENI	Genyem	1.78	86	P	Pn	12 49 04.2	-0.1
GENI				S	Sn	12 49 22.9	-4.1
SRPI	Serui, Papua	2.31	291	P	Pn	12 49 11.8	+0.2
SRPI				S	Sn	12 49 39.2	-0.9
JAY	Jayapura	2.32	85	Pn	Pn	12 49 12.8	+1.0
	46nm,0.3s,baz=236,slow=12,SNR=29						
JAY				Lg	Lg	12 49 45.5	
	32nm,0.3s,baz=309,slow=18,SNR=4.3						
JAY				LR	LR	12 49 58.1	
	comp=Z,2µm,20.4s,baz=282,slow=37						
	158nm,0.5s						
JAY	Jayapura	2.32	85	P	Pn	12 49 11.8	0.0
BAKI	Biak	2.74	304	P	Pb	12 49 20.0	-2.6
RKPI	Ransiki, Papua	4.38	286	P	Pn	12 49 41.6	+1.5
KMPI	Kaimana, Papua	4.77	259	P	Pn	12 49 50.5	+5.0
FAKI	Fak Fak	6.14	268	Pn	Pn	12 50 03.9	-0.4
KDU	Kakadu	11.51	210	P	Pn	12 51 22.5	+4.6
COEN	Coen	12.13	157		Pn	12 51 27.5	+1.0
COEN	Coen	12.13	157	P	Pn	12 51 27.5	+1.0
DRS	Darwin Rock St	12.17	217	P	Pn	12 51 32.6	+5.6
MTN	Manton Dam	12.36	215		Pn	12 51 30.1	+0.5
MTN	Manton Dam	12.36	215	P	Pn	12 51 35.1	+5.5
SOEI	Soe	15.68	243		Pn	12 52 13.5	-1.2
SOEI				IAmb	IAmb	12 52 22.4	
	comp=Z,143nm,1.4s						
SOEI	Soe	15.68	243	P	P	12 52 21.3	+2.4
KNRA	Kununurra	15.99	216		Pn	12 52 18.8	+0.1
MTSU	Mount Surprise	16.39	160	P	P	12 52 27.4	+0.8
BATI	Baumata	16.41	242	Pn	P	12 52 26.5	-0.4
	comp=Z,7.9nm,0.3s,baz=98,slow=5.5,SNR=4.9						
WB0	Warramunga Arr	17.39	193	Pn	Pn	12 52 36.9	+0.5
GUMO	Guam	17.43	21	LR	LR	12 58 57.0	
	comp=Z,350nm,18.8s,baz=208,slow=36						
WR8	Warramunga Arr	17.55	192		Pn	12 52 39.4	+1.0
WRAB	Tennant Creek	17.56	193	P	Pn	12 52 39.8	+1.3
WRA	Warramunga Arr	17.57	193		Pn	12 52 39.8	+1.1
WRA	Warramunga Arr	17.57	193	P	Pn	12 52 37.9	-0.7
	comp=Z,1.7nm,0.3s,baz=10.0,slow=13,SNR=20						
WRA				S	Sn	12 55 48.8	-5.7
	comp=Z,3.2nm,0.8s,baz=16,slow=22,SNR=3.1						
WRA				LR	LR	13 00 53.0	
	comp=Z,603nm,19.3s,baz=349,slow=42						
	comp=Z,5.0nm,0.6s						
QIS	Mount Isa	17.77	176	P	P	12 52 44.7	+2.8
TOLI2	Tolitoli	18.01	282	P	P	12 52 53.4	+8.8
CTAO	Charters Tower	18.89	157	P	P	12 52 55.1	+0.7
FITZ	Fitzroy Crossi	19.74	218	P	P	12 53 03.7	+0.1
FITZ	Fitzroy Crossi	19.74	218	P	Pn	12 53 05.3	+0.2
	comp=Z,0.9nm,0.3s,baz=37,slow=14,SNR=7.5						
FITZ				S	S	12 56 38.0	-8.4
	comp=Z,5.7nm,0.7s,baz=126,slow=16,SNR=2.4						
FITZ				LR	LR	13 00 55.1	
	comp=Z,896nm,18.4s,baz=34,slow=38						
	comp=Z,5.9nm,0.9s						
AS01	Alice Springs	21.26	191	P	P	12 53 24.4	+4.3
AS31	Alice Springs	21.27	191		P	12 53 19.9	-0.3
ASAR	Alice Springs	21.27	191		P	12 53 19.8	-0.4
ASAR	Alice Springs	21.27	191	P	P	12 53 20.0	-0.2
	comp=Z,6.0nm,0.6s,baz=16,slow=12,SNR=10						
ASAR				S	S	12 57 12.3	-4.4
	comp=Z,2.0nm,0.6s,baz=14,slow=24,SNR=4.6						
	comp=Z,6.0nm,0.6s						
MYLDM	Lahad Datu	21.36	292	P	P	12 53 29.3	+8.1
QLP	Quilpie	24.38	167	P	P	12 53 56.6	+4.6
EIDS	Eidsvold	25.62	153	P	P	12 54 06.1	+2.8
EIDS				IAmb	IAmb	12 54 32.1	
	comp=Z,58nm,1.6s						
SBUM	Sibu	26.66	281	P	P	12 54 21.0	+8.2
NWAO	Narrogin (SRO)	36.01	211	LR	LR	13 11 21.4	
	comp=Z,1µm,19.2s,baz=40,slow=38						
NJ2	Nanjing	39.24	333	*e*P	P	12 56 05.5	+3.3
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
CNSH	ChangSha	39.28	323	P	P	12 56 03.0	+0.3
CNSH				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KSRS	Korea Array	41.13	347	P	P	12 56 17.3	-0.6
	comp=Z,1.6nm,0.7s,baz=166,slow=8.9,SNR=8.7						
	comp=Z,1.6nm,0.7s						
SLVN	Son La	41.36	307		P	12 56 18.3	-1.8
CMAR	Chiang Mai Arr	44.16	300		P	12 56 42.6	-0.3
CMAR	Chiang Mai Arr	44.16	300	P	P	12 56 42.4	-0.5
	comp=Z,1.6nm,0.6s,baz=119,slow=6.8,SNR=11						
	comp=Z,1.6nm,0.6s						
KMI	Kunming	44.28	311	P	P	12 56 46.0	+2.0
KMI				pP	sP	12 56 51.0	+2.6
KMI				pmax	pmax		
	comp=Z,13nm,1.2s						
CHTO	Chiang Mai	44.31	301		P	12 56 43.2	-0.9
LYN	LuoYang	44.36	329	P	P	12 56 44.8	+0.6
LYN				pP	sP	12 56 50.5	+1.9
LYN				pmax	pmax		
	comp=Z,39nm,1.3s						
HNS	HongShan	45.57	333	⇑P	P	12 56 59.3	+5.6
HNS				pmax	pmax		
	comp=Z,13nm,1.1s						
XAN	Xi'an	45.90	325	⇓P	P	12 56 56.8	+0.3
XAN				pP	sP	12 57 02.5	+1.6
XAN				pmax	pmax		
	comp=Z,21nm,1.6s						
USRK	Ussuriysk Ar.	47.06	354	P	P	12 57 04.1	-1.3
	comp=Z,1.8nm,0.7s,baz=202,slow=12,SNR=2.4						
	comp=Z,1.8nm,0.7s						
CN2	Changchun	47.75	347	P	P	12 57 11.3	+0.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
URZ	Urewera	50.02	140	P	P	12 57 27.5	-0.8
	comp=Z,7.1nm,0.7s,baz=329,slow=5.9,SNR=2.6						
	comp=Z,7.1nm,0.7s						
RPZ	Rata Peaks	50.04	149	LR	LR	13 17 53.6	
	comp=Z,381nm,19.3s,baz=248,slow=35						
LZH	Lanzhou	50.30	323	*e*P	P	12 57 31.8	+1.2
LZH				pP	sP	12 57 37.5	+2.4
LZH				pmax	pmax		
	comp=Z,20nm,1.5s						
MRZ	Mangatainoka R	50.51	143	P	P	12 57 32.3	+0.3
MRZ				IAmb	IAmb	12 57 39.2	
	comp=Z,20nm,1.0s						
XLT	XiLinHaoTe	50.55	339	*e*P	P	12 57 37.5	+5.2
XLT				pP	sP	12 57 43.5	+6.8
XLT				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HEH	HeiHe	53.60	351	*e*P	P	12 57 54.5	-0.3
HEH				pmax	pmax		
	comp=Z,7.0nm,1.5s						
GTA	Gaotai	54.89	324	*e*P	P	12 58 05.0	+0.5
GTA				pP	sP	12 58 11.5	+2.5
GTA				pmax	pmax		
	comp=Z,7.0nm,1.5s						
SONM	Songino Array	57.59	335		P	12 58 23.2	-0.5
SONM	Songino Array	57.59	335	P	P	12 58 23.4	-0.3
	comp=Z,0.7nm,0.4s,baz=123,slow=7.3,SNR=5.3						
	comp=Z,0.7nm,0.4s						
PETK	Petropavlovsk-	57.95	14	P	P	12 58 25.3	-0.6
	comp=Z,2.9nm,0.9s,baz=223,slow=7.4,SNR=4.1						
	comp=Z,2.9nm,0.9s						
HYB	Hyderabad	62.28	291	*e*P	P	12 58 55.9	-0.5
HYB				*e*sP	pP	12 59 00.3	+0.6
HYB				*e*PcP	PcP	12 59 37.1	+0.8
WMQ	Urumqi	64.82	322	*e*P	P	12 59 19.5	+6.8
WMQ				pmax	pmax		
	comp=Z,38nm,1.3s						
WMQ				LR	LR		
	comp=N,810nm,21.3s						
WMQ				LR	LR		
	comp=E,950nm,19.5s						
WMQ				LR	LR		
	comp=Z,960nm,19.5s						
YAK	Yakutsk	64.92	355	P	P	12 59 12.4	-0.5
ADK	Adak	66.34	29	P	P	12 59 21.5	-0.8
ZSN	Zaisan	68.38	324	*e*P	P	12 59 35.8	+0.4
MKAR	Makanchi Array	69.60	323		P	12 59 43.3	+0.3
MKAR	Makanchi Array	69.60	323	P	P	12 59 41.6	-1.4
	comp=Z,0.8nm,0.5s,baz=108,slow=7.8,SNR=11						
	comp=Z,0.8nm,0.5s						
MAKZ	Makanchi	69.80	322		P	12 59 44.4	+0.2
MAKZ				IAmb	IAmb	12 59 52.0	
	comp=Z,31nm,1.2s						
SHLS	Shalkode	69.81	318	*e*P	P	12 59 43.3	-1.2
	comp=Z,19nm,1.6s						
UZB	Uzynbulak	70.10	318	*e*P	P	12 59 46.8	+0.5
	comp=Z,19nm,1.5s						
KPKS	Kokpek	70.45	318	*e*P	P	12 59 48.9	+0.5
SATY	Saty	70.48	318	*e*P	P	12 59 49.1	+0.5
	comp=Z,15nm,1.3s						
NIKH	Nikolski High	70.85	31	P	P	12 59 51.6	+1.2
	baz=237						
KSH	Kashi	70.86	313	P	P	12 59 53.0	+2.0
KSH				pP	sP	12 59 58.0	+2.5
KSH				PcP	PcP	13 00 16.5	+4.9
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
TDK	Taldyqorghan	71.26	320	*e*P	P	12 59 53.6	+0.5
AAA	Alma-Ata	71.54	317	*e*P	P	12 59 55.5	+0.5
ZAA0	Zalesovo Array	71.78	330		P	12 59 55.5	-0.6
ZALV	Zalesovo Beam	71.78	330	P	P	12 59 55.2	-0.9
ZALV	Zalesovo Beam	71.78	330	P	P	12 59 52.2	-3.9
	comp=Z,2.0nm,0.6s,baz=126,slow=4.0,SNR=8.7						
BOOM	Boomskoye usch	71.94	316	P	P	12 59 58.2	+0.6
UNV	Unalaska Valle	72.50	31	P	P	13 00 01.9	+1.5
	baz=239						
P08K	Saint George I	72.52	27	P	P	13 00 02.3	+1.9
	baz=236						
SPIA	Saint Paul Isl	72.53	26	P	P	13 00 02.2	+1.8
	baz=235						
SGDS	Sogindy	73.18	317	*e*P	P	13 00 05.2	+0.4
KURK	Kurchatov	73.54	325		P	13 00 07.1	+0.5
KURK				IAmb	IAmb	13 00 13.4	
	comp=Z,40nm,1.6s						
KURBB	Kurchatov Arra	73.55	325	P	P	13 00 05.8	-0.8
	comp=Z,1.3nm,0.3s,baz=126,slow=4.9,SNR=9.6						
	comp=Z,1.3nm,0.3s						
ARSB	Arslanbob	73.61	314	IAmb	IAmb	13 00 15.0	
	comp=Z,38nm,1.5s						
BTLS	Baital	74.13	318	*e*P	P	13 00 10.6	+0.4
	comp=Z,14nm,1.8s						
DZA	Taraz	75.28	316	*e*P	P	13 00 17.3	+0.4
VNDA	Vanda	75.80	175	P	P	13 00 18.9	-0.4
	comp=Z,1.6nm,0.7s,baz=328,slow=8.0,SNR=11						
	comp=Z,1.6nm,0.7s						
GAMB	Gambell	75.90	21	P	P	13 00 21.3	+1.3
	baz=232						
KKAR	Karatay Array	75.91	316		P	13 00 20.6	+0.1
IUG	Iuzhnay	75.97	315	*e*P	P	13 00 21.3	+0.3
	comp=Z,12nm,1.6s						

M11K	Mekoryuk	76.07	25	P	P	13 00 22.3	+1.3
	baz=238						
SDPT	Sand Point	76.31	31	P	P	13 00 23.2	+0.7
	baz=244						
CHM	Chimkent	76.32	315	*e*P	P	13 00 23.5	+0.5
BRLS	Borolday	76.36	315	*e*P	P	13 00 23.9	+0.7
CHNA	Chernabura Isl	76.54	32	P	P	13 00 25.3	+1.5
	baz=245						
BRZS	Berezniki	76.75	323	*e*P	P	13 00 25.5	+0.4
S14K	Fog Glacier	77.18	30	P	P	13 00 29.0	+1.5
	baz=245						
M13K	Dall Lake	77.30	26	P	P	13 00 29.7	+1.8
	baz=241						
K13K	Kusilvak Mount	77.52	24	P	P	13 00 30.7	+1.5
	baz=239						
O14K	Tigyukauivet M	77.67	27	P	P	13 00 31.9	+1.9
	baz=243						
N14K	Kuskokwak Cree	77.80	26	P	P	13 00 31.4	+0.6
	baz=242						
L14K	Kuka Creek	78.04	25	P	P	13 00 33.6	+1.5
	baz=241						
M14K	Bethel	78.06	26	P	P	13 00 33.1	+0.8
	baz=242						
TNA	Tin City	78.27	20	P	P	13 00 33.7	+0.4
	baz=235						
O15K	Ungalikthiuk R	78.30	28	P	P	13 00 34.0	+0.4
	baz=244						
J14K	Nanvaranak Lak	78.38	24	P	P	13 00 34.8	+0.8
	baz=240						
M15K	Kasigluk River	78.59	26	P	P	13 00 36.4	+1.2
	baz=243						
N15K	Kwethluk River	78.62	27	P	P	13 00 35.5	+0.2
	baz=244						
ANM	Nome	78.62	21	P	P	13 00 36.1	+0.8
	baz=238						
L15K	Ungalak Mounta	78.70	25	P	P	13 00 36.5	+0.7
	baz=242						
F14K	Arctic Creek	78.78	20	P	P	13 00 36.8	+0.7
	baz=237						
K15K	Wolf Creek Mou	78.98	24	P	P	13 00 38.3	+1.0
	baz=242						
CHIR	Chirikof Islan	79.02	32	P	P	13 00 38.3	+0.7
	baz=248						
P16K	Nushagak River	79.10	28	P	P	13 00 39.1	+1.1
	baz=246						
BVAR	Borovoye Array	79.14	325	P	P	13 00 37.6	-0.7
	comp=Z,2.4nm,0.5s,baz=105,slow=7.0,SNR=9.1						
	comp=Z,2.4nm,0.5s						
BRVK	Borovoye	79.21	325		P	13 00 39.9	+1.1
BRVK				IAmb	IAmb	13 00 45.8	
	comp=Z,54nm,1.8s						
O16K	Kokwok River B	79.28	28	P	P	13 00 39.4	+0.4
	baz=246						
R17L	Mt. Peulik Vol	79.33	30	P	P	13 00 39.8	+0.5
	baz=248						
G15K	Niukluk	79.34	21	P	P	13 00 40.2	+1.0
	baz=239						
N16K	Nishlik Lake	79.34	27	P	P	13 00 39.8	+0.5
	baz=245						
F15K	North Star Dit	79.49	21	P	P	13 00 40.8	+0.8
	baz=238						
M16K	Timber Creek	79.50	26	P	P	13 00 40.8	+0.6
	baz=245						
L16K	Owhat River	79.57	25	P	P	13 00 41.3	+0.8
	baz=244						
Q16K	King Salmon	79.59	29	P	P	13 00 40.5	-0.1
	baz=247						
NRIK	Noril'sk	79.64	344	P	P	13 00 39.0	-1.8
	comp=Z,2.1nm,0.7s,baz=142,slow=4.7,SNR=8.8						
	comp=Z,2.1nm,0.7s						
Q17K	Contact Creek	79.80	29	P	P	13 00 42.3	+0.3
	baz=248						
O17K	Koliganek Bris	79.82	28	P	P	13 00 42.8	+1.0
	baz=246						
J16K	Anvik River	79.82	24	P	P	13 00 43.4	+1.5
	baz=243						
H16K	Elim	79.83	22	P	P	13 00 42.7	+0.9
	baz=241						
P17K	Kvichak River	79.89	28	P	P	13 00 43.2	+0.9
	baz=247						
SII	Sitkinak Islan	80.03	31	P	P	13 00 43.7	+0.5
	baz=250						
I17K	Unalakleet	80.06	23	P	P	13 00 43.8	+0.7
	baz=243						
N17K	Nushagak Hills	80.08	27	P	P	13 00 43.6	+0.3
	baz=246						
G16K	Koyuk River	80.15	21	P	P	13 00 44.4	+0.8
	baz=241						
L17K	Donlin	80.26	25	P	P	13 00 45.0	+0.7
	baz=245						
M17K	Holitna River	80.32	26	P	P	13 00 45.5	+0.9
M17K				IAmb	IAmb	13 00 52.5	
	comp=Z,37nm,1.4s						
M17K	Holitna River	80.32	26	P	P	13 00 45.7	+1.0
	baz=246						
Q18K	Katmai Hardscr	80.37	29	P	P	13 00 45.7	+0.6
	baz=249						
J17K	VABM Dome	80.48	24	IAmb	IAmb	13 00 53.3	
	comp=Z,30nm,1.4s						
J17K	VABM Dome	80.48	24	P	P	13 00 46.4	+0.9
	baz=244						
K17K	Iditarod	80.51	25	IAmb	IAmb	13 00 53.3	
	comp=Z,50nm,1.4s						
K17K	Iditarod	80.51	25	P	P	13 00 46.6	+1.0
	baz=245						
P18K	Big Mountain,	80.54	28	P	P	13 00 46.9	+1.0
	baz=248						
C16K	Lisburne Hills	80.63	18	P	P	13 00 47.6	+1.5
	baz=238						
OHAK	Old Harbor	80.73	31	P	P	13 00 48.0	+1.1
	baz=250						
O18K	Koktuh Hills	80.73	28	P	P	13 00 47.8	+1.0
	baz=248						
N18K	Kilae Creek	80.73	27	P	P	13 00 47.9	+1.1
	baz=247						
G17K	Kiwalik Mounta	80.83	22	P	P	13 00 48.5	+1.3
	baz=242						
H17K	Granite Mounta	80.85	22	IAmb	IAmb	13 00 54.9	
	comp=Z,24nm,1.4s						
H17K	Granite Mounta	80.85	22	P	P	13 00 48.3	+0.9
	baz=243						
L18K	Granite Mounta	80.98	25	IAmb	IAmb	13 00 55.8	
	comp=Z,22nm,1.3s						
L18K	Granite Mounta	80.98	25	P	P	13 00 49.3	+1.1
	baz=246						
D17K	Noatak River	81.06	19	P	P	13 00 49.4	+1.0
	baz=240						
F17K	Baldwin Pennin	81.06	21	P	P	13 00 49.4	+1.0
	baz=242						
M18K	Stony River	81.07	26	P	P	13 00 49.2	+0.6
	baz=247						
Q19K	Cape Douglas,	81.14	29	P	P	13 00 49.6	+0.5
	baz=250						
E17K	Hotham Inlet	81.17	20	P	P	13 00 49.7	+0.7
	baz=241						
KDAK	Kodiak Island	81.27	30	P	P	13 00 50.3	+0.5
	baz=251						
RDOG	Red Dog Mine	81.29	19	P	P	13 00 50.4	+0.7
	baz=240						
N19K	Bonanza Creek	81.42	27		P	13 00 52.3	+1.7
N19K				IAmb	IAmb	13 00 57.9	
	comp=Z,34nm,1.4s						
N19K	Bonanza Creek	81.42	27	P	P	13 00 51.1	+0.5
	baz=249						
C17K	DeLong Mountai	81.42	19	P	P	13 00 51.0	+0.7
	baz=240						
J18K	Innoko River	81.47	24	P	P	13 00 51.5	+0.8
	baz=246						
H18K	Honhosa River	81.53	22	P	P	13 00 51.3	+0.3
	baz=245						
P19K	Oil Pt	81.59	29	P	P	13 00 52.0	+0.6
	baz=250						
Q20K	Shuyak Island	81.64	30	P	P	13 00 52.4	+0.8
	baz=251						
F18K	Selawik	81.70	21	P	P	13 00 52.3	+0.5
	baz=243						
G18K	Tagagawik	81.75	22	P	P	13 00 53.0	+0.9
	baz=244						
E18K	Tukpahlearik C	81.75	20	P	P	13 00 52.9	+0.8
	baz=242						
L19K	White Mountain	81.76	26	IAmb	IAmb	13 00 59.6	
	comp=Z,22nm,1.3s						
L19K	White Mountain	81.76	26	P	P	13 00 52.7	+0.4
	baz=248,SNR=5.3						
M19K	Big River Lodg	81.86	26	P	P	13 00 53.4	+0.6
	baz=249						
GCSA	Galena City Sc	81.93	23	P	P	13 00 53.8	+0.7
	baz=246						
O20K	Slope Mountain	82.02	28	P	P	13 00 54.1	+0.3
	baz=250						
J19K	Poorman	82.13	24	P	P	13 00 54.9	+0.8
	baz=247,SNR=5.0						
C18K	Utukok River	82.14	19	P	P	13 00 54.8	+0.6
	baz=241						
L20K	Farewell, AK	82.29	26	P	P	13 00 55.7	+0.6
	baz=249						
B18K	Kokolik River	82.30	18	P	P	13 00 55.2	+0.2
	baz=241						
M20K	Styx River	82.41	26	P	P	13 00 56.5	+0.7
	baz=250						
H19K	Roundabout Mou	82.42	22		P	13 00 56.7	+1.1
H19K	Roundabout Mou	82.42	22	P	P	13 00 55.4	-0.2
	baz=246						
G19K	Purcell Mounta	82.43	22	IAmb	IAmb	13 01 04.6	
	comp=Z,19nm,1.2s						
G19K	Purcell Mounta	82.43	22	P	P	13 00 55.8	+0.1
	baz=246						
F19K	Shaleruckik Mo	82.47	21	P	P	13 00 56.1	+0.2
	baz=245						
K20K	Telida	82.53	25	P	P	13 00 56.8	+0.5
	baz=249						
J20K	Nowinta River	82.80	24	IAmb	IAmb	13 01 05.1	
	comp=Z,39nm,1.6s						
J20K	Nowinta River	82.80	24	P	P	13 00 57.8	+0.2
	baz=249,SNR=5.1						
BRSE	Bradley Lake S	82.81	29	P	P	13 00 57.8	0.0
	baz=252						
C19K	Lookout Ridge	82.87	19	P	P	13 00 58.2	+0.2
	baz=243						
I20K	Naaghedeneel	82.90	23	P	P	13 00 58.9	+0.8
	baz=248						
A19K	Wainwright	82.93	17	P	P	13 00 58.1	-0.1
	baz=241						
E19K	Redstone River	82.93	21	P	P	13 00 57.7	-0.6
	baz=245						
H20K	Anotleneega Mo	83.00	23	P	P	13 00 59.0	+0.2
	baz=248						
D19K	Kuna River	83.08	19	IAmb	IAmb	13 01 06.7	
	comp=Z,32nm,1.8s						
D19K	Kuna River	83.08	19	P	P	13 00 59.3	+0.2
	baz=244						
SKT	Skwentna	83.16	27	P	P	13 00 59.7	+0.1
	baz=251						
PPLA	Purkeypile	83.17	26	P	P	13 01 00.3	+0.5
	baz=250						
F20K	Avaraart Lake	83.30	21	P	P	13 01 01.3	+1.1
	baz=247						
SUA	Susitna One	83.34	27	P	P	13 01 01.2	+0.5
	baz=252						
CAST	Castle Rocks	83.39	25	IAmb	IAmb	13 01 08.0	
	comp=Z,17nm,1.6s						
CAST	Castle Rocks	83.39	25	P	P	13 01 01.2	+0.4
	baz=251						
CHUM	Lake Minchumin	83.45	25	P	P	13 01 01.5	+0.5
	baz=250,SNR=5.2						
O22K	Cooper Landing	83.52	28	P	P	13 01 01.8	+0.4
	baz=253						
SEW	Seward	83.54	29	P	P	13 01 01.8	+0.3
	baz=253						
E20K	Nigu River	83.62	20	P	P	13 01 02.1	+0.2
	baz=246						
IMAR	Indian Mountai	83.62	22	P	P	13 01 02.7	+0.8
D20K	Etivluk River	83.67	19	P	P	13 01 02.0	-0.1
	baz=246						
RC01	Rabbit Creek A	83.69	28	IAmb	IAmb	13 01 08.3	
	comp=Z,14nm,1.1s						
RC01	Rabbit Creek A	83.69	28	P	P	13 01 02.4	+0.1
	baz=253						
M22K	Willow	83.72	27	P	P	13 01 01.9	-0.5
	baz=252						
CUT	Chulitna	83.85	26	P	P	13 01 03.1	0.0
	baz=252						
H21K	Melozitna Rive	83.87	23	IAmb	IAmb	13 01 10.9	
	comp=Z,15nm,1.5s						
H21K	Melozitna Rive	83.87	23	P	P	13 01 03.5	+0.3
	baz=250						
G21K	Allakaket	83.91	22	P	P	13 01 02.1	-1.3
	baz=249						
KTH	Kantishna Hill	83.93	25	IAmb	IAmb	13 01 10.9	
	comp=Z,19nm,1.2s						
I21K	Tanana	84.03	23	P	P	13 01 04.2	+0.2
	baz=250						
B20K	Meade River	84.04	18	P	P	13 01 03.9	+0.1
	baz=245						
BPAW	Bear Paw Mtn.	84.08	25	P	P	13 01 04.5	+0.2
	baz=252						
PMR	Palmer	84.12	27	P	P	13 01 04.3	-0.2
	baz=253,SNR=7.1						
TRF	Thorofare Moun	84.17	25	P	P	13 01 05.0	+0.1
	baz=252						
F21K	Alatna River	84.17	21	P	P	13 01 04.8	+0.1
	baz=249						
PWL	Port Wells	84.28	28	P	P	13 01 05.3	-0.1
	baz=254						
KNK	Knik Glacier	84.38	28	P	P	13 01 05.2	-0.7
	baz=254						
C21K	Knifeblade Rid	84.45	19	P	P	13 01 06.3	+0.2
	baz=248						
E21K	Killik River	84.45	20	IAmb	IAmb	13 01 13.4	
	comp=Z,25nm,1.5s						
E21K	Killik River	84.45	20	P	P	13 01 05.8	-0.3
	baz=248						
MLY	Manley	84.48	24	P	P	13 01 06.0	-0.3
	baz=252						
P23K	Montague Islan	84.50	29	P	P	13 01 06.3	-0.2
	baz=255						
H22K	Ishtalitna Cre	84.50	23	P	P	13 01 06.4	-0.1
	baz=251						
AB31	Akbulak array	84.52	320	P	P	13 01 07.3	+0.5
AB31				IAmb	IAmb	13 01 14.2	
	comp=Z,19nm,1.6s						
ABKAR	Akbulak array	84.52	320		P	13 01 06.0	-0.8
ABKAR	Akbulak array	84.52	320	IAmb	IAmb	13 01 14.2	
	comp=Z,20nm,1.6s						
B21K	Ikpikpuk River	84.69	19		P	13 01 09.9	+2.8
B21K				IAmb	IAmb	13 01 14.4	
	comp=Z,26nm,1.4s						
B21K	Ikpikpuk River	84.69	19	P	P	13 01 07.0	-0.2
	baz=248						
WAT1	Susitna Watana	84.74	26	P	P	13 01 07.6	-0.1
	baz=254						
F22K	John River	84.75	21	P	P	13 01 07.6	-0.1
	baz=250						
A21K	Barrow	84.75	17	P	P	13 01 07.1	-0.4
	baz=246						
RND	Reindeer	84.77	26	IAmb	IAmb	13 01 14.7	
	comp=Z,18nm,1.2s						
G22K	Bettles	84.80	22	P	P	13 01 07.9	+0.1
	baz=251						
MCK	McKinley	84.83	25	P	P	13 01 07.7	-0.4
	baz=253						
GLI	Glacier Island	84.87	28	P	P	13 01 08.4	0.0
	baz=255						
SCM	Sheep Creek Mo	85.01	27	P	P	13 01 09.0	-0.2
	baz=255						
NEA2	Nenana	85.02	24	P	P	13 01 09.1	0.0
	baz=253						
WAT6	Susitna Watana	85.03	27	P	P	13 01 09.1	-0.2
	baz=255						
D22K	Ayikyak River	85.05	20	IAmb	IAmb	13 01 17.5	
	comp=Z,36nm,1.6s						
D22K	Ayikyak River	85.05	20	P	P	13 01 09.5	+0.4
	baz=250,SNR=6.2						
I23K	Minto, Yukon-K	85.07	24	P	P	13 01 08.8	-0.4
	baz=253						
E22K	Anaktuvuk Pass	85.09	21	P	P	13 01 08.9	-0.4
	baz=250						
A22K	Sinclair Lake	85.11	18	P	P	13 01 09.2	-0.1
	baz=247						
H23K	Yukon River	85.20	23	P	P	13 01 10.6	+0.7
	baz=253						
G23K	Bananza Creek	85.28	22	IAmb	IAmb	13 01 18.9	
	comp=Z,37nm,1.8s						
G23K	Bananza Creek	85.28	22	P	P	13 01 10.5	+0.1
	baz=252						
DHY	Denali Highway	85.32	26	IAmb	IAmb	13 01 17.2	
	comp=Z,20nm,1.4s						
DHY	Denali Highway	85.32	26	P	P	13 01 10.6	-0.2
	baz=255						
B22K	Teshekpuk Lake	85.34	18	P	P	13 01 09.9	-0.6
	baz=249						
COLD	Coldfoot	85.38	22	P	P	13 01 10.5	-0.3
	baz=252						
EYAK	Cordova Ski Ar	85.43	29	P	P	13 01 10.5	-0.6
	baz=256						
DIV	Divide	85.56	28	IAmb	IAmb	13 01 18.6	
	comp=Z,15nm,1.0s						
KLU	Klutina	85.58	28	P	P	13 01 11.5	-0.4
	baz=256						
COLA	College	85.60	24	P	P	13 01 11.6	-0.3
	baz=254						
M24K	Tolsona, Glenn	85.61	27	P	P	13 01 11.5	-0.6
	baz=256						
D23K	Nanushuk River	85.76	20	P	P	13 01 12.3	-0.3
	baz=251,SNR=24						
E23K	Chandalar	85.85	21	P	P	13 01 12.9	-0.3
	baz=252,SNR=22						
HDA	Harding Lake	85.85	25	P	P	13 01 13.2	0.0
	baz=255						
H24K	Noodor Dome	85.86	23	IAmb	IAmb	13 01 21.1	
	comp=Z,27nm,1.6s						
H24K	Noodor Dome	85.86	23	P	P	13 01 13.2	0.0
	baz=254,SNR=5.3						
KAIM	Kayak Island	85.94	29	P	P	13 01 13.1	-0.6
	baz=258						
ILAR	Eielson Array	85.97	24	P	P	13 01 11.7	-2.1
ILAR	Eielson Array	85.97	24	P	P	13 01 11.5	-2.3
	comp=Z,1.1nm,0.6s,baz=262,slow=4.4,SNR=18						
	comp=Z,1.1nm,0.6s						
TOLK	Toolik Lake Re	86.04	20	IAmb	IAmb	13 01 21.5	
	comp=Z,26nm,1.3s						
TOLK	Toolik Lake Re	86.04	20	P	P	13 01 13.6	-0.5
	baz=252						
C23K	Itkillik River	86.07	19	P	P	13 01 14.3	+0.2
	baz=251						
BMRM	Bremner River	86.08	28	P	P	13 01 14.3	-0.1
	baz=258						
PAX	Paxson	86.14	26	P	P	13 01 14.4	-0.4
	baz=257						
HARP	HAARP	86.14	27	P	P	13 01 14.6	0.0
	baz=257						
K24K	Donnelly Dome	86.20	26	P	P	13 01 14.9	-0.1
	baz=256						
N25K	Chitina, Valde	86.22	28	P	P	13 01 15.1	0.0
	baz=257						
G24K	Hadweenzic Riv	86.25	23	IAmb	IAmb	13 01 23.3	
	comp=Z,36nm,1.4s						
G24K	Hadweenzic Riv	86.25	23	P	P	13 01 15.5	+0.3
	baz=254,SNR=14						
E24K	Your Creek	86.26	21	IAmb	IAmb	13 01 22.4	
	comp=Z,23nm,1.7s						
E24K	Your Creek	86.26	21	P	P	13 01 15.0	-0.2
	baz=254						
F24K	Squaw Lake	86.32	22	P	P	13 01 15.4	0.0
	baz=254,SNR=5.9						
D24K	Happy Valley	86.46	20	P	P	13 01 16.2	+0.1
	baz=253						
J25K	Salcha River,	86.57	25	IAmb	IAmb	13 01 23.6	
	comp=Z,34nm,1.8s						
J25K	Salcha River,	86.57	25	P	P	13 01 16.6	-0.2
	baz=257						
RIDG	Independent Ri	86.59	26	IAmb	IAmb	13 01 27.3	
	comp=Z,35nm,1.8s						
RIDG	Independent Ri	86.59	26	P	P	13 01 16.2	-0.7
	baz=257						
C24K	Franklin Bluff	86.67	20	P	P	13 01 16.6	-0.4
	baz=253						
PRP	Porcupine Dome	86.72	24	P	P	13 01 17.6	0.0
	baz=256						
CRQE	Cirque	86.76	29	P	P	13 01 17.6	-0.2
	baz=259						
H25L	Birch Creek	86.78	23	P	P	13 01 17.4	-0.3
	baz=256,SNR=6.3						
G25K	Bearman Lake	86.80	23	P	P	13 01 17.1	-0.7
	baz=256,SNR=5.3						
DOT	Dot Lake	86.91	26	P	P	13 01 18.7	+0.3
DOT				IAmb	IAmb	13 01 25.8	
	comp=Z,16nm,1.4s						
MENT	Mentasta	86.91	27	P	P	13 01 21.9	+3.4
MENT				IAmb	IAmb	13 01 25.3	
	comp=Z,18nm,1.8s						
MCARA	McCarthy VSAT	86.91	28	P	P	13 01 18.3	-0.2
	baz=259						
SCRK	Sand Creek	87.01	26	P	P	13 01 19.2	+0.1
	baz=258						
L26K	Log Cabin Wild	87.09	27	IAmb	IAmb	13 01 26.3	
	comp=Z,18nm,1.6s						
L26K	Log Cabin Wild	87.09	27	P	P	13 01 19.9	+0.6
	baz=258						
M26K	Nabesna, AK	87.13	27	P	P	13 01 20.1	+0.5
	baz=259						
F25K	Christian Rive	87.17	22	IAmb	IAmb	13 01 27.4	
	comp=Z,15nm,1.4s						
F25K	Christian Rive	87.17	22	P	P	13 01 20.6	+0.9
	baz=256						
MESA	MESA	87.20	29	P	P	13 01 20.1	0.0
	baz=260						
QSPA	South Pole Qui	87.23	180	P	P	13 01 19.2	-0.8
QSPA	South Pole Qui	87.23	180	P	P	13 01 20.0	-0.1
	comp=Z,1.7nm,0.6s,baz=290,slow=2.0,SNR=16						
	comp=Z,1.7nm,0.6s						
J26L	Joseph Creek	87.30	25	P	P	13 01 20.6	+0.2
	baz=258						
E25K	Arctic Village	87.33	21	P	P	13 01 20.8	+0.4
	baz=256,SNR=20						
D25K	Kavik River	87.34	20	P	P	13 01 20.7	+0.3
	baz=255						
GRNC	Granite Creek	87.40	29	IAmb	IAmb	13 01 28.9	
	comp=Z,19nm,1.2s						
BMAR	Burnt Mountain	87.53	22		P	13 01 22.5	+1.1
M27K	Edge Creek, AK	87.63	27	IAmb	IAmb	13 01 29.2	
	comp=Z,17nm,1.2s						
M27K	Edge Creek, AK	87.63	27	P	P	13 01 22.4	+0.3
	baz=260,SNR=5.3						
CTG	Chitna Glacier	87.64	29	P	P	13 01 22.7	+0.5
	baz=260						
I26K	Coal Creek Min	87.64	24	IAmb	IAmb	13 01 28.3	
	comp=Z,18nm,1.5s						
I26K	Coal Creek Min	87.64	24	P	P	13 01 22.2	+0.3
	baz=258						
G26K	Porcupine Rive	87.73	23	P	P	13 01 23.0	+0.8
	baz=258,SNR=18						
F26K	Sheenjek River	87.75	22	P	P	13 01 22.9	+0.5
	baz=258,SNR=24						
L27K	Beaver Creek,	87.78	27	IAmb	IAmb	13 01 29.9	
	comp=Z,11nm,1.2s						
L27K	Beaver Creek,	87.78	27	P	P	13 01 23.1	+0.4
	baz=260						
BCAR	Beaver Creek A	87.80	27		P	13 01 23.5	+0.7
K27K	Chicken	87.85	26	P	P	13 01 23.2	+0.3
	baz=260						
C26K	Camden Bay	87.98	20	P	P	13 01 23.8	+0.4
	baz=257						
PINM	Pinnacle	88.03	30	P	P	13 01 24.3	+0.3
	baz=261						
BVCY	Beaver Creek	88.11	27	P	P	13 01 24.2	-0.1
	baz=261						
O28M	Mount Upton	88.16	29	P	P	13 01 24.9	+0.1
	baz=261						
YUK3	Moose Creek	88.19	28	P	P	13 01 24.8	-0.1
	baz=261						
I27K	Kandik River	88.33	24	P	P	13 01 25.5	+0.3
	baz=260,SNR=15						
C27K	Jago River	88.33	20	P	P	13 01 25.3	+0.3
	baz=258						
PNL	Peninsula	88.39	30	P	P	13 01 25.5	-0.1
	baz=262						
YUK8	Steele Glacier	88.44	29	P	P	13 01 25.8	-0.4
	baz=262						
H27K	Steamboat Moun	88.47	24	P	P	13 01 26.2	+0.3
	baz=260,SNR=18						
G27K	Doyon Strip	88.53	23	IAmb	IAmb	13 01 34.8	
	comp=Z,21nm,1.8s						
G27K	Doyon Strip	88.53	23	P	P	13 01 26.3	+0.2
	baz=260						
E27K	Coleen River	88.80	22	P	P	13 01 28.0	+0.6
	baz=260						
O29M	Mount Kennedy	88.89	30	P	P	13 01 28.3	+0.2
	baz=263						
YUK4	Talbot Arm	88.99	29	P	P	13 01 28.9	+0.3
	baz=263						
I28M	Miner Creek	88.99	24	P	P	13 01 28.6	+0.2
	baz=262,SNR=14						
DAWY	Dawson	89.02	26	P	P	13 01 28.5	0.0
	baz=262,SNR=5.8						
YUK6	Outpost Mounta	89.07	29	P	P	13 01 28.9	-0.1
	baz=263						
D27M	Malcolm River	89.21	21	P	P	13 01 29.8	+0.5
	baz=260						
M29M	Somme Creek	89.22	28	IAmb	IAmb	13 01 36.9	
	comp=Z,18nm,1.4s						
M29M	Somme Creek	89.22	28	P	P	13 01 29.9	+0.4
	baz=263						
P29M	Windy Craggy	89.22	30	P	P	13 01 30.2	+0.7

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	baz=264						
F28M	Old Crow	89.34	22	P	P	13 01 29.9	0.0
	baz=262						
L29M	L29M	89.45	27	IAmb	IAmb	13 01 38.1	
	comp=Z,17nm,1.4s						
L29M	L29M	89.45	27	P	P	13 01 30.7	+0.1
	baz=263						
HYT	Haines Junctio	89.47	29	P	P	13 01 31.3	+0.4
	baz=264						
E28M	Babbage River	89.62	21	P	P	13 01 31.8	+0.7
	baz=262						
I29M	Ogilvie Camp,	89.65	25	IAmb	IAmb	13 01 39.0	
	comp=Z,21nm,1.4s						
I29M	Ogilvie Camp,	89.65	25	P	P	13 01 31.0	-0.4
	baz=263						
P30M	Million Dollar	89.67	30	P	P	13 01 31.0	-0.6
	baz=264						
H29M	Whitestone	89.74	24	P	P	13 01 32.4	+0.6
	baz=263						
N30M	Aishikik Lake	89.75	29	P	P	13 01 31.9	0.0
	baz=264						
K29M	Barlow Dome	89.81	26	IAmb	IAmb	13 01 40.4	
	comp=Z,36nm,1.8s						
K29M	Barlow Dome	89.81	26	P	P	13 01 32.6	+0.2
	baz=264						
S31K	Pelican	89.83	32	P	P	13 01 32.5	+0.2
	baz=265						
PLBC	Pleasant Camp	89.90	31	P	P	13 01 33.3	+0.6
	baz=265						
G29M	Pine Creek	89.96	23	P	P	13 01 33.4	+0.6
	baz=263						
O30N	Mendenhall	90.16	29	P	P	13 01 34.3	+0.4
	baz=265						
E29M	Blow River	90.19	22	P	P	13 01 34.2	+0.4
	baz=263						
J30M	Hart River	90.40	25	P	P	13 01 35.4	+0.3
	baz=265						
EPYK	Eagle Plains	90.42	24	P	P	13 01 35.3	+0.3
	baz=264						
SKAG	Skagway	90.43	31	P	P	13 01 35.1	0.0
	baz=266						
I30M	Mount Dempster	90.44	25	P	P	13 01 36.8	+1.6
I30M	Mount Dempster	90.44	25	P	P	13 01 35.1	-0.1
	baz=265						
SYO	Syowa Base	90.64	201	⇑eP	P	13 01 36.0	+0.1
SYO	Syowa Base	90.64	201	⇑ePcP	PcP	13 01 38.6	+1.6
S32K	Killisnoo	90.67	33	P	P	13 01 36.3	0.0
	baz=266						
G30M	tAoh Zraii Nji	90.67	23	P	P	13 01 36.3	+0.1
	baz=265						
WHY	Whitehorse	90.74	29	P	P	13 01 36.4	-0.4
	baz=266						
F30M	Barrier River	90.90	22	P	P	13 01 37.0	-0.2
	baz=265						
P32M	Atlin	91.26	31	P	P	13 01 39.0	-0.1
	baz=267						
H31M	Peel River	91.34	24	P	P	13 01 39.4	+0.1
	baz=267						
CRAG	Craig	91.36	35	P	P	13 01 39.6	+0.1
	baz=267						
U33K	Whale Pass	91.39	34	P	P	13 01 39.2	-0.5
	baz=267						
G31M	Satah River	91.44	23	P	P	13 01 39.6	0.0
	baz=267						
FARO	Faro, Yukon	91.57	28	P	P	13 01 40.5	0.0
	baz=267						
F31M	Tsiigehtchic	91.67	23	P	P	13 01 41.0	+0.3
	baz=267						
P33M	Teslin, Yukon	91.74	30	P	P	13 01 40.7	-0.6
	baz=268						
INK	Inuvik	91.80	22	P	P	13 01 41.0	-0.3
	baz=267						
WRAK	Wrangell Islan	91.84	34	P	P	13 01 41.1	-0.6
	baz=268						
MMPY	Sheldon Lake,	92.56	28	P	P	13 01 45.8	+0.8
	baz=269						
R33M	Jennings River	92.65	31	P	P	13 01 45.4	-0.3
	baz=269						
T35M	Bob Quinn	93.00	33	P	P	13 01 47.6	+0.4
	baz=270						
TORD	Torodi Ar. Bea	135.95	286	PKP	PKPdf	13 07 55.8	-0.1
	comp=Z,1.2nm,0.4s,baz=41,slow=4.6,SNR=2.1						
PB11	IPOC Station P	144.54	130		PKPab	13 08 09.9	+0.1
PB16	IPOC Station P	145.47	128		PKPdf	13 08 14.1	+0.4
CPUP	Villa Florida	147.36	153	PKPbc	PKPdf	13 08 17.8	+1.8
	comp=Z,2.9nm,1.1s,baz=225,slow=7.1,SNR=5.3						
LPAZ	La Paz	147.70	127		PKPbc	13 08 20.3	0.0
LPAZ	La Paz	147.70	127	PKPbc	PKPdf	13 08 19.2	+1.8
	comp=Z,5.7nm,0.9s,baz=216,slow=1.2,SNR=9.6						
RUSC	La Rusia	148.46	83		PKPbc	13 08 21.6	-0.6
CELP	Cerrillos	151.16	56		PKPab	13 08 32.8	-2.9

KRSC 27 12:53:21.9±1.5**,56°.19N**×**164°.27E,h48**^{km}±20^{km}**,Ml3.9, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.81	272	eP	Pn	12 53 36.7	-0.3
KBTR				eS	Sn	12 53 47.0	-0.9
KBG	Krutoberegovo	0.88	275	eP	Pn	12 53 37.6	-0.3
KBG				eS	Sn	12 53 49.3	-0.2
BKI	Bering	1.38	135	eP	Pn	12 53 47.0	+2.3
BKI				eS	Sn	12 54 04.8	+3.0
SMKR	Semkarok	1.61	285	eP	Pn	12 53 49.8	+1.9
SMKR				eS	Sn	12 54 09.9	+2.5
SRKR	Sorokina	1.78	287	eS	Sn	12 54 13.9	+2.1
ZLN	Zelenaya	1.95	266	eP	Pn	12 53 55.7	+3.1
ZLN				eS	Sn	12 54 20.5	+4.6
CIRR	Tsirk	1.97	269	eP	Pn	12 53 55.6	+2.7
BZGR	Bezymyannyi-Gr	2.02	264	eP	Pn	12 53 56.4	+2.8
KLY	Klyuchi	2.02	275	eP	Pn	12 53 54.5	+1.1
BZWR	Bezymyannyi-We	2.12	266	eP	Pn	12 53 58.0	+2.9
BZMR	Bezymyannaya	2.13	265	eP	Pn	12 53 58.5	+3.3
MKZ	Mys Kozlova	2.18	223	eP	Pn	12 53 57.7	+2.0
KIRR	Kirishev	2.21	266	eP	Pn	12 53 59.7	+3.4
KPT	Kopyto	2.28	266	eP	Pn	12 54 00.8	+3.7
KMNR	Kamenistaya	2.31	261	eP	Pn	12 54 01.1	+3.6
TUMD	Tumrok D	2.40	247	eP	Pn	12 54 02.0	+3.3
TUMD				eS	Sn	12 54 30.6	+3.7
KOZ	Kozyrevsk	2.46	269	eP	Pn	12 54 03.4	+3.8
SRDR	Sredinnyy	2.54	275	eP	Pn	12 54 04.4	+3.7
SRDR				eS	Sn	12 54 35.2	+4.8
ESO	Esso	3.13	268	eP	Pn	12 54 12.4	+3.6
OSSR	Ossora	3.14	349	eP	Pn	12 54 10.0	+1.2
SPN	Mys Shipunski	3.96	220	eP	Pn	12 54 22.4	+2.4
SPN				eS	Sn	12 55 05.7	+0.6
SDLR	Sedlovina	4.27	229	eP	Pn	12 54 28.0	+3.6
KRER	Koryakskii	4.31	230	eP	Pn	12 54 29.3	+4.3
KRX	Arik	4.31	231	eP	Pn	12 54 28.9	+3.9
SMAR	Somma	4.31	230	eP	Pn	12 54 28.9	+3.7
AVH	Avacha	4.34	230	eP	Pn	12 54 29.6	+4.2
UGLR	Uglovaya	4.34	229	eP	Pn	12 54 29.2	+3.7
KOK	Koryaka	4.37	231	eP	Pn	12 54 29.4	+3.7
DALK	Dalny	4.50	228	eP	Pn	12 54 30.4	+2.9
KRMR	Karymshinskiy	4.91	229	eP	Pn	12 54 37.9	+4.8
RUS	Russkaya	5.05	224	eP	Pn	12 54 38.6	+3.6
GRL	Gorelyy	5.13	227	eP	Pn	12 54 41.2	+4.9
MTVR	Mutnovka	5.14	226	eP	Pn	12 54 39.9	+3.5
APC	Apacha	5.27	235	eP	Pn	12 54 43.1	+5.1
ASAK	Asacha	5.33	227	eP	Pn	12 54 43.6	+4.7

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*IDC **27** 13:00:32.8±1.3,31°.15S×178°.60W,h0^{km},mb3.9/5, mbtmp3.9/5,Error ellipse: s-maj=32.0km s-min=27.5km az=82.0*

ISC 27 13:00:34.1±1.6**,30°.9S**±0°.3×**179°.2W**±0°.6**,h35**^{km}**,n14,** σ**3^{s}94**/6**,mb3.9**/5**,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.96	35	Pn	Pn	13 01 07.7	+2.7
	121nm,0.3s,baz=127,slow=20,SNR=2.3						
RAO				Sn	Sn	13 01 24.8	-3.5
	130nm,0.3s,baz=238,slow=23,SNR=2.6						
URZ	Urewera	7.97	201	Pn	Pn	13 02 23.5	-4.0
	0.2nm,0.3s,baz=93,slow=18,SNR=3.1						
URZ				Sn	Sn	13 03 59.5	+3.1
	1.0nm,0.3s,baz=11,slow=4.5,SNR=9.6						
ASAR	Alice Springs	42.05	268	P	P	13 08 30.8	+8.2
	1.3nm,0.5s,baz=106,slow=7.3,SNR=21						
	1.3nm,0.5s						
WRA	Warramunga Arr	43.08	273	P	P	13 08 38.8	+7.8
	0.8nm,0.4s,baz=111,slow=8.1,SNR=21						
	0.8nm,0.4s						
FITZ	Fitzroy Crossi	51.32	271	P	P	13 09 42.8	+7.5
	3.4nm,1.0s,baz=121,slow=5.9,SNR=1.9						
	3.4nm,1.0s						
QSPA	South Pole Qui	59.24	180	P	P	13 10 32.7	+1.0
	1.0nm,1.0s,baz=20,slow=2.4,SNR=7.3						
	1.0nm,1.0s						
SNAA	Sanae	77.71	179	P	P	13 12 31.1	+4.2
	0.9nm,0.9s,baz=180,slow=19,SNR=1.5						
	0.9nm,0.9s						
H03S2	Juan Fernandez	81.07	124	T	T	14 41 51.1	
	baz=243						
H03S1	Juan Fernandez	81.08	124	T	T	14 41 41.6	
	baz=243						
H03S3	Juan Fernandez	81.08	124	T	T	14 41 55.5	
	baz=243						
H03N3	Juan Fernandez	81.27	124	T	T	14 41 51.9	
	baz=235						
H03N2	Juan Fernandez	81.27	124	T	T	14 41 53.5	
	baz=235						
H03N1	Juan Fernandez	81.28	124	T	T	14 42 00.6	
	baz=235						
FINES	FINESS Array B	145.22	339	PKPbc	PKiKP	13 20 11.8	+0.7
	2.7nm,0.9s,baz=41,slow=4.4,SNR=7.1						

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*IDC **27** 13:08:23.9±1.2,36°.01N×140°.09E,h0^{km},mb3.5/6, mbtmp3.5/6,Error ellipse: s-maj=30.3km s-min=16.0km az=24.0*

*JMA **27** 13:08:33.4±0.1,36°.1N±0°.4×139°.7E±0°.4,h52^{km}±1^{km}, MV3.4/39,SW IBARAKI PREF*

JMA Felt II J1 at SW IBARAKI PREF .

ISC 27 13:08:32.8±0.9**,36°.08N**±0°.05×**139°.78E**±0°.05**,h60**^{km}**,n33,** σ**1^{s}24**/29**,mb3.6**/6**,2D,Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYT	Yasato	0.37	66	⇓iP	Pn	13 08 43.6	+0.1
JYT				⇓S	Sn	13 08 51.2	0.0
TOK	Tokyo	0.39	182	eP	Pn	13 08 45.0	+1.3
JAG	Ashikaga	0.43	323	iP	Pn	13 08 43.9	-0.2
JAG				S	Sn	13 08 51.8	-0.5
JRY	Ryogami san	0.71	265	iP	Pn	13 08 46.9	-0.3
JKT	Katashina	0.81	328	iP	Pn	13 08 48.2	-0.3
JOD2	Odawara 2	0.99	215	P	Pn	13 08 50.7	-0.1
JYN	Shimob	1.16	240	iP	Pn	13 08 53.9	+0.9
JUON	Uonuma	1.27	333	iP	Pn	13 08 54.4	0.0
JFY	Yanaizu	1.32	358	iP	Pn	13 08 55.7	+0.5
JNT	Takato	1.34	262	iP	Pn	13 08 56.5	+0.9
MJAR	Matsushiro Arr	1.35	290	Pg	Pn	13 08 54.6	-0.9
	9.6nm,0.3s,baz=87,slow=13,SNR=92						
MJAR				Lg	Lg	13 09 13.9	
	3.2nm,0.3s,baz=174,slow=7.9,SNR=4.1						
MAJO	Matsushiro	1.35	290	P	Pn	13 08 55.9	+0.4
MAT	Matsushiro	1.35	290	iP	Pn	13 08 55.5	0.0
JSG	Sagara	1.91	223	P	Pn	13 09 04.3	+1.2
JMM	Marumori	1.96	24	P	Pn	13 09 05.1	+1.4
JGF	Kuroka	2.02	257	P	Pn	13 09 06.6	+2.0
JSD	Sado	2.30	329	P	Pn	13 09 08.5	+0.1
INU	Inuyama	2.36	253	P	Pn	13 09 11.4	+2.2
JHJ2	Mitsune	2.96	179	P	Pn	13 09 17.1	-0.3
JTM	Tenmabayashi	4.81	12	P	Pn	13 09 44.9	+2.3
USRK	Ussuriysk Ar.	10.06	326	Pn	Pn	13 10 58.0	+3.5
	0.1nm,0.3s,baz=134,slow=10,SNR=1.7						
H11N2	WAKE ISLAND Hy	28.84	117	T	T	13 44 30.2	
	baz=308						
H11N1	WAKE ISLAND Hy	28.85	117	T	T	13 44 28.0	
	baz=308						
H11N3	WAKE ISLAND Hy	28.86	117	T	T	13 44 39.9	
	baz=308						
H11S1	WAKE ISLAND Hy	29.50	119	T	T	13 45 26.3	
	baz=314,slow=76,SNR=3.5						
H11S3	WAKE ISLAND Hy	29.50	119	T	T	13 45 28.8	
	baz=314,slow=76,SNR=4.6						
H11S2	WAKE ISLAND Hy	29.51	119	T	T	13 45 28.1	
	baz=314,slow=76,SNR=3.9						
ZALV	Zalesovo Beam	41.59	313	P	P	13 16 16.0	+1.4
	0.4nm,0.3s,baz=98,slow=8.9,SNR=2.1						
	0.4nm,0.3s						
MKAR	Makanchi Array	43.52	303	P	P	13 16 29.8	-0.5
	0.2nm,0.6s,baz=84,slow=8.0,SNR=2.0						
	0.2nm,0.6s						
KURBB	Kurchatov Arra	45.56	309	P	P	13 16 45.6	-0.9
	0.4nm,0.4s,baz=84,slow=7.5,SNR=5.0						
	0.4nm,0.4s						
BVAR	Borovoye Array	50.24	313	P	P	13 17 22.7	0.0
	0.2nm,0.3s,baz=80,slow=8.1,SNR=1.8						
	0.2nm,0.3s						
ILAR	Eielson Array	51.00	32	P	P	13 17 27.3	-0.9
	0.4nm,0.8s,baz=271,slow=6.1,SNR=4.9						
	0.4nm,0.8s						
WRA	Warramunga Arr	55.95	186	P	P	13 18 03.8	-1.1
	0.4nm,0.5s,baz=1.6,slow=7.6,SNR=11						
	0.4nm,0.5s						

IDC 27 13:23:13.3±4.7**,6°.38S**×**126°.33E,h452**^{km}±61^{km}**,mb2.6**/1**, mbtmp3.6**/5**,Error ellipse: s-maj=92.0km s-min=25.4km az=51.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	4.63	215	P	P	13 24 35.5	+1.2
	13nm,0.5s,baz=55,slow=17,SNR=1.7						
BATI				S	S	13 25 40.4	+0.1
	13nm,0.4s,baz=120,slow=8.1,SNR=1.8						
FITZ	Fitzroy Crossi	11.66	183	P	P	13 25 47.3	-1.2
	1.0nm,0.3s,baz=1.4,slow=8.1,SNR=23						
WRA	Warramunga Arr	15.56	151	P	P	13 26 29.2	-1.3
	0.3nm,0.5s,baz=328,slow=11,SNR=16						
ASAR	Alice Springs	18.66	158	P	P	13 27 03.5	+1.0
	0.8nm,0.4s,baz=341,slow=9.4,SNR=21						
MKAR	Makanchi Array	65.76	328	P	P	13 33 12.0	-0.3
	0.2nm,0.5s,baz=114,slow=5.2,SNR=2.4						
	0.2nm,0.5s						

WEL 27 13:28:36.4±1.4**,32°S**±12°×**17°9E**±4°4**,h33**^{km}**,M4.1**/6**, mB4.7**/5**,ML4.5**/11**,MLv4.2**/6**,Mw(mB)3.9**/5**,Error ellipse: s-maj=58.2km s-min=11.4km az=101.3,confirmed, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	5.83	186	P	Pn	13 30 02.1	+1.6
WMGZ				S	Sn	13 31 07.1	+0.9
HAZ	Te Kaha	5.85	191	P	Pn	13 30 00.2	-0.6
HAZ				S	Sn	13 31 08.8	+2.2
RUGZ	Raukumara Rang	6.07	191	P	Pn	13 30 03.6	-0.3
PUZ	Puketiti	6.10	187	P	Pn	13 30 03.7	-0.5
PUZ				S	Sn	13 31 12.3	-0.5
TWGZ	Tauwhareparae	6.23	189	P	Pn	13 30 07.4	+1.3
TWGZ				S	Sn	13 31 17.1	+0.9
MWZ	Matawai	6.46	192	P	Pn	13 30 09.0	-0.1
URZ	Urewera	6.46	195	P	Pn	13 30 09.6	+0.4
URZ				S	Sn	13 31 22.7	+0.9
TKGZ	Te Karaka	6.51	189	P	Pn	13 30 10.0	+0.2
MUGZ	Murupara	6.75	196	P	Pn	13 30 14.1	+0.9
RIGZ	Rimuhau	6.78	190	P	Pn	13 30 12.9	-0.8
SNGZ	Shannon Statio	6.92	192	P	Pn	13 30 15.1	-0.5
MTHZ	Maungataniwha	7.09	195	S	Sn	13 31 38.1	+0.7
RAHZ	Arahi	7.10	193	P	Pn	13 30 17.8	-0.3
BKZ	Black Stump Fm	7.47	196	P	Pn	13 30 22.1	-1.0

NOU 27 13:33:02.7,10°.68S×**165°.00E,h4**^{km}**,MLv4.7**/12**,Santa Cruz Islands,Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUES	Luesalemba Tem	0.90	89	P	Pg	13 33 19.8	-0.2
LUES	Luesalemba Tem	0.90	89	S	Sb	13 33 32.5	-0.7
HURO	Huro Makira	3.05	274	P	Pn	13 33 50.3	-1.5
ALEG	Aligegeo Malai	4.66	294	P	Pn	13 34 13.2	-0.6
HNR	Honiara	5.13	284	P	Pn	13 34 21.3	+0.9
HNR	Honiara	5.13	284	S	Sn	13 35 21.0	+0.9
SAVO	Savo Central	5.33	286	P	Pn	13 34 24.1	+0.9
TATA	Tatamba Isabel	5.61	294	P	Pn	13 34 26.7	-0.2
VLAKA	Lakatoro	5.88	157	P	Pn	13 34 30.7	0.0
KOUNC	Koumac, New Ca	9.84	184	P	Pn	13 35 25.1	+0.1
DZM	Mont Dzumac	11.41	173	P	Pn	13 35 46.4	-0.3

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*IDC **27** 13:36:11.1±0.9,8°.31N×82°.76W,h0^{km},mb3.6/8, mbtmp3.9/13,ML4.4/4,MS4.1/3,Error ellipse: s-maj=30.6km s-min=17.0km az=52.0*

*UCR **27** 13:36:15.3±0.8,8°.34N×82°.86W,h30^{km}±1^{km},MW4.9, Fault plane solution: NP1:ϕ_s104.23000°,δ60.13000°, λ-2.88000°.*

*CATAC **27** 13:36:15.2±0.6,8°N±4°×8°3W±°,h23^{km}±2^{km},M5.2/19, mb5.5/4,mB6.1/3,MLv5.0/19,Mw(mB)5.7/3,Error ellipse: s-maj=8.3km s-min=6.6km az=159.4,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.46; $M_{\theta\theta}$0.15; $M_{\phi\phi}$1.32; $M_{r\theta}$-0.22; $M_{\theta\phi}$-1.77; $M_{\phi r}$-0.82; Fault plane solution: $M_0$2.40784×10^{17} NP1:ϕ_s111.65708°, δ48.88585°,λ-141.20730°. NP2:ϕ_s353.79817°, δ61.83521°,λ-48.23457°. Principal axes: T 2.6661, Plg7.5392°, Azm55.4324°; N -0.6500, Plg35.9596°, Azm150.9421°; P -2.0161, Plg53.0087°, Azm315.3136°; Moment Tensor Solution. Moment tensor: Scale 10^{17} Nm; M_{rr}-1.58; $M_{\theta\theta}$-0.47; $M_{\phi\phi}$2.05; $M_{r\theta}$-0.29; $M_{\theta\phi}$-1.99; $M_{\phi r}$-0.87; Fault plane solution: $M_0$2.87414×10^{17} NP1: ϕ_s115.04041°,δ52.68085°,λ-147.92651°. NP2:ϕ_s4.23804°, δ65.02049°,λ-41.97575°. Principal axes: T 3.2265, Plg7.4742°, Azm62.2199°; N -0.9400, Plg42.3678°, Azm159.0925°; P -2.2864, Plg46.6600°, Azm324.2285°; confirmed*

*NEIC **27** 13:36:16.5±2.3,8°.41N±0°.09×82°.81W±0°.08,h37^{km}±14^{km}, mb4.5/1 Error ellipse: s-maj=13.6km s-min=10.5km az=205.0*

*UPA **27** 13:36:16.2±1.3,8°.40N×82°.85W,h26^{km}±2^{km},MW4.7*

*RSNC **27** 13:36:17.0±1.1,9°N±3°×8°3W±°,h26^{km}±12^{km},M4.0,mb4.5, mB5.1,ML3.8,Mw(mB)4.4*

ISC 27 13:36:13.7±0.5**,8°.36N**±0°.02×**82°.86W**±0°.02**,h13**^{km}**,n222,** σ**1^{s}53**/257**,mb3.6**/8**,MS4.0**/3**,41C-11D,Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LESP3	La Esperanza,	0.08	57	eP	Pg	13 36 21.1	+4.6
LESP3				eS	Sg	13 36 24.6	+6.2
LPPC	Paso Canoas	0.17	6	⇑eP	Pb	13 36 21.5	+2.7
LPPC				eS	Sb	13 36 26.5	+4.4
CDITO	Canoas	0.21	355	⇑P	Pb	13 36 21.7	+2.3
CDITO	Canoas	0.21	355	S	Sb	13 36 27.1	+3.9
LIMO3	Limones	0.26	182	eP	Pb	13 36 23.2	+2.9
LIMO3				eS	Sb	13 36 28.7	+4.0
LMNES	Limones	0.26	181	⇑eP	Pb	13 36 23.1	+2.8
NELY	Ciudad Neily	0.30	343	⇑eP	Pn	13 36 22.7	-1.1
NELY				eS	Sn	13 36 29.0	-1.2
FITO	Golfito	0.39	311	⇑eP	Pb	13 36 23.2	+0.7
FITO				eS	Sb	13 36 29.8	+1.3
DVD	David	0.41	80	eP	Pn	13 36 24.5	-0.8
DVD				eS	Sn	13 36 31.5	-1.3
CSTBL	De las Acacias	0.41	83	⇓eP	Pn	13 36 24.4	-0.9
EDAD	Golfito	0.42	313	⇑eP	Pb	13 36 23.7	+0.6
EDAD				eS	Sb	13 36 30.4	+1.1
MLIR3	Monte Lirio, C	0.43	4	eP	Pn	13 36 25.2	-0.5
MLIR3				eS	Sb	13 36 31.7	+2.0
PEDE3	Pedregal, Chir	0.43	87	eP	Pn	13 36 24.5	-1.1
PEDE3				eS	Sb	13 36 31.3	+1.7
LOCO3	Loma Colorada,	0.44	84	eP	Pn	13 36 24.9	-0.8
LOCO3				eS	Sn	13 36 31.6	-1.8
CLLRA	Cordillera,	0.45	32	⇓eP	Pb	13 36 24.9	+1.4
RSRNO	Rio Sereno	0.45	359	⇑eP	Pn	13 36 25.5	-0.5
BRU2	Volcan	0.46	21		Pb	13 36 25.2	+1.4
BRU2	Volcan	0.46	21	⇓eP	Pb	13 36 25.0	+1.2
BRU2				eS	Sn	13 36 32.9	-1.4
BRU2	Volcan	0.46	21	⇓P	Pb	13 36 25.1	+1.4
BRU2	Volcan	0.46	21	eP	Pn	13 36 25.3	-0.9
BRU2				eS	Sn	13 36 33.1	-1.2
VITO	San Vito	0.47	346	⇑eP	Pn	13 36 25.5	-0.7
SCLRA	Santa Clara, W	0.47	9	⇑eP	Pn	13 36 25.7	-0.7
PTAR3	Potrerillos Ar	0.48	47	eP	Pn	13 36 25.6	-0.9
PTAR3				eS	Sn	13 36 33.7	-1.1
BC3P	Paso Ancho	0.51	28	eP	Pb	13 36 25.8	+1.1
BC3P				eS	Sn	13 36 34.8	-0.8
CHIR3	Chiriqui UPA,	0.52	87	eP	Pn	13 36 26.0	-0.8
CHIR3				eS	Sb	13 36 33.6	+1.4
BQTLY	Boquete Panama	0.55	45	⇓eP	Pb	13 36 26.3	+0.9
ALCO	Alturas Coton,	0.58	2	⇑eP	Pb	13 36 26.6	+0.7
ALCO				eS	Sb	13 36 35.6	+1.4
PSOM3	Paja de Sombre	0.62	59	eP	Pb	13 36 27.2	+0.8
PSOM3				eS	Sb	13 36 36.4	+1.4
EDP2	Potrero Grande	0.72	334	⇑eP	Pb	13 36 29.0	+0.8
PBNVO	Pueblo Nuevo,	0.84	51	⇓eP	Pg	13 36 30.2	+0.2
PANP	Palmar Norte	0.84	315	⇑eP	Pb	13 36 30.3	+0.1
RBALA	Bur	0.86	54	⇓eP	Pb	13 36 30.8	+0.2
BURE	Buenos Aires	0.94	329	⇑eP	Pb	13 36 31.9	+0.1
DRK0	Durika	0.97	337	⇑eP	Pb	13 36 32.2	-0.4
DRK0	Durika	0.97	337	⇑P	Pb	13 36 32.3	-0.4
DRK0	Durika	0.97	337	eP	Pb	13 36 32.5	-0.1
DRK0				eS	Sb	13 36 46.3	+0.8
RMDIO	Remedios, Chir	1.02	98	⇓eP	Pb	13 36 33.1	-0.2
EDPE	Pejibaye, P	1.06	318	⇑eP	Pb	13 36 33.7	-0.3
OCHAL	Ojochal	1.07	313	⇑P	Pb	13 36 33.8	-0.3
OCHAL	Ojochal	1.07	313	S	Sg	13 36 48.6	+0.2
PDCAN	Manzana , Fuen	1.15	94	⇓eP	Pb	13 36 34.6	-0.9
ISBTO	Bastimentos Is	1.17	33	eP	Pg	13 36 36.7	+0.5
SAJE	San Jernim	1.17	327	⇑eP	Pn	13 36 35.0	-1.0
LLNJ	Naranjito	1.65	312	eP	Pn	13 36 42.4	-0.1
PIEC	Cerro El Cedra	1.66	319	eP	Pn	13 36 42.3	-0.5
MESA3	La Mesa, Verag	1.67	97	eP	Pn	13 36 42.9	+0.3
MESA3				eS	Sb	13 37 04.5	-0.7
SVQ2	Quepos	1.67	309	eP	Pn	13 36 42.5	-0.3
GMAL	Guarumal, Vera	1.71	110	eP	Pn	13 36 42.6	-0.8
GMAL	Guarumal, Vera	1.71	110	P	Pn	13 36 42.5	-0.8
GMAL				S	Sn	13 37 04.7	-0.4
GMAL	Guarumal, Vera	1.71	110	eP	Pn	13 36 44.0	+0.7
GMAL				eS	Sn	13 37 04.3	-0.8
RSUS3	Rio de Jesus,	1.72	103	eP	Pn	13 36 43.1	-0.2
RSUS3				eS	Sn	13 37 04.7	-0.6
TURIB	Turrialba	1.74	332	⇑eP	Pn	13 36 44.0	+0.2
SAFE3	Santa Fe, Vera	1.77	85	eP	Pn	13 36 44.6	+0.5
SAFE3				eS	Sn	13 37 05.8	-0.6
PISJ	San Jernim	1.78	315	eP	Pn	13 36 44.2	-0.1
VERB	Verbena	1.78	332	⇑eP	Pn	13 36 44.9	+0.6
TAAN	Batan	1.78	344	eP	Pn	13 36 44.7	+0.6
LCR2	La Lucha 2	1.78	320		Pn	13 36 44.1	-0.3
LCR2	La Lucha 2	1.78	320	⇑eP	Pn	13 36 44.1	-0.3
LCR2	La Lucha 2	1.78	320	⇑P	Pn	13 36 44.1	-0.3
LCR2	La Lucha 2	1.78	320	S	Sn	13 37 07.7	+0.8
ABE2	San Pablo	1.78	318	eP	Pn	13 36 44.6	+0.2
PCAYA	Pacayas	1.81	329	eP	Pn	13 36 45.2	+0.4
PICV	PH. Pirrs	1.82	314	eP	Pn	13 36 44.8	-0.1
VTCV	VTCV, Calle Va	1.82	332	⇑eP	Pn	13 36 45.6	+0.6
TAGO	Cartago	1.83	325	eP	Pn	13 36 45.6	+0.6
RESJ	San Isidro (Tu	1.83	335	eP	Pn	13 36 45.8	+0.8
IRES	Siquirres	1.84	340	⇑eP	Pn	13 36 45.9	+0.9
ABRB	Las Abras (San	1.84	333	eP	Pn	13 36 45.9	+0.6
RAFA	San Farael, Vo	1.84	329	⇑eP	Pn	13 36 45.7	+0.3
PAR1A	Puntarenas Pro	1.84	312	eP	Pn	13 36 45.1	0.0
CVTV	Tajo	1.85	332	⇑eP	Pn	13 36 46.1	+0.6
CVTQ	Turrialba Volc	1.86	331	⇑eP	Pn	13 36 46.2	+0.5
VTLA	Turrialba Volc	1.86	331	⇑eP	Pn	13 36 46.1	+0.5
VTR0	Volcan Turrial	1.87	332	⇑eP	Pn	13 36 46.4	+0.5
RVLA	Villa Bonita	1.88	337	⇑eP	Pn	13 36 46.6	+1.0
STIA3	Santiago, Vera	1.88	98	eP	Pn	13 36 46.2	+0.6
STIA3				eS	Sb	13 37 10.5	-1.0
VICA	Volcano Irazu	1.88	329	⇑eP	Pn	13 36 46.1	+0.1
AMPA	Desamparados	1.93	322	eP	Pn	13 36 46.9	+0.4
CORON	Coronado	1.96	325	eP	Pn	13 36 47.2	+0.4
ECI	Escuela Centro	1.96	323	eP	Pn	13 36 46.9	+0.1
LUJA	Lujan	1.96	322	eP	Pn	13 36 47.8	+0.9
CVIMO	Finca Echandi	1.97	327	eP	Pn	13 36 47.6	+0.6
CALO3	Calobre, Verag	1.99	91	eP	Pn	13 36 47.8	+0.6
CALO3				eS	Sn	13 37 11.0	-1.0
DOMI	Santo Domingo	2.02	323	eP	Pn	13 36 48.4	+0.8
SANTA	Santa Ana	2.04	320	eP	Pn	13 36 48.1	+0.3
HDC	Heredia	2.05	323		Pn	13 36 48.0	0.0
HDC	Heredia	2.05	323	eP	Pn	13 36 48.3	+0.3
HDC	Heredia	2.05	323	⇑P	Pn	13 36 48.5	+0.5
HEME	Heredia, Merce	2.06	322	eP	Pn	13 36 49.0	+0.9
BELE	Belen	2.07	321	eP	Pn	13 36 48.9	+0.6
VBV1	V. Barva	2.13	325	⇑eP	Pn	13 36 49.7	+0.4
CARI	Cariari	2.17	336	eP	Pn	13 36 50.7	+1.2
TCS1	Tacares	2.19	320	P	Pn	13 36 50.5	+0.5
CRIS3	El Cristo, Coc	2.22	93	eP	Pn	13 36 50.9	+0.6
CRIS3				eS	Sn	13 37 17.8	+0.2
CACAO	El Cacao, Vera	2.22	117	P	Pn	13 36 50.3	0.0
CACAO	El Cacao, Vera	2.22	117	eP	Pn	13 36 50.6	+0.4
CACAO				eS	Sn	13 37 17.6	0.0

TRT2	Tortugero	2.35	338	⇑eP	Pn	13 36 52.6	+0.6
TRT2	Tortugero	2.35	338	⇑P	Pn	13 36 52.7	+0.7
TRT2	Tortugero	2.35	338	S	Sn	13 37 21.9	+1.2
SARA	Sarapiqu	2.37	331	eP	Pn	13 36 53.4	+1.0
CHIT3	Chitre	2.45	99	eP	Pn	13 36 54.8	+1.4
CHIT3				eS	Sn	13 37 23.1	-0.1
CBL1	Cabuya	2.52	299	eP	Pn	13 36 53.9	-0.6
TOSI3	Tonosi	2.57	111	eP	Pn	13 36 55.8	+0.7
TOSI3				eS	Sn	13 37 26.2	-0.1
AZU	Azuero	2.62	102	P	Pn	13 36 57.3	+1.6
AZU				S	Sn	13 37 27.9	+0.5
AZU	Azuero	2.62	102	eP	Pn	13 36 57.5	+1.8
AZU				eS	Sn	13 37 27.8	+0.3
SOCE	Pocosol	2.66	319		Pn	13 36 57.5	+1.1
SOCE	Pocosol	2.66	319	eP	Pn	13 36 57.4	+1.1
SOCE	Pocosol	2.66	319	⇑P	Pn	13 36 57.4	+1.1
SOCE	Pocosol	2.66	319	S	Sb	13 37 31.7	-2.1
ARE1	Arenal 1	2.78	319	eP	Pn	13 36 59.1	+1.1
VARE2	V. Arenal	2.78	319	eP	Pn	13 36 59.2	+1.2
CEDE	Laguna Cedeo	2.79	319	eP	Pn	13 36 59.3	+1.1
COVE	Coope Vega, Sa	2.79	327	P	Pn	13 36 59.2	+1.0
PCRI3	Pocri, Los San	2.80	104	eP	Pn	13 36 59.6	+1.3
PCRI3				eS	Sn	13 37 30.9	-1.0
ACHO3	Achotines, Los	2.82	109	eP	Pn	13 36 60.0	+1.5
ACHO3				eS	Sn	13 37 32.8	+0.4
JTS	Las Juntas de	2.82	313	Pn	Pn	13 36 58.8	+0.3
	106nm,0.3s,baz=142,slow=5.2,SNR=126						
JTS				Sn	Sn	13 37 32.4	0.0
	266nm,0.3s,baz=54,slow=20,SNR=16						
	324nm,0.4s						
JTS	Las Juntas de	2.82	313	eP	Pn	13 36 58.8	+0.3
JTS	Las Juntas de	2.82	313	P	Pn	13 36 58.0	-0.5
JTS	Las Juntas de	2.82	313	eP	Pn	13 36 58.9	+0.3
JTS				eS	Sn	13 37 32.0	-0.4
INDI	Punta indio, G	3.01	300	⇑P	Pn	13 37 01.0	-0.1
INDI	Punta indio, G	3.01	300	S	Sn	13 37 34.5	-2.6
ZANG	Zanguenga, Cho	3.01	79	eP	Pn	13 37 02.2	+1.0
QUEB	Quebradon, Cot	3.02	318	eP	Pn	13 37 02.4	+1.1
CMARA	Lajas Hojancha	3.02	303	eP	Pn	13 37 01.7	+0.3
CMARA	Lajas Hojancha	3.02	303	P	Pn	13 37 01.9	+0.5
TIMP	Tierras Morena	3.07	316	eP	Pn	13 37 04.4	+2.4
BCIP	Isla Barro Col	3.09	75		Pn	13 37 03.2	+0.9
BCIP	Isla Barro Col	3.09	75	⇓eP	Pn	13 37 02.7	+0.5
BCIP	Isla Barro Col	3.09	75	P	Pn	13 37 03.0	+0.7
BCIP				S	Sn	13 37 40.6	+1.6
BCIP	Isla Barro Col	3.09	75	eP	Pn	13 37 02.9	+0.7
BCIP				eS	Sn	13 37 37.6	-1.4
CHOR3	La Chorrera	3.10	80	eP	Pn	13 37 04.7	+2.3
CHOR3				eS	Sn	13 37 40.1	+0.7
TABO3	Taboga, Panama	3.29	82	eP	Pn	13 37 05.3	+0.3
TABO3				eS	Sn	13 37 43.1	-0.9
UPA	Univ. de Panam	3.34	79	eP	Pn	13 37 06.9	+1.3
UPA				eS	Sn	13 37 46.5	+1.2
ALIBA	Liberia Airpor	3.46	310	eP	Pn	13 37 09.2	+2.0
LAPC	Finca la Perla	3.49	313	eP	Pn	13 37 08.8	+1.1
CAZU	Cerro Azul, Pa	3.52	75	eP	Pn	13 37 08.7	+0.5
BLUN	Bluefields	3.73	346	⇑P	Pn	13 37 11.2	+0.1
BLUN	Bluefields	3.73	346	P	Pn	13 37 11.6	+0.6
LCRUZ	La Cruz	3.84	315	eP	Pn	13 37 14.3	+1.7
CARN	Rivas	3.84	317	P	Pn	13 37 15.3	+2.6
ESPN	Las Esperanzas	4.06	340		Pn	13 37 16.4	+0.7
ESPN	Las Esperanzas	4.06	340	⇑eP	Pn	13 37 16.3	+0.6
ESPN	Las Esperanzas	4.06	340	P	Pn	13 37 16.1	+0.5
ACON	Acoyapa	4.25	328		Pn	13 37 18.6	+0.4
ACON	Acoyapa	4.25	328	⇑eP	Pn	13 37 18.6	+0.4
ACON	Acoyapa	4.25	328	⇑P	Pn	13 37 18.5	+0.4
ACON	Acoyapa	4.25	328	P	Pn	13 37 18.8	+0.6
SAIC	Isla e San And	4.30	15	P	Pn	13 37 18.3	-0.5
SAIC				S	Sn	13 38 07.0	-1.9
MAPC	Malpelo	4.51	164	P	Pn	13 37 16.7	-5.0
MAPC				S	Sn	13 38 09.9	-4.1
NANN	Nandasmo	4.79	318	P	Pn	13 37 29.5	+3.9
BOAB	BOACO BROADBAN	4.91	326		Pn	13 37 27.9	+0.6
BOAB	BOACO BROADBAN	4.91	326	⇓P	Pn	13 37 28.2	+0.9
PTAC	Punta Ardita,	5.15	103	P	Pn	13 37 30.4	-0.1
	40nm,1.0s						
PRVC	Isla de Provid	5.19	16	P	Pn	13 37 31.4	+0.3
PRVC				S	Sn	13 38 29.1	-1.9
PRVC	Isla de Provid	5.19	16	P	Pn	13 37 29.9	-1.3
	114nm,0.8s						
MOMN	Momotombo	5.41	318	P	Pn	13 37 38.6	+4.3
MATN	Matagalpa	5.45	327	P	Pn	13 37 34.8	0.0
CNGN	Cerro Negro	5.58	318		Pn	13 37 36.9	+0.3
CNGN	Cerro Negro	5.58	318	P	Pn	13 37 36.7	+0.1
	15µm948nm,0.6s						
SIUN	Universidad Ur	5.64	341	P	Pn	13 37 38.0	+0.6
HERN	Volcan Telica	5.75	318		Pn	13 37 40.7	+1.8
RCVN	Varillal2	6.14	328	P	Pn	13 37 45.3	+1.1
APAC	Apartado, Choc	6.23	94	P	Pn	13 37 48.3	+2.9
	83nm,0.7s						
DBBC	Dabeiba	6.72	101	P	Pn	13 37 53.7	+1.4
YUSH	Yuscaran	6.79	325	P	Pn	13 37 55.0	+1.7
TGUH	Tegucigalpa,Un	7.13	323	P	Pn	13 38 06.8	+8.9
CBOC	Ciudad Bolivar	7.23	110	P	Pn	13 37 59.2	-0.2
	17nm,0.9s						
UREC	San Jos de Ur	7.28	94	P	Pn	13 38 01.1	+1.3
	15nm,0.7s						
PLMC	San Jos del P	7.38	117	P	Pn	13 38 01.1	-0.2
	19nm,0.7s						
HELC	Santa Helena	7.58	106	P	Pn	13 38 05.8	+1.5
	18nm,0.9s						
SJCC	San Jacinto, C	7.73	78	P	Pn	13 38 07.4	+1.3
	46nm,0.8s						
YOTC	Yotoco, Valle	7.80	124	P	Pn	13 38 08.2	+1.1
	15nm,0.8s						
ZARC	Zaragoza, Cauc	7.97	96	P	Pn	13 38 10.2	+0.8
	21nm,0.7s						
JAMC	Jamundi, Valle	8.00	129	P	Pn	13 38 11.8	+1.9
	14nm,1.1s						
GUY2C	Guyana, Caldas	8.06	112	P	Pn	13 38 13.7	+2.6
	34nm,0.7s						
ANIL	Santa Ana	8.35	117	P	Pn	13 38 17.7	+2.9
NORC	Norcasia	8.40	109	P	Pn	13 38 17.7	+2.4
	13nm,0.7s						
BBAC	Balboa, Cauca	8.42	138	P	Pn	13 38 18.6	+2.9
	500nm43nm,1.0s						
POPC	Popayan, Colom	8.44	133	P	Pn	13 38 18.8	+2.7
	29nm,0.9s						
PTBC	PUERTO BERRIO,	8.52	102	P	Pn	13 38 20.2	+3.2
	253nm8.4nm,0.7s						
ORTC	Ortega, Tolima	8.76	120	P	Pn	13 38 23.4	+3.1
	24nm,0.6s						
PRAC	Prado	9.17	120	P	Pn	13 38 29.0	+3.1
	20nm,0.5s						
ROSC	El Rosal	9.17	112	Pn	Pn	13 38 28.4	+2.2
	3.2nm,0.3s,baz=302,slow=6.5,SNR=3.9						
OTAV	Otavalo	9.19	151		Pn	13 38 27.8	+1.3
OTAV	Otavalo	9.19	151	P	Pn	13 38 29.5	+3.0
	23nm,1.2s						
BONI	La Bonita	9.48	146	P	Pn	13 38 35.4	+5.1
	68nm,1.0s						
CHIC	Chingaza	9.79	112	P	Pn	13 38 38.1	+3.3
	19nm,0.8s						
FLOC	Florencia	9.84	133		Pn	13 38 34.1	-1.0
FLOC	Florencia	9.84	133	P	Pn	13 38 37.9	+2.9
	17nm,1.1s						
URMC	La Uribe, Meta	9.85	121	P	Pn	13 38 37.6	+2.4
	20nm,0.8s						
RUSC	La Rusia	10.00	104	Pn	Pn	13 38 38.4	+0.7
RUSC	La Rusia	10.00	104	P	Pn	13 38 39.0	+1.3
	20nm,1.1s						
VILC	Villavicencio,	10.04	114	P	Pn	13 38 40.4	+2.5
	787nm80nm,0.6s						
PIAT	Ana Tenorio	10.37	154	P	Pn	13 38 47.3	+4.7
	25nm,0.9s						
COHC	Cochancay	11.34	161		Pn	13 38 59.1	+3.5
COHC	Cochancay	11.34	161	P	Pn	13 38 58.7	+3.1
	19nm,0.9s						
SDV	Santo Domingo	12.10	87		Pn	13 39 07.6	+1.5
SDV	Santo Domingo	12.10	87	Pn	Pn	13 39 07.5	+1.4
	0.5nm,0.3s,baz=295,slow=8.4,SNR=7.8						
SDV				Sn	Sn	13 41 18.0	-3.1
	baz=348,slow=16						
SDV	Santo Domingo	12.10	87	P	Pn	13 39 07.8	+1.7
CMIG	Matias Romero	14.58	308	Pn	Pn	13 39 40.9	+1.0
	0.4nm,0.3s,baz=103,slow=11,SNR=7.9						
	6.1nm,0.7s						
BAUV	El Baul	14.66	87	P	P	13 39 45.9	-1.4
BANI	BANI	15.71	49		P	13 40 00.2	+1.1
ATAH	Atahualpa	16.02	164	Pn	Pn	13 39 58.8	-0.6
	4.4nm,0.8s,baz=0.0,slow=20,SNR=3.0						
PCRV	Puerto La Cruz	18.07	83	P	Pn	13 40 23.0	-1.8
	0.6nm,0.3s,baz=343,slow=11,SNR=5.3						
	8.0nm,0.8s						
SJG	San Juan	18.91	58	P	P	13 40 33.4	-1.0
	5.1nm,0.3s,baz=306,slow=18,SNR=4.3						
	7.3nm,0.3s						
CZSB	Cruzeiro do Su	18.92	147	P	P	13 40 28.9	-5.5
CZSB				IAmb	IAmb	13 40 37.0	
	comp=Z,20nm,0.7s						
LPAZ	La Paz	28.50	149	P	P	13 42 08.8	-0.9
	comp=Z,1.7nm,0.9s,baz=342,slow=9.9,SNR=4.7						
LPAZ				LR	LR	13 54 38.4	
	comp=Z,300nm,18.1s,baz=70,slow=39						
	comp=Z,1.7nm,0.9s						
TXAR	Lajitas Array	28.59	320	P	P	13 42 11.4	+1.5
	comp=Z,0.1nm,0.5s,baz=126,slow=7.2,SNR=3.1						
	comp=Z,0.1nm,0.5s						
PDAR	Pinedale Array	41.52	330	P	P	13 44 00.4	-0.7
	comp=Z,0.2nm,0.5s,baz=119,slow=7.5,SNR=1.7						
	comp=Z,0.2nm,0.5s						
H03N2	Juan Fernandez	41.74	175	T	T	14 28 36.5	
	baz=352						
H03N1	Juan Fernandez	41.74	175	T	T	14 28 47.2	
	baz=352						
H03N3	Juan Fernandez	41.76	175	T	T	14 28 41.6	
	baz=352						
BDFB	Brasilia	41.95	125	LR	LR	14 03 38.3	
	comp=Z,212nm,18.7s,baz=27,slow=39						
ULM	Lac du Bonnet	43.14	348	P	P	13 44 12.2	-1.6
	comp=Z,1.4nm,0.6s,baz=157,slow=5.9,SNR=3.4						
	comp=Z,1.4nm,0.6s						
NVAR	Mina Array Bea	43.73	319	P	P	13 44 19.9	+0.7
	comp=Z,0.3nm,0.5s,baz=124,slow=5.4,SNR=2.8						
	comp=Z,0.3nm,0.5s						
PLCA	Paso Flores	50.15	168	P	P	13 45 07.0	-2.1
	comp=Z,1.8nm,0.8s,baz=321,slow=7.6,SNR=3.5						
	comp=Z,1.8nm,0.8s						
ILAR	Eielson Array	71.56	336	P	P	13 47 34.5	+0.1
	comp=Z,0.5nm,0.6s,baz=110,slow=4.6,SNR=10						
	comp=Z,0.5nm,0.6s						
ESDC	Sonseca Array	76.17	51	P	P	13 48 01.8	-0.2
	comp=Z,0.2nm,0.5s,baz=224,slow=6.9,SNR=2.1						
	comp=Z,0.2nm,0.5s						
TORD	Torodi Ar. Bea	82.86	78	LR	LR	14 25 01.9	
	comp=Z,105nm,20.6s,baz=289,slow=35						
ASAR	Alice Springs	141.68	242	PKP	PKPdf	13 55 43.5	-2.4
	comp=Z,0.6nm,0.9s,baz=106,slow=2.4,SNR=4.6						
WRA	Warramunga Arr	142.24	248	PKP	PKPdf	13 55 44.1	-2.8
	comp=Z,0.5nm,0.8s,baz=102,slow=2.1,SNR=2.5						
CMAR	Chiang Mai Arr	153.29	356	PKPbc	PKPbc	13 56 12.5	-0.1
	comp=Z,0.2nm,0.3s,baz=6.3,slow=2.1,SNR=1.9						

IDC 27 13:37:13.2±4.2**,17°.39N**×**122°.60E,h0^{km},mb3.4**/4**,**
mbtmp3.4/4**,Error ellipse: s-maj=389.2km**
s-min=23.2km az=63.0,Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	38.84	162	P	P	13 44 39.9	-0.4
	0.7nm,0.8s,baz=342,slow=8.9,SNR=4.9						
	0.7nm,0.8s						
H11S3	WAKE ISLAND Hy	41.88	82	T	T	14 30 01.5	
	baz=276,slow=75,SNR=360						
H11S1	WAKE ISLAND Hy	41.89	81	T	T	14 30 00.7	
	baz=276,slow=75,SNR=354						
H11S2	WAKE ISLAND Hy	41.90	82	T	T	14 30 01.6	
	baz=276,slow=75,SNR=344						
H11N1	WAKE ISLAND Hy	41.97	80	T	T	14 30 05.0	
	baz=274,slow=75,SNR=129						
H11N2	WAKE ISLAND Hy	41.97	80	T	T	14 30 05.3	
	baz=274,slow=75,SNR=110						
H11N3	WAKE ISLAND Hy	41.98	80	T	T	14 30 06.3	
	baz=274,slow=75,SNR=70						
ASAR	Alice Springs	42.27	165	P	P	13 45 08.8	+0.1
	0.4nm,0.7s,baz=340,slow=8.2,SNR=7.2						
	0.4nm,0.7s						
MKAR	Makanchi Array	44.27	320	P	P	13 45 25.4	+0.7
	0.2nm,0.5s,baz=102,slow=7.5,SNR=1.9						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	48.24	324	P	P	13 45 55.0	-0.8
	0.4nm,0.5s,baz=120,slow=7.5,SNR=4.9						
	0.4nm,0.5s						

*KRNET **27** 13:41:51.8±0.1,40°.83N×80°.29E,mb3.0*
*SOME **27** 13:41:51.0,40°.70N×79°.60E,h15^{km}*
*NNC **27** 13:41:54.6±5.0,40°.74N×79°.08E,h0^{km},mb3.2,mpv2.9,*
Error ellipse: s-maj=46.2km s-min=33.0km az=85.0
ISC 27 13:41:48.3±3.7**,40°.4N**±0°.2×**79°.5E**±0°.1**,h10^{km},n14,**
σ**1^{s}.19**/17**,11C-3D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	Taragay, Kyrgy	1.82	316	⇑eP	Pg	13 42 29.5	+6.3
TARG				⇑iS	Sg	13 42 57.3	+10
PRZ	Przheval'sk	2.21	338	⇑eP	Pg	13 42 31.2	+0.5
PRZ				⇑eS	Sg	13 42 59.7	+0.4
KDJ	Kajisay	2.43	315	⇑eP	Pg	13 42 37.6	+2.6
KDJ				⇑iS	Sg	13 43 11.0	+4.5
UZB	Uzynbulak	2.73	353	Pg	Pb	13 42 37.2	-0.2
	5.3nm,0.3s						
UZB				Lg	Lg	13 43 10.3	
	6.7nm,0.3s						
SATY	Saty	2.75	343	Pg	Pb	13 42 38.6	+1.0
	2.6nm,0.3s						
SATY				Lg	Lg	13 43 13.0	
	9.4nm,0.5s						
NRN	Naryn	2.83	292	⇑eP	Pg	13 42 46.2	+3.6
NRN				⇑eS	Sg	13 43 26.3	+7.0
PDGK	Podgornoye	2.89	360	⇑Pn	Pb	13 42 40.5	+0.4
	4.6nm,0.4s						
PDGK				⇓Sn	Sb	13 43 13.6	-2.0
	5.5nm,0.5s						
ULHL	Ulahol	3.05	308	⇑iP	Pg	13 42 46.5	-0.2
ULHL				⇑iS	Sg	13 43 26.9	+0.7
KPKS	Kokpek	3.09	349	Pg	Pb	13 42 43.6	+0.1
	0.7nm,0.5s						
KPKS				Lg	Lg	13 43 21.3	
	9.3nm,0.5s						
BOOM	Boomskoye usch	3.37	309	⇓eP	Pg	13 42 51.1	-1.8
BOOM				⇓eS	Sg	13 43 35.0	-1.6
BLB	Baldybastay	3.74	349	Pg	Pb	13 42 54.0	-0.5
	4.7nm,0.5s						
BLB				Lg	Lg	13 43 39.7	
	6.6nm,0.7s						
KTBS	Karatobe	3.89	328	Pg	Pb	13 42 57.7	+0.7
KTBS				Lg	Lg	13 43 45.5	
DJR	Jarkent	3.90	3	Pg	Pb	13 42 57.2	-0.1
	0.5nm,0.3s						
DJR				Lg	Lg	13 43 45.0	
	4.0nm,0.5s						
DJR	Jarkent	3.90	3	eP	Pb	13 42 57.2	-0.1
	0.5nm,0.3s						
DJR				eS	Sb	13 43 45.0	+0.5
	4.0nm,0.5s						

*IDC **27** 14:05:15.9±0.7,2°.70S×138°.39E,h0^{km},mb3.8/10,*
mbtmp3.8/13,ML3.8/3,Error ellipse: s-maj=21.6km
s-min=17.3km az=77.0
*DJA **27** 14:05:18.0±1.0,2°S±8°×13°9E±°,h19^{km}±10^{km},M3.9/6,*
MLv3.9/6
ISC 27 14:05:20.9±0.6**,2°.77S**±0°.09×**138°.43E**±0°.06**,h35^{km},n19,**
σ**1^{s}.43**/19**,mb3.8**/10**,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.83	20	P	Pn	14 05 28.4	-7.7
GENI	Genyem	1.75	84	P	Pn	14 05 46.5	-2.3
JAY	Jayapura	2.29	84	Pn	Pn	14 05 56.4	+0.2
	15nm,0.3s,baz=240,slow=12,SNR=24						
JAY				Sn	Sn	14 06 26.8	+3.5
	13nm,0.3s,baz=294,slow=20,SNR=6.0						
	43nm,0.3s						
JAY	Jayapura	2.29	84	P	Pn	14 05 49.4	-6.9
BAKI	Biak	2.80	304	P	Pn	14 06 01.8	-1.5
RKPI	Ransiki, Papua	4.43	286	P	Pn	14 06 27.1	+1.4
WRA	Warramunga Arr	17.53	193	P	Pn	14 09 22.4	-0.3
	0.4nm,0.3s,baz=16,slow=12,SNR=17						
	1.5nm,0.6s						
FITZ	Fitzroy Crossi	19.73	219	P	P	14 09 47.2	-0.5
	0.2nm,0.3s,baz=38,slow=9.4,SNR=6.4						
FITZ				S	S	14 13 26.5	-1.9
	2.8nm,0.9s,baz=73,slow=15,SNR=2.2						
	1.6nm,0.8s						
ASAR	Alice Springs	21.23	192	P	P	14 10 04.5	+0.5
	2.6nm,0.5s,baz=19,slow=10,SNR=44						
	2.6nm,0.5s						
KSRS	Korea Array	41.19	347	P	P	14 13 01.8	-0.4
	0.5nm,0.6s,baz=148,slow=7.2,SNR=2.8						
	0.5nm,0.6s						
CMAR	Chiang Mai Arr	44.22	300	P	P	14 13 27.7	+0.5
	0.7nm,0.8s,baz=124,slow=5.9,SNR=6.5						
	0.7nm,0.8s						
SONM	Songino Array	57.66	335	P	P	14 15 08.8	+0.9
	0.2nm,0.3s,baz=157,slow=4.1,SNR=2.6						
	0.2nm,0.3s						
MKAR	Makanchi Array	69.67	323	P	P	14 16 26.7	-0.3
	0.9nm,0.8s,baz=107,slow=7.8,SNR=7.3						
	0.9nm,0.8s						
KURBB	Kurchatov Arra	73.62	325	P	P	14 16 50.2	-0.5
	0.8nm,0.2s,baz=135,slow=7.7,SNR=5.3						
	0.8nm,0.2s						
VNDA	Vanda	75.74	175	P	P	14 17 03.3	+0.8
	0.7nm,0.7s,baz=318,slow=6.1,SNR=4.2						
	0.7nm,0.7s						
BVAR	Borovoye Array	79.20	325	P	P	14 17 22.3	-0.1
	0.6nm,0.5s,baz=93,slow=10,SNR=3.1						
	0.6nm,0.5s						
ILAR	Eielson Array	86.01	24	P	P	14 17 55.8	-1.7
	0.6nm,0.7s,baz=267,slow=4.2,SNR=8.4						
	0.6nm,0.7s						
QSPA	South Pole Qui	87.17	180	P	P	14 18 04.3	+0.9
	1.5nm,0.8s,baz=357,slow=2.1,SNR=5.4						
	1.5nm,0.8s						
LPAZ	La Paz	147.63	127	PKPbc	PKiKP	14 25 04.5	-1.1
	0.9nm,0.6s,baz=244,slow=6.8,SNR=4.6						

*NEIC **27** 14:11:44.8±2.6,4°.67S±0°.09×149°.6E±0°.2,h570^{km}±8^{km},*
mb4.3/21,Error ellipse: s-maj=25.3km s-min=11.1km
az=105.0
*IDC **27** 14:11:46.1±1.6,4°.65S×149°.36E,h594^{km}±21^{km},mb3.2/10,*
mbtmp4.2/12,Error ellipse: s-maj=19.2km s-min=10.6km
az=112.0
ISC 27 14:11:44.8±0.6**,4°.69S**±0°.07×**149°.43E**±0°.09**,h577^{km},n40,**
σ**1^{s}.22**/44**,mb4.0**/19**,Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	2.77	80	P	P	14 12 58.1	-2.7
MANU	Manus Island	3.34	322	P	P	14 13 04.0	-0.1
PMG	Port Moresby	5.20	206	S	S	14 14 33.4	-0.5
	baz=300,slow=20						
JAY	Jayapura	8.97	284	P	P	14 13 52.6	-0.4
	10nm,0.4s,baz=122,slow=5.0,SNR=19						
JAY				S	S	14 15 38.7	+0.6
	4.3nm,0.8s,baz=158,slow=19,SNR=1.9						
CTAO	Charters Tower	15.62	191	P	P	14 15 01.0	+1.4
GUMO	Guam	18.71	346	P	P	14 15 28.3	+0.3
	19nm,0.6s,baz=180,slow=19,SNR=1.2						
EIDS	Eidsvold	20.63	176	P	P	14 15 43.5	-1.7
EIDS				IAmb	IAmb	14 15 46.9	
	comp=Z,9.2nm,0.9s						
WB0	Warramunga Arr	20.96	223	P	P	14 15 48.6	+0.3
WB0				IAmb	IAmb	14 16 10.4	
	comp=Z,12nm,1.3s						
WR8	Warramunga Arr	21.02	223	P	P	14 15 50.0	+1.2
WR8				IAmb	IAmb	14 16 22.4	
	comp=Z,11nm,1.4s						
WRAB	Tennant Creek	21.10	223	P	P	14 15 50.5	+0.9
WRAB				IAmb	IAmb	14 15 52.3	
	comp=Z,21nm,1.5s						
WRA	Warramunga Arr	21.12	223	P	P	14 15 49.3	-0.4
WRA	Warramunga Arr	21.12	223	P	P	14 15 50.8	+1.1
	comp=Z,2.9nm,0.5s,baz=47,slow=9.1,SNR=39						
WRA				S	S	14 19 06.2	-1.2
	comp=Z,1.7nm,0.7s,baz=43,slow=16,SNR=7.0						
	comp=Z,2.9nm,0.5s						
DZM	Mont Dzumac	23.88	138	P	P	14 16 14.3	-0.1
	comp=Z,6.1nm,0.8s,baz=310,slow=16,SNR=1.8						
	comp=Z,6.1nm,0.8s						
ASAR	Alice Springs	24.09	217	P	P	14 16 16.8	+0.5
ASAR	Alice Springs	24.09	217	P	P	14 16 17.2	+1.0
	comp=Z,4.6nm,0.5s,baz=48,slow=8.3,SNR=72						
ASAR				S	S	14 19 53.2	-1.0
	comp=Z,0.8nm,0.6s,baz=45,slow=14,SNR=6.5						
	comp=Z,4.6nm,0.5s						
ARMA	Armidale	25.68	176	P	P	14 16 32.2	+1.9
FITZ	Fitzroy Crossi	26.81	238	P	P	14 16 41.2	+1.0
	comp=Z,0.7nm,0.5s,baz=64,slow=9.4,SNR=0.9						
FITZ				S	S	14 20 33.0	-3.8
	comp=Z,2.7nm,1.0s,baz=143,slow=20,SNR=2.6						
	comp=Z,0.7nm,0.5s						
STKA	Stephens Creek	28.03	194	P	P	14 16 48.8	-1.9
STKA	Stephens Creek	28.03	194	P	P	14 16 50.4	-0.3
	comp=Z,1.8nm,0.4s,baz=3.5,slow=8.3,SNR=6.5						
	comp=Z,1.8nm,0.4s						
BBOO	Buckleboo	30.64	202	P	P	14 17 12.9	-0.4
BBOO				IAmb	IAmb	14 17 18.9	
	comp=Z,20nm,1.3s						
FORT	Forrest	32.84	215	P	P	14 17 32.5	+0.5
FORT				IAmb	IAmb	14 17 49.6	
	comp=Z,17nm,1.4s						
TOO	Toolangi	32.93	186	P	P	14 17 34.0	+1.4
TOO				IAmb	IAmb	14 18 10.1	
	comp=Z,6.9nm,1.4s						
TAU	Tasmania Unive	38.11	183	P	P	14 18 16.0	+0.7
RTZ	Ruatahuna	42.04	147	P	P	14 18 45.4	-1.4
MLZ	Mavora Lakes	43.69	161	P	P	14 19 00.8	+1.4
PETK	Petropavlovsk-	58.00	6	P	P	14 20 42.9	-0.1
	comp=Z,2.9nm,0.9s,baz=177,slow=7.6,SNR=5.6						
	comp=Z,2.9nm,0.9s						
SONM	Songino Array	64.48	329	P	P	14 21 25.3	-0.2
	comp=Z,0.3nm,0.5s,baz=114,slow=3.5,SNR=1.3						
	comp=Z,0.3nm,0.5s						
VNDA	Vanda	73.09	177	P	P	14 22 17.5	+1.0
	comp=Z,0.9nm,0.5s,baz=342,slow=7.6,SNR=8.1						
	comp=Z,0.9nm,0.5s						
IL31		83.34	23	P	P	14 23 10.7	-0.7
ILAR	Eielson Array	83.34	23	P	P	14 23 10.3	-1.2
	comp=Z,1.5nm,0.6s,baz=251,slow=5.0,SNR=30						
	comp=Z,1.5nm,0.6s						
J25K	Salcha River,	83.86	23	P	P	14 23 13.8	-0.4
J25K				IAmb	IAmb	14 23 14.8	
	comp=Z,3.0nm,0.7s						
D23K	Nanushuk River	83.98	18	P	P	14 23 15.9	+1.4
D23K				IAmb	IAmb	14 23 16.8	
	comp=Z,3.0nm,0.7s						
F24K	Squaw Lake	84.20	20	P	P	14 23 16.8	+1.0
F24K				IAmb	IAmb	14 23 17.6	
	comp=Z,2.7nm,0.8s						
QSPA	South Pole Qui	85.27	180	P	P	14 23 21.4	+0.2
QSPA	South Pole Qui	85.27	180	P	P	14 23 21.3	+0.2
	comp=Z,0.9nm,0.6s,baz=275,slow=12,SNR=10.0						
	comp=Z,0.9nm,0.6s						
BMAR	Burnt Mountain	85.31	21	P	P	14 23 22.0	+0.9
G26K	Porcupine Rive	85.41	21	P	P	14 23 22.7	+1.1
D25K	Kavik River	85.51	19	P	P	14 23 21.7	-0.4
HYT	Haines Junctio	85.90	28	P	P	14 23 25.7	+1.5
HYT				IAmb	IAmb	14 23 26.3	
	comp=Z,3.5nm,0.7s						
TORD	Torodi Ar. Bea	147.07	287	PKPbc	PKPbc	14 30 23.5	-1.1
	comp=Z,1.6nm,0.3s,baz=67,slow=2.2,SNR=1.4						

*IDC **27** 14:14:04.8±1.0,20°.69S×178°.31W,h526^{km}±9^{km},mb4.2/26,*
mbtmp5.0/27,Error ellipse: s-maj=11.7km s-min=9.2km
az=96.0
*NEIC **27** 14:14:04.5±2.4,20°.7S±0°.1×178°.3W±0°.1,h528^{km}±7^{km},*
mb4.8/246,Error ellipse: s-maj=17.6km s-min=15.1km
az=119.0
*NOU **27** 14:14:05.4,20°.79S×178°.23W,h534^{km},mb5.0/85,Fiji*
Islands Region
*BGR **27** 14:14:09.0,20°.73S×178°.13W,h569^{km}±12^{km}*
ISC 27 14:14:04.7±0.4**,20°.75S**±0°.04×**178°.25W**±0°.05,
h532^{km}±3^{km}**,h533^{km}:pP-P,n954,**σ**1^{s}.21**/935**,mb4.9**/219**,**
59C-31D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKBA	Tubou, Lakemba	2.56	348	P	P	14 15 17.0	+1.3
LKBA	Tubou, Lakemba	2.56	348	S	S	14 16 15.5	+2.2
TAVE	Taveuni	4.32	338	P	P	14 15 29.4	+1.5
MSVF	Nonsavu	4.61	310	P	P	14 15 31.4	+1.1
MSVF	Nonsavu	4.61	310	P	P	14 15 31.6	+1.3
DGTI	Dogotuki	4.82	336	P	P	14 15 32.8	+0.7
FUTU	Fugatoga	6.41	1	P	P	14 15 46.2	-0.2
NIUE	Niue	8.01	79	P	P	14 16 01.6	-0.4
	comp=Z,294nm,1.1s						
RAO	Raoul Island	8.47	178	S	S	14 17 43.4	-3.1
	comp=Z,433nm,0.7s,baz=90,slow=20,SNR=1.6						
GLKZ	Green Lake	8.48	178	P	P	14 16 06.0	-0.6

AFI	Afiamalu	9.19	43	P	P	14 16 10.9	-3.3
MARNC	Mare, Loyalty	12.82	264	P	P	14 16 53.0	+1.2
MARNC	Mare, Loyalty	12.82	264	S	S	14 19 10.3	+0.8
DVP	Devils Point	13.16	281	P	P	14 16 56.5	+1.2
PINNC	Pines Island,	13.43	259	P	P	14 16 58.4	+0.3
PINNC	Pines Island,	13.43	259	P	P	14 16 59.8	+1.8
YATNC	Mamie plateau,	13.90	262	P	P	14 17 04.4	+1.4
OUENC	Ouen Island, N	13.97	260	P	P	14 17 04.3	+0.6
DZM	Mont Dzumac	14.31	262	P	P	14 17 06.8	-0.6
DZM	Mont Dzumac	14.31	262	P	P	14 17 07.3	-0.1
	comp=Z,37nm,0.7s,baz=83,slow=17,SNR=26						
DZM				S	S	14 19 37.6	-0.5
	comp=Z,14nm,1.0s,baz=12,slow=23,SNR=2.6						
DZM	Mont Dzumac	14.31	262	P	P	14 17 07.4	-0.1
VLAKA	Lakatoro	14.36	286	P	P	14 17 08.4	+0.6
OUZ	Omahuta	16.10	205	P	P	14 17 26.7	+1.2
KOUNC	Koumac, New Ca	16.35	268	P	P	14 17 30.5	+2.3
WCZ	Waipu Caves	16.46	202	P	P	14 17 30.4	+1.4
KUZ	Kuaotunu	16.78	197	P	P	14 17 33.4	+1.4
MXZ	Matakaoa Point	17.02	189	P	P	14 17 30.9	-3.4
WMGZ	Waiomatatini S	17.25	189	P	P	14 17 36.9	+0.5
MKAZ	Moumakai	17.27	198	P	P	14 17 37.4	+0.8
HAZ	Te Kaha	17.29	191	P	P	14 17 36.3	-0.4
WTAZ	Waiatarua	17.29	200	P	P	14 17 37.1	+0.3
PKGZ	Pakihiroa	17.35	190	P	P	14 17 38.7	+1.3
RUGZ	Raukumara Rang	17.51	191	P	P	14 17 39.1	+0.1
PUZ	Puketiti	17.52	189	P	P	14 17 39.5	+0.5
TGRZ	Tauranga	17.57	195	P	P	14 17 41.7	+2.3
TWGZ	Tauwhareparae	17.67	190	P	P	14 17 40.8	+0.5
MARZ	Manawahe	17.73	193	P	P	14 17 41.6	+0.7
KMRZ	Kaimai	17.76	195	P	P	14 17 43.1	+1.9
TOZ	Tahuroa Road	17.77	196		P	14 17 42.2	+1.1
TOZ	Tahuroa Road	17.77	196	P	P	14 17 42.3	+1.2
MWZ	Matawai	17.90	191	P	P	14 17 40.7	-1.6
URZ	Urewera	17.90	192	P	P	14 17 39.7	-2.7
	comp=Z,70nm,0.8s,baz=356,slow=3.2,SNR=38						
URZ				S	S	14 20 33.2	-6.5
	comp=Z,21nm,0.9s,baz=348,slow=19,SNR=8.6						
URZ	Urewera	17.90	192	P	P	14 17 42.4	0.0
URZ	Urewera	17.90	192	P	P	14 17 39.9	-2.5
OMRZ	Omania	17.91	194	P	P	14 17 43.2	+0.7
MKRZ	Makatiti	17.92	194	P	P	14 17 44.7	+2.1
TKGZ	Te Karaka	17.95	190	P	P	14 17 42.8	+0.1
NGRZ	Ngongotaha	17.95	194	P	P	14 17 45.2	+2.3
TARZ	Mount Tarawera	18.00	193	P	P	14 17 43.1	-0.4
HLRZ	Highlands Stat	18.05	194	P	P	14 17 44.1	+0.3
RAGZ	Rawiri	18.07	191	P	P	14 17 44.1	0.0
RRRZ	Republican Roa	18.10	193	P	P	14 17 44.5	+0.3
HSRZ	Hossack Road	18.14	194	P	P	14 17 45.9	+1.4
MUGZ	Murupara	18.18	193	P	P	14 17 44.7	-0.3
HRRZ	Handcock Road	18.20	194	P	P	14 17 45.8	+0.7
RIGZ	Rimuhau	18.22	190	P	P	14 17 44.6	-0.7
RTZ	Ruatahuna	18.27	192		P	14 17 44.3	-1.5
PRRZ	Plateau Road	18.28	194	P	P	14 17 45.7	-0.2
TLZ	Tolley Road	18.32	196	P	P	14 17 47.6	+1.4
ALRZ	Allen Road	18.35	194	P	P	14 17 46.8	+0.3
WPRZ	Whakapapatarin	18.35	194	P	P	14 17 47.3	+0.8
SNGZ	Shannon Statio	18.37	191	P	P	14 17 45.2	-1.4
PRGZ	Paritu Road	18.41	190	P	P	14 17 48.6	+1.5
MTHZ	Maungataniwha	18.53	192	P	P	14 17 46.3	-1.8
RAHZ	Arahi	18.54	192	P	P	14 17 46.9	-1.4
MRHZ	Matea Rd	18.60	193	P	P	14 17 47.2	-1.5
MHGZ	Mahia Peninsul	18.64	189	P	P	14 17 49.5	+0.5
HIZ	Hauiti	18.68	197	P	P	14 17 51.7	+2.3
HIZ	Hauiti	18.68	197	P	P	14 17 50.7	+1.2
NMHZ	Naumai	18.77	192	P	P	14 17 49.4	-1.0
RATZ	Rangitukua	18.77	195	P	P	14 17 50.0	-0.4
RITZ	Rihia Road	18.86	194	P	P	14 17 50.8	-0.3
BKZ	Black Stump Fm	18.90	193		P	14 17 49.4	-2.1
BKZ	Black Stump Fm	18.90	193	P	P	14 17 51.0	-0.5
BKZ	Black Stump Fm	18.90	193	P	P	14 17 48.7	-2.9
NTVZ	North Tongarir	19.02	195	P	P	14 17 51.7	-1.0
TMVZ	Te Maari	19.03	195	P	P	14 17 51.6	-1.1
ETVZ	East Tongariro	19.05	195	P	P	14 17 51.4	-1.5
TWVZ	Taurewa	19.05	195	P	P	14 17 52.6	-0.3
WTVZ	West Tongariro	19.05	195	P	P	14 17 52.0	-1.0
NNVZ	North Ngauruho	19.06	195	P	P	14 17 52.8	-0.3
OTVZ	Oturere	19.08	195	P	P	14 17 51.9	-1.4
NGZ	Ngauruhoe	19.11	195	P	P	14 17 53.2	-0.4
SNVZ	South Ngauruho	19.11	195	P	P	14 17 52.2	-1.3
MCHZ	McNeill Hill	19.13	192	P	P	14 17 52.3	-1.2
KWHZ	Kaweka Forest	19.16	193	P	P	14 17 53.1	-0.9
TUVZ	Tukino	19.18	195	P	P	14 17 52.9	-1.3
FWVZ	Far West T-bar	19.20	195	P	P	14 17 53.1	-1.3
WHVZ	Whangaehu Hut	19.21	195	P	P	14 17 53.2	-1.4
WNVZ	Wahianoa	19.25	195	P	P	14 17 53.3	-1.6
VRZ	Vera Road	19.27	197	P	P	14 17 56.5	+1.7
PKVZ	Pokaka	19.28	195	P	P	14 17 54.2	-0.8
MOVZ	Moawhango	19.29	194	P	P	14 17 54.3	-0.9
KRHZ	Kereru	19.39	193	P	P	14 17 55.0	-1.0
KAHZ	Kahuranaki	19.43	191	P	P	14 17 55.8	-0.6
PKE	Pukeiti	19.55	198	P	P	14 18 00.7	+3.2
NEZ	North Egmont	19.59	198	P	P	14 18 01.9	+4.0
PREZ	Palmer Road	19.64	198	P	P	14 18 02.3	+4.1
PXZ	Pawanui	19.67	191	P	P	14 17 58.2	-0.2
PNHZ	Pukenui	19.68	193	P	P	14 17 56.7	-2.0
LREZ	Lake Rotokare	19.68	197	P	P	14 18 00.6	+2.0
WAZ	Wanganui	19.81	196	P	P	14 18 00.4	+0.7
TSZ	Takapari Road	19.87	193	P	P	14 17 58.4	-1.9
PRHZ	Porangahau	19.94	192	P	P	14 18 00.9	0.0
DVHZ	Dannevirke	20.06	193	P	P	14 18 00.4	-1.6
ANWZ	Angora Road	20.15	192	P	P	14 18 02.5	-0.4
POWZ	Post Office Ro	20.23	193	P	P	14 18 04.0	+0.4
BFZ	Birch Farm	20.41	192	P	P	14 18 04.4	-0.8
BFZ	Birch Farm	20.41	192	P	P	14 18 05.4	+0.2
BFZ	Birch Farm	20.41	192	P	P	14 18 03.8	-1.4
MRZ	Mangatainoka R	20.53	193		P	14 18 04.6	-1.7
MRZ	Mangatainoka R	20.53	193	P	P	14 18 04.2	-2.0
TCW	Tory Channel	21.36	196		P	14 18 13.5	-0.2
QRZ	Quartz Range	21.49	199	P	P	14 18 15.6	+0.7
QRZ	Quartz Range	21.49	199	P	P	14 18 15.4	+0.5
TKNZ	Takaka Hill	21.55	198	P	P	14 18 13.8	-1.7
NNZ	Nelson	21.60	197	P	P	14 18 15.6	-0.3
TUWZ	Tuamarina	21.65	196		P	14 18 15.3	-1.1
MRNZ	Matariki Terra	21.95	198		P	14 18 17.1	-2.0
THZ	Tophouse	22.24	198	P	P	14 18 21.7	-0.1
THZ	Tophouse	22.24	198	P	P	14 18 21.3	-0.5
DSZ	Denniston Nort	22.56	200	P	P	14 18 24.3	-0.2
DSZ	Denniston Nort	22.56	200	P	P	14 18 24.1	-0.5
KHZ	Kahutara	22.68	196	P	P	14 18 24.5	-1.0
GVZ	Greta Valley S	23.33	196	P	P	14 18 30.0	-1.4
LTZ	Lake Taylor	23.36	198		P	14 18 30.0	-1.7
LTZ	Lake Taylor	23.36	198	P	P	14 18 30.1	-1.6
INZ	Inchbonnie	23.56	199	P	P	14 18 32.3	-1.1
ALEG	Aligegeo Malai	23.56	297	P	P	14 18 34.3	+0.5
HNR	Honiara	23.83	295	P	P	14 18 34.9	-1.3
	comp=Z,27nm,0.7s,baz=202,slow=19,SNR=1.5						
	comp=Z,27nm,0.7s						
OXZ	Oxford	23.93	198	P	P	14 18 35.8	-1.0
WVZ	Waitaha Valley	24.10	200	P	P	14 18 37.2	-0.9
MQZ	McQueen’s Vall	24.11	196	P	P	14 18 37.2	-1.1
TATA	Tatamba Isabel	24.50	297	P	P	14 18 41.9	-0.2
RPZ	Rata Peaks	24.57	199	P	P	14 18 44.1	+1.7
FOZ	Fox Glacier	24.81	201	P	P	14 18 43.4	-1.0
TMZ	Timaru	25.20	198	P	P	14 18 47.6	-0.3
LBZ	Lake Benmore	25.45	200	P	P	14 18 48.6	-1.6
JCZ	Jackson Bay	25.64	202	P	P	14 18 51.4	-0.5
ODZ	Otahua Downs	25.91	198	P	P	14 18 53.5	-0.7
MSZ	Milford Sound	26.46	202	P	P	14 19 02.0	+3.0
EAZ	Earnscleugh	26.48	200	P	P	14 18 59.4	+0.1
TUZ	Tuapeka	27.03	199	P	P	14 19 04.0	0.0
PPT	Papeete	27.25	88	S	S	14 23 05.0	-3.4
	comp=Z,50nm,0.6s,baz=263,slow=18,SNR=3.8						
WHZ	Wether Hill Ro	27.52	201	P	P	14 19 09.7	+1.4
EIDS	Eidsvold	28.55	255		P	14 19 17.5	-0.2
EIDS	Eidsvold	28.55	255	P	P	14 19 17.6	-0.2
	comp=Z,67nm,0.8s						
EIDS	Eidsvold	28.55	255	P	P	14 19 18.6	+0.9
ARMA	Armidale	28.75	244		P	14 19 20.3	+0.9
ARMA	Armidale	28.75	244	P	P	14 19 20.0	+0.6
	comp=Z,39nm,0.9s						
ARMA	Armidale	28.75	244	P	P	14 19 21.1	+1.7
MGCD	Mangrove Creek	29.88	239	P	P	14 19 29.6	+0.5
	comp=Z,76nm,1.2s						
SYDH	Sydney Hard Ro	30.33	238	P	P	14 19 34.0	+1.0
CNB	Canberra Magne	31.89	236	P	P	14 19 47.1	+0.7
	comp=Z,75nm,1.0s						
CNB	Canberra Magne	31.89	236	P	P	14 19 47.6	+1.2
CAN	Canberra	32.17	236	P	P	14 19 49.0	+0.2
	comp=Z,41nm,1.2s						
CAN	Canberra	32.17	236	P	P	14 19 49.9	+1.1
CAN	Canberra	32.17	236	P	P	14 19 49.5	+0.7
YNG	Young	32.35	238	P	P	14 19 50.9	+0.6
MILA	Mila	32.63	233	P	P	14 19 53.1	+0.5
	comp=Z,7.4nm,1.1s						
CTAO	Charters Tower	33.23	265	P	P	14 19 58.0	+0.1
CTAO	Charters Tower	33.23	265	P	P	14 19 58.5	+0.6
CTAO	Charters Tower	33.23	265	P	P	14 19 58.2	+0.2
CMSA	Cobar Meteorol	33.96	244	P	P	14 20 04.0	0.0
	comp=Z,66nm,1.0s						
CMSA	Cobar Meteorol	33.96	244	P	P	14 20 04.5	+0.6
QLP	Quilpie	34.76	253	P	P	14 20 10.8	+0.1
	comp=Z,170nm,1.1s						
QLP	Quilpie	34.76	253	P	P	14 20 11.5	+0.8
PMG	Port Moresby	35.17	283		P	14 20 13.1	-1.1
PMG	Port Moresby	35.17	283	P	P	14 20 14.2	0.0
PMG	Port Moresby	35.17	283	P	P	14 20 14.0	-0.2
PMG	Port Moresby	35.17	283	P	P	14 20 13.4	-0.8
PMG				sP	sP	14 22 41.0	-4.2
MTSU	Mount Surprise	35.34	268	P	P	14 20 15.8	+0.2
	comp=Z,66nm,0.8s						
MTSU	Mount Surprise	35.34	268	P	P	14 20 16.4	+0.7
TOO	Toolangi	35.56	234	P	P	14 20 17.5	+0.3
TOO				IAmb	IAmb	14 20 18.8	
	comp=Z,13nm,0.8s						
TOO	Toolangi	35.56	234	P	P	14 20 17.7	+0.4
	comp=Z,19nm,1.3s						
PATS	Pohnpei	35.80	318	P	P	14 20 18.5	-0.9
	comp=Z,83nm,1.2s						
COEN	Coen	37.36	274		P	14 20 32.7	+0.3
COEN	Coen	37.36	274	P	P	14 20 32.5	+0.2
	comp=Z,97nm,1.0s						
COEN	Coen	37.36	274	P	P	14 20 33.1	+0.7
STKA	Stephens Creek	37.47	244	P	P	14 20 33.2	+0.3
STKA	Stephens Creek	37.47	244	P	P	14 20 33.0	0.0
	comp=Z,187nm,1.4s						
STKA	Stephens Creek	37.47	244	P	P	14 20 33.5	+0.5
	comp=Z,27nm,0.8s,baz=90,slow=9.9,SNR=31						
STKA				ScP	ScP	14 25 36.4	+2.1
	comp=Z,2.2nm,0.8s,baz=76,slow=12,SNR=3.3						
	comp=Z,27nm,0.8s						
STKA	Stephens Creek	37.47	244	P	P	14 20 33.8	+0.8
MANU	Manus Island	38.34	295	P	P	14 20 39.3	-1.0
QIS	Mount Isa	39.35	263	P	P	14 20 47.9	-0.6
	comp=Z,24nm,0.9s						
QIS	Mount Isa	39.35	263	P	P	14 20 48.2	-0.3
HTT	Hallett	39.90	242	P	P	14 20 52.6	-0.2
	comp=Z,12nm,1.0s						
HTT	Hallett	39.90	242	P	P	14 20 52.9	+0.2
WHYH	Whyalla	40.98	243	P	P	14 21 01.8	+0.6
BBOO	Buckleboo	42.22	244		P	14 21 11.0	-0.2
BBOO	Buckleboo	42.22	244	P	P	14 21 10.8	-0.3
	comp=Z,50nm,0.8s						
BBOO	Buckleboo	42.22	244	P	P	14 21 11.6	+0.4
JAY	Jayapura	43.90	289	P	P	14 21 24.7	+0.2
	comp=Z,124nm,0.6s,baz=140,slow=4.2,SNR=142						
	comp=Z,124nm,0.6s						
JAY	Jayapura	43.90	289	P	P	14 21 24.4	-0.1
	comp=Z,2μmcomp=Z,189nm,0.8s						
WR0	Warramunga Arr	44.14	262	P	P	14 21 25.4	-0.9
	comp=Z,52nm,0.8s						
AS17	Alice Springs	44.15	257	P	P	14 21 26.1	-0.3
	comp=Z,221nm,0.8s						
AS01	Alice Springs	44.19	257	P	P	14 21 26.7	0.0
ASAR	Alice Springs	44.23	257	P	P	14 21 26.9	-0.1
	comp=Z,124nm,0.8s,baz=97,slow=7.9,SNR=970						
ASAR				PcP	PcP	14 23 00.1	+0.1
	comp=Z,11nm,0.6s,baz=111,slow=3.3,SNR=10						
ASAR				ScP	ScP	14 26 03.0	+1.6
	comp=Z,2.6nm,0.7s,baz=109,slow=4.3,SNR=6.1						
ASAR				S	S	14 27 19.2	-2.8
	comp=Z,7.7nm,0.8s,baz=97,slow=14,SNR=21						
ASAR				ScS	ScS	14 30 28.3	+1.8
	comp=Z,1.8nm,1.0s,baz=86,slow=6.8,SNR=5.5						
	comp=Z,124nm,0.8s						
WB2	Warramunga Arr	44.32	262	P	P	14 21 27.0	-0.7
	comp=Z,137nm,0.9s						
WB1	Warramunga Ar.	44.32	262	P	P	14 21 27.1	-0.6
WRAB	Tennant Creek	44.32	262	P	P	14 21 26.7	-1.0
WRA	Warramunga Arr	44.33	262	P	P	14 21 26.1	-1.7
WRA	Warramunga Arr	44.33	262	P	P	14 21 27.1	-0.7
	comp=Z,46nm,0.6s,baz=98,slow=8.8,SNR=366						
WRA				PcP	PcP	14 23 00.7	+0.2
	comp=Z,9.8nm,1.0s,baz=94,slow=4.7,SNR=5.2						
WRA				ScP	ScP	14 26 03.5	+1.7
	comp=Z,1.2nm,0.8s,baz=101,slow=3.8,SNR=3.8						
WRA				S	S	14 27 18.6	-4.8
	comp=Z,3.1nm,0.8s,baz=98,slow=13,SNR=6.3						
WRA				ScS	ScS	14 30 28.4	+1.2
	comp=Z,1.2nm,0.8s,baz=105,slow=5.5,SNR=6.0						
	comp=Z,46nm,0.6s						
GENI	Genyem	44.34	288	P	P	14 21 30.0	+2.1
GENI	Genyem	44.34	288	P	P	14 21 28.2	+0.3
	comp=Z,168nm,1.0s						
SMPI	Sarmi	45.91	288	P	P	14 21 39.7	-0.2
	comp=Z,2μmcomp=Z,105nm,1.1s						
KDU	Kakadu	47.72	272	P	P	14 21 53.2	-0.4
	comp=Z,151nm,0.8s						
KDU	Kakadu	47.72	272	P	P	14 21 53.3	-0.2
SRPI	Serui, Papua	48.17	287	P	P	14 21 58.0	+1.1
	comp=Z,48nm,0.7s						
BAKI	Biak	48.59	288	P	P	14 22 01.7	+1.6
	comp=Z,1μmcomp=Z,191nm,1.0s						
MTN	Manton Dam	48.93	271	P	P	14 22 01.4	-1.2
MTN	Manton Dam	48.93	271	P	P	14 22 01.4	-1.2
	comp=Z,151nm,0.8s						
MTN	Manton Dam	48.93	271	P	P	14 22 02.5	-0.1
WRKA	Warakurna	49.17	254	P	P	14 22 04.0	-0.3
	comp=Z,46nm,0.9s						
DRS	Darwin Rock St	49.27	271	P	P	14 22 04.8	-0.2
GUMO	Guam	49.78	310	P	P	14 22 08.1	-0.7
GUMO	Guam	49.78	310	P	P	14 22 08.5	-0.3
	comp=Z,103nm,0.8s,baz=184,slow=8.6,SNR=7.3						
	comp=Z,103nm,0.8s						
GUMO	Guam	49.78	310	P	P	14 22 09.1	+0.3
GUMO				pP	pP	14 23 47.5	-1.6
GUMO				sP	sP	14 24 44.1	-3.2
RKPI	Ransiki, Papua	50.18	286	P	P	14 22 13.7	+1.9
	comp=Z,53nm,0.9s						
KNRA	Kununurra	50.41	266	P	P	14 22 12.8	-0.6
KNRA	Kununurra	50.41	266	P	P	14 22 13.1	-0.3
	comp=Z,124nm,0.8s						
FITZ	Fitzroy Crossi	52.76	263	P	P	14 22 30.2	-0.1
FITZ	Fitzroy Crossi	52.76	263	P	P	14 22 30.3	-0.1
	comp=Z,11nm,1.2s						
FITZ	Fitzroy Crossi	52.76	263	P	P	14 22 30.5	+0.1
	comp=Z,19nm,0.6s,baz=116,slow=4.2,SNR=92						
	comp=Z,19nm,0.6s						
FITZ	Fitzroy Crossi	52.76	263	P	P	14 22 30.7	+0.3
DRV	Dumont d’Urvil	53.04	199	P	P	14 22 31.0	-0.5
DRV				pP	pP	14 24 10.6	-2.2
SWI	Sorong	53.08	285	P	P	14 22 32.6	-0.2
MSAI	Masohi	54.19	281	P	P	14 22 45.2	+4.6
AAI	Ambon	54.73	281	P	P	14 22 46.0	+1.6
	comp=Z,2μmcomp=Z,149nm,1.1s						
NLAI	Namlea	55.91	281	P	P	14 22 52.7	0.0
	comp=Z,1μmcomp=Z,113nm,0.7s						
SOEI	Soe	56.27	272	P	P	14 22 53.7	-1.6
SOEI	Soe	56.27	272	P	P	14 22 56.7	+1.4
SOEI	Soe	56.27	272	P	P	14 22 56.6	+1.3
BATI	Baumata	56.70	271	P	P	14 23 01.0	+2.9
	comp=Z,93nm,0.8s						
TNTI	Ternate	57.30	285	P	P	14 23 04.2	+2.0
TNTI	Ternate	57.30	285	P	P	14 23 02.5	+0.3
	comp=Z,1μmcomp=Z,128nm,0.9s						
PSAC2	Pilbara Seismi	57.33	257	P	P	14 23 01.8	-0.6
	comp=Z,90nm,0.9s						
PSAB3	Pilbara Seismi	57.37	257	P	P	14 23 02.1	-0.5
	comp=Z,109nm,0.9s						
PSA00	Pilbara Seismi	57.38	257	P	P	14 23 01.9	-0.8
PSA00				IAmb	IAmb	14 23 03.2	
	comp=Z,64nm,0.8s						
PSA00	Pilbara Seismi	57.38	257	P	P	14 23 00.6	-2.0
PSA00				IAmb	IAmb	14 23 03.2	
	comp=Z,32nm,0.9s						
PSA00	Pilbara Seismi	57.38	257	P	P	14 23 02.1	-0.6
	comp=Z,92nm,0.9s						
PSA00	Pilbara Seismi	57.38	257	P	P	14 23 02.7	0.0
MBWA	Marble Bar	57.57	258	P	P	14 23 02.7	-1.2
MBWA				IAmb	IAmb	14 23 04.4	
	comp=Z,60nm,0.8s						
MBWA	Marble Bar	57.57	258	P	P	14 23 03.3	-0.5
	comp=Z,94nm,0.9s						
MBWA	Marble Bar	57.57	258	P	P	14 23 03.6	-0.3
MBWA	Marble Bar	57.57	258	P	P	14 23 03.4	-0.5
MEEK	Meekatharra	57.61	251	P	P	14 23 03.6	-0.6
	comp=Z,33nm,0.9s						
VNDA	Vanda	57.64	185	P	P	14 23 04.1	+0.7
VNDA	Vanda	57.64	185	P	P	14 23 05.5	+2.1
	comp=Z,5.8nm,0.8s,baz=0.0,slow=6.9,SNR=29						
VNDA				ScP	ScP	14 26 59.5	+1.4
	comp=Z,3.2nm,0.9s,baz=328,slow=4.5,SNR=8.2						
	comp=Z,5.8nm,0.8s						
VNDA	Vanda	57.64	185	P	P	14 23 05.6	+2.1
KLBR	Kellerberrin	57.74	245	P	P	14 23 04.6	-0.3
	comp=Z,131nm,0.9s						
KLBR	Kellerberrin	57.74	245	P	P	14 23 05.4	+0.5
NWAO	Narrogin (SRO)	58.05	243	P	P	14 23 07.1	+0.1
	comp=Z,51nm,1.1s						
RKGY	Rocky Gully	58.12	241	P	P	14 23 06.8	-0.6
	comp=Z,39nm,1.3s						
MMRI	Maumere	58.53	272	P	P	14 23 11.0	+0.5
MMRI	Maumere	58.53	272	P	P	14 23 10.7	+0.2
	comp=Z,95nm,0.9s						
BLDU	Ballidu	58.74	246	P	P	14 23 11.5	-0.2
	comp=Z,46nm,1.1s						
EDFI	Ende, Flores	59.00	272	P	P	14 23 13.1	-0.7
	comp=Z,83nm,0.8s						
MUN	Mundaring	59.00	244	P	P	14 23 13.8	+0.3
	comp=Z,53nm,2.4s						
MORW	Morawa	59.52	248	P	P	14 23 16.8	-0.1
	comp=Z,43nm,1.3s						
WSI	Waingapu	60.01	271	P	P	14 23 20.8	+0.3
LUWI	Luwuk	60.75	281	P	P	14 23 25.8	+0.5
LUWI	Luwuk	60.75	281	P	P	14 23 26.1	+0.8
APSI	Ampana	61.83	281	P	P	14 23 35.1	+2.7
	comp=Z,98nm,0.8s						
BNSI	Bone	61.96	276	P	P	14 23 33.6	+0.3
	comp=Z,70nm,1.0s						
MRSI	Marisa	62.11	282	P	P	14 23 33.8	-0.4
	comp=Z,47nm,0.8s						
CCD	Concordia, Ant	62.16	194	P	P	14 23 35.5	+1.4
CCD				PcP	PcP	14 24 08.9	+0.8
CCD				pP	pP	14 25 21.0	+0.6
GIRL	Giralia	62.26	255	P	P	14 23 35.7	+0.6
GIRL	Giralia	62.26	255	P	P	14 23 35.2	+0.1
	comp=Z,119nm,1.1s						
SPSI	Sidrap Palu	62.43	277	P	P	14 23 35.4	-0.9
	comp=Z,38nm,0.9s						
PLAI	Plampang	62.64	271	P	P	14 23 37.9	+0.2
PLAI	Plampang	62.64	271	P	P	14 23 37.5	-0.2
	comp=Z,123nm,0.9s						
TOLI2	Tolitoli	63.43	282	P	P	14 23 41.6	-1.2
TOLI2	Tolitoli	63.43	282	P	P	14 23 44.1	+1.4
PCI	Palu	63.51	280	P	P	14 23 44.8	+1.5
	comp=Z,2μmcomp=Z,187nm,1.0s						
TWSI	Taliwang, Sumb	63.51	270	P	P	14 23 43.1	-0.1
	comp=Z,103nm,1.0s						
CASY	Casey	63.64	205	P	P	14 23 43.4	+0.3
CASY	Casey	63.64	205	P	P	14 23 44.1	+1.0
CASY				pP	pP	14 25 28.7	-1.1
MPSI	Mapaga	63.93	281	P	P	14 23 45.6	-0.3
	comp=Z,78nm,0.9s						
JAGI	Jajag, Banyuwa	66.15	270	P	P	14 23 58.7	-1.2
JAGI	Jajag, Banyuwa	66.15	270	P	P	14 24 00.5	+0.6
JAGI	Jajag, Banyuwa	66.15	270	P	P	14 23 59.9	0.0
	comp=Z,66nm,0.9s						
PCJI	Pacitan	69.02	269	P	P	14 24 18.7	+1.2
	comp=Z,162nm,1.2s						
QSPA	South Pole Qui	69.32	180	P	P	14 24 20.1	+1.7
QSPA				IAmb	IAmb	14 24 21.2	
	comp=Z,27nm,0.8s						
QSPA	South Pole Qui	69.32	180	P	P	14 24 19.9	+1.4
	comp=Z,28nm,0.9s,baz=22,slow=1.3,SNR=92						
QSPA				S	S	14 32 44.7	+2.1
	comp=Z,0.6nm,0.9s,baz=66,slow=20,SNR=1.5						
	comp=Z,28nm,0.9s						
QSPA	South Pole Qui	69.32	180	P	P	14 24 20.2	+1.7
JMM	Marumori	69.87	326	P	P	14 24 22.9	+0.9
MJAR	Matsushiro Arr	70.27	324	P	P	14 24 24.2	-0.2
	comp=Z,9.3nm,0.8s,baz=150,slow=5.5,SNR=16						
	comp=Z,9.3nm,0.8s						
MAJO	Matsushiro	70.28	324	P	P	14 24 23.1	-1.4
MAJO	Matsushiro	70.28	324	P	P	14 24 25.2	+0.7
JSD	Sado	71.34	325	P	P	14 24 32.5	+1.8
STKI	Sintang	71.61	277	P	P	14 24 34.0	+1.2
	comp=Z,68nm,0.7s						
SBUM	Sibu	71.82	280	P	P	14 24 35.2	+1.2
AMKA	Amchitka	71.85	358	P	P	14 24 32.3	-1.0
JNU	Nakatsue	72.30	317	P	P	14 24 37.6	+1.2
ADK	Adak	72.33	1	P	P	14 24 34.7	-1.5
ADK	Adak	72.33	1	P	P	14 24 36.0	-0.1
ATKA	Atka Island	72.73	3	P	P	14 24 37.4	-0.9
ATKA	Atka Island	72.73	3	P	P	14 24 38.2	-0.2
KSM	Kuching	73.21	278	P	P	14 24 43.3	+1.2
TWGBT	Beinan	73.31	303	P	P	14 24 43.5	+1.1
YULB	Yu-li	73.44	304	P	P	14 24 41.1	-2.1
YULB				IAmb	IAmb	14 24 43.1	
	comp=Z,21nm,0.9s						
NACB	Ninganchiao	73.62	304	P	P	14 24 42.8	-1.4
NACB				IAmb	IAmb	14 24 44.6	
	comp=Z,46nm,1.0s						
NACB	Ninganchiao	73.62	304	P	P	14 24 46.0	+1.8
JKA	Kamikawa-asahi	73.83	332	P	P	14 24 45.4	+0.5
JKA				IAmb	IAmb	14 24 47.8	
	comp=Z,57nm,1.1s						
ASAJ	Asahikawa	73.84	332	P	P	14 24 46.0	+1.1
	comp=Z,25nm,0.9s,baz=229,slow=11,SNR=13						
	comp=Z,25nm,0.9s						
NIKH	Nikolski High	73.87	6	P	P	14 24 44.5	-0.4
	baz=189						
TPUB	Ta-pu	73.92	303	P	P	14 24 44.8	-1.1
TPUB	Ta-pu	73.92	303	P	P	14 24 46.1	+0.2
SSLB	Suanglung	73.92	304	P	P	14 24 45.7	-0.2
YHNB	Yeheng	74.06	305	P	P	14 24 47.5	+0.8
UNV	Unalaska Valle	74.98	7	P	P	14 24 50.6	-0.5
	baz=191						
YSS	Yuzhno-Sakhali	76.02	334	P	P	14 24 58.2	+1.2
FALS	False Pass	76.37	9	P	P	14 24 58.2	-0.6
	baz=194						
MDSI	Maura Dua	76.81	270	P	P	14 25 01.3	-0.9
	comp=Z,35nm,1.0s						
KSRS	Korea Array	76.92	319	P	P	14 25 03.1	+0.9
	comp=Z,6.9nm,1.0s,baz=145,slow=6.6,SNR=27						
	comp=Z,6.9nm,1.0s						
CHNA	Chernabura Isl	76.95	11	P	P	14 25 01.5	-0.5
	baz=198						
SDPT	Sand Point	77.30	10	P	P	14 25 03.6	-0.3
	baz=197						
S12K	Black Hills	77.39	9	P	P	14 25 03.7	-0.7
	baz=195						
P08K	Saint George I	77.40	5	P	P	14 25 04.5	+0.1
	baz=188						
SPIA	Saint Paul Isl	77.92	4	P	P	14 25 07.0	-0.2
	baz=188						
S14K	Fog Glacier	78.35	11	P	P	14 25 09.7	0.0
	baz=198						
SMAI	San Martin Ant	78.46	159	P	P	14 25 11.9	+1.8
SMAI				IAmb	IAmb	14 25 13.2	
	comp=Z,35nm,0.9s						
KSI	Kapahiang	78.58	270	P	P	14 25 14.9	+3.0
	comp=Z,78nm,0.8s						
CHIR	Chirikof Islan	78.66	13	P	P	14 25 11.6	+0.4
	baz=201						
USA0B	Ussuriysk Arra	79.04	326	IAmb	IAmb	14 25 15.9	
	comp=Z,27nm,1.1s						
USRK	Ussuriysk Ar.	79.04	326	P	P	14 25 14.4	+0.9
USRK	Ussuriysk Ar.	79.04	326	P	P	14 25 14.6	+1.0
	comp=Z,14nm,1.0s,baz=135,slow=3.9,SNR=14						
	comp=Z,14nm,1.0s						
KMRM	Mail Ridge	79.10	39	IAmb	IAmb	14 25 17.4	
	comp=Z,34nm,0.9s						
MYKOM	Kota Tinggi	79.33	276	P	P	14 25 16.6	+0.8
SII	Sitkinak Islan	79.64	13	P	P	14 25 16.6	+0.2
SII	Sitkinak Islan	79.64	13	P	P	14 25 17.2	+0.8
SII	Sitkinak Islan	79.64	13	P	P	14 25 16.9	+0.4
	baz=203,SNR=6.7						
NJ2	Nanjing	79.86	310	⇑P	P	14 25 19.5	+1.4
NJ2				pmax	pmax		
	comp=Z,22nm,1.0s						
R17L	Mt. Peulik Vol	80.20	12	P	P	14 25 19.8	+0.4
	baz=201,SNR=13						
OHAK	Old Harbor	80.45	13	P	P	14 25 21.1	+0.5
	baz=203						
R18K	Karluk	80.52	13	P	P	14 25 21.2	+0.3
	baz=202						
MDJ	Mudanjiang	80.59	325	P	P	14 25 22.8	+1.1
MDJ				pmax	pmax		
	comp=Z,24nm,1.2s						
MDJ	Mudanjiang	80.59	325	P	P	14 25 22.9	+1.2
Q17K	Contact Creek	80.88	12	P	P	14 25 23.1	+0.1
	baz=201						

O14K	Tigyukauivet M	80.93	9	P	P	14 25 22.8	-0.2
	baz=196						
O15K	Ungalikthiuk R	81.07	9	P	P	14 25 23.6	-0.2
	baz=197						
KDAK	Kodiak Island	81.12	14	P	P	14 25 24.3	+0.3
	baz=204						
Q16K	King Salmon	81.13	11	P	P	14 25 24.6	+0.6
	baz=200,SNR=11						
L04D	Klamath Falls	81.17	39	IAmb	IAmb	14 25 28.2	
	comp=Z,20nm,1.0s						
P16K	Nushagak River	81.23	10	P	P	14 25 24.7	+0.1
	baz=199,SNR=8.4						
MAW	Mawson	81.25	200	P	P	14 25 25.5	+0.8
	comp=Z,5.2nm,0.9s,baz=162,slow=3.1,SNR=4.4						
	comp=Z,5.2nm,0.9s						
NVAR	Mina Array Bea	81.37	43	P	P	14 25 25.5	-0.6
NVAR	Mina Array Bea	81.37	43	P	P	14 25 27.6	+1.4
	comp=Z,4.6nm,0.9s,baz=224,slow=9.0,SNR=19						
	comp=Z,4.6nm,0.9s						
Q18K	Katmai Hardscr	81.41	12	P	P	14 25 25.7	0.0
	baz=202,SNR=21						
M11K	Mekoryuk	81.44	6	P	P	14 25 26.3	+0.7
	baz=191						
N14K	Kuskokwak Cree	81.52	8	P	P	14 25 26.9	+0.9
	baz=196,SNR=8.2						
P17K	Kvichak River	81.65	11	P	P	14 25 27.1	+0.3
	baz=200,SNR=15						
O16K	Kokwok River B	81.74	10	IAmb	IAmb	14 25 27.8	
	comp=Z,32nm,0.9s						
O16K	Kokwok River B	81.74	10	P	P	14 25 26.9	-0.3
	baz=199,SNR=10						
M13K	Dall Lake	81.78	7	P	P	14 25 27.8	+0.4
	baz=194						
TPH	Tonopah	81.87	44	IAmb	IAmb	14 25 31.2	
	comp=Z,46nm,1.1s						
Q20K	Shuyak Island	81.91	13	P	P	14 25 28.6	+0.5
	baz=204						
J04A	Umpqua Nationa	81.92	38	IAmb	IAmb	14 25 31.7	
	comp=Z,40nm,1.0s						
Q19K	Cape Douglas,	81.94	13	IAmb	IAmb	14 25 34.2	
	comp=Z,42nm,0.9s						
Q19K	Cape Douglas,	81.94	13	P	P	14 25 28.3	0.0
	baz=203						
N15K	Kwethluk River	81.98	9	IAmb	IAmb	14 25 31.3	
	comp=Z,46nm,0.9s						
N15K	Kwethluk River	81.98	9	P	P	14 25 28.9	+0.5
	baz=197,SNR=9.0						
P18K	Big Mountain,	82.06	12	IAmb	IAmb	14 25 29.8	
	comp=Z,36nm,0.9s						
P18K	Big Mountain,	82.06	12	P	P	14 25 28.9	0.0
	baz=202,SNR=12						
O17K	Koliganek Bris	82.08	11	P	P	14 25 28.8	-0.1
	baz=200,SNR=7.8						
M14K	Bethel	82.28	8	P	P	14 25 30.8	+0.9
	baz=195,SNR=6.6						
K05A	Summer Lake	82.31	39	IAmb	IAmb	14 25 33.8	
	comp=Z,22nm,1.0s						
CN2	Changchun	82.36	323	P	P	14 25 31.5	+0.8
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
M15K	Kasigluk River	82.40	9	P	P	14 25 31.4	+0.9
	baz=196,SNR=14						
WHN	Wuhan	82.40	307	P	P	14 25 32.3	+1.0
J05D	Fort Rock, OR	82.45	38	IAmb	IAmb	14 25 34.4	
	comp=Z,31nm,1.0s						
N16K	Nishlik Lake	82.47	10	P	P	14 25 31.9	+1.0
	baz=198,SNR=20						
BNX	BinXian	82.50	325	⇓P	P	14 25 31.5	+0.1
BNX				pmax	pmax		
	comp=Z,17nm,0.8s						
O18K	Koktuh Hills	82.50	11	P	P	14 25 31.2	+0.1
	baz=202,SNR=27						
KLR	Kul'dur	82.62	330	P	P	14 25 32.8	+0.9
	comp=Z,6.3nm,1.0s,baz=116,slow=3.6,SNR=9.0						
	comp=Z,6.3nm,1.0s						
P19K	Oil Pt	82.69	13	IAmb	IAmb	14 25 33.3	
	comp=Z,35nm,0.8s						
P19K	Oil Pt	82.69	13	P	P	14 25 32.2	+0.1
	baz=203,SNR=8.3						
L14K	Kuka Creek	82.76	7	IAmb	IAmb	14 25 34.4	
	comp=Z,41nm,0.9s						
L14K	Kuka Creek	82.76	7	P	P	14 25 33.3	+1.0
	baz=194						
N17K	Nushagak Hills	82.78	10	P	P	14 25 32.9	+0.5
	baz=200,SNR=5.0						
PINE	Pine Mountain	82.93	38	IAmb	IAmb	14 25 37.0	
	comp=Z,28nm,1.0s						
IPM	Ipoh	82.93	277	P	P	14 25 35.1	+0.7
MNSI	Mandailing Nat	82.95	274	P	P	14 25 36.5	+2.0
	comp=Z,23nm,0.9s						
M16K	Timber Creek	82.96	9	P	P	14 25 35.0	+1.6
	baz=198,SNR=25						
O19K	Port Alsworth	82.98	12	P	P	14 25 33.5	+0.1
	baz=202,SNR=16						
CNPM	China Poot	83.00	13	IAmb	IAmb	14 25 35.1	
	comp=Z,30nm,0.9s						
HOM	Homer	83.03	13	P	P	14 25 34.4	+0.6
	baz=205						
K13K	Kusilvak Mount	83.11	6	P	P	14 25 34.8	+0.7
K13K				IAmb	IAmb	14 25 36.3	
	comp=Z,32nm,0.9s						
K13K	Kusilvak Mount	83.11	6	P	P	14 25 35.2	+1.1
	baz=193,SNR=7.6						
N18K	Kilae Creek	83.14	11	P	P	14 25 34.2	-0.2
N18K	Kilae Creek	83.14	11	P	P	14 25 34.4	+0.1
	baz=201,SNR=5.7						
O20K	Slope Mountain	83.21	13	P	P	14 25 34.9	+0.1
	baz=204,SNR=7.1						
L15K	Ungalak Mounta	83.24	8	P	P	14 25 35.3	+0.6
	baz=196,SNR=14						
BRLK	Bradley Lake	83.29	14	IAmb	IAmb	14 25 36.4	
	comp=Z,36nm,0.9s						
BRSE	Bradley Lake S	83.30	14	P	P	14 25 35.6	+0.5
	baz=206						
RED	Redoubt Volcan	83.49	12	IAmb	IAmb	14 25 36.7	
	comp=Z,37nm,1.0s						
N19K	Bonanza Creek	83.52	11	IAmb	IAmb	14 25 37.0	
	comp=Z,21nm,0.8s						
N19K	Bonanza Creek	83.52	11	P	P	14 25 36.0	-0.3
	baz=202,SNR=11						
L16K	Owhat River	83.55	9	IAmb	IAmb	14 25 38.5	
	comp=Z,29nm,1.1s						
L16K	Owhat River	83.55	9	P	P	14 25 37.4	+1.1
	baz=198,SNR=9.4						
M17K	Holitna River	83.56	10	IAmb	IAmb	14 25 39.0	
	comp=Z,44nm,1.1s						
M17K	Holitna River	83.56	10	P	P	14 25 37.6	+1.2
	baz=199,SNR=12						
KULM	Kulim	83.57	278	P	P	14 25 36.7	-0.8
KULM				IAmb	IAmb	14 25 39.6	
	comp=Z,27nm,1.3s						
KULM	Kulim	83.57	278	P	P	14 25 38.5	+1.0
K15K	Wolf Creek Mou	83.83	8	P	P	14 25 38.9	+1.2
	baz=196,SNR=8.0						
M18K	Stony River	83.92	11	P	P	14 25 38.7	+0.6
	baz=201,SNR=8.6						
SEW	Seward	83.92	14	IAmb	IAmb	14 25 39.1	
	comp=Z,23nm,0.9s						
SEW	Seward	83.92	14	P	P	14 25 38.1	+0.1
	baz=207,SNR=6.2						
MA2	Magadan	83.96	345	P	P	14 25 37.7	-0.7
MA2				IAmb	IAmb	14 25 39.2	
	comp=Z,14nm,0.9s						
MA2	Magadan	83.96	345	P	P	14 25 37.6	-0.8
	comp=Z,9.6nm,0.8s,baz=143,slow=6.6,SNR=6.1						
	comp=Z,9.6nm,0.8s						
MA2	Magadan	83.96	345	P	P	14 25 36.7	-1.7
	comp=Z,24nm,1.2s						
J14K	Nanvaranak Lak	84.03	7	P	P	14 25 39.3	+0.8
	baz=194						
Q23K	Middleton Isla	84.07	16	P	P	14 25 39.3	+0.4
	baz=210						
L17K	Donlin	84.12	9	P	P	14 25 40.3	+1.2
	baz=199,SNR=5.4						
O22K	Cooper Landing	84.19	14	P	P	14 25 39.4	-0.1
	baz=206						
RPSI	Rantau Prapat	84.24	275	IAmb	IAmb	14 25 41.7	
	comp=Z,27nm,1.2s						
PSI	Prapat	84.28	275	P	P	14 25 41.2	0.0
P23K	Montague Islan	84.30	15	IAmb	IAmb	14 25 41.8	
	comp=Z,34nm,1.1s						
P23K	Montague Islan	84.30	15	P	P	14 25 40.2	+0.2
	baz=209						
U15A	North Rim	84.31	48	P	P	14 25 43.4	+2.4
N20K	Mount Spurr	84.32	12	P	P	14 25 39.6	-0.6
	baz=204						
SPCR	Spurr Chakacha	84.32	12	P	P	14 25 39.8	-0.4
	baz=204						
GAMB	Gambell	84.40	3	P	P	14 25 41.1	+0.7
	baz=186						
L18K	Granite Mounta	84.45	10	P	P	14 25 42.0	+1.3
L18K				IAmb	IAmb	14 25 42.9	
	comp=Z,22nm,0.9s						
L18K	Granite Mounta	84.45	10	P	P	14 25 41.6	+0.9
	baz=200,SNR=10						
M19K	Big River Lodg	84.55	11	P	P	14 25 41.1	-0.1
M19K				IAmb	IAmb	14 25 42.3	
	comp=Z,15nm,0.8s						
M19K	Big River Lodg	84.55	11	P	P	14 25 41.2	-0.1
	baz=202,SNR=9.3						
STLK	Strandline Lak	84.67	12	IAmb	IAmb	14 25 42.1	
	comp=Z,16nm,0.8s						
K17K	Iditarod	84.67	9	P	P	14 25 42.5	+0.7
	baz=198						
L19K	White Mountain	84.73	11	IAmb	IAmb	14 25 43.9	
	comp=Z,31nm,1.1s						
L19K	White Mountain	84.73	11	P	P	14 25 42.8	+0.6
	baz=202,SNR=16						
RC01	Rabbit Creek A	84.73	13	IAmb	IAmb	14 25 43.4	
	comp=Z,32nm,1.0s						
RC01	Rabbit Creek A	84.73	13	P	P	14 25 42.3	+0.2
	baz=206,SNR=8.1						
M20K	Styx River	84.77	12	P	P	14 25 42.0	-0.4
	baz=203						
PWL	Port Wells	84.84	14	IAmb	IAmb	14 25 43.8	
	comp=Z,35nm,1.0s						
PWL	Port Wells	84.84	14	P	P	14 25 42.8	+0.1
	baz=208,SNR=16						
SUA	Susitna One	84.86	13	IAmb	IAmb	14 25 43.8	
	comp=Z,30nm,0.8s						
SUA	Susitna One	84.86	13	P	P	14 25 42.7	-0.2
	baz=206						
J16K	Anvik River	84.90	8	P	P	14 25 43.7	+0.8
	baz=196						
KAIM	Kayak Island	85.00	16	P	P	14 25 43.7	+0.2
	baz=211						
GSI	Gunungsitoli	85.01	273	P	P	14 25 45.7	+1.1
GSI	Gunungsitoli	85.01	273	P	P	14 25 45.6	+1.0
	comp=Z,57nm,1.1s						
CRAG	Craig	85.04	24	P	P	14 25 44.1	+0.4
	baz=222						
GLI	Glacier Island	85.15	15	P	P	14 25 44.2	0.0
	baz=209,SNR=14						
SKT	Skwentna	85.17	12	P	P	14 25 43.3	-1.0
	baz=205,SNR=5.2						
L20K	Farewell, AK	85.18	11	P	P	14 25 44.3	0.0
	baz=203,SNR=10						
FID	Port Fidalgo	85.19	15	IAmb	IAmb	14 25 45.5	
	comp=Z,26nm,1.2s						
EYAK	Cordova Ski Ar	85.19	15	IAmb	IAmb	14 25 45.8	
	comp=Z,21nm,1.1s						
EYAK	Cordova Ski Ar	85.19	15	P	P	14 25 45.0	+0.7
EYAK	Cordova Ski Ar	85.19	15	P	P	14 25 44.3	0.0
	baz=210						
J17K	VABM Dome	85.21	9	P	P	14 25 45.0	+0.6
	baz=198						
M22K	Willow	85.25	13	P	P	14 25 44.6	0.0
	baz=206,SNR=15						
KNK	Knik Glacier	85.31	14	P	P	14 25 45.1	+0.1
	baz=208						
PMR	Palmer	85.32	14	P	P	14 25 45.5	+0.6
PMR	Palmer	85.32	14	P	P	14 25 45.1	+0.2
	baz=207,SNR=14						
HEH	HeiHe	85.40	328	*e*P	P	14 25 46.0	+0.4
HEH				pmax	pmax		
	comp=Z,15nm,1.2s						
I17K	Unalakleet	85.47	8	P	P	14 25 46.2	+0.6
	baz=196						
V35K	Ketchikan	85.52	25	P	P	14 25 47.0	+1.0
	baz=223						
U33K	Whale Pass	85.53	23	P	P	14 25 46.3	+0.2
	baz=222						
HNS	HongShan	85.54	313	⇑P	P	14 25 48.0	+1.4
HNS				pmax	pmax		
	comp=Z,17nm,1.0s						
J18K	Innoko River	85.62	10	IAmb	IAmb	14 25 48.1	
	comp=Z,24nm,1.2s						
J18K	Innoko River	85.62	10	P	P	14 25 46.8	+0.4
	baz=200,SNR=11						
ANM	Nome	85.62	6	P	P	14 25 47.0	+0.6
	baz=192						
LYN	LuoYang	85.73	309	P	P	14 25 49.0	+1.4
LYN				pmax	pmax		
	comp=Z,32nm,0.6s						
SRIT	Nakonsritamara	85.75	281	P	P	14 25 50.1	+2.0
CUT	Chulitna	85.81	13	P	P	14 25 47.1	-0.2
	baz=206						
M23K	Glacier View	85.81	14	P	P	14 25 47.8	+0.4
	baz=208,SNR=5.6						
S31K	Pelican	85.84	21	P	P	14 25 47.7	+0.2
	baz=219						
BMRM	Bremner River	85.84	16	P	P	14 25 48.0	+0.4
	baz=211,SNR=8.6						
PPLA	Purkeypile	85.87	12	P	P	14 25 47.8	0.0
	baz=204						
MESA	MESA	85.88	17	P	P	14 25 48.6	+0.6
	baz=214						
SCM	Sheep Creek Mo	85.94	14	P	P	14 25 48.3	+0.3
	baz=209,SNR=18						
K20K	Telida	85.96	11	IAmb	IAmb	14 25 49.4	
	comp=Z,33nm,1.3s						
K20K	Telida	85.96	11	P	P	14 25 48.3	+0.3
	baz=202,SNR=11						
KLU	Klutina	85.97	15	IAmb	IAmb	14 25 49.6	
	comp=Z,19nm,1.0s						
KLU	Klutina	85.97	15	P	P	14 25 48.2	+0.1
	baz=210,SNR=7.8						
ENH	Enshi	85.99	304	P	P	14 25 49.6	+0.6
H16K	Elim	86.01	7	P	P	14 25 48.9	+0.7
	baz=195						
S32K	Killisnoo	86.02	22	P	P	14 25 48.4	0.0
	baz=220						
WRAK	Wrangell Islan	86.04	24	IAmb	IAmb	14 25 51.0	
	comp=Z,16nm,1.0s						
WRAK	Wrangell Islan	86.04	24	P	P	14 25 49.7	+1.2
	baz=222						
CRQE	Cirque	86.05	16	P	P	14 25 49.1	+0.4
	baz=212						
YAH	Yahtse	86.09	17	IAmb	IAmb	14 25 51.0	
	comp=Z,22nm,0.9s						
G15K	Niukluk	86.17	6	P	P	14 25 49.5	+0.5
	baz=193						
PNL	Peninsula	86.19	19	P	P	14 25 49.7	+0.5
	baz=216						
PINM	Pinnacle	86.29	18	P	P	14 25 50.4	+0.7
	baz=215						
J19K	Poorman	86.29	10	P	P	14 25 49.5	-0.1
J19K				IAmb	IAmb	14 25 51.5	
	comp=Z,24nm,1.5s						
J19K	Poorman	86.29	10	P	P	14 25 50.1	+0.5
	baz=201,SNR=6.7						
TABL	Table Mountain	86.32	17	IAmb	IAmb	14 25 51.8	
	comp=Z,28nm,1.0s						
VRDI	Verde Repeater	86.36	16	IAmb	IAmb	14 25 51.8	
	comp=Z,27nm,1.3s						
CAST	Castle Rocks	86.37	11	IAmb	IAmb	14 25 50.0	
	comp=Z,24nm,0.9s						
CAST	Castle Rocks	86.37	11	P	P	14 25 49.0	-1.0
	baz=204,SNR=34						
N25K	Chitina, Valde	86.39	15	IAmb	IAmb	14 25 51.8	
	comp=Z,33nm,1.3s						
N25K	Chitina, Valde	86.39	15	P	P	14 25 50.6	+0.4
	baz=211,SNR=13						
GRNC	Granite Creek	86.39	17	IAmb	IAmb	14 25 52.2	
	comp=Z,20nm,1.0s						
TNA	Tin City	86.40	4	P	P	14 25 50.3	+0.3
	baz=190						
SYO	Syowa Base	86.43	193	⇓*i*P	P	14 25 48.4	-1.9
SYO	Syowa Base	86.43	193	⇓*e*PcP	PcP	14 25 52.2	+0.2
F14K	Arctic Creek	86.44	5	P	P	14 25 50.7	+0.5
	baz=191						
M24K	Tolsona, Glenn	86.44	14	P	P	14 25 51.2	+0.8
	baz=210,SNR=6.2						
GLB	Gilahina Butte	86.45	16	IAmb	IAmb	14 25 52.0	
	comp=Z,23nm,1.3s						
WAT6	Susitna Watana	86.50	14	P	P	14 25 50.8	0.0
	baz=208,SNR=22						
WAT1	Susitna Watana	86.55	13	P	P	14 25 50.9	0.0
	baz=208						
SEY	Seymchan	86.57	347	P	P	14 25 51.1	+0.3
	comp=Z,32nm,0.9s,baz=144,slow=5.9,SNR=76						
	comp=Z,32nm,0.9s						
B08A	Colville Reser	86.57	35	IAmb	IAmb	14 25 53.1	
	comp=Z,8.9nm,0.8s						
H17K	Granite Mounta	86.58	8	P	P	14 25 51.1	+0.2
	baz=197						
MCARA	McCarthy VSAT	86.60	16	IAmb	IAmb	14 25 52.9	
	comp=Z,22nm,1.1s						
MCARA	McCarthy VSAT	86.60	16	P	P	14 25 51.5	+0.4
	baz=213						
R32K	Eaglecrest	86.66	21	P	P	14 25 51.8	+0.4
	baz=220						
P29M	Windy Craggy	86.67	19	IAmb	IAmb	14 25 53.9	
	comp=Z,21nm,1.2s						
P29M	Windy Craggy	86.67	19	P	P	14 25 52.3	+0.8
	baz=217						
LOGN	Logan Glacier	86.68	17	IAmb	IAmb	14 25 53.5	
	comp=Z,30nm,1.2s						
BARN	Barnard Glacie	86.69	17	IAmb	IAmb	14 25 53.6	
	comp=Z,31nm,1.1s						
CTG	Chitna Glacier	86.70	17	P	P	14 25 52.3	+0.6
	baz=214,SNR=6.2						
CTGM	Chitina Glacie	86.70	17	IAmb	IAmb	14 25 53.5	
	comp=Z,21nm,1.0s						
J20K	Nowinta River	86.70	10	IAmb	IAmb	14 25 53.0	
	comp=Z,28nm,1.6s						
J20K	Nowinta River	86.70	10	P	P	14 25 51.9	+0.4
	baz=202,SNR=9.1						
KTH	Kantishna Hill	86.71	12	IAmb	IAmb	14 25 51.9	
	comp=Z,22nm,0.9s						
G16K	Koyuk River	86.73	7	P	P	14 25 52.1	+0.5
	baz=195						
TRF	Thorofare Moun	86.74	12	P	P	14 25 51.6	-0.3
	baz=206,SNR=34						
CHUM	Lake Minchumin	86.75	11	P	P	14 25 51.2	-0.5
	baz=204,SNR=8.5						
GCSA	Galena City Sc	86.81	9	P	P	14 25 52.4	+0.5
	baz=200						
F15K	North Star Dit	86.81	6	P	P	14 25 52.0	0.0
	baz=193						
O28M	Mount Upton	86.86	18	P	P	14 25 53.0	+0.3
	baz=215,SNR=6.8						
HARP	HAARP	86.93	15	P	P	14 25 52.8	+0.1
	baz=211						
O29M	Mount Kennedy	86.95	19	IAmb	IAmb	14 25 55.1	
	comp=Z,16nm,1.1s						
O29M	Mount Kennedy	86.95	19	P	P	14 25 53.1	+0.2
	baz=217						
PLBC	Pleasant Camp	86.96	20	P	P	14 25 53.0	+0.2
	baz=219						
H18K	Honhosa River	86.98	8	P	P	14 25 52.7	-0.1
	baz=198						
DHY	Denali Highway	87.02	14	IAmb	IAmb	14 25 54.4	
	comp=Z,19nm,1.3s						
DHY	Denali Highway	87.02	14	P	P	14 25 52.9	-0.3
	baz=209,SNR=8.1						
G17K	Kiwalik Mounta	87.03	7	P	P	14 25 53.2	+0.2
	baz=196						
BPAW	Bear Paw Mtn.	87.20	12	P	P	14 25 53.0	-0.9
	baz=205,SNR=6.0						
I20K	Naaghedeneel	87.22	10	IAmb	IAmb	14 25 55.6	
	comp=Z,23nm,1.0s						
I20K	Naaghedeneel	87.22	10	P	P	14 25 54.4	+0.5
	baz=202,SNR=5.8						
MCK	McKinley	87.27	13	IAmb	IAmb	14 25 55.6	
	comp=Z,27nm,0.9s						
MCK	McKinley	87.27	13	P	P	14 25 54.3	+0.1
	baz=207,SNR=19						
P30M	Million Dollar	87.30	19	P	P	14 25 55.6	+1.2
	baz=218						
SKAG	Skagway	87.30	20	IAmb	IAmb	14 25 57.3	
	comp=Z,26nm,1.5s						
SKAG	Skagway	87.30	20	P	P	14 25 55.0	+0.6
SKAG	Skagway	87.30	20	P	P	14 25 54.6	+0.3
	baz=220						
PAX	Paxson	87.35	14	P	P	14 25 54.5	-0.2
	baz=210,SNR=8.2						
TXAR	Lajitas Array	87.39	57	P	P	14 25 56.7	+1.0
	comp=Z,0.7nm,0.7s,baz=211,slow=4.4,SNR=8.1						
	comp=Z,0.7nm,0.7s						
YUK8	Steele Glacier	87.40	18	P	P	14 25 55.8	+0.6
	baz=216,SNR=13						
M26K	Nabesna, AK	87.47	16	IAmb	IAmb	14 25 57.0	
	comp=Z,21nm,1.1s						
M26K	Nabesna, AK	87.47	16	P	P	14 25 55.8	+0.6
	baz=213,SNR=16						
TROLL	Troll, Antarti	87.48	180	⇑P	P	14 25 55.5	0.0
	comp=Z,216nm,0.8s						
TROLL				⇑pP	pP	14 27 52.7	+1.0
	comp=Z,293nm,0.9s						
TROLL				⇑SKSac	SKSac	14 35 32.1	-0.1
	comp=E,125nm,1.1s						
YUK6	Outpost Mounta	87.53	18	P	P	14 25 56.4	+0.6
	baz=217						
S34M	Telegraph Cree	87.59	23	IAmb	IAmb	14 25 58.6	
	comp=Z,20nm,1.1s						
S34M	Telegraph Cree	87.59	23	P	P	14 25 57.3	+1.5
	baz=223,SNR=8.5						
H19K	Roundabout Mou	87.61	9	IAmb	IAmb	14 25 57.3	
	comp=Z,21nm,0.9s						
H19K	Roundabout Mou	87.61	9	P	P	14 25 56.0	+0.3
	baz=200,SNR=10						
YUK3	Moose Creek	87.61	17	P	P	14 25 57.0	+0.9
	baz=215,SNR=26						
G18K	Tagagawik	87.65	8	IAmb	IAmb	14 25 57.0	
	comp=Z,9.6nm,1.0s						
G18K	Tagagawik	87.65	8	P	P	14 25 55.9	0.0
	baz=198,SNR=5.2						
HYT	Haines Junctio	87.69	19	IAmb	IAmb	14 25 58.5	
	comp=Z,12nm,1.0s						
HYT	Haines Junctio	87.69	19	P	P	14 25 57.4	+1.0
	baz=218,SNR=7.3						
M27K	Edge Creek, AK	87.72	16	P	P	14 25 57.6	+1.1
	baz=214,SNR=33						
MENT	Mentasta	87.74	15	IAmb	IAmb	14 25 58.2	
	comp=Z,14nm,1.0s						
MENT	Mentasta	87.74	15	P	P	14 25 57.5	+1.0
SNAA	Sanae	87.77	179	⇑P	P	14 25 56.5	-0.1
	comp=Z,37nm,0.8s						
SNAA				⇑pP	pP	14 27 54.1	+1.5
	comp=Z,60nm,0.9s						
SNAA				⇑SKSac	SKSac	14 35 34.8	+1.0
	comp=E,30nm,0.7s						
SNAA	Sanae	87.77	179	P	P	14 25 56.0	-0.6
	comp=E,1.7nm,0.8s,baz=194,slow=8.3,SNR=8.5						
SNAA				S	SKSac	14 35 32.9	-0.9
	comp=E,1.7nm,1.0s,baz=189,slow=19,SNR=8.0						
	comp=E,1.7nm,0.8s						
YUK4	Talbot Arm	87.77	18	P	P	14 25 58.0	+1.2
	baz=217,SNR=5.1						
H20K	Anotleneega Mo	87.81	10	P	P	14 25 57.3	+0.6
	baz=202,SNR=15						
F17K	Baldwin Pennin	87.87	7	P	P	14 25 56.9	+0.1
	baz=196						
VNA3	Neumayer Olymp	87.91	176	⇑P	P	14 25 57.5	+0.3
	comp=Z,20nm,0.6s						
VNA3				⇑pP	pP	14 27 54.4	+1.2
	comp=Z,8.3nm,0.8s						
VNA3				⇑SKSac	SKSac	14 35 32.6	-1.9
	comp=E,2.6nm,1.1s						
L26K	Log Cabin Wild	87.91	15	IAmb	IAmb	14 25 59.0	
	comp=Z,19nm,1.2s						
L26K	Log Cabin Wild	87.91	15	P	P	14 25 57.9	+0.7
	baz=212,SNR=12						
P32M	Atlin	87.93	21	P	P	14 25 58.6	+1.1
	baz=221						
Q32M	Nakina River	87.95	22	P	P	14 25 59.0	+1.2
	baz=222						
XLT	XiLinHaoTe	87.97	319	*e*P	P	14 25 58.0	-0.1
XLT				pmax	pmax		
	comp=Z,13nm,1.3s						
I21K	Tanana	88.00	11	P	P	14 25 57.7	+0.2
	baz=204						
K24K	Donnelly Dome	88.01	14	P	P	14 25 58.1	+0.4
	baz=210,SNR=19						
NEA2	Nenana	88.01	12	IAmb	IAmb	14 25 58.6	
	comp=Z,10nm,0.8s						
NEA2	Nenana	88.01	12	P	P	14 25 56.9	-0.7
	baz=207,SNR=16						
BVCY	Beaver Creek	88.03	16	P	P	14 25 58.7	+0.9
	baz=214,SNR=15						
O30N	Mendenhall	88.08	19	IAmb	IAmb	14 26 00.2	
	comp=Z,18nm,1.2s						
O30N	Mendenhall	88.08	19	P	P	14 25 59.1	+1.1
	baz=219,SNR=8.1						
MLY	Manley	88.09	11	IAmb	IAmb	14 25 58.4	
	comp=Z,17nm,1.0s						
MLY	Manley	88.09	11	P	P	14 25 57.4	-0.6
	baz=206,SNR=28						
XAN	Xi'an	88.10	307	⇓P	P	14 25 59.8	+1.0
XAN				pmax	pmax		
	comp=Z,27nm,1.1s						
G19K	Purcell Mounta	88.10	8	IAmb	IAmb	14 25 59.5	
	comp=Z,19nm,0.9s						

G19K	Purcell Mounta	88.10	8	P	P	14 25 58.3	+0.3
	baz=200,SNR=13						
RIDG	Independent Ri	88.16	14	IAmb	IAmb	14 25 59.8	
	comp=Z,19nm,1.0s						
RIDG	Independent Ri	88.16	14	P	P	14 25 58.7	+0.3
	baz=211,SNR=11						
F18K	Selawik	88.20	7	P	P	14 25 58.3	-0.1
	baz=197						
DOT	Dot Lake	88.27	15	IAmb	IAmb	14 26 00.3	
	comp=Z,18nm,1.0s						
HDA	Harding Lake	88.28	13	P	P	14 25 58.8	-0.1
	baz=209,SNR=25						
H21K	Melozitna Rive	88.30	10	IAmb	IAmb	14 26 00.4	
	comp=Z,12nm,0.8s						
H21K	Melozitna Rive	88.30	10	P	P	14 25 59.5	+0.5
	baz=204,SNR=21						
N30M	Aishikik Lake	88.31	18	P	P	14 25 59.8	+0.6
	baz=218						
L27K	Beaver Creek,	88.32	16	IAmb	IAmb	14 26 00.9	
	comp=Z,14nm,1.1s						
L27K	Beaver Creek,	88.32	16	P	P	14 25 59.6	+0.4
	baz=214,SNR=13						
BCAR	Beaver Creek A	88.33	16	P	P	14 25 59.5	+0.2
VNA2	Neumayer--Watz	88.34	177	⇑P	P	14 25 59.6	+0.3
	comp=Z,12nm,0.7s,baz=179,slow=4.0						
VNA2				⇑pP	pP	14 27 56.9	+1.6
	comp=Z,5.5nm,0.9s,baz=333,slow=1.7						
VNA2				⇑SKSac	SKSac	14 35 36.2	-0.9
	baz=331,slow=0.1						
WHY	Whitehorse	88.37	20	IAmb	IAmb	14 26 01.7	
	comp=Z,26nm,1.1s						
WHY	Whitehorse	88.37	20	P	P	14 26 00.3	+0.8
	baz=220,SNR=6.8						
DLBC	Dease Lake	88.37	23	P	P	14 26 00.8	+1.2
	baz=224,SNR=5.6						
E17K	Hotham Inlet	88.43	6	P	P	14 25 59.9	+0.4
	baz=195						
IMAR	Indian Mountai	88.44	10	P	P	14 25 59.9	+0.3
I23K	Minto, Yukon-K	88.45	12	P	P	14 25 58.2	-1.4
I23K				IAmb	IAmb	14 26 04.2	
	comp=Z,13nm,1.1s						
I23K	Minto, Yukon-K	88.45	12	P	P	14 25 59.1	-0.6
	baz=207,SNR=8.5						
COLA	College	88.50	12	P	P	14 25 59.9	0.0
COLA	College	88.50	12	P	P	14 25 59.8	0.0
	baz=208						
SCRK	Sand Creek	88.56	14	IAmb	IAmb	14 26 01.9	
	comp=Z,11nm,1.0s						
SCRK	Sand Creek	88.56	14	P	P	14 26 00.7	+0.3
	baz=212,SNR=15						
VNA1	Neumayer--Stat	88.57	177	⇑P	P	14 26 00.2	-0.1
	comp=Z,14nm,0.9s						
IL31		88.61	13	IAmb	IAmb	14 26 01.2	
	comp=Z,19nm,1.0s						
ILAR	Eielson Array	88.61	13	P	P	14 25 58.4	-2.1
ILAR	Eielson Array	88.61	13	P	P	14 25 59.9	-0.5
	comp=Z,14nm,1.0s,baz=229,slow=5.2,SNR=78						
	comp=Z,14nm,1.0s						
F19K	Shaleruckik Mo	88.66	8	IAmb	IAmb	14 26 01.8	
	comp=Z,14nm,0.8s						
F19K	Shaleruckik Mo	88.66	8	P	P	14 26 00.4	-0.2
	baz=199,SNR=13						
P33M	Teslin, Yukon	88.70	21	P	P	14 26 01.7	+0.6
	baz=222,SNR=6.3						
M29M	Somme Creek	88.70	17	IAmb	IAmb	14 26 03.0	
	comp=Z,24nm,1.0s						
M29M	Somme Creek	88.70	17	P	P	14 26 01.9	+0.9
	baz=217,SNR=28						
N31M	Braeburn, Yuko	88.73	19	IAmb	IAmb	14 26 03.1	
	comp=Z,20nm,1.0s						
N31M	Braeburn, Yuko	88.73	19	P	P	14 26 01.2	+0.1
	baz=219,SNR=8.5						
R33M	Jennings River	88.73	22	P	P	14 26 00.8	-0.4
	baz=223,SNR=5.7						
DLMT	Dillon	88.73	40	IAmb	IAmb	14 26 04.3	
	comp=Z,8.6nm,1.1s						
H22K	Ishtalitna Cre	88.76	11	P	P	14 26 01.4	+0.3
	baz=205,SNR=33						
J25K	Salcha River,	88.80	14	IAmb	IAmb	14 26 02.6	
	comp=Z,14nm,0.9s						
J25K	Salcha River,	88.80	14	P	P	14 26 01.6	+0.3
	baz=210,SNR=22						
E18K	Tukpahlearik C	88.89	7	IAmb	IAmb	14 26 03.1	
	comp=Z,18nm,0.9s						
E18K	Tukpahlearik C	88.89	7	P	P	14 26 02.1	+0.5
	baz=196						
D17K	Noatak River	88.90	6	P	P	14 26 01.5	-0.2
	baz=194						
G21K	Allakaket	88.97	10	P	P	14 26 02.4	+0.3
	baz=203						
H23K	Yukon River	89.02	11	P	P	14 26 02.1	-0.2
	baz=207,SNR=7.1						
K27K	Chicken	89.06	15	IAmb	IAmb	14 26 04.7	
	comp=Z,20nm,1.0s						
K27K	Chicken	89.06	15	P	P	14 26 03.4	+0.9
	baz=213						
J26L	Joseph Creek	89.11	14	P	P	14 26 03.8	+1.0
	baz=212,SNR=51						
F20K	Avaraart Lake	89.14	9	IAmb	IAmb	14 26 04.3	
	comp=Z,17nm,0.9s						
F20K	Avaraart Lake	89.14	9	P	P	14 26 03.4	+0.6
	baz=201,SNR=20						
KMI	Kunming	89.25	297	P	P	14 26 06.3	+1.7
KMI				pmax	pmax		
	comp=Z,13nm,1.0s						
RDOG	Red Dog Mine	89.26	6	P	P	14 26 03.7	+0.3
	baz=194						
PLCA	Paso Flores	89.27	134	P	P	14 26 05.1	+0.8
	comp=Z,2.7nm,0.9s,baz=206,slow=7.4,SNR=4.3						
	comp=Z,2.7nm,0.9s						
C16K	Lisburne Hills	89.27	5	IAmb	IAmb	14 26 05.4	
	comp=Z,24nm,1.2s						
C16K	Lisburne Hills	89.27	5	P	P	14 26 03.6	+0.2
	baz=192						
PDAR	Pinedale Array	89.31	43	P	P	14 26 04.9	+0.4
PDAR	Pinedale Array	89.31	43	P	P	14 26 05.5	+1.0
	comp=Z,3.9nm,0.9s,baz=212,slow=3.5,SNR=23						
	comp=Z,3.9nm,0.9s						
E19K	Redstone River	89.32	8	P	P	14 26 04.1	+0.4
	baz=199						
L29M	L29M	89.33	17	P	P	14 26 05.2	+1.3
	baz=217,SNR=40						
H24K	Noodor Dome	89.35	12	P	P	14 26 02.8	-1.1
	baz=208						
HHC	Hu-ho-hao-te	89.36	314	*e*P	P	14 26 03.0	-1.6
HHC				pmax	pmax		
	comp=Z,19nm,0.5s						
HHC				pmax	pmax		
	comp=Z,98nm,4.4s						
PRP	Porcupine Dome	89.55	13	IAmb	IAmb	14 26 07.2	
	comp=Z,12nm,1.0s						
PRP	Porcupine Dome	89.55	13	P	P	14 26 04.8	-0.2
	baz=210,SNR=19						
F21K	Alatna River	89.63	9	IAmb	IAmb	14 26 06.3	
	comp=Z,8.0nm,0.9s						
F21K	Alatna River	89.63	9	P	P	14 26 05.3	+0.2
	baz=203,SNR=12						
C17K	DeLong Mountai	89.65	6	P	P	14 26 05.3	+0.2
	baz=194						
G22K	Bettles	89.67	10	P	P	14 26 05.9	+0.6
	baz=205						
M31M	Drury Creek, Y	89.70	19	P	P	14 26 05.7	+0.1
	baz=220						
G23K	Bananza Creek	89.73	11	IAmb	IAmb	14 26 07.2	
	comp=Z,11nm,1.1s						
G23K	Bananza Creek	89.73	11	P	P	14 26 05.8	+0.1
	baz=206,SNR=12						
DAWY	Dawson	89.77	16	IAmb	IAmb	14 26 07.6	
	comp=Z,18nm,0.9s						
DAWY	Dawson	89.77	16	P	P	14 26 06.7	+0.8
	baz=216,SNR=24						
I26K	Coal Creek Min	89.89	14	IAmb	IAmb	14 26 08.1	
	comp=Z,21nm,1.1s						
I26K	Coal Creek Min	89.89	14	P	P	14 26 06.8	+0.5
	baz=212						
CMAR	Chiang Mai Arr	89.98	290	P	P	14 26 06.2	-1.6
CMAR	Chiang Mai Arr	89.98	290	P	P	14 26 09.5	+1.6
	comp=Z,11nm,1.0s,baz=118,slow=3.1,SNR=43						
CMAR				PP	PP	14 29 45.0	-5.7
	comp=Z,1.1nm,0.8s,baz=132,slow=6.0,SNR=5.0						
	comp=Z,11nm,1.0s						
C18K	Utukok River	90.01	6	IAmb	IAmb	14 26 08.0	
	comp=Z,16nm,1.1s						
C18K	Utukok River	90.01	6	P	P	14 26 07.4	+0.5
	baz=196,SNR=5.3						
FARO	Faro, Yukon	90.04	19	P	P	14 26 07.8	+0.6
	baz=221						
K29M	Barlow Dome	90.08	17	P	P	14 26 07.9	+0.5
	baz=218,SNR=25						
F22K	John River	90.10	10	P	P	14 26 07.6	+0.3
	baz=204,SNR=15						
CHTO	Chiang Mai	90.11	290	P	P	14 26 08.7	+0.2
CHTO	Chiang Mai	90.11	290	P	P	14 26 10.0	+1.5
H25L	Birch Creek	90.14	13	P	P	14 26 07.3	-0.1
	baz=210,SNR=5.1						
COLD	Coldfoot	90.17	11	IAmb	IAmb	14 26 09.5	
	comp=Z,15nm,0.9s						
COLD	Coldfoot	90.17	11	P	P	14 26 08.3	+0.7
	baz=206,SNR=13						
G24K	Hadweenzic Riv	90.19	12	P	P	14 26 08.0	+0.3
	baz=208						
D19K	Kuna River	90.20	7	P	P	14 26 07.9	+0.2
	baz=199						
E20K	Nigu River	90.21	8	P	P	14 26 08.4	+0.5
	baz=200						
BTO	Baotou	90.28	314	*e*P	P	14 26 05.0	-3.9
BTO				sP	sP	14 28 57.5	-1.2
BTO				PP	PP	14 29 53.3	+0.5
BTO				pmax	pmax		
	comp=Z,17nm,0.6s						
BTO				pmax	pmax		
	comp=Z,81nm,3.9s						
MAYO	Mayo, Yukon	90.34	18	P	P	14 26 09.8	+1.3
	baz=219						
J29N	Klondike Camp	90.38	16	IAmb	IAmb	14 26 10.9	
	comp=Z,16nm,0.9s						
J29N	Klondike Camp	90.38	16	P	P	14 26 09.7	+1.0
	baz=217						
TOAD	Toad River Com	90.47	25	P	P	14 26 10.1	+0.9
	baz=228,SNR=12						
I27K	Kandik River	90.49	14	P	P	14 26 09.6	+0.4
	baz=214,SNR=7.2						
G25K	Bearman Lake	90.51	12	P	P	14 26 09.4	+0.2
	baz=210						
D20K	Etivluk River	90.59	8	P	P	14 26 10.1	+0.6
	baz=200						
C19K	Lookout Ridge	90.61	7	P	P	14 26 10.3	+0.6
	baz=197						
B18K	Kokolik River	90.64	6	P	P	14 26 10.4	+0.7
	baz=195						
E21K	Killik River	90.69	9	IAmb	IAmb	14 26 11.2	
	comp=Z,16nm,1.1s						
E21K	Killik River	90.69	9	P	P	14 26 10.3	+0.2
	baz=202						
E22K	Anaktuvuk Pass	90.73	10	P	P	14 26 10.7	+0.5
	baz=204,SNR=18						
I28M	Miner Creek	90.76	15	IAmb	IAmb	14 26 11.8	
	comp=Z,12nm,1.0s						
I28M	Miner Creek	90.76	15	P	P	14 26 10.8	+0.3
	baz=215,SNR=12						
F24K	Squaw Lake	90.84	11	IAmb	IAmb	14 26 12.5	
	comp=Z,8.1nm,1.1s						
F24K	Squaw Lake	90.84	11	P	P	14 26 11.3	+0.6
	baz=208,SNR=8.4						
J30M	Hart River	90.98	17	IAmb	IAmb	14 26 13.3	
	comp=Z,7.4nm,1.1s						
J30M	Hart River	90.98	17	P	P	14 26 12.2	+0.6
	baz=218,SNR=8.5						
MMPY	Sheldon Lake,	90.98	20	IAmb	IAmb	14 26 13.7	
	comp=Z,26nm,1.6s						
MMPY	Sheldon Lake,	90.98	20	P	P	14 26 12.4	+0.8
	baz=223,SNR=9.5						
E23K	Chandalar	91.02	10	P	P	14 26 12.2	+0.5
	baz=206,SNR=11						
H27K	Steamboat Moun	91.03	14	IAmb	IAmb	14 26 13.5	
	comp=Z,10nm,1.1s						
H27K	Steamboat Moun	91.03	14	P	P	14 26 12.1	+0.4
	baz=214,SNR=12						
I29M	Ogilvie Camp,	91.09	16	IAmb	IAmb	14 26 13.8	
	comp=Z,20nm,1.4s						
I29M	Ogilvie Camp,	91.09	16	P	P	14 26 12.3	+0.3
	baz=217						
G26K	Porcupine Rive	91.14	13	P	P	14 26 12.7	+0.7
	baz=212,SNR=21						
TGTN	Hyland Airport	91.19	22	P	P	14 26 13.4	+0.9
	baz=226						
E24K	Your Creek	91.22	11	P	P	14 26 13.0	+0.5
	baz=208,SNR=5.3						
C21K	Knifeblade Rid	91.24	8	P	P	14 26 13.5	+0.9
	baz=202,SNR=13						
D22K	Ayikyak River	91.28	9	IAmb	IAmb	14 26 14.5	
	comp=Z,16nm,0.9s						
D22K	Ayikyak River	91.28	9	P	P	14 26 13.7	+1.0
	baz=204,SNR=15						
F25K	Christian Rive	91.32	12	IAmb	IAmb	14 26 15.1	
	comp=Z,12nm,1.4s						
F25K	Christian Rive	91.32	12	P	P	14 26 13.8	+0.8
	baz=210,SNR=6.8						
BMAR	Burnt Mountain	91.39	12	P	P	14 26 13.6	+0.2
I30M	Mount Dempster	91.48	16	IAmb	IAmb	14 26 15.3	
	comp=Z,13nm,1.0s						
I30M	Mount Dempster	91.48	16	P	P	14 26 14.2	+0.3
	baz=218,SNR=16						
G27K	Doyon Strip	91.48	14	P	P	14 26 14.4	+0.7
	baz=214,SNR=5.6						
A19K	Wainwright	91.52	6	P	P	14 26 14.4	+0.7
	baz=196						
TOLK	Toolik Lake Re	91.55	10	P	P	14 26 14.5	+0.5
	baz=206						
D23K	Nanushuk River	91.66	10	IAmb	IAmb	14 26 16.4	
	comp=Z,15nm,1.0s						
D23K	Nanushuk River	91.66	10	P	P	14 26 15.2	+0.8
	baz=206,SNR=12						
B21K	Ikpikpuk River	91.70	8	IAmb	IAmb	14 26 16.1	
	comp=Z,14nm,1.3s						
B21K	Ikpikpuk River	91.70	8	P	P	14 26 15.0	+0.5
	baz=202						
F26K	Sheenjek River	91.71	12	P	P	14 26 15.6	+0.8
	baz=212,SNR=7.3						
B20K	Meade River	91.75	7	P	P	14 26 15.2	+0.4
	baz=200						
H29M	Whitestone	91.76	15	P	P	14 26 15.6	+0.6
	baz=217,SNR=14						
E25K	Arctic Village	91.80	12	P	P	14 26 15.7	+0.5
	baz=210,SNR=5.4						
D24K	Happy Valley	92.13	10	P	P	14 26 17.0	+0.4
	baz=207						
YAK	Yakutsk	92.26	338	P	P	14 26 16.6	-0.7
	comp=Z,25nm,0.9s,baz=75,slow=1.0,SNR=9.6						
	comp=Z,25nm,0.9s						
EPYK	Eagle Plains	92.29	16	P	P	14 26 17.6	+0.1
	baz=218,SNR=9.7						
G29M	Pine Creek	92.40	15	IAmb	IAmb	14 26 19.2	
	comp=Z,9.4nm,1.1s						
G29M	Pine Creek	92.40	15	P	P	14 26 18.2	+0.3
	baz=217,SNR=6.2						
C23K	Itkillik River	92.46	9	IAmb	IAmb	14 26 19.8	
	comp=Z,11nm,0.9s						
C23K	Itkillik River	92.46	9	P	P	14 26 18.6	+0.5
	baz=206,SNR=5.0						
H31M	Peel River	92.47	17	P	P	14 26 17.6	-0.6
	baz=220						
B22K	Teshekpuk Lake	92.52	8	P	P	14 26 18.6	+0.3
	baz=203						
F28M	Old Crow	92.54	14	P	P	14 26 19.0	+0.4
	baz=215						
E27K	Coleen River	92.64	13	P	P	14 26 19.8	+0.7
	baz=214,SNR=6.7						
C24K	Franklin Bluff	92.65	10	IAmb	IAmb	14 26 20.7	
	comp=Z,13nm,1.1s						
C24K	Franklin Bluff	92.65	10	P	P	14 26 19.8	+0.8
	baz=207						
D25K	Kavik River	92.69	11	P	P	14 26 19.1	-0.2
	baz=210						
G30M	tAoh Zraii Nji	92.89	15	P	P	14 26 20.4	+0.2
	baz=219,SNR=16						
A22K	Sinclair Lake	92.94	7	P	P	14 26 20.6	+0.4
	baz=202						
G31M	Satah River	93.34	16	P	P	14 26 22.1	-0.1
	baz=220,SNR=9.5						
E28M	Babbage River	93.42	13	IAmb	IAmb	14 26 24.1	
	comp=Z,7.9nm,1.0s						
E28M	Babbage River	93.42	13	P	P	14 26 23.0	+0.5
	baz=216,SNR=15						
C27K	Jago River	93.44	11	IAmb	IAmb	14 26 24.2	
	comp=Z,8.6nm,1.1s						
C27K	Jago River	93.44	11	P	P	14 26 23.2	+0.6
	baz=212,SNR=5.7						
C26K	Camden Bay	93.47	11	P	P	14 26 23.0	+0.3
	baz=211						
F30M	Barrier River	93.49	15	IAmb	IAmb	14 26 25.8	
	comp=Z,5.1nm,0.9s						
F30M	Barrier River	93.49	15	P	P	14 26 23.0	+0.1
	baz=219						
E29M	Blow River	93.61	14	P	P	14 26 23.3	-0.1
	baz=217						
D27M	Malcolm River	93.65	12	P	P	14 26 24.2	+0.5
	baz=214,SNR=5.8						
F31M	Tsiigehtchic	93.87	16	P	P	14 26 24.7	+0.1
	baz=221,SNR=11						
D28M	Stokes Point	94.18	13	P	P	14 26 26.2	+0.2
	baz=216						
INK	Inuvik	94.58	15	P	P	14 26 27.6	-0.2
	baz=221						
SONM	Songino Array	95.79	319	P	P	14 26 33.3	-0.7
	comp=Z,0.7nm,0.7s,baz=123,slow=5.3,SNR=2.2						
	comp=Z,0.7nm,0.7s						
GTA	Gaotai	96.95	309	*e*P	P	14 26 40.3	+0.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
A36M	Sachs Harbour	99.18	15	P	Pdif	14 26 48.1	-0.2
	baz=229						
ZALV	Zalesovo Beam	110.54	321	PKiKP	PKiKP	14 31 35.0	-1.3
	comp=Z,2.2nm,0.6s,baz=122,slow=1.9,SNR=9.7						
MKAR	Makanchi Array	111.20	313	Pdiff	Pdif	14 27 41.4	-1.1
	comp=Z,0.4nm,0.9s,baz=98,slow=5.1,SNR=1.9						
MKAR				PKiKP	PKiKP	14 31 37.0	-0.8
	comp=Z,2.8nm,0.8s,baz=64,slow=2.0,SNR=28						
KURBB	Kurchatov Arra	114.07	317	PKiKP	PKPdf	14 31 41.9	-1.3
	comp=Z,3.8nm,0.7s,baz=94,slow=2.0,SNR=31						
KURBB				PP	PP	14 32 42.5	-5.5
	comp=Z,0.7nm,0.2s,baz=98,slow=6.2,SNR=8.2						
KURBB				SKP		14 34 28.3	
	comp=Z,0.8nm,0.7s,baz=94,slow=2.0,SNR=5.9						
BVAR	Borovoye Array	119.12	320	PKP	PKPdf	14 31 52.2	-0.6
	comp=Z,7.9nm,0.6s,baz=80,slow=1.7,SNR=40						
BVAR				SKP		14 34 38.0	
	comp=Z,1.7nm,0.8s,baz=95,slow=3.7,SNR=4.3						
SPITS	Spitsbergen Ar	122.10	356	PKP	PKPdf	14 31 57.1	-0.8
	comp=Z,5.8nm,0.7s,baz=13,slow=8.1,SNR=4.3						
ARTI	Arti	125.38	325		PKPdf	14 32 04.2	-0.6
ARCES	ARCESS Array B	129.12	349	PKP	PKPdf	14 32 11.2	-0.4
	comp=Z,2.1nm,0.5s,baz=44,slow=1.1,SNR=18						
FINES	FINESS Array B	135.95	343	PKhKP	PKPpre	14 32 11.0	
	comp=Z,1.5nm,0.7s,baz=79,slow=0.7,SNR=4.7						
FINES				PKP	sPdif	14 32 23.4	0.0
	comp=Z,5.3nm,0.7s,baz=116,slow=4.4,SNR=8.7						
FINES				SKPbc	SKPbc	14 35 07.6	+1.2
	comp=Z,9.6nm,0.9s,baz=18,slow=2.4,SNR=11						
KBZ	Khabaz	138.90	313	PKhKP	PKPpre	14 32 22.9	
	comp=Z,0.7nm,0.4s,baz=104,slow=12,SNR=2.5						
KBZ				SKPbc	SKiKP	14 35 18.1	-0.4
	comp=Z,2.6nm,1.0s,baz=50,slow=3.8,SNR=5.1						
NB2	NORSAR Subarra	139.20	353	PKP	PKPdf	14 32 22.0	-8.6
	comp=Z,6.0nm,1.4s,baz=16,slow=3.2						
NB2				pPKP	sPKPdf	14 35 17.6	-10
	comp=Z,1.8nm,0.8s,baz=15,slow=3.1						
NOA	NORSAR Array B	139.20	353	PKhKP	PKPpre	14 32 20.4	
	comp=Z,2.8nm,0.8s,baz=16,slow=2.5,SNR=7.7						
NOA				SKPbc	SKPbc	14 35 16.6	+0.8
	comp=Z,4.3nm,0.9s,baz=17,slow=4.4,SNR=6.8						
HFS	Hagfors	139.75	351	PKhKP	PKPpre	14 32 23.7	
	comp=Z,4.5nm,0.4s,baz=64,slow=3.4,SNR=23						
HFS				SKPbc	SKPbc	14 35 18.3	+1.0
	comp=Z,6.3nm,0.9s,baz=90,slow=7.4,SNR=5.4						
MNK	Minsk	140.91	336	*i* PKiKP	PKiKP	14 32 35.8	-0.9
MNK				*i* PKiKP	PKiKP	14 32 35.8	-0.9
MNK				*i* PKiKP	PKiKP	14 32 35.8	-0.9
	comp=Z,18nm,0.9s,baz=41						
MNK				*i* pPKiKP	pPKiKP	14 34 41.7	+0.6
MNK				*i* PP	PP	14 35 41.1	-0.2
MNK				*i* SKS	SKSdf	14 38 50.8	-2.5
MNK				*i* PPP	PPP	14 38 52.9	
MNK				*i* SKKS	SKKSdf	14 48 14.1	-5.2
MNK				*i* SS	SS	14 53 27.2	+1.5
MNK				*i* SSS	SSS	14 58 53.4	
NACGM	Naroch	141.01	337	*e*PKP	PKPdf	14 32 29.7	-4.3
	comp=Z,14nm,0.6s,baz=38						
STRU	Stroemstad	141.16	352	*i* P	PKPdf	14 32 28.7	-5.4
HOMB	Homborsund	142.21	354	*i* P	PKPdf	14 32 32.3	-3.7
BORU	Boraas	142.29	350	*i* P	PKPdf	14 32 31.6	-4.5
ONAU	Onsala	142.65	351	*i* P	PKPdf	14 32 33.1	-3.7
FABU	Falkenberg	142.90	350	*i* P	PKPdf	14 32 33.9	-3.4
BLEU	Blekinge	142.98	347	*i* P	PKPdf	14 32 34.0	-3.5
AKASG	Malin Array Be	143.12	331	PKPdf	PKPab	14 32 35.0	-0.5
AKASG	Malin Array Be	143.12	331	PKP	PKPab	14 32 35.4	-0.1
	comp=Z,59nm,0.7s,baz=42,slow=4.4,SNR=107						
AKASG				SKPbc	SKiKP	14 35 27.3	+0.3
	comp=Z,6.4nm,1.0s,baz=43,slow=3.1,SNR=10						
KIEV	Kiev	143.13	331		PKPab	14 32 35.2	-0.4
KIEV	Kiev	143.13	331	⇑P	PKPab	14 32 35.5	-0.1
KIEV	Kiev	143.13	331	PKP	PKPab	14 32 34.4	-1.2
DEL	Delary	143.21	349	*i* P	PKPab	14 32 35.6	-0.1
BJUU	Bjuv	143.74	349	*i* P	PKPab	14 32 37.3	-0.4
RNPP9	Sopachiv	144.05	334	PKP	PKPbc	14 32 37.9	-1.0
RNPP8	Varash	144.12	334	PKP	PKPbc	14 32 38.3	-0.8
COP	Copenhagen	144.21	350	*i* P	PKPbc	14 32 39.3	+0.1
R9F13	Warsaw-Wawer	145.16	339	*e*PKP	PKPdf	14 32 41.2	-0.1
EKA	Eskdalemuir Ar	145.28	5	PKPbc	PKPbc	14 32 42.1	-0.4
	comp=Z,20nm,0.8s,baz=333,slow=2.7,SNR=45						
SORM	Soroca	145.29	328	⇓P	PKPbc	14 32 42.6	-0.2
GKP	Gorka Klasztor	145.42	344	*e*PKP	PKPbc	14 32 43.1	+0.2
BZK	Bozkurt	145.58	315	⇑P	PKPab	14 32 44.7	-0.6
MILM	Milestii Mici	145.87	326	⇓*i*PKP	PKPbc	14 32 43.8	-0.7
	comp=Z,130nm,1.1s						
MILM	Milestii Mici	145.87	326	⇑P	PKPbc	14 32 43.6	-0.9
KMPD	K-Podol'skiy	145.90	330	PKP	PKPdf	14 32 42.1	-0.6
BSEG	Bad Segeberg	146.23	351	*e*PKPbc	PKPbc	14 32 45.7	+0.4
	baz=19,slow=2.4						
FKH	Fakeheh	146.62	301	*e*P	PKPbc	14 32 47.6	+0.5
KWP	Kalwaria Pacla	146.71	335	*e*PKP	PKPbc	14 32 47.0	+0.2
BEIL	Beino	146.72	302	*e*P	PKPbc	14 32 47.9	+0.6
BRTR	Keskin Array B	146.83	312	PKPbc	PKPbc	14 32 47.3	-0.3
	comp=Z,15nm,0.7s,baz=108,slow=2.7,SNR=61						
BRTR				SKPbc	SKiKP	14 35 35.9	+0.6
	comp=Z,1.2nm,0.8s,baz=48,slow=2.1,SNR=4.3						
KIRS	Kirsehir-Merke	146.88	311	⇑P	PKPbc	14 32 47.7	0.0
VLDR	Vladesti	146.95	325	⇑P	PKPbc	14 32 48.4	+0.9
TLCR		146.97	324	⇑P	PKPbc	14 32 48.0	+0.4
HWQ	Hawqa	146.98	301	*e*P	PKPbc	14 32 48.1	0.0
GORT1	Trebel	146.98	349	*e*PKPbc	PKPbc	14 32 48.0	+0.7
	baz=19,slow=2.4						
RUE	Ruedersdorf	146.98	346	*e*PKPbc	PKPbc	14 32 47.7	+0.3
	baz=19,slow=2.4						
BURAR	Bucovina Array	147.16	330		PKPbc	14 32 48.9	+0.7
BURAR	Bucovina Array	147.16	330	⇑P	PKPbc	14 32 49.0	+0.9
JURR	Jurilovca	147.20	323	⇑P	PKPbc	14 32 48.7	+0.5
TESR	Tescani	147.25	327	⇑P	PKPbc	14 32 48.2	-0.1
RCY	Rachaya	147.27	300	*e*P	PKPbc	14 32 49.4	+0.5
OJC	Ojcow	147.31	338	*e*PKP	PKPbc	14 32 48.5	+0.2
BHL	Bhannes	147.31	301	*e*P	PKPbc	14 32 49.2	+0.3
CFR	Carcaliu	147.35	324	⇑P	PKPbc	14 32 49.0	+0.4
ANTO	Ankara	147.36	313	⇓P	PKPbc	14 32 49.2	+0.3
SHBL	Chebaa	147.38	300	*e*P	PKPbc	14 32 49.8	+0.5
QRWL	Qaraoun	147.38	300	*e*P	PKPbc	14 32 49.8	+0.6
TPGR	Topolog	147.40	324	⇑P	PKPbc	14 32 49.5	+0.7
DQRL	Deir Qamar	147.43	300	*e*P	PKPbc	14 32 50.1	+0.8
KOLS	Kolonicke sedl	147.44	335	*e*PKP	PKiKP	14 32 49.6	-0.7
KOLS				*e*		14 32 53.1	
STHS	Stebnicka Huta	147.45	336	*e*PKP	PKPbc	14 32 48.7	0.0
STHS				*e*		14 32 52.2	
ONER	Baraj Valea Uz	147.50	327	⇑P	PKiKP	14 32 49.8	-0.7
RETH	Rethem/Aller,	147.53	351	*e*PKPbc	PKPbc	14 32 49.3	+0.5
	baz=19,slow=2.4						
FLTG	Flechtingen	147.63	349	*e*PKPbc	PKPbc	14 32 49.2	+0.2
	baz=19,slow=2.4						
FLTG				*e*PKPab	PKPab	14 32 53.1	0.0
	baz=14,slow=4.2						
VRI	Vrincioaia	147.65	327	⇑P	PKPbc	14 32 49.6	+0.2
TIRR	Tirgusor	147.65	323	⇑P	PKPbc	14 32 50.0	+0.7
NRDL	Niedersach Rie	147.66	350	*e*PKPdf	PKPbc	14 32 47.3	-1.8
	baz=15,slow=1.1						
NRDL				*e*PKPbc	PKiKP	14 32 49.6	-1.0
	baz=19,slow=2.4						
NRDL				*e*PKPab	PKPab	14 32 53.5	+0.3
	baz=14,slow=4.2						
PLOR	Plostina	147.70	327	⇑P	PKPbc	14 32 49.6	+0.1
MMAI	Mount Meron Ar	147.73	299	PKPbc	PKPbc	14 32 50.4	+0.3
	comp=Z,39nm,0.7s,baz=60,slow=4.0,SNR=50						
HARR	Harsova	147.77	324	⇑P	PKiKP	14 32 50.5	-0.6
NIE	Niedzica	147.80	337	*e*PKP	PKiKP	14 32 50.5	-0.6
TLBR	Topalu	147.80	324	⇑P	PKPbc	14 32 50.4	+0.7
MFTR	Murfatlar	147.82	323	⇑P	PKPbc	14 32 50.4	+0.6
KSP	Ksiaz	147.86	343	*e*PKP	PKPbc	14 32 50.4	+0.7
BMR	Baia Mare	147.90	332	⇓P	PKiKP	14 32 50.7	-0.6
ASSE	Asse, Remlinge	147.92	350	*e*PKPbc	PKPbc	14 32 50.3	+0.5
	baz=19,slow=2.4						
MANR	Mangalia	147.94	322	⇑P	PKiKP	14 32 51.2	-0.3
OSTC	Ostas	148.14	342	⇑*e*PKP	PKiKP	14 32 51.5	-0.2
IBBN	Ibbenburen	148.16	353	*e*PKPdf	PKPdf	14 32 47.3	+1.0
	baz=15,slow=1.1						

IBBN				ePKPbc	PKPbc	14 32 49.9	-0.5
	baz=19,slow=2.4						
IBBN				ePKPab	PKPab	14 32 55.1	-0.1
	baz=14,slow=4.2						
IBBN				epPKPbc	pPKPab	14 35 03.3	+8.1
STEB	**Steborice**	148.22	340	⇑ePKP	PKPbc	14 32 51.0	+0.3
STEB				ePKPAB	PKPab	14 32 56.6	+0.9
UPC	**Upice**	148.24	343	⇑ePKP	PKiKP	14 32 51.5	-0.4
ISR	**Istrita**	148.25	326	⇑P	PKiKP	14 32 51.6	-0.6
CLZ	**Clausthal**	148.25	350	ePKPdf	PKPdf	14 32 47.5	+0.9
	baz=15,slow=1.1						
CLZ				ePKPbc	PKiKP	14 32 51.4	-0.6
	baz=19,slow=2.4						
CLZ				ePKPab	PKPab	14 32 56.0	+0.3
	baz=14,slow=4.2						
CLZ				epPKPbc	pPKPab	14 35 02.4	+6.8
CLL	**Collm**	148.25	347	ePKPbc	PKPbc	14 32 51.0	+0.3
	baz=19,slow=2.4						
CLL				ePKPab	PKPab	14 32 55.5	-0.2
	baz=14,slow=4.2						
CLL	**Collm**	148.25	347	ePKPdf	PKPdf	14 32 48.0	+1.5
CLL				⇓iPKPbc	PKPbc	14 32 51.1	+0.4
	comp=Z,71nm,0.9s						
CLL				⇑iPKPab	PKPab	14 32 55.7	0.0
	comp=Z,34nm,0.8s						
CLL				epPKPab	pPKPab	14 34 56.0	+0.4
CLL				eSKPbc	SKPbc	14 35 36.0	-1.6
DOPR	**Dopca**	148.26	328	⇓P	PKiKP	14 32 51.9	-0.2
DPC	**Dobruska-Polom**	148.29	342	⇑ePKP	PKiKP	14 32 51.5	-0.6
DPC				ePKPAB	PKPab	14 32 57.3	+1.3
MLR	**Muntele Rosu**	148.31	327	⇓P	PKiKP	14 32 51.8	-0.6
LANS	**Liptovska Anna**	148.32	338	ePKP	PKiKP	14 32 52.3	+0.1
LANS				e		14 32 57.8	
KRLC	**Kraliky**	148.40	341	⇑ePKP	PKPbc	14 32 51.7	+0.5
MORC	**Moravsky Berou**	148.43	340	ePKP	PKPbc	14 32 51.6	+0.4
MORC	**Moravsky Berou**	148.43	340	⇓P	PKiKP	14 32 52.0	-0.4
BRG	**Berggiesshubel**	148.44	345	ePKPdf	PKPdf	14 32 47.7	+0.8
	baz=15,slow=1.1						
BRG				ePKPbc	PKPbc	14 32 51.7	+0.5
	baz=19,slow=2.4						
BRG				ePKPab	PKPab	14 32 56.6	+0.1
	baz=14,slow=4.2						
BRG				epPKPbc	pPKPab	14 35 02.9	+6.7
BRG	**Berggiesshubel**	148.44	345	Amp		14 35 04.6	
	comp=Z,3.5nm,0.8s						
BRG	**Berggiesshubel**	148.44	345	⇓ePKPf		14 32 48.0	
BRG	**Berggiesshubel**	148.44	345	Amp		14 32 48.5	
	comp=Z,4.8nm,0.9s						
BRG	**Berggiesshubel**	148.44	345	⇑PKP	PKiKP	14 32 52.0	-0.3
BRG	**Berggiesshubel**	148.44	345	Amp		14 32 52.8	
	comp=Z,29nm,0.9s						
BRG	**Berggiesshubel**	148.44	345	PKPab	PKPab	14 32 56.9	+0.4
BRG	**Berggiesshubel**	148.44	345	Amp		14 32 57.6	
	comp=Z,22nm,0.8s						
BRG	**Berggiesshubel**	148.44	345	P	pPKPab	14 35 03.2	+7.0
KECS	**Kecovo**	148.50	336	ePKP	PKPab	14 32 57.9	+1.1
GTTG	**Gottingen**	148.60	350	ePKPdf	PKPdf	14 32 48.1	+1.0
	baz=15,slow=1.1						
GTTG				ePKPbc	PKiKP	14 32 52.1	-0.5
	baz=19,slow=2.4						
GTTG				ePKPab	PKPab	14 32 57.5	+0.3
	baz=14,slow=4.2						
NEUB	**Neuenburg**	148.60	348	ePKPbc	PKPbc	14 32 52.0	+0.4
	baz=19,slow=2.4						
NEUB				ePKPab	PKPab	14 32 57.0	-0.1
	baz=14,slow=4.2						
PVCC	**Panska Ves**	148.61	344	⇑ePKP	PKPbc	14 32 52.1	+0.5
MAUC	**Maruska**	148.70	340	⇑ePKP	PKiKP	14 32 52.9	-0.1
VOIR		148.80	327	⇑P	PKPbc	14 32 52.5	+0.2
MARR	**Marisel-Cluj**	148.82	331	⇑P	PKPbc	14 32 52.8	+0.4
DRGR		148.92	332	⇓P	PKiKP	14 32 53.5	-0.1
NEF	**NEVSHA**	149.04	322	i P	PKPdf	14 32 50.1	+2.0
ARR	**Arges**	149.06	328	⇓P	PKiKP	14 32 54.4	+0.5
BUG	**Bochum--Univer**	149.07	353	ePKPdf	PKPdf	14 32 48.0	+0.2
	baz=15,slow=1.1						
BUG				ePKPbc	PKPbc	14 32 52.9	+0.3
	baz=19,slow=2.4						
BUG				ePKPab	PKPab	14 32 58.5	-0.5
	baz=14,slow=4.2						
VYHS	**Vyhne**	149.10	338	ePKP	PKPbc	14 32 53.3	+0.4
VYHS				e		14 32 59.5	
PRU	**Pruhonice**	149.11	344	⇑ePKP	PKiKP	14 32 53.4	-0.3
PRU				ePKPAB	PKPab	14 33 00.1	+0.8
GOPC	**GO Pecny, Ondr**	149.11	343	⇑ePKP	PKPbc	14 32 53.3	+0.4
GOPC				ePKPAB	PKPab	14 32 59.6	+0.3
VRAC	**Vranov**	149.14	341	ePKP	PKPbc	14 32 53.2	+0.3
VRAC	**Vranov**	149.14	341	⇑P	PKiKP	14 32 53.7	-0.1
KASTN	**Kahler Asten**	149.16	352	ePKPdf	PKPdf	14 32 48.4	+0.4
	baz=15,slow=1.1						
KASTN				ePKPbc	PKPbc	14 32 53.3	+0.3
	baz=19,slow=2.4						
KASTN				ePKPab	PKPab	14 32 59.6	+0.1
	baz=14,slow=4.2						
MOX	**Moxa**	149.17	348	ePKPdf	PKPdf	14 32 48.4	+0.4
	baz=15,slow=1.1						
MOX				ePKPbc	PKPbc	14 32 53.4	+0.4
	baz=19,slow=2.4						
MOX				ePKPab	PKPab	14 32 59.1	-0.4
	baz=14,slow=4.2						
MOX				epPKPbc	pPKPab	14 35 05.0	+5.9
JAVC	**Velka Javorina**	149.19	339	ePKP	PKiKP	14 32 54.6	+0.6
PSZ	**Piszkesteto**	149.19	336	⇑P	PKiKP	14 32 53.7	-0.4
TANN	**Tannenbergstha**	149.21	347	ePKPdf	PKPdf	14 32 48.6	+0.4
	baz=15,slow=1.1						
TANN				ePKPbc	PKiKP	14 32 53.6	-0.4
	baz=19,slow=2.4						
TANN				ePKPab	PKPab	14 33 00.2	+0.4
	baz=14,slow=4.2						
UBBA	**Unterbreizbach**	149.30	350	ePKPbc	PKiKP	14 32 53.7	-0.3
	baz=19,slow=2.4						
UBBA				epPKPbc	pPKPab	14 35 03.7	+4.1
KRUC	**Moravsky**	149.42	341	ePKP	PKPbc	14 32 53.9	+0.3
MANZ	**Manzenberg**	149.69	347	ePKPdf	PKPdf	14 32 49.4	+0.5
	baz=15,slow=1.1						
MANZ				ePKPbc	PKiKP	14 32 54.8	-0.2
	baz=19,slow=2.4						
MANZ				ePKPab	PKPab	14 33 02.3	+0.5
	baz=14,slow=4.2						
ZVC	**Zvikov**	149.70	344	ePKPAB	PKPab	14 33 02.3	+0.5
MODS	**Modra-Piesok**	149.74	339	ePKP	PKPbc	14 32 54.5	+0.1
MODS				e		14 33 01.9	
SZH	**Strazhitsa**	149.77	323	i P	PKPbc	14 32 54.7	+0.1
ROTZ	**Rotzenmuhle**	149.88	346	ePKPdf	PKPdf	14 32 49.5	+0.3
	baz=15,slow=1.1						
ROTZ				ePKPbc	PKiKP	14 32 55.2	-0.2
	baz=19,slow=2.4						
ROTZ				ePKPab	PKPab	14 33 03.0	+0.6
	baz=14,slow=4.2						
GZR	**Gura Zlata**	149.94	330	⇑P	PKPbc	14 32 55.2	+0.2
SURR	**Surduc**	149.97	331	⇓P	PKPbc	14 32 55.0	0.0
MEM	**Membach**	150.02	355	dPKP	PKPbc	14 32 53.9	-1.0
BTNL	**Ternell**	150.03	354	dPKiKP	PKPbc	14 32 55.3	+0.3
BTNL				dpPKPdf	pPKPdf	14 34 51.9	-2.8
BSTI	**Sart Tilman**	150.08	355	dPKiKP	PKiKP	14 32 55.5	-0.1
TNS	**Taunus Mts**	150.12	351	ePKPdf	PKPdf	14 32 50.0	+0.4
	baz=15,slow=1.1						
TNS				ePKPbc	PKiKP	14 32 57.5	+1.6
	baz=19,slow=2.4						
TNS				ePKPab	PKPab	14 33 03.3	-0.2
	baz=14,slow=4.2						
TNS				epPKPbc	pPKPab	14 35 06.4	+3.2
KHC	**Kasperske Hory**	150.15	344	⇑ePKP	PKiKP	14 32 56.0	0.0
KHC				ePKPAB	PKPab	14 33 04.2	+0.5
GRF	**Grafenberg Arr**	150.16	348	ePKPbc	PKiKP	14 32 55.7	-0.2
	baz=19,slow=2.4						
GRF				ePKPab	PKPab	14 33 04.0	+0.3
	baz=14,slow=4.2						
GRF				epPKPbc	pPKPab	14 35 06.7	+3.5
BAND	**Balkesir-Ban**	150.24	317	⇑P	PKPbc	14 32 55.9	0.0
CKRC	**Cesky Krumlov**	150.24	343	⇑ePKP	PKiKP	14 32 56.0	-0.1
CKRC				ePKPAB	PKPab	14 33 04.5	+0.4
BCLA	**Clavier**	150.26	355	dPKiKP	PKiKP	14 32 55.9	-0.2
BCLA				dPKP	PKPab	14 33 02.5	-1.5
SRE	**Strehaia**	150.27	328	⇑P	PKiKP	14 32 56.5	+0.2
BHOU	**Houvegnez**	150.27	354	dPKiKP	PKPbc	14 32 55.8	+0.2
BHOU				dPKP	PKPab	14 33 04.4	+0.3
BZS	**Buzias**	150.31	331	⇓P	PKiKP	14 32 56.1	-0.2
WET	**Wettzell**	150.31	345	ePKPdf	PKPdf	14 32 50.0	+0.1
	baz=15,slow=1.1						
WET				ePKPbc	PKPbc	14 32 55.7	0.0
	baz=19,slow=2.4						
WET				ePKPab	PKPab	14 33 05.1	+0.8
	baz=14,slow=4.2						
BGES	**Gesves**	150.31	356	dPKiKP	PKPbc	14 32 55.8	+0.2
BGES				dPKP	PKPab	14 33 04.1	-0.1
GEC2	**GERESS Array S**	150.38	344	ePKPbc	PKPbc	14 32 56.2	+0.2
	baz=19,slow=2.4						
GERES	**GERESS Array B**	150.38	344	PKP	PKPdf	14 32 51.1	+1.0
	comp=Z,1.2nm,0.8s,baz=36,slow=1.8,SNR=5.1						
GERES				PKPbc	PKPbc	14 32 56.1	+0.2
	comp=Z,12nm,0.8s,baz=24,slow=1.6,SNR=50						
GERES				PKPab	PKPab	14 33 04.7	-0.1
	comp=Z,4.5nm,0.8s,baz=25,slow=3.5,SNR=7.5						
BMRD	**Maredsous**	150.41	356	dPKiKP	PKPbc	14 32 56.0	+0.1
BMRD				dPKP	PKPab	14 33 04.3	-0.4
HERR	**Herculane**	150.49	329	⇑P	PKiKP	14 32 56.6	-0.1
CONA	**Conrad Observa**	150.59	340	i PKiKP	PKiKP	14 32 57.0	+0.1
	comp=Z,23nm,0.8s,SNR=13						
DOU	**Dourbes**	150.63	356	dPKiKP	PKPbc	14 32 56.5	+0.1
RONA	**Rosalia, Austr**	150.65	340	i PKiKP	PKiKP	14 32 57.0	0.0
	comp=Z,30nm,0.9s,SNR=7.4						
VALD	**Valchedram**	150.85	327	i P	PKiKP	14 32 57.6	+0.1
MDVR	**Moldovita**	150.90	330	⇑P	PKPbc	14 32 57.0	-0.2
MPEP	**Malo Peshtene**	150.92	326	i P	PKiKP	14 32 57.7	0.0
WLF	**Walferdange**	150.94	354	ePKPbc	PKiKP	14 32 58.1	+0.5
	baz=19,slow=2.4						
WLF				ePKPab	PKPab	14 33 07.4	+0.5
	baz=14,slow=4.2						
WLF				epPKPbc	pPKPab	14 35 11.0	+4.6
MORH	**Mrgy, Hungar**	151.08	335	⇑P	PKiKP	14 32 57.8	-0.1
MOA	**Molln**	151.13	342	i PKiKP	PKPbc	14 32 57.7	+0.1
	comp=Z,10nm,1.0s						
KDZ	**Kurdzhali**	151.18	322	i P	PKPbc	14 32 57.8	-0.1
AKAS	**Kas**	151.20	308		PKPbc	14 32 57.9	-0.5
ALN	**Alexandroupoli**	151.21	320		PKPbc	14 32 57.6	-0.4
ARSA	**Arzberg**	151.30	340	i PKiKP	PKPbc	14 32 58.1	+0.1
	comp=Z,4.4nm,0.8s						
STU	**Stuttgart**	151.41	350	ePKPbc	PKiKP	14 32 58.6	0.0
	baz=19,slow=2.4						
STU				ePKPab	PKPab	14 33 09.0	+0.1
	baz=14,slow=4.2						
BIOA	**Bad Ischl, Aus**	151.45	343	ePKP	PKPab	14 33 09.5	+0.3
	comp=Z,22nm,0.9s						
RZN	**Rozhen**	151.48	322	i P	PKPbc	14 32 58.6	-0.3
FUR	**Furstenfeldbru**	151.59	347	ePKPbc	PKPbc	14 32 58.7	0.0
	baz=19,slow=2.4						
FUR				ePKPab	PKPab	14 33 10.3	+0.6
	baz=14,slow=4.2						
RJOB	**Jochberg**	151.63	344	ePKPbc	PKPbc	14 32 57.6	-1.3
	baz=19,slow=2.4						
RJOB				ePKPab	PKPab	14 33 11.0	+1.0
	baz=14,slow=4.2						
EZN	**Ezine**	151.66	318	⇑P	PKPbc	14 32 59.1	0.0
PLNA	**Plana**	151.69	325	i P	PKiKP	14 32 59.5	0.0
VTS	**Vitosha**	151.70	325	i P	PKPbc	14 32 59.3	0.0
BOVS	**Bovan**	151.76	328	⇓P	PKPbc	14 32 59.2	0.0
LESA	**Schwarzleotal**	151.95	344	i PKiKP	PKPbc	14 32 59.3	-0.3
	comp=Z,7.7nm,0.6s						
SOKA	**Soboth**	151.96	340	i PKiKP	PKPbc	14 32 59.2	-0.4
	comp=Z,13nm,0.9s,SNR=8.6						
BFO	**Black Forest**	151.98	351	ePKPbc	PKPbc	14 32 59.6	+0.1
	baz=19,slow=2.4						
BFO				ePKPab	PKPab	14 33 10.8	-0.6
	baz=14,slow=4.2						
MMB	**Musomishta**	152.14	323	i P	PKPbc	14 32 59.7	-0.4
OBKA	**Obir**	152.26	341	i PKiKP	PKPbc	14 32 59.9	-0.4
	comp=Z,4.4nm,0.9s						
KKB	**Krupnik**	152.29	324	i P	PKPbc	14 33 00.2	-0.2
WATA	**Walderalm**	152.31	346	i PKiKP	PKPbc	14 33 00.3	-0.1
	comp=Z,17nm,1.1s						
RETA	**Reutte**	152.35	347	ePKiKP	PKiKP	14 33 00.6	0.0
	comp=Z,3.8nm,0.8s						
WTTA	**Wattenberg**	152.36	345	i PKiKP	PKPbc	14 33 00.4	-0.2
	comp=Z,24nm,0.9s,SNR=7.5						
MOTA	**Moosalm**	152.41	346	i PKiKP	PKPbc	14 33 00.6	-0.1
	comp=Z,8.4nm,0.7s						
MYKA	**Terra Mystica**	152.42	342	i PKiKP	PKPbc	14 33 00.1	-0.6
	comp=Z,11nm,0.9s,SNR=5.2						
SQTA	**Sankt Quirin**	152.50	346	i PKiKP	PKiKP	14 33 01.0	+0.1
	comp=Z,15nm,0.9s						
ABTA	**Abfaltersbach**	152.62	344	i PKiKP	PKPbc	14 33 00.7	-0.4
	comp=Z,16nm,0.7s,SNR=6.5						
DAVA	**Damuels**	152.72	348	i PKiKP	PKPbc	14 33 00.9	-0.4
	comp=Z,14nm,1.3s						
FETA	**Feichten**	152.79	346	i PKiKP	PKPbc	14 33 00.6	-1.0
	comp=Z,5.7nm,1.1s						
PGAV	**Gavieira, Arco**	157.22	20	ePKPab	PKPab	14 33 32.9	-1.2
PBRG	**Braganca**	157.82	17	ePKPab	PKPab	14 33 37.4	+0.7
MVO	**Moncorvo**	158.33	18	ePKPab	PKPab	14 33 39.8	+0.8
PVIS	**Viseu**	158.47	20	ePKPab	PKPab	14 33 37.9	-1.7
PSARD	**Sardoal**	159.38	22	ePKPab	PKPab	14 33 43.7	+0.1
PMRV	**Marv??o**	159.80	21	ePKPab	PKPab	14 33 45.7	+0.3
PMTG	**Montargil**	159.83	23	ePKPab	PKPab	14 33 44.1	-1.3
ESDC	**Sonseca Array**	160.51	13	PKP	PKPdf	14 33 03.5	-0.3
	comp=Z,0.4nm,0.5s,baz=346,slow=4.2,SNR=2.6						
ESDC				PKPab	PKPab	14 33 48.3	-0.2
	comp=Z,6.7nm,1.1s,baz=342,slow=4.1,SNR=22						
ESDC				PP	PP	14 37 30.7	-1.3
	comp=Z,0.5nm,0.7s,baz=342,slow=6.6,SNR=4.5						
PBAR	**Barrancos**	161.04	22	ePKPab	PKPab	14 33 51.4	+0.6
PFVI	**Vila Bisbo**	161.26	27	ePKPab	PKPab	14 33 49.6	-2.2
PBDV	**Barranco-do-Ve**	161.53	25	ePKPab	PKPab	14 33 50.0	-3.0
KEST	**Kesra**	163.65	338	PKPab	PKPab	14 34 02.1	-0.3
	comp=Z,5.7nm,0.8s,baz=4.8,slow=2.1,SNR=6.6						
TORD	**Torodi Ar. Bea**	172.44	180	PKP	PKPdf	14 33 12.3	-1.1
	comp=Z,1.3nm,0.3s,baz=136,slow=1.6,SNR=1.2						
TORD				PKPab	PKPab	14 34 41.9	+0.3
	comp=Z,1.7nm,0.3s,baz=183,slow=3.0,SNR=1.6						

PRU 27 14:23:36.2, 50°.21N×18°.98E, h0^{km}, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	0.53	89	ePg	Pg	14 23 45.5	-0.8
OJC				eSg	Sg	14 23 52.8	-0.3
OKC	**Ostrava-Krasne**	0.65	236	ePG	Pg	14 23 47.8	-0.9
STEB	**Steborice**	0.82	251	ePG	Pg	14 23 51.7	-0.3
MORC	**Moravsky Berou**	1.02	245	ePG	Pg	14 23 55.1	-0.7
MORC				eSG	Sg	14 24 09.4	+0.3
LANS	**Liptovska Anna**	1.11	163	ePG	Pg	14 23 56.9	-0.5
LANS				eSG	Sb	14 24 12.7	-0.5
LANS				eLG	Lg	14 24 14.9	
NIE	**Niedzica**	1.17	132	ePg	Pb	14 23 59.0	-0.2
NIE				eSg	Sn	14 24 15.9	-0.5
KRLC	**Kraliky**	1.42	265	ePG	Pn	14 24 01.6	-1.7
KRLC				eSG	Sg	14 24 21.6	-0.2
	comp=Z,21nm,0.9s						
STHS	**Stebnicka Huta**	1.67	118	ePG	Pn	14 24 06.8	+0.1
STHS				eSG	Sg	14 24 30.6	+0.9
DPC	**Dobruska-Polom**	1.71	276	ePG	Pn	14 24 06.7	-0.6
DPC				eSG	Sn	14 24 30.0	+0.1
	comp=Z,15nm,0.5s						
VYHS	**Vyhne**	1.72	183	ePG	Pn	14 24 06.3	-1.1
VYHS				eSG	Sn	14 24 28.8	-1.3
VRAC	**Vranov**	1.79	241	ePN	Pn	14 24 08.3	-0.1
VRAC				eSG	Sn	14 24 31.7	-0.1
OSTC	**Ostas**	1.80	282	ePG	Pn	14 24 08.6	0.0
OSTC				eSG	Sb	14 24 33.4	+0.2
KSP	**Ksiaz**	1.83	291	ePg	Pb	14 24 10.3	-0.2
KSP				eSg	Sg	14 24 35.1	+0.2
KECS	**Kecovo**	1.99	150	ePG	Pb	14 24 13.0	-0.2
KECS				eSG	Sb	14 24 37.8	-0.8
KRUC	**Moravsky**	2.04	237	ePN	Pn	14 24 11.8	+0.1
KRUC				eSG	Sn	14 24 38.2	+0.4
BRG	**Berggiesshubel**	3.28	284	Pg	Pg	14 24 37.6	-1.4
BRG				Sg	Sg	14 25 20.6	-1.0
BRG				Amp		14 25 24.0	
	comp=Z,2.6nm,0.5s						
KHC	**Kasperske Hory**	3.67	255	ePN	Pn	14 24 33.0	-1.2
KHC				ex	x	14 24 40.0	
KHC				eSG	Sg	14 25 32.1	-2.0
	comp=Z,4.5nm,0.5s						

WBNET 27 14:34:32.2, 50°.26N×12°.44E, h8^{km}, Ml0.1, 5C-5D, Germany

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBCW	**Luby**	0.02	298	⇓P	Pg	14 34 33.9	+0.1
LBCW				S	Sg	14 34 35.1	+0.2
NKC	**Novy Kostel**	0.02	172	S	Sg	14 34 34.9	+0.2
VAC	**Vackov**	0.05	244	⇓P	Pg	14 34 34.0	+0.1
VAC				S	Sg	14 34 35.1	0.0
STCW	**Studenec**	0.05	85	⇓P	Pg	14 34 34.0	+0.1
STCW				S	Sg	14 34 35.1	-0.1
POCW	**Potky**	0.07	351	⇓P	Pg	14 34 34.3	+0.1
POCW				S	Sg	14 34 35.7	+0.1
KVC	**Kvetna**	0.07	137	⇑P	Pg	14 34 34.4	+0.2
KVC				S	Sg	14 34 35.5	0.0
KRCW	**Kraslice**	0.10	36	⇑P	Pg	14 34 34.6	+0.1
KRCW				S	Sg	14 34 36.2	0.0
SKC	**Skalna**	0.10	212	⇑P	Pg	14 34 34.7	+0.1
SKC				S	Sg	14 34 36.3	+0.1
KOCW	**Kopaniny**	0.14	274	⇓P	Pg	14 34 35.2	+0.1
KOCW				S	Sg	14 34 37.2	0.0
TRCW	**Trojmez**	0.20	284	⇑P	Pg	14 34 36.3	+0.1
TRCW				S	Sg	14 34 39.1	+0.1
ZHC	**Zelena Hora**	0.20	205	⇑P	Pg	14 34 36.5	+0.1
ZHC				S	Sg	14 34 39.3	+0.1

ROM 27 14:43:00.8±0.1, 40°.697N±0°.004×16°.574E±0°.005, h7^{km}, ML2.5/34, 2C-4D, Error ellipse: s-maj=0.4km s-min=0.2km az=261.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATE	**Matera**	0.11	116	⇓P	Pg	14 43 04.0	+0.9
MATE				S	Sg	14 43 06.1	+1.3
MATE				AML	AML		
	comp=E,4485µm,0.6s						
MATE				AML	AML		
	comp=N,5265µm,1.5s						
MATE				AML	AML		
	comp=N,5265µm,0.5s						
MATE				AML	AML		
	comp=N,3928µm,0.3s						
MATE				AML	AML		
	comp=E,4269µm,0.2s						
MIGL	**Miglionico**	0.14	228	⇓iP	Pg	14 43 04.0	+0.3
MIGL				S	Sg	14 43 06.7	+1.1
MIGL				AML	AML		
	comp=N,16200µm,0.4s						
MIGL				AML	AML		
	comp=N,16200µm,1.6s						
MIGL				AML	AML		
	comp=E,13750µm,1.1s						
MIGL				AML	AML		
	comp=N,16221µm,0.4s						
AMUR	**Altamura**	0.21	6	⇑iP	Pg	14 43 05.3	+0.3
AMUR				S	Sg	14 43 08.8	+1.0
AMUR				AML	AML		
	comp=E,2515µm,1.5s						
AMUR				AML	AML		
	comp=N,1565µm,1.2s						
AMUR				AML	AML		
	comp=E,2515µm,0.5s						
AMUR				AML	AML		
	comp=N,1565µm,0.8s						
AMUR				AML	AML		
	comp=E,2483µm,0.3s						
CRAC	**Craco**	0.35	198	⇓iP	Pg	14 43 08.0	+0.4
CRAC				S	Sg	14 43 13.5	+1.3
CRAC				AML	AML		
	comp=E,4535µm,0.2s						
CRAC				AML	AML		
	comp=N,2270µm,0.3s						
CRAC				AML	AML		
	comp=N,2270µm,0.3s						
CRAC				AML	AML		
	comp=E,4533µm,0.2s						
NOCI	**Noci**	0.38	76	⇑P	Pg	14 43 08.7	+0.5
NOCI				S	Sb	14 43 15.5	-0.6
NOCI				AML	AML		
	comp=N,1685µm,0.6s						
NOCI				AML	AML		
	comp=E,1735µm,0.6s						
NOCI				AML	AML		
	comp=E,1681µm,0.3s						
NOCI				AML	AML		
	comp=N,1395µm,0.2s						
ACER	**Acerenza**	0.49	281	P	Pg	14 43 10.5	+0.3
ACER				S	Sb	14 43 18.4	-0.7
ACER				AML	AML		
	comp=E,780µm,0.5s						
ACER				AML	AML		
	comp=N,751µm,1.2s						
ACER				AML	AML		
	comp=E,726µm,0.3s						
ACER				AML	AML		
	comp=N,760µm,1.6s						
ACER				AML	AML		
	comp=E,780µm,1.5s						
ACER				AML	AML		
	comp=N,696µm,0.5s						
PALZ	**Palazzo San Ge**	0.53	298	P	Pg	14 43 11.6	+0.6
PALZ				AML	AML		
	comp=N,396µm,0.8s						
PALZ				AML	AML		
	comp=E,406µm,1.0s						
PALZ				AML	AML		
	comp=E,406µm,1.0s						
PALZ				AML	AML		
	comp=N,396µm,1.2s						
PALZ				AML	AML		
	comp=E,383µm,0.5s						
TAR1	**Taranto**	0.57	107	⇓iP	Pg	14 43 12.2	+0.6
TAR1				S	Sb	14 43 20.9	-0.4
TAR1				AML	AML		
	comp=E,1505µm,0.3s						
TAR1				AML	AML		
	comp=E,1505µm,1.7s						
TAR1				AML	AML		
	comp=N,968µm,0.3s						
TAR1				AML	AML		
	comp=E,1506µm,0.3s						
TAR1				AML	AML		
	comp=N,970µm,0.3s						
ORI	**Oriolo Calabro**	0.64	189	P	Pb	14 43 13.9	-0.3
ORI				S	Sb	14 43 23.4	0.0
MCEL	**Monticello**	0.70	238	P	Pg	14 43 13.6	-0.6
MCEL				S	Sb	14 43 24.4	-0.7
MCEL				AML	AML		
	comp=E,294µm,0.3s						
MCEL				AML	AML		
	comp=E,306µm,0.3s						
MCEL				AML	AML		
	comp=E,294µm,1.7s						
MCEL				AML	AML		
	comp=E,306µm,1.7s						
MCEL				AML	AML		
	comp=N,647µm,0.5s						
MCEL				AML	AML		
	comp=N,662µm,0.5s						
MCEL				AML	AML		
	comp=E,307µm,0.3s						
MCEL				AML	AML		
	comp=N,647µm,0.5s						
MCEL				AML	AML		
	comp=N,662µm,0.5s						
MCEL				AML	AML		
	comp=E,294µm,0.3s						
SIRI	**Monte Sirino -**	0.74	227	P	Pg	14 43 14.6	-0.5
SIRI				S	Sb	14 43 26.1	-0.4
SIRI				AML	AML		
	comp=E,370µm,0.3s						
SIRI				AML	AML		
	comp=E,390µm,0.3s						
SIRI				AML	AML		
	comp=N,257µm,0.2s						
SIRI				AML	AML		
	comp=N,244µm,0.2s						
SIRI				AML	AML		
	comp=N,245µm,0.2s						
SIRI				AML	AML		
	comp=E,391µm,0.3s						
SIRI				AML	AML		
	comp=E,370µm,0.3s						
SIRI				AML	AML		
	comp=N,257µm,0.2s						
VULT	**Monte Vulture**	0.77	290	P	Pb	14 43 16.6	0.0
SLCN	**Sala Consilina**	0.78	247	P	Pg	14 43 15.6	-0.2
SLCN				S	Sb	14 43 27.3	-0.2
MRLC	**Muro Lucano**	0.83	274	P	Pg	14 43 16.9	+0.3
SALB	**San Lorenzo Be**	0.84	192	P	Pg	14 43 16.8	0.0
SALB				S	Sb	14 43 29.6	+0.4
CUC	**Castrocucco**	0.91	220	P	Pg	14 43 17.5	-0.8
CUC				AML	AML		
	comp=E,143µm,0.4s						
CUC				AML	AML		
	comp=N,111µm,0.8s						
CUC				AML	AML		
	comp=N,111µm,1.2s						

CUC				AML	AML		
	comp=E,143µm,0.5s						
CUC				AML	AML		
	comp=N,103µm,0.5s						
CUC				AML	AML		
	comp=E,204µm,0.7s						
MMN	**Mormanno**	**0.92**	**209**	P	Pg	14 43 18.4	0.0
MGR	**Morigerati**	**0.96**	**235**	P	Pg	14 43 19.0	-0.2
MGR				AML	AML		
	comp=E,143µm,0.5s						
MGR				AML	AML		
	comp=N,190µm,0.4s						
MGR				AML	AML		
	comp=E,143µm,1.5s						
MGR				AML	AML		
	comp=N,190µm,0.4s						
MGR				AML	AML		
	comp=E,143µm,0.5s						
CDRU	**Civita di Ruta**	**0.99**	**258**	P	Pg	14 43 19.6	-0.1
CDRU				S	Sb	14 43 33.9	+0.4
SGTA	**Sant Agata di**	**1.01**	**296**	P	Pb	14 43 20.9	+0.1
SGTA				S	Sb	14 43 34.4	+0.1
TDS	**Terranova Siba**	**1.05**	**190**	P	Pg	14 43 20.8	-0.2
SNAL	**S. Angelo Dei**	**1.06**	**283**	P	Pg	14 43 20.6	-0.5
MCRV	**Calabrutti - M**	**1.07**	**275**	P	Pg	14 43 20.8	-0.5
MCRV				S	Sg	14 43 35.0	-0.2
BULG	**Bulgheria - Ca**	**1.10**	**236**	P	Pn	14 43 22.5	-0.2
MSAG	**Monte S. Angel**	**1.13**	**334**	P	Pg	14 43 22.4	0.0
MSAG				S	Sb	14 43 38.3	+0.6
MSAG				AML	AML		
	comp=E,213µm,0.4s						
MSAG				AML	AML		
	comp=N,407µm,0.3s						
MSAG				AML	AML		
	comp=E,85µm,0.4s						
MSAG				AML	AML		
	comp=N,172µm,0.3s						
MSAG				AML	AML		
	comp=N,173µm,0.3s						
MSAG				AML	AML		
	comp=N,407µm,0.3s						
MSAG				AML	AML		
	comp=E,85µm,0.4s						
MSAG				AML	AML		
	comp=E,213µm,0.4s						
MTMR	**Montemarano**	**1.21**	**281**	P	Pg	14 43 23.6	-0.5
PIPA	**Pietrapaola**	**1.23**	**171**	P	Pg	14 43 23.4	-0.8
SGRT	**San Giovanni R**	**1.23**	**330**	P	Pg	14 43 23.8	-0.6
SGRT				S	Sb	14 43 40.5	0.0
SGRT				AML	AML		
	comp=N,186µm,1.6s						
SGRT				AML	AML		
	comp=E,134µm,0.2s						
SGRT				AML	AML		
	comp=N,182µm,0.4s						
SGRT				AML	AML		
	comp=E,134µm,0.2s						
CET2	**Cetraro**	**1.26**	**202**	P	Pn	14 43 24.4	-0.4
CET2				AML	AML		
	comp=E,116µm,1.4s						
CET2				AML	AML		
	comp=N,275µm,1.5s						
CET2				AML	AML		
	comp=N,275µm,0.5s						
CET2				AML	AML		
	comp=E,116µm,0.6s						
CET2				AML	AML		
	comp=N,255µm,0.5s						
CET2				AML	AML		
	comp=E,101µm,0.5s						
MOCO	**Biccari - m.te**	**1.27**	**303**	P	Pn	14 43 24.7	-0.2
CELI	**Celico**	**1.29**	**182**	P	Pn	14 43 24.7	-0.7
APRC	**Apricena**	**1.31**	**324**	P	Pb	14 43 25.7	-0.1
APRC				S	Sg	14 43 43.0	0.0
LADO	**San Nicola del**	**1.45**	**167**	P	Pg	14 43 28.3	-0.1
CAR1	**CAROLEI**	**1.47**	**191**	P	Pb	14 43 28.1	-0.4
TIP	**Timpagrande**	**1.52**	**175**	P	Pb	14 43 29.2	-0.2
SCTE	**Santa Cesarea**	**1.57**	**113**	P	Pn	14 43 29.6	+0.5
SCTE				AML	AML		
	comp=E,203µm,0.7s						
SCTE				AML	AML		
	comp=N,168µm,1.2s						
SCTE				AML	AML		
	comp=E,190µm,0.4s						

ROM 27 14:44:00.7±0.1**, 40°.708N**±0°.002×**16°.540E**±0°.002**, h5^{km}**±1^{km}**, ML1.1**/4**, Error ellipse: s-maj=0.2km s-min=0.1km az=290.0, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIGL	**Miglionico**	**0.13**	**216**	P	Pg	14 44 03.8	+0.5
MIGL				S	Sg	14 44 05.9	+0.8
MATE	**Matera**	**0.14**	**115**	P	Pg	14 44 04.0	+0.4
MATE				S	Sg	14 44 06.3	+1.0
MATE				AML	AML		
	comp=E,135µm,1.9s						
MATE				AML	AML		
	comp=N,117µm,0.5s						
AMUR	**Altamura**	**0.20**	**14**	P	Pg	14 44 05.3	+0.5
AMUR				S	Sg	14 44 08.8	+1.4
AMUR				AML	AML		
	comp=E,93µm,1.2s						
AMUR				AML	AML		
	comp=N,80µm,1.7s						

IDC ***27*** *14:47:12.8±5.8, 7°.28S×129°.35E, h180^{km}±59^{km}, mb2.8/1, mbtmp3.6/4, Error ellipse: s-maj=68.4km s-min=28.8km az=63.0*

ISC 27 14:47:11.0±1.6**, 7°.2S**±0°.1×**129°.1E**±0°.2**, h150^{km}, n10, σ2ˢ37**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRS	**Darwin Rock St**	**5.47**	**161**	P	**Pn**	**14 48 34.4**	**+3.8**
MTN	**Manton Dam**	**5.93**	**161**	P	**Pn**	**14 48 39.8**	**+3.0**
KDU	**Kakadu**	**6.36**	**149**	P	**Pn**	**14 48 44.4**	**+1.9**
FITZ	**Fitzroy Crossi**	**11.33**	**197**	P	**Pn**	**14 49 49.6**	**+1.1**
	2.3nm,0.5s,baz=32,slow=12,SNR=18						
FITZ	**Fitzroy Crossi**	**11.33**	**197**	P	**Pn**	**14 49 49.9**	**+1.4**
WRA	**Warramunga Arr**	**13.62**	**159**	P	**Pn**	**14 50 16.5**	**-1.7**
	0.3nm,0.5s,baz=340,slow=12,SNR=15						
WRA				S	**Sn**	**14 52 49.7**	**+0.5**
	0.9nm,0.5s,baz=332,slow=22,SNR=6.1						
COEN	**Coen**	**15.35**	**117**	P	Pn	14 50 24.7	-15
ASAR	**Alice Springs**	**16.99**	**165**	P	**P**	**14 50 57.7**	**-1.6**
	2.2nm,0.6s,baz=344,slow=10,SNR=33						
ASAR				S	**S**	**14 54 05.8**	**-2.9**
	0.3nm,0.7s,baz=352,slow=24,SNR=2.0						
AS01	**Alice Springs**	**17.00**	**165**	P	**P**	**14 50 58.2**	**-1.2**
MKAR	**Makanchi Array**	**67.93**	**327**	P	**P**	**14 57 53.5**	**-0.1**
	0.1nm,0.5s,baz=139,slow=6.8,SNR=2.5						
	0.1nm,0.5s						

SJA ***27*** *15:04:43.3±0.8, 21°.20S×67°.32W, h221^{km}, ML3.4, MW3.5*

SCB ***27*** *15:04:46.3±1.0, 21°.24S×67°.28W, h174^{km}±10^{km}, ML3.4/3, MW2.9, Error ellipse: s-maj=6.1km s-min=3.8km az=0.0*

ISC 27 15:04:44.5±1.7**, 21°.32S**±0°.04×**67°.25W**±0°.04**, h189^{km}**±14^{km}**, n39, σ1ˢ71**/64**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**1.50**	**88**	Pg	**Pn**	**15 05 19.0**	**+1.3**
MOCB				Sg	**Sn**	**15 05 43.7**	**+0.3**
MOCB				IAML		15 05 44.1	
	77nm,0.5s						
YJA	**Yavi**	**1.82**	**118**	Pg	**Pn**	**15 05 23.0**	**+2.2**
YJA	**Yavi**	**1.82**	**118**	*e*P	**Pn**	**15 05 22.9**	**+2.1**
YJA				*e*S	**Sn**	**15 05 44.5**	**-4.4**
YJA				IAML		15 05 52.0	
	comp=Z,65nm,0.7s						
AF01	**San Pedro de A**	**1.84**	**208**	*e*P	Pn	15 05 29.7	+8.9
AF01				*e*S	**Sn**	**15 05 41.5**	**-7.6**
AF01				IAML		15 05 42.1	
	comp=Z,118nm,0.1s						
PB09	**IPOC Station P**	**1.92**	**255**	Pg	**Pn**	**15 05 22.8**	**+1.3**
PB09	**IPOC Station P**	**1.92**	**255**	*e*P	**Pn**	**15 05 19.3**	**-2.2**
PB09				*e*S	**Sn**	**15 05 52.8**	**+2.6**
PB09				IAML		15 05 54.6	
	comp=Z,127nm,0.5s						
PB01	**IPOC Station P**	**2.11**	**277**	*e*P	**Pn**	**15 05 24.8**	**+1.3**
PB01				*i* S	**Sn**	**15 05 53.6**	**-0.1**
PB01				IAML		15 05 57.9	
	comp=E,288nm,0.2s						
PB01	**IPOC Station P**	**2.11**	**277**	Pg	**Pn**	**15 05 24.7**	**+1.3**
PB01				Sg	**Sn**	**15 05 53.2**	**-0.5**
PB01				IAML		15 05 57.9	
	comp=E,277nm,0.2s						
PB01	**IPOC Station P**	**2.11**	**277**	*e*P	**Pn**	**15 05 24.5**	**+1.1**
PB01				*e*S	**Sn**	**15 05 54.5**	**+0.9**
PB01				IAML		15 05 58.3	
	comp=Z,160nm,0.1s						
PB08	**IPOC Station P**	**2.14**	**303**	*e*P	**Pn**	**15 05 25.1**	**+1.1**
PB08				*i* S	**Sn**	**15 05 55.5**	**+0.7**
PB08	**IPOC Station P**	**2.14**	**303**	Pg	**Pn**	**15 05 25.1**	**+1.1**
PB08	**IPOC Station P**	**2.14**	**303**	*e*P	**Pn**	**15 05 24.7**	**+0.7**
PB08				*e*S	**Sn**	**15 05 56.8**	**+2.0**
PB08				IAML		15 05 59.3	
	comp=Z,33nm,0.2s						
GO01	**Chusmiza**	**2.46**	**312**	Pg	**Pn**	**15 05 28.1**	**+0.4**
GO01	**Chusmiza**	**2.46**	**312**	*e*P	**Pn**	**15 05 28.8**	**+1.1**
GO01				IAML		15 06 09.1	
	comp=Z,28nm,0.1s						
PB06	**IPOC Station P**	**2.56**	**237**	*e*P	**Pn**	**15 05 29.7**	**+1.2**
PB06				*i* S	**Sn**	**15 06 04.2**	**+1.3**
PB06				IAML		15 06 05.8	
	comp=E,194nm,0.4s						
PB06	**IPOC Station P**	**2.56**	**237**	*e*P	**Pn**	**15 05 30.0**	**+1.5**
PB06				*e*S	**Sn**	**15 06 04.4**	**+1.5**
PB06				IAML		15 06 09.0	
	comp=Z,98nm,0.4s						
HMBC	**Humberstone**	**2.68**	**292**	*e*P	**Pn**	**15 05 29.6**	**-0.3**
HMBC				*i* S	**Sn**	**15 06 03.4**	**-1.8**
HMBC	**Humberstone**	**2.68**	**292**	*e*P	**Pn**	**15 05 29.3**	**-0.6**
HMBC				*e*S	**Sn**	**15 06 04.3**	**-1.0**
HMBC				IAML		15 06 05.1	
	comp=Z,233nm,0.2s						
PB11	**IPOC Station P**	**2.74**	**304**	*e*P	**Pn**	**15 05 30.7**	**+0.1**
PB11				*i* S	**Sn**	**15 06 05.2**	**-1.4**
PB11	**IPOC Station P**	**2.74**	**304**	Pg	**Pn**	**15 05 30.7**	**+0.1**
PB11				Sg	**Sn**	**15 06 05.4**	**-1.2**
PB11				IAML		15 06 07.4	
	comp=Z,264nm,0.1s						
PB11	**IPOC Station P**	**2.74**	**304**	*e*P	**Pn**	**15 05 30.3**	**-0.4**
PB11				*e*S	**Sn**	**15 06 06.2**	**-0.4**
PB11				IAML		15 06 07.7	
	comp=Z,84nm,0.2s						
PATCX	**Punta Patache**	**2.76**	**280**	*e*P	**Pn**	**15 05 31.1**	**+0.3**
PATCX				*i* S	**Sn**	**15 06 05.6**	**-1.3**
PATCX	**Punta Patache**	**2.76**	**280**	*e*P	**Pn**	**15 05 30.7**	**-0.1**
PATCX				*e*S	**Sn**	**15 06 06.3**	**-0.6**
PATCX				IAML		15 06 07.5	
	comp=Z,180nm,0.8s						
SOEO	**Opoqueri**	**2.81**	**348**	Pg	**Pn**	**15 05 32.7**	**+0.9**
TA01	**Diego Aracena**	**2.84**	**285**	*e*P	**Pn**	**15 05 31.5**	**-0.1**
TA01				*i* S	**Sn**	**15 06 06.2**	**-2.3**
TA01	**Diego Aracena**	**2.84**	**285**	*e*P	**Pn**	**15 05 31.0**	**-0.7**
TA01				*e*S	**Sn**	**15 06 06.8**	**-1.7**
TA01				IAML		15 06 07.8	
	comp=Z,96nm,0.3s						
TA02	**Huaiquique**	**2.89**	**291**	*e*P	**Pn**	**15 05 31.9**	**-0.4**
TA02				*e*S	**Sn**	**15 06 06.8**	**-2.7**
TA02				IAML		15 06 08.8	
	comp=Z,330nm,0.1s						
SALTA		**3.01**	**164**	*e*P	**Pn**	**15 05 37.0**	**+2.8**
SALTA				*e*P		15 05 41.9	
SALTA				IAML		15 06 47.0	
	comp=Z,8.2nm,1.1s						
PB05	**IPOC Station P**	**3.14**	**240**	*e*P	**Pn**	**15 05 36.5**	**+1.2**
PB05				*i* S	**Sn**	**15 06 14.4**	**-0.7**
PB05				IAML		15 06 16.3	
	comp=E,96nm,0.4s						
PB05	**IPOC Station P**	**3.14**	**240**	*e*P	**Pn**	**15 05 36.5**	**+1.2**
PB05				*e*S	**Sn**	**15 06 15.1**	**0.0**
PB05				IAML		15 06 16.2	
	comp=Z,64nm,0.7s						
PB10	**IPOC Station P**	**3.76**	**234**	*e*P	**Pn**	**15 05 43.4**	**+0.6**
PB10				*i* S	**Sn**	**15 06 27.1**	**-1.5**
PB10	**IPOC Station P**	**3.76**	**234**	*e*P	**Pn**	**15 05 43.9**	**+1.1**
PB10				*e*S	**Sn**	**15 06 28.7**	**+0.1**
PB10				IAML		15 07 00.4	
	comp=Z,26nm,1.8s						
ALOL	**LOMAS DE OLMED**	**3.91**	**130**	*e*P	**Pn**	**15 05 45.3**	**+0.6**
ALOL				*e*S	**Sn**	**15 06 29.7**	**-2.3**
GO02	**Mina Guanaco**	**4.39**	**209**	*e*P	**Pn**	**15 05 51.9**	**+0.8**
GO02				IAML		15 07 05.6	
	comp=Z,119nm,0.8s						
BBOJ	**La Paz, Jacaqu**	**4.41**	**348**	Pg	**Pn**	**15 05 52.4**	**+0.7**
SOEJ	**Jacaque**	**4.41**	**348**	Pg	**Pn**	**15 05 52.9**	**+1.2**
BBOD	**La Paz, Gloria**	**4.83**	**344**	Pg	**Pn**	**15 05 58.3**	**+1.3**
LPAZ	**La Paz**	**5.08**	**350**	Pg	**Pn**	**15 06 00.6**	**+0.3**
BBOB	**La Paz, Bander**	**5.22**	**351**	Pg	**Pn**	**15 06 02.0**	**0.0**

NEIC ***27*** *15:09:46.5±1.0, 31°.61N±0°.01×104°.49W±0°.01, h6^{km}±1^{km}, Error ellipse: s-maj=1.9km s-min=1.6km az=144.0*

NEIC ***27*** *15:09:46.9±0.9, 31°.61N±0°.01×104°.51W±0°.01, h4^{km}±4^{km}, mb_Lg2.4/33, ML2.2/9, ML2.6/62, Error ellipse: s-maj=1.9km s-min=1.7km az=167.0*

TXNET ***27*** *15:09:46.5, 31°.6N±0°.8×104°.5W±1°.0, h6^{km}±2^{km}, ML2.7/9, Error ellipse: s-maj=1.5km s-min=1.2km az=63.0, final*

ISC 27 15:09:47.0±1.0**, 31°.60N**±0°.03×**104°.50W**±0°.02**, h10^{km}**±9^{km}**, n62, σ0ˢ96**/71**, 4C, Western Texas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPB09	**Culberson Coun**	**0.25**	**44**	⇑P	**Pg**	**15 09 52.3**	**+0.2**
TPB09				S	**Sg**	**15 09 55.8**	**+0.3**
TPB11	**China Draw**	**0.52**	**49**	P	**Pg**	**15 09 56.8**	**-0.4**
TPB11				S	**Sb**	**15 10 04.6**	**-1.4**
TPB13	**Reeves - Culbe**	**0.56**	**94**	P	**Pg**	**15 09 57.9**	**0.0**
PECS	**Pecos**	**0.59**	**112**		**Pb**	**15 09 58.8**	**-0.6**
PECS					**Sb**	**15 10 06.9**	**-0.9**
PECS	**Pecos**	**0.59**	**112**	⇑P	**Pb**	**15 09 59.0**	**-0.4**
PECS				S	**Sb**	**15 10 06.9**	**-0.9**
TPB12	**Southwest of T**	**0.60**	**129**	P	**Pb**	**15 09 59.3**	**-0.4**
TPB12				S	**Sb**	**15 10 07.4**	**-0.9**
TPB10	**Southeast of T**	**0.71**	**116**	P	**Pb**	**15 10 01.4**	**-0.1**
TPB10				S	**Sb**	**15 10 11.2**	**-0.2**
MNTX	**Cornudas Mount**	**0.76**	**278**		**Pg**	**15 10 01.5**	**-0.1**
MNTX					**Sg**	**15 10 11.7**	**+0.2**
MNTX	**Cornudas Mount**	**0.76**	**278**	P	**Pg**	**15 10 01.5**	**-0.1**
MNTX				S	**Sg**	**15 10 11.7**	**+0.2**
CLNB	**Carlsbad**	**0.85**	**38**	P	**Pb**	**15 10 03.5**	**-0.4**
PCOS	**Crockett Middl**	**0.87**	**102**		**Sb**	**15 10 16.2**	**+0.3**
PCOS	**Crockett Middl**	**0.87**	**102**	S	**Sb**	**15 10 16.2**	**+0.3**
TPB01	**Permian Basin**	**0.90**	**136**	⇑P	**Pb**	**15 10 04.2**	**-0.5**
TPB01				S	**Sb**	**15 10 16.5**	**-0.2**
VHRN	**Van Horn**	**0.91**	**207**		**Pb**	**15 10 04.6**	**-0.4**
VHRN					**Sg**	**15 10 16.6**	**+0.3**
VHRN				IAML		15 10 18.3	
	136nm,0.3s						
VHRN				IAML		15 10 24.0	
	76nm,0.2s						
VHRN	**Van Horn**	**0.91**	**207**	⇑P	**Pb**	**15 10 04.6**	**-0.4**
VHRN				S	**Sg**	**15 10 16.6**	**+0.3**
TPB03	**Saragosa**	**0.99**	**121**	P	**Pb**	**15 10 06.3**	**0.0**
TPB03				S	**Sb**	**15 10 19.7**	**+0.4**
CLN7	**Carlsbad 7**	**1.01**	**36**		**Pb**	**15 10 06.2**	**-0.4**
CLN7	**Carlsbad 7**	**1.01**	**36**	P	**Pb**	**15 10 06.2**	**-0.4**
HTMS	**Hat Mesa**	**1.14**	**40**	Pg	**Pn**	**15 10 08.8**	**-0.4**
TPB16	**Coyonosa**	**1.17**	**113**	S	**Sn**	**15 10 25.8**	**+0.2**
TPB05	**Hovey Rd**	**1.21**	**123**	P	**Pn**	**15 10 10.3**	**+0.2**
TPB05				S	**Sn**	**15 10 26.6**	**-0.1**
ALPN	**Alpine**	**1.43**	**148**		**Pn**	**15 10 13.2**	**+0.1**
ALPN					**Sn**	**15 10 32.2**	**+0.2**
ALPN	**Alpine**	**1.43**	**148**	P	**Pn**	**15 10 13.2**	**+0.1**
ALPN				S	**Sn**	**15 10 32.2**	**+0.2**
MNHN	**Monahans**	**1.51**	**99**		**Pb**	**15 10 15.1**	**-0.1**
MNHN	**Monahans**	**1.51**	**99**	P	**Pb**	**15 10 15.1**	**-0.1**
CPRX	**Cap Rock**	**1.53**	**20**		**Pg**	**15 10 15.6**	**-0.8**
CPRX	**Cap Rock**	**1.53**	**20**	P	**Pg**	**15 10 15.6**	**-0.8**
EPT	**El Paso**	**1.72**	**276**		**Pn**	**15 10 17.8**	**+0.6**
EPT				IAML		15 10 45.1	
	comp=N,44nm,0.3s						
EPT				IAML		15 10 45.4	
	comp=E,52nm,0.5s						
ODSA	**Odessa**	**1.74**	**72**		**Pb**	**15 10 18.5**	**-0.6**
ODSA	**Odessa**	**1.74**	**72**	P	**Pg**	**15 10 19.3**	**-1.1**
TX31	**Lajitas Ar. Si**	**2.37**	**162**		**Pb**	**15 10 27.9**	**-1.9**
TX31	**Lajitas Ar. Si**	**2.37**	**162**	P	**Pb**	**15 10 28.1**	**-1.7**
TXAR	**Lajitas Array**	**2.37**	**162**		**Pn**	**15 10 27.8**	**+1.8**
SAND	**Sanderson**	**2.62**	**128**		**Pn**	**15 10 31.6**	**+2.2**
SAND				IAML		15 11 16.6	
	comp=E,28nm,0.5s						
MSTX	**Muleshoe**	**2.78**	**31**		**Pn**	**15 10 33.5**	**+1.8**
SGCY	**Sterling City**	**2.89**	**83**	Pn	**Pn**	**15 10 34.4**	**+1.1**
SGCY				IAmb_Lg		15 11 25.2	
	comp=Z,10nm,0.8s						
POST	**Post**	**2.93**	**59**	Pn	**Pn**	**15 10 35.0**	**+1.2**
POST				IAmb_Lg		15 11 21.9	
	comp=Z,12nm,0.7s						
OZNA	**Ozona**	**2.97**	**102**		**Pn**	**15 10 35.7**	**+1.5**
CRNM	**Carthage**	**3.01**	**322**		**Pn**	**15 10 35.8**	**+0.9**
BNM	**Barren Site**	**3.11**	**325**		**Pn**	**15 10 37.2**	**+0.8**
Y22D	**IRIS PASSCAL I**	**3.20**	**321**	Pn	**Pn**	**15 10 37.5**	**-0.1**
SBM	**South Baldy**	**3.27**	**317**		**Pn**	**15 10 38.5**	**-0.3**
LENM	**Lemitar**	**3.30**	**322**	Pn	**Pn**	**15 10 39.3**	**+0.4**
SN05	**Snyder 5**	**3.32**	**66**	IAmb_Lg		15 11 32.2	
	comp=Z,8.2nm,0.7s						
SN07	**Snyder 07**	**3.40**	**63**	Pn	**Pn**	**15 10 42.7**	**+2.5**
DKNS	**Dickens**	**3.66**	**55**	Pn	**Pn**	**15 10 46.1**	**+2.4**
ANMO	**Albuquerque**	**3.72**	**334**		**Pn**	**15 10 46.5**	**+1.8**
ANMO				IAmb_Lg		15 11 43.9	
	comp=Z,11nm,0.8s						
ANMO	**Albuquerque**	**3.72**	**334**	IAML		15 11 44.2	
	comp=Z,16nm,0.7s						
ANMO				IAML		15 11 46.1	
	comp=Z,7.5nm,0.5s						
ANMO	**Albuquerque**	**3.72**	**334**		**Pn**	**15 10 46.4**	**+1.6**
ANMO				IAmb_Lg		15 11 43.9	
	comp=Z,9.9nm,0.7s						
ANMO				IAML		15 11 44.2	
	comp=Z,8.5nm,0.7s						
ANMO				IAML		15 11 44.2	
	comp=Z,8.4nm,0.7s						
ANMO				IAML		15 11 44.3	
	comp=Z,13nm,1.0s						
ANMO				IAML		15 11 44.3	
	comp=Z,13nm,1.0s						
ANMO	**Albuquerque**	**3.72**	**334**		**Pn**	**15 10 46.1**	**+1.4**
ANMO				IAmb_Lg		15 11 43.9	
	comp=Z,9.6nm,0.7s						
ANMO				IAML		15 11 44.3	
	comp=Z,18nm,0.7s						
ANMO				IAML		15 11 44.3	
	comp=Z,17nm,1.0s						
DRIO	**Del Rio**	**3.99**	**122**	IAmb_Lg		15 11 57.0	
	comp=Z,11nm,0.9s						
DUN6	**Lazy B Ranch**	**4.01**	**285**		**Pn**	**15 10 49.6**	**+0.9**
AMTX	**Amarillo**	**4.04**	**35**		**Pn**	**15 10 50.0**	**+1.0**
AMTX				IAmb_Lg		15 12 04.3	
	comp=Z,6.4nm,0.7s						
APMT	**Aspermont**	**4.08**	**64**		**Pn**	**15 10 50.7**	**+1.2**
319A	**Douglas**	**4.09**	**268**		**Pn**	**15 10 50.8**	**+1.1**
319A				IAML		15 11 59.8	
	comp=N,13nm,0.4s						
319A				IAML		15 12 10.2	
	comp=E,13nm,0.7s						
JCT	**Junction City**	**4.18**	**104**	Pn	**Pn**	**15 10 52.5**	**+1.5**
JCT				IAmb_Lg		15 12 09.6	
	comp=Z,11nm,1.0s						
ABTX	**Abilene, Hawle**	**4.25**	**75**	IAmb_Lg		15 12 12.3	
	comp=Z,9.0nm,0.8s						
BRDY	**Brady**	**4.71**	**92**	Pn	**Pn**	**15 10 57.7**	**-0.5**
BRDY				IAmb_Lg		15 12 20.8	
	comp=Z,6.5nm,0.7s						
SMWD	**Samnorwood**	**4.99**	**44**	Pn	**Pn**	**15 11 02.6**	**+0.5**
RTBA	**Rita Blanca**	**5.05**	**16**	IAmb_Lg		15 12 26.4	
	comp=Z,7.4nm,0.9s						
T25A	**Trinidad**	**5.53**	**1**	IAmb_Lg		15 12 53.9	
	comp=Z,5.1nm,0.8s						
WMOK	**Wichita Mounta**	**5.73**	**55**	Pn	**Pn**	**15 11 11.8**	**-0.4**

IDC ***27*** *15:23:56.0±1.1, 30°.30S×179°.15W, h0^{km}, mb4.2/5, mbtmp4.1/6, ML3.5/1, MS3.7/4, Error ellipse: s-maj=28.0km s-min=24.4km az=150.0*

NEIC ***27*** *15:23:57.7±1.1, 30°.3S±0°.1×179°.0W±0°.2, h10^{km}±1^{km}, mb4.5/10, Error ellipse: s-maj=27.6km s-min=11.0km az=128.0*

ISC 27 15:24:00.8±0.8**, 30°.3S**±0°.1×**179°.0W**±0°.1**, h35^{km}, n29, σ0ˢ86**/27**, mb4.5**/11**, 5C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.44**	**42**		**Pn**	**15 24 23.3**	**-1.1**
RAO	**Raoul Island**	**1.44**	**42**	Pn	**Pn**	**15 24 25.1**	**+0.6**
	54nm,0.3s,baz=198,slow=20,SNR=2.1						
URZ	**Urewera**	**8.53**	**201**	Pn	**Pn**	**15 25 59.9**	**-1.9**
	0.6nm,0.3s,baz=27,slow=9.4,SNR=6.3						
URZ				Sn	**Sn**	**15 27 36.4**	**-0.4**
	0.4nm,0.3s,baz=24,slow=20,SNR=1.3						
URZ				LR	LR	15 29 00.2	
	comp=Z,677nm,19.6s,baz=20,slow=36						
	6.8nm,0.8s						
TOZ	**Tahuroa Road**	**8.67**	**210**		**Pn**	**15 26 04.6**	**+1.0**
RTZ	**Ruatahuna**	**8.90**	**201**	Pn	**Pn**	**15 26 05.8**	**-1.1**
MSVF	**Nonsavu**	**12.82**	**347**	LR	LR	15 30 53.9	
	comp=Z,327nm,18.7s,baz=176,slow=33						
RPZ	**Rata Peaks**	**15.52**	**208**	LR	LR	15 33 11.4	
	comp=Z,239nm,20.5s,baz=357,slow=36						
STKA	**Stephens Creek**	**33.63**	**257**	P	**P**	**15 30 38.6**	**+0.5**
STKA	**Stephens Creek**	**33.63**	**257**	P	**P**	**15 30 39.1**	**+1.0**
	2.9nm,0.8s,baz=99,slow=8.0,SNR=3.6						
	2.9nm,0.8s						
BBOO	**Buckleboo**	**38.14**	**254**	P	**P**	**15 31 16.6**	**-0.2**
ASAR	**Alice Springs**	**42.23**	**267**	P	**P**	**15 31 50.0**	**-0.8**
ASAR	**Alice Springs**	**42.23**	**267**	P	**P**	**15 31 50.1**	**-0.6**
	1.1nm,0.8s,baz=102,slow=7.5,SNR=10						
	1.1nm,0.8s						
WR8	**Warramunga Arr**	**43.07**	**273**	P	**P**	**15 31 57.2**	**-0.4**
WR8				IAmb	IAmb	15 32 00.5	
	comp=Z,15nm,1.5s						
WRA	**Warramunga Arr**	**43.21**	**273**	P	**P**	**15 31 57.6**	**-1.2**
	comp=Z,0.5nm,0.8s,baz=111,slow=7.8,SNR=5.7						
	comp=Z,0.5nm,0.8s						
WB0	**Warramunga Arr**	**43.23**	**273**		**P**	**15 31 58.2**	**-0.8**
FORT	**Forrest**	**45.21**	**255**	P	**P**	**15 32 14.7**	**+0.1**
FORT				IAmb	IAmb	15 32 24.1	
	comp=Z,9.7nm,0.9s						
FITZ	**Fitzroy Crossi**	**51.48**	**270**	P	**P**	**15 33 02.8**	**-0.2**
QSPA	**South Pole Qui**	**59.78**	**180**	P	**P**	**15 34 03.3**	**+1.1**
QSPA	**South Pole Qui**	**59.78**	**180**	P	**P**	**15 34 03.3**	**+1.1**
	comp=Z,10nm,0.7s,baz=32,slow=3.0,SNR=67						
	comp=Z,10nm,0.7s						
KAPI	**Kappang**	**62.73**	**281**	LR	LR	16 01 46.3	
	comp=Z,56nm,18.6s,baz=72,slow=36						
BELA	**Belgrano 2**	**69.97**	**172**	P	**P**	**15 35 08.0**	**-0.1**
BELA				IAmb	IAmb	15 35 34.5	
	comp=Z,3.1nm,1.1s						
TROLL	**Troll, Antarti**	**77.94**	**180**	⇑P	**P**	**15 35 55.3**	**+0.3**
	comp=Z,323nm,0.8s						
SNAA	**Sanae**	**78.25**	**179**	⇑P	**P**	**15 35 57.0**	**+0.5**
	comp=Z,76nm,0.8s						
SNAA	**Sanae**	**78.25**	**179**	P	**P**	**15 35 56.7**	**+0.2**
SNAA				IAmb	IAmb	15 35 57.4	
	comp=Z,5.4nm,1.0s						
SNAA	**Sanae**	**78.25**	**179**	P	**P**	**15 35 57.1**	**+0.5**
	comp=Z,3.0nm,0.8s,baz=176,slow=4.5,SNR=12						
	comp=Z,3.0nm,0.8s						
VNA3	**Neumayer Olymp**	**78.43**	**177**	⇑P	**P**	**15 35 58.1**	**+0.5**
	comp=Z,10nm,0.8s						
VNA2	**Neumayer--Watz**	**78.85**	**177**	⇑P	**P**	**15 36 00.6**	**+0.8**
	comp=Z,9.3nm,0.7s,baz=167,slow=5.2						
VNA1	**Neumayer--Stat**	**79.09**	**177**	⇑P	**P**	**15 36 02.0**	**+0.9**
	comp=Z,8.8nm,0.8s						
FINES	**FINESS Array B**	**144.77**	**339**	PKP	**PKPab**	**15 43 31.4**	**-0.8**
	comp=Z,1.5nm,0.8s,baz=25,slow=2.7,SNR=1.5						

JMA ***27*** *15:36:21.2±0.3, 26°N±1°×12°8E±°, h63^{km}±3^{km}, MV3.2/13, NEAR OKINAWAJIMA ISLAND*

ISC 27 15:36:18.2±2.2**, 25°.50N**±0°.10×**128°.49E**±0°.09**, h30^{km}, n16, σ1ˢ28**/25**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT3	**Tamagusuku3**	**0.90**	**315**	P	**Pn**	**15 36 35.8**	**+1.0**
JJT3				*e*S	**Sn**	**15 36 47.0**	**+0.2**
JNTH	**Nagotoyohara**	**1.09**	**338**	P	**Pn**	**15 36 37.9**	**+0.3**
JNTH				*e*S	**Sn**	**15 36 50.3**	**-1.3**
JOW	**Kunigami**	**1.34**	**352**	P	**Pn**	**15 36 41.8**	**+0.9**
JOW				*e*S	**Sn**	**15 36 55.4**	**-2.3**
JYRO	**Yoronjima**	**1.52**	**359**	P	**Pn**	**15 36 44.2**	**+0.9**
JYRO				*e*S	**Sn**	**15 37 00.5**	**-1.6**
JAGN	**Aguni-jima**	**1.56**	**314**	P	**Pn**	**15 36 45.0**	**+1.2**
JAGN				*e*S	**Sn**	**15 37 02.4**	**-0.6**

JIH	Iheya	1.59	343	eP	Pn	15 36 45.7	+1.3
JIH				eS	Sn	15 37 03.0	-1.0
JKE	Kume jima 2	1.74	299	P	Pn	15 36 47.3	+1.0
JKE				eS	Sn	15 37 06.1	-1.4
JOKE	Okinoerabujima	1.85	2	eP	Pn	15 36 49.0	+1.0
JOKE				eS	Sn	15 37 10.1	-0.3
JTK	Tokunoshima	2.31	10	P	Pn	15 36 55.5	+1.3
JTK				eS	Sn	15 37 20.3	-1.4
JAMN	Amaminishikomi	2.80	13	eP	Pn	15 37 02.4	+1.4
YOJ	Yonaguni jima	5.08	259	P	Pn	15 37 32.8	+0.5
NACB	Ninganchiao	6.40	260	P	Pn	15 37 50.5	0.0
YHNB	Yeheng	6.50	264	P	Pn	15 37 54.6	+2.7
YULB	Yu-li	6.88	254	P	Pn	15 37 55.9	-1.2
SSLB	Suanglung	7.06	258	P	Pn	15 38 00.1	+0.5
TPUB	Ta-pu	7.49	255	P	Pn	15 38 06.4	+0.9

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*IDC **27** 15:39:05.8±1.7, 2°.66S×138°.37E, h0^{km}, mb3.0/2, mbtmp3.1/4, ML3.2/2, Error ellipse: s-maj=32.5km s-min=26.6km az=157.0*

*DJA **27** 15:39:09.2±0.4, 3°S±3°×13°8E±°, h10^{km}, M3.3/6, MLv3.3/6*

ISC 27 15:39:09.3±0.9**, 2°.58S**±0°.08×**138°.45E**±0°.04**, h32^{km}, n9, σ1^{s}90**/13**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.64	24	P	Pb	15 39 20.5	-1.6
SMPI				S	Sn	15 39 32.1	+0.9
GENI	Genyem	1.72	91	P	Pb	15 39 39.6	-0.7
JAY	Jayapura	2.26	89	Pn	Pn	15 39 46.4	+1.9
	3.3nm,0.3s,baz=266,slow=11,SNR=24						
JAY				Sn	Sb	15 40 15.3	-1.7
	1.0nm,0.3s,baz=12,slow=9.6,SNR=3.9						
	7.1nm,0.3s						
JAY	Jayapura	2.26	89	P	Pn	15 39 46.4	+1.9
JAY				S	Sb	15 40 14.0	-3.0
SRPI	Serui, Papua	2.31	288	P	Pn	15 39 47.0	+1.8
SRPI				S	Sb	15 40 17.6	-0.9
BAKI	Biak	2.71	300	P	Pb	15 39 54.9	-2.2
WRA	Warramunga Arr	17.72	193	P	Pn	15 43 13.2	-0.5
	0.1nm,0.3s,baz=17,slow=12,SNR=7.3						
	0.6nm,1.0s						
ASAR	Alice Springs	21.42	191	P	P	15 43 54.0	-0.7
	0.4nm,0.8s,baz=19,slow=11,SNR=6.7						
	0.4nm,0.8s						
MKAR	Makanchi Array	69.52	322	P	P	15 50 16.7	+1.7
	0.1nm,0.4s,baz=106,slow=5.1,SNR=2.0						
	0.1nm,0.4s						

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*NOU **27** 15:39:26.8, 21°.86S×169°.10E, h0^{km}, MLv4.9/12, Southeast of Loyalty Islands*

*IDC **27** 15:39:27.1±0.7, 21°.87S×169°.08E, h0^{km}, mb4.3/14, mbtmp4.3/16, ML4.8/2, MS3.7/3, Error ellipse: s-maj=19.7km s-min=17.7km az=123.0*

*NEIC **27** 15:39:29.3±2.6, 21°.89S±0°.09×168°.87E±0°.07, h10^{km}±1^{km}, mb4.8/50, Error ellipse: s-maj=15.7km s-min=10.0km az=161.0*

ISC 27 15:39:32.0±0.4**, 21°.83S**±0°.05×**168°.93E**±0°.05**, h31^{km}, n155, σ1^{s}15**/161**, mb4.8**/40**, 7C-13D, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	0.91	293	P	Pn	15 39 47.9	-0.7
MARNC	Mare, Loyalty	0.91	293	S	Sb	15 40 01.0	+0.1
PINNC	Pines Island,	1.58	240		Pn	15 39 57.6	-0.2
PINNC	Pines Island,	1.58	240	P	Pn	15 39 58.0	+0.2
YATNC	Mamie plateau,	1.90	263	P	Pn	15 40 01.8	-0.6
OUENC	Ouen Island, N	2.02	253	P	Pn	15 40 04.2	+0.3
INH	Isangel	2.30	8	P	Pn	15 40 06.2	-1.6
DZM	Mont Dzumac	2.32	264		Pn	15 40 08.2	+0.1
DZM	Mont Dzumac	2.32	264	Pn	Pn	15 40 08.6	+0.5
	56nm,0.3s,baz=127,slow=9.5,SNR=668						
DZM				Sn	Sn	15 40 37.0	+1.4
	123nm,0.3s,baz=51,slow=22,SNR=8.0						
DZM				LR	LR	15 40 37.2	
	comp=Z,577nm,18.2s,baz=170,slow=29						
	123nm,0.3s						
DZM	Mont Dzumac	2.32	264	P	Pn	15 40 08.9	+0.8
ONTNC	Ouen Toro	2.34	258		Pn	15 40 06.5	-1.9
ONTNC				Sn	Sn	15 40 32.9	-3.2
ONTNC	Ouen Toro	2.34	258	P	Pn	15 40 07.0	-1.4
DVP	Devils Point	4.15	350	P	Pn	15 40 32.1	-1.1
KOUNC	Koumac, New Ca	4.51	286	P	Pn	15 40 39.5	+1.2
VLAKA	Lakatoro	5.87	346	P	Pn	15 40 55.6	-1.4
MSVF	Nonsavu	9.51	66		Pn	15 41 48.5	+1.6
MSVF	Nonsavu	9.51	66	Pn	Pn	15 41 43.6	-3.3
	0.7nm,0.3s,baz=268,slow=12,SNR=8.8						
MSVF				LR	LR	15 44 39.7	
	comp=Z,620nm,18.4s,baz=169,slow=33						
	9.6nm,0.9s						
RAO	Raoul Island	13.98	125	Pn	Pn	15 42 51.2	+3.2
HNR	Honiara	15.05	324	Pn	Pn	15 43 02.3	-0.3
HNR				IAmb	IAmb	15 43 09.0	
	comp=Z,53nm,1.1s						
EIDS	Eidsvold	16.73	254	P	Pn	15 43 22.6	-1.5
ARMA	Armidale	17.71	238	P	P	15 43 37.6	+0.5
URZ	Urewera	17.82	159	LR	LR	15 49 06.8	
	comp=Z,318nm,18.1s,baz=10,slow=33						
RTZ	Ruatahuna	18.10	159	P	Pn	15 43 38.2	-3.0
BKZ	Black Stump Fm	18.45	161	P	P	15 43 43.9	-1.2
MRZ	Mangatainoka R	19.60	165	P	Pn	15 43 58.3	-0.8
SNZO	South Karori	20.02	167	P	P	15 44 02.8	+0.5
SNZO				IAmb	IAmb	15 44 17.6	
	comp=Z,47nm,1.1s						
LTZ	Lake Taylor	21.07	173	P	P	15 44 12.8	-0.9
CTAO	Charters Tower	21.24	271	P	P	15 44 14.4	-1.3
CTAO				IAmb	IAmb	15 44 32.9	
	comp=Z,48nm,1.7s						
RABL	Rabaul	23.92	315	P	P	15 44 44.6	+1.2
RABL				IAmb	IAmb	15 44 59.8	
	comp=Z,48nm,1.3s						
PMG	Port Moresby	24.29	297	P	P	15 44 47.1	+0.2
COEN	Coen	25.70	283	P	P	15 44 59.8	+0.1
COEN				IAmb	IAmb	15 45 30.2	
	comp=Z,27nm,1.2s						
STKA	Stephens Creek	26.29	242	P	P	15 45 05.9	+1.0
	comp=Z,2.6nm,0.8s,baz=112,slow=10,SNR=4.3						
	comp=Z,2.6nm,0.8s						
BBOO	Buckleboo	31.06	242	P	P	15 45 47.5	+0.1
AS31	Alice Springs	32.30	260	P	P	15 45 57.6	-0.8
ASAR	Alice Springs	32.30	260	P	P	15 45 58.9	+0.4
	comp=Z,3.4nm,0.8s,baz=76,slow=9.0,SNR=40						
ASAR				PcP	PcP	15 48 45.9	-0.2
	comp=Z,0.7nm,1.0s,baz=89,slow=3.9,SNR=2.4						
	comp=Z,3.4nm,0.8s						
WB0	Warramunga Arr	32.31	267	P	P	15 45 58.2	-0.3
WB0				IAmb	IAmb	15 47 06.9	
	comp=Z,20nm,1.6s						
WRA	Warramunga Arr	32.33	267	P	P	15 45 58.1	-0.6
WRA	Warramunga Arr	32.33	267	P	P	15 45 58.4	-0.3
	comp=Z,1.7nm,0.8s,baz=97,slow=8.2,SNR=11						
	comp=Z,1.7nm,0.8s						
MTN	Manton Dam	37.09	278	P	P	15 46 39.5	-0.2
FORT	Forrest	37.53	248	P	P	15 46 44.3	+0.8
KNRA	Kununurra	38.44	272	P	P	15 46 50.7	-0.5
FITZ	Fitzroy Crossi	40.76	267		P	15 47 11.1	+0.6
FITZ	Fitzroy Crossi	40.76	267	P	P	15 47 11.6	+1.0
	comp=Z,12nm,0.8s,baz=124,slow=8.0,SNR=18						
	comp=Z,12nm,0.8s						
PSA00	Pilbara Seismi	45.44	261	P	P	15 47 48.3	-0.1
PSA00				IAmb	IAmb	15 48 36.8	
	comp=Z,25nm,2.0s						
MBWA	Marble Bar	45.62	261	P	P	15 47 49.6	-0.3
MBWA				IAmb	IAmb	15 47 51.6	
	comp=Z,12nm,0.8s						
TOLI2	Tolitoli	52.21	290	P	P	15 48 39.4	-1.1
TOLI2				IAmb	IAmb	15 48 41.9	
	comp=Z,17nm,1.0s						
VNDA	Vanda	55.84	182	P	P	15 49 05.6	-0.4
VNDA	Vanda	55.84	182	P	P	15 49 05.7	-0.4
	comp=Z,0.8nm,0.7s,baz=357,slow=3.9,SNR=4.6						
	comp=Z,0.8nm,0.7s						
SBA	Scott Base	56.08	181	P	P	15 49 07.3	-0.4
KSM	Kuching	61.69	284		P	15 49 47.6	0.0
MJAR	Matsushiro Arr	64.91	333	P	P	15 50 08.6	+0.1
MJAR				IAmb	IAmb	15 50 09.2	
	comp=Z,4.5nm,0.9s						
MJAR	Matsushiro Arr	64.91	333	P	P	15 50 08.5	0.0
	comp=Z,4.7nm,0.9s,baz=169,slow=7.1,SNR=8.3						
	comp=Z,4.7nm,0.9s						
QSPA	South Pole Qui	68.23	180		P	15 50 29.7	+0.2
QSPA				IAmb	IAmb	15 50 32.0	
	comp=Z,5.8nm,0.9s						
QSPA	South Pole Qui	68.23	180	P	P	15 50 29.7	+0.2
	comp=Z,4.5nm,0.8s,baz=360,slow=1.4,SNR=15						
	comp=Z,4.5nm,0.8s						
KSRS	Korea Array	70.48	326	P	P	15 50 43.7	+0.2
	comp=Z,1.8nm,1.0s,baz=150,slow=6.6,SNR=5.8						
	comp=Z,1.8nm,1.0s						
NJ2	Nanjing	71.88	317	eP	P	15 50 53.5	+1.4
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
USRK	Ussuriysk Ar.	73.91	333	P	P	15 51 05.0	+1.1
	comp=Z,5.3nm,0.9s,baz=118,slow=2.8,SNR=4.9						
	comp=Z,5.3nm,0.9s						
PETK	Petropavlovsk-	75.26	353	P	P	15 51 11.8	+0.2
	comp=Z,2.1nm,0.8s,baz=121,slow=8.4,SNR=4.2						
	comp=Z,2.1nm,0.8s						
CN2	Changchun	76.52	329	P	P	15 51 20.0	+1.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NIKH	Nikolski High	76.95	14	P	P	15 51 21.2	+0.1
BNX	BinXian	77.10	332	⇑P	P	15 51 22.5	+0.3
BNX				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CMAR	Chiang Mai Arr	79.31	295		P	15 51 34.5	-0.5
CMAR	Chiang Mai Arr	79.31	295	P	P	15 51 36.9	+1.8
	comp=Z,1.3nm,0.9s,baz=125,slow=4.3,SNR=7.2						
	comp=Z,1.3nm,0.9s						
BELA	Belgrano 2	79.55	175		P	15 51 34.6	-0.9
BELA				IAmb	IAmb	15 51 35.4	
	comp=Z,6.9nm,0.7s						
HEH	HeiHe	80.61	334	eP	P	15 51 41.5	+0.1
HEH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SMAI	San Martin Ant	81.47	162	P	P	15 51 45.7	-0.1
SMAI				IAmb	IAmb	15 51 47.0	
	comp=Z,7.9nm,1.0s						
HHC	Hu-ho-hao-te	82.00	320	eP	P	15 51 51.0	+1.9
HHC				pmax	pmax		
	comp=Z,21nm,0.6s						
HHC				pmax	pmax		
	comp=Z,84nm,4.4s						
HHC				LR	LR		
	comp=N,100nm,13.0s						
HHC				LR	LR		
	comp=E,110nm,14.5s						
HHC				LR	LR		
	comp=Z,130nm,13.8s						
SYO	Syowa Base	82.37	196	⇓eP	P	15 51 50.4	-0.2
TROLL	Troll, Antarti	85.94	184	⇑P	P	15 52 08.7	-0.2
	comp=Z,456nm,0.7s						
SYI	Shuyak Island	86.30	19	P	P	15 52 11.3	+0.9
M16K	Timber Creek	86.55	15	P	P	15 52 12.2	+0.7
SNAA	Sanae	86.57	183	⇑P	P	15 52 11.4	-0.5
	comp=Z,117nm,0.9s						
SNAA	Sanae	86.57	183		P	15 52 11.1	-0.8
SNAA				IAmb	IAmb	15 52 12.3	
	comp=Z,8.1nm,1.0s						
SNAA	Sanae	86.57	183	P	P	15 52 10.9	-1.0
	comp=Z,5.6nm,0.9s,baz=199,slow=3.9,SNR=16						
	comp=Z,5.6nm,0.9s						
VNA3	Neumayer Olymp	87.17	180	⇑P	P	15 52 14.2	-0.6
	comp=Z,11nm,0.8s						
VNA2	Neumayer--Watz	87.46	181	⇑P	P	15 52 15.8	-0.3
	comp=Z,7.3nm,0.6s,baz=172,slow=5.3						
VNA1	Neumayer--Stat	87.75	181	⇑P	P	15 52 17.2	-0.2
	comp=Z,8.1nm,0.8s						
KHMM	Horse Mountain	88.26	44	P	P	15 52 20.7	+0.2
O02D	Mt. Diablo Mer	88.52	45	P	P	15 52 22.1	+0.4
O02D				IAmb	IAmb	15 52 36.6	
	comp=Z,6.0nm,0.9s						
ULN	Ulaanbaatar	88.77	324	P	P	15 52 22.9	+0.1
ULN				IAmb	IAmb	15 52 24.8	
	comp=Z,7.2nm,1.1s						
CMB	Columbia Colle	89.10	48	P	P	15 52 23.9	-0.6
SONM	Songino Array	89.11	323		P	15 52 24.8	+0.4
SONM				IAmb	IAmb	15 52 26.2	
	comp=Z,5.8nm,1.1s						
SONM	Songino Array	89.11	323	P	P	15 52 25.4	+1.0
	comp=Z,2.9nm,0.9s,baz=138,slow=5.4,SNR=16						
	comp=Z,2.9nm,0.9s						
DSP	Deep Springs	90.48	50	P	P	15 52 30.1	-0.7
DSP				IAmb	IAmb	15 52 45.8	
	comp=Z,6.3nm,1.1s						
LHV	Little Huntoon	90.51	49	P	P	15 52 30.1	-0.8
LHV				IAmb	IAmb	15 52 52.4	
	comp=Z,2.8nm,0.9s						
QSM	Queen of Sheba	90.63	51	P	P	15 52 31.0	-0.6
QSM				IAmb	IAmb	15 52 53.6	
	comp=Z,4.9nm,0.8s						
NVAR	Mina Array Bea	90.73	49	P	P	15 52 31.4	-0.9
NVAR	Mina Array Bea	90.73	49	P	P	15 52 31.9	-0.3
	comp=Z,1.3nm,0.6s,baz=226,slow=7.7,SNR=8.2						
	comp=Z,1.3nm,0.6s						
GWY	Greenwater Val	90.88	51	P	P	15 52 32.3	-0.7
GWY				IAmb	IAmb	15 52 46.8	
	comp=Z,3.8nm,0.9s						
GMN	Gold Mountain	90.95	50	P	P	15 52 32.7	-0.6
J05D	Fort Rock, OR	91.08	43	P	P	15 52 33.6	-0.1
WCT	Wildcat Mounta	91.18	51	P	P	15 52 33.7	-0.6
WCT				IAmb	IAmb	15 52 48.4	
	comp=Z,4.3nm,0.9s						
PINE	Pine Mountain	91.51	43	P	P	15 52 35.4	-0.4
TPNV	Topopah Spring	91.52	51		P	15 52 36.2	+0.3
TPNV				IAmb	IAmb	15 52 50.1	
	comp=Z,6.5nm,1.1s						
PRN	Pahroc Range	92.58	51	P	P	15 52 41.1	+0.3
PRN				IAmb	IAmb	15 52 58.2	
	comp=Z,4.8nm,0.9s						
AKASG	Malin Array Be	137.39	323	PKP	PKiKP	15 58 53.9	-0.3
	comp=Z,0.6nm,0.5s,baz=77,slow=1.5,SNR=4.5						
PSZ	Piszkesteto	144.05	324	PKPdf	PKPbc	15 59 02.5	0.0
JAVC	Velka Javorina	144.65	327	ePKP	PKPdf	15 59 06.4	+0.9
VRAC	Vranov	144.90	328	ePKP	PKPdf	15 59 05.8	-0.1
PVCC	Panska Ves	145.01	331	ePKP	PKPdf	15 59 06.6	+0.6
BRG	Berggiesshubel	145.04	332	i PKP	PKPdf	15 59 06.1	+0.1
BRG				Amp		15 59 07.0	
	comp=Z,22nm,0.8s						
BRG	Berggiesshubel	145.04	332	Amp		15 59 13.5	
	comp=Z,6.8nm,0.9s						
BRG	Berggiesshubel	145.04	332	Amp		15 59 18.1	
	comp=Z,11nm,0.8s						
BRG	Berggiesshubel	145.04	332	P	PKiKP	15 59 12.7	+2.8
BRG	Berggiesshubel	145.04	332	P	PKiKP	15 59 15.6	+5.7
CLL	Collm	145.12	333		PKPbc	15 59 03.0	-2.7
CLL	Collm	145.12	333	i PKPbc	PKPdf	15 59 05.9	-0.3
	comp=Z,23nm,0.8s						
CLL				ex	x	15 59 16.0	
KRUC	Moravsky	145.16	328	ePKP	PKPdf	15 59 06.5	+0.2
FRGS	Fruska Gora	145.64	320	⇓iP	PKPab	15 59 08.2	+0.3
ZVC	Zvikov	145.96	330	ePKP	PKPab	15 59 09.0	+0.1
EKA	Eskdalemuir Ar	146.03	352	PKPbc	PKPdf	15 59 07.5	-0.1
	comp=Z,6.5nm,0.8s,baz=346,slow=2.9,SNR=15						
RONA	Rosalia, Austr	146.10	326	i PKP	PKPab	15 59 09.9	+0.3
	comp=Z,11nm,0.9s,SNR=5.7						
TEKS	Tekeris	146.13	319	⇓iP	PKPbc	15 59 09.4	+0.2
CONA	Conrad Observa	146.18	327	i PKP	PKPab	15 59 10.3	+0.3
	comp=Z,9.8nm,0.8s,SNR=10						
CKRC	Cesky Krumlov	146.34	329	ePKP	PKPab	15 59 10.6	+0.2
CKRC				ex	x	15 59 16.1	
KHC	Kasperske Hory	146.46	330	ePKP	PKPab	15 59 10.7	-0.2
KHC				ex	x	15 59 22.5	
SJES	Sjenica	146.51	317	⇓iP	PKPab	15 59 11.1	-0.3
BBLS	Lazi&#263i	146.56	318	⇓iP	PKPab	15 59 11.3	-0.3
GEC2	GERESS Array S	146.60	330		PKPdf	15 59 05.9	-3.1
GEC2				PKPbc	PKPbc	15 59 10.5	0.0
GERES	GERESS Array B	146.60	330		PKPdf	15 59 05.5	-3.4
GERES				PKPbc	PKPbc	15 59 10.7	+0.2
GERES	GERESS Array B	146.60	330	PKPbc	PKPbc	15 59 10.8	+0.2
	comp=Z,8.0nm,0.7s,baz=43,slow=6.2,SNR=47						
RUDO	Rudo	146.71	318	eP	PKPbc	15 59 11.0	+0.1
ARSA	Arzberg	146.79	326	ePKP	PKPab	15 59 12.8	+0.6
	comp=Z,4.2nm,0.9s						
GRF	Grafenberg Arr	147.08	333	ePKP	PKPbc	15 59 12.3	+0.5
	baz=41,slow=1.8						
GRF				epPKP	pPKPab	15 59 22.9	+0.3
PDG	Podgorica	147.38	316	eP	PKPbc	15 59 13.1	+0.3
BLY	Banja Luka	147.41	321	⇓iP	PKPbc	15 59 13.3	+0.5
SOKA	Soboth	147.42	326	i PKP	PKPbc	15 59 13.2	+0.3
	comp=Z,9.6nm,1.0s,SNR=5.1						
A051A	Mrakovica	147.42	322	⇓iP	PKPbc	15 59 13.3	+0.4
DRME	Dracevica, Mon	147.55	316	eP	PKPbc	15 59 13.7	+0.4
BRY	Bratogost	147.60	317	⇑iP	PKPbc	15 59 13.6	0.0
CRES	Cresnjevec Ost	147.74	324	⇓iP	PKPbc	15 59 13.9	+0.2
OBKA	Obir	147.78	326	⇓iP	PKiKP	15 59 15.9	+0.1
OBKA	Obir	147.78	326	i PKP	PKPbc	15 59 14.0	+0.2
	comp=Z,5.4nm,1.1s						
TREB	Trebinje	147.82	317	eP	PKPdf	15 59 08.4	-2.6
A050A	Klekovaca	147.95	321	⇓iP	PKPbc	15 59 13.9	-0.5
LESA	Schwarzleotal	148.09	329	i PKP	PKPbc	15 59 14.6	0.0
	comp=Z,8.1nm,0.6s,SNR=6.6						
STON	Ston	148.15	318	⇓iP	PKPbc	15 59 14.1	-0.7
MYKA	Terra Mystica	148.17	327	i PKP	PKPbc	15 59 14.3	-0.5
	comp=Z,5.1nm,0.6s						
PRED	Cave del Predi	148.33	327		PKPbc	15 59 14.2	-1.1
CEY	Cerknica	148.35	325	⇓iP	PKPbc	15 59 15.4	+0.1
SABO	M.te Sabotino	148.63	326	PKPdf	PKPdf	15 59 10.0	-2.3
SABO					PKPbc	15 59 15.0	-1.0
ABTA	Abfaltersbach	148.65	328	epPKP	PKPbc	15 59 15.7	-0.5
	comp=Z,8.9nm,0.7s,SNR=5.3						
WATA	Walderalm	148.68	330	i pPKP	PKPbc	15 59 16.3	0.0
	comp=Z,7.4nm,0.9s						
SKDS	Skadanscina	148.69	325	⇓iP	PKPbc	15 59 16.0	-0.2
WTTA	Wattenberg	148.70	330	epPKP	PKPbc	15 59 16.5	+0.1
	comp=Z,7.2nm,0.9s						
STAL	STALIGIAL	148.89	327	PKPdf	PKPdf	15 59 10.8	-1.9
STAL					PKPbc	15 59 15.6	-1.1
MOTA	Moosalm	148.89	330	i pPKP	PKPbc	15 59 16.8	0.0
	comp=Z,13nm,0.9s,SNR=5.7						
SQTA	Sankt Quirin	148.94	330	epPKP	PKPbc	15 59 16.9	0.0
	comp=Z,12nm,0.8s,SNR=5.4						
RETA	Reutte	148.94	331	i pPKP	PKPbc	15 59 17.3	+0.5
	comp=Z,2.9nm,0.6s						
FETA	Feichten	149.31	330	i pPKP	PKPbc	15 59 18.2	+0.3
	comp=Z,11nm,0.8s,SNR=6.0						
DAVA	Damuels	149.49	331	i PKP	PKPbc	15 59 18.8	+0.5
	comp=Z,7.2nm,1.0s						
FUORN	Ofenpass-Fuorn	149.82	330	PKPdf	PKPdf	15 59 11.6	-2.9
FUORN					PKPbc	15 59 19.4	+0.1
NRCA	Norcia	150.92	322		PKPbc	15 59 21.6	-0.2
ZCCA	Zocca	151.09	326	PKPdf	PKPdf	15 59 14.2	-2.1
ZCCA					PKiKP	15 59 22.4	-0.2
SSB	Saint Sauveur	153.34	335	PKPdf	PKPdf	15 59 17.2	-2.4

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*IDC **27** 15:44:22.0±0.6, 2°.66S×138°.40E, h0^{km}, mb4.2/13, mbtmp4.3/17, ML3.8/3, MS3.8/9, Error ellipse: s-maj=20.3km s-min=13.9km az=76.0*

*NEIC **27** 15:44:23.5±1.2, 2°.60S±0°.07×138°.44E±0°.03, h10^{km}±1^{km}, mb4.7/99, Error ellipse: s-maj=12.4km s-min=5.2km az=177.0*

*DJA **27** 15:44:25.4±0.3, 2°S±3°×13°9E±°, h10^{km}, M4.4/8, mb4.4/1, MLv4.4/8*

ISC 27 15:44:22.4±1.4**, 2°.67S**±0°.04×**138°.43E**±0°.03**, h7^{km}**±9^{km}**, n147, σ1^{s}38**/138**, mb4.7**/66**, MS3.9**/8**, 2D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.73	22	P	Pg	15 44 35.7	-0.8
SMPI				S	Sg	15 44 42.8	-3.2
GENI	Genyem	1.73	87	P	Pb	15 44 54.1	-0.4
GENI				S	Sg	15 45 19.4	+1.2
JAY	Jayapura	2.27	86	Pn	Pn	15 45 01.4	+1.1
	27nm,0.3s,baz=231,slow=12,SNR=70						
JAY				Sn	Sb	15 45 32.7	+0.5
	31nm,0.3s,baz=325,slow=22,SNR=9.5						
	93nm,0.4s						
JAY	Jayapura	2.27	86	P	Pn	15 45 01.5	+1.1
JAY				S	Sn	15 45 27.8	-0.9
SRPI	Serui, Papua	2.33	290	P	Pb	15 45 03.4	-1.3
SRPI				S	Sb	15 45 35.4	+1.6
BAKI	Biak	2.75	302	P	Pb	15 45 10.7	-1.2
RKPI	Ransiki, Papua	4.41	285	P	Pn	15 45 32.2	+2.5
FAKI	Fak Fak	6.18	268	Pn	Pn	15 45 57.0	+2.9
FAKI	Fak Fak	6.18	268	P	Pn	15 45 57.6	+3.5
SAUI	Saumlaki	8.85	233	Pn	Pn	15 46 32.8	+2.0
MANU	Manus Island	8.95	86	Pn	Pn	15 46 33.3	+1.2
PMG	Port Moresby	10.95	128	Pn	Pn	15 47 00.8	+1.2
COEN	Coen	12.15	158		Pn	15 47 17.5	+1.4
MTN	Manton Dam	12.42	215		Pn	15 47 22.0	+2.2
SOEI	Soe	15.73	243	Pn	Pn	15 48 05.0	+0.2
SOEI				IAmb	IAmb	15 48 27.4	
	comp=Z,99nm,1.0s						
KNRA	Kununurra	16.05	216	Pn	Pn	15 48 08.9	+0.2
BATI	Baumata	16.47	242	Pn	Pn	15 48 12.6	-1.5
	comp=Z,24nm,0.9s,baz=359,slow=18,SNR=1.9						
BATI				LR	LR	15 55 24.2	
	comp=Z,345nm,18.7s,baz=106,slow=40						
GUMO	Guam	17.37	21	Pn	Pn	15 48 23.3	-2.1
WB0	Warramunga Arr	17.44	193	Pn	Pn	15 48 25.5	-0.8
WR8	Warramunga Arr	17.60	192	Pn	Pn	15 48 27.7	-0.6
WRAB	Tennant Creek	17.61	193	Pn	Pn	15 48 28.1	-0.3
WRA	Warramunga Arr	17.62	193	P	Pn	15 48 28.0	-0.6
	comp=Z,0.6nm,0.3s,baz=16,slow=13,SNR=16						
WRA				S	Sn	15 51 35.1	-10
	comp=Z,1.9nm,1.0s,baz=9.4,slow=39,SNR=3.3						
WRA				LR	LR	15 55 56.8	
	comp=Z,421nm,19.7s,baz=2.5,slow=39						
	comp=Z,8.1nm,0.8s						
KAPI	Kappang	18.78	262	P	P	15 48 42.7	+0.2
CTAO	Charters Tower	18.92	157	P	Pn	15 48 45.0	+0.5
FITZ	Fitzroy Crossi	19.81	218	P	Pn	15 48 54.6	-0.5
FITZ	Fitzroy Crossi	19.81	218	P	P	15 48 54.2	+0.6
	comp=Z,0.1nm,0.3s,baz=56,slow=9.8,SNR=2.7						
	comp=Z,5.3nm,0.9s						
AS31	Alice Springs	21.32	191		P	15 49 10.8	+0.8
ASAR	Alice Springs	21.33	191		P	15 49 10.8	+0.7
ASAR	Alice Springs	21.33	191	P	P	15 49 10.7	+0.6
	comp=Z,15nm,0.8s,baz=21,slow=11,SNR=57						
ASAR				S	S	15 53 05.2	-2.2
	comp=Z,3.8nm,0.9s,baz=12,slow=24,SNR=4.2						
	comp=Z,15nm,0.8s						
MYLDM	Lahad Datu	21.39	291	P	P	15 49 10.9	+0.1
MYLDM				IAmb	IAmb	15 49 33.9	
	comp=Z,55nm,1.5s						
EIDS	Eidsvold	25.64	153	P	P	15 49 53.2	+0.4
EIDS				IAmb	IAmb	15 49 55.2	
	comp=Z,24nm,1.1s						
MBWA	Marble Bar	25.87	223	P	P	15 49 57.2	+2.2
MBWA				IAmb	IAmb	15 49 58.2	
	comp=Z,44nm,1.5s						
PSA00	Pilbara Seismi	26.07	222	P	P	15 49 57.9	+1.1
PSA00	Pilbara Seismi	26.07	222	P	P	15 49 57.6	+0.8
PSA00				IAmb	IAmb	15 50 15.8	
	comp=Z,19nm,1.2s						
STKA	Stephens Creek	29.20	174	P	P	15 50 24.0	-0.7
STKA	Stephens Creek	29.20	174	P	P	15 50 26.5	+1.8
	comp=Z,2.4nm,0.8s,baz=0.5,slow=7.4,SNR=5.6						
	comp=Z,2.4nm,0.8s						
FORT	Forrest	29.63	198	P	P	15 50 28.2	-0.2
FORT				IAmb	IAmb	15 51 03.9	
	comp=Z,11nm,0.9s						
BBOO	Buckleboo	30.06	184	P	P	15 50 32.9	+0.6
BBOO				IAmb	IAmb	15 51 13.9	
	comp=Z,17nm,1.2s						
YOJ	Yonaguni jima	30.86	332	P	P	15 50 40.5	+1.1
TPUB	Ta-pu	31.11	327	P	P	15 50 40.4	-1.2
NACB	Ninganchiao	31.31	329	P	P	15 50 41.7	-1.7
NACB				IAmb	IAmb	15 50 44.7	
	comp=Z,13nm,0.8s						
SSLB	Suanglung	31.32	328	P	P	15 50 41.6	-2.0
SSLB				IAmb	IAmb	15 51 15.1	
	comp=Z,14nm,1.1s						
ONTNC	Ouen Toro	33.48	128	P	P	15 51 02.1	-0.4
MORW	Morawa	33.81	217	P	P	15 51 05.6	+0.3
PINNC	Pines Island,	34.42	128	P	P	15 51 09.1	-1.5
IPM	Ipoh	38.05	281	P	P	15 51 41.3	-0.6
MJAR	Matsushiro Arr	39.01	360	LR	LR	16 06 13.1	
	comp=Z,60nm,20.4s,baz=162,slow=34						
KSRS	Korea Array	41.10	347	P	P	15 52 08.1	+1.2
	comp=Z,1.6nm,0.8s,baz=159,slow=9.1,SNR=6.3						
	comp=Z,1.6nm,0.8s						
CMAR	Chiang Mai Arr	44.18	300	P	P	15 52 32.7	+0.4
CMAR	Chiang Mai Arr	44.18	300	P	P	15 52 33.0	+0.7
	comp=Z,1.7nm,0.8s,baz=119,slow=6.6,SNR=8.6						
	comp=Z,1.7nm,0.8s						
LYN	LuoYang	44.34	329	P	P	15 52 40.5	+7.1
LYN				pmax	pmax		
	comp=Z,20nm,1.0s						
XAN	Xi'an	45.89	325	⇓P	P	15 52 47.0	+1.3
XAN				pmax	pmax		
	comp=Z,14nm,1.2s						
ASAJ	Asahikawa	46.73	4	LR	LR	16 11 45.1	
	comp=Z,62nm,19.3s,baz=174,slow=35						
BNX	BinXian	49.19	350	⇓P	P	15 53 12.0	+0.9
BNX				pmax	pmax		
	comp=Z,7.0nm,0.7s						
FOZ	Fox Glacier	49.31	150	P	P	15 53 12.5	+0.5
HHC	Hu-ho-hao-te	49.77	333	eP	P	15 53 18.5	+2.7
HHC				pmax	pmax		

	comp=Z,18nm,0.6s						
HHC				pmax	pmax		
	comp=Z,71nm,5.9s						
HHC				LR	LR		
	comp=N,82nm,15.3s						
HHC				LR	LR		
	comp=E,100nm,15.3s						
HHC				LR	LR		
	comp=Z,98nm,16.8s						
TUWZ	Tuamarina	50.06	145		P	15 53 18.4	+0.5
TCW	Tory Channel	50.11	145	P	P	15 53 18.4	+0.1
LBZ	Lake Benmore	50.11	151	P	P	15 53 19.0	+0.8
WHZ	Wether Hill Ro	50.19	153	P	P	15 53 19.1	+0.3
LZH	Lanzhou	50.29	323	*e*P	P	15 53 22.3	+2.4
LZH				pP	sP	15 53 28.0	+4.8
LZH				sP	pP	15 53 31.5	+9.2
LZH				pmax	pmax		
	comp=Z,24nm,1.3s						
MRZ	Mangatainoka R	50.52	143		P	15 53 21.2	-0.1
MRZ				IAmb	IAmb	15 53 23.6	
	comp=Z,18nm,1.0s						
HEH	HeiHe	53.56	351	*e*P	P	15 53 43.8	0.0
GTA	Gaotai	54.88	324	*e*P	P	15 53 56.0	+2.2
GTA				pP	sP	15 54 01.3	+4.2
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ULN	Ulaanbaatar	57.32	335	P	P	15 54 11.8	+0.7
SONM	Songino Array	57.57	335	P	P	15 54 12.9	0.0
SONM	Songino Array	57.57	335	P	P	15 54 13.2	+0.4
	comp=Z,1.4nm,0.9s,baz=148,slow=7.6,SNR=4.9						
SONM				LR	LR	16 18 09.7	
	comp=Z,96nm,21.1s,baz=126,slow=35						
	comp=Z,1.4nm,0.9s						
PALK	Pallekele	58.45	280	P	P	15 54 19.3	-0.3
RAR	Rarotonga	62.79	112	P	P	15 54 48.3	-0.8
YAK	Yakutsk	64.87	355	P	P	15 55 02.1	+0.2
ADK	Adak	66.27	29	P	P	15 55 11.1	-0.1
MKAR	Makanchi Array	69.59	322		P	15 55 32.9	+0.7
MKAR	Makanchi Array	69.59	322	P	P	15 55 33.7	+1.4
	comp=Z,5.1nm,1.0s,baz=116,slow=8.2,SNR=29						
	comp=Z,5.1nm,1.0s						
MAKZ	Makanchi	69.79	322		P	15 55 34.2	+0.7
MAKZ				IAmb	IAmb	15 55 36.3	
	comp=Z,10nm,1.2s						
PRZ	Przheval'sk	70.25	317	P	P	15 55 37.0	+0.4
ZAA0	Zalesovo Array	71.77	330	P	P	15 55 45.0	-0.3
ZALV	Zalesovo Beam	71.77	330		P	15 55 45.3	0.0
ZALV	Zalesovo Beam	71.77	330	P	P	15 55 45.6	+0.3
	comp=Z,0.8nm,0.5s,baz=96,slow=11,SNR=4.6						
	comp=Z,0.8nm,0.5s						
BOOM	Boomskoye usch	71.94	316	P	P	15 55 46.0	-0.9
KURK	Kurchatov	73.53	325	P	P	15 55 55.5	-0.4
KURBB	Kurchatov Arra	73.54	325	P	P	15 55 56.9	+0.9
	comp=Z,1.8nm,0.9s,baz=112,slow=5.3,SNR=10						
	comp=Z,1.8nm,0.9s						
ARSB	Arslanbob	73.61	314	P	P	15 55 56.6	-0.2
ARSB				IAmb	IAmb	15 55 59.3	
	comp=Z,9.0nm,1.4s						
TIXI	Tiksi	74.45	357	LR	LR	16 28 03.8	
	comp=Z,53nm,18.4s,baz=189,slow=35						
VNDA	Vanda	75.84	175	P	P	15 56 08.8	-0.1
VNDA	Vanda	75.84	175	P	P	15 56 09.4	+0.6
	comp=Z,1.7nm,0.6s,baz=319,slow=6.7,SNR=12						
VNDA				LR	LR	16 30 10.4	
	comp=Z,87nm,18.3s,baz=355,slow=36						
	comp=Z,1.7nm,0.6s						
KKAR	Karatay Array	75.91	316	P	P	15 56 08.7	-1.2
KKAR	Karatay Array	75.91	316	P	P	15 56 08.5	-1.4
KKAR				IAmb	IAmb	15 56 47.0	
	comp=Z,4.1nm,1.4s						
O14K	Tigyukauivet M	77.61	27	P	P	15 56 18.7	-0.4
L14K	Kuka Creek	77.98	25	P	P	15 56 19.9	-1.2
M14K	Bethel	78.00	26	P	P	15 56 20.5	-0.7
BVAR	Borovoye Array	79.12	325	P	P	15 56 28.6	+1.0
	comp=Z,1.3nm,0.6s,baz=116,slow=6.8,SNR=8.7						
	comp=Z,1.3nm,0.6s						
BRVK	Borovoye	79.19	325	P	P	15 56 28.3	+0.2
O16K	Kokwok River B	79.22	28	P	P	15 56 28.0	0.0
O16K				IAmb	IAmb	15 56 51.0	
	comp=Z,10nm,1.1s						
NRIK	Noril'sk	79.61	344	P	P	15 56 29.7	-0.3
NRIK				IAmb	IAmb	15 56 31.6	
	comp=Z,11nm,1.1s						
NRIK	Noril'sk	79.61	344	P	P	15 56 30.3	+0.4
	comp=Z,5.3nm,0.9s,baz=158,slow=3.1,SNR=4.5						
	comp=Z,5.3nm,0.9s						
I17K	Unalakleet	80.00	23	P	P	15 56 31.8	-0.3
I17K				IAmb	IAmb	15 57 03.0	
	comp=Z,18nm,1.4s						
N17K	Nushagak Hills	80.02	27	P	P	15 56 31.8	-0.6
N17K				IAmb	IAmb	15 56 34.4	
	comp=Z,9.1nm,1.2s						
M17K	Holitna River	80.26	26	P	P	15 56 34.0	+0.3
M17K				IAmb	IAmb	15 56 36.5	
	comp=Z,12nm,1.0s						
K17K	Iditarod	80.45	25	P	P	15 56 34.8	+0.2
K17K				IAmb	IAmb	15 56 37.7	
	comp=Z,9.3nm,0.9s						
OHAK	Old Harbor	80.66	31	P	P	15 56 36.0	+0.2
OHAK				IAmb	IAmb	15 56 38.1	
	comp=Z,12nm,1.0s						
KDAK	Kodiak Island	81.21	30	LR	LR	16 28 34.2	
	comp=Z,58nm,19.6s,baz=200,slow=33						
N19K	Bonanza Creek	81.36	27	P	P	15 56 38.9	-0.8
N19K				IAmb	IAmb	15 56 41.8	
	comp=Z,7.1nm,1.1s						
G18K	Tagagawik	81.69	22	P	P	15 56 41.7	+0.5
G18K				IAmb	IAmb	15 56 45.3	
	comp=Z,6.6nm,1.2s						
E18K	Tukpahlearik C	81.69	20	P	P	15 56 41.5	+0.3
E18K				IAmb	IAmb	15 56 45.4	
	comp=Z,4.9nm,0.9s						
L19K	White Mountain	81.70	26	P	P	15 56 41.0	-0.3
C18K	Utukok River	82.08	19	P	P	15 56 43.6	+0.3
C18K				IAmb	IAmb	15 57 01.0	
	comp=Z,8.9nm,1.3s						
F19K	Shaleruckik Mo	82.42	21	P	P	15 56 44.9	0.0
F19K				IAmb	IAmb	15 56 56.9	
	comp=Z,7.8nm,1.5s						
J20K	Nowinta River	82.74	24	P	P	15 56 47.1	+0.4
J20K				IAmb	IAmb	15 56 49.0	
	comp=Z,9.1nm,1.3s						
MSEY	Mahe Island	82.77	266	P	P	15 56 46.8	-1.2
E19K	Redstone River	82.87	21	P	P	15 56 47.4	+0.1
E19K				IAmb	IAmb	15 56 51.0	
	comp=Z,4.9nm,0.8s						
F20K	Avaraart Lake	83.24	21	P	P	15 56 49.5	+0.2
IMAR	Indian Mountai	83.56	22	P	P	15 56 50.4	-0.6
D20K	Etivluk River	83.61	19	P	P	15 56 51.1	0.0
D20K				IAmb	IAmb	15 57 02.6	
	comp=Z,6.0nm,1.4s						
RC01	Rabbit Creek A	83.63	28	P	P	15 56 51.5	+0.1
RC01				IAmb	IAmb	15 56 52.1	
	comp=Z,10nm,1.1s						
KNK	Knik Glacier	84.32	28	P	P	15 56 54.4	-0.6
MLY	Manley	84.42	24		P	15 56 55.9	+0.5
MLY				IAmb	IAmb	15 56 58.2	
	comp=Z,6.9nm,1.3s						
HIN	Hinchinbrook I	84.97	29	P	P	15 56 58.7	+0.5
I23K	Minto, Yukon-K	85.01	24	IAmb	IAmb	15 56 59.9	
	comp=Z,3.9nm,1.0s						
E22K	Anaktuvuk Pass	85.03	21		P	15 56 59.0	+0.5
E22K				IAmb	IAmb	15 57 01.4	
	comp=Z,4.0nm,1.0s						
G23K	Bananza Creek	85.22	22	P	P	15 56 59.8	+0.4
DHY	Denali Highway	85.26	26	IAmb	IAmb	15 57 01.0	
	comp=Z,4.3nm,0.9s						
WRH	Wood River Hil	85.33	25	IAmb	IAmb	15 57 00.9	
	comp=Z,6.4nm,1.0s						
CCB	Clear Creek Bu	85.50	24		P	15 56 59.8	-0.9
CCB				IAmb	IAmb	15 57 01.9	
	comp=Z,4.7nm,0.9s						
D23K	Nanushuk River	85.70	20	P	P	15 57 01.2	-0.5
E23K	Chandalar	85.79	21	P	P	15 57 02.3	0.0
E23K				IAmb	IAmb	15 57 05.4	
	comp=Z,8.0nm,1.1s						
HDA	Harding Lake	85.79	25	P	P	15 57 01.2	-1.1
HDA				IAmb	IAmb	15 57 03.7	
	comp=Z,5.1nm,1.0s						
IL31		85.91	24	P	P	15 57 02.2	-0.6
IL31				IAmb	IAmb	15 57 02.6	
	comp=Z,3.2nm,0.8s						
ILAR	Eielson Array	85.91	24	P	P	15 57 02.2	-0.6
ILAR	Eielson Array	85.91	24	P	P	15 57 01.9	-0.9
	comp=Z,1.8nm,0.8s,baz=262,slow=4.6,SNR=18						
	comp=Z,1.8nm,0.8s						
TOLK	Toolik Lake Re	85.98	20		P	15 57 02.6	-0.6
TOLK				IAmb	IAmb	15 57 05.4	
	comp=Z,6.1nm,1.1s						
F24K	Squaw Lake	86.26	22		P	15 57 03.7	-0.8
F24K				IAmb	IAmb	15 57 07.1	
	comp=Z,5.4nm,1.0s						
D24K	Happy Valley	86.40	20	IAmb	IAmb	15 57 07.6	
	comp=Z,4.9nm,0.8s						
J26L	Joseph Creek	87.24	25	IAmb	IAmb	15 57 11.8	
	comp=Z,4.4nm,1.2s						
E25K	Arctic Village	87.27	21	IAmb	IAmb	15 57 12.8	
	comp=Z,6.9nm,1.3s						
QSPA	South Pole Qui	87.27	180	P	P	15 57 10.4	+0.7
QSPA				IAmb	IAmb	15 57 12.7	
	comp=Z,6.7nm,0.9s						
QSPA	South Pole Qui	87.27	180	P	P	15 57 10.3	+0.7
	comp=Z,5.4nm,0.8s,baz=310,slow=1.3,SNR=20						
QSPA				LR	LR	16 35 29.0	
	comp=Z,43nm,19.5s,baz=8.0,slow=35						
	comp=Z,5.4nm,0.8s						
BMAR	Burnt Mountain	87.47	22		P	15 57 11.6	+1.2
M27K	Edge Creek, AK	87.57	27	IAmb	IAmb	15 57 13.1	
	comp=Z,10nm,1.4s						
F26K	Sheenjek River	87.69	22	IAmb	IAmb	15 57 15.0	
	comp=Z,5.2nm,1.2s						
K27K	Chicken	87.79	26	IAmb	IAmb	15 57 14.6	
	comp=Z,5.0nm,1.1s						
H27K	Steamboat Moun	88.41	24		P	15 57 15.5	+0.5
H27K				IAmb	IAmb	15 57 17.5	
	comp=Z,6.3nm,0.9s						
DAWY	Dawson	88.96	26	IAmb	IAmb	15 57 19.6	
	comp=Z,4.6nm,0.9s						
E28M	Babbage River	89.56	21	P	P	15 57 20.6	+0.4
E28M				IAmb	IAmb	15 57 40.2	
	comp=Z,5.9nm,1.5s						
K29M	Barlow Dome	89.75	26	IAmb	IAmb	15 57 33.6	
	comp=Z,8.7nm,1.5s						
G29M	Pine Creek	89.90	23	P	P	15 57 22.2	+0.3
CPUP	Villa Florida	147.39	153	PKPbc	PKPab	16 04 08.9	-0.6
	comp=Z,0.8nm,0.9s,baz=256,slow=2.7,SNR=3.6						
LPAZ	La Paz	147.69	127	PKPbc	PKPbc	16 04 10.5	+0.9
	comp=Z,3.0nm,0.9s,baz=204,slow=4.0,SNR=4.6						

KRSC 27 15:52:03.8±1.4**, 56°.19N**×**164°.25E, h48**^{km}±19^{km}**, Ml3.5, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.80	272	*e*P	Pn	15 52 18.6	-0.1
KBTR				*e*S	Sn	15 52 28.8	-0.8
KBG	Krutoberegovo	0.86	275	*e*P	Pn	15 52 19.4	-0.2
KBG				*e*S	Sn	15 52 31.1	0.0
BKI	Bering	1.39	134	*e*P	Pn	15 52 28.7	+2.0
BKI				*e*S	Sn	15 52 46.7	+2.9
SMKR	Semkarok	1.59	286	*e*P	Pn	15 52 31.5	+1.9
ZLN	Zelenaya	1.94	266	*e*P	Pn	15 52 37.6	+3.3
BZGR	Bezymyannyi-Gr	2.01	264	*e*P	Pn	15 52 38.3	+3.1
KLY	Klyuchi	2.01	275	*e*P	Pn	15 52 36.4	+1.2
KRSR	Krestovskiy	2.06	272	*e*P	Pn	15 52 38.6	+2.6
BZWR	Bezymyannyi-We	2.11	266	*e*P	Pn	15 52 40.1	+3.3
MKZ	Mys Kozlova	2.17	222	*e*P	Pn	15 52 39.6	+2.1
KIRR	Kirishev	2.20	266	*e*P	Pn	15 52 41.1	+3.1
KPT	Kopyto	2.27	266	*e*P	Pn	15 52 42.4	+3.5
KMNR	Kamenistaya	2.29	261	*e*P	Pn	15 52 43.0	+3.8
TUMD	Tumrok D	2.39	247	*e*P	Pn	15 52 43.6	+3.2
KOZ	Kozyrevsk	2.45	269	*e*P	Pn	15 52 45.0	+3.7
SRDR	Sredinnyy	2.53	275	*e*P	Pn	15 52 46.1	+3.7
SRDR				*e*S	Sn	15 53 16.9	+4.8
ESO	Esso	3.12	267	*e*P	Pn	15 52 54.1	+3.7
OSSR	Ossora	3.14	349	*e*P	Pn	15 52 52.0	+1.4
SPN	Mys Shipunski	3.95	220	*e*P	Pn	15 53 04.3	+2.5
NLC	Nalytchevo	4.15	225	*e*P	Pn	15 53 07.4	+2.9
SDLR	Sedlovina	4.26	229	*e*P	Pn	15 53 09.9	+3.7
KRER	Koryakskii	4.30	230	*e*P	Pn	15 53 11.6	+4.8
KRX	Arik	4.30	231	*e*P	Pn	15 53 10.8	+4.0
SMAR	Somma	4.31	229	*e*P	Pn	15 53 10.7	+3.8
AVH	Avacha	4.33	230	*e*P	Pn	15 53 11.1	+4.0
UGLR	Uglovaya	4.33	229	*e*P	Pn	15 53 11.1	+3.9
KOK	Koryaka	4.36	231	*e*P	Pn	15 53 11.2	+3.7
DALK	Dalny	4.49	228	*e*P	Pn	15 53 12.3	+3.1
PET	Petropavlovsk	4.54	228	*e*P	Pn	15 53 13.3	+3.4
KRMR	Karymshinskiy	4.90	229	*e*P	Pn	15 53 19.2	+4.3
RUS	Russkaya	5.04	224	*e*P	Pn	15 53 20.1	+3.4
GRL	Gorelyy	5.13	227	*e*P	Pn	15 53 22.8	+4.8
MTVR	Mutnovka	5.13	226	*e*P	Pn	15 53 21.6	+3.5
ASAK	Asacha	5.32	227	*e*P	Pn	15 53 25.3	+4.6

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*IDC **27** 15:54:34.1±1.1, 2°.49S×138°.33E, h0^{km}, mb3.6/5, mbtmp3.6/7, ML3.5/2, Error ellipse: s-maj=25.9km s-min=23.7km az=99.0*

*DJA **27** 15:54:38.9±0.4, 2°S±3°×13°9E±°, h10^{km}, M3.6/7, MLv3.6/7*

ISC 27 15:54:38.3±0.8**, 2°.5S**±0°.1×**138°.38E**±0°.06**, h32**^{km}**, n12, σ1^s.09**/13**, mb3.5**/5**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.63	31	P	Pb	15 54 49.8	-1.2
GENI	Genyem	1.79	92	P	Pn	15 55 07.8	+0.8
SRPI	Serui, Papua	2.24	287	P	Pb	15 55 16.5	-1.6
JAY	Jayapura	2.32	90	Pn	Pn	15 55 15.2	+0.8
	6.2nm,0.3s,baz=259,slow=9.5,SNR=47						
JAY				Sn	Sb	15 55 47.3	-0.6
	4.2nm,0.3s,baz=141,slow=13,SNR=5.3						
	26nm,0.3s						
JAY	Jayapura	2.32	90	P	Pn	15 55 13.8	-0.6
BAKI	Biak	2.63	300	P	Pb	15 55 24.1	-0.7
WRA	Warramunga Arr	17.75	193	P	Pn	15 58 42.2	-0.8
	0.2nm,0.3s,baz=16,slow=12,SNR=10						
	0.9nm,0.6s						
ASAR	Alice Springs	21.45	191	P	P	15 59 24.4	+0.4
	1.4nm,0.9s,baz=21,slow=9.8,SNR=16						
	1.4nm,0.9s						
PETK	Petropavlovsk-	57.77	14	P	P	16 04 26.5	+0.3
	1.5nm,0.8s,baz=221,slow=7.4,SNR=5.6						
	1.5nm,0.8s						
MKAR	Makanchi Array	69.45	322	P	P	16 05 44.6	+1.1
	0.2nm,0.5s,baz=123,slow=5.3,SNR=3.6						
	0.2nm,0.5s						
BVAR	Borovoye Array	78.98	325	P	P	16 06 40.4	+1.5
	0.2nm,0.4s,baz=96,slow=8.8,SNR=1.7						
	0.2nm,0.4s						
ILAR	Eielson Array	85.81	24	P	P	16 07 13.4	-1.0
	0.3nm,0.7s,baz=262,slow=3.5,SNR=2.2						
	0.3nm,0.7s						

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*IDC **27** 16:04:28.5±1.0, 2°.79S×138°.54E, h0^{km}, mb3.6/5, mbtmp3.5/8, ML3.3/3, Error ellipse: s-maj=24.4km s-min=22.4km az=112.0*

*DJA **27** 16:04:28.9±0.4, 2°S±3°×13°8E±°, h10^{km}, M3.6/7, MLv3.6/7*

ISC 27 16:04:32.9±0.8**, 2°.8S**±0°.1×**138°.40E**±0°.05**, h35**^{km}**, n13, σ2^s.17**/14**, mb3.5**/5**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.84	22	P	Pn	16 04 39.9	-8.3
GENI	Genyem	1.78	84	P	Pn	16 04 58.8	-2.3
GENI				S	Sn	16 05 22.2	-0.3
JAY	Jayapura	2.32	84	Pn	Pn	16 05 06.0	-2.6
	4.0nm,0.3s,baz=262,slow=9.6,SNR=34						
JAY				Sn	Sn	16 05 36.3	+0.3
	2.0nm,0.3s,baz=306,slow=14,SNR=4.1						
	14nm,0.3s						
JAY	Jayapura	2.32	84	P	Pn	16 05 06.7	-1.9
SRPI	Serui, Papua	2.34	293	P	Pn	16 05 05.7	-3.1
BAKI	Biak	2.78	304	P	Pn	16 05 12.7	-2.2
WRA	Warramunga Arr	17.52	193	P	Pn	16 08 33.5	-1.0
	0.2nm,0.3s,baz=17,slow=12,SNR=11						
	0.3nm,0.4s						
FITZ	Fitzroy Crossi	19.71	219	P	Pn	16 09 02.0	+1.0
	baz=31,slow=12,SNR=0.7						
	0.7nm,0.6s						
ASAR	Alice Springs	21.22	191	P	P	16 09 14.8	-1.0
	0.4nm,0.5s,baz=13,slow=10,SNR=16						
	0.4nm,0.5s						
MKAR	Makanchi Array	69.65	323	P	P	16 15 38.7	-0.2
	0.3nm,0.7s,baz=106,slow=6.2,SNR=5.2						
	0.3nm,0.7s						
KURBB	Kurchatov Arra	73.60	325	P	P	16 16 04.7	+2.1
	0.2nm,0.4s,baz=107,slow=5.9,SNR=4.0						
	0.2nm,0.4s						
BVAR	Borovoye Array	79.19	325	P	P	16 16 37.4	+3.2
	0.4nm,0.4s,baz=112,slow=5.2,SNR=3.6						
	0.4nm,0.4s						
QSPA	South Pole Qui	87.17	180	P	P	16 17 17.1	+1.7
	0.8nm,1.0s,baz=351,slow=4.5,SNR=1.3						
	0.8nm,1.0s						

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*NEIC **27** 16:12:06.9±1.9, 18°.3N±0°.1×105°.41W±0°.07, h10^{km}±2^{km}, mb4.4/30, Md4.4/16(MEX), Error ellipse: s-maj=17.9km s-min=11.1km az=195.0*

*MEX **27** 16:12:09.4±1.1, 18°.36N×105°.55W, h16^{km}±44^{km}, MD4.4*

ISC 27 16:12:09.4±3.1**, 18°.41N**±0°.08×**105°.42W**±0°.08**, h24**^{km}±20^{km}**, n55, σ2^s.00**/73**, mb4.4**/4**, Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CIHU	Emiliano Zapat	1.07	37	*e*P	Pn	16 12 27.3	-1.6
CIHU				*e*S	Sb	16 12 41.5	-1.4
CJM	Chamela	1.14	18	*e*P	Pn	16 12 28.1	-1.9
CJM				*e*S	Sn	16 12 42.9	-2.0
CDAR	Ciudad de Arme	1.44	68	*e*P	Pn	16 12 32.6	-1.3
CDAR				*e*S	Sn	16 12 51.5	-0.6
CEGR	Campo Tres	1.77	56	*e*P	Pn	16 12 38.5	-0.2
CEGR				*e*S	Sn	16 13 01.6	+0.9
MMIG	Aquila	1.97	93		Pn	16 12 40.1	-1.2
MMIG					Sn	16 13 04.2	-1.1
MMIG	Aquila	1.97	93	*e*P	Pn	16 12 40.1	-1.2
MMIG				*e*S	Sn	16 13 04.2	-1.1
MNGA	Volcan de Coli	2.00	58	*e*P	Pn	16 12 42.7	+0.7
MNGA				*e*S	Sb	16 13 09.5	-0.4
SOMAC	Volcano de Col	2.02	56	*e*P	Pn	16 12 43.1	+0.7
SOMAC				*e*S	Sb	16 13 10.4	-0.3
INCO	Volcan de Coli	2.05	57	*e*P	Pn	16 12 43.3	+0.6
INCO				*e*S	Sb	16 13 09.8	-1.6
ZIIG	Zihuatanejo	3.84	101	*e*P	Pn	16 13 03.7	-3.4
ZIIG				*e*S	Sn	16 13 50.0	-1.6
ARIG	Puente Sto Nin	4.82	91	*e*P	Pn	16 13 22.6	+2.1
ARIG				*e*S	Sn	16 14 16.9	+1.3
CAIG	El Cayaco	5.09	105	*e*P	Pn	16 13 26.0	+1.8
CAIG				*e*S	Sn	16 14 23.7	+1.3
ZAIG	Zacatecas	5.10	31		Pn	16 13 25.7	+1.1
MEIG	Mezcala	5.53	94	*e*P	Pn	16 13 34.6	+4.1
MEIG				*e*S	Sn	16 14 30.8	-2.6
PLIG	Platanillo	5.62	89	*e*P	Pn	16 13 33.2	+1.6
PLIG				*e*S	Sn	16 14 37.2	+1.8
YAIG	Yautepec	6.04	85	*e*P	Pn	16 13 40.6	+3.2
CRIG	Cruz Grande	6.22	105	*e*P	Pn	16 13 39.0	-0.9
CRIG				*e*S	Sn	16 14 48.2	-2.0
PPM	Popocatepetl	6.47	83	*e*P	Pn	16 13 46.5	+2.8
TLIG	Tlapa	6.57	96		Pn	16 13 45.0	+0.3
TLIG	Tlapa	6.57	96	*e*P	Pn	16 13 48.3	+3.5
SLBS	Sierra La Lagu	6.74	322		Pn	16 13 47.5	+0.5
FTIG	Fresnillo de T	6.94	93	*e*P	Pn	16 13 51.9	+2.1
FTIG				*e*S	Sn	16 15 04.2	-4.0
PNIG	Pinotepa	7.24	105	*e*P	Pn	16 13 56.2	+2.3
TXIG	Tlaxiaco	7.38	98	*e*P	Pn	16 13 58.5	+2.5
TXIG				*e*S	Sn	16 15 13.0	-6.1
YOIG	Yosondua	7.66	100	*e*P	Pn	16 14 03.7	+3.8
YOIG				*e*S	Sn	16 15 23.4	-2.7
TOIG	Toxpalan	7.94	91	*e*P	Pn	16 14 06.8	+3.2
TOIG				*e*S	Sn	16 15 34.8	+2.0
TXAR	Lajitas Array	11.00	8	Pn	Pn	16 14 47.7	+2.4
OZNA	Ozona	13.05	17		Pn	16 15 16.7	+3.2
BRDY	Brady	14.08	23		Pn	16 15 29.3	+1.8
SN05	Snyder 5	14.98	15		Pn	16 15 40.6	+0.9
SN05				IAmb	IAmb	16 15 48.6	
	comp=Z,20nm,0.8s						
ABTX	Abilene, Hawle	15.08	19	Pn	Pn	16 15 41.6	+0.6
ABTX				IAmb	IAmb	16 15 50.0	
	comp=Z,25nm,1.1s						
WHTX	Lake Whitney,	15.32	26		Pn	16 15 45.2	+1.1
PLPT	Palo Pinto	15.70	23		Pn	16 15 49.8	+0.6
PLPT				IAmb	IAmb	16 15 56.3	
	comp=Z,28nm,0.8s						
DKNS	Dickens	15.72	14	Pn	Pn	16 15 50.5	+1.1
DKNS				IAmb	IAmb	16 15 56.7	
	comp=Z,21nm,0.7s						
FW06	Azle	16.13	24	Pn	Pn	16 15 54.5	-0.2
WTFS	Witchita Falls	16.51	21		Pn	16 15 59.0	-0.5
WTFS				IAmb	IAmb	16 16 05.2	
	comp=Z,32nm,0.8s						
Z35A	Perchaven, San	16.57	25		Pn	16 16 00.0	-0.2
WMOK	Wichita Mounta	17.31	19		P	16 16 11.2	+0.4
X34A	Smith Ranch, M	17.49	21		P	16 16 13.2	+0.4
X34A				IAmb	IAmb	16 16 16.1	
	comp=Z,24nm,0.9s						
OK038	West end E0370	18.94	17	P	P	16 16 27.1	-1.7
TUL3	Leonard	19.41	24	P	P	16 16 31.6	-2.3
TUL3				IAmb	IAmb	16 16 36.6	
	comp=Z,15nm,0.6s						
KAN08	Anthony NE Sta	19.86	18	P	P	16 16 35.9	-2.9
KAN09	Caldwell North	19.88	19	P	P	16 16 36.6	-2.4
RLO	Rose Lookout	19.93	25		Pn	16 16 40.8	-0.6
T35A	Sooner Cattle	20.04	21		Pn	16 16 41.5	-1.1
T35A				IAmb	IAmb	16 16 45.3	
	comp=Z,20nm,0.9s						
PV16	Nyswonger Mesa	20.07	352	P	P	16 16 41.6	+0.3
GWY	Greenwater Val	20.31	333		P	16 16 43.8	-0.1
R40A	Maddies Statio	22.90	27	P	P	16 17 13.1	+1.7
P40A	Paris	24.03	26		P	16 17 23.9	+1.4
P40A				IAmb	IAmb	16 17 26.7	
	comp=Z,5.7nm,0.8s						
W50A	Signal Mountai	24.45	43	P	P	16 17 27.9	+1.3
V53A	Saluda	26.38	45		P	16 17 44.8	+0.8
V53A				IAmb	IAmb	16 17 46.0	
	comp=Z,6.9nm,0.7s						
L40A	Anamosa	26.50	24	P	P	16 17 44.1	-0.9
L40A				IAmb	IAmb	16 17 49.5	
	comp=Z,6.7nm,0.7s						
PAULI	Pauline	26.59	47	P	P	16 17 45.5	-0.4
PAULI				IAmb	IAmb	16 17 50.5	
	comp=Z,8.4nm,1.0s						
YNE	Yellowstone No	26.80	353	P	P	16 17 47.2	-0.8
R32K	Eaglecrest	45.19	339	P	P	16 20 24.7	+0.5

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*IDC **27** 16:14:04.8±0.8, 2°.72S×138°.46E, h0^{km}, mb3.9/8, mbtmp4.0/12, ML3.9/4, MS3.4/8, Error ellipse: s-maj=25.1km s-min=19.0km az=86.0*

*NEIC **27** 16:14:05.9±1.6, 2°.56S±0°.05×138°.49E±0°.06, h10^{km}±1^{km}, mb4.0/9, Error ellipse: s-maj=12.5km s-min=6.2km az=302.0*

*DJA **27** 16:14:08.2±0.3, 2°S±3°×13°9E±°, h10^{km}, M4.4/9, mb4.7/2, MLv4.2/9*

ISC 27 16:14:05.7±0.5**, 2°.61S**±0°.05×**138°.48E**±0°.03**, h10**^{km}**, n49, σ1^s.74**/47**, mb4.0**/9**, MS3.4**/6**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.66	20	P	Pb	16 14 18.9	-0.4
SMPI				S	Sg	16 14 24.3	-2.9
GENI	Genyem	1.69	89	P	Pg	16 14 38.7	+0.6
GENI	Genyem	1.69	89	P	Pb	16 14 36.9	0.0
GENI				S	Sb	16 14 58.5	+0.3
JAY	Jayapura	2.23	88	Pn	Pb	16 14 44.6	-1.4
	19nm,0.3s,baz=219,slow=8.3,SNR=70						
JAY				Sn	Sn	16 15 09.8	-0.5
	10nm,0.3s,baz=252,slow=21,SNR=4.2						
JAY				LR	LR	16 15 32.3	
	comp=Z,372nm,21.8s,baz=278,slow=39						
	65nm,0.4s						
JAY	Jayapura	2.23	88	P	Pb	16 14 44.5	-1.6
SRPI	Serui, Papua	2.36	288	P	Pb	16 14 47.0	-1.3
SRPI				S	Sb	16 15 17.6	+0.1
BAKI	Biak	2.76	301	P	Pb	16 14 53.3	-1.9
RKPI	Ransiki, Papua	4.44	284	P	Pn	16 15 14.0	+0.8
KMPI	Kaimana, Papua	4.88	258	P	Pn	16 15 19.8	+0.5
	197nm,0.7s						
FAKI	Fak Fak	6.23	267	Pn	Pn	16 15 41.3	+3.5
FAKI	Fak Fak	6.23	267	P	Pn	16 15 41.4	+3.6
FAKI	Fak Fak	6.23	267	P	Pn	16 15 40.8	+3.0
KDU	Kakadu	11.64	210	P	Pn	16 16 53.2	+1.1
COEN	Coen	12.19	158	Pn	Pn	16 17 01.1	+1.5
COEN	Coen	12.19	158	P	Pn	16 17 01.4	+1.8
MTN	Manton Dam	12.50	215		Pn	16 17 04.9	+1.1
MTN	Manton Dam	12.50	215	P	Pn	16 17 05.1	+1.3
SOEI	Soe	15.80	243		Pn	16 17 48.9	+0.2
SOEI	Soe	15.80	243	P	Pn	16 17 50.7	+2.0
KNRA	Kununurra	16.13	216		Pn	16 17 52.4	-0.4
KNRA				IAmb	IAmb	16 18 30.4	
	comp=Z,19nm,1.2s						

BATI	Baumata	16.54	242	Pn	Pn	16 17 57.0	-1.0
	comp=Z,0.7nm,0.3s,baz=30,slow=22,SNR=1.5						
	comp=Z,5.6nm,0.4s						
GUMO	Guam	17.30	21	LR	LR	16 24 37.1	
	comp=Z,83nm,19.4s,baz=190,slow=36						
WB0	Warramunga Arr	17.51	193		Pn	16 18 09.8	-0.4
WB0				IAmb	IAmb	16 18 44.6	
	comp=Z,12nm,1.1s						
WR8	Warramunga Arr	17.67	192	P	Pn	16 18 11.6	-0.6
WR8				IAmb	IAmb	16 18 22.5	
	comp=Z,7.7nm,0.8s						
WRAB	Tennant Creek	17.68	193	Pn	Pn	16 18 11.0	-1.3
WRAB				IAmb	IAmb	16 18 37.9	
	comp=Z,16nm,1.2s						
WRA	Warramunga Arr	17.69	193		Pn	16 18 09.8	-2.6
WRA	Warramunga Arr	17.69	193	P	Pn	16 18 11.5	-0.9
	comp=Z,0.4nm,0.3s,baz=16,slow=13,SNR=18						
WRA				S	Sn	16 21 23.2	-6.6
	comp=Z,0.8nm,0.7s,baz=5.0,slow=23,SNR=3.7						
	comp=Z,0.9nm,0.3s						
QIS	Mount Isa	17.87	177	P	P	16 18 15.9	+0.6
FITZ	Fitzroy Crossi	19.88	218	P	P	16 18 37.1	-0.3
FITZ	Fitzroy Crossi	19.88	218	P	P	16 18 38.0	+0.6
	comp=Z,0.4nm,0.3s,baz=350,slow=5.0,SNR=11						
	comp=Z,1.8nm,0.8s						
AS01	Alice Springs	21.38	191	P	P	16 18 54.0	+0.3
AS31	Alice Springs	21.39	192	P	P	16 18 54.4	+0.6
AS31				IAmb	IAmb	16 19 03.6	
	comp=Z,8.6nm,1.1s						
ASAR	Alice Springs	21.39	192	P	P	16 18 53.7	-0.1
ASAR	Alice Springs	21.39	192	P	P	16 18 53.4	-0.4
	comp=Z,2.3nm,0.5s,baz=17,slow=9.5,SNR=60						
	comp=Z,2.3nm,0.5s						
HNR	Honiara	22.39	109	LR	LR	16 28 58.8	
	comp=Z,105nm,18.2s,baz=194,slow=40						
STKA	Stephens Creek	29.26	175	LR	LR	16 33 45.9	
	comp=Z,102nm,20.5s,baz=285,slow=40						
NWAO	Narrogin (SRO)	36.14	211	LR	LR	16 36 42.1	
	comp=Z,91nm,21.0s,baz=42,slow=38						
CMAR	Chiang Mai Arr	44.19	300	P	P	16 22 16.4	+1.0
	comp=Z,0.5nm,0.7s,baz=130,slow=6.3,SNR=4.2						
	comp=Z,0.5nm,0.7s						
PETK	Petropavlovsk-	57.82	14	LR	LR	16 44 41.7	
	comp=Z,30nm,21.6s,baz=180,slow=32						
SEY	Seymchan	66.21	7	LR	LR	16 50 21.7	
	comp=Z,27nm,21.8s,baz=151,slow=33						
MKAR	Makanchi Array	69.57	322	P	P	16 25 13.7	-1.4
MKAR	Makanchi Array	69.57	322	P	P	16 25 16.5	+1.4
	comp=Z,0.8nm,0.8s,baz=115,slow=8.1,SNR=7.0						
	comp=Z,0.8nm,0.8s						
MAKZ	Makanchi	69.77	322	P	P	16 25 15.5	-0.8
ZALV	Zalesovo Beam	71.74	330	LR	LR	16 58 20.2	
	comp=Z,31nm,18.4s,baz=119,slow=37						
KURBB	Kurchatov Arra	73.52	325	P	P	16 25 39.9	+1.2
	comp=Z,1.3nm,0.2s,baz=112,slow=4.7,SNR=4.8						
	comp=Z,1.3nm,0.2s						
VNDA	Vanda	75.90	175	P	P	16 25 50.6	-1.5
	comp=Z,0.6nm,0.5s,baz=334,slow=6.3,SNR=5.1						
	comp=Z,0.6nm,0.5s						
BVAR	Borovoye Array	79.10	325	P	P	16 26 11.4	+1.0
	comp=Z,0.6nm,0.4s,baz=121,slow=7.4,SNR=4.5						
	comp=Z,0.6nm,0.4s						
ILAR	Eielson Array	85.84	24	P	P	16 26 45.8	+0.4
	comp=Z,0.4nm,0.7s,baz=249,slow=3.7,SNR=3.6						
	comp=Z,0.4nm,0.7s						
QSPA	South Pole Qui	87.33	180	P	P	16 26 53.7	+0.9
	comp=Z,1.4nm,0.7s,baz=345,slow=1.2,SNR=10						
	comp=Z,1.4nm,0.7s						

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*IDC **27** 16:17:25.8±1.3, 2°.60S×138°.51E, h0^{km}, mb3.5/4, mbtmp3.5/6, ML3.3/2, Error ellipse: s-maj=33.9km s-min=26.7km az=75.0*

ISC 27 16:17:30.1±1.0**, 2°.7S**±0°.1×**138°.6E**±0°.1**, h32^{km}, n6,** σ**1^s.14**/6**,** **mb3.6**/4**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.13	86	Pn	Pn	16 18 03.5	0.0
	3.5nm,0.3s,baz=284,slow=8.3,SNR=7.1						
	14nm,0.5s						
WRA	Warramunga Arr	17.65	193	P	Pn	16 21 32.5	-1.3
	0.2nm,0.3s,baz=15,slow=12,SNR=3.2						
	0.9nm,0.7s						
ASAR	Alice Springs	21.35	192	P	P	16 22 16.3	+1.4
	1.2nm,0.8s,baz=18,slow=8.9,SNR=5.0						
	1.2nm,0.8s						
SONM	Songino Array	57.63	335	P	P	16 27 17.3	-0.1
	0.2nm,0.3s,baz=135,slow=5.6,SNR=2.2						
	0.2nm,0.3s						
MKAR	Makanchi Array	69.68	322	P	P	16 28 37.0	+0.2
	0.5nm,0.8s,baz=101,slow=7.5,SNR=4.0						
	0.5nm,0.8s						
BVAR	Borovoye Array	79.21	325	P	P	16 29 31.8	-0.2
	0.3nm,0.5s,baz=106,slow=4.7,SNR=1.9						
	0.3nm,0.5s						

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*UPP **27** 17:00:40.5±0.1, 67°.05N×20°.95E, h0^{km}, ML2.4, Unknown*
*IDC **27** 17:00:41.2±1.2, 67°.06N×21°.13E, h0^{km}, mbtmp2.6/3, ML2.0/3, Error ellipse: s-maj=19.6km s-min=9.1km az=99.0*

ISC 27 17:00:40.3±1.2**, 67°.05N**±0°.03×**20°.95E**±0°.03**, h2^{km}**±12^{km}**, n17,** σ**0^s.62**/26**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.16	295	P	Pg	17 00 44.0	+0.5
DUNU				S	Sg	17 00 46.3	+0.7
MASU	Masugnsbyn	0.57	45	P	Pg	17 00 51.6	+0.3
MASU				S	Sg	17 00 59.2	+0.5
ERTU	Ertsjaerv	0.70	135	P	Pg	17 00 53.6	-0.2
ERTU				S	Sg	17 01 02.9	+0.1
PAJU	Pajala	0.85	91	P	Pg	17 00 56.2	-0.4
PAJU				S	Sg	17 01 07.5	-0.1
HARU	Harads	0.89	179	P	Pg	17 00 57.2	-0.2
HARU				S	Sg	17 01 09.0	0.0
KUA	Kurravaara	0.94	346	P	Pg	17 00 57.7	-0.6
KUA				S	Sg	17 01 10.4	+0.1
RATU	Laukkuluspa	0.94	327	P	Pg	17 00 57.7	-0.5
RATU				S	Sg	17 01 10.9	+0.6
SALU	Saltoluokta	1.01	290	P	Pg	17 00 59.4	-0.2
SALU				S	Sg	17 01 12.8	+0.1
SALU	Saltoluokta	1.01	290	*e*P	Pg	17 00 59.4	-0.2
KOVU	Salmi	1.21	346	P	Pn	17 01 03.1	-1.2
KALU	Kalix	1.54	140	P	Pn	17 01 08.5	-0.2
SJUU	Sjulsmark	1.57	170	P	Pb	17 01 09.4	-0.7
HEF	Hetta	1.71	36	*e*P	Pn	17 01 11.0	0.0
I37NO	I37NO	2.21	338	I	I	17 14 40.0	
	0.1nm,0.7s,baz=157,slow=328,SNR=2.2						
ARCES	ARCESS Array B	3.01	32	Pn	Pn	17 01 29.6	+0.6
	0.4nm,0.3s,baz=213,slow=14,SNR=34						
ARCES				Sn	Sn	17 02 06.8	+1.2
	0.5nm,0.3s,baz=215,slow=25,SNR=9.1						
	1.0nm,0.3s						
FINES	FINESS Array B	6.06	156	Pn	Pn	17 02 12.1	+1.4
	0.1nm,0.3s,baz=346,slow=12,SNR=7.2						
FINES				Sn	Sn	17 03 19.9	-0.6
	0.3nm,0.3s,baz=344,slow=22,SNR=7.8						
FINES				Lg	Lg	17 03 51.3	
	0.3nm,0.3s,baz=345,slow=26,SNR=2.9						
	0.9nm,0.7s						
NOA	NORSAR Array B	7.39	220	Pn	Pn	17 02 29.6	+0.6
	baz=28,slow=11,SNR=2.2						
	0.2nm,0.6s						

IDC 27 17:16:46.9±15.0**, 22°.14N×144°.61E, h198^{km}**±104^{km}**, mb3.1**/7**, mbtmp3.6**/7**, Error ellipse: s-maj=245.4km s-min=15.7km az=77.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	20.99	320	P	P	17 21 15.2	+0.4
	1.0nm,0.6s,baz=148,slow=8.3,SNR=14						
	1.0nm,0.6s						
WRA	Warramunga Arr	43.02	194	P	P	17 24 27.0	0.0
	0.2nm,0.3s,baz=15,slow=8.7,SNR=6.7						
	0.2nm,0.3s						
ASAR	Alice Springs	46.71	194	P	P	17 24 55.8	-0.3
	0.2nm,0.6s,baz=12,slow=6.5,SNR=7.5						
	0.2nm,0.6s						
ZALV	Zalesovo Beam	54.69	321	P	P	17 25 53.4	-1.9
	0.5nm,0.3s,baz=99,slow=9.1,SNR=2.7						
	0.5nm,0.3s						
MKAR	Makanchi Array	55.38	312	P	P	17 26 00.6	+0.2
	0.1nm,0.4s,baz=100,slow=7.5,SNR=2.0						
	0.1nm,0.4s						
KURBB	Kurchatov Arra	58.11	317	P	P	17 26 19.5	+0.1
	0.7nm,0.4s,baz=94,slow=7.5,SNR=7.9						
	0.7nm,0.4s						
BVAR	Borovoye Array	63.20	319	P	P	17 26 54.5	+0.7
	1.0nm,0.5s,baz=81,slow=7.2,SNR=5.8						
	1.0nm,0.5s						

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*IDC **27** 17:19:28.2±0.7, 31°.16S×178°.43W, h0^{km}, mb4.2/6, mbtmp4.1/7, ML3.7/1, Error ellipse: s-maj=26.1km s-min=20.6km az=108.0*

ISC 27 17:19:36.1±0.8**, 31°.29S**±0°.09×**178°.5W**±0°.2**, h61^{km}, n36,** σ**1^s.67**/43**, mb4.2**/7**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.09	15	P	Pn	17 20 00.7	-8.1
GLKZ				S	Sn	17 20 20.3	-13
RAO	Raoul Island	2.10	15	Pn	Pn	17 20 01.6	-7.3
	69nm,0.3s,baz=81,slow=20,SNR=2.2						
RAO				Sn	Sn	17 20 21.0	-13
	168nm,0.3s,baz=105,slow=24,SNR=4.3						
RIZ	Raoul Island	2.10	15	P	Pn	17 20 01.6	-7.4
RIZ				S	Sn	17 20 20.8	-13
PKGZ	Pakihiroa	7.13	202	P	Pn	17 21 16.7	-1.1
PKGZ				S	Sn	17 22 38.8	+1.4
RUGZ	Raukumara Rang	7.36	204	P	Pn	17 21 20.3	-0.7
RUGZ				S	Sn	17 22 45.6	+2.5
TWGZ	Tauwhareparae	7.45	202	P	Pn	17 21 21.6	-0.6
TWGZ				S	Sn	17 22 47.2	+2.0
WCZ	Waipu Caves	7.54	230	P	Pn	17 21 31.9	+8.6
OUZ	Omahuta	7.67	237	P	Pn	17 21 32.5	+7.4
TKGZ	Te Karaka	7.73	202	P	Pn	17 21 24.5	-1.5
TKGZ				S	Sn	17 22 54.1	+2.1
MWZ	Matawai	7.74	204	P	Pn	17 21 23.5	-2.6
MWZ				S	Sn	17 22 52.8	+0.5
URZ	Urewera	7.82	206	Pn	Pn	17 21 25.5	-1.7
	0.9nm,0.3s,baz=341,slow=18,SNR=8.7						
URZ				Sn	Sn	17 22 54.3	0.0
	2.9nm,0.3s,baz=18,slow=20,SNR=13						
	2.5nm,0.4s						
URZ	Urewera	7.82	206	P	Pn	17 21 25.9	-1.3
URZ				S	Sn	17 22 53.7	-0.6
RAGZ	Rawiri	7.92	204	P	Pn	17 21 27.6	-1.1
RAGZ				S	Sn	17 22 58.3	+1.4
RIGZ	Rimuhau	8.00	201	P	Pn	17 21 29.3	-0.4
RIGZ				S	Sn	17 22 58.3	-0.4
MUGZ	Murupara	8.14	207	P	Pn	17 21 31.6	-0.1
MUGZ				P		17 23 04.8	
RTZ	Ruatahuna	8.19	205	P	Pn	17 21 28.2	-4.1
RTZ				S	Sn	17 23 04.4	+1.1
SNGZ	Shannon Statio	8.21	203	P	Pn	17 21 30.8	-1.7
SNGZ				S	Sn	17 23 04.4	+0.7
MTHZ	Maungataniwha	8.45	205	P	Pn	17 21 35.5	-0.3
MTHZ				S	Sn	17 23 10.4	+0.8
BFZ	Birch Farm	10.28	203	P	Pn	17 21 55.6	-5.3
BFZ				S	Sn	17 23 48.7	-5.8
STKA	Stephens Creek	33.84	258	P	P	17 26 12.7	-0.1
	1.3nm,0.6s,baz=100,slow=11,SNR=1.4						
	1.3nm,0.6s						
ASAR	Alice Springs	42.61	268	P	P	17 27 27.3	+0.7
	2.7nm,0.6s,baz=106,slow=7.2,SNR=84						
	2.7nm,0.6s						
WRA	Warramunga Arr	43.68	273	P	P	17 27 36.0	+0.8
	4.8nm,0.6s,baz=112,slow=8.0,SNR=28						
	4.8nm,0.6s						
QSPA	South Pole Qui	58.83	180	P	P	17 29 29.9	+1.8
	2.2nm,1.0s,baz=74,slow=1.5,SNR=9.3						
	2.2nm,1.0s						
TGY	Tagaytay City	73.53	298	P	P	17 31 01.9	-0.9
	359nm,0.4s,baz=222,slow=18,SNR=4.1						
SNAA	Sanae	77.28	179	P	P	17 31 23.8	+0.2
	2.7nm,1.1s,baz=234,slow=2.9,SNR=3.9						
	2.7nm,1.1s						
NVAR	Mina Array Bea	89.20	43	P	P	17 32 23.4	-2.1
	0.6nm,0.7s,baz=239,slow=7.4,SNR=3.1						
	0.6nm,0.7s						
KURBB	Kurchatov Arra	121.36	313	PKP	PKiKP	17 38 22.8	+0.7
	0.6nm,0.6s,baz=102,slow=2.2,SNR=6.9						
BVAR	Borovoye Array	126.71	315	PKP	PKiKP	17 38 34.1	+1.4
	0.6nm,0.5s,baz=144,slow=3.5,SNR=5.2						
SPITS	Spitsbergen Ar	132.55	356	PKP	PKiKP	17 38 44.9	+1.1
	8.7nm,1.0s,baz=1.9,slow=10.0,SNR=1.5						
FINES	FINESS Array B	145.81	339	PKPbc	PKPab	17 39 09.0	+0.8
	5.9nm,0.6s,baz=50,slow=3.7,SNR=23						
NB2	NORSAR Subarra	149.55	351	PKP	PKiKP	17 39 19.4	+0.4
	comp=Z,1.0nm,0.7s,baz=17,slow=2.6						
NOA	NORSAR Array B	149.55	351	PKPbc	PKiKP	17 39 20.2	+1.2
	comp=Z,1.2nm,0.7s,baz=15,slow=4.3,SNR=5.0						
HFS	Hagfors	150.01	348	PKPbc	PKiKP	17 39 21.0	+1.1
	comp=Z,3.1nm,0.7s,baz=120,slow=5.3,SNR=5.6						
AKASG	Malin Array Be	151.71	321	PKPbc	PKPbc	17 39 22.1	-1.2
	comp=Z,2.5nm,0.8s,baz=54,slow=2.9,SNR=7.8						
BRTR	Keskin Array B	152.60	297	PKPbc	PKPbc	17 39 25.1	-0.9
	comp=Z,0.7nm,0.5s,baz=164,slow=4.2,SNR=4.8						
TORD	Torodi Ar. Bea	161.95	181	PKPab	PKPab	17 40 16.7	-0.3
	comp=Z,0.5nm,0.7s,baz=155,slow=3.2,SNR=3.0						

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*UPA **27** 17:20:11.6±0.4, 8°.34N×82°.90W, h18^{km}±1^{km}, ML3.9*
*UCR **27** 17:20:11.4±0.6, 8°.31N×82°.92W, h9^{km}±2^{km}, MW3.8*
*CATAC **27** 17:20:12.6±0.8, 8°N±5°×8°3W±°, h6^{km}±3^{km}, M3.9/11, MLv3.9/11, Error ellipse: s-maj=10.3km s-min=9.0km az=28.4, confirmed*

ISC 27 17:20:11.4±1.0**, 8°.32N**±0°.03×**82°.91W**±0°.02**, h17^{km}**±6^{km}**, n66,** σ**0^s.96**/80**, 4C-11D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.15	54	⇓*i*P	Pg	17 20 15.8	+0.2
LESP3				*e*S	Sg	17 20 18.9	+0.5
LIMO3	Limones	0.22	168	⇑*i*P	Pb	17 20 17.3	+0.3
LIMO3				AMP		17 20 17.5	
	comp=Z,18μm,0.1s						
LMNES	Limones	0.22	167	⇑*e*P	Pb	17 20 17.3	+0.3
CDITO	Canoas	0.26	9	P	Pg	17 20 17.4	+0.2
CDITO				S	Sb	17 20 21.4	-0.3
NELY	Ciudad Neily	0.33	354	⇑*e*P	Pg	17 20 18.6	+0.2
NELY				*e*S	Sb	17 20 24.1	+0.2
FITO	Golfito	0.39	322	*e*P	Pg	17 20 18.9	-0.6
FITO				*e*S	Sg	17 20 24.6	-0.3
EDAD	Golfito	0.42	323	*e*P	Pg	17 20 19.2	-0.7
EDAD				*e*S	Sg	17 20 25.9	+0.2
DVD	David	0.47	76	*e*P	Pg	17 20 20.9	0.0
DVD				*e*S	Sb	17 20 28.1	+0.2
MLIR3	Monte Lirio, C	0.48	10	*e*P	Pb	17 20 21.5	0.0
PEDE3	Pedregal, Chir	0.49	82	*e*P	Pg	17 20 21.1	-0.2
LOCO3	Loma Colorada,	0.50	79	*e*P	Pg	17 20 21.4	0.0
LOCO3				*e*S	Sb	17 20 29.1	+0.4
RSRNO	Rio Sereno	0.50	6	*e*P	Pb	17 20 22.3	+0.5
VITO	San Vito	0.50	353	*e*P	Pb	17 20 21.9	0.0
CLLRA	Cordillera,	0.52	35	⇓*e*P	Pg	17 20 22.0	+0.2
BRU2	Volcan	0.52	25	⇓*e*P	Pg	17 20 22.1	+0.2
BRU2				*e*S	Sb	17 20 30.0	+0.5
BRU2	Volcan	0.52	25	P	Pg	17 20 22.2	+0.2
BRU2	Volcan	0.52	25	⇓*i*P	Pg	17 20 22.2	+0.2
BRU2				*e*S	Sb	17 20 30.2	+0.7
SCLRA	Santa Clara, W	0.53	14	*e*P	Pb	17 20 22.4	+0.1
LOMA3	Las Lomas, Chi	0.53	78	*e*P	Pg	17 20 21.7	-0.3
TBS2		0.54	28	*e*P	Pb	17 20 23.3	+0.8
PTAR3	Potrerillos Ar	0.56	48	⇓*i*P	Pg	17 20 22.6	+0.1
BC3P	Paso Ancho	0.58	31	⇓*i*P	Pg	17 20 22.9	-0.1
BC3P				AMP		17 20 23.2	
	comp=Z,9μm,0.1s						
BC3P				*e*S	Sb	17 20 31.5	+0.3
BQTLY	Boquete Panama	0.62	46	⇓*e*P	Pg	17 20 23.5	-0.3
ALCO	Alturas Coton,	0.63	7	*e*P	Pg	17 20 23.7	-0.3
ALCO				*e*S	Sg	17 20 32.6	+0.1
BQSF3	Alto Boquete,	0.63	48	⇓*i*P	Pb	17 20 23.6	-0.5
BQSF3				*e*S	Sg	17 20 31.9	-0.5
PSOM3	Paja de Sombre	0.69	58	⇓*i*P	Pb	17 20 24.2	-0.8
PSOM3				*e*S	Sb	17 20 32.8	-1.5
EDP2	Potrero Grande	0.74	339	*e*P	Pb	17 20 25.6	-0.3
PANP	Palmar Norte	0.84	320	*e*P	Pb	17 20 26.6	-0.9
PBNVO	Pueblo Nuevo,	0.91	51	⇓*e*P	Pb	17 20 27.8	-1.0
RBALA	Bur	0.94	53	⇓*e*P	Pb	17 20 28.5	-0.7
DRK0	Durika	0.99	341	⇑*e*P	Pb	17 20 29.4	-0.9
DRK0	Durika	0.99	341	P	Pb	17 20 29.4	-0.9
DRK0	Durika	0.99	341	S	Sb	17 20 41.3	-1.9
DRK0	Durika	0.99	341	*e*P	Pb	17 20 29.4	-0.9
DRK0				*e*S	Sb	17 20 42.9	-0.3
EDPE	Pejibaye, P	1.06	322	*e*P	Pb	17 20 30.3	-1.0
OCHAL	Ojochal	1.06	317	P	Pb	17 20 30.0	-1.3
OCHAL	Ojochal	1.06	317	S	Sn	17 20 45.7	-0.2
RMDIO	Remedios, Chir	1.07	95	*e*P	Pb	17 20 30.6	-0.9
SAJE	San Jernim	1.18	330	*e*P	Pn	17 20 32.2	-1.1
PDCAN	Manzana , Fuen	1.20	91	*e*P	Pn	17 20 32.4	-1.1
KKNTU	Kakintº	1.21	65	*e*P	Pn	17 20 32.4	-1.2
LCR2	La Lucha 2	1.78	323	*e*P	Pn	17 20 41.7	+0.1
LCR2	La Lucha 2	1.78	323	P	Pn	17 20 41.7	+0.1
LCR2	La Lucha 2	1.78	323	S	Sb	17 21 05.7	-0.1
PAR1A	Puntarenas Pro	1.83	314	*e*P	Pn	17 20 42.9	+0.7
VTCV	VTCV, Calle Va	1.84	334	*e*P	Pn	17 20 43.3	+0.9
RESJ	San Isidro (Tu	1.85	337	*e*P	Pn	17 20 43.6	+1.2
ABRB	Las Abras (San	1.86	335	*e*P	Pn	17 20 43.7	+1.1
CVTV	Tajo	1.87	334	*e*P	Pn	17 20 43.9	+0.9
CVTQ	Turrialba Volc	1.88	333	*e*P	Pn	17 20 44.1	+1.0
VTLA	Turrialba Volc	1.88	333	*e*P	Pn	17 20 44.1	+1.1
VTR0	Volcan Turrial	1.89	334	*e*P	Pn	17 20 44.2	+1.0
TCS1	Tacares	2.19	321	P	Pb	17 20 50.0	-0.7
TRT2	Tortugero	2.37	340	P	Pn	17 20 51.1	+1.6
TRT2	Tortugero	2.37	340	S	Sn	17 21 19.7	+1.5
CBL1	Cabuya	2.50	301	*e*P	Pn	17 20 51.2	0.0
SOCE	Pocosol	2.65	321	P	Pn	17 20 56.0	+2.5
SOCE	Pocosol	2.65	321	S	Sg	17 21 35.0	-1.9
COVE	Coope Vega, Sa	2.80	328	P	Pb	17 20 58.4	-2.7
JTS	Las Juntas de	2.81	314	*e*P	Pn	17 20 56.7	+1.1
INDI	Punta indio, G	2.98	301	P	Pn	17 20 59.2	+1.2
INDI	Punta indio, G	2.98	301	S	Sn	17 21 33.9	+0.5
CMARA	Lajas Hojancha	3.00	304	S	Sn	17 21 35.5	+1.6
CMARA	Lajas Hojancha	3.00	304	P	Pn	17 20 59.7	+1.4
ACON	Acoyapa	4.26	329	P	Pn	17 21 17.7	+2.3
BOAB	BOACO BROADBAN	4.92	327	P	Pn	17 21 26.7	+2.1

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*VIE **27** 17:38:25.7±0.5, 49°.85N×18°.91E, h0^{km}, mb2.3/7, ml3.1/7, Error ellipse: s-maj=9.0km s-min=3.1km az=157.0 44 km S of Katowice Suspected Mining induced.*
*IDC **27** 17:38:25.8±0.8, 50°.12N×18°.67E, h0^{km}, mbtmp3.3/6, ML2.7/6, Error ellipse: s-maj=12.8km s-min=6.4km az=144.0*
*BGR **27** 17:38:25.9±0.3, 50°.19N×18°.71E, h1^{km}, ML3.4/12, Error ellipse: s-maj=5.6km s-min=3.3km az=178.0*
*IPEC **27** 17:38:25.3±0.2, 50°.20N×18°.74E, h1^{km}, ML2.9/4, Error ellipse: s-maj=1.9km s-min=0.9km az=176.0*
*PRU **27** 17:38:26.3, 50°.20N×18°.69E, h0^{km}*

ISC 27 17:38:23.4±0.6**, 50°.23N**±0°.03×**18°.73E**±0°.02**, h0^{km}, n70,** σ**1^s.72**/119**, 7C-5D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAC	Raciborz	0.37	248	*e*PG	Pb	17 38 33.6	+0.8
RAC				*e*SG	Sb	17 38 39.5	+0.4
OKC	Ostrava-Krasne	0.54	224	*e*PG	Pb	17 38 36.3	+0.6
OKC				*e*SG	Sb	17 38 42.7	-1.3
	comp=Z,320nm,0.6s						
OKC	Ostrava-Krasne	0.54	224	*e*Pg	Pb	17 38 36.2	+0.5
OKC				*e*Sg	Sb	17 38 43.0	-1.0
STEB	Steborice	0.68	245	*e*PG	Pb	17 38 38.6	+0.5
STEB				*e*SG	Sb	17 38 47.4	-0.7
	comp=Z,472nm,0.7s						
OJC	Ojcow	0.69	90	*e*Pg	Pg	17 38 38.5	+2.0
OJC				*e*Sg	Sb	17 38 48.3	+0.1
OJC	Ojcow	0.69	90	*e*Pg	Pb	17 38 38.7	+0.4
OJC				*e*Sg	Sb	17 38 48.4	+0.1
MORC	Moravsky Berou	0.89	240	*e*Pg	Pb	17 38 42.0	+0.4
	baz=61						
MORC				*e*Sg	Sg	17 38 52.7	+0.9
	244nm,0.2s,baz=61						
MORC	Moravsky Berou	0.89	240	*e*PG	Pb	17 38 42.1	+0.4
MORC				*e*SG	Sg	17 38 52.8	+0.9
MORC	Moravsky Berou	0.89	240	⇓P	Pb	17 38 42.0	+0.4
MORC				⇑S	Sb	17 38 54.2	+0.1
MORC	Moravsky Berou	0.89	240	*e*Pg	Pb	17 38 42.1	+0.4
MORC				*e*Sg	Sb	17 38 54.0	-0.1
MAUC	Maruska	1.04	214	*e*PG	Pb	17 38 45.2	+0.9
LANS	Liptovska Anna	1.18	156	*e*PG	Pn	17 38 47.9	+0.7
LANS				*e*SG	Sn	17 39 05.0	+1.1
LANS				*e*LG	Lg	17 39 09.1	
KRLC	Kraliky	1.26	264	*e*PG	Pg	17 38 48.5	+1.0
KRLC				*e*SG	Sb	17 39 05.5	+0.7
	comp=Z,378nm,0.4s						
NIE	Niedzica	1.30	128	*e*Pg	Pn	17 38 49.7	+0.9
NIE				*e*Sg	Sn	17 39 08.2	+1.3
JAVC	Velka Javorina	1.53	207	*e*Pn	Pb	17 38 53.3	+0.7
	baz=27						
JAVC	Velka Javorina	1.53	207	*e*PN	Pb	17 38 53.4	+0.8
DPC	Dobruska-Polom	1.55	276	*e*SG	Sb	17 39 14.5	+1.4
	comp=Z,161nm,0.3s						
DPC	Dobruska-Polom	1.55	276	*e*Pn	Pb	17 38 53.8	+0.8
DPC				*e*Pg	Pg	17 38 54.7	+1.7
DPC				*e*Sg	Sb	17 39 14.8	+1.7
OSTC	Ostas	1.64	283	*e*PG	Pn	17 38 55.0	+1.5
OSTC				*e*SG	Sg	17 39 17.9	+1.8
	comp=Z,83nm,0.6s						
VRAC	Vranov	1.66	237	Pg	Pb	17 38 55.2	+0.4
	10nm,0.3s,baz=59,slow=15,SNR=19						
VRAC				Lg	Lg	17 39 16.5	
	53nm,0.3s,baz=151,slow=19,SNR=26						
VRAC	Vranov	1.66	237	*e*Pn	Pb	17 38 55.3	+0.4
	baz=57						
VRAC				*e*Sg	Sg	17 39 16.9	+0.2
	100nm,0.2s,baz=57						
VRAC	Vranov	1.66	237	⇓P	Pg	17 38 55.7	+0.5
VRAC				⇑S	Sg	17 39 17.1	+0.4
KSP	Ksiaz	1.67	293	*e*Pg	Pn	17 38 55.3	+1.4
KSP				*e*Sg	Sb	17 39 17.8	+1.2
KSP	Ksiaz	1.67	293	*e*Pn	Pn	17 38 55.3	+1.4
KSP				*e*Pg	Pg	17 38 57.4	+2.0
KSP				*e*Sg	Sg	17 39 19.9	+2.9
VYHS	Vyhne	1.73	178	*e*PG	Pn	17 38 55.4	+0.6
UPC	Upice	1.76	280	*e*PG	Pb	17 38 57.7	+1.2
UPC				*e*SG	Sg	17 39 22.1	+2.2
	comp=Z,101nm,0.4s						
STHS	Stebnicka Huta	1.82	115	*e*PG	Pb	17 38 58.5	+1.0
KRUC	Moravsky	1.91	233	*e*Pn	Pn	17 38 58.8	+1.6
	baz=52						
KRUC				*e*Sg	Sg	17 39 24.7	0.0
	53nm,0.2s,baz=52						
MODS	Modra-Piesok	2.08	208	*e*PG	Pb	17 39 02.6	+0.6
KECS	Kecovo	2.09	146	*e*PG	Pn	17 39 00.1	+0.5
PSZ	Piszkesteto	2.43	161	⇓P	Pn	17 39 06.1	+1.7
KOLS	Kolonicke sedl	2.65	118	*e*PG	Pn	17 39 08.6	+1.3
PRU	Pruhonice	2.71	267	*e*PG	Pb	17 39 13.6	+1.0
PRU				*e*SG	Sg	17 39 49.2	-1.0
	comp=Z,60nm,0.7s						
CONA	Conrad Observa	2.97	220	*e*Pn	Pn	17 39 11.9	0.0
	0.3nm,0.1s						
CONA				Sn	Sn	17 39 47.2	-1.0
	12nm,0.3s						
RONA	Rosalia, Austr	2.99	213	*e*Pn	Pn	17 39 12.5	+0.4
	1.4nm,0.3s						
RONA				*e*Sn	Sn	17 39 48.0	-0.7
	5.2nm,0.3s						
BRG	Berggiesshubel	3.12	284	*e*Pg	Pg	17 39 24.1	+0.9
BRG				*e*Sg	Sg	17 40 04.8	+1.3
BRG	Berggiesshubel	3.12	284	Pg	Pg	17 39 24.0	+0.9
BRG				Sg	Sg	17 40 04.7	+1.3
BRG				Amp		17 40 11.5	
	comp=Z,28nm,0.5s						
KHC	Kasperske Hory	3.52	254	*e*PN	Pn	17 39 20.5	+1.2
KHC				*e*SG	Sg	17 40 16.9	+0.5
	comp=Z,78nm,0.5s						
GEC2	GERESS Array S	3.55	249	*e*Pn	Pn	17 39 21.5	+1.7
GEC2				*e*Pg	Pg	17 39 31.3	-0.1
GEC2				*e*Sg	Sg	17 40 17.7	+0.3
GERES	GERESS Array B	3.55	249	Pn	Pn	17 39 21.4	+1.7
	comp=Z,0.1nm,0.3s,baz=67,slow=15,SNR=9.3						
GERES				Pg	Pb	17 39 29.7	+2.6
	comp=Z,0.4nm,0.3s,baz=63,slow=17,SNR=14						
GERES				Sn	Sn	17 40 00.9	-1.6
	comp=Z,0.4nm,0.3s,baz=71,slow=25,SNR=6.7						
GERES				Lg	Lg	17 40 14.8	
	comp=Z,1.1nm,0.3s,baz=64,slow=27,SNR=8.7						
	comp=Z,0.5nm,0.3s						
ARSA	Arzberg	3.66	217	*i* Pn	Pn	17 39 20.6	-0.6
	comp=Z,1.0nm,0.4s						
ARSA				*e*Sn	Sn	17 39 59.9	-5.1
	comp=Z,13nm,0.6s						
MOA	Molln	3.78	233	*i* Pn	Pn	17 39 23.4	+0.5
	comp=Z,0.3nm,0.2s						
MOA				*e*Sn	Sn	17 40 09.2	+1.2
	comp=Z,42nm,0.6s						

CLL	**Collm**	**3.79**	**289**	*e*Pg	**Pg**	**17 39 37.1**	**+1.0**
CLL	**Collm**	**3.79**	**289**	*e*Pg	**Pg**	**17 39 37.0**	**+1.0**
CLL				*i* x	x	17 39 42.5	
CLL				*e*Sg	**Sg**	**17 40 27.0**	**+1.9**
	comp=Z,37nm,0.6s						
WET	**Wettzell**	**3.95**	**256**	*e*Pn	**Pn**	**17 39 26.3**	**+1.1**
WET				*e*Pg	**Pg**	**17 39 39.3**	**+0.3**
WET				*e*Sg	**Sg**	**17 40 28.8**	**-1.4**
MORH	**Mrgy, Hungar**	**4.01**	**181**	⇑P	**Pn**	**17 39 27.0**	**+0.9**
TANN	**Tannenbergstha**	**4.02**	**275**	*e*Pn	**Pn**	**17 39 27.4**	**+1.2**
TANN				*e*Pg	**Pg**	**17 39 40.0**	**-0.3**
TANN				*e*Sg	**Sg**	**17 40 33.7**	**+1.3**
WERD	**Werda**	**4.12**	**276**	*e*Pg	**Pg**	**17 39 41.8**	**-0.5**
WERD				*e*Sg	**Sg**	**17 40 34.9**	**-0.7**
BIOA	**Bad Ischl, Aus**	**4.20**	**235**	*e*Pn	**Pn**	**17 39 31.7**	**+3.0**
	comp=Z,1.9nm,0.3s						
BIOA				*e*Sn	**Sn**	**17 40 20.3**	**+1.8**
	comp=Z,42nm,0.6s						
MOX	**Moxa**	**4.56**	**278**	*e*Sg	**Sg**	**17 40 52.2**	**+2.3**
GRF	**Grafenberg Arr**	**4.88**	**267**	*e*Sg	**Sg**	**17 40 59.9**	**+0.1**
LESA	**Schwarzleotal**	**4.88**	**237**	*e*Pn	**Pn**	**17 39 39.5**	**+1.4**
	comp=Z,0.6nm,0.3s						
LESA				*i* Sn	**Sn**	**17 40 34.7**	**-0.6**
	comp=Z,43nm,0.7s						
BZS	**Buzias**	**5.00**	**156**	⇑P	**Pn**	**17 39 40.9**	**+1.2**
BURAR	**Bucovina Array**	**5.01**	**119**	⇓P	**Pn**	**17 39 41.4**	**+1.6**
WTTA	**Wattenberg**	**5.55**	**240**	*i* Sn	**Sn**	**17 40 51.6**	**-0.2**
	comp=Z,30nm,0.8s						
GZR	**Gura Zlata**	**5.55**	**149**	⇑P	**Pn**	**17 39 48.9**	**+1.7**
MDVR	**Moldovita**	**5.81**	**159**	⇑P	**Pn**	**17 39 52.4**	**+1.6**
BLEU	**Blekinge**	**6.33**	**345**	*e*P	**Pn**	**17 39 58.9**	**+1.0**
BLEU				*e*S	**Sn**	**17 41 08.2**	**-2.7**
VOIR		**6.41**	**136**	⇓P	**Pn**	**17 40 00.6**	**+1.5**
AKASG	**Malin Array Be**	**6.72**	**82**	Pn	**Pn**	**17 40 03.3**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=268,slow=12,SNR=2.1						
AKASG				Pg	**Pb**	**17 40 22.8**	**+1.8**
	comp=Z,0.8nm,0.3s,baz=269,slow=14,SNR=4.6						
AKASG				Sn	**Sn**	**17 41 16.6**	**-3.7**
	comp=Z,1.5nm,0.3s,baz=273,slow=22,SNR=4.9						
	comp=Z,0.2nm,0.3s						
MLR	**Muntele Rosu**	**6.78**	**132**	⇑P	**Pn**	**17 40 06.0**	**+1.8**
NACGM	**Naroch**	**6.79**	**43**	*e*P	**Pn**	**17 40 06.1**	**+2.0**
	comp=Z,10.0nm,0.8s,baz=230						
BJUU	**Bjuv**	**6.79**	**332**	*e*P	**Pn**	**17 40 05.1**	**+1.0**
BJUU				*e*S	**Sn**	**17 41 15.6**	**-6.4**
DAVOX	**Davos/Dischmat**	**6.81**	**243**	Sn	**Sn**	**17 41 21.9**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=49,slow=19,SNR=2.0						
DAVOX				Lg	Lg	17 42 01.6	
	comp=Z,1.2nm,0.3s,baz=10,slow=11,SNR=7.1						
DEL	**Delary**	**6.90**	**337**	*e*P	**Pn**	**17 40 06.8**	**+1.2**
DEL				*e*S	**Sn**	**17 41 18.1**	**-6.6**
FABU	**Falkenberg**	**7.67**	**335**	*e*P	**Pn**	**17 40 16.4**	**+0.2**
FABU				*e*S	**Sn**	**17 41 36.8**	**-6.9**
HFS	**Hagfors**	**10.33**	**346**	Pn	**Pn**	**17 40 50.7**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=151,slow=25,SNR=2.2						
HFS				Sn	Sn	17 42 41.3	-7.8
	comp=Z,0.1nm,0.3s,baz=177,slow=29,SNR=2.3						
	comp=Z,2.3nm,0.8s						
NOA	**NORSAR Array B**	**11.63**	**342**	Pn	**Pn**	**17 41 09.5**	**-1.0**
	baz=152,slow=12,SNR=6.1						
	comp=Z,0.3nm,0.4s						
FINES	**FINESS Array B**	**11.97**	**17**	Pn	**Pn**	**17 41 13.4**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=202,slow=10,SNR=15						
FINES				Sn	Sn	17 43 19.0	-10
	comp=Z,0.5nm,0.3s,baz=196,slow=22,SNR=7.5						
FINES				Lg	Lg	17 44 48.5	
	comp=Z,0.1nm,0.3s,baz=204,slow=22,SNR=2.6						
	comp=Z,0.9nm,0.3s						
ARCES	**ARCESS Array B**	**19.64**	**7**	Pn	**P**	**17 42 52.5**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=190,slow=12,SNR=4.2						
	comp=Z,1.1nm,0.6s						

IDC ***27*** *17:42:56.5±1.3, 38.°66N×14.°37E, h0^{km}, mb3.6/3, mbtmp3.5/4, ML2.4/1, MS3.8/1, Error ellipse: s-maj=36.1km s-min=12.1km az=98.0*

ROM ***27*** *17:42:58.1±0.1, 38.°406N±0.°004×14.°726E±0.°005, h22^{km}, ML3.3/42, Error ellipse: s-maj=0.4km s-min=0.2km az=355.0*

ISC 27 17:42:57.7±0.7, **38.°40N**±0.°02×**14.°72E**±0.°02, **h16**^{km}**, n93,** σ**0.^{s}77**/105**, mb3.7**/3**, 5C-3D, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LLI	**Lipari**	**0.18**	**75**	P	**Pb**	**17 43 03.7**	**+1.0**
LLI				S	**Sb**	**17 43 07.3**	**+1.3**
LLI				AML	AML		
LLI				AML	AML		
LLI				AML	AML		
LLI				AML	AML		
LLI				AML	AML		
IVGP	**Vulcano Grotta**	**0.19**	**90**	⇑P	**Pb**	**17 43 03.1**	**+0.4**
IVGP				S	**Sb**	**17 43 06.9**	**+0.7**
IFIL	**Filicudi I Eol**	**0.21**	**324**	P	**Pb**	**17 43 03.9**	**+0.8**
IFIL				S	**Sb**	**17 43 07.8**	**+1.1**
IFIL				AML	AML		
IFIL				AML	AML		
IFIL				AML	AML		
IFIL				AML	AML		
VPL	**Vulcano Piano**	**0.21**	**95**	⇑P	**Pb**	**17 43 03.5**	**+0.4**
VPL				S	**Sb**	**17 43 07.2**	**+0.5**
VPL				AML	AML		
	comp=E,33400µm,0.3s						
VPL				AML	AML		
	comp=N,23850µm,1.0s						
VPL				AML	AML		
	comp=N,23850µm,1.0s						
VPL				AML	AML		
	comp=N,19637µm,0.6s						
VPL				AML	AML		
	comp=E,27289µm,1.3s						
IACL	**Alicudi**	**0.32**	**295**	⇑P	**Pb**	**17 43 05.8**	**+0.8**
IACL				S	**Sb**	**17 43 11.0**	**+1.1**
IACL				AML	AML		
	comp=E,89650µm,1.0s						
IACL				AML	AML		
	comp=N,54450µm,1.5s						
IACL				AML	AML		
	comp=E,89650µm,1.0s						
IACL				AML	AML		
	comp=N,54450µm,0.5s						
IACL				AML	AML		
	comp=N,44318µm,0.3s						
IACL				AML	AML		
	comp=E,59528µm,1.0s						
MUCR	**Ucria**	**0.37**	**161**	⇓P	**Pb**	**17 43 05.6**	**-0.4**
MUCR				AML	AML		
	comp=E,24100µm,1.6s						
MUCR				AML	AML		
	comp=N,33850µm,1.3s						
MUCR				AML	AML		
	comp=E,24100µm,0.4s						
MUCR				AML	AML		
	comp=N,33850µm,0.7s						
MUCR				AML	AML		
	comp=E,22517µm,0.4s						
MUCR				AML	AML		
	comp=N,13746µm,0.6s						
MSFR	**San Fratello**	**0.38**	**196**	⇓P	**Pb**	**17 43 05.8**	**-0.2**
MSFR				S	**Sb**	**17 43 11.9**	**+0.2**
MSFR				AML	AML		
	comp=E,5655µm,0.7s						
MSFR				AML	AML		
	comp=N,6445µm,0.2s						
MSFR				AML	AML		
	comp=E,5250µm,0.5s						
MSFR				AML	AML		
	comp=N,4220µm,0.7s						
MILZ	**Milazzo**	**0.42**	**107**	⇑P	**Pb**	**17 43 06.7**	**0.0**
MILZ				S	**Sb**	**17 43 13.0**	**+0.2**
MILZ				AML	AML		
	comp=N,14150µm,0.6s						
MILZ				AML	AML		
	comp=E,37550µm,0.5s						
MILZ				AML	AML		
	comp=N,14150µm,1.4s						
MILZ				AML	AML		
	comp=N,8507µm,1.1s						
MILZ				AML	AML		
	comp=E,19274µm,1.5s						
MNO	**Monte Soro**	**0.47**	**183**	⇓P	**Pb**	**17 43 07.8**	**+0.2**
MNO				AML	AML		
	comp=E,10785µm,0.6s						
MNO				AML	AML		
	comp=E,10790µm,0.6s						
MNO				AML	AML		
	comp=N,12085µm,0.4s						
MNO				AML	AML		
	comp=N,12085µm,1.6s						
MNO				AML	AML		
	comp=N,12073µm,0.4s						
NOV	**Novara**	**0.49**	**138**	P	**Pb**	**17 43 07.8**	**-0.2**
NOV				S	**Sb**	**17 43 15.3**	**+0.3**
NOV				AML	AML		
	comp=E,37100µm,0.4s						
NOV				AML	AML		
	comp=N,40450µm,0.3s						
NOV				AML	AML		
	comp=E,37100µm,1.6s						
NOV				AML	AML		
	comp=E,28240µm,0.3s						
NOV				AML	AML		
	comp=N,37956µm,0.3s						
ISTR	**Stromboli Gino**	**0.54**	**43**	P	**Pb**	**17 43 08.9**	**+0.2**
MPNC	**Port Mandanici**	**0.56**	**117**	P	**Pb**	**17 43 09.0**	**-0.1**
MPNC				S	**Sb**	**17 43 17.4**	**+0.6**
MPNC				AML	AML		
	comp=E,15200µm,0.4s						
MPNC				AML	AML		
	comp=N,18150µm,0.3s						
MPNC				AML	AML		
	comp=N,18150µm,1.7s						
MPNC				AML	AML		
	comp=E,7481µm,0.7s						
MPNC				AML	AML		
	comp=N,9336µm,0.7s						
IST3	**Stromboli F**	**0.56**	**45**	P	**Pb**	**17 43 09.2**	**0.0**
IST3				AML	AML		
	comp=E,2870µm,0.4s						
IST3				AML	AML		
	comp=N,3405µm,0.7s						
EPZF	**Pizzo Felice**	**0.58**	**169**	P	**Pb**	**17 43 10.1**	**+0.5**
EPZF				AML	AML		
	comp=E,11500µm,0.4s						
EPZF				AML	AML		
	comp=N,11300µm,0.3s						
AIO	**Antillo**	**0.59**	**136**	P	**Pb**	**17 43 09.8**	**+0.3**
ECTS	**Castiglione**	**0.60**	**148**	P	**Pb**	**17 43 10.2**	**+0.3**
ECTS				AML	AML		
	comp=N,8820µm,0.8s						
ECTS				AML	AML		
	comp=E,9995µm,0.7s						
ECTS				AML	AML		
	comp=E,9995µm,1.3s						
ECTS				AML	AML		
	comp=N,8815µm,0.8s						
EMSG	**Monte Spagnolo**	**0.60**	**163**	P	**Pb**	**17 43 10.5**	**+0.6**
EMSG				AML	AML		
	comp=E,10865µm,0.8s						
EMSG				AML	AML		
	comp=N,12600µm,0.6s						
PLLN	**Pollina**	**0.61**	**229**	⇑P	**Pb**	**17 43 09.8**	**-0.2**
PLLN				S	**Sb**	**17 43 19.4**	**+1.0**
PLLN				AML	AML		
	comp=E,16750µm,1.0s						
PLLN				AML	AML		
	comp=N,22300µm,0.6s						
PLLN				AML	AML		
	comp=E,16750µm,1.0s						
PLLN				AML	AML		
	comp=E,16214µm,0.5s						
PLLN				AML	AML		
	comp=N,17297µm,0.5s						
MSRU	**Castanea**	**0.63**	**102**	P	**Pb**	**17 43 10.4**	**0.0**
MSRU				S	**Sb**	**17 43 19.8**	**+0.8**
MSRU				AML	AML		
	comp=E,6415µm,1.6s						
MSRU				AML	AML		
	comp=N,5835µm,0.5s						
MSRU				AML	AML		
	comp=E,6415µm,0.4s						
MSRU				AML	AML		
	comp=N,5832µm,0.5s						
MSRU				AML	AML		
	comp=E,3082µm,0.9s						
EPIT	**Pozzo Pitarron**	**0.64**	**156**	P	**Pb**	**17 43 11.2**	**+0.5**
EMCN	**Etna Monte Con**	**0.65**	**158**	P	**Pb**	**17 43 11.3**	**+0.5**
GIB	**Gibilmanna**	**0.68**	**234**	P	**Pb**	**17 43 11.3**	**0.0**
GIB				AML	AML		
	comp=E,7110µm,1.0s						
GIB				AML	AML		
	comp=N,8555µm,0.6s						
GIB				AML	AML		
	comp=E,7110µm,1.0s						
GIB				AML	AML		
	comp=N,4769µm,1.2s						
GIB				AML	AML		
	comp=E,7110µm,1.0s						
CSLB	**Castelbuono**	**0.70**	**229**	P	**Pb**	**17 43 11.4**	**-0.1**
CSLB				S	**Sb**	**17 43 21.5**	**+0.6**
CSLB				AML	AML		
	comp=N,2685µm,0.5s						
CSLB				AML	AML		
	comp=E,2700µm,1.1s						
CSLB				AML	AML		
	comp=E,2700µm,0.9s						
CSLB				AML	AML		
	comp=N,2047µm,1.0s						
CSLB				AML	AML		
	comp=E,2205µm,0.4s						
GALF	**Gagliano Caste**	**0.70**	**190**	P	**Pn**	**17 43 12.3**	**-0.6**
GALF				AML	AML		
	comp=E,1340µm,0.6s						
GALF				AML	AML		
	comp=N,11450µm,0.7s						
GALF				AML	AML		
	comp=N,1655µm,0.6s						
GALF				AML	AML		
	comp=E,11200µm,0.5s						
GALF				AML	AML		
	comp=N,1655µm,1.4s						
ECHR	**Santa Chiara**	**0.73**	**168**	P	**Pn**	**17 43 12.9**	**-0.5**
ESLN	**Serra La Nave**	**0.73**	**164**	P	**Pn**	**17 43 12.8**	**-0.7**
ESLN				AML	AML		
	comp=N,5265µm,0.9s						
ESLN				AML	AML		
	comp=N,5265µm,1.1s						
ESLN				AML	AML		
	comp=E,3990µm,0.9s						
PETRA	**Petralia Sopra**	**0.74**	**221**	P	**Pb**	**17 43 12.6**	**+0.3**
PETRA				AML	AML		
	comp=N,7755µm,0.6s						
PETRA				AML	AML		
	comp=E,6460µm,0.6s						
PETRA				AML	AML		
	comp=N,7755µm,1.4s						
PETRA				AML	AML		
	comp=E,6461µm,0.6s						
PETRA				AML	AML		
	comp=N,5539µm,0.4s						
EVRN	**Santa Venerina**	**0.78**	**155**	P	**Pn**	**17 43 13.5**	**-0.6**
ESML	**S. M. di Licod**	**0.79**	**171**	P	**Pn**	**17 43 13.7**	**-0.4**
ESML				AML	AML		
	comp=E,4035µm,0.7s						
ESML				AML	AML		
	comp=N,2995µm,0.9s						
ESML				AML	AML		
	comp=N,2995µm,1.1s						
SICLA	**Scilla**	**0.79**	**100**	P	**Pg**	**17 43 12.9**	**-0.2**
SICLA				AML	AML		
	comp=E,3150µm,0.4s						
SICLA				AML	AML		
	comp=N,3630µm,1.5s						
SICLA				AML	AML		
	comp=N,3630µm,0.5s						
SICLA				AML	AML		
	comp=E,2171µm,0.4s						
SICLA				AML	AML		
	comp=N,1255µm,1.1s						
CAGR	**Agira**	**0.80**	**193**	P	**Pn**	**17 43 14.0**	**-0.2**
CAGR				AML	AML		
	comp=N,6865µm,1.3s						
CAGR				AML	AML		
	comp=N,6865µm,0.7s						
CAGR				AML	AML		
	comp=E,7785µm,0.6s						
ENIC	**Nicolosi**	**0.80**	**163**	P	**Pg**	**17 43 13.7**	**+0.4**
ENIC				AML	AML		
	comp=E,1765µm,0.5s						
ENIC				AML	AML		
	comp=N,1660µm,1.0s						
ENIC				AML	AML		
	comp=E,1765µm,1.5s						
MTTG	**Motta San Giov**	**0.86**	**117**	P	**Pg**	**17 43 14.4**	**0.0**
MTTG				AML	AML		
	comp=E,2570µm,1.6s						
MTTG				AML	AML		
	comp=N,2945µm,0.4s						
MTTG				AML	AML		
	comp=E,2570µm,0.4s						
MTTG				AML	AML		
	comp=N,2596µm,0.4s						
MTTG				AML	AML		
	comp=E,1429µm,1.1s						
RESU	**Resuttano**	**0.92**	**215**	P	**Pn**	**17 43 16.1**	**+0.2**
RESU				AML	AML		
	comp=E,1985µm,0.5s						
RESU				AML	AML		
	comp=N,3905µm,0.7s						
EPOZ	**Pozzillo**	**0.93**	**162**	P	**Pb**	**17 43 14.5**	**-0.9**
CEL	**Celeste**	**0.93**	**98**	P	**Pb**	**17 43 15.1**	**-0.4**
CEL				AML	AML		
	comp=N,1585µm,0.8s						
CEL				AML	AML		
	comp=E,1485µm,1.6s						
CEL				AML	AML		
	comp=N,1590µm,0.8s						
CEL				AML	AML		
	comp=E,1470µm,1.6s						
CEL				AML	AML		
	comp=N,1025µm,0.5s						
CEL				AML	AML		
	comp=E,1024µm,2.1s						
CEL				AML	AML		
	comp=E,688µm,0.5s						
CEL				AML	AML		
	comp=N,1536µm,0.6s						
JOPP	**Joppolo**	**0.94**	**77**	P	**Pb**	**17 43 15.4**	**-0.2**
JOPP				AML	AML		
	comp=N,762µm,0.6s						
JOPP				AML	AML		
	comp=E,860µm,1.3s						
JOPP				AML	AML		
	comp=N,762µm,1.4s						
VAE	**Valguarnera**	**0.95**	**195**	Pg	**Pn**	**17 43 19.5**	**+3.1**
	comp=N,28nm,0.3s,baz=27,slow=4.5,SNR=39						
VAE				Lg	Lg	17 43 35.1	
	comp=N,55nm,0.3s,baz=18,slow=16,SNR=7.3						
VAE	**Valguarnera**	**0.95**	**195**	P	**Pn**	**17 43 16.9**	**+0.4**
SOLUN	**Solunto**	**0.98**	**252**	P	**Pb**	**17 43 15.8**	**-0.6**
SOLUN				AML	AML		
	comp=N,2420µm,0.5s						
SOLUN				AML	AML		
	comp=E,2255µm,0.6s						
ALJA	**Alia**	**1.00**	**230**	P	**Pg**	**17 43 16.9**	**-0.2**
ALJA				AML	AML		
	comp=N,1950µm,0.8s						
ALJA				AML	AML		
	comp=E,1960µm,1.4s						
ALJA				AML	AML		
	comp=E,1960µm,0.6s						
HLNI	**Lentini**	**1.05**	**173**	P	**Pn**	**17 43 17.8**	**0.0**
HLNI				AML	AML		
	comp=E,1675µm,0.8s						
HLNI				AML	AML		
	comp=N,1695µm,0.7s						
HLNI				AML	AML		
	comp=E,732µm,1.3s						
HLNI				AML	AML		
	comp=N,1000µm,0.8s						
CPTP	**Pietraperzia**	**1.08**	**204**	P	**Pg**	**17 43 19.1**	**+0.4**
CPTP				AML	AML		
	comp=N,2400µm,1.4s						
CPTP				AML	AML		
	comp=E,1565µm,1.1s						
CPTP				AML	AML		
	comp=N,2400µm,0.6s						
MPG	**Monte Pellegri**	**1.10**	**258**	P	**Pb**	**17 43 17.4**	**-0.9**
MPG				AML	AML		
	comp=E,268µm,0.4s						
MPG				AML	AML		
	comp=N,328µm,0.9s						
SOI	**Samo**	**1.10**	**107**	P	**Pb**	**17 43 18.1**	**-0.2**
SOI				AML	AML		
	comp=N,1310µm,0.6s						
SOI				AML	AML		
	comp=E,950µm,0.4s						
HAGA	**Augusta**	**1.16**	**163**	P	**Pn**	**17 43 19.2**	**-0.1**
HAGA				AML	AML		
	comp=E,1210µm,1.3s						
HAGA				AML	AML		
	comp=N,1195µm,0.7s						
HAGA				AML	AML		
	comp=N,932µm,0.9s						
HAGA				AML	AML		
	comp=E,944µm,0.6s						
CMDO	**Montedoro**	**1.17**	**218**	P	**Pg**	**17 43 20.8**	**+0.4**
CMDO				AML	AML		
	comp=E,548µm,1.3s						
CMDO				AML	AML		
	comp=N,773µm,1.0s						
CMDO				AML	AML		
	comp=E,548µm,0.7s						
CMDO				AML	AML		
	comp=N,773µm,1.0s						
AGST	**Augusta-Monte**	**1.21**	**161**	P	**Pb**	**17 43 20.1**	**0.0**
AGST				AML	AML		
	comp=E,2455µm,0.6s						
AGST				AML	AML		
	comp=N,3235µm,1.3s						
HVZN	**Vizzini**	**1.22**	**180**	P	**Pg**	**17 43 21.0**	**-0.2**
CORL	**Corleone**	**1.23**	**246**	P	**Pn**	**17 43 20.1**	**-0.1**
CORL				AML	AML		
	comp=E,1505µm,0.4s						
CORL				AML	AML		
	comp=N,1234µm,0.5s						
USI	**Ustica**	**1.25**	**285**	P	**Pn**	**17 43 19.2**	**-1.2**
USI				AML	AML		
	comp=N,2135µm,1.5s						
USI				AML	AML		
	comp=E,711µm,0.6s						
USI				AML	AML		
	comp=N,2135µm,0.5s						
PLAC	**Placanica**	**1.35**	**87**	P	**Pb**	**17 43 22.1**	**-0.5**
PLAC				AML	AML		
	comp=E,622µm,1.1s						
PLAC				AML	AML		
	comp=E,640µm,0.6s						
PLAC				AML	AML		
	comp=N,656µm,1.1s						
PLAC				AML	AML		
	comp=E,622µm,0.9s						
PLAC				AML	AML		
	comp=N,656µm,0.9s						
PLAC				AML	AML		
	comp=N,629µm,0.6s						
CLTA	**Licata**	**1.38**	**206**	P	**Pg**	**17 43 23.7**	**-0.5**
CLTA				AML	AML		
	comp=E,1385µm,0.5s						
CLTA				AML	AML		
	comp=N,1310µm,1.0s						
CLTA				AML	AML		
	comp=N,1310µm,1.0s						
CLTA				AML	AML		
	comp=E,1385µm,1.5s						
GRI	**Girifalco**	**1.40**	**72**	P	**Pn**	**17 43 22.3**	**-0.2**
FAVR	**Favara**	**1.41**	**217**	P	**Pb**	**17 43 24.0**	**+0.5**
FAVR				AML	AML		
	comp=E,1028µm,1.4s						
FAVR				AML	AML		
	comp=N,1535µm,1.0s						
FAVR				AML	AML		
	comp=E,525µm,1.4s						
FAVR				AML	AML		
	comp=N,1535µm,1.0s						
FAVR				AML	AML		
	comp=N,1535µm,1.0s						
FAVR				AML	AML		
	comp=N,1535µm,1.0s						
FAVR				AML	AML		
	comp=E,525µm,0.6s						
FAVR				AML	AML		
	comp=E,1028µm,0.6s						
CAR1	**CAROLEI**	**1.44**	**53**	P	**Pb**	**17 43 23.4**	**-0.8**
CAR1				AML	AML		
	comp=N,656µm,0.5s						
CAR1				AML	AML		
	comp=E,760µm,0.6s						
MBFT	**Monte Bonifato**	**1.47**	**253**	P	**Pn**	**17 43 23.2**	**-0.3**

MBFT				AML	AML		
	comp=E,270µm,0.9s						
MBFT				AML	AML		
	comp=N,250µm,1.6s						
MBFT				AML	AML		
	comp=N,250µm,0.4s						
MBFT				AML	AML		
	comp=E,270µm,1.1s						
CRJA	**Costa Raja**	**1.48**	**247**	P	**Pn**	**17 43 24.0**	**+0.3**
CRJA				AML	AML		
	comp=E,845µm,0.9s						
CRJA				AML	AML		
	comp=N,788µm,0.5s						
CET2	**Cetraro**	**1.48**	**40**	P	**Pn**	**17 43 23.9**	**+0.2**
CET2				AML	AML		
	comp=E,392µm,0.5s						
CET2				AML	AML		
	comp=N,756µm,0.9s						
MFNL	**Monte Finestre**	**1.54**	**247**	P	**Pn**	**17 43 24.9**	**+0.3**
SPS2	**Spezzano della**	**1.55**	**54**	P	**Pn**	**17 43 21.9**	**-2.7**
MMGO	**Monte Magaggia**	**1.56**	**242**	P	**Pn**	**17 43 25.4**	**+0.6**
ISPIC	**ISPICA**	**1.62**	**175**	P	**Pb**	**17 43 26.5**	**-0.7**
ISPIC				AML	AML		
	comp=N,1078µm,1.0s						
ISPIC				AML	AML		
	comp=E,814µm,1.0s						
ISPIC				AML	AML		
	comp=N,1037µm,1.0s						
ISPIC				AML	AML		
	comp=E,814µm,1.0s						
ISPIC				AML	AML		
	comp=E,924µm,0.8s						
CAVT	**Castelvetrano**	**1.71**	**246**	P	**Pn**	**17 43 27.2**	**+0.4**
CELI	**Celico**	**1.72**	**54**	P	**Pn**	**17 43 27.2**	**+0.1**
CELI				AML	AML		
	comp=E,448µm,0.9s						
CELI				AML	AML		
	comp=E,448µm,1.1s						
CELI				AML	AML		
	comp=N,312µm,0.5s						
ERC	**Erice**	**1.72**	**259**	P	**Pn**	**17 43 26.7**	**-0.3**
HPAC	**Pachino**	**1.73**	**170**	P	**Pn**	**17 43 27.8**	**+0.8**
BULG	**Bulgheria - Ca**	**1.75**	**17**	P	**Pn**	**17 43 27.5**	**+0.1**
BULG				AML	AML		
	comp=E,429µm,1.5s						
BULG				AML	AML		
	comp=N,660µm,0.3s						
BULG				AML	AML		
	comp=E,460µm,1.5s						
BULG				AML	AML		
	comp=N,682µm,0.3s						
BULG				AML	AML		
	comp=E,429µm,0.5s						
BULG				AML	AML		
	comp=E,460µm,0.5s						
BULG				AML	AML		
	comp=N,659µm,0.3s						
BULG				AML	AML		
	comp=N,683µm,0.3s						
BULG				AML	AML		
	comp=E,431µm,0.4s						
BULG				AML	AML		
	comp=E,394µm,0.4s						
TIP	**Timpagrande**	**1.77**	**63**	P	**Pb**	**17 43 28.7**	**-1.2**
TIP				AML	AML		
	comp=E,146µm,0.6s						
TIP				AML	AML		
	comp=N,136µm,0.8s						
TIP				AML	AML		
	comp=E,146µm,1.4s						
TIP				AML	AML		
	comp=N,136µm,1.2s						
TDS	**Terranova Siba**	**1.78**	**44**	P	**Pn**	**17 43 28.2**	**+0.4**
MMN	**Mormanno**	**1.79**	**33**	P	**Pn**	**17 43 27.6**	**-0.2**
CUC	**Castrocucco**	**1.81**	**28**	P	**Pn**	**17 43 28.3**	**+0.1**
CUC				AML	AML		
	comp=N,332µm,0.3s						
CUC				AML	AML		
	comp=E,292µm,0.7s						
CUC				AML	AML		
	comp=E,324µm,1.3s						
CUC				AML	AML		
	comp=N,338µm,0.2s						
CUC				AML	AML		
	comp=E,282µm,0.3s						
CUC				AML	AML		
	comp=E,307µm,0.4s						
CUC				AML	AML		
	comp=N,338µm,0.2s						
CUC				AML	AML		
	comp=N,332µm,0.3s						
MARS	**Marsala (TP) I**	**1.82**	**250**	P	**Pn**	**17 43 29.3**	**+1.0**
MARS				AML	AML		
	comp=E,428µm,1.1s						
MARS				AML	AML		
	comp=N,340µm,0.9s						
MARS				AML	AML		
	comp=E,428µm,0.9s						
MGR	**Morigerati**	**1.85**	**20**	P	**Pn**	**17 43 29.0**	**+0.2**
MGR				AML	AML		
	comp=E,380µm,0.3s						
MGR				AML	AML		
	comp=N,283µm,0.2s						
SALB	**San Lorenzo Be**	**1.94**	**40**	P	**Pn**	**17 43 31.0**	**+0.9**
PIPA	**Pietrapaola**	**1.96**	**56**	P	**Pb**	**17 43 31.5**	**-1.5**
PIPA				AML	AML		
	comp=N,156µm,0.6s						
PIPA				AML	AML		
	comp=E,166µm,1.0s						
PIPA				AML	AML		
	comp=N,156µm,1.4s						
LADO	**San Nicola del**	**1.97**	**63**	P	**Pn**	**17 43 30.9**	**+0.4**
SIRI	**Monte Sirino -**	**1.99**	**26**	P	**Pn**	**17 43 31.3**	**+0.6**
SIRI				AML	AML		
	comp=E,430µm,0.3s						
SIRI				AML	AML		
	comp=E,452µm,0.3s						
SIRI				AML	AML		
	comp=E,452µm,1.7s						
SIRI				AML	AML		
	comp=E,430µm,1.7s						
SIRI				AML	AML		
	comp=N,298µm,0.3s						
SIRI				AML	AML		
	comp=N,291µm,0.3s						
SIRI				AML	AML		
	comp=E,452µm,0.3s						
SIRI				AML	AML		
	comp=E,431µm,0.3s						
SIRI				AML	AML		
	comp=N,299µm,0.3s						
SIRI				AML	AML		
	comp=N,291µm,0.3s						
MCEL	**Monticello**	**2.10**	**23**	P	**Pn**	**17 43 32.4**	**+0.2**
MCEL				AML	AML		
	comp=E,148µm,0.4s						
MCEL				AML	AML		
	comp=N,150µm,1.2s						
MCEL				AML	AML		
	comp=N,142µm,1.2s						
MCEL				AML	AML		
	comp=E,164µm,0.5s						
SLCN	**Sala Consilina**	**2.11**	**19**	P	**Pn**	**17 43 32.9**	**+0.5**
SLCN				AML	AML		
	comp=E,522µm,0.3s						
SLCN				AML	AML		
	comp=N,295µm,1.5s						
SLCN				AML	AML		
	comp=N,295µm,0.5s						
CDRU	**Civita di Ruta**	**2.14**	**12**	P	**Pn**	**17 43 32.9**	**+0.1**
CDRU				AML	AML		
	comp=E,167µm,0.3s						
CDRU				AML	AML		
	comp=N,70µm,0.4s						
MCRV	**Calabrutti - M**	**2.41**	**8**	P	**Pn**	**17 43 36.3**	**-0.2**
MRLC	**Muro Lucano**	**2.43**	**14**	P	**Pn**	**17 43 37.8**	**+1.0**
MRLC				AML	AML		
	comp=E,58µm,1.6s						
MRLC				AML	AML		
	comp=N,80µm,0.3s						
MRLC				AML	AML		
	comp=E,58µm,0.4s						
VBKN	**Vesuvio Bunker**	**2.44**	**355**	P	**Pn**	**17 43 37.0**	**+0.1**
ACER	**Acerenza**	**2.56**	**21**	P	**Pn**	**17 43 39.1**	**+0.5**
ACER				AML	AML		
	comp=E,2770µm,0.8s						
ACER				AML	AML		
	comp=E,212µm,0.4s						
ACER				AML	AML		
	comp=N,196µm,0.5s						
ACER				AML	AML		
	comp=E,212µm,1.6s						
ACER				AML	AML		
	comp=N,3630µm,0.8s						
MIGL	**Miglionico**	**2.57**	**31**	P	**Pn**	**17 43 39.9**	**+1.2**
MIGL				AML	AML		
	comp=E,396µm,0.7s						
MIGL				AML	AML		
	comp=N,368µm,0.8s						
MIGL				AML	AML		
	comp=E,396µm,1.3s						
VSL	**Villasalto**	**4.31**	**286**	P	**Pn**	**17 44 01.0**	**-1.6**
DGI	**Dorgali Grotta**	**4.40**	**297**	P	**Pn**	**17 44 02.7**	**-1.2**
KEST	**Kesra**	**5.06**	**240**	Pn	**Pn**	**17 44 13.1**	**+0.2**
	comp=E,0.1nm,0.3s,baz=53,slow=14,SNR=1.5						
KEST				Sn	**Sn**	**17 45 09.0**	**-2.0**
	comp=E,0.2nm,0.3s,baz=48,slow=19,SNR=1.8						
	comp=E,0.8nm,0.4s						
HFS	**Hagfors**	**21.77**	**359**	P	**P**	**17 47 46.8**	**-1.6**
	comp=E,3.4nm,0.9s,baz=194,slow=10,SNR=4.4						
	comp=E,3.4nm,0.9s						
FINES	**FINESS Array B**	**24.13**	**13**	P	**P**	**17 48 12.3**	**-0.2**
	comp=E,1.5nm,0.7s,baz=214,slow=9.6,SNR=1.5						
	comp=E,1.5nm,0.7s						
MKAR	**Makanchi Array**	**49.05**	**57**	P	**P**	**17 51 45.3**	**+1.5**
	comp=E,0.3nm,0.5s,baz=287,slow=7.3,SNR=5.8						
	comp=E,0.3nm,0.5s						
SCHQ	**Schefferville**	**55.16**	**316**	LR	LR	18 13 52.3	
	comp=E,74nm,18.1s,baz=264,slow=34						

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*SKHL **27** 17:44:31.1±1.0, 45°.60N×137°.40E, h330^{km}±6^{km}, mb3.5/2, msha3.4/1*

*IDC **27** 17:44:32.6±3.9, 45°.36N×137°.22E, h344^{km}±30^{km}, mb2.9/8, mbtmp3.6/9, Error ellipse: s-maj=57.7km s-min=17.5km az=65.0*

*JMA **27** 17:44:36.1±0.5, 45°N±2°×13°8E±°, h360^{km}, MV2.9/13, EASTERN SEA OF JAPAN*

ISC 27 17:44:32.2±0.8**, 45°.2N**±0°.1×**137°.13E**±0°.09**, h350^{km}, n19, σ1^{s}93**/20**, mb3.2**/8**, 1D, Primorye**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEY	**Ternei**	**0.41**	**247**	⇓*i*P	**Pn**	**17 45 13.2**	**-3.1**
TEY				AMB	AMB	17 45 13.3	
	10.0nm,0.5s						
TEY				*e*S	**S**	**17 45 46.4**	**-5.2**
TEY				A	A	17 45 47.0	
	10.0nm,0.7s						
TEY				A	A	17 45 47.0	
	10.0nm,0.7s						
JWK2	**Keihoku**	**3.37**	**86**	*e*P	**Pn**	**17 45 36.0**	**+1.1**
JSS	**Shosan**	**3.45**	**102**	*e*P	**Pn**	**17 45 36.4**	**+0.7**
JOSM	**Okushiri--Mats**	**3.54**	**151**	*e*P	**Pn**	**17 45 36.9**	**+0.1**
USRK	**Ussuriysk Ar.**	**3.80**	**257**	P	**Pn**	**17 45 40.2**	**+1.1**
	3.0nm,0.4s,baz=71,slow=9.2,SNR=15						
JOT	**Ohata**	**4.76**	**142**	*e*P	**Pn**	**17 45 48.7**	**-0.6**
JTKR	**Abashiri--Toko**	**4.99**	**102**	*e*P	**Pn**	**17 45 50.9**	**-0.8**
JCH	**Churui**	**5.19**	**118**	*e*P	**Pn**	**17 45 52.2**	**-1.7**
AKK	**Akkeshi**	**5.96**	**109**	*e*P	**Pn**	**17 46 00.5**	**-2.1**
NEM2	**Nemuro 2**	**6.45**	**103**	*e*P	**Pn**	**17 46 05.9**	**-2.1**
JMK	**Ichinoseki**	**6.94**	**153**	*e*P	**Pn**	**17 46 12.9**	**-1.0**
SONM	**Songino Array**	**21.25**	**288**	P	**P**	**17 48 51.9**	**+0.3**
	0.6nm,0.7s,baz=85,slow=10,SNR=3.8						
	0.6nm,0.7s						
ZALV	**Zalesovo Beam**	**34.32**	**304**	P	**P**	**17 50 47.2**	**+0.6**
	0.8nm,0.5s,baz=79,slow=7.5,SNR=2.9						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**37.48**	**293**	P	**P**	**17 51 14.6**	**+1.3**
	0.2nm,0.7s,baz=76,slow=6.1,SNR=2.8						
	0.2nm,0.7s						
KURBB	**Kurchatov Arra**	**38.76**	**300**	P	**P**	**17 51 24.3**	**+0.5**
	0.5nm,0.3s,baz=76,slow=9.1,SNR=6.2						
	0.5nm,0.3s						
FINES	**FINESS Array B**	**60.13**	**329**	P	**P**	**17 54 03.2**	**-0.1**
	4.1nm,1.1s,baz=42,slow=6.4,SNR=5.0						
	4.1nm,1.1s						
WRA	**Warramunga Arr**	**64.87**	**183**	P	**P**	**17 54 36.4**	**+1.5**
	0.5nm,1.1s,baz=0.4,slow=7.0,SNR=5.6						
	0.5nm,1.1s						
HFS	**Hagfors**	**65.34**	**333**	P	**P**	**17 54 37.8**	**+0.4**
	2.1nm,0.9s,baz=32,slow=7.0,SNR=2.0						
	2.1nm,0.9s						
ASAR	**Alice Springs**	**68.59**	**183**	P	**P**	**17 55 00.5**	**+2.4**
	0.1nm,0.4s,baz=350,slow=7.9,SNR=5.3						
	0.1nm,0.4s						

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*IDC **27** 18:00:41.0±0.6, 2°.70S×138°.50E, h0^{km}, mb4.0/10, mbtmp4.1/14, ML4.0/4, MS3.3/7, Error ellipse: s-maj=19.5km s-min=11.2km az=93.0*

*NEIC **27** 18:00:43.1±2.4, 2°.7S±0°.1×138°.59E±0°.08, h10^{km}±2^{km}, mb4.1/10, Error ellipse: s-maj=22.8km s-min=8.0km az=328.0*

*DJA **27** 18:00:43.2±0.3, 3°S±3°×13°8E±°, h10^{km}, M4.3/6, mb4.4/1, MLv4.3/6*

ISC 27 18:00:45.8±0.5**, 2°.69S**±0°.07×**138°.46E**±0°.04**, h32^{km}, n53, σ1^{s}38**/50**, mb4.0**/12**, MS3.4**/5**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.74**	**20**	P	Pn	18 00 54.3	-5.7
GENI	**Genyem**	**1.71**	**87**	P	**Pn**	**18 01 12.8**	**-0.6**
GENI				S	**Sb**	**18 01 39.6**	**+1.8**
JAY	**Jayapura**	**2.25**	**86**	Pn	**Pn**	**18 01 19.1**	**-1.7**
	21nm,0.3s,baz=229,slow=11,SNR=104						
JAY				Sn	**Sn**	**18 01 48.8**	**+1.2**
	18nm,0.3s,baz=180,slow=14,SNR=5.0						
JAY				LR	LR	18 02 30.3	
	comp=Z,580nm,21.0s,baz=66,slow=49						
	46nm,0.3s						
JAY	**Jayapura**	**2.25**	**86**	P	**Pn**	**18 01 20.0**	**-0.9**
SRPI	**Serui, Papua**	**2.36**	**290**	P	**Pn**	**18 01 22.5**	**+0.2**
BAKI	**Biak**	**2.78**	**302**	P	**Pn**	**18 01 26.3**	**-1.8**
RKPI	**Ransiki, Papua**	**4.43**	**285**	P	**Pn**	**18 01 47.4**	**-3.5**
FAKI	**Fak Fak**	**6.20**	**268**	Pn	**Pn**	**18 02 16.6**	**+1.4**
FAKI	**Fak Fak**	**6.20**	**268**	P	**Pn**	**18 02 17.8**	**+2.6**
FAKI	**Fak Fak**	**6.20**	**268**	P	**Pn**	**18 02 14.7**	**-0.5**
KDU	**Kakadu**	**11.56**	**210**	P	**Pn**	**18 03 29.6**	**+0.9**
COEN	**Coen**	**12.13**	**158**		**Pn**	**18 03 36.8**	**+0.3**
COEN	**Coen**	**12.13**	**158**	P	**Pn**	**18 03 37.1**	**+0.6**
MTN	**Manton Dam**	**12.42**	**215**		**Pn**	**18 03 40.8**	**+0.3**
SOEI	**Soe**	**15.75**	**243**		**P**	**18 04 29.1**	**0.0**
KNRA	**Kununurra**	**16.05**	**216**		**Pn**	**18 04 28.4**	**-0.9**
KNRA				IAmb	IAmb	18 04 50.3	
	comp=Z,10nm,0.8s						
MTSU	**Mount Surprise**	**16.39**	**160**	P	**P**	**18 04 35.0**	**-1.2**
BATI	**Baumata**	**16.48**	**242**	Pn	**Pn**	**18 04 35.9**	**+1.1**
	comp=Z,3.5nm,0.3s,baz=336,slow=6.7,SNR=4.8						
	comp=Z,12nm,0.6s						
GUMO	**Guam**	**17.38**	**21**	LR	LR	18 10 41.2	
	comp=Z,39nm,18.4s,baz=196,slow=35						
WB0	**Warramunga Arr**	**17.43**	**193**		**Pn**	**18 04 45.3**	**-1.4**
WB0				IAmb	IAmb	18 04 58.1	
	comp=Z,34nm,1.4s						
WR8	**Warramunga Arr**	**17.59**	**192**		**Pn**	**18 04 46.6**	**-2.0**
WR8				IAmb	IAmb	18 05 12.6	
	comp=Z,13nm,0.8s						
WRAB	**Tennant Creek**	**17.60**	**193**		**Pn**	**18 04 46.0**	**-2.8**
WRAB				IAmb	IAmb	18 05 00.9	
	comp=Z,13nm,0.8s						
WRA	**Warramunga Arr**	**17.61**	**193**		**Pn**	**18 04 45.5**	**-3.4**
WRA	**Warramunga Arr**	**17.61**	**193**	P	**Pn**	**18 04 47.4**	**-1.6**
	comp=Z,0.5nm,0.3s,baz=17,slow=12,SNR=27						
WRA				S	**S**	**18 08 07.9**	**-3.2**
	comp=Z,1.2nm,0.7s,baz=13,slow=22,SNR=2.2						
	comp=Z,4.5nm,0.7s						
QIS	**Mount Isa**	**17.80**	**176**	P	**P**	**18 04 52.2**	**+0.5**
TOLI2	**Tolitoli**	**18.07**	**282**		**Pn**	**18 04 53.9**	**-0.6**
TOLI2				IAmb	IAmb	18 05 13.8	
	comp=Z,11nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.81**	**219**	P	**P**	**18 05 13.2**	**-0.6**
FITZ	**Fitzroy Crossi**	**19.81**	**219**	P	**P**	**18 05 13.9**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=86,slow=10,SNR=3.5						
	comp=Z,3.8nm,1.0s						
FITZ	**Fitzroy Crossi**	**19.81**	**219**	P	**Pn**	**18 05 15.0**	**-0.5**
AS01	**Alice Springs**	**21.30**	**191**	P	**P**	**18 05 29.7**	**-0.3**
AS31	**Alice Springs**	**21.31**	**192**		**P**	**18 05 29.9**	**-0.2**
AS31				IAmb	IAmb	18 05 40.1	
	comp=Z,6.7nm,0.8s						
ASAR	**Alice Springs**	**21.31**	**192**		**P**	**18 05 29.4**	**-0.7**
ASAR	**Alice Springs**	**21.31**	**192**	P	**P**	**18 05 29.9**	**-0.3**
	comp=Z,6.1nm,0.7s,baz=20,slow=10,SNR=70						
ASAR				S	**S**	**18 09 26.6**	**+1.2**
	comp=Z,0.5nm,0.8s,baz=283,slow=28,SNR=4.5						
	comp=Z,6.1nm,0.7s						
TATA	**Tatamba Isabel**	**21.98**	**106**	P	**P**	**18 05 38.3**	**+1.0**
ALEG	**Aligegeo Malai**	**22.92**	**106**	P	**P**	**18 05 48.3**	**+0.9**
MBWA	**Marble Bar**	**25.87**	**223**	P	**P**	**18 06 16.3**	**+1.5**
MJAR	**Matsushiro Arr**	**39.03**	**360**	LR	LR	18 22 01.6	
	comp=Z,40nm,18.2s,baz=156,slow=33						
CMAR	**Chiang Mai Arr**	**44.21**	**300**	P	**P**	**18 08 52.8**	**+0.5**
	comp=Z,1.3nm,0.7s,baz=117,slow=6.8,SNR=13						
	comp=Z,1.3nm,0.7s						
ASAJ	**Asahikawa**	**46.74**	**4**	LR	LR	18 26 19.1	
	comp=Z,37nm,20.7s,baz=180,slow=33						
KLR	**Kul'dur**	**52.04**	**354**	LR	LR	18 32 16.6	
	comp=Z,28nm,18.0s,baz=194,slow=36						
GTA	**Gaotai**	**54.90**	**324**	*e*P	**P**	**18 10 15.0**	**+1.3**
GTA				pP	pP	18 10 20.8	-2.7
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SONM	**Songino Array**	**57.59**	**335**	P	**P**	**18 10 32.7**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=143,slow=3.6,SNR=2.8						
	comp=Z,0.6nm,0.8s						
PETK	**Petropavlovsk-**	**57.90**	**14**	LR	LR	18 31 30.9	
	comp=Z,33nm,21.6s,baz=156,slow=32						
MKAR	**Makanchi Array**	**69.62**	**322**	P	**P**	**18 11 53.0**	**+1.0**
	comp=Z,1.3nm,0.8s,baz=114,slow=8.1,SNR=13						
	comp=Z,1.3nm,0.8s						
ZALV	**Zalesovo Beam**	**71.79**	**330**	P	**P**	**18 12 04.8**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=104,slow=6.3,SNR=2.6						
	comp=Z,0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**73.56**	**325**	P	**P**	**18 12 15.9**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=118,slow=5.5,SNR=7.4						
	comp=Z,0.6nm,0.6s						
VNDA	**Vanda**	**75.82**	**175**	P	**P**	**18 12 28.7**	**+0.4**
	comp=Z,1.2nm,0.7s,baz=324,slow=6.8,SNR=9.9						
	comp=Z,1.2nm,0.7s						
BVAR	**Borovoye Array**	**79.15**	**325**	P	**P**	**18 12 47.6**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=115,slow=6.5,SNR=7.9						
	comp=Z,1.0nm,0.5s						
ILAR	**Eielson Array**	**85.92**	**24**	P	**P**	**18 13 20.8**	**-1.5**
	comp=Z,0.9nm,0.8s,baz=252,slow=4.3,SNR=7.1						
	comp=Z,0.9nm,0.8s						
QSPA	**South Pole Qui**	**87.26**	**180**	P	**P**	**18 13 29.4**	**+0.4**
	comp=Z,3.3nm,1.1s,baz=287,slow=2.7,SNR=7.3						
	comp=Z,3.3nm,1.1s						
KIRV	**Kirov**	**91.77**	**328**	LR	LR	18 55 29.9	
	comp=Z,25nm,21.7s,baz=42,slow=36						
CPUP	**Villa Florida**	**147.36**	**153**	PKPbc	**PKPbc**	**18 20 27.6**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=137,slow=0.6,SNR=3.5						
LPAZ	**La Paz**	**147.66**	**127**	PKPbc	**PKiKP**	**18 20 30.2**	**-0.8**
	comp=Z,1.4nm,0.8s,baz=259,slow=11,SNR=4.9						

KRSC 27 18:02:31.7±1.6**, 56°.21N**×**164°.52E, h49^{km}**±21^{km}**, Ml3.5, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.95**	**271**	*e*P	Pn	18 02 48.8	+0.1
KBTR				*e*S	Sn	18 03 00.1	-1.1
KBG	**Krutoberegovo**	**1.01**	**273**	*e*P	Pn	18 02 50.1	+0.5
KBG				*e*S	Sn	18 03 02.5	-0.2
BKI	**Bering**	**1.30**	**140**	*e*P	Pn	18 02 56.0	+2.6
BKI				*e*S	Sn	18 03 12.8	+3.2
SMKR	**Semkarok**	**1.74**	**284**	*e*P	Pn	18 03 01.7	+2.2
SMKR				*e*S	Sn	18 03 23.6	+3.1
BDR	**Baidarnaya**	**1.88**	**282**	*e*S	Sn	18 03 26.3	+2.4
SRKR	**Sorokina**	**1.92**	**285**	*e*S	Sn	18 03 27.6	+2.7
ZLN	**Zelenaya**	**2.09**	**266**	*e*P	Pn	18 03 07.6	+3.3
BZGR	**Bezymyannyi-Gr**	**2.16**	**264**	*e*P	Pn	18 03 08.3	+3.0
KLY	**Klyuchi**	**2.16**	**274**	*e*P	Pn	18 03 06.5	+1.3
KLY				*e*S	Sn	18 03 31.2	+0.4
KRSR	**Krestovskiy**	**2.21**	**272**	*e*P	Pn	18 03 09.5	+3.5
BZWR	**Bezymyannyi-We**	**2.27**	**265**	*e*P	Pn	18 03 10.4	+3.6
BZMR	**Bezymyannaya**	**2.28**	**265**	*e*P	Pn	18 03 10.6	+3.7
BZMR				*e*S	Sn	18 03 39.6	+5.8
KIRR	**Kirishev**	**2.36**	**265**	*e*P	Pn	18 03 11.3	+3.3
KIRR				*e*S	Sn	18 03 40.5	+4.7
KPT	**Kopyto**	**2.42**	**266**	*e*P	Pn	18 03 12.6	+3.7
KMNR	**Kamenistaya**	**2.45**	**261**	*e*P	Pn	18 03 13.0	+3.7
TUMD	**Tumrok D**	**2.54**	**248**	*e*P	Pn	18 03 13.5	+3.1
TUMD				*e*S	Sn	18 03 42.7	+2.6
KOZ	**Kozyrevsk**	**2.61**	**269**	*e*P	Pn	18 03 15.0	+3.7
KOZ				*e*S	Sn	18 03 45.6	+3.9
SRDR	**Sredinnyy**	**2.68**	**274**	*e*P	Pn	18 03 16.3	+3.8
SRDR				*e*S	Sn	18 03 48.6	+4.9
OSSR	**Ossora**	**3.15**	**346**	*e*P	Pn	18 03 21.6	+2.9
OSSR				*e*S	Sn	18 03 56.7	+1.7
ESO	**Esso**	**3.28**	**267**	*e*P	Pn	18 03 25.5	+5.0
SPN	**Mys Shipunski**	**4.07**	**222**	*e*S	Sn	18 04 16.3	-1.3
SDLR	**Sedlovina**	**4.39**	**230**	*e*P	Pn	18 03 39.2	+3.3
SMAR	**Somma**	**4.44**	**231**	*e*P	Pn	18 03 39.6	+3.0
KRX	**Arik**	**4.44**	**232**	*e*P	Pn	18 03 40.6	+4.1
AVH	**Avacha**	**4.46**	**231**	*e*P	Pn	18 03 40.8	+3.9
UGLR	**Uglovaya**	**4.47**	**230**	*e*P	Pn	18 03 40.7	+3.7
KOK	**Koryaka**	**4.49**	**232**	*e*P	Pn	18 03 41.0	+3.7
DALK	**Dalny**	**4.62**	**229**	*e*P	Pn	18 03 42.2	+3.3
PET	**Petropavlovsk**	**4.67**	**229**	*e*P	Pn	18 03 44.6	+5.0
RUS	**Russkaya**	**5.16**	**225**	*e*P	Pn	18 03 50.1	+3.7
GRL	**Gorelyy**	**5.25**	**228**	*e*P	Pn	18 03 52.4	+4.6
MTVR	**Mutnovka**	**5.26**	**227**	*e*P	Pn	18 03 52.5	+4.6
ASAK	**Asacha**	**5.45**	**228**	*e*P	Pn	18 03 55.0	+4.6

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*NEIC **27** 18:15:42.4±1.8, 17°.59N±0°.07×68°.41W±0°.05, h10^{km}±2^{km}, ML2.5/14, Md3.2/5(RSPR), Error ellipse: s-maj=13.4km s-min=3.9km az=149.0*

*RSPR **27** 18:15:45.5, 17°.98N×68°.51W, h94^{km}±8^{km}, MD3.2/5*

*SDD **27** 18:15:45.5±1.3, 18°.20N×68°.51W, h111^{km}±22^{km}, MD3.4, ML2.3, MW3.1*

ISC 27 18:15:39.1±1.8**, 17°.6N**±0°.1×**68°.65W**±0°.04**, h18^{km}**±8^{km}**, n30, σ0^{s}98**/36**, 4C-4D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**1.36**	**55**		**Pg**	**18 16 05.9**	**+0.5**
IDE					**Sn**	**18 16 21.6**	**+0.7**
IDE	**Isla Desecheo**	**1.36**	**55**	⇓*e*P	**Pg**	**18 16 05.9**	**+0.5**
IDE	**Isla Desecheo**	**1.36**	**55**	*e*S	**Sn**	**18 16 21.6**	**+0.7**
MIDR	**Miches**	**1.42**	**344**	*e*Pg	**Pn**	**18 16 05.0**	**+0.9**
MIDR				*e*Sg	**Sn**	**18 16 19.5**	**-2.9**
MIDR				IAML		18 16 23.5	
	comp=N,44nm,0.6s						
CRPR	**Cabo Rojo, PR**	**1.52**	**75**	Pn	**Pb**	**18 16 06.3**	**-0.5**
MLPR	**Magueyes Islan**	**1.57**	**76**	⇑*e*P	**Pg**	**18 16 09.5**	**+0.1**
MLPR	**Magueyes Islan**	**1.57**	**76**	*e*S	**Sb**	**18 16 28.4**	**+1.3**
MLPR	**Magueyes Islan**	**1.57**	**76**	*e*Pg	**Pg**	**18 16 09.6**	**+0.3**
MLPR				*e*Sg	**Sg**	**18 16 28.7**	**-1.0**
MLPR				IAML		18 16 32.7	
	comp=N,7.4nm,0.8s						
AGPR	**Aguadilla, PR**	**1.69**	**59**		**Pb**	**18 16 10.6**	**+0.9**
AGPR					**Sn**	**18 16 29.6**	**+0.5**
AGPR	**Aguadilla, PR**	**1.69**	**59**	IAML		18 16 30.9	
	comp=N,66nm,1.4s						
AGPR				IAML		18 16 31.4	
	comp=E,84nm,0.8s						
AGPR	**Aguadilla, PR**	**1.69**	**59**	⇑*e*P	**Pb**	**18 16 10.6**	**+0.9**
AGPR	**Aguadilla, PR**	**1.69**	**59**	*e*S	**Sn**	**18 16 29.6**	**+0.5**
AGPR	**Aguadilla, PR**	**1.69**	**59**	*e*Pg	**Pb**	**18 16 10.3**	**+0.6**
AGPR				*e*Sg	**Sn**	**18 16 26.4**	**-2.7**
AGPR				IAML		18 16 32.1	
	comp=N,68nm,0.6s						
SMDR	**Samana, DR**	**1.75**	**343**	⇓*e*P	**Pn**	**18 16 08.6**	**0.0**
SMDR	**Samana, DR**	**1.75**	**343**	*e*S	**Sn**	**18 16 29.5**	**-1.0**
UUPR	**Utuado, UPR, P**	**1.94**	**70**		**Pn**	**18 16 10.7**	**-0.6**
AOPR	**Arecibo Observ**	**1.95**	**68**		**Pb**	**18 16 13.8**	**-0.3**
AOPR					**Sn**	**18 16 34.8**	**-0.6**
AOPR	**Arecibo Observ**	**1.95**	**68**	IAML		18 16 40.6	
	comp=N,79nm,0.3s						
AOPR	**Arecibo Observ**	**1.95**	**68**	⇓*e*P	**Pb**	**18 16 13.8**	**-0.3**
AOPR	**Arecibo Observ**	**1.95**	**68**	*e*S	**Sn**	**18 16 34.8**	**-0.6**
AOPR	**Arecibo Observ**	**1.95**	**68**	⇑*e*Pg	**Pb**	**18 16 13.0**	**-1.0**
AOPR				*e*Sg	**Sn**	**18 16 34.5**	**-0.9**
AOPR				IAML		18 16 36.4	
	comp=N,63nm,0.5s						
CELP	**Cerrillos**	**2.02**	**76**		**Pb**	**18 16 15.0**	**-0.4**
CELP					**Sn**	**18 16 37.8**	**+0.5**
CELP	**Cerrillos**	**2.02**	**76**	IAML		18 16 41.4	
	comp=E,27nm,0.8s						
CELP				IAML		18 16 44.2	
	comp=N,24nm,0.4s						
CELP	**Cerrillos**	**2.02**	**76**	⇓*e*P	**Pb**	**18 16 15.0**	**-0.4**
CELP	**Cerrillos**	**2.02**	**76**	*e*S	**Sn**	**18 16 37.8**	**+0.5**

ABDR	**Alto Bandera**	**2.23**	**303**	*e*Pg	**Pb**	**18 16 18.4**	**-0.8**
ABDR				*e*Sg	**Sn**	**18 16 43.4**	**+0.5**
PDPR	**Patillas Dam,**	**2.53**	**80**	Pn	**Pn**	**18 16 19.7**	**+0.3**
PDPR				IAML		18 17 08.9	
	comp=N,17nm,2.1s						
PDPR	**Patillas Dam,**	**2.53**	**80**	⇑*e*P	**Pb**	**18 16 23.1**	**-1.0**
PDPR	**Patillas Dam,**	**2.53**	**80**	*e*S	**Sn**	**18 16 49.4**	**-0.4**
SDDR	**Presa de Saban**	**2.86**	**299**	Pn	**Pb**	**18 16 30.3**	**+0.6**
SDDR				IAML		18 17 17.0	
	comp=N,16nm,2.5s						
SDDR				IAML		18 18 22.8	
	comp=N,19nm,2.8s						

*SJA **27** 18:19:26.4±0.7, 32°.37S×71°.79W, h17^{km}±2^{km}, ML3.8, MW3.8*
*GUC **27** 18:19:28.4±0.8, 32°.38S×71°.80W, h20^{km}±8^{km}, ML3.8*
*IDC **27** 18:19:28.2±6.4, 32°.35S×72°.30W, h35^{km}±52^{km}, mb3.0/1, mbtmp3.5/3, ML3.5/2, Error ellipse: s-maj=87.0km s-min=39.2km az=80.0*
ISC 27 18:19:26.1±1.2**, 32°.34S**±0°.02×**71°.79W**±0°.04**, h18**^{km}±5^{km}**, n60, σ1^{s}.30**/95**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	**Catapilco**	**0.47**	**118**	*e*P	**Pn**	**18 19 37.6**	**-0.4**
VA06				*i* S	**Sb**	**18 19 43.9**	**+1.3**
VA06				IAML		18 19 45.5	
	comp=N,13µm,0.3s						
VA01	**Torpederas**	**0.69**	**170**	*e*P	**Pb**	**18 19 40.5**	**+0.8**
VA01				*e*S	**Sn**	**18 19 51.3**	**0.0**
ROCH	**El Roble**	**0.91**	**134**	*e*P	**Pn**	**18 19 44.5**	**+0.3**
ROCH				*e*P	**Pn**	**18 19 44.6**	**+0.3**
ROCH				*i* S	**Sn**	**18 19 56.6**	**-0.5**
ROCH				*i* S	**Sn**	**18 19 56.6**	**-0.5**
ROCH				IAML		18 19 59.2	
	comp=N,3µm,0.5s						
MT02	**Curacav**	**1.07**	**149**	*e*P	**Pg**	**18 19 46.7**	**-0.1**
MT02				*i* S	**Sb**	**18 20 00.1**	**+0.4**
MT02	**Curacav**	**1.07**	**149**	*e*P	**Pg**	**18 19 46.8**	**-0.1**
MT02				*e*S	**Sg**	**18 20 00.5**	**-0.4**
MT02				IAML		18 20 00.6	
	comp=Z,2µm,0.2s						
VA03	**San Esteban**	**1.13**	**112**	*e*P	**Pg**	**18 19 47.6**	**-0.3**
VA03				*i* S	**Sg**	**18 20 03.2**	**+0.4**
VA03				IAML		18 20 06.4	
	comp=E,6µm,0.1s						
VA03	**San Esteban**	**1.13**	**112**	*e*P	**Pg**	**18 19 48.1**	**+0.1**
VA03				*e*S	**Sg**	**18 20 04.0**	**+1.2**
VA03				IAML		18 20 07.6	
	comp=Z,2µm,0.5s						
PEL	**Peldehue**	**1.23**	**131**	*e*P	**Pg**	**18 19 49.8**	**-0.1**
PEL				*i* S	**Sg**	**18 20 05.5**	**-0.4**
PEL				IAML		18 20 06.6	
	comp=E,4µm,0.3s						
PEL	**Peldehue**	**1.23**	**131**	*e*P	**Pg**	**18 19 49.7**	**-0.1**
PEL				*e*S	**Sg**	**18 20 06.5**	**+0.5**
CO02	**Combarbal**	**1.32**	**31**	*e*P	**Pg**	**18 19 51.7**	**+0.2**
CO02				*i* S	**Sg**	**18 20 10.1**	**+1.3**
CO02	**Combarbal**	**1.32**	**31**	*e*P	**Pg**	**18 19 51.8**	**+0.2**
CO02				*e*S	**Sg**	**18 20 10.4**	**+1.7**
CO02				IAML		18 20 12.1	
	comp=Z,2µm,0.3s						
VA05	**Santo Domingo**	**1.32**	**174**	*i* S	**Sn**	**18 20 07.4**	**+0.6**
MT05	**Renca**	**1.37**	**140**	*e*P	**Pg**	**18 19 52.2**	**-0.4**
MT05				*i* S	**Sg**	**18 20 09.9**	**-0.6**
MT05				IAML		18 20 13.0	
	comp=N,5µm,0.3s						
MT05	**Renca**	**1.37**	**140**	*e*P	**Pg**	**18 19 52.1**	**-0.5**
MT05				*e*S	**Sg**	**18 20 10.2**	**-0.3**
MT05				IAML		18 20 15.4	
	comp=Z,963nm,0.6s						
MT10	**Hacienda Santa**	**1.41**	**132**	*e*P	**Pb**	**18 19 52.4**	**+0.5**
MT10				*i* S	**Sg**	**18 20 10.8**	**-0.9**
MT10				IAML		18 20 14.4	
	comp=E,4µm,0.3s						
MT14	**Cerro Cal¡n**	**1.49**	**135**	*e*P	**Pb**	**18 19 54.1**	**+0.8**
MT14				*i* S	**Sg**	**18 20 13.2**	**-1.1**
MT09	**Talagante**	**1.58**	**155**	*e*P	**Pb**	**18 19 55.1**	**+0.2**
MT09				*i* S	**Sb**	**18 20 15.3**	**+0.7**
MT09				IAML		18 20 20.9	
	comp=N,3µm,0.5s						
MT01	**Popeta**	**1.59**	**164**	*e*P	**Pb**	**18 19 54.4**	**-0.5**
MT01				*i* S	**Sb**	**18 20 15.2**	**+0.5**
MT01				IAML		18 20 19.0	
	comp=E,1µm,0.3s						
MT01	**Popeta**	**1.59**	**164**	*e*P	**Pb**	**18 19 54.4**	**-0.5**
MT01				*e*S	**Sn**	**18 20 09.9**	**-3.5**
MT01				IAML		18 20 17.3	
	comp=Z,780nm,0.5s						
FCH	**Farellones**	**1.60**	**128**	*e*P	**Pb**	**18 19 55.5**	**+0.1**
FCH				*i* S	**Sb**	**18 20 16.5**	**+1.1**
MT12	**Pirque**	**1.74**	**143**	*e*P	**Pb**	**18 19 57.8**	**+0.3**
MT12				*i* S	**Sb**	**18 20 20.0**	**+1.0**
MT12				IAML		18 20 27.3	
	comp=E,3µm,0.5s						
MT04	**Ro Olivares**	**1.75**	**128**	*e*P	**Pb**	**18 19 57.7**	**-0.1**
MT04				*e*S	**Sg**	**18 20 21.3**	**-1.3**
MT04				IAML		18 20 27.9	
	comp=Z,447nm,0.5s						
CO03	**El Pedregal**	**1.77**	**32**	*e*P	**Pb**	**18 19 58.9**	**+0.9**
CO03				*i* S	**Sg**	**18 20 22.4**	**-0.6**
CO03				IAML		18 20 28.1	
	comp=N,1µm,0.1s						
CO03	**El Pedregal**	**1.77**	**32**	*e*P	**Pb**	**18 19 58.9**	**+0.9**
CO03				*e*S	**Sg**	**18 20 22.8**	**-0.2**
CO03				IAML		18 20 25.8	
	comp=Z,975nm,0.5s						
MT08	**Bocatoma Ro**	**1.85**	**127**	*e*P	**Pb**	**18 20 00.1**	**+0.5**
MT08				*i* S	**Sb**	**18 20 23.9**	**+1.3**
MT08	**Bocatoma Ro**	**1.85**	**127**	*e*P	**Pb**	**18 19 59.7**	**+0.1**
MT08				*e*S	**Sg**	**18 20 25.0**	**-0.9**
BO04	**La Punta**	**1.92**	**149**	*e*P	**Pb**	**18 20 00.3**	**-0.3**
BO04				*i* S	**Sb**	**18 20 24.6**	**+0.3**
BO04				IAML		18 20 30.6	
	comp=E,1µm,0.5s						
LMEL	**Las Melosas**	**2.01**	**139**	*e*P	**Pb**	**18 20 02.0**	**-0.2**
LMEL				*i* S	**Sb**	**18 20 27.5**	**+0.5**
LMEL				IAML		18 20 35.6	
	comp=N,1µm,0.2s						
LMEL	**Las Melosas**	**2.01**	**139**	*e*P	**Pb**	**18 20 01.8**	**-0.4**
LMEL				*e*S	**Sb**	**18 20 27.9**	**+1.0**
BO01	**Tunca**	**2.13**	**164**	*e*P	**Pn**	**18 20 02.1**	**+1.3**
BO01				*e*S	**Sg**	**18 20 33.1**	**-1.5**
BO01				IAML		18 20 35.5	
	comp=Z,364nm,0.3s						
RTLS	**Leoncito**	**2.18**	**76**	*e*P	**Pg**	**18 20 07.8**	**-0.3**
RTLS				IAML		18 20 41.9	
	comp=Z,2µm,0.9s						
GO04	**Tololo Observa**	**2.32**	**22**	*e*P	**Pn**	**18 20 05.3**	**+1.7**
GO04				*e*S	**Sg**	**18 20 41.1**	**+0.4**
ASAL	**Salagasta**	**2.51**	**97**	*e*P	**Pn**	**18 20 06.9**	**+0.8**
ASAL				*e*S	**Sb**	**18 20 41.9**	**+0.6**
BO02	**Sierra Bellavi**	**2.59**	**161**	*e*P	**Pn**	**18 20 09.3**	**+2.1**
BO02				IAML		18 20 49.6	
	comp=Z,652nm,0.5s						
ZON	**Zonda**	**2.76**	**74**	*e*P	**Pn**	**18 20 11.8**	**+2.3**
ZON				*e*S	**Sb**	**18 20 49.8**	**+1.3**
ZON				IAML		18 21 10.0	
	comp=Z,147nm,0.8s						
ACCO	**Cerro Coronel**	**2.91**	**54**	*e*P	**Pb**	**18 20 17.6**	**-0.1**
ACCO				*e*S	**Sg**	**18 20 58.2**	**-1.4**
AROD	**Rodeo**	**2.94**	**43**	*e*P	**Pb**	**18 20 15.9**	**-2.2**
RTLL	**Cerro Villicun**	**3.00**	**71**	*e*P	**Pb**	**18 20 19.5**	**+0.6**
RTLL				*e*S	**Sb**	**18 20 53.2**	**-2.0**
CFA	**Coronel Fontan**	**3.11**	**77**	*e*P	**Pb**	**18 20 19.6**	**-1.3**
CFA				*e*S	**Sb**	**18 20 56.8**	**-1.6**
ACDV	**Cuesta del Vie**	**3.15**	**47**	*e*P	**Pn**	**18 20 14.7**	**-0.2**
ACDV				IAML		18 21 13.9	
	comp=Z,142nm,0.5s						
ML02	**Panimavida**	**3.43**	**175**	*e*P	**Pg**	**18 20 32.6**	**+0.8**
ML02				*e*S	**Sg**	**18 21 13.8**	**-2.5**
ML02				IAML		18 21 19.4	
	comp=Z,207nm,0.6s						
LCO	**Las Campanas**	**3.45**	**16**	*e*P	**Pn**	**18 20 21.4**	**+2.3**
LCO				*e*S	**Sb**	**18 21 05.0**	**-3.4**
LCO				IAML		18 21 20.5	
	comp=Z,416nm,0.9s						
RFA	**San Rafael**	**3.69**	**132**	*e*P	**Pn**	**18 20 24.4**	**+2.2**
RFA				*e*S	**Sg**	**18 21 22.4**	**-2.0**
RFA				IAML		18 21 30.7	
	comp=Z,65nm,0.7s						
ACAN	**Cantantal**	**3.90**	**90**	*e*P	**Pn**	**18 20 29.4**	**+4.3**
ACAN				IAML		18 21 30.6	
	comp=Z,484nm,0.4s						
AGUA	**GUANDACOL**	**4.01**	**46**	*e*P	**Pb**	**18 20 32.7**	**-3.6**
AGUA				*e*P	Pn	18 20 32.9	+6.1
AGUA				*e*S	**Sg**	**18 21 34.2**	**-0.8**
AGUA				IAML		18 21 36.4	
	comp=Z,223nm,0.5s						
AVFE	**Valle Fertil**	**4.06**	**67**	*e*S	**Sb**	**18 21 27.6**	**+1.6**
AVFE				IAML		18 21 32.4	
	comp=Z,121nm,0.4s						
GO03	**Copiapo**	**4.92**	**16**	*e*S	**Sb**	**18 21 51.8**	**+1.2**
ACLC	**CERRO LA CRUZ**	**5.07**	**56**	*e*P	**Pn**	**18 20 42.9**	**+1.5**
H03N1	**Juan Fernandez**	**6.09**	**258**	T	T	18 27 32.0	
	baz=87,slow=73,SNR=382						
H03N3	**Juan Fernandez**	**6.10**	**258**	T	T	18 27 26.9	
	baz=87,slow=73,SNR=606						
H03N2	**Juan Fernandez**	**6.11**	**258**	T	T	18 27 26.4	
	baz=87,slow=73,SNR=422						
H03S1	**Juan Fernandez**	**6.16**	**254**	T	T	18 27 34.4	
	baz=85,slow=75,SNR=7.8						
H03S3	**Juan Fernandez**	**6.16**	**254**	T	T	18 27 36.8	
	baz=85,slow=75,SNR=8.1						
H03S2	**Juan Fernandez**	**6.17**	**254**	T	T	18 27 28.0	
	baz=85,slow=75,SNR=8.4						
PLCA	**Paso Flores**	**8.44**	**174**	Pn	**Pn**	**18 21 28.7**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=356,slow=14,SNR=1.4						
	comp=Z,1.1nm,0.8s						
LPAZ	**La Paz**	**16.32**	**13**	Pn	**Pn**	**18 23 16.4**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=188,slow=4.7,SNR=6.8						
	comp=Z,2.1nm,0.6s						
TXAR	**Lajitas Array**	**68.39**	**330**	P	**P**	**18 30 25.2**	**-1.6**
	comp=Z,0.1nm,0.4s,baz=155,slow=5.9,SNR=1.1						
	comp=Z,0.1nm,0.4s						
BVAR	**Borovoye Array**	**145.91**	**41**	PKPbc	**PKPbc**	**18 39 04.4**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=300,slow=1.8,SNR=4.2						
KURBB	**Kurchatov Arra**	**151.50**	**41**	PKPbc	**PKPbc**	**18 39 18.6**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=301,slow=3.0,SNR=7.7						
ZALV	**Zalesovo Beam**	**152.71**	**31**	PKPbc	**PKPbc**	**18 39 19.8**	**-1.4**
	comp=Z,0.7nm,0.6s,baz=333,slow=2.5,SNR=3.5						

*IDC **27** 18:28:02.2±0.9, 2°.66S×138°.54E, h0^{km}, mb3.8/6, mbtmp3.8/10, ML3.5/3, MS4.0/1, Error ellipse: s-maj=23.3km s-min=20.6km az=121.0*
*DJA **27** 18:28:06.8±0.3, 3°S±3°×13°8E±°, h10^{km}, M3.8/7, MLv3.8/7*
ISC 27 18:28:05.3±1.6**, 2°.65S**±0°.07×**138°.53E**±0°.04**, h17**^{km}±11^{km}**, n17, σ1^{s}.79**/21**, mb3.8**/6**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**0.68**	**15**	P	**Pg**	**18 28 16.6**	**-2.2**
SMPI				S	**Sb**	**18 28 26.8**	**-1.1**
GENI	**Genyem**	**1.63**	**88**	P	**Pb**	**18 28 35.6**	**+0.6**
GENI				S	**Sg**	**18 29 02.3**	**+4.2**
JAY	**Jayapura**	**2.17**	**86**	Pn	**Pn**	**18 28 40.9**	**+0.2**
	8.7nm,0.3s,baz=266,slow=9.0,SNR=42						
JAY				Sn	**Sn**	**18 29 08.2**	**+0.9**
	6.0nm,0.3s,baz=353,slow=19,SNR=3.8						
	17nm,0.5s						
JAY	**Jayapura**	**2.17**	**86**	P	**Pn**	**18 28 42.4**	**+1.7**
SRPI	**Serui, Papua**	**2.42**	**289**	P	**Pn**	**18 28 44.8**	**+0.7**
SRPI				S	**Sn**	**18 29 15.6**	**+2.3**
BAKI	**Biak**	**2.83**	**301**	P	**Pn**	**18 28 52.0**	**+2.3**
BAKI				S	**Sn**	**18 29 26.1**	**+2.7**
RKPI	**Ransiki, Papua**	**4.50**	**285**	P	**Pn**	**18 29 13.9**	**+1.2**
BATI	**Baumata**	**16.56**	**242**	Pn	**Pn**	**18 31 57.0**	**0.0**
	9.0nm,0.6s,baz=111,slow=6.1,SNR=4.4						
WRA	**Warramunga Arr**	**17.66**	**193**	P	**Pn**	**18 32 09.3**	**-1.5**
	0.3nm,0.3s,baz=17,slow=13,SNR=12						
	1.3nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.89**	**219**	P	**P**	**18 32 35.5**	**-0.5**
	0.1nm,0.3s,baz=47,slow=13,SNR=2.3						
	2.2nm,1.0s						
ASAR	**Alice Springs**	**21.36**	**192**	P	**P**	**18 32 50.9**	**-1.2**
	1.8nm,0.6s,baz=19,slow=10,SNR=32						
	1.8nm,0.6s						
NWAO	**Narrogin (SRO)**	**36.13**	**211**	LR	LR	18 50 58.9	
	comp=Z,216nm,20.9s,baz=150,slow=38						
MKAR	**Makanchi Array**	**69.64**	**322**	P	**P**	**18 39 14.3**	**+0.5**
	0.7nm,0.8s,baz=127,slow=7.8,SNR=5.4						
	0.7nm,0.8s						
KURBB	**Kurchatov Arra**	**73.58**	**325**	P	**P**	**18 39 37.7**	**+0.2**
	0.3nm,0.5s,baz=110,slow=6.0,SNR=4.2						
	0.3nm,0.5s						
BVAR	**Borovoye Array**	**79.17**	**325**	P	**P**	**18 40 08.2**	**-1.0**
	0.5nm,0.5s,baz=95,slow=6.0,SNR=2.8						
	0.5nm,0.5s						
ILAR	**Eielson Array**	**85.86**	**24**	P	**P**	**18 40 42.4**	**-1.4**
	0.4nm,0.7s,baz=269,slow=5.9,SNR=3.8						
	0.4nm,0.7s						
QSPA	**South Pole Qui**	**87.29**	**180**	P	**P**	**18 40 51.1**	**+0.1**
	2.3nm,1.0s,baz=351,slow=0.5,SNR=6.4						
	2.3nm,1.0s						

*TXNET **27** 18:44:12.9, 29°N±2°×10°4W±°, h3^{km}±2^{km}, ML3.1/3, Error ellipse: s-maj=3.2km s-min=2.1km az=31.3, final*
*NEIC **27** 18:44:12.9±1.4, 29°.46N±0°.04×104°.11W±0°.04, h3^{km}±6^{km}, Error ellipse: s-maj=6.5km s-min=3.3km az=219.0*
*NEIC **27** 18:44:12.4±1.2, 29°.44N±0°.03×104°.02W±0°.03, h5^{km}±2^{km}, mb_Lg2.7/53, ML2.7/3, ML2.8/14, Error ellipse: s-maj=6.3km s-min=2.9km az=220.0*
ISC 27 18:44:13.4±1.2**, 29°.50N**±0°.03×**104°.06W**±0°.03**, h4**^{km}±10^{km}**, n61, σ0^{s}.82**/82**, 2C-1D, Texas-Mexico border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TX31	**Lajitas Ar. Si**	**0.38**	**116**		**Pg**	**18 44 20.6**	**-0.1**
TX31					**Sg**	**18 44 26.1**	**+0.5**
TX31	**Lajitas Ar. Si**	**0.38**	**116**	⇑P	**Pg**	**18 44 20.6**	**-0.1**
TX31				S	**Sg**	**18 44 26.2**	**+0.5**
TXAR	**Lajitas Array**	**0.38**	**116**		**Pg**	**18 44 20.6**	**-0.1**
ALPN	**Alpine**	**0.94**	**23**	Pg	**Pg**	**18 44 30.6**	**-0.9**
ALPN					**Sg**	**18 44 43.7**	**-0.1**
ALPN	**Alpine**	**0.94**	**23**	P	**Pg**	**18 44 30.7**	**-0.8**
ALPN				S	**Sg**	**18 44 43.8**	**+0.1**
ALPN	**Alpine**	**0.94**	**23**	⇑P	**Pg**	**18 44 30.7**	**-0.8**
ALPN				S	**Sg**	**18 44 43.7**	**-0.1**
ALPN	**Alpine**	**0.94**	**23**	P	**Pg**	**18 44 30.7**	**-0.8**
TPB01	**Permian Basin**	**1.46**	**9**	P	**Pn**	**18 44 40.2**	**-0.5**
TPB01				S	**Sg**	**18 45 00.4**	**+0.1**
TPB01	**Permian Basin**	**1.46**	**9**	P	**Pn**	**18 44 40.1**	**-0.6**
TPB01				Pg	**Pg**	**18 44 41.3**	**-0.1**
TPB01				S	**Sg**	**18 45 01.1**	**+0.8**
TPB01				Sg	**Sb**	**18 45 02.4**	**+2.3**
VHRN	**Van Horn**	**1.51**	**328**		**Pb**	**18 44 41.1**	**-1.0**
VHRN					**Sg**	**18 45 01.6**	**-0.5**
VHRN				IAML		18 45 06.5	
	125nm,0.6s						
VHRN	**Van Horn**	**1.51**	**328**	P	**Pb**	**18 44 41.2**	**-1.0**
VHRN	**Van Horn**	**1.51**	**328**	⇓P	**Pb**	**18 44 41.2**	**-1.0**
VHRN				S	**Sg**	**18 45 01.6**	**-0.5**
VHRN				Sg	**Sb**	**18 45 03.0**	**+1.2**
VHRN	**Van Horn**	**1.51**	**328**	P	**Pb**	**18 44 41.2**	**-1.0**
TPB05	**Hovey Rd**	**1.55**	**24**	P	**Pb**	**18 44 42.1**	**-0.7**
TPB05	**Hovey Rd**	**1.55**	**24**	P	**Pb**	**18 44 41.9**	**-0.8**
TPB05				S	**Sg**	**18 45 03.8**	**+0.6**
TPB05				Sg	**Sb**	**18 45 05.5**	**+2.7**
TPB03	**Saragosa**	**1.65**	**16**	P	**Pb**	**18 44 43.6**	**-0.8**
TPB03				S	**Sg**	**18 45 06.8**	**+0.5**
TPB08	**Permian Basin**	**1.71**	**35**	P	**Pb**	**18 44 44.9**	**-0.5**
TPB08				S	**Sg**	**18 45 08.5**	**+0.2**
TPB12	**Southwest of T**	**1.71**	**3**	P	**Pb**	**18 44 45.0**	**-0.5**
TPB12	**Southwest of T**	**1.71**	**3**	P	**Pb**	**18 44 44.7**	**-0.8**
TPB12				S	**Sg**	**18 45 08.1**	**-0.2**
SAND	**Sanderson**	**1.74**	**74**		**Pn**	**18 44 44.6**	**+0.1**
SAND					**Sb**	**18 45 08.4**	**+0.1**
SAND	**Sanderson**	**1.74**	**74**	P	**Pn**	**18 44 44.6**	**+0.1**
SAND				S	**Sb**	**18 45 08.4**	**+0.1**
TPB16	**Coyonosa**	**1.76**	**23**	P	**Pb**	**18 44 46.0**	**-0.5**
TPB16	**Coyonosa**	**1.76**	**23**	P	**Pb**	**18 44 45.9**	**-0.5**
TPB16				S	**Sg**	**18 45 10.4**	**+0.3**
TPB10	**Southeast of T**	**1.79**	**8**	P	**Pb**	**18 44 46.8**	**-0.2**
TPB10				S	**Sg**	**18 45 11.3**	**+0.2**
TPB04	**Verhalen**	**1.81**	**22**	P	**Pb**	**18 44 46.7**	**-0.6**
TPB04	**Verhalen**	**1.81**	**22**	P	**Pb**	**18 44 46.5**	**-0.7**
TPB04				S	**Sg**	**18 45 11.5**	**-0.2**
PECS	**Pecos**	**1.87**	**5**		**Pb**	**18 44 47.3**	**-0.9**
PECS					**Sb**	**18 45 12.3**	**+0.3**
PECS	**Pecos**	**1.87**	**5**	P	**Pn**	**18 44 46.7**	**+0.4**
PECS				S	**Sb**	**18 45 12.3**	**+0.3**
PECS	**Pecos**	**1.87**	**5**	P	**Pb**	**18 44 47.0**	**-1.2**
PCOS	**Crockett Middl**	**1.96**	**14**		**Sg**	**18 45 15.6**	**-0.8**
PCOS	**Crockett Middl**	**1.96**	**14**	S	**Sg**	**18 45 15.6**	**-0.8**
MNHN	**Monahans**	**2.15**	**31**		**Pn**	**18 44 50.5**	**+0.4**
MNHN					**Sb**	**18 45 19.2**	**-0.8**
MNHN				IAmb_Lg		18 45 26.6	
	comp=Z,27nm,0.9s						
MNHN	**Monahans**	**2.15**	**31**	P	**Pn**	**18 44 50.7**	**+0.6**
MNHN				S	**Sb**	**18 45 19.2**	**-0.8**
TPB06	**Permian Basin**	**2.26**	**18**	S	**Sb**	**18 45 22.2**	**-1.0**
TMB02	**Rankin**	**2.43**	**45**	P	**Pn**	**18 44 54.9**	**+0.9**
TMB02				Pg	**Pb**	**18 44 57.5**	**-0.3**
MNTX	**Cornudas Mount**	**2.47**	**333**		**Pn**	**18 44 54.1**	**-0.4**
MNTX				Pg	**Pg**	**18 45 00.1**	**-0.6**
MNTX				IAML		18 45 32.3	
	comp=Z,44nm,0.4s						
MNTX	**Cornudas Mount**	**2.47**	**333**	P	**Pn**	**18 44 54.3**	**-0.2**
MNTX				Pg	**Pg**	**18 45 00.1**	**-0.6**
OZNA	**Ozona**	**2.90**	**60**		**Pn**	**18 45 01.1**	**+0.6**
OZNA				IAmb_Lg		18 45 47.3	
	comp=Z,23nm,0.9s						
CLN7	**Carlsbad 7**	**2.91**	**4**		**Pn**	**18 45 01.7**	**+1.0**
ODSA	**Odessa**	**2.92**	**26**		**Pn**	**18 45 01.4**	**+0.7**
HPIG		**2.92**	**209**		**Sn**	**18 45 35.2**	**-1.4**
HPIG					LR	18 45 46.8	
HPIG		**2.92**	**209**	S	**Sn**	**18 45 35.2**	**-1.4**
HPIG				Sg	**Sg**	**18 45 46.8**	**-0.6**
DRIO	**Del Rio**	**3.00**	**91**		**Pn**	**18 45 01.4**	**-0.4**
DRIO				IAmb_Lg		18 45 53.4	
	comp=Z,16nm,0.7s						
SGCY	**Sterling City**	**3.49**	**46**		**Pn**	**18 45 09.1**	**+0.5**
JCT	**Junction City**	**3.82**	**74**		**Pn**	**18 45 14.0**	**+1.0**
JCT				IAmb_Lg		18 46 20.1	
	comp=Z,14nm,0.8s						
SN07	**Snyder 07**	**4.49**	**36**	Pn	**Pn**	**18 45 22.6**	**+0.3**
SN07				IAmb_Lg		18 46 47.7	
	comp=Z,19nm,0.9s						
MSTX	**Muleshoe**	**4.59**	**13**	IAmb_Lg		18 46 45.9	
	comp=Z,9.3nm,0.7s						
BRDY	**Brady**	**4.72**	**67**		**Pn**	**18 45 26.1**	**+0.6**
BRDY				IAmb_Lg		18 46 47.3	
	comp=Z,14nm,0.8s						
319A	**Douglas**	**4.88**	**294**	IAmb_Lg		18 46 52.9	
	comp=Z,17nm,1.2s						
ABTX	**Abilene, Hawle**	**4.90**	**49**		**Pn**	**18 45 28.1**	**+0.1**
DKNS	**Dickens**	**4.94**	**32**		**Pn**	**18 45 28.8**	**+0.2**
DKNS				IAmb_Lg		18 46 58.9	
	comp=Z,18nm,0.9s						
APMT	**Aspermont**	**5.08**	**40**		**Pn**	**18 45 30.6**	**+0.2**
APMT				IAmb_Lg		18 47 00.2	
	comp=Z,15nm,0.9s						
ANMO	**Albuquerque**	**5.80**	**340**	IAmb_Lg		18 47 23.9	
	comp=Z,5.6nm,1.1s						
ANMO	**Albuquerque**	**5.80**	**340**	IAmb_Lg		18 47 30.7	
	comp=Z,3.6nm,0.8s						
ANMO	**Albuquerque**	**5.80**	**340**	IAmb_Lg		18 47 23.9	
	comp=Z,5.8nm,1.1s						
ANMO	**Albuquerque**	**5.80**	**340**	IAmb_Lg		18 47 21.8	
	comp=Z,5.5nm,1.1s						
FW03	**Perrin-Whitt E**	**6.22**	**54**	IAmb_Lg		18 47 45.2	
	comp=Z,10nm,0.7s						
TUC	**Tucson**	**6.42**	**298**		**Pg**	**18 46 19.0**	**+2.5**
SMWD	**Samnorwood**	**6.45**	**29**	IAmb_Lg		18 47 57.2	
	comp=Z,9.5nm,0.7s						
WMOK	**Wichita Mounta**	**6.88**	**39**	IAmb_Lg		18 47 51.8	
	comp=Z,6.0nm,0.9s						
MCMT	**McKenzie Canyo**	**16.81**	**338**		**P**	**18 48 13.7**	**+1.5**

*WEL **27** 19:03:00.1±0.4, 42°S±2°×17°4E±°, h12^{km}±2^{km}, M4.2/57, ML4.4/13, MLv4.2/57, Error ellipse: s-maj=3.1km s-min=2.8km az=126.0, confirmed*
*WEL **27** 19:03:00.9, 41°.71S×174°.13E, h25^{km}, ML4.2, Mw3.9, Moment Tensor Solution. s4 Moment tensor: Scale 10^{15} Nm; M$_{rr}$0.39; M$_{\theta\theta}$0.68; M$_{\phi\phi}$-1.07; M$_{r\theta}$-0.39; M$_{\theta\phi}$-0.17; M$_{\phi r}$0.27; Fault plane solution: M$_0$1.06000×10^{15} NP1: ϕ_s326.00000°, δ73.00000°, λ33.00000°. NP2: ϕ_s225.00000°, δ58.00000°, λ160.00000°. Principal axes: T 0.9932, Plg36.0000°, Azm190.0000°; N 0.1259, Plg53.0000°, Azm349.0000°; P -1.1191, Plg10.0000°, Azm93.0000°; Stations used: NNZ QRZ MRZ LTZ OBLIQUE-REVERSE FAULTING*
*NOU **27** 19:03:00.4, 41°.84S×174°.31E, h25^{km}, MLv4.4/19, Cook Strait, New Zealand*
ISC 27 19:02:59.7±0.8**, 41°.78S**±0°.03×**174°.21E**±0°.02**, h17**^{km}**, n97, σ1^{s}.00**/106**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	**0.03**	**7**	P	**Pg**	**19 03 03.5**	**+0.7**
CMWZ				S	**Sg**	**19 03 06.3**	**+1.6**
WDFS	**Ward Fire Stat**	**0.07**	**227**	P	**Pg**	**19 03 03.9**	**+0.9**
WDFS				S	**Sg**	**19 03 06.9**	**+1.8**
SEDS	**Seddon Fire St**	**0.14**	**317**	P	**Pg**	**19 03 03.4**	**-0.4**
SEDS				S	**Sg**	**19 03 06.1**	**-0.3**
KEKS	**Kekerengu Vall**	**0.25**	**224**	P	**Pb**	**19 03 06.2**	**+0.5**
BSWZ	**Blackbirch Sta**	**0.26**	**284**	P	**Pg**	**19 03 05.0**	**-0.5**
BSWZ				S	**Sg**	**19 03 08.7**	**-0.6**
TUWZ	**Tuamarina**	**0.40**	**330**	P	**Pg**	**19 03 07.5**	**-0.5**
TUWZ				S	**Sg**	**19 03 12.7**	**-0.8**
TCW	**Tory Channel**	**0.57**	**5**	P	**Pg**	**19 03 10.3**	**-0.7**
TCW				S	**Sg**	**19 03 17.6**	**-1.0**
SNZO	**South Karori**	**0.60**	**39**	P	**Pg**	**19 03 11.8**	**+0.3**
SNZO	**South Karori**	**0.60**	**39**	S	**Sn**	**19 03 21.6**	**-1.1**
BHW	**Baring Head**	**0.62**	**54**	P	**Pb**	**19 03 12.7**	**+0.7**
WEL	**Wellington**	**0.65**	**41**	P	**Pb**	**19 03 12.8**	**+0.2**
WEL				S	**Sb**	**19 03 22.6**	**+1.4**
KHZ	**Kahutara**	**0.81**	**218**	P	**Pn**	**19 03 16.7**	**+0.4**
KHZ	**Kahutara**	**0.81**	**218**	P	**Pn**	**19 03 16.5**	**+0.2**
KHZ				S	**Sn**	**19 03 29.1**	**+1.2**
PLWZ	**Palliser**	**0.81**	**75**	P	**Pn**	**19 03 16.5**	**+0.1**
NNZ	**Nelson**	**0.84**	**312**	P	**Pb**	**19 03 14.8**	**-1.0**
MSWZ	**Moikau Station**	**0.86**	**65**	P	**Pn**	**19 03 17.4**	**+0.3**
CAW	**Cannon Point**	**0.93**	**44**	P	**Pb**	**19 03 17.7**	**+0.3**
CAW				S	**Sn**	**19 03 31.8**	**+0.9**
THZ	**Tophouse**	**0.98**	**270**	P	**Pb**	**19 03 17.7**	**-0.5**
PAWZ	**Paruwai Farm**	**1.00**	**67**	P	**Pb**	**19 03 18.9**	**+0.4**
DUWZ	**D’Urville Isla**	**1.00**	**347**	P	**Pb**	**19 03 17.5**	**-1.1**
KIW	**Kapiti Island**	**1.06**	**30**	P	**Pb**	**19 03 19.2**	**-0.3**
MTW	**Mount Morrison**	**1.15**	**58**	P	**Pn**	**19 03 21.0**	**-0.1**
MRNZ	**Matariki Terra**	**1.15**	**289**	P	**Pn**	**19 03 20.9**	**-0.2**
TRWZ	**Traveller**	**1.17**	**72**	P	**Pn**	**19 03 21.2**	**-0.1**
TKNZ	**Takaka Hill**	**1.20**	**308**	P	**Pn**	**19 03 21.1**	**-0.6**
OGWZ	**Otaki Gorge**	**1.20**	**37**	P	**Pn**	**19 03 22.1**	**+0.3**
CECS	**Cheviot Emerge**	**1.25**	**213**	P	**Pn**	**19 03 22.9**	**+0.5**
HOWZ	**Holdsworth Sta**	**1.32**	**49**	P	**Pn**	**19 03 23.2**	**-0.2**
TMWZ	**Te Maipa**	**1.43**	**63**	P	**Pn**	**19 03 24.7**	**-0.2**
GVZ	**Greta Valley S**	**1.47**	**216**	P	**Pn**	**19 03 25.6**	**+0.1**
MRZ	**Mangatainoka R**	**1.52**	**43**	P	**Pn**	**19 03 26.0**	**-0.1**
QRZ	**Quartz Range**	**1.58**	**306**	P	**Pn**	**19 03 27.9**	**+0.9**
QRZ	**Quartz Range**	**1.58**	**306**	S	**Sb**	**19 03 48.6**	**+0.4**
QRZ	**Quartz Range**	**1.58**	**306**	P	**Pn**	**19 03 27.5**	**+0.6**
TIWZ	**Tintock**	**1.61**	**52**	P	**Pn**	**19 03 27.6**	**+0.2**
CPWZ	**Castlepoint**	**1.73**	**61**	P	**Pg**	**19 03 32.3**	**-0.7**
LTZ	**Lake Taylor**	**1.75**	**234**	P	**Pn**	**19 03 29.5**	**+0.2**
OHWZ	**Ohakea**	**1.78**	**28**	P	**Pb**	**19 03 31.1**	**-0.7**
DSZ	**Denniston Nort**	**1.80**	**270**	P	**Pn**	**19 03 31.0**	**+1.0**
PRWZ	**Pori Road**	**1.81**	**48**	P	**Pn**	**19 03 29.8**	**-0.2**
AMCZ	**Amberley**	**1.81**	**219**	P	**Pn**	**19 03 29.9**	**-0.2**
POWZ	**Post Office Ro**	**1.82**	**41**	P	**Pn**	**19 03 30.0**	**-0.2**
BFZ	**Birch Farm**	**1.89**	**55**	P	**Pn**	**19 03 30.5**	**-0.7**
BFZ	**Birch Farm**	**1.89**	**55**	P	**Pn**	**19 03 30.2**	**-1.0**
DVHZ	**Dannevirke**	**2.09**	**46**	P	**Pn**	**19 03 33.1**	**-0.9**
WAZ	**Wanganui**	**2.10**	**17**	P	**Pb**	**19 03 36.6**	**-0.8**
OKCZ	**Okains Bay**	**2.12**	**203**	P	**Pn**	**19 03 33.7**	**-0.7**
ANWZ	**Angora Road**	**2.16**	**53**	P	**Pn**	**19 03 34.1**	**-0.8**
TSZ	**Takapari Road**	**2.17**	**38**	P	**Pn**	**19 03 34.6**	**-0.5**
OXZ	**Oxford**	**2.23**	**225**	P	**Pn**	**19 03 34.9**	**-0.9**
MQZ	**McQueen’s Vall**	**2.24**	**210**	P	**Pn**	**19 03 34.5**	**-1.5**
INZ	**Inchbonnie**	**2.26**	**244**	P	**Pn**	**19 03 36.7**	**+0.4**
AKCZ	**Akaroa Harbour**	**2.30**	**204**	P	**Pn**	**19 03 35.9**	**-0.9**
LREZ	**Lake Rotokare**	**2.32**	**4**	P	**Pn**	**19 03 38.9**	**+1.9**
NMEZ	**Namu Road**	**2.38**	**354**	P	**Pb**	**19 03 41.4**	**-0.6**
PRHZ	**Porangahau**	**2.38**	**51**	P	**Pn**	**19 03 36.8**	**-1.1**
PNHZ	**Pukenui**	**2.40**	**40**	P	**Pn**	**19 03 37.5**	**-0.8**
WPHZ	**Waipukurau**	**2.41**	**45**	P	**Pn**	**19 03 37.8**	**-0.5**
PREZ	**Palmer Road**	**2.43**	**359**	P	**Pb**	**19 03 41.5**	**-1.5**
RACZ	**Rakaia**	**2.47**	**217**	P	**Pn**	**19 03 37.9**	**-1.3**
KHEZ	**Kahui Hut**	**2.48**	**357**	P	**Pb**	**19 03 42.3**	**-1.6**
KHEZ	**Kahui Hut**	**2.48**	**357**	P	**Pn**	**19 03 41.4**	**+2.0**
NEZ	**North Egmont**	**2.51**	**358**	P	**Pb**	**19 03 42.6**	**-1.7**

NBEZ	**Newall Road No**	**2.52**	**354**	P	**Pb**	**19 03 44.6**	**+0.1**
MTVZ	**Mangateitei**	**2.58**	**22**	P	**Pn**	**19 03 42.5**	**+1.8**
DREZ	**Durham Road**	**2.59**	**360**	P	**Pb**	**19 03 46.5**	**+0.9**
PKE	**Pukeiti**	**2.59**	**356**	P	**Pn**	**19 03 42.7**	**+1.9**
MHCZ	**Mount Hutt**	**2.62**	**227**	P	**Pn**	**19 03 40.2**	**-1.1**
PKVZ	**Pokaka**	**2.63**	**20**	P	**Pn**	**19 03 43.1**	**+1.6**
MOVZ	**Moawhango**	**2.64**	**27**	P	**Pn**	**19 03 41.8**	**+0.2**
PXZ	**Pawanui**	**2.66**	**50**	P	**Pn**	**19 03 40.3**	**-1.5**
WNVZ	**Wahianoa**	**2.67**	**24**	P	**Pn**	**19 03 43.2**	**+1.1**
TRVZ	**Turoa**	**2.68**	**23**	P	**Pn**	**19 03 43.8**	**+1.6**
KRHZ	**Kereru**	**2.69**	**38**	P	**Pn**	**19 03 41.4**	**-0.9**
WHVZ	**Whangaehu Hut**	**2.71**	**23**	P	**Pn**	**19 03 43.7**	**+1.1**
FWVZ	**Far West T-bar**	**2.72**	**23**	P	**Pn**	**19 03 44.0**	**+1.2**
TUVZ	**Tukino**	**2.74**	**24**	P	**Pn**	**19 03 44.0**	**+1.0**
WACZ	**Wakanui South**	**2.78**	**218**	P	**Pn**	**19 03 42.5**	**-0.9**
SNVZ	**South Ngauruho**	**2.81**	**23**	P	**Pn**	**19 03 45.1**	**+1.1**
OTVZ	**Oturere**	**2.84**	**24**	P	**Pn**	**19 03 45.4**	**+1.0**
WTVZ	**West Tongariro**	**2.86**	**22**	P	**Pn**	**19 03 46.5**	**+1.9**
TWVZ	**Taurewa**	**2.86**	**20**	P	**Pn**	**19 03 45.9**	**+1.2**
ETVZ	**East Tongariro**	**2.88**	**24**	P	**Pn**	**19 03 45.9**	**+1.0**
WVZ	**Waitaha Valley**	**2.88**	**242**	P	**Pn**	**19 03 45.5**	**+0.8**
TMVZ	**Te Maari**	**2.89**	**24**	P	**Pn**	**19 03 46.1**	**+1.0**
NTVZ	**North Tongarir**	**2.90**	**23**	P	**Pn**	**19 03 46.4**	**+1.1**
RPZ	**Rata Peaks**	**3.02**	**229**	P	**Pn**	**19 03 46.1**	**-0.7**
RPZ	**Rata Peaks**	**3.02**	**229**	S	**Sn**	**19 04 21.8**	**-0.8**
HIZ	**Hauiti**	**3.30**	**9**	P	**Pn**	**19 03 52.3**	**+1.7**
URZ	**Urewera**	**4.16**	**33**	P	**Pn**	**19 04 01.1**	**-1.3**
ODZ	**Otahua Downs**	**4.17**	**217**	P	**Pn**	**19 04 01.4**	**-1.2**
JCZ	**Jackson Bay**	**4.60**	**238**	P	**Pn**	**19 04 09.1**	**+0.6**
KUZ	**Kuaotunu**	**5.16**	**14**	P	**Pn**	**19 04 17.1**	**+1.0**
MXZ	**Matakaoa Point**	**5.26**	**38**	P	**Pn**	**19 04 17.0**	**-0.6**
SYZ	**Scrubby Hill**	**5.99**	**216**	P	**Pn**	**19 04 27.4**	**-0.1**
OUZ	**Omahuta**	**6.57**	**356**	P	**Pn**	**19 04 38.2**	**+2.8**
CTZ	**Chatham Island**	**7.03**	**109**	P	**Pn**	**19 04 41.1**	**-0.7**

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*KRSC **27** 19:10:03.5±1.3,56°.18N×164°.31E,h50^{km}±19^{km},Ml3.9*

*IDC **27** 19:10:03.0±0.9,56°.26N×164°.11E,h0^{km},mb3.4/7,mbtmp3.3/8,ML2.3/1,Error ellipse: s-maj=45.4km s-min=18.7km az=150.0*

ISC 27 19:10:02.8±1.7,**56°.19N**±0°.04×**164°.32E**±0°.04,**h2**^{km}±11^{km},**n52**,σ**1^s.33**/58,**mb3.5**/7,**Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.84**	**272**	*e*P	**Pg**	**19 10 18.5**	**-0.3**
KBTR				*e*S	**Sg**	**19 10 29.9**	**+0.2**
KBG	**Krutoberegovo**	**0.90**	**275**	*e*P	**Pg**	**19 10 19.4**	**-0.7**
KBG				*e*S	**Sg**	**19 10 31.8**	**0.0**
BKI	**Bering**	**1.36**	**136**	*e*P	**Pn**	**19 10 28.3**	**-0.5**
BKI				*e*S	**Sb**	**19 10 45.6**	**-1.1**
SMKR	**Semkarok**	**1.63**	**285**	*e*P	**Pn**	**19 10 31.7**	**-0.9**
SMKR				*e*S	**Sn**	**19 10 52.5**	**-1.7**
BDR	**Baidarnaya**	**1.77**	**284**	*e*S	**Sn**	**19 10 56.7**	**-0.9**
SRKR	**Sorokina**	**1.81**	**286**	*e*P	**Pn**	**19 10 34.6**	**-0.4**
ZLN	**Zelenaya**	**1.98**	**266**	*e*P	**Pn**	**19 10 37.4**	**+0.1**
ZLN				*e*S	**Sn**	**19 11 01.8**	**-0.9**
CIRR	**Tsirk**	**2.00**	**269**	*e*P	**Pn**	**19 10 37.7**	**+0.1**
LGNR	**Loginova**	**2.03**	**269**	*e*P	**Pn**	**19 10 38.6**	**+0.3**
BZGR	**Bezymyannyi-Gr**	**2.04**	**265**	*e*P	**Pn**	**19 10 38.5**	**+0.3**
KLY	**Klyuchi**	**2.05**	**275**	*e*P	**Pn**	**19 10 36.4**	**-1.8**
KRSR	**Krestovskiy**	**2.10**	**272**	*e*P	**Pn**	**19 10 39.5**	**+0.5**
BZWR	**Bezymyannyi-We**	**2.15**	**266**	*e*P	**Pn**	**19 10 40.2**	**+0.4**
BZMR	**Bezymyannaya**	**2.16**	**265**	*e*P	**Pn**	**19 10 40.1**	**+0.1**
MKZ	**Mys Kozlova**	**2.20**	**223**	*e*P	**Pn**	**19 10 39.4**	**-0.9**
MKZ				*e*S	**Sn**	**19 11 05.0**	**-3.0**
KIRR	**Kirishev**	**2.24**	**266**	*e*P	**Pn**	**19 10 41.4**	**+0.4**
KPT	**Kopyto**	**2.31**	**266**	*e*P	**Pn**	**19 10 42.4**	**+0.6**
KMNR	**Kamenistaya**	**2.33**	**261**	*e*P	**Pn**	**19 10 43.1**	**+0.9**
TUMD	**Tumrok D**	**2.43**	**248**	*e*P	**Pn**	**19 10 43.5**	**0.0**
TUMD				*e*S	**Sn**	**19 11 12.3**	**-1.4**
KOZ	**Kozyrevsk**	**2.49**	**269**	*e*P	**Pn**	**19 10 45.2**	**+0.9**
SRDR	**Sredinnyy**	**2.57**	**275**	*e*P	**Pn**	**19 10 46.0**	**+0.6**
OSSR	**Ossora**	**3.14**	**348**	*e*P	**Pn**	**19 10 53.3**	**0.0**
OSSR				*e*S	**Sn**	**19 11 27.1**	**-4.2**
ESO	**Esso**	**3.16**	**268**	*e*P	**Pn**	**19 10 54.7**	**+1.2**
PALN	**Palana**	**3.73**	**323**	*e*P	**Pn**	**19 11 03.7**	**+2.3**
SPN	**Mys Shipunski**	**3.98**	**221**	*e*P	**Pn**	**19 11 04.0**	**-0.7**
NLC	**Nalytchevo**	**4.18**	**226**	*e*S	**Sn**	**19 11 54.0**	**-2.8**
SDLR	**Sedlovina**	**4.29**	**229**	*e*P	**Pn**	**19 11 09.9**	**+0.7**
KRX	**Arik**	**4.33**	**232**	*e*P	**Pn**	**19 11 12.0**	**+2.2**
SMAR	**Somma**	**4.34**	**230**	*e*P	**Pn**	**19 11 10.8**	**+0.9**
AVH	**Avacha**	**4.36**	**230**	*e*P	**Pn**	**19 11 11.5**	**+1.4**
UGLR	**Uglovaya**	**4.37**	**229**	*e*P	**Pn**	**19 11 11.0**	**+0.9**
KOK	**Koryaka**	**4.39**	**231**	*e*P	**Pn**	**19 11 11.9**	**+1.4**
GNL	**Ganaly**	**4.44**	**238**	*e*P	**Pn**	**19 11 12.7**	**+1.4**
DALK	**Dalny**	**4.52**	**228**	*e*P	**Pn**	**19 11 13.8**	**+1.6**
PET	**Petropavlovsk**	**4.57**	**228**	*e*P	**Pn**	**19 11 13.0**	**+0.2**
PETK	**Petropavlovsk-**	**4.93**	**234**	Pn	**Pn**	**19 11 19.6**	**+1.8**
	0.6nm,0.3s,baz=70,slow=18,SNR=9.8						
PETK				Sn	**Sn**	**19 12 15.8**	**+0.5**
	0.9nm,0.3s,baz=71,slow=22,SNR=4.4						
	0.8nm,0.4s						
KRMR	**Karymshinskiy**	**4.93**	**230**	*e*P	**Pn**	**19 11 17.8**	**+0.1**
RUS	**Russkaya**	**5.07**	**224**	*e*P	**Pn**	**19 11 20.4**	**+0.7**
GRL	**Gorelyy**	**5.16**	**228**	*e*P	**Pn**	**19 11 23.0**	**+2.0**
MTVR	**Mutnovka**	**5.16**	**227**	*e*P	**Pn**	**19 11 22.8**	**+1.7**
ASAK	**Asacha**	**5.35**	**227**	*e*P	**Pn**	**19 11 25.4**	**+1.7**
ILAR	**Eielson Array**	**24.91**	**50**	P	**P**	**19 15 26.9**	**+0.1**
	0.3nm,0.7s,baz=269,slow=8.1,SNR=4.2						
	0.3nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**36.45**	**176**	T	T	19 55 50.5	
	baz=357,slow=76,SNR=152						
H11N3	**WAKE ISLAND Hy**	**36.47**	**176**	T	T	19 55 59.8	
	baz=357,slow=76,SNR=136						
H11N1	**WAKE ISLAND Hy**	**36.47**	**176**	T	T	19 56 01.2	
	baz=357,slow=76,SNR=137						
MKAR	**Makanchi Array**	**49.02**	**296**	P	**P**	**19 18 49.7**	**-1.1**
	0.1nm,0.3s,baz=39,slow=9.3,SNR=1.6						
	0.1nm,0.3s						
PDAR	**Pinedale Array**	**53.93**	**65**	P	**P**	**19 19 29.6**	**+1.9**
	0.5nm,0.7s,baz=306,slow=7.4,SNR=3.9						
	0.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**61.18**	**260**	P	**P**	**19 20 19.2**	**+0.3**
	0.3nm,0.7s,baz=20,slow=8.4,SNR=2.6						
	0.3nm,0.7s						
TXAR	**Lajitas Array**	**67.24**	**71**	P	**P**	**19 21 00.2**	**+1.6**
	0.6nm,0.7s,baz=301,slow=6.0,SNR=7.4						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**79.95**	**209**	P	**P**	**19 22 12.5**	**-0.6**
	0.6nm,1.1s,baz=5.1,slow=5.2,SNR=2.1						
	0.6nm,1.1s						
ASAR	**Alice Springs**	**83.62**	**208**	P	**P**	**19 22 33.0**	**+0.6**
	0.2nm,0.7s,baz=20,slow=5.9,SNR=1.7						
	0.2nm,0.7s						
QSPA	**South Pole Qui**	**145.94**	**180**	PKPbc	**PKPdf**	**19 29 41.5**	**-0.1**
	1.8nm,1.1s,baz=45,slow=2.9,SNR=2.5						

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*IDC **27** 19:18:31.8±1.0,2°.81S×138°.50E,h0^{km},mb3.6/6,mbtmp3.6/8,ML3.4/2,MS3.1/2,Error ellipse: s-maj=22.2km s-min=16.8km az=173.0*

ISC 27 19:18:36.9±0.9,**2°.9S**±0°.1×**138°.6E**±0°.2,**h35**^{km},**n10**,σ**0^s.83**/8,**mb3.6**/6,**Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**2.15**	**81**	Pn	**Pn**	**19 19 10.1**	**-0.2**
	6.5nm,0.3s,baz=248,slow=12,SNR=16						
JAY				Lg	Lg	19 19 42.5	
	6.1nm,0.3s,baz=342,slow=19,SNR=6.0						
	16nm,0.3s						
WRA	**Warramunga Arr**	**17.48**	**193**	P	**Pn**	**19 22 37.3**	**-0.8**
	0.2nm,0.3s,baz=18,slow=12,SNR=10						
	1.1nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.76**	**219**	LR	LR	19 31 25.0	
	comp=Z,32nm,20.6s,baz=268,slow=39						
ASAR	**Alice Springs**	**21.18**	**192**	P	**P**	**19 23 19.4**	**0.0**
	2.3nm,0.9s,baz=21,slow=9.4,SNR=17						
	2.3nm,0.9s						
JOW	**Kunigami**	**31.15**	**342**	LR	LR	19 35 47.3	
	comp=Z,62nm,20.5s,baz=114,slow=33						
SONM	**Songino Array**	**57.80**	**335**	P	**P**	**19 28 24.6**	**-0.2**
	0.2nm,0.3s,baz=152,slow=6.4,SNR=2.0						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**69.82**	**322**	P	**P**	**19 29 43.0**	**-0.9**
	0.6nm,0.9s,baz=128,slow=5.3,SNR=4.6						
	0.6nm,0.9s						
KURBB	**Kurchatov Arra**	**73.77**	**325**	P	**P**	**19 30 08.6**	**+1.1**
	0.2nm,0.4s,baz=117,slow=5.4,SNR=1.6						
	0.2nm,0.4s						
VNDA	**Vanda**	**75.65**	**175**	P	**P**	**19 30 18.8**	**+0.9**
	0.7nm,0.8s,baz=331,slow=4.5,SNR=2.6						
	0.7nm,0.8s						
QSPA	**South Pole Qui**	**87.09**	**180**	P	**P**	**19 31 18.9**	**-0.1**
	1.6nm,1.0s,baz=266,slow=4.3,SNR=2.6						
	1.6nm,1.0s						

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*IDC **27** 19:22:44.5±4.8,9°.49S×127°.79E,h82^{km}±52^{km},mb3.2/3,mbtmp3.4/7,ML3.4/4,Error ellipse: s-maj=47.8km s-min=18.0km az=35.0*

ISC 27 19:22:40.4±1.1,**9°.33S**±0°.09×**127°.98E**±0°.09,**h35**^{km},**n7**,σ**2^s.22**/11,**mb3.3**/3,**Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**4.35**	**258**	P	**Pn**	**19 23 44.4**	**+0.4**
	1.0nm,0.3s,baz=68,slow=11,SNR=1.7						
BATI				S	**Sn**	**19 24 33.4**	**-0.1**
	5.7nm,0.3s,baz=81,slow=19,SNR=1.2						
	11nm,0.6s						
FITZ	**Fitzroy Crossi**	**9.01**	**194**	P	**Pn**	**19 24 49.7**	**+1.6**
	0.6nm,0.3s,baz=326,slow=9.1,SNR=12						
FITZ				S	**Sn**	**19 26 26.3**	**-2.1**
	1.3nm,0.3s,baz=93,slow=19,SNR=1.9						
	1.1nm,0.5s						
WRA	**Warramunga Arr**	**12.21**	**150**	P	**Pn**	**19 25 34.9**	**+3.0**
	0.2nm,0.3s,baz=326,slow=15,SNR=7.3						
WRA				S	**Sn**	**19 27 43.2**	**-3.7**
	0.8nm,0.5s,baz=324,slow=25,SNR=6.6						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**15.34**	**159**	P	**Pn**	**19 26 16.8**	**+2.4**
	0.1nm,0.3s,baz=334,slow=12,SNR=6.8						
ASAR				S	**Sn**	**19 29 02.7**	**-0.7**
	0.5nm,0.6s,baz=342,slow=25,SNR=4.8						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**69.10**	**328**	P	**P**	**19 33 42.7**	**-0.3**
	0.2nm,0.7s,baz=138,slow=6.7,SNR=2.3						
	0.2nm,0.7s						
KURBB	**Kurchatov Arra**	**73.47**	**330**	P	**P**	**19 34 07.4**	**-1.8**
	0.1nm,0.4s,baz=130,slow=5.0,SNR=1.2						
	0.1nm,0.4s						
ILAR	**Eielson Array**	**96.29**	**25**	P	**P**	**19 36 04.9**	**-0.1**
	0.2nm,0.5s,baz=270,slow=7.3,SNR=1.8						
	0.2nm,0.5s						

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*JMA **27** 19:29:43.0±0.1,40°.1N±0°.3×142°.5E±0°.7,h34^{km}±1^{km},MD4.1/39,MV4.0/39,NE OFF IWATE PREF*

JMA Felt I J1 at NE OFF IWATE PREF .

*NIED **27** 19:29:43.0,40°.12N×142°.45E,h34^{km},MW4.1,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.00; $M_{\theta\theta}$-0.03; $M_{\phi\phi}$-0.97; $M_{r\theta}$0.54; $M_{\theta\phi}$-0.16; $M_{\phi r}$0.97; Fault plane solution: $M_0$1.49000×10^{15} NP1: ϕ_s177.00000°,δ23.00000°,λ65.00000°. NP2:ϕ_s24.00000°,δ69.00000°,λ100.00000°.*

*MOS **27** 19:29:43.0±1.1,40°.16N×142°.60E,h61^{km},mb4.6/10 Error ellipse: s-maj=9.2km s-min=5.5km az=84.6*

*IDC **27** 19:29:45.8±1.9,40°.12N×142°.53E,h70^{km}±15^{km},mb3.7/20,mbtmp4.0/26,MS3.2/9,Error ellipse: s-maj=20.3km s-min=10.9km az=102.0*

*NEIC **27** 19:29:46.3±1.0,40°.23N±0°.06×142°.23E±0°.09,h59^{km}±5^{km},mb4.4/24,Error ellipse: s-maj=10.5km s-min=8.6km az=119.0*

ISC 27 19:29:43.3±0.7,**40°.13N**±0°.04×**142°.49E**±0°.04,**h44**^{km}±6^{km},**n123**,σ**1^s.76**/114,**mb4.3**/41,**MS3.6**/5,**4C-18D**,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**0.52**	**249**	⇓*i*P	**Pn**	**19 29 53.3**	**-1.2**
JTH				⇓*e*S	**Sn**	**19 30 00.4**	**-2.0**
JKEN	**Kujiedanarisaw**	**0.61**	**278**	⇓P	**Pn**	**19 29 54.3**	**-1.3**
JKEN				⇓*e*S	**Sn**	**19 30 02.3**	**-2.1**
JKEN	**Kujiedanarisaw**	**0.61**	**278**	A	A	19 29 54.3	
	comp=N,6.0nm,0.8s,comp=E,8.0nm,0.6s						
MIYJ	**Miyakonagasawa**	**0.76**	**224**	⇓*i*P	**Pn**	**19 29 56.4**	**-1.1**
MIYJ				⇓*e*S	**Sn**	**19 30 06.1**	**-1.8**
JANG	**Nango**	**0.79**	**288**	⇓*i*P	**Pn**	**19 29 57.0**	**-1.0**
JANG				⇓*e*S	**Sn**	**19 30 06.9**	**-1.8**
JKZ	**Kuzumaki**	**0.91**	**261**	⇓*i*P	**Pn**	**19 29 59.1**	**-0.5**
OFUJ	**Ofunato**	**1.23**	**212**	P	**Pn**	**19 30 04.0**	**0.0**
OFUJ				S	**Sn**	**19 30 18.9**	**-0.4**
OFUJ	**Ofunato**	**1.23**	**212**	A	A	19 30 04.0	
	comp=N,5.0nm,0.7s,comp=E,5.0nm,1.4s						
JARK	**Aomorirokkasho**	**1.23**	**316**	⇓*i*P	**Pn**	**19 30 03.8**	**-0.2**
JARK				⇓*e*S	**Sn**	**19 30 18.8**	**-0.6**
JSZI	**Iwateshizukuis**	**1.25**	**252**	A	A	19 30 04.1	
	comp=N,10.0nm,5.7s,comp=E,11nm,0.6s						
JTM	**Tenmabayashi**	**1.27**	**302**		**Pn**	**19 30 04.3**	**-0.3**
JTM	**Tenmabayashi**	**1.27**	**302**	P	**Pn**	**19 30 04.7**	**+0.1**
JTM	**Tenmabayashi**	**1.27**	**302**	S	**Sn**	**19 30 20.9**	**+0.4**
JTM	**Tenmabayashi**	**1.27**	**302**	⇓*i*P	**Pn**	**19 30 04.6**	**0.0**
JAH	**Hinai**	**1.43**	**273**	⇓*e*P	**Pn**	**19 30 07.0**	**+0.3**
JAH				⇓*e*S	**Sn**	**19 30 24.9**	**+0.7**
JAHD	**Aomorihigashid**	**1.44**	**323**	A	A	19 30 07.2	
	comp=N,6.0nm,0.7s,comp=E,6.0nm,0.7s						
JMK	**Ichinoseki**	**1.53**	**220**	*e*P	**Pn**	**19 30 08.6**	**+0.5**
JMK	**Ichinoseki**	**1.53**	**220**	A	A	19 30 08.6	
	comp=N,5.0nm,0.3s,comp=E,6.0nm,0.4s						
JRG	**Rokugo**	**1.61**	**244**	A	A	19 30 09.5	
	comp=N,5.0nm,1.2s,comp=E,6.0nm,0.7s						
JNTW	**Noshirotokiwa**	**1.79**	**275**	A	A	19 30 12.2	
	comp=N,5.0nm,1.9s,comp=E,8.0nm,1.0s						
ERM	**Erimo**	**1.95**	**15**		**Pn**	**19 30 16.0**	**+2.1**
ERM	**Erimo**	**1.95**	**15**	P	**Pn**	**19 30 15.5**	**+1.6**
ERM	**Erimo**	**1.95**	**15**	P	**Pn**	**19 30 16.0**	**+2.1**
JEM	**Erimo**	**1.95**	**15**	P	**Pn**	**19 30 16.1**	**+2.2**
JOFO	**Osakifurukawao**	**1.96**	**219**	A	A	19 30 14.6	
	comp=N,9.0nm,1.5s,comp=E,9.0nm,5.0s						
JOU	**Okura**	**2.26**	**219**	A	A	19 30 19.0	
	comp=N,2.0nm,2.0s,comp=E,2.0nm,0.8s						
JMM	**Marumori**	**2.62**	**211**		**Pn**	**19 30 23.9**	**+0.8**
JMM	**Marumori**	**2.62**	**211**	P	**Pn**	**19 30 24.7**	**+1.6**
JYA	**Atsumi**	**2.64**	**235**	A	A	19 30 24.4	
	comp=N,5.0nm,2.1s,comp=E,4.0nm,1.3s						
JYAR	**Yonezawaarcadi**	**2.87**	**220**	A	A	19 30 27.7	
	comp=N,5.0nm,1.4s,comp=E,6.0nm,1.0s						
JSD	**Sado**	**3.90**	**239**	Pn	**Pn**	**19 30 41.2**	**+0.5**
JSD	**Sado**	**3.90**	**239**	P	**Pn**	**19 30 42.3**	**+1.6**
JKA	**Kamikawa-asahi**	**3.99**	**1**		**Pn**	**19 30 43.6**	**+1.8**
ASAJ	**Asahikawa**	**3.99**	**1**	P	**Pn**	**19 30 42.9**	**+1.0**
	comp=E,7.5nm,0.4s,baz=224,slow=10,SNR=33						
ASAJ				S	**Sn**	**19 31 31.0**	**+3.7**
	comp=E,23nm,0.6s,baz=250,slow=25,SNR=4.3						
ASAJ				LR	LR	19 32 42.4	
	comp=E,254nm,21.6s,baz=180,slow=44						
NMR	**Nemuro--Hokkai**	**4.04**	**36**	*e*P	**Pn**	**19 30 41.3**	**-1.3**
NMR				*e*S	**Sn**	**19 31 25.3**	**-3.3**
GLVR	**Golovnino**	**4.26**	**31**	*e*P	**Pn**	**19 30 45.9**	**+0.4**
GLVR				*e*S	**Sn**	**19 31 31.6**	**-2.3**
GLVR				pmax	pmax		
	comp=Z,84nm,0.3s						
GLVR				pmax	pmax		
	comp=N,60nm,0.1s						
GLVR				pmax	pmax		
	comp=E,22nm,0.1s						
GLVR				smax	smax		
	comp=N,225nm,0.6s						
GLVR				smax	smax		
	comp=E,401nm,0.8s						
RUSJ	**Misakicho**	**4.47**	**26**	*e*P	**Pn**	**19 30 49.3**	**+0.8**
RUSJ				*e*S	**Sn**	**19 31 38.3**	**-0.9**
YUK	**Yuzh-Kuril'sk**	**4.64**	**32**	*e*P	**Pn**	**19 30 51.2**	**+0.4**
YUK				*i* S	**Sn**	**19 31 39.6**	**-3.7**
YUK				pmax	pmax		
	comp=N,25nm,0.2s						
YUK				pmax	pmax		
	comp=E,44nm,0.2s						
YUK				pmax	pmax		
	comp=Z,129nm,0.2s						
YUK				smax	smax		
	comp=E,272nm,0.7s						
YUK				smax	smax		
	comp=N,403nm,0.6s						
MJAR	**Matsushiro Arr**	**4.92**	**225**	P	**Pn**	**19 30 57.2**	**+2.6**
	comp=N,20nm,0.6s,baz=32,slow=13,SNR=82						
MJAR				S	**Sn**	**19 31 57.0**	**+6.8**
	comp=N,2.2nm,0.6s,baz=19,slow=24,SNR=1.0						
MJAR				LR	LR	19 33 04.6	
	comp=N,191nm,19.7s,baz=69,slow=40						
MJB9	**Matsu-Tunnel**	**4.92**	**225**		**Pn**	**19 30 56.8**	**+2.1**
MAJO	**Matsushiro**	**4.92**	**225**		**Pn**	**19 30 56.8**	**+2.1**
MAJO	**Matsushiro**	**4.92**	**225**	P	**Pn**	**19 30 57.4**	**+2.8**
MAJO	**Matsushiro**	**4.92**	**225**	*c i*P	**Pn**	**19 30 57.3**	**+2.7**
SHO	**Shikotan**	**4.94**	**39**	*e*P	**Pn**	**19 30 54.5**	**-0.4**
SHO				*i* S	**Sn**	**19 31 45.2**	**-5.5**
SHO				pmax	pmax		
	comp=Z,12nm,0.2s						
SHO				smax	smax		
	comp=N,56nm,0.4s						
SHO				smax	smax		
	comp=E,98nm,0.4s						
JGF	**Kuroka**	**6.08**	**224**		**Pn**	**19 31 12.6**	**+2.0**
JGF	**Kuroka**	**6.08**	**224**	P	**Pn**	**19 31 13.5**	**+2.9**
INU	**Inuyama**	**6.45**	**224**	Pn	**Pn**	**19 31 17.1**	**+1.5**
INU	**Inuyama**	**6.45**	**224**	P	Pn	19 31 19.7	+4.1
KUR	**Kuril'sk**	**6.46**	**36**	P	**Pn**	**19 31 17.2**	**+1.5**
KUR				*e*S	**Sn**	**19 32 25.9**	**-2.1**
KUR				pmax	pmax		
	comp=Z,36nm,0.5s						
KUR				smax	smax		
	comp=N,64nm,0.7s						
KUR				smax	smax		
	comp=E,60nm,0.7s						
YSS	**Yuzhno-Sakhali**	**6.83**	**2**	*de*P	**Pn**	**19 31 22.1**	**+1.3**
YSS				pmax	pmax		
	comp=Z,29nm,2.5s						
USRK	**Ussuriysk Ar.**	**8.80**	**301**	P	**Pn**	**19 31 50.5**	**+2.7**
	comp=Z,6.9nm,0.7s,baz=108,slow=13,SNR=8.8						
USRK				LR	LR	19 34 58.2	
	comp=Z,104nm,21.0s,baz=152,slow=35						
JNU	**Nakatsue**	**11.65**	**237**	P	**Pn**	**19 32 28.8**	**+1.8**
	comp=Z,3.9nm,0.8s,baz=41,slow=11,SNR=2.1						
JNU				LR	LR	19 37 24.7	
	comp=Z,43nm,21.9s,baz=142,slow=39						
KSRS	**Korea Array**	**11.68**	**261**	P	Pn	19 32 31.8	+4.5
	comp=Z,0.8nm,0.6s,baz=85,slow=12,SNR=5.3						
KLR	**Kul'dur**	**11.88**	**324**	P	**Pn**	**19 32 33.4**	**+3.5**
	comp=Z,0.7nm,0.5s,baz=91,slow=15,SNR=1.6						
KLR				LR	LR	19 37 08.3	
	comp=Z,82nm,19.9s,baz=168,slow=37						
ZEA	**Zeya**	**17.09**	**328**	*e*P	**P**	**19 33 40.0**	**+0.1**
YAK	**Yakutsk**	**23.27**	**345**	P	**P**	**19 34 46.4**	**-0.2**
	comp=Z,12nm,0.6s,baz=79,slow=10,SNR=4.8						
	comp=Z,12nm,0.6s						
YAK	**Yakutsk**	**23.27**	**345**	⇓*e*P	**P**	**19 34 44.4**	**-2.3**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC	**Hu-ho-hao-te**	**23.48**	**282**	*e*P	**P**	**19 34 47.0**	**-2.0**
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,88nm,4.7s						
HHC				LR	LR		
	comp=N,79nm,12.2s						
HHC				LR	LR		
	comp=E,100nm,13.0s						
HHC				LR	LR		
	comp=Z,66nm,13.8s						
SEY	**Seymchan**	**23.60**	**11**	P	**P**	**19 34 50.0**	**+0.3**
	comp=Z,3.8nm,1.0s,baz=186,slow=12,SNR=7.0						
	comp=Z,3.8nm,1.0s						
SEY	**Seymchan**	**23.60**	**11**	⇓*e*P	**P**	**19 34 50.7**	**+1.0**
SEY				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ULN	**Ulaanbaatar**	**26.46**	**299**	P	**P**	**19 35 14.2**	**-2.0**
ULN	**Ulaanbaatar**	**26.46**	**299**	P	**P**	**19 35 14.2**	**-2.0**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM	**Songino Array**	**26.90**	**299**	P	**P**	**19 35 20.3**	**+0.2**
SONM	**Songino Array**	**26.90**	**299**	P	**P**	**19 35 20.4**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=103,slow=8.9,SNR=10						
	comp=Z,1.5nm,0.7s						
SONM	**Songino Array**	**26.90**	**299**	P	**P**	**19 35 20.3**	**+0.2**
SONM				pmax	pmax		
	comp=Z,1.0nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**29.17**	**127**	T	T	20 06 19.7	
	baz=319,slow=75,SNR=554						
H11N1	**WAKE ISLAND Hy**	**29.18**	**127**	T	T	20 06 24.3	
	baz=319,slow=75,SNR=518						
H11N3	**WAKE ISLAND Hy**	**29.19**	**127**	T	T	20 06 23.0	
	baz=319,slow=75,SNR=428						
H11S1	**WAKE ISLAND Hy**	**29.98**	**129**	T	T	20 07 24.1	
	baz=321,slow=76,SNR=49						
H11S3	**WAKE ISLAND Hy**	**29.99**	**129**	T	T	20 07 23.7	
	baz=321,slow=76,SNR=54						
H11S2	**WAKE ISLAND Hy**	**30.00**	**129**	T	T	20 07 14.9	
	baz=321,slow=76,SNR=58						
GTA	**Gaotai**	**32.58**	**283**	*e*P	**P**	**19 36 11.5**	**+1.0**
GTA				pP	pP	19 36 17.3	-5.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ZALV	**Zalesovo Beam**	**40.52**	**310**	P	**P**	**19 37 17.4**	**-0.3**
	comp=Z,1.5nm,0.6s,baz=92,slow=8.3,SNR=6.5						
	comp=Z,1.5nm,0.6s						
ZALV	**Zalesovo Beam**	**40.52**	**310**	*e*P	**P**	**19 37 17.7**	**-0.1**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
E19K	**Redstone River**	**42.36**	**30**	P	**P**	**19 37 34.5**	**+1.8**
H19K	**Roundabout Mou**	**42.42**	**33**	P	**P**	**19 37 34.6**	**+1.5**
H19K				IAmb	IAmb	19 37 51.3	
	comp=Z,6.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**43.16**	**253**	P	**P**	**19 37 40.3**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=51,slow=7.3,SNR=2.1						
	comp=Z,0.3nm,0.5s						
MK31	**Makanchi Array**	**43.26**	**300**	*ce*P	**P**	**19 37 40.2**	**-0.1**
MKAR	**Makanchi Array**	**43.26**	**300**		**P**	**19 37 40.0**	**-0.3**
MKAR	**Makanchi Array**	**43.26**	**300**	P	**P**	**19 37 40.0**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=85,slow=9.2,SNR=15						
	comp=Z,1.1nm,0.6s						
MAKZ	**Makanchi**	**43.47**	**300**		**P**	**19 37 41.4**	**-0.6**
MAKZ	**Makanchi**	**43.47**	**300**	P	**P**	**19 37 41.4**	**-0.6**
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURK	**Kurchatov**	**44.75**	**306**		**P**	**19 37 51.3**	**-0.8**
KURK	**Kurchatov**	**44.75**	**306**	P	**P**	**19 37 52.8**	**+0.7**
KURBB	**Kurchatov Arra**	**44.83**	**306**	P	**P**	**19 37 52.8**	**0.0**
	comp=Z,5.6nm,0.7s,baz=81,slow=8.6,SNR=30						
	comp=Z,5.6nm,0.7s						
E23K	**Chandalar**	**45.30**	**29**	IAmb	IAmb	19 38 36.6	
	comp=Z,4.9nm,0.9s						
ILAR	**Eielson Array**	**46.44**	**34**	P	**P**	**19 38 05.7**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=264,slow=6.4,SNR=7.7						
	comp=Z,0.7nm,0.7s						
D25K	**Kavik River**	**46.51**	**28**	IAmb	IAmb	19 38 48.1	
	comp=Z,5.0nm,1.2s						
EVN	**Everest**	**47.01**	**273**		**P**	**19 38 10.2**	**-0.8**
EVN				IAmb	IAmb	19 38 13.9	
	comp=Z,3.5nm,0.7s						
F26K	**Sheenjek River**	**47.38**	**30**	IAmb	IAmb	19 38 30.8	
	comp=Z,2.7nm,0.8s						
BOOM	**Boomskoye usch**	**48.88**	**296**	IAmb	IAmb	19 38 26.3	
	comp=Z,3.2nm,1.0s						
E28M	**Babbage River**	**49.02**	**28**	P	**P**	**19 38 27.4**	**+2.1**
BVAR	**Borovoye Array**	**49.16**	**311**	P	**P**	**19 38 26.9**	**+0.4**
	comp=Z,3.3nm,0.5s,baz=73,slow=8.5,SNR=28						
	comp=Z,3.3nm,0.5s						
BRVK	**Borovoye**	**49.22**	**311**		**P**	**19 38 27.0**	**+0.1**
BRVK				IAmb	IAmb	19 38 28.6	
	comp=Z,2.6nm,0.7s						
BRVK	**Borovoye**	**49.22**	**311**	P	**P**	**19 38 27.0**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
E29M	**Blow River**	**49.65**	**29**	P	**P**	**19 38 32.3**	**+2.3**
E29M				IAmb	IAmb	19 38 47.4	
	comp=Z,2.9nm,1.0s						
F30M	**Barrier River**	**50.56**	**29**	IAmb	IAmb	19 38 48.8	
	comp=Z,4.3nm,0.8s						
I30M	**Mount Dempster**	**50.80**	**32**		**P**	**19 38 40.5**	**+1.6**
I30M				IAmb	IAmb	19 38 41.8	
	comp=Z,2.6nm,0.8s						
KKAR	**Karatay Array**	**52.35**	**298**	IAmb	IAmb	19 38 51.5	
	comp=Z,2.5nm,0.8s						
SVE	**Sverdlovsk**	**53.42**	**317**	*e*P	**P**	**19 38 59.3**	**+1.0**
SVE				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ARTI	**Arti**	**54.74**	**317**		**P**	**19 39 07.8**	**-0.2**
ARTI	**Arti**	**54.74**	**317**	*d i*P	**P**	**19 39 08.1**	**+0.1**
ARTI				*PP	**sP**	**19 39 23.7**	**-1.6**
ARTI						19 40 07.7	
ARTI				S	**S**	**19 46 43.6**	**-1.4**
ARTI				SS	**SS**	**19 50 21.8**	**-6.1**
ARTI				pmax	pmax		
	comp=Z,11nm,0.7s						
SIMJ	**Simiganj**	**55.25**	**294**		**P**	**19 39 11.5**	**-0.6**
ABKAR	**Akbulak array**	**56.63**	**309**	IAmb	IAmb	19 39 22.5	
	comp=Z,3.1nm,0.6s						
KBL	**Kabul**	**57.14**	**290**		**P**	**19 39 25.1**	**-0.6**
KBL	**Kabul**	**57.14**	**290**	P	**P**	**19 39 25.1**	**-0.6**
KBL				pmax	pmax		
	comp=Z,9.0nm,1.0s						

KIRV	Kirov	58.31	322*c*	*i*P	P	19 39 33.5	+0.2
FITZ	Fitzroy Crossi	60.02	199	P	P	19 39 44.8	-0.7
	comp=Z,2.3nm,0.9s,baz=6.3,slow=9.2,SNR=2.1						
	comp=Z,2.3nm,0.9s						
WRA	Warramunga Arr	60.24	189	P	P	19 39 46.2	-0.8
	comp=Z,0.8nm,0.6s,baz=6.1,slow=7.1,SNR=15						
	comp=Z,0.8nm,0.6s						
KLMR	Klimovskoe	61.61	327	*e*P	P	19 39 53.7	-2.1
KLMR				pmax	pmax		
	comp=Z,14nm,1.8s						
ASAR	Alice Springs	63.97	189	P	P	19 40 12.1	+0.1
	comp=Z,0.5nm,0.7s,baz=356,slow=7.7,SNR=7.0						
	comp=Z,0.5nm,0.7s						
FINES	FINESS Array B	66.48	332	P	P	19 40 27.4	-0.3
	comp=Z,1.5nm,0.7s,baz=46,slow=6.0,SNR=5.0						
FINES				LR	LR	20 10 48.5	
	comp=Z,36nm,18.2s,baz=48,slow=37						
	comp=Z,1.5nm,0.7s						
KIV	Kislovodsk	69.53	311	*e*P	P	19 40 47.3	-0.1
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KBZ	Khabaz	69.54	310	P	P	19 40 46.7	-0.6
	comp=Z,2.4nm,0.6s,baz=29,slow=4.7,SNR=6.0						
	comp=Z,2.4nm,0.6s						
KBZ	Khabaz	69.54	310*c*	*i*P	P	19 40 48.4	+1.1
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HFS	Hagfors	71.62	336	P	P	19 40 59.7	0.0
	comp=Z,1.4nm,0.6s,baz=36,slow=8.1,SNR=6.0						
HFS				LR	LR	20 19 11.4	
	comp=Z,31nm,18.5s,baz=4.5,slow=41						
	comp=Z,1.4nm,0.6s						
NB2	NORSAR Subarra	71.66	337	P	P	19 41 00.1	+0.1
	comp=Z,1.3nm,0.6s,baz=40,slow=6.2						
NOA	NORSAR Array B	71.66	337	P	P	19 40 59.6	-0.4
	comp=Z,2.0nm,0.9s,baz=38,slow=6.0,SNR=7.1						
NOA				LR	LR	20 15 09.7	
	comp=Z,14nm,22.0s,baz=60,slow=38						
	comp=Z,2.0nm,0.9s						
AKASG	Malin Array Be	72.37	322	P	P	19 41 03.9	-0.5
	comp=Z,1.5nm,0.6s,baz=46,slow=5.8,SNR=7.0						
	comp=Z,1.5nm,0.6s						
BRTR	Keskin Array B	77.44	312	P	P	19 41 33.3	-0.7
	comp=Z,0.4nm,0.5s,baz=12,slow=7.4,SNR=2.2						
	comp=Z,0.4nm,0.5s						
EKA	Eskdalemuir Ar	80.50	341	P	P	19 41 50.2	-0.1
	comp=Z,0.6nm,0.5s,baz=32,slow=4.9,SNR=4.9						
	comp=Z,0.6nm,0.5s						
GERES	GERESS Array B	80.53	329	P	P	19 41 50.9	+0.2
	comp=Z,0.5nm,0.7s,baz=54,slow=9.0,SNR=4.2						
	comp=Z,0.5nm,0.7s						
ESDC	Sonseca Array	94.88	335	LR	LR	20 31 13.4	
	comp=Z,32nm,18.1s,baz=296,slow=39						

KRSC ***27*** *19:33:11.9±1.2, 56°.20N×164°.44E, h49^{km}±19^{km}, Ml4.3*
IDC ***27*** *19:33:11.4±0.7, 56°.16N×164°.33E, h0^{km}, mb3.6/19, mbtmp3.7/22, ML3.8/2, MS3.3/13, Error ellipse: s-maj=21.2km s-min=12.5km az=154.0*
MOS ***27*** *19:33:15.0±0.8, 56°.16N×164°.29E, h47^{km}, mb4.5/5, Error ellipse: s-maj=8.6km s-min=5.0km az=53.3*
ISC 27 19:33:13.8±0.5**, 56°.20N**±0°.05×**164°.40E**±0°.03**, h16**^{km}**, n126, σ1^{s}.46**/118**, mb3.8**/24**, MS3.3**/10**, 2C-6D, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.88	271	PN	Pb	19 33 27.9	-2.8
KBTR				S	Sb	19 33 39.8	-2.4
KBTR	Krutoberegovo	0.88	271	*e*P	Pb	19 33 27.9	-2.8
KBTR				*e*S	Sb	19 33 39.8	-2.4
KBG	Krutoberegovo	0.95	274	PN	Pb	19 33 28.8	-3.0
KBG	Krutoberegovo	0.95	274	*e*P	Pb	19 33 28.8	-3.0
BKI	Bering	1.34	138	PN	Pn	19 33 35.7	-2.1
BKI				S	Sn	19 33 52.7	-2.5
BKI	Bering	1.34	138	*e*P	Pn	19 33 35.8	-2.1
BKI				*e*S	Sn	19 33 52.8	-2.5
SMKR	Semkarok	1.67	284	PN	Pn	19 33 41.0	-1.5
SMKR	Semkarok	1.67	284	*e*P	Pn	19 33 41.0	-1.5
BDR	Baidarnaya	1.81	283	*e*S	Sn	19 34 05.2	-1.9
ZLN	Zelenaya	2.02	266	PN	Pn	19 33 47.1	-0.2
ZLN	Zelenaya	2.02	266	*e*P	Pn	19 33 47.2	-0.2
CIRR	Tsirk	2.04	269	PN	Pn	19 33 48.1	+0.5
CIRR	Tsirk	2.04	269	*e*P	Pn	19 33 48.2	+0.5
LGNR	Loginova	2.08	268	PN	Pn	19 33 48.4	+0.1
LGNR	Loginova	2.08	268	*e*P	Pn	19 33 48.4	+0.1
BZGR	Bezymyannyi-Gr	2.09	264	PN	Pn	19 33 48.1	-0.2
BZGR	Bezymyannyi-Gr	2.09	264	*e*P	Pn	19 33 48.2	-0.2
KLY	Klyuchi	2.09	275	PN	Pn	19 33 46.0	-2.2
KLY				S	Sn	19 34 10.7	-3.1
KLY	Klyuchi	2.09	275	*e*P	Pn	19 33 46.0	-2.2
KLY				*e*S	Sn	19 34 10.8	-3.1
KRSR	Krestovskiy	2.14	272	PN	Pn	19 33 47.9	-1.0
KRSR	Krestovskiy	2.14	272	*e*P	Pn	19 33 48.0	-1.0
BZWR	Bezymyannyi-We	2.20	265	PN	Pn	19 33 49.0	-0.8
BZWR	Bezymyannyi-We	2.20	265	*e*P	Pn	19 33 49.1	-0.8
BZMR	Bezymyannaya	2.21	265	PN	Pn	19 33 49.6	-0.3
BZMR	Bezymyannaya	2.21	265	*e*P	Pn	19 33 49.7	-0.3
KIRR	Kirishev	2.29	265	PN	Pn	19 33 50.9	-0.1
KIRR	Kirishev	2.29	265	*e*P	Pn	19 33 50.9	-0.1
KPT	Kopyto	2.35	266	PN	Pn	19 33 51.9	+0.1
KPT	Kopyto	2.35	266	*e*P	Pn	19 33 52.0	+0.1
KMNR	Kamenistaya	2.38	261	PN	Pn	19 33 52.8	+0.6
KMNR	Kamenistaya	2.38	261	*e*P	Pn	19 33 52.8	+0.6
TUMD	Tumrok D	2.47	248	PN	Pn	19 33 52.7	-0.7
TUMD	Tumrok D	2.47	248	*e*P	Pn	19 33 52.8	-0.7
KOZ	Kozyrevsk	2.54	269	PN	Pn	19 33 54.5	+0.2
KOZ	Kozyrevsk	2.54	269	*e*P	Pn	19 33 54.6	+0.2
SRDR	Sredinnyy	2.61	274	PN	Pn	19 33 56.0	+0.6
SRDR				S	Sn	19 34 26.3	-0.5
SRDR	Sredinnyy	2.61	274	*e*P	Pn	19 33 56.0	+0.6
SRDR				*e*S	Sn	19 34 26.3	-0.5
OSSR	Ossora	3.14	347	PN	Pn	19 34 01.0	-1.5
OSSR	Ossora	3.14	347	*e*P	Pn	19 34 01.0	-1.5
ESO	Esso	3.21	267	P	Pn	19 34 02.3	-1.2
ESO	Esso	3.21	267	*e*P	Pn	19 34 02.3	-1.2
SPN	Mys Shipunski	4.02	221	PN	Pn	19 34 13.5	-1.1
SPN	Mys Shipunski	4.02	221	*e*P	Pn	19 34 13.6	-1.1
NLC	Nalytchevo	4.22	226	PN	Pn	19 34 19.0	+1.6
NLC	Nalytchevo	4.22	226	*e*P	Pn	19 34 19.0	+1.6
SDLR	Sedlovina	4.33	230	PN	Pn	19 34 18.9	-0.2
SDLR	Sedlovina	4.33	230	*e*P	Pn	19 34 19.0	-0.2
TILK	Tilichiki	4.35	11	PN	Pn	19 34 19.2	0.0
TILK	Tilichiki	4.35	11	*e*P	Pn	19 34 19.3	0.0
KRX	Arik	4.38	232	PN	Pn	19 34 18.4	-1.3
KRX	Arik	4.38	232	*e*P	Pn	19 34 18.4	-1.3
SMAR	Somma	4.38	230	PN	Pn	19 34 19.4	-0.4
SMAR	Somma	4.38	230	*e*P	Pn	19 34 19.4	-0.4
AVH	Avacha	4.41	230	PN	Pn	19 34 19.9	-0.2
AVH	Avacha	4.41	230	*e*P	Pn	19 34 19.9	-0.2
UGLR	Uglovaya	4.41	229	PN	Pn	19 34 19.2	-0.9
UGLR	Uglovaya	4.41	229	*e*P	Pn	19 34 19.3	-0.9
KOK	Koryaka	4.43	231	PN	Pn	19 34 21.2	+0.8
KOK	Koryaka	4.43	231	*e*P	Pn	19 34 21.3	+0.8
GNL	Ganaly	4.49	239	PN	Pn	19 34 20.7	-0.5
GNL	Ganaly	4.49	239	*e*P	Pn	19 34 20.7	-0.5
DALK	Dalny	4.57	228	PN	Pn	19 34 21.8	-0.3
DALK	Dalny	4.57	228	*e*P	Pn	19 34 21.8	-0.3
PET	Petropavlovsk	4.61	229	*e*PN	Pn	19 34 22.1	-0.7
PET				*e*S	Sn	19 35 13.5	-2.5
PET				pmax	pmax		
	comp=Z,44nm,0.6s						
PET				smax	smax		
	comp=N,71nm,0.6s						
PET				smax	smax		
	comp=E,60nm,0.6s						
PET				MLR	MLR		
	comp=Z,200nm,12.0s						
PET	Petropavlovsk	4.61	229	*e*P	Pn	19 34 23.3	+0.5
PEA0B	Petropavlovsk-	4.97	234⇓	*e*PN	Pn	19 34 28.9	+1.1
PETK	Petropavlovsk-	4.97	234	Pn	Pn	19 34 28.1	+0.3
	comp=Z,4.7nm,0.8s,baz=74,slow=16,SNR=10						
PETK				Sn	Sn	19 35 23.2	-1.7
	comp=Z,0.3nm,0.3s,baz=62,slow=20,SNR=1.4						
PETK				LR	LR	19 36 32.2	
	comp=Z,278nm,19.3s,baz=52,slow=41						
KRMR	Karymshinskiy	4.97	230	PN	Pn	19 34 29.0	+1.3
KRMR	Karymshinskiy	4.97	230	*e*P	Pn	19 34 29.1	+1.3
RUS	Russkaya	5.11	225	PN	Pn	19 34 28.9	-0.7
RUS	Russkaya	5.11	225	*e*P	Pn	19 34 28.9	-0.7
GRL	Gorelyy	5.20	228	PN	Pn	19 34 31.7	+0.8
GRL	Gorelyy	5.20	228	*e*P	Pn	19 34 31.8	+0.8
MTVR	Mutnovka	5.21	227	PN	Pn	19 34 31.5	+0.4
MTVR	Mutnovka	5.21	227	*e*P	Pn	19 34 31.5	+0.4
APC	Apacha	5.34	235	PN	Pn	19 34 33.8	+1.1
APC	Apacha	5.34	235	*e*P	Pn	19 34 33.9	+1.1
ASAK	Asacha	5.39	228	PN	Pn	19 34 34.0	+0.4
ASAK	Asacha	5.39	228	*e*P	Pn	19 34 34.1	+0.4
SKR	Severo-Kuril’s	7.41	225	PN	Pn	19 35 03.3	+2.1
SKR	Severo-Kuril’s	7.41	225	*e*P	Pn	19 35 03.3	+2.1
MA2	Magadan	8.01	301	LR	LR	19 38 27.2	
	comp=Z,152nm,19.0s,baz=106,slow=40						
SEY	Seymchan	9.08	323	LR	LR	19 38 47.5	
	comp=Z,106nm,18.7s,baz=84,slow=37						
YSS	Yuzhno-Sakhali	16.27	244⇓	*e*P	P	19 37 06.8	+2.5
ASAJ	Asahikawa	18.38	238	P	P	19 37 27.4	-0.3
	comp=Z,0.1nm,0.3s,baz=345,slow=10,SNR=3.8						
	comp=Z,7.3nm,0.9s						
YAK	Yakutsk	18.58	303	P	Pn	19 37 30.1	+0.1
	comp=Z,1.1nm,0.3s,baz=77,slow=2.9,SNR=4.4						
	comp=Z,3.3nm,0.4s						
KLR	Kul'dur	20.82	264	LR	LR	19 45 37.9	
	comp=Z,67nm,20.8s,baz=58,slow=36						
ZEA	Zeya	21.30	279	*e*P	P	19 38 05.9	+6.5
USRK	Ussuriysk Ar.	23.73	253	LR	LR	19 48 04.9	
	comp=Z,84nm,18.3s,baz=40,slow=38						
COLA	College	24.45	50⇓	*e*P	P	19 38 40.1	+8.7
COLA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ILAR	Eielson Array	24.87	50	P	P	19 38 36.4	+1.1
	comp=Z,0.6nm,0.7s,baz=277,slow=6.4,SNR=4.4						
	comp=Z,0.6nm,0.7s						
MAJO	Matsushiro	26.43	233⇓	*e*P	P	19 38 55.1	+5.4
MAJO				pmax	pmax		
	comp=Z,32nm,1.7s						
MJAR	Matsushiro Arr	26.43	233	P	P	19 38 48.8	-0.8
	comp=Z,2.2nm,0.9s,baz=19,slow=8.2,SNR=9.7						
MJAR				LR	LR	19 49 06.2	
	comp=Z,95nm,20.3s,baz=26,slow=36						
	comp=Z,2.2nm,0.9s						
KSRS	Korea Array	30.71	248	P	P	19 39 26.8	-0.9
	comp=Z,0.3nm,0.3s,baz=39,slow=7.5,SNR=1.5						
	comp=Z,0.3nm,0.3s						
JNU	Nakatsue	32.65	239	LR	LR	19 52 04.9	
	comp=Z,80nm,18.8s,baz=139,slow=35						
DLBC	Dease Lake	34.23	58	LR	LR	19 54 46.2	
	comp=Z,9.8nm,18.2s,baz=142,slow=38						
ULN	Ulaanbaatar	35.30	281⇑	*e*P	P	19 40 13.4	+5.5
ULN				pmax	pmax		
	comp=Z,5.0nm,1.5s						
SONM	Songino Array	35.68	282	P	P	19 40 10.8	-0.3
	comp=Z,0.3nm,0.7s,baz=62,slow=8.6,SNR=8.8						
SONM				PcP	PcP	19 42 39.6	+0.5
	comp=Z,0.5nm,0.5s,baz=52,slow=2.6,SNR=3.6						
SONM				LR	LR	19 56 58.8	
	comp=Z,50nm,18.2s,baz=56,slow=40						
	comp=Z,0.3nm,0.7s						
H11N2	WAKE ISLAND Hy	36.46	176	T	T	20 19 10.5	
	baz=357,slow=76,SNR=77						
H11N3	WAKE ISLAND Hy	36.48	176	T	T	20 19 19.3	
	baz=357,slow=76,SNR=79						
H11N1	WAKE ISLAND Hy	36.48	176	T	T	20 19 10.0	
	baz=357,slow=76,SNR=97						
YKA	Yellowknife Ar	39.19	47	P	P	19 40 40.8	+0.3
	comp=Z,0.3nm,0.5s,baz=298,slow=7.9,SNR=2.1						
	comp=Z,0.3nm,0.5s						
RES	Resolute Bay	39.48	24	LR	LR	19 59 16.3	
	comp=Z,60nm,18.3s,baz=301,slow=40						
SPITS	Spitsbergen Ar	44.46	351	P	P	19 41 24.1	+0.6
	comp=Z,6.3nm,0.9s,baz=32,slow=4.9,SNR=5.0						
	comp=Z,6.3nm,0.9s						
GUMO	Guam	45.11	207	LR	LR	20 00 46.5	
	comp=Z,22nm,18.4s,baz=158,slow=37						
NEW	Newport	46.25	65	LR	LR	20 02 15.0	
	comp=Z,76nm,18.1s,baz=190,slow=38						
KURK	Kurchatov	48.22	302	P	P	19 41 54.5	+1.3
KURBB	Kurchatov Arra	48.32	302	P	P	19 41 54.5	+0.5
	comp=Z,0.1nm,0.3s,baz=59,slow=8.0,SNR=1.5						
	comp=Z,0.1nm,0.3s						
MK31	Makanchi Array	49.06	296⇓	*e*P	P	19 42 05.3	+5.5
MKAR	Makanchi Array	49.06	296	P	P	19 41 59.5	-0.3
	comp=Z,0.2nm,0.6s,baz=52,slow=6.5,SNR=5.7						
	comp=Z,0.2nm,0.6s						
BVAR	Borovoye Array	50.41	309	P	P	19 42 09.5	-0.4
	comp=Z,0.7nm,0.6s,baz=46,slow=8.5,SNR=4.7						
	comp=Z,0.7nm,0.6s						
BRVK	Borovoye	50.43	309⇓	*e*P	P	19 42 16.5	+6.4
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NVAR	Mina Array Bea	52.42	75	P	P	19 42 25.7	+0.2
	comp=Z,0.6nm,0.7s,baz=297,slow=10,SNR=3.9						
	comp=Z,0.6nm,0.7s						
PDAR	Pinedale Array	53.88	65	P	P	19 42 36.9	+0.7
	comp=Z,0.4nm,0.7s,baz=343,slow=4.6,SNR=3.9						
	comp=Z,0.4nm,0.7s						
ULM	Lac du Bonnet	54.89	51	P	P	19 42 43.3	+0.2
	comp=Z,1.0nm,0.5s,baz=313,slow=6.9,SNR=3.4						
	comp=Z,1.0nm,0.5s						
AAK	Ala-Archa	55.92	297⇑	*e*P	P	19 42 57.4	+6.5
AAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AKTO	Aktyubinsk	57.54	313	LR	LR	20 11 16.4	
	comp=Z,52nm,19.1s,baz=202,slow=40						
NOA	NORSAR Array B	61.20	345	P	P	19 43 27.5	+0.3
	comp=Z,0.7nm,0.9s,baz=17,slow=6.8,SNR=1.8						
	comp=Z,0.7nm,0.9s						
CMAR	Chiang Mai Arr	61.23	260	P	P	19 43 27.6	-0.3
	comp=Z,0.3nm,0.3s,baz=18,slow=7.2,SNR=8.9						
	comp=Z,0.3nm,0.3s						
HFS	Hagfors	61.70	344	P	P	19 43 30.9	+0.3
	comp=Z,1.3nm,0.8s,baz=45,slow=6.3,SNR=1.8						
	comp=Z,1.3nm,0.8s						
TXAR	Lajitas Array	67.19	71	P	P	19 44 07.6	+0.6
	comp=Z,0.8nm,0.8s,baz=302,slow=4.3,SNR=9.4						
	comp=Z,0.8nm,0.8s						
EKA	Eskdalemuir Ar	68.36	352	P	P	19 44 13.5	-0.4
	comp=Z,0.2nm,0.4s,baz=5.7,slow=9.2,SNR=5.4						
	comp=Z,0.2nm,0.4s						
WRA	Warramunga Arr	79.99	209	*e*P	P	19 45 27.6	+5.6
WRA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ASAR	Alice Springs	83.66	208	P	P	19 45 41.2	-0.1
	comp=Z,0.5nm,1.0s,baz=18,slow=4.6,SNR=2.3						
	comp=Z,0.5nm,1.0s						
ESDC	Sonseca Array	83.98	351	P	P	19 45 43.2	+0.2
	comp=Z,0.1nm,0.3s,baz=356,slow=6.2,SNR=5.6						
	comp=Z,0.1nm,0.3s						
QSPA	South Pole Qui	145.96	180	PKPbc	PKPdf	19 52 50.3	0.0
	comp=Z,3.3nm,0.8s,baz=295,slow=0.8,SNR=16						

IDC ***27*** *19:35:06.4±4.3, 0°.00S×123°.37E, h136^{km}±44^{km}, mb3.2/6, mbtmp3.7/8, Error ellipse: s-maj=37.1km s-min=15.5km az=62.0*
DJA ***27*** *19:35:07.4±0.5, 0°S±4°×12°3E±°, h135^{km}±6^{km}, M4.2/8, mB4.8/1, mb4.6/1, MLv4.0/8, Mw(mB)4.1/1*
ISC 27 19:35:08.0±0.7**, 0°.03S**±0°.06×**123°.22E**±0°.06**, h162**^{km}**, n16, σ2^{s}.75**/21**, mb3.5**/7**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	0.97	52	P	Pn	19 35 31.6	-2.1
KMSI				S	Sn	19 35 51.0	-2.4
LUWI	Luwuk	1.10	204	P	Pn	19 35 31.2	-3.6
LUWI				S	Sn	19 35 49.4	-6.0
MRSI	Marisa	1.37	291	P	Pn	19 35 34.1	-3.1
MRSI				S	Sn	19 35 53.9	-5.8
APSI	Ampana	1.80	241	P	Pn	19 35 39.4	-2.2
MPSI	Mapaga	3.34	276	P	Pn	19 35 59.1	-1.0
TTSI	Tana Toraja	4.53	229	P	Pn	19 36 14.6	-0.9
NLAI	Namlea	5.02	129	P	Pn	19 36 20.4	-1.6
KAPI	Kappang	6.04	215	P	Pn	19 36 36.7	+1.2
	6.3nm,0.3s,baz=61,slow=10,SNR=1.7						
KAPI				S	Sn	19 37 43.2	-0.9
	6.0nm,0.3s,baz=106,slow=16,SNR=1.7						
FITZ	Fitzroy Crossi	18.11	173	P	P	19 39 08.7	+0.9
	1.8nm,0.5s,baz=15,slow=7.9,SNR=14						
WRA	Warramunga Arr	22.59	152	P	P	19 39 55.6	+0.5
	1.1nm,0.5s,baz=332,slow=10,SNR=30						
	1.1nm,0.5s						
ASAR	Alice Springs	25.69	157	P	P	19 40 22.7	-0.6
	0.3nm,0.5s,baz=332,slow=8.3,SNR=8.5						
ASAR				PcP	PcP	19 43 51.1	+1.6
	0.4nm,0.5s,baz=351,slow=2.0,SNR=6.9						
	0.3nm,0.5s						
CMAR	Chiang Mai Arr	30.10	309	P	P	19 41 04.7	+2.1
	0.6nm,0.5s,baz=133,slow=6.8,SNR=6.9						
	0.6nm,0.5s						
MJAR	Matsushiro Arr	38.96	19	P	P	19 42 17.8	-0.6
	0.6nm,0.4s,baz=192,slow=8.8,SNR=2.4						
	0.6nm,0.4s						
SONM	Songino Array	49.87	345	P	P	19 43 46.4	+1.5
	0.5nm,0.5s,baz=168,slow=7.6,SNR=4.2						
	0.5nm,0.5s						
KSH	Kashi	58.34	318	P	P	19 44 49.8	+3.4
KSH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR	Makanchi Array	58.75	328	P	P	19 44 49.6	+0.7
	comp=Z,0.2nm,0.4s,baz=116,slow=7.6,SNR=6.0						
	comp=Z,0.2nm,0.4s						

IDC ***27*** *19:49:46.3±0.7, 1°.21N×97°.83E, h0^{km}, mb4.1/17, mbtmp4.1/18, ML3.9/1, MS3.4/4, Error ellipse: s-maj=21.8km s-min=14.0km az=60.0*
DJA ***27*** *19:49:50.9±0.2, 1°N±2°×9°8E±°, h10^{km}, M4.7/18, mB5.3/2, mb4.9/5, MLv4.7/18, Mw(mB)4.8/2*
NEIC ***27*** *19:49:51.7±1.5, 1°.43N±0°.08×97°.91E±0°.08, h22^{km}±7^{km}, mb4.4/22, Error ellipse: s-maj=13.0km s-min=9.4km az=220.0*
ISC 27 19:49:52.1±0.5**, 1°.34N**±0°.04×**97°.80E**±0°.04**, h35**^{km}**, n91, σ2^{s}.13**/83**, mb4.3**/31**, MS3.3**/3**, 1C-1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	Gunungsitoli	0.22	262	Pg	Pn	19 49 59.2	0.0
GSI				Sg	Sn	19 50 04.6	+0.6
GSI	Gunungsitoli	0.22	262	P	Pn	19 49 59.8	+0.6
GSI	Gunungsitoli	0.22	262	P	Pn	19 49 59.1	-0.1
GSI				S	Sn	19 50 04.6	+0.6
PBSI	Pulau Batu	1.46	161	P	Pn	19 50 17.2	+1.1
RPSI	Rantau Prapat	1.76	40		Pn	19 50 18.9	-1.2
RPSI	Rantau Prapat	1.76	40		Pn	19 50 19.2	-0.9
RPSI					Sn	19 50 45.9	+4.6
PSI	Prapat	1.84	38	Pn	Pn	19 50 19.2	-2.2
	17nm,0.3s,baz=216,slow=8.7,SNR=31						
PSI				Sn	Sn	19 50 45.9	+2.4
	58nm,0.3s,baz=156,slow=20,SNR=7.9						
PSI				LR	LR	19 50 51.2	
	comp=Z,444nm,21.7s,baz=175,slow=35						
PSI	Prapat	1.84	38	P	Pn	19 50 20.8	-0.6
MNSI	Mandailing Nat	1.86	107	P	Pn	19 50 20.1	-1.5
MNSI				S	Sn	19 50 46.7	+2.8
TSI	Tuntungan	2.28	20	P	Pn	19 50 28.3	+0.9
SISI	Saibi	2.94	154	P	Pn	19 50 38.8	+2.3
PPI	Padang Panjang	3.15	124	P	Pn	19 50 39.1	-0.2
MLSI	Meulaboh, Aceh	3.23	335	P	Pn	19 50 41.7	+1.4
BKNI	Bangkinang	3.40	107		Pn	19 50 43.4	+0.7
BKNI	Bangkinang	3.40	107	P	Pn	19 50 44.7	+2.0
BKNI	Bangkinang	3.40	107	P	Pn	19 50 44.5	+1.8
LHMI	Lhok Sumawe	3.96	348	Pn	Pn	19 50 52.0	+1.6
LHMI	Lhok Sumawe	3.96	348	P	Pn	19 50 53.3	+2.9
LHMI	Lhok Sumawe	3.96	348	P	Pn	19 50 51.1	+0.7
IPM	Ipoh	4.49	46		Pn	19 50 57.6	-0.1
IPM	Ipoh	4.49	46	P	Pn	19 50 58.8	+1.1
KULM	Kulim	4.85	36		Pn	19 51 01.4	-1.3
KULM	Kulim	4.85	36	P	Pn	19 51 02.4	-0.3
MYKOM	Kota Tinggi	6.07	86		Pn	19 51 19.4	0.0
MYKOM	Kota Tinggi	6.07	86	P	Pn	19 51 21.1	+1.7
SRIT	Nakonsritamara	7.43	14		Pn	19 51 37.5	-0.6
SRIT	Nakonsritamara	7.43	14	P	Pn	19 51 39.9	+1.7
MNAI	Manna	7.66	138	P	Pn	19 51 44.3	+3.0
MNAI	Manna	7.66	138	P	Pn	19 51 40.9	-0.4
DGPR	DIGLIPUR	12.71	338	*e*P	P	19 52 57.5	-3.7
DGPR				IAmb	IAmb	19 53 13.9	
	comp=Z,100nm,1.4s						
DGPR				*e*S	Sn	19 55 06.7	-4.2
CMAR	Chiang Mai Arr	17.05	4	Pn	Pn	19 53 45.7	-2.3
CMAR	Chiang Mai Arr	17.05	4	Pn	Pn	19 53 47.0	-1.0
	comp=Z,0.2nm,0.3s,baz=196,slow=12,SNR=14						
	comp=Z,1.9nm,0.9s						
CHTO	Chiang Mai	17.41	4		Pn	19 53 51.1	-1.3
PALK	Pallekele	18.03	290	LR	LR	19 59 39.7	
	comp=Z,113nm,21.4s,baz=116,slow=33						
SLVN	Son La	20.75	16		P	19 54 28.8	-1.3
MDRS	Chennai	20.93	305	*e*P	Pn	19 54 39.9	+5.3
MDRS				IAmb	IAmb	19 54 53.2	
	comp=Z,15nm,0.8s						
MDRS				*e*S	Sn	19 58 34.7	+4.4
KAPI	Kappang	22.82	106	LR	LR	20 04 36.8	
	comp=Z,96nm,20.7s,baz=268,slow=39						
IMP	Imphal	23.65	351	*e*P	P	19 55 08.2	+7.6
IMP				IAmb	IAmb	19 55 14.8	
	comp=Z,3.8nm,0.8s						
IMP				*e*S	S	19 59 21.6	+8.6
ZIRO	ZIRO	26.32	352⇓	*e*P	P	19 55 32.4	+7.5
ZIRO				IAmb	IAmb	19 55 36.6	
	comp=Z,16nm,0.5s						
ZIRO				*e*S	S	20 00 05.0	+9.2
H08S2	Diego Garcia H	26.77	250	T	T	20 22 53.6	
	baz=72,slow=75,SNR=328						
H08S3	Diego Garcia H	26.77	250	T	T	20 22 58.6	
	baz=72,slow=75,SNR=434						
H08S1	Diego Carcia H	26.79	250	T	T	20 22 59.7	
	baz=72,slow=75,SNR=120						
XAN	Xi'an	34.16	17	⇑P	P	19 56 32.5	-1.6
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GTA	Gaotai	37.94	3	*e*P	P	19 57 07.5	+1.0
GTA				pP	pP	19 57 11.8	-4.7
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NWAO	Narrogin (SRO)	38.71	153	LR	LR	20 12 37.5	
	comp=Z,46nm,19.7s,baz=120,slow=36						
WRA	Warramunga Arr	41.60	122	P	P	19 57 35.6	-1.6
	comp=Z,2.6nm,0.6s,baz=302,slow=8.9,SNR=32						
WRA				PcP	PcP	19 59 32.4	-1.6
	comp=Z,0.6nm,0.7s,baz=316,slow=2.6,SNR=2.1						
	comp=Z,2.6nm,0.6s						
WR8	Warramunga Arr	41.74	122	P	P	19 57 36.9	-1.4
WR8				IAmb	IAmb	19 57 42.7	
	comp=Z,6.7nm,0.6s						
AS31	Alice Springs	43.00	128	P	P	19 57 47.2	-1.3
ASAR	Alice Springs	43.00	128	P	P	19 57 47.0	-1.6
	comp=Z,2.4nm,0.7s,baz=298,slow=8.0,SNR=35						
ASAR				PcP	PcP	19 59 39.3	+0.7
	comp=Z,0.5nm,0.9s,baz=290,slow=3.2,SNR=2.3						
	comp=Z,2.4nm,0.7s						
KDJ	Kajisay	44.64	338	P	P	19 58 01.7	+0.2
KDJ				IAmb	IAmb	19 58 22.7	
	comp=Z,4.3nm,1.0s						
DRK	Karamyk	44.76	331	P	P	19 58 05.0	+2.3
KSRS	Korea Array	45.40	34	P	P	19 58 06.5	-1.0
	comp=Z,1.1nm,0.7s,baz=218,slow=9.8,SNR=5.5						
	comp=Z,1.1nm,0.7s						
SIMJ	Simiganj	45.54	328		P	19 58 12.6	+3.9
SIMJ				IAmb	IAmb	19 58 19.3	
	comp=Z,5.2nm,1.0s						
ARSB	Arslanbob	45.68	334	P	P	19 58 12.2	+2.5
ARSB				IAmb	IAmb	19 58 32.8	
	comp=Z,5.1nm,0.8s						
SONM	Songino Array	46.91	8	P	P	19 58 19.4	0.0
SONM				IAmb	IAmb	19 58 21.3	
	comp=Z,2.6nm,1.0s						
SONM	Songino Array	46.91	8	P	P	19 58 19.4	0.0
	comp=Z,2.6nm,0.8s,baz=193,slow=9.8,SNR=15						
SONM				PcP	PcP	19 59 52.6	+0.9
	comp=Z,0.2nm,0.4s,baz=212,slow=5.1,SNR=1.7						
	comp=Z,2.6nm,0.8s						
MKAR	Makanchi Array	47.26	346		P	19 58 22.1	+0.2
MKAR	Makanchi Array	47.26	346	P	P	19 58 22.8	+0.8
	comp=Z,4.2nm,0.7s,baz=160,slow=7.6,SNR=39						
	comp=Z,4.2nm,0.7s						
MAKZ	Makanchi	47.35	345		P	19 58 23.2	+0.5
MJAR	Matsushiro Arr	51.19	42	P	P	19 58 51.4	-0.8
	comp=Z,2.1nm,0.8s,baz=226,slow=5.5,SNR=4.6						
	comp=Z,2.1nm,0.8s						
KURBB	Kurchatov Arra	51.76	344	P	P	19 58 57.2	+1.1
	comp=Z,2.2nm,0.7s,baz=165,slow=7.0,SNR=24						
	comp=Z,2.2nm,0.7s						
KURK	Kurchatov	51.82	345		P	19 58 57.7	+1.1
KURK				IAmb	IAmb	19 59 08.9	
	comp=Z,4.1nm,0.9s						
USRK	Ussuriysk Ar.	52.35	31	P	P	19 59 00.5	-0.1
	comp=Z,1.8nm,0.6s,baz=212,slow=6.5,SNR=2.9						
	comp=Z,1.8nm,0.6s						
STKA	Stephens Creek	53.01	133	P	P	19 59 04.5	-1.3
	comp=Z,4.6nm,0.7s,baz=310,slow=6.8,SNR=9.9						
	comp=Z,4.6nm,0.7s						
ZAA0	Zalesovo Array	53.52	350	IAmb	IAmb	19 59 11.9	
	comp=Z,6.7nm,1.1s						
ZALV	Zalesovo Beam	53.52	350		P	19 59 08.9	-0.2
ZALV	Zalesovo Beam	53.52	350	P	P	19 59 09.4	+0.3
	comp=Z,3.4nm,0.3s,baz=174,slow=6.0,SNR=19						
	comp=Z,3.4nm,0.3s						
BVAR	Borovoye Array	56.32	340	P	P	19 59 30.1	+0.7

	comp=Z,1.8nm,0.5s,baz=142,slow=7.5,SNR=8.3						
	comp=Z,1.8nm,0.5s						
BRVK	**Borovoye**	**56.38**	**340**		**P**	**19 59 27.6**	**-2.2**
BRVK				IAmb	IAmb	19 59 50.7	
	comp=Z,2.8nm,0.7s						
AB31	**Akbulak array**	**57.68**	**332**	IAmb	IAmb	19 59 50.4	
	comp=Z,2.5nm,0.7s						
ABKAR	**Akbulak array**	**57.68**	**332**		**P**	**19 59 39.7**	**+0.7**
ABKAR	**Akbulak array**	**57.68**	**332**	IAmb	IAmb	19 59 50.4	
	comp=Z,2.5nm,0.7s						
H04N2	**CROZET ISLANDS**	**62.22**	**214**	T	T	21 07 11.1	
	baz=54,slow=74,SNR=134						
H04N1	**CROZET ISLANDS**	**62.23**	**214**	T	T	21 07 11.6	
	baz=54,slow=74,SNR=143						
H04N3	**CROZET ISLANDS**	**62.24**	**214**	T	T	21 07 10.3	
	baz=54,slow=74,SNR=122						
H04S1	**CROZET ISLANDS**	**62.55**	**214**	T	T	21 07 33.9	
	baz=53,slow=76,SNR=16						
H04S3	**CROZET ISLANDS**	**62.57**	**214**	T	T	21 07 33.1	
	baz=53,slow=76,SNR=17						
H04S2	**CROZET ISLANDS**	**62.57**	**214**	T	T	21 07 35.1	
	baz=53,slow=76,SNR=18						
ARTI	**Arti**	**63.33**	**337**	P	**P**	**20 00 19.0**	**+1.4**
KBZ	**Khabaz**	**64.36**	**319**	P	**P**	**20 00 25.9**	**+1.3**
	comp=Z,1.3nm,0.7s,baz=68,slow=6.0,SNR=3.5						
	comp=Z,1.3nm,0.7s						
BRTR	**Keskin Array B**	**69.46**	**312**	P	**P**	**20 00 56.7**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=132,slow=9.5,SNR=1.9						
	comp=Z,0.3nm,0.5s						
LSZ	**Lusaka**	**70.72**	**253**	LR	LR	20 27 31.7	
	comp=Z,42nm,19.5s,baz=138,slow=32						
TIXI	**Tiksi**	**72.95**	**10**	P	**P**	**20 01 17.1**	**-0.5**
AKASG	**Malin Array Be**	**75.51**	**322**	P	**P**	**20 01 33.3**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=100,slow=1.0,SNR=1.6						
	comp=Z,0.2nm,0.3s						
BURAR	**Bucovina Array**	**77.32**	**319**	P	**P**	**20 01 44.7**	**+1.3**
BUR08	**Bucovina Ar. S**	**77.33**	**319**	P	**P**	**20 01 43.0**	**-0.5**
BUR08				IAmb	IAmb	20 01 55.8	
	comp=Z,5.6nm,1.2s						
FINES	**FINESS Array B**	**80.15**	**332**	P	**P**	**20 01 58.8**	**+0.2**
	comp=Z,1.5nm,0.8s,baz=131,slow=7.8,SNR=5.5						
	comp=Z,1.5nm,0.8s						
ARCES	**ARCESS Array B**	**82.61**	**340**	P	**P**	**20 02 12.1**	**+0.7**
	comp=Z,1.8nm,0.8s,baz=39,slow=4.7,SNR=4.8						
	comp=Z,1.8nm,0.8s						
HFS	**Hagfors**	**85.90**	**330**	P	**P**	**20 02 26.8**	**-1.5**
	comp=Z,1.7nm,0.8s,baz=94,slow=4.6,SNR=1.9						
	comp=Z,1.7nm,0.8s						
TXAR	**Lajitas Array**	**143.24**	**32**	PKP	**PKPdf**	**20 09 22.7**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=347,slow=3.1,SNR=3.9						
CPUP	**Villa Florida**	**145.50**	**222**	PKPbc	**PKPdf**	**20 09 25.5**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=152,slow=1.3,SNR=3.5						

*SJA **27** 19:49:49.8±0.7, 30°.74S×71°.57W, h17^{km}±2^{km}, ML3.7, MW3.6*

*GUC **27** 19:49:53.1±0.7, 30°.77S×71°.38W, h51^{km}±2^{km}, ML3.8*

ISC 27 19:49:52.8±1.2**, 30°.79S**±0°.02×**71°.22W**±0°.03**, h17^{km}**±9^{km}**, n44,** σ**1^{s}78**/77**, 3C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.38**	**288⇑**	*e*P	**Pb**	**19 50 01.4**	**+0.4**
CO06				*e*S	**Sb**	**19 50 07.8**	**+1.3**
CO06				IAML		19 50 08.7	
	comp=N,7μm,0.2s						
CO02	**Combarbal**	**0.45**	**156⇑**	*e*P	**Pn**	**19 50 04.8**	**+0.2**
CO02				*e*S	**Sn**	**19 50 13.3**	**+1.0**
CO02	**Combarbal**	**0.45**	**156**	*e*P	**Pn**	**19 50 04.5**	**-0.1**
CO02				*e*S	**Sn**	**19 50 13.1**	**+0.8**
CO02				IAML		19 50 14.1	
	comp=Z,9μm,0.2s						
CO03	**El Pedregal**	**0.46**	**96⇓**	*e*P	**Pn**	**19 50 05.4**	**+0.8**
CO03				*e*S	**Sn**	**19 50 14.5**	**+2.1**
CO03				IAML		19 50 15.3	
	comp=E,5μm,0.3s						
CO03	**El Pedregal**	**0.46**	**96**	*e*P	**Pn**	**19 50 05.2**	**+0.6**
CO03				*e*S	**Pn**	**19 50 05.4**	**+0.8**
CO03				IAML		19 50 15.0	
	comp=Z,3μm,0.5s						
GO04	**Tololo Observa**	**0.71**	**30**	*e*P	**Pn**	**19 50 08.1**	**-0.1**
GO04				*e*S	**Sn**	**19 50 19.7**	**+0.8**
GO04	**Tololo Observa**	**0.71**	**30**	*e*P	**Pn**	**19 50 08.0**	**-0.3**
GO04				*e*S	**Sn**	**19 50 20.0**	**+1.0**
GO04				IAML		19 50 20.6	
	comp=Z,11μm,0.2s						
CO05	**La Serena**	**0.87**	**359**	*e*P	**Pb**	**19 50 09.2**	**-0.2**
CO05				*e*S	**Sg**	**19 50 20.9**	**-0.3**
CO01	**Juntas del Tor**	**1.27**	**50⇓**	*e*P	**Pg**	**19 50 17.1**	**-0.1**
CO01				*e*S	**Sg**	**19 50 35.0**	**+1.1**
CO01				IAML		19 50 35.5	
	comp=N,4μm,0.3s						
CO01	**Juntas del Tor**	**1.27**	**50**	*e*P	**Pg**	**19 50 17.1**	**-0.1**
CO01				*e*S	**Sg**	**19 50 35.2**	**+1.4**
CO01				IAML		19 50 35.2	
	comp=Z,1μm,0.2s						
VA06	**Catapilco**	**1.77**	**182⇑**	*e*P	**Pn**	**19 50 22.0**	**-0.5**
VA06				*e*S	**Sn**	**19 50 44.2**	**-0.4**
VA06				IAML		19 50 49.7	
	comp=N,1μm,0.2s						
LCO	**Las Campanas**	**1.83**	**14**	*e*P	**Pn**	**19 50 23.1**	**-0.6**
LCO				*e*S	**Sn**	**19 50 46.4**	**-0.2**
LCO	**Las Campanas**	**1.83**	**14**	*e*P	**Pn**	**19 50 23.5**	**-0.2**
LCO				*e*S	**Sn**	**19 50 46.9**	**+0.3**
LCO				IAML		19 50 49.8	
	comp=Z,2μm,0.3s						
ACCO	**Cerro Coronel**	**1.86**	**84**	*e*P	**Pg**	**19 50 28.0**	**-0.6**
ACCO				*e*S	**Sn**	**19 50 41.0**	**-6.4**
RTLS	**Leoncito**	**1.93**	**122**	*e*P	**Pb**	**19 50 28.9**	**+1.4**
RTLS				*e*S	**Sn**	**19 50 50.5**	**+1.6**
RTLS				IAML		19 51 04.6	
	comp=Z,760nm,0.2s						
VA03	**San Esteban**	**2.05**	**164**	*e*P	**Pn**	**19 50 27.1**	**+0.6**
VA03				*e*S	**Sn**	**19 50 52.7**	**+1.1**
VA03				IAML		19 50 57.1	
VA03	**San Esteban**	**2.05**	**164**	*e*P	**Pn**	**19 50 26.5**	**0.0**
VA03				IAML		19 51 02.1	
	comp=Z,444nm,0.2s						
ROCH	**El Roble**	**2.18**	**175**	*e*P	**Pn**	**19 50 28.4**	**-0.1**
ROCH				*e*S	**Sn**	**19 50 55.7**	**+0.5**
ROCH				IAML		19 51 03.3	
	comp=N,637nm,0.6s						
ROC1	**El Roble**	**2.18**	**176**	*e*S	**Sb**	**19 50 59.1**	**+0.2**
ZON	**Zonda**	**2.30**	**110**	*e*P	**Pb**	**19 50 33.4**	**-0.4**
ZON				*e*S	**Sg**	**19 51 07.0**	**+0.1**
PEL	**Peldehue**	**2.39**	**169**	*e*P	**Pn**	**19 50 31.6**	**+0.5**
PEL				*e*S	**Sn**	**19 51 01.0**	**+1.0**
PEL				IAML		19 51 11.5	
	comp=E,321nm,0.3s						
PEL	**Peldehue**	**2.39**	**169**	*e*P	**Pn**	**19 50 31.9**	**+0.8**
PEL				*e*S	Sn	19 50 46.6	-13
PEL				IAML		19 51 14.2	
	comp=Z,197nm,0.3s						
SJA	**San Juan**	**2.39**	**109**	*e*P	Pn	19 50 23.6	-7.5
SJA				*e*S	**Sn**	**19 50 51.5**	**-8.7**
SJA				IAML		19 50 52.0	
	comp=Z,261nm,0.3s						
RTLL	**Cerro Villicun**	**2.41**	**104**	*e*P	**Pb**	**19 50 34.5**	**-1.2**
RTLL				*e*S	**Sg**	**19 51 09.1**	**-1.3**
MT02	**Curacav**	**2.46**	**178**	*e*P	**Pn**	**19 50 31.3**	**-0.8**
MT02				*e*S	Sn	19 50 47.4	-14
MT02				IAML		19 51 12.5	
	comp=Z,208nm,0.5s						
MT10	**Hacienda Santa**	**2.54**	**167⇓**	*e*P	**Pn**	**19 50 34.0**	**+0.7**
AC04	**Llanos de Chal**	**2.58**	**3**	*e*P	**Pn**	**19 50 33.1**	**-0.7**
AC04				*e*S	**Sn**	**19 51 03.9**	**-0.8**
AC04				IAML		19 51 13.7	
	comp=E,267nm,0.3s						
AC04	**Llanos de Chal**	**2.58**	**3**	*e*P	**Pn**	**19 50 33.3**	**-0.4**
AC04				*e*S	**Sn**	**19 51 02.5**	**-2.2**
AC04				IAML		19 51 15.4	
	comp=Z,215nm,0.6s						
MT05	**Renca**	**2.62**	**171**	*e*P	**Pn**	**19 50 35.0**	**+0.6**
MT05				*e*S	**Sn**	**19 51 06.5**	**+0.7**
MT05				IAML		19 51 15.7	
	comp=E,850nm,0.5s						
MT05	**Renca**	**2.62**	**171**	*e*P	**Pn**	**19 50 36.0**	**+1.6**
MT05				*e*S	**Sb**	**19 51 10.7**	**-0.6**
MT05				IAML		19 51 20.3	
	comp=Z,213nm,0.2s						
FCH	**Farellones**	**2.65**	**163**	*e*P	**Pn**	**19 50 35.9**	**+1.0**
FCH				IAML		19 51 18.9	
	comp=E,255nm,0.2s						
MT14	**Cerro Cal¡n**	**2.66**	**168**	*e*P	**Pn**	**19 50 35.7**	**+0.8**
MT14				IAML		19 51 15.3	
	comp=N,537nm,0.3s						
CFA	**Coronel Fontan**	**2.68**	**108**	*e*P	**Pn**	**19 50 37.7**	**+2.6**
CFA				*e*S	**Sb**	**19 51 15.8**	**+2.9**
AGUA	**GUANDACOL**	**2.69**	**62**	*e*P	Pn	19 50 24.9	-11
AGUA				*e*S	**Sg**	**19 51 21.3**	**+1.8**
AGUA				IAML		19 51 23.1	
	comp=Z,394nm,0.5s						
ASAL	**Salagasta**	**2.71**	**132**	*e*P	**Pb**	**19 50 39.2**	**-1.6**
ASAL				*e*S	**Sb**	**19 51 16.8**	**+3.0**
MT04	**Ro Olivares**	**2.76**	**161**	*e*P	**Pn**	**19 50 38.5**	**+2.1**
MT04				*e*S	**Sb**	**19 51 15.3**	**-0.1**
MT04				IAML		19 51 18.2	
	comp=Z,232nm,0.6s						
MT08	**Bocatoma Ro**	**2.83**	**159**	*e*P	Pn	19 50 31.9	-5.5
MT08				*e*P	**Pb**	**19 50 40.4**	**-2.7**
MT08				*e*S	**Sb**	**19 51 18.9**	**+1.3**
MT08				IAML		19 51 20.9	
	comp=Z,164nm,0.4s						
MT15	**Las Vizcachas**	**2.86**	**168**	*e*P	**Pn**	**19 50 37.8**	**+0.1**
MT15				*e*S	**Sn**	**19 51 12.3**	**+0.6**
MT15				IAML		19 51 28.6	
	comp=E,630nm,0.4s						
MT01	**Popeta**	**3.06**	**181**	*e*P	**Pn**	**19 50 39.8**	**-0.6**
MT01				*e*S	**Sn**	**19 51 16.2**	**-0.4**
MT01				IAML		19 51 28.1	
	comp=E,250nm,0.3s						
MT01	**Popeta**	**3.06**	**181**	*e*P	**Pn**	**19 50 39.9**	**-0.6**
MT01				*e*S	**Sn**	**19 51 17.9**	**+1.3**
MT01				IAML		19 51 28.8	
	comp=Z,121nm,0.2s						
LMEL	**Las Melosas**	**3.17**	**165**	*e*P	**Pn**	**19 50 43.8**	**+1.9**
LMEL				*e*S	**Sb**	**19 51 24.0**	**-3.0**
LMEL				IAML		19 51 26.6	
	comp=Z,134nm,0.5s						
AVFE	**Valle Fertil**	**3.24**	**89**	*e*P	**Pn**	**19 50 45.4**	**+2.5**
AVFE				IAML		19 51 45.7	
	comp=Z,72nm,0.5s						
GO03	**Copiapo**	**3.30**	**15**	*e*P	**Pn**	**19 50 44.2**	**+0.5**
GO03				*e*S	**Sn**	**19 51 25.5**	**+2.9**
GO03				IAML		19 51 49.3	
	comp=Z,168nm,0.4s						
VCA	**Vinchina**	**3.32**	**53**	*e*S	**Sb**	**19 51 29.6**	**-1.9**
VCA				IAML		19 51 42.8	
	comp=Z,348nm,0.4s						

*IDC **27** 19:51:51.7±1.4, 54°.51N×118°.14W, h0^{km}, mbtmp3.4/4, ML3.3/4, Error ellipse: s-maj=34.6km s-min=7.9km az=91.0*

*PGC **27** 19:51:53.0±0.2, 54°.48N×117°.15W, h1^{km}, ML3.9/9, 23km west of Fox Creek, Alberta Alberta, Canada Induced.*

ISC 27 19:51:51.9±0.7**, 54°.35N**±0°.03×**117°.54W**±0°.04**, h0^{km}, n29,** σ**2^{s}44**/41**, Alberta**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRLDA	**Berland Lookou**	**0.27**	**163**	P	**Pb**	**19 52 00.2**	**+0.4**
BRLDA				S	**Sb**	**19 52 04.7**	**-0.3**
BDMTA	**Bald Mountain**	**0.92**	**301**	P	**Pn**	**19 52 11.6**	**-0.7**
BDMTA				S	**Sn**	**19 52 24.8**	**-1.5**
STPRA	**Salt Prairie L**	**1.64**	**36**	Pn	**Pn**	**19 52 21.1**	**-1.0**
STPRA				Sg	**Sn**	**19 52 40.8**	**-3.1**
WTMTA	**White Mountain**	**1.66**	**325**	Pn	**Pg**	**19 52 23.7**	**-0.1**
WTMTA				Sg	**Sg**	**19 52 45.8**	**+0.5**
BMTB	**Bullhead Mount**	**3.13**	**305**	Pn	**Pn**	**19 52 44.3**	**+1.7**
BMTB				Pg	**Pg**	**19 52 51.4**	**-0.5**
LLLB	**Lillooet**	**4.59**	**217**	Pg	**Pg**	**19 53 18.8**	**-1.1**
LLLB				Sg	**Sg**	**19 54 17.0**	**-2.3**
FNSB	**Fort Nelson**	**5.31**	**329**	Pn	**Pn**	**19 53 12.3**	**0.0**
WSLR	**Whistler**	**5.37**	**220**	Pg	**Pg**	**19 53 33.4**	**-1.3**
WSLR				Sg	**Sg**	**19 54 42.5**	**-1.8**
HSPGA	**Hill Springs,**	**5.55**	**153**	Pn	**Pn**	**19 53 18.0**	**+2.2**
HSPGA				Sn	**Sn**	**19 54 18.2**	**-2.1**
NEW	**Newport**	**6.10**	**177**	Pn	**Pn**	**19 53 25.5**	**+2.1**
	1.0nm,0.3s,baz=358,slow=12,SNR=6.9						
NEW				Pg	**Pb**	**19 53 42.7**	**+3.7**
	2.8nm,0.3s,baz=359,slow=14,SNR=9.2						
NEW				Sn	**Sn**	**19 54 37.4**	**+3.6**
	1.1nm,0.3s,baz=3.2,slow=11,SNR=5.2						
NEW				Lg	Lg	19 55 05.2	
	5.8nm,0.3s,baz=66,slow=19,SNR=7.8						
	2.0nm,0.3s						
B08A	**Colville Reser**	**6.11**	**191**	Pn	**Pn**	**19 53 26.1**	**+2.7**
B08A				Sn	**Sn**	**19 54 34.0**	**0.0**
B08A				Sg	**Sg**	**19 55 03.5**	**-4.4**
MKRVA	**Milk River, Al**	**6.32**	**143**	Pn	**Pn**	**19 53 27.4**	**+0.9**
BBB	**Bella Bella**	**6.70**	**255**	Sg	**Sg**	**19 55 23.3**	**-3.7**
BSMT	**Bassoo Peak**	**6.74**	**164**	Pn	**Pn**	**19 53 33.3**	**+1.1**
BSMT				Pg	Pb	19 53 55.5	+5.6
JCW	**Jim Creek**	**6.75**	**206**	Sg	**Sg**	**19 55 25.0**	**-3.7**
YBMT	**Yellow Bay**	**6.87**	**160**	Pn	**Pn**	**19 53 34.4**	**+0.5**
YBMT				Pg	**Pb**	**19 53 56.7**	**+4.6**
B926	**Mesachie Lake**	**6.89**	**219**	Sg	**Sg**	**19 55 31.8**	**-1.3**
CLRS	**Cowichan Lake**	**6.89**	**219**	Pg	**Pg**	**19 54 01.8**	**-2.1**
CLRS				Sg	**Sg**	**19 55 30.8**	**-2.4**
JTMT	**Jette**	**6.92**	**161**	Pn	**Pn**	**19 53 34.7**	**0.0**
JTMT				Pg	Pb	19 53 58.3	+5.2
BEAVL	**Fort Liard**	**7.12**	**328**	Pn	**Pn**	**19 53 36.5**	**-0.8**
LTY	**Liberty**	**7.37**	**197**	Sg	**Sg**	**19 55 43.4**	**-5.2**
FMW	**Mount Fremont**	**7.88**	**201**	Sg	**Sg**	**19 56 02.5**	**-2.2**
YKA	**Yellowknife Ar**	**8.31**	**9**	Pn	**Pn**	**19 53 49.9**	**-3.6**
	0.4nm,0.3s,baz=195,slow=12,SNR=10						
YKA				Sn	Sn	19 55 19.7	-8.2
	2.2nm,0.3s,baz=190,slow=29,SNR=6.1						
YKA				Lg	Lg	19 56 05.8	
	4.1nm,0.3s,baz=190,slow=27,SNR=11						
	0.5nm,0.4s						
YKAW1	**Yellowknife Wh**	**8.31**	**10**	Sg	Sb	19 56 04.5	+8.6
YKAW3	**Yellowknife Wh**	**8.38**	**9**	Pn	**Pn**	**19 53 51.0**	**-3.5**
YKAW3				Sn	Sn	19 55 18.7	-11
R33M	**Jennings River**	**8.91**	**310**	Pn	**Pn**	**19 54 02.2**	**+0.2**
PDAR	**Pinedale Array**	**12.73**	**152**	Pn	**Pn**	**19 54 57.5**	**+3.1**
	0.1nm,0.3s,baz=0.0,slow=15,SNR=4.7						
PDAR				Lg	Lg	19 58 35.5	
	baz=4.7,slow=27,SNR=1.9						
	0.5nm,0.7s						
ELK	**Elko**	**13.70**	**173**	Lg	Lg	19 59 03.0	
	0.1nm,0.3s,baz=276,slow=22,SNR=1.8						
ULM	**Lac du Bonnet**	**13.86**	**98**	Pn	**Pn**	**19 55 10.5**	**+1.0**
	0.2nm,0.3s,baz=225,slow=19,SNR=1.5						
ULM				Sn	Sn	19 57 28.4	-16
	0.4nm,0.3s,baz=283,slow=19,SNR=3.0						
ULM				Lg	Lg	19 58 56.6	
	0.7nm,0.3s,baz=223,slow=20,SNR=3.0						
	0.5nm,0.3s						

*MDD **27** 20:04:41.5±0.8, 37°.06N×13°.88W, h0^{km}, Mb4.5/14, M_mb3.9/14, Error ellipse: s-maj=6.1km s-min=4.6km az=85.0*

*CNRM **27** 20:04:42.5, 36°.50N×13°.80W, h30^{km}, ML4.3*

*IGIL **27** 20:04:43.6, 37°.06N×13°.88W, h11^{km}, ML3.5*

*INMG **27** 20:04:44.4±1.2, 36°.89N×14°.15W, h11^{km}±7^{km}, ML3.4, Error ellipse: s-maj=4.6km s-min=3.9km az=121.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Josephine*

*LDG **27** 20:04:44.0±0.3, 37°.12N×13°.91W, h10^{km}, Ml4.0/3, Error ellipse: s-maj=5.4km s-min=4.5km az=53.0*

ISC 27 20:04:41.1±2.7**, 37°.06N**±0°.06×**13°.8W**±0°.1**, h10^{km}, n117,** σ**2^{s}73**/154**, 15C-1D, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**3.98**	**88**	Pn	**Pn**	**20 05 43.6**	**+1.3**
PFVI				Sn	**Sn**	**20 06 26.9**	**-2.1**
PFVI	**Vila Bisbo**	**3.98**	**88⇑**	*i*P	**Pn**	**20 05 43.6**	**+1.3**
PFVI				*e*S	**Sn**	**20 06 26.9**	**-2.1**
PFVI				*i* AML	AML	20 06 30.3	
PFVI				*i* AML	AML	20 06 30.3	
PFVI				*i* AML	AML	20 06 31.8	
PFVI	**Vila Bisbo**	**3.98**	**88**	P	**Pn**	**20 05 42.2**	**0.0**
PFVI	**Vila Bisbo**	**3.98**	**88**	S	**Sn**	**20 06 27.4**	**-1.6**
LIS	**Lisbon**	**4.04**	**64**	*e*S	**Sn**	**20 06 28.6**	**-1.7**
LIS				IAML		20 06 33.8	
	comp=E,229nm,0.5s						
PMAFR	**Mafra**	**4.04**	**61**	Pn	**Pn**	**20 05 45.1**	**+2.0**
PMAFR				Sn	**Sn**	**20 06 29.9**	**-0.6**
PMAFR	**Mafra**	**4.04**	**61⇓**	*e*P	**Pn**	**20 05 45.1**	**+2.0**
PMAFR				*e*S	**Sn**	**20 06 30.1**	**-0.4**
PMAFR				*i* AML	AML	20 06 33.4	
PMAFR				*i* AML	AML	20 06 34.0	
PMAFR				*i* AML	AML	20 06 36.5	
PTEO	**Sao Teotonio**	**4.08**	**82**	*e*P	**Pn**	**20 05 45.1**	**+1.5**
PTEO				*e*S	**Sn**	**20 06 29.3**	**-2.2**
PTEO				*i* AML	AML	20 06 35.1	
PTEO				*i* AML	AML	20 06 36.3	
PTEO				*i* AML	AML	20 06 38.2	
MORF	**Marmelete**	**4.13**	**85**	*e*P	**Pn**	**20 05 45.5**	**+1.2**
MORF				*e*S	**Sn**	**20 06 30.8**	**-1.8**
MORF				IAML		20 06 35.0	
	comp=N,101nm,0.2s						
MORF	**Marmelete**	**4.13**	**85**	*e*P	**Pn**	**20 05 45.5**	**+1.2**
MORF				*e*S	**Sn**	**20 06 31.2**	**-1.4**
MORF				*i* AML	AML	20 06 35.1	
MORF				*i* AML	AML	20 06 36.3	
MORF				*i* AML	AML	20 06 38.5	
PARRA	**Arraiolos**	**4.16**	**64**	*e*P	**Pb**	**20 05 55.8**	**+1.4**
PARRA				*e*S	**Sb**	**20 06 49.8**	**+5.2**
PARRA				*i* AML	AML	20 06 53.8	
PARRA				*i* AML	AML	20 06 54.0	
PARRA				*i* AML	AML	20 06 54.2	
PMPST	**Porto Santo, M**	**4.48**	**208**	*e*P	Pn	20 05 42.6	-6.5
PMPST				*e*S	Sn	20 06 24.9	-16
PMPST				*i* AML	AML	20 06 29.2	
PMPST				*i* AML	AML	20 06 29.2	
PMPST				*i* AML	AML	20 06 30.7	
PMPS	**Porto Santo**	**4.50**	**208**	*e*P	Pn	20 05 42.4	-7.0
PMPS				*e*S	Sn	20 06 26.4	-15
PMPS				*i* AML	AML	20 06 29.9	
MESJ	**Messejana**	**4.51**	**78**	*e*P	**Pn**	**20 05 50.8**	**+1.2**
MESJ				*e*S	**Sn**	**20 06 39.9**	**-2.2**
MESJ				IAML		20 06 45.8	
	comp=N,31nm,0.2s						
PCVE	**Castro Verde**	**4.63**	**81**	Pn	**Pn**	**20 05 52.5**	**+1.4**
PCVE				Sn	**Sn**	**20 06 42.0**	**-3.0**
PCVE	**Castro Verde**	**4.63**	**81**	*e*P	**Pn**	**20 05 52.6**	**+1.4**
PCVE				*e*S	**Sn**	**20 06 43.3**	**-1.8**
PCVE				*i* AML	AML	20 06 47.5	
PCVE				*i* AML	AML	20 06 49.8	
PCVE				*i* AML	AML	20 06 51.3	
PBDV	**Barranco-do-Ve**	**4.70**	**86**	*e*P	**Pn**	**20 05 53.9**	**+1.8**
PBDV				*e*S	**Sn**	**20 06 45.1**	**-1.6**
PBDV				*i* AML	AML	20 06 49.9	
PBDV				*i* AML	AML	20 06 50.9	
PBDV				*i* AML	AML	20 06 51.2	
EVO	**Evora**	**4.82**	**71**	Pn	**Pn**	**20 05 55.0**	**+1.2**
EVO				Sn	**Sn**	**20 06 47.2**	**-2.5**
EVO	**Evora**	**4.82**	**71**	*e*P	**Pn**	**20 05 55.3**	**+1.6**
EVO				*e*S	**Sn**	**20 06 48.5**	**-1.1**
EVO				*i* AML	AML	20 06 52.9	
EVO				*i* AML	AML	20 06 53.4	
EVO				*i* AML	AML	20 06 53.7	
PBEJ	**Beja**	**4.82**	**77**	*e*P	**Pn**	**20 05 55.1**	**+1.3**
PBEJ				*e*S	**Sn**	**20 06 48.8**	**-0.9**
PBEJ				*i* AML	AML	20 06 53.4	
PBEJ				*i* AML	AML	20 06 54.2	
PBEJ				*i* AML	AML	20 06 56.0	
PMTG	**Montargil**	**4.84**	**64**	*e*P	**Pn**	**20 05 55.4**	**+1.4**
PMTG				*e*S	**Sn**	**20 06 48.4**	**-1.7**
PMTG				*i* AML	AML	20 06 53.0	
PMTG				*i* AML	AML	20 06 53.4	
PMTG				*i* AML	AML	20 06 59.6	
PVAQ	**Vaqueiros**	**4.87**	**84**	Pn	**Pn**	**20 05 55.9**	**+1.5**
PVAQ	**Vaqueiros**	**4.87**	**84**	*e*P	**Pn**	**20 05 55.8**	**+1.3**
PVAQ				*e*S	**Sn**	**20 06 48.6**	**-2.4**
PVAQ				*i* AML	AML	20 06 52.9	
PVAQ				*i* AML	AML	20 06 53.9	
PVAQ				*i* AML	AML	20 06 54.4	
PVAQ	**Vaqueiros**	**4.87**	**84**	P	**Pn**	**20 05 56.0**	**+1.5**
PVAQ	**Vaqueiros**	**4.87**	**84**	S	**Sn**	**20 06 50.8**	**-0.2**
PMAR	**Madeira**	**5.02**	**211**	*e*P	Pn	20 05 50.4	-6.3
PMAR				*e*S	Sn	20 06 38.8	-16
PMAR				*i* AML	AML	20 06 42.2	
PMAR				*i* AML	AML	20 06 44.0	
PMAR				*i* AML	AML	20 06 45.9	
PMAR	**Madeira**	**5.02**	**211**	P	Pn	20 05 50.5	-6.2
PMAR	**Madeira**	**5.02**	**211**	S	Sn	20 06 41.0	-14
PMOZ	**Porto Moniz, M**	**5.06**	**214**	Pn	Pn	20 05 50.9	-6.3
PMOZ				Sn	Sn	20 06 40.6	-15
PMOZ	**Porto Moniz, M**	**5.06**	**214**	*e*P	Pn	20 05 50.9	-6.3
PMOZ				*e*S	Sn	20 06 39.5	-16
PMOZ				*i* AML	AML	20 06 44.0	
PMOZ				*i* AML	AML	20 06 46.1	
PMOZ				*i* AML	AML	20 06 47.3	
PMOZ	**Porto Moniz, M**	**5.06**	**214**	P	Pn	20 05 50.9	-6.2
PMOZ	**Porto Moniz, M**	**5.06**	**214**	S	Sn	20 06 43.0	-13
EGRO	**El Granado**	**5.07**	**83**	Pn	**Pn**	**20 05 59.5**	**+2.3**
EGRO				Sn	**Sn**	**20 06 53.5**	**-2.1**
EGRO	**El Granado**	**5.07**	**83**	P	**Pn**	**20 05 58.8**	**+1.7**
EGRO				⇑*i*IVmb_VC		20 06 05.4	
	comp=N,338nm,SNR=6.3						
EGRO				S	**Sn**	**20 06 53.7**	**-2.0**
FUL	**Funchal**	**5.08**	**211**	*e*S	Sn	20 06 41.3	-15
FUL				*i* AML	AML	20 06 41.6	
FUL				*i* AML	AML	20 06 42.4	
FUL				*i* AML	AML	20 06 45.0	
PSARD	**Sardoal**	**5.11**	**59**	*e*P	**Pn**	**20 05 59.7**	**+1.9**
PSARD				*e*S	**Sn**	**20 06 55.6**	**-1.2**
PSARD				*i* AML	AML	20 06 59.9	
PSARD				*i* AML	AML	20 07 00.1	
PSARD				*i* AML	AML	20 07 03.2	
PCAS	**Casmilo, Conde**	**5.12**	**53**	*e*P	**Pn**	**20 05 59.3**	**+1.4**
PCAS				*e*S	**Sn**	**20 06 55.8**	**-1.3**
PCAS				*i* AML	AML	20 07 00.3	
PCAS				*i* AML	AML	20 07 02.4	
PCAS				*i* AML	AML	20 07 09.1	
PESTR	**Estremoz**	**5.23**	**68**	Pn	**Pn**	**20 06 01.6**	**+2.2**
PESTR				Sn	**Sn**	**20 06 57.9**	**-1.9**
PESTR	**Estremoz**	**5.23**	**68**	*e*P	**Pn**	**20 06 01.6**	**+2.2**
PESTR				*e*S	**Sn**	**20 06 58.5**	**-1.4**
PESTR				*i* AML	AML	20 07 02.2	
PESTR				*i* AML	AML	20 07 03.9	
PESTR				*i* AML	AML	20 07 04.6	
PESTR	**Estremoz**	**5.23**	**68**	P	**Pn**	**20 06 01.7**	**+2.3**
PESTR	**Estremoz**	**5.23**	**68**	S	**Sn**	**20 07 03.1**	**+3.3**
COI	**Coimbra**	**5.26**	**52**	*e*S	**Sn**	**20 06 59.2**	**-1.4**
COI				*i* AML	AML	20 07 04.2	
COI				*i* AML	AML	20 07 05.6	
COI				*i* AML	AML	20 07 06.7	
PBAR	**Barrancos**	**5.49**	**76**	Pn	**Pn**	**20 06 05.1**	**+2.2**
PBAR				Sn	**Sn**	**20 07 03.2**	**-2.9**
PBAR	**Barrancos**	**5.49**	**76**	*e*P	**Pn**	**20 06 04.5**	**+1.6**
PBAR				*e*S	**Sn**	**20 07 04.3**	**-1.8**
PBAR				*i* AML	AML	20 07 11.0	
PBAR				*i* AML	AML	20 07 11.3	
PMRV	**Marv??o**	**5.58**	**63**	*e*P	**Pn**	**20 06 05.7**	**+1.6**
PMRV				*e*S	**Sn**	**20 07 06.2**	**-2.1**
PMRV				*i* AML	AML	20 07 09.5	
PMRV				*i* AML	AML	20 07 09.8	
PMRV				*i* AML	AML	20 07 09.8	
EBAD	**Badajoz**	**5.63**	**70**	Pn	**Pn**	**20 06 06.3**	**+1.4**
EBAD				Sn	**Sn**	**20 07 07.1**	**-2.6**
EBAD	**Badajoz**	**5.63**	**70**	P	**Pn**	**20 06 06.1**	**+1.2**
EBAD				⇑*i*IVmb_VC		20 06 09.3	
	comp=N,283nm,SNR=6.3						
EBAD				S	**Sn**	**20 07 08.2**	**-1.4**
ARNO	**Arenosillo**	**5.66**	**88**	Sn	**Sn**	**20 07 07.1**	**-3.2**
PCBR	**Castelo Branco**	**5.69**	**59**	*e*P	**Pn**	**20 06 07.4**	**+1.7**
PCBR				*e*S	**Sn**	**20 07 08.9**	**-2.2**
PCBR				*i* AML	AML	20 07 10.6	
PCBR				*i* AML	AML	20 07 13.6	
PCBR				*i* AML	AML	20 07 14.7	
EMIN	**Mina Concepcio**	**5.72**	**81**	Pn	**Pn**	**20 06 07.9**	**+1.7**
EMIN				Sn	**Sn**	**20 07 08.5**	**-3.4**
EMIN	**Mina Concepcio**	**5.72**	**81**	P	**Pn**	**20 06 07.5**	**+1.3**
EMIN				⇑*i*IVmb_VC		20 06 16.5	
	comp=N,186nm,SNR=5.6						
EMIN				S	**Sn**	**20 07 10.4**	**-1.6**
PTO	**Porto**	**5.74**	**43**	*e*S	**Sn**	**20 07 07.6**	**-4.7**
PTO				*i* AML	AML	20 07 14.5	
PTO				*i* AML	AML	20 07 14.7	
PTO				*i* AML	AML	20 07 18.1	
PVIS	**Viseu**	**5.88**	**50**	*e*P	**Pn**	**20 06 10.6**	**+2.2**
PVIS				*e*S	**Sn**	**20 07 14.0**	**-1.9**
MTE	**Manteigas**	**5.92**	**54**	*e*P	**Pn**	**20 06 10.8**	**+1.8**
MTE				*e*S	**Sn**	**20 07 14.9**	**-2.0**
MTE				*i* AML	AML	20 07 20.6	
MTE				*i* AML	AML	20 07 21.6	
MTE				*i* AML	AML	20 07 21.8	
CNIL	**Conil**	**6.27**	**94**	Pn	**Pn**	**20 06 15.6**	**+2.0**
PVRL	**Vila Real**	**6.33**	**47**	*e*P	**Pn**	**20 06 16.1**	**+1.5**
PVRL				*e*S	**Sn**	**20 07 24.5**	**-2.5**
PVRL				*i* AML	AML	20 07 27.2	

PVRL				*i* AML	AML	20 07 29.2	
PVRL				*i* AML	AML	20 07 30.2	
POLO	Lamas de Olo	6.35	45	*e*P	Pn	20 06 16.0	+1.1
POLO				*e*S	Sn	20 07 23.5	-4.0
POLO				*i* AML	AML	20 07 29.4	
POLO				*i* AML	AML	20 07 30.7	
POLO				*i* AML	AML	20 07 36.5	
ESPR	Espera	6.37	89	Pn	Pn	20 06 16.9	+1.9
ESPR				Sn	Sn	20 07 26.5	-1.3
ESPR	Espera	6.37	89	P	Pn	20 06 17.0	+1.9
ESPR				S	Sn	20 07 27.1	-0.8
EZAM	Zamans	6.43	36	S	Sn	20 07 24.2	-5.1
AVE	Averroes	6.45	124	Pn	Pn	20 06 16.4	+0.3
AVE				Sn	Sn	20 07 25.6	-4.0
PCAB	Cabril	6.45	42	*e*P	Pn	20 06 17.6	+1.5
PCAB				*e*S	Sn	20 07 25.7	-4.1
PCAB				*i* AML	AML	20 07 30.4	
PCAB				*i* AML	AML	20 07 33.1	
PCAB				*i* AML	AML	20 07 37.8	
PGAV	Gavieira, Arco	6.50	39	*e*P	Pn	20 06 18.4	+1.5
PGAV				*e*S	Sn	20 07 28.4	-2.8
PGAV				*i* AML	AML	20 07 33.4	
PGAV				*i* AML	AML	20 07 34.5	
PGAV				*i* AML	AML	20 07 36.4	
MVO	Moncorvo	6.67	50	*e*P	Pn	20 06 20.2	+0.9
MVO				*e*S	Sn	20 07 32.2	-3.2
MVO				*i* AML	AML	20 07 36.6	
MVO				*i* AML	AML	20 07 38.4	
MVO				*i* AML	AML	20 07 39.0	
SRHM	Skhour des Reh	6.68	132	P	Pn	20 06 13.0	-6.4
SRHM	Skhour des Reh	6.68	132	S	Sn	20 07 29.5	-6.1
EJIF	Jimena Fronter	6.72	93	P	Pn	20 06 22.2	+2.3
ECAB	El Cabril	6.74	79	Sn	Sn	20 07 33.8	-3.2
ECAB				Pn	Pn	20 06 21.7	+1.5
ECAB	El Cabril	6.74	79	P	Pn	20 06 20.9	+0.7
ECAB				⇑*i*IVmb_VC		20 06 27.0	
	comp=N,176nm,SNR=6.2						
ECAB				S	Sn	20 07 33.9	-3.2
EPLA	Plasencia	6.76	61	P	Pn	20 06 22.2	+1.8
EPLA				⇑*i*IVmb_VC		20 06 27.6	
	comp=N,194nm,SNR=3.9						
EPLA				S	Sn	20 07 34.9	-2.5
ZHG	ZHG	6.88	119	P	Pn	20 06 19.1	-3.1
ZHG	ZHG	6.88	119	S	Sn	20 07 32.9	-7.7
EMAZ	Mazaricos	6.95	31	P	Pn	20 06 23.8	+0.8
EMAZ				S	Sn	20 07 34.4	-7.7
EAGO	Agolada(Pontev	7.22	36	P	Pn	20 06 27.3	+0.6
EAGO				⇑*i*IVmb_VC		20 06 30.9	
	comp=N,257nm,SNR=2.6						
EAGO				S	Sn	20 07 43.2	-5.6
PBRG	Braganca	7.23	47	*e*P	Pn	20 06 28.3	+1.3
PBRG				*e*S	Sn	20 07 45.5	-3.7
PBRG				*i* AML	AML	20 07 50.5	
PBRG				*i* AML	AML	20 07 50.9	
PBRG				*i* AML	AML	20 07 52.0	
EMIJ	Mijas	7.27	91	Pn	Pn	20 06 29.6	+2.2
EMIJ	Mijas	7.27	91	P	Pn	20 06 28.6	+1.3
EMIJ				S	Sn	20 07 47.3	-2.7
ECAL	Calabor	7.32	46	Pn	Pn	20 06 29.3	+1.1
ECAL				Sn	Sn	20 07 47.2	-4.1
ECAL	Calabor	7.32	46	P	Pn	20 06 29.3	+1.1
ECAL				⇑*i*IVmb_VC		20 06 33.2	
	comp=N,221nm,SNR=3.0						
ECAL				S	Sn	20 07 47.6	-3.8
EADA	Adamuz	7.41	79	Pn	Pn	20 06 30.4	+1.1
EADA				Sn	Sn	20 07 50.7	-2.8
EADA	Adamuz	7.41	79	P	Pn	20 06 30.5	+1.1
EADA				⇑*i*IVmb_VC		20 06 34.8	
	comp=N,185nm,SNR=5.2						
EADA				S	Sn	20 07 50.9	-2.7
OUK	Oukaimeden	7.64	138	P	Pn	20 06 27.0	-5.8
OUK	Oukaimeden	7.64	138	S	Sn	20 07 48.2	-11
EGOR	Sierra Gorda,	7.75	87	Pn	Pn	20 06 36.5	+2.3
EGOR				Sn	Sn	20 07 58.6	-3.5
EGOR	Sierra Gorda,	7.75	87	P	Pn	20 06 36.7	+2.6
EGOR				S	Sn	20 08 00.5	-1.7
PAB	San Pablo	7.84	69	P	Pn	20 06 36.7	+1.4
PAB				⇑*i*IVmb_VC		20 06 38.1	
	comp=N,130nm,SNR=3.6						
PAB				S	Sn	20 08 01.5	-2.7
TTIG	Tnine Tigouga,	7.88	144	P	Pn	20 06 28.9	-7.1
TTIG	Tnine Tigouga,	7.88	144	S	Sn	20 07 51.5	-14
LCRM	LCR	8.05	112	P	Pn	20 06 35.1	-3.1
LCRM	LCR	8.05	112	S	Sn	20 08 02.5	-7.0
EPON	Pontenova	8.07	37	P	Pn	20 06 39.3	+0.9
EPON				⇑*i*IVmb_VC		20 06 41.6	
	comp=N,166nm,SNR=1.2						
EPON				S	Sn	20 08 04.6	-5.0
PSIM	Granatula de C	8.14	75	P	Pn	20 06 40.7	+1.4
PSIM				S	Sn	20 08 07.7	-3.7
ESDC	Sonseca Array	8.16	68	P	Pn	20 06 41.2	+1.5
ESDC				⇑*i*IVmb_VC		20 06 41.4	
	comp=N,198nm,SNR=5.2						
ESDC				S	Sn	20 08 07.6	-4.4
ESBB	Sonseca Array	8.16	68	P	Pn	20 06 41.2	+1.5
ESBB				⇑*i*IVmb_VC		20 06 41.4	
	comp=N,177nm,SNR=4.9						
ESBB				S	Sn	20 08 07.8	-4.3
TIO	Tiouine	8.19	136	Pn	Pn	20 06 39.1	-1.0
TIO				Sn	Sn	20 08 04.8	-8.0
TIO	Tiouine	8.19	136	P	Pn	20 06 35.3	-4.8
TIO	Tiouine	8.19	136	S	Sn	20 08 01.9	-11
PALE	Palemas	8.20	100	P	Pn	20 06 39.0	-1.1
PALE	Palemas	8.20	100	S	Sn	20 08 09.3	-3.5
GUD	Guadarrama	8.34	62	P	Pn	20 06 43.5	+1.4
GUD				⇑*i*IVmb_VC		20 06 44.6	
	comp=N,79nm,SNR=2.8						
GUD				S	Sn	20 08 11.8	-4.6
CFUE	Fuerteventura	8.39	181	P	Pn	20 06 36.8	-6.0
CFUE				S	Sn	20 08 01.7	-16
AKLM	AKL	8.47	105	P	Pn	20 06 39.7	-4.3
AKLM	AKL	8.47	105	S	Sn	20 08 13.5	-6.2
OUZM	OUZ	8.48	134	P	Pn	20 06 37.8	-6.4
OUZM	OUZ	8.48	134	S	Sn	20 08 11.6	-8.4
MD31	MD31	8.53	117	P	Pn	20 06 41.2	-3.5
MD31	MD31	8.53	117	S	Sn	20 08 13.2	-7.8
EQES	Quesada	8.58	82	P	Pn	20 06 46.3	+0.9
EQES				⇑*i*IVmb_VC		20 06 50.4	
	comp=N,78nm,SNR=1.7						
EQES				S	Sn	20 08 19.5	-2.8
MDT	Midelt	8.66	117	P	Pn	20 06 41.3	-5.3
MDT	Midelt	8.66	117	S	Sn	20 08 15.4	-9.0
UCM	Universidad Co	8.87	65	Pn	Pn	20 06 51.1	+1.7
UCM				Sn	Sn	20 08 26.0	-3.4
GOLM	Goulmima	9.06	124	P	Pn	20 06 48.1	-4.0
TZRR	Tazzarine	9.28	130	P	Pn	20 06 49.5	-5.5
ZGR	Zagora	9.72	133	P	Pn	20 06 55.3	-5.8
SJPF	Ste Jean	11.37	54	*e*Pn	Pn	20 07 23.5	-0.1
SJPF				*e*Sn	Sn	20 09 23.4	-7.3
	comp=N,34nm,1.3s						
ETSF	Etsaut	11.71	56	*e*Pn	Pn	20 07 29.0	+0.7
ETSF				*e*Sn	Sn	20 09 32.3	-6.8
	comp=N,3.0nm,0.5s						
EPF	Esparros	12.37	57	*e*Pn	Pn	20 07 37.4	+0.2
EPF				*e*Sn	Sn	20 09 47.6	-7.5
	comp=N,2.1nm,0.3s						

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*IDC **27** 20:15:26.7±0.8, 2°.66S×138°.63E, h0^{km}, mb3.9/8, mbtmp4.0/12, ML4.2/4, Error ellipse: s-maj=18.9km s-min=14.7km az=176.0*

*NEIC **27** 20:15:28.8±2.4, 2°.7S±0°.1×138°.69E±0°.07, h10^{km}±2^{km}, mb4.0/8, Error ellipse: s-maj=22.6km s-min=12.1km az=349.0*

*DJA **27** 20:15:30.6±0.6, 3°S±3°×13°9E±°, h10^{km}±5^{km}, M3.9/6, MLv3.9/6*

ISC 27 20:15:31.4±0.6**, 2°.64S**±0°.06×**138°.64E**±0°.04**, h32**^{km}**, n36,** σ**1**^{s}**23**/39**, mb3.9**/8**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.65	7	P	Pb	20 15 41.6	-2.8
SMPI				S	Sn	20 15 55.1	+1.5
GENI	Genyem	1.53	88	P	Pn	20 15 57.7	+1.2
GENI	Genyem	1.53	88	P	Pn	20 15 57.6	+1.1
GENI				S	Sb	20 16 20.5	+2.3
JAY	Jayapura	2.07	86	Pn	Pn	20 16 03.7	-0.3
	23nm,0.3s,baz=236,slow=10,SNR=99						
JAY				Lg	Lg	20 16 32.8	
	9.0nm,0.3s,baz=111,slow=16,SNR=4.3						
	73nm,0.4s						
JAY	Jayapura	2.07	86	P	Pn	20 16 04.4	+0.4
JAY				S	Sb	20 16 33.5	-0.2
SRPI	Serui, Papua	2.52	288	P	Pn	20 16 09.8	-0.2
BAKI	Biak	2.91	300	P	Pn	20 16 17.3	+1.8
FAKI	Fak Fak	6.38	267	Pn	Pn	20 17 04.7	+1.4
FAKI	Fak Fak	6.38	267	P	Pn	20 17 05.0	+1.7
KDU	Kakadu	11.70	211	P	Pn	20 18 15.8	-0.3
COEN	Coen	12.10	159	Pn	Pn	20 18 22.6	+0.8
COEN	Coen	12.10	159	P	Pn	20 18 22.4	+0.7
SOEI	Soe	15.93	243	P	P	20 19 17.4	+0.7
SOEI	Soe	15.93	243	P	P	20 19 15.5	-1.2
KNRA	Kununurra	16.20	216		Pn	20 19 15.5	-1.2
BATI	Baumata	16.66	243	Pn	Pn	20 19 21.8	-0.8
	8.5nm,0.3s,baz=41,slow=9.3,SNR=6.4						
	16nm,0.8s						
WB0	Warramunga Arr	17.52	193	Pn	Pn	20 19 31.8	-1.5
WB0				IAmb	IAmb	20 19 49.0	
	comp=Z,9.5nm,0.9s						
WR8	Warramunga Arr	17.67	193	Pn	Pn	20 19 33.4	-1.9
WR8				IAmb	IAmb	20 19 47.5	
	comp=Z,23nm,1.5s						
WRAB	Tennant Creek	17.69	193	P	P	20 19 35.9	-0.2
WRAB				IAmb	IAmb	20 19 45.1	
	comp=Z,8.0nm,0.8s						
WRA	Warramunga Arr	17.70	193	P	Pn	20 19 33.2	-2.3
	comp=Z,0.9nm,0.3s,baz=18,slow=12,SNR=23						
	comp=Z,2.3nm,0.5s						
QIS	Mount Isa	17.83	177	P	P	20 19 38.5	+0.8
FITZ	Fitzroy Crossi	19.96	219	P	P	20 19 59.1	-1.8
FITZ	Fitzroy Crossi	19.96	219	P	P	20 20 00.5	-0.5
	comp=Z,0.3nm,0.3s,baz=72,slow=5.0,SNR=7.9						
	comp=Z,1.5nm,0.7s						
FITZ	Fitzroy Crossi	19.96	219	P	Pn	20 20 03.0	+0.2
AS01	Alice Springs	21.38	192	P	P	20 20 17.8	+1.4
AS31	Alice Springs	21.39	192	P	P	20 20 15.3	-1.3
ASAR	Alice Springs	21.39	192	P	P	20 20 16.1	-0.4
ASAR	Alice Springs	21.39	192	P	P	20 20 15.9	-0.6
	comp=Z,4.1nm,0.7s,baz=20,slow=10,SNR=32						
	comp=Z,4.1nm,0.7s						
CMAR	Chiang Mai Arr	44.34	300	P	P	20 23 39.5	+0.5
	comp=Z,0.6nm,0.6s,baz=118,slow=6.6,SNR=6.0						
	comp=Z,0.6nm,0.6s						
SONM	Songino Array	57.63	335	P	P	20 25 19.4	+0.9
	comp=Z,0.4nm,0.6s,baz=152,slow=7.2,SNR=2.5						
	comp=Z,0.4nm,0.6s						
MKAR	Makanchi Array	69.69	322	P	P	20 26 38.9	+0.8
	comp=Z,1.1nm,0.9s,baz=111,slow=7.9,SNR=5.8						
	comp=Z,1.1nm,0.9s						
KURBB	Kurchatov Arra	73.63	325	P	P	20 27 01.3	-0.4
	comp=Z,0.8nm,0.2s,baz=133,slow=6.5,SNR=1.2						
	comp=Z,0.8nm,0.2s						
VNDA	Vanda	75.85	175	P	P	20 27 14.1	0.0
VNDA				IAmb	IAmb	20 27 20.3	
	comp=Z,1.1nm,0.8s						
VNDA	Vanda	75.85	175	P	P	20 27 14.8	+0.7
	comp=Z,1.0nm,0.9s,baz=322,slow=5.3,SNR=6.5						
	comp=Z,1.0nm,0.9s						
BVAR	Borovoye Array	79.22	325	P	P	20 27 33.8	+0.5
	comp=Z,0.9nm,0.7s,baz=99,slow=9.2,SNR=4.8						
	comp=Z,0.9nm,0.7s						
ILAR	Eielson Array	85.80	24	P	P	20 28 06.8	-0.5
	comp=Z,1.2nm,0.8s,baz=253,slow=4.7,SNR=13						
	comp=Z,1.2nm,0.8s						

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*NEIC **27** 20:16:07.7±2.2, 0°.08N±0°.10×123°.94E±0°.06, h119^{km}±11^{km}, mb4.2/4, Error ellipse: s-maj=14.4km s-min=8.7km az=163.0*

*DJA **27** 20:16:08.8±0.3, 0°S±3°×12°4E±°, h88^{km}±7^{km}, M4.5/15, mB4.9/2, mb4.8/2, MLv4.3/15, Mw(mB)4.2/2*

*IDC **27** 20:16:08.3±4.1, 0°.02N×123°.86E, h112^{km}±42^{km}, mb3.6/9, mbtmp4.0/11, Error ellipse: s-maj=35.6km s-min=14.0km az=66.0*

ISC 27 20:16:07.5±0.6**, 0°.10S**±0°.05×**123°.98E**±0°.05**, h110**^{km}**, n31,** σ**1**^{s}**50**/37**, mb4.0**/11**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	0.67	0	P	Pn	20 16 27.1	+1.5
KMSI				S	Sn	20 16 40.3	+1.1
LUWI	Luwuk	1.53	232		Pn	20 16 36.6	+2.0
LUWI	Luwuk	1.53	232	P	Pn	20 16 34.0	-0.7
LUWI				S	Sn	20 16 52.9	-2.4
MRSI	Marisa	2.12	286	P	Pn	20 16 40.6	-1.4
APSI	Ampana	2.47	251	P	Pn	20 16 46.1	-0.4
SANI	Sanana	2.79	134	P	Pn	20 16 49.9	-0.9
TOLI2	Tolitoli	3.41	291		Pn	20 16 58.5	-0.5
TOLI2				Sn	Sn	20 17 36.3	-2.5
TNTI	Ternate	3.50	76		Pn	20 17 01.0	+0.9
TNTI				Sn	Sn	20 17 38.8	-2.0
TNTI	Ternate	3.50	76	P	Pn	20 17 01.6	+1.5
MPSI	Mapaga	4.10	276	P	Pn	20 17 09.5	+1.2
PCI	Palu	4.22	259	P	Pn	20 17 10.9	+1.0
NLAI	Namlea	4.41	135	P	Pn	20 17 13.3	+0.8
TTSI	Tana Toraja	5.09	235	P	Pn	20 17 22.0	+0.5
SPSI	Sidrap Palu	5.70	228	P	Pn	20 17 31.1	+1.3
KAPI	Kappang	6.46	221	Pn	Pn	20 17 40.8	+0.7
KAPI	Kappang	6.46	221	P	Pn	20 17 41.5	+1.4
	20nm,0.5s,baz=90,slow=1.5,SNR=5.5						
FAKI	Fak Fak	8.73	109		Pn	20 18 11.1	+0.1
FAKI				Sn	Sn	20 19 43.5	-4.2
FITZ	Fitzroy Crossi	17.96	175	P	P	20 20 10.7	+1.3
	3.8nm,0.7s,baz=355,slow=15,SNR=8.1						
MBWA	Marble Bar	21.34	191	P	P	20 20 46.5	+0.5
PSA00	Pilbara Seismi	21.73	190	P	P	20 20 49.0	-1.1
PSA00				IAmb	IAmb	20 21 21.1	
	comp=Z,16nm,1.3s						
WB0	Warramunga Arr	22.05	153	P	P	20 20 54.9	+1.3
WRA	Warramunga Arr	22.18	153	P	P	20 20 56.6	+1.7
	comp=Z,3.3nm,0.6s,baz=332,slow=10.0,SNR=9.1						
	comp=Z,3.3nm,0.6s						
WR8	Warramunga Arr	22.27	153	P	P	20 20 56.2	+0.5
WR8				IAmb	IAmb	20 21 07.6	
	comp=Z,18nm,1.4s						
ASAR	Alice Springs	25.34	158	P	P	20 21 26.1	+1.8
	comp=Z,0.9nm,0.4s,baz=333,slow=9.4,SNR=4.5						
ASAR				PcP	PcP	20 24 55.8	+1.3
	comp=Z,0.4nm,0.4s,baz=329,slow=2.1,SNR=2.7						
	comp=Z,0.9nm,0.4s						
CMAR	Chiang Mai Arr	30.74	308	P	P	20 22 12.2	-0.3
	comp=Z,0.5nm,0.8s,baz=130,slow=9.1,SNR=2.5						
	comp=Z,0.5nm,0.8s						
STKA	Stephens Creek	35.73	154	P	P	20 22 57.9	+2.1
	comp=Z,3.4nm,0.5s,baz=322,slow=12,SNR=11						
	comp=Z,3.4nm,0.5s						
MJAR	Matsushiro Arr	38.77	18	P	P	20 23 20.8	-0.6
	comp=Z,1.6nm,0.7s,baz=184,slow=9.4,SNR=4.3						
	comp=Z,1.6nm,0.7s						
USRK	Ussuriysk Ar.	44.68	8	P	P	20 24 10.0	+0.7
	comp=Z,1.4nm,0.4s,baz=183,slow=5.6,SNR=6.8						
	comp=Z,1.4nm,0.4s						
SONM	Songino Array	50.13	345	P	P	20 24 50.9	-0.8
	comp=Z,0.4nm,0.8s,baz=161,slow=6.1,SNR=2.9						
	comp=Z,0.4nm,0.8s						
MKAR	Makanchi Array	59.21	328	P	P	20 25 56.4	-0.8
	comp=Z,0.3nm,0.3s,baz=124,slow=8.3,SNR=10						
	comp=Z,0.3nm,0.3s						
KURBB	Kurchatov Arra	63.54	330	P	P	20 26 25.1	-1.1
	comp=Z,0.7nm,0.2s,baz=135,slow=6.2,SNR=6.1						
	comp=Z,0.7nm,0.2s						

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*AZER **27** 20:23:34.2, 38°.45N×45°.31E, h2^{km}, ml2.9*

*TEH **27** 20:23:35.3, 38°.33N×45°.43E, h8^{km}±44^{km}*

*NSSP **27** 20:23:35.9, 38°.43N×45°.47E, h10^{km}, Ms3.0*

ISC 27 20:23:36.5±1.1**, 38°.37N**±0°.03×**45°.49E**±0°.02**, h6**^{km}±10^{km}**, n44,** σ**1**^{s}**49**/79**, 2C, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISHB	Shabestar	0.13	130	Pg	Pg	20 23 39.0	-0.3
ITBZ	Tabriz	0.54	104	Pg	Pg	20 23 46.2	-0.6
ORD	Ordubad	0.69	35	P	Pg	20 23 50.0	+0.3
ORD				S	Sb	20 24 00.3	-0.3
IAZR	Azarshahr	0.79	150	Pg	Pb	20 23 51.6	-1.2
NAX	Nakhchivan	0.81	0	P	Pg	20 23 52.0	+0.1
NAX				S	Sg	20 24 03.1	+0.7
SBZ	Shahbuz	1.03	3	P	Pb	20 23 55.7	-1.1
SBZ				S	Sg	20 24 10.2	+0.7
EGVZ	Egvard	1.19	44	*e*P	Pn	20 23 58.6	-1.1
EGVZ				*e*S	Sn	20 24 14.9	-1.4
IHRS	Heris	1.22	92	Pg	Pb	20 23 59.6	-0.5
IHRS				Sg	Sg	20 24 18.4	+2.6
VAYK	Vayk	1.33	358	*i* P	Pn	20 24 00.6	-1.0
VAYK				*i* S	Sn	20 24 18.7	-0.9
HYR	Heyderabad	1.44	340	P	Pn	20 24 02.4	-0.7
HYR				S	Sb	20 24 22.4	+0.1
MAHB	Mahabad	1.61	174	Pg	Pb	20 24 05.1	-1.5
HAKT	HAKKARI	1.62	241	P	Pb	20 24 06.3	-0.6
HAKT				S	Sg	20 24 31.4	+2.7
NRKZ	NAREK	1.75	339	*e*P	Pn	20 24 07.3	-0.1
NRKZ				*e*S	Sb	20 24 30.0	-1.3
AYRK	Ayrk	1.76	8	*e*P	Pb	20 24 08.2	-1.1
AYRK				*e*S	Sb	20 24 31.8	+0.1
IHSH	Hashtrud	1.76	127	Pg	Pb	20 24 07.6	-1.7
QRD	Qoradiz	1.80	52	P	Pb	20 24 09.3	-0.5
QRD				S	Sg	20 24 39.6	+5.3
IGDI	IGDIR	1.86	324	P	Pn	20 24 09.2	+0.3
IGDI				S	Sg	20 24 35.4	-0.7
GNI	Garni	1.87	342	⇑*i*P	Pb	20 24 10.1	-1.0
GNI				⇑*i*S	Sg	20 24 36.2	-0.4
GRMI	Germi	1.94	76	Pn	Pb	20 24 11.6	-0.6
BLQ	Beylaqan	2.10	49	P	Pb	20 24 15.2	+0.2
BLQ				S	Sg	20 24 44.0	-0.1
AGDM	Agdam	2.15	35	P	Pb	20 24 15.6	-0.1
AGDM				S	Sg	20 24 45.3	-0.1
VNNZ	Vanand	2.16	324	*e*P	Pb	20 24 16.1	0.0
VNNZ				*e*S	Sg	20 24 45.3	-0.6
ARUZ	Aruch	2.20	331	*e*P	Pb	20 24 16.3	-0.3
ARUZ				*e*S	Sg	20 24 45.8	-1.3
YRD	Yardimli	2.23	75	P	Pb	20 24 17.4	+0.2
YRD				S	Sg	20 24 48.6	+0.7
AMBZ	Amberd	2.23	335	*e*P	Pb	20 24 16.7	-0.6
AMBZ				*e*S	Sb	20 24 46.5	+1.2
LRK	Lerik	2.25	82	P	Pb	20 24 18.0	+0.4
LRK				S	Sg	20 24 49.7	+0.8
BRDA	Brd	2.30	34	P	Pb	20 24 17.3	-1.0
BRDA				S	Sg	20 24 51.6	+1.1
GDB	GEDABAY	2.36	5	P	Pb	20 24 17.6	-1.8
GDB				S	Sb	20 24 50.3	+1.4
GANJ	Ganja	2.37	16	P	Pb	20 24 18.7	-0.8
GANJ				S	Sb	20 24 50.5	+1.6
GLBA	Clilabad	2.43	68	P	Pb	20 24 20.5	-0.1
GLBA				S	Sg	20 24 53.4	-1.2
LSVT	Lusahovit	2.56	355	*e*P	Pb	20 24 21.9	-0.8
LSVT				*e*S	Sb	20 24 55.2	+0.8
ASTR	Astara	2.60	85	P	Pb	20 24 22.1	-1.3
ASTR				S	Sg	20 24 58.9	-1.1
LKRN	Lenkeran, Azer	2.60	81	P	Pb	20 24 22.3	-1.1
LKRN				S	Sg	20 25 00.8	+0.7
QZX	Qazax, Azerbai	2.69	358	P	Pn	20 24 21.4	+1.1
QZX				S	Sb	20 24 56.8	-1.4
SRTK	Saratovka	2.84	342	*e*P	Pb	20 24 27.2	-0.5
SRTK				*e*S	Sb	20 25 04.7	+2.0
KDMR	Kurdemir	2.90	45	S	Sb	20 25 05.9	+1.7
VSHL	Vashlovani	2.94	14	P	Pg	20 24 31.9	-0.9
VSHL				S	Sg	20 25 12.8	+1.8
DGRG	David-gareji	3.08	358	P	Pb	20 24 32.7	+1.1
SEKA	Sheki	3.13	24	P	Pb	20 24 29.5	-3.0
SEKA				S	Sb	20 25 11.4	+0.5
QBL	Gabala	3.15	34	S	Sb	20 25 11.5	0.0
IML	Ismayilli	3.19	40	P	Pb	20 24 30.5	-3.1
IML				S	Sb	20 25 12.0	-0.8
ZKTA	Zakatala	3.38	15	P	Pn	20 24 31.6	+1.8
ZKTA				S	Sn	20 25 13.2	+3.1
PQL	Pirkuli	3.41	44	P	Pn	20 24 32.8	+2.6
PQL				S	Sb	20 25 18.1	-0.9
XNQ	Khinaliq	3.47	35	P	Pb	20 24 34.2	-4.1
XNQ				S	Sb	20 25 18.2	-2.5

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*BJI **27** 20:24:26.6, 0°.91N×127°.87E, h160^{km}, mB4.8/21, mb5.2/81*

*DJA **27** 20:24:32.2±0.1, 1°N±2°×12°7E±°, h126^{km}±2^{km}, M4.5/22, mb5.3/13, mB5.0/14, MLv4.5/22, Mw(mB)4.2/14*

*MOS **27** 20:24:33.3±0.9, 1°.47N×127°.38E, h180^{km}, mb5.1/50, Error ellipse: s-maj=9.1km s-min=4.7km az=108.6*

*NEIC **27** 20:24:33.8±1.5, 1°.40N±0°.08×127°.37E±0°.07, h165^{km}±5^{km}, mb5.0/260, Mww4.8/15, Error ellipse: s-maj=12.2km s-min=10.6km az=205.0*

*NEIC **27** 20:24:33.3, 1°.53N×127°.39E, h170^{km}, Moment Tensor Solution. Duration: 1^{s}2 Moment tensor: Scale 10^{16}Nm; M_{rr}1.68; $M_{\theta\theta}$-0.45; $M_{\phi\phi}$-1.23; $M_{r\theta}$0.77; $M_{\theta\phi}$0.07; $M_{\phi r}$-0.42; Fault plane solution: $M_0$1.74000×10^{16} NP1:ϕ_s3.91000°, δ36.25000°, λ115.45000°. NP2:ϕ_s153.37000°, δ57.73000°, λ72.51000°. Principal axes: T 1.9715, Plg71.0000°, Azm22.0000°; N -0.6380, Plg15.0000°, Azm163.0000°; P -1.3336, Plg11.0000°, Azm256.0000°;*

*GCMT **27** 20:24:33.3±0.4, 1°.47N±0°.03×127°.39E±0°.04, h151^{km}±5^{km}, MW4.8/79, Moment Tensor Solution. s10,c10; s79,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.03±.09; $M_{\theta\theta}$-1.55±.12; $M_{\phi\phi}$-0.48±.12; $M_{r\theta}$0.45±.10; $M_{\theta\phi}$0.76±.10; $M_{\phi r}$-0.29±.10; Best double couple: $M_0$2.05900×10^{16} NP1:ϕ_s296.00000°, δ37.00000°, λ88.00000°. NP2: ϕ_s119.00000°, δ53.00000°, λ92.00000°. Principal axes: T 2.1020, Plg82.0000°, Azm38.0000°; N -0.0900, Plg1.0000°, Azm298.0000°; P -2.0150, Plg8.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **27** 20:24:33.3, 1°.43N×127°.39E, h170^{km}*

*IDC **27** 20:24:33.1±1.3, 1°.46N×127°.38E, h161^{km}±11^{km}, mb4.6/31, mbtmp5.1/34, MS3.6/2, Error ellipse: s-maj=12.3km s-min=7.3km az=81.0*

ISC 27 20:24:33.1±0.3**, 1°.39N**±0°.03×**127°.37E**±0°.04**, h163**^{km}±2^{km}**, h164**^{km}**:pP-P, n858,** σ**1**^{s}**19**/826**, mb5.0**/235**, 36C-17D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.62	180		Pn	20 24 56.6	0.0
TNTI	Ternate	0.62	180	P	Pn	20 24 56.6	0.0
TNTI	Ternate	0.62	180	P	Pn	20 24 52.1	-4.5
TNTI				S	Sn	20 25 10.9	-3.7
SGSI	Sangihe	2.93	321	P	Pn	20 25 20.4	+0.2
KMSI	Cibinong	3.48	257	P	Pn	20 25 24.5	-2.6
SANI	Sanana	3.69	202	P	Pn	20 25 29.2	-0.5
SANI	Sanana	3.69	202	P	Pn	20 25 26.1	-3.6
SWI	Sorong	4.49	120	P	Pn	20 25 38.0	-2.1
NLAI	Namlea	4.61	183	P	Pn	20 25 40.1	-1.6
MSAI	Masohi	4.96	162	P	Pn	20 25 44.9	-1.4
AAI	Ambon	5.11	171	P	Pn	20 25 46.4	-1.9
LUWI	Luwuk	5.19	242		Pn	20 25 49.8	+0.5
LUWI	Luwuk	5.19	242	P	Pn	20 25 50.8	+1.5
LUWI	Luwuk	5.19	242	P	Pn	20 25 46.3	-3.0
MRSI	Marisa	5.50	261	P	Pn	20 25 49.2	-4.2
DAV	Davao City (W)	5.92	343	P	Pn	20 26 03.3	+4.4
	350nm,0.5s,baz=251,slow=19,SNR=6.0						
DAV				S	Sn	20 27 05.2	-1.0
	297nm,0.5s,baz=92,slow=23,SNR=5.6						
APSI	Ampana	6.16	248	P	Pn	20 26 00.1	-2.0
BNDI	Bandanaira	6.40	157	P	Pn	20 26 05.5	+0.2
FAKI	Fak Fak	6.49	131		Pn	20 26 07.9	+1.4
FAKI	Fak Fak	6.49	131	P	Pn	20 26 04.0	-2.6
TOLI2	Tolitoli	6.59	268		Pn	20 26 07.5	-0.4
TOLI2	Tolitoli	6.59	268	P	Pn	20 26 07.6	-0.2
RKPI	Ransiki, Papua	7.39	113	P	Pn	20 26 17.3	-1.2
MPSI	Mapaga	7.54	262	P	Pn	20 26 18.2	-2.3
PCI	Palu	7.87	253	P	Pn	20 26 21.6	-3.2
BBSI	Bau Bau	8.35	215	P	Pn	20 26 30.1	-1.0
TTSI	Tana Toraja	8.74	240	P	Pn	20 26 33.7	-2.6
BAKI	Biak	9.11	106	P	Pn	20 26 38.2	-3.1
BNSI	Bone	9.26	232	P	Pn	20 26 43.7	+0.5
SPSI	Sidrap Palu	9.27	235	P	Pn	20 26 42.1	-1.3
KAPI	Kappang	9.92	230		Pn	20 26 52.2	+0.3
KAPI	Kappang	9.92	230	P	Pn	20 26 52.6	+0.7
	187nm,0.5s,baz=33,slow=4.9,SNR=50						
KAPI				S	Sn	20 28 41.9	-0.2
	120nm,0.5s,baz=155,slow=23,SNR=12						
KAPI	Kappang	9.92	230	P	Pn	20 26 52.9	+1.0
KAPI	Kappang	9.92	230	S	Sn	20 28 42.1	0.0
BSSI	Bau Bau, Buton	10.16	222	P	Pn	20 26 54.1	-1.0
SMKI	Samarinda	10.32	260	P	Pn	20 26 55.4	-1.9
MMRI	Maumere	11.20	207		Pn	20 27 09.5	+0.8
MMRI	Maumere	11.20	207	P	Pn	20 27 10.1	+1.4
MMRI	Maumere	11.20	207	P	Pn	20 27 08.4	-0.3
SOEI	Soe	11.50	196		Pn	20 27 13.2	+0.5
SOEI	Soe	11.50	196	P	Pn	20 27 15.7	+3.0
SOEI	Soe	11.50	196	P	Pn	20 27 14.2	+1.5
EDFI	Ende, Flores	11.55	209	P	Pn	20 27 14.3	+0.8
	1µm96nm,0.6s						

SMPI	**Sarmi**	**11.83**	**106**	P	**Pn**	**20 27 19.0**	**+2.1**
BATI	**Baumata**	**12.10**	**198**	P	**Pn**	**20 27 23.1**	**+2.7**
	150nm,0.4s,baz=45,slow=1.9,SNR=25						
BATI	**Baumata**	**12.10**	**198**	P	**Pn**	**20 27 22.1**	**+1.7**
WSI	**Waingapu**	**13.05**	**213**	P	**Pn**	**20 27 30.7**	**-1.9**
BASI	**Baing, Sumba**	**13.37**	**210**	P	**Pn**	**20 27 36.9**	**+0.3**
GENI	**Genyem**	**13.39**	**107**	P	**Pn**	**20 27 37.9**	**+0.9**
GENI	**Genyem**	**13.39**	**107**	P	**Pn**	**20 27 36.3**	**-0.7**
WBSI	**Waikabubak, Su**	**13.54**	**216**	P	**Pn**	**20 27 37.7**	**-1.1**
JAY	**Jayapura**	**13.89**	**106**	P	**P**	**20 27 46.0**	**-0.3**
	56nm,0.7s,baz=232,slow=9.3,SNR=25						
JAY	**Jayapura**	**13.89**	**106**	P	**Pn**	**20 27 42.9**	**-0.4**
JAY	**Jayapura**	**13.89**	**106**	P	**P**	**20 27 46.0**	**-0.3**
PLAI	**Plampang**	**13.94**	**223**	P	**P**	**20 27 47.3**	**+0.5**
PLAI	**Plampang**	**13.94**	**223**	P	**Pn**	**20 27 45.2**	**+1.3**
DRS	**Darwin Rock St**	**14.17**	**166**	P	**Pn**	**20 27 46.7**	**-0.1**
MTN	**Manton Dam**	**14.63**	**165**	Pn	**Pn**	**20 27 51.5**	**-0.9**
MTN	**Manton Dam**	**14.63**	**165**	P	**Pn**	**20 27 50.1**	**-2.3**
MTN	**Manton Dam**	**14.63**	**165**	P	**Pn**	**20 27 51.7**	**-0.8**
KDU	**Kakadu**	**14.88**	**160**	P	**Pn**	**20 27 53.7**	**-1.9**
KDU	**Kakadu**	**14.88**	**160**	P	**Pn**	**20 27 54.0**	**-1.5**
SBUM	**Sibu**	**15.18**	**274**		**Pn**	**20 27 59.5**	**+0.2**
SBUM	**Sibu**	**15.18**	**274**	P	**P**	**20 28 00.2**	**-0.3**
SRBI	**Singaraja**	**15.35**	**232**	P	**P**	**20 28 02.9**	**+0.5**
	180nm,1.1s						
KMMI	**Kalianget**	**15.78**	**238**	P	**Pn**	**20 28 06.5**	**-0.2**
BWJI	**Bawean**	**16.36**	**244**	P	**Pn**	**20 28 15.4**	**+1.7**
JAGI	**Jajag, Banyuwa**	**16.42**	**233**		**Pn**	**20 28 15.6**	**+1.2**
JAGI	**Jajag, Banyuwa**	**16.42**	**233**	P	**Pn**	**20 28 17.6**	**+3.2**
JAGI	**Jajag, Banyuwa**	**16.42**	**233**	P	**Pn**	**20 28 16.7**	**+2.3**
	124nm,0.6s						
GMJI	**Gumukmas**	**16.88**	**235**	P	**Pn**	**20 28 22.4**	**+2.4**
	134nm,0.9s						
KNRA	**Kununurra**	**17.02**	**175**		**P**	**20 28 21.1**	**+0.3**
KNRA	**Kununurra**	**17.02**	**175**	P	**Pn**	**20 28 21.3**	**-0.2**
	comp=Z,219nm,0.6s						
KSM	**Kuching**	**17.05**	**270**	Pn	**Pn**	**20 28 22.9**	**+0.8**
KSM	**Kuching**	**17.05**	**270**	P	**Pn**	**20 28 23.8**	**+1.7**
NGJI	**Ngawi**	**18.10**	**241**	P	**Pn**	**20 28 37.0**	**+2.5**
	comp=Z,226nm,1.1s						
PCJI	**Pacitan**	**18.74**	**239**	P	**Pn**	**20 28 42.0**	**0.0**
WOJI	**Wonogiri, Jawa**	**18.79**	**241**	P	**P**	**20 28 40.3**	**+0.1**
SMRI	**Semarang**	**18.86**	**243**	Pn	**Pn**	**20 28 43.9**	**+0.5**
SMRI	**Semarang**	**18.86**	**243**	P	**Pn**	**20 28 44.2**	**+0.8**
SMRI	**Semarang**	**18.86**	**243**	P	**Pn**	**20 28 45.2**	**+1.8**
	comp=Z,1µmcomp=Z,143nm,0.8s						
UGM	**Wanagama**	**19.17**	**241**	P	**Pn**	**20 28 47.1**	**0.0**
	comp=Z,119nm,1.2s						
FITZ	**Fitzroy Crossi**	**19.44**	**185**	P	**P**	**20 28 47.0**	**-0.2**
FITZ	**Fitzroy Crossi**	**19.44**	**185**	P	**P**	**20 28 46.7**	**-0.5**
	comp=Z,14nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.44**	**185**	P	**P**	**20 28 47.1**	**-0.1**
	comp=Z,43nm,0.6s,baz=17,slow=10,SNR=161						
FITZ	**Fitzroy Crossi**	**19.44**	**185**	P	**P**	**20 28 47.3**	**+0.1**
TPI	**Tanjungpandan**	**20.13**	**258**	P	**P**	**20 28 55.8**	**+1.0**
GUMO	**Guam**	**21.14**	**54**	P	**P**	**20 29 04.8**	**-0.6**
	comp=Z,71nm,0.7s,baz=202,slow=10,SNR=7.1						
	comp=Z,71nm,0.7s						
LEM	**Lembang**	**21.33**	**247**	P	**P**	**20 29 08.3**	**+0.6**
	comp=Z,38nm,0.6s,baz=38,slow=6.1,SNR=8.7						
	comp=Z,38nm,0.6s						
LEM	**Lembang**	**21.33**	**247**	P	**P**	**20 29 08.8**	**+1.0**
BBJI	**Bungbulang**	**21.55**	**246**	P	**P**	**20 29 10.1**	**+0.2**
DBJI	**Dramaga**	**22.04**	**249**	P	**P**	**20 29 13.9**	**-1.1**
WB0	**Warramunga Arr**	**22.13**	**162**		**P**	**20 29 15.4**	**-0.3**
TWGBT	**Beinan**	**22.16**	**344**	P	**P**	**20 29 13.9**	**-2.0**
TWG	**Pinlang**	**22.16**	**344**	P	**P**	**20 29 13.5**	**-2.5**
WRAB	**Tennant Creek**	**22.27**	**162**	P	**P**	**20 29 16.9**	**-0.1**
WRAB				IAmb	IAmb	20 29 24.8	
	comp=Z,72nm,0.8s						
WRAB	**Tennant Creek**	**22.27**	**162**	*d i*P	**P**	**20 29 17.0**	**-0.1**
WRA	**Warramunga Arr**	**22.28**	**162**	P	**P**	**20 29 17.1**	**0.0**
	comp=Z,9.7nm,0.3s,baz=339,slow=11,SNR=142						
WRA				PcP	**PcP**	**20 33 06.7**	**-0.4**
	comp=Z,15nm,0.9s,baz=294,slow=5.8,SNR=6.2						
WRA				S	**S**	**20 33 11.2**	**+0.9**
	comp=Z,10nm,0.7s,baz=335,slow=19,SNR=12						
WRA				ScP	**ScP**	**20 36 29.2**	**-0.3**
	comp=Z,4.1nm,0.7s,baz=343,slow=3.2,SNR=7.8						
WRA				LR	LR	20 38 21.8	
	comp=Z,201nm,19.5s,baz=2.0,slow=37						
	comp=Z,9.7nm,0.3s						
WR8	**Warramunga Arr**	**22.34**	**162**		**P**	**20 29 17.8**	**+0.1**
WR8				IAmb	IAmb	20 29 26.2	
	comp=Z,73nm,1.0s						
YULB	**Yu-li**	**22.65**	**345**	IAmb	IAmb	20 29 25.2	
	comp=Z,23nm,0.6s						
YULB	**Yu-li**	**22.65**	**345**	P	**P**	**20 29 19.5**	**-1.1**
TPUB	**Ta-pu**	**22.74**	**344**	P	**P**	**20 29 20.6**	**-0.8**
SSLB	**Suanglung**	**23.11**	**345**	IAmb	IAmb	20 29 26.9	
	comp=Z,54nm,0.8s						
SSLB	**Suanglung**	**23.11**	**345**	P	**P**	**20 29 25.4**	**+0.5**
NACB	**Ninganchiao**	**23.33**	**347**	P	**P**	**20 29 26.0**	**-0.8**
MBWA	**Marble Bar**	**23.62**	**198**	P	**P**	**20 29 29.6**	**+0.1**
MBWA				IAmb	IAmb	20 29 30.9	
	comp=Z,23nm,0.7s						
MBWA	**Marble Bar**	**23.62**	**198**	P	**P**	**20 29 29.6**	**+0.1**
	comp=Z,34nm,1.1s						
MBWA	**Marble Bar**	**23.62**	**198**	P	**P**	**20 29 30.2**	**+0.7**
YHNB	**Yeheng**	**23.86**	**346**	P	**P**	**20 29 32.0**	**+0.3**
PSA00	**Pilbara Seismi**	**23.98**	**197**	P	**P**	**20 29 32.9**	**+0.2**
PSA00	**Pilbara Seismi**	**23.98**	**197**	P	**P**	**20 29 32.9**	**+0.2**
	comp=Z,25nm,1.2s						
PSA00	**Pilbara Seismi**	**23.98**	**197**	P	**P**	**20 29 33.7**	**+1.0**
TATO	**Taipei**	**24.12**	**347**	P	**P**	**20 29 34.7**	**+0.7**
TATO	**Taipei**	**24.12**	**347**	P	**P**	**20 29 35.0**	**+1.0**
QIZ	**Qiongzhong**	**24.54**	**317**		**P**	**20 29 37.1**	**-0.8**
QIZ				IAmb	IAmb	20 29 41.0	
	comp=Z,52nm,0.9s						
QIZ	**Qiongzhong**	**24.54**	**317**	P	**P**	**20 29 38.0**	**+0.1**
QIZ				pP	**pP**	**20 30 09.0**	**-1.4**
QIZ				sP	**sP**	**20 30 29.3**	**-0.5**
QIZ				S	**S**	**20 33 49.0**	**+2.3**
QIZ				pmax	pmax		
	comp=Z,59nm,0.9s						
QIZ				LR	LR		
	comp=Z,190nm,15.6s						
QIZ				LR	LR		
	comp=Z,190nm,15.9s						
QIZ	**Qiongzhong**	**24.54**	**317**	P	**P**	**20 29 38.9**	**+1.0**
QIS	**Mount Isa**	**24.89**	**152**	P	**P**	**20 29 41.5**	**+0.5**
	comp=Z,41nm,0.8s						
QIS	**Mount Isa**	**24.89**	**152**	P	**P**	**20 29 41.7**	**+0.6**
QZH	**Quanzhou**	**24.90**	**341**	P	**P**	**20 29 42.3**	**+1.2**
QZH				S	**S**	**20 33 59.5**	**+7.2**
QZH				pmax	pmax		
	comp=Z,120nm,0.9s						
RABL	**Rabaul**	**25.39**	**103**	P	**P**	**20 29 46.2**	**+0.5**
MTSU	**Mount Surprise**	**25.59**	**140**	P	**P**	**20 29 48.4**	**+1.0**
AS31	**Alice Springs**	**25.70**	**166**	IAmb	IAmb	20 29 56.5	
	comp=Z,11nm,0.4s						
ASAR	**Alice Springs**	**25.71**	**166**	P	**P**	**20 29 48.4**	**0.0**
ASAR	**Alice Springs**	**25.71**	**166**	P	**P**	**20 29 48.5**	**+0.1**
	comp=Z,5.3nm,0.5s,baz=350,slow=7.5,SNR=94						
ASAR				PcP	**PcP**	**20 33 14.7**	**+0.2**
	comp=Z,4.3nm,0.5s,baz=356,slow=2.0,SNR=7.3						
ASAR				S	**S**	**20 34 03.3**	**-1.8**
	comp=Z,5.1nm,0.8s,baz=350,slow=20,SNR=7.5						
ASAR				ScP	**ScP**	**20 36 38.7**	**-0.1**
	comp=Z,3.1nm,0.5s,baz=343,slow=2.8,SNR=7.0						
ASAR				LR	LR	20 40 27.3	
	comp=Z,117nm,19.3s,baz=330,slow=37						
	comp=Z,5.3nm,0.5s						
AS01	**Alice Springs**	**25.72**	**166**	P	**P**	**20 29 48.6**	**+0.1**
WRKA	**Warakurna**	**26.29**	**178**	P	**P**	**20 29 54.2**	**+0.6**
	comp=Z,16nm,1.5s						
MNSI	**Mandailing Nat**	**27.79**	**269**	P	**P**	**20 30 07.2**	**+0.1**
SISI	**Saibi**	**28.40**	**265**	P	**P**	**20 30 13.5**	**+0.9**
PSI	**Prapat**	**28.46**	**273**	P	**P**	**20 30 15.2**	**+2.0**
CNSH	**ChangSha**	**30.00**	**334**	P	**P**	**20 30 28.0**	**+1.4**
CNSH				pmax	pmax		
	comp=Z,19nm,0.8s						
WHN	**Wuhan**	**31.51**	**338**	⇑P	**P**	**20 30 42.0**	**+2.2**
WHN				pmax	pmax		
	comp=Z,170nm,1.0s						
NJ2	**Nanjing**	**31.54**	**346**	*e*P	**P**	**20 30 41.8**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GYA	**Guiyang**	**31.90**	**323**	⇑P	**P**	**20 30 44.8**	**+1.4**
GYA				pmax	pmax		
	comp=Z,39nm,0.8s						
CMAR	**Chiang Mai Arr**	**32.64**	**303**	P	**P**	**20 30 50.6**	**+0.8**
	comp=Z,1.8nm,0.3s,baz=117,slow=7.3,SNR=11						
CMAR				PcP	**PcP**	**20 33 33.5**	**+1.3**
	comp=Z,4.7nm,0.9s,baz=162,slow=1.4,SNR=14						
CMAR				ScP	**ScP**	**20 37 01.4**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=153,slow=3.0,SNR=5.2						
CMAR				PKiKP	**PKiKP**	**20 40 58.5**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=315,slow=3.6,SNR=4.3						
	comp=Z,1.8nm,0.3s						
CHTO	**Chiang Mai**	**32.80**	**304**	P	**P**	**20 30 51.9**	**+0.6**
CHTO	**Chiang Mai**	**32.80**	**304**	P	**P**	**20 30 52.5**	**+1.2**
CHTO	**Chiang Mai**	**32.80**	**304**	P	**P**	**20 30 51.9**	**+0.6**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ENH	**Enshi**	**33.37**	**331**	P	**P**	**20 30 57.2**	**+1.2**
ENH	**Enshi**	**33.37**	**331**	P	**P**	**20 30 57.2**	**+1.2**
ENH				sP	**sP**	**20 31 50.2**	**+1.9**
KMI	**Kunming**	**33.49**	**317**	⇑P	**P**	**20 30 59.3**	**+1.9**
KMI				pmax	pmax		
	comp=Z,20nm,1.1s						
TJN	**Taejon**	**34.81**	**360**		**P**	**20 31 08.2**	**-0.1**
TJN	**Taejon**	**34.81**	**360**	P	**P**	**20 31 08.4**	**+0.1**
TJN	**Taejon**	**34.81**	**360**	*c i*P	**P**	**20 31 08.2**	**-0.1**
INU	**Inuyama**	**34.96**	**14**	P	**P**	**20 31 09.1**	**-0.5**
INU				IAmb	IAmb	20 31 10.3	
	comp=Z,38nm,0.7s						
INU	**Inuyama**	**34.96**	**14**	P	**P**	**20 31 09.4**	**-0.2**
PZH	**PanZhiHua**	**35.07**	**318**	P	**P**	**20 31 13.3**	**+2.4**
PZH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,100nm,4.8s						
EIDS	**Eidsvold**	**35.14**	**141**	P	**P**	**20 31 11.7**	**+0.4**
JGF	**Kuroka**	**35.28**	**14**	P	**P**	**20 31 11.5**	**-0.9**
WHYH	**Whyalla**	**35.57**	**165**	P	**P**	**20 31 15.3**	**+0.5**
STKA	**Stephens Creek**	**35.73**	**159**	P	**P**	**20 31 16.8**	**+0.5**
STKA	**Stephens Creek**	**35.73**	**159**	P	**P**	**20 31 16.9**	**+0.6**
	comp=Z,28nm,0.6s,baz=335,slow=7.8,SNR=67						
STKA				PcP	**PcP**	**20 33 41.0**	**+0.2**
	comp=Z,8.2nm,0.5s,baz=311,slow=4.4,SNR=6.2						
STKA				S	**S**	**20 36 40.6**	**-0.6**
	comp=Z,4.9nm,0.8s,baz=134,slow=16,SNR=4.8						
	comp=Z,28nm,0.6s						
STKA	**Stephens Creek**	**35.73**	**159**	P	**P**	**20 31 16.9**	**+0.6**
LYN	**LuoYang**	**35.80**	**339**	P	**P**	**20 31 18.0**	**+1.2**
LYN				pmax	pmax		
	comp=Z,82nm,0.8s						
KSAR	**Wonju Array Be**	**35.88**	**1**	P	**P**	**20 31 17.6**	**+0.2**
KSAR	**Wonju Array Be**	**35.88**	**1**	P	**P**	**20 31 17.6**	**+0.2**
KSRS	**Korea Array**	**35.89**	**1**	P	**P**	**20 31 17.9**	**+0.5**
	comp=Z,24nm,0.7s,baz=178,slow=9.8,SNR=103						
KSRS				PcP	**PcP**	**20 33 42.0**	**+0.8**
	comp=Z,3.1nm,0.7s,baz=186,slow=3.1,SNR=8.4						
	comp=Z,24nm,0.7s						
KSRS	**Korea Array**	**35.89**	**1**	P	**P**	**20 31 18.0**	**+0.5**
KSRS						20 33 42.0	
KS19	**Wonju Array Si**	**35.94**	**1**	IAmb	IAmb	20 31 18.9	
	comp=Z,37nm,0.9s						
MJAR	**Matsushiro Arr**	**36.39**	**15**	P	**P**	**20 31 20.2**	**-1.6**
	comp=Z,19nm,0.5s,baz=193,slow=8.7,SNR=80						
MJAR				PcP	**PcP**	**20 33 42.9**	**+0.2**
	comp=Z,4.0nm,0.9s,baz=186,slow=2.1,SNR=4.6						
	comp=Z,19nm,0.5s						
MAJO	**Matsushiro**	**36.39**	**15**	P	**P**	**20 31 20.2**	**-1.5**
MAJO				IAmb	IAmb	20 31 22.5	
	comp=Z,33nm,0.7s						
MAJO	**Matsushiro**	**36.39**	**15**	P	**P**	**20 31 20.5**	**-1.4**
MAJO	**Matsushiro**	**36.39**	**15**	P	**P**	**20 31 20.4**	**-1.4**
MAJO	**Matsushiro**	**36.39**	**15**	P	**P**	**20 31 20.3**	**-1.5**
MJB9	**Matsu-Tunnel**	**36.39**	**15**	IAmb	IAmb	20 31 22.4	
	comp=Z,32nm,0.6s						
TNCH	**TengChong**	**36.44**	**313**	P	**P**	**20 31 23.8**	**+1.2**
TNCH				PP	**PnPn**	**20 32 53.0**	**+2.1**
TNCH				PcP	**PcP**	**20 33 44.5**	**+1.2**
TNCH				S	**S**	**20 36 53.8**	**+1.4**
TNCH				pmax	pmax		
	comp=Z,21nm,1.2s						
TNCH				pmax	pmax		
	comp=Z,180nm,4.3s						
XAN	**Xi'an**	**36.78**	**334**	⇑P	**P**	**20 31 26.0**	**+0.8**
XAN				pP	pP	20 31 58.8	-0.7
XAN				pmax	pmax		
	comp=Z,89nm,0.9s						
XAN	**Xi'an**	**36.78**	**334**	P	**P**	**20 31 25.8**	**+0.6**
CD2	**Chengdu**	**36.90**	**325**	P	**P**	**20 31 27.3**	**+1.0**
CD2				pmax	pmax		
	comp=Z,80nm,0.9s						
CMSA	**Cobar Meteorol**	**37.08**	**154**	P	**P**	**20 31 28.6**	**+0.9**
HNS	**HongShan**	**37.69**	**343**	⇑P	**P**	**20 31 33.0**	**+0.3**
HNS				PcP	**PcP**	**20 33 47.5**	**+0.9**
HNS				pmax	pmax		
	comp=Z,19nm,0.9s						
DL2	**Dalian**	**37.70**	**353**	P	**P**	**20 31 33.0**	**+0.2**
DL2				pmax	pmax		
	comp=Z,66nm,1.1s						
JMM	**Marumori**	**38.34**	**17**	P	**P**	**20 31 38.2**	**0.0**
ARMA	**Armidale**	**39.18**	**146**		**P**	**20 31 46.5**	**+1.1**
ARMA				IAmb	IAmb	20 31 47.7	
	comp=Z,38nm,1.0s						
ARMA	**Armidale**	**39.18**	**146**	P	**P**	**20 31 46.8**	**+1.3**
BJT	**Baijiatuau**	**39.77**	**347**	P	**P**	**20 31 50.2**	**+0.1**
BJT	**Baijiatuau**	**39.77**	**347**	P	**P**	**20 31 50.3**	**+0.2**
BJI	**Beijing**	**39.79**	**347**	P	**P**	**20 31 50.5**	**+0.3**
BJI				pmax	pmax		
	comp=Z,26nm,0.6s						
LZH	**Lanzhou**	**40.83**	**330**	*e*P	**P**	**20 32 01.0**	**+1.9**
LZH				pP	pwP	20 32 38.0	+1.1
LZH				sP	sP	20 32 57.3	+5.2
LZH				PcP	**PcP**	**20 33 57.8**	**+0.9**
LZH				pmax	pmax		
	comp=Z,100nm,1.1s						
LZH				pmax	pmax		
	comp=Z,210nm,4.3s						
JTM	**Tenmabayashi**	**41.13**	**16**	P	**P**	**20 32 01.3**	**+0.1**
MSHR	**Mys Shultsa**	**41.15**	**4**	⇑*e*P	**P**	**20 32 00.3**	**-1.0**
MSHR				pmax	pmax		
	comp=Z,79nm,0.9s						
PSTR	**Posyet**	**41.19**	**4**	⇑*e*P	**P**	**20 32 02.7**	**+1.1**
VLA	**Vladivostok**	**41.74**	**5**	*ce*P	**P**	**20 32 07.1**	**+1.0**
VLA				pmax	pmax		
	comp=Z,60nm,1.2s						
CAN	**Canberra**	**41.75**	**153**		**P**	**20 32 07.5**	**+1.1**
CAN				IAmb	IAmb	20 32 08.6	
	comp=Z,24nm,0.6s						
CAN	**Canberra**	**41.75**	**153**	P	**P**	**20 32 08.0**	**+1.6**
CAN	**Canberra**	**41.75**	**153**	P	**P**	**20 32 07.5**	**+1.1**
CAN				pmax	pmax		
	comp=Z,24nm,0.6s						
CAN	**Canberra**	**41.75**	**153**	P	**P**	**20 32 08.0**	**+1.6**
CAN				pP	**pP**	**20 32 43.9**	**+1.7**
HHC	**Hu-ho-hao-te**	**41.80**	**342**	*e*P	**P**	**20 32 07.8**	**+1.0**
HHC				pmax	pmax		
	comp=Z,28nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,4.7s						
CN2	**Changchun**	**42.26**	**358**	P	**P**	**20 32 09.5**	**-0.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USA0B	**Ussuriysk Arra**	**42.82**	**5**	IAmb	IAmb	20 32 16.1	
	comp=Z,50nm,1.1s						
USA0B	**Ussuriysk Arra**	**42.82**	**5**	*de*P	**P**	**20 32 14.3**	**-0.5**
USRK	**Ussuriysk Ar.**	**42.82**	**5**		**P**	**20 32 14.8**	**-0.1**
USRK	**Ussuriysk Ar.**	**42.82**	**5**	P	**P**	**20 32 15.2**	**+0.3**
	comp=Z,53nm,0.9s,baz=178,slow=7.5,SNR=54						
USRK				PcP	**PcP**	**20 34 03.8**	**+0.8**
	comp=Z,2.3nm,0.6s,baz=183,slow=3.1,SNR=2.1						
	comp=Z,53nm,0.9s						
MDJ	**Mudanjiang**	**43.09**	**2**	IAmb	IAmb	20 32 18.4	
	comp=Z,74nm,1.0s						
MDJ	**Mudanjiang**	**43.09**	**2**	P	**P**	**20 32 17.0**	**0.0**
MDJ				pmax	pmax		
	comp=Z,88nm,1.4s						
MDJ	**Mudanjiang**	**43.09**	**2**	P	**P**	**20 32 17.5**	**+0.5**
MDJ	**Mudanjiang**	**43.09**	**2**	P	**P**	**20 32 17.3**	**+0.3**
XLT	**XiLinHaoTe**	**43.50**	**348**	*e*P	**P**	**20 32 20.8**	**+0.4**
XLT				pP	pP	20 32 54.8	-0.9
XLT				PcP	**PcP**	**20 34 06.0**	**+0.5**
XLT				pmax	pmax		
	comp=Z,47nm,0.7s						
XLT				pmax	pmax		
	comp=Z,68nm,4.2s						
BNX	**BinXian**	**44.16**	**0**	⇓P	**P**	**20 32 25.0**	**-0.6**
BNX				S	**S**	**20 38 49.8**	**+3.6**
BNX				pmax	pmax		
	comp=Z,33nm,0.8s						
BNX				pmax	pmax		
	comp=Z,77nm,5.4s						
TEY	**Ternei**	**44.22**	**9**	⇓*e*P	**P**	**20 32 22.9**	**-3.1**
TEY				pmax	pmax		
	comp=N,50nm,0.6s						
TEY				pmax	pmax		
	comp=Z,90nm,0.6s						
LSA	**Lhasa**	**44.47**	**313**	P	**P**	**20 32 31.3**	**+2.4**
ASAJ	**Asahikawa**	**44.64**	**16**	P	**P**	**20 32 29.8**	**+0.4**
ASAJ				pmax	pmax		
	comp=Z,79nm,1.5s						
JKA	**Kamikawa-asahi**	**44.64**	**16**	P	**P**	**20 32 29.8**	**+0.4**
JKA				IAmb	IAmb	20 32 30.9	
	comp=Z,78nm,1.5s						
GTA	**Gaotai**	**45.42**	**330**	⇑P	**P**	**20 32 37.8**	**+2.0**
GTA				sP	sP	20 33 33.3	+4.0
GTA				PcP	**PcP**	**20 34 13.5**	**+1.3**
GTA				pmax	pmax		
	comp=Z,46nm,1.0s						
GOMU	**GeErMu**	**45.91**	**323**	P	**P**	**20 32 41.5**	**+1.5**
GOMU				PcP	**PcP**	**20 34 16.0**	**+1.7**
GOMU				pmax	pmax		
	comp=Z,14nm,1.1s						
YSS	**Yuzhno-Sakhali**	**47.32**	**14**	P	**P**	**20 32 49.9**	**-0.4**
YSS				IAmb	IAmb	20 32 51.0	
	comp=Z,31nm,0.9s						
YSS	**Yuzhno-Sakhali**	**47.32**	**14**	P	**P**	**20 32 50.5**	**+0.2**
YSS	**Yuzhno-Sakhali**	**47.32**	**14**	*e*P	**P**	**20 32 50.1**	**-0.2**
YSS				*e**PP	**pwP**	**20 33 27.6**	**-1.6**
YSS				*e*		20 34 19.0	
YSS				*e*S	**S**	**20 39 29.1**	**-2.3**
YSS				pmax	pmax		
	comp=Z,30nm,0.7s						
YSS				MLR	MLR		
	comp=Z,100nm,17.0s						
YSS				MLR	MLR		
	comp=N,100nm,19.0s						
YSS				MLR	MLR		
	comp=E,100nm,18.0s						
YSS	**Yuzhno-Sakhali**	**47.32**	**14**	P	**P**	**20 32 49.9**	**-0.4**
KLR	**Kul'dur**	**47.81**	**4**	*c i*P	**P**	**20 32 53.7**	**-0.3**
KLR				pmax	pmax		
	comp=Z,39nm,0.9s						
HIA	**Hailar**	**48.14**	**353**	P	**P**	**20 32 57.9**	**+1.3**
HEH	**HeiHe**	**48.68**	**0**	*e*P	**P**	**20 33 00.3**	**-0.4**
HEH				PcP	**PcP**	**20 34 23.5**	**+0.1**
HEH				pmax	pmax		
	comp=Z,55nm,0.8s						
ULN	**Ulaanbaatar**	**49.52**	**342**	P	**P**	**20 33 07.9**	**+0.5**
ULN	**Ulaanbaatar**	**49.52**	**342**	P	**P**	**20 33 08.0**	**+0.7**
ULN	**Ulaanbaatar**	**49.52**	**342**	P	**P**	**20 33 08.0**	**+0.7**
SONM	**Songino Array**	**49.70**	**342**	P	**P**	**20 33 08.9**	**+0.3**
SONM	**Songino Array**	**49.70**	**342**	P	**P**	**20 33 09.2**	**+0.5**
	comp=Z,11nm,0.6s,baz=157,slow=8.6,SNR=97						
SONM				PcP	**PcP**	**20 34 27.7**	**+0.3**
	comp=Z,7.2nm,0.8s,baz=163,slow=3.8,SNR=8.7						
	comp=Z,11nm,0.6s						
GRNR	**Gornyy**	**49.79**	**8**	⇑*i*P	**P**	**20 33 09.6**	**+0.5**
GRNR				pmax	pmax		
	comp=N,10.0nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,30nm,0.9s						
GRNR				MLR	MLR		
	comp=E,190nm,22.0s						
HYB	**Hyderabad**	**50.53**	**291**	*e*P	**P**	**20 33 16.5**	**+1.2**
HYB				*e*pP	**pP**	**20 33 52.4**	**+0.6**
TYV	**Tymovskoe**	**50.97**	**12**	*e*P	**P**	**20 33 17.9**	**0.0**
TYV				pmax	pmax		
	comp=Z,15nm,1.4s						
TYV				pmax	pmax		
	comp=Z,100nm,3.4s						
CIT	**Chita**	**51.77**	**349**	*e*P	**P**	**20 33 24.6**	**+0.7**
CIT				*e*		20 34 04.6	
CIT				*e*		20 34 36.2	
CIT				*e*		20 35 21.6	
CIT				*e*		20 36 37.8	
CIT				*e*		20 40 47.2	
CIT				pmax	pmax		
	comp=Z,53nm,1.6s						
ZEA	**Zeya**	**52.17**	**360**	*e*P	**P**	**20 33 26.0**	**-0.8**
ZEA				*e*		20 34 37.4	
ZEA				pmax	pmax		
	comp=N,10.0nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZAK	**Zakamensk**	**52.93**	**341**	*e*P	**P**	**20 33 31.0**	**-1.6**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
MOY	**Mondy**	**54.78**	**340**	*e*P	**P**	**20 33 46.6**	**+0.6**
MOY				pmax	pmax		
	comp=Z,24nm,1.6s						
WMQ	**Urumqi**	**55.00**	**326**	*e*P	**P**	**20 33 49.3**	**+1.6**
WMQ				pmax	pmax		
	comp=Z,70nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,200nm,4.9s						
BOD	**Bodaibo**	**57.26**	**352**	*e*P	**P**	**20 34 03.0**	**-0.3**
BOD				pmax	pmax		
	comp=Z,43nm,0.9s						
PEA0B	**Petropavlovsk-**	**57.35**	**21**	*d i*P	**P**	**20 34 04.9**	**+0.8**
PETK	**Petropavlovsk-**	**57.35**	**21**	P	**P**	**20 34 04.0**	**-0.1**
PETK	**Petropavlovsk-**	**57.35**	**21**	P	**P**	**20 34 03.9**	**-0.3**
	comp=Z,20nm,0.5s,baz=186,slow=4.5,SNR=87						
	comp=Z,20nm,0.5s						
PETK	**Petropavlovsk-**	**57.35**	**21**	P	**P**	**20 34 04.0**	**-0.1**
PET	**Petropavlovsk**	**57.64**	**22**	P	**P**	**20 34 06.7**	**+0.7**
PET	**Petropavlovsk**	**57.64**	**22**	*de*P	**P**	**20 34 06.8**	**+0.7**
PET				pmax	pmax		
	comp=Z,39nm,1.0s						
PET	**Petropavlovsk**	**57.64**	**22**	P	**P**	**20 34 05.9**	**-0.1**
	comp=Z,29nm,0.9s						
MSZ	**Milford Sound**	**58.33**	**147**	P	**P**	**20 34 12.5**	**+1.5**
JCZ	**Jackson Bay**	**58.42**	**146**	P	**P**	**20 34 12.9**	**+1.1**
JCZ	**Jackson Bay**	**58.42**	**146**	P	**P**	**20 34 13.1**	**+1.2**
FOZ	**Fox Glacier**	**58.67**	**145**	P	**P**	**20 34 14.0**	**+0.6**
QRZ	**Quartz Range**	**58.72**	**141**	P	**P**	**20 34 14.9**	**+1.1**
DSZ	**Denniston Nort**	**58.79**	**142**	P	**P**	**20 34 15.2**	**+0.8**
ZSN	**Zaisan**	**58.80**	**328**	*e*P	**P**	**20 34 14.8**	**+0.5**
ZSN				pmax	pmax		
	comp=Z,13nm,1.0s						
ZSN	**Zaisan**	**58.80**	**328**	*e*P	**P**	**20 34 14.8**	**+0.5**
	comp=Z,13nm,1.0s						
KHEZ	**Kahui Hut**	**58.85**	**139**	P	**P**	**20 34 19.1**	**+4.3**
MLZ	**Mavora Lakes**	**58.88**	**147**	P	**P**	**20 34 15.0**	**+0.1**
NEZ	**North Egmont**	**58.89**	**139**	P	**P**	**20 34 19.3**	**+4.2**
HIZ	**Hauiti**	**59.00**	**138**	P	**P**	**20 34 17.0**	**+1.1**
TOZ	**Tahuroa Road**	**59.05**	**136**	IAmb	IAmb	20 34 18.2	
	comp=Z,17nm,0.7s						
TOZ	**Tahuroa Road**	**59.05**	**136**	P	**P**	**20 34 17.4**	**+1.2**
LBZ	**Lake Benmore**	**59.41**	**146**	P	**P**	**20 34 19.0**	**+0.5**
NNZ	**Nelson**	**59.47**	**141**	P	**P**	**20 34 18.6**	**-0.4**
THZ	**Tophouse**	**59.48**	**142**	P	**P**	**20 34 19.0**	**-0.1**
RPZ	**Rata Peaks**	**59.50**	**144**	P	**P**	**20 34 19.5**	**+0.3**
RPZ	**Rata Peaks**	**59.50**	**144**	P	**P**	**20 34 19.7**	**+0.5**
SHLS	**Shalkode**	**59.55**	**321**	*e*P	**P**	**20 34 18.2**	**-1.4**
SHLS				pmax	pmax		
	comp=Z,21nm,0.9s						
SHLS	**Shalkode**	**59.55**	**321**	*e*P	**P**	**20 34 18.3**	**-1.4**
	comp=Z,21nm,0.9s						
LTZ	**Lake Taylor**	**59.67**	**143**	P	**P**	**20 34 20.3**	**-0.1**
LTZ				IAmb	IAmb	20 34 21.4	
	comp=Z,24nm,1.0s						
LTZ	**Lake Taylor**	**59.67**	**143**	P	**P**	**20 34 20.4**	**0.0**
PKVZ	**Pokaka**	**59.73**	**138**	P	**P**	**20 34 21.7**	**+0.9**
WTVZ	**West Tongariro**	**59.80**	**138**	P	**P**	**20 34 23.2**	**+1.7**
UZB	**Uzynbulak**	**59.82**	**321**	*e*P	**P**	**20 34 21.9**	**+0.4**
UZB				pmax	pmax		
	comp=Z,14nm,0.7s						
UZB	**Uzynbulak**	**59.82**	**321**	*e*P	**P**	**20 34 22.0**	**+0.4**
	comp=Z,14nm,0.7s						
KRVZ	**Karewarewa**	**59.83**	**138**	P	**P**	**20 34 23.3**	**+1.7**
NNVZ	**North Ngauruho**	**59.83**	**138**	P	**P**	**20 34 23.3**	**+1.6**
MK31	**Makanchi Array**	**59.83**	**326**	*c i*P	**P**	**20 34 22.0**	**+0.6**
MKAR	**Makanchi Array**	**59.83**	**326**	P	**P**	**20 34 21.9**	**+0.5**
MKAR	**Makanchi Array**	**59.83**	**326**	P	**P**	**20 34 22.1**	**+0.7**
	comp=Z,27nm,0.4s,baz=115,slow=7.9,SNR=261						
MKAR				PcP	**PcP**	**20 35 06.3**	**+0.1**
	comp=Z,12nm,0.6s,baz=125,slow=3.7,SNR=11						
	comp=Z,27nm,0.4s						
OMRZ	**Omania**	**59.83**	**136**	P	P	20 34 28.9	+7.3
NGZ	**Ngauruhoe**	**59.84**	**138**	P	**P**	**20 34 23.2**	**+1.4**
FWVZ	**Far West T-bar**	**59.85**	**138**	P	**P**	**20 34 22.9**	**+1.0**
NTVZ	**North Tongarir**	**59.85**	**138**	P	**P**	**20 34 23.5**	**+1.6**
NIL	**Nilore**	**59.86**	**309**	P	**P**	**20 34 22.3**	**+0.4**
NIL	**Nilore**	**59.86**	**309**	P	**P**	**20 34 22.3**	**+0.4**
NIL				pmax	pmax		
	comp=Z,30nm,0.7s						

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TRVZ  Turoa            59.87 138   P      P      20 34 23.6 +1.6
SNVZ  South Ngauruho   59.87 138   P      P      20 34 23.3 +1.3
OTVZ  Oturere          59.88 138   P      P      20 34 23.5 +1.5
TMVZ  Te Maari         59.88 138   P      P      20 34 23.6 +1.6
WHVZ  Whangaehu Hut    59.89 138   P      P      20 34 23.4 +1.3
ETVZ  East Tongariro   59.89 138   P      P      20 34 23.8 +1.7
TARG  Taragay, Kyrgy   59.91 319   P      P      20 34 24.1 +1.6
TARG                               IAmb   IAmb   20 34 26.6
      comp=Z,14nm,0.7s
TARG  Taragay, Kyrgy   59.91 319   P      P      20 34 24.1 +1.6
TARG                               pmax   pmax
      comp=Z,15nm,0.7s
WNVZ  Wahianoa         59.91 138   P      P      20 34 23.2 +1.0
TUVZ  Tukino           59.92 138   P      P      20 34 23.5 +1.2
TUWZ  Tuamarina        59.94 141   P      P      20 34 21.7 -0.5
MAKZ  Makanchi         60.02 326   P      P      20 34 23.0 +0.4
MAKZ  Makanchi         60.02 326   P      P      20 34 23.2 +0.5
MAKZ  Makanchi         60.02 326   P      P      20 34 23.1 +0.4
TCW   Tory Channel     60.04 141   P      P      20 34 21.9 -0.9
MOVZ  Moawhango        60.06 138   P      P      20 34 23.5 +0.4
KSH   Kashi            60.15 316   P      P      20 34 26.0 +2.2
KSH                                pmax   pmax
      comp=Z,35nm,0.8s
SATY  Saty             60.17 320  eP      P      20 34 24.4 +0.5
SATY                               pmax   pmax
      comp=Z,14nm,0.5s
SATY  Saty             60.17 320  eP      P      20 34 24.4 +0.5
      comp=Z,14nm,0.5s
KPKS  Kokpek           60.19 321  eP      P      20 34 24.4 +0.4
KPKS  Kokpek           60.19 321  eP      P      20 34 24.5 +0.4
KHZ   Kahutara         60.23 142   P      P      20 34 23.9 -0.2
GVZ   Greta Valley S   60.24 143   P      P      20 34 24.5 +0.3
KIW   Kapiti Island    60.26 140   P      P      20 34 24.5 +0.1
OGWZ  Otaki Gorge      60.40 140   P      P      20 34 25.2 -0.2
URZ   Urewera          60.42 136   P      P      20 34 26.1 +0.6
MQZ   McQueen's Vall   60.43 144   P      P      20 34 26.1 +0.7
BKZ   Black Stump Fm   60.44 137   P      P      20 34 25.4 -0.3
BKZ   Black Stump Fm   60.44 137   P      P      20 34 25.6 -0.1
BKZ   Black Stump Fm   60.44 137   P      P      20 34 26.0 +0.4
CAW   Cannon Point     60.49 140   P      P      20 34 25.3 -0.6
RTZ   Ruatahuna        60.50 137   P      P      20 34 26.1  0.0
YAK   Yakutsk          60.51   1   P      P      20 34 25.5 -0.2
YAK   Yakutsk          60.51   1  eP      P      20 34 25.2 -0.5
YAK                               e              20 35 08.2
YAK                               e              20 36 39.9
YAK                               eS      S      20 42 26.1 -2.0
YAK                               e              20 43 58.7
YAK                               eSS     SS     20 46 22.9 -6.3
YAK                               eSSS    SSS    20 49 15.0
YAK                                pmax   pmax
      comp=Z,83nm,0.9s
YAK                                pmax   pmax
      comp=N,24nm,1.1s
YAK                                pmax   pmax
      comp=E,9.0nm,1.0s
YAK                                pmax   pmax
      comp=Z,76nm,3.6s
YAK                                pmax   pmax
      comp=N,59nm,4.3s
YAK                                pmax   pmax
      comp=E,115nm,4.8s
YAK                                smax   smax
      comp=N,40nm,1.7s
YAK                                smax   smax
      comp=E,37nm,2.5s
KWHZ  Kaweka Forest    60.52 138   P      P      20 34 26.8 +0.6
MTHZ  Maungataniwha    60.52 137   P      P      20 34 26.6 +0.4
BHW   Baring Head      60.52 140   P      P      20 34 25.3 -0.8
TSZ   Takapari Road    60.53 139   P      P      20 34 26.0 -0.2
MRZ   Mangatainoka R   60.58 139   P      P      20 34 25.5 -1.1
MRZ                                IAmb   IAmb   20 34 26.5
      comp=Z,22nm,0.8s
MRZ   Mangatainoka R   60.58 139   P      P      20 34 25.8 -0.8
KRHZ  Kereru           60.59 138   P      P      20 34 26.9 +0.2
PNHZ  Pukenui          60.61 138   P      P      20 34 26.7 -0.1
NMHZ  Naumai           60.61 137   P      P      20 34 28.0 +1.1
HAZ   Te Kaha          60.65 136   P      P      20 34 27.2 +0.2
MCHZ  McNeill Hill     60.71 138   P      P      20 34 28.4 +0.9
RAHZ  Arahi            60.72 137   P      P      20 34 28.0 +0.5
MWZ   Matawai          60.74 136   P      P      20 34 27.8  0.0
RAGZ  Rawiri           60.74 136   P      P      20 34 28.2 +0.4
MSWZ  Moikau Station   60.77 140   P      P      20 34 27.3 -0.6
MTW   Mount Morrison   60.79 140   P      P      20 34 27.4 -0.6
MA2   Magadan          60.81  13   P      P      20 34 28.3 +0.6
MA2   Magadan          60.81  13   P      P      20 34 28.5 +0.8
MA2   Magadan          60.81  13c iP      P      20 34 28.3 +0.6
MA2                                pmax   pmax
      comp=Z,50nm,0.9s
MA2   Magadan          60.81  13   P      P      20 34 27.5 -0.2
      comp=Z,69nm,1.1s
MA2   Magadan          60.81  13   P      P      20 34 28.5 +0.8
ARHZ  Aropaoanui       60.82 137   P      P      20 34 29.0 +0.7
SNGZ  Shannon Statio   60.83 137   P      P      20 34 28.6 +0.3
PLWZ  Palliser         60.85 140   P      P      20 34 27.9 -0.6
PAWZ  Paruwai Farm     60.86 140   P      P      20 34 27.9 -0.6
MXZ   Matakaoa Point   60.92 135   P      P      20 34 29.1 +0.1
NRN   Naryn            60.97 318   IAmb   IAmb   20 34 31.4
      comp=Z,22nm,0.8s
KAHZ  Kahuranaki       61.00 138   P      P      20 34 30.0 +0.5
TMWZ  Te Maipa         61.02 140   P      P      20 34 25.9 -3.7
BFZ   Birch Farm       61.03 139   IAmb   IAmb   20 34 33.8
      comp=Z,17nm,0.8s
BFZ   Birch Farm       61.03 139   P      P      20 34 29.1 -0.5
TRWZ  Traveller        61.04 140   P      P      20 34 29.7  0.0
RIGZ  Rimuhau          61.08 136   P      P      20 34 30.7 +0.6
PUZ   Puketiti         61.12 136   P      P      20 34 29.6 -0.7
TDK   Taldyqorghan     61.14 322  eP      P      20 34 30.8 +0.5
TDK                                pmax   pmax
      comp=Z,10.0nm,0.4s
TDK   Taldyqorghan     61.14 322  eP      P      20 34 30.9 +0.5
      comp=Z,10nm,0.4s
ULHL  Ulahol           61.18 319   P      P      20 34 32.0 +1.1
      SNR=7.1
AAA   Alma-Ata         61.19 320  eP      P      20 34 31.2 +0.4
AAA                                pmax   pmax
      comp=Z,32nm,1.1s
AAA   Alma-Ata         61.19 320  eP      P      20 34 31.2 +0.4
      comp=Z,32nm,1.1s
MHGZ  Mahia Peninsul   61.39 137   P      P      20 34 32.6 +0.6
KUU   Kurty            61.89 320  eP      P      20 34 35.8 +0.5
KUU                                pmax   pmax
      comp=Z,13nm,0.5s
KUU   Kurty            61.89 320  eP      P      20 34 35.9 +0.5
      comp=Z,13nm,0.5s
TKM2  Tokmak 2         61.91 319   P      P      20 34 36.8 +1.0
      SNR=16
KBK   Karagaybulak     62.22 319   P      P      20 34 39.1 +1.3
      SNR=6.0
CHMS  Chumysh          62.50 319   P      P      20 34 40.2 +0.7
      SNR=8.2
AAK   Ala-Archa        62.51 318   P      P      20 34 38.8 -0.9
      comp=Z,5.0nm,0.5s,baz=110,slow=7.6,SNR=5.0
      comp=Z,5.0nm,0.5s
AAK   Ala-Archa        62.51 318ceP      P      20 34 41.1 +1.4
AAK                                pmax   pmax
      comp=Z,25nm,1.7s
SGDS  Sogindy          62.78 319⇑iP      P      20 34 41.9 +0.5
USP   Ospenovka        62.79 319   P      P      20 34 42.2 +0.9
      SNR=5.7
AML   Almayashu        62.83 318   P      P      20 34 43.5 +1.4
      SNR=12
ZAA0  Zalesovo Array   62.95 333   IAmb   IAmb   20 34 42.5
      comp=Z,20nm,1.1s
ZALV  Zalesovo Beam    62.95 333   P      P      20 34 41.1 -1.0
ZALV  Zalesovo Beam    62.95 333   P      P      20 34 40.9 -1.2
      comp=Z,4.3nm,0.4s,baz=108,slow=4.8,SNR=25
      comp=Z,4.3nm,0.4s
ZALV  Zalesovo Beam    62.95 333   P      P      20 34 41.1 -1.0
EKS2  Erkin-Say        63.00 318   P      P      20 34 44.3 +1.4
      SNR=17
KBL   Kabul            63.45 308   P      P      20 34 46.1  0.0
KBL   Kabul            63.45 308   P      P      20 34 46.1  0.0
KBL                                pmax   pmax
      comp=Z,55nm,0.9s
BTLS  Baital           63.87 321c iP      P      20 34 48.6 +0.2
BTLS                               pmax   pmax
      comp=Z,9.0nm,0.7s
BTLS  Baital           63.87 321⇑iP      P      20 34 48.7 +0.2
      comp=Z,8.6nm,0.7s
GAR   Garm             63.97 313   P      P      20 34 49.8 +0.5
KURBB Kurchatov Arra   64.04 328   P      P      20 34 49.5 +0.2
      comp=Z,46nm,0.6s,baz=128,slow=6.1,SNR=306
KURBB                              PcP    PcP    20 35 22.1 -1.1
      comp=Z,5.3nm,0.7s,baz=123,slow=5.3,SNR=5.2
KURBB                              PP     PP     20 37 11.7 -0.6
      comp=Z,0.9nm,0.8s,baz=127,slow=10.0,SNR=4.2
      comp=Z,46nm,0.6s
KURK  Kurchatov        64.04 328   P      P      20 34 49.5 +0.2
KURK  Kurchatov        64.04 328   P      P      20 34 49.6 +0.2
KURK                                             20 35 22.1
KURK  Kurchatov        64.04 328   P      P      20 34 49.6 +0.3
SEY   Seymchan         64.16  12c iP      P      20 34 51.1 +1.2
SEY                                pmax   pmax
      comp=Z,72nm,1.0s
DZA   Taraz            64.73 318  eP      P      20 34 54.6 +0.5
DZA                                pmax   pmax
      comp=Z,16nm,0.7s
DZA   Taraz            64.73 318  eP      P      20 34 54.7 +0.5
      comp=Z,16nm,0.7s
SIMJ  Simiganj         64.81 313   P      P      20 34 53.9 -0.9
IUG   Iuzhnay          65.33 316  eP      P      20 34 58.5 +0.4
IUG                                pmax   pmax
      comp=Z,18nm,0.7s
IUG   Iuzhnay          65.33 316  eP      P      20 34 58.5 +0.4
      comp=Z,18nm,0.7s
CHM   Chimkent         65.69 316  eP      P      20 35 00.8 +0.5
CHM                                pmax   pmax
      comp=Z,14nm,0.8s
CHM   Chimkent         65.69 316  eP      P      20 35 00.8 +0.5
      comp=Z,14nm,0.8s
BRLS  Borolday         65.80 317c iP      P      20 35 01.5 +0.6
BRLS                               pmax   pmax
      comp=Z,14nm,0.5s
BRLS  Borolday         65.80 317⇑iP      P      20 35 01.5 +0.6
      comp=Z,14nm,0.5s
BRZS  Berezniki        66.95 325c iP      P      20 35 08.4 +0.3
BRZS  Berezniki        66.95 325⇑iP      P      20 35 08.5 +0.3
DRV   Dumont d'Urvil   68.50 175   P      P      20 35 17.2 -0.2
BVAR  Borovoye Array   69.62 327   P      P      20 35 24.6  0.0
      comp=Z,43nm,0.8s,baz=125,slow=7.8,SNR=79
BVAR                               PcP    PcP    20 35 45.0 -1.5
      comp=Z,6.2nm,0.8s,baz=146,slow=6.4,SNR=4.0
      comp=Z,43nm,0.8s
BRVK  Borovoye         69.69 327c iP      P      20 35 25.1 +0.1
BRVK                               pmax   pmax
      comp=Z,48nm,0.9s
BRVK  Borovoye         69.69 327   P      P      20 35 25.0 -0.1
WSAR  Wadi Sarin       69.94 294   P      P      20 35 27.6 +0.4
      comp=Z,0.1nm,0.6s,baz=144,slow=23,SNR=14
ATKA  Atka Island      70.06  34   P      P      20 35 27.6 +0.3
TIXI  Tiksi            70.16   1   P      P      20 35 27.0 -0.5
TIXI                               IAmb   IAmb   20 35 27.8
      comp=Z,30nm,0.9s
TIXI  Tiksi            70.16   1   P      P      20 35 27.0 -0.5
TIXI                               pmax   pmax
      comp=Z,30nm,0.9s
TIXI  Tiksi            70.16   1   P      P      20 35 26.8 -0.7
TIXI                               sP     sP     20 36 24.0 +0.7
BILL  Bilibino         71.64  14⇑eP      P      20 35 36.2 -0.3
BILL                               pmax   pmax
      comp=Z,13nm,1.3s
SOHO  SOHO             71.96 295  i P     P      20 35 39.4  0.0
      SNR=7.9
MDH   Madha            72.31 296   P      P      20 35 40.7 -0.7
UOSS  Minazif          72.35 296  i P     P      20 35 41.6 -0.1
      SNR=6.5
HATD  Hatta, Dubai     72.41 296  i P     P      20 35 42.4 +0.4
      SNR=9.4
MSFE  Esma-Masafi      72.44 296  i P     P      20 35 43.9 +1.7
      SNR=9.0
ASHO  Ashiyiah         72.45 295  i P     P      20 35 42.7 +0.4
      SNR=11
SHME  Shamm            72.54 297  i P     P      20 35 43.4 +0.6
      SNR=7.7
ALNE  Al Ain           72.66 295  i P     P      20 35 44.5 +1.0
      SNR=43
NRIK  Noril'sk         72.84 346   P      P      20 35 43.4 -0.2
NRIK                               IAmb   IAmb   20 35 44.5
      comp=Z,26nm,0.8s
NRIK  Noril'sk         72.84 346   P      P      20 35 43.6  0.0
      comp=Z,22nm,0.6s,baz=128,slow=5.7,SNR=29
      comp=Z,22nm,0.6s
NAZ   Nazwa, Dubai     72.85 296  i P     P      20 35 45.0 +0.5
      SNR=5.8
FAQ   Al Faqa, Dubai   72.88 295   P      P      20 35 45.3 +0.5
ASUD  Al Ashush, Dub   73.11 295  i P     P      20 35 47.2 +1.1
      SNR=8.8
NIKH  Nikolski High    73.36  34   P      P      20 35 47.4 +0.4
      baz=249
AJN   Ajban            73.41 295  i P     P      20 35 48.1 +0.2
      SNR=7.4
SPIA  Saint Paul Isl   74.18  30   P      P      20 35 52.4 +0.7
      baz=247
P08K  Saint George I   74.31  31   P      P      20 35 53.4 +0.9
      baz=248
MZR   Muzera           74.63 293  i P     P      20 35 55.5 +0.5
      SNR=16
UNV   Unalaska Valle   74.98  34   P      P      20 35 56.2 -0.1
      baz=251
AKTO  Aktyubinsk       75.88 322   P      P      20 36 01.5 -0.1
      comp=Z,32nm,0.7s,baz=102,slow=4.9,SNR=56
      comp=Z,32nm,0.7s
GAMB  Gambell          76.27  24   IAmb   IAmb   20 36 05.8
      comp=Z,28nm,1.0s
GAMB  Gambell          76.27  24   P      P      20 36 04.4 +0.9
      baz=244
SVE   Sverdlovsk       76.27 329deP      P      20 36 03.4 -0.3
SVE                                pmax   pmax
      comp=Z,47nm,0.8s
FALS  False Pass       77.01  34   P      P      20 36 07.8  0.0
      baz=254
M11K  Mekoryuk         77.32  28   P      P      20 36 10.5 +1.0
      baz=250
ARTI  Arti             77.32 328   P      P      20 36 08.8 -0.8
      comp=Z,15nm,0.7s,baz=108,slow=3.4,SNR=24
      comp=Z,15nm,0.7s
ARTI  Arti             77.32 328c iP      P      20 36 08.5 -1.1
ARTI                               *PP    pwP    20 36 50.5 -1.1
ARTI                               S      S      20 45 44.1 -2.0
ARTI                               SS     SS     20 50 43.2 -4.7
ARTI                               pmax   pmax
      comp=Z,19nm,0.8s
S12K  Black Hills      77.99  33   P      P      20 36 13.3  0.0
      baz=254
TNA   Tin City         78.48  23   P      P      20 36 16.4 +0.7
      baz=247
K13K  Kusilvak Mount   78.55  27   IAmb   IAmb   20 36 18.4
      comp=Z,35nm,0.8s
K13K  Kusilvak Mount   78.55  27   P      P      20 36 17.3 +1.1
      baz=251,SNR=10
M13K  Dall Lake        78.67  28   P      P      20 36 18.2 +1.3
      baz=252
SDPT  Sand Point       78.77  34   P      P      20 36 17.8 +0.3
      baz=256
F14K  Arctic Creek     79.07  23   P      P      20 36 19.8 +0.8
      baz=249
ANM   Nome             79.13  24   P      P      20 36 20.1 +0.7
      baz=250
CHNA  Chernabura Isl   79.14  34   P      P      20 36 20.1 +0.6
      baz=257
L14K  Kuka Creek       79.26  27   IAmb   IAmb   20 36 22.3
      comp=Z,54nm,1.1s
L14K  Kuka Creek       79.26  27   P      P      20 36 21.3 +1.3
      baz=253,SNR=12
J14K  Nanvaranak Lak   79.30  26   P      P      20 36 21.1 +0.9
      baz=252
N14K  Kuskokwak Cree   79.33  29   P      P      20 36 21.2 +0.7
      baz=254
O14K  Tigyukauivet M   79.35  30   IAmb   IAmb   20 36 22.4
      comp=Z,38nm,0.9s
O14K  Tigyukauivet M   79.35  30   P      P      20 36 21.4 +0.8
      baz=254
M14K  Bethel           79.43  28   P      P      20 36 22.0 +1.1
      baz=254,SNR=9.4
S14K  Fog Glacier      79.50  33   P      P      20 36 22.1 +0.5
      baz=256
F15K  North Star Dit   79.81  23   IAmb   IAmb   20 36 24.6
      comp=Z,24nm,1.1s
F15K  North Star Dit   79.81  23   P      P      20 36 24.0 +1.0
      baz=250
G15K  Niukluk          79.81  24   P      P      20 36 23.7 +0.7
      baz=251
L15K  Ungalak Mounta   79.91  27   P      P      20 36 24.4 +0.8
      baz=254,SNR=6.7
M15K  Kasigluk River   80.01  28   P      P      20 36 24.8 +0.7
      baz=255,SNR=8.3
O15K  Ungalikthiuk R   80.05  30   IAmb   IAmb   20 36 25.6
      comp=Z,18nm,0.8s
O15K  Ungalikthiuk R   80.05  30   P      P      20 36 25.0 +0.6
      baz=256
K15K  Wolf Creek Mou   80.06  27   IAmb   IAmb   20 36 27.3
      comp=Z,43nm,0.9s
K15K  Wolf Creek Mou   80.06  27   P      P      20 36 25.8 +1.4
      baz=254,SNR=15
N15K  Kwethluk River   80.16  29   IAmb   IAmb   20 36 27.0
      comp=Z,29nm,1.0s
N15K  Kwethluk River   80.16  29   P      P      20 36 25.8 +0.8
      baz=255,SNR=5.4
H16K  Elim             80.43  24   P      P      20 36 27.2 +0.9
      baz=253,SNR=12
C16K  Lisburne Hills   80.44  20   IAmb   IAmb   20 36 28.3
      comp=Z,23nm,0.9s
C16K  Lisburne Hills   80.44  20   P      P      20 36 27.2 +0.9
      baz=249
G16K  Koyuk River      80.61  24   P      P      20 36 28.3 +1.1
      baz=252,SNR=7.4
J16K  Anvik River      80.74  26   IAmb   IAmb   20 36 30.6
      comp=Z,34nm,0.8s
J16K  Anvik River      80.74  26   P      P      20 36 29.5 +1.4
      baz=254,SNR=18
L16K  Owhat River      80.84  28   IAmb   IAmb   20 36 30.1
      comp=Z,19nm,0.7s
L16K  Owhat River      80.84  28   P      P      20 36 29.6 +1.0
      baz=256,SNR=11
I17K  Unalakleet       80.86  25   IAmb   IAmb   20 36 31.3
      comp=Z,31nm,0.8s
I17K  Unalakleet       80.86  25   P      P      20 36 30.2 +1.6
      baz=254,SNR=11
N16K  Nishlik Lake     80.88  29   P      P      20 36 30.1 +1.3
      baz=256
M16K  Timber Creek     80.91  28   IAmb   IAmb   20 36 31.1
      comp=Z,31nm,0.9s
M16K  Timber Creek     80.91  28   P      P      20 36 29.9 +1.0
      baz=256,SNR=10
P16K  Nushagak River   80.94  30   P      P      20 36 30.1 +1.0
      baz=257
O16K  Kokwok River B   81.01  30   IAmb   IAmb   20 36 31.3
      comp=Z,34nm,1.1s
O16K  Kokwok River B   81.01  30   P      P      20 36 30.3 +0.8
      baz=257,SNR=9.1
VNDA  Vanda            81.04 173   P      P      20 36 29.4 +0.1
VNDA  Vanda            81.04 173   P      P      20 36 29.4 +0.1
      comp=Z,6.4nm,0.8s,baz=316,slow=5.9,SNR=42
      comp=Z,6.4nm,0.8s
D17K  Noatak River     81.05  21   P      P      20 36 31.0 +1.5
      baz=251,SNR=18
RDOG  Red Dog Mine     81.22  21   P      P      20 36 31.5 +1.0
      baz=252,SNR=5.3
C17K  DeLong Mountai   81.26  20   P      P      20 36 31.9 +1.1
      baz=251
AKT   Akhty            81.31 312  eP      P      20 36 31.8 +0.1
AKT                               e*PP    pP     20 37 11.6 +0.2
AKT                               e              20 39 39.3
AKT                               ePPP    PPP    20 41 33.4
AKT                                pmax   pmax
      comp=Z,15nm,0.6s
E17K  Hotham Inlet     81.32  22   P      P      20 36 32.4 +1.4
      baz=253,SNR=12
G17K  Kiwalik Mounta   81.32  24   P      P      20 36 32.4 +1.4
      baz=254,SNR=14
F17K  Baldwin Pennin   81.35  23   IAmb   IAmb   20 36 33.4
      comp=Z,22nm,0.7s
F17K  Baldwin Pennin   81.35  23   P      P      20 36 32.3 +1.2
      baz=253
J17K  VABM Dome        81.43  26   IAmb   IAmb   20 36 34.2
      comp=Z,30nm,0.9s
J17K  VABM Dome        81.43  26   P      P      20 36 33.3 +1.6
      baz=256,SNR=17
H17K  Granite Mounta   81.47  24   IAmb   IAmb   20 36 33.8
      comp=Z,20nm,0.6s
H17K  Granite Mounta   81.47  24   P      P      20 36 33.3 +1.5
      baz=255,SNR=19
L17K  Donlin           81.48  27   P      P      20 36 33.5 +1.6
      baz=257,SNR=8.4
R17L  Mt. Peulik Vol   81.49  32   P      P      20 36 32.1 -0.1
      baz=259,SNR=7.8
O17K  Koliganek Bris   81.54  30   P      P      20 36 33.1 +0.9
      baz=258,SNR=10
CHIR  Chirikof Islan   81.56  34   P      P      20 36 33.4 +0.9
      baz=260
K17K  Iditarod         81.61  27   IAmb   IAmb   20 36 35.2
      comp=Z,42nm,0.9s
K17K  Iditarod         81.61  27   P      P      20 36 34.1 +1.5
      baz=257,SNR=19
N17K  Nushagak Hills   81.65  29   P      P      20 36 34.3 +1.4
      baz=258,SNR=5.0
M17K  Holitna River    81.72  28   P      P      20 36 34.5 +1.3
      baz=258
P17K  Kvichak River    81.75  30   P      P      20 36 33.5 +0.1
      baz=259
MAW   Mawson           81.80 200   P      P      20 36 34.5 +1.1
      comp=Z,3.7nm,0.5s,baz=76,slow=5.3,SNR=12
      comp=Z,3.7nm,0.5s
Q17K  Contact Creek    81.86  31   P      P      20 36 33.5 -0.6
      baz=259,SNR=16
E18K  Tukpahlearik C   81.87  22   P      P      20 36 35.4 +1.5
      baz=254,SNR=24
RAYN  Ar Rayn          81.98 293   P      P      20 36 35.8 +0.3
RAYN  Ar Rayn          81.98 293  i P     P      20 36 35.8 +0.3
      SNR=18
C18K  Utukok River     82.01  21   IAmb   IAmb   20 36 36.2
      comp=Z,17nm,0.7s
C18K  Utukok River     82.01  21   P      P      20 36 35.7 +1.0
      baz=253,SNR=7.6
F18K  Selawik          82.01  23   P      P      20 36 35.6 +1.0
      baz=255,SNR=15
B18K  Kokolik River    82.01  20   P      P      20 36 36.2 +1.6
      baz=252,SNR=7.3
H18K  Honhosa River    82.16  24   IAmb   IAmb   20 36 37.5
      comp=Z,29nm,0.8s
H18K  Honhosa River    82.16  24   P      P      20 36 36.4 +0.9
      baz=256,SNR=18
G18K  Tagagawik        82.22  23   IAmb   IAmb   20 36 37.6
      comp=Z,26nm,0.8s
G18K  Tagagawik        82.22  23   P      P      20 36 36.6 +0.9
      baz=256,SNR=21
L18K  Granite Mounta   82.24  27   IAmb   IAmb   20 36 38.3
      comp=Z,42nm,1.1s
L18K  Granite Mounta   82.24  27   P      P      20 36 37.4 +1.5
      baz=258,SNR=22
N18K  Kilae Creek      82.31  29   IAmb   IAmb   20 36 38.8
      comp=Z,41nm,1.8s
N18K  Kilae Creek      82.31  29   P      P      20 36 37.4 +1.1
      baz=259
Q18K  Katmai Hardscr   82.38  31   P      P      20 36 36.3 -0.5
      baz=260,SNR=9.0
P18K  Big Mountain,    82.40  30   IAmb   IAmb   20 36 38.2
      comp=Z,34nm,1.6s
P18K  Big Mountain,    82.40  30   P      P      20 36 36.7 -0.2
      baz=260
SII   Sitkinak Islan   82.48  33   P      P      20 36 38.3 +1.0
SII   Sitkinak Islan   82.48  33   P      P      20 36 38.3 +1.0
      baz=261
J18K  Innoko River     82.48  26   IAmb   IAmb   20 36 39.0
      comp=Z,38nm,0.9s
J18K  Innoko River     82.48  26   P      P      20 36 38.1 +0.9
      baz=258,SNR=41
O18K  Koktuh Hills     82.49  30   P      P      20 36 38.1 +0.8
      baz=260,SNR=5.2
R18K  Karluk           82.49  32   P      P      20 36 37.2 -0.1
      baz=261
M18K  Stony River      82.50  28   P      P      20 36 38.5 +1.3
      baz=259,SNR=14
A19K  Wainwright       82.51  19   P      P      20 36 38.9 +1.8
      baz=253,SNR=8.1
KIRV  Kirov            82.54 329c iP      P      20 36 37.0 -0.5
BELG  Belogornoye      82.64 323c iP      P      20 36 37.4 -0.7
BELG                               pmax   pmax
      comp=Z,10.0nm,1.0s
GCSA  Galena City Sc   82.69  25   P      P      20 36 39.4 +1.3
      baz=258,SNR=6.5
C19K  Lookout Ridge    82.70  20   P      P      20 36 40.1 +1.8
      baz=254,SNR=39
F19K  Shaleruckik Mo   82.79  23   IAmb   IAmb   20 36 40.3
      comp=Z,19nm,0.8s
F19K  Shaleruckik Mo   82.79  23   P      P      20 36 39.4 +0.8
      baz=256,SNR=24
G19K  Purcell Mounta   82.90  23   P      P      20 36 40.7 +1.4
      baz=257,SNR=134
N19K  Bonanza Creek    83.01  29   P      P      20 36 41.3 +1.2
      baz=260,SNR=33
H19K  Roundabout Mou   83.03  24   P      P      20 36 41.3 +1.4
      baz=258,SNR=84
D19K  Kuna River       83.06  21   P      P      20 36 41.4 +1.3
      baz=256
OHAK  Old Harbor       83.06  33   IAmb   IAmb   20 36 41.8
      comp=Z,24nm,0.9s
OHAK  Old Harbor       83.06  33   P      P      20 36 40.9 +0.6
      baz=262
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J19K  Poorman          83.07  26   IAmb    IAmb     20 36 42.4
      comp=Z,43nm,1.0s
J19K  Poorman          83.07  26   P       P        20 36 41.3 +1.2
      baz=259,SNR=43
L19K  White Mountain   83.07  28   IAmb    IAmb     20 36 42.5
      comp=Z,37nm,0.9s
L19K  White Mountain   83.07  28   P       P        20 36 41.4 +1.1
      baz=260,SNR=31
Q19K  Cape Douglas,    83.13  31   IAmb    IAmb     20 36 41.1
      comp=Z,27nm,0.7s
Q19K  Cape Douglas,    83.13  31   P       P        20 36 40.2  -0.4
      baz=261
E19K  Redstone River   83.14  22   P       P        20 36 41.9 +1.4
      baz=257,SNR=74
M19K  Big River Lodg   83.24  28   IAmb    IAmb     20 36 43.4
      comp=Z,34nm,0.9s
M19K  Big River Lodg   83.24  28   P       P        20 36 42.5 +1.4
      baz=260,SNR=18
P19K  Oil Pt           83.44  30   P       P        20 36 42.2   0.0
      baz=262
GNI   Garni            83.46 310   P       P        20 36 42.6  -0.3
GNI   Garni            83.46 310   P       P        20 36 43.1 +0.2
      comp=Z,3.5nm,0.7s,baz=305,slow=8.9,SNR=4.4
      comp=Z,3.5nm,0.7s
GNI   Garni            83.46 310c iP       P        20 36 43.8 +0.9
GNI                                pmax    pmax
      comp=Z,11nm,0.8s
KDAK  Kodiak Island    83.52  32   P       P        20 36 43.3 +0.8
      baz=262
L20K  Farewell, AK     83.57  27   P       P        20 36 44.0 +1.1
      baz=261,SNR=20
F20K  Avaraart Lake    83.63  23   IAmb    IAmb     20 36 45.2
      comp=Z,31nm,0.8s
F20K  Avaraart Lake    83.63  23   P       P        20 36 44.2 +1.3
      baz=258,SNR=35
K20K  Telida           83.63  26   IAmb    IAmb     20 36 45.4
      comp=Z,25nm,1.1s
K20K  Telida           83.63  26   P       P        20 36 44.2 +1.1
      baz=260
D20K  Etivluk River    83.65  21   P       P        20 36 44.2 +1.1
      baz=257,SNR=25
H20K  Anotleneega Mo   83.66  24   P       P        20 36 44.1 +0.9
      baz=259,SNR=19
E20K  Nigu River       83.70  21   P       P        20 36 44.5 +1.1
      baz=258,SNR=56
I20K  Naaghedeneel     83.70  25   IAmb    IAmb     20 36 45.8
      comp=Z,35nm,0.9s
I20K  Naaghedeneel     83.70  25   P       P        20 36 44.5 +1.1
      baz=260,SNR=8.1
Q20K  Shuyak Island    83.73  31   P       P        20 36 44.7 +1.1
      baz=262
J20K  Nowinta River    83.74  26   IAmb    IAmb     20 36 46.0
      comp=Z,18nm,0.9s
J20K  Nowinta River    83.74  26   P       P        20 36 44.8 +1.2
      baz=260,SNR=15
B20K  Meade River      83.75  20   P       P        20 36 44.8 +1.3
      baz=257,SNR=16
RED   Redoubt Volcan   83.78  29   IAmb    IAmb     20 36 44.9
      comp=Z,39nm,0.9s
M20K  Styx River       83.83  28   P       P        20 36 45.1 +0.9
      baz=261
SPCR  Spurr Chakacha   84.17  29   P       P        20 36 45.6  -0.3
      baz=262
N20K  Mount Spurr      84.17  29   P       P        20 36 45.5  -0.4
      baz=262
IMAR  Indian Mountai   84.21  24   P       P        20 36 46.3 +0.4
C21K  Knifeblade Rid   84.39  21   P       P        20 36 47.8 +1.0
      baz=259,SNR=10.0
G21K  Allakaket        84.39  23   P       P        20 36 47.4 +0.5
      baz=260,SNR=24
PPLA  Purkeypile       84.41  27   IAmb    IAmb     20 36 49.4
      comp=Z,12nm,0.6s
PPLA  Purkeypile       84.41  27   P       P        20 36 47.5 +0.4
      baz=262,SNR=5.0
CHUM  Lake Minchumin   84.49  26   P       P        20 36 48.1 +0.7
      baz=262,SNR=12
F21K  Alatna River     84.52  23   P       P        20 36 48.4 +0.9
      baz=260,SNR=9.6
NCK   Nalchik          84.52 313⇓eP        P        20 36 48.2 +0.2
NCK                                pmax    pmax
      comp=Z,7.0nm,0.4s
CAST  Castle Rocks     84.53  26   P       P        20 36 48.2 +0.6
      baz=262,SNR=21
B21K  Ikpikpuk River   84.53  20   IAmb    IAmb     20 36 50.2
      comp=Z,16nm,0.7s
B21K  Ikpikpuk River   84.53  20   P       P        20 36 48.2 +0.8
      baz=259,SNR=17
H21K  Melozitna Rive   84.54  24   P       P        20 36 48.3 +0.7
      baz=261,SNR=11
E21K  Killik River     84.55  21   P       P        20 36 47.5  -0.2
      baz=260,SNR=7.7
SKT   Skwentna         84.59  28   IAmb    IAmb     20 36 48.9
      comp=Z,27nm,1.0s
SKT   Skwentna         84.59  28   P       P        20 36 47.7  -0.3
      baz=263,SNR=23
A22K  Sinclair Lake    84.68  19   P       P        20 36 49.7 +1.6
      baz=259
BRSE  Bradley Lake S   84.71  30   P       P        20 36 48.4  -0.2
      baz=264,SNR=13
I21K  Tanana           84.81  25   P       P        20 36 49.5 +0.5
      baz=262
SUA   Susitna One      84.90  29   P       P        20 36 49.2  -0.4
      baz=264,SNR=38
GOF   Gofitskoye       85.00 315ceP        P        20 36 50.0  -0.4
KBZ   Khabaz           85.04 314   P       P        20 36 49.9  -0.6
      comp=Z,9.5nm,0.9s,baz=111,slow=2.7,SNR=14
      comp=Z,9.5nm,0.9s
KBZ   Khabaz           85.04 314c iP       P        20 36 50.5   0.0
KBZ                                pmax    pmax
      comp=Z,10.0nm,0.8s
KTH   Kantishna Hill   85.06  26   IAmb    IAmb     20 36 51.5
      comp=Z,34nm,1.8s
F22K  John River       85.06  22   P       P        20 36 51.0 +0.8
      baz=262,SNR=8.4
B22K  Teshekpuk Lake   85.06  19   P       P        20 36 51.2 +1.1
      baz=260
D22K  Ayikyak River    85.08  21   P       P        20 36 51.0 +0.7
      baz=261
BPAW  Bear Paw Mtn.    85.10  26   P       P        20 36 50.2  -0.2
      baz=263,SNR=8.3
H22K  Ishtalitna Cre   85.16  24   P       P        20 36 51.0 +0.2
      baz=262,SNR=8.2
KIV   Kislovodsk       85.20 314  eP       P        20 36 50.3  -1.2
KIV                                pmax    pmax
      comp=Z,7.0nm,1.1s
KIV   Kislovodsk       85.20 314   P       P        20 36 52.2 +0.7
SHA1  Shidzhatmaz      85.21 314c iP       P        20 36 51.1  -0.6
M22K  Willow           85.23  28   P       P        20 36 51.3 +0.2
      baz=264,SNR=8.2
G22K  Bettles          85.24  23   P       P        20 36 51.4 +0.3
      baz=262
E22K  Anaktuvuk Pass   85.29  22   IAmb    IAmb     20 36 53.7
      comp=Z,16nm,0.6s
E22K  Anaktuvuk Pass   85.29  22   P       P        20 36 52.1 +0.7
      baz=262,SNR=25
O22K  Cooper Landing   85.29  30   P       P        20 36 51.3  -0.1
      baz=264
MLY   Manley           85.31  25   P       P        20 36 51.5   0.0
      baz=263,SNR=14
TRF   Thorofare Moun   85.33  27   P       P        20 36 50.9  -0.9
      baz=264,SNR=7.2
RC01  Rabbit Creek A   85.34  29   IAmb    IAmb     20 36 52.5
      comp=Z,31nm,0.9s
RC01  Rabbit Creek A   85.34  29   P       P        20 36 51.3  -0.4
      baz=264,SNR=17
SEW   Seward           85.39  30   IAmb    IAmb     20 36 53.0
      comp=Z,24nm,0.9s
SEW   Seward           85.39  30   P       P        20 36 51.8  -0.1
      baz=265,SNR=7.6
GURO  Guroymak-BITLI   85.48 308   IAmb    IAmb     20 36 55.2
      comp=Z,31nm,1.0s
COLD  Coldfoot         85.79  23   IAmb    IAmb     20 36 55.4
      comp=Z,17nm,0.8s
COLD  Coldfoot         85.79  23   P       P        20 36 54.5 +0.8
      baz=264,SNR=32
G23K  Bananza Creek    85.80  23   P       P        20 36 54.6 +0.7
      baz=264,SNR=25
D23K  Nanushuk River   85.81  21   P       P        20 36 54.8 +0.9
      baz=263,SNR=13
H23K  Yukon River      85.90  24   P       P        20 36 54.8 +0.4
      baz=264,SNR=13
I23K  Minto, Yukon-K   85.91  25   P       P        20 36 54.6 +0.2
      baz=264,SNR=16
C23K  Itkillik River   85.94  20   IAmb    IAmb     20 36 56.6
      comp=Z,26nm,0.6s
C23K  Itkillik River   85.94  20   P       P        20 36 54.8 +0.3
      baz=263,SNR=24
MCK   McKinley         85.96  26   P       P        20 36 54.0  -0.8
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      baz=265
RND   Reindeer         85.97  27   IAmb    IAmb     20 36 55.4
      comp=Z,14nm,0.6s
KNK   Knik Glacier     85.99  29   IAmb    IAmb     20 36 57.0
      comp=Z,32nm,0.9s
KNK   Knik Glacier     85.99  29   P       P        20 36 54.9   0.0
      baz=266,SNR=6.7
PWL   Port Wells       86.01  29   IAmb    IAmb     20 36 57.4
      comp=Z,17nm,0.8s
PWL   Port Wells       86.01  29   P       P        20 36 54.8  -0.2
      baz=266,SNR=10
WAT1  Susitna Watana   86.06  27   P       P        20 36 54.5  -0.8
      baz=265
E23K  Chandalar        86.10  22   IAmb    IAmb     20 36 57.0
      comp=Z,23nm,0.8s
E23K  Chandalar        86.10  22   P       P        20 36 56.1 +0.7
      baz=264,SNR=46
TOLK  Toolik Lake Re   86.18  21   IAmb    IAmb     20 36 58.0
      comp=Z,18nm,0.9s
TOLK  Toolik Lake Re   86.18  21   P       P        20 36 56.3 +0.6
      baz=264,SNR=20
VRH   Novokhopyorsk    86.19 321  eP       P        20 36 52.6  -3.4
VRH                               e*PP     pP       20 37 36.3 +0.2
VRH                                pmax    pmax
      comp=Z,30nm,0.5s
M23K  Glacier View     86.36  28   P       P        20 36 56.5  -0.3
      baz=266,SNR=5.8
P23K  Montague Islan   86.41  30   IAmb    IAmb     20 36 58.6
      comp=Z,18nm,0.9s
P23K  Montague Islan   86.41  30   P       P        20 36 56.5  -0.5
      baz=266
WAT6  Susitna Watana   86.41  28   P       P        20 36 56.6  -0.5
      baz=266,SNR=17
D24K  Happy Valley     86.50  21   IAmb    IAmb     20 36 59.7
      comp=Z,25nm,0.7s
D24K  Happy Valley     86.50  21   P       P        20 36 57.7 +0.5
      baz=265,SNR=19
E24K  Your Creek       86.52  22   P       P        20 36 57.8 +0.4
      baz=265,SNR=17
COLA  College          86.52  25⇓eP        P        20 36 55.6  -1.8
COLA                               pmax    pmax
      comp=Z,3.0nm,0.7s
SCM   Sheep Creek Mo   86.56  28   IAmb    IAmb     20 36 59.5
      comp=Z,18nm,0.8s
SCM   Sheep Creek Mo   86.56  28   P       P        20 36 57.9 +0.2
      baz=266,SNR=6.7
H24K  Noodor Dome      86.58  24   P       P        20 36 58.0 +0.2
      baz=266,SNR=12
C24K  Franklin Bluff   86.59  20   IAmb    IAmb     20 36 59.3
      comp=Z,13nm,0.7s
C24K  Franklin Bluff   86.59  20   P       P        20 36 57.9 +0.3
      baz=265
DHY   Denali Highway   86.61  27   P       P        20 36 58.0  -0.1
      baz=266
GLI   Glacier Island   86.61  29   IAmb    IAmb     20 36 59.2
      comp=Z,19nm,0.7s
GLI   Glacier Island   86.61  29   P       P        20 36 57.7  -0.2
      baz=267,SNR=12
F24K  Squaw Lake       86.70  23   P       P        20 36 58.9 +0.5
      baz=266,SNR=17
KOPT  Kop Dagi         86.71 310   IAmb    IAmb     20 37 02.3
      comp=Z,27nm,0.8s
G24K  Hadweenzic Riv   86.81  23   P       P        20 36 59.1 +0.3
      baz=266,SNR=12
ERBR  Yeremizino-Bor   86.83 316  eP       P        20 36 56.0  -3.3
ERBR                              e*PP     pP       20 37 39.4   0.0
ERBR                              eS       SKSac    20 47 05.7  -5.3
ERBR                               pmax    pmax
      comp=Z,16nm,0.5s
HDA   Harding Lake     86.88  26   P       P        20 36 57.7  -1.4
      baz=267
FID   Port Fidalgo     86.91  29   IAmb    IAmb     20 37 00.8
      comp=Z,11nm,0.7s
ILAR  Eielson Array    86.93  25   P       P        20 36 57.3  -2.1
ILAR  Eielson Array    86.93  25   P       P        20 36 57.6  -1.7
      comp=Z,2.2nm,0.7s,baz=243,slow=5.2,SNR=23
      comp=Z,2.2nm,0.7s
VSLR  Vesyoloye        87.11 313d iP       P        20 37 00.6  -0.1
VSLR                               pmax    pmax
      comp=Z,39nm,1.7s
M24K  Tolsona, Glenn   87.11  28   IAmb    IAmb     20 37 03.2
      comp=Z,12nm,0.8s
M24K  Tolsona, Glenn   87.11  28   P       P        20 37 00.8 +0.3
      baz=268
KLU   Klutina          87.21  29   P       P        20 37 00.9   0.0
      baz=268
EYAK  Cordova Ski Ar   87.26  30   P       P        20 37 00.5  -0.5
      baz=268
DIV   Divide           87.27  29   IAmb    IAmb     20 37 03.2
      comp=Z,12nm,0.7s
G25K  Bearman Lake     87.36  23   P       P        20 37 01.2  -0.2
      baz=267
K24K  Donnelly Dome    87.37  26   IAmb    IAmb     20 37 01.8
      comp=Z,14nm,0.8s
K24K  Donnelly Dome    87.37  26   P       P        20 37 00.6  -0.9
      baz=268,SNR=8.1
D25K  Kavik River      87.38  21   P       P        20 37 01.5   0.0
      baz=267,SNR=16
H25L  Birch Creek      87.45  24   P       P        20 37 02.4 +0.6
      baz=268,SNR=8.0
PAX   Paxson           87.47  27   P       P        20 37 01.9  -0.3
      baz=268,SNR=5.1
PRP   Porcupine Dome   87.54  25   P       P        20 37 01.2  -1.3
      baz=268
F25K  Christian Rive   87.57  23   P       P        20 37 03.1 +0.6
      baz=268,SNR=10
J25K  Salcha River,    87.57  26   P       P        20 37 01.1  -1.5
      baz=268,SNR=12
E25K  Arctic Village   87.62  22   IAmb    IAmb     20 37 04.2
      comp=Z,9.9nm,0.8s
E25K  Arctic Village   87.62  22   P       P        20 37 03.2 +0.5
      baz=268,SNR=16
VORD  Divnogorie       87.71 321  eP       P        20 37 01.0  -2.4
VORD                              e*PP     pP       20 37 43.9 +0.3
VORD                               pmax    pmax
      comp=Z,10.0nm,0.6s
KLMR  Klimovskoe       87.74 331  eP       P        20 37 01.7  -1.6
KLMR                              e*PP     pwP      20 37 45.1  -1.2
KLMR                               pmax    pmax
      comp=Z,27nm,1.2s
VORR  Voronezh         87.77 321  eP       P        20 37 01.1  -2.6
VORR                              e*PP     pwP      20 37 45.7  -0.9
VORR                               pmax    pmax
      comp=Z,30nm,0.6s
RIDG  Independent Ri   87.78  26   IAmb    IAmb     20 37 03.9
      comp=Z,20nm,1.0s
RIDG  Independent Ri   87.78  26   P       P        20 37 03.0  -0.6
      baz=269,SNR=12
VSR   Storozhevoye     87.79 321  eP       P        20 37 00.9  -2.9
VSR                               e*PP     pP       20 37 43.9  -0.2
VSR                                pmax    pmax
      comp=Z,9.0nm,0.7s
BMRM  Bremner River    87.83  29   P       P        20 37 03.8  -0.1
      baz=269
N25K  Chitina, Valde   87.85  29   IAmb    IAmb     20 37 05.1
      comp=Z,18nm,1.6s
N25K  Chitina, Valde   87.85  29   P       P        20 37 03.9   0.0
      baz=269
KAIM  Kayak Island     87.91  30   P       P        20 37 04.5 +0.4
      baz=269
LPSR  Galich'ya Gora   87.95 322  eP       P        20 37 02.0  -2.5
LPSR                              e*PP     pwP      20 37 46.2  -1.3
LPSR                               pmax    pmax
      comp=Z,20nm,0.8s
BMAR  Burnt Mountain   87.97  23   P       P        20 37 04.4   0.0
F26K  Sheenjek River   88.14  22   P       P        20 37 05.6 +0.4
      baz=269,SNR=9.4
SCRK  Sand Creek       88.16  26   P       P        20 37 05.0  -0.4
      baz=269
MENT  Mentasta         88.27  27   P       P        20 37 06.1 +0.2
G26K  Porcupine Rive   88.28  23   IAmb    IAmb     20 37 07.3
      comp=Z,25nm,1.8s
G26K  Porcupine Rive   88.28  23   P       P        20 37 06.3 +0.6
      baz=269,SNR=7.0
C27K  Jago River       88.33  21   IAmb    IAmb     20 37 07.4
      comp=Z,19nm,0.7s
C27K  Jago River       88.33  21   P       P        20 37 06.6 +0.7
      baz=269,SNR=22
J26L  Joseph Creek     88.35  26   IAmb    IAmb     20 37 06.8
      comp=Z,12nm,0.7s
J26L  Joseph Creek     88.35  26   P       P        20 37 05.9  -0.4
      baz=270,SNR=29
L26K  Log Cabin Wild   88.44  27   P       P        20 37 06.5  -0.1
      baz=270,SNR=5.4
I26K  Coal Creek Min   88.53  25   P       P        20 37 06.8  -0.2
      baz=270
CRQM  Cirque           88.55  29   IAmb    IAmb     20 39 55.4
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      comp=Z,16nm,1.2s
CRQE  Cirque           88.57  29   P       P        20 37 07.3  -0.1
      baz=270
MCARA McCarthy VSAT    88.60  29   P       P        20 37 07.6 +0.2
      baz=270
M26K  Nabesna, AK      88.61  28   P       P        20 37 07.5   0.0
      baz=270
ANN   Anapa            88.98 315  eP       P        20 37 07.3  -2.2
ANN                               e*PP     pP       20 37 50.3 +0.5
ANN                               e                 20 40 40.5
ANN                               eS       SKSac    20 47 20.0  -3.9
ANN                               eSS      SS       20 53 38.6  -2.0
ANN                                pmax    pmax
      comp=Z,44nm,1.0s
K27K  Chicken          89.00  26   IAmb    IAmb     20 37 11.1
      comp=Z,17nm,0.9s
K27K  Chicken          89.00  26   P       P        20 37 10.1 +0.9
      baz=271
E27K  Coleen River     89.11  22   P       P        20 37 10.0 +0.3
      baz=271,SNR=15
G27K  Doyon Strip      89.12  23   P       P        20 37 10.2 +0.5
      baz=271
M27K  Edge Creek, AK   89.13  28   P       P        20 37 10.3 +0.2
      baz=271
L27K  Beaver Creek,    89.14  27   IAmb    IAmb     20 37 11.3
      comp=Z,8.0nm,0.7s
L27K  Beaver Creek,    89.14  27   P       P        20 37 10.4 +0.5
      baz=271
BCAR  Beaver Creek A   89.16  27   P       P        20 37 10.3 +0.2
I27K  Kandik River     89.17  25   P       P        20 37 10.5 +0.4
      baz=272
H27K  Steamboat Moun   89.19  24   P       P        20 37 10.6 +0.5
      baz=272,SNR=7.9
YAH   Yahtse           89.24  30   IAmb    IAmb     20 37 12.3
      comp=Z,16nm,1.1s
D27M  Malcolm River    89.30  21   P       P        20 37 10.9 +0.3
      baz=272,SNR=7.1
CTG   Chitna Glacier   89.42  29   P       P        20 37 12.1 +0.7
      baz=272
CTGM  Chitina Glacie   89.43  29   IAmb    IAmb     20 37 13.1
      comp=Z,11nm,0.8s
TABL  Table Mountain   89.54  30   IAmb    IAmb     20 37 22.1
      comp=Z,15nm,0.9s
BVCY  Beaver Creek     89.60  28   P       P        20 37 12.7 +0.6
      baz=272
LVZ   Lovozero         89.75 338⇓eP        P        20 37 11.2  -1.5
F28M  Old Crow         89.78  22   P       P        20 37 12.8   0.0
      baz=273,SNR=13
YUK3  Moose Creek      89.82  28   P       P        20 37 13.2  -0.1
      baz=272
E28M  Babbage River    89.85  21   IAmb    IAmb     20 37 14.3
      comp=Z,14nm,1.3s
E28M  Babbage River    89.85  21   P       P        20 37 13.3 +0.1
      baz=273,SNR=13
I28M  Miner Creek      89.87  25   IAmb    IAmb     20 37 14.6
      comp=Z,16nm,0.7s
I28M  Miner Creek      89.87  25   P       P        20 37 13.7 +0.3
      baz=273,SNR=33
O28M  Mount Upton      89.99  29   P       P        20 37 14.7 +0.4
      baz=273
PINM  Pinnacle         90.00  30   P       P        20 37 14.3 +0.3
      baz=273
KMBO  Kilima Mbogo     90.14 269   P       P        20 37 15.3  -0.6
KMBO  Kilima Mbogo     90.14 269   P       P        20 37 15.3  -0.6
KMBO                               pmax    pmax
      comp=Z,4.0nm,0.9s
KMBO  Kilima Mbogo     90.14 269   P       P        20 37 17.3 +1.4
YUK8  Steele Glacier   90.17  29   P       P        20 37 15.4 +0.3
      baz=273
DAWY  Dawson           90.18  26   IAmb    IAmb     20 37 15.9
      comp=Z,10.0nm,0.9s
DAWY  Dawson           90.18  26   P       P        20 37 14.9 +0.1
      baz=274,SNR=7.9
BNN   Bunyan           90.32 309   IAmb    IAmb     20 37 16.8
      comp=Z,18nm,0.9s
PNL   Peninsula        90.45  30   P       P        20 37 16.4 +0.3
      baz=274
H29M  Whitestone       90.46  24   IAmb    IAmb     20 38 03.1
      comp=Z,22nm,1.8s
H29M  Whitestone       90.46  24   P       P        20 37 15.9  -0.1
      baz=274
E29M  Blow River       90.47  22   P       P        20 37 15.6  -0.4
      baz=275,SNR=6.4
SYO   Syowa Base       90.49 201⇓iP        P        20 37 15.2  -0.8
SYO   Syowa Base       90.49 201⇓ePcP      PcP      20 37 18.6 +1.6
G29M  Pine Creek       90.55  23   IAmb    IAmb     20 37 17.3
      comp=Z,12nm,0.8s
G29M  Pine Creek       90.55  23   P       P        20 37 16.3  -0.1
      baz=275,SNR=11
I29M  Ogilvie Camp,    90.56  25   IAmb    IAmb     20 37 17.3
      comp=Z,9.1nm,0.8s
I29M  Ogilvie Camp,    90.56  25   P       P        20 37 16.2  -0.3
      baz=274,SNR=13
YUK4  Talbot Arm       90.71  29   P       P        20 37 17.9 +0.4
      baz=274
M29M  Somme Creek      90.71  28   IAmb    IAmb     20 37 19.1
      comp=Z,11nm,1.1s
M29M  Somme Creek      90.71  28   P       P        20 37 18.1 +0.7
      baz=274
BALJ  Balqa            90.73 302   IAmb    IAmb     20 37 19.4
      comp=Z,15nm,1.0s
L29M  L29M             90.81  27   IAmb    IAmb     20 37 19.6
      comp=Z,16nm,0.9s
L29M  L29M             90.81  27   P       P        20 37 18.6 +0.9
      baz=275,SNR=14
O29M  Mount Kennedy    90.82  30   P       P        20 37 18.2 +0.3
      baz=274
YUK6  Outpost Mounta   90.88  29   P       P        20 37 18.7 +0.4
      baz=274
MMAI  Mount Meron Ar   90.90 303   P       P        20 37 19.1 +0.2
      comp=Z,2.1nm,0.5s,baz=92,slow=5.8,SNR=8.0
      comp=Z,2.1nm,0.5s
K29M  Barlow Dome      91.02  26   IAmb    IAmb     20 37 20.1
      comp=Z,29nm,1.7s
K29M  Barlow Dome      91.02  26   P       P        20 37 19.2 +0.4
      baz=275,SNR=11
EPYK  Eagle Plains     91.11  24   IAmb    IAmb     20 37 19.7
      comp=Z,8.2nm,0.8s
EPYK  Eagle Plains     91.11  24   P       P        20 37 18.5  -0.6
      baz=276,SNR=7.1
G30M  tAoh Zraii Nji   91.25  23   P       P        20 37 19.0  -0.7
      baz=276
P29M  Windy Craggy     91.29  30   IAmb    IAmb     20 37 21.8
      comp=Z,16nm,0.9s
P29M  Windy Craggy     91.29  30   P       P        20 37 20.3 +0.3
      baz=275
HYT   Haines Junctio   91.30  29   IAmb    IAmb     20 37 21.2
      comp=Z,6.2nm,0.7s
HYT   Haines Junctio   91.30  29   P       P        20 37 20.6 +0.5
      baz=275,SNR=6.3
QSPA  South Pole Qui   91.31 180   P       P        20 37 20.1   0.0
QSPA                               IAmb    IAmb     20 37 21.5
      comp=Z,23nm,1.8s
QSPA  South Pole Qui   91.31 180   P       P        20 37 20.1   0.0
      comp=Z,3.7nm,0.6s,baz=175,slow=0.2,SNR=16
      comp=Z,3.7nm,0.6s
F30M  Barrier River    91.34  22   IAmb    IAmb     20 37 20.8
      comp=Z,7.7nm,0.8s
F30M  Barrier River    91.34  22   P       P        20 37 19.7  -0.4
      baz=277,SNR=7.1
I30M  Mount Dempster   91.38  25   P       P        20 37 20.1  -0.4
      baz=276
N30M  Aishikik Lake    91.45  29   P       P        20 37 21.4 +0.6
      baz=276
J30M  Hart River       91.47  25   IAmb    IAmb     20 37 22.2
      comp=Z,20nm,1.6s
J30M  Hart River       91.47  25   P       P        20 37 21.0 +0.1
      baz=276,SNR=7.9
M30M  Minto, Yukon     91.47  27   IAmb    IAmb     20 37 22.4
      comp=Z,23nm,1.6s
M30M  Minto, Yukon     91.47  27   P       P        20 37 21.2 +0.4
      baz=276
P30M  Million Dollar   91.64  30   P       P        20 37 22.0 +0.3
      baz=276
BR131 Keskin Array S   91.99 310⇓eP        P        20 37 22.9  -1.0
BRTR  Keskin Array B   91.99 310   P       P        20 37 21.9  -1.9
BRTR  Keskin Array B   91.99 310   P       P        20 37 22.6  -1.3
      comp=Z,3.1nm,0.9s,baz=132,slow=5.2,SNR=16
BRTR                               PP      PP       20 41 05.4  -0.2
      comp=Z,1.6nm,0.9s,baz=111,slow=8.0,SNR=6.3
      comp=Z,3.1nm,0.9s
O30N  Mendenhall       92.00  29   P       P        20 37 23.6 +0.3
      baz=276
PLBC  Pleasant Camp    92.01  31   P       P        20 37 23.6 +0.4
      baz=276
G31M  Satah River      92.01  23   IAmb    IAmb     20 37 23.4
      comp=Z,8.4nm,0.8s
G31M  Satah River      92.01  23   P       P        20 37 22.4  -0.7
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	baz=278,SNR=12						
N31M	Braeburn, Yuko	92.07	28	IAmb	IAmb	20 37 25.2	
	comp=Z,24nm,1.3s						
N31M	Braeburn, Yuko	92.07	28	P	P	20 37 23.9	+0.4
	baz=277,SNR=6.4						
INK	Inuvik	92.09	22	IAmb	IAmb	20 37 23.8	
	comp=Z,11nm,1.2s						
INK	Inuvik	92.09	22	P	P	20 37 22.7	-0.7
	baz=279						
F31M	Tsiigehtchic	92.14	22	IAmb	IAmb	20 37 23.5	
	comp=Z,10.0nm,0.8s						
F31M	Tsiigehtchic	92.14	22	P	P	20 37 22.9	-0.7
	baz=279,SNR=7.5						
H31M	Peel River	92.14	24	P	P	20 37 23.2	-0.7
	baz=278						
S31K	Pelican	92.23	32	P	P	20 37 24.2	-0.1
	baz=276						
SKAG	Skagway	92.53	30	P	P	20 37 26.4	+0.7
SKAG	Skagway	92.53	30	P	P	20 37 26.3	+0.7
	baz=277						
WHY	Whitehorse	92.60	29	P	P	20 37 26.7	+0.5
	baz=277,SNR=8.4						
M31M	Drury Creek, Y	92.63	28	IAmb	IAmb	20 37 27.3	
	comp=Z,11nm,1.4s						
M31M	Drury Creek, Y	92.63	28	P	P	20 37 26.1	0.0
	baz=278						
SIT	Sitka	92.83	33	P	P	20 37 27.5	+0.5
	baz=277						
ARCES	ARCESS Array B	92.85	340	P	P	20 37 25.7	-1.3
ARCES	ARCESS Array B	92.85	340	P	P	20 37 25.9	-1.0
	comp=Z,21nm,0.8s,baz=79,slow=6.3,SNR=26						
ARCES				PKiKP	PKiKP	20 42 13.9	+0.1
	comp=Z,3.0nm,0.9s,baz=79,slow=2.4,SNR=5.3						
ARCES				PKKP	PKKPdf	20 54 36.8	-0.5
	comp=Z,2.1nm,0.9s,baz=281,slow=8.5,SNR=4.2						
	comp=Z,21nm,0.8s						
SPITS	Spitsbergen Ar	92.88	349	P	P	20 37 26.3	-0.7
	comp=Z,13nm,0.7s,baz=81,slow=4.5,SNR=8.4						
	comp=Z,13nm,0.7s						
R32K	Eaglecrest	93.10	32	P	P	20 37 29.0	+0.6
	baz=278						
FARO	Faro, Yukon	93.11	28	P	P	20 37 28.9	+0.6
	baz=279,SNR=17						
S32K	Killisnoo	93.18	32	P	P	20 37 28.8	+0.1
	baz=278						
P32M	Atlin	93.33	30	IAmb	IAmb	20 37 30.7	
	comp=Z,6.6nm,0.8s						
P32M	Atlin	93.33	30	P	P	20 37 29.9	+0.4
	baz=278,SNR=5.2						
N32M	Quiet Lake	93.40	29	P	P	20 37 30.3	+0.5
	baz=279						
P33M	Teslin, Yukon	93.68	30	IAmb	IAmb	20 37 32.3	
	comp=Z,8.1nm,0.9s						
P33M	Teslin, Yukon	93.68	30	P	P	20 37 31.2	+0.1
	baz=279,SNR=5.6						
MMPY	Sheldon Lake,	94.00	27	IAmb	IAmb	20 37 34.1	
	comp=Z,14nm,0.9s						
MMPY	Sheldon Lake,	94.00	27	P	P	20 37 33.2	+0.7
	baz=281,SNR=19						
A36M	Sachs Harbour	94.02	17	P	P	20 37 32.1	-0.1
	baz=287						
AKASG	Malin Array Be	94.10	321	P	P	20 37 31.3	-1.8
	comp=Z,1.1nm,0.6s,baz=83,slow=3.5,SNR=5.7						
	comp=Z,1.1nm,0.6s						
AKASG	Malin Array Be	94.10	321	*i* P	P	20 37 33.5	+0.4
AKBB	Malin Array Si	94.10	321	⇑*e*P	P	20 37 31.4	-1.7
AKBB				pmax	pmax		
	comp=Z,6.0nm,1.2s						
Q32M	Nakina River	94.16	31	P	P	20 37 33.9	+0.5
	baz=280						
FINES	FINESS Array B	94.18	332	P	P	20 37 31.5	-1.7
	comp=Z,2.1nm,0.6s,baz=65,slow=5.0,SNR=13						
FINES				PKiKP	PKiKP	20 42 16.3	+0.1
	comp=Z,0.9nm,0.7s,baz=90,slow=4.2,SNR=3.8						
	comp=Z,2.1nm,0.6s						
CRAG	Craig	94.26	34	P	P	20 37 34.0	+0.3
	baz=279						
MNK	Minsk	94.39	325	*e*P	P	20 37 31.7	-2.6
	comp=E,15nm,0.9s						
MNK				*e*P	P	20 37 31.7	-2.6
	comp=N,18nm,0.9s						
MNK				*e*P	P	20 37 31.7	-2.6
	comp=Z,10.0nm,0.9s,baz=81						
MNK				*i* pP	pP	20 38 12.7	-2.1
MNK				*i* PP	PP	20 41 21.4	-2.3
MNK				*i* PPP	PPP	20 43 22.6	
MNK				*i* S	SKSac	20 47 50.1	-3.8
MNK				*i* sS	pS	20 49 06.5	-18
MNK				*i* SS	SS	20 54 55.2	-2.3
MNK				*i* SSS	SSS	20 58 39.8	
MNK	Minsk	94.39	325	*e*P	P	20 37 31.7	-2.6
MNK				*i* *PP	pP	20 38 12.6	-2.1
MNK				*i*		20 41 21.3	
MNK				*i* S	SKSac	20 47 50.1	-3.8
MNK				*i* SS	SS	20 54 55.2	-2.3
MNK				*i* SSS	SSS	20 58 39.7	
MNK				pmax	pmax		
	comp=N,18nm,0.9s						
MNK				pmax	pmax		
	comp=E,15nm,0.9s						
MNK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WRAK	Wrangell Islan	94.54	33	P	P	20 37 35.3	+0.3
	baz=279						
R33M	Jennings River	94.74	30	IAmb	IAmb	20 37 37.7	
	comp=Z,8.5nm,0.8s						
R33M	Jennings River	94.74	30	P	P	20 37 36.6	+0.6
	baz=281,SNR=6.3						
S34M	Telegraph Cree	94.93	32	P	P	20 37 37.3	+0.5
	baz=280						
V35K	Ketchikan	95.13	34	P	P	20 37 38.0	+0.3
	baz=280						
DLBC	Dease Lake	95.41	31	P	P	20 37 39.2	+0.2
	baz=282						
T35M	Bob Quinn	95.58	32	P	P	20 37 40.0	+0.3
	baz=281						
TGTN	Hyland Airport	95.60	28	P	P	20 37 40.1	+0.3
	baz=283						
TESR	Tescani	96.37	317	⇑P	P	20 37 43.0	-0.6
VRI	Vrincioaia	96.41	316	⇑P	P	20 37 44.3	+0.4
VRI	Vrincioaia	96.41	316	P	P	20 37 44.2	+0.4
TURR	Turia	96.88	317	⇓P	P	20 37 46.5	+0.6
MLR	Muntele Rosu	97.01	316	⇑P	P	20 37 46.1	-0.6
MLR	Muntele Rosu	97.01	316	P	P	20 37 46.0	-0.6
BURAR	Bucovina Array	97.16	318	P	P	20 37 46.5	-0.7
BURAR				IAmb	IAmb	20 37 48.1	
	comp=Z,5.9nm,1.1s						
BURAR	Bucovina Array	97.16	318	⇓P	P	20 37 47.1	-0.2
BURAR	Bucovina Array	97.16	318	P	P	20 37 47.0	-0.2
BUR08	Bucovina Ar. S	97.16	318	IAmb	IAmb	20 37 47.9	
	comp=Z,9.9nm,1.3s						
BEAVL	Fort Liard	97.46	29	P	Pdif	20 37 48.3	+0.1
	baz=286						
TOAD	Toad River Com	97.75	30	P	Pdif	20 37 49.6	+0.1
	baz=286						
DRGR		98.99	318	⇓P	P	20 37 55.2	-0.3
DRGR		98.99	318	P	P	20 37 55.1	-0.3
STHS	Stebnicka Huta	99.38	321	*i* P	Pdif	20 37 55.7	-1.3
STHS	Stebnicka Huta	99.38	321	*e*PDIFF	Pdif	20 37 55.7	-1.3
RES	Resolute Bay	99.98	10	IAmb	IAmb	20 37 59.9	
	comp=Z,6.4nm,0.8s						
HFS	Hagfors	100.37	332	P	Pdif	20 37 59.2	-1.9
	comp=Z,1.7nm,0.6s,baz=116,slow=6.8,SNR=4.5						
NB2	NORSAR Subarra	101.15	334	P	Pdif	20 38 02.8	-1.9
	comp=Z,4.8nm,0.8s,baz=68,slow=4.4						
NB2	NORSAR Subarra	101.15	334	P	Pdif	20 38 02.8	-1.9
	baz=68,slow=4.4						
NOA	NORSAR Array B	101.15	334	P	Pdif	20 38 03.2	-1.4
	comp=Z,3.1nm,0.8s,baz=67,slow=4.5,SNR=10						
YKA	Yellowknife Ar	101.35	25	P	Pdif	20 38 04.2	-1.2
	comp=Z,0.5nm,0.7s,baz=305,slow=4.9,SNR=4.8						
YKA	Yellowknife Ar	101.35	25	*i* P	Pdif	20 38 07.5	+2.1
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	GERESS Array B	104.30	321	PKiKP	PKiKP	20 42 35.1	+0.3
	comp=Z,0.4nm,0.4s,baz=79,slow=2.0,SNR=5.0						
KEST	Kesra	111.60	309	PKiKP	PKiKP	20 42 49.2	+0.3
	comp=Z,0.7nm,0.5s,baz=90,slow=4.0,SNR=1.9						
KEST				PP	PP	20 43 31.9	-0.7
	comp=Z,4.6nm,0.9s,baz=83,slow=8.1,SNR=5.5						
PDAR	Pinedale Array	112.67	42	PKiKP	PKiKP	20 42 51.1	+0.2
	comp=Z,0.2nm,0.4s,baz=273,slow=2.6,SNR=4.1						
PDAR				PKKPbc	PKKPbc	20 53 39.6	-1.5
	comp=Z,0.6nm,0.6s,baz=123,slow=4.2,SNR=6.5						
PDAR				PKKPab	PKKPab	20 53 47.9	-1.2
	comp=Z,0.5nm,0.5s,baz=121,slow=6.6,SNR=5.4						
ULM	Lac du Bonnet	116.68	29	PKP	PKPdf	20 42 57.0	-1.0
	comp=Z,2.7nm,0.6s,baz=12,slow=2.7,SNR=7.0						
ESDC	Sonseca Array	119.62	318	PKP	PKPdf	20 43 04.1	0.0
	comp=Z,0.8nm,0.7s,baz=15,slow=2.0,SNR=6.8						
ESDC				PP	PP	20 44 27.7	-0.6
	comp=Z,0.7nm,0.8s,baz=88,slow=7.0,SNR=4.5						
ESDC				PKKPbc	PKKPbc	20 53 16.3	-0.3
	comp=Z,0.9nm,1.1s,baz=241,slow=3.7,SNR=4.2						
MVO	Moncorvo	120.81	321	*e*PKPdf	PKiKP	20 43 07.3	+0.8
PCAB	Cabril	121.13	322	*e*PKPdf	PKiKP	20 43 07.7	+0.7
PGAV	Gavieira, Arco	121.13	322	*e*PKPdf	PKiKP	20 43 07.2	+0.1
POLO	Lamas de Olo	121.17	322	*e*PKPdf	PKiKP	20 43 07.6	+0.3
PVRL	Vila Real	121.18	322	*e*PKPdf	PKiKP	20 43 07.8	+0.6
MTE	Manteigas	121.56	321	*e*PKPdf	PKiKP	20 43 08.4	+0.4
PVIS	Viseu	121.61	321	*e*PKPdf	PKPdf	20 43 06.6	-1.3
PCBR	Castelo Branco	121.83	320	*e*PKPdf	PKiKP	20 43 08.7	+0.3
PMRV	Marv??o	122.00	320	*e*PKPdf	PKiKP	20 43 08.8	0.0
PCAS	Casmilo, Conde	122.36	321	*e*PKPdf	PKiKP	20 43 09.6	+0.1
PSARD	Sardoal	122.40	320	*e*PKPdf	PKiKP	20 43 10.2	+0.6
PBAR	Barrancos	122.44	318	*e*PKPdf	PKiKP	20 43 10.1	+0.4
TXAR	Lajitas Array	122.49	54	PKP	PKPdf	20 43 10.0	0.0
	comp=Z,1.7nm,0.7s,baz=224,slow=0.3,SNR=18						
TXAR				PKKPbc	PKKPab	20 53 06.2	+0.4
	comp=Z,0.6nm,0.6s,baz=116,slow=6.4,SNR=12						
SCHQ	Schefferville	122.75	10	PKP	PKPdf	20 43 09.4	-0.2
	comp=Z,3.7nm,0.8s,baz=348,slow=1.3,SNR=9.3						
TORD	Torodi Ar. Bea	124.22	287	PKP	PKPdf	20 43 13.6	+0.1
	comp=Z,4.3nm,0.5s,baz=88,slow=1.9,SNR=9.2						
TORD				PP	PP	20 45 02.0	+1.4
	comp=Z,0.7nm,0.5s,baz=83,slow=7.7,SNR=3.9						
TORD				PKKPbc	PKKPbc	20 52 58.0	-0.3
	comp=Z,2.6nm,0.8s,baz=290,slow=3.9,SNR=4.8						
DBIC	Dimbokro	131.65	280	PKP	PKPdf	20 43 28.0	+0.3
	comp=Z,3.9nm,0.5s,baz=153,slow=2.3,SNR=6.4						
DBIC				SKPbc	SKPbc	20 46 37.0	-1.2
	comp=Z,3.8nm,0.8s,baz=69,slow=2.1,SNR=3.5						
PLCA	Paso Flores	137.61	160	PKP	PKiKP	20 43 39.8	-0.4
	comp=Z,4.6nm,0.6s,baz=228,slow=1.9,SNR=8.1						
CPUP	Villa Florida	154.80	170	PKPbc	PKiKP	20 44 16.4	+0.6
	comp=Z,0.8nm,0.6s,baz=236,slow=2.2,SNR=5.8						
CPUP				PKPab	PKPab	20 44 32.0	+0.7
	comp=Z,2.0nm,0.8s,baz=25,slow=2.9,SNR=9.4						
LPAZ	La Paz	158.73	135	PKP	PKPdf	20 44 14.4	+1.2
	comp=Z,1.8nm,0.7s,baz=74,slow=4.8,SNR=7.8						
LPAZ				PKPab	PKPab	20 44 50.9	+1.5
	comp=Z,5.3nm,0.9s,baz=207,slow=4.2,SNR=7.6						

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*NNC **27** 20:29:13.0±5.6, 37°.09N×71°.00E, h0^{km}, mb4.5, mpv4.3, Error ellipse: s-maj=51.5km s-min=38.6km az=141.0*

*IDC **27** 20:29:12.6±4.8, 36°.49N×71°.35E, h178^{km}±43^{km}, mb3.5/9, mbtmp4.1/15, Error ellipse: s-maj=37.3km s-min=16.0km az=31.0*

*NEIC **27** 20:29:14.7±1.0, 36°.71N±0°.07×71°.25E±0°.10, h198^{km}±10^{km}, mb4.3/6, Error ellipse: s-maj=12.8km s-min=9.1km az=125.0*

ISC 27 20:29:14.2±0.6**, 36°.66N**±0°.05×**71°.40E**±0°.06**, h200^{km}, n63, σ1^{s}90**/74**, mb3.7**/9**, 3C-7D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	2.49	340		Pn	20 29 57.4	-0.6
SIMJ	Simiganj	2.75	317		Pn	20 30 00.1	-1.0
DRK	Karamyk	2.83	6		Pn	20 30 02.4	+0.3
KBL	Kabul	2.85	223		Pn	20 30 01.9	-0.5
NIL	Nilore	3.37	153		Pn	20 30 09.9	+1.7
BTK	Batken	3.42	353		Pn	20 30 09.5	+0.6
ARSB	Arslanbob	4.82	14	Pn	Pn	20 30 26.1	-0.3
JMU	Jammu	4.88	143	*e*P	Pn	20 30 27.0	-0.1
JMU				*e*S	Sn	20 31 19.8	-4.6
JMU				IAML		20 31 27.8	
	comp=E,138nm,0.3s						
AML	Almayashu	5.75	17	P	Pn	20 30 38.8	+0.3
	SNR=110						
NRN	Naryn	5.96	36		Pn	20 30 40.8	-0.4
DHRM	DHARAMSHALA	5.98	136	*e*P	Pn	20 30 42.7	+1.2
DHRM				*e*S	Sn	20 31 46.8	-3.5
DHRM				IAmL		20 31 51.2	
UCH	Uchtor	6.06	22	P	Sn	20 31 49.7	-2.8
	SNR=18						
EKS2	Erkin-Say	6.27	16	P	Pn	20 30 45.6	+0.6
	SNR=24						
AAK	Ala-Archa	6.43	21	P	Pn	20 30 48.0	+0.9
	SNR=13						
AAK	Ala-Archa	6.43	21		Pn	20 30 47.3	+0.3
AAK	Ala-Archa	6.43	21	P	Pn	20 30 48.1	+0.9
	comp=E,17nm,0.4s,baz=189,slow=6.4,SNR=18						
AAK				S	Sn	20 31 57.9	-2.9
	comp=E,32nm,0.6s,baz=141,slow=23,SNR=35						
AAK	Ala-Archa	6.43	21	⇑P	Pn	20 30 47.1	0.0
AAK				⇓S	Sn	20 31 58.5	-2.2
KK31	Karatay Array	6.47	354		Pn	20 30 47.1	-0.3
KK31	Karatay Array	6.47	354	⇓P	Pn	20 30 46.8	-0.7
	comp=E,19nm,0.4s,baz=177,slow=12,SNR=380						
KK31				⇑S	Sn	20 31 54.7	-6.8
	comp=E,44nm,0.4s,baz=185,slow=18,SNR=36						
KKAR	Karatay Array	6.47	354		Pn	20 30 47.1	-0.3
KKAR	Karatay Array	6.47	354		Pn	20 30 46.9	-0.5
KBK	Karagaybulak	6.59	23	P	Pn	20 30 51.1	+2.0
	SNR=9.2						
BHK	Bhakra	6.69	140	*e*P	Pn	20 30 56.1	+5.7
BHK				*e*S	Sn	20 32 09.9	+3.3
BHK				IAML		20 32 11.0	
	comp=E,114nm,0.3s						
BOOM	Boomskoye usch	6.80	30		Pn	20 30 52.5	+0.6
CHMS	Chumysh	6.84	21	P	Pn	20 30 52.8	+0.5
	SNR=13						
CHMS	Chumysh	6.84	21	⇓P	Pn	20 30 52.4	+0.2
	comp=E,5.7nm,0.3s						
CHMS				⇑S	Sn	20 32 06.5	-3.6
	comp=E,21nm,0.5s						
USP	Ospenovka	7.02	19	P	Pn	20 30 54.5	-0.1
	SNR=22						
TKM2	Tokmak 2	7.04	26	P	Pn	20 30 55.9	+0.8
	SNR=31						
TKM2	Tokmak 2	7.04	26	⇓P	Pn	20 30 55.7	+0.6
	comp=E,16nm,0.8s						
TKM2				⇓S	Sn	20 32 11.9	-3.3
	comp=E,24nm,0.8s						
TARG	Taragay, Kyrgy	7.10	43		Pn	20 30 56.7	+0.7
KLP	Kalpa	7.64	130	*e*P	Pn	20 31 04.1	+1.0
KLP				IAmL		20 32 28.0	
	comp=E,249nm,0.5s						
BKNR	BIKANER	8.76	169	*e*P	Pn	20 31 17.1	-0.3
BKNR				*e*S	Sn	20 32 46.4	-9.3
BKNR				IAML		20 32 53.2	
	comp=N,119nm,0.6s						
BKNR				IAML		20 32 53.2	
	comp=E,197nm,0.6s						
JOSI	Joshimath	9.13	129	*e*P	Pn	20 31 24.1	+1.8
JOSI				*e*S	Sn	20 32 59.5	-5.3
JOSI				IAML		20 33 44.5	
	comp=E,179nm,0.3s						
KUDL	Kundal	9.52	152	*e*P	Pn	20 31 30.1	+2.9
KUDL				*e*S	Sn	20 33 08.5	-5.2
KUDL				IAML		20 33 10.8	
	comp=E,123nm,0.3s						
PTH	Pithoragarh	10.24	131	*e*P	Pn	20 31 39.0	+2.2
PTH				*e*S	Sn	20 33 23.9	-7.3
PTH				IAML		20 33 29.6	
	comp=E,194nm,0.5s						
MAKZ	Makanchi	12.84	35		Pn	20 32 10.4	+0.8
MK31	Makanchi Array	12.98	35	P	Pn	20 32 12.6	+1.3
	comp=E,1.3nm,0.6s,baz=213,slow=11,SNR=18						
MKAR	Makanchi Array	12.98	35	Pn	Pn	20 32 11.8	+0.6
MKAR	Makanchi Array	12.98	35	P	Pn	20 32 12.5	+1.3
	comp=E,0.7nm,0.5s,baz=213,slow=8.7,SNR=12						
KURBB	Kurchatov Arra	14.87	18	P	P	20 32 35.7	+0.3
	comp=E,2.7nm,1.0s,baz=208,slow=11,SNR=11						
KURBB	Kurchatov Arra	14.87	18	⇓P	P	20 32 36.7	+1.3
	comp=E,2.7nm,0.6s						
AB31	Akbulak array	15.10	330	P	Pn	20 32 36.3	-1.1
AB31				IAmb	IAmb	20 32 40.1	
	comp=Z,11nm,0.7s						
AB31	Akbulak array	15.10	330	P	Pn	20 32 36.4	-1.1
	comp=Z,4.5nm,0.5s,baz=144,slow=12,SNR=145						
ABKAR	Akbulak array	15.10	330		Pn	20 32 36.4	-1.1
ABKAR				IAmb	IAmb	20 32 40.1	
	comp=Z,11nm,0.7s						
ABKAR	Akbulak array	15.10	330		Pn	20 32 36.6	-0.8
BVAR	Borovoye Array	16.38	358	P	Pn	20 32 53.4	+0.5
	comp=Z,6.1nm,0.5s,baz=163,slow=11,SNR=36						
BRVK	Borovoye	16.42	358	P	Pn	20 32 53.2	0.0
BRVK				IAmb	IAmb	20 32 55.0	
	comp=Z,6.4nm,0.8s						
AKTO	Aktyubinsk	16.80	329	P	Pn	20 32 58.4	+0.4
	comp=Z,24nm,0.4s,baz=142,slow=7.2,SNR=70						
AKTO	Aktyubinsk	16.80	329	⇓P	Pn	20 32 57.7	-0.2
	comp=Z,9.1nm,0.4s						
ZALV	Zalesovo Beam	19.64	24		P	20 33 28.9	+1.5
ZALV	Zalesovo Beam	19.64	24	P	P	20 33 29.1	+1.7
	comp=Z,3.6nm,0.3s,baz=219,slow=11,SNR=15						
ARTI	Arti	21.60	340		P	20 33 48.7	+0.6
ARTI				IAmb	IAmb	20 33 51.7	
	comp=Z,7.7nm,0.7s						
ARTI	Arti	21.60	340	P	P	20 33 48.7	+0.6
	comp=Z,4.7nm,0.7s,baz=139,slow=6.0,SNR=8.7						
	comp=Z,4.7nm,0.7s						
GURO	Guroymak-BITLI	23.30	284	P	P	20 34 02.4	-1.9
BRTR	Keskin Array B	29.69	288	P	P	20 35 02.3	+0.8
	comp=Z,0.3nm,0.5s,baz=88,slow=7.4,SNR=2.2						
	comp=Z,0.3nm,0.5s						
AKASG	Malin Array Be	33.09	309	P	P	20 35 31.3	+0.4
	comp=Z,0.3nm,0.3s,baz=85,slow=6.4,SNR=5.2						
	comp=Z,0.3nm,0.3s						
FINES	FINESS Array B	37.53	326	P	P	20 36 10.2	+1.6
	comp=Z,1.3nm,0.3s,baz=119,slow=8.8,SNR=18						
	comp=Z,1.3nm,0.3s						
ARCES	ARCESS Array B	41.12	337	P	P	20 36 40.2	+2.0
	comp=Z,2.3nm,0.5s,baz=112,slow=8.7,SNR=17						
	comp=Z,2.3nm,0.5s						
HFS	Hagfors	43.14	322	P	P	20 36 56.0	+1.5
	comp=Z,2.9nm,0.3s,baz=91,slow=11,SNR=33						
HFS				pP	pP	20 37 38.5	+0.4
	comp=Z,1.6nm,0.7s,baz=99,slow=9.2,SNR=2.0						
	comp=Z,2.9nm,0.3s						
NB2	NORSAR Subarra	44.45	323	P	P	20 37 06.1	+1.1
	comp=Z,0.9nm,0.4s,baz=97,slow=7.9						
NOA	NORSAR Array B	44.45	323	P	P	20 37 06.1	+1.1
	comp=Z,1.8nm,0.6s,baz=108,slow=7.1,SNR=11						
NOA				pP	pP	20 37 48.8	+0.1
	comp=Z,0.4nm,0.6s,baz=96,slow=7.9,SNR=2.3						
	comp=Z,1.8nm,0.6s						
WRA	Warramunga Arr	81.81	122	P	P	20 41 11.7	+0.7
	comp=Z,0.6nm,0.6s,baz=323,slow=4.9,SNR=6.8						
	comp=Z,0.6nm,0.6s						
ASAR	Alice Springs	84.08	125	P	P	20 41 22.9	+0.3
	comp=Z,0.8nm,0.7s,baz=314,slow=4.9,SNR=5.6						
	comp=Z,0.8nm,0.7s						

JMA 27 20:31:07.3±0.1**, 35°.5N**±0°.1×**137°.8E**±0°.2**, h12^{km}, MV0.7**/29**, SOUTHERN NAGANO PREF, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNY	Yasuok	0.18	149	P	Pg	20 31 11.4	0.0
JGF	Kuroka	0.33	286	P	Pg	20 31 14.0	-0.1
JGF				*e*S	Sg	20 31 18.4	-0.2
JNT	Takato	0.48	41	P	Pg	20 31 16.6	-0.3
JNT				*e*S	Sg	20 31 23.1	-0.2
SHZ3	Shizuoka 3	0.58	140	*e*P	Pg	20 31 18.8	+0.1
JRY	Ryogami san	1.06	61	*e*P	Pb	20 31 27.4	-0.2
JRY				*e*S	Sn	20 31 42.3	-0.5

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*BJI **27** 20:45:06.9, 3°.27S×139°.08E, h10^{km}, mB5.1/20, mb4.8/74, Ms4.6/53, Ms7 4.5/56*

*MOS **27** 20:45:12.9±0.8, 2°.71S×138°.39E, h11^{km}, mb5.0/32, Error ellipse: s-maj=9.7km s-min=5.7km az=113.5*

*IDC **27** 20:45:12.7±0.5, 2°.67S×138°.51E, h0^{km}, mb4.7/17, mbtmp4.7/22, ML4.6/5, MS4.4/33, Error ellipse: s-maj=12.9km s-min=8.8km az=93.0*

*DJA **27** 20:45:14.4±0.2, 2°S±2°×13°9E±°, h10^{km}, M4.6/19, mb4.9/2, mB5.1/19, MLv4.8/11, Mw(mB)4.4/19, MwMwp4.8/6, Mwp5.1/6*

*NEIC **27** 20:45:15.0±1.1, 2°.66S±0°.07×138°.43E±0°.04, h10^{km}±1^{km}, mb5.0/182, Error ellipse: s-maj=12.9km s-min=3.9km az=26.0*

*GCMT **27** 20:45:19.0±0.1, 2°.57S±0°.01×138°.52E±0°.01, h18^{km}, MW5.1/126, Moment Tensor Solution. s88,c142; s126,c219; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.25±.14; $M_{\theta\theta}$-6.01±.10; $M_{\phi\phi}$0.76±.10; $M_{r\theta}$-1.02±.20; $M_{\theta\phi}$1.69±.07; $M_{\phi r}$1.48±.24; Best double couple: $M_0$6.13800×10^{16} NP1:ϕ_s88.00000°, δ41.00000°, λ67.00000°. NP2:ϕ_s297.00000°, δ53.00000°, λ108.00000°. Principal axes: T 5.7160, Plg74.0000°, Azm261.0000°; N 0.8460, Plg15.0000°, Azm106.0000°; P -6.5610, Plg7.0000°, Azm14.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 20:45:14.9±0.3**, 2°.69S**±0°.04×**138°.55E**±0°.05**, h10^{km}, n576, σ1^{s}28**/493**, mb4.9**/153**, MS4.5**/62**, 12C-9D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.71	13	P	Pg	20 45 21.1	-7.6
GENI	Genyem	1.62	87	P	Pn	20 45 46.1	+2.5
GENI	Genyem	1.62	87	P	Pn	20 45 41.5	-2.1
JAY	Jayapura	2.16	85	Pn	Pn	20 45 52.4	+1.4
	98nm,0.3s,baz=243,slow=7.5,SNR=159						
JAY				Lg	Lg	20 46 21.7	
	104nm,0.3s,baz=320,slow=20,SNR=11						
	301nm,0.4s						
JAY	Jayapura	2.16	85	P	Pn	20 45 49.1	-1.9
SRPI	Serui, Papua	2.45	289	P	Pn	20 45 52.2	-2.8
BAKI	Biak	2.86	301	P	Pn	20 45 59.8	-0.8
RKPI	Ransiki, Papua	4.52	285	P	Pn	20 46 23.1	-0.4
KMPI	Kaimana, Papua	4.93	259	P	Pn	20 46 29.5	+0.3
FAKI	Fak Fak	6.30	268		Pn	20 46 45.5	-2.5
FAKI	Fak Fak	6.30	268	P	Pn	20 46 49.7	+1.8
FAKI	Fak Fak	6.30	268	P	Pn	20 46 49.5	+1.6
	0.4nm5μm1μm96nm,0.7s						
SWI	Sorong	7.51	284	P	Pn	20 47 04.9	+0.3
MANU	Manus Island	8.83	86		Pn	20 47 24.3	+1.5
MSAI	Masohi	9.63	266	P	Pn	20 47 34.0	+0.3
AAI	Ambon	10.39	264	P	Pn	20 47 44.4	+0.3
PMG	Port Moresby	10.85	128		Pn	20 47 53.9	+3.5
PMG	Port Moresby	10.85	128	Pn	Pn	20 47 56.0	+5.6
	1.8nm,0.3s,baz=324,slow=6.6,SNR=9.4						
PMG	Port Moresby	10.85	128	P	Pn	20 47 53.9	+3.5
LBMI	Labuha	11.23	280	P	Pn	20 47 58.2	+2.5
NLAI	Namlea	11.45	267	P	Pn	20 47 59.8	+1.2
KDU	Kakadu	11.61	211	P	Pn	20 48 00.6	-0.3
	comp=Z,101nm,0.8s						
KDU	Kakadu	11.61	211	P	Pn	20 48 01.3	+0.4
TNTI	Ternate	11.70	287	P	Pn	20 48 03.1	+1.1
COEN	Coen	12.09	158		Pn	20 48 08.3	+0.8
COEN	Coen	12.09	158	P	Pn	20 48 08.6	+1.1
	comp=Z,181nm,0.8s						
COEN	Coen	12.09	158	P	Pn	20 48 08.7	+1.2
DRS	Darwin Rock St	12.29	218	P	Pn	20 48 12.1	+2.0
MTN	Manton Dam	12.48	216		Pn	20 48 11.5	-1.2
MTN	Manton Dam	12.48	216	P	Pn	20 48 12.1	-0.6
	comp=Z,87nm,0.7s						
MTN	Manton Dam	12.48	216	P	Pn	20 48 13.6	+0.9
SANI	Sanana	12.57	273	P	Pn	20 48 15.4	+1.5
SGSI	Sangihe	14.47	296	P	Pn	20 48 40.1	+0.1
KMSI	Cibinong	14.92	282	P	Pn	20 48 46.5	+0.4
SOEI	Soe	15.83	243		Pn	20 48 57.5	-0.7
SOEI				IAmb	IAmb	20 49 04.0	
	comp=Z,157nm,1.1s						
SOEI	Soe	15.83	243	P	P	20 49 01.9	-0.1
SOEI	Soe	15.83	243	P	P	20 49 00.9	-1.1
LUWI	Luwuk	15.85	276	P	Pn	20 48 58.1	-0.3
KDI	Kendari	15.95	265	P	P	20 49 01.0	-2.3
KNRA	Kununurra	16.11	216		Pn	20 49 01.0	-0.7
KNRA	Kununurra	16.11	216	P	Pn	20 49 01.3	-0.4
	comp=Z,73nm,1.0s						
DAV	Davao City (W)	16.17	307	LR	LR	20 56 18.0	
	comp=Z,1μm,18.1s,baz=127,slow=41						
BBSI	Bau Bau	16.18	260	P	P	20 49 04.0	-1.8
BATI	Baumata	16.56	243	Pn	Pn	20 49 06.8	-0.6
	comp=Z,16nm,0.3s,baz=156,slow=2.1,SNR=13						
	comp=Z,79nm,0.9s						
BATI	Baumata	16.56	243	P	P	20 49 09.5	-0.6
MRSI	Marisa	16.90	280	P	P	20 49 12.1	-1.7
APSI	Ampana	16.98	276	P	P	20 49 13.2	-1.5
MMRI	Maumere	17.27	249	P	P	20 49 18.5	+0.6
GUMO	Guam	17.35	21	LR	LR	20 55 35.5	
	comp=Z,871nm,19.6s,baz=196,slow=36						
WB0	Warramunga Arr	17.45	193		Pn	20 49 16.8	-1.9
WB0				IAmb	IAmb	20 49 28.8	
	comp=Z,118nm,1.3s						
WR8	Warramunga Arr	17.61	193		Pn	20 49 19.0	-1.6
WR8				IAmb	IAmb	20 49 30.9	

	comp=Z,80nm,0.9s						
WRAB	**Tennant Creek**	**17.62**	**193**	P	**Pn**	**20 49 18.9**	**-1.8**
WRAB	**Tennant Creek**	**17.62**	**193**	⇓*e*P	**Pn**	**20 49 19.5**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,216nm,1.6s						
WRA	**Warramunga Arr**	**17.63**	**193**	P	**Pn**	**20 49 17.5**	**-3.4**
WRA	**Warramunga Arr**	**17.63**	**193**	P	**Pn**	**20 49 19.7**	**-1.2**
	comp=Z,1.7nm,0.3s,baz=12,slow=12,SNR=41						
WRA				S	**Sn**	**20 52 38.0**	**+0.4**
	comp=Z,26nm,1.0s,baz=13,slow=23,SNR=4.8						
WRA				LR	LR	20 56 30.9	
	comp=Z,2µm,20.9s,baz=355,slow=38						
	comp=Z,23nm,0.7s						
WRA	**Warramunga Arr**	**17.63**	**193**	P	**Pn**	**20 49 17.5**	**-3.4**
WRA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
QIS	**Mount Isa**	**17.79**	**177**	P	**Pn**	**20 49 21.8**	**-1.1**
	comp=Z,87nm,0.9s						
EDFI	**Ende, Flores**	**17.82**	**250**	P	**P**	**20 49 26.0**	**+2.0**
TOLI2	**Tolitoli**	**18.16**	**282**		**Pn**	**20 49 24.7**	**-2.8**
BNSI	**Bone**	**18.48**	**264**	P	**P**	**20 49 32.8**	**+1.5**
TTSI	**Tana Toraja**	**18.71**	**268**	P	**Pn**	**20 49 35.3**	**+1.1**
PCI	**Palu**	**18.79**	**275**	P	**Pn**	**20 49 35.2**	**+0.1**
SPSI	**Sidrap Palu**	**18.79**	**266**	P	**Pn**	**20 49 35.8**	**+0.7**
CTAO	**Charters Tower**	**18.86**	**157**		**P**	**20 49 35.3**	**-0.1**
CTAO	**Charters Tower**	**18.86**	**157**	P	**P**	**20 49 35.3**	**-0.1**
CTAO				pmax	pmax		
	comp=Z,33nm,1.0s						
MPSI	**Mapaga**	**18.89**	**279**	P	**Pn**	**20 49 35.3**	**-1.0**
KAPI	**Kappang**	**18.90**	**262**	P	**P**	**20 49 33.9**	**-1.9**
	comp=Z,2.1nm,0.3s,baz=15,slow=23,SNR=9.1						
KAPI				LR	LR	20 59 29.4	
	comp=Z,377nm,18.4s,baz=86,slow=45						
	comp=Z,5.4nm,0.4s						
FITZ	**Fitzroy Crossi**	**19.87**	**219**	P	**P**	**20 49 45.4**	**-1.1**
FITZ	**Fitzroy Crossi**	**19.87**	**219**	P	**P**	**20 49 46.1**	**-0.3**
	comp=Z,8.6nm,1.3s						
FITZ	**Fitzroy Crossi**	**19.87**	**219**	P	**P**	**20 49 45.0**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=41,slow=14,SNR=17						
FITZ				LR	LR	20 58 24.8	
	comp=Z,2µm,19.4s,baz=40,slow=40						
	comp=Z,14nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.87**	**219**	P	**P**	**20 49 46.1**	**-0.3**
AS31	**Alice Springs**	**21.33**	**192**	P	**P**	**20 50 01.7**	**-0.6**
AS31	**Alice Springs**	**21.33**	**192**	P	**P**	**20 50 02.3**	**0.0**
	comp=Z,39nm,0.8s						
ASAR	**Alice Springs**	**21.33**	**192**	P	**P**	**20 50 01.2**	**-1.1**
ASAR	**Alice Springs**	**21.33**	**192**	P	**P**	**20 50 02.0**	**-0.3**
	comp=Z,55nm,0.9s,baz=22,slow=9.5,SNR=144						
ASAR				S	**S**	**20 54 01.3**	**+1.9**
	comp=Z,6.0nm,0.9s,baz=10,slow=23,SNR=4.8						
	comp=Z,55nm,0.9s						
SMKI	**Samarinda**	**21.45**	**276**	P	**P**	**20 50 05.7**	**+2.1**
TATA	**Tatamba Isabel**	**21.89**	**106**	P	**P**	**20 50 09.4**	**+1.0**
HNR	**Honiara**	**22.30**	**108**	P	**P**	**20 50 12.5**	**-0.2**
HNR	**Honiara**	**22.30**	**108**	P	**P**	**20 50 12.5**	**-0.2**
HNR				pmax	pmax		
	comp=Z,110nm,0.8s						
NGOA	**Tingoa Renbel**	**23.07**	**114**	P	**P**	**20 50 22.2**	**+1.3**
SRBI	**Singaraja**	**23.84**	**256**	P	**P**	**20 50 26.7**	**-1.8**
TGY	**Tagaytay City**	**24.15**	**314**	P	**P**	**20 50 30.3**	**-1.2**
	comp=Z,131nm,0.3s,baz=144,slow=14,SNR=5.3						
WRKA	**Warakurna**	**24.32**	**203**	P	**P**	**20 50 26.4**	**-6.6**
QLP	**Quilpie**	**24.37**	**168**	P	**P**	**20 50 37.3**	**+3.9**
EIDS	**Eidsvold**	**25.57**	**153**	P	**P**	**20 50 45.8**	**+1.4**
EIDS				IAmb	IAmb	20 50 47.0	
	comp=Z,48nm,1.1s						
EIDS	**Eidsvold**	**25.57**	**153**	P	**P**	**20 50 45.7**	**+1.4**
	comp=Z,45nm,1.4s						
MBWA	**Marble Bar**	**25.94**	**224**	P	**P**	**20 50 46.7**	**-1.0**
MBWA	**Marble Bar**	**25.94**	**224**	P	**P**	**20 50 47.0**	**-0.7**
	comp=Z,52nm,1.2s						
PSA00	**Pilbara Seismi**	**26.14**	**223**	P	**P**	**20 50 48.1**	**-1.4**
PSA00				IAmb	IAmb	20 51 06.6	
	comp=Z,35nm,1.1s						
PSA00	**Pilbara Seismi**	**26.14**	**223**	P	**P**	**20 50 48.1**	**-1.4**
PSA00	**Pilbara Seismi**	**26.14**	**223**	P	**P**	**20 50 49.3**	**-0.2**
	comp=Z,42nm,2.5s						
TBJI	**Tambak Boyo**	**26.92**	**260**	P	**P**	**20 50 56.7**	**+0.1**
WOJI	**Wonogiri, Jawa**	**27.97**	**258**	P	**P**	**20 51 07.6**	**+1.5**
STKA	**Stephens Creek**	**29.17**	**175**	P	**P**	**20 51 16.4**	**-0.1**
STKA	**Stephens Creek**	**29.17**	**175**	P	**P**	**20 51 16.2**	**-0.4**
	comp=Z,5.5nm,0.7s,baz=346,slow=7.7,SNR=10						
STKA				LR	LR	21 04 12.6	
	comp=Z,2µm,19.1s,baz=355,slow=39						
	comp=Z,5.5nm,0.7s						
STKA	**Stephens Creek**	**29.17**	**175**	*ce*P	**P**	**20 51 18.9**	**+2.3**
JOW	**Kunigami**	**30.98**	**342**	LR	LR	21 01 41.5	
	comp=Z,960nm,20.7s,baz=120,slow=32						
DBJI	**Dramaga**	**31.92**	**262**	P	**P**	**20 51 42.1**	**+1.0**
DZM	**Mont Dzumac**	**33.24**	**128**	*e*P	P	20 52 01.6	+8.9
	comp=Z,63nm,22.4s						
DZM				*e*S	**S**	**20 57 10.7**	**-2.4**
	comp=Z,253nm,26.4s						
DZM				*e*LR	LR	21 00 37.7	
	comp=Z,2µm,24.7s						
MDSI	**Maura Dua**	**34.35**	**266**	P	**P**	**20 52 01.9**	**-0.4**
QIZ	**Qiongzhong**	**35.54**	**309**	P	**P**	**20 52 14.8**	**+2.3**
QIZ				PP	**PP**	**20 53 33.0**	**-0.3**
QIZ				ScS	ScS	21 02 32.5	-0.4
QIZ				pmax	pmax		
	comp=Z,23nm,1.0s						
QIZ				LR	LR		
	comp=Z,400nm,17.9s						
QIZ				LR	LR		
	comp=Z,550nm,20.1s						
NWAO	**Narrogin (SRO)**	**36.11**	**211**	LR	LR	21 08 11.7	
	comp=Z,3µm,18.3s,baz=30,slow=38						
JNU	**Nakatsue**	**36.35**	**349**		**P**	**20 52 18.8**	**-0.5**
JNU	**Nakatsue**	**36.35**	**349**	LR	LR	21 06 50.1	
	comp=Z,708nm,18.8s,baz=150,slow=36						
IPM	**Ipoh**	**38.16**	**281**		**P**	**20 52 33.8**	**-1.2**
IPM				IAmb	IAmb	20 52 46.0	
	comp=Z,44nm,1.5s						
PPI	**Padang Panjang**	**38.20**	**273**	P	**P**	**20 52 34.0**	**-1.3**
MJAR	**Matsushiro Arr**	**39.03**	**360**	P	**P**	**20 52 40.0**	**-1.9**
	comp=Z,1.4nm,0.7s,baz=180,slow=9.7,SNR=5.1						
MJAR				LR	LR	21 06 53.8	
	comp=Z,468nm,19.3s,baz=164,slow=33						
	comp=Z,1.4nm,0.7s						
NJ2	**Nanjing**	**39.29**	**333**	*e*P	**P**	**20 52 44.3**	**+0.2**
NJ2				sP	**sP**	**20 52 53.0**	**+4.3**
NJ2				pmax	pmax		
	comp=Z,12nm,0.9s						
NJ2				LR	LR		
	comp=Z,650nm,19.9s						
NJ2				LR	LR		
	comp=Z,340nm,19.9s						
NJ2				LR	LR		
	comp=Z,710nm,19.0s						
CNSH	**ChangSha**	**39.36**	**323**	P	**P**	**20 52 45.5**	**+0.8**
CNSH				S	**S**	**20 58 46.5**	**+0.3**
CNSH				pmax	pmax		
	comp=Z,18nm,1.3s						
CNSH				LR	LR		
	comp=Z,220nm,19.2s						
CNSH				LR	LR		
	comp=Z,350nm,23.1s						
CNSH				LR	LR		
	comp=Z,460nm,24.0s						
RPSI	**Rantau Prapat**	**39.97**	**277**		**P**	**20 52 48.3**	**-1.8**
PSI	**Prapat**	**39.98**	**278**	P	**P**	**20 52 48.3**	**-2.1**
PSI				pmax	pmax		
	comp=Z,18nm,0.9s						
TJN	**Taejon**	**40.24**	**346**	⇑*e*P	**P**	**20 52 52.4**	**+0.4**
WHN	**Wuhan**	**40.32**	**327**	P	**P**	**20 52 54.0**	**+1.3**
WHN				sP	**sP**	**20 53 01.0**	**+3.7**
WHN				S	**S**	**20 59 05.8**	**+5.3**
WHN				LR	LR		
	comp=Z,2µm,20.4s						
KSAR	**Wonju Array Be**	**41.14**	**347**		**P**	**20 52 57.9**	**-1.5**
KSAR	**Wonju Array Be**	**41.14**	**347**	P	**P**	**20 52 57.9**	**-1.5**
KSRS	**Korea Array**	**41.14**	**347**	P	**P**	**20 52 59.5**	**+0.2**
	comp=Z,5.7nm,0.9s,baz=162,slow=9.2,SNR=22						
	comp=Z,5.7nm,0.9s						
KS19	**Wonju Array Si**	**41.20**	**347**	P	**P**	**20 52 59.6**	**-0.3**
SLVN	**Son La**	**41.47**	**307**		**P**	**20 53 01.9**	**-0.6**
MLSI	**Meulaboh, Aceh**	**42.68**	**279**	P	**P**	**20 53 13.9**	**+1.5**
TIA	**Tai'an**	**43.56**	**335**	P	**P**	**20 53 18.5**	**-0.7**
TIA				S	**S**	**20 59 51.3**	**+2.8**
TIA				pmax	pmax		
	comp=Z,13nm,0.8s						
TIA				LR	LR		
	comp=Z,340nm,16.7s						
TIA				LR	LR		
	comp=Z,430nm,22.6s						
TIA				LR	LR		
	comp=Z,850nm,23.5s						
CMAR	**Chiang Mai Arr**	**44.29**	**300**		**P**	**20 53 23.6**	**-1.7**
CMAR	**Chiang Mai Arr**	**44.29**	**300**	P	**P**	**20 53 24.7**	**-0.6**
	comp=Z,6.0nm,0.7s,baz=118,slow=6.6,SNR=54						
	comp=Z,6.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**44.29**	**300**	*i* P	**P**	**20 53 25.2**	**-0.1**
CMAR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KMI	**Kunming**	**44.39**	**311**	P	**P**	**20 53 26.0**	**-0.2**
KMI				S	**S**	**21 00 03.5**	**+2.3**
KMI				pmax	pmax		
	comp=Z,13nm,1.0s						
KMI				LR	LR		
	comp=Z,250nm,21.5s						
KMI				LR	LR		
	comp=Z,280nm,19.3s						
KMI				LR	LR		
	comp=Z,280nm,17.3s						
LYN	**LuoYang**	**44.42**	**329**	P	**P**	**20 53 25.5**	**-0.6**
LYN				sS	sS	21 00 18.0	+12
LYN				pmax	pmax		
	comp=Z,39nm,1.0s						
LYN				LR	LR		
	comp=Z,340nm,17.2s						
LYN				LR	LR		
	comp=Z,350nm,19.9s						
LYN				LR	LR		
	comp=Z,630nm,16.8s						
HNS	**HongShan**	**45.62**	**333**	⇓P	**P**	**20 53 35.5**	**0.0**
HNS				pmax	pmax		
	comp=Z,15nm,1.0s						
HNS				LR	LR		
	comp=Z,520nm,17.9s						
HNS				LR	LR		
	comp=Z,250nm,17.1s						
HNS				LR	LR		
	comp=Z,620nm,16.3s						
PZH	**PanZhiHua**	**45.89**	**312**	P	**P**	**20 53 37.8**	**-0.3**
PZH				S	**S**	**21 00 24.5**	**+1.7**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,210nm,6.3s						
PZH				LR	LR		
	comp=Z,260nm,20.9s						
PZH				LR	LR		
	comp=Z,270nm,19.6s						
PZH				LR	LR		
	comp=Z,370nm,17.8s						
XAN	**Xi'an**	**45.97**	**325**	⇑P	**P**	**20 53 37.5**	**-1.0**
XAN				pP	pP	20 53 41.5	-0.3
XAN				sP	sP	20 53 44.3	+1.2
XAN				pmax	pmax		
	comp=Z,23nm,1.6s						
XAN				LR	LR		
	comp=Z,370nm,19.9s						
XAN				LR	LR		
	comp=Z,340nm,18.6s						
XAN				LR	LR		
	comp=Z,520nm,21.3s						
ASAJ	**Asahikawa**	**46.74**	**4**	LR	LR	21 12 00.4	
	comp=Z,224nm,21.4s,baz=192,slow=34						
USRK	**Ussuriysk Ar.**	**47.05**	**354**	P	**P**	**20 53 47.1**	**+0.4**
	comp=Z,3.8nm,0.8s,baz=142,slow=5.4,SNR=6.1						
USRK				LR	LR	21 11 40.9	
	comp=Z,359nm,18.8s,baz=162,slow=34						
	comp=Z,3.8nm,0.8s						
CD2	**Chengdu**	**47.06**	**318**	P	**P**	**20 53 50.5**	**+3.4**
CD2				S	**S**	**21 00 41.3**	**+2.0**
CD2				pmax	pmax		
	comp=Z,30nm,0.9s						
CD2				LR	LR		
	comp=Z,470nm,15.9s						
CD2				LR	LR		
	comp=Z,620nm,17.8s						
CD2				LR	LR		
	comp=Z,480nm,20.9s						
BJI	**Beijing**	**47.21**	**337**	P	**P**	**20 53 47.8**	**-0.2**
BJI				S	**S**	**21 00 41.5**	**+0.5**
BJI				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BJI				LR	LR		
	comp=Z,200nm,24.1s						
BJI				LR	LR		
	comp=Z,79nm,21.4s						
BJI				LR	LR		
	comp=Z,270nm,19.7s						
TNCH	**TengChong**	**47.60**	**308**	P	**P**	**20 53 51.3**	**-0.3**
TNCH				pP	pP	20 53 54.3	-0.7
TNCH				pmax	pmax		
	comp=Z,14nm,0.8s						
TNCH				pmax	pmax		
	comp=Z,220nm,5.4s						
CN2	**Changchun**	**47.76**	**347**	P	**P**	**20 53 52.5**	**+0.3**
CN2				S	**S**	**21 00 45.8**	**-2.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				LR	LR		
	comp=Z,400nm,16.0s						
CN2				LR	LR		
	comp=Z,300nm,16.0s						
CN2				LR	LR		
	comp=Z,500nm,16.0s						
MDJ	**Mudanjiang**	**47.77**	**351**	IAmb	IAmb	20 53 54.0	
	comp=Z,12nm,1.0s						
BNX	**BinXian**	**49.23**	**350**	⇓P	**P**	**20 54 03.5**	**0.0**
BNX				S	**S**	**21 01 09.3**	**0.0**
BNX				pmax	pmax		
	comp=Z,21nm,0.8s						
BNX				pmax	pmax		
	comp=Z,90nm,2.8s						
BNX				LR	LR		
	comp=Z,370nm,18.4s						
BNX				LR	LR		
	comp=Z,170nm,17.9s						
BNX				LR	LR		
	comp=Z,520nm,18.4s						
YSS	**Yuzhno-Sakhali**	**49.57**	**4**	*e*P	**P**	**20 54 05.7**	**-0.4**
YSS				*e*S	S	21 01 04.7	-9.4
YSS				MLR	MLR		
	comp=Z,300nm,19.0s						
THZ	**Tophouse**	**49.62**	**146**	IAmb	IAmb	20 54 27.8	
	comp=Z,21nm,1.1s						
HHC	**Hu-ho-hao-te**	**49.84**	**333**	*e*P	**P**	**20 54 09.8**	**+1.3**
HHC				S	**S**	**21 01 18.0**	**-0.4**
HHC				SS	**SS**	**21 04 54.5**	**+3.2**
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,160nm,5.1s						
HHC				LR	LR		
	comp=Z,550nm,16.8s						
HHC				LR	LR		
	comp=Z,280nm,17.6s						
HHC				LR	LR		
	comp=Z,660nm,16.8s						
URZ	**Urewera**	**49.94**	**140**	LR	LR	21 17 45.2	
	comp=Z,444nm,18.2s,baz=335,slow=39						
LTZ	**Lake Taylor**	**49.97**	**148**		**P**	**20 54 10.3**	**+1.0**
RPZ	**Rata Peaks**	**49.99**	**149**		**P**	**20 54 09.4**	**0.0**
RPZ	**Rata Peaks**	**49.99**	**149**	LR	LR	21 14 58.0	
	comp=Z,730nm,18.9s,baz=340,slow=36						
BKZ	**Black Stump Fm**	**50.08**	**141**	IAmb	IAmb	20 54 12.4	
	comp=Z,18nm,0.9s						
BTO	**Baotou**	**50.36**	**332**	*e*P	**P**	**20 54 12.8**	**+0.4**
BTO				PP	**PP**	**20 56 09.0**	**+1.0**
BTO				S	**S**	**21 01 24.0**	**-1.6**
BTO				SS	**SS**	**21 04 57.8**	**-1.8**
BTO				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BTO				pmax	pmax		
	comp=Z,140nm,5.5s						
BTO				LR	LR		
	comp=Z,1µm,17.6s						
BTO				LR	LR		
	comp=Z,620nm,17.7s						
BTO				LR	LR		
	comp=Z,1µm,17.6s						
LZH	**Lanzhou**	**50.37**	**323**	*e*P	**P**	**20 54 13.0**	**+0.4**
LZH				sP	sP	20 54 20.5	+3.2
LZH				S	**S**	**21 01 33.5**	**+7.5**
LZH				pmax	pmax		
	comp=Z,30nm,1.3s						
LZH				LR	LR		
	comp=Z,280nm,18.1s						
LZH				LR	LR		
	comp=Z,380nm,16.2s						
LZH				LR	LR		
	comp=Z,640nm,16.5s						
KHZ	**Kahutara**	**50.41**	**147**	IAmb	IAmb	20 54 15.1	
	comp=Z,21nm,0.8s						
MRZ	**Mangatainoka R**	**50.44**	**144**		**P**	**20 54 12.9**	**0.0**
KLR	**Kul'dur**	**52.05**	**354**	LR	LR	21 14 57.4	
	comp=Z,356nm,18.6s,baz=182,slow=34						
KLR	**Kul'dur**	**52.05**	**354**	*c i*P	**P**	**20 54 24.8**	**+0.1**
KLR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HEH	**HeiHe**	**53.60**	**351**	*e*P	**P**	**20 54 36.0**	**-0.2**
HEH				sP	**sP**	**20 54 42.8**	**+1.9**
HEH				S	**S**	**21 02 07.8**	**-1.8**
HEH				pmax	pmax		
	comp=Z,11nm,1.0s						
HEH				pmax	pmax		
	comp=Z,210nm,4.7s						
HEH				LR	LR		
	comp=Z,290nm,15.0s						
HEH				LR	LR		
	comp=Z,270nm,17.3s						
HEH				LR	LR		
	comp=Z,520nm,16.7s						
GTA	**Gaotai**	**54.96**	**324**	*e*P	**P**	**20 54 46.8**	**+0.3**
GTA				sP	sP	20 54 54.5	+3.3
GTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ZEA	**Zeya**	**57.02**	**352**	*e*P	**P**	**20 55 01.1**	**+0.3**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ULN	**Ulaanbaatar**	**57.38**	**335**		**P**	**20 55 02.9**	**-0.8**
ULN	**Ulaanbaatar**	**57.38**	**335**	*c i*P	**P**	**20 55 04.2**	**+0.5**
ULN				pmax	pmax		
	comp=Z,22nm,2.2s						
SONM	**Songino Array**	**57.63**	**335**		**P**	**20 55 04.8**	**-0.6**
SONM	**Songino Array**	**57.63**	**335**	P	**P**	**20 55 04.8**	**-0.6**
	comp=Z,2.6nm,0.8s,baz=157,slow=8.1,SNR=12						
SONM				LR	LR	21 18 40.1	
	comp=Z,727nm,21.8s,baz=142,slow=35						
	comp=Z,2.6nm,0.8s						
PETK	**Petropavlovsk-**	**57.88**	**14**	P	**P**	**20 55 07.7**	**+0.8**
	comp=Z,2.7nm,0.6s,baz=164,slow=4.5,SNR=6.2						
PETK				LR	LR	21 16 12.5	
	comp=Z,325nm,21.6s,baz=195,slow=32						
	comp=Z,2.7nm,0.6s						
PET	**Petropavlovsk**	**58.03**	**14**	*e*P	**P**	**20 55 10.8**	**+2.9**
PET				*e*		20 57 20.1	
PET				*e*S	**S**	**21 03 13.3**	**+4.8**
PET				*e*SS	**SS**	**21 06 54.0**	**-5.9**
PET				MLR	MLR		
	comp=Z,300nm,15.0s						
CIT	**Chita**	**58.48**	**342**	*e*P	**P**	**20 55 11.8**	**+0.6**
CIT				*e*		20 55 15.6	
CIT				*e*		20 55 54.6	
CIT				pmax	pmax		
	comp=Z,51nm,1.9s						
PALK	**Pallekele**	**58.57**	**280**	LR	LR	21 21 54.6	
	comp=Z,133nm,20.2s,baz=112,slow=38						
ZAK	**Zakamensk**	**60.90**	**335**	*e*P	**P**	**20 55 27.1**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,11nm,1.3s						
HYB	**Hyderabad**	**62.42**	**291**	*e*P	**P**	**20 55 38.5**	**-0.3**
RAR	**Rarotonga**	**62.68**	**112**	LR	LR	21 22 32.7	
	comp=Z,198nm,18.0s,baz=284,slow=36						
MA2	**Magadan**	**62.82**	**7**		**P**	**20 55 41.1**	**+0.5**
MA2				IAmb	IAmb	20 55 46.8	
	comp=Z,9.2nm,0.9s						
MA2	**Magadan**	**62.82**	**7**	LR	LR	21 21 05.3	
	comp=Z,118nm,20.6s,baz=195,slow=34						
MA2	**Magadan**	**62.82**	**7**	⇑*i*P	**P**	**20 55 41.3**	**+0.7**
MA2				pmax	pmax		
	comp=Z,24nm,2.0s						
MA2	**Magadan**	**62.82**	**7**	P	**P**	**20 55 40.8**	**+0.2**
	comp=Z,15nm,1.1s						
MOY	**Mondy**	**62.83**	**335**	*e*P	**P**	**20 55 40.7**	**-0.2**
MOY				pmax	pmax		
	comp=Z,22nm,2.5s						
WMQ	**Urumqi**	**64.89**	**322**	*e*P	**P**	**20 55 56.0**	**+1.3**
WMQ				pmax	pmax		
	comp=Z,21nm,0.7s						
WMQ				LR	LR		
	comp=Z,240nm,17.5s						
WMQ				LR	LR		
	comp=Z,160nm,18.7s						
YAK	**Yakutsk**	**64.90**	**355**		**P**	**20 55 53.8**	**-0.4**
YAK	**Yakutsk**	**64.90**	**355**	LR	LR	21 22 31.7	
	comp=Z,333nm,19.4s,baz=170,slow=34						
YAK	**Yakutsk**	**64.90**	**355**	*e*P	**P**	**20 55 53.8**	**-0.4**
YAK				*e**PP	**sP**	**20 56 03.1**	**+4.2**
YAK				*e*		20 56 26.5	
YAK				*e*		20 58 16.5	
YAK				*e*PPP	PPP	20 59 49.2	
YAK				*e*S	**S**	**21 04 32.9**	**-2.5**
YAK				*e**SS	sS	21 04 51.2	+10
YAK				*e*		21 05 45.2	
YAK				*e*SS	**SS**	**21 08 45.8**	**-1.4**
YAK				pmax	pmax		
	comp=Z,40nm,0.6s						
YAK				pmax	pmax		
	comp=N,14nm,1.1s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,106nm,3.3s						
YAK				pmax	pmax		
	comp=E,33nm,2.6s						
YAK				pmax	pmax		
	comp=N,107nm,4.6s						
YAK				smax	smax		
	comp=N,33nm,2.6s						
YAK				smax	smax		
	comp=E,92nm,6.6s						
ADK	**Adak**	**66.23**	**28**		**P**	**20 56 02.9**	**-0.1**
ADK	**Adak**	**66.23**	**28**	P	**P**	**20 56 02.9**	**-0.1**
ADK				pmax	pmax		
	comp=Z,15nm,0.9s						
SEY	**Seymchan**	**66.28**	**7**	LR	LR	21 23 24.7	
	comp=Z,149nm,20.9s,baz=194,slow=35						
SEY	**Seymchan**	**66.28**	**7**	*d i*P	**P**	**20 56 04.0**	**+0.9**
SEY				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CASY	**Casey**	**66.46**	**192**		**P**	**20 56 04.0**	**-0.2**
CASY				IAmb	IAmb	20 56 16.7	
	comp=Z,9.5nm,1.0s						
ZSN	**Zaisan**	**68.45**	**324**	*e*P	**P**	**20 56 16.9**	**-0.3**
ZSN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZSN	**Zaisan**	**68.45**	**324**	*e*P	**P**	**20 56 17.0**	**-0.3**
	comp=Z,10nm,0.9s						
MK31	**Makanchi Array**	**69.68**	**322**	*c i*P	**P**	**20 56 24.0**	**-0.9**
MKAR	**Makanchi Array**	**69.68**	**322**		**P**	**20 56 23.6**	**-1.3**
MKAR	**Makanchi Array**	**69.68**	**322**	P	**P**	**20 56 24.0**	**-0.9**
	comp=Z,5.7nm,0.7s,baz=112,slow=7.5,SNR=61						
MKAR				LR	LR	21 28 49.4	
	comp=Z,174nm,19.4s,baz=127,slow=38						
	comp=Z,5.7nm,0.7s						
MKAR	**Makanchi Array**	**69.68**	**322**	*i* P	**P**	**20 56 24.6**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MAKZ	**Makanchi**	**69.87**	**322**		**P**	**20 56 24.9**	**-1.2**
MAKZ				IAmb	IAmb	20 56 33.7	
	comp=Z,11nm,0.8s						
MAKZ	**Makanchi**	**69.87**	**322**	P	**P**	**20 56 24.9**	**-1.2**
MAKZ				pmax	pmax		
	comp=Z,11nm,0.8s						
SHLS	**Shalkode**	**69.89**	**318**	*e*P	**P**	**20 56 24.0**	**-2.4**
SHLS				pmax	pmax		
	comp=Z,7.0nm,1.4s						
SHLS	**Shalkode**	**69.89**	**318**	*e*P	**P**	**20 56 24.0**	**-2.4**
	comp=Z,7.0nm,1.4s						
UZB	**Uzynbulak**	**70.19**	**318**	*e*P	**P**	**20 56 27.7**	**-0.6**
UZB				pmax	pmax		
	comp=Z,7.0nm,1.1s						
UZB	**Uzynbulak**	**70.19**	**318**	*e*P	**P**	**20 56 27.7**	**-0.6**
	comp=Z,7.1nm,1.1s						
PRZ	**Przheval'sk**	**70.34**	**317**	IAmb	IAmb	20 56 31.6	
	comp=Z,12nm,0.8s						
TARG	**Taragay, Kyrgy**	**70.46**	**316**	IAmb	IAmb	20 56 44.7	
	comp=Z,8.7nm,1.0s						
KPKS	**Kokpek**	**70.54**	**318**	*e*P	**P**	**20 56 29.7**	**-0.6**
KPKS	**Kokpek**	**70.54**	**318**	*e*P	**P**	**20 56 29.7**	**-0.6**
SATY	**Saty**	**70.56**	**318**	*e*P	**P**	**20 56 29.9**	**-0.6**
SATY				pmax	pmax		
	comp=Z,5.0nm,0.8s						

SATY	Saty	70.56	318	*e*P	P	20 56 30.0	-0.6
	comp=Z,5.1nm,0.8s						
NIKH	Nikolski High	70.74	31	P	P	20 56 32.2	+1.0
	baz=237						
KSH	Kashi	70.95	313	P	P	20 56 33.8	+0.8
KSH				sP	sP	20 56 42.3	+4.7
KSH				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KDJ	Kajisay	71.04	316	IAmb	IAmb	20 56 35.1	
	comp=Z,7.2nm,0.7s						
NIL	Nilore	71.19	307	P	P	20 56 33.1	-1.3
NIL	Nilore	71.19	307	P	P	20 56 33.1	-1.3
NIL				pmax	pmax		
	comp=Z,64nm,2.0s						
TDK	Taldyqorghan	71.34	320	*e*P	P	20 56 34.6	-0.5
TDK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TDK	Taldyqorghan	71.34	320	*e*P	P	20 56 34.6	-0.5
	comp=Z,7.6nm,0.8s						
AAA	Alma-Ata	71.63	317	*e*P	P	20 56 36.4	-0.5
AAA				pmax	pmax		
	comp=Z,6.0nm,0.4s						
AAA	Alma-Ata	71.63	317	*e*P	P	20 56 36.5	-0.5
	comp=Z,5.6nm,0.4s						
CHKK	Chushkaly	71.82	318	*e*P	P	20 56 37.4	-0.6
CHKK	Chushkaly	71.82	318	*e*P	P	20 56 37.5	-0.6
ZALV	Zalesovo Beam	71.84	330		P	20 56 35.5	-2.4
ZALV	Zalesovo Beam	71.84	330	P	P	20 56 36.2	-1.7
	comp=Z,3.9nm,0.6s,baz=112,slow=5.1,SNR=22						
ZALV				LR	LR	21 27 32.4	
	comp=Z,171nm,21.9s,baz=114,slow=35						
	comp=Z,3.9nm,0.6s						
ZALV	Zalesovo Beam	71.84	330	*i* P	P	20 56 37.0	-0.8
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.6s						
PPT2	Papeete2	71.92	108	*e*LR	LR	21 18 31.9	
	comp=Z,363nm,23.8s						
PPT2				*e*LR	LR	21 18 36.7	
	comp=Z,346nm,26.2s						
BOOM	Boomskoye usch	72.03	316	IAmb	IAmb	20 56 41.0	
	comp=Z,7.5nm,0.8s						
KUU	Kurty	72.27	318	*e*P	P	20 56 39.9	-0.8
KUU	Kurty	72.27	318	*e*P	P	20 56 40.0	-0.8
UNV	Unalaska Valle	72.40	31	P	P	20 56 42.1	+1.0
	baz=239						
TBI	Tubuai	72.41	114	*e*LR	LR	21 18 43.5	
	comp=Z,901nm,26.0s						
TBI				*e*LR	LR	21 18 50.2	
	comp=Z,1µm,25.8s						
P08K	Saint George I	72.42	27	P	P	20 56 42.0	+0.7
	baz=236						
SPIA	Saint Paul Isl	72.44	26	P	P	20 56 42.4	+1.1
	baz=235						
AAK	Ala-Archa	73.08	316	*ce*P	P	20 56 45.1	-0.7
AAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BILL	Bilibino	73.18	11⇑	*e*P	P	20 56 44.9	-0.7
BILL				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SGDS	Sogindy	73.27	317	*e*P	P	20 56 46.1	-0.6
	comp=Z,6.6nm,1.1s						
KURK	Kurchatov	73.61	325		P	20 56 47.1	-1.3
KURK				IAmb	IAmb	20 56 58.2	
	comp=Z,9.7nm,0.9s						
KURK	Kurchatov	73.61	325	P	P	20 56 47.3	-1.1
KURBB	Kurchatov Arra	73.62	325	P	P	20 56 47.3	-1.2
	comp=Z,4.0nm,0.7s,baz=114,slow=5.3,SNR=28						
KURBB				PP	PP	20 59 30.1	-2.7
	comp=Z,0.2nm,0.6s,baz=112,slow=9.3,SNR=4.3						
	comp=Z,4.0nm,0.7s						
ARSB	Arslanbob	73.71	314	IAmb	IAmb	20 56 51.0	
	comp=Z,8.5nm,0.8s						
BTLS	Baital	74.22	318	*e*P	P	20 56 51.3	-0.8
BTLS	Baital	74.22	318	*e*P	P	20 56 51.4	-0.8
TIXI	Tiksi	74.47	357	P	P	20 56 52.9	-0.2
TIXI				IAmb	IAmb	20 56 54.6	
	comp=Z,16nm,0.8s						
TIXI	Tiksi	74.47	357	LR	LR	21 29 25.1	
	comp=Z,198nm,18.9s,baz=190,slow=36						
TIXI	Tiksi	74.47	357⇑	*e*P	P	20 56 52.9	-0.2
TIXI				pmax	pmax		
	comp=Z,17nm,0.8s						
GAR	Garm	74.97	311	IAmb	IAmb	20 57 06.4	
	comp=Z,17nm,0.8s						
DZA	Taraz	75.37	316	*e*P	P	20 56 58.1	-0.8
DZA	Taraz	75.37	316	*e*P	P	20 56 58.1	-0.8
S12K	Black Hills	75.55	30	P	P	20 57 00.5	+0.8
	baz=243						
VNDA	Vanda	75.81	175		P	20 57 00.9	+0.1
VNDA				IAmb	IAmb	20 57 03.8	
	comp=Z,9.0nm,0.9s						
VNDA	Vanda	75.81	175	P	P	20 57 00.9	+0.1
	comp=Z,7.3nm,0.8s,baz=323,slow=5.4,SNR=31						
VNDA				LR	LR	21 30 22.4	
	comp=Z,607nm,19.2s,baz=347,slow=36						
	comp=Z,7.3nm,0.8s						
GAMB	Gambell	75.82	20	P	P	20 57 01.9	+1.0
	baz=232						
SIMJ	Simiganj	75.86	311		P	20 57 00.5	-1.5
SIMJ				IAmb	IAmb	20 57 04.3	
	comp=Z,8.8nm,0.8s						
M11K	Mekoryuk	75.97	25	P	P	20 57 02.8	+0.9
	baz=238						
KKAR	Karatay Array	76.00	316		P	20 57 01.1	-1.4
KKAR	Karatay Array	76.00	316	P	P	20 57 01.1	-1.4
IUG	Iuzhnay	76.06	315	*e*P	P	20 57 02.1	-0.9
IUG	Iuzhnay	76.06	315	*e*P	P	20 57 02.2	-0.9
SDPT	Sand Point	76.20	31	P	P	20 57 04.3	+1.0
	baz=244						
CHM	Chimkent	76.42	315	*e*P	P	20 57 04.2	-0.7
CHM				pmax	pmax		
	comp=Z,5.0nm,0.4s						
CHM	Chimkent	76.42	315	*e*P	P	20 57 04.3	-0.7
	comp=Z,4.8nm,0.4s						
CHNA	Chernabura Isl	76.44	32	P	P	20 57 05.8	+1.2
	baz=245						
BRLS	Borolday	76.45	315	*e*P	P	20 57 04.7	-0.4
BRLS	Borolday	76.45	315	*e*P	P	20 57 04.8	-0.4
BRZS	Berezniki	76.82	323	*e*P	P	20 57 06.7	-0.3
BRZS	Berezniki	76.82	323	*e*P	P	20 57 06.8	-0.3
S14K	Fog Glacier	77.07	30	P	P	20 57 09.3	+0.9
	baz=245						
M13K	Dall Lake	77.20	26	P	P	20 57 10.1	+1.2
	baz=240						
K13K	Kusilvak Mount	77.43	24	IAmb	IAmb	20 57 11.8	
	comp=Z,13nm,0.9s						
K13K	Kusilvak Mount	77.43	24	P	P	20 57 11.3	+1.1
	baz=239						
O14K	Tigyukauivet M	77.58	27	P	P	20 57 12.0	+1.0
	baz=243						
N14K	Kuskokwak Cree	77.70	26	P	P	20 57 12.2	+0.6
	baz=242						
L14K	Kuka Creek	77.95	25	P	P	20 57 13.8	+0.8
	baz=241						
M14K	Bethel	77.97	26	P	P	20 57 13.9	+0.8
	baz=242						
TNA	Tin City	78.19	20	P	P	20 57 15.1	+0.8
	baz=235						
O15K	Ungalikthiuk R	78.20	28	P	P	20 57 15.2	+0.7
	baz=244						
J14K	Nanvaranak Lak	78.29	23	P	P	20 57 15.8	+0.9
	baz=240						
M15K	Kasigluk River	78.50	26	P	P	20 57 17.2	+1.1
	baz=243						
N15K	Kwethluk River	78.52	27	P	P	20 57 16.7	+0.4
	baz=244						
L15K	Ungalak Mounta	78.61	25	P	P	20 57 17.3	+0.6
	baz=242						
F14K	Arctic Creek	78.69	20	P	P	20 57 17.9	+0.8
	baz=237						
K15K	Wolf Creek Mou	78.88	24	IAmb	IAmb	20 57 19.8	
	comp=Z,10nm,0.8s						
K15K	Wolf Creek Mou	78.88	24	P	P	20 57 18.9	+0.6
	baz=242						
CHIR	Chirikof Islan	78.91	32	P	P	20 57 19.2	+0.7
	baz=248						
P16K	Nushagak River	79.00	28	P	P	20 57 19.5	+0.7
	baz=246						
O16K	Kokwok River B	79.18	28	P	P	20 57 20.3	+0.4
	baz=245						
BVAR	Borovoye Array	79.20	325	P	P	20 57 19.6	-0.5
	comp=Z,7.6nm,0.6s,baz=115,slow=7.5,SNR=25						
BVAR				LR	LR	21 34 36.8	
	comp=Z,90nm,18.8s,baz=97,slow=37						
	comp=Z,7.6nm,0.6s						
R17L	Mt. Peulik Vol	79.22	30	P	P	20 57 20.8	+0.6
	baz=247						
N16K	Nishlik Lake	79.25	27	P	P	20 57 20.9	+0.6
	baz=245						
G15K	Niukluk	79.25	21	P	P	20 57 21.0	+0.9
	baz=239						
BRVK	Borovoye	79.28	325	P	P	20 57 19.5	-1.0
BRVK				IAmb	IAmb	20 57 30.5	
	comp=Z,11nm,0.8s						
BRVK	Borovoye	79.28	325⇓	*e*P	P	20 57 20.1	-0.5
BRVK				pmax	pmax		
	comp=Z,14nm,0.9s						
M16K	Timber Creek	79.40	26	IAmb	IAmb	20 57 23.2	
	comp=Z,15nm,0.8s						
M16K	Timber Creek	79.40	26	P	P	20 57 21.5	+0.4
	baz=244						
F15K	North Star Dit	79.41	21	P	P	20 57 21.5	+0.5
	baz=238						
L16K	Owhat River	79.48	25	P	P	20 57 21.7	+0.2
	baz=244						
Q16K	King Salmon	79.49	29	P	P	20 57 21.5	0.0
	baz=247						
NRIK	Noril'sk	79.66	344	IAmb	IAmb	20 57 23.8	
	comp=Z,11nm,0.9s						
NRIK	Noril'sk	79.66	344	P	P	20 57 21.6	-0.7
	comp=Z,9.8nm,0.8s,baz=136,slow=7.1,SNR=11						
NRIK				LR	LR	21 31 16.1	
	comp=Z,197nm,21.9s,baz=126,slow=35						
	comp=Z,9.8nm,0.8s						
NRIK	Noril'sk	79.66	344	*d i*P	P	20 57 21.8	-0.5
NRIK				pmax	pmax		
	comp=Z,12nm,0.9s						
Q17K	Contact Creek	79.70	29	P	P	20 57 22.3	-0.6
	baz=248						
O17K	Koliganek Bris	79.72	28	P	P	20 57 23.0	+0.2
	baz=246						
J16K	Anvik River	79.73	24	IAmb	IAmb	20 57 32.8	
	comp=Z,14nm,1.2s						
J16K	Anvik River	79.73	24	P	P	20 57 23.3	+0.5
	baz=242						
H16K	Elim	79.74	22	P	P	20 57 23.1	+0.3
	baz=241						
P17K	Kvichak River	79.79	28	P	P	20 57 23.4	+0.2
	baz=247						
SII	Sitkinak Islan	79.93	31	P	P	20 57 24.2	+0.2
	baz=249						
I17K	Unalakleet	79.97	23	P	P	20 57 24.6	+0.5
	baz=242						
N17K	Nushagak Hills	79.98	27	IAmb	IAmb	20 57 34.2	
	comp=Z,37nm,1.7s						
N17K	Nushagak Hills	79.98	27	P	P	20 57 24.7	+0.5
	baz=246						
G16K	Koyuk River	80.07	21	P	P	20 57 25.0	+0.5
	baz=241						
R18K	Karluk	80.15	30	P	P	20 57 25.3	+0.2
	baz=249						
L17K	Donlin	80.17	25	P	P	20 57 25.4	+0.2
	baz=245						
M17K	Holitna River	80.23	26	IAmb	IAmb	20 57 28.2	
	comp=Z,12nm,0.8s						
M17K	Holitna River	80.23	26	P	P	20 57 25.5	-0.1
	baz=246						
Q18K	Katmai Hardscr	80.27	29	P	P	20 57 25.5	-0.5
	baz=248						
J17K	VABM Dome	80.39	24	P	P	20 57 26.6	+0.2
	baz=244						
K17K	Iditarod	80.41	25	IAmb	IAmb	20 57 29.4	
	comp=Z,17nm,0.9s						
K17K	Iditarod	80.41	25	P	P	20 57 26.9	+0.4
	baz=245						
P18K	Big Mountain,	80.44	28	P	P	20 57 26.8	0.0
	baz=248						
OHAK	Old Harbor	80.62	31	P	P	20 57 27.8	+0.1
	baz=250						
O18K	Koktuh Hills	80.63	28	P	P	20 57 27.9	+0.2
	baz=248						
N18K	Kilae Creek	80.63	27	P	P	20 57 28.0	+0.2
	baz=247						
G17K	Kiwalik Mounta	80.74	22	P	P	20 57 28.8	+0.6
	baz=242						
H17K	Granite Mounta	80.76	22	IAmb	IAmb	20 57 37.9	
	comp=Z,36nm,1.9s						
H17K	Granite Mounta	80.76	22	P	P	20 57 28.8	+0.4
	baz=243						
L18K	Granite Mounta	80.89	25	P	P	20 57 29.5	+0.4
	baz=246						
M18K	Stony River	80.97	26	P	P	20 57 30.1	+0.5
	baz=247						
D17K	Noatak River	80.97	19	P	P	20 57 29.9	+0.5
	baz=240						
F17K	Baldwin Pennin	80.98	21	P	P	20 57 30.0	+0.6
	baz=242						
Q19K	Cape Douglas,	81.03	29	P	P	20 57 30.5	+0.5
	baz=250						
E17K	Hotham Inlet	81.09	20	P	P	20 57 30.7	+0.7
	baz=241						
KDAK	Kodiak Island	81.17	30	LR	LR	21 28 55.1	
	comp=Z,462nm,20.9s,baz=230,slow=32						
KDAK	Kodiak Island	81.17	30	P	P	20 57 31.2	+0.6
	baz=251						
RDOG	Red Dog Mine	81.21	19	P	P	20 57 31.1	+0.3
	baz=240						
N19K	Bonanza Creek	81.32	27	P	P	20 57 31.6	+0.1
	baz=248						
C17K	DeLong Mountai	81.34	19	P	P	20 57 31.4	0.0
	baz=239						
J18K	Innoko River	81.38	24	IAmb	IAmb	20 57 36.2	
	comp=Z,27nm,2.0s						
J18K	Innoko River	81.38	24	P	P	20 57 31.9	+0.2
	baz=246						
H18K	Honhosa River	81.44	22	P	P	20 57 32.0	0.0
	baz=244						
P19K	Oil Pt	81.49	28	P	P	20 57 32.2	-0.2
	baz=250						
Q20K	Shuyak Island	81.54	30	P	P	20 57 32.5	-0.1
	baz=251						
F18K	Selawik	81.62	21	P	P	20 57 33.1	+0.2
	baz=243						
G18K	Tagagawik	81.66	22	P	P	20 57 32.9	-0.2
	baz=244						
L19K	White Mountain	81.67	26	IAmb	IAmb	20 57 35.2	
	comp=Z,9.6nm,0.8s						
L19K	White Mountain	81.67	26	P	P	20 57 33.2	0.0
	baz=248						
E18K	Tukpahlearik C	81.67	20	IAmb	IAmb	20 57 34.2	
	comp=Z,7.9nm,0.8s						
E18K	Tukpahlearik C	81.67	20	P	P	20 57 32.8	-0.4
	baz=242						
M19K	Big River Lodg	81.76	26	P	P	20 57 33.8	0.0
	baz=248						
J19K	Poorman	82.04	24	IAmb	IAmb	20 57 44.7	
	comp=Z,17nm,1.5s						
J19K	Poorman	82.04	24	P	P	20 57 35.1	-0.1
	baz=247						
C18K	Utukok River	82.06	19	P	P	20 57 35.1	-0.1
	baz=241						
MAW	Mawson	82.08	202	P	P	20 57 35.0	-0.3
	comp=Z,7.9nm,0.9s,baz=85,slow=5.4,SNR=8.3						
MAW				LR	LR	21 32 18.9	
	comp=Z,362nm,18.0s,baz=75,slow=34						
	comp=Z,7.9nm,0.9s						
MAW	Mawson	82.08	202	P	P	20 57 35.0	-0.3
L20K	Farewell, AK	82.20	26	P	P	20 57 36.0	-0.1
	baz=249						
B18K	Kokolik River	82.22	18	P	P	20 57 36.0	0.0
	baz=241						
M20K	Styx River	82.31	26	IAmb	IAmb	20 57 46.9	
	comp=Z,8.2nm,0.9s						
M20K	Styx River	82.31	26	P	P	20 57 36.4	-0.4
	baz=250						
H19K	Roundabout Mou	82.33	22	IAmb	IAmb	20 57 48.5	
	comp=Z,7.7nm,0.8s						
H19K	Roundabout Mou	82.33	22	P	P	20 57 37.0	+0.4
	baz=246						
G19K	Purcell Mounta	82.35	22	IAmb	IAmb	20 57 46.0	
	comp=Z,9.6nm,0.8s						
G19K	Purcell Mounta	82.35	22	P	P	20 57 37.2	+0.5
	baz=245						
F19K	Shaleruckik Mo	82.39	21	IAmb	IAmb	20 57 47.1	
	comp=Z,24nm,1.9s						
F19K	Shaleruckik Mo	82.39	21	P	P	20 57 37.3	+0.4
	baz=245						
K20K	Telida	82.44	25	P	P	20 57 37.6	+0.4
	baz=249						
BRSE	Bradley Lake S	82.71	29	P	P	20 57 39.0	+0.2
	baz=252						
J20K	Nowinta River	82.71	24	P	P	20 57 39.0	+0.3
	baz=248						
C19K	Lookout Ridge	82.79	19	P	P	20 57 39.2	+0.1
	baz=243						
I20K	Naaghedeneel	82.81	23	P	P	20 57 39.3	+0.2
	baz=248						
E19K	Redstone River	82.85	20	IAmb	IAmb	20 57 43.1	
	comp=Z,13nm,1.1s						
E19K	Redstone River	82.85	20	P	P	20 57 39.5	+0.2
	baz=245,SNR=14						
H20K	Anotleneega Mo	82.92	23	P	P	20 57 39.8	+0.1
	baz=248						
D19K	Kuna River	83.00	19	IAmb	IAmb	20 57 49.1	
	comp=Z,8.5nm,0.7s						
D19K	Kuna River	83.00	19	P	P	20 57 39.9	-0.3
	baz=244,SNR=7.1						
SKT	Skwentna	83.06	27	P	P	20 57 40.1	-0.4
	baz=251						
PPLA	Purkeypile	83.08	26	P	P	20 57 40.5	-0.3
	baz=250						
F20K	Avaraart Lake	83.21	21	IAmb	IAmb	20 57 50.7	
	comp=Z,7.2nm,0.9s						
F20K	Avaraart Lake	83.21	21	P	P	20 57 41.4	+0.2
	baz=247,SNR=9.2						
SUA	Susitna One	83.25	27	IAmb	IAmb	20 57 44.5	
	comp=Z,6.4nm,0.8s						
SUA	Susitna One	83.25	27	P	P	20 57 41.2	-0.4
	baz=252						
CAST	Castle Rocks	83.30	25	IAmb	IAmb	20 57 56.2	
	comp=Z,26nm,2.0s						
CAST	Castle Rocks	83.30	25	P	P	20 57 41.6	-0.1
	baz=250						
CHUM	Lake Minchumin	83.36	25	P	P	20 57 42.0	0.0
	baz=250						
O22K	Cooper Landing	83.42	28	P	P	20 57 42.2	-0.1
	baz=253						
SEW	Seward	83.44	29	P	P	20 57 42.3	-0.2
	baz=253						
E20K	Nigu River	83.54	20	P	P	20 57 42.8	-0.2
	baz=246,SNR=12						
D20K	Etivluk River	83.59	19	P	P	20 57 42.8	-0.3
	baz=246						
RC01	Rabbit Creek A	83.59	28	IAmb	IAmb	20 57 43.2	
	comp=Z,9.8nm,0.7s						
RC01	Rabbit Creek A	83.59	28	P	P	20 57 42.6	-0.7
	baz=253						
H21K	Melozitna Rive	83.78	23	IAmb	IAmb	20 57 52.5	
	comp=Z,16nm,1.8s						
H21K	Melozitna Rive	83.78	23	P	P	20 57 44.0	-0.2
	baz=250						
G21K	Allakaket	83.82	22	P	P	20 57 44.3	-0.1
	baz=249						
KTH	Kantishna Hill	83.83	25	IAmb	IAmb	20 58 02.4	
	comp=Z,10.0nm,1.1s						
I21K	Tanana	83.94	23	IAmb	IAmb	20 57 55.1	
	comp=Z,24nm,1.9s						
I21K	Tanana	83.94	23	P	P	20 57 44.4	-0.5
	baz=250						
B20K	Meade River	83.96	18	P	P	20 57 45.0	+0.1
	baz=245						
BPAW	Bear Paw Mtn.	83.98	25	IAmb	IAmb	20 57 56.1	
	comp=Z,22nm,2.0s						
BPAW	Bear Paw Mtn.	83.98	25	P	P	20 57 45.0	-0.2
	baz=251						
TRF	Thorofare Moun	84.07	25	P	P	20 57 45.6	-0.3
	baz=252						
F21K	Alatna River	84.09	21	P	P	20 57 45.5	-0.2
	baz=249						
GHO	Glory Hole Cre	84.17	27	IAmb	IAmb	20 57 55.5	
	comp=Z,7.9nm,0.7s						
PWL	Port Wells	84.18	28	P	P	20 57 46.0	-0.3
	baz=254						
KNK	Knik Glacier	84.28	28	P	P	20 57 46.3	-0.5
	baz=254						
E21K	Killik River	84.37	20	P	P	20 57 46.8	-0.4
	baz=248						
C21K	Knifeblade Rid	84.37	19	P	P	20 57 47.0	-0.2
	baz=247						
MLY	Manley	84.39	24	IAmb	IAmb	20 57 58.3	
	comp=Z,7.4nm,1.0s						
MLY	Manley	84.39	24	P	P	20 57 47.1	-0.2
	baz=251						
H22K	Ishtalitna Cre	84.42	23	P	P	20 57 47.0	-0.4
	baz=251						
AB31	Akbulak array	84.60	320	IAmb	IAmb	20 58 01.8	
	comp=Z,6.9nm,0.9s						
ABKAR	Akbulak array	84.60	320	P	P	20 57 47.3	-1.4
B21K	Ikpikpuk River	84.61	19	IAmb	IAmb	20 57 56.9	
	comp=Z,7.1nm,0.8s						
B21K	Ikpikpuk River	84.61	19	P	P	20 57 48.0	-0.2
	baz=247						
WAT1	Susitna Watana	84.64	26	P	P	20 57 47.8	-0.8
	baz=254						
F22K	John River	84.66	21	P	P	20 57 48.7	+0.1
	baz=250,SNR=5.3						
RND	Reindeer	84.67	26	IAmb	IAmb	20 57 57.9	
	comp=Z,11nm,1.0s						
A21K	Barrow	84.68	17	P	P	20 57 48.1	-0.4
	baz=245						
G22K	Bettles	84.71	22	P	P	20 57 48.5	-0.3
	baz=251						
M23K	Glacier View	84.72	27	P	P	20 57 48.5	-0.5
	baz=254						
MCK	McKinley	84.73	25	P	P	20 57 48.1	-0.9
	baz=253						
Q23K	Middleton Isla	84.77	30	P	P	20 57 48.9	-0.4
	baz=256						
GLI	Glacier Island	84.77	28	P	P	20 57 48.4	-0.9
	baz=255						
SCM	Sheep Creek Mo	84.92	27	P	P	20 57 49.6	-0.5
	baz=255						
WAT6	Susitna Watana	84.93	26	P	P	20 57 49.5	-0.7
	baz=254						
NEA2	Nenana	84.93	24	IAmb	IAmb	20 57 59.3	
	comp=Z,9.5nm,1.4s						
NEA2	Nenana	84.93	24	P	P	20 57 49.6	-0.4
	baz=253						
D22K	Ayikyak River	84.97	20	P	P	20 57 50.1	-0.1
	baz=249,SNR=6.6						
I23K	Minto, Yukon-K	84.98	24	IAmb	IAmb	20 57 53.5	
	comp=Z,7.4nm,0.9s						
I23K	Minto, Yukon-K	84.98	24	P	P	20 57 49.9	-0.3
	baz=253,SNR=12						
E22K	Anaktuvuk Pass	85.01	21	IAmb	IAmb	20 57 52.9	
	comp=Z,6.8nm,0.8s						
E22K	Anaktuvuk Pass	85.01	21	P	P	20 57 50.4	-0.1
	baz=250,SNR=9.2						
A22K	Sinclair Lake	85.04	18	P	P	20 57 50.3	-0.1
	baz=247						
H23K	Yukon River	85.11	23	IAmb	IAmb	20 57 59.5	
	comp=Z,26nm,1.9s						
H23K	Yukon River	85.11	23	P	P	20 57 50.7	-0.3
	baz=252						
G23K	Bananza Creek	85.20	22	P	P	20 57 51.1	-0.3
	baz=252,SNR=8.5						
DHY	Denali Highway	85.22	26	IAmb	IAmb	20 58 03.1	
	comp=Z,9.3nm,0.7s						
DHY	Denali Highway	85.22	26	P	P	20 57 51.0	-0.7
	baz=255						
B22K	Teshekpuk Lake	85.26	18	P	P	20 57 51.0	-0.5
	baz=248						
COLD	Coldfoot	85.29	22	P	P	20 57 51.6	-0.2
	baz=252						
WRH	Wood River Hil	85.30	25	IAmb	IAmb	20 57 54.1	
	comp=Z,10nm,1.0s						
EYAK	Cordova Ski Ar	85.33	29	P	P	20 57 51.7	-0.4
	baz=256						
CCB	Clear Creek Bu	85.47	24	IAmb	IAmb	20 57 52.8	
	comp=Z,8.8nm,0.8s						
KLU	Klutina	85.48	28	IAmb	IAmb	20 58 09.1	
	comp=Z,6.2nm,0.7s						
KLU	Klutina	85.48	28	P	P	20 57 52.4	-0.6
	baz=256						
COLA	College	85.51	24	*de*P	P	20 57 54.6	+1.7
COLA				pmax	pmax		
	comp=Z,16nm,2.3s						
M24K	Tolsona, Glenn	85.51	27	P	P	20 57 52.5	-0.6
	baz=256						
SVE	Sverdlovsk	85.64	327	*e*P	P	20 57 58.9	+5.2
D23K	Nanushuk River	85.68	20	P	P	20 57 53.7	0.0
	baz=251,SNR=14						
HDA	Harding Lake	85.76	25	P	P	20 57 53.5	-0.6
	baz=255						
E23K	Chandalar	85.77	21	IAmb	IAmb	20 58 01.1	
	comp=Z,17nm,1.1s						
E23K	Chandalar	85.77	21	P	P	20 57 54.1	-0.1
	baz=252,SNR=17						
H24K	Noodor Dome	85.77	23	P	P	20 57 54.0	-0.3
	baz=254,SNR=5.2						
KAIM	Kayak Island	85.84	29	P	P	20 57 54.2	-0.4
	baz=258						
IL31		85.88	24	IAmb	IAmb	20 57 54.3	

	comp=Z,6.6nm,0.8s						
ILAR	Eielson Array	85.88	24	P	P	20 57 51.5	-3.3
ILAR	Eielson Array	85.88	24	P	P	20 57 52.9	-1.9
	comp=Z,5.4nm,0.7s,baz=263,slow=4.6,SNR=51						
ILAR				LR	LR	21 34 25.3	
	comp=Z,105nm,19.6s,baz=229,slow=34						
	comp=Z,5.4nm,0.7s						
TOLK	Toolik Lake Re	85.96	20	IAmb	IAmb	20 58 04.7	
	comp=Z,14nm,1.1s						
TOLK	Toolik Lake Re	85.96	20	P	P	20 57 54.8	-0.3
	baz=252,SNR=6.1						
BMRM	Bremner River	85.97	28	IAmb	IAmb	20 58 11.8	
	comp=Z,11nm,1.0s						
BMRM	Bremner River	85.97	28	P	P	20 57 54.8	-0.6
	baz=257						
C23K	Itkillik River	85.99	19	P	P	20 57 54.8	-0.3
	baz=251,SNR=12						
PAX	Paxson	86.04	26	P	P	20 57 55.1	-0.6
	baz=256						
K24K	Donnelly Dome	86.10	26	P	P	20 57 55.6	-0.3
	baz=256						
N25K	Chitina, Valde	86.12	28	P	P	20 57 55.9	-0.2
	baz=257						
G24K	Hadweenzic Riv	86.16	23	P	P	20 57 56.1	-0.1
	baz=254						
E24K	Your Creek	86.17	21	P	P	20 57 56.1	-0.2
	baz=253,SNR=5.2						
F24K	Squaw Lake	86.23	22	IAmb	IAmb	20 58 06.5	
	comp=Z,12nm,1.1s						
F24K	Squaw Lake	86.23	22	P	P	20 57 56.6	0.0
	baz=254,SNR=10						
D24K	Happy Valley	86.38	20	P	P	20 57 57.1	0.0
	baz=253,SNR=10.0						
GLB	Gilahina Butte	86.45	28	IAmb	IAmb	20 58 16.9	
	comp=Z,17nm,1.5s						
J25K	Salcha River,	86.47	25	IAmb	IAmb	20 58 04.9	
	comp=Z,10nm,1.4s						
J25K	Salcha River,	86.47	25	P	P	20 57 57.5	-0.2
	baz=256						
RIDG	Independent Ri	86.49	26	IAmb	IAmb	20 57 58.7	
	comp=Z,6.8nm,0.9s						
RIDG	Independent Ri	86.49	26	P	P	20 57 57.7	-0.2
	baz=257,SNR=6.3						
PRP	Porcupine Dome	86.63	24	P	P	20 57 58.4	-0.2
	baz=256						
CRQE	Cirque	86.65	29	P	P	20 57 58.5	-0.3
	baz=259						
H25L	Birch Creek	86.69	23	P	P	20 57 58.9	+0.3
	baz=256						
G25K	Bearman Lake	86.71	23	P	P	20 57 59.2	+0.4
	baz=256						
ARTI	Arti	86.78	327	P	P	20 57 59.0	-0.3
ARTI	Arti	86.78	327	*c i*P	P	20 58 03.9	+4.5
ARTI						21 01 21.8	
ARTI				S	SKSac	21 08 29.9	+3.6
ARTI				SS	SS	21 14 18.0	-0.8
ARTI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ARTI				MLR	MLR		
	comp=Z,171nm,20.0s						
MCARA	McCarthy VSAT	86.81	28	P	P	20 57 59.7	+0.3
	baz=259						
SCRK	Sand Creek	86.92	26	P	P	20 58 00.1	+0.1
	baz=258,SNR=5.6						
L26K	Log Cabin Wild	87.00	27	IAmb	IAmb	20 58 08.6	
	comp=Z,17nm,1.8s						
L26K	Log Cabin Wild	87.00	27	P	P	20 58 00.4	+0.1
	baz=258						
M26K	Nabesna, AK	87.03	27	P	P	20 58 00.5	0.0
	baz=259						
F25K	Christian Rive	87.09	22	IAmb	IAmb	20 58 20.3	
	comp=Z,23nm,1.9s						
F25K	Christian Rive	87.09	22	P	P	20 58 00.9	+0.2
	baz=256,SNR=8.5						
MESA	MESA	87.10	29	P	P	20 58 00.8	-0.3
	baz=260						
J26L	Joseph Creek	87.21	25	P	P	20 58 01.0	-0.4
	baz=258,SNR=7.7						
E25K	Arctic Village	87.24	21	P	P	20 58 01.6	+0.2
	baz=256,SNR=7.4						
QSPA	South Pole Qui	87.26	180		P	20 58 01.5	-0.2
QSPA	South Pole Qui	87.26	180	P	P	20 58 01.3	-0.4
	comp=Z,17nm,0.8s,baz=334,slow=2.2,SNR=58						
	comp=Z,17nm,0.8s						
D25K	Kavik River	87.26	20	P	P	20 58 01.6	+0.1
	baz=255						
BARN	Barnard Glacie	87.40	29	IAmb	IAmb	20 58 03.2	
	comp=Z,9.8nm,0.8s						
BMAR	Burnt Mountain	87.44	22		P	20 58 02.6	+0.2
M27K	Edge Creek, AK	87.53	27	P	P	20 58 02.9	-0.1
	baz=260						
CTG	Chitna Glacier	87.54	29	P	P	20 58 03.5	+0.4
	baz=260						
I26K	Coal Creek Min	87.55	24	P	P	20 58 02.1	-0.8
	baz=258						
G26K	Porcupine Rive	87.64	23	IAmb	IAmb	20 58 13.2	
	comp=Z,12nm,1.1s						
G26K	Porcupine Rive	87.64	23	P	P	20 58 03.7	+0.4
	baz=258,SNR=8.8						
F26K	Sheenjek River	87.67	22	IAmb	IAmb	20 58 13.5	
	comp=Z,12nm,1.1s						
F26K	Sheenjek River	87.67	22	P	P	20 58 04.1	+0.6
	baz=257,SNR=10						
L27K	Beaver Creek,	87.68	27	IAmb	IAmb	20 58 12.2	
	comp=Z,6.3nm,1.0s						
L27K	Beaver Creek,	87.68	27	P	P	20 58 04.2	+0.6
	baz=260						
BCAR	Beaver Creek A	87.70	27	P	P	20 58 02.7	-1.0
K27K	Chicken	87.75	26	IAmb	IAmb	20 58 14.6	
	comp=Z,9.6nm,1.1s						
K27K	Chicken	87.75	26	P	P	20 58 04.1	+0.2
	baz=259						
BVCY	Beaver Creek	88.01	27	P	P	20 58 05.9	+0.7
	baz=260						
YUK3	Moose Creek	88.09	28	P	P	20 58 05.8	0.0
	baz=261						
I27K	Kandik River	88.23	24	P	P	20 58 06.5	+0.2
	baz=260,SNR=20						
C27K	Jago River	88.25	20	P	P	20 58 06.5	+0.4
	baz=258						
H27K	Steamboat Moun	88.38	24	P	P	20 58 07.4	+0.5
	baz=260,SNR=11						
G27K	Doyon Strip	88.44	23	IAmb	IAmb	20 58 28.8	
	comp=Z,20nm,1.8s						
G27K	Doyon Strip	88.44	23	P	P	20 58 07.5	+0.3
	baz=260						
E27K	Coleen River	88.71	22	P	P	20 58 08.5	+0.1
	baz=260						
O29M	Mount Kennedy	88.78	30	P	P	20 58 08.5	-0.5
	baz=263						
I28M	Miner Creek	88.90	24	IAmb	IAmb	20 58 18.8	
	comp=Z,7.9nm,0.9s						
I28M	Miner Creek	88.90	24	P	P	20 58 09.5	+0.1
	baz=261,SNR=7.6						
DAWY	Dawson	88.92	26	IAmb	IAmb	20 58 10.6	
	comp=Z,8.2nm,0.8s						
DAWY	Dawson	88.92	26	P	P	20 58 09.3	-0.3
	baz=262,SNR=12						
YUK6	Outpost Mounta	88.97	29	P	P	20 58 09.6	-0.4
	baz=263						
M29M	Somme Creek	89.11	27	P	P	20 58 10.5	-0.1
	baz=263						
P29M	Windy Craggy	89.12	30	P	P	20 58 10.7	+0.2
	baz=263						
F28M	Old Crow	89.26	22	P	P	20 58 11.2	+0.2
	baz=261						
L29M	L29M	89.35	27	IAmb	IAmb	20 58 12.4	
	comp=Z,6.8nm,1.1s						
L29M	L29M	89.35	27	P	P	20 58 11.8	+0.2
	baz=263,SNR=6.4						
HYT	Haines Junctio	89.37	29	IAmb	IAmb	20 58 16.1	
	comp=Z,6.7nm,0.9s						
HYT	Haines Junctio	89.37	29	P	P	20 58 11.8	0.0
	baz=264						
E28M	Babbage River	89.53	21	IAmb	IAmb	20 58 20.4	
	comp=Z,16nm,1.9s						
E28M	Babbage River	89.53	21	P	P	20 58 12.6	+0.4
	baz=262						
I29M	Ogilvie Camp,	89.56	25	P	P	20 58 12.8	+0.3
	baz=263						
N30M	Aishikik Lake	89.64	29	IAmb	IAmb	20 58 13.5	
	comp=Z,5.5nm,0.8s						
N30M	Aishikik Lake	89.64	29	P	P	20 58 12.8	-0.1
	baz=264						
H29M	Whitestone	89.65	24	P	P	20 58 13.0	+0.2
	baz=263						
K29M	Barlow Dome	89.71	26	IAmb	IAmb	20 58 22.9	
	comp=Z,9.6nm,1.1s						
K29M	Barlow Dome	89.71	26	P	P	20 58 13.6	+0.3
	baz=264,SNR=6.0						
G29M	Pine Creek	89.87	23	P	P	20 58 14.1	+0.2
	baz=263						
M30M	Minto, Yukon	89.90	27	IAmb	IAmb	20 58 22.8	
	comp=Z,18nm,1.9s						
M30M	Minto, Yukon	89.90	27	P	P	20 58 14.2	+0.1
	baz=264						
E29M	Blow River	90.10	22	P	P	20 58 15.4	+0.5
	baz=263						
N31M	Braeburn, Yuko	90.27	29	IAmb	IAmb	21 01 32.0	
	comp=Z,8.2nm,0.8s						
N31M	Braeburn, Yuko	90.27	29	P	P	20 58 16.3	+0.5
	baz=265						
J30M	Hart River	90.31	25	IAmb	IAmb	20 58 25.6	
	comp=Z,23nm,1.9s						
J30M	Hart River	90.31	25	P	P	20 58 16.3	+0.3
	baz=265						
SKAG	Skagway	90.32	31	P	P	20 58 16.4	+0.4
	baz=265						
EPYK	Eagle Plains	90.33	24	P	P	20 58 16.4	+0.4
	baz=264						
I30M	Mount Dempster	90.35	25	P	P	20 58 16.3	+0.1
	baz=264						
G30M	tAoh Zraii Nji	90.58	23	P	P	20 58 17.0	-0.2
	baz=265						
WHY	Whitehorse	90.64	29	P	P	20 58 17.7	0.0
	baz=266						
R32K	Eaglecrest	90.65	32	P	P	20 58 17.3	-0.3
	baz=266						
SYO	Syowa Base	90.72	201	⇓*e*PcP	PcP	20 58 19.5	+0.7
F30M	Barrier River	90.81	22	P	P	20 58 18.0	-0.2
	baz=265						
M31M	Drury Creek, Y	90.98	28	P	P	20 58 18.9	-0.2
	baz=266						
P32M	Atlin	91.15	31	P	P	20 58 19.7	-0.3
	baz=267						
H31M	Peel River	91.24	24	P	P	20 58 20.0	-0.3
	baz=266						
G31M	Satah River	91.34	23	P	P	20 58 20.5	-0.1
	baz=266						
FARO	Faro, Yukon	91.47	28	P	P	20 58 21.2	-0.3
	baz=267						
N32M	Quiet Lake	91.55	29	IAmb	IAmb	20 58 23.2	
	comp=Z,6.0nm,0.9s						
N32M	Quiet Lake	91.55	29	P	P	20 58 21.7	-0.1
	baz=267						
F31M	Tsiigehtchic	91.58	23	P	P	20 58 21.5	-0.2
	baz=267						
P33M	Teslin, Yukon	91.63	30	P	P	20 58 21.9	-0.4
	baz=268						
INK	Inuvik	91.71	22	P	P	20 58 22.1	-0.2
	baz=267						
Q32M	Nakina River	91.86	31	P	P	20 58 23.9	+0.4
	baz=268						
MMPY	Sheldon Lake,	92.46	28	P	P	20 58 25.6	-0.4
	baz=269						
BELG	Belogornoye	92.68	322	⇓*e*P	P	20 58 28.6	+1.5
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BBB	Bella Bella	94.16	38	LR	LR	21 33 15.2	
	comp=Z,181nm,21.6s,baz=255,slow=31						
KIV	Kislovodsk	96.08	314	*e*P	P	20 58 40.0	-3.1
KIV				pmax	pmax		
	comp=Z,3.0nm,1.1s						
O02D	Mt. Diablo Mer	98.35	50	P	P	20 58 51.3	-2.2
SPITS	Spitsbergen Ar	98.94	350	LR	LR	21 42 13.1	
	comp=Z,156nm,21.9s,baz=9.5,slow=35						
YKA	Yellowknife Ar	100.12	27	P	Pdif	20 58 59.4	-1.3
	comp=Z,0.5nm,0.8s,baz=296,slow=5.6,SNR=2.8						
TROLL	Troll, Antarti	100.31	193	⇑P	Pdif	20 59 03.3	+1.7
	comp=Z,159nm,0.8s						
SNAA	Sanae	101.70	192	P	Pdif	20 59 06.4	-1.3
	comp=Z,1.3nm,1.0s,baz=123,slow=4.1,SNR=2.4						
NVAR	Mina Array Bea	101.96	51	P	Pdif	20 59 08.8	-0.9
	comp=Z,0.5nm,0.5s,baz=285,slow=5.1,SNR=2.2						
AK03	Malin Array Si	104.25	322	P	Pdif	20 59 18.7	-0.6
STHS	Stebnicka Huta	109.55	322	*i* P	Pdif	20 59 38.6	-4.4
STHS	Stebnicka Huta	109.55	322	*e*PDIFF	Pdif	20 59 38.6	-4.4
OKC	Ostrava-Krasne	111.28	323	AMS	AMS	21 55 40.0	
	comp=Z,200nm,23.3s						
KRLC	Kraliky	111.99	324	AMS	AMS	21 55 00.0	
	comp=Z,100nm,16.5s						
DPC	Dobruska-Polom	112.15	324	AMS	AMS	21 56 40.0	
	comp=Z,200nm,18.0s						
CHVC	Chvalec	112.21	324	AMS	AMS	21 56 50.0	
	comp=Z,200nm,20.2s						
UPC	Upice	112.27	324	AMS	AMS	21 56 50.0	
	comp=Z,200nm,14.7s						
GOPC	GO Pecny, Ondr	113.23	324	AMS	AMS	21 57 30.0	
	comp=Z,200nm,23.1s						
PRU	Pruhonice	113.34	324	AMS	AMS	21 58 10.0	
	comp=Z,200nm,19.0s						
PRA	Prague	113.37	324	AMS	AMS	21 54 30.0	
	comp=Z,200nm,23.6s						
CLL	Collm	113.63	326	*e*SS	SS	21 20 30.0	-2.8
CLL				*e*SSSS		21 27 54.0	
CLL				AMS	AMS	21 56 00.0	
	comp=N,200nm,19.9s						
CLL				AMS	AMS	21 56 00.0	
	comp=E,100nm,18.9s						
CLL				AMS	AMS	21 56 00.0	
	comp=Z,300nm,18.8s						
ZVC	Zvikov	113.78	324	AMS	AMS	21 58 10.0	
	comp=Z,200nm,17.8s						
CKRC	Cesky Krumlov	113.98	323	AMS	AMS	21 57 50.0	
	comp=Z,200nm,19.9s						
KHC	Kasperske Hory	114.28	324	AMS	AMS	21 55 10.0	
	comp=Z,200nm,21.7s						
TXAR	Lajitas Array	115.42	59	PKP	PKPdf	21 03 55.1	-2.8
	comp=Z,0.2nm,0.4s,baz=178,slow=1.6,SNR=3.7						
CPUP	Villa Florida	147.32	153	PKPbc	PKPdf	21 04 58.0	+0.7
	comp=Z,2.3nm,0.9s,baz=86,slow=4.5,SNR=9.5						
CPUP	Villa Florida	147.32	153	PKP2	PKPdf	21 04 58.0	+0.7
LPAZ	La Paz	147.59	126	PKPbc	PKPbc	21 05 01.2	-0.2
	comp=Z,7.8nm,0.8s,baz=274,slow=3.2,SNR=12						

NEIC ***27*** *20:50:46.0±1.0, 34°.03N±0°.01×117°.55W±0°.02, h15km±2km, Error ellipse: s-maj=2.8km s-min=1.5km az=129.0*

PAS 27 20:50:46.8±0.5**, 34°.03N**±0°.01×**117°.57W**±0°.02**, h11**km±3km**, ML3.0**/258**, ML2.7**/46(NEIC)**, Error ellipse: s-maj=2.7km s-min=1.4km az=126.0, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSC	Mira Loma	0.02	166		Pg	20 50 48.7	-0.1
MLSC					Sg	20 50 50.2	-0.1
CHNC	Chino	0.10	253		Pg	20 50 49.5	0.0
CHNC					Sg	20 50 51.8	+0.3
FON	Fontana	0.13	56		Pg	20 50 50.0	0.0
FON					Sg	20 50 52.3	0.0
CRNC	Corona	0.15	178		Pg	20 50 50.2	0.0
CRNC					Sg	20 50 52.7	0.0
RVR	Riverside	0.16	102		Pg	20 50 50.2	-0.2
RVR					Sg	20 50 52.8	-0.2
SS2	San Sevaine	0.19	17		Pg	20 50 50.9	0.0
RSBC	Riverside Bore	0.21	105		Pg	20 50 51.0	-0.2
RSBC					Sg	20 50 54.1	-0.2
PSRC	Puddingstone R	0.21	288		Pg	20 50 51.1	-0.1
PSRC					Sg	20 50 54.5	+0.2
SSK	Sunset Peak	0.21	331		Pg	20 50 51.3	-0.1
CLTC	Calectric	0.22	72		Pg	20 50 51.5	+0.1
CLTC					Sg	20 50 55.2	+0.7
BFSC	Mount Baldy Ra	0.22	341		Pb	20 50 54.5	+1.5
CFSC	Central Fire S	0.25	72		Pg	20 50 50.1	-1.8
HLNC	Highland	0.30	72		Pg	20 50 53.0	0.0
FULC	Fullerton	0.33	242		Sb	20 51 00.1	+0.1
PEC	Perris	0.36	112		Sg	20 50 58.9	-0.1
ELS	Elsinore Mount	0.40	163		Pg	20 50 54.2	-0.5
ELS				IAML		20 51 01.4	
	comp=E,635nm,0.3s						
ELS				IAML		20 51 01.5	
	comp=N,526nm,0.2s						
ELS	Elsinore Mount	0.40	163		Sg	20 50 59.7	-0.2
SVD	Seven Oaks Dam	0.40	78		Sg	20 51 00.3	+0.3
SANC	Santa Ana	0.41	220		Pn	20 51 02.1	+3.5
MWC	Mount Wilson	0.45	296		Sg	20 51 01.6	-0.2
GVRC	Garvey Reservo	0.46	273		Pg	20 50 55.6	-0.2
CACC	Caltech Cellar	0.47	284		Pg	20 50 55.6	-0.4
DLAC	Del Amo	0.47	248		Sb	20 51 04.7	+0.6
CRPC	Caltech Rob’n	0.48	283		Pg	20 50 55.7	-0.4
GSA	Caltech--GSA	0.48	283		Pg	20 50 55.7	-0.5
CHFC	Chilao Flat St	0.49	309		Sg	20 51 02.4	-0.5
HOLC	Holcomb Ridge	0.49	332		Pg	20 50 55.8	-0.5
HOLC					Sg	20 51 02.4	-0.5
BBSC	Beaumont Base	0.50	102		Pg	20 50 56.4	-0.1
BBSC					Sb	20 51 04.0	-0.8
JNH	Juniper Hills	0.53	323		Sg	20 51 03.4	-0.7
MURC	Murrieta	0.53	144		Pg	20 50 56.5	-0.5
MURC					Sg	20 51 03.7	-0.4
PASC	Pasadena Art C	0.53	286		Pg	20 50 56.3	-0.9
ADO	Adelanto Recei	0.53	12		Sg	20 51 04.8	+0.4
HMTC	Hemet	0.57	124		Sg	20 51 04.8	-0.6
VTV	Victorville	0.57	20		Sg	20 51 04.9	-0.5
WTT2	Watts, South G	0.58	262		Sb	20 51 07.9	+0.9
BBRC	Big Bear Solar	0.59	66		Sg	20 51 05.8	-0.2
DGR	Domenigoni Val	0.60	129		Pg	20 50 57.6	-0.8
DGR					Sg	20 51 05.5	-0.8
BACC	Bachelor Mtn.	0.60	133		Sg	20 51 05.6	-0.9
GR2C	Griffith Obs.	0.61	279		Pg	20 50 57.9	-0.9
LRRC	Littlerock Res	0.63	323		Pg	20 50 58.3	-0.6
LRRC					Sg	20 51 06.9	-0.3
POB	Polly Butte	0.64	122		Pg	20 50 58.4	-0.7
POB					Sg	20 51 06.8	-0.7
BHPC	Baldwin Hills	0.66	267		Sn	20 51 11.3	-1.0
DECC	Green Verdugo	0.67	290		Sg	20 51 09.3	+0.6
FMP	Fort Macarthur	0.68	243		Pg	20 51 00.2	+0.3
CJV	Casa Juvan	0.69	317		Pg	20 50 59.4	-0.8
SIL	Silver Peak	0.69	62		Pg	20 50 59.8	-0.4
SIL					Sg	20 51 09.2	-0.2
DJJ	Donna J Jenkin	0.74	276		Pg	20 50 60.0	-1.1
RPV	Rancho Palos V	0.75	248		Pg	20 51 01.0	-0.3
RPV					Sb	20 51 12.0	0.0
DEVC	Devers	0.83	96		Pg	20 51 02.3	-0.5
CRY	Cary Ranch	0.83	123		Sg	20 51 12.7	-1.0
HYS	Haystack Butte	0.83	360		Pg	20 51 02.1	-0.8
HYS					Sg	20 51 13.0	-0.9
LEOC	Leona Valley	0.86	315		Pg	20 51 02.2	-1.1
PLM	Palomar	0.89	139		Pg	20 51 02.9	-1.2
PLM					Sg	20 51 14.8	-0.9
ALPC	Antelope	0.89	318		Pg	20 51 03.0	-1.0
ALPC					Sg	20 51 15.0	-0.7
GORC	Green Oak Ranc	0.92	162		Pg	20 51 03.1	-1.3
GORC					Sg	20 51 14.5	-1.8
BZNA	Buzz No.’s Pla	0.92	125		Pg	20 51 03.6	-0.9
BZNA					Sg	20 51 15.7	-0.8
EDW2	Edwards Air Fo	0.92	338		Pg	20 51 03.8	-0.8
EDW2					Sg	20 51 15.7	-0.9
OAT	Oat Mountain	0.92	290		Pg	20 51 04.2	-0.4
SNDA	J Saunders Pla	0.93	121		Pg	20 51 03.8	-0.8
SNDA					Sg	20 51 16.4	-0.3
CIAC	Catalina I. Ai	0.94	229		Sg	20 51 16.8	-0.4
BLCC	Black Canyon	0.94	284		Pg	20 51 03.9	-1.0
FRD	Ford Ranch, An	0.96	123		Sg	20 51 17.1	-0.9
FRD	Ford Ranch, An	0.96	123		Sg	20 51 17.1	-0.8
EW2	E Wide Canyon	0.97	95		Pg	20 51 04.6	-0.8
RRX	Edison Barstow	0.97	29		Pg	20 51 04.6	-0.8
RRX					Sg	20 51 17.8	-0.3
BLAC	Blackrock camp	0.98	87		Sg	20 51 18.2	-0.2
TPO	Tropico Hills	1.01	328		Pg	20 51 05.3	-0.9
TPO					Sg	20 51 18.7	-0.7
PFO	Pinyon Flats O	1.01	114		Pg	20 51 04.8	-1.5
PFO				IAML		20 51 22.4	
	comp=N,126nm,0.7s						
PFO	Pinyon Flats O	1.01	114		Pg	20 51 04.8	-1.5
PFO					Sg	20 51 18.2	-1.2
XPFO	Pinon Flat	1.01	114		Pg	20 51 04.8	-1.5
GTM	Goat Mountain	1.04	75		Pb	20 51 05.5	-1.3
GTM					Sg	20 51 18.9	-1.4
PMD	Palm Desert	1.06	111		Sb	20 51 19.4	-1.6
CCAC	Calif City Air	1.18	342		Pb	20 51 08.4	-0.8
BORC	Borrego Spring	1.22	128		Pn	20 51 08.8	-1.0
GSC	Goldstone, Bar	1.42	26		Pn	20 51 10.8	-1.7
GSC				IAML		20 51 32.7	
	comp=N,221nm,0.5s						
GSC				IAML		20 51 33.8	
	comp=E,185nm,0.7s						
TKX	Tecate	1.66	151		Pn	20 51 15.0	-0.8
BCW	Bitter Crk WRg	1.77	301		Pn	20 51 16.6	-0.9
BCW				IAML		20 51 46.7	
	comp=N,152nm,0.5s						
ISA	Isabella, Lake	1.79	336		Pg	20 51 20.5	-0.7
ISA				IAML		20 51 43.7	
	comp=N,102nm,0.4s						
ISA				IAML		20 51 45.5	
	comp=E,147nm,0.5s						
CBX	Cerro Bola	1.87	156		Pn	20 51 17.5	-1.3
YUH	Yuha Desert	1.95	135		Pn	20 51 18.2	-1.5
YUH				IAML		20 51 48.0	
	comp=E,55nm,0.8s						
YUH				IAML		20 51 48.6	
	comp=N,88nm,0.6s						
QSM	Queen of Sheba	2.02	16	IAML		20 51 53.8	
	comp=E,40nm,0.3s						
QSM				IAML		20 51 55.2	
	comp=N,42nm,0.3s						
GWY	Greenwater Val	2.28	19		Pn	20 51 23.0	-1.4
GWY				IAML		20 52 05.8	
	comp=N,51nm,0.6s						
GWY				IAML		20 52 07.5	
	comp=E,48nm,0.5s						
ESJX	Sierra Juarez	2.43	146		Pn	20 51 25.7	-0.8
ESJX				IAML		20 52 03.2	
	comp=N,61nm,0.5s						
GLA	Glamis	2.49	112		Pn	20 51 25.0	-2.2
GLA				IAML		20 52 07.6	
	comp=E,34nm,0.6s						
GLA				IAML		20 52 09.9	
	comp=N,23nm,0.5s						
BLYC	Blythe	2.55	95		Pn	20 51 26.1	-1.9
BLYC				IAML		20 52 08.9	
	comp=N,55nm,0.4s						
BLYC				IAML		20 52 09.1	
	comp=E,39nm,0.5s						
WCT	Wildcat Mounta	2.87	15		Pn	20 51 30.8	-1.6
TPNV	Topopah Spring	3.11	20	IAML		20 52 27.2	
	comp=E,15nm,0.5s						
TPNV				IAML		20 52 28.0	
	comp=E,21nm,0.8s						
W13A	Hualapai Mount	3.22	70		Pn	20 51 36.1	-1.4
W13A				IAML		20 52 29.1	
	comp=E,13nm,0.5s						
W13A				IAML		20 52 31.8	
	comp=N,11nm,1.0s						
DSP	Deep Springs	3.35	355		Pn	20 51 37.1	-1.8
TPH	Tonopah	4.05	4		Pg	20 52 02.0	-2.4

IDC 27 20:54:53.0±4.7**, 2°.23S**×**138°.47E, h0**km**, mb3.1**/2**, mbtmp3.3**/3**, ML3.5**/1**, Error ellipse: s-maj=191.3km s-min=30.7km az=86.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.06	193	P	P	20 59 06.2	+0.1
	0.2nm,0.3s,baz=16,slow=12,SNR=1.9						
	1.4nm,0.9s						
ASAR	Alice Springs	21.76	191	P	P	20 59 46.6	+0.2
	0.6nm,0.6s,baz=17,slow=11,SNR=5.4						
	0.6nm,0.6s						
MKAR	Makanchi Array	69.27	322	P	P	21 06 01.9	-0.2
	0.2nm,0.8s,baz=118,slow=5.2,SNR=3.8						
	0.2nm,0.8s						

IDC ***27*** *20:58:22.8±0.4, 20°.73S×174°.08W, h0km, mb4.9/25, mbtmp4.9/27, ML5.6/2, MS4.2/41, Error ellipse: s-maj=16.1km s-min=13.0km az=104.0*

NEIC ***27*** *20:58:24.5±2.3, 20°.71S±0°.08×173°.93W±0°.08, h10km±1km, mb5.2/187, Mww5.2/13, Error ellipse: s-maj=14.9km s-min=11.4km az=133.0*

MOS ***27*** *20:58:26.8±3.0, 20°.73S×174°.50W, h18km, mb5.2/23, MS4.5/6, Error ellipse: s-maj=10.4km s-min=9.3km az=96.3*

GCMT ***27*** *20:58:31.5±0.2, 20°.76S±0°.02×173°.81W±0°.01, h12km, MW5.3/109, Moment Tensor Solution. s41,c47; s109,c142; Duration: 1s.1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.07±.01; $M_{\theta\theta}$0.00±.01; $M_{\phi\phi}$-0.07±.01; $M_{r\theta}$-0.09±.03; $M_{\theta\phi}$-0.03±.01; $M_{\phi r}$1.13±.02; Best double couple: $M_0$1.13600×10^{17} NP1:ϕ_s217.00000°,δ2.00000°, λ131.00000°. NP2:ϕ_s355.00000°,δ88.00000°,λ88.00000°. Principal axes: T 1.1380, Plg47.0000°, Azm264.0000°; N -0.0040, Plg2.0000°, Azm356.0000°; P -1.1340, Plg43.0000°, Azm87.0000°; nsta1 refers to body waves,* *cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NOU ***27*** *20:58:33.4, 20°.82S×173°.93W, h90^{km}, mb5.5/92, Tonga Islands*

ISC 27 20:58:23.8±0.2, **20°.75S**±0°.04×**173°.87W**±0°.04, **h10**^{km}, **n841**, σ**1^{s}.92**/762, **mb5.3**/183, **MS4.3**/53, **49C-34D**, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	4.07	67		Pn	20 59 25.2	-1.1
NIUE				Sn	Sn	21 00 06.3	-7.7
NIUE	Niue	4.07	67	P	Pn	20 59 25.1	-1.1
NIUE				S	Sn	21 00 06.9	-7.1
NIUE	Niue	4.07	67	P	Pn	20 59 26.0	-0.2
NIUE				S	Sn	21 00 06.6	-7.3
LKBA	Tubou, Lakemba	5.29	297	P	Pn	20 59 48.9	+5.9
TAVE	Taveuni	6.99	304	P	Pn	21 00 13.5	+7.2
AFI	Afiamalu	7.09	17	Pn	Pn	21 00 05.9	-1.9
AFI	Afiamalu	7.09	17	P	Pn	21 00 05.9	-1.9
DGTI	Dogotuki	7.50	305	P	Pn	21 00 20.3	+6.8
MSVF	Nonsavu	8.20	290		Pn	21 00 30.6	+7.6
MSVF	Nonsavu	8.20	290	P	Pn	21 00 30.5	+7.5
MSVF	Nonsavu	8.20	290	P	Pn	21 00 30.6	+7.6
RIZ	Raoul Island	9.22	203	P	Pn	21 00 38.4	+1.4
RIZ				S	Sn	21 02 15.0	-5.8
RAO	Raoul Island	9.22	203	Pn	Pn	21 00 36.6	-0.4
RAO	Raoul Island	9.22	203	Pn	Pn	21 00 36.5	-0.5
	46nm,0.3s,baz=67,slow=23,SNR=1.6						
RAO				Sn	Sn	21 02 14.9	-5.9
	530nm,0.3s,baz=87,slow=20,SNR=16						
	137nm,0.3s						
RAO	Raoul Island	9.22	203	P	Pn	21 00 36.6	-0.4
GLKZ	Green Lake	9.23	203	P	Pn	21 00 39.4	+2.3
GLKZ				S	Sn	21 02 16.9	-4.2
RAR	Rarotonga	13.18	95		Pn	21 01 31.7	+0.5
RAR	Rarotonga	13.18	95	Pn	Pn	21 01 30.8	-0.4
	2.5nm,0.3s,baz=302,slow=3.0,SNR=3.2						
RAR				Sn	Sn	21 03 42.3	-16
	4.2nm,0.3s,baz=42,slow=19,SNR=1.9						
MARNC	Mare, Loyalty	16.90	264	P	P	21 02 24.3	+1.7
PINNC	Pines Island,	17.46	261	Pn	Pn	21 02 25.3	-2.3
PINNC				IAmb	IAmb	21 02 32.4	
	comp=Z,358nm,1.4s						
PINNC	Pines Island,	17.46	261	P	P	21 02 31.1	+2.3
YATNC	Mamie plateau,	17.96	262	P	P	21 02 36.8	+2.4
OUENC	Ouen Island, N	18.01	261	P	P	21 02 37.3	+2.4
GRZ	Great Barrier	18.04	209	P	P	21 02 37.4	+2.2
MXZ	Matakaoa Point	18.08	200	Pn	Pn	21 02 32.9	-2.3
MXZ	Matakaoa Point	18.08	200	P	P	21 02 38.4	+2.9
VLAKA	Lakatoro	18.34	281	P	P	21 02 40.9	+2.4
ONTNC	Ouen Toro	18.37	262		Pn	21 02 37.8	-1.0
ONTNC				IAmb	IAmb	21 02 42.7	
	comp=Z,132nm,0.9s						
ONTNC	Ouen Toro	18.37	262	P	P	21 02 40.0	+1.1
DZM	Mont Dzumac	18.38	262		P	21 02 40.3	+1.3
DZM				IAmb	IAmb	21 02 44.7	
	comp=Z,187nm,0.8s						
DZM	Mont Dzumac	18.38	262	*e*P	P	21 02 39.5	+0.5
	comp=Z,476nm,0.9s						
DZM				*e*LR	LR	21 06 52.8	
	comp=Z,3µm,26.1s						
DZM	Mont Dzumac	18.38	262	P	P	21 02 40.7	+1.7
	comp=Z,176nm,0.8s,baz=102,slow=12,SNR=27						
DZM				LR	LR	21 08 59.1	
	comp=Z,2µm,18.1s,baz=82,slow=35						
DZM	Mont Dzumac	18.38	262	P	P	21 02 40.9	+1.9
HAZ	Te Kaha	18.43	201	P	P	21 02 36.1	-3.2
HAZ				S	Sn	21 05 50.8	-15
PUZ	Puketiti	18.56	200	P	Pn	21 02 42.4	+1.4
PUZ				S	Sn	21 05 50.1	-18
MWZ	Matawai	19.03	201	P	Pn	21 02 48.2	+1.3
MWZ				S	Sn	21 06 03.6	-17
URZ	Urewera	19.11	202	P	P	21 02 47.7	+0.9
	comp=Z,23nm,0.3s,baz=4.8,slow=3.1,SNR=93						
URZ				S	Sn	21 06 03.2	-19
	comp=Z,28nm,0.3s,baz=188,slow=23,SNR=8.6						
	comp=Z,97nm,0.4s						
URZ	Urewera	19.11	202	P	Pn	21 02 48.5	+0.8
URZ	Urewera	19.11	202	P	P	21 02 47.8	+0.9
URZ				S	Sn	21 06 03.9	-18
TOZ	Tahuroa Road	19.27	206		Pn	21 02 50.1	+0.5
TOZ				IAmb	IAmb	21 02 52.7	
	comp=Z,122nm,1.2s						
TOZ	Tahuroa Road	19.27	206	P	Pn	21 02 51.4	+1.8
RTZ	Ruatahuna	19.48	202		P	21 02 51.1	+0.2
RTZ	Ruatahuna	19.48	202	P	P	21 02 51.6	+0.7
RTZ				S	Sn	21 06 09.8	-21
TLZ	Tolley Road	19.77	205	P	Pn	21 02 56.8	+1.2
BKZ	Black Stump Fm	20.14	202		P	21 02 56.6	-1.6
BKZ	Black Stump Fm	20.14	202	P	P	21 02 56.5	-1.6
BKZ	Black Stump Fm	20.14	202	P	P	21 02 56.9	-1.3
BKZ				S	S	21 06 26.3	-18
HIZ	Hauiti	20.20	206	P	P	21 03 00.6	+1.8
HIZ	Hauiti	20.20	206	P	Pn	21 03 00.7	0.0
KOUNC	Koumac, New Ca	20.44	267	P	Pn	21 03 04.1	+0.4
NGZ	Ngauruhoe	20.47	204	P	P	21 03 02.5	+0.6
VRZ	Vera Road	20.76	206	P	P	21 03 06.5	+1.6
PXZ	Pawanui	20.79	200	P	P	21 03 05.6	+0.5
PXZ				S	S	21 06 40.9	-16
TSZ	Takapari Road	21.12	202	P	P	21 03 07.2	-1.5
NEZ	North Egmont	21.16	207	P	P	21 03 12.3	+3.1
BFZ	Birch Farm	21.58	201	P	P	21 03 13.9	+0.2
BFZ				IAmb	IAmb	21 03 21.6	
	comp=Z,85nm,1.1s						
BFZ	Birch Farm	21.58	201	P	P	21 03 14.8	+1.1
MRZ	Mangatainoka R	21.79	202		P	21 03 14.4	-1.5
MRZ				IAmb	IAmb	21 03 20.5	
	comp=Z,116nm,1.6s						
MSWZ	Moikau Station	22.57	202	P	P	21 03 21.6	-2.7
SNZO	South Karori	22.67	203	P	P	21 03 23.4	-2.0
SNZO				IAmb	IAmb	21 03 35.4	
	comp=Z,76nm,0.6s						
PLWZ	Palliser	22.70	202		P	21 03 26.4	+0.6
TCW	Tory Channel	22.74	204		P	21 03 24.0	-2.1
TBI	Tubuai	22.77	101	*e*P	P	21 03 28.1	+1.5
	comp=Z,778nm,25.0s						
TBI				*e*S	S	21 07 28.4	-7.2
	comp=Z,3µm,31.8s						
TBI				*e*LR	LR	21 08 48.0	
	comp=Z,8µm,26.0s						
TBI				*e*LR	LR	21 08 51.5	
	comp=Z,2µm,27.5s						
TUWZ	Tuamarina	23.06	204		P	21 03 27.4	-2.0
TUWZ	Tuamarina	23.06	204	P	P	21 03 28.2	-1.1
NNZ	Nelson	23.09	205	P	P	21 03 28.6	-1.2
NNZ	Nelson	23.09	205	P	P	21 03 29.4	-0.4
TKNZ	Takaka Hill	23.11	206	P	P	21 03 28.4	-1.5
QRZ	Quartz Range	23.11	207	P	P	21 03 29.3	-0.7
PPT2	Papeete2	23.16	86	*e*LR	LR	21 08 54.5	
	comp=Z,2µm,25.8s						
PPT2				*e*LR	LR	21 09 02.5	
	comp=Z,1µm,23.5s						
PPT	Papeete	23.16	86	P	P	21 03 32.0	+1.3
	comp=Z,62nm,0.6s,baz=290,slow=11,SNR=4.6						
	comp=Z,62nm,0.6s						
PPT	Papeete	23.16	86	P	P	21 03 32.0	+1.3
PPTF	Pamatai, Papee	23.17	86	P	P	21 03 28.4	-2.5
PPTF	Pamatai, Papee	23.17	86	P	P	21 03 31.2	+0.3
CMWZ	Cape Campbell	23.23	203	P	P	21 03 28.4	-2.8
CMWZ	Cape Campbell	23.23	203	P	P	21 03 31.3	+0.1
BSWZ	Blackbirch Sta	23.33	204		P	21 03 31.7	-0.5
BSWZ	Blackbirch Sta	23.33	204	P	P	21 03 31.0	-1.2
MRNZ	Matariki Terra	23.50	206		P	21 03 30.7	-3.2
MRNZ	Matariki Terra	23.50	206	P	P	21 03 32.5	-1.4
THZ	Tophouse	23.74	205		P	21 03 34.1	-2.2
THZ				IAmb	IAmb	21 03 47.6	
	comp=Z,44nm,0.6s						
THZ	Tophouse	23.74	205	P	P	21 03 34.7	-1.6
KHZ	Kahutara	24.06	203		P	21 03 39.0	-0.2
KHZ				IAmb	IAmb	21 03 50.8	
	comp=Z,52nm,0.8s						
KHZ	Kahutara	24.06	203	P	P	21 03 37.8	-1.4
DSZ	Denniston Nort	24.18	207	P	P	21 03 41.3	+0.8
DSZ	Denniston Nort	24.18	207	P	P	21 03 40.4	-0.1
GVZ	Greta Valley S	24.72	203	P	P	21 03 45.3	-0.1
GVZ	Greta Valley S	24.72	203	P	P	21 03 44.9	-0.5
LTZ	Lake Taylor	24.86	205		P	21 03 45.7	-0.9
LTZ				IAmb	IAmb	21 03 55.0	
	comp=Z,114nm,1.0s						
LTZ					S	21 08 12.6	+3.1
LTZ	Lake Taylor	24.86	205	P	P	21 03 45.2	-1.4
AMCZ	Amberley	25.05	204	P	P	21 03 48.7	+0.4
INZ	Inchbonnie	25.14	206		P	21 03 46.5	-2.6
OXZ	Oxford	25.41	204	P	P	21 03 51.1	-0.4
OXZ	Oxford	25.41	204	P	P	21 03 51.3	-0.3
MQZ	McQueen's Vall	25.50	203	P	P	21 03 53.1	+0.8
MQZ				IAmb	IAmb	21 04 03.6	
	comp=Z,36nm,0.9s						
MQZ					S	21 08 24.2	+4.5
MQZ	McQueen's Vall	25.50	203	P	P	21 03 52.9	+0.6
RACZ	Rakaia	25.71	204	P	P	21 03 56.5	+2.2
WVZ	Waitaha Valley	25.72	207	P	P	21 03 54.6	+0.2
MHCZ	Mount Hutt	25.77	205	P	P	21 03 54.8	-0.1
RPZ	Rata Peaks	26.12	205		P	21 03 57.7	-0.3
FOZ	Fox Glacier	26.49	207	P	P	21 04 01.3	+0.1
LBZ	Lake Benmore	27.03	206	P	P	21 04 07.1	+0.9
LBZ				IAmb	IAmb	21 04 14.9	
	comp=Z,76nm,1.2s						
ALEG	Aligegeo Malai	27.28	292	P	P	21 04 06.8	-1.9
JCZ	Jackson Bay	27.37	208	P	P	21 04 11.3	+2.0
ODZ	Otahua Downs	27.40	204	P	P	21 04 09.9	+0.4
HNR	Honiara	27.62	290		P	21 04 09.8	-2.0
HNR				IAmb	IAmb	21 04 15.6	
	comp=Z,74nm,0.8s						
HNR	Honiara	27.62	290	LR	LR	21 13 28.3	
	comp=Z,583nm,21.4s,baz=169,slow=33						
HNR	Honiara	27.62	290	P	P	21 04 12.9	+1.1
HNR	Honiara	27.62	290	P	P	21 04 09.8	-2.0
HNR				pmax	pmax		
	comp=Z,73nm,0.8s						
SAVO	Savo Central	27.87	291	P	P	21 04 14.8	+0.8
WKZ	Wanaka	27.87	207	P	P	21 04 13.2	-0.5
WKZ				IAmb	IAmb	21 04 20.6	
	comp=Z,47nm,0.6s						
TATA	Tatamba Isabel	28.23	292	P	P	21 04 14.7	-2.5
MLZ	Mavora Lakes	28.68	207		P	21 04 22.2	+1.2
MLZ				IAmb	IAmb	21 04 27.7	
	comp=Z,44nm,0.6s						
WHZ	Wether Hill Ro	29.18	207		P	21 04 26.8	+1.5
WHZ				IAmb	IAmb	21 04 32.6	
	comp=Z,40nm,0.7s						
DCZ	Deep Cove	29.18	208		P	21 04 25.2	-0.1
DCZ				IAmb	IAmb	21 04 32.0	
	comp=Z,47nm,1.1s						
ARMA	Armidale	32.46	246	P	P	21 04 53.6	-1.1
ARMA				IAmb	IAmb	21 04 55.1	
	comp=Z,36nm,0.8s						
ARMA	Armidale	32.46	246	P	P	21 04 53.3	-1.4
	comp=Z,58nm,1.1s						
ARMA	Armidale	32.46	246	P	P	21 04 54.7	0.0
EIDS	Eidsvold	32.51	255		P	21 04 52.9	-2.1
EIDS				IAmb	IAmb	21 04 54.6	
	comp=Z,44nm,0.9s						
EIDS	Eidsvold	32.51	255	P	P	21 04 52.6	-2.5
	comp=Z,50nm,1.1s						
EIDS	Eidsvold	32.51	255	P	P	21 04 53.9	-1.1
NTLH	Newcastle Hard	32.87	241	P	P	21 04 58.5	+0.4
MGCD	Mangrove Creek	33.42	241	P	P	21 05 02.1	-0.8
	comp=Z,101nm,1.0s						
MGCD	Mangrove Creek	33.42	241	P	P	21 05 03.0	+0.1
SYDH	Sydney Hard Ro	33.85	240	P	P	21 05 07.3	+0.7
WOLH	Wollongong Har	33.90	239	P	P	21 05 06.9	-0.1
TAOE	Nuku Hiva Isla	34.60	75	*e*LR	LR	21 14 08.5	
	comp=Z,2µm,26.1s						
CNB	Canberra Magne	35.33	238	P	P	21 05 18.9	-0.5
	comp=Z,147nm,0.9s						
CNB	Canberra Magne	35.33	238	P	P	21 05 19.5	0.0
CAN	Canberra	35.62	238		P	21 05 20.4	-1.6
CAN	Canberra	35.62	238	P	P	21 05 21.0	-0.9
	comp=Z,131nm,0.9s						
CAN	Canberra	35.62	238	P	P	21 05 21.7	-0.2
CAN	Canberra	35.62	238	P	P	21 05 20.4	-1.6
CAN				pmax	pmax		
	comp=Z,95nm,0.8s						
YNG	Young	35.87	240	P	P	21 05 23.2	-0.9
	comp=Z,53nm,0.8s						
CTAO	Charters Tower	37.31	264		P	21 05 34.0	-2.5
CTAO				IAmb	IAmb	21 05 37.7	
	comp=Z,41nm,0.9s						
CTAO	Charters Tower	37.31	264	P	P	21 05 35.3	-1.2
CTAO	Charters Tower	37.31	264	P	P	21 05 34.1	-2.5
CTAO				pmax	pmax		
	comp=Z,41nm,0.9s						
CMSA	Cobar Meteorol	37.66	245	P	P	21 05 37.5	-1.9
	comp=Z,235nm,0.8s						
CMSA	Cobar Meteorol	37.66	245	P	P	21 05 38.3	-1.1
GLAD	Gladstone	38.04	229	P	P	21 05 43.1	+0.7
QLP	Quilpie	38.68	253	P	P	21 05 45.8	-2.2
	comp=Z,269nm,0.9s						
QLP	Quilpie	38.68	253	P	P	21 05 46.7	-1.3
CORO	Coronation Par	38.81	229	P	P	21 05 50.7	+1.8
TOO	Toolangi	38.90	235	P	P	21 05 49.1	-0.7
	comp=Z,37nm,0.8s						
MOO	Moorlands	39.13	227	P	P	21 05 51.6	0.0
	comp=Z,148nm,1.3s						
MOO	Moorlands	39.13	227	P	P	21 05 52.0	+0.4
PMG	Port Moresby	39.18	281		P	21 05 49.5	-2.8
PMG				IAmb	IAmb	21 05 51.9	
	comp=Z,102nm,0.9s						
PMG	Port Moresby	39.18	281	LR	LR	21 21 26.4	
	comp=Z,283nm,18.5s,baz=122,slow=36						
PMG	Port Moresby	39.18	281	P	P	21 05 50.3	-2.0
PMG	Port Moresby	39.18	281	P	P	21 05 50.2	-2.0
PMG	Port Moresby	39.18	281	P	P	21 05 49.5	-2.8
PMG				pmax	pmax		
	comp=Z,102nm,1.0s						
TAU	Tasmania Unive	39.21	227		P	21 05 51.6	-0.6
TAU				IAmb	IAmb	21 05 53.8	
	comp=Z,76nm,0.8s						
TAU	Tasmania Unive	39.21	227	P	P	21 05 53.2	+0.9
TAU	Tasmania Unive	39.21	227	P	P	21 05 51.6	-0.6
TAU				pmax	pmax		
	comp=Z,76nm,0.8s						
MTSU	Mount Surprise	39.44	266	P	P	21 05 52.5	-1.9
	comp=Z,38nm,0.9s						
MTSU	Mount Surprise	39.44	266	P	P	21 05 53.0	-1.5
GEXS	Deakin Univers	39.98	235	P	P	21 05 59.4	+0.7
STKA	Stephens Creek	41.17	245		P	21 06 07.0	-1.7
STKA	Stephens Creek	41.17	245	P	P	21 06 06.8	-1.9
	comp=Z,425nm,1.0s						
STKA	Stephens Creek	41.17	245	P	P	21 06 07.5	-1.2
	comp=Z,65nm,0.7s,baz=90,slow=9.7,SNR=93						
STKA				LR	LR	21 20 23.0	
	comp=Z,452nm,21.8s,baz=55,slow=32						
	comp=Z,65nm,0.7s						
STKA	Stephens Creek	41.17	245	P	P	21 06 07.5	-1.2
COEN	Coen	41.45	272		P	21 06 09.6	-1.6
COEN	Coen	41.45	272	P	P	21 06 08.8	-2.4
	comp=Z,153nm,0.9s						
COEN	Coen	41.45	272	P	P	21 06 10.0	-1.2
MANU	Manus Island	42.11	291		P	21 06 15.4	-1.2
QIS	Mount Isa	43.41	262	P	P	21 06 24.3	-2.8
	comp=Z,7.7nm,0.6s						
HTT	Hallett	43.54	243	P	P	21 06 26.1	-1.9
	comp=Z,22nm,1.3s						
HTT	Hallett	43.54	243	P	P	21 06 26.8	-1.3
WHYH	Whyalla	44.64	244	P	P	21 06 35.7	-1.1
BBOO	Buckleboo	45.90	244		P	21 06 44.4	-2.4
BBOO	Buckleboo	45.90	244	P	P	21 06 44.7	-2.2
	comp=Z,72nm,1.3s						
BBOO	Buckleboo	45.90	244	P	P	21 06 45.0	-1.9
JAY	Jayapura	47.81	286	LR	LR	21 26 36.9	
	comp=Z,249nm,20.3s,baz=86,slow=36						
JAY	Jayapura	47.81	286	P	P	21 07 01.0	-1.0
	comp=Z,2µmcomp=Z,233nm,1.0s						
AS01	Alice Springs	48.18	256	P	P	21 07 03.0	-1.8
AS31	Alice Springs	48.22	256	IAmb	IAmb	21 07 04.1	
	comp=Z,22nm,0.8s						
AS31	Alice Springs	48.22	256	P	P	21 07 02.7	-2.4
	comp=Z,35nm,0.9s						
ASAR	Alice Springs	48.22	256		P	21 07 02.8	-2.3
ASAR	Alice Springs	48.22	256	P	P	21 07 03.1	-2.0
	comp=Z,98nm,0.8s,baz=100,slow=7.9,SNR=597						
ASAR				PcP	PcP	21 08 32.4	+0.1
	comp=Z,12nm,0.8s,baz=98,slow=4.2,SNR=7.0						
ASAR				ScP	ScP	21 12 27.9	+0.8
	comp=Z,1.0nm,0.8s,baz=105,slow=5.2,SNR=3.2						
ASAR				S	S	21 13 52.2	-13
	comp=Z,1.3nm,0.9s,baz=97,slow=13,SNR=5.1						
ASAR				LR	LR	21 26 53.9	
	comp=Z,344nm,18.4s,baz=108,slow=36						
	comp=Z,98nm,0.8s						
GENI	Genyem	48.26	286	P	P	21 07 05.6	+0.2
GENI	Genyem	48.26	286	P	P	21 07 05.0	-0.4
	comp=Z,3µmcomp=Z,194nm,1.2s						
WB1	Warramunga Ar.	48.38	261	P	P	21 07 06.6	+0.2
WRAB	Tennant Creek	48.38	261	P	P	21 07 03.6	-2.7
WRAB	Tennant Creek	48.38	261	*d i*P	P	21 07 04.1	-2.3
WRAB				pmax	pmax		
	comp=Z,82nm,0.9s						
WRA	Warramunga Arr	48.39	261		P	21 07 03.3	-3.2
WRA	Warramunga Arr	48.39	261	P	P	21 07 03.6	-2.8
	comp=Z,44nm,0.8s,baz=96,slow=6.9,SNR=116						
WRA				PcP	PcP	21 08 33.0	0.0
	comp=Z,12nm,0.9s,baz=96,slow=3.7,SNR=6.9						
WRA				S	S	21 13 53.4	-14
	comp=Z,1.0nm,0.9s,baz=101,slow=14,SNR=1.7						
WRA				LR	LR	21 26 26.3	
	comp=Z,139nm,19.2s,baz=60,slow=35						
	comp=Z,44nm,0.8s						
KDU	Kakadu	51.82	270	P	P	21 07 29.9	-2.6
	comp=Z,160nm,1.1s						
KDU	Kakadu	51.82	270	P	P	21 07 30.5	-2.0
BAKI	Biak	52.52	285	P	P	21 07 38.4	+0.7
	comp=Z,134nm,0.8s						
GUMO	Guam	52.99	307		P	21 07 40.6	-0.5
GUMO	Guam	52.99	307	LR	LR	21 28 56.2	
	comp=Z,129nm,19.4s,baz=126,slow=35						
GUMO	Guam	52.99	307	P	P	21 07 41.1	0.0
GUMO	Guam	52.99	307	P	P	21 07 40.6	-0.5
GUMO				pmax	pmax		
	comp=Z,192nm,0.8s						
MTN	Manton Dam	53.03	269	P	P	21 07 38.7	-2.8
	comp=Z,136nm,0.9s						
MTN	Manton Dam	53.03	269	P	P	21 07 39.3	-2.2
WRKA	Warakurna	53.11	254	P	P	21 07 39.8	-2.3
	comp=Z,97nm,0.8s						
DRS	Darwin Rock St	53.36	270	P	P	21 07 42.6	-1.3
KNRA	Kununurra	54.49	265	P	P	21 07 49.7	-2.5
	comp=Z,99nm,1.0s						
FITZ	Fitzroy Crossi	56.82	261	IAmb	IAmb	21 08 08.5	
	comp=Z,24nm,1.5s						
FITZ	Fitzroy Crossi	56.82	261	P	P	21 08 06.4	-2.5
	comp=Z,11nm,1.2s						
FITZ	Fitzroy Crossi	56.82	261	LR	LR	21 32 25.3	
	comp=Z,348nm,18.4s,baz=92,slow=36						
FITZ	Fitzroy Crossi	56.82	261	P	P	21 08 07.6	-1.3
SWI	Sorong	57.06	283	P	P	21 08 09.5	-1.1
	comp=Z,2µmcomp=Z,202nm,0.9s						
SBA	Scott Base	57.91	185		P	21 08 18.3	+2.7
SBA				IAmb	IAmb	21 08 27.9	
	comp=Z,15nm,0.9s						
SBA	Scott Base	57.91	185	P	P	21 08 18.3	+2.7
SBA				pmax	pmax		
	comp=Z,15nm,1.0s						
KMBL	Kambalda	57.97	245	P	P	21 08 14.6	-2.3
	comp=Z,19nm,1.2s						
VNDA	Vanda	58.03	186		P	21 08 18.7	+2.2
VNDA	Vanda	58.03	186	P	P	21 08 18.7	+2.2
	comp=Z,4.2nm,0.9s,baz=11,slow=6.6,SNR=19						
	comp=Z,4.2nm,0.9s						
MSAI	Masohi	58.23	279	P	P	21 08 24.0	+5.1
AAI	Ambon	58.78	279	P	P	21 08 21.9	-0.8
	comp=Z,2µmcomp=Z,110nm,1.2s						
NLAI	Namlea	59.96	279	P	P	21 08 26.0	-4.9
SOEI	Soe	60.37	270	P	P	21 08 33.8	-0.1
SOEI	Soe	60.37	270	P	P	21 08 33.8	-0.1
BATI	Baumata	60.80	270	LR	LR	21 35 22.8	
	comp=Z,571nm,18.3s,baz=152,slow=37						
BATI	Baumata	60.80	270	P	P	21 08 37.6	+0.9
	comp=Z,92nm,1.1s						
TNTI	Ternate	61.27	283		P	21 08 38.4	-1.4
TNTI	Ternate	61.27	283	P	P	21 08 39.9	0.0
TNTI	Ternate	61.27	283	P	P	21 08 39.0	-0.9
	comp=Z,1µmcomp=Z,152nm,1.0s						
PSA00	Pilbara Seismi	61.37	256	P	P	21 08 38.2	-2.2
PSA00	Pilbara Seismi	61.37	256		P	21 08 38.3	-2.2
PSA00				IAmb	IAmb	21 08 39.7	
	comp=Z,116nm,0.7s						
PSA00	Pilbara Seismi	61.37	256	P	P	21 08 38.3	-2.2
	comp=Z,169nm,0.8s						
PSA00	Pilbara Seismi	61.37	256	P	P	21 08 38.9	-1.5
SANI	Sanana	61.43	279	P	P	21 08 39.9	-1.0
SANI	Sanana	61.43	279	P	P	21 08 39.6	-1.3
	comp=Z,1µmcomp=Z,161nm,1.0s						
KLBR	Kellerberrin	61.45	245	P	P	21 08 39.6	-1.2
	comp=Z,285nm,0.9s						
KLBR	Kellerberrin	61.45	245	P	P	21 08 40.3	-0.5
MEEK	Meekatharra	61.48	250	P	P	21 08 39.2	-2.0
	comp=Z,53nm,0.8s						
MEEK	Meekatharra	61.48	250	P	P	21 08 39.5	-1.7
MBWA	Marble Bar	61.56	257		P	21 08 39.6	-2.1
MBWA	Marble Bar	61.56	257	P	P	21 08 39.0	-2.7
	comp=Z,174nm,0.8s						
MBWA	Marble Bar	61.56	257	P	P	21 08 40.1	-1.6
NWAO	Narrogin (SRO)	61.70	243	P	P	21 08 41.5	-1.0
	comp=Z,195nm,1.1s						
NWAO	Narrogin (SRO)	61.70	243	LR	LR	21 34 21.6	
	comp=Z,285nm,18.3s,baz=77,slow=35						
NWAO	Narrogin (SRO)	61.70	243	P	P	21 08 42.4	-0.1
BLDU	Ballidu	62.47	246	P	P	21 08 46.1	-1.6
	comp=Z,77nm,1.4s						
BLDU	Ballidu	62.47	246	P	P	21 08 46.9	-0.9
MMRI	Maumere	62.62	271		P	21 08 47.5	-1.5
MUN	Mundaring	62.69	244	P	P	21 08 48.4	-0.8
	comp=Z,194nm,1.0s						
MUN	Mundaring	62.69	244	P	P	21 08 49.1	-0.1
EDFI	Ende, Flores	63.10	271	P	P	21 08 50.7	-1.6
	comp=Z,65nm,1.3s						
MORW	Morawa	63.30	247	P	P	21 08 52.1	-1.2
	comp=Z,68nm,1.2s						
MORW	Morawa	63.30	247	P	P	21 08 52.6	-0.7
JCJ	Chichijima	63.82	316	P	P	21 08 55.5	-1.1
WSI	Waingapu	64.11	269	P	P	21 08 58.7	-0.1
	comp=Z,3µmcomp=Z,264nm,1.2s						
SGSI	Sangihe	64.15	285	P	P	21 08 58.3	-0.7
	comp=Z,179nm,0.9s						
CASY	Casey	65.40	206		P	21 09 07.0	+0.7
DAV	Davao City (W)	65.56	288	LR	LR	21 36 36.4	
	comp=Z,65nm,19.5s,baz=110,slow=35						
APSI	Ampana	65.87	279	P	P	21 09 10.6	+0.3
	comp=Z,972nmcomp=Z,105nm,1.1s						
BNSI	Bone	66.04	274	P	P	21 09 10.6	-0.8
	comp=Z,82nm,1.3s						
MRSI	Marisa	66.13	280	P	P	21 09 11.0	-0.9
	comp=Z,47nm,0.8s						
KAPI	Kappang	66.16	274	LR	LR	21 37 26.7	
	comp=Z,143nm,19.9s,baz=110,slow=36						
SPSI	Sidrap Palu	66.51	275	P	P	21 09 13.0	-1.4
	comp=Z,36nm,1.1s						
PLAI	Plampang	66.74	269	P	P	21 09 14.7	-1.1
PLAI	Plampang	66.74	269	P	P	21 09 16.1	+0.3
	comp=Z,89nm,0.8s						
TOLI2	Tolitoli	67.44	280		P	21 09 18.8	-1.6
TOLI2	Tolitoli	67.44	280	P	P	21 09 19.4	-0.9
PCI	Palu	67.55	278	P	P	21 09 21.8	+0.8
MPSI	Mapaga	67.96	279	P	P	21 09 22.8	-0.8
	comp=Z,803nmcomp=Z,123nm,0.9s						
QSPA	South Pole Qui	69.32	180		P	21 09 32.6	+1.2
QSPA	South Pole Qui	69.32	180	P	P	21 09 32.3	+1.0
	comp=Z,13nm,0.9s,baz=33,slow=2.3,SNR=22						
	comp=Z,13nm,0.9s						
ADK	Adak	72.36	358	P	P	21 09 49.2	-0.5
MJAR	Matsushiro Arr	72.76	321	P	P	21 09 52.6	+0.1
	comp=Z,16nm,0.6s,baz=152,slow=5.4,SNR=51						
MJAR				LR	LR	21 36 55.0	
	comp=Z,51nm,21.1s,baz=136,slow=32						
	comp=Z,16nm,0.6s						
MAJO	Matsushiro	72.77	321		P	21 09 52.3	-0.2
MAJO				IAmb	IAmb	21 09 53.4	
	comp=Z,21nm,0.7s						
MAJO	Matsushiro	72.77	321	P	P	21 09 53.0	+0.5
MAJO	Matsushiro	72.77	321	*i*P	P	21 09 52.5	0.0
MAJO				pmax	pmax		
	comp=Z,16nm,0.6s						
MJB9	Matsu-Tunnel	72.77	321		P	21 09 52.5	0.0
MJB9				IAmb	IAmb	21 09 53.4	
	comp=Z,20nm,0.7s						
PCJI	Pacitan	73.11	267	P	P	21 09 55.1	0.0
JOW	Kunigami	73.33	308	P	P	21 09 55.7	-0.4
	comp=Z,52nm,0.8s,baz=159,slow=8.7,SNR=7.4						
JOW				LR	LR	21 36 39.6	
	comp=Z,61nm,21.3s,baz=234,slow=31						
	comp=Z,52nm,0.8s						
JNU	Nakatsue	75.16	314	IAmb	IAmb	21 10 07.9	
	comp=Z,34nm,1.0s						
JNU	Nakatsue	75.16	314	P	P	21 10 06.7	+0.1
	comp=Z,36nm,1.1s,baz=150,slow=3.1,SNR=9.4						
JNU				LR	LR	21 36 15.9	
	comp=Z,68nm,20.8s,baz=145,slow=30						
	comp=Z,36nm,1.1s						
JNU	Nakatsue	75.16	314	P	P	21 10 06.3	-0.3
STKI	Sintang	75.68	276	P	P	21 10 11.0	+1.0

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          comp=Z,78nm,1.2s
ASAJ   Asahikawa          75.86 329   P       P        21 10 10.4 +0.1
          comp=Z,11nm,1.0s,baz=215,slow=3.6,SNR=9.1
ASAJ                                  LR      LR       21 37 50.3
          comp=Z,151nm,21.2s,baz=153,slow=31
          comp=Z,11nm,1.0s
LPIG   La Paz             76.25  57   LR      LR       21 35 20.3
          comp=Z,189nm,21.9s,baz=236,slow=29
TWGBT  Beinan             76.79 301   P       P        21 10 15.4 -0.7
TWG    Pinlang            76.80 301   IAmb    IAmb     21 10 15.4
          comp=Z,26nm,0.8s
LEM    Lembang            76.89 268   LR      LR       21 45 15.3
          comp=Z,243nm,18.1s,baz=182,slow=37
YULB   Yu-li              76.90 301   IAmb    IAmb     21 10 17.4
          comp=Z,18nm,0.9s
YULB   Yu-li              76.90 301   P       P        21 10 15.9 -0.8
PFO    Pinyon Flats O     76.91  46           P        21 10 18.1 +1.4
PFO    Pinyon Flats O     76.91  46   LR      LR       21 37 26.9
          comp=Z,188nm,21.5s,baz=250,slow=30
PFO    Pinyon Flats O     76.91  46   P       P        21 10 18.1 +1.4
PFO                                   pmax    pmax
          comp=Z,7.0nm,1.0s
SMAI   San Martin Ant     76.97 158           P        21 10 17.2 +0.9
SMAI                                  IAmb    IAmb     21 10 18.9
          comp=Z,16nm,0.9s
NACB   Ninganchiao        77.05 302   P       P        21 10 16.8 -0.7
CMB    Columbia Colle     77.08  41           P        21 10 18.6 +1.1
CMB    Columbia Colle     77.08  41   P       P        21 10 18.6 +1.1
CMB                                   pmax    pmax
          comp=Z,7.0nm,1.0s
KSM    Kuching            77.28 276   P       P        21 10 19.1  0.0
SSLB   Suanglung          77.37 302   IAmb    IAmb     21 10 19.0
          comp=Z,33nm,0.9s
SSLB   Suanglung          77.37 302   P       P        21 10 18.5 -0.9
TPUB   Ta-pu              77.39 301   P       P        21 10 18.1 -1.4
YHNB   Yeheng             77.47 303   P       P        21 10 19.9 -0.1
PEA0B  Petropavlovsk-     77.57 343⇓iP    P        21 10 20.5 +0.7
PETK   Petropavlovsk-     77.57 343   P       P        21 10 19.9 +0.1
PETK   Petropavlovsk-     77.57 343   P       P        21 10 20.1 +0.3
          comp=Z,12nm,0.9s,baz=118,slow=7.9,SNR=13
PETK                                  LR      LR       21 42 32.4
          comp=Z,44nm,18.9s,baz=155,slow=34
          comp=Z,12nm,0.9s
SPIA   Saint Paul Isl     77.69   2   P       P        21 10 23.4 +3.1
          baz=184
DBJI   Dramaga            77.80 268   P       P        21 10 21.9 -0.1
          comp=Z,3µmcomp=Z,206nm,1.2s
YSS    Yuzhno-Sakhali     77.91 331           P        21 10 22.4 +0.6
YSS                                   IAmb    IAmb     21 10 23.9
          comp=Z,33nm,0.9s
YSS    Yuzhno-Sakhali     77.91 331   P       P        21 10 23.1 +1.3
YSS    Yuzhno-Sakhali     77.91 331⇓iP    P        21 10 23.0 +1.3
YSS                                   pmax    pmax
          comp=Z,40nm,0.9s
YSS                                   MLR     MLR
          comp=Z,100nm,15.0s
WAKR   Walker             77.95  41   IAmb    IAmb     21 10 25.6
          comp=Z,14nm,1.0s
YBH    Yreka Blue Hor     78.13  37           P        21 10 24.4 +1.2
YBH    Yreka Blue Hor     78.13  37   P       P        21 10 24.5 +1.2
YBH                                   pmax    pmax
          comp=Z,6.0nm,1.0s
DSP    Deep Springs       78.16  42           P        21 10 25.4 +2.0
DSP                                   IAmb    IAmb     21 10 26.7
          comp=Z,16nm,1.1s
PNTR   Pine Nut           78.22  40   IAmb    IAmb     21 10 46.5
          comp=Z,20nm,1.0s
TPI    Tanjungpandan      78.25 271   P       P        21 10 25.5 +1.0
          comp=Z,54nm,1.3s
BEKR   Beckworth          78.26  39   P       P        21 10 25.7 +1.5
GWY    Greenwater Val     78.28  44           P        21 10 24.9 +0.5
LHV    Little Huntoon     78.37  41   IAmb    IAmb     21 10 47.6
          comp=Z,26nm,1.1s
SBJI   Serang             78.52 268   P       P        21 10 26.2 +0.2
NVAR   Mina Array Bea     78.61  41   P       P        21 10 27.1 +0.9
NVAR   Mina Array Bea     78.61  41   P       P        21 10 28.2 +2.0
          comp=Z,10nm,0.8s,baz=223,slow=9.5,SNR=40
NVAR                                  LR      LR       21 39 11.1
          comp=Z,156nm,20.7s,baz=230,slow=31
          comp=Z,10nm,0.8s
NV11   Mina Array Sit     78.70  41   IAmb    IAmb     21 10 49.2
          comp=Z,20nm,1.1s
CGJI   Cibinong           78.77 267   P       P        21 10 26.4 -1.0
SII    Sitkinak Islan     78.78  11   P       P        21 10 30.0 +3.6
          baz=199
V12A   Nelson             79.21  45   P       P        21 10 29.5 +0.1
TJN    Taejon             79.42 315⇑eP    P        21 10 32.1 +1.7
R17L   Mt. Peulik Vol     79.44   9   P       P        21 10 33.4 +3.3
          baz=197
KSRS   Korea Array        79.68 317   P       P        21 10 33.1 +1.3
          comp=Z,5.2nm,0.9s,baz=132,slow=5.7,SNR=14
KSRS                                  LR      LR       21 40 08.3
          comp=Z,33µm,21.8s,baz=130,slow=32
          comp=Z,5.2nm,0.9s
KSAR   Wonju Array Be     79.70 317           P        21 10 31.8 -0.1
KSAR   Wonju Array Be     79.70 317   P       P        21 10 31.8 -0.1
J05D   Fort Rock, OR      79.97  36           P        21 10 33.8 +0.4
PRN    Pahroc Range       80.05  44   IAmb    IAmb     21 10 57.2
          comp=Z,23nm,1.2s
Q17K   Contact Creek      80.12  10   P       P        21 10 36.2 +2.3
          baz=197,SNR=5.3
TUC    Tucson             80.14  50           P        21 10 34.9 +0.4
TUC    Tucson             80.14  50   P       P        21 10 34.9 +0.4
TUC                                   pmax    pmax
          comp=Z,10.0nm,1.1s
O15K   Ungalikthiuk R     80.47   7   P       P        21 10 38.2 +2.7
          baz=193
P16K   Nushagak River     80.56   8   P       P        21 10 38.9 +2.9
          baz=195
Q18K   Katmai Hardscr     80.63  10   P       P        21 10 39.8 +3.2
          baz=198
X16A   Lo Mia Camp, P     80.80  48   IAmb    IAmb     21 13 01.3
          comp=Z,9.5nm,0.4s
LWLI   Liwa               80.83 268   P       P        21 10 39.2 +0.5
MDSI   Maura Dua          80.91 269   P       P        21 10 37.3 -1.7
          comp=Z,135nm,0.9s
P17K   Kvichak River      80.94   9   P       P        21 10 41.1 +3.1
          baz=196
N14K   Kuskokwak Cree     81.00   6   P       P        21 10 41.8 +3.5
          baz=192
Q20K   Shuyak Island      81.04  11   P       P        21 10 41.6 +3.0
          baz=200
M11K   Mekoryuk           81.08   4   P       P        21 10 41.5 +2.7
          baz=187
O16K   Kokwok River B     81.09   8   P       P        21 10 41.5 +2.7
          baz=195
Q19K   Cape Douglas,      81.12  10   P       P        21 10 42.0 +2.9
          baz=199
P18K   Big Mountain,      81.31  10   IAmb    IAmb     21 10 59.6
          comp=Z,67nm,1.6s
P18K   Big Mountain,      81.31  10   P       P        21 10 42.2 +2.1
          baz=198,SNR=6.3
M13K   Dall Lake          81.33   5   P       P        21 10 43.1 +3.1
          baz=190
USRK   Ussuriysk Ar.      81.39 324           P        21 10 41.8 +1.0
USRK   Ussuriysk Ar.      81.39 324   P       P        21 10 41.0 +0.1
          comp=Z,5.5nm,0.8s,baz=116,slow=4.4,SNR=9.4
USRK                                  LR      LR       21 43 07.0
          comp=Z,230nm,20.2s,baz=137,slow=33
          comp=Z,5.5nm,0.8s
USRK   Ussuriysk Ar.      81.39 324   P       P        21 10 41.8 +1.0
O17K   Koliganek Bris     81.40   8   P       P        21 10 43.8 +3.4
          baz=196
N15K   Kwethluk River     81.41   7   P       P        21 10 43.6 +3.1
          baz=193
DUN6   Lazy B Ranch       81.48  51   IAmb    IAmb     21 10 45.0
          comp=Z,46nm,1.2s
O18K   Koktuh Hills       81.75   9   P       P        21 10 45.6 +3.2
          baz=198
M14K   Bethel             81.78   6   P       P        21 10 44.6 +2.1
          baz=191
M15K   Kasigluk River     81.86   7   P       P        21 10 45.5 +2.7
          baz=192
N16K   Nishlik Lake       81.86   7   P       P        21 10 45.9 +2.9
          baz=194
P19K   Oil Pt             81.88  10   P       P        21 10 46.1 +3.1
          baz=200
N17K   Nushagak Hills     82.11   8   P       P        21 10 47.2 +3.0
          baz=196
HOM    Homer              82.16  11   P       P        21 10 47.3 +2.8
          baz=201
L14K   Kuka Creek         82.30   5   P       P        21 10 48.1 +2.9
          baz=191
M16K   Timber Creek       82.37   7   P       P        21 10 47.8 +2.2
          baz=194,SNR=5.6
O20K   Slope Mountain     82.39  11   P       P        21 10 48.3 +2.5
          baz=200
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BRSE   Bradley Lake S     82.41  12   P       P        21 10 48.5 +2.7
          baz=202
N18K   Kilae Creek        82.44   9   P       P        21 10 49.4 +3.4
          baz=197
G08A   Pilot Rock         82.52  36   IAmb    IAmb     21 11 09.0
          comp=Z,14nm,1.1s
MAW    Mawson             82.61 199   P       P        21 10 47.2 +0.3
          comp=Z,12nm,0.8s,baz=142,slow=8.1,SNR=15
          comp=Z,12nm,0.8s
H03S2  Juan Fernandez     82.64 123   T       T        22 43 14.7
          baz=247,slow=75,SNR=185
H03S1  Juan Fernandez     82.66 123   T       T        22 43 19.9
          baz=247,slow=75,SNR=148
H03S3  Juan Fernandez     82.66 123   T       T        22 43 18.7
          baz=247,slow=75,SNR=213
KSI    Kapahiang          82.68 269   P       P        21 10 47.5 -0.9
K13K   Kusilvak Mount     82.73   4   P       P        21 10 50.8 +3.4
          baz=189
L15K   Ungalak Mounta     82.74   6   P       P        21 10 49.8 +2.3
          baz=192
N19K   Bonanza Creek      82.78   9   P       P        21 10 50.1 +2.2
          baz=198
ESPZ   Base Esperanza     82.87 156   P       P        21 10 48.4 +0.1
ESPZ                                  IAmb    IAmb     21 10 50.1
          comp=Z,17nm,1.1s
M17K   Holitna River      82.93   8   P       P        21 10 51.6 +3.1
          baz=196
L16K   Owhat River        82.98   7   P       P        21 10 52.0 +3.3
          baz=194
SEW    Seward             82.99  12   P       P        21 10 51.7 +2.9
          baz=203
MDJ    Mudanjiang         82.99 323   IAmb    IAmb     21 10 51.7
          comp=Z,18nm,1.0s
MDJ    Mudanjiang         82.99 323   P       P        21 10 50.0 +0.8
MDJ                                   pmax    pmax
          comp=Z,21nm,1.2s
MDJ    Mudanjiang         82.99 323   P       P        21 10 49.3 +0.1
NJ2    Nanjing            83.05 308  eP       P        21 10 51.3 +1.5
NJ2                                   pmax    pmax
          comp=Z,18nm,0.5s
MFID   Camas Ranch        83.12  39   IAmb    IAmb     21 11 17.1
          comp=Z,15nm,1.2s
M18K   Stony River        83.23   9   P       P        21 10 52.3 +2.3
          baz=197
K15K   Wolf Creek Mou     83.34   6   P       P        21 10 53.9 +3.3
          baz=192
MYKOM  Kota Tinggi        83.41 274   P       P        21 10 52.1  0.0
Q16A   Castle Valley      83.43  44   IAmb    IAmb     21 11 15.4
          comp=Z,23nm,1.4s
L17K   Donlin             83.53   7   P       P        21 10 54.7 +3.2
          baz=195
TMUT   Trail Mountain     83.61  44   IAmb    IAmb     21 10 56.2
          comp=Z,24nm,1.0s
J14K   Nanvaranak Lak     83.62   5   P       P        21 10 55.0 +3.0
          baz=190
VHRN   Van Horn           83.64  54   IAmb    IAmb     21 10 55.7
          comp=Z,37nm,2.0s
D08A   Wollman Farm,      83.66  34   IAmb    IAmb     21 10 55.1
          comp=Z,10nm,1.0s
L18K   Granite Mounta     83.81   8   IAmb    IAmb     21 11 14.0
          comp=Z,25nm,1.2s
L18K   Granite Mounta     83.81   8   P       P        21 10 55.7 +2.7
          baz=196
Y22D   IRIS PASSCAL I     83.82  50   P       P        21 10 54.8 +0.9
          baz=240
M19K   Big River Lodg     83.83   9   P       P        21 10 55.1 +2.0
          baz=198
RC01   Rabbit Creek A     83.85  12   P       P        21 10 56.2 +3.0
          baz=203
V35K   Ketchikan          83.87  23   P       P        21 10 55.3 +1.9
          baz=219
PWL    Port Wells         83.91  12   P       P        21 10 56.4 +2.8
          baz=204
SRU    San Rafael Swe     83.96  44   IAmb    IAmb     21 10 57.3
          comp=Z,20nm,1.0s
TXAR   Lajitas Array      83.97  56           P        21 10 56.1 +1.3
TXAR   Lajitas Array      83.97  56   P       P        21 10 56.0 +1.3
          comp=Z,3.8nm,1.0s,baz=215,slow=6.1,SNR=24
TXAR                                  LR      LR       21 42 59.3
          comp=Z,74nm,19.6s,baz=269,slow=32
          comp=Z,3.8nm,1.0s
TXAR   Lajitas Array      83.97  56   P       P        21 10 56.1 +1.3
SIT    Sitka              83.98  20   P       P        21 10 56.6 +2.7
          baz=216
HVU    Hansel Valley      84.00  41   IAmb    IAmb     21 11 16.4
          comp=Z,12nm,1.0s
M20K   Styx River         84.00  10   P       P        21 10 56.0 +1.9
          baz=200
SUA    Susitna One        84.01  11   IAmb    IAmb     21 11 15.0
          comp=Z,15nm,0.7s
SUA    Susitna One        84.01  11   P       P        21 10 57.0 +2.8
          baz=202
L19K   White Mountain     84.03   9   P       P        21 10 56.6 +2.4
          baz=198
HLID   Hailey             84.04  39   IAmb    IAmb     21 11 17.4
          comp=Z,15nm,1.1s
K17K   Iditarod           84.10   7   P       P        21 10 57.5 +3.0
          baz=195
EYAK   Cordova Ski Ar     84.16  14   P       P        21 10 57.8 +3.0
          baz=206
GLI    Glacier Island     84.17  13   P       P        21 10 58.3 +3.4
          baz=205
SKT    Skwentna           84.36  10   P       P        21 10 59.4 +3.6
          baz=201
J16K   Anvik River        84.40   6   P       P        21 10 58.9 +2.9
          baz=192
P18A   Preston Nutter     84.42  44   IAmb    IAmb     21 11 19.1
          comp=Z,11nm,1.0s
L20K   Farewell, AK       84.45   9   P       P        21 10 59.2 +2.8
          baz=199
PV18   Skein Mesa, Pa     84.57  46   IAmb    IAmb     21 11 01.1
          comp=Z,51nm,1.8s
BSUT   Blindstream Ca     84.58  43   IAmb    IAmb     21 11 00.5
          comp=Z,11nm,0.9s
PV20   West Nyswonger     84.58  46   IAmb    IAmb     21 11 23.1
          comp=Z,20nm,1.1s
ANMO   Albuquerque        84.58  50           P        21 10 59.1 +1.3
ANMO                                  IAmb    IAmb     21 11 00.7
          comp=Z,15nm,1.1s
ANMO   Albuquerque        84.58  50   LR      LR       21 45 10.1
          comp=Z,181nm,18.6s,baz=8.5,slow=33
ANMO   Albuquerque        84.58  50d iP       P        21 10 59.3 +1.4
ANMO                                  pmax    pmax
          comp=Z,17nm,1.1s
J17K   VABM Dome          84.67   7   P       P        21 11 00.4 +3.0
          baz=194
MESA   MESA               84.72  15   P       P        21 11 00.8 +2.9
          baz=210
KLR    Kul'dur            84.76 328   P       P        21 10 57.6 -0.5
          comp=Z,3.2nm,1.0s,baz=110,slow=10.0,SNR=5.1
KLR                                   LR      LR       21 44 47.3
          comp=Z,78nm,19.7s,baz=148,slow=33
          comp=Z,3.2nm,1.0s
KLR    Kul'dur            84.76 328⇑eP    P        21 10 58.5 +0.4
KLR                                   pmax    pmax
          comp=Z,7.0nm,1.4s
BMRM   Bremner River      84.79  14   P       P        21 11 01.7 +3.6
          baz=207
CN2    Changchun          84.90 321   P       P        21 10 59.8 +0.8
CN2                                   pmax    pmax
          comp=Z,20nm,1.5s
BNX    BinXian            84.90 323 ⇓P        P        21 10 59.8 +0.9
BNX                                   S       SKSac    21 21 25.5 +2.1
BNX                                   pmax    pmax
          comp=Z,14nm,1.4s
BNX                                   LR      LR
          comp=Z,110nm,20.1s
BNX                                   LR      LR
          comp=Z,170nm,17.9s
BNX                                   LR      LR
          comp=Z,180nm,16.8s
I17K   Unalakleet         84.99   6   P       P        21 11 02.1 +3.2
          baz=192
SCM    Sheep Creek Mo     85.00  12   P       P        21 11 02.9 +3.7
          baz=205
J18K   Innoko River       85.01   8   IAmb    IAmb     21 11 20.3
          comp=Z,25nm,1.1s
J18K   Innoko River       85.01   8   P       P        21 11 01.6 +2.5
          baz=196,SNR=6.8
MA2    Magadan            85.11 343   P       P        21 10 58.8 -0.8
          comp=Z,2.1nm,0.3s,baz=148,slow=6.7,SNR=5.1
MA2                                   LR      LR       21 45 02.1
          comp=Z,73nm,19.6s,baz=156,slow=33
          comp=Z,2.1nm,0.3s
MA2    Magadan            85.11 343⇓iP    P        21 10 59.8 +0.2
MA2                                   pmax    pmax
          comp=Z,45nm,3.6s
K20K   Telida             85.26   9   P       P        21 11 03.6 +3.3
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          baz=199
N25K   Chitina, Valde     85.36  14   P       P        21 11 03.1 +2.1
          baz=207
NEW    Newport            85.36  34   LR      LR       21 41 21.2
          comp=Z,268nm,21.8s,baz=217,slow=30
P29M   Windy Craggy       85.37  17   P       P        21 11 04.0 +3.0
          baz=214
M24K   Tolsona, Glenn     85.48  13   P       P        21 11 04.7 +3.2
          baz=206
MCARA  McCarthy VSAT      85.52  14   P       P        21 11 04.9 +3.2
          baz=209
CTG    Chitna Glacier     85.56  15   P       P        21 11 05.2 +3.1
          baz=210
AHID   Auburn Hatcher     85.58  41   IAmb    IAmb     21 11 29.6
          comp=Z,12nm,1.1s
H16K   Elim               85.59   5   P       P        21 11 05.2 +3.2
          baz=191
WAT6   Susitna Watana     85.60  12   P       P        21 11 04.7 +2.5
          baz=204
CAST   Castle Rocks       85.62  10   IAmb    IAmb     21 11 21.5
          comp=Z,17nm,1.0s
CAST   Castle Rocks       85.62  10   P       P        21 11 04.6 +2.5
          baz=200
PLBC   Pleasant Camp      85.62  18   P       P        21 11 04.7 +2.5
          baz=215
T35M   Bob Quinn          85.63  22   P       P        21 11 05.0 +2.7
          baz=220
J19K   Poorman            85.66   8   IAmb    IAmb     21 11 30.4
          comp=Z,13nm,1.1s
J19K   Poorman            85.66   8   P       P        21 11 05.1 +2.8
          baz=197
WAT1   Susitna Watana     85.67  11   P       P        21 11 04.8 +2.3
          baz=204
O28M   Mount Upton        85.68  16   P       P        21 11 04.9 +2.0
          baz=211
O29M   Mount Kennedy      85.71  17   P       P        21 11 05.6 +2.8
          baz=213
WHN    Wuhan              85.73 305   P       P        21 11 04.5 +1.1
WHN                                   pmax    pmax
          comp=Z,60nm,1.2s
G15K   Niukluk            85.81   4   P       P        21 11 05.8 +2.8
          baz=189
SKAG   Skagway            85.93  19   P       P        21 11 06.7 +3.0
          baz=216
KTH    Kantishna Hill     85.93  10   IAmb    IAmb     21 11 22.9
          comp=Z,22nm,1.2s
TRF    Thorofare Moun     85.94  10   IAmb    IAmb     21 11 32.2
          comp=Z,24nm,0.9s
TRF    Thorofare Moun     85.94  10   P       P        21 11 06.5 +2.6
          baz=202
HARP   HAARP              85.95  13   P       P        21 11 06.1 +2.3
          baz=207
P30M   Million Dollar     86.00  18   P       P        21 11 06.0 +1.8
          baz=214
CHUM   Lake Minchumin     86.02   9   P       P        21 11 06.9 +2.9
          baz=200
J20K   Nowinta River      86.03   9   IAmb    IAmb     21 11 25.2
          comp=Z,39nm,1.2s
J20K   Nowinta River      86.03   9   P       P        21 11 06.9 +2.7
          baz=198,SNR=12
S34M   Telegraph Cree     86.04  21   P       P        21 11 07.0 +2.7
          baz=220
H17K   Granite Mounta     86.09   6   P       P        21 11 07.5 +3.1
          baz=193
CMIG   Matias Romero      86.10  70   LR      LR       21 43 35.6
          comp=Z,125nm,18.2s,baz=182,slow=31
DHY    Denali Highway     86.12  12   P       P        21 11 07.7 +2.9
          baz=205
F14K   Arctic Creek       86.15   3   P       P        21 11 08.1 +3.5
          baz=187
TNA    Tin City           86.16   2   P       P        21 11 08.1 +3.4
          baz=186
YUK8   Steele Glacier     86.23  16   P       P        21 11 07.9 +2.4
          baz=212
PLCA   Paso Flores        86.27 132   LR      LR       21 40 43.1
          comp=Z,125nm,21.2s,baz=230,slow=29
YUK6   Outpost Mounta     86.30  17   P       P        21 11 07.9 +2.1
          baz=213
G16K   Koyuk River        86.33   5   P       P        21 11 07.6 +2.1
          baz=191
TIA    Tai'an             86.33 311   P       P        21 11 06.5 +0.2
TIA                                   pmax    pmax
          comp=Z,13nm,1.2s
DRIO   Del Rio            86.38  57   IAmb    IAmb     21 11 08.5
          comp=Z,13nm,0.8s
PAX    Paxson             86.40  13   P       P        21 11 08.4 +2.3
          baz=206
M26K   Nabesna, AK        86.42  14   P       P        21 11 08.5 +2.3
          baz=209,SNR=7.8
BPAW   Bear Paw Mtn.      86.43  10   P       P        21 11 08.7 +2.5
          baz=201
HYT    Haines Junctio     86.43  17   P       P        21 11 08.8 +2.4
          baz=214
MCK    McKinley           86.44  11   P       P        21 11 08.7 +2.5
          baz=203
H18K   Honhosa River      86.46   6   P       P        21 11 08.9 +2.7
          baz=194
F15K   North Star Dit     86.47   4   P       P        21 11 09.4 +3.1
          baz=189
Q32M   Nakina River       86.48  20   P       P        21 11 09.5 +2.7
          baz=218
P32M   Atlin              86.53  19   P       P        21 11 09.8 +3.1
          baz=217
PDAR   Pinedale Array     86.54  42   P       P        21 11 07.9 +0.4
          comp=Z,3.1nm,0.8s,baz=204,slow=3.3,SNR=6.1
          comp=Z,3.1nm,0.8s
G17K   Kiwalik Mounta     86.57   5   P       P        21 11 09.9 +3.1
          baz=192
I20K   Naaghedeneel       86.58   8   P       P        21 11 09.8 +3.0
          baz=198
M27K   Edge Creek, AK     86.64  14   P       P        21 11 09.7 +2.3
          baz=210,SNR=6.3
O30N   Mendenhall         86.78  18   P       P        21 11 10.5 +2.5
          baz=215
MSTX   Muleshoe           86.79  52   IAmb    IAmb     21 11 10.9
          comp=Z,13nm,0.9s
DLBC   Dease Lake         86.82  21   P       P        21 11 10.4 +2.2
          baz=220
L26K   Log Cabin Wild     86.89  13   P       P        21 11 11.2 +2.8
          baz=208
IPM    Ipoh               87.00 276   P       P        21 11 11.0 +0.9
H19K   Roundabout Mou     87.03   7   P       P        21 11 11.8 +2.9
          baz=196,SNR=6.7
WHY    Whitehorse         87.04  18   P       P        21 11 12.1 +2.8
          baz=216
MNSI   Mandailing Nat     87.05 272   P       P        21 11 09.5 -0.8
          comp=Z,54nm,0.9s
N30M   Aishikik Lake      87.08  17   P       P        21 11 11.7 +2.3
          baz=214
K24K   Donnelly Dome      87.09  12   P       P        21 11 12.0 +2.6
          baz=206
G18K   Tagagawik          87.15   6   P       P        21 11 11.9 +2.3
          baz=194
H20K   Anotleneega Mo     87.19   8   P       P        21 11 12.4 +2.5
          baz=198
NEA2   Nenana             87.21  10   P       P        21 11 12.1 +2.2
          baz=203,SNR=5.7
RIDG   Independent Ri     87.22  12   P       P        21 11 12.3 +2.2
          baz=207,SNR=5.0
R33M   Jennings River     87.24  20   P       P        21 11 12.1 +1.8
          baz=220
L27K   Beaver Creek,      87.27  14   P       P        21 11 13.0 +2.7
          baz=210
SYO    Syowa Base         87.29 191⇑eP    P        21 11 09.0 -1.5
SYO    Syowa Base         87.29 191⇑ePcP  PcP      21 11 12.4 -0.1
I21K   Tanana             87.29   9   IAmb    IAmb     21 11 25.7
          comp=Z,11nm,0.9s
I21K   Tanana             87.29   9   P       P        21 11 12.6 +2.4
          baz=200
P33M   Teslin, Yukon      87.30  19   P       P        21 11 13.3 +2.8
          baz=218
POST   Post               87.32  53   IAmb    IAmb     21 11 12.9
          comp=Z,10nm,1.0s
MLY    Manley             87.34  10   IAmb    IAmb     21 11 30.6
          comp=Z,15nm,1.3s
MLY    Manley             87.34  10   P       P        21 11 12.5 +1.9
          baz=202,SNR=7.5
HDA    Harding Lake       87.41  11   P       P        21 11 12.9 +1.9
          baz=205
TROLL  Troll, Antarti     87.45 179 ⇑P        P        21 11 11.9 +0.5
          comp=Z,113nm,0.7s
HNDO   Hondo              87.48  57   IAmb    IAmb     21 11 14.2
          comp=Z,16nm,1.0s
M29M   Somme Creek        87.54  16   P       P        21 11 14.3 +2.6
          baz=213
SEY    Seymchan           87.55 345   P       P        21 11 11.5 -0.1
          comp=Z,10.0nm,0.8s,baz=151,slow=7.0,SNR=26
          comp=Z,10.0nm,0.8s
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Sta	Name	Dist	Az	Phase	ISC phase	Time	Res
SEY	Seymchan	87.55	345	c iP	P	21 11 12.0	+0.5
SEY				pmax	pmax		
	comp=Z,15nm,0.9s						
G19K	Purcell Mounta	87.56	7	P	P	21 11 13.9	+2.3
	baz=196						
HEH	HeiHe	87.60	327	eP	P	21 11 12.5	+0.4
HEH				pmax	pmax		
	comp=Z,17nm,1.4s						
HEH				LR	LR		
	comp=Z,170nm,15.0s						
HEH				LR	LR		
	comp=Z,190nm,14.8s						
HEH				LR	LR		
	comp=Z,350nm,17.0s						
SCRK	Sand Creek	87.60	13	P	P	21 11 14.2	+2.2
	baz=208,SNR=5.8						
SNAA	Sanae	87.61	177	⇑P	P	21 11 12.2	+0.1
	comp=Z,110nm,0.8s						
SNAA	Sanae	87.61	177		P	21 11 12.6	+0.5
SNAA	Sanae	87.61	177	P	P	21 11 12.2	+0.1
	comp=Z,3.2nm,0.9s,baz=195,slow=9.4,SNR=14						
	comp=Z,3.2nm,0.9s						
SNAA	Sanae	87.61	177	P	P	21 11 12.6	+0.5
SNAA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
H21K	Melozitna Rive	87.62	9	P	P	21 11 14.2	+2.3
	baz=200,SNR=5.8						
KULM	Kulim	87.64	277	P	P	21 11 14.0	+0.8
I23K	Minto, Yukon-K	87.67	10	P	P	21 11 14.5	+2.5
	baz=203						
COLA	College	87.67	11	P	P	21 11 11.2	-0.9
F18K	Selawik	87.74	6	P	P	21 11 14.6	+2.3
	baz=193						
ILAR	Eielson Array	87.75	11	P	P	21 11 13.7	+1.2
	comp=Z,5.7nm,1.1s,baz=208,slow=4.4,SNR=16						
IMAR	Indian Mountai	87.81	8	P	P	21 11 14.5	+1.7
J25K	Salcha River,	87.90	12	P	P	21 11 15.5	+2.2
	baz=206						
E17K	Hotham Inlet	88.03	5	P	P	21 11 15.9	+2.1
	baz=191						
H22K	Ishtalitna Cre	88.05	9	P	P	21 11 16.2	+2.3
	baz=201,SNR=7.4						
K27K	Chicken	88.05	13	P	P	21 11 15.9	+1.9
	baz=210						
M30M	Minto, Yukon	88.08	16	P	P	21 11 16.7	+2.5
	baz=214						
VNA2	Neumayer--Watz	88.08	176	⇑P	P	21 11 14.9	+0.6
	comp=Z,9.1nm,0.7s,baz=174,slow=3.8						
F19K	Shaleruckik Mo	88.15	6	IAmb	IAmb	21 11 35.2	
	comp=Z,30nm,1.6s						
F19K	Shaleruckik Mo	88.15	6	P	P	21 11 17.2	+2.9
	baz=195						
J26L	Joseph Creek	88.16	13		P	21 11 17.1	+2.6
J26L				IAmb	IAmb	21 11 35.6	
	comp=Z,25nm,1.0s						
J26L	Joseph Creek	88.16	13	P	P	21 11 17.0	+2.5
	baz=208,SNR=8.2						
L29M	L29M	88.18	15	IAmb	IAmb	21 11 35.8	
	comp=Z,22nm,1.1s						
L29M	L29M	88.18	15	P	P	21 11 17.3	+2.7
	baz=213						
H23K	Yukon River	88.27	10	P	P	21 11 18.0	+3.0
	baz=203						
VNA1	Neumayer--Stat	88.28	175	⇑P	P	21 11 15.7	+0.5
	comp=Z,16nm,1.1s						
G21K	Allakaket	88.34	8	P	P	21 11 18.5	+3.2
	baz=199						
PSI	Prapat	88.36	274	LR	LR	21 52 40.9	
	comp=Z,371nm,18.5s,baz=138,slow=37						
PSI	Prapat	88.36	274	P	P	21 11 16.2	-0.6
M31M	Drury Creek, Y	88.42	17	P	P	21 11 19.1	+3.3
	baz=216						
E18K	Tukpahlearik C	88.46	5	P	P	21 11 18.7	+2.9
	baz=192						
D17K	Noatak River	88.55	4	P	P	21 11 19.7	+3.5
	baz=190						
F20K	Avaraart Lake	88.58	7	P	P	21 11 19.6	+3.3
	baz=197						
PRP	Porcupine Dome	88.68	11	P	P	21 11 19.9	+2.8
	baz=206						
DAWY	Dawson	88.69	14	P	P	21 11 20.1	+3.1
	baz=212						
FARO	Faro, Yukon	88.74	18	P	P	21 11 20.1	+2.8
	baz=217						
E19K	Redstone River	88.81	6	IAmb	IAmb	21 11 38.5	
	comp=Z,13nm,1.1s						
E19K	Redstone River	88.81	6	P	P	21 11 20.7	+3.2
	baz=196						
TOAD	Toad River Com	88.82	23	P	P	21 11 20.3	+2.5
	baz=225						
LYN	LuoYang	88.94	308	P	P	21 11 22.0	+3.1
LYN				pmax	pmax		
	comp=Z,29nm,0.8s						
K29M	Barlow Dome	88.95	15	IAmb	IAmb	21 11 39.5	
	comp=Z,17nm,1.1s						
K29M	Barlow Dome	88.95	15	P	P	21 11 21.1	+2.8
	baz=214						
C16K	Lisburne Hills	88.99	3	P	P	21 11 21.1	+2.8
	baz=188						
G22K	Bettles	89.00	9	P	P	21 11 21.2	+2.9
	baz=201						
G23K	Bananza Creek	89.02	9	P	P	21 11 21.0	+2.5
	baz=202						
F21K	Alatna River	89.02	8	P	P	21 11 21.1	+2.6
	baz=199						
GSI	Gunungsitoli	89.10	272	P	P	21 11 21.6	+1.4
GSI	Gunungsitoli	89.10	272	P	P	21 11 21.5	+1.4
	comp=Z,97nm,1.1s						
H25L	Birch Creek	89.30	11	P	P	21 11 22.8	+3.1
	baz=206						
C17K	DeLong Mountai	89.31	4	P	P	21 11 22.1	+2.3
	baz=190						
ENH	Enshi	89.40	303	P	P	21 11 21.3	+0.1
G24K	Hadweenzic Riv	89.41	10	P	P	21 11 23.0	+2.7
	baz=205						
F22K	John River	89.46	8	P	P	21 11 23.5	+2.9
	baz=200						
COLD	Coldfoot	89.47	9	P	P	21 11 23.4	+2.8
	baz=202						
I27K	Kandik River	89.52	13	P	P	21 11 23.8	+2.8
	baz=210						
C18K	Utukok River	89.62	5	P	P	21 11 23.7	+2.3
	baz=192						
MMPY	Sheldon Lake,	89.65	18	IAmb	IAmb	21 11 48.0	
	comp=Z,27nm,1.6s						
MMPY	Sheldon Lake,	89.65	18	P	P	21 11 23.9	+2.3
	baz=219						
E20K	Nigu River	89.69	6	P	P	21 11 24.3	+2.6
	baz=196						
BILL	Bilibino	89.73	353	⇑eP	P	21 11 22.1	+0.3
BILL				pmax	pmax		
	comp=Z,11nm,2.5s						
D19K	Kuna River	89.73	6	P	P	21 11 24.5	+2.7
	baz=195						
I28M	Miner Creek	89.75	13	IAmb	IAmb	21 11 42.7	
	comp=Z,28nm,1.8s						
I28M	Miner Creek	89.75	13	P	P	21 11 24.6	+2.5
	baz=212						
ZEA	Zeya	89.77	329	eP	P	21 11 23.1	+0.8
ZEA				pmax	pmax		
	comp=N,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SRIT	Nakonsritamara	89.78	279	P	P	21 11 23.0	-0.3
BEAVL	Fort Liard	89.83	22	P	P	21 11 24.9	+2.5
	baz=225						
J30M	Hart River	89.85	15	P	P	21 11 24.7	+2.1
	baz=215						
I29M	Ogilvie Camp,	90.04	14	P	P	21 11 25.3	+2.0
	baz=213						
H27K	Steamboat Moun	90.09	13	IAmb	IAmb	21 11 45.2	
	comp=Z,21nm,1.4s						
H27K	Steamboat Moun	90.09	13	P	P	21 11 25.5	+1.9
	baz=210						
D20K	Etivluk River	90.09	6	P	P	21 11 25.3	+1.8
	baz=196						
F24K	Squaw Lake	90.09	10	P	P	21 11 25.7	+2.2
	baz=204						
E22K	Anaktuvuk Pass	90.10	8	P	P	21 11 25.7	+2.2
	baz=201						
E21K	Killik River	90.12	7	P	P	21 11 26.4	+2.8
	baz=199						
GYA	Guiyang	90.15	298	⇑P	P	21 11 26.8	+1.9
GYA				pmax	pmax		
	comp=Z,13nm,1.7s						
KOTAN	Kotaneelee Air	90.15	22	P	P	21 11 25.7	+1.8
	baz=226						
C19K	Lookout Ridge	90.20	5	IAmb	IAmb	21 11 44.5	
	comp=Z,11nm,0.8s						
C19K	Lookout Ridge	90.20	5	P	P	21 11 26.2	+2.2
	baz=193						
G26K	Porcupine Rive	90.28	11	P	P	21 11 26.5	+2.1
	baz=208						
B18K	Kokolik River	90.28	4	P	P	21 11 27.2	+2.9
	baz=191						
E23K	Chandalar	90.33	9	P	P	21 11 27.6	+2.9
	baz=203						
I30M	Mount Dempster	90.37	15	IAmb	IAmb	21 11 45.7	
	comp=Z,33nm,1.5s						
I30M	Mount Dempster	90.37	15	P	P	21 11 27.5	+2.5
	baz=215						
E24K	Your Creek	90.51	9	P	P	21 11 28.8	+3.3
	baz=204						
F25K	Christian Rive	90.53	10	P	P	21 11 28.9	+3.3
	baz=206						
G27K	Doyon Strip	90.56	12	P	P	21 11 29.0	+3.3
	baz=210						
D22K	Ayikyak River	90.69	8	P	P	21 11 29.9	+3.6
	baz=200						
C21K	Knifeblade Rid	90.71	7	P	P	21 11 28.7	+2.4
	baz=198						
XLT	XiLinHaoTe	90.72	317	eP	P	21 11 27.8	+0.7
XLT				pmax	pmax		
	comp=Z,15nm,0.7s						
H29M	Whitestone	90.75	14	P	P	21 11 29.6	+3.1
	baz=213						
TOLK	Toolik Lake Re	90.88	9	P	P	21 11 30.5	+3.3
	baz=203						
F26K	Sheenjek River	90.88	11	P	P	21 11 30.5	+3.3
	baz=208						
E25K	Arctic Village	91.02	10	P	P	21 11 30.9	+3.1
	baz=206						
D23K	Nanushuk River	91.03	8	P	P	21 11 30.1	+2.3
	baz=202						
B21K	Ikpikpuk River	91.17	7	P	P	21 11 30.8	+2.4
	baz=198						
MLSI	Meulaboh, Aceh	91.23	274	P	P	21 11 31.2	+1.1
	comp=Z,114nm,1.3s						
EPYK	Eagle Plains	91.24	14	P	P	21 11 31.8	+2.9
	baz=214						
H31M	Peel River	91.34	15	P	P	21 11 32.2	+2.8
	baz=217						
XAN	Xi'an	91.38	306	⇑P	P	21 11 31.3	+0.9
XAN				pmax	pmax		
	comp=Z,22nm,1.0s						
G29M	Pine Creek	91.41	13	P	P	21 11 32.7	+3.1
	baz=213						
D24K	Happy Valley	91.45	9	P	P	21 11 32.7	+3.0
	baz=203						
F28M	Old Crow	91.61	12	P	P	21 11 33.7	+3.1
	baz=212						
E27K	Coleen River	91.78	12	IAmb	IAmb	21 11 53.1	
	comp=Z,12nm,1.1s						
E27K	Coleen River	91.78	12	P	P	21 11 34.3	+2.9
	baz=210						
C23K	Itkillik River	91.85	8	P	P	21 11 34.5	+2.9
	baz=202						
G30M	tAoh Zraii Nji	91.86	14	P	P	21 11 34.6	+2.8
	baz=215						
D25K	Kavik River	91.97	9	P	P	21 11 35.1	+2.8
	baz=206						
NNA	Nana	92.26	104	LR	LR	21 45 38.8	
	comp=Z,77nm,18.6s,baz=234,slow=31						
G31M	Satah River	92.26	15	P	P	21 11 36.7	+3.2
	baz=217						
HHC	Hu-ho-hao-te	92.32	313	eP	P	21 11 35.5	+0.9
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,130nm,5.5s						
A22K	Sinclair Lake	92.46	6	P	P	21 11 36.9	+2.6
	baz=198						
F30M	Barrier River	92.47	14	P	P	21 11 37.5	+2.9
	baz=215						
E28M	Babbage River	92.53	12	IAmb	IAmb	21 11 55.5	
	comp=Z,12nm,1.1s						
E28M	Babbage River	92.53	12	P	P	21 11 37.6	+2.8
	baz=212						
JTS	Las Juntas de	92.59	80	LR	LR	21 42 22.1	
	comp=Z,118nm,21.2s,baz=255,slow=28						
ATAH	Atahualpa	92.59	99	LR	LR	21 43 12.3	
	comp=Z,125nm,20.4s,baz=253,slow=29						
A21K	Barrow	92.61	5	P	P	21 11 37.6	+2.6
	baz=196						
C27K	Jago River	92.67	10	P	P	21 11 38.5	+3.1
	baz=208						
E29M	Blow River	92.67	13	IAmb	IAmb	21 11 56.3	
	comp=Z,8.9nm,1.2s						
E29M	Blow River	92.67	13	P	P	21 11 38.5	+3.1
	baz=213						
F31M	Tsiigehtchic	92.80	14	P	P	21 11 38.9	+2.8
	baz=217						
D27M	Malcolm River	92.81	11	P	P	21 11 38.9	+2.8
	baz=211						
KMI	Kunming	92.92	296	P	P	21 11 39.0	+1.1
KMI				pmax	pmax		
	comp=Z,14nm,1.4s						
KMI				LR	LR		
	comp=Z,250nm,24.0s						
BTO	Baotou	93.28	312	eP	P	21 11 41.0	+1.9
BTO				PP	PP	21 15 26.5	+3.4
BTO				S	S	21 22 45.3	-1.4
BTO				pmax	pmax		
	comp=Z,19nm,0.5s						
BTO				pmax	pmax		
	comp=Z,780nm,7.6s						
BTO				LR	LR		
	comp=Z,180nm,7.8s						
BTO				LR	LR		
	comp=Z,200nm,11.6s						
BTO				LR	LR		
	comp=Z,240nm,6.0s						
INK	Inuvik	93.54	14	LR	LR	21 50 20.6	
	comp=Z,112nm,18.5s,baz=212,slow=33						
YAK	Yakutsk	93.83	337	LR	LR	21 52 06.9	
	comp=Z,38nm,18.7s,baz=161,slow=34						
CMAR	Chiang Mai Arr	93.85	288		P	21 11 42.7	+0.7
CMAR	Chiang Mai Arr	93.85	288	P	P	21 11 42.9	+0.8
	comp=Z,4.2nm,0.7s,baz=99,slow=3.0,SNR=23						
CMAR				PP	PP	21 15 27.9	0.0
	comp=Z,1.2nm,0.8s,baz=125,slow=5.3,SNR=4.1						
CMAR				LR	LR	21 56 22.4	
	comp=Z,26nm,18.4s,baz=95,slow=37						
	comp=Z,4.2nm,0.7s						
CMAR	Chiang Mai Arr	93.85	288	i P	P	21 11 43.2	+1.1
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CHTO	Chiang Mai	93.98	288		P	21 11 43.2	+0.6
CHTO				IAmb	IAmb	21 11 44.9	
	comp=Z,10nm,0.8s						
CHTO	Chiang Mai	93.98	288	P	P	21 11 44.1	+1.5
CHTO	Chiang Mai	93.98	288	P	P	21 11 43.2	+0.6
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH	PanZhiHua	94.26	297	P	P	21 11 45.3	+1.4
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,100nm,5.7s						
YKA	Yellowknife Ar	95.16	24	P	P	21 11 47.7	+0.7
	comp=Z,0.4nm,0.7s,baz=251,slow=3.8,SNR=3.0						
	comp=Z,0.4nm,0.7s						
PB01	IPOC Station P	95.25	115	P	P	21 11 48.3	-0.3
PB01				IAmb	IAmb	21 11 59.6	
	comp=Z,26nm,1.5s						
ECSD	EROS Data Cent	95.34	45	IAmb	IAmb	21 11 49.8	
	comp=Z,14nm,1.1s						
FFC	Flin Flon	96.79	34	i P	P	21 11 57.8	+3.2
ULN	Ulaanbaatar	98.10	318	deP	P	21 12 01.3	+0.4
ULN				pmax	pmax		
	comp=Z,7.0nm,1.5s						
ULM	Lac du Bonnet	98.34	39	LR	LR	21 50 48.0	
	comp=Z,217nm,20.6s,baz=304,slow=32						
LPAZ	La Paz	98.38	111	P	Pdif	21 12 05.1	+1.5
	comp=Z,0.4nm,0.4s,baz=187,slow=5.3,SNR=2.5						
LPAZ				PKKPbc	PKKPbc	21 28 34.0	+0.2
	comp=Z,0.6nm,0.5s,baz=72,slow=3.2,SNR=4.6						
LPAZ				LR	LR	21 46 01.5	
	comp=Z,109nm,21.8s,baz=242,slow=29						
	comp=Z,0.4nm,0.4s						
SONM	Songino Array	98.50	318	P	P	21 12 02.5	-0.2
	comp=Z,1.1nm,0.9s,baz=112,slow=3.5,SNR=6.6						
SONM				PP	PP	21 16 01.7	-1.7
	comp=Z,1.1nm,1.0s,baz=101,slow=7.7,SNR=4.9						
SONM				LR	LR	21 54 14.0	
	comp=Z,46nm,18.9s,baz=118,slow=34						
	comp=Z,1.1nm,0.9s						
TIXI	Tiksi	100.01	344	LR	LR	21 51 15.3	
	comp=Z,79nm,21.6s,baz=181,slow=32						
GTA	Gaotai	100.14	308	eP	Pdif	21 12 10.3	+0.1
GTA				pP	sP	21 12 14.5	+1.5
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
WMQ	Urumqi	110.02	310	ePKP	PKiKP	21 16 56.5	+0.7
WMQ				LR	LR		
	comp=E,280nm,22.9s						
WMQ				LR	LR		
	comp=Z,100nm,24.1s						
ZALV	Zalesovo Beam	113.12	321	PKiKP	PKiKP	21 17 00.3	-0.9
	comp=Z,1.7nm,0.6s,baz=247,slow=1.1,SNR=7.0						
ZALV				PP	PP	21 17 49.5	-1.5
	comp=Z,1.3nm,0.8s,baz=106,slow=5.3,SNR=3.9						
MK31	Makanchi Array	114.19	313	c iPKIKP	PKPdf	21 17 02.6	-1.0
MKAR	Makanchi Array	114.19	313	PKP	PKPdf	21 17 03.0	-0.6
	comp=Z,2.5nm,0.8s,baz=60,slow=2.9,SNR=22						
MKAR	Makanchi Array	114.19	313	PKIKP	PKPdf	21 17 03.0	-0.6
KURK	Kurchatov	116.80	317	PKIKP	PKPdf	21 17 08.0	-0.4
KURBB	Kurchatov Arra	116.86	317	PKP	PKPdf	21 17 08.0	-0.5
	comp=Z,3.2nm,0.7s,baz=95,slow=1.9,SNR=22						
KURBB				PP	PP	21 18 14.0	-3.4
	comp=Z,1.2nm,1.1s,baz=94,slow=7.3,SNR=6.6						
ULHL	Ulahol	118.18	308	P	PKPdf	21 17 11.7	0.0
	SNR=6.3						
KSH	Kashi	118.21	305	PKP	PKiKP	21 17 12.8	+1.1
TKM2	Tokmak 2	118.69	308	P	PKPdf	21 17 12.3	-0.3
	SNR=7.2						
AAK	Ala-Archa	119.49	308	⇓iPKIKP	PKPdf	21 17 13.9	-0.2
AAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
USP	Ospenovka	119.51	309	P	PKPdf	21 17 13.5	-0.5
	SNR=10.0						
EKS2	Erkin-Say	120.02	308	P	PKPdf	21 17 15.1	0.0
	SNR=6.5						
AML	Almayashu	120.07	307	P	PKPdf	21 17 15.9	+0.3
	SNR=5.7						
BVAR	Borovoye Array	121.75	320	PKP	PKPdf	21 17 17.8	-0.1
	comp=Z,5.7nm,0.8s,baz=90,slow=3.0,SNR=28						
BVAR				PP	PP	21 18 47.8	-3.3
	comp=Z,1.1nm,0.7s,baz=81,slow=9.2,SNR=1.9						
BRVK	Borovoye	121.81	320		PKPdf	21 17 17.3	-0.7
BRVK	Borovoye	121.81	320	c iPKIKP	PKPdf	21 17 17.4	-0.6
KKAR	Karatay Array	122.42	309		PKPdf	21 17 18.4	-1.1
KKAR	Karatay Array	122.42	309	PKIKP	PKPdf	21 17 18.4	-1.1
KBL	Kabul	123.41	298		PKPdf	21 17 21.7	-0.3
KBL	Kabul	123.41	298	PKIKP	PKPdf	21 17 21.7	-0.3
SIMJ	Simiganj	123.58	303		PKPdf	21 17 21.8	-0.3
SVE	Sverdlovsk	126.37	326	i PKIKP	PKPdf	21 17 27.1	+0.5
SVE				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SVE				MLR	MLR		
	comp=Z,215nm,21.0s						
ARTI	Arti	127.69	326		PKPdf	21 17 28.7	-0.5
ARTI	Arti	127.69	326	i PKIKP	PKPdf	21 17 28.8	-0.3
ARTI						21 19 27.5	
ARTI						21 24 39.8	
ARTI				SP	SP	21 29 28.3	-6.1
ARTI				SS	SS	21 36 34.8	-7.3
ABKAR	Akbulak array	128.91	317		PKPdf	21 17 31.5	-0.2
ARCES	ARCESS Array B	129.81	351	PKP	PKPdf	21 17 32.7	-0.2
	comp=Z,2.1nm,0.6s,baz=336,slow=2.7,SNR=7.0						
KIRV	Kirov	131.06	332	d iPKIKP	PKiKP	21 17 36.9	+0.5
KLMR	Klimovskoe	133.60	338	ePKIKP	PKPdf	21 17 39.8	-0.4
KLMR				pmax	pmax		
	comp=Z,11nm,1.6s						
BELG	Belogornoye	135.07	325	d iPKIKP	PKPdf	21 17 44.2	+1.0
FINES	FINESS Array B	137.02	346	PKP	PKPdf	21 17 45.5	-1.1
	comp=Z,5.1nm,1.1s,baz=218,slow=2.2,SNR=4.8						
HFS	Hagfors	140.29	354	PKhKP	PKPpre	21 17 45.0	
	comp=Z,3.8nm,1.0s,baz=104,slow=4.6,SNR=2.5						
KBZ	Khabaz	141.82	315	PKhKP	PKPpre	21 17 51.6	
	comp=Z,2.0nm,0.7s,baz=205,slow=4.5,SNR=5.1						
KIV	Kislovodsk	141.87	316	ePKIKP	PKiKP	21 17 58.7	-0.3
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SHA1	Shidzhatmaz	141.98	316	⇓iPKIKP	PKPdf	21 17 56.9	+0.4
MNK	Minsk	142.48	339	i PKiKP	PKiKP	21 17 59.9	+0.1
MNK				i PKiKP	PKiKP	21 17 59.9	+0.1
MNK				i PKiKP	PKiKP	21 17 59.9	+0.1
	comp=Z,8.0nm,0.8s,baz=35						
MNK				i PP	PP	21 21 02.3	-1.3
MNK				i PPP	PPP	21 24 10.9	
MNK				i SKS	SKSdf	21 25 05.8	-0.7
MNK				i SKKS	SKKSdf	21 34 24.1	-2.7
MNK				i SS	SS	21 39 41.8	+2.9
MNK				i SSS	SSS	21 45 01.5	
MNK				i LQ	LQ	22 12 56.3	
MNK				i LRM	MLR	22 22 22.1	
	comp=Z,81nm,18.9s						
MNK	Minsk	142.48	339	i PKIKP	PKiKP	21 17 59.8	+0.1
MNK				i		21 21 02.2	
MNK				i PPP	PPP	21 24 10.9	
MNK				i		21 25 05.8	
MNK				i SS	SS	21 39 41.7	+2.9
MNK				i SSS	SSS	21 45 01.5	
MNK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MNK				MLR	MLR		
	comp=Z,81nm,19.0s						
KMBO	Kilima Mbogo	142.57	238		PKPdf	21 17 54.9	-3.6
KMBO	Kilima Mbogo	142.57	238	PKHKP	PKPpre	21 17 54.9	
RAYN	Ar Rayn	143.50	282		PKPab	21 17 56.5	+0.6
RAYN	Ar Rayn	143.50	282	PKHKP	PKPpre	21 17 56.5	
GURO	Guroymak-BITLI	144.39	308		PKPbc	21 17 59.6	+0.3
ANN	Anapa	144.75	320	i PKIKP	PKPab	21 17 59.4	-0.4
ANN				e		21 18 03.7	
ANN				pmax	pmax		
	comp=Z,84nm,1.1s						
EKA	Eskdalemuir Ar	144.77	9	PKP	PKPbc	21 18 00.2	+0.5
	comp=Z,1.3nm,0.6s,baz=338,slow=2.8,SNR=5.6						
AKASG	Malin Array Be	145.01	334	PKP	PKPab	21 18 00.2	-0.4
	comp=Z,23nm,0.8s,baz=41,slow=4.4,SNR=62						
AKBB	Malin Array Si	145.01	334		PKPab	21 18 00.2	-0.4
AKBB	Malin Array Si	145.01	334	c iPKIKP	PKPab	21 18 00.2	-0.4
KIEV	Kiev	145.03	334		PKPab	21 18 00.2	-0.4
KIEV	Kiev	145.03	334	PKIKP	PKPab	21 18 00.2	-0.4
SIM	Simferopol'	146.60	323	ePKIKP	PKPdf	21 18 04.7	+0.5
SIM				pmax	pmax		
	comp=Z,47nm,0.8s						
SORM	Soroca	147.34	332	⇑P	PKPbc	21 18 07.8	+0.1
SORM	Soroca	147.34	332	⇑PKIKP	PKPbc	21 18 07.8	+0.1
DIKM	Dikmen	147.77	317	⇑P	PKPab	21 18 18.0	+6.6
PURM	Purcari	147.81	329	⇑P	PKPbc	21 18 10.2	+1.1
MILM	Milestii Mici	148.03	330	⇓P	PKPbc	21 18 09.6	0.0
MILM	Milestii Mici	148.03	330	⇓PKIKP	PKPbc	21 18 09.6	0.0
KWP	Kalwaria Pacla	148.31	339	ePKP	PKPbc	21 18 10.7	+0.4
OJC	Ojcow	148.66	343	ePKP	PKPbc	21 18 11.6	+0.4
VASR	Vaslui	148.71	331	⇓P	PKPbc	21 18 12.5	+1.0
KSP	Ksiaz	148.92	347	ePKP	PKPbc	21 18 12.8	+1.0
STHS	Stebnicka Huta	148.96	341	ePKP2	PKPbc	21 18 12.8	+0.8
STHS	Stebnicka Huta	148.96	341	ePKP	PKPbc	21 18 12.8	+0.8
STHS				e		21 18 17.5	
CLL	Collm	149.03	352	ePKIKP	PKPbc	21 18 11.0	-1.1
CLL				i		21 18 12.5	
CLL				i		21 18 16.5	
CLL				pmax	pmax		
	comp=Z,35nm,1.6s						
CLL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CLL	Collm	149.03	352	ePKPdf	PKPbc	21 18 11.0	-1.1
CLL				i PKPbc	sPKPdf	21 18 12.5	+1.7
	comp=Z,35nm,1.6s						
CLL				i PKPab	PKPab	21 18 16.5	+0.3
	comp=Z,8.0nm,0.8s						
CLL				i x	x	21 18 20.7	
CLL				i x	x	21 18 31.4	
	comp=Z,23nm,1.0s						
CLL				eSKPdf	SKPdf	21 21 38.0	-3.9
KOLS	Kolonicke sedl	149.05	339	ePKP2	PKiKP	21 18 14.2	+0.7
KOLS	Kolonicke sedl	149.05	339	ePKP	PKiKP	21 18 14.2	+0.7
KOLS				e		21 18 18.2	
BURAR	Bucovina Array	149.07	335		PKPdf	21 18 09.6	+1.2
BURAR	Bucovina Array	149.07	335	⇑P	PKPbc	21 18 13.3	+0.9
BURAR	Bucovina Array	149.07	335	⇑PKP2	PKPbc	21 18 13.3	+0.9
OSTC	Ostas	149.21	347	⇑ePKP	PKiKP	21 18 13.8	0.0
OSTC	Ostas	149.21	347	ePKP2	PKiKP	21 18 13.8	0.0
NIE	Niedzica	149.24	342	ePKP	PKPbc	21 18 13.8	+1.1
TLCR		149.28	328	⇓P	PKPbc	21 18 13.8	+0.9
TLCR		149.28	328	⇓PKP2	PKPbc	21 18 13.8	+0.9
BRG	Berggiesshubel	149.31	350	⇓iPKP	PKPbc	21 18 13.9	+1.1

BRG				Amp		21 18 15.4	
	comp=Z,5.8nm,0.8s						
BRG	Berggiesshubel	149.31	350	P	PKPab	21 18 18.1	+0.8
BRG				Amp		21 18 20.0	
	comp=Z,6.5nm,0.9s						
BRG	Berggiesshubel	149.31	350	P	PKPab	21 18 27.2	+10
BRG				Amp		21 18 28.0	
	comp=Z,10nm,0.9s						
TESR	Tescani	149.33	332	⇑P	PKPbc	21 18 14.0	+1.0
DPC	Dobruska-Polom	149.38	347	⇑ePKP	PKiKP	21 18 14.3	+0.1
DPC	Dobruska-Polom	149.38	347	ePKP2	PKiKP	21 18 14.3	+0.1
STEB	Steborice	149.45	345	⇑ePKP	PKPbc	21 18 14.1	+0.9
KRLC	Kraliky	149.54	346	ePKPAB	PKPab	21 18 19.6	+1.2
KRLC	Kraliky	149.54	346	ePKP2	PKPab	21 18 19.6	+1.2
PVCC	Panska Ves	149.54	349	ePKPAB	PKPab	21 18 19.4	+1.1
PVCC				ex	x	21 18 27.3	
PVCC	Panska Ves	149.54	349	ePKP2	PKPab	21 18 19.4	+1.1
SCHLR	Schela	149.56	329	⇑P	PKiKP	21 18 16.0	+1.4
ONER	Baraj Valea Uz	149.58	332	⇑P	PKiKP	21 18 15.5	+0.8
CFR	Carcaliu	149.62	328	⇓P	PKPbc	21 18 14.1	+0.4
CFR	Carcaliu	149.62	328	⇓PKIKP	PKPbc	21 18 14.1	+0.4
MORC	Moravsky Berou	149.65	345	ePKP	PKPbc	21 18 14.2	+0.5
MORC	Moravsky Berou	149.65	345	⇓P	PKPbc	21 18 14.8	+1.1
MORC	Moravsky Berou	149.65	345	⇓PKP2	PKPbc	21 18 14.8	+1.1
BMR	Baia Mare	149.69	336	⇓P	PKPbc	21 18 14.9	+1.1
BMR	Baia Mare	149.69	336	⇓PKP2	PKPbc	21 18 14.9	+1.1
TPGR	Topolog	149.71	328	⇑P	PKiKP	21 18 15.3	+0.3
LANS	Liptovska Anna	149.72	343	ePKP2	PKiKP	21 18 15.5	+0.6
LANS	Liptovska Anna	149.72	343	ePKP	PKiKP	21 18 15.5	+0.6
LANS				e		21 18 18.8	
VRI	Vrincioaia	149.78	331	⇑P	PKPbc	21 18 14.3	+0.1
VRI	Vrincioaia	149.78	331	⇑PKHKP	PKPpre	21 18 14.3	
BR131	Keskin Array S	149.81	315		PKPbc	21 18 14.2	-0.4
BR131	Keskin Array S	149.81	315	PKIKP	PKPbc	21 18 14.2	-0.4
BRTR	Keskin Array B	149.81	315		PKPdf	21 18 09.3	-0.5
BRTR	Keskin Array B	149.81	315	PKP	PKPdf	21 18 08.5	-1.3
	comp=Z,3.8nm,1.1s,baz=132,slow=3.7,SNR=6.6						
BRTR				PKPbc	PKPbc	21 18 14.7	0.0
	comp=Z,12nm,0.9s,baz=133,slow=3.8,SNR=51						
BRTR				PP	PP	21 21 48.6	+0.6
	comp=Z,1.0nm,0.9s,baz=57,slow=5.3,SNR=3.6						
PLOR	Plostina	149.83	331	⇑P	PKPbc	21 18 13.7	-0.6
PLOR	Plostina	149.83	331	⇑PKHKP	PKPpre	21 18 13.7	
TURR	Turia	149.96	332	⇓P	PKiKP	21 18 15.7	+0.1
PRA	Prague	150.01	349	⇑ePKP	PKPbc	21 18 15.4	+0.9
PRA	Prague	150.01	349	ePKHKP	PKPpre	21 18 15.4	
OZUR		150.03	332	⇑P	PKPbc	21 18 15.6	+0.8
PRU	Pruhonice	150.07	349	⇑ePKP	PKPbc	21 18 15.4	+0.7
PRU				AMS	AMS	22 26 00.0	
	comp=Z,100nm,20.0s						
PRU	Pruhonice	150.07	349	ePKHKP	PKPpre	21 18 15.4	
PRU				MLR	MLR		
	comp=Z,100nm,20.0s						
FKH	Fakeheh	150.09	303	eP	PKPbc	21 18 16.3	+0.9
GOPC	GO Pecny, Ondr	150.10	349	AMS	AMS	22 27 50.0	
	comp=Z,100nm,20.1s						
BOSR	Bodos	150.10	332	⇑P	PKiKP	21 18 16.3	+0.5
TLBR	Topalu	150.12	328	⇑P	PKPbc	21 18 15.6	+0.7
BEIL	Beino	150.17	304	eP	PKPbc	21 18 16.2	+0.7
ANTO	Ankara	150.29	316	⇓P	PKiKP	21 18 16.6	+0.1
ANTO	Ankara	150.29	316	⇓PKP2	PKiKP	21 18 16.6	+0.1
VRAC	Vranov	150.31	346	ePKP	PKPbc	21 18 15.9	+0.6
VRAC	Vranov	150.31	346	⇓P	PKiKP	21 18 16.4	+0.3
VRAC	Vranov	150.31	346	⇓PKIKP	PKiKP	21 18 16.4	+0.3
MESR	Meseseni	150.33	336	⇓P	PKiKP	21 18 16.7	+0.5
PGOR	Pogoanele	150.38	329	⇓P	PKiKP	21 18 17.4	+1.1
MLR	Muntele Rosu	150.42	331	⇓P	PKPbc	21 18 16.2	+0.4
MLR	Muntele Rosu	150.42	331	⇓PKIKP	PKPbc	21 18 16.2	+0.4
HWQ	Hawqa	150.44	303	eP	PKPbc	21 18 16.2	0.0
JAVC	Velka Javorina	150.47	344	ePKP	PKiKP	21 18 17.4	+0.9
VYHS	Vyhne	150.50	343	ePKIKP	PKPbc	21 18 16.7	+0.9
VYHS				e		21 18 24.3	
VYHS	Vyhne	150.50	343	ePKP	PKPbc	21 18 16.7	+0.9
VYHS				e		21 18 24.3	
TREC	Trest	150.55	347	⇑ePKP	PKPbc	21 18 16.7	+0.8
TREC	Trest	150.55	347	ePKIKP	PKPbc	21 18 16.7	+0.8
KRUC	Moravsky	150.58	346	ePKP	PKPbc	21 18 16.6	+0.7
ZVC	Zvikov	150.66	349	⇑ePKP	PKiKP	21 18 17.4	+0.6
PSZ	Piszkesteto	150.70	341	⇑P	PKiKP	21 18 17.8	+0.8
PSZ	Piszkesteto	150.70	341	⇑PKIKP	PKiKP	21 18 17.8	+0.8
DRGR		150.72	336	⇑P	PKPbc	21 18 16.8	+0.4
DRGR		150.72	336	⇑PKIKP	PKPbc	21 18 16.8	+0.4
RCY	Rachaya	150.78	302	eP	PKPbc	21 18 17.9	+0.7
BHL	Bhannes	150.79	303	eP	PKPbc	21 18 17.6	+0.6
GRF	Grafenberg Arr	150.84	353	ePKP	PKPbc	21 18 17.0	+0.5
	baz=10,slow=1.4						
QRWL	Qaraoun	150.89	302	eP	PKPbc	21 18 18.0	+0.8
SHBL	Chebaa	150.90	302	eP	PKPbc	21 18 18.2	+0.8
DQRL	Deir Qamar	150.92	303	eP	PKPbc	21 18 18.0	+0.6
MODS	Modra-Piesok	151.02	345	ePKIKP	PKPbc	21 18 17.1	+0.1
MODS				e		21 18 24.1	
MODS	Modra-Piesok	151.02	345	ePKP	PKPbc	21 18 17.1	+0.1
MODS				e		21 18 24.1	
KHC	Kasperske Hory	151.06	350	⇑ePKP	PKPbc	21 18 17.7	+0.6
KHC				ePKPAB	PKPab	21 18 25.0	+0.4
KHC				ex	x	21 18 40.5	
KHC				AMS	AMS	22 25 50.0	
	comp=Z,100nm,19.4s						
KHC	Kasperske Hory	151.06	350	ePKIKP	PKPbc	21 18 17.7	+0.6
KHC				e		21 18 25.0	
KHC				MLR	MLR		
	comp=Z,100nm,19.4s						
ARR	Arges	151.10	332	⇑P	PKiKP	21 18 19.4	+1.5
CKRC	Cesky Krumlov	151.24	349	ePKP	PKiKP	21 18 18.6	+0.6
CKRC				AMS	AMS	22 27 50.0	
	comp=Z,100nm,14.2s						
CKRC	Cesky Krumlov	151.24	349	ePKIKP	PKiKP	21 18 18.6	+0.6
CKRC				MLR	MLR		
	comp=Z,100nm,14.2s						
MMAI	Mount Meron Ar	151.27	301	PKPbc	PKiKP	21 18 19.3	+0.6
	comp=Z,22nm,0.7s,baz=72,slow=5.4,SNR=47						
GERES	GERESS Array B	151.32	350		PKPbc	21 18 17.4	-0.4
GERES	GERESS Array B	151.32	350	PKPbc	PKPbc	21 18 18.3	+0.5
	comp=Z,2.6nm,0.7s,baz=27,slow=2.4,SNR=17						
GERES	GERESS Array B	151.32	350	PKIKP	PKPbc	21 18 17.4	-0.4
SIRR	Siria	151.55	337	⇑P	PKPbc	21 18 18.5	+0.1
CONA	Conrad Observa	151.77	346	i PKP	PKPbc	21 18 19.2	+0.3
	comp=Z,5.2nm,0.7s						
SURR	Surduc	151.81	336	⇓P	PKPbc	21 18 19.3	+0.4
RONA	Rosalia, Austr	151.88	345	ePKP	PKPbc	21 18 19.3	+0.2
	comp=Z,4.4nm,0.5s						
BZS	Buzias	152.12	336	⇑P	PKPbc	21 18 19.5	-0.1
BZS	Buzias	152.12	336	⇑PKIKP	PKPbc	21 18 19.5	-0.1
MOA	Molln	152.18	348	ePKP	PKPbc	21 18 19.5	-0.2
	comp=Z,1.8nm,0.6s						
CSS	Mathiatis	152.20	306		PKPbc	21 18 20.0	-0.2
HERR	Herculane	152.42	334	⇑P	PKPbc	21 18 20.5	+0.2
BFO	Black Forest	152.43	357		PKPbc	21 18 20.1	-0.1
BFO	Black Forest	152.43	357	PKIKP	PKPbc	21 18 20.1	-0.1
BIOA	Bad Ischl, Aus	152.44	349	ePKP	PKPbc	21 18 20.6	+0.3
	comp=Z,1.4nm,0.5s						
ARSA	Arzberg	152.49	346	epPKP	pPKPdf	21 18 18.7	+3.0
	comp=Z,4.4nm,1.0s						
MORH	Mrgy, Hungar	152.61	341	⇓P	PKPbc	21 18 19.2	-1.4
LESA	Schwarzleotal	152.87	350	ePKiKP	PKiKP	21 18 23.0	+1.4
	comp=Z,7.8nm,1.2s						
RETA	Reutte	153.06	353	ePKP	PKPbc	21 18 22.2	+0.4
	comp=Z,2.3nm,0.8s						
WATA	Walderalm	153.11	352	i PKP	PKPbc	21 18 20.9	-1.0
	comp=Z,1.1nm,0.5s						
SOKA	Soboth	153.14	346	ePKP	PKPbc	21 18 21.8	-0.2
	comp=Z,4.7nm,1.2s						
MOTA	Moosalm	153.16	352	ePKP	PKPbc	21 18 22.5	+0.4
	comp=Z,4.6nm,0.9s						
WTTA	Wattenberg	153.18	352	i PKP	PKPbc	21 18 22.2	0.0
	comp=Z,8.4nm,1.0s						
SQTA	Sankt Quirin	153.27	352	i PKP	PKPbc	21 18 22.9	+0.6
	comp=Z,5.0nm,0.9s						
DAVA	Damuels	153.35	354	ePKP	PKPbc	21 18 21.0	-1.5
	comp=Z,3.7nm,0.9s						
OBKA	Obir	153.40	347	ePKP	PKPbc	21 18 22.2	-0.3
	comp=Z,2.7nm,1.0s						
MYKA	Terra Mystica	153.47	348	ePKP	PKPbc	21 18 22.2	-0.5
	comp=Z,2.6nm,1.0s						
FETA	Feichten	153.53	353	ePKP	PKPbc	21 18 23.2	+0.3
	comp=Z,6.0nm,1.2s						
ABTA	Abfaltersbach	153.55	350	ePKP	PKPbc	21 18 22.3	-0.5
	comp=Z,6.0nm,0.7s						
ESDC	Sonseca Array	159.25	22	PKPab	PKPab	21 18 60.0	+0.1
	comp=Z,0.7nm,0.9s,baz=345,slow=5.0,SNR=2.4						
TORD	Torodi Ar. Bea	171.33	150	PKP	PKPdf	21 18 32.4	-1.2
	comp=Z,0.7nm,0.3s,baz=187,slow=2.8,SNR=2.3						
TORD				PKPab	PKPab	21 19 53.5	+0.1
	comp=Z,0.9nm,0.4s,baz=200,slow=4.0,SNR=2.7						

JMA **27** *21:25:19.8±0.1, 23°.7N±0°.7×122°.9E±0°.5, h48^{km}, MV2.8/12, NEAR ISHIGAKIJIMA ISLAND*

TAP **27** *21:25:20.2, 23°.78N×122°.91E, h36^{km}±1^{km}, ML3.3, D*

ISC 27 21:25:18.7±1.2**, 23°.67N**±0°.03×**122°.92E**±0°.02**, h27**^{km}±13^{km}**, n89,** σ**1^{s}05**/150**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS4	EOS4	0.71	309	eP	Pn	21 25 33.4	+0.6
EOS4				eS	Sn	21 25 43.3	+0.6
JYNG	Yonagunijimaku	0.78	2	P	Pn	21 25 33.6	-0.3
JYNG				eS	Sn	21 25 44.1	-0.8
YOJ	Yonaguni jima	0.80	6	P	Pn	21 25 34.1	-0.1
YOJ	Yonaguni jima	0.80	6	P	Pn	21 25 33.9	-0.3
YOJ				eS	Sb	21 25 43.5	-0.9
YOJ	Yonaguni jima	0.80	6	P	Pb	21 25 33.7	-0.3
YOJ				eS	Sb	21 25 43.4	-1.1
EOS3	EOS3	0.83	318	eP	Pb	21 25 35.4	+0.9
EOS3				eS	Sn	21 25 46.5	+0.7
HATJ	Hateruma jima	0.90	64	eP	Pb	21 25 35.9	+0.2
HATJ				eS	Sn	21 25 48.1	+0.4
EOS2	EOS2	0.98	320	eP	Pb	21 25 38.0	+1.0
EOS2				eS	Sb	21 25 51.9	+2.3
IRIF	Iriomote-Funau	0.99	48	P	Pb	21 25 37.1	-0.2
IRIF				eS	Sn	21 25 50.0	-0.1
JKRS	Kuro-shima	1.15	60	eP	Pb	21 25 39.6	-0.3
JKRS				eS	Sb	21 25 54.6	+0.3
TEYL	Yanliau Villag	1.23	280	eP	Pn	21 25 40.2	+0.1
TEYL				eS	Sn	21 25 55.4	-0.5
HWA	Hwalien	1.25	285	eP	Pn	21 25 40.6	+0.2
HWA				eS	Sn	21 25 56.6	+0.3
SHUL	Shoufeng	1.25	276	eP	Pn	21 25 40.7	+0.3
SHUL				eS	Sn	21 25 56.6	+0.2
TEGC	Jichi Village	1.27	272	eS	Sn	21 25 57.2	+0.4
TWD	Chiawan	1.28	289	eP	Pn	21 25 40.8	-0.1
TWD				eS	Sn	21 25 55.6	-1.5
ETL	Fush Village	1.29	293	eS	Sn	21 25 57.2	-0.1
EWUT	Wuta	1.30	307	eP	Pn	21 25 42.0	+0.9
EWUT				eS	Sn	21 25 58.4	+0.7
JIJ	Ishigaki jima	1.31	58	eP	Pn	21 25 41.4	+0.1
NACB	Ninganchiao	1.32	293	P	Pn	21 25 41.6	+0.3
NACB	Ninganchiao	1.32	293	P	Pn	21 25 41.1	-0.2
NACB				S	Sn	21 25 57.2	-0.9
ENA	Nanau	1.32	305	eP	Pn	21 25 41.5	+0.1
ENA				eS	Sn	21 25 58.3	+0.2
ETM	Tongmen	1.34	283	eP	Pn	21 25 41.3	-0.4
ETM				eS	Sn	21 25 57.7	-1.0
TWC	Suao	1.36	314	eP	Pb	21 25 43.2	-0.3
ESL	Shilin	1.37	276	eP	Pn	21 25 41.8	-0.4
ESL				eS	Sn	21 25 56.9	-2.6
HGSD	Ruisui	1.39	263	P	Pn	21 25 42.4	+0.1
HGSD				S	Sn	21 25 59.0	-0.7
ECBN	Changbin	1.40	256	eP	Pn	21 25 43.2	+0.8
ECBN				S	Sn	21 25 59.6	-0.3
WARBT	Fenglin Townsh	1.41	272	P	Pn	21 25 42.6	-0.1
WARBT				eS	Sn	21 25 57.9	-2.5
ETLH	Xiulin Townshi	1.42	293	eP	Pn	21 25 43.0	+0.1
ETLH				eS	Sn	21 26 00.0	-0.8
LXIB	Xiulin Townshi	1.43	285	P	Pn	21 25 42.9	-0.1
LXIB				S	Sn	21 26 00.4	-0.6
EHYH	Wanrong	1.46	264	eP	Pn	21 25 44.1	+0.8
EHYH				eS	Sn	21 26 01.5	0.0
EHY	Hungye	1.48	264	P	Pn	21 25 44.4	+0.8
EHY				eS	Sn	21 26 01.9	-0.1
YULB	Yu-li	1.52	260	P	Pn	21 25 45.3	+1.2
YULB	Yu-li	1.52	260	S	Sn	21 26 03.7	+0.7
YULB	Yu-li	1.52	260	P	Pn	21 25 44.7	+0.6
YULB				eS	Sn	21 26 02.3	-0.7
TWF1	Yuli	1.52	259	P	Pn	21 25 44.9	+0.7
TWF1				eS	Sn	21 26 02.9	-0.3
CHKT	Chengkung	1.54	249	eP	Pn	21 25 44.5	+0.1
CHKT				eS	Sn	21 26 02.5	-0.9
LATG	Datong	1.54	304	eP	Pn	21 25 45.3	+0.7
LATG				eS	Sn	21 26 03.7	0.0
TWE	Neicheng	1.56	313	eP	Pn	21 25 45.8	+1.2
FULB	Fuli	1.57	253	eP	Pn	21 25 45.2	+0.4
FULB				eS	Sn	21 26 03.6	-0.6
JISG	Ishigakijimahi	1.57	54	P	Pn	21 25 44.7	-0.1
JISG				S	Sn	21 26 03.7	-0.5
WHF	Hehuan Shan	1.59	288	P	Pn	21 25 45.8	+0.3
WHF				eS	Sn	21 26 04.5	-0.9
NNSB	Datong	1.60	299	eP	Pn	21 25 46.0	+0.7
NNSB				eS	Sn	21 26 04.9	-0.3
NNS	Nan Shan	1.61	299	eP	Pn	21 25 46.2	+0.6
NNS				eS	Sn	21 26 05.0	-0.5
OWD	Renai	1.62	281	eP	Pn	21 25 46.0	+0.3
OWD				eS	Sn	21 26 05.1	-0.7
FUSB	Fushanzhiwuyua	1.64	312	eP	Pn	21 25 47.0	+1.2
FUSB				eS	Sn	21 26 06.8	+0.8
VWDT	VWDT	1.64	273	P	Pn	21 25 46.6	+0.9
VWDT				eS	Sn	21 26 05.9	0.0
EDH	Donghe	1.64	245	eP	Pn	21 25 46.5	+0.7
EDH				eS	Sn	21 26 05.1	-0.9
FUSS	Fushou	1.64	291	eP	Pn	21 25 46.8	+0.7
FUSS				eS	Sn	21 26 06.4	0.0
TIPB	Shuangxi	1.64	323	eP	Pn	21 25 46.5	+0.7
EHD	Haiduan	1.66	252	eP	Pn	21 25 46.6	+0.5
EHD				eS	Sn	21 26 06.3	-0.2
WUSB	Renai	1.68	281	eP	Pn	21 25 47.3	+0.8
WUSB				eS	Sn	21 26 07.2	-0.1
SXI1	Grass Mountain	1.71	326	eP	Pn	21 25 47.6	+0.8
SXI1				eS	Sn	21 26 07.3	-0.7
YHNB	Yeheng	1.73	306	P	Pb	21 25 49.1	-0.8
YHNB	Yeheng	1.73	306	P	Pn	21 25 48.2	+1.1
YHNB				eS	Sn	21 26 08.1	-0.2
NSK	Sanguang	1.75	305	eP	Pn	21 25 48.5	+1.1
NSK				eS	Sn	21 26 08.0	-0.8
SSLB	Suanglung	1.81	274	P	Pn	21 25 49.9	+1.8
SSLB	Suanglung	1.81	274	S	Sn	21 26 10.6	+0.4
SSLB	Suanglung	1.81	274	eP	Pn	21 25 48.9	+0.7
ELDTW	Lidau	1.81	255	eP	Pn	21 25 49.0	+0.7
ELDTW				eS	Sn	21 26 09.9	-0.6
TATO	Taipei	1.85	315	P	Pb	21 25 51.0	-0.8
TATO	Taipei	1.85	315	S	Sn	21 26 12.7	+1.6
SMLT	Sun Moon Lake	1.86	277	eP	Pn	21 25 50.1	+1.1
SMLT				eS	Sn	21 26 11.9	+0.2
WCS	Beigang Elemen	1.88	282	eP	Pn	21 25 50.3	+1.2
TWGBT	Beinan	1.89	244	eP	Pb	21 25 51.6	-1.0
TWGBT				eS	Sn	21 26 12.3	+0.1
WHYT	Xinyi Township	1.90	271	eP	Pn	21 25 50.9	+1.5
TWG	Pinlang	1.90	244	eS	Sn	21 26 12.4	0.0
TYC	Yuchr	1.91	278	eP	Pn	21 25 51.0	+1.6
TYC				eS	Sn	21 26 12.8	+0.2
WHP	Taichung City	1.91	289	eP	Pb	21 25 52.5	-0.5
WHP				eS	Sn	21 26 13.7	+1.0
NFF	Wufeng Townshi	1.91	301	eP	Pb	21 25 51.6	-1.3
NFF				eS	Sn	21 26 13.0	+0.3
ALS	Alishan	1.95	266	eP	Pn	21 25 52.1	+1.8
LIOB	Emei	2.00	300	eP	Pb	21 25 53.0	-1.4
LIOB				eS	Sn	21 26 16.9	+2.0
NSTT	Nanjuang	2.00	299	eP	Pb	21 25 53.0	-1.4
NSTT				eS	Sn	21 26 16.1	+1.2
STYH	Taoyuan	2.03	256	eP	Pn	21 25 52.6	+1.4
STYH				eS	Sn	21 26 16.0	+0.3
LYUB	Lan-yu	2.06	217	eP	Pn	21 25 52.9	+1.2
LYUB				eS	Sn	21 26 15.0	-1.5
ECL	Taimali	2.10	240	eP	Pn	21 25 53.2	+1.1
ECL				eS	Sn	21 26 17.4	0.0
TPUB	Ta-pu	2.14	261	eP	Pn	21 25 55.0	+2.4
TPUB				eS	Sn	21 26 19.9	+1.6
WTP	Ta-pu	2.16	259	eP	Pb	21 25 55.7	-1.5
WTP				eS	Sn	21 26 21.0	+2.0
CHN1	Nanshi	2.25	258	eP	Pb	21 25 57.5	-1.2
CHN1				eS	Sn	21 26 24.1	+3.0
TWK	Hsinying	2.27	260	eP	Pb	21 25 57.6	-1.5
TWK				eS	Sb	21 26 25.0	-1.8
SNST	Tainan City	2.27	259	eP	Pb	21 25 57.4	-1.6
SNST				eS	Sn	21 26 24.9	+3.3
SSD	Sandimen	2.30	247	eP	Pb	21 25 58.5	-1.0
EAST	Anshuo	2.30	237	eP	Pn	21 25 56.4	+1.5
MASBT	Mashibuluo	2.35	244	eP	Pn	21 25 57.4	+1.7
SCST	Cishan	2.36	251	eP	Pb	21 25 59.8	-0.8
SLIU	Shizi	2.43	234	eP	Pn	21 25 58.1	+1.4
HEN	Hengchun	2.61	231	eS	Sn	21 26 32.3	+2.4
VWUC	VWUC	3.43	293	eP	Pn	21 26 11.2	+0.8
PTMZ	Houxiangcun	3.73	292	eP	Pn	21 26 15.2	+0.7
PTMZ				eS	Sn	21 26 55.2	-2.4
KNMB	Chin-men Tao	4.22	282	eP	Pn	21 26 22.1	+0.8

MEX **27** *21:46:01.0±0.5, 27°.87N×111°.98W, h10^{km}±11^{km}, MD3.7*

ISC 27 21:45:57.8±1.6**, 27°.90N**±0°.05×**112°.01W**±0°.04**, h12**^{km}±14^{km}**, n9,** σ**0^{s}48**/17**, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRIG	Santa Rosalia	0.62	200	eP	Pn	21 46 12.5	0.0
SRIG				eS	Sn	21 46 22.1	-0.3
SRIG				IAML		21 46 22.4	
	comp=N,120nm,0.3s						
SRIG	Santa Rosalia	0.62	200	eP	Pn	21 46 12.4	0.0
SRIG				eS	Sn	21 46 22.0	-0.3
SFQB	San Francisqui	0.90	304	eP	Pg	21 46 15.4	+0.1
SFQB				eS	Sb	21 46 27.6	+0.2
BKIRB	Bahia Kino	0.95	0	eP	Pb	21 46 16.2	-0.1
BKIRB				eS	Sg	21 46 28.5	0.0
GUYB	Guaymas	1.01	90	eP	Pn	21 46 18.1	+0.3
GUYB				eS	Sn	21 46 31.8	-0.1
GUYB	Guaymas	1.01	90	eP	Pn	21 46 18.3	+0.6
GUYB				eS	Sb	21 46 30.3	-0.1
HSIG		1.45	40	eS	Sn	21 46 42.3	-0.6
HSIG				e		21 46 44.5	
HSIG				IAML		21 46 44.5	
	comp=N,14nm,0.4s						
HSIG		1.45	40	eP	Pb	21 46 25.1	+0.3
HSIG				eS	Sg	21 46 43.8	-0.8
UAGRB	Rancho Ultima	2.43	164	eP	Pn	21 46 38.3	+1.0
UAGRB				eS	Sb	21 47 10.8	-0.6

CATAC 27 21:59:25.9±0.5**, 12°N**±4°×**8°8W**±°**, h10**^{km}**, M3.7**/23**, MLv3.7**/23**, 12C, Error ellipse: s-maj=8.1km s-min=4.0km az=24.6, confirmed, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALEN	Leon	1.17	46	P	Pb	21 59 47.6	-0.6
COPN	Copaltepe	1.23	64	⇑P	Pn	21 59 49.0	-0.3
CRIN	San Cristobal	1.24	32	⇑P	Pn	21 59 49.4	0.0
PKGN	Cerro Pekin	1.26	36	⇑P	Pn	21 59 49.1	-0.5
CNGA	Al SSO del Vol	1.31	50	P	Pn	21 59 50.0	-0.4
CNGN	Cerro Negro	1.32	50	⇑P	Pn	21 59 50.0	-0.5
PLRN	Geotermica Pol	1.32	45	P	Pn	21 59 50.2	-0.3
POLN	Al Sur del Vol	1.34	42	⇑P	Pn	21 59 50.2	-0.6
POTN	Potosi Cosigui	1.37	9	⇑P	Pn	21 59 50.7	-0.4
POTN				S	Sb	22 00 08.7	-0.5
ILCN	San Idelfonso	1.37	47	P	Pn	21 59 50.4	-0.7
MOMN	Momotombo	1.39	57	⇑P	Pn	21 59 50.7	-0.7
SAPS	Ciudad Sandino	1.40	68	P	Pn	21 59 51.1	-0.4
MOM2	El Cardon	1.45	57	⇑P	Pn	21 59 51.7	-0.5
MOM2				S	Sn	22 00 10.9	-0.4
ABCN	Banco Central	1.47	71	S	Sb	22 00 12.5	+0.5
APQ3	Volcan Apoyequ	1.47	65	⇑P	Pn	21 59 52.6	+0.2
APQ2	Apoyeque	1.48	68	S	Sn	22 00 12.1	+0.1
UNAN	Cigeo UNAN	1.50	72	P	Pn	21 59 53.2	+0.3
UNAN				S	Sn	22 00 12.4	-0.2
ALLN	Telcor Managua	1.51	70	S	Sn	22 00 12.7	-0.1
TISN	Laguna Tiscapa	1.51	71	P	Pn	21 59 52.6	-0.5
MAFN	Magfor	1.52	73	S	Sn	22 00 13.2	0.0
MGAN	Managua	1.53	71	S	Sn	22 00 13.3	0.0
MGAN	Managua	1.53	71	P	Pn	21 59 52.5	-0.9
R4DEC	Barrio San Lui	1.53	71	P	Pn	21 59 52.9	-0.4
R4DEC	Barrio San Lui	1.53	71	S	Sn	22 00 13.5	+0.2
MAS3	Al N del Volca	1.56	76	P	Pn	21 59 53.1	-0.7
MAS3				S	Sn	22 00 13.8	-0.4
MASN	Masaya	1.58	77	P	Pn	21 59 54.3	+0.2
WILN	Americas 2	1.59	71	P	Pn	21 59 53.9	-0.3
WILN				S	Sn	22 00 14.9	+0.1
NANN	Nandasmo	1.60	79	⇑P	Pn	21 59 54.9	+0.6
AERN	Aeropuerto Man	1.60	72	S	Sn	22 00 15.3	+0.1
CNCH	Conchagua	1.63	356	⇑P	Pn	21 59 54.5	-0.3
NADN	Granada	1.66	86	S	Sn	22 00 16.0	-0.5
LCND	La Caada	1.66	354	P	Pn	21 59 54.9	-0.3
PACA	Pacayal	1.91	342	P	Pn	21 59 58.1	-0.5
CHOHN	Orocuina	1.91	17	⇑P	Pn	21 59 58.5	-0.2
MORN	Al O del Volca	2.04	92	P	Pn	21 59 59.2	-1.2
BOAB	BOACO BROADBAN	2.17	68	P	Pn	22 00 01.2	-0.9
RCVN	Varillal2	2.44	38	P	Pn	22 00 06.3	+0.3

SNET **27** *22:08:21.3±1.0, 10°.29N×88°.84W, h5^{km}, ML3.5*

CATAC **27** *22:08:40.5±1.5, 12°N±10°×8°8W±°, h10^{km}, M3.3/14, MLv3.3/14, Error ellipse: s-maj=24.9km s-min=11.4km az=37.2, confirmed*

ISC 27 22:08:42.5±2.8**, 11°.7N**±0°.2×**87°.75W**±0°.09**, h10**^{km}**, n28,** σ**0^{s}51**/26**, 8C-2D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIN	San Cristobal	1.21	34	⇑P	Pn	22 09 05.9	+0.3
COPN	Copaltepe	1.23	67	⇑P	Pn	22 09 05.7	-0.1
PKGN	Cerro Pekin	1.23	38	P	Pn	22 09 05.8	0.0
CNGA	Al SSO del Vol	1.30	52	P	Pn	22 09 07.0	+0.2
CNGN	Cerro Negro	1.30	52	⇑P	Pn	22 09 06.5	-0.3
POLN	Al Sur del Vol	1.32	44	⇑P	Pn	22 09 06.7	-0.4
POTN	Potosi Cosigui	1.32	10	P	Pn	22 09 07.1	+0.1
ILCN	San Idelfonso	1.35	49	P	Pn	22 09 07.5	0.0
MOMN	Momotombo	1.38	59	⇑P	Pn	22 09 07.5	-0.4
SAPS	Ciudad Sandino	1.40	70	⇓P	Pn	22 09 08.0	-0.1
MOM2	El Cardon	1.44	59	⇑P	Pn	22 09 08.4	-0.3
TISN	Laguna Tiscapa	1.51	73	P	Pn	22 09 09.2	-0.5
R4DEC	Barrio San Lui	1.53	73	S	Sn	22 09 30.0	0.0
R4DEC	Barrio San Lui	1.53	73	P	Pn	22 09 10.2	+0.2
MGAN	Managua	1.54	73	P	Pn	22 09 10.0	0.0
MGAN	Managua	1.54	73	S	Sn	22 09 29.9	-0.1
CNCH	Conchagua	1.58	357	eP	Pn	22 09 11.0	+0.3
CNCH	Conchagua	1.58	357	⇓P	Pn	22 09 11.3	+0.5
NANN	Nandasmo	1.61	81	⇑P	Pn	22 09 11.5	+0.5
NANN	Nandasmo	1.61	81	S	Sn	22 09 33.5	+1.6
LCND	La Caada	1.61	355	eP	Pn	22 09 11.7	+0.6
LCND				IAML		22 09 36.2	
	comp=Z,130nm,0.3s						
BOAB	BOACO BROADBAN	2.17	69	⇑P	Pn	22 09 18.0	-0.8
BOAB	BOACO BROADBAN	2.17	69	S	Sn	22 09 45.3	-0.4
LFRS	El Faro	2.31	326	eP	Pn	22 09 14.4	-6.4
RCPN	Sur Rio San Ju	2.43	41	P	Pn	22 09 22.3	-0.2
JAYA	Jayaque - finc	2.56	320	eP	Pn	22 09 14.2	-10
JAYA				eS	Sn	22 09 55.6	0.0
JAYA	Jayaque - finc	2.56	320	P	Pn	22 09 15.9	-8.4
NUBE	Las Nubes	2.96	318	eS	Sn	22 10 04.6	-0.8

UCR **27** *22:11:03.7±1.1, 8°.33N×82°.80W, h26^{km}±2^{km}, MW4.2, Fault plane solution: NP1:ϕ_s172.90000°, δ71.25000°, λ68.83000°.*

CATAC **27** *22:11:03.2±0.8, 8°N±5°×8°3W±°, h19^{km}±2^{km}, M4.5/8, MLv4.5/8, Error ellipse: s-maj=10.7km s-min=9.1km az=151.5, confirmed*

ISC 27 22:11:03.7±1.1**, 8°.35N**±0°.04×**82°.83W**±0°.03**, h32**^{km}±7^{km}**, n69,** σ**1^{s}07**/77**, 3C-27D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPPC	Paso Canoas	0.19	357	⇑eP	Pn	22 11 09.7	-0.7
LPPC				eS	Sb	22 11 14.5	+0.2
CDITO	Canoas	0.23	349	P	Pn	22 11 10.2	-0.7
CDITO	Canoas	0.23	349	S	Sb	22 11 15.4	+0.3
LMNES	Limones	0.25	187	⇑eP	Pn	22 11 10.8	-0.3
NELY	Ciudad Neily	0.33	339	⇑eP	Pb	22 11 11.3	-0.4
NELY				eS	Sn	22 11 17.6	-0.3
CSTBL	De las Acacias	0.39	80	⇓eP	Pb	22 11 12.1	-0.4
FITO	Golfito	0.43	311	eP	Pb	22 11 12.0	-1.1
FITO				eS	Sb	22 11 18.7	-0.8
CLLRA	Cordillera,	0.45	28	⇓eP	Pb	22 11 13.2	-0.4
EDAD	Golfito	0.45	312	⇓eP	Pb	22 11 12.5	-1.1
EDAD				eS	Sb	22 11 19.4	-0.9
BRU2	Volcan	0.47	17	eP	Pb	22 11 13.4	-0.5
BRU2				eS	Sb	22 11 20.7	-0.1
RSRNO	Rio Sereno	0.47	356	eP	Pb	22 11 14.1	+0.2
TBS2		0.48	21	eP	Pb	22 11 14.2	+0.2
SCLRA	Santa Clara, W	0.49	5	⇓eP	Pb	22 11 13.9	-0.2
VITO	San Vito	0.49	343	⇓eP	Pb	22 11 14.4	+0.2
PTJ1	Puerto Jimnez	0.51	292	⇓eP	Pb	22 11 14.1	-0.2
PTJ1				eS	Sn	22 11 23.3	+1.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PTJ1	Puerto Jimnez	0.51	292	P	Pb	22 11 14.2	-0.2
BQTLY	Boquete Panama	0.55	41	⇓eP	Pb	22 11 14.4	-0.7
ALCO	Alturas Coton,	0.60	359	eP	Pn	22 11 15.1	-1.2
EDP2	Potrero Grande	0.75	333	⇓eP	Pn	22 11 18.0	-0.1
EDP2				eS	Sb	22 11 29.4	+1.1
PBNVO	Pueblo Nuevo,	0.83	49	⇓eP	Pn	22 11 18.2	-1.0
RBALA	Bur	0.85	51	⇓eP	Pn	22 11 18.8	-0.7
PANP	Palmar Norte	0.87	314	eP	Pn	22 11 19.4	-0.3
BURE	Buenos Aires	0.96	329	eP	Pn	22 11 20.9	-0.2
RMDIO	Remedios, Chir	0.99	97	eP	Pn	22 11 21.2	-0.3
DRK0	Durika	1.00	336	⇓eP	Pn	22 11 21.2	-0.5
DRK0	Durika	1.00	336	P	Pn	22 11 21.2	-0.5
EDPE	Pejibaye, P	1.09	318	⇓eP	Pn	22 11 22.9	0.0
OCHAL	Ojochal	1.10	313	P	Pn	22 11 23.0	+0.1
OCHAL	Ojochal	1.10	313	S	Sb	22 11 38.3	0.0
PDCAN	Manzana , Fuen	1.12	93	eP	Pn	22 11 22.2	-1.0
SAJE	San Jernim	1.20	326	⇓eP	Pn	22 11 24.1	-0.4
LLNJ	Naranjito	1.69	312	eP	Pn	22 11 31.5	+0.5
PIEC	Cerro El Cedra	1.69	319	⇓eP	Pn	22 11 31.7	+0.4
VINA	Juan Vinas	1.79	330	eP	Pn	22 11 33.6	+1.1
REPA	Paraso	1.80	325	eP	Pn	22 11 33.5	+0.9
PISJ	San Jernim	1.81	315	⇓eP	Pb	22 11 34.7	-1.6
LCR2	La Lucha 2	1.81	320	⇓eP	Pn	22 11 33.2	+0.3
LCR2	La Lucha 2	1.81	320	P	Pn	22 11 33.2	+0.3
LCR2	La Lucha 2	1.81	320	S	Sb	22 11 57.7	-1.0
ABE2	San Pablo	1.81	318	eP	Pn	22 11 33.9	+0.9
PCAYA	Pacayas	1.84	328	⇓eP	Pn	22 11 35.0	+1.7
VTCV	VTCV, Calle Va	1.85	331	⇓eP	Pn	22 11 34.7	+1.3
PICV	PH. Pirrs	1.86	313	eP	Pn	22 11 34.4	+1.0
ABRB	Las Abras (San	1.87	332	⇓eP	Pn	22 11 35.2	+1.5
RAFA	San Farael, Vo	1.87	329	eP	Pn	22 11 34.8	+0.9
PAR1A	Puntarenas Pro	1.88	312	⇓eP	Pn	22 11 35.1	+1.5
CVTV	Tajo	1.88	331	⇓eP	Pn	22 11 35.3	+1.3
CVTQ	Turrialba Volc	1.89	331	⇓eP	Pn	22 11 35.4	+1.3
VTLA	Turrialba Volc	1.89	330	⇓eP	Pn	22 11 35.4	+1.2
VTR0	Volcan Turrial	1.90	331	⇓eP	Pn	22 11 35.6	+1.3
VICA	Volcano Irazu	1.91	328	⇓eP	Pn	22 11 35.5	+1.0
ACOS	Acosta	1.95	318	eP	Pn	22 11 36.2	+1.4
CORON	Coronado	1.99	324	eP	Pb	22 11 38.1	-1.3
HDC	Heredia	2.08	322	eP	Pn	22 11 38.0	+1.4
BELE	Belen	2.10	320	eP	Pn	22 11 38.7	+1.9
TCS1	Tacares	2.23	319	P	Pn	22 11 40.3	+1.8
TRT2	Tortugero	2.37	338	P	Pn	22 11 42.4	+1.9
CBL1	Cabuya	2.56	299	⇓eP	Pn	22 11 42.9	-0.1
AZU	Azuero	2.59	102	eP	Pn	22 11 45.1	+1.8
SOCE	Pocosol	2.69	319	P	Pn	22 11 47.3	+2.5
SOCE	Pocosol	2.69	319	S	Sb	22 12 21.4	-2.3
JCR1	Jicaral	2.71	304	eP	Pn	22 11 46.8	+1.7
ARE1	Arenal 1	2.81	319	eP	Pn	22 11 48.5	+2.1
JTS	Las Juntas de	2.85	313	⇓eP	Pn	22 11 47.9	+0.9
INDI	Punta indio, G	3.04	300	P	Pn	22 11 49.9	+0.2
INDI	Punta indio, G	3.04	300	S	Sn	22 12 24.1	-0.9
CMARA	Lajas Hojancha	3.06	303	S	Sn	22 12 26.7	+1.2
BCIP	Isla Barro Col	3.07	74	eP	Pn	22 11 51.0	+1.1
BLUN	Bluefields	3.75	346	P	Pn	22 12 00.1	+0.6
BLUN				S	Sn	22 12 44.0	+1.4

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*OSPL **27** 22:12:54.1±1.9, 19°.37N×69°.16W, h0km±20km, ML2.9*
*SDD **27** 22:12:54.4±2.4, 19°.09N×69°.30W, h27km±26km, MD3.3, ML2.9, MW3.0*
ISC 27 22:12:52.0±1.5**, 19°.17N**±0°.06×**69°.24W**±0°.04**, h14**km±12km**, n17, σ1s.37**/24**, 14C, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMDR	Samana, DR	0.13	21	IAML		22 13 03.5	
	comp=N,1μm,0.5s						
SMDR				⇑eSg	Sg	22 13 03.5	+5.7
MIDR	Miches	0.26	137	⇑ePg	Pn	22 13 00.3	-1.0
MIDR				⇑eSg	Sb	22 13 05.7	+3.0
MIDR				IAML		22 13 06.0	
	comp=N,614nm,0.3s						
NADR	Nagua	0.61	287	⇑ePg	Pb	22 13 04.2	-0.3
NADR				⇑eSg	Sb	22 13 14.2	+1.2
NADR				IAML		22 13 14.9	
	comp=N,794nm,0.3s						
DR08	Loma La Naviza	0.77	255	⇑ePg	Pg	22 13 06.0	-1.0
DR08				⇑eSg	Sg	22 13 15.5	-1.7
DR08				IAML		22 13 17.0	
	comp=N,5μm,0.1s						
CADR	Cabrera	0.83	307	⇑eSg	Sn	22 13 20.8	-0.4
CADR				IAML		22 13 21.8	
	comp=N,339nm,2.4s						
BANI	BANI	1.31	234	⇑ePg	Pn	22 13 15.9	-0.2
BANI				IAML		22 13 33.9	
	comp=N,164nm,0.2s						
ABDR	Alto Bandera	1.36	255	⇑ePg	Pn	22 13 15.2	-1.7
ABDR				IAML		22 13 36.3	
	comp=N,125nm,2.0s						
SC01	Santiago de lo	1.43	280	i P	Pg	22 13 20.7	+1.1
SC01				eS	Sg	22 13 39.1	+0.9
LUDR	Luperon	1.77	294	⇑ePg	Pb	22 13 23.2	-1.0
SDDR	Presa de Saban	1.95	265	⇑ePg	Pb	22 13 27.1	-0.2
SDDR				IAML		22 13 59.5	
	comp=N,30nm,0.7s						
SDDR	Presa de Saban	1.95	265	i P	Pb	22 13 26.9	-0.4
SDDR				eS	Sb	22 13 52.9	+1.3
SDDR				IAML		22 13 59.7	
	comp=Z,18nm,0.8s						
REDR	Restauracion	2.04	270	⇑ePg	Pg	22 13 31.0	-0.2
REDR				⇑eSg	Sg	22 14 00.3	+2.7
REDR				IAML		22 14 01.4	
	comp=N,98nm,0.2s						
LONE3	El Aguacate, B	2.18	255	i P	Pb	22 13 31.5	+0.3
LONE3				eS	Sb	22 14 00.1	+1.9
LONE3				IAML		22 14 07.7	
	comp=Z,19nm,2.1s						
LODU1	El Espartillar	2.27	249	i P	Pb	22 13 32.5	-0.3
LODU1				IAML		22 14 13.5	
	comp=Z,64nm,2.1s						
CRPR	Cabo Rojo, PR	2.33	120	i P	Pb	22 13 33.1	-0.6
CRPR				IAML		22 14 17.6	
	comp=Z,59nm,1.7s						
LOBH	Bahia de las A	2.62	241	i P	Pb	22 13 37.8	-1.0
LOBH				IAML		22 14 15.5	
	comp=Z,40nm,2.9s						
GRTK	Grand Turk	2.93	323	i P	Pn	22 13 37.8	-0.3
GRTK				eS	Sn	22 14 12.0	-1.1
GRTK				IAML		22 14 12.4	
	comp=Z,45nm,1.6s						

JMA 27 22:12:58.2±0.3**, 24°N**±1°×**14°2E**±°**, h154**km**, MV4.6**/18**, IOTO ISLANDS REGION, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHH2	Haha-jima-NKT2	2.54	3	P	Pn	22 13 40.1	+0.1
JHH2				S	Sn	22 14 14.1	+1.7
CBIJ	Chichi jima	3.01	3	P	Pn	22 13 46.1	+0.3
CBIJ				eS	Sn	22 14 24.5	+1.9
BSO1	Boso 1	10.57	355	eP	Pn	22 15 26.6	+1.6
BSO3	Boso 3	10.76	353	eP	Pn	22 15 28.3	+0.5
JOD2	Odawara 2	11.43	348	eP	Pn	22 15 38.7	+1.9
JRY	Ryogami san	12.19	348	eP	Pn	22 15 48.4	+1.6
JAG	Ashikaga	12.50	350	eP	Pn	22 15 49.1	-1.6
JHO	Hitachi	12.55	355	eP	Pn	22 15 51.3	-0.1

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*IDC **27** 22:13:42.8±3.7, 5°.37S×147°.31E, h255km±48km, mb3.1/3, mbtmp3.6/5, Error ellipse: s-maj=89.0km s-min=29.0km az=118.0*
ISC 27 22:13:38.3±2.8**, 5°.2S**±0°.2×**147°.1E**±0°.4**, h200**km**, n6, σ3s.45**/6**, mb3.3**/3**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.23	179	P	Pn	22 14 46.6	+3.5
	4.9nm,0.3s,baz=278,slow=19,SNR=1.1						
PMG				S	Sn	22 15 30.3	-3.8
	9.6nm,0.4s,baz=151,slow=22,SNR=2.4						
WRA	Warramunga Arr	19.23	219	P	P	22 17 48.9	+1.3
	0.5nm,0.3s,baz=41,slow=10.0,SNR=18						
ASAR	Alice Springs	22.36	213	P	P	22 18 18.8	-1.3
	0.2nm,0.4s,baz=40,slow=9.8,SNR=1.3						
	0.2nm,0.4s						
FITZ	Fitzroy Crossi	24.58	237	P	P	22 18 40.2	0.0
	1.7nm,0.3s,baz=61,slow=9.2,SNR=19						
	1.7nm,0.3s						
MKAR	Makanchi Array	76.88	320	P	P	22 25 08.9	+0.4
	0.2nm,0.3s,baz=111,slow=4.9,SNR=7.7						
	0.2nm,0.3s						
TORD	Torodi Ar. Bea	144.93	286	PKPbc	PKPdf	22 32 50.4	-2.3
	0.7nm,0.3s,baz=70,slow=2.3,SNR=3.0						

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*IDC **27** 22:20:22.9±0.8, 67°.17N×21°.00E, h0km, mbtmp2.9/4, ML2.3/4, Error ellipse: s-maj=14.2km s-min=6.2km az=116.0*
*HEL **27** 22:20:22.9±0.0, 67°.18N×20°.64E, h1km, ML1.7, ML2.7(UPP), Confirmed Induced event*
*UPP **27** 22:20:22.3±0.0, 67°.19N×20°.64E, h0km, ML2.7, Unknown*
ISC 27 22:20:21.4±0.7**, 67°.17N**±0°.02×**20°.77E**±0°.02**, h0**km**, n34, σ0s.78**/63**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	Dundret	0.09	238	P	Pg	22 20 24.0	+0.9
DUNU				S	Sg	22 20 25.1	+0.8
DUNU	Dundret	0.09	238	i P	Pg	22 20 24.0	+0.9
DUNU				i S	Sg	22 20 25.1	+0.8
MASU	Masugnsbyn	0.56	58	P	Pb	22 20 33.7	-0.3
MASU				S	Sb	22 20 41.5	-1.0
MASU	Masugnsbyn	0.56	58	i P	Pb	22 20 33.7	-0.3
MASU				i S	Sb	22 20 41.5	-1.0
RATU	Laukkuluspa	0.80	326	P	Pg	22 20 36.4	-0.2
RATU				S	Sg	22 20 46.9	-0.1
RATU	Laukkuluspa	0.80	326	i P	Pg	22 20 36.4	-0.2
RATU				i S	Sg	22 20 46.9	-0.1
KUA	Kurravaara	0.80	348	P	Pg	22 20 36.7	-0.1
KUA				S	Sg	22 20 47.5	+0.3
KUA	Kurravaara	0.80	348	i P	Pg	22 20 36.7	-0.1
KUA				i S	Sg	22 20 47.5	+0.3
ERTU	Ertsjaerv	0.83	137	P	Pb	22 20 38.5	-0.2
ERTU				S	Sb	22 20 50.5	+0.1
ERTU	Ertsjaerv	0.83	137	eP	Pb	22 20 38.5	-0.2
ERTU				eS	Sb	22 20 49.6	-0.8
SALU	Saltoluokta	0.91	284	P	Pg	22 20 38.3	-0.3
SALU				S	Sg	22 20 49.8	-0.5
SALU	Saltoluokta	0.91	284	eP	Pg	22 20 38.4	-0.2
SALU	Saltoluokta	0.91	284	i P	Pg	22 20 38.3	-0.3
SALU				i S	Sg	22 20 49.8	-0.5
PAJU	Pajala	0.93	98	P	Pb	22 20 40.4	+0.1
PAJU				S	Sb	22 20 53.7	+0.6
PAJU	Pajala	0.93	98	eP	Pb	22 20 40.4	+0.1
PAJU				eS	Sb	22 20 53.0	-0.2
HARU	Harads	1.02	175	P	Pb	22 20 41.2	-0.6
HARU				S	Sb	22 20 55.6	0.0
HARU	Harads	1.02	175	eP	Pb	22 20 41.2	-0.6
HARU				eS	Sb	22 20 55.6	0.0
KOVU	Salmi	1.08	348	P	Pg	22 20 41.8	-0.3
KOVU				S	Sg	22 20 55.9	-0.1
KOVU	Salmi	1.08	348	eP	Pg	22 20 41.8	-0.3
KOVU				eS	Sg	22 20 55.9	-0.1
KLF	Kolari	1.25	86	eP	Pn	22 20 46.1	+0.1
KLF				eS	Sb	22 21 02.6	+0.4
HEF	Hetta	1.66	40	eP	Pb	22 20 52.5	-0.2
HEF				eS	Sg	22 21 14.5	0.0
HEF				MSG		22 21 17.1	
	comp=Z,2.7nm,0.1s						
KALU	Kalix	1.68	141	P	Pg	22 20 53.3	-0.1
KALU	Kalix	1.68	141	eP	Pg	22 20 53.3	-0.1
KALU				eS	Sg	22 21 15.3	+0.2
KALU				MSG		22 21 18.2	
	comp=Z,2.5nm,0.1s						
SJUU	Sjulsmark	1.70	168	P	Pg	22 20 53.5	-0.5
SJUU	Sjulsmark	1.70	168	eP	Pg	22 20 53.5	-0.5
TOF	Tornio	1.79	126	ePN	Pg	22 20 55.5	-0.1
TOF				eSG	Sg	22 21 19.6	+0.8
TOF				MSG		22 21 22.2	
	comp=Z,5.2nm,0.1s						
KIF	Kilpisjarvi	1.84	0	eP	Pb	22 20 55.8	-0.1
KIF	Kilpisjarvi	1.84	0	eP	Pb	22 20 55.8	-0.1
KIF				eSG	Sg	22 21 20.6	+0.2
KIF				MSG		22 21 23.6	
	comp=Z,5.8nm,0.1s						
RNF	Rovaniemi	2.14	103	eP	Pb	22 21 00.6	-0.4
RNF				eSB	Sg	22 21 29.0	-1.1
RNF				MSG		22 21 32.6	
	comp=Z,4.8nm,0.1s						
SGF	Sodankyl	2.25	80	ePB	Pb	22 21 02.8	0.0
SGF				eSB	Sb	22 21 32.1	+1.0
ARCES	ARCESS Array B	2.95	34	Pn	Pn	22 21 11.0	+1.6
	comp=Z,0.8nm,0.3s,baz=213,slow=13,SNR=52						
ARCES				Sn	Sn	22 21 47.1	+1.6
	comp=Z,1.6nm,0.3s,baz=216,slow=23,SNR=12						
ARCES				Lg	Lg	22 21 52.5	
	comp=Z,1.6nm,0.3s,baz=216,slow=29,SNR=5.4						
	comp=Z,2.8nm,0.4s						
FINES	FINESS Array B	6.19	156	Pn	Pn	22 21 55.9	+2.0
	comp=Z,0.3nm,0.3s,baz=348,slow=13,SNR=12						
FINES				Sn	Sn	22 23 04.5	-0.8
	comp=Z,0.3nm,0.3s,baz=343,slow=22,SNR=5.4						
FINES				Lg	Lg	22 23 37.6	
	comp=Z,1.0nm,0.3s,baz=343,slow=31,SNR=9.8						
	comp=Z,0.9nm,0.4s						
NOA	NORSAR Array B	7.43	219	Pn	Pn	22 22 11.8	+0.8
	baz=28,slow=11,SNR=4.1						
NOA				Sn	Sn	22 23 35.4	-0.5
	baz=38,slow=21,SNR=5.9						
NOA				Lg	Lg	22 24 18.5	
	baz=36,slow=22,SNR=3.7						
	comp=Z,0.1nm,0.3s						
HFS	Hagfors	7.73	207	Pn	Pn	22 22 14.6	-0.4
	comp=Z,0.2nm,0.3s,baz=23,slow=13,SNR=5.1						
HFS				Sn	Sn	22 23 39.3	-3.7
	comp=Z,0.4nm,0.3s,baz=31,slow=24,SNR=6.9						
HFS				Lg	Lg	22 24 24.6	
	comp=Z,0.2nm,0.3s,baz=32,slow=31,SNR=2.0						
	comp=Z,0.5nm,0.3s						

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*JMA **27** 22:24:12.5±0.5, 23°N±2°×12°6E±°, h103km, MV3.0/15, NEAR MIYAKOJIMA ISLAND*
ISC 27 22:24:11.3±2.5**, 23°.3N**±0°.1×**125°.91E**±0°.09**, h35**km**, n18, σ1s.05**/25**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOGS	Gusukube	1.56	343	eP	Pn	22 24 37.2	+0.7
JOGS				eS	Sn	22 24 56.4	+0.9
JMJ2	Miyako jima3	1.56	340	eP	Pn	22 24 36.9	+0.3
JMJ2				eS	Sn	22 24 56.8	+1.2
JIRB	Irabujima	1.69	337	eP	Pn	22 24 38.4	0.0
JTJ	Tarama	1.76	321	P	Pn	22 24 39.5	+0.3
JTJ				S	Sn	22 24 58.4	-2.1
JIJ	Ishigaki jima	1.95	304	eP	Pn	22 24 42.6	+0.7
JIJ				eS	Sn	22 25 04.0	-1.1
JISG	Ishigakijimahi	1.96	312	P	Pn	22 24 42.5	+0.3
JISG				S	Sn	22 25 05.3	-0.3
JKRS	Kuro-shima	1.99	299	eP	Pn	22 24 43.2	+0.7
JKRS				eS	Sn	22 25 04.5	-1.6
HATJ	Hateruma jima	2.08	293	P	Pn	22 24 44.0	+0.3
HATJ				S	Sn	22 25 06.8	-1.6
IRIF	Iriomote-Funau	2.26	299	eP	Pn	22 24 47.1	+0.9
YOJ	Yonaguni jima	2.91	295	P	Pn	22 24 56.6	+1.5
YOJ	Yonaguni jima	2.91	295	eP	Pn	22 24 56.0	+0.9
JYNG	Yonagunijimaku	2.96	294	P	Pn	22 24 56.6	+0.8
JKE	Kume jima 2	3.15	15	eP	Pn	22 24 58.3	-0.1
JNTH	Nagotoyohara	3.77	30	eP	Pn	22 25 06.9	0.0
NACB	Ninganchiao	4.05	284	P	Pn	22 25 11.2	+0.3
YULB	Yu-li	4.24	273	P	Pn	22 25 12.8	-0.6
YHNB	Yeheng	4.37	290	P	Pn	22 25 16.9	+1.5
TPUB	Ta-pu	4.85	271	P	Pn	22 25 23.2	+1.3

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*KOLA **27** 22:26:58.8, 79°.84N×6°.64E, h0km, ML2.4, Error ellipse: s-maj=88.1km s-min=26.1km az=30.0, Greenland sea*
*FCIAR **27** 22:26:58.0, 79°.30N×4°.44E, h10km, station ZFI2 has station magnitude of 3.40 station OMEGA has station magnitude of 3.50*
*BER **27** 22:26:58.3±3.3, 79°.36N×3°.98E, h10km, Mw4.0, ML1.8(DNK), Confirmed Earthquake*
*DNK **27** 22:26:59.5±3.8, 79°.14N×4°.02E, h34km±37km, ML1.8*
ISC 27 22:26:55.4±1.4**, 79°.39N**±0°.07×**4°.05E**±0°.07**, h10**km**, n26, σ1s.64**/39**, 3C, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	Kingsbay	1.56	103	P	Pn	22 27 24.3	+1.1
KBS				S	Sn	22 27 42.2	-1.3
KBS	Kingsbay	1.56	103	⇑iP	Pn	22 27 24.6	+1.3
KBS				eS	Sn	22 27 41.9	-1.6
KBS				IAML		22 27 44.6	
	comp=Z,43nm,0.5s						
KBS	Kingsbay	1.56	103	⇑iP	Pn	22 27 24.5	+1.3
KBS				i S	Sn	22 27 42.1	-1.3
BRBB	Barentsburg B	2.38	118	P	Pn	22 27 36.6	+2.2
BRBB				S	Sn	22 28 02.8	-0.8
BRBB	Barentsburg B	2.38	118	eP	Pn	22 27 36.0	+1.6
BRBB				eS	Sn	22 28 02.2	-1.3
BRBA	Barentsburg A	2.40	119	eP	Pn	22 27 37.1	+2.4
BRBA				eS	Sn	22 28 03.8	-0.3
BRBA				IAML		22 28 05.9	
	comp=Z,52nm,0.6s						
SPA0	Spitsbergen Ar	2.70	111	eP	Pn	22 27 39.4	+0.7
SPA0				eS	Sn	22 28 10.3	-1.1
SPA0	Spitsbergen Ar	2.70	111	⇑iP	Pn	22 27 41.2	+2.4
SPA0				eS	Sn	22 28 11.3	0.0
SPA0				IAML		22 28 18.7	
	comp=Z,22nm,0.7s						
SPITS	Spitsbergen Ar	2.70	111	P	Pn	22 27 40.9	+2.2
SPITS				S	Sn	22 28 12.2	+0.8
HSPB	Hornsund (broa	3.36	130	eP	Pn	22 27 48.9	+1.1
HSPB				eS	Sn	22 28 26.5	-1.2
HSPB	Hornsund (broa	3.36	130	eP	Pn	22 27 49.4	+1.6
HSPB				eS	Sn	22 28 25.1	-2.6
HSPB				IAML		22 28 29.7	
	comp=Z,14nm,0.3s						
NOR	Nord	4.07	313	eP	Pn	22 27 58.1	+0.6
HOPEN	Hopen	5.23	113	eP	Pn	22 28 14.1	+0.7
HOPEN				eS	Sn	22 29 11.2	-2.5
HOPEN	Hopen	5.23	113	eP	Pn	22 28 15.3	+1.9
HOPEN				eS	Sn	22 29 10.6	-3.0
HOPEN				IAML		22 29 14.2	
	comp=Z,5.3nm,0.6s						
DAG	Danmarks Havn	5.36	252	i P	Pn	22 28 13.5	-1.7
DAG				i S	Sn	22 29 08.4	-8.4
DAG				IAML		22 29 13.7	
	comp=Z,9.4nm,0.2s						
DAG	Danmarks Havn	5.36	252	i P	Pn	22 28 13.5	-1.7
DAG				i S	Sn	22 29 08.4	-8.4
DAG				IAML		22 29 13.7	
	comp=Z,9.4nm,0.2s						
DBG	Daneborg	7.45	240	eP	Pn	22 28 44.0	0.0
DBG				i S	Sn	22 29 57.7	-11
DBG				IAML		22 30 02.6	
	comp=Z,3.0nm,0.2s						
DBG	Daneborg	7.45	240	eP	Pn	22 28 44.0	0.0
DBG				i S	Sn	22 29 57.7	-11
DBG				IAML		22 30 02.6	
	comp=Z,3.0nm,0.2s						
ZFI2	Zemlya Franca-	7.49	58	eP	Pn	22 28 46.4	+2.0
ZFI2				eS	Sn	22 30 07.0	-2.3
	comp=Z,11nm,1.4s						
OMEGA	Omega	7.51	58	eP	Pn	22 28 46.4	+1.7
OMEGA				eS	Sn	22 30 07.0	-2.7
	comp=Z,13nm,1.1s						
JNW	Jan Mayen West	8.95	207	eP	Pn	22 29 04.5	-0.1
JNW				eS	Sn	22 30 37.4	-7.8
JNW				IAML		22 30 40.3	
	comp=Z,11nm,0.6s						
JNE	Jan Mayen East	8.98	207	eP	Pn	22 29 05.4	+0.5
JNE				IAML		22 30 34.7	
	comp=Z,11nm,0.6s						
JNE				eS	Sn	22 30 36.7	-9.2
JMIC	Jan Mayen	9.00	207	eP	Pn	22 29 05.3	+0.1
JMIC				eS	Sn	22 30 37.3	-9.1
JMIC				IAML		22 30 50.6	
	comp=Z,8.9nm,0.6s						
JMI	Jan Mayen	9.08	207	eP	Pn	22 29 06.8	+0.6
JMI				eS	Sn	22 30 37.8	-10
JMI				IAML		22 30 48.4	
	comp=Z,9.4nm,0.4s						
SUMG	Summit	11.99	258	eP	Pn	22 29 42.2	-4.2
SUMG				eS	Sn	22 31 45.9	-14
SUMG				IAML		22 31 55.8	
	comp=Z,0.7nm,0.3s						
SUMG	Summit	11.99	258	eP	Pn	22 29 42.2	-4.2
SUMG				eS	Sn	22 31 45.9	-14
SUMG				IAML		22 31 55.8	
	comp=Z,0.7nm,0.3s						

DJA 27 22:57:40.7±0.5**, 0°N**±10°×**12°5E**±°**, h189**km±9km**, M3.9**/8**, mB5.1**/1**, mb3.7**/4**, MLv4.0**/8**, Mw(mB)4.4**/1**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	1.24	289	P	Pn	22 58 10.5	-0.6
KMSI				S	Sn	22 58 36.0	+1.4
LUWI	Luwuk	2.67	243	P	Pn	22 58 25.5	-0.3
MRSI	Marisa	3.22	275	P	Pn	22 58 30.3	-2.2
APSI	Ampana	3.66	253	P	Pn	22 58 37.3	-0.6
MPSI	Mapaga	5.25	272	P	Pn	22 58 58.5	+0.3
	0.1nm4.7nm,0.9s						
PCI	Palu	5.42	259	P	Pn	22 59 00.4	+0.1
	3μm14nm,0.5s						

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*IDC **27** 23:15:38.7±0.7, 56°.38N×163°.74E, h0km, mb3.7/15, mbtmp3.7/17, ML3.5/2, MS3.1/4, Error ellipse: s-maj=23.4km s-min=13.7km az=146.0*
*KRSC **27** 23:15:39.5±1.1, 56°.13N×164°.18E, h41km±16km, Ml4.3*
*MOS **27** 23:15:41.3±0.9, 56°.17N×164°.17E, h34km, mb4.5/3, Error ellipse: s-maj=8.8km s-min=4.9km az=57.5*
ISC 27 23:15:39.1±1.4**, 56°.12N**±0°.04×**164°.17E**±0°.04**, h8**km±9km**, n108, σ1s.46**/112**, mb3.8**/16**, MS3.1**/3**, 2C-1D, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.76	277	PN	Pg	23 15 53.1	-0.5
KBTR				S	Sg	23 16 03.9	+0.4
KBTR	Krutoberegovo	0.76	277	eP	Pg	23 15 53.2	-0.5
KBTR				eS	Sg	23 16 04.0	+0.4
KBG	Krutoberegovo	0.83	280	PN	Pg	23 15 54.6	-0.3
KBG				S	Sg	23 16 06.1	+0.4
KBG	Krutoberegovo	0.83	280	eP	Pg	23 15 54.7	-0.3
KBG				eS	Sg	23 16 06.2	+0.4
BKI	Bering	1.37	131	PN	Pn	23 16 04.5	0.0
BKI				S	Sb	23 16 22.4	-0.3
BKI	Bering	1.37	131	eP	Pn	23 16 04.6	0.0
BKI				eS	Sb	23 16 22.4	-0.3
SMKR	Semkarok	1.57	288	PN	Pn	23 16 07.3	-0.1
SMKR	Semkarok	1.57	288	eP	Pn	23 16 07.3	-0.1
ZLN	Zelenaya	1.89	268	PN	Pn	23 16 12.7	+1.0
ZLN	Zelenaya	1.89	268	eP	Pn	23 16 12.7	+1.0
LGNR	Loginova	1.95	270	PN	Pn	23 16 13.7	+1.0
LGNR	Loginova	1.95	270	eP	Pn	23 16 13.8	+1.0
BZGR	Bezymyannyi-Gr	1.96	266	PN	Pn	23 16 12.6	0.0
BZGR	Bezymyannyi-Gr	1.96	266	eP	Pn	23 16 12.6	0.0
KLY	Klyuchi	1.97	277	PN	Pn	23 16 11.3	-1.4
KLY	Klyuchi	1.97	277	eP	Pn	23 16 11.3	-1.4
KRSR	Krestovskiy	2.02	274	PN	Pn	23 16 13.5	+0.1
KRSR	Krestovskiy	2.02	274	eP	Pn	23 16 13.6	+0.1
BZMR	Bezymyannaya	2.07	266	PN	Pn	23 16 14.8	+0.6
BZMR	Bezymyannaya	2.07	266	eP	Pn	23 16 14.9	+0.6
MKZ	Mys Kozlova	2.09	223	PN	Pn	23 16 14.2	-0.2
MKZ				S	Sn	23 16 39.4	-1.2
MKZ	Mys Kozlova	2.09	223	eP	Pn	23 16 14.2	-0.2
MKZ				eS	Sn	23 16 39.5	-1.2
KIRR	Kirishev	2.15	267	PN	Pn	23 16 15.9	+0.5
KIRR	Kirishev	2.15	267	eP	Pn	23 16 15.9	+0.5
KPT	Kopyto	2.22	268	PN	Pn	23 16 17.5	+1.3
KPT	Kopyto	2.22	268	eP	Pn	23 16 17.6	+1.3
KMNR	Kamenistaya	2.24	262	PN	Pn	23 16 17.9	+1.4
KMNR	Kamenistaya	2.24	262	eP	Pn	23 16 17.9	+1.4
TUMD	Tumrok D	2.32	248	PN	Pn	23 16 18.5	+0.9
TUMD				S	Sn	23 16 46.8	+0.5
TUMD	Tumrok D	2.32	248	eP	Pn	23 16 18.6	+0.9
TUMD				eS	Sn	23 16 46.8	+0.5
KOZ	Kozyrevsk	2.41	270	PN	Pn	23 16 20.1	+1.3
KOZ	Kozyrevsk	2.41	270	eP	Pn	23 16 20.1	+1.3
SRDR	Sredinnyy	2.49	276	PN	Pn	23 16 21.2	+1.3
SRDR	Sredinnyy	2.49	276	eP	Pn	23 16 21.3	+1.3
ESO	Esso	3.07	269	PN	Pn	23 16 29.2	+1.3
ESO	Esso	3.07	269	eP	Pn	23 16 29.3	+1.3
OSSR	Ossora	3.20	350	PN	Pn	23 16 30.5	+0.9
OSSR	Ossora	3.20	350	eP	Pn	23 16 30.5	+0.9
KII	Karymskiy	3.42	234	PN	Pn	23 16 34.3	+1.6
KII	Karymskiy	3.42	234	eP	Pn	23 16 34.3	+1.6
PALN	Palana	3.74	325	PN	Pn	23 16 39.7	+2.7

PALN	Palana	3.74	325	*e*P	Pn	23 16 39.7	+2.7
SPN	Mys Shipunski	3.87	220	PN	Pn	23 16 38.7	-0.1
SPN	Mys Shipunski	3.87	220	*e*P	Pn	23 16 38.7	-0.1
NLC	Nalytchevo	4.07	225	PN	Pn	23 16 42.8	+1.3
NLC	Nalytchevo	4.07	225	*e*P	Pn	23 16 42.8	+1.3
SDLR	Sedlovina	4.18	229	PN	Pn	23 16 44.5	+1.3
SDLR	Sedlovina	4.18	229	*e*P	Pn	23 16 44.5	+1.3
KRER	Koryakskii	4.22	230	PN	Pn	23 16 46.3	+2.5
KRER	Koryakskii	4.22	230	*e*P	Pn	23 16 46.4	+2.5
KRX	Arik	4.22	231	PN	Pn	23 16 45.5	+1.6
KRX	Arik	4.22	231	*e*P	Pn	23 16 45.5	+1.6
SMAR	Somma	4.23	230	PN	Pn	23 16 45.2	+1.3
SMAR	Somma	4.23	230	*e*P	Pn	23 16 45.3	+1.3
AVH	Avacha	4.25	230	PN	Pn	23 16 45.7	+1.6
AVH	Avacha	4.25	230	*e*P	Pn	23 16 45.8	+1.6
KOK	Koryaka	4.28	231	PN	Pn	23 16 46.5	+2.0
KOK	Koryaka	4.28	231	*e*P	Pn	23 16 46.5	+2.0
GNL	Ganaly	4.33	239	PN	Pn	23 16 47.4	+2.1
GNL	Ganaly	4.33	239	*e*P	Pn	23 16 47.5	+2.1
DALK	Dalny	4.41	228	PN	Pn	23 16 47.2	+0.9
DALK	Dalny	4.41	228	*e*P	Pn	23 16 47.3	+0.9
PET	Petropavlovsk	4.46	228	*e*PN	Pn	23 16 48.5	+1.6
PET				pmax	pmax		
	comp=Z,39nm,0.9s						
PET				MLR	MLR		
	comp=Z,300nm,9.0s						
PET	Petropavlovsk	4.46	228	*e*P	Pn	23 16 49.3	+2.3
TILK	Tilichiki	4.46	13	PN	Pn	23 16 47.0	0.0
TILK	Tilichiki	4.46	13	*e*P	Pn	23 16 47.0	0.0
PEA0B	Petropavlovsk-	4.82	234	PN	Pn	23 16 55.2	+3.3
PETK	Petropavlovsk-	4.82	234	Pn	Pn	23 16 54.0	+2.1
	comp=Z,1.3nm,0.3s,baz=72,slow=18,SNR=11						
PETK				Sn	Sn	23 17 50.4	+2.6
	comp=Z,2.0nm,0.3s,baz=68,slow=19,SNR=3.3						
	comp=Z,3.3nm,0.7s						
KRMR	Karymshinskiy	4.82	229	PN	Pn	23 16 54.4	+2.5
KRMR	Karymshinskiy	4.82	229	*e*P	Pn	23 16 54.4	+2.5
RUS	Russkaya	4.96	224	PN	Pn	23 16 55.0	+1.2
RUS	Russkaya	4.96	224	*e*P	Pn	23 16 55.0	+1.2
GRL	Gorelyy	5.04	227	PN	Pn	23 16 56.7	+1.6
GRL	Gorelyy	5.04	227	*e*P	Pn	23 16 56.8	+1.6
MTVR	Mutnovka	5.05	226	PN	Pn	23 16 57.3	+2.1
MTVR	Mutnovka	5.05	226	*e*P	Pn	23 16 57.4	+2.1
ASAK	Asacha	5.24	227	PN	Pn	23 17 00.1	+2.4
ASAK	Asacha	5.24	227	*e*P	Pn	23 17 00.2	+2.4
SEY	Seymchan	9.07	324	LR	LR	23 20 19.5	
	comp=Z,30nm,21.8s,baz=207,slow=32						
BILL	Bilibino	12.01	4⇑	*e*PN	Pn	23 18 30.0	-0.3
ASAJ	Asahikawa	18.22	238	P	P	23 19 53.0	+0.6
	comp=Z,0.7nm,0.3s,baz=14,slow=8.4,SNR=5.9						
	comp=Z,11nm,0.8s						
YAK	Yakutsk	18.51	303⇑	*e*P	P	23 19 52.7	-2.8
YAK				pmax	pmax		
	comp=Z,12nm,0.6s						
ILAR	Eielson Array	25.02	50	P	P	23 21 04.2	+1.1
	comp=Z,1.5nm,0.9s,baz=259,slow=7.8,SNR=13						
	comp=Z,1.5nm,0.9s						
MJA0	Matsu Arr-Jizo	26.26	233	*e*P	P	23 21 15.1	+0.5
MJA0				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MJAR	Matsushiro Arr	26.28	233	P	P	23 21 15.1	+0.3
	comp=Z,2.8nm,0.6s,baz=22,slow=8.3,SNR=8.0						
MJAR				LR	LR	23 32 00.8	
	comp=Z,62nm,21.5s,baz=36,slow=37						
	comp=Z,2.8nm,0.6s						
SONM	Songino Array	35.57	282	P	P	23 22 35.3	-1.4
	comp=Z,0.2nm,0.3s,baz=56,slow=11,SNR=2.1						
	comp=Z,0.2nm,0.3s						
H11N2	WAKE ISLAND Hy	36.39	176	T	T	00 01 51.0	
	baz=357,slow=76,SNR=1029						
H11N3	WAKE ISLAND Hy	36.40	176	T	T	00 02 08.9	
	baz=357,slow=76,SNR=653						
H11N1	WAKE ISLAND Hy	36.41	176	T	T	00 02 01.0	
	baz=357,slow=76,SNR=732						
YKA	Yellowknife Ar	39.34	46	P	P	23 23 09.3	+1.0
	comp=Z,0.5nm,0.8s,baz=295,slow=7.9,SNR=4.2						
	comp=Z,0.5nm,0.8s						
GUMO	Guam	44.98	207	LR	LR	23 40 56.3	
	comp=Z,23nm,19.1s,baz=112,slow=34						
KURK	Kurchatov	48.15	302	P	P	23 24 17.9	-1.4
KURBB	Kurchatov Arra	48.26	302	P	P	23 24 17.9	-2.2
	comp=Z,0.5nm,0.7s,baz=51,slow=7.7,SNR=4.1						
	comp=Z,0.5nm,0.7s						
MKAR	Makanchi Array	48.98	296	P	P	23 24 22.7	-3.1
	comp=Z,0.3nm,0.5s,baz=46,slow=5.2,SNR=5.6						
	comp=Z,0.3nm,0.5s						
BVAR	Borovoye Array	50.36	308	P	P	23 24 33.1	-3.1
	comp=Z,0.4nm,0.5s,baz=44,slow=9.0,SNR=1.2						
	comp=Z,0.4nm,0.5s						
PDAR	Pinedale Array	54.04	65	P	P	23 25 04.9	+1.0
	comp=Z,0.6nm,0.9s,baz=306,slow=5.3,SNR=4.1						
	comp=Z,0.6nm,0.9s						
CMAR	Chiang Mai Arr	61.09	260	P	P	23 25 53.8	+0.3
	comp=Z,0.9nm,0.6s,baz=23,slow=5.9,SNR=4.8						
	comp=Z,0.9nm,0.6s						
CMAR	Chiang Mai Arr	61.09	260	*e*P	P	23 25 54.9	+1.4
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NB2	NORSAR Subarra	61.25	345	P	P	23 26 00.7	+6.5
	comp=Z,0.7nm,0.6s,baz=19,slow=6.9						
NOA	NORSAR Array B	61.25	345	P	P	23 25 53.8	-0.4
	comp=Z,0.3nm,0.7s,baz=19,slow=6.7,SNR=4.5						
	comp=Z,0.3nm,0.7s						
SCHQ	Schefferville	61.85	31	P	P	23 25 59.3	+1.0
	comp=Z,1.7nm,0.9s,baz=2.7,slow=8.6,SNR=4.0						
	comp=Z,1.7nm,0.9s						
HNR	Honiara	65.40	185	LR	LR	23 49 23.1	
	comp=Z,43nm,19.6s,baz=336,slow=31						
AKASG	Malin Array Be	67.18	331	P	P	23 26 31.6	-1.5
	comp=Z,0.2nm,0.3s,baz=26,slow=6.4,SNR=1.2						
	comp=Z,0.2nm,0.3s						
TXAR	Lajitas Array	67.34	71	P	P	23 26 36.3	+1.7
	comp=Z,0.5nm,0.8s,baz=297,slow=3.8,SNR=6.8						
	comp=Z,0.5nm,0.8s						
NCK	Nalchik	68.84	318⇓	*e*P	P	23 26 41.8	-1.9
NCK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
WRA	Warramunga Arr	79.85	208	P	P	23 27 49.1	+1.2
	comp=Z,1.0nm,0.9s,baz=21,slow=5.2,SNR=4.8						
	comp=Z,1.0nm,0.9s						
ASAR	Alice Springs	83.52	208	P	P	23 28 08.8	+1.6
	comp=Z,1.1nm,0.7s,baz=17,slow=6.0,SNR=8.7						
	comp=Z,1.1nm,0.7s						
QSPA	South Pole Qui	145.87	180	PKPbc	PKPdf	23 35 17.2	+0.3
	comp=Z,2.3nm,0.9s,baz=238,slow=1.0,SNR=5.9						

IDC ***27*** *23:16:09.5±0.6, 56°.31N×163°.94E, h0^{km}, mb3.9/15, mbtmp3.9/17, ML3.5/2, MS3.4/2, Error ellipse: s-maj=24.0km s-min=13.5km az=148.0*

ISC 27 23:16:13.2±0.7**, 56°.4N**±0°.1×**163°.9E**±0°.1**, h23^{km}, n19,** σ**0^s.73**/19**, mb3.9**/15**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
PETK	Petropavlovsk-	4.87	230	Pn	Pn	23 17 25.4	+0.4
	2.8nm,0.3s,baz=73,slow=20,SNR=5.9						
PETK				Sn	Sn	23 18 22.0	+1.4
	baz=25,slow=19						
PETK				LR	LR	23 19 37.5	
	comp=Z,311nm,20.6s,baz=59,slow=43						
	8.9nm,0.7s						
ASAJ	Asahikawa	18.25	237	P	Pn	23 20 24.4	-0.3
	0.6nm,0.3s,baz=95,slow=5.2,SNR=3.8						
	5.5nm,0.5s						
ILAR	Eielson Array	24.96	50	P	P	23 21 35.0	+0.5
	1.1nm,0.8s,baz=268,slow=8.4,SNR=5.0						
	1.1nm,0.8s						
MJAR	Matsushiro Arr	26.33	232	P	P	23 21 46.3	-0.8
	4.8nm,0.9s,baz=30,slow=9.4,SNR=7.1						
	4.8nm,0.9s						
SONM	Songino Array	35.38	281	P	P	23 23 05.6	-1.3
	0.3nm,0.3s,baz=59,slow=8.6,SNR=1.8						
	0.3nm,0.3s						
YKA	Yellowknife Ar	39.26	47	P	P	23 23 38.8	-0.6
	0.8nm,0.7s,baz=302,slow=8.9,SNR=4.6						
	0.8nm,0.7s						
KURBB	Kurchatov Arra	48.00	301	P	P	23 24 49.9	+0.1
	0.5nm,0.5s,baz=56,slow=7.9,SNR=4.9						
	0.5nm,0.5s						
MKAR	Makanchi Array	48.74	295	P	P	23 24 55.5	-0.1
	0.4nm,0.4s,baz=56,slow=6.2,SNR=6.0						
	0.4nm,0.4s						
NVAR	Mina Array Bea	52.63	75	P	P	23 25 25.8	+0.4
	1.1nm,0.9s,baz=324,slow=9.1,SNR=2.5						
	1.1nm,0.9s						
PDAR	Pinedale Array	54.05	65	P	P	23 25 36.0	+0.3
	0.9nm,0.8s,baz=321,slow=3.8,SNR=4.6						
	0.9nm,0.8s						
NOA	NORSAR Array B	60.96	345	P	P	23 26 24.4	+0.5
	0.5nm,0.8s,baz=17,slow=6.9,SNR=2.0						
	0.5nm,0.8s						
CMAR	Chiang Mai Arr	61.00	260	P	P	23 26 24.9	+0.2
	0.8nm,0.4s,baz=34,slow=5.5,SNR=2.1						
	0.8nm,0.4s						
HFS	Hagfors	61.46	344	P	P	23 26 28.2	+1.0
	2.3nm,0.9s,baz=46,slow=8.4,SNR=3.6						
	2.3nm,0.9s						
SCHQ	Schefferville	61.69	31	P	P	23 26 29.6	+0.8
	1.3nm,0.6s,baz=326,slow=3.6,SNR=1.8						
	1.3nm,0.6s						
SADO	Sadowa	66.19	44	LR	LR	23 59 29.1	
	comp=Z,35nm,18.1s,baz=172,slow=39						
TXAR	Lajitas Array	67.38	71	P	P	23 27 06.0	-0.6
	0.7nm,0.6s,baz=302,slow=5.0,SNR=7.1						
	0.7nm,0.6s						
WRA	Warramunga Arr	80.02	208	P	P	23 28 19.5	-0.9
	0.8nm,0.7s,baz=18,slow=5.8,SNR=7.3						
	0.8nm,0.7s						
ASAR	Alice Springs	83.69	207	P	P	23 28 39.6	-0.1
	1.8nm,0.9s,baz=15,slow=6.3,SNR=6.4						
	1.8nm,0.9s						
QSPA	South Pole Qui	146.13	180	PKPbc	PKPdf	23 35 48.9	+0.1
	1.5nm,0.7s,baz=292,slow=1.3,SNR=7.8						

IDC ***27*** *23:17:06.1±1.2, 27°.86N×65°.83E, h0^{km}, mb3.8/12, mbtmp3.8/12, MS3.3/8, Error ellipse: s-maj=25.8km s-min=24.0km az=3.0*

ISC 27 23:17:10.8±1.0**, 27°.8N**±0°.2×**65°.6E**±0°.1**, h35^{km}, n29,** σ**1^s.59**/24**, mb3.7**/11**, MS3.1**/7**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
SHME	Shamm	8.65	260	P	Pn	23 19 15.1	+1.6
SHME				S	Sn	23 20 46.5	-3.3
MDH	Madha	8.72	255	P	Pn	23 19 14.6	+0.2
MSFE	Esma-Masafi	8.82	256	P	Pn	23 19 15.3	-0.6
UOSS	Minazif	8.92	253	P	Pn	23 19 17.2	-0.1
SOHO	SOHO	8.97	248	P	Pn	23 19 17.0	-0.8
HATD	Hatta, Dubai	9.03	253	P	Pn	23 19 18.6	-0.1
ASHO	Ashiyiah	9.14	252	P	Pn	23 19 22.1	+1.8
NAZ	Nazwa, Dubai	9.37	255	P	Pn	23 19 26.3	+3.0
ALNE	Al Ain	9.65	249	P	Pn	23 19 28.8	+1.7
ASUD	Al Ashush, Dub	9.78	253	P	Pn	23 19 30.6	+1.7
AAK	Ala-Archa	16.45	24	LR	LR	23 28 15.4	
	comp=Z,86nm,21.6s,baz=224,slow=41						
RAYN	Ar Rayn	18.64	261	P	P	23 21 23.7	-1.9
GNI	Garni	21.18	311	LR	LR	23 31 00.1	
	comp=Z,47nm,18.1s,baz=106,slow=39						
MKAR	Makanchi Array	23.03	30	P	P	23 22 10.5	-2.2
	2.2nm,0.5s,baz=215,slow=11,SNR=31						
MKAR				LR	LR	23 33 11.9	
	comp=Z,144nm,21.0s,baz=196,slow=42						
	2.2nm,0.5s						
AKTO	Aktyubinsk	23.32	348	LR	LR	23 32 35.7	
	comp=Z,63nm,18.1s,baz=234,slow=40						
KURBB	Kurchatov Arra	24.80	20	P	P	23 22 29.7	+0.4
	0.8nm,0.5s,baz=211,slow=8.7,SNR=11						
	0.8nm,0.5s						
BVAR	Borovoye Array	25.43	7	P	P	23 22 35.9	+0.9
	1.3nm,0.6s,baz=188,slow=10.0,SNR=9.4						
BVAR				LR	LR	23 32 48.0	
	comp=Z,40nm,21.4s,baz=141,slow=37						
	1.3nm,0.6s						
BELG	Belogornoye	27.99	336	LR	LR	23 36 43.0	
	comp=Z,34nm,20.3s,baz=68,slow=42						
ZALV	Zalesovo Beam	29.67	23	P	P	23 23 12.6	-0.4
	0.8nm,0.4s,baz=239,slow=11,SNR=4.0						
	0.8nm,0.4s						
KIRV	Kirov	32.76	344	LR	LR	23 38 56.2	
	comp=Z,58nm,18.3s,baz=88,slow=40						
SONM	Songino Array	37.34	46	P	P	23 24 18.4	-1.6
	0.3nm,0.3s,baz=242,slow=9.2,SNR=2.3						
	0.3nm,0.3s						
FINES	FINESS Array B	42.67	333	P	P	23 25 03.3	-0.4
	1.4nm,0.7s,baz=128,slow=12,SNR=6.2						
	1.4nm,0.7s						
GERES	GERESS Array B	44.82	312	P	P	23 25 21.8	+0.4
	0.1nm,0.4s,baz=97,slow=9.0,SNR=1.6						
	0.1nm,0.4s						
HFS	Hagfors	47.53	328	P	P	23 25 44.0	+1.6
	3.5nm,1.2s,baz=122,slow=9.4,SNR=4.5						
	3.5nm,1.2s						
ARCES	ARCESS Array B	47.72	342	P	P	23 25 44.6	+0.9
	1.3nm,0.7s,baz=129,slow=8.7,SNR=5.6						
	1.3nm,0.7s						
TORD	Torodi Ar. Bea	61.05	270	P	P	23 27 23.6	+2.2
	0.5nm,0.3s,baz=39,slow=6.5,SNR=4.2						
	0.5nm,0.3s						
MA2	Magadan	64.03	34	LR	LR	23 57 35.1	
	comp=Z,37nm,18.4s,baz=252,slow=38						
WRA	Warramunga Arr	81.66	118	P	P	23 29 25.7	-0.1
	0.6nm,0.8s,baz=305,slow=5.6,SNR=2.9						
	0.6nm,0.8s						
ASAR	Alice Springs	83.38	121	P	P	23 29 35.3	+0.6
	0.4nm,0.6s,baz=312,slow=5.4,SNR=2.0						
	0.4nm,0.6s						

VAO ***27*** *23:37:57.4±1.8, 17°.44S×69°.96W, h156^{km}±8^{km}, mb4.3*

NEIC ***27*** *23:37:58.7±1.8, 17°.57S±0°.07×69°.9W±0°.1, h164^{km}±6^{km}, mb4.0/11, ML4.1(GUC), Error ellipse: s-maj=15.6km s-min=9.7km az=109.0*

IDC ***27*** *23:38:00.4±1.7, 17°.46S×69°.58W, h161^{km}±14^{km}, mb3.5/8, mbtmp4.1/10, MS3.2/2, Error ellipse: s-maj=22.4km s-min=17.1km az=34.0*

GUC ***27*** *23:38:01.3±0.8, 17°.64S×69°.91W, h152^{km}±4^{km}, ML4.1*

ISC 27 23:37:58.7±0.6**, 17°.58S**±0°.05×**69°.89W**±0°.07**, h162^{km}**±6^{km}**, n78,** σ**1^s.44**/89**, mb3.9**/8**, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
PB18	Visviri	0.39	91		Pn	23 38 22.5	+0.8
PB18	Visviri	0.39	91	*e*P	Pn	23 38 22.6	+0.9
PB18				*i* S	Sn	23 38 39.9	+0.7
PB16	IPOC Station P	0.83	154	Pn	Pn	23 38 24.1	0.0
AP01	Chacalluta	0.89	209		Pn	23 38 24.8	+1.0
AP01					Sn	23 38 43.3	+0.1
AP01	Chacalluta	0.89	209	*e*P	Pn	23 38 25.0	+1.2
AP01				*i* S	Sn	23 38 42.5	-0.7
AP01				IAML		23 38 45.1	
	comp=N,7µm,0.2s						
PX02	IPOC Station P	1.40	192	*e*P	Pn	23 38 28.4	0.0
PX02				*i* S	Sn	23 38 50.1	-1.3
PX02				IAML		23 38 52.0	
	comp=N,944nm,0.3s						
LPAZ	La Paz	2.12	53		Pn	23 38 36.5	-0.1
LPAZ	La Paz	2.12	53	P	Pn	23 38 36.3	-0.4
	comp=N,443nm,0.3s,baz=284,slow=4.0,SNR=5317						
LPAZ	La Paz	2.12	53	*e*P	Pn	23 38 34.7	-2.0
GO01	Chusmiza	2.17	162		Pn	23 38 38.6	+1.4
GO01				Sn	Sn	23 39 07.1	+0.3
GO01	Chusmiza	2.17	162	*e*P	Pn	23 38 38.6	+1.4
GO01				*i* S	Sn	23 39 07.1	+0.3
PB11	IPOC Station P	2.18	174		Pn	23 38 38.0	+1.1
PB11				Sn	Sn	23 39 06.2	-0.2
PB11	IPOC Station P	2.18	174	*e*P	Pn	23 38 37.9	+1.1
PB11				*i* S	Sn	23 39 05.5	-0.8
PB08	IPOC Station P	2.64	165		Pn	23 38 43.9	+1.4
PB08				Sn	Sn	23 39 16.5	+0.1
PB08	IPOC Station P	2.64	165	*e*P	Pn	23 38 44.0	+1.4
PB08				*i* S	Sn	23 39 16.1	-0.3
PB08				IAML		23 39 18.3	
	comp=N,768nm,0.4s						
HMBC	Humberstone	2.68	180		Pn	23 38 43.4	+0.7
HMBC				Sn	Sn	23 39 16.3	-0.7
HMBC	Humberstone	2.68	180	*e*P	Pn	23 38 43.5	+0.7
HMBC				*i* S	Sn	23 39 15.8	-1.2
HMBC				IAML		23 39 17.5	
	comp=N,831nm,0.2s						
TA02	Huaiquique	2.68	185		Pn	23 38 43.4	+0.8
TA02				Sn	Sn	23 39 15.5	-1.3
TA01	Diego Aracena	2.98	185		Pn	23 38 46.4	+0.1
TA01	Diego Aracena	2.98	185	*e*P	Pn	23 38 46.5	+0.1
TA01				*i* S	Sn	23 39 21.3	-2.0
TA01				IAML		23 39 23.6	
	comp=E,515nm,0.2s						
PATCX	Punta Patache	3.23	184		Pn	23 38 50.1	+0.6
PB01	IPOC Station P	3.46	174		Pn	23 38 53.3	+0.8
PB09	IPOC Station P	4.23	172		Pn	23 39 03.3	+0.8
PB06	IPOC Station P	5.10	177		Pn	23 39 14.3	+0.4
PB05	IPOC Station P	5.25	183		Pn	23 39 15.9	+0.1
AF01	San Pedro de A	5.58	164	Pn	Pn	23 39 20.3	0.0
PB10	IPOC Station P	5.93	186		Pn	23 39 24.7	0.0
PB14	IPOC Station P	7.02	184	Pn	Pn	23 39 39.4	-0.1
GO02	Mina Guanaco	7.55	178		Pn	23 39 46.1	-0.2
AC01	Pan de Azucar	8.55	184	Pn	Pn	23 39 58.4	-1.0
SIV	San Ignacio	8.59	81	P	Pn	23 39 55.7	-4.4
	comp=E,7.3nm,0.4s,baz=274,slow=10,SNR=50						
SIV				S	Sn	23 41 23.6	-12
	comp=E,7.5nm,0.8s,baz=154,slow=23,SNR=6.8						
SIV				LR	LR	23 43 11.4	
	comp=E,55nm,21.7s,baz=134,slow=38						
NNA	Nana	8.73	309	Pn	Pn	23 40 01.7	-0.2
NNA	Nana	8.73	309	P	Pn	23 40 03.9	+2.0
	comp=E,15nm,0.2s,baz=146,slow=13,SNR=12						
NNA				S	Sn	23 41 34.8	-4.3
	comp=E,3.1nm,0.3s,baz=249,slow=8.3,SNR=1.5						
AC02	Maricunga	9.23	176	Pn	Pn	23 40 07.5	-1.4
AC06	Mina Casimiro	9.74	182	Pn	Pn	23 40 14.0	-1.1
VILB	Vilhena	10.42	65		Pn	23 40 22.6	-1.7
VILB	Vilhena	10.42	65	*e*P	Pn	23 40 21.3	-2.9
AC04	Llanos de Chal	10.63	186	Pn	Pn	23 40 25.6	-1.2
CO01	Juntas del Tor	12.34	181	Pn	Pn	23 40 47.9	-1.4
GO04	Tololo Observa	12.56	184	Pn	Pn	23 40 51.0	-1.1
CO06	Fray Jorge	13.13	187	Pn	Pn	23 40 58.2	-0.9
CO03	El Pedregal	13.22	183	Pn	Pn	23 40 58.9	-1.4
CO02	Combarbal	13.60	184	Pn	Pn	23 41 04.0	-1.2
SALV	Santo Antonio	13.70	85	*e*P	Pn	23 41 06.1	-0.4
CFA	Coronel Fontan	14.04	174	P	Pn	23 41 10.3	-0.4
	comp=E,0.4nm,0.3s,baz=350,slow=11,SNR=4.0						
PDRB	Porto dos Gac	14.05	67	*e*P	Pn	23 41 10.5	-0.4
VA03	San Esteban	15.13	182	Pn	Pn	23 41 23.0	-1.3
VA03				IAmb	IAmb	23 41 30.6	
	comp=Z,7.7nm,1.1s						
CLDB	Colider	15.20	66	*e*P	Pn	23 41 24.2	-1.0
RPRD	Ribas do Rio P	15.58	103	*e*P	P	23 41 30.5	-0.1
MT02	Curacav	15.65	184	Pn	Pn	23 41 28.7	-1.9
MT02				IAmb	IAmb	23 41 33.2	
	comp=Z,5.2nm,1.0s						
MT09	Talagante	16.16	183	P	Pn	23 41 36.8	-0.1
MT01	Popeta	16.26	184	P	Pn	23 41 40.2	+2.2
MT01				IAmb	IAmb	23 41 51.4	
	comp=Z,8.4nm,1.1s						
BO04	La Punta	16.35	182	P	Pn	23 41 39.4	+0.3
BO04				IAmb	IAmb	23 41 40.5	
	comp=Z,8.4nm,1.1s						
MACA	Manacapuru-AM	16.94	33		P	23 41 44.9	-0.8
BO02	Sierra Bellavi	17.16	182		Pn	23 41 48.3	-0.6
BO02				IAmb	IAmb	23 41 55.6	
	comp=Z,18nm,1.1s						
SNDB	Serra Nova Dou	18.82	75	*e*P	P	23 42 05.1	-1.1
ITTB	Itaituba	19.10	48	*e*P	P	23 42 07.9	-1.4
CPSB	Cacapava Do Su	19.69	133	*e*P	P	23 42 15.4	-0.1
PLTB	Pedras Altas	20.41	137	P	P	23 42 22.7	-0.5
BDFB	Brasilia	21.05	88	P	P	23 42 29.2	-1.1
BDFB				IAmb	IAmb	23 42 37.0	
	comp=Z,3.8nm,0.8s						
BDFB	Brasilia	21.05	88	P	P	23 42 28.2	-2.1
	comp=Z,2.1nm,0.4s,baz=256,slow=8.9,SNR=4.1						
	comp=Z,2.1nm,0.4s						
BOAV	Boa Vista	21.90	26	P	P	23 42 39.5	+0.4
BOAV				IAmb	IAmb	23 42 52.4	
	comp=Z,5.4nm,1.1s						
PLCA	Paso Flores	23.08	181	P	P	23 42 53.0	+2.9
PLCA	Paso Flores	23.08	181	P	P	23 42 53.0	+2.9
	comp=Z,3.1nm,0.9s,baz=357,slow=10,SNR=5.0						
	comp=Z,3.1nm,0.9s						
SMTB	Santa Maria do	23.36	71	*e*P	P	23 42 52.7	-0.2
JANB	Januaria	24.67	88	*e*P	P	23 43 05.0	+0.1
TXAR	Lajitas Array	56.91	325	P	P	23 47 28.3	+1.2
	comp=Z,0.1nm,0.4s,baz=127,slow=4.0,SNR=4.2						
	comp=Z,0.1nm,0.4s						
DBIC	Dimbokro	68.58	75	P	P	23 48 43.8	-0.8
	comp=Z,4.3nm,0.8s,baz=243,slow=3.8,SNR=5.6						
	comp=Z,4.3nm,0.8s						
ULM	Lac du Bonnet	71.32	343	P	P	23 49 01.9	+1.4
	comp=Z,2.3nm,0.5s,baz=162,slow=4.1,SNR=7.8						
	comp=Z,2.3nm,0.5s						
QSPA	South Pole Qui	72.59	180	P	P	23 49 11.3	+3.2
	comp=Z,0.6nm,0.8s,baz=153,slow=4.5,SNR=1.3						
	comp=Z,0.6nm,0.8s						
TORD	Torodi Ar. Bea	76.96	72	P	P	23 49 33.8	-0.1
	comp=Z,2.8nm,0.7s,baz=256,slow=5.2,SNR=5.8						
	comp=Z,2.8nm,0.7s						
NEW	Newport	77.91	330	LR	LR	00 30 25.9	
	comp=Z,46nm,18.1s,baz=234,slow=40						
YKA	Yellowknife Ar	87.20	341	P	P	23 50 29.2	+3.0
	comp=Z,0.6nm,0.8s,baz=138,slow=4.6,SNR=4.5						
	comp=Z,0.6nm,0.8s						
STHS	Stebnicka Huta	103.87	42	*e*PDIFF	Pdif	23 51 44.0	+1.5
KOLS	Kolonicke sedl	104.45	43	*e*PDIFF	Pdif	23 51 39.5	-5.6
WRA	Warramunga Arr	135.77	214	PKP	PKiKP	23 57 03.5	+1.0
	comp=Z,0.5nm,0.9s,baz=140,slow=1.5,SNR=1.5						
SONM	Songino Array	149.68	5	PKPab	PKPab	23 57 37.8	+2.7
	comp=Z,0.5nm,0.5s,baz=326,slow=7.7,SNR=3.8						
PZH	PanZhiHua	168.22	40	PKP	PKPdf	23 57 43.3	-3.4

IDC 28 00:06:07.1±5.3**, 5°.60N×125°.09E, h121^{km}**±63^{km}**, mb3.2**/4**, mbtmp3.5**/4**, Error ellipse: s-maj=134.6km s-min=18.5km az=69.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	1.54	18	P	Pn	00 06 35.1	0.0
	167nm,0.4s,baz=37,slow=18,SNR=2.0						
DAV				S	Sn	00 06 56.4	0.0
	427nm,0.4s,baz=333,slow=19,SNR=9.4						
WRA	Warramunga Arr	26.97	161	P	P	00 11 36.6	-0.9
	0.6nm,0.8s,baz=338,slow=10,SNR=10						
	0.6nm,0.8s						
ASAR	Alice Springs	30.34	164	P	P	00 12 08.3	+0.9
	0.7nm,0.6s,baz=342,slow=7.2,SNR=13						
	0.7nm,0.6s						
MKAR	Makanchi Array	55.09	325	P	P	00 15 26.9	+0.3
	0.2nm,0.5s,baz=113,slow=7.1,SNR=2.1						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	59.29	327	P	P	00 15 55.6	-0.4
	0.2nm,0.4s,baz=125,slow=8.1,SNR=1.8						
	0.2nm,0.4s						

TRN 28 00:24:40.0, 14°.94N×61°.22W, h167^{km}, MD3.9, North of Martinique., Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
SVN	Savane Anatole	0.11	151	*e*P	Pn	00 25 03.3	+1.0
SVN				*e*S	Sn	00 25 20.1	+0.9
ILAM	Ilet Lapin Mar	0.38	116	*e*P	Pn	00 25 03.5	+0.8
ILAM				*e*S	Sn	00 25 20.0	-0.1
DRTD	Roseau, Domini	0.39	336	*e*P	Pn	00 25 03.8	+1.0
DRTD				*e*S	Sn	00 25 21.3	+0.9
DLPL	La Plaine	0.39	357	*e*P	Pn	00 25 03.8	+1.0
DLPL				*e*S	Sn	00 25 20.8	+0.3
MDN	Morne-Daniel	0.41	337	*e*P	Pn	00 25 03.8	+0.9
MDN				*e*S	Sn	00 25 20.7	+0.2
BIM	Bigot	0.45	161	*e*P	Pn	00 25 03.7	+0.6
BIM				*e*S	Sn	00 25 22.5	+1.7
DSLB	Salisbury	0.53	339	*e*P	Pn	00 25 04.6	+1.2
DSLB				*e*S	Sn	00 25 21.8	+0.3
DWS	Wesley	0.63	352	*e*P	Pn	00 25 04.4	+0.5
SLBI	Saint Lucia, B	0.94	165	*e*P	Pn	00 25 06.3	+0.3
SLBI				*e*S	Sn	00 25 25.1	-0.8
TBG	Guadaloupe-3	0.99	336	*e*P	Pn	00 25 07.4	+1.1
TBG				*e*S	Sn	00 25 28.1	+1.4
SVB	Belmont	1.66	181	*e*P	Pn	00 25 13.1	+0.5
SVB				*e*S	Sn	00 25 37.1	-0.5
SVT	Saint Vincent	1.76	181	*e*P	Pn	00 25 13.5	0.0
SVT				*e*S	Sn	00 25 41.1	+1.6
SVOC	Richmond Hill,	1.78	180	*e*P	Pn	00 25 13.7	0.0
SVOC				*e*S	Sn	00 25 39.6	-0.2
BBGH	Gun Hill	2.41	138	*e*P	Pn	00 25 23.6	+2.7
BBGH				*e*S	Sn	00 25 52.4	-0.1
GCMP	Grenada, Carri	2.45	185	*e*P	Pn	00 25 21.8	+0.5
GCMP				*e*S	Sn	00 25 53.1	-0.4
GRSS	Sisters	2.65	188	*e*P	Pn	00 25 23.5	-0.3
ANWB	Willy Bob	2.77	349	*e*P	Pn	00 25 25.6	+0.4
ANWB				*e*S	Sn	00 25 58.9	-1.4
SKI	Saint Kitts	2.79	329	*e*P	Pn	00 25 26.7	+1.2
SKI				*e*S	Sn	00 25 59.4	-1.4
GRW	Mount Saint Ca	2.80	189	*e*P	Pn	00 25 26.2	+0.5
GRW				*e*S	Sn	00 26 01.2	+0.1
GRGR	Grenville	2.82	189	*e*P	Pn	00 25 26.3	+0.4

GRGR				*e*S	Sn	00 26 01.9	+0.4
GRFF	Grenada Fort F	2.92	190	*e*P	Pn	00 25 27.6	+0.5
GRFF				*e*S	Sn	00 26 04.3	+0.7
PSKH	Kent House, Po	4.25	184	*e*S	Sn	00 26 32.1	-1.8
PSMG	Mucurapo Girls	4.25	184	*e*S	Sn	00 26 32.4	-1.7
PSGH	Port of Spain	4.26	184	*e*P	Pn	00 25 46.0	+1.9
PSGH				*e*S	Sn	00 26 32.0	-2.2
TRN	Trinidad (W)	4.27	182	*e*P	Pn	00 25 45.4	+1.2
TRN				*e*S	Sn	00 26 32.0	-2.4

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*IDC **28** 00:28:45.3±3.5, 1.°76N×127.°36E, h108^{km}±29^{km}, mb4.2/9, mbtmp4.6/11, Error ellipse: s-maj=47.7km s-min=13.1km az=68.0*

*NEIC **28** 00:28:45.7±1.3, 1.°81N±0.°09×127.°40E±0.°09, h107^{km}±7^{km}, mb4.5/28, Error ellipse: s-maj=13.9km s-min=12.2km az=53.0*

*DJA **28** 00:28:46.2±0.2, 2°N±2°×12°7E±°, h63^{km}±6^{km}, M4.7/19, mB5.3/7, mb4.8/13, MLv4.6/19, Mw(mB)4.7/7*

ISC 28 00:28:45.0±0.5, **1.°79N**±0.°05×**127.°35E**±0.°07, **h100**^{km}, **n77**, σ**1^{s}22**/81, **mb4.5**/24, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.01	179		Pn	00 29 07.0	+1.5
TNTI	Ternate	1.01	179	P	Pn	00 29 07.2	+1.7
TNTI	Ternate	1.01	179	P	Pn	00 29 06.6	+1.1
TNTI				S	Sn	00 29 22.4	+1.4
SGSI	Sangihe	2.62	316	P	Pn	00 29 23.2	-2.6
KMSI	Cibinong	3.58	250	P	Pn	00 29 38.3	-0.2
SANI	Sanana	4.05	200	P	Pn	00 29 44.8	-0.1
SANI	Sanana	4.05	200	P	Pn	00 29 44.2	-0.7
SWI	Sorong	4.71	124	P	Pn	00 30 01.0	+7.2
NLAI	Namlea	5.00	183	P	Pn	00 29 58.8	+1.1
MSAI	Masohi	5.34	163	P	Pn	00 30 04.4	+2.1
	0.3nm63nm,0.6s						
LUWI	Luwuk	5.37	239	Pn	Pn	00 30 04.5	+1.6
LUWI					Sn	00 31 06.7	+3.3
LUWI	Luwuk	5.37	239	P	Pn	00 30 03.5	+0.7
LUWI	Luwuk	5.37	239	S	Sn	00 31 03.1	-0.4
LUWI	Luwuk	5.37	239	P	Pn	00 30 03.0	+0.2
	6μm127nm,0.4s						
MRSI	Marisa	5.57	257	P	Pn	00 30 06.7	+1.3
APSI	Ampana	6.30	245	P	Pn	00 30 16.1	+0.7
	0.8nm2μm67nm,0.6s						
TOLI2	Tolitoli	6.60	264		Pn	00 30 19.0	-0.6
TOLI2	Tolitoli	6.60	264	P	Pn	00 30 19.2	-0.3
FAKI	Fak Fak	6.77	134	Pn	Pn	00 30 24.1	+2.3
FAKI	Fak Fak	6.77	134	P	Pn	00 30 25.1	+3.3
FAKI	Fak Fak	6.77	134	P	Pn	00 30 24.6	+2.8
	0.2nm60nm,1.5s						
KDI	Kendari	7.41	220	P	Pn	00 30 31.2	+0.6
MPSI	Mapaga	7.59	259	P	Pn	00 30 34.6	+1.6
TTSI	Tana Toraja	8.93	238	P	Pn	00 30 50.8	-0.4
	1μm94nm,0.6s						
SPSI	Sidrap Palu	9.49	233	P	Pn	00 30 59.3	+0.5
BNSI	Bone	9.50	230	P	Pn	00 30 59.4	+0.5
	34nm,0.6s						
KAPI	Kappang	10.16	228		Pn	00 31 09.1	+1.1
KAPI	Kappang	10.16	228	P	Pn	00 31 08.8	+0.8
	21nm,0.3s,baz=352,slow=6.0,SNR=8.4						
KAPI				S	Sn	00 32 58.4	-1.7
	8.8nm,0.3s,baz=345,slow=23,SNR=6.3						
KAPI	Kappang	10.16	228	P	Pn	00 31 09.6	+1.6
KAPI	Kappang	10.16	228	S	Sn	00 33 00.1	-0.1
MTN	Manton Dam	15.01	166		Pn	00 32 11.9	-0.1
MTN				IAmb	IAmb	00 32 16.8	
	comp=Z,28nm,0.3s						
MTN	Manton Dam	15.01	166	P	Pn	00 32 13.3	+1.3
SBUM	Sibu	15.14	273	P	P	00 32 16.6	+0.2
SBUM				IAmb	IAmb	00 32 17.9	
	comp=Z,11nm,0.7s						
KNRA	Kununurra	17.41	175		P	00 32 41.5	0.0
KNRA				IAmb	IAmb	00 32 43.0	
	comp=Z,14nm,0.5s						
FITZ	Fitzroy Crossi	19.83	185		P	00 33 08.1	+0.1
FITZ	Fitzroy Crossi	19.83	185	P	P	00 33 06.8	-1.1
	comp=Z,13nm,0.7s,baz=16,slow=8.9,SNR=63						
WB0	Warramunga Arr	22.51	162	P	P	00 33 35.6	-0.9
WRAB	Tennant Creek	22.65	163	P	P	00 33 37.1	-0.8
WRA	Warramunga Arr	22.66	163	P	P	00 33 35.8	-2.3
WRA	Warramunga Arr	22.66	163	P	P	00 33 36.8	-1.3
	comp=Z,19nm,0.3s,baz=340,slow=10,SNR=192						
	comp=Z,19nm,0.3s						
WR8	Warramunga Arr	22.72	162		P	00 33 37.7	-0.9
WR8				IAmb	IAmb	00 33 38.1	
	comp=Z,26nm,0.5s						
MBWA	Marble Bar	23.99	198	P	P	00 33 49.5	-1.0
MBWA				IAmb	IAmb	00 33 50.6	
	comp=Z,24nm,1.2s						
PSA00	Pilbara Seismi	24.35	197	P	P	00 33 53.4	-0.4
PSA00				IAmb	IAmb	00 33 55.2	
	comp=Z,36nm,1.4s						
AS31	Alice Springs	26.09	166	P	P	00 34 08.8	-0.7
AS31				IAmb	IAmb	00 34 14.2	
	comp=Z,4.8nm,0.7s						
ASAR	Alice Springs	26.09	166	P	P	00 34 08.8	-0.8
ASAR	Alice Springs	26.09	166	P	P	00 34 08.7	-0.9
	comp=Z,7.7nm,0.5s,baz=351,slow=7.5,SNR=124						
ASAR				PcP	PcP	00 37 34.0	-0.9
	comp=Z,0.7nm,0.6s,baz=331,slow=1.2,SNR=4.6						
ASAR				ScP	ScP	00 41 03.6	-2.1
	comp=Z,0.3nm,0.6s,baz=333,slow=2.1,SNR=4.2						
	comp=Z,7.7nm,0.5s						
NJ2	Nanjing	31.15	346	*e*P	P	00 34 56.3	+1.9
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
MORW	Morawa	32.54	199	P	P	00 35 05.9	-0.7
PZH	PanZhiHua	34.77	317	P	P	00 35 27.8	+1.6
BBOO	Buckleboo	35.38	167	P	P	00 35 30.6	-0.6
EIDS	Eidsvold	35.45	141	P	P	00 35 31.3	-0.6
EIDS				IAmb	IAmb	00 35 50.2	
	comp=Z,11nm,1.1s						
NWAO	Narrogin (SRO)	35.83	195	P	P	00 35 34.4	-0.6
STKA	Stephens Creek	36.10	159	P	P	00 35 37.0	-0.3
STKA	Stephens Creek	36.10	159	P	P	00 35 37.0	-0.3
	comp=Z,22nm,0.4s,baz=337,slow=8.3,SNR=54						
	comp=Z,22nm,0.4s						
ARMA	Armidale	39.51	146	P	P	00 36 05.2	-1.1
ARMA				IAmb	IAmb	00 36 11.9	
	comp=Z,26nm,1.4s						
HHC	Hu-ho-hao-te	41.43	342	*e*P	P	00 36 22.0	+0.1
HHC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,79nm,4.2s						
CAN	Canberra	42.11	153	P	P	00 36 27.1	-0.3
TOO	Toolangi	42.62	159	P	P	00 36 31.6	+0.1
TOO				IAmb	IAmb	00 36 46.5	
	comp=Z,7.5nm,1.4s						
GTA	Gaotai	45.08	330	*e*P	P	00 36 52.0	+0.7
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
WMQ	Urumqi	54.67	326	*e*P	P	00 38 04.8	+1.0
WMQ				pP	pwP	00 38 30.8	+0.5
WMQ				pmax	pmax		
	comp=Z,34nm,1.3s						
MKAR	Makanchi Array	59.50	326	P	P	00 38 37.2	-0.6
	comp=Z,1.9nm,0.4s,baz=116,slow=7.8,SNR=42						
	comp=Z,1.9nm,0.4s						
MAKZ	Makanchi	59.68	326	P	P	00 38 38.1	-0.9
MAKZ				IAmb	IAmb	00 38 39.0	
	comp=Z,2.2nm,0.7s						
KBL	Kabul	63.20	308	P	P	00 39 01.6	-1.5
KBL				IAmb	IAmb	00 39 03.7	
	comp=Z,5.5nm,0.9s						
GAR	Garm	63.69	313	P	P	00 39 06.1	-0.1
GAR				IAmb	IAmb	00 39 07.3	
	comp=Z,6.0nm,0.6s						
KURBB	Kurchatov Arra	63.70	328	P	P	00 39 04.8	-1.0
	comp=Z,3.0nm,0.6s,baz=129,slow=6.2,SNR=32						
	comp=Z,3.0nm,0.6s						
KURK	Kurchatov	63.70	328	P	P	00 39 05.0	-0.9
KURK				IAmb	IAmb	00 39 07.4	
	comp=Z,5.3nm,0.7s						
KKAR	Karatay Array	65.07	317	P	P	00 39 14.9	-0.1
BVAR	Borovoye Array	69.28	327	P	P	00 39 42.1	+0.7
	comp=Z,2.1nm,0.8s,baz=132,slow=8.2,SNR=5.6						
	comp=Z,2.1nm,0.8s						
BRVK	Borovoye	69.35	327	P	P	00 39 42.7	+0.9
AB31	Akbulak array	74.04	321	P	P	00 40 11.1	+1.1
ABKAR	Akbulak array	74.04	321	P	P	00 40 11.1	+1.1
VNDA	Vanda	81.43	173	P	P	00 40 49.9	-0.6
VNDA	Vanda	81.43	173	P	P	00 40 49.7	-0.8
	comp=Z,1.4nm,0.8s,baz=327,slow=6.8,SNR=9.3						
	comp=Z,1.4nm,0.8s						
MAW	Mawson	82.16	200	P	P	00 40 53.5	-0.9
	comp=Z,2.4nm,0.5s,baz=77,slow=5.5,SNR=6.0						
	comp=Z,2.4nm,0.5s						
G19K	Purcell Mounta	82.55	23	P	P	00 40 56.0	-0.5
QSPA	South Pole Qui	91.70	180	P	P	00 41 40.5	-0.5
	comp=Z,1.0nm,0.9s,baz=316,slow=16,SNR=2.1						
	comp=Z,1.0nm,0.9s						
TXAR	Lajitas Array	122.27	53	PKP	PKPdf	00 47 28.3	-0.9
	comp=Z,0.1nm,0.5s,baz=167,slow=1.0,SNR=4.2						

IDC 28 00:34:52.1±5.7, **19.°30S**×**178.°74W**, **h0**^{km}, **mb3.8**/2, **mbtmp3.8**/2, **Error ellipse: s-maj=284.3km s-min=45.9km az=148.0**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	44.09	261	P	P	00 43 02.1	-0.2
	0.7nm,0.6s,baz=95,slow=7.8,SNR=12						
	0.7nm,0.6s						
ASAR	Alice Springs	44.13	256	P	P	00 43 02.6	-0.1
	1.3nm,0.6s,baz=97,slow=7.9,SNR=14						
	1.3nm,0.6s						
HFS	Hagfors	138.25	351	PKhKP	PKPpre	00 54 12.5	
	2.7nm,1.0s,baz=73,slow=5.4,SNR=4.7						
AKASG	Malin Array Be	141.63	331	PKP	PKPdf	00 54 22.5	-2.8
	0.7nm,0.5s,baz=45,slow=4.5,SNR=8.5						
BRTR	Keskin Array B	145.52	313	PKPbc	PKPdf	00 54 32.5	-0.2
	0.5nm,0.7s,baz=107,slow=2.0,SNR=2.4						
GERES	GERESS Array B	148.86	344	PKPbc	PKPbc	00 54 41.2	-0.6
	0.2nm,0.3s,baz=343,slow=1.4,SNR=3.6						

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*IDC **28** 00:45:43.4±1.1, 2.°62S×138.°41E, h0^{km}, mb3.6/4, mbtmp3.6/7, ML3.5/3, Error ellipse: s-maj=24.6km s-min=16.6km az=164.0*

*DJA **28** 00:45:47.6±0.4, 2°S±3°×13°8E±°, h10^{km}, M3.7/6, MLv3.7/6*

ISC 28 00:45:47.3±0.7, **2.°54S**±0.°07×**138.°44E**±0.°04, **h32**^{km}, **n12**, σ**1^{s}50**/15, **mb3.6**/4, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.61	27	P	Pb	00 45 58.2	-1.5
SMPI				S	Sb	00 46 07.2	-0.9
GENI	Genyem	1.73	92	P	Pb	00 46 17.0	-1.5
GENI				S	Sb	00 46 39.8	-0.1
JAY	Jayapura	2.27	89	Pn	Pn	00 46 23.2	+0.5
	7.6nm,0.3s,baz=224,slow=11,SNR=18						
JAY				Lg	Lg	00 46 56.6	
	3.9nm,0.3s,baz=119,slow=23,SNR=6.9						
	19nm,0.3s						
JAY	Jayapura	2.27	89	P	Pn	00 46 23.9	+1.2
SRPI	Serui, Papua	2.29	287	P	Pn	00 46 24.7	+1.7
SRPI				S	Sb	00 46 56.1	+0.1
BAKI	Biak	2.69	300	P	Pb	00 46 32.0	-2.8
WRA	Warramunga Arr	17.75	193	P	Pn	00 49 50.5	-1.7
	0.3nm,0.3s,baz=21,slow=12,SNR=12						
	0.9nm,0.6s						
FITZ	Fitzroy Crossi	19.91	218	P	P	00 50 16.3	-0.2
	0.1nm,0.3s,baz=47,slow=16,SNR=2.0						
	2.2nm,0.9s						
ASAR	Alice Springs	21.45	191	P	P	00 50 32.5	-0.7
	1.2nm,0.6s,baz=20,slow=11,SNR=13						
	1.2nm,0.6s						
MKAR	Makanchi Array	69.49	322	P	P	00 56 55.0	+2.1
	0.5nm,0.7s,baz=128,slow=7.9,SNR=5.4						
	0.5nm,0.7s						
VNDA	Vanda	75.97	175	P	P	00 57 31.6	+0.8
	0.5nm,0.7s,baz=345,slow=6.0,SNR=5.7						
	0.5nm,0.7s						
ILAR	Eielson Array	85.79	24	P	P	00 58 23.6	+0.3
	0.3nm,0.7s,baz=265,slow=3.8,SNR=6.7						
	0.3nm,0.7s						

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*IDC **28** 00:52:15.0±0.7, 2.°71S×138.°55E, h0^{km}, mb3.9/9, mbtmp3.9/12, ML4.0/3, MS3.3/3, Error ellipse: s-maj=18.0km s-min=15.4km az=174.0*

*DJA **28** 00:52:16.9±0.4, 3°S±3°×13°9E±°, h10^{km}, M4.1/7, MLv4.1/7*

ISC 28 00:52:19.0±0.7, **2.°62S**±0.°07×**138.°62E**±0.°05, **h32**^{km}, **n19**, σ**1^{s}50**/20, **mb3.8**/9, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.63	8	P	Pb	00 52 30.4	-1.3
SMPI				S	Sn	00 52 39.1	-1.7
GENI	Genyem	1.54	89	P	Pn	00 52 44.7	+0.4
GENI				S	Sb	00 53 05.8	-0.4
JAY	Jayapura	2.08	87	Pn	Pn	00 52 52.6	+0.9
	15nm,0.3s,baz=212,slow=9.2,SNR=26						
JAY				Lg	Lg	00 53 23.9	
	16nm,0.3s,baz=141,slow=21,SNR=9.4						
JAY				LR	LR	00 53 51.0	
	comp=Z,290nm,21.4s,baz=292,slow=44						
	50nm,0.3s						
JAY	Jayapura	2.08	87	P	Pn	00 52 51.9	+0.1
JAY				S	Sb	00 53 20.1	-1.6
SRPI	Serui, Papua	2.50	287	P	Pn	00 52 57.8	+0.4
BAKI	Biak	2.89	299	P	Pn	00 53 02.0	-0.8
BATI	Baumata	16.66	242	LR	LR	01 03 54.3	
	comp=Z,278nm,20.3s,baz=322,slow=42						
WRA	Warramunga Arr	17.72	193	P	Pn	00 56 20.2	-3.2
	1.0nm,0.3s,baz=17,slow=13,SNR=27						
	2.0nm,0.4s						
FITZ	Fitzroy Crossi	19.97	219	P	P	00 56 47.8	-0.9
	0.3nm,0.3s,baz=40,slow=6.8,SNR=9.5						
	1.8nm,0.8s						
ASAR	Alice Springs	21.41	192	P	P	00 57 03.2	-1.2
	4.2nm,0.5s,baz=18,slow=10,SNR=34						
	4.2nm,0.5s						
SONM	Songino Array	57.60	335	P	P	01 02 08.1	+2.1
	0.4nm,0.5s,baz=155,slow=7.9,SNR=2.2						
	0.4nm,0.5s						
PETK	Petropavlovsk-	57.80	13	LR	LR	01 25 17.1	
	comp=Z,22nm,20.4s,baz=121,slow=34						
MKAR	Makanchi Array	69.67	322	P	P	01 03 26.4	+0.8
	0.7nm,0.7s,baz=106,slow=9.1,SNR=5.6						
	0.7nm,0.7s						
ZALV	Zalesovo Beam	71.82	330	P	P	01 03 39.1	+0.7
	0.3nm,0.3s,baz=98,slow=7.4,SNR=1.9						
	0.3nm,0.3s						
KURBB	Kurchatov Arra	73.61	325	P	P	01 03 51.4	+2.3
	0.4nm,0.7s,baz=112,slow=5.9,SNR=4.1						
	0.4nm,0.7s						
VNDA	Vanda	75.88	175	P	P	01 04 03.4	+1.6
	0.9nm,0.8s,baz=323,slow=6.0,SNR=6.8						
	0.9nm,0.8s						
BVAR	Borovoye Array	79.19	325	P	P	01 04 22.5	+1.7
	1.3nm,0.6s,baz=97,slow=6.4,SNR=5.4						
	1.3nm,0.6s						
ILAR	Eielson Array	85.79	24	P	P	01 04 54.6	-0.3
	0.8nm,0.8s,baz=246,slow=6.0,SNR=7.8						
	0.8nm,0.8s						
QSPA	South Pole Qui	87.32	180	P	P	01 05 03.1	+0.5
	1.7nm,0.7s,baz=311,slow=0.8,SNR=7.2						
	1.7nm,0.7s						

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*NOU **28** 01:00:29.3, 39.°15S×174.°83E, h211^{km}, MLv4.4/22, North Island, New Zealand*

*IDC **28** 01:00:29.1±0.8, 38.°99S×174.°90E, h203^{km}±10^{km}, mb3.7/8, mbtmp4.3/9, MS3.5/1, Error ellipse: s-maj=15.7km s-min=12.8km az=81.0*

*NEIC **28** 01:00:30.6±1.2, 39.°12S±0.°06×174.°84E±0.°07, h209^{km}±6^{km}, mb4.0/8, Error ellipse: s-maj=10.7km s-min=6.0km az=144.0*

*WEL **28** 01:00:33.0±0.6, 39°S±5°×17°5E±°, h190^{km}±4^{km}, M4.2/101, ML3.9/2, MLv4.2/101, Error ellipse: s-maj=6.4km s-min=5.7km az=135.8, confirmed*

ISC 28 01:00:30.2±0.6, **39.°12S**±0.°04×**174.°82E**±0.°04, **h218**^{km}±5^{km}, **n203**, σ**1^{s}19**/225, **mb4.1**/12, **3C**, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRZ	Vera Road	0.04	263	P	Pn	01 00 58.3	-0.3
VRZ				S	S	01 01 19.2	-1.5
MHEZ	Mangahewa	0.39	276	P	Pn	01 00 59.7	+0.6
PKVZ	Pokaka	0.45	113	P	Pn	01 00 59.5	+0.2
PKVZ				S	S	01 01 20.5	-1.6
LREZ	Lake Rotokare	0.47	223	P	Pn	01 00 59.8	+0.5
DREZ	Durham Road	0.48	262	P	Pn	01 00 59.7	+0.3
DREZ				S	S	01 01 21.2	-0.9
TWVZ	Taurewa	0.49	85	P	Pn	01 00 59.4	-0.1
TWVZ				S	S	01 01 20.2	-2.2
PREZ	Palmer Road	0.56	246	P	Pn	01 01 00.1	+0.5
COVZ	Chateau Observ	0.57	98	P	Pn	01 00 59.9	+0.1
COVZ				S	S	01 01 20.8	-2.1
MTVZ	Mangateitei	0.57	118	P	Pn	01 00 60.0	+0.2
NEZ	North Egmont	0.58	255	P	Pn	01 01 00.3	+0.5
FWVZ	Far West T-bar	0.59	104	P	Pn	01 01 00.1	+0.1
FWVZ				S	S	01 01 20.4	-2.8
TRVZ	Turoa	0.60	108	P	Pn	01 01 00.2	+0.2
MAVZ	Matarangi	0.60	105	P	Pn	01 01 00.3	+0.1
WTVZ	West Tongariro	0.60	90	P	Pn	01 00 60.0	0.0
WTVZ				S	S	01 01 21.1	-2.0
HIZ	Hauiti	0.61	3		Pn	01 00 59.5	-0.4
HIZ				Sn	S	01 01 21.4	-1.6
HIZ	Hauiti	0.61	3	P	Pn	01 00 59.4	-0.4
HIZ	Hauiti	0.61	3	P	Pn	01 00 59.5	-0.4
HIZ				S	S	01 01 21.3	-1.7
NGZ	Ngauruhoe	0.61	96	P	Pn	01 01 00.1	+0.1
NGZ				S	S	01 01 21.1	-2.2
NNVZ	North Ngauruho	0.62	91	P	Pn	01 01 00.1	+0.1
WHVZ	Whangaehu Hut	0.62	105	P	Pn	01 01 00.3	+0.2
KRVZ	Karewarewa	0.64	88	P	Pn	01 01 00.1	0.0
WNVZ	Wahianoa	0.64	109	P	Pn	01 01 00.4	+0.2
SNVZ	South Ngauruho	0.64	96	P	Pn	01 01 00.5	+0.3
KHEZ	Kahui Hut	0.65	254	P	Pn	01 01 00.2	+0.1
KHEZ	Kahui Hut	0.65	254	P	Pn	01 01 00.3	+0.3
KHEZ				S	S	01 01 23.0	-0.3
WAZ	Wanganui	0.65	168	P	Pn	01 01 00.7	+0.8
WAZ				S	S	01 01 22.0	-1.4
PKE	Pukeiti	0.65	263	P	Pn	01 01 00.3	+0.3
OTVZ	Oturere	0.66	94	P	Pn	01 01 00.1	-0.1
TUVZ	Tukino	0.67	103	P	Pn	01 01 00.6	+0.3
NTVZ	North Tongarir	0.67	89	P	Pn	01 01 00.3	+0.1
TMVZ	Te Maari	0.69	90	P	Pn	01 01 00.3	0.0
ETVZ	East Tongariro	0.70	92	P	Pn	01 01 00.2	-0.2
KATZ	Kakaramea	0.70	78	P	Pn	01 01 00.2	-0.2
NBEZ	Newall Road No	0.75	258	P	Pn	01 01 01.0	+0.5
MOVZ	Moawhango	0.78	112	P	Pn	01 01 00.5	-0.1
MOVZ				S	S	01 01 21.4	-3.0
NMEZ	Namu Road	0.79	248	P	Pn	01 01 01.2	+0.6
RATZ	Rangitukua	0.79	72	P	Pn	01 01 00.4	-0.3
RITZ	Rihia Road	0.82	80	P	Pn	01 01 00.9	+0.1
RITZ				S	S	01 01 23.4	-1.3
WATZ	Wairara	0.82	60	P	Pn	01 01 00.9	0.0
TLZ	Tolley Road	0.97	36	P	Pn	01 01 01.3	-0.5
WHTZ	Whakaora	1.00	63	P	Pn	01 01 01.9	-0.1
KUTZ	Kaahu Road	1.01	52	P	Pn	01 01 01.9	0.0
OHWZ	Ohakea	1.15	161	P	Pn	01 01 03.8	+1.0
OHWZ				S	S	01 01 27.9	-0.4
WPRZ	Whakapapatarin	1.21	61	P	Pn	01 01 02.8	-0.5
GRRZ	Galatos Road	1.27	53	P	Pn	01 01 03.5	-0.3
MRHZ	Matea Rd	1.28	78	P	Pn	01 01 03.1	-0.7
MRHZ				S	S	01 01 26.1	-3.8
KWHZ	Kaweka Forest	1.28	104	P	Pn	01 01 04.3	+0.4
TSZ	Takapari Road	1.29	137	P	Pn	01 01 04.4	+0.5
BKZ	Black Stump Fm	1.30	93		Pn	01 01 03.7	-0.3
BKZ				Sn	S	01 01 27.4	-2.9
BKZ	Black Stump Fm	1.30	93	P	Pn	01 01 03.6	-0.4
BKZ	Black Stump Fm	1.30	93	P	Pn	01 01 03.7	-0.3
BKZ				S	S	01 01 27.3	-3.0
KRHZ	Kereru	1.31	114	P	Pn	01 01 04.3	+0.3
KRHZ				S	S	01 01 28.0	-2.3
ALRZ	Allen Road	1.32	65	P	Pn	01 01 03.6	-0.5
PNHZ	Pukenui	1.33	127	P	Pn	01 01 04.5	+0.4
HRRZ	Handcock Road	1.36	58	P	Pn	01 01 04.1	-0.3
HSRZ	Hossack Road	1.38	55	P	Pn	01 01 04.2	-0.4
PRRZ	Plateau Road	1.38	64	P	Pn	01 01 03.8	-0.8
UTU	Utuhina	1.43	49	P	Pn	01 01 04.8	-0.2
POWZ	Post Office Ro	1.47	150	P	Pn	01 01 05.5	+0.3
NGRZ	Ngongotaha	1.48	47	P	Pn	01 01 05.1	-0.4
HLRZ	Highlands Stat	1.48	55	P	Pn	01 01 05.6	+0.2
TOZ	Tahuroa Road	1.49	21		Pn	01 01 04.9	-0.5
TOZ	Tahuroa Road	1.49	21	P	Pn	01 01 04.9	-0.5
MCHZ	McNeill Hill	1.50	103	P	Pn	01 01 06.3	+0.8
RRRZ	Republican Roa	1.54	60	P	Pn	01 01 05.3	-0.6
KMRZ	Kaimai	1.55	35	P	Pn	01 01 05.7	-0.3
NMHZ	Naumai	1.55	90	P	Pn	01 01 06.7	+0.7
KARZ	Kaharoa	1.57	46	P	Pn	01 01 05.8	-0.4
WPHZ	Waipukurau	1.57	127	P	Pn	01 01 06.6	+0.5
DVHZ	Dannevirke	1.57	139	P	Pn	01 01 06.4	+0.3
OMRZ	Omania	1.58	51	P	Pn	01 01 05.8	-0.5
TARZ	Mount Tarawera	1.59	57	P	Pn	01 01 05.9	-0.6
MTHZ	Maungataniwha	1.60	81	P	Pn	01 01 05.9	-0.5
MKRZ	Makatiti	1.62	53	P	Pn	01 01 06.7	0.0
MRZ	Mangatainoka R	1.65	159		Pn	01 01 06.8	+0.1
MRZ	Mangatainoka R	1.65	159	P	Pn	01 01 06.9	+0.1
MUGZ	Murupara	1.66	68	P	Pn	01 01 05.8	-1.1
LIRZ	Lichensteins R	1.66	48	P	Pn	01 01 06.0	-0.9
PRWZ	Pori Road	1.69	149	P	Pn	01 01 07.6	+0.5
ARHZ	Aropaoanui	1.70	96	P	Pn	01 01 07.6	+0.4
OGWZ	Otaki Gorge	1.72	171	P	Pn	01 01 07.8	+0.5
KAHZ	Kahuranaki	1.73	114	P	Pn	01 01 08.2	+0.7
KIW	Kapiti Island	1.74	178	P	Pn	01 01 07.7	+0.2
RTZ	Ruatahuna	1.76	74		Pn	01 01 07.2	-0.8
RTZ	Ruatahuna	1.76	74	P	Pn	01 01 07.2	-0.8
RAHZ	Arahi	1.78	84	P	Pn	01 01 08.0	0.0
TGRZ	Tauranga	1.79	40	P	Pn	01 01 07.6	-0.5
PRHZ	Porangahau	1.81	130	P	Pn	01 01 08.7	+0.5
EDRZ	Edgecumbe	1.81	57	P	Pn	01 01 07.4	-0.9
DUWZ	D'Urville Isla	1.82	202	P	Pn	01 01 08.4	+0.2
PXZ	Pawanui	1.82	121	P	Pn	01 01 08.7	+0.4
CKHZ	Cape Kidnapper	1.83	108	P	Pn	01 01 09.1	+0.6
MARZ	Manawahe	1.84	53	P	Pn	01 01 08.0	-0.7
TIWZ	Tintock	1.85	154	P	Pn	01 01 08.8	+0.2
ANWZ	Angora Road	1.85	137	P	Pn	01 01 09.0	+0.4
OPRZ	Ohinepanea	1.87	48	P	Pn	01 01 08.0	-0.8
WHHZ	Waihua	1.88	89	P	Pn	01 01 09.0	+0.1
BFZ	Birch Farm	1.91	145		Pn	01 01 09.2	+0.1
BFZ	Birch Farm	1.91	145	P	Pn	01 01 08.9	-0.2
BFZ	Birch Farm	1.91	145	P	S	01 01 38.2	-1.3
BFZ	Birch Farm	1.91	145	P	Pn	01 01 09.2	+0.1
URZ	Urewera	1.99	65	P	Pn	01 01 08.0	-2.0
	890nm,0.4s,baz=246,slow=6.4,SNR=1464						
URZ				S	S	01 01 35.8	-5.0
	275nm,0.4s,baz=31,slow=19,SNR=12						
URZ	Urewera	1.99	65	P	Pn	01 01 08.4	-1.6
URZ	Urewera	1.99	65	P	Pn	01 01 08.6	-1.4
CAW	Cannon Point	2.00	175	P	Pn	01 01 10.2	+0.3
SNGZ	Shannon Statio	2.00	81	P	Pn	01 01 09.8	-0.3
MKAZ	Moumakai	2.03	8	P	Pn	01 01 10.1	-0.3
AWAZ	Awhitu Peninsu	2.06	356	P	Pn	01 01 10.6	-0.1
CPWZ	Castlepoint	2.08	150	P	Pn	01 01 11.4	+0.6
MTW	Mount Morrison	2.10	166	P	Pn	01 01 10.8	-0.2
WHRZ	Whale Island	2.11	54	P	Pn	01 01 10.2	-1.0
RAGZ	Rawiri	2.12	74	P	Pn	01 01 10.7	-0.7
TCW	Tory Channel	2.13	191		Pn	01 01 11.6	+0.3
TCW	Tory Channel	2.13	191	P	Pn	01 01 11.6	+0.3
TMWZ	Te Maipa	2.15	158	P	Pn	01 01 11.5	0.0
MYRZ	Mayor Island	2.15	32	P	Pn	01 01 11.4	-0.3
WEL	Wellington	2.16	181	P	Pn	01 01 11.6	0.0
ETAZ	East Tamaki Re	2.16	2	P	Pn	01 01 11.6	-0.2
SNZO	South Karori	2.19	182		Pn	01 01 11.7	-0.2
SNZO	South Karori	2.19	182	P	Pn	01 01 11.5	-0.4
SNZO	South Karori	2.19	182	S	S	01 01 42.0	-2.4
WTAZ	Waiatarua	2.19	355	P	Pn	01 01 12.1	0.0
KNZ	Kokohu	2.23	88	P	Pn	01 01 12.0	-0.3
MWZ	Matawai	2.26	71	P	Pn	01 01 11.7	-1.0
BHW	Baring Head	2.29	179		Pn	01 01 12.5	-0.3
BHW	Baring Head	2.29	179	P	Pn	01 01 12.6	-0.3
PAWZ	Paruwai Farm	2.31	169	P	Pn	01 01 12.9	-0.2
MSWZ	Moikau Station	2.32	172		Pn	01 01 12.9	-0.3
MSWZ	Moikau Station	2.32	172	P	Pn	01 01 13.0	-0.3
RIGZ	Rimuhau	2.33	81	P	Pn	01 01 13.0	-0.5
WIAZ	Waiheke Island	2.34	6	P	Pn	01 01 13.2	-0.3
MBAZ	Motutapu North	2.35	2	P	Pn	01 01 13.5	-0.1
NNZ	Nelson	2.37	207		Pn	01 01 13.5	-0.2
NNZ	Nelson	2.37	207	P	Pn	01 01 13.5	-0.2
TRWZ	Traveller	2.37	164	P	Pn	01 01 13.6	-0.2
TKNZ	Takaka Hill	2.38	216		Pn	01 01 13.2	-0.7
TKNZ	Takaka Hill	2.38	216	P	Pn	01 01 13.2	-0.7
PRGZ	Paritu Road	2.40	86	P	Pn	01 01 13.7	-0.4
TUWZ	Tuamarina	2.40	196		Pn	01 01 14.3	+0.2
TUWZ	Tuamarina	2.40	196	P	Pn	01 01 14.5	+0.4
MHGZ	Mahia Peninsul	2.40	92	P	Pn	01 01 14.1	-0.1
QRZ	Quartz Range	2.45	225		Pn	01 01 13.7	-0.9
QRZ	Quartz Range	2.45	225	P	Pn	01 01 13.5	-1.1
QRZ	Quartz Range	2.45	225	S	S	01 01 46.5	-2.7
QRZ	Quartz Range	2.45	225	P	Pn	01 01 13.7	-0.9
TKGZ	Te Karaka	2.46	75	P	Pn	01 01 14.3	-0.5

PLWZ	Palliser	2.47	172		Pn	01 01 14.4	-0.5
PLWZ	Palliser	2.47	172	P	Pn	01 01 14.5	-0.5
KUZ	Kuaotunu	2.48	17	P	Pn	01 01 14.4	-0.6
KUZ	Kuaotunu	2.48	17	P	Pn	01 01 14.5	-0.6
ABAZ	Army Bay	2.52	0	P	Pn	01 01 15.3	-0.1
RUGZ	Raukumara Rang	2.52	64	P	Pn	01 01 13.5	-2.1
TWGZ	Tauwhareparae	2.65	70	P	Pn	01 01 16.1	-0.8
CMWZ	Cape Campbell	2.67	190		Pn	01 01 17.4	+0.4
CMWZ	Cape Campbell	2.67	190	P	Pn	01 01 17.4	+0.4
BSWZ	Blackbirch Sta	2.69	195		Pn	01 01 17.1	-0.1
BSWZ	Blackbirch Sta	2.69	195	P	Pn	01 01 17.3	+0.1
HAZ	Te Kaha	2.70	61	P	Pn	01 01 15.4	-2.0
CNGZ	Carnagh Statio	2.73	78	P	Pn	01 01 15.1	-2.6
MRNZ	Matariki Terra	2.77	214		Pn	01 01 17.3	-0.8
MRNZ	Matariki Terra	2.77	214	P	Pn	01 01 17.3	-0.8
PKGZ	Pakihiroa	2.85	65	P	Pn	01 01 17.6	-1.5
THZ	Tophouse	3.02	208		Pn	01 01 20.2	-0.7
THZ	Tophouse	3.02	208	P	Pn	01 01 20.3	-0.7
WMGZ	Waiomatatini S	3.11	66	P	Pn	01 01 20.4	-1.6
MXZ	Matakaoa Point	3.15	62		Pn	01 01 21.0	-1.5
MXZ	Matakaoa Point	3.15	62	P	Pn	01 01 21.2	-1.3
MXZ	Matakaoa Point	3.15	62	P	S	01 02 01.2	-2.1
KHZ	Kahutara	3.43	196		Pn	01 01 25.3	-0.5
KHZ	Kahutara	3.43	196	P	Pn	01 01 25.2	-0.5
KHZ	Kahutara	3.43	196	S	S	01 02 06.8	-2.4
DSZ	Denniston Nort	3.49	220		Pn	01 01 25.2	-1.2
GVZ	Greta Valley S	4.07	199		Pn	01 01 32.3	-1.1
LTZ	Lake Taylor	4.13	207		Pn	01 01 33.0	-1.3
INZ	Inchbonnie	4.42	214		Pn	01 01 35.9	-1.7
RPZ	Rata Peaks	5.39	210	P	Pn	01 01 48.4	-1.5
	66nm,0.4s,baz=340,slow=1.6,SNR=94						
RPZ				S	S	01 02 46.1	-6.9
	154nm,0.3s,baz=124,slow=20,SNR=30						
RPZ	Rata Peaks	5.39	210	P	Pn	01 01 48.0	-1.9
ODZ	Otahua Downs	6.68	206	P	Pn	01 02 04.8	-1.5
JCZ	Jackson Bay	6.70	220	P	Pn	01 02 03.8	-2.9
SYZ	Scrubby Hill	8.50	208	P	Pn	01 02 28.3	-1.4
MSVF	Nonsavu	21.49	8	P	P	01 05 01.8	-0.3
MSVF	Nonsavu	21.49	8	P	P	01 05 01.7	-0.3
	9.7nm,0.8s,baz=288,slow=23,SNR=4.1						
	9.7nm,0.8s						
STKA	Stephens Creek	27.88	275	P	P	01 06 00.6	+0.8
	2.7nm,0.7s,baz=94,slow=14,SNR=4.0						
STKA				LR	LR	01 16 56.2	
	comp=Z,91nm,18.1s,baz=212,slow=35						
	2.7nm,0.7s						
ASAR	Alice Springs	37.83	282	P	P	01 07 26.4	+0.5
ASAR	Alice Springs	37.83	282	P	P	01 07 26.6	+0.7
	5.2nm,0.9s,baz=124,slow=7.8,SNR=28						
	5.2nm,0.9s						
VNDA	Vanda	38.90	184	P	P	01 07 36.5	+2.4
VNDA				IAmb	IAmb	01 08 18.3	
	comp=Z,1.8nm,1.4s						
VNDA	Vanda	38.90	184	P	P	01 07 35.4	+1.3
	comp=Z,0.4nm,0.4s,baz=1.5,slow=7.9,SNR=8.1						
	comp=Z,0.4nm,0.4s						
WR8	Warramunga Arr	39.54	287	P	P	01 07 40.8	+0.7
WR8				IAmb	IAmb	01 07 41.9	
	comp=Z,12nm,1.2s						
WRA	Warramunga Arr	39.67	287	P	P	01 07 41.9	+0.8
WRA	Warramunga Arr	39.67	287	P	P	01 07 41.8	+0.7
	comp=Z,3.0nm,0.6s,baz=124,slow=8.3,SNR=46						
	comp=Z,3.0nm,0.6s						
CASY	Casey	44.66	211	P	P	01 08 20.3	-0.4
CASY				IAmb	IAmb	01 08 21.9	
	comp=Z,11nm,1.3s						
NWAO	Narrogin (SRO)	46.32	259	P	P	01 08 33.4	-0.8
FITZ	Fitzroy Crossi	47.33	282	P	P	01 08 43.0	+0.8
FITZ	Fitzroy Crossi	47.33	282	P	P	01 08 43.2	+1.0
	comp=Z,4.0nm,0.5s,baz=121,slow=4.7,SNR=15						
	comp=Z,4.0nm,0.5s						
QSPA	South Pole Qui	51.01	180	P	P	01 09 12.5	+3.0
QSPA				IAmb	IAmb	01 09 13.5	
	comp=Z,8.6nm,1.4s						
QSPA	South Pole Qui	51.01	180	P	P	01 09 11.6	+2.1
	comp=Z,1.0nm,0.3s,baz=67,slow=0.9,SNR=17						
	comp=Z,1.0nm,0.3s						
TROLL	Troll, Antarti	69.04	183	P	P	01 11 12.9	+1.2
	comp=Z,263nm,1.1s						
SNAA	Sanae	69.50	181	⇑P	P	01 11 15.6	+1.1
	comp=Z,50nm,1.2s						
SNAA	Sanae	69.50	181	P	P	01 11 15.6	+1.1
	comp=Z,2.0nm,0.9s,baz=192,slow=11,SNR=6.5						
	comp=Z,2.0nm,0.9s						
VNA3	Neumayer Olymp	69.90	178	⇑P	P	01 11 17.6	+0.8
	comp=Z,3.4nm,0.7s						
VNA2	Neumayer--Watz	70.25	179	⇑P	P	01 11 20.2	+1.2
	comp=Z,3.7nm,0.5s,baz=166,slow=6.2						
ARCES	ARCESS Array B	145.44	342	PKPbc	PKPdf	01 19 40.8	0.0
	comp=Z,1.5nm,0.4s,baz=57,slow=1.6,SNR=14						
FINES	FINESS Array B	150.53	330	PKPbc	PKPbc	01 19 53.6	-1.3
	comp=Z,3.6nm,0.9s,baz=60,slow=4.9,SNR=3.6						
FINES				PKPab	PKPab	01 20 01.1	-1.4
	comp=Z,1.7nm,0.5s,baz=54,slow=4.8,SNR=13						

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*IDC **28** 01:03:55.3±0.8, 2°.65S×138°.50E, h0^{km}, mb3.8/7, mbtmp3.8/9, ML3.7/2, Error ellipse: s-maj=20.6km s-min=17.0km az=1.0*

*DJA **28** 01:03:58.8±0.4, 2°S±5°×13°8E±°, h10^{km}, M3.8/6, MLv3.8/6*

ISC 28 01:04:00.3±0.7, **2°.7S**±0°.1×**138°.48E**±0°.06, **h32**^{km}, **n14, σ0^{s}.78**/14, **mb3.8**/7, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.74	18	P	Pn	01 04 09.6	-5.0
GENI	Genyem	1.69	87	P	Pn	01 04 28.9	+1.2
JAY	Jayapura	2.23	85	Pn	Pn	01 04 35.0	-0.2
	6.9nm,0.3s,baz=242,slow=9.6,SNR=24						
JAY				Lg	Lg	01 05 05.0	
	5.4nm,0.3s,baz=322,slow=21,SNR=3.5						
	28nm,0.4s						
JAY	Jayapura	2.23	85	P	Pn	01 04 35.4	+0.2
SRPI	Serui, Papua	2.38	290	P	Pn	01 04 37.3	+0.1
SRPI				S	Sn	01 05 06.5	+1.2
BAKI	Biak	2.80	302	P	Pn	01 04 43.0	+0.1
WRA	Warramunga Arr	17.61	193	P	Pn	01 08 03.2	-0.3
	0.4nm,0.3s,baz=16,slow=12,SNR=9.6						
	1.6nm,0.6s						
ASAR	Alice Springs	21.31	192	P	P	01 08 43.9	-0.8
	1.6nm,0.6s,baz=22,slow=11,SNR=13						
	1.6nm,0.6s						
SONM	Songino Array	57.61	335	P	P	01 13 47.4	0.0
	0.4nm,0.5s,baz=143,slow=10,SNR=2.0						
	0.4nm,0.5s						
MKAR	Makanchi Array	69.64	322	P	P	01 15 06.8	+0.1
	0.7nm,0.8s,baz=111,slow=6.6,SNR=6.3						
	0.7nm,0.8s						
VNDA	Vanda	75.81	175	P	P	01 15 43.4	+0.5
	0.8nm,0.9s,baz=324,slow=5.6,SNR=6.6						
	0.8nm,0.9s						
BVAR	Borovoye Array	79.17	325	P	P	01 16 02.2	+0.2
	0.7nm,0.5s,baz=104,slow=8.7,SNR=4.4						
	0.7nm,0.5s						
ILAR	Eielson Array	85.92	24	P	P	01 16 35.4	-1.6
	0.5nm,0.6s,baz=269,slow=4.2,SNR=6.1						
	0.5nm,0.6s						
QSPA	South Pole Qui	87.25	180	P	P	01 16 44.0	+0.4
	1.9nm,0.8s,baz=21,slow=0.7,SNR=5.6						
	1.9nm,0.8s						

IDC 28 01:06:24.2±2.2, **6°.38S**×**129°.63E**, **h0**^{km}, **mb3.5**/1, **mbtmp3.6**/4, **ML3.6**/3, **MS3.2**/1, **Error ellipse: s-maj=93.4km s-min=28.8km az=76.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.28	198	Pn	Pn	01 09 21.3	+0.9
	0.5nm,0.3s,baz=23,slow=8.5,SNR=6.9						
FITZ				Sn	Sn	01 11 32.6	-5.5
	0.6nm,0.3s,baz=106,slow=8.2,SNR=3.9						
	2.4nm,0.5s						
WRA	Warramunga Arr	14.24	162	Pn	Pn	01 09 48.4	+1.1
	0.2nm,0.3s,baz=343,slow=14,SNR=5.0						
WRA				Sn	Sn	01 12 21.8	-4.2
	0.6nm,0.3s,baz=331,slow=22,SNR=5.9						
	0.5nm,0.7s						
ASAR	Alice Springs	17.67	167	P	Pn	01 10 30.6	-1.4
	0.3nm,0.3s,baz=341,slow=9.7,SNR=6.6						
ASAR				LR	LR	01 16 31.3	
	comp=Z,74nm,20.2s,baz=103,slow=34						
	0.7nm,0.3s						
MKAR	Makanchi Array	67.51	327	P	P	01 17 22.2	0.0
	0.2nm,0.3s,baz=124,slow=7.6,SNR=5.2						
	0.2nm,0.3s						

IDC 28 01:47:15.0±43.0, **14°.37S**×**169°.00E**, **h545**^{km}±155^{km}, **mb3.3**/3, **mbtmp4.3**/4, **Error ellipse: s-maj=827.5km s-min=94.0km az=67.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.03	197	P	P	01 49 13.0	0.0
	10nm,1.0s,baz=153,slow=20,SNR=7.9						
STKA	Stephens Creek	30.50	230	P	P	01 52 43.4	-0.7
	2.5nm,0.5s,baz=45,slow=9.2,SNR=4.3						
	2.5nm,0.5s						
WRA	Warramunga Arr	33.53	256	P	P	01 53 10.0	-0.1
	1.7nm,0.5s,baz=84,slow=8.7,SNR=31						
	1.7nm,0.5s						
ASAR	Alice Springs	34.36	249	P	P	01 53 17.1	0.0
	3.2nm,0.5s,baz=80,slow=8.9,SNR=32						
	3.2nm,0.5s						

IDC 28 01:50:19.1±44.0, **14°.54S**×**168°.46E**, **h534**^{km}±190^{km}, **mb3.3**/3, **mbtmp4.2**/4, **Error ellipse: s-maj=871.3km s-min=95.4km az=67.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.73	194	P	P	01 52 13.7	0.0
	9.3nm,1.0s,baz=153,slow=20,SNR=5.7						
STKA	Stephens Creek	29.99	230	P	P	01 55 43.5	-0.8
	2.1nm,0.6s,baz=25,slow=5.8,SNR=4.0						
	2.1nm,0.6s						
WRA	Warramunga Arr	32.99	256	P	P	01 56 10.1	-0.1
	2.1nm,0.5s,baz=84,slow=8.7,SNR=24						
	2.1nm,0.5s						
ASAR	Alice Springs	33.81	249	P	P	01 56 17.2	+0.1
	4.2nm,0.7s,baz=80,slow=9.2,SNR=31						
	4.2nm,0.7s						

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*IDC **28** 02:07:38.6±3.8, 14°.09N×91°.39W, h0^{km}, mb4.0/4, mbtmp3.9/6, ML3.5/2, MS3.6/12, Error ellipse: s-maj=86.4km s-min=42.2km az=12.0*

*GCG **28** 02:07:39.8±1.4, 13°.60N×91°.91W, h4^{km}±19^{km}, MD4.6, ML4.0, MW3.6*

*CATAC **28** 02:07:39.4±0.7, 13°N±5°×9°2W±°, h26^{km}±11^{km}, M4.0/19, MLv4.0/19, Error ellipse: s-maj=15.5km s-min=3.9km az=51.4, confirmed*

*NEIC **28** 02:07:42.7±2.5, 13°.57N±0°.09×91°.92W±0°.01, h35^{km}±2^{km}, mb4.1/54, Md4.3/36(MEX), Error ellipse: s-maj=15.1km s-min=3.1km az=176.0*

*MEX **28** 02:07:43.4±0.5, 13°.66N×92°.15W, h33^{km}±999^{km}, MD4.3*

ISC 28 02:07:40.0±1.8, **13°.48N**±0°.06×**92°.06W**±0°.03, **h31**^{km}±12^{km}, **n140, σ2^{s}.40**/139, **mb4.1**/24, **MS3.7**/11, **Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTAL	Retalhuleu	1.10	19		Pn	02 07 58.5	-0.8
RTAL	Retalhuleu	1.10	19	*e*P	Pn	02 07 58.4	-0.8
RTAL				*e*S	Sn	02 08 10.5	-2.9
RTAL	Retalhuleu	1.10	19	P	Pn	02 07 58.5	-0.8
RTAL	Retalhuleu	1.10	19	S	Sb	02 08 14.7	+0.2
STG0	El Palmar, Qui	1.17	36	*i* P	Pb	02 08 01.4	-0.5
STG0				*i* S	Sn	02 08 15.3	-0.2
STG0				IAML		02 08 25.1	
	comp=E,3µm,1.6s						
THIG		1.43	352		Pn	02 08 02.8	-1.1
THIG					Sn	02 08 16.9	-4.8
THIG		1.43	352	*e*P	Pn	02 08 02.8	-1.1
THIG				*e*S	Sn	02 08 16.9	-4.8
THIG		1.43	352	*i* P	Pn	02 08 03.0	-0.9
ESSG	Sabana Grande	1.50	53	*i* P	Pn	02 08 04.1	-0.7
PATR	El Naranjo	1.64	354	*e*P	Pn	02 08 05.5	-1.4
PATR				*e*S	Sn	02 08 23.4	-3.7
FG16	Alotenango, Sa	1.70	62	*i* P	Pn	02 08 04.4	-3.4
FG16				IAML		02 08 28.3	
	comp=N,6µm,0.2s						
PAVE	Pavencul	1.71	356	*e*P	Pn	02 08 06.4	-1.5
PAVE				*e*S	Sn	02 08 24.9	-3.9
HUEH	Huehuetenango	1.91	16		Pn	02 08 10.6	0.0
HUEH	Huehuetenango	1.91	16	*e*P	Pn	02 08 10.1	-0.5
HUEH				*e*S	Sn	02 08 31.1	-2.6
HUEH	Huehuetenango	1.91	16	*i* P	Pn	02 08 11.0	+0.4
HUEH				IAML		02 09 15.5	
	comp=E,2µm,1.1s						
HUEH	Huehuetenango	1.91	16	P	Pn	02 08 10.9	+0.2
HUEH	Huehuetenango	1.91	16	S	Sn	02 08 34.0	+0.3
FAME	Alcaldia de Sa	2.02	79	P	Pn	02 08 10.3	-1.7
FAME	Alcaldia de Sa	2.02	79	S	Sn	02 08 37.4	+1.2
NUBE	Las Nubes	2.26	79	*i* P	Pn	02 08 15.5	+0.2
NUBE	Las Nubes	2.26	79	P	Pn	02 08 13.6	-1.8
NUBE	Las Nubes	2.26	79	S	Sn	02 08 38.7	-3.6
SLOZ	Alcaldia de Sa	2.28	76	P	Pn	02 08 14.8	-0.8
SLOZ	Alcaldia de Sa	2.28	76	S	Sn	02 08 44.3	+1.7
CEVE	Cerro Verde	2.39	81	P	Pn	02 08 14.6	-2.7
CEVE	Cerro Verde	2.39	81	S	Sn	02 08 47.4	+1.6
PCIG		2.48	333		Pn	02 08 16.9	-1.4
PCIG					Sn	02 08 36.9	-11
PCIG		2.48	333	*e*P	Pn	02 08 16.9	-1.4
PCIG				*e*S	Sn	02 08 36.9	-11
UNIC	Universidad Ca	2.49	78	P	Pn	02 08 17.7	-0.8
UNIC	Universidad Ca	2.49	78	S	Sn	02 08 47.8	-0.1
JAYA	Jayaque - finc	2.55	86	*i* P	Pn	02 08 19.2	-0.1
JAYA				*i* S	Sn	02 08 47.7	-1.7
JAYA	Jayaque - finc	2.55	86	P	Pn	02 08 19.2	-0.1
JAYA	Jayaque - finc	2.55	86	S	Sn	02 08 48.4	-1.0
CEDA	San Andres	2.61	83	P	Pn	02 08 19.2	-1.0
CEDA	San Andres	2.61	83	S	Sn	02 08 51.5	+0.7
LALI	Alcalda de L	2.67	89	P	Pn	02 08 20.2	-0.6
LALI	Alcalda de L	2.67	89	S	Sn	02 08 51.8	-0.3
PMON	Piamonte	2.68	85	P	Pn	02 08 21.2	+0.1
PMON	Piamonte	2.68	85	S	Sn	02 08 53.5	+0.8
MTO3	Montecristo	2.78	70		Pn	02 08 21.8	-0.8
MTO3	Montecristo	2.78	70	P	Pn	02 08 21.7	-0.8
MTO3	Montecristo	2.78	70	S	Sn	02 08 55.5	+0.3
CCIG	Comitan	2.79	358		Pn	02 08 24.7	+2.0
CCIG	Comitan	2.79	358	*e*P	Pn	02 08 23.9	+1.2
CCIG				*i* S	Sn	02 08 59.0	+3.6
CCIG	Comitan	2.79	358	*i* P	Pn	02 08 24.9	+2.2
CCIG				*i* S	Sn	02 08 59.4	+4.0
CCIG				IAML		02 09 11.5	
	comp=N,269nm,0.6s						
CCIG	Comitan	2.79	358	P	Pn	02 08 25.2	+2.4
CCIG	Comitan	2.79	358	S	Sn	02 08 56.0	+0.6
LOMA	Loma Larga	2.81	86	P	Pn	02 08 22.2	-0.8
LOMA	Loma Larga	2.81	86	S	Sn	02 08 56.2	+0.2
ESQI	Esquipulas	2.85	68		Pn	02 08 23.2	-0.3
PAVA	Las Pavas	3.05	85	P	Pn	02 08 26.1	-0.1
PAVA	Las Pavas	3.05	85	S	Sn	02 08 59.1	-2.6
COEG	Centro de Oper	3.10	87	P	Pn	02 08 27.0	+0.2
COEG	Centro de Oper	3.10	87	S	Sn	02 09 02.5	-0.3
SCLA	Alcaldia de Sa	3.25	86	P	Pn	02 08 28.9	0.0
TGIG		3.44	343		Pn	02 08 31.7	+0.2
TGIG					Sn	02 09 07.1	-4.1
TGIG		3.44	343	*e*P	Pn	02 08 31.7	+0.2
TGIG				*e*S	Sn	02 09 07.1	-4.1
SARH	Santa Rosa de	3.45	68	P	Pn	02 08 31.1	-0.7
PACA	Pacayal	3.64	90	P	Pn	02 08 33.4	-1.0
PETF	Flores	4.02	32	*e*P	Pn	02 08 31.3	-8.2
PETF				*e*S	Sn	02 09 09.7	-16
PETF	Flores	4.02	32	P	Pn	02 08 31.7	-7.8
LCND	La Caada	4.06	92	P	Pn	02 08 40.1	0.0
CMIG	Matias Romero	4.51	323		Pn	02 08 46.5	+0.3
CMIG					Sn	02 09 29.9	-7.8
CMIG	Matias Romero	4.51	323	Pn	Pn	02 08 46.3	+0.1
	comp=N,1.5nm,0.3s,baz=136,slow=10,SNR=11						
CMIG				Sn	Sn	02 09 39.3	+1.7
	comp=N,2.6nm,0.3s,baz=97,slow=13,SNR=3.8						
CMIG				LR	LR	02 10 47.8	
	comp=N,139nm,21.7s,baz=158,slow=42						
	comp=N,3.6nm,0.4s						
CMIG	Matias Romero	4.51	323	*e*P	Pn	02 08 46.5	+0.3
CMIG				*e*S	Sn	02 09 29.9	-7.8
HUIG	Huatulco	4.53	301	*e*P	Pn	02 08 49.1	+2.6
HUIG				*e*S	Sn	02 09 30.5	-7.6
YUSH	Yuscaran	5.09	84	P	Pn	02 08 54.7	+0.3
PEIG	Puerto Escondi	5.52	298	*e*P	Pn	02 09 01.5	+1.4
PEIG				*e*S	Sn	02 09 57.8	-4.8
NEUV	Arroyo Zacate	5.54	320	*e*P	Pn	02 09 02.0	+1.6
NEUV				*e*S	Sn	02 10 00.5	-2.6
VHO	Vista Hermosa	5.75	309	*e*P	Pn	02 09 10.3	+6.8
VHO				*e*S	Sn	02 10 14.7	+6.1
YOIG	Yosondua	6.27	303		Pn	02 09 12.5	+1.8
YOIG					Sn	02 10 19.4	-2.1
YOIG	Yosondua	6.27	303	*e*P	Pn	02 09 12.5	+1.8
YOIG				*i* S	Sn	02 10 19.4	-2.1
PNIG	Pinotepa	6.54	297		Pn	02 09 14.8	+0.7
PNIG					Sn	02 10 25.2	-2.5
PNIG	Pinotepa	6.54	297	*e*P	Pn	02 09 14.8	+0.7
PNIG				*e*P	Pn	02 09 15.9	+1.8
PNIG				*i* S	Sn	02 10 25.2	-2.5
TOIG	Toxpalan	6.65	314		Pn	02 09 17.8	+2.0
TOIG					Sn	02 10 29.6	-1.1
TOIG	Toxpalan	6.65	314	*e*P	Pn	02 09 17.8	+2.0
TOIG				*i* S	Sn	02 10 29.6	-1.1
TXIG	Tlaxiaco	6.66	305		Pn	02 09 13.9	-2.2
TXIG					Sn	02 10 28.6	-2.6
TXIG	Tlaxiaco	6.66	305	*e*P	Pn	02 09 13.9	-2.2
TXIG				*i* S	Sn	02 10 28.6	-2.6
HLIG	Huajuapan de L	7.02	309		Pn	02 09 21.2	+0.2
HLIG					Sn	02 10 44.2	+4.4
HLIG	Huajuapan de L	7.02	309	*e*P	Pn	02 09 21.2	+0.2
HLIG				*i* S	Sn	02 10 44.2	+4.4
FTIG	Fresnillo de T	7.32	308		Pn	02 09 28.1	+3.1
FTIG					Sn	02 10 51.5	+4.4
FTIG	Fresnillo de T	7.32	308	*e*P	Pn	02 09 28.1	+3.1
FTIG				*i* S	Sn	02 10 51.5	+4.4
MGIG	Malinaltepec	7.36	301	*e*P	Pn	02 09 29.8	+4.2
JAUV	Jalcomulco	7.41	323	*e*P	Pn	02 09 25.6	-0.6
JAUV				*i* S	Sn	02 10 37.9	-11
TLIG	Tlapa	7.47	304	*e*S	Sn	02 10 41.2	-10
TEIG	Tepich	7.62	28		Pn	02 09 29.7	+0.7
CXUV	Coxquihui	8.50	322	*e*P	Pn	02 09 41.2	+0.1
CXUV				*i* S	Sn	02 11 11.4	-4.7
TX31	Lajitas Ar. Si	19.10	328		Pn	02 12 03.8	+2.4
TXAR	Lajitas Array	19.10	328	P	Pn	02 12 03.6	+2.2
TXAR	Lajitas Array	19.10	328	P	Pn	02 12 02.7	+1.3
	baz=149,slow=10.0,SNR=12						
	comp=N,1.9nm,0.9s						
ALPN	Alpine	19.93	329		Pn	02 12 12.1	+0.8
PLPT	Palo Pinto	20.08	344	P	Pn	02 12 12.3	-0.6
PLPT				IAmb	IAmb	02 12 15.0	
	comp=Z,6.7nm,0.7s						
152A	Waverly Hall	20.25	18		P	02 12 12.2	-0.6
152A				IAmb	IAmb	02 12 18.5	
	comp=Z,6.0nm,0.8s						
MNHN	Monahans	20.32	333	P	Pn	02 12 16.1	+0.2
MNHN				IAmb	IAmb	02 12 17.7	
	comp=Z,10.0nm,0.7s						
PECS	Pecos	20.86	331	P	Pn	02 12 22.2	+0.1
ODSA	Odessa	20.90	334		Pn	02 12 21.5	-1.1
SN05	Snyder 5	20.93	339	P	P	02 12 20.5	+0.2
SN05				IAmb	IAmb	02 12 25.9	
	comp=Z,8.9nm,0.8s						
VHRN	Van Horn	20.94	327		Pn	02 12 22.9	-0.3
APMT	Aspermont	21.08	341		P	02 12 22.8	+1.0
APMT				IAmb	IAmb	02 12 23.9	
	comp=Z,12nm,0.8s						
POST	Post	21.32	338	P	P	02 12 25.6	+1.1
X48A	Hartselle	21.37	11		P	02 12 25.5	+0.6
X48A				IAmb	IAmb	02 12 33.7	
	comp=Z,12nm,1.3s						
Y52A	Lilburn	21.56	18		P	02 12 26.3	-0.6
Y52A				IAmb	IAmb	02 12 28.9	
	comp=Z,4.0nm,0.6s						
DKNS	Dickens	21.66	340	IAmb	IAmb	02 12 29.3	
	comp=Z,4.2nm,0.6s						
FPAL	Fort Paine	21.77	14	P	P	02 12 29.1	-0.1
MNTX	Cornudas Mount	21.87	328	IAmb	IAmb	02 12 35.4	
	comp=Z,5.0nm,0.8s						
MSTX	Muleshoe	22.60	336	IAmb	IAmb	02 12 40.0	
	comp=Z,6.3nm,0.8s						
V48A	Smith Brothers	22.66	11	IAmb	IAmb	02 12 56.9	
	comp=Z,5.4nm,0.9s						
SMWD	Samnorwood	22.77	342	P	P	02 12 40.0	+0.1
WVT	Waverly	22.87	9	P	P	02 12 39.4	-1.5
PBMO	Poplar Bluff	23.25	3	IAmb	IAmb	02 12 44.0	
	comp=Z,6.6nm,0.8s						
TKL	Tuckaleechee C	23.31	17	IAmb	IAmb	02 12 45.4	
	comp=Z,6.9nm,0.9s						
TKL	Tuckaleechee C	23.31	17	LR	LR	02 22 11.3	
	comp=Z,116nm,21.8s,baz=208,slow=39						
V53A	Saluda	23.61	19	IAmb	IAmb	02 13 03.9	
	comp=Z,6.0nm,1.2s						
U49A	Red Boiling Sp	23.62	13	P	P	02 12 46.8	-1.6
U49A				IAmb	IAmb	02 12 59.4	
	comp=Z,4.4nm,0.9s						
CGM3	Cape Girardeau	23.82	5	IAmb	IAmb	02 12 49.1	
	comp=Z,5.2nm,1.1s						
CCM	Cathedral Cave	24.49	2	P	P	02 12 52.3	-4.1
CCM				IAmb	IAmb	02 12 55.6	
	comp=Z,5.0nm,0.8s						
U54A	Nelsons Funny	24.71	20	IAmb	IAmb	02 13 23.2	
	comp=Z,11nm,1.2s						
RTBA	Rita Blanca	24.79	339	IAmb	IAmb	02 13 01.7	
	comp=Z,8.5nm,0.9s						
ANMO	Albuquerque	25.02	331	P	P	02 13 03.5	+2.0
V58A	Windy Hill, Pi	25.09	25	IAmb	IAmb	02 13 01.3	
	comp=Z,4.1nm,0.8s						
WCI	Wyandotte Cave	25.18	11	P	P	02 13 00.7	-2.0
SJG	San Juan	25.34	76	LR	LR	02 23 56.0	
	comp=Z,129nm,19.1s,baz=246,slow=40						
Q54A	Coxs Mills	27.28	19	IAmb	IAmb	02 13 21.1	
	comp=Z,7.7nm,1.0s						
MVCO	Mesa Verde	27.82	331	IAmb	IAmb	02 13 30.7	
	comp=Z,11nm,1.5s						
PV03	Paradox Valley	28.83	332	IAmb	IAmb	02 13 47.8	
	comp=Z,6.3nm,1.2s						
SADO	Sadowa	33.07	17	LR	LR	02 27 41.1	
	comp=Z,104nm,20.4s,baz=214,slow=37						
NVAR	Mina Array Bea	34.04	322	P	P	02 14 24.0	+2.4
	comp=Z,1.3nm,0.8s,baz=132,slow=9.4,SNR=8.4						
	comp=Z,1.3nm,0.8s						
PLID	Pearl Lake	37.50	332	IAmb	IAmb	02 14 54.3	
	comp=Z,5.6nm,1.3s						
SCHQ	Schefferville	45.73	20	P	P	02 15 54.6	-3.6
	comp=Z,5.7nm,0.8s,baz=173,slow=5.2,SNR=8.1						
SCHQ				LR	LR	02 35 28.5	
	comp=Z,144nm,20.6s,baz=230,slow=37						
	comp=Z,5.7nm,0.8s						
YKA	Yellowknife Ar	51.52	347	P	P	02 16 42.5	0.0
	comp=Z,1.2nm,0.7s,baz=151,slow=6.9,SNR=4.7						
	comp=Z,1.2nm,0.7s						
FRB	Frobisher Bay	52.83	13	LR	LR	02 39 50.4	
	comp=Z,51nm,18.4s,baz=274,slow=37						
SFJD	Kangerlussuaq	60.03	17	LR	LR	02 44 19.4	
	comp=Z,83nm,19.5s,baz=232,slow=37						
RES	Resolute Bay	61.22	359	LR	LR	02 48 56.3	
	comp=Z,47nm,18.4s,baz=204,slow=41						
ILAR	Eielson Array	63.29	337	P	P	02 18 07.5	+1.8
	comp=Z,0.8nm,1.0s,baz=114,slow=3.3,SNR=7.7						
	comp=Z,0.8nm,1.0s						
HFS	Hagfors	86.08	29	LR	LR	02 56 29.5	
	comp=Z,19nm,20.9s,baz=311,slow=34						
ARCES	ARCESS Array B	86.65	18	LR	LR	02 57 36.6	
	comp=Z,47nm,22.0s,baz=288,slow=35						
FINES	FINESS Array B	90.99	25	LR	LR	03 01 09.9	
	comp=Z,42nm,18.6s,baz=251,slow=36						
NRIK	Noril'sk	97.39	0	LR	LR	03 09 18.6	
	comp=Z,70nm,18.5s,baz=29,slow=38						
PZH	PanZhiHua	138.05	341	PKP	PKiKP	02 27 05.0	+0.3
CMAR	Chiang Mai Arr	146.46	341	PKPbc	PKPab	02 27 20.4	+0.6
	comp=Z,0.7nm,0.4s,baz=336,slow=4.8,SNR=5.2						

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*NEIC **28** 02:11:17.1±2.1, 17°.3S±0°.1×178°.4W±0°.2, h460^{km}±9^{km}, mb4.4/24, Error ellipse: s-maj=27.7km s-min=15.0km az=124.0*

*IDC **28** 02:11:23.8±2.0, 17°.29S×178°.72W, h538^{km}±19^{km}, mb3.4/8, mbtmp4.3/9, Error ellipse: s-maj=24.0km s-min=19.7km az=100.0*

ISC 28 02:11:24.3±0.7, **17°.4S**±0°.1×**178°.7W**±0°.1, **h547**^{km}, **n46, σ0^{s}.70**/47, **mb4.3**/20, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.12	263	P	P	02 12 39.0	-0.9
	52nm,0.7s,baz=112,slow=4.5,SNR=16						
MSWZ	Moikau Station	24.52	191	P	P	02 15 59.0	-1.8
LTZ	Lake Taylor	26.47	195	P	P	02 16 15.9	-2.1
LTZ				IAmb	IAmb	02 16 37.8	
	comp=Z,17nm,1.3s						
FOZ	Fox Glacier	27.83	198	P	P	02 16 28.9	-1.0
EIDS	Eidsvold	29.19	249	P	P	02 16 41.5	-0.5
EIDS				IAmb	IAmb	02 17 16.9	
	comp=Z,32nm,1.5s						

ARMA	Armidale	29.97	239	P	P	02 16 49.7	+0.9
ARMA				IAmb	IAmb	02 16 50.6	
	comp=Z,12nm,1.0s						
MLZ	Mavora Lakes	30.01	199	P	P	02 16 48.8	0.0
CTAO	Charters Tower	33.26	260	P	P	02 17 16.8	-0.1
CTAO				IAmb	IAmb	02 17 17.4	
	comp=Z,23nm,1.2s						
COEN	Coen	36.82	270	P	P	02 17 47.2	+0.6
COEN				IAmb	IAmb	02 18 11.3	
	comp=Z,24nm,1.4s						
STKA	Stephens Creek	38.64	240	P	P	02 18 02.0	+0.8
STKA	Stephens Creek	38.64	240	P	P	02 18 02.0	+0.8
	comp=Z,3.8nm,0.4s,baz=94,slow=10,SNR=12						
	comp=Z,3.8nm,0.4s						
BBOO	Buckleboo	43.42	240	P	P	02 18 39.2	+0.1
WR8	Warramunga Arr	44.30	259	P	P	02 18 45.6	-0.6
WR8				IAmb	IAmb	02 19 29.5	
	comp=Z,15nm,1.5s						
WRA	Warramunga Arr	44.45	259	P	P	02 18 46.5	-0.8
WRA	Warramunga Arr	44.45	259	P	P	02 18 46.5	-0.8
	comp=Z,1.3nm,0.3s,baz=96,slow=7.8,SNR=90						
	comp=Z,1.3nm,0.3s						
AS31	Alice Springs	44.66	254	P	P	02 18 49.0	+0.1
AS31				IAmb	IAmb	02 18 49.6	
	comp=Z,6.0nm,0.6s						
ASAR	Alice Springs	44.66	254	P	P	02 18 48.6	-0.3
ASAR	Alice Springs	44.66	254	P	P	02 18 49.0	+0.1
	comp=Z,15nm,0.4s,baz=88,slow=8.0,SNR=200						
ASAR				PcP	PcP	02 20 20.4	+0.6
	comp=Z,1.1nm,0.7s,baz=91,slow=3.5,SNR=4.8						
	comp=Z,15nm,0.4s						
FORT	Forrest	49.98	244	P	P	02 19 28.5	-0.1
FORT				IAmb	IAmb	02 19 37.9	
	comp=Z,23nm,1.5s						
KNRA	Kununurra	50.26	264	P	P	02 19 31.0	+0.1
KNRA				IAmb	IAmb	02 19 31.7	
	comp=Z,8.8nm,0.7s						
FITZ	Fitzroy Crossi	52.84	260	P	P	02 19 50.2	+0.7
PSA00	Pilbara Seismi	57.77	255	P	P	02 20 23.4	-0.4
PSA00				IAmb	IAmb	02 20 24.9	
	comp=Z,15nm,1.1s						
MBWA	Marble Bar	57.93	256	P	P	02 20 24.8	-0.1
MBWA				IAmb	IAmb	02 20 40.9	
	comp=Z,30nm,1.5s						
MORW	Morawa	60.44	246	P	P	02 20 41.4	-0.1
VNDA	Vanda	60.95	185	P	P	02 20 45.0	+0.9
	comp=Z,0.6nm,0.8s,baz=358,slow=7.1,SNR=3.0						
	comp=Z,0.6nm,0.8s						
GIRL	Giralia	62.78	253	P	P	02 20 57.3	+0.5
QSPA	South Pole Qui	72.68	180	P	P	02 21 57.0	+0.4
QSPA	South Pole Qui	72.68	180	P	P	02 21 57.5	+0.9
	comp=Z,3.7nm,0.9s,baz=281,slow=0.5,SNR=14						
	comp=Z,3.7nm,0.9s						
O18K	Koktuh Hills	79.29	12	P	P	02 22 32.7	-0.2
M17K	Holitna River	80.33	10	P	P	02 22 38.8	+0.5
M17K				IAmb	IAmb	02 23 12.6	
	comp=Z,14nm,1.4s						
L18K	Granite Mounta	81.22	10	P	P	02 22 43.7	+0.9
J18K	Innoko River	82.38	10	P	P	02 22 49.2	+0.5
SEY	Seymchan	83.19	347	P	P	02 22 52.5	-0.4
	comp=Z,2.3nm,0.5s,baz=155,slow=5.1,SNR=7.5						
	comp=Z,2.3nm,0.5s						
ILAR	Eielson Array	85.43	13	P	P	02 23 03.0	-0.7
	comp=Z,0.2nm,0.4s,baz=229,slow=5.2,SNR=5.0						
	comp=Z,0.2nm,0.4s						
SNAA	Sanae	91.14	179	P	P	02 23 30.3	-0.3
	comp=Z,0.5nm,0.5s,baz=201,slow=9.7,SNR=8.8						
	comp=Z,0.5nm,0.5s						
ILGA	Ilgaz	143.49	317	PKPdf	PKPdf	02 29 57.2	-0.1
LODK	Lodwar	143.83	251	PKPdf	PKPdf	02 29 59.2	+0.6
BUR08	Bucovina Ar. S	144.00	332	PKPbc	PKPdf	02 29 58.1	+0.2
BURAR	Bucovina Array	144.01	332		PKPdf	02 29 58.5	+0.6
BRTR	Keskin Array B	144.21	315	PKPbc	PKPab	02 29 58.9	+0.4
BRTR	Keskin Array B	144.21	315	PKP	PKPab	02 29 58.8	+0.2
	comp=Z,0.5nm,0.4s,baz=73,slow=2.2,SNR=7.0						
CLL	Collm	144.88	347	*i* PKPbc	PKPab	02 30 00.1	-0.4
	comp=Z,7.0nm,1.1s						
MMAI	Mount Meron Ar	145.61	303	PKPbc	PKPab	02 30 03.3	-0.8
	comp=Z,2.4nm,0.6s,baz=207,slow=2.4,SNR=5.0						
GERES	GERESS Array B	147.03	345	PKPbc	PKPbc	02 30 05.5	-0.5
	comp=Z,0.7nm,0.5s,baz=25,slow=3.5,SNR=8.5						
FUORN	Ofenpass-Fuorn	149.90	348		PKiKP	02 30 14.2	+0.2
FNA	Florina	150.94	328		PKiKP	02 30 15.4	-0.7

*IDC **28** 02:18:05.9±20.0, 52°.24N×172°.26W, h0^{km}, mb3.6/2, mbtmp3.5/3, ML3.7/1, Error ellipse: s-maj=385.0km s-min=72.9km az=89.0*

*NEIC **28** 02:18:14.6±0.8, 52°.3N±0°.2×173°.93W±0°.09, h151^{km}±4^{km}, mb3.6/6, ML3.6/12, ML3.3(AEIC), Error ellipse: s-maj=24.0km s-min=5.7km az=166.0*

*AEIC **28** 02:18:14.5±1.2, 52°.4N±0°.2×174°.1W±0°.1, h147^{km}±3^{km}, Error ellipse: s-maj=23.0km s-min=8.4km az=160.0*

ISC 28 02:18:14.9±0.9**, 52°.4N**±0°.2×**173°.93W**±0°.07**, h147**^{km}±8^{km}**, n47, σ0^{s}.85**/49**, mb4.0**/10**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATKA	Atka Island	0.23	226		Sn	02 18 50.2	+0.3
ATKA	Atka Island	0.23	226		Pn	02 18 34.9	+0.1
ATKA				IAML		02 18 51.0	
	comp=E,877nm,0.6s						
GSIG	Igitkin Island	1.28	254		Pn	02 18 41.7	-0.3
GSIG					Sn	02 19 01.2	-1.5
GSTR	Great Sitkin T	1.34	259		Pn	02 18 42.5	0.0
GSTR					Sn	02 19 04.3	+0.7
GSTR	Great Sitkin T	1.34	259	IAML		02 19 07.0	
	comp=N,429nm,0.4s						
GSMY	Great Sitkin M	1.35	257		Pn	02 18 42.3	-0.3
GSMY					Sn	02 19 03.7	0.0
GSTD	Great Sitkin T	1.40	258		Pn	02 18 42.9	-0.3
GSSP	Great Sitkin S	1.41	260		Pn	02 18 43.0	-0.2
GSCK	Great Sitkin C	1.42	257		Pn	02 18 43.3	0.0
GSCK					Sn	02 19 05.2	+0.2
ADAG	Mount Adagdak	1.69	258		Pn	02 18 46.2	0.0
ADAG					Sn	02 19 10.7	+0.4
ADK	Adak	1.76	255		Pn	02 18 46.8	-0.3
ADK				IAML		02 19 13.9	
	comp=N,562nm,0.2s						
ADK				IAML		02 19 14.3	
	comp=N,421nm,0.3s						
ADK	Adak	1.76	255		Sn	02 19 10.9	-0.7
KIRH	Kanaga Island	2.00	258		Pn	02 18 50.2	+0.4
KIRH					Sn	02 19 17.6	+1.0
KIKV	Kanaga Island	2.06	258		Pn	02 18 50.5	0.0
KIMD	Kanaga Island	2.13	255		Sn	02 19 19.5	+0.3
TASE	Tanaga Southea	2.59	260		Pn	02 18 57.0	+0.1
GANE	Gareloi Northe	3.04	262		Pn	02 19 02.8	+0.2
GANO	Gareloi North	3.06	262		Pn	02 19 02.0	-0.8
CEPE	Semis' Perret	3.97	267		Pn	02 19 14.9	+0.2
CESW	Semis' Southwe	4.04	266		Pn	02 19 15.2	-0.3
AMKA	Amchitka	4.31	259		Pn	02 19 18.4	-0.6
MAPS	Pakushin South	4.46	68		Pn	02 19 21.4	+0.4
MREP	Makushin Rep't	4.57	69		Pn	02 19 23.2	+0.7
UNV	Unalaska Valle	4.71	69		Pn	02 19 24.8	+0.4
UNV	Unalaska Valle	4.71	69	IAML		02 20 22.1	
	comp=N,19nm,0.7s						
P08K	Saint George I	4.96	29	Pn	Pn	02 19 27.9	+0.4
LVA	Lava Point	5.07	66	Pn	Pn	02 19 30.1	+1.0
LVA				IAML		02 21 20.8	
	comp=E,47nm,1.5s						
ZRO	Akutan Zero	5.08	67		Pn	02 19 30.4	+1.2
SDPT	Sand Point	8.50	64	Pn	Pn	02 20 14.0	-0.8
CNBA	Chernabura Isl	8.88	68	Pn	Pn	02 20 18.6	-1.3
KTH	Kantishna Hill	16.46	38	IAmb	IAmb	02 22 01.0	
	comp=Z,6.5nm,0.9s						
BPAW	Bear Paw Mtn.	16.73	36		Pn	02 22 01.5	+1.1
BPAW				IAmb	IAmb	02 22 29.6	
	comp=Z,4.4nm,1.4s						
DHY	Denali Highway	17.63	42	P	P	02 22 09.7	-0.5
I23K	Minto, Yukon-K	17.90	35	IAmb	IAmb	02 22 15.5	
	comp=Z,2.1nm,0.7s						
HDA	Harding Lake	18.40	39	P	P	02 22 18.4	-0.1
ILAR	Eielson Array	18.60	38	P	P	02 22 17.9	-2.7
	comp=Z,0.3nm,0.3s,baz=234,slow=12,SNR=16						
	comp=Z,0.4nm,0.5s						
H24K	Noodor Dome	18.80	34	P	P	02 22 23.1	+0.3
H24K				IAmb	IAmb	02 22 23.7	
	comp=Z,3.2nm,1.1s						
PDAR	Pinedale Array	43.14	76	P	P	02 26 00.8	-0.1
	comp=Z,0.5nm,0.6s,baz=304,slow=7.5,SNR=6.5						
	comp=Z,0.5nm,0.6s						
TXAR	Lajitas Array	55.54	85	P	P	02 27 35.0	+0.1
	comp=Z,0.4nm,0.5s,baz=292,slow=4.8,SNR=6.1						
	comp=Z,0.4nm,0.5s						
CONA	Conrad Observa	79.74	353	*i* PcP	P	02 30 07.7	+1.5
	comp=Z,2.2nm,0.6s						
MOA	Molln	79.92	354	*i* PcP	P	02 30 08.6	+1.5
	comp=Z,0.6nm,0.4s						
RONA	Rosalia, Austr	79.93	353	*i* P	P	02 30 07.6	+0.4
	comp=Z,2.8nm,0.9s						
LESA	Schwarzleotal	80.43	355	*i* P	P	02 30 10.5	+0.5
	comp=Z,0.8nm,0.3s						
MOTA	Moosalm	80.58	357	*i* P	P	02 30 11.4	+0.6
	comp=Z,2.5nm,0.8s						
WTTA	Wattenberg	80.64	356	*e*P	P	02 30 11.6	+0.4
	comp=Z,3.2nm,0.5s						
DAVA	Damuels	80.68	357	*i* P	P	02 30 09.8	-1.6
	comp=Z,4.4nm,1.1s						
ABTA	Abfaltersbach	81.11	356	*i* P	P	02 30 11.5	-2.0
	comp=Z,2.6nm,0.6s						

IDC 28 02:25:14.0±4.7**, 19°.05S×176°.49W, h0**^{km}**, mb3.7**/4**, mbtmp3.7**/4**, Error ellipse: s-maj=123.1km s-min=37.5km az=33.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	46.23	260	P	P	02 33 41.4	+0.1
	0.3nm,0.3s,baz=97,slow=7.3,SNR=18						
	0.3nm,0.3s						
ASAR	Alice Springs	46.25	255	P	P	02 33 41.0	-0.5
	0.4nm,0.5s,baz=95,slow=7.3,SNR=5.8						
	0.4nm,0.5s						
VNDA	Vanda	59.48	185	P	P	02 35 18.9	+0.6
	0.7nm,1.1s,baz=16,slow=5.7,SNR=1.8						
	0.7nm,1.1s						
QSPA	South Pole Qui	71.01	180	P	P	02 36 33.2	-0.4
	1.1nm,0.7s,baz=328,slow=0.9,SNR=6.6						
	1.1nm,0.7s						
AKASG	Malin Array Be	142.40	333	PKP	PKPdf	02 44 48.6	0.0
	0.6nm,0.4s,baz=42,slow=4.2,SNR=4.7						

*WEL **28** 02:53:17.2±0.3, 39°S±3°×17°5E±°, h21^{km}±3^{km}, M4.2/30, ML4.4/29, MLv4.2/30, Error ellipse: s-maj=3.9km s-min=2.6km az=174.7, confirmed*

*NOU **28** 02:53:18.0, 39°.17S×174°.67E, h38^{km}, MLv4.0/14, North Island, New Zealand*

ISC 28 02:53:17.8±0.9**, 39°.20S**±0°.02×**174°.76E**±0°.02**, h31**^{km}±6^{km}**, n172, σ0^{s}.94**/182**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRZ	Vera Road	0.07	359	P	Pb	02 53 23.2	+0.1
VRZ				S	Sb	02 53 27.5	+0.8
MHEZ	Mangahewa	0.36	289	P	Pn	02 53 26.8	-0.1
MHEZ				S	Sn	02 53 33.8	+0.9
LREZ	Lake Rotokare	0.38	226	P	Pb	02 53 26.4	-0.1
LREZ				S	Sn	02 53 33.5	0.0
DREZ	Durham Road	0.43	271	P	Pn	02 53 27.5	-0.4
PKVZ	Pokaka	0.46	102	P	Pb	02 53 27.0	-0.7
PKVZ				S	Sb	02 53 34.1	-0.4
PREZ	Palmer Road	0.49	253	P	Pn	02 53 28.4	-0.3
NEZ	North Egmont	0.52	262	P	Pn	02 53 28.8	-0.4
TWVZ	Taurewa	0.54	77	P	Pb	02 53 28.1	-0.8
MTVZ	Mangateitei	0.58	109	P	Pb	02 53 28.7	-1.0
MTVZ				S	Sb	02 53 37.1	-0.6
WAZ	Wanganui	0.58	163	P	Pb	02 53 29.1	-0.6
WAZ				S	Sb	02 53 37.9	+0.2
KHEZ	Kahui Hut	0.59	260	P	Pn	02 53 30.1	0.0
KHEZ	Kahui Hut	0.59	260	S	Sn	02 53 40.0	+1.3
KHEZ	Kahui Hut	0.59	260	P	Pn	02 53 29.7	-0.4
KHEZ				S	Sn	02 53 39.5	+0.9
PKE	Pukeiti	0.60	270	P	Pn	02 53 30.2	0.0
COVZ	Chateau Observ	0.61	91	P	Pb	02 53 29.2	-0.8
COVZ				S	Sb	02 53 38.0	-0.5
FWVZ	Far West T-bar	0.62	96	P	Pb	02 53 29.4	-0.9
FWVZ				S	Sb	02 53 38.2	-0.7
TRVZ	Turoa	0.62	100	P	Pb	02 53 29.5	-0.9
MAVZ	Matarangi	0.63	97	P	Pb	02 53 29.6	-0.9
WHVZ	Whangaehu Hut	0.65	98	P	Pb	02 53 29.8	-1.1
WTVZ	West Tongariro	0.65	83	P	Pb	02 53 29.9	-0.9
NGZ	Ngauruhoe	0.65	88	P	Pb	02 53 30.0	-0.8
WNVZ	Wahianoa	0.66	102	P	Pb	02 53 30.2	-0.9
NNVZ	North Ngauruho	0.67	85	P	Pb	02 53 30.3	-0.8
SNVZ	South Ngauruho	0.68	89	P	Pb	02 53 30.6	-0.7
HIZ	Hauiti	0.69	6	P	Pb	02 53 31.1	-0.2
HIZ	Hauiti	0.69	6	S	Sn	02 53 41.5	+0.5
HIZ	Hauiti	0.69	6	P	Pb	02 53 31.1	-0.2
KRVZ	Karewarewa	0.69	82	P	Pb	02 53 30.6	-0.8
NBEZ	Newall Road No	0.70	264	P	Pn	02 53 31.5	0.0
TUVZ	Tukino	0.70	96	P	Pb	02 53 30.9	-0.7
OTVZ	Oturere	0.70	88	P	Pb	02 53 31.0	-0.7
NMEZ	Namu Road	0.72	252	P	Pn	02 53 31.8	+0.1
NTVZ	North Tongarir	0.72	82	P	Pb	02 53 31.1	-0.8
NTVZ				S	Sb	02 53 40.8	-0.7
TMVZ	Te Maari	0.74	84	P	Pb	02 53 31.5	-0.7
ETVZ	East Tongariro	0.74	86	P	Pb	02 53 31.5	-0.8
KATZ	Kakaramea	0.76	73	P	Pn	02 53 31.9	-0.6
MOVZ	Moawhango	0.80	106	P	Pn	02 53 32.1	-0.9
RATZ	Rangitukua	0.85	68	P	Pn	02 53 33.4	-0.3
RITZ	Rihia Road	0.88	76	P	Pn	02 53 34.0	-0.1
WATZ	Wairara	0.90	58	P	Pn	02 53 34.1	-0.2
TLZ	Tolley Road	1.06	35	P	Pn	02 53 36.2	-0.4
WHTZ	Whakaora	1.07	61	P	Pn	02 53 37.0	+0.2
HATZ	Hinemaiaia	1.08	74	P	Pn	02 53 36.4	-0.4
KUTZ	Kaahu Road	1.09	50	P	Pn	02 53 36.9	-0.1
OHWZ	Ohakea	1.09	157	P	Pn	02 53 37.1	+0.1
TSZ	Takapari Road	1.27	133	P	Pn	02 53 39.2	-0.2
WPRZ	Whakapapatarin	1.29	59	P	Pn	02 53 39.4	-0.3
KWHZ	Kaweka Forest	1.31	100	P	Pn	02 53 39.8	-0.2
PNHZ	Pukenui	1.32	123	P	Pn	02 53 40.1	-0.1
KRHZ	Kereru	1.32	110	P	Pn	02 53 40.1	-0.1
MRHZ	Matea Rd	1.34	75	P	Pn	02 53 40.2	-0.2
BKZ	Black Stump Fm	1.35	89	P	Pn	02 53 40.3	-0.2
BKZ	Black Stump Fm	1.35	89	P	Pn	02 53 40.2	-0.2
GRRZ	Galatos Road	1.35	52	P	Pn	02 53 40.5	-0.1
ALRZ	Allen Road	1.39	63	P	Pn	02 53 41.3	+0.2
POWZ	Post Office Ro	1.42	147	P	Pn	02 53 42.0	+0.4
HRRZ	Handcock Road	1.44	56	P	Pn	02 53 41.9	+0.2
PRRZ	Plateau Road	1.45	62	P	Pn	02 53 42.0	+0.1
HSRZ	Hossack Road	1.46	53	P	Pn	02 53 42.1	0.0
UTU	Utuhina	1.52	48	P	Pn	02 53 42.8	0.0
MCHZ	McNeill Hill	1.52	100	P	Pb	02 53 44.5	-0.8
DVHZ	Dannevirke	1.54	136	P	Pn	02 53 44.0	+0.8
WPHZ	Waipukurau	1.56	124	P	Pb	02 53 45.0	-1.0
NGRZ	Ngongotaha	1.56	46	P	Pn	02 53 43.5	+0.1
TOZ	Tahuroa Road	1.57	22	P	Pn	02 53 43.6	0.0
MRZ	Mangatainoka R	1.59	157	P	Pn	02 53 44.4	+0.5
NMHZ	Naumai	1.59	87	P	Pn	02 53 44.9	+1.0
RRRZ	Republican Roa	1.62	59	P	Pb	02 53 46.8	-0.2
KMRZ	Kaimai	1.64	35	P	Pn	02 53 44.6	+0.1
PRWZ	Pori Road	1.65	146	P	Pn	02 53 46.0	+1.4
OGWZ	Otaki Gorge	1.65	169	P	Pn	02 53 45.2	+0.6
KARZ	Kaharoa	1.65	45	P	Pb	02 53 46.4	-1.2
MTHZ	Maungataniwha	1.66	79	P	Pn	02 53 44.8	0.0
KIW	Kapiti Island	1.67	176	P	Pn	02 53 45.1	+0.2
TARZ	Mount Tarawera	1.67	55	P	Pb	02 53 47.9	-0.1
MKRZ	Makatiti	1.70	52	P	Pb	02 53 49.3	+0.8
MUGZ	Murupara	1.73	66	P	Pn	02 53 46.0	+0.4
DUWZ	D'Urville Isla	1.73	202	P	Pn	02 53 46.1	+0.4
ARHZ	Aropaoanui	1.74	93	P	Pb	02 53 47.7	-1.3
KAHZ	Kahuranaki	1.74	111	P	Pn	02 53 47.6	+1.6
PRHZ	Porangahau	1.80	127	P	Pn	02 53 47.7	+1.0
TIWZ	Tintock	1.80	152	P	Pn	02 53 48.1	+1.4
PXZ	Pawanui	1.82	118	P	Pb	02 53 49.5	-1.0
ANWZ	Angora Road	1.83	134	P	Pb	02 53 53.9	+3.4
RTZ	Ruatahuna	1.83	72	P	Pn	02 53 47.2	+0.1
RAHZ	Arahi	1.83	82	P	Pn	02 53 47.7	+0.6
CKHZ	Cape Kidnapper	1.85	105	P	Pb	02 53 52.0	+1.0
BFZ	Birch Farm	1.87	143	P	Pn	02 53 48.4	+0.7
BFZ	Birch Farm	1.87	143	P	Pn	02 53 48.3	+0.7
TGRZ	Tauranga	1.88	39	P	Pn	02 53 47.7	-0.1
EDRZ	Edgecumbe	1.89	56	P	Pb	02 53 54.7	+3.0
CAW	Cannon Point	1.92	173	P	Pn	02 53 49.2	+0.8
MARZ	Manawahe	1.93	52	P	Pb	02 53 52.7	+0.4
WHHZ	Waihua	1.93	87	P	Pb	02 53 50.6	-1.6
OPRZ	Ohinepanea	1.95	47	P	Pn	02 53 48.6	-0.1
CPWZ	Castlepoint	2.04	148	P	Pb	02 53 52.8	-1.3
MTW	Mount Morrison	2.04	164	P	Pn	02 53 51.1	+1.1
TCW	Tory Channel	2.04	190	P	Pn	02 53 50.2	+0.1
SNGZ	Shannon Statio	2.05	79	P	Pn	02 53 51.2	+1.0
URZ	Urewera	2.06	64	P	Pn	02 53 50.8	+0.5
WEL	Wellington	2.08	180	P	Pn	02 53 51.7	+1.1
TMWZ	Te Maipa	2.10	156	P	Pn	02 53 51.9	+1.1
KBAZ	Karaka Road Bo	2.10	3	P	Pn	02 53 51.8	+1.0
SNZO	South Karori	2.11	181	P	Pn	02 53 51.8	+0.9
MKAZ	Moumakai	2.11	9	P	Pn	02 53 51.4	+0.4
AWAZ	Awhitu Peninsu	2.13	357	P	Pn	02 53 51.7	+0.4
RAGZ	Rawiri	2.19	72	P	Pn	02 53 53.3	+1.2
WHRZ	Whale Island	2.19	53	P	Pb	02 53 58.0	+1.2
BHW	Baring Head	2.21	178	P	Pn	02 53 54.3	+2.0
MYRZ	Mayor Island	2.24	32	P	Pn	02 53 55.1	+2.4
PAWZ	Paruwai Farm	2.24	167	P	Pn	02 53 54.0	+1.2
ETAZ	East Tamaki Re	2.24	3	P	Pn	02 53 53.5	+0.7
MSWZ	Moikau Station	2.25	171	P	Pn	02 53 53.5	+0.6
WTAZ	Waiatarua	2.27	356	P	Pn	02 53 53.7	+0.6
KNZ	Kokohu	2.27	86	P	Pn	02 53 53.8	+0.6
NNZ	Nelson	2.28	207	P	Pn	02 53 53.9	+0.7
TKNZ	Takaka Hill	2.30	216	P	Pn	02 53 53.8	+0.3
TRWZ	Traveller	2.31	162	P	Pn	02 53 55.1	+1.3
TUWZ	Tuamarina	2.32	195	P	Pn	02 53 54.4	+0.6
EPAZ	Eden Park BICE	2.32	360	P	Pn	02 53 54.7	+1.0
MWZ	Matawai	2.33	69	P	Pn	02 53 54.4	+0.4
HBAZ	Herne Bay Bore	2.34	359	P	Pn	02 53 54.9	+0.8
QRZ	Quartz Range	2.36	226	P	Pn	02 53 53.7	-0.7
QRZ	Quartz Range	2.36	226	S	Sn	02 54 20.9	-1.5
QRZ	Quartz Range	2.36	226	P	Pn	02 53 53.9	-0.5
RIGZ	Rimuhau	2.39	79	P	Pn	02 53 57.2	+2.4
PLWZ	Palliser	2.40	171	P	Pn	02 53 55.2	+0.2
WIAZ	Waiheke Island	2.42	7	P	Pn	02 53 55.8	+0.6
MBAZ	Motutapu North	2.43	3	P	Pn	02 53 55.7	+0.4
MHGZ	Mahia Peninsul	2.45	90	P	Pn	02 53 56.9	+1.3
PRGZ	Paritu Road	2.45	85	P	Pn	02 53 56.7	+1.1
TKGZ	Te Karaka	2.53	74	P	Pn	02 53 58.8	+2.1
KUZ	Kuaotunu	2.56	18	P	Pn	02 53 56.8	-0.3
CMWZ	Cape Campbell	2.58	189	P	Pn	02 53 59.3	+1.9
ABAZ	Army Bay	2.59	1	P	Pn	02 53 58.2	+0.6
RUGZ	Raukumara Rang	2.60	63	P	Pn	02 53 58.3	+0.5
BSWZ	Blackbirch Sta	2.60	195	P	Pn	02 53 58.7	+1.0
MRNZ	Matariki Terra	2.68	214	P	Pn	02 53 59.2	+0.4
TWGZ	Tauwhareparae	2.72	69	P	Pn	02 54 01.6	+2.3
HAZ	Te Kaha	2.77	60	P	Pn	02 54 00.9	+0.9
CNGZ	Carnagh Statio	2.78	76	P	Pn	02 54 02.1	+1.9
PKGZ	Pakihiroa	2.92	64	P	Pn	02 54 03.5	+1.4
THZ	Tophouse	2.93	208	P	Pn	02 54 03.1	+0.9
PUZ	Puketiti	2.96	69	P	Pn	02 54 04.2	+1.6
GRZ	Great Barrier	2.99	11	P	Pn	02 54 03.1	0.0
WMGZ	Waiomatatini S	3.18	66	P	Pn	02 54 07.5	+1.9
MXZ	Matakaoa Point	3.23	61	P	Pn	02 54 08.3	+2.0
MXZ	Matakaoa Point	3.23	61	P	Pn	02 54 08.3	+2.0
WCZ	Waipu Caves	3.27	354	P	Pn	02 54 07.1	+0.2
KHZ	Kahutara	3.35	196	P	Pn	02 54 08.5	+0.6
KHZ	Kahutara	3.35	196	P	Pn	02 54 08.6	+0.6
DSZ	Denniston Nort	3.40	221	P	Pn	02 54 08.6	-0.1
GVZ	Greta Valley S	3.99	199	P	Pn	02 54 16.6	-0.1
LTZ	Lake Taylor	4.05	207	P	Pn	02 54 17.8	+0.2
OUZ	Omahuta	4.08	346	P	Pn	02 54 17.9	-0.1
OUZ	Omahuta	4.08	346	S	Sn	02 55 04.3	-0.4
OUZ	Omahuta	4.08	346	P	Pn	02 54 18.1	+0.1
AMCZ	Amberley	4.28	201	P	Pn	02 54 20.4	-0.4
INZ	Inchbonnie	4.33	214	P	Pn	02 54 21.6	+0.2
OXZ	Oxford	4.61	206	P	Pn	02 54 24.0	-1.3
OKCZ	Okains Bay	4.70	195	P	Pn	02 54 25.3	-1.3
AKCZ	Akaroa Harbour	4.87	196	P	Pn	02 54 27.6	-1.3
WVZ	Waitaha Valley	4.92	217	P	Pn	02 54 29.6	0.0
RACZ	Rakaia	4.94	203	P	Pn	02 54 28.1	-1.6
MHCZ	Mount Hutt	4.95	208	P	Pn	02 54 29.7	-0.3
GCSZ	Gaunt Creek Bo	5.30	218	P	Pn	02 54 34.7	0.0
ARCZ	Arundel	5.45	208	P	Pn	02 54 36.1	-0.8
TMZ	Timaru	5.89	207	P	Pn	02 54 41.4	-1.5
ODZ	Otahua Downs	6.59	206	P	Pn	02 54 51.7	-0.8
ODZ	Otahua Downs	6.59	206	P	Pn	02 54 51.7	-0.8
TUZ	Tuapeka	7.74	208	P	Pn	02 55 07.2	-1.0
MLZ	Mavora Lakes	7.89	216	P	Pn	02 55 10.5	+0.2

IDC 28 03:03:29.9±2.0**, 54°.62N×164°.35E, h0**^{km}**, mb3.3**/4**, mbtmp3.3**/5**, ML2.1**/1**, Error ellipse: s-maj=69.7km s-min=21.8km az=165.0, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	Petropavlovsk-	4.22	252	Pn	Pn	03 04 36.0	+0.5
	0.5nm,0.3s,baz=71,slow=17,SNR=6.9						
PETK				Sn	Sn	03 05 25.0	-0.4
	0.5nm,0.3s,baz=99,slow=18,SNR=1.6						
	1.3nm,0.4s						
ILAR	Eielson Array	25.94	47	P	P	03 09 03.2	-0.3
	0.4nm,0.5s,baz=253,slow=8.1,SNR=16						
	0.4nm,0.5s						
KURBB	Kurchatov Arra	49.15	303	P	P	03 12 18.9	-0.2
	0.2nm,0.5s,baz=59,slow=8.3,SNR=3.1						
	0.2nm,0.5s						
MKAR	Makanchi Array	49.74	297	P	P	03 12 23.6	-0.1
	0.1nm,0.4s,baz=48,slow=4.3,SNR=2.1						
	0.1nm,0.4s						
TXAR	Lajitas Array	67.73	71	P	P	03 14 29.5	+0.3
	0.2nm,0.6s,baz=307,slow=4.8,SNR=3.8						
	0.2nm,0.6s						

IDC 28 03:31:17.2±1.9**, 2°.60S×138°.41E, h0**^{km}**, mb3.3**/2**, mbtmp3.4**/4**, ML3.2**/2**, MS2.5**/1**, Error ellipse: s-maj=36.4km s-min=19.3km az=160.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	2.30	88	Pn	Pn	03 31 57.9	+1.4
	2.5nm,0.3s,baz=243,slow=10,SNR=12						
JAY				Lg	Lg	03 32 29.4	
	4.7nm,0.3s,baz=94,slow=20,SNR=6.0						
JAY				LR	LR	03 33 09.3	
	comp=Z,107nm,19.7s,baz=188,slow=49						
	17nm,0.6s						
WRA	Warramunga Arr	17.69	193	P	Pn	03 35 25.2	-0.1
	0.1nm,0.3s,baz=13,slow=12,SNR=7.7						
	0.7nm,0.7s						
ASAR	Alice Springs	21.39	191	P	P	03 36 06.5	-0.2
	0.5nm,0.6s,baz=20,slow=11,SNR=8.9						
	0.5nm,0.6s						
ILAR	Eielson Array	85.86	24	P	P	03 43 58.4	-0.3
	0.3nm,0.6s,baz=263,slow=4.3,SNR=4.5						
	0.3nm,0.6s						

*IDC **28** 03:34:27.0±25.0, 43°.69N×145°.85E, h0^{km}, mb3.5/4, mbtmp3.5/4, MS3.2/3, Error ellipse: s-maj=690.2km s-min=34.1km az=167.0*

*MOS **28** 03:34:34.2±1.2, 43°.63N×146°.15E, h73^{km}, mb3.9/2, Error ellipse: s-maj=14.8km s-min=13.1km az=117.9*

*SKHL **28** 03:34:35.5±0.1, 43°.60N×146°.20E, h73^{km}±6^{km}, mb5.0/4*

*NIED **28** 03:34:35.1, 43°.53N×146°.22E, h71^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.91; $M_{\theta\theta}$3.93; $M_{\phi\phi}$-2.02; $M_{r\theta}$-1.44; $M_{\theta\phi}$-1.01; $M_{\phi r}$-1.81; Fault plane solution: $M_0$4.24000×10^{14} NP1: ϕ_s316.00000°, δ51.00000°, λ-27.00000°. NP2: ϕ_s64.00000°, δ69.00000°, λ-138.00000°.*

*JMA **28** 03:34:35.1±0.2, 43°.5N±0°.5×146°.2E±0°.9, h71^{km}±1^{km}, MV3.7/40, NEAR KUNASHIRI ISLAND*

ISC 28 03:34:35.5±0.8**, 43°.58N**±0°.05×**146°.19E**±0°.04**, h70**^{km}±6^{km}**, n50, σ0^{s}.94**/63**, mb3.4**/5**, 6C-5D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	Nemuro 2	0.39	236	*i* P	Pn	03 34 47.1	-0.2
NEM2				S	Sn	03 34 55.7	-0.3
NMR	Nemuro--Hokkai	0.40	238	⇑ *i*PN	Pn	03 34 47.1	-0.3
NMR				*i* S	Sn	03 34 55.7	-0.4
NMR	Nemuro--Hokkai	0.40	238	*i* P	Pn	03 34 47.1	-0.3
NMR				*i* S	Sn	03 34 55.8	-0.4
YUK	Yuzh-Kuril'sk	0.51	332	*c i*PN	Pn	03 34 47.8	-0.6
YUK	Yuzh-Kuril'sk	0.51	332	*i* P	Pn	03 34 47.8	-0.6
YUK				AMB	AMB	03 34 48.5	
	1μm,0.2s						
YUK				*i* S	Sn	03 34 57.1	-0.8
YUK				A	A	03 35 01.0	
	3μm,0.3s						
YUK				A	A	03 35 01.0	
	4μm,0.3s						
GLVR	Golovnino	0.51	288	⇓ *i*PN	Pn	03 34 48.7	+0.3
GLVR				*i* S	Sn	03 34 58.6	+0.7
GLVR				pmax	pmax		
	comp=N,167nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,832nm,0.1s						

GLVR				smax	smax		
	comp=N,4µm,0.2s						
GLVR				smax	smax		
	comp=E,5µm,0.2s						
GLVR	**Golovnino**	0.51	288	iP	Pn	03 34 48.7	+0.3
GLVR				AMB	AMB	03 34 49.8	
	comp=E,830nm,0.2s						
GLVR				iS	Sn	03 34 58.6	+0.7
GLVR				A	A	03 34 59.9	
	comp=E,4µm,0.2s						
GLVR				A	A	03 34 59.9	
	comp=E,5µm,0.2s						
SHO	**Shikotan**	0.54	58	d iPN	Pn	03 34 49.3	+0.6
SHO				iS	Sn	03 34 59.0	+0.6
SHO				pmax	pmax		
	comp=Z,503nm,0.3s						
SHO				pmax	pmax		
	comp=N,81nm,0.2s						
SHO				smax	smax		
	comp=N,3µm,0.2s						
SHO				smax	smax		
	comp=E,4µm,0.4s						
SHO	**Shikotan**	0.54	58	iP	Pn	03 34 49.1	+0.4
SHO				AMB	AMB	03 34 49.9	
	comp=E,500nm,0.3s						
SHO				iS	Sn	03 34 59.2	+0.8
SHO				A	A	03 34 59.6	
	comp=E,3µm,0.3s						
SHO				A	A	03 34 59.6	
	comp=E,4µm,0.3s						
JRA	**Rausu**	0.85	295	P	Pn	03 34 52.4	+0.3
JRA				eS	Sn	03 35 05.3	+0.8
RUSJ	**Misakicho**	0.86	308	⇑iPN	Pn	03 34 52.5	+0.3
RUSJ				iS	Sn	03 35 05.3	+0.7
JNSB	**Nemuroshibetsu**	0.88	283	iP	Pn	03 34 52.8	+0.3
JNSB				S	Sn	03 35 05.9	+0.7
JKHN	**Kushirohamanak**	0.91	237	iP	Pn	03 34 52.7	-0.1
JKHN				eS	Sn	03 35 05.5	-0.1
JNK	**Nakash**	1.07	271	iP	Pn	03 34 54.5	-0.4
JNK				eS	Sn	03 35 08.4	-0.9
AKK	**Akkeshi**	1.14	241	eP	Pn	03 34 55.1	-0.6
JAK	**Akkeshi**	1.24	242	iP	Pn	03 34 56.6	-0.4
JAK				eS	Sn	03 35 12.9	-0.2
JTKR	**Abashiri--Toko**	1.70	284	P	Pn	03 35 03.5	+0.5
JTKR				eS	Sn	03 35 25.1	+1.1
JAR	**Ashorobuto**	1.79	262	iP	Pn	03 35 04.7	+0.4
JAR				S	Sn	03 35 26.6	+0.6
JOB	**Onbets**	1.85	249	eP	Pn	03 35 05.4	+0.3
JOB				eS	Sn	03 35 27.8	+0.2
KUR	**Kuril'sk**	2.04	35	⇑iPN	Pn	03 35 07.4	-0.1
KUR				iS	Sn	03 35 32.0	-0.1
KUR	**Kuril'sk**	2.04	35	iP	Pn	03 35 07.5	-0.1
KUR				AMB	AMB	03 35 09.1	
	comp=E,170nm,0.4s						
KUR				eS	Sn	03 35 31.8	-0.3
KUR				A	A	03 35 33.3	
	comp=E,730nm,0.4s						
KUR				A	A	03 35 33.3	
	comp=E,650nm,0.4s						
JMP	**Maruseppu**	2.10	283	eP	Pn	03 35 09.0	+0.6
JMP				eS	Sn	03 35 34.8	+1.3
ERM	**Erimo**	2.73	236	d iPN	Pn	03 35 18.8	+1.9
YSS	**Yuzhno-Sakhali**	4.15	325	ePN	Pn	03 35 37.1	+0.8
YSS				eS	Sn	03 36 22.9	-0.7
YSS				pmax	pmax		
	comp=Z,20nm,0.4s						
YSS				smax	smax		
	comp=N,40nm,0.9s						
YSS				smax	smax		
	comp=E,50nm,0.7s						
YSS	**Yuzhno-Sakhali**	4.15	325	eP	Pn	03 35 37.1	+0.8
YSS				eS	Sn	03 36 22.9	-0.7
TYV	**Tymovskoe**	7.67	343	eP	Pn	03 36 25.7	+1.4
OKH	**Okha**	10.20	349	eP	Pn	03 36 57.4	-1.5
NKL	**Nikolayevsk**	10.25	341	eP	Pn	03 36 59.9	+0.4
USA0B	**Ussuriysk Arra**	10.28	278	⇑ePN	Pn	03 37 01.1	+1.1
ZEA	**Zeya**	16.07	316	eP	Pn	03 38 15.0	-1.8
MA2	**Magadan**	16.26	8	LR	LR	03 43 56.1	
	comp=E,38nm,18.2s,baz=180,slow=35						
YAK	**Yakutsk**	20.88	338	LR	LR	03 48 26.1	
	comp=E,46nm,18.4s,baz=234,slow=41						
ULN	**Ulaanbaatar**	27.45	293	⇓eP	P	03 40 14.4	-0.4
ULN				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ULN	**Ulaanbaatar**	27.45	293	eP	P	03 40 14.4	-0.4
SONM	**Songino Array**	27.89	293	P	P	03 40 17.3	-1.4
	comp=Z,0.6nm,0.6s,baz=86,slow=6.2,SNR=2.4						
	comp=Z,0.6nm,0.6s						
H11N2	**WAKE ISLAND Hy**	29.44	137	T	T	04 11 28.9	
	baz=328,slow=75,SNR=563						
H11N1	**WAKE ISLAND Hy**	29.45	137	T	T	04 11 28.7	
	baz=328,slow=75,SNR=432						
H11N3	**WAKE ISLAND Hy**	29.46	137	T	T	04 11 30.3	
	baz=328,slow=75,SNR=342						
H11S1	**WAKE ISLAND Hy**	30.39	139	T	T	04 12 37.1	
	baz=329,slow=76,SNR=991						
H11S3	**WAKE ISLAND Hy**	30.39	139	T	T	04 12 38.3	
	baz=329,slow=76,SNR=550						
H11S2	**WAKE ISLAND Hy**	30.41	139	T	T	04 12 40.0	
	baz=329,slow=76,SNR=509						
ILAR	**Eielson Array**	42.03	36	P	P	03 42 20.2	+0.6
	comp=Z,0.3nm,0.8s,baz=288,slow=8.4,SNR=5.1						
	comp=Z,0.3nm,0.8s						
MK31	**Makanchi Array**	44.05	297	⇑eP	P	03 42 34.5	-1.6
MKAR	**Makanchi Array**	44.05	297	P	P	03 42 32.9	-3.2
	comp=Z,0.3nm,0.5s,baz=74,slow=11,SNR=3.8						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	44.05	297	iP	P	03 42 36.2	+0.1
MKAR	**Makanchi Array**	44.05	297	eP	P	03 42 36.2	+0.1
KURK	**Kurchatov**	45.05	304	P	P	03 42 42.8	-1.1
KURBB	**Kurchatov Arra**	45.13	304	P	P	03 42 42.8	-1.8
	comp=Z,0.6nm,0.5s,baz=75,slow=8.6,SNR=5.1						
	comp=Z,0.6nm,0.5s						
AAK	**Ala-Archa**	50.80	295	LR	LR	04 03 57.5	
	comp=Z,52nm,21.8s,baz=316,slow=35						
KIRV	**Kirov**	57.30	322	d eP	P	03 44 17.8	+2.3

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*UPA **28** 03:41:04.8±1.3, 8°.40N×82°.83W, h14^{km}±4^{km}, ML3.5, MW3.0*

*CATAC **28** 03:41:05.3±1.3, 8°N±8°×8°3W±°, h20^{km}±3^{km}, M3.3/5, MLv3.3/5, Error ellipse: s-maj=17.6km s-min=12.2km az=176.3, confirmed*

ISC 28 03:41:03.7±1.0, **8°.35N**±0°.03×**82°.82W**±0°.03, **h30**^{km}±6^{km}, **n28**, σ**0^{s}.56**/44, **3C-3D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	**La Esperanza,**	0.07	23	eP	Pb	03 41 06.7	-2.3
LESP3				eS	Pb	03 41 09.4	+0.4
LESP3	**La Esperanza,**	0.07	23	⇓iP	Pb	03 41 09.3	+0.4
LESP3				eS	Sb	03 41 13.5	+1.0
CDITO	**Canoas**	0.23	346	P	Pb	03 41 10.7	+0.3
CDITO	**Canoas**	0.23	346	S	Sn	03 41 16.0	+0.1
LIMO3	**Limones**	0.25	191	eP	Pn	03 41 11.4	+0.1
LIMO3				eS	Sn	03 41 16.8	+0.6
LMNES	**Limones**	0.25	190	iP	Pn	03 41 11.5	+0.1
LMNES				eS	Sn	03 41 16.4	+0.2
DVD	**David**	0.37	76	eP	Pn	03 41 12.8	-0.3
DVD				eS	Sn	03 41 19.2	-0.1
CSTBL	**De las Acacias**	0.38	80	iP	Pn	03 41 12.8	-0.3
LOCO3	**Loma Colorada,**	0.40	81	eP	Pn	03 41 13.1	-0.3
LOCO3				AMP		03 41 13.3	
	comp=Z,6µm,0.0s						
CLLRA	**Cordillera,**	0.44	27	⇑iP	Pb	03 41 13.8	+0.3
MLIR3	**Monte Lirio, C**	0.44	359	eP	Pn	03 41 14.2	+0.1
MLIR3				AMP		03 41 14.3	
	comp=Z,4µm,0.1s						
MLIR3				eS	Sb	03 41 19.6	-0.4
BRU2	**Volcan**	0.46	15	P	Pb	03 41 14.1	+0.3
BRU2	**Volcan**	0.46	15	⇑iP	Pb	03 41 14.0	+0.3
BRU2				eP	Pb	03 41 14.0	+0.3
BRU2				eS	Sn	03 41 21.6	-0.1
BRU2				eS	Sb	03 41 21.7	+1.2
PTAR3	**Potrerillos Ar**	0.47	42	eP	Pn	03 41 14.3	-0.2
PTAR3				eS	Sn	03 41 21.9	+0.1
RSRNO	**Rio Sereno**	0.47	355	iP	Pn	03 41 14.5	0.0
SCLRA	**Santa Clara, W**	0.48	4	⇓iP	Pn	03 41 14.6	-0.1
BC3P	**Paso Ancho**	0.51	24	eP	Pb	03 41 14.6	+0.1
BC3P				eS	Sn	03 41 22.7	-0.3
BQTLY	**Boquete Panama**	0.54	41	iP	Pb	03 41 15.1	+0.2
BQTLY				eS	Sb	03 41 23.0	+0.3
PSOM3	**Paja de Sombre**	0.59	55	eP	Pb	03 41 15.7	-0.1
PSOM3				eS	Sn	03 41 24.5	-0.3
RBALA	**Bur**	0.84	51	⇓iP	Pn	03 41 19.6	0.0
RBALA				eS	Sn	03 41 30.8	-0.1
RMDIO	**Remedios, Chir**	0.98	97	⇑iP	Pb	03 41 22.0	-0.2
DRK0	**Durika**	1.00	335	P	Pn	03 41 21.6	-0.4
DRK0	**Durika**	1.00	335	S	Sb	03 41 36.0	+0.3
DRK0	**Durika**	1.00	335	eP	Pn	03 41 22.0	0.0
DRK0				eS	Sb	03 41 36.0	+0.3
OCHAL	**Ojochal**	1.11	312	P	Pn	03 41 23.6	+0.4
OCHAL	**Ojochal**	1.11	312	S	Sb	03 41 39.1	+0.6
KKNTU	**Kakintº**	1.11	64	iP	Pn	03 41 23.2	-0.1
KKNTU				eS	Sn	03 41 37.1	-0.4
SOCE	**Pocosol**	2.69	319	P	Pb	03 41 50.0	-1.4

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*UPA **28** 03:58:38.6±0.7, 8°.39N×82°.80W, h42^{km}±5^{km}, MW3.4*

*UCR **28** 03:58:39.1±1.2, 8°.34N×82°.79W, h24^{km}±4^{km}, MW3.6*

*CATAC **28** 03:58:42.6±0.9, 9°N±5°×8°3W±°, h15^{km}±1^{km}, M3.5/6, MLv3.5/6, Error ellipse: s-maj=11.7km s-min=6.7km az=171.7, confirmed*

ISC 28 03:58:39.0±1.0, **8°.37N**±0°.03×**82°.77W**±0°.03, **h31**^{km}±7^{km}, **n49**, σ**0^{s}.98**/62, **Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDITO	**Canoas**	0.23	333	P	Pn	03 58 45.8	-0.5
CDITO	**Canoas**	0.23	333	S	Sb	03 58 50.7	+0.6
LIMO3	**Limones**	0.28	199	eP	Pb	03 58 46.3	0.0
LIMO3				eS	Sn	03 58 53.1	+0.9
LMNES	**Limones**	0.28	198	eP	Pb	03 58 46.3	0.0
DVD	**David**	0.32	78	eP	Pn	03 58 47.5	-0.1
DVD				eS	Sn	03 58 53.9	+0.7
CSTBL	**De las Acacias**	0.33	83	eP	Pn	03 58 47.5	-0.2
NELY	**Ciudad Neily**	0.33	328	eP	Pb	03 58 46.6	-0.3
NELY				eS	Sn	03 58 53.0	-0.4
PEDE3	**Pedregal, Chir**	0.34	88	eP	Pn	03 58 47.5	-0.4
PEDE3				eS	Sn	03 58 54.0	+0.2
LOCO3	**Loma Colorada,**	0.35	83	eP	Pn	03 58 47.8	-0.2
LOCO3				eS	Sn	03 58 55.1	+1.2
CLLRA	**Cordillera,**	0.40	23	eP	Pb	03 58 48.4	+0.3
PTAR3	**Potrerillos Ar**	0.42	40	eP	Pn	03 58 48.9	-0.2
PTAR3				eS	Sn	03 58 55.9	0.0
BRU2	**Volcan**	0.43	10	eP	Pb	03 58 48.6	+0.1
BRU2				eS	Sn	03 58 56.2	+0.1
BRU2	**Volcan**	0.43	10	P	Pb	03 58 48.8	+0.2
BRU2	**Volcan**	0.43	10	eP	Pb	03 58 48.6	+0.1
BRU2				eS	Sn	03 58 56.4	+0.3
RSRNO	**Rio Sereno**	0.45	349	eP	Pb	03 58 49.2	+0.3
FITO	**Golfito**	0.46	304	eP	Pb	03 58 47.3	-1.5
FITO				eS	Sb	03 58 54.3	-1.3
SCLRA	**Santa Clara, W**	0.46	359	eP	Pb	03 58 49.1	+0.1
BC3P	**Paso Ancho**	0.47	20	eP	Pb	03 58 49.2	0.0
BC3P				eS	Sn	03 58 58.1	+0.8
EDAD	**Golfito**	0.48	306	eP	Pb	03 58 47.8	-1.5
EDAD				eS	Sb	03 58 55.0	-1.3
VITO	**San Vito**	0.49	336	eP	Pb	03 58 49.5	+0.1
BQTLY	**Boquete Panama**	0.49	38	eP	Pb	03 58 49.8	+0.3
PSOM3	**Paja de Sombre**	0.54	55	eP	Pb	03 58 50.3	+0.1
PSOM3				eS	Sn	03 58 59.0	+0.2
ALCO	**Alturas Coton,**	0.58	354	eP	Pb	03 58 50.3	-0.6
EDP2	**Potrero Grande**	0.76	328	eP	Pb	03 58 53.2	-0.5
PBNVO	**Pueblo Nuevo,**	0.77	48	eP	Pb	03 58 53.4	-0.6
RBALA	**Bur**	0.79	50	eP	Pb	03 58 54.1	-0.2
RMDIO	**Remedios, Chir**	0.94	99	eP	Pb	03 58 56.5	-0.3
DRK0	**Durika**	1.00	332	eP	Pb	03 58 56.5	-1.5
DRK0	**Durika**	1.00	332	P	Pb	03 58 56.8	-1.2
DRK0	**Durika**	1.00	332	S	Sb	03 59 09.1	-1.9
DRK0	**Durika**	1.00	332	eP	Pb	03 58 57.0	-1.0
DRK0				eS	Sb	03 59 10.6	-0.4
KKNTU	**Kakintº**	1.06	64	eP	Pn	03 58 57.6	-0.2
PDCAN	**Manzana , Fuen**	1.06	94	eP	Pn	03 58 57.6	-0.3
EDPE	**Pejibaye, P**	1.11	315	eP	Pn	03 58 58.2	-0.4
OCHAL	**Ojochal**	1.13	310	P	Pb	03 59 00.0	0.0
OCHAL	**Ojochal**	1.13	310	S	Sb	03 59 13.7	-0.6
BRIBI	**Bribri**	1.24	358	eP	Pb	03 59 02.1	+0.2
GMAL	**Guarumal, Vera**	1.64	111	eP	Pn	03 59 05.5	-0.2
LCR2	**La Lucha 2**	1.83	318	eP	Pn	03 59 10.3	+1.7
LCR2	**La Lucha 2**	1.83	318	P	Pb	03 59 10.8	-1.2
LCR2	**La Lucha 2**	1.83	318	S	Sb	03 59 34.6	0.0
PISJ	**San Jernim**	1.83	313	eP	Pn	03 59 10.1	+1.5
ABE2	**San Pablo**	1.83	316	eP	Pn	03 59 10.5	+1.8
PICV	**PH. Pirrs**	1.88	312	eP	Pn	03 59 10.2	+1.1
PAR1A	**Puntarenas Pro**	1.91	310	eP	Pn	03 59 10.4	+1.0
TCS1	**Tacares**	2.25	318	P	Pb	03 59 19.9	+0.9
TCS1	**Tacares**	2.25	318	S	Sb	03 59 46.1	-0.4
SOCE	**Pocosol**	2.71	318	P	Pb	03 59 24.4	-2.5
SOCE	**Pocosol**	2.71	318	S	Sn	03 59 56.0	+3.7

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*FUNV **28** 04:09:21.5, 7°.16N×71°.86W, h5^{km}, MW3.3*

*RSNC **28** 04:09:22.0±0.0, 7°N±1°×7°2W±°, h-1^{km}±1^{km}, M2.5, ML2.3*

ISC 28 04:09:20.8±1.5, **7°.18N**±0°.03×**71°.84W**±0°.03, **h15**^{km}±11^{km}, **n30**, σ**1^{s}.92**/52, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAMC	**Tame, Arauca**	0.74	176	P	Pb	04 09 35.8	+0.3
TAMC				S	Sg	04 09 46.3	+1.2
CAPV	**Capacho**	0.83	325	eP	Pb	04 09 36.9	-0.2
CAPV				eS	Sg	04 09 48.9	+0.9
PAMC	**Pamplona, Colo**	0.87	281	P	Pb	04 09 35.6	-2.3
PAMC				S	Sb	04 09 46.5	-3.0
BARC	**Barichara**	1.46	246	P	Pn	04 09 47.3	+0.5
BARC				S	Sg	04 10 09.2	+1.3
SOCV	**Socops**	1.47	42	eP	Pn	04 09 48.2	+1.4
SOCV				eS	Sb	04 10 08.7	+2.3
RUSC	**La Rusia**	1.78	224	P	Pb	04 09 53.2	-0.2
RUSC				S	Sg	04 10 17.3	-0.9
OCAC	**Ocana**	1.81	306	P	Pn	04 09 52.8	+1.2
OCAC				S	Sb	04 10 16.8	+0.6
BRJC	**Barrancabermej**	1.90	264	P	Pb	04 09 54.4	-0.9
BRJC				S	Sb	04 10 19.7	+0.9
SDV	**Santo Domingo**	2.08	35	P	Pn	04 09 57.6	+2.3
SDV				S	Sb	04 10 25.3	+1.3
PTBC	**PUERTO BERRIO,**	2.67	256	P	Pn	04 10 03.5	+0.1
PTBC				S	Sb	04 10 42.1	+1.0
SPBC	**San Pablo de B**	2.69	236	P	Pn	04 10 05.2	+1.5
SPBC				S	Sg	04 10 44.4	-2.9
MCQV	**Machiques**	2.94	346	eP	Pn	04 10 08.2	+1.2
MCQV				eS	Sn	04 10 42.7	+0.7
ZARC	**Zaragoza, Cauc**	3.01	276	P	Pn	04 10 08.5	+0.5
ZARC				S	Sn	04 10 44.2	+0.3
CHIC	**Chingaza**	3.16	217	P	Pn	04 10 11.8	+1.4
CHIC				S	Sn	04 10 47.9	-0.1
NORC	**Norcasia**	3.41	242	P	Pn	04 10 15.9	+2.3
NORC				S	Sb	04 11 00.9	-1.5
VILC	**Villavicencio,**	3.56	211	P	Pn	04 10 16.3	+0.6
VILC				S	Sn	04 11 01.0	+3.3
UREC	**San Jos de Ur**	3.71	279	P	Pn	04 10 18.3	+0.7
UREC				S	Sn	04 10 57.8	-3.3
HELC	**Santa Helena**	3.79	255	P	Pn	04 10 16.8	-2.3
CRJC	**Cerrejon, Guaj**	3.95	345	P	Pn	04 10 21.5	+0.4
GUY2C	**Guyana, Caldas**	4.01	241	P	Pn	04 10 23.6	+1.4
GUY2C				S	Sn	04 11 11.0	+1.9
BAUV	**El Baul**	4.15	65	eP	Pn	04 10 23.9	+0.2
BAUV				eS	Sn	04 11 11.5	-0.4
SJCC	**San Jacinto, C**	4.27	309	P	Pn	04 10 26.4	+1.0
CBOC	**Ciudad Bolivar**	4.35	253	P	Pn	04 10 30.1	+3.5
PRAC	**Prado**	4.59	222	P	Pn	04 10 26.4	-3.4
PRAC				S	Sn	04 11 24.3	+1.4
ORTC	**Ortega, Tolima**	4.70	226	P	Pn	04 10 32.1	+0.9
ORTC				S	Sn	04 11 26.9	+1.4
PLMC	**San Jos del P**	4.96	243	P	Pn	04 10 37.9	+3.0
BENV	**Beln**	5.02	56	eP	Pn	04 10 36.2	+0.5
BENV				eS	Sn	04 11 32.3	-1.3
CACV	**CAICARA DEL OR**	5.27	85	eP	Pn	04 10 46.8	+7.7
CACV				eS	Sb	04 11 49.5	-6.3
TACV	**Tcata**	5.59	58	eP	Pn	04 10 44.2	+0.6
PCRV	**Puerto La Cruz**	7.72	67	eP	Pn	04 11 12.1	-0.7

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*IDC **28** 04:12:47.0±7.7, 33°.69N×25°.41E, h0^{km}, mb3.8/6, mbtmp3.7/7, ML4.2/1, Error ellipse: s-maj=146.0km s-min=42.4km az=28.0*

ISC 28 04:12:52.8±4.9, **33°.8N**±0°.5×**25°.5E**±0°.4, **h35**^{km}, **n7**, σ**0^{s}.28**/7, **mb3.7**/6, **Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKASG	**Malin Array Be**	17.12	8	P	Pn	04 16 49.2	0.0
	0.8nm,0.3s,baz=198,slow=11,SNR=4.3						
	0.1nm,0.2s						
HFS	**Hagfors**	27.46	347	P	P	04 18 35.6	+0.4
	1.2nm,0.8s,baz=165,slow=11,SNR=1.6						
	1.2nm,0.8s						
FINES	**FINESS Array B**	27.67	1	P	P	04 18 37.3	+0.2
	2.0nm,0.8s,baz=160,slow=11,SNR=8.6						
	2.0nm,0.8s						
NOA	**NORSAR Array B**	28.78	346	P	P	04 18 47.2	+0.2
	0.6nm,0.8s,baz=156,slow=8.0,SNR=1.7						
	0.6nm,0.8s						
ARCES	**ARCESS Array B**	35.79	0	P	P	04 19 48.0	-0.3
	2.2nm,0.8s,baz=176,slow=8.7,SNR=4.6						
	2.2nm,0.8s						
MKAR	**Makanchi Array**	44.34	55	P	P	04 20 59.4	-0.1
	0.2nm,0.6s,baz=266,slow=8.2,SNR=2.1						
	0.2nm,0.6s						
ZALV	**Zalesovo Beam**	45.78	45	P	P	04 21 10.9	+0.2
	1.0nm,0.4s,baz=286,slow=10,SNR=2.6						
	1.0nm,0.4s						

IDC 28 04:16:33.0±13.0, **17°.11S**×**175°.70W**, **h362**^{km}±65^{km}, **mb3.2**/3, **mbtmp4.0**/4, **Error ellipse: s-maj=323.0km s-min=33.6km az=139.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	6.00	263	P	Pn	04 18 04.4	0.0
	22nm,0.7s,baz=94,slow=15,SNR=9.7						
WRA	**Warramunga Arr**	47.32	258	P	P	04 24 32.7	+0.7
	0.3nm,0.4s,baz=93,slow=8.3,SNR=4.5						
	0.3nm,0.4s						
ASAR	**Alice Springs**	47.49	253	P	P	04 24 32.8	-0.6
	3.5nm,0.5s,baz=85,slow=8.3,SNR=42						
	3.5nm,0.5s						
ILAR	**Eielson Array**	84.55	12	P	P	04 28 25.7	-0.1
	0.3nm,0.5s,baz=217,slow=5.0,SNR=6.0						
	0.3nm,0.5s						

IDC 28 04:18:07.4±8.4, **22°.76S**×**147°.93E**, **h0**^{km}, **mbtmp3.0**/2, **ML2.8**/2, **Error ellipse: s-maj=77.3km s-min=63.8km az=5.0, Queensland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	12.93	263	Pn	Pn	04 21 13.7	+1.2
	0.1nm,0.3s,baz=86,slow=14,SNR=1.9						
ASAR				Lg	Lg	04 25 01.6	
	baz=81,slow=31						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	12.97	280	Pn	Pn	04 21 11.5	-1.6
	0.1nm,0.3s,baz=101,slow=13,SNR=1.7						
WRA				Lg	Lg	04 24 57.0	
	baz=108,slow=32						
	0.3nm,0.9s						
I22FR	**PORTLAGUERRE I**	17.50	92	I	I	06 06 10.0	
	baz=267,slow=311,SNR=1.2						

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*TXNET **28** 04:20:10.7, 31°.7N±0°.8×10°4W±°, h7^{km}±1^{km}, ML2.9/12, Error ellipse: s-maj=1.9km s-min=1.1km az=68.8, final*

*NEIC **28** 04:20:11.4±1.1, 31°.64N±0°.02×104°.28W±0°.06, h5^{km}±2^{km}, mb_Lg2.7/61, ML2.6/32, Error ellipse: s-maj=9.3km s-min=3.0km az=266.0*

ISC 28 04:20:11.0±0.9, **31°.66N**±0°.02×**104°.32W**±0°.03, **h10**^{km}±7^{km}, **n63**, σ**1^{s}.33**/69, **9C, Western Texas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPB09	**Culberson Coun**	0.12	6	⇑P	Pg	04 20 14.3	+0.3
TPB09				S	Sg	04 20 16.5	+0.3
TPB11	**China Draw**	0.37	41	⇑P	Pg	04 20 18.6	+0.2
TPB11				S	Sg	04 20 23.6	+0.3
TPB13	**Reeves - Culbe**	0.41	104	P	Pb	04 20 19.9	-0.6
TPB13				S	Sb	04 20 25.7	-1.2
PECS	**Pecos**	0.48	127		Pb	04 20 20.8	-0.9
PECS	**Pecos**	0.48	127	⇑P	Pb	04 20 20.7	-0.9
PECS				S	Sg	04 20 27.3	+0.6
TPB12	**Southwest of T**	0.54	145	⇑P	Pb	04 20 21.8	-0.8
TPB12				S	Sb	04 20 29.3	-1.1
TPB07	**Mentone**	0.56	98	P	Pb	04 20 22.6	-0.3
TPB07				S	Sb	04 20 30.7	-0.3
TPB10	**Southeast of T**	0.61	128	P	Pb	04 20 23.2	-0.6
TPB10				S	Sb	04 20 31.7	-0.7
CLNB	**Carlsbad**	0.71	31	P	Pg	04 20 25.2	+0.3
CLNB				S	Sb	04 20 35.3	-0.1
PCOS	**Crockett Middl**	0.73	109	P	Pb	04 20 26.5	+0.7
PCOS				S	Sb	04 20 35.9	-0.1
TPB01	**Permian Basin**	0.84	147	⇑P	Pg	04 20 27.0	-0.4
TPB01				S	Sg	04 20 37.8	-0.6
CLN7	**Carlsbad 7**	0.87	30		Pg	04 20 27.7	-0.1
CLN7	**Carlsbad 7**	0.87	30	P	Pg	04 20 27.7	-0.1
TPB03	**Saragosa**	0.89	130	⇑P	Pb	04 20 28.5	-0.2
TPB03				S	Sb	04 20 40.4	-0.2
MNTX	**Cornudas Mount**	0.91	273		Pb	04 20 28.6	-0.3
MNTX				IAML		04 20 42.4	
	65nm,0.4s						
TPB06	**Permian Basin**	0.94	90	S	Sb	04 20 42.5	+0.6
HTMS	**Hat Mesa**	1.00	35		Pg	04 20 30.2	-0.1
HTMS	**Hat Mesa**	1.00	35	P	Pb	04 20 30.8	+0.3
VHRN	**Van Horn**	1.04	214		Pb	04 20 30.9	-0.3
VHRN				IAML		04 20 50.9	
	161nm,0.6s						
VHRN				IAML		04 20 50.9	
	203nm,0.4s						
VHRN	**Van Horn**	1.04	214	⇑P	Pg	04 20 30.7	-0.4
VHRN				S	Sb	04 20 44.7	-0.2
TPB16	**Coyonosa**	1.05	120	P	Pb	04 20 31.5	+0.1
TPB16				S	Sb	04 20 45.5	+0.2
TPB05	**Hovey Rd**	1.12	131	⇑P	Pg	04 20 32.3	-0.3
TPB05				S	Sb	04 20 47.2	0.0
MNHN	**Monahans**	1.36	103		Pn	04 20 36.3	+0.2
MNHN	**Monahans**	1.36	103	P	Pn	04 20 36.4	+0.2
MNHN				S	Sn	04 20 54.9	+0.6
ALPN	**Alpine**	1.40	155		Pn	04 20 36.5	-0.3
ALPN	**Alpine**	1.40	155	⇑P	Pn	04 20 36.6	-0.3
ALPN				S	Sb	04 20 54.8	-0.6
CPRX	**Cap Rock**	1.42	15		Pn	04 20 37.5	+0.4
CPRX	**Cap Rock**	1.42	15	P	Pb	04 20 37.7	0.0
ODSA	**Odessa**	1.57	72		Pb	04 20 40.1	-0.1
ODSA	**Odessa**	1.57	72	P	Pb	04 20 40.2	-0.1
ODSA				S	Sb	04 21 00.6	+0.3
TMB04	**Seminole**	1.83	58	P	Pb	04 20 44.3	-0.3
TMB04				S	Sg	04 21 09.1	-0.7
TMB02	**Rankin**	2.00	103	P	Pb	04 20 47.3	-0.3
TX31	**Lajitas Ar. Si**	2.38	166		Pn	04 20 52.0	+1.8
TX31	**Lajitas Ar. Si**	2.38	166	P	Pn	04 20 52.0	+1.8
TX31				Pg	Pb	04 20 53.9	-0.1
TXAR	**Lajitas Array**	2.38	166		Pn	04 20 51.9	+1.7
MSTX	**Muleshoe**	2.65	29		Pn	04 20 56.4	+2.5
MSTX	**Muleshoe**	2.65	29	S	Sb	04 21 29.3	-1.9
MSTX				Sg	Sg	04 21 33.0	-3.2
SGCY	**Sterling City**	2.73	84	IAmb_Lg		04 21 40.3	
	comp=Z,29nm,0.9s						
SGCY	**Sterling City**	2.73	84	P	Pn	04 20 57.1	+2.1
POST	**Post**	2.77	59	IAmb_Lg		04 21 36.3	
	comp=Z,28nm,1.0s						
OZNA	**Ozona**	2.83	104		Pn	04 20 58.3	+2.0
CRNM	**Carthage**	3.06	319		Pb	04 21 02.9	-2.9
SN05	**Snyder 5**	3.15	66		Pb	04 21 04.8	-2.4
BNM	**Barren Site**	3.16	323		Pb	04 21 04.5	-2.9
SN07	**Snyder 07**	3.23	63	IAmb_Lg		04 21 58.8	
	comp=Z,20nm,0.8s						
SBM	**South Baldy**	3.34	315		Pn	04 21 06.8	+3.1
LENM	**Lemitar**	3.36	319		Pn	04 21 06.6	+2.9
DKNS	**Dickens**	3.49	54		Pb	04 21 10.0	-3.0
DKNS				IAmb_Lg		04 22 03.4	
	comp=Z,20nm,0.8s						
ANMO	**Albuquerque**	3.74	332		Pn	04 21 11.3	+2.3
ANMO				IAML		04 22 06.4	
	comp=Z,13nm,0.7s						
DRIO	**Del Rio**	3.89	124	IAmb_Lg		04 22 21.5	
	comp=Z,22nm,0.8s						
APMT	**Aspermont**	3.92	64		Pn	04 21 12.8	+1.5
APMT				IAmb_Lg		04 22 24.6	
	comp=Z,22nm,0.7s						
JCT	**Junction City**	4.05	106	IAmb_Lg		04 22 24.1	
	comp=Z,18nm,0.8s						
BRDY	**Brady**	4.56	93		Pn	04 21 21.4	+1.4
RTBA	**Rita Blanca**	4.95	15		Pn	04 21 28.3	+2.8
RTBA				IAmb_Lg		04 22 52.2	
	comp=Z,11nm,0.7s						

FW03	**Perrin-Whitt E**	**5.47**	**74**	IAmb_Lg		04 23 14.8	
	comp=Z,9.7nm,0.7s						
FW07	**Weatherford**	**5.63**	**78**	IAmb_Lg		04 23 14.1	
	comp=Z,12nm,1.1s						
435B	**Jarrell**	**5.83**	**97**	IAmb_Lg		04 23 23.2	
	comp=Z,14nm,0.8s						
ELIS	**Ellis County**	**5.99**	**41**	IAmb_Lg		04 23 29.3	
	comp=Z,13nm,1.0s						
FW14	**Alvarado**	**6.09**	**81**	IAmb_Lg		04 23 31.6	
	comp=Z,10nm,0.7s						
X34A	**Smith Ranch, M**	**6.18**	**60**	IAmb_Lg		04 23 36.2	
	comp=Z,9.4nm,0.8s						
FNO	**Franklin**	**6.80**	**56**	IAmb_Lg		04 23 51.3	
	comp=Z,11nm,0.8s						
237A	**Washetta, Mont**	**7.25**	**85**	IAmb_Lg		04 24 13.4	
	comp=Z,8.8nm,0.8s						
KSCO	**Kaye Shedlock'**	**7.47**	**10**	IAmb_Lg		04 24 14.1	
	comp=Z,9.4nm,0.8s						

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*MOS **28** 04:30:32.4±1.0, 29°.98N×142°.85E, h10^{km}, mb4.6/16, Error ellipse: s-maj=17.6km s-min=7.6km az=121.6*

*BJI **28** 04:30:32.6, 29°.95N×142°.98E, h17^{km}, mB4.7/8, mb4.5/30, Ms4.0/4, Ms7 3.7/2*

*IDC **28** 04:30:32.3±0.7, 29°.96N×142°.93E, h0^{km}, mb4.1/16, mbtmp4.1/18, ML3.5/2, MS2.9/3, Error ellipse: s-maj=22.4km s-min=17.7km az=65.0*

*NEIC **28** 04:30:34.1±2.3, 29°.97N±0°.07×143°.0E±0°.1, h10^{km}±1^{km}, mb4.7/14, Error ellipse: s-maj=21.5km s-min=11.8km az=79.0*

*JMA **28** 04:30:36.2±0.2, 29°.9N±0°.9×14°2E±°, h52^{km}, MV4.2/15, NEAR TORISHIMA IS*

ISC 28 04:30:34.2±0.6**, 29°.99N**±0°.05×**142°.84E**±0°.09**, h10**^{km}**, n86,** σ**1**^{s}**.44**/87**, mb4.4**/34**, MS3.8**/3**, 10C-5D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.94**	**191**	*e*P	**Pn**	**04 31 20.3**	**-0.7**
JCJ	**Chichijima**	**2.94**	**191**		**Pn**	**04 31 19.4**	**-1.5**
JCJ	**Chichijima**	**2.94**	**191**	Pn	**Pn**	**04 31 18.9**	**-2.0**
	baz=180,slow=0.0						
JCJ				Sn	**Sn**	**04 31 52.4**	**-4.0**
	baz=180,slow=0.0						
JHJ2	**Mitsune**	**4.04**	**321**	Pn	**Pn**	**04 31 35.2**	**-0.8**
JHJ2	**Mitsune**	**4.04**	**321**	*e*P	**Pn**	**04 31 33.2**	**-2.9**
BSO1	**Boso 1**	**4.91**	**342**	*e*P	**Pn**	**04 31 45.6**	**-1.9**
BSO3	**Boso 3**	**5.18**	**338**	*e*P	**Pn**	**04 31 51.4**	**-0.2**
BSO3				*e*S	**Sn**	**04 32 48.3**	**-3.0**
BSO4	**Boso 4**	**5.41**	**338**	*e*P	**Pn**	**04 31 54.5**	**-0.4**
JOD2	**Odawara 2**	**6.13**	**330**	*e*P	**Pn**	**04 32 04.0**	**-0.9**
JRY	**Ryogami san**	**6.86**	**332**	*e*P	**Pn**	**04 32 14.1**	**-0.7**
JHO	**Hitachi**	**6.87**	**345**	*e*P	**Pn**	**04 32 12.4**	**-2.6**
JGF	**Kuroka**	**7.25**	**322**		**Pn**	**04 32 20.8**	**+0.6**
MJAR	**Matsushiro Arr**	**7.59**	**331**	Pn	**Pn**	**04 32 24.3**	**-0.6**
	0.5nm,0.3s,baz=156,slow=11,SNR=35						
MJAR				Sn	**Sn**	**04 33 45.6**	**-5.5**
	0.3nm,0.3s,baz=154,slow=17,SNR=7.0						
MJAR				LR	LR	04 35 03.5	
	comp=Z,29nm,20.1s,baz=244,slow=35 12nm,0.7s						
MAJO	**Matsushiro**	**7.60**	**331**		**Pn**	**04 32 24.7**	**-0.2**
MAJO	**Matsushiro**	**7.60**	**331**	P	**Pn**	**04 32 24.7**	**-0.2**
MJB9	**Matsu-Tunnel**	**7.60**	**331**		**Pn**	**04 32 25.0**	**0.0**
JMM	**Marumori**	**8.04**	**348**		**Pn**	**04 32 27.3**	**-3.6**
JOW	**Kunigami**	**13.20**	**260**	LR	LR	04 38 03.5	
	comp=Z,72nm,20.2s,baz=86,slow=34						
KSRS	**Korea Array**	**14.46**	**305**	Pn	**Pn**	**04 33 59.2**	**+0.3**
	0.2nm,0.3s,baz=114,slow=13,SNR=22 4.7nm,0.7s						
MDJ	**Mudanjiang**	**17.97**	**328**	P	**P**	**04 34 45.3**	**+0.8**
MDJ				pmax	pmax		
	comp=Z,11nm,1.0s						
BNX	**BinXian**	**19.83**	**327**	⇑P	**P**	**04 35 05.0**	**0.0**
BNX				pmax	pmax		
	comp=Z,11nm,0.8s						
YULB	**Yu-li**	**20.32**	**256**		**P**	**04 35 10.9**	**+0.4**
YULB				IAmb	IAmb	04 35 18.0	
	comp=Z,21nm,0.6s						
SSLB	**Suanglung**	**20.46**	**258**		**P**	**04 35 12.9**	**+0.9**
SSLB				IAmb	IAmb	04 35 18.3	
	comp=Z,27nm,0.6s						
TPUB	**Ta-pu**	**20.92**	**257**	P	**P**	**04 35 18.4**	**+1.4**
TPUB				IAmb	IAmb	04 35 24.2	
	comp=Z,21nm,0.6s						
KLR	**Kul'dur**	**20.98**	**339**	P	**P**	**04 35 18.2**	**+0.7**
	comp=Z,2.3nm,0.6s,baz=147,slow=9.8,SNR=6.0 comp=Z,2.3nm,0.6s						
KLR	**Kul'dur**	**20.98**	**339**	⇑*e*P	**P**	**04 35 18.4**	**+0.9**
KLR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
LYN	**LuoYang**	**26.02**	**288**	P	**P**	**04 36 06.5**	**-1.0**
LYN				pP	sP	04 36 11.8	+3.3
LYN				sP	pwP	04 36 15.8	-2.6
LYN				pmax	pmax		
	comp=Z,17nm,1.2s						
LYN				LR	LR		
	comp=Z,140nm,13.7s						
LYN				LR	LR		
	comp=Z,160nm,11.0s						
LYN				LR	LR		
	comp=Z,200nm,15.1s						
ZEA	**Zeya**	**26.30**	**339**	*e*P	P	04 36 18.9	+9.2
ZEA				pmax	pmax		
	comp=N,20nm,0.5s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.4s						
HHC	**Hu-ho-hao-te**	**27.56**	**302**	*e*P	**P**	**04 36 22.5**	**+1.1**
HHC				pmax	pmax		
	comp=Z,18nm,0.6s						
HHC				pmax	pmax		
	comp=Z,75nm,5.2s						
XAN	**Xi'an**	**28.96**	**287**	⇓P	**P**	**04 36 33.8**	**-0.1**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ULN	**Ulaanbaatar**	**32.69**	**313**	*ce*P	**P**	**04 37 08.9**	**+2.1**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SONM	**Songino Array**	**33.10**	**313**	P	**P**	**04 37 11.9**	**+1.6**
	comp=Z,2.6nm,0.6s,baz=117,slow=7.6,SNR=6.6 comp=Z,2.6nm,0.6s						
SEY	**Seymchan**	**33.53**	**8**	⇑*e*P	**P**	**04 37 14.4**	**+0.7**
SEY				pmax	pmax		
	comp=Z,6.0nm,1.8s						
PZH	**PanZhiHua**	**36.23**	**275**	P	**P**	**04 37 39.5**	**+1.9**
BILL	**Bilibino**	**40.52**	**13**	⇓*e*P	**P**	**04 38 14.0**	**+1.0**
BILL				pmax	pmax		
	comp=Z,8.0nm,1.9s						
CMAR	**Chiang Mai Arr**	**41.41**	**264**	LR	LR	04 55 56.5	
	comp=Z,27nm,18.1s,baz=175,slow=37						
CMAR	**Chiang Mai Arr**	**41.41**	**264**	*i* P	**P**	**04 38 18.7**	**-2.3**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZALV	**Zalesovo Beam**	**47.72**	**317**	P	**P**	**04 39 11.0**	**+0.1**
	comp=Z,0.9nm,0.4s,baz=76,slow=7.6,SNR=4.1						
ZALV				PcP	**PcP**	**04 40 40.1**	**0.0**
	comp=Z,1.5nm,0.7s,baz=92,slow=3.4,SNR=4.5 comp=Z,0.9nm,0.4s						
MK31	**Makanchi Array**	**49.12**	**308**	*ce*P	**P**	**04 39 23.0**	**+1.1**
MKAR	**Makanchi Array**	**49.12**	**308**	P	**P**	**04 39 22.7**	**+0.8**
	comp=Z,3.2nm,0.8s,baz=87,slow=9.3,SNR=24 comp=Z,3.2nm,0.8s						
WRAB	**Tennant Creek**	**50.30**	**190**	⇑*e*P	**P**	**04 39 30.9**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,34nm,3.8s						
WRA	**Warramunga Arr**	**50.31**	**190**	P	**P**	**04 39 30.5**	**-0.7**
	comp=Z,2.0nm,0.5s,baz=9.9,slow=8.2,SNR=18 comp=Z,2.0nm,0.5s						
KURK	**Kurchatov**	**51.41**	**313**	P	**P**	**04 39 39.5**	**+0.4**
KURBB	**Kurchatov Arra**	**51.47**	**313**	P	**P**	**04 39 39.5**	**-0.1**
	comp=Z,2.3nm,0.5s,baz=90,slow=9.0,SNR=20 comp=Z,2.3nm,0.5s						
D20K	**Etivluk River**	**51.78**	**24**	P	**P**	**04 39 41.6**	**-0.1**
E21K	**Killik River**	**52.65**	**25**	P	**P**	**04 39 48.4**	**+0.2**
TARG	**Taragay, Kyrgy**	**52.85**	**302**		**P**	**04 39 51.9**	**+1.4**
TARG				IAmb	IAmb	04 39 54.6	
	comp=Z,7.0nm,1.0s						
TARG	**Taragay, Kyrgy**	**52.85**	**302**	P	**P**	**04 39 51.9**	**+1.4**
TARG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
G23K	**Bananza Creek**	**53.82**	**27**	P	**P**	**04 39 55.4**	**-1.4**
KSH	**Kashi**	**54.63**	**299**	P	**P**	**04 40 08.0**	**+4.8**
KSH				pmax	pmax		
	comp=Z,15nm,0.6s						
ILAR	**Eielson Array**	**54.91**	**30**	P	**P**	**04 40 03.9**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=264,slow=6.4,SNR=6.9 comp=Z,0.5nm,0.7s						
BVAR	**Borovoye Array**	**56.33**	**316**	P	**P**	**04 40 15.5**	**+0.3**
	comp=Z,4.2nm,0.5s,baz=96,slow=9.2,SNR=14 comp=Z,4.2nm,0.5s						
BRVK	**Borovoye**	**56.39**	**316**	⇓*e*P	**P**	**04 40 16.2**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KK31	**Karatay Array**	**57.89**	**305**		**P**	**04 40 27.4**	**+1.1**
KK31				IAmb	IAmb	04 40 28.2	
	comp=Z,4.0nm,0.8s						
KK31	**Karatay Array**	**57.89**	**305**	P	**P**	**04 40 27.5**	**+1.1**
KK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KKAR	**Karatay Array**	**57.89**	**305**	P	**P**	**04 40 27.7**	**+1.3**
KKAR	**Karatay Array**	**57.89**	**305**	P	**P**	**04 40 27.7**	**+1.3**
NIL	**Nilore**	**58.22**	**293**	P	**P**	**04 40 29.7**	**+0.9**
NIL	**Nilore**	**58.22**	**293**	P	**P**	**04 40 29.7**	**+0.9**
NIL				pmax	pmax		
	comp=Z,11nm,0.7s						
L29M	**L29M**	**58.80**	**31**	P	**P**	**04 40 32.9**	**+0.5**
L29M				IAmb	IAmb	04 40 35.0	
	comp=Z,2.7nm,0.8s						
GAR	**Garm**	**59.02**	**300**		**P**	**04 40 34.4**	**0.0**
SIMJ	**Simiganj**	**60.09**	**300**		**P**	**04 40 40.5**	**-1.3**
SIMJ				IAmb	IAmb	04 40 44.7	
	comp=Z,7.4nm,0.8s						
ARTI	**Arti**	**62.61**	**321**	*c i*P	**P**	**04 40 58.1**	**-0.3**
ARTI						04 41 36.2	
ARTI						04 43 12.5	
ARTI				S	**S**	**04 49 25.2**	**-1.1**
ARTI				pmax	pmax		
	comp=Z,12nm,2.6s						
ABKAR	**Akbulak array**	**63.51**	**313**		**P**	**04 41 04.9**	**+0.4**
ABKAR				IAmb	IAmb	04 41 09.7	
	comp=Z,4.6nm,0.6s						
ABKAR	**Akbulak array**	**63.51**	**313**		**P**	**04 41 04.0**	**-0.5**
KIRV	**Kirov**	**66.64**	**325**	⇓*e*P	**P**	**04 41 23.8**	**-0.8**
YKA	**Yellowknife Ar**	**69.34**	**29**	P	**P**	**04 41 40.9**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=301,slow=7.0,SNR=6.1 comp=Z,0.6nm,0.7s						
YKA	**Yellowknife Ar**	**69.34**	**29**	*i* P	**P**	**04 41 41.7**	**+0.2**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BELG	**Belogornoye**	**69.84**	**319**	⇑*e*P	**P**	**04 41 45.3**	**+0.5**
BELG				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AKT	**Akhty**	**74.33**	**309**	*e*P	**P**	**04 42 11.7**	**-0.4**
AKT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
FINES	**FINESS Array B**	**75.61**	**334**	P	**P**	**04 42 18.7**	**-0.3**
	comp=Z,2.5nm,0.8s,baz=68,slow=6.6,SNR=4.6 comp=Z,2.5nm,0.8s						
FINES	**FINESS Array B**	**75.61**	**334**	*i* P	**P**	**04 42 19.5**	**+0.5**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KBZ	**Khabaz**	**76.47**	**313**	P	**P**	**04 42 24.7**	**+0.5**
	comp=Z,4.0nm,0.7s,baz=99,slow=4.8,SNR=11 comp=Z,4.0nm,0.7s						
KBZ	**Khabaz**	**76.47**	**313**	*c i*P	**P**	**04 42 25.2**	**+1.0**
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KIV	**Kislovodsk**	**76.49**	**313**	*e*P	**P**	**04 42 26.4**	**+1.9**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NVAR	**Mina Array Bea**	**78.29**	**52**	P	**P**	**04 42 35.0**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=296,slow=7.5,SNR=5.6 comp=Z,0.8nm,0.7s						
PPT	**Papeete**	**80.42**	**117**	LR	LR	05 16 07.4	
	comp=Z,196nm,18.6s,baz=113,slow=34						
AKASG	**Malin Array Be**	**80.63**	**324**	P	**P**	**04 42 46.4**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=48,slow=6.4,SNR=6.0 comp=Z,0.3nm,0.4s						
AKASG	**Malin Array Be**	**80.63**	**324**	*ce*P	**P**	**04 42 47.2**	**+0.2**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NB2	**NORSAR Subarra**	**81.14**	**338**	P	**P**	**04 42 49.3**	**-0.3**
	comp=Z,2.0nm,0.8s,baz=44,slow=4.8						
NOA	**NORSAR Array B**	**81.14**	**338**	P	**P**	**04 42 49.5**	**-0.2**
	comp=Z,1.0nm,0.8s,baz=40,slow=5.1,SNR=5.1 comp=Z,1.0nm,0.8s						
BR131	**Keskin Array S**	**84.46**	**313**	⇓*i*P	**P**	**04 43 08.4**	**+1.0**
BRTR	**Keskin Array B**	**84.46**	**313**		**P**	**04 43 06.5**	**-1.0**
BRTR	**Keskin Array B**	**84.46**	**313**	P	**P**	**04 43 07.8**	**+0.4**
	comp=Z,1.7nm,0.7s,baz=109,slow=3.7,SNR=12 comp=Z,1.7nm,0.7s						
TXAR	**Lajitas Array**	**93.42**	**53**	P	**P**	**04 43 49.8**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=318,slow=1.7,SNR=4.9 comp=Z,0.4nm,0.8s						
PLCA	**Paso Flores**	**150.90**	**121**	PKPbc	**PKiKP**	**04 50 28.2**	**+0.5**
	comp=Z,2.9nm,1.0s,baz=203,slow=2.2,SNR=3.4						

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*ISN **28** 04:35:18.2±1.1, 36°.96N×44°.45E, h10^{km}, ML2.6*

*TEH **28** 04:35:20.0, 36°.80N×44°.57E, h10^{km}*

ISC 28 04:35:20.2±1.7**, 36°.83N**±0°.08×**44°.5E**±0°.1**, h10**^{km}**, n6,** σ**1**^{s}**.07**/7**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAHB	**Mahabad**	**0.95**	**93**	Pg	**Pg**	**04 35 37.3**	**-1.2**
IKRK	**Kirkuk**	**1.43**	**186**	*e*Pn	**Pg**	**04 35 47.0**	**-0.7**
	baz=3.0						
IKRK				*e*Sn	**Sg**	**04 36 06.0**	**-0.3**
IKRK				AML	AML	04 36 18.2	
	comp=N,12nm,0.9s						
IAZR	**Azarshahr**	**1.44**	**54**	Pg	**Pg**	**04 35 47.7**	**-0.1**
ISHB	**Shabestar**	**1.69**	**31**	Pg	**Pb**	**04 35 50.8**	**-0.7**
IHRS	**Heris**	**2.50**	**53**	Pn	**Pb**	**04 36 05.7**	**+0.5**
IDHR	**Dehrash**	**2.61**	**144**	Pn	**Pn**	**04 36 03.9**	**+1.3**

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*IDC **28** 04:38:33.8±1.3, 30°.47S×177°.43W, h0^{km}, mb4.1/5, mbtmp4.1/5, Error ellipse: s-maj=33.7km s-min=20.3km az=82.0*

ISC 28 04:38:38.0±1.0**, 30°.57S**±0°.07×**177°.5W**±0°.2**, h33**^{km}**, n13,** σ**1**^{s}**.50**/15**, mb4.2**/7**, 3C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.36**	**346**	Pn	**Pn**	**04 38 58.8**	**-1.8**
	276nm,0.3s,baz=136,slow=3.5,SNR=8.2						
RAO				Sn	**Sb**	**04 39 19.5**	**-0.4**
	433nm,0.3s,baz=284,slow=23,SNR=5.7						
URZ	**Urewera**	**8.85**	**209**	Pn	**Pn**	**04 40 40.9**	**-2.7**
	0.6nm,0.3s,baz=120,slow=13,SNR=1.5						
URZ				Sn	**Sn**	**04 42 20.8**	**-1.3**
	2.1nm,0.3s,baz=164,slow=21,SNR=9.0						
STKA	**Stephens Creek**	**34.83**	**257**	P	**P**	**04 45 28.2**	**+2.2**
	1.9nm,0.3s,baz=111,slow=6.7,SNR=7.0 1.9nm,0.3s						
ASAR	**Alice Springs**	**43.50**	**267**	P	**P**	**04 46 39.2**	**+0.7**
	0.9nm,0.8s,baz=100,slow=7.7,SNR=7.1 0.9nm,0.8s						
WRA	**Warramunga Arr**	**44.50**	**272**	P	**P**	**04 46 47.2**	**+0.6**
	5.2nm,0.8s,baz=111,slow=8.0,SNR=32 5.2nm,0.8s						
FITZ	**Fitzroy Crossi**	**52.76**	**270**	P	**P**	**04 47 52.3**	**+2.2**
	1.3nm,0.7s,baz=135,slow=11,SNR=1.5 1.3nm,0.7s						
QSPA	**South Pole Qui**	**59.54**	**180**	P	**P**	**04 48 39.9**	**+1.9**
	0.8nm,0.5s,baz=80,slow=2.9,SNR=8.0 0.8nm,0.5s						
TROLL	**Troll, Antarti**	**77.70**	**180**	⇑P	**P**	**04 50 31.0**	**-0.1**
	comp=Z,105nm,0.8s						
VNA3	**Neumayer Olymp**	**78.11**	**176**	⇑P	**P**	**04 50 33.5**	**+0.3**
	comp=Z,1.9nm,0.7s						
VNA2	**Neumayer--Watz**	**78.55**	**177**	⇑P	**P**	**04 50 35.3**	**-0.4**
	comp=Z,2.0nm,0.6s,baz=167,slow=3.7						
FINES	**FINESS Array B**	**145.44**	**340**	PKPbc	**PKPdf**	**04 58 11.4**	**-0.4**
	comp=Z,3.1nm,0.7s,baz=65,slow=3.2,SNR=9.9						
NOA	**NORSAR Array B**	**148.98**	**352**	PKPbc	**PKiKP**	**04 58 23.1**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=14,slow=2.7,SNR=1.1						
AKASG	**Malin Array Be**	**151.68**	**323**	PKPbc	**PKiKP**	**04 58 28.6**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=53,slow=2.0,SNR=2.9						

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*MDD **28** 04:43:29.8±0.7, 35°.48N×3°.85W, h1^{km}, mb_Lg2.1/8, Error ellipse: s-maj=6.2km s-min=3.1km az=28.0*

*CNRM **28** 04:43:30.4, 35°.50N×3°.78W, h17^{km}, ML2.1*

*SFS **28** 04:43:32.8, 35°.49N×3°.73W, h25^{km}, ML2.5/6, ML2.1/7, MLv2.0/7*

ISC 28 04:43:30.3±1.0**, 35°.49N**±0°.02×**3°.80W**±0°.03**, h17**^{km}±8^{km}**, n27,** σ**0**^{s}**.61**/39**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.30**	**203**	P	**Pg**	**04 43 36.8**	**0.0**
PALE	**Palemas**	**0.30**	**203**	S	**Sg**	**04 43 41.6**	**+0.5**
GOG	**Mont Gurugu**	**0.71**	**112**	P	**Pg**	**04 43 43.9**	**-0.3**
GOG	**Mont Gurugu**	**0.71**	**112**	S	**Sb**	**04 43 54.0**	**+0.3**
WMELI	**Melilla**	**0.71**	**104**	Pg	**Pn**	**04 43 45.0**	**-0.6**
WMELI				Sg	**Sb**	**04 43 53.8**	**+0.1**
EMEL	**Melilla**	**0.71**	**105**	P	**Pg**	**04 43 44.0**	**-0.3**
EMEL				S	**Sg**	**04 43 53.0**	**-0.7**
EMLI	**Melilla**	**0.72**	**105**	Pg	**Pn**	**04 43 45.3**	**-0.3**
EMLI				Sg	**Sb**	**04 43 54.1**	**+0.3**
EALB	**Alboran**	**0.77**	**54**	Sg	**Sg**	**04 43 56.0**	**+0.6**
EALB				Pg	**Pg**	**04 43 45.6**	**+0.3**
EALB	**Alboran**	**0.77**	**54**	P	**Pb**	**04 43 45.0**	**-0.1**
EALB				S	**Sb**	**04 43 55.1**	**-0.2**
EALB				*i* IVmb_Lg		04 43 57.8	
AKLM	**AKL**	**0.98**	**183**	P	**Pb**	**04 43 49.1**	**+0.3**
AKLM	**AKL**	**0.98**	**183**	S	**Sb**	**04 44 01.0**	**-0.5**
TAF	**Taforalt**	**1.32**	**120**	P	**Pn**	**04 43 53.7**	**-0.3**
TAF	**Taforalt**	**1.32**	**120**	S	**Sg**	**04 44 12.4**	**-0.6**
CHEFC	**Chefchaouen**	**1.32**	**254**	P	**Pb**	**04 43 54.8**	**+0.1**
EMIJ	**Mijas**	**1.33**	**324**	Sn	**Sn**	**04 44 10.5**	**-1.0**
EMIJ				Pn	**Pg**	**04 43 55.9**	**-0.2**
EMIJ	**Mijas**	**1.33**	**324**	P	**Pn**	**04 43 53.0**	**-1.2**
EMIJ				S	**Sn**	**04 44 11.3**	**-0.2**
EMIJ				*i* IVmb_Lg		04 44 16.1	
ECEU	**Ceuta**	**1.35**	**288**	Pn	**Pb**	**04 43 55.5**	**+0.3**
ECEU	**Ceuta**	**1.35**	**288**	P	**Pn**	**04 43 54.0**	**-0.4**
ECEU				S	**Sn**	**04 44 11.2**	**-0.7**
ECEU				*i* IVmb_Lg		04 44 19.2	
EMAL	**Malaga-Limoner**	**1.37**	**338**	Sn	**Sn**	**04 44 12.5**	**+0.1**
ELGU	**Los Guajares,**	**1.38**	**6**	Pn	**Pg**	**04 43 56.7**	**-0.3**
ELGU				Sn	**Sn**	**04 44 12.2**	**-0.6**
ELGU	**Los Guajares,**	**1.38**	**6**	P	**Pn**	**04 43 54.9**	**0.0**
ELGU				S	**Sb**	**04 44 13.8**	**+0.6**
ELGU				*i* IVmb_Lg		04 44 16.1	
EQES	**Quesada**	**2.38**	**14**	P	**Pn**	**04 44 08.6**	**-0.1**
EQES				S	**Sn**	**04 44 38.9**	**+1.4**
EQES				*i* IVmb_Lg		04 44 43.2	
MD31	**MD31**	**2.73**	**197**	P	**Pn**	**04 44 13.9**	**+0.4**
MD31	**MD31**	**2.73**	**197**	S	**Sn**	**04 44 46.8**	**+0.6**
EADA	**Adamuz**	**2.75**	**347**	S	**Sn**	**04 44 48.2**	**+1.8**
EADA				*i* IVmb_Lg		04 44 55.5	
MDT	**Midelt**	**2.75**	**194**	P	**Pn**	**04 44 13.7**	**-0.1**
ECAB	**El Cabril**	**2.89**	**334**	P	**Pn**	**04 44 15.6**	**0.0**
ECAB				S	**Sn**	**04 44 49.9**	**-0.1**
ECAB				*i* IVmb_Lg		04 44 55.8	

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*JMA **28** 05:04:34.7±0.2, 33°N±2°×13°7E±°, h437^{km}, MV3.4/31, FAR S OFF TOKAI DISTRICT*

*IDC **28** 05:04:37.3±1.3, 32°.60N×137°.17E, h396^{km}±11^{km}, mb3.1/13, mbtmp3.8/16, Error ellipse: s-maj=17.0km s-min=13.8km az=141.0*

ISC 28 05:04:37.5±0.7**, 32°.65N**±0°.09×**137°.28E**±0°.06**, h394**^{km}**, n36,** σ**1**^{s}**.73**/44**, mb3.4**/13**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTO1	**TONANKAI O.B.S**	**1.05**	**337**	P	**Pn**	**05 05 30.7**	**+3.0**
TTO2	**TONANKAI O.B.S**	**1.10**	**349**	P	**Pn**	**05 05 31.0**	**+3.2**
TTO3	**TONANKAI O.B.S**	**1.21**	**5**	*e*P	**Pn**	**05 05 31.7**	**+3.2**
TTO4	**TONANKAI O.B.S**	**1.37**	**9**	*e*P	**Pn**	**05 05 32.1**	**+3.0**
JIE	**Ise**	**1.80**	**345**	P	**Pn**	**05 05 33.9**	**+2.2**
JTNC	**Tanabenakahech**	**1.82**	**310**	P	**Pn**	**05 05 33.5**	**+1.7**
JWY	**Kouya**	**2.11**	**318**	*e*P	**Pn**	**05 05 35.7**	**+2.0**
JHJ2	**Mitsune**	**2.18**	**77**	*e*P	**Pn**	**05 05 35.8**	**+1.7**
JHJ2				*e*S	**S**	**05 06 22.6**	**+2.9**
JAI	**Aioi**	**2.63**	**296**	P	**Pn**	**05 05 39.1**	**+1.8**
JYTA	**Yamagatataniai**	**2.97**	**351**	*e*P	**Pn**	**05 05 42.1**	**+2.2**
JOD2	**Odawara 2**	**3.01**	**29**	*e*P	**Pn**	**05 05 42.0**	**+1.8**
JOD2				*e*S	**S**	**05 06 33.4**	**+2.3**
JYN	**Shimob**	**3.03**	**20**	*e*P	**Pn**	**05 05 42.8**	**+2.3**
JMN	**Monobe**	**3.05**	**292**	P	**Pn**	**05 05 42.6**	**+1.9**
JWT	**Wachi**	**3.06**	**330**	P	**Pn**	**05 05 42.5**	**+1.9**
JWT				*e*S	**S**	**05 06 33.0**	**+1.2**
JRY	**Ryogami san**	**3.62**	**21**	*e*P	**Pn**	**05 05 47.1**	**+1.6**
JRY				*e*S	**S**	**05 06 40.8**	**0.0**
BSO1	**Boso 1**	**3.67**	**56**	*e*P	**Pn**	**05 05 45.0**	**-0.5**
BSO1				*e*S	**S**	**05 06 39.4**	**-1.2**
JTO	**Tosashimizu**	**3.78**	**274**	*e*P	**Pn**	**05 05 48.5**	**+1.4**
MAT	**Matsushiro**	**3.96**	**11**	P	**Pn**	**05 05 50.3**	**+1.6**
MAT				*e*S	**S**	**05 06 46.7**	**+0.1**
MJAR	**Matsushiro Arr**	**3.96**	**11**	P	**Pn**	**05 05 50.2**	**+1.5**
	41nm,0.6s,baz=187,slow=9.5,SNR=66						
MJAR				S	**S**	**05 06 46.4**	**-0.1**
	3.3nm,0.5s,baz=319,slow=10,SNR=4.2						
JAG	**Ashikaga**	**4.17**	**25**	*e*P	**Pn**	**05 05 50.5**	**-0.3**
JAG				*e*S	**S**	**05 06 47.5**	**-2.8**
JNU	**Nakatsue**	**5.41**	**277**	P	**Pn**	**05 06 03.7**	**+0.2**
	4.1nm,0.6s,baz=233,slow=6.7,SNR=3.6						
KSRS	**Korea Array**	**9.04**	**305**	P	**P**	**05 06 45.4**	**+0.8**
	2.0nm,0.6s,baz=120,slow=9.8,SNR=10						
CMAR	**Chiang Mai Arr**	**37.15**	**257**	P	**P**	**05 11 11.4**	**-1.4**
	0.9nm,0.5s,baz=54,slow=7.0,SNR=4.4 0.9nm,0.5s						
ZALV	**Zalesovo Beam**	**42.53**	**316**	P	**P**	**05 11 54.4**	**-1.5**
	0.7nm,0.4s,baz=108,slow=4.7,SNR=1.9 0.7nm,0.4s						
MKAR	**Makanchi Array**	**43.72**	**305**	P	**P**	**05 12 04.8**	**-0.7**
	0.6nm,0.5s,baz=91,slow=9.4,SNR=6.2 0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**46.16**	**311**	P	**P**	**05 12 23.4**	**-1.0**
	0.6nm,0.5s,baz=98,slow=6.7,SNR=6.6 0.6nm,0.5s						
BVAR	**Borovoye Array**	**51.10**	**314**	P	**P**	**05 13 00.9**	**-0.6**
	0.7nm,0.6s,baz=116,slow=9.8,SNR=1.7 0.7nm,0.6s						
WRA	**Warramunga Arr**	**52.37**	**183**	P	**P**	**05 13 09.7**	**-1.4**
	0.5nm,0.6s,baz=360,slow=7.6,SNR=9.9 0.5nm,0.6s						
ILAR	**Eielson Array**	**55.00**	**30**	P	**P**	**05 13 29.2**	**-0.1**
	0.4nm,0.5s,baz=245,slow=6.0,SNR=7.4 0.4nm,0.5s						
ARCES	**ARCESS Array B**	**66.89**	**339**	P	**P**	**05 14 47.6**	**-0.6**
	2.0nm,0.9s,baz=61,slow=9.9,SNR=4.0 2.0nm,0.9s						
YKA	**Yellowknife Ar**	**69.28**	**28**	P	**P**	**05 15 03.1**	**+0.1**
	0.3nm,0.6s,baz=298,slow=6.6,SNR=7.4 0.3nm,0.6s						
FINES	**FINESS Array B**	**71.08**	**332**	P	**P**	**05 15 13.0**	**-0.8**
	1.6nm,0.8s,baz=64,slow=8.7,SNR=5.6 1.6nm,0.8s						
NVAR	**Mina Array Bea**	**80.36**	**50**	P	**P**	**05 16 07.6**	**+1.0**
	0.8nm,0.7s,baz=312,slow=4.9,SNR=7.1 0.8nm,0.7s						
PDAR	**Pinedale Array**	**83.17**	**43**	P	**P**	**05 16 21.3**	**+0.3**
	0.5nm,0.7s,baz=298,slow=1.6,SNR=4.9 0.5nm,0.7s						
TXAR	**Lajitas Array**	**95.51**	**50**	P	**P**	**05 17 20.1**	**+0.9**
	0.5nm,0.6s,baz=274,slow=2.2,SNR=7.0 0.5nm,0.6s						
LPAZ	**La Paz**	**151.82**	**61**	PKPbc	**PKPbc**	**05 23 47.1**	**-0.6**
	1.1nm,0.8s,baz=76,slow=4.2,SNR=3.7						

IDC 28 05:15:20.4±3.0**, 55°.03N**×**84°.09E, h0**^{km}**, mbtmp2.5**/2**, ML2.3**/2**, Error ellipse: s-maj=25.3km s-min=14.5km az=3.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.17**	**158**	I	I	05 23 50.0	
	baz=336,slow=308,SNR=6.3						
ZALV	**Zalesovo Beam**	**1.17**	**158**	Pg	Pg	05 15 41.4	-1.3
	4.0nm,0.3s,baz=339,slow=19,SNR=44						
ZALV				Lg	Lg	05 15 59.5	
	2.8nm,0.3s,baz=338,slow=28,SNR=15						
KURBB	**Kurchatov Arra**	**5.55**	**220**	Pn	Pn	05 16 44.5	+0.4
	0.1nm,0.3s,baz=40,slow=13,SNR=6.2						
KURBB				Lg	Lg	05 18 17.0	
	baz=40,slow=29,SNR=4.3 0.6nm,0.4s						
MKAR	**Makanchi Array**	**8.32**	**189**	Pn	Pn	05 17 21.8	-0.4
	baz=9.0,slow=14,SNR=1.6 0.1nm,0.3s						

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*MOS **28** 05:16:10.9±0.8, 36°.47N×70°.29E, h214^{km}, mb4.2/14, Error ellipse: s-maj=9.3km s-min=4.0km az=77.9*

*BJI **28** 05:16:11.6, 36°.62N×70°.25E, h221^{km}, mB4.4/3, mb4.3/14*

*NEIC **28** 05:16:12.2±1.2, 36°.49N±0°.07×70°.24E±0°.10, h210^{km}±8^{km},* *mb4.2/40, Error ellipse: s-maj=11.9km s-min=9.8km az=124.0*

*IDC **28** 05:16:12.5±0.8, 36.°37N×70.°36E, h222^{km}±5^{km}, mb3.7/21, mbtmp4.4/26, Error ellipse: s-maj=13.3km s-min=10.7km az=16.0*

*NNC **28** 05:16:14.3±3.6, 36.°79N×70.°14E, h190^{km}±37^{km}, mb3.9, mpv4.6, Error ellipse: s-maj=30.3km s-min=19.9km az=29.0*

ISC 28 05:16:12.4±0.5**, 36.°50N**±0.°04×**70.°33E**±0.°05**, h213^{km}**±4^{km}**, h213^{km}:pP-P, n182,** σ1.ˢ**53**/221**, mb4.2**/48**, 14C-23D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.22	209		Pn	05 16 53.2	-1.1
KBL	Kabul	2.22	209	PN	Pn	05 16 53.3	-1.1
SIMJ	Simiganj	2.40	334		Pn	05 16 55.6	-0.5
GAR	Garm	2.50	360		Pn	05 16 57.2	+0.1
DRK	Karamyk	3.19	21		Pn	05 17 05.3	+0.1
DRK	Karamyk	3.19	21	PN	Pn	05 17 05.3	+0.1
BTK	Batken	3.57	6		Pn	05 17 10.7	+1.2
BTK	Batken	3.57	6	PN	Pn	05 17 10.7	+1.2
ARSB	Arslanbob	5.24	22		Pn	05 17 29.9	-0.3
ARSB	Arslanbob	5.24	22	PN	Pn	05 17 29.9	-0.3
JMU	Jammu	5.33	134	*e*P	Pn	05 17 28.3	-3.0
JMU				*e*S	S	05 18 23.4	-10
JMU				IAML		05 18 33.0	
	comp=N,529nm,0.3s						
JMU				IAML		05 18 34.0	
	comp=E,715nm,0.6s						
KSH	Kashi	5.38	54	P	Pn	05 17 27.8	-4.2
KSH				S	S	05 18 24.8	-10
KSH				smax	smax		
	comp=E,610nm,0.9s						
KSH				smax	smax		
	comp=E,730nm,0.6s						
IUG	Iuzhnay	5.64	358	*e*PN	Pn	05 17 35.6	+0.4
IUG				*e*S	S	05 18 39.4	-1.4
IUG	Iuzhnay	5.64	358	*e*P	Pn	05 17 35.7	+0.4
IUG				*e*S	S	05 18 39.5	-1.4
CHM	Chimkent	5.84	355	*e*PN	Pn	05 17 38.2	+0.6
CHM				*e*S	S	05 18 44.1	-1.1
CHM	Chimkent	5.84	355	*e*P	Pn	05 17 38.2	+0.6
CHM				*e*S	S	05 18 44.2	-1.1
THN	Thein Dam	6.02	131	*e*P	Pn	05 17 39.9	-0.2
THN				*e*S	S	05 18 43.3	-6.2
THN				IAML		05 18 50.8	
	comp=N,524nm,0.3s						
THN				IAML		05 18 50.8	
	comp=E,499nm,0.2s						
AML	Almayashu	6.20	24	P	Pn	05 17 42.7	0.0
	SNR=291						
DZA	Taraz	6.43	7	*e*PN	Pn	05 17 45.0	-0.3
DZA				*e*S	S	05 18 57.0	-2.0
DZA	Taraz	6.43	7	*e*P	Pn	05 17 45.0	-0.3
DZA				*e*S	S	05 18 57.0	-2.0
DHRM	DHARAMSHALA	6.51	129	*e*P	Pn	05 17 46.0	-0.6
DHRM				*e*S	S	05 18 53.9	-7.4
DHRM				IAmL		05 19 01.5	
	comp=N,1µm,0.4s						
DHRM				IAmL		05 19 01.8	
	comp=E,739nm,0.5s						
BRLS	Borolday	6.53	357	*d i*PN	Pn	05 17 42.9	-3.7
BRLS	Borolday	6.53	357	⇓*i*P	Pn	05 17 42.1	-4.5
UCH	Uchtor	6.58	28	P	Pn	05 17 47.9	+0.4
	SNR=18						
KK31	Karatay Array	6.60	1		Pn	05 17 46.9	-0.5
KK31	Karatay Array	6.60	1	⇑P	Pn	05 17 46.7	-0.7
	comp=E,18nm,0.3s,baz=195,slow=14,SNR=373						
KK31				⇓S	S	05 18 55.2	-7.7
	comp=E,75nm,0.6s,baz=187,slow=24,SNR=4.2						
KK31	Karatay Array	6.60	1	PN	Pn	05 17 46.9	-0.5
KKAR	Karatay Array	6.60	1		Pn	05 17 46.8	-0.6
KKAR	Karatay Array	6.60	1	PN	Pn	05 17 46.8	-0.6
NRN	Naryn	6.62	40		Pn	05 17 46.5	-1.5
NRN	Naryn	6.62	40	PN	Pn	05 17 46.5	-1.5
EKS2	Erkin-Say	6.71	22	P	Pn	05 17 49.4	+0.5
	SNR=61						
AAK	Ala-Archa	6.92	26	P	Pn	05 17 52.3	+0.5
	SNR=56						
AAK	Ala-Archa	6.92	26		Pn	05 17 51.8	+0.1
AAK	Ala-Archa	6.92	26	P	Pn	05 17 52.2	+0.4
	comp=E,82nm,0.4s,baz=160,slow=4.5,SNR=79						
AAK				S	S	05 19 08.7	-2.0
	comp=E,152nm,0.6s,baz=329,slow=23,SNR=20						
AAK	Ala-Archa	6.92	26	⇑P	Pn	05 17 51.8	+0.1
	comp=E,4.4nm,0.5s						
AAK				⇓S	S	05 19 10.2	-0.5
	comp=E,39nm,0.6s						
AAK	Ala-Archa	6.92	26	*d i*PN	Pn	05 17 52.3	+0.5
AAK				pmax	pmax		
	comp=Z,91nm,0.8s						
KBK	Karagaybulak	7.11	29	P	Pn	05 17 54.9	+0.8
	SNR=14						
FRU1	Bishkek	7.12	26		Pn	05 17 54.4	+0.2
FRU1	Bishkek	7.12	26	PN	Pn	05 17 54.4	+0.2
BHK	Bhakra	7.16	133	*e*P	Pn	05 17 58.7	+3.9
BHK				IAML		05 19 15.0	
	comp=N,323nm,0.5s						
BHK				IAML	S	05 19 16.4	0.0
	comp=E,316nm,0.4s						
BHK				*e*S	S	05 19 16.4	0.0
CHMS	Chumysh	7.33	26	P	Pn	05 17 56.9	+0.1
	SNR=20						
CHMS	Chumysh	7.33	26	⇓P	Pn	05 17 56.7	-0.2
	comp=E,52nm,0.7s						
CHMS				⇓S	S	05 19 17.5	-2.6
	comp=E,147nm,0.9s						
ULHL	Ulahol	7.34	37	P	Pn	05 17 56.6	-0.6
	SNR=104						
BOOM	Boomskoye usch	7.39	34		Pn	05 17 57.8	0.0
BOOM	Boomskoye usch	7.39	34	PN	Pn	05 17 57.8	0.0
USP	Ospenovka	7.48	24	P	Pn	05 17 58.3	-0.5
	SNR=90						
TKM2	Tokmak 2	7.59	31	P	Pn	05 18 00.6	+0.2
	SNR=109						
TKM2	Tokmak 2	7.59	31	⇑P	Pn	05 18 00.3	-0.1
	comp=E,81nm,0.7s						
TKM2				⇑S	S	05 19 24.7	-1.8
	comp=E,71nm,0.8s						
TKM2	Tokmak 2	7.59	31	*i* PN	Pn	05 18 00.3	-0.1
TKM2				pmax	pmax		
	comp=Z,37nm,0.4s						
SGDS	Sogindy	7.69	24	⇓*i*P	Pn	05 18 01.0	-0.5
KDJ	Kajisay	7.73	41		Pn	05 18 02.0	-0.2
KDJ	Kajisay	7.73	41	PN	Pn	05 18 02.0	-0.2
TARG	Taragay, Kyrgy	7.81	46		Pn	05 18 03.1	-0.4
TARG	Taragay, Kyrgy	7.81	46	PN	Pn	05 18 03.1	-0.4
KLP	Kalpa	8.23	125	*e*P	Pn	05 18 09.6	+0.6
KLP				*e*S	S	05 19 34.4	-7.7
KLP				IAML		05 19 40.5	
	comp=N,254nm,0.3s						
KLP				IAML		05 19 41.3	
	comp=E,259nm,0.5s						
AAA	Alma-Ata	8.40	35	*e*PN	Pn	05 18 10.7	0.0
AAA	Alma-Ata	8.40	35	*e*P	Pn	05 18 10.8	0.0
PRZ	Przheval'sk	8.64	44		Pn	05 18 14.6	+0.7
PRZ	Przheval'sk	8.64	44	PN	Pn	05 18 14.6	+0.7
DDI	Dehra Dun	8.93	131	*e*P	Pn	05 18 18.4	+0.7
DDI				*e*S	S	05 19 49.9	-8.2
DDI				IAML		05 19 54.2	
	comp=N,264nm,0.2s						
DDI				IAML		05 20 01.1	
	comp=E,272nm,0.3s						
BTLS	Baital	8.98	17	*d i*P	Pn	05 18 17.9	-0.3
BTLS	Baital	8.98	17	⇓*i*P	Pn	05 18 17.9	-0.3
UZB	Uzynbulak	9.42	43	*d i*P	Pn	05 18 24.0	0.0
UZB	Uzynbulak	9.42	43	⇓*i*P	Pn	05 18 24.0	0.0
SHLS	Shalkode	9.67	44	*e*P	Pn	05 18 30.3	+3.2
SHLS	Shalkode	9.67	44	*e*P	Pn	05 18 30.4	+3.2
PDGK	Podgornoye	9.80	43	⇑P	Pn	05 18 28.4	-0.4
	comp=E,28nm,0.9s						
KUDL	Kundal	9.82	146	*e*P	Pn	05 18 29.8	+0.6
KUDL				*e*S	S	05 20 09.2	-10
KUDL				*e*S	S	05 20 09.3	-10
KUDL				IAML		05 20 11.5	
	comp=N,65nm,0.6s						
KUDL				IAML		05 20 12.6	
	comp=E,101nm,0.4s						
SONA	Sohna	10.01	143	*e*P	Pn	05 18 32.2	+0.6
SONA				*e*S	S	05 20 13.7	-10
SONA				IAmL		05 20 16.4	
	comp=N,91nm,0.7s						
SONA				IAmL		05 20 17.4	
	comp=E,215nm,0.4s						
AJM	Ajmer	10.65	159	*e*P	Pn	05 18 40.8	+1.0
AJM				*e*S	S	05 20 28.6	-11
AJM				IAML		05 20 49.9	
	comp=N,39nm,0.8s						
AJM				IAML		05 20 54.8	
	comp=E,52nm,0.4s						
OTUK	Ortayu	11.83	7	⇓P	Pn	05 18 53.7	-0.9
	comp=E,30nm,0.7s						
MAKZ	Makanchi	13.47	37		Pn	05 19 15.0	-0.2
MAKZ	Makanchi	13.47	37	⇑P	Pn	05 19 14.5	-0.6
	comp=E,34nm,0.5s						
MAKZ	Makanchi	13.47	37	P	Pn	05 19 15.0	-0.2
BRZS	Berezniki	13.58	6	*e*P	Pn	05 19 15.8	-0.7
BRZS	Berezniki	13.58	6	*e*P	Pn	05 19 15.8	-0.7
MK31	Makanchi Array	13.61	37	P	Pn	05 19 16.6	-0.2
	comp=E,12nm,0.6s,baz=215,slow=10,SNR=116						
MK31	Makanchi Array	13.61	37	*d i*P	Pn	05 19 16.7	-0.2
MKAR	Makanchi Array	13.61	37		Pn	05 19 16.5	-0.4
MKAR	Makanchi Array	13.61	37	P	Pn	05 19 16.8	-0.1
	comp=E,8.9nm,0.5s,baz=226,slow=13,SNR=108						
AB31	Akbulak array	14.83	333	P	Pn	05 19 30.5	-1.2
AB31	Akbulak array	14.83	333	⇑P	Pn	05 19 30.0	-1.7
	comp=E,5.9nm,0.4s,baz=149,slow=12,SNR=226						
AB31				⇑S	S	05 22 14.1	-1.6
	comp=E,6.2nm,0.7s,baz=164,slow=22,SNR=7.2						
AB31	Akbulak array	14.83	333	*e*P	Pn	05 19 30.1	-1.7
ABKAR	Akbulak array	14.83	333		Pn	05 19 30.5	-1.2
ABKAR	Akbulak array	14.83	333		Pn	05 19 30.4	-1.3
WMQ	Urumqi	15.14	56	*e*P	P	05 19 36.8	+0.9
KURBB	Kurchatov Arra	15.30	20	P	Pn	05 19 36.9	-0.5
	comp=E,11nm,0.5s,baz=210,slow=10,SNR=56						
KURBB	Kurchatov Arra	15.30	20	⇑P	Pn	05 19 36.2	-1.3
	comp=E,24nm,0.8s						
KURK	Kurchatov	15.41	20	P	P	05 19 37.6	-1.1
KURK	Kurchatov	15.41	20	⇑P	P	05 19 37.2	-1.5
	comp=E,3.8nm,0.8s						
KURK	Kurchatov	15.41	20	P	P	05 19 37.6	-1.1
KURK				pmax	pmax		
	comp=Z,15nm,0.8s						
EVN	Everest	16.33	117	P	P	05 19 49.3	-0.5
AKTO	Aktyubinsk	16.52	331	P	Pn	05 19 51.9	-0.1
	comp=Z,13nm,0.3s,baz=144,slow=8.4,SNR=39						
AKTO				S	S	05 22 50.1	-2.5
	comp=Z,3.7nm,0.8s,baz=246,slow=15,SNR=6.0						
AKTO	Aktyubinsk	16.52	331	⇓P	Pn	05 19 51.7	-0.3
	comp=Z,18nm,0.8s						
AKTO				⇓S	S	05 22 53.9	+1.3
	comp=Z,7.3nm,0.9s						
BVA0	Borovoye Array	16.52	0	P	Pn	05 19 51.9	-0.3
	comp=Z,15nm,0.5s,baz=154,slow=8.7,SNR=36						
BVA0	Borovoye Array	16.52	0	*i* P	Pn	05 19 51.8	-0.3
BVAR	Borovoye Array	16.52	0	P	Pn	05 19 51.9	-0.2
	comp=Z,22nm,0.4s,baz=156,slow=9.7,SNR=37						
BRVK	Borovoye	16.56	360	P	P	05 19 51.0	-0.3
BRVK	Borovoye	16.56	360	⇓P	P	05 19 51.2	-0.1
	comp=Z,18nm,0.6s						
BRVK	Borovoye	16.56	360	*d i*P	Pn	05 19 52.2	-0.3
BRVK				pmax	pmax		
	comp=Z,45nm,1.3s						
ZAA0	Zalesovo Array	20.14	25	P	P	05 20 30.3	+0.2
ZALV	Zalesovo Beam	20.14	25	P	P	05 20 30.3	+0.2
ZALV	Zalesovo Beam	20.14	25	P	P	05 20 30.6	+0.5
	comp=Z,11nm,0.3s,baz=221,slow=10,SNR=69						
ZALV				S	S	05 24 03.4	-0.8
	comp=Z,1.6nm,0.6s,baz=218,slow=18,SNR=3.2						
	comp=Z,11nm,0.3s						
GNI	Garni	20.38	288	P	P	05 20 34.5	+1.6
	comp=Z,7.2nm,0.6s,baz=143,slow=7.1,SNR=4.8						
	comp=Z,7.2nm,0.6s						
GNI	Garni	20.38	288	*de*P	Pn	05 20 35.6	-2.6
GNI				pmax	pmax		
	comp=Z,21nm,1.3s						
ARTI	Arti	21.47	342	P	P	05 20 43.1	-0.8
ARTI	Arti	21.47	342	P	P	05 20 43.8	-0.2
	comp=Z,6.0nm,0.4s,baz=147,slow=6.2,SNR=9.7						
	comp=Z,6.0nm,0.4s						
ARTI	Arti	21.47	342	*c i*P	P	05 20 44.6	+0.7
ARTI				*PP	pP	05 21 22.0	+1.7
ARTI				S	S	05 24 28.8	+1.2
ARTI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KBZ	Khabaz	22.12	298	⇑*e*P	P	05 20 51.3	+0.9
KBZ				pmax	pmax		
	comp=Z,5.0nm,1.7s						
KIV	Kislovodsk	22.31	298	*e*P	P	05 20 51.4	-0.9
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BELG	Belogornoye	22.55	322	P	P	05 20 54.9	+0.7
	comp=Z,8.2nm,0.5s,baz=131,slow=3.4,SNR=7.6						
	comp=Z,8.2nm,0.5s						
RAYN	Ar Rayn	25.00	246	P	P	05 21 16.2	-0.6
RAYN				IAmb	IAmb	05 21 18.3	
	comp=Z,8.8nm,0.9s						
RAYN	Ar Rayn	25.00	246	P	P	05 21 16.2	-0.6
RAYN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PZH	PanZhiHua	28.47	102	P	P	05 21 51.0	+3.1
SONM	Songino Array	28.78	55	P	P	05 21 51.3	+1.0
	comp=Z,1.0nm,0.5s,baz=249,slow=9.7,SNR=3.7						
	comp=Z,1.0nm,0.5s						
BRTR	Keskin Array B	28.92	288	P	P	05 21 52.5	+0.8
	comp=Z,0.8nm,0.6s,baz=100,slow=9.8,SNR=5.0						
	comp=Z,0.8nm,0.6s						
ULN	Ulaanbaatar	29.22	56	⇓*e*P	P	05 21 56.8	+2.5
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CMAR	Chiang Mai Arr	30.93	118	*ce*P	P	05 22 13.6	+4.1
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
HHC	Hu-ho-hao-te	32.27	69	*e*P	P	05 22 22.0	+0.9
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,40nm,4.5s						
AKASG	Malin Array Be	32.52	309	P	P	05 22 22.6	-0.3
	comp=Z,0.3nm,0.4s,baz=81,slow=7.2,SNR=4.2						
	comp=Z,0.3nm,0.4s						
MNK	Minsk	34.12	315	*i* P	P	05 22 35.4	-1.3
	comp=E,13nm,0.9s						
MNK				*i* P	P	05 22 35.4	-1.3
	comp=N,19nm,0.9s						
MNK				*i* P	P	05 22 35.4	-1.3
	comp=Z,10.0nm,0.7s,baz=104						
MNK				*i* pP	pP	05 23 20.3	-0.2
MNK				*i* PP	PP	05 23 57.2	-1.3
MNK				*i* S	S	05 27 44.4	-2.0
MNK				*i* sS	sS	05 29 05.0	0.0
MNK				*i* SS	SS	05 30 19.6	-1.2
MNK				*i* LR	LR	05 34 58.6	
MNK				*i* LRM	MLR	05 37 00.1	
	comp=Z,231nm,18.9s						
MNK				*i* LRM	MLR	05 37 02.0	
	comp=N,2µm,21.1s						
MNK				*i* LRM	MLR	05 37 02.9	
	comp=E,2µm,21.7s						
MNK	Minsk	34.12	315	*i* P	P	05 22 35.4	-1.3
MNK				*i* *PP	pP	05 23 20.2	-0.2
MNK				*i*		05 23 57.1	
MNK				*i* S	S	05 27 44.4	-2.0
MNK				*i* *SS	sS	05 29 05.0	0.0
MNK				*i* SS	SS	05 30 19.6	-1.2
MNK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MNK				pmax	pmax		
	comp=E,13nm,0.9s						
MNK				pmax	pmax		
	comp=N,19nm,0.9s						
MNK				MLR	MLR		
	comp=Z,231nm,19.0s						
MNK				MLR	MLR		
	comp=N,2µm,21.0s						
MNK				MLR	MLR		
	comp=E,2µm,22.0s						
NRIK	Noril'sk	34.23	11	P	P	05 22 38.4	+1.0
NRIK				IAmb	IAmb	05 22 39.8	
	comp=Z,3.2nm,0.6s						
NRIK	Noril'sk	34.23	11	P	P	05 22 38.4	+1.0
NRIK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
IDI	Anoyia	36.57	282	P	P	05 22 55.9	-2.0
FIA1	FINESS Array S	37.18	326	P	P	05 23 02.6	0.0
FINES	FINESS Array B	37.18	326	P	P	05 23 02.2	-0.4
FINES	FINESS Array B	37.18	326	P	P	05 23 02.7	+0.1
	comp=Z,1.9nm,0.7s,baz=123,slow=9.4,SNR=5.6						
FINES				pP	pP	05 23 48.2	+1.2
	comp=Z,0.9nm,0.4s,baz=123,slow=9.5,SNR=3.4						
	comp=Z,1.9nm,0.7s						
ARCES	ARCESS Array B	40.94	338	P	P	05 23 34.2	+0.6
ARCES	ARCESS Array B	40.94	338	P	P	05 23 34.6	+1.0
	comp=Z,2.8nm,0.6s,baz=114,slow=7.4,SNR=14						
	comp=Z,2.8nm,0.6s						
HFS	Hagfors	42.73	322	P	P	05 23 47.9	-0.4
	comp=Z,3.6nm,0.6s,baz=97,slow=12,SNR=13						
HFS				pP	pP	05 24 34.8	+1.0
	comp=Z,2.4nm,0.6s,baz=98,slow=11,SNR=4.3						
	comp=Z,3.6nm,0.6s						
NC303	NORSAR Array S	44.00	323	P	P	05 23 58.4	0.0
NC303				IAmb	IAmb	05 23 59.6	
	comp=Z,8.0nm,0.8s						
NB2	NORSAR Subarra	44.05	323	P	P	05 23 58.3	-0.5
	comp=Z,2.2nm,0.6s,baz=99,slow=7.9						
NB2				pP	pP	05 24 45.2	+0.6
	comp=Z,2.3nm,0.7s,baz=96,slow=8.6						
NOA	NORSAR Array B	44.05	323	P	P	05 23 58.6	-0.2
	comp=Z,3.1nm,0.8s,baz=97,slow=7.8,SNR=10						
NOA				pP	pP	05 24 45.1	+0.6
	comp=Z,1.6nm,0.6s,baz=97,slow=8.1,SNR=5.9						
	comp=Z,3.1nm,0.8s						
KSRS	Korea Array	45.39	71	P	P	05 24 10.1	+0.5
	comp=Z,1.3nm,0.5s,baz=273,slow=7.0,SNR=5.4						
	comp=Z,1.3nm,0.5s						
KLR	Kul'dur	45.58	54	⇓*e*P	P	05 24 10.8	-0.2
KLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SPITS	Spitsbergen Ar	47.37	347	P	P	05 24 25.6	+1.2
	comp=Z,12nm,0.9s,baz=114,slow=12,SNR=6.1						
	comp=Z,12nm,0.9s						
EKA	Eskdalemuir Ar	51.91	316	P	P	05 24 58.5	-0.5
	comp=Z,0.5nm,0.4s,baz=77,slow=7.3,SNR=5.3						
	comp=Z,0.5nm,0.4s						
YSS	Yuzhno-Sakhali	53.27	55	⇑*e*P	P	05 25 10.3	+1.3
YSS				pmax	pmax		
	comp=Z,4.0nm,0.4s						
SEY	Seymchan	54.72	34	⇓*e*P	P	05 25 20.3	+1.1
SEY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ESDC	Sonseca Array	56.98	298	P	P	05 25 35.1	-0.6
	comp=Z,0.4nm,0.6s,baz=69,slow=7.6,SNR=4.0						
ESDC				pP	pP	05 26 25.4	+1.6
	comp=Z,0.3nm,0.5s,baz=49,slow=6.8,SNR=4.1						
	comp=Z,0.4nm,0.6s						
SUMG	Summit	60.88	341	P	P	05 26 03.9	+1.5
SUMG				IAmb	IAmb	05 26 04.7	
	comp=Z,5.4nm,0.9s						
SUMG	Summit	60.88	341	P	P	05 26 03.9	+1.5
SUMG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
VOI	Vohitsoka	62.20	205	P	P	05 26 11.3	-0.1
C18K	Utukok River	68.44	18	P	P	05 26 51.2	+0.4
C19K	Lookout Ridge	68.49	17	P	P	05 26 51.5	+0.4
C19K				IAmb	IAmb	05 26 54.0	
	comp=Z,12nm,1.3s						
D19K	Kuna River	69.30	17	P	P	05 26 56.0	-0.1
D19K				IAmb	IAmb	05 26 57.6	
	comp=Z,3.8nm,0.7s						
D20K	Etivluk River	69.48	17	P	P	05 26 57.8	+0.6
D20K				IAmb	IAmb	05 27 18.9	
	comp=Z,6.4nm,1.4s						
E18K	Tukpahlearik C	69.50	19	P	P	05 26 57.6	+0.3
E18K				IAmb	IAmb	05 26 59.3	
	comp=Z,11nm,1.5s						
F15K	North Star Dit	69.64	21	P	P	05 26 58.8	+0.6
F15K				IAmb	IAmb	05 27 14.2	
	comp=Z,9.3nm,1.2s						
E22K	Anaktuvuk Pass	71.02	15	P	P	05 27 06.8	+0.3
TOLK	Toolik Lake Re	71.06	14		P	05 27 07.8	+1.0
F21K	Alatna River	71.39	17	P	P	05 27 09.0	+0.2
F25K	Christian Rive	72.72	14	P	P	05 27 16.8	+0.1
E29M	Blow River	73.31	11	P	P	05 27 21.1	+1.0
J19K	Poorman	73.47	19		P	05 27 21.5	+0.5
J19K				IAmb	IAmb	05 27 22.7	
	comp=Z,3.5nm,0.8s						
J18K	Innoko River	73.59	20	P	P	05 27 22.5	+0.7
J18K				IAmb	IAmb	05 27 23.3	
	comp=Z,3.6nm,0.8s						
G26K	Porcupine Rive	73.64	13		P	05 27 22.7	+0.8
G27K	Doyon Strip	74.15	13		P	05 27 25.5	+0.6
G27K				IAmb	IAmb	05 27 27.1	
	comp=Z,2.9nm,0.7s						
F30M	Barrier River	74.34	10		P	05 27 26.2	+0.2
F30M				IAmb	IAmb	05 27 28.2	
	comp=Z,6.4nm,1.1s						
COLA	College	74.63	16	⇓*i*P	P	05 27 28.3	+0.6
COLA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
H27K	Steamboat Moun	74.69	13	P	P	05 27 29.1	+0.9
H27K				IAmb	IAmb	05 27 30.1	
	comp=Z,3.8nm,0.8s						
CAST	Castle Rocks	74.85	18		P	05 27 29.5	+0.4
CAST				IAmb	IAmb	05 27 30.5	
	comp=Z,5.0nm,0.9s						
ILAR	Eielson Array	74.93	16	P	P	05 27 29.1	-0.3
	comp=Z,1.3nm,0.9s,baz=289,slow=5.0,SNR=15						
ILAR				pP	pP	05 28 23.2	+2.4
	comp=Z,0.8nm,0.9s,baz=313,slow=5.7,SNR=4.8						
	comp=Z,1.3nm,0.9s						
J25K	Salcha River,	75.39	15		P	05 27 31.7	-0.5
I28M	Miner Creek	75.68	13		P	05 27 34.2	+0.3
I28M				IAmb	IAmb	05 27 35.0	
	comp=Z,3.6nm,0.8s						
J26L	Joseph Creek	75.86	14	P	P	05 27 34.9	+0.1
DHY	Denali Highway	76.28	17		P	05 27 37.2	-0.2
DHY				IAmb	IAmb	05 27 38.9	
	comp=Z,4.1nm,0.7s						
I30M	Mount Dempster	76.48	11	P	P	05 27 38.7	+0.3
I30M				IAmb	IAmb	05 27 39.6	
	comp=Z,3.3nm,0.8s						
PAX	Paxson	76.81	16	P	P	05 27 40.0	-0.2
PAX				IAmb	IAmb	05 27 41.0	
	comp=Z,3.9nm,0.6s						
PAX	Paxson	76.81	16	P	P	05 27 40.0	-0.2
PAX				pmax	pmax		
	comp=Z,4.0nm,0.6s						
J30M	Hart River	77.09	11	P	P	05 27 41.0	-0.8
BOSA	Boshof	77.40	220	P	P	05 27 43.0	-1.0
	comp=Z,4.3nm,0.8s,baz=8.6,slow=4.4,SNR=5.4						
	comp=Z,4.3nm,0.8s						
BOSA	Boshof	77.40	220	P	P	05 27 43.0	-1.0
L27K	Beaver Creek,	77.49	14	P	P	05 27 44.7	+0.8
K29M	Barlow Dome	77.58	12	P	P	05 27 44.8	+0.3
K29M				IAmb	IAmb	05 27 45.7	
	comp=Z,2.6nm,0.6s						
YKA	Yellowknife Ar	81.27	2	P	P	05 28 04.6	+0.4
	comp=Z,2.0nm,0.8s,baz=350,slow=6.0,SNR=23						
YKA				pP	pP	05 28 57.5	+1.4
	comp=Z,3.4nm,0.7s,baz=350,slow=6.1,SNR=23						
	comp=Z,2.0nm,0.8s						
SCHQ	Schefferville	81.88	337	P	P	05 28 07.8	+0.1
	comp=Z,2.7nm,0.7s,baz=81,slow=3.2,SNR=4.5						
	comp=Z,2.7nm,0.7s						
WRA	Warramunga Arr	82.45	121	P	P	05 28 08.8	-2.3
	comp=Z,2.8nm,0.7s,baz=323,slow=4.8,SNR=22						
	comp=Z,2.8nm,0.7s						
ASAR	Alice Springs	84.70	124	P	P	05 28 20.8	-1.6
	comp=Z,2.5nm,0.8s,baz=319,slow=5.4,SNR=20						
	comp=Z,2.5nm,0.8s						
QSPA	South Pole Qui	126.30	180	PKP	PKPdf	05 34 47.0	-1.5
	comp=Z,2.1nm,0.9s,baz=258,slow=1.1,SNR=8.1						

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*ASRS **28** 05:25:19.0±0.6, 54.°59N×86.°44E, h0^{km}, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 28 05:25:21.1±3.6**, 54.°64N×86.°46E, h0^{km}, mbtmp2.7**/2**, ML2.4**/2**, Error ellipse: s-maj=27.9km s-min=17.3km az=44.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.18	235	I	I	05 32 40.0	
	baz=55,slow=317,SNR=5.6						
ZALV	Zalesovo Beam	1.18	235	Pg	Pg	05 25 42.1	-1.6
	1.2nm,0.3s,baz=51,slow=16,SNR=6.8						
ZALV				Lg	Lg	05 25 59.7	
	2.9nm,0.3s,baz=53,slow=27,SNR=14						
KURBB	Kurchatov Arra	6.28	233	Pn	Pn	05 26 55.8	+0.9
	0.1nm,0.3s,baz=49,slow=14,SNR=2.1						
KURBB				Lg	Lg	05 28 42.9	
	baz=49,slow=28,SNR=4.2						
	0.3nm,0.3s						
MKAR	Makanchi Array	8.29	200	Pn	Pn	05 27 23.7	+1.2

0.1nm,0.3s,baz=23,slow=13,SNR=1.4
0.3nm,0.8s

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*SJA **28** 05:29:50.2±0.7, 22°.40S×65°.92W, h285^{km}±4^{km}, ML4.1, MW3.9*
*NEIC **28** 05:29:52.5±1.4, 22°.43S±0°.08×65°.96W±0°.10, h256^{km}±4^{km}, mb4.2/8, Error ellipse: s-maj=13.2km s-min=11.3km az=78.0*
*IDC **28** 05:29:53.7±1.9, 22°.25S×65°.93W, h265^{km}±20^{km}, mb3.2/3, mbtmp3.8/7, Error ellipse: s-maj=25.7km s-min=17.3km az=78.0*
*VAO **28** 05:29:54.0±0.7, 22°.30S×65°.92W, h262^{km}, mb3.9*
ISC 28 05:29:51.8±0.5**, 22°.41S**±0°.04×**66°.03W**±0°.05**, h251**^{km}**, n80, σ1^{s}23**/94**, mb3.8**/8**, 4C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YJA	Yavi	0.53	64	iP	Pn	05 30 28.3	+2.8
YJA				iS	S	05 30 55.6	+3.7
YJA				IAML		05 30 55.7	
	comp=Z,144nm,1.0s						
AF01	San Pedro de A	2.06	254		Pn	05 30 36.4	+1.2
SLA	San Lorenzo	2.35	168	iP	Pn	05 30 39.2	+1.4
SLA				IAML		05 31 30.1	
	comp=Z,18nm,0.9s						
PB09	IPOC Station P	3.04	281		Pn	05 30 47.5	+2.5
PB09	IPOC Station P	3.04	281	iP	Pn	05 30 46.9	+1.9
PB09				iS	S	05 31 28.9	+1.8
PB09				IAML		05 31 34.5	
	comp=Z,232nm,0.3s						
PB06	IPOC Station P	3.29	264		Pn	05 30 49.6	+1.9
PB06	IPOC Station P	3.29	264	iP	Pn	05 30 49.2	+1.5
PB06				iS	S	05 31 33.3	+1.4
PB06				IAML		05 31 36.7	
	comp=Z,290nm,0.4s						
PB03	IPOC Station P	3.47	275		Pn	05 30 51.2	+1.5
PB01	IPOC Station P	3.49	292		Pn	05 30 51.5	+1.7
PB01	IPOC Station P	3.49	292	iP	Pn	05 30 51.6	+1.7
PB01				iS	S	05 31 37.3	+1.3
PB01				IAML		05 31 38.5	
	comp=Z,462nm,0.1s						
PB08	IPOC Station P	3.69	307		Pn	05 30 54.9	+2.5
PB08	IPOC Station P	3.69	307	iP	Pn	05 30 54.3	+1.8
PB08				iS	S	05 31 41.0	+0.5
PB08				IAML		05 31 45.3	
	comp=Z,118nm,0.4s						
FSA	Cafayete	3.69	179	iP	Pn	05 30 53.5	+1.3
FSA				iS	S	05 31 39.6	-0.6
PB05	IPOC Station P	3.88	263		Pn	05 30 55.7	+1.3
PB05	IPOC Station P	3.88	263	iP	Pn	05 30 55.7	+1.3
PB05				iS	S	05 31 44.8	+0.8
PB05				IAML		05 31 48.9	
	comp=Z,234nm,0.5s						
GO01	Chusmiza	4.02	312		Pn	05 30 58.4	+2.0
GO01	Chusmiza	4.02	312	iP	Pn	05 30 57.8	+1.3
GO01				iS	S	05 31 47.2	-0.5
GO02	Mina Guanaco	4.26	229		Pn	05 31 00.7	+1.6
GO02	Mina Guanaco	4.26	229	iP	Pn	05 31 00.0	+1.0
GO02				iS	S	05 31 52.2	-0.3
TA01	Diego Aracena	4.28	295		Pn	05 30 59.7	+0.7
TA01	Diego Aracena	4.28	295	iP	Pn	05 30 60.0	+1.0
TA01				iS	S	05 31 52.5	+0.2
TA01				IAML		05 31 52.7	
	comp=Z,247nm,0.2s						
PB11	IPOC Station P	4.29	307		Pn	05 31 00.3	+1.0
PB11	IPOC Station P	4.29	307	iP	Pn	05 31 00.2	+0.9
PB11				iS	S	05 31 52.4	-0.5
PB11				IAML		05 31 54.7	
	comp=Z,211nm,0.3s						
PB10	IPOC Station P	4.31	254		Pn	05 31 00.5	+1.1
PB10	IPOC Station P	4.31	254	iP	Pn	05 31 00.3	+1.0
PB10				iS	S	05 31 53.2	+0.1
PB10				IAML		05 31 54.0	
	comp=Z,147nm,0.8s						
TA02	Huaiquique	4.38	298		Pn	05 31 00.8	+0.7
TA02	Huaiquique	4.38	298	iP	Pn	05 31 00.9	+0.8
TA02				iS	S	05 31 53.7	-0.7
TA02				IAML		05 31 54.7	
	comp=Z,368nm,0.1s						
PB14	IPOC Station P	4.58	240		Pn	05 31 03.5	+0.7
PB16	IPOC Station P	5.20	321		Pn	05 31 12.9	+2.1
AC02	Maricunga	5.23	212		Pn	05 31 11.9	+1.0
AC02	Maricunga	5.23	212	iP	Pn	05 31 12.2	+1.2
AC02				IAML		05 32 20.1	
	comp=Z,290nm,0.5s						
PB18	Visviri	5.79	325		Pn	05 31 20.8	+2.9
AC06	Mina Casimiro	6.30	218		Pn	05 31 23.4	-0.3
LPAZ	La Paz	6.40	342	P	Pn	05 31 27.1	+1.4
	comp=Z,14nm,0.4s,baz=130,slow=4.8,SNR=159						
LPAZ				S	S	05 32 40.5	-0.3
	comp=Z,24nm,1.0s,baz=294,slow=18,SNR=9.4						
LPAZ	La Paz	6.40	342	eP	Pn	05 31 27.0	+1.3
BBSD	Serra de San D	7.28	45	eP	Pn	05 31 35.7	-0.4
MURT	Porto Murtinho	7.85	86	eP	Pn	05 31 42.9	-0.3
SIV	San Ignacio	7.92	37	P	Pn	05 31 43.9	-0.3
	comp=Z,5.4nm,0.4s,baz=216,slow=12,SNR=45						
BDQN	Bodoquena, MS	8.86	79	eP	Pn	05 31 56.1	0.0
SJPY	San Joaquin	9.45	108	eP	Pn	05 32 03.8	+0.3
PTLB	Pontes e Lacer	9.51	44		Pn	05 32 04.2	0.0
PTLB	Pontes e Lacer	9.51	44	eP	Pn	05 32 03.8	-0.5
AQDB	Aquidauana	9.81	81	Pn	Pn	05 32 07.5	-0.6
AQDB	Aquidauana	9.81	81	eP	Pn	05 32 09.0	+0.9
SALV	Santo Antonio	11.71	58	eP	Pn	05 32 31.5	-0.4
TRCB	Terra Rica	12.38	94	eP	P	05 32 42.6	-0.1
PTGB	Pitanga	13.01	103	eP	P	05 32 50.5	+0.8
ITAB	Concordia	13.50	114		Pn	05 32 54.3	+0.4
ITAB	Concordia	13.50	114	eP	P	05 32 55.5	+0.5
PCMB	Pacaembu	13.72	89	eP	P	05 32 58.9	+1.4
CPSB	Cacapava Do Su	13.80	128	eP	P	05 33 00.0	+1.7
PDRB	Porto dos Gac	13.93	41	eP	P	05 33 00.8	+0.9
PLTB	Pedras Altas	14.46	133		Pn	05 33 04.1	-1.3
PLTB	Pedras Altas	14.46	133	eP	Pn	05 33 05.2	-0.3
FRTB	Fartura	15.21	97	eP	P	05 33 14.2	+0.2
CNLB	Canela	15.29	120	eP	P	05 33 15.7	+0.9
TRQA	Tornquist	15.98	168		P	05 33 21.5	-0.8
TRQA				IAmb	IAmb	05 33 52.2	
	comp=Z,9.0nm,1.1s						
IPMB	Ipameri, GO	17.29	78	eP	P	05 33 37.1	+0.3
PET01	Itanhaem-SP	17.32	100	eP	P	05 33 37.2	+0.1
SNDB	Serra Nova Dou	17.47	56	eP	P	05 33 38.2	-0.6
VAO	Valinhos	17.60	96	P	P	05 33 40.0	-0.3
VAO	Valinhos	17.60	96	eP	P	05 33 39.9	-0.3
BDFB	Brasilia	18.30	72	P	P	05 33 47.3	-0.6
	comp=Z,1.3nm,0.4s,baz=231,slow=10,SNR=4.2						
PLCA	Paso Flores	18.66	191	P	Pn	05 33 54.6	-0.5
	comp=Z,1.3nm,0.6s,baz=2.1,slow=12,SNR=5.6						
VNA3	Neumayer Olymp	58.37	162	⇑P	P	05 39 21.3	+0.7
	comp=Z,1.5nm,0.7s						
VNA2	Neumayer--Watz	58.92	161	⇑P	P	05 39 24.9	+0.6
	comp=Z,2.5nm,0.8s,baz=281,slow=8.8						
SNAA	Sanae	60.55	161	⇑P	P	05 39 36.5	+0.9
	comp=Z,42nm,1.0s						
SNAA	Sanae	60.55	161	P	P	05 39 35.5	0.0
SNAA				IAmb	IAmb	05 39 44.1	
	comp=Z,8.8nm,1.5s						
WVT	Waverly	61.77	340	P	P	05 39 43.3	-0.6
WVT				IAmb	IAmb	05 39 43.9	
	comp=Z,3.1nm,0.7s						
TROLL	Troll, Antarti	62.27	161	⇑P	P	05 39 47.3	+0.3
	comp=Z,43nm,0.5s						
TXAR	Lajitas Array	62.93	323	P	P	05 39 51.8	-0.1
	comp=Z,0.1nm,0.4s,baz=146,slow=9.1,SNR=3.5						
	comp=Z,0.1nm,0.4s						
PBMO	Poplar Bluff	63.21	338	P	P	05 39 53.3	-0.2
PBMO				IAmb	IAmb	05 39 53.7	
	comp=Z,4.9nm,0.6s						
DBIC	Dimbokro	66.45	72	P	P	05 40 14.2	-0.7
QSPA	South Pole Qui	67.79	180	P	P	05 40 24.0	+1.4
QSPA	South Pole Qui	67.79	180	P	P	05 40 23.9	+1.4
	comp=Z,0.8nm,0.5s,baz=355,slow=3.3,SNR=12						
	comp=Z,0.8nm,0.5s						
TORD	Torodi Ar. Bea	75.17	69	P	P	05 41 04.8	-2.3
YKA	Yellowknife Ar	92.95	340	P	P	05 42 36.1	+0.1
	comp=Z,0.4nm,0.7s,baz=126,slow=4.2,SNR=9.2						
	comp=Z,0.4nm,0.7s						
WRA	Warramunga Arr	133.44	207	PKP	PKPdf	05 48 38.7	-0.3
	comp=Z,0.3nm,0.4s,baz=154,slow=1.8,SNR=7.6						
MKAR	Makanchi Array	144.73	39	PKP	PKPdf	05 48 58.3	-0.3
	comp=Z,0.7nm,0.6s,baz=335,slow=4.7,SNR=6.8						
PZH	PanZhiHua	168.14	67	PKP	PKPdf	05 49 27.0	-1.9

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*UCR **28** 05:38:03.6±0.9, 8°.33N×82°.79W, h29^{km}±1^{km}, MW4.1, Fault plane solution: NP1:ϕ_s303.82000°, δ70.79000°, λ29.84000°.*
*UPA **28** 05:38:04.5±1.1, 8°.38N×82°.78W, h22^{km}±3^{km}, MW4.1, Fault plane solution: NP1:ϕ_s96.00000°, δ81.00000°, λ-62.00000°.*
*CATAC **28** 05:38:05.2±0.7, 8°N±5°×8°3W±°, h22^{km}±2^{km}, M4.3/12, MLv4.3/12, Error ellipse: s-maj=9.9km s-min=8.1km az=7.6, confirmed*
ISC 28 05:38:04.2±0.9**, 8°.38N**±0°.03×**82°.80W**±0°.02**, h32**^{km}±5^{km}**, n120, σ1^{s}31**/149**, 31C-27D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.03	21	⇓iP	Pb	05 38 09.1	-0.5
LESP3				eS	Sb	05 38 11.5	-1.8
LPPC	Paso Canoas	0.16	347	⇑eP	Pb	05 38 09.9	-0.5
LPPC				eS	Sb	05 38 14.8	+0.2
CDITO	Canoas	0.21	340	P	Pb	05 38 10.3	-0.5
CDITO	Canoas	0.21	340	S	Sb	05 38 15.9	+0.5
LIMO3	Limones	0.28	193	⇓iP	Pb	05 38 11.1	-0.6
LIMO3				eS	Sn	05 38 18.4	+1.2
LMNES	Limones	0.28	192	⇓eP	Pb	05 38 11.0	-0.6
LMNES	Limones	0.28	192	⇓iP	Pb	05 38 11.1	-0.6
NELY	Ciudad Neily	0.31	332	⇑eP	Pb	05 38 11.6	-0.5
NELY				eS	Sn	05 38 18.0	0.0
DVD	David	0.35	80	⇓iP	Pb	05 38 12.1	-0.5
DVD				eS	Sn	05 38 18.6	-0.4
CSTBL	De las Acacias	0.36	84	⇓eP	Pb	05 38 12.2	-0.5
CSTBL	De las Acacias	0.36	84	iP	Pb	05 38 12.2	-0.5
PEDE3	Pedregal, Chir	0.38	89	⇓iP	Pb	05 38 12.3	-0.6
LOCO3	Loma Colorada,	0.38	85	⇓iP	Pb	05 38 12.5	-0.5
LOMA3	Las Lomas, Chi	0.41	82	⇓iP	Pb	05 38 12.8	-0.6
CLLRA	Cordillera,	0.41	27	⇑eP	Pb	05 38 13.3	-0.3
CLLRA	Cordillera,	0.41	27	iP	Pb	05 38 13.3	-0.3
CLLRA				eS	Sn	05 38 21.1	+0.4
MLIR3	Monte Lirio, C	0.42	357	⇑iP	Pb	05 38 13.6	0.0
FITO	Golfito	0.43	305	⇑eP	Pb	05 38 12.3	-1.3
FITO				eS	Sb	05 38 19.6	-0.6
BRU2	Volcan	0.43	15	⇑eP	Pb	05 38 13.4	-0.4
BRU2				eS	Sn	05 38 21.0	-0.2
BRU2	Volcan	0.43	15	P	Pb	05 38 13.6	-0.2
BRU2	Volcan	0.43	15	⇑iP	Pb	05 38 13.5	-0.4
BRU2				eS	Sn	05 38 21.1	-0.1
PTAR3	Potrerillos Ar	0.44	44	⇓iP	Pb	05 38 13.7	-0.3
TBS2		0.44	19	eP	Pb	05 38 14.4	+0.4
RSRNO	Rio Sereno	0.44	352	⇑eP	Pb	05 38 14.0	0.0
RSRNO	Rio Sereno	0.44	352	⇑iP	Pb	05 38 14.1	0.0
RSRNO				eS	Sb	05 38 21.3	+0.6
EDAD	Golfito	0.45	307	⇑eP	Pb	05 38 12.8	-1.3
EDAD				eS	Sb	05 38 20.0	-0.9
SCLRA	Santa Clara, W	0.46	2	⇑eP	Pb	05 38 14.0	-0.2
SCLRA	Santa Clara, W	0.46	2	⇑iP	Pb	05 38 14.0	-0.2
SCLRA				eS	Sn	05 38 22.7	+1.0
CHIR3	Chiriqui UPA,	0.47	88	⇓iP	Pb	05 38 13.6	-0.7
CHIR3				iS	Sb	05 38 20.2	-0.9
VITO	San Vito	0.47	339	⇑eP	Pb	05 38 14.3	-0.1
BC3P	Paso Ancho	0.48	23	⇑iP	Pb	05 38 14.0	-0.5
BC3P				eS	Sn	05 38 22.4	0.0
BQTLY	Boquete Panama	0.51	42	⇓eP	Pb	05 38 14.5	-0.5
BQTLY	Boquete Panama	0.51	42	⇓iP	Pb	05 38 14.5	-0.5
BQTLY				eS	Sb	05 38 22.4	-0.1
BQSF3	Alto Boquete,	0.52	45	⇓iP	Pb	05 38 14.5	-0.7
BQSF3				eS	Sb	05 38 22.4	-0.2
PSOM3	Paja de Sombre	0.57	57	⇓iP	Pb	05 38 15.0	-0.9
PSOM3				eS	Sb	05 38 23.4	-0.4
ALCO	Alturas Coton,	0.57	357	⇑eP	Pb	05 38 15.2	-0.9
ALCO				eS	Sb	05 38 24.5	+0.3
EDP2	Potrero Grande	0.74	330	⇑eP	Pb	05 38 18.1	-0.6
PBNVO	Pueblo Nuevo,	0.79	50	⇓eP	Pb	05 38 18.2	-1.4
RBALA	Bur	0.81	52	⇓eP	Pb	05 38 18.9	-1.1
RBALA	Bur	0.81	52	⇓iP	Pb	05 38 18.9	-1.1
RBALA				eS	Sb	05 38 30.3	-0.4
PANP	Palmar Norte	0.87	312	⇑eP	Pb	05 38 19.6	-1.3
PANP				eS	Sb	05 38 32.5	+0.2
BURE	Buenos Aires	0.95	326	⇑eP	Pb	05 38 21.0	-1.3
RMDIO	Remedios, Chir	0.97	99	⇓eP	Pb	05 38 20.8	-1.7
RMDIO	Remedios, Chir	0.97	99	iP	Pb	05 38 20.9	-1.7
DRK0	Durika	0.98	334	⇑eP	Pb	05 38 21.3	-1.6
DRK0	Durika	0.98	334	P	Pb	05 38 21.4	-1.6
DRK0	Durika	0.98	334	⇑iP	Pb	05 38 21.4	-1.6
DRK0				eS	Sb	05 38 35.5	-0.2
EDPE	Pejibaye, P	1.09	316	⇑eP	Pn	05 38 23.0	-0.3
PDCAN	Manzana , Fuen	1.10	94	⇓eP	Pn	05 38 22.1	-1.3
OCHAL	Ojochal	1.10	311	P	Pn	05 38 23.2	-0.2
OCHAL	Ojochal	1.10	311	S	Sb	05 38 38.4	-0.4
ISBTO	Bastimentos Is	1.13	31	eP	Pn	05 38 24.1	+0.4
SAJE	San Jernim	1.19	324	⇑eP	Pn	05 38 24.2	-0.6
BRIBI	Bribri	1.24	359	⇑eP	Pb	05 38 26.9	-0.1
VERH	Veragua Rainfo	1.59	346	⇑eP	Pn	05 38 30.9	+0.7
MESA3	La Mesa, Verag	1.62	98	iP	Pn	05 38 30.4	-0.1
MESA3				iS	Sn	05 38 51.5	+1.3
GMAL	Guarumal, Vera	1.67	111	⇓eP	Pn	05 38 29.8	-1.4
GMAL	Guarumal, Vera	1.67	111	⇓eP	Pn	05 38 29.9	-1.4
GMAL				eS	Sn	05 38 52.8	+1.3
RSUS3	Rio de Jesus,	1.67	103	iP	Pn	05 38 31.0	-0.3
RSUS3				iS	Sn	05 38 52.6	+1.0
PIEC	Cerro El Cedra	1.69	317	eP	Pn	05 38 31.8	+0.1
VINA	Juan Vinas	1.77	328	eP	Pn	05 38 33.2	+0.4
TAAN	Batan	1.78	342	eP	Pn	05 38 33.9	+1.2
REPA	Paraso	1.79	324	eP	Pn	05 38 33.1	+0.1
VERB	Verbena	1.79	331	eP	Pn	05 38 33.4	+0.4
LCR2	La Lucha 2	1.80	319	⇑eP	Pn	05 38 33.3	0.0
LCR2	La Lucha 2	1.80	319	P	Pn	05 38 34.2	+0.9
LCR2	La Lucha 2	1.80	319	S	Sn	05 38 55.2	0.0
PCAYA	Pacayas	1.83	327	eP	Pn	05 38 34.4	+0.8
STIA3	Santiago, Vera	1.83	98	eP	Pn	05 38 33.8	+0.3
VTCV	VTCV, Calle Va	1.84	330	⇑eP	Pn	05 38 34.9	+1.1
RESJ	San Isidro (Tu	1.84	333	⇑eP	Pn	05 38 34.7	+1.0
IRES	Siquirres	1.84	338	eP	Pn	05 38 35.2	+1.6
ABRB	Las Abras (San	1.85	331	eP	Pn	05 38 35.3	+1.3
CVTV	Tajo	1.87	330	⇑eP	Pn	05 38 35.4	+1.1
PAR1A	Puntarenas Pro	1.88	310	⇓eP	Pn	05 38 35.2	+1.1
CVTQ	Turrialba Volc	1.88	330	eP	Pn	05 38 35.5	+1.0
VTLA	Turrialba Volc	1.88	329	⇑eP	Pn	05 38 35.2	+0.7
VTR0	Volcan Turrial	1.89	330	eP	Pn	05 38 35.5	+0.9
TRIO	Tres Rios	1.92	322	eP	Pn	05 38 35.7	+0.8
CALO3	Calobre, Verag	1.94	91	eP	Pn	05 38 35.5	+0.5
CORON	Coronado	1.98	323	eP	Pn	05 38 36.9	+1.2
ECI	Escuela Centro	1.98	322	eP	Pn	05 38 36.7	+1.0
LUJA	Lujan	1.99	321	eP	Pn	05 38 37.0	+1.2
MEXI	Barrio Mexico	2.01	321	eP	Pn	05 38 36.7	+0.7
HDC	Heredia	2.07	321	eP	Pn	05 38 37.7	+0.8
HEME	Heredia, Merce	2.08	321	eP	Pn	05 38 38.1	+1.1
BELE	Belen	2.10	319	eP	Pn	05 38 38.3	+1.1
CRIS3	El Cristo, Coc	2.17	93	eP	Pn	05 38 38.9	+0.8
CACAO	El Cacao, Vera	2.18	118	eP	Pn	05 38 38.4	+0.1
CACAO				⇑iP	Pb	05 38 40.6	-2.4
CACAO				eS	Sb	05 39 10.4	+0.8
CARI	Cariari	2.18	335	eP	Pn	05 38 39.9	+1.6
TCS1	Tacares	2.22	318	P	Pn	05 38 40.7	+1.8
TRB2	Turrubares	2.23	313	⇓eP	Pn	05 38 39.8	+0.8
TRT2	Tortugero	2.36	337	P	Pn	05 38 42.5	+1.8
TOSI3	Tonosi	2.53	112	eP	Pn	05 38 45.3	+2.3
CBL1	Cabuya	2.56	298	eP	Pn	05 38 43.1	-0.5
AZU	Azuero	2.57	103	eP	Pn	05 38 44.6	+1.0
AZU	Azuero	2.57	103	eP	Pn	05 38 45.2	+1.6
AZU				eS	Sn	05 39 16.0	+2.2
SOCE	Pocosol	2.68	318	P	Pn	05 38 48.2	+3.0
SOCE	Pocosol	2.68	318	S	Sn	05 39 21.3	+4.6
PCRI3	Pocri, Los San	2.75	105	eP	Pn	05 38 48.5	+2.4
ACHO3	Achotines, Los	2.77	110	eP	Pn	05 38 48.0	+1.6
ACHO3				eS	Sn	05 39 22.9	+4.1
COVE	Coope Vega, Sa	2.81	326	P	Pn	05 38 51.0	+4.0
COVE	Coope Vega, Sa	2.81	326	S	Sb	05 39 27.8	-0.1
JUNT	Juntas	2.85	312	eP	Pn	05 38 48.3	+0.8
JTS	Las Juntas de	2.85	312	⇓eP	Pn	05 38 48.0	+0.5
JTS	Las Juntas de	2.85	312	eP	Pn	05 38 48.1	+0.5
PEDA3	Pedasi	2.88	107	eP	Pn	05 38 50.9	+3.1
BCIP	Isla Barro Col	3.03	75	eP	Pn	05 38 51.1	+1.1
BCIP	Isla Barro Col	3.03	75	iP	Pn	05 38 51.0	+1.1
CHOR3	La Chorrera	3.05	80	eP	Pn	05 38 52.1	+1.9
CMARA	Lajas Hojancha	3.06	302	⇓eP	Pn	05 38 51.0	+0.5
CMARA	Lajas Hojancha	3.06	302	P	Pn	05 38 51.0	+0.5
CMARA	Lajas Hojancha	3.06	302	S	Sn	05 39 26.1	+0.1
ARRA3	Arraijan, Pana	3.16	79	eP	Pb	05 38 56.3	-3.5
UPA	Univ. de Panam	3.29	79	eP	Pn	05 38 57.6	+4.2
ALIBA	Liberia Airpor	3.49	309	⇓eP	Pn	05 38 58.8	+2.5
BLUN	Bluefields	3.73	345	⇑eP	Pn	05 39 00.4	+0.8
BLUN	Bluefields	3.73	345	P	Pn	05 39 00.7	+1.1
BLUN				S	Sn	05 39 39.3	-3.2
ESPN	Las Esperanzas	4.07	339	P	Pn	05 39 02.4	-1.8
ACON	Acoyapa	4.27	327	P	Pn	05 39 08.8	+1.8

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*ASRS **28** 06:05:51.0±0.8, 54°.35N×86°.81E, h0^{km}, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*
IDC 28 06:05:52.9±3.0**, 54°.34N×86°.86E, h0**^{km}**, mbtmp3.0**/2**, ML2.8**/2**, Error ellipse: s-maj=25.1km s-min=16.0km az=57.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.26	253	I	I	06 13 50.0	
	baz=70,slow=319,SNR=1.5						
ZALV	Zalesovo Beam	1.26	253	Pg	Pg	06 06 15.8	-1.1
	2.2nm,0.3s,baz=71,slow=14,SNR=17						
ZALV				Lg	Lg	06 06 34.1	
	3.1nm,0.3s,baz=70,slow=27,SNR=14						
KURBB	Kurchatov Arra	6.30	237	Pn	Pn	06 07 27.9	+1.0
	0.1nm,0.3s,baz=54,slow=13,SNR=7.5						
KURBB				Sn	Sn	06 08 38.9	-0.7
	baz=39,slow=20,SNR=2.1						
	0.8nm,0.4s						
MKAR	Makanchi Array	8.09	203	Pn	Pn	06 07 52.9	+1.4
	0.2nm,0.3s,baz=21,slow=13,SNR=5.5						
MKAR				Sn	Sn	06 09 21.8	-1.9
	0.2nm,0.3s,baz=19,slow=25,SNR=3.9						
	0.2nm,0.3s						

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*IDC **28** 06:06:30.7±0.9, 75°.41N×7°.20E, h0^{km}, mb3.1/5, mbtmp3.5/10, ML3.4/5, MS3.3/24, Error ellipse: s-maj=20.8km s-min=13.2km az=62.0*
*NAO **28** 06:06:32.8±1.5, 75°.45N×8°.79E, ML3.3*
*BER **28** 06:06:32.3±3.2, 75°.39N×8°.05E, h10^{km}, Mw3.8, ML3.3(NAO), Confirmed Earthquake*
*FCIAR **28** 06:06:39.0, 75°.85N×8°.19E, h10^{km}*
ISC 28 06:06:31.7±0.8**, 75°.47N**±0°.05×**8°.85E**±0°.08**, h10**^{km}**, n53, σ2^{s}58**/46**, mb3.0**/5**, MS3.3**/18**, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSPB	Hornsund (broa	2.22	43	Pn	Pn	06 07 10.1	+1.6
HSPB				Sn	Sn	06 07 35.8	-0.1
HSPB	Hornsund (broa	2.22	43	eP	Pn	06 07 09.5	+1.0
HSPB				eS	Sn	06 07 34.2	-1.7
HSPB	Hornsund (broa	2.22	43	eP	Pn	06 07 10.0	+1.5
HSPB				eS	Sn	06 07 35.9	0.0
HSPB				IAML		06 07 44.0	
	comp=Z,12nm,0.5s						
BRBA	Barentsburg A	2.88	23	Pn	Pn	06 07 18.9	+1.3
BRBA	Barentsburg A	2.88	23	eP	Pn	06 07 18.7	+1.2
SPA0	Spitsbergen Ar	3.22	29	Pn	Pn	06 07 24.3	+2.1
	baz=218,slow=16						
SPA0				Sn	Sn	06 08 02.3	+1.8
	baz=209,slow=37						
SPA0	Spitsbergen Ar	3.22	29	eP	Pn	06 07 23.3	+1.0
SPA0				eS	Sn	06 07 58.9	-1.6
SPA0	Spitsbergen Ar	3.22	29	Pn	Pn	06 07 24.3	+2.1
	baz=218,slow=16						
SPA0				Sn	Sn	06 08 02.3	+1.8
	baz=209,slow=37						
SPITS	Spitsbergen Ar	3.22	29	Pn	Pn	06 07 24.4	+2.1
	baz=214,slow=17						
SPITS				Sn	Sn	06 08 00.9	+0.3
	baz=230,slow=21						
	comp=Z,12nm,0.2s						
KBS	Kingsbay	3.54	10	Pn	Pn	06 07 26.9	+0.2
KBS	Kingsbay	3.54	10	eP	Pn	06 07 27.1	+0.4
KBS	Kingsbay	3.54	10	e	Pn	06 07 27.0	+0.4
KBS				e		06 07 34.1	
HOPEN	Hopen	4.06	67	Pn	Pn	06 07 36.6	+2.9
HOPEN				Sn	Sn	06 08 22.1	+0.9
HOPEN	Hopen	4.06	67	eP	Pn	06 07 35.2	+1.4
HOPEN				eS	Sn	06 08 21.3	+0.1
HOPEN	Hopen	4.06	67	eP	Pn	06 07 36.2	+2.5
HOPEN				eS	Sn	06 08 21.7	+0.5
HOPEN				IAML		06 08 26.3	
	comp=Z,13nm,0.3s						
JNW	Jan Mayen West	6.67	237	eP	Pn	06 08 03.8	-5.8
JNE	Jan Mayen East	6.67	236	eP	Pn	06 08 03.8	-5.8
JMIC	Jan Mayen	6.72	237	Pn	Pn	06 08 04.2	-6.0
	comp=Z,7.3nm,0.3s,baz=163,slow=17,SNR=10						
JMIC				LR	LR	06 09 56.7	
	comp=Z,148nm,19.2s,baz=194,slow=32						
	comp=Z,22nm,0.4s						
JMIC	Jan Mayen	6.72	237	eP	Pn	06 08 04.4	-5.8
KIF	Kilpisjarvi	7.43	145	Pn	Pn	06 08 22.6	+2.6
KIF				Sn	Sn	06 09 39.9	-4.3
KIF	Kilpisjarvi	7.43	145	Pn	Pn	06 08 22.6	+2.6
KIF				Sn	Sn	06 09 39.9	-4.3
ARA0	ARCESS Array S	7.75	132	Pn	Pn	06 08 25.3	+0.9
	baz=334,slow=22						
ARA0				Sn	Sn	06 09 46.4	-5.8
	baz=334,slow=22						
ARA0	ARCESS Array S	7.75	132	Pn	Pn	06 08 25.3	+0.9
	baz=334,slow=22						
ARA0				Sn	Sn	06 09 46.4	-5.8
	baz=334,slow=22						
ARCES	ARCESS Array B	7.75	132	Pn	Pn	06 08 27.7	+3.3
	comp=Z,0.9nm,0.3s,baz=323,slow=9.3,SNR=37						
ARCES				Sn	Sn	06 09 47.4	-4.8
	comp=Z,0.4nm,0.3s,baz=337,slow=18,SNR=5.1						
ARCES				LR	LR	06 11 47.3	
	comp=Z,108nm,19.1s,baz=328,slow=39						
	comp=Z,4.2nm,0.4s						
ZFI2	Zemlya Franca-	9.37	38	eP	Pn	06 08 48.8	+2.3
ZFI2				eS	Sn	06 10 26.7	-5.1
OMEGA	Omega	9.38	38	eP	Pn	06 08 48.8	+2.2
OMEGA				eS	Sn	06 10 26.7	-5.2
NOA	NORSAR Array B	14.52	175	LR	LR	06 15 06.4	
	comp=Z,29nm,18.8s,baz=15,slow=36						
BORG	Borgarnes	14.61	239	LR	LR	06 14 00.4	
	comp=Z,84nm,20.4s,baz=346,slow=32						
FINES	FINESS Array B	15.32	147	Pn	Pn	06 10 08.0	+0.3
	comp=Z,0.1nm,0.3s,baz=337,slow=13,SNR=1.8						
FINES				LR	LR	06 16 24.8	
	comp=Z,61nm,19.7s,baz=12,slow=38						
	comp=Z,3.4nm,1.0s						
HFS	Hagfors	15.51	171	Pn	Pn	06 10 12.0	+1.8
	comp=Z,0.2nm,0.3s,baz=20,slow=13,SNR=4.1						
	comp=Z,2.1nm,0.8s						
SFJD	Kangerlussuaq	19.93	277	LR	LR	06 17 42.0	
	comp=Z,75nm,19.0s,baz=3.0,slow=34						
KIRV	Kirov	22.37	117	LR	LR	06 20 31.3	
	comp=Z,72nm,18.9s,baz=345,slow=37						
NRIK	Noril'sk	22.75	64	LR	LR	06 23 11.4	
	comp=Z,69nm,18.6s,baz=334,slow=43						
AKASG	Malin Array Be	26.20	150	P	P	06 12 07.8	+1.7
	comp=Z,0.3nm,0.4s,baz=341,slow=8.2,SNR=1.5						
AKASG				LR	LR	06 21 29.7	
	comp=Z,40nm,21.2s,baz=48,slow=34						
	comp=Z,0.3nm,0.4s						
VRAC	Vranov	26.45	169	LR	LR	06 21 57.5	
	comp=Z,33nm,20.2s,baz=312,slow=35						
ARTI	Arti	26.45	108	LR	LR	06 23 25.1	
	comp=Z,44nm,20.1s,baz=17,slow=38						
GERES	GERESS Array B	26.80	173	P	P	06 12 12.3	+0.7
	comp=Z,0.1nm,0.3s,baz=0.9,slow=8.3,SNR=5.6						
	comp=Z,0.1nm,0.3s						
FRB	Frobisher Bay	26.98	287	LR	LR	06 21 39.2	
	comp=Z,102nm,21.5s,baz=38,slow=34						
BELG	Belogornoye	27.72	124	LR	LR	06 23 35.0	
	comp=Z,62nm,20.6s,baz=354,slow=36						
TIXI	Tiksi	28.62	35	LR	LR	06 23 41.8	
	comp=Z,57nm,18.2s,baz=12,slow=36						
AKTO	Aktyubinsk	31.85	114	LR	LR	06 26 33.6	
	comp=Z,75nm,19.2s,baz=306,slow=37						
BVAR	Borovoye Array	32.45	98	LR	LR	06 30 07.2	
	comp=Z,49nm,18.2s,baz=329,slow=43						
SCHQ	Schefferville	34.38	277	LR	LR	06 25 58.1	
	comp=Z,77nm,18.7s,baz=13,slow=34						
KBZ	Khabaz	35.10	135	LR	LR	06 28 11.4	
	comp=Z,51nm,21.0s,baz=332,slow=37						
ZALV	Zalesovo Beam	35.25	84	LR	LR	06 31 18.0	
	comp=Z,62nm,19.6s,baz=354,slow=42						
KURBB	Kurchatov Arra	36.70	92	LR	LR	06 32 14.6	
	comp=Z,67nm,19.4s,baz=166,slow=42						
YKA	Yellowknife Ar	37.59	321	P	P	06 13 42.9	-2.8
	comp=Z,0.1nm,0.7s,baz=0.4,slow=9.8,SNR=4.3						

	comp=Z,0.1nm,0.7s						
GNI	Garni	38.90	134	LR	LR	06 31 22.6	
	comp=Z,38nm,18.1s,baz=350,slow=38						
ILAR	Eielson Array	39.14	344	P	P	06 13 59.8	+1.0
	comp=Z,0.2nm,0.9s,baz=352,slow=7.6,SNR=5.0						
	comp=Z,0.2nm,0.9s						
MKAR	Makanchi Array	41.19	91	LR	LR	06 35 29.2	
	comp=Z,83nm,18.2s,baz=350,slow=42						
AAK	Ala-Archa	43.12	100	LR	LR	06 36 27.8	
	comp=Z,56nm,18.7s,baz=20,slow=41						
ULM	Lac du Bonnet	45.52	300	LR	LR	06 34 22.5	
	comp=Z,70nm,18.8s,baz=323,slow=37						
TXAR	Lajitas Array	67.22	299	P	P	06 17 25.1	-0.8
	comp=Z,0.3nm,0.9s,baz=46,slow=5.9,SNR=4.3						
	comp=Z,0.3nm,0.9s						

DNK 28 06:06:36.8±2.7, 77°.81N×45°.00W, h15^{km}, Western Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAG	Danmarks Havn	5.87	87	*i* P	Pn	06 08 03.1	+0.1
DAG				*e*S	Sn	06 09 04.2	-5.7
DBG	Daneborg	6.89	108	*i* P	Pn	06 08 14.7	-2.3
DBG				*e*S	Sn	06 09 31.3	-3.7
SCO	Scoresbysund	9.59	128	*i* P	Pn	06 08 51.5	-2.5
SCO				*e*S	Sn	06 10 29.4	-12

IDC 28 06:14:05.4±1.3, 51°.67N×82°.42E, h0^{km}, mbtmp2.5/3, ML2.1/3, Error ellipse: s-maj=19.4km s-min=12.1km az=129.0

NNC 28 06:14:16.6±6.6, 51°.01N×82°.57E, h20^{km}±54^{km}, mb2.7, mpv2.3, Error ellipse: s-maj=54.0km s-min=33.6km az=44.0, Suspected Mining explosion.

ISC 28 06:14:03.9±1.1, 51°.82N±0°.09×82°.67E±0°.08, h0^{km}, n8, σ0^{s}.85/10, 5C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZALV	Zalesovo Beam	2.50	31	Pn	Pb	06 14 50.3	+0.6
	1.9nm,0.3s,baz=213,slow=15,SNR=19						
ZALV				Sn	Sg	06 15 23.9	-0.3
	1.3nm,0.3s,baz=213,slow=21,SNR=7.0						
ZALV				Lg	Lg	06 15 31.3	
	1.3nm,0.3s,baz=206,slow=29,SNR=7.3						
	3.3nm,0.3s						
I46RU	ZALESOVO INFRA	2.50	31	I	I	06 34 10.0	
	baz=216,slow=302,SNR=3.3						
KURK	Kurchatov	2.77	248	⇓Pn	Pg	06 14 56.7	-0.3
	0.2nm,0.3s						
KURK				⇑Sn	Sb	06 15 28.7	-0.1
	2.1nm,0.5s						
KURBB	Kurchatov Arra	2.86	247	Pn	Pn	06 14 49.7	-1.1
	0.1nm,0.3s,baz=69,slow=19,SNR=5.1						
KURBB				Lg	Lg	06 15 30.2	
	0.2nm,0.3s,baz=68,slow=33,SNR=7.7						
	0.2nm,0.3s						
KURBB	Kurchatov Arra	2.86	247	⇑Pn	Pb	06 14 56.5	+0.7
	0.8nm,0.5s						
KURBB				⇑Sn	Sn	06 15 27.2	+1.2
	6.8nm,0.5s						
MAKZ	Makanchi	5.04	185	⇑Pn	Pn	06 15 19.9	-0.8
	0.9nm,0.8s						
MAKZ				⇓Lg	Lg	06 16 32.9	
	1.5nm,0.6s						
MK31	Makanchi Array	5.04	183	⇓Pn	Pn	06 15 19.9	-0.8
	0.5nm,0.6s,baz=13,slow=11,SNR=12						
MK31				⇑Lg	Lg	06 16 29.6	
	1.0nm,0.5s,baz=15,slow=27,SNR=7.3						
MKAR	Makanchi Array	5.04	183	Pn	Pn	06 15 21.0	+0.2
	0.3nm,0.3s,baz=8.5,slow=12,SNR=10						
MKAR				Lg	Lg	06 16 34.1	
	0.4nm,0.3s,baz=6.8,slow=25,SNR=13						
	0.4nm,0.3s						

NEIC 28 06:16:58.6±0.8, 35°.786N±0°.007×96°.69W±0°.01, h5^{km}±1^{km}, mb_Lg2.4/43, ML2.5/42, ML2.6/40, Error ellipse: s-maj=2.5km s-min=1.8km az=51.0

NEIC 28 06:16:58.7±0.9, 35°.788N±0°.005×96°.69W±0°.01, h7^{km}±3^{km}, Error ellipse: s-maj=1.8km s-min=0.6km az=105.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DEOK	Depew	0.17	71		Pg	06 17 02.6	+0.4
DEOK				Sg	Sg	06 17 05.2	+0.7
DEOK				IAML		06 17 06.1	
	comp=E,2µm,0.2s						
OK052	Battle Ridge R	0.22	336		Pg	06 17 03.6	+0.3
OK052				Sg	Sg	06 17 06.9	+0.6
OK052				IAML		06 17 07.2	
	comp=E,2µm,0.2s						
QUOK	Quay	0.38	358		Pg	06 17 06.5	+0.3
QUOK				Sg	Sg	06 17 11.8	+0.5
QUOK				IAML		06 17 12.1	
	comp=E,861nm,0.2s						
OK029	Liberty Lake	0.62	271		Pg	06 17 10.4	-0.2
OK029					Sg	06 17 19.4	+0.6
OK029				IAML		06 17 19.5	
	comp=E,341nm,0.3s						
OK048	Pawnee Station	0.66	342		Pg	06 17 11.3	-0.1
OK048				IAML		06 17 20.9	
	comp=E,276nm,0.3s						
OK004	Okla Sci Mus	0.69	248		Pg	06 17 12.3	+0.3
OK004					Sg	06 17 21.6	+0.6
OKCSW	OKLAHOMA CITY	0.72	238		Pg	06 17 12.6	+0.1
OKCSW					Sg	06 17 22.4	+0.5
OKCSW				IAML		06 17 22.9	
	comp=N,249nm,0.1s						
OK051	E0350 and S346	0.72	351		Pg	06 17 12.6	-0.1
OK051					Sg	06 17 22.6	+0.4
TUL3	Leonard	0.74	80		Pg	06 17 12.9	-0.1
TUL3					Sg	06 17 22.9	+0.3
FNO	Franklin	0.78	228		Pg	06 17 13.4	-0.4
FNO					Sg	06 17 24.4	+0.5
FNO				IAML		06 17 24.6	
	comp=E,398nm,0.2s						
FNO				IAML		06 17 24.6	
	comp=N,311nm,0.2s						
BLOK	Blackwell	1.06	337		Pg	06 17 18.9	-0.2
BLOK					Sg	06 17 33.0	+0.2
T35A	Sooner Cattle	1.14	7		Pg	06 17 19.8	-0.8
T35A					Sg	06 17 35.3	+0.1
T35A				IAML		06 17 35.6	
	comp=N,167nm,0.2s						
T35A				IAML		06 17 35.7	
	comp=N,154nm,0.2s						
CROK	Carrier	1.27	305		Pn	06 17 22.0	-0.8
CROK					Sg	06 17 39.5	0.0
KAN13	South Haven SW	1.38	333	IAmb_Lg		06 17 41.6	
	comp=Z,22nm,0.9s						
RLO	Rose Lookout	1.41	74		Pn	06 17 24.2	-0.5
GC02	Grant County #	1.42	319		Pb	06 17 25.4	-0.2
X34A	Smith Ranch, M	1.51	219		Pn	06 17 26.3	+0.1
KAN14	Manchester OK	1.55	319		Pn	06 17 26.9	+0.1
OK038	West end E0370	1.80	293		Pn	06 17 30.7	+0.5
LOOK	Love County	1.84	193		Pb	06 17 31.9	-0.7
U38A	Gravette	1.98	70		Pb	06 17 33.8	-1.2
WMOK	Wichita Mounta	2.00	239		Pn	06 17 33.9	+0.9
WMOK	Wichita Mounta	2.00	239	IAmb_Lg		06 18 01.7	
	comp=Z,19nm,0.7s						
HHAR	Hobbs	2.28	77		Pn	06 17 38.1	+1.3
WTFS	Witchita Falls	2.49	216		Pn	06 17 41.3	+1.6
WTFS					Sb	06 18 13.2	-1.4
Z35A	Perchaven, San	2.50	191		Pn	06 17 40.8	+1.1
MIAR	Mount Ida	2.84	115		Pn	06 17 45.4	+1.1
X40A	Basin Creek Fa	3.42	111		Pn	06 17 52.5	+0.1
UALR	University of	3.70	105	IAmb_Lg		06 19 03.0	
	comp=Z,7.5nm,0.8s						
CBKS	Cedar Bluff	3.88	322	IAmb_Lg		06 19 07.3	
	comp=Z,7.2nm,0.8s						
DKNS	Dickens	4.08	240	IAmb_Lg		06 19 18.3	
	comp=Z,6.2nm,1.0s						
AMTX	Amarillo	4.18	259	IAmb_Lg		06 19 19.4	
	comp=Z,7.5nm,0.9s						
R40A	Maddies Statio	4.33	53	IAmb_Lg		06 19 14.6	
	comp=Z,11nm,0.9s						
SN07	Snyder 07	4.39	233	IAmb_Lg		06 19 25.5	
	comp=Z,7.8nm,1.1s						
LCAR	Lake Charles	4.50	85	IAmb_Lg		06 19 23.2	
	comp=Z,6.1nm,0.8s						
SN05	Snyder 5	4.52	231	IAmb_Lg		06 19 25.5	
	comp=Z,5.3nm,0.8s						
T42A	Van Buren	4.68	73	IAmb_Lg		06 19 34.4	
	comp=Z,6.2nm,0.8s						
CCM	Cathedral Cave	4.92	61	IAmb_Lg		06 19 41.5	
	comp=Z,9.9nm,0.9s						
N35A	Tabor	5.13	9	IAmb_Lg		06 19 53.7	
	comp=Z,13nm,0.9s						
PBMO	Poplar Bluff	5.15	77	IAmb_Lg		06 19 48.6	
	comp=Z,9.9nm,0.8s						
P40A	Paris	5.25	43	IAmb_Lg		06 19 45.0	
	comp=Z,6.5nm,0.7s						
FVM	French Village	5.48	65	IAmb_Lg		06 19 57.8	
	comp=Z,7.8nm,0.8s						
N38A	Joes South For	5.69	28	IAmb_Lg		06 20 03.0	
	comp=Z,7.9nm,0.8s						
CGM3	Cape Girardeau	5.86	73	IAmb_Lg		06 20 07.1	
	comp=Z,8.1nm,0.8s						
JCT	Junction City	5.90	207	IAmb_Lg		06 20 18.3	
	comp=Z,7.6nm,1.2s						
T25A	Trinidad	6.37	284	IAmb_Lg		06 20 26.1	
	comp=Z,5.4nm,0.9s						
Q44A	Meyer Farm, Va	6.86	61	IAmb_Lg		06 20 44.8	
	comp=Z,7.2nm,0.7s						
K30B	Basset	7.24	343	IAmb_Lg		06 21 08.7	
	comp=Z,9.5nm,0.7s						
T47A	Sharon Grove	7.82	78	IAmb_Lg		06 21 09.9	
	comp=Z,5.7nm,0.8s						

AUST 28 06:16:56.5±0.5, 20°S±4°×14°9E±°, h10^{km}, mb3.8/3, ML3.9/7, Error ellipse: s-maj=9.6km s-min=6.3km az=24.3

IDC 28 06:16:59.7±2.9, 19°.42S×148°.15E, h0^{km}, mb3.6/1, mbtmp3.4/4, ML3.3/3, Error ellipse: s-maj=56.4km s-min=33.5km az=150.0

ISC 28 06:17:00.2±1.6, 19°.69S±0°.07×148°.4E±0°.1, h10^{km}, n12, σ1^{s}.78/13, Queensland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BW2S	Bowen Soft Roc	0.37	214	P	Pg	06 17 06.8	-0.7
BW2S				S	Sb	06 17 14.7	+0.1
CTAO	Charters Tower	2.10	259	P	Pn	06 17 35.5	+0.1
CTAO				S	Sg	06 18 09.2	+1.6
CN1H	Cairns Hard Ro	3.79	316	P	Pn	06 17 58.9	+0.2
MTSU	Mount Surprise	4.20	291	P	Pn	06 18 05.8	+1.4
AXCOZ	Aramac airstri	4.41	222	P	Pn	06 18 05.5	-1.7
EIDS	Eidsvold	6.16	157	P	Pn	06 18 24.4	-6.8
	comp=Z,77nm,0.4s,comp=Z,0.1nm						
COEN	Coen	7.61	318	P	Pn	06 18 52.1	+0.9
	comp=Z,13nm,2.4s						
QIS	Mount Isa	8.35	263	P	Pn	06 19 01.7	+0.3
	comp=Z,5.1nm,1.1s						
WRA	Warramunga Arr	13.28	267	Pn	Pn	06 20 05.8	-3.1
	comp=Z,0.1nm,0.3s,baz=89,slow=13,SNR=4.9						
WRA				Lg	Lg	06 23 55.5	
	comp=Z,0.3nm,0.3s,baz=89,slow=26,SNR=5.1						
	comp=Z,0.2nm,0.3s						
STKA	Stephens Creek	13.61	206	Pn	Pn	06 20 16.0	+2.7
	comp=Z,0.1nm,0.3s,baz=20,slow=15,SNR=1.4						
	comp=Z,1.0nm,0.5s						
ASAR	Alice Springs	14.08	251	Pn	Pn	06 20 17.4	-2.4
	comp=Z,0.1nm,0.3s,baz=76,slow=13,SNR=9.1						
ASAR				Lg	Lg	06 24 20.6	
	comp=Z,0.2nm,0.3s,baz=76,slow=26,SNR=4.5						
	comp=Z,0.6nm,0.7s						
MKAR	Makanchi Array	88.95	321	P	P	06 29 54.5	-0.5
	comp=Z,0.2nm,0.6s,baz=125,slow=7.2,SNR=3.5						
	comp=Z,0.2nm,0.6s						

GCG 28 06:20:06.5±2.1, 13°.95N×93°.43W, h35^{km}±68^{km}, MD4.5, ML3.8, MW3.4

MEX 28 06:20:12.0±0.7, 14°.34N×93°.27W, h16^{km}±52^{km}, MD4.2

ISC 28 06:20:03.8±1.8, 14°.23N±0°.07×93°.40W±0°.03, h14^{km}±11^{km}, n25, σ2^{s}.28/46, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.29	58	*e*P	Pg	06 20 29.7	+1.1
THIG				*e*S	Sn	06 20 48.3	+4.0
THIG		1.29	58	*i* P	Pg	06 20 29.9	+1.4
THIG				*i* S	Sn	06 20 48.5	+4.2
THIG				IAML		06 20 49.6	
	comp=E,1µm,0.4s						
PATR	El Naranjo	1.43	52	*e*P	Pg	06 20 31.3	-0.1
PATR				*i* S	Sb	06 20 47.2	-1.3
PCIG		1.47	7	*e*P	Pg	06 20 31.9	-0.2
PCIG				*i* S	Sn	06 20 47.8	-1.2
PAVE	Pavencul	1.52	51	*e*P	Pg	06 20 33.0	-0.1
PAVE				*i* S	Sn	06 20 48.2	-2.2
RTAL	Retalhuleu	1.68	80	*e*P	Pb	06 20 35.1	+0.6
RTAL				*e*S	Sb	06 20 56.8	+1.4
STG8	El Palmar, Qui	2.00	84	*i* P	Pn	06 20 37.3	0.0
STG8				IAML		06 21 07.5	
	comp=E,626nm,0.2s						
STG0	El Palmar, Qui	2.00	84	*i* P	Pn	06 20 37.1	-0.3
STG0				*i* S	Sn	06 21 00.9	-1.4
STG0				IAML		06 21 02.9	
	comp=E,864nm,0.3s						
HUEH	Huehuetenango	2.13	59	*e*P	Pb	06 20 42.9	+0.6
HUEH				*e*S	Sg	06 21 11.4	-0.9
HUEH	Huehuetenango	2.13	59	*i* P	Pb	06 20 43.2	+0.9
CCIG	Comitan	2.37	31	*e*P	Pg	06 20 47.5	-1.9
CCIG				*i* S	Sb	06 21 14.3	-1.4
CCIG	Comitan	2.37	31	*i* P	Pg	06 20 47.7	-1.7
CCIG				*i* S	Sg	06 21 20.0	-0.1
CCIG				IAML		06 21 28.0	
	comp=N,314nm,0.7s						
TGIG		2.54	6	*e*P	Pb	06 20 48.8	-0.5
TGIG				*i* S	Sn	06 21 15.6	0.0
TGIG		2.54	6	*i* P	Pb	06 20 48.8	-0.5
FG8	Yepocapa, Chim	2.75	89	*i* P	Pn	06 20 44.7	-2.9
CMIG	Matias Romero	3.18	333	*e*P	Pn	06 20 55.6	+2.2
CMIG				*i* S	Sn	06 21 32.6	+1.4
NUBE	Las Nubes	3.53	95	*i* P	Pn	06 21 01.3	+2.9
NUBE				*i* S	Sn	06 21 40.8	+0.9
NEUV	Arroyo Zacate	4.16	327	*e*P	Pn	06 21 09.6	+2.7
NEUV				*i* S	Sn	06 21 58.6	+3.2
PETF	Flores	4.32	51	*e*P	Pn	06 21 12.6	+3.5
PETF				*e*S	Sn	06 21 52.6	-6.8
PNIG	Pinotepa	5.04	296	*e*P	Pn	06 21 19.9	+0.8
PNIG				*i* S	Sn	06 22 14.2	-3.0
TXIG	Tlaxiaco	5.17	306	*e*P	Pn	06 21 21.6	+0.5
TXIG				*i* S	Sn	06 22 25.4	+4.8
TOIG	Toxpalan	5.21	318	*e*P	Pn	06 21 20.7	-0.8
TOIG				*i* S	Sn	06 22 19.6	-1.8
HLIG	Huajuapan de L	5.54	311	*e*P	Pn	06 21 27.8	+1.7
HLIG				*i* S	Sn	06 22 26.3	-3.5
FTIG	Fresnillo de T	5.84	309	*e*P	Pn	06 21 29.0	-1.1
FTIG				*i* S	Sn	06 22 34.8	-2.0
MGIG	Malinaltepec	5.86	301	*e*P	Pn	06 21 30.6	+0.2
MGIG				*e*S	Sn	06 22 38.8	+1.3

CATAC 28 06:37:19.3±0.3, 13°N±3°×8°8W±°, h26^{km}, M2.9/15, MLv2.9/15, Error ellipse: s-maj=5.8km s-min=2.5km az=22.6, confirmed

SNET 28 06:37:19.9±1.3, 12°.68N×87°.97W, h72^{km}, ML2.9

ISC 28 06:37:19.5±1.4, 12°.56N±0°.06×88°.04W±0°.03, h27^{km}±13^{km}, n36, σ0^{s}.64/48, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
POTN	Potosi Cosigui	0.68	50	P	Pn	06 37 33.5	+0.3
POTN				S	Sn	06 37 43.7	+0.7
CNCH	Conchagua	0.74	15	*e*P	Pn	06 37 34.5	+0.2
CNCH				*e*S	Sn	06 37 45.6	+0.9
CNCH	Conchagua	0.74	15	P	Pn	06 37 34.3	0.0
LCND	La Caada	0.76	11	*e*P	Pn	06 37 34.5	+0.2
LCND				*e*S	Sn	06 37 45.4	+0.4
LCND	La Caada	0.76	11	P	Pn	06 37 34.6	+0.2
LCND	La Caada	0.76	11	S	Sn	06 37 46.4	+1.4
ALJI	Alcalda de J	0.93	326	*e*P	Pb	06 37 37.1	+0.2
ALJI				*e*S	Sn	06 37 49.8	+0.7
ALJI	Alcalda de J	0.93	326	P	Pb	06 37 37.2	+0.3
ALJI	Alcalda de J	0.93	326	S	Sn	06 37 48.9	-0.2
CRIN	San Cristobal	0.97	82	P	Pb	06 37 37.9	+0.1
CRIN	San Cristobal	0.97	82	S	Sn	06 37 52.2	+1.8
PKGN	Cerro Pekin	1.04	84	P	Pb	06 37 39.1	+0.3
PKGN				S	Sn	06 37 52.8	+0.9
PQSS	Presa 15 de Se	1.18	334	*e*P	Pb	06 37 40.7	-0.5
PQSS				*e*S	Sb	06 37 56.1	+0.1
PQSS	Presa 15 de Se	1.18	334	P	Pn	06 37 40.4	+0.2
PQSS	Presa 15 de Se	1.18	334	S	Sb	06 37 55.7	-0.3
POLN	Al Sur del Vol	1.20	86	P	Pn	06 37 40.2	-0.3
POLN				S	Sb	06 37 57.0	+0.4
TECO	Alcaldia de Te	1.21	323	S	Sn	06 37 56.1	-0.2
TECO	Alcaldia de Te	1.21	323	P	Pn	06 37 40.2	-0.5
PLRN	Geotermica Pol	1.24	89	P	Pn	06 37 40.2	-0.8
PLRN				S	Sn	06 37 55.9	-0.9
CHOHN	Orocuina	1.25	43	S	Sn	06 37 57.0	-0.3
CHOHN	Orocuina	1.25	43	P	Pn	06 37 41.2	-0.1
UESV	Universidad de	1.30	326	P	Pn	06 37 41.8	-0.1
CNGA	Al SSO del Vol	1.30	93	P	Pn	06 37 40.3	-1.6
CNGA				S	Sn	06 37 57.9	-0.6
ILCN	San Idelfonso	1.30	89	P	Pn	06 37 42.3	+0.4
ILCN				S	Sn	06 37 58.5	0.0
SCLA	Alcaldia de Sa	1.32	329	P	Pn	06 37 42.6	+0.4
SCLA	Alcaldia de Sa	1.32	329	S	Sb	06 37 59.6	-0.6
COPN	Copaltepe	1.46	105	P	Pn	06 37 44.6	+0.5
LOMA	Loma Larga	1.55	314	S	Sn	06 38 04.6	0.0
LOMA	Loma Larga	1.55	314	P	Pn	06 37 45.3	0.0
TGUH	Tegucigalpa,Un	1.66	26	P	Pn	06 37 46.6	-0.4
TGUH				S	Sn	06 38 07.2	-0.3
PMON	Piamonte	1.69	313	*e*P	Pn	06 37 47.8	+0.4
PMON				*e*S	Sn	06 38 08.1	-0.1
PMON	Piamonte	1.69	313	P	Pn	06 37 47.5	+0.2
JAYA	Jayaque - finc	1.76	308	P	Pn	06 37 48.8	+0.5
JAYA	Jayaque - finc	1.76	308	S	Sn	06 38 09.4	-0.4
YUSH	Yuscaran	1.81	40	P	Pn	06 37 47.5	-1.5
YUSH	Yuscaran	1.81	40	S	Sn	06 38 10.5	-0.6

IDC 28 06:48:45.0±0.6, 3°.95N×78°.68W, h0^{km}, mb4.1/14, mbtmp4.1/17, ML3.7/3, MS3.4/22, Error ellipse: s-maj=24.9km s-min=14.6km az=69.0

NEIC 28 06:48:47.7±1.9, 3°.87N±0°.06×78°.77W±0°.08, h10^{km}±1^{km}, mb4.7/20, Error ellipse: s-maj=13.2km s-min=9.2km az=255.0

RSNC 28 06:48:48.0±0.0, 4°N±1°×7°9W±°, h30^{km}±6^{km}, M3.5, mb4.4, mB5.9, ML3.2, Mw(mB)5.5

VAO 28 06:48:50.5±0.5, 3°.71N×78°.79W, h42^{km}±5^{km}, mb4.7

ISC 28 06:48:45.5±2.1, 3°.87N±0°.03×78°.77W±0°.04, h4^{km}±13^{km}, n329, σ1^{s}.43/342, mb4.4/25, MS3.5/17, 4C, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GR1C	Gorgona, Isla	1.05	145	P	Pn	06 49 06.2	-0.7
GR1C				S	Sn	06 49 19.6	-2.4
MALC	Bahia Malaga	1.44	84	P	Pb	06 49 12.6	-0.2
MALC				S	Sg	06 49 31.4	-0.4
TUMC	Tumaco	2.03	179	Pn	Pn	06 49 20.9	+0.4
TUMC	Tumaco	2.03	179	P	Pn	06 49 20.3	-0.2
TUMC				S	Sn	06 49 44.3	-2.0
JAMC	Jamundi, Valle	2.19	107	P	Pn	06 49 22.7	-0.2
JAMC				S	Sn	06 49 48.2	-2.4
BBAC	Balboa, Cauca	2.39	140	P	Pn	06 49 25.3	-0.2
BBAC				S	Sn	06 49 51.5	-3.8
YOTC	Yotoco, Valle	2.42	87	P	Pn	06 49 25.7	-0.3
YOTC				S	Sn	06 49 54.4	-1.7
POPC	Popayan, Colom	2.48	122	P	Pn	06 49 26.7	-0.1
POPC				S	Sn	06 49 54.7	-2.8
PLMC	San Jos del P	2.69	67	P	Pn	06 49 28.5	-1.0
PLMC				S	Sn	06 49 55.8	-6.7
MAPC	Malpelo	2.83	273	P	Pn	06 49 29.0	-2.4
MAPC				S	Sn	06 49 58.3	-7.7
CRUC	La Cruz	2.92	141	P	Pn	06 49 34.8	+1.8
GCUF	Volcan Galeras	2.99	151	P	Pn	06 49 35.0	+0.9
GCUF				S	Sn	06 50 09.7	-0.9
CMBC	Cumbal	3.06	162	P	Pn	06 49 35.0	0.0
CMBC				S	Sn	06 50 07.8	-4.5
CBOC	Ciudad Bolivar	3.39	54	P	Pn	06 49 37.9	-1.4
CBOC				S	Sn	06 50 10.6	-9.4
PTAC	Punta Ardita,	3.39	16	P	Pn	06 49 37.7	-1.5
PTAC				S	Sn	06 50 11.0	-8.9
ANIL	Santa Ana	3.42	79	P	Pn	06 49 40.8	+1.0
CMAN1	Manizales, Cal	3.45	70	P	Pn	06 49 39.6	-0.6
CMAN1				S	Sn	06 50 17.0	-4.7
NIZA	Niza - Manizal	3.50	70	P	Pn	06 49 41.0	+0.1
NIZA				S	Sn	06 50 20.8	-2.0
ORTC	Ortega, Tolima	3.52	89	P	Pn	06 49 43.2	+2.3
ORTC				S	Sn	06 50 23.4	+0.4
BETC	Betania	3.53	109	P	Pb	06 49 44.5	-4.0
BETC				S	Sb	06 50 26.7	-5.1
CUSE	Cuicocha Este	3.56	174	P	Pn	06 49 41.4	-0.5
CUSE				S	Sn	06 50 20.7	-3.9
PAC1	Pacto, Paraso	3.58	180	P	Pn	06 49 40.8	-1.1
PAC1				S	Sn	06 50 19.6	-5.1
BONI	La Bonita	3.62	160	P	Pn	06 49 42.8	+0.3
BONI				S	Sn	06 50 25.3	-0.4
OTAV	Otavalo	3.62	175		Pn	06 49 42.1	-0.6
OTAV	Otavalo	3.62	175	*e*P	Pn	06 49 41.9	-0.8
OTAV				*e*S	Sn	06 50 21.9	-4.2
OTAV	Otavalo	3.62	175	P	Pn	06 49 42.1	-0.6
GUY2C	Guyana, Caldas	3.65	68	P	Pn	06 49 44.2	+1.0
GARC	Garzon, Huila	3.68	117	P	Pn	06 49 45.5	+2.2
GARC				S	Sn	06 50 26.0	-1.2
FLOC	Florencia	3.86	126	Pn	Pn	06 49 48.2	+2.7
FLOC	Florencia	3.86	126	P	Pn	06 49 48.3	+2.7
FLOC				S	Sn	06 50 27.7	-3.7
PRAC	Prado	3.88	92	P	Pn	06 49 48.5	+2.6
HELC	Santa Helena	3.97	54	P	Pn	06 49 47.8	+0.4
HELC				S	Sn	06 50 31.3	-3.3
CACAO	El Cacao, Vera	4.03	329	P	Pn	06 49 43.7	-4.2
DBBC	Dabeiba	4.04	39	P	Pn	06 49 48.8	+0.7
DBBC				S	Sn	06 50 35.7	-0.2
AZU	Azuero	4.17	339	P	Pn	06 49 45.6	-4.3
AZU				S	Sn	06 50 28.6	-11
NORC	Norcasia	4.24	66	P	Pn	06 49 52.6	+1.7
NORC				S	Sn	06 50 40.1	-0.7
URMC	La Uribe, Meta	4.43	98	P	Pn	06 49 55.9	+2.4
URMC				S	Sn	06 50 45.9	+0.3
ROSC	El Rosal	4.54	78	Pn	Pn	06 49 58.1	+2.8
	27nm,0.3s,baz=0.7,slow=4.6,SNR=29						
APAC	Apartado, Choc	4.56	28	P	Pn	06 49 57.5	+2.3
APAC				S	Sn	06 50 50.7	+2.0
CVER	Cruz Verde, Cu	4.73	82	P	Pn	06 50 00.8	+2.8
SPBC	San Pablo de B	5.01	69	P	Pn	06 50 03.4	+1.9
UREC	San Jos de Ur	5.03	40	P	Pn	06 50 04.1	+2.4
PTBC	PUERTO BERRIO,	5.05	58	P	Pn	06 50 03.6	+1.6
VILC	Villavicencio,	5.07	87	P	Pn	06 50 05.8	+3.4
CHIC	Chingaza	5.08	81	P	Pn	06 50 06.0	+3.2
MACC	Macarena, Meta	5.21	109	P	Pn	06 50 06.2	+2.0
ZARC	Zaragoza, Cauc	5.30	47	P	Pn	06 50 07.2	+1.7
BCIP	Isla Barro Col	5.37	349	Pn	Pn	06 50 05.6	-0.7
BCIP	Isla Barro Col	5.37	349	P	Pn	06 50 04.9	-1.4
	45nm,1.5s						
BCIP				S	Sn	06 51 00.4	-8.2
	45nm,1.5s						
PTLC	Puerto Leguiza	5.41	133	P	Pn	06 50 11.7	+4.7
BRJC	Barrancabermej	5.88	58	P	Pn	06 50 14.2	+0.8
	37nm,0.7s						
RUSC	La Rusia	6.01	70	Pn	Pn	06 50 17.4	+1.7
RUSC	La Rusia	6.01	70	P	Pn	06 50 18.8	+3.1
BARC	Barichara	6.19	64	P	Pn	06 50 20.0	+2.1
GUVC	San Jose del G	6.28	102	P	Pn	06 50 18.6	-0.2
COHC	Cochancay	6.31	184		Pn	06 50 19.3	0.0
OCAC	Ocana	6.95	51	P	Pn	06 50 30.3	+2.1
PAMC	Pamplona, Colo	6.96	60	P	Pn	06 50 30.0	+1.4
LCR2	La Lucha 2	7.81	319		Pn	06 50 41.9	+1.8
HDC	Heredia	8.07	319		Pn	06 50 45.5	+1.8
HDC	Heredia	8.07	319	*e*P	Pn	06 50 46.7	+3.0
SOCE	Pocosol	8.69	318	Pn	Pn	06 50 53.4	+1.3
JTS	Las Juntas de	8.85	316	Pn	Pn	06 50 54.6	+0.5
JTS	Las Juntas de	8.85	316	Pn	Pn	06 50 55.9	+1.7
	1.1nm,0.3s,baz=279,slow=14,SNR=4.1						
JTS				LR	LR	06 53 52.7	
	comp=Z,324nm,21.0s,baz=146,slow=35						
	7.7nm,0.6s						
SDV	Santo Domingo	9.50	58		Pn	06 51 03.7	+0.4
SDV	Santo Domingo	9.50	58	Pn	Pn	06 51 03.2	-0.1
	2.1nm,0.3s,baz=250,slow=11,SNR=4.9						
SDV				Sn	Sn	06 52 49.8	-0.9
	1.8nm,0.3s,baz=82,slow=6.7,SNR=3.2						
SDV				LR	LR	06 55 20.4	
	comp=Z,83nm,18.4s,baz=236,slow=42						
	3.9nm,0.4s						
SDV	Santo Domingo	9.50	58	*e*P	Pn	06 51 06.7	+3.5
SDV	Santo Domingo	9.50	58	P	Pn	06 51 06.1	+2.8
ACON	Acoyapa	10.24	322	Pn	Pn	06 51 13.5	+0.2
ATAH	Atahualpa	10.94	178	Pn	Pn	06 51 25.5	+2.3
	1.3nm,0.3s,baz=354,slow=6.5,SNR=12						

ATAH				LR	LR	06 55 48.7	
	comp=Z,158nm,21.9s,baz=360,slow=38						
	3.5nm,0.4s						
TBTG	Tabatinga, AM	11.94	132	Pn	Pn	06 51 36.4	-0.2
TBTG	Tabatinga, AM	11.94	132	eP	Pn	06 51 36.4	-0.2
CZSB	Cruzeiro do Su	13.02	152		Pn	06 51 51.2	-0.1
CZSB	Cruzeiro do Su	13.02	152	eP	Pn	06 51 51.7	+0.4
MTO3	Montecristo	14.78	316	Pn	Pn	06 52 16.6	+0.9
PCRV	Puerto La Cruz	15.36	65	LR	LR	07 00 01.5	
	comp=Z,98nm,20.6s,slow=44						
NNA	Nana	15.87	173	Pn	P	06 52 34.8	+1.1
	9.7nm,0.3s,baz=351,slow=10,SNR=30						
TEFE	Tefe	15.92	117	eP	Pn	06 52 30.1	-0.3
BOAV	Boa Vista	18.28	94	P	Pn	06 52 59.4	-0.8
TEIG	Tepich	18.71	331	P	Pn	06 53 06.8	+1.5
SJG	San Juan	18.79	40	LR	LR	07 01 01.5	
	comp=Z,24nm,19.4s,baz=168,slow=39						
MACA	Manacapuru-AM	19.38	111		Pn	06 53 13.1	-0.5
MACA	Manacapuru-AM	19.38	111	eP	P	06 53 12.1	-0.4
CMIG	Matias Romero	20.55	311	LR	LR	06 59 24.5	
	comp=Z,85nm,20.7s,baz=158,slow=31						
TDBA	Terre de Bas,	20.63	54	P	P	06 53 26.6	+0.5
LPAZ	La Paz	22.62	153		P	06 53 48.4	+0.2
LPAZ				IAmb	IAmb	06 53 56.0	
	comp=Z,11nm,0.8s						
LPAZ	La Paz	22.62	153	P	P	06 53 47.9	-0.3
	comp=Z,9.4nm,0.8s,baz=332,slow=8.6,SNR=37						
LPAZ				LR	LR	07 03 30.0	
	comp=Z,197nm,20.1s,baz=296,slow=39						
	comp=Z,9.4nm,0.8s						
LPAZ	La Paz	22.62	153	eP	P	06 53 46.3	-1.9
PB18	Visviri	23.21	157		P	06 53 56.3	+2.1
PB18				IAmb	IAmb	06 54 30.4	
	comp=Z,20nm,0.8s						
PB16	IPOC Station P	23.88	158	P	P	06 54 03.1	+2.2
PB16				IAmb	IAmb	06 54 10.8	
	comp=Z,46nm,1.5s						
ITTB	Itaituba	24.43	109	eP	P	06 54 05.4	-0.1
VILB	Vilhena	24.89	132		P	06 54 10.5	+0.9
VILB	Vilhena	24.89	132	eP	P	06 54 08.9	-0.7
GO01	Chusmiza	25.22	158	P	P	06 54 15.3	+2.3
GO01				IAmb	IAmb	06 54 20.4	
	comp=Z,15nm,0.5s						
PB08	IPOC Station P	25.66	159	P	P	06 54 18.0	+1.1
PB08				IAmb	IAmb	06 54 31.6	
	comp=Z,12nm,0.8s						
NPGB	Novo Progresso	25.76	115	eP	P	06 54 17.7	+0.1
MDP	Montagnes des	26.08	86	LR	LR	07 05 00.4	
	comp=Z,64nm,20.4s,baz=256,slow=38						
SIV	San Ignacio	26.38	139	LR	LR	07 04 51.2	
	comp=Z,167nm,19.1s,baz=286,slow=37						
PDRB	Porto dos Gac	26.78	125	eP	P	06 54 25.1	-1.7
456A	Hilliard	26.89	354	P	P	06 54 28.9	+1.4
CLDB	Colider	27.16	123	eP	P	06 54 29.2	-1.0
PB03	IPOC Station P	27.23	161	P	P	06 54 32.8	+2.0
PB03				IAmb	IAmb	06 54 51.1	
	comp=Z,15nm,0.9s						
PTLB	Pontes e Lacer	27.32	135	eP	P	06 54 31.3	-0.2
BBSD	Serra de San D	27.56	140	eP	P	06 54 33.6	-0.1
GOGA	Godfrey	29.71	352	P	P	06 54 53.4	+0.7
LRAL	Lakeview Retre	30.02	346		P	06 54 55.8	+0.4
Z47A	Carrollton	30.45	344	P	P	06 54 59.5	+0.4
Z47A				IAmb	IAmb	06 55 00.4	
	comp=Z,9.3nm,0.7s						
CPCT	Cooper Cave	31.87	351	P	P	06 55 12.7	+0.9
TKL	Tuckaleechee C	31.97	352	LR	LR	07 08 27.0	
	comp=Z,51nm,18.2s,baz=184,slow=37						
V48A	Smith Brothers	32.58	348	P	P	06 55 18.4	+0.5
V48A				IAmb	IAmb	06 55 19.1	
	comp=Z,12nm,1.3s						
TXAR	Lajitas Array	34.62	320	P	P	06 55 37.5	+1.6
	comp=Z,0.3nm,0.6s,baz=141,slow=8.1,SNR=4.6						
TXAR				PcP	PcP	06 58 10.7	+0.2
	comp=Z,1.4nm,0.9s,baz=133,slow=3.5,SNR=11						
TXAR				LR	LR	07 09 37.9	
	comp=Z,44nm,18.9s,baz=179,slow=36						
	comp=Z,0.3nm,0.6s						
BDFB	Brasilia	36.09	123	LR	LR	07 11 12.7	
	comp=Z,147nm,19.6s,baz=276,slow=37						
LPIG	La Paz	36.45	306	LR	LR	07 08 42.2	
	comp=Z,58nm,18.6s,baz=190,slow=33						
CPUP	Villa Florida	36.50	147	LR	LR	07 13 13.6	
	comp=Z,32nm,18.7s,baz=208,slow=40						
ANMO	Albuquerque	40.18	324	LR	LR	07 15 46.0	
	comp=Z,53nm,18.6s,baz=272,slow=40						
SADO	Sadowa	40.73	360	LR	LR	07 14 16.5	
	comp=Z,70nm,18.4s,baz=190,slow=38						
PV13	Radium Mtn., P	43.77	325	P	P	06 56 53.0	+0.4
PV13				IAmb	IAmb	06 56 55.1	
	comp=Z,9.2nm,1.1s						
PLCA	Paso Flores	45.02	171	P	P	06 57 03.1	+0.8
	comp=Z,2.5nm,0.6s,baz=352,slow=10,SNR=12						
	comp=Z,2.5nm,0.6s						
PFO	Pinyon Flats O	45.90	315	LR	LR	07 17 07.6	
	comp=Z,58nm,18.4s,baz=174,slow=37						
PDAR	Pinedale Array	47.42	329	P	P	06 57 22.0	+0.6
	comp=Z,1.2nm,0.9s,baz=120,slow=8.8,SNR=9.1						
PDAR				PcP	PcP	06 58 51.5	-0.5
	comp=Z,0.4nm,0.7s,baz=163,slow=1.3,SNR=3.2						
PDAR				LR	LR	07 19 33.9	
	comp=Z,43nm,18.1s,baz=152,slow=39						
	comp=Z,1.2nm,0.9s						
ULM	Lac du Bonnet	48.42	345	P	P	06 57 27.5	-1.2
	comp=Z,1.7nm,0.4s,baz=170,slow=7.9,SNR=6.6						
ULM				PcP	PcP	06 58 53.9	-1.1
	comp=Z,0.8nm,0.6s,baz=111,slow=2.1,SNR=3.1						
	comp=Z,1.7nm,0.4s						
NVAR	Mina Array Bea	49.77	319	P	P	06 57 39.8	+0.3
	comp=Z,1.1nm,0.6s,baz=129,slow=7.0,SNR=9.6						
NVAR				PcP	PcP	06 59 00.6	+0.1
	comp=Z,0.8nm,0.6s,baz=122,slow=4.1,SNR=5.5						
	comp=Z,1.1nm,0.6s						
SCHQ	Schefferville	51.72	9	P	P	06 57 53.1	-0.6
	comp=Z,3.1nm,0.8s,baz=196,slow=6.7,SNR=4.9						
	comp=Z,3.1nm,0.8s						
YBH	Yreka Blue Hor	54.39	320	LR	LR	07 23 55.7	
	comp=Z,4.7nm,18.1s,baz=136,slow=39						
NEW	Newport	55.06	330	LR	LR	07 25 52.1	
	comp=Z,54nm,18.0s,baz=171,slow=40						
YKA	Yellowknife Ar	64.22	342	P	P	06 59 20.6	-0.6
	comp=Z,1.2nm,0.8s,baz=136,slow=5.6,SNR=18						
YKA				LR	LR	07 31 38.3	
	comp=Z,67nm,18.1s,baz=195,slow=40						
	comp=Z,1.2nm,0.8s						
TOAD	Toad River Com	65.51	336	P	P	06 59 30.2	+0.4
	baz=127						
LIRD	Liard River Hi	66.20	336	P	P	06 59 34.7	+0.5
	baz=127						
BEAVL	Fort Liard	66.26	337	P	P	06 59 35.3	+0.7
	baz=128						
V35K	Ketchikan	66.46	330	P	P	06 59 36.5	+0.6
	baz=120						
DLBC	Dease Lake	67.33	334	P	P	06 59 42.4	+0.9
	baz=122						
WRGLY	Wrigley	67.60	340	P	P	06 59 43.6	+0.6
	baz=131						
WTLY	Watson Lake, Y	67.72	335	P	P	06 59 44.7	+0.7
	baz=124						
R33M	Jennings River	68.25	334	P	P	06 59 48.1	+0.7
	baz=122						
TGTN	Hyland Airport	68.32	337	P	P	06 59 48.6	+0.9
	baz=125						
Q32M	Nakina River	68.60	333	P	P	06 59 50.1	+0.5
	baz=120						
S32K	Killisnoo	68.94	331	P	P	06 59 52.2	+0.7
	baz=118						
R32K	Eaglecrest	69.29	332	P	P	06 59 54.5	+0.8
	baz=118						
P33M	Teslin, Yukon	69.48	334	P	P	06 59 55.6	+0.7
	baz=120						
P32M	Atlin	69.56	334	P	P	06 59 56.1	+0.7
	baz=119						
ICESG	Greenland Ices	70.09	14	i P	P	06 59 57.8	-1.1
MMPY	Sheldon Lake,	70.10	337	P	P	06 59 59.6	+0.9
	baz=123						
WHY	Whitehorse	70.59	334	P	P	07 00 02.4	+0.7
	baz=119						
PLBC	Pleasant Camp	70.69	333	P	P	07 00 03.0	+0.8
	baz=117						
FARO	Faro, Yukon	70.72	336	P	P	07 00 03.9	+1.4
	baz=120						
M31M	Drury Creek, Y	71.13	336	P	P	07 00 06.2	+1.2
	baz=120						
O30N	Mendenhall	71.17	334	P	P	07 00 06.3	+1.1
	baz=118						
P30M	Million Dollar	71.25	333	P	P	07 00 06.4	+0.6
	baz=116						
N31M	Braeburn, Yuko	71.37	335	P	P	07 00 07.1	+0.7
	baz=118						
HYT	Haines Junctio	71.81	334	P	P	07 00 09.6	+0.4
	baz=116						
N30M	Aishikik Lake	71.91	335	P	P	07 00 10.4	+0.7
	baz=117						
PNL	Peninsula	72.17	332	P	P	07 00 10.9	-0.3
	baz=114						
YUK6	Outpost Mounta	72.24	334	P	P	07 00 12.5	+0.6
	baz=115						
M30M	Minto, Yukon	72.30	336	P	P	07 00 12.4	+0.4
	baz=117,SNR=7.8						
YUK4	Talbot Arm	72.53	334	P	P	07 00 14.0	+0.3
	baz=115						
PINM	Pinnacle	72.74	333	P	P	07 00 15.2	+0.5
	baz=113						
H31M	Peel River	72.93	339	P	P	07 00 16.4	+0.7
	baz=121						
M29M	Somme Creek	72.93	335	P	P	07 00 16.6	+0.7
	baz=116,SNR=5.7						
SUMG	Summit	72.95	12		P	07 00 16.5	+0.4
SUMG	Summit	72.95	12	i P	P	07 00 16.4	+0.2
YUK8	Steele Glacier	73.00	334	P	P	07 00 16.8	+0.3
	baz=114						
J30M	Hart River	73.05	338	P	P	07 00 17.2	+0.6
	baz=118						
L29M	L29M	73.08	336	P	P	07 00 17.1	+0.5
	baz=116,SNR=6.0						
K29M	Barlow Dome	73.17	337	P	P	07 00 17.5	+0.3
	baz=117,SNR=12						
I30M	Mount Dempster	73.38	338	P	P	07 00 18.9	+0.4
	baz=118,SNR=6.2						
G31M	Satah River	73.48	340	P	P	07 00 20.0	+1.2
	baz=121						
YUK3	Moose Creek	73.50	334	P	P	07 00 20.1	+0.7
	baz=114						
MESA	MESA	73.56	332	P	P	07 00 20.0	+0.3
	baz=112						
F31M	Tsiigehtchic	73.57	341	P	P	07 00 19.2	-0.1
	baz=122						
CTG	Chitna Glacier	73.58	333	P	P	07 00 20.0	+0.3
	baz=113						
A36M	Sachs Harbour	73.89	346	P	P	07 00 20.2	-1.0
	baz=131						
BVCY	Beaver Creek	73.93	335	P	P	07 00 22.1	+0.4
	baz=114						
INK	Inuvik	73.96	342	P	P	07 00 21.6	0.0
	baz=122						
DAWY	Dawson	74.01	337	P	P	07 00 22.2	+0.1
	baz=115						
EPYK	Eagle Plains	74.05	339	P	P	07 00 22.6	+0.3
	baz=118						
I29M	Ogilvie Camp,	74.16	338	P	P	07 00 23.2	+0.3
	baz=117						
F30M	Barrier River	74.33	341	P	P	07 00 24.8	+0.9
	baz=120						
M27K	Edge Creek, AK	74.35	334	P	P	07 00 24.9	+0.6
	baz=112						
H29M	Whitestone	74.57	339	P	P	07 00 25.8	+0.5
	baz=117						
BCAR	Beaver Creek A	74.58	335		P	07 00 26.7	+1.2
L27K	Beaver Creek,	74.60	335	P	P	07 00 26.2	+0.7
	baz=113,SNR=11						
KAIM	Kayak Island	74.62	332	P	P	07 00 26.2	+0.5
	baz=110						
G29M	Pine Creek	74.76	339	P	P	07 00 26.7	+0.3
	baz=117						
I28M	Miner Creek	74.81	338	P	P	07 00 27.1	+0.3
	baz=115,SNR=7.2						
M26K	Nabesna, AK	74.85	334	P	P	07 00 27.5	+0.5
	baz=112						
NEEM	North Greenlan	75.01	6	i P	P	07 00 28.2	+0.2
BMRM	Bremner River	75.06	333	P	P	07 00 29.0	+0.7
	baz=110						
K27K	Chicken	75.08	336	P	P	07 00 28.8	+0.6
	baz=113						
L26K	Log Cabin Wild	75.23	335	P	P	07 00 29.6	+0.4
	baz=111,SNR=5.4						
Q23K	Middleton Isla	75.39	331	P	P	07 00 30.6	+0.5
	baz=108						
E29M	Blow River	75.41	341	P	P	07 00 30.1	0.0
	baz=118,SNR=5.4						
EYAK	Cordova Ski Ar	75.46	332	P	P	07 00 30.8	+0.3
	baz=108						
I27K	Kandik River	75.51	338	P	P	07 00 31.0	+0.2
	baz=114,SNR=7.2						
F28M	Old Crow	75.72	340	P	P	07 00 31.9	-0.1
	baz=116						
H27K	Steamboat Moun	75.73	338	P	P	07 00 31.9	-0.1
	baz=114						
KLU	Klutina	75.84	333	P	P	07 00 33.4	+0.6
	baz=108						
SCRK	Sand Creek	75.84	336	P	P	07 00 33.3	+0.5
	baz=111,SNR=5.1						
ESDC	Sonseca Array	75.85	50	P	P	07 00 32.8	-0.5
	comp=Z,0.7nm,0.7s,baz=273,slow=5.6,SNR=4.4						
ESDC				LR	LR	07 33 04.0	
	comp=Z,38nm,19.4s,baz=243,slow=35						
	comp=Z,0.7nm,0.7s						
J26L	Joseph Creek	75.86	336	P	P	07 00 33.2	+0.3
	baz=111,SNR=8.0						
I26K	Coal Creek Min	75.99	337	P	P	07 00 33.9	+0.5
	baz=112						
G27K	Doyon Strip	76.01	339	P	P	07 00 33.5	-0.2
	baz=114,SNR=5.4						
E28M	Babbage River	76.04	341	P	P	07 00 33.8	+0.1
	baz=116						
RIDG	Independent Ri	76.11	335	P	P	07 00 34.4	+0.1
	baz=110,SNR=6.0						
PAX	Paxson	76.11	334	P	P	07 00 34.2	-0.1
	baz=109						
M24K	Tolsona, Glenn	76.14	333	P	P	07 00 34.6	+0.1
	baz=108						
K24K	Donnelly Dome	76.52	335	P	P	07 00 36.6	0.0
	baz=109						
E27K	Coleen River	76.56	340	P	P	07 00 36.9	+0.2
	baz=114						
SCM	Sheep Creek Mo	76.58	333	P	P	07 00 37.1	+0.2
	baz=107						
J25K	Salcha River,	76.62	336	P	P	07 00 37.4	+0.2
	baz=110						
M23K	Glacier View	76.75	333	P	P	07 00 38.0	+0.1
	baz=107						
D27M	Malcolm River	76.79	341	P	P	07 00 37.3	-0.7
	baz=115						
G26K	Porcupine Rive	76.84	338	P	P	07 00 38.8	+0.5
	baz=112						
DHY	Denali Highway	76.97	334	P	P	07 00 39.0	-0.3
	baz=108						
WAT6	Susitna Watana	76.98	334	P	P	07 00 39.2	-0.2
	baz=107						
PRP	Porcupine Dome	76.99	337	P	P	07 00 39.7	+0.4
	baz=110						
SEW	Seward	77.09	331	P	P	07 00 39.9	+0.2
	baz=105						
HDA	Harding Lake	77.20	336	P	P	07 00 40.8	+0.4
	baz=108,SNR=6.0						
F26K	Sheenjek River	77.25	339	P	P	07 00 41.1	+0.6
	baz=112						
ILAR	Eielson Array	77.29	336	P	P	07 00 40.6	-0.2
	comp=Z,1.3nm,0.8s,baz=112,slow=4.2,SNR=14						
	comp=Z,1.3nm,0.8s						
H25L	Birch Creek	77.36	338	P	P	07 00 42.2	+1.1
	baz=110,SNR=6.0						
WAT1	Susitna Watana	77.42	334	P	P	07 00 42.0	+0.4
	baz=106						
BRSE	Bradley Lake S	77.63	330	P	P	07 00 42.9	0.0
	baz=104						
G25K	Bearman Lake	77.64	338	P	P	07 00 43.1	+0.4
	baz=110						
RND	Reindeer	77.71	334		P	07 00 43.8	+0.5
RND				IAmb	IAmb	07 00 44.7	
	comp=Z,8.9nm,0.8s						
F25K	Christian Rive	77.75	339	P	P	07 00 43.2	-0.2
	baz=110						
C27K	Jago River	77.83	341	P	P	07 00 43.6	-0.2
	baz=112						
MCK	McKinley	77.84	335	P	P	07 00 44.2	+0.2
	baz=106						
E25K	Arctic Village	77.91	339	P	P	07 00 44.2	0.0
	baz=110						
H24K	Noodor Dome	78.02	337	P	P	07 00 44.8	-0.1
	baz=108						
SUA	Susitna One	78.05	332	P	P	07 00 45.3	+0.1
	baz=104						
HOM	Homer	78.06	330	P	P	07 00 44.7	-0.5
	baz=103						
G24K	Hadweenzic Riv	78.13	338	P	P	07 00 45.8	+0.3
	baz=108						
NEA2	Nenana	78.14	335	P	P	07 00 45.7	+0.2
	baz=106						
TRF	Thorofare Moun	78.34	334	P	P	07 00 46.8	-0.1
	baz=105						
I23K	Minto, Yukon-K	78.41	336	P	P	07 00 47.2	+0.2
	baz=106						
SKT	Skwentna	78.54	333	P	P	07 00 47.9	+0.1
	baz=104						
F24K	Squaw Lake	78.54	338	P	P	07 00 48.0	+0.3
	baz=108						
D25K	Kavik River	78.60	340	P	P	07 00 48.9	+0.9
	baz=110						
O20K	Slope Mountain	78.63	331	P	P	07 00 48.9	+0.4
	baz=102						
H23K	Yukon River	78.67	337	P	P	07 00 48.9	+0.4
	baz=106						
BPAW	Bear Paw Mtn.	78.81	335	P	P	07 00 49.2	-0.1
	baz=104						
P19K	Oil Pt	78.84	330	P	P	07 00 49.6	0.0
	baz=102						
Q19K	Cape Douglas,	78.91	329	P	P	07 00 49.8	-0.1
	baz=101						
MLY	Manley	78.94	336	P	P	07 00 49.8	-0.3
	baz=105						
PPLA	Purkeypile	79.05	333	P	P	07 00 50.7	-0.1
	baz=103						
R18K	Karluk	79.08	328	P	P	07 00 50.8	0.0
	baz=100						
G23K	Bananza Creek	79.10	337	P	P	07 00 50.9	0.0
	baz=106						
CAST	Castle Rocks	79.12	334	P	P	07 00 50.9	-0.2
	baz=103						
M20K	Styx River	79.25	332	P	P	07 00 52.1	+0.3
	baz=102						
COLD	Coldfoot	79.31	338	P	P	07 00 52.7	+0.7
	baz=106						
CHUM	Lake Minchumin	79.33	334	P	P	07 00 51.7	-0.3
	baz=103						
E23K	Chandalar	79.33	339	P	P	07 00 53.0	+0.9
	baz=106						
D24K	Happy Valley	79.37	340	P	P	07 00 53.1	+0.9
	baz=107						
H22K	Ishtalitna Cre	79.42	337	P	P	07 00 53.0	+0.4
	baz=104						
TOLK	Toolik Lake Re	79.48	339	P	P	07 00 52.8	-0.1
	baz=107						
I21K	Tanana	79.49	336	P	P	07 00 52.3	-0.7
	baz=104						
C24K	Franklin Bluff	79.50	341	P	P	07 00 52.9	0.0
	baz=108						
N19K	Bonanza Creek	79.68	331	P	P	07 00 53.5	-0.7
	baz=101						
L20K	Farewell, AK	79.72	333	P	P	07 00 54.0	-0.3
	baz=102						
G22K	Bettles	79.73	338	P	P	07 00 54.4	+0.2
	baz=104						
M19K	Big River Lodg	79.84	332	P	P	07 00 55.2	+0.2
	baz=101						
O18K	Koktuh Hills	79.86	330	P	P	07 00 55.3	+0.2
	baz=100						
H21K	Melozitna Rive	79.93	336	P	P	07 00 55.4	0.0
	baz=103						
Q17K	Contact Creek	79.95	328	P	P	07 00 55.7	-0.1
	baz=99						
D23K	Nanushuk River	79.96	340	P	P	07 00 56.0	+0.5
	baz=106						
K20K	Telida	79.98	334	P	P	07 00 55.6	-0.1
	baz=102						
L19K	White Mountain	80.11	332	P	P	07 00 56.0	-0.5
	baz=101						
F22K	John River	80.12	338	P	P	07 00 56.3	-0.1
	baz=104						
E22K	Anaktuvuk Pass	80.14	339	P	P	07 00 56.6	+0.1
	baz=104						
C23K	Itkillik River	80.17	340	P	P	07 00 56.8	+0.2
	baz=106						
J20K	Nowinta River	80.18	335	P	P	07 00 56.8	+0.1
	baz=102						
N18K	Kilae Creek	80.34	331	P	P	07 00 57.8	+0.1
	baz=99						
G21K	Allakaket	80.40	337	P	P	07 00 58.0	+0.1
	baz=102						
M18K	Stony River	80.44	332	P	P	07 00 57.9	-0.3
	baz=100						
I20K	Naaghedeneel	80.44	335	P	P	07 00 58.0	-0.1
	baz=101						
F21K	Alatna River	80.55	338	P	P	07 00 58.8	+0.1
	baz=103						
D22K	Ayikyak River	80.64	339	P	P	07 00 59.5	+0.3
	baz=104						
R16K	Pilot Point	80.74	328	P	P	07 01 00.8	+1.0
	baz=97						
H20K	Anotleneega Mo	80.74	336	P	P	07 01 00.0	+0.3
	baz=101						
O17K	Koliganek Bris	80.79	330	P	P	07 01 00.1	0.0
	baz=98						
N17K	Nushagak Hills	80.95	331	P	P	07 01 00.9	0.0
	baz=98						
L18K	Granite Mounta	80.96	332	P	P	07 01 01.4	+0.5
	baz=99						
E21K	Killik River	81.00	339	P	P	07 01 02.0	+0.9
	baz=102						
P16K	Nushagak River	81.15	329	P	P	07 01 02.2	+0.2
	baz=97						
F20K	Avaraart Lake	81.37	337	P	P	07 01 03.3	+0.2
	baz=100						
H19K	Roundabout Mou	81.39	336	P	P	07 01 03.5	+0.3
	baz=100						
C21K	Knifeblade Rid	81.44	339	P	P	07 01 03.9	+0.6
	baz=102						
B21K	Ikpikpuk River	81.47	340	P	P	07 01 04.2	+0.7
	baz=102						
S14K	Fog Glacier	81.67	326	P	P	07 01 05.0	0.0
	baz=96						
L17K	Donlin	81.70	332	P	P	07 01 05.6	+0.8
	baz=98						
G19K	Purcell Mounta	81.75	336	P	P	07 01 05.8	+0.7
	baz=99						
E20K	Nigu River	81.77	338	P	P	07 01 06.0	+0.8
	baz=100						
K17K	Iditarod	81.78	333	P	P	07 01 05.8	+0.6
	baz=98						
D20K	Etivluk River	82.00	339	P	P	07 01 07.0	+0.6
	baz=100						
E19K	Redstone River	82.02	338	P	P	07 01 06.8	+0.3
	baz=99						
SDPT	Sand Point	82.11	325	P	P	07 01 07.0	-0.1
	baz=95						
H18K	Honhosa River	82.13	335	P	P	07 01 06.5	-0.6
	baz=98						
F19K	Shaleruckik Mo	82.13	337	P	P	07 01 06.9	-0.2
	baz=99						
L16K	Owhat River	82.20	332	P	P	07 01 07.8	+0.3
	baz=96						
G18K	Tagagawik	82.35	336	P	P	07 01 08.8	+0.6
	baz=98						
B20K	Meade River	82.41	340	P	P	07 01 08.8	+0.4
	baz=100						
A21K	Barrow	82.46	341	P	P	07 01 09.1	+0.4
	baz=100						
D19K	Kuna River	82.51	339	P	P	07 01 09.6	+0.6
	baz=98						
H17K	Granite Mounta	82.75	335	P	P	07 01 10.8	+0.4
	baz=96						
F18K	Selawik	82.84	337	P	P	07 01 10.7	-0.1
	baz=97						
O14K	Tigyukauivet M	82.85	329	P	P	07 01 10.0	-0.9
	baz=94						
J16K	Anvik River	82.88	333	P	P	07 01 11.3	+0.3
	baz=96						
I17K	Unalakleet	82.98	334	P	P	07 01 11.3	-0.2
	baz=96						
C19K	Lookout Ridge	83.12	339	P	P	07 01 12.1	-0.1
	baz=97						
G17K	Kiwalik Mounta	83.12	335	P	P	07 01 12.2	0.0
	baz=96						
L15K	Ungalak Mounta	83.15	332	P	P	07 01 12.4	-0.1
	baz=95						
E18K	Tukpahlearik C	83.30	337	P	P	07 01 12.8	-0.3
	baz=96						
F17K	Baldwin Pennin	83.46	336	P	P	07 01 14.4	+0.5
	baz=95						
C18K	Utukok River	83.65	339	P	P	07 01 15.3	+0.3
	baz=96						
H16K	Elim	83.72	335	P	P	07 01 15.4	+0.1
	baz=94						
E17K	Hotham Inlet	83.75	337	P	P	07 01 15.8	+0.3
	baz=95						

G16K	Koyuk River	83.82	335	P	P	07 01 15.9	+0.1
	baz=94						
J14K	Nanvaranak Lak	84.19	333	P	P	07 01 18.0	+0.3
	baz=93						
NOA	NORSAR Array B	86.64	29	P	P	07 01 31.0	+0.9
	comp=Z,1.0nm,0.7s,baz=276,slow=4.5,SNR=3.5						
	comp=Z,1.0nm,0.7s						
VNA3	Neumayer Olymp	87.04	162	⇑P	P	07 01 32.5	+0.7
	comp=Z,1.8nm,0.8s						
VNA2	Neumayer--Watz	87.63	162	⇑P	P	07 01 35.6	+1.0
	comp=Z,1.7nm,0.8s,baz=320,slow=4.7						
HFS	Hagfors	87.91	30	P	P	07 01 36.6	+0.4
	comp=Z,1.8nm,0.7s,baz=267,slow=5.8,SNR=2.6						
	comp=Z,1.8nm,0.7s						
SNAA	Sanae	89.25	162	⇑P	P	07 01 42.8	+0.4
	comp=Z,22nm,0.6s						
SNAA	Sanae	89.25	162	P	P	07 01 43.6	+1.2
	comp=Z,0.9nm,0.6s,baz=273,slow=5.4,SNR=8.2						
	comp=Z,0.9nm,0.6s						
TROLL	Troll, Antarti	90.97	162	⇑P	P	07 01 52.0	+1.5
	comp=Z,59nm,0.6s						
ARCES	ARCESS Array B	91.36	20	P	P	07 01 51.7	-0.5
	comp=Z,3.0nm,0.9s,baz=309,slow=7.7,SNR=3.7						
	comp=Z,3.0nm,0.9s						
ASAR	Alice Springs	142.82	235	PKhKP	PKPpre	07 08 16.9	
	comp=Z,1.8nm,0.6s,baz=112,slow=3.8,SNR=23						
WRA	Warramunga Arr	143.99	241	PKP	PKPbc	07 08 21.1	0.0
	comp=Z,10nm,1.0s,baz=108,slow=3.2,SNR=40						
CMAR	Chiang Mai Arr	157.70	6	PKPab	PKPab	07 09 15.7	-0.6
	comp=Z,1.2nm,0.3s,baz=335,slow=5.2,SNR=5.3						

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*IDC **28** 06:49:49.2±3.9, 53°79N×88°23E, h0^{km}, mbtmp2.6/3, ML2.2/3, Error ellipse: s-maj=38.7km s-min=21.5km az=45.0*

ASRS 28 06:49:47.0±1.2**, 53°79N×88°21E, h0^{km}, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	2.01	276	I	I	07 02 10.0	
	0.1nm,0.9s,baz=92,slow=310,SNR=4.6						
ZALV	Zalesovo Beam	2.01	276	Pn	Pg	06 50 25.1	-0.4
	1.3nm,0.3s,baz=92,slow=13,SNR=9.7						
ZALV				Lg	Lg	06 50 53.4	
	1.8nm,0.3s,baz=93,slow=29,SNR=8.7						
	2.9nm,0.4s						
KURBB	Kurchatov Arra	6.74	246	Pn	Pn	06 51 29.8	+2.7
	0.1nm,0.3s,baz=63,slow=14,SNR=4.7						
	0.5nm,0.4s						
MKAR	Makanchi Array	7.96	211	Pn	Pn	06 51 47.1	+3.2
	0.1nm,0.3s,baz=23,slow=14,SNR=2.0						
	0.1nm,0.3s						

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*IDC **28** 06:55:22.9±3.1, 54°46N×87°11E, h0^{km}, mbtmp3.1/2, ML2.5/2, Error ellipse: s-maj=27.7km s-min=17.8km az=62.0*

*NNC **28** 06:55:24.2±2.6, 54°46N×87°11E, h0^{km}, mb3.1, mpv2.9, Error ellipse: s-maj=24.0km s-min=13.5km az=1.0, Suspected Mining explosion.*

*ASRS **28** 06:55:24.0±1.2, 54°32N×86°79E, h0^{km}, M3.0, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

ISC 28 06:55:27.5±1.8**, 52°92N**±0°04×**85°9E**±0°1**, h0^{km}, n9, σ2^{s}83**/12**, 7C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.20	329	⇓P	Pn	06 55 50.0	-1.6
	0.7nm,0.7s						
ZAA0				⇓S	Sn	06 56 10.8	+2.2
	1.7nm,0.8s						
ZALV	Zalesovo Beam	1.20	329	Pg	Pg	06 55 48.6	-2.0
	0.5nm,0.3s,baz=68,slow=18,SNR=17						
ZALV				Lg	Lg	06 56 09.1	
	1.5nm,0.3s,baz=68,slow=26,SNR=7.6						
I46RU	ZALESOVO INFRA	1.21	329	I	I	07 03 30.0	
	0.1nm,0.8s,baz=71,slow=316,SNR=42						
KURK	Kurchatov	5.00	247	⇑Pn	Pg	06 57 01.4	-1.9
	1.7nm,1.1s						
KURK				⇓Lg	Lg	06 58 46.0	
	4.6nm,0.9s						
KURBB	Kurchatov Arra	5.10	246	Pn	Pb	06 56 59.7	+2.2
	0.1nm,0.3s,baz=55,slow=14,SNR=17						
	3.0nm,0.9s						
KURBB	Kurchatov Arra	5.10	246	⇑Pn	Pg	06 57 01.9	-3.2
	4.3nm,0.8s						
KURBB				⇑Lg	Lg	06 58 48.6	
	16nm,1.3s						
MK31	Makanchi Array	6.55	202	⇑Pn	Pg	06 57 28.8	-4.2
	0.2nm,0.5s,baz=28,slow=13,SNR=5.0						
MK31				⇑Sn	Sg	06 58 58.9	+1.1
	0.3nm,0.5s						
MK31				⇓Lg	Lg	06 59 49.6	
	5.2nm,1.2s,baz=31,slow=30,SNR=4.2						
MKAR	Makanchi Array	6.55	202	Pn	Pb	06 57 25.5	+3.2
	0.1nm,0.3s,baz=24,slow=14,SNR=5.3						
MKAR				Sn	Sg	06 58 58.4	+0.6
	baz=26,slow=26,SNR=5.0						
MKAR				Lg	Lg	06 59 42.8	
	baz=15,slow=30,SNR=6.3						
	0.2nm,0.4s						
MAKZ	Makanchi	6.61	204	⇓Pn	Pb	06 57 26.8	+3.5
	0.3nm,0.5s						
MAKZ				⇑Sn	Sg	06 59 00.5	+0.7
	2.8nm,1.1s						
MAKZ				⇑Lg	Lg	06 59 47.1	
	6.0nm,1.1s						

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*IDC **28** 07:04:15.3±0.6, 8°31N×126°23E, h0^{km}, mb4.3/21, mbtmp4.3/23, ML4.5/2, MS3.6/21, Error ellipse: s-maj=23.3km s-min=11.9km az=84.0*

*DJA **28** 07:04:19.2±0.4, 8°N±3°×12°6E±$^{\circ}$, h10^{km}, M5.0/15, mb4.9/15, mB5.3/4, MLv5.1/6, Mw(mB)4.8/4*

*BJI **28** 07:04:22.4, 8°45N×126°02E, h30^{km}, mB4.8/11, mb4.7/40, Ms4.2/11, Ms7 3.9/15*

*NEIC **28** 07:04:22.2±1.5, 8°29N±0°06×125°96E±0°10, h35^{km}±2^{km}, mb4.8/56, Error ellipse: s-maj=16.6km s-min=9.8km az=102.0*

ISC 28 07:04:21.9±0.4**, 8°31N**±0°04×**126°07E**±0°07**, h34^{km}, n128, σ1^{s}82**/127**, mb4.7**/56**, MS3.7**/24**, 2C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.33	202		Pn	07 04 43.4	-0.6
DAV				Sn	Sn	07 04 59.7	-0.9
DAV	Davao City (W)	1.33	202	Pn	Pn	07 04 43.3	-0.8
	456nm,0.3s,baz=38,slow=3.7,SNR=52						
DAV				Sn	Sb	07 05 06.8	+3.7
	252nm,0.3s,baz=292,slow=14,SNR=6.6						
SGSI	Sangihe	4.63	187	P	Pn	07 05 30.1	+0.6
SGSI				S	Sn	07 06 27.5	+5.4
TNTI	Ternate	7.60	170	P	Pn	07 06 11.1	+0.7
	0.3nm79nm,0.8s						
MYLDM	Lahad Datu	8.14	248	Pn	Pn	07 06 16.1	-1.7
MRSI	Marisa	8.80	208	P	Pn	07 06 28.1	+1.2
	807nm54nm,0.6s						
LUWI	Luwuk	9.86	200	Pn	Pn	07 06 40.5	-0.9
LUWI	Luwuk	9.86	200	P	Pn	07 06 43.1	+1.8
	187nm,1.0s						
TTSI	Tana Toraja	12.89	209	P	Pn	07 07 24.7	+1.8
	28nm,0.9s						
KAPI	Kappang	14.66	206	Pn	Pn	07 07 46.4	-0.6
KAPI	Kappang	14.66	206	Pn	Pn	07 07 47.0	0.0
	0.5nm,0.3s,baz=330,slow=1.9,SNR=4.1						
KAPI				LR	LR	07 13 12.2	
	comp=Z,290nm,21.2s,baz=3.0,slow=36						
	1.6nm,0.3s						
SMPI	Sarmi	16.23	129	P	Pn	07 08 08.8	+1.2
	96nm,1.1s						
SOEI	Soe	18.04	186		Pn	07 08 28.2	-2.0
JOW	Kunigami	18.54	6	P	P	07 08 35.4	-0.4
JOW				IAmb	IAmb	07 08 43.3	
	comp=Z,182nm,1.8s						
JOW	Kunigami	18.54	6	P	P	07 08 34.9	-0.9
	comp=Z,4.7nm,0.3s,baz=136,slow=20,SNR=18						
JOW				LR	LR	07 15 11.3	
	comp=Z,152nm,19.5s,baz=132,slow=35						
	comp=Z,7.0nm,0.3s						
QIZ	Qiongzhong	19.01	306	P	Pn	07 08 42.8	+0.9
QIZ				S	Sn	07 12 12.0	-2.0
QIZ				LR	LR		
	comp=Z,290nm,13.1s						
QIZ				LR	LR		
	comp=Z,370nm,17.0s						
KNRA	Kununurra	23.98	174		P	07 09 31.4	-2.1
KNRA				IAmb	IAmb	07 09 37.7	
	comp=Z,23nm,0.8s						
NJ2	Nanjing	24.56	345	*e*P	P	07 09 41.0	+2.3
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
JNU	Nakatsue	25.09	10	P	P	07 09 41.7	-1.8
JNU				IAmb	IAmb	07 09 47.9	
	comp=Z,27nm,0.9s						
JNU	Nakatsue	25.09	10	LR	LR	07 21 46.2	
	comp=Z,58nm,18.0s,baz=178,slow=42						
MDSI	Maura Dua	25.27	241	P	P	07 09 46.5	+1.2
	comp=Z,17nm,1.4s						
FITZ	Fitzroy Crossi	26.24	181		P	07 09 52.0	-2.0
JMN	Monobe	26.30	15	P	P	07 09 54.2	-0.3
COEN	Coen	27.88	142	P	P	07 10 10.6	+1.7
COEN				IAmb	IAmb	07 10 20.7	
	comp=Z,12nm,0.9s						
CMAR	Chiang Mai Arr	28.21	294	P	P	07 10 10.5	-1.4
	comp=Z,1.4nm,0.3s,baz=107,slow=7.3,SNR=7.9						
CMAR				PcP	PcP	07 13 25.4	+0.2
	comp=Z,1.3nm,0.3s,baz=53,slow=0.9,SNR=5.2						
CMAR				LR	LR	07 21 59.8	
	comp=Z,71nm,19.3s,baz=115,slow=38						
	comp=Z,1.4nm,0.3s						
KSAR	Wonju Array Be	29.05	3		P	07 10 19.1	+0.1
KSRS	Korea Array	29.06	3	P	P	07 10 16.6	-2.5
	comp=Z,0.5nm,0.3s,baz=187,slow=11,SNR=4.9						
	comp=Z,0.5nm,0.3s						
WB0	Warramunga Arr	29.08	164	P	P	07 10 16.8	-2.7
KS19	Wonju Array Si	29.11	3	P	P	07 10 20.4	+0.8
KS19				IAmb	IAmb	07 10 22.6	
	comp=Z,27nm,1.5s						
WRA	Warramunga Arr	29.23	164	P	P	07 10 19.6	-1.2
WRA	Warramunga Arr	29.23	164	P	P	07 10 18.6	-2.3
	comp=Z,1.4nm,0.7s,baz=344,slow=9.5,SNR=6.8						
WRA				LR	LR	07 23 06.5	
	comp=Z,113nm,19.1s,baz=352,slow=39						
	comp=Z,1.4nm,0.7s						
PZH	PanZhiHua	29.33	311	P	P	07 10 24.0	+2.1
XAN	Xi'an	30.09	331	⇑P	P	07 10 32.0	+3.6
XAN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
XAN				LR	LR		
	comp=Z,140nm,15.8s						
XAN				LR	LR		
	comp=Z,200nm,17.2s						
XAN				LR	LR		
	comp=Z,220nm,17.9s						
MJAR	Matsushiro Arr	30.20	20	P	P	07 10 26.5	-2.8
	comp=Z,5.2nm,0.7s,baz=194,slow=9.1,SNR=9.7						
MJAR				LR	LR	07 22 34.4	
	comp=Z,89nm,19.0s,baz=202,slow=36						
	comp=Z,5.2nm,0.7s						
JMM	Marumori	32.30	22	P	P	07 10 46.7	-1.0
AS31	Alice Springs	32.69	167	P	P	07 10 50.0	-1.3
ASAR	Alice Springs	32.69	167	P	P	07 10 49.9	-1.4
ASAR	Alice Springs	32.69	167	P	P	07 10 49.2	-2.1
	comp=Z,1.5nm,0.6s,baz=342,slow=7.0,SNR=19						
ASAR				LR	LR	07 23 35.5	
	comp=Z,103nm,18.6s,baz=316,slow=36						
	comp=Z,1.5nm,0.6s						
LZH	Lanzhou	34.29	327	*e*P	P	07 11 09.3	+4.0
LZH				pP	sP	07 11 19.8	+0.5
LZH				pmax	pmax		
	comp=Z,30nm,1.3s						
LZH				LR	LR		
	comp=Z,320nm,15.5s						
LZH				LR	LR		
	comp=Z,280nm,18.4s						
LZH				LR	LR		
	comp=Z,160nm,16.2s						
HHC	Hu-ho-hao-te	34.88	341	*e*P	P	07 11 13.0	+2.7
HHC				pmax	pmax		
	comp=Z,16nm,0.5s						
HHC				pmax	pmax		
	comp=Z,49nm,3.9s						
BTO	Baotou	35.20	339	*e*P	P	07 11 15.8	+2.8
BTO				pP	sP	07 11 28.0	+0.9
BTO				sP	pP	07 11 33.3	+10
BTO				PP	PP	07 12 36.5	+3.2
BTO				pmax	pmax		
	comp=Z,24nm,0.7s						
BTO				pmax	pmax		
	comp=Z,200nm,7.2s						
USA0B	Ussuriysk Arra	36.12	7		P	07 11 21.6	+0.9
USRK	Ussuriysk Ar.	36.12	7	P	P	07 11 20.8	0.0
	comp=Z,37nm,0.7s,baz=192,slow=7.8,SNR=36						
	comp=Z,37nm,0.7s						
MDJ	Mudanjiang	36.30	4	P	P	07 11 22.2	-0.1
MDJ	Mudanjiang	36.30	4	P	P	07 11 26.5	+4.2
MDJ				S	S	07 17 04.5	+3.7
MDJ				sS	sS	07 17 23.0	+5.8
MDJ				ScP	ScP	07 17 34.5	+3.7
MDJ				PcS	PcS	07 17 40.5	+6.2
MDJ				pmax	pmax		
	comp=Z,40nm,1.2s						
MDJ				LR	LR		
	comp=Z,190nm,13.6s						
MDJ				LR	LR		
	comp=Z,150nm,11.4s						
MDJ				LR	LR		
	comp=Z,150nm,12.7s						
BNX	BinXian	37.31	2	⇓P	P	07 11 34.5	+3.6
BNX				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ASAJ	Asahikawa	38.47	19	LR	LR	07 29 03.9	
	comp=Z,83nm,18.1s,baz=188,slow=39						
GTA	Gaotai	38.89	327	*e*P	P	07 11 44.0	-0.5
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
FORT	Forrest	38.91	177	P	P	07 11 43.1	-1.4
FORT				IAmb	IAmb	07 11 44.1	
	comp=Z,17nm,1.1s						
LSA	Lhasa	39.03	308	P	P	07 11 47.5	+1.3
GOMU	GeErMu	39.76	319	P	P	07 11 53.5	+1.4
GOMU				sP	sP	07 12 06.3	+0.1
GOMU				pmax	pmax		
	comp=Z,15nm,1.2s						
GOMU				LR	LR		
	comp=Z,110nm,16.4s						
GOMU				LR	LR		
	comp=Z,86nm,13.3s						
GOMU				LR	LR		
	comp=Z,130nm,18.0s						
KLR	Kul'dur	41.06	6	LR	LR	07 29 29.3	
	comp=Z,71nm,18.9s,baz=182,slow=37						
HEH	HeiHe	41.82	1	*e*P	P	07 12 11.5	+3.1
HEH				pmax	pmax		
	comp=Z,18nm,0.9s						
EVN	Everest	41.85	303		P	07 12 07.7	-2.1
BBOO	Buckleboo	41.98	167	P	P	07 12 08.5	-1.4
BBOO				IAmb	IAmb	07 12 10.4	
	comp=Z,19nm,0.8s						
STKA	Stephens Creek	42.63	160	P	P	07 12 14.4	-0.8
STKA				IAmb	IAmb	07 12 21.7	
	comp=Z,33nm,0.9s						
STKA	Stephens Creek	42.63	160	P	P	07 12 13.2	-2.0
	comp=Z,4.4nm,0.8s,baz=348,slow=8.4,SNR=5.9						
	comp=Z,4.4nm,0.8s						
WMQ	Urumqi	48.65	323	*e*P	P	07 13 05.0	+2.2
WMQ				LR	LR		
	comp=Z,160nm,21.5s						
MKAR	Makanchi Array	53.47	324		P	07 13 37.4	-1.6
MKAR	Makanchi Array	53.47	324	P	P	07 13 38.0	-1.0
	comp=Z,4.8nm,0.9s,baz=116,slow=7.5,SNR=25						
MKAR				PcP	PcP	07 14 44.6	-1.0
	comp=Z,6.1nm,1.2s,baz=116,slow=5.5,SNR=4.6						
	comp=Z,4.8nm,0.9s						
MAKZ	Makanchi	53.66	324		P	07 13 39.7	-0.6
MAKZ				IAmb	IAmb	07 13 46.7	
	comp=Z,11nm,1.1s						
MAKZ	Makanchi	53.66	324	P	P	07 13 39.4	-0.9
MAKZ				sP	sP	07 13 54.2	-0.5
YAK	Yakutsk	53.68	2	LR	LR	07 38 13.4	
	comp=Z,50nm,19.4s,baz=148,slow=38						
TARG	Taragay, Kyrgy	53.96	316		P	07 13 43.1	0.0
TARG				IAmb	IAmb	07 14 02.8	
	comp=Z,6.4nm,0.8s						
KSH	Kashi	54.41	313	P	P	07 13 50.5	+4.5
KDJ	Kajisay	54.55	317	P	P	07 13 46.1	-1.0
KDJ				IAmb	IAmb	07 13 51.5	
	comp=Z,19nm,1.2s						
NIL	Nilore	54.69	305		P	07 13 47.3	-0.7
NRN	Naryn	55.09	315		P	07 13 50.5	-0.7
NRN				IAmb	IAmb	07 13 55.9	
	comp=Z,19nm,1.3s						
BOOM	Boomskoye usch	55.54	316		P	07 13 53.6	-0.7
BOOM				IAmb	IAmb	07 13 59.1	
	comp=Z,15nm,1.3s						
ZAA0	Zalesovo Array	56.25	332	P	P	07 13 57.7	-1.1
ZALV	Zalesovo Beam	56.25	332	P	P	07 13 58.4	-0.4
ZALV	Zalesovo Beam	56.25	332	P	P	07 13 56.5	-2.3
	comp=Z,1.1nm,0.6s,baz=106,slow=9.4,SNR=6.2						
	comp=Z,1.1nm,0.6s						
AAK	Ala-Archa	56.58	316		P	07 14 00.9	-0.8
AAK				IAmb	IAmb	07 14 14.5	
	comp=Z,14nm,1.6s						
AAK	Ala-Archa	56.58	316	LR	LR	07 39 58.4	
	comp=Z,130nm,21.9s,baz=94,slow=38						
DRK	Karamyk	57.44	312	P	P	07 14 06.5	-1.4
KURK	Kurchatov	57.57	326		P	07 14 07.8	-0.5
KURK				IAmb	IAmb	07 14 12.5	
	comp=Z,7.3nm,0.8s						
KURBB	Kurchatov Arra	57.57	326	P	P	07 14 07.7	-0.6
	comp=Z,1.9nm,0.3s,baz=127,slow=6.3,SNR=11						
	comp=Z,1.9nm,0.3s						
KBL	Kabul	58.29	306		P	07 14 13.0	-0.9
KBL				IAmb	IAmb	07 14 18.1	
	comp=Z,9.3nm,0.8s						
BTK	Batken	58.34	312	P	P	07 14 12.8	-1.2
GAR	Garm	58.41	311		P	07 14 13.8	-0.7
SIMJ	Simiganj	59.30	310		P	07 14 20.3	-0.4
SIMJ				IAmb	IAmb	07 14 25.8	
	comp=Z,8.7nm,1.0s						
KK31	Karatay Array	59.49	315		P	07 14 20.3	-1.6
KKAR	Karatay Array	59.49	315		P	07 14 20.4	-1.4
BVAR	Borovoye Array	63.16	326	P	P	07 14 45.4	-1.1
	comp=Z,6.0nm,1.0s,baz=111,slow=8.1,SNR=8.8						
	comp=Z,6.0nm,1.0s						
BRVK	Borovoye	63.24	326		P	07 14 46.2	-0.8
BRVK				IAmb	IAmb	07 14 51.7	
	comp=Z,9.0nm,0.9s						
BRVK	Borovoye	63.24	326	P	P	07 14 45.7	-1.2
TIXI	Tiksi	63.30	1		P	07 14 48.1	+1.1
TIXI				IAmb	IAmb	07 14 51.0	
	comp=Z,13nm,0.9s						
ATKA	Atka Island	65.16	36	P	P	07 14 58.4	-1.1
THZ	Tophouse	65.72	143	P	P	07 15 02.5	-0.9
NRIK	Noril'sk	65.86	346	P	P	07 15 03.8	0.0
NRIK				IAmb	IAmb	07 15 07.3	
	comp=Z,8.7nm,0.9s						
NRIK	Noril'sk	65.86	346	P	P	07 15 04.3	+0.6
	comp=Z,5.7nm,0.8s,baz=118,slow=2.0,SNR=6.3						
	comp=Z,5.7nm,0.8s						
BKZ	Black Stump Fm	66.43	139		P	07 15 07.8	-0.2
BKZ				IAmb	IAmb	07 15 14.0	
	comp=Z,13nm,1.1s						
RTZ	Ruatahuna	66.44	138		P	07 15 08.6	+0.4
ABKAR	Akbulak array	68.23	320		P	07 15 17.6	-1.6
AKTO	Aktyubinsk	69.70	321	P	P	07 15 27.1	-1.3
	comp=Z,1.5nm,0.3s,baz=102,slow=6.7,SNR=11						
AKTO				LR	LR	07 46 50.0	
	comp=Z,60nm,18.5s,baz=144,slow=37						
	comp=Z,1.5nm,0.3s						
ARTI	Arti	70.83	327	P	P	07 15 34.3	-0.8
	comp=Z,1.8nm,0.3s,baz=2.9,slow=2.7,SNR=5.6						
ARTI				LR	LR	07 49 18.0	
	comp=Z,56nm,18.1s,baz=86,slow=38						
	comp=Z,1.8nm,0.3s						
E18K	Tukpahlearik C	75.99	22		P	07 16 05.2	-0.1
E18K				IAmb	IAmb	07 16 10.9	
	comp=Z,6.2nm,0.9s						
C18K	Utukok River	76.04	21	P	P	07 16 05.5	-0.2
C18K				IAmb	IAmb	07 16 41.8	
	comp=Z,26nm,1.8s						
M17K	Holitna River	76.28	29	P	P	07 16 08.1	+1.0
M17K				IAmb	IAmb	07 18 38.6	
	comp=Z,33nm,1.9s						
BELG	Belogornoye	76.41	322	P	P	07 16 07.8	-0.2
	comp=Z,11nm,0.9s,baz=117,slow=3.4,SNR=5.1						
	comp=Z,11nm,0.9s						
D19K	Kuna River	77.12	22		P	07 16 11.2	-0.6
D19K				IAmb	IAmb	07 16 17.9	
	comp=Z,13nm,1.2s						
E19K	Redstone River	77.27	23		P	07 16 12.7	+0.1
E19K				IAmb	IAmb	07 16 18.1	
	comp=Z,10nm,1.2s						
H19K	Roundabout Mou	77.30	25		P	07 16 12.0	-0.7
H19K				IAmb	IAmb	07 16 18.3	
	comp=Z,6.8nm,0.9s						
N19K	Bonanza Creek	77.64	30	P	P	07 16 15.4	+0.5
F20K	Avaraart Lake	77.79	23	P	P	07 16 16.1	+0.7
GNI	Garni	78.08	309	LR	LR	07 54 59.1	
	comp=Z,29nm,20.2s,baz=78,slow=39						
RAYN	Ar Rayn	78.12	292		P	07 16 16.6	-1.7
RAYN				IAmb	IAmb	07 16 21.3	
	comp=Z,8.0nm,1.3s						
KDAK	Kodiak Island	78.40	33	LR	LR	07 48 34.4	
	comp=Z,26nm,20.4s,baz=216,slow=34						
IMAR	Indian Mountai	78.46	24	P	P	07 16 19.3	+0.2
H21K	Melozitna Rive	78.81	25	P	P	07 16 20.7	-0.5
CAST	Castle Rocks	78.97	27		P	07 16 21.2	-0.8
KBZ	Khabaz	79.39	313	LR	LR	07 56 31.0	
	comp=Z,33nm,19.8s,baz=50,slow=39						
MLY	Manley	79.64	25		P	07 16 25.5	-0.2
ILAR	Eielson Array	81.28	26	P	P	07 16 32.4	-2.1
	comp=Z,0.5nm,0.8s,baz=239,slow=5.3,SNR=11						
	comp=Z,0.5nm,0.8s						
BMAR	Burnt Mountain	82.14	23	P	P	07 16 39.6	+0.6
I28M	Miner Creek	84.17	25		P	07 16 50.1	+0.5
ARCES	ARCESS Array B	85.95	340	LR	LR	08 00 04.9	
	comp=Z,52nm,18.4s,baz=250,slow=39						
FINES	FINESS Array B	87.51	332	P	P	07 17 04.2	-1.9
	comp=Z,1.6nm,0.8s,baz=92,slow=12,SNR=4.7						
FINES				LR	LR	08 00 13.0	
	comp=Z,36nm,19.5s,baz=116,slow=38						
	comp=Z,1.6nm,0.8s						
AKASG	Malin Array Be	87.95	321	P	P	07 17 06.7	-1.7
	comp=Z,0.1nm,0.3s,baz=67,slow=4.9,SNR=6.7						
	comp=Z,0.1nm,0.3s						
VNDA	Vanda	88.02	173		P	07 17 07.5	-0.6
VNDA	Vanda	88.02	173	P	P	07 17 06.2	-2.0
	comp=Z,1.6nm,0.8s,baz=302,slow=6.0,SNR=7.4						
	comp=Z,1.6nm,0.8s						
HFS	Hagfors	93.69	332	LR	LR	08 03 00.2	
	comp=Z,64nm,18.2s,baz=58,slow=38						
NOA	NORSAR Array B	94.42	334	LR	LR	08 04 16.4	
	comp=Z,33nm,19.1s,baz=60,slow=38						
YKA	Yellowknife Ar	95.61	24	P	P	07 17 41.6	-2.1
	comp=Z,0.4nm,0.8s,baz=304,slow=5.3,SNR=8.9						
	comp=Z,0.4nm,0.8s						
VRAC	Vranov	96.17	322	LR	LR	08 02 57.0	
	comp=Z,23nm,18.4s,baz=347,slow=37						
SYO	Syowa Base	96.43	201	⇑*e*P	P	07 17 48.3	+1.1
GERES	GERESS Array B	98.11	322	P	Pdif	07 17 56.2	+0.7
	comp=Z,0.8nm,0.9s,baz=46,slow=7.6,SNR=6.8						
	comp=Z,0.8nm,0.9s						
LPAZ	La Paz	164.03	121	PKP	PKPdf	07 24 20.8	-2.7
	comp=Z,1.3nm,0.9s,baz=231,slow=2.4,SNR=4.6						

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*CATAC **28** 07:21:30.3±0.7, 14°N±9°×9°0W±$^{\circ}$, h230^{km}±5^{km}, M2.6/10, MLv2.6/10, Error ellipse: s-maj=19.1km s-min=5.9km az=15.5, confirmed*

*GCG **28** 07:21:52.7±0.3, 14°36N×90°79W, h50^{km}±999^{km}, MD3.3*

ISC 28 07:21:28.1±1.3**, 14°5N**±0°2×**90°40W**±0°09**, h250^{km}, n19, σ1^{s}60**/18**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FG16	Alotenango, Sa	0.20	210	*i* P	Pn	07 22 01.4	+0.7
FG8	Yepocapa, Chim	0.24	219	*e*P	Pn	07 22 01.2	+0.6
FAME	Alcaldia de Sa	0.71	148	P	Pn	07 22 01.8	0.0
FAME	Alcaldia de Sa	0.71	148	S	S	07 22 25.7	-2.6
SLOZ	Alcaldia de Sa	0.73	125	P	Pn	07 21 59.2	-2.7
NUBE	Las Nubes	0.81	132	S	S	07 22 26.4	-3.0
NUBE	Las Nubes	0.81	132	P	Pn	07 22 00.5	-2.0
MTO3	Montecristo	1.01	93	P	Pn	07 22 03.6	+0.1
ESQI	Esquipulas	1.03	84	P	Pn	07 22 03.2	-0.2
ESQI	Esquipulas	1.03	84	S	S	07 22 29.3	-1.9
JAYA	Jayaque - finc	1.22	130	P	Pn	07 22 06.1	+1.4
RTAL	Retalhuleu	1.25	274	P	Pn	07 22 05.2	+0.5
RTAL	Retalhuleu	1.25	274	S	S	07 22 33.4	0.0
HUEH	Huehuetenango	1.37	309	P	Pn	07 22 06.9	+1.2
SARH	Santa Rosa de	1.62	78	P	Pn	07 22 07.8	+0.3
COEG	Centro de Oper	1.69	119	P	Pn	07 22 08.2	+0.2
COEG	Centro de Oper	1.69	119	S	S	07 22 41.9	+2.4

TECO	Alcaldia de Te	1.82	120	P	Pn	07 22 09.7	+0.7
TECO	Alcaldia de Te	1.82	120	S	S	07 22 43.4	+2.1

AEIC ***28*** *07:22:30.9±0.9, 53˚53N±0˚07×164˚68W±0˚09, h39^{km}±10^{km}, Error ellipse: s-maj=11.5km s-min=5.6km az=147.0*

NEIC 28 07:22:31.8±0.5**, 53˚54N**±0˚07×**164˚72W**±0˚08**, h35**^{km}±2^{km}**, ML2.6**/10**, ML2.3**(AEIC)**, Error ellipse: s-maj=11.4km s-min=7.3km az=342.0, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKUT	Akutan	0.86	314		Pn	07 22 47.3	-0.1
AKUT	Akutan	0.86	314	IAML		07 23 00.3	
	comp=E,93nm,0.3s						
AKUT				IAML		07 23 01.3	
	comp=N,66nm,0.2s						
AHB	Akutan Harbor	0.87	312		Pn	07 22 47.4	-0.1
AHB					Sn	07 23 00.3	+1.3
AKBBA	Akutan Broad B	0.91	308		Pn	07 22 48.0	0.0
AKBBA					Sn	07 23 01.4	+1.4
ZRO	Akutan Zero	0.93	307		Pn	07 22 48.3	-0.1
ZRO					Sn	07 23 01.9	+1.4
WECS	Westdahl Cape	0.99	358		Pn	07 22 49.1	-0.1
LVA	Lava Point	1.00	309	Pn	Pn	07 22 49.1	-0.2
LVA				IAML		07 23 06.3	
	comp=E,87nm,1.1s						
LVA				IAML		07 23 23.1	
	comp=N,118nm,1.4s						
AKGG	Akutan Green G	1.00	312		Pn	07 22 49.5	+0.2
AKGG					Sn	07 23 03.3	+1.1
WEBT	Westdahl Beart	1.05	359		Pn	07 22 49.3	-0.7
UNV	Unalaska Valle	1.11	287		Pn	07 22 50.3	-0.4
UNV					Sn	07 23 05.2	+0.4
SSBA	Shishaldin	1.28	16		Pn	07 22 53.5	+0.3
MAPS	Pakushin South	1.35	282		Pn	07 22 54.2	+0.1
MAPS					Sn	07 23 12.4	+1.6
ISNN	Isanotski Nort	1.41	23		Pn	07 22 54.8	-0.1
FALS	False Pass	1.52	30		Pn	07 22 56.5	0.0
FALS	False Pass	1.52	30	IAML		07 23 26.6	
	comp=E,199nm,0.6s						
SDPT	Sand Point	3.07	52	Pn	Pn	07 23 17.6	-0.1
SDPT				IAML		07 23 41.7	
	comp=N,44nm,1.1s						

IDC ***28*** *07:24:33.8±1.8, 24˚22S×179˚78E, h523^{km}±19^{km}, mb3.4/11, mbtmp4.3/14, Error ellipse: s-maj=18.2km s-min=16.2km az=72.0*

NEIC ***28*** *07:24:35.5±1.4, 24˚3S±0˚1×179˚7E±0˚2, h539^{km}±9^{km}, mb4.3/15, Error ellipse: s-maj=21.6km s-min=18.7km az=67.0*

ISC 28 07:24:33.4±0.6**, 24˚26S**±0˚07×**179˚8E**±0˚1**, h517**^{km}**, n55, σ1ˢ40**/60**, mb4.1**/19**, 4D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	5.39	158	P	P	07 26 06.7	+2.0
GLKZ				S	S	07 27 21.0	+1.6
MSVF	Nonsavu	6.69	346	P	P	07 26 16.8	-0.6
MSVF	Nonsavu	6.69	346	P	P	07 26 18.1	+0.7
	8.3nm,0.6s,baz=274,slow=19,SNR=4.7						
PINNC	Pines Island,	11.44	276	P	P	07 27 08.5	+2.4
OUZ	Omahuta	12.17	205	P	P	07 27 16.5	+2.9
DZM	Mont Dzumac	12.46	277	P	P	07 27 18.4	+1.5
DZM	Mont Dzumac	12.46	277	P	P	07 27 18.6	+1.6
	12nm,0.8s,baz=113,slow=18,SNR=2.8						
HAZ	Te Kaha	13.56	187	P	P	07 27 29.8	+1.6
HAZ				S	S	07 29 50.8	-1.4
PKGZ	Pakihiroa	13.64	186	P	P	07 27 31.7	+2.6
PKGZ				S	S	07 29 50.1	-3.7
TOZ	Tahuroa Road	13.92	194	P	P	07 27 34.2	+2.4
TWGZ	Tauwhareparae	13.96	186	P	P	07 27 34.4	+2.1
URZ	Urewera	14.14	189	P	P	07 27 34.3	+0.2
	4.6nm,0.6s,baz=346,slow=2.2,SNR=5.3						
URZ				S	S	07 30 01.6	-1.6
	14nm,1.0s,baz=232,slow=23,SNR=9.3						
URZ	Urewera	14.14	189	P	P	07 27 34.4	+0.2
RTZ	Ruatahuna	14.51	189	P	P	07 27 39.9	+1.8
BKZ	Black Stump Fm	15.12	190	P	P	07 27 44.2	-0.4
BKZ				S	S	07 30 18.2	-3.9
TMVZ	Te Maari	15.21	192	P	P	07 27 47.2	+1.7
ETVZ	East Tongariro	15.23	192	P	P	07 27 46.9	+1.2
KWHZ	Kaweka Forest	15.38	190	P	P	07 27 47.5	+0.2
WNVZ	Wahianoa	15.43	192	P	P	07 27 48.4	+0.5
KAHZ	Kahuranaki	15.68	188	P	P	07 27 50.8	+0.5
PXZ	Pawanui	15.92	188	P	P	07 27 52.3	-0.3
KHZ	Kahutara	18.83	194	P	P	07 28 19.1	-1.2
KHZ				IAmb	IAmb	07 28 20.1	
	comp=Z,18nm,1.1s						
ARMA	Armidale	25.71	250	P	P	07 29 23.2	+0.8
ARMA				IAmb	IAmb	07 29 34.7	
	comp=Z,15nm,1.4s						
EIDS	Eidsvold	26.05	262	P	P	07 29 25.7	+0.3
CTAO	Charters Tower	31.28	271	P	P	07 30 11.0	+0.1
STKA	Stephens Creek	34.40	249	P	P	07 30 37.7	+0.4
	comp=Z,1.4nm,0.5s,baz=108,slow=13,SNR=3.5						
	comp=Z,1.4nm,0.5s						
BBOO	Buckleboo	39.12	247	P	P	07 31 15.4	-0.7
AS31	Alice Springs	41.77	261	P	P	07 31 37.2	-0.4
ASAR	Alice Springs	41.78	261	P	P	07 31 36.7	-0.9
ASAR	Alice Springs	41.78	261	P	P	07 31 37.4	-0.2
	comp=Z,2.8nm,0.6s,baz=95,slow=7.2,SNR=33						
	comp=Z,2.8nm,0.6s						
WR8	Warramunga Arr	42.03	267	P	P	07 31 38.7	-0.9
WR8				IAmb	IAmb	07 31 40.9	
	comp=Z,9.9nm,1.2s						
WRA	Warramunga Arr	42.18	267	P	P	07 31 39.7	-1.1
WRA	Warramunga Arr	42.18	267	P	P	07 31 40.0	-0.7
	comp=Z,6.3nm,0.5s,baz=97,slow=8.3,SNR=157						
WRA				ScP	ScP	07 36 24.8	+0.3
	comp=Z,0.7nm,0.7s,baz=93,slow=3.6,SNR=5.9						
	comp=Z,6.3nm,0.5s						
JAY	Jayapura	43.47	294	P	P	07 31 50.2	-0.7
	comp=Z,11nm,0.7s,baz=129,slow=8.3,SNR=4.9						
	comp=Z,11nm,0.7s						
FORT	Forrest	46.00	250	P	P	07 32 09.3	-0.8
FORT				IAmb	IAmb	07 32 17.7	
	comp=Z,22nm,1.3s						
KNRA	Kununurra	48.48	270	P	P	07 32 27.9	-1.2
KNRA				IAmb	IAmb	07 32 30.1	
	comp=Z,13nm,1.1s						
FITZ	Fitzroy Crossi	50.60	266	P	P	07 32 44.0	-0.6
FITZ	Fitzroy Crossi	50.60	266	P	P	07 32 44.5	-0.2
	comp=Z,6.6nm,0.6s,baz=138,slow=8.3,SNR=17						
	comp=Z,6.6nm,0.6s						
CASY	Casey	59.70	206	P	P	07 33 46.8	-0.6
CASY				IAmb	IAmb	07 33 59.1	
	comp=Z,16nm,1.4s						
QSPA	South Pole Qui	65.82	180	P	P	07 34 28.1	+0.9
QSPA				IAmb	IAmb	07 34 30.1	
	comp=Z,4.5nm,0.9s						
QSPA	South Pole Qui	65.82	180	P	P	07 34 28.0	+0.9
	comp=Z,3.3nm,0.6s,baz=301,slow=0.7,SNR=29						
	comp=Z,3.3nm,0.6s						
MJAR	Matsushiro Arr	72.08	326	P	P	07 35 04.0	-1.0
	comp=Z,0.9nm,0.4s,baz=159,slow=7.0,SNR=2.2						
	comp=Z,0.9nm,0.4s						
KSRS	Korea Array	78.39	320	P	P	07 35 40.5	+0.3
	comp=Z,1.0nm,0.7s,baz=132,slow=6.1,SNR=4.9						
	comp=Z,1.0nm,0.7s						
PETK	Petropavlovsk-	79.40	347	P	P	07 35 45.3	0.0
	comp=Z,1.7nm,0.6s,baz=183,slow=6.8,SNR=3.0						
	comp=Z,1.7nm,0.6s						
SLBS	Sierra La Lagu	83.16	60	P	P	07 36 05.7	+0.3
SLBS				IAmb	IAmb	07 36 28.7	
	comp=Z,11nm,1.3s						
TROLL	Troll, Antarti	83.97	181	⇓P	P	07 36 08.3	-0.4
	comp=Z,95nm,0.3s						
SNAA	Sanae	84.31	179	⇓P	P	07 36 08.9	-1.5
	comp=Z,12nm,0.4s						
SNAA	Sanae	84.31	179	P	P	07 36 09.2	-1.1
SNAA				IAmb	IAmb	07 36 22.0	
	comp=Z,4.2nm,1.3s						
SNAA	Sanae	84.31	179	P	P	07 36 08.7	-1.6
	comp=Z,0.6nm,0.6s,baz=208,slow=8.9,SNR=16						
	comp=Z,0.6nm,0.6s						
VNA3	Neumayer Olymp	84.53	177	⇓P	P	07 36 10.4	-0.9
	comp=Z,1.0nm,0.3s						
VNA2	Neumayer--Watz	84.94	178	⇓P	P	07 36 11.8	-1.5
	comp=Z,2.1nm,0.6s,baz=187,slow=4.6						
TXAR	Lajitas Array	90.79	58	P	P	07 36 41.2	-0.4
	comp=Z,0.5nm,0.7s,baz=212,slow=6.5,SNR=9.3						
	comp=Z,0.5nm,0.7s						
HFS	Hagfors	142.86	348	PKhKP	PKPpre	07 43 03.3	
	comp=Z,2.4nm,0.3s,baz=64,slow=3.4,SNR=25						
AKASG	Malin Array Be	145.16	327	PKPbc	PKPdf	07 43 10.7	-1.0
	comp=Z,0.6nm,0.3s,baz=47,slow=4.7,SNR=5.4						
BRTR	Keskin Array B	147.63	307	PKPbc	PKPbc	07 43 19.1	-0.8
	comp=Z,0.9nm,0.6s,baz=93,slow=4.3,SNR=4.3						

IDC ***28*** *07:30:22.7±1.9, 63˚96N×28˚47E, h0^{km}, mbtmp2.9/3, ML1.8/2, Error ellipse: s-maj=34.9km s-min=10.7km az=97.0*

HEL ***28*** *07:30:22.6±0.1, 63˚98N×28˚15E, h0^{km}, ML1.5, Suspected explosion*

ISC 28 07:30:21.0±0.8**, 63˚97N**±0˚02×**28˚09E**±0˚03**, h0**^{km}**, n26, σ1ˢ30**/37**, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIF	Nilsia	0.59	192	PG	Pb	07 30 33.5	-0.7
	baz=13						
NIF				SG	Sg	07 30 38.0	-1.9
RMF	Romuvaara	0.85	72	PB	Pb	07 30 38.1	-0.5
RMF				MSG		07 30 48.0	
	comp=Z,4.2nm,0.2s						
RMF				SG	Sg	07 30 48.1	-0.2
OUL	Oulu	1.47	321	PN	Pb	07 30 49.5	+0.4
OUF	Merijarvi	1.52	287	PG	Pg	07 30 50.2	+0.1
	baz=101						
OUF				MSG		07 31 09.0	
	comp=Z,3.7nm,0.2s						
SUF	Sumiainen	1.53	216	PG	Pg	07 30 50.4	+0.2
SUF				MSG		07 31 09.0	
	comp=Z,2.0nm,0.2s						
OBF4	Vikkela, Lumij	1.55	305	PG	Pg	07 30 50.8	+0.1
	baz=114						
OBF4				MSG		07 31 09.5	
	comp=Z,2.6nm,0.2s						
KU1	Kurvinen	1.73	21	PG	Pb	07 30 53.3	-0.2
	baz=195						
KU2	Taivalkoski	1.75	2	PG	Pb	07 30 53.9	-0.1
OBF0	Syolatti, Pyha	1.76	289	PG	Pb	07 30 54.4	+0.2
OBF0				MSG		07 31 16.0	
	comp=Z,2.4nm,0.2s						
OBF0				SG	Sg	07 31 18.1	+0.5
MSF	Maaselka	2.00	11	PG	Pb	07 30 57.8	-0.4
KAF	Kangasniemi	2.03	204	PG	Pb	07 30 59.1	+0.4
	baz=18						
KAF				MSG		07 31 23.5	
	comp=Z,2.6nm,0.2s						
KAF				SG	Sg	07 31 27.5	+1.4
RANF	Ranua	2.13	346	PG	Pb	07 31 00.8	+0.4
RANF				SG	Sb	07 31 27.6	+0.2
KU6	Riekki	2.21	20	PG	Pb	07 31 01.9	+0.2
	baz=192						
KU6				MSG		07 31 27.4	
	comp=Z,1.1nm,0.2s						
KU6				SG	Sb	07 31 29.8	+0.2
KEF	Keuruu	2.32	220	PG	Pb	07 31 03.8	+0.1
KEF				MSG		07 31 32.0	
	comp=Z,3.1nm,0.2s						
KEF				SG	Sg	07 31 34.6	-1.0
OLKF	Oulanka, Finla	2.43	13	PG	Pb	07 31 06.0	+0.5
OLKF				MSG		07 31 33.9	
	comp=Z,1.4nm,0.2s						
OLKF				SG	Sb	07 31 36.6	+0.6
RUF	Ruokolahti	2.58	171	PG	Pb	07 31 08.0	-0.1
	baz=347						
RUF				MSG		07 31 38.8	
	comp=Z,2.8nm,0.2s						
FIA0	FINESS Array S	2.70	201	PB	Pb	07 31 09.2	-0.8
	baz=15						
FIA0				MSG		07 31 42.7	
	comp=Z,1.4nm,0.2s						
FIA0				SB	Sb	07 31 44.4	+0.8
FINES	FINESS Array B	2.70	201	Pn	Pb	07 31 09.6	-0.5
	comp=Z,0.4nm,0.3s,baz=23,slow=13,SNR=12						
FINES				Sn	Sb	07 31 44.4	+0.8
	comp=Z,0.3nm,0.3s,baz=20,slow=28,SNR=8.8						
	comp=Z,1.9nm,0.8s						
RNF	Rovaniemi	2.79	343	SG	Sb	07 31 47.6	+1.2
UMAU	Umeaa	3.27	272	PN	Pn	07 31 15.7	+2.2
UMAU				SG	Sg	07 32 05.1	-0.9
ERTU	Ertsjaerv	3.59	319	PB	Pb	07 31 22.3	-3.0
RAF	Rauma	4.16	228	SN	Sn	07 32 11.3	-3.6
RAJF	Raja-Jooseppi	4.53	1	SB	Sb	07 32 32.9	-3.5
ARCES	ARCESS Array B	5.69	351	Pn	Pn	07 31 47.1	+0.5
	comp=Z,1.7nm,0.8s,baz=173,slow=11,SNR=1.7						
ARCES				Sn	Sn	07 32 52.0	-0.5
	comp=Z,0.1nm,0.3s,baz=169,slow=25,SNR=1.1						
I37NO	I37NO	6.37	328	I	I	08 10 20.0	
	baz=140,slow=328,SNR=2.4						
HFS	Hagfors	7.77	247	Pn	Pn	07 32 17.3	+2.1
	comp=Z,0.1nm,0.3s,baz=54,slow=12,SNR=1.3						
	comp=Z,1.2nm,0.9s						

IDC ***28*** *07:49:30.3±2.5, 34˚07N×24˚66E, h0^{km}, mb3.7/5, mbtmp3.7/10, ML3.5/5, Error ellipse: s-maj=42.1km s-min=21.4km az=49.0*

ISK ***28*** *07:49:35.2, 34˚23N×25˚17E, h9^{km}, ML3.5/16*

THE ***28*** *07:49:36.4, 34˚N±22˚×2˚5E±1˚8, h7^{km}±23^{km}, M3.0/4, MLh3.0/4*

ATH ***28*** *07:49:43.1, 34˚71N×25˚15E, h22^{km}±3^{km}, ML3.1/7, Manual Solution by N.Liadopoulou First location: 2019/06/28 07:50:55, This location: 2019/06/28 07:59:36 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 8 km; Longitude uncertainty: 3 km*

ISC 28 07:49:36.1±1.8**, 34˚30N**±0˚08×**25˚16E**±0˚04**, h13**^{km}±11^{km}**, n51, σ1ˢ37**/55**, mb3.6**/5**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TMBK	Timbaki Herakl	0.84	337	P	Pb	07 49 52.8	+0.3
IACM	Heraklion	1.01	356	P	Pg	07 49 55.2	-0.3
IDI	Anoyia	1.01	347	P	Pg	07 49 55.4	-0.3
IDI				S	Sb	07 50 09.8	+1.0
IDI	Anoyia	1.01	347	Pn	Pg	07 49 55.4	-0.3
	39nm,0.3s,baz=179,slow=15,SNR=225						
IDI				Sn	Sn	07 50 11.7	+1.5
	75nm,0.3s,baz=250,slow=12,SNR=7.2						
IDI	Anoyia	1.01	347	P	Pg	07 49 55.0	-0.6
GVD	Gavdhos	1.04	302	Pn	Pg	07 49 56.1	0.0
GVD				Sn	Sn	07 50 11.8	+1.1
GVD	Gavdhos	1.04	302	P	Pg	07 49 56.1	0.0
GVD				S	Sn	07 50 12.0	+1.3
GVD	Gavdhos	1.04	302	P	Pn	07 49 58.0	+1.7
ZKR	Zakros	1.19	47	Pn	Pn	07 49 59.3	+0.8
ZKR				Sn	Sn	07 50 16.6	+2.1
ZKR	Zakros	1.19	47	P	Pb	07 49 57.8	-0.7
ZKR	Zakros	1.19	47	P	Pn	07 49 59.2	+0.8
PRNS	Prines Rethymn	1.20	333	P	Pb	07 49 58.7	+0.1
PRNS	Prines Rethymn	1.20	333	P	Pb	07 49 58.8	+0.2
CHAN	Chania	1.53	323	P	Pb	07 50 04.9	+0.7
KNDR	Palaiochora Ch	1.53	308	Pn	Pb	07 50 04.9	+0.6
KNDR	Palaiochora Ch	1.53	308	P	Pg	07 50 06.7	+1.2
KARP	Karpathos	2.06	52	Pn	Pn	07 50 11.6	+1.1
KARP	Karpathos	2.06	52	P	Pb	07 50 13.6	+0.2
SAP3	Santorini-Thir	2.14	4	P	Pn	07 50 12.3	+0.8
ANKY	Antikythira Is	2.19	316	P	Pn	07 50 12.5	+0.3
ANKY	Antikythira Is	2.19	316	P	Pb	07 50 14.5	-1.0
MHLO	Agia Marina, M	2.46	346	P	Pn	07 50 16.8	+0.8
MHLO	Agia Marina, M	2.46	346	P	Pn	07 50 16.4	+0.5
KTHA	Kythira Island	2.60	319	Pn	Pn	07 50 19.4	+1.5
APE	Apeiranthos	2.78	6	Pn	Pn	07 50 21.9	+1.5
APE	Apeiranthos	2.78	6	P	Pn	07 50 20.8	+0.5
APE	Apeiranthos	2.78	6	P	Pn	07 50 20.9	+0.5
VLI	Veliai	3.02	324	P	Pn	07 50 24.5	+0.9
ARG	Arkhangelos	3.09	51	Pn	Pn	07 50 26.3	+1.8
ARG	Arkhangelos	3.09	51	P	Pn	07 50 26.7	+2.1
DAT	Datca	3.12	38	Pn	Pn	07 50 26.9	+1.8
BODT	Bodrum	3.27	32	Pn	Pn	07 50 29.1	+2.1
TURN	Turunc	3.52	45	Pn	Pn	07 50 32.2	+1.7
MET4	Agioi Theodoro	3.61	337	P	Pn	07 50 32.3	+0.5
MET5	Makryloggos,Me	3.62	337	P	Pn	07 50 32.4	+0.4
DALY	Dalyan (Mula)	3.80	48	Pn	Pn	07 50 36.4	+2.1
FETY	Fethiye	3.96	53	Pn	Pn	07 50 38.3	+1.8
AKAS	Kas	4.12	61	Pn	Pn	07 50 40.5	+1.7
CAME	Cameli-Denizli	4.28	51	Pn	Pn	07 50 42.4	+1.3
ELL	Elmali	4.58	56	Pn	Pn	07 50 47.5	+2.4
KORT	Korkueli	5.01	56	Pn	Pn	07 50 53.6	+2.5
MMAI	Mount Meron Ar	8.63	96	Pn	Pn	07 51 43.5	+2.7
	0.8nm,0.3s,baz=259,slow=15,SNR=1.8						
	0.7nm,0.3s						
BRTR	Keskin Array B	8.68	49	Pn	Pn	07 51 47.7	+6.3
	0.1nm,0.3s,baz=234,slow=16,SNR=2.7						
	0.5nm,0.6s						
EIL	Elat	9.51	116	Pn	Pn	07 51 52.0	-0.6
	0.9nm,0.3s,baz=347,slow=3.9,SNR=19						
	2.2nm,0.3s						
AKASG	Malin Array Be	16.66	9	Pn	Pn	07 53 29.2	+0.1
	1.2nm,0.3s,baz=202,slow=11,SNR=7.3						
	1.1nm,0.6s						
GERES	GERESS Array B	16.84	333	Pn	Pn	07 53 29.7	-1.9
	baz=142,slow=11,SNR=8.1						
	1.8nm,0.6s						
HFS	Hagfors	26.91	347	P	P	07 55 13.8	-2.9
	0.8nm,0.5s,baz=124,slow=13,SNR=4.1						
	0.8nm,0.5s						
NOA	NORSAR Array B	28.23	346	P	P	07 55 26.7	-1.8
	0.3nm,0.6s,baz=132,slow=8.9,SNR=2.2						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	41.66	50	P	P	07 57 23.2	-0.8
	0.5nm,0.6s,baz=278,slow=8.7,SNR=6.0						
	0.5nm,0.6s						
MKAR	Makanchi Array	44.25	56	P	P	07 57 45.2	+0.1
	0.5nm,0.5s,baz=289,slow=5.1,SNR=5.1						
	0.5nm,0.5s						
ZALV	Zalesovo Beam	45.60	46	P	P	07 57 54.8	-1.0
	1.2nm,0.4s,baz=276,slow=10,SNR=3.7						
	1.2nm,0.4s						

IDC ***28*** *07:50:08.8±3.6, 53˚61N×87˚94E, h0^{km}, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=35.3km s-min=19.6km az=51.0*

ASRS 28 07:50:05.0±0.7**, 53˚62N×87˚89E, h0**^{km}**, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.85	281	I	I	08 01 40.0	
	0.2nm,0.9s,baz=99,slow=315,SNR=6.8						
ZALV	Zalesovo Beam	1.85	281	Pn	Pg	07 50 42.5	+2.0
	0.7nm,0.3s,baz=98,slow=14,SNR=6.0						
ZALV				Lg	Lg	07 51 08.6	
	1.8nm,0.3s,baz=99,slow=26,SNR=9.2						
KURBB	Kurchatov Arra	6.50	246	Pn	Pn	07 51 46.2	+4.4
	0.1nm,0.3s,baz=62,slow=14,SNR=4.4						
	0.3nm,0.3s						
MKAR	Makanchi Array	7.72	210	Pn	Pn	07 52 03.6	+5.1
	0.1nm,0.3s,baz=28,slow=13,SNR=2.3						
	0.1nm,0.3s						

SOME ***28*** *07:51:36.7, 43˚05N×74˚83E*

KNET ***28*** *07:51:37.5±0.3, 43˚04N×74˚90E, h14^{km}±2^{km}, ml1.1, Error ellipse: s-maj=2.7km s-min=1.9km az=12.0*

NNC ***28*** *07:51:38.0±1.0, 43˚03N×74˚93E, h0^{km}±5^{km}, mb3.1, mpv2.4, Error ellipse: s-maj=6.8km s-min=2.7km az=173.0, Suspected Mining explosion.*

ISC 28 07:51:38.2±0.9**, 43˚04N**±0˚04×**74˚91E**±0˚02**, h0**^{km}**, n15, σ0ˢ76**/28**, 20C-3D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHMS	Chumysh	0.12	249	⇑P	Pg	07 51 40.5	-0.1
	42nm,0.1s,SNR=45						
CHMS				⇑S	Sg	07 51 42.7	+0.6
	83nm,0.2s						
CHMS	Chumysh	0.12	249	⇑P	Pg	07 51 40.4	-0.1
	7.2nm,0.2s						
CHMS				⇓S	Sg	07 51 42.9	+0.8
	59nm,0.7s						
USP	Ospenovka	0.37	307	⇑P	Pg	07 51 45.2	-0.1
	26nm,0.1s,SNR=49						
USP				⇑S	Sg	07 51 51.2	+1.0
	26nm,0.1s						
KBK	Karagaybulak	0.39	175	⇑P	Pg	07 51 46.0	+0.4
	31nm,0.1s,SNR=14						
KBK				⇑S	Sg	07 51 52.1	+1.5
	34nm,0.2s						
AAK	Ala-Archa	0.51	217	⇑P	Pg	07 51 48.0	+0.1
	3.9nm,0.1s,SNR=7.4						
AAK				⇑S	Sg	07 51 55.5	+1.1
	6.8nm,0.2s						
AAK	Ala-Archa	0.51	217	⇑P	Pg	07 51 47.3	-0.6
	0.3nm,0.3s						
AAK				⇓S	Sg	07 51 55.6	+1.2
	0.4nm,0.3s						
TKM2	Tokmak 2	0.52	103	⇑P	Pg	07 51 48.1	-0.1
	9.0nm,0.1s,SNR=44						
TKM2				⇓S	Sg	07 51 55.7	+0.7
	30nm,0.1s						
TKM2	Tokmak 2	0.52	103	⇑P	Pg	07 51 47.6	-0.6
	0.9nm,0.2s						
TKM2				⇑S	Sg	07 51 55.2	+0.2
	1.7nm,0.2s						
KST	Kastek	0.78	90	P	Pg	07 51 53.4	+0.3
	2.4nm,0.1s						
KST				S	Sb	07 52 05.1	-0.7
	15nm,0.8s						
EKS2	Erkin-Say	0.91	246	⇑P	Pg	07 51 55.6	-0.1
	4.2nm,0.1s,SNR=18						
EKS2				⇑S	Sb	07 52 09.1	-0.7
	1.9nm,0.1s						
ULHL	Ulahol	1.27	128	⇑P	Pg	07 52 01.7	-0.8
	1.3nm,0.1s,SNR=7.5						
AML	Almayashu	1.28	225	⇑P	Pg	07 52 02.5	-0.2
	2.4nm,0.2s						
AML				⇑S	Sg	07 52 19.3	+0.1
	3.6nm,0.3s						
KTBS	Karatobe	1.46	62	P	Pn	07 52 05.7	-0.1
	2.0nm,0.1s						
KTBS				S	Sn	07 52 26.0	+0.2
	2.7nm,0.2s						
CHKK	Chushkaly	1.72	61	P	Pb	07 52 10.4	-0.3
	10.0nm,0.2s						
CHKK				S	Sg	07 52 35.4	+1.9
	4.2nm,0.1s						
KK31	Karatay Array	3.22	273	⇑Pg	Pg	07 52 39.4	-0.5
	0.4nm,0.4s,baz=89,slow=14,SNR=6.3						
KK31				⇑Lg	Lg	07 53 20.1	
	0.8nm,0.6s,baz=84,slow=28,SNR=4.5						

IDC ***28*** *07:58:18.6±2.1, 55˚58N×164˚77E, h0^{km}, mb3.5/2, mbtmp3.3/3, ML2.3/1, Error ellipse: s-maj=183.1km s-min=25.3km az=152.0*

KRSC ***28*** *07:58:19.2±1.3, 56˚00N×164˚16E, h15^{km}±20^{km}, Ml3.8*

ISC 28 07:58:13.9±2.3**, 55˚82N**±0˚05×**164˚32E**±0˚09**, h10**^{km}±10^{km}**, n41, σ1ˢ49**/51**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.93	295	*e*P	Pn	07 58 33.4	+0.3
KBTR				*e*S	Sg	07 58 43.8	-0.1
KBG	Krutoberegovo	1.01	296	*e*P	Pn	07 58 34.7	+0.6
KBG				*e*S	Sg	07 58 46.3	-0.1
BKI	Bering	1.12	123	*e*P	Pn	07 58 43.2	+7.5
BKI				*e*S	Sn	07 59 00.8	+10
SMKR	Semkarok	1.77	297	*e*P	Pg	07 58 47.0	-0.8
SMKR				*e*S	Sn	07 59 08.1	+0.8
BDR	Baidarnaya	1.90	295	*e*S	Sn	07 59 10.8	+0.4
SRKR	Sorokina	1.95	297	*e*S	Sn	07 59 12.1	+0.3
MKZ	Mys Kozlova	1.95	231	*e*P	Pg	07 58 54.6	+3.2
MKZ				*e*S	Sg	07 59 19.9	+3.3
ZLN	Zelenaya	1.99	277	*e*P	Pg	07 58 52.4	+0.4
ZLN				*e*S	Sg	07 59 17.2	-0.7
CIRR	Tsirk	2.03	280	*e*S	Sb	07 59 18.0	+1.6
BZGR	Bezymyannyi-Gr	2.05	275	*e*P	Pg	07 58 53.5	+0.3
BZGR				*e*S	Sb	07 59 18.6	+1.7
LGNR	Loginova	2.06	279	*e*S	Sb	07 59 18.6	+1.3
KLY	Klyuchi	2.12	285	*e*P	Pb	07 58 51.5	-0.9
KLY				*e*S	Sn	07 59 15.0	-0.7
KRSR	Krestovskiy	2.15	282	*e*P	Pg	07 58 53.7	-1.4
KRSR				*e*S	Sb	07 59 18.9	-0.7
BZWR	Bezymyannyi-We	2.16	275	*e*P	Pg	07 58 55.3	0.0
BZWR				*e*S	Sg	07 59 22.6	-0.8
BZMR	Bezymyannaya	2.16	275	*e*P	Pg	07 58 55.3	-0.1
BZMR				*e*S	Sb	07 59 21.2	+1.0
KIRR	Kirishev	2.25	275	*e*P	Pg	07 58 56.7	-0.3
KIRR				*e*S	Sb	07 59 24.3	+1.7
KMNR	Kamenistaya	2.31	270	*e*P	Pg	07 58 58.4	+0.2
KMNR				*e*S	Sb	07 59 26.7	+2.4

KPT	**Kopyto**	**2.31**	**275**	eP	**Pg**	**07 58 58.0**	**-0.3**
KPT				eS	**Sb**	**07 59 25.7**	**+1.2**
TUMD	**Tumrok D**	**2.32**	**256**	eS	**Sg**	**07 59 27.9**	**-0.4**
KOZ	**Kozyrevsk**	**2.52**	**277**	eP	**Pb**	**07 59 00.2**	**+1.0**
SRDR	**Sredinnyy**	**2.63**	**283**	eP	**Pb**	**07 59 00.8**	**-0.4**
SRDR				eS	**Sb**	**07 59 31.6**	**-1.9**
SPN	**Mys Shipunski**	**3.71**	**224**	eP	**Pb**	**07 59 19.6**	**+0.1**
SPN				eS	**Sb**	**08 00 03.5**	**-1.0**
NLC	**Nalytchevo**	**3.93**	**230**	eS	**Sb**	**08 00 09.6**	**-1.3**
SDLR	**Sedlovina**	**4.06**	**233**	eP	**Pb**	**07 59 24.8**	**-0.9**
SDLR				eS	**Sb**	**08 00 12.7**	**-2.2**
SMAR	**Somma**	**4.11**	**234**	eP	**Pb**	**07 59 25.5**	**-1.0**
KRX	**Arik**	**4.12**	**236**	eP	**Pb**	**07 59 26.0**	**-0.6**
UGLR	**Uglovaya**	**4.14**	**233**	eP	**Pb**	**07 59 25.9**	**-1.0**
AVH	**Avacha**	**4.14**	**234**	eP	**Pb**	**07 59 26.4**	**-0.5**
KOK	**Koryaka**	**4.17**	**235**	eP	**Pb**	**07 59 26.7**	**-0.7**
GNL	**Ganaly**	**4.27**	**243**	eP	**Pb**	**07 59 27.6**	**-1.4**
DALK	**Dalny**	**4.29**	**232**	eS	**Sb**	**08 00 17.5**	**-3.6**
PETK	**Petropavlovsk-**	**4.72**	**238**	Pn	Pb	07 59 31.8	-5.0
	0.6nm,0.3s,baz=70,slow=17,SNR=13						
PETK				Sn	**Sb**	**08 00 31.8**	**-1.9**
	0.5nm,0.3s,baz=157,slow=24,SNR=4.7						
	1.1nm,0.5s						
GRL	**Gorelyy**	**4.92**	**231**	eP	**Pb**	**07 59 37.9**	**-2.3**
MTVR	**Mutnovka**	**4.92**	**230**	eP	**Pb**	**07 59 37.5**	**-2.8**
ASAK	**Asacha**	**5.11**	**230**	eP	**Pb**	**07 59 40.5**	**-3.0**
H11N2	**WAKE ISLAND Hy**	**36.08**	**176**	T	T	08 44 18.6	
	baz=357,slow=76,SNR=209						
H11N3	**WAKE ISLAND Hy**	**36.10**	**176**	T	T	08 44 19.6	
	baz=357,slow=76,SNR=137						
H11N1	**WAKE ISLAND Hy**	**36.10**	**176**	T	T	08 44 19.9	
	baz=357,slow=76,SNR=128						
PDAR	**Pinedale Array**	**54.08**	**65**	P	P	08 07 43.7	+4.9
	0.1nm,0.3s,baz=333,slow=8.7,SNR=2.6						
	0.1nm,0.3s						
TXAR	**Lajitas Array**	**67.35**	**71**	P	P	08 09 14.8	+5.6
	0.4nm,0.5s,baz=294,slow=4.5,SNR=7.3						
	0.4nm,0.5s						
QSPA	**South Pole Qui**	**145.57**	**180**	PKPbc	**PKiKP**	**08 17 55.7**	**+0.9**
	0.6nm,0.6s,baz=326,slow=7.3,SNR=8.3						

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*ASRS **28** 08:01:52.0±1.2, 54°.14N×86°.37E, h0^{km}, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 28 08:01:51.5±3.2**, 54°.13N**×**86°.72E, h0**^{km}**, mbtmp2.9**/2**, ML2.8**/2**, Error ellipse: s-maj=28.0km s-min=16.2km az=50.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.13**	**261**	I	I	08 08 20.0	
	baz=80,slow=317,SNR=4.6						
ZALV	**Zalesovo Beam**	**1.13**	**261**	Pg	Pg	08 02 12.5	-0.7
	1.0nm,0.3s,baz=75,slow=17,SNR=6.2						
ZALV				Lg	Lg	08 02 28.8	
	1.8nm,0.3s,baz=82,slow=31,SNR=5.2						
KURBB	**Kurchatov Arra**	**6.12**	**238**	Pn	Pn	08 03 24.2	+1.1
	0.1nm,0.3s,baz=52,slow=14,SNR=3.6						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**7.87**	**203**	Pn	Pn	08 03 48.1	+0.9
	0.2nm,0.3s,baz=25,slow=14,SNR=7.4						
	0.2nm,0.3s						

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*IDC **28** 08:20:06.1±2.2, 9°.89S×113°.64E, h0^{km}, mb3.8/4, mbtmp3.8/5, ML3.6/1, MS3.7/3, Error ellipse: s-maj=114.7km s-min=24.8km az=48.0*

*DJA **28** 08:20:14.8±0.8, 10°S±5°×11°4E±°, h36^{km}±18^{km}, M4.1/13, MLv4.1/13*

ISC 28 08:20:12.0±0.9**, 9°.71S**±0°.07×**113°.96E**±0°.04**, h31**^{km}**, n18, σ1^{s}.97**/21**, mb3.7**/4**, MS3.7**/3**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGI	**Jajag, Banyuwa**	**1.25**	**9**	P	**Pb**	**08 20 34.4**	**-0.6**
JAGI				S	**Sb**	**08 20 51.0**	**+0.3**
GMJI	**Gumukmas**	**1.52**	**340**	P	**Pb**	**08 20 37.9**	**-1.7**
ABJI	**Asem Bagus**	**1.92**	**8**	P	**Pb**	**08 20 44.8**	**-1.6**
SRBI	**Singaraja**	**2.03**	**37**	P	**Pb**	**08 20 46.8**	**-1.5**
SRBI				S	**Sb**	**08 21 11.1**	**-2.1**
TWSI	**Taliwang, Sumb**	**3.04**	**72**	P	**Pn**	**08 20 59.9**	**+1.9**
PCJI	**Pacitan**	**3.14**	**298**	P	**Pn**	**08 21 00.4**	**+1.0**
PCJI				S	**Sn**	**08 21 37.3**	**+1.5**
GRJI	**Gresik**	**3.14**	**332**	P	**Pn**	**08 21 01.0**	**+1.6**
NGJI	**Ngawi**	**3.40**	**313**	P	**Pn**	**08 21 05.1**	**+2.2**
WOJI	**Wonogiri, Jawa**	**3.54**	**302**	P	**Pn**	**08 21 07.2**	**+2.4**
UGM	**Wanagama**	**3.84**	**297**	P	**Pn**	**08 21 11.3**	**+2.2**
UGM				S	**Sn**	**08 21 54.9**	**+1.7**
PLAI	**Plampang**	**3.86**	**77**	P	**Pn**	**08 21 12.4**	**+3.1**
PLAI				S	**Sn**	**08 21 57.1**	**+3.4**
FITZ	**Fitzroy Crossi**	**14.06**	**128**	Pn	**Pn**	**08 23 26.7**	**-2.5**
	0.2nm,0.3s,baz=308,slow=9.8,SNR=1.5						
FITZ				Sn	Sn	08 25 49.9	-14
	0.3nm,0.3s,baz=351,slow=23,SNR=6.7						
	2.2nm,0.9s						
WRA	**Warramunga Arr**	**22.14**	**120**	P	**P**	**08 25 04.5**	**-0.9**
	1.8nm,0.7s,baz=292,slow=10,SNR=16						
	1.8nm,0.7s						
ASAR	**Alice Springs**	**23.56**	**129**	P	**P**	**08 25 20.3**	**+0.2**
	1.9nm,0.6s,baz=301,slow=9.2,SNR=18						
	1.9nm,0.6s						
STKA	**Stephens Creek**	**33.78**	**135**	P	**P**	**08 26 51.9**	**+0.6**
	1.5nm,0.4s,baz=320,slow=9.2,SNR=5.2						
STKA				LR	LR	08 40 45.4	
	comp=Z,145nm,18.5s,baz=211,slow=37						
	1.5nm,0.4s						
PALK	**Pallekele**	**37.18**	**296**	LR	LR	08 42 19.9	
	comp=Z,91nm,18.3s,baz=108,slow=36						
ASAJ	**Asahikawa**	**59.54**	**24**	LR	LR	08 58 41.9	
	comp=Z,50nm,18.9s,baz=162,slow=39						
MKAR	**Makanchi Array**	**62.95**	**336**	P	**P**	**08 30 34.7**	**-0.9**
	0.2nm,0.3s,baz=157,slow=6.6,SNR=3.9						
	0.2nm,0.3s						

IDC 28 08:20:23.4±3.0**, 53°.77N**×**86°.81E, h0**^{km}**, mbtmp2.5**/2**, ML2.2**/2**, Error ellipse: s-maj=27.2km s-min=15.8km az=68.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.20**	**280**	I	I	08 28 10.0	
	baz=99,slow=321,SNR=4.8						
ZALV	**Zalesovo Beam**	**1.20**	**279**	Pg	Pg	08 20 45.2	-1.1
	0.5nm,0.3s,baz=101,slow=13,SNR=4.6						
ZALV				Lg	Lg	08 21 02.6	
	0.9nm,0.3s,baz=97,slow=29,SNR=4.9						
KURBB	**Kurchatov Arra**	**5.99**	**242**	Pn	Pn	08 21 54.2	+1.0
	baz=55,slow=13,SNR=5.1						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**7.56**	**204**	Pn	Pn	08 22 15.8	+1.0
	0.1nm,0.3s,baz=24,slow=15,SNR=1.9						
	0.1nm,0.3s						

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*NEIC **28** 08:20:37.7±0.9, 36°.034N±0°.009×98°.10W±0°.01, h4^{km}±3^{km}, mb_Lg2.3/34, ML2.3/31, ML2.5/50, Error ellipse: s-maj=1.3km s-min=1.1km az=151.0*

NEIC 28 08:20:37.6±1.2**, 36°.030N**±0°.010×**98°.09W**±0°.01**, h6**^{km}±4^{km}**, Error ellipse: s-maj=1.5km s-min=1.2km az=197.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	**0.48**	**11**		Pg	08 20 47.1	+0.2
CROK					Sg	08 20 53.5	+0.3
CROK				IAML		08 20 54.6	
	comp=E,336nm,0.3s						
BCOK	**Bluff Creek, N**	**0.54**	**133**		Pg	08 20 48.6	+0.5
BCOK					Sg	08 20 55.9	+0.7
OK029	**Liberty Lake**	**0.57**	**114**		Pg	08 20 48.5	-0.1
OK029					Sg	08 20 56.7	+0.7
OK029				IAML		08 20 57.0	
	comp=E,326nm,0.3s						
CSTR	**Hydro, Custer**	**0.62**	**232**		Pg	08 20 50.0	+0.5
CSTR					Sg	08 20 58.4	+0.9
OK038	**West end E0370**	**0.69**	**311**		Pg	08 20 50.7	-0.2
OK038					Sg	08 21 00.6	+0.8
OKCSW	**OKLAHOMA CITY**	**0.82**	**139**		Pg	08 20 53.4	0.0
OKCSW					Sg	08 21 04.2	+0.2
OKCSW				IAML		08 21 07.0	
	comp=N,176nm,0.6s						
OKCSW				IAML		08 21 15.0	
	comp=E,103nm,0.5s						
GC02	**Grant County #**	**0.84**	**13**		Pg	08 20 53.6	-0.2
GC02					Sg	08 21 05.3	+0.5
KAN14	**Manchester OK**	**0.93**	**6**		Pg	08 20 54.9	-0.6
KAN14					Sg	08 21 07.9	+0.3
KAN14				IAML		08 21 15.2	
	comp=N,100nm,0.1s						
KAN14				IAML		08 21 15.3	
	comp=E,98nm,0.2s						
FNO	**Franklin**	**0.96**	**144**		Pg	08 20 55.8	-0.2
FNO					Sg	08 21 08.6	+0.2
FNO				IAML		08 21 11.2	
	comp=E,129nm,0.4s						
FNO				IAML		08 21 11.2	
	comp=N,112nm,0.3s						
OK048	**Pawnee Station**	**1.01**	**67**		Pg	08 20 56.6	-0.4
OK048				IAML		08 21 15.2	
	comp=N,91nm,0.3s						
BLOK	**Blackwell**	**1.02**	**44**		Pb	08 20 57.8	+0.1
BLOK					Sg	08 21 10.8	+0.4
KAN17	**Caldwell West**	**1.05**	**15**		Pg	08 20 57.2	-0.5
KAN17					Sg	08 21 11.6	+0.3
KAN17				IAML		08 21 13.5	
	comp=E,160nm,0.3s						
OK052	**Battle Ridge R**	**1.05**	**92**		Pg	08 20 57.1	-0.7
OK052					Sb	08 21 12.2	+0.1
OK052				IAML		08 21 18.0	
	comp=E,99nm,0.3s						
OK052				IAML		08 21 18.7	
	comp=E,118nm,0.3s						
ELIS	**Ellis County**	**1.07**	**272**	Pg	Pg	08 20 57.9	-0.3
ELIS				IAML		08 21 26.2	
	comp=N,112nm,0.3s						
ELIS				IAML		08 21 28.0	
	comp=E,130nm,0.3s						
KAN13	**South Haven SW**	**1.10**	**27**		Pg	08 20 58.3	-0.4
OK051	**E0350 and S346**	**1.12**	**65**		Pg	08 20 58.9	-0.2
QUOK	**Quay**	**1.13**	**82**		Pg	08 20 58.8	-0.6
QUOK				IAML		08 21 15.9	
	comp=E,118nm,0.2s						
DEOK	**Depew**	**1.31**	**98**		Pn	08 21 01.6	-0.9
DEOK					Sg	08 21 19.9	+0.2
DEOK				IAML		08 21 22.9	
	comp=N,89nm,0.4s						
DEOK				IAML		08 21 24.8	
	comp=E,77nm,0.2s						
WMOK	**Wichita Mounta**	**1.41**	**204**		Pn	08 21 03.3	-0.5
X34A	**Smith Ranch, M**	**1.44**	**171**		Pb	08 21 04.7	-0.2
T35A	**Sooner Cattle**	**1.55**	**55**		Pn	08 21 06.1	+0.3
TUL3	**Leonard**	**1.87**	**93**		Pn	08 21 10.7	+0.5
TUL3				IAmb_Lg		08 21 40.9	
	comp=Z,19nm,0.7s						
R32A	**Long Quarter,**	**2.44**	**349**	IAmb_Lg		08 22 01.5	
	comp=Z,8.3nm,0.8s						
CBKS	**Cedar Bluff**	**3.07**	**335**	IAmb_Lg		08 22 13.1	
	comp=Z,11nm,0.7s						
AMTX	**Amarillo**	**3.14**	**250**	IAmb_Lg		08 22 17.5	
	comp=Z,8.6nm,0.8s						
SN07	**Snyder 07**	**3.73**	**219**	IAmb_Lg		08 22 38.8	
	comp=Z,7.1nm,0.8s						
MIAR	**Mount Ida**	**3.98**	**111**	IAmb_Lg		08 22 48.2	
	comp=Z,5.9nm,0.8s						
POST	**Post**	**4.08**	**225**	IAmb_Lg		08 22 46.8	
	comp=Z,5.0nm,0.8s						
X40A	**Basin Creek Fa**	**4.57**	**108**	IAmb_Lg		08 23 09.2	
	comp=Z,5.1nm,0.7s						
WHAR	**Wooly Hollow**	**4.79**	**97**	IAmb_Lg		08 23 14.9	
	comp=Z,6.8nm,1.0s						
SGCY	**Sterling City**	**4.82**	**212**	IAmb_Lg		08 23 15.5	
	comp=Z,6.4nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.84**	**90**	IAmb_Lg		08 23 20.6	
	comp=Z,4.9nm,0.9s						
P38A	**Dawn**	**5.09**	**44**	IAmb_Lg		08 23 30.1	
	comp=Z,5.0nm,0.8s						
T25A	**Trinidad**	**5.20**	**284**	IAmb_Lg		08 23 33.0	
	comp=Z,4.3nm,0.7s						
JCT	**Junction City**	**5.72**	**195**	IAmb_Lg		08 23 49.1	
	comp=Z,5.4nm,0.8s						
PBMO	**Poplar Bluff**	**6.23**	**81**	IAmb_Lg		08 23 56.4	
	comp=Z,4.5nm,0.7s						
FVM	**French Village**	**6.44**	**70**	IAmb_Lg		08 24 13.9	
	comp=Z,3.9nm,0.8s						
CGM3	**Cape Girardeau**	**6.90**	**77**	IAmb_Lg		08 24 15.1	
	comp=Z,4.7nm,0.9s						

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*ASRS **28** 08:24:58.0±1.1, 54°.06N×86°.58E, h0^{km}, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 28 08:25:01.7±2.8**, 54°.04N**×**86°.50E, h0**^{km}**, mbtmp2.9**/2**, ML2.7**/2**, Error ellipse: s-maj=22.6km s-min=13.6km az=56.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.99**	**265**	I	I	08 31 30.0	
	baz=84,slow=319,SNR=5.7						
ZALV	**Zalesovo Beam**	**0.99**	**265**	Pg	Pg	08 25 20.1	-0.7
	0.8nm,0.3s,baz=83,slow=18,SNR=8.0						
ZALV				Lg	Lg	08 25 35.1	
	2.6nm,0.3s,baz=88,slow=33,SNR=12						
KURBB	**Kurchatov Arra**	**5.96**	**238**	Pn	Pn	08 26 31.2	+0.1
	0.1nm,0.3s,baz=56,slow=13,SNR=4.7						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**7.73**	**202**	Pn	Pn	08 26 57.1	+1.6
	0.1nm,0.3s,baz=24,slow=12,SNR=6.6						
MKAR				Lg	Lg	08 29 05.9	
	baz=23,slow=31,SNR=3.6						
	0.2nm,0.3s						

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*IDC **28** 08:25:28.9±6.0, 2°.96S×138°.68E, h0^{km}, mb3.6/2, mbtmp3.4/4, ML3.3/2, Error ellipse: s-maj=109.7km s-min=17.4km az=149.0*

*DJA **28** 08:25:30.3±0.9, 2°S±6°×13°9E±°, h20^{km}±10^{km}, M3.5/5, MLv3.5/5*

ISC 28 08:25:29.4±1.0**, 2°.55S**±0°.09×**138°.54E**±0°.06**, h32**^{km}**, n9, σ1^{s}.37**/9**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**0.59**	**17**	P	**Pb**	**08 25 40.4**	**-0.9**
GENI	**Genyem**	**1.63**	**91**	P	**Pb**	**08 25 58.9**	**0.0**
JAY	**Jayapura**	**2.17**	**89**	Pn	**Pn**	**08 26 04.9**	**+1.6**
	4.2nm,0.3s,baz=226,slow=12,SNR=16						
JAY				Lg	Lg	08 26 34.8	
	1.5nm,0.3s,baz=102,slow=20,SNR=1.3						
	11nm,0.3s						
JAY	**Jayapura**	**2.17**	**89**	P	**Pb**	**08 26 05.6**	**-2.4**
BAKI	**Biak**	**2.78**	**299**	P	**Pn**	**08 26 13.1**	**+1.4**
RKPI	**Ransiki, Papua**	**4.48**	**283**	P	**Pn**	**08 26 35.2**	**+0.1**
WRA	**Warramunga Arr**	**17.76**	**193**	P	**Pn**	**08 29 34.1**	**-0.2**
	0.2nm,0.3s,baz=17,slow=12,SNR=6.4						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**21.46**	**192**	P	**P**	**08 30 15.2**	**-0.1**
	0.5nm,0.8s,baz=20,slow=10,SNR=6.0						
	0.5nm,0.8s						
STKA	**Stephens Creek**	**29.31**	**175**	P	**P**	**08 31 29.3**	**+0.2**
	2.1nm,0.7s,baz=340,slow=15,SNR=3.0						
	2.1nm,0.7s						

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*IDC **28** 08:30:02.6±2.0, 14°.04N×88°.03W, h0^{km}, mb3.1/3, mbtmp3.2/4, ML3.6/1, MS3.5/1, Error ellipse: s-maj=154.4km s-min=16.3km az=54.0*

*SNET **28** 08:30:06.5±1.1, 13°.07N×89°.24W, h53^{km}, ML4.0*

*GCG **28** 08:30:07.6±1.4, 13°.14N×89°.24W, h56^{km}±8^{km}, MD4.2, ML3.9*

*CATAC **28** 08:30:07.3±0.2, 13°N±2°×8°9W±°, h31^{km}±2^{km}, M4.2/54, MLv4.2/54, Error ellipse: s-maj=3.8km s-min=1.8km az=33.2, confirmed*

ISC 28 08:30:06.8±1.0**, 13°.06N**±0°.04×**89°.21W**±0°.03**, h51**^{km}±8^{km}**, n147, σ0^{s}.88**/174**, mb3.0**/3**, 4D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.44**	**345**	eP	**Pn**	**08 30 17.2**	**-0.3**
LALI	**Alcalda de L**	**0.44**	**345**	iP	**Pn**	**08 30 17.2**	**-0.3**
LALI				iS	**Sn**	**08 30 25.8**	**+0.8**
LALI				IAML		08 30 26.2	
	comp=E,2μm,0.4s						
LALI	**Alcalda de L**	**0.44**	**345**	Pn	Pn	08 30 25.1	+7.6
LALI	**Alcalda de L**	**0.44**	**345**	P	**Pn**	**08 30 17.2**	**-0.3**
PANCS	**Alcalda de**	**0.55**	**3**	Pn	Pn	08 30 27.0	+8.2
PANCS				S	**Sn**	**08 30 27.3**	**-0.2**
PANCS	**Alcalda de**	**0.55**	**3**	P	**Pn**	**08 30 18.5**	**-0.4**
LFRS	**El Faro**	**0.58**	**14**	eP	**Pn**	**08 30 18.9**	**-0.4**
LOMA	**Loma Larga**	**0.58**	**3**	iP	**Pn**	**08 30 19.0**	**-0.3**
LOMA	**Loma Larga**	**0.58**	**3**	P	**Pn**	**08 30 18.9**	**-0.4**
LOMA	**Loma Larga**	**0.58**	**3**	S	**Sn**	**08 30 29.6**	**+1.3**
ITCA	**Escuela Especi**	**0.61**	**354**	P	**Pn**	**08 30 19.4**	**-0.3**
ITCA	**Escuela Especi**	**0.61**	**354**	S	**Sn**	**08 30 28.7**	**-0.2**
TECO	**Alcaldia de Te**	**0.63**	**41**	eP	**Pn**	**08 30 19.4**	**-0.4**
TECO	**Alcaldia de Te**	**0.63**	**41**	P	**Pn**	**08 30 19.4**	**-0.4**
TECO	**Alcaldia de Te**	**0.63**	**41**	S	**Sn**	**08 30 29.3**	**+0.2**
JAYA	**Jayaque - finc**	**0.64**	**338**	eP	**Pn**	**08 30 19.6**	**-0.5**
JAYA				eS	**Sn**	**08 30 28.9**	**-0.5**
JAYA	**Jayaque - finc**	**0.64**	**338**	iP	**Pn**	**08 30 19.5**	**-0.5**
JAYA				iS	**Sn**	**08 30 29.5**	**+0.1**
JAYA	**Jayaque - finc**	**0.64**	**338**	P	**Pn**	**08 30 19.6**	**-0.5**
UTEC	**Universidad Te**	**0.64**	**1**	eP	**Pn**	**08 30 19.8**	**-0.2**
UTEC	**Universidad Te**	**0.64**	**1**	P	**Pn**	**08 30 19.8**	**-0.2**
UTEC	**Universidad Te**	**0.64**	**1**	S	**Sn**	**08 30 30.0**	**+0.6**
SEMO	**Seminario San**	**0.64**	**359**	P	**Pn**	**08 30 19.7**	**-0.3**
SEMO	**Seminario San**	**0.64**	**359**	S	**Sn**	**08 30 30.2**	**+0.8**
COEG	**Centro de Oper**	**0.64**	**30**	⇓iP	**Pn**	**08 30 19.5**	**-0.5**
COEG	**Centro de Oper**	**0.64**	**30**	P	**Pn**	**08 30 19.5**	**-0.5**
COEG	**Centro de Oper**	**0.64**	**30**	S	**Sn**	**08 30 29.6**	**+0.1**
IGN	**Direccin Gen**	**0.65**	**3**	P	**Pn**	**08 30 19.9**	**-0.2**
IGN	**Direccin Gen**	**0.65**	**3**	S	**Sn**	**08 30 30.4**	**+0.7**
UDBS	**Universidad Do**	**0.65**	**4**	eP	**Pn**	**08 30 20.0**	**-0.2**
UDBS	**Universidad Do**	**0.65**	**4**	P	**Pn**	**08 30 20.2**	**+0.1**
UDBS	**Universidad Do**	**0.65**	**4**	S	**Sn**	**08 30 30.2**	**+0.5**
UEES	**Universidad Ev**	**0.65**	**357**	iP	**Pn**	**08 30 19.9**	**-0.3**
UEES	**Universidad Ev**	**0.65**	**357**	P	**Pn**	**08 30 19.8**	**-0.4**
UEES	**Universidad Ev**	**0.65**	**357**	S	**Sn**	**08 30 30.2**	**+0.5**
SNVI	**San Vicente**	**0.66**	**33**	eP	**Pn**	**08 30 19.9**	**-0.3**
PMON	**Piamonte**	**0.66**	**351**	⇓iP	**Pn**	**08 30 19.9**	**-0.3**
PMON	**Piamonte**	**0.66**	**351**	P	**Pn**	**08 30 19.8**	**-0.5**
PMON	**Piamonte**	**0.66**	**351**	S	**Sn**	**08 30 30.6**	**+0.7**
ALJI	**Alcalda de J**	**0.68**	**67**	eP	**Pn**	**08 30 20.9**	**+0.6**
ALJI				eS	**Sn**	**08 30 31.8**	**+1.7**
ALJI	**Alcalda de J**	**0.68**	**67**	P	**Pn**	**08 30 20.8**	**+0.5**
BOQS	**Boqueron**	**0.68**	**354**	⇓iP	**Pn**	**08 30 20.4**	**-0.2**
PIC2	**El Picacho**	**0.68**	**356**	eP	**Pn**	**08 30 20.7**	**0.0**
LFU	**La Fuente**	**0.69**	**8**	iP	**Pn**	**08 30 20.6**	**0.0**
LBRS	**Las Brisas**	**0.69**	**13**	eP	**Pn**	**08 30 20.6**	**0.0**
PAVA	**Las Pavas**	**0.70**	**22**	eP	**Pn**	**08 30 20.5**	**-0.3**
PAVA				eS	**Sn**	**08 30 31.3**	**+0.5**
PAVA	**Las Pavas**	**0.70**	**22**	P	**Pn**	**08 30 20.4**	**-0.3**
UESV	**Universidad de**	**0.70**	**35**	eP	**Pn**	**08 30 20.4**	**-0.3**
UESV				eS	**Sn**	**08 30 31.1**	**+0.3**
UESV	**Universidad de**	**0.70**	**35**	P	**Pn**	**08 30 20.4**	**-0.3**
CEDA	**San Andres**	**0.76**	**346**	⇓iP	**Pn**	**08 30 21.2**	**-0.3**
CEDA				eS	**Sn**	**08 30 32.5**	**+0.3**
CEDA	**San Andres**	**0.76**	**346**	P	**Pn**	**08 30 21.2**	**-0.3**
SCLA	**Alcaldia de Sa**	**0.79**	**36**	eP	**Pn**	**08 30 21.9**	**0.0**
SCLA				eS	**Sn**	**08 30 33.6**	**+0.8**
SCLA	**Alcaldia de Sa**	**0.79**	**36**	P	**Pn**	**08 30 21.9**	**0.0**
TECA	**Tecapa**	**0.81**	**58**	eP	**Pn**	**08 30 22.4**	**+0.1**
TECA				eS	**Sn**	**08 30 34.1**	**+0.6**
PQSS	**Presa 15 de Se**	**0.84**	**48**	eP	**Pn**	**08 30 22.4**	**-0.1**
PQSS				eS	**Sn**	**08 30 35.4**	**+1.4**
PQSS	**Presa 15 de Se**	**0.84**	**48**	P	**Pn**	**08 30 22.7**	**+0.2**
PQSS	**Presa 15 de Se**	**0.84**	**48**	S	**Sn**	**08 30 34.9**	**+1.0**
CEVE	**Cerro Verde**	**0.86**	**332**	P	**Pn**	**08 30 23.0**	**-0.1**
CEVE	**Cerro Verde**	**0.86**	**332**	S	**Sn**	**08 30 35.5**	**+0.7**
SBLS	**San Blas**	**0.88**	**332**	eP	**Pn**	**08 30 23.0**	**-0.2**
SBLS				eS	**Sn**	**08 30 35.6**	**+0.5**
PACA	**Pacayal**	**0.95**	**65**	eP	**Pn**	**08 30 24.7**	**+0.6**
PACA				eS	**Sn**	**08 30 38.5**	**+1.7**
PACA	**Pacayal**	**0.95**	**65**	P	**Pn**	**08 30 25.0**	**+1.0**
RANC	**El Ranchito**	**0.97**	**67**	P	Pn	08 30 14.5	-10
RANC	**El Ranchito**	**0.97**	**67**	S	Sn	08 30 28.4	-8.7
UNIC	**Universidad Ca**	**0.97**	**340**	eP	**Pn**	**08 30 24.3**	**0.0**
UNIC	**Universidad Ca**	**0.97**	**340**	S	**Sn**	**08 30 37.9**	**+0.7**
UNIC	**Universidad Ca**	**0.97**	**340**	P	**Pn**	**08 30 24.2**	**-0.1**
NUBE	**Las Nubes**	**1.01**	**326**	iP	**Pn**	**08 30 24.4**	**-0.4**
NUBE				eS	**Sn**	**08 30 37.9**	**-0.2**
NUBE	**Las Nubes**	**1.01**	**326**	iP	**Pn**	**08 30 24.4**	**-0.4**
NUBE				iS	**Sn**	**08 30 37.9**	**-0.2**
NUBE	**Las Nubes**	**1.01**	**326**	P	**Pn**	**08 30 24.5**	**-0.4**
LOAL	**Lomas de Alarc**	**1.09**	**329**	P	**Pn**	**08 30 26.0**	**+0.2**
LOAL	**Lomas de Alarc**	**1.09**	**329**	S	**Sn**	**08 30 41.9**	**+2.0**
CNRM	**Centro Naciona**	**1.09**	**68**	eP	**Pn**	**08 30 26.3**	**+0.4**
CNRM				eS	**Sn**	**08 30 41.8**	**+1.9**
CNRM	**Centro Naciona**	**1.09**	**68**	P	**Pn**	**08 30 26.5**	**+0.6**
FAME	**Alcaldia de Sa**	**1.11**	**315**	P	**Pn**	**08 30 25.4**	**-0.6**
FAME	**Alcaldia de Sa**	**1.11**	**315**	Pn	Pn	08 30 39.9	+14
SLOZ	**Alcaldia de Sa**	**1.11**	**330**	eP	**Pn**	**08 30 26.1**	**-0.1**
SLOZ				eS	**Sn**	**08 30 41.9**	**+1.4**
SLOZ	**Alcaldia de Sa**	**1.11**	**330**	P	**Pn**	**08 30 26.3**	**+0.2**
SLOZ	**Alcaldia de Sa**	**1.11**	**330**	S	**Sn**	**08 30 42.2**	**+1.7**
LLGN	**La Laguna**	**1.13**	**13**	eP	**Pn**	**08 30 26.2**	**-0.2**
LLGN				eS	**Sn**	**08 30 41.4**	**+0.5**
LLGN	**La Laguna**	**1.13**	**13**	P	**Pn**	**08 30 26.3**	**-0.2**
CAHU	**Cacacuatique**	**1.20**	**54**	eP	**Pn**	**08 30 28.3**	**+0.8**
LCND	**La Caada**	**1.31**	**79**	eP	**Pn**	**08 30 29.1**	**+0.4**
LCND	**La Caada**	**1.31**	**79**	P	**Pn**	**08 30 29.5**	**+0.8**
LCND	**La Caada**	**1.31**	**79**	S	**Sn**	**08 30 46.4**	**+1.3**
MTO3	**Montecristo**	**1.34**	**354**	eP	**Pn**	**08 30 29.2**	**-0.2**
MTO3	**Montecristo**	**1.34**	**354**	iP	**Pn**	**08 30 29.2**	**-0.2**
MTO3				iS	**Sn**	**08 30 46.2**	**-0.1**
MTO3	**Montecristo**	**1.34**	**354**	P	**Pn**	**08 30 29.3**	**-0.2**
CNCH	**Conchagua**	**1.35**	**81**	eP	**Pn**	**08 30 29.9**	**+0.4**
CNCH				eS	**Sn**	**08 30 47.9**	**+1.4**
CNCH	**Conchagua**	**1.35**	**81**	P	**Pn**	**08 30 29.7**	**+0.2**
CNCH	**Conchagua**	**1.35**	**81**	S	**Sn**	**08 30 48.0**	**+1.6**
ESQI	**Esquipulas**	**1.50**	**355**	iP	**Pn**	**08 30 31.7**	**+0.3**
ESQI				eS	**Sn**	**08 30 50.2**	**+0.3**
ESQI	**Esquipulas**	**1.50**	**355**	P	**Pn**	**08 30 31.8**	**+0.3**
ESQI	**Esquipulas**	**1.50**	**355**	S	**Sn**	**08 30 49.1**	**-0.8**
POTN	**Potosi Cosigui**	**1.66**	**92**	P	**Pn**	**08 30 33.8**	**+0.3**
POTN				S	**Sn**	**08 30 53.9**	**+0.2**
SARH	**Santa Rosa de**	**1.76**	**14**	iP	**Pn**	**08 30 35.5**	**+0.5**
SARH				iS	**Sn**	**08 30 57.0**	**+0.6**
SARH	**Santa Rosa de**	**1.76**	**14**	P	**Pn**	**08 30 35.6**	**+0.6**
SARH	**Santa Rosa de**	**1.76**	**14**	S	**Sn**	**08 30 57.1**	**+0.8**
FG8	**Yepocapa, Chim**	**1.78**	**312**	iP	Pn	08 30 41.2	+5.9
FG8				iS	Sn	08 31 08.0	+11
CHOHN	**Orocuina**	**2.04**	**78**	P	**Pn**	**08 30 38.8**	**-0.1**
CHOHN	**Orocuina**	**2.04**	**78**	S	**Sn**	**08 31 04.1**	**+0.9**
TGUH	**Tegucigalpa,Un**	**2.13**	**62**	P	**Pn**	**08 30 40.3**	**+0.3**
CRIN	**San Cristobal**	**2.13**	**99**	P	**Pn**	**08 30 40.8**	**+0.7**
CRIN	**San Cristobal**	**2.13**	**99**	S	**Sn**	**08 31 07.2**	**+1.7**
PKGN	**Cerro Pekin**	**2.21**	**100**	P	**Pn**	**08 30 41.3**	**+0.2**
PKGN				S	**Sn**	**08 31 07.4**	**+0.2**
QUEN	**Al S del Volca**	**2.34**	**101**	P	**Pn**	**08 30 43.0**	**0.0**
POLN	**Al Sur del Vol**	**2.37**	**100**	P	**Pn**	**08 30 43.1**	**-0.2**
POLN				S	**Sn**	**08 31 10.2**	**-1.1**
PLRN	**Geotermica Pol**	**2.42**	**101**	P	**Pn**	**08 30 43.9**	**-0.2**
PLRN				S	**Sn**	**08 31 11.8**	**-0.8**
YUSH	**Yuscaran**	**2.47**	**69**	P	**Pn**	**08 30 44.8**	**+0.1**
YUSH	**Yuscaran**	**2.47**	**69**	S	**Sn**	**08 31 14.3**	**+0.6**
ILCN	**San Idelfonso**	**2.49**	**101**	P	**Pn**	**08 30 45.0**	**0.0**
ILCN				S	**Sn**	**08 31 14.2**	**0.0**
CNGA	**Al SSO del Vol**	**2.51**	**103**	P	**Pn**	**08 30 47.8**	**+2.6**
CNGN	**Cerro Negro**	**2.51**	**103**	P	**Pn**	**08 30 45.4**	**+0.1**
MOMN	**Momotombo**	**2.68**	**104**	P	**Pn**	**08 30 49.4**	**+1.8**
MOMN				S	**Sn**	**08 31 21.3**	**+2.3**
COPN	**Copaltepe**	**2.70**	**109**	P	**Pn**	**08 30 47.3**	**-0.5**
OCON	**Estacion meteo**	**2.72**	**78**	P	**Pn**	**08 30 48.5**	**+0.3**
OCON				S	**Sn**	**08 31 19.3**	**-0.5**
MOM2	**El Cardon**	**2.73**	**103**	P	**Pn**	**08 30 48.6**	**+0.4**
MOM2				S	**Sn**	**08 31 19.3**	**-0.7**
RTAL	**Retalhuleu**	**2.82**	**301**	P	**Pn**	**08 30 51.3**	**+1.8**
RTAL	**Retalhuleu**	**2.82**	**301**	S	**Sn**	**08 31 23.9**	**+1.6**
SAPS	**Ciudad Sandino**	**2.88**	**108**	P	**Pn**	**08 30 52.0**	**+1.8**
APQ3	**Volcan Apoyequ**	**2.88**	**105**	P	**Pn**	**08 30 50.3**	**0.0**
APQ3				S	**Sn**	**08 31 24.0**	**+0.3**
APQ2	**Apoyeque**	**2.94**	**107**	P	**Pn**	**08 30 52.1**	**+1.0**
APQ2				S	**Sn**	**08 31 25.7**	**+0.4**
RCVN	**Varillal2**	**2.98**	**80**	P	**Pn**	**08 30 52.4**	**+0.6**
UNAN	**Cigeo UNAN**	**3.02**	**108**	P	**Pn**	**08 30 52.9**	**+0.7**
R4DEC	**Barrio San Lui**	**3.03**	**107**	P	**Pn**	**08 30 53.4**	**+1.1**
R4DEC	**Barrio San Lui**	**3.03**	**107**	S	**Sn**	**08 31 26.8**	**-0.6**
MGAN	**Managua**	**3.03**	**107**	P	**Pn**	**08 30 54.1**	**+1.8**
MGAN	**Managua**	**3.03**	**107**	S	**Sn**	**08 31 26.7**	**-0.6**
RCPN	**Sur Rio San Ju**	**3.07**	**81**	P	**Pn**	**08 30 53.9**	**+1.0**
WILN	**Americas 2**	**3.08**	**107**	P	**Pn**	**08 30 55.1**	**+2.1**
WILN				S	**Sn**	**08 31 27.8**	**-0.8**
MAS3	**Al N del Volca**	**3.13**	**109**	P	**Pn**	**08 30 54.9**	**+1.1**
SABN	**Sabanita**	**3.17**	**110**	P	**Pn**	**08 30 56.0**	**+1.7**
MATN	**Matagalpa**	**3.20**	**92**	P	**Pn**	**08 30 54.1**	**-0.7**

MATN	Matagalpa	3.20	92	S	Sn	08 31 29.8	-2.0
NANN	Nandasmo	3.21	110	P	Pn	08 30 57.1	+2.2
NANN	Nandasmo	3.21	110	S	Sn	08 31 30.9	-1.1
BOAB	BOACO BROADBAN	3.51	100	P	Pn	08 30 58.4	-0.5
PETF	Flores	3.89	351	P	Pn	08 31 05.1	+0.9
ACON	Acoyapa	4.08	105	P	Pn	08 31 07.9	+1.1
CCIG	Comitan	4.28	319	P	Pn	08 31 12.3	+2.7
SIUN	Universidad Ur	4.36	81	P	Pn	08 31 11.5	+0.9
CMARA	Lajas Hojancha	4.78	129	P	Pn	08 31 17.7	+1.2
CMARA	Lajas Hojancha	4.78	129	S	Sn	08 32 10.0	-0.7
JTS	Las Juntas de	4.99	123	Pn	Pn	08 31 17.3	-2.1
	comp=E,2.3nm,0.3s,baz=321,slow=19,SNR=11						
JTS				Pg		08 31 28.7	
	comp=E,6.3nm,0.3s,baz=299,slow=13,SNR=8.1						
JTS				Sn	Sn	08 32 14.4	-1.4
	comp=E,4.6nm,0.3s,baz=311,slow=18,SNR=1.8						
JTS				Lg	Lg	08 32 33.9	
	comp=E,7.2nm,0.3s,baz=282,slow=20,SNR=12						
	comp=E,2.6nm,0.3s						
TXAR	Lajitas Array	21.03	323	P	P	08 34 47.4	+0.7
	comp=E,0.3nm,0.5s,baz=138,slow=9.0,SNR=5.0						
	comp=E,0.3nm,0.5s						
ATAH	Atahualpa	22.76	151	LR	LR	08 43 14.5	
	comp=E,135nm,21.3s,baz=211,slow=34						
YKA	Yellowknife Ar	52.59	345	P	P	08 39 12.7	-2.5
	comp=E,0.4nm,0.9s,baz=151,slow=6.3,SNR=5.5						
	comp=E,0.4nm,0.9s						
ILAR	Eielson Array	64.78	336	P	P	08 40 40.3	+0.4
	comp=E,0.1nm,0.6s,baz=93,slow=10.0,SNR=4.2						
	comp=E,0.1nm,0.6s						

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*VAO **28** 08:30:39.8±0.3, 29°.29S×70°.78W, h45^{km}±2^{km}, mb5.0*

*SJA **28** 08:30:41.3±0.7, 29°.37S×71°.09W, h81^{km}±5^{km}, ML5.0, MW4.9*

*GUC **28** 08:30:41.8±0.8, 29°.36S×70°.84W, h73^{km}±3^{km}, ML5.1*

*IDC **28** 08:30:42.9±0.4, 29°.32S×70°.86W, h84^{km}±3^{km}, mb4.4/18, mbtmp4.7/20, MS3.7/31, Error ellipse: s-maj=16.3km s-min=7.8km az=58.0*

*NEIC **28** 08:30:42.8±1.5, 29°.36S±0°.04×71°.02W±0°.08, h78^{km}±3^{km}, mb5.0/46, Mwr4.9/32, Mww5.0/20, Mwr5.0(GUC), Error ellipse: s-maj=10.7km s-min=5.7km az=101.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.33; $M_{\theta\theta}$3.16; $M_{\phi\phi}$-2.82; $M_{r\theta}$-0.64; $M_{\theta\phi}$-0.61; $M_{\phi r}$0.95; Fault plane solution: $M_0$3.27000×10^{16} NP1: ϕ_s139.79000°, δ85.80000°, λ-20.97000°. NP2: ϕ_s231.40000°, δ69.09000°, λ-175.50000°. Principal axes: T 3.3681, Plg12.0000°, Azm187.0000°; N -0.2044, Plg69.0000°, Azm309.0000°; P -3.1636, Plg18.0000°, Azm94.0000°;*

*NEIC **28** 08:30:43, 29°.38S×71°.14W, h80^{km}, Moment Tensor Solution. Duration: 1^{s}7 Moment tensor: Scale 10^{16}Nm; M_{rr}0.43; $M_{\theta\theta}$4.02; $M_{\phi\phi}$-4.45; $M_{r\theta}$-1.27; $M_{\theta\phi}$0.52; $M_{\phi r}$-0.13; Fault plane solution: $M_0$4.47000×10^{16} NP1: ϕ_s312.86000°, δ77.20000°, λ12.13000°. NP2: ϕ_s220.14000°, δ78.18000°, λ166.91000°. Principal axes: T 4.4530, Plg18.0000°, Azm176.0000°; N 0.0290, Plg72.0000°, Azm359.0000°; P -4.4819, Plg1.0000°, Azm267.0000°;*

*NEIC **28** 08:30:43, 29°.40S×70°.96W, h81^{km}*

*NEIC **28** 08:30:43, 29°.38S×70°.91W, h80^{km}*

*GCMT **28** 08:30:44.8±0.3, 29°.41S±0°.02×71°.13W±0°.03, h96^{km}±3^{km}, MW5.0/87, Moment Tensor Solution. s33,c35; s87,c122; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.23±.14; $M_{\theta\theta}$3.50±.14; $M_{\phi\phi}$-3.73±.19; $M_{r\theta}$-1.35±.07; $M_{\theta\phi}$-0.72±.15; $M_{\phi r}$-0.80±.13; Best double couple: $M_0$4.01200×10^{16} NP1: ϕ_s322.00000°, δ67.00000°, λ4.00000°. NP2: ϕ_s230.00000°, δ86.00000°, λ157.00000°. Principal axes: T 4.0070, Plg19.0000°, Azm183.0000°; N 0.0080, Plg67.0000°, Azm40.0000°; P -4.0170, Plg13.0000°, Azm278.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 08:30:42.1±0.3**, 29°.35S**±0°.02×**70°.99W**±0°.03**, h81**^{km}±2^{km}**, h82**^{km}**:pP-P, n264,** σ**1^{s}60**/305**, mb4.9**/41**, 25C-2D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	Las Campanas	0.42	37		Pn	08 30 56.3	+0.7
LCO				Sn	Sn	08 31 06.6	+1.0
LCO	Las Campanas	0.42	37	⇑iP	Pn	08 30 55.7	0.0
LCO				iS	Sn	08 31 05.2	-0.4
LCO	Las Campanas	0.42	37	eP	Pn	08 30 56.1	+0.5
CO05	La Serena	0.61	201		Pn	08 30 57.2	+0.3
CO05				Sn	Sn	08 31 08.5	+0.6
CO05	La Serena	0.61	201	⇑iP	Pn	08 30 57.4	+0.4
CO05				iS	Sn	08 31 08.6	+0.6
GO04	Tololo Observa	0.84	169		Pn	08 30 59.9	+0.3
GO04	Tololo Observa	0.84	169	⇑iP	Pn	08 30 59.9	+0.3
GO04				iS	Sn	08 31 13.3	+0.6
GO04	Tololo Observa	0.84	169	eP	Pn	08 30 60.0	+0.3
GO04				eS	Sn	08 31 13.7	+1.0
CO01	Juntas del Tor	1.00	129		Pn	08 31 01.7	+0.3
CO01	Juntas del Tor	1.00	129	⇓iP	Pn	08 31 01.6	+0.1
CO01				iS	Sn	08 31 15.6	-0.3
CO01	Juntas del Tor	1.00	129	eP	Pn	08 31 01.5	+0.1
CO01				IAML		08 31 20.0	
	comp=Z,15µm,0.2s						
AC04	Llanos de Chal	1.14	356		Pn	08 31 04.0	+1.0
AC04	Llanos de Chal	1.14	356	⇑iP	Pn	08 31 03.9	+1.0
AC04				iS	Sn	08 31 20.1	+1.6
AC04				IAML		08 31 22.7	
	comp=E,37µm,0.2s						
AC04	Llanos de Chal	1.14	356	eP	Pn	08 31 03.9	+1.0
AC04				eS	Sn	08 31 21.4	+2.9
AC04				IAML		08 31 21.6	
	comp=Z,14µm,1.1s						
CO06	Fray Jorge	1.44	203		Pn	08 31 06.8	+0.1
CO06				Sn	Sn	08 31 25.1	-0.1
CO06	Fray Jorge	1.44	203	⇑iP	Pn	08 31 06.7	+0.1
CO06				iS	Sn	08 31 25.4	+0.2
CO06				IAML		08 31 28.1	
	comp=E,29µm,0.3s						
CO03	El Pedregal	1.51	170		Pn	08 31 08.0	+0.3
CO03	El Pedregal	1.51	170	⇑iP	Pn	08 31 08.0	+0.3
CO03				iS	Sn	08 31 27.1	+0.1
CO03				IAML		08 31 30.3	
	comp=E,53µm,0.2s						
CO03	El Pedregal	1.51	170	eP	Pn	08 31 07.9	+0.3
CO03				eS	Sn	08 31 27.5	+0.5
CO03				IAML		08 31 29.4	
	comp=Z,12µm,0.3s						
AROD	Rodeo	1.55	122	eP	Pn	08 31 10.2	+1.9
ACDV	Cuesta del Vie	1.82	117	eP	Pn	08 31 13.4	+1.7
ACDV				eS	Sn	08 31 37.5	+3.2
ACDV				AMP		08 31 41.6	
	comp=Z,144µm,0.2s						
ACDV				IAML		08 31 41.6	
	comp=Z,9µm,0.3s						
CO02	Combarbal	1.85	180		Pn	08 31 12.3	+0.2
CO02	Combarbal	1.85	180	⇑iP	Pn	08 31 12.4	+0.2
CO02				iS	Sn	08 31 34.7	-0.3
CO02	Combarbal	1.85	180	eP	Pn	08 31 12.3	+0.2
CO02				eS	Sn	08 31 35.7	+0.7
CO02				IAML		08 31 37.4	
	comp=Z,15µm,0.5s						
GO03	Copiapo	1.87	21		Pn	08 31 12.8	+0.5
GO03	Copiapo	1.87	21	⇑iP	Pn	08 31 12.8	+0.5
GO03				eS	Sn	08 31 36.1	+0.8
GO03				IAML		08 31 38.2	
	comp=N,18µm,0.4s						
GO03	Copiapo	1.87	21	eP	Pn	08 31 13.0	+0.6
GO03				eS	Sn	08 31 36.6	+1.3
AC06	Mina Casimiro	2.06	16		Pn	08 31 15.3	+0.5
AC06	Mina Casimiro	2.06	16	⇑iP	Pn	08 31 15.3	+0.5
AC06				iS	Sn	08 31 39.5	-0.3
ACCO	Cerro Coronel	2.08	127	eP	Pn	08 31 17.7	+2.4
ACCO				eS	Sn	08 31 44.6	+3.9
AGUA	GUANDACOL	2.18	94	eP	Pn	08 31 18.7	+2.2
AGUA				eS	Sn	08 31 46.7	+3.9
AGUA				IAML		08 31 48.0	
	comp=Z,17µm,0.4s						
RTLS	Leoncito	2.84	150	eP	Pn	08 31 28.0	+2.4
RTLS				eS	Sn	08 32 03.6	+4.5
RTLS				IAML		08 32 04.6	
	comp=Z,16µm,0.4s						
RTLL	Cerro Villicun	2.94	133	eP	Pn	08 31 27.9	+1.3
RTLL				eS	Sn	08 31 55.5	-5.4
ZON	Zonda	2.96	138		Pn	08 31 28.5	+1.5
ZON	Zonda	2.96	138	eP	Pn	08 31 28.5	+1.5
ZON				eS	Sn	08 32 03.2	+1.6
ZON				IAML		08 32 14.8	
	comp=Z,2µm,0.6s						
AC02	Maricunga	2.99	34		Pn	08 31 28.5	+0.7
AC02	Maricunga	2.99	34	⇑iP	Pn	08 31 28.5	+0.7
AC02				iS	Sn	08 32 03.4	+0.4
AC02	Maricunga	2.99	34	eP	Pn	08 31 28.3	+0.5
AC02				eS	Sn	08 31 53.0	-10
AC02				IAML		08 31 53.4	
	comp=Z,11µm,0.5s						
SJA	San Juan	3.02	137	eP	Pn	08 31 29.3	+1.6
SJA				eS	Sn	08 31 56.4	-6.5
SJA				IAML		08 32 11.7	
	comp=Z,2µm,0.6s						
AC01	Pan de Azucar	3.21	6		Pn	08 31 29.2	-1.0
AC01	Pan de Azucar	3.21	6	⇑iP	Pn	08 31 29.2	-1.0
AC01				iS	Sn	08 32 03.8	-3.6
AC01	Pan de Azucar	3.21	6	eP	Pn	08 31 29.2	-1.0
AC01				eS	Sn	08 31 56.4	-11
AC01				IAML		08 32 38.4	
	comp=Z,3µm,1.4s						
VA06	Catapilco	3.21	185		Pn	08 31 30.1	-0.2
VA06	Catapilco	3.21	185	⇑iP	Pn	08 31 29.9	-0.4
VA06				iS	Sn	08 32 06.9	-0.7
CFA	Coronel Fontan	3.27	134	P	Pn	08 31 31.9	+0.8
	comp=Z,367nm,0.3s,baz=316,slow=14,SNR=3417						
CFA				S	Sn	08 32 09.6	+0.6
	comp=Z,3µm,0.5s,baz=233,slow=20,SNR=30						
AVFE	Valle Fertil	3.33	114	eP	Pn	08 31 33.0	+1.1
AVFE				eS	Sn	08 32 11.5	+1.0
AVFE				IAML		08 32 12.3	
	comp=Z,10µm,0.5s						
VA03	San Esteban	3.43	174		Pn	08 31 34.0	+0.6
VA03	San Esteban	3.43	174	⇑iP	Pn	08 31 33.9	+0.6
VA03				iS	Sn	08 32 13.5	+0.6
VA03	San Esteban	3.43	174	eP	Pn	08 31 33.9	+0.6
VA03				IAML		08 32 37.5	
	comp=Z,3µm,0.2s						
ACLC	CERRO LA CRUZ	3.52	92	eP	Pn	08 31 35.5	+0.8
ACLC				eS	Sn	08 32 17.4	+2.1
ACLC				IAML		08 32 22.8	
	comp=Z,1µm,0.5s						
ROCH	El Roble	3.61	180	⇑iP	Pn	08 31 35.5	-0.5
VA01	Torpederas	3.71	189		Pn	08 31 35.7	-1.3
VA01	Torpederas	3.71	189	⇑iP	Pn	08 31 35.9	-1.2
VA01				iS	Sn	08 32 16.8	-2.8
VA01	Torpederas	3.71	189	eP	Pn	08 31 35.5	-1.5
VA01				IAML		08 32 48.2	
	comp=Z,1µm,0.5s						
ASAL	Salagasta	3.72	151	eP	Pn	08 31 39.5	+2.2
ASAL				eS	Sn	08 32 24.0	+3.9
PEL	Peldehue	3.79	176		Pn	08 31 38.5	+0.2
PEL	Peldehue	3.79	176	⇑iP	Pn	08 31 38.5	+0.2
MT02	Curacav	3.90	182		Pn	08 31 39.3	-0.3
MT02	Curacav	3.90	182	⇑iP	Pn	08 31 38.8	-0.9
MT02	Curacav	3.90	182	eP	Pn	08 31 38.6	-1.1
MT02				IAML		08 32 26.6	
	comp=Z,2µm,1.6s						
MT10	Hacienda Santa	3.93	175	⇑iP	Pn	08 31 40.5	+0.3
APLL	PUNTA DE LOS L	4.01	106	eP	Pn	08 31 41.8	+0.6
FCH	Farellones	4.01	172	⇑iP	Pn	08 31 42.4	+0.9
FCH				iS	Sn	08 32 29.4	+2.0
MT05	Renca	4.04	177		Pn	08 31 41.5	-0.1
MT05	Renca	4.04	177	eP	Pn	08 31 41.7	+0.1
MT05				IAML		08 32 55.4	
	comp=Z,2µm,1.3s						
MT16	CCHEN	4.09	175		Pn	08 31 42.4	+0.1
MT04	Ro Olivares	4.11	170	eP	Pn	08 31 43.9	+1.1
MT04				eS	Sn	08 32 37.3	+7.6
MT04				IAML		08 32 42.4	
	comp=Z,1µm,0.4s						
ACHE	Chepes	4.15	117	eP	Pn	08 31 44.0	+0.8
MT03	Universidad Ad	4.15	175		Pn	08 31 43.0	-0.1
MT03	Universidad Ad	4.15	175	eP	Pn	08 31 43.8	+0.6
MT03				eS	Sn	08 32 34.7	+4.1
MT03				IAML		08 32 38.9	
	comp=Z,2µm,0.3s						
MT08	Bocatoma Ro	4.17	169		Pn	08 31 44.4	+0.9
MT08	Bocatoma Ro	4.17	169	IAML		08 33 01.2	
	comp=Z,888nm,0.6s						
VA05	Santo Domingo	4.33	187		Pn	08 31 43.3	-2.1
GO02	Mina Guanaco	4.35	17		Pn	08 31 45.1	-1.0
MT09	Talagante	4.42	180		Pn	08 31 46.1	-0.6
MT01	Popeta	4.51	183		Pn	08 31 46.5	-1.4
LMEL	Las Melosas	4.54	172		Pn	08 31 48.4	-0.1
LMEL	Las Melosas	4.54	172	eP	Pn	08 31 49.6	+1.2
CYA	Choya	4.63	80	eP	Pn	08 31 49.4	-0.3
BO04	La Punta	4.64	176		Pn	08 31 48.7	-1.0
PB14	IPOC Station P	4.73	6		Pn	08 31 49.2	-2.0
BO01	Tunca	5.03	181		Pn	08 31 53.7	-1.3
BO02	Sierra Bellavi	5.43	178		Pn	08 31 59.0	-1.6
AF01	San Pedro de A	6.85	22		Pn	08 32 18.4	-1.8
H03N1	Juan Fernandez	7.91	237	T	T	08 40 28.0	
	baz=64,slow=72,SNR=220						
H03N2	Juan Fernandez	7.92	237	T	T	08 40 33.3	
	baz=64,slow=72,SNR=182						
H03N3	Juan Fernandez	7.92	237	T	T	08 40 31.3	
	baz=64,slow=72,SNR=112						
VA04	Juan Fernndez	7.95	235		Pn	08 32 33.5	-1.3
PLCA	Paso Flores	11.37	178	P	Pn	08 33 19.7	-1.7
	comp=Z,9.8nm,0.5s,baz=348,slow=14,SNR=11						
PLCA				LR	LR	08 38 16.0	
	comp=Z,330nm,21.6s,baz=358,slow=40						
PLCA	Paso Flores	11.37	178	eP	Pn	08 33 19.3	-2.2
PLCA				eS	Sn	08 35 27.9	+1.4
TRQA	Tornquist	11.47	142	Pn	Pn	08 33 20.6	-2.3
PB18	Visviri	11.79	7		Pn	08 33 25.8	-1.9
CPUP	Villa Florida	12.45	79	P	Pn	08 33 32.4	-3.9
	comp=Z,1.4nm,0.4s,baz=307,slow=20,SNR=11						
CPUP				LR	LR	08 38 49.7	
	comp=Z,124nm,20.9s,baz=98,slow=40						
ITQB	Itaqui	12.52	95	Pn	Pn	08 33 33.6	-3.4
ITQB	Itaqui	12.52	95	eP	Pn	08 33 33.0	-4.0
LPAZ	La Paz	13.26	12		Pn	08 33 44.8	-2.9
LPAZ	La Paz	13.26	12	P	Pn	08 33 44.4	-3.3
	comp=Z,83nm,0.7s,baz=181,slow=7.8,SNR=32						
LPAZ				LR	LR	08 39 48.8	
	comp=Z,269nm,19.1s,baz=192,slow=41						
LPAZ	La Paz	13.26	12	eP	Pn	08 33 44.0	-3.7
LL02	Futaleuf	13.83	183		Pn	08 33 52.9	-1.5
SJPY	San Joaquin	13.94	75	eP	Pn	08 33 52.0	-3.8
MURT	Porto Murtinho	14.29	61	eP	Pn	08 33 57.1	-3.4
PLTB	Pedras Altas	15.17	103	eP	Pn	08 34 08.0	-3.8
CPSB	Cacapava Do Su	15.26	98	eP	Pn	08 34 08.7	-4.2
BBSD	Serra de San D	15.39	40	eP	Pn	08 34 11.8	-3.0
BDQN	Bodoquena, MS	15.65	59	eP	Pn	08 34 15.8	-2.1
SIV	San Ignacio	16.12	37	P	Pn	08 34 20.7	-3.3
	comp=Z,4.3nm,0.7s,baz=233,slow=9.1,SNR=20						
COYC	Coyhaique	16.22	183		Pn	08 34 25.3	+0.4
AQDB	Aquidauana	16.43	61	eP	Pn	08 34 25.4	-2.2
ITAB	Concordia	16.74	87		P	08 34 31.9	-0.5
ITAB	Concordia	16.74	87	eP	Pn	08 34 27.8	-3.7
ITAB				eS	Sn	08 37 33.3	-3.8
PTGB	Pitanga	17.47	79	eP	Pn	08 34 38.0	-2.6
PTGB				eS	Sn	08 37 50.5	-4.3
CNLB	Canela	17.56	95	eP	Pn	08 34 39.9	-1.7
PTLB	Pontes e Lacer	17.62	41	P	Pn	08 34 42.4	+0.1
PTLB	Pontes e Lacer	17.62	41	eP	P	08 34 40.9	-1.3
TRCB	Terra Rica	17.72	73	P	P	08 34 43.0	-0.3
TRCB	Terra Rica	17.72	73	eP	P	08 34 40.8	-2.5
AY03	Cochrane	17.92	184	P	P	08 34 45.5	+0.2
RPRD	Ribas do Rio P	17.98	65	eP	P	08 34 44.0	-2.1
NNA	Nana	18.11	341	P	Pn	08 34 49.7	+1.3
	comp=Z,9.1nm,0.9s,baz=180,slow=13,SNR=1.7						
NNA				LR	LR	08 40 36.3	
	comp=Z,94nm,18.3s,baz=164,slow=33						
VILB	Vilhena	19.14	34		P	08 34 59.3	+0.4
VILB	Vilhena	19.14	34	eP	P	08 34 58.7	-0.3
VILB				eS	S	08 38 30.8	-1.1
PCMB	Pacaembu	19.39	71	eP	P	08 35 01.4	-0.2
SALV	Santo Antonio	19.42	50	eP	P	08 35 01.7	-0.2
C2SB	Chapadao do Su	19.61	62	eP	P	08 35 03.9	-0.1
FRTB	Fartura	20.09	78	eP	P	08 35 07.2	-2.0
ITRB	Iturama	21.05	68	eP	P	08 35 19.0	-0.6
CZSB	Cruzeiro do Su	21.57	355	P	P	08 35 26.4	+1.4
CZSB	Cruzeiro do Su	21.57	355	eP	P	08 35 25.6	+0.6
PET01	Itanhaem-SP	21.74	82	eP	P	08 35 27.1	+0.2
SPB	Sao Paulo	21.83	80		P	08 35 28.8	+0.9
SPB	Sao Paulo	21.83	80	eP	P	08 35 27.6	-0.2
GO09	Cerro Castillo	21.92	182	P	P	08 35 29.4	+0.8
PDRB	Porto dos Gac	22.09	40	eP	P	08 35 29.4	-1.2
MG05	Puerto Natales	22.34	182	P	P	08 35 33.3	+0.4
VAO	Valinhos	22.44	79	P	P	08 35 33.2	-1.3
VAO				IAmb	IAmb	08 35 35.5	
	comp=Z,43nm,0.7s						
VAO	Valinhos	22.44	79	eP	P	08 35 32.4	-2.2
CLDB	Colider	23.22	41	eP	P	08 35 39.3	-2.9
MG04	Isla Riesco	23.49	181	P	P	08 35 44.7	+0.2
IPMB	Ipameri, GO	23.68	67	eP	P	08 35 43.5	-3.1
MG03	Isla Dawson	24.48	179	P	P	08 35 54.2	+0.9
PMNB	Patos De Minas	24.83	70	eP	P	08 35 55.6	-1.4
TBTG	Tabatinga, AM	25.05	3		P	08 35 59.5	+0.7
BDFB	Brasilia	25.16	62		P	08 35 59.6	-0.5
BDFB				IAmb	IAmb	08 36 20.7	
	comp=Z,122nm,1.5s						
BDFB	Brasilia	25.16	62	P	P	08 35 59.0	-1.1
	comp=Z,15nm,0.8s,baz=232,slow=9.2,SNR=21						
BDFB				LR	LR	08 46 10.7	
	comp=Z,190nm,20.1s,baz=241,slow=37						
	comp=Z,15nm,0.8s						
SNDB	Serra Nova Dou	25.19	51	eP	P	08 35 59.1	-1.1
USHA	Ushuaia	25.53	177	P	P	08 36 03.4	+0.5
	comp=Z,66nm,0.9s,baz=324,slow=3.9,SNR=20						
USHA				LR	LR	08 45 42.2	
	comp=Z,316nm,20.1s,baz=313,slow=35						
	comp=Z,66nm,0.9s						
TEFE	Tefe	26.39	14	eP	P	08 36 11.8	+0.8
NPGB	Novo Progresso	26.63	37	eP	P	08 36 12.1	-1.0
DIAM	Diamantina, MG	27.23	72	eP	P	08 36 18.6	-0.2
MACA	Manacapuru-AM	27.82	22	eP	P	08 36 23.8	0.0
JANB	Januaria	28.41	66	eP	P	08 36 27.8	-1.3
ITTB	Itaituba	28.74	33	eP	P	08 36 31.1	-0.9
SJMB	Sao Joao De Ma	29.13	75	eP	P	08 36 34.5	-1.0
SMTB	Santa Maria do	29.95	52	eP	P	08 36 42.0	-0.7
OTAV	Otavalo	30.27	345	eP	P	08 36 47.4	+1.3
CMC01	Camacan, BA	32.14	71	eP	P	08 37 00.2	-1.8
ROSC	El Rosal	34.14	354	P	P	08 37 20.2	+0.4
	comp=Z,3.1nm,0.3s,baz=108,slow=22,SNR=1.0						
ROSC				LR	LR	08 50 28.0	
	comp=Z,99nm,19.9s,baz=108,slow=35						
	comp=Z,3.1nm,0.3s						
ESPZ	Base Esperanza	35.24	169	P	P	08 37 28.2	-0.1
PMSA	Palmer Station	35.71	175	LR	LR	08 51 45.3	
	comp=Z,270nm,18.2s,baz=345,slow=35						
SDV	Santo Domingo	38.01	1	P	P	08 37 51.4	-1.2
	comp=Z,4.4nm,0.4s,baz=241,slow=19,SNR=2.3						
SDV				LR	LR	08 53 08.4	
	comp=Z,153nm,18.5s,baz=227,slow=35						
	comp=Z,4.4nm,0.4s						
MDP	Montagnes des	38.52	30	LR	LR	08 55 12.6	
	comp=Z,156nm,20.7s,baz=206,slow=38						
SMAI	San Martin Ant	38.88	178		P	08 37 59.7	+0.6
SMAI				IAmb	IAmb	08 38 02.4	
	comp=Z,24nm,1.3s						
PCRV	Puerto La Cruz	39.77	10	LR	LR	08 55 32.8	
	comp=Z,172nm,20.9s,slow=38						
RCBR	Riachuelo	40.54	62	LR	LR	08 54 45.5	
	comp=Z,50nm,20.6s,baz=242,slow=36						
JTS	Las Juntas de	41.65	339	LR	LR	08 54 26.8	
	comp=Z,53nm,19.9s,baz=126,slow=34						
PDPR	Patillas Dam,	47.33	6	P	P	08 39 09.4	+1.6
PDPR				IAmb	IAmb	08 39 36.5	
	comp=Z,25nm,0.9s						
SJG	San Juan	47.41	6	LR	LR	09 00 04.7	
	comp=Z,61nm,19.8s,baz=179,slow=37						
CMIG	Matias Romero	51.61	330	LR	LR	08 55 16.9	
	comp=Z,29nm,21.3s,baz=170,slow=28						
TEIG	Tepich	52.03	339	P	P	08 39 44.8	+1.4
TEIG	Tepich	52.03	339	P	P	08 39 44.5	+1.1
TEIG				pP	pP	08 40 04.8	+0.8
TEIG				sP	sP	08 40 13.2	+0.1
CAMR	Camarioca	53.05	348	P	P	08 39 50.9	-0.1
CAMR				IAmb	IAmb	08 40 32.5	
	comp=Z,94nm,1.1s						
VNA3	Neumayer Olymp	53.35	159	⇑P	P	08 39 52.9	+0.3
	comp=Z,18nm,0.6s						
VNA1	Neumayer--Stat	53.62	158	⇑P	P	08 39 55.2	+0.6
	comp=Z,22nm,1.0s						
VNA2	Neumayer--Watz	53.97	159	⇑P	P	08 39 57.4	+0.3
	comp=Z,21nm,0.5s,baz=281,slow=7.1						
SNAA	Sanae	55.57	159	⇑P	P	08 40 08.9	+0.2
	comp=Z,323nm,0.5s						
SNAA	Sanae	55.57	159		P	08 40 09.1	+0.3
SNAA	Sanae	55.57	159	P	P	08 40 08.9	+0.2
	comp=Z,13nm,0.5s,baz=280,slow=6.8,SNR=242						
SNAA				LR	LR	09 02 52.2	
	comp=Z,70nm,20.1s,baz=302,slow=35						
	comp=Z,13nm,0.5s						
TROLL	Troll, Antarti	57.29	159	⇑P	P	08 40 21.4	+0.4
	comp=Z,301nm,0.5s						
QSPA	South Pole Qui	60.88	180	P	P	08 40 46.6	+0.8
	comp=Z,19nm,0.7s,baz=152,slow=2.6,SNR=89						
	comp=Z,19nm,0.7s						
QSPA	South Pole Qui	60.88	180	P	P	08 40 46.7	+0.8
QSPA				sP	sP	08 41 17.0	+0.8
833A	Chaparral WMA,	63.46	332	P	P	08 41 04.6	+1.2
HPIG		65.09	326		P	08 41 15.2	+0.8
HPIG				IAmb	IAmb	08 41 48.3	
	comp=Z,14nm,1.1s						
LPIG	La Paz	65.22	320	LR	LR	09 02 20.8	
	comp=Z,100nm,19.2s,baz=188,slow=29						
JCT	Junction City	65.53	333		P	08 41 18.1	+1.2
JCT				IAmb	IAmb	08 41 50.5	
	comp=Z,38nm,1.3s						
CPCT	Cooper Cave	65.70	348	P	P	08 41 18.5	+0.6
CPCT				IAmb	IAmb	08 41 49.3	
	comp=Z,20nm,1.1s						
TXAR	Lajitas Array	66.17	329	P	P	08 41 22.8	+1.6
	comp=Z,2.9nm,0.8s,baz=149,slow=8.3,SNR=33						
TXAR				pP	pP	08 41 43.9	+1.6
	comp=Z,3.8nm,0.8s,baz=158,slow=7.4,SNR=12						
	comp=Z,2.9nm,0.8s						
WVT	Waverly	67.03	345	P	P	08 41 27.0	+0.7
WVT				IAmb	IAmb	08 41 57.5	
	comp=Z,17nm,0.9s						
WVT	Waverly	67.03	345	P	P	08 41 26.4	+0.1
WVT				pP	pP	08 41 47.2	-0.4
WVT				sP	PcP	08 41 56.2	+2.1
MIAR	Mount Ida	67.04	340		P	08 41 27.6	+1.1
MIAR				IAmb	IAmb	08 41 59.2	
	comp=Z,14nm,1.0s						
ALPN	Alpine	67.05	330		P	08 41 28.0	+1.2
SGCY	Sterling City	67.32	332		P	08 41 29.1	+0.8
SGCY				IAmb	IAmb	08 42 04.3	
	comp=Z,13nm,1.0s						
T47A	Sharon Grove	67.70	346	P	P	08 41 30.9	+0.3
T47A				IAmb	IAmb	08 42 01.9	
	comp=Z,26nm,1.0s						
APMT	Aspermont	68.17	334		P	08 41 34.9	+1.2
APMT				IAmb	IAmb	08 42 06.3	
	comp=Z,45nm,1.5s						
HHAR	Hobbs	68.76	340	P	P	08 41 38.1	+0.9
HHAR				IAmb	IAmb	08 42 09.3	
	comp=Z,15nm,0.9s						
VNDA	Vanda	68.83	191	P	P	08 41 38.6	+1.4
	comp=Z,1.4nm,0.9s,baz=138,slow=5.1,SNR=4.8						
	comp=Z,1.4nm,0.9s						
U38A	Gravette	69.04	340		P	08 41 39.8	+0.9
WUPA	West Chester U	69.06	356	P	P	08 41 39.9	+0.9
WUPA				IAmb	IAmb	08 42 11.5	
	comp=Z,10nm,1.1s						
MVL	Millersville	69.17	356		P	08 41 41.4	+1.7
MVL				IAmb	IAmb	08 42 12.2	
	comp=Z,16nm,1.0s						
P52A	Corning	69.41	351	P	P	08 41 41.6	+0.5
P52A				IAmb	IAmb	08 42 12.3	
	comp=Z,23nm,1.1s						
CCM	Cathedral Cave	69.68	343	P	P	08 41 44.2	+1.3
CCM				IAmb	IAmb	08 42 15.0	
	comp=Z,34nm,1.0s						
CCM	Cathedral Cave	69.68	343	P	P	08 41 43.5	+0.7
CCM				pP	pP	08 42 04.5	+0.3
CCM				sP	sP	08 42 13.8	+0.5
SMWD	Samnorwood	69.80	335		P	08 41 44.2	+0.5
SMWD				IAmb	IAmb	08 42 18.9	
	comp=Z,12nm,0.8s						
SYO	Syowa Base	69.86	159	⇑iP	P	08 41 43.3	-0.3
SYO	Syowa Base	69.86	159	⇓ePcP	PcP	08 42 06.4	+0.8
SSPA	Standing Stone	69.92	354	P	P	08 41 45.4	+1.2
SSPA				pP	pP	08 42 06.3	+0.5
SSPA				sP	sP	08 42 15.2	+0.4
TUC	Tucson	72.02	325	P	P	08 41 58.2	+1.0
ANMO	Albuquerque	72.18	330		P	08 42 00.2	+1.9
ANMO	Albuquerque	72.18	330	LR	LR	09 09 47.7	

	comp=Z,126nm,18.6s,baz=276,slow=32						
DBIC	Dimbokro	72.86	72	P	P	08 42 02.4	-0.2
	comp=Z,11nm,0.7s,baz=258,slow=5.8,SNR=7.2						
DBIC				pP	pP	08 42 24.4	-0.2
	comp=Z,16nm,0.6s,baz=256,slow=5.4,SNR=7.1						
DBIC				sP	sP	08 42 33.0	-0.8
	comp=Z,6.2nm,0.5s,baz=246,slow=8.5,SNR=3.3						
DBIC				LR	LR	09 14 24.5	
	comp=Z,44nm,18.1s,baz=199,slow=36						
	comp=Z,11nm,0.7s						
L40A	Anamosa	73.47	344	P	P	08 42 05.7	+0.2
SADO	Sadowa	74.14	354	LR	LR	09 19 43.0	
	comp=Z,58nm,18.5s,baz=190,slow=40						
D62A	Allapoint, All	76.09	1	P	P	08 42 22.2	+1.7
D62A				IAmb	IAmb	08 42 53.3	
	comp=Z,20nm,0.9s						
V12A	Nelson	76.78	325		P	08 42 27.0	+2.1
SPMN	Marine on St.	76.83	344	P	P	08 42 25.0	+0.2
SPMN				IAmb	IAmb	08 42 48.3	
	comp=Z,13nm,1.0s						
O20A	White River Ci	77.31	332	P	P	08 42 29.8	+1.9
O20A				IAmb	IAmb	08 43 04.5	
	comp=Z,21nm,1.1s						
MAW	Mawson	77.38	164	P	P	08 42 27.7	+0.1
MAW	Mawson	77.38	164	P	P	08 42 27.8	+0.1
	comp=Z,6.3nm,0.6s,baz=216,slow=8.2,SNR=14						
MAW				LR	LR	09 17 02.7	
	comp=Z,86nm,18.6s,baz=228,slow=36						
	comp=Z,6.3nm,0.6s						
RSSD	Black Hills	79.12	336	P	P	08 42 39.2	+1.4
TSUM	Tsumeb	79.63	106	P	P	08 42 40.0	-1.2
TSUM				IAmb	IAmb	08 43 10.3	
	comp=Z,19nm,1.5s						
TSUM	Tsumeb	79.63	106	P	P	08 42 40.9	-0.2
	comp=Z,3.9nm,0.7s,baz=294,slow=2.9,SNR=9.5						
TSUM				LR	LR	09 17 12.3	
	comp=Z,56nm,18.5s,baz=323,slow=35						
	comp=Z,3.9nm,0.7s						
PDAR	Pinedale Array	80.05	332	P	P	08 42 44.2	+1.3
	comp=Z,1.7nm,0.8s,baz=145,slow=5.4,SNR=15						
PDAR				pP	pP	08 43 05.7	+0.8
	comp=Z,1.3nm,0.6s,baz=125,slow=6.8,SNR=6.9						
PDAR				LR	LR	09 16 19.6	
	comp=Z,23nm,18.5s,baz=170,slow=34						
	comp=Z,1.7nm,0.8s						
NVAR	Mina Array Bea	80.62	324	P	P	08 42 47.0	+1.0
	comp=Z,1.4nm,0.9s,baz=162,slow=5.4,SNR=9.5						
	comp=Z,1.4nm,0.9s						
AHID	Auburn Hatcher	80.69	331	P	P	08 42 47.8	+1.5
AHID				IAmb	IAmb	08 43 23.6	
	comp=Z,12nm,1.1s						
BOSA	Boshof	81.44	118	P	P	08 42 50.1	-0.6
	comp=Z,5.5nm,0.6s,baz=268,slow=2.5,SNR=12						
BOSA				pP	pP	08 43 13.1	+0.2
	comp=Z,1.9nm,0.5s,baz=274,slow=3.2,SNR=2.2						
BOSA				LR	LR	09 17 01.5	
	comp=Z,61nm,18.6s,baz=207,slow=34						
	comp=Z,5.5nm,0.6s						
TORD	Torodi Ar. Bea	81.78	70		P	08 42 52.3	-0.1
TORD	Torodi Ar. Bea	81.78	70	P	P	08 42 51.7	-0.7
	comp=Z,3.4nm,0.4s,baz=276,slow=2.8,SNR=2.3						
TORD				pP	pP	08 43 14.7	0.0
	comp=Z,6.0nm,0.5s,baz=276,slow=5.8,SNR=3.6						
	comp=Z,3.4nm,0.4s						
YNE	Yellowstone No	82.10	333	P	P	08 42 55.2	+1.5
ULM	Lac du Bonnet	82.27	344	P	P	08 42 54.5	+0.4
	comp=Z,9.3nm,0.8s,baz=154,slow=4.3,SNR=20						
ULM				pP	pP	08 43 16.4	+0.2
	comp=Z,11nm,0.9s,baz=147,slow=4.0,SNR=8.4						
	comp=Z,9.3nm,0.8s						
LBTB	Lobatse	83.44	115	LR	LR	09 19 55.6	
	comp=Z,39nm,18.4s,baz=226,slow=35						
SCHQ	Schefferville	83.91	2	P	P	08 43 01.4	-1.1
	comp=Z,3.7nm,1.1s,baz=102,slow=9.3,SNR=3.7						
SCHQ				LR	LR	09 23 50.6	
	comp=Z,42nm,18.1s,baz=218,slow=38						
	comp=Z,3.7nm,1.1s						
NEW	Newport	87.62	331	LR	LR	09 19 37.0	
	comp=Z,54nm,19.8s,baz=151,slow=34						
MDT	Midelt	88.19	51	LR	LR	09 23 03.7	
	comp=Z,14nm,18.6s,baz=228,slow=36						
LSZ	Lusaka	90.38	108	LR	LR	09 24 51.9	
	comp=Z,40nm,18.3s,baz=188,slow=36						
FRB	Frobisher Bay	92.80	1	LR	LR	09 26 54.6	
	comp=Z,45nm,18.6s,baz=148,slow=36						
SFJD	Kangerlussuaq	97.28	8	LR	LR	09 28 57.0	
	comp=Z,31nm,19.3s,baz=217,slow=36						
YKA	Yellowknife Ar	97.95	341	P	P	08 44 08.5	+0.2
	comp=Z,0.7nm,0.8s,baz=142,slow=3.9,SNR=6.5						
YKA				pP	pP	08 44 30.6	-0.2
	comp=Z,0.4nm,0.7s,baz=141,slow=4.2,SNR=6.0						
	comp=Z,0.7nm,0.8s						
NACGM	Naroch	117.79	40	*e*PKiKP	PKiKP	08 49 20.2	+1.8
	comp=Z,10.0nm,0.7s,baz=258						
BRTR	Keskin Array B	118.71	58	PKP	PKPdf	08 49 21.3	+0.4
	comp=Z,0.7nm,0.7s,baz=197,slow=3.9,SNR=3.6						
ASAR	Alice Springs	122.11	207	PKP	PKPdf	08 49 27.4	-0.6
	comp=Z,0.2nm,0.4s,baz=132,slow=1.7,SNR=7.7						
WRA	Warramunga Arr	125.25	210	PKP	PKPdf	08 49 33.6	-0.4
	comp=Z,0.4nm,0.4s,baz=154,slow=1.6,SNR=19						
WRA				pPKP	pPKPdf	08 49 56.7	-0.5
	comp=Z,0.8nm,0.5s,baz=156,slow=1.6,SNR=5.4						
FITZ	Fitzroy Crossi	130.18	201	PKP	PKPdf	08 49 41.4	-2.0
	comp=Z,2.3nm,0.9s,baz=104,slow=4.2,SNR=1.6						
ARTI	Arti	135.50	38	PKP	PKPdf	08 49 49.6	-2.6
	comp=Z,1.4nm,0.4s,baz=225,slow=1.4,SNR=3.7						
PETK	Petropavlovsk-	137.44	318	PKP	PKPdf	08 49 56.1	+0.2
	comp=Z,4.1nm,1.0s,baz=102,slow=4.0,SNR=4.5						
BVAR	Borovoye Array	143.19	39	PKP	PKPbc	08 50 04.8	+1.3
	comp=Z,0.7nm,0.4s,baz=208,slow=5.5,SNR=3.9						
KK31	Karatay Array	146.35	55		PKPdf	08 50 12.6	+0.4
KKAR	Karatay Array	146.35	55		PKPdf	08 50 12.8	+0.7
KURBB	Kurchatov Arra	148.77	39	PKPbc	PKPbc	08 50 20.7	+0.9
	comp=Z,6.6nm,0.7s,baz=302,slow=3.3,SNR=34						
KURBB				pPKPbc	pPKPbc	08 50 43.1	+0.2
	comp=Z,2.6nm,0.4s,baz=304,slow=3.1,SNR=6.4						
EKS2	Erkin-Say	148.78	55	P	PKiKP	08 50 22.0	+0.4
	SNR=6.7						
USP	Ospenovka	149.15	54	P	PKiKP	08 50 22.4	+0.2
	SNR=6.4						
AAK	Ala-Archa	149.30	55	P	PKiKP	08 50 23.4	+0.7
	SNR=5.2						
AAK	Ala-Archa	149.30	55	PKPbc	PKiKP	08 50 23.4	+0.7
	comp=Z,8.1nm,0.6s,baz=246,slow=4.4,SNR=13						
ZAA0	Zalesovo Array	149.77	29		PKPbc	08 50 21.9	-0.2
ZALV	Zalesovo Beam	149.77	29		PKPdf	08 50 17.9	+0.6
ZALV	Zalesovo Beam	149.77	29	PKPbc	PKPbc	08 50 23.0	+0.9
	comp=Z,24nm,0.8s,baz=316,slow=3.1,SNR=4.7						
ZALV				pPKPbc	pPKPbc	08 50 46.0	+0.6
	comp=Z,10nm,0.6s,baz=310,slow=2.6,SNR=6.9						
TKM2	Tokmak 2	150.01	54	P	PKiKP	08 50 24.8	+0.5
	SNR=11						
ULHL	Ulahol	150.66	55	P	PKiKP	08 50 26.7	+1.1
	SNR=7.6						
KSH	Kashi	151.06	61	PKPbc	PKPdf	08 50 20.5	+0.5
KSH				pPKP	pPKPbc	08 50 48.5	-0.5
KSH				LR	LR		
	comp=N,310nm,18.9s						
KSH				LR	LR		
	comp=E,250nm,17.9s						
MKAR	Makanchi Array	152.88	43		PKPbc	08 50 29.4	-0.2
MKAR	Makanchi Array	152.88	43	PKP	PKPdf	08 50 21.9	-0.5
	comp=E,0.4nm,0.8s,baz=304,slow=2.8,SNR=4.0						
MKAR				PKPbc	PKPbc	08 50 30.1	+0.4
	comp=E,3.5nm,0.7s,baz=328,slow=2.0,SNR=33						
MJAR	Matsushiro Arr	154.54	294	PKPab	PKPab	08 50 49.0	+0.6
	comp=E,3.4nm,0.7s,baz=80,slow=4.0,SNR=8.0						
WMQ	Urumqi	157.69	44	*e*PKP	PKPdf	08 50 29.5	+0.5
HHC	Hu-ho-hao-te	168.34	350	*e*P	PKPdf	08 50 36.5	-2.9
NJ2	Nanjing	171.11	290	*e*P	PKPdf	08 50 41.0	-0.1
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
PZH	PanZhiHua	172.97	112	PKP	PKPdf	08 50 41.3	-1.0

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*IDC **28** 08:50:23.6±0.9, 72°.07N×0°.32W, h0^{km}, mb3.4/7, mbtmp3.5/12, ML3.0/5, MS3.1/6, Error ellipse: s-maj=25.4km s-min=15.0km az=60.0*

*BER **28** 08:50:25.4±4.2, 72°.17N×0°.62W, h10^{km}, Mw4.1, Confirmed Earthquake*

ISC 28 08:50:24.3±0.7**, 72°.06N**±0°.08×**0°.33W**±0°.07**, h10^{km}, n29,** σ1^s**77**/27**, mb3.4**/7**, MS3.1**/3**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNE	Jan Mayen East	2.76	251	*e*P	Pn	08 51 06.9	-1.5
JNE				*e*		08 53 52.5	
JNW	Jan Mayen West	2.78	252	*e*P	Pn	08 51 07.8	-0.9
JMIC	Jan Mayen	2.82	251	*e*P	Pn	08 51 07.9	-1.4
DBG	Daneborg	6.18	301	*e*P	Pn	08 51 52.0	-3.3
HSPB	Hornsund (broa	6.50	33	*e*P	Pn	08 51 58.0	-1.7
STEI	Steigen	6.75	120	*e*P	Pn	08 52 02.6	-0.5
STEI				*e*S	Sn	08 53 14.1	-5.8
STEI				IAML		08 53 15.6	
	comp=Z,2.4nm,0.3s						
KONS	Konsvik	7.33	133	*e*P	Pn	08 52 11.4	+0.3
SPA0	Spitsbergen Ar	7.45	27	*e*P	Pn	08 52 13.0	+0.2
SPA0				IAML		08 52 14.2	
	comp=Z,2.5nm,0.2s						
SPITS	Spitsbergen Ar	7.45	27	Pn	Pn	08 52 12.5	-0.4
	baz=206,slow=15						
	comp=Z,1.7nm,0.2s						
KBS	Kingsbay	7.53	18	*e*P	Pn	08 52 13.8	0.0
LEIR	Leirfjorden	7.65	135	*e*P	Pn	08 52 15.7	+0.2
KIF	Kilpisjarvi	7.67	103	*e*P	Pn	08 52 15.7	-0.1
HAMF	Hammerfest	7.80	89	*e*P	Pn	08 52 20.0	+2.4
MOR8	Moi Rana	7.90	131	*e*P	Pn	08 52 20.6	+1.6
SALU	Saltoluokta	8.02	117	*e*P	Pn	08 52 21.4	+0.7
ARCES	ARCESS Array B	8.84	94	Pn	Pn	08 52 30.9	-1.0
	comp=Z,0.1nm,0.3s,baz=299,slow=12,SNR=6.2						
	comp=Z,5.0nm,1.0s						
NOA	NORSAR Array B	11.95	152	Pn	Pn	08 53 15.8	+1.4
	baz=333,slow=13,SNR=1.7						
NOA				LR	LR	08 57 58.2	
	comp=Z,33nm,18.2s,baz=345,slow=38						
	comp=Z,0.4nm,0.6s						
HFS	Hagfors	13.20	148	Pn	Pn	08 53 32.8	+1.3
	comp=Z,0.1nm,0.3s,baz=170,slow=41,SNR=1.2						
HFS				LR	LR	08 58 25.3	
	comp=Z,65nm,18.8s,baz=4.5,slow=36						
	comp=Z,0.6nm,0.5s						
FINES	FINESS Array B	14.72	123	LR	LR	08 59 00.5	
	comp=Z,83nm,18.4s,baz=249,slow=35						
EKA	Eskdalemuir Ar	16.84	186	Pn	Pn	08 54 19.7	-0.1
	baz=8.5,slow=10						
	comp=Z,0.8nm,0.6s						
VRAC	Vranov	24.10	152	LR	LR	09 05 32.3	
	comp=Z,33nm,18.5s,baz=347,slow=38						
GERES	GERESS Array B	24.16	157	P	P	08 55 42.6	+2.2
	comp=Z,1.0nm,0.8s,baz=352,slow=8.1,SNR=7.4						
	comp=Z,1.0nm,0.8s						
AKASG	Malin Array Be	25.15	132	P	P	08 55 49.3	+0.1
	comp=Z,0.1nm,0.3s,baz=341,slow=11,SNR=4.6						
AKASG				LR	LR	09 04 55.6	
	comp=Z,55nm,18.8s,baz=358,slow=35						
	comp=Z,0.1nm,0.3s						
ARTI	Arti	28.40	92	LR	LR	09 07 04.0	
	comp=Z,50nm,19.7s,baz=156,slow=35						
ESDC	Sonseca Array	32.52	185	P	P	08 56 55.7	+0.9
	comp=Z,0.4nm,0.5s,baz=8.7,slow=9.3,SNR=4.6						
	comp=Z,0.4nm,0.5s						
BRTR	Keskin Array B	36.54	134	P	P	08 57 31.1	+1.3
	comp=Z,0.6nm,0.6s,baz=284,slow=5.8,SNR=2.8						
	comp=Z,0.6nm,0.6s						
YKA	Yellowknife Ar	38.47	317	P	P	08 57 45.6	0.0
	comp=Z,0.7nm,1.1s,baz=30,slow=10,SNR=4.7						
	comp=Z,0.7nm,1.1s						
ILAR	Eielson Array	41.56	339	P	P	08 58 12.5	+1.2
	comp=Z,0.7nm,0.9s,baz=15,slow=8.5,SNR=7.5						
	comp=Z,0.7nm,0.9s						
PDAR	Pinedale Array	55.38	302	P	P	08 59 58.6	+0.3
	comp=Z,0.1nm,0.5s,baz=18,slow=8.1,SNR=1.8						
	comp=Z,0.1nm,0.5s						

IDC 28 08:59:53.3±3.0**, 53°.71N×87°.01E, h0^{km}, mbtmp2.6**/2**, ML2.1**/2**, Error ellipse: s-maj=28.3km s-min=16.9km az=70.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.32	281	I	I	09 07 50.0	
	0.1nm,0.9s,baz=101,slow=321,SNR=6.7						
ZALV	Zalesovo Beam	1.32	281	Pg	Pg	09 00 16.7	-1.8
	0.8nm,0.3s,baz=101,slow=16,SNR=6.8						
ZALV				Lg	Lg	09 00 36.0	
	1.0nm,0.3s,baz=100,slow=32,SNR=5.1						
ZALV				I	I	09 08 02.6	
	baz=108,slow=32,SNR=7.0						
KURBB	Kurchatov Arra	6.06	243	Pn	Pn	09 01 25.0	+0.9
	0.1nm,0.3s,baz=57,slow=14,SNR=4.8						
	0.2nm,0.3s						
MKAR	Makanchi Array	7.55	205	Pn	Pn	09 01 46.0	+1.4
	baz=24,slow=13,SNR=1.8						
	0.1nm,0.2s						

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*IDC **28** 09:08:49.3±3.3, 54°.33N×87°.30E, h0^{km}, mbtmp2.9/2, ML2.4/2, Error ellipse: s-maj=27.8km s-min=20.4km az=47.0*

ASRS 28 09:08:49.0±1.0**, 54°.23N×87°.02E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.33	259	I	I	09 17 20.0	
	0.1nm,1.0s,baz=77,slow=316,SNR=24						
ZALV	Zalesovo Beam	1.33	259	Pg	Pn	09 09 15.3	+0.5
	0.5nm,0.3s,baz=70,slow=20,SNR=5.3						
ZALV				Lg	Lg	09 09 38.0	
	1.3nm,0.3s,baz=73,slow=30,SNR=8.3						
KURBB	Kurchatov Arra	6.32	239	Pn	Pn	09 10 27.1	+3.7
	0.1nm,0.3s,baz=53,slow=14,SNR=4.8						
KURBB				Lg	Lg	09 12 15.4	
	baz=54,slow=30,SNR=5.1						
	0.5nm,0.2s						
MKAR	Makanchi Array	8.03	204	Pn	Pn	09 10 50.9	+4.0
	0.1nm,0.3s,baz=19,slow=9.3,SNR=1.9						
MKAR				Lg	Lg	09 13 09.0	
	0.1nm,0.3s,baz=24,slow=30,SNR=6.1						
	0.2nm,0.5s						

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*THR **28** 09:08:55.7±0.0, 27°.49N×53°.23E, h10^{km}±503^{km}, ML4.4*

*IDC **28** 09:08:56.8±0.8, 27°.75N×53°.21E, h0^{km}, mb4.0/21, mbtmp3.9/23, ML3.4/2, MS3.5/20, Error ellipse: s-maj=19.3km s-min=16.5km az=157.0*

*NEIC **28** 09:08:56.6±2.3, 27°.59N±0°.08×53°.22E±0°.07, h10^{km}±1^{km}, mb4.4/59, Error ellipse: s-maj=13.7km s-min=10.1km az=24.0*

*TEH **28** 09:08:56.0, 27°.55N×53°.17E, h14^{km}±27^{km}*

*DSN **28** 09:08:57.0±2.5, 27°.75N×53°.12E, h10^{km}, ML3.9/17, Error ellipse: s-maj=30.4km s-min=10.2km az=169.0*

*OMAN **28** 09:09:02.9±0.1, 27°.21N×53°.26E, h10^{km}, mb4.7/8, ml4.3/20, Error ellipse: s-maj=1.1km s-min=0.6km az=0.0*

ISC 28 09:08:58.2±0.3**, 27°.57N**±0°.03×**53°.22E**±0°.03**, h20^{km}, n230,** σ1^s**61**/235**, mb4.3**/46**, MS3.5**/18**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QIR1	Qir	0.91	350	Pg	Pb	09 09 13.7	-1.7
JHRM	Jahrom	0.98	19	Pg	Pb	09 09 15.4	-1.3
LAR1	LAR	1.03	84	Pg	Pb	09 09 16.5	-1.0
DSBU	Dashti - Bushe	1.90	295	Pn	Pn	09 09 29.5	-0.1
SHI	Shiraz	2.15	343	Pn	Pn	09 09 33.6	+0.5
BNDS	Bandar-Abbas	2.63	93	Pn	Pn	09 09 40.2	+0.5
BNDS	Bandar-Abbas	2.63	93	*e*PnA		09 09 40.0	
BNDS				IAML		09 10 41.3	
	comp=Z,3.0nm,1.0s						
GENO	Geno	2.63	93	Pn	Pn	09 09 40.2	+0.5
JRN	Qarnain Island	2.64	187	P	Pb	09 09 42.6	-2.3
JRN				S	Sn	09 10 11.7	+0.6
SHMA	Al-Shehemyia	2.64	230	P	Pb	09 09 43.0	-1.9
	SNR=7.6						
SAKB	Bahrain	2.88	237	P	Pb	09 09 48.5	-0.3
UMQ	Umm Al-Quwin	2.99	132	P	Pb	09 09 49.2	-1.6
UMQ	Umm Al-Quwin	2.99	132	P	Pb	09 09 49.8	-1.0
SHME	Shamm	3.02	119	P	Pn	09 09 47.6	+2.7
SHME				S	Sn	09 10 21.6	+1.1
SHME	Shamm	3.02	119	P	Pn	09 09 46.9	+2.0
BANOM	Banah	3.21	120	P	Pn	09 09 50.0	+2.5
BANOM				S	Sb	09 10 29.7	-3.5
BANOM	Banah	3.21	120	*i* P	Pn	09 09 49.7	+2.2
	SNR=14						
TRNA	Turayna	3.35	213	P	Pn	09 09 51.9	+2.5
	SNR=24						
NAZ	Nazwa, Dubai	3.38	139	P	Pn	09 09 52.8	+2.9
	SNR=22						
NAZ				S	Sn	09 10 32.3	+2.9
NAZ	Nazwa, Dubai	3.38	139	*i* P	Pn	09 09 52.6	+2.7
	SNR=22						
AJN	Ajban	3.39	152	P	Pn	09 09 53.3	+3.3
	SNR=9.1						
AJN				S	Sn	09 10 33.7	+4.0
MASF	Masafi	3.43	129	P	Pn	09 09 53.6	+3.0
MASF				S	Sn	09 10 29.4	-1.3
MSFE	Esma-Masafi	3.44	129	*i* P	Pn	09 09 52.8	+2.2
	SNR=10						
ASUD	Al Ashush, Dub	3.50	147	P	Pn	09 09 54.5	+3.0
ASUD				S	Sn	09 10 32.4	+0.2
ASUD	Al Ashush, Dub	3.50	147	P	Pn	09 09 54.4	+3.0
FAQ	Al Faqa, Dubai	3.53	142	P	Pn	09 09 54.5	+2.6
	SNR=12						
FAQ				S	Sn	09 10 32.9	-0.2
FAQ	Al Faqa, Dubai	3.53	142	*i* P	Pn	09 09 53.9	+1.9
	SNR=12						
SMRA	Abu-Samra	3.54	218	P	Pn	09 09 55.1	+3.0
	SNR=8.8						
MDH	Madha	3.57	129	P	Pn	09 09 56.6	+4.1
MDH	Madha	3.57	129	P	Pn	09 09 55.2	+2.7
GHWR	Ruwais	3.61	185	P	Pn	09 09 54.7	+1.8
KLNJ	Kolanjah	3.71	338	Pn	Pn	09 09 55.0	+0.3
KLNJ	Kolanjah	3.71	338	*e*Pn	Pn	09 09 56.3	+1.6
KLNJ				IAML		09 11 15.5	
	comp=Z,1.1nm,1.0s						
NGRK	Negar Kerman	3.71	55	Pn	Pn	09 09 55.7	+0.9
UOSS	Minazif	3.75	134		Pn	09 09 55.4	+0.5
UOSS				Sn	Sn	09 10 38.6	+0.2
UOSS	Minazif	3.75	134	Pn	Pn	09 09 56.1	+1.2
UOSS	Minazif	3.75	134	P	Pn	09 09 56.5	+1.6
UOSS				S	Sn	09 10 36.6	-1.9
UOSS	Minazif	3.75	134	*i* P	Pn	09 09 56.4	+1.5
	SNR=7.7						
SLWR	Sila	3.75	202	P	Pn	09 09 56.7	+1.8
HATD	Hatta, Dubai	3.79	136	P	Pn	09 09 57.8	+2.3
	SNR=5.6						
HATD				S	Sn	09 10 35.2	-4.3
HATD	Hatta, Dubai	3.79	136	P	Pn	09 09 57.5	+2.0
ASHO	Ashiyiah	3.85	138	P	Pn	09 09 58.2	+1.9
	SNR=22						
ASHO				S	Sn	09 10 42.7	+1.7
ASHO	Ashiyiah	3.85	138	*i* P	Pn	09 09 58.1	+1.8
	SNR=22						
KRBR	Kerman	3.93	51	Pn	Pn	09 09 59.4	+1.7
KRBR	Kerman	3.93	51	*e*PnA		09 09 59.6	
KRBR				IAML		09 11 01.5	
	comp=Z,1.3nm,1.0s						
KHGB	Koh Gabri	3.99	45	Pn	Pn	09 10 00.0	+1.5
KHNJ	Kahnooj	3.99	84	Pn	Pn	09 09 59.3	+0.9
ALNE	Al Ain	4.18	146	P	Pn	09 10 03.3	+2.4
	SNR=13						
ALNE				S	Sn	09 10 50.9	+1.7
ALNE	Al Ain	4.18	146	*i* P	Pn	09 10 03.0	+2.1
	SNR=20						
IRAM	Ramesheh	4.28	350	Pn	Pn	09 10 03.8	+1.3
ISAD	Sadrabad	4.34	5	Pn	Pn	09 10 04.6	+1.2
CHMN	Cheshme madani	4.43	58	Pn	Pn	09 10 06.3	+1.7
ZRDN	Zarand Kerman	4.45	40	Pn	Pn	09 10 06.1	+1.3
JASK	Jask - Hormozg	4.49	111	Pn	Pn	09 10 05.9	+0.7
JASK	Jask - Hormozg	4.49	111	P	Pn	09 10 07.1	+1.9
JASK				S	Sn	09 10 59.1	+2.2
SOHO	SOHO	4.54	138	P	Pn	09 10 07.5	+1.6
SOHO				S	Sn	09 10 59.4	+1.3
SOHO	SOHO	4.54	138	*i* P	Pn	09 10 07.0	+1.1
	SNR=13						
MZR	Muzera	4.56	177	P	Pn	09 10 06.7	+0.7
MZR	Muzera	4.56	177	P	Pn	09 10 07.4	+1.3
ICHK	Chekchek	4.77	12	Pn	Pn	09 10 10.7	+1.6
KBAM	BAM	4.87	70	Pn	Pn	09 10 12.0	+1.6
IGAR	Gharneh	4.92	348	Pn	Pn	09 10 11.9	+0.7
YZKH	Yazd	4.95	14	*e*PnA		09 10 13.1	
YZKH				IAML		09 11 06.8	
	comp=Z,0.1nm,1.0s						
ZNGN	Zangian	4.97	336	Pn	Pn	09 10 12.1	+0.1
KBD	Kabd	5.12	289	P	Pn	09 10 17.8	+4.0
UMZA	Um Al Zommool	5.15	160	P	Pn	09 10 16.1	+1.9
UMZA				S	Sn	09 11 13.5	+0.4
ARQ	Araqi	5.17	144	P	Pn	09 10 16.3	+1.8
	SNR=30						
ARQ				S	Sn	09 11 15.3	+1.8
IZEF	Zefreh	5.36	352	Pn	Pn	09 10 17.7	+0.4
HOQ	Hoqain	5.43	136	Pn	Pn	09 10 18.9	+0.9
HOQ	Hoqain	5.43	136	P	Pn	09 10 20.5	+2.5
HOQ				S	Sn	09 11 18.7	-1.2
IPIR	Pirpir	5.48	339	Pn	Pn	09 10 19.1	+0.1
ANAR	Anarak	5.62	4	Pn	Pn	09 10 21.7	+1.0
IKLH	Kolahrood	5.90	347	Pn	Pn	09 10 25.6	+0.9
BIDO	Bidbid	5.99	131	P	Pn	09 10 28.1	+2.3
BIDO				S	Sn	09 11 35.3	+1.4
BSY	Bisya	6.01	142	P	Pn	09 10 27.9	+1.9
	SNR=15						
BSY				S	Sn	09 11 33.0	-1.3
GTMR	Gotvand	6.04	325	*e*Pn	Pn	09 10 29.0	+2.5
TPRV	Parvadeh(Tabas	6.21	28	Pn	Pn	09 10 30.4	+1.6
SMDO	Samad	6.27	135	P	Pn	09 10 31.5	+1.8
	SNR=20						
SMDO				S	Sn	09 11 39.9	-0.9
QAMS	Qamsar	6.34	346	Pn	Pn	09 10 32.1	+1.3
KRSH	Karshahi	6.44	352	Pn	Pn	09 10 33.2	+1.0
WSAR	Wadi Sarin	6.52	130	Pn	Pn	09 10 32.5	-0.6
	baz=310,slow=23,SNR=24						
WSAR				Sn	Sn	09 11 46.2	-0.8
	comp=Z,0.1nm,0.3s,baz=150,slow=24,SNR=9.3						
WSAR	Wadi Sarin	6.52	130	P	Pn	09 10 34.4	+1.3
	SNR=18						
WSAR				S	Sn	09 11 48.7	+1.8
BSRN	Basiran	6.75	48	Pn	Pn	09 10 38.1	+1.9
BSRN	Basiran	6.75	48	*e*Pn	Pn	09 10 39.0	+2.7
BSRN				IAML		09 12 45.2	
	comp=Z,54nm,1.0s						
KHMZ	Khomeyn	6.76	336	*e*Pn	Pn	09 10 38.1	+1.6
KHMZ				IAML		09 11 54.2	
	comp=Z,0.2nm,1.0s						
CHBR	Chabahar	6.79	105	Pn	Pn	09 10 37.3	+0.5
ISFB	Sefidab	6.81	353	Pn	Pn	09 10 36.9	-0.2
JMDO	Jabal Madar	6.82	138	P	Pn	09 10 38.0	+0.8
	SNR=15						
TABS	Tabas	6.93	28	*e*PnA		09 10 39.4	
TABS				IAML		09 13 00.2	
	comp=Z,0.1nm,1.0s						
ZHSF	Zahedan	6.95	71	Pn	Pn	09 10 40.5	+1.4
ZHSF	Zahedan	6.95	71	*e*PnA		09 10 40.4	
ZHSF				IAML		09 12 50.6	
	comp=Z,31nm,1.0s						
IKOO	Kooshah	6.97	45	Pn	Pn	09 10 40.6	+1.2
TNSJ	Nastanj	7.01	24	Pn	Pn	09 10 40.6	+0.8
WBK	Wadi Bani Khal	7.18	132	Pn	Pn	09 10 43.0	+0.9
WBK	Wadi Bani Khal	7.18	132	P	Pn	09 10 43.3	+1.1
WBK				S	Sn	09 12 02.3	-0.9
NGCH	Negor - Chabah	7.43	105	P	Pn	09 10 46.4	+0.9
ASAO	Ashtian	7.47	339	*e*PnA		09 10 49.6	
ASAO				IAML		09 12 21.0	
	comp=Z,59nm,1.0s						
IVRN	Varamin	7.51	351	Pn	Pn	09 10 47.0	+0.3
AFRZ	Afriz	7.68	39	Pn	Pn	09 10 51.3	+2.2
MHTO	MHTO	7.86	146	P	Pn	09 10 53.0	+1.6
	SNR=36						
MHTO				S	Sn	09 12 17.0	-2.8
IANJ	Anjilo	7.89	4	Pn	Pn	09 10 53.2	+1.1
TAPT	Tabas- Tapeh t	8.03	24	Pn	Pn	09 10 54.7	+0.8
IDMV	Damavand	8.04	353	Pn	Pn	09 10 54.7	+0.5
RAYN	Ar Rayn	8.05	242		Pn	09 10 54.9	+0.8
RAYN				Sn	Sn	09 12 23.6	-1.0
RAYN	Ar Rayn	8.05	242	Pn	Pn	09 10 53.9	-0.1
RAYN	Ar Rayn	8.05	242	P	Pn	09 10 54.7	+0.6
RAYN				S	Sn	09 12 27.6	+3.0
RAYN	Ar Rayn	8.05	242	*i* P	Pn	09 10 54.1	0.0
	SNR=10						
DAMV	Damavand	8.10	353	*e*PnA		09 10 55.3	
DAMV				IAML		09 10 57.4	
	comp=Z,51nm,1.0s						
SRVN	Saravan	8.15	89	Pn	Pn	09 10 56.4	+0.8
SRVN	Saravan	8.15	89	*e*PnA		09 10 57.2	
SRVN				IAML		09 11 06.0	
	comp=Z,29nm,1.0s						
SHRT	Shahrakht	8.59	43	Pn	Pn	09 11 02.7	+1.2
SHRT	Shahrakht	8.59	43	*e*Pn	Pn	09 11 03.7	+2.2
IKIA	Kiasar	8.62	3	Pn	Pn	09 11 03.5	+1.5
SNQR	Sonqor, Kerman	8.70	328	Pn	Pn	09 11 02.9	-0.2
SHRO	Shahrood	8.72	15	*e*PnA		09 11 04.7	
SHRO				IAML		09 11 09.9	
	comp=Z,13nm,1.0s						
DOK	Doka	8.95	174	P	Pn	09 11 06.5	+0.1
	SNR=17						

WHFO	Wadi Hawf	9.62	177	P	Pn	09 11 15.3	-0.4
	SNR=12						
WHFO				S	Sn	09 13 02.5	-0.8
DMTO	DMTO	9.94	170	P	Pn	09 11 18.9	-1.1
RBK	Rabkut	10.06	175	P	Pn	09 11 19.8	-1.9
ABTO	Aybut	10.17	180	P	Pn	09 11 23.4	+0.2
BJRD	Bojnurd	10.70	18	iP	Pn	09 11 31.6	+1.2
GNI	Garni	14.37	333	Pn	Pn	09 12 19.7	-1.0
GNI	Garni	14.37	333	Pn	Pn	09 12 19.0	-1.7
	comp=Z,1.5nm,0.3s,baz=355,slow=20,SNR=9.3						
ASF	Jabal al Asfar	14.88	292	LR	LR	09 19 41.9	
	comp=Z,108nm,18.1s,baz=67,slow=44						
KBL	Kabul	15.23	59		P	09 12 35.1	-2.1
KBL				IAmb	IAmb	09 12 48.7	
	comp=Z,6.6nm,0.8s						
KBL	Kabul	15.23	59	P	P	09 12 36.0	-1.2
	SNR=5.2						
GHAJ	Ghor Haditha	15.82	288	P	P	09 12 42.7	-0.8
EIL	Elat	16.18	282	Pn	Pn	09 12 44.9	+0.5
	comp=Z,0.1nm,0.3s,baz=90,slow=14,SNR=3.9						
	comp=Z,4.1nm,0.9s						
KOPT	Kop Dagi	16.28	323	P	Pn	09 12 46.7	+0.7
MMAI	Mount Meron Ar	16.31	294	LR	LR	09 20 18.3	
	comp=Z,81nm,19.0s,baz=93,slow=42						
SIMJ	Simiganj	17.21	46	P	Pn	09 12 56.9	-0.7
KBZ	Khabaz	18.15	335	P	Pn	09 13 07.9	-1.0
	comp=Z,0.1nm,0.3s,baz=145,slow=13,SNR=4.1						
	comp=Z,0.7nm,0.4s						
GAR	Garm	18.25	47	P	Pn	09 13 08.8	-1.5
NIL	Nilore	18.27	66		Pn	09 13 10.3	-0.3
NIL				IAmb	IAmb	09 13 13.7	
	comp=Z,36nm,1.1s						
BNN	Bunyan	18.35	312	P	Pn	09 13 09.0	-2.6
KIV	Kislovodsk	18.42	335	P	P	09 13 10.7	-1.6
ATD	Arta Tunnel	18.70	213	LR	LR	09 21 04.9	
	comp=Z,4.6nm,19.7s,baz=318,slow=39						
BTK	Batken	19.16	45		P	09 13 19.2	-1.2
BR131	Keskin Array S	20.26	312	P	P	09 13 29.6	-2.9
BRTR	Keskin Array B	20.26	312	P	P	09 13 29.5	-3.1
BRTR	Keskin Array B	20.26	312	P	Pn	09 13 33.5	-1.1
	comp=Z,0.7nm,0.4s,baz=124,slow=15,SNR=4.7						
	comp=Z,0.7nm,0.4s						
KK31	Karatay Array	20.89	38		P	09 13 39.6	+0.4
KK31				IAmb	IAmb	09 13 44.1	
	comp=Z,20nm,1.4s						
KKAR	Karatay Array	20.89	38		P	09 13 39.0	-0.2
ARSB	Arslanbob	21.24	45	P	P	09 13 43.8	+0.7
ARSB				IAmb	IAmb	09 13 46.3	
	comp=Z,16nm,0.7s						
AKAS	Kas	21.79	299	P	P	09 13 46.5	-2.5
AB31	Akbulak array	22.26	12	P	P	09 13 54.4	+0.6
ABKAR	Akbulak array	22.26	12		P	09 13 53.7	-0.1
AAK	Ala-Archa	22.91	43	P	P	09 13 58.7	-2.2
AAK	Ala-Archa	22.91	43	LR	LR	09 24 02.0	
	comp=Z,90nm,18.2s,baz=248,slow=40						
ARG	Arkhangelos	22.93	298	P	P	09 13 59.1	-1.9
AKTO	Aktyubinsk	23.12	8	LR	LR	09 24 54.3	
	comp=Z,63nm,20.0s,baz=195,slow=42						
NRN	Naryn	23.23	48		P	09 14 02.6	-1.8
NRN				IAmb	IAmb	09 14 09.5	
	comp=Z,4.5nm,0.6s						
BOOM	Boomskoye usch	23.72	45		P	09 14 07.6	-1.6
BOOM				IAmb	IAmb	09 14 14.2	
	comp=Z,4.6nm,0.7s						
KDJ	Kajisay	24.34	47		P	09 14 13.4	-1.5
TARG	Taragay, Kyrgy	24.56	49		P	09 14 15.3	-1.8
TARG				IAmb	IAmb	09 14 57.4	
	comp=Z,3.5nm,0.7s						
BELG	Belogornoye	25.14	352	LR	LR	09 28 20.1	
	comp=Z,50nm,18.4s,baz=267,slow=47						
ALN	Alexandroupoli	25.98	308		P	09 14 27.6	-2.0
HMDM	Hanimaadhoo	28.05	134	P	P	09 14 47.2	-1.1
BRVK	Borovoye	28.44	22	P	P	09 14 50.6	-0.9
BRVK				IAmb	IAmb	09 14 53.5	
	comp=Z,3.1nm,0.6s						
BVAR	Borovoye Array	28.45	22	P	P	09 14 52.1	+0.5
	comp=Z,3.0nm,0.5s,baz=212,slow=7.6,SNR=14						
BVAR				PcP	PcP	09 18 05.0	+1.7
	comp=Z,0.7nm,0.4s,baz=229,slow=2.1,SNR=3.2						
	comp=Z,3.0nm,0.5s						
ARTI	Arti	29.03	6	P	P	09 14 55.8	-1.0
ARTI	Arti	29.03	6	LR	LR	09 28 57.2	
	comp=Z,67nm,19.9s,baz=210,slow=42						
AKASG	Malin Array Be	29.42	328	P	P	09 14 59.2	-1.0
	comp=Z,0.2nm,0.3s,baz=139,slow=8.0,SNR=4.9						
	comp=Z,0.2nm,0.3s						
BURAR	Bucovina Array	29.62	320	P	P	09 15 00.1	-2.1
MAKZ	Makanchi	29.64	42		P	09 15 01.2	-1.1
MAKZ				IAmb	IAmb	09 15 05.6	
	comp=Z,3.2nm,0.6s						
MKAR	Makanchi Array	29.82	42	P	P	09 15 02.5	-1.4
MKAR	Makanchi Array	29.82	42	P	P	09 15 03.4	-0.5
	comp=Z,0.8nm,0.4s,baz=228,slow=10,SNR=12						
MKAR				PcP	PcP	09 18 07.6	+0.6
	comp=Z,0.3nm,0.6s,baz=234,slow=4.8,SNR=2.7						
MKAR				LR	LR	09 28 06.0	
	comp=Z,68nm,18.9s,baz=241,slow=39						
	comp=Z,0.8nm,0.4s						
KURBB	Kurchatov Arra	29.99	33	P	P	09 15 05.8	+0.5
	comp=Z,0.9nm,0.7s,baz=232,slow=8.9,SNR=7.7						
KURBB				LR	LR	09 28 25.0	
	comp=Z,108nm,18.9s,baz=171,slow=39						
	comp=Z,0.9nm,0.7s						
KURK	Kurchatov	30.10	33	P	P	09 15 04.9	-1.3
KIRV	Kirov	31.11	356	LR	LR	09 29 36.7	
	comp=Z,36nm,18.1s,baz=240,slow=40						
LANS	Liptovska Anna	33.70	319	eP	P	09 15 39.6	+1.6
VYHS	Vyhne	33.79	318	eP	P	09 15 39.6	+0.9
ZAA0	Zalesovo Array	35.09	33	P	P	09 15 48.3	-1.5
ZAA0				IAmb	IAmb	09 15 59.3	
	comp=Z,4.6nm,1.1s						
ZALV	Zalesovo Beam	35.09	33	P	P	09 15 48.7	-1.1
ZALV	Zalesovo Beam	35.09	33	P	P	09 15 49.2	-0.6
	comp=Z,1.1nm,0.4s,baz=193,slow=5.8,SNR=2.0						
ZALV				LR	LR	09 31 43.8	
	comp=Z,81nm,18.4s,baz=196,slow=39						
	comp=Z,1.1nm,0.4s						
VRAC	Vranov	35.47	318	LR	LR	09 34 59.2	
	comp=Z,21nm,19.4s,baz=252,slow=44						
FIA1	FINESS Array S	38.43	339	P	P	09 16 18.4	+0.2
FINES	FINESS Array B	38.43	339	P	P	09 16 18.3	+0.2
FINES	FINESS Array B	38.43	339	P	P	09 16 17.7	-0.5
	comp=Z,2.4nm,0.6s,baz=143,slow=9.1,SNR=13						
FINES				LR	LR	09 32 27.6	
	comp=Z,78nm,18.9s,baz=98,slow=37						
	comp=Z,2.4nm,0.6s						
FUORN	Ofenpass-Fuorn	38.61	311	P	P	09 16 20.2	0.0
FUORN				IAmb	IAmb	09 16 23.5	
	comp=Z,7.3nm,1.5s						
GTA	Gaotai	40.21	61	eP	P	09 16 35.5	+2.0
GTA				pP	pP	09 16 39.5	-0.5
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BFO	Black Forest	40.30	313	P	P	09 16 34.1	+0.1
BFO				IAmb	IAmb	09 16 51.9	
	comp=Z,3.5nm,0.8s						
HFS	Hagfors	42.16	332	P	P	09 16 48.6	-0.4
	comp=Z,0.7nm,0.4s,baz=125,slow=9.2,SNR=8.0						
	comp=Z,0.7nm,0.4s						
NOA	NORSAR Array B	43.67	332	P	P	09 17 02.9	+1.5
	comp=Z,0.6nm,0.6s,baz=122,slow=8.3,SNR=4.4						
NOA				LR	LR	09 36 17.1	
	comp=Z,18nm,18.2s,baz=245,slow=38						
	comp=Z,0.6nm,0.6s						
CEST	Esterri de Car	44.41	304	P	P	09 17 07.8	+0.1
CEST				IAmb	IAmb	09 17 49.3	
	comp=Z,7.9nm,1.2s						
KEV	Kevo	44.86	347	P	P	09 17 11.1	+0.5
ARCES	ARCESS Array B	44.98	347	P	P	09 17 12.6	+0.9
ARCES	ARCESS Array B	44.98	347	P	P	09 17 12.4	+0.7
	comp=Z,0.4nm,0.3s,baz=148,slow=7.6,SNR=7.3						
	comp=Z,0.4nm,0.3s						
SONM	Songino Array	45.68	49	P	P	09 17 19.5	+1.8
	comp=Z,0.8nm,0.5s,baz=290,slow=8.8,SNR=3.5						
SONM				LR	LR	09 38 58.4	
	comp=Z,46nm,20.3s,baz=248,slow=40						
	comp=Z,0.8nm,0.5s						
NRIK	Noril'sk	46.32	16	P	P	09 17 23.4	+1.2
	comp=Z,2.1nm,0.5s,baz=249,slow=5.5,SNR=4.6						
	comp=Z,2.1nm,0.5s						
ESDC	Sonseca Array	48.39	300	P	P	09 17 39.3	+0.4
	comp=Z,0.4nm,0.6s,baz=84,slow=8.0,SNR=5.7						
	comp=Z,0.4nm,0.6s						
PAB	San Pablo	48.69	300	P	P	09 17 40.8	-0.5
PAB				IAmb	IAmb	09 17 52.6	
	comp=Z,3.6nm,1.1s						
EKA	Eskdalemuir Ar	48.80	321	P	P	09 17 42.5	+0.8
	comp=Z,0.6nm,0.4s,baz=109,slow=8.6,SNR=5.0						
	comp=Z,0.6nm,0.4s						
LSZ	Lusaka	49.03	213	LR	LR	09 38 38.3	
	comp=Z,87nm,19.4s,baz=148,slow=36						
TORD	Torodi Ar. Bea	50.05	264	P	P	09 17 52.0	+0.1
	comp=Z,1.7nm,0.4s,baz=54,slow=7.2,SNR=1.7						
	comp=Z,1.7nm,0.4s						
LPHEP	Lephephe	57.11	210	P	P	09 18 42.8	-0.8
GRTLG	Ghanzi	57.66	216	P	P	09 18 46.3	-1.1
LBTB	Lobatse	58.67	210	LR	LR	09 45 17.8	
	comp=Z,50nm,19.7s,baz=38,slow=37						
DBIC	Dimbokro	58.71	261	P	P	09 18 54.2	-0.7
DBIC	Dimbokro	58.71	261	P	P	09 18 57.3	+2.4
	comp=Z,6.1nm,0.9s,baz=71,slow=4.3,SNR=3.8						
	comp=Z,6.1nm,0.9s						
TIXI	Tiksi	59.57	21	LR	LR	09 47 15.6	
	comp=Z,53nm,19.1s,baz=348,slow=39						
BOSA	Boshof	61.97	208	P	P	09 19 16.9	-0.1
BOSA	Boshof	61.97	208	P	P	09 19 20.9	+3.9
	comp=Z,6.6nm,1.0s,baz=63,slow=6.8,SNR=4.4						
	comp=Z,6.6nm,1.0s						
KLR	Kul'dur	62.39	46	P	P	09 19 17.0	-2.6
	comp=Z,0.8nm,0.6s,baz=347,slow=7.2,SNR=1.8						
SFJD	Kangerlussuaq	70.13	336	LR	LR	09 54 15.7	
	comp=Z,51nm,18.6s,baz=344,slow=39						
SHEL	Horse Pasture	71.67	240	P	P	09 20 18.4	-0.6
KAPI	Kappang	71.81	106	LR	LR	09 58 36.1	
	comp=Z,112nm,18.1s,baz=252,slow=42						
A36M	Sachs Harbour	80.71	360	P	P	09 21 09.5	+0.1
A36M				IAmb	IAmb	09 21 17.2	
	comp=Z,5.0nm,0.8s						
C18K	Utukok River	80.78	12	P	P	09 21 10.8	+0.8
C18K				IAmb	IAmb	09 21 16.5	
	comp=Z,11nm,1.4s						
B21K	Ikpikpuk River	81.01	10	P	P	09 21 11.6	+0.5
B21K				IAmb	IAmb	09 21 40.4	
	comp=Z,11nm,1.4s						
D25K	Kavik River	82.34	7	P	P	09 21 17.8	-0.4
D25K				IAmb	IAmb	09 21 26.3	
	comp=Z,5.7nm,1.5s						
E19K	Redstone River	82.54	11	P	P	09 21 18.3	-1.0
E19K				IAmb	IAmb	09 21 46.0	
	comp=Z,3.7nm,1.3s						
TOLK	Toolik Lake Re	82.61	8	P	P	09 21 20.1	+0.5
TOLK				IAmb	IAmb	09 21 43.7	
	comp=Z,6.7nm,1.4s						
E25K	Arctic Village	83.58	7	P	P	09 21 25.3	+0.7
E25K				IAmb	IAmb	09 21 30.6	
	comp=Z,2.4nm,1.0s						
BMAR	Burnt Mountain	84.35	7	P	P	09 21 29.4	+0.8
H19K	Roundabout Mou	84.42	12	P	P	09 21 29.6	+0.7
H19K				IAmb	IAmb	09 21 40.8	
	comp=Z,5.3nm,1.4s						
IMAR	Indian Mountai	84.47	11	P	P	09 21 29.3	+0.1
G24K	Hadweenzic Riv	84.72	8	P	P	09 21 29.1	-1.3
G24K				IAmb	IAmb	09 22 05.2	
	comp=Z,2.7nm,1.1s						
FYU	Fort Yukon	85.11	7	P	P	09 21 32.3	-0.1
G27K	Doyon Strip	85.24	6	P	P	09 21 33.9	+0.8
H23K	Yukon River	85.27	9	P	P	09 21 34.3	+1.0
H23K				IAmb	IAmb	09 21 48.0	
	comp=Z,2.1nm,1.1s						
G31M	Satah River	85.63	3	P	P	09 21 34.8	-0.2
G31M				IAmb	IAmb	09 21 58.4	
	comp=Z,3.8nm,1.2s						
H27K	Steamboat Moun	85.82	6	P	P	09 21 36.4	+0.4
H27K				IAmb	IAmb	09 21 49.6	
	comp=Z,2.9nm,1.2s						
H29M	Whitestone	86.09	5	P	P	09 21 37.0	-0.2
H29M				IAmb	IAmb	09 22 04.9	
	comp=Z,5.9nm,1.5s						
ILAR	Eielson Array	86.63	8	P	P	09 21 42.5	+2.5
	comp=Z,0.3nm,0.6s,baz=332,slow=5.4,SNR=5.5						
	comp=Z,0.3nm,0.6s						
I30M	Mount Dempster	87.21	4	P	P	09 21 42.1	-0.8
I30M				IAmb	IAmb	09 22 13.3	
	comp=Z,3.3nm,1.2s						
YKA	Yellowknife Ar	89.72	354	P	P	09 21 57.1	+2.4
	comp=Z,0.4nm,0.7s,baz=2.1,slow=5.5,SNR=6.2						
	comp=Z,0.4nm,0.7s						
WRA	Warramunga Arr	91.56	112	P	P	09 22 06.0	+2.0
	comp=Z,0.3nm,0.7s,baz=310,slow=4.4,SNR=2.1						
	comp=Z,0.3nm,0.7s						
ASAR	Alice Springs	92.98	115	P	P	09 22 11.2	+0.7
	comp=Z,0.3nm,0.6s,baz=303,slow=4.6,SNR=6.5						
	comp=Z,0.3nm,0.6s						
SADO	Sadowa	95.91	328	LR	LR	10 07 59.2	
	comp=Z,72nm,18.2s,baz=305,slow=37						

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*ISK **28** 09:11:36.3, 36°.23N×36°.01E, h9^{km}, ML2.5/26*

*GRAL **28** 09:11:36.0±0.4, 36°.07N×35°.63E, h1^{km}±7^{km}, MD3.2*

ISC 28 09:11:34.4±1.3**, 36°.11N**±0°.03×**36°.00E**±0°.04**, h4**^{km}±11^{km}**, n31, σ0^{s}.93**/39**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAHT	Tahtakopru-Hat	0.30	30	Pg	Pg	09 11 41.1	+0.8
TAHT				Sg	Sg	09 11 44.6	+0.3
CEYT	Ceyhan	0.92	348	Pg	Pn	09 11 54.9	+0.8
KOZT	Kozan	1.37	354	Pn	Pn	09 12 00.3	-0.1
KOZT				Sn	Sg	09 12 18.6	+0.1
KARA	Karaisali	1.37	327	Pn	Pg	09 12 00.4	-0.3
KARA				Sn	Sn	09 12 19.5	+0.5
MERS	Mersin	1.41	303	Pn	Pn	09 12 02.0	+1.1
MERS				Sn	Sn	09 12 20.9	+1.0
GAZ	Gaziantep	1.44	42	Pn	Pn	09 12 01.9	+0.5
GAZ				Sn	Sn	09 12 20.6	-0.2
KIZK	Mersin	1.54	284	Pn	Pg	09 12 04.2	+0.3
KMRS	Kahramanmaras	1.57	27	Pn	Pn	09 12 03.4	+0.3
KMRS				Sn	Sn	09 12 23.4	-0.5
BEIL	Beino	1.57	174	eP	Pn	09 12 03.9	+0.7
BEIL				eS	Sn	09 12 24.4	+0.4
EREN	Erenkoy	1.59	249	Pn	Pg	09 12 06.7	+1.8
SLFK	Silifke-Mersin	1.68	280	Pn	Pg	09 12 06.3	-0.3
SILI	Silifke-Mersin	1.69	279	Pn	Pg	09 12 06.9	0.0
CMRD	Camardi-Nigde	1.74	333	Pn	Pn	09 12 06.4	+0.8
HWQ	Hawqa	1.83	181	eP	Pn	09 12 06.9	+0.1
HWQ				eS	Sn	09 12 29.9	-0.5
KARG	Kargicak-Mersi	1.85	273	Pn	Pg	09 12 09.3	-0.6
IKL	Isikli	1.87	275	Pn	Pg	09 12 09.7	-0.6
KEBE	Keben-Mersin	1.87	281	Pn	Pb	09 12 08.5	-0.7
TISA	Tisan-Mersin	1.88	272	Pn	Pg	09 12 09.8	-0.6
FKH	Fakeheh	1.89	170	eP	Pn	09 12 08.7	+1.1
YESI	Yesilovacik-Me	1.91	273	Pn	Pg	09 12 10.1	-0.8
AKK1	Akkuyu-Mersin	1.99	272	Pn	Pg	09 12 11.4	-1.1
TEVE	Tevekalti-Mers	2.09	280	Pn	Pb	09 12 12.5	-0.4
LFK	Lefkose	2.17	248	Pn	Pb	09 12 14.5	+0.2
BERE	Bereket-Mersin	2.25	277	Pn	Pb	09 12 14.5	-1.3
SARI	SarD1z-Kayseri	2.31	8	Pn	Pn	09 12 14.1	+0.6
TEKE	Tekeli-Mersin	2.33	272	Pn	Pn	09 12 14.4	+0.8
YESY	Yesilyurt	2.46	313	Pn	Pn	09 12 16.3	+0.9
RCY	Rachaya	2.61	183	eP	Pn	09 12 17.4	-0.2
SHBL	Chebaa	2.77	184	eP	Pn	09 12 19.8	+0.1
HDMB	Hadim	2.95	288	Pn	Pn	09 12 24.3	+2.0
GAZI	Gazipasa	2.98	273	Pn	Pb	09 12 25.2	-2.9

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*IDC **28** 09:13:57.3±1.2, 2°.65S×138°.51E, h0^{km}, mb3.6/4, mbtmp3.6/6, ML3.4/2, Error ellipse: s-maj=26.2km s-min=17.8km az=166.0*

*DJA **28** 09:14:01.6±0.5, 3°S±3°×13°9E±°, h10^{km}, M3.5/5, MLv3.5/5*

ISC 28 09:14:01.3±0.8**, 2°.55S**±0°.10×**138°.4E**±0°.1**, h32**^{km}**, n10, σ1^{s}.67**/10**, mb3.6**/4**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.66	32	P	Pn	09 14 12.8	-1.7
GENI	Genyem	1.81	91	P	Pn	09 14 30.5	+0.3
JAY	Jayapura	2.34	89	Pn	Pn	09 14 37.3	-0.3
	7.9nm,0.3s,baz=212,slow=10,SNR=22						
JAY				Lg	Lg	09 15 07.3	
	2.8nm,0.3s,baz=101,slow=23,SNR=2.0						
	16nm,0.3s						
JAY	Jayapura	2.34	89	P	Pn	09 14 37.2	-0.5
BAKI	Biak	2.63	301	P	Pb	09 14 47.2	-0.6
WRA	Warramunga Arr	17.72	193	P	Pn	09 18 04.7	-1.2
	0.2nm,0.3s,baz=16,slow=10,SNR=9.7						
	0.5nm,0.6s						
ASAR	Alice Springs	21.43	191	P	P	09 18 46.8	-0.1
	1.4nm,0.7s,baz=20,slow=11,SNR=17						
	1.4nm,0.7s						
MKAR	Makanchi Array	69.45	322	P	P	09 25 10.2	+3.6
	0.6nm,0.7s,baz=100,slow=8.1,SNR=4.0						
	0.6nm,0.7s						
VNDA	Vanda	75.97	175	P	P	09 25 43.5	-1.2
	0.4nm,0.5s,baz=321,slow=3.1,SNR=1.6						
	0.4nm,0.5s						
ILAR	Eielson Array	85.83	24	P	P	09 26 37.4	-0.1
	0.3nm,0.7s,baz=259,slow=4.5,SNR=4.9						
	0.3nm,0.7s						

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*IDC **28** 09:14:15.9±2.9, 53°.44N×87°.18E, h0^{km}, mbtmp2.7/2, ML2.1/1, Error ellipse: s-maj=26.1km s-min=16.7km az=69.0*

ASRS 28 09:14:12.0±1.2**, 53°.38N**×**87°.19E, h0**^{km}**, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZALV	Zalesovo Beam	1.52	293	Pg	Pg	09 14 42.7	+1.6
	0.5nm,0.3s,baz=108,slow=17,SNR=7.1						
ZALV				Lg	Lg	09 15 03.0	
	1.0nm,0.3s,baz=109,slow=26,SNR=7.2						
I46RU	ZALESOVO INFRA	1.52	293	I	I	09 24 00.0	
	baz=109,slow=315,SNR=10						
KURBB	Kurchatov Arra	6.02	246	Pn	Pn	09 15 47.4	+5.2
	baz=62,slow=14,SNR=4.2						
KURBB				Lg	Lg	09 17 27.1	
	baz=66,slow=35,SNR=4.1						
	0.5nm,0.5s						
MKAR	Makanchi Array	7.31	207	Pn	Pn	09 16 05.6	+5.6
	0.2nm,0.5s,baz=25,slow=13,SNR=1.7						

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*CATAC **28** 09:15:05.1±1.2, 8°N±8°×8°3W±°, h17^{km}±8^{km}, M2.6/5, MLv2.6/5, Error ellipse: s-maj=18.1km s-min=13.1km az=39.0, confirmed*

*UPA **28** 09:15:05.0±0.6, 8°.38N×82°.88W, h31^{km}±5^{km}, ML3.2*

ISC 28 09:15:02.4±2.1**, 8°.3N**±0°.1×**82°.93W**±0°.08**, h28**^{km}±19^{km}**, n19, σ0^{s}.80**/22**, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.18	50	eP	Pn	09 15 10.2	+0.9
LESP3				AMP		09 15 11.4	
	comp=Z,4µm,0.1s						
CDITO	Canoas	0.29	11	P	Pn	09 15 11.0	+0.2
CDITO	Canoas	0.29	11	S	Sn	09 15 15.8	-0.4
DVD	David	0.50	73	eP	Pn	09 15 14.0	+0.4
DVD				AMP		09 15 14.2	
	comp=Z,4µm,0.1s						
DVD				eS	Sn	09 15 21.2	-0.1
MLIR3	Monte Lirio, C	0.51	12	eP	Pn	09 15 14.5	+0.5
LOCO3	Loma Colorada,	0.52	77	eP	Pn	09 15 14.5	+0.5
LOMA3	Las Lomas, Chi	0.55	75	eP	Pn	09 15 14.8	+0.4
BRU2	Volcan	0.56	25	P	Pn	09 15 14.8	+0.1
BRU2	Volcan	0.56	25	eP	Pn	09 15 14.8	+0.1
BRU2				AMP		09 15 15.0	
	comp=Z,623nm,0.1s						
BRU2				eS	Sn	09 15 22.6	-0.4
PTAR3	Potrerillos Ar	0.59	47	eS	Sn	09 15 23.1	-0.6
BC3P	Paso Ancho	0.61	31	eP	Pn	09 15 15.5	+0.1
BC3P				eS	Sn	09 15 23.9	-0.6
BQSF3	Alto Boquete,	0.67	47	eP	Pn	09 15 16.4	+0.3
PSOM3	Paja de Sombre	0.72	57	eP	Pn	09 15 15.5	-1.3
DRK0	Durika	1.02	342	P	Pb	09 15 22.1	+0.6
DRK0	Durika	1.02	342	S	Sn	09 15 33.6	-0.9
DRK0	Durika	1.02	342	eP	Pb	09 15 22.2	+0.6
OCHAL	Ojochal	1.07	319	P	Pb	09 15 20.4	-1.9
OCHAL	Ojochal	1.07	319	S	Sn	09 15 36.5	+1.0
LCR2	La Lucha 2	1.79	324	P	Pb	09 15 35.6	+0.9

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*NIED **28** 09:19:59.9, 41°.59N×141°.92E, h65^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.19; $M_{\theta\theta}$-0.29; $M_{\phi\phi}$-3.89; $M_{r\theta}$1.62; $M_{\theta\phi}$-1.28; $M_{\phi r}$3.82; Fault plane solution: $M_0$5.94000×10^{14} NP1: ϕ_s194.00000°, δ23.00000°, λ83.00000°. NP2: ϕ_s21.00000°, δ67.00000°, λ93.00000°.*

*JMA **28** 09:19:59.9±0.1, 41°.6N±0°.3×141°.9E±0°.6, h65^{km}±1^{km}, MD3.9/38, MV3.9/38, E OFF AOMORI PREF*

JMA Felt I J1 at E OFF AOMORI PREF .

*NEIC **28** 09:20:00.1±1.6, 41°.57N±0°.06×141°.88E±0°.09, h56^{km}±5^{km}, mb4.2/70, Error ellipse: s-maj=11.7km s-min=5.6km az=133.0*

*IDC **28** 09:20:01.6±2.0, 41°.58N×141°.91E, h80^{km}±17^{km}, mb3.6/17, mbtmp3.9/22, MS3.2/3, Error ellipse: s-maj=17.5km s-min=14.7km az=107.0*

ISC 28 09:20:00.3±0.8**, 41°.57N**±0°.03×**141°.93E**±0°.04**, h65**^{km}±6^{km}**, n148, σ0^{s}.96**/148**, mb4.2**/53**, 15D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAHD	Aomorihigashid	0.54	236	⇓iP	Pn	09 20 13.2	+0.1
JAHD				⇓eS	Sn	09 20 22.7	+0.3
JAHD	Aomorihigashid	0.54	236	A	A	09 20 13.2	
	comp=N,23nm,1.0s,comp=E,40nm,1.2s						
JOT	Ohata	0.69	255	⇓iP	Pn	09 20 14.4	-0.3
JOT				⇓eS	Sn	09 20 24.8	-0.4
JOT	Ohata	0.69	255	A	A	09 20 14.4	
	comp=N,3.0nm,0.3s,comp=E,3.0nm,3.9s						
JARK	Aomorirokkasho	0.70	217	iP	Pn	09 20 14.5	-0.4
JARK				eS	Sn	09 20 24.9	-0.7
JKB	Kayabe	0.74	296	⇓iP	Pn	09 20 14.6	-0.7
JKB				⇓eS	Sn	09 20 25.7	-0.7
JNBK	Urakawa-nobuka	0.94	41	P	Pn	09 20 16.9	-0.9
JNBK	Urakawa-nobuka	0.94	41	A	A	09 20 16.9	
	comp=N,5.0nm,0.5s,comp=E,4.0nm,0.4s						
JTM	Tenmabayashi	1.01	220		Pn	09 20 18.8	0.0
JTM				Sn	Sn	09 20 31.8	-0.6
JTM	Tenmabayashi	1.01	220	⇓iP	Pn	09 20 18.8	0.0
JTM				⇓eS	Sn	09 20 32.1	-0.3
ERM	Erimo	1.02	64		Pn	09 20 18.4	-0.4
ERM				Sn	Sn	09 20 32.2	-0.4
JEM	Erimo	1.02	64	iP	Pn	09 20 18.5	-0.3
JEM				eS	Sn	09 20 32.3	-0.3
JIAM	Iburiatsuma	1.05	360	A	A	09 20 18.8	
	comp=N,7.0nm,0.3s,comp=E,6.0nm,1.3s						
JNB	Noboribetsu	1.12	324	⇓iP	Pn	09 20 19.2	-0.9
JNB				⇓S	Sn	09 20 33.5	-1.3
JSR	Shiriuchi	1.13	269	iP	Pn	09 20 19.9	-0.3
JSR				eS	Sn	09 20 35.0	-0.2
JANG	Nango	1.23	195	iP	Pn	09 20 21.0	-0.6
JANG				eS	Sn	09 20 36.3	-1.2
JSI2	Shiura 2	1.25	246	A	A	09 20 21.8	
	comp=N,3.0nm,1.0s,comp=E,4.0nm,0.6s						
JBT2	Biratori 2	1.25	15	iP	Pn	09 20 21.9	+0.1
JBT2				S	Sn	09 20 38.8	+0.8
JYM2	Yakumo 2	1.29	296	⇓iP	Pn	09 20 22.4	+0.1
JEW	Eniwo	1.32	345	⇓iP	Pn	09 20 22.7	-0.1
JEW				⇓eS	Sn	09 20 39.0	-0.6
JKEN	Kujiedanarisaw	1.37	187	A	A	09 20 23.6	
	comp=N,9.0nm,0.5s,comp=E,6.0nm,0.7s						
JOMM	Oshimamatsumae	1.44	269	⇓iP	Pn	09 20 24.0	-0.3
JCH	Churui	1.49	45	iP	Pn	09 20 25.5	+0.5
JCH				S	Sn	09 20 45.1	+1.4
JOSM	Okushiri--Mats	1.90	286	⇓iP	Pn	09 20 29.9	-0.6
ASAJ	Asahikawa	2.59	11	P	Pn	09 20 40.4	+0.4
	comp=E,25nm,0.5s,baz=226,slow=11,SNR=60						
ASAJ				S	Sn	09 21 08.4	-1.9
	comp=E,28nm,0.4s,baz=218,slow=28,SNR=5.6						
JKA	Kamikawa-asahi	2.59	11		Pn	09 20 40.6	+0.7
JMM	Marumori	3.80	194	Pn	Pn	09 20 55.5	-0.9
MJB9	Matsu-Tunnel	5.79	211	Pn	Pn	09 21 22.7	-1.0
MAJO	Matsushiro	5.79	211	Pn	Pn	09 21 23.1	-0.6
MJAR	Matsushiro Arr	5.79	211	Pn	Pn	09 21 21.3	-2.3
MJAR	Matsushiro Arr	5.79	211	P	Pn	09 21 26.1	+2.4
	comp=E,1.5nm,0.6s,baz=24,slow=17,SNR=5.0						
JGF	Kuroka	6.95	212	Pn	Pn	09 21 37.4	-2.1
USA0B	Ussuriysk Arra	7.76	293	Pn	Pn	09 21 48.8	-1.6
USRK	Ussuriysk Ar.	7.76	293	Pn	Pn	09 21 49.0	-1.5
USRK	Ussuriysk Ar.	7.76	293	P	Pn	09 21 51.2	+0.7
	comp=E,3.7nm,0.6s,baz=95,slow=16,SNR=6.8						
KLR	Kul'dur	10.48	320	P	Pn	09 22 29.6	+2.1
	comp=E,2.9nm,1.0s,baz=119,slow=11,SNR=4.4						
KLR				LR	LR	09 26 22.2	
	comp=E,50nm,18.9s,baz=218,slow=36						
KSRS	Korea Array	11.57	254	P	Pn	09 22 47.1	+4.6
	comp=E,2.5nm,0.8s,baz=65,slow=14,SNR=12						
KSRS				S	Sn	09 24 54.5	+4.5
	comp=E,1.7nm,0.7s,baz=65,slow=24,SNR=4.4						
PETK	Petropavlovsk-	15.69	37	P	P	09 23 38.7	-1.3
	comp=E,0.8nm,0.7s,baz=240,slow=12,SNR=1.5						

SONM	Songino Array	25.86	296	P	P	09 25 24.5	-1.3
	comp=E,0.5nm,0.5s,baz=126,slow=10,SNR=2.5						
	comp=E,0.5nm,0.5s						
H11N2	WAKE ISLAND Hy	30.39	128	T	T	09 58 36.7	
	baz=322,slow=75,SNR=74						
H11N1	WAKE ISLAND Hy	30.40	128	T	T	09 58 37.4	
	baz=322,slow=75,SNR=97						
H11N3	WAKE ISLAND Hy	30.41	128	T	T	09 58 38.0	
	baz=322,slow=75,SNR=107						
H11S1	WAKE ISLAND Hy	31.23	130	T	T	09 59 40.1	
	baz=323,slow=76,SNR=64						
H11S3	WAKE ISLAND Hy	31.23	130	T	T	09 59 38.6	
	baz=323,slow=76,SNR=40						
H11S2	WAKE ISLAND Hy	31.25	130	T	T	09 59 41.7	
	baz=323,slow=76,SNR=56						
ZALV	Zalesovo Beam	39.28	308	P	P	09 27 22.3	-0.1
ZALV	Zalesovo Beam	39.28	308	P	P	09 27 22.2	-0.2
	comp=E,1.5nm,0.3s,baz=77,slow=6.4,SNR=3.7						
	comp=E,1.5nm,0.3s						
NRIK	Noril'sk	39.37	333	LR	LR	09 43 51.6	
	comp=E,47nm,20.5s,baz=307,slow=36						
L16K	Owhat River	39.88	39	P	P	09 27 28.4	+1.2
L16K				IAmb	IAmb	09 27 28.8	
	comp=Z,3.8nm,0.9s						
H17K	Granite Mounta	39.95	34	P	P	09 27 29.0	+1.2
E18K	Tukpahlearik C	40.04	30	P	P	09 27 28.8	+0.2
E18K				IAmb	IAmb	09 27 37.7	
	comp=Z,8.3nm,1.5s						
C18K	Utukok River	40.07	28	P	P	09 27 28.5	-0.4
M16K	Timber Creek	40.10	40	P	P	09 27 30.2	+1.1
J17K	VABM Dome	40.16	37	P	P	09 27 31.1	+1.5
J17K				IAmb	IAmb	09 27 38.9	
	comp=Z,6.8nm,1.4s						
K17K	Iditarod	40.47	38	P	P	09 27 34.0	+1.9
K17K				IAmb	IAmb	09 28 14.4	
	comp=Z,8.8nm,1.3s						
G18K	Tagagawik	40.58	33	P	P	09 27 33.3	+0.3
H18K	Honhosa River	40.62	34	P	P	09 27 34.0	+0.6
H18K				IAmb	IAmb	09 27 40.0	
	comp=Z,5.7nm,1.4s						
C19K	Lookout Ridge	40.74	28	P	P	09 27 34.2	-0.2
C19K				IAmb	IAmb	09 27 44.9	
	comp=Z,13nm,1.4s						
M17K	Holitna River	40.84	40	P	P	09 27 37.1	+1.9
D19K	Kuna River	41.15	29	P	P	09 27 37.5	-0.2
D19K				IAmb	IAmb	09 28 16.4	
	comp=Z,9.3nm,1.5s						
L18K	Granite Mounta	41.21	39	P	P	09 27 38.8	+0.6
L18K				IAmb	IAmb	09 28 03.3	
	comp=Z,4.6nm,1.4s						
J18K	Innoko River	41.22	37	P	P	09 27 38.6	+0.3
J18K				IAmb	IAmb	09 27 53.4	
	comp=Z,4.4nm,1.4s						
G19K	Purcell Mounta	41.24	33	P	P	09 27 38.4	-0.1
H19K	Roundabout Mou	41.45	34	P	P	09 27 41.0	+0.8
J19K	Poorman	41.73	36	P	P	09 27 43.7	+1.2
J19K				IAmb	IAmb	09 28 11.2	
	comp=Z,5.2nm,1.5s						
D20K	Etivluk River	41.73	29	P	P	09 27 42.3	-0.2
D20K				IAmb	IAmb	09 28 15.6	
	comp=Z,5.3nm,1.4s						
B20K	Meade River	41.74	27	P	P	09 27 42.1	-0.4
MYLDM	Lahad Datu	41.84	216	P	P	09 27 44.1	+0.3
MKAR	Makanchi Array	42.19	298	P	P	09 27 46.4	-0.1
MKAR	Makanchi Array	42.19	298	P	P	09 27 46.0	-0.5
	comp=Z,0.8nm,0.5s,baz=83,slow=12,SNR=5.9						
MKAR				PcP	PcP	09 29 39.3	-0.3
	comp=Z,0.2nm,0.3s,baz=72,slow=4.8,SNR=2.5						
	comp=Z,0.8nm,0.5s						
J20K	Nowinta River	42.38	36	P	P	09 27 48.8	+1.1
K20K	Telida	42.41	37	P	P	09 27 49.0	+0.9
K20K				IAmb	IAmb	09 28 31.7	
	comp=Z,5.9nm,1.5s						
B21K	Ikpikpuk River	42.56	28	P	P	09 27 49.1	0.0
B21K				IAmb	IAmb	09 28 02.5	
	comp=Z,4.6nm,1.1s						
IMAR	Indian Mountai	42.59	33	P	P	09 27 49.7	+0.2
CMAR	Chiang Mai Arr	43.19	251	P	P	09 27 56.0	+1.1
	comp=Z,0.9nm,0.3s,baz=44,slow=7.9,SNR=1.5						
	comp=Z,0.9nm,0.3s						
CAST	Castle Rocks	43.30	37	P	P	09 27 56.7	+1.4
CAST				IAmb	IAmb	09 27 57.3	
	comp=Z,2.1nm,0.7s						
E22K	Anaktuvuk Pass	43.44	30	P	P	09 27 55.9	-0.5
KURBB	Kurchatov Arra	43.65	304	P	P	09 27 57.5	-0.6
	comp=Z,3.3nm,0.5s,baz=77,slow=8.6,SNR=15						
	comp=Z,3.3nm,0.5s						
KTH	Kantishna Hill	43.82	37	P	P	09 28 00.0	+0.5
KTH				IAmb	IAmb	09 28 01.4	
	comp=Z,3.2nm,0.9s						
MLY	Manley	43.84	34	P	P	09 27 59.2	-0.4
H23K	Yukon River	44.32	33	P	P	09 28 04.7	+1.3
I23K	Minto, Yukon-K	44.42	34	P	P	09 28 05.3	+1.1
NEA2	Nenana	44.58	35	P	P	09 28 06.4	+0.9
NEA2				IAmb	IAmb	09 28 06.8	
	comp=Z,2.9nm,0.6s						
RND	Reindeer	44.76	37	P	P	09 28 07.8	+0.9
H24K	Noodor Dome	45.00	33	P	P	09 28 10.5	+1.6
D25K	Kavik River	45.44	28	P	P	09 28 12.1	-0.2
D25K				IAmb	IAmb	09 28 38.1	
	comp=Z,5.6nm,1.3s						
IL31		45.50	35	P	P	09 28 13.4	+0.7
ILAR	Eielson Array	45.50	35	P	P	09 28 12.8	+0.1
	comp=Z,0.9nm,0.8s,baz=277,slow=7.0,SNR=13						
	comp=Z,0.9nm,0.8s						
PRP	Porcupine Dome	46.00	34		P	09 28 17.3	+0.5
PRP				IAmb	IAmb	09 28 18.4	
	comp=Z,2.9nm,0.8s						
FID	Port Fidalgo	46.20	40	P	P	09 28 17.8	-0.5
BMAR	Burnt Mountain	46.20	31	P	P	09 28 19.5	+1.2
F26K	Sheenjek River	46.35	30	P	P	09 28 20.8	+1.4
G26K	Porcupine Rive	46.56	31	P	P	09 28 22.4	+1.4
G26K				IAmb	IAmb	09 29 02.1	
	comp=Z,4.6nm,1.4s						
SCRK	Sand Creek	46.84	36	P	P	09 28 23.8	+0.3
SCRK				IAmb	IAmb	09 28 24.1	
	comp=Z,2.0nm,0.6s						
DOT	Dot Lake	46.86	36	P	P	09 28 23.4	-0.1
DOT				IAmb	IAmb	09 28 25.4	
	comp=Z,2.6nm,1.2s						
J26L	Joseph Creek	46.95	35	P	P	09 28 25.5	+1.2
KDJ	Kajisay	47.16	293	P	P	09 28 27.0	+0.7
KDJ				IAmb	IAmb	09 28 29.7	
	comp=Z,3.3nm,1.1s						
E27K	Coleen River	47.26	30	P	P	09 28 27.1	+0.6
H27K	Steamboat Moun	47.54	32	P	P	09 28 28.7	-0.1
H27K				IAmb	IAmb	09 28 30.9	
	comp=Z,2.1nm,0.9s						
K27K	Chicken	47.67	35	P	P	09 28 30.5	+0.8
K27K				IAmb	IAmb	09 28 39.0	
	comp=Z,5.3nm,1.4s						
BOOM	Boomskoye usch	47.88	294	P	P	09 28 32.3	+0.4
BOOM				IAmb	IAmb	09 28 58.2	
	comp=Z,3.3nm,0.8s						
BVAR	Borovoye Array	47.91	309	P	P	09 28 31.4	-0.3
	comp=Z,1.2nm,0.3s,baz=85,slow=10,SNR=6.1						
	comp=Z,1.2nm,0.3s						
BCAR	Beaver Creek A	47.97	37	P	P	09 28 33.5	+1.4
I28M	Miner Creek	48.32	33	P	P	09 28 36.0	+1.2
I28M				IAmb	IAmb	09 28 36.7	
	comp=Z,2.9nm,1.1s						
E29M	Blow River	48.59	29	P	P	09 28 38.1	+1.3
E29M				IAmb	IAmb	09 29 11.2	
	comp=Z,4.6nm,1.4s						
H29M	Whitestone	48.81	32	P	P	09 28 39.9	+1.5
H29M				IAmb	IAmb	09 28 40.0	
	comp=Z,2.4nm,0.9s						
EPYK	Eagle Plains	49.43	32	P	P	09 28 44.7	+1.5
EPYK				IAmb	IAmb	09 28 45.0	
	comp=Z,3.4nm,0.8s						
F30M	Barrier River	49.52	30		P	09 28 44.1	+0.2
I30M	Mount Dempster	49.83	33		P	09 28 47.6	+1.2
ARSB	Arslanbob	50.37	294	P	P	09 28 51.3	+0.4
ARSB				IAmb	IAmb	09 28 51.9	
	comp=Z,4.6nm,0.9s						
H31M	Peel River	50.50	32	P	P	09 28 52.0	+0.6
KK31	Karatay Array	51.30	297	P	P	09 28 57.2	-0.5
KK31				IAmb	IAmb	09 28 57.4	
	comp=Z,1.2nm,0.7s						
KKAR	Karatay Array	51.30	297	P	P	09 28 57.2	-0.5
KKAR				IAmb	IAmb	09 28 57.4	
	comp=Z,1.3nm,0.7s						
A36M	Sachs Harbour	51.92	23	P	P	09 29 03.2	+1.3
ARTI	Arti	53.40	316	P	P	09 29 12.7	-0.3
	comp=Z,1.6nm,0.3s,baz=118,slow=3.3,SNR=3.3						
	comp=Z,1.6nm,0.3s						
AB31	Akbulak array	55.40	308	P	P	09 29 27.5	-0.1
AB31				IAmb	IAmb	09 29 28.0	
	comp=Z,1.8nm,0.7s						
ABKAR	Akbulak array	55.40	308		P	09 29 27.5	-0.1
ABKAR				IAmb	IAmb	09 29 28.0	
	comp=Z,1.8nm,0.7s						
EUNU	Eureka	55.65	9	P	P	09 29 28.9	-0.1
YKA	Yellowknife Ar	59.72	32	P	P	09 29 57.2	-0.5
	comp=Z,0.2nm,0.7s,baz=298,slow=7.2,SNR=3.6						
	comp=Z,0.2nm,0.7s						
WB0	Warramunga Arr	61.42	188	P	P	09 30 10.2	+0.4
WR0	Warramunga Arr	61.60	188	P	P	09 30 11.5	+0.6
WB2	Warramunga Arr	61.60	188	P	P	09 30 11.6	+0.6
WRA	Warramunga Arr	61.60	188	P	P	09 30 09.6	-1.4
	comp=Z,0.7nm,0.8s,baz=5.8,slow=6.9,SNR=6.8						
	comp=Z,0.7nm,0.8s						
FINES	FINESS Array B	65.01	332	P	P	09 30 32.9	-0.2
FINES	FINESS Array B	65.01	332	P	P	09 30 32.2	-0.8
	comp=Z,3.0nm,0.6s,baz=37,slow=7.8,SNR=11						
	comp=Z,3.0nm,0.6s						
ASAR	Alice Springs	65.33	188	P	P	09 30 35.0	-0.5
	comp=Z,0.4nm,0.9s,baz=4.6,slow=7.1,SNR=2.8						
	comp=Z,0.4nm,0.9s						
DZM	Mont Dzumac	67.27	155	LR	LR	10 00 06.8	
	comp=Z,361nm,18.7s,baz=120,slow=36						
NC405	NORSAR Array S	69.96	337	P	P	09 31 04.2	-0.2
HFS	Hagfors	70.13	335	P	P	09 31 04.6	-0.8
	comp=Z,0.8nm,0.4s,baz=46,slow=6.4,SNR=6.6						
	comp=Z,0.8nm,0.4s						
NB201	NORSAR Array S	70.14	337	P	P	09 31 05.6	+0.2
NOA	NORSAR Array B	70.17	337	P	P	09 31 05.1	-0.5
	comp=Z,0.6nm,0.6s,baz=36,slow=6.1,SNR=3.9						
	comp=Z,0.6nm,0.6s						
UOSS	Minazif	70.85	287	P	P	09 31 10.5	+0.2
AKASG	Malin Array Be	70.97	322	P	P	09 31 09.9	-0.7
	comp=Z,0.8nm,0.3s,baz=46,slow=6.0,SNR=6.7						
	comp=Z,0.8nm,0.3s						
BOZ	Bozeman (W)	71.24	45	P	P	09 31 13.3	+0.7
PDAR	Pinedale Array	74.23	47	P	P	09 31 30.7	+0.3
	comp=Z,0.4nm,0.7s,baz=316,slow=6.2,SNR=4.1						
	comp=Z,0.4nm,0.7s						
BUR08	Bucovina Ar. S	75.00	321	P	P	09 31 35.5	+0.9
BUR08				IAmb	IAmb	09 31 49.1	
	comp=Z,4.5nm,1.5s						
BURAR	Bucovina Array	75.02	321	P	P	09 31 35.0	+0.3
BRTR	Keskin Array B	76.16	311	P	P	09 31 41.3	-0.2
	comp=Z,0.6nm,0.6s,baz=46,slow=8.9,SNR=3.0						
	comp=Z,0.6nm,0.6s						
FUORN	Ofenpass-Fuorn	82.24	329	P	P	09 32 14.7	+0.1
FUORN				IAmb	IAmb	09 32 45.4	
	comp=Z,7.1nm,1.4s						
DAVOX	Davos/Dischmat	82.25	329	LR	LR	10 15 19.5	
	comp=Z,22nm,18.1s,baz=267,slow=40						
QSPA	South Pole Qui	131.31	180	PKP	PKPdf	09 39 02.3	-1.6
	comp=Z,1.4nm,1.0s,baz=311,slow=2.8,SNR=2.0						
SNAA	Sanae	145.18	199	PKPbc	PKPdf	09 39 29.2	0.0
SNAA	Sanae	145.18	199	PKPbc	PKPbc	09 39 27.8	-1.2
	comp=Z,0.7nm,0.6s,baz=182,slow=5.9,SNR=8.0						
PB11	IPOC Station P	145.51	61	PKPbc	PKPab	09 39 32.2	+0.4
H03N2	Juan Fernandez	146.83	89	T	T	12 24 26.5	
	baz=300,slow=77,SNR=5.4						
H03N3	Juan Fernandez	146.85	89	T	T	12 24 24.0	
	baz=300,slow=77,SNR=7.6						
H03N1	Juan Fernandez	146.85	89	T	T	12 24 32.1	
	baz=300,slow=77,SNR=6.8						
GO04	Tololo Observa	151.31	77	PKPdf	PKPdf	09 39 39.6	-1.0
GO04				PKPbc	PKiKP	09 39 46.8	-0.4
GO04				PKPab	PKPab	09 39 55.5	+0.4

*IDC **28** 09:20:46.9±3.3, 53°.56N×87°.72E, h0^{km}, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=31.1km s-min=16.7km az=50.0*

ASRS 28 09:20:44.0±1.0**, 53°.56N×87°.72E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.77	284	I	I	09 31 40.0	
	0.1nm,1.0s,baz=102,slow=314,SNR=13						
ZALV	Zalesovo Beam	1.77	284	Pg	Pg	09 21 18.6	+0.8
	1.6nm,0.3s,baz=105,slow=17,SNR=15						
ZALV				Lg	Lg	09 21 43.0	
	2.4nm,0.3s,baz=100,slow=22,SNR=9.0						
KURBB	Kurchatov Arra	6.38	246	Pn	Pn	09 22 22.5	+3.3
	0.1nm,0.3s,baz=61,slow=14,SNR=4.4						
KURBB				Lg	Lg	09 24 09.7	
	0.1nm,0.3s,baz=61,slow=30,SNR=6.0						
	0.6nm,0.5s						
MKAR	Makanchi Array	7.62	209	Pn	Pn	09 22 40.4	+4.2
	0.2nm,0.3s,baz=26,slow=14,SNR=7.0						
	0.4nm,0.4s						

*IDC **28** 09:22:26.6±5.0, 53°.86N×89°.82E, h0^{km}, mbtmp3.1/3, ML2.7/3, Error ellipse: s-maj=52.7km s-min=24.9km az=43.0*

ASRS 28 09:22:18.0±2.2**, 54°.02N×90°.25E, h0^{km}, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	3.21	271	I	I	09 41 00.0	
	0.1nm,1.0s,baz=86,slow=316,SNR=6.0						
ZALV	Zalesovo Beam	3.21	271	Pn	Pb	09 23 17.0	+1.2
	0.8nm,0.3s,baz=89,slow=16,SNR=4.5						
ZALV				Lg	Lg	09 23 59.9	
	2.1nm,0.3s,baz=87,slow=26,SNR=7.6						
	1.4nm,0.3s						
KURBB	Kurchatov Arra	7.95	249	Pn	Pn	09 24 19.2	+4.6
	0.1nm,0.3s,baz=67,slow=14,SNR=5.3						
	0.8nm,0.4s						
MKAR	Makanchi Array	8.84	218	Pn	Pn	09 24 32.2	+5.3
	0.5nm,0.3s,baz=31,slow=12,SNR=15						
	0.7nm,0.4s						

*IDC **28** 09:25:24.1±3.3, 54°.48N×86°.93E, h0^{km}, mbtmp2.8/2, ML2.3/2, Error ellipse: s-maj=29.3km s-min=20.1km az=52.0*

ASRS 28 09:25:23.0±1.2**, 54°.38N×86°.80E, h0^{km}, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.24	250	I	I	09 33 20.0	
	baz=69,slow=318,SNR=3.7						
ZALV	Zalesovo Beam	1.24	250	Pg	Pn	09 25 47.9	+0.3
	0.4nm,0.3s,baz=64,slow=17,SNR=3.8						
ZALV				Lg	Lg	09 26 08.2	
	0.9nm,0.3s,baz=66,slow=25,SNR=2.7						
KURBB	Kurchatov Arra	6.30	237	Pn	Pn	09 27 00.1	+3.1
	0.1nm,0.3s,baz=53,slow=14,SNR=9.6						
KURBB				Lg	Lg	09 28 46.7	
	baz=57,slow=31						
	0.9nm,0.6s						
MKAR	Makanchi Array	8.12	202	Pn	Pn	09 27 26.6	+4.5
	baz=19,slow=12,SNR=2.2						
	0.1nm,0.3s						

*SJA **28** 09:29:03.4±0.7, 29°.35S×71°.05W, h85^{km}±3^{km}, ML3.4, MW3.5*

*GUC **28** 09:29:04.4±0.9, 29°.39S×70°.88W, h77^{km}±4^{km}, ML3.8*

ISC 28 09:29:05.0±1.2**, 29°.36S**±0°.02×**71°.04W**±0°.05**, h83^{km}**±7^{km}**, n42, σ1^{s}.31**/72**, 7C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	Las Campanas	0.45	41	⇑*i*P	Pn	09 29 18.8	-0.2
LCO				*i* S	Sn	09 29 29.1	-0.3
LCO	Las Campanas	0.45	41	*e*P	Pn	09 29 18.9	-0.1
LCO				*e*S	Sn	09 29 29.4	0.0
LCO				IAML		09 29 30.9	
	comp=Z,4µm,0.2s						
CO05	La Serena	0.59	197	⇓*i*P	Pn	09 29 20.0	+0.1
CO05				*i* S	Sn	09 29 31.1	+0.3
CO05				IAML		09 29 31.6	
	comp=E,7µm,0.3s						
GO04	Tololo Observa	0.84	166	⇑*i*P	Pn	09 29 22.5	-0.3
GO04				*i* S	Sn	09 29 35.9	0.0
GO04				IAML		09 29 38.2	
	comp=N,6µm,0.2s						
GO04	Tololo Observa	0.84	166	*e*P	Pn	09 29 22.5	-0.3
GO04				*e*S	Sn	09 29 36.1	+0.3
CO01	Juntas del Tor	1.03	127	⇑*i*P	Pn	09 29 24.2	-0.7
CO01				*i* S	Sn	09 29 38.4	-1.3
CO01	Juntas del Tor	1.03	127	*e*P	Pn	09 29 24.3	-0.6
CO01				*e*S	Sn	09 29 38.4	-1.3
CO01				IAML		09 29 38.9	
	comp=Z,821nm,0.2s						
AC04	Llanos de Chal	1.15	358	⇑*i*P	Pn	09 29 26.6	+0.5
AC04				*i* S	Sn	09 29 42.9	+1.0
AC04	Llanos de Chal	1.15	358	*e*P	Pn	09 29 26.5	+0.4
AC04				*e*S	Sn	09 29 46.1	+4.3
AC04				IAML		09 29 46.6	
	comp=Z,384nm,0.1s						
CO06	Fray Jorge	1.41	201	*e*P	Pn	09 29 29.3	0.0
CO06				*e*S	Sn	09 29 47.5	-0.2
CO06				IAML		09 29 50.5	
	comp=E,946nm,0.4s						
CO03	El Pedregal	1.51	169	⇑*i*P	Pn	09 29 30.5	-0.2
CO03				*i* S	Sn	09 29 50.0	-0.1
CO03				IAML		09 29 50.7	
	comp=E,2µm,0.1s						
CO03	El Pedregal	1.51	169	*e*P	Pn	09 29 30.6	-0.2
CO03				*e*S	Sn	09 29 50.5	+0.5
CO03				IAML		09 29 53.1	
	comp=Z,461nm,0.3s						
AROD	Rodeo	1.58	121	*e*P	Pn	09 29 33.0	+1.1
CO02	Combarbal	1.84	179	⇑*i*P	Pn	09 29 34.9	-0.2
CO02				*i* S	Sn	09 29 57.9	0.0
CO02				IAML		09 29 58.6	
	comp=E,2µm,0.3s						
CO02	Combarbal	1.84	179	*e*P	Pn	09 29 29.4	-5.7
CO02				*e*P		09 29 34.8	
CO02				*e*S	Sn	09 29 57.7	-0.1
CO02				IAML		09 29 59.7	
	comp=Z,538nm,0.2s						
ACDV	Cuesta del Vie	1.85	116	*e*P	Pn	09 29 35.9	+0.6
ACDV				IAML		09 30 02.1	
	comp=Z,198nm,0.5s						
GO03	Copiapo	1.89	22	*e*P	Pn	09 29 35.5	-0.2
GO03				*e*S	Sn	09 29 59.0	0.0
GO03				IAML		09 30 00.9	
	comp=N,948nm,0.2s						
GO03	Copiapo	1.89	22	*e*P	Pn	09 29 35.6	-0.1
GO03				*e*S	Sn	09 29 59.7	+0.7
AC06	Mina Casimiro	2.08	17	⇑*i*P	Pn	09 29 38.0	-0.1
AC06				*i* S	Sn	09 30 02.4	-1.0
ACCO	Cerro Coronel	2.11	126	*e*P	Pn	09 29 40.2	+1.5
ACCO				*e*S	Sn	09 30 06.0	+1.6
AGUA	GUANDACOL	2.23	94	*e*P	Pn	09 29 41.5	+1.3
AGUA				IAML		09 30 11.4	
	comp=Z,124nm,0.2s						
RTLS	Leoncito	2.86	149	*e*P	Pn	09 29 50.7	+1.8
RTLS				*e*S	Sn	09 30 26.1	+3.6
RTLS				IAML		09 30 26.9	
	comp=Z,232nm,0.3s						
RTLL	Cerro Villicun	2.96	132	*e*P	Pn	09 29 50.7	+0.7
ZON	Zonda	2.98	138	*e*P	Pn	09 29 37.9	-12
ZON				*e*S	Sn	09 30 21.7	-3.5
ZON				IAML		09 30 32.5	
	comp=Z,42nm,0.4s						
AC02	Maricunga	3.02	34	*e*P	Pn	09 29 51.5	+0.2
AC02				*e*S	Sn	09 30 26.5	-0.3
AC02				IAML		09 30 35.3	
	comp=Z,215nm,0.8s						
AC01	Pan de Azucar	3.22	7	*e*P	Pn	09 29 51.9	-1.6
AC01				*e*S	Sn	09 30 29.9	-0.9
AC01				IAML		09 30 47.4	
	comp=Z,80nm,0.5s						
AVFE	Valle Fertil	3.37	114	*e*P	Pn	09 29 55.6	+0.2
AVFE				*e*S	Sn	09 30 17.6	-17
AVFE				IAML		09 30 34.4	
	comp=Z,172nm,0.4s						
VA03	San Esteban	3.42	173	*e*P	Pn	09 29 56.5	+0.2
VA03				*e*S	Sn	09 30 39.6	+3.8
VA03				IAML		09 30 44.6	
	comp=Z,69nm,0.4s						
ACLC	CERRO LA CRUZ	3.57	92	*e*P	Pn	09 29 58.2	-0.1
ASAL	Salagasta	3.74	150	*e*P	Pn	09 30 01.4	+0.9
ASAL				*e*S	Sn	09 30 46.2	+2.8
MT02	Curacav	3.89	181	*e*P	Pn	09 30 01.4	-1.2
MT02				*e*S	Sn	09 30 45.6	-1.4
MT02				IAML		09 30 55.3	
	comp=Z,33nm,0.3s						
MT05	Renca	4.03	176	*e*P	Pn	09 30 04.3	-0.2
MT05				*e*S	Sn	09 30 50.5	-0.1
MT05				IAML		09 31 18.9	
	comp=Z,52nm,0.7s						
APLL	PUNTA DE LOS L	4.05	106	*e*P	Pn	09 30 04.5	-0.2
APLL				*e*S	Sn	09 30 50.4	-0.7
APLL				IAML		09 30 52.0	
	comp=Z,98nm,0.4s						
MT04	Ro Olivares	4.11	169	*e*P	Pn	09 30 06.9	+1.2
MT04				*e*S	Sn	09 30 52.3	-0.4
MT04				IAML		09 31 04.8	
	comp=Z,29nm,0.5s						
MT08	Bocatoma Ro	4.17	168	*e*P	Pn	09 30 08.8	+2.3
MT08				*e*S	Sn	09 30 35.0	-19
MT08				IAML		09 31 15.1	
	comp=Z,22nm,0.8s						
ACHE	Chepes	4.19	117	*e*P	Pn	09 30 06.5	-0.2
ACHE				*e*S	Sn	09 30 53.2	-1.4
GO02	Mina Guanaco	4.37	17	*e*P	Pn	09 30 08.0	-1.3
GO02				*e*S	Sn	09 31 00.4	+1.2
ACAN	Cantantal	4.41	132	*e*P	Pn	09 30 09.0	-0.6
ACAN				IAML		09 31 04.1	
	comp=Z,90nm,0.6s						
MT01	Popeta	4.50	182	*e*P	Pn	09 30 09.7	-1.1
MT01				*e*S	Sn	09 30 59.9	-2.0
MT01				IAML		09 31 00.8	
	comp=Z,50nm,0.1s						
LMEL	Las Melosas	4.53	171	*e*P	Pn	09 30 12.3	+0.9
LMEL				*e*S	Sn	09 31 03.7	+0.8
CYA	Choya	4.68	80	*e*P	Pn	09 30 12.2	-1.1
BO01	Tunca	5.02	180	*e*P	Pn	09 30 16.3	-1.6
BO01				IAML		09 31 14.4	
	comp=Z,19nm,0.5s						

IDC 28 09:29:27.8±3.1**, 53°.73N×86°.73E, h0^{km}, mbtmp2.7**/2**, ML2.5**/2**, Error ellipse: s-maj=28.2km s-min=15.7km az=63.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.15	282	I	I	09 36 00.0	
	baz=99,slow=317,SNR=1.8						
ZALV	Zalesovo Beam	1.15	282	Pg	Pg	09 29 49.9	+0.1
	1.3nm,0.3s,baz=104,slow=13,SNR=11						
ZALV				Lg	Lg	09 30 05.2	
	0.8nm,0.3s,baz=102,slow=27,SNR=3.8						
KURBB	Kurchatov Arra	5.93	242	Pn	Pn	09 30 57.5	+0.8
	0.1nm,0.3s,baz=56,slow=13,SNR=4.4						
	0.2nm,0.3s						
MKAR	Makanchi Array	7.50	204	Pn	Pn	09 31 19.4	+0.9
	0.1nm,0.3s,baz=27,slow=14,SNR=3.3						
	0.1nm,0.3s						

*ASRS **28** 09:29:51.0±0.7, 55°.70N×86°.18E, h0^{km}, M2.8, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 28 09:29:58.1±2.9**, 55°.47N×86°.28E, h0^{km}, mbtmp3.1**/3**, ML2.7**/3**, Error ellipse: s-maj=26.8km s-min=19.6km az=71.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.75	210	I	I	09 41 42.9	
	0.1nm,1.0s,baz=23,slow=316,SNR=4.7						
ZALV	Zalesovo Beam	1.75	210	Pg	Pn	09 30 28.0	-1.6
	7.0nm,0.3s,baz=29,slow=18,SNR=33						
ZALV				Lg	Lg	09 30 54.3	
	4.4nm,0.3s,baz=29,slow=28,SNR=8.4						
KURBB	Kurchatov Arra	6.74	227	Pn	Pn	09 31 38.0	-0.2
	0.1nm,0.3s,baz=46,slow=14,SNR=8.1						
KURBB				Lg	Lg	09 33 34.1	
	baz=41,slow=32,SNR=5.9						
	0.6nm,0.3s						
MKAR	Makanchi Array	9.04	198	Pn	Pn	09 32 09.8	0.0
	0.1nm,0.3s,baz=7.7,slow=12,SNR=4.2						
MKAR				Lg	Lg	09 34 45.0	
	baz=12,slow=28,SNR=5.5						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	0.3nm,0.4s						
BVAR	Borovoye Array	9.62	262	Pn	Pn	09 32 17.5	-0.1
	baz=68,slow=13,SNR=2.7						
	0.5nm,0.3s						

IDC **28** *09:40:02.0±3.9, 53°.56N×87°.79E, h0^{km}, mbtmp2.5/2, ML2.4/2, Error ellipse: s-maj=38.3km s-min=18.7km az=51.0*

ASRS 28 09:39:59.0±1.6, 53°.55N×87°.77E, h0^{km}, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.80	284	I	I	09 51 00.0	
	0.2nm,0.8s,baz=102,slow=314,SNR=3.4						
ZALV	Zalesovo Beam	1.80	284	Pg	Pg	09 40 34.3	+0.8
	0.7nm,0.3s,baz=100,slow=15,SNR=6.1						
ZALV				Lg	Lg	09 40 59.5	
	0.9nm,0.3s,baz=100,slow=24,SNR=5.1						
ZALV				I	I	09 51 05.8	
	baz=98,slow=39,SNR=14						
KURBB	Kurchatov Arra	6.40	246	Pn	Pn	09 41 38.7	+4.2
	baz=63,slow=14,SNR=3.0						
	0.2nm,0.4s						
MKAR	Makanchi Array	7.62	210	Pn	Pn	09 41 55.6	+4.3
	0.1nm,0.3s,baz=29,slow=13,SNR=2.7						
	0.2nm,0.4s						

ASRS **28** *09:42:34.0±1.8, 54°.03N×86°.64E, h0^{km}, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 28 09:42:33.4±3.4, 54°.18N×86°.83E, h0^{km}, mbtmp2.9/2, ML2.3/2, Error ellipse: s-maj=29.5km s-min=17.6km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.21	260	I	I	09 48 30.0	
	baz=80,slow=313,SNR=1.8						
ZALV	Zalesovo Beam	1.21	260	Pg	Pb	09 42 57.2	+0.1
	0.7nm,0.3s,baz=77,slow=13,SNR=5.4						
ZALV				Lg	Lg	09 43 12.7	
	0.7nm,0.3s,baz=75,slow=28,SNR=7.4						
KURBB	Kurchatov Arra	6.20	238	Pn	Pn	09 44 05.9	-0.2
	0.1nm,0.3s,baz=53,slow=13,SNR=5.8						
	2.5nm,0.8s						
MKAR	Makanchi Array	7.94	203	Pn	Pn	09 44 31.4	+1.4
	0.1nm,0.3s,baz=25,slow=14,SNR=1.9						
	0.2nm,0.5s						

IDC **28** *09:45:07.0±3.6, 54°.22N×87°.45E, h0^{km}, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=32.0km s-min=19.7km az=44.0*

ASRS 28 09:45:08.0±1.6, 54°.15N×87°.18E, h0^{km}, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.41	263	I	I	09 54 25.0	
	baz=80,slow=315,SNR=5.4						
ZALV	Zalesovo Beam	1.41	263	Pg	Pb	09 45 35.6	+0.5
	2.0nm,0.3s,baz=76,slow=16,SNR=14						
ZALV				Lg	Lg	09 45 57.3	
	1.2nm,0.3s,baz=81,slow=26,SNR=4.2						
KURBB	Kurchatov Arra	6.36	240	Pn	Pn	09 46 43.7	+0.8
	0.1nm,0.3s,baz=53,slow=14,SNR=2.2						
	0.5nm,0.3s						
MKAR	Makanchi Array	8.00	205	Pn	Pn	09 47 07.8	+2.4
	0.1nm,0.3s,baz=27,slow=14,SNR=6.3						
MKAR				Lg	Lg	09 49 25.0	
	baz=21,slow=22						
	0.2nm,0.2s						

IDC **28** *09:59:02.1±3.8, 54°.11N×87°.49E, h0^{km}, mbtmp2.5/2, ML2.2/2, Error ellipse: s-maj=33.9km s-min=19.9km az=42.0*

ASRS 28 09:58:59.0±0.5, 54°.11N×87°.48E, h0^{km}, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.58	265	I	I	10 09 03.4	
	baz=82,slow=314,SNR=2.9						
ZALV	Zalesovo Beam	1.58	265	Pg	Pg	09 59 30.1	+0.9
	1.4nm,0.3s,baz=85,slow=18,SNR=14						
ZALV				Lg	Lg	09 59 52.4	
	2.8nm,0.3s,baz=84,slow=29,SNR=12						
KURBB	Kurchatov Arra	6.50	241	Pn	Pn	10 00 40.3	+4.6
	baz=56,slow=13,SNR=2.0						
	0.1nm,0.3s						
MKAR	Makanchi Array	8.04	206	Pn	Pn	10 01 01.0	+4.0
	0.1nm,0.3s,baz=26,slow=14,SNR=1.5						
	0.1nm,0.4s						

HEL **28** *10:00:05.8±0.3, 64°.70N×30°.67E, h0^{km}, ML2.1, Suspected explosion*

UPP **28** *10:00:06.5±3.0, 64°.74N×30°.80E, h0^{km}, ML1.9*

KOLA **28** *10:00:06.7, 64°.65N×30°.70E, h0^{km}, ML2.3, Kostomuksha, Karelia*

IDC **28** *10:00:07.7±2.2, 64°.71N×30°.93E, h0^{km}, mbtmp3.0/4, ML2.2/4, Error ellipse: s-maj=30.2km s-min=10.0km az=102.0*

ISC 28 10:00:07.2±0.9, 64°.75N±0°.02×30°.43E±0°.04, h0^{km}, n49, σ1^{s}.56/73, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RMF	Romuvaara	0.58	202	PG	Pg	10 00 16.6	-1.7
	baz=33						
RMF				SG	Sg	10 00 24.0	-1.7
RMF				MSG		10 00 24.5	
	comp=Z,28nm,0.2s						
KU1	Kurvinen	0.90	336	PG	Pg	10 00 23.5	-0.9
	baz=155						
KU6	Riekki	1.30	350	PG	Pg	10 00 30.8	-1.2
	baz=165						
KU6				MSG		10 00 47.0	
	comp=Z,20nm,0.2s						
KU6				SN	Sn	10 00 50.3	-0.3
MSF	Maaselka	1.30	334	PN	Pg	10 00 31.5	-0.7
MSF				SN	Sn	10 00 50.5	-0.2
KU2	Taivalkoski	1.34	317	PG	Pg	10 00 32.2	-0.6
	baz=134						
OLKF	Oulanka, Finla	1.63	345	PG	Pn	10 00 37.0	-0.1
OLKF				MSG		10 00 56.9	
	comp=Z,13nm,0.2s						
OLKF				SN	Sg	10 01 01.3	+1.7
NIF	Nilsia	1.79	221	PG	Pn	10 00 38.7	-0.6
NIF				SG	Sn	10 01 03.9	+1.2
OUL	Oulu	1.96	282	PG	Pn	10 00 43.1	+1.4
OUL				SG	Sb	10 01 09.4	+0.6
RANF	Ranua	1.98	311	PG	Pn	10 00 43.1	+1.2
	baz=129						
RANF				SG	Sg	10 01 11.8	+1.0
KVDA	Kovda	2.19	26	P	Pn	10 00 44.3	-0.5
KVDA				S	Sn	10 01 11.2	-1.4
OBF4	Vikkela, Lumij	2.28	274	PB	Pn	10 00 46.2	+0.1
	baz=94						
OBF4				MSG		10 01 16.3	
	comp=Z,14nm,0.2s						
OBF4				SG	Sb	10 01 19.9	+1.9
OUF	Merijarvi	2.49	264	PB	Pn	10 00 49.9	+0.9
	baz=78						
OUF				MSG		10 01 22.0	
	comp=Z,15nm,0.2s						
OUF				SG	Sb	10 01 25.2	+1.3
RNF	Rovaniemi	2.61	318	PB	Pn	10 00 52.1	+1.5
RNF				SG	Sg	10 01 29.4	-1.7
OBF0	Syolatti, Pyha	2.68	267	PG	Pb	10 00 55.5	-0.5
OBF0				MSG		10 01 27.7	
	comp=Z,6.3nm,0.2s						
SUF	Sumiainen	2.79	225	PB	Pn	10 00 54.7	+1.6
SUF				MSG		10 01 29.2	
	comp=Z,5.1nm,0.2s						
TOF	Tornio	2.88	300	PG	Pb	10 00 59.8	+0.4
TOF				MSG		10 01 33.6	
	comp=Z,3.4nm,0.2s						
TOF				SG	Sb	10 01 37.1	+1.9
VRF	Varrio	3.03	354	PN	Pn	10 00 56.7	+0.4
VRF				MSG		10 01 36.5	
	comp=Z,3.6nm,0.2s						
OBF8	Ulkokalla	3.05	265	PB	Pn	10 00 59.2	+2.7
	baz=81						
OBF8				MSG		10 01 38.0	
	comp=Z,5.0nm,0.2s						
APA0	Apatity Array	3.05	19	P	Pn	10 00 56.9	+0.3
APA0				S	Sn	10 01 34.1	+0.4
APA	Apatity	3.08	22	P	Pn	10 00 56.8	-0.2
APA				S	Sn	10 01 33.9	-0.5
KALU	Kalix	3.17	294	P	Pn	10 00 59.3	+1.0
KALU				S	Sn	10 01 39.4	+2.7
KALU	Kalix	3.17	294	PN	Pn	10 00 59.6	+1.4
KALU				SG	Sb	10 01 45.8	+2.3
KAF	Kangasniemi	3.23	217	PB	Pn	10 01 01.7	+2.5
	baz=40						
KAF				SG	Sb	10 01 47.6	+2.3
RUF	Ruokolahti	3.41	192	PB	Pn	10 01 03.0	+1.5
LVZ	Lovozero	3.59	26	S	Sn	10 01 47.3	+0.2
LVZ	Lovozero	3.59	26	PB	Pn	10 01 06.5	+2.4
KEF	Keuruu	3.60	226	PB	Pn	10 01 05.8	+1.6
KLF	Kolari	3.63	316	PB	Pn	10 01 07.8	+3.2
PAJU	Pajala	3.77	310	P	Pn	10 01 07.1	+0.5
PAJU	Pajala	3.77	310	PN	Pn	10 01 08.1	+1.5
	baz=125						
SJUU	Sjulsmark	3.81	285	P	Pn	10 01 07.9	+0.9
RAJF	Raja-Jooseppi	3.83	348	PN	Pn	10 01 07.1	-0.2
RAJF				SB	Sb	10 02 02.0	-0.6
ERTU	Ertsjaerv	3.86	302	P	Pn	10 01 08.5	+0.7
ERTU	Ertsjaerv	3.86	302	PN	Pn	10 01 09.4	+1.6
FIA0	FINESS Array S	3.87	213	PB	Pn	10 01 09.7	+1.9
	baz=34						
FINES	FINESS Array B	3.87	213	Pn	Pn	10 01 07.4	-0.4
	comp=Z,0.3nm,0.3s,baz=29,slow=14,SNR=6.8						
FINES				Pg	Pb	10 01 17.4	+1.3
	comp=Z,0.5nm,0.3s,baz=30,slow=15,SNR=12						
FINES				Lg	Lg	10 02 06.5	
	comp=Z,1.3nm,0.3s,baz=33,slow=28,SNR=10						
	comp=Z,1.0nm,0.7s						
HARU	Harads	4.19	294	P	Pn	10 01 13.6	+1.3
UMAU	Umeaa	4.33	263	PN	Pn	10 01 15.0	+0.8
UMAU				SG	Sg	10 02 24.4	-1.9
VJF	Virojoki	4.43	199	SG	Sb	10 02 21.9	+2.2
HEF	Hetta	4.56	327	PN	Pn	10 01 19.5	+2.2
	baz=143						
HEF				SG	Sg	10 02 29.7	-3.7
SVAU	Svanoeiden	4.68	272	P	Pn	10 01 19.7	+0.6
TERR	Teriberka	4.83	20	S	Sn	10 02 15.6	-2.0
ARCES	ARCESS Array B	5.17	340	Pn	Pn	10 01 25.7	-0.1
	comp=Z,0.3nm,0.3s,baz=154,slow=15,SNR=32						
ARCES				Sn	Sn	10 02 24.0	-2.1
	comp=Z,0.2nm,0.3s,baz=155,slow=22,SNR=1.4						
ARCES				Lg	Lg	10 02 47.5	
	comp=Z,0.4nm,0.3s,baz=161,slow=30,SNR=2.8						
	comp=Z,0.9nm,0.2s						
ARCES	ARCESS Array B	5.17	340	P	Pn	10 01 25.5	-0.2
ARCES				S	Sn	10 02 25.1	-1.0
KUA	Kurravaara	5.18	313	P	Pn	10 01 25.9	0.0
VADS	Vadso	5.41	356	P	Pn	10 01 28.5	-0.4
VADS				S	Sn	10 02 30.7	-1.1
I37NO	I37NO	6.35	318	I	I	10 40 40.0	
	comp=Z,0.1nm,0.7s,baz=127,slow=324,SNR=3.4						
HFS	Hagfors	9.02	247	Pn	Pn	10 02 17.8	-0.7
	comp=Z,0.1nm,0.3s,baz=54,slow=13,SNR=6.5						
HFS				Sn	Sn	10 03 55.9	-4.8
	comp=Z,0.5nm,0.3s,baz=55,slow=30,SNR=2.6						
HFS				Lg	Lg	10 04 48.8	
	comp=Z,0.2nm,0.3s,baz=68,slow=31,SNR=1.8						
	comp=Z,0.4nm,0.3s						
NOA	NORSAR Array B	9.51	256	Pn	Pn	10 02 25.1	-0.2
	baz=56,slow=14,SNR=1.2						
	comp=Z,0.3nm,0.7s						

IDC 28 10:07:02.5±1.5, 2°.65S×139°.00E, h0^{km}, mb3.5/3, mbtmp3.4/4, ML3.4/1, Error ellipse: s-maj=31.6km s-min=14.6km az=167.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	1.71	85	Pg	Pb	10 07 34.4	-0.4
	2.7nm,0.3s,baz=246,slow=10.0,SNR=7.8						
JAY				Lg	Lg	10 07 56.0	
	6.5nm,0.3s,baz=174,slow=13,SNR=6.8						
WRA	Warramunga Arr	17.78	195	P	Pn	10 11 12.0	+0.4
	0.1nm,0.3s,baz=18,slow=12,SNR=10						
	0.4nm,0.5s						
ASAR	Alice Springs	21.47	193	P	P	10 11 53.6	+0.8
	0.3nm,0.6s,baz=15,slow=9.0,SNR=8.5						
	0.3nm,0.6s						
MKAR	Makanchi Array	69.92	322	P	P	10 18 15.8	+0.2
	0.2nm,0.5s,baz=108,slow=7.7,SNR=2.3						
	0.2nm,0.5s						
QSPA	South Pole Qui	87.30	180	P	P	10 19 49.8	-1.3
	1.2nm,1.0s,baz=29,slow=2.6,SNR=2.4						
	1.2nm,1.0s						

IDC **28** *10:12:10.0±0.6, 8°.38N×126°.31E, h0^{km}, mb4.1/17, mbtmp4.0/17, MS3.4/7, Error ellipse: s-maj=21.7km s-min=10.0km az=99.0*

NEIC **28** *10:12:17.1±1.2, 8°.18N±0°.08×126°.1E±0°.1, h36^{km}±8^{km}, mb4.5/59, Error ellipse: s-maj=18.5km s-min=12.2km az=93.0*

ISC 28 10:12:16.1±0.5, 8°.22N±0°.07×126°.2E±0°.1, h35^{km}, n92, σ1^{s}.28/89, mb4.4/49, MS3.4/7, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	1.27	207		Pn	10 12 37.3	-0.1
DAV	Davao City (W)	1.27	207	Pg	Pn	10 12 37.0	-0.4
	189nm,0.3s,baz=48,slow=2.4,SNR=21						
DAV				Lg	Lg	10 12 58.1	
	146nm,0.3s,baz=274,slow=19,SNR=7.5						
DAV	Davao City (W)	1.27	207	P	Pn	10 12 36.0	-1.4
LUWI	Luwuk	9.80	200	Pn	Pn	10 14 34.2	-0.3
KNRA	Kununurra	23.88	174		P	10 17 26.6	0.0
KNRA				IAmb	IAmb	10 17 32.0	
	comp=Z,14nm,0.8s						
JNU	Nakatsue	25.17	9		P	10 17 38.1	-0.2
JNU				IAmb	IAmb	10 17 42.1	
	comp=Z,13nm,0.8s						
FITZ	Fitzroy Crossi	26.15	181		P	10 17 46.8	-0.4
FITZ	Fitzroy Crossi	26.15	181	P	P	10 17 47.0	-0.3
	comp=Z,5.9nm,0.8s,baz=348,slow=8.4,SNR=8.6						
	comp=Z,5.9nm,0.8s						
CM31	Chiang Mai Arr	28.32	294	P	P	10 18 08.7	+1.9
CM31				IAmb	IAmb	10 18 30.2	
	comp=Z,9.9nm,1.2s						
CMAR	Chiang Mai Arr	28.32	294	P	P	10 18 07.6	+0.8
	comp=Z,0.4nm,0.3s,baz=116,slow=8.9,SNR=4.6						
CMAR				LR	LR	10 28 56.2	
	comp=Z,25nm,19.7s,baz=190,slow=35						
	comp=Z,0.4nm,0.3s						
WB0	Warramunga Arr	28.97	164	P	P	10 18 12.7	+0.2
WB0				IAmb	IAmb	10 18 51.0	
	comp=Z,11nm,1.2s						
WRAB	Tennant Creek	29.11	164	P	P	10 18 12.8	-1.0
WRA	Warramunga Arr	29.12	164	P	P	10 18 13.9	0.0
WRA	Warramunga Arr	29.12	164	P	P	10 18 13.7	-0.1
	comp=Z,1.4nm,0.9s,baz=345,slow=9.3,SNR=6.6						
WRA				PcP	PcP	10 21 20.4	-0.9
	comp=Z,0.4nm,0.9s,baz=342,slow=2.7,SNR=2.0						
	comp=Z,1.4nm,0.9s						
KSAR	Wonju Array Be	29.14	3	P	P	10 18 15.2	+1.4
KSRS	Korea Array	29.15	3	P	P	10 18 11.3	-2.6
	comp=Z,0.7nm,0.6s,baz=182,slow=9.6,SNR=8.4						
	comp=Z,0.7nm,0.6s						
WR8	Warramunga Arr	29.18	164	P	P	10 18 13.4	-0.9
MJAR	Matsushiro Arr	30.26	20	P	P	10 18 21.0	-2.8
	comp=Z,2.6nm,0.8s,baz=196,slow=8.8,SNR=5.6						
MJAR				LR	LR	10 29 42.9	
	comp=Z,41nm,19.9s,baz=180,slow=35						
	comp=Z,2.6nm,0.8s						
AS31	Alice Springs	32.58	167	P	P	10 18 44.1	-0.2
ASAR	Alice Springs	32.58	167	P	P	10 18 44.3	-0.1
ASAR	Alice Springs	32.58	167	P	P	10 18 44.0	-0.3
	comp=Z,1.1nm,0.6s,baz=344,slow=7.2,SNR=24						
	comp=Z,1.1nm,0.6s						
USA0B	Ussuriysk Arra	36.20	7		P	10 19 17.5	+2.1
USRK	Ussuriysk Ar.	36.20	7	P	P	10 19 13.3	-2.2
	comp=Z,8.9nm,0.7s,baz=192,slow=8.2,SNR=32						
	comp=Z,8.9nm,0.7s						
MDJ	Mudanjiang	36.38	4	P	P	10 19 18.7	+1.7
JKA	Kamikawa-asahi	38.53	19	P	P	10 19 36.9	+1.7
JKA				IAmb	IAmb	10 19 48.9	
	comp=Z,12nm,1.1s						
FORT	Forrest	38.82	177	P	P	10 19 38.9	+1.2
FORT				IAmb	IAmb	10 20 01.6	
	comp=Z,18nm,1.1s						
GTA	Gaotai	39.01	327	*e*P	P	10 19 38.0	-1.5
GTA				pP	pP	10 19 42.5	-7.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BBOO	Buckleboo	41.88	167	P	P	10 20 03.3	+0.3
HEH	HeiHe	41.91	1	*e*P	P	10 20 02.0	-1.1
EVN	Everest	41.97	303	P	P	10 20 05.2	+0.5
STKA	Stephens Creek	42.51	160	P	P	10 20 09.2	+1.0
STKA	Stephens Creek	42.51	160	P	P	10 20 08.8	+0.6
	comp=Z,4.0nm,0.9s,baz=319,slow=11,SNR=4.1						
	comp=Z,4.0nm,0.9s						
PEA0B	Petropavlovsk-	51.55	24	P	P	10 21 19.9	+1.4
PETK	Petropavlovsk-	51.55	24	P	P	10 21 19.5	+1.0
PETK	Petropavlovsk-	51.55	24	P	P	10 21 16.4	-2.1
	comp=Z,1.1nm,0.8s,baz=235,slow=8.1,SNR=5.1						
PETK				LR	LR	10 43 31.7	
	comp=Z,34nm,18.9s,baz=148,slow=37						
	comp=Z,1.1nm,0.8s						
MKAR	Makanchi Array	53.59	324		P	10 21 33.7	-0.1
MKAR	Makanchi Array	53.59	324	P	P	10 21 33.2	-0.6
	comp=Z,3.0nm,0.8s,baz=138,slow=8.2,SNR=11						
	comp=Z,3.0nm,0.8s						
MAKZ	Makanchi	53.78	324	P	P	10 21 34.2	-1.0
MAKZ				IAmb	IAmb	10 21 40.9	
	comp=Z,7.5nm,1.1s						
TARG	Taragay, Kyrgy	54.08	316	P	P	10 21 37.9	0.0
TARG				IAmb	IAmb	10 21 47.1	
	comp=Z,3.9nm,0.9s						
MA2	Magadan	54.53	15	P	P	10 21 41.0	+0.6
MA2				IAmb	IAmb	10 21 56.2	
	comp=Z,8.0nm,1.1s						
MA2	Magadan	54.53	15	LR	LR	10 45 57.2	
	comp=Z,28nm,18.0s,baz=232,slow=37						
KDJ	Kajisay	54.67	317		P	10 21 41.3	-0.6
KDJ				IAmb	IAmb	10 21 46.3	
	comp=Z,5.2nm,1.0s						
NIL	Nilore	54.80	305		P	10 21 42.5	-0.3
NRN	Naryn	55.21	315	P	P	10 21 46.4	+0.3
NRN				IAmb	IAmb	10 21 50.0	
	comp=Z,4.7nm,1.0s						
BOOM	Boomskoye usch	55.66	317	P	P	10 21 49.5	+0.4
BOOM				IAmb	IAmb	10 22 17.2	
	comp=Z,6.2nm,1.1s						
ZALV	Zalesovo Beam	56.37	332	P	P	10 21 54.8	+1.1
ZALV	Zalesovo Beam	56.37	332	P	P	10 21 51.4	-2.3
	comp=Z,0.9nm,0.5s,baz=110,slow=8.5,SNR=3.9						
	comp=Z,0.9nm,0.5s						
AAK	Ala-Archa	56.70	316	P	P	10 21 57.0	+0.4
AAK				IAmb	IAmb	10 22 00.3	
	comp=Z,6.2nm,1.4s						
AAK	Ala-Archa	56.70	316	LR	LR	10 47 52.8	
	comp=Z,66nm,19.7s,baz=118,slow=38						
KURK	Kurchatov	57.69	326	P	P	10 22 03.7	+0.6
KURK				IAmb	IAmb	10 22 06.7	
	comp=Z,3.9nm,1.0s						
KURBB	Kurchatov Arra	57.69	326	P	P	10 22 00.1	-3.1
	comp=Z,0.5nm,0.5s,baz=127,slow=6.2,SNR=7.3						
	comp=Z,0.5nm,0.5s						
KBL	Kabul	58.41	306	P	P	10 22 09.0	+0.3
KBL				IAmb	IAmb	10 22 12.3	
	comp=Z,4.7nm,0.8s						
GAR	Garm	58.52	311		P	10 22 09.5	+0.2
SIMJ	Simiganj	59.42	310	P	P	10 22 14.3	-1.3
SIMJ				IAmb	IAmb	10 22 19.5	
	comp=Z,3.8nm,1.1s						
KK31	Karatay Array	59.61	316	P	P	10 22 13.9	-2.8
KK31				IAmb	IAmb	10 22 20.2	
	comp=Z,6.7nm,1.1s						
KKAR	Karatay Array	59.61	316	P	P	10 22 13.9	-2.8
KKAR				IAmb	IAmb	10 22 20.2	
	comp=Z,7.1nm,1.1s						
FUTU	Fugatoga	59.64	112	P	P	10 22 15.8	-1.5
BVAR	Borovoye Array	63.28	326	P	P	10 22 39.8	-1.5
	comp=Z,2.9nm,1.0s,baz=114,slow=3.7,SNR=3.5						
	comp=Z,2.9nm,1.0s						
BRVK	Borovoye	63.36	326		P	10 22 41.1	-0.6
BRVK				IAmb	IAmb	10 22 45.9	
	comp=Z,4.2nm,0.9s						
TIXI	Tiksi	63.39	1		P	10 22 43.9	+2.2
NRIK	Noril'sk	65.96	346	P	P	10 22 58.4	-0.1
	comp=Z,2.6nm,0.8s,baz=113,slow=7.6,SNR=1.6						
	comp=Z,2.6nm,0.8s						
BKZ	Black Stump Fm	66.31	139	P	P	10 23 01.9	+0.7
AB31	Akbulak array	68.35	320	P	P	10 23 14.7	+0.7
AB31				IAmb	IAmb	10 23 18.0	
	comp=Z,4.1nm,1.0s						
ABKAR	Akbulak array	68.35	320	P	P	10 23 13.8	-0.2
J17K	VABM Dome	75.89	27	P	P	10 24 00.6	+1.8
C19K	Lookout Ridge	76.77	21	P	P	10 24 04.6	+0.8
C19K				IAmb	IAmb	10 24 09.6	
	comp=Z,12nm,1.4s						
L18K	Granite Mounta	76.79	28	P	P	10 24 05.9	+2.0
L18K				IAmb	IAmb	10 24 16.8	
	comp=Z,4.4nm,1.3s						
D19K	Kuna River	77.18	21	P	P	10 24 07.2	+1.1
D19K				IAmb	IAmb	10 24 11.9	
	comp=Z,11nm,1.4s						
E19K	Redstone River	77.33	23		P	10 24 07.6	+0.7
E19K				IAmb	IAmb	10 24 13.0	
	comp=Z,6.4nm,1.1s						
H19K	Roundabout Mou	77.35	25	P	P	10 24 07.8	+0.8
D20K	Etivluk River	77.76	21	P	P	10 24 10.2	+0.9
D20K				IAmb	IAmb	10 24 41.6	
	comp=Z,6.4nm,1.3s						
F20K	Avaraart Lake	77.85	23	P	P	10 24 11.2	+1.5
I21K	Tanana	79.17	25	P	P	10 24 18.2	+1.1
D22K	Ayikyak River	79.20	21	P	P	10 24 18.5	+1.3
D22K				IAmb	IAmb	10 24 47.6	
	comp=Z,7.2nm,1.4s						
BPAW	Bear Paw Mtn.	79.54	26	P	P	10 24 19.2	0.0
BPAW				IAmb	IAmb	10 24 23.8	
	comp=Z,2.5nm,0.8s						
MLY	Manley	79.69	25	P	P	10 24 20.6	+0.6
COLD	Coldfoot	80.01	23	P	P	10 24 22.7	+1.0
H23K	Yukon River	80.22	25	P	P	10 24 23.8	+1.0
I23K	Minto, Yukon-K	80.28	25	P	P	10 24 24.5	+1.4
F24K	Squaw Lake	80.92	23	P	P	10 24 27.2	+0.6
ILAR	Eielson Array	81.33	26	P	P	10 24 26.5	-2.3
	comp=Z,0.3nm,0.8s,baz=253,slow=6.2,SNR=7.4						
	comp=Z,0.3nm,0.8s						
OPO	Ambohidratompo	82.25	250	LR	LR	10 59 12.6	
	comp=Z,45nm,20.1s,baz=125,slow=34						
K27K	Chicken	83.45	26	P	P	10 24 41.2	+1.4
K27K				IAmb	IAmb	10 24 50.5	
	comp=Z,2.4nm,0.8s						
BCAR	Beaver Creek A	83.67	27	P	P	10 24 42.2	+1.1
F28M	Old Crow	83.98	23		P	10 24 44.0	+1.5
F28M				IAmb	IAmb	10 24 47.8	
	comp=Z,3.4nm,1.0s						
I28M	Miner Creek	84.22	25		P	10 24 44.6	+0.7
H29M	Whitestone	84.75	24	P	P	10 24 47.2	+0.7
H29M				IAmb	IAmb	10 24 51.3	
	comp=Z,4.2nm,1.0s						
G29M	Pine Creek	84.79	23	P	P	10 24 46.9	+0.3
G31M	Satah River	86.24	23	P	P	10 24 55.9	+2.1
G31M				IAmb	IAmb	10 24 59.1	
	comp=Z,3.5nm,1.1s						
FINES	FINESS Array B	87.63	332	LR	LR	11 06 59.7	
	comp=Z,25nm,18.4s,baz=68,slow=38						
AKASG	Malin Array Be	88.07	321	P	P	10 25 02.1	-0.9
	comp=Z,0.1nm,0.3s,baz=76,slow=3.9,SNR=1.4						
	comp=Z,0.1nm,0.3s						
YKA	Yellowknife Ar	95.67	24	P	P	10 25 38.1	+0.2
	comp=Z,0.5nm,0.8s,baz=297,slow=4.2,SNR=4.6						
	comp=Z,0.5nm,0.8s						

CATAC 28 10:13:33.7±0.7, 13°N±4°×8°9W±°, h27^{km}±4^{km}, M2.6/10, MLv2.6/10, Error ellipse: s-maj=9.9km s-min=3.9km az=16.9, confirmed, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.46	344	P	Pb	10 13 41.7	-1.6
LALI	Alcalda de L	0.46	344	S	Sn	10 13 53.2	+1.3
LOMA	Loma Larga	0.60	2	S	Sn	10 13 56.3	+0.8
TECO	Alcaldia de Te	0.63	39	S	Sn	10 13 55.9	-0.3
TECO	Alcaldia de Te	0.63	39	P	Pn	10 13 46.8	-0.1
ITCA	Escuela Especi	0.63	352	S	Sn	10 13 56.3	0.0

COEG	Centro de Oper	0.65	28	P	Pn	10 13 47.1	-0.1
COEG	Centro de Oper	0.65	28	S	Sn	10 13 56.7	0.0
JAYA	Jayaque - finc	0.66	337	S	Sn	10 13 57.7	+0.7
JAYA	Jayaque - finc	0.66	337	P	Pn	10 13 48.0	+0.6
ALJI	Alcalda de J	0.67	65	P	Pn	10 13 48.4	+1.0
ALJI	Alcalda de J	0.67	65	S	Sn	10 13 57.8	+0.8
UDBS	Universidad Do	0.67	3	S	Sn	10 13 57.8	+0.7
UEES	Universidad Ev	0.67	356	S	Sn	10 13 58.4	+1.2
PMON	Piamonte	0.68	350	P	Pn	10 13 47.4	-0.3
PMON	Piamonte	0.68	350	S	Sn	10 13 58.0	+0.6
UESV	Universidad de	0.71	34	P	Pn	10 13 47.8	-0.2
UESV	Universidad de	0.71	34	S	Sn	10 13 57.8	-0.2
SCLA	Alcaldia de Sa	0.79	34	P	Pn	10 13 49.3	+0.1
SCLA	Alcaldia de Sa	0.79	34	S	Sn	10 14 00.2	0.0
PQSS	Presa 15 de Se	0.84	47	P	Pn	10 13 50.0	+0.2
PQSS	Presa 15 de Se	0.84	47	S	Sn	10 14 01.4	+0.1
PACA	Pacayal	0.94	63	S	Sn	10 14 04.8	+0.8
PACA	Pacayal	0.94	63	P	Pn	10 13 51.0	-0.3
NUBE	Las Nubes	1.03	326	S	Sn	10 14 06.3	+0.1
NUBE	Las Nubes	1.03	326	P	Pb	10 13 52.8	-0.2
FAME	Alcaldia de Sa	1.13	315	S	Sn	10 14 08.3	-0.2
LCND	La Caada	1.29	78	P	Pn	10 13 55.8	-0.2
MARCA	Marcala la Paz	1.58	45	P	Pn	10 13 59.4	-0.6

RSNC 28 10:17:42.7±0.0**, 10°N**±1°×**7°4W**±°**, h38**^{km}±5^{km}**, M2.7, mb4.3, ML2.3, Near north coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARGC	Ariguani, Magd	0.40	145	P	Pn	10 17 51.1	-0.8
ARGC				S	Sn	10 17 57.7	-1.0
SJCC	San Jacinto, C	0.75	247	P	Pn	10 17 55.5	-1.3
SJCC				S	Sn	10 18 07.3	+0.4
SMRC	Santa Marta, M	1.00	15	P	Pn	10 17 59.2	-1.0
SMRC				S	Sn	10 18 13.4	+0.3
CRJC	Cerrejon, Guaj	1.77	62	P	Pn	10 18 09.5	-1.4
CRJC				S	Sn	10 18 31.5	-0.8
OCAC	Ocana	2.25	149	P	Pn	10 18 16.7	-0.9
OCAC				S	Sn	10 18 43.6	-0.6
UREC	San Jos de Ur	2.64	203	P	Pn	10 18 22.7	0.0
UREC				S	Sn	10 18 51.9	-1.6
ZARC	Zaragoza, Cauc	2.71	188	P	Pn	10 18 24.2	+0.5
ZARC				S	Sn	10 19 00.7	+5.5
URIC	Uribia, Colomb	2.87	58	P	Pn	10 18 25.1	-0.8
URIC				S	Sn	10 18 59.8	+0.6
BRJC	Barrancabermej	3.28	167	P	Pn	10 18 32.7	+1.1
BRJC				S	Sn	10 19 12.9	+3.6
PTBC	PUERTO BERRIO,	3.63	180	P	Pn	10 18 36.3	-0.1
PTBC				S	Sn	10 19 24.3	+6.3
BARC	Barichara	3.80	160	P	Pn	10 18 40.2	+1.3
SDV	Santo Domingo	4.01	109	P	Pn	10 18 41.2	-0.6
SDV				S	Sn	10 19 27.5	-0.1
HELC	Santa Helena	4.11	195	P	Pn	10 18 43.8	+0.5
NORC	Norcasia	4.61	185	P	Pn	10 18 50.2	+0.2
BCIP	Isla Barro Col	5.38	260	P	Pn	10 18 59.7	-0.7
BCIP				S	Sn	10 19 57.4	-3.7

UPA ***28*** *10:46:23.7±1.1, 8°.35N×82°.84W, h41^{km}±13^{km}, ML3.7*
UCR ***28*** *10:46:24.6±1.2, 8°.38N×82°.85W, h21^{km}±4^{km}, MW3.6*
CATAC ***28*** *10:46:24.7±1.0, 8°N±6°×8°3W±°, h5^{km}±4^{km}, M3.8/6, MLv3.8/6, Error ellipse: s-maj=12.5km s-min=9.1km az=19.0, confirmed*
ISC 28 10:46:19.7±1.3**, 8°.18N**±0°.06×**83°.01W**±0°.03**, h10**^{km}**, n62,** σ**0^s.68**/65**, 4D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMNES	Limones	0.17	119	eP	Pg	10 46 31.9	+8.4
LESP3	La Esperanza,	0.31	45	⇓iP	Pn	10 46 29.8	-0.5
LESP3				AMP		10 46 30.0	
	comp=Z,19µm,0.1s						
CDITO	Canoas	0.41	20	P	Pn	10 46 30.6	-1.2
CDITO	Canoas	0.41	20	S	Sb	10 46 36.1	+0.7
NELY	Ciudad Neily	0.47	8	eP	Pn	10 46 31.6	-1.0
NELY				eS	Sb	10 46 37.8	+0.8
EDAD	Golfito	0.49	342	eP	Pn	10 46 32.5	-0.4
CSTBL	De las Acacias	0.61	68	eP	Pb	10 46 33.2	+0.7
DVD	David	0.61	66	eP	Pb	10 46 33.2	+0.7
DVD				eS	Sg	10 46 40.2	+0.6
VITO	San Vito	0.63	4	eP	Pn	10 46 34.4	-0.5
RSRNO	Rio Sereno	0.65	13	eP	Pn	10 46 34.3	-0.8
SCLRA	Santa Clara, W	0.68	19	eP	Pb	10 46 34.3	+0.5
BRU2	Volcan	0.68	28	eP	Pb	10 46 33.9	+0.1
BRU2	Volcan	0.68	28	P	Pb	10 46 34.0	+0.1
BRU2	Volcan	0.68	28	⇓iP	Pb	10 46 34.0	+0.1
BRU2				eS	Sg	10 46 42.0	-0.1
TBS2		0.70	30	eP	Pb	10 46 34.9	+0.7
BC3P	Paso Ancho	0.74	32	⇓iP	Pb	10 46 34.5	-0.4
BC3P				AMP		10 46 34.8	
	comp=Z,3µm,0.3s						
ALCO	Alturas Coton,	0.78	13	eP	Pb	10 46 35.5	0.0
BQTLY	Boquete Panama	0.79	44	eP	Pg	10 46 35.1	+0.1
BQSF3	Alto Boquete,	0.80	46	⇓iP	Pg	10 46 35.1	0.0
BQSF3				AMP		10 46 37.0	
	comp=Z,3µm,0.1s						
EDP2	Potrero Grande	0.84	349	eP	Pn	10 46 37.9	+0.2
PANP	Palmar Norte	0.89	330	eP	Pn	10 46 39.2	+0.9
BURE	Buenos Aires	1.03	342	eP	Pn	10 46 40.8	+0.4
RBALA	Bur	1.09	51	eP	Pb	10 46 39.6	-1.2
DRK0	Durika	1.10	348	eP	Pn	10 46 41.1	-0.2
DRK0	Durika	1.10	348	P	Pn	10 46 41.3	0.0
DRK0	Durika	1.10	348	S	Sg	10 46 54.6	-0.5
DRK0	Durika	1.10	348	eP	Pn	10 46 41.2	-0.2
DRK0				eS	Sb	10 46 55.5	+0.1
OCHAL	Ojochal	1.10	325	P	Pn	10 46 42.7	+1.5
OCHAL	Ojochal	1.10	325	S	Sn	10 46 57.4	+0.9
EDPE	Pejibaye, P	1.11	330	eP	Pn	10 46 42.8	+1.3
SAJE	San Jernim	1.25	337	eP	Pg	10 46 44.0	+0.1
PDCAN	Manzana , Fuen	1.31	85	eP	Pn	10 46 43.8	-0.3
BRIBI	Bribri	1.44	8	eP	Pn	10 46 46.1	+0.2
QUEP	Quepos	1.68	317	eP	Pg	10 46 52.0	0.0
PIEC	Cerro El Cedra	1.71	327	eP	Pn	10 46 49.5	-0.3
RAZU	San Marcos de	1.77	326	eP	Pg	10 46 53.4	-0.5
PITB	Pirrs, San	1.77	326	eP	Pg	10 46 53.3	-0.5
GMAL	Guarumal, Vera	1.81	103	eP	Pb	10 46 52.5	-0.5
ABE2	San Pablo	1.83	326	eP	Pg	10 46 54.2	-0.7
LCR2	La Lucha 2	1.83	328	eP	Pn	10 46 52.4	+0.9
REPA	Paraso	1.84	333	eP	Pb	10 46 52.7	-0.9
PICV	PH. Pirrs	1.85	321	eP	Pb	10 46 54.3	+0.6
PAR1A	Puntarenas Pro	1.86	319	eP	Pg	10 46 54.9	-0.6
VTCV	VTCV, Calle Va	1.92	339	eP	Pb	10 46 54.5	-0.5
RAFA	San Farael, Vo	1.93	336	eP	Pg	10 46 56.8	0.0
RESJ	San Isidro (Tu	1.94	341	eP	Pb	10 46 55.0	-0.2
ABRB	Las Abras (San	1.94	339	eP	Pb	10 46 55.2	-0.1
CVTV	Tajo	1.95	338	eP	Pb	10 46 55.3	-0.3
CVTQ	Turrialba Volc	1.96	338	eP	Pb	10 46 55.5	-0.2
VTLA	Turrialba Volc	1.96	337	eP	Pb	10 46 55.5	-0.3
ACOS	Acosta	1.96	325	eP	Pg	10 46 56.7	-0.8
VTR0	Volcan Turrial	1.96	338	eP	Pb	10 46 54.9	-1.0
SANTA	Santa Ana	2.09	326	eP	Pb	10 46 58.2	+0.4
ATEO	Atenas	2.24	323	eP	Pb	10 47 00.9	+0.6
SOCE	Pocosol	2.70	324	eP	Pb	10 47 07.4	-0.8
SOCE	Pocosol	2.70	324	P	Pb	10 47 08.5	+0.3
SOCE	Pocosol	2.70	324	S	Sb	10 47 40.9	-0.5
FORC	Fortuna	2.80	324	eP	Pb	10 47 09.8	0.0
VACR	Volcan Arenal	2.81	324	eP	Pb	10 47 09.6	-0.4
ARE1	Arenal 1	2.82	323	eP	Pb	10 47 10.9	+0.6
VARE2	V. Arenal	2.82	323	eP	Pb	10 47 10.0	-0.3
JTS	Las Juntas de	2.84	318	eP	Pb	10 47 08.1	-2.5

IDC ***28*** *10:47:02.6±0.9, 22°.27S×175°.65W, h0^{km}, mb4.0/7, mbtmp4.1/9, ML4.1/2, Error ellipse: s-maj=31.1km s-min=24.4km az=151.0*
NEIC ***28*** *10:47:03.3±1.9, 21°.97S±0°.09×175°.4W±0°.1, h10^{km}±1^{km}, mb4.6/11, Error ellipse: s-maj=20.0km s-min=14.6km az=286.0*
ISC 28 10:47:03.1±0.6**, 22°.1S**±0°.1×**175°.43W**±0°.08**, h10**^{km}**, n33,** σ**1^s.47**/29**, mb4.4**/12**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	5.97	61	Pn	Pn	10 48 30.2	-1.4
NIUE				Sn	Sn	10 49 37.0	-3.2
MSVF	Nonsavu	7.52	304	Pn	Pb	10 49 04.0	-10
	2.1nm,0.3s,baz=157,slow=11,SNR=7.8						
AFI	Afiamalu	8.87	24	Pn	Pn	10 49 10.5	-0.9
RAR	Rarotonga	14.59	89	Pn	Pn	10 50 29.0	-0.6
RAR	Rarotonga	14.59	89	Pn	Pn	10 50 32.2	+2.6
	5.5nm,0.3s,baz=259,slow=7.0,SNR=6.1						
RAR				Sn	Sn	10 52 58.6	-13
	1.4nm,0.3s,baz=339,slow=22,SNR=1.5						
	14nm,0.3s						
URZ	Urewera	17.32	200	Pn	Pn	10 51 02.8	-2.2
	0.9nm,0.3s,baz=231,slow=2.6,SNR=5.9						
URZ				Sn	Sn	10 53 56.6	-21
	0.7nm,0.3s,baz=278,slow=23,SNR=5.7						
	2.2nm,0.3s						
ARMA	Armidale	30.59	247	P	P	10 53 17.7	+0.3
ARMA				IAmb	IAmb	10 53 26.0	
	comp=Z,19nm,1.4s						
STKA	Stephens Creek	39.29	246	P	P	10 54 33.0	+0.7
STKA				IAmb	IAmb	10 54 51.7	
	comp=Z,21nm,1.1s						
STKA	Stephens Creek	39.29	246	P	P	10 54 31.4	-0.9
	comp=Z,4.6nm,1.1s,baz=83,slow=8.1,SNR=3.9						
	comp=Z,4.6nm,1.1s						
BBOO	Buckleboo	44.01	245	P	P	10 55 11.2	+0.2
AS31	Alice Springs	46.50	258	P	P	10 55 30.0	-1.0
ASAR	Alice Springs	46.50	258	P	P	10 55 30.7	-0.3
ASAR	Alice Springs	46.50	258	P	P	10 55 30.2	-0.7
	comp=Z,1.6nm,0.8s,baz=102,slow=8.7,SNR=16						
ASAR				PcP	PcP	10 57 05.8	+0.4
	comp=Z,0.5nm,0.5s,baz=109,slow=4.1,SNR=6.4						
	comp=Z,1.6nm,0.8s						
WR8	Warramunga Arr	46.62	263	P	P	10 55 30.9	-0.9
WR8				IAmb	IAmb	10 55 39.3	
	comp=Z,7.0nm,1.1s						
WB0	Warramunga Arr	46.75	263	P	P	10 55 32.1	-0.8
WB0				IAmb	IAmb	10 55 48.0	
	comp=Z,9.4nm,1.4s						
WRA	Warramunga Arr	46.77	263	P	P	10 55 31.7	-1.4
WRA	Warramunga Arr	46.77	263	P	P	10 55 32.4	-0.6
	comp=Z,0.6nm,0.7s,baz=90,slow=5.8,SNR=38						
WRA				PcP	PcP	10 57 05.9	-0.5
	comp=Z,0.4nm,0.6s,baz=102,slow=3.1,SNR=2.8						
	comp=Z,0.6nm,0.7s						
FORT	Forrest	50.88	248	P	P	10 56 03.2	-1.2
FORT				IAmb	IAmb	10 56 17.0	
	comp=Z,12nm,0.9s						
KNRA	Kununurra	52.95	267	P	P	10 56 20.7	+0.6
KNRA				IAmb	IAmb	10 56 47.3	
	comp=Z,7.8nm,1.4s						
MORW	Morawa	61.44	248	P	P	10 57 18.8	-1.2
QSPA	South Pole Qui	67.97	180	P	P	10 58 04.1	+2.0
QSPA				IAmb	IAmb	10 58 15.0	
	comp=Z,3.8nm,1.1s						
QSPA	South Pole Qui	67.97	180	P	P	10 58 03.1	+0.9
	comp=Z,0.7nm,0.7s,baz=289,slow=2.1,SNR=3.2						
	comp=Z,0.7nm,0.7s						
PETK	Petropavlovsk-	78.46	344	P	P	10 59 05.5	+1.7
	comp=Z,2.5nm,0.8s,baz=183,slow=6.4,SNR=4.9						
	comp=Z,2.5nm,0.8s						
H03S2	Juan Fernandez	83.11	124	T	T	12 31 13.1	
	baz=246,slow=74,SNR=86						
H03S1	Juan Fernandez	83.12	124	T	T	12 31 14.2	
	baz=246,slow=74,SNR=91						
H03S3	Juan Fernandez	83.12	124	T	T	12 31 21.4	
	baz=246,slow=74,SNR=115						
H03N2	Juan Fernandez	83.25	123	T	T	12 31 28.6	
	baz=252,slow=72,SNR=43						
H03N3	Juan Fernandez	83.25	123	T	T	12 31 28.8	
	baz=252,slow=72,SNR=31						
H03N1	Juan Fernandez	83.27	123	T	T	12 31 28.3	
	baz=252,slow=72,SNR=39						
TXAR	Lajitas Array	85.93	56	P	P	10 59 47.4	+3.6
	comp=Z,0.5nm,0.9s,baz=199,slow=6.1,SNR=3.5						
	comp=Z,0.5nm,0.9s						
SNAA	Sanae	86.33	178	P	P	10 59 44.4	-0.6
	comp=Z,2.0nm,1.2s,baz=116,slow=12,SNR=2.4						
	comp=Z,2.0nm,1.2s						
AKASG	Malin Array Be	145.57	332	PKPbc	PKPab	11 06 41.5	-0.3
	comp=Z,0.6nm,0.4s,baz=43,slow=4.1,SNR=4.1						
BRTR	Keskin Array B	149.69	312	PKPbc	PKiKP	11 06 54.0	-0.4
	comp=Z,0.7nm,0.6s,baz=126,slow=6.4,SNR=3.6						

IDC ***28*** *10:52:30.3±1.0, 6°.31S×103°.70E, h0^{km}, mb4.1/12, mbtmp4.1/13, ML3.7/1, MS3.3/1, Error ellipse: s-maj=39.6km s-min=15.0km az=57.0*
DJA ***28*** *10:52:36.1±2.2, 6°S±7°×10°4E±°, h32^{km}±37^{km}, M4.3/9, mb4.7/1, MLv4.2/9*
NEIC ***28*** *10:52:37.1±1.4, 6°.17S±0°.08×103°.87E±0°.03, h35^{km}±2^{km}, mb4.5/15, Error ellipse: s-maj=14.0km s-min=5.3km az=187.0*
ISC 28 10:52:37.1±0.7**, 6°.31S**±0°.08×**103°.78E**±0°.08**, h48**^{km}**, n58,** σ**1^s.27**/49**, mb4.3**/20**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LWLI	Liwa	1.32	12	P	Pn	10 52 59.5	+0.2
KLI	Kotabumi	1.80	37	P	Pn	10 53 05.3	-0.4
MDSI	Maura Dua	1.86	12	P	Pn	10 53 06.4	-0.2
MDSI				S	Sn	10 53 30.3	+1.4
CGJI	Cibinong	1.93	99	P	Pn	10 53 06.1	-1.4
CGJI				S	Sn	10 53 29.2	-1.3
MNAI	Manna	2.11	337	Pn	Pn	10 53 08.2	-1.7
MNAI	Manna	2.11	337	P	Pn	10 53 09.9	-0.1
TNG	Tangerang	2.86	87	P	Pn	10 53 18.8	-1.4
KSI	Kapahiang	2.90	336	P	Pn	10 53 20.8	0.0
CNJI	Cibinong	3.47	107	P	Pn	10 53 26.9	-1.8
PMBI	Palembang	3.51	16	Pn	Pn	10 53 26.3	-2.9
LEM	Lembang	3.85	98	Pn	Pn	10 53 31.9	-2.2
	5.1nm,0.3s,baz=320,slow=22,SNR=2.1						
LEM				Sn	Sn	10 54 23.7	+5.5
	6.6nm,0.3s,baz=10,slow=24,SNR=3.9						
	8.9nm,0.3s						
UGM	Wanagama	6.88	104	Pn	Pn	10 54 16.8	+1.3
UGM	Wanagama	6.88	104	P	Pn	10 54 14.6	-0.9
JAGI	Jajag, Banyuwa	10.51	102	Pn	Pn	10 55 03.1	-2.1
KAPI	Kappang	15.95	86	LR	LR	11 03 29.4	
	comp=Z,106nm,18.3s,baz=266,slow=41						
SOEI	Soe	20.57	101	P	P	10 57 12.2	-0.1
FITZ	Fitzroy Crossi	24.33	121	P	P	10 57 51.2	+0.6
CMAR	Chiang Mai Arr	25.07	349	P	P	10 57 57.2	-0.1
	3.1nm,0.7s,baz=181,slow=9.3,SNR=16						
	3.1nm,0.7s						
KNRA	Kununurra	26.20	113	P	P	10 58 07.1	-0.6
KNRA				IAmb	IAmb	10 58 17.3	
	comp=Z,16nm,1.5s						
MTN	Manton Dam	27.73	106	P	P	10 58 20.2	-1.2
MTN				IAmb	IAmb	10 58 54.0	
	comp=Z,19nm,1.4s						
H01W3	Cape Leeuwin H	30.00	163	T	T	11 29 46.9	
	baz=340,slow=76,SNR=13						
H01W2	Cape Leeuwin H	30.01	163	T	T	11 29 47.9	
	baz=340,slow=76,SNR=12						
H01W1	Cape Leeuwin H	30.01	163	T	T	11 29 50.7	
	baz=340,slow=76,SNR=11						
H08S2	Diego Garcia H	31.07	266	T	T	11 31 25.2	
	baz=89,slow=74						
H08S3	Diego Garcia H	31.09	266	T	T	11 31 23.9	
	baz=89,slow=74						
H08S1	Diego Carcia H	31.09	266	T	T	11 31 28.4	
	baz=89						
WB0	Warramunga Arr	32.61	117	P	P	10 59 04.9	+0.3
WB0				IAmb	IAmb	10 59 10.4	
	comp=Z,9.9nm,1.4s						
WRA	Warramunga Arr	32.62	117	P	P	10 59 05.0	+0.3
WRA	Warramunga Arr	32.62	117	P	P	10 59 04.5	-0.2
	comp=Z,1.5nm,0.7s,baz=286,slow=12,SNR=15						
WRA				PcP	PcP	11 01 50.3	+0.2
	comp=Z,0.2nm,0.5s,baz=278,slow=2.6,SNR=1.6						
	comp=Z,1.5nm,0.7s						
WR8	Warramunga Arr	32.77	117	P	P	10 59 06.4	+0.5
WR8				IAmb	IAmb	10 59 31.8	
	comp=Z,7.5nm,1.2s						
AS31	Alice Springs	33.71	124	P	P	10 59 14.5	+0.4
ASAR	Alice Springs	33.71	124	P	P	10 59 14.0	-0.1
	comp=Z,1.3nm,0.9s,baz=308,slow=8.1,SNR=9.4						
	comp=Z,1.3nm,0.9s						
EVN	Everest	37.80	335		P	10 59 49.8	0.0
EVN				IAmb	IAmb	10 59 51.0	
	comp=Z,5.4nm,0.6s						
STKA	Stephens Creek	43.49	131	P	P	11 00 36.7	+0.7
STKA	Stephens Creek	43.49	131	P	P	11 00 36.5	+0.5
	comp=Z,2.3nm,0.5s,baz=308,slow=9.3,SNR=5.4						
	comp=Z,2.3nm,0.5s						
KSRS	Korea Array	49.03	26	P	P	11 01 17.9	-1.4
	comp=Z,1.4nm,0.8s,baz=217,slow=9.2,SNR=6.2						
	comp=Z,1.4nm,0.8s						
SONM	Songino Array	53.97	2	P	P	11 01 55.9	-0.3
	comp=Z,1.9nm,0.7s,baz=183,slow=8.8,SNR=9.0						
	comp=Z,1.9nm,0.7s						
KDJ	Kajisay	53.97	336	P	P	11 01 57.2	+0.7
MKAR	Makanchi Array	56.21	342	P	P	11 02 12.4	+0.1
MKAR	Makanchi Array	56.21	342	P	P	11 02 12.2	-0.1
	comp=Z,1.4nm,0.7s,baz=147,slow=8.4,SNR=13						
	comp=Z,1.4nm,0.7s						
USA0B	Ussuriysk Arra	56.35	24	P	P	11 02 13.2	-0.1
USA0B				IAmb	IAmb	11 02 13.6	
	comp=Z,3.1nm,0.7s						
USRK	Ussuriysk Ar.	56.35	24	P	P	11 02 13.6	+0.3
USRK	Ussuriysk Ar.	56.35	24	P	P	11 02 13.1	-0.2
	comp=Z,1.6nm,0.6s,baz=202,slow=5.2,SNR=4.1						
	comp=Z,1.6nm,0.6s						
H04N2	CROZET ISLANDS	59.73	219	T	T	12 07 00.9	
	baz=65,slow=75,SNR=260						
H04N1	CROZET ISLANDS	59.74	219	T	T	12 07 01.1	
	baz=65,slow=75,SNR=217						
H04N3	CROZET ISLANDS	59.74	219	T	T	12 06 59.5	
	baz=65,slow=75,SNR=256						
H04S1	CROZET ISLANDS	59.95	219	T	T	12 07 15.8	
	baz=66,slow=76,SNR=11						
H04S3	CROZET ISLANDS	59.96	219	T	T	12 07 15.2	
	baz=66,slow=76,SNR=9.1						
H04S2	CROZET ISLANDS	59.96	219	T	T	12 07 16.6	
	baz=66,slow=76,SNR=6.9						
KURBB	Kurchatov Arra	60.76	342	P	P	11 02 43.4	-0.5
	comp=Z,0.4nm,0.2s,baz=161,slow=5.9,SNR=4.4						
	comp=Z,0.4nm,0.2s						
ZAA0	Zalesovo Array	62.12	347	P	P	11 02 52.7	-0.3
ZAA0				IAmb	IAmb	11 02 53.5	
	comp=Z,3.4nm,1.0s						
ZALV	Zalesovo Beam	62.12	347	P	P	11 02 52.5	-0.6
	comp=Z,1.1nm,0.4s,baz=142,slow=7.3,SNR=5.0						
	comp=Z,1.1nm,0.4s						
BVAR	Borovoye Array	65.53	339	P	P	11 03 15.1	-0.4
	comp=Z,2.2nm,0.7s,baz=146,slow=8.2,SNR=7.5						
	comp=Z,2.2nm,0.7s						
AB31	Akbulak array	67.22	331	P	P	11 03 26.6	+0.3
AB31				IAmb	IAmb	11 03 26.7	
	comp=Z,2.0nm,0.7s						
ABKAR	Akbulak array	67.22	331	P	P	11 03 26.5	+0.1
QSPA	South Pole Qui	83.67	180	P	P	11 05 01.0	+0.4
QSPA				IAmb	IAmb	11 05 37.6	
	comp=Z,4.9nm,1.4s						
QSPA	South Pole Qui	83.67	180	P	P	11 04 60.0	-0.6
	comp=Z,1.5nm,1.0s,baz=156,slow=22,SNR=2.9						
	comp=Z,1.5nm,1.0s						
TXAR	Lajitas Array	145.44	45	PKPbc	PKPab	11 12 11.8	+0.9
	comp=Z,2.0nm,0.8s,baz=295,slow=1.8,SNR=22						

AFAD ***28*** *10:55:01.9, 40°.05N×33°.23E, h15^{km}±1^{km}, ML3.5*
ISK ***28*** *10:55:02.1, 40°.07N×33°.23E, h8^{km}, ML3.5/43*
CFUSG ***28*** *10:55:05.1, 40°.27N×33°.30E, h35^{km}, mb2.5/2, Central Turkey Magtype MSH 2.9 from 1 stations*
ISC 28 10:55:02.3±0.9**, 40°.05N**±0°.02×**33°.23E**±0°.02**, h12**^{km}±7^{km}**, n67,** σ**1^s.08**/95**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOKD	Ankara-Kalecik	0.19	84	P	Pg	10 55 06.6	0.0
GOKD				S	Sg	10 55 09.9	+0.4
GOKD				i IAML		10 55 11.0	
	comp=E,3µm,0.4s						
GOKD				i IAML		10 55 11.0	
	comp=N,2µm,0.3s						
ANTO	Ankara	0.38	242	Pg	Pb	10 55 10.1	-0.9
ANTO				Sg	Sb	10 55 16.2	-0.7
LOD	Lodumlu	0.40	246	Pg	Pg	10 55 10.2	0.0
LOD				Sg	Sb	10 55 16.6	-0.6
BR131	Keskin Array S	0.45	136	Pg	Pb	10 55 11.5	-0.7
BR131				Sg	Sb	10 55 18.4	-0.6
ELDT	Eldivan	0.46	19	P	Pg	10 55 10.8	-0.7
ELDT				S	Sg	10 55 17.4	-0.3
ELDT				i IAML		10 55 18.0	
	comp=E,6µm,0.3s						
ELDT				i IAML		10 55 20.0	
	comp=N,6µm,0.5s						
KESK	Krkkale-Ke	0.50	147	P	Pb	10 55 12.3	-0.7
KESK				S	Sg	10 55 18.9	+0.2
BBAL	Bala	0.52	189	P	Pg	10 55 12.2	-0.2
BBAL				S	Sb	10 55 21.6	+0.8
DELI	KIRIKKALE	0.53	96	P	Pg	10 55 12.7	0.0
DELI				S	Sg	10 55 19.9	+0.1
AFSR	Afar-Bala (An	0.62	192	Pg	Pb	10 55 14.8	-0.2
AFSR				Sg	Sn	10 55 24.9	-1.9
CANT	Cankiri	0.63	28	Pg	Pg	10 55 14.3	-0.2
CANT				Sg	Sb	10 55 24.4	+0.4
KAMT	Kaman	0.78	151	Pg	Pb	10 55 17.3	-0.4
KAMT				Sg	Sn	10 55 28.9	-1.8
YENC	ankr-Yen	0.78	36	P	Pb	10 55 17.3	-0.6
YENC				S	Sb	10 55 28.1	-0.4
YENC				i IAML		10 55 29.0	
	comp=E,2µm,0.4s						
YENC				i IAML		10 55 29.0	
	comp=N,2µm,0.3s						
SUNG	orum-Sungurl	0.79	80	P	Pb	10 55 17.5	-0.4
SUNG				S	Sb	10 55 28.7	+0.1
AKPI	Kirsehir/Akpin	0.80	133	P	Pb	10 55 17.7	-0.5
CDAG	Cicekdag	0.98	116	P	Pb	10 55 20.5	-0.6
CDAG				S	Sg	10 55 34.0	+0.2
CDAG				i IAML		10 55 39.0	
	comp=E,2µm,1.0s						
CDAG				i IAML		10 55 39.0	
	comp=N,2µm,0.5s						
KULU	Kulu	1.02	190	Pg	Pn	10 55 22.4	-0.1
KULU				Sg	Sn	10 55 38.5	+1.7
KIRS	Kirsehir-Merke	1.06	150	P	Pb	10 55 21.9	-0.6
KIRS				S	Sn	10 55 37.6	0.0
KIRS				i IAML		10 55 41.0	
	comp=E,897nm,0.4s						
CORM	Corum	1.08	83	Pn	Pg	10 55 22.8	-0.3
CORM				Sn	Sn	10 55 38.8	+0.6
SERE	Sereflikochisa	1.13	167	Pn	Pg	10 55 23.8	-0.3
TOS	Tosya	1.15	31	Pn	Pg	10 55 24.4	-0.1
TOS				Sn	Sn	10 55 40.8	+0.8
YUVA	Yuva-Kibriscik	1.23	286	Pn	Pg	10 55 26.0	+0.1
YOZG	Bozok Univ. Me	1.23	102	P	Pb	10 55 25.0	-0.5
YOZG				S	Sn	10 55 41.4	-0.6
YOZG				i IAML		10 55 44.0	
	comp=N,591nm,0.5s						
SAFT	Safranbolu	1.26	341	Pn	Pb	10 55 25.3	-0.6
MCUR	KIREHR	1.34	131	P	Pg	10 55 27.2	-0.8
MCUR				S	Sg	10 55 45.3	-0.1
MCUR				i IAML		10 55 49.0	
	comp=E,511nm,0.3s						
MCUR				i IAML		10 55 49.0	
	comp=N,496nm,0.5s						
COAL	Corum-Alaca	1.36	81	P	Pn	10 55 26.7	-0.4
COAL				S	Sg	10 55 45.8	-0.3
COAL				i IAML		10 55 49.0	
	comp=N,516nm,0.5s						
COAL				i IAML		10 55 52.0	
	comp=E,507nm,0.8s						
KMON	Kastamonu	1.39	17	Pn	Pg	10 55 28.2	-0.7
AYAZ	Ayas K¶y, M	1.39	63	P	Pb	10 55 27.4	-0.9
AYAZ				S	Sg	10 55 47.3	+0.2
AYAZ				i IAML		10 55 50.0	
	comp=E,498nm,0.3s						
KAGI	orum-Kargı	1.44	41	P	Pb	10 55 28.0	-1.0
KAGI				S	Sb	10 55 46.8	-0.5
KAGI				i IAML		10 55 48.0	
	comp=E,434nm,0.4s						
KAGI				i IAML		10 55 49.0	
	comp=N,528nm,0.4s						
SVRH	Sivrihisar-ESK	1.45	246	Pn	Pb	10 55 28.9	-0.3
CHBY	Cihanbeyli	1.49	190	Pn	Pb	10 55 29.9	0.0
KOZK	Kozakli-Nevseh	1.52	123	Pn	Pg	10 55 30.6	-0.8
MDUB	Mudurnu	1.61	286	Pn	Pb	10 55 31.5	-0.5
SIRC	Yozgat	1.64	115	P	Pb	10 55 32.6	+0.1
SIRC				S	Sg	10 55 55.0	-0.1
SIRC				i IAML		10 55 57.0	
	comp=E,472nm,0.4s						
YOZ	Yozgat	1.66	104	Pn	Pb	10 55 32.7	-0.1
CKRK	Yozgat, Cekere	1.74	89	P	Pb	10 55 34.3	+0.1
CKRK				S	Sg	10 55 58.5	+0.2
AVNS	Nevsehir-Avano	1.76	134	P	Pb	10 55 34.3	-0.3
AVNS				S	Sg	10 56 00.0	+1.0
AVNS				i IAML		10 56 01.0	
	comp=E,2µm,0.6s						
AVNS				i IAML		10 56 03.0	
	comp=N,1µm,0.7s						
CIFT	Cifteler, Eski	1.81	248	Pn	Pb	10 55 34.7	-0.6
KURC	Kurucasile-Bar	1.83	348	Pn	Pb	10 55 34.5	-1.1
SULT	Sultanhani-AKS	1.86	173	Pn	Pb	10 55 35.4	-0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GULA	Gulagac	1.88	155	Pn	Pb	10 55 35.5	-1.0
HACI	Hacifakili, Ak	1.95	99	P	Pb	10 55 37.0	-0.8
HACI				S	Sb	10 56 02.5	+0.3
HACI				*i* IAML		10 56 07.0	
	comp=E,399nm,0.8s						
HACI				*i* IAML		10 56 07.0	
	comp=N,356nm,0.8s						
LADK	Ladik-KONYA	1.97	200	Pn	Pb	10 55 36.6	-1.5
BZK	Bozkurt	1.99	17	Pn	Pb	10 55 37.5	-0.9
GULT	Gulveren	2.11	281	Pn	Pb	10 55 38.7	-1.8
GUNE	Kayseri	2.18	121	P	Pg	10 55 43.5	-0.6
GUNE				S	Sg	10 56 13.5	+1.2
GUNE				*i* IAML		10 56 17.0	
	comp=N,1µm,0.9s						
GUNE				*i* IAML		10 56 19.0	
	comp=E,1µm,0.7s						
KONT	Konya--Tatoy	2.21	198	Pn	Pb	10 55 40.3	-1.9
DIKM	Dikmen	2.21	43	Pn	Pn	10 55 39.6	+0.8
KIZO	Buyukkizoglu-L	2.23	67	Pn	Pb	10 55 40.5	-2.0
YESY	Yesilyurt	2.30	170	Pn	Pb	10 55 41.6	-2.1
SAUV	Serdivan-Sakar	2.32	288	Pn	Pb	10 55 41.8	-2.2
BNN	Bunyan	2.35	120	Pn	Pb	10 55 42.2	-2.4
KVT	Kavak	2.38	63	Pn	Pn	10 55 42.3	+1.3
SNOP	Sinop	2.47	37	Pn	Pn	10 55 42.9	+0.7
TOKT	Tokat	2.55	83	Pn	Pn	10 55 45.1	+1.6
SHUT	Suhut-Afyon	2.56	235	Pn	Pn	10 55 45.2	+1.5
CAVI	Cavuskoy	2.60	274	Pn	Pn	10 55 45.6	+1.5
ADVT	Abdulvahap	2.70	279	Pn	Pn	10 55 46.9	+1.5
CMRD	Camardi-Nigde	2.75	150	Pn	Pn	10 55 48.2	+1.9
SEYD	Seydisehir-KON	2.86	203	Pn	Pn	10 55 49.1	+1.4
SILT	Sile	2.94	293	Pn	Pn	10 55 50.3	+1.5
TVSB	Tavsanli	2.97	260	Pn	Pn	10 55 50.8	+1.6
ISP	Isparta	3.07	224	Pn	Pn	10 55 52.5	+1.9
GEDZ	Gediz	3.12	252	Pn	Pn	10 55 53.2	+1.9
HDMB	Hadim	3.14	191	Pn	Pn	10 55 53.1	+1.4
SEV	Sevastopol'	4.50	4	Pm		10 55 10.6	
	comp=Z,3.0nm,0.2s						
SEV				*e*S	Sn	10 57 00.8	-1.6
SEV				Sm		10 57 03.2	
	comp=N,2.0nm,0.3s						
SEV				Sm		10 57 03.2	
	comp=E,1.0nm,0.2s						
SUDU	Sudak	5.01	15	*e*P	Pn	10 56 20.2	+3.1
SUDU				Pm		10 56 22.1	
	comp=Z,5.0nm,0.3s						
DNZ2	Donuzlav2	5.32	360	*e*P	Pn	10 56 23.5	+2.1
DNZ2				Pm		10 56 23.6	
	comp=Z,39nm,0.3s						

GCG ***28*** *10:59:21.1±1.3, 14.°34N×91.°73W, h67^{km}±5^{km}, MD4.0, ML4.2, MW3.5*

CATAC ***28*** *10:59:21.9±0.5, 14°N±3°×9°2W±°, h48^{km}±5^{km}, M3.8/15, MLv3.8/15, Error ellipse: s-maj=8.8km s-min=4.4km az=41.8, confirmed*

ISC 28 10:59:23.0±1.6**, 14.°35N**±0.°07×**91.°72W**±0.°06**, h56**^{km}±8^{km}**, n35, σ2^{s}06**/43**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	Retalhuleu	0.18	9	P	Pn	10 59 31.3	-0.6
RTAL				S	Sn	10 59 39.8	+1.5
STG8	El Palmar, Qui	0.38	74	*i* P	Pn	10 59 33.1	-0.5
STG8				*i* S	Sn	10 59 43.0	+1.7
STG0	El Palmar, Qui	0.38	78	*i* P	Pn	10 59 32.9	-0.7
STG0				*i* S	Sn	10 59 42.6	+1.3
STG0				IAML		10 59 43.1	
	comp=E,15µm,0.4s						
SOKI	Kika Raxquin	0.56	33	*i* P	Pn	10 59 35.1	-0.7
SOKI				*i* S	Sn	10 59 46.7	+1.6
SOKI				IAML		10 59 53.8	
	comp=N,3µm,0.5s						
SMCA	Catarina	0.61	326	*i* P	Pn	10 59 34.6	-1.3
SMCA				*i* S	Sn	10 59 45.6	+0.2
SMCA				IAML		10 59 46.1	
	comp=E,5µm,0.2s						
THIG		0.76	317	*i* P	Pn	10 59 36.5	-1.3
THIG				*i* S	Sn	10 59 49.1	+0.4
HUEH	Huehuetenango	0.99	12	P	Pn	10 59 40.2	-0.8
HUEH	Huehuetenango	0.99	12	S	Sn	10 59 55.8	+1.7
FG8	Yepocapa, Chim	1.13	94	*i* P	Pn	10 59 37.0	-5.7
FG8				*i* S	Sn	10 59 50.0	-7.4
FG16	Alotenango, Sa	1.18	94	*i* P	Pn	10 59 38.0	-5.5
FG16				*i* S	Sn	10 59 51.8	-6.9
FG16				IAML		10 59 58.3	
	comp=E,21µm,0.2s						
FAME	Alcaldia de Sa	1.73	107	P	Pn	10 59 49.2	-1.5
FAME	Alcaldia de Sa	1.73	107	S	Sn	11 00 10.3	-1.5
SLOZ	Alcaldia de Sa	1.91	99	P	Pn	10 59 53.5	+0.3
SLOZ	Alcaldia de Sa	1.91	99	S	Sn	11 00 18.0	+1.9
NUBE	Las Nubes	1.94	103	*i* P	Pn	10 59 52.7	-0.9
NUBE				*i* S	Sn	11 00 16.9	-0.1
NUBE	Las Nubes	1.94	103	P	Pn	10 59 53.1	-0.6
CCIG	Comitan	1.96	348	*i* P	Pn	10 59 53.6	-0.4
CCIG				*i* S	Sn	11 00 19.0	+1.4
CCIG				IAML		11 00 19.7	
	comp=N,220nm,0.6s						
CCIG	Comitan	1.96	348	P	Pn	10 59 53.8	-0.2
CEVE	Cerro Verde	2.10	104	P	Pn	10 59 57.4	+1.4
CEVE	Cerro Verde	2.10	104	S	Sn	11 00 22.0	+0.9
UNIC	Universidad Ca	2.14	100	P	Pn	10 59 56.2	-0.2
UNIC	Universidad Ca	2.14	100	S	Sn	11 00 24.0	+2.1
MTO3	Montecristo	2.29	88	P	Pn	10 59 59.0	+0.4
JAYA	Jayaque - finc	2.31	107	P	Pn	10 59 58.2	-0.6
JAYA	Jayaque - finc	2.31	107	S	Sn	11 00 25.4	-0.8
ESQI	Esquipulas	2.32	85	P	Pn	10 59 59.8	+1.0
PMON	Piamonte	2.42	105	P	Pn	11 00 00.8	+0.6
PMON	Piamonte	2.42	105	S	Sn	11 00 30.4	+1.6
COEG	Centro de Oper	2.85	104	P	Pn	11 00 06.4	+0.3
COEG	Centro de Oper	2.85	104	S	Sn	11 00 41.3	+2.0
SARH	Santa Rosa de	2.90	81	P	Pn	11 00 07.4	+0.7
PETF	Flores	3.12	35	P	Pn	11 00 08.9	-0.8
PETF	Flores	3.12	35	S	Sn	11 00 44.1	-1.6
PQSS	Presa 15 de Se	3.15	103	P	Pn	11 00 12.0	+1.8
PQSS	Presa 15 de Se	3.15	103	S	Sn	11 00 49.8	+3.2

NIED ***28*** *11:13:05.9, 38.°65N×139.°45E, h13^{km}, MW3.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{13}Nm; M$_{rr}$-6.27; M$_{θθ}$-3.22; M$_{φφ}$9.49; M$_{rθ}$3.17; M$_{θφ}$-3.51; M$_{φr}$-2.12; Fault plane solution: M$_0$9.57000×10^{13} NP1: φ$_s$195.00000°, δ44.00000°, λ-43.00000°. NP2: φ$_s$319.00000°, δ61.00000°, λ-125.00000°.*

JMA 28 11:13:05.9±0.0**, 38.°7N**±0.°1×**139.°5E**±0.°2**, h13**^{km}**, MV3.5**/32**, 5D, OFF N NIIGATA PREF, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYA	Atsumi	0.21	105	*i* P	Pg	11 13 10.6	0.0
JYA				S	Sg	11 13 14.1	+0.3
JAW	Awa shima	0.25	220	*i* P	Pg	11 13 11.2	0.0
JTB	Tobi-shima	0.55	9	⇓*i*P	Pg	11 13 16.7	-0.1
JYS	Shirataka	0.65	131	⇓*i*P	Pg	11 13 18.0	-0.5
JYS				⇓S	Sg	11 13 27.0	0.0
JYK	Kaneyama	0.76	69	*i* P	Pg	11 13 20.3	-0.4
JNS	Sasagawa	0.83	187	⇓*i*P	Pg	11 13 21.5	-0.6
JNS				⇓S	Sg	11 13 32.6	-0.4
JOU	Okura	0.99	106	*i* P	Pb	11 13 24.5	-0.4
JOU				S	Sb	11 13 37.6	-0.4

IDC 28 11:13:58.8±1.5**, 0.°91N**×**125.°91E, h0**^{km}**, mb3.4**/4**, mbtmp3.5**/5**, ML3.1**/1**, Error ellipse: s-maj=117.8km s-min=20.3km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	18.89	181	P	P	11 18 20.8	-0.2
	baz=345,slow=12,SNR=1.4						
	1.3nm,0.9s						
WRA	Warramunga Arr	22.31	159	P	P	11 18 57.7	-0.4
	0.6nm,0.4s,baz=337,slow=11,SNR=26						
	0.6nm,0.4s						
ASAR	Alice Springs	25.63	163	P	P	11 19 30.6	+0.3
	0.3nm,0.4s,baz=348,slow=9.7,SNR=11						
	0.3nm,0.4s						
MKAR	Makanchi Array	59.42	327	P	P	11 24 03.2	-0.1
	0.2nm,0.3s,baz=142,slow=7.3,SNR=4.2						
	0.2nm,0.3s						
KURBB	Kurchatov Arra	63.68	328	P	P	11 24 32.0	+0.1
	0.5nm,0.6s,baz=128,slow=6.1,SNR=5.7						
	0.5nm,0.6s						

IDC ***28*** *11:17:25.9±0.7, 8.°41N×82.°82W, h0^{km}, mb3.9/11, mbtmp4.0/17, ML3.4/5, MS3.6/31, Error ellipse: s-maj=27.7km s-min=11.7km az=44.0*

CATAC ***28*** *11:17:28.4±0.4, 8°N±2°×8°3W±°, h10^{km}±2^{km}, M5.0/29, mb5.3/11, mB5.4/11, MLv5.0/29, Mw(mB)4.8/11, Error ellipse: s-maj=6.9km s-min=3.9km az=64.9, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.76; M$_{θθ}$2.22; M$_{φφ}$-0.47; M$_{rθ}$2.07; M$_{θφ}$3.44; M$_{φr}$-5.11; Fault plane solution: M$_0$6.81043×10^{15} NP1: φ$_s$266.23028°, δ43.75968°, λ-19.50806°. NP2: φ$_s$10.58292°, δ76.64615°, λ-132.07077°. Principal axes: T 5.0226, Plg20.3277°, Azm130.9317°; N 2.7291, Plg40.6874°, Azm22.3592°; P -7.7517, Plg42.3783°, Azm240.6880°; Moment Tensor Solution. Moment tensor: Scale 10^{15} Nm; M$_{rr}$-1.83; M$_{θθ}$2.94; M$_{φφ}$-1.11; M$_{rθ}$2.01; M$_{θφ}$3.73; M$_{φr}$-5.19; Fault plane solution: M$_0$7.17196×10^{15} NP1: φ$_s$272.63337°, δ50.76745°, λ-22.73667°. NP2: φ$_s$17.47792°, δ72.57997°, λ-138.48075°. Principal axes: T 5.3791, Plg13.6231°, Azm140.4862°; N 2.7635, Plg45.5935°, Azm36.1610°; P -8.1426, Plg41.2170°, Azm242.7428°; confirmed*

UPA ***28*** *11:17:29.7±2.7, 8.°32N×82.°87W, h10^{km}±6^{km}, MW5.2*

UCR ***28*** *11:17:30.2±1.1, 8.°32N×82.°82W, h29^{km}±2^{km}, MW5.0, Fault plane solution: NP1: φ$_s$155.82000°, δ50.18000°, λ83.48000°.*

NEIC ***28*** *11:17:32.6±1.5, 8.°43N±0.°06×82.°81W±0.°04, h35^{km}±2^{km}, mb4.4/105, Error ellipse: s-maj=10.5km s-min=6.5km az=21.0*

ISC 28 11:17:31.3±0.7**, 8.°36N**±0.°03×**82.°85W**±0.°02**, h33**^{km}±4^{km}**, n377, σ1^{s}36**/386**, mb4.3**/60**, MS3.6**/27**, 48C-42D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LESP3	La Esperanza,	0.08	51	⇓*i*P	Pb	11 17 35.9	-1.2
LESP3				*i* S	Sb	11 17 40.3	-0.6
LPPC	Paso Canoas	0.18	4	⇑*e*P	Pb	11 17 36.6	-1.1
LPPC				*e*S	Sb	11 17 41.8	-0.3
CDITO	Canoas	0.22	355	S	Sb	11 17 43.1	+0.3
CDITO	Canoas	0.22	355	P	Pb	11 17 29.3	-8.9
LIMO3	Limones	0.25	183	⇑*e*P	Pn	11 17 37.8	-0.6
LIMO3				*i* S	Sb	11 17 43.4	0.0
LMNES	Limones	0.25	182	⇑*e*P	Pn	11 17 37.8	-0.7
NELY	Ciudad Neily	0.31	342	⇑*e*P	Pb	11 17 38.0	-1.2
NELY				*e*S	Sn	11 17 44.7	+0.3
FITO	Golfito	0.40	312	⇑*e*P	Pb	11 17 38.7	-1.8
FITO				*e*S	Sb	11 17 45.8	-0.9
DVD	David	0.41	79	⇓*i*P	Pb	11 17 39.0	-1.5
DVD				*i* S	Sb	11 17 45.9	-0.9
CSTBL	De las Acacias	0.41	82	⇓*e*P	Pb	11 17 39.0	-1.6
PEDE3	Pedregal, Chir	0.43	86	⇓*e*P	Pb	11 17 39.4	-1.5
PEDE3				*i* S	Sb	11 17 46.1	-1.2
EDAD	Golfito	0.43	313	⇑*e*P	Pb	11 17 39.1	-1.8
LOCO3	Loma Colorada,	0.43	83	⇓*i*P	Pb	11 17 39.5	-1.5
LOCO3				*i* S	Sb	11 17 46.5	-1.0
MLIR3	Monte Lirio, C	0.43	4	*e*P	Pb	11 17 40.3	-0.7
MLIR3				*i* S	Sn	11 17 49.0	+0.8
CLLRA	Cordillera,	0.45	31	⇓*e*P	Pb	11 17 40.0	-1.3
RSRNO	Rio Sereno	0.46	359	*e*P	Pb	11 17 40.8	-0.6
LOMA3	Las Lomas, Chi	0.46	81	⇓*i*P	Pb	11 17 39.9	-1.5
LOMA3				*i* S	Sb	11 17 47.3	-1.0
BRU2	Volcan	0.46	20		Pb	11 17 40.3	-1.3
BRU2				Sg	Sn	11 17 48.3	-0.7
BRU2	Volcan	0.46	20	⇓*e*P	Pb	11 17 40.2	-1.3
BRU2				*e*S	Sb	11 17 48.0	-0.5
BRU2	Volcan	0.46	20	P	Pb	11 17 40.4	-1.1
BRU2	Volcan	0.46	20	⇓*i*P	Pb	11 17 40.3	-1.3
BRU2				*i* S	Sn	11 17 48.9	-0.1
VITO	San Vito	0.47	346	⇑*e*P	Pb	11 17 40.9	-0.8
VITO				*e*S	Sn	11 17 49.8	+0.6
SCLRA	Santa Clara, W	0.48	8	⇓*e*P	Pb	11 17 40.7	-1.1
PTAR3	Potrerillos Ar	0.49	46	⇓*e*P	Pb	11 17 40.5	-1.4
PTAR3				*i* S	Sb	11 17 47.3	-1.8
BC3P	Paso Ancho	0.52	28	⇓*i*P	Pb	11 17 40.8	-1.6
BC3P				*i* S	Sn	11 17 49.6	-0.7
CHIR3	Chiriqui UPA,	0.52	86	⇓*i*P	Pb	11 17 40.5	-1.7
CHIR3				*i* S	Sb	11 17 49.0	-0.7
BQTLY	Boquete Panama	0.56	44	⇓*e*P	Pb	11 17 41.2	-1.7
BQSF3	Alto Boquete,	0.56	47	⇓*i*P	Pb	11 17 41.3	-1.8
BQSF3				*i* S	Sb	11 17 49.4	-1.7
ALCO	Alturas Coton,	0.59	2	⇓*e*P	Pb	11 17 41.9	-1.7
ALCO				*e*S	Sb	11 17 51.3	-0.6
PSOM3	Paja de Sombre	0.62	58	⇓*i*P	Pb	11 17 42.0	-1.9
PSOM3				*i* S	Sb	11 17 50.9	-1.5
EDP2	Potrero Grande	0.73	334	⇑*e*P	Pb	11 17 44.5	-1.2
PBNVO	Pueblo Nuevo,	0.84	51	⇓*e*P	Pb	11 17 45.0	-2.5
PANP	Palmar Norte	0.85	315	⇑*e*P	Pb	11 17 45.9	-1.8
RBALA	Bur	0.86	53	⇓*e*P	Pb	11 17 45.6	-2.3
BURE	Buenos Aires	0.94	329	⇑*e*P	Pn	11 17 47.3	-1.0
DRK0	Durika	0.98	337	⇑*e*P	Pn	11 17 47.7	-1.2
DRK0	Durika	0.98	337	⇑P	Pn	11 17 48.3	-0.7
DRK0	Durika	0.98	337	⇑*e*P	Pn	11 17 48.0	-1.0
DRK0				*i* S	Sn	11 18 02.0	+0.2
RMDIO	Remedios, Chir	1.02	97	⇓*e*P	Pn	11 17 48.0	-1.3
EDPE	Pejibaye, P	1.07	318	⇑*e*P	Pn	11 17 49.3	-0.8
OCHAL	Ojochal	1.08	313	S	Sn	11 18 05.2	+1.3
OCHAL	Ojochal	1.08	313	⇑P	Pn	11 17 49.7	-0.4
PDCAN	Manzana , Fuen	1.15	93	⇓*e*P	Pn	11 17 49.2	-1.9
ISBTO	Bastimentos Is	1.17	33	*e*P	Pb	11 17 51.8	-1.3
SAJE	San Jernim	1.18	327	⇑*e*P	Pn	11 17 50.5	-1.2
BRIBI	Bribri	1.26	2	⇑*e*P	Pb	11 17 53.4	-1.2
LLNJ	Naranjito	1.66	312	*e*P	Pn	11 17 58.1	-0.1
MESA3	La Mesa, Verag	1.66	97	⇓*e*P	Pn	11 17 57.4	-0.8
PIEC	Cerro El Cedra	1.67	319	⇑*e*P	Pn	11 17 58.3	-0.1
QUEP	Quepos	1.68	310	*e*P	Pn	11 17 58.3	-0.1
GMAL	Guarumal, Vera	1.71	110	⇓*e*P	Pn	11 17 57.0	-1.8
GMAL	Guarumal, Vera	1.71	110	P	Pn	11 17 57.2	-1.6
GMAL				S	Sn	11 18 18.3	-1.2
GMAL	Guarumal, Vera	1.71	110	⇓*e*P	Pn	11 17 57.4	-1.4
GMAL				*e*S	Sn	11 18 17.9	-1.6
RSUS3	Rio de Jesus,	1.72	102	*e*P	Pn	11 17 58.3	-0.6
RSUS3				*i* S	Sn	11 18 19.3	-0.4
TURIB	Turrialba	1.75	332	⇑*e*P	Pn	11 17 59.6	+0.2
VINA	Juan Vinas	1.77	330	⇑*e*P	Pn	11 17 60.0	+0.2
REPA	Paraso	1.77	326	⇑*e*P	Pn	11 18 00.0	+0.2
PISJ	San Jernim	1.78	315	⇑*e*P	Pn	11 18 00.1	+0.1
VERB	Verbena	1.79	332	*e*P	Pn	11 18 00.5	+0.6
LCR2	La Lucha 2	1.79	320		Pn	11 17 60.0	-0.1
LCR2				Sn	Sn	11 18 23.2	+1.4
LCR2	La Lucha 2	1.79	320	⇑*e*P	Pn	11 17 59.4	-0.7
LCR2	La Lucha 2	1.79	320	P	Pn	11 17 59.9	-0.2
LCR2	La Lucha 2	1.79	320	S	Sb	11 18 24.5	-1.2
PCAYA	Pacayas	1.82	329	*e*P	Pn	11 18 01.0	+0.5
PICV	PH. Pirrs	1.83	314	*e*P	Pn	11 18 01.0	+0.5
VTCV	VTCV, Calle Va	1.83	332	⇑*e*P	Pn	11 18 01.2	+0.5
ABRB	Las Abras (San	1.85	333	*e*P	Pn	11 18 01.2	+0.2
PAR1A	Puntarenas Pro	1.85	312	*e*P	Pn	11 18 00.6	-0.1
CVTV	Tajo	1.86	332	⇑*e*P	Pn	11 18 01.7	+0.5
CVTQ	Turrialba Volc	1.87	331	⇑*e*P	Pn	11 18 01.9	+0.5
VTLA	Turrialba Volc	1.87	331	⇑*e*P	Pn	11 18 01.9	+0.5
STIA3	Santiago, Vera	1.88	98	⇓*e*P	Pn	11 18 00.7	-0.4
STIA3				*i* S	Sn	11 18 25.3	+1.6
VTR0	Volcan Turrial	1.88	332	⇑*e*P	Pn	11 18 01.9	+0.4
TRIO	Tres Rios	1.91	324	*e*P	Pn	11 18 01.9	+0.2
ACOS	Acosta	1.93	318	*e*P	Pn	11 18 02.8	+0.8
AMPA	Desamparados	1.94	322	*e*P	Pn	11 18 02.5	+0.3
CORON	Coronado	1.97	325	*e*P	Pn	11 18 03.2	+0.6
CALO3	Calobre, Verag	1.99	91	⇓*i*P	Pn	11 18 02.8	+0.2
CALO3				*i* S	Sn	11 18 28.1	+1.6
HDC	Heredia	2.06	323		Pn	11 18 04.5	+0.8
HDC	Heredia	2.06	323	*e*P	Pn	11 18 04.5	+0.8
HDC	Heredia	2.06	323	⇑*e*P	Pn	11 18 03.7	0.0
PILE	Guapiles	2.07	333	⇑*e*P	Pn	11 18 04.6	+0.8
BELE	Belen	2.08	321	*e*P	Pn	11 18 04.5	+0.5
VBV1	V. Barva	2.14	325	⇑*e*P	Pn	11 18 05.4	+0.4
BITO	Garabito Jaco	2.15	306	*e*P	Pn	11 18 04.3	-0.6
CARI	Cariari	2.18	336	*e*P	Pn	11 18 06.2	+1.0
TCS1	Tacares	2.20	320	⇑P	Pn	11 18 06.8	+1.1
ATEO	Atenas	2.21	317	*e*P	Pn	11 18 06.1	+0.4
TRB2	Turrubares	2.21	315	⇓*e*P	Pn	11 18 06.1	+0.4
CACAO	El Cacao, Vera	2.21	117	P	Pn	11 18 05.1	-0.6
CACAO				S	Sn	11 18 31.8	-0.2
CACAO	El Cacao, Vera	2.21	117	*i* P	Pn	11 18 05.3	-0.4
CACAO				*i* S	Sn	11 18 31.7	-0.2
CRIS3	El Cristo, Coc	2.21	92	⇓*e*P	Pn	11 18 06.3	+0.5
CBL1	Cabuya	2.53	299	⇓*e*P	Pn	11 18 09.1	-0.9
TOSI3	Tonosi	2.57	111	⇓*e*P	Pn	11 18 12.6	+2.0
TOSI3				*i* S	Sb	11 18 48.4	+0.5
AZU	Azuero	2.61	102	*e*P	Pn	11 18 11.9	+0.7
AZU	Azuero	2.61	102	P	Pn	11 18 12.0	+0.7
AZU				S	Sn	11 18 42.1	+0.2
AZU	Azuero	2.61	102	⇓*e*P	Pn	11 18 12.4	+1.1
AZU				*i* S	Sn	11 18 43.3	+1.5
SOCE	Pocosol	2.66	319		Pn	11 18 13.5	+1.5
SOCE	Pocosol	2.66	319	S	Sb	11 18 48.8	-1.9
SOCE	Pocosol	2.66	319	⇓P	Pn	11 18 14.0	+2.0
PCRI3	Pocri, Los San	2.79	104	⇓*e*P	Pn	11 18 15.7	+1.9
COVE	Coope Vega, Sa	2.80	327	S	Sb	11 18 54.3	-0.4
COVE	Coope Vega, Sa	2.80	327	⇑P	Pn	11 18 15.0	+1.1
ACHO3	Achotines, Los	2.81	109	⇑*i*P	Pn	11 18 14.8	+0.8
ACHO3				*i* S	Sn	11 18 48.4	+1.6
JTS	Las Juntas de	2.83	313	Pn	Pn	11 18 14.3	+0.1
	343nm,0.3s,baz=97,slow=14,SNR=93						
JTS				Sn	Sn	11 18 48.3	+1.2
	248nm,0.3s,baz=142,slow=11,SNR=5.8						
JTS				Lg	Lg	11 18 54.6	
	273nm,0.3s,baz=216,slow=20,SNR=16						
JTS	Las Juntas de	2.83	313	P	Pn	11 18 14.5	+0.3
JTS	Las Juntas de	2.83	313	⇓*i*P	Pn	11 18 14.4	+0.3
PEDA3	Pedasi	2.92	106	*e*P	Pn	11 18 12.7	-2.8
INDI	Punta indio, G	3.02	300	P	Pn	11 18 16.7	-0.1
INDI	Punta indio, G	3.02	300	S	Sn	11 18 50.8	-1.1
CMARA	Lajas Hojancha	3.03	303	S	Sn	11 18 52.1	-0.1
CMARA	Lajas Hojancha	3.03	303	⇑P	Pn	11 18 18.0	+0.9
BCIP	Isla Barro Col	3.09	75		Pn	11 18 18.5	+0.7
BCIP	Isla Barro Col	3.09	75	*e*P	Pn	11 18 17.6	-0.2
BCIP	Isla Barro Col	3.09	75	P	Pn	11 18 18.1	+0.3
BCIP				S	Sb	11 18 59.9	-3.0
BCIP	Isla Barro Col	3.09	75	⇑*e*P	Pn	11 18 18.2	+0.5
CHOR3	La Chorrera	3.10	80	*e*P	Pn	11 18 19.5	+1.6
CHOR3				*i* S	Sb	11 19 00.4	-2.8
ARRA3	Arraijan, Pana	3.22	79	*e*P	Pn	11 18 20.9	+1.4
TABO3	Taboga, Panama	3.29	82	*e*P	Pn	11 18 23.2	+2.6
UPA	Univ. de Panam	3.34	79	*e*P	Pn	11 18 23.5	+2.3
UPA				*i* S	Sb	11 19 05.4	-4.7
ALIBA	Liberia Airpor	3.46	310	*e*P	Pn	11 18 24.8	+1.9
BLUN	Bluefields	3.74	346	⇑P	Pn	11 18 27.4	+0.6
BLUN				S	Sn	11 19 12.4	+2.7
BLUN	Bluefields	3.74	346	P	Pn	11 18 26.8	+0.1
CARN	Rivas	3.85	317	⇓P	Pn	11 18 31.4	+3.1
CARN				S	Sb	11 19 19.8	-5.1
CNTA3	Canitas, Panam	4.01	77	⇓*e*P	Pn	11 18 31.7	+1.2
ESPN	Las Esperanzas	4.07	340		Pn	11 18 32.5	+1.2
ESPN	Las Esperanzas	4.07	340	⇓P	Pn	11 18 32.4	+1.2
ESPN	Las Esperanzas	4.07	340	P	Pn	11 18 32.1	+0.8
MORN	Al O del Volca	4.20	319	⇑P	Pn	11 18 35.7	+2.6
JAPN	Al SSO del Vol	4.20	319	⇑P	Pn	11 18 35.6	+2.5
ACON	Acoyapa	4.25	328		Pn	11 18 34.5	+0.6
ACON	Acoyapa	4.25	328	⇑*e*P	Pn	11 18 34.1	+0.3
ACON	Acoyapa	4.25	328	⇓P	Pn	11 18 34.8	+1.0
ACON	Acoyapa	4.25	328	P	Pn	11 18 34.5	+0.6
SAIC	Isla e San And	4.30	15	P	Pn	11 18 33.5	-1.0
MAPC	Malpelo	4.50	164	P	Pn	11 18 34.4	-2.8
MAPC				S	Sn	11 19 24.0	-4.4
NANN	Nandasmo	4.80	318	⇑P	Pn	11 18 44.6	+3.3
BOAB	BOACO BROADBAN	4.92	326		Pn	11 18 43.6	+0.6
BOAB	BOACO BROADBAN	4.92	326	P	Pn	11 18 43.9	+0.9
UNAN	Cigeo UNAN	5.02	318	⇑P	Pn	11 18 46.0	+1.5
MGAN	Managua	5.04	319		Pn	11 18 45.7	+1.1
MGAN	Managua	5.04	319	P	Pn	11 18 45.1	+0.5
PTAC	Punta Ardita,	5.14	103	P	Pn	11 18 43.5	-2.5
SAPS	Ciudad Sandino	5.16	318	⇓P	Pn	11 18 49.1	+2.9
PRVC	Isla de Provid	5.20	16	Pn	Pn	11 18 47.1	+0.3
PRVC	Isla de Provid	5.20	16	P	Pn	11 18 47.5	+0.7
PRVC	Isla de Provid	5.20	16	P	Pn	11 18 46.6	-0.2
COPN	Copaltepe	5.29	316	P	Pn	11 18 50.0	+1.9
MOM2	El Cardon	5.41	319	⇑P	Pn	11 18 52.5	+2.9
MOMN	Momotombo	5.42	318	⇑P	Pn	11 18 52.5	+2.6
MATN	Matagalpa	5.46	327	⇓P	Pn	11 18 50.8	+0.4
CNGA	Al SSO del Vol	5.59	318	⇑P	Pn	11 18 55.3	+3.0
CNGN	Cerro Negro	5.59	318		Pn	11 18 53.4	+1.2
CNGN	Cerro Negro	5.59	318	P	Pn	11 18 54.8	+2.5
SIUN	Universidad Ur	5.65	341	⇑P	Pn	11 18 53.9	+0.8
HERN	Volcan Telica	5.76	318		Pn	11 18 55.5	+0.9
POLN	Al Sur del Vol	5.78	318	⇓P	Pn	11 18 57.3	+2.5
SOLC	Bahia Solano	5.80	111	P	Pn	11 18 54.0	-1.1
PKGN	Cerro Pekin	5.90	317	⇓P	Pn	11 18 59.1	+2.6
CRIN	San Cristobal	5.97	317		Pn	11 18 58.1	+0.5
CRIN	San Cristobal	5.97	317	P	Pn	11 18 59.0	+1.5
RCPN	Sur Rio San Ju	6.04	329	⇑P	Pn	11 19 01.8	+3.2
RCVN	Varillal2	6.14	328	⇑P	Pn	11 19 01.8	+1.9
APAC	Apartado, Choc	6.23	94	P	Pn	11 19 02.7	+1.7
	2µm144nm,1.0s						
DBBC	Dabeiba	6.72	101	P	Pn	11 19 08.6	+0.8
TGUH	Tegucigalpa,Un	7.13	323		Pn	11 19 14.2	+0.6
CBOC	Ciudad Bolivar	7.22	110	P	Pn	11 19 14.9	+0.1
	20nm,0.6s						
UREC	San Jos de Ur	7.27	94	P	Pn	11 19 15.9	+0.5
	309nm18nm,0.7s						
UREC	San Jos de Ur	7.27	94	*e*P	Pn	11 19 16.4	+1.0
PLMC	San Jos del P	7.37	117	P	Pn	11 19 16.1	-0.7
	3µm28nm,0.8s						
HELC	Santa Helena	7.58	106	P	Pn	11 19 20.4	+0.6
	15nm,0.6s						
SJCC	San Jacinto, C	7.73	78	P	Pn	11 19 23.1	+1.4
	48nm,1.0s						
YOTC	Yotoco, Valle	7.79	123	P	Pn	11 19 21.4	-1.2
	19nm,0.8s						
ZARC	Zaragoza, Cauc	7.96	96	P	Pn	11 19 25.5	+0.6
	20nm,0.4s						
JAMC	Jamundi, Valle	7.99	129	P	Pn	11 19 25.1	-0.3
	2µm20nm,1.0s						
GUY2C	Guyana, Caldas	8.06	112	P	Pn	11 19 28.7	+2.1
	619nm43nm,0.6s						
ANIL	Santa Ana	8.34	117	P	Pn	11 19 31.8	+1.6
NORC	Norcasia	8.40	109	P	Pn	11 19 31.3	+0.5
	13nm,0.8s						
BBAC	Balboa, Cauca	8.41	138	P	Pn	11 19 32.3	+1.1
	451nm22nm,1.4s						
POPC	Popayan, Colom	8.44	133	P	Pn	11 19 33.5	+2.0
	402nm28nm,2.0s						
PTBC	PUERTO BERRIO,	8.52	102	P	Pn	11 19 32.8	+0.3
	114nm9.5nm,0.9s						
ORTC	Ortega, Tolima	8.76	120	P	Pn	11 19 37.4	+1.6
	30nm,0.9s						
MTO3	Montecristo	8.76	314		Pn	11 19 37.1	+1.2
ESQI	Esquipulas	8.86	315		Pn	11 19 37.6	+0.4
GCUF	Volcan Galeras	8.96	142	P	Pn	11 19 41.6	+2.7
	1µm69nm,1.4s						
PAC1	Pacto, Paraso	9.00	153	P	Pn	11 19 39.9	+0.7
	658nm57nm,1.3s						
SPBC	San Pablo de B	9.12	107	P	Pn	11 19 42.9	+2.1
	423nm12nm,1.0s						
PRAC	Prado	9.16	120	P	Pn	11 19 43.9	+2.5
	24nm,1.1s						
ROSC	El Rosal	9.17	112	Pn	Pn	11 19 39.7	-2.0
	2.6nm,0.3s,baz=308,slow=21,SNR=5.0						
ROSC				Sn	Sn	11 21 25.6	+1.6
	2.1nm,0.3s,baz=64,slow=21,SNR=1.5						
ROSC				LR	LR	11 23 15.4	
	comp=Z,167nm,20.1s,baz=219,slow=38						
	7.8nm,0.4s						
OTAV	Otavalo	9.18	151		Pn	11 19 43.8	+1.9
OTAV	Otavalo	9.18	151	*e*P	Pn	11 19 43.3	+1.3
OTAV	Otavalo	9.18	151	P	Pn	11 19 43.2	+1.3
	25nm,1.2s						
OCAC	Ocana	9.44	90	P	Pn	11 19 45.7	+0.5
	42nm,0.6s						
BONI	La Bonita	9.47	146	P	Pn	11 19 46.9	+1.1
	1µm79nm,1.2s						
GARC	Garzon, Huila	9.55	130	P	Pn	11 19 49.3	+2.5
BARC	Barichara	9.75	100	P	Pn	11 19 50.0	+0.5
CHIC	Chingaza	9.79	112	P	Pn	11 19 54.1	+3.9
	28nm,1.0s						
FLOC	Florencia	9.83	133		Pn	11 19 52.3	+1.8
FLOC	Florencia	9.83	133	P	Pn	11 19 52.5	+2.0
	29nm,1.0s						
URMC	La Uribe, Meta	9.84	121	P	Pn	11 19 53.2	+2.6
	29nm,1.1s						
RUSC	La Rusia	10.00	104		Pn	11 19 54.5	+1.4
RUSC	La Rusia	10.00	104	P	Pn	11 19 54.3	+1.1
	36nm,1.2s						
VILC	Villavicencio,	10.03	114	P	Pn	11 19 56.9	+3.6
	2µm83nm,0.7s						
PPLP	Puerto Lpez	10.05	168	P	Pn	11 19 50.3	-3.2
CRJC	Cerrejon, Guaj	10.18	74	P	Pn	11 19 52.6	-2.7
	21nm,0.8s						

PIAT	**Ana Tenorio**	**10.36**	**154**	P	**Pn**	**11 20 01.2**	**+3.2**
	23nm,1.3s						
MTDJ	**Mount Denham**	**11.09**	**27**	Pn	**Pn**	**11 20 07.9**	**+0.1**
COHC	**Cochancay**	**11.33**	**161**		**Pn**	**11 20 12.2**	**+1.2**
COHC	**Cochancay**	**11.33**	**161**	P	**Pn**	**11 20 12.6**	**+1.6**
	21nm,1.0s						
PTLC	**Puerto Leguiza**	**11.43**	**135**	P	Pn	11 20 17.3	+5.0
	1μm32nm,1.1s						
PAYG	**Puerto Ayora**	**11.63**	**220**	Pn	**Pn**	**11 20 15.7**	**+0.5**
CCIG	**Comitan**	**12.01**	**312**	Pn	**Pn**	**11 20 20.0**	**-0.4**
SDV	**Santo Domingo**	**12.09**	**87**	Pn	**Pn**	**11 20 19.6**	**-2.0**
SDV	**Santo Domingo**	**12.09**	**87**	Pn	**Pn**	**11 20 19.4**	**-2.3**
	1.3nm,0.3s,baz=360,slow=9.8,SNR=1.6						
SDV				Sn	**Sn**	**11 22 38.9**	**+3.4**
	1.2nm,0.3s,baz=7.8,slow=12,SNR=1.7						
SDV				LR	LR	11 25 42.9	
	comp=Z,382nm,20.0s,baz=254,slow=41						
	4.1nm,0.3s						
SDV	**Santo Domingo**	**12.09**	**87**	*e*P	P	11 20 39.1	+5.1
MCRA	**Macar, Loja**	**12.97**	**167**	P	**Pn**	**11 20 34.9**	**+1.5**
CMIG	**Matias Romero**	**14.59**	**308**	Pn	**Pn**	**11 20 53.8**	**-1.7**
	0.9nm,0.3s,baz=146,slow=10,SNR=10.0						
	7.5nm,0.7s						
BANI	**BANI**	**15.71**	**49**	Pn	**Pn**	**11 21 09.1**	**-1.3**
ATAH	**Atahualpa**	**16.02**	**164**	Pn	**Pn**	**11 21 12.8**	**-1.9**
	0.2nm,0.3s,baz=75,slow=23,SNR=1.0						
ATAH				LR	LR	11 26 46.0	
	comp=Z,282nm,21.6s,baz=340,slow=35						
	2.1nm,0.7s						
TLIG	**Tlapa**	**17.83**	**302**		**Pn**	**11 21 37.4**	**+0.3**
TLIG				IAmb	IAmb	11 22 05.9	
	comp=Z,34nm,1.4s						
PCRV	**Puerto La Cruz**	**18.07**	**83**	P	**Pn**	**11 21 39.7**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=306,slow=15,SNR=1.6						
PCRV				LR	LR	11 30 17.1	
	comp=Z,328nm,20.3s,slow=43						
	comp=Z,3.7nm,0.6s						
AOPR	**Arecibo Observ**	**18.53**	**56**	P	**P**	**11 21 44.8**	**-0.5**
AOPR				IAmb	IAmb	11 22 19.3	
	comp=Z,24nm,1.0s						
CZSB	**Cruzeiro do Su**	**18.91**	**147**	P	**Pn**	**11 21 50.0**	**-0.2**
CZSB	**Cruzeiro do Su**	**18.91**	**147**	*e*P	**P**	**11 21 49.1**	**-0.3**
NNA	**Nana**	**21.07**	**163**	P	**P**	**11 22 14.2**	**+1.2**
TEFE	**Tefe**	**21.66**	**122**	*e*P	**P**	**11 22 22.5**	**+3.3**
BOAV	**Boa Vista**	**23.00**	**104**	P	**P**	**11 22 34.5**	**+1.0**
BOAV				IAmb	IAmb	11 22 43.1	
	comp=Z,9.7nm,1.1s						
BOAV	**Boa Vista**	**23.00**	**104**	*e*P	P	11 22 41.3	+7.8
ZAIG	**Zacatecas**	**23.75**	**309**		**P**	**11 22 40.1**	**-1.0**
154A	**Montrose**	**24.14**	**359**	P	**P**	**11 22 44.4**	**+0.1**
152A	**Waverly Hall**	**24.25**	**356**	P	**P**	**11 22 45.5**	**+0.1**
152A				IAmb	IAmb	11 23 08.5	
	comp=Z,11nm,1.1s						
441A	**DeRidder**	**24.29**	**338**	P	**P**	**11 22 46.5**	**+0.9**
HKT	**Hockley**	**24.69**	**332**	P	**P**	**11 22 49.0**	**-0.4**
HKT				IAmb	IAmb	11 22 53.5	
	comp=Z,11nm,1.0s						
735A	**Kenedy**	**24.78**	**327**	P	**P**	**11 22 50.9**	**+0.7**
146A	**Union**	**24.84**	**347**	P	**P**	**11 22 51.2**	**+0.6**
LRAL	**Lakeview Retre**	**24.86**	**352**	P	**P**	**11 22 50.4**	**-0.5**
LRAL				IAmb	IAmb	11 23 21.5	
	comp=Z,8.0nm,0.9s						
MACA	**Manacapuru-AM**	**24.89**	**116**	P	**P**	**11 22 51.9**	**+0.5**
GOGA	**Godfrey**	**24.94**	**359**	P	**P**	**11 22 51.7**	**+0.1**
GOGA				IAmb	IAmb	11 23 08.4	
	comp=Z,12nm,1.1s						
Z47A	**Carrollton**	**25.19**	**350**	P	**P**	**11 22 53.1**	**-0.8**
Z47A				IAmb	IAmb	11 23 13.2	
	comp=Z,12nm,1.0s						
HNVL	**Huntsville, TX**	**25.21**	**334**	P	**P**	**11 22 53.0**	**-1.1**
833A	**Chaparral WMA,**	**25.26**	**324**	P	**P**	**11 22 53.8**	**-0.8**
833A				IAmb	IAmb	11 23 17.6	
	comp=Z,7.8nm,0.9s						
Y52A	**Lilburn**	**25.41**	**358**	P	**P**	**11 22 54.9**	**-1.0**
Y49A	**Blount Mountai**	**25.59**	**353**	P	**P**	**11 22 56.5**	**-1.0**
HODGE	**Hodges**	**25.76**	**1**	P	**P**	**11 22 57.7**	**-1.4**
HODGE				IAmb	IAmb	11 23 14.9	
	comp=Z,15nm,1.1s						
X51A	**Calhoun**	**26.15**	**356**	P	**P**	**11 23 02.8**	**+0.2**
X51A				IAmb	IAmb	11 23 24.9	
	comp=Z,8.2nm,1.0s						
X48A	**Hartselle**	**26.26**	**352**	P	**P**	**11 23 04.6**	**+1.1**
X48A				IAmb	IAmb	11 23 21.1	
	comp=Z,9.0nm,1.2s						
PAULI	**Pauline**	**26.36**	**2**	P	**P**	**11 23 04.3**	**-0.1**
PAULI				IAmb	IAmb	11 23 20.6	
	comp=Z,7.0nm,0.8s						
237A	**Washetta, Mont**	**26.43**	**335**	P	**P**	**11 23 04.1**	**-1.1**
BG3	**Lake Jocassee**	**26.51**	**360**	P	**P**	**11 23 06.1**	**+0.2**
BG3				IAmb	IAmb	11 23 27.1	
	comp=Z,10nm,1.0s						
DRIO	**Del Rio**	**26.79**	**324**	P	**P**	**11 23 08.3**	**-0.1**
W57A	**Gilead**	**26.80**	**5**	P	**P**	**11 23 07.9**	**-0.6**
W57A				IAmb	IAmb	11 23 24.6	
	comp=Z,12nm,1.3s						
CPCT	**Cooper Cave**	**27.01**	**357**	P	**P**	**11 23 09.1**	**-1.2**
CPCT				IAmb	IAmb	11 23 36.0	
	comp=Z,7.5nm,1.1s						
JCT	**Junction City**	**27.13**	**326**	P	**P**	**11 23 10.9**	**-0.6**
JCT				IAmb	IAmb	11 23 35.0	
	comp=Z,6.7nm,1.1s						
TKL	**Tuckaleechee C**	**27.19**	**358**	LR	LR	11 33 54.9	
	comp=Z,126nm,21.6s,baz=177,slow=36						
BRDY	**Brady**	**27.33**	**329**	P	**P**	**11 23 13.4**	**+0.1**
MIAR	**Mount Ida**	**27.87**	**341**	P	**P**	**11 23 17.7**	**-0.3**
MIAR				IAmb	IAmb	11 23 47.6	
	comp=Z,7.3nm,1.1s						
WHAR	**Wooly Hollow**	**28.17**	**343**	P	**P**	**11 23 20.4**	**-0.3**
WHAR				IAmb	IAmb	11 23 39.3	
	comp=Z,5.5nm,1.0s						
PLPT	**Palo Pinto**	**28.24**	**332**	P	**P**	**11 23 21.0**	**-0.4**
PLPT				IAmb	IAmb	11 23 38.0	
	comp=Z,5.1nm,0.9s						
LPAZ	**La Paz**	**28.49**	**149**	P	**P**	**11 23 24.9**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=8.3,slow=11,SNR=2.7						
LPAZ				LR	LR	11 35 59.5	
	comp=Z,119nm,18.2s,baz=306,slow=39						
	comp=Z,0.8nm,0.7s						
TXAR	**Lajitas Array**	**28.60**	**320**	P	**P**	**11 23 23.4**	**-1.3**
	comp=Z,0.2nm,0.5s,baz=134,slow=9.4,SNR=2.0						
TXAR				PcP	**PcP**	**11 26 35.1**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=82,slow=2.3,SNR=5.4						
	comp=Z,0.2nm,0.5s						
LCAR	**Lake Charles**	**28.61**	**346**	P	**P**	**11 23 24.8**	**+0.2**
LCAR				IAmb	IAmb	11 23 26.2	
	comp=Z,5.7nm,0.8s						
FCAR	**Ozark Folk Cen**	**28.69**	**344**	P	**P**	**11 23 25.2**	**-0.1**
H06E1	**SOCORRO T-PHAS**	**29.14**	**294**	T	T	11 53 38.7	
	SNR=15						
CGM3	**Cape Girardeau**	**29.47**	**349**	P	**P**	**11 23 31.5**	**-0.7**
T42A	**Van Buren**	**29.51**	**347**		**P**	**11 23 32.1**	**-0.5**
PB16	**IPOC Station P**	**29.61**	**154**	P	**P**	**11 23 34.2**	**-0.1**
PB16				IAmb	IAmb	11 23 49.2	
	comp=Z,5.1nm,0.8s						
S44A	**Carbondale**	**29.78**	**350**	P	**P**	**11 23 33.9**	**-1.0**
S44A				IAmb	IAmb	11 23 50.1	
	comp=Z,9.4nm,1.3s						
R58B	**Mineral**	**29.82**	**8**	P	**P**	**11 23 34.4**	**-0.9**
R50A	**Paris**	**29.82**	**358**	P	**P**	**11 23 34.0**	**-1.4**
R50A				IAmb	IAmb	11 23 51.4	
	comp=Z,8.9nm,1.4s						
ODSA	**Odessa**	**29.90**	**325**	P	**P**	**11 23 36.0**	**-0.2**
ODSA				IAmb	IAmb	11 23 48.5	
	comp=Z,4.3nm,0.8s						
MDP	**Montagnes des**	**30.17**	**94**	LR	LR	11 36 15.7	
	comp=Z,192nm,21.0s,baz=266,slow=38						
CCM	**Cathedral Cave**	**30.53**	**347**		**P**	**11 23 41.4**	**-0.2**
CCM				IAmb	IAmb	11 23 42.7	
	comp=Z,5.4nm,0.8s						
GO01	**Chusmiza**	**30.93**	**154**	P	**P**	**11 23 47.3**	**+1.5**
P53A	**Whipple**	**31.02**	**2**	P	**P**	**11 23 45.3**	**-0.7**
P53A				IAmb	IAmb	11 24 17.8	
	comp=Z,5.4nm,0.8s						
NPGB	**Novo Progresso**	**31.39**	**118**	*e*P	**P**	**11 23 53.4**	**+3.9**
SIV	**San Ignacio**	**32.41**	**138**	LR	LR	11 37 23.1	
	comp=Z,113nm,19.3s,baz=292,slow=37						
CLDB	**Colider**	**33.01**	**125**	*e*P	**P**	**11 24 06.9**	**+3.2**
N38A	**Joes South For**	**33.60**	**346**	P	**P**	**11 24 08.9**	**+0.4**
N35A	**Tabor**	**34.31**	**343**	P	**P**	**11 24 14.6**	**-0.2**
214A	**Organ Pipe Nat**	**36.41**	**314**	P	**P**	**11 24 34.0**	**+1.0**
214A				IAmb	IAmb	11 24 36.1	
	comp=Z,6.3nm,1.1s						
SADO	**Sadowa**	**36.42**	**4**	LR	LR	11 39 42.9	
	comp=Z,106nm,19.0s,baz=192,slow=37						
X16A	**Lo Mia Camp, P**	**36.91**	**319**	P	**P**	**11 24 36.3**	**-1.1**
AC02	**Maricunga**	**37.43**	**160**	P	**P**	**11 24 43.1**	**+1.0**
113A	**Mohawk Valley,**	**37.53**	**315**		**P**	**11 24 43.5**	**+1.0**
113A				IAmb	IAmb	11 25 02.0	
	comp=Z,6.7nm,1.3s						
Y14A	**Wickenburg**	**37.67**	**317**	P	**P**	**11 24 44.1**	**+0.4**
PV18	**Skein Mesa, Pa**	**37.91**	**326**		**P**	**11 24 46.2**	**+0.3**
PV18				IAmb	IAmb	11 24 48.8	
	comp=Z,7.9nm,1.2s						
SRU	**San Rafael Swe**	**39.42**	**325**	P	**P**	**11 24 57.6**	**-0.8**
GSC	**Goldstone, Bar**	**41.02**	**316**	P	**P**	**11 25 13.3**	**+1.6**
GSC				IAmb	IAmb	11 25 31.5	
	comp=Z,6.4nm,1.2s						
PDAR	**Pinedale Array**	**41.53**	**330**	P	**P**	**11 25 15.6**	**-0.3**
PDAR	**Pinedale Array**	**41.53**	**330**	P	**P**	**11 25 14.8**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=133,slow=6.3,SNR=3.9						
PDAR				LR	LR	11 46 28.2	
	comp=Z,34nm,19.4s,baz=136,slow=42						
	comp=Z,0.5nm,0.7s						
SPR3	**Spring Creek 3**	**41.58**	**322**		**P**	**11 25 16.3**	**-0.2**
HWUT	**Hardware Ranch**	**41.73**	**327**		**P**	**11 25 17.4**	**-0.1**
H03N2	**Juan Fernandez**	**41.73**	**175**	T	T	12 09 44.2	
	baz=354,slow=76,SNR=3.4						
H03N1	**Juan Fernandez**	**41.73**	**175**	T	T	12 09 29.5	
	baz=354,slow=76,SNR=14						
H03N3	**Juan Fernandez**	**41.75**	**175**	T	T	12 09 32.4	
	baz=354,slow=76,SNR=12						
CCAC	**Calif City Air**	**41.79**	**315**	P	**P**	**11 25 17.7**	**-0.2**
CCAC				IAmb	IAmb	11 25 21.7	
	comp=Z,10nm,0.9s						
MDND	**Maddock**	**41.85**	**343**	P	**P**	**11 25 18.6**	**+0.5**
BDFB	**Brasilia**	**41.94**	**125**	LR	LR	11 43 19.1	
	comp=Z,142nm,20.1s,baz=304,slow=37						
EPLO	**Experimental L**	**42.18**	**349**	P	**P**	**11 25 19.8**	**-1.0**
EPLO				IAmb	IAmb	11 25 40.0	
	comp=Z,6.9nm,1.0s						
GRAC	**Grapevine Rang**	**42.33**	**318**	P	**P**	**11 25 22.6**	**+0.3**
GRAC				IAmb	IAmb	11 25 33.4	
	comp=Z,7.8nm,1.2s						
GMN	**Gold Mountain**	**42.43**	**318**	P	**P**	**11 25 24.0**	**+0.6**
SNOW	**Snow King Moun**	**42.63**	**330**	P	**P**	**11 25 25.0**	**0.0**
TPH	**Tonopah**	**42.84**	**319**	P	**P**	**11 25 27.7**	**+1.1**
FXWY	**Fox Creek**	**42.90**	**330**	P	**P**	**11 25 27.1**	**0.0**
DSP	**Deep Springs**	**42.94**	**318**	P	**P**	**11 25 26.9**	**-0.2**
ULM	**Lac du Bonnet**	**43.15**	**348**		**P**	**11 25 27.7**	**-0.9**
ULM				IAmb	IAmb	11 25 47.2	
	comp=Z,14nm,1.3s						
ULM	**Lac du Bonnet**	**43.15**	**348**	P	**P**	**11 25 26.6**	**-2.1**
	comp=Z,2.5nm,0.6s,baz=157,slow=8.8,SNR=7.1						
	comp=Z,2.5nm,0.6s						
RLMT	**Red Lodge**	**43.17**	**333**	P	**P**	**11 25 28.2**	**-1.0**
ELK	**Elko**	**43.22**	**324**	P	**P**	**11 25 29.7**	**0.0**
ELK	**Elko**	**43.22**	**324**	LR	LR	11 44 51.0	
	comp=Z,71nm,18.7s,baz=164,slow=38						
MT08	**Bocatoma Ro**	**43.32**	**164**	P	**P**	**11 25 32.5**	**+2.0**
LMEL	**Las Melosas**	**43.66**	**165**	P	**P**	**11 25 34.5**	**+1.3**
NVAR	**Mina Array Bea**	**43.74**	**319**	P	**P**	**11 25 34.5**	**+0.5**
NVAR	**Mina Array Bea**	**43.74**	**319**	P	**P**	**11 25 33.4**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=121,slow=7.3,SNR=12						
NVAR				PcP	**PcP**	**11 27 21.1**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=156,slow=4.0,SNR=3.6						
NVAR				LR	LR	11 47 56.4	
	comp=Z,88nm,19.0s,baz=191,slow=42						
	comp=Z,1.2nm,0.5s						
DLMT	**Dillon**	**44.92**	**330**	IAmb	IAmb	11 25 57.2	
	comp=Z,7.0nm,1.3s						
LYMT	**Lyon Mountain**	**45.94**	**332**	P	**P**	**11 25 51.1**	**-0.2**
BPMT	**Black Pine Rid**	**46.10**	**331**		**P**	**11 25 52.5**	**-0.2**
WVOR	**Wild Horse Val**	**46.27**	**323**	IAmb	IAmb	11 26 12.3	
	comp=Z,6.7nm,1.1s						
ORV	**Oroville**	**46.45**	**318**	P	**P**	**11 25 54.7**	**-0.5**
ORV				IAmb	IAmb	11 25 58.3	
	comp=Z,6.1nm,1.1s						
PLID	**Pearl Lake**	**46.47**	**328**		**P**	**11 25 55.1**	**-0.3**
O02D	**Mt. Diablo Mer**	**47.62**	**318**	P	**P**	**11 26 03.9**	**-0.5**
O02D				IAmb	IAmb	11 26 18.3	
	comp=Z,8.7nm,1.5s						
SCHQ	**Schefferville**	**48.09**	**12**	LR	LR	11 46 24.7	
	comp=Z,71nm,21.9s,baz=206,slow=36						
YBH	**Yreka Blue Hor**	**48.37**	**320**	LR	LR	11 47 55.4	
	comp=Z,7.4nm,19.3s,baz=142,slow=38						
L04D	**Klamath Falls**	**48.38**	**321**	P	**P**	**11 26 10.6**	**+0.3**
E09A	**Wood Farm, Sta**	**48.53**	**328**	P	**P**	**11 26 10.1**	**-1.1**
E09A				IAmb	IAmb	11 26 14.6	
	comp=Z,4.1nm,1.0s						
NEW	**Newport**	**49.17**	**330**	LR	LR	11 51 48.2	
	comp=Z,49nm,18.1s,baz=140,slow=42						
PLCA	**Paso Flores**	**50.14**	**168**	P	**P**	**11 26 23.2**	**-0.5**
	comp=Z,3.4nm,0.8s,baz=337,slow=6.8,SNR=5.8						
	comp=Z,3.4nm,0.8s						
LL02	**Futaleuf**	**52.27**	**170**		**P**	**11 26 40.0**	**+0.5**
FRB	**Frobisher Bay**	**56.24**	**8**	LR	LR	11 50 35.4	
	comp=Z,134nm,20.4s,baz=194,slow=35						
YKA	**Yellowknife Ar**	**58.77**	**343**	P	**P**	**11 27 25.4**	**-0.5**
	comp=Z,0.8nm,0.8s,baz=136,slow=7.0,SNR=7.6						
	comp=Z,0.8nm,0.8s						
SFJD	**Kangerlussuaq**	**62.50**	**14**	LR	LR	11 54 26.2	
	comp=Z,83nm,21.7s,baz=222,slow=36						
I30M	**Mount Dempster**	**67.74**	**339**		**P**	**11 28 25.7**	**+0.2**
I30M				IAmb	IAmb	11 28 53.3	
	comp=Z,5.1nm,1.1s						
BCAR	**Beaver Creek A**	**68.83**	**335**	P	**P**	**11 28 33.3**	**+1.0**
L27K	**Beaver Creek,**	**68.85**	**335**		**P**	**11 28 33.1**	**+0.7**
L27K				IAmb	IAmb	11 28 44.9	
	comp=Z,3.8nm,1.1s						
H29M	**Whitestone**	**68.95**	**339**	P	**P**	**11 28 33.7**	**+0.8**
H29M				IAmb	IAmb	11 29 05.4	
	comp=Z,7.4nm,1.4s						
G29M	**Pine Creek**	**69.17**	**340**	IAmb	IAmb	11 28 38.1	
	comp=Z,5.8nm,1.1s						
H27K	**Steamboat Moun**	**70.09**	**338**	IAmb	IAmb	11 28 58.3	
	comp=Z,4.2nm,1.2s						
J26L	**Joseph Creek**	**70.14**	**336**		**P**	**11 28 40.4**	**0.0**
J26L				IAmb	IAmb	11 28 55.8	
	comp=Z,6.1nm,1.2s						
BORG	**Borgarnes**	**70.56**	**24**	LR	LR	11 56 03.8	
	comp=Z,46nm,20.8s,baz=231,slow=33						
J25K	**Salcha River,**	**70.91**	**336**	IAmb	IAmb	11 29 00.0	
	comp=Z,2.6nm,0.8s						
ILAR	**Eielson Array**	**71.57**	**336**	P	**P**	**11 28 48.9**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=116,slow=4.8,SNR=15						
ILAR				LR	LR	12 04 35.3	
	comp=Z,36nm,18.7s,baz=94,slow=40						
	comp=Z,0.8nm,0.6s						
RND	**Reindeer**	**71.94**	**334**		**P**	**11 28 52.0**	**+0.7**
F25K	**Christian Rive**	**72.13**	**339**	P	**P**	**11 28 53.2**	**+0.9**
KDAK	**Kodiak Island**	**72.21**	**328**	LR	LR	12 01 46.0	
	comp=Z,53nm,18.3s,baz=124,slow=37						
G23K	**Bananza Creek**	**73.43**	**338**	P	**P**	**11 29 01.1**	**+1.0**
G23K				IAmb	IAmb	11 29 05.7	
	comp=Z,2.9nm,0.9s						
TOLK	**Toolik Lake Re**	**73.88**	**339**	P	**P**	**11 29 03.1**	**+0.4**
C23K	**Itkillik River**	**74.62**	**341**	P	**P**	**11 29 07.1**	**+0.2**
IMAR	**Indian Mountai**	**74.68**	**336**	P	**P**	**11 29 07.2**	**-0.1**
G21K	**Allakaket**	**74.71**	**337**	P	**P**	**11 29 08.1**	**+0.5**
G21K				IAmb	IAmb	11 29 10.6	
	comp=Z,2.7nm,0.8s						
H19K	**Roundabout Mou**	**75.66**	**336**	P	**P**	**11 29 13.5**	**+0.6**
H19K				IAmb	IAmb	11 29 16.2	
	comp=Z,4.9nm,1.2s						
MDT	**Midelt**	**75.66**	**58**	LR	LR	11 57 09.3	
	comp=Z,29nm,21.5s,baz=234,slow=32						
G19K	**Purcell Mounta**	**76.04**	**336**	P	**P**	**11 29 15.5**	**+0.4**
G19K				IAmb	IAmb	11 29 28.0	
	comp=Z,8.0nm,1.4s						
ESDC	**Sonseca Array**	**76.17**	**51**	P	**P**	**11 29 16.1**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=267,slow=5.6,SNR=2.7						
	comp=Z,0.4nm,0.5s						
E19K	**Redstone River**	**76.35**	**338**	P	**P**	**11 29 17.0**	**+0.1**
E19K				IAmb	IAmb	11 29 29.4	
	comp=Z,3.0nm,1.1s						
D20K	**Etivluk River**	**76.38**	**339**	P	**P**	**11 29 17.6**	**+0.5**
D20K				IAmb	IAmb	11 29 18.1	
	comp=Z,2.9nm,0.7s						
F19K	**Shaleruckik Mo**	**76.44**	**337**	P	**P**	**11 29 17.7**	**+0.3**
DBIC	**Dimbokro**	**77.23**	**85**	LR	LR	12 03 51.5	
	comp=Z,18nm,18.3s,baz=194,slow=36						
TORD	**Torodi Ar. Bea**	**82.86**	**78**	P	**P**	**11 29 52.7**	**-0.6**
	comp=Z,1.1nm,0.5s,baz=276,slow=5.2,SNR=2.3						
	comp=Z,1.1nm,0.5s						
SPITS	**Spitsbergen Ar**	**83.77**	**12**	LR	LR	12 08 34.4	
	comp=Z,62nm,19.8s,baz=252,slow=37						
NOA	**NORSAR Array B**	**84.72**	**29**	LR	LR	12 07 29.6	
	comp=Z,8.7nm,18.4s,baz=305,slow=36						
DAVOX	**Davos/Dischmat**	**85.84**	**43**	LR	LR	12 05 02.6	
	comp=Z,21nm,18.5s,baz=259,slow=33						
HFS	**Hagfors**	**86.07**	**30**	LR	LR	12 09 17.5	
	comp=Z,13nm,19.3s,baz=303,slow=36						
VRAC	**Vranov**	**89.84**	**40**	LR	LR	12 04 38.7	
	comp=Z,54nm,20.7s,baz=264,slow=32						
MLR	**Muntele Rosu**	**96.99**	**42**	LR	LR	12 16 40.6	
	comp=Z,28nm,18.0s,baz=243,slow=37						
AKASG	**Malin Array Be**	**97.19**	**36**	LR	LR	12 11 39.6	
	comp=Z,34nm,19.9s,baz=20,slow=34						
TIXI	**Tiksi**	**97.45**	**350**	LR	LR	12 19 18.5	
	comp=Z,30nm,18.1s,baz=350,slow=38						
QSPA	**South Pole Qui**	**98.35**	**180**	P	**P**	**11 31 05.0**	**-0.6**
	comp=Z,1.1nm,1.0s,baz=150,slow=4.8,SNR=1.8						
	comp=Z,1.1nm,1.0s						
KSRS	**Korea Array**	**126.10**	**330**	PKP	**PKPdf**	**11 36 29.8**	**-0.9**
	comp=Z,1.5nm,0.8s,baz=17,slow=0.2,SNR=7.6						
KSH	**Kashi**	**128.48**	**21**	PKP	**PKPdf**	**11 36 35.3**	**-0.1**
HHC	**Hu-ho-hao-te**	**129.27**	**346**	*e*P	**PKPdf**	**11 36 34.8**	**-2.0**
ASAR	**Alice Springs**	**141.68**	**242**	PKhKP	PKPpre	11 36 53.9	
	comp=Z,0.7nm,0.6s,baz=110,slow=3.7,SNR=13						
ASAR				PKP	**PKPdf**	**11 36 59.1**	**-1.1**
	comp=Z,1.0nm,0.7s,baz=104,slow=1.7,SNR=10						
WRA	**Warramunga Arr**	**142.24**	**248**	PKhKP	PKPpre	11 36 56.2	
	comp=Z,1.6nm,0.8s,baz=106,slow=2.9,SNR=11						
WRA				PKP	**PKPdf**	**11 37 00.5**	**-0.8**
	comp=Z,1.2nm,0.9s,baz=90,slow=2.0,SNR=5.6						
PZH	**PanZhiHua**	**145.06**	**353**	PKPbc	**PKPdf**	**11 37 07.0**	**+0.7**
MTN	**Manton Dam**	**146.32**	**259**	PKPbc	**PKPbc**	**11 37 09.8**	**+0.1**
KNRA	**Kununurra**	**148.26**	**254**	PKPbc	**PKPbc**	**11 37 14.7**	**-0.4**
FITZ	**Fitzroy Crossi**	**150.66**	**248**	PKPbc	**PKPbc**	**11 37 20.7**	**-0.3**
CMAR	**Chiang Mai Arr**	**153.30**	**356**	PKP	**PKPdf**	**11 37 18.4**	**-1.0**
	comp=Z,0.9nm,0.3s,baz=121,slow=46,SNR=2.0						
CMAR				PKPbc	**PKPbc**	**11 37 26.4**	**-0.5**
	comp=Z,1.2nm,0.3s,baz=160,slow=16,SNR=4.8						

VIE ***28*** *11:17:40.3±0.1, 47.°51N×11.°14E, h4^{km}±1^{km}, mb2.1/18, ml3.0/18, Error ellipse: s-maj=0.9km s-min=0.6km az=21.0 3 km E of Garmisch Partenkirchen*

BUG ***28*** *11:17:41.2±0.6, 47.°45N×11.°22E, h2^{km}±2^{km}, MD3.1/12, ML3.4/12, Mining explosion.*

BGR ***28*** *11:17:41.9±0.2, 47.°50N×11.°15E, h5^{km}, ML2.7/13, Error ellipse: s-maj=4.4km s-min=3.3km az=174.0*

STR ***28*** *11:17:41.2±1.5, 47°N±11°×1°1E±°, h19^{km}±13^{km}, MLv3.4/10, Error ellipse: s-maj=0.0km s-min=0.0km az=11.9, preliminary*

PRU ***28*** *11:17:42.4, 47.°52N×11.°25E, h3^{km}, Garmisch-partenkirchen*

LDG ***28*** *11:17:43.5±0.2, 47.°38N×11.°01E, h2^{km}, Ml3.1/17, Error ellipse: s-maj=3.4km s-min=2.5km az=53.0*

ISC 28 11:17:40.1±0.7**, 47.°50N**±0.°02×**11.°14E**±0.°01**, h0**^{km}**, n115,** σ**1.^{s}85**/195**, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PART	**Garmisch-Parte**	**0.01**	**259**	*e*Pg	**Pg**	**11 17 41.4**	**+1.1**
PART				*e*Sg	**Sg**	**11 17 42.0**	**+1.5**
MOTA	**Moosalm**	**0.16**	**188**	*i* Pg	**Pg**	**11 17 43.6**	**+0.6**
	62nm,0.1s,SNR=723						
MOTA				*i* Sg	**Sg**	**11 17 46.5**	**+1.4**
	238nm,0.1s						
RETA	**Reutte**	**0.25**	**267**	*i* Pg	**Pg**	**11 17 45.8**	**+0.9**
	3.6nm,0.1s,SNR=119						
RETA				*e*Sg	**Sg**	**11 17 48.8**	**+0.6**
	172nm,0.2s						
SQTA	**Sankt Quirin**	**0.28**	**170**	*i* Pg	**Pg**	**11 17 45.9**	**+0.4**
	85nm,0.1s,SNR=350						
SQTA				*i* Sg	**Sg**	**11 17 50.6**	**+1.5**
	282nm,0.1s						
WATA	**Walderalm**	**0.34**	**119**	*e*Pg	**Pg**	**11 17 46.5**	**-0.1**
	42nm,0.1s,SNR=94						
WATA				*i* Sg	**Sg**	**11 17 52.0**	**+1.0**
	337nm,0.2s						
WTTA	**Wattenberg**	**0.41**	**125**	*e*Pg	**Pg**	**11 17 48.0**	**0.0**
	14nm,0.2s,SNR=25						
WTTA				*e*Sg	**Sg**	**11 17 54.3**	**+0.9**
	43nm,0.2s						
WTTA	**Wattenberg**	**0.41**	**125**	*e*Pg	**Pg**	**11 17 48.0**	**0.0**
WTTA				*e*Sg	**Sg**	**11 17 54.2**	**+0.9**
FETA	**Feichten**	**0.55**	**210**	*e*Pg	**Pg**	**11 17 51.0**	**+0.4**
	3.7nm,0.1s,SNR=14						
FETA				*i* Sg	**Sg**	**11 17 58.8**	**+1.0**
	9.6nm,0.2s						
A105A	**Obersdorf, Sch**	**0.58**	**261**	Pg	**Pg**	**11 17 52.9**	**+1.8**
A105A				Sg	**Sb**	**11 18 02.1**	**+0.2**
OBER	**Oberstdorf**	**0.58**	**261**	*e*Pg	**Pg**	**11 17 52.9**	**+1.8**
OBER				*e*Sg	**Sb**	**11 18 02.5**	**+0.6**
FUR	**Furstenfeldbru**	**0.67**	**8**	*e*Pg	**Pb**	**11 17 54.5**	**-0.2**
FUR				Sg	**Sb**	**11 18 04.0**	**-0.6**
DAVA	**Damuels**	**0.88**	**256**	*e*Sg	**Sg**	**11 18 10.3**	**+2.0**
	101nm,0.5s						
DAVA	**Damuels**	**0.88**	**256**	*e*Sg	**Sb**	**11 18 12.3**	**+1.7**
LESA	**Schwarzleotal**	**1.05**	**94**	*e*Pg	**Pg**	**11 18 00.2**	**0.0**
	0.1nm,0.1s,SNR=36						
LESA				Sg	**Sb**	**11 18 15.4**	**-0.1**
	58nm,0.4s						
A103D	**Ravensburg, Wa**	**1.11**	**286**	Pg	**Pn**	**11 18 04.0**	**+1.1**
A103D				Sg	**Sn**	**11 18 18.8**	**-0.2**
A104A	**Biberach, Staf**	**1.11**	**301**	Pg	**Pn**	**11 18 03.4**	**+0.5**
A104A				Sg	**Sn**	**11 18 18.8**	**-0.2**
RJOB	**Jochberg**	**1.15**	**77**	*e*Pg	**Pn**	**11 18 04.6**	**+1.1**
RJOB				*e*Sg	**Sn**	**11 18 22.6**	**+2.7**
A104C	**Biberach, Ahle**	**1.18**	**303**	Pg	**Pn**	**11 18 04.5**	**+0.7**
A104C				Sg	**Sn**	**11 18 21.6**	**+1.0**
ABTA	**Abfaltersbach**	**1.21**	**128**	*e*Pg	**Pg**	**11 18 03.6**	**+0.5**
	5.5nm,0.3s,SNR=11						
ABTA				Sg	**Sg**	**11 18 20.0**	**+1.3**
	39nm,0.4s						
A108A	**Ulm, Ringingen**	**1.22**	**315**	Pg	**Pn**	**11 18 05.1**	**+0.7**
A108A				Sg	**Sn**	**11 18 22.2**	**+0.6**
NORI	**Noerdlinger Ri**	**1.27**	**345**	*e*Pg	**Pn**	**11 18 05.9**	**+0.8**
NORI				*e*Sg	**Sn**	**11 18 23.7**	**+0.9**
A102A	**Sigmaringen, J**	**1.45**	**297**	Pg	**Pb**	**11 18 09.2**	**+1.2**
A102A				Sg	**Sn**	**11 18 29.1**	**+1.7**
A109A	**Bad Urach, See**	**1.47**	**311**	Pg	**Pb**	**11 18 09.3**	**+1.0**
A109A				Sg	**Sn**	**11 18 29.9**	**+2.1**
GUT	**Gutenstein**	**1.48**	**293**	Pn	**Pb**	**11 18 09.4**	**+1.0**
GUT	**Gutenstein**	**1.48**	**293**	Sn	**Sn**	**11 18 30.0**	**+2.0**
A106B	**Goeppingen, Ma**	**1.57**	**323**	Pg	**Pg**	**11 18 11.2**	**+1.0**
A106B				Sg	**Sg**	**11 18 32.4**	**+1.9**
BIOA	**Bad Ischl, Aus**	**1.71**	**83**	*e*Pg	**Pg**	**11 18 13.5**	**+0.8**
	16nm,0.3s,SNR=9.2						
BIOA				*e*Sg	**Sg**	**11 18 36.2**	**+1.4**
	27nm,0.4s						
ZUR	**Degenried**	**1.74**	**267**	Pn	**Pg**	**11 18 14.4**	**+1.0**
ZUR	**Degenried**	**1.74**	**267**	Sn	**Sg**	**11 18 38.5**	**+2.6**
SLE	**Schleitheim**	**1.81**	**279**	Pn	**Pn**	**11 18 13.3**	**+0.9**
SLE	**Schleitheim**	**1.81**	**279**	Sn	**Sg**	**11 18 39.2**	**+1.1**
SLE	**Schleitheim**	**1.81**	**279**	Pg	**Pg**	**11 18 15.3**	**+0.6**
MYKA	**Terra Mystica**	**1.92**	**116**	*e*Pg	**Pb**	**11 18 16.9**	**+0.9**
	3.2nm,0.2s,SNR=8.1						
MYKA				*e*Sg	**Sg**	**11 18 43.8**	**+2.1**
	22nm,0.3s						
WET	**Wettzell**	**2.02**	**35**	*e*Pn	**Pn**	**11 18 15.5**	**+0.2**
WET				Sg	**Sg**	**11 18 44.4**	**-0.4**
SULZ	**Cheisacher**	**2.05**	**272**	Sg	**Sg**	**11 18 48.5**	**+2.6**
ROBS	**Robic**	**2.06**	**127**	*e*Pn	**Pb**	**11 18 18.8**	**+0.6**
ROBS				*e*Sn	**Sg**	**11 18 46.9**	**+0.8**
BFO	**Black Forest**	**2.06**	**295**	*e*Pn	**Pb**	**11 18 18.1**	**-0.3**
BFO				*e*Pg	**Pg**	**11 18 21.0**	**+1.4**
BFO				*e*Sg	**Sg**	**11 18 48.3**	**+2.1**
MOA	**Molln**	**2.15**	**79**	*e*Pg	**Pg**	**11 18 21.1**	**-0.1**
	5.2nm,0.3s,SNR=8.8						
MOA				*e*Sg	**Sg**	**11 18 49.6**	**+0.7**
	29nm,0.3s						
MOA	**Molln**	**2.15**	**79**	*e*Pg	**Pg**	**11 18 21.1**	**-0.1**
MOA				*e*Sg	**Sg**	**11 18 49.9**	**+1.0**
FELD	**Feldberg im Sc**	**2.15**	**281**	Pn	**Pn**	**11 18 18.7**	**+1.4**
FELD	**Feldberg im Sc**	**2.15**	**281**	Sn	**Sg**	**11 18 50.1**	**+1.0**
GEC2	**GERESS Array S**	**2.18**	**51**	*e*Pn	**Pb**	**11 18 19.5**	**-1.0**
GEC2				*e*Pg	**Pg**	**11 18 22.8**	**+1.0**
CADS	**Cadrg**	**2.19**	**125**	*e*Pn	**Pb**	**11 18 20.5**	**-0.1**
GRF	**Grafenberg Arr**	**2.19**	**1**	*e*Pg	**Pg**	**11 18 23.3**	**+1.2**
GRF				*e*Sg	**Sg**	**11 18 51.5**	**+0.9**
KIZ	**Kirchzarten**	**2.22**	**283**	Pn	**Pn**	**11 18 19.7**	**+1.6**
KIZ	**Kirchzarten**	**2.22**	**283**	Sn	**Sg**	**11 18 52.8**	**+1.5**
KIZ	**Kirchzarten**	**2.22**	**283**	Pg	**Pg**	**11 18 23.7**	**+1.1**
KHC	**Kasperske Hory**	**2.31**	**44**	*e*PN	**Pn**	**11 18 20.6**	**+1.2**
KHC				*e*SG	**Sg**	**11 18 54.8**	**+0.6**
	comp=Z,48nm,0.6s						
ENDD	**Endenburg**	**2.31**	**277**	Pn	**Pn**	**11 18 20.7**	**+1.3**
ENDD	**Endenburg**	**2.31**	**277**	Sn	**Sg**	**11 18 55.5**	**+1.3**
ENDD	**Endenburg**	**2.31**	**277**	Pg	**Pg**	**11 18 25.1**	**+0.8**
BABA	**Baden-Baden-Ne**	**2.32**	**303**	Pn	**Pn**	**11 18 20.9**	**+1.5**

BABA	Baden-Baden-Ne	2.32	303	Sn	Sg	11 18 54.3	-0.3
BABA	Baden-Baden-Ne	2.32	303	Pg	Pg	11 18 25.4	+0.9
BALST	Balsthal	2.34	267	Pn	Pn	11 18 21.1	+1.2
BALST	Balsthal	2.34	267	Sn	Sg	11 18 57.3	+2.1
ROTZ	Rotzenmuhle	2.38	17	ePg	Pg	11 18 25.7	+0.1
ROTZ				eSg	Sg	11 18 55.7	-0.7
VOJS	Vojsko	2.39	127	ePn	Pn	11 18 22.6	+2.0
VOGT	Vogtsburg - To	2.41	285	Pg	Pg	11 18 27.4	+1.2
VOGT	Vogtsburg - To	2.41	285	Sg	Sg	11 18 58.8	+1.4
CKRC	Cesky Krumlov	2.50	57	ePN	Pn	11 18 23.8	+1.8
CKRC				eSG	Sg	11 19 00.0	-0.4
	comp=Z,34nm,0.8s						
MANZ	Manzenberg	2.57	14	ePn	Pn	11 18 22.0	-1.0
MANZ				ePg	Pg	11 18 29.3	0.0
MANZ				eSn	Sn	11 18 53.1	-1.9
MANZ				eSg	Sg	11 19 02.4	-0.2
JAVS	Javornik	2.58	127	ePn	Pn	11 18 25.1	+1.9
BOURR	Bourrignon	2.65	269	Pn	Pn	11 18 25.9	+1.8
BOURR	Bourrignon	2.65	269	Sn	Sg	11 19 07.8	+2.6
BOURR	Bourrignon	2.65	269	Pg	Pg	11 18 31.8	+1.0
HOHE	HOHENGOEFT	2.71	297	Pg	Pg	11 18 33.0	+1.0
HOHE				Sg	Sg	11 19 08.7	+1.7
CDF	Champ du Feu	2.75	291	ePg	Pg	11 18 33.4	+0.7
CDF				eSg	Sg	11 19 08.5	+0.1
	26nm,0.4s						
ECH	Echery	2.77	286	Pn	Pn	11 18 25.4	-0.3
ECH				Sg	Sg	11 19 09.7	+0.6
SOKA	Soboth	2.79	106	ePn	Pn	11 18 26.6	+0.7
	1.7nm,0.2s						
SOKA				Sg	Sg	11 19 08.6	-1.0
	5.2nm,0.3s						
ZVC	Zvikov	2.81	45	ePN	Pn	11 18 27.8	+1.5
ZVC				eSG	Sg	11 19 09.7	-0.6
	comp=Z,13nm,0.3s						
CIEL	Dossenheim-sur	2.85	299	Pn	Pn	11 18 28.6	+1.8
NKC	Novy Kostel	2.87	17	ePG	Pg	11 18 35.1	+0.1
NKC				eSG	Sg	11 19 11.3	-0.9
	comp=Z,37nm,0.3s						
HINF	Hinteralfeld	2.91	278	ePn	Pn	11 18 28.6	+0.9
HINF	Hinteralfeld	2.91	278	ePg	Pg	11 18 37.0	+1.2
HINF				eSg	Sg	11 19 13.4	-0.2
	23nm,0.4s						
ARSA	Arzberg	2.99	93	Pn	Pn	11 18 28.3	-0.5
	1.5nm,0.3s						
ARSA				i Sn	Sn	11 19 05.4	0.0
	0.5nm,0.1s						
ARSA				Sg	Sg	11 19 16.2	+0.1
	7.0nm,0.4s						
CHMF	Charmoille	3.06	267	Pg	Pg	11 18 38.7	+0.1
CHMF				Sg	Sg	11 19 18.5	+0.2
VOEL	Voellerdingen	3.06	300	Pn	Pn	11 18 30.8	+1.1
VOEL				Sg	Sg	11 19 19.5	+1.3
MOX	Moxa	3.16	6	ePn	Pn	11 18 30.2	-0.9
MOX				eSn	Sn	11 19 07.4	-2.2
CONA	Conrad Observa	3.22	81	ePn	Pn	11 18 33.3	+1.4
	0.3nm,0.2s						
CONA				ePg	Pg	11 18 42.0	+0.2
	1.9nm,0.2s						
CONA				i Sn	Sn	11 19 12.0	+1.0
	5.2nm,0.3s						
CONA				Sg	Sg	11 19 25.3	+1.8
	6.8nm,0.2s						
BRANT	Les Verrieres	3.23	262	Pg	Pn	11 18 34.3	+2.3
BRANT	Les Verrieres	3.23	262	Sg	Sg	11 19 24.7	+1.0
TNS	Taunus Mts	3.25	328	Pn	Pn	11 18 33.1	+0.7
HAU	Haudompre	3.27	281	ePn	Pn	11 18 33.3	+0.7
HAU	Haudompre	3.27	281	ePg	Pg	11 18 42.8	+0.1
HAU				eSg	Sg	11 19 24.5	-0.5
	32nm,0.4s						
BOUC	Bouclans	3.33	267	Pn	Pn	11 18 34.7	+1.4
BOUC				Sg	Sg	11 19 27.8	+0.9
PRU	Pruhonice	3.36	41	ePG	Pb	11 18 42.4	+1.9
PRU				eSN	Sn	11 19 12.7	-1.6
PRU				eSG	Sg	11 19 25.7	-2.2
	comp=Z,20nm,1.0s						
GOPC	GO Pecny, Ondr	3.42	44	ePG	Pg	11 18 44.7	-0.8
GOPC				eSG	Sb	11 19 26.3	+2.7
	comp=Z,12nm,0.5s						
RONA	Rosalia, Austr	3.50	85	i Pn	Pn	11 18 37.0	+1.2
	0.4nm,0.1s						
RONA				i Sn	Sn	11 19 18.0	+0.2
	3.6nm,0.3s						
RONA				eSg	Sg	11 19 32.6	+0.2
	4.9nm,0.2s						
CABF	La Chapelle	3.56	257	eP	Pn	11 18 39.7	+3.0
CABF	La Chapelle	3.56	257	ePg	Pg	11 18 48.2	-0.1
CABF				eSg	Sg	11 19 33.3	-1.2
	38nm,1.0s						
PAGF	Fort de Pagny	3.78	288	ePn	Pn	11 18 40.2	+0.6
PAGF	Fort de Pagny	3.78	288	ePg	Pg	11 18 52.4	-0.1
PAGF				eSg	Sg	11 19 40.8	-0.7
	44nm,0.6s						
KRUC	Moravsky	3.84	64	ePN	Pn	11 18 40.5	+0.1
KRUC				eSG	Sg	11 19 42.1	-1.4
BRG	Berggiesshubel	3.85	28	Pg	Pg	11 18 53.1	-0.7
BRG				Sg	Sg	11 19 42.7	-0.9
BRG				Amp		11 19 49.6	
	comp=Z,8.5nm,0.4s						
CLL	Collm	4.00	17	ePg	Pg	11 18 57.0	+0.3
CLL				ex	x	11 19 01.0	
CLL				eSg	Sg	11 19 48.0	-0.6
	comp=Z,15nm,0.8s						
VRAC	Vranov	4.06	62	eSG	Sg	11 19 48.9	-1.6
MBDF	Montbardon	4.11	229	eP	Pn	11 18 48.6	+4.4
MBDF				eSn	Sn	11 19 28.8	-4.3
	comp=Z,5.2nm,0.5s						
SFTF	Sexfontaines	4.17	282	ePg	Pg	11 18 58.9	-0.9
SFTF				eSg	Sg	11 19 52.0	-1.8
	comp=Z,10nm,0.4s						
MEZF	Maizieres J'vi	4.21	286	ePg	Pg	11 19 00.3	-0.3
MEZF				eSn	Sn	11 19 31.2	-4.0
	comp=Z,12nm,0.5s						
DPC	Dobruska-Polom	4.45	48	ePG	Pb	11 19 00.2	+1.1
DPC				eSG	Sg	11 20 00.0	-3.0
	comp=Z,6.9nm,0.5s						
SBF	Sospel	4.47	217	ePn	Pn	11 18 48.2	-0.8
SBF				eSn	Sn	11 19 35.5	-6.2
	comp=Z,9.3nm,0.4s						
ORIF	Oris-en-Rattie	4.47	237	eP	Pn	11 18 52.4	+3.3
ORIF				eSn	Sn	11 19 36.9	-4.9
	comp=Z,4.1nm,0.4s						
MORC	Moravsky Berou	4.82	59	eSG	Sg	11 20 13.6	-1.2
LOR	Lormes	4.95	270	ePg	Pg	11 19 13.7	-1.1
LOR				eSg	Sg	11 20 16.5	-2.4
	comp=Z,4.4nm,0.3s						
SMF	Signal de Mont	5.06	263	ePn	Pn	11 18 56.5	-0.6
SMF				eSn	Sn	11 19 50.7	-5.5
SMF				eSg	Sg	11 20 19.1	-3.3
	comp=Z,3.6nm,0.3s						
VIVF	Saint-Julien-l	5.21	242	ePn	Pn	11 18 59.1	-0.1
VIVF				eSn	Sn	11 19 52.5	-7.5
	comp=Z,1.4nm,0.3s						
SSF	Saint Saulge	5.21	268	ePn	Pn	11 18 58.5	-0.7
SSF	Saint Saulge	5.21	268	ePg	Pg	11 19 18.2	-1.7
SSF				eSg	Sg	11 20 23.7	-3.7
SMRF	Simiane la Rot	5.25	230	eP	Pn	11 19 02.4	+2.6
LMR	La Mourre	5.29	220	eP	Pn	11 19 03.6	+3.4
AVF	Avril sur Loir	5.36	265	ePn	Pn	11 19 01.3	+0.1
AVF				eSn	Sn	11 19 57.7	-5.9
BGF	Bois d'Agland	5.75	264	ePn	Pn	11 19 06.2	-0.4
BGF				eSn	Sn	11 20 07.9	-5.2
LASF	Ste Croix	6.13	239	ePn	Pn	11 19 10.7	-1.2
LASF				eSn	Sn	11 20 16.2	-6.5
	comp=Z,3.4nm,0.4s						
TCF	Toulx Ste Croi	6.24	262	ePn	Pn	11 19 11.6	-1.7
TCF				eSg	Sg	11 20 55.2	-5.1

IDC **28** *11:19:03.4±0.9, 64°.96N×2°.78W, h0km, mb3.6/9,*
mbtmp3.7/17, ML3.1/6, MS2.6/4, Error ellipse:
s-maj=18.6km s-min=15.3km az=49.0
BGS **28** *11:19:05.3±0.6, 64°.87N×3°.13W, h10km, ML3.9*
BER **28** *11:19:05.8±3.6, 64°.95N×2°.71W, h10km, ML2.9,*
Confirmed Earthquake
NAO **28** *11:19:07.6±0.5, 64°.93N×2°.57W, h25km, ML3.7*
UPP **28** *11:19:12.8±3.3, 65°.34N×1°.54W, h0km, ML2.5*
ISC 28 11:19:03.7±0.6, **64°.87N**±0°.04×**2°.44W**±0°.06, **h10km, n136,**
σ**3ˢ41**/197, **mb3.5**/8, **Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FOO	Floro	4.71	131	Pn	Pn	11 20 18.1	+3.4
FOO				Sn	Sn	11 21 08.3	-1.0
FOO	Floro	4.71	131	eP	Pn	11 20 18.1	+3.4
FOO				IAML		11 21 11.0	
	comp=E,13nm,0.2s						
FOO				IAML		11 21 15.1	
	comp=N,11nm,0.2s						
FOO	Floro	4.71	131	eP	Pn	11 20 18.8	+4.1
FOO				eS	Sn	11 21 08.3	-1.0
FOO				IAML		11 21 13.6	
	comp=Z,24nm,0.3s						
LRW	Lerwick	4.78	172	Pn	Pn	11 20 16.9	+1.1
LRW				Sn	Sn	11 21 08.7	-2.5
LRW	Lerwick	4.78	172	eP	Pn	11 20 16.7	+1.0
LRW				eS	Sn	11 21 08.6	-2.5
LRW				IAML		11 21 11.2	
	comp=E,186nm,0.5s						
LRW				IAML		11 21 12.8	
	comp=N,114nm,0.2s						
LRW	Lerwick	4.78	172	eP	Pn	11 20 16.8	+1.0
LRW				eS	Sn	11 21 08.7	-2.5
LRW				IAML		11 21 11.9	
	comp=Z,80nm,0.3s						
MOL	Molde	5.00	113	eP	Pn	11 20 20.5	+1.8
MOL				eS	Sn	11 21 14.9	-1.6
MOL				IAML		11 21 23.3	
	comp=Z,26nm,0.3s						
AKN	Aaknes	5.01	118	Pn	Pn	11 20 22.1	+3.2
AKN				Sn	Sn	11 21 16.6	-0.1
AKN	Aaknes	5.01	118	eP	Pn	11 20 21.7	+2.8
AKN				eS	Sn	11 21 16.1	-0.7
AKN				IAML		11 21 23.3	
	comp=Z,74nm,0.3s						
SUE	Sulen	5.04	136	Pn	Pn	11 20 21.6	+2.3
SUE				Sn	Sn	11 21 15.0	-2.4
SUE	Sulen	5.04	136	eP	Pn	11 20 20.0	+0.8
SUE				eS	Sn	11 21 14.4	-3.0
SUE				IAML		11 21 22.9	
	comp=Z,41nm,0.3s						
HYA	Hoyanger	5.40	129	eP	Pn	11 20 26.8	+2.6
HYA				eS	Sn	11 21 25.5	-0.8
HYA				IAML		11 21 38.5	
	comp=Z,24nm,0.5s						
BAS02	BAS02	5.46	138	eP	Pn	11 20 28.2	+3.2
BAS02				eS	Sn	11 21 24.7	-3.0
BAS02	BAS02	5.46	138	IAML		11 21 29.8	
	comp=Z,32nm,0.3s						
BAS03	BAS03	5.55	138	eS	Sn	11 21 27.2	-2.8
ASK	Askoy	5.63	138	eP	Pn	11 20 30.1	+2.8
ASK				eS	Sn	11 21 29.4	-2.5
ASK				IAML		11 21 34.6	
	comp=Z,18nm,0.3s						
BAS15	BAS15	5.76	140	eP	Pn	11 20 31.0	+1.9
BAS15	BAS15	5.76	140	eS	Sn	11 21 31.7	-3.4
BAS16	BAS16	5.83	139	eP	Pn	11 20 31.3	+1.2
BAS16	BAS16	5.83	139	eS	Sn	11 21 33.3	-3.6
BAS16	BAS16	5.83	139	IAML		11 21 36.7	
	comp=Z,21nm,0.4s						
DOMB	Dombas	5.88	114	eP	Pn	11 20 34.9	+4.0
DOMB				eS	Sn	11 21 37.2	-1.1
DOMB				IAML		11 21 43.2	
	comp=Z,17nm,0.3s						
BAS17	BAS17	5.92	139	eP	Pn	11 20 32.7	+1.3
BAS17	BAS17	5.92	139	eS	Sn	11 21 35.4	-3.8
BAS17	BAS17	5.92	139	IAML		11 21 43.8	
	comp=Z,14nm,0.5s						
NSS	Namsos	6.19	87	eP	Pn	11 20 36.6	+1.6
NSS				eS	Sn	11 21 42.8	-2.8
NSS				IAML		11 21 47.7	
	comp=Z,19nm,0.3s						
BIGH	Upper Bighouse	6.43	187	eP	Pn	11 20 38.0	-0.3
BIGH				IAML		11 21 50.3	
	comp=E,23nm,0.3s						
BIGH				IAML		11 21 52.1	
	comp=N,29nm,0.5s						
BIGH	Upper Bighouse	6.43	187	eP	Pn	11 20 38.1	-0.3
BIGH				eS	Sn	11 21 46.2	-5.6
SKAR	Skarslia	6.47	126	Pn	Pn	11 20 42.9	+3.9
SKAR				Sn	Sn	11 21 51.1	-1.7
SKAR	Skarslia	6.47	126	eP	Pn	11 20 41.2	+2.2
SKAR				eS	Sn	11 21 51.7	-1.1
SKAR				IAML		11 22 09.7	
	comp=Z,13nm,0.2s						
ODD1	Odda	6.51	136	eS	Sn	11 21 50.3	-3.5
JNE	Jan Mayen East	6.53	343	eP	Pn	11 20 39.0	-0.6
JNE				eS	Sn	11 21 42.9	-11
JNE				IAML		11 21 51.6	
	comp=Z,27nm,0.6s						
JMIC	Jan Mayen	6.55	342	Pn	Pn	11 20 39.0	-1.0
JMIC	Jan Mayen	6.55	342	Pn	Pn	11 20 37.4	-2.7
	comp=Z,3.9nm,0.3s,baz=130,slow=15,SNR=1.4						
JMIC				Sn	Sn	11 21 43.7	-11
	comp=Z,1.2nm,0.3s,baz=73,slow=21,SNR=0.8						
	comp=Z,20nm,0.4s						
JMIC	Jan Mayen	6.55	342	Pn	Pn	11 20 39.0	-1.0
JMIC				eS	Sn	11 21 43.6	-11
JMIC				IAML		11 21 49.9	
	comp=Z,23nm,0.6s						
STOK	Stokkvaagen	6.57	70	Pn	Pn	11 20 41.3	+1.1
STOK				Sn	Sn	11 21 49.6	-5.4
STOK	Stokkvaagen	6.57	70	eP	Pn	11 20 41.2	+1.1
STOK				eS	Sn	11 21 48.7	-6.3
STOK				IAML		11 21 53.5	
	comp=Z,22nm,0.2s						
JNW	Jan Mayen West	6.58	343	eP	Pn	11 20 38.6	-1.8
JNW				eS	Sn	11 21 44.0	-11
JNW				IAML		11 21 50.0	
	comp=Z,18nm,0.5s						
LEIR	Leirfjorden	6.59	72	eP	Pn	11 20 42.0	+1.5
LEIR				eS	Sn	11 21 50.8	-4.7
LEIR				IAML		11 21 57.5	
	comp=Z,29nm,0.3s						
KONS	Konsvik	6.63	69	Pn	Pn	11 20 42.4	+1.4
KONS				Sn	Sn	11 21 51.4	-5.1
KONS	Konsvik	6.63	69	eP	Pn	11 20 42.1	+1.1
KONS				eS	Sn	11 21 50.5	-6.0
KONS				IAML		11 21 55.5	
	comp=Z,47nm,0.6s						
VAGH	Vaagaholmen	6.72	67	eP	Pn	11 20 43.5	+1.3
VAGH				eS	Sn	11 21 52.4	-6.3
VAGH				IAML		11 21 56.8	
	comp=Z,29nm,0.2s						
KMY	Karmoy	6.72	144	Pn	Pn	11 20 44.7	+2.4
KMY				Sn	Sn	11 21 54.9	-4.0
KMY	Karmoy	6.72	144	eP	Pn	11 20 43.5	+1.1
KMY				Sn	Sn	11 21 54.9	-4.0
KMY				IAML		11 22 01.7	
	comp=Z,15nm,0.2s						
BLS5	Blasjo	6.87	139	Pn	Pn	11 20 47.2	+2.8
BLS5				Sn	Sn	11 21 58.4	-4.0
BLS5	Blasjo	6.87	139	eP	Pn	11 20 46.1	+1.7
BLS5				eS	Sn	11 21 57.6	-4.8
BLS5				IAML		11 22 06.6	
	comp=Z,12nm,0.3s						
LINV	Loch Inver, As	6.87	192	eP	Pn	11 20 43.9	-0.5
LINV				IAML		11 22 00.6	
	comp=N,21nm,0.4s						
LINV				IAML		11 22 00.6	
	comp=E,37nm,0.4s						
LEWI	Lewis, Hebride	7.07	199	eP	Pn	11 20 46.3	-0.9
LEWI				IAML		11 22 04.4	
	comp=E,10nm,0.6s						
LEWI				IAML		11 22 05.9	
	comp=N,9.7nm,0.4s						
MOR8	Moi Rana	7.13	72	Pn	Pn	11 20 52.1	+4.1
MOR8	Moi Rana	7.13	72	eP	Pn	11 20 51.8	+3.8
MOR8				eS	Sn	11 22 08.4	-0.5
MOR8				IAML		11 22 16.0	
	comp=Z,43nm,0.5s						
LOF	Lofoten	7.17	56	Pn	Pn	11 20 48.7	+0.3
LOF				Sn	Sn	11 22 02.3	-7.5
LOF	Lofoten	7.17	56	eP	Pn	11 20 47.3	-1.2
LOF				eS	Sn	11 22 02.5	-7.3
LOF				IAML		11 22 05.8	
	comp=Z,23nm,0.3s						
NAO01	NORSAR Array S	7.30	117	eP	Pn	11 20 54.0	+3.7
NAO01				IAML		11 22 29.7	
	comp=Z,7.5nm,0.5s						
NB2	NORSAR Subarra	7.31	115	Pn	Pn	11 20 53.7	+3.3
	baz=307,slow=14						
NB2				Pn	Pn	11 20 53.8	+3.3
NB2	NORSAR Subarra	7.31	115	Pn	Pn	11 20 53.7	+3.3
	baz=307,slow=14						
NB2				Pn	Pn	11 20 53.8	+3.3
NOA	NORSAR Array B	7.31	115	Pn	Pn	11 20 53.1	+2.7
	comp=Z,0.1nm,0.3s,baz=122,slow=5.1,SNR=9.9						
NOA				Sn	Sn	11 22 08.9	-4.4
	comp=Z,0.2nm,0.3s,baz=311,slow=25,SNR=5.3						
NOA				LR	LR	11 23 52.7	
	comp=Z,17nm,20.3s,baz=285,slow=39						
	comp=Z,0.7nm,0.4s						
MCD	Coleburn Disti	7.32	183	eP	Pn	11 20 50.7	+0.1
MCD				eS	Sn	11 22 08.1	-5.5
MCD				IAML		11 22 10.3	
	comp=N,24nm,0.3s						
MCD				IAML		11 22 13.3	
	comp=E,24nm,0.6s						
FAUS	Fauske	7.61	63	Pn	Pn	11 20 56.2	+1.8
FAUS				Sn	Sn	11 22 14.9	-5.8
FAUS	Fauske	7.61	63	eP	Pn	11 20 56.3	+1.8
FAUS				eS	Sn	11 22 14.9	-5.8
FAUS				IAML		11 22 23.1	
	comp=Z,22nm,0.2s						
NRA0	NORESS Array S	7.62	116	Pn	Pn	11 20 57.7	+3.0
	baz=314,slow=16						
NRA0				Sn	Sn	11 22 18.9	-2.1
	baz=308,slow=22						
NRA0	NORESS Array S	7.62	116	Pn	Pn	11 20 57.7	+3.0
	baz=314,slow=16						
NRA0				Sn	Sn	11 22 18.9	-2.1
	baz=308,slow=22						
NOD	Norderasen	7.69	93	P	Pn	11 20 58.1	+2.5
NOD				S	Sn	11 22 20.9	-1.7
NOD	Norderasen	7.69	93	P	Pn	11 20 58.1	+2.5
NOD				S	Sn	11 22 20.9	-1.7
KPL	Plockton	7.71	193	eP	Pn	11 20 55.6	-0.3
KPL				IAML		11 22 19.9	
	comp=E,9.9nm,0.5s						
KPL				IAML		11 22 20.4	
	comp=N,17nm,0.3s						
KPL	Plockton	7.71	193	eP	Pn	11 20 55.5	-0.3
KPL				eS	Sn	11 22 17.4	-5.8
STEI	Steigen	7.72	59	Pn	Pn	11 20 56.7	+0.7
STEI				Sn	Sn	11 22 16.4	-6.9
STEI	Steigen	7.72	59	eP	Pn	11 20 56.6	+0.6
STEI				eS	Sn	11 22 16.4	-6.9
STEI				IAML		11 22 21.3	
	comp=Z,24nm,0.3s						
DRUM	Mains of Drumt	7.98	180	eP	Pn	11 20 59.8	+0.2
DRUM				eS	Sn	11 22 23.3	-6.6
DRUM				IAML		11 22 29.3	
	comp=E,45nm,0.4s						
DRUM				IAML		11 22 30.0	
	comp=N,38nm,0.4s						
DRUM	Mains of Drumt	7.98	180	eP	Pn	11 20 59.9	+0.2
SNART	Snartemo	7.99	141	eP	Pn	11 21 04.9	+5.2
SNART				eS	Sn	11 22 25.1	-5.0
HOMB	Homborsund	8.42	137	eP	Pn	11 21 09.2	+3.7
HOMB				eS	Sn	11 22 34.8	-5.7
INVG	Invergeldie, C	8.51	186	eP	Pn	11 21 06.7	-0.2
INVG				IAML		11 22 40.2	
	comp=N,6.1nm,0.3s						
INVG				IAML		11 22 43.0	
	comp=E,8.3nm,0.4s						
STRU	Stroemstad	8.67	126	eP	Pn	11 21 11.4	+2.4
STRU				eS	Sn	11 22 41.8	-4.8
LAWE	Loch Awe, Argy	8.76	191	eP	Pn	11 21 10.1	-0.1
LAWE				IAML		11 22 46.3	
	comp=E,11nm,0.4s						
LAWE				IAML		11 22 48.0	
	comp=N,11nm,0.3s						
SOLU	Sollefteaa	8.78	92	P	Pn	11 21 12.9	+2.4
SOLU				S	Sn	11 22 45.4	-3.9
SOLU	Sollefteaa	8.78	92	P	Pn	11 21 12.9	+2.4
SOLU				S	Sn	11 22 45.4	-3.9
HFS	Hagfors	8.83	115	Pn	Pn	11 21 13.9	+2.7
	baz=310,slow=16						
HFS				Sn	Sn	11 22 49.2	-1.5
	baz=309,slow=28						
HFS	Hagfors	8.83	115	Pn	Pn	11 21 13.1	+1.9
	comp=N,0.5nm,0.3s,baz=304,slow=13,SNR=9.9						
HFS				Sn	Sn	11 22 49.6	-1.1
	comp=N,0.8nm,0.3s,baz=311,slow=23,SNR=6.2						
	comp=N,0.9nm,0.3s						
HFS	Hagfors	8.83	115	Pn	Pn	11 21 13.9	+2.7
	baz=310,slow=16						
HFS				Sn	Sn	11 22 49.2	-1.5
	baz=309,slow=28						
SALU	Saltoluokta	8.84	64	eP	Pn	11 21 13.8	+2.4
SALU				eS	Sn	11 22 47.5	-3.4
HASU	Hassela	8.93	99	P	Pn	11 21 15.0	+2.5
HASU				S	Sn	11 22 50.9	-2.1
HASU	Hassela	8.93	99	P	Pn	11 21 15.0	+2.5
HASU				S	Sn	11 22 50.9	-2.1
ROTU	Roteberg	8.94	104	P	Pn	11 21 16.3	+3.5
ROTU	Roteberg	8.94	104	P	Pn	11 21 16.3	+3.5
HEMU	Hemsoen	9.31	94	P	Pn	11 21 19.7	+1.9
HEMU	Hemsoen	9.31	94	P	Pn	11 21 19.7	+1.9
FALU	Falun	9.46	109	P	Pn	11 21 23.5	+3.7
FALU	Falun	9.46	109	P	Pn	11 21 23.5	+3.7
ARNU	Arnoeviken	9.46	101	P	Pn	11 21 22.6	+2.8
ARNU	Arnoeviken	9.46	101	P	Pn	11 21 22.6	+2.8
EKA	Eskdalemuir Ar	9.57	182	Pn	Pn	11 21 21.4	0.0
	comp=N,5.5nm,0.4s,baz=357,slow=12,SNR=64						
EKA				Sn	Sn	11 23 02.7	-6.2
	baz=356,slow=25						
EKB	Eskdalemuir	9.57	183	Pn	Pn	11 21 22.2	+0.8
HUSU	Husum	9.58	89	P	Pn	11 21 23.5	+2.0
HUSU	Husum	9.58	89	P	Pn	11 21 23.5	+2.0
ESK	Eskdalemuir	9.59	183	eP	Pn	11 21 21.8	+0.1
ESK	Eskdalemuir	9.59	183	eP	Pn	11 21 21.4	-0.2
ESK				eS	Sn	11 23 02.4	-6.9
IGGU	Iggoen	9.85	105	P	Pn	11 21 28.0	+2.8
IGGU	Iggoen	9.85	105	P	Pn	11 21 28.0	+2.8
KIF	Kilpisjarvi	9.97	55	Pn	Pn	11 21 28.7	+1.9
KIF				Sn	Sn	11 23 10.6	-8.1
KIF	Kilpisjarvi	9.97	55	eP	Pn	11 21 28.7	+1.9
KIF				eS	Sn	11 23 10.6	-8.1
JETT	Jettan, Norway	9.99	52	Pn	Pn	11 21 29.2	+2.2
JETT				Sn	Sn	11 23 10.8	-8.2
JETT	Jettan, Norway	9.99	52	eP	Pn	11 21 29.4	+2.3
JETT				eS	Sn	11 23 13.0	-6.0
EDMD	Edmundbyers	10.07	178	eP	Pn	11 21 28.9	+0.6
EDMD				eS	Sn	11 23 13.4	-7.8
OSTU	Oestervaala	10.14	108	P	Pn	11 21 31.8	+2.6
OSTU	Oestervaala	10.14	108	P	Pn	11 21 31.8	+2.6
ONAU	Onsala	10.19	131	eS	Sn	11 23 16.3	-7.6
BORU	Boraas	10.28	128	eP	Pn	11 21 33.8	+2.7
BORU				eS	Sn	11 23 19.5	-6.8
FIBU	Brunna	10.42	109	P	Pn	11 21 35.9	+2.9
FIBU	Brunna	10.42	109	P	Pn	11 21 35.9	+2.9
FLYU	Flymyra	10.50	107	P	Pn	11 21 36.9	+2.8
FLYU	Flymyra	10.50	107	P	Pn	11 21 36.9	+2.8
HEF	Hetta	10.90	59	Pn	Pn	11 21 39.9	+0.3
HEF				Sn	Sn	11 23 33.3	-8.0
HEF	Hetta	10.90	59	eP	Pn	11 21 40.0	+0.5
HEF				eS	Sn	11 23 31.3	-10
ARA0	ARCESS Array S	11.72	54	Pn	Pn	11 21 51.4	+0.6
	baz=257,slow=14						
ARA0	ARCESS Array S	11.72	54	Pn	Pn	11 21 51.4	+0.6
	baz=257,slow=14						
ARA0				Sn	Sn	11 23 51.2	-10
	baz=246,slow=28						
ARCES	ARCESS Array B	11.72	54	Pn	Pn	11 21 53.9	+3.1
	comp=N,0.2nm,0.3s,baz=266,slow=11,SNR=5.9						
ARCES				Sn	Sn	11 23 53.9	-7.6
	comp=N,0.2nm,0.3s,baz=248,slow=22,SNR=2.1						
ARCES				LR	LR	11 25 49.2	
	comp=N,26nm,20.7s,baz=162,slow=34						
	comp=N,5.4nm,1.0s						
FIA0	FINESS Array S	13.27	92	Pn	Pn	11 22 11.2	-0.6
	baz=307,slow=12						
FIA0	FINESS Array S	13.27	92	Pn	Pn	11 22 11.2	-0.6
	baz=307,slow=12						
FINES	FINESS Array B	13.27	92	Pn	Pn	11 22 13.2	+1.3
	comp=N,0.3nm,0.3s,baz=299,slow=12,SNR=7.3						
FINES				Sn	Sn	11 24 32.8	-6.4
	comp=N,0.2nm,0.3s,baz=164,slow=30,SNR=1.6						
	comp=N,2.0nm,0.8s						
APA0	Apatity Array	14.41	63	Pn	Pn	11 22 27.8	+0.4
	baz=270,slow=11						
APA0				Sn	Sn	11 24 55.3	-12
	baz=276,slow=28						
APA0	Apatity Array	14.41	63	Pn	Pn	11 22 27.8	+0.4
	baz=270,slow=11						
APA0				Sn	Sn	11 24 55.3	-12
	baz=276,slow=28						
SPA0	Spitsbergen Ar	14.50	15	Pn	Pn	11 22 30.9	+2.3
	baz=193,slow=16						
SPA0	Spitsbergen Ar	14.50	15	Pn	Pn	11 22 30.9	+2.3

	baz=193,slow=16						
SPITS	Spitsbergen Ar	14.50	15	Pn	Pn	11 22 30.5	+1.9
	comp=N,1.7nm,0.3s,baz=180,slow=14,SNR=28						
GERES	GERESS Array B	18.23	144	P	P	11 23 19.8	+3.0
	baz=335,slow=11,SNR=1.9						
	comp=N,0.2nm,0.4s						
VRAC	Vranov	18.58	138	LR	LR	11 32 06.5	
	comp=N,37nm,18.1s,baz=329,slow=42						
DAVOX	Davos/Dischmat	19.34	154	LR	LR	11 32 04.3	
	comp=N,24nm,18.2s,baz=80,slow=40						
AKASG	Malin Array Be	21.72	116	P	P	11 23 57.9	+3.2
	comp=N,0.8nm,0.5s,baz=324,slow=11,SNR=2.2						
	comp=N,0.8nm,0.5s						
ESDC	Sonseca Array	25.25	183	P	P	11 24 32.2	+2.5
	comp=N,0.6nm,0.7s,baz=357,slow=9.1,SNR=5.0						
	comp=N,0.6nm,0.7s						
BVAR	Borovoye Array	37.17	73	P	P	11 26 17.1	+2.7
	comp=N,1.7nm,0.6s,baz=328,slow=10,SNR=7.1						
	comp=N,1.7nm,0.6s						
KURBB	Kurchatov Arra	42.29	69	P	P	11 26 58.9	+2.0
	comp=N,0.5nm,0.4s,baz=318,slow=6.9,SNR=7.9						
	comp=N,0.5nm,0.4s						
YKA	Yellowknife Ar	43.45	321	P	P	11 27 04.8	-1.3
	comp=N,0.3nm,0.6s,baz=38,slow=8.6,SNR=3.6						
	comp=N,0.3nm,0.6s						
MKAR	Makanchi Array	46.85	70	P	P	11 27 36.6	+3.2
	comp=N,0.6nm,0.6s,baz=350,slow=7.1,SNR=7.7						
	comp=N,0.6nm,0.6s						
ILAR	Eielson Array	48.08	340	P	P	11 27 43.6	+0.8
	comp=N,0.5nm,1.0s,baz=15,slow=8.5,SNR=5.8						
	comp=N,0.5nm,1.0s						
TORD	Torodi Ar. Bea	51.73	175	P	P	11 28 12.8	+1.8
	comp=N,0.9nm,0.4s,baz=343,slow=9.6,SNR=1.9						
	comp=N,0.9nm,0.4s						
TXAR	Lajitas Array	68.40	293	P	P	11 30 06.1	+0.7
	comp=N,0.1nm,0.4s,baz=49,slow=7.4,SNR=1.4						
	comp=N,0.1nm,0.4s						

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*ISN **28** 11:20:05.7±2.4, 34°.56N×46°.09E, h10^{km}, ML2.9*

*TEH **28** 11:20:05.8, 34°.57N×46°.07E, h10^{km}±161^{km}*

ISC 28 11:20:05.8±1.1, **34°.59N**±0°.07×**46°.06E**±0°.05, **h10**^{km}, **n5**, **σ0^{s}69**/7, **Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDHR	Dehrash	0.30	67	Pg	Pg	11 20 11.7	-0.2
IDHR				Sg	Sg	11 20 16.8	+0.9
GLG1	Gilan-e-Gharb	0.48	194	Pg	Pg	11 20 15.3	0.0
IGHG	Ghaleghazi	0.49	121	Pg	Pg	11 20 15.5	0.0
ILIN	Lien	0.82	66	Pg	Pb	11 20 22.1	-0.1
IKRK	Kirkuk	1.63	300	ePg	Pn	11 20 34.0	-0.5
	baz=120						
IKRK				eSg	Sg	11 20 59.0	+0.9
IKRK				AML	AML	11 21 02.6	
	comp=N,224nm,0.3s						
IKRK				AML	AML	11 21 02.9	
	comp=E,131nm,0.3s						

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*IDC **28** 11:30:21.4±0.7, 55°.88N×162°.77E, h0^{km}, mb3.8/16, mbtmp3.8/17, ML2.7/2, MS3.0/7, Error ellipse: s-maj=21.9km s-min=14.0km az=147.0*

*MOS **28** 11:30:22.1±0.8, 55°.49N×163°.34E, h13^{km}, mb4.0/9, Error ellipse: s-maj=7.1km s-min=5.6km az=76.5*

*NEIC **28** 11:30:23.4±1.2, 55°.0N±0°.2×163°.92E±0°.08, h10^{km}±2^{km}, mb4.1/61, Error ellipse: s-maj=30.4km s-min=3.2km az=166.0*

*KRSC **28** 11:30:23.2±0.9, 55°.41N×163°.25E, h22^{km}±34^{km}, Ml4.4*

ISC 28 11:30:25.0±1.1, **55°.50N**±0°.03×**163°.26E**±0°.03, **h29**^{km}±8^{km}, **n175**, σ**1^{s}67**/178, **mb4.0**/47, **MS3.1**/4, **1D**, **Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.75	341	PN	Pb	11 30 38.9	-0.6
KBTR				S	Sn	11 30 50.4	+0.4
KBTR	Krutoberegovo	0.75	341	eP	Pb	11 30 38.9	-0.6
KBTR				eS	Sn	11 30 50.5	+0.4
KBG	Krutoberegovo	0.82	338	PN	Pb	11 30 39.8	-0.8
KBG				S	Sn	11 30 52.1	+0.5
KBG	Krutoberegovo	0.82	338	eP	Pb	11 30 39.8	-0.8
KBG				eS	Sn	11 30 52.1	+0.5
MKZ	Mys Kozlova	1.29	223	PN	Pn	11 30 46.0	-1.0
MKZ				S	Sn	11 31 02.6	-0.6
MKZ	Mys Kozlova	1.29	223	eP	Pn	11 30 46.0	-1.0
MKZ				eS	Sn	11 31 02.7	-0.6
SMKR	Semkarok	1.48	318	PN	Pn	11 30 50.3	+0.6
SMKR	Semkarok	1.48	318	eP	Pn	11 30 50.3	+0.6
ZLN	Zelenaya	1.48	292	PN	Pn	11 30 49.6	-0.1
ZLN	Zelenaya	1.48	292	eP	Pn	11 30 49.7	-0.1
BZGR	Bezymyannyi-Gr	1.51	288	PN	Pn	11 30 49.7	-0.4
BZGR				S	Sb	11 31 11.2	0.0
BZGR	Bezymyannyi-Gr	1.51	288	eP	Pn	11 30 49.8	-0.4
BZGR				eS	Sb	11 31 11.3	0.0
CIRR	Tsirk	1.54	295	PN	Pb	11 30 52.0	-1.0
CIRR	Tsirk	1.54	295	eP	Pb	11 30 52.0	-1.0
LGNR	Loginova	1.56	293	PN	Pn	11 30 50.3	-0.7
LGNR	Loginova	1.56	293	eP	Pn	11 30 50.4	-0.7
BKI	Bering	1.58	100	PN	Pb	11 30 52.1	-1.3
BKI				S	Sb	11 31 13.6	+0.6
BKI	Bering	1.58	100	eP	Pb	11 30 52.2	-1.3
BKI				eS	Sb	11 31 13.7	+0.6
BZMR	Bezymyannaya	1.62	287	PN	Pn	11 30 51.5	-0.2
BZMR	Bezymyannaya	1.62	287	eP	Pn	11 30 51.6	-0.2
BZWR	Bezymyannyi-We	1.63	288	PN	Pn	11 30 51.8	0.0
BZWR	Bezymyannyi-We	1.63	288	eP	Pn	11 30 51.8	0.0
TUMD	Tumrok D	1.66	261	PN	Pn	11 30 51.8	-0.3
TUMD				S	Sn	11 31 13.4	+1.0
TUMD	Tumrok D	1.66	261	eP	Pn	11 30 51.8	-0.3
TUMD				eS	Sn	11 31 13.4	+1.0
KLY	Klyuchi	1.68	300	PN	Pn	11 30 50.5	-1.8
KLY	Klyuchi	1.68	300	eP	Pn	11 30 50.5	-1.8
KRSR	Krestovskiy	1.68	296	PN	Pn	11 30 52.0	-0.4
KRSR	Krestovskiy	1.68	296	eP	Pn	11 30 52.0	-0.4
KIRR	Kirishev	1.71	287	PN	Pn	11 30 52.9	0.0
KIRR				S	Sb	11 31 16.6	-0.3
KIRR	Kirishev	1.71	287	eP	Pn	11 30 53.0	0.0
KIRR				eS	Sb	11 31 16.6	-0.3
KMNR	Kamenistaya	1.73	280	PN	Pn	11 30 53.3	+0.2
KMNR				S	Sb	11 31 19.1	+1.7
KMNR	Kamenistaya	1.73	280	eP	Pn	11 30 53.4	+0.2
KMNR				eS	Sb	11 31 19.2	+1.7
KPT	Kopyto	1.78	286	PN	Pn	11 30 54.2	+0.4
KPT	Kopyto	1.78	286	eP	Pn	11 30 54.3	+0.4
KOZ	Kozyrevsk	1.99	288	PN	Pn	11 30 57.8	+1.2
KOZ				S	Sb	11 31 24.0	-0.8
KOZ	Kozyrevsk	1.99	288	eP	Pn	11 30 57.9	+1.2
KOZ				eS	Sb	11 31 24.1	-0.8
SRDR	Sredinnyy	2.15	294	PN	Pn	11 31 00.2	+1.3
SRDR	Sredinnyy	2.15	294	eP	Pn	11 31 00.2	+1.3
KII	Karymskiy	2.65	238	PN	Pn	11 31 06.7	+1.0
KII	Karymskiy	2.65	238	eP	Pn	11 31 06.8	+1.0
SPN	Mys Shipunski	3.06	220	PN	Pn	11 31 10.4	-0.9
SPN	Mys Shipunski	3.06	220	eP	Pn	11 31 10.4	-0.9
SPN				eS	Sn	11 31 46.0	-1.0
NLC	Nalytchevo	3.27	226	PN	Pn	11 31 15.0	+0.8
NLC	Nalytchevo	3.27	226	eP	Pn	11 31 15.0	+0.8
SDLR	Sedlovina	3.39	231	PN	Pn	11 31 17.1	+1.2
SDLR	Sedlovina	3.39	231	eP	Pn	11 31 17.1	+1.2
KRER	Koryakskii	3.43	232	PN	Pn	11 31 18.1	+1.5
KRER	Koryakskii	3.43	232	eP	Pn	11 31 18.1	+1.5
SMAR	Somma	3.44	231	PN	Pn	11 31 17.7	+1.0
SMAR	Somma	3.44	231	eP	Pn	11 31 17.8	+1.0
KRX	Arik	3.44	233	PN	Pn	11 31 17.6	+0.9
KRX	Arik	3.44	233	eP	Pn	11 31 17.7	+0.9
PET	Petropavlovsk	3.67	229		Pn	11 31 20.9	+1.2
PET	Petropavlovsk	3.67	229	ePN	Pn	11 31 20.8	+1.2
PET				pmax	pmax		
	comp=Z,75nm,0.5s						
PET				MLR	MLR		
	comp=Z,400nm,10.0s						
PET				MLR	MLR		
	comp=Z,200nm,11.0s						
OSSR	Ossora	3.76	358	PN	Pn	11 31 22.5	+1.6
OSSR	Ossora	3.76	358	eP	Pn	11 31 22.5	+1.6
PEA0B	Petropavlovsk-	4.04	236		Pn	11 31 25.9	+1.1
PEA0B	Petropavlovsk-	4.04	236	PN	Pn	11 31 25.9	+1.1
PETK	Petropavlovsk-	4.04	236		Pn	11 31 26.4	+1.6
PETK	Petropavlovsk-	4.04	236	Pn	Pn	11 31 25.0	+0.2
	comp=Z,0.9nm,0.3s,baz=74,slow=29,SNR=22						
PETK				Sn	Sn	11 32 12.6	+1.4
	comp=Z,1.3nm,0.3s,baz=22,slow=16,SNR=4.0						
PETK				LR	LR	11 32 50.8	
	comp=Z,38nm,20.2s,baz=104,slow=37						
PETK	Petropavlovsk-	4.04	236	PN	Pn	11 31 25.0	+0.2
GRL	Gorelyy	4.25	228	PN	Pn	11 31 30.4	+2.6
GRL	Gorelyy	4.25	228	eP	Pn	11 31 30.4	+2.6
MTVR	Mutnovka	4.25	227	PN	Pn	11 31 29.0	+1.2
MTVR	Mutnovka	4.25	227	eP	Pn	11 31 29.1	+1.2
ASAK	Asacha	4.45	228	PN	Pn	11 31 32.7	+2.3
ASAK	Asacha	4.45	228	eP	Pn	11 31 32.8	+2.3
MA2	Magadan	7.86	306	LR	LR	11 35 43.0	
	comp=Z,166nm,18.2s,baz=149,slow=43						
SEY	Seymchan	9.29	328	LR	LR	11 36 20.3	
	comp=Z,97nm,20.9s,baz=178,slow=41						
ADK	Adak	12.42	99	Pn	Pn	11 33 12.7	-6.8
ADK	Adak	12.42	99	PN	Pn	11 33 12.7	-6.9
BILL	Bilibino	12.66	5	i PN	Pn	11 33 23.5	+0.7
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ASAJ	Asahikawa	17.46	238	P	Pn	11 34 25.7	-0.4
	comp=Z,0.1nm,0.3s,baz=208,slow=30,SNR=2.3						
	comp=Z,3.7nm,1.0s						
AKUT	Akutan	17.83	82		Pn	11 34 27.2	-3.4
YAK	Yakutsk	18.43	304	P	Pn	11 34 45.3	+7.4
YAK	Yakutsk	18.43	304	LR	LR	11 42 12.2	
	comp=Z,72nm,19.1s,baz=96,slow=40						
F15K	North Star Dit	18.54	44	P	Pn	11 34 40.4	+1.2
ERM	Erimo	18.82	233	P	Pn	11 34 42.6	-0.1
ERM	Erimo	18.82	233	P	Pn	11 34 42.6	-0.1
ERM				pmax	pmax		
	comp=Z,40nm,1.2s						
M14K	Bethel	18.94	60	P	P	11 34 43.3	0.0
M14K				IAmb	IAmb	11 35 00.8	
	comp=Z,8.9nm,0.9s						
K15K	Wolf Creek Mou	19.22	55	P	Pn	11 34 46.9	-0.6
K15K				IAmb	IAmb	11 34 58.3	
	comp=Z,16nm,1.4s						
C16K	Lisburne Hills	19.26	36	P	Pn	11 34 49.3	+1.5
C16K				IAmb	IAmb	11 35 17.1	
	comp=Z,20nm,1.4s						
N15K	Kwethluk River	19.88	61	P	P	11 34 52.8	-0.8
N15K				IAmb	IAmb	11 34 58.3	
	comp=Z,11nm,0.9s						
F17K	Baldwin Pennin	20.08	43	P	Pn	11 34 58.3	+0.7
O15K	Ungalikthiuk R	20.09	64	P	P	11 34 54.8	-1.1
KLR	Kul'dur	20.11	265	LR	LR	11 43 43.4	
	comp=Z,127nm,18.3s,baz=80,slow=40						
KLR	Kul'dur	20.11	265	i P	P	11 34 54.6	-1.6
KLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
L16K	Owhat River	20.16	57	P	P	11 34 56.8	+0.2
L16K				IAmb	IAmb	11 35 11.9	
	comp=Z,4.2nm,0.7s						
M16K	Timber Creek	20.41	59	P	P	11 34 59.4	+0.1
M16K				IAmb	IAmb	11 35 30.6	
	comp=Z,12nm,1.4s						
J17K	VABM Dome	20.44	52	P	Pn	11 35 01.1	-0.7
J17K				IAmb	IAmb	11 35 22.2	
	comp=Z,8.3nm,1.5s						
K17K	Iditarod	20.74	54	P	P	11 35 03.8	+0.9
K17K				IAmb	IAmb	11 35 07.1	
	comp=Z,5.7nm,0.9s						
C18K	Utukok River	20.81	37	P	Pn	11 35 06.5	+0.3
C18K				IAmb	IAmb	11 35 17.0	
	comp=Z,15nm,1.4s						
G18K	Tagagawik	20.98	45	P	Pn	11 35 07.5	-0.6
C19K	Lookout Ridge	21.52	36	P	P	11 35 13.3	+2.0
C19K				IAmb	IAmb	11 35 17.2	
	comp=Z,11nm,1.2s						
F19K	Shaleruckik Mo	21.52	43		P	11 35 13.7	+2.5
TIXI	Tiksi	21.76	331	P	P	11 35 18.0	+4.3
TIXI	Tiksi	21.76	331	P	P	11 35 08.0	-5.7
	comp=Z,2.0nm,0.3s,baz=62,slow=1.9,SNR=3.0						
TIXI				LR	LR	11 44 29.2	
	comp=Z,50nm,19.3s,baz=188,slow=40						
	comp=Z,2.0nm,0.3s						
TIXI	Tiksi	21.76	331	P	P	11 35 18.0	+4.3
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
H19K	Roundabout Mou	21.82	46	P	P	11 35 15.2	+0.8
D19K	Kuna River	21.83	38	P	P	11 35 17.6	+3.0
D19K				IAmb	IAmb	11 35 20.8	
	comp=Z,6.7nm,1.1s						
E19K	Redstone River	21.87	41		P	11 35 17.0	+2.0
D20K	Etivluk River	22.42	38	P	P	11 35 23.1	+2.2
D20K				IAmb	IAmb	11 35 25.9	
	comp=Z,4.6nm,0.9s						
N19K	Bonanza Creek	22.60	59	P	P	11 35 22.2	-0.8
N19K				IAmb	IAmb	11 35 25.4	
	comp=Z,4.7nm,1.1s						
B20K	Meade River	22.63	35	P	P	11 35 24.7	+1.6
J20K	Nowinta River	22.67	50	P	P	11 35 25.1	+1.5
K20K	Telida	22.69	52	P	P	11 35 25.3	+1.6
USRK	Ussuriysk Ar.	22.91	254	P	P	11 35 27.9	+1.7
USRK	Ussuriysk Ar.	22.91	254	P	P	11 35 27.9	+1.7
IMAR	Indian Mountai	22.98	46	P	P	11 35 27.0	+0.2
G21K	Allakaket	23.14	44	P	P	11 35 28.6	+0.2
G21K				IAmb	IAmb	11 35 32.3	
	comp=Z,10nm,1.4s						
F21K	Alatna River	23.25	43	P	P	11 35 29.9	+0.3
Q19K	Cape Douglas,	23.28	64	P	P	11 35 29.6	-0.3
E21K	Killik River	23.30	39	P	P	11 35 32.5	+2.6
H21K	Melozitna Rive	23.34	47	P	P	11 35 32.4	+2.0
B21K	Ikpikpuk River	23.36	36		P	11 35 32.6	+2.1
P19K	Oil Pt	23.37	62	P	P	11 35 28.7	-2.0
CAST	Castle Rocks	23.58	52	P	P	11 35 33.5	+0.7
I21K	Tanana	23.65	48	P	P	11 35 35.0	+1.6
VLA	Vladivostok	23.68	252	i P	P	11 35 30.5	-3.3
D22K	Ayikyak River	23.85	39	P	P	11 35 37.8	+2.5
E22K	Anaktuvuk Pass	24.03	41	P	P	11 35 39.1	+2.1
E22K				IAmb	IAmb	11 35 40.2	
	comp=Z,4.6nm,0.9s						
BPAW	Bear Paw Mtn.	24.06	51	P	P	11 35 38.2	+0.9
BPAW				IAmb	IAmb	11 35 56.2	
	comp=Z,6.9nm,1.3s						
KDAK	Kodiak Island	24.07	66	P	P	11 35 38.0	+0.7
KDAK	Kodiak Island	24.07	66	P	P	11 35 38.1	+0.7
KDAK				pmax	pmax		
	comp=Z,29nm,1.5s						
SUA	Susitna One	24.34	57	P	P	11 35 39.6	-0.4
SUA				IAmb	IAmb	11 35 44.8	
	comp=Z,5.4nm,0.9s						
COLD	Coldfoot	24.52	43	P	P	11 35 43.0	+1.6
COLD				IAmb	IAmb	11 35 46.5	
	comp=Z,3.6nm,0.9s						
D23K	Nanushuk River	24.58	39	P	P	11 35 45.3	+3.3
D23K				IAmb	IAmb	11 35 45.3	
	comp=Z,4.2nm,1.0s						
H23K	Yukon River	24.69	46	P	P	11 35 45.3	+2.3
H23K				IAmb	IAmb	11 35 47.8	
	comp=Z,3.5nm,1.1s						
I23K	Minto, Yukon-K	24.75	48	P	P	11 35 45.9	+2.3
I23K				IAmb	IAmb	11 36 00.9	
	comp=Z,6.8nm,1.5s						
C23K	Itkillik River	24.76	37	P	P	11 35 46.1	+2.5
E23K	Chandalar	24.83	41	P	P	11 35 46.3	+1.9
E23K				IAmb	IAmb	11 35 48.1	
	comp=Z,3.8nm,0.8s						
TOLK	Toolik Lake Re	24.92	40		P	11 35 47.1	+2.0
E24K	Your Creek	25.25	41	P	P	11 35 50.2	+2.0
E24K				IAmb	IAmb	11 35 52.0	
	comp=Z,5.1nm,0.8s						
D24K	Happy Valley	25.27	38	P	P	11 35 50.5	+2.3
D24K				IAmb	IAmb	11 35 51.7	
	comp=Z,3.3nm,0.8s						
WRH	Wood River Hil	25.31	50	P	P	11 35 50.3	+1.7
WRH				IAmb	IAmb	11 36 08.1	
	comp=Z,6.1nm,1.2s						
CCB	Clear Creek Bu	25.43	49	P	P	11 35 51.6	+2.0
CCB				IAmb	IAmb	11 36 10.1	
	comp=Z,2.5nm,1.0s						
MJAR	Matsushiro Arr	25.49	232	P	P	11 35 51.6	+1.1
	comp=Z,1.3nm,0.4s,baz=186,slow=19,SNR=4.9						
MJAR				LR	LR	11 45 24.2	
	comp=Z,36nm,21.5s,baz=16,slow=35						
	comp=Z,1.3nm,0.4s						
G24K	Hadweenzic Riv	25.56	44		P	11 35 52.9	+2.0
G24K				IAmb	IAmb	11 35 55.0	
	comp=Z,5.7nm,0.9s						
PWL	Port Wells	25.58	58	P	P	11 35 51.3	+0.2
PWL				IAmb	IAmb	11 35 54.9	
	comp=Z,4.3nm,0.8s						
ILAR	Eielson Array	25.82	49	P	P	11 35 52.7	-0.5
	comp=Z,0.5nm,0.7s,baz=267,slow=9.2,SNR=8.7						
	comp=Z,0.5nm,0.7s						
D25K	Kavik River	26.15	38	P	P	11 35 58.7	+2.4
E25K	Arctic Village	26.35	41	IAmb	IAmb	11 36 01.7	
	comp=Z,5.4nm,1.1s						
ULN	Ulaanbaatar	34.80	281	i P	P	11 37 08.5	-4.5
ULN				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WTLY	Watson Lake, Y	35.04	54	P	P	11 37 15.9	+1.2
WTLY				IAmb	IAmb	11 37 45.2	
	comp=Z,3.6nm,1.1s						
NRIK	Noril'sk	35.05	323	i P	P	11 37 12.4	-2.2
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SONM	Songino Array	35.19	282	P	P	11 37 21.0	+4.8
SONM				IAmb	IAmb	11 37 31.9	
	comp=Z,2.2nm,1.4s						
SONM	Songino Array	35.19	282	P	P	11 37 21.0	+4.8
SONM				pmax	pmax		
	comp=Z,2.0nm,1.4s						
H11N2	WAKE ISLAND Hy	35.82	174	T	T	12 16 22.0	
	baz=357,slow=76,SNR=51						
H11N3	WAKE ISLAND Hy	35.83	174	T	T	12 16 26.2	
	baz=357,slow=76,SNR=7.2						
H11N1	WAKE ISLAND Hy	35.83	174	T	T	12 16 24.6	
	baz=357,slow=76,SNR=43						
HHC	Hu-ho-hao-te	36.55	268	eP	P	11 37 32.3	+4.4
HHC				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,60nm,5.4s						
YKA	Yellowknife Ar	40.14	46	P	P	11 37 57.6	-0.1
	comp=Z,1.1nm,0.8s,baz=303,slow=8.4,SNR=7.3						
	comp=Z,1.1nm,0.8s						
BLKN	Baker Lake	46.06	36	P	P	11 38 46.5	+1.0
KURK	Kurchatov	48.04	302	i P	P	11 39 01.1	0.0
KURK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
KURBB	Kurchatov Arra	48.14	302	P	P	11 39 00.8	-1.1
	comp=Z,0.4nm,0.5s,baz=55,slow=7.9,SNR=4.4						
	comp=Z,0.4nm,0.5s						
MKAR	Makanchi Array	48.78	296	P	P	11 39 03.9	-3.1
	comp=Z,0.1nm,0.4s,baz=48,slow=7.5,SNR=1.9						
	comp=Z,0.1nm,0.4s						
BRVK	Borovoye	50.37	308	i P	P	11 39 16.5	-2.4
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
PZH	PanZhiHua	52.54	263	P	P	11 39 41.3	+5.6
NVAR	Mina Array Bea	53.23	74	P	P	11 39 42.6	+1.9
	comp=Z,1.4nm,0.8s,baz=305,slow=7.9,SNR=7.0						
	comp=Z,1.4nm,0.8s						
PDAR	Pinedale Array	54.77	64	P	P	11 39 52.9	+1.0
	comp=Z,1.0nm,0.8s,baz=336,slow=3.3,SNR=7.7						
	comp=Z,1.0nm,0.8s						
AAK	Ala-Archa	55.66	297	i P	P	11 39 55.1	-3.2
AAK				pmax	pmax		
	comp=Z,1.0nm,1.2s						
ULM	Lac du Bonnet	55.83	50	P	P	11 39 59.5	+0.3
	comp=Z,0.9nm,0.4s,baz=318,slow=11,SNR=3.3						
	comp=Z,0.9nm,0.4s						
CMAR	Chiang Mai Arr	60.47	259	i P	P	11 40 30.3	-1.7
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
OBN	Obninsk	61.46	328⇓	eP	P	11 40 36.0	-2.2
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,40nm,18.0s						
ANMO	Albuquerque	62.19	68	i P	P	11 40 43.5	-0.2
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.0s						
HFS	Hagfors	62.20	343	P	P	11 40 40.3	-2.8
	comp=Z,2.7nm,1.1s,baz=354,slow=8.7,SNR=2.0						
	comp=Z,2.7nm,1.1s						
AKASG	Malin Array Be	67.47	330	P	P	11 41 16.3	-1.2
	comp=Z,0.2nm,0.3s,baz=34,slow=6.6,SNR=4.2						
	comp=Z,0.2nm,0.3s						
TXAR	Lajitas Array	68.03	70	P	P	11 41 24.4	+2.9
	comp=Z,1.1nm,0.7s,baz=298,slow=4.1,SNR=12						
	comp=Z,1.1nm,0.7s						
EKA	Eskdalemuir Ar	68.97	352	P	P	11 41 25.4	-1.5
	comp=Z,1.1nm,0.7s,baz=351,slow=7.4,SNR=2.3						
	comp=Z,1.1nm,0.7s						
KBZ	Khabaz	69.02	318	i P	P	11 41 24.7	-2.7
KBZ				pmax	pmax		
	comp=Z,2.0nm,1.1s						
WRA	Warramunga Arr	79.06	208	P	P	11 42 27.0	+0.8
	comp=Z,0.5nm,1.1s,baz=15,slow=5.3,SNR=1.6						
	comp=Z,0.5nm,1.1s						
WRA	Warramunga Arr	79.06	208	P	P	11 42 27.0	+0.8
ASAR	Alice Springs	82.73	207	P	P	11 42 47.0	+1.3
	comp=Z,0.8nm,1.0s,baz=209,slow=25,SNR=4.5						
	comp=Z,0.8nm,1.0s						
ESDC	Sonseca Array	84.57	350	P	P	11 42 53.9	-1.3
	comp=Z,0.7nm,0.9s,baz=27,slow=4.2,SNR=4.8						
	comp=Z,0.7nm,0.9s						
QSPA	South Pole Qui	145.25	180	PKPbc	PKiKP	11 50 01.6	-0.5
	comp=Z,2.0nm,1.1s,baz=168,slow=1.4,SNR=5.3						

CATAC 28 11:36:21.3±0.5, **13˚N**±4˚×**8˚9W**±˚, **h68**^{km}±4^{km}, **M2.9**/12, **MLv2.9**/12, **Error ellipse: s-maj=9.8km s-min=4.4km az=13.9, confirmed, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALJI	Alcalda de J	0.26	40	P	Pn	11 36 32.3	+0.3
ALJI	Alcalda de J	0.26	40	S	Sn	11 36 42.1	+2.3
TECO	Alcaldia de Te	0.41	354	P	Pn	11 36 34.1	+0.9
TECO	Alcaldia de Te	0.41	354	S	Sn	11 36 44.3	+2.4
COEG	Centro de Oper	0.51	344	P	Pn	11 36 35.3	+1.1
COEG	Centro de Oper	0.51	344	S	Sn	11 36 46.7	+3.1
UESV	Universidad de	0.51	355	P	Pn	11 36 35.5	+1.3
UESV	Universidad de	0.51	355	S	Sn	11 36 47.2	+3.8
PQSS	Presa 15 de Se	0.52	19	P	Pn	11 36 35.8	+1.6
PQSS	Presa 15 de Se	0.52	19	S	Sn	11 36 47.9	+4.3
PACA	Pacayal	0.53	50	P	Pn	11 36 35.4	+1.0
PACA	Pacayal	0.53	50	S	Sn	11 36 46.5	+2.6
SCLA	Alcaldia de Sa	0.57	1	P	Pn	11 36 37.0	+2.3
SCLA	Alcaldia de Sa	0.57	1	S	Sn	11 36 49.0	+4.4
LOMA	Loma Larga	0.66	321	P	Pn	11 36 36.1	+0.2
LOMA	Loma Larga	0.66	321	S	Sn	11 36 49.0	+2.5
LALI	Alcalda de L	0.67	302	P	Pn	11 36 33.5	-2.2
LALI	Alcalda de L	0.67	302	S	Sn	11 36 46.9	+0.5
PMON	Piamonte	0.81	316	P	Pn	11 36 38.2	+0.7
PMON	Piamonte	0.81	316	S	Sn	11 36 52.2	+2.8
LCND	La Caada	0.84	78	P	Pn	11 36 38.0	+0.2
LCND	La Caada	0.84	78	S	Sn	11 36 51.4	+1.4
CNCH	Conchagua	0.89	81	P	Pn	11 36 38.7	+0.2
CNCH	Conchagua	0.89	81	S	Sn	11 36 53.2	+1.9
NUBE	Las Nubes	1.27	307	P	Pn	11 36 44.1	+0.8
NUBE	Las Nubes	1.27	307	S	Sn	11 37 02.4	+2.5
CHOHN	Orocuina	1.58	77	P	Pn	11 36 47.3	0.0
SARH	Santa Rosa de	1.64	359	P	Pn	11 36 51.3	+3.2
SARH	Santa Rosa de	1.64	359	S	Sn	11 37 04.4	-4.0
PKGN	Cerro Pekin	1.78	105	P	Pn	11 36 49.0	-1.0
YUSH	Yuscaran	2.02	66	P	Pn	11 36 54.3	+1.1
YUSH	Yuscaran	2.02	66	S	Sn	11 37 17.8	+0.2

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*SKHL **28** 11:38:37.5±0.8, 43°.30N×138°.00E, h238^{km}±11^{km}, mb5.0/5, mbv4.6/4, msh4.7/5, msha5.6/6*

*JMA **28** 11:38:39.8±0.4, 43˚N±1˚×13˚8E±˚, h275^{km}±3^{km}, MV2.9/30, EASTERN SEA OF JAPAN*

*IDC **28** 11:38:39.0±0.8, 43°.25N×138°.06E, h259^{km}±8^{km}, mb3.2/13, mbtmp3.8/19, Error ellipse: s-maj=12.6km s-min=9.9km az=143.0*

ISC 28 11:38:38.2±0.6, **43°.25N**±0°.05×**138°.00E**±0°.05, **h250**^{km}, **n61**, σ**1^{s}90**/79, **mb3.6**/13, **Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOSM	Okushiri--Mats	1.60	137	eP	Pn	11 39 20.2	+2.9
JHST	Hiyamasetana	1.61	120	eP	Pn	11 39 20.4	+3.0
JSH	Shimam	1.62	111	P	Pn	11 39 20.2	+2.8
JSK	Shakotan	1.81	86	P	Pn	11 39 21.4	+2.5
TEY	Ternei	2.05	331	eP	Pn	11 39 20.0	-1.0
TEY				AMB	AMB	11 39 20.6	
	30nm,0.3s						
TEY				eS	S	11 39 53.8	-1.0
TEY				A	A	11 39 55.7	
	290nm,2.0s						
TEY				A	A	11 39 55.7	
	220nm,2.0s						
TEY				A	A	11 39 55.8	
	50nm,0.5s						
TEY				A	A	11 39 55.8	

	30nm,0.5s						
JOMM	Oshimamatsumae	2.28	139	P	Pn	11 39 25.9	+2.5
JOMM				eS	S	11 40 02.1	+3.2
JHR	Hokuryu	2.75	79	P	Pn	11 39 30.5	+2.5
JSS	Shosan	3.01	66	P	Pn	11 39 33.3	+2.5
JRBN	Rebuntou	3.09	44	P	Pn	11 39 33.5	+2.0
JTM	Tenmabayashi	3.36	136	P	Pn	11 39 35.8	+1.1
ASAJ	Asahikawa	3.44	74	P	Pn	11 39 37.0	+1.5
	28nm,0.6s,baz=254,slow=9.1,SNR=71						
ASAJ				S	S	11 40 21.9	+1.0
	21nm,0.8s,baz=353,slow=31,SNR=7.6						
JWK2	Keihoku	3.48	52	P	Pn	11 39 38.9	+3.0
JWK2				eS	S	11 40 23.6	+2.0
JKK2	Kamakawa 2	3.50	78	P	Pn	11 39 38.2	+2.0
JKK2				S	S	11 40 24.2	+1.9
JNBK	Urakawa-nobuka	3.63	104	eP	Pn	11 39 39.4	+1.6
JNBK				eS	S	11 40 25.7	+0.8
JSE	Soyaes	3.71	61	P	Pn	11 39 40.7	+2.1
JSE				S	S	11 40 28.3	+1.8
JANG	Nango	3.90	136	eS	S	11 40 28.9	-1.7
JCH	Churui	3.99	97	P	Pn	11 39 41.6	-0.2
JCH				S	S	11 40 29.2	-3.1
ERM	Erimo	4.00	106	P	Pn	11 39 43.5	+1.5
JEM	Erimo	4.00	106	P	Pn	11 39 43.6	+1.6
JAR	Ashorobuto	4.21	87	P	Pn	11 39 45.7	+1.2
JAR				S	S	11 40 36.0	-1.1
JTKR	Abashiri--Toko	4.35	78	P	Pn	11 39 47.4	+1.3
JTKR				eS	S	11 40 40.0	0.0
USRK	Ussuriysk Ar.	4.46	284	P	Pn	11 39 49.1	+1.8
	31nm,0.6s,baz=90,slow=13,SNR=98						
JOM	Ohasama	4.52	146	eS	S	11 40 42.1	-1.8
JYK	Kaneyama	4.68	157	P	Pn	11 39 51.6	+1.4
JYK				eS	S	11 40 47.1	-0.4
JAK	Akkeshi	4.91	91	P	Pn	11 39 52.5	-0.3
JAK				eS	S	11 40 48.0	-4.2
JMK	Ichinoseki	4.94	149	P	Pn	11 39 54.1	+0.9
YSS	Yuzhno-Sakhali	5.00	41	eP	Pn	11 39 55.3	+1.4
YSS				AMB	AMB	11 39 56.7	
	100nm,3.1s						
YSS				AMB	AMB	11 39 56.8	
	900nm,0.6s						
YSS				eS	S	11 40 55.4	+1.2
YSS				A	A	11 40 57.2	
	100nm,2.0s						
YSS				A	A	11 40 57.2	
	100nm,2.0s						
YSS				A	A	11 40 57.3	
	200nm,1.3s						
YSS				A	A	11 40 57.3	
	200nm,1.3s						
AKK	Akkeshi	5.01	90	eP	Pn	11 39 53.3	-0.8
JSD	Sado	5.21	178	P	Pn	11 39 59.3	+2.6
GLVR	Golovnino	5.49	82	eP	Pn	11 40 00.7	+0.8
GLVR				eS	S	11 41 03.2	-2.0
GLVR				A	A	11 41 14.0	
	140nm,0.1s						
GLVR				A	A	11 41 14.0	
	100nm,0.1s						
NMR	Nemuro--Hokkai	5.64	86	iP	Pn	11 40 00.7	-1.1
NEM2	Nemuro 2	5.65	86	S	S	11 41 03.2	-5.6
YUK	Yuzh-Kuril'sk	5.76	80	eP	Pn	11 40 03.9	+0.7
YUK				AMB	AMB	11 40 04.6	
	250nm,2.0s						
YUK				AMB	AMB	11 40 05.0	
	570nm,0.4s						
YUK				eS	S	11 41 10.6	-0.6
YUK				A	A	11 41 13.5	
	760nm,2.5s						
YUK				A	A	11 41 13.5	
	610nm,2.5s						
YUK				A	A	11 41 15.3	
	940nm,0.3s						
YUK				A	A	11 41 15.3	
	360nm,0.3s						
JMM	Marumori	5.79	158	P	Pn	11 40 04.1	+0.4
JMM	Marumori	5.79	158	S	S	11 41 08.1	-3.9
SHO	Shikotan	6.45	81	eP	Pn	11 40 12.2	+0.4
SHO				AMB	AMB	11 40 14.2	
	20nm,0.4s						
SHO				AMB	AMB	11 40 15.5	
	140nm,2.5s						
SHO				eS	S	11 41 21.6	-5.2
SHO				A	A	11 41 23.3	
	140nm,0.4s						
SHO				A	A	11 41 23.3	
	150nm,0.4s						
SHO				A	A	11 41 23.9	
	330nm,3.0s						
SHO				A	A	11 41 23.9	
	210nm,3.0s						
UGL	Uglegorsk	6.47	24	eP	Pn	11 40 11.4	-0.7
MJAR	Matsushiro Arr	6.71	179	P	Pn	11 40 17.4	+2.2
	4.5nm,0.3s,baz=3.6,slow=11,SNR=18						
KLR	Kul'dur	7.38	326	P	Pn	11 40 24.5	+1.0
	0.7nm,0.4s,baz=120,slow=19,SNR=1.7						
KLR				S	S	11 41 45.8	-2.4
	1.1nm,0.7s,baz=88,slow=10,SNR=1.4						
JGF	Kuroka	7.66	184	P	Pn	11 40 29.2	+1.9
INU	Inuyama	7.93	186	P	Pn	11 40 32.9	+2.2
TYV	Tymovskoe	8.25	21	eP	Pn	11 40 35.6	+1.2
TYV				AMB	AMB	11 40 36.8	
	100nm,2.4s						
TYV				A	A	11 42 06.6	
	60nm,0.6s						
TYV				A	A	11 42 06.6	
	40nm,0.6s						
TYV				eS	S	11 42 07.3	-0.9
TYV				A	A	11 42 07.3	
	100nm,4.0s						
TYV				A	A	11 42 07.3	
	100nm,4.0s						
KSRS	Korea Array	9.63	236	P	Pn	11 40 53.3	+1.3
	2.3nm,0.7s,baz=54,slow=12,SNR=14						
NKL	Nikolayevsk	10.06	9	eP	Pn	11 40 57.2	-0.1
NKL				AMB	AMB	11 40 58.4	
	20nm,0.6s						
OKH	Okha	10.81	16	eP	Pn	11 41 08.6	+1.9
JNU	Nakatsue	11.56	211	P	Pn	11 41 16.4	0.0
	7.0nm,0.7s,baz=63,slow=3.0,SNR=5.1						
SEY	Seymchan	21.42	18	P	P	11 43 05.5	-1.0
	1.8nm,0.6s,baz=201,slow=9.4,SNR=7.4 1.8nm,0.6s						
ZALV	Zalesovo Beam	35.95	306	P	P	11 45 15.5	+0.7
	0.9nm,0.4s,baz=70,slow=8.4,SNR=2.7 0.9nm,0.4s						
MKAR	Makanchi Array	38.84	295	P	P	11 45 40.0	+0.9
	0.3nm,0.5s,baz=92,slow=10,SNR=3.4 0.3nm,0.5s						
KURBB	Kurchatov Arra	40.29	302	P	P	11 45 51.9	+0.9
	0.3nm,0.4s,baz=83,slow=9.5,SNR=4.3 0.3nm,0.4s						
ILAR	Eielson Array	45.78	35	P	P	11 46 34.7	0.0
	0.6nm,0.6s,baz=270,slow=5.3,SNR=14 0.6nm,0.6s						
FINES	FINESS Array B	62.11	330	P	P	11 48 31.8	-0.5
	1.4nm,0.7s,baz=59,slow=6.0,SNR=7.5 1.4nm,0.7s						
WRA	Warramunga Arr	62.97	184	P	P	11 48 37.9	-0.6
	0.3nm,0.5s,baz=2.0,slow=6.9,SNR=11 0.3nm,0.5s						
ASAR	Alice Springs	66.69	184	P	P	11 49 02.4	0.0
	0.3nm,0.7s,baz=10.0,slow=6.4,SNR=5.7 0.3nm,0.7s						
HFS	Hagfors	67.36	333	P	P	11 49 06.2	+0.1
	0.7nm,0.4s,baz=64,slow=10,SNR=1.6 0.7nm,0.4s						
NVAR	Mina Array Bea	73.33	53	P	P	11 49 43.2	+0.4
	1.0nm,0.5s,baz=301,slow=6.0,SNR=10 1.0nm,0.5s						
PDAR	Pinedale Array	75.13	45	P	P	11 49 53.0	-0.2
	1.4nm,0.7s,baz=305,slow=2.1,SNR=13 1.4nm,0.7s						
ULM	Lac du Bonnet	75.70	32	P	P	11 49 55.1	-0.8
	3.0nm,0.5s,baz=314,slow=6.3,SNR=6.8 3.0nm,0.5s						
TXAR	Lajitas Array	88.28	50	P	P	11 51 01.3	-0.3
	0.3nm,0.5s,baz=295,slow=2.6,SNR=4.5 0.3nm,0.5s						
LPAZ	La Paz	145.11	48	PKPbc	PKPdf	11 57 46.5	-0.3
	0.8nm,0.4s,baz=56,slow=8.0,SNR=2.7						
SNAA	Sanae	145.79	201	PKPbc	PKPdf	11 57 45.6	0.0
	0.5nm,0.5s,baz=119,slow=13,SNR=2.3						

WEL 28 12:03:15.2±1.3, 33°S±8°×18°0E±°, h12km, mB4.4/4, ML4.2/12, MLv4.0/10, Mw(mB)3.5/4, Error ellipse: s-maj=12.2km s-min=9.9km az=71.1, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	4.52	193	P	Pn	12 04 21.3	-2.1
HAZ	Te Kaha	4.61	199	P	Pn	12 04 26.2	+1.6
HAZ				S	Sn	12 05 20.3	+2.2
PKGZ	Pakihiroa	4.64	196	P	Pn	12 04 24.2	-0.9
PKGZ				S	Sn	12 05 19.1	+0.3
PUZ	Puketiti	4.80	194	P	Pn	12 04 24.4	-2.9
PUZ				S	Sn	12 05 20.7	-2.1
RUGZ	Raukumara Rang	4.83	199	P	Pn	12 04 28.2	+0.4
TWGZ	Tauwhareparae	4.96	196	P	Pn	12 04 29.1	-0.4
MWZ	Matawai	5.22	199	P	Pn	12 04 31.4	-1.6
MWZ				S	Sn	12 05 37.7	+4.5
TKGZ	Te Karaka	5.24	196	P	Pn	12 04 33.7	+0.5
URZ	Urewera	5.27	203	P	Pn	12 04 30.5	-3.2
OUZ	Omahuta	5.35	249	P	Pn	12 04 37.4	+2.6
OUZ				S	Sn	12 05 35.5	-0.9
RAGZ	Rawiri	5.40	199	P	Pn	12 04 35.4	-0.2
SNGZ	Shannon Statio	5.69	199	P	Pn	12 04 39.9	+0.4
PRGZ	Paritu Road	5.69	194	P	Pn	12 04 44.2	+4.6
RAHZ	Arahi	5.89	200	P	Pn	12 04 41.8	-0.4
RAHZ				S	Sn	12 05 50.7	+1.1
MTHZ	Maungataniwha	5.90	202	P	Pn	12 04 43.6	+1.2
BKZ	Black Stump Fm	6.30	203	P	Pn	12 04 47.9	0.0

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*IDC **28** 12:10:42.9±9.0, 2°.43S×139°.02E, h0km, mb3.2/2, mbtmp3.3/3, ML3.5/1, Error ellipse: s-maj=375.6km s-min=31.9km az=86.0*

*DJA **28** 12:10:50.5±0.4, 3°S±3°×13°8E±°, h10km, M3.4/6, MLv3.4/6*

ISC 28 12:10:49.1±1.0, 2°.5S±0°.1×138°.42E±0°.05, h32km, n8, σ0ˢ.90/9, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.59	29	P	Pn	12 11 01.2	0.0
GENI	Genyem	1.74	93	P	Pb	12 11 19.8	-0.7
GENI				S	Sb	12 11 42.9	+0.9
SRPI	Serui, Papua	2.27	286	P	Pb	12 11 28.8	-0.6
JAY	Jayapura	2.28	90	P	Pb	12 11 28.5	-1.1
BAKI	Biak	2.66	299	P	Pb	12 11 35.3	-0.7
WRA	Warramunga Arr	17.79	193	P	Pn	12 14 53.6	-0.7
	0.2nm,0.3s,baz=14,slow=12,SNR=12 0.2nm,0.4s						
ASAR	Alice Springs	21.49	191	P	P	12 15 36.1	+0.8
	0.6nm,0.5s,baz=21,slow=11,SNR=18 0.6nm,0.5s						
MKAR	Makanchi Array	69.45	322	P	P	12 21 54.9	+0.6
	0.2nm,0.6s,baz=108,slow=6.6,SNR=1.7 0.2nm,0.6s						

STR 28 12:13:36.1±0.6, 48°N±4°×°±°, h0km, MLv1.7/7, Error ellipse: s-maj=0.0km s-min=0.0km az=20.5, preliminary, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPP	Oppenau	0.30	288	Pg	Pg	12 13 41.1	-0.7
OPP	Oppenau	0.30	288	Sg	Sg	12 13 46.6	+1.0
BABA	Baden-Baden-Ne	0.42	318	Pg	Pg	12 13 43.6	-0.6
BABA	Baden-Baden-Ne	0.42	318	Sg	Sg	12 13 49.8	+0.3
KIZ	Kirchzarten	0.65	226	Pg	Pg	12 13 48.6	+0.1
KIZ	Kirchzarten	0.65	226	Sg	Sg	12 13 56.9	+0.1
SLE	Schleitheim	0.65	187	Pn	Pg	12 13 47.2	-1.2
SLE	Schleitheim	0.65	187	Pg	Pg	12 13 49.2	+0.7
SLE	Schleitheim	0.65	187	Sg	Sb	12 13 59.7	-0.2
HOHE	HOHENGOEFT	0.79	289	Pg	Pg	12 13 51.6	+0.4
HOHE				Sn	Sb	12 14 03.9	-0.1
LEMB	Lembach	0.84	318	Pg	Pg	12 13 52.5	+0.2
LEMB				Sg	Sb	12 14 05.2	-0.3
ECH	Echery	0.99	259	Pg	Pg	12 13 54.8	-0.2
ECH				Sg	Sg	12 14 08.1	+0.3

ZUR 28 12:13:50.2, 46°.55N×8°.75E, h-2km±2km, MLh0.9/5, Error ellipse: s-maj=6846.3km s-min=2175.8km az=190.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NALPS	Val Nalps	0.04	356	Pg	Pg	12 13 51.3	+0.3
NALPS				Sg	Sg	12 13 51.9	+0.3
GMS01	Gemsstock NE-G	0.11	297	Pg	Pg	12 13 52.9	+0.6
GMS01				Sg	Sg	12 13 54.9	+1.2
BTAO	Waffenplatz Be	0.12	258	Sg	Sg	12 13 54.6	+0.7
FUSIO	Fusio	0.12	212	Pg	Pg	12 13 53.1	+0.7
FUSIO				Sg	Sg	12 13 55.0	+1.2
MORC	Moravsky Berou	6.71	58	ePG	Pg	12 15 58.1	-0.5
MORC				eSG	Sn	12 16 05.4	-42

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*IDC **28** 12:33:47.4±1.5, 3°.14N×125°.56E, h0km, mb3.4/6, mbtmp3.4/6, Error ellipse: s-maj=137.8km s-min=19.9km az=69.0*

*DJA **28** 12:33:54.0±0.4, 3°N±4°×12°6E±°, h10km, M4.0/6, mB4.7/1, mb4.2/1, MLv3.8/6, Mw(mB)3.9/1*

ISC 28 12:33:45.3±5.0, 4°.1N±0°.5×126°.7E±0°.1, h10km, n9, σ2ˢ.16/6, mb3.5/6, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.23	250	P	Pg	12 34 10.5	+1.5
SGSI				S	Sb	12 34 22.5	-2.2
TNTI	Ternate	3.40	168	P	Pn	12 34 39.5	+1.1
MRSI	Marisa	5.97	233	P	Pn	12 35 14.5	+0.8
FITZ	Fitzroy Crossi	22.10	183	P	P	12 38 33.4	-7.5
	1.6nm,0.9s,baz=6.1,slow=12,SNR=1.7 1.6nm,0.9s						
WRA	Warramunga Arr	25.07	163	P	P	12 39 08.2	-1.9
	0.4nm,0.6s,baz=339,slow=9.9,SNR=12 0.4nm,0.6s						
ASAR	Alice Springs	28.50	166	P	P	12 39 39.8	-1.3
	0.1nm,0.3s,baz=339,slow=7.3,SNR=4.8 0.1nm,0.3s						
MKAR	Makanchi Array	57.21	325	P	P	12 43 38.1	+5.4
	0.2nm,0.5s,baz=128,slow=6.4,SNR=2.9 0.2nm,0.5s						
ZALV	Zalesovo Beam	60.22	333	P	P	12 43 59.7	+6.1
	0.5nm,0.4s,baz=134,slow=4.2,SNR=1.9 0.5nm,0.4s						
KURBB	Kurchatov Arra	61.39	327	P	P	12 44 06.1	+4.6
	0.2nm,0.5s,baz=133,slow=6.5,SNR=2.1 0.2nm,0.5s						

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*NEIC **28** 12:39:53.7±0.4, 34°.2S±0°.1×178°.2W±0°.1, h10km±2km, mb4.4/10, Error ellipse: s-maj=25.3km s-min=9.2km az=38.0*

*IDC **28** 12:39:55.9±1.1, 33°.58S×178°.85W, h0km, mb4.0/6, mbtmp4.1/7, ML4.2/1, Error ellipse: s-maj=33.6km s-min=26.6km az=71.0*

*WEL **28** 12:40:00.4±0.9, 34°S±8°×17°8W±1°2, h33km, mB4.9/13, ML4.7/22, MLv4.4/20, Mw(mB)4.2/13, Error ellipse: s-maj=17.6km s-min=6.7km az=117.9, confirmed*

*NOU **28** 12:40:17.8, 35°.21S×179°.01W, h130km, MLv4.2/6, East of North Island, N.Z.*

ISC 28 12:40:00.4±0.8, 33°.85S±0°.07×178°.4W±0°.1, h37km, n59, σ1ˢ.55/74, mb4.3/10, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.58	215	P	Pn	12 41 06.8	-0.3
MXZ	Matakaoa Point	4.58	215	P	Pn	12 41 06.6	-0.4
MXZ				S	Sn	12 42 00.7	+1.7
RAO	Raoul Island	4.60	5	Pn	Pn	12 41 07.6	+0.2
WMGZ	Waiomatatini S	4.74	212	P	Pn	12 41 10.6	+1.3
PKGZ	Pakihiroa	4.93	215	P	Pn	12 41 11.1	-0.8
PKGZ				S	Sn	12 42 08.2	+0.4
HAZ	Te Kaha	4.99	218	P	Pn	12 41 12.7	0.0
HAZ				S	Sn	12 42 11.3	+2.2
PUZ	Puketiti	5.02	212	P	Pn	12 41 11.6	-1.5
PUZ				S	Sn	12 42 10.0	+0.2
RUGZ	Raukumara Rang	5.21	217	P	Pn	12 41 14.6	-1.2
TWGZ	Tauwhareparae	5.23	213	P	Pn	12 41 15.2	-0.9
TWGZ				S	Sn	12 42 16.9	+1.8
TKGZ	Te Karaka	5.50	213	P	Pn	12 41 19.9	+0.2
TKGZ				S	Sn	12 42 22.7	+1.0
MYRZ	Mayor Island	5.56	230	P	Pn	12 41 21.2	+0.6
MWZ	Matawai	5.57	215	P	Pn	12 41 19.3	-1.4
MWZ				S	Sn	12 42 24.2	+0.8
KUZ	Kuaotunu	5.62	237	P	Pn	12 41 24.7	+3.3
URZ	Urewera	5.72	218	Pn	Pn	12 41 22.2	-0.5
	7.5nm,0.3s,baz=333,slow=1.2,SNR=54						
URZ				Sn	Sn	12 42 26.8	-0.2
	7.3nm,0.3s,baz=253,slow=19,SNR=8.4 47nm,0.5s						
URZ	Urewera	5.72	218	P	Pn	12 41 22.4	-0.2
URZ	Urewera	5.72	218	P	Pn	12 41 22.5	-0.2
URZ				S	Sn	12 42 27.2	+0.1
OPRZ	Ohinepanea	5.73	224	P	Pn	12 41 22.9	+0.1
OPRZ				S	Sn	12 42 24.3	-2.9
RAGZ	Rawiri	5.75	215	P	Pn	12 41 23.3	+0.1
RAGZ				S	Sn	12 42 29.0	+1.1
RIGZ	Rimuhau	5.76	212	P	Pn	12 41 23.6	+0.2
RIGZ				S	Sn	12 42 29.0	+0.9
TGRZ	Tauranga	5.83	227	P	Pn	12 41 24.4	+0.2
PRGZ	Paritu Road	5.89	210	P	Pn	12 41 25.9	+0.7
SNGZ	Shannon Statio	6.01	214	P	Pn	12 41 27.0	+0.3
SNGZ				S	Sn	12 42 35.8	+1.5
TARZ	Mount Tarawera	6.03	222	P	Pn	12 41 27.8	+0.8
MUGZ	Murupara	6.06	219	P	Pn	12 41 26.7	-0.6
MUGZ				S	Sn	12 42 34.3	-1.1
MHGZ	Mahia Peninsul	6.08	208	P	Pn	12 41 26.8	-0.9
KMRZ	Kaimai	6.09	228	P	Pn	12 41 28.4	+0.5
RAHZ	Arahi	6.24	215	P	Pn	12 41 29.9	0.0
TOZ	Tahuroa Road	6.30	230	P	Pn	12 41 31.5	+0.8
WCZ	Waipu Caves	6.33	249	P	Pn	12 41 32.7	+1.6
MRHZ	Matea Rd	6.51	219	P	Pn	12 41 32.5	-1.1
NMHZ	Naumai	6.51	215	P	Pn	12 41 33.5	-0.2
NMHZ				S	Sn	12 42 48.2	+1.4
BKZ	Black Stump Fm	6.72	216	P	Pn	12 41 35.3	-1.2
BKZ	Black Stump Fm	6.72	216	P	Pn	12 41 35.0	-1.5
BKZ				S	Sn	12 42 50.4	-1.4
OUZ	Omahuta	6.76	256	P	Pn	12 41 37.9	+0.9
HIZ	Hauiti	7.18	228	P	Pn	12 41 43.0	+0.2
BFZ	Birch Farm	8.05	211	P	Pn	12 41 52.5	-2.2
RPZ	Rata Peaks	12.83	217	Sn	Sn	12 45 09.8	-12
	0.3nm,0.3s,baz=344,slow=22,SNR=1.5						
AS31	Alice Springs	42.72	271	P	P	12 47 52.0	-2.1
ASAR	Alice Springs	42.72	271	P	P	12 47 51.8	-2.3
ASAR	Alice Springs	42.72	271	P	P	12 47 51.6	-2.5
	2.1nm,0.7s,baz=111,slow=7.2,SNR=34						
ASAR				PcP	PcP	12 49 45.9	+0.6
	0.7nm,1.0s,baz=106,slow=3.7,SNR=2.5 2.1nm,0.7s						
WR0	Warramunga Arr	43.84	276	P	P	12 48 00.7	-2.4
WR0				IAmb	IAmb	12 48 39.6	
	comp=Z,10nm,1.4s						
WR8	Warramunga Arr	43.88	276	P	P	12 48 01.3	-2.1
WR8				IAmb	IAmb	12 48 05.9	
	comp=Z,4.7nm,0.9s						
WB2	Warramunga Arr	44.01	276	P	P	12 48 02.4	-2.1
WB2				IAmb	IAmb	12 48 02.6	
	comp=Z,3.8nm,0.6s						
WRAB	Tennant Creek	44.01	276	P	P	12 48 02.3	-2.2
WRA	Warramunga Arr	44.02	276	P	P	12 48 02.4	-2.2
WRA	Warramunga Arr	44.02	276	P	P	12 48 02.0	-2.5
	comp=Z,2.4nm,0.6s,baz=116,slow=7.9,SNR=49 comp=Z,2.4nm,0.6s						
WB0	Warramunga Arr	44.05	276	P	P	12 48 02.6	-2.3
VNDA	Vanda	44.64	186	P	P	12 48 11.9	+3.1
	comp=Z,0.4nm,0.9s,baz=33,slow=11,SNR=1.7 comp=Z,0.4nm,0.9s						
CASY	Casey	51.96	209	P	P	12 49 01.1	-4.3
CASY				IAmb	IAmb	12 49 02.3	
	comp=Z,12nm,1.4s						
FITZ	Fitzroy Crossi	52.11	273	P	P	12 49 05.1	-2.0
FITZ				IAmb	IAmb	12 49 39.8	
	comp=Z,2.0nm,1.4s						
FITZ	Fitzroy Crossi	52.11	273	P	P	12 49 04.6	-2.5
	comp=Z,2.1nm,0.7s,baz=174,slow=7.1,SNR=5.9 comp=Z,2.1nm,0.7s						
QSPA	South Pole Qui	56.27	180	P	P	12 49 31.8	-5.1
QSPA				IAmb	IAmb	12 50 05.4	
	comp=Z,7.3nm,1.4s						
QSPA	South Pole Qui	56.27	180	P	P	12 49 39.7	+2.8
	comp=Z,0.9nm,0.6s,baz=199,slow=5.1,SNR=2.1 comp=Z,0.9nm,0.6s						
PETK	Petropavlovsk-	89.06	346	P	P	12 52 51.7	+0.6
	comp=Z,1.2nm,0.7s,baz=201,slow=6.7,SNR=2.3 comp=Z,1.2nm,0.7s						
FINES	FINESS Array B	148.24	338	PKPbc	PKPbc	12 59 40.6	-1.0
	comp=Z,2.2nm,0.5s,baz=54,slow=3.7,SNR=13						
MMAI	Mount Meron Ar	151.86	278	PKPbc	PKPbc	12 59 51.6	+0.1
	comp=Z,0.6nm,0.2s,baz=74,slow=8.8,SNR=3.6						
AKASG	Malin Array Be	153.75	318	PKPbc	PKiKP	12 59 56.1	+1.1
	comp=Z,0.3nm,0.3s,baz=72,slow=3.0,SNR=1.4						
BRTR	Keskin Array B	153.78	292	PKPbc	PKPbc	12 59 55.4	-0.2
	comp=Z,0.8nm,0.6s,baz=147,slow=2.9,SNR=4.1						
TORD	Torodi Ar. Bea	159.39	180	PKPab	PKPab	13 00 34.4	+1.4
	comp=Z,0.5nm,0.9s,baz=166,slow=3.4,SNR=1.7						

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*IDC **28** 12:40:00.8±0.8, 56°.28S×24°.95W, h0km, mb4.0/8, mbtmp3.9/9, ML3.5/1, Error ellipse: s-maj=28.2km s-min=18.8km az=67.0*

*NEIC **28** 12:40:03.3±1.2, 56°.4S±0°.1×25°.3W±0°.2, h10km±1km, mb4.6/22, Error ellipse: s-maj=23.5km s-min=17.3km az=198.0*

ISC 28 12:40:02.5±0.5, 56°.33S±0°.10×25°.3W±0°.1, h10km, n63, σ0ˢ.93/63, mb4.4/17, 4C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	6.73	283	Pn	Pn	12 41 39.9	-1.4
VNA1	Neumayer--Stat	16.15	159	⇑P	Pn	12 43 48.0	-1.1
	comp=Z,0.5nm,0.2s						
VNA3	Neumayer Olymp	16.38	162	⇑P	Pn	12 43 50.9	-1.3
	comp=Z,0.6nm,0.2s						
VNA2	Neumayer--Watz	16.54	159	⇑P	Pn	12 43 52.6	-1.6
	comp=Z,1.0nm,0.2s,baz=322,slow=15						
SNAA	Sanae	18.06	157	⇑P	P	12 44 15.0	+1.4
	comp=Z,7.0nm,0.4s						
SNAA	Sanae	18.06	157	P	Pn	12 44 13.5	+0.3
SNAA	Sanae	18.06	157	P	Pn	12 44 12.9	-0.3
	comp=Z,0.1nm,0.3s,baz=305,slow=16,SNR=10.0 comp=Z,0.7nm,0.6s						
TRQA	Tornquist	30.43	291	P	P	12 46 15.3	+0.4
QSPA	South Pole Qui	33.92	180	P	P	12 46 45.8	+0.3
QSPA				IAmb	IAmb	12 47 04.5	
	comp=Z,11nm,1.4s						
QSPA	South Pole Qui	33.92	180	P	P	12 46 45.4	0.0
	comp=Z,1.3nm,0.6s,baz=132,slow=0.6,SNR=12 comp=Z,1.3nm,0.6s						
CPUP	Villa Florida	37.82	309	P	P	12 47 19.0	0.0
	comp=Z,0.7nm,0.6s,baz=4.8,slow=6.5,SNR=4.3 comp=Z,0.7nm,0.6s						
BO04	La Punta	38.06	286	P	P	12 47 21.5	+0.4
MT02	Curacav	38.90	287	P	P	12 47 27.2	-0.8
MT02				IAmb	IAmb	12 48 05.6	
	comp=Z,28nm,1.3s						
ZON	Zonda	38.94	291	P	P	12 47 28.0	-0.4
ZON				IAmb	IAmb	12 47 55.9	
	comp=Z,5.7nm,0.9s						
MAW	Mawson	39.28	143	P	P	12 47 30.4	-0.4
	comp=Z,2.6nm,0.8s,baz=286,slow=17,SNR=1.9 comp=Z,2.6nm,0.8s						
CO02	Combarbal	40.43	289	P	P	12 47 40.9	0.0
CO02				IAmb	IAmb	12 47 44.3	
	comp=Z,18nm,1.2s						
CO01	Juntas del Tor	40.92	291	P	P	12 47 45.5	+0.3
CO01				IAmb	IAmb	12 47 47.0	
	comp=Z,16nm,1.5s						
GO04	Tololo Observa	41.14	290	P	P	12 47 46.5	-0.4
GO04				IAmb	IAmb	12 48 27.6	
	comp=Z,19nm,1.2s						
AC04	Llanos de Chal	42.85	291	P	P	12 48 00.5	-0.1
AC04				IAmb	IAmb	12 48 34.6	
	comp=Z,25nm,1.4s						
AC02	Maricunga	42.97	295	P	P	12 48 03.4	+1.2
BOSA	Boshof	45.00	74	P	P	12 48 16.5	-1.5
	comp=Z,1.4nm,0.7s,baz=149,slow=15,SNR=1.1 comp=Z,1.4nm,0.7s						
VNDA	Vanda	46.34	182	P	P	12 48 27.8	-0.1
VNDA	Vanda	46.34	182	P	P	12 48 28.0	+0.1
	comp=Z,0.5nm,0.8s,baz=163,slow=12,SNR=2.0 comp=Z,0.5nm,0.8s						
PB09	IPOC Station P	47.23	298	P	P	12 48 34.1	-1.6
PB01	IPOC Station P	47.99	299	P	P	12 48 39.9	-1.6
LBTB	Lobatse	48.06	71	P	P	12 48 41.3	-0.8
GO01	Chusmiza	49.02	300	P	P	12 48 49.7	-0.2
GO01				IAmb	IAmb	12 48 56.3	
	comp=Z,12nm,1.4s						

PB11	IPOC Station P	49.16	299	P	P	12 48 50.2	-0.5
PB11				IAmb	IAmb	12 49 18.3	
	comp=Z,7.9nm,1.0s						
PB16	IPOC Station P	50.31	301	P	P	12 48 58.5	-1.4
PB16				IAmb	IAmb	12 49 18.9	
	comp=Z,5.3nm,1.2s						
QNGWA	Qangwa	50.35	63	P	P	12 48 59.8	+0.2
QNGWA				IAmb	IAmb	12 49 05.1	
	comp=Z,4.2nm,1.2s						
LPAZ	La Paz	51.43	303	P	P	12 49 09.4	+1.1
LPAZ	La Paz	51.43	303	P	P	12 49 09.7	+1.4
	comp=Z,1.9nm,0.5s,baz=110,slow=5.2,SNR=8.1						
	comp=Z,1.9nm,0.5s						
DBIC	Dimbokro	64.99	22	P	P	12 50 41.5	-0.9
	comp=Z,5.9nm,1.1s,baz=260,slow=12,SNR=1.9						
	comp=Z,5.9nm,1.1s						
TORD	Torodi Ar. Bea	72.78	28	P	P	12 51 30.8	-0.1
TORD	Torodi Ar. Bea	72.78	28	P	P	12 51 30.3	-0.6
	comp=Z,0.8nm,0.5s,baz=190,slow=6.7,SNR=2.9						
	comp=Z,0.8nm,0.5s						
WHY	Whitehorse	144.58	307	PKPdf	PKPbc	12 59 37.4	+0.7
M31M	Drury Creek, Y	145.00	309	PKPbc	PKPbc	12 59 38.4	+0.5
A36M	Sachs Harbour	145.02	328	PKPbc	PKPab	12 59 38.6	+0.9
JMZ	Minamidaito 2	145.09	141	PKPbc	PKPbc	12 59 38.0	-1.2
O30N	Mendenhall	145.17	307	PKPbc	PKPbc	12 59 38.4	-0.1
N31M	Braeburn, Yuko	145.32	308	PKPbc	PKPdf	12 59 39.8	+0.8
N30M	Aishikik Lake	145.89	307	PKPbc	PKPab	12 59 42.0	+0.8
H31M	Peel River	146.28	315	PKPbc	PKPbc	12 59 42.4	+0.6
F31M	Tsiigehtchic	146.55	318	PKPbc	PKPbc	12 59 43.2	+0.8
G31M	Satah River	146.59	317	PKPbc	PKPab	12 59 44.0	+0.3
I30M	Mount Dempster	146.90	314	PKPbc	PKPbc	12 59 44.1	+0.4
L29M	L29M	146.94	310	PKPdf	PKPdf	12 59 42.4	+0.6
G30M	tAoh Zraii Nji	147.35	317	PKPdf	PKPdf	12 59 43.0	+0.7
G30M				PKPbc	PKPbc	12 59 45.4	+0.6
F30M	Barrier River	147.35	318	PKPbc	PKPbc	12 59 45.8	+1.0
LOGN	Logan Glacier	147.41	305	PKPbc	PKPdf	12 59 44.6	+1.9
DAWY	Dawson	147.78	311	PKPbc	PKPbc	12 59 46.5	+0.4
H29M	Whitestone	147.97	315	PKPbc	PKPbc	12 59 46.9	+0.4
G29M	Pine Creek	148.01	317	PKPbc	PKPbc	12 59 47.1	+0.5
E29M	Blow River	148.30	319	PKPbc	PKPbc	12 59 47.4	+0.2
BERG	Berg Lake	148.50	303	PKPbc	PKPbc	12 59 47.9	-0.1
BCAR	Beaver Creek A	148.50	309	PKPbc	PKPbc	12 59 48.6	+0.6
F28M	Old Crow	148.87	318	PKPbc	PKPbc	12 59 49.1	+0.3
H27K	Steamboat Moun	149.22	315	PKPbc	PKPbc	12 59 50.4	+0.7
J26L	Joseph Creek	149.66	311	PKPbc	PKPbc	12 59 51.3	+0.4
SONM	Songino Array	149.67	85	PKPbc	PKPdf	12 59 50.1	+3.2
	comp=Z,0.3nm,0.3s,baz=242,slow=3.1,SNR=1.7						
I26K	Coal Creek Min	149.67	313	PKPbc	PKPbc	12 59 51.3	+0.6
G26K	Porcupine Rive	150.25	316	PKPbc	PKPbc	12 59 53.1	+1.0
ILAR	Eielson Array	151.11	311	PKPbc	PKPbc	12 59 53.8	-0.4
	comp=Z,1.1nm,0.9s,baz=125,slow=2.2,SNR=10						
ILAR				PKPab	PKPab	13 00 02.4	+0.2
	comp=Z,1.3nm,1.1s,baz=130,slow=3.6,SNR=5.3						

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*NEIC **28** 12:43:35.5±0.8, 31°.10S±0°.08×176°.8W±0°.2, h10^{km}±2^{km}, mb4.3/7, Error ellipse: s-maj=37.0km s-min=11.3km az=75.0*

*IDC **28** 12:43:38.0±1.1, 31°.16S×177°.28W, h0^{km}, mb3.9/6, mbtmp3.9/6, Error ellipse: s-maj=30.4km s-min=26.6km az=77.0*

ISC 28 12:43:37.4±1.1**, 31°.18S**±0°.06×**177°.3W**±0°.2**, h10**^{km}**, n18, σ1**^{s}.**68**/20**, mb4.1**/11**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.00	344	Pn	Pn	12 44 10.2	-1.1
RAO	Raoul Island	2.00	344	Pn	Pb	12 44 12.9	-0.9
	193nm,0.3s,baz=84,slow=21,SNR=4.6						
RAO				Sn	Sn	12 44 36.3	0.0
	269nm,0.3s,baz=115,slow=23,SNR=6.5						
URZ	Urewera	8.42	212	Pn	Pn	12 45 37.5	-1.9
	0.2nm,0.3s,baz=164,slow=23,SNR=0.9						
URZ				Sn	Sn	12 47 12.7	-1.8
	0.9nm,0.3s,baz=176,slow=14,SNR=5.1						
STKA	Stephens Creek	34.89	258	P	P	12 50 31.9	+2.7
	1.8nm,0.7s,baz=100,slow=12,SNR=1.9						
	1.8nm,0.7s						
AS31	Alice Springs	43.67	267	P	P	12 51 43.4	+0.8
AS31				IAmb	IAmb	12 52 15.7	
	comp=Z,1.9nm,1.2s						
ASAR	Alice Springs	43.67	267	P	P	12 51 43.0	+0.4
ASAR	Alice Springs	43.67	267	P	P	12 51 44.7	+2.1
	comp=Z,1.0nm,0.8s,baz=106,slow=7.5,SNR=10						
ASAR				PcP	PcP	12 53 31.8	+2.0
	comp=Z,0.7nm,0.9s,baz=107,slow=4.0,SNR=3.1						
	comp=Z,1.0nm,0.8s						
WR8	Warramunga Arr	44.58	273	P	P	12 51 50.4	+0.4
WR8				IAmb	IAmb	12 52 26.5	
	comp=Z,12nm,1.5s						
WRAB	Tennant Creek	44.72	273	P	P	12 51 50.7	-0.3
WRAB				IAmb	IAmb	12 52 04.9	
	comp=Z,6.5nm,1.2s						
WRA	Warramunga Arr	44.73	273	P	P	12 51 51.1	0.0
WRA	Warramunga Arr	44.73	273	P	P	12 51 53.2	+2.0
	comp=Z,1.1nm,0.6s,baz=113,slow=7.9,SNR=13						
	comp=Z,1.1nm,0.6s						
WB0	Warramunga Arr	44.75	273	P	P	12 51 51.8	+0.5
WB0				IAmb	IAmb	12 52 33.7	
	comp=Z,4.4nm,1.1s						
VNDA	Vanda	47.38	186	P	P	12 52 09.7	-1.6
VNDA				IAmb	IAmb	12 52 32.8	
	comp=Z,2.1nm,1.2s						
QSPA	South Pole Qui	58.93	180	P	P	12 53 35.9	-0.7
QSPA	South Pole Qui	58.93	180	P	P	12 53 39.6	+3.0
	comp=Z,1.5nm,0.9s,baz=358,slow=2.5,SNR=3.5						
	comp=Z,1.5nm,0.9s						
SNAA	Sanae	77.36	178	P	P	12 55 33.3	+1.3
	comp=Z,0.9nm,1.0s,baz=219,slow=6.5,SNR=2.2						
	comp=Z,0.9nm,1.0s						
NVAR	Mina Array Bea	88.41	42	P	P	12 56 32.2	+2.3
	comp=Z,0.4nm,0.7s,baz=233,slow=9.1,SNR=4.1						
	comp=Z,0.4nm,0.7s						
FINES	FINESS Array B	146.09	340	PKPbc	PKiKP	13 03 18.2	-2.1
	comp=Z,3.2nm,0.7s,baz=38,slow=2.5,SNR=7.4						

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*TIR **28** 12:44:26.8, 40°.44N×20°.82E, h1^{km}±2^{km}, Ml3.6/5*

*SKO **28** 12:44:28.5, 40°.46N×20°.89E, h19^{km}, ML3.0*

*PDG **28** 12:44:28.3±1.0, 40°.41N×20°.89E, h9^{km}±2^{km}, ML3.4/11, Error ellipse: s-maj=2.4km s-min=2.9km az=0.0*

*ATH **28** 12:44:28.7, 40°.51N×20°.88E, h5^{km}±1^{km}, ML3.5/17, Manual Solution by S.Liakopoulos First location: 2019/06/28 12:45:21, This location: 2020/10/27 09:45:56 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*

*THE **28** 12:44:28.7, 40°N±2°×2°1E±°, h0^{km}±1^{km}, M3.2/14, MLh3.2/14*

*BEO **28** 12:44:29.1±0.3, 40°.48N×20°.84E, h5^{km}±3^{km}, ML3.0/14*

ISC 28 12:44:28.7±0.9**, 40°.48N**±0°.01×**20°.86E**±0°.02**, h9**^{km}±6^{km}**, n114, σ1**^{s}.**42**/172**, 8C-4D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.15	340	Pg	Pg	12 44 30.7	-1.3
KBN				Sg	Sg	12 44 33.2	-1.2
KBN				AML	AML	12 44 34.0	
	32nm,0.3s						
NEST	Nestorio	0.16	114	⇑Pg	Pg	12 44 32.3	+0.1
NEST				Sg	Sg	12 44 36.9	+2.2
NEST				AML	AML	12 44 37.7	
	29nm,0.3s						
NEST	Nestorio	0.16	114	P	Pg	12 44 32.3	+0.1
NEST				S	Sg	12 44 34.8	+0.1
PENT	Pentalofos	0.36	143	P	Pg	12 44 35.3	-0.5
PENT				S	Sb	12 44 41.9	-1.2
PENT	Pentalofos	0.36	143	P	Pg	12 44 35.2	-0.6
PENT				S	Sg	12 44 41.1	+0.6
LMS2	Laimos Florina	0.41	32	P	Pg	12 44 36.2	-0.7
LMS2				S	Sg	12 44 42.9	+0.5
FNA	Florina	0.50	52	⇑Pg	Pg	12 44 38.1	-0.4
FNA				Sg	Sb	12 44 47.1	-0.1
FNA				AML	AML	12 44 47.9	
	29nm,0.4s						
FNA	Florina	0.50	52	P	Pg	12 44 38.2	-0.2
FNA				S	Sb	12 44 46.5	-0.6
FNA	Florina	0.50	52	*i* Pg	Pg	12 44 38.0	-0.4
FNA				*i* Sg	Sb	12 44 47.1	-0.1
FNA	Florina	0.50	52	*e*Pg	Pg	12 44 37.9	-0.5
FNA				*e*Sg	Sb	12 44 47.2	0.0
FNA	Florina	0.50	52	P	Pg	12 44 38.0	-0.4
FNA				S	Sg	12 44 44.4	-0.6
OHR	Ohrid	0.63	356	*i* Pg	Pg	12 44 40.6	-0.3
OHR				*i* Sg	Sb	12 44 51.3	+0.3
OHR				*e*Lg	Lg	12 44 52.8	
	comp=E,527nm,0.7s						
OHR				*e*Lg	Lg	12 44 56.1	
	comp=N,786nm,1.3s						
KPRO	Kipourio	0.65	143	P	Pg	12 44 40.5	-0.9
KPRO				S	Sb	12 44 51.7	+0.1
KPRO	Kipourio	0.65	143	P	Pg	12 44 40.3	-1.0
KPRO				S	Sg	12 44 50.5	+0.6
KZN	Kozani	0.72	104	P	Pg	12 44 42.8	+0.2
KZN				S	Sb	12 44 52.8	-0.7
KZN	Kozani	0.72	104	P	Pg	12 44 42.3	-0.3
KZN				S	Sb	12 44 53.7	+0.2
MSVA	Metsovo	0.75	160	P	Pg	12 44 43.2	0.0
MSVA				S	Sg	12 44 52.9	-0.2
SRN	Sarande	0.89	228	Pg	Pg	12 44 43.9	-1.9
SRN				Sg	Sg	12 44 55.7	-1.7
NASA	Naoussa	0.94	80	P	Pg	12 44 46.0	-0.7
NASA				S	Sg	12 44 58.5	-0.3
IGT	Igoumenitsa	1.03	203	Pg	Pg	12 44 47.2	-1.3
IGT	Igoumenitsa	1.03	203	*i* Pg	Pg	12 44 47.0	-1.5
IGT				*i* Sg	Sn	12 45 04.2	+0.3
IGT	Igoumenitsa	1.03	203	*e*Pg	Pg	12 44 47.0	-1.5
IGT				*e*Sg	Sb	12 45 02.7	+0.4
KEK	Kerkira	1.12	227	P	Pg	12 44 49.9	-0.2
KEK				S	Sn	12 45 06.7	+0.6
KEK	Kerkira	1.12	227	P	Pb	12 44 50.8	+0.6
KEK				S	Sb	12 45 06.2	+1.3
TETR	Tetrakomo, Epi	1.18	164	P	Pn	12 44 51.8	+0.3
TETR				S	Sn	12 45 09.1	+1.3
THL	Klokotos Trika	1.28	135	P	Pg	12 44 51.8	-1.4
THL				S	Sn	12 45 10.5	+0.5
TYRN	Tyrnavos	1.31	126	P	Pn	12 44 52.7	-0.4
TYRN				S	Sn	12 45 12.1	+1.4
TYRN	Tyrnavos	1.31	126	P	Pn	12 44 52.3	-0.9
GINA	Giannouli	1.43	124	P	Pb	12 44 55.4	-0.1
VAY	Valandovo	1.55	57	*i* Pn	Pn	12 44 56.9	+0.4
VAY				*i* Sn	Sg	12 45 17.9	-0.6
VAY				*e*Lg	Lg	12 45 20.9	
	comp=E,318nm,0.7s						
VAY				*e*Lg	Lg	12 45 24.9	
	comp=N,448nm,0.8s						
SKO	Skopje	1.55	16	*i* Pn	Pb	12 44 58.0	+0.4
THE	Thessaloniki	1.61	84	*i* Pn	Pn	12 44 57.5	+0.1
THE				*i* Sn	Sg	12 45 19.9	-0.8
THE	Thessaloniki	1.61	84	P	Pn	12 44 57.1	-0.3
TSLK	Tsoukalades, L	1.66	185	P	Pb	12 44 59.7	+0.2
KNT	Kendrikon	1.69	66	P	Pn	12 44 58.8	+0.3
KNT	Kendrikon	1.69	66	*i* Pn	Pn	12 44 58.8	+0.3
KNT				*i* Sn	Sg	12 45 25.5	+2.4
KNT	Kendrikon	1.69	66	P	Pn	12 44 58.8	+0.3
LKD2	Lefkada island	1.70	185	P	Pb	12 45 00.5	+0.4
HORT	Hortiatis	1.71	85	P	Pn	12 44 58.7	-0.2
HORT	Hortiatis	1.71	85	P	Pn	12 44 58.5	-0.3
PUK	Puka	1.72	335	Pn	Pb	12 45 01.2	+0.6
PUK				Sn	Sg	12 45 27.0	+3.0
PUK				AML	AML	12 45 29.5	
	comp=N,1.9nm,0.8s						
EVR	Evrytania	1.73	154	P	Pn	12 45 00.1	+1.0
MAKR	Makrakomi, Fth	1.77	146	P	Pn	12 45 00.3	+0.8
MAKR	Makrakomi, Fth	1.77	146	P	Pn	12 44 59.9	+0.4
NYDR	Nydri-Lefkada	1.77	184	P	Pb	12 45 01.0	-0.3
AGG	Agios Georgios	1.85	142	P	Pn	12 45 00.8	+0.1
AGG	Agios Georgios	1.85	142	P	Pn	12 45 00.7	+0.1
EVGI	Lefkada island	1.86	185	P	Pn	12 45 02.0	+1.2
EVGI	Lefkada island	1.86	185	P	Pn	12 45 02.0	+1.2
SCTE	Santa Cesarea	1.87	258	P	Pn	12 45 00.3	-0.6
ULC	Ulcinj	1.92	321	*i* Pn	Pn	12 45 02.8	+1.2
ULC	Ulcinj	1.92	321	⇑*i*Pn	Pn	12 45 02.5	+0.9
ULC				*i* Sn	Sg	12 45 30.9	+0.6
PVO	Paravola	1.93	164	P	Pn	12 45 03.0	+1.2
BCI	Bajram Curri	1.98	343	Pn	Pb	12 45 05.3	+0.5
BCI				Sn	Sg	12 45 33.7	+1.5
BCI				AML	AML	12 45 35.4	
	comp=N,1.7nm,0.8s						
PEHC	Pehcevo	2.02	49	*i* Pn	Pn	12 44 58.0	-5.0
PEHC				*i* Sn	Sn	12 45 20.4	-8.0
FSK	Fiskardo	2.03	187	P	Pn	12 45 03.9	+0.8
FSK	Fiskardo	2.03	187	P	Pn	12 45 03.8	+0.6
ANX	Ano Chora	2.06	156	P	Pn	12 45 05.0	+1.4
DRME	Dracevica, Mon	2.12	324	*e*Pn	Pn	12 45 05.7	+1.3
DRME	Dracevica, Mon	2.12	324	⇓*i*Pn	Pb	12 45 07.0	-0.3
DRME				*i* Sn	Sb	12 45 35.7	+2.0
NEO	Neokhori	2.17	122	P	Pn	12 45 05.2	+0.1
SRS	Serrai	2.17	72	*i* Pn	Pn	12 45 05.6	+0.5
SRS	Serrai	2.17	72	*e*Pn	Pn	12 45 05.5	+0.4
SRS				*e*Sn	Sn	12 45 33.7	+1.5
SRS	Serrai	2.17	72	P	Pn	12 45 05.5	+0.4
KKB	Krupnik	2.19	51	*i* Pn	Pn	12 45 06.6	+1.3
KKB				*i* Sn	Sb	12 45 34.7	-1.0
AXAR	Agios Charalam	2.21	140	P	Pn	12 45 06.2	+0.6
EFP	Efpalio	2.21	158	P	Pn	12 45 06.5	+1.0
PAIG	Paliouri	2.23	103	P	Pn	12 45 05.5	-0.4
SERG	Sergoula	2.27	155	P	Pn	12 45 07.5	+1.1
DMLN	Damoulianata-K	2.27	190	P	Pn	12 45 06.6	+0.2
PDG	Podgorica	2.29	329	*e*Pn	Pn	12 45 06.7	0.0
PDG				*e*Sn	Sb	12 45 37.6	-1.0
PDG	Podgorica	2.29	329	⇓*i*Pn	Pn	12 45 08.7	+2.0
PDG				*i* Sn	Sb	12 45 39.4	+0.8
VLS	Valsamata	2.31	185	P	Pn	12 45 07.5	+0.5
BUM	Brajici-Budva	2.34	322	⇑*i*Pn	Pn	12 45 08.6	+1.1
BUM				*i* Sn	Sb	12 45 41.1	+0.9
BOSS	Bosilegrad	2.35	31	*e*Pn	Pn	12 45 07.2	-0.4
BOSS				*e*Sn	Sn	12 45 37.4	+0.7
PSDA	Pessada-Kefalo	2.37	185	P	Pn	12 45 08.4	+0.6
KOKK	Kokkinochori,	2.42	81	P	Pn	12 45 08.9	+0.5
MMB	Musomishta	2.44	63	*i* Pn	Pn	12 45 07.8	-0.9
MMB				*i* Sn	Sn	12 45 40.3	+1.6
BARS	Barje	2.44	17	*i* Pn	Pn	12 45 08.7	-0.2
BARS	Barje	2.44	17	*e*Pn	Pn	12 45 08.6	-0.2
BARS				*e*Sn	Sn	12 45 38.6	-0.2
BEY	Berane	2.50	344	*e*Pn	Pn	12 45 11.7	+2.1
IVA	Berane	2.50	344	⇑*i*Pn	Pn	12 45 11.7	+2.1
IVA				*i* Sn	Sb	12 45 45.6	+0.9
CEME	Cevo	2.52	325	*e*Pn	Pn	12 44 55.5	-15
CEME				*i* Sn	Sb	12 45 45.8	+0.3
KOME	Kolasin	2.57	337	*e*Pn	Pn	12 45 12.5	+1.8
KOME	Kolasin	2.57	337	⇓*i*Pn	Pn	12 45 12.4	+1.8
KOME				*i* Sn	Sn	12 45 45.2	+3.1
HCY	Herceg Novi	2.65	319	⇓*i*Pn	Pn	12 45 12.1	+0.5
HCY				*i* Sn	Sb	12 45 47.5	-1.4
SELS	Selova	2.74	4	*e*Pn	Pn	12 45 12.5	-0.5
VTS	Vitosha	2.78	39	*e*Pn	Pn	12 45 13.4	-0.2
VTS				*e*Sn	Sn	12 45 49.1	+1.7
SJES	Sjenica	2.85	347	*e*Pn	Pn	12 45 16.0	+1.4
TREB	Trebinje	2.92	321	*e*Pn	Pn	12 45 15.4	0.0
TREB				*e*Sn	Sn	12 45 51.1	+0.5
BRY	Bratogost	2.98	325	⇑*i*Pn	Pb	12 45 20.1	-1.9
BRY				*i* Sn	Sn	12 45 55.3	+3.1
PLE	Pljevlja	3.05	339	⇑*i*Pn	Pn	12 45 18.9	+1.6
PLE				*i* Sn	Sb	12 45 58.5	-2.1
GOCS	Kraljevo Serbi	3.08	0	*e*Pn	Pn	12 45 19.0	+1.3
UPM	Unac-Piva	3.09	332	⇑*i*Pn	Pn	12 45 19.7	+1.9
UPM				*i* Sn	Sn	12 45 59.1	+4.2
ZAPS	Zavoj	3.09	25	*e*Pn	Pn	12 45 17.4	-0.3
ZAPS				*e*Sn	Sn	12 45 55.9	+1.1
BOVS	Bovan	3.21	11	*e*Pn	Pn	12 45 19.0	-0.4
STON	Ston	3.36	316	*e*Pn	Pn	12 45 21.3	-0.1
STON				*e*Sn	Sn	12 46 01.8	+0.4
PLD	Plovdiv	3.37	59	*e*Sn	Sn	12 46 01.9	+0.2
GRUS	Gruza	3.41	358	*e*Pn	Pn	12 45 22.6	+0.5
ZAGS	Zajecar	3.48	17	*e*Pn	Pn	12 45 24.0	+0.9
BBLS	Lazi&#263i	3.55	343	*e*Pn	Pn	12 45 24.4	+0.3
DIVS	Divibare	3.67	350	*e*Pn	Pn	12 45 25.6	-0.2
TEKS	Tekeris	4.18	347	*e*Pn	Pn	12 45 32.9	+0.2
SOKA	Soboth	7.50	328	*e*Pn	Pn	12 46 18.1	-0.2
	comp=N,2.8nm,1.1s						
SOKA				*e*Sn	Sn	12 47 39.7	-3.7
	comp=N,2.2nm,0.9s						
OBKA	Obir	7.57	325	*e*Pn	Pn	12 46 20.1	+0.8
	comp=N,2.2nm,0.7s						
OBKA				*e*Sn	Sn	12 47 45.0	-0.2
	comp=N,2.8nm,0.7s						
ARSA	Arzberg	7.79	332	*i* Pn	Pn	12 46 25.6	+3.4
	comp=N,1.4nm,0.6s						
MYKA	Terra Mystica	8.07	322	*e*Pn	Pn	12 46 28.3	+2.1
	comp=N,1.6nm,0.7s						
ABTA	Abfaltersbach	8.71	319	*e*Pn	Pn	12 46 43.1	+8.2
	comp=N,2.7nm,0.6s						
ABTA				*i* Sn	Sn	12 48 10.6	-2.6
	comp=N,2.4nm,0.7s						
LESA	Schwarzleotal	9.10	322	*i* Pn	Pn	12 46 40.4	+0.1
	comp=N,1.6nm,0.5s						
LESA				*i* Sn	Sn	12 48 20.2	-2.7
	comp=N,1.3nm,0.6s						
WTTA	Wattenberg	9.50	319	*e*Pn	Pn	12 46 47.9	+2.1
	comp=N,1.0nm,0.5s						
WTTA				*e*Sn	Sn	12 48 29.2	-3.5
	comp=N,2.1nm,0.5s						
WATA	Walderalm	9.58	319	*e*Pn	Pn	12 46 47.7	+0.9
	comp=N,1.1nm,0.4s						
WATA				*e*Sn	Sn	12 48 32.7	-1.9
	comp=N,6.9nm,0.7s						
FETA	Feichten	9.81	315	*e*Pn	Pn	12 46 54.7	+4.6
	comp=N,1.4nm,0.7s						
MOTA	Moosalm	9.82	318	*i* Pn	Pn	12 46 51.1	+0.8
	comp=N,1.7nm,0.6s						
MOTA				*e*Sn	Sn	12 48 39.6	-1.1
	comp=N,3.4nm,0.7s						
RETA	Reutte	10.09	317	*e*Pn	Pn	12 46 54.8	+1.0
	comp=N,0.5nm,0.4s						
RETA				*e*Sn	Sn	12 48 44.4	-2.7
	comp=N,1.5nm,0.6s						

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*IDC **28** 12:52:09.8±4.2, 6°.51S×129°.13E, h199^{km}±43^{km}, mb3.4/7, mbtmp4.0/11, Error ellipse: s-maj=44.9km s-min=20.0km az=61.0*

ISC 28 12:52:09.2±0.8**, 6°.68S**±0°.07×**129°.2E**±0°.1**, h200**^{km}**, n11, σ1**^{s}.**90**/14**, mb3.6**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.51	237	P	Pn	12 53 44.6	+1.4
	40nm,0.4s,baz=95,slow=5.1,SNR=8.0						
FITZ	Fitzroy Crossi	11.87	197	P	Pn	12 54 54.6	+2.1
	3.2nm,0.3s,baz=21,slow=9.7,SNR=45						
FITZ				S	Sn	12 57 02.1	-2.8
	7.5nm,0.7s,baz=123,slow=7.7,SNR=6.7						
WRA	Warramunga Arr	14.09	160	P	P	12 55 22.5	+0.4
	0.4nm,0.5s,baz=347,slow=12,SNR=16						
WRA				S	S	12 57 53.5	-3.7
	1.8nm,0.6s,baz=330,slow=23,SNR=6.7						
ASAR	Alice Springs	17.48	166	P	Pn	12 56 03.8	+2.6
	4.3nm,0.7s,baz=340,slow=9.5,SNR=51						
ASAR				S	S	12 59 11.2	+0.3
	0.9nm,0.8s,baz=346,slow=22,SNR=5.1						
CMAR	Chiang Mai Arr	38.93	310	P	P	12 59 14.7	-1.3
	0.3nm,0.4s,baz=119,slow=8.6,SNR=1.5						
	0.3nm,0.4s						
SONM	Songino Array	57.90	342	P	P	13 01 40.4	0.0
	0.8nm,0.5s,baz=150,slow=6.3,SNR=2.2						
	0.8nm,0.5s						
PETK	Petropavlovsk-	64.27	19	P	P	13 02 22.7	-0.3
	1.4nm,0.9s,baz=215,slow=7.3,SNR=2.0						
	1.4nm,0.9s						
MKAR	Makanchi Array	67.54	327	P	P	13 02 43.6	-0.3
	0.4nm,0.3s,baz=118,slow=8.1,SNR=12						
	0.4nm,0.3s						
ZALV	Zalesovo Beam	70.96	334	P	P	13 03 03.7	-1.0
	0.6nm,0.5s,baz=132,slow=6.0,SNR=2.1						
	0.6nm,0.5s						
KURBB	Kurchatov Arra	71.83	329	P	P	13 03 09.6	-0.5
	0.5nm,0.4s,baz=134,slow=4.9,SNR=3.1						
	0.5nm,0.4s						
QSPA	South Pole Qui	83.29	180	P	P	13 04 14.4	+1.0
	0.6nm,0.5s,baz=225,slow=12,SNR=1.8						
	0.6nm,0.5s						

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*CATAC **28** 13:07:47.8±0.9, 8°N±6°×8°3W±°, h3^{km}±3^{km}, M4.0/13, MLv4.0/13, Error ellipse: s-maj=12.7km s-min=7.8km az=16.8, confirmed*

*UCR **28** 13:07:50.4±1.1, 8°.34N×82°.83W, h29^{km}±2^{km}, MW3.8*

*UPA **28** 13:07:50.3±0.7, 8°.39N×82°.84W, h37^{km}±5^{km}, MW4.5*

ISC 28 13:07:50.9±1.0**, 8°.37N**±0°.04×**82°.83W**±0°.03**, h30**^{km}±7^{km}**, n84, σ1**^{s}.**28**/93**, 1C-2D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.05	47	*e*P	Pb	13 07 56.0	0.0
LPPC	Paso Canoas	0.16	356	*e*P	Pn	13 07 56.4	-1.0
LPPC				*e*S	Sn	13 08 01.8	+1.0
CDITO	Canoas	0.20	347	P	Pn	13 07 57.0	-1.0
CDITO	Canoas	0.20	347	S	Sn	13 08 02.5	+1.0
LIMO3	Limones	0.27	188	*e*P	Pb	13 07 58.0	0.0
LMNES	Limones	0.27	187	*e*P	Pb	13 07 58.0	-0.1
NELY	Ciudad Neily	0.30	337	*e*P	Pb	13 07 57.9	-0.5
NELY				*e*S	Sn	13 08 04.2	-0.5
DVD	David	0.38	80	*e*P	Pb	13 07 59.3	-0.2
DVD				*e*S	Sb	13 08 06.2	+0.9
CSTBL	De las Acacias	0.38	84	*e*P	Pb	13 07 59.4	-0.2
PEDE3	Pedregal, Chir	0.40	88	*e*P	Pb	13 07 59.4	-0.4
PEDE3				⇑*e*S	Sb	13 08 06.7	+0.8
LOCO3	Loma Colorada,	0.41	85	*e*P	Pb	13 07 59.7	-0.2
LOCO3				*e*S	Sb	13 08 06.0	0.0
FITO	Golfito	0.41	308	*e*P	Pb	13 07 58.4	-1.6
FITO				*e*S	Sb	13 08 05.2	-1.0
MLIR3	Monte Lirio, C	0.42	0	*e*P	Pb	13 08 00.4	+0.2
MLIR3				*e*S	Sb	13 08 06.8	+0.3
CLLRA	Cordillera,	0.42	30	*e*P	Pb	13 08 00.1	-0.3
LOMA3	Las Lomas, Chi	0.43	82	*e*P	Pb	13 07 59.9	-0.4
LOMA3				*e*S	Sb	13 08 07.0	+0.2
EDAD	Golfito	0.44	310	*e*P	Pb	13 07 57.9	-2.5
EDAD				*e*S	Sb	13 08 06.0	-0.9
BRU2	Volcan	0.44	18	*e*P	Pb	13 08 00.1	-0.4
BRU2	Volcan	0.44	18	P	Pb	13 08 00.2	-0.4
BRU2	Volcan	0.44	18	⇓*i*P	Pb	13 08 00.2	-0.4
BRU2				*e*S	Sb	13 08 08.0	+0.9
PTAR3	Potrerillos Ar	0.46	46	*e*P	Pb	13 08 00.5	-0.2
PTAR3				*e*S	Sb	13 08 07.6	+0.1
BC3P	Paso Ancho	0.49	26	⇓*i*P	Pn	13 08 00.8	-1.4
BQTLY	Boquete Panama	0.53	43	*e*P	Pn	13 08 01.2	-1.3
BQSF3	Alto Boquete,	0.54	47	*e*P	Pn	13 08 01.3	-1.3
BQSF3				*e*S	Sb	13 08 10.0	+0.4
ALCO	Alturas Coton,	0.57	359	*e*P	Pn	13 08 01.9	-1.4
PSOM3	Paja de Sombre	0.59	58	*e*P	Pn	13 08 01.9	-1.4
EDP2	Potrero Grande	0.73	332	*e*P	Pn	13 08 04.3	-0.9
PBNVO	Pueblo Nuevo,	0.81	51	*e*P	Pn	13 08 05.2	-1.2
RBALA	Bur	0.83	53	*e*P	Pn	13 08 05.8	-0.9
PANP	Palmar Norte	0.86	313	*e*P	Pn	13 08 05.7	-1.3
DRK0	Durika	0.98	335	*e*P	Pn	13 08 07.4	-1.4
DRK0	Durika	0.98	335	P	Pn	13 08 07.5	-1.3
DRK0	Durika	0.98	335	*e*P	Pn	13 08 07.5	-1.3
DRK0				*e*S	Sn	13 08 19.8	-1.9
EDPE	Pejibaye, P	1.07	317	*e*P	Pn	13 08 09.1	-0.9
OCHAL	Ojochal	1.08	312	P	Pn	13 08 09.1	-1.0
OCHAL	Ojochal	1.08	312	S	Sn	13 08 24.3	+0.2
PDCAN	Manzana , Fuen	1.12	94	*e*P	Pn	13 08 09.4	-1.2
SAJE	San Jernim	1.18	325	*e*P	Pn	13 08 10.2	-1.4
VERH	Veragua Rainfo	1.59	347	*e*P	Pn	13 08 16.7	-0.3
LLNJ	Naranjito	1.67	311	*e*P	Pn	13 08 18.6	+0.4
PIEC	Cerro El Cedra	1.67	318	*e*P	Pn	13 08 18.3	-0.1
GMAL	Guarumal, Vera	1.69	111	*e*P	Pn	13 08 18.1	-0.3
TURIB	Turrialba	1.75	331	*e*P	Pn	13 08 19.5	+0.2
VERB	Verbena	1.78	331	*e*P	Pn	13 08 20.4	+0.5
LCR2	La Lucha 2	1.79	320	*e*P	Pn	13 08 19.1	-0.9
LCR2	La Lucha 2	1.79	320	P	Pn	13 08 19.4	-0.7
LCR2	La Lucha 2	1.79	320	S	Sn	13 08 43.9	+2.0
PISJ	San Jernim	1.79	314	*e*P	Pn	13 08 20.9	+0.9
ABE2	San Pablo	1.79	318	*e*P	Pn	13 08 20.6	+0.5
VTCV	VTCV, Calle Va	1.83	331	*e*P	Pn	13 08 21.1	+0.5
RESJ	San Isidro (Tu	1.83	334	*e*P	Pn	13 08 21.2	+0.7
ABRB	Las Abras (San	1.85	332	*e*P	Pn	13 08 21.4	+0.6
RAFA	San Farael, Vo	1.85	328	*e*P	Pn	13 08 21.3	+0.4
CVTV	Tajo	1.86	331	*e*P	Pn	13 08 21.6	+0.6
PAR1A	Puntarenas Pro	1.86	311	*e*P	Pn	13 08 21.3	+0.5
CVTQ	Turrialba Volc	1.87	330	*e*P	Pn	13 08 21.7	+0.5
VTLA	Turrialba Volc	1.87	330	*e*P	Pn	13 08 21.6	+0.3
VTR0	Volcan Turrial	1.88	331	*e*P	Pn	13 08 22.0	+0.6
RVLA	Villa Bonita	1.88	337	*e*P	Pn	13 08 22.0	+0.9
VICA	Volcano Irazu	1.89	328	*e*P	Pn	13 08 22.2	+0.6
CVIMO	Finca Echandi	1.98	326	*e*P	Pn	13 08 24.3	+1.7
BELE	Belen	2.08	320	*e*P	Pn	13 08 25.5	+1.5
VBV1	V. Barva	2.14	324	*e*P	Pn	13 08 26.9	+2.0
TCS1	Tacares	2.21	319	P	Pn	13 08 29.0	+3.4
TRT2	Tortugero	2.35	338	P	Pn	13 08 28.0	+0.5
TRT2	Tortugero	2.35	338	S	Sb	13 09 02.9	+1.7
CBL1	Cabuya	2.54	299	*e*P	Pn	13 08 29.0	-1.2
SOCE	Pocosol	2.67	319	*e*P	Pn	13 08 35.0	+3.1
SOCE	Pocosol	2.67	319	P	Pn	13 08 34.4	+2.4
SOCE	Pocosol	2.67	319	S	Sn	13 09 08.2	+4.9

FORC	Fortuna	2.76	319	*e*P	Pn	13 08 36.3	+3.1
VACR	Volcan Arenal	2.77	319	*e*P	Pn	13 08 36.6	+3.3
ARE1	Arenal 1	2.79	318	*e*P	Pn	13 08 36.5	+2.9
VARE2	V. Arenal	2.79	318	*e*P	Pn	13 08 37.4	+3.7
CEDE	Laguna Cedeo	2.80	319	*e*P	Pn	13 08 37.2	+3.4
COVE	Coope Vega, Sa	2.80	326	P	Pn	13 08 34.3	+0.6
JTS	Las Juntas de	2.83	312	*e*P	Pn	13 08 35.4	+1.2
QUEB	Quebradon, Cot	3.03	318	*e*P	Pn	13 08 40.4	+3.5
INDI	Punta indio, G	3.03	300	P	Pn	13 08 36.7	-0.2
INDI	Punta indio, G	3.03	300	S	Sn	13 09 10.2	-2.0
CMARA	Lajas Hojancha	3.04	303	*e*P	Pn	13 08 37.0	-0.2
CMARA	Lajas Hojancha	3.04	303	P	Pn	13 08 36.9	-0.2
PLVR	Palo Verde	3.17	308	*e*P	Pn	13 08 40.0	+1.0
BLUN	Bluefields	3.73	346	P	Pn	13 08 46.2	-0.3
ACON	Acoyapa	4.25	327	P	Pn	13 08 53.8	0.0

*IDC **28** 13:21:52.3±0.5, 2°.54S×121°.76E, h0^{km}, mb4.3/16, mbtmp4.3/20, ML4.2/4, MS3.9/41, Error ellipse: s-maj=22.3km s-min=11.2km az=74.0*

*GCMT **28** 13:21:54.8±0.3, 2°.60S±0°.02×121°.65E±0°.02, h12^{km}, MW4.7/77, Moment Tensor Solution. s4,c5; s77,c99; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.67±.07; $M_{\theta\theta}$1.19±.06; $M_{\phi\phi}$-1.86±.06; $M_{r\theta}$0.12±.19; $M_{\theta\phi}$0.31±.06; $M_{\phi r}$0.45±.20; Best double couple: $M_0$1.61500×10^{16} NP1:ϕ_s129.00000°, δ72.00000°, λ5.00000°. NP2: ϕ_s38.00000°, δ85.00000°, λ162.00000°. Principal axes: T 1.2680, Plg16.0000°, Azm352.0000°; N 0.6910, Plg71.0000°, Azm203.0000°; P -1.9620, Plg9.0000°, Azm85.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **28** 13:21:54.8±1.3, 2°.60S±0°.05×121°.77E±0°.06, h10^{km}±1^{km}, mb4.7/31 Error ellipse: s-maj=11.1km s-min=8.7km az=112.0*

*DJA **28** 13:21:55.6±0.8, 3°S±1°×12°2E±°, h17^{km}±7^{km}, M4.8/39, mb5.0/39, mB5.3/13, MLv4.9/31, Mw(mB)4.8/13, MwMwp4.5/3, Mwp4.9/3*

ISC 28 13:21:54.3±0.4, **2°.62S**±0°.05×**121°.73E**±0°.05, **h10^{km}, n145, σ1^{s}24**/119, **mb4.6**/38, **MS3.9**/37, **1C, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDI	Kendari	1.60	146	P	Pn	13 22 23.6	+0.9
APSI	Ampana	1.70	357	P	Pn	13 22 23.7	-0.3
LUWI	Luwuk	1.88	34		Pn	13 22 26.6	+0.1
LUWI	Luwuk	1.88	34	P	Pn	13 22 23.9	-2.6
TTSI	Tana Toraja	1.96	257	P	Pn	13 22 24.3	-3.3
SPSI	Sidrap Palu	2.37	236	P	Pn	13 22 31.3	-2.0
BNSI	Bone	2.40	222	P	Pn	13 22 33.3	-0.4
PCI	Palu	2.54	312	P	Pn	13 22 33.8	-1.9
BBSI	Bau Bau	2.97	164	P	Pn	13 22 41.2	-0.4
MRSI	Marisa	3.08	4	P	Pn	13 22 42.8	-0.3
KAPI	Kappang	3.09	220		Pn	13 22 43.8	+0.5
KAPI	Kappang	3.09	220	Pn	Pn	13 22 44.4	+1.2
	114nm,0.3s,baz=25,slow=7.4,SNR=87						
KAPI				Sn	Sn	13 23 21.6	+1.3
	90nm,0.3s,baz=85,slow=20,SNR=9.0						
KAPI				LR	LR	13 24 10.8	
	comp=Z,3μm,19.1s,baz=48,slow=44						
	577nm,0.5s						
MPSI	Mapaga	3.46	328	P	Pn	13 22 48.0	-0.3
BSSI	Bau Bau, Buton	3.71	199	P	Pn	13 22 50.5	-1.3
TOLI2	Tolitoli	3.82	346		Pn	13 22 54.1	+0.8
KMSI	Cibinong	3.89	35	P	Pn	13 22 56.0	+1.8
SANI	Sanana	4.29	83	P	Pn	13 22 59.3	-0.5
BKB	Balikpapan	5.01	285	Pn	Pn	13 23 11.0	+1.3
BKB	Balikpapan	5.01	285	P	Pn	13 23 10.2	+0.5
NLAI	Namlea	5.40	97	P	Pn	13 23 16.6	+1.6
	0.7nm2μm168nm,0.7s						
MMRI	Maumere	6.00	175		Pn	13 23 24.4	+1.1
MMRI	Maumere	6.00	175	P	Pn	13 23 23.5	+0.2
	0.6nm2μm159nm,0.8s						
EDFI	Ende, Flores	6.09	180	P	Pn	13 23 25.0	+0.4
	0.2nm63nm,0.6s						
AAI	Ambon	6.54	100	P	Pn	13 23 33.8	+3.1
	0.4nm106nm,0.9s						
TNTI	Ternate	6.56	59		Pn	13 23 31.4	+0.4
TNTI	Ternate	6.56	59	P	Pn	13 23 31.4	+0.4
	0.6nm2μm188nm,0.8s						
WSI	Waingapu	7.15	191	P	Pn	13 23 39.7	+0.7
	244nm,1.2s						
MSAI	Masohi	7.23	96	P	Pn	13 23 44.2	+4.1
	0.6nm2μm98nm,0.8s						
PLAI	Plampang	7.32	212	P	Pn	13 23 42.7	+1.3
	0.3nm82nm,0.9s						
WBSI	Waikabubak, Su	7.36	198	P	Pn	13 23 40.5	-1.4
SOEI	Soe	7.53	161		Pn	13 23 45.0	+0.7
SOEI	Soe	7.53	161	P	Pn	13 23 43.9	-0.5
BASI	Baing, Sumba	7.64	189	P	Pn	13 23 46.0	+0.2
TWSI	Taliwang, Sumb	7.76	218	P	Pn	13 23 46.5	-1.0
	0.2nm42nm,1.1s						
BATI	Baumata	7.78	166	Pn	Pn	13 23 49.8	+2.0
	11nm,0.3s,baz=315,slow=4.3,SNR=8.3						
BATI				LR	LR	13 27 22.4	
	comp=Z,3μm,19.8s,baz=15,slow=42						
	65nm,0.8s						
BATI	Baumata	7.78	166	P	Pn	13 23 49.4	+1.6
MYLDM	Lahad Datu	8.39	337		Pn	13 23 57.7	+1.7
SRBI	Singaraja	8.46	230	P	Pn	13 23 56.9	-0.2
	2μm62nm,0.9s						
KMMI	Kalianget	8.90	240	P	Pn	13 24 03.3	+0.2
JAGI	Jajag, Banyuwa	9.52	232	P	Pn	13 24 13.0	+1.4
	57nm,1.1s						
BWJI	Bawean	9.60	250	P	Pn	13 24 12.1	-0.6
SWI	Sorong	9.68	80	P	Pn	13 24 15.9	+2.1
GMJI	Gumukmas	9.98	235	P	Pn	13 24 17.6	-0.3
KKM	Kota Kinabalu	10.21	327	Pn	Pn	13 24 22.7	+1.5
DAV	Davao City (W)	10.36	22	LR	LR	13 29 06.2	
	comp=Z,670nm,18.8s,baz=216,slow=42						
SBUM	Sibu	10.76	298		Pn	13 24 30.8	+2.3
KSM	Kuching	12.12	289		Pn	13 24 47.3	+0.1
MTN	Manton Dam	13.78	138	Pn	Pn	13 25 08.9	-1.0
BAKI	Biak	14.44	85	P	Pn	13 25 19.6	+0.6
LEM	Lembang	14.67	253	LR	LR	13 31 44.6	
	comp=Z,1μm,18.3s,baz=60,slow=40						
KNRA	Kununurra	14.71	152		Pn	13 25 21.8	-0.8
SKJI	Sukabumi	15.73	253	P	Pn	13 25 35.5	-0.7
FITZ	Fitzroy Crossi	15.86	166		Pn	13 25 38.2	+0.4
FITZ	Fitzroy Crossi	15.86	166	Pn	Pn	13 25 36.2	-1.6
	0.2nm,0.3s,baz=357,slow=6.8,SNR=20						
FITZ				LR	LR	13 32 16.3	
	comp=Z,313nm,19.8s,baz=350,slow=39						
	3.1nm,0.8s						
TGY	Tagaytay City	16.63	357	LR	LR	13 31 50.5	
	comp=Z,342nm,21.2s,baz=99,slow=36						
SMPI	Sarmi	16.98	88	P	P	13 25 53.9	-0.2
	66nm,1.6s						
MDSI	Maura Dua	17.61	263	P	Pn	13 26 01.0	+0.9
	43nm,0.9s						
MYKOM	Kota Tinggi	18.40	284		P	13 26 09.2	-0.6
MYKOM				IAmb	IAmb	13 26 13.6	
	comp=Z,46nm,1.4s						
GENI	Genyem	18.42	90	P	P	13 26 12.2	+2.2
	comp=Z,75nm,1.1s						
MBWA	Marble Bar	18.53	186	P	P	13 26 11.0	-0.2
PSA00	Pilbara Seismi	18.93	185	P	P	13 26 15.9	+0.4
JAY	Jayapura	18.96	90	P	P	13 26 15.2	-0.8
	comp=Z,0.3nm,0.3s,baz=344,slow=18,SNR=1.9						
JAY				LR	LR	13 35 51.8	
	comp=Z,373nm,21.8s,baz=254,slow=44						
	comp=Z,18nm,1.0s						
KSI	Kapahiang	19.14	266	P	P	13 26 15.8	-2.1
BKNI	Bangkinang	20.89	278	P	P	13 26 36.3	-0.7
BKNI	Bangkinang	20.89	278	P	P	13 26 34.9	-2.1
WB0	Warramunga Arr	21.06	145		P	13 26 38.1	-0.8
WB0				IAmb	IAmb	13 26 44.3	
	comp=Z,32nm,1.0s						
WRAB	Tennant Creek	21.17	145	P	P	13 26 39.0	-1.0
WRAB				IAmb	IAmb	13 26 57.7	
	comp=Z,29nm,1.2s						
WRA	Warramunga Arr	21.17	145		P	13 26 40.1	+0.1
WRA	Warramunga Arr	21.17	145	P	P	13 26 39.7	-0.3
	comp=Z,15nm,1.0s,baz=320,slow=11,SNR=41						
WRA				LR	LR	13 35 50.7	
	comp=Z,514nm,19.4s,baz=7.5,slow=40						
	comp=Z,15nm,1.0s						
WR8	Warramunga Arr	21.27	145		P	13 26 40.8	-0.4
WR8				IAmb	IAmb	13 26 56.7	
	comp=Z,20nm,0.8s						
IPM	Ipoh	21.86	289		P	13 26 48.0	+0.6
MNSI	Mandailing Nat	22.40	278	P	P	13 26 53.3	0.0
	comp=Z,60nm,0.9s						
RPSI	Rantau Prapat	23.40	283		P	13 27 04.3	+0.6
PSI	Prapat	23.42	283	LR	LR	13 38 08.4	
	comp=Z,498nm,18.1s,baz=107,slow=42						
TSI	Tuntungan	23.94	285	P	P	13 27 09.4	+0.5
COEN	Coen	24.00	119		P	13 27 09.1	-0.4
COEN				IAmb	IAmb	13 27 28.9	
	comp=Z,28nm,1.1s						
AS31	Alice Springs	24.01	152	P	P	13 27 09.5	-0.1
ASAR	Alice Springs	24.02	152	P	P	13 27 09.6	0.0
	comp=Z,15nm,0.9s,baz=324,slow=7.7,SNR=48						
ASAR				PcP	PcP	13 30 52.9	+1.2
	comp=Z,0.5nm,0.7s,baz=354,slow=1.7,SNR=4.2						
	comp=Z,15nm,0.9s						
GSI	Gunungsitoli	24.46	279		P	13 27 13.2	-0.6
GSI	Gunungsitoli	24.46	279	P	P	13 27 12.5	-1.3
	comp=Z,68nm,1.1s						
QIZ	Qiongzhong	24.48	332	P	P	13 27 14.3	+0.4
QIZ				S	S	13 31 36.8	+2.5
QIZ				SS	SnSn	13 32 23.5	+4.7
QIZ				LR	LR		
	comp=E,260nm,16.2s						
QIZ				LR	LR		
	comp=Z,350nm,18.5s						
SRIT	Nakonsritamara	24.71	297	P	P	13 27 14.8	-1.3
TWG	Pinlang	25.29	359	P	P	13 27 20.5	-0.6
MLSI	Meulaboh, Aceh	26.21	285	P	P	13 27 28.9	-0.8
	comp=Z,54nm,1.1s						
SSLB	Suanglung	26.26	358		P	13 27 29.3	-0.6
SSLB				IAmb	IAmb	13 27 41.2	
	comp=Z,20nm,0.9s						
JOW	Kunigami	29.95	12	LR	LR	13 41 09.8	
	comp=Z,122nm,20.3s,baz=318,slow=39						
NWAO	Narrogin (SRO)	30.45	187	LR	LR	13 40 05.5	
	comp=Z,172nm,20.4s,baz=307,slow=36						
CMAR	Chiang Mai Arr	30.69	314	P	P	13 28 08.9	-0.6
	comp=Z,2.6nm,0.8s,baz=140,slow=6.8,SNR=14						
CMAR				PcP	PcP	13 31 08.4	+0.7
	comp=Z,0.3nm,0.4s,baz=128,slow=2.9,SNR=1.9						
CMAR				LR	LR	13 43 43.9	
	comp=Z,197nm,18.0s,baz=120,slow=43						
	comp=Z,2.6nm,0.8s						
CHTO	Chiang Mai	30.92	314	P	P	13 28 12.5	+0.9
CHTO				IAmb	IAmb	13 28 29.8	
	comp=Z,11nm,1.2s						
STKA	Stephens Creek	34.60	149		P	13 28 43.4	-0.2
STKA	Stephens Creek	34.60	149	P	P	13 28 44.1	+0.4
	comp=Z,18nm,1.0s,baz=323,slow=12,SNR=12						
	comp=Z,18nm,1.0s						
JNU	Nakatsue	36.58	13	LR	LR	13 46 20.7	
	comp=Z,51nm,18.1s,baz=193,slow=40						
XAN	Xi'an	38.41	343	⇑P	P	13 29 21.5	+5.4
XAN				pP	sP	13 29 25.5	+4.7
XAN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
XAN				LR	LR		
	comp=N,330nm,18.5s						
XAN				LR	LR		
	comp=E,170nm,17.9s						
XAN				LR	LR		
	comp=Z,260nm,16.5s						
HNR	Honiara	38.58	102	LR	LR	13 45 43.2	
	comp=Z,79nm,21.5s,baz=242,slow=37						
KSRS	Korea Array	40.28	8	P	P	13 29 30.9	-0.7
	comp=Z,1.1nm,0.8s,baz=187,slow=10,SNR=6.0						
	comp=Z,1.1nm,0.8s						
MJAR	Matsushiro Arr	41.88	20	P	P	13 29 43.6	-1.3
	comp=Z,2.2nm,0.9s,baz=194,slow=9.3,SNR=3.3						
MJAR				LR	LR	13 48 21.2	
	comp=Z,53nm,18.8s,baz=207,slow=38						
	comp=Z,2.2nm,0.9s						
PALK	Pallekele	42.10	284	LR	LR	13 48 42.3	
	comp=Z,193nm,18.1s,baz=102,slow=38						
EVN	Everest	45.29	315		P	13 30 12.7	-0.6
EVN				IAmb	IAmb	13 30 32.9	
	comp=Z,18nm,1.1s						
GTA	Gaotai	46.42	336	*e*P	P	13 30 22.3	+0.8
GTA				pP	sP	13 30 27.0	+0.8
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GTA				LR	LR		
	comp=N,100nm,14.7s						
GTA				LR	LR		
	comp=E,130nm,13.9s						
GTA				LR	LR		
	comp=Z,120nm,18.3s						
USRK	Ussuriysk Ar.	47.51	10	P	P	13 30 28.3	-1.4
	comp=Z,3.4nm,0.8s,baz=192,slow=6.2,SNR=6.4						
USRK				LR	LR	13 51 06.8	
	comp=Z,68nm,19.4s,baz=214,slow=37						
	comp=Z,3.4nm,0.8s						
DZM	Mont Dzumac	47.51	118	LR	LR	13 51 55.6	
	comp=Z,82nm,19.5s,baz=316,slow=38						
JKA	Kamikawa-asahi	50.14	20	P	P	13 30 49.4	-0.5
JKA				IAmb	IAmb	13 31 29.4	
	comp=Z,16nm,1.2s						
SONM	Songino Array	52.01	347	P	P	13 31 03.2	-0.8
SONM	Songino Array	52.01	347	P	P	13 31 03.9	-0.2
	comp=Z,0.6nm,0.5s,baz=169,slow=8.8,SNR=5.1						
SONM				LR	LR	13 55 11.0	
	comp=Z,123nm,20.1s,baz=155,slow=38						
	comp=Z,0.6nm,0.5s						
KLR	Kul'dur	52.37	8	LR	LR	13 55 11.4	
	comp=Z,48nm,18.3s,baz=192,slow=38						
HEH	HeiHe	52.89	5	*e*P	P	13 31 10.0	-0.4
HEH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HEH				pmax	pmax		
	comp=Z,70nm,5.5s						
RPZ	Rata Peaks	59.78	140	P	P	13 31 58.4	-1.4
	comp=Z,12nm,0.9s,baz=348,slow=14,SNR=3.4						
	comp=Z,12nm,0.9s						
MK31	Makanchi Array	60.19	330	P	P	13 32 02.6	+0.1
MK31				IAmb	IAmb	13 32 39.0	
	comp=Z,3.9nm,1.1s						
MKAR	Makanchi Array	60.19	330		P	13 32 02.4	-0.2
MKAR	Makanchi Array	60.19	330	P	P	13 32 01.8	-0.7
	comp=Z,1.9nm,0.8s,baz=136,slow=7.8,SNR=14						
MKAR				LR	LR	14 01 58.6	
	comp=Z,55nm,18.5s,baz=166,slow=40						
	comp=Z,1.9nm,0.8s						
MAKZ	Makanchi	60.36	330		P	13 32 03.9	+0.2
MAKZ				IAmb	IAmb	13 32 39.6	
	comp=Z,5.4nm,1.2s						
URZ	Urewera	61.66	133	LR	LR	14 00 34.6	
	comp=Z,192nm,19.1s,baz=312,slow=38						
AAK	Ala-Archa	61.97	322	LR	LR	14 01 35.6	
	comp=Z,111nm,20.1s,baz=116,slow=38						
PETK	Petropavlovsk-	63.18	23	P	P	13 32 22.1	-0.4
PETK	Petropavlovsk-	63.18	23	P	P	13 32 20.7	-1.8
	comp=Z,2.1nm,0.9s,baz=222,slow=3.9,SNR=4.9						
	comp=Z,2.1nm,0.9s						
ZAA0	Zalesovo Array	64.18	337	IAmb	IAmb	13 32 54.3	
	comp=Z,4.7nm,1.0s						
ZALV	Zalesovo Beam	64.18	337		P	13 32 27.8	-1.3
ZALV	Zalesovo Beam	64.18	337	P	P	13 32 27.5	-1.6
	comp=Z,2.9nm,0.8s,baz=110,slow=6.5,SNR=8.4						
	comp=Z,2.9nm,0.8s						
KURBB	Kurchatov Arra	64.60	331	P	P	13 32 30.7	-1.2
	comp=Z,1.3nm,0.2s,baz=130,slow=6.0,SNR=9.1						
	comp=Z,1.3nm,0.2s						
KURK	Kurchatov	64.62	331		P	13 32 32.0	0.0
KURK				IAmb	IAmb	13 32 57.5	
	comp=Z,8.3nm,1.1s						
YAK	Yakutsk	64.76	4	LR	LR	14 01 14.6	
	comp=Z,52nm,21.7s,baz=216,slow=36						
SEY	Seymchan	69.34	14	LR	LR	14 06 05.2	
	comp=Z,39nm,18.2s,baz=256,slow=38						
BVAR	Borovoye Array	70.07	330	P	P	13 33 05.7	-0.9
	comp=Z,0.6nm,0.6s,baz=133,slow=8.5,SNR=4.5						
BVAR				LR	LR	14 08 22.0	
	comp=Z,34nm,18.4s,baz=130,slow=40						
	comp=Z,0.6nm,0.6s						
TIXI	Tiksi	74.28	2	P	P	13 33 31.2	-0.1
TIXI				IAmb	IAmb	13 33 47.7	
	comp=Z,6.3nm,1.1s						
TIXI	Tiksi	74.28	2	LR	LR	14 07 53.2	
	comp=Z,97nm,20.9s,baz=201,slow=37						
NRIK	Noril'sk	75.47	348	LR	LR	14 09 25.5	
	comp=Z,47nm,18.1s,baz=159,slow=38						
AKTO	Aktyubinsk	75.64	324	LR	LR	14 10 48.3	
	comp=Z,74nm,20.2s,baz=218,slow=39						
MAW	Mawson	76.12	200	LR	LR	14 01 41.4	
	comp=Z,79nm,21.8s,baz=76,slow=31						
VNDA	Vanda	77.85	172	P	P	13 33 51.9	+0.2
VNDA	Vanda	77.85	172	P	P	13 33 51.6	-0.1
	comp=Z,2.8nm,0.8s,baz=306,slow=7.6,SNR=14						
VNDA				LR	LR	14 08 38.4	
	comp=Z,71nm,18.4s,baz=332,slow=36						
	comp=Z,2.8nm,0.8s						
BELG	Belogornoye	82.42	324	LR	LR	14 14 13.5	
	comp=Z,51nm,20.0s,baz=81,slow=38						
QSPA	South Pole Qui	87.33	180	P	P	13 34 41.5	0.0
QSPA				IAmb	IAmb	13 34 52.2	
	comp=Z,9.7nm,1.2s						
QSPA	South Pole Qui	87.33	180	P	P	13 34 40.6	-0.9
	comp=Z,3.2nm,0.9s,baz=289,slow=1.3,SNR=10						
QSPA				LR	LR	14 16 46.9	
	comp=Z,56nm,18.0s,baz=358,slow=38						
	comp=Z,3.2nm,0.9s						
H17K	Granite Mounta	87.43	25	IAmb	IAmb	13 34 43.3	
	comp=Z,3.5nm,1.1s						
MMAI	Mount Meron Ar	88.33	303	LR	LR	14 20 10.9	
	comp=Z,87nm,18.8s,baz=104,slow=40						
H19K	Roundabout Mou	88.97	24	P	P	13 34 49.7	+0.7
H19K				IAmb	IAmb	13 34 57.8	
	comp=Z,6.2nm,1.1s						
KDAK	Kodiak Island	89.89	32	LR	LR	14 12 03.6	
	comp=Z,32nm,21.9s,baz=232,slow=34						
MATP	Matopo	92.12	250	LR	LR	14 11 17.0	
	comp=Z,51nm,19.2s,baz=81,slow=32						
LSZ	Lusaka	92.73	255	LR	LR	14 14 10.4	
	comp=Z,113nm,19.3s,baz=128,slow=34						
BOSA	Boshof	94.44	241	LR	LR	14 13 20.9	
	comp=Z,66nm,18.1s,baz=52,slow=33						
LBTB	Lobatse	94.46	245	LR	LR	14 14 57.8	
	comp=Z,57nm,18.8s,baz=100,slow=34						
ARCES	ARCESS Array B	94.62	339	LR	LR	14 22 09.1	
	comp=Z,38nm,21.0s,baz=76,slow=38						
NACGM	Naroch	94.98	325	*e*P	P	13 35 16.9	-0.2
	comp=Z,12nm,0.9s,baz=88						
SNAA	Sanae	97.83	195	LR	LR	14 15 09.3	
	comp=Z,63nm,21.8s,baz=117,slow=33						
PDAR	Pinedale Array	119.39	41	PKP	PKiKP	13 40 45.3	+0.5
	comp=Z,0.2nm,0.4s,baz=286,slow=2.1,SNR=1.4						

*IDC **28** 13:24:12.0±1.2, 7°.14S×120°.61E, h544^{km}±15^{km}, mb3.1/4, mbtmp4.0/8, Error ellipse: s-maj=73.4km s-min=17.4km az=59.0*

*NEIC **28** 13:24:12.7±1.6, 7°.3S±0°.1×120°.3E±0°.1, h554^{km}±4^{km}, mb4.1/14, Error ellipse: s-maj=21.2km s-min=15.2km az=62.0*

ISC 28 13:24:11.9±0.5, **7°.33S**±0°.09×**120°.4E**±0°.1, **h550^{km}, n37, σ1^{s}03**/38, **mb3.6**/6, **Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMRI	Maumere	2.26	125	P	P	13 25 22.1	-0.7
KAPI	Kappang	2.38	345	P	P	13 25 23.3	-0.1
KAPI	Kappang	2.38	345	P	P	13 25 23.7	+0.3
	164nm,1.1s,baz=142,slow=5.9,SNR=0.9						
BATI	Baumata	4.33	132	P	P	13 25 37.4	+1.1
	45nm,0.4s,baz=309,slow=13,SNR=25						
BATI				S	S	13 26 42.4	-2.8
	35nm,0.4s,baz=311,slow=20,SNR=6.9						
SOEI	Soe	4.55	122	P	P	13 25 40.0	+1.9
JAGI	Jajag, Banyuwa	6.26	259	P	P	13 25 52.4	-0.5
FITZ	Fitzroy Crossi	11.87	155	P	P	13 26 49.9	+0.8
FITZ	Fitzroy Crossi	11.87	155	P	P	13 26 49.6	+0.6
	6.2nm,0.7s,baz=344,slow=8.2,SNR=14						
MTN	Manton Dam	11.93	118	P	P	13 26 49.7	0.0
SBUM	Sibu	12.67	320	P	P	13 26 59.1	+1.6
MBWA	Marble Bar	13.76	183	P	P	13 27 08.5	-0.1
KKM	Kota Kinabalu	13.92	343	P	P	13 27 10.4	0.0
WB0	Warramunga Arr	18.38	134	P	P	13 27 55.2	+1.8
WB0				IAmb	IAmb	13 28 07.8	
	comp=Z,8.4nm,0.9s						
WRA	Warramunga Arr	18.46	134	P	P	13 27 54.8	+0.7
	comp=Z,1.9nm,0.6s,baz=314,slow=8.9,SNR=12						
WRAB	Tennant Creek	18.46	134	P	P	13 27 55.2	+1.2
WB2	Warramunga Arr	18.47	134	P	P	13 27 55.3	+1.2
WB2				IAmb	IAmb	13 28 24.6	
	comp=Z,9.3nm,0.9s						
WR8	Warramunga Arr	18.58	134	P	P	13 27 56.2	+1.0
WR8				IAmb	IAmb	13 28 17.9	
	comp=Z,10nm,0.9s						
WR0	Warramunga Arr	18.61	134	P	P	13 27 56.5	+1.0
WR0				IAmb	IAmb	13 28 24.1	
	comp=Z,12nm,1.0s						
ASAR	Alice Springs	20.80	143	P	P	13 28 15.9	+0.7
ASAR	Alice Springs	20.80	143	P	P	13 28 16.3	+1.0
	comp=Z,5.5nm,1.0s,baz=318,slow=9.3,SNR=0.8						
	comp=Z,5.5nm,1.0s						
CHTO	Chiang Mai	33.48	321	P	P	13 30 05.2	-1.0
CHTO				IAmb	IAmb	13 30 20.7	
	comp=Z,2.7nm,1.1s						
JKA	Kamikawa-asahi	55.01	19	P	P	13 32 52.3	+0.6
JKA				IAmb	IAmb	13 33 09.3	
	comp=Z,3.0nm,0.9s						
FUNA	Funafuti	58.23	95	P	P	13 33 13.7	-0.6
MKAR	Makanchi Array	63.62	332	P	P	13 33 49.2	+0.1
	comp=Z,0.4nm,0.6s,baz=147,slow=8.2,SNR=0.9						
	comp=Z,0.4nm,0.6s						
KK31	Karatay Array	67.54	323	P	P	13 34 13.1	-0.6
KKAR	Karatay Array	67.54	323	P	P	13 34 13.1	-0.6
KKAR				IAmb	IAmb	13 34 17.4	
	comp=Z,2.5nm,1.1s						
ZALV	Zalesovo Beam	67.99	338	P	P	13 34 15.6	-0.6
	comp=Z,0.8nm,0.4s,baz=130,slow=6.0,SNR=1.9						
	comp=Z,0.8nm,0.4s						
VNDA	Vanda	73.42	171	P	P	13 34 47.2	-0.6
ABKAR	Akbulak array	77.00	324	P	P	13 35 08.3	+0.1
QSPA	South Pole Qui	82.65	180	P	P	13 35 39.0	+1.2
MWH	Mokuaweoweo	86.83	70	P	P	13 35 59.4	-0.1
SNAA	Sanae	92.96	195	P	P	13 36 27.1	+0.8
SNAA				IAmb	IAmb	13 36 32.0	
	comp=Z,0.6nm,0.9s						
SNAA	Sanae	92.96	195	P	P	13 36 27.7	+1.4
	comp=Z,0.8nm,0.8s,baz=122,slow=19,SNR=1.9						
	comp=Z,0.8nm,0.8s						
HAWA	Hanford	115.83	42	PKPdf	PKPdf	13 41 52.1	-0.2
D08A	Wollman Farm,	116.03	41	PKPdf	PKPdf	13 41 51.7	-1.0
TORD	Torodi Ar. Bea	119.49	281	PKPdf	PKPdf	13 41 59.1	-1.2
LYMT	Lyon Mountain	120.29	39		PKPdf	13 42 01.8	+0.5

IDC 28 13:35:19.9±1.3, **2°.56S**×**140°.15E, h0^{km}, mb3.2**/3, **mbtmp3.2**/4, **ML2.8**/1, **Error ellipse: s-maj=27.8km s-min=10.3km az=176.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	0.56	86	Pg	Pg	13 35 30.8	+0.2
	49nm,0.3s,baz=231,slow=5.1,SNR=493						
JAY				Lg	Lg	13 35 38.0	
	33nm,0.3s,baz=116,slow=23,SNR=5.7						
WRA	Warramunga Arr	18.19	198	P	Pn	13 39 33.5	-0.6
	baz=26,slow=13,SNR=1.3						
	0.1nm,0.4s						
ASAR	Alice Springs	21.84	196	P	P	13 40 14.6	+0.4
	0.4nm,0.8s,baz=22,slow=10.0,SNR=6.6						
	0.4nm,0.8s						
SONM	Songino Array	58.21	334	P	P	13 45 16.8	+0.7
	0.4nm,0.4s,baz=151,slow=6.3,SNR=1.5						
	0.4nm,0.4s						
MKAR	Makanchi Array	70.55	322	P	P	13 46 35.8	-1.1
	0.1nm,0.4s,baz=101,slow=7.9,SNR=1.5						
	0.1nm,0.4s						

*NOU **28** 13:40:03.7, 35°.59S×178°.85E, h302^{km}, mb3.7/7, Off E. Coast of N. Island, N.Z.*

*WEL **28** 13:40:20.7±1.1, 36°S±9°×17°8E±1°0, h188^{km}±10^{km}, M3.3/20, ML3.4/8, MLv3.3/20, Error ellipse: s-maj=15.5km s-min=8.1km az=49.1, confirmed*

ISC 28 13:40:16.5±3.3, **36°.3S**±0°.1×**178°.1E**±0°.1, **h222^{km}**±17^{km}, **n39, σ1^{s}36**/46, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	1.31	172	P	Pn	13 40 51.5	+0.9
MXZ	Matakaoa Point	1.31	172	P	Pn	13 40 51.3	+0.8
MXZ				S	S	13 41 15.3	-2.0
WSRZ	White Island S	1.45	210	P	Pn	13 40 52.9	+1.2
WIZ	White Island	1.45	209	P	Pn	13 40 52.4	+0.7
HAZ	Te Kaha	1.51	189	P	Pn	13 40 53.1	+0.9
HAZ				S	S	13 41 18.3	-1.8
WMGZ	Waiomatatini S	1.58	170	P	Pn	13 40 54.1	+1.4
PKGZ	Pakihiroa	1.60	180	P	Pn	13 40 54.2	+1.2
RUGZ	Raukumara Rang	1.73	191	P	Pn	13 40 54.5	+0.2
PUZ	Puketiti	1.81	176	P	Pn	13 40 55.9	+1.0

PUZ				S	**S**	**13 41 23.3**	**-1.5**
TWGZ	**Tauwhareparae**	**1.91**	**182**	P	**Pn**	**13 40 57.7**	**+1.8**
TWGZ				S	**S**	**13 41 26.8**	**+0.2**
KUZ	**Kuaotunu**	**1.96**	**255**	P	**Pn**	**13 40 56.8**	**+0.5**
KUZ	**Kuaotunu**	**1.96**	**255**	P	**Pn**	**13 40 56.8**	**+0.5**
OPRZ	**Ohinepanea**	**2.00**	**217**	P	**Pn**	**13 40 58.5**	**+1.9**
TBAS	**Tolaga Bay Are**	**2.11**	**175**	P	**Pn**	**13 40 59.7**	**+2.0**
MWZ	**Matawai**	**2.11**	**192**	P	**Pn**	**13 40 58.8**	**+1.0**
MWZ				S	**S**	**13 41 28.7**	**-1.3**
GRZ	**Great Barrier**	**2.12**	**270**	P	**Pn**	**13 40 58.2**	**+0.4**
URZ	**Urewera**	**2.14**	**201**	P	**Pn**	**13 40 58.9**	**+1.0**
URZ	**Urewera**	**2.14**	**201**	P	**Pn**	**13 40 58.9**	**+1.0**
TKGZ	**Te Karaka**	**2.18**	**185**	P	**Pn**	**13 40 59.7**	**+1.4**
TKGZ				S	**S**	**13 41 30.6**	**-0.6**
CNGZ	**Carnagh Statio**	**2.22**	**177**	P	**Pn**	**13 41 00.6**	**+1.8**
RAGZ	**Rawiri**	**2.29**	**193**	P	**Pn**	**13 41 01.3**	**+1.6**
WIAZ	**Waiheke Island**	**2.43**	**257**	P	**Pn**	**13 41 02.1**	**+1.1**
MUGZ	**Murupara**	**2.44**	**205**	P	**Pn**	**13 41 02.1**	**+1.0**
RIGZ	**Rimuhau**	**2.45**	**186**	P	**Pn**	**13 41 02.5**	**+1.2**
MKAZ	**Moumakai**	**2.49**	**249**	P	**Pn**	**13 41 03.0**	**+1.3**
RTZ	**Ruatahuna**	**2.51**	**200**	P	**Pn**	**13 41 02.7**	**+0.8**
SNGZ	**Shannon Statio**	**2.58**	**193**	P	**Pn**	**13 41 03.8**	**+1.1**
PRRZ	**Plateau Road**	**2.61**	**211**	P	**Pn**	**13 41 04.2**	**+1.4**
ALRZ	**Allen Road**	**2.68**	**211**	P	**Pn**	**13 41 05.1**	**+1.4**
RAHZ	**Arahi**	**2.77**	**196**	P	**Pn**	**13 41 05.8**	**+1.2**
MTHZ	**Maungataniwha**	**2.77**	**201**	P	**Pn**	**13 41 05.9**	**+1.3**
MHGZ	**Mahia Peninsul**	**2.89**	**183**	P	**Pn**	**13 41 07.3**	**+1.3**
MHGZ				S	**S**	**13 41 43.8**	**-0.9**
MRHZ	**Matea Rd**	**2.89**	**207**	P	**Pn**	**13 41 06.8**	**+0.8**
TLZ	**Tolley Road**	**2.89**	**224**	P	**Pn**	**13 41 08.8**	**+2.7**
WCZ	**Waipu Caves**	**3.04**	**275**	P	**Pn**	**13 41 08.2**	**+0.4**
BKZ	**Black Stump Fm**	**3.16**	**203**	P	**Pn**	**13 41 09.8**	**+0.7**
HIZ	**Hauiti**	**3.41**	**228**	P	**Pn**	**13 41 15.0**	**+3.0**
BFZ	**Birch Farm**	**4.64**	**198**	P	**Pn**	**13 41 26.7**	**-0.2**
KHZ	**Kahutara**	**7.08**	**208**	P	**Pn**	**13 41 56.7**	**-1.1**

IDC 28 13:58:34.1±4.0,**62°.81N**×**34°.36E,h0**^{km}**,mbtmp2.8**/2,**ML1.8**/2,**Error ellipse: s-maj=48.3km s-min=15.9km az=135.0,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FINES	**FINESS Array B**	**4.12**	**254**	Pn	Pn	13 59 38.3	0.0
	0.1nm,0.3s,baz=75,slow=12,SNR=1.0						
FINES				Pg	Pb	13 59 45.3	-2.2
	0.1nm,0.3s,baz=73,slow=14,SNR=1.9						
FINES				Sn	Sn	14 00 26.9	-0.2
	0.2nm,0.3s,baz=60,slow=22,SNR=2.5						
FINES				Lg	Lg	14 00 43.5	
	0.7nm,0.3s,baz=66,slow=26,SNR=12 0.4nm,0.4s						
ARCES	**ARCESS Array B**	**7.63**	**336**	Pn	Pn	14 00 23.2	-3.3
	0.1nm,0.3s,baz=148,slow=14,SNR=1.3 1.4nm,0.8s						
I37NO	**I37NO**	**8.97**	**321**	I	I	14 54 50.0	
	baz=126,slow=328,SNR=0.8						

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*SOME **28** 14:30:08.1,40°.35N×77°.32E,h15^{km}*
*NNC **28** 14:30:09.4±1.1,40°.44N×77°.18E,h0^{km},mb3.5,mpv3.2, Error ellipse: s-maj=7.2km s-min=6.3km az=4.0*
*KRNET **28** 14:30:09.4±0.1,40°.43N×77°.11E,h15^{km},mb2.7*
ISC 28 14:30:10.2±2.7,**40°.5N**±0°.1×**77°.13E**±0°.06,**h6**^{km}±20^{km}**,n20,**σ**1**^{s}**15**/31,**12C-2D,Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNKS	**Jany-Kuch**	**1.25**	**297**	⇑*i*P	**Pg**	**14 30 33.8**	**-0.4**
JNKS				⇑*i*S	**Sg**	**14 30 51.3**	**+0.8**
NRN	**Naryn**	**1.27**	**318**	⇑*i*P	**Pg**	**14 30 34.7**	**+0.2**
NRN				⇑*i*S	**Sg**	**14 30 52.7**	**+1.7**
KDJ	**Kajisay**	**1.63**	**1**	⇓*e*P	**Pb**	**14 30 41.0**	**+0.1**
KDJ				⇓*e*S	**Sg**	**14 31 04.4**	**+1.7**
ULHL	**Ulahol**	**1.87**	**339**	⇑*i*P	**Pg**	**14 30 45.8**	**-0.3**
ULHL				⇑*i*S	**Sg**	**14 31 11.9**	**+1.6**
BOOM	**Boomskoye usch**	**2.18**	**336**	⇑*e*P	**Pb**	**14 30 49.9**	**-0.3**
BOOM				⇑*i*S	**Sg**	**14 31 19.6**	**-0.7**
PRZ	**Przheval'sk**	**2.20**	**25**	⇑*e*P	**Pb**	**14 30 50.3**	**-0.3**
PRZ				⇑*e*S	**Sg**	**14 31 20.8**	**-0.3**
TKM2	**Tokmak 2**	**2.68**	**335**	⇑*i*P	**Pb**	**14 30 57.2**	**-1.5**
TKM2				⇑*i*S	**Sb**	**14 31 31.6**	**-0.3**
MTBS	**Maitube**	**2.68**	**349**	Pg	**Pb**	**14 30 59.7**	**+1.0**
	0.9nm,0.1s						
MTBS				Lg	Lg	14 31 37.3	
	6.9nm,0.2s						
MTBS	**Maitube**	**2.68**	**349**	*e*P	**Pb**	**14 30 59.7**	**+1.0**
	1.5nm,0.1s						
MTBS				*e*S	**Sg**	**14 31 37.0**	**+0.6**
	6.5nm,0.2s						
KST	**Kastek**	**2.69**	**342**	Pg	**Pb**	**14 30 59.8**	**+1.0**
	3.4nm,0.6s						
KST				Lg	Lg	14 31 37.6	
	4.5nm,0.3s						
KST	**Kastek**	**2.69**	**342**	*e*P	**Pg**	**14 31 00.4**	**-1.4**
	1.5nm,0.2s						
KST				*e*S	**Sg**	**14 31 38.0**	**+1.4**
	4.7nm,0.3s						
KOTS	**Kotyrbulak**	**2.74**	**360**	Pg	**Pb**	**14 31 00.5**	**+0.8**
	3.2nm,0.2s						
KOTS				Lg	Lg	14 31 38.7	
	25nm,0.5s						
KOTS	**Kotyrbulak**	**2.74**	**360**	*e*P	**Pb**	**14 31 00.5**	**+0.8**
	3.2nm,0.2s						
KOTS				*e*S	**Sg**	**14 31 38.4**	**+0.3**
	19nm,0.3s						
UZB	**Uzynbulak**	**3.00**	**28**	Pg	**Pb**	**14 31 05.2**	**+1.0**
	2.7nm,0.2s						
UZB				Lg	Lg	14 31 46.5	
	7.1nm,0.7s						
KPKS	**Kokpek**	**3.19**	**21**	Pg	**Pb**	**14 31 08.4**	**+1.1**
	0.2nm,0.1s						
KPKS				Lg	Lg	14 31 52.0	
	8.8nm,0.6s						
KTBS	**Karatobe**	**3.23**	**354**	Pg	**Pb**	**14 31 09.3**	**+1.3**
	2.6nm,0.2s						
KTBS				Lg	Lg	14 31 54.0	
	11nm,0.4s						
CHKK	**Chushkaly**	**3.36**	**358**	Pg	**Pb**	**14 31 10.6**	**+0.5**
	4.8nm,0.1s						
CHKK				Lg	Lg	14 31 57.1	
	6.8nm,0.2s						
CHKK	**Chushkaly**	**3.36**	**358**	*e*P	**Pb**	**14 31 11.1**	**+1.0**
	3.0nm,0.1s						
CHKK				*e*S	**Sg**	**14 31 56.6**	**-1.4**
	6.8nm,0.2s						
SGDS	**Sogindy**	**3.49**	**329**	Pg	**Pg**	**14 31 14.6**	**-2.5**
	0.3nm,0.1s						
SGDS				Lg	Lg	14 32 02.7	
	1.3nm,0.1s						
BLB	**Baldybastay**	**3.73**	**15**	Pg	**Pb**	**14 31 17.8**	**+1.1**
	2.3nm,0.2s						
BLB				Lg	Lg	14 32 07.6	
	10nm,0.2s						

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*IDC **28** 14:34:23.1±1.9,55°.06N×164°.62E,h0^{km},mb3.3/3, mbtmp3.3/4,ML2.3/1,Error ellipse: s-maj=71.9km s-min=23.5km az=160.0*
*KRSC **28** 14:34:23.8±1.7,54°.90N×164°.70E,h50^{km}±29^{km},Ml3.5*
ISC 28 14:34:23.1±1.5,**55°.04N**±0°.04×**164°.45E**±0°.04,**h1**^{km}±11^{km}**, n39,**σ**1**^{s}**65**/58,**mb3.4**/3,**Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.89**	**79**	*e*P	**Pg**	**14 34 40.2**	**+0.1**
BKI				*e*S	**Sg**	**14 34 51.1**	**-0.6**
KBTR	**Krutoberegovo**	**1.50**	**322**	*e*P	**Pn**	**14 34 51.1**	**+0.1**
KBTR				*e*S	**Sb**	**14 35 09.2**	**-1.9**
KBG	**Krutoberegovo**	**1.57**	**322**	*e*S	**Sg**	**14 35 14.9**	**+1.3**
MKZ	**Mys Kozlova**	**1.65**	**254**	*e*P	**Pn**	**14 34 53.7**	**+0.5**
MKZ				*e*S	**Sn**	**14 35 13.9**	**-1.0**
SMKR	**Semkarok**	**2.29**	**314**	*e*P	**Pb**	**14 35 05.2**	**+0.1**
SMKR				*e*S	**Sg**	**14 35 35.3**	**-1.2**
ZLN	**Zelenaya**	**2.29**	**297**	*e*P	**Pb**	**14 35 06.0**	**+0.7**
BZGR	**Bezymyannyi-Gr**	**2.32**	**294**	*e*P	**Pb**	**14 35 05.8**	**+0.1**
BZGR				*e*S	**Sb**	**14 35 35.2**	**+0.3**
TUMD	**Tumrok D**	**2.33**	**276**	*e*S	**Sn**	**14 35 34.1**	**+2.2**
LGNR	**Loginova**	**2.38**	**298**	*e*S	**Sb**	**14 35 37.7**	**+0.9**
BZMR	**Bezymyannaya**	**2.43**	**293**	*e*P	**Pb**	**14 35 07.5**	**-0.1**
BZMR				*e*S	**Sb**	**14 35 39.7**	**+1.6**
BZWR	**Bezymyannyi-We**	**2.44**	**294**	*e*P	**Pb**	**14 35 07.5**	**-0.3**
SRKR	**Sorokina**	**2.46**	**313**	*e*S	**Sg**	**14 35 39.7**	**-2.4**
KRSR	**Krestovskiy**	**2.50**	**300**	*e*P	**Pb**	**14 35 08.4**	**-0.4**
KRSR				*e*S	**Sb**	**14 35 39.4**	**-0.7**
KLY	**Klyuchi**	**2.50**	**302**	*e*P	**Pn**	**14 35 06.9**	**+2.0**
KLY				*e*S	**Sb**	**14 35 37.6**	**-2.5**
KMNR	**Kamenistaya**	**2.51**	**288**	*e*P	**Pb**	**14 35 08.3**	**-0.7**
KMNR				*e*S	**Sb**	**14 35 39.4**	**-1.0**
KIRR	**Kirishev**	**2.51**	**293**	*e*P	**Pb**	**14 35 08.4**	**-0.6**
KIRR				*e*S	**Sb**	**14 35 40.3**	**-0.2**
KPT	**Kopyto**	**2.58**	**293**	*e*P	**Pb**	**14 35 09.4**	**-0.7**
KPT				*e*S	**Sb**	**14 35 42.0**	**-0.4**
KOZ	**Kozyrevsk**	**2.80**	**293**	*e*P	**Pb**	**14 35 13.2**	**-0.6**
KOZ				*e*S	**Sb**	**14 35 49.3**	**+0.8**
SPN	**Mys Shipunski**	**3.25**	**235**	*e*P	**Pn**	**14 35 16.0**	**+0.8**
SPN				*e*S	**Sn**	**14 35 50.8**	**-3.7**
SDLR	**Sedlovina**	**3.72**	**244**	*e*P	**Pn**	**14 35 23.4**	**+1.8**
SDLR				*e*S	**Sn**	**14 36 04.7**	**-1.4**
SMAR	**Somma**	**3.77**	**244**	*e*P	**Pn**	**14 35 24.7**	**+2.2**
SMAR				*e*S	**Sn**	**14 36 06.0**	**-1.5**
KRER	**Koryakskii**	**3.77**	**245**	*e*P	**Pn**	**14 35 25.2**	**+2.6**
KRER				*e*S	**Sn**	**14 36 06.7**	**-1.0**
UGLR	**Uglovaya**	**3.78**	**243**	*e*P	**Pn**	**14 35 24.5**	**+1.9**
AVH	**Avacha**	**3.80**	**244**	*e*P	**Pn**	**14 35 25.0**	**+2.2**
AVH				*e*S	**Sn**	**14 36 07.4**	**-0.7**
KRX	**Arik**	**3.80**	**246**	*e*P	**Pn**	**14 35 25.3**	**+2.4**
KOK	**Koryaka**	**3.84**	**245**	*e*P	**Pn**	**14 35 25.8**	**+2.4**
PET	**Petropavlovsk**	**3.97**	**242**	*e*P	**Pn**	**14 35 27.1**	**+2.1**
PET				*e*S	**Sn**	**14 36 10.3**	**-1.8**
GNL	**Ganaly**	**4.04**	**253**	*e*P	**Pn**	**14 35 28.5**	**+2.4**
OSSR	**Ossora**	**4.29**	**350**	*e*P	**Pn**	**14 35 31.5**	**+2.1**
OSSR				*e*S	**Sn**	**14 36 20.0**	**-0.1**
PETK	**Petropavlovsk-**	**4.42**	**247**	Pn	**Pn**	**14 35 33.6**	**+2.3**
	0.7nm,0.3s,baz=66,slow=17,SNR=26						
PETK				Sn	**Sn**	**14 36 25.0**	**+1.7**
	0.6nm,0.3s,baz=79,slow=18,SNR=2.2 1.5nm,0.5s						
MTVR	**Mutnovka**	**4.51**	**238**	*e*P	**Pn**	**14 35 34.2**	**+1.5**
MTVR				*e*S	**Sn**	**14 36 23.2**	**-2.6**
GRL	**Gorelyy**	**4.53**	**239**	*e*P	**Pn**	**14 35 36.4**	**+3.6**
GRL				*e*S	**Sn**	**14 36 26.1**	**0.0**
ASAK	**Asacha**	**4.71**	**238**	*e*P	**Pn**	**14 35 37.5**	**+2.2**
ILAR	**Eielson Array**	**25.61**	**48**	P	**P**	**14 39 52.8**	**-0.7**
	0.4nm,0.5s,baz=261,slow=9.1,SNR=9.0 0.4nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**35.30**	**176**	T	T	15 19 44.0	
	baz=359,slow=76,SNR=8.8						
H11N3	**WAKE ISLAND Hy**	**35.31**	**176**	T	T	15 19 51.0	
	baz=359,slow=76,SNR=9.2						
H11N1	**WAKE ISLAND Hy**	**35.31**	**176**	T	T	15 19 43.0	
	baz=359,slow=76,SNR=8.0						
KURBB	**Kurchatov Arra**	**48.97**	**303**	P	**P**	**14 43 11.1**	**+0.5**
	0.3nm,0.7s,baz=52,slow=9.5,SNR=2.8 0.3nm,0.7s						
TXAR	**Lajitas Array**	**67.54**	**71**	P	**P**	**14 45 20.5**	**-0.5**
	0.3nm,0.8s,baz=298,slow=3.7,SNR=1.5 0.3nm,0.8s						

ATH 28 14:36:00.5,37°.44N×20°.47E,h14^{km}±1^{km}**,ML2.2**/5,**Manual Solution by S.Liakopoulos First location: 2019/06/28 14:37:11, This location: 2019/06/28 14:46:59 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km,Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTHK	**Lithakia**	**0.40**	**48**	P	Pg	14 36 08.5	0.0
LTHK				S	Sg	14 36 13.6	-0.4
ORTH	**Orthonies,Zaky**	**0.45**	**24**	P	Pg	14 36 09.7	+0.3
ORTH				S	Sg	14 36 15.8	+0.3
PSDA	**Pessada-Kefalo**	**0.68**	**8**	P	Pb	14 36 14.1	0.0
PSDA				S	Sb	14 36 23.2	0.0
VLS	**Valsamata**	**0.74**	**8**	P	Pg	14 36 14.9	0.0
VLS				S	Sg	14 36 24.6	0.0
DMLN	**Damoulianata-K**	**0.80**	**355**	P	Pb	14 36 16.1	0.0
DMLN				S	Sb	14 36 27.3	+0.6
YRMI	**Loutra Irminis**	**0.96**	**47**	P	Pb	14 36 18.7	-0.2
YRMI				S	Sb	14 36 31.2	-0.2
AMT	**Artemida-Makis**	**0.99**	**85**	P	Pg	14 36 19.7	0.0
AMT				S	Sg	14 36 33.1	+0.4
FSK	**Fiskardo**	**1.02**	**4**	P	Pb	14 36 19.6	-0.2
FSK				S	Sg	14 36 33.3	-0.1
AXS	**Araxos**	**1.04**	**44**	P	Pb	14 36 20.0	-0.2
AXS				S	Sb	14 36 33.7	0.0
EVGI	**Lefkada island**	**1.19**	**7**	P	Pb	14 36 22.8	+0.1
EVGI				S	Sb	14 36 38.0	+0.1

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*IDC **28** 14:36:35.9±0.6,40°.46N×20°.88E,h0^{km},mb3.8/18, mbtmp3.8/31,ML3.5/11,MS3.2/25,Error ellipse: s-maj=10.2km s-min=9.8km az=20.0*
*ATH **28** 14:36:35.8,40°.49N×20°.71E,h6^{km}±2^{km},ML3.9/14, Manual Solution by A.Agalos First location: 2019/06/28 14:37:39, This location: 2019/06/28 14:56:30 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*TIR **28** 14:36:36.2,40°.49N×20°.82E,h18^{km},Md3.5/15,Ml4.2/9*
*NAO **28** 14:36:36.0,40°.48N×20°.82E,h0^{km},mb3.6*
*PDG **28** 14:36:37.1±0.8,40°.46N×20°.79E,h11^{km}±1^{km},MD4.3/3, ML4.2/10,Error ellipse: s-maj=1.6km s-min=1.8km az=0.0*
*THE **28** 14:36:37.6,40°N±1°×2°1E±°,h0^{km}±1^{km},M3.7/24, MLh3.7/24*
*NEIC **28** 14:36:37.7±1.7,40°.53N±0°.06×20°.83E±0°.07,h10^{km}±1^{km}, mb4.4/9,Error ellipse: s-maj=9.8km s-min=8.5km az=203.0*
*SKO **28** 14:36:38.0,40°.51N×20°.87E,h23^{km},ML3.8*
*BEO **28** 14:36:38.4±0.3,40°.48N×20°.84E,h9^{km}±2^{km},ML3.8/30*
ISC 28 14:36:37.2±0.8,**40°.49N**±0°.01×**20°.80E**±0°.02,**h9**^{km}±5^{km}**, n336,**σ**1**^{s}**30**/400,**mb4.0**/21,**MS3.3**/15,**44C-12D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBN	**Korca**	**0.14**	**356**	Pg	**Pg**	**14 36 39.9**	**-0.3**
KBN				Sg	**Sg**	**14 36 42.7**	**+0.2**
KBN				AML	AML	14 36 50.9	
	179nm,0.9s						
KBN				AMd		14 37 38.4	
NEST	**Nestorio**	**0.20**	**111**	Pg	**Pg**	**14 36 41.6**	**+0.2**
NEST				Sg	**Sg**	**14 36 44.2**	**0.0**
NEST				AML	AML	14 36 49.3	
	158nm,0.7s						
NEST				AMd		14 37 32.5	
NEST	**Nestorio**	**0.20**	**111**	P	**Pg**	**14 36 41.5**	**+0.1**
NEST				S	**Sg**	**14 36 44.3**	**0.0**
NEST	**Nestorio**	**0.20**	**111**	P	**Pg**	**14 36 41.8**	**+0.4**
NEST				S	**Sg**	**14 36 44.7**	**+0.4**
PENT	**Pentalofos**	**0.39**	**138**	P	**Pg**	**14 36 44.4**	**-0.4**
PENT				S	**Sg**	**14 36 50.2**	**+0.2**
PENT	**Pentalofos**	**0.39**	**138**	P	**Pg**	**14 36 44.7**	**-0.2**
PENT				S	**Sg**	**14 36 50.7**	**+0.7**
FNA	**Florina**	**0.53**	**56**	Pg	**Pg**	**14 36 47.4**	**0.0**
FNA	**Florina**	**0.53**	**56**	Pg	**Pg**	**14 36 47.0**	**-0.4**
FNA				Sg	**Sg**	**14 36 55.0**	**+0.6**
FNA				AML	AML	14 37 00.5	
	65nm,0.3s						
FNA				AMd		14 37 46.4	
FNA	**Florina**	**0.53**	**56**	P	**Pg**	**14 36 47.4**	**0.0**
FNA				S	**Sb**	**14 36 56.2**	**-0.2**
FNA	**Florina**	**0.53**	**56**	*i* Pg	**Pg**	**14 36 47.5**	**0.0**
FNA				*i* Sg	**Sb**	**14 36 56.7**	**+0.3**
FNA	**Florina**	**0.53**	**56**	*e*Pg	**Pg**	**14 36 47.6**	**+0.2**
FNA				*e*Sg	**Sb**	**14 36 56.1**	**-0.3**
FNA	**Florina**	**0.53**	**56**	P	**Pg**	**14 36 47.5**	**0.0**
FNA				S	**Sb**	**14 36 55.5**	**-0.9**
OHR	**Ohrid**	**0.62**	**360**	⇑*i*Pg	**Pg**	**14 36 49.4**	**+0.2**
OHR				*i* Sg	**Sb**	**14 36 60.0**	**+0.8**
OHR				*e*Lg	Lg	14 37 01.6	
	comp=E,5µm,0.5s						
OHR				*e*Lg	Lg	14 37 02.1	
	comp=N,2µm,0.7s						
KPRO	**Kipourio**	**0.68**	**141**	P	**Pg**	**14 36 49.7**	**-0.7**
KPRO				S	**Sb**	**14 37 00.3**	**-0.6**
KPRO	**Kipourio**	**0.68**	**141**	P	**Pg**	**14 36 49.8**	**-0.5**
KPRO				S	**Sb**	**14 37 00.5**	**-0.4**
KZN	**Kozani**	**0.76**	**103**	P	**Pg**	**14 36 51.6**	**-0.3**
KZN				S	**Sn**	**14 37 04.4**	**-1.5**
KZN	**Kozani**	**0.76**	**103**	P	**Pg**	**14 36 52.2**	**+0.3**
KZN				S	**Sb**	**14 37 03.9**	**+0.7**
MSVA	**Metsovo**	**0.77**	**158**	P	**Pg**	**14 36 51.4**	**-0.7**
MSVA				S	**Sg**	**14 37 02.5**	**+0.4**
JAN	**Janina**	**0.83**	**177**	P	**Pg**	**14 36 51.6**	**-1.5**
JAN				S	**Sg**	**14 37 03.3**	**-0.6**
SRN	**Sarande**	**0.86**	**226**	Pg	**Pg**	**14 36 53.7**	**0.0**
SRN				Sg	**Sb**	**14 37 06.0**	**0.0**
SRN				AML	AML	14 37 08.3	
	comp=N,23nm,0.9s						
SRN				AMd		14 37 58.9	
NASA	**Naoussa**	**0.97**	**81**	P	**Pg**	**14 36 55.8**	**-0.1**
NASA				S	**Sn**	**14 37 10.1**	**-0.9**
VLO	**Vlora**	**1.00**	**269**	Pg	**Pg**	**14 36 55.1**	**-1.2**
VLO				Sg	**Sg**	**14 37 09.1**	**-0.1**
VLO				AML	AML	14 37 16.7	
	comp=N,42nm,0.5s						
VLO				AMd		14 38 11.2	
KTI	**Kastanea**	**1.01**	**95**	P	**Pg**	**14 36 56.5**	**-0.1**
IGT	**Igoumenitsa**	**1.02**	**201**	Pg	**Pg**	**14 36 56.3**	**-0.4**
IGT				Sg	**Sb**	**14 37 10.9**	**+0.5**
IGT				AMd		14 38 10.3	
IGT	**Igoumenitsa**	**1.02**	**201**	P	**Pg**	**14 36 56.0**	**-0.7**
IGT				S	**Sn**	**14 37 12.1**	**0.0**
IGT	**Igoumenitsa**	**1.02**	**201**	*i* Pg	**Pg**	**14 36 56.7**	**0.0**
IGT				*i* Sg	**Sn**	**14 37 12.4**	**+0.4**
IGT	**Igoumenitsa**	**1.02**	**201**	*e*Pg	**Pg**	**14 36 56.0**	**-0.7**
IGT				*e*Sg	**Sn**	**14 37 12.5**	**+0.4**
IGT	**Igoumenitsa**	**1.02**	**201**	P	**Pg**	**14 36 55.4**	**-1.4**
KEK	**Kerkira**	**1.09**	**225**		**Pn**	**14 36 59.2**	**+0.6**
KEK	**Kerkira**	**1.09**	**225**	P	**Pg**	**14 36 56.9**	**-1.2**
TIR	**Tirane**	**1.11**	**321**		**Pb**	**14 36 58.2**	**-0.4**
TIR	**Tirane**	**1.11**	**321**	Pg	**Pb**	**14 36 58.0**	**-0.6**
TIR				Sg	**Sb**	**14 37 13.8**	**+0.6**
TIR				AML	AML	14 37 27.4	
	comp=N,8.9nm,1.0s						
TIR				AMd		14 38 22.8	
TIR	**Tirane**	**1.11**	**321**	⇑P	**Pg**	**14 36 58.8**	**+0.3**
TIR	**Tirane**	**1.11**	**321**	*i* Pg	**Pb**	**14 36 58.6**	**0.0**
TIR				*i* Sg	**Sn**	**14 37 20.4**	**+5.9**
TIR	**Tirane**	**1.11**	**321**	*e*Pg	**Pb**	**14 36 58.5**	**-0.1**
TIR				*e*Sg	**Sn**	**14 37 16.4**	**+1.9**
TIR	**Tirane**	**1.11**	**321**	P	**Pb**	**14 36 55.9**	**-2.7**
TETR	**Tetrakomo, Epi**	**1.20**	**162**	P	**Pg**	**14 37 00.3**	**+0.2**
TETR	**Tetrakomo, Epi**	**1.20**	**162**	P	**Pb**	**14 36 59.2**	**-0.9**
THL	**Klokotos Trika**	**1.31**	**134**	P	**Pn**	**14 37 01.2**	**-0.4**
THL	**Klokotos Trika**	**1.31**	**134**	P	**Pn**	**14 37 00.5**	**-1.1**
THL				S	**Sb**	**14 37 18.8**	**0.0**
TYRN	**Tyrnavos**	**1.34**	**125**	P	**Pb**	**14 37 02.3**	**-0.2**
TYRN	**Tyrnavos**	**1.34**	**125**	P	**Pn**	**14 37 01.9**	**-0.2**
LRSO	**Larissa Observ**	**1.47**	**123**	P	**Pn**	**14 37 03.3**	**-0.5**
SKO	**Skopje**	**1.56**	**18**	*i* Pn	**Pb**	**14 37 06.6**	**+0.4**
AMPL	**Ampelaki**	**1.59**	**168**	P	**Pb**	**14 37 06.5**	**-0.3**
THE	**Thessaloniki**	**1.66**	**84**	Pn	**Pn**	**14 37 06.8**	**+0.4**
THE				AMd		14 38 30.6	
THE	**Thessaloniki**	**1.66**	**84**	P	**Pn**	**14 37 06.6**	**+0.2**
THE	**Thessaloniki**	**1.66**	**84**	*i* Pn	**Pn**	**14 37 06.6**	**+0.2**
THE	**Thessaloniki**	**1.66**	**84**	P	**Pn**	**14 37 06.3**	**0.0**
TSLK	**Tsoukalades, L**	**1.66**	**184**	P	**Pn**	**14 37 06.1**	**-0.4**
PUK	**Puka**	**1.70**	**337**	Pn	**Pb**	**14 37 08.0**	**-0.6**
PUK				Sn	**Sg**	**14 37 31.3**	**-0.5**
PUK				AML	AML	14 37 40.0	
	comp=N,7.6nm,0.5s						
PUK				AMd		14 38 57.1	
LKD2	**Lefkada island**	**1.70**	**184**	Pn	Pn	14 36 29.4	-38
LKD2				Sn	**Sg**	**14 37 32.0**	**+0.2**
LKD2				AML	AML	14 37 48.3	
	comp=N,8.7nm,0.7s						
LKD2				AMd		14 39 01.0	
LKD2	**Lefkada island**	**1.70**	**184**	P	**Pb**	**14 37 09.0**	**+0.4**
LKD2	**Lefkada island**	**1.70**	**184**	P	**Pn**	**14 37 07.2**	**+0.2**
KNT	**Kendrikon**	**1.73**	**66**	P	**Pn**	**14 37 07.2**	**-0.2**
KNT	**Kendrikon**	**1.73**	**66**	*i* Pn	**Pn**	**14 37 08.2**	**+0.8**
KNT				*i* Sn	**Sg**	**14 37 35.8**	**+3.1**
KNT	**Kendrikon**	**1.73**	**66**	P	**Pn**	**14 37 07.2**	**-0.2**
EVR	**Evrytania**	**1.75**	**153**	P	**Pn**	**14 37 07.7**	**-0.1**
HORT	**Hortiatis**	**1.75**	**86**	P	**Pn**	**14 37 07.9**	**0.0**
HORT	**Hortiatis**	**1.75**	**86**	P	**Pn**	**14 37 07.8**	**0.0**
NYDR	**Nydri-Lefkada**	**1.77**	**183**	P	**Pn**	**14 37 08.3**	**+0.3**
SCTE	**Santa Cesarea**	**1.83**	**258**		**Pn**	**14 37 08.9**	**+0.1**
SCTE	**Santa Cesarea**	**1.83**	**258**	Pn	**Pn**	**14 37 09.1**	**+0.2**
SCTE				Sn	**Sg**	**14 37 35.8**	**-0.3**
SCTE				AML	AML	14 37 40.1	
	comp=N,15nm,1.0s						
SCTE				AMd		14 38 48.7	
SCTE	**Santa Cesarea**	**1.83**	**258**	P	**Pn**	**14 37 07.2**	**-1.7**
ULC	**Ulcinj**	**1.89**	**322**	Pn	**Pb**	**14 37 11.0**	**-0.8**
ULC				AMd		14 39 01.0	
ULC	**Ulcinj**	**1.89**	**322**	*i* Pn	**Pb**	**14 37 11.2**	**-0.5**
ULC	**Ulcinj**	**1.89**	**322**	⇑*i*Pn	**Pb**	**14 37 10.8**	**-1.0**
ULC				*i* Sn	**Sb**	**14 37 36.6**	**+1.1**
FSK	**Fiskardo**	**2.03**	**185**	P	**Pb**	**14 37 13.2**	**-1.1**
PEHC	**Pehcevo**	**2.04**	**50**	*i* Pn	Pn	14 37 06.7	-5.1
DRME	**Dracevica, Mon**	**2.09**	**325**	⇑*i*Pn	**Pb**	**14 37 14.2**	**-1.0**
DRME	**Dracevica, Mon**	**2.09**	**325**	*e*Pn	**Pb**	**14 37 14.1**	**-1.1**
DRME	**Dracevica, Mon**	**2.09**	**325**	⇑*i*Pn	**Pn**	**14 37 13.7**	**+1.3**
DRME				*i* Sn	**Sb**	**14 37 41.2**	**-0.1**
NEO	**Neokhori**	**2.21**	**122**	P	**Pn**	**14 37 13.9**	**-0.1**
SRS	**Serrai**	**2.21**	**73**	P	**Pn**	**14 37 14.5**	**+0.5**
SRS	**Serrai**	**2.21**	**73**	*i* Pn	**Pn**	**14 37 15.0**	**+0.9**
SRS				*i* Sn	**Sb**	**14 37 43.1**	**-1.6**
SRS	**Serrai**	**2.21**	**73**	*e*Pn	**Pn**	**14 37 14.8**	**+0.8**
SRS				*e*Sn	**Sn**	**14 37 41.6**	**+0.1**
SRS	**Serrai**	**2.21**	**73**	P	**Pn**	**14 37 13.8**	**-0.3**
KKB	**Krupnik**	**2.22**	**52**	*i* Pn	**Pb**	**14 37 16.2**	**-1.2**
AXAR	**Agios Charalam**	**2.24**	**140**	P	**Pn**	**14 37 13.7**	**-0.7**
PDG	**Podgorica**	**2.26**	**330**		**Pn**	**14 37 16.0**	**+1.3**
PDG	**Podgorica**	**2.26**	**330**	⇑*i*Pn	**Pb**	**14 37 16.7**	**-1.4**
PDG	**Podgorica**	**2.26**	**330**	⇑P	**Pb**	**14 37 16.8**	**-1.4**
PDG	**Podgorica**	**2.26**	**330**	*e*Pn	**Pb**	**14 37 16.7**	**-1.4**
PDG				*e*Sn	**Sb**	**14 37 45.4**	**-0.8**
PDG	**Podgorica**	**2.26**	**330**	⇑*i*Pn	**Pn**	**14 37 16.5**	**+1.8**
PDG				*i* Sn	**Sb**	**14 37 45.5**	**-0.8**
PDG	**Podgorica**	**2.26**	**330**	P	**Pn**	**14 37 13.2**	**-1.5**
DMLN	**Damoulianata-K**	**2.27**	**189**	P	**Pn**	**14 37 16.1**	**+1.2**
DMLN	**Damoulianata-K**	**2.27**	**189**	P	**Pn**	**14 37 13.6**	**-1.2**
PAIG	**Paliouri**	**2.27**	**103**	P	**Pn**	**14 37 14.8**	**-0.1**
SERG	**Sergoula**	**2.29**	**154**	P	**Pn**	**14 37 15.9**	**+0.7**
BUM	**Brajici-Budva**	**2.31**	**322**	Pn	**Pn**	**14 37 17.2**	**+1.7**
BUM				AMd		14 39 08.4	
BUM	**Brajici-Budva**	**2.31**	**322**	⇓*i*Pn	**Pn**	**14 37 16.6**	**+1.1**
BUM				*i* Sn	**Sb**	**14 37 47.1**	**-0.7**
VLS	**Valsamata**	**2.31**	**184**	P	**Pn**	**14 37 16.7**	**+1.3**
VLS	**Valsamata**	**2.31**	**184**	P	**Pn**	**14 37 15.1**	**-0.3**
KALE	**Kalithea**	**2.34**	**153**	P	**Pn**	**14 37 16.0**	**+0.2**
BOSS	**Bosilegrad**	**2.37**	**32**	*e*Pn	**Pn**	**14 37 17.1**	**+0.8**
PSDA	**Pessada-Kefalo**	**2.38**	**184**	P	**Pn**	**14 37 17.7**	**+1.4**
PSDA	**Pessada-Kefalo**	**2.38**	**184**	P	**Pn**	**14 37 15.9**	**-0.4**
YRMI	**Loutra Irminis**	**2.42**	**170**	P	**Pn**	**14 37 17.2**	**+0.4**
OUR	**Ouranopolis**	**2.43**	**93**	P	**Pn**	**14 37 17.1**	**0.0**
BARS	**Barje**	**2.45**	**18**	*i* Pn	**Pn**	**14 37 18.3**	**+1.0**
BARS	**Barje**	**2.45**	**18**	*e*Pn	**Pn**	**14 37 18.1**	**+0.8**
BARS				*e*Sn	**Sn**	**14 37 48.1**	**+0.7**
KOKK	**Kokkinochori,**	**2.46**	**81**	P	**Pn**	**14 37 17.7**	**+0.3**
MMB	**Musomishta**	**2.47**	**64**	P	**Pn**	**14 37 18.6**	**+1.0**
BEY	**Berane**	**2.48**	**344**	Pn	**Pn**	**14 37 19.8**	**+2.0**
BEY				AMd		14 39 05.3	
BEY	**Berane**	**2.48**	**344**	*i* Pn	**Pb**	**14 37 21.7**	**-0.2**
BEY	**Berane**	**2.48**	**344**	*e*Pn	**Pb**	**14 37 20.9**	**-1.0**
IVA	**Berane**	**2.48**	**344**	⇑*i*Pn	**Pb**	**14 37 20.5**	**-1.4**
IVA				*i* Sn	**Sb**	**14 37 51.8**	**-0.8**
CEME	**Cevo**	**2.50**	**326**	⇓*i*Pn	**Pn**	**14 37 19.2**	**+1.2**
CEME				*i* Sn	**Sn**	**14 37 50.9**	**+2.2**
KOME	**Kolasin**	**2.55**	**338**	*e*Pn	**Pb**	**14 37 21.4**	**-1.8**
KOME	**Kolasin**	**2.55**	**338**	⇑*i*Pn	**Pb**	**14 37 21.4**	**-1.8**
KOME				*i* Sn	**Sb**	**14 37 53.7**	**-1.0**
HCY	**Herceg Novi**	**2.62**	**319**	⇑*i*Pn	**Pn**	**14 37 20.3**	**+0.7**
HCY	**Herceg Novi**	**2.62**	**319**	⇑*i*Pn	**Pn**	**14 37 20.4**	**+0.8**
HCY				*i* Sn	**Sn**	**14 37 53.3**	**+1.8**
AOS	**Alonnisos**	**2.71**	**118**	P	**Pn**	**14 37 20.4**	**-0.5**
SELS	**Selova**	**2.74**	**5**	*e*Pn	**Pn**	**14 37 22.2**	**+0.8**
SELS				*e*Sn	**Sn**	**14 37 55.7**	**+1.1**
VTS	**Vitosha**	**2.81**	**40**	P	**Pn**	**14 37 23.4**	**+1.1**
VTS	**Vitosha**	**2.81**	**40**	*e*Pn	**Pn**	**14 37 23.1**	**+0.8**
VTS				*e*Sn	**Sn**	**14 37 57.0**	**+0.6**
SJES	**Sjenica**	**2.84**	**348**	*e*Pn	**Pn**	**14 37 24.0**	**+1.2**
SJES				*e*Sn	**Sn**	**14 37 58.0**	**+0.8**
TREB	**Trebinje**	**2.89**	**321**	⇑*i*Pn	**Pn**	**14 37 23.9**	**+0.5**
TREB	**Trebinje**	**2.89**	**321**	*e*Pn	**Pn**	**14 37 23.8**	**+0.4**
BRY	**Bratogost**	**2.95**	**326**	Pn	**Pn**	**14 37 26.4**	**+2.1**
BRY				AMd		14 39 25.2	

BRY	Bratogost	2.95	326	⇑ *i*Pn	Pn	14 37 25.8	+1.5
BRY	Bratogost	2.95	326	⇑ *i*Pn	Pn	14 37 25.6	+1.3
BRY				*i* Sn	Sn	14 38 01.6	+1.7
THAS	Thassos island	2.99	86	P	Pn	14 37 24.3	-0.4
VILL	Villia	3.03	139	P	Pn	14 37 26.2	+0.8
PLE	Pljevlja	3.03	340	*e*Pn	Pn	14 37 27.7	+2.3
PLE	Pljevlja	3.03	340	⇑ *i*Pn	Pn	14 37 28.1	+2.7
PLE				*i* Sn	Sb	14 38 05.5	-3.0
GOCS	Kraljevo Serbi	3.07	1	*e*Pn	Pn	14 37 28.0	+2.0
ZAPS	Zavoj	3.10	26	*e*Pn	Pn	14 37 27.5	+1.2
ZAPS				*e*Sn	Sn	14 38 04.9	+1.4
IVAS	Ivanjica	3.12	351	*e*Pn	Pn	14 37 26.9	+0.2
MATE	Matera	3.12	274	⇑P	Pn	14 37 26.0	-0.5
BOVS	Bovan	3.22	12	⇑P	Pn	14 37 28.8	+1.0
BOVS	Bovan	3.22	12	*e*Pn	Pn	14 37 28.3	+0.4
BOVS				*e*Sn	Sn	14 38 06.7	+0.4
RUDO	Rudo	3.31	342	⇑ *i*Pn	Pn	14 37 30.9	+1.8
RUDO	Rudo	3.31	342	*e*Pn	Pn	14 37 30.5	+1.4
STON	Ston	3.33	317	*e*Pn	Pn	14 37 30.0	+0.7
STON	Ston	3.33	317	*e*Pn	Pn	14 37 29.8	+0.5
STON				*e*Sn	Sn	14 38 09.5	+0.5
TIP	Timpagrande	3.38	249		Pn	14 37 30.5	+0.4
TIP	Timpagrande	3.38	249	⇓P	Pn	14 37 30.9	+0.8
GRUS	Gruza	3.40	359	*e*Pn	Pn	14 37 31.8	+1.4
GRUS				*e*Sn	Sn	14 38 13.2	+2.4
PLD	Plovdiv	3.40	60	*e*Pn	Pn	14 37 32.0	+1.6
PLD				*e*Sn	Sn	14 38 11.0	+0.1
ITM	Ithomi	3.42	165		Pn	14 37 33.4	+2.7
BLKB	Belogradchik	3.43	23	*e*Pn	Pn	14 37 32.5	+1.7
BLKB				*e*Sn	Sn	14 38 12.0	+0.4
ZAGS	Zajecar	3.49	17	*e*Pn	Pn	14 37 32.3	+0.7
BBLS	Lazi&#263i	3.53	343	*e*Pn	Pn	14 37 34.0	+1.7
BBLS	Lazi&#263i	3.53	343	*e*Pn	Pn	14 37 34.2	+1.9
RDO	Rodhopi	3.65	78		Pn	14 37 34.3	+0.4
DIVS	Divibare	3.66	351	*e*Pn	Pn	14 37 35.2	+1.2
DIVS				*e*Sn	Sn	14 38 19.4	+2.1
ACER	Acerenza	3.71	276		Pn	14 37 34.5	-0.2
BORS2	Bor- Borsko je	3.71	14	*e*Pn	Pn	14 37 36.7	+2.0
TRUS	Trudelj	3.75	356	*e*Pn	Pn	14 37 36.1	+1.0
CUC	Castrocucco	3.85	264		Pn	14 37 36.7	+0.1
KUBS	Kucevo	3.98	9	*e*Pn	Pn	14 37 37.6	-0.7
KUBS				*e*Sn	Sn	14 38 23.5	-1.5
ALN	Alexandroupoli	4.01	82		Pn	14 37 39.3	+0.6
ALN	Alexandroupoli	4.01	82	P	Pn	14 37 39.1	+0.4
SGRT	San Giovanni R	4.03	290		Pn	14 37 38.4	-0.7
CAVK	Edirne/Enez-Ca	4.09	85	⇓P	Pn	14 37 43.1	+3.2
TEKS	Tekeris	4.17	347	⇑ *i*Pn	Pn	14 37 42.6	+1.7
TEKS	Tekeris	4.17	347	*e*Pn	Pn	14 37 42.3	+1.4
EZN	Ezine	4.28	97	⇑P	Pn	14 37 43.5	+0.9
MDVR	Moldovita	4.34	9	⇓P	Pn	14 37 45.7	+2.3
DJES	Djerdap	4.37	16	⇑P	Pn	14 37 46.8	+3.2
CEL	Celeste	4.41	241		Pn	14 37 44.1	-0.1
HERR	Herculane	4.55	15	⇑P	Pn	14 37 48.3	+2.1
VRSS	Vrsac	4.65	5	*e*Pn	Pn	14 37 47.4	-0.1
FRGS	Fruska Gora	4.72	351	*e*Pn	Pn	14 37 48.3	-0.3
FRGS	Fruska Gora	4.72	351	*e*Pn	Pn	14 37 49.7	+1.1
FRGS				*e*Sn	Sn	14 38 44.9	+1.4
PAOL	Paolisi	4.76	279		Pn	14 37 49.2	0.0
COPA	Copaceanca	4.90	40	⇓P	Pn	14 37 54.4	+3.5
BLY	Banja Luka	5.03	329	⇑ *i*Pn	Pn	14 37 53.7	+1.0
BLY	Banja Luka	5.03	329	*e*Pn	Pn	14 37 53.7	+1.0
APE	Apeiranthos	5.03	131	⇑P	Pn	14 37 54.7	+1.9
A050A	Klekovaca	5.09	323	*e*Pn	Pn	14 37 54.8	+1.1
GZR	Gura Zlata	5.11	16	⇓P	Pn	14 37 56.1	+2.1
BZS	Buzias	5.16	6	⇑P	Pn	14 37 57.3	+2.7
BZS	Buzias	5.16	6	*e*Pn	Pn	14 37 55.6	+1.0
BZS				*e*Sn	Sn	14 38 53.2	-1.0
SURR	Surduc	5.35	10	⇓P	Pn	14 38 00.2	+3.1
A051A	Mrakovica	5.35	329	⇑ *i*Pn	Pn	14 37 58.3	+1.0
LOT	Lotru	5.42	23	⇓P	Pn	14 38 01.1	+3.0
INTR	Introdacqua	5.42	289		Pn	14 37 58.6	+0.4
ARR	Arges	5.63	29	⇑P	Pn	14 38 03.8	+2.8
SIRR	Siria	5.81	6	⇑P	Pn	14 38 06.8	+3.3
VAE	Valguarnera	5.81	241	Pn	Pn	14 38 06.5	+2.8
	comp=N,8.9nm,0.4s,baz=45,slow=18,SNR=1.6						
VAE				Pg	Pb	14 38 23.3	+4.5
	baz=28,slow=22						
VAE				Sn	Sn	14 39 12.3	+1.9
	comp=N,9.9nm,0.3s,baz=35,slow=9.9,SNR=2.6						
VOIR		5.85	31	⇑P	Pn	14 38 06.2	+2.2
CAMP	Campotosto	5.92	293		Pn	14 38 05.4	+0.4
MORH	Mrgy, Hungar	5.94	345	⇑P	Pn	14 38 06.3	+1.1
MORH	Mrgy, Hungar	5.94	345	*e*Pn	Pn	14 38 05.9	+0.7
MORH				*e*Sn	Sn	14 39 11.4	-1.9
IDI	Anoyia	6.11	147	Pn	Pn	14 38 07.6	-0.2
	comp=N,4.6nm,0.6s,baz=329,slow=11,SNR=7.0						
IDI				Sn	Sn	14 39 18.5	+0.7
	comp=N,1.4nm,0.3s,baz=240,slow=20,SNR=2.3						
GUMA	Gualdo di Mace	6.15	297		Pn	14 38 08.5	+0.4
NRCA	Norcia	6.22	295		Pn	14 38 09.5	+0.4
MLR	Muntele Rosu	6.26	35	Pn	Pn	14 38 11.3	+1.5
	comp=N,0.8nm,0.3s,baz=215,slow=12,SNR=4.0						
MLR				Sn	Sn	14 39 23.0	+1.4
	comp=N,0.6nm,0.3s,baz=170,slow=18,SNR=3.6						
MLR				Lg	Lg	14 39 55.2	
	comp=N,0.4nm,0.3s,baz=139,slow=20,SNR=5.4						
MLR				LR	LR	14 41 11.0	
	comp=N,193nm,19.1s,baz=135,slow=44						
	comp=N,2.4nm,0.6s						
MLR	Muntele Rosu	6.26	35	⇓P	Pn	14 38 12.7	+2.8
ISR	Istrita	6.26	40	⇑P	Pn	14 38 13.0	+3.2
FDMO	Fiordimonte	6.30	296		Pn	14 38 10.4	+0.1
MANT	Manisa	6.32	106		Pn	14 38 12.6	+1.9
NEHR	Nehoiu	6.37	37	⇓P	Pn	14 38 13.6	+2.3
MARR	Marisel-Cluj	6.41	14	⇑P	Pn	14 38 14.2	+2.4
DOPR	Dopca	6.42	30	⇑P	Pn	14 38 14.0	+2.1
BOJS	Bojanci	6.46	323	⇑ *i*Pn	Pn	14 38 12.4	+0.1
BOJS	Bojanci	6.46	323	*e*Pn	Pn	14 38 12.7	+0.3
BOJS				*e*Sn	Sn	14 39 23.9	-2.2
BOJS				*e*		14 40 14.8	
BOJS	Bojanci	6.46	323	*e*Pn	Pn	14 38 12.6	+0.3
BOJS				*e*Sn	Sn	14 39 25.5	-0.6
CESX	Cesi	6.52	292		Pn	14 38 14.0	+0.7
CRES	Cresnjevec Ost	6.61	326	*e*Pn	Pn	14 38 14.6	+0.1
CRES	Cresnjevec Ost	6.61	326	*e*Pn	Pn	14 38 14.7	+0.1
BEHE	Becsehely	6.66	335	Pn	Pn	14 38 15.9	+0.8
HARR	Harsova	6.73	49	⇑P	Pn	14 38 18.2	+2.1
MURB	Monte Urbino	6.77	297		Pn	14 38 17.4	+0.7
PLOR	Plostina	6.86	37	⇑P	Pn	14 38 20.0	+2.1
VRI	Vrincioaia	6.90	37	⇑P	Pn	14 38 20.9	+2.4
CEY	Cerknica	7.02	320	⇑ *i*Pn	Pn	14 38 20.3	+0.1
CEY	Cerknica	7.02	320	*e*Pn	Pn	14 38 20.2	+0.1
SKDS	Skadanscina	7.09	318	⇑ *i*Pn	Pn	14 38 20.2	-0.8
SKDS	Skadanscina	7.09	318	*i* Pn	Pn	14 38 20.5	-0.6
SKDS	Skadanscina	7.09	318	*e*Pn	Pn	14 38 20.3	-0.8
ONER	Baraj Valea Uz	7.12	33	⇑P	Pn	14 38 24.4	+2.9
CFR	Carcaliu	7.14	47	⇑P	Pn	14 38 24.5	+2.7
JAVS	Javornik	7.31	320	*e*Pn	Pn	14 38 23.6	-0.6
JAVS				Sn	Sn	14 39 44.1	-3.1
TRI	Trieste	7.33	318		Pn	14 38 23.6	-0.7
BORA	Eskisehir	7.42	92	Pn	Pn	14 38 26.4	+0.7
PSZ	Piszkesteto	7.46	355		Pn	14 38 26.6	+0.4
PSZ	Piszkesteto	7.46	355	⇓P	Pn	14 38 28.4	+2.2
SOKA	Soboth	7.47	328	*e*Pn	Pn	14 38 27.2	+0.9
	comp=N,0.6nm,0.1s,SNR=6.0						
SOKA				*i* Sn	Sn	14 39 51.7	+0.5
	comp=N,9.3nm,0.6s						
OBKA	Obir	7.54	325	⇑ *i*Pn	Pn	14 38 26.6	-0.7
OBKA	Obir	7.54	325	*e*Pn	Pn	14 38 27.4	+0.1
	comp=N,1.6nm,0.3s,SNR=5.7						
OBKA				*e*Sn	Sn	14 39 54.4	+1.4
	comp=N,55nm,0.9s						
SABO	M.te Sabotino	7.60	319		Pn	14 38 27.6	-0.5
OSSC	Osservatorio P	7.74	296	Pn	Pn	14 38 29.9	-0.1
ARSA	Arzberg	7.76	332	Pn	Pn	14 38 29.7	-0.6
ARSA	Arzberg	7.76	332	*e*Pn	Pn	14 38 30.5	+0.2
	comp=N,4.0nm,0.5s,SNR=7.5						
ARSA				*i* Sn	Sn	14 39 57.4	-0.8
	comp=N,3.0nm,0.5s						
BURAR	Bucovina Array	7.80	23	⇑P	Pn	14 38 34.8	+3.9
RONA	Rosalia, Austr	7.90	337	*i* Pn	Pn	14 38 31.3	-1.0
	comp=N,2.0nm,0.4s						
KECS	Kecovo	8.00	358	*e*PN	Pn	14 38 37.0	+3.5
MYKA	Terra Mystica	8.04	322	*i* Pn	Pn	14 38 33.8	-0.4
	comp=N,3.7nm,0.3s						
MYKA				*i* Sn	Sn	14 40 06.6	+1.4
	comp=N,4.4nm,0.6s						
VYHS	Vyhne	8.13	351	*e*PN	Pn	14 38 34.3	-1.0
VYHS				*e*SN	Sn	14 40 06.6	-0.7
ZCCA	Zocca	8.23	301		Pn	14 38 36.2	-0.6
CONA	Conrad Observa	8.24	336	*i* Pn	Pn	14 38 37.5	+0.6
	comp=N,0.1nm,0.1s						
STAL	STALIGIAL	8.24	317		Pn	14 38 37.1	+0.1
MODS	Modra-Piesok	8.28	343	*e*PN	Pn	14 38 36.5	-0.9
TEOL	Teolo	8.28	309		Pn	14 38 36.5	-0.9
JAVC	Velka Javorina	8.66	346	*e*PN	Pn	14 38 42.3	-0.4
ABTA	Abfaltersbach	8.67	319	*i* Pn	Pn	14 38 42.5	-0.3
	comp=N,12nm,0.4s,SNR=6.1						
ABTA				*i* Sn	Sn	14 40 20.0	-0.8
	comp=N,7.8nm,0.6s						
CTI	Castel Tesino	8.68	313		Pn	14 38 42.2	-0.8
MOA	Molln	8.73	330	*i* Pn	Pn	14 38 44.0	+0.4
	comp=N,2.9nm,0.4s						
MOA				*i* Sn	Sn	14 40 19.3	-2.7
	comp=N,5.2nm,0.5s						
BIOA	Bad Ischl, Aus	8.85	327	*i* Pn	Pn	14 38 45.1	-0.2
	comp=N,3.0nm,0.8s						
STHS	Stebnicka Huta	8.94	2	*e*PN	Pn	14 38 47.5	+1.1
LESA	Schwarzleotal	9.07	323	*i* Pn	Pn	14 38 47.6	-0.7
	comp=N,6.6nm,0.5s,SNR=5.6						
LESA				*i* Sn	Sn	14 40 29.1	-1.5
	comp=N,5.2nm,0.5s						
KRUC	Moravsky	9.13	341	*e*PN	Pn	14 38 48.8	-0.2
VRAC	Vranov	9.31	343	Pn	Pn	14 38 53.0	+1.5
	comp=N,0.3nm,0.3s,baz=170,slow=20,SNR=3.3						
VRAC				LR	LR	14 42 34.2	
	comp=N,159nm,20.8s,baz=170,slow=38						
	comp=N,2.8nm,0.6s						
VRAC	Vranov	9.31	343	*e*PN	Pn	14 38 51.3	-0.2
WTTA	Wattenberg	9.46	319	*i* Pn	Pn	14 38 53.8	0.0
	comp=N,8.9nm,0.5s,SNR=9.0						
WTTA				*i* Sn	Sn	14 40 39.1	-1.3
	comp=N,24nm,0.8s						
CKRC	Cesky Krumlov	9.53	333	*e*PN	Pn	14 38 57.7	+3.2
CKRC				AMS	AMS	14 42 50.0	
	comp=N,400nm,12.4s						
OKC	Ostrava-Krasne	9.54	350	AMS	AMS	14 43 50.0	
	comp=N,600nm,7.2s						
WATA	Walderalm	9.54	319	*i* Pn	Pn	14 38 53.7	-1.1
	comp=N,23nm,0.5s,SNR=15						
WATA				*i* Sn	Sn	14 40 40.8	-1.5
	comp=N,22nm,0.7s						
MORC	Moravsky Berou	9.57	347	Pn	Pn	14 38 55.6	+0.5
MORC	Moravsky Berou	9.57	347	*e*PN	Pn	14 38 54.0	-1.1
TREC	Trest	9.58	339	AMS	AMS	14 43 00.0	
	comp=N,900nm,8.4s						
SQTA	Sankt Quirin	9.65	317	*i* Pn	Pn	14 38 57.0	+0.7
	comp=N,8.3nm,0.4s,SNR=7.9						
SQTA				*i* Sn	Sn	14 40 44.5	-0.5
	comp=N,12nm,0.6s						
GEC2	GERESS Array S	9.76	331		Pn	14 38 57.4	-0.4
GERES	GERESS Array B	9.76	331		Pn	14 38 57.9	+0.1
GERES	GERESS Array B	9.76	331	Pn	Pn	14 38 59.2	+1.4
	baz=152,slow=15,SNR=18						
GERES				Sn	Sn	14 40 48.2	+0.7
	baz=143,slow=23,SNR=1.7						
GERES				LR	LR	14 43 29.7	
	comp=N,275nm,21.4s,baz=142,slow=42						
	comp=N,2.6nm,0.7s						
FETA	Feichten	9.78	315	*e*Pn	Pn	14 38 58.0	-0.1
	comp=N,11nm,0.6s,SNR=10.0						
FETA				*e*Sn	Sn	14 40 47.5	-0.6
	comp=N,3.6nm,0.6s						
MOTA	Moosalm	9.79	318	*i* Pn	Pn	14 38 58.3	+0.1
	comp=N,22nm,0.7s,SNR=15						
MOTA				*i* Sn	Sn	14 40 48.3	0.0
	comp=N,14nm,0.7s						
FUORN	Ofenpass-Fuorn	9.80	312	Pn	Pn	14 38 58.5	+0.1
BRTR	Keskin Array B	9.87	90	Pn	Pn	14 39 00.3	+1.0
	comp=N,0.1nm,0.3s,baz=266,slow=11,SNR=1.9						
	comp=N,0.4nm,0.6s						
KRLC	Kraliky	10.00	345	AMS	AMS	14 43 30.0	
	comp=N,500nm,9.7s						
KHC	Kasperske Hory	10.05	332	*e*PN	Pn	14 39 04.7	+3.1
KHC				*e*SN	Sn	14 40 57.0	+2.6
KHC				AMS	AMS	14 43 10.0	
	comp=N,500nm,11.4s						
RETA	Reutte	10.06	317	*i* Pn	Pn	14 39 01.7	-0.1
	comp=N,2.9nm,0.6s						
RETA				*i* Sn	Sn	14 40 57.3	+2.6
	comp=N,13nm,0.7s						
ZVC	Zvikov	10.10	335	*e*PN	Pn	14 39 04.3	+2.0
ZVC				AMS	AMS	14 43 20.0	
	comp=N,700nm,11.4s						
DAVOX	Davos/Dischmat	10.11	312	Pn	Pn	14 39 03.2	+0.6
	comp=N,1.4nm,0.3s,baz=143,slow=15,SNR=12						
DAVOX				Sn	Sn	14 40 54.8	-1.4
	comp=N,0.5nm,0.3s,baz=44,slow=21,SNR=3.8						
DAVOX				LR	LR	14 43 57.2	
	comp=N,118nm,20.9s,baz=83,slow=43						
	comp=N,7.4nm,0.6s						
KEST	Kesra	10.20	246		Pn	14 39 04.1	+0.3
KEST	Kesra	10.20	246	Pn	Pn	14 39 04.5	+0.8
	comp=N,0.2nm,0.3s,baz=30,slow=6.3,SNR=8.6						
KEST				LR	LR	14 43 37.1	
	comp=N,53nm,20.8s,baz=354,slow=41						
	comp=N,3.3nm,0.7s						
TUE	Stuetta	10.24	309		Pn	14 39 04.4	-0.1
GOPC	GO Pecny, Ondr	10.33	338	AMS	AMS	14 43 20.0	
	comp=N,700nm,10.2s						
DPC	Dobruska-Polom	10.35	344	*e*PN	Pn	14 39 07.5	+1.7
DPC				AMS	AMS	14 43 40.0	
	comp=N,700nm,9.4s						
DAVA	Damuels	10.40	314	*i* Pn	Pn	14 39 08.3	+1.7
	comp=N,7.1nm,0.7s						
DAVA				*e*Sn	Sn	14 41 02.2	-1.2
	comp=N,12nm,0.7s						
PRU	Pruhonice	10.47	337	AMS	AMS	14 43 30.0	
	comp=N,700nm,9.6s						
UPC	Upice	10.57	343	AMS	AMS	14 43 40.0	
	comp=N,800nm,8.3s						
OSTC	Ostas	10.57	344	*e*PN	Pn	14 39 05.5	-3.2
OSTC				AMS	AMS	14 43 50.0	
	comp=N,700nm,8.6s						
PRA	Prague	10.58	337	AMS	AMS	14 43 20.0	
	comp=N,700nm,9.2s						
CHVC	Chvalec	10.63	343	AMS	AMS	14 43 50.0	
	comp=N,700nm,9.3s						
PVCC	Panska Ves	10.95	339	AMS	AMS	14 43 50.0	
	comp=N,700nm,10.0s						
RICC	Richard	11.10	337	AMS	AMS	14 43 50.0	
	comp=N,500nm,9.6s						
BNI	Bardonecchia	11.34	298	Pn	Pn	14 39 20.3	+0.9
SENIN	Lac Senin/Sane	11.44	305		Pn	14 39 20.7	-0.1
AKASG	Malin Array Be	11.79	27	Pn	Pn	14 39 23.5	-1.8
	comp=N,0.5nm,0.3s,baz=217,slow=13,SNR=1.6						
AKASG				LR	LR	14 44 41.7	
	comp=N,68nm,18.4s,baz=226,slow=41						
	comp=N,0.2nm,0.3s						
BFO	Black Forest	11.86	315		Pn	14 39 24.8	-1.7
ECH	Echery	12.44	313	Pn	Pn	14 39 34.2	-0.1
MMAI	Mount Meron Ar	13.87	118	Pn	Pn	14 39 52.7	-1.3
	comp=N,0.5nm,0.3s,baz=316,slow=12,SNR=1.3						
MMAI				LR	LR	14 45 58.0	
	comp=N,115nm,20.5s,baz=292,slow=41						
	comp=N,0.3nm,0.3s						
ASF	Jabal al Asfar	15.38	118	Pn	Pn	14 40 13.6	-0.9
	comp=N,0.1nm,0.3s,baz=343,slow=20,SNR=1.7						
ASF				LR	LR	14 47 26.3	
	comp=N,84nm,19.1s,baz=249,slow=42						
	comp=N,0.5nm,0.3s						
EIL	Elat	15.81	129	Pn	Pn	14 40 18.7	-1.3
	comp=N,0.3nm,0.3s,baz=22,slow=19,SNR=3.8						
EIL				LR	LR	14 48 32.5	
	comp=N,34nm,18.4s,baz=246,slow=46						
	comp=N,8.4nm,1.3s						
ESDC	Sonseca Array	18.96	276	P	P	14 40 58.9	+0.2
	comp=N,0.1nm,0.3s,baz=72,slow=11,SNR=14						
ESDC				LR	LR	14 48 17.4	
	comp=N,78nm,18.4s,baz=128,slow=37						
	comp=N,2.0nm,0.9s						
HFS	Hagfors	20.16	350	P	Pn	14 41 12.7	-0.7
	comp=N,2.0nm,0.6s,baz=172,slow=12,SNR=9.2						
HFS				LR	LR	14 50 40.3	
	comp=N,86nm,19.7s,baz=171,slow=42						
	comp=N,2.0nm,0.6s						
PBRG	Braganca	20.75	283	*e*P	Pn	14 41 20.5	-0.1
PBRG				*i* Amb		14 41 26.5	
	comp=N,11nm,1.4s						
MVO	Moncorvo	21.04	281	*e*P	P	14 41 21.4	+0.1
MVO				*i* Amb		14 41 29.5	
	comp=N,15nm,1.5s						
NC602	NORSAR Array S	21.07	347	P	P	14 41 21.2	-0.1
NC602				IAmb	IAmb	14 41 22.2	
	comp=Z,20nm,1.4s						
FINES	FINESS Array B	21.23	7	P	P	14 41 22.8	-0.3
FINES	FINESS Array B	21.23	7	P	P	14 41 22.3	-0.8
	comp=Z,2.6nm,0.9s,baz=167,slow=9.6,SNR=8.8						
	comp=Z,2.6nm,0.9s						
NC405	NORSAR Array S	21.39	348		P	14 41 25.2	+0.3
NC405				IAmb	IAmb	14 41 34.2	
	comp=Z,13nm,0.9s						
NB2	NORSAR Subarra	21.41	347	P	P	14 41 24.9	-0.2
	comp=Z,2.6nm,0.8s,baz=160,slow=11						
NOA	NORSAR Array B	21.41	347	P	P	14 41 24.6	-0.4
	comp=Z,0.9nm,0.7s,baz=167,slow=10,SNR=7.2						
NOA				LR	LR	14 50 12.3	
	comp=Z,34nm,20.2s,baz=160,slow=38						
	comp=Z,0.9nm,0.7s						
MTE	Manteigas	21.54	279	*e*P	P	14 41 27.3	+0.6
MTE				*i* Amb		14 41 34.6	
	comp=Z,17nm,1.6s						
NC303	NORSAR Array S	21.56	348		P	14 41 27.1	+0.5
NC303				IAmb	IAmb	14 41 30.4	
	comp=Z,16nm,1.0s						
PMRV	Marv??o	21.61	276	*e*P	P	14 41 28.2	+0.8
PMRV				*i* Amb		14 41 34.8	
	comp=Z,11nm,1.5s						
PBAR	Barrancos	21.63	273	*e*P	P	14 41 27.6	0.0
EKA	Eskdalemuir Ar	21.72	321	P	P	14 41 28.4	0.0
	comp=Z,3.8nm,0.8s,baz=123,slow=9.3,SNR=9.8						
	comp=Z,3.8nm,0.8s						
MDT	Midelt	21.73	257	P	P	14 41 29.6	+0.8
	comp=Z,1.6nm,0.3s,baz=75,slow=11,SNR=1.4						
	comp=Z,1.6nm,0.3s						
PVIS	Viseu	21.75	280	*e*P	P	14 41 28.3	-0.7
BELG	Belogornoye	21.85	48	P	P	14 41 28.9	-0.8
	comp=Z,5.4nm,0.9s,baz=311,slow=15,SNR=3.6						
BELG				LR	LR	14 51 00.3	
	comp=Z,39nm,18.5s,baz=228,slow=40						
	comp=Z,5.4nm,0.9s						
PSARD	Sardoal	22.15	277	*e*P	P	14 41 34.8	+1.5
PSARD				*i* Amb		14 41 35.8	
	comp=Z,8.9nm,1.2s						
PVAQ	Vaqueiros	22.35	271	*e*P	P	14 41 35.5	+0.1
PVAQ				*i* Amb		14 41 40.2	
	comp=Z,13nm,1.2s						
AKTO	Aktyubinsk	27.67	56	LR	LR	14 54 24.3	
	comp=Z,46nm,20.0s,baz=270,slow=39						
ABKAR	Akbulak array	28.82	59	P	P	14 42 35.3	-0.2
ARTI	Arti	29.11	44	LR	LR	14 53 57.9	
	comp=Z,28nm,18.0s,baz=181,slow=36						
ARCES	ARCESS Array B	29.22	3	P	P	14 42 37.7	-1.1
	comp=Z,2.7nm,0.9s,baz=198,slow=3.6,SNR=3.6						
	comp=Z,2.7nm,0.9s						
BORG	Borgarnes	34.22	329	LR	LR	14 57 25.0	
	comp=Z,52nm,20.5s,baz=130,slow=36						
BVAR	Borovoye Array	35.50	52	P	P	14 43 32.4	-1.5
	comp=Z,0.4nm,0.5s,baz=293,slow=7.7,SNR=3.9						
BVAR				LR	LR	14 59 35.2	
	comp=Z,61nm,18.0s,baz=238,slow=39						
	comp=Z,0.4nm,0.5s						
AAK	Ala-Archa	39.67	69	LR	LR	15 06 11.3	
	comp=Z,25nm,20.9s,baz=184,slow=45						
KURBB	Kurchatov Arra	40.72	56	P	P	14 44 17.7	-0.2
	comp=Z,0.2nm,0.7s,baz=283,slow=7.5,SNR=2.2						
	comp=Z,0.2nm,0.7s						
MK31	Makanchi Array	43.94	60	P	P	14 44 43.0	-1.4
MKAR	Makanchi Array	43.94	60	P	P	14 44 44.0	-0.3
MKAR	Makanchi Array	43.94	60	P	P	14 44 43.8	-0.5
	comp=Z,0.7nm,0.6s,baz=284,slow=6.8,SNR=11						
MKAR				LR	LR	15 04 14.8	
	comp=Z,36nm,18.2s,baz=178,slow=38						
	comp=Z,0.7nm,0.6s						
ZALV	Zalesovo Beam	44.01	50	P	P	14 44 44.2	-0.5
	comp=Z,1.2nm,0.6s,baz=270,slow=7.4,SNR=3.9						
ZALV				LR	LR	15 04 48.0	
	comp=Z,38nm,18.4s,baz=210,slow=38						
	comp=Z,1.2nm,0.6s						
SFJD	Kangerlussuaq	46.35	329	LR	LR	15 07 10.9	
	comp=Z,43nm,19.1s,baz=70,slow=40						
EVN	Everest	54.84	81	P	P	14 46 06.8	-1.8
SCHQ	Schefferville	56.93	316	P	P	14 46 24.7	+2.3
	comp=Z,2.0nm,0.7s,baz=75,slow=12,SNR=2.8						
	comp=Z,2.0nm,0.7s						
SONM	Songino Array	58.84	52	P	P	14 46 36.9	+0.8
	comp=Z,0.4nm,0.6s,baz=290,slow=4.2,SNR=1.4						
	comp=Z,0.4nm,0.6s						
A36M	Sachs Harbour	65.30	349	P	P	14 47 19.6	+0.7
A36M				IAmb	IAmb	14 47 42.8	
	comp=Z,4.2nm,0.8s						
LBTB	Lobatse	65.32	175	LR	LR	15 16 43.4	
	comp=Z,35nm,19.2s,baz=42,slow=37						
BOSA	Boshof	68.87	176	P	P	14 47 43.1	+0.9
BOSA	Boshof	68.87	176	P	P	14 47 42.8	+0.6
	comp=Z,2.6nm,0.8s,baz=1.3,slow=5.1,SNR=4.8						
	comp=Z,2.6nm,0.8s						
SADO	Sadowa	68.89	311	LR	LR	15 18 13.5	
	comp=Z,40nm,18.1s,baz=246,slow=36						
YKA	Yellowknife Ar	71.30	340	LR	LR	15 19 48.9	
	comp=Z,37nm,18.3s,baz=332,slow=36						
ULM	Lac du Bonnet	73.97	323	P	P	14 48 13.2	+0.5
	comp=Z,1.0nm,0.4s,baz=20,slow=3.2,SNR=5.1						
	comp=Z,1.0nm,0.4s						
KSRS	Korea Array	77.70	51	P	P	14 48 33.8	-0.4
	comp=Z,1.0nm,0.7s,baz=314,slow=5.0,SNR=7.1						
	comp=Z,1.0nm,0.7s						
PDAR	Pinedale Array	85.77	326	P	P	14 49 17.2	+0.2
	comp=Z,0.2nm,0.4s,baz=30,slow=6.1,SNR=2.1						
PDAR				LR	LR	15 30 47.6	
	comp=Z,35nm,18.4s,baz=294,slow=38						
	comp=Z,0.2nm,0.4s						
TXAR	Lajitas Array	93.54	314	P	P	14 49 54.8	+1.1
	comp=Z,0.6nm,0.8s,baz=69,slow=4.3,SNR=4.4						
	comp=Z,0.6nm,0.8s						
WRA	Warramunga Arr	120.39	91	PKP	PKPdf	14 55 28.2	-1.0
	comp=Z,0.2nm,0.6s,baz=300,slow=1.5,SNR=2.4						
ASAR	Alice Springs	122.18	95	PKP	PKPdf	14 55 31.8	-0.8
	comp=Z,0.6nm,0.6s,baz=302,slow=1.8,SNR=4.2						

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*TIR **28** 14:39:35.0, 40.°45N×20.°81E, h5^{km}, Md2.5/6, Ml2.9/5*

*THE **28** 14:39:36.3, 40°N±1°×2°1E±°, h11^{km}±3^{km}, M2.7/6, MLh2.7/6*

*ATH **28** 14:39:36.1, 40.°48N×20.°78E, h5^{km}±2^{km}, ML2.8/6, Manual Solution by S.Liakopoulos First location: 2019/06/28 14:40:52, This location: 2019/06/28 15:00:54 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*

*SKO **28** 14:39:37.4, 40.°47N×20.°86E, h12^{km}, ML2.5*

ISC 28 14:39:36.3±1.1, **40.°47N**±0.°02×**20.°81E**±0.°02, **h3**^{km}±10^{km}, **n31**, σ**1.^{s}10**/52, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.15	353	Pg	Pg	14 39 31.9	-7.4
KBN				Sg	Sg	14 39 41.3	-0.1
KBN				AML	AML	14 39 42.3	
	11nm,0.5s						
NEST	Nestorio	0.19	107	Pg	Pg	14 39 37.5	-2.5
NEST				Sg	Sg	14 39 42.4	-0.1
NEST				AML	AML	14 39 44.8	
	18nm,0.2s						
NEST				AMd		14 40 12.9	
NEST	Nestorio	0.19	107	P	Pg	14 39 40.5	+0.6
NEST				S	Sg	14 39 43.8	+1.3
NEST	Nestorio	0.19	107	P	Pg	14 39 40.6	+0.7
NEST				S	Sg	14 39 44.3	+1.8
PENT	Pentalofos	0.37	138	P	Pg	14 39 43.6	+0.2
PENT	Pentalofos	0.37	138	P	Pg	14 39 43.4	0.0
PENT				S	Sg	14 39 49.5	+1.2
FNA	Florina	0.53	54	Pg	Pg	14 39 46.4	-0.2
FNA				Sg	Sb	14 39 54.7	-1.7
FNA				AML	AML	14 39 55.9	
	7.4nm,0.4s						
FNA				AMd		14 40 15.5	
FNA	Florina	0.53	54	P	Pg	14 39 46.2	-0.2
FNA				S	Sg	14 39 54.5	+1.1
FNA	Florina	0.53	54	*i* Pg	Pg	14 39 46.3	-0.2
FNA				*i* Sg	Sb	14 39 55.3	-1.0
FNA	Florina	0.53	54	P	Pg	14 39 46.2	-0.2
FNA				S	Sb	14 39 54.9	-1.4
OHR	Ohrid	0.64	359	*i* Pg	Pb	14 39 49.6	-0.6
OHR				*i* Sg	Sb	14 39 58.8	-0.7
OHR				*e*Lg	Lg	14 39 59.5	
	comp=E,230nm,0.5s						
OHR				*e*Lg	Lg	14 40 00.9	
	comp=N,130nm,0.6s						
KPRO	Kipourio	0.67	140	P	Pg	14 39 48.6	-0.4
KPRO				S	Sb	14 39 58.8	-1.4
KPRO	Kipourio	0.67	140	P	Pg	14 39 48.7	-0.4
KPRO				S	Sg	14 39 58.5	+0.8
KZN	Kozani	0.75	102	P	Pg	14 39 50.5	-0.2

KZN	Kozani	0.75	102	P	Pg	14 39 50.6	0.0
KZN				S	Sb	14 40 02.5	-0.1
JAN	Janina	0.81	178	P	Pg	14 39 52.0	+0.1
JAN				S	Sg	14 40 02.9	+0.5
SRN	Sarande	0.86	227	Pg	Pg	14 39 52.4	-0.3
SRN				Sg	Sb	14 40 05.0	-0.5
SRN				AML	AML	14 40 07.5	
	comp=N,1.1nm,0.6s						
SRN				AMd		14 40 55.0	
SRN	Sarande	0.86	227	P	Pg	14 39 52.5	-0.3
SRN				S	Sg	14 40 04.4	+0.7
KTI	Kastanea	1.00	94	P	Pg	14 39 55.3	-0.1
IGT	Igoumenitsa	1.01	202	Pn	Pg	14 39 54.6	-0.9
IGT				Sn	Sg	14 40 08.9	+0.3
IGT				AMd		14 40 47.2	
IGT	Igoumenitsa	1.01	202	P	Pg	14 39 55.6	0.0
IGT	Igoumenitsa	1.01	202	*i* Pg	Pb	14 39 55.8	-0.6
IGT				*i* Sg	Sn	14 40 11.2	-0.7
IGT	Igoumenitsa	1.01	202	P	Pb	14 39 55.7	-0.6
IGT				S	Sb	14 40 09.9	-0.1
KEK	Kerkira	1.08	226	P	Pb	14 39 57.5	-0.2
TIR	Tirane	1.13	321	Pn	Pg	14 39 57.2	-0.8
TIR				Sn	Sn	14 40 14.7	-0.4
TIR				AML	AML	14 40 21.2	
	comp=N,0.4nm,0.7s						
TIR				AMd		14 40 38.1	
TIR	Tirane	1.13	321	*i* Pg	Pn	14 40 05.0	+6.0
TIR				*i* Sg	Sn	14 40 20.2	+5.1
TETR	Tetrakomo, Epi	1.18	162	P	Pn	14 40 00.5	+0.8
THL	Klokotos Trika	1.29	134	P	Pn	14 39 60.0	-1.2
THL				S	Sn	14 40 19.4	+0.5
TYRN	Tyrnavos	1.33	124	P	Pg	14 40 01.7	0.0
TYRN				S	Sn	14 40 20.3	+0.5
PUK	Puka	1.72	336	Pn	Pb	14 40 08.2	-0.3
PUK				AMd		14 41 06.8	
KNT	Kendrikon	1.73	66	*i* Pn	Pn	14 40 07.5	+0.3

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*IDC **28** 15:11:52.0±0.6, 55.°05N×164.°83E, h0^{km}, mb4.0/26, mbtmp4.0/29, ML4.3/2, MS3.3/11, Error ellipse: s-maj=18.9km s-min=11.6km az=159.0*

*KRSC **28** 15:11:53.0±1.3, 54.°88N×164.°63E, h48^{km}±26^{km}, Ml4.4*

*NEIC **28** 15:11:53.3±2.1, 55.°1N±0.°2×164.°66E±0.°10, h10^{km}±2^{km}, mb4.3/89, Error ellipse: s-maj=27.8km s-min=3.6km az=161.0*

*MOS **28** 15:11:54.7±0.9, 54.°93N×164.°76E, h34^{km}, mb4.5/13, Error ellipse: s-maj=5.7km s-min=5.3km az=87.7*

ISC 28 15:11:56.3±0.4, **54.°92N**±0.°05×**164.°76E**±0.°03, **h34^{km}**, **n434**, σ**1^{s}23**/412, **mb4.2**/84, **MS3.3**/7, **1C-1D**, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	0.76	67	PN	Pn	15 12 08.8	-1.7
BKI				S	Sn	15 12 20.1	-0.6
BKI	Bering	0.76	67	*e*P	Pn	15 12 08.9	-1.7
BKI				*e*S	Sn	15 12 20.1	-0.6
KBTR	Krutoberegovo	1.70	320	PN	Pn	15 12 20.0	-3.5
KBTR	Krutoberegovo	1.70	320	*e*P	Pn	15 12 20.0	-3.5
KBG	Krutoberegovo	1.77	320	PN	Pn	15 12 22.9	-1.6
KBG				S	Sn	15 12 43.3	-2.5
KBG	Krutoberegovo	1.77	320	*e*P	Pn	15 12 23.0	-1.6
KBG				*e*S	Sn	15 12 43.4	-2.5
MKZ	Mys Kozlova	1.79	260	PN	Pn	15 12 22.7	-2.0
MKZ				S	Sn	15 12 42.8	-3.4
MKZ	Mys Kozlova	1.79	260	*e*P	Pn	15 12 22.8	-2.0
MKZ				*e*S	Sn	15 12 42.9	-3.4
SMKR	Semkarok	2.50	313	PN	Pn	15 12 33.6	-0.9
SMKR	Semkarok	2.50	313	*e*P	Pn	15 12 33.6	-0.9
ZLN	Zelenaya	2.50	298	PN	Pn	15 12 34.3	-0.3
ZLN	Zelenaya	2.50	298	*e*P	Pn	15 12 34.4	-0.3
TUMD	Tumrok D	2.52	278	PN	Pn	15 12 33.4	-1.4
TUMD				S	Sn	15 13 01.5	-2.8
TUMD	Tumrok D	2.52	278	*e*P	Pn	15 12 33.4	-1.4
TUMD				*e*S	Sn	15 13 01.6	-2.8
BZGR	Bezymyannyi-Gr	2.53	296	PN	Pn	15 12 34.5	-0.5
BZGR	Bezymyannyi-Gr	2.53	296	*e*P	Pn	15 12 34.5	-0.5
CIRR	Tsirk	2.58	299	PN	Pn	15 12 36.1	+0.5
CIRR	Tsirk	2.58	299	*e*P	Pn	15 12 36.2	+0.5
LGNR	Loginova	2.59	298	PN	Pn	15 12 36.6	+0.6
LGNR	Loginova	2.59	298	*e*P	Pn	15 12 36.6	+0.6
BZMR	Bezymyannaya	2.64	294	PN	Pn	15 12 36.3	-0.2
BZMR	Bezymyannaya	2.64	294	*e*P	Pn	15 12 36.3	-0.2
BZWR	Bezymyannyi-We	2.64	295	PN	Pn	15 12 36.3	-0.3
BZWR	Bezymyannyi-We	2.64	295	*e*P	Pn	15 12 36.3	-0.3
SRKR	Sorokina	2.67	312	PN	Pn	15 12 38.1	+1.2
SRKR	Sorokina	2.67	312	*e*P	Pn	15 12 38.1	+1.2
KRSR	Krestovskiy	2.71	300	PN	Pn	15 12 37.1	-0.4
KRSR	Krestovskiy	2.71	300	*e*P	Pn	15 12 37.1	-0.4
KMNR	Kamenistaya	2.71	290	PN	Pn	15 12 37.5	0.0
KMNR	Kamenistaya	2.71	290	*e*P	Pn	15 12 37.6	0.0
KIRR	Kirishev	2.72	294	PN	Pn	15 12 37.7	0.0
KIRR	Kirishev	2.72	294	*e*P	Pn	15 12 37.7	0.0
KPT	Kopyto	2.79	294	PN	Pn	15 12 38.6	+0.1
KPT	Kopyto	2.79	294	*e*P	Pn	15 12 38.7	+0.1
KOZ	Kozyrevsk	3.00	294	PN	Pn	15 12 42.5	+1.1
KOZ	Kozyrevsk	3.00	294	*e*P	Pn	15 12 42.6	+1.1
SRDR	Sredinnyy	3.18	298	PN	Pn	15 12 44.3	+0.4
SRDR	Sredinnyy	3.18	298	*e*P	Pn	15 12 44.3	+0.4
KII	Karymskiy	3.22	256	PN	Pn	15 12 44.3	-0.1
KII	Karymskiy	3.22	256	*e*P	Pn	15 12 44.4	-0.1
SPN	Mys Shipunski	3.34	239	PN	Pn	15 12 44.4	-1.6
SPN	Mys Shipunski	3.34	239	*e*P	Pn	15 12 44.4	-1.6
SPN				*e*S	Sn	15 13 20.3	-4.1
ESO	Esso	3.60	289	PN	Pn	15 12 48.9	-0.7
ESO	Esso	3.60	289	*e*P	Pn	15 12 48.9	-0.7
NLC	Nalytchevo	3.64	243	PN	Pn	15 12 49.4	-0.7
NLC	Nalytchevo	3.64	243	*e*P	Pn	15 12 49.4	-0.7
NLC				*e*S	Sn	15 13 29.5	-2.3
SDLR	Sedlovina	3.83	247	PN	Pn	15 12 52.1	-0.8
SDLR	Sedlovina	3.83	247	*e*P	Pn	15 12 52.1	-0.8
SDLR				*e*S	Sn	15 13 34.0	-2.7
SMAR	Somma	3.88	247	PN	Pn	15 12 52.9	-0.7
SMAR	Somma	3.88	247	*e*P	Pn	15 12 52.9	-0.7
SMAR				*e*S	Sn	15 13 34.2	-3.9
KRER	Koryakskii	3.89	248	PN	Pn	15 12 53.3	-0.4
KRER	Koryakskii	3.89	248	*e*P	Pn	15 12 53.4	-0.4
KRER				*e*S	Sn	15 13 36.9	-1.4
UGLR	Uglovaya	3.89	246	PN	Pn	15 12 53.2	-0.5
UGLR	Uglovaya	3.89	246	*e*P	Pn	15 12 53.2	-0.5
UGLR				*e*S	Sn	15 13 35.1	-3.2
AVH	Avacha	3.91	247	PN	Pn	15 12 53.7	-0.2
AVH	Avacha	3.91	247	*e*P	Pn	15 12 53.8	-0.2
AVH				*e*S	Sn	15 13 36.4	-2.3
KRX	Arik	3.92	249	PN	Pn	15 12 53.6	-0.5
KRX	Arik	3.92	249	*e*P	Pn	15 12 53.6	-0.5
KRX				*e*S	Sn	15 13 37.8	-1.2
KOK	Koryaka	3.95	248	PN	Pn	15 12 54.2	-0.3
KOK	Koryaka	3.95	248	*e*P	Pn	15 12 54.3	-0.3
KOK				*e*S	Sn	15 13 37.6	-2.1
DALK	Dalny	4.02	244	PN	Pn	15 12 54.3	-1.0
DALK	Dalny	4.02	244	*e*P	Pn	15 12 54.3	-1.0
PET	Petropavlovsk	4.07	245		Pn	15 12 55.6	-0.5
PET	Petropavlovsk	4.07	245	*e*PN	Pn	15 12 55.5	-0.6
PET				MLR	MLR		
	comp=Z,200nm,20.0s						
PET				MLR	MLR		
	comp=Z,300nm,18.0s						
GNL	Ganaly	4.18	256	PN	Pn	15 12 57.6	0.0
GNL	Ganaly	4.18	256	*e*P	Pn	15 12 57.7	0.0
OSSR	Ossora	4.44	349	PN	Pn	15 12 59.6	-1.5
OSSR	Ossora	4.44	349	*e*P	Pn	15 12 59.6	-1.5
KRMR	Karymshinskiy	4.45	245	PN	Pn	15 13 01.3	+0.1
KRMR	Karymshinskiy	4.45	245	*e*P	Pn	15 13 01.4	+0.1
KRMR				*e*S	Sn	15 13 48.7	-3.0
RUS	Russkaya	4.47	239	PN	Pn	15 13 00.8	-0.7
RUS	Russkaya	4.47	239	*e*P	Pn	15 13 00.8	-0.7
PEA0B	Petropavlovsk-	4.54	249		Pn	15 13 02.9	+0.3
PEA0B	Petropavlovsk-	4.54	249	PN	Pn	15 13 02.7	+0.2
PETK	Petropavlovsk-	4.54	249		Pn	15 13 02.4	-0.1
PETK	Petropavlovsk-	4.54	249	Pn	Pn	15 13 02.0	-0.6
	comp=Z,9.6nm,0.5s,baz=71,slow=19,SNR=56						
PETK				Sn	Sn	15 13 51.5	-2.6
	comp=Z,1.5nm,0.3s,baz=80,slow=40,SNR=9.4						
PETK				LR	LR	15 14 47.7	
	comp=Z,174nm,21.7s,baz=48,slow=38						
PETK	Petropavlovsk-	4.54	249	PN	Pn	15 13 02.4	-0.1
MTVR	Mutnovka	4.61	241	PN	Pn	15 13 03.2	-0.3
MTVR	Mutnovka	4.61	241	*e*P	Pn	15 13 03.2	-0.3
MTVR				*e*S	Sn	15 13 52.3	-3.6
GRL	Gorelyy	4.62	242	PN	Pn	15 13 03.9	+0.1
GRL	Gorelyy	4.62	242	*e*P	Pn	15 13 03.9	+0.1
ASAK	Asacha	4.80	241	PN	Pn	15 13 06.4	+0.2
ASAK	Asacha	4.80	241	*e*P	Pn	15 13 06.4	+0.2
APC	Apacha	4.92	249	PN	Pn	15 13 09.0	+1.4
APC	Apacha	4.92	249	*e*P	Pn	15 13 09.1	+1.4
SKR	Severo-Kuril's	6.74	235	*i* PN	Pn	15 13 33.2	+0.5
SKR	Severo-Kuril's	6.74	235	*e*P	Pn	15 13 33.2	+0.5
KMSK	Kamenskaya	7.61	5	PN	Pn	15 13 45.0	+0.5
KMSK	Kamenskaya	7.61	5	*e*P	Pn	15 13 45.0	+0.5
MA2	Magadan	8.90	307	LR	LR	15 17 47.4	
	comp=Z,170nm,19.8s,baz=114,slow=40						
SEY	Seymchan	10.25	327	LR	LR	15 18 05.0	
	comp=Z,131nm,21.1s,baz=87,slow=37						
BILL	Bilibino	13.19	2	*i* PN	Pn	15 14 57.8	-3.0
BILL				pmax	pmax		
	comp=Z,2.0nm,1.5s						
SPIA	Saint Paul Isl	14.12	71	P	Pn	15 15 11.1	-2.5
	baz=272						
P08K	Saint George I	14.54	73	P	Pn	15 15 16.3	-2.9
	baz=275						
GAMB	Gambell	14.84	44	P	Pn	15 15 20.7	-2.5
	baz=245						
NIKH	Nikolski High	15.63	86	P	Pn	15 15 31.9	-1.8
	baz=288						
M11K	Mekoryuk	16.39	59	P	Pn	15 15 40.8	-2.6
	baz=264						
UNV	Unalaska Valle	16.73	82	P	Pn	15 15 46.0	-1.7
	baz=286						
TNA	Tin City	17.08	41	P	Pn	15 15 49.0	-3.0
	baz=245						
K13K	Kusilvak Mount	17.36	54	P	Pn	15 15 53.0	-2.5
	baz=261						
F14K	Arctic Creek	17.65	42	P	Pn	15 15 56.6	-2.5
	baz=248						
M13K	Dall Lake	17.80	59	P	Pn	15 15 58.7	-2.3
	baz=267						
ASAJ	Asahikawa	17.91	242	P	Pn	15 16 04.9	+2.4
	comp=Z,0.3nm,0.3s,baz=40,slow=7.9,SNR=5.9						
	comp=Z,3.6nm,0.7s						
L14K	Kuka Creek	18.20	56	P	Pn	15 16 04.1	-1.8
	baz=264						
F15K	North Star Dit	18.39	42	P	P	15 16 05.5	-2.4
	baz=249						
S12K	Black Hills	18.81	74	P	P	15 16 12.4	-0.2
	baz=282						
L15K	Ungalak Mounta	18.81	55	P	P	15 16 11.2	-1.4
	baz=265						
O14K	Tigyukauivet M	18.83	63	P	P	15 16 12.0	-0.8
	baz=272						
K15K	Wolf Creek Mou	18.86	53	P	P	15 16 12.2	-1.0
	baz=263						
H16K	Elim	19.02	46	P	P	15 16 14.2	-0.6
	baz=255						
M15K	Kasigluk River	19.13	58	P	P	15 16 15.6	-0.4
	baz=268						
G16K	Koyuk River	19.18	44	P	P	15 16 15.2	-1.4
	baz=253						
C16K	Lisburne Hills	19.24	34	P	P	15 16 16.1	-1.1
	baz=241						
N15K	Kwethluk River	19.41	60	P	P	15 16 15.4	-3.9
N15K				IAmb	IAmb	15 16 22.6	
	comp=Z,25nm,1.5s						
N15K	Kwethluk River	19.41	60	P	P	15 16 18.7	-0.6
	baz=270						
J16K	Anvik River	19.43	51	P	P	15 16 19.1	-0.3
	baz=261						
YAK	Yakutsk	19.47	306	P	Pn	15 16 21.1	-0.1
	comp=Z,3.4nm,0.3s,baz=127,slow=5.1,SNR=6.1						
YAK				LR	LR	15 24 04.5	
	comp=Z,74nm,18.3s,baz=74,slow=38						
	comp=Z,7.6nm,0.3s						
I17K	Unalakleet	19.50	49	P	P	15 16 16.8	-3.3
I17K	Unalakleet	19.50	49	P	P	15 16 19.1	-1.0
	baz=259						
O15K	Ungalikthiuk R	19.57	63	P	P	15 16 20.7	-0.2
	baz=274						
D17K	Noatak River	19.74	37	P	P	15 16 21.9	-0.8
	baz=246						
SDPT	Sand Point	19.76	74	P	P	15 16 21.9	-1.1
	baz=284						
L16K	Owhat River	19.77	55	P	P	15 16 21.9	-1.1
	baz=267						
G17K	Kiwalik Mounta	19.89	44	P	P	15 16 23.4	-1.0
	baz=255						
F17K	Baldwin Pennin	19.94	41	P	P	15 16 24.7	-0.1
	baz=252						
E17K	Hotham Inlet	19.95	39	P	P	15 16 24.4	-0.6
	baz=249						
M16K	Timber Creek	19.98	57	P	P	15 16 24.9	-0.5
	baz=269						
C17K	DeLong Mountai	20.04	35	P	P	15 16 25.3	-0.7
	baz=244						
H17K	Granite Mounta	20.05	46		P	15 16 25.3	-0.9
H17K	Granite Mounta	20.05	46	P	P	15 16 26.5	+0.3
	baz=257,SNR=7.1						
N16K	Nishlik Lake	20.07	59	P	P	15 16 26.6	+0.2
	baz=271						
J17K	VABM Dome	20.13	51		P	15 16 23.9	-3.1
J17K	VABM Dome	20.13	51	P	P	15 16 27.1	+0.1
	baz=262,SNR=6.3						
L17K	Donlin	20.35	54	P	P	15 16 29.5	+0.1
	baz=267						
CHNA	Chernabura Isl	20.38	76	P	P	15 16 30.1	+0.3
	baz=286						
K17K	Iditarod	20.40	53		P	15 16 28.4	-1.5
K17K				IAmb	IAmb	15 16 33.0	
	comp=Z,15nm,1.1s						
K17K	Iditarod	20.40	53	P	P	15 16 29.6	-0.3
	baz=265,SNR=7.8						
O16K	Kokwok River B	20.44	62	P	P	15 16 30.4	0.0
	baz=274						
E18K	Tukpahlearik C	20.51	39	P	P	15 16 30.1	-1.0
	baz=250						
P16K	Nushagak River	20.53	63	P	P	15 16 31.8	+0.5
	baz=275						
F18K	Selawik	20.60	41	P	P	15 16 32.6	+0.6
	baz=253						
M17K	Holitna River	20.73	56		P	15 16 32.9	-0.6
M17K				IAmb	IAmb	15 16 39.3	
	comp=Z,21nm,1.4s						
M17K	Holitna River	20.73	56	P	P	15 16 34.1	+0.6
	baz=269						
H18K	Honhosa River	20.74	46		Pn	15 16 35.0	-1.2
H18K	Honhosa River	20.74	46	P	P	15 16 33.4	-0.2
	baz=258						
C18K	Utukok River	20.78	35		P	15 16 33.7	-0.3
C18K	Utukok River	20.78	35	P	P	15 16 34.3	+0.2
	baz=246						
G18K	Tagagawik	20.80	44	P	P	15 16 30.6	-3.6
G18K	Tagagawik	20.80	44	P	P	15 16 34.3	+0.1
	baz=256						
B18K	Kokolik River	20.89	33	P	P	15 16 35.5	+0.3
	baz=244						
O17K	Koliganek Bris	20.93	61	P	P	15 16 35.9	+0.3
	baz=274						
KLR	Kul'dur	20.94	268	P	P	15 16 38.0	+2.2
	comp=Z,1.8nm,0.8s,baz=46,slow=9.7,SNR=4.0						
KLR				LR	LR	15 24 30.5	
	comp=Z,106nm,19.0s,baz=65,slow=36						
	comp=Z,1.8nm,0.8s						
L18K	Granite Mounta	21.11	54		P	15 16 38.0	+0.4
L18K	Granite Mounta	21.11	54	P	P	15 16 37.9	+0.3
	baz=268						
J18K	Innoko River	21.19	51		P	15 16 35.6	-2.8
J18K				IAmb	IAmb	15 16 41.3	
	comp=Z,9.9nm,0.9s						
J18K	Innoko River	21.19	51	P	P	15 16 38.5	0.0
	baz=265,SNR=11						
GCSA	Galena City Sc	21.29	47	P	P	15 16 39.4	-0.1
	baz=261						
P17K	Kvichak River	21.31	63	P	P	15 16 40.2	+0.4
	baz=276						
F19K	Shaleruckik Mo	21.38	41		P	15 16 40.0	-0.4
F19K				IAmb	IAmb	15 16 44.1	
	comp=Z,16nm,1.2s						
F19K	Shaleruckik Mo	21.38	41	P	P	15 16 40.2	-0.2
	baz=255,SNR=13						
G19K	Purcell Mounta	21.48	43	P	P	15 16 41.1	-0.3
	baz=257,SNR=5.9						
N18K	Kilae Creek	21.49	58		P	15 16 41.9	+0.2
N18K	Kilae Creek	21.49	58	P	P	15 16 41.5	-0.2
	baz=273						
C19K	Lookout Ridge	21.50	35	P	P	15 16 41.7	0.0
	baz=247						
R17L	Mt. Peulik Vol	21.55	67	P	P	15 16 42.5	0.0
	baz=280						
H19K	Roundabout Mou	21.61	45		P	15 16 42.7	-0.1
H19K				IAmb	IAmb	15 16 46.5	
	comp=Z,12nm,1.1s						
H19K	Roundabout Mou	21.61	45	P	P	15 16 42.8	-0.1
	baz=260,SNR=9.7						
Q17K	Contact Creek	21.71	65	P	P	15 16 44.2	0.0
	baz=279						
J19K	Poorman	21.73	49		P	15 16 42.1	-2.1
J19K	Poorman	21.73	49	P	P	15 16 44.0	-0.2
	baz=264,SNR=9.7						
E19K	Redstone River	21.76	40	IAmb	IAmb	15 16 48.7	
	comp=Z,12nm,1.2s						
E19K	Redstone River	21.76	40	P	P	15 16 44.3	-0.2
	baz=254						
D19K	Kuna River	21.77	37	IAmb	IAmb	15 16 45.8	
	comp=Z,12nm,1.2s						
D19K	Kuna River	21.77	37	P	P	15 16 44.1	-0.6
	baz=250						
O18K	Koktuh Hills	21.88	61	P	P	15 16 45.4	-0.5
	baz=275						
P18K	Big Mountain,	21.91	62	P	P	15 16 46.5	+0.3
	baz=276						
L19K	White Mountain	21.97	54	P	P	15 16 46.5	-0.3
	baz=270						
Q18K	Katmai Hardscr	22.11	64	P	P	15 16 48.1	-0.3
	baz=278						
N19K	Bonanza Creek	22.17	58	P	P	15 16 45.9	-3.3
N19K	Bonanza Creek	22.17	58	P	P	15 16 48.3	-0.8
	baz=273						
M19K	Big River Lodg	22.19	55	P	P	15 16 48.6	-0.6
	baz=271						
F20K	Avaraart Lake	22.22	41	P	P	15 16 49.0	-0.4
	baz=257,SNR=5.7						
H20K	Anotleneega Mo	22.24	46	P	P	15 16 49.2	-0.5
	baz=261,SNR=6.3						
I20K	Naaghedeneel	22.32	47	P	P	15 16 50.7	+0.2
	baz=264						
D20K	Etivluk River	22.36	37	IAmb	IAmb	15 16 52.5	
	comp=Z,12nm,1.2s						
D20K	Etivluk River	22.36	37	P	P	15 16 50.3	-0.7
	baz=252						
E20K	Nigu River	22.37	38	P	P	15 16 50.4	-0.7
	baz=253						
K20K	Telida	22.37	51		P	15 16 51.1	0.0
K20K				IAmb	IAmb	15 16 53.8	
	comp=Z,12nm,1.3s						
K20K	Telida	22.37	51	P	P	15 16 51.0	-0.2
	baz=268						
J20K	Nowinta River	22.39	49		P	15 16 52.0	+0.6
J20K				IAmb	IAmb	15 17 03.2	
	comp=Z,11nm,0.8s						
J20K	Nowinta River	22.39	49	P	P	15 16 51.3	0.0
	baz=265,SNR=11						
L20K	Farewell, AK	22.43	54	P	P	15 16 52.1	+0.3
	baz=270						
B20K	Meade River	22.63	33	IAmb	IAmb	15 16 55.3	
	comp=Z,10nm,0.9s						
TIXI	Tiksi	22.69	331	LR	LR	15 25 12.9	
	comp=Z,60nm,19.4s,baz=180,slow=36						
TIXI	Tiksi	22.69	331	*i* P	P	15 16 52.9	-1.5
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
IMAR	Indian Mountai	22.78	44	P	P	15 16 55.8	+0.4
M20K	Styx River	22.78	55	P	P	15 16 55.6	0.0
	baz=272						
G21K	Allakaket	22.97	43	P	P	15 16 57.0	-0.4
	baz=260						
F21K	Alatna River	23.11	41	P	P	15 16 58.7	-0.1
	baz=259,SNR=7.7						
H21K	Melozitna Rive	23.12	45	IAmb	IAmb	15 17 01.8	
	comp=Z,12nm,1.1s						
H21K	Melozitna Rive	23.12	45	P	P	15 16 58.5	-0.4
	baz=263,SNR=19						
C21K	Knifeblade Rid	23.13	36	P	P	15 16 58.6	-0.3
	baz=253,SNR=5.3						
CHUM	Lake Minchumin	23.18	50	P	P	15 16 59.2	-0.3
	baz=268,SNR=6.8						
E21K	Killik River	23.21	38	P	P	15 16 59.0	-0.8
	baz=255						
PPLA	Purkeypile	23.21	53	P	P	15 16 59.2	-0.8
	baz=270						
CAST	Castle Rocks	23.27	51	IAmb	IAmb	15 17 03.1	
	comp=Z,6.8nm,0.9s						
CAST	Castle Rocks	23.27	51	P	P	15 17 00.2	-0.2
	baz=269,SNR=11						
B21K	Ikpikpuk River	23.33	35		P	15 17 00.4	-0.6
B21K				IAmb	IAmb	15 17 02.7	
	comp=Z,12nm,0.9s						
B21K	Ikpikpuk River	23.33	35	P	P	15 17 00.3	-0.6
	baz=252,SNR=8.2						
I21K	Tanana	23.41	47	P	P	15 17 01.4	-0.4
	baz=265						
KDAK	Kodiak Island	23.52	65	P	P	15 17 02.5	-0.4
	baz=282						
SKT	Skwentna	23.54	55	IAmb	IAmb	15 17 13.9	
	comp=Z,16nm,1.3s						
SKT	Skwentna	23.54	55	P	P	15 17 02.7	-0.3
	baz=273						
H22K	Ishtalitna Cre	23.73	45	P	P	15 17 04.0	-0.9
	baz=264,SNR=10						
BPAW	Bear Paw Mtn.	23.77	49	IAmb	IAmb	15 17 07.6	
	comp=Z,12nm,1.2s						
BPAW	Bear Paw Mtn.	23.77	49	P	P	15 17 05.5	+0.2
	baz=269,SNR=8.3						
D22K	Ayikyak River	23.78	37		P	15 17 02.7	-2.6
D22K				IAmb	IAmb	15 17 06.4	
	comp=Z,14nm,1.2s						
D22K	Ayikyak River	23.78	37	P	P	15 17 04.3	-1.0
	baz=256,SNR=5.9						
KTH	Kantishna Hill	23.79	51	IAmb	IAmb	15 17 08.2	
	comp=Z,12nm,1.2s						
G22K	Bettles	23.82	42	P	P	15 17 05.4	-0.3
	baz=262,SNR=8.5						
E22K	Anaktuvuk Pass	23.92	39	IAmb	IAmb	15 17 16.6	
	comp=Z,18nm,1.4s						
E22K	Anaktuvuk Pass	23.92	39	P	P	15 17 05.5	-1.2
	baz=259,SNR=7.7						
MLY	Manley	23.92	47	P	P	15 17 06.2	-0.5
	baz=267,SNR=9.0						
SUA	Susitna One	23.94	56	IAmb	IAmb	15 17 17.3	
	comp=Z,6.4nm,0.8s						
SUA	Susitna One	23.94	56	P	P	15 17 06.4	-0.6
	baz=275						
B22K	Teshekpuk Lake	23.95	34	P	P	15 17 06.5	-0.3
	baz=252						
TRF	Thorofare Moun	24.07	51	P	P	15 17 07.8	-0.5
	baz=271,SNR=18						
M22K	Willow	24.22	55	P	P	15 17 08.9	-0.5
	baz=275						
COLD	Coldfoot	24.37	42	P	P	15 17 10.3	-0.4
	baz=262,SNR=10						
G23K	Bananza Creek	24.37	43	P	P	15 17 10.2	-0.6
	baz=264						
RC01	Rabbit Creek A	24.46	57	P	P	15 17 11.3	-0.3
	baz=276						
H23K	Yukon River	24.48	45	P	P	15 17 11.7	-0.1
	baz=266,SNR=24						
D23K	Nanushuk River	24.50	38	P	P	15 17 11.8	-0.2
	baz=258						
I23K	Minto, Yukon-K	24.51	47	P	P	15 17 12.0	-0.1
	baz=268,SNR=20						
NEA2	Nenana	24.62	48	P	P	15 17 12.8	-0.2
	baz=269,SNR=17						
MCK	McKinley	24.68	50	P	P	15 17 13.2	-0.4
	baz=271						
E23K	Chandalar	24.72	40	IAmb	IAmb	15 17 16.1	
	comp=Z,11nm,0.9s						
E23K	Chandalar	24.72	40	P	P	15 17 13.4	-0.6
	baz=261,SNR=14						
RND	Reindeer	24.72	51	IAmb	IAmb	15 17 24.3	
	comp=Z,11nm,0.9s						
SEW	Seward	24.72	59	P	P	15 17 13.6	-0.4
	baz=279						
C23K	Itkillik River	24.73	36	IAmb	IAmb	15 17 15.8	
	comp=Z,11nm,1.1s						
C23K	Itkillik River	24.73	36	P	P	15 17 13.9	0.0
	baz=256						
TOLK	Toolik Lake Re	24.83	39	P	P	15 17 14.7	-0.3
	baz=260,SNR=7.9						
WAT1	Susitna Watana	24.88	53	P	P	15 17 15.1	-0.4
	baz=274						
KNK	Knik Glacier	25.04	56	P	P	15 17 16.6	-0.3
	baz=277						
E24K	Your Creek	25.14	40	P	P	15 17 17.0	-0.8
	baz=262,SNR=21						
H24K	Noodor Dome	25.16	45	P	P	15 17 17.3	-0.7
	baz=268						

PWL	Port Wells	25.17	57	P	P	15 17 17.2	-0.9
	baz=278,SNR=6.4						
D24K	Happy Valley	25.19	38	IAmb	IAmb	15 17 20.0	
	comp=Z,6.6nm,0.8s						
D24K	Happy Valley	25.19	38	P	P	15 17 17.5	-0.7
	baz=260						
WAT6	Susitna Watana	25.27	53	P	P	15 17 18.4	-0.7
	baz=275						
F24K	Squaw Lake	25.29	41	P	P	15 17 18.5	-0.6
	baz=264						
C24K	Franklin Bluff	25.35	36	P	P	15 17 19.0	-0.5
	baz=258						
G24K	Hadweenzic Riv	25.38	43	P	P	15 17 19.9	-0.1
	baz=266,SNR=19						
DHY	Denali Highway	25.40	52	IAmb	IAmb	15 17 32.1	
	comp=Z,10nm,1.0s						
DHY	Denali Highway	25.40	52	P	P	15 17 19.8	-0.5
	baz=274						
SCM	Sheep Creek Mo	25.53	55	P	P	15 17 21.6	+0.2
	baz=277						
HDA	Harding Lake	25.54	49	IAmb	IAmb	15 17 30.4	
	comp=Z,4.4nm,0.8s						
HDA	Harding Lake	25.54	49	P	P	15 17 21.0	-0.3
	baz=272						
ILAR	Eielson Array	25.56	48	P	P	15 17 20.9	-0.7
ILAR	Eielson Array	25.56	48	P	P	15 17 21.3	-0.3
	comp=Z,7.6nm,0.9s,baz=272,slow=8.7,SNR=65						
	comp=Z,7.6nm,0.9s						
GLI	Glacier Island	25.77	57	P	P	15 17 23.4	0.0
	baz=279						
MJA0	Matsu Arr-Jizo	25.83	236	eP	P	15 17 26.8	+2.5
MJA0				pmax	pmax		
	comp=Z,11nm,1.4s						
MJAR	Matsushiro Arr	25.85	236	P	P	15 17 26.2	+1.8
	comp=Z,2.0nm,0.7s,baz=28,slow=8.1,SNR=4.6						
MJAR				LR	LR	15 28 00.9	
	comp=Z,31nm,18.0s,baz=203,slow=37						
	comp=Z,2.0nm,0.7s						
G25K	Bearman Lake	25.93	43	P	P	15 17 25.0	+0.1
	baz=267						
H25L	Birch Creek	26.02	44	P	P	15 17 25.7	0.0
	baz=269						
M24K	Tolsona, Glenn	26.04	54	P	P	15 17 25.9	-0.2
	baz=277						
K24K	Donnelly Dome	26.07	50	IAmb	IAmb	15 18 07.8	
	comp=Z,6.7nm,0.7s						
K24K	Donnelly Dome	26.07	50	P	P	15 17 26.1	-0.2
	baz=274						
D25K	Kavik River	26.08	37	IAmb	IAmb	15 17 35.5	
	comp=Z,4.4nm,0.7s						
D25K	Kavik River	26.08	37	P	P	15 17 25.7	-0.6
	baz=262,SNR=8.1						
PRP	Porcupine Dome	26.13	46	IAmb	IAmb	15 17 28.1	
	comp=Z,11nm,0.9s						
PRP	Porcupine Dome	26.13	46	P	P	15 17 26.5	-0.4
	baz=270,SNR=19						
F25K	Christian Rive	26.16	41	P	P	15 17 26.1	-1.0
	baz=266,SNR=7.1						
J25K	Salcha River,	26.21	48	P	P	15 17 26.7	-0.9
	baz=272,SNR=5.2						
E25K	Arctic Village	26.23	40	P	P	15 17 27.1	-0.5
	baz=265						
KLU	Klutina	26.24	55	IAmb	IAmb	15 17 46.7	
	comp=Z,6.6nm,1.0s						
KLU	Klutina	26.24	55	P	P	15 17 27.5	-0.3
	baz=278						
FYU	Fort Yukon	26.27	44	IAmb	IAmb	15 17 29.5	
	comp=Z,12nm,1.0s						
PAX	Paxson	26.28	52	P	P	15 17 27.2	-0.9
	baz=276						
RIDG	Independent Ri	26.49	50	IAmb	IAmb	15 17 30.1	
	comp=Z,5.8nm,0.9s						
RIDG	Independent Ri	26.49	50	P	P	15 17 28.7	-1.4
	baz=275,SNR=5.6						
BMAR	Burnt Mountain	26.56	42		P	15 17 29.6	-1.0
F26K	Sheenjek River	26.74	41	P	P	15 17 31.1	-1.1
	baz=267						
G26K	Porcupine Rive	26.85	43	IAmb	IAmb	15 17 39.0	
	comp=Z,12nm,1.4s						
G26K	Porcupine Rive	26.85	43	P	P	15 17 33.1	0.0
	baz=269,SNR=8.9						
N25K	Chitina, Valde	26.85	55	P	P	15 17 32.7	-0.7
	baz=279						
SCRK	Sand Creek	26.85	50	IAmb	IAmb	15 17 33.5	
	comp=Z,6.1nm,1.0s						
SCRK	Sand Creek	26.85	50	P	P	15 17 32.2	-1.2
	baz=275,SNR=9.0						
BMRM	Bremner River	26.95	56	P	P	15 17 33.9	-0.3
	baz=280						
C27K	Jago River	27.05	37	IAmb	IAmb	15 17 36.5	
	comp=Z,7.9nm,1.0s						
C27K	Jago River	27.05	37	P	P	15 17 34.7	-0.3
	baz=264,SNR=7.7						
L26K	Log Cabin Wild	27.23	52	P	P	15 17 36.9	+0.2
	baz=277						
KAIM	Kayak Island	27.24	59	P	P	15 17 37.6	+0.9
	baz=282						
M26K	Nabesna, AK	27.48	53	P	P	15 17 39.8	+0.8
	baz=279						
K27K	Chicken	27.69	49	IAmb	IAmb	15 17 42.3	
	comp=Z,8.7nm,0.9s						
K27K	Chicken	27.69	49	P	P	15 17 40.4	-0.3
	baz=276						
G27K	Doyon Strip	27.69	43	P	P	15 17 41.2	+0.5
	baz=271						
CRQE	Cirque	27.72	56	P	P	15 17 41.4	+0.2
	baz=282						
E27K	Coleen River	27.72	40	P	P	15 17 41.0	0.0
	baz=269						
I27K	Kandik River	27.75	46	P	P	15 17 41.4	0.0
	baz=274						
H27K	Steamboat Moun	27.76	45	P	P	15 17 41.7	+0.3
	baz=273,SNR=6.3						
L27K	Beaver Creek,	27.92	51	P	P	15 17 43.3	+0.5
	baz=278,SNR=17						
BCAR	Beaver Creek A	27.93	51		P	15 17 43.2	+0.2
D27M	Malcolm River	27.99	38	P	P	15 17 43.7	+0.3
	baz=267						
M27K	Edge Creek, AK	28.00	53	IAmb	IAmb	15 17 58.6	
	comp=Z,4.7nm,0.8s						
M27K	Edge Creek, AK	28.00	53	P	P	15 17 44.1	+0.4
	baz=280						
F28M	Old Crow	28.37	42	IAmb	IAmb	15 17 48.4	
	comp=Z,6.4nm,1.1s						
F28M	Old Crow	28.37	42	P	P	15 17 47.1	+0.3
	baz=272,SNR=7.9						
MESA	MESA	28.39	57	P	P	15 17 47.3	0.0
	baz=284						
BVCY	Beaver Creek	28.46	53	P	P	15 17 47.7	0.0
	baz=280						
I28M	Miner Creek	28.46	46	IAmb	IAmb	15 17 48.9	
	comp=Z,4.7nm,1.1s						
I28M	Miner Creek	28.46	46	P	P	15 17 47.9	+0.1
	baz=276						
E28M	Babbage River	28.49	39	P	P	15 17 47.7	-0.1
	baz=270						
CTG	Chitna Glacier	28.52	56	P	P	15 17 48.6	+0.3
	baz=283						
YUK3	Moose Creek	28.76	54	P	P	15 17 50.5	-0.1
	baz=282						
DAWY	Dawson	28.86	49	P	P	15 17 51.5	+0.3
	baz=278						
H29M	Whitestone	29.04	44	P	P	15 17 53.0	+0.3
	baz=275						
E29M	Blow River	29.09	40	P	P	15 17 53.4	+0.2
	baz=272,SNR=5.9						
O28M	Mount Upton	29.11	56	P	P	15 17 53.8	+0.1
	baz=284						
G29M	Pine Creek	29.12	43	P	P	15 17 53.8	+0.3
	baz=274,SNR=8.6						
I29M	Ogilvie Camp,	29.15	46	P	P	15 17 53.9	+0.2
	baz=277						
YUK8	Steele Glacier	29.19	55	P	P	15 17 54.4	0.0
	baz=283						
PINM	Pinnacle	29.24	57	P	P	15 17 55.3	+0.7
	baz=285						
M29M	Somme Creek	29.55	52	IAmb	IAmb	15 18 08.6	
	comp=Z,3.7nm,0.8s						
M29M	Somme Creek	29.55	52	P	P	15 17 57.5	+0.1
	baz=282						
L29M	L29M	29.57	51	P	P	15 17 57.1	-0.4
	baz=281,SNR=11						
EPYK	Eagle Plains	29.69	44	P	P	15 17 58.3	-0.2
	baz=276						
YUK4	Talbot Arm	29.70	54	P	P	15 17 59.3	+0.4
	baz=284						
K29M	Barlow Dome	29.71	49	P	P	15 17 58.4	-0.4
	baz=280						
PNL	Peninsula	29.77	58	P	P	15 17 59.7	+0.4
	baz=286						
G30M	tAoh Zraii Nji	29.82	43	P	P	15 17 59.5	-0.2
	baz=276						
F30M	Barrier River	29.93	41	P	P	15 18 00.6	0.0
	baz=275						
I30M	Mount Dempster	29.97	46		P	15 18 01.1	-0.1
I30M				IAmb	IAmb	15 18 02.1	
	comp=Z,3.7nm,0.9s						
I30M	Mount Dempster	29.97	46	P	P	15 18 00.8	-0.4
	baz=279,SNR=7.2						
O29M	Mount Kennedy	30.00	56	P	P	15 18 01.6	+0.2
	baz=286						
J30M	Hart River	30.09	47	P	P	15 18 02.3	0.0
	baz=280						
M30M	Minto, Yukon	30.28	51	P	P	15 18 03.9	+0.1
	baz=283						
HYT	Haines Junctio	30.37	55	P	P	15 18 05.2	+0.5
	baz=285						
N30M	Aishikik Lake	30.40	54	P	P	15 18 05.0	+0.1
	baz=285						
KS19	Wonju Array Si	30.43	250	P	P	15 18 05.1	-0.3
KSRS	Korea Array	30.44	250	P	P	15 18 07.6	+2.3
	comp=Z,3.0nm,0.8s,baz=40,slow=8.1,SNR=16						
	comp=Z,3.0nm,0.8s						
KSAR	Wonju Array Be	30.47	250	P	P	15 18 05.4	-0.2
KSAR	Wonju Array Be	30.47	250	P	P	15 18 05.4	-0.2
G31M	Satah River	30.59	43	P	P	15 18 06.3	-0.1
	baz=278						
INK	Inuvik	30.72	40	P	P	15 18 06.4	-1.1
	baz=276						
H31M	Peel River	30.72	45	P	P	15 18 07.6	-0.1
	baz=279						
M31M	Drury Creek, Y	31.45	52	IAmb	IAmb	15 18 16.6	
	comp=Z,6.0nm,0.9s						
M31M	Drury Creek, Y	31.45	52	P	P	15 18 14.7	+0.6
	baz=285,SNR=8.5						
WHY	Whitehorse	31.65	55	P	P	15 18 16.3	+0.3
	baz=287						
S31K	Pelican	31.87	60	P	P	15 18 18.5	+0.8
	baz=291						
P32M	Atlin	32.54	56	P	P	15 18 23.9	+0.2
	baz=290						
SIT	Sitka	32.65	61	P	P	15 18 25.1	+0.6
	baz=293						
MMPY	Sheldon Lake,	32.74	50	IAmb	IAmb	15 18 36.7	
	comp=Z,4.8nm,0.9s						
MMPY	Sheldon Lake,	32.74	50	P	P	15 18 26.0	+0.5
	baz=287,SNR=5.9						
P33M	Teslin, Yukon	32.77	55	P	P	15 18 26.1	+0.4
	baz=289						
S32K	Killisnoo	32.87	60	P	P	15 18 26.8	+0.3
	baz=292						
Q32M	Nakina River	33.46	57	P	P	15 18 32.9	+0.9
	baz=292						
R33M	Jennings River	33.93	56	P	P	15 18 36.7	+0.8
	baz=292						
CRAG	Craig	34.42	63	P	P	15 18 41.2	+1.3
	baz=296						
TGTN	Hyland Airport	34.42	51	P	P	15 18 41.1	+1.0
	baz=290						
WTLY	Watson Lake, Y	34.69	54	P	P	15 18 43.8	+1.4
	baz=292						
DLBC	Dease Lake	34.74	57	P	P	15 18 43.9	+1.0
	baz=293						
H11N2	WAKE ISLAND Hy	35.17	176	T	T	15 57 13.7	
	baz=359,slow=76,SNR=249						
H11N3	WAKE ISLAND Hy	35.18	176	T	T	15 57 14.8	
	baz=359,slow=76,SNR=231						
H11N1	WAKE ISLAND Hy	35.18	177	T	T	15 57 18.1	
	baz=359,slow=76,SNR=263						
NRIK	Noril'sk	36.03	324	P	P	15 18 54.0	+0.3
	comp=Z,1.9nm,0.7s,baz=83,slow=8.1,SNR=2.3						
NRIK				LR	LR	15 34 02.2	
	comp=Z,58nm,20.5s,baz=74,slow=37						
	comp=Z,1.9nm,0.7s						
SONM	Songino Array	36.16	284	P	P	15 18 57.1	+1.9
	comp=Z,0.6nm,0.4s,baz=52,slow=9.3,SNR=2.4						
SONM				LR	LR	15 34 32.4	
	comp=Z,52nm,19.6s,baz=61,slow=38						
	comp=Z,0.6nm,0.4s						
LIRD	Liard River Hi	36.22	54	P	P	15 18 56.8	+1.4
	baz=294						
H11S1	WAKE ISLAND Hy	36.38	177	T	T	15 58 43.1	
	baz=359,slow=74						
BEAVL	Fort Liard	36.38	52	P	P	15 18 57.5	+0.7
	baz=294						
H11S3	WAKE ISLAND Hy	36.39	177	T	T	15 58 43.3	
	baz=359,slow=74						
H11S2	WAKE ISLAND Hy	36.39	177	T	T	15 58 44.9	
	baz=359						
TOAD	Toad River Com	36.86	55	P	P	15 19 02.8	+1.8
	baz=296						
HHC	Hu-ho-hao-te	37.40	270	eP	P	15 19 05.5	-0.4
HHC				pmax	pmax		
	comp=Z,14nm,0.6s						
HHC				pmax	pmax		
	comp=Z,84nm,5.8s						
EUNU	Eureka	39.49	15	IAmb	IAmb	15 19 24.3	
	comp=Z,6.7nm,0.9s						
YKA	Yellowknife Ar	39.94	46	P	P	15 19 27.0	+0.3
	comp=Z,1.4nm,0.8s,baz=300,slow=8.5,SNR=8.3						
	comp=Z,1.4nm,0.8s						
YKA	Yellowknife Ar	39.94	46	eP	P	15 19 27.5	+0.8
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ZALV	Zalesovo Beam	44.09	303	P	P	15 20 02.7	+2.0
	comp=Z,0.3nm,0.3s,baz=40,slow=7.2,SNR=1.4						
ZALV				LR	LR	15 39 47.7	
	comp=Z,37nm,18.1s,baz=55,slow=38						
	comp=Z,0.3nm,0.3s						
BLKN	Baker Lake	46.01	37		P	15 20 14.9	-0.8
ENH	Enshi	46.05	261	P	P	15 20 15.7	-0.8
WMQ	Urumqi	48.93	291	eP	P	15 20 39.5	+0.6
WMQ				pmax	pmax		
	comp=Z,32nm,0.8s						
KURK	Kurchatov	49.08	303	P	P	15 20 38.8	-1.0
KURK	Kurchatov	49.08	303	i P	P	15 20 39.3	-0.5
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURBB	Kurchatov Arra	49.18	303	P	P	15 20 40.3	-0.3
	comp=Z,1.7nm,0.8s,baz=55,slow=8.0,SNR=14						
	comp=Z,1.7nm,0.8s						
MK31	Makanchi Array	49.81	297	i P	P	15 20 44.6	-0.9
MKAR	Makanchi Array	49.81	297	P	P	15 20 44.7	-0.8
	comp=Z,0.9nm,0.8s,baz=63,slow=8.4,SNR=9.7						
MKAR				LR	LR	15 43 18.4	
	comp=Z,64nm,19.0s,baz=26,slow=38						
	comp=Z,0.9nm,0.8s						
MKAR	Makanchi Array	49.81	297	eP	P	15 20 45.0	-0.5
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BVAR	Borovoye Array	51.38	310	P	P	15 20 57.3	+0.1
	comp=Z,2.8nm,0.8s,baz=46,slow=6.2,SNR=11						
	comp=Z,2.8nm,0.8s						
BRVK	Borovoye	51.40	310	i P	P	15 20 57.2	-0.1
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
NVAR	Mina Array Bea	52.56	74	P	P	15 21 07.7	+1.3
	comp=Z,0.9nm,0.9s,baz=312,slow=4.9,SNR=4.0						
	comp=Z,0.9nm,0.9s						
PZH	PanZhiHua	53.33	265	P	P	15 21 13.5	+1.4
ARTI	Arti	53.98	319	d iP	P	15 21 16.8	+0.5
ARTI				S	S	15 28 52.6	+3.3
ARTI				SS	SKiKP	15 32 23.3	-2.2
ARTI				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PDAR	Pinedale Array	54.24	65	P	P	15 21 18.5	-0.3
	comp=Z,0.5nm,0.6s,baz=313,slow=7.9,SNR=7.7						
	comp=Z,0.5nm,0.6s						
KIRV	Kirov	55.52	325	i P	P	15 21 27.3	-0.1
ULM	Lac du Bonnet	55.55	50	P	P	15 21 28.5	+0.7
	comp=Z,2.1nm,0.7s,baz=310,slow=9.8,SNR=3.5						
	comp=Z,2.1nm,0.7s						
ULM	Lac du Bonnet	55.55	50	eP	P	15 21 28.7	+0.9
ULM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AAK	Ala-Archa	56.69	298	i P	P	15 21 36.2	-0.1
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KLMR	Klimovskoe	56.71	331	eP	P	15 21 33.3	-2.5
KLMR				e		15 22 29.2	
KLMR				pmax	pmax		
	comp=Z,12nm,1.2s						
KSH	Kashi	58.20	295	P	P	15 21 51.5	+4.6
KSH				pmax	pmax		
	comp=Z,5.0nm,1.4s						
ABKAR	Akbulak array	58.66	312		P	15 21 50.5	+0.7
FINES	FINESS Array B	59.49	338	P	P	15 21 55.0	-0.3
	comp=Z,4.2nm,0.9s,baz=28,slow=6.5,SNR=6.6						
	comp=Z,4.2nm,0.9s						
FINES	FINESS Array B	59.49	338	eP	P	15 21 55.1	-0.2
FINES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CMAR	Chiang Mai Arr	61.22	261	P	P	15 22 09.5	+1.7
	comp=Z,0.7nm,0.7s,baz=37,slow=5.8,SNR=4.5						
	comp=Z,0.7nm,0.7s						
OBN	Obninsk	62.40	329	⇑eP	P	15 22 15.3	+0.1
OBN				e		15 22 53.8	
OBN				e		15 24 34.2	
OBN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NB2	NORSAR Subarra	62.50	346	P	P	15 22 15.6	-0.2
	comp=Z,0.8nm,0.6s,baz=18,slow=6.9						
NOA	NORSAR Array B	62.50	346	P	P	15 22 15.8	-0.1
	comp=Z,1.8nm,0.8s,baz=16,slow=6.6,SNR=5.8						
	comp=Z,1.8nm,0.8s						
NOA	NORSAR Array B	62.50	346	eP	P	15 22 15.9	+0.1
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SCHQ	Schefferville	62.71	31	P	P	15 22 16.7	-0.6
	comp=Z,1.7nm,0.7s,baz=352,slow=7.1,SNR=4.4						
	comp=Z,1.7nm,0.7s						
HFS	Hagfors	63.00	344	P	P	15 22 18.1	-1.0
	comp=Z,1.0nm,0.6s,baz=46,slow=10,SNR=2.1						
	comp=Z,1.0nm,0.6s						
TXAR	Lajitas Array	67.41	71	P	P	15 22 48.7	+0.4
	comp=Z,1.0nm,0.7s,baz=323,slow=6.1,SNR=11						
	comp=Z,1.0nm,0.7s						
AKASG	Malin Array Be	68.40	331	P	P	15 22 53.6	-0.4
	comp=Z,2.4nm,0.8s,baz=31,slow=6.6,SNR=6.8						
	comp=Z,2.4nm,0.8s						
KIV	Kislovodsk	69.92	319	eP	P	15 23 03.0	-0.7
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KBZ	Khabaz	70.03	319	P	P	15 23 04.5	+0.3
	comp=Z,1.8nm,0.7s,baz=342,slow=6.4,SNR=3.9						
	comp=Z,1.8nm,0.7s						
KBZ	Khabaz	70.03	319	eP	P	15 23 05.0	+0.8
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CLL	Collm	71.56	342	eP	P	15 23 14.0	+0.6
STHS	Stebnicka Huta	71.63	336	eP	P	15 23 15.0	+1.1
STHS	Stebnicka Huta	71.63	336	eP	P	15 23 15.0	+1.1
LANS	Liptovska Anna	72.29	337	eP	P	15 23 20.0	+2.1
LANS	Liptovska Anna	72.29	337	eP	P	15 23 20.0	+2.1
MODS	Modra-Piesok	73.50	338	eP	P	15 23 26.0	+0.9
MODS	Modra-Piesok	73.50	338	eP	P	15 23 26.0	+0.9
GERES	GERESS Array B	73.78	341	P	P	15 23 27.2	+0.3
	comp=Z,0.6nm,0.4s,baz=20,slow=5.1,SNR=8.2						
	comp=Z,0.6nm,0.4s						
GERES	GERESS Array B	73.78	341	eP	P	15 23 27.7	+0.9
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CONA	Conrad Observa	74.23	339	i P	P	15 23 26.2	-3.2
	comp=Z,4.4nm,1.1s						
SOKA	Soboth	75.59	339	epP	P	15 23 34.5	-2.8
	comp=Z,2.9nm,1.1s						
MOTA	Moosalm	75.71	342	i P	P	15 23 34.3	-3.8
	comp=Z,2.8nm,1.2s						
SQTA	Sankt Quirin	75.81	342	epP	P	15 23 37.3	-1.3
	comp=Z,2.1nm,0.6s						
ABTA	Abfaltersbach	76.03	341	i pP	P	15 23 38.4	-1.3
	comp=Z,2.6nm,1.0s						
FETA	Feichten	76.09	342	i P	P	15 23 36.9	-3.3
	comp=Z,2.8nm,0.9s						
WRA	Warramunga Arr	78.96	209	P	P	15 23 57.4	+1.2
	comp=Z,0.4nm,0.8s,baz=21,slow=5.9,SNR=2.2						
	comp=Z,0.4nm,0.8s						
ASAR	Alice Springs	82.62	208	P	P	15 24 17.1	+1.4
	comp=Z,1.1nm,0.9s,baz=16,slow=5.8,SNR=6.2						
	comp=Z,1.1nm,0.9s						
ESDC	Sonseca Array	85.28	351	P	P	15 24 30.5	+1.1
	comp=Z,2.4nm,1.0s,baz=9.9,slow=4.7,SNR=12						
	comp=Z,2.4nm,1.0s						
QSPA	South Pole Qui	144.67	180	PKP	PKPab	15 31 27.1	+0.5
	comp=Z,2.5nm,0.9s,baz=359,slow=0.4,SNR=6.9						

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*IDC **28** 15:16:41.5±0.6,30°.75S×177°.55W,h0^{km},mb4.2/11, mbtmp4.1/11,MS3.8/4,Error ellipse: s-maj=21.4km s-min=17.5km az=97.0*

*NEIC **28** 15:16:44.1±1.4,30°.9S±0°.1×177°.5W±0°.2,h10^{km}±1^{km}, mb4.8/9,Error ellipse: s-maj=32.4km s-min=17.6km az=76.0*

ISC 28 15:16:42.7±0.5,**31°.00S**±0°.05×**177°.7W**±0°.1,**h10**^{km}**,n78,** σ1^{s}**61**/62,**mb4.4**/17,**4C-2D,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	1.74	352	P	Pn	15 17 12.8	-0.2
GLKZ				S	Sb	15 17 35.9	-0.8
RAO	Raoul Island	1.75	353		Pn	15 17 13.7	+0.5
RAO	Raoul Island	1.75	353	Pn	Pn	15 17 08.1	-5.0
	346nm,0.3s,baz=151,slow=19,SNR=7.6						
RAO				Sn	Sn	15 17 31.1	-4.5
	538nm,0.3s,baz=62,slow=21,SNR=6.5						
RIZ	Raoul Island	1.76	352	P	Pn	15 17 13.5	+0.3
RIZ				S	Sb	15 17 36.8	-0.4
WMGZ	Waiomatatini S	7.54	204	P	Pn	15 18 30.5	-2.1
WMGZ				S	Sn	15 19 58.4	+0.2
PKGZ	Pakihiroa	7.71	206	P	Pn	15 18 32.1	-2.9
PKGZ				S	Sn	15 19 59.7	-2.6
RUGZ	Raukumara Rang	7.95	208	P	Pn	15 18 35.8	-2.6
RUGZ				S	Sn	15 20 06.8	-1.7
TWGZ	Tauwhareparae	8.02	205	P	Pn	15 18 36.2	-3.0
TWGZ				S	Sn	15 20 07.0	-3.0
TKGZ	Te Karaka	8.29	205	P	Pn	15 18 40.6	-2.4
WCZ	Waipu Caves	8.30	231	P	Pn	15 18 52.3	+9.2
OPRZ	Ohinepanea	8.34	213	P	Pn	15 18 43.0	-0.6
URZ	Urewera	8.43	209	Pn	Pn	15 18 40.3	-4.6
	1.3nm,0.3s,baz=41,slow=18,SNR=9.9						
URZ				Sn	Sn	15 20 16.9	-3.2
	5.1nm,0.3s,baz=112,slow=18,SNR=12						
OUZ	Omahuta	8.46	238	P	Pn	15 18 53.0	+7.7
RIGZ	Rimuhau	8.56	205	P	Pn	15 18 43.1	-3.7
PRGZ	Paritu Road	8.71	204	P	Pn	15 18 44.0	-4.8
PRGZ				S	Sn	15 20 22.4	-4.7
MUGZ	Murupara	8.76	210	P	Pn	15 18 45.4	-4.0
MUGZ				S	Sn	15 20 23.8	-4.4
MUGZ	Murupara	8.76	210	P	Pn	15 18 45.8	-3.7
RTZ	Ruatahuna	8.79	209	Pn	Pn	15 18 48.9	-1.0
SNGZ	Shannon Statio	8.79	207	P	Pn	15 18 46.8	-3.0
SNGZ	Shannon Statio	8.79	207	P	Pn	15 18 48.0	-1.9
MHGZ	Mahia Peninsul	8.91	203	P	Pn	15 18 47.0	-4.5
BKZ	Black Stump Fm	9.45	209	Pn	Pn	15 18 57.3	-1.7
BKZ	Black Stump Fm	9.45	209	P	Pn	15 18 55.1	-3.9
BKZ				S	Sn	15 20 39.2	-6.2
CTZ	Chatham Island	12.74	177	P	Pn	15 19 42.2	-1.7
KHZ	Kahutara	13.40	209	Pn	Pn	15 19 52.9	+0.1
OXZ	Oxford	14.78	211		Pn	15 20 08.8	-3.0
RPZ	Rata Peaks	15.53	212	Pn	Pn	15 20 15.3	-6.4
	1.2nm,0.3s,baz=41,slow=19,SNR=6.2						
RPZ				Sn	Sn	15 22 56.0	-18
	0.5nm,0.3s,baz=61,slow=12,SNR=1.6						
RPZ				LR	LR	15 27 18.6	
	comp=Z,380nm,18.0s,baz=40,slow=40						
DZM	Mont Dzumac	16.76	298	LR	LR	15 26 19.6	
	comp=Z,548nm,18.0s,baz=164,slow=35						
RAR	Rarotonga	18.76	63	LR	LR	15 26 53.3	
	comp=Z,104nm,19.3s,baz=242,slow=33						
STKA	Stephens Creek	34.64	258	P	P	15 23 35.3	+3.1
	3.5nm,0.6s,baz=100,slow=13,SNR=7.1						
STKA				LR	LR	15 36 27.7	
	comp=Z,166nm,18.3s,baz=43,slow=34						
	3.5nm,0.6s						
AS31	Alice Springs	43.37	267		P	15 24 47.4	+1.8
ASAR	Alice Springs	43.38	267	P	P	15 24 46.5	+0.9
	1.4nm,0.4s,baz=111,slow=8.4,SNR=34						
ASAR				PcP	PcP	15 26 34.7	+0.5
	1.1nm,0.6s,baz=109,slow=3.7,SNR=3.2						
ASAR				ScP	ScP	15 30 27.3	+1.7
	2.3nm,1.0s,baz=105,slow=3.7,SNR=7.3						
	1.4nm,0.4s						
WR8	Warramunga Arr	44.27	273		P	15 24 54.3	+1.5
WR8				IAmb	IAmb	15 25 08.5	
	comp=Z,7.2nm,0.8s						
WRAB	Tennant Creek	44.41	273	P	P	15 24 55.1	+1.2
WRAB				IAmb	IAmb	15 25 10.5	
	comp=Z,7.3nm,0.9s						
WRA	Warramunga Arr	44.42	273		P	15 24 53.1	-0.9
WRA	Warramunga Arr	44.42	273	P	P	15 24 54.5	+0.6
	comp=Z,5.3nm,0.5s,baz=114,slow=8.1,SNR=80						

WRA				PcP	**PcP**	**15 26 38.3**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=115,slow=2.7,SNR=1.8						
WRA				ScP	**ScP**	**15 30 31.6**	**+1.7**
	comp=Z,1.3nm,0.9s,baz=124,slow=4.6,SNR=5.3						
	comp=Z,5.3nm,0.5s						
WB0	**Warramunga Arr**	**44.44**	**273**		**P**	**15 24 55.2**	**+1.1**
WB0				IAmb	IAmb	15 25 10.3	
	comp=Z,20nm,1.2s						
MTN	**Manton Dam**	**50.37**	**279**	P	**P**	**15 25 41.6**	**+1.3**
FITZ	**Fitzroy Crossi**	**52.66**	**270**	P	**P**	**15 25 58.0**	**+0.6**
	comp=Z,2.1nm,0.6s,baz=92,slow=15,SNR=15						
	comp=Z,2.1nm,0.6s						
QSPA	**South Pole Qui**	**59.12**	**180**	P	**P**	**15 26 43.9**	**+0.7**
QSPA	**South Pole Qui**	**59.12**	**180**	P	**P**	**15 26 45.2**	**+2.0**
	comp=Z,2.9nm,0.7s,baz=43,slow=2.0,SNR=24						
	comp=Z,2.9nm,0.7s						
SYO	**Syowa Base**	**76.60**	**193**	⇓*e*P	**P**	**15 28 34.0**	**+1.0**
SYO	**Syowa Base**	**76.60**	**193**	⇓*e*PcP	**PcP**	**15 28 44.8**	**+0.3**
TROLL	**Troll, Antarti**	**77.28**	**180**	⇑P	**P**	**15 28 37.8**	**+0.8**
	comp=Z,83nm,0.5s						
SNAA	**Sanae**	**77.55**	**178**	⇑P	**P**	**15 28 38.5**	**0.0**
	comp=Z,30nm,0.6s						
SNAA	**Sanae**	**77.55**	**178**	P	**P**	**15 28 38.8**	**+0.4**
SNAA				IAmb	IAmb	15 29 01.8	
	comp=Z,11nm,1.3s						
SNAA	**Sanae**	**77.55**	**178**	P	**P**	**15 28 38.8**	**+0.4**
	comp=Z,1.8nm,1.1s,baz=187,slow=16,SNR=2.8						
	comp=Z,1.8nm,1.1s						
VNA3	**Neumayer Olymp**	**77.69**	**176**	⇑P	**P**	**15 28 39.4**	**+0.2**
	comp=Z,7.2nm,0.7s						
VNA2	**Neumayer--Watz**	**78.13**	**177**	⇑P	**P**	**15 28 41.6**	**0.0**
	comp=Z,4.2nm,0.6s,baz=171,slow=5.3						
H03S2	**Juan Fernandez**	**79.89**	**123**	T	T	16 58 11.4	
	baz=238						
H03S1	**Juan Fernandez**	**79.90**	**123**	T	T	16 57 56.0	
	baz=238						
H03S3	**Juan Fernandez**	**79.91**	**123**	T	T	16 58 00.8	
	baz=238						
H03N3	**Juan Fernandez**	**80.08**	**123**	T	T	16 58 33.0	
	baz=241						
H03N2	**Juan Fernandez**	**80.09**	**123**	T	T	16 58 25.9	
	baz=241						
H03N1	**Juan Fernandez**	**80.10**	**123**	T	T	16 58 25.0	
	baz=241						
KSRS	**Korea Array**	**84.99**	**319**	P	**P**	**15 29 16.4**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=143,slow=4.0,SNR=1.6						
	comp=Z,0.2nm,0.3s						
PETK	**Petropavlovsk-**	**86.46**	**345**	P	**P**	**15 29 24.7**	**-0.5**
	comp=Z,1.6nm,0.6s,baz=159,slow=5.5,SNR=4.2						
	comp=Z,1.6nm,0.6s						
O02D	**Mt. Diablo Mer**	**87.17**	**39**	P	**P**	**15 29 30.4**	**+1.3**
O02D				IAmb	IAmb	15 29 32.5	
	comp=Z,11nm,1.2s						
NVAR	**Mina Array Bea**	**88.47**	**43**	P	**P**	**15 29 35.9**	**+0.4**
NVAR	**Mina Array Bea**	**88.47**	**43**	P	**P**	**15 29 36.6**	**+1.1**
	comp=Z,1.1nm,0.7s,baz=249,slow=5.6,SNR=5.6						
	comp=Z,1.1nm,0.7s						
TXAR	**Lajitas Array**	**92.46**	**57**	P	**P**	**15 29 52.0**	**-2.2**
	comp=Z,0.2nm,0.6s,baz=237,slow=4.0,SNR=1.6						
	comp=Z,0.2nm,0.6s						
PDAR	**Pinedale Array**	**96.36**	**43**	P	**P**	**15 30 11.8**	**-0.2**
	comp=Z,0.1nm,0.4s,baz=243,slow=4.5,SNR=2.1						
	comp=Z,0.1nm,0.4s						
MKAR	**Makanchi Array**	**118.38**	**310**	PKP	**PKPdf**	**15 35 30.3**	**0.0**
	comp=Z,0.2nm,0.4s,baz=103,slow=1.0,SNR=4.3						
KURBB	**Kurchatov Arra**	**121.71**	**313**	PKP	**PKPdf**	**15 35 36.6**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=91,slow=1.8,SNR=5.8						
BVAR	**Borovoye Array**	**127.04**	**315**	PKP	**PKPdf**	**15 35 47.4**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=94,slow=4.3,SNR=4.0						
H10N3	**ASCENSION HYDR**	**138.15**	**155**	T	T	18 11 49.6	
	baz=203						
H10N1	**ASCENSION HYDR**	**138.15**	**155**	T	T	18 11 57.4	
	baz=203						
H10N2	**ASCENSION HYDR**	**138.16**	**155**	T	T	18 11 57.7	
	baz=203						
KBZ	**Khabaz**	**145.69**	**303**	PKPbc	**PKPdf**	**15 36 22.6**	**+1.4**
	comp=Z,2.9nm,0.8s,baz=63,slow=4.5,SNR=4.8						
FINES	**FINESS Array B**	**145.80**	**340**	PKPbc	**PKPdf**	**15 36 21.3**	**+0.5**
	comp=Z,4.7nm,0.5s,baz=41,slow=2.8,SNR=32						
NB2	**NORSAR Subarra**	**149.38**	**352**	PKP	**PKPbc**	**15 36 31.7**	**+0.4**
	comp=Z,4.7nm,1.0s,baz=11,slow=4.0						
NOA	**NORSAR Array B**	**149.38**	**352**	PKPbc	**PKPbc**	**15 36 30.9**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=17,slow=2.6,SNR=4.3						
HFS	**Hagfors**	**149.88**	**349**	PKPbc	**PKPbc**	**15 36 32.7**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=45,slow=2.2,SNR=4.3						
AKASG	**Malin Array Be**	**151.95**	**322**	PKPbc	**PKPbc**	**15 36 37.6**	**0.0**
	comp=Z,2.1nm,0.7s,baz=54,slow=3.2,SNR=7.1						
MMAI	**Mount Meron Ar**	**151.95**	**283**	PKPbc	**PKPbc**	**15 36 39.9**	**+1.5**
	comp=Z,1.8nm,0.5s,baz=96,slow=4.3,SNR=8.4						
BRTR	**Keskin Array B**	**153.14**	**298**	PKPbc	**PKPbc**	**15 36 41.3**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=116,slow=3.4,SNR=5.6						
GERES	**GERESS Array B**	**160.20**	**337**	PKPab	**PKPab**	**15 37 20.8**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=47,slow=5.8,SNR=1.8						
TORD	**Torodi Ar. Bea**	**162.23**	**178**	PKPab	**PKPab**	**15 37 31.4**	**-0.4**
	comp=Z,1.3nm,0.3s,baz=186,slow=4.7,SNR=1.6						

WEL 28 15:18:41.0±0.9**, 41°S**±4°×**17°6E**±°**, h26**^{km}±6^{km}**, M1.4**/8**, ML1.6**/9**, MLv1.4**/8**, Error ellipse: s-maj=5.5km s-min=3.9km az=142.8, confirmed, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRWZ	**Pori Road**	**0.09**	**60**	P	Pb	15 18 47.3	+1.6
PRWZ				S	Sb	15 18 51.3	+2.5
TIWZ	**Tintock**	**0.18**	**177**	P	Pn	15 18 47.7	-0.4
TIWZ				S	Sb	15 18 53.0	+2.6
POWZ	**Post Office Ro**	**0.22**	**339**	P	Pn	15 18 48.3	-0.3
MRZ	**Mangatainoka R**	**0.23**	**254**	P	Pn	15 18 48.7	-0.1
MRZ				S	Sb	15 18 53.9	+2.5
BFZ	**Birch Farm**	**0.30**	**106**	P	Pn	15 18 49.0	-0.7
BFZ				S	Sn	15 18 54.6	-0.6
DVHZ	**Dannevirke**	**0.37**	**37**	P	Pb	15 18 50.0	+0.8
CPWZ	**Castlepoint**	**0.40**	**141**	P	Pn	15 18 51.2	+0.1
HOWZ	**Holdsworth Sta**	**0.40**	**222**	P	Pn	15 18 51.1	-0.1
HOWZ				S	Sn	15 18 57.8	-0.1
TMWZ	**Te Maipa**	**0.51**	**178**	P	Pn	15 18 52.6	0.0
TMWZ				S	Sn	15 19 01.4	+0.8
TSZ	**Takapari Road**	**0.54**	**7**	P	Pn	15 18 52.6	-0.5
OGWZ	**Otaki Gorge**	**0.58**	**247**	P	Pn	15 18 53.8	+0.3
OGWZ				S	Sn	15 19 02.4	+0.3
WAZ	**Wanganui**	**1.08**	**321**	P	Pb	15 19 02.5	+1.4
WAZ				S	Sb	15 19 18.2	+3.5
MCHZ	**McNeill Hill**	**1.31**	**29**	P	Pn	15 18 58.2	-5.5
OTVZ	**Oturere**	**1.44**	**354**	P	Pn	15 19 02.3	-3.3
ETVZ	**East Tongariro**	**1.47**	**355**	P	Pn	15 19 04.0	-1.9
TMVZ	**Te Maari**	**1.49**	**355**	P	Pn	15 19 03.9	-2.3
TKNZ	**Takaka Hill**	**2.25**	**258**	P	Pn	15 19 13.3	-3.3
CNGZ	**Carnagh Statio**	**2.78**	**41**	P	Pn	15 19 22.5	-1.3

IDC 28 15:24:10.0±5.5**, 6°.87S**×**129°.33E, h146**^{km}±55^{km}**, mb2.7**/1**, mbtmp3.9**/5**, Error ellipse: s-maj=46.0km s-min=20.6km az=51.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.51**	**239**	P	Pn	15 25 43.4	-0.1
	13nm,0.3s,baz=49,slow=20,SNR=2.5						
BATI				S	Sn	15 26 57.4	+0.7
	baz=0.0,slow=18						
FITZ	**Fitzroy Crossi**	**11.72**	**198**	P	Pn	15 26 53.5	+0.7
	1.0nm,0.5s,baz=15,slow=11,SNR=1.1						
FITZ				S	Sn	15 29 01.1	-1.3
	2.2nm,0.3s,baz=49,slow=20,SNR=7.0						
WRA	**Warramunga Arr**	**13.87**	**160**	P	Pn	15 27 20.7	+0.1
	0.6nm,0.3s,baz=340,slow=11,SNR=10						
WRA				S	Sn	15 29 55.8	+1.5
	0.4nm,0.3s,baz=332,slow=24,SNR=5.1						
ASAR	**Alice Springs**	**17.27**	**166**	P	P	15 28 01.3	-0.4
	12nm,0.6s,baz=344,slow=10,SNR=74						
ASAR				S	S	15 31 15.0	+0.7
	0.2nm,0.7s,baz=356,slow=28,SNR=1.2						
MKAR	**Makanchi Array**	**67.75**	**327**	P	P	15 34 52.0	0.0
	0.1nm,0.4s,baz=130,slow=6.2,SNR=1.5						
	0.1nm,0.4s						

NOU ***28*** *15:31:05.0, 37°.07S×176°.80E, h288^{km}, MLv3.6/19, North Island, New Zealand*

WEL ***28*** *15:31:06.5±1.1, 37°S±10°×17°7E±°, h272^{km}±10^{km}, M3.0/29, MLv3.0/29, Error ellipse: s-maj=13.0km s-min=11.8km az=1.3, confirmed*

ISC 28 15:31:01.8±2.5**, 36°.92S**±0°.08×**176°.88E**±0°.08**, h309**^{km}±14^{km}**, n117, σ1^{s}58**/135**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MYRZ	**Mayor Island**	**0.62**	**235**	P	**Pn**	**15 31 42.0**	**+0.3**
TGRZ	**Tauranga**	**0.94**	**211**	P	**Pn**	**15 31 44.1**	**+1.3**
KUZ	**Kuaotunu**	**0.95**	**280**	P	**Pn**	**15 31 43.0**	**+0.2**
KUZ	**Kuaotunu**	**0.95**	**280**	P	**Pn**	**15 31 43.4**	**+0.6**
OPRZ	**Ohinepanea**	**0.95**	**196**	P	**Pn**	**15 31 43.9**	**+1.1**
MARZ	**Manawahe**	**1.07**	**189**	P	**Pn**	**15 31 45.1**	**+1.7**
HAZ	**Te Kaha**	**1.10**	**139**	P	**Pn**	**15 31 44.0**	**+0.6**
HAZ				S	**S**	**15 32 14.1**	**-2.6**
KMRZ	**Kaimai**	**1.19**	**219**	P	**Pn**	**15 31 45.4**	**+1.4**
EDRZ	**Edgecumbe**	**1.19**	**185**	P	**Pn**	**15 31 46.0**	**+2.0**
KARZ	**Kaharoa**	**1.21**	**205**	P	**Pn**	**15 31 45.6**	**+1.5**
RUGZ	**Raukumara Rang**	**1.22**	**149**	P	**Pn**	**15 31 44.5**	**+0.2**
OMRZ	**Omania**	**1.25**	**199**	P	**Pn**	**15 31 45.8**	**+1.5**
MKRZ	**Makatiti**	**1.26**	**195**	P	**Pn**	**15 31 46.6**	**+2.2**
MXZ	**Matakaoa Point**	**1.31**	**120**	P	**Pn**	**15 31 45.5**	**+0.9**
MXZ	**Matakaoa Point**	**1.31**	**120**	S	**S**	**15 32 17.2**	**-1.5**
MXZ	**Matakaoa Point**	**1.31**	**120**	P	**Pn**	**15 31 45.5**	**+0.9**
MXZ				S	**S**	**15 32 16.8**	**-1.9**
PKGZ	**Pakihiroa**	**1.34**	**135**	P	**Pn**	**15 31 46.3**	**+1.5**
TARZ	**Mount Tarawera**	**1.34**	**193**	P	**Pn**	**15 31 46.6**	**+1.7**
URZ	**Urewera**	**1.35**	**172**	P	**Pn**	**15 31 45.4**	**+0.6**
URZ	**Urewera**	**1.35**	**172**	P	**Pn**	**15 31 45.3**	**+0.6**
URZ				S	**S**	**15 32 17.3**	**-1.8**
TOZ	**Tahuroa Road**	**1.36**	**233**	P	**Pn**	**15 31 46.5**	**+1.6**
MKAZ	**Moumakai**	**1.39**	**262**	P	**Pn**	**15 31 46.3**	**+1.2**
HLRZ	**Highlands Stat**	**1.39**	**197**	P	**Pn**	**15 31 47.3**	**+2.2**
WIAZ	**Waiheke Island**	**1.41**	**275**	P	**Pn**	**15 31 46.2**	**+1.0**
RRRZ	**Republican Roa**	**1.44**	**191**	P	**Pn**	**15 31 47.1**	**+1.7**
HSRZ	**Hossack Road**	**1.47**	**200**	P	**Pn**	**15 31 47.4**	**+1.9**
MWZ	**Matawai**	**1.50**	**160**	P	**Pn**	**15 31 46.8**	**+1.0**
MWZ				S	**S**	**15 32 20.3**	**-0.5**
WMGZ	**Waiomatatini S**	**1.52**	**127**	P	**Pn**	**15 31 47.4**	**+1.6**
WMGZ				S	**S**	**15 32 19.9**	**-1.0**
TWGZ	**Tauwhareparae**	**1.53**	**145**	P	**Pn**	**15 31 47.9**	**+1.9**
TWGZ				S	**S**	**15 32 21.1**	**-0.1**
HRRZ	**Handcock Road**	**1.54**	**198**	P	**Pn**	**15 31 47.5**	**+1.5**
MUGZ	**Murupara**	**1.55**	**183**	P	**Pn**	**15 31 46.9**	**+0.9**
MUGZ				S	**S**	**15 32 19.9**	**-1.5**
ETAZ	**East Tamaki Re**	**1.56**	**268**	P	**Pn**	**15 31 47.5**	**+1.3**
PUZ	**Puketiti**	**1.59**	**137**	P	**Pn**	**15 31 47.7**	**+1.4**
PUZ				S	**S**	**15 32 20.0**	**-1.8**
MBAZ	**Motutapu North**	**1.60**	**275**	P	**Pn**	**15 31 47.7**	**+1.3**
PRRZ	**Plateau Road**	**1.62**	**194**	P	**Pn**	**15 31 47.8**	**+1.3**
RAGZ	**Rawiri**	**1.63**	**165**	P	**Pn**	**15 31 48.1**	**+1.4**
ALRZ	**Allen Road**	**1.69**	**194**	P	**Pn**	**15 31 48.5**	**+1.5**
RTZ	**Ruatahuna**	**1.69**	**177**	P	**Pn**	**15 31 48.2**	**+1.1**
WPRZ	**Whakapapatarin**	**1.69**	**199**	P	**Pn**	**15 31 48.6**	**+1.6**
TKGZ	**Te Karaka**	**1.70**	**153**	P	**Pn**	**15 31 48.8**	**+1.8**
TLZ	**Tolley Road**	**1.76**	**217**	P	**Pn**	**15 31 49.6**	**+2.0**
KUTZ	**Kaahu Road**	**1.77**	**208**	P	**Pn**	**15 31 49.4**	**+1.8**
AWAZ	**Awhitu Peninsu**	**1.80**	**265**	P	**Pn**	**15 31 49.0**	**+1.2**
CNGZ	**Carnagh Statio**	**1.88**	**146**	P	**Pn**	**15 31 50.6**	**+2.3**
SNGZ	**Shannon Statio**	**1.89**	**169**	P	**Pn**	**15 31 50.2**	**+1.7**
SNGZ				S	**S**	**15 32 25.3**	**-0.4**
RIGZ	**Rimuhau**	**1.91**	**159**	P	**Pn**	**15 31 50.4**	**+1.8**
MTHZ	**Maungataniwha**	**1.93**	**181**	P	**Pn**	**15 31 49.9**	**+1.2**
MRHZ	**Matea Rd**	**1.94**	**191**	P	**Pn**	**15 31 49.9**	**+1.1**
RAHZ	**Arahi**	**2.00**	**175**	P	**Pn**	**15 31 51.1**	**+1.8**
RAHZ				S	**S**	**15 32 26.9**	**-0.3**
WATZ	**Wairara**	**2.00**	**207**	P	**Pn**	**15 31 51.2**	**+1.9**
RATZ	**Rangitukua**	**2.13**	**204**	P	**Pn**	**15 31 51.9**	**+1.6**
PRGZ	**Paritu Road**	**2.15**	**159**	P	**Pn**	**15 31 52.2**	**+1.8**
WHHZ	**Waihua**	**2.17**	**173**	P	**Pn**	**15 31 52.5**	**+1.9**
NMHZ	**Naumai**	**2.17**	**181**	P	**Pn**	**15 31 52.8**	**+2.1**
KNZ	**Kokohu**	**2.19**	**164**	P	**Pn**	**15 31 52.3**	**+1.6**
RITZ	**Rihia Road**	**2.20**	**201**	P	**Pn**	**15 31 52.8**	**+1.9**
KATZ	**Kakaramea**	**2.25**	**204**	P	**Pn**	**15 31 53.4**	**+2.0**
HIZ	**Hauiti**	**2.26**	**225**	P	**Pn**	**15 31 53.6**	**+2.3**
HIZ	**Hauiti**	**2.26**	**225**	P	**Pn**	**15 31 53.6**	**+2.3**
BKZ	**Black Stump Fm**	**2.26**	**188**	P	**Pn**	**15 31 52.3**	**+0.9**
BKZ	**Black Stump Fm**	**2.26**	**188**	S	**S**	**15 32 29.5**	**-1.5**
BKZ	**Black Stump Fm**	**2.26**	**188**	P	**Pn**	**15 31 52.4**	**+1.0**
WCZ	**Waipu Caves**	**2.27**	**295**	P	**Pn**	**15 31 52.3**	**+0.8**
ARHZ	**Aropaoanui**	**2.34**	**178**	P	**Pn**	**15 31 53.8**	**+1.8**
MHGZ	**Mahia Peninsul**	**2.37**	**160**	P	**Pn**	**15 31 54.3**	**+2.1**
NTVZ	**North Tongarir**	**2.37**	**203**	P	**Pn**	**15 31 53.9**	**+1.4**
TMVZ	**Te Maari**	**2.38**	**203**	P	**Pn**	**15 31 53.7**	**+1.3**
KRVZ	**Karewarewa**	**2.38**	**204**	P	**Pn**	**15 31 53.8**	**+1.3**
ETVZ	**East Tongariro**	**2.39**	**202**	P	**Pn**	**15 31 54.0**	**+1.4**
WTVZ	**West Tongariro**	**2.41**	**205**	P	**Pn**	**15 31 54.2**	**+1.4**
NNVZ	**North Ngauruho**	**2.42**	**204**	P	**Pn**	**15 31 54.5**	**+1.6**
TWVZ	**Taurewa**	**2.43**	**208**	P	**Pn**	**15 31 54.3**	**+1.4**
OTVZ	**Oturere**	**2.43**	**203**	P	**Pn**	**15 31 54.5**	**+1.5**
SNVZ	**South Ngauruho**	**2.46**	**203**	P	**Pn**	**15 31 54.6**	**+1.4**
NGZ	**Ngauruhoe**	**2.46**	**204**	P	**Pn**	**15 31 54.9**	**+1.6**
COVZ	**Chateau Observ**	**2.51**	**204**	P	**Pn**	**15 31 55.0**	**+1.4**
MCHZ	**McNeill Hill**	**2.52**	**183**	P	**Pn**	**15 31 55.4**	**+1.8**
KWHZ	**Kaweka Forest**	**2.52**	**188**	P	**Pn**	**15 31 55.1**	**+1.4**
TUVZ	**Tukino**	**2.53**	**202**	P	**Pn**	**15 31 55.2**	**+1.4**
FWVZ	**Far West T-bar**	**2.55**	**204**	P	**Pn**	**15 31 55.7**	**+1.5**
MAVZ	**Matarangi**	**2.56**	**204**	P	**Pn**	**15 31 55.9**	**+1.6**
WHVZ	**Whangaehu Hut**	**2.57**	**203**	P	**Pn**	**15 31 55.6**	**+1.4**
TRVZ	**Turoa**	**2.59**	**203**	P	**Pn**	**15 31 56.0**	**+1.4**
WNVZ	**Wahianoa**	**2.60**	**202**	P	**Pn**	**15 31 55.7**	**+1.2**
MOVZ	**Moawhango**	**2.63**	**199**	P	**Pn**	**15 31 55.7**	**+1.0**
PKVZ	**Pokaka**	**2.65**	**207**	P	**Pn**	**15 31 56.2**	**+1.4**
MTVZ	**Mangateitei**	**2.70**	**204**	P	**Pn**	**15 31 56.6**	**+1.3**
CKHZ	**Cape Kidnapper**	**2.73**	**177**	P	**Pn**	**15 31 57.3**	**+1.8**
KRHZ	**Kereru**	**2.75**	**188**	P	**Pn**	**15 31 56.7**	**+1.1**
VRZ	**Vera Road**	**2.76**	**217**	P	**Pn**	**15 31 58.1**	**+2.3**
KAHZ	**Kahuranaki**	**2.87**	**180**	P	**Pn**	**15 31 58.4**	**+1.6**
PNHZ	**Pukenui**	**3.03**	**190**	P	**Pn**	**15 31 59.3**	**+0.9**
WPHZ	**Waipukurau**	**3.15**	**186**	P	**Pn**	**15 32 00.2**	**+0.6**
WPHZ				S	**S**	**15 32 45.0**	**-0.9**
OUZ	**Omahuta**	**3.16**	**302**	P	**Pn**	**15 32 00.3**	**+0.6**
OUZ	**Omahuta**	**3.16**	**302**	P	**Pn**	**15 32 00.4**	**+0.7**
WAZ	**Wanganui**	**3.19**	**207**	P	**Pn**	**15 32 01.4**	**+1.4**
WAZ				S	**S**	**15 32 45.3**	**-1.3**
LREZ	**Lake Rotokare**	**3.20**	**217**	P	**Pn**	**15 32 02.3**	**+2.3**
NEZ	**North Egmont**	**3.21**	**222**	P	**Pn**	**15 32 03.3**	**+3.0**
TSZ	**Takapari Road**	**3.21**	**193**	P	**Pn**	**15 32 00.9**	**+0.8**
TSZ				S	**S**	**15 32 45.6**	**-1.3**
PKE	**Pukeiti**	**3.22**	**224**	P	**Pn**	**15 32 03.0**	**+2.8**
KHEZ	**Kahui Hut**	**3.27**	**223**	P	**Pn**	**15 32 03.6**	**+2.8**
KHEZ	**Kahui Hut**	**3.27**	**223**	P	**Pn**	**15 32 03.6**	**+2.8**
PRHZ	**Porangahau**	**3.34**	**183**	P	**Pn**	**15 32 02.9**	**+1.5**
PRHZ				S	**S**	**15 32 48.0**	**-1.3**
DVHZ	**Dannevirke**	**3.42**	**189**	P	**Pn**	**15 32 02.8**	**+0.6**
DVHZ				S	**S**	**15 32 48.4**	**-2.2**
NMEZ	**Namu Road**	**3.43**	**223**	P	**Pn**	**15 32 05.3**	**+3.0**
OHWZ	**Ohakea**	**3.50**	**200**	P	**Pn**	**15 32 04.7**	**+1.7**
OHWZ				S	**S**	**15 32 52.7**	**+0.6**
POWZ	**Post Office Ro**	**3.57**	**194**	P	**Pn**	**15 32 04.9**	**+1.1**
POWZ				S	**S**	**15 32 53.0**	**-0.5**
PRWZ	**Pori Road**	**3.69**	**191**	P	**Pn**	**15 32 06.7**	**+1.6**
PRWZ				S	**S**	**15 32 54.1**	**-1.7**
BFZ	**Birch Farm**	**3.79**	**187**	P	**Pn**	**15 32 06.7**	**+0.7**
BFZ	**Birch Farm**	**3.79**	**187**	P	**S**	**15 32 56.4**	**-1.2**
SNZO	**South Karori**	**4.70**	**200**	P	**Pn**	**15 32 16.3**	**+0.3**
SNZO	**South Karori**	**4.70**	**200**	P	**S**	**15 33 12.8**	**-2.9**
QRZ	**Quartz Range**	**5.17**	**220**	P	**Pn**	**15 32 21.7**	**+0.2**
KHZ	**Kahutara**	**6.06**	**204**	P	**Pn**	**15 32 32.2**	**+0.3**
KHZ	**Kahutara**	**6.06**	**204**	S	**S**	**15 33 41.6**	**-3.0**
ODZ	**Otahua Downs**	**9.38**	**208**	P	**Pn**	**15 33 13.6**	**+1.5**
JCZ	**Jackson Bay**	**9.43**	**218**	P	**Pn**	**15 33 14.0**	**+1.2**

TIR ***28*** *15:33:43.0, 40°.43N×20°.76E, h1^{km}±1^{km}, Md2.9/7, Ml2.7/7*

ATH ***28*** *15:33:44.2, 40°.48N×20°.77E, h7^{km}±2^{km}, ML2.3/7, Manual Solution by A.Agalos First location: 2019/06/28 15:34:55, This location: 2019/06/28 15:52:10 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

SKO ***28*** *15:33:46.2, 40°.48N×20°.84E, h12^{km}, ML2.3*

BEO ***28*** *15:33:46.6±0.3, 40°.48N×20°.96E, h15^{km}±3^{km}, ML2.1/6*

ISC 28 15:33:44.7±1.0**, 40°.48N**±0°.02×**20°.81E**±0°.02**, h4**^{km}±9^{km}**, n41, σ0^{s}99**/64**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	**0.14**	**353**	Pg	**Pg**	**15 33 46.7**	**-0.9**
KBN				Sg	**Sg**	**15 33 50.1**	**+0.6**
KBN				AML	AML	15 33 51.2	
	14nm,0.5s						
NEST	**Nestorio**	**0.19**	**110**	Pg	**Pg**	**15 33 47.9**	**-0.6**
NEST				Sg	**Sg**	**15 33 51.8**	**+0.7**
NEST				AML	AML	15 33 56.5	
	4.5nm,0.3s						
NEST				AMd		15 34 41.2	
NEST	**Nestorio**	**0.19**	**110**	P	**Pg**	**15 33 49.6**	**+1.1**
NEST				S	**Sg**	**15 33 52.3**	**+1.3**
PENT	**Pentalofos**	**0.38**	**139**	P	**Pg**	**15 33 52.4**	**+0.4**
PENT				S	**Sg**	**15 33 57.7**	**+0.7**
FNA	**Florina**	**0.53**	**55**	Pg	**Pb**	**15 33 55.4**	**-1.2**
FNA				Sg	**Sb**	**15 34 03.4**	**-1.1**
FNA				AML	AML	15 34 04.2	
	1.8nm,0.4s						
FNA				AMd		15 34 50.8	
FNA	**Florina**	**0.53**	**55**	*i* Pg	**Pb**	**15 33 55.4**	**-1.2**
FNA				*i* Sg	**Sb**	**15 34 04.0**	**-0.5**
FNA	**Florina**	**0.53**	**55**	*e*Pg	**Pg**	**15 33 55.2**	**+0.4**
FNA				*e*Sg	**Sb**	**15 34 03.7**	**-0.8**
FNA	**Florina**	**0.53**	**55**	P	**Pg**	**15 33 55.0**	**+0.2**
FNA				S	**Sb**	**15 34 02.5**	**-2.1**
OHR	**Ohrid**	**0.63**	**359**	*i* Pg	**Pb**	**15 33 57.7**	**-0.7**
OHR				*i* Sg	**Sb**	**15 34 07.4**	**-0.1**
OHR				*e*Lg	Lg	15 34 08.0	
	comp=E,158nm,0.5s						
OHR				*e*Lg	Lg	15 34 09.0	
	comp=N,66nm,0.4s						
KPRO	**Kipourio**	**0.68**	**141**	P	**Pg**	**15 33 57.7**	**0.0**
KPRO				S	**Sg**	**15 34 07.4**	**+1.0**
KZN	**Kozani**	**0.75**	**103**	P	**Pb**	**15 33 59.9**	**-0.6**
KZN				S	**Sb**	**15 34 10.9**	**-0.2**
JAN	**Janina**	**0.82**	**178**	P	**Pg**	**15 34 00.1**	**-0.4**
SRN	**Sarande**	**0.86**	**226**	Pg	**Pg**	**15 33 59.7**	**-1.6**
SRN				Sg	**Sg**	**15 34 12.3**	**-0.2**
SRN				AML	AML	15 34 17.0	
	comp=N,0.2nm,0.6s						
SRN				AMd		15 35 04.4	
IGT	**Igoumenitsa**	**1.02**	**201**	Pg	**Pg**	**15 34 02.4**	**-1.8**
IGT				Sg	**Sg**	**15 34 16.9**	**-0.5**
IGT				AMd		15 35 23.4	
IGT	**Igoumenitsa**	**1.02**	**201**	*i* Pg	**Pg**	**15 34 04.7**	**+0.5**
IGT	**Igoumenitsa**	**1.02**	**201**	*e*Pg	**Pg**	**15 34 04.3**	**+0.1**
IGT				*e*Sg	**Sn**	**15 34 21.7**	**+1.2**
IGT	**Igoumenitsa**	**1.02**	**201**	P	**Pg**	**15 34 03.7**	**-0.5**
TIR	**Tirane**	**1.12**	**321**	Pn	**Pg**	**15 34 05.8**	**-0.4**
TIR				Sn	**Sn**	**15 34 23.2**	**0.0**
TIR				AML	AML	15 34 29.8	
	comp=N,0.2nm,0.4s						
TIR				AMd		15 34 51.2	
TIR	**Tirane**	**1.12**	**321**	*i* Pg	**Pn**	**15 34 07.4**	**+0.1**
TIR				*i* Sg	**Sn**	**15 34 25.1**	**+1.9**
TIR	**Tirane**	**1.12**	**321**	*e*Pg	**Pb**	**15 34 07.0**	**+0.3**
TIR				*e*Sg	**Sn**	**15 34 24.9**	**+1.7**
TETR	**Tetrakomo, Epi**	**1.19**	**162**	P	**Pg**	**15 34 08.1**	**+0.6**
THL	**Klokotos Trika**	**1.30**	**134**	P	**Pg**	**15 34 08.6**	**-1.0**
THL				S	**Sg**	**15 34 26.7**	**+0.2**
TYRN	**Tyrnavos**	**1.33**	**125**	P	**Pn**	**15 34 09.8**	**-0.3**
SKO	**Skopje**	**1.56**	**17**	*i* Pn	**Pg**	**15 34 14.3**	**-0.4**
SKO				*i* Sn	**Sg**	**15 34 36.0**	**+1.1**
PUK	**Puka**	**1.71**	**336**	Pn	**Pb**	**15 34 16.7**	**0.0**
PUK				Sn	**Sg**	**15 34 42.0**	**+2.4**
PUK				AML	AML	15 34 49.8	
	comp=N,0.4nm,0.6s						
PUK				AMd		15 35 24.1	
KNT	**Kendrikon**	**1.72**	**66**	*i* Pn	**Pb**	**15 34 16.1**	**-0.9**
KNT				*i* Sn	**Sg**	**15 34 42.5**	**+2.4**
KNT	**Kendrikon**	**1.72**	**66**	P	**Pn**	**15 34 15.4**	**-0.1**
HORT	**Hortiatis**	**1.75**	**85**	P	**Pn**	**15 34 15.6**	**-0.3**
MAKR	**Makrakomi, Fth**	**1.79**	**145**	P	**Pn**	**15 34 17.2**	**+0.8**
SCTE	**Santa Cesarea**	**1.84**	**258**	Pn	**Pn**	**15 34 17.8**	**+0.8**
SCTE				Sn	**Sb**	**15 34 43.0**	**+0.8**
SCTE				AML	AML	15 34 50.7	
	comp=N,0.4nm,1.1s						
SCTE				AMd		15 35 27.1	
SCTE	**Santa Cesarea**	**1.84**	**258**	P	**Pn**	**15 34 16.8**	**-0.2**
PEHC	**Pehcevo**	**2.04**	**50**	*i* Pn	Pn	15 34 14.5	-5.4
PEHC				*i* Sn	Sn	15 34 35.9	-10
DRME	**Dracevica, Mon**	**2.10**	**325**	*e*Pn	**Pb**	**15 34 22.3**	**-1.0**
BOSS	**Bosilegrad**	**2.37**	**31**	*e*Pn	**Pn**	**15 34 23.2**	**-1.2**
BARS	**Barje**	**2.45**	**18**	*i* Pn	**Pn**	**15 34 25.9**	**+0.3**
BARS	**Barje**	**2.45**	**18**	*e*Pn	**Pn**	**15 34 25.5**	**0.0**
BARS				*e*Sn	**Sn**	**15 34 55.1**	**-0.8**
MMB	**Musomishta**	**2.46**	**63**	*i* Pn	**Pn**	**15 34 25.2**	**-0.5**
MMB				*i* Sn	**Sn**	**15 34 57.4**	**+1.1**
KOME	**Kolasin**	**2.56**	**338**	*e*Pn	**Pb**	**15 34 29.7**	**-1.5**
SELS	**Selova**	**2.75**	**5**	*e*Pn	**Pn**	**15 34 30.9**	**+1.3**
VTS	**Vitosha**	**2.81**	**40**	*e*Pn	**Pn**	**15 34 29.4**	**-1.1**
ZAPS	**Zavoj**	**3.10**	**25**	*e*Pn	**Pn**	**15 34 34.2**	**-0.3**

IDC 28 15:35:39.1±2.4**, 5°.78S**×**129°.81E, h0**^{km}**, mb3.4**/1**, mbtmp3.6**/4**, ML3.6**/3**, Error ellipse: s-maj=97.1km s-min=29.9km az=76.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.90**	**198**	Pn	Pn	15 38 46.2	+2.2
	0.3nm,0.3s,baz=14,slow=12,SNR=21						
FITZ				Sn	Sn	15 40 56.7	-12
	0.1nm,0.3s,baz=0.0,slow=20,SNR=2.6						
	0.9nm,0.3s						
WRA	**Warramunga Arr**	**14.75**	**163**	Pn	Pn	15 39 10.1	+0.8
	0.2nm,0.3s,baz=343,slow=13,SNR=23						
WRA				Sn	Sn	15 41 44.3	-9.3
	0.1nm,0.3s,baz=346,slow=23,SNR=4.8						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**18.22**	**168**	P	Pn	15 39 51.7	-1.9
	0.3nm,0.3s,baz=346,slow=11,SNR=48						
	1.0nm,0.4s						
MKAR	**Makanchi Array**	**67.11**	**327**	P	P	15 46 34.7	+0.1
	0.1nm,0.3s,baz=130,slow=8.2,SNR=2.5						
	0.1nm,0.3s						

TIR ***28*** *15:35:50.3, 40°.62N×20°.91E, h39^{km}, Md2.6/4, Ml2.5/5*

SKO ***28*** *15:35:58.4, 40°.62N×20°.94E, h26^{km}, ML1.5*

ISC 28 15:35:53.7±0.9**, 40°.52N**±0°.04×**20°.89E**±0°.04**, h9**^{km}**, n9, σ2^{s}59**/14**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	**0.13**	**324**	Pg	**Pg**	**15 35 58.0**	**+1.4**
KBN				Sg	**Sg**	**15 36 01.3**	**+2.5**
KBN				AML	AML	15 36 05.0	
	1.6nm,0.3s						
NEST	**Nestorio**	**0.16**	**130**	Pg	**Pg**	**15 35 58.1**	**+0.9**
NEST				Sg	**Sg**	**15 36 04.1**	**+4.5**
NEST				AML	AML	15 36 04.6	
	2.1nm,0.2s						
NEST				AMd		15 36 28.6	
FNA	**Florina**	**0.46**	**54**	Pn	**Pg**	**15 36 00.2**	**-2.4**
FNA				Sn	**Sb**	**15 36 07.2**	**-3.7**
FNA				AML	AML	15 36 15.6	
	1.9nm,0.3s						
FNA				AMd		15 36 44.9	
FNA	**Florina**	**0.46**	**54**	*i* Pg	**Pn**	**15 36 06.3**	**-0.2**
FNA				*i* Sg	**Sb**	**15 36 15.0**	**+4.1**
OHR	**Ohrid**	**0.60**	**354**	*i* Pg	**Pn**	**15 36 08.4**	**0.0**
OHR				*i* Sg	**Sn**	**15 36 18.2**	**0.0**
OHR				*e*Lg	Lg	15 36 18.9	
	comp=E,29nm,0.5s						
OHR				*e*Lg	Lg	15 36 21.6	
	comp=N,14nm,0.3s						
SRN	**Sarande**	**0.93**	**227**	Pn	**Pg**	**15 36 10.2**	**-1.4**
SRN				Sn	**Sb**	**15 36 25.3**	**+0.8**
SRN				AML	AML	15 36 34.0	
	comp=N,0.1nm,0.4s						
SRN				AMd		15 36 57.4	
IGT	**Igoumenitsa**	**1.07**	**204**	Pn	**Pb**	**15 36 12.0**	**-2.4**
IGT				Sn	**Sb**	**15 36 28.8**	**+0.2**
IGT				AMd		15 37 22.7	
IGT	**Igoumenitsa**	**1.07**	**204**	*i* Pg	Pn	15 36 20.0	+5.1
SCTE	**Santa Cesarea**	**1.90**	**257**	AML	AML	15 37 29.2	
	comp=N,0.2nm,1.4s						

SKO ***28*** *15:39:33.9, 40°.38N×20°.76E, h0^{km}, ML2.7*

THE ***28*** *15:39:33.2, 40°.5N±0°.9×2°1E±°, h3^{km}±3^{km}, M2.8/5, MLh2.8/5*

TIR ***28*** *15:39:33.3, 40°.45N×20°.79E, h5^{km}, Md2.9/7, Ml3.0/7*

ISC 28 15:39:33.8±1.0**, 40°.46N**±0°.02×**20°.78E**±0°.03**, h6**^{km}±9^{km}**, n19, σ0^{s}84**/33**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC

KBN	Korca	0.17	1	Pg	Pg	15 39 36.5	-0.7
KBN				Sg	Sg	15 39 39.6	+0.1
KBN				AML	AML	15 39 40.3	
	23nm,0.4s						
KBN	Korca	0.17	1	P	Pg	15 39 36.8	-0.4
KBN				S	Sg	15 39 39.0	-0.5
NEST	Nestorio	0.21	102	Pg	Pg	15 39 37.9	0.0
NEST				Sg	Sg	15 39 41.3	+0.6
NEST				AML	AML	15 39 45.4	
	12nm,0.3s						
NEST				AMd		15 40 24.8	
NEST	Nestorio	0.21	102	P	Pg	15 39 38.3	+0.3
NEST				S	Sg	15 39 41.6	+0.8
PENT	Pentalofos	0.38	134	P	Pg	15 39 40.8	-0.3
PENT				S	Sg	15 39 46.8	+0.6
FNA	Florina	0.56	54	Pg	Pg	15 39 44.6	0.0
FNA				Sg	Sb	15 39 53.3	-0.9
FNA				AML	AML	15 39 55.8	
	5.9nm,0.2s						
FNA				AMd		15 40 27.4	
FNA	Florina	0.56	54	P	Pg	15 39 44.2	-0.4
FNA				S	Sg	15 39 52.8	+1.0
FNA	Florina	0.56	54	i Pg	Pg	15 39 44.4	-0.2
FNA				i Sg	Sb	15 39 53.6	-0.7
OHR	Ohrid	0.65	1	i Pg	Pb	15 39 46.9	-0.8
OHR				i Sg	Sb	15 39 57.3	+0.2
OHR				eLg	Lg	15 39 58.0	
	comp=N,150nm,0.5s						
OHR				eLg	Lg	15 39 58.4	
	comp=E,287nm,0.5s						
KPRO	Kipourio	0.67	138	P	Pg	15 39 46.1	-0.6
KPRO				S	Sg	15 39 56.2	+0.8
KZN	Kozani	0.77	101	P	Pg	15 39 48.3	-0.3
SRN	Sarande	0.83	226	Pg	Pb	15 39 50.1	-0.6
SRN				Sg	Sb	15 40 02.7	+0.7
SRN				AML	AML	15 40 04.8	
	comp=E,0.6nm,0.5s						
SRN				AMd		15 40 55.2	
IGT	Igoumenitsa	0.99	201	Pg	Pb	15 39 52.6	-0.7
IGT				Sg	Sn	15 40 07.3	-1.2
IGT				AMd		15 41 06.6	
TIR	Tirane	1.13	322	Pn	Pn	15 39 55.9	-0.3
TIR				Sn	Sn	15 40 12.6	+0.6
TIR				AML	AML	15 40 20.1	
	comp=E,0.4nm,0.5s						
TIR				AMd		15 40 52.4	
TIR	Tirane	1.13	322	i Pn	Pn	15 39 57.3	+1.1
LKD2	Lefkada island	1.67	183	Pn	Pg	15 40 05.2	-0.6
LKD2				AMd		15 41 27.3	
PUK	Puka	1.72	337	Pn	Pg	15 40 06.1	-0.7
PUK				Sn	Sg	15 40 31.3	+2.2
PUK				AML	AML	15 40 36.4	
	comp=E,0.6nm,0.8s						
PUK				AMd		15 41 09.4	
KNT	Kendrikon	1.75	66	i Pn	Pb	15 40 06.7	+0.3
SCTE	Santa Cesarea	1.81	258	Sn	Sg	15 40 33.9	+1.8
SCTE				AML	AML	15 40 39.2	
	comp=E,0.5nm,0.5s						

*PRU **28** 15:45:33.4, 49°.81N×18°.46E, h0^{km}*

IPEC 28 15:45:31.7±0.3**, 49°.85N×18°.54E, h1**^{km}**, ML1.2**/4**, Error ellipse: s-maj=2.1km s-min=1.7km az=69.0, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.25	268	ePG	Pg	15 45 36.9	+0.4
OKC				eSG	Sg	15 45 40.5	+0.7
	comp=Z,27nm,0.4s						
MORC	Moravsky Berou	0.65	264	ePg	Pg	15 45 44.0	-0.1
	baz=83						
MORC				eSg	Sg	15 45 52.1	-0.4
	5.8nm,0.3s,baz=83						
MORC	Moravsky Berou	0.65	264	ePG	Pg	15 45 44.1	0.0
MORC				eSG	Sg	15 45 52.2	-0.3
LANS	Liptovska Anna	0.92	139	ePG	Pg	15 45 49.9	+0.5
JAVC	Velka Javorina	1.14	210	ePg	Pg	15 45 53.7	+0.2
	baz=30						
JAVC	Velka Javorina	1.14	210	ePG	Pg	15 45 53.8	+0.3
VYHS	Vyhne	1.37	172	ePG	Pg	15 45 57.6	-0.3
VYHS				eSG	Sn	15 46 16.4	-0.3
VRAC	Vranov	1.37	248	ePg	Pg	15 45 57.1	-0.9
	baz=66						
VRAC				eSg	Sg	15 46 14.7	-1.1
	3.3nm,0.2s,baz=66						
DPC	Dobruska-Polom	1.51	290	ePG	Pn	15 45 59.5	-0.5
DPC				eSG	Sg	15 46 19.7	-0.5
	comp=Z,2.4nm,0.4s						
KRUC	Moravsky	1.60	241	ePg	Pn	15 46 00.8	-0.3
	baz=60						
KRUC				eSg	Sn	15 46 21.7	-0.8
	1.7nm,0.1s,baz=60						
KRUC	Moravsky	1.60	241	ePG	Pn	15 46 00.9	-0.2
KRUC				eSG	Sn	15 46 21.8	-0.7

*UCR **28** 15:48:32.8±1.1, 10°.17N×84°.20W, h84^{km}±2^{km}, MW3.8*

*CATAC **28** 15:48:34.0±0.3, 10°N±2°×8°4W±°, h62^{km}±4^{km}, M3.5/12, MLv3.5/12, Error ellipse: s-maj=5.2km s-min=3.0km az=54.1, confirmed*

ISC 28 15:48:33.2±1.3**, 10°.15N**±0°.04×**84°.19W**±0°.03**, h84**^{km}±6^{km}**, n113, σ0^{s}.73**/123**, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VPS5	V. Poas	0.06	314	eP	Pn	15 48 45.5	-0.1
VPS5				eS	Sn	15 48 54.7	+0.1
VPS8	V Poas	0.07	301	eP	Pn	15 48 45.5	-0.1
VBV1	V. Barva	0.09	110	eP	Pn	15 48 45.2	-0.3
VBV1				eS	Sn	15 48 54.5	-0.1
UELA	Alajuela	0.13	191	eP	Pn	15 48 44.8	-0.7
UELA				eS	Sn	15 48 54.4	-0.1
TCS1	Tacares	0.15	228	eP	Pn	15 48 44.9	-0.6
TCS1				eS	Sn	15 48 54.9	+0.4
TCS1	Tacares	0.15	228	P	Pn	15 48 44.4	-1.0
HEME	Heredia, Merce	0.16	162	eP	Pn	15 48 45.2	-0.3
HEME				eS	Sn	15 48 54.8	+0.2
HDC	Heredia	0.16	154	eP	Pn	15 48 45.1	-0.5
HDC				eS	Sn	15 48 54.7	+0.1
BELE	Belen	0.17	181	eP	Pn	15 48 45.0	-0.5
BELE				eS	Sn	15 48 54.2	-0.3
SARCI	Sarchi	0.17	251	eP	Pn	15 48 45.2	-0.3
SARCI				eS	Sn	15 48 54.9	+0.3
DOMI	Santo Domingo	0.19	150	eP	Pn	15 48 45.6	0.0
VPL1	V. Platanar	0.21	302	eP	Pn	15 48 45.5	-0.3
SANTA	Santa Ana	0.21	180	eP	Pn	15 48 44.9	-0.8
CENT	San Jose	0.24	154	eP	Pn	15 48 46.5	+0.7
SJS	Escuela Geolog	0.24	148	eP	Sn	15 48 56.1	+0.9
SJS3	Mercedes San J	0.24	148	eP	Sn	15 48 56.3	+1.1
LUJA	Lujan	0.24	153	eP	Pn	15 48 45.5	-0.4
CORON	Coronado	0.25	134	eP	Pn	15 48 46.0	+0.1
VPL2	V. Platanar	0.25	310	eP	Pn	15 48 45.8	-0.1
VPL2				eS	Sn	15 48 56.0	+0.7
ATEO	Atenas	0.26	229	eP	Pn	15 48 45.2	-0.6
PALD	Palmares	0.26	250	eP	Pn	15 48 45.1	-0.8
CVIMO	Finca Echandi	0.27	117	eP	Pn	15 48 45.8	-0.2
AMPA	Desamparados	0.28	154	eP	Pn	15 48 45.6	-0.4
RAMO	San Ramon	0.28	258	eP	Pn	15 48 45.5	-0.5
PURI	Puriscal	0.32	203	eP	Pn	15 48 45.7	-0.5
TRB2	Turrubares	0.35	228	eP	Pn	15 48 45.7	-0.6
ACOS	Acosta	0.35	177	eP	Pn	15 48 46.0	-0.4
VICA	Volcano Irazu	0.37	115	eP	Pn	15 48 46.8	-0.1
OROT	Orotina	0.41	235	eP	Pn	15 48 46.1	-0.6
RAFA	San Farael, Vo	0.41	117	eP	Pn	15 48 47.3	+0.2
VTLA	Turrialba Volc	0.43	109	eP	Pn	15 48 47.5	+0.3
CVTQ	Turrialba Volc	0.43	109	eP	Pn	15 48 47.5	+0.3
VTR0	Volcan Turrial	0.44	107	eP	Pn	15 48 47.9	+0.6
LCR2	La Lucha 2	0.44	156	eP	Pn	15 48 46.5	-0.6
LCR2	La Lucha 2	0.44	156	P	Pn	15 48 46.0	-1.1
LCR2	La Lucha 2	0.44	156	S	Sn	15 48 57.3	-0.1
REPA	Paraso	0.44	135	eP	Pn	15 48 46.9	-0.2
CVTV	Tajo	0.45	108	eP	Pn	15 48 47.6	+0.3
ABE2	San Pablo	0.46	164	eP	Pn	15 48 46.9	-0.4
VTCV	VTCV, Calle Va	0.48	110	eP	Pn	15 48 47.2	-0.2
SOCE	Pocosol	0.49	299	eP	Pn	15 48 47.2	-0.1
SOCE	Pocosol	0.49	299	P	Pn	15 48 47.1	-0.1
SOCE	Pocosol	0.49	299	S	Sn	15 48 58.0	+0.3
VINA	Juan Vinas	0.50	120	eP	Pn	15 48 47.5	0.0
ARZA	Esparza	0.50	252	eP	Pn	15 48 46.9	-0.4
PITB	Pirrs, San	0.51	162	eP	Pn	15 48 47.3	-0.3
RAZU	San Marcos de	0.51	162	eP	Pn	15 48 47.3	-0.3
PISJ	San Jernim	0.51	173	eP	Pn	15 48 47.0	-0.7
PICV	PH. Pirrs	0.52	181	eP	Pn	15 48 47.0	-0.6
RESJ	San Isidro (Tu	0.55	102	eP	Pn	15 48 48.2	+0.4
TURIB	Turrialba	0.55	116	eP	Pn	15 48 47.7	-0.1
PAR1A	Puntarenas Pro	0.55	187	eP	Pn	15 48 47.6	-0.2
PIEC	Cerro El Cedra	0.57	157	eP	Pn	15 48 47.7	-0.6
ROBF	Roble, Puntare	0.57	253	eP	Pn	15 48 47.3	-0.6
FORC	Fortuna	0.57	304	eP	Pn	15 48 47.8	-0.2
VACR	Volcan Arenal	0.58	304	eP	Pn	15 48 47.9	-0.2
RVLA	Villa Bonita	0.59	93	eP	Pn	15 48 48.4	+0.3
EGUB	Earth Gu¡pi	0.59	83	eP	Pn	15 48 48.4	+0.3
TRT2	Tortugero	0.60	47	eP	Pn	15 48 48.1	-0.1
TRT2	Tortugero	0.60	47	P	Pn	15 48 48.3	0.0
TRT2	Tortugero	0.60	47	S	Sn	15 48 59.7	+0.3
COVE	Coope Vega, Sa	0.61	340	P	Pn	15 48 48.0	-0.3
COVE	Coope Vega, Sa	0.61	340	S	Sn	15 48 59.2	-0.4
ARE1	Arenal 1	0.61	301	eP	Pn	15 48 48.3	-0.1
VARE2	V. Arenal	0.61	301	eP	Pn	15 48 48.3	-0.1
CEDE	Laguna Cedeo	0.61	304	eP	Pn	15 48 48.5	+0.1
MTEVE	Monteverde	0.66	285	eP	Pn	15 48 49.3	+0.4
TABAC	Tabacon	0.67	302	eP	Pn	15 48 49.0	0.0
BITO	Garabito Jaco	0.68	219	eP	Pn	15 48 49.2	+0.2
JTS	Las Juntas de	0.77	281	eP	Pn	15 48 49.6	-0.3
CHIK	Chiripa	0.77	293	eP	Pn	15 48 48.6	-1.4
JUNT	Juntas	0.77	280	eP	Pn	15 48 50.0	0.0
TILA	Tilaran	0.84	293	eP	Pn	15 48 50.6	-0.1
QUEB	Quebradon, Cot	0.84	304	eP	Pn	15 48 50.2	-0.5
INVE	Universidad In	0.92	291	eP	Pn	15 48 51.6	0.0
TIMP	Tierras Morena	0.93	298	eP	Pn	15 48 51.6	-0.1
TENO	El Achiote	0.96	306	eP	Pn	15 48 52.0	0.0
CUI	Cuipilapa	1.09	298	eP	Pn	15 48 53.5	-0.1
COLC	Colonia	1.13	297	eP	Pn	15 48 53.9	-0.2
HORNC	Hornillas	1.13	300	eP	Pn	15 48 52.2	-1.9
EDPE	Pejibaye, P	1.15	148	eP	Pn	15 48 54.5	+0.1
MESS	Mesas	1.16	301	eP	Pn	15 48 53.9	-0.5
PLVR	Palo Verde	1.17	280	eP	Pn	15 48 55.8	+1.2
OCHAL	Ojochal	1.17	153	P	Pn	15 48 54.5	-0.1
OCHAL	Ojochal	1.17	153	S	Sn	15 49 11.1	+0.5
CMARA	Lajas Hojancha	1.23	264	eP	Pn	15 48 55.2	-0.1
CMARA	Lajas Hojancha	1.23	264	P	Pn	15 48 55.2	-0.1
CMARA	Lajas Hojancha	1.23	264	S	Sn	15 49 12.3	+0.4
NICO	Nicoya	1.24	270	eP	Pn	15 48 55.7	+0.3
DRK0	Durika	1.28	133	eP	Pn	15 48 55.5	-0.5
DRK0	Durika	1.28	133	P	Pn	15 48 55.0	-1.1
DRK0	Durika	1.28	133	S	Sn	15 49 12.7	-0.5
VRLE	La Escondida,	1.32	299	eP	Pn	15 48 56.6	0.0
INDI	Punta indio, G	1.33	258	P	Pn	15 48 55.7	-0.7
INDI	Punta indio, G	1.33	258	S	Sn	15 49 13.4	-0.6
BUAI	Buenos Aires	1.34	303	eP	Pn	15 48 56.6	-0.1
LAPC	Finca la Perla	1.37	297	eP	Pn	15 48 56.6	-0.5
SACU	Santa Cruz	1.38	275	eP	Pn	15 48 57.7	+0.6
ALIBA	Liberia Airpor	1.41	289	eP	Pn	15 48 57.8	+0.2
CARN	Rivas	1.67	308	P	Pn	15 49 03.1	+2.1
CARN				S	Sn	15 49 22.0	+0.1
LCRUZ	La Cruz	1.70	303	eP	Pn	15 49 01.5	+0.3
ALCO	Alturas Coton,	1.79	132	eP	Pn	15 48 58.0	-4.5
PTJ1	Puerto Jimnez	1.82	151	S	Sn	15 49 28.8	+3.4
CDITO	Canoas	2.03	140	P	Pn	15 49 05.6	0.0
ESPN	Las Esperanzas	2.04	357	P	Pn	15 49 05.4	-0.4
ESPN	Las Esperanzas	2.04	357	S	Sn	15 49 30.6	0.0
ACON	Acoyapa	2.06	332	eP	Pn	15 49 05.7	-0.3
ACON	Acoyapa	2.06	332	P	Pn	15 49 05.7	-0.3
ACON	Acoyapa	2.06	332	S	Sn	15 49 30.9	0.0
CLLRA	Cordillera,	2.08	132	eP	Pn	15 49 06.6	+0.2
PBNVO	Pueblo Nuevo,	2.33	122	eP	Pn	15 49 09.7	+0.1
RBALA	Bur	2.37	122	eP	Pn	15 49 09.6	-0.5
BOAB	BOACO BROADBAN	2.71	328	P	Pn	15 49 13.8	-1.0

*BGR **28** 15:50:50.9, 19°.38N×144°.66E, h33^{km}*

*JMA **28** 15:51:27.9±0.5, 20°N±2°×14°5E±°, h5^{km}, MD6.7/41, MV6.9/41, FAR FIELD*

JMA Felt I J1 at FAR FIELD .

*BJI **28** 15:51:29.4, 19°.85N×144°.45E, h430^{km}, mB6.3/77, mb6.3/98*

*NEIC **28** 15:51:31.2, 19°.91N×144°.40E, h430^{km}*

*NEIC **28** 15:51:31.3±2.4, 19°.85N±0°.07×144°.35E±0°.08, h410^{km}±1^{km}, mb6.0/696, Mwb6.4/92, Mww6.4/53, Error ellipse: s-maj=13.3km s-min=10.9km az=138.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-2.39; $M_{\theta\theta}$1.66; $M_{\phi\phi}$0.73; $M_{r\theta}$-3.01; $M_{\theta\phi}$-3.49; $M_{\phi r}$-1.42; Fault plane solution: $M_0$5.27000×10^{18} NP1:ϕ_s95.10000°, δ69.04000°, λ-135.27000°. NP2:ϕ_s345.58000°, δ48.91000°, λ-28.34000°. Principal axes: T 5.0116, Plg12.0000°, Azm216.0000°; N 0.4878, Plg42.0000°, Azm115.0000°; P -5.4994, Plg46.0000°, Azm319.0000°;*

*NEIC **28** 15:51:31.2, 19°.91N×144°.40E, h430^{km}, Moment Tensor Solution. Duration: 8^{s}.3 Moment tensor: Scale 10^{18}Nm; M_{rr}-2.85; $M_{\theta\theta}$2.33; $M_{\phi\phi}$0.52; $M_{r\theta}$-2.68; $M_{\theta\phi}$-3.87; $M_{\phi r}$-1.08; Fault plane solution: $M_0$5.50000×10^{18} NP1: ϕ_s343.18000°, δ49.54000°, λ-31.14000°. NP2:ϕ_s94.59000°, δ66.83000°, λ-135.10000°. Principal axes: T 5.6577, Plg10.0000°, Azm215.0000°; N -0.3403, Plg41.0000°, Azm116.0000°; P -5.3174, Plg47.0000°, Azm317.0000°;*

*IPGP **28** 15:51:31.0, 19°.89N×144°.41E, h423^{km}, Mw6.5, Fault plane solution: NP1:ϕ_s93.00000°, δ68.00000°, λ-136.00000°. NP2:ϕ_s343.00000°, δ50.00000°, λ-30.00000°.*

*MOS **28** 15:51:32.2±0.9, 19°.92N×144°.35E, h445^{km}, mb6.1/77, MS5.6/12, Error ellipse: s-maj=7.9km s-min=3.7km az=112.8*

*NEIC **28** 15:51:32, 19°.90N×144°.38E, h420^{km}*

*IDC **28** 15:51:33.0±0.4, 19°.92N×144°.41E, h438^{km}±3^{km}, mb5.6/36, mbtmp6.3/41, Error ellipse: s-maj=7.9km s-min=6.6km az=74.0*

*DJA **28** 15:51:32.7±0.4, 20°N±3°×14°4E±°, h434^{km}±6^{km}, M6.1/38, mb6.2/38, mB6.4/37, MLv6.9/2, Mw(mB)6.1/37, MwMwp6.0/36, Mwp6.1/36*

*GCMT **28** 15:51:34.3±0.1, 19°.83N×144°.27E, h422^{km}, MW6.4/177, Moment Tensor Solution. s177,c462; s167,c301; Duration: 4^{s}.0 Moment tensor: Scale 10^{18}Nm; M_{rr}-2.74±.02; $M_{\theta\theta}$2.36±.03; $M_{\phi\phi}$0.38±.03; $M_{r\theta}$-2.86±.02; $M_{\theta\phi}$-3.98±.02; $M_{\phi r}$-1.46±.02; Best double couple: $M_0$5.72400×10^{18} NP1:ϕ_s343.00000°, δ51.00000°, λ-29.00000°. NP2:ϕ_s93.00000°, δ68.00000°, λ-137.00000°. Principal axes: T 5.7190, Plg10.0000°, Azm214.0000°; N 0.0160, Plg43.0000°, Azm115.0000°; P -5.7290, Plg46.0000°, Azm315.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*

ISC 28 15:51:32.2±0.2**, 19°.87N**±0°.02×**144°.40E**±0°.02**, h438**^{km}±1^{km}**, h439**^{km}**:pP-P, n2376, σ1^{s}.74**/2842**, mb6.0**/570**, 136C-165D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	6.26	176		P	15 53 08.4	-0.5
GUMO	Guam	6.26	176	P	P	15 53 10.5	+1.6
	7μm,0.6s,baz=334,slow=3.5,SNR=332						
GUMO				S	S	15 54 28.9	+1.1
	14μm,0.5s,baz=17,slow=19,SNR=36						
GUMO	Guam	6.26	176	P	P	15 53 09.2	+0.3
GUMO	Guam	6.26	176	⇓P	P	15 53 08.1	-0.8
JHH2	Haha-jima-NKT2	7.04	344	P	P	15 53 18.3	+1.2
JHH2				S	S	15 54 44.5	+1.6
JHH2	Haha-jima-NKT2	7.04	344	A	A	15 53 18.3	
	comp=N,360nm,2.6s,comp=E,632nm,4.0s						
CBIJ	Chichi jima	7.48	345	P	P	15 53 22.2	+0.4
CBIJ				S	S	15 54 53.4	+1.8
CBIJ	Chichi jima	7.48	345	A	A	15 53 22.2	
	comp=N,394nm,4.5s,comp=E,426nm,4.4s						
JCJ	Chichijima	7.48	345		P	15 53 21.4	-0.4
JCJ	Chichijima	7.48	345	P	P	15 53 20.8	-1.0
	comp=E,1μm,0.5s,baz=180,slow=0.0						
JCJ				S	S	15 54 50.0	-1.6
	baz=180,slow=0.0						
JCJ	Chichijima	7.48	345	P	P	15 53 23.4	+1.6
JCJ	Chichijima	7.48	345	S	S	15 54 51.6	0.0
JCJ	Chichijima	7.48	345	⇑P	P	15 53 22.4	+0.5
JAOM	Aogashimamukai	13.22	343	eP	P	15 54 24.6	+0.2
JAOM				eS	S	15 56 45.9	-0.7
JAOM	Aogashimamukai	13.22	343	A	A	15 54 24.6	
	comp=N,206nm,3.1s,comp=E,247nm,5.0s						
JKDJ	Kitadaitoujima	13.51	299	P	P	15 54 28.2	+0.7
JKDJ				S	S	15 56 53.4	+1.0
JKDJ	Kitadaitoujima	13.51	299	A	A	15 54 28.2	
	comp=N,63nm,5.9s,comp=E,132nm,5.1s						
JMZ	Minamidaito 2	13.51	298		P	15 54 28.9	+1.2
JMZ	Minamidaito 2	13.51	298	P	P	15 54 29.2	+1.6
JMZ	Minamidaito 2	13.51	298	⇓P	P	15 54 28.4	+0.8
JMZ				⇓eS	S	15 56 54.7	+2.1
JMZ	Minamidaito 2	13.51	298	A	A	15 54 28.4	
	comp=N,65nm,3.8s,comp=E,101nm,5.2s						
JMZ	Minamidaito 2	13.51	298	⇑P	P	15 54 29.0	+1.4
JHCJ	Hachijojimakas	13.78	344	P	P	15 54 30.4	-0.1
JHCJ				S	S	15 56 55.1	-2.6
JHCJ	Hachijojimakas	13.78	344	A	A	15 54 30.4	
	comp=N,75nm,5.8s,comp=E,87nm,5.8s						
JHJ2	Mitsune	13.81	344		P	15 54 30.5	-0.2
JHJ2	Mitsune	13.81	344	P	P	15 54 30.5	-0.2
JHJ2	Mitsune	13.81	344	S	S	15 57 00.7	+2.4
JHJ2	Mitsune	13.81	344	P	P	15 54 30.6	-0.2
JHJ2				eS	S	15 56 57.2	-1.2
JHJ2	Mitsune	13.81	344	A	A	15 54 30.6	
	comp=N,106nm,5.2s,comp=E,107nm,5.2s						
JMKN	Mikurajimanish	14.61	344	A	A	15 54 39.6	
	comp=N,89nm,6.0s,comp=E,80nm,5.2s						
JMYK	Miyake Tsubota	14.78	344	A	A	15 54 41.3	
	comp=N,122nm,5.5s,comp=E,96nm,4.2s						
JKO	Kozu shima	15.01	343	A	A	15 54 43.7	
	comp=N,63nm,2.8s,comp=E,126nm,4.5s						
BSO1	Boso 1	15.04	349	P	P	15 54 44.0	+0.7
JSKK	Shikinejimakit	15.13	343	A	A	15 54 44.9	
	comp=N,64nm,4.5s,comp=E,62nm,1.8s						
JNIO	Niijimaoohara	15.13	344	A	A	15 54 44.9	
	comp=N,96nm,5.8s,comp=E,106nm,2.9s						
TTO3	TONANKAI O.B.S	15.27	337	A	A	15 54 46.4	
	comp=N,103nm,7.3s,comp=E,73nm,5.4s						
JTHY	Toshimahigashi	15.29	344	A	A	15 54 46.5	
	comp=N,93nm,3.6s,comp=E,78nm,6.0s						
TTO1	TONANKAI O.B.S	15.29	335	P	P	15 54 46.4	0.0
TTO1	TONANKAI O.B.S	15.29	335	A	A	15 54 46.4	
	comp=N,97nm,6.3s,comp=E,120nm,5.1s						
TTO2	TONANKAI O.B.S	15.29	336	A	A	15 54 46.7	
	comp=N,92nm,6.9s,comp=E,103nm,6.5s						
TTO4	TONANKAI O.B.S	15.35	338	A	A	15 54 47.2	
	comp=N,67nm,6.9s,comp=E,67nm,4.7s						
JIM2	Oshima 3	15.44	344	A	A	15 54 48.0	
	comp=N,59nm,3.7s,comp=E,59nm,6.3s						
TTO5	TONANKAI O.B.S	15.51	339	A	A	15 54 48.8	
	comp=N,64nm,3.5s,comp=E,69nm,5.8s						
I39PW	PALAU INFRASON	15.54	219	P	P	15 54 50.0	+0.4
	baz=68,slow=11,SNR=7.4						
JWKM	Wakayamakushim	15.57	332	A	A	15 54 49.5	
	comp=N,39nm,4.0s,comp=E,49nm,3.9s						
JIZS	Izushimoda	15.58	343	A	A	15 54 49.5	
	comp=N,48nm,7.1s,comp=E,31nm,7.6s						
JZK	Kikaishima	15.62	305	A	A	15 54 50.1	
	comp=N,145nm,5.0s,comp=E,75nm,3.2s						
TATJ	Tateyama 2	15.63	346	A	A	15 54 49.8	
	comp=N,93nm,5.3s,comp=E,128nm,6.3s						
JKUC	kamogawauchiur	15.68	347	A	A	15 54 50.3	
	comp=N,100nm,5.6s,comp=E,100nm,7.8s						
JSG	Sagara	15.74	341	P	P	15 54 49.3	-2.2
JSG	Sagara	15.74	341	P	P	15 54 52.8	+1.3
JSG	Sagara	15.74	341	S	S	15 57 39.6	+3.4
JSG	Sagara	15.74	341	A	A	15 54 51.2	
	comp=N,42nm,4.7s,comp=E,35nm,6.3s						
JSG	Sagara	15.74	341	⇑P	P	15 54 51.2	-0.2
JMMH	Miemihama	15.77	333	A	A	15 54 51.5	
	comp=N,8.0nm,8.4s,comp=E,21nm,4.5s						
JHTM	Izuhatsuma	15.77	344	A	A	15 54 51.3	
	comp=N,89nm,1.6s,comp=E,80nm,4.5s						
JYO	Yokosk	15.86	346	A	A	15 54 52.2	
	comp=N,75nm,8.4s,comp=E,73nm,4.4s						
JKKS	Kakegawashinom	15.88	340	A	A	15 54 52.4	
	comp=N,53nm,5.0s,comp=E,52nm,4.2s						
JTNC	Tanabenakahech	15.95	332	P	P	15 54 52.9	-0.7
JTNC	Tanabenakahech	15.95	332	A	A	15 54 52.9	
	comp=N,17nm,5.3s,comp=E,35nm,5.4s						
JAM	Amami Oshima	15.95	305	A	A	15 54 53.3	
	comp=N,42nm,4.6s,comp=E,24nm,3.1s						
JIE	Ise	16.00	336	P	P	15 54 52.7	-1.4
JIE	Ise	16.00	336	A	A	15 54 52.7	
	comp=N,7.0nm,11.8s,comp=E,23nm,5.2s						
JKN2	Miekihoku	16.03	335	A	A	15 54 54.1	
	comp=N,7.0nm,4.8s,comp=E,22nm,4.8s						
JOD2	Odawara 2	16.04	344	P	P	15 54 53.6	-1.1
JOD2				eS	S	15 57 33.2	-8.8
JOD2	Odawara 2	16.04	344	A	A	15 54 53.6	
	comp=N,48nm,6.5s,comp=E,35nm,7.7s						
JAA	Atsumi	16.05	338	A	A	15 54 54.3	
	comp=N,14nm,5.4s,comp=E,20nm,6.4s						
HMMJ	Hamamatsu 2	16.06	340	A	A	15 54 54.3	
	comp=N,18nm,5.9s,comp=E,18nm,4.1s						
JFNN	Fujinakano	16.08	343	A	A	15 54 54.4	
	comp=N,74nm,5.7s,comp=E,51nm,5.7s						
JWM	Minabe	16.09	332	A	A	15 54 54.7	
	comp=N,26nm,2.7s,comp=E,37nm,4.8s						
JMTN	Minamitane	16.09	313	A	A	15 54 54.8	
	comp=N,28nm,5.4s,comp=E,25nm,4.9s						
JSMT	Sammumatsuo	16.10	348	A	A	15 54 54.4	
	comp=N,181nm,5.6s,comp=E,156nm,6.0s						
SHZ3	Shizuoka 3	16.10	341	A	A	15 54 54.7	
	comp=N,33nm,2.7s,comp=E,28nm,5.3s						
JTK	Tokunoshima	16.18	302	A	A	15 54 55.5	
	comp=N,44nm,4.6s,comp=E,63nm,3.6s						
JSSY	Shinshiroyabe	16.18	339	A	A	15 54 55.5	
	comp=N,20nm,6.3s,comp=E,21nm,5.8s						
JTN	Tanegashima 3	16.20	314	A	A	15 54 55.9	
	comp=N,17nm,4.6s,comp=E,27nm,5.5s						
JAMN	Amaminishikomi	16.20	304	P	P	15 54 57.9	+1.4
JAMN				eS	S	15 57 47.0	+1.7
JAMN	Amaminishikomi	16.20	304	A	A	15 54 57.9	
	comp=N,52nm,4.7s,comp=E,26nm,3.2s						
JNTK	Naratenkawa	16.22	334	A	A	15 54 55.9	
	comp=N,8.0nm,3.6s,comp=E,27nm,5.9s						
JYAK	Yakushimahirau	16.27	312	A	A	15 54 56.5	
	comp=N,28nm,4.7s,comp=E,13nm,5.1s						
JYRO	Yoronjima	16.27	299	A	A	15 54 56.4	
	comp=N,26nm,4.0s,comp=E,79nm,4.0s						
MRT2	Murotomisaki 2	16.28	328	A	A	15 54 56.6	
	comp=N,36nm,5.5s,comp=E,23nm,5.8s						
TOK	Tokyo	16.28	346	A	A	15 54 56.3	
	comp=N,111nm,7.7s,comp=E,126nm,4.6s						
JWY	Kouya	16.30	333	A	A	15 54 56.7	
	comp=N,14nm,5.8s,comp=E,33nm,5.2s						
JOKE	Okinoerabujima	16.30	300	A	A	15 54 56.7	
	comp=N,52nm,6.1s,comp=E,56nm,4.5s						
JSGW	Sagamiharawaka	16.33	345	A	A	15 54 56.8	
	comp=N,37nm,5.5s,comp=E,27nm,5.9s						
JOW	Kunigami	16.34	298	P	P	15 54 59.3	+1.3
	comp=E,13μm,0.8s,baz=110,slow=6.9,SNR=428						
JOW				S	S	15 57 48.7	+0.6
	comp=E,352nm,0.9s,baz=106,slow=19,SNR=13						
JOW				ScP	ScP	16 02 15.6	-0.8
	comp=E,44nm,0.7s,baz=90,slow=3.0,SNR=4.8						
JOW				ScS	ScS	16 05 54.6	-1.4
	comp=E,25nm,1.1s,baz=50,slow=26,SNR=2.1						
JOW	Kunigami	16.34	298	P	P	15 54 59.4	+1.3
JOW	Kunigami	16.34	298	S	S	15 57 50.8	+2.7
JOW	Kunigami	16.34	298	i P	P	15 54 59.3	+1.3
JOW				S	S	15 57 48.6	+0.6
JOW	Kunigami	16.34	298	A	A	15 54 59.3	
	comp=N,24nm,5.0s,comp=E,67nm,4.2s						
JOW	Kunigami	16.34	298	⇓P	P	15 54 59.2	+1.3
TSUJ	Tsu 2	16.39	336	A	A	15 54 57.6	
	comp=N,11nm,6.7s,comp=E,24nm,7.4s						
JIHU	Itakohorinouch	16.40	349	A	A	15 54 57.4	
	comp=N,153nm,4.1s,comp=E,94nm,5.7s						
JYN	Shimob	16.41	343	A	A	15 54 57.7	
	comp=N,53nm,6.1s,comp=E,60nm,6.4s						
JNTH	Nagotoyohara	16.44	297	A	A	15 54 58.0	
	comp=N,22nm,4.5s,comp=E,37nm,4.6s						
JAI	Aioi	16.45	329	A	A	15 54 58.4	
	comp=N,29nm,4.1s,comp=E,14nm,4.3s						
JNY	Yasuok	16.48	341	A	A	15 54 58.4	
	comp=N,29nm,4.1s,comp=E,25nm,7.0s						
JNN	Nakanoshima	16.49	310	A	A	15 54 58.7	
	comp=N,40nm,5.5s,comp=E,19nm,9.3s						
JJT3	Tamagusuku3	16.52	295	A	A	15 54 58.8	
	comp=N,53nm,4.2s,comp=E,92nm,5.1s						
JTSR	Tashiro 2	16.55	315	A	A	15 54 59.4	
	comp=N,20nm,5.1s,comp=E,20nm,9.5s						
JNAR	Kushima--Naru	16.56	317	A	A	15 54 59.5	
	comp=N,16nm,6.0s,comp=E,27nm,8.3s						
JTO	Tosashimizu	16.58	324	P	P	15 55 01.0	+0.7
JTO				eS	S	15 57 54.4	+1.9
JTO	Tosashimizu	16.58	324	A	A	15 55 01.0	
	comp=N,30nm,4.8s,comp=E,33nm,5.3s						
JNKG	Nichinankitago	16.58	318	A	A	15 54 59.7	
	comp=N,14nm,8.9s,comp=E,26nm,6.0s						

JAO	Obara	16.59	339	A	A	15 54 59.5	
	comp=N,33nm,4.6s,comp=E,36nm,6.0s						
JKC	Kuchinoerabu	16.62	312	A	A	15 55 00.0	
	comp=N,15nm,6.1s,comp=E,26nm,11.8s						
JTAJ	Takarajima	16.62	307	A	A	15 55 00.0	
	comp=N,35nm,4.7s,comp=E,18nm,3.8s						
JHE	Heguri	16.63	334	A	A	15 55 00.0	
	comp=N,8.0nm,6.9s,comp=E,28nm,6.6s						
JIH	Iheya	16.67	298	A	A	15 55 00.4	
	comp=N,40nm,3.7s,comp=E,74nm,4.0s						
JMN	Monobe	16.68	328		P	15 55 00.2	-1.3
JMN	Monobe	16.68	328	P	P	15 55 02.4	+0.9
JMN	Monobe	16.68	328	A	A	15 55 00.6	
	comp=N,32nm,5.3s,comp=E,28nm,5.6s						
JMN	Monobe	16.68	328	⇓P	P	15 55 01.5	0.0
JKHR	Kochiharuno	16.70	327	A	A	15 55 00.8	
	comp=N,27nm,5.7s,comp=E,28nm,4.9s						
JYT	Yasato	16.71	348	A	A	15 55 00.6	
	comp=N,28nm,6.2s,comp=E,31nm,6.7s						
INU	Inuyama	16.75	339		P	15 54 58.3	-3.7
INU	Inuyama	16.75	339	P	P	15 55 02.2	+0.1
INU	Inuyama	16.75	339	S	S	15 57 59.0	+3.4
INU	Inuyama	16.75	339	⇑P	P	15 55 00.6	-1.4
JHYU	Hitachinakayam	16.75	349	A	A	15 55 00.8	
	comp=N,35nm,2.8s,comp=E,32nm,4.7s						
JICN	Ichinomiyachia	16.76	338	A	A	15 55 01.2	
	comp=N,30nm,4.2s,comp=E,40nm,5.7s						
JEG	Eigenji	16.78	337	A	A	15 55 01.4	
	comp=N,25nm,8.0s,comp=E,21nm,9.9s						
JKU	Kubokawa	16.78	325	A	A	15 55 01.6	
	comp=N,25nm,4.9s,comp=E,30nm,5.8s						
JRY	Ryogami san	16.80	344	*i* P	P	15 55 01.7	-1.0
JRY				*e*S	S	15 57 53.5	-3.2
JRY	Ryogami san	16.80	344	A	A	15 55 01.7	
	comp=N,50nm,3.4s,comp=E,35nm,5.9s						
JMAF	Mimaanabuki	16.80	329	A	A	15 55 01.8	
	comp=N,14nm,4.8s,comp=E,36nm,4.4s						
JAWN	Awajishima-nag	16.82	332	A	A	15 55 01.9	
	comp=N,17nm,5.4s,comp=E,21nm,6.6s						
JGF	Kuroka	16.86	340		P	15 55 02.1	-1.2
JGF	Kuroka	16.86	340	P	P	15 55 02.9	-0.4
JGF	Kuroka	16.86	340	A	A	15 55 02.2	
	comp=N,23nm,6.1s,comp=E,30nm,6.5s						
JGF	Kuroka	16.86	340	⇑P	P	15 55 01.9	-1.5
JNT	Takato	16.88	342	A	A	15 55 02.3	
	comp=N,34nm,4.8s,comp=E,29nm,6.1s						
JTZ	Takazaki	16.93	318	A	A	15 55 03.1	
	comp=N,20nm,5.8s,comp=E,35nm,6.1s						
UWA2	Uwa jima 2	16.94	324	A	A	15 55 03.2	
	comp=N,24nm,3.8s,comp=E,36nm,5.8s						
JHHC	Hyugahichiya	16.96	320	A	A	15 55 03.3	
	comp=N,10.0nm,5.3s,comp=E,25nm,4.7s						
JHO	Hitachi	17.02	349	A	A	15 55 03.5	
	comp=N,32nm,8.0s,comp=E,38nm,4.9s						
JMIK	Miki	17.03	333	A	A	15 55 04.0	
	comp=N,20nm,6.5s,comp=E,24nm,5.5s						
JSKE	Saikikamae	17.05	322	A	A	15 55 04.2	
	comp=N,9.0nm,6.5s,comp=E,28nm,4.6s						
JAG	Ashikaga	17.06	346	A	A	15 55 04.0	
	comp=N,27nm,3.6s,comp=E,26nm,3.0s						
JYTA	Yamagatataniai	17.06	338	A	A	15 55 04.2	
	comp=N,18nm,6.3s,comp=E,27nm,6.2s						
JAGN	Aguni-jima	17.12	296	A	A	15 55 04.8	
	comp=N,44nm,6.7s,comp=E,51nm,6.4s						
JET	Tanbara	17.15	326	A	A	15 55 05.2	
	comp=N,16nm,3.8s,comp=E,39nm,5.6s						
JJS	Sakaide	17.18	329	A	A	15 55 05.5	
	comp=N,28nm,4.0s,comp=E,69nm,5.1s						
JKS	Kasai	17.27	333	A	A	15 55 06.3	
	comp=N,12nm,5.3s,comp=E,17nm,10.4s						
JFM	Mihama	17.28	336	A	A	15 55 06.4	
	comp=N,17nm,5.3s,comp=E,31nm,8.7s						
JNA	Nagahama	17.28	324	A	A	15 55 06.5	
	comp=N,14nm,6.1s,comp=E,32nm,7.5s						
JWT	Wachi	17.29	334	A	A	15 55 06.5	
	comp=N,11nm,8.1s,comp=E,24nm,9.7s						
JUS	Usuki	17.33	322	A	A	15 55 07.0	
	comp=N,21nm,5.2s,comp=E,43nm,4.8s						
JNG	Nsakai	17.38	343	A	A	15 55 07.2	
	comp=N,20nm,6.1s,comp=E,27nm,7.0s						
JGK	Kuni	17.39	344	A	A	15 55 07.2	
	comp=N,46nm,5.3s,comp=E,27nm,6.1s						
JZO	Okuchi	17.39	317	A	A	15 55 07.6	
	comp=N,14nm,4.9s,comp=E,42nm,9.9s						
JKE	Kume jima 2	17.43	295	P	P	15 55 09.4	-0.1
JKE				*e*S	S	15 58 07.8	-0.9
JKE	Kume jima 2	17.43	295	A	A	15 55 09.4	
	comp=N,26nm,8.4s,comp=E,31nm,5.3s						
JKT	Katashina	17.43	346	A	A	15 55 07.7	
	comp=N,20nm,5.2s,comp=E,21nm,2.5s						
JGN	Niukaw	17.45	341	A	A	15 55 07.9	
	comp=N,21nm,7.4s,comp=E,17nm,6.8s						
ONAJ	Iwakimizuishiy	17.46	350	A	A	15 55 07.8	
	comp=N,40nm,5.1s,comp=E,66nm,5.8s						
MJAR	Matsushiro Arr	17.48	343	P	P	15 55 07.8	-2.1
MJAR	Matsushiro Arr	17.48	343	P	P	15 55 08.2	-1.7
	comp=E,489nm,0.7s,baz=167,slow=10,SNR=521						
MJAR				S	S	15 58 07.0	-2.5
	comp=E,122nm,0.7s,baz=155,slow=9.4,SNR=4.1						
MJAR				ScP	ScP	16 02 17.0	-1.6
	comp=E,39nm,0.9s,baz=167,slow=4.0,SNR=5.7						
MJAR				ScS	ScS	16 05 55.7	-3.4
	comp=E,5.0nm,0.9s,baz=52,slow=31,SNR=4.0						
MJAR				PKP2bc		16 31 43.0	
	comp=E,2.3nm,0.9s,baz=359,slow=3.7,SNR=4.6						
MAJO	Matsushiro	17.48	343		P	15 55 08.0	-1.9
MAJO	Matsushiro	17.48	343	P	P	15 55 09.0	-0.9
MAJO	Matsushiro	17.48	343	P	P	15 55 08.0	-1.9
MAJO	Matsushiro	17.48	343	P	P	15 55 07.6	-2.3
MAJO				S	S	15 58 01.2	-8.3
MAJO	Matsushiro	17.48	343	⇑P	P	15 55 07.8	-2.1
MJB9	Matsu-Tunnel	17.48	343		P	15 55 08.0	-2.0
JSB	Shiboa	17.49	348	A	A	15 55 08.1	
	comp=N,64nm,5.4s,comp=E,65nm,7.9s						
JFFD	Fukushimafurud	17.49	350	A	A	15 55 08.0	
	comp=N,33nm,6.3s,comp=E,64nm,6.6s						
JAD	Aida	17.53	331	A	A	15 55 08.9	
	comp=N,25nm,4.3s,comp=E,43nm,6.6s						
JIU3	Izumi3	17.53	319	A	A	15 55 09.0	
	comp=N,9.0nm,4.0s,comp=E,45nm,7.6s						
JSJ	Shimokoshiki	17.68	315	P	P	15 55 11.7	-0.3
JSJ				*e*S	S	15 58 13.3	+0.2
JSJ	Shimokoshiki	17.68	315	A	A	15 55 11.7	
	comp=N,31nm,4.9s,comp=E,49nm,7.4s						
JFK	Kawauchi	17.71	351	A	A	15 55 33.1	
	comp=N,26nm,6.3s,comp=E,67nm,8.9s						
JKY	Yasaka	17.71	334	A	A	15 55 32.8	
	comp=N,13nm,5.0s,comp=E,24nm,9.9s						
JJG	Jouge	17.77	328	A	A	15 55 32.2	
	comp=N,24nm,4.9s,comp=E,53nm,6.2s						
JTT	Ttatey	17.79	341	A	A	15 55 32.2	
	comp=N,27nm,7.5s,comp=E,43nm,6.0s						
JKG	Kaga	17.82	338	A	A	15 55 31.8	
	comp=N,22nm,5.0s,comp=E,28nm,6.3s						
JKI	Kunimi	17.85	323	A	A	15 55 31.4	
	comp=N,25nm,3.5s,comp=E,45nm,6.2s						
JKSM	Kasumi	17.86	333	A	A	15 55 31.3	
	comp=N,9.0nm,5.6s,comp=E,19nm,8.9s						
JNU	Nakatsue	17.89	320	P	P	15 55 14.1	-0.2
JNU	Nakatsue	17.89	320	P	P	15 55 13.9	-0.3
	comp=E,2µm,0.9s,baz=128,slow=8.7,SNR=244						
JNU				S	S	15 58 17.2	+0.3
	comp=E,281nm,1.0s,baz=148,slow=19,SNR=6.9						
JNU				ScP	ScP	16 02 18.4	-1.2
	comp=E,32nm,0.9s,baz=124,slow=3.6,SNR=4.3						
JNU				ScS	ScS	16 05 57.8	-2.8
	comp=E,8.4nm,1.0s,baz=194,slow=20,SNR=2.1						
JNU	Nakatsue	17.89	320	P	P	15 55 14.7	+0.5
JNU	Nakatsue	17.89	320	A	A	15 55 30.9	
	comp=N,11nm,5.2s,comp=E,34nm,6.1s						
JNU	Nakatsue	17.89	320	⇓P	P	15 55 13.9	-0.3
JUON	Uonuma	17.90	346	A	A	15 55 31.2	
	comp=N,27nm,4.4s,comp=E,39nm,7.9s						
JHD	Hondo	17.90	317	A	A	15 55 30.7	
	comp=N,26nm,7.8s,comp=E,43nm,8.5s						
JFY	Yanaizu	17.95	348	A	A	15 55 30.6	
	comp=N,48nm,5.0s,comp=E,77nm,4.3s						
JOTO	OTAMA OYAMA	17.98	349	A	A	15 55 30.3	
	comp=N,68nm,2.4s,comp=E,81nm,7.0s						
JKD	Kudamatsu	17.99	324	A	A	15 55 29.6	
	comp=N,21nm,3.7s,comp=E,40nm,5.8s						
JTA	Tamana	17.99	319	A	A	15 55 29.6	
	comp=N,13nm,7.4s,comp=E,38nm,6.0s						
JJN	Nakama	18.02	344	A	A	15 55 29.6	
	comp=N,23nm,6.8s,comp=E,32nm,6.3s						
JKR	Kurayoshi	18.05	331	A	A	15 55 28.7	
	comp=N,13nm,7.7s,comp=E,52nm,6.6s						
JMST	Minamisoumatoc	18.06	351	A	A	15 55 29.4	
	comp=N,30nm,8.6s,comp=E,52nm,10.1s						
JHS	Saijyo	18.08	329	P	P	15 55 14.6	-1.5
JHS				*e*S	S	15 58 18.7	-1.4
JHS	Saijyo	18.08	329	A	A	15 55 14.6	
	comp=N,14nm,3.8s,comp=E,32nm,6.6s						
JHT	Toyohira	18.16	327	A	A	15 55 22.2	
	comp=N,22nm,5.0s,comp=E,42nm,5.0s						
JMM	Marumori	18.21	351		P	15 55 17.2	-0.2
JMM	Marumori	18.21	351	P	P	15 55 17.6	+0.2
JMM	Marumori	18.21	351	S	S	15 58 26.0	+3.8
JOGS	Gusukube	18.23	289	P	P	15 55 19.7	+1.9
JOGS				*e*S	S	15 58 26.8	+3.8
JMJ	Miyako jima 2	18.34	289	P	P	15 55 20.2	+1.3
PATS	Pohnpei	18.71	132	P	P	15 55 21.3	-1.3
PATS	Pohnpei	18.71	132	P	P	15 55 22.4	-0.2
	comp=Z,0.0nmcomp=Z,2µm,1.3s						
PATS	Pohnpei	18.71	132	P	P	15 55 23.2	+0.6
JSD	Sado	18.88	345	P	P	15 55 23.3	-0.6
JSD	Sado	18.88	345	P	P	15 55 23.5	-0.4
JSD	Sado	18.88	345	⇓P	P	15 55 22.9	-1.0
JOI	OKI	19.07	331	P	P	15 55 24.5	-1.2
JMK	Ichinoseki	19.22	352	*e*P	P	15 55 26.7	-0.3
JMK				*e*S	S	15 58 40.9	+2.1
JTU	Tsushima	19.75	321	P	P	15 55 32.7	+0.8
JTU	Tsushima	19.75	321	P	P	15 55 31.8	-0.2
JTU				*e*S	S	15 58 49.0	+1.6
JTU	Tsushima	19.75	321	⇑P	P	15 55 31.8	-0.2
YOJ	Yonaguni jima	20.33	287	P	P	15 55 38.5	+1.2
YOJ	Yonaguni jima	20.33	287	P	P	15 55 38.2	+0.9
YOJ	Yonaguni jima	20.33	287	⇓P	P	15 55 38.0	+0.6
JTM	Tenmabayashi	21.05	353	P	P	15 55 44.7	+0.9
JTM	Tenmabayashi	21.05	353	P	P	15 55 44.6	+0.9
JTM	Tenmabayashi	21.05	353	S	S	15 59 10.6	+2.3
JTM	Tenmabayashi	21.05	353	⇓P	P	15 55 44.0	+0.3
NACB	Ninganchiao	21.57	286	P	P	15 55 49.3	+0.6
JOT	Ohata	21.64	353	P	P	15 55 49.6	+0.5
JOT				*e*S	S	15 59 16.8	-0.9
YULB	Yu-li	21.76	283	P	P	15 55 50.8	+0.4
TATO	Taipei	21.77	288	P	P	15 55 50.9	+0.4
TATO	Taipei	21.77	288	P	P	15 55 50.4	-0.1
TATO				P	P	15 55 50.4	-0.1
TATO				S	S	15 59 24.0	+3.7
TATO				S	S	15 59 24.0	+3.7
TATO	Taipei	21.77	288	P	P	15 55 50.9	+0.4
TATO	Taipei	21.77	288	S	S	15 59 26.4	+6.1
YHNB	Yeheng	21.83	287	P	P	15 55 52.0	+0.9
TWGBT	Beinan	21.92	282	P	P	15 55 52.0	+0.1
MANU	Manus Island	21.97	172		P	15 55 51.2	-1.2
ERM	Erimo	22.11	358	P	P	15 55 54.8	+1.5
ERM	Erimo	22.11	358	*de*P	P	15 55 54.6	+1.3
ERM				pmax	pmax		
	comp=Z,624nm,0.8s						
ERM	Erimo	22.11	358	P	P	15 55 54.3	+1.1
ERM				S	S	15 59 24.5	-0.6
ERM	Erimo	22.11	358	⇓P	P	15 55 54.4	+1.1
JEM	Erimo	22.11	358	P	P	15 55 54.9	+1.6
SSLB	Suanglung	22.11	284	P	P	15 55 54.1	+0.5
SSLB	Suanglung	22.11	284	P	P	15 55 54.7	+1.1
TJN	Taejon	22.22	321	P	P	15 55 54.4	0.0
TJN	Taejon	22.22	321	*d i*P	P	15 55 54.2	-0.2
DAV	Davao City (W)	22.26	238	P	P	15 55 53.5	-1.5
DAV				P	P	15 55 53.5	-1.5
DAV				S	S	15 59 28.9	+0.7
DAV				S	S	15 59 28.9	+0.7
DAV	Davao City (W)	22.26	238	P	P	15 55 54.8	-0.2
DAV	Davao City (W)	22.26	238	P	P	15 55 54.0	-1.0
TPUB	Ta-pu	22.36	283	P	P	15 55 56.9	+1.0
SMPI	Sarmi	22.43	195	P	P	15 55 57.3	+0.8
	comp=Z,41µmcomp=Z,29µmcomp=Z,2µm,1.9s						
BAKI	Biak	22.45	202	P	P	15 55 58.2	+1.4
	comp=Z,44µmcomp=Z,20µmcomp=Z,2µm,1.2s						
JAY	Jayapura	22.54	190	ScS	ScS	16 06 17.5	+0.2
	comp=Z,27nm,1.1s,baz=134,slow=20,SNR=3.7						
JOSM	Okushiri--Mats	22.54	350	P	P	15 55 57.7	+0.5
JOSM				*e*S	S	15 59 29.6	-2.4
KSRS	Korea Array	22.66	324	P	P	15 55 58.9	+0.6
	comp=Z,954nm,0.6s,baz=141,slow=9.5,SNR=1349						
KSRS				S	S	15 59 36.3	+2.3
	comp=Z,20nm,0.9s,baz=138,slow=12,SNR=1.1						
KSRS				ScP	ScP	16 02 30.2	-0.6
	comp=Z,66nm,0.8s,baz=138,slow=2.7,SNR=28						
KSRS				ScS	ScS	16 06 16.1	-0.8
	comp=Z,0.7nm,0.8s,baz=356,slow=31,SNR=1.0						
KSRS				PKPPKP	P'P'df	16 30 58.1	-1.5
	comp=Z,1.0nm,0.8s,baz=318,slow=4.1,SNR=4.2						
	comp=Z,954nm,0.6s						
KSAR	Wonju Array Be	22.67	324	P	P	15 55 58.7	+0.2
KSAR	Wonju Array Be	22.67	324	P	P	15 55 58.7	+0.2
JCH	Churui	22.70	358	P	P	15 55 59.3	+0.7
GENI	Genyem	22.70	191	P	P	15 56 01.3	+2.3
GENI	Genyem	22.70	191	P	P	15 56 00.3	+1.3
	comp=Z,39µmcomp=Z,25µmcomp=Z,1µm,2.2s						
GENI	Genyem	22.70	191	⇑P	P	15 56 00.0	+1.0
SRPI	Serui, Papua	23.04	201	P	P	15 56 02.9	+0.8
TGY	Tagaytay City	23.15	259	P	P	15 56 04.2	+1.1
	comp=Z,5µm,1.1s,baz=146,slow=1.2,SNR=26						
TGY				S	S	15 59 45.1	+2.7
	comp=Z,206nm,0.6s,baz=53,slow=20,SNR=7.6						
TGY				ScP	ScP	16 02 32.0	-0.6
	comp=Z,98nm,0.2s,baz=63,slow=2.3,SNR=2.8						
	comp=Z,5µm,1.1s						
INCN	Inchon	23.41	322	P	P	15 56 05.1	-0.1
INCN	Inchon	23.41	322	P	P	15 56 05.5	+0.3
INCN				P	P	15 56 05.5	+0.3
INCN				S	S	15 59 54.4	+8.5
INCN				S	S	15 59 54.4	+8.5
INCN	Inchon	23.41	322	P	P	15 56 05.7	+0.6
INCN	Inchon	23.41	322	P	P	15 56 05.1	-0.1
INCN				pmax	pmax		
	comp=Z,3µm,0.9s						
INCN	Inchon	23.41	322	⇓P	P	15 56 04.9	-0.2
NEM2	Nemuro 2	23.46	2	P	P	15 56 05.8	+0.4
RKPI	Ransiki, Papua	23.49	206	P	P	15 56 05.9	-0.2
	comp=Z,29µmcomp=Z,11µmcomp=Z,840nm,0.9s						
SSE	Sheshan	23.70	303	P	P	15 56 08.0	+0.2
SSE				S	S	15 59 47.8	-2.9
SSE				pmax	pmax		
	comp=Z,1µm,0.8s						
SSE				pmax	pmax		
	comp=Z,6µm,3.5s						
JHR	Hokuryu	23.91	355	P	P	15 56 10.9	+1.3
YUK	Yuzh-Kuril'sk	24.13	3	*d i*P	P	15 56 12.1	+0.7
JKA	Kamikawa-asahi	24.23	357	IAmb	IAmb	15 56 17.1	
	comp=Z,327nm,0.6s						
WAMI	Wamena	24.25	194	P	P	15 56 15.6	+2.7
	comp=Z,28µmcomp=Z,16µmcomp=Z,1µm,1.0s						
SWI	Sorong	24.30	214	P	P	15 56 13.6	+0.3
	comp=Z,27µmcomp=Z,16µmcomp=Z,1µm,1.1s						
QZH	Quanzhou	24.37	287	⇓*i*P	P	15 56 14.5	+0.6
QZH				sP	sP	15 58 17.3	-1.3
QZH				S	S	15 59 59.3	-2.1
QZH				ScS	ScS	16 06 19.3	-4.9
QZH				pmax	pmax		
	comp=Z,3µm,0.9s						
QZH				pmax	pmax		
	comp=Z,10µm,2.8s						
SGSI	Sangihe	24.44	231	P	P	15 56 15.6	+0.9
	comp=Z,22µmcomp=Z,14µmcomp=Z,1µm,0.8s						
RABL	Rabaul	25.09	161	P	P	15 56 20.5	+0.1
RABL	Rabaul	25.09	161	⇑P	P	15 56 20.2	-0.2
MSHR	Mys Shultsa	25.26	337	*ce*P	P	15 56 21.7	+0.2
MSHR				pmax	pmax		
	comp=Z,2µm,1.7s						
TNTI	Ternate	25.26	223	P	P	15 56 23.3	+1.4
TNTI	Ternate	25.26	223	P	P	15 56 22.5	+0.6
	comp=Z,351nm,0.8s						
TNTI	Ternate	25.26	223	⇑P	P	15 56 20.7	-1.3
PSTR	Posyet	25.45	336	*i* P	P	15 56 23.8	+0.6
KUR	Kuril'sk	25.46	6	*d i*P	P	15 56 24.0	+0.7
KUR				*SP	sP	15 58 31.9	+3.2
KUR				*i* S	S	16 00 18.6	+0.7
KUR				pmax	pmax		
	comp=Z,2µm,1.1s						
KUR				pmax	pmax		
	comp=Z,6µm,6.8s						
KUR				MLR	MLR		
	comp=Z,5µm,13.0s						
VLA	Vladivostok	25.46	338	*c i*P	P	15 56 24.7	+1.4
VLA				pmax	pmax		
	comp=Z,904nm,0.9s						
FAKI	Fak Fak	25.60	209	P	P	15 56 24.6	-0.2
FAKI				IAmb	IAmb	15 56 26.2	
	comp=Z,836nm,1.0s						
FAKI	Fak Fak	25.60	209	P	P	15 56 25.0	+0.1
FAKI	Fak Fak	25.60	209	P	P	15 56 25.0	+0.1
	comp=Z,24µmcomp=Z,10µmcomp=Z,925nm,1.4s						
FAKI	Fak Fak	25.60	209	⇑P	P	15 56 24.5	-0.4
KMPI	Kaimana, Papua	25.64	205	P	P	15 56 25.8	+0.6
NJ2	Nanjing	25.91	303	⇓*i*P	P	15 56 27.5	+0.1
NJ2				sP	sP	15 58 28.8	-4.8
NJ2				S	S	16 00 25.3	-0.1
NJ2				ScP	ScP	16 02 39.8	-0.3
NJ2				pmax	pmax		
	comp=Z,810nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,9µm,5.5s						
TEY	Ternei	25.92	347	⇑*e*P	P	15 56 24.9	-2.5
TEY				pmax	pmax		
	comp=Z,50nm,2.4s						
TEY				pmax	pmax		
	comp=N,30nm,2.4s						
TEY				pmax	pmax		
	comp=E,10.0nm,2.4s						
TEY				pmax	pmax		
	comp=Z,900nm,6.1s						
TEY				pmax	pmax		
	comp=N,700nm,5.4s						
USA0B	Ussuriysk Arra	26.39	340	IAmb	IAmb	15 56 35.4	
	comp=Z,447nm,0.8s						
USA0B	Ussuriysk Arra	26.39	340	*d i*P	P	15 56 31.6	+0.1
USRK	Ussuriysk Ar.	26.39	340	P	P	15 56 32.2	+0.7
	comp=Z,324nm,0.7s,baz=152,slow=7.5,SNR=224						
USRK				S	S	16 00 32.2	-0.3
	comp=Z,6.6nm,0.6s,baz=148,slow=8.4,SNR=0.9						
USRK				ScP	ScP	16 02 40.1	-1.1
	comp=Z,28nm,1.0s,baz=159,slow=4.5,SNR=4.9						
USRK				ScS	ScS	16 06 31.4	-0.7
	comp=Z,0.9nm,0.8s,baz=284,slow=16,SNR=1.1						
USRK				PKPPKP	P'P'df	16 30 54.0	-3.2
	comp=Z,0.8nm,0.7s,baz=306,slow=5.0,SNR=1.9						
	comp=Z,324nm,0.7s						
YSS	Yuzhno-Sakhali	27.05	358	P	P	15 56 37.6	+0.2
YSS				IAmb	IAmb	15 56 39.0	
	comp=Z,221nm,0.4s						
YSS	Yuzhno-Sakhali	27.05	358	P	P	15 56 38.1	+0.8
YSS	Yuzhno-Sakhali	27.05	358	*de*P	P	15 56 37.5	+0.2
YSS				pmax	pmax		
	comp=Z,142nm,0.6s						
YSS	Yuzhno-Sakhali	27.05	358	⇓P	P	15 56 37.6	+0.2
DL2	Dalian	27.33	319	P	P	15 56 39.8	-0.1
DL2				sP	sP	15 58 47.0	-0.3
DL2				PcP	PcP	15 59 46.0	+0.2
DL2				S	S	16 00 48.0	+0.6
DL2				ScP	ScP	16 02 43.5	-0.7
DL2				ScS	ScS	16 06 33.0	-3.5
DL2				pmax	pmax		
	comp=Z,870nm,1.0s						
DL2				pmax	pmax		
	comp=Z,10µm,10.6s						
MDJ	Mudanjiang	27.59	337	IAmb	IAmb	15 56 45.1	
	comp=Z,531nm,0.8s						
MDJ	Mudanjiang	27.59	337	P	P	15 56 43.3	+1.2
MDJ				S	S	16 00 53.3	+1.9
MDJ				pmax	pmax		
	comp=Z,800nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,9µm,5.7s						
MDJ	Mudanjiang	27.59	337	P	P	15 56 43.8	+1.7
MSAI	Masohi	27.63	215	P	P	15 56 43.7	+0.9
	comp=Z,22µmcomp=Z,17µmcomp=Z,1µm,1.0s						
KMSI	Cibinong	27.70	229	P	P	15 56 44.7	+1.2
	comp=Z,32µmcomp=Z,18µmcomp=Z,2µm,0.8s						
BNDI	Bandanaira	28.12	212	P	P	15 56 47.7	+0.6
BNDI	Bandanaira	28.12	212	P	P	15 56 47.8	+0.6
BNDI	Bandanaira	28.12	212	⇑P	P	15 56 46.6	-0.5
SNY	Shenyang	28.12	326	⇓P	P	15 56 46.8	-0.1
SNY				pP	pP	15 58 05.5	+1.9
SNY				sP	sP	15 58 56.5	+2.0
SNY				pmax	pmax		
	comp=Z,280nm,1.0s						
SNY				pmax	pmax		
	comp=Z,5µm,12.0s						
HKC	Hong Kong Obse	28.29	280	⇑P	P	15 56 51.0	+2.4
SANI	Sanana	28.30	222	P	P	15 56 45.8	-3.0
SANI	Sanana	28.30	222	P	P	15 56 47.8	-1.0
SANI	Sanana	28.30	222	P	P	15 56 47.3	-1.5
SANI	Sanana	28.30	222	⇑P	P	15 56 46.9	-1.9
AAI	Ambon	28.31	216	P	P	15 56 49.7	+0.8
	comp=Z,21µmcomp=Z,16µmcomp=Z,853nm,1.4s						
HKPS	Hong Kong Po S	28.32	280	IAmb	IAmb	15 56 53.1	
	comp=Z,788nm,0.9s						
NLAI	Namlea	28.57	218	P	P	15 56 51.5	+0.4
	comp=Z,27µmcomp=Z,10µmcomp=Z,885nm,0.9s						
CN2	Changchun	28.65	331	⇓P	P	15 56 51.8	+0.3
CN2				*e*pP	pwP	15 58 09.8	-0.8
CN2				*e*S	S	16 01 08.0	-0.1
CN2				pmax	pmax		
	comp=Z,5µm,5.0s						
TIA	Tai'an	28.93	310	P	P	15 56 54.8	+0.8
TIA				pP	pP	15 58 08.5	-1.7
TIA				sP	sP	15 58 58.5	-2.5
TIA				PcP	PcP	15 59 51.5	+1.6
TIA				S	S	16 01 16.0	+3.4
TIA				ScP	ScP	16 02 49.0	-0.4
TIA				ScS	ScS	16 06 45.8	+1.6
TIA				pmax	pmax		
	comp=Z,690nm,0.8s						
TIA				pmax	pmax		
	comp=Z,12µm,9.3s						
GZH	Guangzhou	29.05	282	P	P	15 56 51.5	-3.8
GZH				pP	pP	15 58 08.5	-2.9
GZH				sP	sP	15 58 56.5	-5.4
GZH				PcP	PcP	15 59 45.3	-5.2
GZH				S	S	16 01 13.0	-1.8
GZH				pmax	pmax		
	comp=Z,3µm,0.8s						
WHN	Wuhan	29.11	297	⇓P	P	15 56 56.8	+1.1
WHN				pP	PP	15 58 14.5	+1.7
WHN				sP	sP	15 59 06.5	+4.0
WHN				S	S	16 01 15.8	+0.2
WHN				ScP	ScP	16 02 49.8	-0.2
WHN				SS	SS	16 03 41.5	-1.0
WHN				pmax	pmax		
	comp=Z,4µm,1.0s						
WHN				pmax	pmax		
	comp=Z,17µm,5.0s						
MYLDM	Lahad Datu	29.13	243	P	P	15 56 58.4	+2.4
MYLDM				IAmb	IAmb	15 57 01.7	
	comp=Z,2µm,1.9s						
MYLDM	Lahad Datu	29.13	243	P	P	15 56 58.6	+2.6
MYLDM	Lahad Datu	29.13	243	⇑P	P	15 56 58.2	+2.1
UGL	Uglegorsk	29.20	357	*e*P	P	15 56 48.9	-7.3
UGL				pmax	pmax		
	comp=Z,500nm,1.4s						
UGL				pmax	pmax		
	comp=Z,5µm,4.4s						
PMG	Port Moresby	29.21	174	P	P	15 56 56.9	+0.2
PMG	Port Moresby	29.21	174	ScP	ScP	16 02 50.3	-0.2
	comp=Z,116nm,0.8s,baz=355,slow=8.0,SNR=3.8						
PMG	Port Moresby	29.21	174	P	P	15 56 56.4	-0.3
PMG	Port Moresby	29.21	174	P	P	15 56 56.9	+0.2
PMG				pmax	pmax		
	comp=Z,779nm,0.7s						
PMG	Port Moresby	29.21	174	⇑P	P	15 56 56.3	-0.5
MRSI	Marisa	29.24	231	P	P	15 56 57.7	+0.7
	comp=Z,27µmcomp=Z,15µmcomp=Z,1µm,1.0s						
BNX	BinXian	29.37	335	⇓P	P	15 56 58.0	+0.3
BNX				pP	PP	15 58 16.8	+1.4
BNX				S	S	16 01 18.0	-1.1
BNX				sS	SS	16 03 44.8	-2.5
BNX				pmax	pmax		
	comp=Z,2µm,0.8s						
BNX				pmax	pmax		
	comp=Z,7µm,4.0s						
TOLI2	Tolitoli	29.69	234	IAmb	IAmb	15 57 03.5	
	comp=Z,702nm,0.9s						
TOLI2	Tolitoli	29.69	234	P	P	15 57 01.4	+0.4
LUWI	Luwuk	29.69	228	P	P	15 56 56.0	-5.0
LUWI	Luwuk	29.69	228	IAmb	IAmb	15 57 03.6	
	comp=Z,1µm,1.1s						
LUWI	Luwuk	29.69	228	P	P	15 57 00.8	-0.2
LUWI	Luwuk	29.69	228	P	P	15 56 59.7	-1.3
	comp=Z,23µmcomp=Z,13µmcomp=Z,1µm,1.0s						
CNSH	ChangSha	29.85	292	P	P	15 57 03.8	+1.6
CNSH				PP	PP	15 58 23.8	+2.9
CNSH				S	S	16 01 29.0	+2.0

CNSH				pmax	pmax		
	comp=Z,220nm,0.5s						
APSI	Ampana	30.40	230	P	P	15 57 06.8	-0.3
	comp=Z,16µmcomp=Z,2µm,1.5s						
SAUI	Saumlaki	30.53	206	P	P	15 57 09.8	+1.6
SAUI	Saumlaki	30.53	206	P	P	15 57 09.1	+0.9
	comp=Z,31µmcomp=Z,2µm,1.7s						
SAUI	Saumlaki	30.53	206	⇑P	P	15 57 09.5	+1.3
KKM	Kota Kinabalu	30.64	247	P	P	15 57 10.6	+1.3
KKM				IAmb	IAmb	15 57 14.1	
	comp=Z,688nm,0.7s						
KKM	Kota Kinabalu	30.64	247	P	P	15 57 11.0	+1.7
KKM	Kota Kinabalu	30.64	247	⇑P	P	15 57 10.5	+1.2
MPSI	Mapaga	30.86	234	P	P	15 57 11.8	+0.7
	comp=Z,8µmcomp=Z,486nm,0.8s						
TYV	Tymovskoe	30.96	358	eP	P	15 57 12.3	+0.8
TYV				eS	S	16 01 50.7	+7.0
TYV				pmax	pmax		
	comp=Z,328nm,1.0s						
TYV				pmax	pmax		
	comp=Z,3µm,2.9s						
TYV				smax	smax		
	comp=N,129nm,2.3s						
TYV				smax	smax		
	comp=E,182nm,2.3s						
TYV				smax	smax		
	comp=N,10µm,5.4s						
TYV				smax	smax		
	comp=E,5µm,5.4s						
KLR	Kul'dur	31.01	344	d iP	P	15 57 12.4	+0.5
KLR				pmax	pmax		
	comp=Z,1µm,0.8s						
HNS	HongShan	31.19	310	⇓P	P	15 57 14.8	+1.1
HNS				pP	pP	15 58 31.0	+0.3
HNS				PP	PP	15 58 38.8	+3.2
HNS				sP	sP	15 59 18.3	-2.8
HNS				PcP	PcP	15 59 57.5	+1.6
HNS				S	S	16 01 50.3	+2.7
HNS				ScP	ScP	16 02 56.3	-0.4
HNS				sS	sS	16 04 13.3	+3.3
HNS				ScS	ScS	16 06 55.3	+0.2
HNS				pmax	pmax		
	comp=Z,4µm,1.1s						
BJT	Baijiatuau	31.44	316	P	P	15 57 16.9	+1.1
BJI	Beijing	31.45	316	P	P	15 57 16.8	+0.9
BJI				pP	PP	15 58 38.8	+0.4
BJI				S	S	16 01 51.5	0.0
BJI				SS	SS	16 04 27.0	-2.7
BJI				pmax	pmax		
	comp=Z,2µm,1.3s						
BJI				pmax	pmax		
	comp=Z,6µm,3.9s						
GRNR	Gornyy	31.48	350	⇓iP	P	15 57 17.0	+1.0
GRNR				e		15 58 32.3	
GRNR				eS	S	16 01 59.3	+7.6
GRNR				pmax	pmax		
	comp=E,80nm,0.9s						
GRNR				pmax	pmax		
	comp=N,180nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,340nm,0.7s						
GRNR				smax	smax		
	comp=N,30nm,1.0s						
PCI	Palu	31.72	232	P	P	15 57 18.9	+0.3
	comp=N,10µmcomp=N,582nm,1.0s						
LYN	LuoYang	31.79	304	⇓iP	P	15 57 19.5	+0.6
LYN				pP	pwP	15 58 39.0	-2.9
LYN				PcP	PcP	15 59 59.5	+1.9
LYN				S	S	16 02 00.0	+3.1
LYN				ScP	ScP	16 02 58.8	-0.1
LYN				PcS	PcS	16 03 44.3	+1.4
LYN				sS	sS	16 04 20.0	+0.5
LYN				SS	SS	16 04 36.5	-0.2
LYN				ScS	ScS	16 06 56.0	-2.3
LYN				pmax	pmax		
	comp=N,3µm,1.0s						
LYN				pmax	pmax		
	comp=N,11µm,10.4s						
GULI	GuiLin	31.83	286	P	P	15 57 20.3	+0.9
GULI				pP	pwP	15 58 41.5	-1.1
GULI				sP	sP	15 59 26.0	-0.8
GULI				S	S	16 02 00.0	+2.2
GULI				SS	SS	16 04 39.3	+1.4
GULI				pmax	pmax		
	comp=N,3µm,1.6s						
GULI				pmax	pmax		
	comp=N,7µm,7.3s						
TATA	Tatamba Isabel	31.91	150	P	P	15 57 20.5	+0.4
SKR	Severo-Kuril's	32.12	14	eP	P	15 57 20.8	-0.7
SKR				eS	S	16 02 01.4	-0.1
SKR				e*SS	sS	16 04 24.3	+0.1
SKR				pmax	pmax		
	comp=Z,2µm,8.0s						
SKR				pmax	pmax		
	comp=Z,372nm,1.3s						
QIZ	Qiongzhong	32.57	274	IAmb	IAmb	15 57 31.1	
	comp=Z,2µm,1.7s						
QIZ	Qiongzhong	32.57	274	P	P	15 57 26.8	+1.0
QIZ				pP	pP	15 58 40.3	-2.9
QIZ				PP	PP	15 58 51.3	+0.3
QIZ				sP	sP	15 59 30.5	-2.8
QIZ				S	S	16 02 11.0	+1.8
QIZ				PcS	PcS	16 03 48.5	+2.4
QIZ				sS	sS	16 04 33.0	+0.8
QIZ				SS	SS	16 04 53.5	+0.8
QIZ				pmax	pmax		
	comp=Z,430nm,1.2s						
QIZ				pmax	pmax		
	comp=Z,4µm,5.7s						
QIZ	Qiongzhong	32.57	274	P	P	15 57 27.9	+2.1
SAVO	Savo Central	32.58	151	P	P	15 57 25.8	-0.1
ALEG	Aligegeo Malai	32.65	149	P	P	15 57 27.2	+0.7
HNR	Honiara	32.89	151	P	P	15 57 28.3	-0.2
HNR	Honiara	32.89	151	P	P	15 57 28.8	+0.3
HNR	Honiara	32.89	151	P	P	15 57 28.3	-0.2
HNR				pmax	pmax		
	comp=Z,2µm,0.9s						
HNR	Honiara	32.89	151	⇑P	P	15 57 27.6	-0.9
TIY	Taiyuan	32.96	309	eP	P	15 57 30.5	+1.5
TIY				PP	PP	15 58 57.3	+2.1
TIY				sP	sP	15 59 38.0	+1.2
TIY				S	S	16 02 12.0	-3.0
TIY				sS	sS	16 04 41.8	+3.7
TIY				pmax	pmax		
	comp=Z,9µm,4.7s						
ENH	Enshi	33.16	295	P	P	15 57 31.4	+0.6
TTSI	Tana Toraja	33.19	229	P	P	15 57 32.5	+1.4
HEH	HeiHe	33.19	340	eP	P	15 57 31.3	+0.6
HEH				pP	pwP	15 58 51.8	-1.9
HEH				sP	sP	15 59 40.0	+1.0
HEH				PcP	PcP	16 00 02.3	+1.1
HEH				S	S	16 02 19.3	+1.4
HEH				ScP	ScP	16 03 02.3	-1.1
HEH				sS	sS	16 04 43.3	+2.2
HEH				pmax	pmax		
	comp=Z,2µm,0.8s						
HEH				pmax	pmax		
	comp=Z,9µm,4.3s						
NKL	Nikolayevsk	33.35	356	eP	P	15 57 30.7	-1.2
NKL				eS	S	16 02 21.5	+1.3
NKL				pmax	pmax		
	comp=N,472nm,1.1s						
NKL				pmax	pmax		
	comp=E,628nm,1.1s						
NKL				pmax	pmax		
	comp=Z,2µm,1.1s						
NKL				smax	smax		
	comp=E,6µm,5.1s						
NKL				smax	smax		
	comp=N,3µm,5.4s						
NKL				MLR	MLR		
	comp=E,5µm,10.0s						
NKL				MLR	MLR		
	comp=N,8µm,11.0s						
NKL				MLR	MLR		
	comp=Z,13µm,12.0s						
COEN	Coen	33.63	182	P	P	15 57 36.1	+1.2
	comp=Z,0.0nmcomp=Z,3µm,1.0s						
COEN	Coen	33.63	182	P	P	15 57 35.8	+1.0
XLT	XiLinHaoTe	33.66	322	eP	P	15 57 35.8	+0.9
XLT				S	S	16 02 26.5	+1.0
XLT				ScS	ScS	16 07 09.5	+1.6
XLT				pmax	pmax		
	comp=Z,1µm,1.3s						
XLT				pmax	pmax		
	comp=Z,10µm,4.5s						
BKB	Balikpapan	34.18	235	P	P	15 57 41.1	+1.5
BKB	Balikpapan	34.18	235	⇑P	P	15 57 41.7	+2.2
KDU	Kakadu	34.41	201	P	P	15 57 41.5	0.0
	comp=Z,0.0nmcomp=Z,2µm,0.7s						
KDU	Kakadu	34.41	201	P	P	15 57 41.4	0.0
KDU	Kakadu	34.41	201	⇑P	P	15 57 41.4	0.0
XAN	Xi'an	34.45	302	⇓P	P	15 57 42.3	+0.7
XAN				PP	PP	15 59 14.8	+3.1
XAN				S	S	16 02 37.3	-0.3
XAN				sS	sS	16 05 04.5	+3.1
XAN				ScS	ScS	16 07 11.8	-0.7
XAN				pmax	pmax		
	comp=Z,1µm,1.0s						
XAN				pmax	pmax		
	comp=Z,11µm,9.9s						
KAPI	Kappang	34.62	227	P	P	15 57 44.2	+1.0
KAPI				IAmb	IAmb	15 57 45.9	
	comp=Z,632nm,0.9s						
KAPI	Kappang	34.62	227	ScS	ScS	16 07 13.3	-0.5
	comp=Z,7.4nm,0.4s,baz=118,slow=16,SNR=1.3						
KAPI	Kappang	34.62	227	P	P	15 57 43.9	+0.6
KAPI				P	P	15 57 43.9	+0.6
KAPI				S	S	16 02 41.9	+1.3
KAPI				S	S	16 02 41.9	+1.3
KAPI	Kappang	34.62	227	P	P	15 57 44.9	+1.6
KAPI	Kappang	34.62	227	P	P	15 57 44.2	+1.0
KAPI				pmax	pmax		
	comp=Z,632nm,1.0s						
KAPI	Kappang	34.62	227	P	P	15 57 44.2	+1.0
KAPI				S	S	16 02 41.2	+0.6
KAPI	Kappang	34.62	227	⇑P	P	15 57 44.3	+1.0
HURO	Huro Makira	34.72	149	P	P	15 57 42.9	-1.1
DRS	Darwin Rock St	34.74	204	P	P	15 57 44.4	+0.2
PEA0B	Petropavlovsk-	34.74	14	IAmb	IAmb	15 57 49.0	
	comp=Z,1µm,2.0s						
PEA0B	Petropavlovsk-	34.74	14	d iP	P	15 57 44.7	+0.9
PETK	Petropavlovsk-	34.74	14	P	P	15 57 44.9	+1.1
PETK	Petropavlovsk-	34.74	14	P	P	15 57 44.6	+0.8
	comp=Z,47nm,0.6s,baz=212,slow=6.9,SNR=70						
PETK				PP	PP	15 59 16.5	+1.8
	comp=Z,139nm,1.2s,baz=198,slow=8.8,SNR=3.7						
PETK				S	S	16 02 41.4	0.0
	comp=Z,4.0nm,0.6s,baz=197,slow=7.4,SNR=0.7						
PETK				ScP	ScP	16 03 07.4	-1.5
	comp=Z,79nm,1.1s,baz=208,slow=6.5,SNR=5.8						
NGOA	Tingoa Renbel	34.82	152	P	P	15 57 44.8	-0.1
PET	Petropavlovsk	34.89	15	P	P	15 57 46.4	+1.4
PET				IAmb	IAmb	15 57 48.0	
	comp=Z,643nm,1.4s						
PET	Petropavlovsk	34.89	15	P	P	15 57 46.4	+1.4
PET	Petropavlovsk	34.89	15	κ iP	P	15 57 46.3	+1.4
PET				i S	S	16 02 45.2	+1.6
PET				eSS	SS	16 05 32.3	-7.0
PET				pmax	pmax		
	comp=Z,351nm,1.3s						
PET				pmax	pmax		
	comp=Z,2µm,7.9s						
PET				pmax	pmax		
	comp=Z,1µm,8.6s						
PET				MLR	MLR		
	comp=Z,6µm,14.0s						
PET				MLR	MLR		
	comp=Z,7µm,15.0s						
PET	Petropavlovsk	34.89	15	P	P	15 57 45.7	+0.7
	comp=Z,5µmcomp=Z,320nm,1.5s						
PET				pP	pP	15 59 04.9	+2.1
	comp=Z,5µmcomp=Z,320nm,1.5s						
PET	Petropavlovsk	34.89	15	⇓P	P	15 57 46.3	+1.3
HHC	Hu-ho-hao-te	34.91	314	eP	P	15 57 46.5	+0.9
HHC				PP	PP	15 59 17.0	0.0
HHC				S	S	16 02 47.5	+2.8
HHC				sS	sS	16 05 06.8	-1.9
HHC				SS	SS	16 05 38.3	-2.1
HHC				ScS	ScS	16 07 17.3	+2.4
HHC				pmax	pmax		
	comp=Z,430nm,0.7s						
HHC				pmax	pmax		
	comp=Z,9µm,5.6s						
MTN	Manton Dam	35.03	203	P	P	15 57 46.9	+0.3
	comp=Z,0.0nmcomp=Z,2µm,0.8s						
MTN	Manton Dam	35.03	203	P	P	15 57 46.7	+0.1
MTN	Manton Dam	35.03	203	⇑P	P	15 57 46.7	+0.1
GYA	Guiyang	35.22	288	⇓P	P	15 57 50.3	+2.0
GYA				S	S	16 02 50.8	+1.1
GYA				pmax	pmax		
	comp=Z,3µm,0.7s						
HIA	Hailar	35.36	332	IAmb	IAmb	15 57 54.1	
	comp=Z,878nm,1.5s						
HIA	Hailar	35.36	332	P	P	15 57 50.2	+1.2
HIA	Hailar	35.36	332	P	P	15 57 49.7	+0.7
HIA				PcP	PcP	16 00 09.1	+1.5
SOEI	Soe	35.49	216	P	P	15 57 45.1	-5.6
SOEI	Soe	35.49	216	P	P	15 57 50.3	-0.4
MMRI	Maumere	35.76	220	P	P	15 57 52.9	+0.1
MMRI	Maumere	35.76	220	⇑P	P	15 57 52.8	0.0
MIDW	Midway	35.77	69	P	P	15 57 54.5	+1.8
MIDW				IAmb	IAmb	15 57 57.8	
	comp=Z,895nm,1.4s						
MIDW	Midway	35.77	69	P	P	15 57 53.9	+1.2
MIDW	Midway	35.77	69	⇓P	P	15 57 54.6	+1.9
BTO	Baotou	35.86	313	eP	P	15 57 56.0	+2.5
BTO				pP	pwP	15 59 18.5	+0.8
BTO				PP	PP	15 59 32.8	+5.5
BTO				S	S	16 03 03.8	+4.8
BTO				pmax	pmax		
	comp=Z,510nm,0.6s						
BTO				pmax	pmax		
	comp=Z,23µm,7.2s						
SBUM	Sibu	35.88	245	P	P	15 57 55.7	+1.8
BATI	Baumata	36.19	216	S	S	16 03 00.1	-4.2
	comp=Z,325nm,1.0s,baz=43,slow=19,SNR=13						
BATI				ScS	ScS	16 07 22.4	-0.1
	comp=Z,54nm,0.9s,baz=241,slow=18,SNR=2.4						
ZEA	Zeya	36.29	343	deP	P	15 57 57.2	+0.5
ZEA				e		15 59 30.0	
ZEA				e		16 00 06.8	
ZEA				eS	S	16 03 04.0	-0.8
ZEA				pmax	pmax		
	comp=E,900nm,4.5s						
ZEA				pmax	pmax		
	comp=N,2µm,2.9s						
ZEA				pmax	pmax		
	comp=Z,3µm,2.9s						
ZEA				pmax	pmax		
	comp=E,150nm,1.2s						
ZEA				pmax	pmax		
	comp=N,400nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,780nm,1.0s						
ZEA				pmax	pmax		
	comp=E,800nm,7.9s						
ZEA				pmax	pmax		
	comp=N,1µm,8.4s						
ZEA				pmax	pmax		
	comp=Z,2µm,7.2s						
ZEA				smax	smax		
	comp=N,2µm,6.5s						
ZEA				smax	smax		
	comp=E,4µm,6.7s						
LUES	Luesalemba Tem	37.00	143	P	P	15 58 03.9	+0.8
MTSU	Mount Surprise	37.76	180	P	P	15 58 10.9	+1.5
	comp=Z,645nm,1.1s						
MTSU	Mount Surprise	37.76	180	P	P	15 58 11.1	+1.7
SLVN	Son La	37.87	279	P	P	15 58 13.1	+2.8
KSM	Kuching	38.02	245	P	P	15 58 11.9	+0.3
CD2	Chengdu	38.14	295	⇓P	P	15 58 13.3	+0.8
CD2				PP	PP	15 59 50.0	-1.8
CD2				sP	sP	16 00 20.0	-1.8
CD2				S	S	16 03 31.3	-1.9
CD2				pmax	pmax		
	comp=Z,590nm,0.5s						
CD2				pmax	pmax		
	comp=Z,15µm,6.7s						
KNRA	Kununurra	38.52	205	P	P	15 58 16.2	+0.7
KNRA	Kununurra	38.52	205	P	P	15 58 16.1	+0.5
	comp=Z,0.0nmcomp=Z,2µm,1.5s						
PLAI	Plampang	38.73	225	P	P	15 58 17.3	-0.1
KMI	Kunming	38.74	286	⇓P	P	15 58 19.5	+1.9
KMI				pP	pwP	15 59 41.3	-2.4
KMI				PP	PP	15 59 58.5	+0.1
KMI				sP	sP	16 00 27.5	+0.5
KMI				ScP	ScP	16 03 25.5	+0.8
KMI				S	S	16 03 44.5	+2.0
KMI				sS	sS	16 06 10.3	+1.6
KMI				ScS	ScS	16 07 38.8	+1.3
KMI				pmax	pmax		
	comp=Z,690nm,1.6s						
KMI				pmax	pmax		
	comp=Z,7µm,3.6s						
LZH	Lanzhou	38.98	303	⇓P	P	15 58 21.3	+1.9
LZH				PP	PP	16 00 02.5	+1.7
LZH				S	S	16 03 47.0	+1.3
LZH				sS	sS	16 06 12.5	+0.4
LZH				SS	SS	16 06 54.5	-5.7
LZH				pmax	pmax		
	comp=Z,5µm,1.7s						
LZH				pmax	pmax		
	comp=Z,14µm,7.9s						
PZH	PanZhiHua	39.63	288	P	P	15 58 26.0	+1.2
PZH				PP	PP	16 00 06.0	-1.7
PZH				sP	sP	16 00 37.3	+2.8
PZH				ScP	ScP	16 03 27.0	-1.1
PZH				S	S	16 03 55.0	-0.4
PZH				PcS	PcS	16 04 13.5	+0.9
PZH				SS	SS	16 07 05.5	-7.5
PZH				ScS	ScS	16 07 41.5	-1.0
PZH				pmax	pmax		
	comp=Z,2µm,0.9s						
PZH				pmax	pmax		
	comp=Z,8µm,4.9s						
CTAO	Charters Tower	39.75	177	P	P	15 58 26.8	+1.3
CTAO				IAmb	IAmb	15 58 28.2	
	comp=Z,988nm,1.0s						
CTAO	Charters Tower	39.75	177	P	P	15 58 26.5	+1.0
CTAO	Charters Tower	39.75	177	P	P	15 58 26.8	+1.3
CTAO				pmax	pmax		
	comp=Z,988nm,1.0s						
CTAO	Charters Tower	39.75	177	⇑P	P	15 58 26.6	+1.1
MA2	Magadan	39.93	5	P	P	15 58 27.3	+0.8
MA2				IAmb	IAmb	15 58 31.1	
	comp=Z,648nm,1.1s						
MA2	Magadan	39.93	5	P	P	15 58 27.1	+0.6
MA2	Magadan	39.93	5	ceP	P	15 58 27.3	+0.8
MA2				pmax	pmax		
	comp=Z,1µm,1.7s						
MA2	Magadan	39.93	5	P	P	15 58 26.9	+0.4
	comp=Z,9µmcomp=Z,750nm,1.3s						
MA2	Magadan	39.93	5	P	P	15 58 27.5	+1.0
MA2				pP	pP	15 59 45.7	-0.8
SMY	Shemya	40.06	28	IAmb	IAmb	15 58 34.0	
	comp=Z,2µm,1.6s						
SMY	Shemya	40.06	28	P	P	15 58 28.7	+1.1
SMY	Shemya	40.06	28	⇓P	P	15 58 30.0	+2.4
CIT	Chita	40.10	331	eP	P	15 58 29.0	+0.9
CIT				e		15 59 58.0	
CIT				e		16 00 30.4	
CIT				e		16 00 43.0	
CIT				eS	S	16 04 00.8	-0.7
CIT				pmax	pmax		
	comp=Z,2µm,2.0s						
QIS	Mount Isa	40.45	187	P	P	15 58 32.1	+0.8
	comp=Z,0.0nmcomp=Z,873nm,1.3s						
QIS	Mount Isa	40.45	187	P	P	15 58 32.0	+0.8
WB0	Warramunga Arr	40.59	195	P	P	15 58 32.9	+0.6
WR8	Warramunga Arr	40.75	194	P	P	15 58 34.1	+0.5
WR8				IAmb	IAmb	15 58 35.8	
	comp=Z,1µm,1.1s						
WRAB	Tennant Creek	40.76	195	P	P	15 58 34.4	+0.7
WRAB	Tennant Creek	40.76	195	P	P	15 58 34.4	+0.7
WRAB				pmax	pmax		
	comp=Z,2µm,1.2s						
I07AU	WARRAMUNGA INF	40.77	195	P	P	15 58 35.2	+1.4
	baz=11,slow=8.6,SNR=5.5						
WRA	Warramunga Arr	40.77	195	P	P	15 58 34.5	+0.6
WRA	Warramunga Arr	40.77	195	P	P	15 58 34.4	+0.6
	comp=Z,551nm,0.4s,baz=16,slow=8.3,SNR=1002						
WRA				ScP	ScP	16 03 32.9	+0.5
	comp=Z,220nm,0.9s,baz=16,slow=4.0,SNR=20						
WRA				S	S	16 04 11.1	-0.8
	comp=Z,102nm,1.0s,baz=17,slow=13,SNR=18						
WRA				ScS	ScS	16 07 49.6	+0.5
	comp=Z,1.6nm,0.6s,baz=320,slow=37,SNR=1.7						
	comp=Z,551nm,0.4s						
JAGI	Jajag, Banyuwa	40.98	229	P	P	15 58 34.4	-1.3
JAGI				IAmb	IAmb	15 58 38.7	
	comp=Z,349nm,0.6s						
JAGI	Jajag, Banyuwa	40.98	229	P	P	15 58 36.1	+0.5
JAGI	Jajag, Banyuwa	40.98	229	⇑P	P	15 58 34.8	-0.9
ULN	Ulaanbaatar	41.10	322	P	P	15 58 37.5	+1.3
ULN	Ulaanbaatar	41.10	322	P	P	15 58 38.0	+1.7
ULN				P	P	15 58 38.0	+1.7
ULN				S	S	16 04 18.2	+1.8
ULN				S	S	16 04 18.2	+1.8
ULN	Ulaanbaatar	41.10	322	P	P	15 58 37.6	+1.3
ULN				pmax	pmax		
	comp=Z,3µm,1.5s						
ULN	Ulaanbaatar	41.10	322	P	P	15 58 37.8	+1.4
SONM	Songino Array	41.47	321	P	P	15 58 40.4	+1.2
	comp=Z,372nm,0.7s,baz=134,slow=8.1,SNR=758						
SONM				PP	PP	16 00 26.3	-0.5
	comp=Z,70nm,0.9s,baz=122,slow=9.0,SNR=1.5						
SONM				ScP	ScP	16 03 33.9	-1.1
	comp=Z,71nm,1.1s,baz=131,slow=3.1,SNR=8.6						
SONM				S	S	16 04 21.8	0.0
	comp=Z,17nm,1.1s,baz=124,slow=18,SNR=1.2						
	comp=Z,372nm,0.7s						
FITZ	Fitzroy Crossi	41.98	207	P	P	15 58 44.2	+0.7
FITZ	Fitzroy Crossi	41.98	207	ScP	ScP	16 03 37.2	0.0
	comp=Z,84nm,0.8s,baz=33,slow=7.9,SNR=5.2						
FITZ				S	S	16 04 25.5	-4.0
	comp=Z,119nm,1.0s,baz=352,slow=13,SNR=12						
FITZ				ScS	ScS	16 07 56.6	0.0
	comp=Z,27nm,1.0s,baz=134,slow=19,SNR=1.7						
VLAKA	Lakatoro	42.30	146	P	P	15 58 46.5	+0.5
TNCH	TengChong	42.56	286	⇓P	P	15 58 49.8	+1.5
TNCH				PP	PcP	16 00 33.8	+2.5
TNCH				sP	sP	16 00 57.0	-2.1
TNCH				ScP	ScP	16 03 40.5	+0.6
TNCH				PcS	PcS	16 04 21.3	-3.2
TNCH				S	S	16 04 38.3	0.0
TNCH				pmax	pmax		
	comp=Z,2µm,0.8s						
CHTO	Chiang Mai	42.81	277	P	P	15 58 51.4	+1.3
CHTO				IAmb	IAmb	15 58 54.0	
	comp=Z,880nm,1.2s						
CHTO	Chiang Mai	42.81	277	P	P	15 58 50.5	+0.3
CHTO				P	P	15 58 50.5	+0.3
CHTO				S	S	16 04 42.1	+0.5
CHTO				S	S	16 04 42.1	+0.5
CHTO	Chiang Mai	42.81	277	P	P	15 58 51.4	+1.3
CHTO	Chiang Mai	42.81	277	P	P	15 58 51.4	+1.3
CHTO				pmax	pmax		
	comp=Z,880nm,1.2s						
CHTO	Chiang Mai	42.81	277	P	P	15 58 51.1	+1.0
CHTO				S	S	16 04 40.7	-0.9
CHTO	Chiang Mai	42.81	277	⇓P	P	15 58 51.2	+1.0
CHTO	Chiang Mai	42.81	277	P	P	15 58 51.5	+1.3
CM31	Chiang Mai Arr	42.87	276	P	P	15 58 52.6	+2.1
	SNR=271						
CM31				P	P	15 58 52.6	+2.1
	SNR=271						
CM31				S	S	16 04 47.3	+4.8
CM31				S	S	16 04 47.3	+4.8
CMAR	Chiang Mai Arr	42.87	276	P	P	15 58 52.2	+1.7
	comp=Z,585nm,0.9s,baz=78,slow=7.6,SNR=946						
CMAR				PcP	PcP	16 00 32.3	+0.1
	comp=Z,65nm,0.7s,baz=97,slow=4.2,SNR=7.5						
CMAR				ScP	ScP	16 03 41.3	+0.3
	comp=Z,7.2nm,0.9s,baz=112,slow=4.4,SNR=4.4						
CMAR				S	S	16 04 43.4	+1.0
	comp=Z,3.2nm,1.0s,baz=78,slow=8.2,SNR=1.0						
CMAR				PKPPKP	P'P'df	16 30 29.9	-10
	comp=Z,1.4nm,0.9s,baz=316,slow=2.1,SNR=4.3						
	comp=Z,585nm,0.9s						
GTA	Gaotai	42.87	307	⇓P	P	15 58 52.0	+1.5
GTA				PP	PP	16 00 42.5	+2.0
GTA				S	S	16 04 47.0	+4.8
GTA				sS	sS	16 07 12.5	+1.4
GTA				ScS	ScS	16 08 02.5	+0.5
GTA				pmax	pmax		
	comp=Z,1µm,1.5s						
GTA				pmax	pmax		
	comp=Z,9µm,10.8s						
UGM	Wanagama	43.29	234	P	P	15 58 54.3	+0.3
UGM				IAmb	IAmb	15 58 58.4	
	comp=Z,1µm,1.4s						

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UGM   Wanagama          43.29 234   P      P       15 58 54.0  0.0
YAK   Yakutsk           43.36 350   P      P       15 58 53.9 +0.2
YAK   Yakutsk           43.36 350 ceP      P       15 58 53.7  0.0
YAK                                 pmax   pmax
      comp=Z,3µm,0.8s
YAK   Yakutsk           43.36 350  ⇓P      P       15 58 53.7  0.0
SEY   Seymchan          43.38   5 d iP     P       15 58 55.0 +1.1
SEY                                 pmax   pmax
      comp=Z,219nm,0.9s
MYKOM Kota Tinggi       43.51 251   IAmb   IAmb    15 58 59.8
      comp=Z,589nm,0.9s
MYKOM Kota Tinggi       43.51 251   P      P       15 58 57.7 +2.0
MYKOM Kota Tinggi       43.51 251  ⇓P      P       15 58 57.9 +2.3
JOHN  Johnston Islan    43.75  86   P      P       15 58 57.9 +0.4
JOHN  Johnston Islan    43.75  86   P      P       15 58 59.6 +2.1
BOD   Bodaibo           43.96 337  eP      P       15 58 57.8 -0.7
BOD                                 pmax   pmax
      comp=Z,390nm,2.3s
ADK   Adak              44.03  34   P      P       15 59 00.7 +1.6
ADK                                 IAmb   IAmb    15 59 01.9
      comp=Z,383nm,0.8s
ADK   Adak              44.03  34   P      P       15 59 00.7 +1.6
ADK   Adak              44.03  34   P      P       15 59 00.7 +1.6
ADK                                 pmax   pmax
      comp=Z,383nm,0.8s
ADK   Adak              44.03  34  ⇑P      P       15 58 59.2 +0.1
DVP   Devils Point      44.05 146   P      P       15 59 00.4 +0.6
AS16  Alice Springs     44.43 194   P      P       15 59 03.1 +0.4
      comp=Z,349nm,0.7s
AS01  Alice Springs     44.45 194   P      P       15 59 03.5 +0.6
ASAR  Alice Springs     44.46 194   P      P       15 59 02.9 -0.1
ASAR  Alice Springs     44.46 194   P      P       15 59 03.3 +0.3
      comp=Z,185nm,0.4s,baz=15,slow=9.9,SNR=5633
ASAR                                PcP    PcP     16 00 38.8 +1.3
      comp=Z,28nm,0.6s,baz=14,slow=5.2,SNR=2.4
ASAR                                PP     PP      16 00 56.4 +1.1
      comp=Z,69nm,0.9s,baz=16,slow=7.3,SNR=5.1
ASAR                                ScP    ScP     16 03 47.6 +0.3
      comp=Z,114nm,1.0s,baz=12,slow=4.7,SNR=13
ASAR                                S      S       16 05 04.2 -0.8
      comp=Z,207nm,0.9s,baz=14,slow=9.1,SNR=28
ASAR                                PKPPKP         16 30 32.1
      comp=Z,2.3nm,1.1s,baz=198,slow=1.8,SNR=4.1
      comp=Z,185nm,0.4s
ZAK   Zakamensk         44.49 323  eP      P       15 59 03.5 +0.6
ZAK                                e               16 05 05.8
ZAK                                 pmax   pmax
      comp=Z,1µm,1.3s
KOUNC Koumac, New Ca    44.64 153   P      P       15 59 05.7 +1.4
KOUNC Koumac, New Ca    44.64 153  ⇑P      P       15 59 05.2 +0.9
SRIT  Nakonsritamara    44.72 262   IAmb   IAmb    15 59 09.0
      comp=Z,537nm,0.9s
IRK   Irkutsk           44.86 326  eP      P       15 59 05.6  0.0
IRK                                eS      S       16 05 11.3 +1.3
IRK                                 pmax   pmax
      comp=Z,2µm,1.7s
IPM   Ipoh              44.91 256   P      P       15 59 07.7 +1.1
IPM                                 IAmb   IAmb    15 59 09.9
      comp=Z,550nm,0.8s
IPM   Ipoh              44.91 256   P      P       15 59 08.3 +1.7
IPM   Ipoh              44.91 256  ⇓P      P       15 59 08.1 +1.5
KULM  Kulim             44.93 257   IAmb   IAmb    15 59 10.4
      comp=Z,645nm,0.9s
KULM  Kulim             44.93 257   P      P       15 59 08.7 +1.9
KULM  Kulim             44.93 257  ⇓P      P       15 59 08.5 +1.7
BBJI  Bungbulang        45.23 237   P      P       15 59 09.1  0.0
EIDS  Eidsvold          45.43 172   P      P       15 59 10.6 +0.2
      comp=Z,0.0nmcomp=Z,267nm,1.1s
EIDS  Eidsvold          45.43 172   P      P       15 59 11.1 +0.7
EIDS  Eidsvold          45.43 172  ⇑P      P       15 59 10.4  0.0
ATKA  Atka Island       45.51  35   P      P       15 59 11.9 +1.2
ATKA                                IAmb   IAmb    15 59 12.9
      comp=Z,524nm,0.7s
ATKA  Atka Island       45.51  35   P      P       15 59 11.9 +1.2
ATKA  Atka Island       45.51  35  ⇓P      P       15 59 11.7 +1.0
INH   Isangel           46.13 147   P      P       15 59 16.7 +0.8
QLP   Quilpie           46.17 180   P      P       15 59 16.2 +0.1
      comp=Z,0.0nmcomp=Z,1µm,1.3s
QLP   Quilpie           46.17 180   P      P       15 59 16.8 +0.8
QLP   Quilpie           46.17 180  ⇑P      P       15 59 16.2 +0.1
GOMU  GeErMu            46.20 301   P      P       15 59 17.0 +0.3
GOMU                                PcP    pwP     16 00 45.0 -0.6
GOMU                                PP     PP      16 01 10.0 -1.2
GOMU                                S      S       16 05 31.0 +0.9
GOMU                                sS     sS      16 07 56.5 -4.6
GOMU                                pmax   pmax
      comp=Z,2µm,1.0s
GOMU                                pmax   pmax
      comp=Z,9µm,4.3s
RMQ   Roma              46.27 175   P      P       15 59 17.3 +0.5
      comp=Z,139nm,1.0s
MOY   Mondy             46.36 324  eP      P       15 59 17.9 +0.5
MOY                                 pmax   pmax
      comp=Z,2µm,1.9s
ZIRO  ZIRO              46.66 289  eP      P       15 59 18.6 -1.5
ZIRO                                IAmb   IAmb    15 59 23.4
      comp=Z,118nm,0.4s
BKNI  Bangkinang        46.67 251   P      P       15 59 17.1 -3.0
BKNI  Bangkinang        46.67 251   IAmb   IAmb    15 59 24.9
      comp=Z,574nm,0.7s
BKNI  Bangkinang        46.67 251   P      P       15 59 22.3 +2.1
BKNI  Bangkinang        46.67 251  ⇓P      P       15 59 22.1 +1.9
IMP   Imphal            46.72 286  eP      P       15 59 19.2 -1.3
IMP                                 IAmb   IAmb    15 59 21.9
      comp=Z,188nm,0.9s
DZM   Mont Dzumac       46.92 152   P      P       15 59 23.2 +1.3
DZM                                 IAmb   IAmb    15 59 24.5
      comp=Z,495nm,0.9s
DZM   Mont Dzumac       46.92 152  eP      P       15 59 21.6 -0.3
      comp=Z,1µm,1.1s
DZM                                epP     PcP     16 00 45.4 -0.9
      comp=Z,450nm,1.4s
DZM                                eS      S       16 05 40.0 +0.2
      comp=Z,7µm,27.1s
DZM                                eSS     ScS     16 08 46.2  +18
      comp=Z,6µm,29.8s
DZM                                eLQ     LQ      16 11 09.1
      comp=Z,11µm,32.4s
DZM                                eLR     LR      16 13 06.3
      comp=Z,4µm,24.2s
DZM   Mont Dzumac       46.92 152   P      P       15 59 22.5 +0.6
DZM   Mont Dzumac       46.92 152  ⇑P      P       15 59 23.1 +1.1
DZM   Mont Dzumac       46.92 152   P      P       15 59 23.3 +1.3
YATNC Mamie plateau,    47.11 151   P      P       15 59 24.2 +0.9
ONTNC Ouen Toro         47.13 152   P      P       15 59 22.3 -1.1
ONTNC Ouen Toro         47.13 152   P      P       15 59 22.7 -0.7
ONTNC Ouen Toro         47.13 152  ⇑P      P       15 59 21.9 -1.5
WRKA  Warakurna         47.30 200   P      P       15 59 25.2 +0.4
      comp=Z,0.0nmcomp=Z,226nm,0.9s
MNAI  Manna             47.31 244   P      P       15 59 26.2 +1.2
MBWA  Marble Bar        47.38 212   P      P       15 59 25.8 +0.4
MBWA                                IAmb   IAmb    15 59 27.4
      comp=Z,540nm,1.1s
MBWA  Marble Bar        47.38 212   P      P       15 59 25.8 +0.4
      comp=Z,0.0nmcomp=Z,457nm,0.8s
MBWA  Marble Bar        47.38 212   P      P       15 59 25.4  0.0
MBWA                                P      P       15 59 25.4  0.0
MBWA                                S      S       16 05 43.9 -2.3
MBWA                                S      S       16 05 43.9 -2.3
MBWA  Marble Bar        47.38 212   P      P       15 59 26.0 +0.6
MBWA  Marble Bar        47.38 212   P      P       15 59 25.5  0.0
MBWA                                S      S       16 05 42.9 -3.2
MBWA  Marble Bar        47.38 212  ⇑P      P       15 59 24.7 -0.7
OUENC Ouen Island, N    47.40 151   P      P       15 59 27.2 +1.8
PSI   Prapat            47.50 255   S      S       16 05 50.2 +1.8
      baz=129,slow=19
PSI   Prapat            47.50 255   P      P       15 59 28.7 +2.1
PSAD1 Pilbara Seismi    47.58 212   P      P       15 59 27.4 +0.5
      comp=Z,585nm,1.9s
TEZP  TEZPUR            47.63 288  eP      P       15 59 26.2 -1.1
PSAC2 Pilbara Seismi    47.64 211   P      P       15 59 27.8 +0.5
      comp=Z,612nm,1.4s
PSA00 Pilbara Seismi    47.67 212   P      P       15 59 28.0 +0.4
PSA00 Pilbara Seismi    47.67 212   P      P       15 59 28.3 +0.7
PINNC Pines Island,     47.84 151   P      P       15 59 30.0 +1.2
PINNC Pines Island,     47.84 151   P      P       15 59 30.8 +2.0
LHMI  Lhok Sumawe       48.36 259   P      P       15 59 35.7 +2.7
LHMI  Lhok Sumawe       48.36 259  ⇑P      P       15 59 34.9 +2.0
TAWA  Tawang            48.41 290  eP      P       15 59 32.3 -1.3
XMI   Christmas Isla    48.58 235   P      P       15 59 36.8 +2.2
XMI   Christmas Isla    48.58 235  ⇓P      P       15 59 34.6  0.0
NIKH  Nikolski High     48.77  36   P      P       15 59 36.2 +0.8
NIKH  Nikolski High     48.77  36   P      P       15 59 36.0 +0.6
      baz=246,SNR=17
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NIKH                                S      S       16 06 04.8 +0.3
      baz=246
LSA   Lhasa             48.97 292   P      P       15 59 40.5 +2.6
LSA   Lhasa             48.97 292   P      P       15 59 40.4 +2.6
LSA   Lhasa             48.97 292   P      P       15 59 40.3 +2.5
BRDH  Bariadhala        49.04 283   P      P       15 59 39.8 +1.9
      comp=Z,788nm,0.5s,baz=87,slow=11,SNR=67
BRDH                                ScP    ScP     16 04 07.6 +0.9
      comp=Z,147nm,0.3s,baz=83,slow=4.7,SNR=1.2
BRDH                                S      S       16 06 09.8 +0.6
      comp=Z,133nm,0.3s,baz=45,slow=19,SNR=7.8
      comp=Z,788nm,0.5s
GSI   Gunungsitoli      49.35 254   IAmb   IAmb    15 59 43.5
      comp=Z,971nm,1.2s
GSI   Gunungsitoli      49.35 254   P      P       15 59 41.5 +1.2
GSI   Gunungsitoli      49.35 254  ⇓P      P       15 59 40.9 +0.5
DGPR  DIGLIPUR          49.64 271  eP      P       15 59 41.7 -0.8
DGPR                                IAmb   IAmb    15 59 44.8
      comp=Z,261nm,1.1s
MSVF  Nonsavu           49.87 136   P      P       15 59 45.8 +1.6
MSVF  Nonsavu           49.87 136   P      P       15 59 45.9 +1.7
MSVF  Nonsavu           49.87 136   P      P       15 59 45.8 +1.6
MSVF                                pmax   pmax
      comp=Z,158nm,0.9s
MSVF  Nonsavu           49.87 136  ⇑P      P       15 59 46.1 +1.9
SPIA  Saint Paul Isl    49.94  30   IAmb   IAmb    15 59 47.0
      comp=Z,519nm,0.7s
SPIA  Saint Paul Isl    49.94  30   P      P       15 59 45.6 +1.6
      baz=241,SNR=12
SPIA                                S      S       16 06 22.7 +2.3
      baz=241
P08K  Saint George I    50.01  31   IAmb   IAmb    15 59 48.3
      comp=Z,2µm,1.4s
P08K  Saint George I    50.01  31   P      P       15 59 45.9 +1.4
      baz=242,SNR=12
P08K                                S      S       16 06 23.6 +2.2
      baz=242
BILL  Bilibino          50.09  11   P      P       15 59 46.0 +1.0
BILL                                IAmb   IAmb    15 59 49.0
      comp=Z,618nm,1.1s
BILL  Bilibino          50.09  11 deP      P       15 59 45.6 +0.6
BILL                                pmax   pmax
      comp=Z,570nm,1.0s
BILL  Bilibino          50.09  11   P      P       15 59 45.7 +0.6
UNV   Unalaska Valle    50.41  36   P      P       15 59 48.5 +1.0
UNV                                 IAmb   IAmb    15 59 52.6
      comp=Z,320nm,0.6s
UNV   Unalaska Valle    50.41  36   P      P       15 59 48.1 +0.6
      baz=247,SNR=34
UNV                                 S      S       16 06 26.5 -0.4
      baz=247
ARMA  Armidale          50.48 172   P      P       15 59 49.3 +0.8
ARMA                                IAmb   IAmb    15 59 51.1
      comp=Z,1µm,1.9s
ARMA  Armidale          50.48 172   P      P       15 59 48.9 +0.5
      comp=Z,0.0nmcomp=Z,304nm,1.8s
ARMA  Armidale          50.48 172   P      P       15 59 49.5 +1.0
ARMA  Armidale          50.48 172  ⇑P      P       15 59 49.5 +1.0
CMBY  CAMPBELL BAY      50.54 263  eP      P       15 59 48.2 -0.9
CMBY                                IAmb   IAmb    15 59 52.7
      comp=Z,131nm,0.8s
AKUT  Akutan            50.92  35   P      P       15 59 52.4 +1.1
AKUT  Akutan            50.92  35  ⇑P      P       15 59 52.3 +1.1
CMSA  Cobar Meteorol    51.12 179   P      P       15 59 53.9 +0.9
      comp=Z,0.0nmcomp=Z,553nm,1.3s
CMSA  Cobar Meteorol    51.12 179   P      P       15 59 54.1 +1.1
GTK   Tadong            51.33 290  eP      P       15 59 54.5 -0.4
GIRL  Giralia           51.50 216   IAmb   IAmb    15 59 59.8
      comp=Z,744nm,1.1s
GIRL  Giralia           51.50 216   P      P       15 59 57.0 +1.0
      comp=Z,491nm,0.7s
GIRL  Giralia           51.50 216   P      P       15 59 58.1 +2.1
GIRL  Giralia           51.50 216  ⇑P      P       15 59 57.8 +1.8
STKA  Stephens Creek    51.52 183   P      P       15 59 56.4 +0.4
STKA  Stephens Creek    51.52 183   P      P       15 59 56.4 +0.4
      comp=Z,0.0nmcomp=Z,2µm,1.3s
STKA  Stephens Creek    51.52 183   P      P       15 59 56.4 +0.4
      comp=Z,273nm,0.8s,baz=0.2,slow=9.6,SNR=266
STKA                                ScP    ScP     16 04 17.8 +0.8
      comp=Z,96nm,1.2s,baz=344,slow=6.7,SNR=4.7
STKA                                S      S       16 06 41.8 -0.7
      comp=Z,23nm,0.7s,baz=84,slow=19,SNR=6.3
STKA                                ScS    ScS     16 08 59.4 +0.1
      comp=Z,16nm,1.1s,baz=140,slow=18,SNR=1.4
      comp=Z,273nm,0.8s
STKA  Stephens Creek    51.52 183   P      P       15 59 56.3 +0.4
FALS  False Pass        52.46  35   P      P       16 00 02.9 +0.4
      baz=250,SNR=40
FALS                                S      S       16 06 54.0 -0.6
      baz=250
MEEK  Meekatharra       52.56 209   P      P       16 00 03.5 -0.2
      comp=Z,284nm,0.7s
MEEK  Meekatharra       52.56 209   P      P       16 00 03.7 +0.1
TIXI  Tiksi             52.58 354   P      P       16 00 03.0 -0.1
TIXI  Tiksi             52.58 354   P      P       16 00 03.0 -0.1
TIXI                                pmax   pmax
      comp=Z,411nm,1.0s
TIXI  Tiksi             52.58 354  ⇑P      P       16 00 02.9 -0.1
WMQ   Urumqi            52.62 310   P      P       16 00 05.8 +1.8
WMQ                                 PcP    PcP     16 01 09.3 +2.1
WMQ                                 PP     PP      16 02 13.0 +4.4
WMQ                                 ScP    ScP     16 04 16.0 -5.9
WMQ                                 S      S       16 07 01.0 +3.6
WMQ                                 ScS    ScS     16 09 05.3 -1.9
WMQ                                 pmax   pmax
      comp=Z,3µm,1.3s
WMQ                                 pmax   pmax
      comp=Z,11µm,3.7s
WMQ   Urumqi            52.62 310   P      P       16 00 05.9 +1.9
FORT  Forrest           52.75 198   P      P       16 00 05.5 +0.7
FORT                                IAmb   IAmb    16 00 06.9
      comp=Z,408nm,0.6s
GAMB  Gambell           52.85  23   P      P       16 00 06.5 +1.5
      baz=235,SNR=20
GAMB                                S      S       16 07 00.6 +1.1
      baz=235
EVN   Everest           52.85 290   P      P       16 00 07.8 +1.2
EVN   Everest           52.85 290  ⇓P      P       16 00 08.2 +1.6
NTLH  Newcastle Hard    52.93 172   P      P       16 00 07.7 +1.6
BBOO  Buckleboo         52.98 189   P      P       16 00 06.9 +0.4
BBOO  Buckleboo         52.98 189   P      P       16 00 07.0 +0.4
      comp=Z,0.0nmcomp=Z,508nm,1.3s
BBOO  Buckleboo         52.98 189   P      P       16 00 06.9 +0.4
WHYH  Whyalla           53.00 187   P      P       16 00 07.7 +1.1
PTPS  Port Pirie        53.09 187   P      P       16 00 08.3 +1.1
MGCD  Mangrove Creek    53.16 173   P      P       16 00 08.8 +1.1
      comp=Z,197nm,1.0s
MGCD  Mangrove Creek    53.16 173   P      P       16 00 09.4 +1.6
HTT   Hallett           53.25 186   P      P       16 00 09.1 +0.7
      comp=Z,121nm,1.1s
HTT   Hallett           53.25 186   P      P       16 00 09.2 +0.7
HTT   Hallett           53.25 186  ⇑P      P       16 00 09.2 +0.7
M11K  Mekoryuk          53.31  28   P      P       16 00 10.2 +1.7
      baz=243,SNR=10
M11K                                S      S       16 07 07.8 +2.0
      baz=243
S12K  Black Hills       53.48  35   IAmb   IAmb    16 00 12.1
      comp=Z,366nm,0.8s
S12K  Black Hills       53.48  35   P      P       16 00 09.9 +0.1
      baz=250
S12K                                S      S       16 07 06.8 -1.4
      baz=250
KIP   Kipapa            53.65  78   P      P       16 00 12.3 +0.8
KIP   Kipapa            53.65  78   P      P       16 00 13.8 +2.2
KIP   Kipapa            53.65  78   P      P       16 00 14.0 +2.4
KIP   Kipapa            53.65  78   P      P       16 00 12.3 +0.8
KIP                                 pmax   pmax
      comp=Z,197nm,0.8s
NFK   Norfolk Island    53.67 154   P      P       16 00 11.2 -0.2
      comp=Z,459nm,1.2s
SYDH  Sydney Hard Ro    53.67 173   P      P       16 00 12.7 +1.3
RIV   Riverview         53.78 173   P      P       16 00 13.3 +1.1
      comp=Z,0.0nmcomp=Z,498nm,1.5s
RIV   Riverview         53.78 173   P      P       16 00 13.0 +0.8
RIV   Riverview         53.78 173  ⇑P      P       16 00 13.8 +1.7
YNG   Young             54.00 176   P      P       16 00 14.7 +1.0
      comp=Z,277nm,1.2s
SDPT  Sand Point        54.22  35   P      P       16 00 16.0 +1.0
SDPT  Sand Point        54.22  35   P      P       16 00 15.6 +0.6
      baz=252,SNR=38
SDPT                                S      S       16 07 18.2 +0.2
      baz=252
WOLH  Wollongong Har    54.32 173   P      P       16 00 17.1 +1.1
CHNA  Chernabura Isl    54.55  36   P      P       16 00 18.3 +0.9
CHNA  Chernabura Isl    54.55  36   P      P       16 00 18.2 +0.8
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      baz=253,SNR=13
CHNA                                S      S       16 07 22.9 +0.6
      baz=253
M13K  Dall Lake         54.60  29   IAmb   IAmb    16 00 21.2
      comp=Z,544nm,0.8s
M13K  Dall Lake         54.60  29   P      P       16 00 19.9 +2.2
      baz=246,SNR=96
M13K                                S      S       16 07 26.4 +3.5
      baz=246
K13K  Kusilvak Mount    54.68  27   P      P       16 00 20.0 +1.8
      baz=244,SNR=141
K13K                                S      S       16 07 26.1 +2.3
      baz=244
KNTI  KHUNTI            54.79 285  eP      P       16 00 19.6 -0.2
CAN   Canberra          55.05 175   P      P       16 00 22.6 +1.4
CAN   Canberra          55.05 175   P      P       16 00 22.5 +1.2
      comp=Z,0.0nmcomp=Z,366nm,1.4s
CAN   Canberra          55.05 175   P      P       16 00 22.7 +1.4
CAN   Canberra          55.05 175   P      P       16 00 22.6 +1.4
CAN                                 pmax   pmax
      comp=Z,356nm,1.0s
CAN   Canberra          55.05 175  ⇑P      P       16 00 22.5 +1.2
CAN   Canberra          55.05 175   P      P       16 00 22.7 +1.4
CAN                                 pwP    pwP     16 01 55.5 +2.0
CNB   Canberra Magne    55.08 175   P      P       16 00 22.2 +0.8
      comp=Z,0.0nmcomp=Z,302nm,1.1s
CNB   Canberra Magne    55.08 175   P      P       16 00 22.8 +1.4
ZSN   Zaisan            55.11 315  eP      P       16 00 22.8 +1.3
ZSN                                eS      S       16 07 32.5 +2.4
ZSN                                 pmax   pmax
      comp=Z,1µm,1.0s
ZSN   Zaisan            55.11 315  eP      P       16 00 22.9 +1.3
      comp=Z,1µm,1.0s
ZSN                                eS      S       16 07 32.5 +2.4
O14K  Tigyukauivet M    55.13  31   P      P       16 00 22.9 +1.5
      baz=249,SNR=36
O14K                                S      S       16 07 31.0 +1.2
      baz=249
N14K  Kuskokwak Cree    55.18  30   IAmb   IAmb    16 00 24.6
      comp=Z,496nm,0.7s
N14K  Kuskokwak Cree    55.18  30   P      P       16 00 23.2 +1.5
      baz=248,SNR=78
N14K                                S      S       16 07 31.6 +1.2
      baz=248
TNA   Tin City          55.19  22   P      P       16 00 23.1 +1.4
      baz=238,SNR=14
TNA                                 S      S       16 07 32.0 +1.6
      baz=238
TNA   Tin City          55.19  22  ⇓P      P       16 00 23.0 +1.3
L14K  Kuka Creek        55.28  28   P      P       16 00 24.1 +1.6
      baz=246,SNR=139
L14K                                S      S       16 07 33.5 +1.8
      baz=246
KMBL  Kambalda          55.34 203   P      P       16 00 23.0 -0.2
      comp=Z,106nm,0.7s
M14K  Bethel            55.37  29   IAmb   IAmb    16 00 26.2
      comp=Z,578nm,0.8s
M14K  Bethel            55.37  29   P      P       16 00 24.8 +1.7
      baz=247,SNR=184
M14K                                S      S       16 07 35.3 +2.5
      baz=247
J14K  Nanvaranak Lak    55.50  26   P      P       16 00 25.6 +1.7
      baz=244,SNR=86
J14K                                S      S       16 07 36.5 +1.9
      baz=244
CHGN  Chignik           55.61  35   P      P       16 00 25.1 +0.3
      baz=253
CHGN                                S      S       16 07 34.8 -1.4
      baz=253
ANM   Nome              55.62  24   P      P       16 00 26.1 +1.4
ANM   Nome              55.62  24   P      P       16 00 26.1 +1.4
ANM                                 pmax   pmax
      comp=Z,300nm,1.0s
ANM   Nome              55.62  24   P      P       16 00 26.4 +1.7
      baz=241,SNR=51
ANM                                 S      S       16 07 35.7 -0.3
      baz=241
F14K  Arctic Creek      55.72  23   P      P       16 00 27.3 +1.9
      baz=240,SNR=145
F14K                                S      S       16 07 38.4 +1.1
      baz=240
O15K  Ungalikthiuk R    55.79  31   IAmb   IAmb    16 00 28.8
      comp=Z,414nm,0.7s
O15K  Ungalikthiuk R    55.79  31   P      P       16 00 27.5 +1.4
      baz=250,SNR=141
O15K                                S      S       16 07 40.3 +1.7
      baz=250
MORW  Morawa            55.82 210   P      P       16 00 26.1 -0.6
MORW  Morawa            55.82 210   P      P       16 00 26.7 +0.1
      comp=Z,0.0nmcomp=Z,354nm,0.8s
MORW  Morawa            55.82 210   P      P       16 00 26.6 -0.1
MORW  Morawa            55.82 210  ⇑P      P       16 00 26.6 -0.1
M15K  Kasigluk River    55.92  29   P      P       16 00 28.2 +1.2
      baz=248,SNR=76
M15K                                S      S       16 07 41.4 +1.2
      baz=248
L15K  Ungalak Mounta    55.94  28   P      P       16 00 28.1 +1.1
      baz=247,SNR=86
L15K                                S      S       16 07 41.9 +1.6
      baz=247
N15K  Kwethluk River    56.01  30   IAmb   IAmb    16 00 30.6
      comp=Z,427nm,0.8s
N15K  Kwethluk River    56.01  30   P      P       16 00 29.1 +1.5
      baz=249,SNR=134
N15K                                S      S       16 07 43.2 +1.8
      baz=249
K15K  Wolf Creek Mou    56.17  27   P      P       16 00 29.5 +0.8
K15K  Wolf Creek Mou    56.17  27   P      P       16 00 30.2 +1.6
      baz=246,SNR=124
K15K                                S      S       16 07 44.7 +1.4
      baz=246
POHA  Pohakuloa         56.23  79  ⇑P      P       16 00 32.3 +2.2
G15K  Niukluk           56.33  24   P      P       16 00 30.9 +1.3
      baz=242,SNR=72
G15K                                S      S       16 07 46.5 +1.2
      baz=242
ZAA0  Zalesovo Array    56.35 322   IAmb   IAmb    16 00 32.2
      comp=Z,690nm,0.8s
ZALV  Zalesovo Beam     56.35 322   P      P       16 00 30.2 +0.2
ZALV  Zalesovo Beam     56.35 322   P      P       16 00 30.4 +0.3
      comp=Z,746nm,0.8s,baz=104,slow=6.1,SNR=784
ZALV                                PcP    PcP     16 01 21.2  0.0
      comp=Z,79nm,0.7s,baz=108,slow=4.7,SNR=1.8
ZALV                                S      S       16 07 44.1 -1.8
      comp=Z,11nm,1.0s,baz=108,slow=12,SNR=3.0
ZALV                                PKPPKP P'P'df  16 30 18.2 -4.3
      comp=Z,0.8nm,0.5s,baz=316,slow=4.0,SNR=4.9
ZALV                                PKP2bc         16 30 30.0
      comp=Z,1.1nm,0.7s,baz=303,slow=2.9,SNR=3.9
ZALV                                P4KPbc         16 37 38.3
      comp=Z,1.1nm,0.5s,baz=128,slow=4.0,SNR=5.1
      comp=Z,746nm,0.8s
JHSG  JHARSUGUGA        56.38 283  eP      P       16 00 31.6 +0.8
MLH   Mauna Loa         56.41  79   P      P       16 00 33.4 +2.0
F15K  North Star Dit    56.44  23   P      P       16 00 32.1 +1.7
      baz=241,SNR=139
F15K                                S      S       16 07 47.1 +0.3
      baz=241
UWE   Uwekahuna         56.52  79   P      P       16 00 33.8 +1.8
P16K  Nushagak River    56.64  32   P      P       16 00 33.8 +1.9
      baz=252,SNR=46
P16K                                S      S       16 07 50.6 +1.1
      baz=252
N16K  Nishlik Lake      56.73  30   P      P       16 00 34.2 +1.6
      baz=250,SNR=160
N16K                                S      S       16 07 52.2 +1.4
      baz=250
O16K  Kokwok River B    56.77  31   P      P       16 00 34.2 +1.3
      baz=252,SNR=153
O16K                                S      S       16 07 52.6 +1.5
      baz=252
MK31  Makanchi Array    56.77 313  iP      P       16 00 34.4 +1.2
MKAR  Makanchi Array    56.77 313   P      P       16 00 33.3 +0.1
MKAR  Makanchi Array    56.77 313   P      P       16 00 34.4 +1.2
      comp=Z,474nm,0.6s,baz=93,slow=9.0,SNR=2187
MKAR                                PcP    PcP     16 01 22.5 -0.6
      comp=Z,65nm,0.7s,baz=96,slow=5.3,SNR=3.5
MKAR                                PP     PP      16 02 47.6 +2.3
      comp=Z,26nm,0.6s,baz=100,slow=9.0,SNR=3.7
MKAR                                ScP    ScP     16 04 39.8 -0.2
      comp=Z,23nm,0.8s,baz=108,slow=4.7,SNR=2.9
MKAR                                S      S       16 07 52.4 +0.6
      comp=Z,4.9nm,0.8s,baz=86,slow=21,SNR=2.7
MKAR                                ScS    ScS     16 09 32.7 -4.3
      comp=Z,2.5nm,0.8s,baz=122,slow=9.2,SNR=1.7
MKAR                                PKPPKP P'P'df  16 30 16.2 -5.6
      comp=Z,2.5nm,0.9s,baz=290,slow=2.1,SNR=8.7
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MKAR				PKP2bc		16 30 32.1	
	comp=Z,2.8nm,1.0s,baz=276,slow=4.2,SNR=6.6						
MKAR				P4KPbc		16 37 40.6	
	comp=Z,2.1nm,0.8s,baz=89,slow=5.5,SNR=13						
	comp=Z,474nm,0.6s						
MKAR	Makanchi Array	56.77	313	ceP	P	16 00 34.4	+1.2
MKAR				pmax	pmax		
	comp=Z,477nm,0.6s						
MILA	Mila	56.79	175	P	P	16 00 34.4	+1.1
	comp=Z,89nm,1.1s						
BLDU	Ballidu	56.82	209	P	P	16 00 33.9	+0.2
	comp=Z,466nm,0.9s						
BLDU	Ballidu	56.82	209	P	P	16 00 33.8	+0.2
M16K	Timber Creek	56.83	29	P	P	16 00 34.7	+1.4
	baz=250,SNR=93						
M16K				S	S	16 07 51.9	-0.1
	baz=250						
L16K	Owhat River	56.84	28	P	P	16 00 34.4	+1.1
L16K	Owhat River	56.84	28	P	P	16 00 34.3	+1.1
	baz=249,SNR=120						
L16K				S	S	16 07 53.2	+1.1
	baz=249						
H16K	Elim	56.85	24	P	P	16 00 34.4	+1.0
	baz=244,SNR=78						
H16K				S	S	16 07 53.5	+1.4
	baz=244						
J16K	Anvik River	56.95	26	P	P	16 00 35.9	+1.8
	baz=247,SNR=139						
J16K				S	S	16 07 54.8	+1.3
	baz=247						
MAKZ	Makanchi	56.99	313	P	P	16 00 35.6	+0.9
MAKZ	Makanchi	56.99	313	P	P	16 00 35.6	+0.9
MAKZ				pmax	pmax		
	comp=Z,1µm,1.1s						
MAKZ	Makanchi	56.99	313	⇓P	P	16 00 35.9	+1.2
MAKZ	Makanchi	56.99	313	P	P	16 00 36.0	+1.2
MAKZ				sP	PP	16 02 45.8	-1.5
CHIR	Chirikof Islan	57.00	36	P	P	16 00 36.2	+1.7
CHIR	Chirikof Islan	57.00	36	P	P	16 00 36.1	+1.6
	baz=256,SNR=24						
CHIR				S	S	16 07 55.6	+1.3
	baz=256						
R17L	Mt. Peulik Vol	57.06	33	P	P	16 00 35.0	+0.1
	baz=254,SNR=39						
R17L				S	S	16 07 53.4	-1.7
	baz=254						
BRAT	Ballarat	57.11	180	P	P	16 00 37.0	+1.6
TOO	Toolangi	57.14	179	P	P	16 00 36.8	+1.1
	comp=Z,0.0nmcomp=Z,103nm,1.5s						
TOO	Toolangi	57.14	179	⇑P	P	16 00 37.0	+1.3
G16K	Koyuk River	57.14	24	P	P	16 00 36.3	+1.0
	baz=244,SNR=21						
G16K				S	S	16 07 56.1	+0.3
	baz=244						
RAGD	RAYAGADA	57.14	281	eP	P	16 00 37.0	+0.8
RAGD				IAmb	IAmb	16 00 39.0	
	comp=Z,244nm,0.8s						
I17K	Unalakleet	57.15	26	P	P	16 00 37.3	+1.9
	baz=246,SNR=86						
I17K				S	S	16 07 57.9	+2.0
	baz=246						
KLBR	Kellerberrin	57.19	207	P	P	16 00 36.3	+0.1
	comp=Z,780nm,1.0s						
KLBR	Kellerberrin	57.19	207	P	P	16 00 36.3	+0.1
Q16K	King Salmon	57.20	32	P	P	16 00 36.1	+0.3
	baz=254,SNR=21						
Q16K				S	S	16 07 57.2	+0.5
	baz=254						
O17K	Koliganek Bris	57.30	31	P	P	16 00 37.9	+1.4
	baz=252,SNR=316						
O17K				S	S	16 07 59.3	+1.3
	baz=252						
P17K	Kvichak River	57.45	32	P	P	16 00 38.2	+0.7
	baz=253,SNR=34						
P17K				S	S	16 08 00.9	+1.0
	baz=253						
Q17K	Contact Creek	57.48	33	P	P	16 00 37.6	-0.3
	baz=254,SNR=36						
Q17K				S	S	16 07 58.9	-1.7
	baz=254						
C16K	Lisburne Hills	57.48	20	P	P	16 00 38.7	+1.1
	baz=239,SNR=78						
C16K				S	S	16 08 02.7	+2.6
	baz=239						
N17K	Nushagak Hills	57.49	30	IAmb	IAmb	16 00 41.1	
	comp=Z,546nm,1.4s						
N17K	Nushagak Hills	57.49	30	P	P	16 00 39.6	+1.8
	baz=252,SNR=133						
N17K				S	S	16 08 03.6	+3.1
	baz=252						
L17K	Donlin	57.51	28	P	P	16 00 39.8	+1.9
	baz=250,SNR=205						
L17K				S	S	16 08 02.8	+2.1
	baz=250						
VIS	Vishakhapatnam	57.58	279	eP	P	16 00 40.0	+0.9
VIS				IAmb	IAmb	16 00 42.0	
	comp=Z,133nm,0.8s						
ALBI	Allahabad	57.60	288	eP	P	16 00 40.4	+1.2
J17K	VABM Dome	57.63	26	P	P	16 00 40.6	+1.9
	baz=248,SNR=262						
J17K				S	S	16 08 04.4	+2.2
	baz=248						
M17K	Holitna River	57.65	29	P	P	16 00 40.9	+1.9
	baz=251,SNR=160						
M17K				S	S	16 08 04.1	+1.6
	baz=251						
K17K	Iditarod	57.72	27	IAmb	IAmb	16 00 42.8	
	comp=Z,701nm,1.0s						
K17K	Iditarod	57.72	27	P	P	16 00 41.3	+2.0
	baz=250						
K17K				S	S	16 08 05.3	+2.0
	baz=250						
BLSP	Bilaspur	57.82	284	eP	P	16 00 41.5	+0.7
BLSP				IAmb	IAmb	16 00 42.9	
	comp=Z,128nm,0.8s						
G17K	Kiwalik Mounta	57.83	24	P	P	16 00 41.5	+1.4
	baz=246,SNR=198						
G17K				S	S	16 08 06.2	+1.5
	baz=246						
H17K	Granite Mounta	57.88	25	P	P	16 00 42.1	+1.6
	baz=247,SNR=204						
H17K				S	S	16 08 06.8	+1.4
	baz=247						
D17K	Noatak River	57.94	21	P	P	16 00 42.4	+1.6
	baz=242,SNR=192						
D17K				S	S	16 08 07.4	+1.4
	baz=242						
SII	Sitkinak Islan	57.95	35	P	P	16 00 43.4	+2.3
SII	Sitkinak Islan	57.95	35	P	P	16 00 42.5	+1.4
	baz=257,SNR=61						
SII				S	S	16 08 07.7	+1.2
	baz=257						
F17K	Baldwin Pennin	58.01	23	IAmb	IAmb	16 00 44.3	
	comp=Z,290nm,0.7s						
F17K	Baldwin Pennin	58.01	23	P	P	16 00 42.9	+1.7
	baz=244						
F17K				S	S	16 08 06.3	-0.5
	baz=244						
Q18K	Katmai Hardscr	58.02	32	P	P	16 00 41.4	-0.2
	baz=255,SNR=138						
Q18K				S	S	16 08 05.2	-2.4
	baz=255						
R18K	Karluk	58.04	34	P	P	16 00 41.6	+0.1
	baz=256						
R18K				S	S	16 08 06.0	-1.5
	baz=256						
E17K	Hotham Inlet	58.09	22	P	P	16 00 43.5	+1.8
	baz=243,SNR=214						
E17K				S	S	16 08 09.4	+1.5
	baz=243						
P18K	Big Mountain,	58.11	32	P	P	16 00 42.3	+0.2
	baz=254,SNR=77						
P18K				S	S	16 08 07.2	-1.3
	baz=254						
N18K	Kilae Creek	58.15	30	P	P	16 00 44.0	+1.7
	baz=253,SNR=155						
N18K				S	S	16 08 10.1	+1.1
	baz=253						
RDOG	Red Dog Mine	58.16	21	P	P	16 00 44.0	+1.6
	baz=242,SNR=73						
RDOG				S	S	16 08 10.7	+1.8
	baz=242						
MUN	Mundaring	58.20	208	P	P	16 00 43.4	+0.3
	comp=Z,200nm,1.0s						
MUN	Mundaring	58.20	208	P	P	16 00 43.8	+0.7
O18K	Koktuh Hills	58.24	31	P	P	16 00 44.4	+1.4
	baz=254,SNR=264						
O18K				S	S	16 08 11.1	+1.0
	baz=254						
L18K	Granite Mounta	58.25	28	P	P	16 00 44.9	+1.8
	baz=251,SNR=181						
L18K				S	S	16 08 11.2	+1.0
	baz=251						
C17K	DeLong Mountai	58.28	20	P	P	16 00 44.7	+1.6
	baz=241,SNR=71						
C17K				S	S	16 08 10.9	+0.5
	baz=241						
MTKN	Mount Kenneth	58.36	209	P	P	16 00 43.0	-1.1
	comp=Z,462nm,0.9s						
MTKN	Mount Kenneth	58.36	209	P	P	16 00 45.2	+1.1
M18K	Stony River	58.42	29	P	P	16 00 45.9	+1.8
	baz=253,SNR=189						
M18K				S	S	16 08 12.7	+0.4
	baz=253						
PTH	Pithoragarh	58.47	293	eP	P	16 00 46.4	+1.1
PTH				IAmb	IAmb	16 00 47.9	
	comp=Z,187nm,0.6s						
NWAO	Narrogin (SRO)	58.57	207	P	P	16 00 46.1	+0.6
NWAO				IAmb	IAmb	16 00 47.5	
	comp=Z,595nm,1.4s						
NWAO	Narrogin (SRO)	58.57	207	P	P	16 00 46.0	+0.4
	comp=Z,553nm,1.0s						
NWAO	Narrogin (SRO)	58.57	207	ScP	ScP	16 04 48.1	+0.2
	comp=Z,77nm,1.0s,baz=8.2,slow=5.1,SNR=4.0						
NWAO				S	S	16 08 15.4	+0.5
	comp=Z,30nm,1.1s,baz=38,slow=18,SNR=5.6						
NWAO	Narrogin (SRO)	58.57	207	P	P	16 00 45.9	+0.4
NWAO				S	S	16 08 15.7	+0.8
NWAO	Narrogin (SRO)	58.57	207	P	P	16 00 46.0	+0.4
NWAO	Narrogin (SRO)	58.57	207	P	P	16 00 46.4	+0.9
NWAO	Narrogin (SRO)	58.57	207	P	P	16 00 46.1	+0.6
NWAO				pmax	pmax		
	comp=Z,595nm,1.4s						
H18K	Honhosa River	58.57	25	P	P	16 00 46.3	+1.2
	baz=248						
H18K				S	S	16 08 11.8	-2.4
	baz=248						
OHAK	Old Harbor	58.58	34	P	P	16 00 46.3	+1.1
OHAK	Old Harbor	58.58	34	P	P	16 00 46.3	+1.1
	baz=258,SNR=68						
OHAK				S	S	16 08 14.6	+0.2
	baz=258						
J18K	Innoko River	58.65	27	P	P	16 00 46.8	+1.1
	baz=251,SNR=102						
J18K				S	S	16 08 15.7	+0.5
	baz=251						
F18K	Selawik	58.66	23	P	P	16 00 46.9	+1.3
	baz=246,SNR=107						
F18K				S	S	16 08 15.8	+0.7
	baz=246						
E18K	Tukpahlearik C	58.66	22	IAmb	IAmb	16 00 49.0	
	comp=Z,449nm,1.0s						
E18K	Tukpahlearik C	58.66	22	P	P	16 00 47.6	+1.9
	baz=244						
E18K				S	S	16 08 17.0	+1.8
	baz=244						
G18K	Tagagawik	58.74	24	P	P	16 00 47.5	+1.2
	baz=247,SNR=319						
G18K				S	S	16 08 16.2	-0.2
	baz=247						
O19K	Port Alsworth	58.76	31	P	P	16 00 47.9	+1.4
	baz=255,SNR=66						
O19K				S	S	16 08 17.7	+1.0
	baz=255						
Q19K	Cape Douglas,	58.78	32	P	P	16 00 46.5	-0.1
	baz=256,SNR=24						
Q19K				S	S	16 08 14.2	-2.9
	baz=256						
N19K	Bonanza Creek	58.85	30	P	P	16 00 48.9	+1.6
	baz=254,SNR=242						
N19K				S	S	16 08 18.6	+0.6
	baz=254						
UZB	Uzynbulak	58.86	309	eP	P	16 00 48.8	+1.1
UZB				eS	S	16 08 20.8	+2.0
UZB				pmax	pmax		
	comp=Z,652nm,1.4s						
UZB	Uzynbulak	58.86	309	eP	P	16 00 48.8	+1.1
	comp=Z,652nm,1.4s						
UZB				eS	S	16 08 20.9	+2.0
JOSI	Joshimath	58.94	294	eP	P	16 00 49.6	+1.2
C18K	Utukok River	59.01	20	P	P	16 00 49.1	+1.0
	baz=243						
C18K				S	S	16 08 20.3	+0.6
	baz=243						
GCSA	Galena City Sc	59.02	25	P	P	16 00 49.0	+0.9
	baz=250,SNR=37						
GCSA				S	S	16 08 20.4	+0.7
	baz=250						
L19K	White Mountain	59.06	29	P	P	16 00 50.0	+1.4
	baz=253,SNR=204						
L19K				S	S	16 08 20.7	+0.1
	baz=253						
KDAK	Kodiak Island	59.07	34	P	P	16 00 49.5	+0.9
	baz=258						
KDAK				S	S	16 08 21.1	+0.5
	baz=258						
KDAK	Kodiak Island	59.07	34	⇑P	P	16 00 48.1	-0.4
KDAK	Kodiak Island	59.07	34	P	P	16 00 49.1	+0.6
KDAK				PcP	PcP	16 01 32.7	+0.8
KDAK				pP	pP	16 02 14.7	-2.3
KPKS	Kokpek	59.11	309	d iP	P	16 00 50.5	+1.2
KPKS				eS	S	16 08 24.2	+2.3
KPKS	Kokpek	59.11	309	⇓iP	P	16 00 50.6	+1.2
KPKS				eS	S	16 08 24.3	+2.3
B18K	Kokolik River	59.14	19	P	P	16 00 50.7	+1.8
	baz=242,SNR=102						
B18K				S	S	16 08 20.2	-1.0
	baz=242						
P19K	Oil Pt	59.16	32	P	P	16 00 49.8	+0.6
	baz=256,SNR=94						
P19K				S	S	16 08 20.1	-1.7
	baz=256						
M19K	Big River Lodg	59.19	29	P	P	16 00 51.0	+1.6
M19K	Big River Lodg	59.19	29	P	P	16 00 51.0	+1.6
	baz=254,SNR=115						
M19K				S	S	16 08 23.8	+1.6
	baz=254						
J19K	Poorman	59.28	26	P	P	16 00 51.3	+1.3
	baz=251,SNR=255						
J19K				S	S	16 08 24.8	+1.6
	baz=251						
Q20K	Shuyak Island	59.34	33	P	P	16 00 51.0	+0.6
	baz=258,SNR=75						
Q20K				S	S	16 08 22.5	-1.5
	baz=258						
TDK	Taldyqorghan	59.36	311	eP	P	16 00 52.2	+1.4
TDK				eS	S	16 08 27.2	+2.4
TDK				pmax	pmax		
	comp=Z,872nm,1.4s						
TDK	Taldyqorghan	59.36	311	eP	P	16 00 52.2	+1.4
	comp=Z,872nm,1.4s						
TDK				eS	S	16 08 27.3	+2.4
G19K	Purcell Mounta	59.43	24	P	P	16 00 52.1	+1.2
	baz=249,SNR=315						
G19K				S	S	16 08 26.0	+1.0
	baz=249						
F19K	Shaleruckik Mo	59.43	23	P	P	16 00 51.6	+0.7
	baz=248						
F19K				S	S	16 08 25.2	+0.2
	baz=248						
H19K	Roundabout Mou	59.46	25	P	P	16 00 52.7	+1.6
	baz=250,SNR=442						
H19K				S	S	16 08 27.4	+2.1
	baz=250						
O20K	Slope Mountain	59.56	31	P	P	16 00 52.3	+0.3
	baz=256,SNR=29						
O20K				S	S	16 08 25.0	-1.9
	baz=256						
L20K	Farewell, AK	59.58	28	P	P	16 00 53.6	+1.6
	baz=254,SNR=135						
L20K				S	S	16 08 28.6	+1.5
	baz=254						
KURK	Kurchatov	59.59	318	P	P	16 00 53.0	+0.8
KURK	Kurchatov	59.59	318	P	P	16 00 53.3	+1.1
KURK				S	S	16 08 26.9	-0.6
KURK	Kurchatov	59.59	318	P	P	16 00 53.1	+0.8
KURK	Kurchatov	59.59	318	⇓P	P	16 00 52.9	+0.8
KURK	Kurchatov	59.59	318	P	P	16 00 52.9	+0.7
KURBB	Kurchatov Arra	59.64	318	P	P	16 00 53.1	+0.6
	comp=Z,1µm,0.6s,baz=96,slow=7.4,SNR=248						
KURBB				PP	PP	16 03 11.6	+1.2
	comp=Z,151nm,1.1s,baz=95,slow=7.9,SNR=3.1						
KURBB				S	S	16 08 27.1	-1.0
	comp=Z,32nm,0.9s,baz=94,slow=10.0,SNR=13						
KURBB				PKPPKP	P'P'df	16 30 14.7	-2.7
	comp=Z,1.4nm,0.9s,baz=289,slow=3.4,SNR=7.6						
KURBB				PKP2bc		16 30 25.3	
	comp=Z,4.2nm,1.0s,baz=288,slow=2.7,SNR=6.3						
KURBB				P4KPbc		16 37 51.9	
	comp=Z,0.1nm,0.3s,baz=92,slow=4.6,SNR=4.2						
	comp=Z,1µm,0.6s						
KURBB	Kurchatov Arra	59.64	318	P	P	16 00 53.4	+0.8
C19K	Lookout Ridge	59.73	20	P	P	16 00 54.9	+1.9
	baz=245						
C19K				S	S	16 08 30.1	+1.3
	baz=245						
TARG	Taragay, Kyrgy	59.75	307	IAmb	IAmb	16 00 59.6	
	comp=Z,1µm,1.2s						
K20K	Telida	59.75	27	P	P	16 00 55.0	+1.8
	baz=253,SNR=271						
K20K				S	S	16 08 30.7	+1.6
	baz=253						
ARXS	Arharly	59.75	310	i P	P	16 00 54.6	+1.0
A19K	Wainwright	59.76	19	P	P	16 00 54.9	+1.9
	baz=242						
A19K				S	S	16 08 31.0	+2.1
	baz=242						
M20K	Styx River	59.76	29	P	P	16 00 54.9	+1.6
	baz=255						
M20K				S	S	16 08 31.7	+2.2
	baz=255						
E19K	Redstone River	59.87	22	P	P	16 00 55.4	+1.5
	baz=248						
E19K				S	S	16 08 32.1	+1.6
	baz=248						
HOM	Homer	59.95	32	P	P	16 00 54.7	+0.2
	baz=258,SNR=6.5						
HOM				S	S	16 08 29.6	-2.1
	baz=258						
KLP	Kalpa	59.95	296	eP	P	16 00 56.6	+1.2
KLP				IAmb	IAmb	16 00 59.0	
	comp=Z,153nm,0.9s						
J20K	Nowinta River	59.95	26	P	P	16 00 56.3	+1.8
	baz=253,SNR=484						
J20K				S	S	16 08 33.1	+1.4
	baz=253						
D19K	Kuna River	59.96	21	IAmb	IAmb	16 00 57.4	
	comp=Z,595nm,1.1s						
D19K	Kuna River	59.96	21	P	P	16 00 55.8	+1.3
	baz=246						
D19K				S	S	16 08 33.0	+1.3
	baz=246						
I20K	Naaghedeneel	60.01	26	P	P	16 00 56.6	+1.9
	baz=252,SNR=179						
I20K				S	S	16 08 34.5	+2.2
	baz=252						
SPCR	Spurr Chakacha	60.02	30	P	P	16 00 55.7	+0.7
	baz=256,SNR=21						
SPCR				S	S	16 08 32.1	-0.7
	baz=256						
H20K	Anotleneega Mo	60.06	25	P	P	16 00 56.8	+1.6
	baz=251,SNR=457						
H20K				S	S	16 08 34.3	+1.2
	baz=251						
NRIK	Noril'sk	60.10	340	P	P	16 00 55.9	+0.5
	comp=Z,812nm,0.6s,baz=111,slow=8.1,SNR=715						
NRIK				ScP	ScP	16 04 53.6	-0.6
	comp=Z,66nm,1.0s,baz=109,slow=4.8,SNR=3.7						
NRIK				S	S	16 08 33.0	-0.3
	comp=Z,19nm,1.0s,baz=204,slow=20,SNR=22						
NRIK				ScS	SKKSac	16 09 59.0	-1.6
	comp=Z,18nm,1.1s,baz=4.7,slow=9.6,SNR=1.2						
NRIK				PKPPKP	P'P'df	16 30 16.6	-0.2
	comp=Z,1.2nm,0.6s,baz=270,slow=3.9,SNR=3.6						
NRIK				P4KPbc		16 37 54.0	
	comp=Z,3.0nm,0.5s,baz=110,slow=4.7,SNR=5.3						
	comp=Z,812nm,0.6s						
RKGY	Rocky Gully	60.12	206	P	P	16 00 56.9	+0.9
	comp=Z,166nm,0.8s						
DDI	Dehra Dun	60.25	294	eP	P	16 00 58.8	+1.6
DDI				IAmb	IAmb	16 00 59.8	
	comp=Z,173nm,0.9s						
F20K	Avaraart Lake	60.26	23	P	P	16 00 58.1	+1.6
	baz=250,SNR=260						
F20K				S	S	16 08 36.2	+0.8
	baz=250						
VJD	Vijayawada	60.35	278	eP	P	16 00 59.8	+2.0
VJD				IAmb	IAmb	16 01 00.9	
	comp=Z,102nm,0.7s						
CHKK	Chushkaly	60.35	310	eP	P	16 00 58.6	+1.1
CHKK	Chushkaly	60.35	310	eP	P	16 00 58.7	+1.1
AAA	Alma-Ata	60.40	309	i P	P	16 00 59.9	+2.0
BRSE	Bradley Lake S	60.41	32	P	P	16 00 57.8	+0.2
	baz=258,SNR=105						
BRSE				S	S	16 08 36.1	-1.5
	baz=258						
CAPN	Captain Cook N	60.42	31	P	P	16 00 59.0	+1.4
	baz=258						
CAPN				S	S	16 08 39.0	+1.4
	baz=258						
PPLA	Purkeypile	60.45	28	IAmb	IAmb	16 01 00.8	
	comp=Z,1µm,1.6s						
PPLA	Purkeypile	60.45	28	P	P	16 00 59.2	+1.3
	baz=255						
PPLA				S	S	16 08 38.2	0.0
	baz=255						
JHNI	Jhansi	60.50	289	eP	P	16 00 58.4	-0.4
JHNI				IAmb	IAmb	16 00 59.8	
	comp=Z,122nm,0.6s						
SKT	Skwentna	60.52	29	P	P	16 00 58.5	+0.3
	baz=256,SNR=274						
SKT				S	S	16 08 39.0	+0.1
	baz=256						
E20K	Nigu River	60.53	22	P	P	16 00 59.9	+1.5
	baz=248						
E20K				S	S	16 08 40.2	+1.3
	baz=248						
D20K	Etivluk River	60.56	21	P	P	16 00 60.0	+1.5
	baz=248						
D20K				S	S	16 08 40.2	+1.0
	baz=248						
CAST	Castle Rocks	60.62	28	P	P	16 01 00.3	+1.3
	baz=255,SNR=916						
CAST				S	S	16 08 40.8	+0.6
	baz=255						
GLAD	Gladstone	60.63	177	P	P	16 01 00.4	+1.2
UGON	Onchagaon	60.63	292	eP	P	16 00 58.8	-0.8
CHUM	Lake Minchumin	60.65	27	P	P	16 01 00.6	+1.5
	baz=255,SNR=268						
CHUM				S	S	16 08 41.3	+1.0
	baz=255						
SUA	Susitna One	60.77	30	IAmb	IAmb	16 01 01.8	
	comp=Z,438nm,1.2s						
SUA	Susitna One	60.77	30	P	P	16 01 00.0	-0.1
	baz=258						
SUA				S	S	16 08 39.7	-2.5
	baz=258						
KUU	Kurty	60.82	310	eP	P	16 01 01.9	+1.3
KUU				eS	S	16 08 45.5	+2.3
KUU				pmax	pmax		
	comp=Z,879nm,1.3s						
KUU	Kurty	60.82	310	eP	P	16 01 01.9	+1.3
	comp=Z,879nm,1.3s						
KUU				eS	S	16 08 45.6	+2.3
B20K	Meade River	60.88	20	P	P	16 01 02.2	+1.8
	baz=247,SNR=145						
B20K				S	S	16 08 43.5	+0.5
	baz=247						
ULHL	Ulahol	60.91	308	P	P	16 01 03.3	+1.8
	SNR=33						
SMLA	Simla	60.92	295	eP	P	16 01 03.1	+1.6
G21K	Allakaket	60.92	24	IAmb	IAmb	16 01 04.0	
	comp=Z,461nm,1.2s						
G21K	Allakaket	60.92	24	P	P	16 01 02.5	+1.6
	baz=252						
G21K				S	S	16 08 46.5	+2.7
	baz=252						
H21K	Melozitna Rive	60.94	25	P	P	16 01 02.6	+1.6
	baz=253,SNR=384						
H21K				S	S	16 08 45.4	+1.5
	baz=253						
O22K	Cooper Landing	61.05	31	P	P	16 01 02.4	+0.6
	baz=259,SNR=105						
O22K				S	S	16 08 43.6	-1.9
	baz=259						
NRN	Naryn	61.10	307	IAmb	IAmb	16 01 06.3	
	comp=Z,486nm,1.0s						
SEW	Seward	61.12	32	IAmb	IAmb	16 01 07.3	
	comp=Z,472nm,1.0s						
SEW	Seward	61.12	32	P	P	16 01 02.8	+0.6
	baz=259,SNR=132						
SEW				S	S	16 08 47.2	+0.9

	baz=259						
M22K	**Willow**	61.12	30	P	P	16 01 02.2	0.0
	baz=258,SNR=134						
M22K				S	S	16 08 44.6	-1.7
	baz=258						
I21K	**Tanana**	61.13	26	IAmb	IAmb	16 01 05.5	
	comp=Z,395nm,1.2s						
I21K	**Tanana**	61.13	26	P	P	16 01 04.0	+1.7
	baz=254						
I21K				S	S	16 08 49.4	+3.0
	baz=254						
JMIU	**JAMIA UNIVERSI**	61.14	292	*e*P	P	16 01 04.7	+1.7
JMIU				IAmb	IAmb	16 01 04.9	
	comp=Z,127nm,0.8s						
F21K	**Alatna River**	61.15	23	P	P	16 01 03.6	+1.2
	baz=252,SNR=145						
F21K				S	S	16 08 47.7	+1.1
	baz=252						
KTH	**Kantishna Hill**	61.16	28	P	P	16 01 03.4	+0.8
KTH				IAmb	IAmb	16 01 05.6	
	comp=Z,698nm,1.2s						
RC01	**Rabbit Creek A**	61.17	30	IAmb	IAmb	16 01 04.4	
	comp=Z,398nm,0.8s						
RC01	**Rabbit Creek A**	61.17	30	P	P	16 01 02.8	+0.3
	baz=259,SNR=227						
RC01				S	S	16 08 44.7	-2.2
	baz=259						
NDI	**New Delhi**	61.19	292	*e*P	P	16 01 05.1	+1.8
NDI				IAmb	IAmb	16 01 05.2	
	comp=Z,142nm,1.1s						
CUT	**Chulitna**	61.19	29	P	P	16 01 03.0	+0.3
	baz=257,SNR=24						
CUT				S	S	16 08 45.3	-1.9
	baz=257						
KSH	**Kashi**	61.20	305	P	P	16 01 07.5	+4.1
KSH				PcP	PcP	16 01 46.0	+4.8
KSH				sP	PP	16 03 27.0	+2.4
KSH				S	S	16 08 52.3	+3.9
KSH				ScS	ScS	16 10 12.0	+1.5
KSH				pmax	pmax		
	comp=Z,960nm,1.0s						
KSH				pmax	pmax		
	comp=Z,7µm,8.7s						
LDR	**Lodi Road**	61.20	292	*e*P	P	16 01 04.5	+1.1
LDR				IAmb	IAmb	16 01 05.0	
	comp=Z,133nm,0.6s						
NPLP	**NPLP New Delhi**	61.23	292	*e*P	P	16 01 04.1	+0.5
NPLP				IAmb	IAmb	16 01 05.2	
	comp=Z,119nm,1.3s						
BPAW	**Bear Paw Mtn.**	61.27	27	P	P	16 01 04.4	+1.2
BPAW				IAmb	IAmb	16 01 05.8	
	comp=Z,460nm,0.7s						
BPAW	**Bear Paw Mtn.**	61.27	27	P	P	16 01 04.3	+1.2
	baz=256,SNR=772						
BPAW				S	S	16 08 49.4	+1.2
	baz=256						
AYAN	**Aya Nagar**	61.29	292	*e*P	P	16 01 05.8	+1.9
AYAN				IAmb	IAmb	16 01 06.0	
	comp=Z,212nm,1.0s						
C21K	**Knifeblade Rid**	61.34	21	P	P	16 01 05.2	+1.7
	baz=250						
C21K				S	S	16 08 50.9	+2.1
	baz=250						
SONA	**Sohna**	61.36	292	*e*P	P	16 01 05.3	+0.9
SONA				IAmb	IAmb	16 01 06.4	
	comp=Z,189nm,0.8s						
E21K	**Killik River**	61.37	22	P	P	16 01 05.1	+1.3
	baz=251						
E21K				S	S	16 08 50.5	+1.2
	baz=251						
TKM2	**Tokmak 2**	61.37	309	P	P	16 01 06.2	+1.7
	SNR=760						
TKM2	**Tokmak 2**	61.37	309	P	P	16 01 05.2	+0.7
OUZ	**Omahuta**	61.39	153	P	P	16 01 06.7	+2.4
OUZ	**Omahuta**	61.39	153	P	P	16 01 06.8	+2.4
OUZ	**Omahuta**	61.39	153	⇑P	P	16 01 06.8	+2.4
TRF	**Thorofare Moun**	61.42	28	P	P	16 01 04.8	+0.4
	baz=257,SNR=355						
TRF				S	S	16 08 48.4	-2.0
	baz=257						
BHK	**Bhakra**	61.52	296	*e*P	P	16 01 04.3	-1.1
DHRM	**DHARAMSHALA**	61.52	297	*e*P	P	16 01 07.4	+1.6
DHRM				IAmb	IAmb	16 01 07.5	
	comp=Z,175nm,0.9s						
B21K	**Ikpikpuk River**	61.55	20	IAmb	IAmb	16 01 08.1	
	comp=Z,288nm,0.8s						
B21K	**Ikpikpuk River**	61.55	20	P	P	16 01 06.5	+1.5
	baz=249,SNR=161						
B21K				S	S	16 08 52.6	+1.1
	baz=249						
H22K	**Ishtalitna Cre**	61.57	25	P	P	16 01 06.8	+1.6
	baz=254,SNR=205						
H22K				S	S	16 08 52.6	+0.8
	baz=254						
A21K	**Barrow**	61.57	18	P	P	16 01 06.5	+1.4
	baz=246,SNR=11						
A21K				S	S	16 08 52.7	+1.1
	baz=246						
MDRS	**Chennai**	61.59	274	*e*P	P	16 01 07.7	+1.6
MDRS				IAmb	IAmb	16 01 09.0	
	comp=Z,185nm,1.0s						
MLY	**Manley**	61.60	26	P	P	16 01 06.7	+1.3
	baz=256,SNR=423						
MLY				S	S	16 08 52.0	-0.4
	baz=256						
GHO	**Glory Hole Cre**	61.68	30	IAmb	IAmb	16 01 08.0	
	comp=Z,310nm,0.7s						
F22K	**John River**	61.72	23	P	P	16 01 08.0	+1.9
	baz=253,SNR=176						
F22K				S	S	16 08 55.2	+1.6
	baz=253						
GUNA	**GUNA**	61.72	288	*e*P	P	16 01 08.6	+1.7
GUNA				IAmb	IAmb	16 01 08.7	
	comp=Z,148nm,0.9s						
PWL	**Port Wells**	61.80	31	P	P	16 01 07.5	+0.8
	baz=260,SNR=353						
PWL				S	S	16 08 55.0	+0.2
	baz=260						
G22K	**Bettles**	61.80	24	P	P	16 01 07.8	+1.1
	baz=254						
G22K				S	S	16 08 54.1	-0.4
	baz=254						
KNK	**Knik Glacier**	61.83	30	IAmb	IAmb	16 01 09.2	
	comp=Z,459nm,0.8s						
KNK	**Knik Glacier**	61.83	30	P	P	16 01 07.8	+0.8
	baz=260,SNR=90						
KNK				S	S	16 08 54.9	-0.4
	baz=260						
KBK	**Karagaybulak**	61.85	308	P	P	16 01 09.2	+1.5
	SNR=414						
BHPL	**Bhopal**	61.89	286	*e*P	P	16 01 09.5	+1.4
BHPL				IAmb	IAmb	16 01 09.8	
	comp=Z,113nm,0.7s						
KUDL	**Kundal**	61.90	292	*e*P	P	16 01 08.6	+0.7
KUDL				IAmb	IAmb	16 01 09.9	
	comp=Z,232nm,0.9s						
A22K	**Sinclair Lake**	61.94	19	P	P	16 01 09.3	+1.9
	baz=248,SNR=56						
A22K				S	S	16 08 56.3	+0.1
	baz=248						
D22K	**Ayikyak River**	61.96	21	IAmb	IAmb	16 01 11.1	
	comp=Z,473nm,0.8s						
D22K	**Ayikyak River**	61.96	21	P	P	16 01 09.7	+2.0
	baz=252,SNR=321						
D22K				S	S	16 08 57.8	+1.2
	baz=252						
CHMS	**Chumysh**	61.99	309	P	P	16 01 10.1	+1.7
	SNR=7.0						
THN	**Thein Dam**	61.99	297	*e*P	P	16 01 09.6	+1.1
THN				IAmb	IAmb	16 01 10.5	
	comp=Z,213nm,1.0s						
E22K	**Anaktuvuk Pass**	62.03	22	IAmb	IAmb	16 01 11.5	
	comp=Z,458nm,1.1s						
E22K	**Anaktuvuk Pass**	62.03	22	P	P	16 01 09.9	+1.7
	baz=253,SNR=358						
E22K				S	S	16 08 58.7	+1.1
	baz=253						
RND	**Reindeer**	62.04	28	IAmb	IAmb	16 01 10.1	
	comp=Z,651nm,1.6s						
MOO	**Moorlands**	62.05	178	P	P	16 01 09.3	+0.8
	comp=Z,142nm,1.7s						
MOO	**Moorlands**	62.05	178	P	P	16 01 09.9	+1.4
WAT1	**Susitna Watana**	62.06	29	P	P	16 01 08.7	+0.2
	baz=259						
WAT1				S	S	16 08 57.4	-0.7
	baz=259						
SGDS	**Sogindy**	62.06	309	⇓*i*P	P	16 01 10.0	+1.1
MCK	**McKinley**	62.07	28	IAmb	IAmb	16 01 10.3	
	comp=Z,411nm,1.2s						
MCK	**McKinley**	62.07	28	P	P	16 01 08.7	+0.2
	baz=258,SNR=122						
MCK				S	S	16 08 55.2	-2.9
	baz=258						
HYB	**Hyderabad**	62.09	280	*e*P	P	16 01 09.8	+0.4
HYB				*e*PcP	PcP	16 01 45.9	+0.9
HYB				*e*pP	pP	16 02 36.6	-2.8
HYB				*e*sP	sP	16 03 21.5	-4.7
HYB				*e*PP	PP	16 03 34.2	+1.6
HYB				*e*ScP	ScP	16 05 07.4	+3.2
HYB				*e*S	S	16 09 02.5	+2.8
HYB				*e*SS	SS	16 13 14.8	+2.7
USP	**Ospenovka**	62.16	309	P	P	16 01 10.8	+1.3
	SNR=546						
AAK	**Ala-Archa**	62.19	308	P	P	16 01 11.5	+1.6
	SNR=10.0						
AAK	**Ala-Archa**	62.19	308	P	P	16 01 11.1	+1.2
AAK				IAmb	IAmb	16 01 12.9	
	comp=Z,371nm,0.9s						
AAK	**Ala-Archa**	62.19	308	P	P	16 01 10.8	+0.9
AAK				P	P	16 01 10.8	+0.9
AAK				S	S	16 09 05.6	+5.0
AAK				S	S	16 09 05.6	+5.0
AAK	**Ala-Archa**	62.19	308	P	P	16 01 11.1	+1.2
AAK				pmax	pmax		
	comp=Z,371nm,1.0s						
AAK	**Ala-Archa**	62.19	308	*i* P	P	16 01 11.2	+1.4
	SNR=205						
AAK	**Ala-Archa**	62.19	308	P	P	16 01 10.8	+0.9
AAK				S	S	16 09 01.6	+1.0
AAK	**Ala-Archa**	62.19	308	⇓P	P	16 01 11.1	+1.2
UCH	**Uchtor**	62.19	308	P	P	16 01 12.3	+2.1
	SNR=155						
B22K	**Teshekpuk Lake**	62.19	20	IAmb	IAmb	16 01 12.0	
	comp=Z,467nm,0.9s						
B22K	**Teshekpuk Lake**	62.19	20	P	P	16 01 10.5	+1.4
	baz=250,SNR=62						
B22K				S	S	16 09 00.5	+1.2
	baz=250						
NEA2	**Nenana**	62.20	27	P	P	16 01 09.7	+0.4
	baz=257,SNR=270						
NEA2				S	S	16 08 58.5	-1.1
	baz=257						
I23K	**Minto, Yukon-K**	62.20	26	IAmb	IAmb	16 01 12.3	
	comp=Z,1µm,1.6s						
I23K	**Minto, Yukon-K**	62.20	26	P	P	16 01 10.5	+1.3
	baz=257,SNR=493						
I23K				S	S	16 09 00.1	+0.6
	baz=257						
NRDN	**NARMADA NAGAR**	62.23	286	*e*P	P	16 01 12.4	+2.2
NRDN				IAmb	IAmb	16 01 17.1	
	comp=Z,266nm,0.7s						
M23K	**Glacier View**	62.25	30	P	P	16 01 10.2	+0.5
	baz=260,SNR=90						
M23K				S	S	16 08 59.8	-0.6
	baz=260						
H23K	**Yukon River**	62.28	25	P	P	16 01 11.3	+1.5
	baz=256,SNR=397						
H23K				S	S	16 09 01.5	+0.8
	baz=256						
G23K	**Bananza Creek**	62.31	24	IAmb	IAmb	16 01 13.4	
	comp=Z,829nm,1.6s						
G23K	**Bananza Creek**	62.31	24	P	P	16 01 11.8	+1.8
	baz=255,SNR=326						
G23K				S	S	16 09 03.2	+2.2
	baz=255						
WCZ	**Waipu Caves**	62.32	153	P	P	16 01 12.9	+2.4
COLD	**Coldfoot**	62.37	24	P	P	16 01 12.1	+1.7
	baz=255,SNR=249						
COLD				S	S	16 09 03.5	+1.8
	baz=255						
WAT6	**Susitna Watana**	62.38	29	P	P	16 01 11.2	+0.5
	baz=260,SNR=367						
WAT6				S	S	16 09 01.3	-1.0
	baz=260						
GLI	**Glacier Island**	62.40	31	P	P	16 01 11.4	+0.8
	baz=261,SNR=100						
GLI				S	S	16 09 02.4	+0.2
	baz=261						
SCM	**Sheep Creek Mo**	62.44	30	P	P	16 01 12.0	+1.0
	baz=260,SNR=311						
SCM				S	S	16 09 03.4	+0.6
	baz=260						
BTLS	**Baital**	62.45	311	*d i*P	P	16 01 12.5	+1.2
BTLS				pmax	pmax		
	comp=Z,600nm,1.2s						
BTLS	**Baital**	62.45	311	⇓*i*P	P	16 01 12.6	+1.2
	comp=Z,600nm,1.2s						
TAU	**Tasmania Unive**	62.52	178	P	P	16 01 12.5	+1.0
TAU				IAmb	IAmb	16 01 14.1	
	comp=Z,780nm,1.9s						
TAU	**Tasmania Unive**	62.52	178	P	P	16 01 13.0	+1.4
TAU	**Tasmania Unive**	62.52	178	P	P	16 01 12.5	+1.0
TAU				pmax	pmax		
	comp=Z,780nm,1.9s						
TAU	**Tasmania Unive**	62.52	178	⇑P	P	16 01 12.6	+1.0
Q23K	**Middleton Isla**	62.56	33	P	P	16 01 13.4	+1.7
	baz=263,SNR=16						
Q23K				S	S	16 09 07.0	+2.9
	baz=263						
HIN	**Hinchinbrook I**	62.62	31	IAmb	IAmb	16 01 14.7	
	comp=Z,464nm,1.0s						
DHY	**Denali Highway**	62.63	28	P	P	16 01 12.7	+0.3
	baz=260,SNR=201						
DHY				S	S	16 09 05.1	-0.2
	baz=260						
JMU	**Jammu**	62.64	297	*e*P	P	16 01 15.2	+2.5
JMU				IAmb	IAmb	16 01 17.6	
	comp=Z,245nm,1.1s						
MALK	**Mahakanadarawa**	62.66	269	P	P	16 01 10.8	-2.4
MALK	**Mahakanadarawa**	62.66	269	⇓P	P	16 01 13.9	+0.7
D23K	**Nanushuk River**	62.67	22	IAmb	IAmb	16 01 16.0	
	comp=Z,389nm,0.9s						
D23K	**Nanushuk River**	62.67	22	P	P	16 01 14.4	+2.1
	baz=254,SNR=328						
D23K				S	S	16 09 07.0	+1.7
	baz=254						
FID	**Port Fidalgo**	62.68	31	IAmb	IAmb	16 01 14.7	
	comp=Z,410nm,0.7s						
EKS2	**Erkin-Say**	62.72	308	P	P	16 01 14.6	+1.3
	SNR=358						
COLA	**College**	62.77	26	P	P	16 01 12.9	0.0
COLA	**College**	62.77	26	P	P	16 01 14.1	+1.2
COLA	**College**	62.77	26	P	P	16 01 12.9	0.0
COLA				pmax	pmax		
	comp=Z,200nm,1.0s						
COLA	**College**	62.77	26	P	P	16 01 13.0	+0.1
	baz=258						
COLA				S	S	16 09 05.0	-1.5
	baz=258						
COLA	**College**	62.77	26	P	P	16 01 12.8	-0.2
COLA				S	S	16 09 04.4	-2.1
COLA	**College**	62.77	26	⇓P	P	16 01 13.0	0.0
COLA	**College**	62.77	26	P	P	16 01 12.9	0.0
AML	**Almayashu**	62.80	308	P	P	16 01 16.0	+1.9
	SNR=669						
E23K	**Chandalar**	62.81	23	P	P	16 01 15.4	+2.0
	baz=255,SNR=634						
E23K				S	S	16 09 09.1	+1.9
	baz=255						
PALK	**Pallekele**	62.86	268	P	P	16 01 15.9	+1.4
PALK				IAmb	IAmb	16 01 17.0	
	comp=Z,285nm,0.9s						
PALK	**Pallekele**	62.86	268	P	P	16 01 15.7	+1.2
	comp=Z,142nm,0.8s,baz=63,slow=8.2,SNR=42						
PALK				S	S	16 09 09.3	-0.1
	comp=Z,8.1nm,0.8s,baz=30,slow=20,SNR=1.5						
	comp=Z,142nm,0.8s						
PALK	**Pallekele**	62.86	268	P	P	16 01 15.1	+0.6
PALK				P	P	16 01 15.1	+0.6
PALK				S	S	16 09 10.2	+0.8
PALK				S	S	16 09 10.2	+0.8
PALK	**Pallekele**	62.86	268	P	P	16 01 15.9	+1.4
PALK				pmax	pmax		
	comp=Z,285nm,1.0s						
PALK	**Pallekele**	62.86	268	P	P	16 01 15.1	+0.6
PALK				S	S	16 09 07.5	-1.9
C23K	**Itkillik River**	62.95	21	P	P	16 01 15.8	+1.8
	baz=253,SNR=468						
C23K				S	S	16 09 10.4	+1.8
	baz=253						
H24K	**Noodor Dome**	62.95	25	IAmb	IAmb	16 01 18.5	
	comp=Z,698nm,1.7s						
H24K	**Noodor Dome**	62.95	25	P	P	16 01 15.5	+1.3
	baz=258,SNR=206						
H24K				S	S	16 09 09.2	+0.2
	baz=258						
TOLK	**Toolik Lake Re**	62.97	22	IAmb	IAmb	16 01 17.7	
	comp=Z,401nm,0.8s						
TOLK	**Toolik Lake Re**	62.97	22	P	P	16 01 16.1	+1.8
	baz=255,SNR=343						
TOLK				S	S	16 09 11.0	+1.8
	baz=255						
EYAK	**Cordova Ski Ar**	63.01	31	IAmb	IAmb	16 01 17.3	
	comp=Z,274nm,0.8s						
EYAK	**Cordova Ski Ar**	63.01	31	P	P	16 01 16.2	+1.6
EYAK	**Cordova Ski Ar**	63.01	31	P	P	16 01 15.8	+1.2
	baz=263,SNR=116						
EYAK				S	S	16 09 10.9	+1.3
	baz=263						
M24K	**Tolsona, Glenn**	63.02	30	IAmb	IAmb	16 01 17.7	
	comp=Z,512nm,1.3s						
M24K	**Tolsona, Glenn**	63.02	30	P	P	16 01 16.1	+1.4
	baz=261,SNR=56						
M24K				S	S	16 09 10.8	+0.9
	baz=261						
KLU	**Klutina**	63.05	30	IAmb	IAmb	16 01 17.6	
	comp=Z,813nm,1.4s						
KLU	**Klutina**	63.05	30	P	P	16 01 16.1	+1.1
	baz=262,SNR=200						
KLU				S	S	16 09 11.0	+0.6
	baz=262						
HDA	**Harding Lake**	63.06	27	P	P	16 01 14.6	-0.3
	baz=260,SNR=205						
HDA				S	S	16 09 06.5	-3.7
	baz=260						
GRZ	**Great Barrier**	63.07	152	P	P	16 01 17.1	+1.8
DIV	**Divide**	63.07	31	IAmb	IAmb	16 01 17.9	
	comp=Z,762nm,1.6s						
ABAZ	**Army Bay**	63.09	153	P	P	16 01 18.2	+2.8
IL31		63.15	27	IAmb	IAmb	16 01 16.6	
	comp=Z,316nm,0.9s						
ILAR	**Eielson Array**	63.15	27	P	P	16 01 14.9	-0.5
	comp=Z,194nm,1.0s,baz=259,slow=6.3,SNR=703						
ILAR				pP	pP	16 02 46.2	+1.1
	comp=Z,30nm,0.8s,baz=263,slow=6.8,SNR=2.7						
ILAR				S	S	16 09 06.9	-4.4
	comp=Z,12nm,1.2s,baz=257,slow=10,SNR=5.9						
ILAR				PKPPKP	P'P'df	16 30 09.6	-2.2
	comp=Z,4.2nm,1.1s,baz=56,slow=1.1,SNR=7.1						
ILAR				P4KPbc		16 38 05.7	
	comp=Z,1.0nm,0.8s,baz=265,slow=5.6,SNR=8.6						
	comp=Z,194nm,1.0s						
E24K	**Your Creek**	63.22	23	IAmb	IAmb	16 01 19.3	
	comp=Z,260nm,0.8s						
E24K	**Your Creek**	63.22	23	P	P	16 01 17.8	+1.8
	baz=256,SNR=518						
E24K				S	S	16 09 14.4	+2.2
	baz=256						
HBAZ	**Herne Bay Bore**	63.26	153	P	P	16 01 18.7	+2.2
WTAZ	**Waiatarua**	63.26	153	P	P	16 01 19.3	+2.8
MBAZ	**Motutapu North**	63.26	153	P	P	16 01 19.0	+2.5
G24K	**Hadweenzic Riv**	63.29	24	IAmb	IAmb	16 01 19.6	
	comp=Z,278nm,1.1s						
G24K	**Hadweenzic Riv**	63.29	24	P	P	16 01 18.0	+1.6
	baz=258,SNR=252						
G24K				S	S	16 09 14.6	+1.6
	baz=258						
F24K	**Squaw Lake**	63.31	23	IAmb	IAmb	16 01 20.0	
	comp=Z,317nm,1.1s						
F24K	**Squaw Lake**	63.31	23	P	P	16 01 18.4	+1.9
	baz=257,SNR=290						
F24K				S	S	16 09 14.4	+1.0
	baz=257						
BRZS	**Berezniki**	63.35	317	*e*P	P	16 01 17.9	+0.8
BRZS	**Berezniki**	63.35	317	*e*P	P	16 01 17.9	+0.8
D24K	**Happy Valley**	63.37	22	P	P	16 01 18.8	+2.0
	baz=255,SNR=478						
D24K				S	S	16 09 14.9	+1.1
	baz=255						
WIAZ	**Waiheke Island**	63.38	153	P	P	16 01 19.5	+2.1
AWAZ	**Awhitu Peninsu**	63.40	153	P	P	16 01 19.1	+1.7
ETAZ	**East Tamaki Re**	63.43	153	P	P	16 01 20.1	+2.4
K24K	**Donnelly Dome**	63.46	28	IAmb	IAmb	16 01 19.6	
	comp=Z,257nm,1.0s						
K24K	**Donnelly Dome**	63.46	28	P	P	16 01 18.1	+0.6
	baz=261,SNR=18						
K24K				S	S	16 09 14.1	-1.1
	baz=261						
PAX	**Paxson**	63.47	29	IAmb	IAmb	16 01 20.1	
	comp=Z,244nm,0.7s						
PAX	**Paxson**	63.47	29	P	P	16 01 18.5	+0.8
	baz=262,SNR=360						
PAX				S	S	16 09 15.3	-0.2
	baz=262						
RAGM	**Ragged Mountai**	63.51	32	IAmb	IAmb	16 01 20.7	
	comp=Z,516nm,1.2s						
HARP	**HAARP**	63.53	29	P	P	16 01 19.3	+1.2
	baz=262,SNR=119						
HARP				S	S	16 09 16.9	+0.8
	baz=262						
C24K	**Franklin Bluff**	63.55	21	P	P	16 01 19.5	+1.6
	baz=255						
C24K				S	S	16 09 17.5	+1.4
	baz=255						
KAIM	**Kayak Island**	63.59	32	P	P	16 01 20.2	+1.8
	baz=264,SNR=118						
KAIM				S	S	16 09 19.5	+2.6
	baz=264						
KUZ	**Kuaotunu**	63.60	152	P	P	16 01 20.4	+1.7
KUZ	**Kuaotunu**	63.60	152	P	P	16 01 20.3	+1.7
BMRM	**Bremner River**	63.61	31	P	P	16 01 19.8	+1.2
	baz=263,SNR=251						
BMRM				S	S	16 09 18.6	+1.4
	baz=263						
MKAZ	**Moumakai**	63.66	153	P	P	16 01 21.4	+2.3
N25K	**Chitina, Valde**	63.69	30	IAmb	IAmb	16 01 22.0	
	comp=Z,1µm,1.8s						
N25K	**Chitina, Valde**	63.69	30	P	P	16 01 20.5	+1.3
	baz=263,SNR=173						
N25K				S	S	16 09 18.3	+0.1
	baz=263						
LATR	**Latur**	63.70	281	*e*P	P	16 01 20.4	+0.6
LATR				IAmb	IAmb	16 01 21.8	
	comp=Z,229nm,0.8s						
HMT	**Hamilton**	63.71	32	IAmb	IAmb	16 01 21.9	
	comp=Z,363nm,1.0s						
J25K	**Salcha River,**	63.77	27	P	P	16 01 19.0	-0.5
	baz=261,SNR=281						
J25K				S	S	16 09 16.4	-2.5
	baz=261						
G25K	**Bearman Lake**	63.84	24	P	P	16 01 21.6	+1.7
	baz=259,SNR=150						
G25K				S	S	16 09 21.7	+2.1
	baz=259						
PRP	**Porcupine Dome**	63.85	26	P	P	16 01 19.1	-1.0
	baz=260,SNR=85						
PRP				S	S	16 09 17.2	-2.9
	baz=260						
H25L	**Birch Creek**	63.86	25	P	P	16 01 21.5	+1.5
	baz=260,SNR=373						
H25L				S	S	16 09 22.1	+2.2
	baz=260						
RIDG	**Independent Ri**	63.86	28	IAmb	IAmb	16 01 22.3	
	comp=Z,458nm,0.8s						
RIDG	**Independent Ri**	63.86	28	P	P	16 01 20.8	+0.6
	baz=262,SNR=412						
RIDG				S	S	16 09 18.6	-1.5
	baz=262						
NIL	**Nilore**	63.90	298	P	P	16 01 22.4	+1.4
NIL	**Nilore**	63.90	298	P	P	16 01 22.2	+1.2
NIL	**Nilore**	63.90	298	P	P	16 01 22.4	+1.4
NIL				pmax	pmax		
	comp=Z,2µm,0.8s						
NIL	**Nilore**	63.90	298	P	P	16 01 22.6	+1.6
SUCK	**Suckling Hills**	63.93	32	IAmb	IAmb	16 01 23.8	
	comp=Z,795nm,1.4s						
F25K	**Christian Rive**	64.17	24	IAmb	IAmb	16 01 25.7	
	comp=Z,333nm,0.9s						
F25K	**Christian Rive**	64.17	24	P	P	16 01 24.2	+2.1
	baz=259,SNR=552						
F25K				S	S	16 09 25.9	+2.1
	baz=259						
BGLC	**Bering Glacier**	64.18	32	P	P	16 01 24.4	+2.3
	baz=265,SNR=15						
BGLC				S	S	16 09 26.0	+2.2
	baz=265						
DOT	**Dot Lake**	64.19	28	IAmb	IAmb	16 01 24.4	
	comp=Z,311nm,0.8s						
VRDI	**Verde Repeater**	64.20	31	IAmb	IAmb	16 01 24.9	
	comp=Z,279nm,1.0s						

D25K	Kavik River	64.25	22	P	P	16 01 24.3	+1.7
	baz=258,SNR=750						
D25K				S	S	16 09 25.0	+0.3
	baz=258						
MENT	Mentasta	64.26	29	P	P	16 01 24.1	+1.4
SCRK	Sand Creek	64.27	28	IAmb	IAmb	16 01 25.0	
	comp=Z,418nm,1.0s						
SCRK	Sand Creek	64.27	28	P	P	16 01 23.5	+0.6
	baz=262,SNR=629						
SCRK				S	S	16 09 24.2	-1.0
	baz=262						
E25K	Arctic Village	64.30	23	P	P	16 01 24.9	+2.0
	baz=259,SNR=508						
E25K				S	S	16 09 27.5	+2.2
	baz=259						
CRQE	Cirque	64.33	31	P	P	16 01 24.5	+1.2
	baz=265,SNR=149						
CRQE				S	S	16 09 26.2	+0.2
	baz=265						
TOZ	Tahuroa Road	64.33	153	P	P	16 01 25.1	+1.7
MCARA	McCarthy VSAT	64.42	31	IAmb	IAmb	16 01 26.4	
	comp=Z,381nm,1.0s						
MCARA	McCarthy VSAT	64.42	31	P	P	16 01 24.8	+1.1
	baz=265,SNR=92						
MCARA				S	S	16 09 27.4	+0.5
	baz=265						
WAX	Waxell Ridge	64.42	32	IAmb	IAmb	16 01 26.6	
	comp=Z,368nm,0.6s						
L26K	Log Cabin Wild	64.44	29	P	P	16 01 25.1	+1.2
	baz=264,SNR=259						
L26K				S	S	16 09 27.5	+0.4
	baz=264						
TGL	Tana Glacier	64.46	31	IAmb	IAmb	16 01 26.7	
	comp=Z,553nm,1.2s						
DZA	Taraz	64.50	309	eP	P	16 01 25.7	+1.1
DZA				pmax	pmax		
	comp=Z,280nm,0.8s						
DZA	Taraz	64.50	309	eP	P	16 01 25.8	+1.1
	comp=Z,280nm,0.8s						
J26L	Joseph Creek	64.52	27	IAmb	IAmb	16 01 26.5	
	comp=Z,639nm,1.2s						
J26L	Joseph Creek	64.52	27	P	P	16 01 24.9	+0.5
	baz=263,SNR=606						
J26L				S	S	16 09 27.1	-1.1
	baz=263						
M26K	Nabesna, AK	64.53	29	P	P	16 01 25.4	+0.9
	baz=264,SNR=134						
M26K				S	S	16 09 28.5	+0.2
	baz=264						
BMAR	Burnt Mountain	64.55	24	P	P	16 01 26.3	+1.8
KMRZ	Kaimai	64.62	153	P	P	16 01 26.8	+1.5
TGRZ	Tauranga	64.66	152	P	P	16 01 27.2	+1.7
ISLE	Juniper Island	64.69	32	IAmb	IAmb	16 01 28.0	
	comp=Z,403nm,1.1s						
BKNR	BIKANER	64.72	292	eP	P	16 01 28.1	+1.9
BKNR				IAmb	IAmb	16 01 28.2	
	comp=Z,297nm,0.7s						
HIZ	Hauiti	64.72	154	IAmb	IAmb	16 01 29.0	
	comp=Z,417nm,1.2s						
HIZ	Hauiti	64.72	154	P	P	16 01 27.8	+1.9
HIZ	Hauiti	64.72	154	P	P	16 01 27.8	+1.9
F26K	Sheenjek River	64.75	24	IAmb	IAmb	16 01 29.4	
	comp=Z,364nm,0.8s						
F26K	Sheenjek River	64.75	24	P	P	16 01 27.9	+2.1
	baz=261,SNR=701						
F26K				S	S	16 09 31.8	+1.0
	baz=261						
G26K	Porcupine Rive	64.78	24	IAmb	IAmb	16 01 29.3	
	comp=Z,344nm,1.0s						
G26K	Porcupine Rive	64.78	24	P	P	16 01 27.7	+1.9
	baz=261,SNR=549						
G26K				S	S	16 09 32.3	+1.4
	baz=261						
I26K	Coal Creek Min	64.80	26	P	P	16 01 25.7	-0.3
	baz=263						
I26K				S	S	16 09 30.1	-1.2
	baz=263						
BVA0	Borovoye Array	64.80	320	i P	P	16 01 26.6	+0.3
BVAR	Borovoye Array	64.80	320	P	P	16 01 27.1	+0.9
	comp=Z,1µm,0.5s,baz=92,slow=7.7,SNR=2705						
BVAR				S	S	16 09 30.2	-1.5
	comp=Z,31nm,0.8s,baz=96,slow=12,SNR=12						
BVAR				PKPPKP	P'P'df	16 30 06.7	-2.4
	comp=Z,1.0nm,0.6s,baz=298,slow=3.1,SNR=4.2						
BVAR				PKP2bc		16 30 12.5	
	comp=Z,1.5nm,0.7s,baz=268,slow=4.3,SNR=6.6						
BVAR				P4KPbc		16 38 13.5	
	comp=Z,0.6nm,0.5s,baz=90,slow=7.2,SNR=4.2						
	comp=Z,1µm,0.5s						
MESA	MESA	64.85	32	P	P	16 01 28.3	+1.7
	baz=266,SNR=114						
MESA				S	S	16 09 32.9	+0.4
	baz=266						
TLZ	Tolley Road	64.85	153	P	P	16 01 28.3	+1.6
BRVK	Borovoye	64.86	320	P	P	16 01 27.6	+0.9
BRVK	Borovoye	64.86	320	P	P	16 01 27.4	+0.7
BRVK				S	S	16 09 31.8	-0.7
BRVK	Borovoye	64.86	320	P	P	16 01 27.6	+0.9
BRVK				pmax	pmax		
	comp=Z,1µm,1.0s						
BRVK	Borovoye	64.86	320	⇑P	P	16 01 27.4	+0.7
C26K	Camden Bay	64.88	21	P	P	16 01 29.0	+2.5
	baz=259,SNR=122						
C26K				S	S	16 09 34.2	+2.1
	baz=259						
OPRZ	Ohinepanea	64.88	152	P	P	16 01 28.7	+1.8
KARZ	Kaharoa	64.89	153	P	P	16 01 28.3	+1.3
WIZ	White Island	64.90	152	P	P	16 01 29.7	+2.7
NGRZ	Ngongotaha	64.94	153	P	P	16 01 29.3	+1.9
PKE	Pukeiti	64.95	155	P	P	16 01 29.8	+2.4
YAH	Yahtse	64.96	32	IAmb	IAmb	16 01 30.4	
	comp=Z,326nm,0.8s						
NBEZ	Newall Road No	64.96	155	P	P	16 01 30.6	+3.2
GRNC	Granite Creek	64.98	31	IAmb	IAmb	16 01 30.2	
	comp=Z,339nm,0.7s						
UTU	Utuhina	65.00	153	P	P	16 01 30.3	+2.6
KOD	Kodaikanal	65.00	272	eP	P	16 01 29.8	+1.2
KOD				IAmb	IAmb	16 01 30.7	
	comp=Z,191nm,1.0s						
OMRZ	Omania	65.02	153	P	P	16 01 29.5	+1.6
KHEZ	Kahui Hut	65.05	155	P	P	16 01 30.2	+2.2
KHEZ	Kahui Hut	65.05	155	P	P	16 01 29.9	+1.9
M27K	Edge Creek, AK	65.05	30	IAmb	IAmb	16 01 30.5	
	comp=Z,495nm,1.4s						
M27K	Edge Creek, AK	65.05	30	P	P	16 01 29.0	+1.1
	baz=265,SNR=212						
M27K				S	S	16 09 33.6	-1.1
	baz=265						
MARZ	Manawahe	65.05	152	P	P	16 01 29.6	+1.5
NEZ	North Egmont	65.06	155	P	P	16 01 30.1	+2.0
WHRZ	Whale Island	65.08	152	P	P	16 01 30.6	+2.4
KK31	Karatay Array	65.08	309	i P	P	16 01 28.5	+0.2
KKAR	Karatay Array	65.08	309	P	P	16 01 29.6	+1.3
KKAR	Karatay Array	65.08	309	P	P	16 01 29.1	+0.8
KKAR	Karatay Array	65.08	309	P	P	16 01 29.6	+1.3
KKAR				pmax	pmax		
	comp=Z,1µm,0.9s						
KKAR	Karatay Array	65.08	309	⇓P	P	16 01 29.3	+1.0
MKRZ	Makatiti	65.09	153	P	P	16 01 30.2	+1.9
GRRZ	Galatos Road	65.11	153	P	P	16 01 30.3	+1.9
K27K	Chicken	65.11	28	IAmb	IAmb	16 01 31.1	
	comp=Z,389nm,1.4s						
K27K	Chicken	65.11	28	P	P	16 01 29.5	+1.4
	baz=264						
K27K				S	S	16 09 36.6	+1.4
	baz=264						
L27K	Beaver Creek,	65.13	29	IAmb	IAmb	16 01 30.9	
	comp=Z,749nm,1.6s						
L27K	Beaver Creek,	65.13	29	P	P	16 01 29.4	+1.2
	baz=265,SNR=331						
L27K				S	S	16 09 34.5	-1.0
	baz=265						
HSRZ	Hossack Road	65.14	153	P	P	16 01 30.2	+1.6
PREZ	Palmer Road	65.14	155	P	P	16 01 31.8	+3.2
BCAR	Beaver Creek A	65.15	29	P	P	16 01 29.4	+1.0
EDRZ	Edgecumbe	65.18	152	P	P	16 01 29.3	+0.4
VRZ	Vera Road	65.20	154	P	P	16 01 30.9	+2.0
CTG	Chitna Glacier	65.20	31	P	P	16 01 30.3	+1.4
	baz=266,SNR=135						
CTG				S	S	16 09 36.1	-0.4
	baz=266						
CTGM	Chitina Glacie	65.20	31	IAmb	IAmb	16 01 31.8	
	comp=Z,381nm,1.1s						
HRRZ	Handcock Road	65.22	153	P	P	16 01 30.3	+1.2
C27K	Jago River	65.24	22	IAmb	IAmb	16 01 32.1	
	comp=Z,342nm,0.8s						
C27K	Jago River	65.24	22	P	P	16 01 30.7	+1.9
	baz=260,SNR=303						
C27K				S	S	16 09 36.6	+0.2
	baz=260						
WATZ	Wairara	65.25	153	P	P	16 01 31.0	+1.7
WPRZ	Whakapapatarin	65.28	153	P	P	16 01 30.4	+1.0
RRRZ	Republican Roa	65.28	153	P	P	16 01 30.5	+1.1
LREZ	Lake Rotokare	65.34	155	P	P	16 01 31.6	+1.8
HAZ	Te Kaha	65.36	151	P	P	16 01 29.2	-0.7
LOGN	Logan Glacier	65.36	31	IAmb	IAmb	16 01 32.6	
	comp=Z,241nm,0.7s						
PRRZ	Plateau Road	65.36	153	P	P	16 01 30.8	+0.9
RATZ	Rangitukua	65.40	153	P	P	16 01 31.9	+1.6
TWVZ	Taurewa	65.43	154	P	P	16 01 32.1	+1.6
MXZ	Matakaoa Point	65.44	151	P	P	16 01 30.3	-0.1
MXZ	Matakaoa Point	65.44	151	P	P	16 01 30.4	0.0
KATZ	Kakaramea	65.46	154	P	P	16 01 33.3	+2.6
I27K	Kandik River	65.47	26	P	P	16 01 31.1	+0.7
	baz=264,SNR=194						
I27K				S	S	16 09 38.7	-0.8
	baz=264						
URZ	Urewera	65.47	152	P	P	16 01 30.8	+0.2
URZ	Urewera	65.47	152	P	P	16 01 30.2	-0.4
URZ	Urewera	65.47	152	⇑P	P	16 01 30.2	-0.4
MUGZ	Murupara	65.50	152	P	P	16 01 31.0	+0.2
IUG	Iuzhnay	65.52	308	eP	P	16 01 32.3	+1.1
IUG				pmax	pmax		
	comp=Z,581nm,1.1s						
IUG	Iuzhnay	65.52	308	eP	P	16 01 32.4	+1.1
	comp=Z,581nm,1.1s						
BVCY	Beaver Creek	65.53	30	P	P	16 01 32.0	+1.3
	baz=266,SNR=126						
BVCY				S	S	16 09 39.8	-0.4
	baz=266						
KRVZ	Karewarewa	65.54	154	P	P	16 01 32.1	+0.9
H27K	Steamboat Moun	65.58	25	P	P	16 01 32.6	+1.6
	baz=264,SNR=857						
H27K				S	S	16 09 41.1	+0.4
	baz=264						
PKVZ	Pokaka	65.58	154	P	P	16 01 33.0	+1.6
TMVZ	Te Maari	65.58	154	P	P	16 01 32.5	+1.0
BRLS	Borolday	65.58	309	d iP	P	16 01 33.2	+1.8
BRLS	Borolday	65.58	309	⇓iP	P	16 01 33.3	+1.8
G27K	Doyon Strip	65.59	25	P	P	16 01 32.5	+1.5
	baz=263,SNR=181						
G27K				S	S	16 09 41.2	+0.4
	baz=263						
NGZ	Ngauruhoe	65.59	154	P	P	16 01 32.5	+0.9
OTVZ	Oturere	65.61	154	P	P	16 01 33.2	+1.5
FWVZ	Far West T-bar	65.64	154	P	P	16 01 33.3	+1.3
MRHZ	Matea Rd	65.65	153	P	P	16 01 32.4	+0.6
YUK3	Moose Creek	65.67	30	P	P	16 01 33.1	+1.2
	baz=267,SNR=196						
YUK3				S	S	16 09 41.9	-0.5
	baz=267						
WHVZ	Whangaehu Hut	65.67	154	P	P	16 01 33.1	+0.9
PCA	Pinnacle	65.69	32	IAmb	IAmb	16 01 34.6	
	comp=Z,290nm,0.8s						
PINM	Pinnacle	65.69	32	P	P	16 01 33.2	+1.3
	baz=268,SNR=70						
PINM				S	S	16 09 42.2	-0.1
	baz=268						
RTZ	Ruatahuna	65.71	152	P	P	16 01 31.9	-0.4
WNVZ	Wahianoa	65.72	154	P	P	16 01 32.9	+0.5
MWZ	Matawai	65.72	152	P	P	16 01 32.4	+0.1
O28M	Mount Upton	65.75	31	IAmb	IAmb	16 01 35.5	
	comp=Z,391nm,0.8s						
O28M	Mount Upton	65.75	31	P	P	16 01 34.0	+1.5
	baz=267,SNR=209						
O28M				S	S	16 09 43.8	+0.3
	baz=267						
E27K	Coleen River	65.78	23	IAmb	IAmb	16 01 35.5	
	comp=Z,235nm,1.1s						
E27K	Coleen River	65.78	23	P	P	16 01 34.0	+1.7
	baz=263,SNR=246						
E27K				S	S	16 09 43.4	+0.4
	baz=263						
QRZ	Quartz Range	65.80	157	IAmb	IAmb	16 01 35.1	
	comp=Z,384nm,1.0s						
QRZ	Quartz Range	65.80	157	P	P	16 01 34.2	+1.5
QRZ	Quartz Range	65.80	157	P	P	16 01 34.0	+1.4
CHM	Chimkent	65.82	308	eP	P	16 01 34.2	+1.3
CHM				pmax	pmax		
	comp=Z,530nm,0.8s						
CHM	Chimkent	65.82	308	eP	P	16 01 34.3	+1.3
	comp=Z,530nm,0.8s						
PUZ	Puketiti	65.83	151	P	P	16 01 32.5	-0.4
WAZ	Wanganui	65.83	155	P	P	16 01 34.5	+1.6
BKZ	Black Stump Fm	65.96	153	IAmb	IAmb	16 01 35.1	
	comp=Z,286nm,0.8s						
BKZ	Black Stump Fm	65.96	153	P	P	16 01 33.9	+0.1
BKZ	Black Stump Fm	65.96	153	P	P	16 01 33.6	-0.1
YUK8	Steele Glacier	65.98	31	P	P	16 01 35.5	+1.6
	baz=268,SNR=212						
YUK8				S	S	16 09 47.6	+1.5
	baz=268						
BCPM	Bancas Point	66.00	32	IAmb	IAmb	16 01 36.7	
	comp=Z,331nm,1.0s						
PNL	Peninsula	66.11	33	P	P	16 01 36.4	+2.0
PNL	Peninsula	66.11	33	P	P	16 01 35.8	+1.4
	baz=269,SNR=59						
PNL				S	S	16 09 47.8	+0.6
	baz=269						
D27M	Malcolm River	66.14	22	IAmb	IAmb	16 01 38.0	
	comp=Z,349nm,0.8s						
D27M	Malcolm River	66.14	22	P	P	16 01 36.5	+1.9
	baz=263,SNR=310						
D27M				S	S	16 09 48.3	+0.9
	baz=263						
I28M	Miner Creek	66.15	26	IAmb	IAmb	16 01 37.3	
	comp=Z,195nm,0.8s						
I28M	Miner Creek	66.15	26	P	P	16 01 35.8	+1.1
	baz=266,SNR=315						
I28M				S	S	16 09 47.5	-0.2
	baz=266						
KAD	Karad	66.16	281	eP	P	16 01 35.8	+0.2
KAD				IAmb	IAmb	16 01 36.9	
	comp=Z,226nm,0.5s						
POO	Poona	66.17	282	eP	P	16 01 36.5	+0.9
POO				IAmb	IAmb	16 01 37.3	
	comp=Z,576nm,0.9s						
DAWY	Dawson	66.29	28	IAmb	IAmb	16 01 38.4	
	comp=Z,204nm,0.9s						
DAWY	Dawson	66.29	28	P	P	16 01 37.0	+1.4
	baz=267,SNR=161						
DAWY				S	S	16 09 50.4	+1.1
	baz=267						
DSZ	Denniston Nort	66.34	158	P	P	16 01 36.6	+0.5
KNZ	Kokohu	66.35	152	P	P	16 01 36.8	+0.7
F28M	Old Crow	66.36	24	IAmb	IAmb	16 01 39.1	
	comp=Z,353nm,1.0s						
F28M	Old Crow	66.36	24	P	P	16 01 37.6	+1.7
	baz=265,SNR=489						
F28M				S	S	16 09 51.3	+1.3
	baz=265						
NNZ	Nelson	66.46	157	IAmb	IAmb	16 01 39.0	
	comp=Z,687nm,1.6s						
NNZ	Nelson	66.46	157	P	P	16 01 36.9	+0.2
TSZ	Takapari Road	66.48	154	P	P	16 01 37.0	0.0
YUK4	Talbot Arm	66.52	31	P	P	16 01 39.4	+2.2
	baz=269,SNR=399						
YUK4				S	S	16 09 53.9	+1.5
	baz=269						
O29M	Mount Kennedy	66.53	32	IAmb	IAmb	16 01 40.8	
	comp=Z,401nm,0.9s						
O29M	Mount Kennedy	66.53	32	P	P	16 01 39.3	+2.0
	baz=269,SNR=245						
O29M				S	S	16 09 55.3	+2.8
	baz=269						
E28M	Babbage River	66.58	23	P	P	16 01 39.1	+1.9
	baz=265,SNR=698						
E28M				S	S	16 09 53.8	+1.3
	baz=265						
M29M	Somme Creek	66.64	30	P	P	16 01 39.7	+1.8
	baz=268,SNR=498						
M29M				S	S	16 09 53.7	+0.1
	baz=268						
YUK6	Outpost Mounta	66.65	31	P	P	16 01 40.0	+1.9
	baz=269,SNR=166						
YUK6				S	S	16 09 57.2	+3.1
	baz=269						
SIMJ	Simiganj	66.67	304	P	P	16 01 39.3	+0.8
SIMJ	Simiganj	66.67	304	P	P	16 01 39.4	+0.8
THZ	Tophouse	66.75	157	P	P	16 01 38.6	0.0
L29M	L29M	66.81	29	P	P	16 01 40.8	+2.0
	baz=268,SNR=690						
L29M				S	S	16 09 57.2	+1.7
	baz=268						
J29N	Klondike Camp	66.83	27	IAmb	IAmb	16 01 42.0	
	comp=Z,266nm,0.9s						
J29N	Klondike Camp	66.83	27	P	P	16 01 40.6	+1.7
	baz=268,SNR=33						
J29N				S	S	16 09 56.7	+1.0
	baz=268						
I29M	Ogilvie Camp,	66.83	26	IAmb	IAmb	16 01 41.5	
	comp=Z,399nm,1.2s						
I29M	Ogilvie Camp,	66.83	26	P	P	16 01 39.9	+1.1
	baz=267,SNR=213						
I29M				S	S	16 09 56.1	+0.6
	baz=267						
PWZ	Pawanui	66.83	153	P	P	16 01 40.0	+0.9
MRZ	Mangatainoka R	66.84	155	IAmb	IAmb	16 01 40.3	
	comp=Z,554nm,1.3s						
MRZ	Mangatainoka R	66.84	155	P	P	16 01 39.1	0.0
PXZ	Pawanui	66.84	153	P	P	16 01 39.9	+0.8
H29M	Whitestone	66.85	25	IAmb	IAmb	16 01 41.9	
	comp=Z,256nm,0.8s						
H29M	Whitestone	66.85	25	P	P	16 01 40.3	+1.4
	baz=267,SNR=322						
H29M				S	S	16 09 56.9	+1.1
	baz=267						
D28M	Stokes Point	66.94	22	P	P	16 01 41.1	+1.7
	baz=265,SNR=26						
D28M				S	S	16 09 58.4	+1.8
	baz=265						
P29M	Windy Craggy	66.95	33	P	P	16 01 41.7	+2.0
	baz=270,SNR=176						
P29M				S	S	16 10 00.1	+2.8
	baz=270						
BHV	Bhavnagar	66.98	286	eP	P	16 01 43.2	+2.7
BHV				IAmb	IAmb	16 01 43.4	
	comp=Z,229nm,0.9s						
JASL	Jaisalmer	66.99	292	eP	P	16 01 41.4	+0.8
JASL				IAmb	IAmb	16 01 43.3	
	comp=Z,108nm,1.1s						
G29M	Pine Creek	67.03	25	P	P	16 01 41.8	+1.7
	baz=267,SNR=379						
G29M				S	S	16 09 59.8	+1.9
	baz=267						
SNZO	South Karori	67.04	156	P	P	16 01 40.3	0.0
SNZO				IAmb	IAmb	16 01 41.3	
	comp=Z,333nm,0.8s						
SNZO	South Karori	67.04	156	P	P	16 01 40.6	+0.2
SNZO	South Karori	67.04	156	P	P	16 01 39.7	-0.7
SNZO				S	S	16 09 56.7	-1.8
SNZO	South Karori	67.04	156	⇑P	P	16 01 40.1	-0.3
HYT	Haines Junctio	67.07	31	P	P	16 01 42.5	+2.0
	baz=270,SNR=499						
HYT				S	S	16 10 00.2	+1.4
	baz=270						
INZ	Inchbonnie	67.08	159	IAmb	IAmb	16 01 41.5	
	comp=Z,185nm,0.9s						
K29M	Barlow Dome	67.11	28	IAmb	IAmb	16 01 43.9	
	comp=Z,375nm,0.9s						
K29M	Barlow Dome	67.11	28	P	P	16 01 42.4	+1.6
	baz=268,SNR=395						
K29M				S	S	16 10 00.7	+1.5
	baz=268						
BFZ	Birch Farm	67.12	154	IAmb	IAmb	16 01 42.2	
	comp=Z,324nm,0.9s						
BFZ	Birch Farm	67.12	154	P	P	16 01 41.6	+0.7
BFZ	Birch Farm	67.12	154	P	P	16 01 41.3	+0.3
WVZ	Waitaha Valley	67.16	159	P	P	16 01 41.1	+0.1
KBU	Kabul Universi	67.16	300	P	P	16 01 37.1	-4.6
E29M	Blow River	67.17	23	P	P	16 01 42.3	+1.4
	baz=266,SNR=281						
E29M				S	S	16 10 00.3	+0.8
	baz=266						
BHW	Baring Head	67.19	156	IAmb	IAmb	16 01 42.2	
	comp=Z,211nm,0.8s						
KBL	Kabul	67.23	300	P	P	16 01 43.1	+0.9
KBL	Kabul	67.23	300	P	P	16 01 43.1	+0.9
	SNR=637						
KBL				P	P	16 01 43.1	+0.9
	SNR=637						
KBL				S	S	16 09 59.9	-1.9
KBL				S	S	16 09 59.9	-1.9
KBL	Kabul	67.23	300	P	P	16 01 43.1	+0.9
KBL				pmax	pmax		
	comp=Z,1µm,0.9s						
FOZ	Fox Glacier	67.27	160	IAmb	IAmb	16 01 43.5	
	comp=Z,292nm,1.1s						
FOZ	Fox Glacier	67.27	160	P	P	16 01 42.5	+0.8
N30M	Aishikik Lake	67.27	31	IAmb	IAmb	16 01 45.0	
	comp=Z,339nm,0.9s						
N30M	Aishikik Lake	67.27	31	P	P	16 01 43.5	+1.8
	baz=270,SNR=326						
N30M				S	S	16 10 03.1	+2.0
	baz=270						
P30M	Million Dollar	67.34	32	P	P	16 01 44.1	+1.9
	baz=270						
P30M				S	S	16 10 03.8	+2.0
	baz=270						
M30M	Minto, Yukon	67.42	29	IAmb	IAmb	16 01 45.7	
	comp=Z,210nm,1.0s						
M30M	Minto, Yukon	67.42	29	P	P	16 01 44.2	+1.6
	baz=270,SNR=257						
M30M				S	S	16 10 03.8	+1.1
	baz=270						
LTZ	Lake Taylor	67.42	158	P	P	16 01 42.9	+0.2
JCZ	Jackson Bay	67.43	161	P	P	16 01 44.9	+2.0
JCZ	Jackson Bay	67.43	161	P	P	16 01 44.4	+1.6
EPYK	Eagle Plains	67.52	25	P	P	16 01 44.6	+1.4
	baz=268,SNR=376						
EPYK				S	S	16 10 03.8	+0.1
	baz=268						
KHZ	Kahutara	67.56	157	IAmb	IAmb	16 01 44.5	
	comp=Z,238nm,1.1s						
KHZ	Kahutara	67.56	157	P	P	16 01 42.9	-0.6
KHZ	Kahutara	67.56	157	P	P	16 01 42.9	-0.6
KHZ	Kahutara	67.56	157	⇑P	P	16 01 42.5	-1.0
I30M	Mount Dempster	67.63	27	IAmb	IAmb	16 01 47.9	
	comp=Z,420nm,1.5s						
I30M	Mount Dempster	67.63	27	P	P	16 01 45.1	+1.1
	baz=269,SNR=213						
I30M				S	S	16 10 05.3	0.0
	baz=269						
J30M	Hart River	67.64	27	IAmb	IAmb	16 01 47.0	
	comp=Z,216nm,1.0s						
J30M	Hart River	67.64	27	P	P	16 01 45.5	+1.5
	baz=269,SNR=307						
J30M				S	S	16 10 06.0	+0.5
	baz=269						
PLBC	Pleasant Camp	67.65	33	P	P	16 01 45.7	+1.7
	baz=271,SNR=216						
PLBC				S	S	16 10 07.6	+2.2
	baz=271						
MSZ	Milford Sound	67.72	162	P	P	16 01 46.1	+1.6
G30M	tAoh Zraii Nji	67.74	25	P	P	16 01 45.5	+1.1
	baz=268,SNR=621						
G30M				S	S	16 10 06.6	+0.3
	baz=268						
O30N	Mendenhall	67.76	31	P	P	16 01 46.1	+1.4
	baz=271,SNR=123						
O30N				S	S	16 10 08.7	+1.9
	baz=271						
S31K	Pelican	67.77	34	IAmb	IAmb	16 01 47.7	
	comp=Z,225nm,1.1s						
S31K	Pelican	67.77	34	P	P	16 01 46.3	+1.6
	baz=272,SNR=40						
S31K				S	S	16 10 08.5	+1.8
	baz=272						
OXZ	Oxford	67.82	159	IAmb	IAmb	16 01 45.9	
	comp=Z,196nm,0.8s						
OXZ	Oxford	67.82	159	P	P	16 01 44.7	-0.5
MAYO	Mayo, Yukon	67.83	28	P	P	16 01 46.8	+1.8
	baz=270,SNR=5.8						
MAYO				S	S	16 10 08.7	+1.3
	baz=270						
RPZ	Rata Peaks	67.83	159	P	P	16 01 45.3	+0.1
RPZ	Rata Peaks	67.83	159	P	P	16 01 45.3	+0.1
GVZ	Greta Valley S	67.85	158	IAmb	IAmb	16 01 46.7	
	comp=Z,388nm,1.1s						
GVZ	Greta Valley S	67.85	158	P	P	16 01 45.6	+0.2
N31M	Braeburn, Yuko	67.90	31	P	P	16 01 47.4	+1.9
	baz=271,SNR=224						
N31M				S	S	16 10 10.9	+2.6
	baz=271						
F30M	Barrier River	67.93	24	P	P	16 01 47.2	+1.7
	baz=268,SNR=648						
F30M				S	S	16 10 08.9	+0.5
	baz=268						
R31K	City Hall, Gus	68.01	34	P	P	16 01 47.7	+1.5

	baz=272						
R31K				S	**S**	**16 10 12.5**	**+2.9**
	baz=272						
LBZ	**Lake Benmore**	**68.15**	**160**	P	**P**	**16 01 47.4**	**+0.3**
SKAG	**Skagway**	**68.18**	**33**	IAmb	IAmb	16 01 50.4	
	comp=Z,242nm,0.9s						
SKAG	**Skagway**	**68.18**	**33**	P	**P**	**16 01 49.6**	**+2.4**
SKAG	**Skagway**	**68.18**	**33**	P	**P**	**16 01 49.0**	**+1.8**
	baz=272,SNR=64						
SKAG				S	**S**	**16 10 14.0**	**+2.5**
	baz=272						
WKZ	**Wanaka**	**68.19**	**161**	P	**P**	**16 01 48.8**	**+1.3**
DCZ	**Deep Cove**	**68.23**	**163**	P	**P**	**16 01 48.7**	**+1.1**
SIT	**Sitka**	**68.30**	**35**	P	**P**	**16 01 50.0**	**+2.1**
SIT	**Sitka**	**68.30**	**35**	P	**P**	**16 01 49.6**	**+1.6**
	baz=273,SNR=21						
SIT				S	**S**	**16 10 15.1**	**+2.2**
	baz=273						
WHY	**Whitehorse**	**68.36**	**32**	P	**P**	**16 01 50.1**	**+1.6**
	baz=272,SNR=212						
WHY				S	**S**	**16 10 16.7**	**+2.8**
	baz=272						
MQZ	**McQueen's Vall**	**68.36**	**158**	P	**P**	**16 01 49.1**	**+0.6**
TMZ	**Timaru**	**68.41**	**160**	P	**P**	**16 01 49.0**	**+0.3**
MLZ	**Mavora Lakes**	**68.41**	**162**	P	**P**	**16 01 49.6**	**+0.8**
H31M	**Peel River**	**68.48**	**26**	P	**P**	**16 01 50.2**	**+1.2**
	baz=271,SNR=606						
H31M				S	**S**	**16 10 14.9**	**-0.1**
	baz=271						
G31M	**Satah River**	**68.51**	**25**	P	**P**	**16 01 50.2**	**+1.2**
	baz=270,SNR=1000						
G31M				S	**S**	**16 10 14.8**	**-0.2**
	baz=270						
M31M	**Drury Creek, Y**	**68.54**	**30**	IAmb	IAmb	16 01 52.3	
	comp=Z,398nm,1.2s						
M31M	**Drury Creek, Y**	**68.54**	**30**	P	**P**	**16 01 50.8**	**+1.4**
	baz=272,SNR=266						
M31M				S	**S**	**16 10 17.0**	**+1.2**
	baz=272						
EAZ	**Earnscleugh**	**68.64**	**161**	P	**P**	**16 01 51.2**	**+1.1**
R32K	**Eaglecrest**	**68.66**	**34**	IAmb	IAmb	16 01 53.4	
	comp=Z,220nm,0.8s						
R32K	**Eaglecrest**	**68.66**	**34**	P	**P**	**16 01 52.0**	**+1.8**
	baz=273,SNR=96						
R32K				S	**S**	**16 10 19.3**	**+2.1**
	baz=273						
S32K	**Killisnoo**	**68.68**	**35**	IAmb	IAmb	16 01 53.2	
	comp=Z,249nm,1.1s						
S32K	**Killisnoo**	**68.68**	**35**	P	**P**	**16 01 51.8**	**+1.5**
	baz=274,SNR=66						
S32K				S	**S**	**16 10 19.2**	**+1.9**
	baz=274						
F31M	**Tsiigehtchic**	**68.71**	**24**	IAmb	IAmb	16 01 52.5	
	comp=Z,277nm,0.9s						
F31M	**Tsiigehtchic**	**68.71**	**24**	P	**P**	**16 01 51.1**	**+0.9**
	baz=270,SNR=48						
F31M				S	**S**	**16 10 16.7**	**-0.7**
	baz=270						
JIS	**Juneau Island**	**68.73**	**34**	P	**P**	**16 01 52.9**	**+2.3**
INK	**Inuvik**	**68.79**	**23**	IAmb	IAmb	16 01 53.0	
	comp=Z,404nm,0.9s						
INK	**Inuvik**	**68.79**	**23**	P	**P**	**16 01 51.5**	**+0.8**
	baz=270,SNR=217						
INK				S	**S**	**16 10 17.4**	**-0.9**
	baz=270						
INK	**Inuvik**	**68.79**	**23**	⇑P	**P**	**16 01 52.0**	**+1.3**
WHZ	**Wether Hill Ro**	**68.85**	**163**	P	**P**	**16 01 52.0**	**+0.6**
BHUJ	**Bhuj**	**68.88**	**288**	*e*P	**P**	**16 01 55.0**	**+2.8**
BHUJ				IAmb	IAmb	16 01 55.0	
	comp=Z,230nm,1.1s						
ODZ	**Otahua Downs**	**68.88**	**160**	P	**P**	**16 01 52.3**	**+0.7**
ODZ	**Otahua Downs**	**68.88**	**160**	P	**P**	**16 01 52.4**	**+0.7**
ODZ	**Otahua Downs**	**68.88**	**160**	⇑P	**P**	**16 01 52.5**	**+0.9**
P32M	**Atlin**	**69.00**	**33**	IAmb	IAmb	16 01 55.3	
	comp=Z,208nm,0.8s						
P32M	**Atlin**	**69.00**	**33**	P	**P**	**16 01 53.9**	**+1.6**
	baz=274,SNR=141						
P32M				S	**S**	**16 10 22.4**	**+1.2**
	baz=274						
FARO	**Faro, Yukon**	**69.03**	**30**	IAmb	IAmb	16 01 55.3	
	comp=Z,486nm,1.3s						
FARO	**Faro, Yukon**	**69.03**	**30**	P	**P**	**16 01 53.7**	**+1.3**
	baz=273,SNR=210						
FARO				S	**S**	**16 10 22.6**	**+1.1**
	baz=273						
N32M	**Quiet Lake**	**69.22**	**31**	IAmb	IAmb	16 01 56.5	
	comp=Z,629nm,1.3s						
N32M	**Quiet Lake**	**69.22**	**31**	P	**P**	**16 01 55.0**	**+1.4**
	baz=274						
N32M				S	**S**	**16 10 24.9**	**+1.2**
	baz=274						
TUZ	**Tuapeka**	**69.39**	**161**	P	**P**	**16 01 56.0**	**+1.4**
P33M	**Teslin, Yukon**	**69.41**	**32**	P	**P**	**16 01 56.2**	**+1.4**
	baz=274,SNR=174						
P33M				S	**S**	**16 10 26.3**	**+0.3**
	baz=274						
U33K	**Whale Pass**	**69.58**	**36**	IAmb	IAmb	16 01 59.0	
	comp=Z,305nm,1.1s						
U33K	**Whale Pass**	**69.58**	**36**	P	**P**	**16 01 57.6**	**+1.9**
	baz=275,SNR=30						
U33K				S	**S**	**16 10 29.3**	**+1.4**
	baz=275						
T33K	**Petersburg**	**69.61**	**36**	P	**P**	**16 01 57.4**	**+1.5**
	baz=275						
T33K				S	**S**	**16 10 29.9**	**+1.7**
	baz=275						
CRAG	**Craig**	**69.64**	**37**	P	**P**	**16 01 58.8**	**+2.7**
CRAG	**Craig**	**69.64**	**37**	P	**P**	**16 01 57.8**	**+1.7**
	baz=276,SNR=15						
CRAG				S	**S**	**16 10 29.3**	**+0.7**
	baz=276						
CRAG	**Craig**	**69.64**	**37**	⇓P	**P**	**16 01 57.8**	**+1.7**
SYZ	**Scrubby Hill**	**69.77**	**162**	P	**P**	**16 01 57.6**	**+0.7**
SYZ	**Scrubby Hill**	**69.77**	**162**	P	**P**	**16 01 58.1**	**+1.2**
Q32M	**Nakina River**	**69.78**	**33**	IAmb	IAmb	16 02 00.6	
	comp=Z,705nm,1.8s						
Q32M	**Nakina River**	**69.78**	**33**	P	**P**	**16 01 59.1**	**+1.9**
	baz=275,SNR=71						
Q32M				S	**S**	**16 10 31.5**	**+0.9**
	baz=275						
MMPY	**Sheldon Lake,**	**69.97**	**29**	P	**P**	**16 01 59.9**	**+1.8**
	baz=274,SNR=231						
MMPY				S	**S**	**16 10 32.9**	**+0.5**
	baz=274						
WRAK	**Wrangell Islan**	**69.98**	**36**	IAmb	IAmb	16 02 01.3	
	comp=Z,240nm,0.9s						
WRAK	**Wrangell Islan**	**69.98**	**36**	P	**P**	**16 01 59.8**	**+1.6**
	baz=276,SNR=60						
WRAK				S	**S**	**16 10 33.7**	**+1.2**
	baz=276						
WRAK	**Wrangell Islan**	**69.98**	**36**	⇓P	**P**	**16 01 59.8**	**+1.6**
HMDM	**Hanimaadhoo**	**70.09**	**270**	P	**P**	**16 02 01.5**	**+1.9**
	SNR=9.7						
HMDM	**Hanimaadhoo**	**70.09**	**270**	⇑P	**P**	**16 02 01.6**	**+1.9**
SVE	**Sverdlovsk**	**70.22**	**324**	*c* *i*P	**P**	**16 02 00.5**	**+0.9**
SVE				*e*PPP	PPP	16 06 27.9	
SVE				*i* S	**S**	**16 10 34.8**	**-0.5**
SVE				*e*		16 11 12.3	
SVE				pmax	pmax		
	comp=Z,2µm,1.9s						
DIB	**Dawson Inlet,**	**70.27**	**39**	IAmb	IAmb	16 02 02.2	
	comp=Z,210nm,0.8s						
H02S1	**DAWSON INLET T**	**70.27**	**39**	P	**P**	**16 02 00.3**	**+0.4**
	SNR=183						
R33M	**Jennings River**	**70.41**	**33**	P	**P**	**16 02 02.8**	**+1.9**
	baz=276,SNR=139						
R33M				S	**S**	**16 10 38.2**	**+0.6**
	baz=276						
S34M	**Telegraph Cree**	**70.48**	**34**	P	**P**	**16 02 03.2**	**+2.0**
	baz=276,SNR=8.9						
S34M				S	**S**	**16 10 39.1**	**+0.9**
	baz=276						
V35K	**Ketchikan**	**70.51**	**37**	P	**P**	**16 02 02.5**	**+1.2**
	baz=277,SNR=14						
V35K				S	**S**	**16 10 39.3**	**+0.7**
	baz=277						
MOBC	**Moresby Island**	**70.58**	**39**	IAmb	IAmb	16 02 04.3	
	comp=Z,396nm,1.5s						
DLBC	**Dease Lake**	**71.00**	**34**	P	**P**	**16 02 06.3**	**+2.0**
	baz=277,SNR=169						
DLBC				S	**S**	**16 10 45.4**	**+1.1**
	baz=277						
T35M	**Bob Quinn**	**71.07**	**35**	IAmb	IAmb	16 02 08.1	
	comp=Z,402nm,1.3s						
T35M	**Bob Quinn**	**71.07**	**35**	P	**P**	**16 02 06.6**	**+1.9**
	baz=277,SNR=122						
T35M				S	**S**	**16 10 46.9**	**+2.0**
	baz=277						
HG4B	**Hotspring**	**71.16**	**40**	IAmb	IAmb	16 02 07.8	
	comp=Z,248nm,0.8s						
U35K	**Hyder**	**71.33**	**36**	IAmb	IAmb	16 02 20.0	
	comp=Z,235nm,0.5s						
U35K	**Hyder**	**71.33**	**36**	P	**P**	**16 02 07.5**	**+1.3**
	baz=278						
U35K				S	**S**	**16 10 48.7**	**+0.9**
	baz=278						
A36M	**Sachs Harbour**	**71.38**	**19**	P	**P**	**16 02 07.2**	**+1.0**
	baz=277,SNR=159						
A36M				S	**S**	**16 10 48.5**	**+0.6**
	baz=277						
WTLY	**Watson Lake, Y**	**71.42**	**32**	P	**P**	**16 02 08.5**	**+1.8**
	baz=278,SNR=159						
WTLY				S	**S**	**16 10 49.6**	**+0.8**
	baz=278						
TGTN	**Hyland Airport**	**71.49**	**30**	P	**P**	**16 02 08.9**	**+1.8**
	baz=278,SNR=119						
TGTN				S	**S**	**16 10 50.0**	**+0.4**
	baz=278						
ARTI	**Arti**	**71.51**	**324**	P	**P**	**16 02 07.4**	**+0.2**
ARTI	**Arti**	**71.51**	**324**	*d* *i*P	**P**	**16 02 07.5**	**+0.2**
ARTI						16 04 52.8	
ARTI				PPP	PPP	16 06 39.1	
ARTI				S	**S**	**16 10 49.2**	**-0.7**
ARTI				SS	**SS**	**16 15 32.2**	**-3.0**
ARTI				SSS	SSS	16 18 48.7	
ARTI				pmax	pmax		
	comp=Z,899nm,0.9s						
ARTI	**Arti**	**71.51**	**324**	⇓P	**P**	**16 02 07.5**	**+0.2**
AB31	**Akbulak array**	**71.66**	**317**	*e*P	**P**	**16 02 08.4**	**+0.1**
ABKAR	**Akbulak array**	**71.66**	**317**	⇓P	**P**	**16 02 08.6**	**+0.4**
KAAM	**Kaadhehdhoo**	**72.36**	**264**	IAmb	IAmb	16 02 16.3	
	comp=Z,530nm,1.2s						
AKTO	**Aktyubinsk**	**72.68**	**318**	S	**S**	**16 11 02.6**	**-0.8**
	comp=Z,5.5nm,0.9s,baz=174,slow=10,SNR=2.5						
LIRD	**Liard River Hi**	**72.87**	**32**	P	**P**	**16 02 16.8**	**+1.6**
	baz=280,SNR=48						
LIRD				S	**S**	**16 11 05.1**	**0.0**
	baz=280						
BBB	**Bella Bella**	**73.05**	**40**	S	**S**	**16 11 07.4**	**+0.2**
	comp=Z,4.8nm,0.9s,baz=221,slow=20,SNR=1.6						
BBB	**Bella Bella**	**73.05**	**40**	⇓P	**P**	**16 02 17.4**	**+1.1**
BEAVL	**Fort Liard**	**73.25**	**31**	P	**P**	**16 02 19.0**	**+1.7**
	baz=281,SNR=179						
BEAVL				S	**S**	**16 11 10.0**	**+0.8**
	baz=281						
TOAD	**Toad River Com**	**73.41**	**33**	P	**P**	**16 02 19.5**	**+1.1**
	baz=281,SNR=70						
TOAD				S	**S**	**16 11 11.4**	**+0.2**
	baz=281						
WRGLY	**Wrigley**	**73.43**	**28**	P	**P**	**16 02 20.0**	**+1.8**
	baz=281,SNR=33						
WRGLY				S	**S**	**16 11 11.3**	**+0.2**
	baz=281						
KOTAN	**Kotaneelee Air**	**73.76**	**31**	P	**P**	**16 02 21.8**	**+1.6**
	baz=282,SNR=83						
KOTAN				S	**S**	**16 11 14.8**	**-0.1**
	baz=282						
PPT2	**Papeete2**	**74.73**	**115**	*e*P	P	16 02 32.1	+5.5
	comp=Z,82nm,1.3s						
PPT2				*e*pP	pP	16 03 59.0	-2.0
	comp=Z,119nm,1.1s						
PPT2				*e*S	**S**	**16 11 25.0**	**-2.0**
	comp=Z,2µm,25.2s						
PPT2				*e*sS	sS	16 14 06.3	-9.2
	comp=Z,6µm,27.8s						
PPT2				*e*LQ	LQ	16 22 27.3	
	comp=Z,10µm,29.2s						
PPT2				*e*LR	LR	16 26 05.6	
	comp=Z,1µm,32.5s						
PPT2				*e*LR	LR	16 26 08.3	
	comp=Z,1µm,23.0s						
PAE	**Paea**	**74.76**	**115**	*e*LQ	LQ	16 22 07.2	
	comp=Z,472nm,25.0s						
PAE				*e*LR	LR	16 26 05.5	
	comp=Z,300nm,22.8s						
PMOR	**Pomariorio Ree**	**75.04**	**112**	*e*P	**P**	**16 02 29.2**	**+1.0**
	comp=Z,171nm,1.4s						
PMOR				*e*pP	**pP**	**16 04 04.7**	**+1.9**
	comp=Z,199nm,1.1s						
PMOR	**Pomariorio Ree**	**75.04**	**112**	*e*LR	LR	16 26 15.5	
	comp=Z,4µm,23.2s						
TVO	**Taravao**	**75.09**	**115**	*e*P	**P**	**16 02 32.4**	**+3.8**
	comp=Z,24nm,0.7s						
TVO				*e*pP	**pP**	**16 04 03.0**	**-0.2**
	comp=Z,91nm,1.1s						
CBB	**Campbell River**	**75.19**	**42**	IAmb	IAmb	16 02 31.9	
	comp=Z,409nm,1.4s						
KIRV	**Kirov**	**75.82**	**327**	S	**S**	**16 11 34.9**	**-2.5**
	comp=Z,7.1nm,0.6s,baz=107,slow=19,SNR=1.3						
KIRV	**Kirov**	**75.82**	**327**	*c* *e*P	**P**	**16 02 32.4**	**+0.5**
PGC	**Sidney**	**76.73**	**43**	IAmb	IAmb	16 02 40.2	
	comp=Z,187nm,0.9s						
EUNU	**Eureka**	**76.75**	**8**	IAmb	IAmb	16 02 39.4	
	comp=Z,390nm,0.9s						
EUNU	**Eureka**	**76.75**	**8**	⇓P	**P**	**16 02 37.7**	**+0.9**
NLWA	**Neilton Lookou**	**76.79**	**44**	⇓P	**P**	**16 02 39.7**	**+2.1**
A04D	**Lummi Island**	**77.19**	**43**	IAmb	IAmb	16 02 43.0	
	comp=Z,248nm,0.9s						
LLLB	**Lillooet**	**77.20**	**41**	IAmb	IAmb	16 02 43.0	
	comp=Z,414nm,1.1s						
HOPEN	**Hopen**	**77.30**	**348**	*e*P	**P**	**16 02 40.5**	**+0.8**
HOPEN				IVmB_BB		16 02 42.2	
	comp=Z,8µm,1.3s						
HOPEN				*e*pP	**pP**	**16 04 14.4**	**-0.9**
HOPEN				*e*S	**S**	**16 11 53.3**	**+0.7**
HEBO	**Mount Hebo**	**77.44**	**46**	IAmb	IAmb	16 02 44.6	
	comp=Z,399nm,0.9s						
TBI	**Tubuai**	**77.48**	**121**	*e*S	**S**	**16 11 58.7**	**+2.5**
	comp=Z,9µm,43.2s						
TBI				*e*sS	sS	16 14 14.2	-32
	comp=Z,14µm,36.8s						
TBI				*e*LQ	LQ	16 23 33.6	
	comp=Z,12µm,34.0s						
YKAW3	**Yellowknife Wh**	**77.51**	**28**	IAmb	IAmb	16 02 43.5	
	comp=Z,397nm,0.7s						
YKA	**Yellowknife Ar**	**77.53**	**28**	P	**P**	**16 02 42.0**	**+0.7**
YKA	**Yellowknife Ar**	**77.53**	**28**	P	**P**	**16 02 41.8**	**+0.5**
	comp=Z,226nm,0.8s,baz=293,slow=5.9,SNR=789						
YKA				pP	**pP**	**16 04 18.6**	**+2.2**
	comp=Z,12nm,0.7s,baz=294,slow=6.4,SNR=1.8						
YKA				S	**S**	**16 11 49.6**	**-6.0**
	comp=Z,9.9nm,1.1s,baz=292,slow=10,SNR=7.4						
YKA				PKKPbc	**PKKPbc**	**16 21 41.7**	**-1.3**
	comp=Z,0.6nm,0.7s,baz=97,slow=5.3,SNR=3.8						
	comp=Z,226nm,0.8s						
YKAW1	**Yellowknife Wh**	**77.59**	**28**	IAmb	IAmb	16 02 44.0	
	comp=Z,444nm,0.8s						
F04D	**Rainier, OR**	**77.70**	**45**	IAmb	IAmb	16 02 45.9	
	comp=Z,324nm,1.0s						
G03D	**McMinnville, O**	**77.77**	**46**	IAmb	IAmb	16 02 46.2	
	comp=Z,360nm,0.8s						
SPA0	**Spitsbergen Ar**	**77.82**	**350**	*e*P	**P**	**16 02 42.9**	**+0.2**
SPB2	**Spitsbergen Ar**	**77.82**	**350**	IAmb	IAmb	16 02 45.6	
	comp=Z,353nm,1.0s						
SPITS	**Spitsbergen Ar**	**77.82**	**350**	P	**P**	**16 02 42.7**	**+0.1**
	comp=Z,58nm,0.5s,baz=79,slow=7.5,SNR=176						
SPITS				S	**S**	**16 11 57.1**	**-1.1**
	comp=Z,2.0nm,0.7s,baz=38,slow=7.3,SNR=1.0						
	comp=Z,58nm,0.5s						
SPITS	**Spitsbergen Ar**	**77.82**	**350**	P	**P**	**16 02 42.9**	**+0.2**
SPITS				pmax	pmax		
	comp=Z,643nm,1.3s						
COR	**Corvallis**	**77.91**	**47**	P	**P**	**16 02 45.8**	**+2.1**
COR				IAmb	IAmb	16 02 47.4	
	comp=Z,482nm,1.1s						
COR	**Corvallis**	**77.91**	**47**	P	**P**	**16 02 45.8**	**+2.1**
COR				pmax	pmax		
	comp=Z,482nm,1.1s						
COR	**Corvallis**	**77.91**	**47**	⇓P	**P**	**16 02 45.8**	**+2.1**
KBS	**Kingsbay**	**77.96**	**352**	P	**P**	**16 02 44.2**	**+0.8**
KBS				IAmb	IAmb	16 02 45.8	
	comp=Z,340nm,0.8s						
KBS	**Kingsbay**	**77.96**	**352**	*c* *e*P	**P**	**16 02 44.7**	**+1.4**
KBS				pmax	pmax		
	comp=Z,1µm,2.5s						
KBS	**Kingsbay**	**77.96**	**352**	*e*P	**P**	**16 02 44.1**	**+0.8**
KBS				IVmB_BB		16 02 45.5	
	comp=Z,3µm,0.8s						
KBS				*e*S	**S**	**16 12 01.4**	**+1.8**
KBS	**Kingsbay**	**77.96**	**352**	⇓P	**P**	**16 02 44.1**	**+0.8**
KBS	**Kingsbay**	**77.96**	**352**	*i* P	**P**	**16 02 43.4**	**+0.1**
I03D	**Drain, OR**	**78.13**	**48**	IAmb	IAmb	16 02 48.2	
	comp=Z,408nm,0.9s						
K02D	**Willamette Mer**	**78.18**	**49**	IAmb	IAmb	16 02 48.3	
	comp=Z,323nm,1.1s						
NOR	**Nord**	**78.28**	**357**	*i* P	**P**	**16 02 45.0**	**0.0**
NOR				IAmb	IAmb	16 02 46.8	
	comp=Z,274nm,1.2s						
JLN	**Jalan Bani Buh**	**78.30**	**289**	P	**P**	**16 02 47.2**	**+0.9**
	SNR=26						
LON	**Longmire**	**78.32**	**44**	IAmb	IAmb	16 02 48.5	
	comp=Z,313nm,1.4s						
H04D	**Lebanon**	**78.32**	**47**	IAmb	IAmb	16 02 49.3	
	comp=Z,551nm,1.2s						
L02F	**Cave Junction**	**78.41**	**49**	IAmb	IAmb	16 02 49.7	
	comp=Z,218nm,0.9s						
JCC	**Jacoby Creek,**	**78.44**	**51**	IAmb	IAmb	16 02 50.2	
	comp=Z,464nm,1.2s						
BELG	**Belogornoye**	**78.53**	**322**	S	**S**	**16 12 05.4**	**-1.0**
	comp=Z,31nm,0.9s,baz=127,slow=20,SNR=7.9						
BELG	**Belogornoye**	**78.53**	**322**	*d* *i*P	**P**	**16 02 47.4**	**+0.6**
BELG				pmax	pmax		
	comp=Z,268nm,0.9s						
H04A	**Detroit Lake**	**78.65**	**47**	IAmb	IAmb	16 02 50.5	
	comp=Z,410nm,1.1s						
WSAR	**Wadi Sarin**	**78.67**	**291**	P	**P**	**16 02 49.5**	**+1.3**
	SNR=51						
WSAR				S	**S**	**16 12 08.5**	**-0.6**
HSPB	**Hornsund (broa**	**78.74**	**350**	*e*P	**P**	**16 02 48.4**	**+0.8**
BBOR	**Butler Butte**	**78.82**	**48**	IAmb	IAmb	16 02 51.8	
	comp=Z,214nm,1.0s						
LVZ	**Lovozero**	**78.91**	**339**	P	**P**	**16 02 48.5**	**-0.2**
LVZ				IAmb	IAmb	16 02 50.3	
	comp=Z,357nm,1.0s						
LVZ	**Lovozero**	**78.91**	**339**	P	**P**	**16 02 48.5**	**-0.2**
LVZ				pmax	pmax		
	comp=Z,357nm,1.0s						
LVZ	**Lovozero**	**78.91**	**339**	P	**P**	**16 02 48.7**	**0.0**
	comp=Z,6µmcomp=Z,493nm,1.1s						
BIDO	**Bidbid**	**79.04**	**291**	P	**P**	**16 02 51.5**	**+1.4**
	SNR=100						
BIDO				S	**S**	**16 12 13.3**	**+0.5**
G05A	**Wamic**	**79.08**	**46**	IAmb	IAmb	16 02 55.3	
	comp=Z,252nm,1.0s						
YBH	**Yreka Blue Hor**	**79.13**	**50**	IAmb	IAmb	16 02 53.7	
	comp=Z,270nm,0.8s						
YBH	**Yreka Blue Hor**	**79.13**	**50**	P	**P**	**16 02 52.0**	**+1.5**
	comp=Z,19nm,0.9s,baz=295,slow=1.4,SNR=234						
YBH				pP	**pP**	**16 04 28.1**	**+1.9**
	comp=Z,3.4nm,1.0s,baz=282,slow=2.0,SNR=1.9						
YBH				S	**S**	**16 12 12.9**	**-0.5**
	comp=Z,0.1nm,0.7s,baz=315,slow=2.9,SNR=6.0						
SMDO	**Samad**	**79.24**	**291**	P	**P**	**16 02 51.9**	**+0.5**
	SNR=51						
SMDO				S	**S**	**16 12 13.6**	**-1.6**
L04D	**Klamath Falls**	**79.28**	**49**	IAmb	IAmb	16 02 54.1	
	comp=Z,372nm,0.8s						
I05D	**Terrebonne, OR**	**79.33**	**47**	IAmb	IAmb	16 02 54.4	
	comp=Z,612nm,1.6s						
MXC	**Moxie City**	**79.37**	**44**	IAmb	IAmb	16 02 54.5	
	comp=Z,508nm,1.3s						
JMDO	**Jabal Madar**	**79.39**	**290**	P	**P**	**16 02 52.9**	**+0.7**
	SNR=37						
B08A	**Colville Reser**	**79.44**	**42**	IAmb	IAmb	16 02 54.5	
	comp=Z,328nm,0.8s						
APA	**Apatity**	**79.48**	**339**	⇓*i*P	**P**	**16 02 51.0**	**-0.7**
APA				*i*		16 02 56.4	
APA				*i*		16 06 01.0	
APA				*i* S	**S**	**16 12 14.0**	**-1.9**
APA				*i* SS	**SS**	**16 17 33.0**	**-1.2**
APA				pmax	pmax		
	comp=Z,385nm,0.9s						
APA				MLR	MLR		
	comp=Z,4µm,21.0s						
TAOE	**Nuku Hiva Isla**	**79.51**	**103**	*e*P	P	16 02 42.0	-11
	comp=Z,211nm,24.8s						
TAOE				*e*S	**S**	**16 12 11.9**	**-6.3**
	comp=Z,1µm,26.7s						
TAOE	**Nuku Hiva Isla**	**79.51**	**103**	*e*LQ	LQ	16 23 58.0	
	comp=Z,5µm,26.8s						
TAOE				*e*LR	LR	16 28 13.3	
	comp=Z,3µm,24.9s						
G06A	**Carlson Farm,**	**79.54**	**46**	IAmb	IAmb	16 02 55.4	
	comp=Z,580nm,1.7s						
VADS	**Vadso**	**79.56**	**342**	*e*P	**P**	**16 02 52.4**	**+0.3**
VADS				*e*sP	**sP**	**16 05 10.9**	**-3.1**
VADS				*e*S	**S**	**16 12 17.7**	**+1.1**
E07A	**Sunnyside**	**79.66**	**44**	IAmb	IAmb	16 02 56.0	
	comp=Z,282nm,0.8s						
J05D	**Fort Rock, OR**	**79.72**	**48**	IAmb	IAmb	16 02 56.7	
	comp=Z,380nm,1.0s						
HOQ	**Hoqain**	**79.73**	**291**	P	**P**	**16 02 55.0**	**+1.1**
	SNR=201						
HOQ				S	**S**	**16 12 19.9**	**-0.3**
F07A	**Phinny Hill Vi**	**79.81**	**45**	IAmb	IAmb	16 02 56.8	
	comp=Z,364nm,1.2s						
KLMR	**Klimovskoe**	**79.85**	**331**	*d* *i*P	**P**	**16 02 52.0**	**-1.7**
KLMR				*e*		16 06 02.3	
KLMR				S	**S**	**16 12 17.0**	**-2.9**
KLMR				*e*		16 12 34.2	
KLMR				SS	**SS**	**16 17 36.5**	**-3.4**
KLMR				SSS	SSS	16 21 02.6	
KLMR				pmax	pmax		
	comp=Z,1µm,1.4s						
KLMR				MLR	MLR		
	comp=Z,3µm,18.0s						
HAWA	**Hanford**	**79.92**	**44**	IAmb	IAmb	16 02 57.3	
	comp=Z,225nm,0.9s						
HAWA	**Hanford**	**79.92**	**44**	⇓P	**P**	**16 02 55.8**	**+1.3**
MHTO	**MHTO**	**79.92**	**289**	P	**P**	**16 02 55.6**	**+0.7**
	SNR=105						
MHTO				S	**S**	**16 12 18.9**	**-3.2**
SHME	**Shamm**	**80.02**	**294**	P	**P**	**16 02 56.6**	**+1.2**
	SNR=110						
SHME				S	**S**	**16 12 22.1**	**-0.9**
SHME	**Shamm**	**80.02**	**294**	*i* P	**P**	**16 02 56.6**	**+1.2**
	SNR=117						
MCCM	**Marconi Confer**	**80.06**	**53**	IAmb	IAmb	16 02 57.9	
	comp=Z,260nm,1.1s						
MCCM	**Marconi Confer**	**80.06**	**53**	⇑P	**P**	**16 02 56.4**	**+1.1**
BSY	**Bisya**	**80.08**	**291**	P	**P**	**16 02 56.6**	**+0.9**
	SNR=63						
BSY				S	**S**	**16 12 27.8**	**+4.1**
MDH	**Madha**	**80.11**	**293**	P	**P**	**16 02 56.6**	**+0.8**
	SNR=13						
MDH				S	**S**	**16 12 20.6**	**-3.3**
MDH	**Madha**	**80.11**	**293**	*i* P	**P**	**16 02 55.6**	**-0.2**
	SNR=27						
D08A	**Wollman Farm,**	**80.11**	**44**	IAmb	IAmb	16 02 58.2	
	comp=Z,349nm,1.1s						
K05A	**Summer Lake**	**80.13**	**48**	IAmb	IAmb	16 02 59.0	
	comp=Z,499nm,1.1s						
E08A	**Dider Farm, El**	**80.20**	**44**	IAmb	IAmb	16 02 58.8	
	comp=Z,295nm,1.2s						
MASF	**Masafi**	**80.21**	**293**	P	**P**	**16 02 57.7**	**+1.3**
	SNR=8.8						
MASF				S	**S**	**16 12 26.4**	**+1.4**
MSFE	**Esma-Masafi**	**80.21**	**293**	*i* P	**P**	**16 02 57.3**	**+0.8**
	SNR=102						
SOHO	**SOHO**	**80.25**	**292**	P	**P**	**16 02 57.5**	**+0.9**
SOHO				S	**S**	**16 12 23.8**	**-1.6**
SOHO	**SOHO**	**80.25**	**292**	*i* P	**P**	**16 02 57.1**	**+0.5**
	SNR=56						
C09A	**Chrisman Ranch**	**80.29**	**43**	IAmb	IAmb	16 02 58.9	
	comp=Z,239nm,0.8s						
UOSS	**Minazif**	**80.30**	**293**	P	**P**	**16 02 57.4**	**+0.6**
UOSS				IAmb	IAmb	16 03 02.7	
	comp=Z,298nm,0.8s						
UOSS	**Minazif**	**80.30**	**293**	P	**P**	**16 02 57.7**	**+0.8**
UOSS				S	**S**	**16 12 23.6**	**-2.3**
UOSS	**Minazif**	**80.30**	**293**	*i* P	**P**	**16 02 56.9**	**+0.1**
	SNR=64						
UOSS	**Minazif**	**80.30**	**293**	P	**P**	**16 02 57.0**	**+0.2**
UOSS				S	**S**	**16 12 21.9**	**-4.0**
HATC	**Hat Creek Radi**	**80.31**	**50**	IAmb	IAmb	16 02 59.6	
	comp=Z,389nm,0.8s						
HATD	**Hatta, Dubai**	**80.39**	**293**	P	**P**	**16 02 58.8**	**+1.4**
	SNR=40						
HATD				S	**S**	**16 12 26.5**	**-0.3**
HATD	**Hatta, Dubai**	**80.39**	**293**	*i* P	**P**	**16 02 58.1**	**+0.7**
	SNR=71						
YPT	**Yellepit**	**80.41**	**45**	IAmb	IAmb	16 02 60.0	
	comp=Z,266nm,0.9s						
KEV	**Kevo**	**80.45**	**342**	P	**P**	**16 02 56.5**	**-0.2**
KEV				IAmb	IAmb	16 02 58.5	
	comp=Z,322nm,0.7s						
KEV	**Kevo**	**80.45**	**342**	P	**P**	**16 02 56.5**	**-0.2**
KEV				pmax	pmax		
	comp=Z,322nm,0.7s						
KEV	**Kevo**	**80.45**	**342**	P	**P**	**16 02 56.9**	**+0.2**

KEV				S	S	16 12 23.0	-2.7
KEV	Kevo	80.45	342	⇓P	P	16 02 56.8	+0.1
ARQ	Araqi	80.50	291	P	P	16 02 59.2	+1.2
	SNR=109						
ARQ				S	S	16 12 30.4	+2.4
ASHO	Ashiyiah	80.50	293	P	P	16 02 59.2	+1.2
	SNR=51						
ASHO				S	S	16 12 27.1	-0.9
ASHO	Ashiyiah	80.50	293	*i* P	P	16 02 59.0	+1.0
	SNR=106						
UMQ	Umm Al-Quwin	80.59	294	P	P	16 03 00.1	+1.8
	SNR=13						
UMQ				S	S	16 12 30.0	+1.2
UMQ	Umm Al-Quwin	80.59	294	*i* P	P	16 03 00.0	+1.7
	SNR=11						
DQM	DQM	80.62	288	P	P	16 02 59.9	+1.3
	SNR=34						
DQM				S	S	16 12 29.1	-0.2
ORV	Oroville	80.66	51	IAmb	IAmb	16 03 00.8	
	comp=Z,405nm,1.2s						
NAZ	Nazwa, Dubai	80.75	293	P	P	16 03 00.3	+1.1
	SNR=48						
NAZ	Nazwa, Dubai	80.75	293	*i* P	P	16 02 60.0	+0.8
	SNR=104						
E09A	Wood Farm, Sta	80.79	44	IAmb	IAmb	16 03 01.8	
	comp=Z,236nm,0.9s						
NEW	Newport	80.87	42	IAmb	IAmb	16 03 02.0	
	comp=Z,253nm,0.8s						
NEW	Newport	80.87	42	P	P	16 03 00.5	+1.0
	comp=Z,282nm,1.0s,baz=288,slow=5.3						
NEW				pP	pP	16 04 37.1	+1.9
	comp=Z,64nm,1.0s,baz=321,slow=4.8,SNR=1.9						
NEW				S	S	16 12 29.3	-1.7
	comp=Z,1.0nm,0.4s,baz=300,slow=20,SNR=6.8						
	comp=Z,282nm,1.0s						
NEW	Newport	80.87	42	⇓P	P	16 03 00.4	+1.0
FAQ	Al Faqa, Dubai	80.89	293	P	P	16 03 00.8	+0.8
	SNR=38						
FAQ	Al Faqa, Dubai	80.89	293	*i* P	P	16 03 00.5	+0.6
	SNR=31						
HAMF	Hammerfest	80.90	343	*e*P	P	16 02 58.7	-0.4
HAMF				IVmB_BB		16 03 00.3	
	comp=Z,4µm,1.1s						
HAMF				*e*S	S	16 12 29.9	-0.4
ALNE	Al Ain	80.96	292	P	P	16 03 01.6	+1.3
	SNR=78						
ALNE				S	S	16 12 31.1	-1.6
ALNE	Al Ain	80.96	292	*i* P	P	16 03 01.1	+0.8
	SNR=226						
ARA0	ARCESS Array S	81.01	342	*e*P	P	16 03 00.0	+0.3
ARCES	ARCESS Array B	81.01	342	P	P	16 02 59.8	+0.1
ARCES	ARCESS Array B	81.01	342	P	P	16 02 59.9	+0.2
	comp=Z,288nm,0.5s,baz=56,slow=5.6,SNR=1142						
ARCES				S	S	16 12 28.2	-3.3
	comp=Z,8.1nm,1.0s,baz=23,slow=19,SNR=3.8						
ARCES				PKKPbc	PKKPbc	16 21 33.2	-2.4
	comp=Z,1.7nm,0.6s,baz=208,slow=1.7,SNR=8.3						
	comp=Z,288nm,0.5s						
ASUD	Al Ashush, Dub	81.15	293	P	P	16 03 02.5	+1.2
	SNR=104						
ASUD				S	S	16 12 35.4	+0.8
ASUD	Al Ashush, Dub	81.15	293	*i* P	P	16 03 02.4	+1.1
	SNR=50						
BEKR	Beckworth	81.40	51	IAmb	IAmb	16 03 04.9	
	comp=Z,265nm,0.8s						
AJN	Ajban	81.47	293	P	P	16 03 03.6	+0.6
	SNR=192						
AJN				S	S	16 12 36.5	-1.2
AJN	Ajban	81.47	293	*i* P	P	16 03 03.5	+0.6
	SNR=119						
MAK	Makhachkala	81.58	313	*d i*P	P	16 03 00.1	-3.0
MAK				*e**PP	pP	16 04 39.5	0.0
MAK				*e**SP	sP	16 05 25.8	+1.1
MAK				*e*PPP	PPP	16 08 06.7	
MAK				*e*S	S	16 12 34.5	-3.7
MAK				*e*SS	SS	16 18 06.5	+0.1
MAK				*e*SSS	SSS	16 21 43.4	
MAK				pmax	pmax		
	comp=Z,1µm,1.0s						
MAK				MLR	MLR		
	comp=Z,6µm,17.0s						
J08A	Circle Bar Ran	81.61	47	IAmb	IAmb	16 03 06.2	
	comp=Z,184nm,0.9s						
TULEG	Thule	81.72	7	*i* P	P	16 03 04.0	+0.7
TULEG				IAmb	IAmb	16 03 05.6	
	comp=Z,720nm,1.2s						
WVOR	Wild Horse Val	81.80	48	IAmb	IAmb	16 03 07.1	
	comp=Z,220nm,1.1s						
WVOR	Wild Horse Val	81.80	48	⇓P	P	16 03 05.6	+1.1
MPK	Martis Peak	81.82	51	IAmb	IAmb	16 03 07.6	
	comp=Z,532nm,1.1s						
UMZA	Um Al Zommool	81.88	291	P	P	16 03 05.8	+0.8
UMZA				S	S	16 12 38.8	-3.2
BMO	Blue Mountains	81.90	45	IAmb	IAmb	16 03 07.5	
	comp=Z,278nm,1.0s						
BMO	Blue Mountains	81.90	45	⇓P	P	16 03 05.9	+1.0
AKT	Akhty	81.91	311	*e*P	P	16 03 05.5	+0.5
AKT				*e**PP	pwP	16 04 47.2	+0.8
AKT				*e*		16 06 18.5	
AKT				*e*PPP	PPP	16 08 10.7	
AKT				*e*S	S	16 12 37.2	-4.7
AKT				pmax	pmax		
	comp=Z,2µm,1.0s						
AKT				pmax	pmax		
	comp=Z,1µm,0.9s						
AKT				pmax	pmax		
	comp=E,388nm,0.9s						
AKT				pmax	pmax		
	comp=N,238nm,0.8s						
AKT				smax	smax		
	comp=E,449nm,2.3s						
AKT				smax	smax		
	comp=N,1µm,3.3s						
AKT				MLR	MLR		
	comp=E,3µm,16.0s						
AKT				MLR	MLR		
	comp=N,2µm,15.0s						
AKT				MLR	MLR		
	comp=Z,4µm,17.0s						
CMB	Columbia Colle	81.97	53	IAmb	IAmb	16 03 07.9	
	comp=Z,247nm,0.7s						
PNTR	Pine Nut	82.21	51	IAmb	IAmb	16 03 09.6	
	comp=Z,316nm,1.0s						
VRH	Novokhopyorsk	82.38	322	*e*P	P	16 03 06.3	-0.8
VRH				*e*S	SKSac	16 12 41.3	-4.1
VRH				pmax	pmax		
	comp=Z,324nm,0.8s						
VRH				smax	smax		
	comp=E,10µm,6.8s						
JETT	Jettan, Norway	82.45	343	*e*P	P	16 03 07.2	+0.1
NEEM	North Greenlan	82.46	3	*i* P	P	16 03 08.0	+0.6
NEEM				IAmb	IAmb	16 03 11.3	
	comp=Z,1µm,1.1s						
WAKR	Walker	82.52	52	IAmb	IAmb	16 03 11.3	
	comp=Z,160nm,0.7s						
TRO	Tromso	82.81	343	*e*P	P	16 03 09.0	+0.2
TRO				IVmB_BB		16 03 10.0	
	comp=Z,5µm,0.8s						
TRO				*e*SKSac	S	16 12 51.1	+1.6
MOS	Moscow	82.82	327	*e*P	P	16 03 06.6	-2.6
MOS				*e**PP	pP	16 04 43.3	-2.7
MOS				*e*		16 06 23.6	
MOS				*e*S	SKSac	16 12 44.4	-3.7
MOS				*e*SS	SS	16 18 24.7	+0.7
MOS				pmax	pmax		
	comp=Z,2µm,1.6s						
MOS				pmax	pmax		
	comp=N,433nm,1.5s						
MOS				pmax	pmax		
	comp=E,308nm,1.7s						
MOS				pmax	pmax		
	comp=Z,4µm,1.9s						
MOS				pmax	pmax		
	comp=N,600nm,1.8s						
MOS				pmax	pmax		
	comp=E,600nm,2.0s						
MOS				smax	smax		
	comp=E,7µm,4.8s						
MOS				smax	smax		
	comp=N,2µm,2.6s						
MOS				MLR	MLR		
	comp=Z,2µm,16.0s						
MOS				MLR	MLR		
	comp=N,2µm,15.0s						
DAG	Danmarks Havn	83.03	356	P	P	16 03 06.2	-3.7
DAG	Danmarks Havn	83.03	356	⇓P	P	16 03 09.7	-0.2
DAG	Danmarks Havn	83.03	356	*i* P	P	16 03 09.5	-0.3
DAG				IAmb	IAmb	16 03 11.2	
	comp=Z,234nm,1.2s						
RYN	Ryan	83.15	52	IAmb	IAmb	16 03 14.2	
	comp=Z,180nm,0.9s						
JRN	Qarnain Island	83.19	294	P	P	16 03 12.0	+0.3
	SNR=75						
JRN				S	SKSac	16 12 47.3	-4.4
MZR	Muzera	83.26	292	P	P	16 03 13.4	+1.2
	SNR=223						
MZR				S	SKSac	16 12 48.2	-4.2
MZR	Muzera	83.26	292	*i* P	P	16 03 12.9	+0.7
	SNR=411						
MZR				P	PcP	16 03 13.2	-2.4
LHV	Little Huntoon	83.30	52	IAmb	IAmb	16 03 15.2	
	comp=Z,180nm,0.9s						
NVAR	Mina Array Bea	83.38	52	P	P	16 03 13.7	+0.9
NVAR	Mina Array Bea	83.38	52	P	P	16 03 13.8	+1.1
	comp=Z,148nm,0.7s,baz=291,slow=5.5,SNR=566						
NVAR				pP	pP	16 04 51.6	+2.0
	comp=Z,23nm,0.9s,baz=295,slow=5.2,SNR=1.8						
NVAR				S	SKSac	16 12 52.1	-0.9
	comp=Z,1.0nm,0.7s,baz=286,slow=4.4,SNR=1.8						
NVAR				PKPPKP	P'P'df	16 29 33.8	-2.8
	comp=Z,0.6nm,0.7s,baz=113,slow=3.1,SNR=3.7						
	comp=Z,148nm,0.7s						
MSO	Missoula	83.40	43	⇑P	P	16 03 12.4	0.0
LPSR	Galich'ya Gora	83.42	324	*e*P	P	16 03 11.5	-0.8
LPSR				*e**PP	pP	16 04 48.3	-1.0
LPSR				*e**SP	sP	16 05 32.2	-2.2
LPSR				*e*S	SKSac	16 12 49.1	-3.1
LPSR				pmax	pmax		
	comp=Z,960nm,1.9s						
LPSR				smax	smax		
	comp=E,12µm,7.1s						
GHWR	Ruwais	83.48	293	P	P	16 03 14.2	+1.0
GHWR				S	SKSac	16 12 50.0	-3.6
OBN	Obninsk	83.63	327	P	P	16 03 13.1	-0.2
OBN	Obninsk	83.63	327	S	SKSac	16 12 51.0	-2.3
	comp=E,8.3nm,0.4s,baz=108,slow=20,SNR=5.7						
OBN	Obninsk	83.63	327	⇑P	P	16 03 14.1	+0.8
OBN	Obninsk	83.63	327	*d i*P	P	16 03 12.8	-0.5
OBN				*e**PP	pP	16 04 49.6	-0.7
OBN				*e*		16 06 37.4	
OBN				*e*PPP	PPP	16 08 27.3	
OBN				*e*SSS	SSS	16 22 07.1	
OBN				pmax	pmax		
	comp=Z,1µm,1.7s						
OBN	Obninsk	83.63	327	P	P	16 03 13.3	0.0
	comp=Z,13µmcomp=Z,656nm,1.9s						
DMTO	DMTO	83.64	286	P	P	16 03 15.1	+1.0
	SNR=10						
VORR	Voronezh	83.64	323	*e*P	P	16 03 13.1	-0.3
VORR				*e*S	SKSac	16 12 57.6	+4.0
VORR				pmax	pmax		
	comp=Z,687nm,1.3s						
VORR				smax	smax		
	comp=N,1µm,1.7s						
VSR	Storozhevoye	83.85	322	*e*P	P	16 03 12.4	-2.1
VSR				pmax	pmax		
	comp=Z,160nm,1.0s						
GOF	Gofitskoye	83.86	316	*d i*P	P	16 03 14.6	-0.1
GOF				*e*S	SKSac	16 12 54.1	-1.2
VORD	Divnogorie	83.88	322	*e*P	P	16 03 11.9	-2.7
VORD				pmax	pmax		
	comp=Z,120nm,0.8s						
DSP	Deep Springs	84.00	53	IAmb	IAmb	16 03 18.7	
	comp=Z,346nm,1.4s						
Q09A	Carvers	84.07	51	IAmb	IAmb	16 03 18.8	
	comp=Z,436nm,1.4s						
DOK	Doka	84.09	288	P	P	16 03 17.0	+0.7
	SNR=24						
BLKN	Baker Lake	84.17	22	IAmb	IAmb	16 03 17.7	
	comp=Z,530nm,1.3s						
HLID	Hailey	84.30	46	IAmb	IAmb	16 03 19.9	
	comp=Z,258nm,1.0s						
HLID	Hailey	84.30	46	⇓P	P	16 03 18.3	+1.1
RBK	Rabkut	84.38	286	P	P	16 03 18.5	+0.7
	SNR=20						
KBZ	Khabaz	84.46	314	P	P	16 03 17.4	-0.2
	comp=Z,182nm,0.9s,baz=80,slow=5.6,SNR=85						
KBZ				S	SKSac	16 12 58.7	-0.4
	comp=Z,2.6nm,0.8s,baz=52,slow=19,SNR=4.6						
	comp=Z,182nm,0.9s						
KBZ	Khabaz	84.46	314	*ce*P	P	16 03 17.7	+0.1
GNI	Garni	84.50	311	P	P	16 03 18.9	+0.7
GNI	Garni	84.50	311	S	SKSac	16 12 59.3	-0.6
	comp=Z,5.1nm,0.5s,baz=0.0,slow=20,SNR=1.1						
GNI	Garni	84.50	311	P	P	16 03 19.1	+0.9
GNI				S	SKSac	16 12 59.8	-0.1
GNI	Garni	84.50	311	P	P	16 03 18.9	+0.7
GNI				pmax	pmax		
	comp=Z,2µm,2.0s						
GNI	Garni	84.50	311	P	P	16 03 18.9	+0.7
GNI	Garni	84.50	311	P	P	16 03 18.9	+0.7
	comp=Z,7µmcomp=Z,359nm,1.7s						
GNI	Garni	84.50	311	⇓P	P	16 03 18.8	+0.7
KVAR	Kislovodsk Arr	84.51	315	S	SKSac	16 12 58.9	-0.8
	comp=Z,14nm,1.0s,baz=150,slow=14,SNR=4.7						
SHMA	Al-Shehemyia	84.51	295	P	P	16 03 18.6	+0.3
	SNR=51						
SHMA				S	SKSac	16 12 57.1	-3.0
KIV	Kislovodsk	84.51	315	P	P	16 03 18.0	-0.1
KIV				IAmb	IAmb	16 03 22.6	
	comp=Z,586nm,1.4s						
KIV	Kislovodsk	84.51	315	P	P	16 03 18.1	0.0
KIV				S	SKSac	16 12 58.9	-0.8
KIV	Kislovodsk	84.51	315	⇑P	P	16 03 19.2	+1.2
KIV	Kislovodsk	84.51	315	*e*P	P	16 03 18.1	0.0
KIV				*e**PP	pP	16 04 55.2	-0.1
KIV				*e**SP	sP	16 05 39.1	-1.2
KIV				*e*		16 06 40.8	
KIV				*e*PPP	PPP	16 08 35.0	
KIV				*e*		16 12 59.1	
KIV				pmax	pmax		
	comp=Z,174nm,1.0s						
KIV				pmax	pmax		
	comp=Z,1µm,4.6s						
KIV				MLR	MLR		
	comp=Z,3µm,20.0s						
KIV	Kislovodsk	84.51	315	*i* P	P	16 03 18.0	-0.1
	SNR=88						
KIV	Kislovodsk	84.51	315	P	P	16 03 18.0	-0.1
KIV				S	SKSac	16 13 00.0	+0.3
KIV	Kislovodsk	84.51	315	P	P	16 03 18.4	+0.3
	comp=Z,7µmcomp=Z,265nm,1.9s						
GMN	Gold Mountain	84.55	52	IAmb	IAmb	16 03 21.1	
	comp=Z,174nm,1.0s						
GRAC	Grapevine Rang	84.58	53	IAmb	IAmb	16 03 20.6	
	comp=Z,263nm,1.4s						
WHFO	Wadi Hawf	84.64	287	P	P	16 03 19.1	0.0
	SNR=10						
KULLO	Kullorsuaq	84.76	6	*i* P	P	16 03 19.2	+0.7
KULLO				IAmb	IAmb	16 03 20.6	
	comp=Z,408nm,1.0s						
ELK	Elko	84.78	49	IAmb	IAmb	16 03 22.3	
	comp=Z,333nm,0.9s						
ELK	Elko	84.78	49	P	P	16 03 20.9	+1.2
	comp=Z,246nm,0.8s,baz=289,slow=4.3,SNR=566						
ELK				pP	pP	16 04 58.8	+1.8
	comp=Z,24nm,0.9s,baz=288,slow=8.3,SNR=2.0						
ELK				S	SKSac	16 13 00.8	-1.0
	comp=Z,4.3nm,1.0s,baz=202,slow=11,SNR=11						
	comp=Z,246nm,0.8s						
ELK	Elko	84.78	49	⇓P	P	16 03 20.9	+1.2
SAKB	Bahrain	84.83	296	P	P	16 03 19.4	-0.4
SAKB				S	SKSac	16 12 59.1	-3.0
STEI	Steigen	84.94	343	*e*P	P	16 03 19.4	-0.1
STEI				IVmB_BB		16 03 20.3	
	comp=Z,10µm,0.8s						
STEI				*e*sP	sP	16 05 39.5	-2.4
SMRA	Abu-Samra	85.00	294	P	P	16 03 20.8	+0.1
	SNR=101						
WCT	Wildcat Mounta	85.20	53	IAmb	IAmb	16 03 24.2	
	comp=Z,207nm,0.8s						
ABTO	Aybut	85.25	287	P	P	16 03 23.1	+1.0
	SNR=18						
LOF	Lofoten	85.27	343	*e*P	P	16 03 21.0	-0.1
LOF				IVmB_BB		16 03 24.3	
	comp=Z,5µm,1.8s						
LOF				*e*sP	sP	16 05 42.4	-1.3
LOF				*e*SKSac	SKSac	16 13 05.5	+2.2
ERBR	Yeremizino-Bor	85.27	317	*d i*P	P	16 03 21.6	0.0
ERBR				*i* *PP	pP	16 04 58.8	-0.3
ERBR				*e*S	SKSac	16 13 03.1	-1.1
ERBR				*e*SS	SS	16 18 56.9	-3.5
ERBR				pmax	pmax		
	comp=Z,774nm,1.1s						
FAUS	Fauske	85.31	342	*e*P	P	16 03 20.9	-0.4
FAUS				IVmB_BB		16 03 21.7	
	comp=Z,6µm,1.2s						
FAUS				*e*SKSac	SKSac	16 13 02.0	-1.4
FAUS				IVMs_BB	IVMs_BB	16 43 08.9	
	comp=Z,1µm,4.3s						
FINES	FINESS Array B	85.32	335	P	P	16 03 20.3	-1.2
FINES	FINESS Array B	85.32	335	P	P	16 03 20.4	-1.0
	comp=Z,257nm,0.4s,baz=60,slow=4.6,SNR=2060						
FINES				pP	pwP	16 05 01.4	-1.3
	comp=Z,13nm,0.4s,baz=44,slow=8.1,SNR=1.7						
FINES				PP	PP	16 06 46.6	+0.3
	comp=Z,38nm,0.8s,baz=57,slow=10,SNR=3.6						
FINES				S	SKSac	16 13 00.4	-3.3
	comp=Z,3.8nm,1.0s,baz=40,slow=11,SNR=1.8						
FINES				PKKP	PKKPdf	16 21 09.3	-6.5
	comp=Z,5.3nm,1.1s,baz=177,slow=3.8,SNR=5.2						
FINES				PKKPbc	PKKPbc	16 21 23.5	-2.0
	comp=Z,2.2nm,1.0s,baz=198,slow=0.4,SNR=1.3						
	comp=Z,257nm,0.4s						
QSM	Queen of Sheba	85.32	54	IAmb	IAmb	16 03 24.6	
	comp=Z,210nm,0.9s						
BOZ	Bozeman (W)	85.35	43	IAmb	IAmb	16 03 24.7	
	comp=Z,148nm,0.9s						
GWY	Greenwater Val	85.39	53	IAmb	IAmb	16 03 25.1	
	comp=Z,232nm,0.8s						
R11B	Troy Canyon, C	85.41	51	IAmb	IAmb	16 03 25.5	
	comp=Z,307nm,1.3s						
TPNV	Topopah Spring	85.43	52	IAmb	IAmb	16 03 25.4	
	comp=Z,243nm,0.7s						
TPNV	Topopah Spring	85.43	52	⇓P	P	16 03 23.7	+0.9
DBG	Daneborg	85.52	356	*i* P	P	16 03 22.2	-0.1
DBG				IAmb	IAmb	16 03 24.3	
	comp=Z,231nm,0.9s						
EGMT	Eagleton	85.53	40	IAmb	IAmb	16 03 25.3	
	comp=Z,356nm,1.2s						
EGMT	Eagleton	85.53	40	⇓P	P	16 03 23.4	+0.5
LABN	Labinsk	85.55	316	*e*P	P	16 03 22.6	-0.4
LABN				*e**PP	pP	16 04 59.4	-1.1
LABN				*e*		16 06 50.7	
LABN				*i* PPP	PPP	16 08 44.0	
LABN				*e*S	SKSac	16 13 05.1	-0.8
LABN				pmax	pmax		
	comp=Z,170nm,1.4s						
S11A	Rachel	85.55	52	IAmb	IAmb	16 03 28.3	
	comp=Z,264nm,0.9s						
GSC	Goldstone, Bar	85.60	54	IAmb	IAmb	16 03 26.1	
	comp=Z,440nm,1.4s						
ELS	Elsinore Mount	85.72	56	IAmb	IAmb	16 03 26.4	
	comp=Z,445nm,1.8s						
YHB	Horse Butte	85.97	44	IAmb	IAmb	16 03 28.6	
	comp=Z,408nm,1.1s						
SPR3	Spring Creek 3	86.08	50	IAmb	IAmb	16 03 29.0	
	comp=Z,270nm,1.2s						
HVU	Hansel Valley	86.10	47	IAmb	IAmb	16 03 28.9	
	comp=Z,395nm,1.3s						
KBD	Kabd	86.12	299	P	P	16 03 25.9	-0.1
KBD				S	SKSac	16 13 06.4	-3.6
YNM	Yellowstone No	86.31	44	IAmb	IAmb	16 03 31.5	
	comp=Z,462nm,1.2s						
VAGH	Vaagaholmen	86.33	343	*e*P	P	16 03 26.1	-0.1
VAGH				IVmB_BB		16 03 29.7	
	comp=Z,3µm,2.4s						
VAGH				*e*sP	sP	16 05 47.7	-1.2
VAGH				*e*SKSac	SKSac	16 13 08.7	-1.1
YFT	Old Faithful	86.33	44	IAmb	IAmb	16 03 33.8	
	comp=Z,582nm,1.6s						
MOR8	Moi Rana	86.39	342	*e*P	P	16 03 25.0	-1.6
MOR8				IVmB_BB		16 03 28.8	
	comp=Z,4µm,2.2s						
MOR8				*e*sP	sP	16 05 45.5	-3.7
MOR8				*e*SKSac	SKSac	16 13 05.0	-5.2
GEVA	Gevas	86.39	309	IAmb	IAmb	16 03 31.0	
	comp=Z,260nm,1.1s						
PFO	Pinyon Flats O	86.48	56	P	P	16 03 28.5	+0.6
PFO				IAmb	IAmb	16 03 30.2	
	comp=Z,249nm,1.1s						
PFO	Pinyon Flats O	86.48	56	P	P	16 03 28.5	+0.6
	comp=Z,162nm,1.1s,baz=275,slow=5.3,SNR=129						
	comp=Z,162nm,1.1s						
H17A	Grant Village	86.52	44	IAmb	IAmb	16 03 32.5	
	comp=Z,193nm,1.2s						
KONS	Konsvik	86.54	342	*e*P	P	16 03 26.9	-0.3
FXWY	Fox Creek	86.54	45	IAmb	IAmb	16 03 31.1	
	comp=Z,292nm,1.6s						
UPNV	Upernavik	86.56	6	*i* P	P	16 03 27.7	+0.5
UPNV				IAmb	IAmb	16 03 28.7	
	comp=Z,113nm,0.6s						
PSUT	Pine Spring	86.60	50	IAmb	IAmb	16 03 30.9	
	comp=Z,221nm,0.9s						
SOC	Sochi	86.64	315	*d i*P	P	16 03 27.1	-1.1
SOC				*e**PP	pP	16 05 04.8	-1.2
SOC				*e*		16 06 56.3	
SOC				*e*PPP	PPP	16 08 56.6	
SOC				*e*S	SKSac	16 13 11.4	-1.2
SOC				*e*SSS	SSS	16 22 50.4	
SOC				pmax	pmax		
	comp=Z,80nm,0.6s						
TPAW	Teton Pass	86.65	45	IAmb	IAmb	16 03 34.0	
	comp=Z,314nm,1.8s						
YMP	Mirror Lake Pl	86.65	43	IAmb	IAmb	16 03 32.4	
	comp=Z,383nm,1.3s						
STOK	Stokkvaagen	86.68	342	*e*P	P	16 03 27.3	-0.7
STOK				IVmB_BB		16 03 29.0	
	comp=Z,3µm,1.5s						
STOK				*e*sP	sP	16 05 46.8	-3.9
STOK				*e*SKSac	SKSac	16 13 12.2	+0.2
VSU	Vasula	86.69	332	*ce*P	P	16 03 26.8	-1.3
VSU				pmax	pmax		
	comp=Z,604nm,1.7s						
DUG	Dugway, Tooele	86.70	48	IAmb	IAmb	16 03 31.4	
	comp=Z,206nm,0.9s						
FFC	Flin Flon	86.77	32	P	P	16 03 29.2	+0.6
FFC	Flin Flon	86.77	32	P	P	16 03 29.2	+0.6
FFC				pmax	pmax		
	comp=Z,362nm,1.0s						
CBX	Cerro Bola	86.79	57	P	P	16 03 30.4	+1.0
LEIR	Leirfjorden	86.81	342	*e*P	P	16 03 27.9	-0.7
LEIR				IVmB_BB		16 03 31.4	
	comp=Z,4µm,1.2s						
LEIR				*e*sP	sP	16 05 49.2	-2.3
LEIR				*e*SKSac	SKSac	16 13 12.0	-0.7
V12A	Nelson	86.93	53	IAmb	IAmb	16 03 32.8	
	comp=Z,284nm,0.8s						
HWUT	Hardware Ranch	87.00	47	IAmb	IAmb	16 03 32.8	
	comp=Z,232nm,1.1s						
GURO	Guroymak-BITLI	87.05	310	IAmb	IAmb	16 03 32.5	
	comp=Z,223nm,1.0s						
RLMT	Red Lodge	87.06	43	IAmb	IAmb	16 03 33.9	
	comp=Z,494nm,1.7s						
JNW	Jan Mayen West	87.40	351	*e*P	P	16 03 34.9	+3.7
JNE	Jan Mayen East	87.42	351	*e*P	P	16 03 32.4	+1.1
JNE				*e*sP	sP	16 05 51.1	-3.5
JNE				*e*PP	PP	16 07 02.6	0.0
JNE				*e*SKSac	SKSac	16 13 20.8	+4.6
ESJX	Sierra Juarez	87.47	57	IAmb	IAmb	16 03 35.4	
	comp=Z,676nm,2.0s						
ESJX	Sierra Juarez	87.47	57	P	P	16 03 33.9	+1.3
JLU	Jordanelle	87.49	48	IAmb	IAmb	16 03 35.2	
	comp=Z,426nm,1.6s						
JMI	Jan Mayen	87.53	351	*e*P	P	16 03 34.1	+2.2
JMI				IVmB_BB		16 03 36.9	
	comp=Z,4µm,3.3s						
MPU	Maple Canyon	87.60	48	IAmb	IAmb	16 03 35.7	
	comp=Z,232nm,1.4s						
ANN	Anapa	87.61	317	*e*P	P	16 03 31.5	-1.3
ANN				*e**PP	pP	16 05 09.4	-1.5
ANN				*e*		16 07 03.7	
ANN				*e*PPP	PPP	16 09 03.3	
ANN				*e*S	SKSac	16 13 15.7	-2.7
ANN				*e*		16 13 28.5	
ANN				pmax	pmax		
	comp=Z,453nm,1.0s						
ANN				pmax	pmax		
	comp=N,64nm,0.8s						
LCMT	Little Creek M	87.63	51	IAmb	IAmb	16 03 36.2	
	comp=Z,175nm,1.1s						
SUMG	Summit	87.77	1	P	P	16 03 29.2	-4.3
SUMG	Summit	87.77	1	IAmb	IAmb	16 03 37.4	
	comp=Z,206nm,0.8s						
SUMG	Summit	87.77	1	*i* P	P	16 03 34.4	+0.9
SUMG				IAmb	IAmb	16 03 36.6	

	comp=Z,405nm,1.2s						
VTX	Valle De La Tr	87.83	57	IAmb	IAmb	16 03 36.7	
	comp=Z,649nm,2.0s						
PDAR	Pinedale Array	87.88	45	P	P	16 03 34.4	0.0
PDAR	Pinedale Array	87.88	45	P	P	16 03 34.5	+0.1
	comp=Z,17nm,0.5s,baz=294,slow=3.2,SNR=191						
PDAR				pP	pP	16 05 14.4	+1.8
	comp=Z,6.9nm,0.7s,baz=280,slow=4.2,SNR=1.3						
PDAR				PP	PP	16 07 07.0	-0.5
	comp=Z,11nm,1.1s,baz=282,slow=8.8,SNR=2.0						
PDAR				S	SKSac	16 13 19.5	-1.2
	comp=Z,0.2nm,0.4s,baz=304,slow=26,SNR=1.3						
PDAR				PKKP	PKKPdf	16 21 13.3	+1.5
	comp=Z,2.3nm,0.9s,baz=134,slow=1.8,SNR=7.2						
PDAR				SKKPbc	SKKPbc	16 24 11.7	-1.0
	comp=Z,0.7nm,0.8s,baz=110,slow=0.4,SNR=4.7						
	comp=Z,17nm,0.5s						
W13A	Hualapai Mount	87.90	53	IAmb	IAmb	16 03 37.4	
	comp=Z,150nm,0.9s						
BLYC	Blythe	87.93	55	IAmb	IAmb	16 03 37.3	
	comp=Z,185nm,0.9s						
GLA	Glamis	87.96	56	IAmb	IAmb	16 03 37.5	
	comp=Z,199nm,0.8s						
NUUG	Nuugaatsiaq	88.03	6	*i* P	P	16 03 34.4	+0.2
NUUG				IAmb	IAmb	16 03 36.0	
	comp=Z,116nm,1.1s						
FCC	Fort Churchill	88.17	26	IAmb	IAmb	16 03 37.0	
	comp=Z,241nm,0.9s						
LAO	LASA Array	88.28	41	IAmb	IAmb	16 03 38.6	
	comp=Z,261nm,0.9s						
NSS	Namsos	88.28	341	*e*P	P	16 03 34.6	-0.8
NSS				IVmB_BB		16 03 37.9	
	comp=Z,2µm,1.3s						
NSS				*e*SKSac	SKSac	16 13 23.5	+1.9
MNK	Minsk	88.32	329	*i* P	P	16 03 35.9	0.0
	comp=E,309nm,1.1s						
MNK				*i* P	P	16 03 35.9	0.0
	comp=N,301nm,1.1s						
MNK				*i* P	P	16 03 35.9	0.0
	comp=Z,808nm,0.9s,baz=57						
MNK				*i* pP	pP	16 05 13.6	-0.6
MNK				*i* PP	PP	16 07 10.8	+0.5
MNK				*i* PPP	PPP	16 09 09.8	
MNK				*i* S	SKSac	16 13 22.3	0.0
MNK				*i* sS	sS	16 16 26.5	-13
MNK				*i* SSS	SSS	16 23 26.3	
MNK				*i* LQ	LQ	16 35 44.2	
MNK				*i* LR	LR	16 43 29.0	
MNK				*i* LRM	MLR	16 45 08.3	
	comp=E,1µm,18.3s						
MNK				*i* LRM	MLR	16 45 08.3	
	comp=N,3µm,18.2s						
MNK				*i* LRM	MLR	16 45 08.3	
	comp=Z,3µm,17.4s						
MNK	Minsk	88.32	329	*i* P	P	16 03 35.8	0.0
MNK				*i* *PP	pP	16 05 13.6	-0.6
MNK				*i*		16 07 10.7	
MNK				*i* PPP	PPP	16 09 09.7	
MNK				*i* S	SKSac	16 13 22.2	0.0
MNK				*i* SSS	SSS	16 23 26.3	
MNK				pmax	pmax		
	comp=N,301nm,1.1s						
MNK				pmax	pmax		
	comp=Z,808nm,0.9s						
MNK				pmax	pmax		
	comp=E,309nm,1.1s						
MNK				MLR	MLR		
	comp=E,1µm,18.0s						
MNK				MLR	MLR		
	comp=N,3µm,18.0s						
MNK				MLR	MLR		
	comp=Z,3µm,17.0s						
ROCAM	Rodrigues Isla	88.58	249	⇓P	P	16 03 38.9	+1.1
NACGM	Naroch	88.64	329	*i* P	P	16 03 36.9	-0.5
DGMT	Dagmar	88.65	38	IAmb	IAmb	16 03 38.9	
	comp=Z,235nm,1.4s						
SFX	San Felipe	88.70	58	IAmb	IAmb	16 03 40.6	
	comp=Z,217nm,0.8s						
SRU	San Rafael Swe	88.75	49	IAmb	IAmb	16 03 40.8	
	comp=Z,182nm,1.1s						
113A	Mohawk Valley,	88.89	56	IAmb	IAmb	16 03 41.7	
	comp=Z,203nm,1.2s						
UMMG	Uummannaq	88.96	5	*i* P	P	16 03 38.2	-0.3
UMMG				IAmb	IAmb	16 03 40.0	
	comp=Z,292nm,1.4s						
Y14A	Wickenburg	89.02	54	IAmb	IAmb	16 03 42.5	
	comp=Z,219nm,0.8s						
HMU	Henry Mountain	89.08	50	IAmb	IAmb	16 03 42.3	
	comp=Z,140nm,0.8s						
SCO	Scoresbysund	89.38	355	*i* P	P	16 03 40.4	-0.1
SCO				IAmb	IAmb	16 03 42.5	
	comp=Z,198nm,1.2s						
WUAZ	Wupatki	89.62	52	IAmb	IAmb	16 03 45.6	
	comp=Z,273nm,1.2s						
PABE	Paberze	89.62	331	P	P	16 03 41.3	-0.6
AK03	Malin Array Si	89.64	325	P	P	16 03 40.5	-1.6
SIM	Simferopol'	89.65	318	*e*P	P	16 03 41.0	-1.3
SIM				*e*		16 07 22.9	
SIM				*e*S	SKSac	16 13 31.1	+0.7
SIM				pmax	pmax		
	comp=Z,218nm,1.1s						
SIM				pmax	pmax		
	comp=Z,98nm,19.1s						
SIM				smax	smax		
	comp=N,782nm,18.0s						
AKASG	Malin Array Be	89.65	325	P	P	16 03 40.5	-1.6
AKASG				IAmb	IAmb	16 03 44.5	
	comp=Z,493nm,1.6s						
AKASG	Malin Array Be	89.65	325	P	P	16 03 40.6	-1.6
	comp=Z,15nm,0.5s,baz=59,slow=5.2,SNR=159						
AKASG				PP	PP	16 07 20.7	-0.2
	comp=Z,26nm,1.0s,baz=52,slow=8.5,SNR=6.9						
AKASG				S	SKSac	16 13 27.8	-2.3
	comp=Z,2.1nm,0.8s,baz=57,slow=5.2,SNR=7.4						
AKASG				SKKPbc	SKKPbc	16 24 06.6	-1.8
	comp=Z,1.6nm,0.7s,baz=257,slow=2.8,SNR=2.8						
	comp=Z,15nm,0.5s						
AKBB	Malin Array Si	89.65	325	IAmb	IAmb	16 03 42.6	
	comp=Z,260nm,1.3s						
AKBB	Malin Array Si	89.65	325	*ce*P	P	16 03 40.7	-1.5
AKBB	Malin Array Si	89.65	325	P	P	16 03 40.6	-1.6
AK01	Malin Array Si	89.66	325	P	P	16 03 40.9	-1.3
KIEV	Kiev	89.67	325	P	P	16 03 40.8	-1.4
KIEV				IAmb	IAmb	16 03 42.6	
	comp=Z,235nm,1.3s						
KIEV	Kiev	89.67	325	⇑P	P	16 03 41.9	-0.3
KIEV	Kiev	89.67	325	⇑P	P	16 03 41.9	-0.3
KIEV	Kiev	89.67	325	*i* P	P	16 03 40.9	-1.3
	SNR=34						
KIEV	Kiev	89.67	325	P	P	16 03 40.9	-1.3
	comp=Z,12µmcomp=Z,570nm,1.9s						
O20A	White River Ci	89.91	47	IAmb	IAmb	16 03 46.0	
	comp=Z,168nm,1.0s						
214A	Organ Pipe Nat	89.95	56	IAmb	IAmb	16 03 47.0	
	comp=Z,289nm,1.2s						
RAYN	Ar Rayn	89.98	295	P	P	16 03 44.0	-0.3
RAYN				IAmb	IAmb	16 03 45.4	
	comp=Z,165nm,0.8s						
RAYN	Ar Rayn	89.98	295	P	P	16 03 44.3	0.0
RAYN	Ar Rayn	89.98	295	P	P	16 03 44.0	-0.3
RAYN				pmax	pmax		
	comp=Z,165nm,0.9s						
RAYN	Ar Rayn	89.98	295	*i* P	P	16 03 44.0	-0.3
	SNR=9.9						
PV21	Cone Mtn., Par	90.08	49	IAmb	IAmb	16 03 47.1	
	comp=Z,208nm,0.9s						
PV14	Lion Creek, Pa	90.13	49	IAmb	IAmb	16 03 47.3	
	comp=Z,256nm,0.8s						
PV05	Paradox Valley	90.20	49	IAmb	IAmb	16 03 47.7	
	comp=Z,182nm,1.0s						
PV04	Paradox Valley	90.20	49	IAmb	IAmb	16 03 47.7	
	comp=Z,286nm,1.1s						
PV22	Blue Mesa, Par	90.22	49	IAmb	IAmb	16 03 47.7	
	comp=Z,290nm,1.5s						
PV16	Nyswonger Mesa	90.23	49	IAmb	IAmb	16 03 47.8	
	comp=Z,225nm,0.9s						
PV03	Paradox Valley	90.30	49	IAmb	IAmb	16 03 47.9	
	comp=Z,284nm,1.1s						
PV13	Radium Mtn., P	90.36	49	IAmb	IAmb	16 03 48.2	
	comp=Z,156nm,0.8s						
PV07	Paradox Valley	90.36	49	IAmb	IAmb	16 03 48.3	
	comp=Z,197nm,1.4s						
ILULI	Ilulissat	90.47	5	IAmb	IAmb	16 03 47.3	
	comp=Z,158nm,0.9s						
ILULI	Ilulissat	90.47	5	*i* P	P	16 03 45.5	-0.1
ILULI				IAmb	IAmb	16 03 47.0	
	comp=Z,166nm,0.9s						
PV15	Paradox Valley	90.52	49	IAmb	IAmb	16 03 49.0	
	comp=Z,146nm,1.1s						
PV01	Paradox Valley	90.55	49	IAmb	IAmb	16 03 49.0	
	comp=Z,136nm,0.8s						
MSEY	Mahe Island	90.56	265	P	P	16 03 47.2	0.0
MSEY	Mahe Island	90.56	265	P	P	16 03 47.8	+0.6
MSEY	Mahe Island	90.56	265	P	P	16 03 47.2	0.0
MSEY				pmax	pmax		
	comp=Z,104nm,1.0s						
MSEY	Mahe Island	90.56	265	*i* P	P	16 03 47.0	-0.1
	SNR=5.6						
NC405	NORSAR Array S	90.83	339	IAmb	IAmb	16 03 48.1	
	comp=Z,240nm,1.1s						
RSSD	Black Hills	90.85	42	P	P	16 03 48.4	+0.2
RSSD	Black Hills	90.85	42	P	P	16 03 48.4	+0.2
RSSD				pmax	pmax		
	comp=Z,124nm,1.0s						
RSSD	Black Hills	90.85	42	P	P	16 03 48.7	+0.6
HFS	Hagfors	90.85	338	P	P	16 03 46.0	-1.5
	comp=Z,58nm,0.5s,baz=73,slow=5.0,SNR=568						
HFS				PP	PP	16 07 27.2	-2.7
	comp=Z,38nm,0.8s,baz=59,slow=8.6,SNR=7.2						
HFS				S	SKSac	16 13 33.0	-3.6
	comp=Z,6.1nm,0.9s,baz=51,slow=12,SNR=3.0						
HFS				PKKP	PKKPdf	16 21 06.9	+0.5
	comp=Z,1.5nm,0.4s,baz=213,slow=5.0,SNR=9.0						
	comp=Z,58nm,0.5s						
HFS	Hagfors	90.85	338	P	P	16 03 46.0	-1.5
NC303	NORSAR Array S	90.87	339	IAmb	IAmb	16 03 48.4	
	comp=Z,277nm,1.4s						
SUW	Suwalki	90.87	330	*e*P	P	16 03 47.1	-0.7
SUW				*e*S	SKSac	16 13 34.8	-2.1
BAL3X	Bal3x, Balta	90.89	322	P	P	16 03 47.6	-0.3
W18A	Petrified Fore	91.00	52	IAmb	IAmb	16 03 51.9	
	comp=Z,279nm,1.5s						
MVCO	Mesa Verde	91.00	50	IAmb	IAmb	16 03 51.6	
	comp=Z,290nm,1.4s						
DOMB	Dombas	91.01	341	*e*P	P	16 03 47.6	-0.6
DOMB				IVmB_BB		16 03 51.4	
	comp=Z,2µm,2.2s						
DOMB				*e*sP	sP	16 06 10.1	-1.6
DOMB				*e*PP	PP	16 07 33.5	+2.3
NB201	NORSAR Array S	91.02	339	IAmb	IAmb	16 03 49.0	
	comp=Z,406nm,1.6s						
NC204	NORSAR Array S	91.03	340	IAmb	IAmb	16 03 49.2	
	comp=Z,282nm,1.3s						
RNPP9	Sopachiv	91.03	327	P	P	16 03 47.6	-0.9
NB2	NORSAR Subarra	91.06	339	P	P	16 03 47.3	-1.2
	comp=Z,57nm,0.6s,baz=44,slow=5.1						
NB2				PP	PP	16 07 30.7	-0.9
	comp=Z,34nm,1.1s,baz=69,slow=6.5						
NB2	NORSAR Subarra	91.06	339	P	P	16 03 47.3	-1.2
	baz=44,slow=5.1						
NOA	NORSAR Array B	91.06	339	P	P	16 03 47.3	-1.2
	comp=Z,32nm,0.6s,baz=47,slow=4.5,SNR=140						
NOA				pP	pP	16 05 29.2	+2.1
	comp=Z,6.4nm,0.8s,baz=45,slow=4.5,SNR=2.9						
NOA				PP	PP	16 07 30.1	-1.5
	comp=Z,31nm,0.9s,baz=46,slow=8.3,SNR=12						
NOA				S	SKSac	16 13 34.2	-3.6
	comp=Z,1.2nm,0.9s,baz=47,slow=8.5,SNR=2.4						
	comp=Z,32nm,0.6s						
MOL	Molde	91.07	342	*e*P	P	16 03 48.0	-0.4
MOL				IVmB_BB		16 03 49.9	
	comp=Z,2µm,1.8s						
MOL				*e*sP	sP	16 06 11.7	-0.1
MOL				*e*PP	PP	16 07 33.4	+1.8
MOL				*e*SKSac	SKSac	16 13 36.5	-1.2
RNPP8	Varash	91.09	327	P	P	16 03 47.7	-1.1
BZK	Bozkurt	91.13	316	⇓P	P	16 03 49.0	-0.2
RNPP5	Staryi Chortor	91.14	326	P	P	16 03 48.1	-0.9
NC602	NORSAR Array S	91.17	339	*e*P	P	16 03 47.3	-1.7
NBO00	NORSAR Array S	91.21	339	IAmb	IAmb	16 03 52.0	
	comp=Z,227nm,1.4s						
ICESG	Greenland Ices	91.25	1	*i* P	P	16 03 49.8	+0.1
ICESG				IAmb	IAmb	16 03 52.5	
	comp=Z,382nm,1.4s						
NAO01	NORSAR Array S	91.31	339	IAmb	IAmb	16 03 50.1	
	comp=Z,302nm,1.8s						
TUC	Tucson	91.38	55	P	P	16 03 52.1	+1.4
TUC	Tucson	91.38	55	P	P	16 03 52.1	+1.4
TUC				pmax	pmax		
	comp=Z,106nm,1.0s						
SORM	Soroca	91.49	323	⇑P	P	16 03 49.5	-1.2
SORM	Soroca	91.49	323	⇑P	P	16 03 49.5	-1.2
AKN	Aaknes	91.53	341	*e*P	P	16 03 50.9	+0.2
ILGA	Ilgaz	91.75	315	IAmb	IAmb	16 03 55.9	
	comp=Z,149nm,1.1s						
NDNU	Novodnistrovsk	91.80	324	P	P	16 03 51.1	-1.1
KIS	Kishinev	91.83	322	⇓*i*P	P	16 03 50.0	-2.3
	comp=Z,440nm,2.6s						
KIS				*e*pP	pP	16 05 29.0	-1.9
KIS				*i* sP	sP	16 06 09.0	-6.4
KIS	Kishinev	91.83	322	*i* PP	PP	16 07 38.0	0.0
KIS	Kishinev	91.83	322	*d i*P	P	16 03 50.0	-2.3
KIS				*e**PP	pP	16 05 29.0	-1.9
KIS				*i*		16 07 38.0	
KIS				*i* PPP	PPP	16 09 39.0	
KIS				*i*		16 13 41.0	
KIS				*e*S	S	16 14 03.0	-12
KIS				*i*		16 15 27.0	
KIS				pmax	pmax		
	comp=Z,440nm,2.6s						
KIS				MLR	MLR		
	comp=Z,1µm,17.5s						
MILM	Milestii Mici	91.88	322	⇓*i*P	P	16 03 50.0	-2.5
	comp=Z,320nm,2.1s						
MILM				*i* pP	pP	16 05 25.0	-6.1
MILM				*i* sP	sP	16 06 07.0	-8.6
MILM	Milestii Mici	91.88	322	⇓*i*PP	PP	16 07 41.0	+2.6
MILM	Milestii Mici	91.88	322	LRM	MLR	16 47 34.0	
	comp=Z,2µm,16.0s						
MILM	Milestii Mici	91.88	322	⇑P	P	16 03 49.0	-3.6
MILM	Milestii Mici	91.88	322	*d i*P	P	16 03 50.0	-2.5
MILM				*i*		16 07 41.0	
MILM				*i*		16 13 41.0	
MILM				*e*S	S	16 14 08.0	-7.5
MILM				*i*		16 15 27.0	
MILM				*e*PS	PS	16 16 14.0	-12
MILM				pmax	pmax		
	comp=Z,320nm,2.1s						
MILM				MLR	MLR		
	comp=Z,3µm,15.5s						
MILM	Milestii Mici	91.88	322	*e*PS	PS	16 16 14.0	-12
MILM	Milestii Mici	91.88	322	*e*sS	sS	16 16 47.0	-26
MILM	Milestii Mici	91.88	322	*e*L	L	16 38 24.0	
MILM	Milestii Mici	91.88	322	LQM		16 39 04.0	
	comp=Z,2µm,20.0s						
OSL	Oslo	92.03	339	*e*P	P	16 03 52.9	-0.1
OSL				IVmB_BB		16 03 55.7	
	comp=Z,2µm,1.7s						
OSL				*e*SKSac	SKSac	16 13 43.3	+0.2
SKAR	Skarslia	92.28	340	*e*P	P	16 03 54.0	-0.2
SKAR				IVmB_BB		16 03 58.0	
	comp=Z,1µm,1.9s						
SKAR				*e*sP	sP	16 06 17.5	+0.1
SKAR				*e*PP	PP	16 07 44.0	+2.9
SKAR				*e*SKSac	SKSac	16 13 46.8	+2.1
SKAR				*e*SS	SS	16 20 42.8	+2.7
KMPD	K-Podol'skiy	92.32	324	P	P	16 03 52.6	-1.9
ULM	Lac du Bonnet	92.33	34	P	P	16 03 54.5	0.0
	comp=Z,35nm,1.0s,baz=303,slow=3.4,SNR=56						
ULM				pP	pwP	16 05 35.5	-2.0
	comp=Z,8.4nm,0.8s,baz=354,slow=10,SNR=1.6						
ULM				S	SKSac	16 13 41.1	-4.1
	comp=Z,1.2nm,0.4s,baz=302,slow=13,SNR=1.7						
ULM				ScS	S	16 14 15.2	-4.1
	comp=Z,1.5nm,0.4s,baz=90,slow=20,SNR=2.2						
ULM				PKKPbc	PKKPbc	16 21 07.7	-0.4
	comp=Z,1.0nm,0.4s,baz=112,slow=4.2,SNR=3.1						
	comp=Z,35nm,1.0s						
BR131	Keskin Array S	92.42	314	IAmb	IAmb	16 03 58.2	
	comp=Z,267nm,1.1s						
BR131	Keskin Array S	92.42	314	P	P	16 03 54.5	-0.9
	SNR=106						
BR131	Keskin Array S	92.42	314	*d i*P	P	16 03 54.3	-1.1
BRTR	Keskin Array B	92.42	314	P	P	16 03 54.5	-0.9
BRTR	Keskin Array B	92.42	314	P	P	16 03 54.4	-1.1
	comp=Z,94nm,0.9s,baz=93,slow=2.7,SNR=218						
BRTR				pP	pP	16 05 35.7	+1.7
	comp=Z,7.8nm,0.9s,baz=78,slow=3.4,SNR=2.6						
BRTR				PP	PP	16 07 44.5	+1.4
	comp=Z,25nm,1.0s,baz=75,slow=4.3,SNR=4.0						
BRTR				S	SKSac	16 13 43.3	-3.3
	comp=Z,0.9nm,0.8s,baz=54,slow=7.4,SNR=1.3						
BRTR				PKKPbc	PKKPbc	16 21 08.0	+0.4
	comp=Z,1.0nm,0.6s,baz=204,slow=3.2,SNR=4.5						
BRTR				SKKPbc	SKKPbc	16 24 03.5	+1.4
	comp=Z,1.4nm,0.7s,baz=178,slow=4.1,SNR=5.7						
	comp=Z,94nm,0.9s						
BR104	Keskin Array S	92.43	314	P	P	16 03 54.6	-0.9
	comp=Z,1µmcomp=Z,155nm,1.1s						
BR106	Keskin Array S	92.44	314	P	P	16 03 54.6	-0.9
	comp=Z,1µmcomp=Z,131nm,1.0s						
BR105	Keskin Array S	92.44	314	P	P	16 03 54.6	-0.9
	comp=Z,1µmcomp=Z,153nm,1.1s						
KIRS	Kirsehir-Merke	92.51	313	⇑P	P	16 03 55.6	-0.2
STRU	Stroemstad	92.53	338	*i* P	P	16 03 53.5	-1.8
HYA	Hoyanger	92.57	341	*e*P	P	16 03 54.9	-0.5
HYA				IVmB_BB		16 03 58.7	
	comp=Z,2µm,1.7s						
HYA				*e*sP	sP	16 06 17.6	-1.2
HYA				*e*PP	PP	16 07 44.9	+1.7
HYA				*e*SKSac	SKSac	16 13 48.2	+2.2
FOO	Floro	92.57	342	*e*P	P	16 03 54.1	-1.2
FOO				IVmB_BB		16 03 59.0	
	comp=Z,2µm,2.3s						
FOO				*e*sP	sP	16 06 16.1	-2.6
FOO				*e*PP	PP	16 07 45.1	+1.9
FOO				*e*SKSac	SKSac	16 13 48.1	+2.1
FOO				*e*ScS	ScS	16 14 26.9	+4.7
FOO				IVMs_BB	IVMs_BB	16 49 24.8	
	comp=Z,1µm,15.8s						
Q24A	Divide	92.57	47	IAmb	IAmb	16 03 58.8	
	comp=Z,192nm,1.8s						
KONO	Kongsberg	92.63	339	P	P	16 03 55.0	-0.7
KONO				IAmb	IAmb	16 03 58.3	
	comp=Z,168nm,1.6s						
KONO	Kongsberg	92.63	339	⇓P	P	16 03 55.4	-0.3
KONO	Kongsberg	92.63	339	*e*P	P	16 03 54.5	-1.2
KONO				IVmB_BB		16 03 58.5	
	comp=Z,1µm,2.1s						
KONO				*e*sP	sP	16 06 17.7	-1.3
KONO				*e*PP	PP	16 07 46.7	+2.9
KONO				*e*SKSac	SKSac	16 13 45.9	-0.5
KONO				*e*PS	PS	16 16 36.2	+2.1
KONO				*e*SS	SS	16 20 49.1	+4.2
KONO				IVMs_BB	IVMs_BB	16 48 42.3	
	comp=Z,1µm,15.9s						
SFJD	Kangerlussuaq	92.67	6	P	P	16 03 55.7	-0.1
SFJD				IAmb	IAmb	16 03 57.1	
	comp=Z,164nm,1.0s						
SFJD	Kangerlussuaq	92.67	6	P	P	16 03 55.7	-0.1
SFJD				pmax	pmax		
	comp=Z,164nm,1.0s						
SFJD	Kangerlussuaq	92.67	6	P	P	16 03 55.4	-0.4
SFJD				S	S	16 14 18.2	-3.4
SFJD	Kangerlussuaq	92.67	6	*i* P	P	16 03 55.4	-0.4
SFJD				IAmb	IAmb	16 03 56.9	
	comp=Z,168nm,1.0s						
BLEU	Blekinge	92.68	334	*i* P	P	16 03 53.8	-2.2
TLCR		92.79	320	⇓P	P	16 03 54.7	-2.1
TLCR		92.79	320	⇓P	P	16 03 54.7	-2.1
VLDR	Vladesti	92.88	321	⇑P	P	16 03 55.8	-1.4
LVV	L'vov	92.92	326	P	P	16 03 56.9	-0.4
ANTO	Ankara	92.93	314	P	P	16 03 57.2	-0.5
ANTO				IAmb	IAmb	16 03 58.7	
	comp=Z,163nm,1.1s						
ANTO	Ankara	92.93	314	P	P	16 03 57.0	-0.7
ANTO	Ankara	92.93	314	⇓P	P	16 03 57.4	-0.3
ANTO	Ankara	92.93	314	⇓P	P	16 03 57.4	-0.3
ANTO	Ankara	92.93	314	P	P	16 03 56.8	-0.9
ANTO	Ankara	92.93	314	P	P	16 03 57.1	-0.5
	comp=Z,1µmcomp=Z,80nm,1.7s						
R9F13	Warsaw-Wawer	92.94	329	*e*P	P	16 03 57.4	+0.1
R9F13				*e*S	SKSac	16 13 50.1	+1.7
BORU	Boraas	92.96	336	*i* P	P	16 03 55.1	-2.1
BEIL	Beino	92.99	308	*e*P	P	16 03 57.5	-0.5
SUE	Sulen	93.08	342	*e*P	P	16 03 57.1	-0.6
SUE				IVmB_BB		16 04 01.4	
	comp=Z,2µm,1.7s						
SUE				*e*SKSac	SKSac	16 13 48.9	+0.1
PRAR	RASCA	93.12	323	⇑P	P	16 03 59.8	+1.5
CFR	Carcaliu	93.20	321	⇑P	P	16 03 58.1	-0.5
CFR	Carcaliu	93.20	321	⇑P	P	16 03 58.1	-0.5
TPGR	Topolog	93.20	320	⇑P	P	16 03 56.9	-1.8
HWQ	Hawqa	93.29	308	*e*P	P	16 03 58.2	-1.2
STNU	Starunia	93.31	325	P	P	16 03 57.9	-1.2
BEL	Belsk	93.35	329	*e*P	P	16 03 59.4	+0.2
BEL				*e*S	SKSac	16 13 50.6	-0.1
TESR	Tescani	93.35	322	⇑P	P	16 03 58.6	-0.7
DEL	Delary	93.35	335	*i* P	P	16 03 57.6	-1.5
ASK	Askoy	93.41	341	*e*P	P	16 03 58.8	-0.5
ASK				IVmB_BB		16 04 02.5	
	comp=Z,2µm,1.4s						
ASK				*e*sP	sP	16 06 20.3	-2.4
ASK				*e*PP	PP	16 07 52.0	+2.3
ASK				*e*SKSac	SKSac	16 13 53.1	+2.5
ASK				IVMsBB		16 46 42.5	
	comp=Z,819nm,19.0s						
ODD1	Odda	93.41	340	*e*P	P	16 03 59.6	+0.2
ODD1				IVmB_BB		16 04 02.9	
	comp=Z,1µm,2.5s						
ODD1				*e*sP	sP	16 06 22.8	+0.2
ODD1				*e*PP	PP	16 07 51.5	+1.7
ODD1				*e*SKSac	SKSac	16 13 55.4	+4.6
ODD1				IVMs_BB	IVMs_BB	16 46 38.1	
	comp=Z,960nm,15.2s						
PANC	Panciu	93.41	322	⇑P	P	16 04 01.5	+1.9
TIRR	Tirgusor	93.42	320	IAmb	IAmb	16 04 00.5	
	comp=Z,130nm,1.4s						
TIRR	Tirgusor	93.42	320	⇑P	P	16 03 58.8	-0.9
TIRR	Tirgusor	93.42	320	⇑P	P	16 03 58.8	-0.9
TIRR	Tirgusor	93.42	320	P	P	16 03 59.3	-0.3
	comp=Z,2µmcomp=Z,63nm,2.1s						
FABU	Falkenberg	93.43	336	*i* P	P	16 03 57.0	-2.4
BER	Bergen	93.44	341	*e*P	P	16 03 59.3	-0.1
BER				IVmB_BB		16 04 02.8	
	comp=Z,1µm,1.8s						
BER				*e*sP	sP	16 06 19.6	-3.3
BER				*e*PP	PP	16 07 52.6	+2.6
BER				*e*SKSac	SKSac	16 13 53.5	+2.7
BER				IVMs_BB	IVMs_BB	16 46 51.0	
	comp=Z,1µm,15.1s						
ONAU	Onsala	93.45	336	*i* P	P	16 03 57.8	-1.7
AGMN	Agassiz Nation	93.46	36	IAmb	IAmb	16 04 01.3	
	comp=Z,122nm,1.3s						
ANMO	Albuquerque	93.49	51	P	P	16 04 01.5	+0.9
ANMO	Albuquerque	93.49	51	P	P	16 04 01.4	+0.9
	comp=Z,74nm,1.2s,baz=314,slow=18,SNR=95						
ANMO				pP	pP	16 05 41.3	+1.7
	comp=Z,10nm,1.0s,baz=350,slow=2.6,SNR=2.4						
	comp=Z,74nm,1.2s						
ASF	Jabal al Asfar	93.50	306	S	SKSac	16 13 51.4	-1.2
	comp=Z,1.9nm,0.6s,baz=127,slow=20,SNR=1.9						
BURAR	Bucovina Array	93.54	324	P	P	16 03 59.4	-1.0
BURAR	Bucovina Array	93.54	324	⇓P	P	16 04 00.3	0.0
BURAR	Bucovina Array	93.54	324	⇓P	P	16 04 00.3	0.0
MFTR	Murfatlar	93.56	320	⇑P	P	16 04 00.1	-0.2
HARR	Harsova	93.58	320	⇓P	P	16 04 00.5	+0.1
TLBR	Topalu	93.59	320	⇓P	P	16 03 59.9	-0.5
ONER	Baraj Valea Uz	93.59	322	⇑P	P	16 04 00.5	0.0
VRI	Vrincioaia	93.66	322	⇑P	P	16 03 59.9	-0.9
VRI	Vrincioaia	93.66	322	⇑P	P	16 03 59.9	-0.9
BHL	Bhannes	93.67	308	*e*P	P	16 04 00.1	-1.2
OGNE	Ogallala	93.70	44	IAmb	IAmb	16 05 52.5	
	comp=Z,176nm,1.6s						
PLOR	Plostina	93.71	322	⇓P	P	16 04 01.0	0.0
PLOR	Plostina	93.71	322	⇓P	P	16 04 01.0	0.0
KWP	Kalwaria Pacla	93.72	326	*e*P	P	16 04 00.3	-0.7
KWP				*e*S	SKSac	16 13 53.1	+0.3
KWP	Kalwaria Pacla	93.72	326	P	P	16 04 00.3	-0.7
	comp=Z,3µmcomp=Z,173nm,1.2s						
QRWL	Qaraoun	93.81	308	*e*P	P	16 04 01.4	-0.5
SUSD	Miller	93.82	40	IAmb	IAmb	16 04 02.8	
	comp=Z,157nm,1.0s						
DQRL	Deir Qamar	93.82	308	*e*P	P	16 04 01.7	-0.2
BLS5	Blasjo	93.84	340	*e*P	P	16 04 00.6	-0.7
BLS5				IVmB_BB		16 04 04.9	
	comp=Z,1µm,2.2s						
BLS5				*e*PP	PP	16 07 56.5	+3.4
BLS5				*e*SKSac	SKSac	16 13 53.0	-0.1
BLS5				*e*SS	SS	16 21 01.4	-0.7
SHBL	Chebaa	93.85	307	*e*P	P	16 04 01.1	-1.0
RAKU	Rahkiv	93.89	324	P	P	16 04 01.2	-0.6
MEZ	Mezhgor'ye	93.96	325	P	P	16 04 01.8	-0.3
BJUU	Bjuv	93.97	335	*i* P	P	16 04 00.5	-1.4

TURR	Turia	93.97	322	⇑P	P	16 04 02.6	+0.4
PSN	Preselentsi	94.02	319	i P	P	16 04 01.8	-0.6
HOMB	Homborsund	94.04	338	eP	P	16 04 00.6	-1.5
HOMB				IVmB_BB		16 04 04.8	
	comp=Z,954nm,2.2s						
HOMB				eSKSac	SKSac	16 13 55.1	+1.1
HOMB				IVMs_BB	IVMs_BB	16 46 43.5	
	comp=Z,1µm,10.7s						
HOMB	Homborsund	94.04	338	i P	P	16 04 00.7	-1.5
OZUR		94.08	322	⇓P	P	16 04 01.3	-1.4
GKP	Gorka Klasztor	94.10	331	eP	P	16 04 01.8	-0.8
GKP				epP	sP	16 06 23.6	-2.4
GKP				eS	SKSac	16 13 53.4	-1.2
NEHR	Nehoiu	94.15	321	⇓P	P	16 04 05.9	+2.8
ISR	Istrita	94.18	321	⇑P	P	16 04 03.7	+0.5
ISR	Istrita	94.18	321	⇑P	P	16 04 03.7	+0.5
MMAI	Mount Meron Ar	94.26	307	P	P	16 04 03.2	-0.7
	comp=Z,44nm,0.8s,baz=57,slow=5.3,SNR=61						
MMAI				PP	PP	16 07 58.8	+1.4
	comp=Z,170nm,1.3s,baz=61,slow=10,SNR=10						
MMAI				S	SKSac	16 13 55.3	-1.2
	comp=Z,0.2nm,0.2s,baz=116,slow=16,SNR=1.2						
	comp=Z,44nm,0.8s						
MLR	Muntele Rosu	94.32	322	IAmb	IAmb	16 04 06.6	
	comp=Z,124nm,1.5s						
MLR	Muntele Rosu	94.32	322	S	SKSac	16 13 54.7	-1.9
	comp=Z,1.6nm,0.4s,baz=38,slow=20,SNR=7.1						
MLR	Muntele Rosu	94.32	322	⇓P	P	16 04 04.0	0.0
MLR	Muntele Rosu	94.32	322	⇓P	P	16 04 04.0	0.0
BRIU	Brid	94.33	325	P	P	16 04 03.3	-0.4
ARCR	ARCALIA	94.33	324	⇓P	P	16 04 05.0	+1.2
K30B	Basset	94.36	42	IAmb	IAmb	16 04 05.5	
	comp=Z,149nm,1.0s						
KOLS	Kolonicke sedl	94.37	326	eP	P	16 04 03.4	-0.5
KOLS				e		16 07 58.6	
KOLS	Kolonicke sedl	94.37	326	eP	P	16 04 03.4	-0.5
KOLS				ePP	PP	16 07 58.6	+1.0
DOPR	Dopca	94.38	322	⇑P	P	16 04 04.4	+0.3
KMY	Karmoy	94.39	340	eP	P	16 04 03.2	-0.5
KMY				IVmB_BB		16 04 07.6	
	comp=Z,1µm,2.7s						
KMY				esP	sP	16 06 25.8	-1.5
KMY				ePP	PP	16 07 59.8	+2.5
KMY				eSKSac	SKSac	16 13 59.0	+3.0
KMY				IVMs_BB	IVMs_BB	16 45 37.9	
	comp=Z,983nm,14.2s						
SNART	Snartemo	94.43	339	eP	P	16 04 03.5	-0.5
SNART				IVmB_BB		16 04 07.3	
	comp=Z,2µm,2.5s						
SNART				esP	sP	16 06 25.4	-1.9
SNART				ePP	PP	16 07 59.0	+1.3
SNART				eSKSac	SKSac	16 13 56.3	+0.1
SNART				ePS	PS	16 16 53.1	-0.2
SNART	Snartemo	94.43	339	i P	P	16 04 03.5	-0.5
BMR	Baia Mare	94.46	324	⇑P	P	16 04 05.2	+0.8
BMR	Baia Mare	94.46	324	⇑P	P	16 04 05.2	+0.8
COP	Copenhagen	94.48	335	i P	P	16 04 02.8	-1.4
COP				IAmb	IAmb	16 04 06.6	
	comp=Z,357nm,1.2s						
BORA	Eskisehir	94.49	315	IAmb	IAmb	16 04 05.3	
	comp=Z,241nm,1.5s						
BALJ	Balqa	94.50	306	IAmb	IAmb	16 04 05.8	
	comp=Z,132nm,0.9s						
HOLU	Holmets	94.55	326	P	P	16 04 04.5	-0.2
BERU	Beregovo	94.59	325	P	P	16 04 04.6	-0.3
SULR		94.59	321	⇑P	P	16 04 06.3	+1.3
STHS	Stebnicka Huta	94.61	327	eP	P	16 04 04.3	-0.8
STHS	Stebnicka Huta	94.61	327	eP	P	16 04 04.3	-0.8
F33A	5 Mile Ranch,	94.62	38	IAmb	IAmb	16 04 06.8	
	comp=Z,122nm,1.3s						
PRD	Provadia	94.72	319	i P	P	16 04 05.5	-0.1
OJC	Ojcow	94.85	328	eP	P	16 04 05.3	-0.8
OJC				epP	sP	16 06 26.4	-3.2
OJC				eS	SKSac	16 13 58.9	+0.1
OJC	Ojcow	94.85	328	P	P	16 04 05.5	-0.6
	comp=Z,1µmcomp=Z,72nm,1.7s						
VOIR		94.87	322	⇑P	P	16 04 05.8	-0.6
VOIR		94.87	322	⇑P	P	16 04 05.8	-0.6
CSS	Mathiatis	94.89	310	IAmb	IAmb	16 04 10.8	
	comp=Z,114nm,1.2s						
CSS	Mathiatis	94.89	310	P	P	16 04 06.1	-0.5
	comp=Z,2µmcomp=Z,111nm,1.4s						
GHAJ	Ghor Haditha	94.90	306	IAmb	IAmb	16 04 07.5	
	comp=Z,82nm,0.8s						
BORG	Borgarnes	94.94	354	P	P	16 04 07.6	+1.5
BORG				IAmb	IAmb	16 04 08.8	
	comp=Z,97nm,0.9s						
BORG	Borgarnes	94.94	354	P	P	16 04 07.6	+1.5
BORG				pmax	pmax		
	comp=Z,97nm,1.0s						
CJR	Cluj-Napoca	94.97	324	⇑P	P	16 04 08.1	+1.3
CTYL	Yalikoy Yolu	95.07	317	⇑P	P	16 04 02.3	-4.9
NIE	Niedzica	95.09	327	eP	P	16 04 06.9	-0.4
NIE				epP	sP	16 06 29.2	-1.5
NIE				eS	SKSac	16 14 02.0	+1.7
NIE	Niedzica	95.09	327	P	P	16 04 07.2	-0.1
	comp=Z,538nmcomp=Z,22nm,1.7s						
LPIG	La Paz	95.14	62	P	P	16 04 09.5	+1.6
	comp=Z,25nm,0.3s,baz=233,slow=2.4,SNR=9.0						
	comp=Z,25nm,0.3s						
ARR	Arges	95.15	322	⇑P	P	16 04 08.6	+0.9
MUD	Monsted U'grnd	95.16	337	i P	P	16 04 05.6	-1.7
MUD				IAmb	IAmb	16 04 07.9	
	comp=Z,186nm,1.5s						
TNR	Turnu Rosu	95.20	322	⇓P	P	16 04 06.0	-1.8
TNR	Turnu Rosu	95.20	322	⇓P	P	16 04 06.0	-1.8
MARR	Marisel-Cluj	95.25	324	⇓P	P	16 04 08.1	-0.1
DRGR		95.41	324	⇑P	P	16 04 09.1	+0.3
DRGR		95.41	324	⇑P	P	16 04 09.1	+0.3
HUMR	Humele	95.43	321	⇓P	P	16 04 08.2	-0.6
ISP	Isparta	95.48	313	IAmb	IAmb	16 04 11.2	
	comp=Z,112nm,1.2s						
ISP	Isparta	95.48	313	ceP	P	16 04 08.9	-0.5
ISP				pmax	pmax		
	comp=Z,146nm,1.7s						
LRW	Lerwick	95.52	343	eP	P	16 04 08.7	-0.1
SZH	Strazhitsa	95.54	320	i P	P	16 04 08.6	-0.8
SZH	Strazhitsa	95.54	320	P	P	16 02 08.3	-121
KECS	Kecovo	95.58	326	ePP	PP	16 08 07.9	+1.0
LOT	Lotru	95.61	323	⇓P	P	16 04 10.1	+0.3
SLBS	Sierra La Lagu	95.62	62	P	P	16 04 11.9	+1.7
JMB	Yambol	95.63	319	P	P	16 04 08.6	-1.2
LANS	Liptovska Anna	95.69	327	eP	P	16 04 10.7	+0.7
LANS				e		16 08 09.2	
LANS	Liptovska Anna	95.69	327	ePDIFF	P	16 04 10.7	+0.7
LANS	Liptovska Anna	95.69	327	ePP	PP	16 08 09.2	+1.5
SSRD	Sdr. Stenderup	95.72	336	i P	P	16 04 08.7	-1.2
SSRD				IAmb	IAmb	16 04 11.5	
	comp=Z,192nm,0.8s						
BAND	Balkesir-Ban	95.79	316	⇑P	P	16 04 02.2	-8.4
OKC	Ostrava-Krasne	95.91	328	eP	P	16 04 10.2	-0.7
OKC				esP	sP	16 06 30.1	-4.4
OKC				ePP	PP	16 08 04.8	-4.5
OKC				ex	x	16 10 17.2	
OKC				eSKS	SKSac	16 14 05.0	+0.6
OKC				ePS	PS	16 17 08.4	-1.0
OKC				ex	x	16 30 46.8	
OKC	Ostrava-Krasne	95.91	328	eP	P	16 04 10.2	-0.7
OKC				e		16 08 04.8	
OKC				e		16 10 17.2	
OKC				e		16 14 05.0	
OKC				e		16 17 08.4	
BGNE	Belgrade	95.96	42	IAmb	IAmb	16 04 14.2	
	comp=Z,86nm,1.0s						
EIL	Elat	96.11	304	S	SKSac	16 14 07.4	+1.2
	comp=Z,1.1nm,0.5s,baz=114,slow=19,SNR=3.8						
KSP	Ksiaz	96.14	330	eP	P	16 04 11.4	-0.5
KSP				epP	sP	16 06 32.3	-3.2
KSP				eS	SKSac	16 14 05.5	-0.1
KSP	Ksiaz	96.14	330	P	P	16 04 11.4	-0.5
	comp=Z,1µmcomp=Z,87nm,1.4s						
GZR	Gura Zlata	96.20	323	⇓P	P	16 04 12.3	-0.1
GZR	Gura Zlata	96.20	323	⇓P	P	16 04 12.3	-0.1
PSZ	Piszkesteto	96.24	326	IAmb	IAmb	16 04 15.6	
	comp=Z,183nm,1.6s						
PSZ	Piszkesteto	96.24	326	⇑P	P	16 04 11.8	-0.7
PSZ	Piszkesteto	96.24	326	⇑P	P	16 04 11.8	-0.7
MORC	Moravsky Berou	96.25	329	ePDIFF	P	16 04 11.2	-1.3
MORC				ePP	PP	16 08 12.5	+0.6
MORC	Moravsky Berou	96.25	329	⇓P	P	16 04 12.5	0.0
MORC	Moravsky Berou	96.25	329	⇓P	P	16 04 12.5	0.0
SURR	Surduc	96.36	323	⇑P	P	16 04 12.7	-0.3
OSTC	Ostas	96.37	330	eP	P	16 04 12.6	-0.4
OSTC				esP	sP	16 06 31.5	-5.1
OSTC				ePP	PP	16 08 11.4	-1.4
OSTC				ex	x	16 10 18.7	
OSTC				eSKS	SKSac	16 14 07.6	+0.8
OSTC				eAS		16 17 09.0	
OSTC				ex	x	16 30 55.5	
OSTC	Ostas	96.37	330	i P	P	16 04 12.6	-0.4
OSTC				e		16 08 11.4	
OSTC				e		16 10 18.7	
OSTC				e		16 14 07.6	
OSTC				e		16 17 09.0	
KRLC	Kraliky	96.42	329	eP	P	16 04 12.5	-0.8
KRLC				esP	sP	16 06 28.7	-8.2
KRLC				ePP	PP	16 08 11.0	-2.3
KRLC				ex	x	16 10 19.1	
KRLC				eAS		16 16 57.6	
KRLC	Kraliky	96.42	329	i P	P	16 04 12.5	-0.8
KRLC				e		16 08 11.0	
KRLC				e		16 10 19.1	
KRLC				e		16 16 57.6	
VYHS	Vyhne	96.43	327	eP	P	16 04 13.2	-0.1
VYHS				e		16 08 14.9	
VYHS	Vyhne	96.43	327	ePDIFF	P	16 04 13.2	-0.1
VYHS	Vyhne	96.43	327	ePP	PP	16 08 14.9	+1.6
CHVC	Chvalec	96.43	330	eP	P	16 04 12.7	-0.6
CHVC				epP	sP	16 06 28.7	-8.2
CHVC				ePP	PP	16 08 13.1	-0.2
CHVC				ex	x	16 10 19.0	
CHVC				eSKS	SKSac	16 14 07.7	+0.6
CHVC	Chvalec	96.43	330	i P	P	16 04 12.7	-0.6
CHVC				e		16 08 13.1	
CHVC				e		16 10 19.0	
CHVC				e		16 14 07.7	
DPC	Dobruska-Polom	96.46	330	eP	P	16 04 13.0	-0.5
DPC				esP	sP	16 06 31.5	-5.5
DPC				ePP	PP	16 08 14.0	+0.5
DPC				ex	x	16 10 23.2	
DPC				eSKS	SKSac	16 14 08.0	+0.7
DPC				eXSKS		16 17 10.5	
DPC				ex	x	16 30 52.4	
DPC	Dobruska-Polom	96.46	330	eP	P	16 04 13.0	-0.5
DPC				e		16 08 14.0	
DPC				e		16 10 23.2	
DPC				e		16 14 08.0	
DPC				e		16 17 10.5	
DPC	Dobruska-Polom	96.46	330	P	P	16 04 12.9	-0.5
	comp=Z,1µmcomp=Z,46nm,1.7s						
MANT	Manisa	96.47	315	IAmb	IAmb	16 04 14.5	
	comp=Z,111nm,1.4s						
UPC	Upice	96.50	330	eP	P	16 04 12.9	-0.7
UPC				epP	sP	16 06 31.5	-5.7
UPC				ePP	PP	16 08 13.8	0.0
UPC				ex	x	16 10 21.9	
UPC				eSKS	SKSac	16 14 07.9	+0.5
UPC				eAS		16 17 01.7	
UPC				ex	x	16 31 02.8	
UPC	Upice	96.50	330	i P	P	16 04 12.9	-0.7
UPC				e		16 08 13.8	
UPC				e		16 10 21.9	
UPC				e		16 14 07.9	
UPC				e		16 17 01.7	
BSEG	Bad Segeberg	96.59	335	ePP	PP	16 08 14.6	+0.4
HERR	Herculane	96.71	323	⇑P	P	16 04 14.3	-0.3
BZS	Buzias	96.72	324	⇑P	P	16 04 14.5	-0.1
BZS	Buzias	96.72	324	⇑P	P	16 04 14.5	-0.1
ATD	Arta Tunnel	96.76	285	P	P	16 04 16.9	+1.4
	SNR=7.1						
JAVC	Velka Javorina	96.78	328	ePDIFF	P	16 04 14.5	-0.4
JAVC				ePP	PP	16 08 18.1	+2.0
ALN	Alexandroupoli	96.81	318	P	P	16 04 13.5	-1.6
VALD	Valchedram	96.82	321	i P	P	16 04 15.5	+0.4
MPEP	Malo Peshtene	96.84	321	i P	P	16 04 14.7	-0.5
KDZ	Kurdzhali	96.84	319	P	P	16 04 14.5	-0.8
PLD	Plovdiv	96.92	319	P	P	16 04 15.2	-0.4
SPMN	Marine on St.	96.97	37	IAmb	IAmb	16 06 07.5	
	comp=Z,84nm,1.0s						
AMTX	Amarillo	96.97	49	IAmb	IAmb	16 04 18.3	
	comp=Z,78nm,1.1s						
RDO	Rodhopi	96.99	318	IAmb	IAmb	16 07 33.0	
	comp=Z,85nm,1.3s						
RDO	Rodhopi	96.99	318	P	P	16 04 14.2	-1.7
VRAC	Vranov	97.02	329	S	SKSac	16 14 10.3	+0.1
	comp=Z,2.6nm,0.3s,baz=50,slow=13,SNR=6.1						
VRAC	Vranov	97.02	329	ePDIFF	P	16 04 14.7	-1.2
VRAC				ePP	PP	16 08 18.4	+0.6
VRAC	Vranov	97.02	329	⇑P	P	16 04 15.7	-0.2
VRAC	Vranov	97.02	329	⇑P	P	16 04 15.7	-0.2
PGB	Panagyurishte	97.06	320	i P	P	16 04 15.9	-0.4
FETY	Fethiye	97.07	313	P	P	16 04 14.8	-1.6
SRO	Srobarova	97.13	327	ePP	PP	16 08 18.2	-0.4
PVCC	Panska Ves	97.17	330	eP	P	16 04 13.4	-3.1
PVCC				esP	sP	16 06 34.3	-5.8
PVCC				ePP	PP	16 08 19.6	+0.8
PVCC				ex	x	16 10 26.6	
PVCC				eSKS	SKSac	16 14 12.2	+1.4
PVCC				eAS		16 17 12.4	
PVCC				ex	x	16 31 13.4	
PVCC	Panska Ves	97.17	330	eP	P	16 04 13.4	-3.1
PVCC				e		16 08 19.6	
PVCC				e		16 10 26.6	
PVCC				e		16 14 12.2	
PVCC				e		16 17 12.4	
MDVR	Moldovita	97.17	323	⇓P	P	16 04 16.2	-0.6
RZN	Rozhen	97.18	319	i P	P	16 04 16.3	-0.7
RZN	Rozhen	97.18	319	P	P	16 04 15.8	-1.2
R32A	Long Quarter,	97.20	45	IAmb	IAmb	16 04 18.2	
	comp=Z,88nm,1.5s						
BRG	Berggiesshubel	97.22	331	ePP	PP	16 08 20.1	+1.0
BRG	Berggiesshubel	97.22	331	⇓iPif		16 04 16.0	
BRG				Amp		16 04 20.6	
	comp=Z,151nm,1.5s						
BRG	Berggiesshubel	97.22	331	P	Pdif	16 04 38.2	+21
BRG				Amp		16 04 41.7	
	comp=Z,16nm,1.2s						
BRG	Berggiesshubel	97.22	331	sP	sP	16 06 33.0	-7.4
BRG	Berggiesshubel	97.22	331	P	PKiKP	16 08 40.3	-9.1
BRG				Amp		16 08 43.4	
	comp=Z,25nm,1.0s						
BRG	Berggiesshubel	97.22	331	pPKiKP	pPKiKP	16 10 27.0	-7.0
BRG				⇑SKS	SKSac	16 14 11.3	+0.3
BRG				Amp		16 14 14.5	
	comp=Z,40nm,1.8s						
BRG	Berggiesshubel	97.22	331	S	S	16 15 01.0	-0.4
BRG	Berggiesshubel	97.22	331	SP	SP	16 16 28.0	+1.8
BRG	Berggiesshubel	97.22	331	pS	pS	16 17 15.0	+4.7
BRG	Berggiesshubel	97.22	331	PS	PS	16 17 21.0	-2.1
BRG	Berggiesshubel	97.22	331	SS	SS	16 21 54.0	+4.2
EZN	Ezine	97.22	317	P	P	16 04 15.8	-1.1
EZN	Ezine	97.22	317	⇑P	P	16 04 16.2	-0.8
KRUC	Moravsky	97.28	329	ePDIFF	P	16 04 15.5	-1.6
KRUC				ePP	PP	16 08 20.5	+0.7
GADA	Gvkgeada	97.29	317	P	P	16 04 15.8	-1.5
MODS	Modra-Piesok	97.30	328	eP	P	16 04 16.7	-0.5
MODS				e		16 08 19.7	
MODS	Modra-Piesok	97.30	328	ePDIFF	P	16 04 16.7	-0.5
MODS				ePP	PP	16 08 19.7	-0.2
CLL	Collm	97.34	332	IAmb	IAmb	16 04 18.1	
	comp=Z,86nm,1.1s						
CLL	Collm	97.34	332	i P	P	16 04 16.3	-1.0
CLL				e		16 14 10.0	
CLL				eS	S	16 14 59.0	-3.4
CLL				pmax	pmax		
	comp=Z,146nm,1.3s						
CLL	Collm	97.34	332	P	P	16 04 16.2	-1.0
	comp=Z,1µmcomp=Z,76nm,1.6s						
CLL	Collm	97.34	332	i Pdif	P	16 04 16.3	-1.0
	comp=Z,146nm,1.3s						
CLL				epP	pP	16 05 54.0	-2.4
CLL				esP	sP	16 06 33.0	-7.9
CLL				ex	x	16 06 56.0	
CLL				ex	x	16 07 35.0	
CLL				ex	x	16 08 16.0	
CLL				i PP	PP	16 08 20.0	-0.1
	comp=Z,469nm,1.9s						
CLL				ePPP	PPP	16 10 30.0	
CLL				epPPP		16 11 46.0	
CLL				eSKSac	SKSac	16 14 10.0	-1.6
CLL				eSKKSac	SKKSac	16 14 41.0	-0.2
CLL				eSdif	S	16 14 59.0	-3.4
CLL				eSP	SP	16 16 26.0	-1.4
CLL				ePS	PS	16 17 23.0	-1.3
CLL				esS	sS	16 18 10.0	+8.5
CLL				esPS		16 19 12.0	
CLL				eSS	SS	16 21 49.0	-2.5
CLL				eSKKPdf	SKKPbc	16 23 51.0	+0.8
CLL				esSS		16 24 18.0	
CLL				eSSS	SSS	16 25 36.0	
CLL				eSSSS		16 29 30.0	
I37A	Lemond, Waseca	97.35	38	IAmb	IAmb	16 06 09.4	
	comp=Z,96nm,1.3s						
SMTH	Samothraki Isl	97.37	318	P	P	16 04 15.8	-1.8
RICC	Richard	97.37	331	eP	P	16 04 17.1	-0.3
RICC				esP	sP	16 06 38.5	-2.6
RICC				ePP	PP	16 08 21.0	+0.6
RICC				ex	x	16 10 28.0	
RICC				eSKS	SKSac	16 14 12.9	+1.1
RICC				ex	x	16 31 24.6	
FLTG	Flechtingen	97.38	333	ePP	PP	16 08 20.4	+0.1
GOPC	GO Pecny, Ondr	97.48	330	eP	P	16 04 17.4	-0.6
GOPC				esP	sP	16 06 35.7	-5.9
GOPC				ePP	PP	16 08 23.6	+2.3
GOPC				ex	x	16 10 26.6	
GOPC				eSKS	SKSac	16 14 13.0	+0.5
GOPC				ex	x	16 31 17.7	
GOPC	GO Pecny, Ondr	97.48	330	eP	P	16 04 17.4	-0.6
GOPC				e		16 08 23.6	
GOPC				e		16 14 13.0	
BLCB	Balcova	97.53	315	P	P	16 04 16.8	-1.6
PRA	Prague	97.54	330	eP	P	16 04 17.6	-0.6
PRA				esP	sP	16 06 34.3	-7.6
PRA				ePP	PP	16 08 20.9	-0.8
PRA				ex	x	16 10 27.6	
PRA				eSKS	SKSac	16 14 13.3	+0.6
PRA				eXSKS		16 17 15.2	
PRA				ex	x	16 31 27.6	
PRA	Prague	97.54	330	i P	P	16 04 17.6	-0.6
PRA				e		16 08 20.9	
PRA				e		16 10 27.6	
PRA				e		16 14 13.3	
PRA				e		16 17 15.2	
PRU	Pruhonice	97.55	330	eP	P	16 04 17.5	-0.7
PRU				epP	sP	16 06 37.1	-4.8
PRU				ePP	PP	16 08 23.4	+1.7
PRU				ex	x	16 10 27.5	
PRU				eSKS	SKSac	16 14 12.4	-0.4
PRU				eXSKS		16 17 14.0	
PRU				ex	x	16 31 21.7	
PRU	Pruhonice	97.55	330	eP	P	16 04 17.5	-0.7
PRU				e		16 08 23.4	
PRU				e		16 10 27.5	
PRU				e		16 14 12.4	
PRU				e		16 17 14.0	
VTS	Vitosha	97.57	320	i P	P	16 04 18.3	-0.4
VTS	Vitosha	97.57	320	P	P	16 04 18.2	-0.4
PRK	Paraskevi	97.57	316	P	P	16 04 17.1	-1.5
TREC	Trest	97.57	329	eP	P	16 04 17.8	-0.6
TREC				esP	sP	16 06 35.7	-6.4
TREC				ePP	PP	16 08 20.2	-1.7
TREC				ex	x	16 10 28.5	
TREC				eSKS	SKSac	16 14 13.5	+0.5
TREC				eAS		16 17 12.1	
TREC	Trest	97.57	329	i P	P	16 04 17.8	-0.6
TREC				e		16 08 20.2	
TREC				e		16 10 28.5	
TREC				e		16 14 13.5	
TREC				e		16 17 12.1	
BIGH	Upper Bighouse	97.65	344	eP	P	16 04 13.8	-4.6
KUQ	Kuujjuuaa	97.68	17	IAmb	IAmb	16 04 19.9	
	comp=Z,106nm,1.3s						
ODSA	Odessa	97.70	52	IAmb	IAmb	16 06 43.4	
	comp=Z,64nm,1.2s						
KAVA	Kavala	97.72	319	P	P	16 04 17.9	-1.3
VNDA	Vanda	97.72	176	P	Pdif	16 04 19.7	+1.5
	comp=Z,3.2nm,0.9s,baz=328,slow=6.0,SNR=15						
VNDA				pP	pP	16 05 59.0	+1.6
	comp=Z,4.0nm,1.0s,baz=321,slow=9.0,SNR=3.1						
VNDA				PP	PP	16 08 23.5	+0.1
	comp=Z,6.1nm,0.9s,baz=335,slow=7.8,SNR=4.1						
VNDA				S	SKSac	16 14 09.5	-2.6
	comp=Z,2.4nm,1.1s,baz=304,slow=7.3,SNR=2.1						
VNDA				PKKPbc	PKKPbc	16 20 53.0	-2.0
	comp=Z,2.0nm,0.6s,baz=166,slow=4.1,SNR=12						
VNDA				SKKP		16 23 47.4	
	comp=Z,2.4nm,0.9s,baz=180,slow=1.0,SNR=4.8						
VNDA				PKPPKP		16 29 06.7	
	comp=Z,2.1nm,1.3s,baz=120,slow=1.3,SNR=3.4						
NRDL	Niedersach Rie	97.73	334	ePP	PP	16 08 23.5	+0.6
ASSE	Asse, Remlinge	97.76	333	ePP	PP	16 08 24.1	+1.0
THAS	Thassos island	97.81	318	P	P	16 04 18.2	-1.4
SIGR	SIGRI	97.86	316	P	P	16 04 18.4	-1.4
RETH	Rethem/Aller,	97.86	334	ePP	PP	16 08 24.5	+0.6
BOVS	Bovan	97.87	322	⇓P	P	16 04 19.1	-0.7
MMB	Musomishta	97.87	319	i P	P	16 04 19.1	-0.8
MMB	Musomishta	97.87	319	P	P	16 04 18.6	-1.3
LIA	Limnos Island	97.91	317	P	P	16 04 18.8	-1.2
ARG	Arkhangelos	97.95	313	P	P	16 04 20.0	-0.4
MPLH	Magyarpolny	97.95	327	P	P	16 04 19.3	-0.8
	comp=Z,2µmcomp=Z,104nm,1.9s						
NEUB	Neuenburg	97.95	332	ePP	PP	16 08 25.7	+1.0
ELIS	Ellis County	97.96	47	IAmb	IAmb	16 04 22.8	
	comp=Z,57nm,1.1s						
MORH	Mrgy, Hungar	97.98	325	⇓P	P	16 04 19.2	-1.0
MORH	Mrgy, Hungar	97.98	325	P	P	16 04 19.4	-0.8
	comp=Z,782nmcomp=Z,32nm,1.9s						
FRGS	Fruska Gora	98.01	324	eP	P	16 04 20.1	-0.3
SMG	Samos	98.03	315	P	P	16 04 19.6	-1.1
BODT	Bodrum	98.06	314	P	P	16 04 19.3	-1.5
KKB	Krupnik	98.08	320	i P	P	16 04 20.3	-0.5
KKB	Krupnik	98.08	320	P	P	16 04 20.4	-0.5
ZVC	Zvikov	98.09	330	eP	P	16 04 19.9	-0.8
ZVC				esP	sP	16 06 41.3	-3.1
ZVC				ePP	PP	16 08 27.3	+1.5
ZVC				ex	x	16 10 33.2	
ZVC				eSKS	SKSac	16 14 15.4	-0.1
ZVC				eAS		16 17 26.2	
ZVC				ex	x	16 31 35.2	
CLZ	Clausthal	98.10	333	ePP	PP	16 08 26.7	+0.9
KOKK	Kokkinochori,	98.14	319	P	P	16 04 19.8	-1.3
TXAR	Lajitas Array	98.18	55	P	Pdif	16 04 22.0	+0.4
TXAR	Lajitas Array	98.18	55	P	Pdif	16 04 22.9	+1.2
	comp=Z,3.5nm,0.5s,baz=297,slow=4.2,SNR=52						
TXAR				PP	PP	16 08 27.6	+0.1
	comp=Z,5.2nm,1.0s,baz=315,slow=6.4,SNR=2.0						
TXAR				S	SKSac	16 14 17.2	+0.2
	comp=Z,1.6nm,1.1s,baz=325,slow=5.2,SNR=1.2						
TXAR				PKKP	PKKPdf	16 20 53.0	-0.5
	comp=Z,3.3nm,0.5s,baz=105,slow=2.3,SNR=21						
TXAR				PKPPKP		16 29 02.5	
	comp=Z,0.1nm,0.3s,baz=59,slow=3.6,SNR=4.6						
	comp=Z,3.5nm,0.5s						
TANN	Tannenbergstha	98.21	331	ePP	PP	16 08 28.2	+1.4
SRS	Serrai	98.22	319	P	P	16 04 19.8	-1.7
RONA	Rosalia, Austr	98.24	328	i Pdiff	Pdif	16 04 21.6	+0.2
	comp=Z,8.8nm,0.8s,SNR=14						
RONA				i PP	PP	16 08 31.1	+4.1
	comp=Z,13nm,0.8s						
PEHC	Pehcevo	98.26	320	i P	Pdif	16 04 25.4	+3.7
MCD	Coleburn Disti	98.26	343	eP	P	16 04 17.9	-3.4
LINV	Loch Inver, As	98.29	344	eP	P	16 04 20.1	-1.2
CONA	Conrad Observa	98.30	328	ePdiff	P	16 04 21.4	-0.4
	comp=Z,12nm,0.9s,SNR=30						
CONA				i PP	PP	16 08 26.6	-1.0
	comp=Z,15nm,1.0s						
OUR	Ouranopolis	98.42	318	P	P	16 04 20.9	-1.4
MOX	Moxa	98.43	332	ePP	PP	16 08 29.2	+0.9
CKRC	Cesky Krumlov	98.46	329	eP	P	16 04 21.7	-0.7
CKRC				epP	sP	16 06 41.3	-4.8
CKRC				ePP	PP	16 08 29.6	+0.9
CKRC				ex	x	16 10 37.9	
CKRC				eSKS	SKSac	16 14 17.7	+0.2
CKRC				eAS		16 17 21.4	
CKRC				ex	x	16 31 43.8	
CKRC	Cesky Krumlov	98.46	329	i P	P	16 04 21.7	-0.7
CKRC				e		16 08 29.6	
CKRC				e		16 10 37.9	
CKRC				e		16 14 17.7	
TEKS	Tekeris	98.55	324	eP	P	16 04 22.0	-0.8
KHC	Kasperske Hory	98.59	330	eP	P	16 04 22.4	-0.6
KHC				x	x	16 04 25.0	
KHC				esP	sP	16 06 40.0	-6.7
KHC				ePP	PP	16 08 30.7	+1.0
KHC				ex	x	16 10 35.2	
KHC				eSKS	SKSac	16 14 18.6	+0.5

KHC				eAS		16 17 21.3	
KHC				ex	x	16 31 43.0	
KHC	Kasperske Hory	98.59	330	i P	P	16 04 22.4	-0.6
KHC				e		16 08 30.7	
KHC				e		16 14 18.6	
KHC	Kasperske Hory	98.59	330	P	P	16 04 22.2	-0.8
	comp=Z,822nmcomp=Z,33nm,1.7s						
KNT	Kendrikon	98.62	319	P	P	16 04 22.2	-1.0
DRUM	Mains of Drumt	98.62	342	eP	P	16 04 19.9	-3.0
MANZ	Manzenberg	98.68	331	ePP	PP	16 08 31.8	+1.5
LEWI	Lewis, Hebride	98.70	345	eP	P	16 04 20.1	-3.1
GEC2	GERESS Array S	98.73	330	ePP	PP	16 08 31.8	+0.9
GERES	GERESS Array B	98.73	330	P	P	16 04 23.0	-0.7
	comp=Z,12nm,0.8s,baz=46,slow=4.5,SNR=71						
GERES				PP	PP	16 08 30.7	-0.2
	comp=Z,8.6nm,0.7s,baz=41,slow=9.1,SNR=6.6						
GERES				S	SKSac	16 14 19.4	+0.4
	comp=Z,1.5nm,1.1s,baz=82,slow=8.3,SNR=1.3						
GERES				PKKPbc	PKKPbc	16 20 50.2	-1.1
	comp=Z,0.7nm,0.6s,baz=230,slow=0.8,SNR=4.3						
	comp=Z,12nm,0.8s						
GERES	GERESS Array B	98.73	330	P	P	16 04 23.0	-0.7
ROTZ	Rotzenmuhle	98.79	331	ePP	PP	16 08 32.5	+1.4
HORT	Hortiatis	98.82	319	P	Pdif	16 04 22.2	-2.0
IBBN	Ibbenburen	98.83	335	ePP	PP	16 08 31.6	+0.4
PAIG	Paliouri	98.85	318	P	Pdif	16 04 22.8	-1.4
THE	Thessaloniki	98.89	319	P	Pdif	16 04 22.4	-1.9
SKY	Skiros Island	98.89	317	P	Pdif	16 04 23.4	-1.1
WET	Wettzell	98.92	330	ePP	PP	16 08 33.5	+1.4
ARSA	Arzberg	98.93	328	i Pdiff	P	16 04 25.2	+0.7
	comp=Z,8.5nm,0.9s,SNR=15						
ARSA				ePP	PP	16 08 34.8	+2.6
	comp=Z,15nm,1.2s,SNR=9.2						
KARP	Karpathos	98.96	313	P	Pdif	16 04 24.4	-0.5
	comp=Z,3µmcomp=Z,168nm,1.6s						
UBBA	Unterbreizbach	99.01	333	ePP	PP	16 08 32.9	+0.4
SKO	Skopje	99.02	321	i P	Pdif	16 04 25.0	0.0
BBLS	Lazi&#263i	99.04	323	eP	Pdif	16 04 25.0	-0.1
KPL	Plockton	99.11	344	eP	Pdif	16 04 23.4	-1.6
MOA	Molln	99.15	329	i Pdiff	Pdif	16 04 25.5	0.0
	comp=Z,7.6nm,0.8s,SNR=10.0						
MOA				ePP	PP	16 08 32.7	-1.1
	comp=Z,22nm,0.9s						
AOS	Alonnisos	99.15	317	P	Pdif	16 04 23.6	-2.1
RUDO	Rudo	99.22	323	eP	Pdif	16 04 25.5	-0.3
KYMI	Kymi, Euboea I	99.32	317	P	Pdif	16 04 24.4	-2.0
IVA	Berane	99.38	322	⇑iP	Pdif	16 04 26.4	-0.3
NEO	Neokhori	99.49	318	P	Pdif	16 04 25.3	-1.9
PERS	Pernice	99.55	327	ePdiff	Pdif	16 04 25.9	-1.4
PERS				e		16 10 48.4	
SOKA	Soboth	99.56	327	ePdiff	Pdif	16 04 27.6	+0.2
	comp=Z,8.3nm,1.0s,SNR=22						
SOKA				i PP	PP	16 08 34.5	-2.6
	comp=Z,11nm,0.7s,SNR=5.9						
SOKA	Soboth	99.56	327	i P	PP	16 08 34.5	-2.6
	comp=Z,11nm,0.7s,SNR=5.9						
BIOA	Bad Ischl, Aus	99.56	329	ePdiff	Pdif	16 04 27.7	+0.4
	comp=Z,6.3nm,0.8s,SNR=11						
BIOA				i PP	PP	16 08 35.7	-1.3
	comp=Z,8.0nm,0.9s						
KOME	Kolasin	99.61	322	⇑iP	Pdif	16 04 27.2	-0.5
THERA	Ancient Thera,	99.67	314	P	Pdif	16 04 25.3	-2.7
A051A	Mrakovica	99.69	325	eP	Pdif	16 04 29.7	+1.7
BLY	Banja Luka	99.71	325	eP	Pdif	16 04 28.0	0.0
DION	Dionisos Attik	99.74	316	P	Pdif	16 04 26.2	-2.1
FNA	Florina	99.77	320	P	Pdif	16 04 26.9	-1.6
PTL	Penteli	99.80	316	P	Pdif	16 04 26.5	-2.1
KZN	Kozani	99.81	319	P	Pdif	16 04 26.9	-1.8
TYRN	Tyrnavos	99.88	318	P	Pdif	16 04 26.9	-2.0
PUK	Puka	99.89	321	P	Pdif	16 04 28.2	-0.8
ATHU	Athens Univers	99.90	316	P	Pdif	16 04 26.9	-2.1
CRES	Cresnjevec Ost	99.92	326	eP	Pdif	16 04 28.1	-0.8
OBKA	Obir	99.92	327	eP	Pdif	16 04 26.5	-2.5
OBKA	Obir	99.92	327	i Pdiff	Pdif	16 04 28.4	-0.6
	comp=Z,4.7nm,0.7s						
OBKA				ePP	PP	16 08 41.4	+1.6
	comp=Z,37nm,1.5s,SNR=7.1						
OBKA	Obir	99.92	327	eP	PP	16 08 41.4	+1.6
	comp=Z,37nm,1.5s,SNR=7.1						
OHR	Ohrid	99.92	320	i P	Pdif	16 04 28.7	-0.4
RJOB	Jochberg	99.94	329	ePP	PP	16 08 41.4	+1.6
LKR	Lokris	100.01	317	P	Pdif	16 04 27.0	-2.5
PDG	Podgorica	100.03	322	eP	Pdif	16 04 29.0	-0.4
PDG	Podgorica	100.03	322	⇓P	Pdif	16 04 29.0	-0.4
PDG	Podgorica	100.03	322	⇑iP	Pdif	16 04 28.5	-0.9
VILL	Villia	100.09	317	P	Pdif	16 04 27.0	-2.9
THL	Klokotos Trika	100.10	318	P	Pdif	16 04 27.4	-2.4
TNS	Taunus Mts	100.12	333	ePP	PP	16 08 41.4	+0.3
BRY	Bratogost	100.14	323	eP	Pdif	16 04 29.0	-1.1
BRY	Bratogost	100.14	323	⇑iP	Pdif	16 04 29.0	-1.1
PGBU	Glenifferbraes	100.14	343	eP	Pdif	16 04 25.8	-3.8
CEME	Cevo	100.15	322	⇑iP	Pdif	16 04 29.2	-0.9
AXAR	Agios Charalam	100.16	318	P	Pdif	16 04 27.9	-2.3
EKA	Eskdalemuir Ar	100.18	342	P	Pdif	16 04 29.8	0.0
	comp=Z,5.2nm,0.5s,baz=27,slow=5.3,SNR=22						
EKA				pP	pP	16 06 10.7	+1.7
	comp=Z,4.0nm,1.0s,baz=27,slow=5.7,SNR=2.2						
EKA				PP	PP	16 08 40.1	-1.0
	comp=Z,45nm,0.9s,baz=32,slow=6.5,SNR=6.4						
NEST	Nestorio	100.19	320	P	Pdif	16 04 28.9	-1.4
ESK	Eskdalemuir	100.20	342	eP	Pdif	16 04 27.2	-2.7
LESA	Schwarzleotal	100.22	329	i Pdiff	Pdif	16 04 30.6	+0.3
	comp=Z,8.0nm,1.0s,SNR=16						
LESA				i PP	PP	16 08 45.0	+3.1
	comp=Z,37nm,0.8s						
LESA				i SKS	SKSac	16 14 25.1	-1.2
	comp=Z,5.2nm,0.9s						
DRME	Dracevica, Mon	100.22	322	eP	Pdif	16 04 30.0	-0.3
DRME	Dracevica, Mon	100.22	322	⇑iP	Pdif	16 04 30.0	-0.3
AGG	Agios Georgios	100.22	318	P	Pdif	16 04 26.6	-3.9
GDLE	Glaisdale, N Y	100.23	340	eP	Pdif	16 04 26.9	-3.1
A050A	Klekovaca	100.24	325	eP	Pdif	16 04 29.8	-0.6
BOJS	Bojanci	100.24	326	eP	Pdif	16 04 30.2	-0.1
EDMD	Edmundbyers	100.25	341	eP	Pdif	16 04 27.4	-2.7
KPRO	Kipourio	100.28	319	P	Pdif	16 04 28.7	-2.0
MYKA	Terra Mystica	100.30	328	i Pdiff	Pdif	16 04 29.5	-1.1
	comp=Z,2.8nm,0.8s,SNR=7.5						
MYKA				i PP	PP	16 08 42.6	0.0
	comp=Z,17nm,0.8s						
BUM	Brajici-Budva	100.31	322	⇓iP	Pdif	16 04 30.2	-0.6
ULC	Ulcinj	100.32	322	⇓iP	Pdif	16 04 30.5	-0.3
TIR	Tirane	100.34	321	⇓P	Pdif	16 04 24.0	-6.8
TIR	Tirane	100.34	321	⇓P	Pdif	16 04 24.0	-6.8
TIR	Tirane	100.34	321	P	Pdif	16 04 30.6	-0.3
	comp=Z,2µmcomp=Z,104nm,1.9s						
MAKR	Makrakomi, Fth	100.35	318	P	Pdif	16 04 28.7	-2.3
CRNS	Crni Vrh	100.36	327	ePdiff	Pdif	16 04 29.3	-1.6
FUR	Furstenfeldbru	100.36	330	ePP	PP	16 08 44.8	+1.9
TREB	Trebinje	100.36	323	eP	Pdif	16 04 29.5	-1.4
LTK	Loutraki	100.40	317	P	Pdif	16 04 27.8	-3.4
GBRS	Gornja Briga	100.45	327	ePdiff	Pdif	16 04 30.1	-1.2
GBRS				ePP	PP	16 08 40.8	-2.9
GBRS				e		16 10 55.1	
GBRS				eSKSac	SKSac	16 14 25.4	-1.9
GBRS				e		16 17 30.3	
GBRS				i		16 32 27.0	
HCY	Herceg Novi	100.45	322	eP	Pdif	16 04 30.3	-1.1
HCY	Herceg Novi	100.45	322	⇓iP	Pdif	16 04 29.7	-1.7
CEY	Cerknica	100.51	327	eP	Pdif	16 04 30.6	-1.0
EVR	Evrytania	100.61	318	P	Pdif	16 04 31.6	-0.7
STON	Ston	100.64	323	eP	Pdif	16 04 31.3	-0.8
IDI	Anoyia	100.66	314	P	Pdif	16 04 30.4	-2.1
IDI	Anoyia	100.66	314	S	SKSac	16 14 27.1	-1.7
	comp=Z,18nm,0.8s,baz=24,slow=20,SNR=4.6						
NEWG	New Galloway	100.67	342	eP	Pdif	16 04 30.3	-1.7
TETR	Tetrakomo, Epi	100.69	319	P	Pdif	16 04 31.5	-1.1
KALE	Kalithea	100.71	317	P	Pdif	16 04 29.9	-2.8
ANX	Ano Chora	100.73	318	P	Pdif	16 04 31.0	-1.8
SERG	Sergoula	100.75	318	P	Pdif	16 04 30.1	-2.8
ABTA	Abfaltersbach	100.77	329	i Pdiff	Pdif	16 04 32.0	-0.8
	comp=Z,8.2nm,1.0s,SNR=10						
ABTA				i PP	PP	16 08 47.5	+1.4
	comp=Z,11nm,0.9s						
ABTA				eSKS	SKSac	16 14 25.5	-3.5
	comp=Z,4.7nm,0.8s						
KESW	Keswick, Cumbr	100.80	341	eP	Pdif	16 04 30.9	-1.6
BTNL	Ternell	100.81	334	dPdif	Pdif	16 04 32.7	-0.1
BTNL				dPP	PP	16 08 46.0	-0.2
WATA	Walderalm	100.81	329	ePP	PP	16 08 47.6	+1.2
	comp=Z,15nm,0.9s						
BEBN	Eben Emael	100.83	335	dPdif	Pdif	16 04 32.5	-0.3
WTTA	Wattenberg	100.83	329	i Pdiff	Pdif	16 04 33.4	+0.2
	comp=Z,7.0nm,0.8s,SNR=5.7						
WTTA				ePP	PP	16 08 47.4	+0.7
	comp=Z,37nm,0.9s						
MEM	Membach	100.84	334	dPdif	Pdif	16 04 33.1	+0.3
MEM				dPP	PP	16 08 46.6	+0.3
EFP	Efpalio	100.84	318	P	Pdif	16 04 31.7	-1.4
GUR	Goura	100.85	317	P	Pdif	16 04 30.9	-2.5
SKDS	Skadanscina	100.85	327	eP	Pdif	16 04 32.1	-1.0
STU	Stuttgart	100.87	332	ePP	PP	16 08 49.4	+2.7
HPK	Haverah Park	100.88	340	eP	Pdif	16 04 30.7	-2.2
KLV	Kalavryta, Ach	100.91	317	P	Pdif	16 04 31.0	-2.6
SCHQ	Schefferville	100.96	18	P	Pdif	16 04 33.9	+0.6
	comp=Z,20nm,0.9s,baz=328,slow=6.8,SNR=26						
SCHQ				S	SKSac	16 14 27.2	-2.2
	comp=Z,2.4nm,0.9s,baz=343,slow=19,SNR=1.5						
SCHQ				PKKPbc	PKKPbc	16 20 42.4	-2.8
	comp=Z,2.9nm,0.4s,baz=159,slow=8.2,SNR=12						
SCHQ				SKKPbc	SKKPbc	16 23 40.7	-0.5
	comp=Z,3.8nm,0.9s,baz=130,slow=4.3,SNR=4.5						
PVO	Paravola	100.97	318	P	Pdif	16 04 32.3	-1.4
AMPL	Ampelaki	100.98	318	P	Pdif	16 04 31.8	-2.0
GAL1	Galloway	101.03	342	eP	Pdif	16 04 31.8	-1.7
MOTA	Moosalm	101.03	330	i Pdiff	Pdif	16 04 34.0	0.0
	comp=Z,5.3nm,1.1s,SNR=6.8						
MOTA				ePP	PP	16 08 45.0	-3.1
	comp=Z,25nm,1.0s						
MOTA				eSKS	SKSac	16 14 27.7	-2.6
	comp=Z,4.4nm,1.0s						
BHOU	Houvegnez	101.04	334	dPdif	Pdif	16 04 33.6	-0.2
BHOU				dPP	PP	16 08 48.8	+1.0
BSTI	Sart Tilman	101.04	335	dPdif	Pdif	16 04 33.9	+0.1
BSTI				dPP	PP	16 08 48.0	+0.3
SQTA	Sankt Quirin	101.07	330	i PP	PP	16 08 47.1	-1.2
	comp=Z,17nm,0.9s						
SQTA				i SKS	SKSac	16 14 29.0	-1.4
	comp=Z,2.3nm,0.9s						
RETA	Reutte	101.09	330	i Pdiff	Pdif	16 04 34.7	+0.5
	comp=Z,3.0nm,0.7s,SNR=6.8						
RETA				i PP	PP	16 08 45.7	-2.7
	comp=Z,12nm,0.9s						
VLX	Vlachokerasia	101.16	316	P	Pdif	16 04 33.1	-1.6
IGT	Igoumenitsa	101.16	319	P	Pdif	16 04 33.1	-1.4
VLI	Veliai	101.17	316	P	Pdif	16 04 31.6	-3.0
BCLA	Clavier	101.27	335	dPdif	Pdif	16 04 34.3	-0.5
BCLA				dPP	PP	16 08 43.7	-5.8
BCLA				dPKiKP	PKiKP	16 08 50.8	-5.8
AXS	Araxos	101.31	318	P	Pdif	16 04 34.0	-1.3
KTHA	Kythira Island	101.35	315	P	Pdif	16 04 33.6	-1.9
UCC	Uccle	101.35	335	dPdif	Pdif	16 04 34.4	-0.7
UCC				dPP	PP	16 08 49.8	-0.3
BGES	Gesves	101.39	335	dPdif	Pdif	16 04 34.8	-0.5
BGES				dPKiKP	PP	16 08 51.9	+1.5
LKD2	Lefkada island	101.41	318	P	Pdif	16 04 34.3	-1.4
ANKY	Antikythira Is	101.41	315	P	Pdif	16 04 33.8	-2.0
FETA	Feichten	101.44	330	ePdiff	Pdif	16 04 36.2	+0.3
	comp=Z,6.2nm,1.0s,SNR=6.7						
FETA				ePP	PP	16 08 49.9	-1.3
	comp=Z,19nm,1.1s						
FETA				eSKS	SKSac	16 14 32.6	+0.3
	comp=Z,4.5nm,0.9s						
WLF	Walferdange	101.51	334	P	Pdif	16 04 34.9	-0.9
WLF	Walferdange	101.51	334	dPdif	Pdif	16 04 36.2	+0.3
WLF				dPP	PP	16 08 51.5	+0.1
EVGI	Lefkada island	101.51	318	P	Pdif	16 04 35.1	-1.0
IOMK	Kirk Michael	101.52	342	eP	Pdif	16 04 31.2	-4.6
ITM	Ithomi	101.56	317	P	Pdif	16 04 35.1	-1.3
BMRD	Maredsous	101.58	335	dPdif	Pdif	16 04 35.6	-0.5
BMRD				dPP	PP	16 08 51.5	-0.3
BFO	Black Forest	101.58	332	ePP	PP	16 08 52.3	+0.3
IDGL	Inch Island, C	101.61	344	eP	Pdif	16 04 35.6	-0.5
IDGL	Inch Island, C	101.61	344	P	Pdif	16 04 36.2	0.0
IDGL				PP	PP	16 08 52.8	+1.0
DAVA	Damuels	101.65	330	i Pdiff	Pdif	16 04 37.3	+0.6
	comp=Z,9.3nm,0.9s,SNR=8.7						
DAVA				ePP	PP	16 08 51.2	-1.5
	comp=Z,18nm,0.8s						
FSK	Fiskardo	101.67	318	P	Pdif	16 04 35.1	-1.7
CWF	Charnwood Fore	101.81	340	eP	Pdif	16 04 34.5	-2.6
DOU	Dourbes	101.81	335	dPdif	Pdif	16 04 37.3	+0.1
DOU				dPP	PP	16 08 51.4	-2.1
DOU				dPKiKP	PKiKP	16 08 55.0	-2.7
VLS	Valsamata	101.82	318	P	Pdif	16 04 36.4	-1.1
PSDA	Pessada-Kefalo	101.86	318	P	Pdif	16 04 36.4	-1.2
ILTH	Belurgan, Co L	102.22	343	eP	Pdif	16 04 33.6	-5.3
ILTH	Belurgan, Co L	102.22	343	PP	PKiKP	16 08 56.9	-1.3
FOEL	Foel Wylfa	102.29	341	eP	Pdif	16 04 35.4	-3.9
TUE	Stuetta	102.49	330	P	Pdif	16 04 40.3	-0.3
	comp=Z,2µmcomp=Z,52nm,1.2s						
MATE	Matera	102.63	322	⇓P	Pdif	16 04 40.7	-0.3
HMNX	Herstmonceux	102.80	338	eP	Pdif	16 04 37.8	-3.7
DSB	Dublin	102.92	342	PP	PKiKP	16 09 03.1	+3.5
MCH1	Michaelchurch	102.99	340	eP	Pdif	16 04 36.5	-5.9
SWN1	Swindon	103.01	339	eP	Pdif	16 04 40.5	-2.0
AQU	L'Aquila	103.36	325	P	Pdif	16 04 42.6	-1.7
AQU				PKP	PKiKP	16 09 01.1	+0.3
TIP	Timpagrande	103.55	321	⇑P	Pdif	16 04 28.8	-17
TIP	Timpagrande	103.55	321	P	Pdif	16 04 44.9	-0.4
IGLA	Glengowla, Co	103.58	344	PP	PKiKP	16 09 00.9	+0.2
VLC	Villacollemand	103.66	328	P	Pdif	16 04 43.0	-2.6
VLC				PKP	PKiKP	16 09 01.1	-0.2
IWEX	Carrickbyrne,	103.81	342	PP	PKiKP	16 09 05.1	+3.9
DYA	Yadsworthy	104.63	340	eP	Pdif	16 04 45.6	-4.1
MAW	Mawson	105.00	203	Pdiff	Pdif	16 04 54.4	+3.6
	comp=Z,3.4nm,0.6s,baz=87,slow=7.3,SNR=8.2						
MAW				PP	PP	16 09 17.5	-0.2
	comp=Z,22nm,1.1s,baz=80,slow=11,SNR=6.6						
MAW				PKKPbc	PKKPbc	16 20 32.1	-1.5
	comp=Z,8.5nm,0.8s,baz=242,slow=3.5,SNR=9.2						
JSA	Saint Aubin	105.10	338	eP	Pdif	16 04 47.4	-4.4
VAL	Valentia	105.14	344	PKP	PKiKP	16 09 01.8	-1.8
CCA1	Carnmenellis	105.26	340	eP	Pdif	16 04 50.0	-2.5
QSPA	South Pole Qui	109.67	180	Pdiff	Pdif	16 05 13.2	+1.4
	comp=Z,1.7nm,0.9s,baz=274,slow=1.8,SNR=7.0						
QSPA				PKiKP	PKiKP	16 09 11.6	-0.1
	comp=Z,7.4nm,0.7s,baz=342,slow=3.4,SNR=10						
QSPA				PP	PP	16 09 52.6	+1.1
	comp=Z,65nm,1.2s,baz=2.4,slow=3.1,SNR=15						
QSPA				PKKPbc	PKKPbc	16 20 16.6	-3.3
	comp=Z,6.2nm,0.4s,baz=187,slow=2.2,SNR=32						
KEST	Kesra	110.22	322	Pdiff	Pdif	16 05 15.8	+0.7
	comp=Z,5.8nm,0.9s,baz=45,slow=8.6,SNR=6.4						
KEST				PKiKP	PKiKP	16 09 13.8	0.0
	comp=Z,10nm,0.9s,baz=72,slow=3.2,SNR=5.6						
KEST				PP	PP	16 09 54.0	-1.3
	comp=Z,11nm,1.0s,baz=62,slow=8.1,SNR=5.6						
EIBI	Ibiza	111.97	330	PP	PP	16 10 07.7	+0.3
SET	Setif	112.08	325	P	Pdif	16 05 10.0	-13
MBAR	Mbarara	112.41	278c	i PKIKP	PKiKP	16 09 20.5	+1.9
MBAR				pmax	pmax		
	comp=Z,29nm,1.7s						
ECHE	Chera	112.58	332	PP	PP	16 10 11.7	0.0
ECAL	Calabor	112.96	337	PP	PP	16 10 13.5	-0.7
UCM	Universidad Co	112.98	334	PP	PP	16 10 12.8	-1.6
PBRG	Braganca	113.08	337	ePKPdf	PKiKP	16 09 19.4	+0.3
PBRG				ePP	PP	16 10 13.3	-1.7
PGAV	Gavieira, Arco	113.49	338	ePKPdf	PKiKP	16 09 20.3	+0.4
PGAV				ePP	PP	16 10 17.2	-0.7
PCAB	Cabril	113.63	338	ePP	PP	16 10 19.9	+1.1
SYO	Syowa Base	113.69	202	⇓ePdiff	Pdif	16 05 30.0	+0.6
MVO	Moncorvo	113.74	337	ePKPdf	PKiKP	16 09 19.7	-0.7
MVO				ePP	PP	16 10 18.4	-1.2
ESDC	Sonseca Array	113.81	334	Pdiff	Pdif	16 05 30.9	0.0
	comp=Z,0.4nm,0.6s,baz=33,slow=2.5,SNR=4.4						
ESDC				PKiKP	PKiKP	16 09 20.6	+0.1
	comp=Z,1.4nm,0.5s,baz=19,slow=4.1,SNR=8.9						
ESDC				PP	PP	16 10 19.6	-0.7
	comp=Z,35nm,0.9s,baz=34,slow=5.9,SNR=13						
ESDC				PKKPbc	PKKPbc	16 20 04.8	-0.5
	comp=Z,1.8nm,0.8s,baz=225,slow=3.0,SNR=7.2						
ESDC				PKKPab	PKKPab	16 20 14.3	-0.7
	comp=Z,7.9nm,1.0s,baz=222,slow=4.8,SNR=17						
POLO	Lamas de Olo	113.84	337	ePP	PP	16 10 17.9	-2.5
PVIS	Viseu	114.45	337	ePP	PP	16 10 24.8	+0.2
MTE	Manteigas	114.60	337	ePKPdf	PKPdf	16 09 22.7	+0.7
MTE				ePP	PP	16 10 20.5	-5.2
PCBR	Castelo Branco	115.06	336	ePKPdf	PKiKP	16 09 23.7	+0.9
PCBR				ePP	PP	16 10 21.7	-7.1
PCAS	Casmilo, Conde	115.25	337	ePKPdf	PKiKP	16 09 23.5	+0.3
PCAS				ePP	PP	16 10 30.5	+0.3
PMRV	Marv??o	115.39	336	ePKPdf	PKiKP	16 09 24.2	+0.7
PMRV				ePP	PP	16 10 29.5	-1.6
PSARD	Sardoal	115.53	337	⇑ePKPdf	PKiKP	16 09 24.6	+0.8
PSARD				ePP	PP	16 10 28.0	-4.1
PESTR	Estremoz	115.95	336	ePKPdf	PKiKP	16 09 24.9	+0.3
PESTR				ePP	PP	16 10 34.4	-0.6
PMTG	Montargil	116.02	337	ePKPdf	PKPdf	16 09 24.1	-0.6
PMTG				ePP	PP	16 10 34.1	-1.3
PBAR	Barrancos	116.34	335	ePKPdf	PKiKP	16 09 26.2	+0.8
PBAR				ePP	PP	16 10 32.4	-5.3
EVO	Evora	116.41	336	PKP	PKPdf	16 09 25.4	0.0
EVO	Evora	116.41	336	ePKPdf	PKiKP	16 09 26.1	+0.7
EVO				ePP	PP	16 10 34.5	-3.7
EMAL	Malaga-Limoner	116.45	332	PKP	PKPdf	16 09 24.6	-1.0
LIS	Lisbon	116.67	337	ePP	PP	16 10 41.1	+1.2
PBEJ	Beja	116.79	336	⇑ePKPdf	PKiKP	16 09 27.3	+1.1
PBEJ				ePP	PP	16 10 41.8	+1.0
MESJ	Messejana	117.09	336	ePKPdf	PKiKP	16 09 27.2	+0.4
MESJ				ePP	PP	16 10 44.1	+1.2
PCVE	Castro Verde	117.20	336	ePKPdf	PKiKP	16 09 27.6	+0.6
PCVE				ePP	PP	16 10 40.6	-3.0
PVAQ	Vaqueiros	117.27	335	ePKPdf	PKiKP	16 09 28.3	+1.1
PVAQ				ePP	PP	16 10 42.3	-1.8
PTEO	Sao Teotonio	117.54	336	ePP	PP	16 10 38.5	-7.4
MORF	Marmelete	117.72	336	ePKPdf	PKiKP	16 09 28.3	+0.2
MORF				ePP	PP	16 10 48.6	+1.3
MORF	Marmelete	117.72	336	ePKPdf	PKiKP	16 09 29.3	+1.2
MORF				i PP	PP	16 10 45.0	-2.3
PFVI	Vila Bisbo	117.94	336	ePP	PP	16 10 46.7	-2.0
LSZ	Lusaka	119.32	263		PKiKP	16 09 32.1	+0.3
LSZ	Lusaka	119.32	263	PKIKP	PKiKP	16 09 32.1	+0.3
MDT	Midelt	119.82	330	PKP	PKiKP	16 09 32.5	+0.1
	comp=Z,16nm,0.8s,baz=38,slow=2.8,SNR=16						
MDT				PP	PP	16 11 02.4	+0.6
	comp=Z,29nm,1.0s,baz=39,slow=8.1,SNR=11						
MDT				PKKPab	PKKPab	16 19 49.4	+1.0
	comp=Z,4.3nm,0.7s,baz=223,slow=4.1,SNR=5.2						
BBSR	BB Station	121.06	29		PKiKP	16 09 35.3	+0.6
BROLN	Tlhalogang	121.39	257	i P	PKiKP	16 09 35.9	+0.2
MREMI	Moremi	121.55	255	i P	PKiKP	16 09 36.4	+0.4
TIO	Tiouine	122.63	331	PKP	PKPdf	16 09 37.9	+0.1
KSANE	Kasane	122.73	261	i P	PKiKP	16 09 39.5	+1.1
LPHEP	Lephephe	123.13	255		PKiKP	16 09 39.4	+0.3
LPHEP	Lephephe	123.13	255	i P	PKiKP	16 09 39.3	+0.2
TROLL	Troll, Antarti	123.45	193	⇑P	PKPdf	16 09 38.1	0.0
	comp=Z,3µm,1.0s						
TROLL				⇑PKKPbc	PKKPab	16 19 28.9	+0.5
	comp=Z,405nm,0.9s						
HDC	Heredia	123.77	63	eP	PKPdf	16 09 38.1	-2.2
KDWAN	Kaudwane	124.22	255	i P	PKiKP	16 09 41.8	+0.5
PMPST	Porto Santo, M	124.23	340	ePP	PP	16 11 36.4	+5.4
BOSA	Boshof	124.33	248	PKP	PKiKP	16 09 41.4	+0.1
	comp=Z,29nm,0.8s,baz=77,slow=2.6,SNR=28						
BOSA				PKKPbc	PKKPab	16 19 25.5	-0.6
	comp=Z,9.0nm,1.1s,baz=269,slow=3.4,SNR=5.8						
MAKGR	Makgori	124.43	252	i P	PKiKP	16 09 42.2	+0.6
PMOZ	Porto Moniz, M	124.73	341	ePP	PP	16 11 37.5	+3.1
PMAR	Madeira	124.74	341	i PP	PP	16 11 41.0	+6.4
SNAA	Sanae	124.81	192	⇑P	PKPdf	16 09 40.6	0.0
	comp=Z,743nm,0.7s						
SNAA				⇑PKKPbc	PKKPab	16 19 23.6	+1.1
	comp=Z,163nm,1.0s						
SNAA	Sanae	124.81	192	PKP	PKiKP	16 09 40.9	-0.1
	comp=Z,45nm,0.9s,baz=132,slow=2.3,SNR=47						
SNAA				pPKP	pPKPdf	16 11 26.9	+1.9
	comp=Z,21nm,1.1s,baz=135,slow=2.9,SNR=3.4						
SNAA				PKKPab	PKKPab	16 19 23.4	+0.9
	comp=Z,6.9nm,1.0s,baz=309,slow=5.0,SNR=9.5						
SNAA				SKKPbc	SKKPbc	16 22 31.3	-3.7
	comp=Z,4.3nm,1.0s,baz=307,slow=4.4,SNR=3.9						
SNAA				SKKP		16 22 57.2	
	comp=Z,5.7nm,1.0s,baz=297,slow=4.1,SNR=3.7						
SKOMA	Sekoma	125.04	254	i P	PKiKP	16 09 43.4	+0.6
PHPEN	Phepeng	126.13	252	i P	PKiKP	16 09 45.5	+0.5
VNA2	Neumayer--Watz	126.28	191	⇑P	PKiKP	16 09 44.3	+0.5
	comp=Z,64nm,0.7s,baz=140,slow=1.0						
VNA2				⇑PKKPbc	PKKPab	16 19 17.4	+1.2
	comp=Z,4.4nm,0.7s,baz=334,slow=8.9						
KGCAE	Kacgae	126.37	256	i P	PKiKP	16 09 45.5	-0.1
VNA3	Neumayer Olymp	126.40	190	⇑P	PKPdf	16 09 43.2	-0.3
	comp=Z,31nm,0.8s						
VNA3				⇑PKKPbc	PKKPab	16 19 16.9	+1.3
	comp=Z,6.3nm,0.7s						
VNA1	Neumayer--Stat	126.67	191	⇑P	PKiKP	16 09 45.0	+0.4
	comp=Z,70nm,1.2s						
LKGWB	Lokgwabe	127.44	254	i P	PKiKP	16 09 47.5	-0.1
TSUM	Tsumeb	130.05	261		PKPdf	16 09 52.0	-0.2
TORD	Torodi Ar. Bea	130.77	309	PKhKP	PKPpre	16 09 40.0	
	comp=Z,2.3nm,0.5s,baz=49,slow=2.3,SNR=3.8						
TORD				PKP	PKPdf	16 09 53.4	-0.1
	comp=Z,21nm,0.5s,baz=28,slow=2.9,SNR=20						
TORD				PP	PP	16 12 16.4	+1.6
	comp=Z,40nm,1.1s,baz=39,slow=5.7,SNR=4.2						
TORD				SKPbc	SKPbc	16 12 34.9	-1.2
	comp=Z,111nm,0.9s,baz=35,slow=5.3,SNR=17						
SJCC	San Jacinto, C	131.08	56	P	PKPdf	16 09 50.6	-3.6
PMSA	Palmer Station	131.29	164	eP	PKiKP	16 09 53.8	-0.2
OBIP	Obispado Ponce	131.57	41		PKPdf	16 09 55.3	+0.4
UREC	San Jos de Ur	132.06	59	P	PKPdf	16 09 53.0	-3.0
CRJC	Cerrejon, Guaj	132.15	53	P	PKiKP	16 09 57.3	-0.1
	comp=Z,2µmcomp=Z,106nm,1.6s						
PAC1	Pacto, Paraso	133.21	70	P	PKPpre	16 09 47.2	
	comp=Z,1µmcomp=Z,104nm,0.7s						
OTAV	Otavalo	133.52	70	PKP	PKPdf	16 09 57.5	-1.9
MCRA	Macar, Loja	134.16	76	P	PKPpre	16 09 47.1	
	comp=Z,674nmcomp=Z,25nm,2.2s						
PIAT	Ana Tenorio	134.25	71	P	PKPpre	16 09 55.3	
SPBC	San Pablo de B	134.45	60	P	PKiKP	16 10 02.3	+0.2
ROSC	El Rosal	134.70	61	PKhKP	PKPpre	16 09 58.6	
	comp=Z,27nm,0.6s,baz=304,slow=13,SNR=4.2						
ROSC				PP	PP	16 12 40.7	+0.2
	comp=Z,18nm,0.7s,baz=21,slow=5.8,SNR=5.2						
ROSC				SKPbc	SKPbc	16 12 49.8	-0.2
	comp=Z,10nm,0.4s,baz=343,slow=19,SNR=3.6						
SDV	Santo Domingo	135.21	54	PKP	PKPdf	16 10 02.2	+0.1
FLOC	Florencia	135.31	66	P	PKPpre	16 09 56.8	
	comp=Z,1µmcomp=Z,80nm,1.6s						
GO09	Cerro Castillo	137.45	146		PKPdf	16 10 05.6	+0.7
DBIC	Dimbokro	139.87	308		PKPpre	16 10 02.6	
DBIC	Dimbokro	139.87	308	PKhKP	PKPpre	16 10 02.8	
	comp=Z,34nm,0.5s,baz=71,slow=4.2,SNR=54						
DBIC				SKPbc	SKPbc	16 13 02.8	-1.7
	comp=Z,109nm,0.6s,baz=66,slow=4.5,SNR=3.5						
DBIC				PP	PP	16 13 11.6	0.0
	comp=Z,60nm,0.9s,baz=59,slow=6.1,SNR=15						
DBIC	Dimbokro	139.87	308	PKHKP	PKPpre	16 10 02.7	
DBIC	Dimbokro	139.87	308	PKP	PKPpre	16 10 02.9	
BBTS	Babate	140.90	330	PKhKP	PKPpre	16 10 08.0	
	comp=Z,56nm,0.7s,baz=61,slow=2.3,SNR=6.8						
BBTS				SKPbc	SKPbc	16 13 05.7	-1.4
	comp=Z,62nm,0.8s,baz=35,slow=1.6,SNR=3.9						
BBTS				PP	PP	16 13 17.2	+0.3
	comp=Z,63nm,1.0s,baz=19,slow=1.7,SNR=4.3						
CZSB	Cruzeiro do Su	142.10	77	PKP	PKPdf	16 10 09.7	-4.8
TBTG	Tabatinga, AM	143.12	70	PKP	PKPab	16 10 12.8	-0.7
TBTG	Tabatinga, AM	143.12	70	eP	PKPab	16 10 13.4	-0.1
SACV	Santiago Islan	143.43	340		PKPdf	16 10 16.8	0.0
SGC2	Sao Gabriel da	143.56	61	PKP	PKPab	16 10 12.4	-2.7
PLCA	Paso Flores	143.69	133	PKP	PKPdf	16 10 16.1	-0.5
	comp=Z,52nm,0.7s,baz=241,slow=4.6,SNR=50						
PLCA				SKPbc	SKiKP	16 13 14.0	-0.2
	comp=Z,139nm,0.9s,baz=242,slow=1.4,SNR=16						
PLCA				SKKPbc	SKKPab	16 21 18.5	-4.2
	comp=Z,8.1nm,1.1s,baz=56,slow=8.1,SNR=3.6						
PLCA	Paso Flores	143.69	133	PKP	PKPbc	16 10 15.2	+0.1
PLCA	Paso Flores	143.69	133	eP	PKPbc	16 10 15.1	0.0
EFI	East Falkland	143.70	156		PKPdf	16 10 15.5	-0.6
EFI	East Falkland	143.70	156c	i PKIKP	PKPdf	16 10 16.4	+0.3
EFI				pmax	pmax		
	comp=Z,521nm,1.7s						
HOPE	Hope Point	145.63	179		PKPab	16 10 21.2	-0.5
HOPE	Hope Point	145.63	179	PKP2	PKPab	16 10 21.2	-0.5
LCO	Las Campanas	146.87	113		PKiKP	16 10 27.1	-0.2
LCO	Las Campanas	146.87	113	PKP2	PKiKP	16 10 27.1	-0.2
TEFE	Tefe	147.34	64	PKP	PKPdf	16 10 23.4	0.0
TEFE	Tefe	147.34	64	eP	PKPdf	16 10 21.1	-2.4
CFA	Coronel Fontan	148.48	118	PKPbc	PKiKP	16 10 29.7	-0.5
	comp=Z,49nm,0.7s,baz=254,slow=3.2,SNR=70						
CFA				pPKPbc	pPKPbc	16 12 12.2	-0.5
	comp=Z,17nm,0.9s,baz=257,slow=6.8,SNR=2.3						
LPAZ	La Paz	148.90	89	PKP	PKPdf	16 10 27.2	+0.6
	comp=Z,46nm,1.0s,baz=298,slow=2.5,SNR=71						
LPAZ				PKPbc	PKiKP	16 10 32.2	0.0
	comp=Z,59nm,0.5s,baz=227,slow=2.9,SNR=51						
LPAZ				pPKPbc	pPKPbc	16 12 16.1	+1.0
	comp=Z,51nm,1.0s,baz=303,slow=4.7,SNR=2.8						
LPAZ	La Paz	148.90	89	PKP	PKPdf	16 10 27.3	+0.6
LPAZ	La Paz	148.90	89	eP	PKPdf	16 10 23.6	-3.1
MACA	Manacapuru-AM	150.42	59	PKP	PKPdf	16 10 28.7	+0.3

MACA	Manacapuru-AM	150.42	59	eP	PKPdf	16 10 25.9	-2.6
SHEL	Horse Pasture	151.35	273		PKiKP	16 10 38.2	+1.6
SHEL	Horse Pasture	151.35	273	PKIKP	PKiKP	16 10 38.2	+1.6
CN01	Coaracy Nunes	154.25	38	PKP	PKPdf	16 10 31.6	-2.4
MAL2	Monte Alegre,	154.61	48	PKP	PKPdf	16 10 34.7	+0.1
ITTB	Itaituba	155.05	54	PKP	PKPdf	16 10 34.9	-0.3
ITTB	Itaituba	155.05	54	eP	PKPdf	16 10 34.7	-0.4
VILB	Vilhena	155.44	78	PKP	PKPdf	16 10 35.9	+0.3
VILB	Vilhena	155.44	78	eP	PKPdf	16 10 33.2	-2.4
SIV	San Ignacio	155.47	85	PKP	PKPdf	16 10 35.9	+0.3
	comp=Z,24nm,1.0s,baz=276,slow=1.2,SNR=40						
SIV				PKPab	PKPab	16 11 04.5	+0.6
	comp=Z,6.1nm,0.5s,baz=284,slow=5.0,SNR=6.7						
BBSD	Serra de San D	156.14	88	eP	PKPdf	16 10 36.3	-0.1
ATM1	UHE Belo Monte	156.88	47	PKP	PKPdf	16 10 37.9	+0.4
NPGB	Novo Progresso	156.98	59	PKP	PKPdf	16 10 37.7	0.0
NPGB	Novo Progresso	156.98	59	eP	PKPdf	16 10 37.5	-0.2
BMO2	UHE Belo Monte	157.08	46	PKP	PKPdf	16 10 37.7	-0.1
BMO1	UHE Belo Monte	157.09	46	PKP	PKPdf	16 10 37.8	0.0
PTLB	Pontes e Lacer	157.15	83	PKP	PKPdf	16 10 37.6	-0.1
PTLB	Pontes e Lacer	157.15	83	eP	PKPdf	16 10 37.9	+0.2
PDRB	Porto dos Gac	158.09	71	PKP	PKPdf	16 10 39.3	+0.4
PDRB	Porto dos Gac	158.09	71	eP	PKPdf	16 10 39.0	+0.1
ITQB	Itaqui	158.59	121	eP	PKPdf	16 10 39.8	+0.7
CLDB	Colider	158.59	68	PKP	PKPdf	16 10 40.0	+0.4
CLDB	Colider	158.59	68	eP	PKPdf	16 10 40.6	+1.0
CPUP	Villa Florida	159.01	112		PKPdf	16 10 40.2	+0.5
CPUP	Villa Florida	159.01	112	PKP	PKPdf	16 10 39.1	-0.6
	comp=Z,4.2nm,1.1s,baz=270,slow=1.0,SNR=8.6						
CPUP				PKPab	PKPab	16 11 19.7	+0.7
	comp=Z,5.6nm,1.0s,baz=239,slow=5.9,SNR=8.9						
CPUP	Villa Florida	159.01	112	PKP	PKPdf	16 10 39.6	-0.1
CPUP	Villa Florida	159.01	112	eP	PKPdf	16 10 37.9	-1.8
MURT	Porto Murtinho	159.34	99	eP	PKPdf	16 10 40.2	0.0
PLTB	Pedras Altas	159.96	130	PKP	PKPdf	16 10 39.6	-1.1
PLTB	Pedras Altas	159.96	130	eP	PKPdf	16 10 40.2	-0.5
BDQN	Bodoquena, MS	160.13	95	eP	PKPdf	16 10 39.1	-2.0
SJPY	San Joaquin	160.38	109	eP	PKPdf	16 10 42.1	+0.8
SALV	Santo Antonio	160.47	82	PKP	PKPdf	16 10 41.8	+0.2
SALV	Santo Antonio	160.47	82	eP	PKPdf	16 10 41.0	-0.6
CPSB	Cacapava Do Su	160.76	127	eP	PKPdf	16 10 41.4	-0.2
AQDB	Aquidauana	161.12	95	PKP	PKPdf	16 10 42.3	+0.2
AQDB	Aquidauana	161.12	95	eP	PKPdf	16 10 42.1	0.0
PAL2	UHE Estreito -	162.69	43	PKP	PKPdf	16 10 44.7	+0.7
RPRD	Ribas do Rio P	162.99	95	eP	PKPdf	16 10 44.1	0.0
SNDB	Serra Nova Dou	163.00	65	PKP	PKPdf	16 10 45.0	+0.8
SNDB	Serra Nova Dou	163.00	65	eP	PKPdf	16 10 44.5	+0.3
ITAB	Concordia	163.17	119	eP	PKPdf	16 10 44.1	+0.1
CNLB	Canela	163.25	127	eP	PKPdf	16 10 44.5	+0.3
C2SB	Chapadao do Su	163.69	89	PKP	PKPdf	16 10 45.9	+1.1
C2SB	Chapadao do Su	163.69	89	eP	PKPdf	16 10 42.8	-1.9
TRCB	Terra Rica	163.86	103	PKP	PKPdf	16 10 45.3	+0.4
TRCB	Terra Rica	163.86	103	eP	PKPdf	16 10 45.3	+0.4
PTGB	Pitanga	164.02	111	PKP	PKPdf	16 10 45.6	+0.5
PTGB	Pitanga	164.02	111	eP	PKPdf	16 10 44.9	-0.1
SMTB	Santa Maria do	164.06	48	PKP	PKPdf	16 10 45.9	+0.6
SMTB	Santa Maria do	164.06	48	eP	PKPdf	16 10 45.3	0.0
LAJE	UHE Lajeado	164.28	53	PKP	PKPdf	16 10 45.6	+0.2
PCMB	Pacaembu	165.24	99	PKP	PKPdf	16 10 46.7	+0.6
PCMB	Pacaembu	165.24	99	eP	PKPdf	16 10 46.4	+0.4
NBPB	Pedra_Branca-C	165.25	16	PKP	PKPdf	16 10 46.6	+0.3
NBPB	Pedra_Branca-C	165.25	16	eP	PKPdf	16 10 46.8	+0.5
RCBR	Riachuelo	166.04	1	PKP	PKPdf	16 10 47.2	+0.3
	comp=Z,9.1nm,0.9s,baz=355,slow=12,SNR=5.5						
RCBR				PKPab	PKPab	16 11 50.7	+0.9
	comp=Z,9.2nm,1.0s,baz=9.9,slow=14,SNR=6.6						
RCBR	Riachuelo	166.04	1	PKP	PKPdf	16 10 47.1	+0.2
RCBR	Riachuelo	166.04	1	eP	PKPdf	16 10 47.6	+0.6
CAN3	Cana Brava	166.10	63	PKP	PKPdf	16 10 47.4	+0.4
ITRB	Iturama	166.10	92	PKP	PKPdf	16 10 47.4	+0.6
ITRB	Iturama	166.10	92	eP	PKPdf	16 10 48.0	+1.2
TIJ01	Guaruva-PR	166.48	116	PKP	PKPdf	16 10 47.6	+0.5
FRTB	Fartura	166.56	107	PKP	PKPdf	16 10 48.0	+0.9
FRTB	Fartura	166.56	107	eP	PKPdf	16 10 48.4	+1.3
ITU3	Corumbazu	167.34	85	PKP	PKPdf	16 10 48.4	+0.6
BDFB	Brasilia	167.45	72	PKP	PKPdf	16 10 49.1	+1.1
	comp=Z,35nm,1.0s,baz=297,slow=2.3,SNR=25						
BDFB				PKPab	PKPab	16 11 57.2	+0.7
	comp=Z,46nm,0.8s,baz=293,slow=5.5,SNR=16						
BDFB	Brasilia	167.45	72	PKP	PKPdf	16 10 48.6	+0.6
IPMB	Ipameri, GO	167.92	83	PKP	PKPdf	16 10 48.6	+0.3
IPMB	Ipameri, GO	167.92	83	eP	PKPdf	16 10 48.0	-0.2
PET01	Itanhaem-SP	168.31	114	PKP	PKPdf	16 10 48.7	+0.4
PET01	Itanhaem-SP	168.31	114	eP	PKPdf	16 10 48.8	+0.5
SDBA	SAO DESIDERIO	168.39	52	PKP	PKPdf	16 10 48.4	-0.2
SDBA	SAO DESIDERIO	168.39	52	eP	PKPdf	16 10 49.6	+0.9
SFA1	Serra Facao	168.39	83	PKP	PKPdf	16 10 49.0	+0.5
SPB	Sao Paulo	168.39	111	eP	PKPdf	16 10 48.4	+0.1
VABB	Valinhos	168.96	108	PKP	PKPdf	16 10 49.2	+0.4
VAO	Valinhos	168.96	108	eP	PKPdf	16 10 48.8	0.0
PMNB	Patos De Minas	169.67	84	eP	PKPdf	16 10 50.3	+1.0
NBAN	Anadia - AL	169.84	4	PKP	PKPdf	16 10 48.6	-0.9
NBAN	Anadia - AL	169.84	4	eP	PKPdf	16 10 49.9	+0.4
PARB	Paraibuna	170.06	112	eP	PKPdf	16 10 50.2	+0.8
JANB	Januaria	170.41	61	PKP	PKPdf	16 10 49.7	-0.1
JANB	Januaria	170.41	61	eP	PKPdf	16 10 50.0	+0.2
SLP01	Ubatuba-SP	170.47	113	eP	PKPdf	16 10 50.4	+0.7
JQT1	Jequitai-MG	171.29	74	PKP	PKPdf	16 10 50.2	0.0
BSCB	Bom Sucesso	171.32	99	PKP	PKPdf	16 10 50.3	+0.1
BSCB	Bom Sucesso	171.32	99	eP	PKPdf	16 10 51.0	+0.8
MAN01	Angra dos Reis	171.65	112	eP	PKPdf	16 10 50.8	+0.6
DIAM	Diamantina, MG	172.21	80	PKP	PKPdf	16 10 50.8	0.0
DIAM	Diamantina, MG	172.21	80	eP	PKPdf	16 10 51.2	+0.5
VAS01	Vassouras-RJ	172.29	110	PKP	PKPdf	16 10 50.8	+0.2
VAS01	Vassouras-RJ	172.29	110	eP	PKPdf	16 10 51.2	+0.7
DUB01	Friburgo-RJ	173.30	110	eP	PKPdf	16 10 51.6	+0.6
CAM01	Campos-RJ	174.01	110	eP	PKPdf	16 10 51.8	+0.7
CMC01	Camacan, BA	174.16	40	PKP	PKPdf	16 10 51.5	+0.2
CMC01	Camacan, BA	174.16	40	eP	PKPdf	16 10 51.8	+0.5
SJMB	Sao Joao De Ma	174.60	79	PKP	PKPdf	16 10 51.0	-0.4
SJMB	Sao Joao De Ma	174.60	79	eP	PKPdf	16 10 52.2	+0.8
GUA01	Guaratinga, BA	174.84	51	PKP	PKPdf	16 10 51.2	-0.4
GUA01	Guaratinga, BA	174.84	51	eP	PKPdf	16 10 52.2	+0.7
RIB01	Linhares ES	175.44	84	eP	PKPdf	16 10 51.8	+0.2

CATAC 28 16:04:18.5±0.3**, 14°N**±2°×**9°0W**±°**, h10**^{km}**, M2.5**/8**, MLv2.5**/8**, Error ellipse: s-maj=4.9km s-min=3.6km az=30.6, confirmed, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NUBE	Las Nubes	0.10	24	P	Pg	16 04 23.9	+2.8
NUBE	Las Nubes	0.10	24	S	Sg	16 04 27.5	+4.4
LOAL	Lomas de Alarc	0.19	12	P	Pg	16 04 22.7	+0.2
LOAL	Lomas de Alarc	0.19	12	S	Sg	16 04 25.5	+0.3
FAME	Alcaldia de Sa	0.19	278	P	Pg	16 04 24.0	+1.5
FAME	Alcaldia de Sa	0.19	278	S	Sg	16 04 27.8	+2.5
SLOZ	Alcaldia de Sa	0.21	10	P	Pg	16 04 22.0	-0.9
SLOZ	Alcaldia de Sa	0.21	10	S	Sg	16 04 25.2	-0.8
UNIC	Universidad Ca	0.31	58	P	Pb	16 04 26.3	+0.1
UNIC	Universidad Ca	0.31	58	S	Sb	16 04 31.9	+0.5
JAYA	Jayaque - finc	0.40	114	S	Sb	16 04 40.4	+6.6
JAYA	Jayaque - finc	0.40	114	P	Pn	16 04 30.7	+0.4
PMON	Piamonte	0.50	102	P	Pg	16 04 28.7	+0.4
PMON	Piamonte	0.50	102	S	Sn	16 04 43.3	+2.7
LLGN	La Laguna	0.92	68	P	Pn	16 04 38.0	+0.5
LLGN	La Laguna	0.92	68	S	Sn	16 04 50.3	-0.6
UESV	Universidad de	1.02	100	P	Pn	16 04 41.7	+2.8

ROM 28 16:06:42.0±0.2**, 38°35N**±0°01×**14°71E**±0°01**, h9**^{km}±2^{km}**, ML1.4**/5**, Error ellipse: s-maj=1.7km s-min=0.6km az=40.0, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LLI	Lipari	0.21	62	P	Pg	16 06 47.8	+1.4
LLI				S	Sg	16 06 51.1	+1.8
VPL	Vulcano Piano	0.22	81	P	Pg	16 06 46.9	+0.4
VPL				S	Sg	16 06 50.5	+1.0
VPL				AML	AML		
	comp=E,82µm,0.6s						
VPL				AML	AML		
	comp=N,103µm,0.7s						
IFIL	Filicudi I Eol	0.25	333	P	Pg	16 06 47.8	+0.9
IFIL				S	Sg	16 06 51.4	+1.1
IFIL				AML	AML		
	comp=N,164µm,0.2s						
MSFR	San Fratello	0.33	197	P	Pb	16 06 49.4	-0.6
MSFR				S	Sb	16 06 54.7	-0.6
MUCR	Ucria	0.33	157	P	Pg	16 06 49.1	+0.6
MUCR				S	Sb	16 06 54.5	-1.0
IACL	Alicudi	0.34	304	P	Pg	16 06 49.3	+0.7
IACL				S	Sb	16 06 54.9	-0.7
MSRU	Castanea	0.64	97	AML	AML		
	comp=E,66µm,0.8s						
MSRU				AML	AML		
	comp=N,45µm,0.1s						
VAE	Valguarnera	0.90	195	AML	AML		
	comp=N,52µm,0.1s						
VAE				AML	AML		
	comp=E,39µm,0.1s						

PRU ***28*** *16:13:49.8, 50°08N×18°35E, h0*^{km}
IPEC 28 16:13:48.5±0.3**, 50°07N×18°41E, h1**^{km}**, ML1.6**/4**, Error ellipse: s-maj=1.9km s-min=1.8km az=22.0, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.29	216	ePG	Pg	16 13 54.6	+0.6
OKC				eSG	Sg	16 13 59.2	+1.5
	comp=Z,49nm,0.9s						
STEB	Steborice	0.43	252	ePG	Pg	16 13 57.3	+0.5
STEB				eSG	Sg	16 14 03.6	+1.2
MORC	Moravsky Berou	0.63	243	ePg	Pg	16 14 00.6	0.0
	baz=62						
MORC				eSg	Sg	16 14 08.3	-0.5
	13nm,0.3s,baz=62						
MORC	Moravsky Berou	0.63	243	ePG	Pg	16 14 00.7	+0.1
MORC				eSG	Sg	16 14 08.4	-0.4
KRLC	Kraliky	1.05	271	ePG	Pg	16 14 07.6	-1.0
KRLC				eSG	Sg	16 14 21.3	-0.8
	comp=Z,14nm,0.3s						
LANS	Liptovska Anna	1.15	143	ePG	Pb	16 14 11.0	-0.2
LANS				eSG	Sn	16 14 28.3	+0.1
JAVC	Velka Javorina	1.30	202	ePg	Pg	16 14 13.2	-0.3
	baz=21						
JAVC	Velka Javorina	1.30	202	ePG	Pg	16 14 13.3	-0.2
DPC	Dobruska-Polom	1.37	283	ePG	Pg	16 14 14.2	-0.5
DPC				eSG	Sb	16 14 32.9	-0.1
	comp=Z,16nm,0.7s						
VRAC	Vranov	1.40	238	ePg	Pn	16 14 14.5	-0.7
	baz=56						
VRAC				eSg	Sg	16 14 32.4	-1.2
	7.5nm,0.3s,baz=56						
VRAC	Vranov	1.40	238	ePG	Pn	16 14 14.6	-0.6
VRAC				eSG	Sg	16 14 32.5	-1.1
OSTC	Ostas	1.49	290	ePG	Pn	16 14 15.9	-0.5
OSTC				eSG	Sn	16 14 36.9	+0.4
	comp=Z,6.9nm,0.7s						
CHVC	Chvalec	1.59	290	ePG	Pn	16 14 17.5	-0.4
CHVC				eSG	Sg	16 14 39.9	+0.2
	comp=Z,8.6nm,0.9s						
UPC	Upice	1.60	287	ePG	Pn	16 14 17.3	-0.6
UPC				eSG	Sn	16 14 37.4	-1.8
	comp=Z,6.3nm,0.4s						
VYHS	Vyhne	1.60	170	ePG	Pn	16 14 17.7	-0.3
KRUC	Moravsky	1.65	233	ePg	Pn	16 14 18.5	-0.2
	baz=52						
KRUC				eSg	Sn	16 14 40.3	-0.2
	4.4nm,0.3s,baz=52						
STHS	Stebnicka Huta	1.95	109	ePG	Pb	16 14 24.8	-0.1
KHC	Kasperske Hory	3.28	255	eSG	Sg	16 15 31.6	-2.2
	comp=Z,4.4nm,0.7s						

IDC 28 16:24:03.4±4.2**, 47°72N×92°78W, h0**^{km}**, mbtmp2.4**/1**, ML0.2**/1**, Error ellipse: s-maj=70.4km s-min=27.1km az=52.0, Minnesota**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULM	Lac du Bonnet	3.25	322	Pn	Pn	16 24 54.0	-1.6
	baz=146,slow=8.9,SNR=1.2						
ULM				Pg	Pb	16 25 02.4	+0.5
	0.3nm,0.3s,baz=142,slow=17,SNR=2.0						
ULM				Sn	Sn	16 25 30.9	-4.1
	0.4nm,0.3s,baz=137,slow=19,SNR=3.3						
ULM				Lg	Lg	16 25 44.1	
	4.5nm,0.3s,baz=108,slow=16,SNR=13						
	1.5nm,0.6s						
I10CA	LAC DU BONNET	3.28	320	I	I	16 44 40.0	
	0.1nm,1.0s,baz=138,slow=313,SNR=6.6						
I56US	NEWPORT INFRAS	16.29	281	I	I	18 04 40.0	
	baz=83,slow=315,SNR=1.7						

IDC 28 16:28:05.1±1.7**, 2°93S×138°46E, h0**^{km}**, mb3.2**/2**, mbtmp3.2**/4**, ML3.0**/2**, Error ellipse: s-maj=33.6km s-min=18.3km az=161.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	2.28	80	Pn	Pn	16 28 43.6	-0.5
	1.8nm,0.3s,baz=264,slow=10,SNR=14						
JAY				Lg	Lg	16 29 18.0	
	1.8nm,0.3s,baz=287,slow=19,SNR=3.5						
	9.4nm,0.7s						
WRA	Warramunga Arr	17.38	193	P	P	16 32 10.6	-0.1
	0.1nm,0.3s,baz=15,slow=13,SNR=7.9						
	0.5nm,0.9s						
ASAR	Alice Springs	21.08	192	P	P	16 32 50.6	-0.7
	0.9nm,1.0s,baz=22,slow=9.4,SNR=6.3						
	0.9nm,1.0s						
MKAR	Makanchi Array	69.81	323	P	P	16 39 17.7	+0.1
	0.3nm,0.8s,baz=107,slow=5.0,SNR=1.7						
	0.3nm,0.8s						

IDC 28 16:47:41.6±10.0**, 20°60S×176°77W, h328**^{km}±68^{km}**, mb3.4**/3**, mbtmp4.1**/4**, Error ellipse: s-maj=143.4km s-min=63.9km az=136.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	5.67	299	P	Pn	16 49 08.0	-0.1
	9.4nm,0.5s,baz=120,slow=8.1,SNR=7.5						
STKA	Stephens Creek	38.79	244	P	P	16 54 34.7	-1.0
	3.1nm,1.0s,baz=75,slow=12,SNR=5.2						
	3.1nm,1.0s						
ASAR	Alice Springs	45.62	257	P	P	16 55 31.9	+1.4
	3.8nm,0.5s,baz=94,slow=7.9,SNR=150						
ASAR				PcP	PcP	16 57 02.3	-0.4
	0.2nm,0.6s,baz=97,slow=4.1,SNR=1.3						
	3.8nm,0.5s						
WRA	Warramunga Arr	45.73	262	P	P	16 55 30.1	-1.3
	0.7nm,0.8s,baz=98,slow=7.8,SNR=12						
WRA				PcP	PcP	16 57 02.8	-0.4
	0.3nm,0.9s,baz=91,slow=3.2,SNR=2.0						
	0.7nm,0.8s						

UCR ***28*** *16:48:41.3±1.3, 11°97N×87°03W, h71*^{km}*±44*^{km}*, MW3.7*
CATAC ***28*** *16:48:42.9±0.4, 12°N±3°×8°7W±°, h43*^{km}*±4*^{km}*, M3.6/24, MLv3.6/24, Error ellipse: s-maj=6.6km s-min=3.6km az=35.8, confirmed*
ISC 28 16:48:43.1±1.6**, 12°06N**±0°06×**86°96W**±0°05**, h66**^{km}±10^{km}**, n45, σ0^{s}75**/60**, 10C-2D, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COPN	Copaltepe	0.38	72	eP	Pn	16 48 54.2	-0.3
COPN	Copaltepe	0.38	72	⇑P	Pn	16 48 54.2	-0.3
ALEN	Leon	0.41	13	P	Pn	16 48 54.1	-0.6
ALEN	Leon	0.41	13	S	Sn	16 49 02.8	-0.4
CNGA	Al SSO del Vol	0.50	30	⇑P	Pn	16 48 55.4	-0.3
CNGN	Cerro Negro	0.51	30	⇑P	Pn	16 48 55.3	-0.4
MOMN	Momotombo	0.54	50	⇑P	Pn	16 48 55.7	-0.3
MOMN				S	Sn	16 49 05.7	+0.2
PLRN	Geotermica Pol	0.56	20	⇑P	Pn	16 48 55.5	-0.6
PLRN				S	Sn	16 49 05.8	+0.1
SAPS	Ciudad Sandino	0.56	79	P	Pn	16 48 56.1	0.0
ILCN	San Idelfonso	0.57	26	⇑P	Pn	16 48 55.9	-0.5
ILCN				S	Sn	16 49 06.2	+0.1
MOM2	El Cardon	0.60	51	⇑P	Pn	16 48 56.5	-0.1
MOM2				S	Sn	16 49 07.1	+0.6
PKGN	Cerro Pekin	0.61	359	P	Pn	16 48 56.6	-0.1
PKGN				S	Sn	16 49 07.1	+0.5
APQ3	Volcan Apoyequ	0.62	70	⇑P	Pn	16 48 56.7	-0.1
APQ3				S	Sn	16 49 07.7	+0.8
APQ2	Apoyeque	0.64	77	P	Pn	16 48 56.8	-0.1
APQ2				S	Sn	16 49 08.0	+0.8
CRIN	San Cristobal	0.64	352	eP	Pn	16 48 57.2	0.0
CRIN	San Cristobal	0.64	352	P	Pn	16 48 57.2	0.0
CRIN	San Cristobal	0.64	352	S	Sn	16 49 08.5	+1.0
CRUN	El Crucero	0.65	97	P	Sn	16 49 08.5	+0.8
USIM	UNAN	0.67	85	P	Pn	16 48 56.5	-1.0
UNAN	Cigeo UNAN	0.68	86	P	Pn	16 48 57.0	-0.5
UNAN				S	Sn	16 49 08.9	+0.8
TISN	Laguna Tiscapa	0.68	83	P	Pn	16 48 55.2	-2.3
TISN				S	Sn	16 49 05.9	-2.3
MGAN	Managua	0.70	83	eP	Pn	16 48 57.6	-0.1
MGAN				eS	Sn	16 49 09.4	+0.8
MGAN	Managua	0.70	83	P	Pn	16 48 57.5	-0.2
MGAN	Managua	0.70	83	S	Sn	16 49 08.6	+0.1
R4DEC	Barrio San Lui	0.70	83	P	Pn	16 48 57.6	-0.1
R4DEC	Barrio San Lui	0.70	83	S	Sn	16 49 09.3	+0.8
WILN	Americas 2	0.76	82	P	Pn	16 48 58.3	-0.2
WILN				S	Sn	16 49 10.1	+0.4
MAS3	Al N del Volca	0.77	92	P	Pn	16 48 58.6	0.0
MAS3				S	Sn	16 49 10.2	+0.2
SABN	Sabanita	0.79	97	P	Pn	16 48 57.4	-1.3
NANN	Nandasmo	0.83	98	S	Sn	16 49 13.5	+2.2
NANN	Nandasmo	0.83	98	P	Pn	16 49 00.1	+0.8
NADN	Granada	0.96	109	eP	Pn	16 48 60.0	-0.9
POTN	Potosi Cosigui	1.08	330	eP	Pn	16 49 01.9	-0.5
POTN				eS	Sn	16 49 16.5	-0.2
POTN	Potosi Cosigui	1.08	330	⇓P	Pn	16 49 01.9	-0.5
POTN				S	Sn	16 49 16.4	-0.3
ARIN	Rivas	1.26	118	eP	Pn	16 49 04.2	-0.5
BOAB	BOACO BROADBAN	.32	73	⇑P	Pn	16 49 05.2	-0.4
BOAB	BOACO BROADBAN	.32	73	S	Sn	16 49 22.1	-0.3
MATN	Matagalpa	1.33	49	⇑P	Pn	16 49 04.8	-1.0
MATN	Matagalpa	1.33	49	S	Sn	16 49 22.7	-0.1
LCRUZ	La Cruz	1.63	127	eP	Pn	16 49 09.2	-0.5
LCRUZ				eS	Sn	16 49 30.1	+0.3
CARN	Rivas	1.66	121	P	Pn	16 49 09.9	-0.1
RCPN	Sur Rio San Ju	1.69	30	⇓P	Pn	16 49 10.0	-0.5
RCVN	Varillal2	1.69	26	P	Pn	16 49 10.8	+0.2
RCVN	Varillal2	1.69	26	S	Sn	16 49 32.7	+1.2
SCLA	Alcaldia de Sa	2.37	314	P	Pn	16 49 20.0	+0.2

GUC ***28*** *17:35:55.6±0.8, 29°37S×71°57W, h50*^{km}*±2*^{km}*, ML3.1*
SJA ***28*** *17:35:57.4±1.6, 29°35S×71°53W, h73*^{km}*±16*^{km}*, ML3.3, MW3.5*
ISC 28 17:35:52.4±1.9**, 29°32S**±0°03×**71°65W**±0°07**, h4**^{km}±12^{km}**, n21, σ1^{s}77**/31**, 2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	La Serena	0.70	149	eP	Pb	17 36 08.6	+1.5
CO05				i S	Sb	17 36 17.6	+0.6
CO05				IAML		17 36 18.5	
	comp=N,2µm,0.3s						
GO04	Tololo Observa	1.13	139	eP	Pg	17 36 14.7	+0.7
GO04				i S	Sg	17 36 28.9	+0.3
AC04	Llanos de Chal	1.22	25	eP	Pn	17 36 17.0	+0.8
AC04				i S	Sb	17 36 32.4	+0.3
AC04				IAML		17 36 35.5	
	comp=E,613nm,0.1s						
CO06	Fray Jorge	1.35	179	eP	Pn	17 36 17.8	-0.2
CO06				i S	Sb	17 36 32.7	-3.1
CO06				IAML		17 36 39.6	
	comp=N,251nm,0.1s						
CO01	Juntas del Tor	1.50	116	eP	Pb	17 36 20.9	-0.1
CO01				i S	Sg	17 36 38.8	-2.0
CO01				IAML		17 36 39.9	
	comp=N,393nm,0.2s						
CO03	El Pedregal	1.73	151	eP	Pn	17 36 23.1	-0.2
CO03				i S	Sn	17 36 43.8	-2.1
CO02	Combarbal	1.96	163	eP	Pn	17 36 26.9	+0.4
CO02				i S	Sn	17 36 49.6	-2.0
AROD	Rodeo	2.07	115	eP	Pb	17 36 30.6	-0.1
AROD				eS	Sb	17 36 56.2	-0.8
GO03	Copiapo	2.12	36	eP	Pg	17 36 32.5	-0.6
GO03				IAML		17 37 04.7	
	comp=Z,244nm,0.7s						
AC06	Mina Casimiro	2.27	31	i S	Sn	17 36 58.8	-0.1
AGUA	GUANDACOL	2.76	94	eP	Pb	17 36 40.9	-1.4
AGUA				IAML		17 37 23.8	
	comp=Z,60nm,0.5s						
VCA	Vinchina	3.07	80	eP	Pb	17 36 46.8	-0.9
VCA				IAML		17 37 43.4	
	comp=Z,83nm,0.7s						
AC02	Maricunga	3.33	43	eP	Pn	17 36 47.8	+2.1
AC02				IAML		17 37 45.2	
	comp=Z,56nm,0.2s						
RTLL	Cerro Villicun	3.40	127	eP	Pn	17 36 47.9	+1.6
AUSP	Uspallata	3.49	147	eP	Pn	17 36 51.2	+3.5
VA03	San Esteban	3.56	165	eP	Pn	17 36 50.6	+2.1
VA03				⇓eS	Sn	17 37 31.9	+0.9
VA03				IAML		17 37 53.0	
	comp=Z,57nm,0.7s						
AVFE	Valle Fertil	3.88	111	eP	Pn	17 36 54.6	+1.8
AVFE				IAML		17 37 57.0	
	comp=Z,46nm,0.5s						
ASAL	Salagasta	4.06	144	eP	Pn	17 36 58.7	+3.3
ASAL				IAML		17 38 07.9	
	comp=Z,0.0nm,5.0s						
ACLC	CERRO LA CRUZ	4.10	93	eP	Pn	17 36 58.0	+2.0
ACLC				IAML		17 37 53.9	
	comp=Z,13nm,0.3s						
ACHE	Chepes	4.69	114	eP	Pn	17 37 05.2	+1.1
ACHE				eS	Sn	17 37 57.5	-1.5
ACAN	Cantantal	4.84	129	⇓eP	Pn	17 37 08.9	+2.9
ACAN				IAML		17 38 24.9	
	comp=Z,79nm,0.9s						

IDC ***28*** *17:51:31.3±0.9, 8°54N×127°27E, h0*^{km}*, mb3.9/9, mbtmp3.9/10, ML4.1/1, Error ellipse: s-maj=32.3km s-min=15.8km az=82.0*
NEIC ***28*** *17:51:38.3±1.0, 8°14N±0°09×126°5E±0°1, h44*^{km}*±8*^{km}*, mb4.4/22, Error ellipse: s-maj=18.4km s-min=13.3km az=91.0*
ISC 28 17:51:36.7±0.6**, 8°16N**±0°08×**126°5E**±0°1**, h35**^{km}**, n38, σ0^{s}97**/38**, mb4.3**/20**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	1.44	221	Pn	Pn	17 52 00.4	+0.1
DAV	Davao City (W)	1.44	221	Pn	Pn	17 52 09.5	+9.2
	57nm,0.3s,baz=143,slow=18,SNR=3.7						
DAV				Sn	Sn	17 52 39.6	+22
	108nm,0.3s,baz=249,slow=23,SNR=7.4						
	256nm,0.5s						
TNTI	Ternate	7.38	174	Pn	Pn	17 53 23.1	+1.0
MTN	Manton Dam	21.36	168	P	P	17 56 21.9	+0.8
MTN				IAmb	IAmb	17 56 36.8	
	comp=Z,17nm,1.4s						
KNRA	Kununurra	23.78	175	P	P	17 56 46.0	-0.3
KNRA				IAmb	IAmb	17 57 02.5	
	comp=Z,21nm,1.2s						
KULM	Kulim	25.86	265	P	P	17 57 05.4	0.0
KULM				IAmb	IAmb	17 57 26.0	
	comp=Z,12nm,1.2s						
FITZ	Fitzroy Crossi	26.11	182	P	P	17 57 07.2	-0.2
FITZ	Fitzroy Crossi	26.11	182	P	P	17 57 10.7	+3.3
	comp=Z,1.8nm,0.5s,baz=23,slow=11,SNR=5.6						
	comp=Z,1.8nm,0.5s						
WRAB	Tennant Creek	28.95	165	P	P	17 57 32.8	-0.2
WRAB				IAmb	IAmb	17 57 46.7	
	comp=Z,7.7nm,1.4s						
WRA	Warramunga Arr	28.96	165	P	P	17 57 32.7	-0.3
WRA	Warramunga Arr	28.96	165	P	P	17 57 34.4	+1.3
	comp=Z,0.2nm,0.4s,baz=343,slow=8.7,SNR=5.5						
	comp=Z,0.2nm,0.4s						
AS31	Alice Springs	32.44	167	P	P	17 58 02.7	-1.1
ASAR	Alice Springs	32.44	167	P	P	17 58 02.8	-1.0
ASAR	Alice Springs	32.44	167	P	P	17 58 05.0	+1.2
	comp=Z,0.3nm,0.4s,baz=346,slow=7.0,SNR=13						
	comp=Z,0.3nm,0.4s						
MORW	Morawa	38.37	195	P	P	17 58 53.9	-0.7
BBOO	Buckleboo	41.74	168	P	P	17 59 21.3	-1.3
MKAR	Makanchi Array	53.87	324	P	P	18 00 57.2	+0.8
	comp=Z,0.6nm,0.4s,baz=111,slow=7.9,SNR=20						
MKAR				PcP	PcP	18 02 02.1	+0.4
	comp=Z,0.6nm,0.8s,baz=120,slow=6.9,SNR=4.1						
	comp=Z,0.6nm,0.4s						
MAKZ	Makanchi	54.06	323	P	P	18 00 58.3	+0.5
ZAA0	Zalesovo Array	56.60	332	P	P	18 01 15.6	-0.3
ZALV	Zalesovo Beam	56.60	332	P	P	18 01 15.3	-0.7
ZALV	Zalesovo Beam	56.60	332	P	P	18 01 15.5	-0.5
	comp=Z,0.5nm,0.3s,baz=108,slow=9.3,SNR=2.8						
	comp=Z,0.5nm,0.3s						
KURK	Kurchatov	57.95	326		P	18 01 25.9	+0.4
KURK				IAmb	IAmb	18 01 26.9	

	comp=Z,3.2nm,0.8s						
KURBB	Kurchatov Arra	57.95	326	P	P	18 01 26.4	+0.8
	comp=Z,2.1nm,0.7s,baz=127,slow=6.1,SNR=22						
	comp=Z,2.1nm,0.7s						
KKAR	Karatay Array	59.92	315	P	P	18 01 39.7	+0.3
TIXI	Tiksi	63.45	1	P	P	18 02 02.5	-0.1
BVAR	Borovoye Array	63.55	326	P	P	18 02 04.3	+0.6
	comp=Z,2.4nm,0.7s,baz=124,slow=7.9,SNR=12						
	comp=Z,2.4nm,0.7s						
BRVK	Borovoye	63.62	326	P	P	18 02 04.0	-0.1
BRVK				IAmb	IAmb	18 02 05.4	
	comp=Z,2.6nm,0.8s						
CASY	Casey	75.16	187	P	P	18 03 15.2	+0.1
M16K	Timber Creek	75.41	29	P	P	18 03 16.9	+0.2
C18K	Utukok River	76.02	21	P	P	18 03 20.3	+0.2
C18K				IAmb	IAmb	18 03 36.1	
	comp=Z,5.1nm,1.1s						
C19K	Lookout Ridge	76.69	21	P	P	18 03 25.0	+1.0
D19K	Kuna River	77.09	21	P	P	18 03 26.7	+0.5
D19K				IAmb	IAmb	18 03 38.1	
	comp=Z,6.7nm,1.4s						
BPAW	Bear Paw Mtn.	79.42	26	P	P	18 03 39.4	+0.2
BPAW				IAmb	IAmb	18 03 51.8	
	comp=Z,3.8nm,1.0s						
ILAR	Eielson Array	81.22	26	P	P	18 03 46.2	-2.6
	comp=Z,0.1nm,0.5s,baz=256,slow=5.7,SNR=2.1						
	comp=Z,0.1nm,0.5s						
BMAR	Burnt Mountain	82.10	23	P	P	18 03 54.2	+0.8
I28M	Miner Creek	84.11	25		P	18 04 04.5	+0.5
I28M				IAmb	IAmb	18 04 17.9	
	comp=Z,2.9nm,0.8s						
G29M	Pine Creek	84.69	23	P	P	18 04 07.4	+0.6
G29M				IAmb	IAmb	18 04 08.8	
	comp=Z,3.6nm,0.9s						
FINES	FINESS Array B	87.86	332	P	P	18 04 21.9	-0.5
	comp=Z,1.6nm,0.8s,baz=52,slow=3.1,SNR=8.9						
	comp=Z,1.6nm,0.8s						

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*OSPL **28** 18:04:37.4±2.5, 19°.82N×69°.83W, h4^{km}±69^{km}, ML2.2*
*SDD **28** 18:04:38.7±1.2, 19°.75N×70°.14W, h12^{km}±13^{km}, MD3.2, ML2.7, MW2.9*

ISC 28 18:04:38.4±1.3, **19°.75N**±0°.06×**70°.10W**±0°.05, **h12**^{km}±9^{km}, **n8,** σ**1^{s}.55**/14, **2C-1D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CADR	Cabrera	0.17	120	*e*Pg	Pg	18 04 42.9	+0.6
CADR				*e*Sg	Sg	18 04 45.8	+0.9
CADR				IAML		18 04 46.1	
	comp=N,2μm,0.2s						
DR08	Loma La Naviza	0.79	175	⇑*e*Pg	Pg	18 04 52.5	-1.2
DR08				*e*Sg	Sg	18 05 03.5	-0.5
DR08				IAML		18 05 04.6	
	comp=N,4μm,0.2s						
ABDR	Alto Bandera	1.06	208	*e*Pg	Pg	18 04 57.9	-1.0
ABDR				*e*Sg	Sg	18 05 11.2	-1.6
ABDR				IAML		18 05 21.9	
	comp=N,50nm,0.2s						
MIDR	Miches	1.25	128	⇑*e*Pg	Pb	18 05 00.8	-1.1
MIDR				⇓*e*Sg	Sn	18 05 19.2	+0.7
MIDR				IAML		18 05 26.3	
	comp=N,23nm,0.8s						
SDDR	Presa de Saban	1.36	236	*i* P	Pn	18 05 04.0	+0.7
SDDR				*e*S	Sn	18 05 23.2	+1.9
SDDR				IAML		18 05 30.2	
	comp=Z,18nm,2.0s						
BANI	BANI	1.38	190	*e*Pg	Pn	18 05 04.0	+0.4
BANI				*e*Sg	Sb	18 05 21.3	-0.5
BANI				IAML		18 05 24.6	
	comp=N,91nm,0.2s						
LONE3	El Aguacate, B	1.72	229	*e*S	Sb	18 05 35.0	+3.2
LONE3				IAML		18 05 38.2	
	comp=Z,15nm,1.4s						
GRTK	Grand Turk	2.00	331	*i* P	Pn	18 05 11.1	-1.0
GRTK				IAML		18 05 49.8	
	comp=Z,82nm,1.4s						

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*IDC **28** 18:07:29.2±0.6, 1°.92S×122°.50E, h0^{km}, mb4.2/17, mbtmp4.3/21, ML4.8/5, MS4.0/3, Error ellipse: s-maj=20.6km s-min=11.8km az=79.0*
*DJA **28** 18:07:31.8±0.1, 2°S±2°×12°3E±°, h10^{km}, M5.0/30, mb5.1/30, mB5.6/13, MLv4.8/30, Mw(mB)5.1/13, MwMwp6.1/2, Mwp6.1/2*
*BJI **28** 18:07:33.2, 1°.96S×122°.92E, h36^{km}, mB4.9/7, mb4.6/52, Ms4.6/12, Ms7 4.2/12*
*NEIC **28** 18:07:33.8±1.4, 1°.94S±0°.04×122°.60E±0°.06, h35^{km}±2^{km}, mb4.9/103, Error ellipse: s-maj=10.1km s-min=7.0km az=103.0*

ISC 28 18:07:34.2±0.3, **1°.95S**±0°.03×**122°.57E**±0°.04, **h35**^{km}, **n460,** σ**1^{s}.25**/472, **mb4.8**/98, **MS4.3**/8, **2C-1D, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	Luwuk	0.93	13		Pn	18 07 50.8	+0.1
LUWI				Sn	Sn	18 08 01.4	-1.5
LUWI	Luwuk	0.93	13	P	Pn	18 07 52.1	+1.3
LUWI	Luwuk	0.93	13	S	Sn	18 08 05.8	+3.0
LUWI	Luwuk	0.93	13	P	Pn	18 07 49.4	-1.4
KDI	Kendari	1.99	179	P	Pn	18 08 03.0	-2.4
MRSI	Marisa	2.49	345	P	Pn	18 08 08.5	-3.8
KMSI	Cibinong	2.88	29	P	Pn	18 08 18.3	+0.7
PCI	Palu	2.92	291	P	Pn	18 08 16.1	-2.2
TTSI	Tana Toraja	2.96	248	P	Pn	18 08 16.5	-2.2
SANI	Sanana	3.42	92	P	Pn	18 08 25.4	+0.4
SANI	Sanana	3.42	92	P	Pn	18 08 23.3	-1.7
SPSI	Sidrap Palu	3.44	234	P	Pn	18 08 23.9	-1.4
BNSI	Bone	3.46	225	P	Pn	18 08 28.2	+2.6
MPSI	Mapaga	3.51	310	P	Pn	18 08 24.0	-2.3
BBSI	Bau Bau	3.51	180	P	Pn	18 08 25.5	-0.8
TOLI2	Tolitoli	3.53	330		Pn	18 08 27.1	+0.5
TOLI2				Sn	Sn	18 09 07.7	+0.6
TOLI2	Tolitoli	3.53	330	P	Pn	18 08 28.4	+1.8
KAPI	Kappang	4.14	223		Pn	18 08 35.4	+0.3
KAPI				Sn	Sn	18 09 22.2	-0.1
KAPI	Kappang	4.14	223	Pn	Pn	18 08 35.2	+0.2
	55nm,0.3s,baz=12,slow=5.1,SNR=85						
KAPI				Sn	Sn	18 09 22.3	0.0
	199nm,0.3s,baz=43,slow=23,SNR=15						
KAPI				LR	LR	18 10 23.7	
	comp=Z,2μm,18.0s,baz=50,slow=42						
	263nm,0.5s						
KAPI	Kappang	4.14	223	P	Pn	18 08 36.4	+1.4
KAPI	Kappang	4.14	223	S	Sn	18 09 23.3	+1.0
BSSI	Bau Bau, Buton	4.65	206	P	Pn	18 08 42.1	+0.1
NLAI	Namlea	4.70	106	P	Pn	18 08 46.0	+3.3
LBMI	Labuha	5.10	75	P	Pn	18 08 48.3	+0.1
TNTI	Ternate	5.51	61		Pn	18 08 54.2	+0.5
TNTI	Ternate	5.51	61	P	Pn	18 08 55.6	+1.8
TNTI	Ternate	5.51	61	S	Sn	18 09 59.4	+3.5
TNTI	Ternate	5.51	61	P	Pn	18 08 53.7	-0.1
SMKI	Samarinda	5.56	286	P	Pn	18 08 52.9	-1.7
BKB	Balikpapan	5.71	277		Pn	18 08 57.6	+1.0
BKB				Sn	Sn	18 10 01.9	+0.8
BKB	Balikpapan	5.71	277	P	Pn	18 08 58.2	+1.6
BKB	Balikpapan	5.71	277	S	Sn	18 10 04.5	+3.5
BKB	Balikpapan	5.71	277	P	Pn	18 08 55.8	-0.8
AAI	Ambon	5.88	107	P	Pn	18 09 00.6	+1.8
SGSI	Sangihe	6.33	28	P	Pn	18 09 05.9	+0.8
MSAI	Masohi	6.50	102	P	Pn	18 09 10.3	+2.9
MMRI	Maumere	6.65	183		Pn	18 09 08.8	-0.6
MMRI	Maumere	6.65	183	P	Pn	18 09 09.6	+0.1
MMRI	Maumere	6.65	183	P	Pn	18 09 09.5	+0.1
EDFI	Ende, Flores	6.81	187	P	Pn	18 09 11.5	-0.3
	1.0nm3μm267nm,0.7s						
BNDI	Bandanaira	7.75	109	P	Pn	18 09 25.9	+1.2
BNDI	Bandanaira	7.75	109	P	Pn	18 09 26.4	+1.7
SOEI	Soe	7.93	168		Pn	18 09 28.5	+1.2
SOEI	Soe	7.93	168	P	Pn	18 09 29.7	+2.5
WSI	Waingapu	7.99	196	P	Pn	18 09 28.9	+1.0
MYLDM	Lahad Datu	8.17	330		Pn	18 09 31.5	+1.1
MYLDM	Lahad Datu	8.17	330	P	Pn	18 09 32.7	+2.3
WBSI	Waikabubak, Su	8.27	202	P	Pn	18 09 31.8	+0.1
	107nm,0.8s						
BATI	Baumata	8.27	173	Pn	Pn	18 09 33.9	+2.1
	26nm,0.3s,baz=7.7,slow=1.7,SNR=40						
BATI				LR	LR	18 13 40.0	
	comp=Z,1μm,18.5s,baz=7.5,slow=45						
PLAI	Plampang	8.33	215	P	Pn	18 09 33.4	+0.8
PLAI	Plampang	8.33	215	P	Pn	18 09 33.0	+0.4
BASI	Baing, Sumba	8.45	193	P	Pn	18 09 33.0	-1.2
SWI	Sorong	8.75	83	P	Pn	18 09 41.4	+3.0
DAV	Davao City (W)	9.45	18	Pn	Pn	18 09 47.5	-0.5
	42nm,0.3s,baz=238,slow=20,SNR=1.8						
DAV				LR	LR	18 14 04.7	
	comp=Z,665nm,19.9s,baz=14,slow=42						
	108nm,0.3s						
FAKI	Fak Fak	9.72	96		Pn	18 09 51.6	0.0
FAKI	Fak Fak	9.72	96	P	Pn	18 09 52.8	+1.2
FAKI	Fak Fak	9.72	96	P	Pn	18 09 52.2	+0.6
	2μm160nm,0.7s						
KMMI	Kalianget	9.96	239	P	Pn	18 09 55.3	+0.4
	87nm,0.8s						
KKM	Kota Kinabalu	10.17	321		Pn	18 09 57.3	-0.6
KKM	Kota Kinabalu	10.17	321	P	Pn	18 09 59.8	+1.9
KKM	Kota Kinabalu	10.17	321	S	Sn	18 11 54.4	+3.6
KMPI	Kaimana, Papua	11.25	99	P	Pn	18 10 14.6	+2.0
RKPI	Ransiki, Papua	11.61	88	P	Pn	18 10 19.1	+1.5
	110nm,1.1s						
KSM	Kuching	12.72	285		Pn	18 10 34.0	+1.2
DRS	Darwin Rock St	13.29	142	P	Pn	18 10 40.9	+0.5
BAKI	Biak	13.55	87	P	Pn	18 10 44.8	+0.7
	74nm,1.4s						
MTN	Manton Dam	13.75	142		Pn	18 10 45.1	-1.7
MTN	Manton Dam	13.75	142	P	Pn	18 10 47.3	+0.6
	comp=Z,58nm,0.9s						
MTN	Manton Dam	13.75	142	P	Pn	18 10 47.5	+0.7
KDU	Kakadu	14.49	138	P	Pn	18 10 56.7	-0.2
	comp=Z,39nm,0.8s						
KNRA	Kununurra	14.94	156		Pn	18 10 59.4	-3.6
KNRA	Kununurra	14.94	156	P	Pn	18 11 00.2	-2.7
LEM	Lembang	15.67	252	Pn	Pn	18 11 11.8	-0.9
	comp=Z,2.4nm,0.3s,baz=50,slow=5.4,SNR=6.3						
	comp=Z,6.1nm,0.4s						
TGY	Tagaytay City	16.03	354	Pn	Pn	18 11 17.0	-0.2
	comp=Z,16nm,0.3s,baz=164,slow=13,SNR=6.7						
SMPI	Sarmi	16.13	90	P	Pn	18 11 19.8	+1.4
	comp=Z,90nm,1.2s						
FITZ	Fitzroy Crossi	16.33	170		Pn	18 11 17.0	-3.9
FITZ	Fitzroy Crossi	16.33	170	P	Pn	18 11 17.6	-3.3
FITZ	Fitzroy Crossi	16.33	170	Pn	Pn	18 11 17.9	-2.9
	comp=Z,0.3nm,0.3s,baz=1.9,slow=8.2,SNR=21						
FITZ	Fitzroy Crossi	16.33	170	P	Pn	18 11 21.5	+0.6
CGJI	Cibinong	17.45	254	P	Pn	18 11 35.5	+0.4
	comp=Z,63nm,1.1s						
GENI	Genyem	17.59	92	P	P	18 11 40.8	+3.2
	comp=Z,95nm,1.3s						
KLI	Kotabumi	17.91	260	P	P	18 11 41.1	0.0
JAY	Jayapura	18.13	92	P	P	18 11 44.8	+1.2
	comp=Z,0.4nm,0.3s,baz=160,slow=20,SNR=2.2						
	comp=Z,7.0nm,0.8s						
MDSI	Maura Dua	18.53	262	P	Pn	18 11 48.8	+0.5
	comp=Z,40nm,0.9s						
LWLI	Liwa	18.72	260	P	Pn	18 11 50.6	-0.2
	comp=Z,170nm,0.9s						
MYKOM	Kota Tinggi	19.08	281	P	P	18 11 53.3	-0.7
MBWA	Marble Bar	19.29	188	P	P	18 11 54.1	-2.1
MBWA	Marble Bar	19.29	188	P	Pn	18 11 57.0	-0.4
	comp=Z,26nm,1.2s						
PSAD1	Pilbara Seismi	19.57	188	P	P	18 11 59.4	+0.2
	comp=Z,29nm,1.3s						
PSAC1	Pilbara Seismi	19.65	188	P	P	18 12 00.3	+0.2
	comp=Z,37nm,1.6s						
PSAB2	Pilbara Seismi	19.66	188	P	Pn	18 12 02.1	+0.3
	comp=Z,23nm,1.2s						
PSA00	Pilbara Seismi	19.68	188	P	P	18 11 59.2	-1.2
KSI	Kapahiang	20.02	265	P	Pn	18 12 05.5	-0.8
	comp=Z,5μmcomp=Z,117nm,1.0s						
WB0	Warramunga Arr	21.15	148		P	18 12 14.8	-1.6
WB0				IAmb	IAmb	18 12 21.4	
	comp=Z,72nm,1.1s						
WRAB	Tennant Creek	21.26	148	P	P	18 12 16.9	-0.7
WRA	Warramunga Arr	21.26	148		P	18 12 14.7	-3.0
WRA	Warramunga Arr	21.26	148	P	P	18 12 17.6	0.0
	comp=Z,27nm,0.9s,baz=319,slow=12,SNR=108						
	comp=Z,27nm,0.9s						
WR8	Warramunga Arr	21.36	148		P	18 12 17.6	-1.0
WR8				IAmb	IAmb	18 12 24.6	
	comp=Z,62nm,1.0s						
BKNI	Bangkinang	21.65	276	P	P	18 12 23.1	+1.3
	comp=Z,111nm,0.8s						
GIRL	Giralia	22.10	201	P	P	18 12 26.5	-0.1
PPI	Padang Panjang	22.22	274	P	P	18 12 29.7	+1.7
	comp=Z,34nm,1.0s						
IPM	Ipoh	22.46	287		P	18 12 29.7	-0.9
IPM				IAmb	IAmb	18 12 40.8	
	comp=Z,35nm,0.7s						
IPM	Ipoh	22.46	287	P	P	18 12 31.8	+1.3
KULM	Kulim	23.05	288		P	18 12 35.7	-1.0
KULM				IAmb	IAmb	18 12 39.4	
	comp=Z,27nm,0.9s						
KULM	Kulim	23.05	288	P	P	18 12 38.7	+2.0
COEN	Coen	23.60	121	P	P	18 12 41.1	-1.0
COEN				IAmb	IAmb	18 13 00.2	
	comp=Z,31nm,1.1s						
COEN	Coen	23.60	121	P	P	18 12 44.6	+2.4
	comp=Z,29nm,1.3s						
COEN	Coen	23.60	121	P	P	18 12 43.7	+1.5
WRKA	Warakurna	23.61	167	P	P	18 12 41.9	-0.2
	comp=Z,27nm,1.2s						
RPSI	Rantau Prapat	24.09	281		P	18 12 45.4	-1.3
AS15	Alice Springs	24.19	154	P	P	18 12 48.7	+1.1
	comp=Z,44nm,0.9s						
AS31	Alice Springs	24.22	154		P	18 12 47.7	-0.2
AS31	Alice Springs	24.22	154	P	P	18 12 49.0	+1.1
	comp=Z,15nm,0.7s						
ASAR	Alice Springs	24.22	154		P	18 12 47.9	0.0
ASAR	Alice Springs	24.22	154	P	P	18 12 48.8	+0.9
	comp=Z,13nm,0.6s,baz=344,slow=15,SNR=322						
	comp=Z,13nm,0.6s						
AS01	Alice Springs	24.24	154	P	P	18 12 49.3	+1.3
QIZ	Qiongzhong	24.32	330	P	P	18 12 50.5	+1.7
QIZ				S	S	18 17 09.3	+3.5
QIZ				pmax	pmax		
	comp=Z,29nm,1.5s						
QIZ				LR	LR		
	comp=Z,230nm,12.1s						
TSI	Tuntungan	24.60	283	P	P	18 12 52.9	+1.5
	comp=Z,122nm,0.8s						
TWG	Pinlang	24.67	357	P	P	18 12 50.1	-1.7
TWG				IAmb	IAmb	18 13 17.7	
	comp=Z,36nm,0.9s						
MEEK	Meekatharra	24.84	188	P	P	18 12 54.0	+0.6
	comp=Z,51nm,0.9s						
MEEK	Meekatharra	24.84	188	P	P	18 12 54.3	+0.8
QIS	Mount Isa	24.87	139	P	P	18 12 55.0	+1.2
	comp=Z,53nm,0.7s						
QIS	Mount Isa	24.87	139	P	P	18 12 55.2	+1.4
TPUB	Ta-pu	25.17	356	P	P	18 12 54.9	-1.6
TPUB	Ta-pu	25.17	356	P	P	18 12 59.2	+2.7
SRIT	Nakonsritamara	25.18	295	P	P	18 12 55.5	-1.2
GSI	Gunungsitoli	25.20	277		P	18 12 55.5	-1.4
GSI	Gunungsitoli	25.20	277	P	P	18 12 59.4	+2.5
GSI	Gunungsitoli	25.20	277	P	P	18 12 56.2	-0.7
	comp=Z,76nm,0.8s						
YULB	Yu-li	25.22	357		P	18 12 55.0	-2.0
YULB				IAmb	IAmb	18 13 20.3	
	comp=Z,40nm,1.0s						
YULB	Yu-li	25.22	357	P	P	18 12 59.7	+2.8
HKPS	Hong Kong Po S	25.45	342	P	P	18 12 58.5	-0.5
SSLB	Suanglung	25.63	357		P	18 12 59.1	-1.5
SSLB				IAmb	IAmb	18 13 10.9	
	comp=Z,47nm,0.8s						
SSLB	Suanglung	25.63	357	P	P	18 13 02.1	+1.4
MORW	Morawa	27.67	192	P	P	18 13 18.0	-1.0
MORW				IAmb	IAmb	18 14 00.2	
	comp=Z,68nm,1.6s						
BLDU	Ballidu	29.04	190	P	P	18 13 32.7	+1.5
	comp=Z,32nm,2.8s						
FORT	Forrest	29.14	170	P	P	18 13 31.2	-0.8
FORT				IAmb	IAmb	18 14 09.2	
	comp=Z,17nm,1.0s						
KMBL	Kambalda	29.26	181	P	P	18 13 33.9	+0.7
	comp=Z,12nm,2.5s						
SLVN	Son La	29.48	323	P	P	18 13 33.6	-1.7
SLVN				IAmb	IAmb	18 13 59.3	
	comp=Z,26nm,1.4s						
CMAR	Chiang Mai Arr	30.85	312	P	P	18 13 48.1	+0.7
	comp=Z,2.8nm,0.7s,baz=138,slow=7.4,SNR=17						
	comp=Z,2.8nm,0.7s						
CHTO	Chiang Mai	31.08	313		P	18 13 49.1	-0.2
CHTO	Chiang Mai	31.08	313	P	P	18 13 50.1	+0.7
KMI	Kunming	33.08	326	P	P	18 14 04.0	-3.1
KMI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KMI				LR	LR		
	comp=N,200nm,23.3s						
KMI				LR	LR		
	comp=E,240nm,23.3s						
KMI				LR	LR		
	comp=Z,340nm,8.5s						
BBOO	Buckleboo	33.21	159	P	P	18 14 07.8	-0.1
BBOO	Buckleboo	33.21	159	P	P	18 14 08.5	+0.6
	comp=Z,46nm,1.1s						
BBOO	Buckleboo	33.21	159	P	P	18 14 08.7	+0.8
WHN	Wuhan	33.25	347	P	P	18 14 16.0	+7.8
NJ2	Nanjing	34.00	354	*e*P	P	18 14 17.0	+2.3
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
ENH	Enshi	34.39	340		P	18 14 17.5	-0.8
PZH	PanZhiHua	34.71	326	P	P	18 14 22.8	+1.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
STKA	Stephens Creek	34.75	151	P	P	18 14 20.4	-0.9
STKA	Stephens Creek	34.75	151	P	P	18 14 22.5	+1.2
	comp=Z,143nm,1.2s						
STKA	Stephens Creek	34.75	151	P	P	18 14 22.2	+0.9
	comp=Z,6.4nm,0.8s,baz=318,slow=8.4,SNR=7.0						
	comp=Z,6.4nm,0.8s						
STKA	Stephens Creek	34.75	151	P	P	18 14 22.5	+1.2
HTT	Hallett	34.86	156	P	P	18 14 23.6	+1.2
	comp=Z,8.2nm,2.2s						
HTT	Hallett	34.86	156	P	P	18 14 23.5	+1.2
TNCH	TengChong	35.54	321	⇑P	P	18 14 30.0	+1.6
TNCH				pP	sP	18 14 42.0	-0.3
TNCH				sP	pP	18 14 46.5	+8.3
TNCH				S	S	18 20 00.3	-1.8
TNCH				sS	sS	18 20 22.5	+4.0
TNCH				pmax	pmax		
	comp=Z,11nm,1.2s						
TNCH				pmax	pmax		
	comp=Z,160nm,4.7s						
TNCH				LR	LR		
	comp=Z,290nm,7.6s						
TNCH				LR	LR		
	comp=Z,250nm,9.8s						
TNCH				LR	LR		
	comp=Z,410nm,14.1s						
CMSA	Cobar Meteorol	36.64	146	P	P	18 14 38.9	+1.5
	comp=Z,17nm,0.9s						
CMSA	Cobar Meteorol	36.64	146	P	P	18 14 39.6	+2.1
JMN	Monobe	37.06	16	P	P	18 14 39.0	-2.1
LYN	LuoYang	37.53	346	P	P	18 14 45.8	+0.8
LYN				sP	sP	18 15 03.0	+3.9
LYN				S	S	18 20 28.8	-3.0
LYN				PcS	PcS	18 20 51.3	0.0
LYN				SS	SnSn	18 23 07.5	-4.3
LYN				pmax	pmax		
	comp=Z,38nm,0.8s						
LYN				LR	LR		
	comp=Z,580nm,11.0s						
LYN				LR	LR		
	comp=Z,280nm,13.7s						
XAN	Xi'an	38.04	341	⇑P	P	18 14 52.3	+3.0
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TIA	Tai'an	38.31	353	P	P	18 14 53.0	+1.5
TIA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
INU	Inuyama	39.49	19	P	P	18 15 00.2	-1.3
INU				IAmb	IAmb	18 15 54.9	
	comp=Z,58nm,1.5s						
KSRS	Korea Array	39.52	7	P	P	18 15 01.0	-0.6
	comp=Z,1.8nm,0.8s,baz=188,slow=10,SNR=6.7						
	comp=Z,1.8nm,0.8s						
JGF	Kuroka	39.84	19	P	P	18 15 02.4	-2.0
YNG	Young	40.20	146	P	P	18 15 09.5	+2.0
	comp=Z,20nm,1.4s						
MAJO	Matsushiro	40.97	19	P	P	18 15 11.5	-2.3
MAJO	Matsushiro	40.97	19	P	P	18 15 12.9	-0.9
MAJO				pP	pP	18 15 22.4	-1.4
MJAR	Matsushiro Arr	40.97	19	P	P	18 15 12.4	-1.3
MJAR	Matsushiro Arr	40.97	19	P	P	18 15 13.2	-0.5
	comp=Z,5.9nm,0.8s,baz=192,slow=8.8,SNR=20						
	comp=Z,5.9nm,0.8s						
MJB9	Matsu-Tunnel	40.98	19	P	P	18 15 11.4	-2.4
TOO	Toolangi	41.24	152	P	P	18 15 14.2	-1.8
CAN	Canberra	41.29	147		P	18 15 16.2	-0.2
CAN				IAmb	IAmb	18 15 29.5	
	comp=Z,18nm,1.0s						
CAN	Canberra	41.29	147	P	P	18 15 18.6	+2.1
BJT	Baijiatuau	42.18	353	P	P	18 15 22.7	-0.8
BJI	Beijing	42.20	353	P	P	18 15 24.5	+0.8
BJI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
JMM	Marumori	43.06	21	P	P	18 15 29.1	-1.6
LSA	Lhasa	43.50	319	P	P	18 15 33.1	-1.9
LSA				IAmb	IAmb	18 15 46.8	
	comp=Z,15nm,0.6s						
HHC	Hu-ho-hao-te	43.77	348	*e*P	P	18 15 38.3	+1.8
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,62nm,4.4s						
LHI	Lord Howe Isla	45.27	134	P	P	18 15 47.8	-0.7
EVN	Everest	45.44	313		P	18 15 49.8	-0.9
EVN				IAmb	IAmb	18 16 11.4	
	comp=Z,14nm,0.7s						
CN2	Changchun	45.62	3	*e*P	P	18 15 55.0	+3.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GOMU	GeErMu	45.93	328	P	P	18 15 56.5	+2.3
GOMU				sP	sP	18 16 09.8	+1.5
GOMU				PcP	PcP	18 17 31.0	+0.2
XLT	XiLinHaoTe	46.02	353	*e*P	P	18 15 55.0	+0.6
XLT				ScS	ScS	18 25 44.0	-3.5
XLT				pmax	pmax		
	comp=Z,6.0nm,0.7s						
XLT				LR	LR		
	comp=Z,67nm,7.2s						
XLT				LR	LR		
	comp=Z,170nm,19.5s						
GTA	Gaotai	46.16	335	*e*P	P	18 15 58.5	+2.8
GTA				pmax	pmax		
	comp=Z,12nm,1.0s						
GTA				LR	LR		
	comp=Z,330nm,13.1s						
GTA				LR	LR		
	comp=Z,380nm,14.3s						
USA0B	Ussuriysk Arra	46.71	9	P	P	18 15 58.8	-0.9
USA0B				IAmb	IAmb	18 16 05.4	
	comp=Z,9.1nm,0.8s						
USRK	Ussuriysk Ar.	46.71	9		P	18 15 59.4	-0.3
USRK	Ussuriysk Ar.	46.71	9	P	P	18 15 59.8	+0.1
	comp=Z,6.2nm,0.6s,baz=202,slow=5.5,SNR=18						
	comp=Z,6.2nm,0.6s						
MDJ	Mudanjiang	46.79	7		P	18 15 59.6	-0.7
MDJ				IAmb	IAmb	18 16 06.4	
	comp=Z,12nm,0.9s						
MDJ	Mudanjiang	46.79	7	P	P	18 16 00.8	+0.5
MDJ				pmax	pmax		
	comp=Z,11nm,1.0s						
JKA	Kamikawa-asahi	49.24	19	P	P	18 16 18.4	-0.9
JKA				IAmb	IAmb	18 16 26.1	
	comp=Z,19nm,0.9s						
ULN	Ulaanbaatar	51.43	347		P	18 16 35.0	-1.1
ULN				IAmb	IAmb	18 16 56.9	
	comp=Z,9.9nm,0.8s						
ULN	Ulaanbaatar	51.43	347	P	P	18 16 37.3	+1.3
SONM	Songino Array	51.56	346		P	18 16 37.0	+0.1
SONM	Songino Array	51.56	346	P	P	18 16 36.6	-0.3
	comp=Z,1.9nm,0.6s,baz=164,slow=8.7,SNR=9.4						
	comp=Z,1.9nm,0.6s						
YSS	Yuzhno-Sakhali	51.83	17		P	18 16 38.0	-0.8
YSS				IAmb	IAmb	18 17 21.1	
	comp=Z,8.7nm,0.9s						
HEH	HeiHe	52.17	4	*e*P	P	18 16 41.5	+0.3
HEH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WMQ	Urumqi	55.24	330	*e*P	P	18 17 06.8	+2.8
KSH	Kashi	59.35	319	P	P	18 17 41.0	+7.8
KSH				pP	sP	18 17 50.8	+3.2
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KSH				LR	LR		
	comp=Z,240nm,18.9s						
TARG	Taragay, Kyrgy	59.42	322	P	P	18 17 32.1	-1.8
TARG				IAmb	IAmb	18 18 36.5	
	comp=Z,6.3nm,1.0s						
KDJ	Kajisay	60.03	322		P	18 17 36.2	-1.7
MK31	Makanchi Array	60.05	329	P	P	18 17 36.4	-1.3
MK31				IAmb	IAmb	18 18 14.8	

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      comp=Z,5.6nm,0.9s
MKAR  Makanchi Array   60.05 329          P        18 17 36.5 -1.2
MKAR  Makanchi Array   60.05 329   P      P        18 17 37.5 -0.2
      comp=Z,1.8nm,1.0s,baz=135,slow=6.2,SNR=9.9
      comp=Z,1.8nm,1.0s
MAKZ  Makanchi         60.22 329          P        18 17 37.9 -1.0
MAKZ  Makanchi         60.22 329   P      P        18 17 39.2 +0.4
MAKZ                               pP     pP       18 17 48.8 -0.5
NRN   Naryn            60.38 321   P      P        18 17 38.9 -1.5
KBL   Kabul            61.88 311          P        18 17 48.6 -2.0
AAK   Ala-Archa        61.97 322   P      P        18 17 50.5 -0.6
AAK                                IAmb   IAmb     18 18 17.7
      comp=Z,4.6nm,0.7s
PETK  Petropavlovsk-   62.24  23   P      P        18 17 51.9 -0.5
PETK  Petropavlovsk-   62.24  23   P      P        18 17 53.9 +1.5
      comp=Z,1.0nm,0.6s,baz=173,slow=2.6,SNR=6.0
      comp=Z,1.0nm,0.6s
ARSB  Arslanbob        62.24 320   P      P        18 17 51.6 -1.3
GAR   Garm             62.90 316          P        18 17 55.8 -1.4
GAR                                IAmb   IAmb     18 18 51.0
      comp=Z,13nm,1.0s
BTK   Batken           63.05 317   P      P        18 17 57.6 -0.6
BTK                                IAmb   IAmb     18 18 48.6
      comp=Z,8.5nm,1.0s
SIMJ  Simiganj         63.66 315          P        18 18 01.1 -1.2
SIMJ                               IAmb   IAmb     18 18 51.1
      comp=Z,12nm,1.2s
ZAA0  Zalesovo Array   63.91 336          P        18 18 02.0 -1.4
ZALV  Zalesovo Beam    63.91 336          P        18 18 02.0 -1.4
ZALV  Zalesovo Beam    63.91 336   P      P        18 18 03.0 -0.4
      comp=Z,2.6nm,0.8s,baz=117,slow=5.5,SNR=7.5
      comp=Z,2.6nm,0.8s
YAK   Yakutsk          64.04   4          P        18 18 03.8 -0.4
YAK   Yakutsk          64.04   4   P      P        18 18 04.0 -0.2
YAK                                pP     pP       18 18 14.0 -0.6
KURBB Kurchatov Arra   64.44 331   P      P        18 18 05.5 -1.5
      comp=Z,0.8nm,0.3s,baz=131,slow=5.7,SNR=13
      comp=Z,0.8nm,0.3s
KURK  Kurchatov        64.45 331          P        18 18 06.1 -0.9
KURK                               IAmb   IAmb     18 18 29.7
      comp=Z,14nm,0.8s
KK31  Karatay Array    64.72 320   P      P        18 18 07.5 -1.5
KKAR  Karatay Array    64.72 320   P      P        18 18 07.7 -1.4
MA2   Magadan          65.22  15          P        18 18 11.1 -0.7
MA2                                IAmb   IAmb     18 18 52.2
      comp=Z,15nm,0.9s
MA2   Magadan          65.22  15   P      P        18 18 12.4 +0.6
BVAR  Borovoye Array   69.93 329   P      P        18 18 42.6 +0.8
      comp=Z,0.3nm,0.6s,baz=134,slow=8.5,SNR=12
      comp=Z,0.3nm,0.6s
BRVK  Borovoye         70.00 329   P      P        18 18 41.4 -0.8
TIXI  Tiksi            73.59   2          P        18 19 02.4 -1.0
TIXI                               IAmb   IAmb     18 19 27.0
      comp=Z,12nm,1.1s
AB31  Akbulak array    74.01 323   P      P        18 19 04.2 -2.1
ABKAR Akbulak array    74.01 323   P      P        18 19 04.4 -1.9
NRIK  Noril'sk         75.00 348   P      P        18 19 11.7  0.0
      comp=Z,2.7nm,0.7s,baz=112,slow=3.3,SNR=3.9
      comp=Z,2.7nm,0.7s
VNDA  Vanda            78.39 172          P        18 19 29.7 -1.0
VNDA  Vanda            78.39 172   P      P        18 19 30.7  0.0
      comp=Z,1.1nm,0.7s,baz=310,slow=6.3,SNR=10
      comp=Z,1.1nm,0.7s
NIKH  Nikolski High    78.82  35   P      P        18 19 33.9 +0.4
      baz=251
SPIA  Saint Paul Isl   79.47  31   P      P        18 19 37.0 +0.1
      baz=250
P08K  Saint George I   79.64  31   P      P        18 19 37.7 -0.2
      baz=250
UNV   Unalaska Valle   80.43  35   P      P        18 19 42.0 -0.2
      baz=253
GAMB  Gambell          81.24  24   P      P        18 19 46.8 +0.4
      baz=247
M11K  Mekoryuk         82.51  28   P      P        18 19 53.1  0.0
      baz=253
GEVA  Gevas            82.98 309   P      P        18 19 56.0 -0.3
GEVA                               IAmb   IAmb     18 20 33.6
      comp=Z,12nm,1.2s
S12K  Black Hills      83.40  33   P      P        18 19 57.7 -0.1
      baz=257
TNA   Tin City         83.41  23   P      P        18 19 57.5 -0.1
      baz=250
K13K  Kusilvak Mount   83.67  27          P        18 19 58.5 -0.6
K13K  Kusilvak Mount   83.67  27   P      P        18 19 59.3 +0.2
      baz=254,SNR=6.7
M13K  Dall Lake        83.88  29   P      P        18 20 00.6 +0.5
      baz=255
F14K  Arctic Creek     84.01  23   P      P        18 20 00.9 +0.2
      baz=252
ANM   Nome             84.12  24   P      P        18 20 00.8 -0.5
      baz=253
SDPT  Sand Point       84.20  34   P      P        18 20 01.7 -0.2
      baz=258
J14K  Nanvaranak Lak   84.39  26   P      P        18 20 03.2 +0.5
      baz=255
L14K  Kuka Creek       84.43  28   P      P        18 20 03.2 +0.3
      baz=256,SNR=7.0
N14K  Kuskokwak Cree   84.56  29          P        18 20 01.8 -1.9
N14K  Kuskokwak Cree   84.56  29   P      P        18 20 03.9 +0.3
      baz=257
CHNA  Chernabura Isl   84.59  35   P      P        18 20 03.9  0.0
      baz=259
O14K  Tigyukauivet M   84.62  30   P      P        18 20 04.2 +0.2
      baz=257
M14K  Bethel           84.63  29   P      P        18 20 04.4 +0.5
      baz=256,SNR=6.2
F15K  North Star Dit   84.75  23          P        18 20 03.3 -1.2
F15K                               IAmb   IAmb     18 20 13.7
      comp=Z,9.7nm,0.9s
F15K  North Star Dit   84.75  23   P      P        18 20 05.2 +0.7
      baz=253
G15K  Niukluk          84.79  24   P      P        18 20 05.4 +0.7
      baz=254
L15K  Ungalak Mounta   85.06  28   P      P        18 20 07.0 +0.8
      baz=257
K15K  Wolf Creek Mou   85.19  27   P      P        18 20 07.2 +0.5
      baz=256
M15K  Kasigluk River   85.22  29   P      P        18 20 07.5 +0.6
      baz=257
C16K  Lisburne Hills   85.24  21   P      P        18 20 07.8 +0.9
      baz=253
O15K  Ungalikthiuk R   85.33  30   P      P        18 20 08.6 +1.1
      baz=258
N15K  Kwethluk River   85.40  29   P      P        18 20 08.8 +1.0
      baz=258
H16K  Elim             85.44  25   P      P        18 20 09.1 +1.1
      baz=256
G16K  Koyuk River      85.58  24   P      P        18 20 08.1 -0.6
G16K                               IAmb   IAmb     18 20 46.4
      comp=Z,9.3nm,0.8s
G16K  Koyuk River      85.58  24   P      P        18 20 09.2 +0.6
      baz=256
SYO   Syowa Base       85.67 201⇓eP    P        18 20 10.0 +1.0
J16K  Anvik River      85.83  26   P      P        18 20 10.3 +0.4
      baz=257
D17K  Noatak River     85.89  22   P      P        18 20 10.4 +0.3
      baz=255
I17K  Unalakleet       85.92  26   P      P        18 20 10.4 +0.1
      baz=257
L16K  Owhat River      86.01  28   P      P        18 20 11.3 +0.5
      baz=258
C17K  DeLong Mountai   86.06  21   P      P        18 20 12.0 +0.9
      baz=255
N16K  Nishlik Lake     86.10  29   P      P        18 20 12.1 +0.7
      baz=259
M16K  Timber Creek     86.12  29   P      P        18 20 11.9 +0.5
      baz=259
E17K  Hotham Inlet     86.20  22   P      P        18 20 12.6 +0.9
      baz=256
P16K  Nushagak River   86.23  31   P      P        18 20 12.4 +0.4
      baz=260
F17K  Baldwin Pennin   86.28  23   P      P        18 20 12.9 +0.8
      baz=256
O16K  Kokwok River B   86.28  30   P      P        18 20 11.5 -0.7
O16K                               IAmb   IAmb     18 20 53.8
      comp=Z,7.9nm,1.0s
O16K  Kokwok River B   86.28  30   P      P        18 20 12.4 +0.2
      baz=260
G17K  Kiwalik Mounta   86.30  24   P      P        18 20 12.8 +0.6
      baz=257,SNR=7.4
H17K  Granite Mounta   86.48  25          P        18 20 11.1 -2.0
H17K                               IAmb   IAmb     18 20 22.2
      comp=Z,9.8nm,0.8s
H17K  Granite Mounta   86.48  25   P      P        18 20 13.0 -0.1
      baz=258
J17K  VABM Dome        86.52  26   P      P        18 20 11.7 -1.7
J17K                               IAmb   IAmb     18 20 29.1
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      comp=Z,7.2nm,1.1s
J17K  VABM Dome        86.52  26   P      P        18 20 13.7 +0.4
      baz=259
L17K  Donlin           86.64  28   P      P        18 20 14.5 +0.5
      baz=259
K17K  Iditarod         86.74  27          P        18 20 12.7 -1.7
K17K                               IAmb   IAmb     18 20 25.6
      comp=Z,9.2nm,1.0s
K17K  Iditarod         86.74  27   P      P        18 20 14.1 -0.3
      baz=259
E18K  Tukpahlearik C   86.75  22   P      P        18 20 15.2 +0.8
      baz=257
C18K  Utukok River     86.81  21   P      P        18 20 15.8 +1.1
      baz=256
R17L  Mt. Peulik Vol   86.85  32   P      P        18 20 15.9 +0.8
      baz=261
PLK4  Peulik 4         86.85  32          P        18 20 14.2 -1.0
N17K  Nushagak Hills   86.89  29   P      P        18 20 15.2  0.0
      baz=260
M17K  Holitna River    86.91  28   P      P        18 20 15.6 +0.3
      baz=260
F18K  Selawik          86.93  23   P      P        18 20 16.2 +0.9
      baz=258
H18K  Honhosa River    87.17  25   P      P        18 20 17.3 +0.8
      baz=259
G18K  Tagagawik        87.19  24   P      P        18 20 17.1 +0.5
      baz=259
Q17K  Contact Creek    87.19  32   P      P        18 20 17.8 +1.0
      baz=262
L18K  Granite Mounta   87.39  28          P        18 20 16.8 -0.8
L18K                               IAmb   IAmb     18 20 26.5
      comp=Z,4.6nm,0.8s
L18K  Granite Mounta   87.39  28   P      P        18 20 18.6 +1.0
      baz=261
C19K  Lookout Ridge    87.48  21   P      P        18 20 19.5 +1.6
      baz=258
N18K  Kilae Creek      87.54  29   P      P        18 20 19.1 +0.7
      baz=262
J18K  Innoko River     87.58  26   IAmb   IAmb     18 20 27.9
      comp=Z,9.2nm,1.4s
J18K  Innoko River     87.58  26   P      P        18 20 18.7 +0.2
      baz=261
P18K  Big Mountain,    87.69  30   P      P        18 20 18.9 -0.3
      baz=262
M18K  Stony River      87.69  28   P      P        18 20 18.8 -0.2
      baz=262
Q18K  Katmai Hardscr   87.70  31   P      P        18 20 19.2 -0.1
      baz=262
F19K  Shaleruckik Mo   87.71  23   P      P        18 20 19.4 +0.4
      baz=260
GCSA  Galena City Sc   87.72  25   P      P        18 20 19.5 +0.4
      baz=261
O18K  Koktuh Hills     87.76  30   P      P        18 20 19.9 +0.4
      baz=262
G19K  Purcell Mounta   87.86  24          P        18 20 18.0 -1.8
G19K                               IAmb   IAmb     18 20 28.2
      comp=Z,9.3nm,0.8s
G19K  Purcell Mounta   87.86  24   P      P        18 20 19.9 +0.1
      baz=260
SII   Sitkinak Islan   87.89  33   P      P        18 20 20.2 +0.1
      baz=263
D19K  Kuna River       87.89  21   P      P        18 20 18.9 -1.0
      baz=259
QSPA  South Pole Qui   87.99 180   P      P        18 20 20.9 +0.3
      comp=Z,0.6nm,0.6s,baz=290,slow=1.0,SNR=8.0
      comp=Z,0.6nm,0.6s
H19K  Roundabout Mou   88.02  24   P      P        18 20 21.0 +0.5
      baz=261,SNR=11
E19K  Redstone River   88.03  22   IAmb   IAmb     18 20 37.3
      comp=Z,5.7nm,0.8s
E19K  Redstone River   88.03  22   P      P        18 20 20.8 +0.3
      baz=260
J19K  Poorman          88.14  26   P      P        18 20 21.9 +0.8
      baz=262,SNR=7.2
L19K  White Mountain   88.24  28   P      P        18 20 21.4 -0.3
      baz=262
N19K  Bonanza Creek    88.24  29          P        18 20 20.7 -1.1
N19K                               IAmb   IAmb     18 20 30.3
      comp=Z,8.4nm,0.9s
N19K  Bonanza Creek    88.24  29   P      P        18 20 21.9 +0.1
      baz=263
M19K  Big River Lodg   88.42  28   P      P        18 20 21.1 -1.4
M19K                               IAmb   IAmb     18 21 06.0
      comp=Z,3.8nm,0.8s
M19K  Big River Lodg   88.42  28   P      P        18 20 23.4 +0.9
      baz=263
Q19K  Cape Douglas,    88.44  31   P      P        18 20 23.2 +0.4
      baz=264
OHAK  Old Harbor       88.45  33   P      P        18 20 23.1 +0.4
      baz=264
B20K  Meade River      88.49  20   P      P        18 20 23.8 +1.2
      baz=260
F20K  Avaraart Lake    88.54  23   P      P        18 20 23.8 +0.9
      baz=262
E20K  Nigu River       88.55  22   P      P        18 20 23.6 +0.5
      baz=261
H20K  Anotleneega Mo   88.67  24   P      P        18 20 24.4 +0.7
      baz=262,SNR=6.0
L20K  Farewell, AK     88.73  27   P      P        18 20 24.5 +0.5
      baz=263
P19K  Oil Pt           88.73  30   P      P        18 20 24.2 +0.1
      baz=264
I20K  Naaghedeneel     88.74  25   P      P        18 20 24.6 +0.7
      baz=263
K20K  Telida           88.75  27   P      P        18 20 24.0  0.0
      baz=263
J20K  Nowinta River    88.81  26   P      P        18 20 24.1 -0.2
      baz=263,SNR=7.6
KDAK  Kodiak Island    88.88  32   P      P        18 20 25.1 +0.4
      baz=265
M20K  Styx River       89.01  28   P      P        18 20 26.0 +0.5
      baz=264
C21K  Knifeblade Rid   89.19  21   P      P        18 20 26.5 +0.5
      baz=262
E21K  Killik River     89.39  22   P      P        18 20 27.3 +0.3
      baz=263
H21K  Melozitna Rive   89.54  24   P      P        18 20 28.4 +0.7
      baz=264,SNR=7.5
CAST  Castle Rocks     89.64  27   P      P        18 20 28.6 +0.3
      baz=265
SKT   Skwentna         89.78  28   P      P        18 20 29.3 +0.4
      baz=265
B22K  Teshekpuk Lake   89.80  20   P      P        18 20 29.7 +0.9
      baz=264
I21K  Tanana           89.84  25   P      P        18 20 29.6 +0.5
      baz=265
F22K  John River       89.97  23   P      P        18 20 30.3 +0.6
      baz=265
BRSE  Bradley Lake S   90.00  30   P      P        18 20 30.4 +0.4
      baz=266
H22K  Ishtalitna Cre   90.15  24   P      P        18 20 30.8 +0.2
      baz=266,SNR=6.9
E22K  Anaktuvuk Pass   90.16  22   P      P        18 20 31.5 +0.9
      baz=265
BPAW  Bear Paw Mtn.    90.18  26   P      P        18 20 31.1 +0.3
      baz=266
MLY   Manley           90.35  25          P        18 20 31.7 +0.1
MLY                                IAmb   IAmb     18 20 40.1
      comp=Z,6.4nm,0.8s
MLY   Manley           90.35  25   P      P        18 20 32.0 +0.4
      baz=266,SNR=6.5
TRF   Thorofare Moun   90.45  27   P      P        18 20 32.0 -0.2
      baz=266
D23K  Nanushuk River   90.64  21   P      P        18 20 33.1 +0.3
      baz=266
SEW   Seward           90.67  30   P      P        18 20 33.3 +0.3
      baz=267
COLD  Coldfoot         90.71  23   P      P        18 20 33.8 +0.7
      baz=267,SNR=5.7
C23K  Itkillik River   90.72  20   P      P        18 20 33.6 +0.5
      baz=266
G23K  Bananza Creek    90.75  23   P      P        18 20 32.9 -0.5
G23K                               IAmb   IAmb     18 20 42.1
      comp=Z,8.1nm,0.9s
G23K  Bananza Creek    90.75  23   P      P        18 20 33.0 -0.4
      baz=267,SNR=8.1
H23K  Yukon River      90.90  24   P      P        18 20 34.4 +0.3
      baz=267,SNR=6.8
I23K  Minto, Yukon-K   90.94  25   P      P        18 20 34.5 +0.3
      baz=267,SNR=7.5
E23K  Chandalar        90.98  22   P      P        18 20 34.9 +0.4
      baz=267
TOLK  Toolik Lake Re   91.02  21   P      P        18 20 34.5 -0.1
      baz=267
NEA2  Nenana           91.04  26   P      P        18 20 34.1 -0.6
      baz=268
MCK   McKinley         91.07  26   P      P        18 20 35.4 +0.5
      baz=268
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PWL   Port Wells       91.25  29   P      P        18 20 35.7 -0.1
      baz=268
E24K  Your Creek       91.40  22   P      P        18 20 35.9 -0.5
      baz=268
WAT6  Susitna Watana   91.58  28   P      P        18 20 37.3 -0.2
      baz=269
H24K  Noodor Dome      91.58  24   IAmb   IAmb     18 20 46.7
      comp=Z,5.8nm,1.1s
H24K  Noodor Dome      91.58  24   P      P        18 20 37.5 +0.3
      baz=269
F24K  Squaw Lake       91.61  23   P      P        18 20 38.0 +0.6
      baz=269
DHY   Denali Highway   91.75  27   P      P        18 20 38.3  0.0
      baz=269
SCM   Sheep Creek Mo   91.75  28   P      P        18 20 38.2  0.0
      baz=269
G24K  Hadweenzic Riv   91.76  23   P      P        18 20 38.1 +0.1
      baz=269,SNR=5.1
GLI   Glacier Island   91.86  29   P      P        18 20 38.5  0.0
      baz=269
ILAR  Eielson Array    91.98  25   P      P        18 20 39.4 +0.3
      comp=Z,0.2nm,0.5s,baz=254,slow=5.4,SNR=4.1
      comp=Z,0.2nm,0.5s
D25K  Kavik River      92.19  21   P      P        18 20 40.5 +0.5
      baz=270
M24K  Tolsona, Glenn   92.30  28   P      P        18 20 41.3 +0.6
      baz=270
G25K  Bearman Lake     92.31  23   P      P        18 20 41.5 +1.0
      baz=270
KLU   Klutina          92.42  29   P      P        18 20 42.2 +0.9
      baz=270
H25L  Birch Creek      92.42  24   P      P        18 20 41.9 +0.8
      baz=271
F25K  Christian Rive   92.48  23   P      P        18 20 42.4 +1.0
      baz=271
E25K  Arctic Village   92.50  22   P      P        18 20 42.6 +1.2
      baz=271
EYAK  Cordova Ski Ar   92.52  30   P      P        18 20 41.7 +0.1
      baz=270
PRP   Porcupine Dome   92.56  25   P      P        18 20 42.5 +0.5
      baz=271
PAX   Paxson           92.62  27   P      P        18 20 42.3 +0.1
      baz=271
J25K  Salcha River,    92.64  26   P      P        18 20 42.9 +0.7
      baz=271
RIDG  Independent Ri   92.89  26   P      P        18 20 44.5 +1.2
      baz=271
BMAR  Burnt Mountain   92.89  23          P        18 20 43.2  0.0
F26K  Sheenjek River   93.05  22   P      P        18 20 45.3 +1.3
      baz=272
N25K  Chitina, Valde   93.06  29   P      P        18 20 44.0 -0.2
      baz=272
BMRM  Bremner River    93.07  29   P      P        18 20 45.0 +0.8
      baz=272
C27K  Jago River       93.12  20   P      P        18 20 45.0 +0.8
      baz=273
G26K  Porcupine Rive   93.22  23   P      P        18 20 45.0 +0.3
      baz=273
SCRK  Sand Creek       93.26  26   P      P        18 20 44.9 -0.3
      baz=272
J26L  Joseph Creek     93.42  26   P      P        18 20 45.9 +0.1
      baz=273
I26K  Coal Creek Min   93.56  25   P      P        18 20 46.7 +0.4
      baz=273
CRQE  Cirque           93.82  29   P      P        18 20 47.6 -0.2
      baz=273
MCARA McCarthy VSAT    93.82  29   P      P        18 20 48.1 +0.5
      baz=273
E27K  Coleen River     93.98  22   P      P        18 20 48.0 -0.2
      baz=275
G27K  Doyon Strip      94.07  23   P      P        18 20 48.3 -0.4
      baz=274
K27K  Chicken          94.10  26   P      P        18 20 50.4 +1.5
      baz=274
D27M  Malcolm River    94.11  21   P      P        18 20 49.0 +0.1
      baz=275
H27K  Steamboat Moun   94.16  24   P      P        18 20 48.8 -0.4
      baz=275,SNR=6.5
I27K  Kandik River     94.18  24   P      P        18 20 49.5 +0.2
      baz=274,SNR=9.9
L27K  Beaver Creek,    94.28  27          P        18 20 49.0 -0.7
L27K  Beaver Creek,    94.28  27   P      P        18 20 49.8 +0.1
      baz=274
M27K  Edge Creek, AK   94.30  28   P      P        18 20 50.1 +0.1
      baz=274
MNK   Minsk            94.31 324 i P      P        18 20 49.7 -0.3
      comp=E,11nm,1.0s
MNK                              i P      P        18 20 49.7 -0.3
      comp=N,6.0nm,0.7s
MNK                              i P      P        18 20 49.7 -0.3
      comp=Z,6.0nm,0.7s,baz=87
MNK                              i PP     PP       18 24 36.5 -0.7
MNK                              i PPP    PPP      18 26 37.4
MNK                              i S      SKSac    18 31 24.6 +2.1
MNK                              i PS     PS       18 33 18.2 -0.4
MNK                              i SS     SS       18 38 24.1 +3.2
MNK                              i SSS    SSS      18 42 05.6
MNK                              i LQ     LQ       18 58 15.5
MNK                              i LR     LR       19 03 07.2
MNK                              i LRM    MLR      19 04 08.5
      comp=E,121nm,26.7s
MNK                              i LRM    MLR      19 04 08.5
      comp=Z,79nm,18.8s
MNK                              i LRM    MLR      19 04 45.7
      comp=N,162nm,24.8s
MESA  MESA             94.42  30   P      P        18 20 49.7 -1.0
      baz=274
YAH   Yahtse           94.51  30   P      P        18 20 49.8 -1.3
CTG   Chitna Glacier   94.66  29   P      P        18 20 52.6 +0.9
      baz=274
F28M  Old Crow         94.68  22   P      P        18 20 51.7 +0.2
      baz=276,SNR=6.0
E28M  Babbage River    94.69  21   P      P        18 20 52.4 +0.9
      baz=277,SNR=6.1
BVCY  Beaver Creek     94.77  28   P      P        18 20 52.1 +0.1
      baz=275
I28M  Miner Creek      94.89  25   P      P        18 20 52.7 +0.1
      baz=276,SNR=9.0
YUK3  Moose Creek      95.02  28   P      P        18 20 53.8 +0.4
      baz=275
O28M  Mount Upton      95.24  29   P      P        18 20 54.1 -0.4
      baz=275
DAWY  Dawson           95.27  26          P        18 20 53.0 -1.3
DAWY                               IAmb   IAmb     18 21 03.0
      comp=Z,6.5nm,1.1s
PINM  Pinnacle         95.27  30   P      P        18 20 53.6 -0.8
      baz=275
E29M  Blow River       95.32  22   P      P        18 20 54.8 +0.4
      baz=278
H29M  Whitestone       95.44  24   IAmb   IAmb     18 21 03.0
      comp=Z,6.5nm,0.9s
H29M  Whitestone       95.44  24   P      P        18 20 55.2 +0.3
      baz=278
G29M  Pine Creek       95.48  23   P      P        18 20 54.7 -0.4
G29M  Pine Creek       95.48  23   P      P        18 20 54.8 -0.4
      baz=278,SNR=5.3
PNL   Peninsula        95.74  30   P      P        18 20 56.4 -0.1
      baz=276
M29M  Somme Creek      95.88  28   P      P        18 20 57.3 +0.1
      baz=277,SNR=5.5
YUK4  Talbot Arm       95.92  29   P      P        18 20 57.6  0.0
      baz=277
L29M  L29M             95.95  27   P      P        18 20 57.5 +0.1
      baz=277,SNR=6.1
EPYK  Eagle Plains     96.08  23   P      P        18 20 58.4 +0.5
      baz=279
YUK6  Outpost Mounta   96.11  29   P      P        18 20 58.2 -0.2
      baz=277
K29M  Barlow Dome      96.12  26          P        18 20 55.9 -2.3
K29M                               IAmb   IAmb     18 21 11.0
      comp=Z,2.7nm,0.9s
K29M  Barlow Dome      96.12  26   P      P        18 20 59.0 +0.7
      baz=278
G30M  tAoh Zraii Nji   96.17  23   P      P        18 20 59.0 +0.6
      baz=280
F30M  Barrier River    96.23  22   P      P        18 20 59.1 +0.6
      baz=280
I30M  Mount Dempster   96.40  25   P      P        18 21 00.2 +0.7
      baz=279
J30M  Hart River       96.52  25          P        18 20 59.2 -0.9
J30M                               IAmb   IAmb     18 21 28.8
      comp=Z,6.7nm,1.4s
J30M  Hart River       96.52  25   P      P        18 21 00.7 +0.6
      baz=279
HYT   Haines Junctio   96.54  29   P      P        18 20 59.8 -0.4
      baz=278
P29M  Windy Craggy     96.58  30   P      P        18 21 00.2 -0.1
      baz=277
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M30M	Minto, Yukon	96.63	27	P	P	18 20 58.9	-1.6
M30M				IAmb	IAmb	18 21 09.4	
	comp=Z,3.4nm,0.9s						
M30M	Minto, Yukon	96.63	27	P	P	18 21 00.8	+0.3
	baz=278						
N30M	Aishikik Lake	96.65	28	P	P	18 21 01.0	+0.3
	baz=278						
G31M	Satah River	96.94	23	P	P	18 21 03.2	+1.5
	baz=281						
H31M	Peel River	97.13	24	P	Pdif	18 21 03.4	+0.6
	baz=281						
S31K	Pelican	97.59	32	P	P	18 21 04.4	-0.4
	baz=278						
WHY	Whitehorse	97.84	29		P	18 21 03.9	-2.2
WHY	Whitehorse	97.84	29	P	P	18 21 05.3	-0.8
	baz=280						
S32K	Killisnoo	98.55	32	P	P	18 21 08.4	-0.7
	baz=280						
A36M	Sachs Harbour	98.60	17	P	P	18 21 08.5	-0.5
	baz=291						
P32M	Atlin	98.61	30	P	P	18 21 09.1	-0.4
	baz=281						
P33M	Teslin, Yukon	98.93	29	P	P	18 21 10.4	-0.5
	baz=282						
Q32M	Nakina River	99.46	30	P	Pdif	18 21 12.3	-1.2
	baz=282						
U33K	Whale Pass	99.58	33	P	Pdif	18 21 12.8	-1.0
	baz=281						
CRAG	Craig	99.70	34	P	Pdif	18 21 14.2	-0.1
	baz=281						
R33M	Jennings River	100.02	30	P	Pdif	18 21 14.9	-1.0
	baz=283						
V35K	Ketchikan	100.57	34	P	Pdif	18 21 17.6	-0.6
	baz=282						
T35M	Bob Quinn	100.95	32	P	Pdif	18 21 19.7	-0.2
	baz=283						
CPUP	Villa Florida	151.88	180	PKPbc	PKiKP	18 27 27.6	+0.9
	comp=Z,1.1nm,0.9s,baz=349,slow=5.8,SNR=4.2						

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*IDC **28** 18:14:24.0±0.5,12°.64S×166°.14E,h0^{km},mb4.7/20, mbtmp4.7/21,ML5.3/1,MS4.9/46,Error ellipse: s-maj=19.3km s-min=14.4km az=97.0*

*NEIC **28** 18:14:25.7,12°.68S×165°.88E,h12^{km},Moment Tensor Solution. Duration: 2^{s}6 Moment tensor: Scale 10^{17}Nm; M_{rr}1.57; $M_{\theta\theta}$0.07; $M_{\phi\phi}$-1.65; $M_{r\theta}$0.86; $M_{\theta\phi}$0.45; $M_{\phi r}$-0.57; Fault plane solution: $M_0$1.97000×10^{17} NP1:ϕ_s5.81000°, δ36.23000°,λ124.07000°. NP2:ϕ_s145.83000°,δ60.69000°, λ67.68000°. Principal axes: T 1.9983, Plg66.0000°, Azm14.0000°; N -0.0669, Plg19.0000°, Azm157.0000°; P -1.9314, Plg13.0000°, Azm252.0000°;*

*NEIC **28** 18:14:25.7,12°.58S×166°.09E,h12^{km}*

*MOS **28** 18:14:25.7±1.4,12°.60S×165°.74E,h10^{km},mb5.4/33, MS5.1/19,Error ellipse: s-maj=11.3km s-min=7.3km az=113.8*

*NEIC **28** 18:14:25.6±1.8,12°.56S±0°.07×166°.08E±0°.09,h10^{km}±1^{km}, mb5.1/134,Ms_20 5.3/596,Mww5.5/21,Error ellipse: s-maj=14.7km s-min=11.8km az=78.0*

*NOU **28** 18:14:26.4,12°.55S×166°.04E,h0^{km},mb5.2/49,Santa Cruz Islands*

*BJI **28** 18:14:29.7,12°.17S×165°.95E,h23^{km},mB5.5/60,mb4.9/65, Ms5.3/68,Ms7 5.0/70*

*GCMT **28** 18:14:31.6±0.1,12°.55S±0°.01×165°.93E±0°.01,h14^{km}, MW5.5/151,Moment Tensor Solution. s110,c159; s151,c288; Duration: 1^{s}4 Moment tensor: Scale 10^{17} Nm; M_{rr}2.18±.05; $M_{\theta\theta}$-0.02±.03; $M_{\phi\phi}$-2.16±.04; $M_{r\theta}$0.66±.09; $M_{\theta\phi}$0.50±.02; $M_{\phi r}$-1.23±.09; Best double couple: $M_0$2.62600×10^{17} NP1:ϕ_s356.00000°,δ30.00000°, λ105.00000°. NP2:ϕ_s159.00000°,δ61.00000°,λ82.00000°. Principal axes: T 2.6050, Plg73.0000°, Azm49.0000°; N 0.0460, Plg7.0000°, Azm163.0000°; P -2.6470, Plg16.0000°, Azm255.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 18:14:25.7±0.2**,12°.58S**±0°.04×**166°.16E**±0°.04**,h10^{km},n777,** σ**1^{s}86**/505**,mb5.0**/146**,MS5.3**/383**,46C-12D,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUES	Luesalemba Tem	1.92	353	P	Pb	18 14 59.7	-1.1
VLAKA	Lakatoro	3.71	161	P	Pn	18 15 26.3	+3.2
HURO	Huro Makira	4.67	296	P	Pn	18 15 35.4	-0.9
DVP	Devils Point	5.48	159	P	Pn	18 15 50.7	+3.3
NGOA	Tingoa Renbel	6.05	279	P	Pn	18 15 53.9	-1.4
ALEG	Aligegeo Malai	6.58	305	P	Pn	18 16 03.1	+0.6
HNR	Honiara	6.86	297		Pn	18 16 06.1	-0.2
HNR	Honiara	6.86	297	Pn	Pn	18 16 06.5	+0.2
	57nm,0.3s,baz=181,slow=5.7,SNR=46						
HNR				Sn	Sn	18 17 24.4	0.0
	142nm,0.3s,baz=166,slow=19,SNR=4.9						
HNR				LR	LR	18 18 57.3	
	comp=Z,10µm,21.3s,baz=126,slow=40						
	809nm,0.7s						
HNR	Honiara	6.86	297	P	Pn	18 16 06.8	+0.5
SAVO	Savo Central	7.11	298	P	Pn	18 16 10.8	+1.0
TATA	Tatamba Isabel	7.51	303	P	Pn	18 16 15.8	+0.5
INH	Isangel	7.55	157	P	Pn	18 16 18.5	+2.7
KOUNC	Koumac, New Ca	8.13	193	P	Pn	18 16 25.3	+1.5
DZM	Mont Dzumac	9.44	178		Pn	18 16 42.7	+0.8
DZM	Mont Dzumac	9.44	178	*e*P	Pn	18 16 46.2	+4.3
	165nm,1.2s						
DZM				*e*LR	LR	18 18 47.8	
	6µm,25.9s						
DZM	Mont Dzumac	9.44	178	Pn	Pn	18 16 43.8	+1.9
	1.8nm,0.3s,baz=351,slow=20,SNR=12						
DZM	Mont Dzumac	9.44	178	P	Pn	18 16 42.9	+1.0
YATNC	Mamie plateau,	9.45	176	P	Pn	18 16 44.8	+2.8
ONTNC	Ouen Toro	9.68	178		Pn	18 16 45.8	+0.7
ONTNC	Ouen Toro	9.68	178	P	Pn	18 16 48.0	+2.9
OUENC	Ouen Island, N	9.81	176	P	Pn	18 16 49.5	+2.7
PINNC	Pines Island,	10.05	173	Pn	Pn	18 16 51.7	+1.5
MSVF	Nonsavu	12.57	116		Pn	18 17 25.4	+0.7
MSVF	Nonsavu	12.57	116	Pn	Pn	18 17 29.0	+4.3
	0.7nm,0.3s,baz=239,slow=11,SNR=6.0						
MSVF				LR	LR	18 21 13.8	
	comp=Z,14µm,19.4s,baz=306,slow=33						
MSVF	Nonsavu	12.57	116	P	Pn	18 17 25.4	+0.7
FUNA	Funafuti	13.43	74	Pn	Pn	18 17 38.5	+2.1
EIDS	Eidsvold	19.09	226		P	18 18 46.1	-2.4
EIDS				IAmb	IAmb	18 18 57.9	
	comp=Z,194nm,1.6s						
EIDS	Eidsvold	19.09	226	P	Pn	18 18 50.7	+1.4
	comp=Z,0.0nmcomp=Z,76nm,1.8s						
EIDS	Eidsvold	19.09	226	P	Pn	18 18 51.0	+1.6
CTAO	Charters Tower	20.50	246		P	18 19 01.7	-2.3
CTAO	Charters Tower	20.50	246	P	Pn	18 19 06.2	0.0
CTAO	Charters Tower	20.50	246	P	P	18 19 01.7	-2.3
CTAO				pmax	pmax		
	comp=Z,60nm,1.4s						
CTAO				MLR	MLR		
	comp=Z,8µm,18.0s						
PATS	Pohnpei	20.81	338		P	18 19 06.3	-1.1
PATS	Pohnpei	20.81	338	P	Pn	18 19 10.5	+0.7
	comp=Z,342nm,1.1s						
PATS	Pohnpei	20.81	338	P	Pn	18 19 08.6	-1.2
MANU	Manus Island	21.36	298	P	P	18 19 12.1	-1.3
MANU				IAmb	IAmb	18 19 19.0	
	comp=Z,63nm,1.4s						
MTSU	Mount Surprise	21.77	253	P	P	18 19 17.4	-0.4
	comp=Z,27nm,1.3s						
ARMA	Armidale	22.27	215		P	18 19 21.1	-2.1
ARMA				IAmb	IAmb	18 19 31.7	
	comp=Z,53nm,1.1s						
ARMA	Armidale	22.27	215	P	P	18 19 24.4	+1.2
	comp=Z,49nm,0.9s						
ARMA	Armidale	22.27	215	P	P	18 19 26.0	+2.8
COEN	Coen	22.41	264		P	18 19 21.5	-3.2
COEN	Coen	22.41	264	P	P	18 19 24.4	-0.3
	comp=Z,39nm,1.7s						
COEN	Coen	22.41	264	P	P	18 19 25.4	+0.7
OUZ	Omahuta	23.52	165	IAMs_20	IAMs_20	18 29 56.5	
	comp=Z,9µm,18.0s						
QLP	Quilpie	24.86	233	P	P	18 19 48.8	+0.2
	comp=Z,115nm,1.9s						
RIV	Riverview	25.19	210	P	P	18 19 53.1	+1.7
	comp=Z,119nm,0.9s						
RIV	Riverview	25.19	210	P	P	18 19 54.2	+2.8
TOZ	Tahuroa Road	26.40	163	P	P	18 20 02.3	-0.1
CMSA	Cobar Meteorol	26.67	222	P	P	18 20 06.0	+1.1
	comp=Z,38nm,1.1s						
CMSA	Cobar Meteorol	26.67	222	P	P	18 20 06.3	+1.4
HIZ	Hauiti	26.96	165	IAMs_20	IAMs_20	18 31 25.5	
	comp=Z,10µm,18.0s						
YNG	Young	26.99	214	P	P	18 20 10.5	+2.7
	comp=Z,39nm,1.2s						
MXZ	Matakaoa Point	27.15	159	IAMs_20	IAMs_20	18 29 18.6	
	comp=Z,6µm,19.0s						
CNB	Canberra Magne	27.27	211	P	P	18 20 12.8	+2.5
	comp=Z,34nm,1.5s						
CNB	Canberra Magne	27.27	211	P	P	18 20 12.1	+1.8
URZ	Urewera	27.37	161	P	P	18 20 15.3	+4.2
CAN	Canberra	27.45	212		P	18 20 11.7	-0.3
CAN				IAmb	IAmb	18 20 18.6	
	comp=Z,34nm,1.2s						
CAN	Canberra	27.45	212	P	P	18 20 17.9	+5.9
CAN	Canberra	27.45	212	P	P	18 20 11.7	-0.3
CAN				pmax	pmax		
	comp=Z,34nm,1.2s						
CAN				MLR	MLR		
	comp=Z,2µm,19.0s						
RTZ	Ruatahuna	27.66	162	P	P	18 20 14.0	+0.2
RTZ				IAmb	IAmb	18 20 51.8	
	comp=Z,33nm,1.1s						
RTZ				IAMs_20	IAMs_20	18 30 50.0	
	comp=Z,6µm,19.0s						
BKZ	Black Stump Fm	28.02	163	P	P	18 20 17.0	0.0
BKZ				IAmb	IAmb	18 20 48.1	
	comp=Z,103nm,2.0s						
BKZ	Black Stump Fm	28.02	163	P	P	18 20 19.0	+2.0
QRZ	Quartz Range	28.69	170	P	P	18 20 22.7	-0.2
QRZ				IAmb	IAmb	18 20 29.8	
	comp=Z,97nm,1.6s						
QRZ				IAMs_20	IAMs_20	18 33 09.0	
	comp=Z,7µm,18.0s						
QRZ	Quartz Range	28.69	170	P	P	18 20 25.5	+2.6
TKNZ	Takaka Hill	28.97	169	P	P	18 20 26.0	+0.7
SMPI	Sarmi	29.15	289	P	P	18 20 31.0	+3.7
	comp=Z,25nm,1.0s						
MRZ	Mangatainoka R	29.17	165	P	P	18 20 26.9	-0.3
MRZ				IAmb	IAmb	18 20 48.8	
	comp=Z,22nm,1.0s						
MRZ				IAMs_20	IAMs_20	18 32 56.0	
	comp=Z,10µm,19.0s						
NNZ	Nelson	29.22	169	IAMs_20	IAMs_20	18 31 51.2	
	comp=Z,5µm,19.0s						
MRNZ	Matariki Terra	29.29	170	P	P	18 20 28.0	-0.2
BFZ	Birch Farm	29.36	164	P	P	18 20 27.9	-1.0
BFZ	Birch Farm	29.36	164	P	P	18 20 29.7	+0.8
TCW	Tory Channel	29.39	167	P	P	18 20 27.7	-1.4
DSZ	Denniston Nort	29.47	171	P	P	18 20 29.3	-0.6
DSZ				IAMs_20	IAMs_20	18 33 39.7	
	comp=Z,6µm,18.0s						
TUWZ	Tuamarina	29.54	168	P	P	18 20 30.3	-0.1
SNZO	South Karori	29.58	167	P	P	18 20 29.8	-1.0
SNZO	South Karori	29.58	167	IAMs_20	IAMs_20	18 32 28.8	
	comp=Z,7µm,18.0s						
STKA	Stephens Creek	29.64	226		P	18 20 28.8	-2.6
STKA	Stephens Creek	29.64	226	P	P	18 20 32.2	+0.7
	comp=Z,348nm,1.7s						
STKA	Stephens Creek	29.64	226	P	P	18 20 31.6	+0.1
	comp=Z,11nm,0.8s,baz=28,slow=9.7,SNR=12						
STKA				LR	LR	18 32 32.6	
	comp=Z,9µm,18.2s,baz=60,slow=37						
	comp=Z,11nm,0.8s						
STKA	Stephens Creek	29.64	226	P	P	18 20 32.8	+1.3
THZ	Tophouse	29.66	170	P	P	18 20 31.1	-0.5
THZ				IAmb	IAmb	18 20 44.4	
	comp=Z,26nm,0.8s						
BSWZ	Blackbirch Sta	29.80	168	P	P	18 20 31.9	-0.8
MSWZ	Moikau Station	29.81	166	P	P	18 20 31.9	-0.9
PLWZ	Palliser	29.95	166	P	P	18 20 32.7	-1.4
INZ	Inchbonnie	30.38	172		P	18 20 37.1	-0.7
INZ				IAmb	IAmb	18 20 50.0	
	comp=Z,35nm,0.9s						
INZ				IAMs_20	IAMs_20	18 33 43.8	
	comp=Z,6µm,18.0s						
KHZ	Kahutara	30.41	169	P	P	18 20 37.6	-0.5
KHZ				IAmb	IAmb	18 21 01.2	
	comp=Z,60nm,1.4s						
KHZ				IAMs_20	IAMs_20	18 32 48.6	
	comp=Z,6µm,18.0s						
KHZ	Kahutara	30.41	169	P	P	18 20 39.1	+1.0
LTZ	Lake Taylor	30.56	171		P	18 20 38.0	-1.5
LTZ				IAMs_20	IAMs_20	18 34 25.4	
	comp=Z,5µm,19.0s						
GVZ	Greta Valley S	30.86	170	P	P	18 20 42.6	+0.5
TOO	Toolangi	31.00	213	P	P	18 20 43.2	-0.2
TOO				IAmb	IAmb	18 20 50.1	
	comp=Z,28nm,1.6s						
TOO	Toolangi	31.00	213	P	P	18 20 45.2	+1.7
	comp=Z,11nm,2.1s						
TOO	Toolangi	31.00	213	P	P	18 20 43.2	-0.2
TOO				pmax	pmax		
	comp=Z,28nm,1.6s						
AMCZ	Amberley	31.00	171	P	P	18 20 43.7	+0.4
FOZ	Fox Glacier	31.00	175	P	P	18 20 43.1	-0.2
FOZ				IAmb	IAmb	18 21 05.4	
	comp=Z,38nm,0.8s						
OXZ	Oxford	31.05	172	P	P	18 20 44.0	+0.1
OXZ				IAmb	IAmb	18 21 02.6	
	comp=Z,26nm,0.7s						
OXZ				IAMs_20	IAMs_20	18 35 36.6	
	comp=Z,6µm,19.0s						
WR0	Warramunga Arr	31.19	252	P	P	18 20 43.1	-2.2
WR9	Warramunga Arr	31.21	252	P	P	18 20 45.5	0.0
WR8	Warramunga Arr	31.23	252	P	P	18 20 43.8	-1.9
WR8				IAmb	IAmb	18 20 50.2	
	comp=Z,29nm,1.6s						
WB0	Warramunga Arr	31.30	253		P	18 20 44.5	-1.8
WB0				IAmb	IAmb	18 21 06.0	
	comp=Z,84nm,1.9s						
RPZ	Rata Peaks	31.31	173		P	18 20 46.6	+0.5
RPZ				IAMs_20	IAMs_20	18 35 09.3	
	comp=Z,8µm,18.0s						
RPZ	Rata Peaks	31.31	173	P	P	18 20 49.2	+3.1
WRAB	Tennant Creek	31.36	252	P	P	18 20 44.4	-2.4
WRAB	Tennant Creek	31.36	252	*i* P	P	18 20 45.7	-1.1
WRAB				pmax	pmax		
	comp=Z,17nm,1.3s						
WRA	Warramunga Arr	31.37	252	P	P	18 20 43.8	-3.1
WRA	Warramunga Arr	31.37	252	P	P	18 20 44.9	-2.1
	comp=Z,3.3nm,0.7s,baz=85,slow=9.1,SNR=20						
WRA				PcP	PcP	18 23 39.8	-1.1
	comp=Z,2.5nm,0.9s,baz=76,slow=2.8,SNR=4.7						
WRA				LR	LR	18 33 16.7	
	comp=Z,3µm,18.1s,baz=73,slow=36						
	comp=Z,3.3nm,0.7s						
JCZ	Jackson Bay	31.46	176	P	P	18 20 49.4	+1.9
MQZ	McQueen's Vall	31.52	171	IAmb	IAmb	18 20 53.0	
	comp=Z,36nm,0.9s						
LBZ	Lake Benmore	31.88	175		P	18 20 50.9	-0.2
WKZ	Wanaka	32.23	176	P	P	18 20 54.0	-0.1
WKZ				IAMs_20	IAMs_20	18 34 28.5	
	comp=Z,5µm,18.0s						
HTT	Hallett	32.38	226	P	P	18 20 56.1	+0.5
	comp=Z,15nm,2.1s						
HTT	Hallett	32.38	226	P	P	18 20 57.3	+1.7
AS17	Alice Springs	32.42	246	P	P	18 20 54.5	-1.6
	comp=Z,14nm,1.2s						
AS01	Alice Springs	32.46	246	P	P	18 20 56.0	-0.5
AS31	Alice Springs	32.50	246		P	18 20 54.7	-2.2
AS31	Alice Springs	32.50	246	P	P	18 20 55.6	-1.3
	comp=Z,3.3nm,0.7s						
ASAR	Alice Springs	32.50	246		P	18 20 54.3	-2.5
ASAR	Alice Springs	32.50	246	P	P	18 20 55.1	-1.7
	comp=Z,5.6nm,0.7s,baz=68,slow=9.2,SNR=51						
ASAR				PcP	PcP	18 23 43.0	-0.8
	comp=Z,3.6nm,0.9s,baz=79,slow=3.0,SNR=4.5						
ASAR				LR	LR	18 33 59.2	
	comp=Z,4µm,18.1s,baz=83,slow=36						
	comp=Z,5.6nm,0.7s						
ODZ	Otahua Downs	32.58	174	P	P	18 20 57.0	-0.2
ODZ				IAMs_20	IAMs_20	18 35 42.9	
	comp=Z,5µm,18.0s						
ODZ	Otahua Downs	32.58	174	P	P	18 20 59.5	+2.3
MLZ	Mavora Lakes	32.72	177	P	P	18 20 57.5	-0.9
MLZ				IAMs_20	IAMs_20	18 34 31.4	
	comp=Z,5µm,20.0s						
DCZ	Deep Cove	32.79	179	P	P	18 20 57.3	-1.7
DCZ				IAmb	IAmb	18 21 10.6	
	comp=Z,52nm,1.1s						
KDU	Kakadu	32.86	266	P	P	18 20 59.4	-0.6
	comp=Z,18nm,1.2s						
GUMO	Guam	33.49	320	LR	LR	18 34 09.6	
	comp=Z,3µm,20.2s,baz=140,slow=35						
RAR	Rarotonga	33.65	109	LR	LR	18 33 19.7	
	comp=Z,1µm,19.5s,baz=276,slow=34						
MOO	Moorlands	34.01	205	P	P	18 21 12.1	+2.3
	comp=Z,63nm,1.7s						
BBOO	Buckleboo	34.11	229	P	P	18 21 09.6	-1.2
BBOO				IAmb	IAmb	18 21 18.7	
	comp=Z,33nm,0.9s						
BBOO	Buckleboo	34.11	229	P	P	18 21 11.0	+0.2
	comp=Z,50nm,1.3s						
BBOO	Buckleboo	34.11	229	P	P	18 21 12.3	+1.6
MTN	Manton Dam	34.16	266	P	P	18 21 08.9	-2.4
MTN	Manton Dam	34.16	266	P	P	18 21 11.2	-0.2
	comp=Z,22nm,1.3s						
MTN	Manton Dam	34.16	266	P	P	18 21 11.8	+0.5
KNRA	Kununurra	36.37	261		P	18 21 28.7	-1.7
KNRA				IAmb	IAmb	18 21 35.8	
	comp=Z,31nm,0.9s						
KNRA	Kununurra	36.37	261	P	P	18 21 29.5	-0.8
	comp=Z,38nm,1.2s						
WRKA	Warakurna	37.79	245	P	P	18 21 41.1	-1.4
	comp=Z,7.7nm,1.2s						
FITZ	Fitzroy Crossi	39.40	257		P	18 21 54.5	-1.5
FITZ	Fitzroy Crossi	39.40	257	P	P	18 21 55.3	-0.7
	comp=Z,9.1nm,1.4s						
FITZ	Fitzroy Crossi	39.40	257	P	P	18 21 54.9	-1.2
	comp=Z,7.8nm,0.7s,baz=129,slow=8.0,SNR=19						
FITZ				LR	LR	18 38 19.8	
	comp=Z,3µm,18.2s,baz=76,slow=36						
	comp=Z,7.8nm,0.7s						
FITZ	Fitzroy Crossi	39.40	257	P	P	18 21 56.7	+0.7
FORT	Forrest	39.52	237	P	P	18 21 55.1	-1.7
FORT				IAmb	IAmb	18 22 04.2	
	comp=Z,26nm,0.9s						
NLAI	Namlea	39.73	280	P	P	18 22 01.1	+2.3
	comp=Z,1µmcomp=Z,48nm,1.2s						
BATI	Baumata	41.70	269	LR	LR	18 39 43.1	
	comp=Z,2µm,18.3s,baz=146,slow=36						
PPT	Papeete	42.95	102	LR	LR	18 38 41.1	
	comp=Z,2µm,18.6s,baz=271,slow=34						
PPT2	Papeete2	42.95	102	*e*P	P	18 22 23.5	-1.8
	comp=Z,294nm,24.8s						
PPT2				*e*S	S	18 28 49.9	-1.0
	comp=Z,2µm,27.5s						
PPT2				*e*LQ	LQ	18 32 28.3	
	comp=Z,5µm,26.8s						
PPT2				*e*LR	LR	18 34 17.5	
	comp=Z,7µm,27.5s						
PPT2				*e*LR	LR	18 34 21.8	
	comp=Z,5µm,30.2s						
TBI	Tubuai	43.40	111	*e*S	S	18 28 58.1	+1.0
	comp=Z,3µm,27.0s						
TBI				*e*LQ	LQ	18 32 40.3	
	comp=Z,14µm,34.5s						
TBI				*e*LR	LR	18 34 26.9	
	comp=Z,3µm,34.5s						
TBI				*e*LR	LR	18 34 28.2	
	comp=Z,14µm,35.8s						
KMBL	Kambalda	44.77	238	P	P	18 22 39.7	0.0
	comp=Z,13nm,1.5s						
DAV	Davao City (W)	44.81	294	LR	LR	18 41 35.8	
	comp=Z,802nm,18.2s,baz=118,slow=36						
MBWA	Marble Bar	45.11	253	P	P	18 22 41.1	-1.5
MBWA				IAmb	IAmb	18 22 48.2	
	comp=Z,29nm,1.1s						
KAPI	Kappang	46.42	275	LR	LR	18 42 15.4	
	comp=Z,581nm,21.4s,baz=85,slow=36						
MEEK	Meekatharra	46.66	245	P	P	18 22 53.6	-1.2
	comp=Z,30nm,1.4s						
MEEK	Meekatharra	46.66	245	P	P	18 22 56.1	+1.3
KLBR	Kellerberrin	48.25	239	P	P	18 23 07.1	0.0
	comp=Z,50nm,1.1s						
NWAO	Narrogin (SRO)	48.96	237	LR	LR	18 44 16.5	
	comp=Z,3µm,19.6s,baz=76,slow=37						
MORW	Morawa	49.26	242		P	18 23 14.4	-0.5
MORW	Morawa	49.26	242	P	P	18 23 15.7	+0.9
	comp=Z,22nm,0.9s						
MORW	Morawa	49.26	242	P	P	18 23 16.5	+1.6
POHA	Pohakuloa	49.55	50	IAMs_20	IAMs_20	18 44 35.2	
	comp=Z,3µm,18.0s						
TGY	Tagaytay City	52.06	299	LR	LR	18 46 00.2	
	comp=Z,462nm,18.7s,baz=167,slow=36						
TAOE	Nuku Hiva Isla	52.81	92	*e*P	P	18 23 39.9	-2.0
	comp=Z,331nm,24.3s						
TAOE				*e*S	S	18 31 08.4	-2.5
	comp=Z,1µm,26.9s						
TAOE				*e*SS	SS	18 34 43.4	-6.4
	comp=Z,677nm,27.5s						
TAOE				*e*LR	LR	18 38 49.8	
	comp=Z,3µm,28.9s						
JOW	Kunigami	53.75	317	LR	LR	18 47 23.1	
	comp=Z,872nm,18.4s,baz=131,slow=37						
JGF	Kuroka	55.13	331		P	18 23 58.0	-0.3
JGF				IAmb	IAmb	18 24 02.7	
	comp=Z,17nm,0.8s						
JGF	Kuroka	55.13	331	P	P	18 23 59.3	+1.0
JMN	Monobe	55.37	327		P	18 23 59.3	-0.8
JMN	Monobe	55.37	327	P	P	18 24 03.3	+3.2
MJAR	Matsushiro Arr	55.51	333	P	P	18 24 00.0	-1.0
MJAR	Matsushiro Arr	55.51	333	P	P	18 24 00.4	-0.6
	comp=Z,6.9nm,0.8s,baz=165,slow=8.4,SNR=14						
	comp=Z,6.9nm,0.8s						
MAJO	Matsushiro	55.51	333		P	18 24 00.7	-0.3
MAJO				IAmb	IAmb	18 24 13.7	
	comp=Z,20nm,1.0s						
MAJO	Matsushiro	55.51	333	P	P	18 24 02.6	+1.6
MAJO	Matsushiro	55.51	333	*i* P	P	18 24 01.7	+0.7
MAJO				pmax	pmax		
	comp=Z,15nm,0.9s						
MJB9	Matsu-Tunnel	55.52	333	P	P	18 24 00.8	-0.2
MJB9				IAmb	IAmb	18 24 06.0	
	comp=Z,22nm,1.1s						
SBUM	Sibu	55.60	282	P	P	18 24 00.4	-1.7
JNU	Nakatsue	56.56	324		P	18 24 07.9	-0.7
JNU	Nakatsue	56.56	324	LR	LR	18 46 07.9	
	comp=Z,527nm,19.9s,baz=120,slow=34						
JNU	Nakatsue	56.56	324	P	P	18 24 11.2	+2.6
YULB	Yu-li	56.61	309	P	P	18 24 07.3	-1.9
YULB				IAmb	IAmb	18 24 49.8	
	comp=Z,35nm,1.2s						
JSD	Sado	56.73	334		P	18 24 09.5	-0.2
JSD				IAmb	IAmb	18 24 14.8	
	comp=Z,24nm,1.0s						
KSM	Kuching	57.16	280		P	18 24 11.7	-1.5
KSM				IAmb	IAmb	18 24 22.0	
	comp=Z,16nm,1.1s						
LEM	Lembang	57.90	270	LR	LR	18 50 31.0	
	comp=Z,560nm,19.5s,baz=154,slow=37						
JTM	Tenmabayashi	57.96	338		P	18 24 17.2	-1.1
JTM	Tenmabayashi	57.96	338	P	P	18 24 19.1	+0.8
ERM	Erimo	58.31	340		P	18 24 19.6	-1.0
ERM				IAmb	IAmb	18 24 29.0	
	comp=Z,27nm,0.8s						
ERM	Erimo	58.31	340	P	P	18 24 22.9	+2.2
ERM	Erimo	58.31	340	P	P	18 24 19.7	-1.0
ERM				pmax	pmax		
	comp=Z,27nm,0.9s						
QZH	Quanzhou	59.52	309	P	P	18 24 31.0	+1.5
QZH				S	S	18 32 40.3	+0.8
QZH				pmax	pmax		
	comp=Z,480nm,6.0s						
QZH				LR	LR		
	comp=Z,670nm,18.6s						
QZH				LR	LR		
	comp=Z,830nm,18.9s						
QZH				LR	LR		
	comp=Z,1µm,21.3s						
JKA	Kamikawa-asahi	60.37	341		P	18 24 35.8	+0.9
ASAJ	Asahikawa	60.37	341	LR	LR	18 48 21.6	
	comp=Z,1µm,20.2s,baz=169,slow=34						
ASAJ	Asahikawa	60.37	341	P	P	18 24 35.8	+0.9
ASAJ				pmax	pmax		
	comp=Z,51nm,0.7s						
TJN	Taejon	60.90	325		P	18 24 38.0	-0.7
TJN	Taejon	60.90	325	P	P	18 24 38.1	-0.7
TJN				pmax	pmax		
	comp=Z,73nm,0.9s						
KSRS	Korea Array	61.37	326	P	P	18 24 43.5	+1.6
	comp=Z,5.1nm,0.8s,baz=144,slow=6.6,SNR=15						
	comp=Z,5.1nm,0.8s						
KSAR	Wonju Array Be	61.38	326		P	18 24 41.4	-0.5
KSAR	Wonju Array Be	61.38	326	P	P	18 24 41.4	-0.5
KS19	Wonju Array Si	61.43	326	P	P	18 24 42.4	0.0
YSS	Yuzhno-Sakhali	62.86	342		P	18 24 51.9	+0.2
YSS				IAMs_20	IAMs_20	18 49 51.4	
	comp=Z,2µm,20.0s						

YSS	Yuzhno-Sakhali	62.86	342	eP	P	18 24 53.2	+1.5
YSS				eS	S	18 33 19.1	-2.1
YSS				pmax	pmax		
	comp=Z,500nm,8.8s						
YSS				pmax	pmax		
	comp=N,100nm,8.6s						
YSS				pmax	pmax		
	comp=E,200nm,5.5s						
YSS				pmax	pmax		
	comp=Z,60nm,1.1s						
YSS				smax	smax		
	comp=N,400nm,9.2s						
YSS				smax	smax		
	comp=E,200nm,6.1s						
YSS				MLR	MLR		
	comp=Z,1µm,20.0s						
YSS				MLR	MLR		
	comp=N,900nm,19.0s						
YSS				MLR	MLR		
	comp=E,900nm,16.0s						
TEY	Ternei	63.28	337	eP	P	18 24 49.4	-5.1
TEY				e		18 24 49.5	
TEY				e		18 33 22.6	
NJ2	Nanjing	63.39	316	⇑P	P	18 24 56.8	+1.2
NJ2				S	S	18 33 28.0	-0.4
NJ2				pmax	pmax		
	comp=E,15nm,0.6s						
NJ2				pmax	pmax		
	comp=E,400nm,5.5s						
NJ2				LR	LR		
	comp=E,630nm,18.5s						
NJ2				LR	LR		
	comp=E,700nm,17.5s						
NJ2				LR	LR		
	comp=E,710nm,21.1s						
QIZ	Qiongzhong	63.76	299	P	P	18 24 57.3	-1.0
QIZ				S	S	18 33 32.5	-1.0
QIZ				pmax	pmax		
	comp=E,500nm,11.2s						
QIZ				LR	LR		
	comp=E,350nm,15.7s						
QIZ				LR	LR		
	comp=E,590nm,19.8s						
PSTR	Posyet	63.81	332	i P	P	18 25 00.8	+2.7
USA0B	Ussuriysk Arra	64.49	333	P	P	18 25 02.2	-0.3
USA0B	Ussuriysk Arra	64.49	333c	iP	P	18 25 02.2	-0.3
USRK	Ussuriysk Ar.	64.49	333		P	18 25 02.2	-0.4
USRK	Ussuriysk Ar.	64.49	333	P	P	18 25 03.9	+1.3
	comp=E,14nm,0.8s,baz=129,slow=7.0,SNR=19						
USRK				LR	LR	18 53 34.4	
	comp=E,543nm,19.4s,baz=135,slow=36						
	comp=E,14nm,0.8s						
VNDA	Vanda	64.98	181		P	18 25 04.9	-0.4
VNDA				IAmb	IAmb	18 25 14.6	
	comp=Z,20nm,1.6s						
VNDA	Vanda	64.98	181	P	P	18 25 05.4	+0.1
	comp=Z,1.6nm,0.8s,baz=20,slow=5.8,SNR=8.0						
	comp=Z,1.6nm,0.8s						
CASY	Casey	65.11	202		P	18 25 05.5	-0.7
CASY				IAmb	IAmb	18 25 12.8	
	comp=Z,13nm,0.8s						
CASY	Casey	65.11	202	IAMs_20	IAMs_20	18 52 49.2	
	comp=Z,2µm,18.0s						
SBA	Scott Base	65.27	180		P	18 25 08.0	+0.8
SBA	Scott Base	65.27	180	IAMs_20	IAMs_20	18 52 15.0	
	comp=Z,2µm,18.0s						
SBA	Scott Base	65.27	180	P	P	18 25 08.0	+0.8
SBA				pmax	pmax		
	comp=Z,42nm,1.6s						
SBA				MLR	MLR		
	comp=Z,2µm,18.0s						
WHN	Wuhan	65.71	312	⇑P	P	18 25 10.0	-0.8
WHN				S	S	18 33 58.5	+1.4
WHN				pmax	pmax		
	comp=Z,600nm,5.9s						
WHN				LR	LR		
	comp=Z,1µm,13.8s						
WHN				LR	LR		
	comp=Z,2µm,19.2s						
WHN				LR	LR		
	comp=Z,2µm,17.3s						
PEA0B	Petropavlovsk-	65.82	354	i P	P	18 25 14.5	+3.5
PETK	Petropavlovsk-	65.82	354		P	18 25 10.5	-0.5
PETK	Petropavlovsk-	65.82	354	P	P	18 25 11.6	+0.6
	comp=Z,4.0nm,0.8s,baz=142,slow=7.5,SNR=8.0						
PETK				LR	LR	18 50 14.2	
	comp=Z,1µm,20.6s,baz=161,slow=33						
	comp=Z,4.0nm,0.8s						
MDJ	Mudanjiang	65.89	332	P	P	18 25 15.5	+3.9
MDJ				S	S	18 34 02.8	+4.0
MDJ				pmax	pmax		
	comp=Z,25nm,1.7s						
MDJ				LR	LR		
	comp=Z,730nm,13.6s						
MDJ				LR	LR		
	comp=Z,700nm,14.5s						
MDJ				LR	LR		
	comp=Z,790nm,19.3s						
ADK	Adak	65.89	12	IAMs_20	IAMs_20	18 50 20.4	
	comp=Z,2µm,20.0s						
DL2	Dalian	65.94	323	P	P	18 25 13.5	+1.4
DL2				S	S	18 33 59.3	-0.3
DL2				pmax	pmax		
	comp=Z,51nm,1.5s						
DL2				pmax	pmax		
	comp=Z,350nm,7.3s						
DL2				LR	LR		
	comp=Z,1µm,16.5s						
DL2				LR	LR		
	comp=Z,550nm,17.3s						
DL2				LR	LR		
	comp=Z,1µm,17.9s						
TYV	Tymovskoe	66.42	344	eP	P	18 25 16.2	+1.3
TYV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TYV				pmax	pmax		
	comp=Z,100nm,4.2s						
ATKA	Atka Island	66.71	13	IAMs_20	IAMs_20	18 49 34.1	
	comp=Z,2µm,20.0s						
TIA	Tai'an	67.03	318	P	P	18 25 20.8	+1.7
TIA				S	S	18 34 11.0	-1.9
TIA				SS	SS	18 38 21.8	-10
TIA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TIA				pmax	pmax		
	comp=Z,430nm,6.9s						
TIA				LR	LR		
	comp=Z,620nm,13.1s						
TIA				LR	LR		
	comp=Z,240nm,13.7s						
TIA				LR	LR		
	comp=Z,1µm,15.1s						
CN2	Changchun	67.26	329	eP	P	18 25 22.3	+1.9
CN2				esP	pwP	18 25 29.0	-0.7
CN2				eS	S	18 34 15.5	+0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,400nm,5.0s						
CN2				LR	LR		
	comp=Z,300nm,16.0s						
CN2				LR	LR		
	comp=Z,300nm,16.0s						
CN2				LR	LR		
	comp=Z,600nm,17.0s						
BNX	BinXian	67.75	332	⇑P	P	18 25 23.5	+0.1
BNX				pP	pwP	18 25 38.0	+5.2
BNX				S	S	18 34 20.5	-0.7
BNX				pmax	pmax		
	comp=Z,17nm,0.6s						
BNX				pmax	pmax		
	comp=Z,370nm,4.9s						
BNX				LR	LR		
	comp=Z,380nm,13.6s						
BNX				LR	LR		
	comp=Z,670nm,14.1s						
BNX				LR	LR		
	comp=Z,520nm,21.7s						
GRNR	Gornyy	68.22	340	⇑iP	P	18 25 27.3	+1.0
GRNR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KLR	Kul'dur	68.62	337	LR	LR	18 53 50.0	
	comp=Z,615nm,19.9s,baz=148,slow=34						
KLR	Kul'dur	68.62	337	i P	P	18 25 29.4	+0.6
KLR				pmax	pmax		
	comp=Z,35nm,1.1s						
ENH	Enshi	69.18	309	IAmb	IAmb	18 26 25.8	
	comp=Z,20nm,1.1s						
LYN	LuoYang	69.21	315	P	P	18 25 34.0	+1.2
LYN				pP	pwP	18 25 46.8	+4.8
LYN				S	S	18 34 39.0	-0.1
LYN				SS	SS	18 38 59.8	-6.1
LYN				pmax	pmax		
	comp=Z,25nm,0.6s						
LYN				pmax	pmax		
	comp=Z,540nm,5.5s						
LYN				LR	LR		
	comp=Z,770nm,21.3s						
LYN				LR	LR		
	comp=Z,730nm,17.2s						
LYN				LR	LR		
	comp=Z,900nm,20.6s						
HNS	HongShan	69.29	318	⇑P	P	18 25 36.0	+2.7
HNS				S	S	18 34 39.3	-0.6
HNS				pmax	pmax		
	comp=Z,12nm,1.1s						
HNS				pmax	pmax		
	comp=Z,470nm,7.3s						
HNS				LR	LR		
	comp=Z,650nm,18.7s						
HNS				LR	LR		
	comp=Z,730nm,17.6s						
HNS				LR	LR		
	comp=Z,850nm,20.0s						
BJI	Beijing	69.92	321	P	P	18 25 39.5	+2.4
BJI				S	S	18 34 47.5	+0.3
BJI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BJI				pmax	pmax		
	comp=Z,210nm,5.7s						
BJI				LR	LR		
	comp=Z,330nm,16.9s						
BJI				LR	LR		
	comp=Z,140nm,18.4s						
BJI				LR	LR		
	comp=Z,340nm,19.9s						
TIY	Taiyuan	70.96	317	eP	P	18 25 46.5	+2.9
TIY				S	S	18 35 02.3	+2.7
TIY				pmax	pmax		
	comp=Z,430nm,9.0s						
TIY				LR	LR		
	comp=Z,370nm,13.1s						
TIY				LR	LR		
	comp=Z,620nm,19.2s						
TIY				LR	LR		
	comp=Z,700nm,17.9s						
HEH	HeiHe	71.16	335	eP	P	18 25 46.0	+1.5
HEH				pP	pwP	18 25 56.8	+3.0
HEH				S	S	18 34 59.3	-2.0
HEH				ScS	SKSac	18 35 46.8	-0.5
HEH				pmax	pmax		
	comp=Z,23nm,0.8s						
HEH				pmax	pmax		
	comp=Z,680nm,8.6s						
HEH				LR	LR		
	comp=Z,1µm,16.3s						
HEH				LR	LR		
	comp=Z,470nm,15.1s						
HEH				LR	LR		
	comp=Z,680nm,16.9s						
XAN	Xi'an	71.45	313	⇓P	P	18 25 48.0	+1.3
XAN				S	S	18 35 06.0	+0.6
XAN				pmax	pmax		
	comp=Z,9.0nm,1.5s						
XAN				pmax	pmax		
	comp=Z,440nm,7.9s						
XAN				LR	LR		
	comp=Z,770nm,19.2s						
XAN				LR	LR		
	comp=Z,860nm,19.2s						
XAN				LR	LR		
	comp=Z,1µm,20.6s						
P08K	Saint George I	71.83	14	IAMs_20	IAMs_20	18 52 30.5	
	comp=Z,2µm,21.0s						
SPIA	Saint Paul Isl	72.19	13	IAMs_20	IAMs_20	18 53 08.1	
	comp=Z,1µm,20.0s						
KMI	Kunming	72.27	302	P	P	18 25 53.5	+1.5
KMI				S	S	18 35 14.5	-1.0
KMI				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KMI				pmax	pmax		
	comp=Z,420nm,7.3s						
KMI				LR	LR		
	comp=Z,430nm,16.9s						
KMI				LR	LR		
	comp=Z,280nm,19.1s						
KMI				LR	LR		
	comp=Z,500nm,17.6s						
XLT	XiLinHaoTe	72.34	324	eP	P	18 25 51.8	0.0
XLT				pP	PcP	18 26 06.5	-3.3
XLT				S	S	18 35 12.8	-2.6
XLT				pmax	pmax		
	comp=Z,20nm,0.8s						
XLT				pmax	pmax		
	comp=Z,340nm,6.5s						
XLT				LR	LR		
	comp=Z,740nm,19.8s						
XLT				LR	LR		
	comp=Z,830nm,18.6s						
MA2	Magadan	72.97	352	IAMs_20	IAMs_20	18 55 05.0	
	comp=Z,2µm,20.0s						
MA2	Magadan	72.97	352	LR	LR	18 54 56.1	
	comp=Z,2µm,20.2s,baz=159,slow=33						
MA2	Magadan	72.97	352	i P	P	18 25 56.4	+1.3
MA2				pmax	pmax		
	comp=Z,9.0nm,1.2s						
CM31	Chiang Mai Arr	73.10	294	P	P	18 25 55.8	-0.9
CM31				IAmb	IAmb	18 26 03.5	
	comp=Z,8.2nm,0.8s						
CMAR	Chiang Mai Arr	73.10	294	P	P	18 25 55.2	-1.6
CMAR	Chiang Mai Arr	73.10	294	P	P	18 25 57.2	+0.5
	comp=Z,4.4nm,0.8s,baz=130,slow=4.7,SNR=25						
CMAR				LR	LR	19 00 07.3	
	comp=Z,185nm,19.1s,baz=120,slow=38						
	comp=Z,4.4nm,0.8s						
CNBA	Chernabura Isl	73.11	20	IAMs_20	IAMs_20	18 52 11.8	
	comp=Z,2µm,21.0s						
HHC	Hu-ho-hao-te	73.26	320	eP	P	18 25 59.0	+1.6
HHC				S	SKiKP	18 35 28.0	-1.6
HHC				SKS	SKSac	18 36 00.3	-3.5
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,250nm,4.1s						
HHC				LR	LR		
	comp=Z,440nm,18.8s						
HHC				LR	LR		
	comp=Z,800nm,18.8s						
HHC				LR	LR		
	comp=Z,900nm,18.6s						
PZH	PanZhiHua	73.64	303	P	P	18 26 02.0	+2.0
PZH				S	S	18 35 25.5	-5.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,420nm,9.0s						
PZH				LR	LR		
	comp=Z,310nm,17.3s						
HIA	Hailar	73.90	330	i P	P	18 26 02.9	+2.1
HIA				pmax	pmax		
	comp=Z,22nm,1.2s						
ZEA	Zeya	73.91	337	eP	P	18 26 02.2	+1.5
ZEA				eS	S	18 35 36.3	+3.8
ZEA				e		18 36 07.7	
ZEA				eSS	SS	18 40 21.5	+4.3
ZEA				pmax	pmax		
	comp=N,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,400nm,8.4s						
ZEA				smax	smax		
	comp=E,300nm,16.4s						
ZEA				MLR	MLR		
	comp=Z,400nm,20.0s						
BTO	Baotou	74.11	319	eP	P	18 26 08.0	+5.6
BTO				S	S	18 35 40.0	+4.4
BTO				pmax	pmax		
	comp=Z,26nm,0.9s						
BTO				pmax	pmax		
	comp=Z,1µm,8.5s						
BTO				LR	LR		
	comp=Z,1µm,15.4s						
BTO				LR	LR		
	comp=Z,950nm,20.8s						
BTO				LR	LR		
	comp=Z,1µm,17.1s						
CHIR	Chirikof Islan	75.27	21	IAMs_20	IAMs_20	18 53 02.9	
	comp=Z,2µm,20.0s						
TNCH	TengChong	75.77	300	⇑P	P	18 26 13.5	+1.1
TNCH				pP	sP	18 26 17.3	+3.0
TNCH				S	S	18 35 54.0	-0.9
TNCH				pmax	pmax		
	comp=Z,14nm,1.7s						
TNCH				pmax	pmax		
	comp=Z,350nm,7.3s						
TNCH				LR	LR		
	comp=Z,260nm,7.5s						
TNCH				LR	LR		
	comp=Z,240nm,7.6s						
TNCH				LR	LR		
	comp=Z,370nm,17.0s						
M11K	Mekoryuk	76.01	14	IAMs_20	IAMs_20	18 54 58.0	
	comp=Z,1µm,20.0s						
SEY	Seymchan	76.03	354	LR	LR	18 57 00.2	
	comp=Z,2µm,20.4s,baz=164,slow=34						
SEY	Seymchan	76.03	354	i P	P	18 26 15.5	+2.7
SEY				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LZH	Lanzhou	76.08	312	eP	P	18 26 17.5	+3.5
LZH				sP	PcP	18 26 25.3	-0.9
LZH				S	S	18 36 01.0	+3.1
LZH				pmax	pmax		
	comp=Z,37nm,1.1s						
LZH				pmax	pmax		
	comp=Z,570nm,7.9s						
LZH				LR	LR		
	comp=Z,600nm,19.6s						
LZH				LR	LR		
	comp=Z,960nm,20.3s						
LZH				LR	LR		
	comp=Z,1µm,19.2s						
SII	Sitkinak Islan	76.35	21	IAMs_20	IAMs_20	18 54 07.5	
	comp=Z,2µm,20.0s						
PLK4	Peulik 4	76.45	20	IAMs_20	IAMs_20	18 53 47.9	
	comp=Z,1µm,21.0s						
M13K	Dall Lake	76.72	15	IAMs_20	IAMs_20	18 55 45.0	
	comp=Z,1µm,20.0s						
M14K	Bethel	77.37	15	IAMs_20	IAMs_20	18 55 01.1	
	comp=Z,1µm,21.0s						
QSPA	South Pole Qui	77.44	180		P	18 26 20.9	-0.1
QSPA	South Pole Qui	77.44	180	IAMs_20	IAMs_20	18 58 35.3	
	comp=Z,1µm,20.0s						
QSPA	South Pole Qui	77.44	180	P	P	18 26 21.4	+0.3
	comp=Z,38nm,1.0s,baz=329,slow=1.1,SNR=84						
	comp=Z,38nm,1.0s						
K13K	Kusilvak Mount	77.73	14	IAMs_20	IAMs_20	18 56 31.5	
	comp=Z,1µm,20.0s						
GAMB	Gambell	78.00	10	IAMs_20	IAMs_20	18 59 26.4	
	comp=Z,1µm,19.0s						
P18K	Big Mountain,	78.20	19	P	P	18 26 25.3	+0.1
P18K				IAmb	IAmb	18 26 51.3	
	comp=Z,15nm,1.1s						
Q19K	Cape Douglas,	78.36	20	IAMs_20	IAMs_20	18 55 09.5	
	comp=Z,1µm,20.0s						
M16K	Timber Creek	78.40	17	IAmb	IAmb	18 26 55.6	
	comp=Z,28nm,1.4s						
M16K				IAMs_20	IAMs_20	19 08 01.4	
	comp=Z,1µm,18.0s						
SYI	Shuyak Island	78.54	21	IAMs_20	IAMs_20	18 55 43.3	
	comp=Z,2µm,20.0s						
CIT	Chita	78.68	330	eP	P	18 26 28.6	+0.6
CIT				e		18 26 39.4	
CIT				pmax	pmax		
	comp=Z,96nm,2.4s						
J14K	Nanvaranak Lak	78.70	14	IAMs_20	IAMs_20	18 56 51.1	
	comp=Z,1µm,21.0s						
K15K	Wolf Creek Mou	78.79	15		P	18 26 27.4	-0.9
K15K				IAmb	IAmb	18 26 47.4	
	comp=Z,11nm,0.9s						
K15K				IAMs_20	IAMs_20	18 57 07.6	
	comp=Z,1µm,20.0s						
N19K	Bonanza Creek	79.55	18	IAMs_20	IAMs_20	18 55 36.8	
	comp=Z,1µm,20.0s						
HOM	Homer	79.58	20	IAMs_20	IAMs_20	18 56 17.8	
	comp=Z,2µm,20.0s						
YAK	Yakutsk	79.67	343	P	P	18 26 32.8	-0.3
YAK	Yakutsk	79.67	343	IAMs_20	IAMs_20	19 03 04.9	
	comp=Z,1µm,19.0s						
YAK	Yakutsk	79.67	343	LR	LR	19 01 32.9	
	comp=Z,722nm,18.7s,baz=132,slow=36						
YAK	Yakutsk	79.67	343c	eP	P	18 26 33.5	+0.4
YAK				pmax	pmax		
	comp=Z,51nm,1.3s						
ULN	Ulaanbaatar	79.77	324	P	P	18 26 33.9	-0.4
ULN				IAmb	IAmb	18 26 37.8	
	comp=Z,14nm,0.8s						
ULN	Ulaanbaatar	79.77	324c	eP	P	18 26 35.6	+1.4
ULN				pmax	pmax		
	comp=Z,14nm,0.7s						
J16K	Anvik River	79.86	15	P	P	18 26 34.0	-0.2
J16K				IAMs_20	IAMs_20	18 57 39.8	
	comp=Z,1µm,20.0s						
ANM	Nome	79.89	12	IAMs_20	IAMs_20	18 56 54.6	
	comp=Z,1µm,19.0s						
K17K	Iditarod	79.98	16	IAMs_20	IAMs_20	18 58 25.0	
	comp=Z,1µm,20.0s						
L18K	Granite Mounta	80.01	17		P	18 26 34.6	-0.4
SONM	Songino Array	80.14	324		P	18 26 34.9	-1.2
SONM				IAmb	IAmb	18 26 56.4	
	comp=Z,35nm,1.6s						
SONM	Songino Array	80.14	324	P	P	18 26 36.4	+0.2
	comp=Z,6.0nm,0.7s,baz=149,slow=8.4,SNR=22						
SONM				LR	LR	19 02 55.3	
	comp=Z,590nm,18.8s,baz=108,slow=36						
	comp=Z,6.0nm,0.7s						
J17K	VABM Dome	80.33	15	IAMs_20	IAMs_20	18 57 56.4	
	comp=Z,1µm,20.0s						
BILL	Bilibino	80.40	0	P	P	18 26 37.1	+0.1
BILL				IAmb	IAmb	18 26 41.7	
	comp=Z,21nm,1.1s						
BILL	Bilibino	80.40	0c	eP	P	18 26 37.8	+0.8
BILL				pmax	pmax		
	comp=Z,24nm,1.3s						
GTA	Gaotai	80.41	314	eP	P	18 26 39.5	+1.7
GTA				pP	PcP	18 26 43.8	-1.0
GTA				S	S	18 36 40.5	-3.8
GTA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,580nm,8.4s						
GTA				LR	LR		
	comp=Z,610nm,15.1s						
GTA				LR	LR		
	comp=Z,410nm,19.1s						
GTA				LR	LR		
	comp=Z,680nm,19.1s						
L19K	White Mountain	80.51	17	IAmb	IAmb	18 27 55.6	
	comp=Z,22nm,1.9s						
CAPN	Captain Cook N	80.58	20	IAMs_20	IAMs_20	18 56 22.1	
	comp=Z,1µm,20.0s						
BRDH	Bariadhala	80.92	296	LR	LR	19 04 11.5	
	comp=Z,246nm,19.1s,baz=126,slow=37						
F15K	North Star Dit	81.05	12	IAMs_20	IAMs_20	18 56 50.1	
	comp=Z,1µm,20.0s						
FIS	Fire Island	81.16	20	IAMs_20	IAMs_20	18 56 39.6	
	comp=Z,2µm,22.0s						
G16K	Koyuk River	81.25	13	IAmb	IAmb	18 26 47.9	
	comp=Z,35nm,1.9s						
G16K				IAMs_20	IAMs_20	18 58 39.5	
	comp=Z,1µm,20.0s						
RC01	Rabbit Creek A	81.28	20	IAMs_20	IAMs_20	18 56 51.7	
	comp=Z,2µm,20.0s						
Q23K	Middleton Isla	81.30	22	IAMs_20	IAMs_20	19 07 30.5	
	comp=Z,1µm,18.0s						
PWL	Port Wells	81.59	21	P	P	18 26 43.0	-0.5
M22K	Willow	81.64	19	IAMs_20	IAMs_20	18 57 41.2	
	comp=Z,1µm,21.0s						
J19K	Poorman	81.72	16	IAMs_20	IAMs_20	18 59 19.2	
	comp=Z,1µm,20.0s						
HIN	Hinchinbrook I	81.91	22	IAMs_20	IAMs_20	18 57 23.5	
	comp=Z,2µm,19.0s						
KNK	Knik Glacier	81.95	20	IAMs_20	IAMs_20	18 58 12.3	
	comp=Z,2µm,20.0s						
H18K	Honhosa River	81.96	14	IAMs_20	IAMs_20	18 58 56.4	
	comp=Z,1µm,20.0s						
GLI	Glacier Island	82.04	21	IAMs_20	IAMs_20	18 58 22.8	
	comp=Z,2µm,20.0s						
BOD	Bodaibo	82.08	335	eP	P	18 26 46.8	+0.7

BOD				pmax	pmax		
	comp=Z,26nm,1.7s						
J20K	**Nowinta River**	**82.27**	**16**	IAMs_20	IAMs_20	19 09 43.7	
	comp=Z,1µm,18.0s						
EYAK	**Cordova Ski Ar**	**82.29**	**22**	IAMs_20	IAMs_20	18 56 41.5	
	comp=Z,1µm,20.0s						
KAIM	**Kayak Island**	**82.36**	**23**	IAMs_20	IAMs_20	18 57 42.5	
	comp=Z,2µm,20.0s						
F17K	**Baldwin Pennin**	**82.39**	**13**	IAMs_20	IAMs_20	18 58 12.5	
	comp=Z,1µm,20.0s						
RAGM	**Ragged Mountai**	**82.57**	**22**	IAMs_20	IAMs_20	18 59 03.0	
	comp=Z,1µm,20.0s						
HMT	**Hamilton**	**82.69**	**22**	IAMs_20	IAMs_20	18 58 25.2	
	comp=Z,2µm,20.0s						
SUCK	**Suckling Hills**	**82.70**	**23**	IAMs_20	IAMs_20	18 58 03.4	
	comp=Z,2µm,20.0s						
H19K	**Roundabout Mou**	**82.74**	**15**	IAMs_20	IAMs_20	18 59 40.9	
	comp=Z,1µm,20.0s						
GOMU	**GeErMu**	**82.80**	**309**	P	**P**	**18 26 51.3**	**+0.5**
GOMU				S	**S**	**18 37 09.3**	**-0.3**
GOMU				SS	**SS**	**18 42 33.8**	**+1.2**
GOMU				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TRF	**Thorofare Moun**	**82.84**	**18**	IAMs_20	IAMs_20	18 58 03.8	
	comp=Z,1µm,21.0s						
KLU	**Klutina**	**82.87**	**21**	IAMs_20	IAMs_20	18 58 05.9	
	comp=Z,2µm,20.0s						
BERG	**Berg Lake**	**82.94**	**23**	IAMs_20	IAMs_20	18 58 11.8	
	comp=Z,2µm,20.0s						
BMRM	**Bremner River**	**82.99**	**22**	IAMs_20	IAMs_20	19 10 23.0	
	comp=Z,1µm,18.0s						
G19K	**Purcell Mounta**	**83.08**	**14**	IAMs_20	IAMs_20	18 58 48.9	
	comp=Z,1µm,20.0s						
BPAW	**Bear Paw Mtn.**	**83.11**	**18**	IAMs_20	IAMs_20	19 10 47.0	
	comp=Z,929nm,18.0s						
ZAK	**Zakamensk**	**83.18**	**325**	*e*P	**P**	**18 26 52.5**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,13nm,1.3s						
C16K	**Lisburne Hills**	**83.19**	**10**	IAMs_20	IAMs_20	18 59 29.6	
	comp=Z,1µm,21.0s						
RND	**Reindeer**	**83.25**	**19**	P	**P**	**18 26 51.4**	**-0.8**
RND				IAMs_20	IAMs_20	19 11 04.6	
	comp=Z,900nm,18.0s						
RND	**Reindeer**	**83.25**	**19**	P	**P**	**18 26 51.4**	**-0.8**
RND				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RND				MLR	MLR		
	comp=Z,900nm,18.0s						
WAX	**Waxell Ridge**	**83.30**	**23**	IAMs_20	IAMs_20	18 57 50.2	
	comp=Z,2µm,20.0s						
E18K	**Tukpahlearik C**	**83.35**	**12**	IAmb	IAmb	18 27 20.2	
	comp=Z,7.8nm,1.0s						
E18K				IAMs_20	IAMs_20	18 59 25.1	
	comp=Z,1µm,20.0s						
CRQM	**Cirque**	**83.39**	**22**	IAMs_20	IAMs_20	18 58 36.0	
	comp=Z,1µm,20.0s						
HOPS	**Hopland Field**	**83.39**	**48**	IAMs_20	IAMs_20	19 04 42.5	
	comp=Z,2µm,18.0s						
JCC	**Jacoby Creek,**	**83.41**	**46**	IAMs_20	IAMs_20	19 10 00.7	
	comp=Z,918nm,18.0s						
N25K	**Chitina, Valde**	**83.42**	**21**	IAmb	IAmb	18 27 34.6	
	comp=Z,23nm,1.7s						
N25K				IAMs_20	IAMs_20	18 58 32.3	
	comp=Z,2µm,20.0s						
RDOG	**Red Dog Mine**	**83.44**	**11**	IAMs_20	IAMs_20	18 59 48.2	
	comp=Z,1µm,20.0s						
MAW	**Mawson**	**83.46**	**202**	P	**P**	**18 26 53.7**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=116,slow=5.1,SNR=6.1						
MAW				LR	LR	19 01 41.4	
	comp=Z,328nm,18.1s,baz=104,slow=34						
	comp=Z,1.9nm,0.7s						
MESA	**MESA**	**83.47**	**23**	IAMs_20	IAMs_20	18 57 43.8	
	comp=Z,1µm,20.0s						
F19K	**Shaleruckik Mo**	**83.48**	**14**	IAMs_20	IAMs_20	19 01 58.5	
	comp=Z,1µm,20.0s						
DHY	**Denali Highway**	**83.48**	**19**	IAMs_20	IAMs_20	18 58 34.9	
	comp=Z,2µm,20.0s						
TGL	**Tana Glacier**	**83.50**	**23**	IAMs_20	IAMs_20	18 58 49.6	
	comp=Z,1µm,20.0s						
IRK	**Irkutsk**	**83.56**	**327**	*e*P	**P**	**18 26 54.1**	**+0.2**
IRK				pmax	pmax		
	comp=Z,50nm,2.6s						
ISLE	**Juniper Island**	**83.59**	**23**	IAMs_20	IAMs_20	18 58 40.9	
	comp=Z,1µm,20.0s						
GLB	**Gilahina Butte**	**83.59**	**22**	IAMs_20	IAMs_20	19 09 09.9	
	comp=Z,967nm,18.0s						
BWN	**Browne**	**83.62**	**18**	IAMs_20	IAMs_20	18 59 30.7	
	comp=Z,1µm,20.0s						
I21K	**Tanana**	**83.64**	**16**	IAMs_20	IAMs_20	19 07 28.9	
	comp=Z,1µm,18.0s						
YAH	**Yahtse**	**83.67**	**23**	IAMs_20	IAMs_20	18 58 19.8	
	comp=Z,1µm,20.0s						
H21K	**Melozitna Rive**	**83.78**	**16**	IAMs_20	IAMs_20	19 00 31.6	
	comp=Z,961nm,20.0s						
GRNC	**Granite Creek**	**83.89**	**23**	IAMs_20	IAMs_20	18 58 49.0	
	comp=Z,1µm,20.0s						
TABL	**Table Mountain**	**83.95**	**23**	IAMs_20	IAMs_20	18 58 09.4	
	comp=Z,1µm,20.0s						
NEA2	**Nenana**	**84.04**	**18**	IAMs_20	IAMs_20	18 58 50.6	
	comp=Z,1µm,20.0s						
PCA	**Pinnacle**	**84.08**	**24**	IAMs_20	IAMs_20	18 59 01.0	
	comp=Z,1µm,20.0s						
E19K	**Redstone River**	**84.11**	**13**	IAMs_20	IAMs_20	19 02 19.3	
	comp=Z,1µm,20.0s						
F20K	**Avaraart Lake**	**84.14**	**14**	IAMs_20	IAMs_20	19 00 12.8	
	comp=Z,1µm,19.0s						
BARN	**Barnard Glacie**	**84.14**	**23**	IAMs_20	IAMs_20	18 58 49.4	
	comp=Z,1µm,20.0s						
CTGM	**Chitina Glacie**	**84.20**	**23**	IAMs_20	IAMs_20	18 58 18.1	
	comp=Z,1µm,20.0s						
BCPM	**Bancas Point**	**84.24**	**24**	IAMs_20	IAMs_20	18 58 36.2	
	comp=Z,1µm,20.0s						
LOGN	**Logan Glacier**	**84.24**	**23**	IAMs_20	IAMs_20	18 58 19.1	
	comp=Z,1µm,20.0s						
G21K	**Allakaket**	**84.26**	**15**	IAMs_20	IAMs_20	19 00 28.2	
	comp=Z,1µm,20.0s						
C18K	**Utukok River**	**84.28**	**11**	IAMs_20	IAMs_20	18 58 42.4	
	comp=Z,1µm,20.0s						
S31K	**Pelican**	**84.51**	**27**	IAMs_20	IAMs_20	19 08 37.5	
	comp=Z,1µm,18.0s						
M26K	**Nabesna, AK**	**84.51**	**21**	IAmb	IAmb	18 27 19.0	
	comp=Z,7.4nm,1.1s						
M26K				IAMs_20	IAMs_20	18 58 48.2	
	comp=Z,1µm,20.0s						
O28M	**Mount Upton**	**84.52**	**23**	IAmb	IAmb	18 29 54.6	
	comp=Z,4.4nm,0.7s						
O28M				IAMs_20	IAMs_20	18 58 27.6	
	comp=Z,1µm,20.0s						
HDA	**Harding Lake**	**84.56**	**19**	IAmb	IAmb	18 27 59.3	
	comp=Z,9.9nm,0.9s						
HDA				IAMs_20	IAMs_20	18 59 56.2	
	comp=Z,1µm,20.0s						
COLA	**College**	**84.61**	**18**	IAMs_20	IAMs_20	18 59 58.5	
	comp=Z,1µm,20.0s						
YBH	**Yreka Blue Hor**	**84.67**	**45**	P	**P**	**18 26 58.7**	**-1.3**
YBH	**Yreka Blue Hor**	**84.67**	**45**	LR	LR	19 00 46.3	
	comp=Z,27nm,18.4s,baz=272,slow=33						
YBH	**Yreka Blue Hor**	**84.67**	**45**	P	**P**	**18 26 58.7**	**-1.3**
YBH				pmax	pmax		
	comp=Z,5.0nm,1.1s						
RIDG	**Independent Ri**	**84.77**	**20**	IAmb	IAmb	18 27 20.8	
	comp=Z,14nm,1.2s						
RIDG				IAMs_20	IAMs_20	18 58 51.9	
	comp=Z,1µm,21.0s						
D19K	**Kuna River**	**84.77**	**12**	IAMs_20	IAMs_20	19 00 52.6	
	comp=Z,2µm,20.0s						
L26K	**Log Cabin Wild**	**84.80**	**21**	IAMs_20	IAMs_20	18 58 58.7	
	comp=Z,1µm,20.0s						
H23K	**Yukon River**	**84.80**	**17**	IAMs_20	IAMs_20	19 12 06.6	
	comp=Z,846nm,18.0s						
F21K	**Alatna River**	**84.81**	**15**	IAMs_20	IAMs_20	18 59 53.8	
	comp=Z,1µm,20.0s						
P29M	**Windy Craggy**	**84.82**	**25**	IAMs_20	IAMs_20	19 07 02.6	
	comp=Z,2µm,18.0s						
IL31		**84.83**	**18**	IAmb	IAmb	18 27 26.4	
	comp=Z,12nm,1.4s						
ILAR	**Eielson Array**	**84.83**	**18**	P	**P**	**18 26 58.3**	**-1.8**
ILAR	**Eielson Array**	**84.83**	**18**	P	**P**	**18 26 58.5**	**-1.6**
	comp=Z,2.5nm,0.8s,baz=232,slow=6.6,SNR=27						
	comp=Z,2.5nm,0.8s						
O29M	**Mount Kennedy**	**84.87**	**24**	IAMs_20	IAMs_20	19 06 08.0	
	comp=Z,1µm,18.0s						
M27K	**Edge Creek, AK**	**84.88**	**22**	IAmb	IAmb	18 28 25.7	
	comp=Z,18nm,1.7s						
DOT	**Dot Lake**	**84.97**	**20**	IAmb	IAmb	18 27 21.7	
	comp=Z,8.7nm,1.1s						
DOT				IAMs_20	IAMs_20	19 04 56.1	
	comp=Z,966nm,19.0s						
C19K	**Lookout Ridge**	**84.98**	**12**	IAMs_20	IAMs_20	18 59 38.0	
	comp=Z,1µm,20.0s						
MOY	**Mondy**	**85.06**	**325**	*e*P	**P**	**18 27 01.8**	**+0.1**
MOY				pmax	pmax		
	comp=Z,39nm,2.6s						
J25K	**Salcha River,**	**85.19**	**19**	IAmb	IAmb	18 27 22.7	
	comp=Z,9.3nm,0.9s						
J25K				IAMs_20	IAMs_20	19 00 11.1	
	comp=Z,2µm,20.0s						
HATC	**Hat Creek Radi**	**85.21**	**47**	IAMs_20	IAMs_20	19 10 15.6	
	comp=Z,864nm,18.0s						
D20K	**Etivluk River**	**85.27**	**13**	IAMs_20	IAMs_20	19 01 37.8	
	comp=Z,1µm,20.0s						
V35K	**Ketchikan**	**85.27**	**30**	IAMs_20	IAMs_20	19 04 07.9	
	comp=Z,1µm,18.0s						
G23K	**Bananza Creek**	**85.32**	**16**	IAmb	IAmb	18 27 35.8	
	comp=Z,25nm,1.9s						
G23K				IAMs_20	IAMs_20	18 59 46.3	
	comp=Z,1µm,21.0s						
L27K	**Beaver Creek,**	**85.35**	**21**	IAMs_20	IAMs_20	18 59 45.4	
	comp=Z,1µm,20.0s						
PASC	**Pasadena Art C**	**85.44**	**54**	IAMs_20	IAMs_20	19 04 27.9	
	comp=Z,1µm,18.0s						
R32K	**Eaglecrest**	**85.44**	**27**	IAMs_20	IAMs_20	19 08 49.1	
	comp=Z,1µm,19.0s						
BBB	**Bella Bella**	**85.61**	**34**	LR	LR	19 02 39.0	
	comp=Z,1µm,18.1s,baz=238,slow=34						
E21K	**Killik River**	**85.65**	**14**	P	**P**	**18 27 03.8**	**-0.4**
E21K				IAmb	IAmb	18 27 43.8	
	comp=Z,25nm,1.8s						
COLD	**Coldfoot**	**85.66**	**16**	IAMs_20	IAMs_20	19 01 14.1	
	comp=Z,1µm,20.0s						
BEKR	**Beckworth**	**85.67**	**48**	P	**P**	**18 27 06.0**	**+0.9**
BEKR				IAmb	IAmb	18 27 21.9	
	comp=Z,11nm,1.5s						
J26L	**Joseph Creek**	**85.70**	**20**	IAMs_20	IAMs_20	18 59 32.4	
	comp=Z,1µm,21.0s						
E22K	**Anaktuvuk Pass**	**85.93**	**15**	IAMs_20	IAMs_20	19 00 30.2	
	comp=Z,2µm,21.0s						
G24K	**Hadweenzic Riv**	**86.02**	**17**	IAmb	IAmb	18 27 40.6	
	comp=Z,8.5nm,1.0s						
NLWA	**Neilton Lookou**	**86.08**	**40**	IAMs_20	IAMs_20	19 00 39.9	
	comp=Z,938nm,20.0s						
N30M	**Aishikik Lake**	**86.14**	**24**	IAMs_20	IAMs_20	19 00 00.5	
	comp=Z,1µm,20.0s						
O30N	**Mendenhall**	**86.15**	**25**	IAMs_20	IAMs_20	19 08 04.7	
	comp=Z,1µm,18.0s						
M29M	**Somme Creek**	**86.19**	**23**	IAMs_20	IAMs_20	19 00 05.7	
	comp=Z,1µm,20.0s						
B20K	**Meade River**	**86.21**	**12**	IAMs_20	IAMs_20	19 00 49.5	
	comp=Z,1µm,20.0s						
J05D	**Fort Rock, OR**	**86.25**	**44**	IAmb	IAmb	18 27 29.3	
	comp=Z,26nm,1.9s						
D22K	**Ayikyak River**	**86.29**	**14**	IAmb	IAmb	18 27 45.6	
	comp=Z,22nm,1.6s						
D22K				IAMs_20	IAMs_20	19 01 43.7	
	comp=Z,1µm,20.0s						
U35K	**Hyder**	**86.35**	**30**	IAMs_20	IAMs_20	19 04 24.3	
	comp=Z,1µm,18.0s						
I26K	**Coal Creek Min**	**86.36**	**19**	IAMs_20	IAMs_20	19 00 03.9	
	comp=Z,2µm,20.0s						
E23K	**Chandalar**	**86.42**	**15**	IAmb	IAmb	18 27 37.2	
	comp=Z,11nm,1.3s						
E23K				IAMs_20	IAMs_20	19 01 07.3	
	comp=Z,916nm,20.0s						
B21K	**Ikpikpuk River**	**86.43**	**13**	IAmb	IAmb	18 27 41.1	
	comp=Z,34nm,1.6s						
B21K				IAMs_20	IAMs_20	19 02 07.4	
	comp=Z,1µm,20.0s						
F24K	**Squaw Lake**	**86.49**	**16**		**P**	**18 27 07.5**	**-0.9**
P32M	**Atlin**	**86.50**	**26**	IAMs_20	IAMs_20	18 59 42.0	
	comp=Z,982nm,20.0s						
FYU	**Fort Yukon**	**86.57**	**17**	IAMs_20	IAMs_20	19 01 19.3	
	comp=Z,1µm,20.0s						
PFO	**Pinyon Flats O**	**86.63**	**55**	LR	LR	18 57 49.3	
	comp=Z,1µm,21.1s,baz=264,slow=30						
EVN	**Everest**	**86.63**	**299**		**P**	**18 27 08.5**	**-2.2**
EVN				IAmb	IAmb	18 27 18.2	
	comp=Z,13nm,0.9s						
N31M	**Braeburn, Yuko**	**86.67**	**24**	IAMs_20	IAMs_20	19 08 25.6	
	comp=Z,1µm,18.0s						
NVAR	**Mina Array Bea**	**86.70**	**50**	P	**P**	**18 27 09.3**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=243,slow=9.3,SNR=5.3						
NVAR				LR	LR	19 02 06.1	
	comp=Z,2µm,18.1s,baz=253,slow=33						
	comp=Z,0.4nm,0.6s						
L29M	**L29M**	**86.71**	**22**	IAMs_20	IAMs_20	19 00 53.4	
	comp=Z,1µm,20.0s						
E24K	**Your Creek**	**86.73**	**16**	IAMs_20	IAMs_20	19 01 46.4	
	comp=Z,1µm,21.0s						
T35M	**Bob Quinn**	**86.75**	**29**	IAMs_20	IAMs_20	19 10 23.0	
	comp=Z,967nm,18.0s						
D23K	**Nanushuk River**	**86.83**	**14**	IAmb	IAmb	18 27 38.9	
	comp=Z,8.6nm,1.0s						
TOLK	**Toolik Lake Re**	**86.86**	**15**	IAMs_20	IAMs_20	19 02 11.9	
	comp=Z,1µm,20.0s						
M30M	**Minto, Yukon**	**86.90**	**23**	IAMs_20	IAMs_20	18 59 36.4	
	comp=Z,1µm,20.0s						
GMN	**Gold Mountain**	**87.13**	**51**	P	**P**	**18 27 10.9**	**-1.5**
F25K	**Christian Rive**	**87.16**	**17**	IAMs_20	IAMs_20	19 00 52.8	
	comp=Z,1µm,21.0s						
P33M	**Teslin, Yukon**	**87.21**	**26**	IAMs_20	IAMs_20	19 07 40.8	
	comp=Z,1µm,18.0s						
B22K	**Teshekpuk Lake**	**87.25**	**13**	IAMs_20	IAMs_20	19 03 24.1	
	comp=Z,1µm,20.0s						
G26K	**Porcupine Rive**	**87.25**	**18**	IAmb	IAmb	18 28 02.0	
	comp=Z,10nm,1.1s						
G26K				IAMs_20	IAMs_20	19 01 47.4	
	comp=Z,1µm,20.0s						
D24K	**Happy Valley**	**87.42**	**15**	IAMs_20	IAMs_20	19 02 31.7	
	comp=Z,1µm,21.0s						
H27K	**Steamboat Moun**	**87.47**	**19**	IAMs_20	IAMs_20	19 01 52.3	
	comp=Z,2µm,20.0s						
J29N	**Klondike Camp**	**87.47**	**21**	IAMs_20	IAMs_20	18 59 58.5	
	comp=Z,1µm,20.0s						
C23K	**Itkillik River**	**87.50**	**14**	IAMs_20	IAMs_20	19 01 33.6	
	comp=Z,946nm,19.0s						
E25K	**Arctic Village**	**87.54**	**16**	IAMs_20	IAMs_20	19 02 52.9	
	comp=Z,908nm,20.0s						
DLBC	**Dease Lake**	**87.56**	**28**	LR	LR	19 01 58.9	
	comp=Z,43nm,19.0s,baz=236,slow=33						
N32M	**Quiet Lake**	**87.59**	**25**	IAMs_20	IAMs_20	19 07 13.8	
	comp=Z,1µm,18.0s						
M31M	**Drury Creek, Y**	**87.62**	**24**	IAMs_20	IAMs_20	19 08 31.6	
	comp=Z,1µm,18.0s						
F26K	**Sheenjek River**	**87.65**	**17**	IAMs_20	IAMs_20	19 01 15.8	
	comp=Z,1µm,20.0s						
TIXI	**Tiksi**	**87.66**	**349**	LR	LR	19 04 10.5	
	comp=Z,567nm,20.4s,baz=149,slow=34						
I07A	**Izee**	**87.71**	**44**	P	**P**	**18 27 13.7**	**-1.2**
I07A				IAmb	IAmb	18 28 06.3	
	comp=Z,21nm,2.0s						
WVOR	**Wild Horse Val**	**87.76**	**46**	IAMs_20	IAMs_20	19 04 34.8	
	comp=Z,833nm,18.0s						
G27K	**Doyon Strip**	**87.80**	**18**	IAMs_20	IAMs_20	19 02 04.9	
	comp=Z,1µm,20.0s						
C24K	**Franklin Bluff**	**87.86**	**14**	IAMs_20	IAMs_20	19 04 55.3	
	comp=Z,1µm,19.0s						
I29M	**Ogilvie Camp,**	**87.98**	**20**	IAMs_20	IAMs_20	19 01 28.9	
	comp=Z,1µm,20.0s						
D25K	**Kavik River**	**88.16**	**15**	IAMs_20	IAMs_20	19 02 53.2	
	comp=Z,1µm,21.0s						
G08A	**Pilot Rock**	**88.48**	**43**		**P**	**18 27 17.8**	**-0.7**
G08A				IAmb	IAmb	18 28 00.5	
	comp=Z,17nm,1.8s						
I30M	**Mount Dempster**	**88.56**	**21**	IAMs_20	IAMs_20	19 01 14.3	
	comp=Z,1µm,21.0s						
E27K	**Coleen River**	**88.70**	**17**	IAMs_20	IAMs_20	19 03 03.6	
	comp=Z,944nm,20.0s						
F28M	**Old Crow**	**88.85**	**18**	IAMs_20	IAMs_20	19 02 28.6	
	comp=Z,892nm,20.0s						
G29M	**Pine Creek**	**89.00**	**19**	IAMs_20	IAMs_20	19 01 45.6	
	comp=Z,1µm,20.0s						
C27K	**Jago River**	**89.05**	**16**	IAMs_20	IAMs_20	19 03 24.9	
	comp=Z,1µm,21.0s						
LPIG	**La Paz**	**89.28**	**65**	LR	LR	18 58 29.5	
	comp=Z,376nm,21.1s,baz=248,slow=30						
BMO	**Blue Mountains**	**89.45**	**44**	IAMs_20	IAMs_20	19 07 00.4	
	comp=Z,1µm,18.0s						
SLBS	**Sierra La Lagu**	**89.50**	**66**	IAMs_20	IAMs_20	19 04 15.2	
	comp=Z,966nm,18.0s						
D27M	**Malcolm River**	**89.55**	**17**	IAMs_20	IAMs_20	19 02 48.0	
	comp=Z,1µm,20.0s						
ELK	**Elko**	**89.66**	**48**	IAMs_20	IAMs_20	19 07 53.4	
	comp=Z,1µm,18.0s						
ELK	**Elko**	**89.66**	**48**	LR	LR	19 04 25.4	
	comp=Z,887nm,18.0s,baz=249,slow=34						
E29M	**Blow River**	**89.91**	**18**	IAMs_20	IAMs_20	19 02 51.7	
	comp=Z,1µm,20.0s						
F30M	**Barrier River**	**90.11**	**19**	IAMs_20	IAMs_20	19 02 20.1	
	comp=Z,887nm,21.0s						
G31M	**Satah River**	**90.22**	**20**	IAMs_20	IAMs_20	19 02 48.1	
	comp=Z,971nm,20.0s						
SYO	**Syowa Base**	**90.44**	**197**	⇓*i*P	**P**	**18 27 26.8**	**-0.4**
SYO	**Syowa Base**	**90.44**	**197**	⇑*i*sP	sP	18 27 30.7	+1.7
WMQ	**Urumqi**	**90.46**	**315**	*e*P	**P**	**18 27 23.5**	**-4.3**
WMQ				pmax	pmax		
	comp=Z,58nm,1.1s						
WMQ				LR	LR		
	comp=N,610nm,15.1s						
WMQ				LR	LR		
	comp=E,270nm,15.1s						
WMQ				LR	LR		
	comp=Z,300nm,24.9s						
NEW	**Newport**	**90.64**	**41**	LR	LR	19 03 11.9	
	comp=Z,577nm,19.8s,baz=256,slow=32						
F31M	**Tsiigehtchic**	**90.68**	**20**	IAMs_20	IAMs_20	19 03 43.1	
	comp=Z,918nm,20.0s						
SMAI	**San Martin Ant**	**91.04**	**163**	P	**P**	**18 27 29.2**	**-0.8**
WUAZ	**Wupatki**	**91.19**	**54**	IAMs_20	IAMs_20	19 01 05.2	
	comp=Z,936nm,20.0s						
HVU	**Hansel Valley**	**91.73**	**48**	P	**P**	**18 27 32.5**	**-1.4**
HVU				IAmb	IAmb	18 27 51.7	
	comp=Z,5.4nm,1.1s						
HVU	**Hansel Valley**	**91.73**	**48**	P	**P**	**18 27 32.5**	**-1.4**
HVU				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HMU	**Henry Mountain**	**92.28**	**52**	IAmb	IAmb	18 30 06.2	
	comp=Z,12nm,0.9s						
HWUT	**Hardware Ranch**	**92.56**	**48**	IAMs_20	IAMs_20	19 05 47.2	
	comp=Z,822nm,19.0s						
DLMT	**Dillon**	**92.79**	**44**	P	**P**	**18 27 36.7**	**-2.0**
FXWY	**Fox Creek**	**93.45**	**46**	IAMs_20	IAMs_20	19 07 34.4	
	comp=Z,765nm,19.0s						
TPAW	**Teton Pass**	**93.46**	**46**	IAMs_20	IAMs_20	19 11 57.8	
	comp=Z,881nm,18.0s						
SNOW	**Snow King Moun**	**93.60**	**46**	IAMs_20	IAMs_20	19 15 29.4	
	comp=Z,794nm,18.0s						
MVCO	**Mesa Verde**	**93.84**	**53**	IAMs_20	IAMs_20	19 11 32.5	
	comp=Z,722nm,18.0s						
PMSA	**Palmer Station**	**94.14**	**161**	LR	LR	19 04 44.8	
	comp=Z,695nm,19.8s,baz=226,slow=32						
PDAR	**Pinedale Array**	**94.29**	**47**	LR	LR	19 06 48.0	
	comp=Z,338nm,18.5s,baz=253,slow=33						
TROLL	**Troll, Antarti**	**94.90**	**185**	⇑P	**P**	**18 27 47.1**	**-0.8**
	comp=Z,728nm,0.9s						
MK31	**Makanchi Array**	**94.91**	**317**	*ce*P	**P**	**18 27 48.5**	**+0.3**
MKAR	**Makanchi Array**	**94.91**	**317**		**P**	**18 27 47.6**	**-0.7**
MKAR	**Makanchi Array**	**94.91**	**317**	P	**P**	**18 27 48.5**	**+0.3**
	comp=Z,6.7nm,0.8s,baz=96,slow=6.2,SNR=42						
MKAR				PKiKP	**PKiKP**	**18 32 29.5**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=87,slow=1.3,SNR=5.5						
MKAR				PKKPbc	**PKKPbc**	**18 44 45.4**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=302,slow=2.7,SNR=3.6						
MKAR				LR	LR	19 12 18.8	
	comp=Z,451nm,19.4s,baz=123,slow=37						
	comp=Z,6.7nm,0.8s						
ANMO	**Albuquerque**	**94.98**	**55**	IAMs_20	IAMs_20	19 09 38.7	
	comp=Z,1µm,18.0s						
ANMO	**Albuquerque**	**94.98**	**55**	IAMs_20	IAMs_20	19 09 38.7	
	comp=Z,1µm,18.0s						
ANMO	**Albuquerque**	**94.98**	**55**	IAMs_20	IAMs_20	19 09 38.7	
	comp=Z,1µm,18.0s						
ANMO	**Albuquerque**	**94.98**	**55**	LR	LR	19 07 03.2	
	comp=Z,1µm,18.0s,baz=2.0,slow=33						
RLMT	**Red Lodge**	**95.02**	**45**	IAMs_20	IAMs_20	19 07 55.9	
	comp=Z,851nm,19.0s						
ZAA0	**Zalesovo Array**	**95.03**	**324**		**P**	**18 27 46.4**	**-2.1**
ZALV	**Zalesovo Beam**	**95.03**	**324**		**P**	**18 27 45.8**	**-2.7**
ZALV	**Zalesovo Beam**	**95.03**	**324**	P	**P**	**18 27 48.1**	**-0.4**
	comp=Z,4.3nm,0.7s,baz=107,slow=5.1,SNR=11						
ZALV				LR	LR	19 10 26.0	
	comp=Z,384nm,20.3s,baz=96,slow=35						
	comp=Z,4.3nm,0.7s						
ZALV	**Zalesovo Beam**	**95.03**	**324**	*i* P	**P**	**18 27 49.5**	**+1.0**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MAKZ	**Makanchi**	**95.12**	**317**		**P**	**18 27 46.7**	**-2.5**
MAKZ	**Makanchi**	**95.12**	**317**	P	**P**	**18 27 46.7**	**-2.5**
MAKZ				pmax	pmax		
	comp=Z,17nm,1.1s						
MAKZ				MLR	MLR		
	comp=Z,500nm,20.0s						
MNTX	**Cornudas Mount**	**95.21**	**59**	IAMs_20	IAMs_20	19 06 22.0	
	comp=Z,836nm,19.0s						
SNAA	**Sanae**	**95.62**	**183**	⇑P	**P**	**18 27 50.2**	**-0.9**
	comp=Z,127nm,0.8s						
SNAA	**Sanae**	**95.62**	**183**		**P**	**18 27 48.7**	**-2.4**
SNAA				IAmb	IAmb	18 27 55.0	
	comp=Z,13nm,1.2s						
SNAA				IAMs_20	IAMs_20	19 14 31.6	
	comp=Z,1µm,18.0s						
SNAA	**Sanae**	**95.62**	**183**	P	**P**	**18 27 49.2**	**-1.9**
	comp=Z,4.3nm,0.7s,baz=202,slow=5.6,SNR=24						
SNAA				LR	LR	19 10 58.7	
	comp=Z,935nm,18.0s,baz=139,slow=36						
	comp=Z,4.3nm,0.7s						
YKA	**Yellowknife Ar**	**96.14**	**27**	LR	LR	19 03 28.0	
	comp=Z,531nm,21.9s,baz=264,slow=31						
TXAR	**Lajitas Array**	**96.20**	**61**	LR	LR	19 02 46.7	
	comp=Z,542nm,21.2s,baz=266,slow=30						
SDCO	**Great Sand Dun**	**96.28**	**53**	IAMs_20	IAMs_20	19 03 55.1	
	comp=Z,956nm,20.0s						
VNA3	**Neumayer Olymp**	**96.33**	**181**	⇑P	**P**	**18 27 54.0**	**-0.3**
	comp=Z,5.1nm,0.6s						
K22A	**Casper**	**96.45**	**48**	IAMs_20	IAMs_20	19 11 56.0	
	comp=Z,1µm,18.0s						
VNA2	**Neumayer--Watz**	**96.58**	**182**	⇑P	**P**	**18 27 53.1**	**-2.3**
	comp=Z,9.9nm,0.8s,baz=154,slow=7.4						
ISCO	**Idaho Springs**	**96.58**	**51**	IAMs_20	IAMs_20	19 04 12.9	
	comp=Z,1µm,21.0s						
VNA1	**Neumayer--Stat**	**96.88**	**182**	⇑P	**P**	**18 27 58.8**	**+2.0**
	comp=Z,8.2nm,1.2s						
T25A	**Trinidad**	**97.03**	**54**	IAMs_20	IAMs_20	19 04 43.7	
	comp=Z,1µm,20.0s						
NRIK	**Noril'sk**	**97.69**	**339**	P	**P**	**18 27 59.5**	**-0.8**
	comp=Z,2.3nm,0.8s,baz=115,slow=4.2,SNR=4.5						
NRIK				LR	LR	19 13 34.0	
	comp=Z,805nm,19.3s,baz=99,slow=36						
	comp=Z,2.3nm,0.8s						
NRIK	**Noril'sk**	**97.69**	**339**	*i* P	Pdif	18 28 02.3	+1.9
NRIK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KSH	**Kashi**	**98.03**	**309**	P	Pdif	18 28 08.8	+6.1
KSH				PP	**PP**	**18 32 04.5**	**+2.7**
KSH				SKS	**SKSac**	**18 38 43.8**	**+2.9**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KSH				LR	LR		
	comp=Z,380nm,16.8s						
KSH				LR	LR		
	comp=Z,400nm,16.5s						
KSH				LR	LR		
	comp=Z,210nm,15.5s						
KURK	**Kurchatov**	**98.07**	**320**	P	**P**	**18 28 01.8**	**-0.6**
KURBB	**Kurchatov Arra**	**98.11**	**320**	P	**P**	**18 28 01.8**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=99,slow=3.5,SNR=13						
KURBB				PP	**PP**	**18 32 06.6**	**+4.7**
	comp=Z,0.3nm,0.3s,baz=101,slow=8.2,SNR=4.4						
KURBB				PKiKP	**PKiKP**	**18 32 35.9**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=89,slow=1.4,SNR=5.7						
KURBB				LR	LR	19 14 56.5	
	comp=Z,530nm,18.7s,baz=139,slow=37						
	comp=Z,1.0nm,0.7s						
RSSD	**Black Hills**	**98.49**	**47**	IAMs_20	IAMs_20	19 12 20.0	
	comp=Z,923nm,19.0s						
AAK	**Ala-Archa**	**99.61**	**312**	LR	LR	19 14 24.0	
	comp=Z,205nm,19.8s,baz=72,slow=36						
JCT	**Junction City**	**99.70**	**61**	IAMs_20	IAMs_20	19 04 49.2	
	comp=Z,986nm,21.0s						
ABTX	**Abilene, Hawle**	**100.16**	**59**	IAMs_20	IAMs_20	19 06 08.1	
	comp=Z,861nm,20.0s						
KVTX	**Kingsville**	**100.91**	**64**	IAMs_20	IAMs_20	19 21 33.5	
	comp=Z,1µm,22.0s						
CBKS	**Cedar Bluff**	**100.93**	**53**	IAMs_20	IAMs_20	19 12 37.1	
	comp=Z,767nm,18.0s						
E28A	**Huff**	**101.16**	**45**	IAMs_20	IAMs_20	19 11 09.5	
	comp=Z,747nm,20.0s						
735A	**Kenedy**	**101.18**	**63**	IAMs_20	IAMs_20	19 12 51.4	
	comp=Z,926nm,18.0s						
K30B	**Basset**	**101.49**	**49**	IAMs_20	IAMs_20	19 14 23.5	
	comp=Z,917nm,18.0s						
R32A	**Long Quarter,**	**101.68**	**53**	IAMs_20	IAMs_20	19 15 35.0	
	comp=Z,969nm,18.0s						
WHTX	**Lake Whitney,**	**101.91**	**60**	IAMs_20	IAMs_20	19 09 37.5	
	comp=Z,794nm,19.0s						

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SUSD  Miller            102.15  47   IAMs_20  IAMs_20  19 12 32.9
      comp=Z,736nm,20.0s
Z35A  Perchaven, San    102.25  58   IAMs_20  IAMs_20  19 14 34.3
      comp=Z,1µm,18.0s
KSU1  Kansas State U    103.39  53   IAMs_20  IAMs_20  19 08 38.1
      comp=Z,869nm,20.0s
BVAR  Borovoye Array    103.40 322   Pdiff    Pdif     18 28 25.1  -1.1
      comp=Z,1.1nm,0.9s,baz=116,slow=10,SNR=4.3
BVAR                                 PKiKP    PKiKP    18 32 45.6 +0.5
      comp=Z,0.8nm,0.5s,baz=106,slow=1.0,SNR=4.0
Z38A  Mt. Pleasant      104.12  59   IAMs_20  IAMs_20  19 12 14.1
      comp=Z,985nm,19.0s
F33A  5 Mile Ranch,     104.14  46   IAMs_20  IAMs_20  19 09 47.4
      comp=Z,815nm,20.0s
NATX  Nacogdoches       104.24  60   IAMs_20  IAMs_20  19 15 43.3
      comp=Z,899nm,18.0s
AGMN  Agassiz Nation    104.57  43   IAMs_20  IAMs_20  19 14 51.4
      comp=Z,692nm,18.0s
441A  DeRidder          105.39  61   IAMs_20  IAMs_20  19 16 17.9
      comp=Z,714nm,19.0s
I37A  Lemond, Waseca    106.11  48   IAMs_20  IAMs_20  19 14 53.6
      comp=Z,862nm,19.0s
SPMN  Marine on St.     106.57  46   IAMs_20  IAMs_20  19 20 57.7
      comp=Z,805nm,18.0s
143A  Socs Landing,     107.07  59   IAMs_20  IAMs_20  19 13 40.3
      comp=Z,856nm,20.0s
E38A  The Farm, Brul    107.45  45   IAMs_20  IAMs_20  19 15 13.0
      comp=Z,772nm,20.0s
CCM   Cathedral Cave    107.51  54   IAMs_20  IAMs_20  19 17 54.3
      comp=Z,1µm,18.0s
VBMS  Vicksburg         107.79  60   IAMs_20  IAMs_20  19 18 22.2
      comp=Z,999nm,18.0s
I40A  Norwalk           108.11  48   IAMs_20  IAMs_20  19 21 02.7
      comp=Z,839nm,18.0s
G40A  Rib Lake          108.41  46   IAMs_20  IAMs_20  19 18 04.3
      comp=Z,641nm,18.0s
346A  Big Creek Wild    108.63  61   IAMs_20  IAMs_20  19 18 27.6
      comp=Z,667nm,18.0s
TEIG  Tepich            108.68  73   IAMs_20  IAMs_20  19 09 07.8
      comp=Z,738nm,22.0s
Y45A  Yeager Farm, C    108.70  58   IAMs_20  IAMs_20  19 20 22.2
      comp=Z,1µm,18.0s
TGUH  Tegucigalpa,Un    108.81  79   IAMs_20  IAMs_20  19 08 05.3
      comp=Z,730nm,22.0s
OXF   Oxford            108.84  58   IAMs_20  IAMs_20  19 19 29.9
      comp=Z,817nm,18.0s
146A  Union             109.05  60   IAMs_20  IAMs_20  19 15 20.5
      comp=Z,810nm,19.0s
COWI  Conover           109.14  45   IAMs_20  IAMs_20  19 22 24.5
      comp=Z,865nm,18.0s
I42A  Draeger Farm,     109.35  48   IAMs_20  IAMs_20  19 21 05.3
      comp=Z,1µm,18.0s
F42A  Maple Grove Fa    109.85  46   IAMs_20  IAMs_20  19 16 09.4
      comp=Z,674nm,19.0s
Z47A  Carrollton        109.90  59   IAMs_20  IAMs_20  19 12 14.1
      comp=Z,986nm,20.0s
TULEG Thule             109.98  12   IAMs_20  IAMs_20  19 05 32.4
      comp=Z,729nm,20.0s
M44A  Midewin, Midew    110.03  50   IAMs_20  IAMs_20  19 13 05.7
      comp=Z,1µm,20.0s
ARTI  Arti              110.22 326   PKiKP    PKiKP    18 32 57.7 +0.1
      comp=Z,3.0nm,0.5s,baz=39,slow=3.8,SNR=7.0
ARTI  Arti              110.22 326 i PKIKP    PKiKP    18 32 58.3 +0.7
ARTI                                                   18 33 36.1
ARTI                                                   18 40 10.6
ARTI                                 MLR      MLR
      comp=Z,521nm,20.0s
BRAL  Brewton           110.68  61   IAMs_20  IAMs_20  19 21 04.9
      comp=Z,890nm,18.0s
SFIN  Lafayette         110.76  51   IAMs_20  IAMs_20  19 16 10.2
      comp=Z,973nm,20.0s
X48A  Hartselle         110.79  58   IAMs_20  IAMs_20  19 21 22.6
      comp=Z,718nm,18.0s
LRAL  Lakeview Retre    110.79  59   IAMs_20  IAMs_20  19 16 44.8
      comp=Z,928nm,20.0s
AKTO  Aktyubinsk        111.15 319   PKiKP    PKiKP    18 32 59.0  -0.6
      comp=Z,3.0nm,0.7s,baz=86,slow=2.2,SNR=9.9
AKTO  Aktyubinsk        111.15 319 i PKIKP    PKiKP    18 32 59.0  -0.6
HDC   Heredia           111.22  84   IAMs_20  IAMs_20  19 13 10.3
      comp=Z,925nm,19.0s
I45A  Fountain          111.28  48   IAMs_20  IAMs_20  19 20 05.3
      comp=Z,889nm,18.0s
Y49A  Blount Mountai    111.30  58   IAMs_20  IAMs_20  19 20 57.2
      comp=Z,621nm,18.0s
N47A  Urbana            111.81  51   IAMs_20  IAMs_20  19 13 07.0
      comp=Z,1µm,21.0s
E46A  Sault Ste Mari    112.47  45   IAMs_20  IAMs_20  19 17 32.6
      comp=Z,726nm,20.0s
352A  Blakely           112.51  61   IAMs_20  IAMs_20  19 22 16.5
      comp=Z,546nm,18.0s
X51A  Calhoun           112.60  58   IAMs_20  IAMs_20  19 20 28.4
      comp=Z,882nm,18.0s
152A  Waverly Hall      112.70  60   IAMs_20  IAMs_20  19 17 55.4
      comp=Z,765nm,19.0s
553A  Crawfordville     112.90  62   IAMs_20  IAMs_20  19 23 33.9
      comp=Z,1µm,18.0s
Y52A  Lilburn           113.26  58   IAMs_20  IAMs_20  19 21 60.0
      comp=Z,791nm,18.0s
GOGA  Godfrey           113.76  59   IAMs_20  IAMs_20  19 12 59.2
      comp=Z,667nm,22.0s
154A  Montrose          114.06  60   IAMs_20  IAMs_20  19 18 08.4
      comp=Z,825nm,19.0s
N51A  Ashland           114.33  51   IAMs_20  IAMs_20  19 19 00.4
      comp=Z,997nm,19.0s
KIRV  Kirov             114.49 329c iPKIKP    PKiKP    18 33 08.2 +2.5
656A  Willston          114.53  63   IAMs_20  IAMs_20  19 25 33.1
      comp=Z,658nm,18.0s
OTAV  Otavalo           114.80  96   IAMs_20  IAMs_20  19 13 19.1
      comp=Z,772nm,18.0s
456A  Hilliard          114.99  62   IAMs_20  IAMs_20  19 24 06.1
      comp=Z,525nm,18.0s
DWPF  Disney Wildern    115.48  65   IAMs_20  IAMs_20  19 25 18.3
      comp=Z,611nm,18.0s
N53A  Lisbon            115.50  51   IAMs_20  IAMs_20  19 15 22.4
      comp=Z,664nm,20.0s
257A  Skidaway Islan    115.83  61   IAMs_20  IAMs_20  19 15 58.3
      comp=Z,617nm,20.0s
061Z  Ochoppi           115.89  67   IAMs_20  IAMs_20  19 25 45.3
      comp=Z,684nm,18.0s
BELG  Belogornoye       117.18 323   PKP      PKiKP    18 33 11.6 +0.6
      comp=Z,23nm,0.7s,baz=8.1,slow=2.8,SNR=7.1
ARCES ARCESS Array B    117.91 345   PKP      PKiKP    18 33 12.1 +0.1
      comp=Z,6.5nm,0.7s,baz=68,slow=1.2,SNR=32
ARCES                                PKKPbc   PKKPbc   18 43 32.4  -2.4
      comp=Z,4.8nm,1.0s,baz=251,slow=2.2,SNR=5.5
KLMR  Klimovskoe        118.29 334 ePKIKP     PKiKP    18 33 12.9  -0.1
KLMR                                 pmax     pmax
      comp=Z,22nm,1.4s
ILULI Ilulissat         118.65  14   IAMs_20  IAMs_20  19 23 36.9
      comp=Z,640nm,19.0s
J59A  Piesco            119.77  47   IAMs_20  IAMs_20  19 21 28.2
      comp=Z,797nm,20.0s
VT1   Waterbury         120.83  46   IAMs_20  IAMs_20  19 27 26.0
      comp=Z,623nm,18.0s
VRH   Novokhopyorsk     121.03 323 ePKIKP     PKPdf    18 33 17.7  -0.8
VRH                                  pmax     pmax
      comp=Z,31nm,0.6s
J61A  Chester           121.19  47   IAMs_20  IAMs_20  19 22 56.6
      comp=Z,715nm,19.0s
HNH   Hanover           121.30  46   IAMs_20  IAMs_20  19 28 38.4
      comp=Z,620nm,18.0s
LBNH  Lisbon            121.43  46   IAMs_20  IAMs_20  19 23 11.7
      comp=Z,665nm,20.0s
H62A  Milan             121.88  45   IAMs_20  IAMs_20  19 24 08.6
      comp=Z,806nm,19.0s
SCO   Scoresbysund      121.91   3   IAMs_20  IAMs_20  19 24 22.4
      comp=Z,832nm,20.0s
I62A  Tamworth          121.93  46   IAMs_20  IAMs_20  19 30 31.0
      comp=Z,729nm,18.0s
GNI   Garni             121.94 310            PKPdf    18 33 18.9  -1.9
GNI   Garni             121.94 310   PKP      PKiKP    18 33 21.6 +0.6
      comp=Z,14nm,0.8s,baz=3.0,slow=6.7,SNR=6.0
GNI   Garni             121.94 310   PKP      PKiKP    18 33 22.3 +1.3
LPSR  Galich'ya Gora    122.13 325 ePKIKP     PKPdf    18 33 19.8  -0.8
LPSR                                 pmax     pmax
      comp=Z,20nm,0.6s
G62A  West of Eustis    122.14  44   IAMs_20  IAMs_20  19 26 07.4
      comp=Z,765nm,19.0s
OBN   Obninsk           122.32 328   PKP      PKiKP    18 33 21.2 +0.2
      comp=Z,8.7nm,0.4s,baz=71,slow=15,SNR=3.6
OBN   Obninsk           122.32 328⇑ePKIKP     PKiKP    18 33 23.2 +2.2
OBN                                e                   18 34 59.1
OBN                                eSS        SS       18 51 35.8  -0.3
VORR  Voronezh          122.33 324 ePKIKP     PKiKP    18 33 21.3 +0.1
VORR                                 pmax     pmax
      comp=Z,56nm,0.5s
I63A  Otisfield         122.41  46   IAMs_20  IAMs_20  19 24 48.8
      comp=Z,736nm,19.0s
KBZ   Khabaz            122.50 314   PKP      PKiKP    18 33 22.8 +1.0
      comp=Z,3.9nm,0.7s,baz=116,slow=5.8,SNR=6.4
KBZ   Khabaz            122.50 314c iPKIKP    PKiKP    18 33 23.9 +2.2
VSR   Storozhevoye      122.53 323 ePKIKP     PKPdf    18 33 18.6  -2.8
VSR                                  pmax     pmax
      comp=Z,10.0nm,1.0s
VORD  Divnogorie        122.55 323 ePKIKP     PKPdf    18 33 20.4  -1.0
VORD                                 pmax     pmax
      comp=Z,10.0nm,1.0s
KIV   Kislovodsk        122.59 314 i PKIKP    PKiKP    18 33 24.4 +2.3
KIV                                  pmax     pmax
      comp=Z,11nm,1.0s
KIV                                  MLR      MLR
      comp=Z,417nm,22.0s
D62A  Allapoint, All    122.59  42   IAMs_20  IAMs_20  19 24 12.1
      comp=Z,804nm,19.0s
RAYN  Ar Rayn           122.88 290            PKPdf    18 33 21.6  -1.4
RAYN  Ar Rayn           122.88 290 ⇓PKIKP     PKiKP    18 33 23.4 +0.2
FINES FINESS Array B    123.34 338   PKP      PKPdf    18 33 22.2  -0.4
      comp=Z,6.4nm,0.8s,baz=6.7,slow=3.1,SNR=15
F64A  Sherman           123.43  43   IAMs_20  IAMs_20  19 28 14.3
      comp=Z,754nm,18.0s
SDV   Santo Domingo     124.16  88   IAMs_20  IAMs_20  19 21 00.4
      comp=Z,460nm,18.0s
EMMW  East Machias      124.38  44   IAMs_20  IAMs_20  19 34 01.6
      comp=Z,833nm,18.0s
SDDR  Presa de Saban    124.55  76   IAMs_20  IAMs_20  19 25 10.2
      comp=Z,575nm,18.0s
ATD   Arta Tunnel       124.65 275   IAMs_20  IAMs_20  19 28 01.3
      comp=Z,464nm,18.0s
VSU   Vasula            125.02 335c iPKIKP    PKiKP    18 33 27.3 +1.0
VSU                                  pmax     pmax
      comp=Z,53nm,2.5s
IVI   Ivigtut           125.43  20   IAMs_20  IAMs_20  19 22 20.4
      comp=Z,686nm,20.0s
MNK   Minsk             126.93 331 i PKP      PKPdf    18 33 28.8  -0.9
      comp=E,14nm,1.0s
MNK                                i PKP      PKPdf    18 33 28.8  -0.9
      comp=N,8.0nm,0.8s
MNK                                i PKP      PKPdf    18 33 28.8  -0.9
      comp=Z,16nm,0.7s,baz=55
MNK                                i PP       PP       18 35 26.6  -0.6
MNK                                i PPP      PPP      18 38 09.2
MNK                                i SKS      SKSdf    18 40 40.6  -1.0
MNK                                i PS       PS       18 45 30.7  -1.2
MNK                                i SS       SS       18 52 35.2 +1.1
MNK                                i SSS      SSS      18 57 16.3
MNK                                i LQ       LQ       19 21 45.6
MNK   Minsk             126.93 331 i PKIKP    PKPdf    18 33 28.7  -0.9
MNK                                i                   18 35 26.5
MNK                                i PPP      PPP      18 38 09.2
MNK                                i                   18 40 40.5
MNK                                i PS       PS       18 45 30.7  -1.2
MNK                                i SS       SS       18 52 35.1 +1.0
MNK                                i SSS      SSS      18 57 16.2
MNK                                  pmax     pmax
      comp=E,14nm,1.0s
MNK                                  pmax     pmax
      comp=Z,16nm,0.7s
MNK                                  pmax     pmax
      comp=N,8.0nm,0.8s
MNK                                  MLR      MLR
      comp=N,391nm,19.0s
MNK                                  MLR      MLR
      comp=E,148nm,18.0s
MNK                                  MLR      MLR
      comp=Z,279nm,18.0s
NACGM Naroch            127.20 332 ePKiKP     PKiKP    18 33 34.3 +3.5
      comp=Z,17nm,1.1s,baz=53
SIM   Simferopol'       128.07 318 ePKIKP     PKiKP    18 33 32.9 +0.1
SIM                                  pmax     pmax
      comp=Z,17nm,0.8s
NB2   NORSAR Subarra    128.28 345   PKPdf    PKiKP    18 33 32.8  0.0
      comp=Z,1.3nm,0.7s,baz=31,slow=1.9
NOA   NORSAR Array B    128.28 345   PKP      PKPdf    18 33 32.0  -0.2
      comp=Z,3.3nm,0.9s,baz=33,slow=2.0,SNR=8.1
AKASG Malin Array Be    128.36 326   PKP      PKPdf    18 33 31.8  -0.8
      comp=Z,6.2nm,0.9s,baz=57,slow=2.0,SNR=19
AKBB  Malin Array Si    128.36 326c iPKIKP    PKiKP    18 33 33.8 +0.6
HFS   Hagfors           128.36 343   PKP      PKPdf    18 33 32.0  -0.3
      comp=Z,4.4nm,0.9s,baz=104,slow=4.7,SNR=6.9
HFS   Hagfors           128.36 343   PKIKP    PKPdf    18 33 32.0  -0.3
KIEV  Kiev              128.37 326            PKPdf    18 33 30.2  -2.4
KIEV  Kiev              128.37 326   IAMs_20  IAMs_20  19 32 08.4
      comp=Z,577nm,20.0s
KIEV  Kiev              128.37 326 ⇑P         PKiKP    18 33 36.0 +2.8
KIEV  Kiev              128.37 326 ⇑PKIKP     PKiKP    18 33 36.0 +2.8
SUW   Suwalki           129.40 333   IAMs_20  IAMs_20  19 34 25.6
      comp=Z,500nm,20.0s
KONO  Kongsberg         129.89 345   IAMs_20  IAMs_20  19 34 03.0
      comp=Z,464nm,20.0s
SORM  Soroca            130.18 324 ⇑P         PKPdf    18 33 34.1  -2.0
SORM  Soroca            130.18 324 ⇑PKIKP     PKPdf    18 33 34.1  -2.0
KIRS  Kirsehir-Merke    130.28 311 ⇑P         PKPdf    18 33 36.5  -0.2
BRTR  Keskin Array B    130.29 312            PKPdf    18 33 33.0  -3.8
BRTR  Keskin Array B    130.29 312   PKP      PKPdf    18 33 36.9  0.0
      comp=Z,1.9nm,0.7s,baz=8.8,slow=4.5,SNR=6.7
BORU  Boraas            130.69 341 i P        PKPdf    18 33 27.9  -8.9
MMAI  Mount Meron Ar    130.76 303   PKP      PKPdf    18 33 38.0 +0.2
      comp=Z,2.2nm,0.6s,baz=45,slow=1.8,SNR=5.4
KMPD  K-Podol'skiy      131.03 325   PKP      PKPdf    18 33 37.5  -0.2
ONAU  Onsala            131.15 342 i P        PKPdf    18 33 29.5  -8.2
DEL   Delary            131.28 340 i P        PKPdf    18 33 30.3  -7.6
HOMB  Homborsund        131.37 344 i P        PKPdf    18 33 26.4  -12
CFR   Carcaliu          131.78 321 ⇑P         PKPdf    18 33 37.3  -2.0
CFR   Carcaliu          131.78 321 ⇑PKIKP     PKPdf    18 33 37.3  -2.0
EIL   Elat              131.79 299   PKP      PKiKP    18 33 40.4  -0.4
      comp=Z,5.5nm,0.8s,baz=247,slow=3.6,SNR=6.1
BJUU  Bjuv              131.88 340 i P        PKPdf    18 33 32.4  -6.7
TIRR  Tirgusor          131.96 320   IAMs_20  IAMs_20  19 36 29.1
      comp=Z,531nm,20.0s
HARR  Harsova           132.15 320 ⇑P         PKPdf    18 33 39.2  -0.8
HARR  Harsova           132.15 320 ⇑PKIKP     PKPdf    18 33 39.2  -0.8
BURAR Bucovina Array    132.24 325            PKPdf    18 33 37.7  -2.6
BURAR Bucovina Array    132.24 325 ⇑P         PKiKP    18 33 41.6 +0.3
BURAR Bucovina Array    132.24 325 ⇑PKIKP     PKiKP    18 33 41.6 +0.3
MLR   Muntele Rosu      132.97 322 ⇑P         PKiKP    18 33 42.4  -0.4
MLR   Muntele Rosu      132.97 322 ⇑PKIKP     PKiKP    18 33 42.4  -0.4
KOLS  Kolonicke sedl    133.06 328 ePKIKP     PKiKP    18 33 44.0 +1.2
KOLS  Kolonicke sedl    133.06 328 ePKP       PKiKP    18 33 44.0 +1.2
STHS  Stebnicka Huta    133.29 329 ePKIKP     PKiKP    18 33 46.9 +3.7
STHS  Stebnicka Huta    133.29 329 ePKP       PKiKP    18 33 46.9 +3.7
MARR  Marisel-Cluj      133.96 325 ⇑P         PKPdf    18 33 43.6 +0.1
DRGR                    134.12 325 ⇓P         PKiKP    18 33 48.8 +3.7
DRGR                    134.12 325 ⇓PKIKP     PKiKP    18 33 48.8 +3.7
OKC   Ostrava-Krasne    134.51 331   AMS      AMS      19 36 00.0
      comp=Z,500nm,20.7s
MORC  Moravsky Berou    134.84 332 ePKP       PKiKP    18 33 46.0  -0.4
MORC  Moravsky Berou    134.84 332 ⇓P         PKPdf    18 33 44.1  -0.9
MORC  Moravsky Berou    134.84 332 ⇓PKIKP     PKPdf    18 33 44.1  -0.9
OSTC  Ostas             134.88 333 ePKP       PKiKP    18 33 47.9 +1.5
OSTC                               ePP        PP       18 37 08.0  +49
OSTC                                 AMS      AMS      19 40 20.0
      comp=Z,800nm,17.3s
OSTC  Ostas             134.88 333 ePKIKP     PKiKP    18 33 47.9 +1.5
OSTC                                 MLR      MLR
      comp=Z,800nm,17.3s
GZR   Gura Zlata        134.89 324 ⇑P         PKPdf    18 33 44.4  -0.8
GZR   Gura Zlata        134.89 324 ⇑PKIKP     PKPdf    18 33 44.4  -0.8
CHVC  Chvalec           134.93 333 ePKP       PKiKP    18 33 48.0 +1.5
CHVC                               ePP        PP       18 36 18.8  -0.1
CHVC                                 AMS      AMS      19 40 30.0
      comp=Z,800nm,20.4s
CHVC  Chvalec           134.93 333 ePKIKP     PKiKP    18 33 48.0 +1.5
CHVC                               e                   18 36 18.8
CHVC                                 MLR      MLR
      comp=Z,800nm,20.4s
PSZ   Piszkesteto       134.93 328 ⇑P         PKiKP    18 33 50.5 +3.8
PSZ   Piszkesteto       134.93 328 ⇑PKIKP     PKiKP    18 33 50.5 +3.8
KRLC  Kraliky           134.98 332 ePKP       PKiKP    18 33 48.0 +1.3
KRLC                                 AMS      AMS      19 39 50.0
      comp=Z,500nm,16.3s
KRLC  Kraliky           134.98 332 ePKIKP     PKiKP    18 33 48.0 +1.3
KRLC                                 MLR      MLR
      comp=Z,500nm,16.3s
DPC   Dobruska-Polom    134.99 333 ePKP       PKiKP    18 33 47.2 +0.5
DPC                                  AMS      AMS      19 37 20.0
      comp=Z,700nm,18.6s
DPC   Dobruska-Polom    134.99 333 ePKIKP     PKiKP    18 33 47.2 +0.5
DPC                                  MLR      MLR
      comp=Z,700nm,18.6s
UPC   Upice             135.01 333 ePKP       PKiKP    18 33 47.2 +0.5
UPC                                ePP        PP       18 36 21.8 +2.4
UPC                                  AMS      AMS      19 40 50.0
      comp=Z,800nm,18.5s
UPC   Upice             135.01 333 ePKIKP     PKiKP    18 33 47.2 +0.5
UPC                                e                   18 36 21.8
UPC                                  MLR      MLR
      comp=Z,800nm,18.5s
SURR  Surduc            135.05 324 ⇑P         PKPdf    18 33 44.5  -0.9
JAVC  Velka Javorina    135.41 331 ePKP       PKiKP    18 33 47.5  -0.1
BZS   Buzias            135.42 325 ⇑P         PKPdf    18 33 46.1  0.0
BZS   Buzias            135.42 325 ⇑PKIKP     PKPdf    18 33 46.1  0.0
VRAC  Vranov            135.61 332 ePKP       PKPdf    18 33 46.8 +0.4
VRAC  Vranov            135.61 332 ⇑P         PKiKP    18 33 50.5 +2.6
VRAC  Vranov            135.61 332 ⇑PKIKP     PKiKP    18 33 50.5 +2.6
PVCC  Panska Ves        135.62 334 ePKP       PKiKP    18 33 48.3 +0.4
PVCC                               ePP        PP       18 36 24.3 +1.1
PVCC  Panska Ves        135.62 334 ePKIKP     PKiKP    18 33 48.3 +0.4
PVCC                               e                   18 36 24.3
BRG   Berggiesshubel    135.62 335 ePKP       PKiKP    18 33 49.5 +1.6
BRG                                  Amp               18 33 53.3
      comp=Z,5.0nm,1.0s
BRG   Berggiesshubel    135.62 335   P        PKiKP    18 33 56.3 +8.5
BRG                                  Amp               18 33 56.7
      comp=Z,4.2nm,0.9s
CLL   Collm             135.66 336   IAMs_20  IAMs_20  19 39 18.0
      comp=Z,572nm,20.0s
CLL   Collm             135.66 336 ePKIKP     PKPdf    18 33 47.0 +0.6
CLL                                  pmax     pmax
      comp=Z,6.0nm,0.6s
CLL                                  MLR      MLR
      comp=Z,600nm,19.2s
CLL   Collm             135.66 336 ePKPdf     PKPdf    18 33 47.0 +0.6
      comp=Z,6.0nm,0.6s
CLL                                eSS        SS       18 54 24.0 +3.5
CLL                                eSKSSKSacS'S'ac     18 56 27.0 +6.3
CLL                                eSSS       SSS      18 59 19.0
CLL                                eSSSS               19 03 06.0
CLL                                  AMS      AMS      19 35 00.0
      comp=N,400nm,19.8s
CLL                                  AMS      AMS      19 35 00.0
      comp=E,300nm,20.9s
CLL                                  AMS      AMS      19 39 00.0
      comp=N,500nm,19.6s
CLL                                  AMS      AMS      19 39 00.0
      comp=E,100nm,19.8s
CLL                                  AMS      AMS      19 39 00.0
      comp=Z,600nm,19.2s
RICC  Richard           135.80 335   AMS      AMS      19 40 20.0
      comp=Z,800nm,19.6s
MDVR  Moldovita         135.86 324 ⇓P         PKPdf    18 33 47.7 +0.6
KRUC  Moravsky          135.87 332 ePKP       PKPdf    18 33 47.0 +0.2
MODS  Modra-Piesok      135.94 330 ePKIKP     PKiKP    18 33 47.7  -0.9
MODS  Modra-Piesok      135.94 330 ePKP       PKiKP    18 33 47.7  -0.9
GOPC  GO Pecny, Ondr    135.98 334 ePP        PP       18 36 20.7  -4.8
GOPC                                 AMS      AMS      19 38 10.0
      comp=Z,800nm,20.4s
PRA   Prague            136.02 334 ePP        PP       18 36 28.4 +2.7
PRA                                  AMS      AMS      19 39 00.0
      comp=Z,700nm,20.5s
PRU   Pruhonice         136.03 334 ePKP       PKiKP    18 33 49.8 +1.1
PRU                                ePP        PP       18 36 26.9 +1.1
PRU                                  AMS      AMS      19 38 10.0
      comp=Z,900nm,20.2s
PRU   Pruhonice         136.03 334 ePKIKP     PKiKP    18 33 49.8 +1.1
PRU                                e                   18 36 26.9
PRU                                  MLR      MLR
      comp=Z,900nm,20.2s
TREC  Trest             136.12 332   AMS      AMS      19 41 00.0
      comp=Z,800nm,21.2s
BOVS  Bovan             136.52 322 ⇑P         PKPdf    18 33 47.1  -1.1
EKA   Eskdalemuir Ar    136.53 351   PKP      PKPdf    18 33 48.3 +0.4
      comp=Z,1.0nm,0.6s,baz=8.4,slow=3.0,SNR=4.8
ZVC   Zvikov            136.59 333 ePKP       PKiKP    18 33 51.2 +1.3
ZVC                                  AMS      AMS      19 38 10.0
      comp=Z,600nm,17.6s
MORH  Mrgy, Hungar      136.68 327 ⇓P         PKPdf    18 33 48.6 +0.2
RONA  Rosalia, Austr    136.88 330 eS         SKiKP    18 37 25.9  -1.1
      comp=Z,14nm,1.5s
RONA  Rosalia, Austr    136.88 330 i PKiKP    PKiKP    18 33 49.7  -0.9
      comp=Z,5.8nm,0.7s
RONA                               eSKP                18 37 25.9
      comp=Z,14nm,1.5s
CONA  Conrad Observa    136.93 331 eS         SKPbc    18 37 24.1 +2.1
      comp=Z,12nm,1.5s
CONA  Conrad Observa    136.93 331 i PKP      PKPdf    18 33 49.6 +0.6
      comp=Z,0.9nm,0.4s
CONA                               eSKP                18 37 24.1
      comp=Z,12nm,1.5s
CKRC  Cesky Krumlov     137.00 333 ePKP       PKPdf    18 33 48.7  -0.3
CKRC                               ePP        PP       18 36 33.0 +1.0
CKRC                                 AMS      AMS      19 39 20.0
      comp=Z,700nm,17.5s
CKRC  Cesky Krumlov     137.00 333 ePKIKP     PKPdf    18 33 48.7  -0.3
CKRC                               e                   18 36 33.0
CKRC                                 MLR      MLR
      comp=Z,700nm,17.5s
KHC   Kasperske Hory    137.09 334 ePKP       PKiKP    18 33 50.2  -0.8
KHC                                ePP        PP       18 36 35.0 +2.5
KHC                                  AMS      AMS      19 39 50.0
      comp=Z,600nm,18.5s
KHC   Kasperske Hory    137.09 334 ePKIKP     PKiKP    18 33 50.2  -0.8
KHC                                e                   18 36 35.0
KHC                                  MLR      MLR
      comp=Z,600nm,18.5s
GERES GERESS Array B    137.25 333   PKP      PKPdf    18 33 49.6 +0.1
      comp=Z,4.2nm,0.8s,baz=48,slow=2.0,SNR=19
GRA1  Grafenberg Arr    137.64 336   IAMs_20  IAMs_20  19 37 27.2
      comp=Z,552nm,20.0s
GRFO  Grafenberg        137.64 336   IAMs_20  IAMs_20  19 37 27.3
      comp=Z,548nm,20.0s
MOA   Molln             137.73 332 eS         SKiKP    18 37 28.3  -0.4
      comp=Z,7.8nm,1.3s
MOA   Molln             137.73 332 i PKP      PKPdf    18 33 50.0  -0.4
      comp=Z,1.0nm,0.4s
MOA                                eSKP                18 37 28.3
      comp=Z,7.8nm,1.3s
SOKA  Soboth            138.21 330 i PKP      PKPdf    18 33 50.1  -1.2
      comp=Z,3.8nm,0.9s
OBKA  Obir              138.56 330 i PKiKP    PKiKP    18 33 53.2  -1.0
      comp=Z,1.4nm,0.7s
PDG   Podgorica         138.68 322   IAMs_20  IAMs_20  19 42 32.7
      comp=Z,414nm,20.0s
BTNL  Ternell           138.74 341 dPKPdf     PKPdf    18 33 51.9  -0.2
LESA  Schwarzleotal     138.77 333 i PKP      PKPdf    18 33 51.7  -0.7
      comp=Z,0.9nm,0.4s
MYKA  Terra Mystica     138.91 331 ePKP       PKPdf    18 33 50.5  -2.2
      comp=Z,2.8nm,0.7s
TIR   Tirane            138.93 321   IAMs_20  IAMs_20  19 43 44.7
      comp=Z,684nm,20.0s
STU   Stuttgart         139.17 337   IAMs_20  IAMs_20  19 40 49.7
      comp=Z,535nm,19.0s
ABTA  Abfaltersbach     139.35 332 i PKP      PKPdf    18 33 51.6  -1.8
      comp=Z,4.3nm,0.8s
WTTA  Wattenberg        139.35 333 i PKP      PKPdf    18 33 50.8  -2.8
      comp=Z,1.1nm,0.5s
WLF   Walferdange       139.52 340 dPKiKP     PKPdf    18 33 53.9 +0.3
MOTA  Moosalm           139.52 334 i PKP      PKPdf    18 33 52.3  -1.5
      comp=Z,5.1nm,0.8s
FETA  Feichten          139.94 334 ePKP       PKPdf    18 33 54.9 +0.3
      comp=Z,3.0nm,0.7s
DAVA  Damuels           140.09 335 ePKP       PKPdf    18 33 54.6  -0.3
      comp=Z,3.0nm,0.7s
ECH   Echery            140.40 338   IAMs_20  IAMs_20  19 39 43.1
      comp=Z,609nm,20.0s
FUORN Ofenpass-Fuorn    140.45 334   IAMs_20  IAMs_20  19 43 58.7
      comp=Z,564nm,20.0s
TUE   Stuetta           140.96 334   IAMs_20  IAMs_20  19 37 59.1
      comp=Z,558nm,20.0s
SGRT  San Giovanni R    141.15 324            PKPdf    18 33 53.4  -3.4
SENIN Lac Senin/Sane    141.88 336   IAMs_20  IAMs_20  19 42 24.4
      comp=Z,472nm,20.0s
TIP   Timpagrande       142.12 320            PKPdf    18 33 56.5  -2.2
BNI   Bardonecchia      143.21 335   IAMs_20  IAMs_20  19 45 12.5
      comp=Z,570nm,19.0s
SSB   Saint Sauveur     143.84 338   IAMs_20  IAMs_20  19 44 56.2
      comp=Z,382nm,19.0s
VAE   Valguarnera       144.62 319   PKP      PKPdf    18 34 04.4 +1.3
      comp=Z,19nm,0.8s,baz=114,slow=6.8,SNR=4.2
VSL   Villasalto        146.24 327            PKPdf    18 34 02.5  -3.3
VSL                                  IAMs_20  IAMs_20  19 43 00.4
      comp=Z,408nm,20.0s
MAHO  Mahon             148.45 333   IAMs_20  IAMs_20  19 55 55.4
      comp=Z,380nm,19.0s
KEST  Kesra             148.87 322            PKPdf    18 34 08.2  -2.2
KEST  Kesra             148.87 322   PKPbc    PKPbc    18 34 13.4  -0.8
      comp=Z,16nm,0.7s,baz=265,slow=2.1,SNR=20
CMAH  Djebel Manchou    149.37 325   P        PKPbc    18 34 14.8  -0.7
CKFL  Kef-Lekhel        149.92 326   P        PKiKP    18 34 17.7  -0.1
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PBRG	**Braganca**	**150.23**	**349**	*e*PKPdf	**PKiKP**	**18 34 19.9**	**+1.7**
DFRA	**Djebel Bou Aff**	**150.28**	**327**	P	**PKiKP**	**18 34 18.9**	**+0.3**
PGAV	**Gavieira, Arco**	**150.32**	**352**	*e*PKPdf	**PKiKP**	**18 34 18.4**	**-0.1**
PGAV				*e*LR	LR	19 35 59.1	
PGAV				*i* AMs_20		19 45 49.1	
	comp=Z,518nm,20.0s						
PCAB	**Cabril**	**150.54**	**351**	*e*PKPdf	**PKiKP**	**18 34 20.0**	**+1.2**
SET	**Setif**	**150.79**	**327**	P	**PKiKP**	**18 34 20.0**	**+0.4**
POLO	**Lamas de Olo**	**150.83**	**351**	*e*PKPdf	**PKPbc**	**18 34 18.1**	**-0.8**
MVO	**Moncorvo**	**150.91**	**349**	*e*PKPdf	**PKPbc**	**18 34 17.9**	**-1.2**
MVO				*e*LR	LR	19 35 35.5	
MVO				*i* AMs_20		19 46 34.5	
	comp=Z,619nm,20.0s						
PVRL	**Vila Real**	**150.91**	**350**	*e*PKPdf	**PKiKP**	**18 34 19.6**	**-0.1**
RCBR	**Riachuelo**	**151.45**	**129**	IAMs_20	IAMs_20	19 37 24.0	
	comp=Z,642nm,20.0s						
PVIS	**Viseu**	**151.49**	**351**	*e*PKPdf	**PKPdf**	**18 34 17.2**	**+3.0**
ESDC	**Sonseca Array**	**151.63**	**344**		**PKPdf**	**18 34 12.9**	**-1.6**
ESDC	**Sonseca Array**	**151.63**	**344**	PKPbc	**PKiKP**	**18 34 20.9**	**-0.3**
	comp=Z,6.8nm,0.8s,baz=8.2,slow=2.7,SNR=12						
MTE	**Manteigas**	**151.74**	**350**		**PKPdf**	**18 34 12.9**	**-1.8**
MTE				IAMs_20	IAMs_20	19 50 26.8	
	comp=Z,556nm,18.0s						
MTE	**Manteigas**	**151.74**	**350**	*e*PKPdf	**PKiKP**	**18 34 21.7**	**+0.3**
MTE				*e*LR	LR	19 36 36.4	
MTE				*i* AMs_20		19 50 48.7	
	comp=Z,503nm,18.0s						
PAB	**San Pablo**	**151.86**	**344**	IAMs_20	IAMs_20	19 57 34.2	
	comp=Z,521nm,18.0s						
PAB	**San Pablo**	**151.86**	**344**	⇓PKIKP	**PKiKP**	**18 34 21.9**	**+0.2**
COI	**Coimbra**	**152.07**	**351**	IAMs_20	IAMs_20	19 51 08.5	
	comp=Z,539nm,20.0s						
COI	**Coimbra**	**152.07**	**351**	*e*PKPdf	**PKPbc**	**18 34 18.8**	**-2.9**
PCAS	**Casmilo, Conde**	**152.23**	**351**	*e*PKPdf	**PKPdf**	**18 34 17.0**	**+1.7**
PCBR	**Castelo Branco**	**152.27**	**349**	*e*PKPdf	**PKPbc**	**18 34 21.9**	**-0.1**
PSARD	**Sardoal**	**152.62**	**350**	*e*PKPdf	**PKiKP**	**18 34 23.0**	**-0.2**
PMRV	**Marv??o**	**152.66**	**349**	*e*PKPdf	**PKPbc**	**18 34 21.9**	**-1.1**
PMRV				*e*LR	LR	19 34 37.4	
PMRV				*i* AMs_20		19 49 09.3	
	comp=Z,650nm,18.0s						
PMTG	**Montargil**	**153.15**	**350**	*e*PKPdf	**PKiKP**	**18 34 24.3**	**0.0**
PESTR	**Estremoz**	**153.24**	**349**	*e*PKPdf	**PKiKP**	**18 34 24.9**	**+0.5**
PBAR	**Barrancos**	**153.80**	**348**	*e*PKPdf	**PKPbc**	**18 34 24.9**	**-0.6**
PBEJ	**Beja**	**154.10**	**349**	*e*PKPdf	**PKPdf**	**18 34 20.8**	**+2.7**
MESJ	**Messejana**	**154.35**	**350**	*e*PKPdf	**PKPdf**	**18 34 17.2**	**-1.2**
MESJ				IAMs_20	IAMs_20	19 51 34.9	
	comp=Z,728nm,19.9s						
MESJ	**Messejana**	**154.35**	**350**	*e*PKIKP	**PKPdf**	**18 34 17.2**	**-1.2**
PCVE	**Castro Verde**	**154.52**	**349**	*e*PKPdf	**PKPbc**	**18 34 24.0**	**-3.1**
PVAQ	**Vaqueiros**	**154.68**	**349**	*e*LR	LR	19 33 48.2	
PVAQ				*i* AMs_20		19 49 24.3	
	comp=Z,728nm,20.0s						
PTEO	**Sao Teotonio**	**154.72**	**350**	*e*PKPdf	**PKPdf**	**18 34 23.1**	**+4.1**
MORF	**Marmelete**	**154.94**	**350**	*e*PKPdf	**PKPdf**	**18 34 18.0**	**-1.3**
MORF				IAMs_20	IAMs_20	19 50 38.4	
	comp=E,976nm,21.2s						
MORF	**Marmelete**	**154.94**	**350**	*e*PKIKP	**PKPdf**	**18 34 18.0**	**-1.3**
PMPST	**Porto Santo, M**	**159.47**	**6**	*e*PKPdf	**PKPdf**	**18 34 27.0**	**+1.9**
PMOZ	**Porto Moniz, M**	**159.62**	**8**	*e*LR	LR	19 36 40.0	
PMOZ				*i* AMs_20		19 51 46.7	
	comp=E,565nm,16.0s						

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*ISK **28** 18:27:27.8, 39°.97N×39°.89E, h5^{km}, ML3.8/14*
*TIF **28** 18:27:27.8, 39°.95N×39°.90E, h18^{km}*
*AFAD **28** 18:27:28.6, 39°.93N×39°.89E, h7^{km}±1^{km}, MW3.7*
*CFUSG **28** 18:27:29.4, 39°.81N×39°.88E, h4^{km}, mb2.9/3, Northeastern Turkey Magtype MSH 3.2 from 3 stations*
*IDC **28** 18:27:30.7±0.9, 40°.44N×39°.57E, h0^{km}, mb3.9/2, mbtmp3.4/8, ML3.0/6, Error ellipse: s-maj=19.2km s-min=9.6km az=163.0*
ISC 28 18:27:28.7±1.1, **39°.94N**±0°.02×**39°.91E**±0°.02, **h3**^{km}±9^{km}, **n49, σ1^{s}17**/67, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EUZM	**Uzumlu**	**0.29**	**215**	P	**Pg**	**18 27 34.4**	**+0.1**
EUZM				S	**Sg**	**18 27 38.7**	**+0.7**
ERZN	**Erzincan**	**0.38**	**202**	Pg	**Pg**	**18 27 36.3**	**+0.2**
ERZN				Sg	**Sg**	**18 27 42.5**	**+1.4**
BAYB	**BAYBURT**	**0.41**	**40**	P	**Pg**	**18 27 37.1**	**+0.4**
BAYB				S	**Sg**	**18 27 43.5**	**+1.4**
KOPT	**Kop Dagi**	**0.46**	**80**	P	**Pg**	**18 27 38.3**	**+0.7**
KOPT				S	**Sb**	**18 27 47.1**	**+0.1**
KELT	**Kelkit**	**0.54**	**292**	P	**Pg**	**18 27 39.3**	**+0.2**
KELT				S	**Sb**	**18 27 47.1**	**-2.2**
YEDI	**Yedisu-Bingol**	**0.70**	**136**	Pg	**Pg**	**18 27 41.9**	**-0.3**
YEDI				Sg	**Sb**	**18 27 53.2**	**-0.7**
EMRE	**Erzurum,Aziziy**	**0.82**	**84**	P	**Pg**	**18 27 45.0**	**+0.5**
KRIK	**Erzurum-spir**	**0.87**	**63**	P	**Pg**	**18 27 45.8**	**+0.3**
KRIK				S	**Sb**	**18 28 00.1**	**+1.3**
ECAT	**Cat-ERZURUM**	**0.89**	**112**	P	**Pg**	**18 27 45.6**	**-0.1**
ALUC	**Giresun/Alucra**	**0.96**	**295**	P	**Pb**	**18 27 47.1**	**-1.0**
ALUC				S	**Sb**	**18 28 00.4**	**-0.9**
IZDR	**Rize**	**0.98**	**30**	P	**Pg**	**18 27 46.8**	**-0.7**
IZDR				S	**Sg**	**18 27 59.7**	**-0.4**
MACK	**Trabzon**	**1.00**	**354**	P	**Pg**	**18 27 48.0**	**0.0**
MACK				S	**Sb**	**18 28 01.7**	**-0.7**
KTUT	**Trabzon**	**1.05**	**354**	Pg	**Pg**	**18 27 48.0**	**-0.8**
KTUT				Sg	**Sg**	**18 28 02.2**	**-0.2**
KARO	**Karliova-Bingo**	**1.08**	**125**	Pn	**Pg**	**18 27 48.9**	**-0.6**
BNGB	**Bingl**	**1.12**	**148**	Pn	**Pg**	**18 27 48.9**	**-1.3**
BNGB				Sn	**Sn**	**18 28 06.9**	**-0.6**
ILIC	**ilic-Erzincan**	**1.15**	**245**	Pn	**Pg**	**18 27 50.1**	**-0.6**
KOVA	**Elazig, Kovanc**	**1.24**	**183**	P	**Pg**	**18 27 51.6**	**-0.8**
KOVA				S	**Sn**	**18 28 10.3**	**0.0**
CHOM	**Cayeli-Rize**	**1.32**	**29**	Pn	**Pn**	**18 27 53.4**	**-0.7**
ESPY	**Espiye-Giresun**	**1.33**	**318**	Pn	**Pn**	**18 27 53.1**	**-1.1**
ESPY				Sn	**Sg**	**18 28 10.8**	**-0.5**
SUSE	**Susehri**	**1.34**	**282**	P	**Pn**	**18 27 53.1**	**-1.4**
SUSE				S	**Sn**	**18 28 11.8**	**-1.0**
VRTB	**Varto-Mus**	**1.43**	**123**	Pn	**Pn**	**18 27 55.8**	**+0.1**
ARPR	**Arapgir-MALATY**	**1.48**	**236**	Pn	**Pn**	**18 27 55.9**	**-0.6**
KOPR	**Koprukoy-ERZUR**	**1.50**	**88**	Pn	**Pn**	**18 27 56.1**	**-0.5**
CUZAR	**Zara_SIVAS**	**1.65**	**269**	P	**Pb**	**18 27 59.3**	**-0.5**
CUZAR				S	**Sg**	**18 28 23.6**	**+2.0**
HEKM	**Malatya_Hekimh**	**1.85**	**235**	P	**Pb**	**18 28 02.8**	**-0.4**
HOPA	**Hopa-Artvin**	**1.86**	**39**	Pn	**Pn**	**18 28 00.9**	**-0.5**
SENK	**Senkaya-Erzuru**	**1.97**	**71**	Pn	**Pn**	**18 28 03.0**	**-0.2**
RSDY	**Resadiye-TOKAT**	**2.03**	**284**	Pn	**Pn**	**18 28 03.7**	**-0.1**
SVAN	**Silvan-Diyarba**	**2.05**	**150**	Pn	**Pn**	**18 28 04.4**	**+0.2**
BATM	**Batumi**	**2.14**	**39**	P	**Pb**	**18 28 06.7**	**-1.5**
GURO	**Guroymak-BITLI**	**2.16**	**129**	Pn	**Pn**	**18 28 06.0**	**+0.3**
MLAZ	**Malazgirt-MUS**	**2.19**	**111**	Pn	**Pn**	**18 28 06.3**	**+0.1**
SVSK	**Karacayir**	**2.24**	**270**	Pn	**Pn**	**18 28 06.6**	**-0.1**
DARE	**Darende-Malaty**	**2.33**	**235**	Pn	**Pn**	**18 28 08.3**	**+0.3**
AGRB	**Hanur-Agry**	**2.41**	**98**	Pn	**Pn**	**18 28 09.5**	**+0.3**
GHRG	**Ghorjomi**	**2.57**	**45**	P	**Pn**	**18 28 13.3**	**+1.8**
GHRG				S	**Sg**	**18 28 49.8**	**-1.5**
TOKT	**Tokat**	**2.61**	**279**	Pn	**Pn**	**18 28 11.8**	**0.0**
URFA	**Urfa**	**2.64**	**199**	Pn	**Pn**	**18 28 12.6**	**+0.3**
GNI	**Garni**	**3.71**	**85**	Pn	**Pb**	**18 28 36.0**	**+0.9**
	1.9nm,0.3s,baz=336,slow=4.2,SNR=11						
	4.0nm,0.6s						
KBZ	**Khabaz**	**4.39**	**30**	Pn	**Pn**	**18 28 35.4**	**-0.9**
	0.4nm,0.3s,baz=245,slow=10.0,SNR=4.6						
	0.9nm,0.4s						
KVAR	**Kislovodsk Arr**	**4.52**	**26**	Pn	**Pn**	**18 28 37.8**	**-0.3**
	baz=274,slow=20						
	2.0nm,0.4s						
BRTR	**Keskin Array B**	**4.83**	**269**	Pn	**Pn**	**18 28 43.6**	**+1.1**
	0.2nm,0.3s,baz=84,slow=13,SNR=6.5						
BRTR				Pg	**Pb**	**18 28 54.2**	**+0.2**
	0.5nm,0.3s,baz=85,slow=14,SNR=20						
	0.9nm,0.4s						
SUDU	**Sudak**	**6.13**	**325**	Pm		18 29 03.2	
	comp=Z,8.0nm,0.5s						
SUDU				*i* S	**Sn**	**18 30 13.5**	**+2.7**
SUDU				Sm		18 30 17.0	
	comp=N,38nm,0.6s						
SUDU				Sm		18 30 17.0	
	comp=E,12nm,0.7s						
YAL	**Yalta**	**6.23**	**319**	*e*P	**Pn**	**18 29 04.7**	**+3.2**
YAL				Pm		18 29 07.0	
	comp=Z,6.0nm,0.3s						
YAL				*e*S	**Sn**	**18 30 17.6**	**+4.3**
YAL				Sm		18 30 18.3	
	comp=N,8.0nm,0.4s						
YAL				Sm		18 30 18.3	
	comp=E,4.0nm,0.3s						
SEV	**Sevastopol'**	**6.53**	**317**	*e*P	**Pn**	**18 29 07.5**	**+2.0**
SEV				Pm		18 29 08.0	
	comp=Z,2.0nm,0.3s						
SEV				x	x	18 30 24.2	
SEV				Sm		18 30 24.7	
	comp=N,4.0nm,0.5s						
SEV				Sm		18 30 24.7	
	comp=E,3.0nm,0.5s						
AKASG	**Malin Array Be**	**13.11**	**329**	Pn	Pn	18 30 29.9	-5.8
	comp=E,0.7nm,0.3s,baz=136,slow=14,SNR=4.0						
	comp=E,0.1nm,0.3s						
AKTO	**Aktyubinsk**	**16.48**	**44**	Pn	**Pn**	**18 31 19.8**	**-0.9**
	comp=E,0.1nm,0.3s,baz=218,slow=5.1,SNR=4.6						
	comp=E,1.3nm,0.7s						
FINES	**FINESS Array B**	**23.14**	**343**	P	**P**	**18 32 33.9**	**-1.9**
	comp=E,1.6nm,0.9s,baz=157,slow=12,SNR=3.5						
	comp=E,1.6nm,0.9s						
TORD	**Torodi Ar. Bea**	**42.87**	**242**	P	**P**	**18 35 29.3**	**+0.9**
	comp=E,4.6nm,0.8s,baz=59,slow=5.6,SNR=13						
	comp=E,4.6nm,0.8s						

IDC 28 18:40:24.9±4.0, **4°.78S**×**152°.70E, h0**^{km}**, mb3.7**/5, **mbtmp3.7**/5, **Error ellipse: s-maj=121.0km s-min=28.3km az=110.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.38**	**228**	P	P	18 45 35.8	+0.3
	0.8nm,0.4s,baz=52,slow=9.6,SNR=19						
	0.8nm,0.4s						
ASAR	**Alice Springs**	**26.10**	**222**	P	P	18 46 00.2	-0.4
	0.4nm,0.6s,baz=58,slow=8.9,SNR=16						
	0.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**29.58**	**241**	P	P	18 46 32.1	+0.3
	2.1nm,0.7s,baz=74,slow=6.7,SNR=8.0						
	2.1nm,0.7s						
MKAR	**Makanchi Array**	**80.25**	**319**	P	P	18 52 38.1	+0.5
	0.7nm,0.8s,baz=98,slow=6.0,SNR=5.8						
	0.7nm,0.8s						
KURBB	**Kurchatov Arra**	**83.72**	**322**	P	P	18 52 55.2	-0.6
	0.7nm,0.9s,baz=111,slow=4.1,SNR=6.6						
	0.7nm,0.9s						

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*AEIC **28** 18:41:40.6±1.8, 53°.73N±0°.04×163°.99W±0°.04, h8^{km}±7^{km}, Error ellipse: s-maj=6.3km s-min=1.1km az=148.0*
NEIC 28 18:41:39.7±1.0, **53°.77N**±0°.07×**164°.04W**±0°.08, **h15**^{km}±11^{km}, **ML2.5**/12, **ML2.4**(AEIC), **Error ellipse: s-maj=11.0km s-min=4.6km az=149.0, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WESE	**West Dahl East**	**0.77**	**336**		Pn	18 41 55.8	-0.4
WESE					Sn	18 42 06.9	-0.6
WECS	**Westdahl Cape**	**0.88**	**331**		Pn	18 41 57.5	0.0
WEBT	**Westdahl Beart**	**0.92**	**333**		Pn	18 41 58.1	0.0
WEBT					Sn	18 42 11.8	+0.7
SSLS	**Shishaldin Sou**	**0.94**	**1**		Pn	18 41 58.3	-0.2
ISLZ	**Isanotski Laza**	**0.98**	**11**		Pb	18 41 58.2	-0.2
ISLZ					Sg	18 42 11.8	+0.4
SSBA	**Shishaldin**	**1.00**	**357**		Pb	18 41 58.9	+0.1
SSBA					Sn	18 42 12.9	-0.3
ISNN	**Isanotski Nort**	**1.07**	**8**		Pg	18 42 00.5	+0.1
ISNN					Sn	18 42 15.1	+0.2
AKUT	**Akutan**	**1.09**	**290**	Pn	Pb	18 42 00.0	-0.1
AKUT				IAML		18 42 18.1	
	comp=E,66nm,0.3s						
AHB	**Akutan Harbor**	**1.10**	**289**		Pb	18 42 00.4	-0.1
AHB					Sg	18 42 15.4	0.0
FALS	**False Pass**	**1.15**	**18**		Pn	18 42 01.0	-0.2
FALS					Sb	18 42 15.6	-0.2
AKBBA	**Akutan Broad B**	**1.17**	**287**		Pn	18 42 01.4	-0.1
ZRO	**Akutan Zero**	**1.19**	**286**		Pn	18 42 01.6	-0.2
AKMO	**Akutan Morgan**	**1.21**	**286**		Pn	18 42 02.0	0.0
AKGG	**Akutan Green G**	**1.23**	**291**		Pn	18 42 02.4	+0.1
AKRB	**Akutan Reef Bi**	**1.25**	**287**		Pn	18 42 02.4	-0.2
UNV	**Unalaska Valle**	**1.46**	**274**		Pn	18 42 04.9	-0.6
MTBL	**Makushin Table**	**1.57**	**278**		Pn	18 42 07.4	+0.3
MTBL					Sg	18 42 30.0	-0.3
MREP	**Makushin Rep't**	**1.60**	**272**		Pn	18 42 07.4	-0.1
MGOD	**Makushin Gods**	**1.68**	**272**		Pn	18 42 08.7	+0.1
MAPS	**Pakushin South**	**1.72**	**272**		Pn	18 42 09.2	+0.1
HAG	**Hague Volcano**	**1.99**	**38**		Pn	18 42 14.0	+1.2
PS1A	**Pavlof South-1**	**2.13**	**38**		Pn	18 42 15.6	+0.9
S12K	**Black Hills**	**2.25**	**30**		Pn	18 42 17.2	+0.9
S12K				IAML		18 42 49.6	
	comp=N,37nm,0.6s						
OKTU	**Okmok Mt. Tuli**	**2.42**	**262**		Pn	18 42 19.5	+0.8
SDPT	**Sand Point**	**2.61**	**51**		Pn	18 42 22.3	+1.0
SDPT	**Sand Point**	**2.61**	**51**	IAML		18 43 11.8	
	comp=N,30nm,1.3s						
SDPT				IAML		18 43 45.3	
	comp=E,25nm,1.2s						
CNBA	**Chernabura Isl**	**2.81**	**66**	Pn	Pn	18 42 23.8	-0.3
CNBA				IAML		18 43 46.4	
	comp=E,14nm,1.2s						
CNBA				IAML		18 43 53.7	
	comp=N,20nm,1.3s						
O14K	**Tigyukauivet M**	**5.71**	**15**	Pn	Pn	18 43 05.4	+1.6

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*IDC **28** 18:46:13.8±1.6, 33°.20N×133°.54E, h0^{km}, mb3.4/3, mbtmp3.3/5, ML2.5/2, MS4.2/1, Error ellipse: s-maj=27.7km s-min=15.9km az=166.0*
*JMA **28** 18:46:15.7±0.0, 33°.4N±0°.1×133°.52E±0°.09, h8^{km}, MV3.3/40, TOSA BAY REGION*
JMA Felt I J1 at TOSA BAY REGION .
ISC 28 18:46:15.2±1.2, **33°.36N**±0°.07×**133°.51E**±0°.03, **h10**^{km}±9^{km}, **n16, σ0^{s}64**/23, **mb3.4**/3, **14D, Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKHR	**Kochiharuno**	**0.15**	**357**	*i* P	**Pg**	**18 46 18.3**	**-0.1**
JKHR				*e*S	**Sg**	**18 46 20.6**	**-0.2**
JKU	**Kubokawa**	**0.38**	**262**	⇓*i*P	**Pb**	**18 46 23.4**	**-0.5**
JKU				⇓S	**Sb**	**18 46 28.9**	**-0.9**
JMN	**Monobe**	**0.48**	**40**	⇓*i*P	**Pg**	**18 46 24.7**	**+0.1**
JMN				⇓S	**Sg**	**18 46 31.1**	**+0.2**
JET	**Tanbara**	**0.56**	**318**	⇓*i*P	**Pg**	**18 46 26.4**	**+0.2**
JET				⇓S	**Sg**	**18 46 33.8**	**+0.2**
UWA2	**Uwa jima 2**	**0.75**	**259**	⇓*i*P	**Pb**	**18 46 30.4**	**-0.1**
UWA2				⇓S	**Sb**	**18 46 40.4**	**-0.4**
JTO	**Tosashimizu**	**0.78**	**230**	⇓*i*P	**Pb**	**18 46 31.0**	**+0.2**
JTO				⇓S	**Sb**	**18 46 41.0**	**-0.4**
JNA	**Nagahama**	**0.88**	**283**	⇓P	**Pg**	**18 46 32.2**	**0.0**
JNA				⇓*e*S	**Sg**	**18 46 44.3**	**+0.7**
JAI	**Aioi**	**0.90**	**61**	⇓*i*P	**Pg**	**18 46 32.2**	**-0.2**
JAI				⇓*e*S	**Sg**	**18 46 44.0**	**-0.1**
JJS	**Sakaide**	**1.07**	**19**	*i* P	**Pg**	**18 46 35.1**	**-0.6**
JJS				S	**Sg**	**18 46 48.9**	**-0.8**
JNU	**Nakatsue**	**2.22**	**265**	Pn	**Pn**	**18 46 52.8**	**+0.7**
	5.5nm,0.3s,baz=99,slow=5.4,SNR=32						
JNU				Lg	Lg	18 47 26.3	
	9.3nm,0.3s,baz=301,slow=24,SNR=7.4						
	12nm,0.3s						
MJAR	**Matsushiro Arr**	**5.00**	**49**	Pn	**Pn**	**18 47 32.0**	**+1.7**
	baz=236,slow=12,SNR=1.8						
MJAR				Lg	Lg	18 48 58.7	
	baz=230,slow=30,SNR=4.5						
	0.4nm,0.4s						
KSRS	**Korea Array**	**6.12**	**313**	Pg	Pg	18 48 08.2	-4.2
	0.2nm,0.3s,baz=135,slow=18,SNR=4.2						
KURBB	**Kurchatov Arra**	**43.29**	**310**	P	**P**	**18 54 16.6**	**-0.3**
	0.4nm,0.5s,baz=97,slow=9.1,SNR=5.3						
	0.4nm,0.5s						
LEM	**Lembang**	**46.92**	**216**	LR	LR	19 16 30.4	
	comp=Z,257nm,18.2s,baz=174,slow=39						
BVAR	**Borovoye Array**	**48.34**	**314**	P	**P**	**18 54 57.3**	**+0.5**
	0.2nm,0.4s,baz=104,slow=9.6,SNR=2.3						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**53.01**	**179**	P	**P**	**18 55 31.4**	**-0.9**
	0.4nm,0.9s,baz=355,slow=7.8,SNR=2.6						
	0.4nm,0.9s						

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*RSPR **28** 18:47:03.0, 18°.92N×64°.43W, h57^{km}±15^{km}, MD3.3/5*
NEIC 28 18:47:00.3±0.9, **18°.9N**±0°.1×**64°.3W**±0°.1, **h35**^{km}±2^{km}, **ML2.5**/16, **Md3.3**/5(RSPR), **6C-1D, Error ellipse: s-maj=21.5km s-min=14.2km az=136.0, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUMP	**Col San Antoni**	**1.66**	**243**		Sn	18 47 46.6	-0.4
HUMP	**Col San Antoni**	**1.66**	**243**		Pn	18 47 26.6	-0.4
HUMP				IAML		18 47 47.5	
	comp=E,36nm,0.2s						
HUMP	**Col San Antoni**	**1.66**	**243**	⇓*e*P	Pn	18 47 26.7	-0.2
HUMP	**Col San Antoni**	**1.66**	**243**	*e*S	Sn	18 47 46.6	-0.4
GCPR	**Guaynabo City**	**1.80**	**251**	Pn	Pn	18 47 28.2	-0.6
PDPR	**Patillas Dam,**	**1.86**	**242**	Pn	Pn	18 47 29.3	-0.4
PDPR				IAML		18 47 57.3	
	comp=N,28nm,0.4s						
PDPR	**Patillas Dam,**	**1.86**	**242**	⇑*e*P	Pn	18 47 30.5	+0.8
PDPR	**Patillas Dam,**	**1.86**	**242**	*e*S	Sn	18 47 52.0	0.0
ECPR	**Experimental S**	**2.04**	**254**	⇑*e*P	Pn	18 47 32.6	+0.4
ECPR	**Experimental S**	**2.04**	**254**	*e*S	Sn	18 47 55.5	-1.1
CELP	**Cerrillos**	**2.32**	**249**		Sn	18 48 03.0	-0.3
CELP	**Cerrillos**	**2.32**	**249**		Pn	18 47 36.2	+0.2
CELP				IAML		18 48 39.8	
	comp=N,19nm,2.8s						
CELP				IAML		18 49 03.1	
	comp=E,20nm,2.6s						
CELP	**Cerrillos**	**2.32**	**249**	⇑*e*P	Pn	18 47 36.3	+0.3
CELP	**Cerrillos**	**2.32**	**249**	*e*S	Sn	18 48 03.0	-0.3
OBIP	**Obispado Ponce**	**2.35**	**249**	Pn	Pn	18 47 37.0	+0.5
OBIP				IAML		18 48 14.4	
	comp=N,34nm,2.3s						
OBIP				IAML		18 49 07.2	
	comp=E,27nm,2.4s						
AOPR	**Arecibo Observ**	**2.40**	**257**		Sn	18 48 04.9	-0.4
AOPR	**Arecibo Observ**	**2.40**	**257**		Pn	18 47 37.0	0.0
AOPR				IAML		18 48 05.5	
	comp=N,45nm,2.1s						
AOPR				IAML		18 48 18.0	
	comp=E,44nm,0.5s						
AOPR	**Arecibo Observ**	**2.40**	**257**	⇑*e*P	Pn	18 47 37.8	+0.8
AOPR	**Arecibo Observ**	**2.40**	**257**	*e*S	Sn	18 48 04.9	-0.4
AGPR	**Aguadilla, PR**	**2.70**	**261**	Pn	Pn	18 47 42.0	+0.7
LSP	**Las Mesas**	**2.74**	**255**		Pn	18 47 42.4	+0.5
LSP	**Las Mesas**	**2.74**	**255**	⇑*e*P	Pn	18 47 42.4	+0.5
MLPR	**Magueyes Islan**	**2.77**	**251**	⇑*e*P	Pn	18 47 43.0	+0.9
CRPR	**Cabo Rojo, PR**	**2.82**	**252**	Pn	Pn	18 47 43.5	+0.7

TRN 28 18:48:05.1, 14°.48N×61°.24W, h174^{km}, MD3.9, West of Martinique., Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIM	**Bigot**	**0.17**	**76**	*e*P	Pn	18 48 28.5	+0.2
SVN	**Savane Anatole**	**0.37**	**11**	*e*P	Pn	18 48 29.4	+0.6
SLBI	**Saint Lucia, B**	**0.52**	**150**	*e*P	Pn	18 48 29.3	0.0
SLBI				*e*S	Sn	18 48 48.7	+0.8
MDN	**Morne-Daniel**	**0.85**	**350**	*e*P	Pn	18 48 31.6	+0.5
DLPL	**La Plaine**	**0.85**	**359**	*e*P	Pn	18 48 31.4	+0.2
DSLB	**Salisbury**	**0.97**	**350**	*e*P	Pn	18 48 32.8	+0.8
DSLB				*e*S	Sn	18 48 52.7	-0.3
DWS	**Wesley**	**1.09**	**356**	*e*P	Pn	18 48 34.9	+2.0
DWS				*e*S	Sn	18 48 56.0	+1.5
SVB	**Belmont**	**1.20**	**181**	*e*P	Pn	18 48 34.4	+0.5
SVB				*e*S	Sn	18 48 55.1	-1.0
SVT	**Saint Vincent**	**1.30**	**180**	*e*P	Pn	18 48 35.5	+0.8
SVT				*e*S	Sn	18 48 58.5	+0.9
SVOC	**Richmond Hill,**	**1.32**	**179**	*e*P	Pn	18 48 35.1	+0.2
SVOC				*e*S	Sn	18 48 59.3	+1.4
GCMP	**Grenada, Carri**	**1.99**	**185**	*e*P	Pn	18 48 42.4	+0.7
GCMP				*e*S	Sn	18 49 09.4	-0.6
BBGH	**Gun Hill**	**2.10**	**129**	*e*P	Pn	18 48 45.3	+2.4
BBGH				*e*S	Sn	18 49 11.9	-0.3
GRW	**Mount Saint Ca**	**2.34**	**190**	*e*P	Pn	18 48 47.0	+1.3
GRW				*e*S	Sn	18 49 16.1	-1.2
GRGR	**Grenville**	**2.37**	**190**	*e*P	Pn	18 48 47.4	+1.5
GRGR				*e*S	Sn	18 49 17.5	-0.2
ANWB	**Willy Bob**	**3.22**	**351**	*e*P	Pn	18 48 56.5	+0.4
ANWB				*e*S	Sn	18 49 33.7	-2.3
TRN	**Trinidad (W)**	**3.81**	**182**	*e*P	Pn	18 49 05.2	+1.6
TRN				*e*S	Sn	18 49 47.7	-1.7

DJA 28 19:04:53.7±0.4, **1°N**±2°×**12°7E**±°, **h63**^{km}±11^{km}, **M3.7**/12, **mb3.9**/4, **MLv3.6**/12, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.73**	**162**	P	Pn	19 05 09.8	+1.3
SGSI	**Sangihe**	**2.73**	**324**	P	Pn	19 05 34.7	-0.4
SGSI				S	Sn	19 06 06.5	-0.5
KMSI	**Cibinong**	**3.28**	**254**	P	Pn	19 05 43.9	+1.2
KMSI				S	Sn	19 06 23.0	+2.4
SANI	**Sanana**	**3.68**	**198**	P	Pn	19 05 47.5	-0.7
SANI				S	Sn	19 06 27.3	-3.1
LUWI	**Luwuk**	**5.03**	**240**	P	Pn	19 06 08.8	+2.1
	30nm,1.2s						
MRSI	**Marisa**	**5.29**	**259**	P	Pn	19 06 11.6	+1.4
	0.1nm9.9nm,0.6s						

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*IDC **28** 19:13:50.6±0.8, 8°.30N×126°.62E, h0^{km}, mb4.0/13, mbtmp4.0/13, MS3.9/2, Error ellipse: s-maj=31.8km s-min=14.3km az=81.0*
*NEIC **28** 19:13:55.3±1.4, 8°.2N±0°.1×126°.9E±0°.1, h35^{km}±2^{km}, mb4.4/13, Error ellipse: s-maj=23.3km s-min=7.8km az=137.0*
ISC 28 19:13:55.9±0.6, **8°.22N**±0°.07×**126°.8E**±0°.1, **h46**^{km}**, n36, σ1^{s}36**/37, **mb4.3**/19, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.69**	**228**	Pn	**Pn**	**19 14 22.2**	**-0.7**
DAV	**Davao City (W)**	**1.69**	**228**	Pn	**Pn**	**19 14 21.1**	**-1.8**
	38nm,0.3s,baz=38,slow=6.9,SNR=4.9						
DAV				Sn	**Sn**	**19 14 47.3**	**+4.0**
	33nm,0.3s,baz=297,slow=24,SNR=4.9						
DAV				LR	LR	19 15 02.2	
	comp=Z,390nm,18.2s,baz=34,slow=45						
TNTI	**Ternate**	**7.41**	**176**	Pn	**Pn**	**19 15 40.5**	**-1.1**
MTN	**Manton Dam**	**21.35**	**168**	P	**P**	**19 18 37.5**	**-1.9**
KNRA	**Kununurra**	**23.81**	**175**	P	**P**	**19 19 04.6**	**-0.1**
KNRA				IAmb	IAmb	19 19 22.3	
	comp=Z,7.3nm,0.7s						
JNU	**Nakatsue**	**25.07**	**8**	LR	LR	19 29 20.9	
	comp=Z,71nm,18.8s,baz=196,slow=37						
FITZ	**Fitzroy Crossi**	**26.17**	**183**	P	**P**	**19 19 25.5**	**-0.7**
FITZ	**Fitzroy Crossi**	**26.17**	**183**	P	**P**	**19 19 26.9**	**+0.7**
	comp=Z,2.3nm,0.6s,baz=15,slow=12,SNR=9.6						
	comp=Z,2.3nm,0.6s						
WB0	**Warramunga Arr**	**28.79**	**165**	P	**P**	**19 19 47.6**	**-2.0**
WB0				IAmb	IAmb	19 20 27.6	
	comp=Z,8.7nm,1.2s						
WRA	**Warramunga Arr**	**28.94**	**165**	P	**P**	**19 19 53.4**	**+2.4**
	comp=Z,0.2nm,0.5s,baz=346,slow=10,SNR=4.8						
	comp=Z,0.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**28.94**	**293**	P	**P**	**19 19 48.6**	**-2.5**
	comp=Z,0.6nm,0.6s,baz=94,slow=9.8,SNR=4.2						
	comp=Z,0.6nm,0.6s						
KSRS	**Korea Array**	**29.12**	**2**	P	**P**	**19 19 53.0**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=172,slow=9.3,SNR=4.3						
	comp=Z,0.6nm,0.6s						
ASAR	**Alice Springs**	**32.43**	**168**	P	**P**	**19 20 21.9**	**+0.1**
ASAR	**Alice Springs**	**32.43**	**168**	P	**P**	**19 20 23.7**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=345,slow=7.0,SNR=12						
	comp=Z,0.2nm,0.3s						
MORW	**Morawa**	**38.50**	**195**	P	**P**	**19 21 13.7**	**-0.1**
FORT	**Forrest**	**38.79**	**178**	P	**P**	**19 21 15.3**	**-0.9**
SONM	**Songino Array**	**43.13**	**340**	P	**P**	**19 21 51.7**	**-0.2**
	comp=Z,0.9nm,0.9s,baz=160,slow=7.8,SNR=4.3						
	comp=Z,0.9nm,0.9s						
MKAR	**Makanchi Array**	**53.99**	**323**	P	**P**	**19 23 16.1**	**+0.7**
MKAR				PcP	**PcP**	**19 24 20.6**	**+0.5**
MKAR	**Makanchi Array**	**53.99**	**323**	P	**P**	**19 23 15.8**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=118,slow=7.8,SNR=11						
MKAR				PcP	**PcP**	**19 24 20.6**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=121,slow=5.0,SNR=5.1						
	comp=Z,0.6nm,0.4s						
MAKZ	**Makanchi**	**54.19**	**323**	P	**P**	**19 23 17.0**	**+0.2**
ZALV	**Zalesovo Beam**	**56.69**	**332**	P	**P**	**19 23 33.8**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=113,slow=12,SNR=4.3						
	comp=Z,0.5nm,0.3s						
KURK	**Kurchatov**	**58.07**	**326**	P	**P**	**19 23 44.4**	**0.0**
KURBB	**Kurchatov Arra**	**58.07**	**326**	P	**P**	**19 23 45.0**	**+0.6**
	comp=Z,2.7nm,0.2s,baz=127,slow=6.1,SNR=17						
	comp=Z,2.7nm,0.2s						
KK31	**Karatay Array**	**60.09**	**315**		**P**	**19 23 58.2**	**-0.3**
KK31				IAmb	IAmb	19 23 59.4	
	comp=Z,3.9nm,1.1s						
KKAR	**Karatay Array**	**60.09**	**315**	P	**P**	**19 23 58.2**	**-0.3**
BVAR	**Borovoye Array**	**63.66**	**326**	P	**P**	**19 24 22.6**	**+0.3**
	comp=Z,4.1nm,0.8s,baz=124,slow=8.6,SNR=24						

	comp=Z,4.1nm,0.8s						
BRVK	Borovoye	63.74	326		P	19 24 23.2	+0.3
BRVK				IAmb	IAmb	19 24 23.9	
	comp=Z,3.9nm,0.8s						
NRIK	Noril'sk	66.13	346	P	P	19 24 38.5	+0.4
	comp=Z,3.4nm,0.6s,baz=174,slow=5.4,SNR=5.3						
	comp=Z,3.4nm,0.6s						
M16K	Timber Creek	75.22	29	P	P	19 25 36.0	+2.5
O18K	Koktuh Hills	76.89	30	P	P	19 25 44.8	+1.6
O18K				IAmb	IAmb	19 26 27.9	
	comp=Z,8.0nm,1.3s						
IMAR	Indian Mountai	78.23	24	P	P	19 25 51.1	+0.6
C23K	Itkillik River	79.77	20	P	P	19 26 00.1	+1.3
C23K				IAmb	IAmb	19 26 23.1	
	comp=Z,6.6nm,1.2s						
ILAR	Eielson Array	81.04	26	P	P	19 26 07.3	+1.6
	comp=Z,0.4nm,0.7s,baz=228,slow=5.4,SNR=5.0						
	comp=Z,0.4nm,0.7s						
BMAR	Burnt Mountain	81.93	23	P	P	19 26 11.1	+0.7
EIL	Elat	87.62	299	LR	LR	20 14 14.6	
	comp=Z,241nm,18.0s,baz=246,slow=42						
FINES	FINESS Array B	87.95	332	P	P	19 26 40.1	-0.6
	comp=Z,2.5nm,0.9s,baz=104,slow=8.0,SNR=7.0						
	comp=Z,2.5nm,0.9s						

IDC 28 19:24:53.1±5.5**,16°.02S**×**173°.98W,h0km,mb3.9**/3**,**
mbtmp3.9/3**,MS3.4**/2**,Error ellipse: s-maj=214.0km**
s-min=60.3km az=135.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAR	Rarotonga	14.42	113	LR	LR	19 32 16.3	
	comp=Z,119nm,21.3s,baz=216,slow=31						
URZ	Urewera	23.50	198	LR	LR	19 37 32.7	
	comp=Z,155nm,19.7s,baz=3.0,slow=32						
STKA	Stephens Creek	43.24	240	P	P	19 32 56.1	-0.3
	1.0nm,0.5s,baz=100,slow=6.1,SNR=3.4						
	1.0nm,0.5s						
WRA	Warramunga Arr	49.16	257	P	P	19 33 43.3	0.0
	0.7nm,0.7s,baz=93,slow=7.4,SNR=11						
	0.7nm,0.7s						
ASAR	Alice Springs	49.39	252	P	P	19 33 44.9	-0.1
	2.1nm,0.6s,baz=90,slow=7.8,SNR=32						
	2.1nm,0.6s						
BRTR	Keskin Array B	146.28	320	PKPbc	PKPdf	19 44 35.2	+0.2
	0.8nm,0.8s,baz=45,slow=2.2,SNR=3.8						

IDC ***28*** *19:28:35.6±0.9,42°.88N×141°.53E,h146km±10km,*
mb3.5/11,mbtmp3.8/13,Error ellipse: s-maj=20.2km
s-min=14.3km az=96.0
JMA ***28*** *19:28:35.2±0.1,42°.8N±0°.5×141°.3E±0°.6,h133km±1km,*
MV3.2/35,IBURI REGION
ISC 28 19:28:34.8±0.7**,42°.78N**±0°.05×**141°.37E**±0°.05**,h138**km±6km**,**
n34,σ**0ˢ.75**/46**,mb3.5**/11**,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JEW	Eniwo	0.08	45	P	Pn	19 28 53.5	+0.1
JEW				eS	Sn	19 29 06.9	-0.6
JNB	Noboribetsu	0.40	218	P	Pn	19 28 54.1	-0.2
JNB				eS	Sn	19 29 08.3	-0.7
JIAM	Iburiatsuma	0.43	111	eP	Pn	19 28 54.9	+0.4
JIAM				eS	Sn	19 29 10.5	+1.2
JISS	Ishikarishitsu	0.49	4	P	Pn	19 28 54.9	+0.2
JISS				eS	Sn	19 29 09.6	-0.3
JBT2	Biratori 2	0.73	90	i P	Pn	19 28 56.2	0.0
JBT2				S	Sn	19 29 13.1	+0.6
JKB	Kayabe	0.93	196	i P	Pn	19 28 57.8	0.0
JKB				S	Sn	19 29 14.5	-0.7
JAB	Ashibetsu	0.95	41	i P	Pn	19 28 58.8	+0.8
JAB				S	Sn	19 29 16.1	+0.4
JFR	Furan	0.97	67	P	Pn	19 28 58.2	0.0
JFR				eS	Sn	19 29 15.5	-0.5
JSH	Shimam	0.99	262	P	Pn	19 28 58.3	0.0
JHR	Hokuryu	0.99	15	i P	Pn	19 28 59.0	+0.7
JHR				S	Sn	19 29 16.7	+0.4
JYM2	Yakumo 2	1.00	228	i P	Pn	19 28 58.5	+0.1
JYM2				eS	Sn	19 29 15.4	-0.9
JNBK	Urakawa-nobuka	1.14	116	i P	Pn	19 28 59.9	+0.2
JOT	Ohata	1.42	190	i P	Pn	19 29 02.6	0.0
JOT				S	Sn	19 29 24.2	+0.5
JCH	Churui	1.48	96	i P	Pn	19 29 02.8	-0.3
JCH				S	Sn	19 29 23.7	-1.1
JKK2	Kamakawa 2	1.48	42	i P	Pn	19 29 03.7	+0.5
JKK2				S	Sn	19 29 24.8	-0.2
ASAJ	Asahikawa	1.60	33	P	Pn	19 29 05.1	+0.5
	60nm,0.3s,baz=234,slow=12,SNR=312						
ASAJ				S	Sn	19 29 26.5	-0.9
	51nm,0.7s,baz=286,slow=33,SNR=20						
JAR	Ashorobuto	1.83	73	i P	Pn	19 29 07.3	+0.2
JAR				S	Sn	19 29 31.3	-0.7
MJAR	Matsushiro Arr	6.69	202	P	Pn	19 30 12.9	+2.2
	0.4nm,0.3s,baz=31,slow=12,SNR=5.3						
USRK	Ussuriysk Ar.	6.97	285	P	Pn	19 30 15.6	+1.3
	2.3nm,0.6s,baz=89,slow=15,SNR=7.1						
SEY	Seymchan	21.19	14	P	P	19 33 07.2	-1.8
	0.7nm,0.5s,baz=204,slow=12,SNR=5.3						
	0.7nm,0.5s						
SONM	Songino Array	24.97	294	P	P	19 33 45.2	-0.3
	1.3nm,0.8s,baz=77,slow=8.8,SNR=9.6						
	1.3nm,0.8s						
H11S1	WAKE ISLAND Hy	32.33	131	T	T	20 07 53.5	
	baz=329,slow=75,SNR=5.8						
H11S3	WAKE ISLAND Hy	32.33	131	T	T	20 07 54.6	
	baz=329,slow=75,SNR=5.3						
H11S2	WAKE ISLAND Hy	32.35	131	T	T	20 07 56.6	
	baz=329,slow=75,SNR=3.1						
ZALV	Zalesovo Beam	38.21	307	P	P	19 35 41.0	+0.2
	1.8nm,0.5s,baz=88,slow=8.7,SNR=8.6						
	1.8nm,0.5s						
MKAR	Makanchi Array	41.27	297	P	P	19 36 06.8	+0.6
	0.5nm,0.7s,baz=88,slow=11,SNR=7.4						
	0.5nm,0.7s						
KURBB	Kurchatov Arra	42.63	303	P	P	19 36 17.8	+0.6
	4.7nm,0.5s,baz=76,slow=8.9,SNR=19						
	4.7nm,0.5s						
BVAR	Borovoye Array	46.82	308	P	P	19 36 51.4	+1.0
	1.2nm,0.3s,baz=76,slow=9.7,SNR=18						
	1.2nm,0.3s						
WRA	Warramunga Arr	62.75	187	P	P	19 38 45.5	+0.3
	0.4nm,0.7s,baz=6.7,slow=7.1,SNR=5.1						
	0.4nm,0.7s						
FINES	FINESS Array B	63.74	331	P	P	19 38 50.6	-0.8
	1.2nm,0.4s,baz=52,slow=7.5,SNR=20						
	1.2nm,0.4s						
ASAR	Alice Springs	66.47	187	P	P	19 39 10.4	+1.1
	0.4nm,0.8s,baz=358,slow=4.8,SNR=4.9						
	0.4nm,0.8s						
HFS	Hagfors	68.86	335	P	P	19 39 23.1	-0.8
	0.7nm,0.3s,baz=35,slow=5.4,SNR=9.3						
	0.7nm,0.3s						
NB2	NORSAR Subarra	68.89	337	P	P	19 39 24.5	+0.3
	comp=Z,0.2nm,0.3s,baz=36,slow=6.5						
NOA	NORSAR Array B	68.89	337	P	P	19 39 24.2	0.0
	comp=Z,0.7nm,0.7s,baz=38,slow=6.3,SNR=4.2						
	comp=Z,0.7nm,0.7s						

IDC 28 19:31:27.1±2.2**,0°.79S**×**127°.64E,h0km,mb3.1**/3**,**
mbtmp3.2/3**,Error ellipse: s-maj=156.6km**
s-min=28.5km az=67.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	20.13	161	P	P	19 36 02.8	-0.2
	0.3nm,0.3s,baz=340,slow=11,SNR=12						
	0.3nm,0.3s						
ASAR	Alice Springs	23.54	165	P	P	19 36 39.5	+0.2
	0.3nm,0.3s,baz=345,slow=12,SNR=7.4						
	0.3nm,0.3s						
MKAR	Makanchi Array	61.78	326	P	P	19 41 47.7	-0.1
	0.1nm,0.3s,baz=117,slow=6.3,SNR=1.9						
	0.1nm,0.3s						

WEL 28 19:39:47.9±1.2**,33°S**±10°×**17°9W**±1°8**,h12km,M3.8**/8**,**
mB4.4/6**,ML4.2**/11**,MLv4.0**/8**,Mw(mB)3.6**/6**,Error ellipse:**
s-maj=25.7km s-min=8.0km az=112.8,confirmed,South
of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	5.35	206	P	Pn	19 41 09.0	+1.5
WMGZ				S	Sn	19 42 12.1	+3.1
PKGZ	Pakihiroa	5.52	208	P	Pn	19 41 09.3	-0.6
PKGZ				S	Sn	19 42 15.4	+2.2
HAZ	Te Kaha	5.55	211	P	Pn	19 41 10.8	+0.5
HAZ				S	Sn	19 42 16.1	+2.1
PUZ	Puketiti	5.63	206	P	Pn	19 41 09.5	-1.9
PUZ				S	Sn	19 42 16.3	+0.3
RUGZ	Raukumara Rang	5.77	211	P	Pn	19 41 13.5	+0.1
RUGZ				S	Sn	19 42 22.5	+2.9
TKGZ	Te Karaka	6.11	207	S	Sn	19 42 29.2	+1.5
MWZ	Matawai	6.14	210	P	Pn	19 41 16.8	-1.7
MWZ				S	Sn	19 42 29.8	+1.1
URZ	Urewera	6.26	213	P	Pn	19 41 19.1	-0.9
URZ				S	Sn	19 42 31.5	0.0
RAGZ	Rawiri	6.33	210	P	Pn	19 41 21.8	+0.8
RAGZ				S	Sn	19 42 32.8	-0.5
RIGZ	Rimuhau	6.37	207	S	Sn	19 42 35.6	+1.3
PRGZ	Paritu Road	6.52	205	P	Pn	19 41 23.2	-0.4
PRGZ				S	Sn	19 42 38.9	+1.0
MUGZ	Murupara	6.59	213	P	Pn	19 41 24.2	-0.5
MUGZ				S	Sn	19 42 40.0	+0.2
SNGZ	Shannon Statio	6.60	209	P	Pn	19 41 24.8	0.0
SNGZ				S	Sn	19 42 41.0	+1.0
OUZ	Omahuta	6.83	249	P	Pn	19 41 28.8	+1.0
MTHZ	Maungataniwha	6.87	211	P	Pn	19 41 28.5	0.0
MTHZ				S	Sn	19 42 45.7	-0.9
BKZ	Black Stump Fm	7.28	212	P	Pn	19 41 33.3	-0.9
BKZ				S	Sn	19 42 56.0	-0.7

IDC ***28*** *19:47:01.0±4.3,17°.87S×178°.09W,h578km±27km,mb3.5/4,*
mbtmp4.4/5,Error ellipse: s-maj=122.0km s-min=27.9km
az=25.0
NEIC ***28*** *19:47:01.0±1.0,18°.0S±0°.2×178°.1W±0°.2,h571km±5km,*
mb4.4/20,Error ellipse: s-maj=24.1km s-min=21.6km
az=125.0
ISC 28 19:47:02.0±1.1**,17°.9S**±0°.1×**178°.2W**±0°.2**,h590km,n27,**
σ**0ˢ.80**/28**,mb4.3**/13**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.56	272	P	P	19 48 21.9	-1.9
MSVF	Nonsavu	3.56	272	P	P	19 48 22.6	-1.3
	26nm,0.8s,baz=117,slow=7.8,SNR=9.3						
DZM	Mont Dzumac	15.01	251	P	P	19 50 10.8	+0.1
DZM				IAmb	IAmb	19 50 29.0	
	comp=Z,35nm,1.3s						
BKZ	Black Stump Fm	21.71	191	P	P	19 51 09.7	-1.7
BKZ				IAmb	IAmb	19 51 17.0	
	comp=Z,18nm,1.3s						
EIDS	Eidsvold	29.45	250	P	P	19 52 19.4	-0.2
EIDS				IAmb	IAmb	19 52 29.8	
	comp=Z,27nm,1.4s						
MLZ	Mavora Lakes	29.70	200	P	P	19 52 20.4	-1.0
ARMA	Armidale	30.12	240	P	P	19 52 25.8	+0.4
CTAO	Charters Tower	33.63	260	P	P	19 52 55.3	+0.1
CAN	Canberra	33.87	233	P	P	19 52 57.3	+0.2
CAN				IAmb	IAmb	19 53 14.6	
	comp=Z,21nm,1.4s						
JOHN	Johnston Islan	35.43	14	P	P	19 53 10.0	-0.1
COEN	Coen	37.29	270	P	P	19 53 26.6	+1.2
COEN				IAmb	IAmb	19 53 51.4	
	comp=Z,17nm,1.1s						
TOO	Toolangi	37.34	231	P	P	19 53 26.2	+0.6
TOO				IAmb	IAmb	19 53 45.5	
	comp=Z,12nm,1.4s						
STKA	Stephens Creek	38.81	241	P	P	19 53 38.0	+0.5
STKA	Stephens Creek	38.81	241	P	P	19 53 38.7	+1.1
	comp=Z,6.2nm,0.8s,baz=88,slow=11,SNR=7.2						
	comp=Z,6.2nm,0.8s						
BBOO	Buckleboo	43.59	241	P	P	19 54 14.7	-0.5
WR8	Warramunga Arr	44.67	259	P	P	19 54 23.6	-0.1
WR8				IAmb	IAmb	19 54 37.2	
	comp=Z,12nm,1.5s						
WRAB	Tennant Creek	44.81	259	P	P	19 54 25.1	+0.3
WRA	Warramunga Arr	44.82	259	P	P	19 54 25.1	+0.2
	comp=Z,2.7nm,0.7s,baz=96,slow=7.5,SNR=56						
	comp=Z,2.7nm,0.7s						
AS31	Alice Springs	44.98	254	P	P	19 54 26.6	+0.5
AS31				IAmb	IAmb	19 54 27.7	
	comp=Z,4.5nm,0.6s						
ASAR	Alice Springs	44.98	254	P	P	19 54 26.0	-0.1
ASAR				PcP	PcP	19 55 55.1	+0.7
ASAR	Alice Springs	44.98	254	P	P	19 54 26.6	+0.5
	comp=Z,15nm,0.6s,baz=88,slow=8.7,SNR=287						
	comp=Z,15nm,0.6s						
MTN	Manton Dam	48.98	268	P	P	19 54 56.1	-0.1
MTN				IAmb	IAmb	19 54 59.3	
	comp=Z,8.4nm,1.1s						
KNRA	Kununurra	50.68	264	P	P	19 55 08.8	+0.3
KNRA				IAmb	IAmb	19 55 11.9	
	comp=Z,19nm,1.5s						
FITZ	Fitzroy Crossi	53.22	260	P	P	19 55 27.1	+0.4
SBA	Scott Base	60.47	184	P	P	19 56 16.4	+1.3
QSPA	South Pole Qui	72.18	180	P	P	19 57 27.9	+0.1
QSPA	South Pole Qui	72.18	180	P	P	19 57 27.9	+0.1
	comp=Z,1.8nm,0.7s,baz=326,slow=0.5,SNR=17						
	comp=Z,1.8nm,0.7s						

MOS ***28*** *20:01:43.2,41°.21N×45°.87E,h21km,MPVA3.6*
AZER ***28*** *20:01:44.2,41°.25N×45°.84E,h16km,ml2.6*
NORS ***28*** *20:01:45.6,41°.27N×45°.85E,h12km,MPVA3.5*
DRS ***28*** *20:01:47.4,41°.29N×45°.87E,h54km*
ISC 28 20:01:45.2±1.0**,41°.29N**±0°.02×**45°.66E**±0°.02**,h16**km±9km**,**
n46,σ**1ˢ.20**/91**,Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QZX	Qazax, Azerbai	0.32	224	P	Pn	20 01 54.0	-1.2
QZX				S	Sn	20 01 59.6	-2.0
GDB	GEDABAY	0.57	173	P	Pg	20 01 56.3	-0.2
GDB				S	Sg	20 02 04.2	0.0
ZKTA	Zakatala	0.80	64	P	Pb	20 01 59.7	-1.0
ZKTA				S	Sb	20 02 10.6	-0.7
GANJ	Ganja	0.81	142	P	Pb	20 01 59.4	-1.6
GANJ				S	Sb	20 02 09.6	-2.2
SEKA	Sheki	1.16	93	P	Pn	20 02 05.0	-1.8
SEKA				S	Sb	20 02 20.5	-1.3
MNGR	Mingechevir, A	1.19	115	P	Pn	20 02 06.5	-0.6
MNGR				S	Sn	20 02 23.5	+0.4
GNI	Garni	1.34	212	ePg	Pg	20 02 10.7	-0.3
GNI				eSg	Sg	20 02 30.4	+2.0
KMKR	Kumukh	1.36	51	ePg	Pn	20 02 09.5	-0.3
KMKR				eSg	Sn	20 02 27.1	-0.6
BTLR	Botlikh	1.44	17	ePg	Pb	20 02 11.7	+0.1
BTLR				eSg	Sg	20 02 31.7	+0.2
GNBR	Gunib	1.47	41	ePg	Pn	20 02 11.2	+0.2
GNBR				eSg	Sb	20 02 31.0	+0.4
XNZR	Khunzakh	1.47	32	ePg	Pb	20 02 12.6	+0.3
XNZR				eSg	Sg	20 02 32.6	-0.2
BRDA	Brd	1.54	131	P	Pn	20 02 12.8	+0.8
BRDA				S	Sn	20 02 32.1	+0.4
AKT	Akhty	1.57	82	ePg	Pn	20 02 11.7	-0.8
AKT				eSg	Sn	20 02 31.5	-1.0
AGDM	Agdam	1.61	137	Pn	Pn	20 02 13.0	0.0
AGDM				Sn	Sn	20 02 34.4	+1.0
AKH	Akhalkalaki	1.64	275	ePg	Pg	20 02 16.2	-0.4
AKH				eSg	Sg	20 02 37.8	-0.2
ARKR	Arakani	1.65	37	ePg	Pn	20 02 14.1	+0.5
ARKR				eSg	Sb	20 02 36.3	+0.6
UNCR	Uncukul	1.65	30	ePg	Pb	20 02 14.5	-0.8
UNCR				eSg	Sb	20 02 36.9	+1.0
QBL	Gabala	1.68	101	Pn	Pn	20 02 13.2	-0.7
QBL				Sn	Sn	20 02 35.6	+0.5
HYR	Heyderabad	1.69	202	Pn	Pg	20 02 17.1	-0.5
HYR				Sn	Sg	20 02 40.6	+1.1
URKR	Urkarakh	1.71	59	ePg	Pn	20 02 14.1	-0.4
URKR				eSg	Sn	20 02 36.1	0.0
KRNR	Karanay	1.79	31	ePg	Pn	20 02 16.6	+1.0
KRNR				eSg	Sb	20 02 40.9	+0.9
ZRD	Zardab	1.84	123	Pn	Pn	20 02 17.2	+1.2
ZRD				Sn	Sb	20 02 42.8	+1.7
LACR	Lac	1.84	327	ePg	Pg	20 02 19.6	-1.0
LACR				eSg	Sg	20 02 45.3	+0.8
IGDI	IGDIR	1.86	221	Pn	Pb	20 02 18.7	-0.2
IGDI				Sn	Sg	20 02 45.5	+0.3
XNQ	Khinaliq	1.87	93	Pn	Pn	20 02 16.8	0.0
XNQ				Sn	Sn	20 02 40.6	+0.4
BUJR	Buynaksk	1.87	35	ePg	Pb	20 02 18.2	-0.9
BUJR				eSg	Sb	20 02 41.4	-0.8
KSMR	Kasumkent	1.88	80	ePg	Pn	20 02 16.3	-0.4
KSMR				eSg	Sn	20 02 39.7	-0.4
SBZ	Shahbuz	1.89	183	Pn	Pb	20 02 19.6	+0.2
SBZ				Sn	Sb	20 02 44.5	+1.7
VLKR	Vladikavkaz	1.90	338	i Pg	Pg	20 02 23.8	+2.1
VLKR				eSg	Sg	20 02 48.3	+1.9
GROC	Groznyy	1.91	3	ePg	Pb	20 02 18.8	-0.9
GROC				eSg	Sb	20 02 44.8	+1.4
IML	Ismayilli	1.97	104	Pn	Pn	20 02 17.9	0.0
IML				Sn	Sn	20 02 43.9	+1.5
QSAR	Qusar	1.97	83	Pn	Pb	20 02 19.8	-0.8
QSAR				Sn	Sb	20 02 44.3	-0.6
BLQ	Beylaqan	2.13	137	Pn	Pn	20 02 21.3	+1.2
BLQ				Sn	Sb	20 02 48.9	-0.7
QUBA	Quba, Azerbaij	2.13	87	Pn	Pn	20 02 21.7	+1.5
QUBA				Sn	Sn	20 02 47.2	+0.9
KORR	Kora	2.15	327	ePn	Pb	20 02 24.9	+1.1
KORR				eSn	Sg	20 02 53.8	-0.6
QRD	Qoradiz	2.22	145	Pn	Pn	20 02 21.0	-0.4
QRD				Sn	Sb	20 02 51.7	-0.5
BTKR	Batakoyurt	2.24	339	ePn	Pb	20 02 23.9	-1.4
BTKR				eSn	Sb	20 02 52.7	-0.1
PQL	Pirkuli	2.27	102	Pn	Pn	20 02 22.7	+0.5
PQL				Sn	Sb	20 02 54.1	+0.2
ORD	Ordubad	2.37	174	Pg	Pb	20 02 27.7	+0.1
ORD				Sg	Sb	20 02 58.5	+1.9
SIZA	Siyzn	2.45	94	Pg	Pn	20 02 25.4	+0.8
SIZA				Sg	Sb	20 02 57.5	-1.4
GLBA	Clilabad	2.92	134	Pg	Pb	20 02 35.7	-1.2
GLBA				Sg	Sb	20 03 14.0	+1.6
YRD	Yardimli	3.09	139	Pg	Pb	20 02 38.6	-1.2
YRD				Sg	Sb	20 03 17.3	0.0
KBZ	Khabaz	3.18	321	ePn	Pb	20 02 37.7	-3.6
KBZ				eSn	Sb	20 03 18.0	-1.8
SHA1	Shidzhatmaz	3.31	319	ePn	Pn	20 02 39.4	+2.9
SHA1				eSn	Sb	20 03 21.3	-2.4
LRK	Lerik	3.35	141	Pg	Pb	20 02 41.8	-2.5
LRK				Sg	Sb	20 03 27.4	+2.6
ASTR	Astara	3.63	138	Sg	Sb	20 03 34.4	+1.5

UCR ***28*** *20:01:48.8±1.0,8°.35N×82°.85W,h30km±1km,MW4.1,*
Fault plane solution: NP1:φₛ285.08000°,δ85.79000°,
λ-24.67000°.
CATAC ***28*** *20:01:49.7±0.8,8°N±5°×8°3W±°,h16km±2km,M4.2/11,*
MLv4.2/11,Error ellipse: s-maj=11.6km s-min=5.4km
az=159.2,confirmed
UPA ***28*** *20:01:49.4±1.0,8°.39N×82°.84W,h26km±3km,MW4.0,*
Fault plane solution: NP1:φₛ24.00000°,δ58.00000°,
λ-179.00000°.
ISC 28 20:01:49.0±1.0**,8°.38N**±0°.02×**82°.85W**±0°.02**,h33**km±2km**,**
n111,σ**0ˢ.89**/153**,17C-27D,Panama-Costa Rica border**
region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LESP3	La Esperanza,	0.06	62	⇓iP	Pb	20 01 54.4	-0.3
LESP3				eS	Sb	20 01 57.7	-0.8
LESP3	La Esperanza,	0.06	62	⇓eP	Pb	20 01 54.4	-0.3
LESP3				eS	Sb	20 01 58.6	+0.1
LPPC	Paso Canoas	0.15	3	eP	Pb	20 01 54.9	-0.3
LPPC				eS	Sb	20 01 59.9	+0.4
CDITO	Canoas	0.20	352	P	Pb	20 01 55.2	-0.5
CDITO	Canoas	0.20	352	S	Sb	20 01 59.0	-1.1
LIMO3	Limones	0.27	184	⇑iP	Pn	20 01 56.4	-0.2
LIMO3				eS	Sb	20 02 01.4	-0.2
LIMO3	Limones	0.27	184	⇑eP	Pn	20 01 56.5	-0.2
LIMO3				eS	Sb	20 02 02.6	+1.0
LMNES	Limones	0.28	183	⇑eP	Pn	20 01 56.4	-0.3
NELY	Ciudad Neily	0.29	340	⇑eP	Pb	20 01 56.2	-0.5
NELY				eS	Sn	20 02 02.4	+0.8
FITO	Golfito	0.39	309	⇑eP	Pb	20 01 56.6	-1.4
FITO				eS	Sb	20 02 03.0	-1.2
DVD	David	0.40	81	⇓iP	Pb	20 01 57.7	-0.4
DVD				eS	Sn	20 02 04.7	-0.1
DVD	David	0.40	81	⇓eP	Pb	20 01 57.7	-0.4
DVD				eS	Sb	20 02 04.3	0.0
CSTBL	De las Acacias	0.40	85	⇓eP	Pb	20 01 57.7	-0.5
MLIR3	Monte Lirio, C	0.41	3	⇑iP	Pb	20 01 58.5	+0.1
MLIR3				eS	Sb	20 02 04.8	-0.1
MLIR3	Monte Lirio, C	0.41	3	⇑eP	Pb	20 01 58.5	+0.1
MLIR3				eS	Sb	20 02 05.5	+0.6
EDAD	Golfito	0.42	311	⇑eP	Pb	20 01 57.1	-1.4
EDAD				eS	Sb	20 02 03.7	-1.2
PEDE3	Pedregal, Chir	0.42	89	⇓iP	Pb	20 01 57.9	-0.5
PEDE3				eS	Sb	20 02 04.4	-0.5
PEDE3	Pedregal, Chir	0.42	89	⇓eP	Pb	20 01 57.9	-0.5
PEDE3				eS	Sb	20 02 04.5	-0.4
LOCO3	Loma Colorada,	0.42	86	⇓iP	Pb	20 01 58.1	-0.4
LOCO3				eS	Sb	20 02 04.6	-0.4
LOCO3	Loma Colorada,	0.42	86	⇓eP	Pb	20 01 58.1	-0.4
LOCO3				eS	Sn	20 02 05.7	+0.2
CLLRA	Cordillera,	0.43	32	⇓eP	Pb	20 01 58.3	-0.5
RSRNO	Rio Sereno	0.44	358	⇑eP	Pb	20 01 58.8	0.0
BRU2	Volcan	0.44	20	⇓eP	Pb	20 01 58.4	-0.5
BRU2				eS	Sb	20 02 06.4	+0.7
BRU2	Volcan	0.44	20	P	Pb	20 01 58.6	-0.4
BRU2	Volcan	0.44	20	S	Sb	20 02 05.1	-0.6
BRU2	Volcan	0.44	20	⇓iP	Pb	20 01 58.5	-0.4
BRU2				eS	Sb	20 02 06.4	+0.7
BRU2	Volcan	0.44	20	⇓iP	Pb	20 01 58.5	-0.4
BRU2				i S	Sn	20 02 06.6	+0.4
LOMA3	Las Lomas, Chi	0.45	83	⇓iP	Pb	20 01 58.4	-0.5
LOMA3				eS	Sn	20 02 05.9	-0.3
LOMA3	Las Lomas, Chi	0.45	83	eP	Pb	20 01 58.4	-0.5
LOMA3				eS	Sn	20 02 05.9	-0.3
VITO	San Vito	0.46	344	⇑eP	Pb	20 01 58.9	-0.1
VITO				eS	Sn	20 02 07.3	+0.9
SCLRA	Santa Clara, W	0.46	8	eP	Pb	20 01 58.9	-0.2
PTAR3	Potrerillos Ar	0.47	48	⇓iP	Pb	20 01 58.9	-0.4
PTAR3				eS	Sb	20 02 04.7	-1.6
PTAR3	Potrerillos Ar	0.47	48	⇓eP	Pb	20 01 58.9	-0.4
PTAR3				eS	Sn	20 02 07.6	+0.9
PTJ1	Puerto Jimnez	0.48	289	eP	Pb	20 01 58.5	-0.8
PTJ1				eS	Sn	20 02 07.2	+0.3
PTJ1	Puerto Jimnez	0.48	289	S	Sb	20 02 04.9	-1.5
PTJ1	Puerto Jimnez	0.48	289	P	Pb	20 01 58.9	-0.4
PTJ1	Puerto Jimnez	0.48	289	⇓iP	Pb	20 01 58.9	-0.4
PTJ1				i S	Sb	20 02 06.5	+0.1
BC3P	Paso Ancho	0.49	28	⇓iP	Pb	20 01 59.1	-0.6
BC3P				eS	Sn	20 02 08.3	+0.8
BC3P	Paso Ancho	0.49	28	⇓eP	Pb	20 01 59.1	-0.6
BC3P				eS	Sn	20 02 08.4	+0.8
CHIR3	Chiriqui UPA,	0.51	88	eP	Pb	20 01 59.1	-0.7
CHIR3				eS	Sb	20 02 07.1	-0.1
BQTLY	Boquete Panama	0.54	45	⇓eP	Pb	20 01 59.6	-0.7
BQSF3	Alto Boquete,	0.55	48	⇓eP	Pb	20 01 59.7	-0.8
BQSF3				eS	Sb	20 02 08.5	+0.1
GUAL3	Gualaca, Chiri	0.56	74	⇓iP	Pb	20 01 59.8	-0.9
GUAL3				eS	Sb	20 02 07.7	-0.9
GUAL3	Gualaca, Chiri	0.56	74	eP	Pb	20 01 59.8	-0.9
GUAL3				eS	Sb	20 02 07.3	-1.3
ALCO	Alturas Coton,	0.57	1	⇑eP	Pb	20 02 00.0	-0.9
ALCO				eS	Sb	20 02 09.0	0.0
PSOM3	Paja de Sombre	0.60	59	⇓iP	Pb	20 02 00.3	-1.0
PSOM3				eS	Sb	20 02 09.3	-0.4
PSOM3	Paja de Sombre	0.60	59	⇓eP	Pb	20 02 00.3	-1.0
PSOM3				eS	Sb	20 02 09.4	-0.3
EDP2	Potrero Grande	0.71	333	⇑eP	Pb	20 02 02.4	-0.8
PBNVO	Pueblo Nuevo,	0.82	52	⇓eP	Pn	20 02 03.4	-0.9
PANP	Palmar Norte	0.84	314	eP	Pn	20 02 03.8	-0.7
PANP				eS	Sb	20 02 16.3	+0.1
RBALA	Bur	0.85	54	⇓eP	Pn	20 02 04.1	-0.6
BURE	Buenos Aires	0.93	328	eP	Pn	20 02 05.2	-0.6
DRK0	Durika	0.96	336	⇑eP	Pn	20 02 05.6	-0.9
DRK0	Durika	0.96	336	P	Pn	20 02 05.8	-0.7
DRK0	Durika	0.96	336	eP	Pn	20 02 05.7	-0.7
DRK0				eS	Sn	20 02 16.3	-2.8
RMDIO	Remedios, Chir	1.01	98	eP	Pn	20 02 06.9	-0.1
EDPE	Pejibaye, P	1.06	317	⇑eP	Pn	20 02 07.1	-0.5
OCHAL	Ojochal	1.07	312	P	Pn	20 02 07.2	-0.5
OCHAL	Ojochal	1.07	312	S	Sn	20 02 21.3	-0.1
KKNTU	Kakintº	1.13	66	⇓eP	Pn	20 02 07.8	-0.7
SAJE	San Jernim	1.17	326	⇑eP	Pn	20 02 08.4	-0.8
LLNJ	Naranjito	1.65	311	eP	Pn	20 02 16.0	+0.3
PIEC	Cerro El Cedra	1.66	319	eP	Pn	20 02 16.1	+0.1
MESA3	La Mesa, Verag	1.66	98	eS	Sn	20 02 36.8	+0.8
GMAL	Guarumal, Vera	1.71	111	eP	Pn	20 02 16.3	-0.2
GMAL	Guarumal, Vera	1.71	111	eP	Pn	20 02 16.1	-0.4
GMAL				eS	Sn	20 02 38.7	+1.4
GMAL	Guarumal, Vera	1.71	111	eP	Pn	20 02 17.2	+0.7

GMAL				eS	Sb	20 02 39.6	-1.5
RSUS3	Rio de Jesus,	1.71	103	eS	Sn	20 02 38.1	+0.7
RSUS3	Rio de Jesus,	1.71	103	eP	Pb	20 02 18.1	-1.9
TURIB	Turrialba	1.73	331	eP	Pn	20 02 17.7	+0.7
VINA	Juan Vinas	1.75	330	eP	Pn	20 02 18.1	+0.9
VERB	Verbena	1.77	332	eP	Pn	20 02 18.1	+0.6
LCR2	La Lucha 2	1.77	320	⇑eP	Pn	20 02 17.4	-0.2
LCR2	La Lucha 2	1.77	320	P	Pn	20 02 17.5	-0.1
ABE2	San Pablo	1.78	318	eP	Pn	20 02 18.4	+0.7
VTCV	VTCV, Calle Va	1.82	331	eP	Pn	20 02 19.0	+0.7
RESJ	San Isidro (Tu	1.82	334	eP	Pn	20 02 19.4	+1.3
IRES	Siquirres	1.83	339	eP	Pn	20 02 19.6	+1.5
ABRB	Las Abras (San	1.83	332	eP	Pn	20 02 19.3	+0.9
RAFA	San Farael, Vo	1.84	329	eP	Pn	20 02 19.4	+0.8
PAR1A	Puntarenas Pro	1.84	311	eP	Pn	20 02 19.0	+0.6
CVTV	Tajo	1.85	331	eP	Pn	20 02 19.8	+1.1
CVTQ	Turrialba Volc	1.86	331	eP	Pn	20 02 19.9	+1.0
VTLA	Turrialba Volc	1.86	330	eP	Pn	20 02 19.9	+1.0
SFRA3	San Francisco,	1.86	94	eS	Sb	20 02 44.0	-1.3
VTR0	Volcan Turrial	1.86	331	eP	Pn	20 02 19.8	+0.7
STIA3	Santiago, Vera	1.88	98	eS	Sn	20 02 43.2	+1.8
VICA	Volcano Irazu	1.88	328	eP	Pn	20 02 19.6	+0.4
ACOS	Acosta	1.92	317	eP	Pn	20 02 20.1	+0.5
LUJA	Lujan	1.96	322	eP	Pn	20 02 21.1	+1.0
EGUB	Earth Gu¡pi	1.97	338	eP	Pn	20 02 21.6	+1.5
CALO3	Calobre, Verag	1.98	91	eP	Pn	20 02 20.4	+0.1
HDC	Heredia	2.04	322	eP	Pn	20 02 22.0	+0.8
HDC	Heredia	2.04	322	P	Pn	20 02 22.4	+1.2
HDC				S	Sn	20 02 46.9	+1.2
TCS1	Tacares	2.19	319	P	Pn	20 02 24.5	+1.3
CACAO	El Cacao, Vera	2.22	117	eP	Pn	20 02 24.1	+0.5
CACAO				eS	Sn	20 02 51.9	+2.1
CACAO	El Cacao, Vera	2.22	117	eP	Pn	20 02 24.0	+0.5
TRT2	Tortugero	2.34	338	eP	Pn	20 02 26.1	+0.9
TRT2	Tortugero	2.34	338	P	Pn	20 02 26.5	+1.3
CBL1	Cabuya	2.52	299	eP	Pn	20 02 27.6	-0.1
AZU	Azuero	2.61	103	eP	Pn	20 02 30.6	+1.6
AZU	Azuero	2.61	103	⇑eP	Pn	20 02 30.7	+1.8
AZU				eS	Sn	20 03 01.0	+1.5
AZU	Azuero	2.61	103	eP	Pn	20 02 30.4	+1.4
SOCE	Pocosol	2.65	319	P	Pn	20 02 31.4	+1.8
ARE1	Arenal 1	2.78	318	eP	Pn	20 02 32.6	+1.4
VARE2	V. Arenal	2.78	318	eP	Pn	20 02 32.5	+1.2
JTS	Las Juntas de	2.82	313	eP	Pn	20 02 33.5	+1.7
INDI	Punta indio, G	3.01	300	P	Pn	20 02 35.1	+0.6
INDI	Punta indio, G	3.01	300	S	Sn	20 03 10.2	+0.7
BCIP	Isla Barro Col	3.08	75	eP	Pn	20 02 36.9	+1.6
UPA	Univ. de Panam	3.33	79	eS	Sb	20 03 25.6	-1.9

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*IDC **28** 20:09:52.8±1.7, 40°.36N×20°.81E, h0^{km}, mb3.4/6, mbtmp3.5/12, ML3.3/4, Error ellipse: s-maj=27.8km s-min=15.9km az=26.0*

*TIR **28** 20:09:54.0, 40°.46N×20°.79E, h25^{km}, Md3.3/13, Ml3.8/7*

*PRU **28** 20:09:53.8, 40°.37N×20°.85E, h0^{km}*

*PDG **28** 20:09:54.3±0.1, 40°.50N×20°.88E, h2^{km}, ML3.6/11, Error ellipse: s-maj=0.3km s-min=0.3km az=0.0*

*ATH **28** 20:09:54.1, 40°.47N×20°.71E, h14^{km}±1^{km}, ML3.6/12, Manual Solution by K.Orfanogiannaki First location: 2019/06/28 20:10:55, This location: 2019/06/28 22:06:40 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*

*THE **28** 20:09:55.6, 40°N±1°×2°1E±°, h0^{km}±1^{km}, M3.3/15, MLh3.3/15*

*SKO **28** 20:09:56.5, 40°.46N×20°.85E, h14^{km}, ML3.4*

*BEO **28** 20:09:56.3±0.3, 40°.54N×20°.86E, h0^{km}, ML3.3/9*

*NAO **28** 20:10:04.0, 40°.48N×20°.82E, h10^{km}, mb3.0*

ISC 28 20:09:55.1±0.7**, 40°.47N**±0°.02×**20°.80E**±0°.02**, h11**^{km}±4^{km}**, n171, σ1.^{s}57**/239**, mb3.3**/5**, 33C-4D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.15	357	Pg	Pg	20 09 58.6	0.0
KBN				Sg	Sg	20 10 01.5	+0.3
KBN				AML	AML	20 10 05.4	
	119nm,0.5s						
KBN				AMd		20 10 34.9	
KBN	Korca	0.15	357	P	Pg	20 09 58.7	0.0
KBN				S	Sg	20 10 00.3	-0.9
NEST	Nestorio	0.20	106	Pg	Pg	20 09 54.0	-5.4
NEST				Sg	Sg	20 10 03.3	+0.8
NEST				AML	AML	20 10 08.8	
	43nm,0.3s						
NEST				AMd		20 10 57.4	
NEST	Nestorio	0.20	106	P	Pg	20 10 00.2	+0.7
NEST				S	Sb	20 10 03.5	+1.1
NEST	Nestorio	0.20	106	P	Pg	20 10 00.1	+0.6
NEST				S	Sb	20 10 04.2	+1.8
PENT	Pentalofos	0.38	136	P	Pg	20 10 02.9	+0.2
PENT				S	Pg	20 09 56.9	-5.8
PENT	Pentalofos	0.38	136	P	Pg	20 10 02.9	+0.2
PENT				S	Sb	20 10 08.9	-1.0
FNA	Florina	0.54	55	Pg	Pg	20 10 05.4	-0.3
FNA				Sg	Sb	20 10 13.8	-0.6
FNA				AML	AML	20 10 16.0	
	66nm,0.4s						
FNA				AMd		20 11 02.4	
FNA	Florina	0.54	55	P	Pg	20 10 05.9	+0.3
FNA				S	Sb	20 10 14.6	+0.1
FNA	Florina	0.54	55	i Pg	Pg	20 10 06.0	+0.3
FNA				i Sg	Sb	20 10 15.0	+0.6
FNA	Florina	0.54	55	ePg	Pg	20 10 06.1	+0.4
FNA				eSg	Sg	20 10 12.1	-0.7
FNA	Florina	0.54	55	P	Pg	20 10 06.0	+0.3
FNA				S	Sb	20 10 14.2	-0.2
OHR	Ohrid	0.64	0	i Pg	Pb	20 10 08.5	+0.1
OHR				i Sg	Sb	20 10 18.7	+1.4
OHR				eLg	Lg	20 10 19.3	
	comp=E,2µm,0.7s						
OHR				eLg	Lg	20 10 22.0	
	comp=N,958nm,0.4s						
KPRO	Kipourio	0.67	140	P	Pg	20 10 07.9	-0.2
KPRO				S	Sb	20 10 19.2	+0.9
KPRO	Kipourio	0.67	140	P	Pg	20 10 08.0	-0.2
KPRO				S	Sb	20 10 17.9	-0.4
KZN	Kozani	0.76	102	P	Pg	20 10 10.0	+0.2
KZN				S	Sn	20 10 23.0	-0.4
KZN	Kozani	0.76	102	P	Pg	20 10 10.1	+0.2
KZN				S	Sb	20 10 21.4	+0.6
JAN	Janina	0.81	177	P	Pg	20 10 10.1	-0.8
JAN				S	Sg	20 10 21.2	-0.3
SRN	Sarande	0.85	226	Pg	Pg	20 10 10.9	-0.6
SRN				Sg	Sg	20 10 22.9	+0.3
SRN				AML	AML	20 10 26.3	
	comp=N,4.2nm,0.5s						
SRN				AMd		20 11 34.5	
SRN	Sarande	0.85	226	P	Pg	20 10 11.8	+0.3
NASA	Naoussa	0.98	80	P	Pb	20 10 13.5	-0.6
VLO	Vlora	0.99	270	Pg	Pb	20 10 12.4	-2.0
VLO				Sg	Sb	20 10 26.1	-1.3
VLO				AML	AML	20 10 33.6	
	comp=N,22nm,1.0s						
VLO				AMd		20 11 45.2	
IGT	Igoumenitsa	1.00	201	Pg	Pb	20 10 13.2	-1.4
IGT				Sg	Sb	20 10 27.6	-0.1
IGT				AMd		20 11 50.3	
IGT	Igoumenitsa	1.00	201	P	Pb	20 10 14.4	-0.1
IGT	Igoumenitsa	1.00	201	i Pg	Pb	20 10 14.6	+0.1
IGT				i Sg	Sn	20 10 30.2	+0.9
IGT	Igoumenitsa	1.00	201	ePg	Pb	20 10 14.4	-0.1
IGT				eSg	Sn	20 10 31.7	+2.4
IGT	Igoumenitsa	1.00	201	P	Pb	20 10 12.7	-1.8
KTI	Kastanea	1.01	94	P	Pn	20 10 15.7	+0.4
TIR	Tirane	1.12	321	Pg	Pb	20 10 15.7	-0.9
TIR				Sg	Sg	20 10 31.9	+0.5
TIR				AML	AML	20 10 46.5	
	comp=N,3.5nm,0.5s						
TIR				AMd		20 11 41.6	
TIR	Tirane	1.12	321	⇑P	Pg	20 10 17.9	+1.1
TIR	Tirane	1.12	321	i Pn	Pb	20 10 16.2	-0.5
TIR				i Sn	Sn	20 10 40.2	+7.9
TIR	Tirane	1.12	321	ePg	Pb	20 10 16.1	-0.5
TIR				eSg	Sb	20 10 31.4	+0.2
TETR	Tetrakomo, Epi	1.18	162	P	Pn	20 10 15.9	-1.8
THL	Klokotos Trika	1.30	134	S	Sg	20 10 39.6	+2.6
THL	Klokotos Trika	1.30	134	P	Pn	20 10 18.8	-0.4
TYRN	Tyrnavos	1.34	124	S	Sg	20 10 41.7	+3.5
TYRN	Tyrnavos	1.34	124	P	Pn	20 10 19.0	-0.7
SKO	Skopje	1.57	18	i Pn	Pb	20 10 24.1	-0.2
SKO				i Sn	Sg	20 10 47.6	+1.8
TSLK	Tsoukalades, L	1.65	184	P	Pn	20 10 22.7	-1.3
THE	Thessaloniki	1.66	84	Pn	Pn	20 10 24.5	+0.4
THE				AMd		20 11 35.9	
THE	Thessaloniki	1.66	84	i Pn	Pb	20 10 25.6	-0.1
THE				i Sn	Sg	20 10 47.5	-1.0
THE	Thessaloniki	1.66	84	P	Pn	20 10 24.1	0.0
LKD2	Lefkada island	1.68	184	P	Pn	20 10 23.1	-1.5
PUK	Puka	1.71	337	Pn	Pn	20 10 25.4	+0.4
PUK				AMd		20 11 55.0	
KNT	Kendrikon	1.74	66	P	Pb	20 10 27.0	0.0
KNT	Kendrikon	1.74	66	i Pn	Pg	20 10 27.8	-0.7
KNT				i Sn	Sg	20 10 53.7	+2.7
KNT	Kendrikon	1.74	66	P	Pn	20 10 25.5	+0.3
EVR	Evrytania	1.74	153	P	Pn	20 10 25.1	-0.3
MAKR	Makrakomi, Fth	1.78	144	P	Pn	20 10 26.0	+0.1
SCTE	Santa Cesarea	1.83	258	Pn	Pn	20 10 27.2	+0.8
SCTE				Sn	Sb	20 10 52.0	+0.6
SCTE				AML	AML	20 10 57.1	
	comp=N,2.6nm,0.7s						
SCTE				AMd		20 12 05.7	
SCTE	Santa Cesarea	1.83	258	P	Pn	20 10 24.6	-1.8
ULC	Ulcinj	1.90	322	i Pn	Pb	20 10 30.2	+0.4
ULC	Ulcinj	1.90	322	⇑iPn	Pb	20 10 29.5	-0.2
ULC				i Sn	Sg	20 10 57.2	+1.1
BCI	Bajram Curri	1.97	344	Pn	Pb	20 10 31.4	+0.4
PEHC	Pehcevo	2.06	50	i Pn	Pn	20 10 24.7	-5.0
PEHC				i Sn	Sn	20 10 47.6	-7.8
DRME	Dracevica, Mon	2.10	325	Pn	Pn	20 10 31.0	+0.8
DRME				AMd		20 12 16.7	
DRME	Dracevica, Mon	2.10	325	ePn	Pb	20 10 32.8	-0.4
DRME	Dracevica, Mon	2.10	325	ePg	Pb	20 10 33.0	-0.2
DRME				eSg	Sg	20 11 02.8	+0.2
DRME	Dracevica, Mon	2.10	325	⇑iPn	Pb	20 10 32.4	-0.8
DRME				i Sn	Sg	20 11 02.1	-0.5
NEO	Neokhori	2.20	121	P	Pn	20 10 32.7	+1.0
SRS	Serrai	2.22	72	P	Pn	20 10 33.0	+1.2
SRS	Serrai	2.22	72	i Pn	Pb	20 10 33.4	-1.8
SRS				i Sn	Sb	20 11 02.2	-0.5
SRS	Serrai	2.22	72	ePg	Pb	20 10 33.4	-1.8
SRS				eSg	Sb	20 11 03.7	+1.0
KKB	Krupnik	2.23	51	i Pn	Pb	20 10 34.8	-0.7
DMLN	Damoulianata-K	2.25	189	P	Pb	20 10 34.2	-1.6
PAIG	Paliouri	2.27	103	P	Pn	20 10 33.6	+1.0
PDG	Podgorica	2.27	330	⇑iPn	Pb	20 10 34.9	-1.3
PDG	Podgorica	2.27	330	⇓P	Pn	20 10 34.4	+1.8
PDG	Podgorica	2.27	330	ePg	Pb	20 10 35.3	-0.9
PDG				eSg	Sg	20 11 06.8	-1.4
PDG	Podgorica	2.27	330	⇑iPn	Pb	20 10 34.6	-1.6
PDG				i Sn	Sb	20 11 06.1	+1.8
VLS	Valsamata	2.30	184	P	Pb	20 10 34.8	-1.8
AXS	Araxos	2.32	169	P	Pb	20 10 35.1	-1.8
BUM	Brajici-Budva	2.32	323	Pn	Pn	20 10 34.7	+1.4
BUM				AMd		20 12 19.1	
BUM	Brajici-Budva	2.32	323	⇑iPn	Pb	20 10 35.4	-1.6
BUM				i Sn	Sb	20 11 07.4	+1.6
PSDA	Pessada-Kefalo	2.36	184	P	Pn	20 10 35.6	+1.8
BOSS	Bosilegrad	2.38	31	ePn	Pb	20 10 36.0	-2.1
KOKK	Kokkinochori,	2.46	81	P	Pn	20 10 36.5	+1.3
BARS	Barje	2.46	18	i Pn	Pn	20 10 36.8	+1.6
BARS				i Sn	Sb	20 11 07.8	-2.0
BARS	Barje	2.46	18	ePn	Pn	20 10 36.8	+1.6
IVA	Berane	2.49	345	⇑iPn	Pn	20 10 37.5	+1.8
IVA				i Sn	Sb	20 11 10.9	+0.2
CEME	Cevo	2.51	326	Pn	Pn	20 10 37.1	+1.2
CEME				AMd		20 12 39.6	
CEME	Cevo	2.51	326	⇑iPn	Pn	20 10 37.9	+2.0
CEME				i Sn	Sb	20 11 11.8	+0.7
KOME	Kolasin	2.56	338	⇑iPn	Pn	20 10 38.6	+1.9
KOME				i Sn	Sb	20 11 12.9	+0.2
HCY	Herceg Novi	2.63	320	ePn	Pn	20 10 38.6	+1.1
HCY	Herceg Novi	2.63	320	⇑iPn	Pn	20 10 38.7	+1.2
HCY				i Sn	Sb	20 11 14.8	+0.4
SELS	Selova	2.76	5	ePn	Pn	20 10 41.4	+2.1
SELS				eSn	Sn	20 11 13.2	+0.6
SJES	Sjenica	2.85	348	ePn	Pn	20 10 42.4	+1.7
SJES				eSn	Sb	20 11 18.2	-2.9
TREB	Trebinje	2.90	322	ePn	Pn	20 10 42.1	+0.9
BRY	Bratogost	2.96	326	⇑iPn	Pn	20 10 44.3	+2.1
BRY				i Sn	Sb	20 11 22.7	-1.5
PLE	Pljevlja	3.04	340	⇓iPn	Pn	20 10 45.3	+2.0
PLE				i Sn	Sb	20 11 24.3	-2.3
UPM	Unac-Piva	3.07	333	ePn	Pn	20 10 46.6	+2.8
UPM	Unac-Piva	3.07	333	⇓iPn	Pn	20 10 45.7	+1.9
UPM				i Sn	Sb	20 11 25.3	-2.2
ZAPS	Zavoj	3.12	25	ePn	Pn	20 10 46.7	+2.4
MATE	Matera	3.12	275	⇑P	Pn	20 10 47.3	+3.1
IVAS	Ivanjica	3.14	351	ePn	Pn	20 10 45.5	+0.9
BOVS	Bovan	3.23	12	⇑P	Pn	20 10 46.5	+0.8
BOVS	Bovan	3.23	12	ePn	Pn	20 10 47.0	+1.2
BOVS				eSn	Sn	20 11 24.9	+0.6
RUDO	Rudo	3.32	342	ePn	Pn	20 10 49.0	+2.0
STON	Ston	3.34	317	⇑iPn	Pn	20 10 47.2	0.0
TIP	Timpagrande	3.37	249	⇑P	Pn	20 10 50.2	+2.5
GRUS	Gruza	3.42	359	ePn	Pn	20 10 50.4	+2.1
ZAGS	Zajecar	3.50	17	ePn	Pn	20 10 51.1	+1.6
BBLS	Lazi&#263i	3.55	343	ePn	Pn	20 10 52.9	+2.7
BBLS	Lazi&#263i	3.55	343	ePn	Pn	20 10 52.8	+2.6
DIVS	Divibare	3.67	351	ePn	Pn	20 10 53.5	+1.6
TRUS	Trudelj	3.76	356	ePn	Pn	20 10 54.6	+1.5
KUBS	Kucevo	3.99	9	ePn	Pn	20 10 56.4	+0.2
TEKS	Tekeris	4.18	347	ePn	Pn	20 11 00.7	+1.8
TEKS	Tekeris	4.18	347	ePn	Pn	20 11 01.0	+2.1
MDVR	Moldovita	4.36	9	⇑P	Pn	20 11 01.9	+0.5
HERR	Herculane	4.56	15	⇑P	Pn	20 11 04.1	0.0
VRSS	Vrsac	4.67	5	ePn	Pn	20 11 06.1	+0.6
FRGS	Fruska Gora	4.74	352	⇑iPn	Pn	20 11 08.3	+1.8
FRGS	Fruska Gora	4.74	352	ePn	Pn	20 11 08.0	+1.5
FRGS				eSn	Sn	20 12 01.0	-0.5
BLY	Banja Luka	5.04	329	⇑iPn	Pn	20 11 12.8	+2.2
A050A	Klekovaca	5.10	323	⇑iPn	Pn	20 11 13.0	+1.5
GZR	Gura Zlata	5.13	16	⇑P	Pn	20 11 12.6	+0.7
BZS	Buzias	5.18	6	⇑P	Pn	20 11 13.8	+1.3
A051A	Mrakovica	5.37	329	ePn	Pn	20 11 16.3	+1.1
SURR	Surduc	5.37	10	⇓P	Pn	20 11 15.6	+0.5
LOT	Lotru	5.43	23	⇑P	Pn	20 11 15.3	-0.8
VOIR		5.86	31	⇑P	Pn	20 11 20.5	-1.5
MORH	Mrgy, Hungar	5.95	345	⇑P	Pn	20 11 24.1	+1.0
IDI	Anoyia	6.10	147	Pn	Pn	20 11 24.2	-1.1
	comp=N,12nm,1.1s,baz=299,slow=13,SNR=1.6						
IDI				Sn	Sn	20 12 37.1	+2.0
	comp=N,0.5nm,0.3s,baz=247,slow=21,SNR=2.2						
MLR	Muntele Rosu	6.28	35	Pn	Pn	20 11 29.4	+1.7
	comp=N,0.5nm,0.3s,baz=204,slow=14,SNR=3.4						
	comp=N,1.0nm,0.3s						
MLR	Muntele Rosu	6.28	35	⇑P	Pn	20 11 26.4	-1.4
MARR	Marisel-Cluj	6.43	14	⇑P	Pn	20 11 30.4	+0.6
BOJS	Bojanci	6.47	323	ePn	Pn	20 11 30.4	+0.2
BOJS	Bojanci	6.47	323	i Pn	Pn	20 11 31.1	+0.9
BOJS				i Sn	Sn	20 12 43.5	-0.5
DRGR		6.47	12	⇑P	Pn	20 11 31.1	+0.8
CRES	Cresnjevec Ost	6.62	326	ePn	Pn	20 11 32.9	+0.5
CRES	Cresnjevec Ost	6.62	326	i Pn	Pn	20 11 33.1	+0.7
BOSR	Bodos	6.63	31	⇑P	Pn	20 11 31.4	-1.1
GBRS	Gornja Briga	6.69	321	ePn	Pn	20 11 34.6	+1.2
PLOR	Plostina	6.87	37	⇑P	Pn	20 11 34.4	-1.4
VRI	Vrincioaia	6.92	37	⇑P	Pn	20 11 35.5	-0.9
CEY	Cerknica	7.03	321	⇑iPn	Pn	20 11 38.5	+0.5
SKDS	Skadanscina	7.10	318	⇑iPn	Pn	20 11 38.6	-0.3
SOKA	Soboth	7.48	328	i Pn	Pn	20 11 45.5	+1.3
	comp=N,3.8nm,0.4s						
OBKA	Obir	7.55	325	ePn	Pn	20 11 45.0	-0.2
OBKA	Obir	7.55	325	i Pn	Pn	20 11 46.3	+1.1
	comp=N,2.7nm,0.5s						
OBKA				i Sn	Sn	20 13 13.2	+2.4
	comp=N,12nm,0.6s						
ARSA	Arzberg	7.77	332	i Pn	Pn	20 11 48.3	+0.2
	comp=N,2.5nm,0.6s						
RONA	Rosalia, Austr	7.92	337	i Pn	Pn	20 11 51.8	+1.7
	comp=N,1.3nm,0.5s						
KECS	Kecovo	8.01	359	ePN	Pn	20 11 56.0	+4.6
KECS				eSN	Sn	20 13 19.6	-2.4
MYKA	Terra Mystica	8.05	322	i Pn	Pn	20 11 52.3	+0.2
	comp=N,1.5nm,0.3s						
MYKA				i Sn	Sn	20 13 22.9	-0.2
	comp=N,3.0nm,0.5s						
VYHS	Vyhne	8.14	351	ePN	Pn	20 11 57.7	+4.5
VYHS				eSN	Sn	20 13 25.8	+0.6
CONA	Conrad Observa	8.25	336	i Pn	Pn	20 11 59.2	+4.4
	comp=N,2.5nm,0.8s						
ABTA	Abfaltersbach	8.68	319	i Pn	Pn	20 12 00.8	+0.1
	comp=N,0.4nm,0.3s						
ABTA				i Sn	Sn	20 13 38.7	0.0
	comp=N,4.2nm,0.5s						
MOA	Molln	8.74	330	i Pn	Pn	20 12 03.4	+1.9
	comp=N,1.2nm,0.4s						
BIOA	Bad Ischl, Aus	8.86	327	i Pn	Pn	20 12 05.2	+2.1
	comp=N,2.5nm,0.4s						
LESA	Schwarzleotal	9.09	323	i Pn	Pn	20 12 07.0	+0.8
	comp=N,2.1nm,0.4s						
WTTA	Wattenberg	9.47	319	i Pn	Pn	20 12 13.2	+1.6
	comp=N,3.6nm,0.4s						
WTTA				i Sn	Sn	20 13 58.9	+0.7
	comp=N,6.7nm,0.5s						
WATA	Walderalm	9.55	319	i Pn	Pn	20 12 14.1	+1.5
	comp=N,5.9nm,0.3s,SNR=6.1						
WATA				i Sn	Sn	20 14 00.3	+0.2
	comp=N,12nm,0.8s						
SQTA	Sankt Quirin	9.66	317	i Pn	Pn	20 12 15.1	+1.0
	comp=N,5.2nm,0.4s						
SQTA				eSn	Sn	20 14 01.5	-1.3
	comp=N,4.2nm,0.4s						
GERES	GERESS Array B	9.78	331	Pn	Pn	20 12 17.6	+2.0
	baz=160,slow=14,SNR=9.3						
	comp=N,1.2nm,0.5s						
FETA	Feichten	9.79	315	i Pn	Pn	20 12 17.1	+1.2
	comp=N,1.6nm,0.4s						
FETA				i Sn	Sn	20 14 06.1	+0.2
	comp=N,1.9nm,0.7s						
MOTA	Moosalm	9.80	318	i Pn	Pn	20 12 16.9	+0.8
	comp=N,11nm,0.8s						
MOTA				eSn	Sn	20 14 07.8	+1.7
	comp=N,6.3nm,0.8s						
BRTR	Keskin Array B	9.87	90	Pn	Pn	20 12 17.0	-0.1
	comp=N,0.1nm,0.3s,baz=309,slow=18,SNR=2.4						
	comp=N,0.4nm,0.8s						
KHC	Kasperske Hory	10.06	332	ePN	Pn	20 12 17.5	-2.0
KHC				eSN	Sn	20 14 14.5	+2.2
RETA	Reutte	10.07	317	i Pn	Pn	20 12 20.3	+0.6
	comp=N,1.1nm,0.3s						
RETA				i Sn	Sn	20 14 12.0	-0.6
	comp=N,2.2nm,0.4s						
DAVOX	Davos/Dischmat	10.12	312	Pn	Pn	20 12 21.5	+1.1
	comp=N,4.6nm,0.4s,baz=112,slow=13,SNR=11						
DAVA	Damuels	10.41	314	i Pn	Pn	20 12 25.5	+1.1
	comp=N,5.4nm,0.4s,SNR=8.4						
DAVA				i Sn	Sn	20 14 22.5	+1.4
	comp=N,0.4nm,0.2s						
MNK	Minsk	14.82	16	i P	Pn	20 13 21.9	-2.5
	comp=E,6.0nm,0.9s						
MNK				i P	Pn	20 13 21.9	-2.5
	comp=N,15nm,1.1s						
MNK				i P	Pn	20 13 21.9	-2.5
	comp=Z,6.0nm,0.8s,baz=201						
MNK				i PP	P	20 13 29.9	-0.5
MNK				i PPP	PPP	20 13 37.6	
MNK				i S	Sn	20 16 06.7	-1.8
MNK				i SS	SnSn	20 16 20.5	-0.6
MNK				i SSS	SSS	20 16 33.1	
MNK				i LQ	LQ	20 17 23.4	
MNK				i LR	LR	20 18 30.4	
MNK				i LRM	MLR	20 19 40.9	
	comp=N,185nm,20.7s						
MNK				i LRM	MLR	20 19 40.9	
	comp=Z,90nm,16.2s						
MNK				i LRM	MLR	20 19 52.6	
	comp=E,223nm,21.2s						
ESDC	Sonseca Array	18.95	276	P	P	20 14 14.6	-1.7
	comp=E,0.1nm,0.3s,baz=78,slow=7.0,SNR=1.8						
	comp=E,0.2nm,0.5s						
HFS	Hagfors	20.18	350	P	P	20 14 29.4	0.0
	comp=E,0.5nm,0.4s,baz=166,slow=14,SNR=7.2						
	comp=E,0.5nm,0.4s						
FINES	FINESS Array B	21.25	7	P	P	20 14 40.7	-0.2
	comp=E,0.9nm,0.6s,baz=176,slow=11,SNR=7.6						
	comp=E,0.9nm,0.6s						
NB2	NORSAR Subarra	21.42	347	P	P	20 14 44.1	+1.2
	comp=Z,0.5nm,0.6s,baz=160,slow=11						
NOA	NORSAR Array B	21.42	347	P	P	20 14 43.1	+0.2
	comp=Z,0.4nm,0.6s,baz=154,slow=10.0,SNR=3.8						
	comp=Z,0.4nm,0.6s						
EKA	Eskdalemuir Ar	21.73	321	P	P	20 14 46.2	0.0
	comp=Z,1.2nm,0.8s,baz=123,slow=9.1,SNR=3.7						
	comp=Z,1.2nm,0.8s						
ARCES	ARCESS Array B	29.23	3	P	P	20 15 56.9	+0.3
	comp=Z,2.6nm,0.9s,baz=185,slow=8.8,SNR=5.2						
	comp=Z,2.6nm,0.9s						
MKAR	Makanchi Array	43.95	60	P	P	20 18 02.0	-0.1
	comp=Z,0.3nm,0.6s,baz=272,slow=7.2,SNR=4.4						
	comp=Z,0.3nm,0.6s						

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*TIR **28** 20:19:19.4, 40°.46N×20°.79E, h21^{km}±1^{km}, Md2.9/6, Ml2.7/6*

*SKO **28** 20:19:21.7, 40°.46N×20°.85E, h15^{km}, ML2.2*

*ATH **28** 20:19:22.8, 40°.42N×20°.91E, h9^{km}±1^{km}, ML2.4/19, Manual Solution by N.Liadopoulou First location: 2019/06/28 20:20:28, This location: 2019/06/29 05:52:38 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

ISC 28 20:19:20.8±0.9**, 40°.47N**±0°.02×**20°.82E**±0°.02**, h8**^{km}±8^{km}**, n42, σ0.^{s}90**/59**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.15	351	Pg	Pg	20 19 23.1	-1.1
KBN				Sg	Sg	20 19 26.8	+0.4
KBN				AML	AML	20 19 27.9	
	9.0nm,0.3s						
NEST	Nestorio	0.18	108	Pg	Pg	20 19 24.7	0.0
NEST				Sg	Sg	20 19 28.7	+1.4
NEST				AML	AML	20 19 29.5	
	4.9nm,0.4s						
NEST				AMd		20 20 13.2	
NEST	Nestorio	0.18	108	P	Pg	20 19 25.2	+0.5
NEST				S	Sg	20 19 27.6	+0.2
PENT	Pentalofos	0.37	138	P	Pg	20 19 27.9	-0.2
PENT				S	Sg	20 19 32.5	-0.5
FNA	Florina	0.53	54	Pg	Pg	20 19 30.8	-0.3
FNA				Sg	Sg	20 19 39.4	+1.4
FNA				AML	AML	20 19 42.4	
	2.3nm,0.3s						
FNA				AMd		20 20 27.0	
FNA	Florina	0.53	54	i Pg	Pg	20 19 31.2	+0.1
FNA				i Sg	Sb	20 19 40.3	+0.1
FNA	Florina	0.53	54	P	Pg	20 19 31.4	+0.3
FNA				S	Sb	20 19 39.8	-0.3
OHR	Ohrid	0.64	359	i Pg	Pg	20 19 33.7	+0.5
OHR				i Sg	Sb	20 19 43.8	+0.4
OHR				eLg	Lg	20 19 44.5	
	comp=E,142nm,0.6s						
OHR				eLg	Lg	20 19 45.3	
	comp=N,45nm,0.3s						
KPRO	Kipourio	0.66	141	P	Pg	20 19 32.8	-0.9
KPRO				S	Sg	20 19 42.3	-0.1
KZN	Kozani	0.75	102	P	Pb	20 19 36.0	-0.1
KZN				S	Sg	20 19 45.2	+0.3
MSVA	Metsovo	0.75	158	P	Pb	20 19 36.4	+0.2
MSVA				S	Sg	20 19 45.5	+0.3
JAN	Janina	0.81	178	P	Pg	20 19 36.9	+0.4
JAN				S	Sg	20 19 47.1	0.0
SRN	Sarande	0.86	227	Pg	Pb	20 19 36.2	-1.8
SRN				Sg	Sb	20 19 48.8	-0.9
SRN				AML	AML	20 19 50.6	
	comp=N,0.3nm,0.4s						
SRN				AMd		20 20 36.5	
IGT	Igoumenitsa	1.01	202	Pg	Pb	20 19 38.6	-2.0
IGT				Sg	Sb	20 19 51.3	-2.6
IGT				AMd		20 20 55.2	
IGT	Igoumenitsa	1.01	202	i Pg	Pb	20 19 40.0	-0.5
IGT				i Sg	Sn	20 19 55.2	-0.4
IGT	Igoumenitsa	1.01	202	P	Pb	20 19 39.8	-0.7
KEK	Kerkira	1.09	226	P	Pg	20 19 44.1	+2.4
TIR	Tirane	1.14	321	Pg	Pn	20 19 41.0	-2.0
TIR				Sg	Sb	20 19 57.2	-0.4
TIR				AML	AML	20 20 08.2	
	comp=N,0.2nm,0.6s						
TIR				AMd		20 20 42.4	
TIR	Tirane	1.14	321	i Pg	Pg	20 19 43.9	+1.2
TETR	Tetrakomo, Epi	1.18	163	P	Pg	20 19 44.5	+1.0
THL	Klokotos Trika	1.29	134	P	Pn	20 19 44.5	-0.6
TYRN	Tyrnavos	1.32	125	P	Pn	20 19 45.5	0.0

TSLK	Tsoukalades, L	1.65	184	P	Pb	20 19 51.6	+0.1
LKD2	Lefkada island	1.69	184	P	Pb	20 19 52.2	+0.1
KNT	Kendrikon	1.72	66	i Pn	Pg	20 19 54.0	+0.1
KNT	Kendrikon	1.72	66	P	Pn	20 19 51.5	+0.4
EVR	Evrytania	1.73	153	P	Pb	20 19 52.3	-0.6
NYDR	Nydri-Lefkada	1.76	183	P	Pb	20 19 52.5	-0.8
MAKR	Makrakomi, Fth	1.77	145	P	Pn	20 19 52.6	+0.8
SCTE	Santa Cesarea	1.84	258	Pn	Pn	20 19 52.9	+0.2
SCTE				Sn	Sb	20 20 17.9	-0.1
SCTE				AML	AML	20 20 20.8	
	comp=N,0.3nm,0.8s						
SCTE				AMd		20 21 09.2	
SCTE	Santa Cesarea	1.84	258	P	Pb	20 19 55.8	+1.1
AGG	Agios Georgios	1.86	141	P	Pn	20 19 53.4	+0.4
PVO	Paravola	1.93	163	P	Pb	20 19 56.0	-0.3
PLG	Polygyros	2.01	92	P	Pn	20 19 55.4	+0.3
FSK	Fiskardo	2.02	186	P	Pb	20 19 56.6	-1.2
ANX	Ano Chora	2.06	155	P	Pn	20 19 56.8	+1.0
EFP	Efpalio	2.21	157	P	Pn	20 19 58.7	+0.9
AXAR	Agios Charalam	2.22	140	P	Pn	20 19 58.6	+0.7
SERG	Sergoula	2.27	155	P	Pn	20 19 59.1	+0.5
VLS	Valsamata	2.30	184	P	Pn	20 19 59.9	+0.8
KALE	Kalithea	2.32	153	P	Pn	20 19 59.8	+0.5
PSDA	Pessada-Kefalo	2.36	184	P	Pn	20 20 00.5	+0.7

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*IDC **28** 20:26:18.6±0.8, 30°.66S×177°.60W, h0^{km}, mb4.1/8, mbtmp4.2/9, ML4.1/1, MS3.4/1, Error ellipse: s-maj=27.1km s-min=17.9km az=94.0*

*NEIC **28** 20:26:20.7±1.0, 30°.55S±0°.09×178°.7W±0°.2, h14^{km}±5^{km}, mb4.8/12, Error ellipse: s-maj=23.4km s-min=9.8km az=115.0*

ISC 28 20:26:19.5±0.6**, 30°.74S**±0°.06×**177°.7W**±0°.2**, h10^{km}, n47, σ1^{s}68**/41**, mb4.4**/12**, 3C-1D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.50	352	Pn	Pg	20 26 46.6	-1.6
RAO	Raoul Island	1.50	352	Pn	Pg	20 26 46.5	-1.8
	276nm,0.3s,baz=288,slow=23,SNR=9.5						
RAO				Sn	Sg	20 27 07.6	0.0
	581nm,0.3s,baz=125,slow=21,SNR=8.6						
MXZ	Matakaoa Point	7.58	205	Pn	Pn	20 28 08.6	-1.4
URZ	Urewera	8.65	208	Pn	Pn	20 28 22.3	-2.4
	1.2nm,0.3s,baz=255,slow=12,SNR=6.2						
URZ				Sn	Sn	20 30 01.3	-1.0
	1.8nm,0.3s,baz=15,slow=23,SNR=8.1						
RPZ	Rata Peaks	15.74	212	Pn	Pn	20 30 01.9	+0.6
	0.7nm,0.3s,baz=26,slow=7.0,SNR=3.5						
	8.1nm,0.7s						
ARMA	Armidale	26.40	263	P	P	20 31 48.6	-7.7
ARMA				IAmb	IAmb	20 31 59.0	
	comp=Z,33nm,1.6s						
CTAO	Charters Tower	34.14	279	P	P	20 32 56.5	-8.2
STKA	Stephens Creek	34.68	257	P	P	20 33 02.5	-7.0
STKA	Stephens Creek	34.68	257	P	P	20 33 11.0	+1.6
	comp=Z,7.7nm,0.9s,baz=95,slow=12,SNR=5.1						
STKA				LR	LR	20 45 33.8	
	comp=Z,54nm,19.2s,baz=202,slow=33						
	comp=Z,7.7nm,0.9s						
BBOO	Buckleboo	39.15	255	P	P	20 33 40.1	-7.3
AS31	Alice Springs	43.38	267	P	P	20 34 14.3	-8.0
ASAR	Alice Springs	43.38	267	P	P	20 34 14.3	-8.0
ASAR	Alice Springs	43.38	267	P	P	20 34 23.5	+1.2
	comp=Z,1.6nm,0.6s,baz=102,slow=6.8,SNR=19						
ASAR				ScP	ScP	20 40 03.9	+1.5
	comp=Z,0.6nm,0.8s,baz=112,slow=3.5,SNR=4.5						
	comp=Z,1.6nm,0.6s						
WR8	Warramunga Arr	44.25	272	P	P	20 34 17.5	-12
WRAB	Tennant Creek	44.39	272	P	P	20 34 20.0	-10
WRAB				IAmb	IAmb	20 35 30.9	
	comp=Z,24nm,1.8s						
WRA	Warramunga Arr	44.40	272	P	P	20 34 31.8	+1.2
	comp=Z,1.9nm,0.4s,baz=111,slow=8.1,SNR=12						
	comp=Z,1.9nm,0.4s						
CASY	Casey	54.98	208	P	P	20 35 47.9	-2.5
CASY				IAmb	IAmb	20 35 55.6	
	comp=Z,13nm,1.3s						
MBWA	Marble Bar	56.47	264	P	P	20 35 54.9	-7.0
QSPA	South Pole Qui	59.37	180	P	P	20 36 23.6	+1.9
QSPA				IAmb	IAmb	20 36 36.2	
	comp=Z,22nm,1.6s						
QSPA	South Pole Qui	59.37	180	P	P	20 36 24.4	+2.7
	comp=Z,2.4nm,0.9s,baz=51,slow=2.5,SNR=5.9						
	comp=Z,2.4nm,0.9s						
SYO	Syowa Base	76.85	193	⇓eP	P	20 38 10.6	-0.6
TROLL	Troll, Antarti	77.53	180	⇑P	P	20 38 17.1	+2.0
	comp=Z,105nm,0.8s						
SNAA	Sanae	77.81	178	⇑P	P	20 38 15.8	-0.9
	comp=Z,36nm,0.8s						
SNAA	Sanae	77.81	178	P	P	20 38 17.2	+0.6
SNAA				IAmb	IAmb	20 39 56.6	
	comp=Z,26nm,2.0s						
SNAA	Sanae	77.81	178	P	P	20 38 18.3	+1.6
	comp=Z,1.0nm,0.8s,baz=16,slow=6.3,SNR=2.2						
	comp=Z,1.0nm,0.8s						
VNA2	Neumayer--Watz	78.39	177	⇑P	P	20 38 16.4	-3.4
	comp=Z,2.0nm,0.7s,baz=174,slow=5.4						
KSRS	Korea Array	84.79	319	P	P	20 38 54.5	+0.5
	comp=Z,0.7nm,0.7s,baz=153,slow=8.4,SNR=4.5						
	comp=Z,0.7nm,0.7s						
PETK	Petropavlovsk-	86.21	345	P	P	20 39 03.1	+2.5
	comp=Z,1.1nm,0.8s,baz=180,slow=6.7,SNR=4.4						
	comp=Z,1.1nm,0.8s						
NVAR	Mina Array Bea	88.29	43	P	P	20 39 11.7	+0.3
	comp=Z,0.8nm,0.8s,baz=218,slow=8.8,SNR=3.8						
	comp=Z,0.8nm,0.8s						
KURBB	Kurchatov Arra	121.53	313	PKP	PKiKP	20 45 12.7	-0.2
	comp=Z,0.1nm,0.5s,baz=62,slow=2.2,SNR=4.3						
KBZ	Khabaz	145.54	304	PKPbc	PKPab	20 45 57.6	-0.5
	comp=Z,1.9nm,0.6s,baz=177,slow=3.2,SNR=3.9						
FINES	FINESS Array B	145.56	340	PKPbc	PKPab	20 45 56.6	-1.0
	comp=Z,4.6nm,0.6s,baz=55,slow=4.2,SNR=34						
KIV	Kislovodsk	145.66	304	PKP	PKPab	20 45 59.4	+0.7
NB2	NORSAR Subarra	149.13	352	PKP	PKPbc	20 46 06.3	-1.1
	comp=Z,0.5nm,0.7s,baz=12,slow=2.7						
NOA	NORSAR Array B	149.13	352	PKPbc	PKPbc	20 46 06.0	-1.4
	comp=Z,1.1nm,0.8s,baz=15,slow=4.3,SNR=4.4						
HFS	Hagfors	149.63	349	PKPbc	PKiKP	20 46 09.7	0.0
	comp=Z,4.3nm,0.8s,baz=152,slow=6.7,SNR=6.1						
AK03	Malin Array Si	151.73	323	PKP	PKPdf	20 46 09.4	+1.9
AKASG	Malin Array Be	151.74	323	PKPbc	PKiKP	20 46 13.5	-0.8
	comp=Z,3.3nm,0.7s,baz=53,slow=2.8,SNR=9.2						
AKBB	Malin Array Si	151.74	323	PKP	PKPdf	20 46 08.8	+1.2
AK01	Malin Array Si	151.75	323	PKP	PKPdf	20 46 09.5	+1.9
KIEV	Kiev	151.75	323	PKP	PKPdf	20 46 08.8	+1.2
AK08	Malin Array Si	151.76	322	PKP	PKPbc	20 46 09.9	-4.0
MMAI	Mount Meron Ar	151.89	283	PKPbc	PKiKP	20 46 15.5	+0.2
	comp=Z,2.7nm,0.8s,baz=91,slow=4.2,SNR=4.9						
BRTR	Keskin Array B	153.01	298	PKPbc	PKiKP	20 46 17.9	+0.4
	comp=Z,0.9nm,0.9s,baz=146,slow=5.2,SNR=4.1						
RNPP1	Kostyukhnivka	153.07	327	PKP	PKPdf	20 46 11.7	+2.2
KMPD	K-Podol'skiy	154.44	321	PKP	PKPdf	20 46 13.7	+2.2
CLL	Collm	157.98	342	ePKPab	PKPab	20 46 49.0	-0.3
CLL				i x	x	20 46 58.1	

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*IDC **28** 20:28:19.4±2.6, 10°.28S×161°.41E, h81^{km}±19^{km}, mb3.9/8, mbtmp4.2/9, Error ellipse: s-maj=25.1km s-min=17.4km az=82.0*

*NEIC **28** 20:28:21.2±1.7, 10°.07S±0°.07×161°.30E±0°.09, h87^{km}±6^{km}, mb4.4/24, Error ellipse: s-maj=13.2km s-min=10.0km az=80.0*

ISC 28 20:28:20.3±0.7**, 10°.20S**±0°.08×**161°.3E**±0°.1**, h85^{km}, n43, σ1^{s}37**/43**, mb4.3**/16**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.54	299		Pn	20 28 46.2	-0.1
HNR				Sn	Sn	20 29 03.5	-2.6
HNR	Honiara	1.54	299	P	Pn	20 28 46.6	+0.3
	314nm,0.4s,baz=177,slow=2.8,SNR=26						
HNR				S	Sn	20 29 07.7	+1.7
	987nm,0.4s,baz=181,slow=23,SNR=14						
DZM	Mont Dzumac	12.80	158	Pn	Pn	20 31 20.2	+1.1
DZM	Mont Dzumac	12.80	158	P	Pn	20 31 17.6	-1.5
	17nm,1.1s,baz=266,slow=20,SNR=2.4						
DZM				S	Sn	20 33 37.6	-2.2
	5.6nm,0.8s,baz=52,slow=23,SNR=1.2						
ONTNC	Ouen Toro	13.02	158	Pn	Pn	20 31 25.0	+3.0
PATS	Pohnpei	17.18	350		Pn	20 32 07.5	-7.5
COEN	Coen	18.12	256	P	P	20 32 24.8	-1.0
COEN				IAmb	IAmb	20 32 27.1	
	comp=Z,28nm,1.4s						
WR8	Warramunga Arr	27.60	246	P	P	20 34 00.6	+0.7
WR8				IAmb	IAmb	20 34 01.4	
	comp=Z,4.4nm,0.6s						
WB0	Warramunga Arr	27.64	247	P	P	20 34 01.1	+0.8
WB0				IAmb	IAmb	20 34 02.1	
	comp=Z,7.7nm,0.6s						
WRAB	Tennant Creek	27.73	246	P	P	20 34 01.8	+0.7
WRA	Warramunga Arr	27.74	246	P	P	20 34 01.9	+0.8
	comp=Z,4.8nm,0.6s,baz=76,slow=9.1,SNR=66						
	comp=Z,4.8nm,0.6s						
ASAR	Alice Springs	29.36	239	P	P	20 34 15.2	-0.3
	comp=Z,0.6nm,0.5s,baz=62,slow=10,SNR=20						
	comp=Z,0.6nm,0.5s						
TOO	Toolangi	30.75	205	P	P	20 34 29.0	+1.3
BKZ	Black Stump Fm	31.88	157	P	P	20 34 37.7	+0.2
KNRA	Kununurra	32.16	257	P	P	20 34 40.8	+0.6
KNRA				IAmb	IAmb	20 34 42.0	
	comp=Z,12nm,1.1s						
BBOO	Buckleboo	32.36	222	P	P	20 34 42.4	+0.6
FITZ	Fitzroy Crossi	35.41	253	P	P	20 35 08.5	+0.1
FITZ	Fitzroy Crossi	35.41	253	P	P	20 35 07.8	-0.6
	comp=Z,5.5nm,0.5s,baz=81,slow=6.6,SNR=24						
	comp=Z,5.5nm,0.5s						
PSA00	Pilbara Seismi	41.32	249	P	P	20 35 57.7	-0.3
MORW	Morawa	46.25	239	P	P	20 36 37.3	-0.1
JMJ	Miyako jima 2	49.44	315	P	P	20 37 05.7	+3.7
JGF	Kuroka	50.86	335	P	P	20 37 10.6	-2.0
MJAR	Matsushiro Arr	51.32	336	P	P	20 37 13.6	-2.4
MJAR				IAmb	IAmb	20 37 26.9	
	comp=Z,2.8nm,1.1s						
MJAR	Matsushiro Arr	51.32	336	P	P	20 37 16.7	+0.7
	comp=Z,1.6nm,0.6s,baz=169,slow=8.0,SNR=7.4						
	comp=Z,1.6nm,0.6s						
YULB	Yu-li	51.44	311	P	P	20 37 14.6	-2.5
TPUB	Ta-pu	51.88	310	P	P	20 37 23.0	+2.5
SSLB	Suanglung	51.92	311	P	P	20 37 15.7	-5.1
YHNB	Yeheng	52.13	312	P	P	20 37 07.9	-14
GSI	Gunungsitoli	64.43	276	P	P	20 38 47.5	-0.7
SONM	Songino Array	75.44	325	P	P	20 39 55.6	+0.4
SONM				IAmb	IAmb	20 39 56.9	
	comp=Z,2.3nm,0.6s						
SONM	Songino Array	75.44	325	P	P	20 39 55.8	+0.6
	comp=Z,2.6nm,0.6s,baz=139,slow=6.0,SNR=13						
	comp=Z,2.6nm,0.6s						
M16K	Timber Creek	77.58	19	P	P	20 40 06.9	+0.1
M16K				IAmb	IAmb	20 40 22.9	
	comp=Z,13nm,1.4s						
J17K	VABM Dome	79.38	17	P	P	20 40 17.3	+0.6
J17K				IAmb	IAmb	20 40 27.2	
	comp=Z,6.5nm,1.4s						
L19K	White Mountain	79.76	19	P	P	20 40 19.1	+0.3
L19K				IAmb	IAmb	20 40 20.4	
	comp=Z,2.5nm,0.7s						
QSPA	South Pole Qui	79.80	180	P	P	20 40 18.6	-0.6
QSPA				IAmb	IAmb	20 40 27.3	
	comp=Z,5.1nm,1.5s						
QSPA	South Pole Qui	79.80	180	P	P	20 40 18.1	-1.0
	comp=Z,1.4nm,0.6s,baz=13,slow=1.3,SNR=12						
	comp=Z,1.4nm,0.6s						
CAST	Castle Rocks	81.54	19	P	P	20 40 27.6	-0.6
IMAR	Indian Mountai	82.84	17	P	P	20 40 35.5	+0.5
D19K	Kuna River	83.56	14	P	P	20 40 38.4	-0.3
D19K				IAmb	IAmb	20 40 57.7	
	comp=Z,6.2nm,1.4s						
ILAR	Eielson Array	84.15	20	P	P	20 40 40.9	-0.8
	comp=Z,0.5nm,0.6s,baz=232,slow=4.4,SNR=7.4						
	comp=Z,0.5nm,0.6s						
J25K	Salcha River,	84.56	20	P	P	20 40 44.0	+0.1
B20K	Meade River	84.94	13	P	P	20 40 45.9	+0.4
B20K				IAmb	IAmb	20 40 55.2	
	comp=Z,13nm,1.4s						
MKAR	Makanchi Array	89.94	318	P	P	20 41 09.6	-0.6
	comp=Z,0.2nm,0.5s,baz=93,slow=5.7,SNR=5.4						
	comp=Z,0.2nm,0.5s						

JMA 28 20:36:32.6±0.3**, 25°N**±2°×**123°.5E**±0°.8**, h154^{km}**±3^{km}**, MV3.3**/17**, NW OFF ISHIGAKIJIMA IS, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	0.79	211	P	Pn	20 36 56.1	0.0
YOJ	Yonaguni jima	0.79	211	eS	Sn	20 37 14.5	+0.4
JYNG	Yonagunijimaku	0.83	214	eS	Sn	20 37 15.0	+0.4
IRIF	Iriomote-Funau	0.84	162	P	Pn	20 36 56.4	-0.2
JISG	Ishigakijimahi	0.96	125	P	Pn	20 36 57.3	-0.1
JISG				eS	Sn	20 37 16.0	-0.3
JIJ	Ishigaki jima	1.00	141	P	Pn	20 36 57.7	-0.1
JIJ				S	Sn	20 37 16.3	-0.7
JKRS	Kuro-shima	1.03	150	P	Pn	20 36 58.4	+0.4
JKRS				S	Sn	20 37 17.8	+0.3
HATJ	Hateruma jima	1.13	163	eP	Pn	20 36 59.4	+0.5
HATJ				eS	Sn	20 37 19.5	+0.5
JTJ	Tarama	1.24	113	eP	Pn	20 37 00.3	+0.4
JTJ				eS	Sn	20 37 21.4	+0.6
JIRB	Irabujima	1.59	101	eP	Pn	20 37 03.3	-0.2
JIRB				eS	Sn	20 37 26.8	-0.3
JIKM	Ikemajima	1.65	97	eP	Pn	20 37 04.3	+0.3
JIKM				eS	Sn	20 37 29.5	+1.4
JMJ2	Miyako jima3	1.75	103	eP	Pn	20 37 05.5	+0.4
JMJ2				eS	Sn	20 37 30.4	+0.3
TATO	Taipei	1.79	265	P	Pn	20 37 06.1	+0.6
JOGS	Gusukube	1.82	102	eP	Pn	20 37 06.4	+0.6
JOGS				eS	Sn	20 37 31.7	+0.3
NACB	Ninganchiao	1.94	241	P	Pn	20 37 07.0	-0.3
JKE	Kume jima 2	3.23	68	eP	Pn	20 37 21.8	-1.2
JKE				eS	Sn	20 38 01.1	-1.0

TAP 28 20:36:46.9, 24°.47N×121°.58E, h5^{km}, ML0.8, 1D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LATG	Datong	0.08	323	⇓iP	Pg	20 36 49.4	+0.6
LATG				i S	Sg	20 36 50.6	+0.7
ENA	Nanau	0.16	107	i P	Pg	20 36 51.1	+1.1
ENA				i S	Sg	20 36 53.5	+1.4
ENTT	Nioudou	0.17	357	i P	Pg	20 36 51.1	+0.9
ENTT				i S	Sg	20 36 53.7	+1.2
NNSB	Datong	0.18	256	i P	Pg	20 36 51.4	+0.8
NNSB				S	Sg	20 36 54.0	+1.0
EWUT	Wuta	0.19	99	i P	Pg	20 36 51.4	+0.8
EWUT				i S	Sg	20 36 53.9	+0.9
NNS	Nan Shan	0.19	260	i P	Pg	20 36 51.4	+0.7
NNS				i S	Sg	20 36 54.1	+0.9
YHNB	Yeheng	0.27	317	i P	Pg	20 36 53.2	+1.1
YHNB				S	Sg	20 36 56.6	+0.9
ETLH	Xiulin Townshi	0.28	198	P	Pb	20 36 53.9	-0.6
ETLH				S	Sb	20 36 58.0	-1.5
TWC	Suao	0.28	61	i P	Pg	20 36 53.2	+0.8
TWC				i S	Sg	20 36 57.1	+1.0
NSK	Sanguang	0.28	315	i P	Pg	20 36 53.4	+1.0
NSK				i S	Sg	20 36 57.1	+0.9

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*SJA **28** 20:49:59.8±0.7, 20°.44S×69°.11W, h100^{km}±3^{km}, ML3.5, MW3.5*

*GUC **28** 20:50:01.0±0.8, 20°.43S×69°.12W, h92^{km}±3^{km}, ML3.4*

ISC 28 20:50:01.1±1.3**, 20°.43S**±0°.03×**69°.15W**±0°.07**, h100^{km}, n19, σ0^{s}70**/37**, 3C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	IPOC Station P	0.29	359	⇓iP	Pn	20 50 15.6	-0.6
PB08				eS	Sn	20 50 26.5	-0.8
PB08				IAML		20 50 27.0	
	comp=E,3μm,0.2s						
PB08	IPOC Station P	0.29	359	eP	Pn	20 50 15.3	-0.8
PB08				eS	Sn	20 50 26.7	-0.6
PB08				IAML		20 50 27.4	
	comp=Z,1μm,0.2s						
PX03	IPOC Station P	0.46	273	eP	Pn	20 50 15.5	-1.2
PX03				eS	Sn	20 50 27.8	-0.6
PX03				IAML		20 50 29.1	
	comp=N,4μm,0.5s						
PB01	IPOC Station P	0.69	208	⇑iP	Pn	20 50 18.0	-0.6
PB01				eS	Sn	20 50 31.1	-0.5
PB01				IAML		20 50 34.1	
	comp=E,2μm,0.2s						
PB01	IPOC Station P	0.69	208	eP	Pn	20 50 18.0	-0.6
PB01				eS	Sn	20 50 31.5	-0.1
PB01				IAML		20 50 33.4	
	comp=Z,1μm,0.1s						
GO01	Chusmiza	0.76	357	eP	Pn	20 50 19.1	-0.5
GO01				eS	Sn	20 50 33.0	-0.4
GO01				IAML		20 50 35.3	
	comp=N,2μm,0.2s						
GO01	Chusmiza	0.76	357	eP	Pn	20 50 19.3	-0.3
GO01				eS	Sn	20 50 33.9	+0.5
GO01				IAML		20 50 35.1	
	comp=Z,908nm,0.2s						
PB11	IPOC Station P	0.82	324	⇑iP	Pn	20 50 19.5	-0.4
PB11				eS	Sn	20 50 33.6	-0.2
PB11				IAML		20 50 34.2	
	comp=N,2μm,0.3s						
PB11	IPOC Station P	0.82	324	eP	Pn	20 50 19.4	-0.4
PB11				eS	Sn	20 50 34.1	+0.2
PB11				IAML		20 50 35.4	
	comp=Z,754nm,0.2s						
TA02	Huaiquique	0.94	280	eP	Pn	20 50 20.6	-0.2
TA02				eS	Sn	20 50 36.0	+0.3
TA02	Huaiquique	0.94	280	eP	Pn	20 50 20.7	-0.2
TA02				eS	Sn	20 50 36.7	+1.0
TA02				IAML		20 50 40.2	
	comp=Z,1μm,0.1s						
TA01	Diego Aracena	0.98	262	⇑iP	Pn	20 50 20.9	-0.4
TA01				eS	Sn	20 50 36.2	-0.3
TA01				IAML		20 50 37.0	
	comp=E,1μm,0.3s						
TA01	Diego Aracena	0.98	262	eP	Pn	20 50 20.9	-0.4
TA01				eS	Sn	20 50 36.9	+0.4
TA01				IAML		20 50 37.8	
	comp=Z,406nm,0.2s						
PB09	IPOC Station P	1.36	184	eP	Pn	20 50 25.9	0.0
PB09				eS	Sn	20 50 45.2	+0.6
PB09	IPOC Station P	1.36	184	eP	Pn	20 50 25.3	-0.6
PB09				eS	Sn	20 50 46.2	+1.6
PB09				IAML		20 50 46.4	
	comp=Z,348nm,0.5s						
PB16	IPOC Station P	2.11	351	i P	Pn	20 50 36.8	+1.1
PB16				eS	Sn	20 51 03.5	+1.5
PB16	IPOC Station P	2.11	351	eP	Pn	20 50 36.5	+0.9
PB16				eP		20 50 36.9	
PB16				eS	Sn	20 51 01.0	-1.0
PB06	IPOC Station P	2.30	190	eP	Pn	20 50 37.6	-0.2
PB06				eS	Sn	20 51 06.5	+0.7
PB06				IAML		20 51 12.5	
	comp=Z,236nm,0.3s						
PB05	IPOC Station P	2.60	202	eP	Pn	20 50 41.7	0.0
PB05				eS	Sn	20 51 01.5	-11
PB05				IAML		20 51 21.5	
	comp=Z,140nm,0.6s						

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*IDC **28** 20:58:50.7±0.8, 18°.71N×145°.63E, h200^{km}±7^{km}, mb3.4/14, mbtmp3.9/16, MS3.5/1, Error ellipse: s-maj=19.2km s-min=11.3km az=86.0*

*NEIC **28** 20:58:52.1±2.3, 18°.54N±0°.07×145°.7E±0°.2, h210^{km}±7^{km}, mb4.3/29, Error ellipse: s-maj=21.6km s-min=10.3km az=85.0*

ISC 28 20:58:50.6±0.5**, 18°.57N**±0°.05×**145°.7E**±0°.1**, h200^{km}, n52, σ1^{s}22**/57**, mb4.1**/26**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	5.01	189		Pn	21 00 04.3	-0.9
GUMO				Sn	Sn	21 01 04.2	+0.1
GUMO	Guam	5.01	189	P	Pn	21 00 08.7	+3.5
	16nm,0.3s,baz=263,slow=5.1,SNR=5.8						
GUMO				S	Sn	21 01 05.0	+0.9
	66nm,0.4s,baz=185,slow=22,SNR=9.1						
JCJ	Chichijima	9.07	340	Pn	Pn	21 01 02.4	+4.7
INU	Inuyama	18.39	337	P	P	21 02 50.1	-0.5
INU				IAmb	IAmb	21 02 52.7	
	comp=Z,12nm,1.0s						
JGF	Kuroka	18.49	338	P	P	21 02 52.2	+0.5
JGF				IAmb	IAmb	21 03 21.4	
	comp=Z,12nm,1.2s						
MJAR	Matsushiro Arr	19.07	341	P	P	21 02 57.9	0.0
	comp=Z,0.6nm,0.4s,baz=157,slow=9.0,SNR=2.3						
SSLB	Suanglung	23.61	287	P	P	21 03 44.4	+0.8
SSLB				IAmb	IAmb	21 03 57.5	
	comp=Z,13nm,1.2s						
KSRS	Korea Array	24.40	324	P	P	21 03 49.5	-1.0
	comp=Z,0.6nm,0.5s,baz=141,slow=8.7,SNR=4.3						
	comp=Z,0.6nm,0.5s						
JKA	Kamikawa-asahi	25.60	355	P	P	21 04 01.8	+0.5
JKA				IAmb	IAmb	21 04 11.2	
	comp=Z,17nm,1.4s						
HNR	Honiara	31.19	152	LR	LR	21 15 59.2	
	comp=Z,85nm,21.5s,baz=258,slow=33						
COEN	Coen	32.42	185	P	P	21 05 02.0	+0.1
MTN	Manton Dam	34.35	206	P	P	21 05 19.1	+0.5
MTN				IAmb	IAmb	21 05 20.1	
	comp=Z,12nm,1.0s						
SOEI	Soe	35.19	219	P	P	21 05 24.7	-1.2
KNRA	Kununurra	37.89	207	P	P	21 05 49.5	+0.9
KNRA				IAmb	IAmb	21 06 23.3	
	comp=Z,14nm,1.4s						
WR8	Warramunga Arr	39.83	197	P	P	21 06 04.7	+0.1
WR8				IAmb	IAmb	21 06 34.4	
	comp=Z,8.2nm,1.4s						
WRA	Warramunga Arr	39.86	197	P	P	21 06 05.1	+0.2
WRA	Warramunga Arr	39.86	197	P	P	21 06 05.3	+0.4
	comp=Z,2.1nm,0.4s,baz=18,slow=8.7,SNR=59						
	comp=Z,2.1nm,0.4s						
FITZ	Fitzroy Crossi	41.42	210	P	P	21 06 18.6	+0.9
SONM	Songino Array	43.22	321	P	P	21 06 30.7	-1.4
	comp=Z,0.5nm,0.4s,baz=133,slow=7.6,SNR=2.6						
	comp=Z,0.5nm,0.4s						
AS31	Alice Springs	43.52	196	P	P	21 06 34.2	-0.4
ASAR	Alice Springs	43.52	196	P	P	21 06 34.5	-0.1
ASAR	Alice Springs	43.52	196	P	P	21 06 35.5	+0.8
	comp=Z,0.5nm,0.5s,baz=14,slow=6.1,SNR=16						
	comp=Z,0.5nm,0.5s						
CMAR	Chiang Mai Arr	44.21	278	P	P	21 06 40.3	+0.1
	comp=Z,0.4nm,0.5s,baz=86,slow=10,SNR=1.9						
	comp=Z,0.4nm,0.5s						
DZM	Mont Dzumac	45.22	152	P	P	21 06 49.0	+0.9
MBWA	Marble Bar	46.95	214	P	P	21 07 01.8	+0.3
PSA00	Pilbara Seismi	47.23	214	P	P	21 07 03.5	-0.3
ARMA	Armidale	49.04	173	P	P	21 07 16.8	-0.8
ARMA				IAmb	IAmb	21 07 29.3	
	comp=Z,33nm,1.4s						
FORT	Forrest	51.91	199	P	P	21 07 37.7	-1.1
MORW	Morawa	55.33	212	P	P	21 08 03.4	-0.3
O15K	Ungalikthiuk R	56.29	30	P	P	21 08 11.0	+0.9
O15K				IAmb	IAmb	21 08 24.9	
	comp=Z,12nm,1.2s						
N15K	Kwethluk River	56.54	29	P	P	21 08 13.1	+1.1
N15K				IAmb	IAmb	21 08 55.7	
	comp=Z,13nm,1.3s						
ZALV	Zalesovo Beam	58.10	323	P	P	21 08 21.8	-1.1
	comp=Z,0.8nm,0.5s,baz=110,slow=13,SNR=4.4						
	comp=Z,0.8nm,0.5s						
MKAR	Makanchi Array	58.53	314	P	P	21 08 25.8	-0.3
MKAR	Makanchi Array	58.53	314	P	P	21 08 26.3	+0.2
	comp=Z,0.9nm,0.5s,baz=95,slow=8.0,SNR=16						
	comp=Z,0.9nm,0.5s						
MAKZ	Makanchi	58.74	314	P	P	21 08 27.2	-0.4
H18K	Honhosa River	59.25	24	P	P	21 08 31.1	+0.4
H18K				IAmb	IAmb	21 09 15.2	
	comp=Z,7.2nm,1.4s						
H19K	Roundabout Mou	60.14	24	P	P	21 08 38.9	+2.2
H19K				IAmb	IAmb	21 08 47.9	
	comp=Z,9.1nm,1.5s						
D20K	Etivluk River	61.33	21	P	P	21 08 45.6	+0.8
KURBB	Kurchatov Arra	61.39	318	P	P	21 08 44.7	-0.7
	comp=Z,1.2nm,0.6s,baz=93,slow=7.5,SNR=23						
KURBB				pP	pP	21 09 30.6	+0.4
	comp=Z,0.4nm,0.6s,baz=94,slow=7.8,SNR=1.8						
	comp=Z,1.2nm,0.6s						
NRIK	Noril'sk	61.72	340	P	P	21 08 47.0	-0.2
NRIK				IAmb	IAmb	21 08 47.4	
	comp=Z,2.8nm,0.7s						
D22K	Ayikyak River	62.72	21	P	P	21 08 55.2	+1.2
D22K				IAmb	IAmb	21 09 11.7	
	comp=Z,8.5nm,1.5s						
ILAR	Eielson Array	63.77	26	P	P	21 09 00.6	-0.3
	comp=Z,0.3nm,0.6s,baz=270,slow=5.9,SNR=4.3						
ILAR				pP	pP	21 09 45.9	-0.3
	comp=Z,0.1nm,0.5s,baz=267,slow=7.6,SNR=1.6						
	comp=Z,0.3nm,0.6s						
PCA	Pinnacle	66.15	32	P	P	21 09 14.5	-1.9
PCA				PcP	PcP	21 09 44.0	-1.0

BVAR	Borovoye Array	66.55	320	P	P	21 09 18.1	-0.9
	comp=Z,3.8nm,0.6s,baz=94,slow=7.6,SNR=17						
	comp=Z,3.8nm,0.6s						
BRVK	Borovoye	66.62	320		P	21 09 18.6	-0.8
AB31	Akbulak array	73.41	317		P	21 09 59.4	-1.4
ABKAR	Akbulak array	73.41	317		P	21 09 59.1	-1.7
YKA	Yellowknife Ar	78.11	28	P	P	21 10 27.2	0.0
	comp=Z,0.4nm,0.7s,baz=282,slow=9.8,SNR=3.3						
	comp=Z,0.4nm,0.7s						
ARCES	ARCESS Array B	82.60	342	P	P	21 10 49.0	-2.0
	comp=Z,2.1nm,0.8s,baz=65,slow=5.8,SNR=3.6						
	comp=Z,2.1nm,0.8s						
NVAR	Mina Array Bea	83.24	52	P	P	21 10 54.8	-0.4
	comp=Z,0.5nm,0.5s,baz=289,slow=5.7,SNR=4.4						
NVAR				pP	pP	21 11 43.2	+0.5
	comp=Z,0.6nm,0.7s,baz=248,slow=5.2,SNR=1.9						
	comp=Z,0.5nm,0.5s						
FINES	FINESS Array B	86.99	335	P	P	21 11 10.7	-2.3
	comp=Z,1.3nm,0.6s,baz=61,slow=4.6,SNR=14						
	comp=Z,1.3nm,0.6s						
LPAZ	La Paz	147.70	91	PKPbc	PKPbc	21 18 14.4	+1.3
	comp=Z,2.4nm,0.9s,baz=203,slow=3.1,SNR=6.4						

*IDC **28** 20:59:58.4±1.2, 30°.20S×179°.09W, h0km, mb4.4/5, mbtmp4.4/6, ML4.0/1, MS3.9/10, Error ellipse: s-maj=36.8km s-min=26.5km az=51.0*

*NEIC **28** 21:00:01.8±2.0, 30°.45S±0°.09×179°.3W±0°.2, h10km±1km, mb4.8/8, Error ellipse: s-maj=28.2km s-min=6.6km az=301.0*

ISC 28 21:00:01.4±0.6**, 30°.41S**±0°.10×**179°.3W**±0°.1**, h10**km**, n60,** σ**1s60**/46**, mb4.8**/11**, MS4.0**/8**, 4C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.68	48	P	Pb	21 00 33.7	+1.3
RAO	Raoul Island	1.69	47	Pn	Pn	21 00 32.3	+1.3
RAO	Raoul Island	1.69	47	Sn	Sn	21 00 36.7	-16
	152nm,0.3s,baz=322,slow=20,SNR=3.8						
MXZ	Matakaoa Point	7.40	195	Pn	Pn	21 01 49.1	-0.4
MXZ	Matakaoa Point	7.40	195	P	Pn	21 01 52.5	+3.1
OUZ	Omahuta	7.64	229	P	Pn	21 01 53.9	+1.1
WCZ	Waipu Caves	7.65	222	P	Pn	21 01 55.2	+2.4
HAZ	Te Kaha	7.71	197	P	Pn	21 01 54.5	+0.8
PUZ	Puketiti	7.90	194	P	Pn	21 01 56.9	+0.5
RUGZ	Raukumara Rang	7.94	197	P	Pn	21 01 59.6	+2.6
OPRZ	Ohinepanea	8.16	204	P	Pn	21 02 04.9	+5.0
CNGZ	Carnagh Statio	8.31	193	P	Pn	21 02 04.3	+2.4
MWZ	Matawai	8.32	197	P	Pn	21 02 04.6	+2.4
URZ	Urewera	8.37	200	Pn	Pn	21 02 02.8	+0.1
	1.9nm,0.3s,baz=21,slow=3.6,SNR=12						
	13nm,0.6s						
URZ	Urewera	8.37	200	P	Pn	21 02 04.8	+2.1
KMRZ	Kaimai	8.39	207	P	Pn	21 02 09.0	+6.0
TOZ	Tahuroa Road	8.47	209	P	Pn	21 02 08.8	+4.7
RAGZ	Rawiri	8.50	197	P	Pn	21 02 06.9	+2.2
RIGZ	Rimuhau	8.62	195	P	Pn	21 02 07.9	+1.6
RTZ	Ruatahuna	8.73	199		Pn	21 02 08.0	+0.2
SNGZ	Shannon Statio	8.79	197	P	Pn	21 02 10.4	+1.8
TLZ	Tolley Road	8.96	207	P	Pn	21 02 15.7	+4.8
RAHZ	Arahi	8.99	198	P	Pn	21 02 12.9	+1.7
MTHZ	Maungataniwha	8.99	199	P	Pn	21 02 14.8	+3.4
NMHZ	Naumai	9.23	199	P	Pn	21 02 16.2	+1.6
HIZ	Hauiti	9.40	209	P	Pn	21 02 23.2	+6.3
OTVZ	Oturere	9.65	204	P	Pn	21 02 22.3	+1.8
SNVZ	South Ngauruho	9.68	204	P	Pn	21 02 23.3	+2.3
KAHZ	Kahuranaki	9.87	197	P	Pn	21 02 23.9	+0.6
TSZ	Takapari Road	10.37	200	P	Pn	21 02 36.9	+6.7
BFZ	Birch Farm	10.86	198	P	Pn	21 02 34.6	-2.3
MSVF	Nonsavu	12.84	349	LR	LR	21 06 56.7	
	comp=Z,243nm,19.9s,baz=159,slow=33						
RAR	Rarotonga	19.83	67	LR	LR	21 11 39.4	
	comp=Z,122nm,18.3s,baz=235,slow=36						
PPT	Papeete	29.94	72	LR	LR	21 18 35.3	
	comp=Z,120nm,18.3s,baz=336,slow=38						
STKA	Stephens Creek	33.35	257	P	P	21 06 41.8	+2.0
	8.1nm,0.8s,baz=97,slow=11,SNR=4.9						
STKA				LR	LR	21 17 32.2	
	comp=Z,141nm,20.6s,baz=191,slow=31						
	8.1nm,0.8s						
BBOO	Buckleboo	37.85	255	P	P	21 07 16.9	-1.6
ASAR	Alice Springs	41.95	268	P	P	21 07 53.2	+0.5
	2.0nm,1.0s,baz=101,slow=7.7,SNR=8.9						
ASAR				LR	LR	21 25 08.8	
	comp=Z,163nm,18.0s,baz=140,slow=36						
	2.0nm,1.0s						
WR8	Warramunga Arr	42.80	273	P	P	21 07 59.0	-0.6
WR8				IAmb	IAmb	21 09 25.8	
	comp=Z,39nm,2.0s						
WRA	Warramunga Arr	42.94	273	P	P	21 07 59.2	-1.6
WRA	Warramunga Arr	42.94	273	P	P	21 08 00.0	-0.7
	comp=Z,1.8nm,0.8s,baz=112,slow=7.5,SNR=10.0						
WRA				LR	LR	21 25 46.6	
	comp=Z,201nm,18.1s,baz=349,slow=36						
	comp=Z,1.8nm,0.8s						
FORT	Forrest	44.93	256	P	P	21 08 16.1	-0.4
FORT				IAmb	IAmb	21 08 18.3	
	comp=Z,16nm,0.9s						
FITZ	Fitzroy Crossi	51.20	271	P	P	21 09 05.3	+0.1
FITZ				IAmb	IAmb	21 09 25.3	
	comp=Z,7.9nm,1.9s						
GUMO	Guam	55.68	316	LR	LR	21 32 08.4	
	comp=Z,45nm,18.3s,baz=130,slow=35						
BATI	Baumata	56.50	278	LR	LR	21 33 18.3	
	comp=Z,606nm,18.0s,baz=275,slow=35						
QSPA	South Pole Qui	59.70	180	P	P	21 10 06.5	+0.5
QSPA	South Pole Qui	59.70	180	P	P	21 10 06.7	+0.7
	comp=Z,18nm,0.8s,baz=34,slow=1.8,SNR=101						
	comp=Z,18nm,0.8s						
DAV	Davao City (W)	64.58	296	LR	LR	21 38 46.4	
	comp=Z,96nm,18.4s,baz=146,slow=36						
BELA	Belgrano 2	69.93	173	P	P	21 11 11.1	-1.2
BELA				IAmb	IAmb	21 11 12.8	
	comp=Z,8.5nm,0.9s						
ESPZ	Base Esperanza	76.02	157	P	P	21 11 48.3	-0.2
TROLL	Troll, Antarti	77.86	181	⇑P	P	21 11 58.6	-0.4
	comp=Z,196nm,0.7s						
SNAA	Sanae	78.18	179	⇑P	P	21 11 59.6	-1.0
	comp=Z,94nm,0.9s						
SNAA	Sanae	78.18	179	P	P	21 11 59.5	-1.1
SNAA				IAmb	IAmb	21 12 01.1	
	comp=Z,14nm,1.2s						
SNAA	Sanae	78.18	179	P	P	21 11 60.0	-0.7
	comp=Z,4.8nm,0.9s,baz=178,slow=6.0,SNR=12						
	comp=Z,4.8nm,0.9s						
VNA3	Neumayer Olymp	78.37	177	⇑P	P	21 12 01.1	-0.5
	comp=Z,25nm,0.8s						
VNA2	Neumayer--Watz	78.79	177	⇑P	P	21 12 02.9	-1.1
	comp=Z,16nm,0.7s,baz=173,slow=3.9						
ELK	Elko	92.33	43	LR	LR	21 46 19.9	
	comp=Z,269nm,21.1s,baz=176,slow=30						
KURBB	Kurchatov Arra	120.25	314	PKP	PKPdf	21 18 50.9	-1.4
	comp=Z,0.2nm,0.6s,baz=115,slow=2.1,SNR=2.7						
BVAR	Borovoye Array	125.60	316	PKP	PKPdf	21 19 01.1	-1.5
	comp=Z,0.3nm,0.5s,baz=72,slow=1.8,SNR=2.5						
FINES	FINESS Array B	144.75	339	PKP	PKPab	21 19 35.8	-0.8
	comp=Z,2.7nm,0.8s,baz=65,slow=4.7,SNR=11						
AKASG	Malin Array Be	150.59	322	PKPbc	PKPbc	21 19 51.5	-1.6
	comp=Z,0.3nm,0.3s,baz=54,slow=2.3,SNR=4.1						

*IDC **28** 21:12:53.1±3.7, 29°.69S×178°.05W, h0km, mb4.5/4, mbtmp4.4/5, ML3.8/1, Error ellipse: s-maj=82.9km s-min=31.1km az=44.0*

*WEL **28** 21:13:27.6±0.8, 32°S±9°×17°9W±2°3, h230km±13km, mB4.6/13, ML4.7/13, MLv4.7/10, Mw(mB)3.8/13, Error ellipse: s-maj=32.3km s-min=4.9km az=110.3, confirmed*

ISC 28 21:13:25.0±1.3**, 31°.75S**±0°.08×**178°.3W**±0°.2**, h250**km**, n47,** σ**1s95**/60**, mb4.2**/4**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.51	8	P	Pn	21 14 14.6	+2.2
GLKZ				S	S	21 14 49.7	0.0
PKGZ	Pakihiroa	6.78	205	P	Pn	21 15 05.1	+2.3
PKGZ				S	S	21 16 22.8	+1.6
PUZ	Puketiti	6.90	203	P	Pn	21 15 06.5	+2.1
PUZ				S	S	21 16 25.6	+1.5
RUGZ	Raukumara Rang	7.01	207	P	Pn	21 15 07.8	+2.0
RUGZ				S	S	21 16 27.7	+0.9
TWGZ	Tauwhareparae	7.09	204	P	Pn	21 15 10.2	+3.4
TWGZ				S	S	21 16 30.9	+2.4
TKGZ	Te Karaka	7.37	204	P	Pn	21 15 11.4	+1.2
TKGZ				S	S	21 16 36.9	+2.0
WCZ	Waipu Caves	7.39	234	P	Pn	21 15 12.3	+1.8
MWZ	Matawai	7.39	206	P	Pn	21 15 11.8	+1.2
MWZ				S	S	21 16 35.2	-0.3
URZ	Urewera	7.49	209	Pn	Pn	21 15 11.7	-0.1
	0.9nm,0.3s,baz=250,slow=4.8,SNR=10						
URZ				Sn	S	21 16 36.4	-1.3
	4.3nm,0.3s,baz=32,slow=18,SNR=17						
	3.1nm,0.3s						
URZ	Urewera	7.49	209	P	Pn	21 15 13.0	+1.3
URZ				S	S	21 16 37.7	0.0
RIGZ	Rimuhau	7.64	204	P	Pn	21 15 16.3	+2.6
OMRZ	Omania	7.69	213	P	Pn	21 15 14.8	+0.5
PRGZ	Paritu Road	7.79	202	P	Pn	21 15 18.7	+3.0
PRGZ				S	S	21 16 45.5	+0.8
MUGZ	Murupara	7.82	210	P	Pn	21 15 16.8	+0.9
MUGZ				S	S	21 16 46.6	+1.4
SNGZ	Shannon Statio	7.86	206	P	Pn	21 15 17.4	+1.0
SNGZ				S	S	21 16 46.0	-0.1
RAHZ	Arahi	8.07	206	P	Pn	21 15 20.0	+0.9
RAHZ				S	S	21 16 50.2	-0.9
MTHZ	Maungataniwha	8.11	208	P	Pn	21 15 19.8	+0.2
MTHZ				S	S	21 16 52.2	+0.2
TLZ	Tolley Road	8.27	216	P	Pn	21 15 25.0	+3.4
MRHZ	Matea Rd	8.27	210	P	Pn	21 15 25.4	+3.8
NMHZ	Naumai	8.33	207	P	Pn	21 15 22.9	+0.4
ARHZ	Aropaoanui	8.41	206	P	Pn	21 15 23.1	-0.3
ARHZ				S	S	21 16 58.5	-0.4
BKZ	Black Stump Fm	8.52	208	P	Pn	21 15 24.6	-0.2
HIZ	Hauiti	8.76	218	P	Pn	21 15 32.5	+4.7
NTVZ	North Tongarir	8.81	212	P	Pn	21 15 31.7	+3.1
KRVZ	Karewarewa	8.82	212	P	Pn	21 15 32.1	+3.3
OTVZ	Oturere	8.87	212	P	Pn	21 15 28.9	-0.5
SNVZ	South Ngauruho	8.90	212	P	Pn	21 15 29.0	-0.7
KAHZ	Kahuranaki	8.92	205	P	Pn	21 15 29.7	-0.2
TUVZ	Tukino	8.96	212	P	Pn	21 15 33.6	+3.1
KRHZ	Kereru	8.98	207	P	Pn	21 15 29.5	-1.1
FWVZ	Far West T-bar	8.99	212	P	Pn	21 15 30.8	-0.2
WHVZ	Whangaehu Hut	9.00	212	P	Pn	21 15 34.0	+2.9
WNVZ	Wahianoa	9.03	212	P	Pn	21 15 33.0	+1.5
PKVZ	Pokaka	9.12	213	P	Pn	21 15 32.5	+0.1
PXZ	Pawanui	9.13	204	P	Pn	21 15 33.1	+0.6
PNHZ	Pukenui	9.28	207	P	Pn	21 15 32.7	-1.7
PRHZ	Porangahau	9.42	204	P	Pn	21 15 35.9	-0.3
TSZ	Takapari Road	9.49	208	P	Pn	21 15 36.1	-1.0
DVHZ	Dannevirke	9.62	206	P	Pn	21 15 41.1	+2.3
PKE	Pukeiti	9.71	218	P	Pn	21 15 43.6	+3.7
BFZ	Birch Farm	9.93	205	P	Pn	21 15 41.4	-1.1
MRZ	Mangatainoka R	10.16	207	P	Pn	21 15 43.2	-2.3
MTW	Mount Morrison	10.62	206	P	Pn	21 15 49.3	-2.0
STKA	Stephens Creek	33.92	259	P	P	21 19 42.9	-1.9
	2.5nm,0.4s,baz=105,slow=12,SNR=9.5						
	2.5nm,0.4s						
ASAR	Alice Springs	42.78	269	P	P	21 20 55.1	-3.3
	3.2nm,0.7s,baz=105,slow=7.4,SNR=38						
	3.2nm,0.7s						
WRA	Warramunga Arr	43.89	274	P	P	21 21 03.6	-3.7
	3.9nm,0.3s,baz=111,slow=8.1,SNR=163						
	3.9nm,0.3s						
QSPA	South Pole Qui	58.36	180	P	P	21 23 04.1	+10
	4.2nm,0.7s,baz=211,slow=1.9,SNR=47						
	4.2nm,0.7s						

IDC 28 21:17:49.8±7.3**, 18°.90N**×**144°.76E, h0**km**, mb3.6**/5**, mbtmp3.6**/5**, Error ellipse: s-maj=297.3km s-min=25.7km az=79.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	39.93	195	P	P	21 25 26.4	+0.5
	0.5nm,0.9s,baz=17,slow=8.5,SNR=2.6						
	0.5nm,0.9s						
ASAR	Alice Springs	43.61	195	P	P	21 25 55.3	-0.8
	0.3nm,0.7s,baz=21,slow=12,SNR=1.5						
	0.3nm,0.7s						
MKAR	Makanchi Array	57.69	314	P	P	21 27 41.4	-0.8
	0.5nm,1.0s,baz=111,slow=7.9,SNR=3.2						
	0.5nm,1.0s						
KURBB	Kurchatov Arra	60.58	318	P	P	21 28 02.4	+0.2
	0.7nm,0.5s,baz=96,slow=7.4,SNR=9.9						
	0.7nm,0.5s						
BVAR	Borovoye Array	65.76	320	P	P	21 28 36.8	+0.2
	1.8nm,0.7s,baz=88,slow=9.0,SNR=7.1						
	1.8nm,0.7s						

*GCG **28** 21:17:57.9±0.7, 13°.16N×88°.28W, h237km±21km, MD3.8*

*CATAC **28** 21:18:05.0±1.2, 13°N±13°×8°9W±°, h191km±11km, M2.9/9, MLv2.9/9, Error ellipse: s-maj=30.5km s-min=7.3km az=26.5, confirmed*

ISC 28 21:18:01.1±3.8**, 13°.4N**±0°.2×**88°.5W**±0°.1**, h231**km±26km**, n16,** σ**1s47**/19**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PACA	Pacayal	0.14	71	P	Pn	21 18 31.3	+0.1
TECO	Alcaldia de Te	0.33	290	P	Pn	21 18 31.8	+0.4
SCLA	Alcaldia de Sa	0.38	316	P	Pn	21 18 32.2	+0.7
PAVA	Las Pavas	0.55	302	P	Pn	21 18 32.6	+0.5
LCND	La Caada	0.56	102	P	Pn	21 18 32.3	+0.4
CNCH	Conchagua	0.62	103	P	Pn	21 18 32.6	+0.2
JAYA	Jayaque - finc	0.99	283	*e*P	Pn	21 18 33.7	-0.5
JAYA				*e*S	S	21 19 00.9	+0.8
JAYA	Jayaque - finc	0.99	283	P	Pn	21 18 34.1	-0.1
MTO3	Montecristo	1.31	318	P	Pn	21 18 36.6	+0.2
MTO3	Montecristo	1.31	318	S	S	21 19 01.8	-2.2
NUBE	Las Nubes	1.37	290	*e*P	Pn	21 18 36.9	+0.2
NUBE				*e*S	S	21 19 08.5	+3.9
NUBE	Las Nubes	1.37	290	P	Pn	21 18 37.0	+0.2
SARH	Santa Rosa de	1.38	348	*e*P	Pn	21 18 37.3	+0.5
FAME	Alcaldia de Sa	1.57	286	P	Pn	21 18 37.6	-0.6
FAME	Alcaldia de Sa	1.57	286	S	S	21 19 04.8	-2.3
PKGN	Cerro Pekin	1.63	117	P	Pn	21 18 39.7	+1.0
PKGN				S	S	21 19 06.1	-1.9

*NNC **28** 21:31:50.4±10.0, 36°.94N×70°.14E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=82.4km s-min=71.1km az=170.0*

*IDC **28** 21:31:51.6±8.9, 36°.70N×70°.14E, h197km±61km, mb3.4/5, mbtmp3.8/9, Error ellipse: s-maj=86.9km s-min=45.4km az=172.0*

ISC 28 21:31:51.5±2.1**, 36°.7N**±0°.2×**70°.3E**±0°.1**, h200**km**, n12,** σ**0s90**/16**, mb3.6**/4**, 4C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.40	2	⇑P	Pn	21 33 25.0	+1.1
	1.1nm,0.2s,baz=179,slow=13,SNR=61						
KK31				⇓S	Sn	21 34 35.6	-1.6
	2.7nm,0.4s,baz=189,slow=26,SNR=6.1						
AAK	Ala-Archa	6.77	28	P	Pn	21 33 29.3	+0.4
	3.4nm,0.3s,baz=182,slow=5.4,SNR=5.6						
AAK				S	Sn	21 34 46.4	+0.3
	8.2nm,0.5s,baz=330,slow=23,SNR=14						
AAK	Ala-Archa	6.77	28	⇑P	Pn	21 33 27.8	-1.1
	2.6nm,0.7s						
AAK				⇑S	Sn	21 34 47.3	+1.2
	2.4nm,0.5s						
TKM2	Tokmak 2	7.45	32	⇑P	Pn	21 33 37.9	+0.2
	7.5nm,0.6s						
TKM2				⇓S	Sn	21 35 00.8	-1.3
	2.8nm,0.8s						
MKAR	Makanchi Array	13.49	38	P	P	21 34 57.5	0.0
	0.3nm,0.6s,baz=210,slow=9.2,SNR=7.7						
AKTO	Aktyubinsk	16.31	331	P	Pn	21 35 29.7	+0.3
	2.1nm,0.6s,baz=162,slow=7.8,SNR=5.8						
BVAR	Borovoye Array	16.33	0	P	Pn	21 35 30.3	+0.7
	0.5nm,0.4s,baz=174,slow=8.2,SNR=4.4						
ZALV	Zalesovo Beam	19.99	26	P	P	21 36 08.9	+0.4
	1.0nm,0.4s,baz=211,slow=10,SNR=5.8						
	1.0nm,0.4s						
FINES	FINESS Array B	36.98	326	P	P	21 38 41.0	-0.4
	1.2nm,0.7s,baz=108,slow=10,SNR=5.7						
	1.2nm,0.7s						
ARCES	ARCESS Array B	40.73	338	P	P	21 39 12.6	+0.2
	1.0nm,0.5s,baz=106,slow=8.9,SNR=7.8						
	1.0nm,0.5s						
HFS	Hagfors	42.54	322	P	P	21 39 26.6	-0.5
	6.6nm,1.2s,baz=98,slow=8.1,SNR=5.0						
	6.6nm,1.2s						
NOA	NORSAR Array B	43.86	323	P	P	21 39 36.9	-0.8
	1.2nm,0.9s,baz=95,slow=7.8,SNR=3.0						
	1.2nm,0.9s						

*ISK **28** 21:31:59.4, 34°.87N×33°.93E, h21km, ML2.6/13*

*NIC **28** 21:32:02.0, 35°.01N×33°.84E, h21km, Ml1.9/10*

*GII **28** 21:32:02.2±0.0, 34°.773N±0°.002×33°.837E±0°.001, h16km, Mws2.0, confirmed*

ISC 28 21:32:01.3±0.9**, 34°.92N**±0°.03×**33°.89E**±0°.03**, h27**km±6km**, n58,** σ**0s62**/72**, 2C, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PARAL	Paralimni	0.14	60	⇑*i*P	Pb	21 32 06.6	+0.2
PARAL				S	Sb	21 32 10.9	+0.9
PARAL				AML	AML	21 32 11.1	
	1.3nm,0.4s						
PARAL				AML	AML	21 32 13.5	
	1.5nm,0.6s						
LAR1C	Larnaka City C	0.23	270	P	Pb	21 32 07.3	-0.1
LAR1C				S	Sb	21 32 11.6	+0.1
MVOU	Mavrovouni	0.23	293	⇑*i*P	Pb	21 32 06.9	-0.6
MVOU				S	Sb	21 32 10.9	-0.8
MVOU				AML	AML	21 32 11.4	
	1.0nm,0.3s						
MVOU				AML	AML	21 32 12.7	
	1.0nm,0.2s						
AKIN	Akıncılar- Kıb	0.36	285	Pg	Pb	21 32 08.6	-0.7
AKIN				Sg	Sb	21 32 14.5	-0.3
ATHAL	Athalassa	0.46	298	P	Pb	21 32 10.6	-0.3
ATHAL				S	Sb	21 32 16.7	-0.8
ATHAL				AML	AML	21 32 20.9	
	0.5nm,0.5s						
ATHAL				AML	AML	21 32 23.3	
	0.5nm,0.4s						
LFK	Lefkose	0.46	320	Pg	Pb	21 32 10.7	-0.3
LFK				Sg	Sb	21 32 18.8	+1.3
CSS	Mathiatis	0.46	275	Pg	Pb	21 32 10.2	-0.7
CSS				Sg	Sb	21 32 17.4	-0.1
CSS	Mathiatis	0.46	275	P	Pb	21 32 10.5	-0.5
CSS				S	Sb	21 32 18.4	+0.9
CSS	Mathiatis	0.46	275	P	Pb	21 32 10.6	-0.3
CSS				S	Sb	21 32 17.9	+0.4
CSS				AML	AML	21 32 18.2	
	0.2nm,0.5s						
CSS				AML	AML	21 32 18.3	
	0.2nm,0.5s						
ASGA	Asgata	0.55	256	P	Pb	21 32 12.6	+0.3
ASGA				S	Sn	21 32 21.4	-0.2
ASGA				AML	AML	21 32 25.6	
	0.2nm,0.3s						
ASGA				AML	AML	21 32 25.8	
	0.2nm,0.3s						
EREN	Erenkoy	0.65	21	Pg	Pb	21 32 13.6	-0.4
EREN				Sg	Sb	21 32 23.1	+0.5
XYLS	Xyliatos	0.70	278	P	Pb	21 32 14.3	-0.5
XYLS				S	Sn	21 32 25.0	-0.4
XYLS				AML	AML	21 32 29.9	
	0.3nm,0.2s						
XYLS				AML	AML	21 32 30.1	
	0.2nm,0.5s						
TROD	Troodos	0.84	272	P	Pn	21 32 17.6	0.0
TROD				AML	AML	21 32 36.3	
	0.2nm,0.5s						
TROD				AML	AML	21 32 36.8	
	0.2nm,0.5s						
APOL	The Sanctuary	0.88	254	P	Pn	21 32 18.9	+1.0
APOL				S	Sn	21 32 31.8	+1.9
APOL				AML	AML	21 32 33.7	
	0.3nm,0.5s						
APOL				AML	AML	21 32 34.4	
	0.2nm,0.3s						
ALFC	Alefka	1.09	283	P	Pn	21 32 21.1	+0.4
ALFC				S	Sb	21 32 35.0	-0.2
ALFC				AML	AML	21 32 40.2	
	0.1nm,0.5s						
ALFC				AML	AML	21 32 42.2	
	0.1nm,0.4s						
NATA	Nata	1.10	263	P	Pb	21 32 22.6	+1.0
NATA				AML	AML	21 32 41.5	
	0.1nm,0.4s						
NATA				AML	AML	21 32 43.5	
	0.3nm,0.4s						
TISA	Tisan-Mersin	1.25	352	Pn	Pn	21 32 22.8	-0.1
AKMS	Akamas	1.28	275	P	Pb	21 32 24.7	0.0
TEKE	Tekeli-Mersin	1.37	333	Pn	Pn	21 32 24.6	-0.1
BERE	Bereket-Mersin	1.52	339	Pn	Pn	21 32 26.9	0.0
KEBE	Keben-Mersin	1.53	355	Pn	Pn	21 32 26.9	0.0
TEVE	Tevekalti-Mers	1.55	347	Pn	Pn	21 32 27.6	+0.4
KIZK	Mersin	1.57	7	Pn	Pn	21 32 27.9	+0.6
GAZI	Gazipasa	1.83	316	Pn	Pn	21 32 31.4	+0.4
MERS	Mersin	2.01	15	Pn	Pn	21 32 33.5	0.0
HNTI	Hanita	2.12	150	P	Pn	21 32 35.3	+0.3
HNTI	Hanita	2.12	150	S	Sn	21 33 00.1	-0.4
GEM	Giv'at Ha'Em	2.25	139	P	Pn	21 32 37.3	+0.5
GEM	Giv'at Ha'Em	2.25	139	S	Sn	21 33 03.9	+0.1
NATI	Neve Ativ	2.26	137	P	Pn	21 32 37.6	+0.8
NATI	Neve Ativ	2.26	137	S	Sn	21 33 04.1	+0.3
MMA0B	Mount Meron ar	2.28	146	P	Pn	21 32 37.8	+0.5
MMA0B	Mount Meron ar	2.28	146	S	Sn	21 33 04.1	-0.4
KRMN	Karaman	2.30	347	Pn	Pn	21 32 38.2	+0.6
OFRI	`Ofer	2.47	158	P	Pn	21 32 40.1	+0.3
OFRI	`Ofer	2.47	158	S	Sn	21 33 08.4	-0.7
MMLI	Mount Malkishu	2.79	152	P	Pn	21 32 44.7	+0.6
MMLI	Mount Malkishu	2.79	152	S	Sn	21 33 17.0	0.0
SLTI	Sal'it	2.84	160	P	Pn	21 32 45.2	+0.3
SLTI	Sal'it	2.84	160	S	Sn	21 33 17.4	-0.9
HMDT	Nahal Hemdat	2.99	152	P	Pn	21 32 47.8	+0.9
HMDT	Nahal Hemdat	2.99	152	S	Sn	21 33 21.6	-0.4
AMAZ	Amatzia	3.49	165	P	Pn	21 32 53.9	+0.1
AMAZ	Amatzia	3.49	165	S	Sn	21 33 33.3	-1.0
DSI	Dead Sea	3.57	159	P	Pn	21 32 55.3	+0.5
DSI	Dead Sea	3.57	159	S	Sn	21 33 35.1	-1.1
YTIR	Yattir	3.70	164	P	Pn	21 32 56.9	+0.2
YTIR	Yattir	3.70	164	S	Sn	21 33 38.9	-0.6
KZIT	Kziot	4.03	174	P	Pn	21 33 01.5	+0.3
KZIT	Kziot	4.03	174	S	Sn	21 33 46.2	-1.4
PRNI	Paran	4.66	168	P	Pn	21 33 10.0	+0.2
PRNI	Paran	4.66	168	S	Sn	21 34 01.8	-1.2
KRMI	Paran Flat	4.84	171	P	Pn	21 33 12.6	+0.1
KRMI	Paran Flat	4.84	171	S	Sn	21 34 07.5	-0.2
HRFI	Mount Harif	4.97	168	P	Pn	21 33 14.6	+0.4
HRFI	Mount Harif	4.97	168	S	Sn	21 34 10.0	-0.8
MBRI	Mt Berech	5.19	170	P	Pn	21 33 17.4	+0.2
MBRI	Mt Berech	5.19	170	S	Sn	21 34 15.4	-0.9

*IDC **28** 21:46:14.6±2.0, 16°.06N×93°.68W, h0km, mb3.9/8, mbtmp3.8/9, ML3.5/1, MS3.4/3, Error ellipse: s-maj=58.4km s-min=13.4km az=33.0*

*GCG **28** 21:46:15.1±2.6, 15°.35N×94°.63W, h50km±725km, MD4.2*

*MEX **28** 21:46:17.6±1.2, 15°.45N×94°.51W, h39km±48km, MD4.3*

ISC 28 21:46:09.1±1.3**, 15°.39N**±0°.04×**94°.59W**±0°.02**, h4**km±9km**, n64,** σ**2s51**/90**, mb3.9**/8**, MS3.2**/3**, 1C, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.36	77	*e*P	Pg	21 46 37.6	+2.5
PCIG				*e*S	Sb	21 46 51.9	-1.0
HUIG	Huatulco	1.51	285	*e*P	Pg	21 46 39.4	+1.3
HUIG				*e*S	Sb	21 46 56.1	-1.2
HUIG	Huatulco	1.51	285	*e*P	Pg	21 46 39.4	+1.3
HUIG				*e*S	Sb	21 46 56.3	-1.0
CMIG	Matias Romero	1.71	351	Pg	Pg	21 46 43.1	+1.1
	75nm,0.3s,baz=185,slow=13,SNR=881						
CMIG				Lg	Lg	21 47 03.1	
	737nm,0.3s,baz=171,slow=12,SNR=55						
CMIG				LR	LR	21 47 36.8	
	comp=Z,198nm,21.9s,baz=180,slow=53						
CMIG	Matias Romero	1.71	351	*e*P	Pg	21 46 42.9	+0.9
CMIG				*e*S	Sg	21 47 02.6	-1.7
TGIG		1.97	45	*e*P	Pg	21 46 47.2	+0.2
TGIG				*e*S	Sb	21 47 09.4	-1.3
TGIG		1.97	45	⇑*e*P	Pg	21 46 46.9	0.0
TGIG				*e*S	Sg	21 47 11.4	-1.1
TGBT	Tuxtla Gutierr	2.00	46	*e*P	Pb	21 46 44.8	-1.2
TGBT				*i* S	Sb	21 47 08.7	-2.5
PATR	El Naranjo	2.29	97	*e*P	Pb	21 46 50.4	-0.7
PATR				*e*S	Sn	21 47 15.8	-1.0
THIG		2.30	102	*e*P	Pb	21 46 49.7	-1.4
THIG				*e*S	Sn	21 47 15.7	-0.8
PAVE	Pavencul	2.34	94	*e*P	Pb	21 46 51.7	-0.3
PAVE				*e*S	Sn	21 47 17.8	-0.1
CCIG	Comitan	2.52	69	*e*P	Pb	21 46 53.7	-1.4

CCIG				eS	Sn	21 47 21.6	-0.8
CCIG	Comitan	2.52	69	eP	Pb	21 46 55.2	+0.1
CCIG				eS	Sg	21 47 28.4	-1.8
PEIG	Puerto Escondi	2.54	284	eP	Pb	21 46 54.2	-1.1
PEIG				eS	Sn	21 47 20.4	-2.1
MIHL	Minatitlan	2.58	1	eP	Pb	21 46 55.0	-1.0
MIHL				i S	Sb	21 47 27.6	-0.6
NEUV	Arroyo Zacate	2.58	333	eP	Pb	21 46 55.2	-0.9
NEUV				eS	Sn	21 47 23.4	-0.3
OXLC	Oaxaca	2.63	310	eS	Sb	21 47 26.7	-2.9
TUIG	Tuzandepetl	2.63	3	eP	Pb	21 46 56.6	-0.3
TUIG				eS	Sn	21 47 22.5	-2.4
OXBJ	Oaxaca	2.64	309	eS	Sb	21 47 27.1	-3.0
VHO	Vista Hermosa	2.65	309	eP	Pb	21 46 58.0	+0.6
VHO				eS	Sb	21 47 26.8	-3.6
RTAL	Retalhuleu	2.93	107	eP	Pb	21 46 59.7	-2.3
RTAL				i S	Sn	21 47 32.0	-0.2
YOIG	Yosondua	3.19	298	eP	Pb	21 47 05.5	-1.1
YOIG				eS	Sn	21 47 39.0	-0.2
STG8	El Palmar, Qui	3.27	106	eP	Pn	21 47 00.8	-0.6
STG8				eS	Sn	21 47 33.5	-7.4
STG0	El Palmar, Qui	3.28	107	eP	Pn	21 47 00.8	-0.8
STG0				eS	Sn	21 47 34.1	-7.1
PNIG	Pinotepa	3.55	287	eP	Pb	21 47 08.9	-3.5
PNIG				eS	Sn	21 47 44.4	-3.1
TXIG	Tlaxiaco	3.57	302	eP	Pb	21 47 11.5	-1.6
TXIG				eS	Sn	21 47 44.8	-3.6
TOIG	Toxpalan	3.59	319	eP	Pb	21 47 12.0	-1.2
TOIG				eS	Sn	21 47 46.8	-1.8
HLIG	Huajuapan de L	3.92	309	eP	Pb	21 47 16.4	-2.6
HLIG				eS	Sn	21 47 58.1	+1.1
TPIG	Tehuac#an	4.01	319	eP	Pb	21 47 20.4	-0.2
TPIG				eS	Sb	21 48 05.5	-4.1
FTIG	Fresnillo de T	4.22	307	eP	Pb	21 47 21.2	-2.8
FTIG				eS	Sn	21 48 04.1	-0.2
MGIG	Malinaltepec	4.29	296	eP	Pb	21 47 20.2	-5.1
MGIG				eS	Sn	21 48 05.3	-0.8
TLIG	Tlapa	4.38	300	eP	Pb	21 47 21.4	-5.5
TLIG				eS	Sn	21 48 07.0	-1.3
JAUV	Jalcomulco	4.48	332	eP	Pn	21 47 20.3	+2.3
JAUV				eS	Sn	21 48 08.9	-1.8
CRIG	Cruz Grande	4.57	288	eP	Pn	21 47 23.2	+4.1
CRIG				eS	Sn	21 48 07.3	-5.3
LVIG	Laguna Verde	4.65	338	eP	Pn	21 47 19.1	-1.1
LVIG				eS	Sn	21 48 13.7	-0.9
PETF	Flores	4.79	71	eP	Pn	21 47 25.0	+2.9
PETF				eS	Sn	21 48 14.5	-3.6
PETF	Flores	4.79	71	eP	Pn	21 47 25.9	+3.8
PETF				eS	Sn	21 48 15.2	-2.8
NUBE	Las Nubes	4.88	107	eP	Pn	21 47 26.8	+3.2
DAIG	Los Arroyos	5.12	289	eP	Pn	21 47 29.0	+2.2
DAIG				eS	Sn	21 48 22.1	-4.3
PPM	Popocatepetl	5.32	314	eS	Sn	21 48 36.0	+4.2
MEIG	Mezcala	5.44	298	eP	Pn	21 47 37.0	+5.8
MEIG				eS	Sn	21 48 33.0	-1.3
YAIG	Yautepec	5.50	310	eP	Pb	21 47 39.1	-6.8
YAIG				eS	Sn	21 48 34.5	-1.4
CXUV	Coxquihui	5.55	329	eP	Pn	21 47 34.9	+2.3
CXUV				eS	Sn	21 48 36.0	-0.9
PLIG	Platanillo	5.57	303	eP	Pn	21 47 38.6	+5.6
PLIG				eS	Sn	21 48 36.8	-0.8
CAIG	El Cayaco	5.70	288	eP	Pn	21 47 39.2	+4.6
CAIG				eS	Sn	21 48 34.6	-5.9
AOVM	Tlapan	5.94	311	eS	Sn	21 48 45.1	-2.1
ARIG	Puente Sto Nin	6.22	298	eP	Pn	21 47 48.5	+6.8
ARIG				eS	Sn	21 48 50.9	-2.5
ZIIG	Zihuatanejo	6.95	289	eP	Pn	21 47 57.6	+5.7
ZIIG				eS	Sn	21 49 13.4	+1.9
MYIG	Merida	7.21	39	eP	Pn	21 48 00.3	+5.0
MYIG				eS	Sn	21 49 11.3	-6.4
INCO	Volcan de Coli	9.53	297	eP	Pn	21 48 36.7	+9.0
SOMAC	Volcano de Col	9.55	297	eP	Pn	21 48 36.9	+8.9
CEGR	Campo Tres	9.70	296	eP	Pn	21 48 37.1	+7.4
TXAR	Lajitas Array	16.21	330	Pn	P	21 50 03.0	+1.9
	baz=155,slow=15,SNR=4.7						
	0.3nm,0.6s						
TKL	Tuckaleechee C	22.39	24	LR	LR	21 59 20.6	
	comp=Z,51nm,20.5s,baz=168,slow=37						
NVAR	Mina Array Bea	31.03	322	P	P	21 52 35.3	+7.0
	0.1nm,0.3s,baz=137,slow=9.2,SNR=4.2						
	0.1nm,0.3s						
SCHQ	Schefferville	44.85	22	P	P	21 54 23.4	-1.0
	2.5nm,0.7s,baz=256,slow=12,SNR=4.1						
	2.5nm,0.7s						
BDFB	Brasilia	55.38	122	P	P	21 55 48.1	+3.1
	2.9nm,0.7s,baz=264,slow=9.2,SNR=3.8						
	2.9nm,0.7s						
ILAR	Eielson Array	60.59	337	P	P	21 56 24.5	+3.8
	0.2nm,0.6s,baz=132,slow=3.8,SNR=2.4						
	0.2nm,0.6s						
EKA	Eskdalemuir Ar	78.31	36	P	P	21 58 10.0	-0.4
	4.1nm,0.9s,baz=289,slow=5.2,SNR=8.2						
	4.1nm,0.9s						
ESDC	Sonseca Array	80.82	51	P	P	21 58 24.7	+0.1
	0.8nm,0.9s,baz=316,slow=5.7,SNR=5.3						
	0.8nm,0.9s						
NOA	NORSAR Array B	84.11	28	P	P	21 58 42.6	+1.4
	0.9nm,0.8s,baz=290,slow=5.1,SNR=3.3						
	0.9nm,0.8s						
GERES	GERESS Array B	90.11	39	P	P	21 59 11.9	+1.2
	0.5nm,0.7s,baz=258,slow=6.7,SNR=4.4						
	0.5nm,0.7s						
VRAC	Vranov	91.65	38	LR	LR	22 43 43.3	
	comp=Z,7.5nm,18.1s,baz=11,slow=38						
URZ	Urewera	98.05	233	LR	LR	22 37 41.7	
	comp=Z,64nm,18.0s,baz=316,slow=31						

*CATAC **28** 21:50:12.7±0.9, 8°N±5°×8°3W±°, h18^{km}±2^{km}, M3.7/7, MLv3.7/7, Error ellipse: s-maj=12.0km s-min=7.3km az=156.4, confirmed*

*UCR **28** 21:50:13.5±1.2, 8°.37N×82°.85W, h27^{km}±3^{km}, MW3.7*

*UPA **28** 21:50:13.4±0.9, 8°.39N×82°.85W, h35^{km}±4^{km}, MW3.8*

ISC 28 21:50:13.9±0.9**, 8°.40N**±0°.03×**82°.85W**±0°.02**, h31**^{km}±6^{km}**, n67,** σ**1^{s}.04**/85**, 3C-4D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LESP3	La Esperanza,	0.06	85	⇑eP	Pb	21 50 18.9	-0.3
LESP3				eS	Sb	21 50 23.4	+0.7
CDITO	Canoas	0.17	351	P	Pb	21 50 19.5	-0.4
CDITO	Canoas	0.17	351	S	Sb	21 50 23.5	-0.7
NELY	Ciudad Neily	0.27	338	eP	Pb	21 50 20.5	-0.5
NELY				eS	Sn	21 50 26.6	-0.1
LIMO3	Limones	0.30	183	⇓iP	Pb	21 50 21.2	-0.3
LIMO3				eS	Sn	21 50 26.6	-0.9
LMNES	Limones	0.30	183	eP	Pb	21 50 21.1	-0.3
FITO	Golfito	0.38	306	eP	Pb	21 50 21.0	-1.5
FITO				eS	Sb	21 50 27.4	-1.0
MLIR3	Monte Lirio, C	0.39	3	eP	Pb	21 50 23.0	+0.2
MLIR3				eS	Sn	21 50 33.1	+3.1
DVD	David	0.39	85	⇓eP	Pb	21 50 22.3	-0.4
DVD				eS	Sb	21 50 29.1	+0.3
CSTBL	De las Acacias	0.40	89	eP	Pb	21 50 22.4	-0.4
EDAD	Golfito	0.40	308	eP	Pb	21 50 21.4	-1.5
CLLRA	Cordillera,	0.41	34	eP	Pb	21 50 22.8	-0.3
RSRNO	Rio Sereno	0.41	358	eP	Pb	21 50 23.3	+0.2
BRU2	Volcan	0.42	21	eP	Pb	21 50 23.0	-0.2
BRU2	Volcan	0.42	21	S	Sn	21 50 31.0	+0.2
BRU2	Volcan	0.42	21	P	Pb	21 50 23.1	-0.2
BRU2	Volcan	0.42	21	⇑iP	Pb	21 50 23.0	-0.2
BRU2				i S	Sn	21 50 31.3	+0.6
PEDE3	Pedregal, Chir	0.42	92	eP	Pb	21 50 22.5	-0.7
PEDE3				eS	Sb	21 50 28.4	-1.1
TBS2		0.43	26	eP	Pn	21 50 23.9	-0.3
VITO	San Vito	0.43	344	eP	Pb	21 50 23.4	-0.1
LOMA3	Las Lomas, Chi	0.45	86	eP	Pb	21 50 23.1	-0.5
LOMA3				eS	Sb	21 50 30.5	+0.2
PTAR3	Potrerillos Ar	0.45	50	eP	Pb	21 50 23.4	-0.3
PTAR3				eS	Sn	21 50 31.8	+0.4
PTJ1	Puerto Jimnez	0.47	287	eP	Pb	21 50 22.9	-1.0
PTJ1	Puerto Jimnez	0.47	287	P	Pb	21 50 23.2	-0.7
PTJ1	Puerto Jimnez	0.47	287	eP	Pb	21 50 22.9	-1.0
PTJ1				eS	Sn	21 50 31.2	-0.5
BC3P	Paso Ancho	0.47	30	⇑iP	Pb	21 50 23.6	-0.5
BC3P				i S	Sn	21 50 32.0	-0.2
CHIR3	Chiriqui UPA,	0.51	91	⇓iP	Pb	21 50 23.9	-0.7
CHIR3				eS	Sn	21 50 34.1	+1.3
BQSF3	Alto Boquete,	0.53	50	i P	Pb	21 50 24.3	-0.6
BQSF3				eS	Sn	21 50 33.2	-0.2
ALCO	Alturas Coton,	0.55	1	eP	Pb	21 50 24.5	-0.8
GUAL3	Gualaca, Chiri	0.56	76	eP	Pb	21 50 22.8	-2.5
GUAL3				eS	Sb	21 50 32.2	-0.9
PSOM3	Paja de Sombre	0.59	61	eP	Pb	21 50 25.0	-0.9
PSOM3				eS	Sn	21 50 34.6	-0.2
EDP2	Potrero Grande	0.69	332	eP	Pn	21 50 26.8	-0.8
PBNVO	Pueblo Nuevo,	0.81	53	eP	Pn	21 50 28.1	-1.0
PANP	Palmar Norte	0.82	313	eP	Pn	21 50 28.4	-1.0
RBALA	Bur	0.83	55	eP	Pn	21 50 28.8	-0.7
BURE	Buenos Aires	0.91	328	eP	Pn	21 50 29.7	-0.9
DRK0	Durika	0.94	335	eP	Pn	21 50 30.2	-1.0
DRK0	Durika	0.94	335	P	Pn	21 50 30.2	-1.0
DRK0	Durika	0.94	335	eP	Pn	21 50 30.2	-1.0
DRK0				eS	Sn	21 50 43.2	-0.5
EDPE	Pejibaye, P	1.04	316	eP	Pn	21 50 31.7	-0.6
OCHAL	Ojochal	1.05	311	P	Pn	21 50 31.7	-0.8
OCHAL	Ojochal	1.05	311	S	Sn	21 50 46.3	+0.2
KKNTU	Kakintº	1.12	67	eP	Pn	21 50 32.6	-0.8
PDCAN	Manzana , Fuen	1.14	95	eP	Pn	21 50 33.1	-0.7
SAJE	San Jernim	1.14	325	eP	Pn	21 50 32.8	-1.1
PIEC	Cerro El Cedra	1.64	318	eP	Pn	21 50 40.5	-0.3
GMAL	Guarumal, Vera	1.72	112	eP	Pn	21 50 41.2	-0.5
LCR2	La Lucha 2	1.76	319	eP	Pn	21 50 42.0	-0.4
LCR2	La Lucha 2	1.76	319	P	Pn	21 50 42.2	-0.2
PISJ	San Jernim	1.76	314	eP	Pn	21 50 43.4	+1.0
ABE2	San Pablo	1.76	317	eP	Pn	21 50 43.9	+1.4
VTCV	VTCV, Calle Va	1.80	331	eP	Pn	21 50 43.4	+0.5
ABRB	Las Abras (San	1.81	332	eP	Pn	21 50 44.0	+0.8
CVTV	Tajo	1.82	331	eP	Pn	21 50 44.2	+0.7
PAR1A	Puntarenas Pro	1.83	311	eP	Pn	21 50 43.9	+0.7
CVTQ	Turrialba Volc	1.83	330	eP	Pn	21 50 44.3	+0.7
VTLA	Turrialba Volc	1.84	330	eP	Pn	21 50 44.3	+0.6
VTR0	Volcan Turrial	1.84	331	eP	Pn	21 50 44.4	+0.6
ACOS	Acosta	1.90	317	eP	Pn	21 50 45.3	+1.0
HDC	Heredia	2.02	322	P	Pn	21 50 47.6	+1.6
HDC				S	Sn	21 51 12.4	+2.1
TCS1	Tacares	2.17	319	P	Pn	21 50 48.1	+0.1
CACAO	El Cacao, Vera	2.23	118	eP	Pn	21 50 50.1	+1.4
AZU	Azuero	2.62	103	eP	Pn	21 50 56.5	+2.5
SOCE	Pocosol	2.63	319	eP	Pn	21 50 55.9	+1.6
ARE1	Arenal 1	2.76	318	eP	Pn	21 50 58.4	+2.4
VARE2	V. Arenal	2.76	318	eP	Pn	21 50 58.4	+2.3
JTS	Las Juntas de	2.80	312	⇓eP	Pn	21 50 59.1	+2.5

*KRSC **28** 21:52:41.8±1.8, 56°.01N×163°.86E, h8^{km}±30^{km}, Mc4.5, Ml4.5, Felt [III-IV] at HMS cape Afrika.*

*IDC **28** 21:52:43.0±0.8, 56°.04N×163°.48E, h0^{km}, mb3.9/19, mbtmp3.9/21, ML3.4/2, MS3.3/10, Error ellipse: s-maj=21.8km s-min=16.3km az=132.0*

*MOS **28** 21:52:42.4±0.9, 56°.06N×163°.79E, h7^{km}, mb4.2/6, Error ellipse: s-maj=7.1km s-min=5.3km az=57.5*

ISC 28 21:52:43.0±1.3**, 56°.07N**±0°.04×**163°.80E**±0°.03**, h1**^{km}±8^{km}**, n112,** σ**1^{s}.13**/125**, mb4.0**/21**, MS3.4**/8**, 4C, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.56	285	PN	Pg	21 52 53.6	-0.1
KBTR	Krutoberegovo	0.56	285	eP	Pg	21 52 53.7	-0.1
KBG	Krutoberegovo	0.64	287	PN	Pg	21 52 55.0	-0.2
KBG				S	Sg	21 53 03.1	-0.3
KBG	Krutoberegovo	0.64	287	eP	Pg	21 52 55.0	-0.2
KBG				eS	Sg	21 53 03.2	-0.3
SMKR	Semkarok	1.40	293	PN	Pn	21 53 08.3	-1.3
SMKR				S	Sn	21 53 28.0	-0.7
SMKR	Semkarok	1.40	293	eP	Pn	21 53 08.4	-1.3
SMKR				eS	Sn	21 53 28.0	-0.7
BKI	Bering	1.51	124	PN	Pg	21 53 11.2	-0.6
BKI				S	Sg	21 53 32.2	+0.9
BKI	Bering	1.51	124	eP	Pg	21 53 11.2	-0.6
BKI				eS	Sg	21 53 32.2	+0.9
SRKR	Sorokina	1.58	293	eS	Sn	21 53 33.4	+0.3
ZLN	Zelenaya	1.68	269	PN	Pn	21 53 13.8	+0.3
ZLN				S	Sn	21 53 36.6	+0.9
ZLN	Zelenaya	1.68	269	eP	Pn	21 53 13.8	+0.3
ZLN				eS	Sn	21 53 36.6	+0.9
CIRR	Tsirk	1.71	273	PN	Pn	21 53 13.9	0.0
CIRR	Tsirk	1.71	273	eP	Pn	21 53 14.0	0.0
LGNR	Loginova	1.74	272	PN	Pn	21 53 14.5	0.0
LGNR	Loginova	1.74	272	eP	Pn	21 53 14.6	0.0
BZGR	Bezymyannyi-Gr	1.75	267	PN	Pn	21 53 14.4	0.0
BZGR				S	Sn	21 53 37.1	-0.2
BZGR	Bezymyannyi-Gr	1.75	267	eP	Pn	21 53 14.4	0.0
BZGR				eS	Sn	21 53 37.1	-0.2
KLY	Klyuchi	1.77	279	PN	Pn	21 53 12.7	-2.0
KLY				S	Sn	21 53 34.6	-3.3
KLY	Klyuchi	1.77	279	eP	Pn	21 53 12.8	-2.0
KLY				eS	Sn	21 53 34.6	-3.3
KRSR	Krestovskiy	1.81	276	PN	Pn	21 53 14.8	-0.6
KRSR	Krestovskiy	1.81	276	eP	Pn	21 53 14.9	-0.6
BZWR	Bezymyannyi-We	1.86	268	PN	Pn	21 53 16.1	+0.1
BZWR				S	Sn	21 53 41.4	+1.3
BZWR	Bezymyannyi-We	1.86	268	eP	Pn	21 53 16.1	+0.1
BZWR				eS	Sn	21 53 41.5	+1.3
BZMR	Bezymyannaya	1.86	267	PN	Pn	21 53 16.1	0.0
BZMR	Bezymyannaya	1.86	267	eP	Pn	21 53 16.1	0.0
MKZ	Mys Kozlova	1.92	219	PN	Pn	21 53 15.0	-1.7
MKZ	Mys Kozlova	1.92	219	eP	Pn	21 53 15.1	-1.7
KIRR	Kirishev	1.94	268	PN	Pn	21 53 17.3	+0.1
KIRR				S	Sn	21 53 43.0	+0.8
KIRR	Kirishev	1.94	268	eP	Pn	21 53 17.4	+0.1
KIRR				eS	Sn	21 53 43.1	+0.8
KPT	Kopyto	2.01	269	PN	Pn	21 53 18.5	+0.5
KPT	Kopyto	2.01	269	eP	Pn	21 53 18.5	+0.5
KMNR	Kamenistaya	2.03	263	PN	Pn	21 53 18.6	+0.3
KMNR	Kamenistaya	2.03	263	eP	Pn	21 53 18.7	+0.3
TUMD	Tumrok D	2.11	247	PN	Pn	21 53 19.2	-0.2
TUMD	Tumrok D	2.11	247	eP	Pn	21 53 19.2	-0.2
KOZ	Kozyrevsk	2.20	271	PN	Pn	21 53 21.4	+0.8
KOZ				S	Sn	21 53 50.2	+1.8
KOZ	Kozyrevsk	2.20	271	eP	Pn	21 53 21.5	+0.8
KOZ				eS	Sn	21 53 50.3	+1.8
SRDR	Sredinnyy	2.29	278	PN	Pn	21 53 22.7	+0.8
SRDR				S	Sn	21 53 52.4	+1.6
SRDR	Sredinnyy	2.29	278	eP	Pn	21 53 22.8	+0.8
SRDR				eS	Sn	21 53 52.5	+1.6
ESO	Esso	2.87	269	PN	Pn	21 53 30.5	+0.8
ESO				S	Sb	21 54 11.1	+0.7
ESO	Esso	2.87	269	eP	Pn	21 53 30.6	+0.8
ESO				eS	Sb	21 54 11.1	+0.7
OSSR	Ossora	3.21	353	PN	Pn	21 53 35.2	+0.7
OSSR	Ossora	3.21	353	eP	Pn	21 53 35.2	+0.7
OSSR				eS	Sn	21 54 11.7	-1.6
KII	Karymskiy	3.23	233	PN	Pn	21 53 34.8	+0.1
KII	Karymskiy	3.23	233	eP	Pn	21 53 34.8	+0.1
SPN	Mys Shipunski	3.70	218	PN	Pn	21 53 39.5	-1.6
SPN	Mys Shipunski	3.70	218	eP	Pn	21 53 39.6	-1.6
SDLR	Sedlovina	3.99	228	PN	Pn	21 53 45.4	+0.1
SDLR	Sedlovina	3.99	228	eP	Pn	21 53 45.4	+0.1
SMAR	Somma	4.04	228	PN	Pn	21 53 46.4	+0.4
SMAR	Somma	4.04	228	eP	Pn	21 53 46.5	+0.4
AVH	Avacha	4.06	228	PN	Pn	21 53 48.0	+1.8
AVH	Avacha	4.06	228	eP	Pn	21 53 48.0	+1.8
UGLR	Uglovaya	4.07	227	PN	Pn	21 53 46.6	+0.3
UGLR	Uglovaya	4.07	227	eP	Pn	21 53 46.6	+0.3
KOK	Koryaka	4.09	229	PN	Pn	21 53 48.6	+2.0
KOK	Koryaka	4.09	229	eP	Pn	21 53 48.6	+2.0
GNL	Ganaly	4.13	237	PN	Pn	21 53 48.3	+1.1
GNL	Ganaly	4.13	237	eP	Pn	21 53 48.4	+1.1
PET	Petropavlovsk	4.28	227	ePN	Pn	21 53 50.0	+0.9
PET				MLR	MLR		
	comp=Z,100nm,11.0s						
PEA0B	Petropavlovsk-	4.62	233	PN	Pn	21 53 55.1	+1.2
PETK	Petropavlovsk-	4.62	233	Pn	Pn	21 53 53.7	-0.2
	comp=Z,1.1nm,0.3s,baz=58,slow=17,SNR=7.7						
	comp=Z,2.8nm,0.5s						
RUS	Russkaya	4.78	223	PN	Pn	21 53 55.9	-0.1
RUS	Russkaya	4.78	223	eP	Pn	21 53 56.0	-0.1
GRL	Gorelyy	4.86	226	PN	Pn	21 53 58.9	+1.7
GRL	Gorelyy	4.86	226	eP	Pn	21 53 59.0	+1.7
MTVR	Mutnovka	4.87	225	PN	Pn	21 53 58.2	+0.8
MTVR	Mutnovka	4.87	225	eP	Pn	21 53 58.2	+0.8
ASAK	Asacha	5.06	226	PN	Pn	21 54 01.4	+1.5
ASAK	Asacha	5.06	226	eP	Pn	21 54 01.5	+1.5
MA2	Magadan	7.79	302	LR	LR	21 57 41.7	
	comp=Z,124nm,20.0s,baz=100,slow=39						
SEY	Seymchan	8.99	325	LR	LR	21 58 40.9	
	comp=Z,91nm,18.2s,baz=146,slow=40						
BILL	Bilibino	12.07	4	i PN	Pn	21 55 37.4	+1.6
BILL				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ASAJ	Asahikawa	18.02	237	P	Pn	21 56 53.1	-1.4
	comp=Z,0.5nm,0.3s,baz=306,slow=6.9,SNR=6.4						
	comp=Z,8.0nm,0.8s						
YAK	Yakutsk	18.37	303	i P	Pn	21 56 58.7	+0.1
YAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TIXI	Tiksi	21.41	330	P	P	21 57 31.8	0.0
	comp=Z,2.5nm,0.5s,baz=352,slow=7.9,SNR=2.3						
TIXI				LR	LR	22 05 40.6	
	comp=Z,60nm,20.7s,baz=182,slow=36						
	comp=Z,2.5nm,0.5s						
ILAR	Eielson Array	25.21	50	P	P	21 58 10.8	+1.1
	comp=Z,1.7nm,1.0s,baz=263,slow=8.3,SNR=14						
	comp=Z,1.7nm,1.0s						
MJA0	Matsu Arr-Jizo	26.07	232	eP	P	21 58 15.6	-2.2
MJA0				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MJAR	Matsushiro Arr	26.08	232	P	P	21 58 16.6	-1.3
	comp=Z,3.0nm,0.7s,baz=31,slow=8.2,SNR=12						
MJAR				LR	LR	22 10 06.0	
	comp=Z,45nm,19.1s,baz=49,slow=40						
	comp=Z,3.0nm,0.7s						
NRIK	Noril'sk	34.77	323	LR	LR	22 14 27.8	
	comp=Z,56nm,18.4s,baz=44,slow=38						
ULN	Ulaanbaatar	34.99	281	ceP	P	21 59 36.7	0.0
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	Songino Array	35.38	281	P	P	21 59 38.7	-1.2
	comp=Z,0.9nm,0.6s,baz=60,slow=8.9,SNR=5.9						
	comp=Z,0.9nm,0.6s						
H11N2	WAKE ISLAND Hy	36.36	175	T	T	22 38 31.3	
	baz=357,slow=76,SNR=8270						
H11N3	WAKE ISLAND Hy	36.37	175	T	T	22 38 34.0	
	baz=357,slow=76,SNR=3354						
H11N1	WAKE ISLAND Hy	36.37	175	T	T	22 38 34.2	
	baz=357,slow=76,SNR=4335						
ZALV	Zalesovo Beam	43.01	302	PcP	PcP	22 02 33.5	-0.1
	comp=Z,1.1nm,0.6s,baz=344,slow=4.7,SNR=4.7						
SPITS	Spitsbergen Ar	44.54	351	P	P	22 00 55.3	-0.2
	comp=Z,8.2nm,0.9s,baz=69,slow=9.1,SNR=4.2						
	comp=Z,8.2nm,0.9s						
KURK	Kurchatov	48.00	302	P	P	22 01 22.2	-0.8
KURBB	Kurchatov Arra	48.11	301	P	P	22 01 22.2	-1.6
	comp=Z,0.5nm,0.3s,baz=40,slow=14,SNR=5.6						
	comp=Z,0.5nm,0.3s						
MK31	Makanchi Array	48.81	295	ceP	P	22 01 26.9	-2.5
MKAR	Makanchi Array	48.81	295	P	P	22 01 26.9	-2.5
	comp=Z,0.7nm,0.4s,baz=53,slow=6.1,SNR=17						
	comp=Z,0.7nm,0.4s						
BVAR	Borovoye Array	50.23	308	LR	LR	22 25 23.6	
	comp=Z,32nm,20.3s,baz=108,slow=39						
ARTI	Arti	52.76	318	LR	LR	22 25 50.3	
	comp=Z,37nm,18.2s,baz=38,slow=38						
AAK	Ala-Archa	55.68	297	ceP	P	22 02 20.3	-0.3
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES	FINESS Array B	58.21	338	P	P	22 02 37.6	-0.4
	comp=Z,0.8nm,0.7s,baz=38,slow=3.4,SNR=4.7						
	comp=Z,0.8nm,0.7s						
FINES	FINESS Array B	58.21	338	eP	P	22 02 38.7	+0.6
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	NORSAR Array B	61.25	345	P	P	22 02 58.3	-0.8
	comp=Z,0.7nm,0.7s,baz=63,slow=5.1,SNR=2.0						
	comp=Z,0.7nm,0.7s						
HFS	Hagfors	61.74	344	P	P	22 03 01.5	-0.8
	comp=Z,2.4nm,1.1s,baz=8.9,slow=10,SNR=1.1						
	comp=Z,2.4nm,1.1s						
AKASG	Malin Array Be	67.12	331	P	P	22 03 36.6	-1.1
	comp=Z,1.0nm,0.5s,baz=29,slow=6.5,SNR=3.4						
AKASG				LR	LR	22 34 21.2	
	comp=Z,33nm,20.9s,baz=34,slow=37						
	comp=Z,1.0nm,0.5s						
AKBB	Malin Array Si	67.12	331	ceP	P	22 03 39.3	+1.6
TXAR	Lajitas Array	67.55	71	P	P	22 03 42.5	+1.6
	comp=Z,0.9nm,0.9s,baz=303,slow=5.2,SNR=6.4						
	comp=Z,0.9nm,0.9s						
EKA	Eskdalemuir Ar	68.45	352	P	P	22 03 46.9	+0.9
	comp=Z,0.6nm,0.5s,baz=2.5,slow=4.7,SNR=4.8						
	comp=Z,0.6nm,0.5s						
KBZ	Khabaz	68.81	318	P	P	22 03 48.0	-0.4
	comp=Z,3.7nm,0.9s,baz=259,slow=2.2,SNR=4.4						
	comp=Z,3.7nm,0.9s						
KBZ	Khabaz	68.81	318	eP	P	22 03 50.0	+1.6
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GNI	Garni	71.16	315	LR	LR	22 39 40.6	
	comp=Z,39nm,18.1s,baz=38,slow=40						
GERES	GERESS Array B	72.52	340	P	P	22 04 12.1	+1.1
	comp=Z,0.2nm,0.4s,baz=25,slow=6.1,SNR=3.6						
	comp=Z,0.2nm,0.4s						
MLR	Muntele Rosu	72.78	330	P	P	22 04 14.5	+1.8
	comp=Z,2.2nm,0.6s,baz=351,slow=3.8,SNR=4.5						
	comp=Z,2.2nm,0.6s						
BRTR	Keskin Array B	75.63	323	P	P	22 04 29.6	+0.2
	comp=Z,1.1nm,0.7s,baz=43,slow=4.1,SNR=4.7						
	comp=Z,1.1nm,0.7s						
WRA	Warramunga Arr	79.71	208	P	P	22 04 51.1	-1.0
	comp=Z,0.3nm,0.8s,baz=18,slow=5.3,SNR=1.6						
	comp=Z,0.3nm,0.8s						
ESDC	Sonseca Array	84.06	351	P	P	22 05 15.4	+0.4
	comp=Z,0.5nm,0.8s,baz=2.0,slow=5.6,SNR=5.3						
	comp=Z,0.5nm,0.8s						
NWAO	Narrogin (SRO)	97.10	218	LR	LR	22 53 42.5	
	comp=Z,40nm,18.4s,baz=324,slow=38						
QSPA	South Pole Qui	145.82	180	PKPbc	PKPbc	22 12 21.4	-1.0
	comp=Z,3.7nm,0.9s,baz=275,slow=0.9,SNR=16						

HEL 28 22:05:22.2±0.2**, 67°.66N×34°.16E, h0**^{km}**, ML1.2, Explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVZ	Lovozero	0.30	38	PG	Pg	22 05 27.8	-0.2
LVZ				SG	Sg	22 05 31.8	-0.2
VRF	Varrio	1.74	275	PG	Pn	22 05 53.5	-0.1
VRF				MSG		22 06 14.0	
	comp=Z,1.3nm,0.2s						
VRF				SN	Sn	22 06 15.9	-0.5
OLKF	Oulanka, Finla	2.30	237	MSG		22 06 30.4	
	comp=Z,1.0nm,0.2s						
OLKF				SG	Sb	22 06 32.7	-0.8
RAJF	Raja-Jooseppi	2.34	293	PG	Pb	22 06 03.9	-1.4
RAJF				SB	Sn	22 06 32.8	+1.4
KU6	Riekki	2.35	228	MSG		22 06 31.9	
	comp=Z,0.5nm,0.2s						
KU6				SG	Sb	22 06 34.7	-0.3
MSF	Maaselka	2.68	232	SG	Sb	22 06 44.6	+0.2
KU2	Taivalkoski	3.06	233	SN	Sn	22 06 48.9	-0.2
RNF	Rovaniemi	3.35	255	SN	Sn	22 06 57.4	+1.2
KEV	Kevo	3.35	312	SG	Sb	22 07 04.2	+0.5
ARA0	ARCESS Array S	3.69	305	SG	Sb	22 07 16.8	+3.5
HEF	Hetta	4.02	286	SG	Sb	22 07 25.6	+2.8

IDC 28 22:09:46.0±6.6**, 19°.35S×175°.46W, h0**^{km}**, mb3.9**/2**, mbtmp3.9**/2**, Error ellipse: s-maj=313.9km s-min=102.2km az=153.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	47.12	255	P	P	22 18 19.5	-0.8
	1.7nm,0.8s,baz=93,slow=8.1,SNR=12						
	1.7nm,0.8s						
WRA	Warramunga Arr	47.14	260	P	P	22 18 21.0	+0.5
	1.4nm,1.1s,baz=97,slow=7.9,SNR=24						
	1.4nm,1.1s						
AKASG	Malin Array Be	143.10	334	PKP	PKPdf	22 29 20.8	-1.0
	0.5nm,0.4s,baz=38,slow=3.9,SNR=4.1						

*DJA **28** 22:17:32.4±0.5, 11°S±6°×11°8E±°, h10^{km}, M4.7/18, mB5.2/1, mb4.8/16, MLv4.7/18, Mw(mB)4.6/1*

*IDC **28** 22:17:33.4±3.1, 10°.36S×119°.05E, h0^{km}, mb4.0/3, mbtmp3.7/5, ML3.6/2, Error ellipse: s-maj=244.3km s-min=25.0km az=49.0*

ISC 28 22:17:34.2±0.9**, 11°.52S**±0°.08×**118°.18E**±0°.07**, h35**^{km}**, n25,** σ**2^{s}.24**/30**, mb4.1**/4**, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WBSI	Waikabubak, Su	2.21	33	P	Pn	22 18 09.5	+1.0
WBSI				S	Sn	22 18 32.9	-1.8
BASI	Baing, Sumba	2.69	62	P	Pn	22 18 14.3	-0.7
PLAI	Plampang	2.70	352	P	Pn	22 18 14.8	-0.4

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PLAI                                 S     Sn     22 18 41.3 -5.4
WSI    Waingapu           2.78  49   P     Pn     22 18 17.4 +1.2
WSI                                  S     Sn     22 18 48.2 -0.4
EDFI   Ende, Flores       4.42  52   P     Pn     22 18 38.8 -0.1
SRBI   Singaraja          4.49 319   P     Pn     22 18 40.7 +0.9
MMRI   Maumere            4.92  55   P     Pn     22 18 44.2 -1.5
JAGI   Jajag, Banyuwa     4.99 307   P     Pn     22 18 44.7 -2.0
GMJI   Gumukmas           5.67 304   P     Pn     22 18 55.0 -1.0
       0.4nm81nm,0.7s
BSSI   Bau Bau, Buton     5.81  23   P     Pn     22 18 59.5 +1.6
       0.7nm2µm150nm,0.6s
KMMI   Kalianget          6.08 317   P     Pn     22 19 02.4 +0.7
       0.7nm93nm,1.6s
SOEI   Soe                6.24  74   P     Pn     22 19 06.1 +2.2
       0.2nm32nm,1.5s
BNSI   Bone               7.32  15   P     Pn     22 19 19.9 +1.1
       0.1nm35nm,0.7s
PCJI   Pacitan            7.65 295   P     Pn     22 19 23.7 +0.5
SPSI   Sidrap Palu        7.67  12   P     Pn     22 19 25.5 +2.0
       0.1nm20nm,0.6s
WOJI   Wonogiri, Jawa     8.03 296   P     Pn     22 19 28.9 +0.4
       49nm,1.6s
UGM    Wanagama           8.35 295   P     Pn     22 19 32.5 -0.4
       168nm,1.9s
TTSI   Tana Toraja        8.57  11   P     Pn     22 19 37.0 +1.1
       20nm,0.5s
FITZ   Fitzroy Crossi     9.74 133   Sn    Sn     22 21 38.0 -2.1
       1.7nm,0.3s,baz=179,slow=22,SNR=3.3
WRA    Warramunga Arr    17.66 120   P     P      22 21 39.2 +1.0
       0.2nm,0.3s,baz=295,slow=13,SNR=9.7
WRA                                  S     Sn     22 24 46.7 -6.7
       1.0nm,0.9s,baz=293,slow=24,SNR=4.9
       0.5nm,0.7s
ASAR   Alice Springs     19.23 131   P     Pn     22 22 01.5 +4.7
       0.3nm,0.3s,baz=315,slow=13,SNR=12
ASAR                                 S     Sn     22 25 29.7 -1.8
       1.3nm,0.8s,baz=308,slow=22,SNR=5.5
       1.1nm,0.6s
KSH    Kashi             64.16 325   P     P      22 28 06.3 +0.8
KSH                                  pmax  pmax
       comp=Z,4.0nm,0.6s
MKAR   Makanchi Array    66.33 334   P     P      22 28 19.9 +0.6
       comp=Z,0.9nm,0.3s,baz=146,slow=6.8,SNR=22
       comp=Z,0.9nm,0.3s
KURBB  Kurchatov Arra    70.86 335   P     P      22 28 47.9 +0.5
       comp=Z,0.7nm,0.9s,baz=145,slow=5.4,SNR=5.7
       comp=Z,0.7nm,0.9s
ZALV   Zalesovo Beam     71.10 340   P     P      22 28 48.3 -0.5
       comp=Z,0.7nm,0.5s,baz=145,slow=5.3,SNR=2.9
       comp=Z,0.7nm,0.5s
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*IDC **28** 22:21:30.9±0.7, 2°.57S×138°.51E, h0km, mb4.0/9, mbtmp4.1/12, ML3.9/3, MS3.8/3, Error ellipse: s-maj=17.7km s-min=15.9km az=19.0*

*NEIC **28** 22:21:33.5±1.4, 2°.6S±0°.1×138°.57E±0°.06, h10km±1km, mb4.4/60, Error ellipse: s-maj=17.5km s-min=9.0km az=163.0*

*DJA **28** 22:21:33.6±0.4, 3°S±4°×13°9E±°, h10km, M4.4/7, mb4.4/2, MLv4.4/7*

ISC 28 22:21:32.7±0.5**, 2°.70S**±0°.05×**138°.50E**±0°.06**, h10km, n90,** σ1§**30**/93**, mb4.4**/38**, Irian Jaya**

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Code   Station Name         Δ°   AZ°   Phase ID          Time     Res
                                     Op    ISC        h  m  s    ISC
SMPI   Sarmi              0.73  16   P     Pg     22 21 44.5 -2.5
GENI   Genyem             1.67  86   P     Pn     22 22 02.1 +0.1
JAY    Jayapura           2.21  85   Pn    Pn     22 22 09.3 -0.2
       12nm,0.3s,baz=244,slow=7.7,SNR=28
JAY                                  Lg    Lg     22 22 40.8
       14nm,0.3s,baz=110,slow=16,SNR=2.7
       131nm,0.6s
SRPI   Serui, Papua       2.41 290   P     Pn     22 22 13.3 +1.1
SRPI                                 S     Sn     22 22 44.3 +2.5
BAKI   Biak               2.83 302   P     Pn     22 22 20.4 +2.4
RKPI   Ransiki, Papua     4.48 285   P     Pn     22 22 41.2 +0.4
FAKI   Fak Fak            6.25 268   Pn    Pn     22 23 07.0 +1.9
FAKI   Fak Fak            6.25 268   P     Pn     22 23 06.6 +1.5
SWI    Sorong             7.47 284   P     Pn     22 23 19.9 -1.9
COEN   Coen              12.10 158   Pn    Pn     22 24 26.2 +0.8
MTN    Manton Dam        12.44 216   Pn    Pn     22 24 32.0 +2.0
KNRA   Kununurra         16.07 216   Pn    Pn     22 25 20.7 +1.7
WB0    Warramunga Arr    17.43 193   P     Pn     22 25 37.6 +1.4
WR0    Warramunga Arr    17.59 192   Pn    Pn     22 25 38.8 +0.7
WR0                                  IAmb  IAmb   22 26 01.8
       comp=Z,29nm,1.4s
WR8    Warramunga Arr    17.59 193   P     Pn     22 25 39.9 +1.7
WRAB   Tennant Creek     17.60 193   P     Pn     22 25 40.4 +2.0
WB2    Warramunga Arr    17.61 193         Pn     22 25 40.5 +2.0
WRA    Warramunga Arr    17.61 193         Pn     22 25 37.9 -0.6
WRA    Warramunga Arr    17.61 193   P     P      22 25 41.2 +1.8
       comp=Z,0.7nm,0.3s,baz=14,slow=13,SNR=13
WRA                                  S     Sn     22 28 50.0 -4.9
       comp=Z,3.0nm,1.0s,baz=6.6,slow=21,SNR=5.7
WRA                                  LR    LR     22 32 49.7
       comp=Z,144nm,20.6s,baz=291,slow=38
       comp=Z,4.3nm,0.8s
FITZ   Fitzroy Crossi    19.83 219   P     P      22 26 04.8 +1.0
FITZ   Fitzroy Crossi    19.83 219   P     P      22 26 04.2 +0.3
       comp=Z,0.2nm,0.3s,baz=54,slow=16,SNR=3.4
FITZ                                 S     S      22 29 42.7 -4.6
       comp=Z,2.3nm,0.7s,baz=126,slow=15,SNR=2.2
FITZ                                 LR    LR     22 34 45.6
       comp=Z,291nm,18.7s,baz=5.5,slow=40
       comp=Z,3.5nm,0.8s
AS31   Alice Springs     21.31 192         P      22 26 21.1 +1.2
ASAR   Alice Springs     21.31 192         P      22 26 20.6 +0.6
ASAR   Alice Springs     21.31 192   P     P      22 26 20.1 +0.2
       comp=Z,7.0nm,0.7s,baz=23,slow=9.9,SNR=21
ASAR                                 S     S      22 30 13.2 -3.6
       comp=Z,1.6nm,0.8s,baz=14,slow=26,SNR=4.0
       comp=Z,7.0nm,0.7s
DZM    Mont Dzumac       33.27 128   P     P      22 28 11.2 +0.4
ONTNC  Ouen Toro         33.41 128   P     P      22 28 12.7 +0.9
NWAO   Narrogin (SRO)    36.08 211   LR    LR     22 44 48.7
       comp=Z,298nm,18.8s,baz=328,slow=39
SONM   Songino Array     57.62 335   P     P      22 31 22.6 -0.6
       comp=Z,0.5nm,0.5s,baz=150,slow=9.0,SNR=3.7
       comp=Z,0.5nm,0.5s
MKAR   Makanchi Array    69.66 322   P     P      22 32 42.1 -0.5
MKAR   Makanchi Array    69.66 322   P     P      22 32 42.2 -0.4
       comp=Z,1.4nm,1.0s,baz=116,slow=7.9,SNR=6.5
       comp=Z,1.4nm,1.0s
MAKZ   Makanchi          69.85 322   P     P      22 32 43.0 -0.8
KDJ    Kajisay           71.02 316   P     P      22 32 51.3 +0.1
KDJ                                  IAmb  IAmb   22 32 52.0
       comp=Z,1.7nm,0.8s
ZALV   Zalesovo Beam     71.82 330   P     P      22 32 54.5 -1.1
       comp=Z,0.5nm,0.5s,baz=79,slow=7.5,SNR=2.2
       comp=Z,0.5nm,0.5s
BOOM   Boomskoye usch    72.00 316   P     P      22 32 57.8 +0.6
BOOM                                 IAmb  IAmb   22 32 57.9
       comp=Z,2.4nm,0.7s
KURBB  Kurchatov Arra    73.60 325   P     P      22 33 05.3 -0.9
       comp=Z,0.4nm,0.6s,baz=112,slow=5.1,SNR=4.2
       comp=Z,0.4nm,0.6s
VNDA   Vanda             75.81 175   P     P      22 33 20.0 +1.4
VNDA   Vanda             75.81 175   P     P      22 33 19.1 +0.5
       comp=Z,1.4nm,0.8s,baz=314,slow=6.1,SNR=9.2
       comp=Z,1.4nm,0.8s
CNBA   Chernabura Isl    76.46  32   P     P      22 33 22.3 -0.3
L14K   Kuka Creek        77.97  25   P     P      22 33 30.9  0.0
M14K   Bethel            78.00  26   P     P      22 33 31.5 +0.4
K15K   Wolf Creek Mou    78.91  24   P     P      22 33 36.8 +0.6
K15K                                 IAmb  IAmb   22 34 17.6
       comp=Z,8.5nm,1.3s
BVAR   Borovoye Array    79.19 325   P     P      22 33 37.5 -0.3
       comp=Z,1.1nm,0.5s,baz=111,slow=8.4,SNR=7.1
       comp=Z,1.1nm,0.5s
M16K   Timber Creek      79.43  26   P     P      22 33 39.6 +0.6
H17K   Granite Mounta    80.78  22         P      22 33 47.2 +0.9
L18K   Granite Mounta    80.92  25   P     P      22 33 48.0 +1.0
L18K                                 IAmb  IAmb   22 34 00.6
       comp=Z,9.7nm,1.5s
F17K   Baldwin Pennin    81.00  21   P     P      22 33 47.4 +0.1
F17K                                 IAmb  IAmb   22 34 21.9
       comp=Z,5.6nm,1.2s
KDAK   Kodiak Island     81.20  30   P     P      22 33 48.0 -0.6
N19K   Bonanza Creek     81.35  27   P     P      22 33 48.7 -0.8
N19K                                 IAmb  IAmb   22 34 17.8
       comp=Z,4.6nm,1.2s
P19K   Oil Pt            81.52  28   P     P      22 33 49.6 -0.8
SYI    Shuyak Island     81.57  30   P     P      22 33 51.2 +0.6
G18K   Tagagawik         81.69  22   P     P      22 33 51.1  0.0
G18K                                 IAmb  IAmb   22 33 51.5
       comp=Z,5.9nm,1.5s
E18K   Tukpahlearik C    81.69  20   P     P      22 33 51.5 +0.5
E18K                                 IAmb  IAmb   22 33 54.2
       comp=Z,2.0nm,0.7s
C18K   Utukok River      82.09  19   P     P      22 33 52.9 -0.3
M20K   Styx River        82.34  26   P     P      22 33 55.4 +0.7
M20K                                 IAmb  IAmb   22 33 55.8
       comp=Z,1.5nm,0.7s
J20K   Nowinta River     82.74  24   P     P      22 33 56.4 -0.2
J20K                                 IAmb  IAmb   22 34 19.2
       comp=Z,5.7nm,1.4s
E19K   Redstone River    82.87  20   P     P      22 33 57.4 +0.2
E19K                                 IAmb  IAmb   22 34 05.0
       comp=Z,3.0nm,1.0s
D19K   Kuna River        83.02  19   P     P      22 33 58.4 +0.3
D19K                                 IAmb  IAmb   22 34 33.6
       comp=Z,6.7nm,1.4s
SLKM   Skilak Lake       83.22  28   P     P      22 33 58.1 -1.2
SLKM                                 IAmb  IAmb   22 33 58.8
       comp=Z,2.5nm,0.6s
F20K   Avaraart Lake     83.24  21   P     P      22 34 00.7 +1.5
F20K                                 IAmb  IAmb   22 34 11.6
       comp=Z,4.6nm,1.4s
D20K   Etivluk River     83.61  19   P     P      22 34 01.1  0.0
ABKAR  Akbulak array     84.58 320   P     P      22 34 05.2 -1.2
B21K   Ikpikpuk River    84.63  19   P     P      22 34 05.1 -1.1
HIN    Hinchinbrook I    84.96  29   P     P      22 34 06.4 -1.7
E22K   Anaktuvuk Pass    85.04  21   P     P      22 34 08.8 +0.5
E22K                                 IAmb  IAmb   22 34 27.7
       comp=Z,3.6nm,1.4s
G23K   Bananza Creek     85.22  22   P     P      22 34 09.9 +0.6
G23K                                 IAmb  IAmb   22 34 40.1
       comp=Z,6.2nm,1.5s
DHY    Denali Highway    85.25  26   P     P      22 34 09.8 +0.1
DHY                                  IAmb  IAmb   22 34 12.2
       comp=Z,2.0nm,0.8s
DIV    Divide            85.49  28   P     P      22 34 10.6 -0.1
CCB    Clear Creek Bu    85.50  24   P     P      22 34 10.8 +0.2
CCB                                  IAmb  IAmb   22 34 11.1
       comp=Z,1.5nm,0.6s
M24K   Tolsona, Glenn    85.54  27   PcP   PcP    22 34 13.1 -0.8
D23K   Nanushuk River    85.71  20   P     P      22 34 12.9 +1.3
D23K                                 IAmb  IAmb   22 34 22.8
       comp=Z,6.7nm,1.4s
E23K   Chandalar         85.79  21   P     P      22 34 13.1 +0.9
E23K                                 IAmb  IAmb   22 34 17.4
       comp=Z,2.2nm,0.9s
H24K   Noodor Dome       85.80  23   P     P      22 34 13.1 +0.9
ILAR   Eielson Array     85.91  24   P     P      22 34 11.4 -1.3
ILAR   Eielson Array     85.91  24   P     P      22 34 10.8 -1.9
       comp=Z,1.2nm,0.6s,baz=266,slow=4.1,SNR=14
       comp=Z,1.2nm,0.6s
C23K   Itkillik River    86.01  19   P     P      22 34 13.5 +0.4
C23K                                 IAmb  IAmb   22 34 27.6
       comp=Z,4.8nm,0.9s
HMT    Hamilton          86.03  29   P     P      22 34 13.4  0.0
G24K   Hadweenzic Riv    86.19  23   P     P      22 34 14.0 -0.1
G24K                                 IAmb  IAmb   22 34 49.6
       comp=Z,4.3nm,1.5s
F24K   Squaw Lake        86.26  22   P     P      22 34 15.4 +1.0
F24K                                 IAmb  IAmb   22 34 16.7
       comp=Z,1.9nm,0.8s
D24K   Happy Valley      86.40  20   P     P      22 34 16.4 +1.4
D24K                                 IAmb  IAmb   22 34 21.0
       comp=Z,2.9nm,0.6s
GLB    Gilahina Butte    86.48  28   P     P      22 34 16.3 +0.6
GLB                                  IAmb  IAmb   22 34 16.7
       comp=Z,2.4nm,0.8s
J25K   Salcha River,     86.50  25   P     P      22 34 15.3 -0.4
RIDG   Independent Ri    86.52  26   P     P      22 34 16.2 +0.4
RIDG                                 IAmb  IAmb   22 34 23.7
       comp=Z,2.4nm,0.9s
F25K   Christian Rive    87.11  22   P     P      22 34 19.2 +0.6
J26L   Joseph Creek      87.24  25   P     P      22 34 19.0 -0.3
J26L                                 IAmb  IAmb   22 34 51.9
       comp=Z,2.7nm,1.3s
QSPA   South Pole Qui    87.25 180   P     P      22 34 20.0 +0.6
QSPA   South Pole Qui    87.25 180   P     P      22 34 20.0 +0.6
       comp=Z,3.6nm,0.7s,baz=307,slow=1.0,SNR=26
       comp=Z,3.6nm,0.7s
D25K   Kavik River       87.29  20         P      22 34 19.6 +0.2
D25K                                 IAmb  IAmb   22 34 22.2
       comp=Z,1.8nm,1.1s
BMAR   Burnt Mountain    87.47  22   P     P      22 34 21.3 +1.0
M27K   Edge Creek, AK    87.56  27   P     P      22 34 21.5 +0.5
M27K                                 IAmb  IAmb   22 34 24.5
       comp=Z,2.5nm,1.1s
LPAZ   La Paz           147.62 127   PKPbc PKPbc  22 41 19.5 +0.2
       comp=Z,2.4nm,0.8s,baz=225,slow=1.9,SNR=3.9
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*IDC **28** 22:29:10.8±0.6, 8°.42N×126°.84E, h0km, mb4.3/19, mbtmp4.3/20, ML4.8/1, MS3.4/5, Error ellipse: s-maj=26.4km s-min=12.2km az=83.0*

*NEIC **28** 22:29:18.8±1.2, 8°.64N±0°.09×126°.7E±0°.1, h35km±2km, mb4.5/64, Error ellipse: s-maj=19.2km s-min=15.2km az=105.0*

ISC 28 22:29:17.6±0.5**, 8°.60N**±0°.06×**126°.70E**±0°.10**, h35km, n101,** σ1§**39**/98**, mb4.5**/55**, MS3.6**/3**, Mindanao**

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Code   Station Name         Δ°   AZ°   Phase ID          Time     Res
                                     Op    ISC        h  m  s    ISC
DAV    Davao City (W)     1.88 216   Pn    Pn     22 29 49.8 +2.5
DAV    Davao City (W)     1.88 216   Pn    Pn     22 29 43.0 -4.3
       63nm,0.3s,baz=52,slow=5.6,SNR=7.7
DAV                                  Sn    Sn     22 30 08.8 -1.0
       90nm,0.3s,baz=248,slow=16,SNR=7.4
TGY    Tagaytay City      7.86 315   LR    LR     22 34 37.5
       comp=Z,386nm,20.1s,baz=19,slow=40
TOLI2  Tolitoli           9.49 219   Pn    Pn     22 31 34.5 +2.6
LUWI   Luwuk             10.35 202   Pn    Pn     22 31 46.7 +3.1
FAKI   Fak Fak           12.71 154   Pn    Pn     22 32 17.4 +1.5
YULB   Yu-li             15.59 341         P      22 32 58.7  0.0
TPUB   Ta-pu             15.73 339         P      22 33 00.3 +0.1
GUMO   Guam              18.50  73   LR    LR     22 41 42.9
       comp=Z,36nm,18.7s,baz=99,slow=41
BATI   Baumata           18.93 189   P     P      22 33 32.7 -2.9
       3.1nm,0.3s,baz=299,slow=16,SNR=1.5
       19nm,0.4s
KNRA   Kununurra         24.21 175         P      22 34 30.7 -0.4
KNRA                                 IAmb  IAmb   22 34 40.9
       comp=Z,19nm,0.8s
FITZ   Fitzroy Crossi    26.55 182   P     P      22 34 50.8 -1.5
FITZ   Fitzroy Crossi    26.55 182   P     P      22 34 49.7 -2.6
       comp=Z,5.8nm,0.8s,baz=5.8,slow=9.0,SNR=9.7
       comp=Z,5.8nm,0.8s
CMAR   Chiang Mai Arr    28.67 293   P     P      22 35 12.9 +1.5
       comp=Z,0.9nm,0.6s,baz=111,slow=6.1,SNR=7.4
       comp=Z,0.9nm,0.6s
KSRS   Korea Array       28.75   2   P     P      22 35 11.7 -0.1
       comp=Z,1.0nm,0.8s,baz=196,slow=11,SNR=2.1
       comp=Z,1.0nm,0.8s
WRA    Warramunga Arr    29.34 165   P     P      22 35 13.0 -4.3
       comp=Z,0.4nm,0.6s,baz=349,slow=10,SNR=9.6
       comp=Z,0.4nm,0.6s
PZH    PanZhiHua         29.62 310   P     P      22 35 22.5 +2.6
TNCH   TengChong         31.43 305   P     P      22 35 39.0 +3.0
TNCH                                 PP    PnPn   22 36 40.8 +1.3
TNCH                                 S     S      22 40 38.3 -3.4
TNCH                                 pmax  pmax
       comp=Z,6.0nm,0.6s
TNCH                                 pmax  pmax
       comp=Z,78nm,8.4s
TNCH                                 LR    LR
       comp=N,240nm,8.3s
TNCH                                 LR    LR
       comp=E,200nm,6.3s
TNCH                                 LR    LR
       comp=Z,260nm,8.7s
ASAR   Alice Springs     32.83 168   P     P      22 35 43.8 -4.3
       comp=Z,0.5nm,0.4s,baz=350,slow=7.7,SNR=4.5
ASAR                                 LR    LR     22 49 38.8
       comp=Z,35nm,20.4s,baz=322,slow=38
       comp=Z,0.5nm,0.4s
HHC    Hu-ho-hao-te      34.82 340   eP    P      22 36 08.3 +3.0
HHC                                  pmax  pmax
       comp=Z,13nm,0.5s
HHC                                  pmax  pmax
       comp=Z,44nm,4.1s
USRK   Ussuriysk Ar.     35.76   7   P     P      22 36 13.4 +0.3
       comp=Z,3.3nm,0.7s,baz=184,slow=6.2,SNR=11
       comp=Z,3.3nm,0.7s
XLT    XiLinHaoTe        36.36 347   eP    P      22 36 19.5 +1.1
XLT                                  pmax  pmax
       comp=Z,8.0nm,1.0s
GTA    Gaotai            38.99 326   P     P      22 36 41.5 +0.7
GTA                                  pP    pP     22 36 46.5 -3.6
GTA                                  pmax  pmax
       comp=Z,8.0nm,0.7s
EVN    Everest           42.22 302         P      22 37 07.5 -0.7
EVN                                  IAmb  IAmb   22 37 09.9
       comp=Z,5.9nm,0.8s
ULN    Ulaanbaatar       42.53 340         P      22 37 10.6 +0.8
STKA   Stephens Creek    42.69 161   P     P      22 37 10.4 -0.8
STKA   Stephens Creek    42.69 161   P     P      22 37 09.0 -2.2
       comp=Z,1.3nm,0.5s,baz=340,slow=5.9,SNR=4.0
       comp=Z,1.3nm,0.5s
SONM   Songino Array     42.72 340   P     P      22 37 11.6 +0.2
       comp=Z,0.5nm,0.4s,baz=151,slow=7.5,SNR=6.0
       comp=Z,0.5nm,0.4s
YAK    Yakutsk           53.37   2   P     P      22 38 33.3  0.0
       comp=Z,6.4nm,0.4s,baz=26,slow=5.8,SNR=4.0
       comp=Z,6.4nm,0.4s
MKAR   Makanchi Array    53.61 323   P     P      22 38 35.7 +0.3
       comp=Z,1.3nm,0.4s,baz=112,slow=7.3,SNR=26
MKAR                                 PcP   PcP    22 39 39.3 -2.3
       comp=Z,1.4nm,0.8s,baz=125,slow=4.9,SNR=4.7
       comp=Z,1.3nm,0.4s
MAKZ   Makanchi          53.80 323         P      22 38 37.1 +0.3
KSH    Kashi             54.66 313   P     P      22 38 45.3 +1.9
KSH                                  pmax  pmax
       comp=Z,4.0nm,0.9s
KDJ    Kajisay           54.77 316   P     P      22 38 44.4 +0.2
KDJ                                  IAmb  IAmb   22 38 45.5
       comp=Z,2.8nm,0.7s
ZALV   Zalesovo Beam     56.29 332   P     P      22 38 54.0 -0.5
       comp=Z,1.5nm,0.5s,baz=114,slow=3.7,SNR=8.1
       comp=Z,1.5nm,0.5s
KURK   Kurchatov         57.68 326         P      22 39 04.8 +0.4
KURBB  Kurchatov Arra    57.68 326   P     P      22 39 04.8 +0.3
       comp=Z,6.6nm,0.8s,baz=126,slow=6.3,SNR=66
       comp=Z,6.6nm,0.8s
KBL    Kabul             58.63 305   P     P      22 39 09.1 -2.6
GAR    Garm              58.69 311   P     P      22 39 11.5 -0.5
KK31   Karatay Array     59.72 315         P      22 39 18.6 -0.3
KK31                                 IAmb  IAmb   22 39 19.5
       comp=Z,3.9nm,0.8s
KKAR   Karatay Array     59.72 315         P      22 39 18.7 -0.2
KKAR                                 IAmb  IAmb   22 39 19.5
       comp=Z,4.1nm,0.8s
KKAR   Karatay Array     59.72 315         P      22 39 18.7 -0.2
BVAR   Borovoye Array    63.27 326   P     P      22 39 42.7  0.0
       comp=Z,6.0nm,0.7s,baz=120,slow=8.7,SNR=22
       comp=Z,6.0nm,0.7s
BRVK   Borovoye          63.35 326         P      22 39 43.1  0.0
NRIK   Noril'sk          65.73 346         P      22 39 58.9 +0.5
NRIK   Noril'sk          65.73 346   P     P      22 39 58.6 +0.3
       comp=Z,7.4nm,0.7s,baz=125,slow=5.6,SNR=11
       comp=Z,7.4nm,0.7s
AB31   Akbulak array     68.41 320   P     P      22 40 15.8 -0.1
AB31                                 IAmb  IAmb   22 40 16.7
       comp=Z,4.7nm,1.2s
ABKAR  Akbulak array     68.41 320         P      22 40 15.6 -0.2
ABKAR                                IAmb  IAmb   22 40 16.7
       comp=Z,4.7nm,1.2s
P18K   Big Mountain,     76.57  31   P     P      22 41 05.0 +0.8
P18K                                 IAmb  IAmb   22 41 18.2
       comp=Z,4.6nm,1.0s
D19K   Kuna River        76.62  21   P     P      22 41 05.7 +1.3
D19K                                 IAmb  IAmb   22 41 17.6
       comp=Z,6.5nm,0.8s
O18K   Koktuh Hills      76.63  31   P     P      22 41 05.5 +1.0
E19K   Redstone River    76.77  23         P      22 41 06.3 +1.1
E19K                                 IAmb  IAmb   22 41 18.5
       comp=Z,7.5nm,1.1s
H19K   Roundabout Mou    76.78  25         P      22 41 06.5 +1.2
H19K                                 IAmb  IAmb   22 41 19.1
       comp=Z,4.1nm,0.9s
N19K   Bonanza Creek     77.08  30   P     P      22 41 08.8 +1.6
N19K                                 IAmb  IAmb   22 41 20.7
       comp=Z,4.2nm,0.9s
D20K   Etivluk River     77.20  21   P     P      22 41 08.8 +1.1
B20K   Meade River       77.23  20   P     P      22 41 08.8 +1.0
KDAK   Kodiak Island     77.82  33   P     P      22 41 12.3 +1.1
IMAR   Indian Mountai    77.94  24   P     P      22 41 12.7 +1.0
B21K   Ikpikpuk River    78.05  21   P     P      22 41 13.5 +1.3
B21K                                 IAmb  IAmb   22 41 25.7
       comp=Z,6.8nm,0.8s
H21K   Melozitna Rive    78.29  25   P     P      22 41 14.5 +0.8
CAST   Castle Rocks      78.43  27         P      22 41 15.6 +1.0
CAST                                 IAmb  IAmb   22 41 27.9
       comp=Z,7.2nm,1.2s
RAYN   Ar Rayn           78.59 292   P     P      22 41 13.9 -2.4
SKT    Skwentna          78.59  28   P     P      22 41 15.3 -0.2
SKT                                  IAmb  IAmb   22 41 27.4
       comp=Z,4.8nm,0.9s
CNPM   China Poot        78.61  31   P     P      22 41 17.4 +1.7
D22K   Ayikyak River     78.64  21   P     P      22 41 16.7 +1.1
E22K   Anaktuvuk Pass    78.90  22         P      22 41 18.8 +1.7
E22K                                 IAmb  IAmb   22 41 30.3
       comp=Z,4.5nm,1.1s
BPAW   Bear Paw Mtn.     78.95  26         P      22 41 18.3 +0.9
BPAW                                 IAmb  IAmb   22 41 30.2
       comp=Z,5.3nm,0.8s
MLY    Manley            79.11  25   P     P      22 41 19.4 +1.1
D23K   Nanushuk River    79.37  21   P     P      22 41 21.2 +1.6
D23K                                 IAmb  IAmb   22 41 33.3
       comp=Z,5.7nm,0.9s
C23K   Itkillik River    79.45  20   P     P      22 41 21.7 +1.6
C23K                                 IAmb  IAmb   22 41 33.2
       comp=Z,6.8nm,0.8s
G23K   Bananza Creek     79.49  24   P     P      22 41 21.7 +1.4
I23K   Minto, Yukon-K    79.70  25   P     P      22 41 22.6 +1.1
RND    Reindeer          79.88  27   P     P      22 41 22.8 +0.2
RND                                  IAmb  IAmb   22 41 34.4
       comp=Z,5.1nm,0.9s
PWL    Port Wells        80.09  30   P     P      22 41 24.1 +0.4
E24K   Your Creek        80.14  22   P     P      22 41 25.4 +1.6
H24K   Noodor Dome       80.33  25   P     P      22 41 25.8 +0.9
H24K                                 IAmb  IAmb   22 41 39.4
       comp=Z,4.2nm,0.9s
F24K   Squaw Lake        80.35  23         P      22 41 26.4 +1.4
F24K                                 IAmb  IAmb   22 41 38.5
       comp=Z,3.8nm,0.8s
G24K   Hadweenzic Riv    80.50  24   P     P      22 41 27.3 +1.5
G24K                                 IAmb  IAmb   22 41 39.2
       comp=Z,4.1nm,0.9s
ILAR   Eielson Array     80.75  26   P     P      22 41 26.9 -0.2
       comp=Z,0.6nm,0.7s,baz=250,slow=4.6,SNR=7.0
       comp=Z,0.6nm,0.7s
D25K   Kavik River       80.92  21   P     P      22 41 28.8 +0.7
D25K                                 IAmb  IAmb   22 41 41.1
       comp=Z,3.9nm,0.9s
BMAR   Burnt Mountain    81.63  23         P      22 41 33.2 +1.4
RIDG   Independent Ri    81.67  27         P      22 41 32.4 +0.3
RIDG                                 IAmb  IAmb   22 41 44.8
       comp=Z,8.9nm,1.1s
C27K   Jago River        81.86  21   P     P      22 41 34.1 +1.2
J26L   Joseph Creek      82.19  26   P     P      22 41 35.0 +0.2
F28M   Old Crow          83.42  23   P     P      22 41 41.9 +0.8
F28M                                 IAmb  IAmb   22 41 54.3
       comp=Z,4.5nm,0.9s
I28M   Miner Creek       83.64  25         P      22 41 43.7 +1.3
H29M   Whitestone        84.18  24         P      22 41 46.1 +1.1
G29M   Pine Creek        84.22  23   P     P      22 41 46.3 +1.1
I29M   Ogilvie Camp,     84.33  25   P     P      22 41 46.6 +0.8
I29M                                 IAmb  IAmb   22 41 58.8
       comp=Z,5.1nm,0.8s
L29M   L29M              84.73  27         P      22 41 49.2 +1.2
G30M   tAoh Zraii Nji    84.91  23   P     P      22 41 49.5 +0.8
G30M                                 IAmb  IAmb   22 42 01.4
       comp=Z,4.9nm,1.1s
I30M   Mount Dempster    85.15  25         P      22 41 51.0 +0.9
I30M                                 IAmb  IAmb   22 42 02.8
       comp=Z,4.2nm,1.1s
M30M   Minto, Yukon      85.42  27   P     P      22 41 51.2 -0.2
G31M   Satah River       85.68  23   P     P      22 41 54.5 +2.0
G31M                                 IAmb  IAmb   22 42 10.5
       comp=Z,3.6nm,1.1s
H31M   Peel River        85.88  24   P     P      22 41 53.8 +0.2
H31M                                 IAmb  IAmb   22 42 25.7
       comp=Z,5.6nm,1.4s
ARCES  ARCESS Array B    85.90 340   P     P      22 41 52.8 -0.8
ARCES  ARCESS Array B    85.90 340   P     P      22 41 52.4 -1.2
       comp=Z,3.2nm,0.9s,baz=56,slow=3.1,SNR=4.0
       comp=Z,3.2nm,0.9s
EIL    Elat              87.31 299   LR    LR     23 26 18.8
       comp=Z,51nm,18.1s,baz=67,slow=39
FINES  FINESS Array B    87.55 332   P     P      22 42 00.6 -1.2
       comp=Z,1.6nm,0.6s,baz=70,slow=4.8,SNR=14
```

	comp=Z,1.6nm,0.6s						
HFS	Hagfors	93.72	333	P	P	22 42 28.4	-2.1
	comp=Z,3.4nm,0.9s,baz=95,slow=3.1,SNR=4.0						
	comp=Z,3.4nm,0.9s						
NOA	NORSAR Array B	94.43	334	LR	LR	23 27 31.5	
	comp=Z,21nm,19.2s,baz=70,slow=37						
YKA	Yellowknife Ar	95.10	24	P	P	22 42 35.8	-1.0
	comp=Z,0.7nm,0.8s,baz=309,slow=4.4,SNR=4.0						
	comp=Z,0.7nm,0.8s						

*IDC **28** 22:30:36.0±1.7, 37°.63S×176°.95E, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=59.1km s-min=32.5km az=51.0*

*NOU **28** 22:30:57.7, 38°.77S×175°.85E, h146km, MLv4.0/21, North Island, New Zealand*

*WEL **28** 22:30:59.8±1.0, 39°S±6°×17°6E±°, h132km±8km, M3.6/96, ML3.2/24, MLv3.6/96, Error ellipse: s-maj=11.2km s-min=6.9km az=119.6, confirmed*

ISC 28 22:30:57.7±0.8**, 38°.70S**±0°.04×**175°.82E**±0°.04**, h158**km±5km**, n157, σ0s.89**/163**, mb3.6**/3**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WATZ	Wairara	0.07	261	P	Pn	22 31 18.8	0.0
WHTZ	Whakaora	0.11	74	P	Pn	22 31 19.1	+0.2
RATZ	Rangitukua	0.17	193	P	Pn	22 31 18.9	-0.1
KUTZ	Kaahu Road	0.21	1	P	Pn	22 31 19.1	0.0
RITZ	Rihia Road	0.28	174	P	Pn	22 31 19.5	+0.3
KATZ	Kakaramea	0.29	199	P	Pn	22 31 19.4	0.0
WPRZ	Whakapapatarin	0.32	57	P	Pn	22 31 19.1	-0.2
GRRZ	Galatos Road	0.41	33	P	Pn	22 31 19.7	0.0
NTVZ	North Tongarir	0.42	196	P	Pn	22 31 19.9	+0.2
KRVZ	Karewarewa	0.42	199	P	Pn	22 31 19.9	+0.2
TLZ	Tolley Road	0.43	329	P	Pn	22 31 19.8	0.0
TLZ				S	Sn	22 31 35.3	-1.2
TMVZ	Te Maari	0.43	192	P	Pn	22 31 20.0	+0.2
TMVZ				S	Sn	22 31 35.8	-0.9
ALRZ	Allen Road	0.43	72	P	Pn	22 31 19.4	-0.2
ETVZ	East Tongariro	0.45	191	P	Pn	22 31 20.1	+0.3
WTVZ	West Tongariro	0.46	203	P	Pn	22 31 20.1	+0.2
NNVZ	North Ngauruho	0.46	200	P	Pn	22 31 20.1	+0.1
HRRZ	Handcock Road	0.47	50	P	Pn	22 31 19.8	-0.1
TWVZ	Taurewa	0.48	219	P	Pn	22 31 20.2	+0.2
TWVZ				S	Sn	22 31 36.1	-0.9
OTVZ	Oturere	0.48	195	P	Pn	22 31 20.2	+0.2
OTVZ				S	Sn	22 31 37.2	-0.1
MRHZ	Matea Rd	0.49	107	P	Pn	22 31 19.7	-0.3
MRHZ				S	Sn	22 31 34.6	-2.3
NGZ	Ngauruhoe	0.51	200	P	Pn	22 31 20.3	+0.2
HSRZ	Hossack Road	0.51	41	P	Pn	22 31 19.9	-0.1
SNVZ	South Ngauruho	0.51	196	P	Pn	22 31 20.3	+0.2
COVZ	Chateau Observ	0.55	203	P	Pn	22 31 20.5	+0.2
TUVZ	Tukino	0.58	193	P	Pn	22 31 21.0	+0.5
FWVZ	Far West T-bar	0.59	200	P	Pn	22 31 20.8	+0.1
UTU	Utuhina	0.60	30	P	Pn	22 31 20.4	-0.1
MAVZ	Matarangi	0.60	199	P	Pn	22 31 21.1	+0.2
HLRZ	Highlands Stat	0.61	43	P	Pn	22 31 21.0	+0.4
WHVZ	Whangaehu Hut	0.61	197	P	Pn	22 31 21.0	+0.2
TRVZ	Turoa	0.64	199	P	Pn	22 31 21.3	+0.4
RRRZ	Republican Roa	0.65	57	P	Pn	22 31 20.6	-0.2
WNVZ	Wahianoa	0.65	195	P	Pn	22 31 21.4	+0.5
NGRZ	Ngongotaha	0.66	26	P	Pn	22 31 20.7	-0.2
PKVZ	Pokaka	0.70	212	P	Pn	22 31 21.5	+0.4
BKZ	Black Stump Fm	0.70	132	P	Pn	22 31 21.2	+0.1
BKZ	Black Stump Fm	0.70	132	P	Pn	22 31 21.4	+0.3
BKZ				S	Sn	22 31 37.5	-1.6
TARZ	Mount Tarawera	0.71	50	P	Pn	22 31 21.1	-0.1
MOVZ	Moawhango	0.71	184	P	Pn	22 31 21.4	+0.2
OMRZ	Omania	0.73	36	P	Pn	22 31 21.0	-0.3
MTVZ	Mangateitei	0.74	202	P	Pn	22 31 21.9	+0.5
KARZ	Kaharoa	0.75	26	P	Pn	22 31 21.2	-0.3
MKRZ	Makatiti	0.75	43	P	Pn	22 31 21.7	+0.2
MUGZ	Murupara	0.78	74	P	Pn	22 31 21.0	-0.5
HIZ	Hauiti	0.78	283	P	Pn	22 31 21.8	+0.2
HIZ	Hauiti	0.78	283	P	Sn	22 31 39.6	-0.2
HIZ	Hauiti	0.78	283	P	Pn	22 31 21.7	+0.2
MTHZ	Maungataniwha	0.81	101	P	Pn	22 31 22.0	+0.2
KMRZ	Kaimai	0.85	6	P	Pn	22 31 21.9	-0.2
KWHZ	Kaweka Forest	0.86	147	P	Pn	22 31 22.9	+0.7
NMHZ	Naumai	0.87	118	P	Pn	22 31 23.3	+1.1
RTZ	Ruatahuna	0.91	85	P	Pn	22 31 22.5	-0.1
EDRZ	Edgecumbe	0.93	51	P	Pn	22 31 22.4	-0.4
VRZ	Vera Road	0.93	242	P	Pn	22 31 23.3	+0.6
MARZ	Manawahe	0.98	44	P	Pn	22 31 22.9	-0.2
TOZ	Tahuroa Road	1.00	345	P	Pn	22 31 23.2	0.0
MCHZ	McNeill Hill	1.01	138	P	Pn	22 31 24.7	+1.4
RAHZ	Arahi	1.01	103	P	Pn	22 31 24.0	+0.7
TGRZ	Tauranga	1.03	20	P	Pn	22 31 23.1	-0.3
OPRZ	Ohinepanea	1.03	34	P	Pn	22 31 23.0	-0.4
KRHZ	Kereru	1.04	156	P	Pn	22 31 24.3	+0.7
ARHZ	Aropaoanui	1.08	122	P	Pn	22 31 24.8	+1.0
URZ	Urewera	1.10	67	P	Pn	22 31 23.4	-0.6
URZ	Urewera	1.10	67	P	Sn	22 31 41.9	-2.3
URZ	Urewera	1.10	67	P	Pn	22 31 23.4	-0.6
WHHZ	Waihua	1.17	109	P	Pn	22 31 25.3	+0.7
SNGZ	Shannon Statio	1.19	95	P	Pn	22 31 25.4	+0.5
WHRZ	Whale Island	1.24	48	P	Pn	22 31 24.4	-0.9
WAZ	Wanganui	1.24	211	P	Pn	22 31 26.0	+0.8
PNHZ	Pukenui	1.25	167	P	Pn	22 31 26.0	+0.6
RAGZ	Rawiri	1.27	81	P	Pn	22 31 25.7	+0.1
LREZ	Lake Rotokare	1.34	235	P	Pn	22 31 27.4	+1.2
DREZ	Durham Road	1.35	248	P	Pn	22 31 27.4	+1.1
TSZ	Takapari Road	1.36	175	P	Pn	22 31 27.2	+0.7
KAHZ	Kahuranaki	1.37	144	P	Pn	22 31 27.6	+1.1
CKHZ	Cape Kidnapper	1.37	135	P	Pn	22 31 27.6	+1.1
MWZ	Matawai	1.39	75	P	Pn	22 31 26.6	-0.2
PREZ	Palmer Road	1.45	243	P	Pn	22 31 28.4	+1.1
WPHZ	Waipukurau	1.45	161	P	Pn	22 31 28.0	+0.7
MYRZ	Mayor Island	1.45	13	P	Pn	22 31 27.4	0.0
NEZ	North Egmont	1.46	246	P	Pn	22 31 28.6	+1.0
KNZ	Kokohu	1.48	103	P	Pn	22 31 28.1	+0.5
PKE	Pukeiti	1.51	250	P	Pn	22 31 28.8	+0.8
RIGZ	Rimuhau	1.52	91	P	Pn	22 31 28.5	+0.5
KHEZ	Kahui Hut	1.53	246	P	Pn	22 31 29.1	+0.9
KHEZ	Kahui Hut	1.53	246	P	Pn	22 31 29.0	+0.9
PXZ	Pawanui	1.56	149	P	Pn	22 31 29.1	+0.8
TKGZ	Te Karaka	1.61	81	P	Pn	22 31 29.4	+0.5
DVHZ	Dannevirke	1.62	171	P	Pn	22 31 29.5	+0.4
NBEZ	Newall Road No	1.63	249	P	Pn	22 31 30.1	+1.0
PRGZ	Paritu Road	1.63	99	P	Pn	22 31 29.5	+0.3
RUGZ	Raukumara Rang	1.63	64	P	Pn	22 31 28.3	-1.1
NMEZ	Namu Road	1.67	244	P	Pn	22 31 30.5	+0.9
MHGZ	Mahia Peninsul	1.69	106	P	Pn	22 31 30.4	+0.6
PRHZ	Porangahau	1.69	158	P	Pn	22 31 30.5	+0.7
POWZ	Post Office Ro	1.69	181	P	Pn	22 31 30.2	+0.4
TWGZ	Tauwhareparae	1.77	74	P	Pn	22 31 31.3	+0.6
HAZ	Te Kaha	1.81	59	P	Pn	22 31 30.0	-1.1
ANWZ	Angora Road	1.83	164	P	Pn	22 31 32.1	+0.8
PRWZ	Pori Road	1.86	176	P	Pn	22 31 32.2	+0.5
AWAZ	Awhitu Peninsu	1.88	330	P	Pn	22 31 32.0	+0.1
ETAZ	East Tamaki Re	1.88	338	P	Pn	22 31 31.9	0.0
CNGZ	Carnagh Statio	1.88	84	P	Pn	22 31 32.5	+0.6
KUZ	Kuaotunu	1.95	358	P	Pn	22 31 32.3	-0.4
KUZ	Kuaotunu	1.95	358	P	Pn	22 31 32.4	-0.3
PKGZ	Pakihiroa	1.96	66	P	Pn	22 31 32.5	-0.4
MRZ	Mangatainoka R	1.97	185	P	Pn	22 31 33.0	+0.1
WIAZ	Waiheke Island	1.98	344	P	Pn	22 31 33.0	-0.1
EPAZ	Eden Park BICE	2.01	335	P	Pn	22 31 33.4	0.0
BFZ	Birch Farm	2.01	171	P	Pn	22 31 33.5	+0.2
BFZ	Birch Farm	2.01	171	P	Sn	22 31 59.0	-2.0
BFZ	Birch Farm	2.01	171	P	Pn	22 31 33.6	+0.2
PUZ	Puketiti	2.01	73	P	Pn	22 31 33.1	-0.3
WTAZ	Waiatarua	2.02	330	P	Pn	22 31 33.9	+0.4
HBAZ	Herne Bay Bore	2.04	335	P	Pn	22 31 33.8	+0.1
MBAZ	Motutapu North	2.06	339	P	Pn	22 31 33.9	-0.1
TIWZ	Tintock	2.08	179	P	Pn	22 31 34.4	+0.2
OGWZ	Otaki Gorge	2.18	193	P	Pn	22 31 35.4	+0.1
HOWZ	Holdsworth Sta	2.21	186	P	Pn	22 31 35.5	-0.2
WMGZ	Waiomatatini S	2.22	68	P	Pn	22 31 35.4	-0.4
CPWZ	Castlepoint	2.23	173	P	Pn	22 31 36.5	+0.6
ABAZ	Army Bay	2.23	339	P	Pn	22 31 36.1	+0.1
MXZ	Matakaoa Point	2.26	61	P	Pn	22 31 36.1	-0.2
MXZ	Matakaoa Point	2.26	61	P	Sn	22 32 04.7	-1.4
MXZ	Matakaoa Point	2.26	61	P	Pn	22 31 36.1	-0.2
KIW	Kapiti Island	2.27	198	P	Pn	22 31 36.1	-0.3
TMWZ	Te Maipa	2.41	179	P	Pn	22 31 37.8	-0.2
GRZ	Great Barrier	2.46	353	P	Pn	22 31 38.6	-0.1
MTW	Mount Morrison	2.47	186	P	Pn	22 31 38.3	-0.5
CAW	Cannon Point	2.48	193	P	Pn	22 31 38.6	-0.3
DUWZ	D'Urville Isla	2.56	214	P	Pn	22 31 39.4	-0.5
PAWZ	Paruwai Farm	2.70	186	P	Pn	22 31 41.0	-0.6
TRWZ	Traveller	2.70	182	P	Pn	22 31 41.1	-0.5
WEL	Wellington	2.71	197	P	Pn	22 31 41.2	-0.4
SNZO	South Karori	2.75	198	P	Pn	22 31 41.3	-0.8
SNZO	South Karori	2.75	198	S	Sn	22 32 13.7	-2.9
MSWZ	Moikau Station	2.75	189	P	Pn	22 31 41.5	-0.8
TCW	Tory Channel	2.78	205	P	Pn	22 31 41.8	-0.7
BHW	Baring Head	2.81	195	P	Pn	22 31 42.1	-0.8
PLWZ	Palliser	2.90	188	P	Pn	22 31 43.1	-1.0
TUWZ	Tuamarina	3.09	207	P	Pn	22 31 46.1	-0.3
NNZ	Nelson	3.14	216	P	Pn	22 31 46.1	-0.9
TKNZ	Takaka Hill	3.21	222	P	Pn	22 31 45.8	-2.1
QRZ	Quartz Range	3.31	229	P	Pn	22 31 47.8	-1.4
QRZ	Quartz Range	3.31	229	S	Sn	22 32 26.7	-2.6
QRZ	Quartz Range	3.31	229	P	Pn	22 31 47.8	-1.4
BSWZ	Blackbirch Sta	3.36	206	P	Pn	22 31 49.1	-0.7
OUZ	Omahuta	3.90	332	P	Pn	22 31 57.6	+0.8
KHZ	Kahutara	4.10	204	P	Pn	22 31 58.2	-1.1
KHZ	Kahutara	4.10	204	S	Sn	22 32 45.1	-2.4
ODZ	Otahua Downs	7.42	210	P	Pn	22 32 41.5	-1.8
JCZ	Jackson Bay	7.54	222	P	Pn	22 32 45.1	+0.2
ASAR	Alice Springs	38.52	280	P	P	22 38 06.3	+1.5
	1.0nm,0.8s,baz=126,slow=9.3,SNR=6.0						
	1.0nm,0.8s						
WRA	Warramunga Arr	40.30	286	P	P	22 38 19.9	+0.3
	0.6nm,0.7s,baz=124,slow=8.4,SNR=4.8						
	0.6nm,0.7s						
QSPA	South Pole Qui	51.43	180	P	P	22 39 50.6	+4.3
	2.0nm,0.7s,baz=324,slow=0.5,SNR=16						
	2.0nm,0.7s						
KURBB	Kurchatov Arra	122.90	311	PKP	PKPdf	22 49 31.8	-2.5
	0.4nm,0.6s,baz=120,slow=2.2,SNR=5.4						
FINES	FINESS Array B	150.56	330	PKPbc	PKPbc	22 50 28.2	-1.4
	2.0nm,1.0s,baz=65,slow=4.7,SNR=7.3						

*STR **28** 23:03:02.5±1.0, 43°N±5°×1°1E±°, h10km, MLv3.6/25, Error ellipse: s-maj=0.0km s-min=0.0km az=119.5, preliminary*

*ROM **28** 23:03:05.8±0.1, 43°.428N±0°.004×11°.115E±0°.006, h8km, ML3.1/160, Error ellipse: s-maj=0.4km s-min=0.3km az=232.0*

*LDG **28** 23:03:05.8±0.2, 43°.46N×11°.09E, h8km, Ml3.1/15, Error ellipse: s-maj=3.6km s-min=3.4km az=18.0*

*NEIC **28** 23:03:06.1±1.3, 43°.44N±0°.04×11°.14E±0°.06, h10km±7km, ML2.9/40, Error ellipse: s-maj=8.2km s-min=1.5km az=47.0*

*PRU **28** 23:03:10.2, 44°.01N×10°.17E, h0km*

*IDC **28** 23:03:14.7±3.4, 44°.21N×11°.53E, h0km, mb3.1/1, mbtmp3.4/4, ML2.9/3, MS2.5/4, Error ellipse: s-maj=42.7km s-min=23.5km az=55.0*

ISC 28 23:03:05.6±0.8**, 43°.42N**±0°.01×**11°.10E**±0°.01**, h9**km±5km**, n268, σ1s.52**/342**, 8C, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSNT	Castellina Chi	0.15	69	P	Pg	23 03 08.9	+0.1
CSNT				S	Sg	23 03 11.2	+0.1
CSNT	Castellina Chi	0.15	69	P	Pg	23 03 09.0	+0.1
CSNT				S	Sg	23 03 11.2	+0.1
OSSC	Osservatorio P	0.15	45		Pg	23 03 09.1	+0.2
OSSC				Sg	Sg	23 03 11.3	+0.2
OSSC	Osservatorio P	0.15	45	P	Pg	23 03 09.0	+0.2
OSSC				S	Sg	23 03 11.5	+0.4
OSSC	Osservatorio P	0.15	45	⇑P	Pg	23 03 09.1	+0.2
OSSC				S	Sg	23 03 11.4	+0.2
OSSC				AML	AML		
	comp=E,33450µm,1.5s						
OSSC				AML	AML		
	comp=E,33500µm,1.5s						
OSSC				AML	AML		
	comp=N,30950µm,0.5s						
OSSC				AML	AML		
	comp=E,30850µm,0.6s						
OSSC				AML	AML		
	comp=N,33750µm,0.3s						
OSSC				AML	AML		
	comp=N,28357µm,0.6s						
FIR	Firenze	0.37	17	P	Pg	23 03 13.3	+0.4
FIR				S	Sb	23 03 19.1	-1.1
RIBO	Ribolla Roccas	0.47	185	P	Pg	23 03 15.8	+1.1
RIBO				S	Sg	23 03 22.6	+1.6
RIBO	Ribolla Roccas	0.47	185	AML	AML		
	comp=E,5293µm,0.9s						
RUFI	Rufina	0.51	35	P	Pg	23 03 15.8	+0.2
RUFI				S	Sb	23 03 23.5	-0.9
RUFI	Rufina	0.51	35	⇑P	Pg	23 03 15.8	+0.2
RUFI				S	Sb	23 03 23.1	-1.2
RUFI				AML	AML		
	comp=E,8095µm,0.6s						
RUFI				AML	AML		
	comp=E,8090µm,0.6s						
RUFI				AML	AML		
	comp=N,6725µm,0.6s						
RUFI				AML	AML		
	comp=N,6726µm,0.6s						
RUFI				AML	AML		
	comp=E,6029µm,0.3s						
PII	Pisa	0.52	306	P	Pg	23 03 16.3	+0.7
PII				S	Sg	23 03 23.3	+0.9
PII	Pisa	0.52	306	P	Pg	23 03 16.4	+0.7
PII				S	Sg	23 03 23.4	+0.9
PII				AML	AML		
	comp=E,20100µm,0.3s						
PII				AML	AML		
	comp=N,17400µm,0.3s						
PII				AML	AML		
	comp=N,17400µm,1.7s						
PII				AML	AML		
	comp=E,20100µm,1.7s						
PII				AML	AML		
	comp=E,20081µm,0.3s						
PII				AML	AML		
	comp=N,17380µm,0.3s						
MPPT	Montemurlo	0.54	359	P	Pg	23 03 16.3	+0.2
MPPT				S	Sb	23 03 24.0	-1.1
MPPT				AML	AML		
	comp=E,8325µm,0.4s						
MPPT				AML	AML		
	comp=N,5860µm,0.4s						
MPPT				AML	AML		
	comp=N,5860µm,1.6s						
MPPT				AML	AML		
	comp=N,5861µm,0.4s						
MPPT				AML	AML		
	comp=E,8325µm,0.5s						
MOCL	Monte Cuccoli	0.59	5	P	Pg	23 03 17.1	0.0
MOCL				S	Sb	23 03 25.3	-1.2
MOCL				AML	AML		
	comp=E,5370µm,0.4s						
MOCL				AML	AML		
	comp=N,10800µm,0.9s						
MOCL				AML	AML		
	comp=N,10800µm,1.1s						
MOCL				AML	AML		
	comp=E,5365µm,0.4s						
MOCL				AML	AML		
	comp=N,9311µm,0.5s						
MOCL				AML	AML		
	comp=E,5366µm,0.4s						
MTCR	Monte La Croce	0.61	353	P	Pg	23 03 17.6	+0.1
MTCR				S	Sb	23 03 26.4	-0.9
MTCR	Monte La Croce	0.61	353	P	Pg	23 03 17.8	+0.3
MTCR				S	Sb	23 03 26.9	-0.4
MTCR				AML	AML		
	comp=E,4485µm,0.4s						
MTCR				AML	AML		
	comp=N,4360µm,0.4s						
ARCI	Arcidosso	0.63	154	⇑P	Pg	23 03 18.3	+0.6
ARCI				S	Sg	23 03 27.7	+1.7
ARCI				AML	AML		
	comp=E,1805µm,0.5s						
ARCI				AML	AML		
	comp=N,2845µm,0.5s						
ARCI				AML	AML		
	comp=N,2970µm,0.5s						
ARCI				AML	AML		
	comp=N,2840µm,0.5s						
ARCI				AML	AML		
	comp=E,1825µm,0.5s						
ARCI				AML	AML		
	comp=E,1804µm,0.5s						
ARCI				AML	AML		
	comp=N,2842µm,0.5s						
ARCI				AML	AML		
	comp=N,2970µm,0.5s						
ARCI				AML	AML		
	comp=E,1827µm,0.5s						
CAFI	Castiglion Fio	0.64	98	P	Pg	23 03 18.1	+0.3
CAFI				S	Sg	23 03 26.9	+0.6
CAFI				AML	AML		
	comp=N,1280µm,1.0s						
CAFI				AML	AML		
	comp=E,1600µm,0.6s						
CAFI				AML	AML		
	comp=N,1285µm,1.0s						
CAFI				AML	AML		
	comp=N,1350µm,1.0s						
CAFI				AML	AML		
	comp=E,1530µm,0.6s						
CAFI				AML	AML		
	comp=N,1350µm,1.0s						
CAFI				AML	AML		
	comp=N,1285µm,1.0s						
CAFI				AML	AML		
	comp=E,1532µm,0.6s						
CAFI				AML	AML		
	comp=N,1111µm,0.7s						
CAFI				AML	AML		
	comp=E,1602µm,0.6s						
CAFI				AML	AML		
	comp=N,1161µm,0.7s						
CRE	Caprese Michel	0.65	72	P	Pg	23 03 18.4	+0.2
CRE				S	Sb	23 03 27.3	-1.0
CRE				AML	AML		
	comp=E,2770µm,1.6s						
CRE				AML	AML		
	comp=N,3915µm,0.7s						
CRE				AML	AML		
	comp=E,2770µm,0.4s						
CRE				AML	AML		
	comp=N,3915µm,0.7s						
CRE				AML	AML		
	comp=E,2760µm,0.4s						
CASP	Castiglione de	0.65	196		Pg	23 03 19.1	+0.9
CASP				Sg	Sg	23 03 27.6	+1.0
CASP	Castiglione de	0.65	196	P	Pg	23 03 19.0	+0.9
CASP				AML	AML		
	comp=E,2940µm,0.7s						
CASP				AML	AML		
	comp=N,3985µm,0.6s						
CASP				AML	AML		
	comp=E,2287µm,0.3s						
CASP				AML	AML		
	comp=N,3985µm,0.6s						
SEI	Scarperia	0.66	16	P	Pb	23 03 18.7	-0.6
SEI				S	Sb	23 03 28.5	-0.1
SEI	Scarperia	0.66	16	P	Pg	23 03 18.6	+0.2
SEI				AML	AML		
	comp=E,5280µm,0.8s						
SEI				AML	AML		
	comp=N,11300µm,0.7s						
SEI				AML	AML		
	comp=N,11300µm,1.3s						
SEI				AML	AML		
	comp=E,8010µm,0.4s						
SEI				AML	AML		
	comp=N,13192µm,0.5s						
SEI				AML	AML		
	comp=E,8009µm,0.4s						
MAIM	Mastiano	0.67	318	P	Pg	23 03 18.9	+0.5
MAIM				S	Sg	23 03 27.6	+0.5
MAIM	Mastiano	0.67	318	P	Pg	23 03 18.9	+0.5
MAIM				S	Sb	23 03 28.2	-0.4
POPM	Popiglio	0.67	338	P	Pb	23 03 19.4	-0.1
POPM				S	Sb	23 03 28.1	-0.9
POPM	Popiglio	0.67	338	P	Pb	23 03 19.2	-0.3
POPM				AML	AML		
	comp=N,4170µm,1.5s						
POPM				AML	AML		
	comp=E,4605µm,0.8s						
POPM				AML	AML		
	comp=N,4170µm,0.5s						
POPM				AML	AML		
	comp=N,3950µm,0.3s						
POPM				AML	AML		
	comp=E,4532µm,0.3s						
SF11	Podere del Sol	0.69	142	⇑P	Pg	23 03 19.5	+0.5
SF01	Poggio Pratacc	0.69	151	P	Pg	23 03 19.5	+0.5
SF01				AML	AML		
	comp=E,5005µm,0.5s						
SF01				AML	AML		
	comp=E,5010µm,0.5s						
SF01				AML	AML		
	comp=N,6615µm,0.6s						
SF01				AML	AML		
	comp=N,6615µm,1.4s						
SF01				AML	AML		
	comp=E,5006µm,0.5s						
SF01				AML	AML		
	comp=N,6617µm,0.6s						
SF13	Bagnolo	0.71	148	⇑P	Pg	23 03 19.9	+0.6
SF13				S	Sg	23 03 28.7	+0.2
SF04	Casetta	0.71	145	⇑P	Pg	23 03 19.9	+0.6
SF04				AML	AML		
	comp=N,7µm,1.2s						
SF04				AML	AML		
	comp=E,20µm,50.0s						
SFI	Santa Sofia	0.73	48	P	Pg	23 03 19.5	-0.1
SFI				AML	AML		
	comp=N,1250µm,1.2s						
SFI				AML	AML		
	comp=E,2740µm,0.8s						
SFI				AML	AML		
	comp=N,1285µm,1.2s						
SFI				AML	AML		
	comp=N,1285µm,0.8s						
SFI				AML	AML		
	comp=N,1250µm,0.8s						
SFI				AML	AML		
	comp=E,2650µm,0.8s						
SFI				AML	AML		
	comp=N,1929µm,0.8s						
SFI				AML	AML		
	comp=N,1950µm,0.8s						
SFI				AML	AML		
	comp=E,2744µm,0.8s						
SFI				AML	AML		
	comp=E,2647µm,0.8s						
BDI	Bagni Di Lucca	0.74	330	P	Pg	23 03 20.1	+0.3
BDI				S	Sb	23 03 31.0	+0.1
BDI	Bagni Di Lucca	0.74	330	P	Pg	23 03 20.2	+0.3
BDI				S	Sb	23 03 30.8	-0.1
BDI				AML	AML		
	comp=E,2750µm,0.4s						
BDI				AML	AML		
	comp=N,3685µm,1.1s						
BDI				AML	AML		
	comp=E,3020µm,1.6s						
BDI				AML	AML		
	comp=N,3885µm,1.1s						
BDI				AML	AML		
	comp=N,3885µm,0.9s						
BDI				AML	AML		
	comp=N,3685µm,0.9s						
BDI				AML	AML		
	comp=E,2750µm,1.6s						
BDI				AML	AML		
	comp=E,3020µm,0.4s						
BDI				AML	AML		
	comp=E,2753µm,0.4s						
BDI				AML	AML		
	comp=E,2829µm,0.4s						
BDI				AML	AML		
	comp=N,3751µm,0.5s						
BDI				AML	AML		
	comp=N,3665µm,0.5s						
SF03	Valle Cupa	0.75	145	⇑P	Pg	23 03 20.6	+0.6
CARD	Cardoso	0.76	324	P	Pg	23 03 20.5	+0.3
CARD				S	Sg	23 03 30.3	+0.2
CARD	Cardoso	0.76	324	P	Pg	23 03 20.4	+0.3
CARD				AML	AML		
	comp=E,3735µm,0.3s						
CARD				AML	AML		
	comp=N,3875µm,0.4s						
CARD				AML	AML		
	comp=E,3735µm,1.7s						
CARD				AML	AML		
	comp=E,3738µm,0.3s						

CARD				AML	AML		
	comp=N,3876µm,0.4s						
SF14	**Selvena**	**0.76**	**150**	⇑P	**Pg**	**23 03 20.4**	**+0.2**
SSP9	**Sansepolcro**	**0.76**	**78**	P	**Pb**	**23 03 20.9**	**-0.1**
SSP9				AML	AML		
	comp=E,2985µm,1.6s						
SSP9				AML	AML		
	comp=N,3165µm,1.5s						
SSP9				AML	AML		
	comp=E,2985µm,0.4s						
SSP9				AML	AML		
	comp=E,2592µm,0.7s						
SSP9				AML	AML		
	comp=N,2993µm,1.3s						
BRIS	**BRISIGHELLA**	**0.79**	**22**	P	**Pn**	**23 03 24.0**	**+1.2**
BRIS				AML	AML		
	comp=N,1540µm,1.6s						
BRIS				AML	AML		
	comp=N,1550µm,1.5s						
BRIS				AML	AML		
	comp=N,1550µm,0.5s						
BRIS				AML	AML		
	comp=N,1540µm,0.4s						
BRIS				AML	AML		
	comp=E,1750µm,0.5s						
BRIS				AML	AML		
	comp=E,1595µm,0.6s						
BRIS				AML	AML		
	comp=N,2065µm,0.5s						
BRIS				AML	AML		
	comp=E,2248µm,0.5s						
BRIS				AML	AML		
	comp=E,2356µm,0.7s						
BRIS				AML	AML		
	comp=N,2060µm,0.5s						
LMD	**Lutirano**	**0.79**	**33**	P	**Pg**	**23 03 20.9**	**0.0**
LMD				S	**Sb**	**23 03 32.1**	**-0.2**
LMD	**Lutirano**	**0.79**	**33**	P	**Pb**	**23 03 21.0**	**-0.5**
LMD				AML	AML		
	comp=E,1475µm,0.4s						
LMD				AML	AML		
	comp=E,2590µm,0.4s						
LMD				AML	AML		
	comp=N,2205µm,0.2s						
LMD				AML	AML		
	comp=E,3218µm,0.5s						
LMD				AML	AML		
	comp=N,2795µm,0.7s						
ATMC	**Monte Cedrone**	**0.79**	**88**	P	**Pg**	**23 03 21.2**	**+0.3**
SACS	**San Casciano d**	**0.82**	**134**	P	**Pg**	**23 03 21.5**	**+0.1**
SACS				AML	AML		
	comp=E,481µm,0.6s						
SACS				AML	AML		
	comp=N,400µm,1.5s						
SACS				AML	AML		
	comp=E,481µm,1.4s						
SACS				AML	AML		
	comp=N,400µm,0.5s						
SACS				AML	AML		
	comp=E,481µm,0.6s						
SACS				AML	AML		
	comp=N,382µm,0.8s						
SACS				AML	AML		
	comp=E,528µm,0.6s						
SACS				AML	AML		
	comp=N,451µm,0.8s						
BADI	**Badiali**	**0.84**	**83**	P	**Pg**	**23 03 21.9**	**+0.2**
BADI				AML	AML		
	comp=E,1645µm,0.8s						
BADI				AML	AML		
	comp=N,1610µm,0.7s						
BADI				AML	AML		
	comp=E,1640µm,0.8s						
BADI				AML	AML		
	comp=E,1640µm,1.2s						
BADI				AML	AML		
	comp=N,1610µm,0.7s						
BADI				AML	AML		
	comp=E,1641µm,0.8s						
ATMI	**Monte Miggiano**	**0.85**	**95**	P	**Pg**	**23 03 22.0**	**0.0**
ATMI				AML	AML		
	comp=N,3215µm,0.6s						
ATMI				AML	AML		
	comp=E,2510µm,0.5s						
ATMI				AML	AML		
	comp=E,2510µm,0.5s						
ATMI				AML	AML		
	comp=N,3217µm,0.6s						
PARC	**Parchiule**	**0.86**	**74**	P	**Pb**	**23 03 22.4**	**-0.3**
PARC				AML	AML		
	comp=E,1730µm,0.6s						
PARC				AML	AML		
	comp=N,2030µm,1.0s						
PARC				AML	AML		
	comp=E,1730µm,1.4s						
PARC				AML	AML		
	comp=N,1882µm,0.5s						
PARC				AML	AML		
	comp=E,1727µm,0.6s						
MGAB	**Montegabbione**	**0.90**	**124**	P	**Pg**	**23 03 23.0**	**+0.2**
MGAB				AML	AML		
	comp=E,575µm,0.5s						
MGAB				AML	AML		
	comp=N,636µm,1.4s						
MGAB				AML	AML		
	comp=N,658µm,1.5s						
MGAB				AML	AML		
	comp=E,616µm,0.5s						
MGAB				AML	AML		
	comp=E,575µm,0.5s						
MGAB				AML	AML		
	comp=N,596µm,0.6s						
MGAB				AML	AML		
	comp=E,616µm,0.5s						
MGAB				AML	AML		
	comp=N,554µm,0.4s						
VLC	**Villacollemand**	**0.90**	**325**	P	**Pg**	**23 03 22.9**	**-0.1**
VLC				AML	AML		
	comp=E,1190µm,1.2s						
VLC				AML	AML		
	comp=N,1210µm,0.4s						
VLC				AML	AML		
	comp=N,1225µm,0.4s						
VLC				AML	AML		
	comp=E,1210µm,1.2s						
VLC				AML	AML		
	comp=E,1070µm,0.6s						
VLC				AML	AML		
	comp=N,1212µm,0.4s						
VLC				AML	AML		
	comp=E,1068µm,0.7s						
VLC				AML	AML		
	comp=N,1228µm,0.4s						
SARO	**Sassorosso**	**0.92**	**327**	P	**Pg**	**23 03 23.6**	**+0.4**
SARO	**Sassorosso**	**0.92**	**327**	P	**Pg**	**23 03 23.4**	**+0.1**
SARO				AML	AML		
	comp=E,4075µm,0.5s						
SARO				AML	AML		
	comp=N,6100µm,0.5s						
SARO				AML	AML		
	comp=E,4080µm,0.5s						
SARO				AML	AML		
	comp=N,6105µm,0.5s						
SARO				AML	AML		
	comp=E,4080µm,1.5s						
SARO				AML	AML		
	comp=E,4078µm,0.5s						
SARO				AML	AML		
	comp=N,6103µm,0.5s						
MASSA	**Massa (MS), It**	**0.93**	**310**	P	**Pb**	**23 03 24.4**	**+0.6**
MASSA				S	**Sb**	**23 03 36.3**	**+0.1**
ZCCA	**Zocca**	**0.94**	**354**		**Pb**	**23 03 24.2**	**+0.2**
ZCCA				Sn	**Sn**	**23 03 38.9**	**+0.4**
ZCCA				IAML		23 03 42.9	
	comp=N,494nm,0.8s						
ZCCA				IAML		23 03 47.5	
	comp=E,691nm,1.1s						
ZCCA	**Zocca**	**0.94**	**354**	P	**Pn**	**23 03 25.2**	**+0.3**
ZCCA	**Zocca**	**0.94**	**354**	P	**Pb**	**23 03 24.1**	**+0.1**
ZCCA				AML	AML		
	comp=E,1675µm,1.6s						
ZCCA				AML	AML		
	comp=N,1168µm,0.9s						
ZCCA				AML	AML		
	comp=E,1720µm,1.6s						
ZCCA				AML	AML		
	comp=N,1280µm,1.0s						
ZCCA				AML	AML		
	comp=N,1280µm,1.0s						
ZCCA				AML	AML		
	comp=N,1168µm,1.1s						
ZCCA				AML	AML		
	comp=E,1675µm,0.4s						
ZCCA				AML	AML		
	comp=E,1720µm,0.4s						
ZCCA				AML	AML		
	comp=E,1524µm,0.6s						
ZCCA				AML	AML		
	comp=E,1564µm,0.6s						
ZCCA				AML	AML		
	comp=N,1052µm,0.6s						
ZCCA				AML	AML		
	comp=N,1033µm,0.5s						
ATTE	**AVT- Monte Tez**	**0.94**	**103**	P	**Pg**	**23 03 23.3**	**-0.4**
ATTE				AML	AML		
	comp=E,1101µm,0.9s						
ATTE				AML	AML		
	comp=N,984µm,1.1s						
ATTE				AML	AML		
	comp=E,1101µm,1.1s						
ATTE				AML	AML		
	comp=N,984µm,1.1s						
ATTE				AML	AML		
	comp=E,1100µm,0.9s						
ATPI	**Pietralunga -**	**0.95**	**88**	P	**Pg**	**23 03 23.4**	**-0.4**
ATPI				AML	AML		
	comp=E,1135µm,0.6s						
ATPI				AML	AML		
	comp=N,884µm,0.5s						
ATPI				AML	AML		
	comp=E,1067µm,0.6s						
ATPI				AML	AML		
	comp=N,888µm,0.6s						
ATPI				AML	AML		
	comp=E,1135µm,1.4s						
ATPI				AML	AML		
	comp=E,1067µm,1.4s						
ATPI				AML	AML		
	comp=N,884µm,1.5s						
ATPI				AML	AML		
	comp=E,1069µm,0.6s						
ATPI				AML	AML		
	comp=N,882µm,0.5s						
ATPI				AML	AML		
	comp=N,888µm,0.6s						
ATPI				AML	AML		
	comp=E,1134µm,0.6s						
ATVO	**AVT- Monte Val**	**0.95**	**92**	P	**Pg**	**23 03 23.6**	**-0.2**
ATVO				AML	AML		
	comp=E,1245µm,0.6s						
ATVO				AML	AML		
	comp=N,1265µm,0.8s						
ATVO				AML	AML		
	comp=N,1265µm,1.2s						
ATVO				AML	AML		
	comp=N,1269µm,0.8s						
ATVO				AML	AML		
	comp=E,1242µm,0.6s						
LATE	**Laterza**	**0.95**	**147**	P	**Pg**	**23 03 24.8**	**+0.9**
ATLO	**AVT- Montelove**	**0.96**	**96**	P	**Pg**	**23 03 24.0**	**0.0**
CPGN	**Carpegna, Ital**	**0.96**	**66**	P	**Pb**	**23 03 24.7**	**+0.2**
CPGN				AML	AML		
	comp=E,1350µm,1.4s						
CPGN				AML	AML		
	comp=N,1350µm,1.4s						
CPGN				AML	AML		
	comp=E,1004µm,0.4s						
CPGN				AML	AML		
	comp=N,1655µm,1.5s						
CPGN				AML	AML		
	comp=E,1350µm,0.6s						
CPGN				AML	AML		
	comp=N,1655µm,0.5s						
CPGN				AML	AML		
	comp=N,1350µm,0.6s						
CPGN				AML	AML		
	comp=N,1222µm,0.5s						
CPGN				AML	AML		
	comp=E,1254µm,1.1s						
CPGN				AML	AML		
	comp=E,1006µm,0.4s						
CPGN				AML	AML		
	comp=N,1339µm,0.7s						
APEC	**Apecchio**	**0.97**	**81**	P	**Pg**	**23 03 24.3**	**+0.1**
APEC				AML	AML		
	comp=E,803µm,0.4s						
APEC				AML	AML		
	comp=N,847µm,0.4s						
APEC				AML	AML		
	comp=E,1650µm,0.6s						
APEC				AML	AML		
	comp=N,2010µm,0.4s						
APEC				AML	AML		
	comp=N,2011µm,0.4s						
APEC				AML	AML		
	comp=E,1649µm,0.6s						
APEC				AML	AML		
	comp=E,1421µm,0.7s						
APEC				AML	AML		
	comp=N,2230µm,0.4s						
ATPC	**Poggio Castell**	**0.99**	**86**	P	**Pg**	**23 03 24.5**	**-0.1**
MAON	**Monte Argentar**	**0.99**	**179**	P	**Pg**	**23 03 25.6**	**+1.0**
MAON	**Monte Argentar**	**0.99**	**179**	P	**Pg**	**23 03 24.7**	**+0.1**
MAON				AML	AML		
	comp=E,1435µm,1.1s						
MAON				AML	AML		
	comp=N,1400µm,0.5s						
MAON				AML	AML		
	comp=E,1435µm,0.9s						
MAON				AML	AML		
	comp=N,1402µm,0.5s						
MAON				AML	AML		
	comp=E,1317µm,0.7s						
MTRZ	**Monterenzio**	**0.99**	**15**	P	**Pb**	**23 03 25.1**	**+0.1**
MTRZ	**Monterenzio**	**0.99**	**15**	P	**Pg**	**23 03 24.3**	**-0.3**
GSCL	**Gusciola**	**1.00**	**338**	P	**Pn**	**23 03 25.7**	**-0.1**
GSCL	**Gusciola**	**1.00**	**338**	P	**Pg**	**23 03 24.8**	**-0.1**
GSCL				AML	AML		
	comp=E,1705µm,0.3s						
GSCL				AML	AML		
	comp=N,2010µm,0.4s						
GSCL				AML	AML		
	comp=E,1704µm,0.3s						
GSCL				AML	AML		
	comp=N,2011µm,0.5s						
EQUI	**Equi**	**1.01**	**318**	P	**Pg**	**23 03 25.3**	**+0.2**
EQUI				S	**Sg**	**23 03 38.4**	**+0.1**
EQUI	**Equi**	**1.01**	**318**	P	**Pg**	**23 03 25.4**	**+0.3**
IMOL	**Imola, Italy**	**1.05**	**26**	P	**Pb**	**23 03 25.9**	**0.0**
IMOL				AML	AML		
	comp=N,1220µm,0.6s						
IMOL				AML	AML		
	comp=E,1525µm,1.0s						
IMOL				AML	AML		
	comp=E,1926µm,0.4s						
IMOL				AML	AML		
	comp=N,1434µm,0.7s						
MURB	**Monte Urbino**	**1.05**	**98**		**Pg**	**23 03 25.3**	**-0.4**
MURB				Sn	**Sn**	**23 03 41.8**	**+0.6**
MURB	**Monte Urbino**	**1.05**	**98**	P	**Pg**	**23 03 25.4**	**-0.4**
PE3	**Peglio**	**1.05**	**74**	P	**Pb**	**23 03 25.9**	**0.0**
PE3				AML	AML		
	comp=E,4215µm,0.5s						
PE3				AML	AML		
	comp=N,5080µm,0.8s						
PE3				AML	AML		
	comp=N,5077µm,0.8s						
PE3				AML	AML		
	comp=E,4213µm,0.5s						
ATBU	**Serra di Buran**	**1.05**	**86**	P	**Pg**	**23 03 25.9**	**0.0**
ATFO	**Monte Foce - G**	**1.07**	**92**	P	**Pg**	**23 03 25.5**	**-0.7**
ATFO				AML	AML		
	comp=N,907µm,0.5s						
ATFO				AML	AML		
	comp=E,1225µm,0.7s						
ATFO				AML	AML		
	comp=E,1224µm,0.7s						
ATFO				AML	AML		
	comp=N,907µm,0.5s						
FIVI	**Fivizzano**	**1.08**	**320**	P	**Pb**	**23 03 27.0**	**+0.5**
RSM	**Repubblica di**	**1.10**	**62**	P	**Pn**	**23 03 27.1**	**-0.1**
PLMA	**Palmaria, Port**	**1.10**	**305**	P	**Pg**	**23 03 26.8**	**0.0**
PLMA	**Palmaria, Port**	**1.10**	**305**	P	**Pg**	**23 03 26.5**	**-0.3**
PLMA				AML	AML		
	comp=N,880µm,0.3s						
PLMA				AML	AML		
	comp=E,666µm,0.3s						
PLMA				AML	AML		
	comp=N,880µm,0.3s						
PLMA				AML	AML		
	comp=E,667µm,0.3s						
ATCC	**AVT- Casa Cast**	**1.15**	**101**	P	**Pg**	**23 03 27.7**	**+0.1**
ATSC	**Scheggia e Pas**	**1.15**	**89**	P	**Pg**	**23 03 27.4**	**-0.3**
FRON	**Frontone**	**1.19**	**85**	AML	AML		
	comp=N,278µm,0.5s						
FRON				AML	AML		
	comp=E,388µm,1.5s						
FRON				AML	AML		
	comp=N,449µm,1.5s						
FRON				AML	AML		
	comp=E,388µm,0.5s						
FRON				AML	AML		
	comp=E,253µm,0.5s						
FOSV	**Fossato di Vic**	**1.22**	**95**	P	**Pb**	**23 03 27.9**	**-0.8**
FOSV				AML	AML		
	comp=E,328µm,1.6s						
FOSV				AML	AML		
	comp=N,358µm,0.5s						
FOSV				AML	AML		
	comp=E,328µm,0.4s						
FOSV				AML	AML		
	comp=E,331µm,1.7s						
FOSV				AML	AML		
	comp=N,358µm,0.5s						
MPAG	**Monte Paganucc**	**1.22**	**80**	P	**Pb**	**23 03 28.1**	**-0.8**
MPAG				AML	AML		
	comp=N,399µm,1.1s						
MPAG				AML	AML		
	comp=N,399µm,0.9s						
MPAG				AML	AML		
	comp=E,414µm,0.8s						
MPAG				AML	AML		
	comp=E,598µm,0.8s						
MPAG				AML	AML		
	comp=E,415µm,0.8s						
MPAG				AML	AML		
	comp=N,771µm,1.0s						
MPAG				AML	AML		
	comp=N,399µm,1.1s						
SSFR	**Montelago di S**	**1.22**	**89**	P	**Pb**	**23 03 28.9**	**0.0**
MOMA	**Monte Martano**	**1.24**	**119**	P	**Pn**	**23 03 28.5**	**-0.6**
MOMA				AML	AML		
	comp=E,374µm,0.5s						
MOMA				AML	AML		
	comp=N,266µm,0.7s						
MOMA				AML	AML		
	comp=N,266µm,1.3s						
MOMA				AML	AML		
	comp=N,453µm,1.1s						
MOMA				AML	AML		
	comp=E,356µm,0.5s						
MOMA				AML	AML		
	comp=E,375µm,0.5s						
MOMA				AML	AML		
	comp=N,266µm,0.7s						
FIU	**Minerbio Fiu**	**1.25**	**13**	P	**Pb**	**23 03 29.2**	**-0.1**
FIU				AML	AML		
	comp=E,4010µm,0.5s						
FIU				AML	AML		
	comp=N,1780µm,1.1s						
FIU				AML	AML		
	comp=E,4010µm,1.5s						
FIU				AML	AML		
	comp=N,1722µm,0.7s						
FIU				AML	AML		
	comp=E,4013µm,0.5s						
GRAM	**Graiana**	**1.31**	**325**	P	**Pn**	**23 03 30.4**	**+0.3**
GRAM	**Graiana**	**1.31**	**325**	P	**Pn**	**23 03 30.4**	**+0.3**
RAVA	**Ravarino**	**1.34**	**0**	P	**Pg**	**23 03 33.8**	**+2.6**
ARVD	**Arcevia**	**1.34**	**86**	P	**Pn**	**23 03 30.8**	**+0.3**
SNTG	**Esanatoglia**	**1.35**	**96**	P	**Pn**	**23 03 30.9**	**+0.3**
CESX	**Cesi**	**1.35**	**126**		**Pn**	**23 03 30.5**	**-0.1**
CESX	**Cesi**	**1.35**	**126**	P	**Pn**	**23 03 30.2**	**-0.4**
MORSI	**Morsiglia**	**1.35**	**250**	P	**Pn**	**23 03 29.8**	**-0.8**
MORSI				S	**Sb**	**23 03 47.6**	**-0.9**
BARO	**Barbarano Roma**	**1.36**	**149**	P	**Pn**	**23 03 31.5**	**+0.8**
PESA	**Pesaro**	**1.36**	**67**	P	**Pn**	**23 03 30.8**	**+0.1**
PESA				AML	AML		
	comp=E,759µm,1.3s						
PESA				AML	AML		
	comp=N,683µm,0.8s						
PESA				AML	AML		
	comp=E,759µm,0.7s						
PESA				AML	AML		
	comp=N,683µm,0.8s						
PESA				AML	AML		
	comp=E,934µm,0.5s						
CESI	**CESI - Serrava**	**1.38**	**107**	P	**Pn**	**23 03 30.6**	**-0.4**
COR1	**Corinaldo**	**1.40**	**81**	P	**Pg**	**23 03 32.7**	**+0.3**
MML1	**Montelago di S**	**1.40**	**102**	P	**Pn**	**23 03 31.0**	**-0.3**
CAVE	**Cavezzo**	**1.45**	**357**	P	**Pg**	**23 03 33.9**	**+0.6**
MSSA	**Maissana**	**1.46**	**309**		**Pn**	**23 03 31.9**	**-0.2**
MSSA				IAML		23 03 54.0	
	comp=N,215nm,0.8s						
MSSA				IAML		23 03 54.4	
	comp=E,192nm,0.5s						
MSSA	**Maissana**	**1.46**	**309**	P	**Pn**	**23 03 31.9**	**-0.2**
MSSA	**Maissana**	**1.46**	**309**	P	**Pn**	**23 03 31.8**	**-0.3**
EL6	**Elcito**	**1.46**	**93**	P	**Pn**	**23 03 32.1**	**0.0**
PRMA	**PARMA**	**1.46**	**337**		**Pn**	**23 03 31.9**	**-0.1**
PRMA				IAML		23 04 08.1	
	comp=N,257nm,1.0s						
PRMA				IAML		23 04 09.7	
	comp=E,269nm,0.9s						
ARRO	**Arrone**	**1.48**	**124**	P	**Pn**	**23 03 32.6**	**+0.2**
FDMO	**Fiordimonte**	**1.50**	**104**		**Pn**	**23 03 31.6**	**-1.1**
FDMO				IAML		23 04 05.7	
	comp=N,73nm,0.7s						
FDMO	**Fiordimonte**	**1.50**	**104**	P	**Pn**	**23 03 32.8**	**+0.2**
GAVE	**Gavelli**	**1.50**	**118**	P	**Pn**	**23 03 33.4**	**+0.6**
CING	**Cingoli**	**1.53**	**91**	P	**Pn**	**23 03 33.5**	**+0.5**
PF6	**Pievefavera**	**1.55**	**99**	P	**Pb**	**23 03 34.3**	**-0.1**
NRCA	**Norcia**	**1.58**	**111**		**Pn**	**23 03 32.9**	**-1.0**
NRCA	**Norcia**	**1.58**	**111**	P	**Pb**	**23 03 35.0**	**0.0**
SERM	**Sermide**	**1.60**	**5**	P	**Pg**	**23 03 35.6**	**-0.6**
MC2	**Monte Cornacci**	**1.61**	**108**	P	**Pn**	**23 03 34.5**	**+0.1**
GUMA	**Gualdo di Mace**	**1.67**	**102**		**Pn**	**23 03 34.6**	**-0.4**
PGF	**Pioggiola**	**1.77**	**241**	*e*Pn	**Pn**	**23 03 35.6**	**-0.9**
PGF				*e*Sn	**Sn**	**23 03 58.0**	**-1.1**
	comp=N,60nm,0.3s						
RM33	**Pellescritta (**	**1.80**	**120**	P	**Pn**	**23 03 36.8**	**0.0**
BOB	**Bobbio (Coli)**	**1.80**	**319**	P	**Pb**	**23 03 38.4**	**-0.4**
MNTT	**Montottone**	**1.86**	**100**	P	**Pn**	**23 03 38.3**	**+0.7**
MNTT				AML	AML		
	comp=E,426µm,0.8s						
MNTT				AML	AML		
	comp=N,662µm,0.8s						
MNTT				AML	AML		
	comp=N,662µm,0.8s						
MNTT				AML	AML		
	comp=E,509µm,0.7s						
FIAM	**Fiamignano**	**1.88**	**127**	P	**Pb**	**23 03 40.0**	**-0.1**
RNCA	**Ronca, Sant'Ol**	**1.88**	**305**	P	**Pn**	**23 03 39.4**	**+1.6**
RNCA				AML	AML		
	comp=E,144µm,0.8s						
RNCA				AML	AML		
	comp=N,124µm,0.4s						
RNCA				AML	AML		
	comp=N,124µm,0.4s						
RNCA				AML	AML		
	comp=E,144µm,0.8s						
SMPL	**Sampolo**	**1.88**	**226**	P	**Pn**	**23 03 38.4**	**+0.5**
SMPL				AML	AML		
	comp=E,182µm,0.8s						
SMPL				AML	AML		
	comp=N,118µm,0.8s						
SMPL				AML	AML		
	comp=E,182µm,0.8s						
SMPL				AML	AML		
	comp=N,118µm,0.8s						
CAMP	**Campotosto**	**1.91**	**117**		**Pn**	**23 03 38.4**	**0.0**
TEOL	**Teolo**	**1.98**	**12**		**Pn**	**23 03 40.3**	**+1.0**
TEOL	**Teolo**	**1.98**	**12**	P	**Pn**	**23 03 39.4**	**+0.1**
CERT	**Cerreto**	**2.02**	**136**	P	**Pb**	**23 03 42.1**	**-0.3**
ZOVE	**Zovencedo**	**2.05**	**8**	P	**Pb**	**23 03 41.9**	**-1.1**
MARN	**Marana (Italy)**	**2.22**	**2**	P	**Pn**	**23 03 44.1**	**+1.5**
ROVR	**Rover Verones**	**2.23**	**359**	P	**Pn**	**23 03 43.3**	**+0.5**
VCEL	**Villa Celiera**	**2.26**	**116**	P	**Pn**	**23 03 44.1**	**+1.0**
VCEL				AML	AML		

	comp=N,145µm,1.1s						
VCEL				AML	AML		
	comp=E,105µm,1.5s						
VCEL				AML	AML		
	comp=N,145µm,0.9s						
VCEL				AML	AML		
	comp=N,145µm,1.1s						
VCEL				AML	AML		
	comp=E,133µm,0.7s						
AJAC	**Base Areonaval**	**2.28**	**230**	P	**Pn**	**23 03 44.0**	**+0.7**
AJAC				S	**Sn**	**23 04 12.0**	**+0.5**
MAGA	**Magasa**	**2.38**	**352**	P	**Pn**	**23 03 45.3**	**+0.4**
VARA	**Varagna**	**2.41**	**357**	P	**Pn**	**23 03 46.1**	**+0.8**
ASOL	**Asolo**	**2.45**	**13**	P	**Pn**	**23 03 46.8**	**+1.1**
INTR	**Introdacqua**	**2.50**	**123**		**Pn**	**23 03 47.4**	**+1.0**
CTI	**Castel Tesino**	**2.66**	**8**		**Pn**	**23 03 48.8**	**+0.1**
SBF	**Sospel**	**2.70**	**281**	*e*Pn	**Pn**	**23 03 48.3**	**-0.9**
TRI	**Trieste**	**2.98**	**39**		**Pn**	**23 03 52.6**	**-0.3**
CALF	**Calern**	**3.06**	**278**	P	**Pn**	**23 03 53.9**	**-0.2**
CALF				S	**Sn**	**23 04 28.7**	**-2.1**
STAL	**STALIGIAL**	**3.06**	**21**		**Pn**	**23 03 54.4**	**+0.2**
SABO	**M.te Sabotino**	**3.12**	**34**		**Pn**	**23 03 55.3**	**+0.4**
ENAUX	**Enaux**	**3.21**	**284**	P	**Pn**	**23 03 57.6**	**+1.3**
FUORN	**Ofenpass-Fuorn**	**3.26**	**350**		**Pn**	**23 03 58.2**	**+1.2**
FUORN				IAML		23 04 53.8	
	comp=N,31nm,0.9s						
FUORN				IAML		23 05 03.4	
	comp=E,28nm,0.7s						
TUE	**Stuetta**	**3.30**	**338**		**Pn**	**23 03 57.8**	**+0.3**
TUE				IAML		23 04 45.5	
	comp=E,24nm,0.8s						
TUE				IAML		23 05 03.1	
	comp=N,32nm,1.0s						
JAUF	**Jausiers**	**3.30**	**289**	P	**Pn**	**23 03 58.2**	**+0.6**
LMR	**La Mourre**	**3.35**	**270**	*e*Pn	**Pn**	**23 03 57.3**	**-0.7**
LMR				*e*Sn	**Sn**	**23 04 35.3**	**-2.6**
	comp=N,4.5nm,0.2s						
MBDF	**Montbardon**	**3.38**	**294**	*e*Pn	**Pn**	**23 03 57.8**	**-0.9**
MBDF	**Montbardon**	**3.38**	**294**	*e*P	**Pn**	**23 04 01.4**	**+2.7**
MBDF				*e*Sn	**Sn**	**23 04 36.1**	**-2.9**
	comp=N,11nm,0.4s						
CREF	**Crivoux**	**3.42**	**291**	P	**Pn**	**23 03 60.0**	**+0.7**
CREF				S	**Sn**	**23 04 43.8**	**+3.7**
TRIGF	**Trigance**	**3.43**	**277**	P	**Pn**	**23 03 59.6**	**+0.4**
TRIGF				S	**Sn**	**23 04 39.5**	**-0.5**
RRL	**Rocca Remolon**	**3.45**	**297**	P	**Pn**	**23 03 59.9**	**+0.3**
DAVOX	**Davos/Dischmat**	**3.47**	**346**	Pn	**Pn**	**23 04 02.1**	**+2.2**
	comp=N,6.3nm,0.3s,baz=162,slow=16,SNR=34						
DAVOX				Lg	Lg	23 04 42.3	
	comp=N,5.5nm,0.3s,baz=356,slow=18,SNR=3.7						
	comp=N,23nm,0.6s						
ABTA	**Abfaltersbach**	**3.48**	**16**	*i* Pn	**Pn**	**23 04 00.8**	**+0.9**
	comp=N,18nm,0.5s,SNR=50						
ABTA				*i* Sn	**Sn**	**23 04 42.6**	**+1.4**
	comp=N,7.4nm,0.3s						
FLAF	**Flassans-sur-I**	**3.53**	**271**	P	**Pn**	**23 04 00.5**	**-0.1**
FLAF	**Flassans-sur-I**	**3.53**	**271**	S	**Sn**	**23 04 40.6**	**-1.8**
BNI	**Bardonecchia**	**3.57**	**299**		**Pn**	**23 04 01.8**	**+0.6**
FETA	**Feichten**	**3.61**	**356**	*i* Pn	**Pn**	**23 04 04.1**	**+2.3**
	comp=N,3.0nm,0.2s,SNR=12						
FETA				*e*Sn	**Sn**	**23 04 47.5**	**+2.8**
	comp=N,10nm,0.5s						
MYKA	**Terra Mystica**	**3.68**	**28**	*i* Pn	**Pn**	**23 04 03.9**	**+1.2**
	comp=N,1.4nm,0.3s						
MYKA				*i* Sn	**Sn**	**23 04 46.6**	**+0.4**
	comp=N,4.8nm,0.3s						
BLAF	**les Blancs**	**3.71**	**280**	P	**Pn**	**23 04 04.0**	**+1.0**
LPG	**La Plagne**	**3.75**	**305**	*e*P	**Pn**	**23 04 05.9**	**+2.1**
LPL	**La Plagne**	**3.77**	**305**	*e*P	**Pn**	**23 04 06.2**	**+2.2**
SQTA	**Sankt Quirin**	**3.80**	**1**	*i* Pn	**Pn**	**23 04 05.9**	**+1.5**
	comp=N,6.0nm,0.2s,SNR=36						
SQTA				*i* Sn	**Sn**	**23 04 50.3**	**+1.0**
	comp=N,22nm,0.3s						
SGRT	**San Giovanni R**	**3.81**	**114**	Pn	**Pn**	**23 04 03.6**	**-0.8**
SGRT				IAML		23 04 51.6	
	comp=N,22nm,1.4s						
SGRT				IAML		23 05 16.9	
	comp=E,24nm,1.4s						
ARTF	**Artigues**	**3.86**	**274**	P	**Pn**	**23 04 05.5**	**+0.4**
ARTF				S	**Sn**	**23 04 49.6**	**-0.9**
WTTA	**Wattenberg**	**3.86**	**5**	*i* Pn	**Pn**	**23 04 06.9**	**+1.6**
	comp=E,1.9nm,0.2s,SNR=13						
MLYF	**Mely**	**3.91**	**280**	P	**Pn**	**23 04 07.1**	**+1.3**
RSL	**Roselend**	**3.92**	**307**	P	**Pn**	**23 04 09.1**	**+3.0**
MOTA	**Moosalm**	**3.93**	**0**	*i* Pn	**Pn**	**23 04 07.6**	**+1.4**
	comp=E,7.5nm,0.4s,SNR=19						
MOTA				*i* Sn	**Sn**	**23 04 53.4**	**+1.0**
	comp=E,37nm,0.8s						
WATA	**Walderalm**	**3.93**	**5**	*i* Pn	**Pn**	**23 04 06.8**	**+0.6**
	comp=E,3.3nm,0.2s,SNR=11						
WATA				*i* Sn	**Sn**	**23 04 55.4**	**+2.9**
	comp=E,33nm,0.7s						
LEPF	**PUYLOUBIER**	**3.93**	**273**	P	**Pn**	**23 04 06.5**	**+0.4**
LEPF				S	**Sn**	**23 04 51.3**	**-1.0**
OBKA	**Obir**	**3.94**	**37**	*i* Pn	**Pn**	**23 04 09.2**	**+3.0**
	comp=E,0.7nm,0.2s						
DAVA	**Damuels**	**3.96**	**348**	*i* Pn	**Pn**	**23 04 07.3**	**+0.7**
	comp=E,11nm,0.6s,SNR=12						
DAVA				*i* Sn	**Sn**	**23 04 56.9**	**+3.6**
	comp=E,71nm,0.6s						
BSTF	**la Bastide-des**	**3.99**	**279**	P	**Pn**	**23 04 07.7**	**+0.8**
BSTF				S	**Sn**	**23 04 51.5**	**-2.2**
SENIN	**Lac Senin/Sane**	**4.00**	**319**		**Pn**	**23 04 09.5**	**+2.3**
SENIN				IAML		23 05 00.4	
	comp=E,9.4nm,0.9s						
SENIN				IAML		23 05 04.9	
	comp=N,10nm,1.1s						
ORIF	**Oris-en-Rattie**	**4.05**	**294**	*e*P	**Pn**	**23 04 10.1**	**+2.4**
ORIF				*e*Sn	**Sn**	**23 04 51.9**	**-3.3**
	comp=N,14nm,0.5s						
ORIF	**Oris-en-Rattie**	**4.05**	**294**	P	**Pn**	**23 04 10.4**	**+2.6**
ORIF	**Oris-en-Rattie**	**4.05**	**294**	S	**Sn**	**23 04 56.4**	**+1.2**
SMRF	**Simiane la Rot**	**4.05**	**280**	*e*Pn	**Pn**	**23 04 08.9**	**+1.2**
RETA	**Reutte**	**4.08**	**357**	*i* Pn	**Pn**	**23 04 10.4**	**+2.3**
	comp=N,9.1nm,0.6s,SNR=17						
RETA				*e*Sn	**Sn**	**23 04 59.1**	**+3.1**
	comp=N,27nm,0.7s						
RUSF	**Rustrel**	**4.11**	**279**	P	**Pn**	**23 04 09.5**	**+1.0**
RUSF				S	**Sn**	**23 04 55.9**	**-0.8**
VSL	**Villasalto**	**4.13**	**199**		**Pn**	**23 04 10.2**	**+1.4**
VSL				IAML		23 05 01.4	
	comp=E,8.7nm,1.1s						
AIGLE	**Aigle**	**4.15**	**316**	P	**Pn**	**23 04 11.7**	**+2.6**
LESA	**Schwarzleotal**	**4.16**	**15**	*i* Pn	**Pn**	**23 04 10.9**	**+1.7**
	comp=E,11nm,0.6s,SNR=59						
LESA				*e*Sn	**Sn**	**23 04 59.2**	**+1.3**
	comp=E,15nm,0.7s						
GRN	**Grenoble**	**4.25**	**297**	P	**Pn**	**23 04 13.0**	**+2.4**
SOKA	**Soboth**	**4.29**	**39**	*i* Pn	**Pn**	**23 04 13.0**	**+1.9**
	comp=E,2.9nm,0.8s,SNR=5.4						
SOKA				*i* Sn	**Sn**	**23 04 59.1**	**-2.1**
	comp=E,4.9nm,0.6s						
OGMY	**Moye**	**4.46**	**305**	P	**Pn**	**23 04 15.9**	**+2.5**
BALST	**Balsthal**	**4.59**	**330**	P	**Pn**	**23 04 16.1**	**+0.9**
BALST	**Balsthal**	**4.59**	**330**	S	**Sn**	**23 05 07.5**	**-1.2**
SULZ	**Cheisacher**	**4.62**	**334**	P	**Pn**	**23 04 16.7**	**+1.2**
GIMEL	**St. Georges /**	**4.63**	**314**	P	**Pn**	**23 04 17.5**	**+1.7**
SLE	**Schleitheim**	**4.72**	**338**	P	**Pn**	**23 04 17.1**	**+0.3**
SLE	**Schleitheim**	**4.72**	**338**	S	**Sn**	**23 05 11.1**	**-0.6**
OG35	**Corcelles**	**4.74**	**306**	P	**Pn**	**23 04 19.1**	**+1.9**
CABF	**La Chapelle**	**4.78**	**314**	*e*Pn	**Pn**	**23 04 17.3**	**-0.5**
BRANT	**Les Verrieres**	**4.80**	**319**	P	**Pn**	**23 04 19.5**	**+1.3**
BOURR	**Bourrignon**	**4.82**	**327**	P	**Pn**	**23 04 19.4**	**+1.1**
BOURR	**Bourrignon**	**4.82**	**327**	S	**Sn**	**23 05 14.6**	**+0.3**
VIVF	**Saint-Julien-I**	**4.85**	**289**	*e*Pn	**Pn**	**23 04 18.0**	**-0.7**
VIVF				*e*Sn	**Sn**	**23 05 11.0**	**-3.9**
	comp=E,1.5nm,0.3s						
GUT	**Gutenstein**	**4.86**	**344**	P	**Pn**	**23 04 19.1**	**+0.3**
GUT	**Gutenstein**	**4.86**	**344**	S	**Sn**	**23 05 12.8**	**-2.3**
ENDD	**Endenburg**	**4.90**	**332**	P	**Pn**	**23 04 19.9**	**+0.5**
ARSA	**Arzberg**	**4.94**	**38**		**Pn**	**23 04 21.2**	**+1.3**
ARSA				IAML		23 06 04.4	
	comp=N,6.2nm,1.6s						
ARSA				IAML		23 06 05.5	
	comp=E,7.1nm,1.8s						
ARSA	**Arzberg**	**4.94**	**38**	*i* Pn	**Pn**	**23 04 19.6**	**-0.3**
	comp=E,3.4nm,0.6s						
CHMF	**Charmoille**	**4.95**	**322**	P	**Pn**	**23 04 21.3**	**+1.2**
CHMF				S	**Sn**	**23 05 17.0**	**-0.4**
MOA	**Molln**	**4.96**	**25**	*i* Pn	**Pn**	**23 04 22.1**	**+2.0**
	comp=E,3.5nm,0.6s,SNR=7.5						
MOA				*i* Sn	**Sn**	**23 05 17.8**	**+0.2**
	comp=E,7.1nm,0.6s						
FELD	**Feldberg im Sc**	**4.96**	**335**	P	**Pn**	**23 04 21.2**	**+0.9**
KIZ	**Kirchzarten**	**5.06**	**335**	P	**Pn**	**23 04 22.1**	**+0.5**
KIZ	**Kirchzarten**	**5.06**	**335**	S	**Sn**	**23 05 17.9**	**-2.1**
SSB	**Saint Sauveur**	**5.06**	**294**		**Pn**	**23 04 22.6**	**+1.0**
SSB				IAML		23 05 34.1	
	comp=N,4.7nm,3.0s						
SSB				IAML		23 06 02.5	
	comp=E,4.7nm,3.1s						
SSB	**Saint Sauveur**	**5.06**	**294**	P	**Pn**	**23 04 22.9**	**+1.3**
BOUC	**Bouclans**	**5.13**	**320**	P	**Pn**	**23 04 23.6**	**+1.1**
BOUC				S	**Sn**	**23 05 23.1**	**+1.2**
FOURG	**Fourg**	**5.25**	**316**	P	**Pn**	**23 04 25.1**	**+1.0**
WALT	**Westhalten**	**5.28**	**331**	P	**Pn**	**23 04 25.2**	**+0.6**
BFO	**Black Forest**	**5.28**	**339**		**Pn**	**23 04 25.4**	**+0.8**
LASF	**Ste Croix**	**5.29**	**280**	*e*Pn	**Pn**	**23 04 24.4**	**-0.3**
RONF	**Ronchamp**	**5.31**	**325**	P	**Pn**	**23 04 25.6**	**+0.6**
RONF				S	**Sn**	**23 05 25.8**	**-0.5**
HINF	**Hinteralfeld**	**5.31**	**327**	*e*Pn	**Pn**	**23 04 25.4**	**+0.3**
HINF				*e*Sn	**Sn**	**23 05 23.0**	**-3.4**
	comp=E,6.3nm,0.4s						
OPP	**Oppenau**	**5.47**	**339**	P	**Pn**	**23 04 27.5**	**+0.3**
OPP	**Oppenau**	**5.47**	**339**	S	**Sn**	**23 05 27.2**	**-3.0**
ECH	**Echery**	**5.53**	**331**		**Pn**	**23 04 28.6**	**+0.5**
ECH	**Echery**	**5.53**	**331**	P	**Pn**	**23 04 28.5**	**+0.5**
CONA	**Conrad Observa**	**5.61**	**35**	*i* Pn	**Pn**	**23 04 31.3**	**+2.1**
	comp=E,2.1nm,0.5s						
CONA				*i* Sn	**Sn**	**23 05 32.3**	**-1.4**
	comp=E,4.6nm,0.8s						
CDF	**Champ du Feu**	**5.66**	**333**	*e*Pn	**Pn**	**23 04 29.6**	**-0.3**
CDF				*e*Sn	**Sn**	**23 05 29.7**	**-5.3**
	comp=E,4.7nm,0.2s						
HAU	**Haudompre**	**5.67**	**326**	*e*Pn	**Pn**	**23 04 30.3**	**+0.4**
HAU				*e*Sn	**Sn**	**23 05 30.3**	**-4.8**
	comp=E,5.4nm,0.2s						
GEC2	**GERESS Array S**	**5.72**	**17**		**Pn**	**23 04 30.6**	**0.0**
GERES	**GERESS Array B**	**5.72**	**17**		**Pn**	**23 04 30.7**	**0.0**
GERES	**GERESS Array B**	**5.72**	**17**	Pn	**Pn**	**23 04 30.0**	**-0.7**
	comp=E,0.2nm,0.3s,baz=194,slow=12,SNR=39						
GERES				Lg	Lg	23 05 48.6	
	baz=200,slow=23,SNR=2.2						
	comp=E,3.5nm,0.5s						
HOHE	**HOHENGOEFT**	**5.81**	**336**	P	**Pn**	**23 04 32.0**	**+0.1**
HOHE				S	**Sn**	**23 05 36.2**	**-2.4**
CKRC	**Cesky Krumlov**	**5.84**	**21**	*e*PN	**Pn**	**23 04 32.9**	**+0.6**
NEEW	**Neewiller pres**	**5.92**	**340**	P	**Pn**	**23 04 33.9**	**+0.6**
NEEW				S	**Sn**	**23 05 40.1**	**-1.0**
KHC	**Kasperske Hory**	**5.96**	**16**	*e*PN	**Pn**	**23 04 33.8**	**-0.2**
KHC				*e*PG	Pg	23 05 04.5	+4.7
KHC				*e*SN	**Sn**	**23 05 38.7**	**-3.7**
KHC				*e*x	x	23 05 43.0	
KHC				*e*x	x	23 06 16.5	
TIP	**Timpagrande**	**6.01**	**133**	Pn	**Pn**	**23 04 32.2**	**-2.4**
SMF	**Signal de Mont**	**6.07**	**305**	*e*P	**Pn**	**23 04 35.7**	**+0.2**
SMF				*e*Sn	**Sn**	**23 05 39.9**	**-5.1**
	comp=E,5.1nm,0.5s						
GRFO	**Grafenberg**	**6.28**	**1**	Pn	**Pn**	**23 04 38.6**	**+0.4**
GRA1	**Grafenberg Arr**	**6.28**	**1**	Pn	**Pn**	**23 04 39.4**	**+1.1**
CEL	**Celeste**	**6.30**	**143**	Pn	**Pn**	**23 04 38.3**	**-0.4**
PAGF	**Fort de Pagny**	**6.36**	**326**	*e*Pn	**Pn**	**23 04 39.3**	**-0.1**
PAGF				*e*Sn	**Sn**	**23 05 47.1**	**-4.9**
	comp=E,9.7nm,0.5s						
ZVC	**Zvikov**	**6.39**	**18**	*e*PN	**Pn**	**23 04 40.3**	**+0.5**
ZVC				*e*SN	**Sn**	**23 05 49.1**	**-3.7**
LOR	**Lormes**	**6.39**	**310**	*e*Pn	**Pn**	**23 04 40.3**	**+0.4**
	baz=120						
AVF	**Avril sur Loir**	**6.44**	**304**	*e*P	**Pn**	**23 04 41.8**	**+1.4**
MTLF	**Montolieu**	**6.48**	**272**	*e*Pn	**Pn**	**23 04 40.3**	**-0.7**
SSF	**Saint Saulge**	**6.48**	**307**	*e*P	**Pn**	**23 04 44.3**	**+3.2**
SSF				*e*Sn	**Sn**	**23 05 49.1**	**-6.0**
	comp=E,1.3nm,0.3s						
MODS	**Modra-Piesok**	**6.56**	**39**	*e*PN	**Pn**	**23 04 44.0**	**+1.8**
MODS				*e*SN	**Sn**	**23 05 52.2**	**-5.0**
BGF	**Bois d'Agland**	**6.64**	**301**	*e*Pn	**Pn**	**23 04 44.2**	**+0.9**
CAF	**Calviac**	**6.67**	**286**	*e*Pn	**Pn**	**23 04 44.4**	**+0.7**
TIR	**Tirane**	**6.81**	**105**	Pn	**Pn**	**23 04 43.4**	**-2.2**
TCF	**Toulx Ste Croi**	**6.94**	**297**	*e*Sn	**Sn**	**23 06 00.5**	**-5.9**
	comp=E,0.5nm,0.3s						
PRU	**Pruhonice**	**6.98**	**19**	*e*PN	**Pn**	**23 04 48.6**	**+0.7**
PRU				*e*SN	**Sn**	**23 06 01.5**	**-5.9**
VRAC	**Vranov**	**7.01**	**31**	LR	LR	23 08 00.5	
	comp=E,41nm,19.4s,baz=185,slow=46						
CEST	**Esterri de Car**	**7.27**	**267**	Pn	**Pn**	**23 04 52.5**	**+0.5**
VYHS	**Vyhne**	**7.40**	**44**	*e*PN	**Pn**	**23 04 54.4**	**+0.7**
LFF	**La Frestale**	**7.60**	**285**	*e*Pn	**Pn**	**23 04 55.2**	**-1.3**
BRG	**Berggiesshubel**	**7.70**	**14**	Pn	**Pn**	**23 04 58.5**	**+0.6**
BRG				Pg	**Pg**	**23 05 36.2**	**+3.2**
BRG				r		23 06 18.3	
BRG	**Berggiesshubel**	**7.70**	**14**	Sg	**Sg**	**23 07 17.7**	**+5.0**
BRG				Amp		23 07 28.7	
	comp=Z,5.2nm,1.0s						
KEST	**Kesra**	**7.80**	**191**	Pn	**Pn**	**23 04 59.5**	**+0.3**
EPF	**Esparros**	**7.87**	**271**	*e*Pn	**Pn**	**23 04 58.8**	**-1.4**
CLL	**Collm**	**8.00**	**9**	Pn	**Pn**	**23 05 01.7**	**-0.1**
CLL	**Collm**	**8.00**	**9**	*e*Pn	**Pn**	**23 05 02.0**	**+0.2**
CLL				*e*x	x	23 06 21.0	
CLL				*e*(Sb)	**Sn**	**23 06 39.0**	**+6.7**
CLL				*e*x	x	23 07 10.0	
CLL				*e*Sg	**Sg**	**23 07 21.0**	**-1.1**
MLR	**Muntele Rosu**	**10.81**	**74**	LR	LR	23 11 11.6	
	comp=Z,43nm,19.1s,baz=252,slow=46						
MNK	**Minsk**	**15.59**	**39**	*i* P	**Pn**	**23 06 43.6**	**-1.6**
	comp=E,8.0nm,0.7s						
MNK				*i* P	**Pn**	**23 06 43.6**	**-1.6**
	comp=N,12nm,0.8s						
MNK				*i* P	**Pn**	**23 06 43.6**	**-1.6**
	comp=Z,5.0nm,0.7s,baz=232						
MNK				*i* PP	**pP**	**23 06 51.5**	**-0.7**
MNK				*i* PPP	PPP	23 06 59.2	
MNK				*i* S	**Sn**	**23 09 36.2**	**-1.7**
MNK				*i* SS	**SnSn**	**23 09 50.2**	**-0.3**
MNK				*i* SSS	SSS	23 10 02.9	
MNK				*i* LQ	LQ	23 11 16.0	
MNK				*i* LR	LR	23 12 26.7	
MNK				*i* LRM	MLR	23 13 09.3	
	comp=Z,17nm,13.2s						
MNK				*i* LRM	MLR	23 13 52.9	
	comp=E,251nm,22.2s						
MNK				*i* LRM	MLR	23 13 54.9	
	comp=N,204nm,22.2s						
BRTR	**Keskin Array B**	**17.25**	**95**	LR	LR	23 15 23.2	
	comp=N,21nm,20.8s,baz=138,slow=43						
NOA	**NORSAR Array B**	**17.65**	**0**	LR	LR	23 14 56.8	
	comp=N,10nm,18.3s,baz=110,slow=42						
FINES	**FINESS Array B**	**20.14**	**21**	P	Pn	23 07 42.6	+1.2
	comp=N,0.1nm,0.3s,baz=206,slow=16,SNR=5.2						
	comp=N,1.5nm,0.7s						
MKAR	**Makanchi Array**	**48.77**	**60**	P	**P**	**23 11 54.2**	**+3.6**
	comp=N,0.1nm,0.5s,baz=288,slow=7.1,SNR=2.6						
	comp=N,0.1nm,0.5s						

GCG 28 23:05:33.7±0.8**, 14°.69N**×**92°.08W, h24**^{km}±3^{km}**, MD3.8, ML3.5, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMCA	**Catarina**	**0.17**	**1**	*i* P	Pb	23 05 39.0	0.0
THIG		**0.28**	**320**	*i* P	Pb	23 05 39.9	-0.5
THIG				*i* S	Sb	23 05 45.4	+0.3
THIG				IAML		23 05 45.7	
	comp=E,4µm,0.2s						
SOKI	**Kika Raxquin**	**0.67**	**78**	*i* P	Pn	23 05 48.4	+0.4
STG8	**El Palmar, Qui**	**0.74**	**108**	*i* P	Pb	23 05 44.1	-4.0
STG8				*e*S	Sb	23 05 52.0	-6.0
STG0	**El Palmar, Qui**	**0.76**	**110**	*i* P	Pb	23 05 44.3	-4.1
STG0				*e*S	Sb	23 05 52.1	-6.2
STG0				IAML		23 05 54.3	
	comp=E,4µm,0.1s						
ESSG	**Sabana Grande**	**1.25**	**104**	*e*P	Pn	23 05 55.7	+0.1
FG16	**Alotenango, Sa**	**1.57**	**105**	*i* P	Pn	23 05 55.6	-4.7
FG16				*e*S	Sn	23 06 12.1	-7.9
FG16				IAML		23 06 15.3	
	comp=E,1µm,0.2s						
CCIG	**Comitan**	**1.59**	**358**	*e*P	Pb	23 06 01.5	-0.9
CCIG				*e*S	Sb	23 06 22.7	+0.5

NEIC ***28*** *23:06:44.4±0.5, 19°.20N±0°.03×155°.35W±0°.04, h43*^{km}*±3*^{km}*, Error ellipse: s-maj=6.3km s-min=2.9km az=132.0*

HVO 28 23:06:45.0±0.6**, 19°.19N**±0°.04×**155°.34W**±0°.04**, h45**^{km}±1^{km}**, ML1.7**/1**, ML2.1**/39(NEIC)**, Error ellipse: s-maj=7.2km s-min=3.3km az=136.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HTC	**Hot Caves**	**0.07**	**309**		Pn	23 06 51.8	-0.4
HLP	**Hilina Pali**	**0.11**	**14**		Pn	23 06 51.7	-0.7
HLP					Sn	23 06 57.0	-0.6
SDHHI	**Sand Hill**	**0.20**	**11**		Pn	23 06 52.1	-0.9
SDHHI					Sn	23 06 57.4	-1.3
RIM	**Rim**	**0.21**	**16**		Pn	23 06 52.2	-0.9
RIM					Sn	23 06 57.6	-1.1
AIN	**Ainahou**	**0.21**	**327**		Sn	23 06 58.0	-0.9
AIN	**Ainahou**	**0.21**	**327**	Pn	Pn	23 06 52.5	-0.7
AIN				IAML		23 06 58.4	
	comp=E,151nm,0.3s						
AIN				IAML		23 07 06.8	
	comp=N,149nm,2.8s						
PUH	**Pauahi**	**0.21**	**32**		Sn	23 06 57.5	-1.3
PUH	**Pauahi**	**0.21**	**32**		Pn	23 06 51.9	-1.2
PUH				IAML		23 06 59.4	
	comp=N,124nm,2.5s						
PUH				IAML		23 07 00.8	
	comp=E,108nm,2.0s						
KKO	**Keanakako'i**	**0.22**	**18**		Pn	23 06 52.3	-0.9
KKO					Sn	23 06 57.7	-1.1
WRMHI	**West Rim**	**0.22**	**9**		Pn	23 06 52.1	-1.0
WRMHI					Sn	23 06 58.2	-0.7
OBL	**Observatory Le**	**0.23**	**12**		Pn	23 06 52.2	-1.0
BYL	**Byron's Ledge**	**0.23**	**18**	Pn	Pn	23 06 52.3	-1.0
BYL	**Byron's Ledge**	**0.23**	**18**		Sn	23 06 57.7	-1.3
UWE	**Uwekahuna**	**0.23**	**10**	Pn	Pn	23 06 52.1	-1.1
UWB	**Uwekahuna Bluf**	**0.24**	**13**		Pn	23 06 52.1	-1.2
UWB					Sn	23 06 57.9	-1.3
HATHI	**Halema‘uma‘u T**	**0.24**	**17**		Pn	23 06 52.3	-1.0
HATHI				IAML		23 06 58.2	
	comp=E,137nm,2.1s						
HATHI				IAML		23 07 00.1	
	comp=N,181nm,2.8s						
SBLHI	**Steaming Bluff**	**0.24**	**15**		Pn	23 06 52.2	-1.1
KNHH	**Kane Nui o Ham**	**0.24**	**40**	Pn	Pn	23 06 52.5	-0.9
KHU	**Kahuku**	**0.27**	**282**		Pn	23 06 52.6	-1.1
KHU					Sn	23 06 58.2	-1.5
KHU	**Kahuku**	**0.27**	**282**	IAML		23 07 03.3	
	comp=N,156nm,3.1s						
STCH	**Steam Cracks**	**0.28**	**46**	Pn	Pn	23 06 52.6	-0.9
NPOC	**North of Pu‘u**	**0.29**	**47**		Pn	23 06 52.9	-0.8
NPOC					Sn	23 06 58.6	-1.3
MLH	**Mauna Loa**	**0.31**	**351**		Pn	23 06 53.1	-0.9
MLH					Sn	23 06 59.1	-1.3
MLH	**Mauna Loa**	**0.31**	**351**	IAML		23 07 01.8	
	comp=N,151nm,2.4s						
MLH				IAML		23 07 10.8	
	comp=E,137nm,2.8s						
MWH	**Mokuaweoweo**	**0.38**	**320**		Pn	23 06 53.7	-1.5
MWH				IAML		23 07 09.1	
	comp=N,162nm,2.2s						
MWH	**Mokuaweoweo**	**0.38**	**320**		Sn	23 07 00.8	-1.5
MWH	**Mokuaweoweo**	**0.38**	**320**	IAML		23 06 59.4	
	comp=E,262nm,2.1s						
JOKA	**Jonika Flow**	**0.40**	**52**		Pn	23 06 53.8	-1.0
JOKA	**Jonika Flow**	**0.40**	**52**	IAML		23 07 02.2	
	comp=E,115nm,2.9s						
JOKA				IAML		23 07 15.8	
	comp=N,165nm,1.6s						
HMH	**Humu‘ula Sheep**	**0.43**	**341**		Pn	23 06 54.5	-1.0
HMH					Sn	23 07 01.6	-1.3
HMH	**Humu‘ula Sheep**	**0.43**	**341**	IAML		23 07 12.9	
	comp=N,134nm,3.2s						
ALEP	**Alea Permanent**	**0.46**	**320**		Pn	23 06 54.2	-1.6
ALEP					Sn	23 07 01.4	-2.0
POHA	**Pohakuloa**	**0.59**	**342**		Pn	23 06 55.8	-1.7
POHA					Sn	23 07 03.6	-2.7
POHA	**Pohakuloa**	**0.59**	**342**	IAML		23 07 10.5	
	comp=N,81nm,2.6s						
POHA				IAML		23 07 19.2	
	comp=N,108nm,3.2s						
HUH	**Hualalai**	**0.68**	**316**	Pn	Pn	23 06 58.2	-0.4

IDC ***28*** *23:22:52.8±1.3, 56°.69N×163°.70E, h0*^{km}*, mb3.3/5, mbtmp3.3/6, ML2.3/1, Error ellipse: s-maj=42.8km s-min=20.9km az=149.0*

KRSC ***28*** *23:22:54.4±2.4, 56°.05N×163°.85E, h15*^{km}*±18*^{km}*, Ml3.9*

ISC 28 23:22:53.3±1.1**, 56°.19N**±0°.07×**163°.89E**±0°.07**, h10**^{km}**, n36, σ2**^{s}**.07**/35**, mb3.3**/5**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.60**	**272**	*e*P	**Pg**	**23 23 05.4**	**+0.5**
KBG	**Krutoberegovo**	**0.67**	**276**	*e*P	**Pg**	**23 23 06.2**	**0.0**
KBG				*e*S	**Sb**	**23 23 17.1**	**+0.9**
SMKR	**Semkarok**	**1.40**	**287**	*e*P	**Pn**	**23 23 18.2**	**-0.8**
ZLN	**Zelenaya**	**1.74**	**266**	*e*P	**Pb**	**23 23 25.2**	**-0.1**
CIRR	**Tsirk**	**1.76**	**269**	*e*P	**Pn**	**23 23 25.2**	**+1.2**
LGNR	**Loginova**	**1.79**	**268**	*e*P	**Pb**	**23 23 26.4**	**0.0**
BZGR	**Bezymyannyi-Gr**	**1.81**	**263**	*e*P	**Pn**	**23 23 26.0**	**+1.4**
KLY	**Klyuchi**	**1.81**	**275**	*e*P	**Pn**	**23 23 23.8**	**-0.7**
KRSR	**Krestovskiy**	**1.86**	**272**	*e*P	**Pn**	**23 23 26.6**	**+1.3**
BZWR	**Bezymyannyi-We**	**1.92**	**265**	*e*P	**Pn**	**23 23 27.7**	**+1.6**
BZMR	**Bezymyannaya**	**1.93**	**264**	*e*P	**Pn**	**23 23 27.6**	**+1.4**
KIRR	**Kirishev**	**2.00**	**265**	*e*P	**Pn**	**23 23 28.7**	**+1.4**
MKZ	**Mys Kozlova**	**2.05**	**218**	*e*P	**Pn**	**23 23 27.5**	**-0.3**
KPT	**Kopyto**	**2.07**	**265**	*e*P	**Pn**	**23 23 30.1**	**+2.0**
KMNR	**Kamenistaya**	**2.10**	**260**	*e*P	**Pb**	**23 23 30.7**	**-0.8**
TUMD	**Tumrok D**	**2.21**	**245**	*e*P	**Pb**	**23 23 31.7**	**-1.6**
KOZ	**Kozyrevsk**	**2.25**	**268**	*e*P	**Pn**	**23 23 32.6**	**+2.0**
SRDR	**Sredinnyy**	**2.33**	**275**	*e*P	**Pn**	**23 23 33.5**	**+1.8**
SPN	**Mys Shipunski**	**3.83**	**218**	*e*P	**Pn**	**23 23 52.0**	**-0.2**
SPN				*e*S	**Sn**	**23 24 35.7**	**-1.5**
SDLR	**Sedlovina**	**4.12**	**227**	*e*P	**Pn**	**23 23 59.0**	**+2.7**
KRER	**Koryakskii**	**4.15**	**228**	*e*P	**Pn**	**23 24 00.5**	**+3.7**
KRX	**Arik**	**4.16**	**229**	*e*P	**Pn**	**23 23 59.2**	**+2.4**
SMAR	**Somma**	**4.16**	**227**	*e*P	**Pn**	**23 23 59.7**	**+2.7**
AVH	**Avacha**	**4.18**	**228**	*e*P	**Pn**	**23 24 00.7**	**+3.4**
UGLR	**Uglovaya**	**4.19**	**227**	*e*P	**Pn**	**23 24 00.1**	**+2.8**
KOK	**Koryaka**	**4.21**	**229**	*e*P	Pb	23 24 01.9	-5.5
GNL	**Ganaly**	**4.25**	**236**	*e*P	**Pn**	**23 24 01.0**	**+3.0**
PETK	**Petropavlovsk-**	**4.74**	**232**	Pn	**Pn**	**23 24 08.5**	**+3.7**
	0.6nm,0.3s,baz=53,slow=17,SNR=6.8						
PETK				Sn	**Sb**	**23 25 09.6**	**-3.9**
	0.4nm,0.3s,baz=32,slow=14,SNR=1.5						
	2.1nm,0.5s						
ILAR	**Eielson Array**	**25.09**	**50**	P	**P**	**23 28 17.1**	**-0.5**
	0.2nm,0.5s,baz=257,slow=8.8,SNR=4.1						
	0.2nm,0.5s						
MJAR	**Matsushiro Arr**	**26.20**	**232**	P	**P**	**23 28 31.2**	**+3.2**
	1.8nm,0.7s,baz=26,slow=8.7,SNR=5.2						
	1.8nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**36.47**	**175**	T	T	00 08 40.9	
	baz=357,slow=76,SNR=283						
H11N3	**WAKE ISLAND Hy**	**36.49**	**175**	T	T	00 08 39.0	
	baz=357,slow=76,SNR=182						
H11N1	**WAKE ISLAND Hy**	**36.49**	**175**	T	T	00 08 41.3	
	baz=357,slow=76,SNR=210						
KURBB	**Kurchatov Arra**	**48.09**	**301**	P	**P**	**23 31 30.8**	**-1.9**
	0.1nm,0.4s,baz=57,slow=8.2,SNR=2.5						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**48.81**	**295**	P	**P**	**23 31 36.8**	**-1.5**
	0.1nm,0.4s,baz=61,slow=7.0,SNR=4.7						
	0.1nm,0.4s						
TXAR	**Lajitas Array**	**67.46**	**71**	P	**P**	**23 33 49.6**	**+0.4**
	0.2nm,0.6s,baz=313,slow=6.1,SNR=3.7						
	0.2nm,0.6s						

IDC ***28*** *23:30:20.5±0.9, 1°.92N×126°.37E, h0*^{km}*, mb4.0/7, mbtmp4.0/8, ML3.8/1, MS3.3/2, Error ellipse: s-maj=59.1km s-min=15.6km az=73.0*

NEIC ***28*** *23:30:30.1±0.8, 1°.5N±0°.2×126°.3E±0°.1, h37*^{km}*±25*^{km}*, mb4.1/8, Error ellipse: s-maj=33.6km s-min=9.7km az=205.0*

ISC 28 23:30:27.4±0.8**, 1°.87N**±0°.10×**126°.5E**±0°.1**, h47**^{km}**, n22, σ1**^{s}**.15**/21**, mb4.2**/11**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.42**	**140**		**Pn**	**23 30 51.1**	**+0.4**
TOLI2	**Tolitoli**	**5.72**	**263**	Pn	**Pn**	**23 31 49.6**	**-0.2**
MYLDM	**Lahad Datu**	**8.60**	**293**		**Pn**	**23 32 32.5**	**+3.3**
MTN	**Manton Dam**	**15.34**	**163**	Pn	**Pn**	**23 34 00.2**	**-0.6**
FITZ	**Fitzroy Crossi**	**19.86**	**182**	P	**P**	**23 34 53.6**	**-1.0**
FITZ	**Fitzroy Crossi**	**19.86**	**182**	P	**P**	**23 34 54.4**	**-0.2**
	0.2nm,0.3s,baz=17,slow=11,SNR=1.4						
	0.7nm,0.3s						
WB0	**Warramunga Arr**	**22.87**	**160**	P	**P**	**23 35 26.1**	**-0.9**
WB0				IAmb	IAmb	23 35 33.8	

	comp=Z,9.1nm,0.9s						
WRAB	**Tennant Creek**	23.01	161	P	P	23 35 28.0	-0.5
WRAB				IAmb	IAmb	23 35 33.8	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	23.02	161	P	P	23 35 26.9	-1.6
WRA	**Warramunga Arr**	23.02	161	P	P	23 35 27.6	-0.9
	comp=Z,3.3nm,0.4s,baz=339,slow=11,SNR=76						
	comp=Z,3.3nm,0.4s						
WR8	**Warramunga Arr**	23.08	160	P	P	23 35 28.4	-0.7
WR8				IAmb	IAmb	23 35 41.0	
	comp=Z,14nm,1.3s						
AS31	**Alice Springs**	26.39	164	P	P	23 35 59.7	+0.1
AS31				IAmb	IAmb	23 36 11.9	
	comp=Z,2.4nm,1.2s						
ASAR	**Alice Springs**	26.40	164	P	P	23 36 01.4	+1.8
ASAR	**Alice Springs**	26.40	164	P	P	23 35 59.5	-0.1
	comp=Z,1.0nm,0.3s,baz=344,slow=8.0,SNR=20						
	comp=Z,1.0nm,0.3s						
BBOO	**Buckleboo**	35.67	166	P	P	23 37 20.9	-0.2
MJAR	**Matsushiro Arr**	36.17	16	P	P	23 37 24.7	-0.8
	comp=Z,0.7nm,0.3s,baz=181,slow=11,SNR=4.2						
MJAR				LR	LR	23 52 19.0	
	comp=Z,22nm,19.3s,baz=194,slow=36						
	comp=Z,0.7nm,0.3s						
STKA	**Stephens Creek**	36.51	158	P	P	23 37 28.4	+0.1
STKA	**Stephens Creek**	36.51	158	P	P	23 37 28.3	0.0
	comp=Z,1.3nm,0.3s,baz=326,slow=13,SNR=3.6						
	comp=Z,1.3nm,0.3s						
SONM	**Songino Array**	48.97	342	P	P	23 39 08.3	-0.9
	comp=Z,0.3nm,0.5s,baz=180,slow=7.6,SNR=2.3						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	58.93	326	P	P	23 40 20.8	-1.0
	comp=Z,1.1nm,0.5s,baz=119,slow=8.3,SNR=18						
	comp=Z,1.1nm,0.5s						
KURBB	**Kurchatov Arra**	63.16	328	P	P	23 40 49.5	-0.9
	comp=Z,0.8nm,0.5s,baz=132,slow=7.1,SNR=19						
	comp=Z,0.8nm,0.5s						
MMAI	**Mount Meron Ar**	89.88	303	LR	LR	00 30 41.0	
	comp=Z,31nm,18.3s,baz=116,slow=40						

RSNC 28 23:37:34.3±0.0, 7°N±1°×7°3W±°, h150^{km}±2^{km}, M3.1, mB4.4, mb3.5, ML2.8, Mw(mB)3.6, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	0.23	191	P	Pn	23 37 54.6	-0.4
BARC				S	Sn	23 38 09.6	-1.1
BRJC	**Barrancabermej**	0.62	284	P	Pn	23 37 56.0	-0.3
BRJC				S	Sn	23 38 13.2	+0.2
PAMC	**Pamplona, Colo**	0.68	40	P	Pn	23 37 57.3	+0.1
PAMC				S	Sn	23 38 14.3	-0.4
RUSC	**La Rusia**	0.92	176	P	Pn	23 37 58.4	-0.6
RUSC				S	Sn	23 38 17.2	-0.7
PTBC	**PUERTO BERRIO,**	1.34	258	P	Pn	23 38 00.9	-1.3
PTBC				S	Sn	23 38 22.2	-1.3
TAMC	**Tame, Arauca**	1.39	106	P	Pn	23 38 02.8	0.0
TAMC				S	Sn	23 38 24.4	-0.2
OCAC	**Ocana**	1.42	353	P	Pn	23 38 02.6	-0.6
OCAC				S	Sn	23 38 25.0	-0.4
SPBC	**San Pablo de B**	1.48	219	P	Pn	23 38 03.1	-0.7
SPBC				S	Sn	23 38 25.6	-0.8
ZARC	**Zaragoza, Cauc**	1.83	292	P	Pn	23 38 07.4	-0.1
ZARC				S	Sn	23 38 32.1	-0.9
NORC	**Norcasia**	2.12	234	P	Pn	23 38 10.2	-0.8
NORC				S	Sn	23 38 38.3	-0.9
CHIC	**Chingaza**	2.25	195	P	Pn	23 38 12.9	0.0
CHIC				P		23 38 13.1	
CHIC				P		23 38 13.2	
CHIC				S	Sn	23 38 42.5	0.0
ROSC	**El Rosal**	2.29	211	P	Pn	23 38 14.6	+1.3
ROSC				S	Sn	23 38 43.9	+0.6
HELC	**Santa Helena**	2.46	255	P	Pn	23 38 15.5	+0.3
HELC				S	Sn	23 38 46.4	-0.3
CVER	**Cruz Verde, Cu**	2.46	202	P	Pn	23 38 16.5	+1.0
CVER				S	Sn	23 38 47.1	-0.1
UREC	**San Jos de Ur**	2.55	291	P	Pn	23 38 14.4	-1.6
UREC				S	Sn	23 38 45.2	-3.0
GUY2C	**Guyana, Caldas**	2.72	234	P	Pn	23 38 18.8	+0.1
GUY2C				S	Sn	23 38 54.7	+1.9
VILC	**Villavicencio,**	2.75	192	P	Pn	23 38 17.9	-0.8
VILC				S	Sn	23 38 51.4	-1.5
PTGC	**Puerto Gaitan,**	2.79	159	P	Pn	23 38 17.5	-1.6
PTGC				S	Sn	23 38 51.5	-2.2
CBOC	**Ciudad Bolivar**	3.01	252	P	Pn	23 38 22.6	+0.6
CBOC				S	Sn	23 38 57.6	-1.2
DBBC	**Dabeiba**	3.05	274	P	Pn	23 38 22.3	-0.1
DBBC				S	Sn	23 38 57.4	-2.3
ARGC	**Ariguani, Magd**	3.21	340	P	Pn	23 38 25.1	+0.7
ARGC				S	Sn	23 39 03.8	+0.6
SDV	**Santo Domingo**	3.22	50	P	Pn	23 38 24.5	-0.2
SDV				S	Sn	23 39 02.3	-1.4
ANIL	**Santa Ana**	3.23	224	P	Pn	23 38 25.0	+0.1
ANIL				S	Sn	23 39 05.4	+1.4
PRAC	**Prado**	3.54	209	P	Pn	23 38 28.4	-0.3
PRAC				S	Sn	23 39 09.9	-1.0
ORTC	**Ortega, Tolima**	3.57	216	P	Pn	23 38 28.8	-0.3
ORTC				S	Sn	23 39 11.9	+0.3
APAC	**Apartado, Choc**	3.58	288	P	Pn	23 38 29.1	0.0
APAC				S	Sn	23 39 10.4	-1.1
PLMC	**San Jos del P**	3.66	239	P	Pn	23 38 30.0	-0.2
PLMC				S	Sn	23 39 13.5	-0.1
SJCC	**San Jacinto, C**	3.66	327	P	Pn	23 38 28.1	-2.2
SJCC				S	Sn	23 39 09.6	-4.1
URMC	**La Uribe, Meta**	3.76	199	P	Pn	23 38 31.7	+0.2
URMC				S	Sn	23 39 15.9	-0.1
CRJC	**Cerrejon, Guaj**	4.18	3	P	Pn	23 38 35.4	-1.6
CRJC				S	Sn	23 39 23.1	-2.8
YOTC	**Yotoco, Valle**	4.26	229	P	Pn	23 38 37.6	-0.5
SMRC	**Santa Marta, M**	4.45	346	P	Pn	23 38 39.8	-0.7
SMRC				S	Sn	23 39 28.2	-3.8
MACC	**Macarena, Meta**	4.70	189	P	Pn	23 38 41.7	-2.1
MACC				S	Sn	23 39 33.9	-4.1
URIC	**Uribia, Colomb**	4.98	13	P	Pn	23 38 45.2	-2.3
MALC	**Bahia Malaga**	5.02	236	P	Pn	23 38 49.9	+1.9
POPC	**Popayan, Colom**	5.52	220	P	Pn	23 38 54.6	-0.3
	2.7nm,0.5s						
FLOC	**Florencia**	5.77	206	P	Pn	23 38 58.0	-0.1
	6.7nm,1.3s						
BBAC	**Balboa, Cauca**	6.28	221	P	Pn	23 39 05.3	+0.3

GEN 28 23:40:10.8, 44°.83N×9°.30E, h8^{km}±1^{km}, Ml0.9, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOB	**Bobbio (Coli)**	0.12	123	P	Pg	23 40 14.6	+0.9
BOB				S	Sg	23 40 17.7	+2.1
GORR	**Gorreto**	0.23	182	P	Pg	23 40 16.3	+0.8
GORR				S	Sg	23 40 20.5	+2.0
RNCA	**Ronca, Sant'Ol**	0.44	215	P	Pg	23 40 19.9	+0.6
RNCA				S	Sb	23 40 26.8	-0.7
MSSA	**Maissana**	0.54	163	P	Pg	23 40 21.8	+0.5
MSSA				S	Sb	23 40 30.4	0.0
PCP	**Piancastagn**	0.61	242	P	Pg	23 40 22.7	0.0
GRAM	**Graiana**	0.64	122	P	Pb	23 40 24.3	0.0
GRAM				S	Sb	23 40 34.2	+0.8

ROM 28 23:40:44.3±0.2, 43°.432N±0°.009×11°.09E±0°.02, h5^{km}, Md1.0/2, ML1.0/7, Error ellipse: s-maj=1.6km s-min=0.5km az=305.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OSSC	**Osservatorio P**	0.15	51	P	Pg	23 40 47.9	+0.6
OSSC				S	Sg	23 40 50.2	+0.9
OSSC				AML	AML		
	comp=N,70µm,0.3s						
OSSC				AML	AML		
	comp=E,85µm,0.5s						
OSSC				AML	AML		
	comp=N,83µm,0.2s						
OSSC				END			
CSNT	**Castellina Chi**	0.15	74	P	Pg	23 40 47.8	+0.4
CSNT				S	Sg	23 40 49.9	+0.5
CSNT				AML	AML		
	comp=E,79µm,0.1s						
CSNT				AML	AML		
	comp=N,132µm,0.5s						
CSNT				END			
FROS	**Frosini**	0.23	168	P	Pg	23 40 49.8	+1.0
FROS				S	Sg	23 40 53.4	+1.6
FROS				AML	AML		
	comp=E,64µm,1.3s						
FROS				AML	AML		
	comp=E,64µm,0.7s						
FROS				AML	AML		
	comp=N,63µm,1.5s						
TRIF	**Trifonti**	0.34	203	P	Pg	23 40 52.0	+1.0
TRIF				S	Sb	23 40 57.3	-1.5

MEX 29 00:16:02.4±1.2, 14°.26N×94°.24W, h15^{km}±23^{km}, MD4.2
GCG 29 00:16:03.4±1.9, 14°.20N×94°.02W, h36^{km}±488^{km}, MD4.2, ML3.9

ISC 29 00:15:54.4±1.5, 14°.38N±0°.05×94°.21W±0°.02, h5^{km}±11^{km}, n41, σ2^{s}50/70, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.63	36	*e*P	Pg	00 16 28.7	+3.0
PCIG				*e*S	Sg	00 16 48.6	+1.8
THIG		1.96	74	*e*P	Pg	00 16 32.2	+0.2
THIG				*e*S	Sb	00 16 55.6	+0.4
THIG		1.96	74	*i* P	Pg	00 16 32.2	+0.2
THIG				*i* S	Sb	00 16 55.2	0.0
THIG				IAML		00 16 56.2	
	comp=N,828nm,0.3s						
PATR	**El Naranjo**	2.05	69	*e*P	Pg	00 16 33.3	-0.4
PATR				*e*S	Sn	00 16 56.4	+0.6
SMCA	**Catarina**	2.12	77	*i* P	Pg	00 16 34.3	-0.8
SMCA				*e*S	Sn	00 16 58.4	+1.1
PAVE	**Pavencul**	2.13	67	*e*P	Pg	00 16 34.6	-0.6
PAVE				*e*S	Sn	00 16 56.2	-1.5
HUIG	**Huatulco**	2.29	307	*e*P	Pg	00 16 39.1	+0.7
HUIG				*e*S	Sb	00 17 04.6	-0.3
RTAL	**Retalhuleu**	2.44	86	*e*P	Pb	00 16 38.1	-0.7
RTAL				*i* S	Sn	00 17 03.9	-1.3
TGIG		2.61	24	*e*P	Pg	00 16 44.4	0.0
TGIG				*e*S	Sb	00 17 15.2	+1.2
TGIG		2.61	24	*i* P	Pg	00 16 44.2	-0.2
TGIG				*e*S	Sg	00 17 16.5	-1.7
TGIG				IAML		00 17 18.4	
	comp=E,417nm,0.5s						
CCIG	**Comitan**	2.75	46	*e*P	Pg	00 16 46.3	-0.9
CCIG				*e*S	Sb	00 17 17.6	-0.8
CCIG	**Comitan**	2.75	46	*i* P	Pg	00 16 46.4	-0.9
CCIG				*e*S	Sb	00 17 19.3	+1.0
CCIG				IAML		00 17 21.0	
	comp=E,381nm,0.7s						
SOKI	**Kika Raxquin**	2.75	80	*e*P	Pb	00 16 43.6	-0.8
SOKI				*e*S	Sb	00 17 17.3	-1.3
CMIG	**Matias Romero**	2.77	347	*e*P	Pg	00 16 46.8	-0.8
CMIG				*e*S	Sb	00 17 18.0	-0.7
STG8	**El Palmar, Qui**	2.77	88	*e*P	Pn	00 16 40.1	+0.4
STG8				*i* S	Sn	00 17 10.2	-3.5
STG8				IAML		00 17 11.2	
	comp=E,507nm,0.2s						
STG0	**El Palmar, Qui**	2.78	89	*i* P	Pn	00 16 40.5	+0.7
STG0				*i* S	Sn	00 17 09.8	-4.0
STG0				IAML		00 17 12.1	
	comp=E,956nm,0.2s						
HUEH	**Huehuetenango**	2.78	70	*e*P	Pb	00 16 45.3	+0.6
HUEH				*i* S	Sb	00 17 18.0	-1.2
HUEH	**Huehuetenango**	2.78	70	*e*P	Pb	00 16 45.8	+1.0
HUEH				*i* S	Sb	00 17 20.3	+1.1
HUEH				IAML		00 17 25.6	
	comp=E,738nm,0.5s						
PEIG	**Puerto Escondi**	3.26	300	*e*P	Pb	00 16 52.2	-0.6
PEIG				*e*S	Sn	00 17 26.4	+1.0
FG16	**Alotenango, Sa**	3.59	91	*e*S	Sn	00 17 26.8	-7.0
VHO	**Vista Hermosa**	3.61	318	*e*P	Pb	00 16 59.8	+0.9
VHO				*e*S	Sb	00 17 39.8	-3.4
NEUV	**Arroyo Zacate**	3.65	335	*e*P	Pb	00 17 00.2	+0.8
NEUV				*e*S	Sb	00 17 40.0	-3.9
YOIG	**Yosondua**	4.05	308	*e*P	Pb	00 17 06.1	-0.3
YOIG				*e*S	Sn	00 17 49.1	+3.9
PNIG	**Pinotepa**	4.27	298	*i* P	Pb	00 17 06.6	-3.5
PNIG				*e*S	Sn	00 17 51.0	+0.5
NUBE	**Las Nubes**	4.33	96	*e*P	Pn	00 17 05.2	+4.2
TXIG	**Tlaxiaco**	4.46	310	*e*P	Pb	00 17 12.8	-0.5
TXIG				*e*S	Sn	00 18 01.0	+5.7
TOIG	**Toxpalan**	4.60	324	*e*P	Pb	00 17 15.5	-0.1
TOIG				*e*S	Sb	00 18 05.2	-6.3
JAYA	**Jayaque - finc**	4.68	98	*e*S	Sn	00 17 59.9	-0.8
HLIG	**Huajuapan de L**	4.87	315	*e*P	Pb	00 17 20.7	+0.4
HLIG				*e*S	Sb	00 18 12.5	-6.7
PETF	**Flores**	4.89	58	*e*P	Pn	00 17 14.2	+5.6
PETF				*e*S	Sn	00 18 02.7	-2.8
PETF	**Flores**	4.89	58	*i* P	Pn	00 17 14.3	+5.7
MGIG	**Malinaltepec**	5.12	304	*e*P	Pb	00 17 22.2	-2.3
MGIG				*i* S	Sn	00 18 14.5	+3.1
FTIG	**Fresnillo de T**	5.15	313	*e*P	Pb	00 17 22.6	-2.5
FTIG				*e*S	Sn	00 18 15.9	+3.8
CRIG	**Cruz Grande**	5.29	297	*e*S	Sn	00 18 13.9	-1.5
SCIG	**Sabancuy**	5.41	32	*e*P	Pn	00 17 21.9	+6.2
SCIG				*e*S	Sn	00 18 16.9	-1.4
POHV	**Veracruz**	5.51	328	*e*P	Pb	00 17 31.3	-0.2
POHV				*e*S	Sn	00 18 24.6	+3.0
JAUV	**Jalcomulco**	5.54	334	*e*P	Pb	00 17 27.6	-4.2
JAUV				*e*S	Sn	00 18 22.8	+1.0
DAIG	**Los Arroyos**	5.86	297	*e*P	Pn	00 17 23.0	+1.0
DAIG				*e*S	Sn	00 18 27.9	-1.6
PLIG	**Platanillo**	6.46	309	*e*P	Pb	00 17 41.3	-6.0
CXUV	**Coxquihui**	6.60	331	*e*P	Pb	00 17 45.1	-4.7
CXUV				*e*S	Sn	00 18 45.6	-2.3
ARIG	**Puente Sto Nin**	7.05	304	*e*P	Pb	00 17 49.6	-7.8

IDC 29 00:34:54.0±1.8, 47°.15N×156°.99E, h0^{km}, mb3.6/6, mbtmp3.6/7, ML2.4/1, MS2.3/2, Error ellipse: s-maj=43.7km s-min=27.2km az=175.0

ISC 29 00:34:59.2±1.4, 47°.2N±0°.1×157°.0E±0°.2, h35^{km}, n11, σ1^{s}03/8, mb3.6/6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	5.98	4	Pn	Pn	00 36 23.6	-1.5
	0.5nm,0.3s,baz=195,slow=14,SNR=11						
PETK				Sn	Sn	00 37 33.3	+1.1
	0.8nm,0.3s,baz=162,slow=17,SNR=5.5						
PETK				LR	LR	00 39 21.9	
	comp=Z,19nm,19.7s,baz=165,slow=45						
	2.2nm,0.6s						
MA2	**Magadan**	12.97	346	LR	LR	00 44 15.5	
	comp=Z,18nm,18.6s,baz=229,slow=43						
H11S1	**WAKE ISLAND Hy**	29.67	161	T	T	01 12 05.5	
	baz=347,slow=76,SNR=6.0						
H11S3	**WAKE ISLAND Hy**	29.68	161	T	T	01 12 07.4	
	baz=347,slow=76,SNR=10.0						
H11S2	**WAKE ISLAND Hy**	29.69	161	T	T	01 11 51.4	
	baz=347,slow=76,SNR=7.5						
ILAR	**Eielson Array**	34.58	39	P	P	00 41 44.0	-0.1
	0.2nm,0.5s,baz=253,slow=7.2,SNR=4.8						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	49.08	299	P	P	00 43 42.2	-0.5
	0.5nm,0.8s,baz=64,slow=8.2,SNR=5.7						
	0.5nm,0.8s						
KURBB	**Kurchatov Arra**	49.41	305	P	P	00 43 45.0	-0.2
	0.5nm,0.7s,baz=68,slow=8.1,SNR=4.3						
	0.5nm,0.7s						
BVAR	**Borovoye Array**	52.62	311	P	P	00 44 10.3	+1.0
	0.3nm,0.4s,baz=67,slow=8.0,SNR=2.8						
	0.3nm,0.4s						
TXAR	**Lajitas Array**	74.97	63	P	P	00 46 37.1	+0.2
	0.4nm,0.6s,baz=303,slow=3.8,SNR=7.8						
	0.4nm,0.6s						
EKA	**Eskdalemuir Ar**	76.52	348	P	P	00 46 45.9	+0.8
	0.7nm,0.7s,baz=17,slow=5.4,SNR=3.6						
	0.7nm,0.7s						

KRSC 29 01:04:03.7±1.3, 56°.20N×164°.29E, h48^{km}±20^{km}, Mc5.5, Ml5.0
IDC 29 01:04:03.6±0.5, 56°.25N×164°.02E, h0^{km}, mb4.4/38, mbtmp4.5/41, ML4.6/3, MS3.8/53, Error ellipse: s-maj=14.1km s-min=10.2km az=148.0
NEIC 29 01:04:05.6±2.3, 56°.3N±0°.1×164°.0E±0°.2, h10^{km}±1^{km}, mb4.8/446, Error ellipse: s-maj=20.7km s-min=12.4km az=149.0
BJI 29 01:04:07.0, 56°.30N×163°.90E, h40^{km}, mB4.8/10, mb4.6/33, Ms4.5/26, Ms7 4.3/26
MOS 29 01:04:08.1±1.0, 56°.16N×164°.00E, h50^{km}, mb5.1/28, MS4.1/12, Error ellipse: s-maj=6.0km s-min=3.9km az=70.0

ISC 29 01:04:07.9±0.6, 56°.19N±0°.04×164°.13E±0°.03, h31^{km}±4^{km}, n858, σ1^{s}16/672, mb4.8/285, MS4.0/70, 20C-14D, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	0.73	272	PN	Pb	01 04 18.5	-3.7
KBTR	**Krutoberegovo**	0.73	272	*e*P	Pb	01 04 18.5	-3.7
KBG	**Krutoberegovo**	0.80	276	PN	Pb	01 04 19.5	-3.8
KBG				S	Sb	01 04 31.8	-2.0
KBG	**Krutoberegovo**	0.80	276	*e*P	Pb	01 04 19.5	-3.8
KBG				*e*S	Sb	01 04 31.9	-2.0
BKI	**Bering**	1.43	133	PN	Pn	01 04 29.0	-2.7
BKI				S	Sn	01 04 47.2	-2.2
BKI	**Bering**	1.43	133	*e*P	Pn	01 04 29.1	-2.7
BKI				*e*S	Sn	01 04 47.2	-2.2
SMKR	**Semkarok**	1.54	286	PN	Pn	01 04 31.6	-1.6
SMKR	**Semkarok**	1.54	286	*e*P	Pn	01 04 31.7	-1.6
SRKR	**Sorokina**	1.71	287	PN	Pn	01 04 35.0	-0.7
SRKR	**Sorokina**	1.71	287	*e*P	Pn	01 04 35.0	-0.7
ZLN	**Zelenaya**	1.87	266	PN	Pn	01 04 37.6	-0.3
ZLN	**Zelenaya**	1.87	266	*e*P	Pn	01 04 37.6	-0.3
CIRR	**Tsirk**	1.90	269	PN	Pn	01 04 37.9	-0.3
CIRR	**Tsirk**	1.90	269	*e*P	Pn	01 04 37.9	-0.3
LGNR	**Loginova**	1.93	268	PN	Pn	01 04 38.7	-0.1
LGNR	**Loginova**	1.93	268	*e*P	Pn	01 04 38.7	-0.1
BZGR	**Bezymyannyi-Gr**	1.94	264	PN	Pn	01 04 38.5	-0.3
BZGR				S	Sb	01 05 04.7	-1.8
BZGR	**Bezymyannyi-Gr**	1.94	264	*e*P	Pn	01 04 38.6	-0.3
BZGR				*e*S	Sb	01 05 04.7	-1.8
KLY	**Klyuchi**	1.95	275	PN	Pn	01 04 36.5	-2.3
KLY				S	Sn	01 04 59.8	-2.3
KLY	**Klyuchi**	1.95	275	*e*P	Pn	01 04 36.5	-2.3
KLY				*e*S	Sn	01 04 59.9	-2.3
KRSR	**Krestovskiy**	1.99	272	PN	Pn	01 04 38.5	-1.0
KRSR	**Krestovskiy**	1.99	272	*e*P	Pn	01 04 38.6	-1.0
BZWR	**Bezymyannyi-We**	2.05	265	PN	Pn	01 04 40.2	-0.2
BZWR	**Bezymyannyi-We**	2.05	265	*e*P	Pn	01 04 40.2	-0.2
BZMR	**Bezymyannaya**	2.06	265	PN	Pn	01 04 40.4	-0.1
BZMR	**Bezymyannaya**	2.06	265	*e*P	Pn	01 04 40.5	-0.1
MKZ	**Mys Kozlova**	2.13	221	PN	Pn	01 04 39.4	-1.9
MKZ				S	Sn	01 05 03.3	-3.4
MKZ	**Mys Kozlova**	2.13	221	*e*P	Pn	01 04 39.4	-1.9
MKZ				*e*S	Sn	01 05 03.3	-3.4
KIRR	**Kirishev**	2.14	265	PN	Pn	01 04 41.2	-0.3
KIRR	**Kirishev**	2.14	265	*e*P	Pn	01 04 41.3	-0.3
KPT	**Kopyto**	2.20	266	PN	Pn	01 04 42.3	-0.1
KPT	**Kopyto**	2.20	266	*e*P	Pn	01 04 42.3	-0.1
KMNR	**Kamenistaya**	2.23	261	PN	Pn	01 04 42.7	-0.1
KMNR	**Kamenistaya**	2.23	261	*e*P	Pn	01 04 42.8	-0.1
TUMD	**Tumrok D**	2.33	247	PN	Pn	01 04 44.0	-0.1
TUMD				S	Sn	01 05 12.7	+1.0
TUMD	**Tumrok D**	2.33	247	*e*P	Pn	01 04 44.1	-0.1
TUMD				*e*S	Sn	01 05 12.8	+1.0
SRDR	**Sredinnyy**	2.47	275	PN	Pn	01 04 46.1	+0.1
SRDR				S	Sn	01 05 16.7	+1.6
SRDR	**Sredinnyy**	2.47	275	*e*P	Pn	01 04 46.2	+0.1
SRDR				*e*S	Sn	01 05 16.7	+1.6
ESO	**Esso**	3.06	267	PN	Pn	01 04 53.8	-0.3
ESO	**Esso**	3.06	267	*e*P	Pn	01 04 53.8	-0.3
OSSR	**Ossora**	3.13	350	PN	Pn	01 04 52.8	-2.1
OSSR	**Ossora**	3.13	350	*e*P	Pn	01 04 52.9	-2.1
OSSR				*e*S	Sn	01 05 27.4	-3.8
KII	**Karymskiy**	3.45	233	PN	Pn	01 04 59.8	+0.3
KII	**Karymskiy**	3.45	233	*e*P	Pn	01 04 59.8	+0.3
SPN	**Mys Shipunski**	3.91	219	PN	Pn	01 05 03.3	-2.4
SPN	**Mys Shipunski**	3.91	219	*e*P	Pn	01 05 03.3	-2.4
NLC	**Nalytchevo**	4.10	225	PN	Pn	01 05 08.1	-0.3
NLC	**Nalytchevo**	4.10	225	*e*P	Pn	01 05 08.2	-0.3
SDLR	**Sedlovina**	4.21	228	PN	Pn	01 05 10.0	0.0
SDLR	**Sedlovina**	4.21	228	*e*P	Pn	01 05 10.1	0.0
KRER	**Koryakskii**	4.25	229	PN	Pn	01 05 11.4	+0.8
KRER	**Koryakskii**	4.25	229	*e*P	Pn	01 05 11.5	+0.8
KRX	**Arik**	4.25	231	PN	Pn	01 05 11.9	+1.3
KRX	**Arik**	4.25	231	*e*P	Pn	01 05 12.0	+1.3
SMAR	**Somma**	4.26	229	PN	Pn	01 05 10.7	0.0
SMAR	**Somma**	4.26	229	*e*P	Pn	01 05 10.8	0.0
AVH	**Avacha**	4.28	229	PN	Pn	01 05 11.8	+0.9
AVH	**Avacha**	4.28	229	*e*P	Pn	01 05 11.9	+0.9
UGLR	**Uglovaya**	4.29	228	PN	Pn	01 05 10.7	-0.3
UGLR	**Uglovaya**	4.29	228	*e*P	Pn	01 05 10.8	-0.3
KOK	**Koryaka**	4.31	230	PN	Pn	01 05 11.9	+0.6
KOK	**Koryaka**	4.31	230	*e*P	Pn	01 05 12.0	+0.6
GNL	**Ganaly**	4.36	238	PN	Pn	01 05 13.4	+1.4
GNL	**Ganaly**	4.36	238	*e*P	Pn	01 05 13.4	+1.4
TILK	**Tilichiki**	4.40	13	PN	Pn	01 05 12.3	-0.1
TILK	**Tilichiki**	4.40	13	*e*P	Pn	01 05 12.4	-0.1
DALK	**Dalny**	4.45	227	PN	Pn	01 05 12.9	-0.2
DALK				S	Sn	01 06 03.0	-0.7
DALK	**Dalny**	4.45	227	*e*P	Pn	01 05 13.0	-0.2
DALK				*e*S	Sn	01 06 03.1	-0.7
INSR	**Institute**	4.48	228	PN	Pn	01 05 16.1	+2.5
INSR	**Institute**	4.48	228	*e*P	Pn	01 05 16.1	+2.5
PET	**Petropavlovsk**	4.49	227		Pn	01 05 13.3	-0.5
PET	**Petropavlovsk**	4.49	227	*e*PN	Pn	01 05 13.7	0.0
PET				*e*S	Sn	01 06 02.9	-2.0
PET				pmax	pmax		
	comp=Z,281nm,0.6s						
PET				smax	smax		
	comp=E,858nm,0.8s						
PET				smax	smax		
	comp=N,726nm,0.7s						
PET				MLR	MLR		
	comp=Z,1µm,7.0s						
PET				MLR	MLR		
	comp=Z,2µm,7.0s						
PET	**Petropavlovsk**	4.49	227	P	Pn	01 05 12.7	-1.0
PEA0B	**Petropavlovsk-**	4.84	233		Pn	01 05 19.9	+1.3
PEA0B	**Petropavlovsk-**	4.84	233	PN	Pn	01 05 19.9	+1.3
PETK	**Petropavlovsk-**	4.84	233	Pn	Pn	01 05 19.2	+0.6
	comp=Z,12nm,0.3s,baz=66,slow=16,SNR=45						
PETK				Sn	Sn	01 06 17.9	+4.3
	comp=Z,5.0nm,0.3s,baz=357,slow=15,SNR=4.1						
PETK				LR	LR	01 07 20.3	
	comp=Z,580nm,22.0s,baz=63,slow=41						
	comp=Z,24nm,0.5s						
KRMR	**Karymshinskiy**	4.85	229	PN	Pn	01 05 20.0	+1.3
KRMR	**Karymshinskiy**	4.85	229	*e*P	Pn	01 05 20.0	+1.3
RUS	**Russkaya**	5.00	224	PN	Pn	01 05 20.2	-0.4
RUS	**Russkaya**	5.00	224	*e*P	Pn	01 05 20.3	-0.4
GRL	**Gorelyy**	5.08	227	PN	Pn	01 05 23.2	+1.3
GRL	**Gorelyy**	5.08	227	*e*P	Pn	01 05 23.2	+1.3
APC	**Apacha**	5.21	234	PN	Pn	01 05 25.4	+1.8
APC	**Apacha**	5.21	234	*e*P	Pn	01 05 25.5	+1.8
ASAK	**Asacha**	5.28	226	PN	Pn	01 05 25.7	+1.1
ASAK	**Asacha**	5.28	226	*e*P	Pn	01 05 25.7	+1.1
PAU	**Pauzhetka**	6.41	226	PN	Pn	01 05 41.4	+1.3
PAU	**Pauzhetka**	6.41	226	*e*P	Pn	01 05 41.4	+1.3
SKR	**Severo-Kuril's**	7.30	224	*ce*PN	Pn	01 05 52.1	-0.1
SKR	**Severo-Kuril's**	7.30	224	*e*P	Pn	01 05 51.7	-0.5
MA2	**Magadan**	7.89	301	LR	LR	01 09 06.0	
	comp=Z,776nm,21.1s,baz=108,slow=39						
MA2	**Magadan**	7.89	301	P	Pn	01 05 57.4	-3.0
	comp=Z,0.2nmcomp=Z,11nm,1.2s						
SEY	**Seymchan**	9.01	323	*i* PN	Pn	01 06 13.2	-2.4
BILL	**Bilibino**	11.94	4	*i* PN	Pn	01 06 55.8	+0.1
BILL				pmax	pmax		
	comp=Z,34nm,1.6s						
BILL				MLR	MLR		
	comp=Z,907nm,14.0s						
OKH	**Okha**	12.48	267	*de*PN	P	01 07 15.4	+0.8
OKH				*e*S	Sn	01 09 27.7	+6.7
OKH				pmax	pmax		
	comp=Z,100nm,8.7s						
OKH				MLR	MLR		
	comp=N,600nm,12.0s						
OKH				MLR	MLR		
	comp=E,600nm,13.0s						
OKH				MLR	MLR		
	comp=Z,200nm,11.0s						
TYV	**Tymovskoe**	13.82	256	*e*P	Pn	01 07 23.5	+2.1
TYV				*e*S	Sn	01 09 59.0	+5.4
TYV				pmax	pmax		
	comp=Z,200nm,2.8s						
TYV				pmax	pmax		
	comp=Z,18nm,1.3s						
TYV				smax	smax		
	comp=N,100nm,3.3s						
TYV				smax	smax		
	comp=E,200nm,3.3s						

SPIA	Saint Paul Isl	14.09	75	P	Pn	01 07 24.6	-0.4
	baz=277						
GAMB	Gambell	14.21	48	P	Pn	01 07 25.6	-1.0
	baz=249						
P08K	Saint George I	14.55	77	P	Pn	01 07 31.3	0.0
	baz=280						
NIKH	Nikolski High	15.94	90		P	01 07 53.5	+0.5
NIKH				IAmb	IAmb	01 07 54.6	
	comp=Z,86nm,1.2s						
NIKH	Nikolski High	15.94	90	P	Pn	01 07 50.5	+0.8
	baz=293						
M11K	Mekoryuk	16.07	63	P	Pn	01 07 50.9	-0.4
	baz=268						
YSS	Yuzhno-Sakhali	16.13	244	*e*P	Pn	01 07 51.5	-0.6
YSS				*e*S	Sn	01 10 44.3	-5.4
YSS				pmax	pmax		
	comp=Z,100nm,3.4s						
YSS				pmax	pmax		
	comp=Z,30nm,0.7s						
YSS				MLR	MLR		
	comp=Z,500nm,14.0s						
YSS				MLR	MLR		
	comp=N,200nm,15.0s						
YSS				MLR	MLR		
	comp=E,400nm,14.0s						
TNA	Tin City	16.38	44	P	Pn	01 07 53.8	-1.3
	baz=249						
K13K	Kusilvak Mount	16.93	57		Pn	01 08 01.9	-0.2
K13K	Kusilvak Mount	16.93	57	P	Pn	01 08 01.5	-0.6
	baz=265,SNR=6.5						
UNV	Unalaska Valle	16.94	86	P	Pn	01 08 02.9	+0.6
	baz=290						
F14K	Arctic Creek	16.97	45	P	Pn	01 08 02.1	-0.5
	baz=251						
ANM	Nome	17.09	48	P	Pn	01 08 03.2	-0.9
	baz=255						
M13K	Dall Lake	17.49	63	P	Pn	01 08 08.6	-0.4
	baz=271						
J14K	Nanvaranak Lak	17.53	55	P	Pn	01 08 09.0	-0.6
	baz=263						
F15K	North Star Dit	17.70	45	P	P	01 08 13.0	+0.6
F15K	North Star Dit	17.70	45	P	Pn	01 08 11.5	-0.3
	baz=253						
G15K	Niukluk	17.75	47	P	Pn	01 08 12.0	-0.3
	baz=256						
L14K	Kuka Creek	17.83	60	P	P	01 08 14.9	+1.1
L14K	Kuka Creek	17.83	60	P	Pn	01 08 13.2	0.0
	baz=268						
M14K	Bethel	18.17	61		P	01 08 19.8	+2.3
M14K				IAmb	IAmb	01 08 22.9	
	comp=Z,119nm,1.8s						
M14K	Bethel	18.17	61	P	Pn	01 08 17.1	-0.4
	baz=271						
JKA	Kamikawa-asahi	18.24	238		Pn	01 08 18.0	-0.5
JKA				IAmb	IAmb	01 08 25.6	
	comp=Z,98nm,1.2s						
ASAJ	Asahikawa	18.24	238	P	P	01 08 18.9	+0.4
	comp=Z,1.2nm,0.3s,baz=22,slow=6.0,SNR=21						
ASAJ				LR	LR	01 15 03.9	
	comp=Z,218nm,19.4s,baz=48,slow=36						
	comp=Z,55nm,0.9s						
FALS	False Pass	18.33	81	P	P	01 08 19.4	+0.1
	baz=288						
N14K	Kuskokwak Cree	18.34	64	P	P	01 08 19.3	0.0
	baz=274						
C16K	Lisburne Hills	18.41	37	P	Pn	01 08 21.9	+1.6
C16K	Lisburne Hills	18.41	37	P	P	01 08 19.9	-0.2
	baz=244						
L15K	Ungalak Mounta	18.41	58	P	P	01 08 20.2	0.0
	baz=269						
H16K	Elim	18.42	49	P	P	01 08 19.9	-0.4
	baz=259						
K15K	Wolf Creek Mou	18.42	57	P	Pn	01 08 22.8	+2.2
K15K	Wolf Creek Mou	18.42	57	P	P	01 08 20.4	0.0
	baz=267						
YAK	Yakutsk	18.46	303	P	P	01 08 18.9	-1.8
	comp=Z,11nm,0.3s,baz=91,slow=17,SNR=7.5						
YAK				LR	LR	01 15 35.9	
	comp=Z,205nm,20.4s,baz=94,slow=38						
	comp=Z,35nm,0.5s						
YAK	Yakutsk	18.46	303	*ce*P	P	01 08 19.4	-1.3
YAK				pmax	pmax		
	comp=Z,46nm,0.8s						
G16K	Koyuk River	18.54	47	P	P	01 08 21.4	-0.1
	baz=257						
O14K	Tigyukauivet M	18.60	66	P	Pn	01 08 25.1	+2.3
O14K	Tigyukauivet M	18.60	66	P	P	01 08 22.1	-0.2
	baz=276						
M15K	Kasigluk River	18.80	62	P	P	01 08 24.5	0.0
	baz=272,SNR=5.4						
S12K	Black Hills	18.83	77	P	Pn	01 08 27.5	+1.9
S12K	Black Hills	18.83	77	P	P	01 08 25.3	+0.4
	baz=286,SNR=7.9						
J16K	Anvik River	18.93	54	P	P	01 08 25.6	-0.3
	baz=265						
I17K	Unalakleet	18.96	52	P	Pn	01 08 28.3	+1.3
I17K	Unalakleet	18.96	52	P	P	01 08 26.1	-0.1
	baz=263						
D17K	Noatak River	18.96	39	P	P	01 08 26.1	-0.1
	baz=249,SNR=13						
N15K	Kwethluk River	19.12	63	P	Pn	01 08 29.6	+0.6
N15K	Kwethluk River	19.12	63	P	P	01 08 28.1	+0.1
	baz=274,SNR=10.0						
RDOG	Red Dog Mine	19.15	39	P	Pn	01 08 30.8	+1.4
RDOG	Red Dog Mine	19.15	39	P	P	01 08 28.0	-0.4
	baz=248						
E17K	Hotham Inlet	19.21	42	P	P	01 08 28.1	-0.8
	baz=252,SNR=21						
C17K	DeLong Mountai	19.23	37	P	P	01 08 28.4	-0.7
	baz=247,SNR=18						
F17K	Baldwin Pennin	19.24	44	IAmb	IAmb	01 08 41.1	
	comp=Z,101nm,1.8s						
F17K	Baldwin Pennin	19.24	44	P	P	01 08 28.9	-0.4
	baz=255						
G17K	Kiwalik Mounta	19.26	47	P	P	01 08 29.5	+0.1
	baz=258						
O15K	Ungalikthiuk R	19.35	66	P	P	01 08 30.9	+0.4
O15K	Ungalikthiuk R	19.35	66	P	P	01 08 30.4	0.0
	baz=277						
L16K	Owhat River	19.37	58	P	Pn	01 08 32.6	+0.6
L16K				IAmb	IAmb	01 08 37.3	
	comp=Z,111nm,1.9s						
L16K	Owhat River	19.37	58	P	P	01 08 30.8	+0.1
	baz=270						
H17K	Granite Mounta	19.45	49	IAmb	IAmb	01 08 43.5	
	comp=Z,112nm,1.8s						
H17K	Granite Mounta	19.45	49	P	P	01 08 31.6	0.0
	baz=261						
J17K	VABM Dome	19.62	53	IAmb	IAmb	01 08 45.7	
	comp=Z,77nm,1.8s						
J17K	VABM Dome	19.62	53	P	P	01 08 33.5	0.0
	baz=266						
ERM	Erimo	19.63	233	*i* P	Pn	01 08 34.8	-0.3
ERM				pmax	pmax		
	comp=Z,24nm,1.1s						
M16K	Timber Creek	19.63	60	P	Pn	01 08 35.2	+0.1
M16K	Timber Creek	19.63	60	P	P	01 08 34.1	+0.5
	baz=273						
N16K	Nishlik Lake	19.76	62	P	P	01 08 34.9	-0.1
	baz=274,SNR=8.1						
E18K	Tukpahlearik C	19.77	41	IAmb	IAmb	01 08 40.9	
	comp=Z,63nm,1.4s						
E18K	Tukpahlearik C	19.77	41	P	P	01 08 35.2	+0.2
	baz=253,SNR=15						
SDPT	Sand Point	19.80	78		Pn	01 08 38.6	+1.5
SDPT				IAmb	IAmb	01 08 45.0	
	comp=Z,93nm,1.2s						
SDPT	Sand Point	19.80	78	P	P	01 08 35.9	+0.5
	baz=288						
F18K	Selawik	19.90	44	P	P	01 08 36.5	0.0
	baz=256						
L17K	Donlin	19.93	57	P	P	01 08 37.1	+0.3
	baz=270,SNR=6.9						
K17K	Iditarod	19.94	55		Pn	01 08 38.8	0.0
K17K				IAmb	IAmb	01 08 49.2	
	comp=Z,107nm,1.9s						
K17K	Iditarod	19.94	55	P	P	01 08 37.1	+0.1
	baz=268,SNR=7.6						
C18K	Utukok River	19.96	38	P	P	01 08 37.9	+0.7
C18K	Utukok River	19.96	38	P	P	01 08 37.0	-0.2
	baz=249,SNR=8.5						
B18K	Kokolik River	20.04	35	P	P	01 08 37.5	-0.4
	baz=246,SNR=8.6						
H18K	Honhosa River	20.14	48	P	P	01 08 38.8	-0.3
	baz=262,SNR=6.3						
G18K	Tagagawik	20.14	46	IAmb	IAmb	01 08 45.1	
	comp=Z,69nm,1.6s						
G18K	Tagagawik	20.14	46	P	P	01 08 39.4	+0.2
	baz=259,SNR=9.7						
O16K	Kokwok River B	20.18	65	IAmb	IAmb	01 08 52.8	
	comp=Z,111nm,1.9s						
O16K	Kokwok River B	20.18	65	P	P	01 08 39.8	+0.3
	baz=277						
P16K	Nushagak River	20.30	66	P	P	01 08 41.3	+0.4
	baz=279						
M17K	Holitna River	20.35	59		P	01 08 42.7	+1.3
M17K				IAmb	IAmb	01 08 47.6	
	comp=Z,44nm,1.0s						
M17K	Holitna River	20.35	59	P	P	01 08 41.6	+0.2
	baz=273,SNR=11						
CHNA	Chernabura Isl	20.44	79	P	P	01 08 42.9	+0.5
	baz=289						
N17K	Nushagak Hills	20.53	62	P	P	01 08 43.8	+0.4
	baz=275,SNR=5.3						
A19K	Wainwright	20.62	34	P	P	01 08 43.9	-0.3
	baz=245						
CHGN	Chignik	20.65	74	IAmb	IAmb	01 08 59.8	
	comp=Z,96nm,1.3s						
CHGN	Chignik	20.65	74	P	P	01 08 45.0	+0.3
	baz=286,SNR=6.8						
O17K	Koliganek Bris	20.66	64	P	P	01 08 44.3	-0.4
	baz=278						
KLR	Kul'dur	20.67	264	P	P	01 08 44.2	-0.7
	comp=Z,1.4nm,0.5s,baz=41,slow=8.7,SNR=7.1						
KLR				LR	LR	01 17 01.6	
	comp=Z,173nm,18.8s,baz=51,slow=38						
	comp=Z,1.4nm,0.5s						
C19K	Lookout Ridge	20.67	37	IAmb	IAmb	01 08 47.7	
	comp=Z,39nm,0.9s						
C19K	Lookout Ridge	20.67	37	P	P	01 08 44.2	-0.7
	baz=250,SNR=8.6						
F19K	Shaleruckik Mo	20.68	44		P	01 08 45.7	+0.8
F19K				IAmb	IAmb	01 08 49.8	
	comp=Z,93nm,1.6s						
F19K	Shaleruckik Mo	20.68	44	P	P	01 08 44.5	-0.5
	baz=258,SNR=21						
L18K	Granite Mounta	20.68	57	P	P	01 08 46.6	+1.6
L18K	Granite Mounta	20.68	57	P	P	01 08 44.8	-0.2
	baz=271						
J18K	Innoko River	20.69	53	P	P	01 08 45.1	+0.1
	baz=268,SNR=15						
GCSA	Galena City Sc	20.71	50	P	P	01 08 44.9	-0.3
	baz=264						
G19K	Purcell Mounta	20.82	46	P	P	01 08 45.8	-0.6
	baz=260,SNR=8.7						
D19K	Kuna River	20.98	39	P	P	01 08 48.7	+0.5
D19K	Kuna River	20.98	39	P	P	01 08 47.4	-0.8
	baz=253,SNR=15						
H19K	Roundabout Mou	20.98	48	P	P	01 08 47.9	-0.2
	baz=263,SNR=19						
E19K	Redstone River	21.03	42	IAmb	IAmb	01 08 58.3	
	comp=Z,57nm,1.6s						
E19K	Redstone River	21.03	42	P	P	01 08 48.0	-0.7
	baz=257,SNR=13						
Q16K	King Salmon	21.05	67	P	P	01 08 49.1	+0.2
	baz=281						
P17K	Kvichak River	21.07	65	P	P	01 08 49.1	-0.1
	baz=279						
M18K	Stony River	21.12	59	P	P	01 08 49.6	-0.1
	baz=274,SNR=11						
ZEA	Zeya	21.16	279	*e*P	P	01 08 48.4	-1.7
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEA				MLR	MLR		
	comp=E,200nm,10.0s						
ZEA				MLR	MLR		
	comp=N,300nm,17.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,14.0s						
N18K	Kilae Creek	21.16	61	IAmb	IAmb	01 09 02.5	
	comp=Z,95nm,1.9s						
N18K	Kilae Creek	21.16	61	P	P	01 08 50.1	0.0
	baz=276,SNR=7.3						
J19K	Poorman	21.20	52	P	P	01 08 50.0	-0.5
	baz=268						
TIXI	Tiksi	21.41	330		P	01 08 53.0	+0.4
TIXI				IAmb	IAmb	01 08 56.5	
	comp=Z,47nm,1.1s						
TIXI	Tiksi	21.41	330	P	P	01 08 51.9	-0.7
	comp=Z,22nm,0.8s,baz=127,slow=11,SNR=22						
TIXI				LR	LR	01 17 57.2	
	comp=Z,484nm,19.5s,baz=174,slow=39						
	comp=Z,22nm,0.8s						
TIXI	Tiksi	21.41	330	*ce*P	P	01 08 53.4	+0.7
TIXI				pmax	pmax		
	comp=Z,81nm,1.7s						
R17L	Mt. Peulik Vol	21.41	70	P	P	01 08 52.9	0.0
	baz=283,SNR=16						
PLK4	Peulik 4	21.41	70	IAmb	IAmb	01 08 56.8	
	comp=Z,48nm,0.8s						
F20K	Avaraart Lake	21.52	44	IAmb	IAmb	01 09 03.1	
	comp=Z,65nm,1.9s						
F20K	Avaraart Lake	21.52	44	P	P	01 08 53.8	-0.1
	baz=260,SNR=7.7						
Q17K	Contact Creek	21.52	68	P	P	01 08 54.6	+0.4
	baz=282,SNR=6.8						
L19K	White Mountain	21.55	57	P	P	01 08 54.3	0.0
	baz=273,SNR=9.5						
D20K	Etivluk River	21.57	39	P	P	01 08 54.0	-0.5
	baz=254,SNR=15						
O18K	Koktuh Hills	21.59	63	IAmb	IAmb	01 08 59.2	
	comp=Z,54nm,1.4s						
O18K	Koktuh Hills	21.59	63	P	P	01 08 55.0	+0.2
	baz=279,SNR=11						
E20K	Nigu River	21.61	40	P	P	01 08 54.7	-0.2
	baz=256,SNR=14						
H20K	Anotleneega Mo	21.63	48	P	P	01 08 55.0	-0.2
	baz=264,SNR=19						
P18K	Big Mountain,	21.65	65	P	P	01 08 55.6	+0.2
	baz=280,SNR=12						
I20K	Naaghedeneel	21.74	50	IAmb	IAmb	01 09 06.2	
	comp=Z,82nm,1.6s						
I20K	Naaghedeneel	21.74	50	P	P	01 08 55.8	-0.4
	baz=267						
M19K	Big River Lodg	21.78	58	P	P	01 08 56.6	-0.2
	baz=274						
B20K	Meade River	21.79	35	IAmb	IAmb	01 09 06.3	
	comp=Z,66nm,1.2s						
B20K	Meade River	21.79	35	P	P	01 08 56.0	-0.7
	baz=251,SNR=12						
N19K	Bonanza Creek	21.83	61	P	P	01 08 57.4	0.0
	baz=277,SNR=6.8						
J20K	Nowinta River	21.86	52	P	P	01 08 56.8	-0.8
	baz=268,SNR=11						
K20K	Telida	21.88	54	P	P	01 08 57.5	-0.3
	baz=271,SNR=10						
Q18K	Katmai Hardscr	21.90	66	P	P	01 08 58.0	-0.2
	baz=282						
L20K	Farewell, AK	21.99	56	P	P	01 08 58.9	-0.2
	baz=273						
IMAR	Indian Mountai	22.15	47	P	P	01 09 00.6	-0.1
CHIR	Chirikof Islan	22.29	74	P	P	01 09 02.3	+0.1
	baz=288						
G21K	Allakaket	22.30	45	IAmb	IAmb	01 09 06.2	
	comp=Z,67nm,1.6s						
G21K	Allakaket	22.30	45	P	P	01 09 02.1	-0.3
	baz=263,SNR=21						
C21K	Knifeblade Rid	22.33	38	P	P	01 09 02.3	-0.3
	baz=256,SNR=9.7						
M20K	Styx River	22.38	58	P	P	01 09 03.0	-0.3
	baz=275,SNR=9.7						
F21K	Alatna River	22.41	44	IAmb	IAmb	01 09 12.6	
	comp=Z,63nm,1.8s						
F21K	Alatna River	22.41	44	P	P	01 09 03.0	-0.5
	baz=262,SNR=16						
R18K	Karluk	22.43	69	P	P	01 09 03.6	-0.1
	baz=285						
E21K	Killik River	22.45	40	IAmb	IAmb	01 09 06.2	
	comp=Z,39nm,1.4s						
E21K	Killik River	22.45	40	P	P	01 09 03.0	-0.9
	baz=258						
H21K	Melozitna Rive	22.50	48	IAmb	IAmb	01 09 07.9	
	comp=Z,49nm,1.5s						
H21K	Melozitna Rive	22.50	48	P	P	01 09 04.1	-0.4
	baz=266,SNR=22						
B21K	Ikpikpuk River	22.51	37	P	P	01 09 05.0	+0.5
B21K	Ikpikpuk River	22.51	37	P	P	01 09 04.3	-0.2
	baz=255,SNR=19						
Q19K	Cape Douglas,	22.54	65	P	P	01 09 05.1	+0.1
	baz=282,SNR=8.7						
HEH	HeiHe	22.57	270	*e*P	P	01 09 02.3	-3.0
HEH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
P19K	Oil Pt	22.61	63	P	P	01 09 05.5	-0.3
	baz=280,SNR=8.0						
RED	Redoubt Volcan	22.72	61	IAmb	IAmb	01 09 09.4	
	comp=Z,51nm,1.4s						
PPLA	Purkeypile	22.75	55	P	P	01 09 07.1	-0.1
	baz=273,SNR=10						
CAST	Castle Rocks	22.77	54	IAmb	IAmb	01 09 18.5	
	comp=Z,52nm,1.6s						
CAST	Castle Rocks	22.77	54	P	P	01 09 07.0	-0.4
	baz=272,SNR=14						
A22K	Sinclair Lake	22.81	34	P	P	01 09 07.0	-0.6
	baz=251						
I21K	Tanana	22.82	49	IAmb	IAmb	01 09 10.2	
	comp=Z,58nm,1.8s						
I21K	Tanana	22.82	49	P	P	01 09 07.6	-0.2
	baz=268,SNR=5.5						
SII	Sitkinak Islan	22.84	72	IAmb	IAmb	01 09 10.1	
	comp=Z,43nm,1.0s						
SII	Sitkinak Islan	22.84	72	P	P	01 09 08.3	+0.2
	baz=287						
O20K	Slope Mountain	22.84	62	P	P	01 09 08.3	+0.1
	baz=280,SNR=7.3						
N20K	Mount Spurr	22.89	59	P	P	01 09 07.9	-0.7
	baz=277						
SPCR	Spurr Chakacha	22.89	59	P	P	01 09 08.1	-0.5
	baz=277						
F22K	John River	22.95	43	P	P	01 09 08.8	-0.4
	baz=262						
D22K	Ayikyak River	23.00	39	IAmb	IAmb	01 09 19.5	
	comp=Z,49nm,1.6s						
D22K	Ayikyak River	23.00	39	P	P	01 09 09.4	-0.3
	baz=259,SNR=8.9						
STLK	Strandline Lak	23.03	58	IAmb	IAmb	01 09 20.5	
	comp=Z,94nm,2.0s						
B22K	Teshekpuk Lake	23.10	36	P	P	01 09 09.9	-0.7
	baz=254						
H22K	Ishtalitna Cre	23.11	47	P	P	01 09 10.8	0.0
	baz=267,SNR=17						
SKT	Skwentna	23.12	57	IAmb	IAmb	01 09 13.3	
	comp=Z,42nm,1.4s						
SKT	Skwentna	23.12	57	P	P	01 09 11.1	+0.1
	baz=276,SNR=11						
OHAK	Old Harbor	23.12	70	P	P	01 09 10.7	-0.3
	baz=286						
G22K	Bettles	23.14	45	P	P	01 09 10.6	-0.4
	baz=264						
E22K	Anaktuvuk Pass	23.18	41	P	P	01 09 11.3	-0.3
	baz=261,SNR=34						
BPAW	Bear Paw Mtn.	23.24	52	IAmb	IAmb	01 09 14.1	
	comp=Z,53nm,1.6s						
BPAW	Bear Paw Mtn.	23.24	52	P	P	01 09 12.0	-0.1
	baz=272,SNR=15						
Q20K	Shuyak Island	23.24	66	P	P	01 09 12.1	-0.1
	baz=283						
KTH	Kantishna Hill	23.29	53	IAmb	IAmb	01 09 14.8	
	comp=Z,78nm,1.6s						
KDAK	Kodiak Island	23.34	68	P	P	01 09 12.9	-0.3
KDAK	Kodiak Island	23.34	68	P	P	01 09 12.9	-0.3
KDAK				pmax	pmax		
	comp=Z,13nm,0.7s						
KDAK	Kodiak Island	23.34	68	P	P	01 09 12.9	-0.3
	baz=285						
MLY	Manley	23.34	49	IAmb	IAmb	01 09 15.3	
	comp=Z,51nm,1.7s						
MLY	Manley	23.34	49	P	P	01 09 13.2	0.0
	baz=270,SNR=12						
HOM	Homer	23.41	63	P	P	01 09 13.5	-0.2
	baz=281						
CAPN	Captain Cook N	23.45	60	P	P	01 09 14.2	0.0
	baz=279						
SUA	Susitna One	23.55	58	P	P	01 09 15.1	-0.2
	baz=278						
TRF	Thorofare Moun	23.57	53	IAmb	IAmb	01 09 27.0	
	comp=Z,40nm,1.2s						
TRF	Thorofare Moun	23.57	53	P	P	01 09 15.8	+0.2
	baz=274,SNR=14						
USRK	Ussuriysk Ar.	23.58	253	P	P	01 09 16.4	+0.8
	comp=Z,3.4nm,0.8s,baz=71,slow=12,SNR=5.7						
	comp=Z,3.4nm,0.8s						
CNPM	China Poot	23.63	63	IAmb	IAmb	01 09 19.2	
	comp=Z,17nm,0.5s						
CUT	Chulitna	23.67	56	P	P	01 09 16.4	+0.1
	baz=276						
COLD	Coldfoot	23.68	44	P	P	01 09 16.5	+0.2
	baz=265,SNR=14						
G23K	Bananza Creek	23.71	45	IAmb	IAmb	01 09 25.8	
	comp=Z,39nm,1.8s						
G23K	Bananza Creek	23.71	45	P	P	01 09 16.7	0.0
	baz=266,SNR=11						
D23K	Nanushuk River	23.73	40	IAmb	IAmb	01 09 18.6	
	comp=Z,44nm,1.5s						
D23K	Nanushuk River	23.73	40	P	P	01 09 16.3	-0.5
	baz=261,SNR=11						
M22K	Willow	23.81	58	IAmb	IAmb	01 09 38.0	
	comp=Z,22nm,0.9s						
M22K	Willow	23.81	58	P	P	01 09 17.7	+0.1
	baz=278						
BRSE	Bradley Lake S	23.84	63	P	P	01 09 17.8	-0.1
	baz=282						
H23K	Yukon River	23.86	47	IAmb	IAmb	01 09 21.5	
	comp=Z,36nm,1.4s						
H23K	Yukon River	23.86	47	P	P	01 09 18.3	+0.2
	baz=269,SNR=12						
C23K	Itkillik River	23.92	37	P	P	01 09 18.6	0.0
C23K	Itkillik River	23.92	37	P	P	01 09 18.5	0.0
	baz=259,SNR=18						
I23K	Minto, Yukon-K	23.93	49	IAmb	IAmb	01 09 30.3	
	comp=Z,79nm,1.8s						
I23K	Minto, Yukon-K	23.93	49	P	P	01 09 18.7	0.0
	baz=271						
E23K	Chandalar	23.99	42	IAmb	IAmb	01 09 22.2	
	comp=Z,45nm,1.5s						
E23K	Chandalar	23.99	42	P	P	01 09 19.4	0.0
	baz=264,SNR=16						
NEA2	Nenana	24.06	50	P	P	01 09 19.9	0.0
	baz=272,SNR=11						
TOLK	Toolik Lake Re	24.08	40	P	P	01 09 20.1	0.0
	baz=262,SNR=15						
RC01	Rabbit Creek A	24.09	59	P	P	01 09 20.1	-0.1
	baz=279						
MCK	McKinley	24.16	53	IAmb	IAmb	01 09 37.6	
	comp=Z,42nm,1.7s						
MCK	McKinley	24.16	53	P	P	01 09 20.7	-0.2
	baz=274						
O22K	Cooper Landing	24.20	61	P	P	01 09 21.5	+0.3
	baz=281						
PMR	Palmer	24.30	58	P	P	01 09 22.4	+0.2
	baz=279						
SEW	Seward	24.40	61	P	P	01 09 23.3	+0.2
	baz=282						
E24K	Your Creek	24.41	42	IAmb	IAmb	01 09 25.5	
	comp=Z,51nm,1.5s						
E24K	Your Creek	24.41	42	P	P	01 09 23.2	0.0
	baz=265,SNR=30						
WAT1	Susitna Watana	24.41	55	P	P	01 09 23.0	-0.3
	baz=276						
D24K	Happy Valley	24.42	39	P	P	01 09 23.5	+0.3
	baz=262,SNR=6.3						
WRH	Wood River Hil	24.49	51	IAmb	IAmb	01 09 25.1	
	comp=Z,33nm,1.2s						
H24K	Noodor Dome	24.55	47	P	P	01 09 24.6	+0.2
	baz=270,SNR=12						
C24K	Franklin Bluff	24.55	38	IAmb	IAmb	01 09 45.8	
	comp=Z,21nm,0.9s						
C24K	Franklin Bluff	24.55	38	P	P	01 09 24.1	-0.3
	baz=261						
COLA	College	24.57	50	P	P	01 09 25.0	+0.4
COLA	College	24.57	50	P	P	01 09 24.4	-0.2
	baz=272						
F24K	Squaw Lake	24.59	43	P	P	01 09 24.9	0.0
	baz=267,SNR=12						
CCB	Clear Creek Bu	24.60	50	IAmb	IAmb	01 09 26.6	
	comp=Z,20nm,1.0s						
KNK	Knik Glacier	24.65	58	P	P	01 09 24.8	-0.5
	baz=280						
G24K	Hadweenzic Riv	24.72	45	IAmb	IAmb	01 09 28.3	
	comp=Z,25nm,0.9s						
G24K	Hadweenzic Riv	24.72	45	P	P	01 09 26.1	+0.2
	baz=269,SNR=50						
PWL	Port Wells	24.80	59	P	P	01 09 26.5	-0.3
	baz=281,SNR=16						
WAT6	Susitna Watana	24.81	55	P	P	01 09 26.6	-0.4
	baz=278,SNR=5.8						
DHY	Denali Highway	24.92	54	P	P	01 09 27.5	-0.5
	baz=277,SNR=16						
M23K	Glacier View	24.93	57	P	P	01 09 27.7	-0.2
	baz=279,SNR=5.3						
HDA	Harding Lake	24.99	51	P	P	01 09 28.1	-0.3
	baz=274						
ILAR	Eielson Array	24.99	50	P	P	01 09 27.9	-0.6

	comp=Z,4.5nm,0.8s,baz=264,slow=7.6,SNR=42							
ILAR					LR	LR	01 19 43.6	
	comp=Z,128nm,19.1s,baz=255,slow=38							
	comp=Z,4.5nm,0.8s							
JSD	Sado	25.05	234		P	P	01 09 28.5	-0.6
BNX	BinXian	25.09	261	⇑	P	P	01 09 29.5	0.0
BNX					pmax	pmax		
	comp=Z,9.0nm,1.0s							
SCM	Sheep Creek Mo	25.11	57		P	P	01 09 29.4	-0.2
	baz=280,SNR=14							
G25K	Bearman Lake	25.27	45		P	P	01 09 30.9	+0.1
	baz=270,SNR=6.1							
D25K	Kavik River	25.31	39		P	P	01 09 31.2	-0.1
	baz=264,SNR=34							
H25L	Birch Creek	25.38	46		P	P	01 09 32.1	+0.2
	baz=271							
GLI	Glacier Island	25.39	59		IAmb	IAmb	01 09 41.9	
	comp=Z,52nm,1.8s							
GLI	Glacier Island	25.39	59		P	P	01 09 32.2	+0.1
	baz=282							
P23K	Montague Islan	25.43	61		IAmb	IAmb	01 09 41.5	
	comp=Z,42nm,1.2s							
P23K	Montague Islan	25.43	61		P	P	01 09 32.3	-0.1
	baz=283							
F25K	Christian Rive	25.46	43		IAmb	IAmb	01 09 35.2	
	comp=Z,23nm,1.3s							
F25K	Christian Rive	25.46	43		P	P	01 09 32.4	-0.3
	baz=269,SNR=22							
E25K	Arctic Village	25.51	42		IAmb	IAmb	01 09 35.8	
	comp=Z,42nm,1.4s							
E25K	Arctic Village	25.51	42		P	P	01 09 33.0	-0.1
	baz=268,SNR=25							
PRP	Porcupine Dome	25.53	48		IAmb	IAmb	01 09 34.9	
	comp=Z,29nm,1.2s							
PRP	Porcupine Dome	25.53	48		P	P	01 09 33.3	-0.1
	baz=273,SNR=18							
K24K	Donnelly Dome	25.55	52		P	P	01 09 33.3	-0.2
	baz=276							
M24K	Tolsona, Glenn	25.61	56		P	P	01 09 34.4	+0.3
	baz=280							
J25K	Salcha River,	25.65	50		IAmb	IAmb	01 09 45.0	
	comp=Z,39nm,1.9s							
J25K	Salcha River,	25.65	50		P	P	01 09 33.6	-0.9
	baz=275,SNR=10							
FID	Port Fidalgo	25.71	59		IAmb	IAmb	01 09 43.9	
	comp=Z,47nm,1.7s							
PAX	Paxson	25.80	54		P	P	01 09 35.6	-0.3
	baz=278,SNR=6.4							
KLU	Klutina	25.83	57		IAmb	IAmb	01 09 45.7	
	comp=Z,17nm,1.0s							
KLU	Klutina	25.83	57		P	P	01 09 36.2	+0.1
	baz=281,SNR=7.8							
BMAR	Burnt Mountain	25.86	44		P	P	01 09 37.2	+0.8
C26K	Camden Bay	25.88	38		P	P	01 09 35.7	-0.6
	baz=264							
RIDG	Independent Ri	25.97	52		IAmb	IAmb	01 09 37.4	
	comp=Z,31nm,1.4s							
RIDG	Independent Ri	25.97	52		P	P	01 09 36.7	-0.7
	baz=277,SNR=8.7							
F26K	Sheenjek River	26.03	43		P	P	01 09 38.0	+0.1
	baz=270,SNR=15							
Q23K	Middleton Isla	26.08	62		P	P	01 09 37.9	-0.4
	baz=285							
EYAK	Cordova Ski Ar	26.11	60		P	P	01 09 38.4	-0.1
	baz=283							
G26K	Porcupine Rive	26.18	45		IAmb	IAmb	01 09 41.1	
	comp=Z,40nm,1.5s							
G26K	Porcupine Rive	26.18	45		P	P	01 09 38.7	-0.4
	baz=272,SNR=20							
C27K	Jago River	26.27	39		P	P	01 09 39.4	-0.6
	baz=266,SNR=20							
MAJO	Matsushiro	26.30	233		P	P	01 09 39.9	-0.6
MAJO	Matsushiro	26.30	233	i	P	P	01 09 41.2	+0.6
MAJO					pmax	pmax		
	comp=Z,39nm,1.0s							
MJAR	Matsushiro Arr	26.30	233		P	P	01 09 41.1	+0.5
MJAR	Matsushiro Arr	26.30	233		P	P	01 09 40.1	-0.4
	comp=Z,13nm,0.9s,baz=25,slow=8.6,SNR=24							
MJAR					LR	LR	01 21 22.8	
	comp=Z,210nm,20.9s,baz=34,slow=40							
	comp=Z,13nm,0.9s							
MJAR	Matsushiro Arr	26.30	233		P	P	01 09 41.1	+0.5
MJAR					pmax	pmax		
	comp=Z,17nm,1.3s							
SCRK	Sand Creek	26.32	52		IAmb	IAmb	01 09 40.6	
	comp=Z,23nm,1.1s							
SCRK	Sand Creek	26.32	52		P	P	01 09 39.4	-1.2
	baz=278,SNR=23							
N25K	Chitina, Valde	26.43	57		IAmb	IAmb	01 09 43.0	
	comp=Z,34nm,1.6s							
N25K	Chitina, Valde	26.43	57		P	P	01 09 41.7	+0.1
	baz=282,SNR=7.2							
J26L	Joseph Creek	26.44	50		P	P	01 09 41.2	-0.5
	baz=277							
I26K	Coal Creek Min	26.53	48		P	P	01 09 42.1	-0.3
	baz=276							
BMRM	Bremner River	26.56	58		IAmb	IAmb	01 09 44.0	
	comp=Z,36nm,1.2s							
BMRM	Bremner River	26.56	58		P	P	01 09 42.5	-0.3
	baz=283,SNR=9.9							
RAGM	Ragged Mountai	26.66	60		IAmb	IAmb	01 09 47.4	
	comp=Z,32nm,1.3s							
L26K	Log Cabin Wild	26.74	54		P	P	01 09 44.0	-0.3
	baz=280							
GLB	Gilahina Butte	26.84	57		IAmb	IAmb	01 09 46.7	
	comp=Z,40nm,1.6s							
HMT	Hamilton	26.88	60		IAmb	IAmb	01 09 47.1	
	comp=Z,17nm,1.0s							
KAIM	Kayak Island	26.90	61		P	P	01 09 45.5	-0.3
	baz=285							
E27K	Coleen River	27.00	42		P	P	01 09 46.9	+0.3
	baz=271,SNR=10							
M26K	Nabesna, AK	27.02	55		IAmb	IAmb	01 09 48.9	
	comp=Z,27nm,1.4s							
M26K	Nabesna, AK	27.02	55		P	P	01 09 47.3	+0.5
	baz=281,SNR=13							
G27K	Doyon Strip	27.03	45		P	P	01 09 46.8	0.0
	baz=274,SNR=12							
H27K	Steamboat Moun	27.12	46		IAmb	IAmb	01 09 49.9	
	comp=Z,44nm,1.4s							
H27K	Steamboat Moun	27.12	46		P	P	01 09 48.6	+0.9
	baz=275,SNR=32							
I27K	Kandik River	27.14	48		P	P	01 09 46.8	-1.1
	baz=276							
K27K	Chicken	27.15	51		IAmb	IAmb	01 09 48.9	
	comp=Z,21nm,1.1s							
K27K	Chicken	27.15	51		P	P	01 09 47.8	-0.1
	baz=279,SNR=23							
MCARA	McCarthy VSAT	27.22	57		P	P	01 09 48.4	-0.1
	baz=283							
D27M	Malcolm River	27.22	40		IAmb	IAmb	01 09 50.1	
	comp=Z,34nm,1.4s							
D27M	Malcolm River	27.22	40		P	P	01 09 48.4	-0.2
	baz=270							
CRQE	Cirque	27.33	58		P	P	01 09 49.5	-0.3
	baz=284							
BGLC	Bering Glacier	27.40	60		P	P	01 09 50.4	+0.2
	baz=286							
L27K	Beaver Creek,	27.42	53		IAmb	IAmb	01 09 52.2	
	comp=Z,23nm,1.1s							
L27K	Beaver Creek,	27.42	53		P	P	01 09 50.5	+0.1
	baz=281,SNR=27							
BCAR	Beaver Creek A	27.44	53		P	P	01 09 51.1	+0.5
JGF	Kuroka	27.47	233		IAmb	IAmb	01 09 53.9	
	comp=Z,45nm,1.4s							
M27K	Edge Creek, AK	27.54	55		IAmb	IAmb	01 09 53.7	
	comp=Z,19nm,1.1s							
M27K	Edge Creek, AK	27.54	55		P	P	01 09 51.8	+0.2
	baz=282,SNR=15							
F28M	Old Crow	27.67	43		IAmb	IAmb	01 09 54.5	
	comp=Z,23nm,1.4s							
F28M	Old Crow	27.67	43		P	P	01 09 53.1	+0.5
	baz=274,SNR=14							
E28M	Babbage River	27.75	41		P	P	01 09 53.2	-0.1
	baz=272,SNR=5.3							
I28M	Miner Creek	27.86	48		P	P	01 09 54.4	0.0
	baz=278,SNR=13							
GRNC	Granite Creek	27.98	58		IAmb	IAmb	01 10 08.6	
	comp=Z,29nm,1.4s							
BVCY	Beaver Creek	27.99	54		P	P	01 09 55.8	+0.3
	baz=283							
D28M	Stokes Point	28.02	39		P	P	01 09 55.7	+0.1
	baz=272							
MESA	MESA	28.03	59		P	P	01 09 56.1	0.0
	baz=286							
YAH	Yahtse	28.08	59		IAmb	IAmb	01 09 58.5	
	comp=Z,30nm,1.4s							
CTG	Chitna Glacier	28.11	57		P	P	01 09 57.0	+0.3
	baz=285							
DAWY	Dawson	28.31	51		P	P	01 09 58.2	-0.1
	baz=281							
YUK3	Moose Creek	28.32	56		P	P	01 09 58.8	+0.1
	baz=284							
E29M	Blow River	28.36	41		IAmb	IAmb	01 10 00.6	
	comp=Z,23nm,1.4s							
E29M	Blow River	28.36	41		P	P	01 09 59.4	+0.7
	baz=274,SNR=13							
H29M	Whitestone	28.39	46		IAmb	IAmb	01 10 00.8	
	comp=Z,33nm,1.5s							
H29M	Whitestone	28.39	46		P	P	01 09 59.4	+0.4
	baz=278,SNR=11							
G29M	Pine Creek	28.45	45		IAmb	IAmb	01 10 01.8	
	comp=Z,38nm,1.3s							
G29M	Pine Creek	28.45	45		P	P	01 10 00.5	+1.0
	baz=277,SNR=25							
I29M	Ogilvie Camp,	28.54	48		IAmb	IAmb	01 10 01.7	
	comp=Z,27nm,1.4s							
I29M	Ogilvie Camp,	28.54	48		P	P	01 10 00.8	+0.5
	baz=279,SNR=16							
O28M	Mount Upton	28.70	58		IAmb	IAmb	01 10 03.6	
	comp=Z,25nm,1.4s							
O28M	Mount Upton	28.70	58		P	P	01 10 02.3	+0.1
	baz=286,SNR=6.8							
J29N	Klondike Camp	28.74	50		P	P	01 10 01.9	-0.3
	baz=281							
YUK8	Steele Glacier	28.77	56		P	P	01 10 02.6	-0.1
	baz=286							
PINM	Pinnacle	28.87	59		P	P	01 10 03.5	+0.1
	baz=287							
EPYK	Eagle Plains	29.03	45		P	P	01 10 04.7	0.0
	baz=279,SNR=5.8							
L29M	L29M	29.06	52		IAmb	IAmb	01 10 07.1	
	comp=Z,35nm,1.4s							
L29M	L29M	29.06	52		P	P	01 10 06.0	+1.0
	baz=284,SNR=18							
M29M	Somme Creek	29.07	54		IAmb	IAmb	01 10 08.5	
	comp=Z,20nm,1.4s							
M29M	Somme Creek	29.07	54		P	P	01 10 06.0	+0.8
	baz=284,SNR=17							
G30M	tAoh Zraii Nji	29.14	44		IAmb	IAmb	01 10 15.7	
	comp=Z,33nm,1.6s							
G30M	tAoh Zraii Nji	29.14	44		P	P	01 10 05.9	+0.2
	baz=278,SNR=8.9							
K29M	Barlow Dome	29.16	51		P	P	01 10 05.3	-0.7
	baz=283							
F30M	Barrier River	29.23	43		IAmb	IAmb	01 10 08.7	
	comp=Z,38nm,1.4s							
F30M	Barrier River	29.23	43		P	P	01 10 07.0	+0.6
	baz=277,SNR=9.9							
I30M	Mount Dempster	29.37	48		IAmb	IAmb	01 10 09.0	
	comp=Z,35nm,1.6s							
I30M	Mount Dempster	29.37	48		P	P	01 10 07.8	0.0
	baz=281,SNR=15							
PNL	Peninsula	29.41	59		P	P	01 10 08.2	+0.1
	baz=289,SNR=5.8							
J30M	Hart River	29.51	49		P	P	01 10 08.8	-0.3
	baz=282							
YUK6	Outpost Mounta	29.51	57		P	P	01 10 09.4	+0.1
	baz=287							
O29M	Mount Kennedy	29.61	58		P	P	01 10 10.4	+0.4
	baz=288							
M30M	Minto, Yukon	29.78	53		P	P	01 10 11.9	+0.5
	baz=285,SNR=8.2							
G31M	Satah River	29.91	44		IAmb	IAmb	01 10 13.8	
	comp=Z,20nm,1.4s							
G31M	Satah River	29.91	44		P	P	01 10 12.3	-0.1
	baz=280,SNR=6.2							
HYT	Haines Junctio	29.95	57		IAmb	IAmb	01 10 15.0	
	comp=Z,11nm,0.9s							
HYT	Haines Junctio	29.95	57		P	P	01 10 13.6	+0.6
	baz=288,SNR=9.8							
N30M	Aishikik Lake	29.95	55		P	P	01 10 12.5	-0.5
	baz=287							
INK	Inuvik	29.98	41		LR	LR	01 25 02.5	
	comp=Z,112nm,18.8s,baz=290,slow=42							
INK	Inuvik	29.98	41		P	P	01 10 13.6	+0.6
	baz=278,SNR=10							
F31M	Tsiigehtchic	30.03	43		IAmb	IAmb	01 10 14.9	
	comp=Z,28nm,1.4s							
F31M	Tsiigehtchic	30.03	43		P	P	01 10 13.6	+0.1
	baz=279,SNR=5.6							
H31M	Peel River	30.09	46		P	P	01 10 14.3	+0.2
	baz=282,SNR=6.7							
P29M	Windy Craggy	30.22	59		P	P	01 10 15.9	+0.6
	baz=290							
P30M	Million Dollar	30.43	58		P	P	01 10 17.9	+0.7
	baz=289							
N31M	Braeburn, Yuko	30.55	55		P	P	01 10 19.0	+0.8
	baz=288							
KSRS	Korea Array	30.57	248		P	P	01 10 17.8	-0.7
	comp=Z,0.8nm,0.4s,baz=35,slow=10,SNR=4.5							
	comp=Z,0.8nm,0.4s							
O30N	Mendenhall	30.63	56		P	P	01 10 19.4	+0.5
	baz=289							
PLBC	Pleasant Camp	30.94	59		P	P	01 10 21.9	+0.4
	baz=291							
M31M	Drury Creek, Y	30.96	53		IAmb	IAmb	01 10 24.1	
	comp=Z,12nm,0.9s							
M31M	Drury Creek, Y	30.96	53		P	P	01 10 23.0	+1.2
	baz=288,SNR=16							
WHY	Whitehorse	31.23	56		P	P	01 10 25.5	+1.3
	baz=290,SNR=11							
FARO	Faro, Yukon	31.42	53		IAmb	IAmb	01 10 28.1	
	comp=Z,25nm,1.4s							
FARO	Faro, Yukon	31.42	53		P	P	01 10 27.3	+1.4
	baz=288,SNR=7.2							
SKAG	Skagway	31.43	59		P	P	01 10 27.1	+1.2
	baz=291							
S31K	Pelican	31.55	62		P	P	01 10 27.8	+0.8
	baz=293							
P32M	Atlin	32.15	58		P	P	01 10 32.8	+0.5
	baz=292							
MMPY	Sheldon Lake,	32.22	52		IAmb	IAmb	01 10 35.3	
	comp=Z,14nm,1.1s							
MMPY	Sheldon Lake,	32.22	52		P	P	01 10 33.8	+1.0
	baz=289,SNR=16							
A36M	Sachs Harbour	32.26	33		P	P	01 10 33.3	+0.3
	baz=279							
R32K	Eaglecrest	32.27	60		P	P	01 10 34.4	+1.1
	baz=294							
P33M	Teslin, Yukon	32.34	56		P	P	01 10 34.8	+0.8
	baz=292,SNR=5.5							
SIT	Sitka	32.37	63		P	P	01 10 35.0	+0.9
	baz=295							
JNU	Nakatsue	32.52	239		LR	LR	01 24 51.6	
	comp=Z,92nm,19.1s,baz=42,slow=38							
S32K	Killisnoo	32.57	62		P	P	01 10 37.0	+1.1
	baz=295							
Q32M	Nakina River	33.08	58		P	P	01 10 41.2	+0.6
	baz=294,SNR=9.4							
R33M	Jennings River	33.52	57		IAmb	IAmb	01 10 47.3	
	comp=Z,24nm,1.4s							
R33M	Jennings River	33.52	57		P	P	01 10 44.4	+0.1
	baz=294,SNR=9.5							
U33K	Whale Pass	33.88	63		P	P	01 10 47.8	+0.5
	baz=297							
TGTN	Hyland Airport	33.92	53		P	P	01 10 48.1	+0.4
	baz=292							
S34M	Telegraph Cree	34.06	60		IAmb	IAmb	01 10 51.9	
	comp=Z,12nm,1.2s							
S34M	Telegraph Cree	34.06	60		P	P	01 10 49.2	+0.3
	baz=296							
CRAG	Craig	34.17	64		P	P	01 10 50.3	+0.4
	baz=298							
WTLY	Watson Lake, Y	34.24	55		IAmb	IAmb	01 10 52.6	
	comp=Z,29nm,1.4s							
WTLY	Watson Lake, Y	34.24	55		P	P	01 10 51.4	+0.9
	baz=294							
DLBC	Dease Lake	34.36	58		LR	LR	01 25 44.8	
	comp=Z,17nm,18.1s,baz=286,slow=38							
DLBC	Dease Lake	34.36	58		P	P	01 10 53.0	+1.4
	baz=296,SNR=14							
NRIK	Noril'sk	34.80	323		LR	LR	01 25 36.3	
	comp=Z,230nm,18.3s,baz=76,slow=37							
NRIK	Noril'sk	34.80	323	i	P	P	01 10 55.0	-0.1
NRIK					pmax	pmax		
	comp=Z,6.0nm,1.1s							
T35M	Bob Quinn	34.90	61		P	P	01 10 57.6	+1.4
	baz=297,SNR=6.1							
ULN	Ulaanbaatar	35.16	281	ce	P	P	01 10 58.1	-0.6
ULN					pmax	pmax		
	comp=Z,8.0nm,1.7s							
SONM	Songino Array	35.54	281		P	P	01 11 00.7	-1.2
SONM	Songino Array	35.54	281		P	P	01 11 01.1	-0.8
	comp=Z,2.3nm,0.8s,baz=66,slow=8.9,SNR=14							
SONM					PcP	PcP	01 13 30.1	-0.3
	comp=Z,1.1nm,0.6s,baz=78,slow=2.1,SNR=3.6							
SONM					LR	LR	01 26 15.4	
	comp=Z,118nm,19.2s,baz=58,slow=38							
	comp=Z,2.3nm,0.8s							
KOTAN	Kotaneelee Air	36.38	53		P	P	01 11 09.8	+0.9
	baz=297							
TOAD	Toad River Com	36.42	56		P	P	01 11 10.3	+1.1
	baz=298,SNR=22							
H11N2	WAKE ISLAND Hy	36.46	176		T	T	01 49 51.4	
	baz=357,slow=76							
H11N3	WAKE ISLAND Hy	36.47	176		T	T	01 49 56.1	
	baz=357,slow=76,SNR=5800							
H11N1	WAKE ISLAND Hy	36.47	176		T	T	01 49 52.7	
	baz=357,slow=76,SNR=8027							
HHC	Hu-ho-hao-te	37.06	268	e	P	P	01 11 13.8	-1.2
HHC					pmax	pmax		
	comp=Z,10.0nm,0.6s							
HHC					pmax	pmax		
	comp=Z,41nm,3.5s							
HHC					LR	LR		
	comp=Z,270nm,14.9s							
HHC					LR	LR		
	comp=Z,260nm,15.5s							
HHC					LR	LR		
	comp=Z,260nm,15.5s							
BTO	Baotou	38.09	269	e	P	P	01 11 23.5	-0.2
BTO					pP	pwP	01 11 35.8	+0.7
BTO					sP	sP	01 11 41.0	+5.6
BTO					PP	PnPn	01 12 54.0	+1.6
BTO					S	S	01 17 11.5	-2.9
BTO					sS	sS	01 17 32.3	+3.1
BTO					SS	SnSn	01 19 50.0	-8.4
BTO					pmax	pmax		
	comp=Z,27nm,0.8s							
BTO					pmax	pmax		
	comp=Z,180nm,8.6s							
BTO					LR	LR		
	comp=Z,570nm,17.1s							
BTO					LR	LR		
	comp=Z,720nm,16.8s							
BTO					LR	LR		
	comp=Z,730nm,12.2s							
EUNU	Eureka	38.36	15		IAmb	IAmb	01 11 29.0	
	comp=Z,21nm,1.4s							
BBB	Bella Bella	38.40	67		LR	LR	01 26 01.9	
	comp=Z,43nm,18.8s,baz=264,slow=34							
YKAW3	Yellowknife Wh	39.27	46		IAmb	IAmb	01 11 34.2	
	comp=Z,7.5nm,0.5s							
YKA	Yellowknife Ar	39.31	46		P	P	01 11 33.7	+0.2
YKA	Yellowknife Ar	39.31	46		P	P	01 11 33.4	-0.1
	comp=Z,3.4nm,0.6s,baz=304,slow=14,SNR=51							
	comp=Z,3.4nm,0.6s							
YKA	Yellowknife Ar	39.31	46		P	P	01 11 33.7	+0.2
YKAW1	Yellowknife Wh	39.36	46		IAmb	IAmb	01 11 35.0	
	comp=Z,6.9nm,0.8s							
NJ2	Nanjing	39.47	252	e	P	P	01 11 35.0	-0.2
NJ2					pmax	pmax		
	comp=Z,6.0nm,0.5s							
RES	Resolute Bay	39.55	24		LR	LR	01 28 23.0	
	comp=Z,67nm,20.7s,baz=5.5,slow=37							
NOR	Nord	42.45	0	i	P	P	01 11 55.0	-4.2
LLLB	Lillooet	42.50	65		P	P	01 12 00.9	+0.9
LLLB					IAmb	IAmb	01 12 10.5	
	comp=Z,28nm,1.4s							
ZALV	Zalesovo Beam	43.11	302		PP	PP	01 13 48.6	+3.7
	comp=Z,3.2nm,0.9s,baz=22,slow=8.3,SNR=6.8							
ZALV					LR	LR	01 31 56.3	
	comp=Z,160nm,18.8s,baz=44,slow=39							
SPITS	Spitsbergen Ar	44.46	351		P	P	01 12 15.2	-0.2
	comp=Z,19nm,0.8s,baz=57,slow=8.1,SNR=48							
SPITS					LR	LR	01 30 57.3	
	comp=Z,110nm,18.9s,baz=336,slow=36							
	comp=Z,19nm,0.8s							
SPITS	Spitsbergen Ar	44.46	351		P	P	01 12 16.1	+0.7
SPITS					pmax	pmax		
	comp=Z,49nm,1.1s							
SPB2	Spitsbergen Ar	44.46	351		P	P	01 12 15.7	+0.3
POIN	Pond Inlet	44.53	22		P	P	01 12 16.2	+0.3
GTA	Gaotai	44.60	276		P	P	01 12 16.3	-0.9
GTA					pmax	pmax		
	comp=Z,9.0nm,1.2s							
GTA					LR	LR		
	comp=Z,280nm,16.4s							
GTA					LR	LR		
	comp=Z,210nm,16.7s							
GTA					LR	LR		
	comp=Z,260nm,15.3s							
LZH	Lanzhou	44.71	270		P	P	01 12 19.5	+1.4
LZH					pP	pP	01 12 25.8	-0.8
LZH					pmax	pmax		
	comp=Z,25nm,1.2s							
LZH					LR	LR		
	comp=Z,430nm,13.3s							
LZH					LR	LR		
	comp=Z,310nm,12.7s							
LZH					LR	LR		
	comp=Z,240nm,12.7s							
NEEM	North Greenlan	44.84	10	i	P	P	01 12 17.6	-1.2
NEEM					IAmb	IAmb	01 12 19.8	
	comp=Z,14nm,0.7s							
GUMO	Guam	45.03	207		LR	LR	01 29 06.4	
	comp=Z,39nm,20.4s,baz=44,slow=33							
B08A	Colville Reser	45.20	66		IAmb	IAmb	01 12 23.6	
	comp=Z,14nm,1.1s							
BLKN	Baker Lake	45.21	37		P	P	01 12 21.4	0.0
MXC	Moxie City	45.87	69		IAmb	IAmb	01 12 35.9	
	comp=Z,11nm,1.3s							
HOOD	Mount Hood Mea	45.98	71		IAmb	IAmb	01 12 36.1	
	comp=Z,18nm,1.0s							
ILON	Igloolik, Nuna	46.01	27		P	P	01 12 27.8	+0.1
C09A	Chrisman Ranch	46.10	66		IAmb	IAmb	01 12 30.4	
	comp=Z,25nm,1.6s							
G05A	Wamic	46.21	71		IAmb	IAmb	01 13 04.8	
	comp=Z,12nm,1.0s							
HAWA	Hanford	46.38	68		IAmb	IAmb	01 12 32.9	
	comp=Z,14nm,1.4s							
NEW	Newport	46.39	65		IAmb	IAmb	01 12 32.7	
	comp=Z,11nm,1.2s							
NEW	Newport	46.39	65		LR	LR	01 32 19.7	
	comp=Z,50nm,18.0s,baz=316,slow=36							
E09A	Wood Farm, Sta	47.02	67		IAmb	IAmb	01 12 43.5	
	comp=Z,13nm,1.0s							
BBOR	Butler Butte	47.07	74		IAmb	IAmb	01 12 46.8	
	comp=Z,24nm,1.7s							
PINE	Pine Mountain	47.38	72		IAmb	IAmb	01 12 49.1	
	comp=Z,15nm,1.2s							
G08A	Pilot Rock	47.42	69		IAmb	IAmb	01 12 48.4	
	comp=Z,16nm,1.9s							
J05D	Fort Rock, OR	47.57	73		IAmb	IAmb	01 12 43.1	
	comp=Z,15nm,1.0s							
KURK	Kurchatov	48.10	302		P	P	01 12 43.2	-1.1
KURK					IAmb	IAmb	01 12 53.0	
	comp=Z,6.7nm,1.0s							
KURK	Kurchatov	48.10	302	ce	P	P	01 12 43.6	-0.7
KURK					pmax	pmax		
	comp=Z,3.0nm,1.0s							
WMQ	Urumqi	48.17	289	e	P	P	01 12 47.8	+2.8
WMQ					LR	LR		
	comp=Z,510nm,21.5s							
WMQ					LR	LR		
	comp=Z,140nm,24.0s							
KURBB	Kurchatov Arra	48.21	302		P	P	01 12 43.3	-1.8
	comp=Z,1.0nm,0.5s,baz=56,slow=7.7,SNR=13							
KURBB					PP	PP	01 14 37.0	-0.2
	comp=Z,1.5nm,0.8s,baz=47,slow=9.5,SNR=4.7							
KURBB					LR	LR	01 35 36.5	
	comp=Z,148nm,21.9s,baz=162,slow=39							
	comp=Z,1.0nm,0.5s							
BMO	Blue Mountains	48.57	68		IAmb	IAmb	01 12 50.0	
	comp=Z,15nm,1.5s							
MK31	Makanchi Array	48.93	296	ce	P	P	01 12 49.7	-1.1
MKAR	Makanchi Array	48.93	296		P	P	01 12 49.1	-1.7
MKAR	Makanchi Array	48.93	296		P	P	01 12 49.0	-1.9
	comp=Z,1.0nm,0.5s,baz=58,slow=6.4,SNR=17							
MKAR					LR	LR	01 33 10.0	
	comp=Z,42nm,20.6s,baz=328,slow=36							
	comp=Z,1.0nm,0.5s							
MKAR	Makanchi Array	48.93	296		P	P	01 12 49.1	-1.7
MAKZ	Makanchi	49.08	296		P	P	01 12 50.1	-1.8
MAKZ	Makanchi	49.08	296		P	P	01 12 50.1	-1.8
MAKZ					pmax	pmax		
	comp=Z,6.0nm,1.3s							
PLID	Pearl Lake	49.09	67		IAmb	IAmb	01 12 53.9	
	comp=Z,6.0nm,0.7s							
FFC	Flin Flon	49.20	50		P	P	01 12 52.7	0.0
FFC					IAmb	IAmb	01 12 54.0	
	comp=Z,23nm,1.6s							

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FFC   Flin Flon          49.20  50    P      P       01 12 52.7  0.0
FFC                                   pmax   pmax
      comp=Z,23nm,1.6s
DBG   Daneborg           49.75   2  i P      P       01 12 56.4 -0.2
DBG                                   IAmb   IAmb    01 12 57.2
      comp=Z,5.9nm,0.7s
NUUG  Nuugaatsiaq        49.89  15  i P      P       01 12 59.4 +1.7
EGMT  Eagleton           50.21  61    IAmb   IAmb    01 13 03.0
      comp=Z,9.6nm,0.8s
BVAR  Borovoye Array     50.30 308    P      P       01 13 00.7 -0.5
      comp=Z,4.8nm,0.8s,baz=51,slow=7.8,SNR=22
BVAR                                  PP     PP      01 14 57.5 +1.2
      comp=Z,3.7nm,1.0s,baz=38,slow=7.5,SNR=4.0
BVAR                                  LR     LR      01 35 18.4
      comp=Z,119nm,19.4s,baz=47,slow=37
      comp=Z,4.8nm,0.8s
BRVK  Borovoye           50.33 309    P      P       01 13 00.9 -0.4
BRVK  Borovoye           50.33 309ceP        P       01 13 01.1 -0.2
BRVK                                  pmax   pmax
      comp=Z,15nm,1.7s
MFID  Camas Ranch        50.34  69    IAmb   IAmb    01 13 03.4
      comp=Z,11nm,1.2s
SUMG  Summit             50.58   9  i P      P       01 13 03.0 -0.4
SUMG                                  IAmb   IAmb    01 13 05.3
      comp=Z,8.1nm,0.6s
BOZ   Bozeman (W)        50.96  64    IAmb   IAmb    01 13 08.1
      comp=Z,13nm,1.4s
ARCES ARCESS Array B     51.05 343    P      P       01 13 05.6 -1.0
      comp=Z,1.5nm,0.6s,baz=18,slow=4.2,SNR=5.5
ARCES                                 LR     LR      01 37 33.3
      comp=Z,76nm,18.5s,baz=0.5,slow=39
      comp=Z,1.5nm,0.6s
PAHR  Pah Rah Range      51.07  75    IAmb   IAmb    01 13 17.0
      comp=Z,20nm,1.8s
PNTR  Pine Nut           51.39  75    IAmb   IAmb    01 13 13.6
      comp=Z,9.9nm,0.9s
SVE   Sverdlovsk         51.62 317  eP       P       01 13 11.1 +0.2
SVE                                   pmax   pmax
      comp=Z,18nm,1.3s
SVE                                   MLR    MLR
      comp=Z,441nm,20.0s
YFT   Old Faithful       52.17  65    IAmb   IAmb    01 13 26.3
      comp=Z,11nm,0.9s
YNE   Yellowstone No     52.19  64    IAmb   IAmb    01 13 28.0
      comp=Z,8.6nm,0.8s
H17A  Grant Village      52.34  64    IAmb   IAmb    01 13 20.2
      comp=Z,20nm,1.2s
DGMT  Dagmar             52.55  57    IAmb   IAmb    01 13 19.5
      comp=Z,25nm,1.4s
NVAR  Mina Array Bea     52.57  75    P      P       01 13 19.3 +0.8
NVAR  Mina Array Bea     52.57  75    P      P       01 13 19.1 +0.6
      comp=Z,3.5nm,0.9s,baz=297,slow=8.5,SNR=16
      comp=Z,3.5nm,0.9s
TPAW  Teton Pass         52.80  66    IAmb   IAmb    01 13 29.4
      comp=Z,15nm,1.1s
ARTI  Arti               52.80 318    P      P       01 13 19.4 -0.3
ARTI                                  IAmb   IAmb    01 13 20.8
      comp=Z,13nm,0.7s
ARTI  Arti               52.80 318    LR     LR      01 38 59.9
      comp=Z,214nm,18.3s,baz=32,slow=40
ARTI  Arti               52.80 318c iP       P       01 13 19.6 -0.1
ARTI                                                 01 14 28.6
ARTI                                  S      S       01 20 49.6 +4.0
ARTI                                  SS     SS      01 24 23.3 -0.4
ARTI                                  pmax   pmax
      comp=Z,22nm,1.2s
LOHW  Long Hollow        52.88  65    IAmb   IAmb    01 13 23.1
      comp=Z,16nm,1.2s
PZH   PanZhiHua          53.12 263    P      P       01 13 29.0 +6.4
DSP   Deep Springs       53.52  76    IAmb   IAmb    01 13 36.1
      comp=Z,12nm,1.4s
SCO   Scoresbysund       53.56   3  i P      P       01 13 24.7 -0.4
SCO                                   IAmb   IAmb    01 13 26.3
      comp=Z,14nm,1.4s
FRB   Frobisher Bay      53.71  26    LR     LR      01 40 02.1
      comp=Z,94nm,18.3s,baz=328,slow=40
ICESG Greenland Ices     53.83  10  i P      P       01 13 26.7 -0.9
BW06  Boulder Array      54.02  65    IAmb   IAmb    01 13 31.0
      comp=Z,14nm,1.2s
PD31  Pinedale Array     54.02  65    IAmb   IAmb    01 13 31.0
      comp=Z,14nm,1.2s
PDAR  Pinedale Array     54.02  65    P      P       01 13 29.9 +0.7
      comp=Z,5.0nm,0.7s,baz=336,slow=3.3,SNR=52
      comp=Z,5.0nm,0.7s
KIRV  Kirov              54.28 324    LR     LR      01 40 56.5
      comp=Z,133nm,21.4s,baz=36,slow=41
KIRV  Kirov              54.28 324ceP        P       01 13 31.2 +0.7
SPR3  Spring Creek 3     54.28  72    IAmb   IAmb    01 13 34.4
      comp=Z,15nm,1.1s
SFJD  Kangerlussuaq      54.42  16    LR     LR      01 39 37.1
      comp=Z,74nm,18.0s,baz=324,slow=39
TPNV  Topopah Spring     54.76  75    IAmb   IAmb    01 13 43.1
      comp=Z,8.9nm,1.0s
PSUT  Pine Spring        54.88  72    IAmb   IAmb    01 14 29.0
      comp=Z,24nm,1.6s
MPU   Maple Canyon       54.96  69    IAmb   IAmb    01 13 38.4
      comp=Z,14nm,1.3s
ULM   Lac du Bonnet      55.01  51    P      P       01 13 36.5 +0.5
      comp=Z,6.8nm,0.4s,baz=312,slow=6.7,SNR=20
      comp=Z,6.8nm,0.4s
BSUT  Blindstream Ca     55.03  68    IAmb   IAmb    01 13 39.4
      comp=Z,19nm,1.4s
PRN   Pahroc Range       55.07  74    IAmb   IAmb    01 13 39.3
      comp=Z,10.0nm,0.9s
GWY   Greenwater Val     55.10  76    IAmb   IAmb    01 13 45.3
      comp=Z,8.3nm,1.0s
BOOM  Boomskoye usch     55.18 296    IAmb   IAmb    01 13 40.9
      comp=Z,8.4nm,1.1s
SOEG  Soedalen           55.40   7  i P      P       01 13 36.6 -1.8
SOEG                                  IAmb   IAmb    01 13 54.3
      comp=Z,92nm,1.5s
KLMR  Klimovskoe         55.42 331  eP       P       01 13 37.1 -1.6
KLMR                                  pmax   pmax
      comp=Z,29nm,1.7s
KLMR                                  MLR    MLR
      comp=Z,242nm,14.0s
K22A  Casper             55.64  63    IAmb   IAmb    01 13 50.8
      comp=Z,13nm,1.3s
MVU   Marysvale          55.77  71    IAmb   IAmb    01 14 34.2
      comp=Z,8.9nm,0.9s
RSSD  Black Hills        55.78  61    P      P       01 13 42.4 +0.5
RSSD  Black Hills        55.78  61    P      P       01 13 42.4 +0.5
RSSD                                  pmax   pmax
      comp=Z,23nm,1.4s
AAK   Ala-Archa          55.80 297    LR     LR      01 37 26.3
      comp=Z,52nm,18.9s,baz=40,slow=36
AAK   Ala-Archa          55.80 297ceP        P       01 13 41.7 -0.2
AAK                                   pmax   pmax
      comp=Z,7.0nm,0.8s
P18A  Preston Nutter     55.97  68    IAmb   IAmb    01 13 52.8
      comp=Z,13nm,1.2s
Q16A  Castle Valley      56.01  70    IAmb   IAmb    01 13 46.1
      comp=Z,7.8nm,0.8s
AGMN  Agassiz Nation     56.47  52    IAmb   IAmb    01 13 47.9
      comp=Z,10.0nm,0.9s
KNB   Kanab              56.55  72    IAmb   IAmb    01 13 57.3
      comp=Z,14nm,1.3s
NUUK  Nuuk               56.84  18  i P      P       01 13 51.2 +2.5
NUUK                                  IAmb   IAmb    01 13 52.2
      comp=Z,6.1nm,0.7s
KSH   Kashi              57.36 293    P      P       01 13 56.0 +3.0
KSH                                   pmax   pmax
      comp=Z,3.0nm,0.9s
KSH                                   LR     LR
      comp=Z,240nm,14.4s
KSH                                   LR     LR
      comp=Z,150nm,10.7s
KSH                                   LR     LR
      comp=Z,210nm,17.9s
KK31  Karatay Array      57.41 300    IAmb   IAmb    01 13 54.0
      comp=Z,10nm,1.2s
KKAR  Karatay Array      57.41 300    P      P       01 13 52.1 -1.1
KKAR  Karatay Array      57.41 300    IAmb   IAmb    01 13 54.0
      comp=Z,11nm,1.2s
KKAR  Karatay Array      57.41 300    P      P       01 13 52.1 -1.1
PV21  Cone Mtn., Par     57.42  68    IAmb   IAmb    01 13 55.1
      comp=Z,7.1nm,0.9s
AKTO  Aktyubinsk         57.44 313    LR     LR      01 42 09.8
      comp=Z,158nm,18.3s,baz=47,slow=40
PV22  Blue Mesa, Par     57.54  68    IAmb   IAmb    01 13 56.6
      comp=Z,21nm,1.3s
ABKAR Akbulak array      57.55 311    P      P       01 13 53.8 -0.2
ABKAR Akbulak array      57.55 311    IAmb   IAmb    01 13 55.1
      comp=Z,29nm,1.4s
PV16  Nyswonger Mesa     57.64  68    IAmb   IAmb    01 14 03.4
      comp=Z,14nm,1.0s
PV17  East Wray Mesa     57.64  68    IAmb   IAmb    01 13 57.3
      comp=Z,13nm,1.0s
PV07  Paradox Valley     57.68  68    IAmb   IAmb    01 13 57.5
      comp=Z,10nm,1.0s
PV03  Paradox Valley     57.72  68    IAmb   IAmb    01 13 57.8
      comp=Z,10nm,1.0s
PV05  Paradox Valley     57.72  69    IAmb   IAmb    01 13 57.9
      comp=Z,13nm,1.0s
PV13  Radium Mtn., P     57.80  68    IAmb   IAmb    01 13 58.5
      comp=Z,15nm,1.1s
PV15  Paradox Valley     57.84  68    IAmb   IAmb    01 13 58.7
      comp=Z,15nm,1.0s
PV01  Paradox Valley     57.95  68    IAmb   IAmb    01 14 06.4
      comp=Z,19nm,1.8s
F33A  5 Mile Ranch,      58.14  54    IAmb   IAmb    01 13 59.8
      comp=Z,8.1nm,0.8s
FINES FINESS Array B     58.18 338    P      P       01 13 58.0 -0.3
      comp=Z,5.1nm,0.9s,baz=31,slow=8.0,SNR=16
      comp=Z,5.1nm,0.9s
FINES FINESS Array B     58.18 338    P      P       01 13 58.0 -0.3
ISCO  Idaho Springs      58.22  65    IAmb   IAmb    01 14 02.0
      comp=Z,11nm,1.2s
TBO   Thunder Bay        58.97  48    IAmb   IAmb    01 14 04.8
      comp=Z,7.3nm,0.9s
BORG  Borgarnes          59.32   3    LR     LR      01 39 48.3
      comp=Z,23nm,20.6s,baz=346,slow=36
ECSD  EROS Data Cent     59.60  56    IAmb   IAmb    01 14 09.5
      comp=Z,23nm,1.8s
BELG  Belogornoye        59.85 321    LR     LR      01 42 31.0
      comp=Z,95nm,18.1s,baz=57,slow=39
X18A  Snowflake          59.95  72    IAmb   IAmb    01 14 14.0
      comp=Z,11nm,1.3s
MOS   Moscow             60.29 328  eP       P       01 14 10.8 -2.1
GAR   Garm               60.62 297    IAmb   IAmb    01 14 16.5
      comp=Z,13nm,1.1s
CMAR  Chiang Mai Arr     61.08 260    P      P       01 14 19.0 +0.2
      comp=Z,6.1nm,0.3s,baz=21,slow=7.4,SNR=7.3
CMAR                                  PcP    PcP     01 15 02.0 +0.4
      comp=Z,2.1nm,0.3s,baz=33,slow=4.2,SNR=5.5
CMAR                                  LR     LR      01 41 51.5
      comp=Z,86nm,19.1s,baz=180,slow=37
      comp=Z,6.1nm,0.3s
COWI  Conover            61.09  50    IAmb   IAmb    01 14 19.4
      comp=Z,12nm,1.3s
OBN   Obninsk            61.13 329⇓iP        P       01 14 19.1 +0.5
OBN                                 e                01 16 32.9
OBN                                 eS       S       01 22 36.7 +1.3
OBN                                   pmax   pmax
      comp=Z,41nm,1.3s
OBN                                   MLR    MLR
      comp=Z,124nm,16.0s
NB201 NORSAR Array S     61.16 345    P      P       01 14 18.8  0.0
NB2   NORSAR Subarra     61.18 345    P      P       01 14 18.8 -0.2
      comp=Z,2.8nm,0.6s,baz=18,slow=6.9
NOA   NORSAR Array B     61.18 345    P      P       01 14 18.4 -0.6
      comp=Z,1.6nm,0.5s,baz=17,slow=6.8,SNR=17
NOA                                   LR     LR      01 42 28.7
      comp=Z,41nm,18.6s,baz=15,slow=38
      comp=Z,1.6nm,0.5s
ANMO  Albuquerque        61.48  69    P      P       01 14 22.5 +0.9
ANMO  Albuquerque        61.48  69    P      P       01 14 22.5 +0.9
ANMO                                  pmax   pmax
      comp=Z,3.0nm,0.9s
SIMJ  Simiganj           61.53 297    P      P       01 14 20.5 -1.3
SIMJ                                  IAmb   IAmb    01 14 28.7
      comp=Z,13nm,1.4s
HFS   Hagfors            61.68 344    P      P       01 14 21.6 -0.8
      comp=Z,3.8nm,0.6s,baz=20,slow=4.7,SNR=36
HFS                                   LR     LR      01 41 08.6
      comp=Z,97nm,21.9s,baz=16,slow=36
      comp=Z,3.8nm,0.6s
SCHQ  Schefferville      61.80  31    P      P       01 14 22.7 -0.5
      comp=Z,7.8nm,0.5s,baz=346,slow=5.8,SNR=41
SCHQ                                  LR     LR      01 45 15.2
      comp=Z,64nm,18.1s,baz=296,slow=40
      comp=Z,7.8nm,0.5s
LPSR  Galich'ya Gora     62.59 326  eP       P       01 14 28.5  0.0
LPSR                                  pmax   pmax
      comp=Z,24nm,1.0s
VRH   Novokhopyorsk      62.88 323    P      P       01 14 30.0 -0.4
VRH                                   pmax   pmax
      comp=Z,17nm,1.0s
VORR  Voronezh           63.30 325    P      P       01 14 33.3 +0.1
VORR                                  pmax   pmax
      comp=Z,16nm,1.1s
VSR   Storozhevoye       63.70 325  eP       P       01 14 34.1 -1.8
VSR                                   pmax   pmax
      comp=Z,10.0nm,1.0s
VORD  Divnogorie         63.88 325  eP       P       01 14 35.4 -1.6
VORD                                  pmax   pmax
      comp=Z,10.0nm,1.0s
MNK   Minsk              64.03 333  i P      P       01 14 38.4 +0.3
      comp=E,5.0nm,0.8s
MNK                                 i P      P       01 14 38.4 +0.3
      comp=N,3.0nm,0.8s
MNK                                 i P      P       01 14 38.4 +0.3
      comp=Z,8.0nm,0.8s,baz=26
MNK                                 i PcP    PcP     01 15 13.5 +0.4
MNK                                 i PP     PP      01 16 59.0 +0.7
MNK                                 i PPP    PPP     01 18 29.1
MNK                                 i S      S       01 23 15.4 +3.6
MNK                                 i PS     PnS     01 23 30.5 -0.8
MNK                                 i ScS    SKKSac  01 24 27.6 -1.4
MNK                                 i SS     SS      01 26 08.4  -71
MNK                                 i SSS    SSS     01 30 09.0
MNK                                 i LQ     LQ      01 37 35.4
MNK                                 i LR     LR      01 41 42.7
MNK                                 i LRM    MLR     01 44 32.6
      comp=N,105nm,16.6s
MNK                                 i LRM    MLR     01 46 07.9
      comp=Z,116nm,15.3s
MNK                                 i LRM    MLR     01 46 11.0
      comp=E,106nm,16.5s
MNK   Minsk              64.03 333  i P      P       01 14 38.3 +0.3
MNK                                 i                01 15 13.4
MNK                                 i                01 16 59.0
MNK                                 i PPP    PPP     01 18 29.0
MNK                                 i S      S       01 23 15.4 +3.6
MNK                                 i PS     PnS     01 23 30.4 -0.8
MNK                                 i                01 24 27.6
MNK                                 i SSS    SSS     01 30 09.0
MNK                                   pmax   pmax
      comp=E,5.0nm,0.8s
MNK                                   pmax   pmax
      comp=Z,8.0nm,0.8s
MNK                                   pmax   pmax
      comp=N,3.0nm,0.8s
MNK                                   MLR    MLR
      comp=N,105nm,17.0s
MNK                                   MLR    MLR
      comp=Z,116nm,15.0s
MNK                                   MLR    MLR
      comp=E,106nm,17.0s
SMWD  Samnorwood         64.55  65    IAmb   IAmb    01 14 43.2
      comp=Z,12nm,1.1s
MNTX  Cornudas Mount     64.56  71    IAmb   IAmb    01 14 44.2
      comp=Z,10nm,1.1s
DKNS  Dickens            65.33  66    IAmb   IAmb    01 14 48.2
      comp=Z,9.6nm,1.1s
HNR   Honiara            65.47 185    LR     LR      01 37 59.4
      comp=Z,196nm,20.6s,baz=345,slow=31
VHRN  Van Horn           65.49  71    IAmb   IAmb    01 14 50.3
      comp=Z,9.7nm,1.3s
BUKO  Buck Lake          65.58  44    IAmb   IAmb    01 14 47.6
      comp=Z,5.7nm,1.0s
SN07  Snyder 07          65.81  66    IAmb   IAmb    01 14 51.3
      comp=Z,13nm,1.5s
APMT  Aspermont          66.01  66    IAmb   IAmb    01 14 52.3
      comp=Z,8.5nm,0.8s
MNHN  Monahans           66.22  69    IAmb   IAmb    01 14 53.6
      comp=Z,4.7nm,0.7s
LDAQ  Lac Daran          66.39  37    P      P       01 14 53.1 -0.4
LDAQ                                  IAmb   IAmb    01 14 54.2
      comp=Z,15nm,1.4s
ALPN  Alpine             66.52  70    IAmb   IAmb    01 14 55.9
      comp=Z,3.8nm,0.7s
CCM   Cathedral Cave     66.58  56    P      P       01 14 54.2 -0.5
CCM                                   IAmb   IAmb    01 14 55.4
      comp=Z,7.7nm,0.8s
CCM   Cathedral Cave     66.58  56    P      P       01 14 54.2 -0.5
CCM                                   pmax   pmax
      comp=Z,8.0nm,0.8s
HHAR  Hobbs              66.73  59    IAmb   IAmb    01 14 56.0
      comp=Z,9.7nm,1.1s
LMQ   La Malbaie         67.06  37    IAmb   IAmb    01 14 58.5
      comp=Z,8.5nm,0.8s
AK03  Malin Array Si     67.09 331    P      P       01 14 56.6 -1.2
AK21  Malin Array Si     67.10 331    P      P       01 14 56.4 -1.5
AK22  Malin Array Si     67.10 331    P      P       01 14 56.7 -1.2
AK04  Malin Array Si     67.11 331    P      P       01 14 56.8 -1.2
AKASG Malin Array Be     67.12 331    P      P       01 14 57.6 -0.3
      comp=Z,4.0nm,0.4s,baz=29,slow=6.8,SNR=15
AKASG                                 LR     LR      01 47 59.3
      comp=Z,224nm,18.4s,baz=30,slow=39
      comp=Z,4.0nm,0.4s
AKBB  Malin Array Si     67.12 331    IAmb   IAmb    01 14 58.1
      comp=Z,6.0nm,0.8s
AKBB  Malin Array Si     67.12 331ceP        P       01 14 57.6 -0.4
AKBB                                  pmax   pmax
      comp=Z,8.0nm,1.0s
AKBB  Malin Array Si     67.12 331    P      P       01 14 56.5 -1.5
KIEV  Kiev               67.13 331    P      P       01 14 57.1 -0.9
KIEV                                  IAmb   IAmb    01 14 58.1
      comp=Z,5.4nm,0.8s
KIEV  Kiev               67.13 331  ⇓P       P       01 14 58.2 +0.2
KIEV  Kiev               67.13 331    P      P       01 14 58.2 +0.2
KIEV  Kiev               67.13 331    P      P       01 14 56.5 -1.5
      comp=Z,30nm,1.5s
AK01  Malin Array Si     67.13 331    P      P       01 14 56.6 -1.5
TX31  Lajitas Ar. Si     67.33  71    IAmb   IAmb    01 15 01.9
      comp=Z,13nm,1.1s
TXAR  Lajitas Array      67.33  71    P      P       01 15 00.6 +0.8
TXAR  Lajitas Array      67.33  71    P      P       01 15 00.8 +0.9
      comp=Z,5.5nm,0.7s,baz=299,slow=4.7,SNR=45
      comp=Z,5.5nm,0.7s
PLPT  Palo Pinto         67.34  65    IAmb   IAmb    01 15 00.2
      comp=Z,6.6nm,0.7s
RNPP9 Sopachiv           67.34 333    P      P       01 14 58.2 -1.2
T42A  Van Buren          67.47  57    IAmb   IAmb    01 15 00.3
      comp=Z,5.1nm,0.6s
SAND  Sanderson          67.65  69    IAmb   IAmb    01 15 36.0
      comp=Z,6.5nm,1.1s
SBUM  Sibu               67.68 238    P      P       01 15 03.2 +1.2
D62A  Allapoint, All     67.89  36    IAmb   IAmb    01 15 03.3
      comp=Z,7.5nm,0.7s
ERPA  Erie               68.13  46    IAmb   IAmb    01 15 05.1
      comp=Z,14nm,1.4s
E62A  Clayton Lake       68.14  37    P      P       01 15 03.9 -0.7
WHAR  Wooly Hollow       68.32  59    IAmb   IAmb    01 15 06.5
      comp=Z,11nm,1.0s
EKA   Eskdalemuir Ar     68.36 352    P      P       01 15 05.8 +0.1
      comp=Z,2.5nm,0.7s,baz=12,slow=4.9,SNR=8.9
      comp=Z,2.5nm,0.7s
X40A  Basin Creek Fa     68.70  60    IAmb   IAmb    01 15 08.2
      comp=Z,11nm,1.1s
KIV   Kislovodsk         68.73 319  ⇓P       P       01 15 08.7 +0.3
KIV   Kislovodsk         68.73 319    P      P       01 15 08.7 +0.3
KBZ   Khabaz             68.84 318    P      P       01 15 09.6 +0.7
      comp=Z,10nm,1.0s,baz=217,slow=0.4,SNR=11
KBZ                                   LR     LR      01 49 15.4
      comp=Z,167nm,20.9s,baz=25,slow=39
      comp=Z,10nm,1.0s
DRIO  Del Rio            68.86  69    IAmb   IAmb    01 15 16.3
      comp=Z,9.4nm,0.9s
AKT   Akhty              68.88 314  eP       P       01 15 07.6 -1.8
AKT                                   pmax   pmax
      comp=Z,121nm,1.9s
AKT                                   MLR    MLR
      comp=Z,163nm,16.0s
SHA1  Shidzhatmaz        68.92 319  i P      P       01 15 09.7 -0.1
F64A  Sherman            69.20  36    P      P       01 15 09.6 -1.5
F64A                                  IAmb   IAmb    01 15 11.6
      comp=Z,10nm,1.2s
O53A  New Philadelph     69.20  48    IAmb   IAmb    01 15 19.2
      comp=Z,12nm,1.1s
HORU  Horodok            69.22 332    P      P       01 15 10.5 -0.7
LVV   L'vov              69.28 334    P      P       01 15 10.8 -0.8
P52A  Corning            69.33  49    IAmb   IAmb    01 15 11.6
      comp=Z,7.6nm,0.8s
HNDO  Hondo              69.47  68    IAmb   IAmb    01 15 29.2
      comp=Z,9.6nm,1.0s
R50A  Paris              69.51  51    IAmb   IAmb    01 15 13.4
      comp=Z,5.4nm,0.8s
SORM  Soroca             69.69 330  ⇑P       P       01 15 14.3 +0.2
SORM  Soroca             69.69 330    P      P       01 15 14.2 +0.2
WVT   Waverly            69.72  55    P      P       01 15 13.9 -0.6
WVT   Waverly            69.72  55    P      P       01 15 13.9 -0.6
WVT                                   pmax   pmax
      comp=Z,21nm,1.4s
KWP   Kalwaria Pacla     69.78 334  eP       P       01 15 15.9 +1.3
Q52A  Bidwell            69.83  50    IAmb   IAmb    01 15 15.5
      comp=Z,16nm,1.3s
OJC   Ojcow              69.90 336  eP       P       01 15 16.0 +0.5
KSP   Ksiaz              70.06 339  eP       P       01 15 16.4 +0.1
SSPA  Standing Stone     70.23  46    P      P       01 15 16.6 -1.0
CLL   Collm              70.24 341    IAmb   IAmb    01 15 18.7
      comp=Z,15nm,1.4s
CLL   Collm              70.24 341  i P      P       01 15 17.5 +0.1
CLL                                 e*SP     pwP     01 15 33.0 +3.6
CLL                                   pmax   pmax
      comp=Z,56nm,2.3s
CLL   Collm              70.24 341  i P      P       01 15 17.5 +0.1
      comp=Z,56nm,2.3s
CLL                                 ex       x       01 15 24.0
CLL                                 ex       x       01 15 33.0
CLL                                 ePP      PP      01 17 50.0 -2.3
CLL                                 eSS      SS      01 29 12.0  +16
CLL                                   AMS    AMS     01 47 00.0
      comp=Z,100nm,20.8s
STHS  Stebnicka Huta     70.32 335  eP       P       01 15 18.2 +0.2
STHS  Stebnicka Huta     70.32 335  eP       P       01 15 18.2 +0.2
T50A  Nancy              70.34  52    IAmb   IAmb    01 15 18.5
      comp=Z,7.3nm,1.1s
OSTC  Ostas              70.34 339    AMS    AMS     01 50 00.0
      comp=Z,100nm,16.7s
UPC   Upice              70.43 339    AMS    AMS     01 49 50.0
      comp=Z,100nm,20.4s
CLTN  Cedars of Leba     70.44  54    IAmb   IAmb    01 15 20.0
      comp=Z,9.5nm,1.3s
BRG   Berggiesshubel     70.48 340  eP       P       01 15 19.4 +0.4
BRG                                   Amp            01 15 20.5
      comp=Z,5.0nm,1.1s
V48A  Smith Brothers     70.50  55    IAmb   IAmb    01 15 41.3
      comp=Z,5.3nm,0.7s
DPC   Dobruska-Polom     70.52 339  eP       P       01 15 20.3 +1.1
DPC                                 ex       x       01 15 28.0
DPC                                   AMS    AMS     01 50 10.0
      comp=Z,100nm,18.3s
DPC   Dobruska-Polom     70.52 339  eP       P       01 15 20.3 +1.1
DPC                                   MLR    MLR
      comp=Z,100nm,18.3s
N58A  Sunbury            70.52  45    IAmb   IAmb    01 15 18.8
      comp=Z,5.9nm,0.8s
KOLS  Kolonicke sedl     70.53 334  eP       P       01 15 19.8 +0.5
KOLS                                  pmax   pmax
      comp=Z,6.0nm,0.6s
KOLS  Kolonicke sedl     70.53 334  eP       P       01 15 19.8 +0.5
NIE   Niedzica           70.54 336    P      P       01 15 18.6 -0.8
      comp=Z,2.8nm,1.9s
STEB  Steborice          70.61 338  eP       P       01 15 20.7 +0.9
KRLC  Kraliky            70.69 338  eP       P       01 15 21.0 +0.7
KRLC  Kraliky            70.69 338  eP       P       01 15 21.0 +0.7
MORC  Moravsky Berou     70.81 338    IAmb   IAmb    01 15 23.1
      comp=Z,12nm,1.3s
MORC  Moravsky Berou     70.81 338  eP       P       01 15 21.7 +0.7
MORC  Moravsky Berou     70.81 338  ⇓P       P       01 15 21.1 +0.1
MORC  Moravsky Berou     70.81 338    P      P       01 15 21.1 +0.1
LANS  Liptovska Anna     70.98 336  eP       P       01 15 23.7 +1.6
LANS                                  pmax   pmax
      comp=Z,7.0nm,0.7s
LANS  Liptovska Anna     70.98 336  eP       P       01 15 23.7 +1.6
BURAR Bucovina Array     71.01 332  ⇑P       P       01 15 21.8 -0.6
BURAR Bucovina Array     71.01 332    P      P       01 15 21.8 -0.6
MAUC  Maruska            71.14 337  eP       P       01 15 23.7 +0.7
PRA   Prague             71.16 340    AMS    AMS     01 50 50.0
      comp=Z,100nm,20.3s
GNI   Garni              71.21 315    P      P       01 15 24.5 +0.8
GNI   Garni              71.21 315    LR     LR      01 51 13.1
      comp=Z,171nm,19.1s,baz=34,slow=40
GNI   Garni              71.21 315ceP        P       01 15 24.6 +0.8
GNI                                   pmax   pmax
      comp=Z,31nm,1.7s
PRU   Pruhonice          71.22 340    AMS    AMS     01 50 50.0
      comp=Z,200nm,20.8s
SWET  Sewanee            71.34  54    IAmb   IAmb    01 15 24.4
      comp=Z,7.5nm,0.8s
VRAC  Vranov             71.45 338    P      P       01 15 25.9 +1.0
      comp=Z,4.0nm,0.7s,baz=18,slow=5.4,SNR=7.8
VRAC                                  LR     LR      01 51 53.0
      comp=Z,44nm,19.1s,baz=19,slow=40
      comp=Z,4.0nm,0.7s
VRAC  Vranov             71.45 338  eP       P       01 15 25.8 +0.9
VRAC  Vranov             71.45 338  ⇓P       P       01 15 25.2 +0.3
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W50A	Signal Mountai	71.64	54	IAmb	IAmb	01 15 33.0	
	comp=Z,9.3nm,1.1s						
TESR	Tescani	71.64	331	⇑P	P	01 15 26.0	-0.1
JAVC	Velka Javorina	71.65	337	*e*P	P	01 15 28.0	+1.9
TREC	Trest	71.69	339	AMS	AMS	01 52 30.0	
	comp=Z,100nm,16.9s						
KRUC	Moravsky	71.73	338	*e*P	P	01 15 27.3	+0.8
VYHS	Vyhne	71.74	336	*e*P	P	01 15 27.8	+1.2
VYHS				pmax	pmax		
	comp=Z,67nm,2.5s						
VYHS	Vyhne	71.74	336	*e*P	P	01 15 27.8	+1.2
ZVC	Zvikov	71.81	340	*e*P	P	01 15 27.7	+0.7
TKL	Tuckaleechee C	71.94	53	LR	LR	01 48 49.5	
	comp=Z,66nm,18.1s,baz=338,slow=37						
MEM	Membach	72.03	346	*d*P	P	01 15 28.6	+0.3
BTNL	Ternell	72.04	345	*d*P	P	01 15 28.8	+0.4
FPAL	Fort Paine	72.05	54	IAmb	IAmb	01 15 29.6	
	comp=Z,10nm,1.2s						
MODS	Modra-Piesok	72.19	337	*e*P	P	01 15 29.5	+0.1
MODS	Modra-Piesok	72.19	337	*e*P	P	01 15 29.5	+0.1
KHC	Kasperske Hory	72.22	340	*e*P	P	01 15 30.1	+0.6
KHC				AMS	AMS	01 51 20.0	
	comp=Z,200nm,19.8s						
KHC	Kasperske Hory	72.22	340	*e*P	P	01 15 30.1	+0.6
KHC				MLR	MLR		
	comp=Z,200nm,19.8s						
S57A	Dark Hollow, R	72.24	48	IAmb	IAmb	01 15 30.2	
	comp=Z,9.3nm,1.0s						
Y49A	Blount Mountai	72.25	55	IAmb	IAmb	01 15 30.1	
	comp=Z,8.5nm,0.7s						
CKRC	Cesky Krumlov	72.38	340	*e*P	P	01 15 31.4	+0.9
CKRC				*e*x	x	01 15 40.1	
CKRC				AMS	AMS	01 51 20.0	
	comp=Z,200nm,19.5s						
CKRC	Cesky Krumlov	72.38	340	*e*P	P	01 15 31.4	+0.9
CKRC				MLR	MLR		
	comp=Z,200nm,19.5s						
DRGR		72.42	333	⇑P	P	01 15 30.8	0.0
DRGR		72.42	333	P	P	01 15 30.8	0.0
GERES	GERESS Array B	72.47	340	P	P	01 15 31.4	+0.3
	comp=Z,1.8nm,0.8s,baz=2.9,slow=2.7,SNR=14						
GERES				LR	LR	01 51 57.7	
	comp=Z,133nm,18.0s,baz=32,slow=40						
	comp=Z,1.8nm,0.8s						
GERES	GERESS Array B	72.47	340	P	P	01 15 31.6	+0.5
SRO	Srobarova	72.50	337	*e*P	P	01 15 32.9	+1.8
SRO	Srobarova	72.50	337	*e*P	P	01 15 32.8	+1.7
BMRD	Maredsous	72.50	346	*d*P	P	01 15 31.1	0.0
DOU	Dourbes	72.73	346	*d*P	P	01 15 34.1	+1.6
T57A	Hurt	72.76	49	IAmb	IAmb	01 15 44.4	
	comp=Z,9.3nm,0.8s						
MLR	Muntele Rosu	72.77	331	P	P	01 15 33.5	+0.5
MLR				IAmb	IAmb	01 15 37.4	
	comp=Z,6.7nm,0.8s						
MLR	Muntele Rosu	72.77	331	P	P	01 15 33.5	+0.5
	comp=Z,4.6nm,0.6s,baz=346,slow=3.5,SNR=10						
MLR				LR	LR	01 50 05.6	
	comp=Z,175nm,20.1s,baz=47,slow=38						
	comp=Z,4.6nm,0.6s						
MLR	Muntele Rosu	72.77	331	⇑P	P	01 15 33.7	+0.7
MLR	Muntele Rosu	72.77	331	P	P	01 15 33.7	+0.7
CONA	Conrad Observa	72.92	338	*i* pP	P	01 15 35.0	+1.3
	comp=Z,8.5nm,1.3s						
KOPT	Kop Dagi	72.95	318	IAmb	IAmb	01 15 39.4	
	comp=Z,13nm,1.0s						
RONA	Rosalia, Austr	73.04	338	*i* pP	P	01 15 35.6	+1.1
	comp=Z,7.8nm,1.3s						
VOIR		73.06	331	⇑P	P	01 15 35.7	+1.0
VOIR		73.06	331	P	P	01 15 35.7	+1.0
SIRR	Siria	73.17	334	⇓P	P	01 15 35.8	+0.6
MOA	Molln	73.31	339	*i* pP	P	01 15 37.4	+1.4
	comp=Z,5.2nm,1.2s						
T59A	Double "B" Far	73.49	47	IAmb	IAmb	01 15 43.9	
	comp=Z,12nm,1.3s						
SURR	Surduc	73.53	333	⇓P	P	01 15 38.0	+0.7
BIOA	Bad Ischl, Aus	73.59	340	*i* pP	P	01 15 39.5	+1.8
	comp=Z,5.7nm,1.6s						
ARSA	Arzberg	73.63	338	*e*pP	P	01 15 39.2	+1.3
	comp=Z,6.5nm,1.1s						
GZR	Gura Zlata	73.70	333	⇓P	P	01 15 38.6	+0.2
GZR	Gura Zlata	73.70	333	P	P	01 15 38.6	+0.2
BZS	Buzias	73.79	334	⇓P	P	01 15 38.2	-0.6
BZS	Buzias	73.79	334	P	P	01 15 38.2	-0.6
HODGE	Hodges	73.81	52	IAmb	IAmb	01 15 39.9	
	comp=Z,17nm,1.4s						
LESA	Schwarzleotal	74.03	340	*e*pP	P	01 15 41.9	+1.6
	comp=Z,4.7nm,1.0s						
SOKA	Soboth	74.28	338	*i* pP	P	01 15 42.7	+0.9
	comp=Z,6.4nm,1.7s						
RETA	Reutte	74.32	342	*i* P	P	01 15 41.3	-0.7
	comp=Z,2.3nm,0.7s						
WATA	Walderalm	74.32	341	*i* pP	P	01 15 42.8	+0.8
	comp=Z,11nm,1.4s						
WTTA	Wattenberg	74.38	341	*i* pP	P	01 15 43.6	+1.1
	comp=Z,12nm,1.4s						
MOTA	Moosalm	74.39	341	*i* pP	P	01 15 43.2	+0.7
	comp=Z,9.6nm,1.5s						
SQTA	Sankt Quirin	74.50	341	*i* pP	P	01 15 44.0	+0.9
	comp=Z,11nm,1.1s						
OBKA	Obir	74.54	339	*i* pP	P	01 15 44.4	+1.1
	comp=Z,12nm,1.0s						
MYKA	Terra Mystica	74.61	339	*i* pP	P	01 15 44.6	+0.9
	comp=Z,7.0nm,1.2s						
DAVA	Damuels	74.67	342	*i* pP	P	01 15 44.9	+0.8
	comp=Z,5.3nm,1.2s						
ABTA	Abfaltersbach	74.71	340	*i* pP	P	01 15 45.2	+0.9
	comp=Z,9.8nm,1.2s						
FETA	Feichten	74.77	341	*e*pP	P	01 15 45.8	+1.1
	comp=Z,6.7nm,1.0s						
DAVOX	Davos/Dischmat	75.16	342	P	P	01 15 48.0	+1.1
	comp=Z,5.4nm,1.0s,baz=313,slow=5.2,SNR=5.7						
DAVOX				LR	LR	01 51 54.5	
	comp=Z,75nm,20.1s,baz=69,slow=38						
	comp=Z,5.4nm,1.0s						
BOVS	Bovan	75.62	333	⇑P	P	01 15 48.9	-0.5
BRTR	Keskin Array B	75.65	323	P	P	01 15 50.0	+0.1
BRTR	Keskin Array B	75.65	323	P	P	01 15 50.5	+0.5
	comp=Z,1.5nm,0.8s,baz=72,slow=3.5,SNR=6.9						
	comp=Z,1.5nm,0.8s						
DZM	Mont Dzumac	77.97	178	*e*LR	LR	01 40 07.7	
	comp=Z,109nm,25.2s						
DZM	Mont Dzumac	77.97	178	LR	LR	01 46 56.6	
	comp=Z,76nm,19.8s,baz=158,slow=33						
UOSS	Minazif	78.96	298	P	P	01 16 07.0	-1.5
TAOE	Nuku Hiva Isla	79.37	124	*e*LR	LR	01 41 00.4	
	comp=Z,118nm,23.0s						
WRA	Warramunga Arr	79.90	208	P	P	01 16 13.8	+0.3
	comp=Z,2.3nm,0.9s,baz=25,slow=5.9,SNR=9.5						
	comp=Z,2.3nm,0.9s						
FITZ	Fitzroy Crossi	80.78	217	P	P	01 16 19.4	+1.3
	comp=Z,3.0nm,1.0s,baz=94,slow=20,SNR=3.2						
	comp=Z,3.0nm,1.0s						
MMAI	Mount Meron Ar	81.04	318	P	P	01 16 19.6	-0.1
	comp=Z,4.5nm,0.8s,baz=284,slow=3.4,SNR=5.9						
MMAI				LR	LR	01 57 59.4	
	comp=Z,58nm,18.3s,baz=41,slow=40						
	comp=Z,4.5nm,0.8s						
ASF	Jabal al Asfar	81.23	317	P	P	01 16 21.0	+0.3
	comp=Z,5.8nm,0.9s,baz=97,slow=1.0,SNR=8.7						
ASF				LR	LR	01 56 37.5	
	comp=Z,82nm,20.3s,baz=65,slow=39						
	comp=Z,5.8nm,0.9s						
ASF	Jabal al Asfar	81.23	317	P	P	01 16 21.0	+0.3
POLO	Lamas de Olo	82.57	354	*e*P	P	01 16 28.5	+0.9
PVRL	Vila Real	82.66	354	*e*P	P	01 16 29.0	+0.9
PVRL				*i* Amb		01 16 32.0	
	comp=Z,30nm,2.0s						
MVO	Moncorvo	82.73	353	*e*P	P	01 16 30.1	+1.7
MVO				*i* Amb		01 16 37.8	
	comp=Z,16nm,1.5s						
PPT	Papeete	83.12	136	LR	LR	01 47 19.5	
	comp=Z,69nm,20.8s,baz=318,slow=31						
PPT2	Papeete2	83.14	136	*e*LR	LR	01 42 27.8	
	comp=Z,146nm,25.5s						
PPT2				*e*LR	LR	01 42 34.4	
	comp=Z,82nm,22.5s						
VAE	Valguarnera	83.21	336	LR	LR	01 58 46.0	
	comp=Z,96nm,18.1s,baz=316,slow=40						
ASAR	Alice Springs	83.57	208	P	P	01 16 32.4	-0.3
ASAR	Alice Springs	83.57	208	P	P	01 16 33.3	+0.6
	comp=Z,2.6nm,0.9s,baz=13,slow=4.7,SNR=14						
	comp=Z,2.6nm,0.9s						
ESDC	Sonseca Array	83.97	351	P	P	01 16 34.8	-0.1
ESDC	Sonseca Array	83.97	351	P	P	01 16 35.6	+0.8
	comp=Z,1.0nm,0.6s,baz=8.4,slow=5.9,SNR=11						
	comp=Z,1.0nm,0.6s						
PAB	San Pablo	84.14	351	P	P	01 16 34.4	-1.3
PAB	San Pablo	84.14	351	P	P	01 16 34.4	-1.3
PAB				pmax	pmax		
	comp=Z,18nm,1.5s						
EIL	Elat	84.21	317	P	P	01 16 35.9	-0.2
	comp=Z,4.0nm,0.9s,baz=284,slow=2.8,SNR=3.8						
EIL				LR	LR	01 59 46.3	
	comp=Z,64nm,19.6s,baz=61,slow=40						
	comp=Z,4.0nm,0.9s						
PMTG	Montargil	84.89	354	*e*P	P	01 16 40.4	+1.0
PMTG				*i* Amb		01 16 49.6	
	comp=Z,30nm,1.7s						
PESTR	Estremoz	85.05	354	*e*P	P	01 16 41.0	+0.8
PESTR				*i* Amb		01 16 47.8	
	comp=Z,23nm,1.5s						
RAYN	Ar Rayn	85.23	306	P	P	01 16 39.7	-1.8
RAYN				IAmb	IAmb	01 16 49.5	
	comp=Z,10nm,1.2s						
RAYN	Ar Rayn	85.23	306	P	P	01 16 41.2	-0.2
PBAR	Barrancos	85.70	353	*e*P	P	01 16 44.3	+0.8
PBAR				*i* Amb		01 16 53.8	
	comp=Z,34nm,1.7s						
KEST	Kesra	85.96	340	P	P	01 16 44.8	-0.1
	comp=Z,1.3nm,0.5s,baz=0.7,slow=4.1,SNR=9.3						
KEST				LR	LR	02 00 56.4	
	comp=Z,41nm,18.0s,baz=301,slow=40						
	comp=Z,1.3nm,0.5s						
JTS	Las Juntas de	92.82	67	LR	LR	02 03 31.8	
	comp=Z,24nm,18.4s,baz=15,slow=38						
SJG	San Juan	94.79	47	LR	LR	02 03 09.2	
	comp=Z,25nm,20.4s,baz=136,slow=37						
QSPA	South Pole Qui	145.94	180	PKPbc	PKPdf	01 23 42.4	+0.4
	comp=Z,2.5nm,0.5s,baz=275,slow=0.7,SNR=50						

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*THE **29** 01:05:32.9, 40°N±1°×25°.6E±1°.0, h11^{km}±1^{km}, M3.0/27, MLh3.0/27*

*SOF **29** 01:05:32.9, 39°.81N±0°.03×25°.48E±0°.02, h4^{km}±2^{km}, MD2.9/9*

*ISK **29** 01:05:32.3, 39°.74N×25°.62E, h10^{km}, ML3.2/23*

*ATH **29** 01:05:33.0, 39°.75N×25°.59E, h15^{km}±1^{km}, ML3.2/18, Manual Solution by K.Orfanogiannaki First location: 2019/06/29 01:06:35, This location: 2019/06/29 03:20:57 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

*AFAD **29** 01:05:33.1, 39°.73N×25°.67E, h7^{km}±1^{km}, ML3.1*

*BEO **29** 01:05:34.5±0.8, 39°.78N×25°.57E, h0^{km}, ML3.2/7*

ISC 29 01:05:32.9±1.0**, 39°.74N**±0°.02×**25°.60E**±0°.02**, h11**^{km}±8^{km}**, n148, σ0^{s}.89**/183**, 21C-6D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIA	Limnos Island	0.36	296	P	Pg	01 05 40.1	+0.2
LIA				S	Sb	01 05 46.1	-0.6
LIA	Limnos Island	0.36	296	P	Pg	01 05 40.1	+0.2
LIA				S	Sb	01 05 45.6	-1.1
BOZC	Bozcaada	0.36	74	Pg	Pg	01 05 39.7	-0.5
BOZC				Sg	Sg	01 05 44.9	-0.1
BOZC	Bozcaada	0.36	74	P	Pg	01 05 39.6	-0.5
BOZC				*i* IAML		01 05 49.0	
	comp=E,957nm,0.4s						
BOZC				*i* IAML		01 05 50.0	
	comp=N,1µm,0.9s						
KOCA	Canakkale, Ayv	0.48	120	P	Pg	01 05 41.8	-0.5
KOCA				S	Sg	01 05 49.2	+0.5
KOCA				*i* IAML		01 05 51.0	
	comp=N,883nm,0.4s						
KOCA				*i* IAML		01 05 54.0	
	comp=E,1µm,0.6s						
GOAD	anakkale-G¶	0.48	30	P	Pg	01 05 42.5	+0.2
GOAD				*i* IAML		01 05 51.0	
	comp=E,2µm,0.5s						
GOAD				*i* IAML		01 06 04.0	
	comp=N,2µm,0.7s						
GPNR	Gulpinar-Canak	0.50	124	Pg	Pg	01 05 42.3	-0.4
GADA	Gvkgeada	0.50	27	Pg	Pg	01 05 42.7	0.0
GADA				Sg	Sb	01 05 50.3	-0.8
GADA	Gvkgeada	0.50	27	P	Pg	01 05 42.7	0.0
EFSA	Agios Efstrati	0.51	247	P	Pg	01 05 42.9	+0.1
EFSA				S	Sg	01 05 50.0	+0.4
EZN	Ezine	0.57	81	Pg	Pg	01 05 43.1	-0.8
EZN				Sg	Sg	01 05 51.4	0.0
EZN	Ezine	0.57	81	P	Pg	01 05 43.4	-0.5
EZN				S	Sg	01 05 51.3	-0.1
EZN	Ezine	0.57	81	⇓P	Pg	01 05 43.3	-0.5
EZNE	Ezine-Canakkal	0.59	88	Pg	Pg	01 05 43.9	-0.5
PRK	Paraskevi	0.72	133	P	Pg	01 05 46.2	-0.6
PRK				S	Sb	01 05 57.1	-0.1
SMTH	Samothraki Isl	0.73	356	P	Pg	01 05 47.0	0.0
SMTH				S	Sn	01 05 59.0	-1.3
SMTH	Samothraki Isl	0.73	356	P	Pg	01 05 47.1	0.0
SMTH				S	Sb	01 05 57.5	-0.1
BAYC	CANAKKALE_Bayr	0.73	90	P	Pg	01 05 46.3	-0.7
GELI	Tayfur-Gelibol	0.94	45	Pg	Pb	01 05 50.8	-0.3
AYVA	Ayvalik	0.95	117	P	Pb	01 05 50.4	-0.9
AYVA				S	Sn	01 06 06.2	+0.5
AYVA				*i* IAML		01 06 12.0	
	comp=E,636nm,0.7s						
AYVA				*i* IAML		01 06 17.0	
	comp=N,695nm,0.5s						
ENZZ	Sultanice-Enez	0.96	26	Pg	Pb	01 05 50.9	-0.6
CAVK	Edirne/Enez-Ca	1.04	25	P	Pb	01 05 52.7	-0.2
CAVK				*i* IAML		01 06 16.0	
	comp=N,513nm,0.5s						
CAVK				*i* IAML		01 06 21.0	
	comp=E,564nm,0.7s						
CAVK	Edirne/Enez-Ca	1.04	25	⇓P	Pb	01 05 52.5	-0.4
ENEZ	Enez	1.08	23	Pg	Pb	01 05 53.2	-0.3
ENEZ				Sg	Sn	01 06 09.3	+0.4
ENEZ	Enez	1.08	23	P	Pb	01 05 53.1	-0.4
ENEZ				S	Sn	01 06 09.2	+0.3
LPK	Lapseki	1.09	54	Pg	Pb	01 05 53.5	-0.2
THAS	Thassos island	1.09	322	P	Pn	01 05 53.6	-0.5
THAS				S	Sn	01 06 08.8	-0.5
THAS	Thassos island	1.09	322	P	Pb	01 05 53.4	-0.4
THAS				S	Sb	01 06 07.7	-0.4
ALEX	Alexandroupoli	1.14	12	P	Pb	01 05 54.2	-0.3
ALEX				S	Sg	01 06 09.3	-0.2
CANM	Can-anakkale	1.15	76	Pn	Pn	01 05 54.3	-0.6
ERIK	Erikli-Kesan	1.16	37	Pn	Pb	01 05 54.8	-0.1
BUHA	Balikesir, Bur	1.17	101	P	Pn	01 05 54.4	-0.7
BUHA				S	Sg	01 06 12.1	+1.7
BUHA				*i* IAML		01 06 15.0	
	comp=E,493nm,0.4s						
BUHA				*i* IAML		01 06 21.0	
	comp=N,398nm,0.9s						
SKY	Skiros Island	1.19	224	S	Sb	01 06 10.6	-0.1
SKY	Skiros Island	1.19	224	P	Pb	01 05 55.3	-0.1
SKY				S	Sb	01 06 10.0	-0.6
ALN	Alexandroupoli	1.20	16	Pn	Pn	01 05 55.2	-0.4
ALN	Alexandroupoli	1.20	16	P	Pn	01 05 55.0	-0.6
ALN				S	Sg	01 06 12.3	+0.6
DKL	Dikili	1.21	123	Pn	Pb	01 05 55.8	0.0
DKL	Dikili	1.21	123	P	Pn	01 05 55.6	-0.2
DKL				S	Sb	01 06 11.6	+0.2
KARB	zmir-Karabur	1.25	149	P	Pn	01 05 56.2	0.0
KARB				S	Sb	01 06 11.6	-0.9
KARB				*i* IAML		01 06 14.0	
	comp=E,353nm,0.4s						
KARB				*i* IAML		01 06 15.0	
	comp=N,328nm,0.3s						
EAG2	Marmaro, Chios	1.26	162	P	Pb	01 05 57.0	+0.4
EAG2				S	Sg	01 06 13.7	+0.2
YENI	Yenice-Canakka	1.28	81	Pn	Pn	01 05 55.9	-0.8
XANC	Avdira	1.33	338	P	Pn	01 05 56.8	-0.5
XANC				S	Sn	01 06 14.3	-0.8
KESN	Edirne-Kesan	1.36	37	P	Pn	01 05 57.8	-0.3
KESN				S	Sg	01 06 17.8	+0.9
KESN				*i* IAML		01 06 23.0	
	comp=E,626nm,0.5s						
KESN				*i* IAML		01 06 25.0	
	comp=N,619nm,0.5s						
OUR	Ouranopolis	1.38	296	P	Pn	01 05 57.6	-0.4
OUR				S	Sb	01 06 15.9	-0.2
OUR	Ouranopolis	1.38	296	P	Pn	01 05 57.5	-0.4
OUR				S	Sb	01 06 15.5	-0.6
ZEDA	zmir-Bergama	1.38	124	P	Pn	01 05 58.0	-0.1
ZEDA				S	Sg	01 06 17.8	+0.4
ZEDA				*i* IAML		01 06 19.0	
	comp=N,378nm,0.4s						
ZEDA				*i* IAML		01 06 24.0	
	comp=E,168nm,0.4s						
CHOS	Chios island	1.40	165	Pn	Pn	01 05 58.5	+0.1
CHOS	Chios island	1.40	165	P	Pn	01 05 57.6	-0.8
CHOS				S	Sb	01 06 17.3	+0.3
CHOS	Chios island	1.40	165	P	Pn	01 05 57.3	-1.1
CHOS				S	Sb	01 06 17.2	+0.3
RDO	Rodhopi	1.40	358	Pn	Pn	01 05 58.1	-0.2
RDO	Rodhopi	1.40	358	P	Pn	01 05 58.2	-0.2
RDO	Rodhopi	1.40	358	P	Pn	01 05 58.1	-0.2
AOS	Alonnisos	1.45	247	P	Pn	01 05 58.8	-0.2
AOS				S	Sb	01 06 18.2	0.0
KRBG	Karabiga-Canak	1.46	63	Pn	Pn	01 05 58.9	-0.2
PAIG	Paliouri	1.49	278	P	Pn	01 05 58.9	-0.6
KAVA	Kavala	1.50	327	P	Pn	01 05 59.6	-0.1
KAVA				S	Sn	01 06 18.7	-0.6
KAVA	Kavala	1.50	327	P	Pn	01 05 59.5	-0.2
RKY	Sarkoy-Tekirda	1.54	52	Pn	Pn	01 06 00.4	+0.2
BALY	Balya	1.56	89	P	Pn	01 06 00.8	+0.3
BALY				S	Sb	01 06 21.8	+0.3
BALY				*i* IAML		01 06 28.0	
	comp=N,300nm,0.5s						
BALY				*i* IAML		01 06 31.0	
	comp=E,228nm,0.6s						
URLA	Izmir	1.58	150	Pn	Pn	01 06 00.7	-0.2
UKOP	Uzunkopru-Edir	1.59	29	Pn	Pn	01 06 01.2	+0.2
KYMI	Kymi, Euboea I	1.61	227	P	Pn	01 05 59.9	-1.2
KYMI	Kymi, Euboea I	1.61	227	P	Pn	01 05 59.8	-1.3
SOMA	Soma-Manisa	1.61	111	Pn	Pn	01 06 01.0	-0.2
KOKK	Kokkinochori,	1.63	312	P	Pn	01 06 01.0	-0.5
GONE	Gonen-Balikesi	1.64	79	Pn	Pn	01 06 01.3	-0.2
BLCB	Balcova	1.76	140	Pn	Pn	01 06 03.4	+0.1
PLG	Polygyros	1.77	292	P	Pn	01 06 03.3	-0.1
EDC	Edincik	1.84	70	Pn	Pn	01 06 04.7	+0.3
KDZ	Kurdzhali	1.90	354	*i* P	Pn	01 06 05.3	+0.1
KDZ	Kurdzhali	1.90	354	P	Pn	01 06 05.2	0.0
KDZ				S	Sn	01 06 28.8	-0.2
KARY	Karystos	1.93	208	P	Pn	01 06 04.3	-1.3
KARY	Karystos	1.93	208	P	Pn	01 06 04.3	-1.3
TKR	Tekirdag	1.94	49	Pn	Pn	01 06 05.6	-0.1
BAND	Balkesir-Ban	2.02	72	⇑P	Pn	01 06 07.8	+1.0
RZN	Rozhen	2.06	342	*i* P	Pn	01 06 08.0	+0.5
RZN	Rozhen	2.06	342	P	Pn	01 06 08.0	+0.5
SRS	Serrai	2.06	313	P	Pn	01 06 07.3	-0.1
SRS	Serrai	2.06	313	*e*Pg	Pn	01 06 07.4	0.0
SRS				*e*Sg	Sg	01 06 39.6	+0.6
SRS	Serrai	2.06	313	P	Pn	01 06 06.9	-0.5
HORT	Hortiatis	2.10	295	P	Pn	01 06 08.1	+0.1
DION	Dionisos Attik	2.11	219	P	Pn	01 06 07.2	-0.9
PTL	Penteli	2.17	219	P	Pn	01 06 07.6	-1.3
PTL	Penteli	2.17	219	P	Pn	01 06 07.5	-1.4
GORD	Gordes-Manisa	2.17	112	Pn	Pn	01 06 09.1	+0.2
THE	Thessaloniki	2.20	295	P	Pn	01 06 09.6	+0.2
SMG	Samos	2.25	154	P	Pn	01 06 10.1	+0.1
ATHU	Athens Univers	2.27	219	P	Pn	01 06 10.4	+0.2
MMB	Musomishta	2.29	323	*i* P	Pb	01 06 12.9	-1.2
MMB	Musomishta	2.29	323	P	Pn	01 06 11.1	+0.5
LKR	Lokris	2.29	242	P	Pn	01 06 09.5	-1.1
DIM	Dimitrovgrad	2.30	360	*i* P	Pn	01 06 11.9	+1.2
VIL2	Platees	2.37	231	P	Pn	01 06 11.7	0.0
VILL	Villia	2.38	229	P	Pn	01 06 11.4	-0.4
PHSR	Pinarhisar	2.39	37	⇑P	Pn	01 06 12.9	+1.0
PLD	Plovdiv	2.49	345	*i* P	Pb	01 06 15.9	-1.6
PLD	Plovdiv	2.49	345	P	Pn	01 06 14.0	+0.8
PLD	Plovdiv	2.49	345	*e*Pn	Pb	01 06 15.8	-1.7
KNT	Kendrikon	2.50	305	P	Pn	01 06 13.9	+0.4
KNT	Kendrikon	2.50	305	P	Pn	01 06 13.4	0.0
TYRN	Tyrnavos	2.60	270	P	Pn	01 06 15.5	+0.8
AGG	Agios Georgios	2.63	255	P	Pn	01 06 15.3	0.0
APE	Apeiranthos	2.67	181	P	Pn	01 06 15.2	-0.7
LTK	Loutraki	2.68	231	P	Pn	01 06 16.0	+0.1
CTYL	Yalikoy Yolu	2.68	49	⇑P	Pn	01 06 16.0	0.0
THL	Klokotos Trika	2.77	267	P	Pn	01 06 17.5	+0.4
MAKR	Makrakomi, Fth	2.78	256	P	Pn	01 06 17.9	+0.5
KKB	Krupnik	2.81	319	*i* P	Pb	01 06 20.8	-2.3
KKB	Krupnik	2.81	319	P	Pn	01 06 18.1	+0.3
JMB	Yambol	2.83	14	*i* P	Pg	01 06 27.5	+0.3
JMB	Yambol	2.83	14	P	Pn	01 06 18.5	+0.4
BODT	Bodrum	3.00	153	P	Pn	01 06 20.0	-0.3
VTS	Vitosha	3.38	329	*i* P	Pn	01 06 26.6	+0.9
VTS	Vitosha	3.38	329	*e*Pn	Pn	01 06 28.8	+3.1
FNA	Florina	3.39	289	*e*Pn	Pn	01 06 27.1	+1.3
BOSS	Bosilegrad	3.62	320	*e*Pn	Pn	01 06 29.9	+1.0
MPEP	Malo Peshtene	3.87	339	*i* P	Pn	01 06 33.3	+1.0
IGT	Igoumenitsa	4.07	269	*e*Pn	Pn	01 06 39.4	+4.4
ZAPS	Zavoj	4.17	329	*e*Pn	Pn	01 06 38.4	+1.9
BARS	Barje	4.19	318	*e*Pn	Pn	01 06 38.0	+1.3
VLAD	Vladila	4.35	349	⇓P	Pn	01 06 39.9	+1.1
COPA	Copaceanca	4.40	356	⇑P	Pn	01 06 40.1	+0.5
ZAGS	Zajecar	4.78	329	*e*Pn	Pn	01 06 45.9	+1.1
SELS	Selova	4.84	317	*e*Pn	Pn	01 06 48.1	+2.5
BOVS	Bovan	4.86	324	⇑P	Pn	01 06 47.0	+1.1
HERR	Herculane	5.65	336	⇑P	Pn	01 06 58.3	+1.6
VOIR		5.71	356	⇓P	Pn	01 06 59.0	+1.5
MLR	Muntele Rosu	5.75	2	⇓P	Pn	01 06 59.3	+1.0
MLR	Muntele Rosu	5.75	2	*e*Pn	Pn	01 07 01.2	+3.0
MDVR	Moldovita	5.80	331	⇓P	Pn	01 07 00.2	+1.3
LOT	Lotru	5.86	347	⇑P	Pn	01 07 00.2	+0.5
GZR	Gura Zlata	6.02	341	⇑P	Pn	01 07 02.4	+0.5
GZR	Gura Zlata	6.02	341	*e*Pn	Pn	01 07 02.9	+1.0
PLOR	Plostina	6.16	7	⇑P	Pn	01 07 05.2	+1.5
VRI	Vrincioaia	6.18	7	⇑P	Pn	01 07 04.6	+0.7
DOPR	Dopca	6.22	359	⇑P	Pn	01 07 05.8	+1.2
VRSS	Vrsac	6.24	331	*e*Pn	Pn	01 07 06.2	+1.4
TURR	Turia	6.32	3	⇑P	Pn	01 07 07.1	+1.2
BOSR	Bodos	6.33	0	⇑P	Pn	01 07 06.4	+0.4
OZUR		6.35	1	⇑P	Pn	01 07 06.4	0.0
DEV	Deva	6.45	343	⇑P	Pn	01 07 08.5	+0.8
SURR	Surduc	6.53	338	⇑P	Pn	01 07 09.7	+0.9
BZS	Buzias	6.56	335	*e*Pn	Pn	01 07 10.6	+1.4
TESR	Tescani	6.81	6	⇑P	Pn	01 07 13.5	+0.8
TIP	Timpagrande	6.86	268	⇑P	Pn	01 07 14.8	+1.3
MARR	Marisel-Cluj	7.16	346	⇑P	Pn	01 07 19.2	+1.6
DRGR		7.35	344	⇑P	Pn	01 07 20.0	-0.2
BURAR	Bucovina Array	7.88	358	⇑P	Pn	01 07 29.1	+1.8

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*NEIC **29** 01:06:33.3±2.1, 14°.59S±0°.03×76°.6W±0°.1, h10^{km}±1^{km}, mb4.6/11, Error ellipse: s-maj=21.4km s-min=3.2km az=257.0*

*IDC **29** 01:06:33.1±0.8, 14°.52S×76°.37W, h0^{km}, mb3.9/9, mbtmp3.9/14, ML3.8/5, MS3.5/9, Error ellipse: s-maj=29.0km s-min=15.2km az=68.0*

*VAO **29** 01:06:48.9±1.1, 13°.96S×75°.52W, h80^{km}±9^{km}, mb4.2*

ISC 29 01:06:36.0±0.6**, 14°.44S**±0°.06×**76°.32W**±0°.08**, h23**^{km}**, n67, σ1^{s}.62**/55**, mb3.9**/12**, MS3.5**/6**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	Nana	2.49	348		Pn	01 07 14.4	-0.8
NNA	Nana	2.49	348	Pn	Pn	01 07 16.4	+1.2
	39nm,0.3s,baz=165,slow=9.0,SNR=68						
NNA				Sn	Sb	01 07 48.9	-1.6
	139nm,0.3s,baz=221,slow=10,SNR=7.0						
	241nm,0.6s						
PB18	Visviri	7.28	116		Pn	01 08 24.9	+3.5
ATAH	Atahualpa	7.54	344	Pn	Pn	01 08 26.1	+1.2
	3.6nm,0.3s,baz=203,slow=3.6,SNR=14						
	5.5nm,0.5s						
CZSB	Cruzeiro do Su	7.55	28		Pn	01 08 26.7	+1.9
CZSB	Cruzeiro do Su	7.55	28	*e*P	Pn	01 08 25.3	+0.5
CZSB				*e*S	Sn	01 09 41.9	-7.9
LPAZ	La Paz	8.11	104		Pn	01 08 36.5	+3.6
LPAZ	La Paz	8.11	104	Pn	Pn	01 08 34.1	+1.3
	1.3nm,0.3s,baz=294,slow=6.2,SNR=41						
LPAZ				LR	LR	01 11 32.7	
	comp=Z,89nm,20.7s,baz=278,slow=37						
	6.2nm,0.5s						
LPAZ	La Paz	8.11	104	*e*P	Pn	01 08 36.0	+3.1
LPAZ				*e*S	Sn	01 09 59.9	-4.3
PB11	IPOC Station P	8.28	131		Pn	01 08 33.6	-1.2
GO01	Chusmiza	8.57	128		Pn	01 08 38.9	-0.2
PB08	IPOC Station P	8.88	131		Pn	01 08 44.4	+1.0
PB01	IPOC Station P	9.24	136		Pn	01 08 47.4	-0.6
PB03	IPOC Station P	9.80	141		Pn	01 08 54.4	-1.4
PB09	IPOC Station P	9.93	138		Pn	01 08 57.3	-0.2
PB05	IPOC Station P	10.17	146	Pn	Pn	01 08 59.1	-1.7
TBTG	Tabatinga, AM	11.99	32	*e*P	Pn	01 09 25.4	-0.2
OTAV	Otavalo	14.74	352	*e*P	P	01 10 09.1	-0.5
SIV	San Ignacio	14.79	98	Pn	Pn	01 10 03.1	-0.8
	baz=269,slow=13,SNR=6.9						
SIV				LR	LR	01 16 52.8	

	comp=Z,216nm,21.3s,baz=290,slow=42						
	1.5nm,0.9s						
VILB	**Vilhena**	**15.73**	**87**	*e*P	**Pn**	**01 10 16.0**	**-0.3**
TEFE	**Tefe**	**15.84**	**48**	*e*P	**Pn**	**01 10 16.7**	**-0.9**
FLOC	**Florencia**	**15.94**	**2**		**Pn**	**01 10 18.6**	**-0.3**
FLOC				IAmb	IAmb	01 10 44.6	
	comp=Z,15nm,0.8s						
PTLB	**Pontes e Lacer**	**16.63**	**96**	*e*P	**Pn**	**01 10 28.3**	**+0.5**
CFA	**Coronel Fontan**	**18.62**	**158**	P	**P**	**01 10 50.1**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=326,slow=13,SNR=3.8						
	comp=Z,1.4nm,0.8s						
H03N1	**Juan Fernandez**	**19.06**	**187**	T	T	01 30 27.7	
	baz=7.9,slow=74,SNR=1871						
H03N2	**Juan Fernandez**	**19.06**	**187**	T	T	01 30 27.0	
	baz=7.9,slow=74,SNR=1424						
H03N3	**Juan Fernandez**	**19.08**	**187**	T	T	01 30 26.5	
	baz=7.9,slow=74,SNR=2115						
ROSC	**El Rosal**	**19.26**	**6**	LR	LR	01 20 06.1	
	comp=Z,343nm,19.4s,baz=236,slow=42						
PDRB	**Porto dos Gac**	**19.29**	**84**	*e*P	**P**	**01 10 57.9**	**-1.5**
BDQN	**Bodoquena, MS**	**19.59**	**111**	*e*P	**P**	**01 11 05.0**	**+2.3**
SALV	**Santo Antonio**	**19.96**	**97**	*e*P	**P**	**01 11 07.0**	**+0.3**
CLDB	**Colider**	**20.33**	**82**	*e*P	**P**	**01 11 10.3**	**-0.5**
RUSC	**La Rusia**	**20.46**	**9**		**P**	**01 11 14.3**	**+1.7**
RUSC				IAmb	IAmb	01 11 22.8	
	comp=Z,19nm,0.9s						
SJPY	**San Joaquin**	**21.70**	**122**	*e*P	**P**	**01 11 28.3**	**+2.8**
NPGB	**Novo Progresso**	**21.85**	**73**	*e*P	**P**	**01 11 25.7**	**-1.5**
RPRD	**Ribas do Rio P**	**22.38**	**109**	*e*P	**P**	**01 11 34.7**	**+1.9**
ITTB	**Itaituba**	**22.61**	**66**	*e*P	**P**	**01 11 33.4**	**-2.0**
BOAV	**Boa Vista**	**22.91**	**44**	P	**P**	**01 11 38.1**	**-0.4**
JTS	**Las Juntas de**	**26.02**	**340**	LR	LR	01 21 27.2	
	comp=Z,108nm,18.3s,baz=197,slow=34						
PLCA	**Paso Flores**	**26.67**	**170**	P	**P**	**01 12 13.2**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=9.2,slow=7.4,SNR=3.3						
PLCA				LR	LR	01 21 09.0	
	comp=Z,68nm,18.2s,baz=346,slow=33						
	comp=Z,1.5nm,0.8s						
PCRV	**Puerto La Cruz**	**27.06**	**26**	LR	LR	01 23 25.9	
	comp=Z,163nm,19.2s,slow=37						
BDFB	**Brasilia**	**27.35**	**96**	P	**P**	**01 12 21.7**	**+1.9**
	comp=Z,2.0nm,0.7s,baz=245,slow=11,SNR=3.2						
BDFB				LR	LR	01 23 54.7	
	comp=Z,156nm,20.4s,baz=237,slow=38						
	comp=Z,2.0nm,0.7s						
MDP	**Montagnes des**	**30.47**	**52**	LR	LR	01 25 55.2	
	comp=Z,112nm,20.5s,baz=239,slow=38						
SJG	**San Juan**	**33.87**	**18**	LR	LR	01 28 51.2	
	comp=Z,101nm,19.1s,baz=189,slow=39						
TEIG	**Tepich**	**36.40**	**341**	P	**P**	**01 13 37.9**	**-0.9**
TEIG				IAmb	IAmb	01 13 38.1	
	comp=Z,18nm,1.3s						
X48A	**Hartselle**	**49.68**	**348**	P	**P**	**01 15 24.7**	**-1.5**
X48A				IAmb	IAmb	01 15 34.1	
	comp=Z,9.8nm,1.1s						
L59A	**Walton**	**56.36**	**1**	P	**P**	**01 16 15.1**	**-0.2**
L59A				IAmb	IAmb	01 16 22.8	
	comp=Z,8.4nm,0.8s						
FRNY	**Flat Rock**	**59.05**	**2**	P	**P**	**01 16 34.3**	**+0.3**
FRNY				IAmb	IAmb	01 16 41.8	
	comp=Z,6.4nm,0.8s						
LMN	**Caledonia Moun**	**60.91**	**9**	P	**P**	**01 16 46.2**	**-0.7**
PDAR	**Pinedale Array**	**64.60**	**333**	P	**P**	**01 17 12.7**	**+0.9**
	comp=Z,0.1nm,0.4s,baz=113,slow=7.4,SNR=2.0						
	comp=Z,0.1nm,0.4s						
DRLN	**Deer Lake**	**65.57**	**13**	P	**P**	**01 17 17.9**	**+0.2**
NVAR	**Mina Array Bea**	**65.66**	**325**	P	**P**	**01 17 20.6**	**+1.8**
	comp=Z,0.5nm,0.7s,baz=138,slow=4.9,SNR=2.0						
	comp=Z,0.5nm,0.7s						
SNAA	**Sanae**	**71.20**	**161**	P	**P**	**01 17 53.7**	**+0.9**
SNAA				IAmb	IAmb	01 18 01.2	
	comp=Z,2.6nm,0.9s						
SNAA	**Sanae**	**71.20**	**161**	P	**P**	**01 17 53.4**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=266,slow=7.5,SNR=9.3						
	comp=Z,0.7nm,0.5s						
QSPA	**South Pole Qui**	**75.70**	**180**	P	**P**	**01 18 20.9**	**+1.4**
QSPA	**South Pole Qui**	**75.70**	**180**	P	**P**	**01 18 20.5**	**+1.0**
	comp=Z,1.2nm,1.0s,baz=149,slow=2.5,SNR=5.6						
	comp=Z,1.2nm,1.0s						
TORD	**Torodi Ar. Bea**	**81.95**	**74**	P	**P**	**01 18 55.4**	**+0.9**
	comp=Z,4.1nm,0.6s,baz=273,slow=5.1,SNR=8.3						
	comp=Z,4.1nm,0.6s						
YKA	**Yellowknife Ar**	**82.33**	**343**	P	**P**	**01 18 55.3**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=134,slow=5.0,SNR=4.2						
	comp=Z,0.4nm,0.8s						
ESDC	**Sonseca Array**	**86.04**	**47**	P	**P**	**01 19 16.2**	**+1.2**
	comp=Z,0.4nm,0.8s,baz=247,slow=2.6,SNR=2.3						
	comp=Z,0.4nm,0.8s						
H11N3	**WAKE ISLAND Hy**	**119.62**	**285**	T	T	03 36 15.1	
	baz=96,slow=74,SNR=156						
H11N2	**WAKE ISLAND Hy**	**119.64**	**285**	T	T	03 36 12.0	
	baz=96,slow=74,SNR=170						
H11N1	**WAKE ISLAND Hy**	**119.64**	**285**	T	T	03 36 15.1	
	baz=96,slow=74,SNR=93						
H11S2	**WAKE ISLAND Hy**	**119.68**	**283**	T	T	03 36 16.4	
	baz=97,slow=75,SNR=77						
H11S1	**WAKE ISLAND Hy**	**119.69**	**283**	T	T	03 36 17.7	
	baz=97,slow=75,SNR=71						
H11S3	**WAKE ISLAND Hy**	**119.70**	**283**	T	T	03 36 17.7	
	baz=97,slow=75,SNR=88						
SONM	**Songino Array**	**146.63**	**357**	PKPbc	**PKPbc**	**01 26 16.9**	**+0.9**
	comp=Z,1.5nm,0.6s,baz=330,slow=2.4,SNR=6.1						
PZH	**PanZhiHua**	**167.86**	**8**	PKP	**PKPdf**	**01 26 38.0**	**-3.4**

IDC 29 01:26:15.9±5.3**, 5°.44S**×**146°.00E, h0^{km}, mb3.1**/1**, mbtmp3.2**/2**, ML3.0**/1**, Error ellipse: s-maj=339.8km s-min=62.0km az=117.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.34**	**217**	P	Pn	01 30 29.9	-2.1
	baz=36,slow=10,SNR=5.5						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**21.55**	**212**	P	P	01 31 07.1	+0.1
	0.5nm,0.6s,baz=30,slow=12,SNR=7.7						
	0.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**143.98**	**285**	PKP	PKPdf	01 45 55.8	+1.2
	1.0nm,0.7s,baz=84,slow=4.9,SNR=6.3						

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*IDC **29** 02:05:04.3±4.2, 29°.97N×143°.22E, h0^{km}, mb3.7/5, mbtmp3.7/7, ML3.1/2, MS3.0/1, Error ellipse: s-maj=156.3km s-min=25.8km az=70.0*

ISC 29 02:05:08.8±2.2**, 30°.1N**±0°.2×**143°.2E**±0°.4**, h30^{km}, n8, σ1ˢ.47**/7**, mb3.7**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**7.69**	**329**	Pn	**Pn**	**02 06 57.1**	**-1.7**
	0.1nm,0.3s,baz=157,slow=11,SNR=7.0						
	1.1nm,0.3s						
KSRS	**Korea Array**	**14.67**	**304**	Pn	**Pn**	**02 08 33.1**	**-1.1**
	0.2nm,0.3s,baz=110,slow=14,SNR=4.6						
	1.1nm,0.7s						
YAK	**Yakutsk**	**33.19**	**348**	LR	LR	02 30 42.5	
	comp=Z,24nm,18.7s,baz=310,slow=46						
SONM	**Songino Array**	**33.27**	**313**	P	**P**	**02 11 45.4**	**+1.8**
	0.5nm,0.6s,baz=101,slow=4.6,SNR=2.2						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**49.32**	**308**	P	**P**	**02 13 55.6**	**+0.5**
	0.5nm,0.8s,baz=87,slow=9.1,SNR=3.7						
	0.5nm,0.8s						
WRA	**Warramunga Arr**	**50.43**	**191**	P	**P**	**02 14 02.9**	**-0.8**
	0.4nm,0.5s,baz=9.3,slow=8.0,SNR=8.3						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**51.64**	**313**	P	**P**	**02 14 13.2**	**+0.7**
	0.7nm,0.3s,baz=92,slow=6.8,SNR=5.1						
	0.7nm,0.3s						
BVAR	**Borovoye Array**	**56.49**	**316**	P	**P**	**02 14 48.3**	**+0.4**
	0.5nm,0.4s,baz=94,slow=7.7,SNR=3.5						
	0.5nm,0.4s						

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*TIR **29** 02:44:27.8, 40°.44N×20°.78E, h5^{km}, Ml2.8/7*
*SKO **29** 02:44:29.2, 40°.45N×20°.84E, h15^{km}, ML2.3*
*ATH **29** 02:44:30.0, 40°.50N×20°.93E, h4^{km}±1^{km}, ML2.3/15, Manual Solution by A.Papageorgiou First location: 2019/06/29 02:45:35, This location: 2019/06/29 04:42:48 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

ISC 29 02:44:29.2±1.0**, 40°.46N**±0°.02×**20°.83E**±0°.02**, h6^{km}**±8^{km}**, n35, σ0ˢ.79**/61**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	**Korca**	**0.16**	**348**	Pg	**Pg**	**02 44 31.5**	**-1.0**
KBN				Sg	**Sg**	**02 44 34.6**	**-0.2**
KBN				AML	AML	02 44 35.7	
	10nm,0.3s						
NEST	**Nestorio**	**0.17**	**107**	Pg	**Pg**	**02 44 32.9**	**+0.2**
NEST				Sg	**Sg**	**02 44 35.9**	**+0.9**
NEST				AML	AML	02 44 37.3	
	6.3nm,0.2s						
NEST	**Nestorio**	**0.17**	**107**	P	**Pg**	**02 44 32.8**	**+0.1**
NEST				S	**Sg**	**02 44 35.9**	**+0.9**
PENT	**Pentalofos**	**0.35**	**139**	P	**Pg**	**02 44 35.5**	**-0.6**
PENT				S	**Sg**	**02 44 41.9**	**+1.0**
FNA	**Florina**	**0.52**	**52**	Pg	**Pg**	**02 44 39.0**	**-0.3**
FNA				Sg	**Sb**	**02 44 48.1**	**-0.7**
FNA				AML	AML	02 44 50.1	
	3.7nm,0.4s						
FNA	**Florina**	**0.52**	**52**	*i* Pg	**Pg**	**02 44 38.8**	**-0.5**
FNA				*i* Sg	**Sb**	**02 44 48.1**	**-0.7**
FNA	**Florina**	**0.52**	**52**	P	**Pg**	**02 44 38.9**	**-0.5**
FNA				S	**Sg**	**02 44 46.0**	**-0.1**
OHR	**Ohrid**	**0.65**	**358**	*i* Pg	**Pg**	**02 44 41.4**	**-0.3**
OHR				*i* Sg	**Sg**	**02 44 51.5**	**+1.3**
OHR				*e*Lg	Lg	02 44 52.6	
	comp=E,184nm,0.6s						
OHR				*e*Lg	Lg	02 44 53.1	
	comp=N,86nm,0.4s						
KPRO	**Kipourio**	**0.65**	**141**	P	**Pg**	**02 44 41.5**	**-0.3**
KPRO				S	**Sb**	**02 44 51.0**	**-1.4**
KZN	**Kozani**	**0.73**	**102**	P	**Pg**	**02 44 43.3**	**0.0**
KZN				S	**Sg**	**02 44 52.9**	**0.0**
JAN	**Janina**	**0.81**	**179**	P	**Pn**	**02 44 46.4**	**-0.9**
JAN				S	**Sb**	**02 44 56.3**	**-0.6**
SRN	**Sarande**	**0.86**	**228**	Pg	**Pg**	**02 44 44.3**	**-1.5**
SRN				Sg	**Sg**	**02 44 57.3**	**+0.3**
SRN				AML	AML	02 44 59.9	
	comp=N,0.3nm,0.9s						
IGT	**Igoumenitsa**	**1.01**	**203**	Pg	**Pg**	**02 44 47.0**	**-1.5**
IGT				Sg	**Sn**	**02 45 03.8**	**-0.7**
IGT				AML	AML	02 45 16.4	
	comp=N,0.2nm,0.8s						
IGT	**Igoumenitsa**	**1.01**	**203**	*i* Pg	**Pg**	**02 44 47.2**	**-1.3**
IGT				*i* Sg	**Sn**	**02 45 04.0**	**-0.4**
IGT	**Igoumenitsa**	**1.01**	**203**	P	**Pn**	**02 44 51.2**	**+1.2**
IGT				S	**Sn**	**02 45 05.2**	**+0.7**
KEK	**Kerkira**	**1.09**	**227**	P	**Pn**	**02 44 52.2**	**+1.1**
KEK				S	**Sn**	**02 45 08.1**	**+1.6**
TIR	**Tirane**	**1.15**	**321**	*i* Pg	**Pb**	**02 44 51.8**	**+0.2**
TETR	**Tetrakomo, Epi**	**1.17**	**163**	P	**Pn**	**02 44 53.1**	**+0.8**
TETR				S	**Sn**	**02 45 10.0**	**+1.5**
THL	**Klokotos Trika**	**1.28**	**134**	P	**Pn**	**02 44 53.6**	**-0.1**
THL				S	**Sb**	**02 45 10.3**	**-0.1**
TYRN	**Tyrnavos**	**1.31**	**125**	P	**Pn**	**02 44 53.8**	**-0.3**
TYRN				S	**Sg**	**02 45 10.8**	**-0.6**
TSLK	**Tsoukalades, L**	**1.64**	**185**	P	**Pg**	**02 45 00.7**	**0.0**
LKD2	**Lefkada island**	**1.68**	**185**	Pn	**Pg**	**02 45 02.3**	**+0.9**
LKD2	**Lefkada island**	**1.68**	**185**	P	**Pg**	**02 45 01.0**	**-0.4**
LKD2				S	**Sg**	**02 45 23.8**	**+0.6**
KNT	**Kendrikon**	**1.71**	**65**	*i* Pn	**Pb**	**02 45 01.5**	**+0.3**
KNT	**Kendrikon**	**1.71**	**65**	P	**Pn**	**02 44 59.7**	**0.0**
KNT				S	**Sn**	**02 45 21.4**	**-0.6**
EVR	**Evrytania**	**1.72**	**154**	P	**Pg**	**02 45 02.5**	**+0.4**
EVR				S	**Sg**	**02 45 25.3**	**+0.9**
PUK	**Puka**	**1.73**	**336**	Pn	**Pb**	**02 45 01.2**	**-0.3**
PUK				Sn	**Sg**	**02 45 25.8**	**+0.9**
PUK				AML	AML	02 45 31.1	
	comp=N,0.3nm,0.6s						
NYDR	**Nydri-Lefkada**	**1.75**	**183**	P	**Pb**	**02 45 01.5**	**-0.3**
NYDR				S	**Sg**	**02 45 25.6**	**+0.1**
AGG	**Agios Georgios**	**1.84**	**141**	P	**Pn**	**02 45 01.3**	**-0.2**
AGG				S	**Sb**	**02 45 26.4**	**-0.4**
EVGI	**Lefkada island**	**1.85**	**184**	P	**Pb**	**02 45 02.8**	**-0.6**
SCTE	**Santa Cesarea**	**1.85**	**259**	P	**Pn**	**02 45 02.4**	**+0.9**
BCI	**Bajram Curri**	**1.99**	**343**	Pg	**Pb**	**02 45 06.2**	**+0.4**
BCI				Sg	**Sg**	**02 45 33.8**	**+0.7**
BCI				AML	AML	02 45 39.6	
	comp=N,0.3nm,0.7s						
PLG	**Polygyros**	**2.00**	**92**	P	**Pn**	**02 45 02.6**	**-1.0**
ANX	**Ano Chora**	**2.05**	**155**	P	**Pb**	**02 45 06.2**	**-0.7**
EFP	**Efpalio**	**2.20**	**157**	P	**Pn**	**02 45 07.6**	**+1.3**

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*NEIC **29** 03:26:23.4±0.4, 19°.43N±0°.02×155°.61W±0°.03, h43^{km}±4^{km}, Error ellipse: s-maj=3.6km s-min=3.3km az=97.0*

HVO 29 03:26:23.9±0.5**, 19°.41N**±0°.02×**155°.62W**±0°.03**, h43^{km}**±1^{km}**, ML2.5**/42**, ML2.8**/38(NEIC)**, Error ellipse: s-maj=3.9km s-min=3.3km az=85.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MWH	**Mokuaweoweo**	**0.08**	**14**		Pn	03 26 30.5	-1.0
MWH				Sn	Sn	03 26 36.2	-0.6
MWH				IAML		03 26 39.1	
	comp=N,895nm,0.7s						
ALEP	**Alea Permanent**	**0.14**	**350**		Pn	03 26 30.9	-0.7
ALEP					Sn	03 26 36.3	-0.6
AIN	**Ainahou**	**0.15**	**103**		Pn	03 26 30.9	-0.6
AIN				Sn	Sn	03 26 36.4	-0.3
KHU	**Kahuku**	**0.16**	**179**		Pn	03 26 31.1	-0.5
KHU				Sn	Sn	03 26 36.6	-0.3
KHU				IAML		03 26 38.2	
	comp=E,858nm,0.3s						
KHU				IAML		03 26 38.6	
	comp=N,1µm,1.0s						
HMH	**Humu‘ula Sheep**	**0.23**	**33**		Pn	03 26 31.3	-0.8
HMH					Sn	03 26 37.3	-0.6
MLH	**Mauna Loa**	**0.24**	**68**		Sn	03 26 37.1	-0.7
MLH	**Mauna Loa**	**0.24**	**68**		Pn	03 26 31.1	-1.0
MLH				IAML		03 26 38.5	
	comp=N,798nm,0.7s						
MLH				IAML		03 26 39.3	
	comp=E,939nm,1.1s						
HTC	**Hot Caves**	**0.27**	**129**		Pn	03 26 31.5	-0.6
CPH	**Captain Cook**	**0.29**	**286**		Pn	03 26 32.3	-0.1
WRMHI	**West Rim**	**0.30**	**90**		Pn	03 26 32.0	-0.5
WRMHI					Sn	03 26 38.0	-0.6
SDHHI	**Sand Hill**	**0.31**	**93**		Pn	03 26 31.5	-1.1
SDHHI					Sn	03 26 37.7	-1.1
UWE	**Uwekahuna**	**0.31**	**87**		Pn	03 26 32.1	-0.5
UWE					Sn	03 26 38.1	-0.7
UWE	**Uwekahuna**	**0.31**	**87**	IAML		03 26 41.9	
	comp=E,992nm,0.9s						
UWE				IAML		03 26 43.7	
	comp=N,890nm,0.7s						
HLP	**Hilina Pali**	**0.31**	**111**		Pn	03 26 32.0	-0.6
HLP					Sn	03 26 38.2	-0.5
HLP	**Hilina Pali**	**0.31**	**111**	IAML		03 26 42.5	
	comp=E,1µm,1.2s						
HLP				IAML		03 26 46.7	
	comp=N,879nm,0.7s						
OBL	**Observatory Le**	**0.32**	**88**		Pn	03 26 32.1	-0.7
OBL					Sn	03 26 38.4	-0.5
UWB	**Uwekahuna Bluf**	**0.32**	**87**		Pn	03 26 31.6	-1.2
UWB					Sn	03 26 37.2	-1.8
RIM	**Rim**	**0.33**	**92**		Pn	03 26 32.1	-0.8
RIM					Sn	03 26 38.2	-0.9
RSD	**Rainshed**	**0.33**	**80**		Pn	03 26 32.2	-0.6
RSD					Sn	03 26 38.0	-1.2
SBLHI	**Steaming Bluff**	**0.33**	**86**		Pn	03 26 32.1	-0.8
SBLHI					Sn	03 26 38.4	-0.8
KKO	**Keanakako'i**	**0.33**	**92**		Pn	03 26 32.0	-0.9
KKO					Sn	03 26 38.5	-0.8
BYL	**Byron's Ledge**	**0.34**	**89**		Pn	03 26 32.2	-0.7
BYL					Sn	03 26 38.4	-0.9
BYL	**Byron's Ledge**	**0.34**	**89**	IAML		03 26 40.2	
	comp=N,431nm,1.0s						
BYL				IAML		03 26 48.1	
	comp=E,602nm,1.3s						
HATHI	**Halema‘uma‘u T**	**0.34**	**87**		Pn	03 26 32.1	-0.9
HATHI					Sn	03 26 37.8	-1.5
HATHI	**Halema‘uma‘u T**	**0.34**	**87**	IAML		03 26 43.8	
	comp=E,795nm,0.7s						
HUH	**Hualalai**	**0.34**	**323**		Sn	03 26 39.1	-0.6
HUH	**Hualalai**	**0.34**	**323**		Pn	03 26 32.5	-0.6
HUH				IAML		03 26 41.0	
	comp=N,655nm,0.9s						
HUH				IAML		03 26 41.8	
	comp=E,728nm,0.9s						
POHA	**Pohakuloa**	**0.36**	**13**		Pn	03 26 32.6	-0.7
POHA				IAML		03 26 40.8	
	comp=E,742nm,0.9s						
POHA	**Pohakuloa**	**0.36**	**13**		Sn	03 26 38.9	-1.1
PUH	**Pauahi**	**0.38**	**95**		Pn	03 26 32.5	-0.9
PUH					Sn	03 26 39.4	-0.7
PUH	**Pauahi**	**0.38**	**95**	IAML		03 26 41.1	
	comp=E,574nm,1.0s						
PUH				IAML		03 26 45.8	
	comp=N,373nm,0.8s						
KNHH	**Kane Nui o Ham**	**0.42**	**94**		Pn	03 26 33.4	-0.6
STCH	**Steam Cracks**	**0.47**	**93**		Pn	03 26 33.6	-0.8
STCH					Sn	03 26 40.1	-1.7
STCH	**Steam Cracks**	**0.47**	**93**	IAML		03 26 42.6	
	comp=N,515nm,0.9s						
STCH				IAML		03 26 43.1	
	comp=E,588nm,1.2s						
NPOC	**North of Pu‘u**	**0.48**	**92**		Pn	03 26 33.7	-0.9
NPOC					Sn	03 26 40.5	-1.7
JCUZ	**Jacuzzi**	**0.49**	**93**		Pn	03 26 33.5	-1.2
JCUZ					Sn	03 26 41.1	-1.2
JOKA	**Jonika Flow**	**0.58**	**87**		Pn	03 26 34.8	-1.0
JOKA					Sn	03 26 43.0	-1.3
JOKA	**Jonika Flow**	**0.58**	**87**	IAML		03 26 44.9	
	comp=E,488nm,0.9s						

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*IDC **29** 03:27:58.7±1.6, 30°.70S×178°.05W, h0^{km}, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=45.2km s-min=22.7km az=103.0*

ISC 29 03:28:05.0±1.5**, 30°.7S**±0°.1×**178°.1W**±0°.3**, h46^{km}, n5, σ1ˢ.24**/6**, mb3.8**/3**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.39**	**5**	Pn	**Pn**	**03 28 28.1**	**+0.1**
	76nm,0.3s,baz=98,slow=21,SNR=1.6						
RAO				Sn	**Sn**	**03 28 45.7**	**+0.5**
	198nm,0.3s,baz=104,slow=20,SNR=3.2						
ASAR	**Alice Springs**	**43.05**	**267**	P	**P**	**03 36 01.4**	**+0.9**
	0.5nm,0.7s,baz=114,slow=8.5,SNR=2.4						
	0.5nm,0.7s						
WRA	**Warramunga Arr**	**44.06**	**272**	P	**P**	**03 36 08.1**	**-0.6**
	1.1nm,0.6s,baz=111,slow=8.1,SNR=6.8						
	1.1nm,0.6s						
QSPA	**South Pole Qui**	**59.47**	**180**	P	**P**	**03 38 03.5**	**+0.5**
	0.4nm,0.5s,baz=49,slow=9.3,SNR=1.9						
	0.4nm,0.5s						
FINES	**FINESS Array B**	**145.36**	**340**	PKPbc	**PKPbc**	**03 47 35.2**	**-1.7**
	2.8nm,0.9s,baz=44,slow=5.4,SNR=9.9						

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*DJA **29** 03:36:42.3±0.2, 6°S±2°×13°2E±°, h116^{km}±5^{km}, M4.7/15, mb4.8/12, mB5.2/6, MLv4.8/15, Mw(mB)4.6/6*
*IDC **29** 03:36:42.4±2.7, 6°.43S×131°.54E, h44^{km}±30^{km}, mb4.1/9, mbtmp4.4/14, ML4.5/5, MS3.4/1, Error ellipse: s-maj=26.5km s-min=23.2km az=83.0*
*NEIC **29** 03:36:43.0±1.8, 6°.18S±0°.03×131°.62E±0°.07, h35^{km}±1^{km}, mb4.4/15, Error ellipse: s-maj=12.3km s-min=5.5km az=76.0*

ISC 29 03:36:44.4±0.5**, 6°.22S**±0°.04×**131°.63E**±0°.05**, h61^{km}, n70, σ1ˢ.88**/69**, mb4.4**/16**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.78**	**191**		**Pn**	**03 37 13.9**	**+0.9**
SAUI	**Saumlaki**	**1.78**	**191**	P	**Pn**	**03 37 14.0**	**+1.0**
SAUI	**Saumlaki**	**1.78**	**191**	P	**Pn**	**03 37 13.2**	**+0.2**
SAUI				S	**Sn**	**03 37 37.5**	**+2.9**
BNDI	**Bandanaira**	**2.41**	**314**	P	**Pn**	**03 37 21.0**	**-0.5**
BNDI	**Bandanaira**	**2.41**	**314**	P	**Pn**	**03 37 21.0**	**-0.5**
BNDI				S	**Sn**	**03 37 49.0**	**-0.9**
KMPI	**Kaimana, Papua**	**3.27**	**39**	P	**Pn**	**03 37 33.1**	**-0.2**
KMPI				S	**Sn**	**03 38 09.8**	**-1.3**
FAKI	**Fak Fak**	**3.34**	**11**		**Pn**	**03 37 33.2**	**-1.0**
FAKI	**Fak Fak**	**3.34**	**11**	P	**Pn**	**03 37 33.6**	**-0.6**
FAKI	**Fak Fak**	**3.34**	**11**	P	**Pn**	**03 37 32.6**	**-1.6**
FAKI				S	**Sn**	**03 38 09.4**	**-3.2**
MSAI	**Masohi**	**3.93**	**317**	P	**Pn**	**03 37 40.1**	**-2.1**
MSAI				S	**Sn**	**03 38 23.2**	**-3.9**
AAI	**Ambon**	**4.25**	**306**	P	**Pn**	**03 37 44.1**	**-2.6**
RKPI	**Ransiki, Papua**	**5.32**	**29**	P	**Pn**	**03 38 01.9**	**+0.5**
SWI	**Sorong**	**5.33**	**356**	P	**Pn**	**03 37 59.2**	**-2.3**
NLAI	**Namlea**	**5.40**	**303**	P	**Pn**	**03 38 00.1**	**-2.3**
	0.6nm3µm109nm,0.5s						
DRS	**Darwin Rock St**	**6.21**	**187**	P	**Pn**	**03 38 12.2**	**-1.4**
SRPI	**Serui, Papua**	**6.31**	**47**	P	**Pn**	**03 38 12.6**	**-2.3**
	0.5nm44nm,0.4s						
KDU	**Kakadu**	**6.48**	**173**	P	**Pn**	**03 38 15.6**	**-1.6**
MTN	**Manton Dam**	**6.60**	**184**		**Pn**	**03 38 17.5**	**-1.3**
MTN	**Manton Dam**	**6.60**	**184**	P	**Pn**	**03 38 17.6**	**-1.3**
BAKI	**Biak**	**6.70**	**42**	P	**Pn**	**03 38 17.7**	**-2.6**
	0.3nm80nm,0.7s						
SANI	**Sanana**	**6.99**	**306**	P	**Pn**	**03 38 22.1**	**-2.1**
	0.3nm1µm66nm,0.6s						
SOEI	**Soe**	**8.09**	**244**		**Pn**	**03 38 40.6**	**+1.2**
SOEI	**Soe**	**8.09**	**244**	P	**Pn**	**03 38 40.1**	**+0.6**
	80nm,0.5s						
BATI	**Baumata**	**8.82**	**243**	P	**Pn**	**03 38 45.8**	**-3.6**
	0.7nm,0.3s,baz=265,slow=19,SNR=1.3						
BATI				S	**Sn**	**03 40 25.0**	**-2.4**
	52nm,0.4s,baz=66,slow=20,SNR=2.8						
	35nm,0.4s						
JAY	**Jayapura**	**9.77**	**68**	P	**Pn**	**03 39 02.7**	**+0.5**
	0.9nm,0.3s,baz=238,slow=10,SNR=4.2						
	2.2nm,0.4s						
KNRA	**Kununurra**	**9.81**	**196**		**Pn**	**03 39 00.4**	**-2.4**
WSI	**Waingapu**	**11.74**	**252**	P	Pn	03 39 42.0	+13
KAPI	**Kappang**	**11.88**	**275**	P	**Pn**	**03 39 30.4**	**-0.8**
TOLI2	**Tolitoli**	**13.05**	**304**	Pn	**Pn**	**03 39 50.6**	**+3.4**
FITZ	**Fitzroy Crossi**	**13.17**	**206**		Pn	03 39 43.1	-5.7
FITZ	**Fitzroy Crossi**	**13.17**	**206**	P	Pn	03 39 43.7	-5.0
	9.3nm,0.3s,baz=35,slow=12,SNR=96						
FITZ				S	Sn	03 41 59.0	-15
	22nm,0.6s,baz=201,slow=16,SNR=8.6						
	24nm,0.4s						
COEN	**Coen**	**13.71**	**125**		**Pn**	**03 39 54.1**	**-1.9**
COEN	**Coen**	**13.71**	**125**	P	**Pn**	**03 39 54.6**	**-1.5**
WRA	**Warramunga Arr**	**13.89**	**169**		Pn	03 39 51.5	-6.9
WRA	**Warramunga Arr**	**13.89**	**169**	P	Pn	03 39 52.7	-5.7
	2.9nm,0.3s,baz=347,slow=13,SNR=53						
WRA				S	Sn	03 42 16.7	-14
	11nm,0.5s,baz=350,slow=23,SNR=12						
	8.1nm,0.6s						
WR8	**Warramunga Arr**	**13.94**	**169**		Pn	03 39 53.9	-5.1
QIS	**Mount Isa**	**16.22**	**152**	P	**Pn**	**03 40 26.5**	**-2.0**
MTSU	**Mount Surprise**	**17.13**	**135**	P	**Pn**	**03 40 38.9**	**-1.0**
AS31	**Alice Springs**	**17.48**	**173**		**Pn**	**03 40 40.9**	**-3.3**
ASAR	**Alice Springs**	**17.48**	**173**		**Pn**	**03 40 41.1**	**-3.1**
ASAR	**Alice Springs**	**17.48**	**173**	P	**Pn**	**03 40 40.6**	**-3.6**
	2.8nm,0.3s,baz=347,slow=8.9,SNR=108						
ASAR				S	Sn	03 43 44.9	-13
	8.8nm,0.6s,baz=355,slow=25,SNR=10						
	7.6nm,0.5s						
AS01	**Alice Springs**	**17.49**	**173**	P	**Pn**	**03 40 40.7**	**-3.5**
MBWA	**Marble Bar**	**18.80**	**217**	P	**P**	**03 40 57.2**	**-1.9**
MBWA				IAmb	IAmb	03 41 30.3	
	comp=Z,22nm,1.1s						
PSA00	**Pilbara Seismi**	**19.05**	**216**	P	**P**	**03 41 01.9**	**+0.1**
PSA00				IAmb	IAmb	03 41 02.8	
	comp=Z,16nm,0.8s						
KKM	**Kota Kinabalu**	**19.63**	**308**	P	**P**	**03 41 08.1**	**-0.1**
KKM				IAmb	IAmb	03 41 08.6	
	comp=Z,11nm,0.7s						
SBUM	**Sibu**	**21.21**	**293**	P	**P**	**03 41 25.2**	**-0.1**
BBOO	**Buckleboo**	**26.77**	**172**	P	**P**	**03 42 18.6**	**0.0**
STKA	**Stephens Creek**	**27.17**	**161**	P	**P**	**03 42 21.9**	**-0.3**
STKA	**Stephens Creek**	**27.17**	**161**	P	**P**	**03 42 20.9**	**-1.3**
	comp=Z,1.4nm,0.3s,baz=339,slow=8.6,SNR=3.6						
	comp=Z,1.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**40.51**	**308**	P	**P**	**03 44 17.8**	**0.0**
	comp=Z,4.2nm,0.5s,baz=136,slow=7.5,SNR=22						
	comp=Z,4.2nm,0.5s						
CHTO	**Chiang Mai**	**40.71**	**308**	P	**P**	**03 44 19.3**	**-0.1**
CHTO				IAmb	IAmb	03 44 20.1	
	comp=Z,8.8nm,0.8s						
PZH	**PanZhiHua**	**43.56**	**320**	P	**P**	**03 44 47.0**	**+4.3**
USRK	**Ussuriysk Ar.**	**50.19**	**0**	P	**P**	**03 45 35.3**	**+1.3**
	comp=Z,2.2nm,0.5s,baz=186,slow=6.2,SNR=7.0						
	comp=Z,2.2nm,0.5s						
HHC	**Hu-ho-hao-te**	**50.34**	**340**	*e*P	**P**	**03 45 38.3**	**+3.0**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,52nm,3.8s						
ASAJ	**Asahikawa**	**51.07**	**10**	LR	LR	04 08 14.6	
	comp=Z,35nm,18.7s,baz=164,slow=37						
EVN	**Everest**	**54.99**	**310**	P	**P**	**03 46 10.7**	**+0.1**
SONM	**Songino Array**	**58.24**	**340**	P	**P**	**03 46 34.5**	**+1.9**

	comp=Z,0.6nm,0.4s,baz=180,slow=7.1,SNR=3.6						
	comp=Z,0.6nm,0.4s						
MK31	Makanchi Array	68.48	326	P	P	03 47 41.1	+0.9
MK31				IAmb	IAmb	03 47 42.0	
	comp=Z,3.1nm,0.8s						
MKAR	Makanchi Array	68.48	326	P	P	03 47 41.3	+1.1
	comp=Z,3.8nm,0.6s,baz=120,slow=8.1,SNR=51						
	comp=Z,3.8nm,0.6s						
MAKZ	Makanchi	68.66	326	P	P	03 47 40.8	-0.6
MAKZ				IAmb	IAmb	03 47 43.0	
	comp=Z,4.9nm,0.9s						
BOOM	Boomskoye usch	70.00	319	P	P	03 47 51.0	+1.0
BOOM				IAmb	IAmb	03 47 51.6	
	comp=Z,1.8nm,0.7s						
SEY	Seymchan	70.76	10	P	P	03 47 55.2	+1.3
	comp=Z,1.3nm,0.6s,baz=161,slow=7.9,SNR=4.8						
	comp=Z,1.3nm,0.6s						
ARSB	Arslanbob	71.41	317	P	P	03 47 59.4	+0.8
ARSB				IAmb	IAmb	03 48 00.5	
	comp=Z,4.1nm,0.8s						
ZALV	Zalesovo Beam	71.62	333	P	P	03 47 59.4	+0.1
	comp=Z,2.3nm,0.7s,baz=112,slow=6.6,SNR=8.3						
	comp=Z,2.3nm,0.7s						
KURBB	Kurchatov Arra	72.71	328	P	P	03 48 06.5	+0.6
	comp=Z,2.8nm,0.7s,baz=128,slow=4.9,SNR=34						
	comp=Z,2.8nm,0.7s						
KKAR	Karatay Array	73.84	318	P	P	03 48 13.4	+0.7
BVAR	Borovoye Array	78.28	327	P	P	03 48 38.3	+0.6
	comp=Z,1.9nm,0.5s,baz=128,slow=9.6,SNR=12						
	comp=Z,1.9nm,0.5s						
AB31	Akbulak array	82.92	321	P	P	03 49 02.5	-0.2
ABKAR	Akbulak array	82.92	321	P	P	03 49 02.5	-0.1
QSPA	South Pole Qui	83.75	180	P	P	03 49 08.7	+1.9
QSPA				IAmb	IAmb	03 49 47.1	
	comp=Z,11nm,1.5s						

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*KRSC **29** 03:49:15.8±1.5, 56°.21N×164°.30E, h49^{km}±20^{km}, Ml4.0*
*IDC **29** 03:49:15.3±0.7, 56°.27N×163°.92E, h0^{km}, mb3.7/14, mbtmp3.7/16, ML3.3/2, MS3.0/3, Error ellipse: s-maj=25.7km s-min=14.8km az=150.0*
ISC 29 03:49:15.7±1.7**, 56°.21N**±0°.04×**164°.25E**±0°.04**, h4**^{km}±10^{km}**, n61, σ1^{s}34**/65**, mb3.8**/14**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.80	271	*e*P	Pg	03 49 30.7	-0.3
KBTR				*e*S	Sg	03 49 41.1	-0.2
KBG	Krutoberegovo	0.86	274	*e*P	Pg	03 49 31.7	-0.5
KBG				*e*S	Sg	03 49 44.4	+1.0
BKI	Bering	1.40	135	*e*P	Pn	03 49 41.3	-0.7
BKI				*e*S	Sb	03 49 59.2	-1.4
SMKR	Semkarok	1.59	285	*e*P	Pn	03 49 44.0	-0.7
SMKR				*e*S	Sn	03 50 04.8	-0.8
BDR	Baidarnaya	1.73	283	*e*S	Sn	03 50 09.5	+0.5
ZLN	Zelenaya	1.94	266	*e*P	Pn	03 49 49.9	+0.4
CIRR	Tsirk	1.96	269	*e*P	Pn	03 49 50.2	+0.4
LGNR	Loginova	1.99	268	*e*P	Pn	03 49 50.9	+0.5
KLY	Klyuchi	2.01	274	*e*P	Pn	03 49 48.8	-1.4
KLY				*e*S	Sn	03 50 12.8	-3.0
BZGR	Bezymyannyi-Gr	2.01	264	*e*P	Pn	03 49 50.7	+0.2
KRSR	Krestovskiy	2.06	272	*e*P	Pn	03 49 51.0	-0.1
BZWR	Bezymyannyi-We	2.12	265	*e*P	Pn	03 49 52.4	+0.4
BZMR	Bezymyannaya	2.12	264	*e*P	Pn	03 49 52.6	+0.6
MKZ	Mys Kozlova	2.19	222	*e*P	Pn	03 49 51.9	-0.9
MKZ				*e*S	Sn	03 50 17.8	-2.5
KIRR	Kirishev	2.20	265	*e*P	Pn	03 49 53.6	+0.4
KPT	Kopyto	2.27	266	*e*P	Pn	03 49 54.9	+0.9
KMNR	Kamenistaya	2.30	260	*e*P	Pn	03 49 54.9	+0.5
TUMD	Tumrok D	2.40	247	*e*P	Pn	03 49 56.0	+0.3
TUMD				*e*S	Sn	03 50 25.8	+0.3
KOZ	Kozyrevsk	2.45	268	*e*P	Pn	03 49 57.6	+1.1
SRDR	Sredinnyy	2.53	274	*e*P	Pn	03 49 58.5	+1.0
OSSR	Ossora	3.12	349	*e*P	Pn	03 50 05.1	-0.4
OSSR				*e*S	Sn	03 50 39.9	-3.2
KII	Karymskiy	3.51	234	*e*P	Pn	03 50 11.9	+0.9
SPN	Mys Shipunski	3.97	220	*e*P	Pn	03 50 16.7	-0.5
SPN				*e*S	Sn	03 50 59.3	-4.8
NLC	Nalytchevo	4.17	225	*e*P	Pn	03 50 20.1	+0.2
SDLR	Sedlovina	4.28	229	*e*P	Pn	03 50 22.2	+0.6
KRER	Koryakskii	4.31	230	*e*P	Pn	03 50 23.6	+1.4
KRX	Arik	4.32	231	*e*P	Pn	03 50 23.5	+1.3
SMAR	Somma	4.32	229	*e*P	Pn	03 50 22.9	+0.6
AVH	Avacha	4.35	230	*e*P	Pn	03 50 23.4	+0.9
UGLR	Uglovaya	4.35	229	*e*P	Pn	03 50 23.3	+0.7
KOK	Koryaka	4.37	230	*e*P	Pn	03 50 23.8	+1.0
GNL	Ganaly	4.42	238	*e*P	Pn	03 50 25.0	+1.4
DALK	Dalny	4.51	227	*e*P	Pn	03 50 25.2	+0.6
PETK	Petropavlovsk-	4.91	233	Pn	Pn	03 50 30.4	+0.2
	2.0nm,0.3s,baz=84,slow=16,SNR=34						
PETK				Sn	Sn	03 51 29.6	+2.2
	0.7nm,0.3s,baz=327,slow=11,SNR=3.9						
	5.2nm,0.5s						
KRMR	Karymshinskiy	4.91	229	*e*P	Pn	03 50 32.0	+1.8
RUS	Russkaya	5.06	224	*e*P	Pn	03 50 32.6	+0.5
GRL	Gorelyy	5.14	227	*e*P	Pn	03 50 35.5	+2.0
MTVR	Mutnovka	5.15	226	*e*P	Pn	03 50 35.2	+1.6
ASAK	Asacha	5.34	227	*e*P	Pn	03 50 37.7	+1.6
SEY	Seymchan	9.03	323	LR	LR	03 55 03.6	
	comp=Z,25nm,19.6s,baz=348,slow=39						
ASAJ	Asahikawa	18.31	238	P	Pn	03 53 29.4	-0.9
	0.3nm,0.3s,baz=261,slow=15,SNR=3.6						
	6.5nm,0.9s						
ILAR	Eielson Array	24.93	50	P	P	03 54 39.0	-0.4
	0.4nm,0.7s,baz=267,slow=8.8,SNR=7.5						
	0.4nm,0.7s						
MJAR	Matsushiro Arr	26.37	233	P	P	03 54 51.7	-1.0
	1.7nm,0.7s,baz=15,slow=7.7,SNR=4.9						
	1.7nm,0.7s						
H11N2	WAKE ISLAND Hy	36.48	176	T	T	04 35 02.0	
	baz=357,slow=76,SNR=1274						
H11N3	WAKE ISLAND Hy	36.49	176	T	T	04 35 04.5	
	baz=357,slow=76,SNR=575						
H11N1	WAKE ISLAND Hy	36.49	176	T	T	04 35 01.5	
	baz=357,slow=76,SNR=682						
YKA	Yellowknife Ar	39.24	46	P	P	03 56 46.0	+1.4
	0.6nm,0.7s,baz=300,slow=8.7,SNR=6.8						
	0.6nm,0.7s						
RES	Resolute Bay	39.51	24	LR	LR	04 15 28.1	
	comp=Z,24nm,18.4s,baz=20,slow=40						
KURBB	Kurchatov Arra	48.25	302	P	P	03 57 55.8	-1.3
	0.2nm,0.4s,baz=54,slow=7.6,SNR=2.5						
	0.2nm,0.4s						
MKAR	Makanchi Array	48.98	296	P	P	03 58 00.9	-2.0
	0.2nm,0.5s,baz=52,slow=7.5,SNR=2.8						
	0.2nm,0.5s						
NVAR	Mina Array Bea	52.50	75	P	P	03 58 31.6	+1.8
	0.4nm,0.7s,baz=311,slow=7.5,SNR=3.1						
	0.4nm,0.7s						
PDAR	Pinedale Array	53.96	65	P	P	03 58 42.1	+1.6
	1.0nm,0.6s,baz=325,slow=4.2,SNR=10						
	1.0nm,0.6s						
ULM	Lac du Bonnet	54.95	51	P	P	03 58 48.5	+1.3
	1.2nm,0.4s,baz=313,slow=8.9,SNR=4.0						
	1.2nm,0.4s						
NOA	NORSAR Array B	61.18	345	P	P	03 59 31.2	+0.4
	0.3nm,0.5s,baz=13,slow=9.5,SNR=1.4						
	0.3nm,0.5s						
HFS	Hagfors	61.67	344	P	P	03 59 34.0	-0.1
	1.0nm,0.7s,baz=31,slow=3.4,SNR=1.3						
	1.0nm,0.7s						
SCHQ	Schefferville	61.75	31	P	P	03 59 35.0	+0.2
	1.4nm,0.6s,baz=358,slow=6.2,SNR=5.8						
	1.4nm,0.6s						
AKASG	Malin Array Be	67.12	331	P	P	04 00 09.3	-0.6
	0.4nm,0.3s,baz=29,slow=6.7,SNR=2.9						
	0.4nm,0.3s						
TXAR	Lajitas Array	67.27	71	P	P	04 00 13.0	+1.7
	0.9nm,0.5s,baz=301,slow=4.8,SNR=21						
	0.9nm,0.5s						
TKL	Tuckaleechee C	71.88	53	LR	LR	04 32 53.9	
	comp=Z,31nm,18.4s,baz=94,slow=36						
WRA	Warramunga Arr	79.95	208	P	P	04 01 25.6	-0.1
	0.4nm,0.7s,baz=19,slow=5.7,SNR=2.5						
	0.4nm,0.7s						
QSPA	South Pole Qui	145.96	180	PKPbc	PKPdf	04 08 54.0	-0.1
	0.8nm,0.5s,baz=281,slow=1.5,SNR=15						

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*GCG **29** 04:05:35.2±1.9, 15°.44N×93°.01W, h97^{km}±25^{km}, MD4.0, ML3.3*
*MEX **29** 04:05:36.6±0.6, 15°.44N×92°.98W, h99^{km}±6^{km}, MD4.0*
ISC 29 04:05:32.9±1.4**, 15°.32N**±0°.05×**93°.06W**±0°.03**, h112**^{km}±9^{km}**, n22, σ1^{s}95**/42**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.41	338	*e*P	Pn	04 05 49.8	+0.3
PCIG				*e*S	Sn	04 06 01.1	-0.8
PATR	El Naranjo	0.82	104	*e*P	Pn	04 05 53.2	+0.4
PATR				*e*S	Sn	04 06 06.7	-1.1
PAVE	Pavencul	0.86	98	*e*P	Pn	04 05 54.0	+0.8
PAVE				*e*S	Sn	04 06 08.2	-0.3
THIG		0.87	118	*e*P	Pn	04 05 54.4	+1.4
THIG				*e*S	Sn	04 06 07.3	-0.9
SMCA	Catarina	1.06	116	*i* P	Pn	04 05 56.0	+1.0
SMCA				*i* S	Sn	04 06 11.4	-0.1
CCIG	Comitan	1.31	43	*e*P	Pn	04 05 58.9	+1.1
CCIG				*e*S	Sn	04 06 14.9	-1.7
CCIG	Comitan	1.31	43	*i* P	Pn	04 05 59.1	+1.3
CCIG				*i* S	Sn	04 06 17.5	+0.8
CCIG				IAML		04 06 18.5	
	comp=N,97nm,0.5s						
TGIG		1.45	358	*e*P	Pn	04 05 59.9	+0.5
TGIG				*e*S	Sn	04 06 17.5	-1.9
TGIG		1.45	358	*i* P	Pn	04 05 59.7	+0.3
TGIG				*i* S	Sn	04 06 17.8	-1.7
HUEH	Huehuetenango	1.50	90	*e*P	Pn	04 06 00.9	+0.8
HUEH				*e*S	Sn	04 06 20.5	-0.3
RTAL	Retalhuleu	1.54	121	*e*P	Pn	04 06 02.4	+2.0
RTAL				*e*S	Sn	04 06 22.9	+1.7
STG0	El Palmar, Qui	1.89	118	*i* P	Pn	04 06 02.6	-2.2
STG0				*i* S	Sn	04 06 25.0	-4.0
CMIG	Matias Romero	2.48	315	*e*P	Pn	04 06 14.0	+1.8
CMIG				*e*S	Sn	04 06 43.3	+0.9
HUIG	Huatulco	2.97	279	*e*P	Pn	04 06 19.7	+1.1
HUIG				*e*S	Sn	04 06 51.0	-2.8
PETF	Flores	3.46	62	*e*P	Pn	04 06 26.7	+1.7
PETF				*e*S	Sn	04 07 03.4	-1.9
PETF	Flores	3.46	62	*i* P	Pn	04 06 26.8	+1.7
PETF				*i* S	Sn	04 07 03.9	-1.4
PETF				IAML		04 07 07.7	
	comp=E,142nm,0.4s						
PEIG	Puerto Escondi	3.99	280	*e*P	Pn	04 06 33.4	+1.2
YOIG	Yosondua	4.57	290	*e*P	Pn	04 06 43.6	+3.3
YOIG				*e*S	Sn	04 07 31.9	-0.7
TOIG	Toxpalan	4.72	306	*e*P	Pn	04 06 44.9	+2.7
TOIG				*e*S	Sn	04 07 35.7	-0.3
TXIG	Tlaxiaco	4.91	294	*e*P	Pn	04 06 46.9	+2.0
TXIG				*e*S	Sn	04 07 37.4	-3.3
PNIG	Pinotepa	4.99	283	*e*P	Pn	04 06 47.6	+1.9
PNIG				*e*S	Sn	04 07 40.0	-2.3
JAUV	Jalcomulco	5.38	319	*e*S	Sn	04 07 46.5	-5.3

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*IDC **29** 04:13:52.4±0.8, 8°.24N×126°.10E, h0^{km}, mb3.9/10, mbtmp3.9/10, MS3.4/3, Error ellipse: s-maj=31.3km s-min=11.2km az=97.0*
ISC 29 04:13:57.3±0.8**, 8°.17N**±0°.09×**125°.9E**±0°.3**, h36**^{km}**, n15, σ0^{s}76**/12**, mb3.8**/10**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	1.15	198	Pg	Pn	04 14 16.4	-0.4
	179nm,0.3s,baz=42,slow=1.9,SNR=9.8						
DAV				Lg	Lg	04 14 34.7	
	89nm,0.3s,baz=262,slow=17,SNR=6.0						
DAV	Davao City (W)	1.15	198	P	Pn	04 14 17.0	+0.2
KAPI	Kappang	14.47	205	LR	LR	04 23 01.5	
	comp=Z,170nm,18.5s,baz=284,slow=38						
WRA	Warramunga Arr	29.13	164	P	P	04 19 54.9	-0.1
	0.3nm,0.7s,baz=344,slow=8.9,SNR=1.6						
	0.3nm,0.7s						
KSRS	Korea Array	29.21	3	P	P	04 19 54.9	-0.7
	1.7nm,1.0s,baz=204,slow=11,SNR=4.5						
	1.7nm,1.0s						
ASAR	Alice Springs	32.58	166	P	P	04 20 26.3	+0.8
	0.5nm,0.5s,baz=343,slow=7.2,SNR=7.4						
	0.5nm,0.5s						
USRK	Ussuriysk Ar.	36.28	7	P	P	04 20 58.0	+0.7
	5.8nm,0.7s,baz=205,slow=9.5,SNR=7.8						
	5.8nm,0.7s						
ASAJ	Asahikawa	38.65	19	LR	LR	04 37 18.0	
	comp=Z,34nm,18.7s,baz=173,slow=36						
KLR	Kul'dur	41.22	6	P	P	04 21 39.2	+0.6
	1.7nm,0.8s,baz=192,slow=4.0,SNR=3.6						
	1.7nm,0.8s						
STKA	Stephens Creek	42.54	160	P	P	04 21 49.5	-0.1
	3.3nm,0.8s,baz=283,slow=11,SNR=3.3						
	3.3nm,0.8s						
MKAR	Makanchi Array	53.51	324	P	P	04 23 15.8	+1.5
	0.3nm,0.5s,baz=112,slow=8.3,SNR=4.0						
	0.3nm,0.5s						
AAK	Ala-Archa	56.59	316	LR	LR	04 52 30.6	
	comp=Z,38nm,18.7s,baz=165,slow=41						
KURBB	Kurchatov Arra	57.62	326	P	P	04 23 43.8	+0.1
	0.4nm,0.5s,baz=122,slow=6.4,SNR=7.1						
	0.4nm,0.5s						
BVAR	Borovoye Array	63.21	326	P	P	04 24 21.9	0.0
	0.6nm,0.4s,baz=116,slow=6.6,SNR=4.5						
	0.6nm,0.4s						
FINES	FINESS Array B	87.58	332	P	P	04 26 40.6	-0.9
	2.0nm,0.9s,baz=72,slow=9.1,SNR=3.5						
	2.0nm,0.9s						

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*KRSC **29** 04:16:12.8±1.6, 56°.16N×164°.73E, h49^{km}±23^{km}, Ml4.2*
*IDC **29** 04:16:12.3±0.9, 56°.09N×164°.69E, h0^{km}, mb3.7/12, mbtmp3.7/14, ML3.3/2, MS2.8/5, Error ellipse: s-maj=29.8km s-min=14.9km az=163.0*
*NEIC **29** 04:16:15.5±2.3, 56°.5N±0°.2×164°.0E±0°.2, h10^{km}±2^{km}, mb4.1/39, Error ellipse: s-maj=33.6km s-min=15.5km az=152.0*
ISC 29 04:16:12.9±0.5**, 55°.89N**±0°.05×**164°.28E**±0°.04**, h16**^{km}**, n88, σ1^{s}95**/76**, mb4.1**/33**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.88	292	*e*P	Pn	04 16 31.0	+0.4
KBG	Krutoberegovo	0.96	293	*e*P	Pn	04 16 31.1	-0.6
BKI	Bering	1.18	125	*e*P	Pn	04 16 34.8	0.0
BKI				*e*S	Sb	04 16 50.6	+0.7
SMKR	Semkarok	1.72	295	*e*P	Pg	04 16 44.1	-1.8
ZLN	Zelenaya	1.96	275	*e*P	Pg	04 16 50.3	-0.3
MKZ	Mys Kozlova	1.98	229	*e*P	Pg	04 16 50.3	-0.6
CIRR	Tsirk	2.00	278	*e*P	Pg	04 16 50.7	-0.6
BZGR	Bezymyannyi-Gr	2.02	273	*e*P	Pg	04 16 50.9	-0.7
KLY	Klyuchi	2.08	283	*e*P	Pb	04 16 50.0	-0.2
KRSR	Krestovskiy	2.11	281	*e*P	Pg	04 16 51.9	-1.6
BZMR	Bezymyannaya	2.14	273	*e*P	Pg	04 16 52.6	-1.3
KIRR	Kirishev	2.22	273	*e*P	Pg	04 16 53.5	-1.9
KMNR	Kamenistaya	2.29	268	*e*P	Pg	04 16 55.6	-1.2
KPT	Kopyto	2.29	274	*e*P	Pg	04 16 54.6	-2.1
TUMD	Tumrok D	2.31	254	*e*P	Pg	04 16 55.2	-2.1
KOZ	Kozyrevsk	2.48	276	*e*P	Pg	04 16 57.9	-2.7
SRDR	Sredinnyy	2.59	281	*e*P	Pb	04 16 58.1	-0.9
ESO	Esso	3.14	273	*e*P	Pb	04 17 09.3	+0.9
KII	Karymskiy	3.35	238	*e*P	Pb	04 17 11.1	-0.8
OSSR	Ossora	3.44	349	*e*P	Pn	04 17 04.2	-1.5
OSSR				*e*S	Sn	04 17 40.6	-5.4
SPN	Mys Shipunski	3.74	223	*e*P	Pb	04 17 14.9	-3.6
SDLR	Sedlovina	4.08	232	*e*P	Pb	04 17 21.0	-3.5
KRER	Koryakskii	4.13	233	*e*P	Pb	04 17 23.0	-2.2
SMAR	Somma	4.13	233	*e*P	Pb	04 17 21.5	-3.9
KRX	Arik	4.14	235	*e*P	Pb	04 17 24.8	-0.7
UGLR	Uglovaya	4.16	232	*e*P	Pb	04 17 21.9	-3.8
AVH	Avacha	4.16	233	*e*P	Pb	04 17 23.4	-2.3
GNL	Ganaly	4.28	242	*e*P	Pb	04 17 24.4	-3.4
PET	Petropavlovsk	4.36	231	Pn	Pb	04 17 26.6	-2.5
PETK	Petropavlovsk-	4.74	237	Pn	Pb	04 17 30.6	-5.0
	0.7nm,0.3s,baz=71,slow=19,SNR=6.4						
PETK				Sn	Sb	04 18 32.4	0.0
	0.3nm,0.3s,baz=99,slow=9.6,SNR=3.8						
PETK				LR	LR	04 18 50.1	
	comp=Z,20nm,20.5s,baz=85,slow=31						
	2.9nm,0.6s						
MA2	Magadan	8.12	303	LR	LR	04 21 41.5	
	comp=Z,86nm,18.4s,baz=114,slow=40						
ATKA	Atka Island	13.16	97	Pn	P	04 19 25.1	-3.8
ASAJ	Asahikawa	18.16	239	P	P	04 20 27.9	+3.5
	0.4nm,0.3s,baz=107,slow=2.4,SNR=5.1						
ASAJ				LR	LR	04 27 04.2	
	comp=Z,30nm,19.5s,baz=182,slow=35						
	3.3nm,0.4s						
F17K	Baldwin Pennin	19.40	43	P	P	04 20 37.9	0.0
ERM	Erimo	19.51	234	P	Pn	04 20 43.3	+2.7
K17K	Iditarod	20.04	55	P	P	04 20 46.1	+1.2
H18K	Honhosa River	20.28	48	P	P	04 20 48.7	+1.2
M17K	Holitna River	20.44	59		P	04 20 50.7	+1.4
M17K				IAmb	IAmb	04 20 55.2	
	comp=Z,12nm,0.8s						
J18K	Innoko River	20.80	53		P	04 20 53.6	+0.4
J18K				IAmb	IAmb	04 20 55.6	
	comp=Z,7.8nm,0.9s						
F19K	Shaleruckik Mo	20.84	43		P	04 20 54.6	+1.1
F19K				IAmb	IAmb	04 20 55.2	
	comp=Z,6.9nm,0.9s						
C19K	Lookout Ridge	20.86	36	P	P	04 20 55.1	+1.2
D19K	Kuna River	21.16	39	P	P	04 20 57.7	+0.6
D19K				IAmb	IAmb	04 21 06.4	
	comp=Z,12nm,1.2s						
E19K	Redstone River	21.20	42		P	04 20 58.8	+1.4
PLK4	Peulik 4	21.44	69	P	P	04 21 01.1	+1.0
PLK4				IAmb	IAmb	04 21 04.9	
	comp=Z,11nm,0.8s						
O18K	Koktuh Hills	21.66	63		P	04 21 02.5	+0.1
P18K	Big Mountain,	21.71	64		P	04 21 03.0	+0.1
P18K				IAmb	IAmb	04 21 06.8	
	comp=Z,6.5nm,0.9s						
D20K	Etivluk River	21.76	38		P	04 21 03.8	+0.4
D20K				IAmb	IAmb	04 21 12.2	
	comp=Z,12nm,1.2s						
IMAR	Indian Mountai	22.29	46	P	P	04 21 09.6	+0.4
F21K	Alatna River	22.57	43	P	P	04 21 11.4	-0.8
E22K	Anaktuvuk Pass	23.35	41	IAmb	IAmb	04 21 42.6	
	comp=Z,6.3nm,1.1s						
SUA	Susitna One	23.64	58	IAmb	IAmb	04 21 24.6	
	comp=Z,5.2nm,0.9s						
CNPM	China Poot	23.70	63		P	04 21 22.3	-1.3
CNPM				IAmb	IAmb	04 21 23.9	
	comp=Z,8.8nm,1.0s						
E23K	Chandalar	24.16	41	P	P	04 21 27.2	-0.8
E23K				IAmb	IAmb	04 21 29.7	
	comp=Z,3.7nm,0.8s						
TOLK	Toolik Lake Re	24.25	40	IAmb	IAmb	04 21 30.3	
	comp=Z,4.4nm,0.8s						
E24K	Your Creek	24.58	42	IAmb	IAmb	04 21 42.5	
	comp=Z,6.2nm,1.1s						
WRH	Wood River Hil	24.62	50	IAmb	IAmb	04 21 49.6	
	comp=Z,3.8nm,1.0s						
CCB	Clear Creek Bu	24.73	50	IAmb	IAmb	04 22 13.1	
	comp=Z,5.5nm,1.0s						
G24K	Hadweenzic Riv	24.87	45		P	04 21 34.3	-0.1
G24K				IAmb	IAmb	04 21 45.2	
	comp=Z,8.5nm,1.2s						
IL31		25.12	49	P	P	04 21 37.2	+0.6
IL31				IAmb	IAmb	04 21 47.4	
	comp=Z,5.5nm,1.2s						
ILAR	Eielson Array	25.12	49	P	P	04 21 36.0	-0.7
	comp=Z,1.0nm,0.9s,baz=266,slow=6.3,SNR=9.1						
	comp=Z,1.0nm,0.9s						
F25K	Christian Rive	25.62	43		P	04 21 42.2	+1.0
F25K				IAmb	IAmb	04 21 53.2	
	comp=Z,6.3nm,1.2s						
E25K	Arctic Village	25.68	42	IAmb	IAmb	04 21 52.8	
	comp=Z,7.0nm,1.2s						
BMAR	Burnt Mountain	26.02	43	P	P	04 21 44.9	0.0
MJAR	Matsushiro Arr	26.19	233	P	P	04 21 50.6	+4.0
	comp=Z,1.4nm,0.4s,baz=33,slow=8.1,SNR=6.3						
MJAR				LR	LR	04 31 45.5	
	comp=Z,40nm,19.9s,baz=165,slow=35						
	comp=Z,1.4nm,0.4s						
C27K	Jago River	26.45	38	P	P	04 21 48.5	-0.2
C27K				IAmb	IAmb	04 22 02.3	
	comp=Z,4.2nm,0.9s						
SONM	Songino Array	35.68	282	P	P	04 23 14.8	+4.5
	comp=Z,0.5nm,0.7s,baz=64,slow=7.9,SNR=4.6						
	comp=Z,0.5nm,0.7s						
H11N2	WAKE ISLAND Hy	36.15	176	T	T	05 01 24.1	
	baz=358,slow=76,SNR=71						
H11N3	WAKE ISLAND Hy	36.16	176	T	T	05 01 17.9	
	baz=358,slow=76,SNR=37						
H11N1	WAKE ISLAND Hy	36.17	176	T	T	05 01 15.7	
	baz=358,slow=76,SNR=50						
HHC	Hu-ho-hao-te	37.14	269	*e*P	P	04 23 21.5	-1.2
HHC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,34nm,4.5s						
YKA	Yellowknife Ar	39.45	46	P	P	04 23 42.1	+0.3
	comp=Z,0.5nm,0.8s,baz=299,slow=8.3,SNR=4.1						
	comp=Z,0.5nm,0.8s						
GTA	Gaotai	44.72	277	*e*P	P	04 24 36.3	+11
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BLKN	Baker Lake	45.40	37	P	P	04 24 29.8	-0.3
MXC	Moxie City	45.90	68	P	P	04 24 37.6	+3.2
MXC				IAmb	IAmb	04 24 42.6	
	comp=Z,3.3nm,0.9s						
KURBB	Kurchatov Arra	48.44	302	P	P	04 24 56.3	+2.3
	comp=Z,0.6nm,0.8s,baz=55,slow=8.4,SNR=5.2						
	comp=Z,0.6nm,0.8s						
MKAR	Makanchi Array	49.14	296	P	P	04 25 02.5	+3.0
	comp=Z,0.2nm,0.3s,baz=67,slow=5.7,SNR=2.0						
	comp=Z,0.2nm,0.3s						
BVAR	Borovoye Array	50.56	309	P	P	04 25 12.6	+2.4
	comp=Z,1.1nm,0.6s,baz=47,slow=8.7,SNR=5.0						
	comp=Z,1.1nm,0.6s						
ELK	Elko	52.56	71	LR	LR	04 44 29.2	
	comp=Z,14nm,19.3s,baz=280,slow=32						
NVAR	Mina Array Bea	52.57	75	P	P	04 25 24.1	-1.6
	comp=Z,0.5nm,0.7s,baz=306,slow=7.3,SNR=4.5						
	comp=Z,0.5nm,0.7s						
PZH	PanZhiHua	53.16	263	P	P	04 25 29.0	-1.1
PDAR	Pinedale Array	54.07	65	P	P	04 25 36.7	0.0
PDAR	Pinedale Array	54.07	65	P	P	04 25 35.5	-1.2
	comp=Z,1.0nm,0.9s,baz=316,slow=4.1,SNR=6.1						
	comp=Z,1.0nm,0.9s						
KSH	Kashi	57.56	294	P	P	04 26 06.0	+4.4
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KK31	Karatay Array	57.63	300	P	P	04 26 00.9	-1.0
KKAR	Karatay Array	57.63	300	P	P	04 26 02.1	+0.1
NOA	NORSAR Array B	61.49	345	P	P	04 26 27.7	-0.6
	comp=Z,0.8nm,0.8s,baz=19,slow=6.8,SNR=3.4						
	comp=Z,0.8nm,0.8s						
HFS	Hagfors	61.99	344	P	P	04 26 32.6	+1.0
	comp=Z,1.4nm,0.9s,baz=173,slow=1.2,SNR=6.7						
	comp=Z,1.4nm,0.9s						
TXAR	Lajitas Array	67.35	71	P	P	04 27 08.8	+1.7
	comp=Z,0.5nm,0.8s,baz=308,slow=4.9,SNR=8.2						
	comp=Z,0.5nm,0.8s						

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*SJA **29** 04:57:00.2±0.7, 30°.19S×71°.58W, h32^{km}±3^{km}, ML4.2, MW4.1*
*IDC **29** 04:57:03.1±0.7, 30°.22S×71°.12W, h59^{km}±5^{km}, mb3.7/6, mbtmp3.8/10, Error ellipse: s-maj=26.4km s-min=16.7km az=101.0*
*NEIC **29** 04:57:03.5±1.2, 30°.20S±0°.04×71°.4W±0°.1, h58^{km}±6^{km}, mb4.5/5, ML4.3(GUC), Error ellipse: s-maj=16.5km s-min=6.3km az=88.0*
*GUC **29** 04:57:03.0±0.7, 30°.21S×71°.32W, h65^{km}±2^{km}, ML4.3*
ISC 29 04:57:02.8±0.5**, 30°.19S**±0°.03×**71°.43W**±0°.04**, h56**^{km}±4^{km}**, n84, σ1^{s}81**/111**, mb4.3**/6**, 1C-6D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	La Serena	0.32	32		Pn	04 57 13.3	+0.7
CO05				Sn	Sn	04 57 20.7	+1.1
CO05	La Serena	0.32	32	⇓*i*P	Pn	04 57 13.3	+0.7
CO05				*i* S	Sn	04 57 20.9	+1.3
CO05				IAML		04 57 21.1	
	comp=N,23µm,0.1s						
CO06	Fray Jorge	0.52	200		Pn	04 57 15.6	+1.0
CO06				Sn	Sn	04 57 25.0	+1.8
CO06	Fray Jorge	0.52	200	⇓*i*P	Pn	04 57 15.6	+1.0
CO06				*i* S	Sn	04 57 25.0	+1.8
CO06				IAML		04 57 25.5	
	comp=N,12µm,0.4s						
GO04	Tololo Observa	0.55	89		Pn	04 57 15.1	-0.1
GO04				Sn	Sn	04 57 23.9	-0.3
GO04	Tololo Observa	0.55	89	⇓*i*P	Pn	04 57 15.1	-0.1
GO04				*i* S	Sn	04 57 23.9	-0.3
GO04	Tololo Observa	0.55	89	*e*P	Pn	04 57 14.6	-0.6
GO04				IAML		04 57 26.5	
	comp=Z,31µm,0.2s						
CO03	El Pedregal	0.91	136		Pn	04 57 19.1	-0.5
CO03	El Pedregal	0.91	136	⇓*i*P	Pn	04 57 19.1	-0.5
CO03				*i* S	Sn	04 57 30.9	-1.1
CO03				IAML		04 57 31.4	
	comp=N,39µm,0.2s						

CO03	El Pedregal	0.91	136	eP	Pn	04 57 18.8	-0.7
CO03				IAML		04 57 34.3	
	comp=Z,4µm,0.4s						
CO02	Combarbal	1.08	160		Pn	04 57 21.7	-0.1
CO02	Combarbal	1.08	160	⇓iP	Pn	04 57 21.8	-0.1
CO02				iS	Sn	04 57 35.6	-0.3
CO02				IAML		04 57 36.8	
	comp=E,14µm,0.2s						
CO02	Combarbal	1.08	160	eP	Pn	04 57 21.5	-0.3
CO02				eS	Sn	04 57 33.1	-2.8
CO02				IAML		04 57 38.2	
	comp=Z,4µm,0.3s						
CO01	Juntas del Tor	1.18	80		Pn	04 57 23.4	+0.1
CO01	Juntas del Tor	1.18	80	⇑iP	Pn	04 57 23.4	+0.1
CO01				iS	Sn	04 57 38.4	0.0
CO01				IAML		04 57 38.9	
	comp=E,16µm,0.2s						
CO01	Juntas del Tor	1.18	80	eP	Pn	04 57 23.3	+0.1
CO01				eS	Sn	04 57 38.7	+0.3
CO01				IAML		04 57 38.9	
	comp=Z,13µm,0.1s						
LCO	Las Campanas	1.33	29		Pn	04 57 25.8	+0.4
LCO	Las Campanas	1.33	29	⇓iP	Pn	04 57 25.7	+0.4
LCO				iS	Sn	04 57 42.5	+0.3
LCO				IAML		04 57 44.8	
	comp=Z,15µm,0.2s						
LCO	Las Campanas	1.33	29	eP	Pn	04 57 25.7	+0.4
LCO				eS	Sn	04 57 43.2	+1.0
LCO				IAML		04 57 46.5	
	comp=Z,6µm,0.2s						
AROD	Rodeo	1.69	90	eP	Pn	04 57 31.8	+1.5
AROD				eS	Sn	04 57 53.0	+1.9
AC04	Llanos de Chal	2.00	9		Pn	04 57 35.0	+0.8
AC04	Llanos de Chal	2.00	9	IAML		04 58 19.3	
	comp=E,2µm,0.2s						
AC04	Llanos de Chal	2.00	9	eP	Pn	04 57 34.8	+0.6
AC04				eS	Sn	04 57 45.3	-13
AC04				IAML		04 58 08.5	
	comp=Z,932nm,0.7s						
ACDV	Cuesta del Vie	2.00	90	eP	Pn	04 57 36.6	+2.3
ACCO	Cerro Coronel	2.08	102	eP	Pn	04 57 37.9	+2.3
ACCO				eS	Sn	04 57 56.2	-4.3
VA06	Catapilco	2.37	177		Pn	04 57 39.4	+0.3
RTLS	Leoncito	2.44	132	eP	Pn	04 57 42.4	+2.0
RTLS				eS	Sn	04 58 13.6	+4.4
RTLS				IAML		04 58 18.7	
	comp=Z,2µm,0.7s						
AGUA	GUANDACOL	2.65	75	eP	Pn	04 57 46.1	+3.0
AGUA				eS	Sn	04 58 24.2	+10
AGUA				IAML		04 58 25.4	
	comp=Z,2µm,0.6s						
VA03	San Esteban	2.68	164		Pn	04 57 44.8	+1.3
VA03	San Esteban	2.68	164	eP	Pn	04 57 44.1	+0.7
VA03				eS	Sn	04 58 15.1	+0.3
VA03				IAML		04 58 23.7	
	comp=Z,831nm,1.0s						
ZON	Zonda	2.73	120		Pn	04 57 45.6	+1.5
ZON	Zonda	2.73	120	eP	Pn	04 57 45.6	+1.5
ZON				eS	Sn	04 58 24.7	+8.8
ZON				IAML		04 58 30.1	
	comp=Z,398nm,0.3s						
GO03	Copiapo	2.79	22		Pn	04 57 45.9	+0.8
GO03	Copiapo	2.79	22	eP	Pn	04 57 41.8	-3.2
GO03				eP		04 57 46.3	
GO03				eS	Sn	04 58 04.1	-13
GO03				IAML		04 58 32.9	
	comp=Z,757nm,0.6s						
ROCH	El Roble	2.80	173	IAML		04 58 31.4	
	comp=N,2µm,0.5s						
AC06	Mina Casimiro	2.97	19		Pn	04 57 47.9	+0.4
PEL	Peldehue	3.02	168		Pn	04 57 49.2	+1.1
MT02	Curacav	3.07	175		Pn	04 57 48.9	0.0
MT02	Curacav	3.07	175	eP	Pn	04 57 48.8	0.0
MT02				eS	Sn	04 58 31.6	+7.2
MT02				IAML		04 58 32.9	
	comp=Z,546nm,0.6s						
VCA	Vinchina	3.16	64	eP	Pn	04 57 52.8	+2.6
VCA				eS	Sn	04 58 31.8	+5.0
VCA				IAML		04 58 38.3	
	comp=Z,2µm,1.3s						
MT05	Renca	3.25	170		Pn	04 57 52.0	+0.7
MT05	Renca	3.25	170	eP	Pn	04 57 52.0	+0.7
MT05				eS	Sn	04 58 30.8	+2.1
MT05				eS		04 58 32.6	
MT05				IAML		04 58 51.6	
	comp=Z,488nm,1.0s						
ASAL	Salagasta	3.27	138	eP	Pn	04 57 54.1	+2.6
ASAL				eS	Sn	04 58 47.1	+18
MT04	Ro Olivares	3.39	161	eP	Pn	04 57 55.0	+1.6
MT04				eS	Sn	04 58 30.8	-1.7
MT04				eS		04 58 32.6	
MT04				IAML		04 58 46.6	
	comp=Z,355nm,0.8s						
MT08	Bocatoma Ro	3.46	160		Pn	04 57 57.4	+3.0
MT08	Bocatoma Ro	3.46	160	eP	Pn	04 57 56.9	+2.5
MT08				eS	Sn	04 58 48.3	+14
MT08				IAML		04 58 58.4	
	comp=Z,321nm,0.6s						
AVFE	Valle Fertil	3.46	99	eP	Pn	04 57 55.3	+1.1
AVFE				eS	Sn	04 58 39.4	+5.3
AVFE				IAML		04 58 40.0	
	comp=Z,414nm,0.5s						
MT09	Talagante	3.60	174		Pn	04 57 56.8	+0.7
MT01	Popeta	3.67	178		Pn	04 57 57.2	+0.2
MT01	Popeta	3.67	178	eP	Pn	04 57 44.6	-12
MT01				eS	Sn	04 58 41.8	+2.8
MT01				IAML		04 58 47.6	
	comp=Z,351nm,0.6s						
BO04	La Punta	3.85	170		Pn	04 58 00.1	+0.6
AC02	Maricunga	3.91	32		Pn	04 58 01.0	+0.3
ACLC	CERRO LA CRUZ	3.96	80	eP	Pn	04 58 02.5	+1.2
ACLC				eS	Sn	04 58 51.1	+4.6
ACLC				IAML		04 58 57.7	
	comp=Z,261nm,0.5s						
AC01	Pan de Azucar	4.09	11		Pn	04 58 01.7	-1.1
BO01	Tunca	4.20	176		Pn	04 58 04.0	-0.3
BO01	Tunca	4.20	176	eS	Sn	04 58 54.8	+2.7
BO01				IAML		04 59 15.9	
	comp=Z,208nm,0.5s						
BO02	Sierra Bellavi	4.62	173		Pn	04 58 10.9	+0.8
H03N1	Juan Fernandez	7.15	241	P	Pn	04 58 44.5	+0.1
	baz=117,slow=18,SNR=68						
H03N1				T	T	05 06 17.1	
	baz=67,slow=72,SNR=886						
H03N2	Juan Fernandez	7.16	241	P	Pn	04 58 44.5	-0.1
	baz=117,slow=18,SNR=52						
H03N2				T	T	05 06 19.5	
	baz=67,slow=72,SNR=1018						
H03N3	Juan Fernandez	7.16	241	P	Pn	04 58 44.7	+0.1
	baz=117,slow=18,SNR=62						
H03N3				T	T	05 06 21.1	
	baz=67,slow=72,SNR=1021						
H03S3	Juan Fernandez	7.32	238	P	Pn	04 58 45.8	-0.9
	baz=38,slow=19,SNR=12						
H03S1	Juan Fernandez	7.32	238	P	Pn	04 58 45.9	-0.9
	baz=38,slow=19,SNR=10						
H03S2	Juan Fernandez	7.33	238	P	Pn	04 58 46.1	-0.8
	baz=38,slow=19,SNR=16						
PLCA	Paso Flores	10.55	176	P	Pn	04 59 30.9	-0.3
	comp=Z,0.9nm,0.8s,baz=291,slow=10,SNR=2.9						
TRQA	Tornquist	11.08	138		Pn	04 59 37.6	-0.9
CPUP	Villa Florida	13.01	76	P	Pn	05 00 01.6	-3.2
	comp=Z,0.3nm,0.4s,baz=101,slow=9.4,SNR=5.2						
LPAZ	La Paz	14.16	13		Pn	05 00 23.0	+2.0
LPAZ	La Paz	14.16	13	P	Pn	05 00 21.3	+0.2
	comp=Z,1.1nm,0.5s,baz=184,slow=5.7,SNR=9.0						
PLTB	Pedras Altas	15.37	100	Pn	Pn	05 00 35.0	-1.2
SIV	San Ignacio	17.03	36	P	Pn	05 00 55.3	-1.9
	comp=Z,1.4nm,0.7s,baz=200,slow=11,SNR=7.7						
BDFB	Brasilia	25.90	61	P	P	05 02 26.8	-3.0
	comp=Z,2.3nm,0.8s,baz=247,slow=11,SNR=4.1						
BDFB				pP	pP	05 02 43.2	-0.7
	comp=Z,2.7nm,0.7s,baz=46,slow=26,SNR=3.3						
	comp=Z,2.3nm,0.8s						
RUSC	La Rusia	35.91	357	P	P	05 04 00.3	+2.0
RUSC				IAmb	IAmb	05 04 09.1	
	comp=Z,7.7nm,1.1s						
TEIG	Tepich	52.68	340	P	P	05 06 12.5	+1.0
SNAA	Sanae	54.93	159	P	P	05 06 27.2	-0.4
SNAA				IAmb	IAmb	05 07 03.0	
	comp=Z,6.9nm,1.4s						
SNAA	Sanae	54.93	159	P	P	05 06 26.7	-0.8
	comp=Z,2.0nm,0.9s,baz=264,slow=3.6,SNR=6.0						
	comp=Z,2.0nm,0.9s						
QSPA	South Pole Qui	60.04	180	P	P	05 07 04.1	+0.4
QSPA				IAmb	IAmb	05 07 22.6	
	comp=Z,4.9nm,1.1s						
QSPA	South Pole Qui	60.04	180	P	P	05 07 03.1	-0.6
	comp=Z,2.2nm,0.7s,baz=165,slow=1.7,SNR=20						
QSPA				pP	pP	05 07 19.9	+1.0
	comp=Z,1.3nm,0.5s,baz=270,slow=1.1,SNR=3.4						
	comp=Z,2.2nm,0.7s						
TXAR	Lajitas Array	66.69	330	P	P	05 07 49.4	+1.4
	comp=Z,0.1nm,0.5s,baz=155,slow=7.1,SNR=2.4						
TXAR				pP	pP	05 08 05.0	+1.9
	comp=Z,0.2nm,0.5s,baz=154,slow=8.0,SNR=2.5						
	comp=Z,0.1nm,0.5s						
BOSA	Boshof	81.39	118	P	P	05 09 13.1	-0.9
	comp=Z,2.8nm,0.9s,baz=269,slow=7.3,SNR=4.0						
	comp=Z,2.8nm,0.9s						
TORD	Torodi Ar. Bea	82.43	70	P	P	05 09 18.7	-0.7
	comp=Z,0.4nm,0.3s,baz=269,slow=3.2,SNR=1.6						
TORD				pP	pP	05 09 34.9	-0.6
	comp=Z,0.5nm,0.4s,baz=252,slow=3.4,SNR=1.8						
	comp=Z,0.4nm,0.3s						
KURBB	Kurchatov Arra	149.67	39	PKPbc	PKiKP	05 16 46.1	-0.6
	comp=Z,1.8nm,0.5s,baz=302,slow=3.1,SNR=15						
KURBB				pPKPbc	pPKPbc	05 17 02.3	0.0
	comp=Z,0.6nm,0.5s,baz=304,slow=3.1,SNR=3.2						
ZALV	Zalesovo Beam	150.69	29	PKPbc	PKPbc	05 16 47.5	-0.6
	comp=Z,6.0nm,0.6s,baz=312,slow=4.1,SNR=22						
ZALV				pPKPbc	pPKPbc	05 17 04.1	-0.6
	comp=Z,2.6nm,0.7s,baz=320,slow=3.9,SNR=4.5						
MKAR	Makanchi Array	153.76	43	PKPbc	PKPbc	05 16 53.1	-2.2
	comp=Z,0.5nm,0.8s,baz=17,slow=1.5,SNR=4.4						
PZH	PanZhiHua	172.95	120	PKP	PKPdf	05 17 05.5	-0.6

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*VAO **29** 05:00:21.8±0.4, 16.°02S×73.°96W, h10^{km}, mb4.7*

*IDC **29** 05:00:22.9±2.4, 16.°03S×74.°25W, h41^{km}±20^{km}, mb3.9/14, mbtmp4.2/18, ML4.4/4, MS4.1/39, Error ellipse: s-maj=21.0km s-min=13.6km az=59.0*

*NEIC **29** 05:00:23.3±0.7, 16.°01S±0.°08×74.°24W±0.°04, h35^{km}±2^{km}, mb4.8/47, Error ellipse: s-maj=13.9km s-min=6.4km az=180.0*

*GCMT **29** 05:00:25.3±0.4, 16.°20S±0.°02×74.°43W±0.°03, h40^{km}±1^{km}, MW5.0/71, Moment Tensor Solution. s45,c51; s71,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.57±.23; $M_{\theta\theta}$-0.15±.16; $M_{\phi\phi}$-3.42±.18; $M_{r\theta}$1.09±.15; $M_{\theta\phi}$1.92±.08; $M_{\phi r}$-1.86±.14; Best double couple: $M_0$4.49200×10^{16} NP1:ϕ_s339.00000°,δ31.00000°,λ96.00000°. NP2: ϕ_s152.00000°,δ59.00000°,λ86.00000°. Principal axes: T 4.1290, Plg75.0000°, Azm52.0000°; N 0.7230, Plg3.0000°, Azm154.0000°; P -4.8540, Plg14.0000°, Azm245.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*RSNC **29** 05:00:28.0±1.2, 16°S±11°×7°4W±°, h51^{km}±6^{km}, M4.4, mb4.6, mB5.0, ML4.1, Mw(mB)4.4, MwMwp4.7, Mwp5.0*

ISC 29 05:00:22.7±0.3, **16.°12S**±0.°05×**74.°26W**±0.°05, **h35^{km}, n231,** σ**1^{s}69**/185, **mb4.7**/43, **MS4.1**/38, **5C-4D, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	Chacalluta	4.37	121		Pn	05 01 28.6	+2.0
AP01	Chacalluta	4.37	121	eP	Pn	05 01 27.3	+0.7
AP01				eS	Sn	05 02 18.5	+2.2
NNA	Nana	4.81	328		Pn	05 01 32.6	-0.2
NNA	Nana	4.81	328	P	Pn	05 01 31.5	-1.2
	11nm,0.3s,baz=143,slow=12,SNR=13						
NNA				S	Sn	05 02 34.5	+7.2
	132nm,0.3s,baz=120,slow=2.0,SNR=4.5						
	12nm,0.3s						
NNA	Nana	4.81	328	P	Pn	05 01 31.2	-1.5
PB18	Visviri	4.81	108		Pn	05 01 33.9	+0.7
PB18	Visviri	4.81	108	eS	Sn	05 02 30.1	+2.2
PB16	IPOC Station P	5.05	117		Pn	05 01 38.1	+1.6
PB11	IPOC Station P	5.69	130		Pn	05 01 45.4	+0.4
TA02	Huaiquique	5.70	137		Pn	05 01 45.3	+0.4
TA01	Diego Aracena	5.88	139		Pn	05 01 47.0	-0.5
LPAZ	La Paz	5.89	93		Pn	05 01 51.5	+3.4
LPAZ	La Paz	5.89	93	P	Pn	05 01 49.9	+1.7
	12nm,0.3s,baz=299,slow=7.9,SNR=152						
LPAZ				S	Sn	05 03 03.5	+8.7
	158nm,1.0s,baz=128,slow=18,SNR=5.1						
LPAZ				LR	LR	05 04 20.6	
	comp=Z,4µm,18.1s,baz=269,slow=40						
	27nm,0.4s						
LPAZ	La Paz	5.89	93	P	Pn	05 01 51.7	+3.5
	3µm2µm245nm,0.9s						
GO01	Chusmiza	5.98	127		Pn	05 01 50.6	+1.4
PB01	IPOC Station P	6.67	138	Pn	Pn	05 01 57.8	-0.6
PB05	IPOC Station P	7.72	151		Pn	05 02 11.3	-1.4
PB10	IPOC Station P	8.14	155		Pn	05 02 16.2	-2.3
CZSB	Cruzeiro do Su	8.47	11		Pn	05 02 22.7	-0.4
CZSB	Cruzeiro do Su	8.47	11	eP	Pn	05 02 22.3	-0.8
CZSB	Cruzeiro do Su	8.47	11	P	Pn	05 02 22.7	-0.4
	2µm116nm,0.8s						
ATAH	Atahualpa	9.80	335	P	Pn	05 02 42.3	+0.7
	1.8nm,0.3s,baz=123,slow=2.2,SNR=9.9						
	1.3nm,0.5s						
GO02	Mina Guanaco	10.01	155	Pn	Pn	05 02 43.8	-0.5
TBTG	Tabatinga, AM	12.60	20	eP	Pn	05 03 18.0	-1.6
TBTG	Tabatinga, AM	12.60	20	P	Pn	05 03 18.0	-1.6
SIV	San Ignacio	12.68	91	P	Pn	05 03 19.0	-1.8
	0.2nm,0.3s,baz=263,slow=14,SNR=22						
	5.7nm,0.3s						
MCRA	Macar, Loja	12.94	334	P	P	05 03 29.4	-5.1
	14nm,1.1s						
BBSD	Serra de San D	13.13	97	eP	Pn	05 03 25.2	-1.6
VILB	Vilhena	13.97	79	eP	Pn	05 03 36.1	-2.3
COHC	Cochancay	14.43	340		Pn	05 03 46.0	+1.5
COHC	Cochancay	14.43	340	P	P	05 03 49.2	-1.7
	685nm40nm,1.1s						
PTLB	Pontes e Lacer	14.57	89		Pn	05 03 43.3	-3.2
PTLB	Pontes e Lacer	14.57	89	eP	Pn	05 03 44.2	-2.3
PIAT	Ana Tenorio	15.53	345	P	P	05 04 02.9	-0.7
	17nm,1.0s						
TEFE	Tefe	15.70	38	eP	Pn	05 04 01.0	-0.4
ZON	Zonda	16.18	163		Pn	05 04 09.2	+1.7
MURT	Porto Murtinho	16.69	112	eP	Pn	05 04 11.9	-2.1
OTAV	Otavalo	16.77	345	eP	P	05 04 18.1	+0.7
OTAV	Otavalo	16.77	345	P	P	05 04 19.4	+2.0
	16nm,1.3s						
VA03	San Esteban	16.91	169		Pn	05 04 19.1	+2.3
BDQN	Bodoquena, MS	17.18	107	eP	Pn	05 04 17.2	-2.9
PDRB	Porto dos Gac	17.60	77	eP	Pn	05 04 25.1	-0.4
FLOC	Florencia	17.64	355		Pn	05 04 24.7	-1.2
FLOC				IAmb	IAmb	05 04 52.3	
	comp=Z,68nm,1.5s						
FLOC	Florencia	17.64	355	P	P	05 04 26.9	+0.3
	comp=Z,358nmcomp=Z,32nm,1.5s						
MT08	Bocatoma Ro	17.68	168	P	Pn	05 04 27.6	+1.2
H03N1	Juan Fernandez	17.75	193	T	T	05 22 44.2	
	baz=16,slow=74,SNR=4050						
H03N2	Juan Fernandez	17.76	193	T	T	05 23 08.5	
	baz=16,slow=74,SNR=4672						
H03N3	Juan Fernandez	17.77	193	T	T	05 23 03.6	
	baz=16,slow=74,SNR=4460						
MT09	Talagante	17.83	171	P	Pn	05 04 28.6	+0.3
SALV	Santo Antonio	17.85	92	eP	Pn	05 04 25.6	-3.0
AQDB	Aquidauana	18.15	107		Pn	05 04 30.4	-1.8
AQDB	Aquidauana	18.15	107	eP	Pn	05 04 31.6	-0.5
MACC	Macarena, Meta	18.15	1	P	Pn	05 04 30.6	-1.6
	comp=Z,452nmcomp=Z,35nm,0.8s						
BBAC	Balboa, Cauca	18.26	350	P	P	05 04 37.0	+3.3
	comp=Z,20nm,1.1s						
MACA	Manacapuru-AM	18.55	47		P	05 04 34.7	-2.0
MACA				IAmb	IAmb	05 04 41.4	
	comp=Z,83nm,1.2s						
MACA	Manacapuru-AM	18.55	47	eP	P	05 04 35.5	-1.1
POPC	Popayan, Colom	18.69	352	P	P	05 04 37.9	-0.5
	comp=Z,22nm,1.6s						
CLDB	Colider	18.69	76	eP	P	05 04 38.4	+0.2
CPUP	Villa Florida	18.75	126	LR	LR	05 13 11.5	
	comp=Z,240nm,18.4s,baz=161,slow=41						
CPUP	Villa Florida	18.75	126	eP	P	05 04 38.7	-0.1
BO02	Sierra Bellavi	18.86	171	P	P	05 04 41.1	+1.1
URMC	La Uribe, Meta	19.24	360	P	Pn	05 04 46.6	+1.2
	comp=Z,1µmcomp=Z,39nm,1.3s						
PRAC	Prado	19.71	358	P	Pn	05 04 51.8	+0.8
	comp=Z,932nmcomp=Z,46nm,1.7s						
ML02	Panimavida	19.73	173	P	P	05 04 50.6	+1.2
ORTC	Ortega, Tolima	19.92	357	P	Pn	05 04 52.8	-0.7
	comp=Z,933nmcomp=Z,85nm,1.2s						
RPRD	Ribas do Rio P	20.00	106	eP	P	05 04 53.4	+0.9
YOTC	Yotoco, Valle	20.08	354	P	Pn	05 04 57.8	+2.4
	comp=Z,13nm,1.4s						
VILC	Villavicencio,	20.11	2	P	Pn	05 04 55.3	-0.5
	comp=Z,441nmcomp=Z,55nm,0.8s						
ANIL	Santa Ana	20.51	357	P	Pn	05 05 06.7	+6.1
NPGB	Novo Progresso	20.58	66	eP	P	05 04 56.8	-2.0
C2SB	Chapadao do Su	20.61	100	eP	P	05 04 59.5	+0.4
CHIC	Chingaza	20.62	2	P	Pn	05 05 02.6	+0.6
	comp=Z,34nm,1.4s						
ROSC	El Rosal	20.82	360	LR	LR	05 15 15.0	
	comp=Z,1µm,20.0s,baz=218,slow=43						
ROSC	El Rosal	20.82	360	P	Pn	05 05 04.4	0.0
	comp=Z,799nmcomp=Z,45nm,1.6s						
PLMC	San Jos del P	20.98	354	P	P	05 05 03.3	+0.1
	comp=Z,520nmcomp=Z,31nm,0.9s						
GUY2C	Guyana, Caldas	21.23	357	P	P	05 05 07.6	+1.3
	comp=Z,560nmcomp=Z,59nm,1.0s						
NORC	Norcasia	21.55	358	P	P	05 05 08.1	-1.2
	comp=Z,598nmcomp=Z,30nm,1.7s						
ITTB	Itaituba	21.62	59	eP	P	05 05 08.1	-2.0
SPBC	San Pablo de B	21.63	1	P	P	05 05 09.9	-0.3
	comp=Z,26nm,1.4s						
RUSC	La Rusia	21.90	3		P	05 05 12.6	-0.9
RUSC	La Rusia	21.90	3	P	P	05 05 12.8	-0.7
	comp=Z,866nmcomp=Z,59nm,1.4s						
CBOC	Ciudad Bolivar	21.91	355	P	P	05 05 12.6	-0.6
	comp=Z,33nm,1.3s						
HELC	Santa Helena	22.20	357	P	P	05 05 17.6	+1.0
	comp=Z,444nmcomp=Z,16nm,1.1s						
PCMB	Pacaembu	22.43	108	eP	P	05 05 17.3	-1.4
PTGB	Pitanga	22.47	116	eP	P	05 05 20.4	+1.2
PTBC	PUERTO BERRIO,	22.51	359	P	P	05 05 17.8	-1.8
	comp=Z,286nmcomp=Z,24nm,1.7s						
SNDB	Serra Nova Dou	22.65	82	eP	P	05 05 20.1	-1.1
LDASE	Londrina, Braz	22.93	112	eP	P	05 05 23.1	-0.9
BRJC	Barrancabermej	22.95	1	P	P	05 05 30.4	+6.3
	comp=Z,61nm,1.6s						
ITRB	Iturama	23.02	102	eP	P	05 05 24.5	-0.4
DBBC	Dabeiba	23.07	355	P	P	05 05 27.7	+2.3
ITAB	Concordia	23.31	122	eP	P	05 05 28.6	+0.8
ZARC	Zaragoza, Cauc	23.46	359	P	P	05 05 28.4	-0.9
	comp=Z,34nm,1.0s						
CPSB	Cacapava Do Su	23.78	130	eP	P	05 05 32.4	+0.1
APAC	Apartado, Choc	23.97	354	P	P	05 05 33.9	-0.2
	comp=Z,24nm,1.0s						
OCAC	Ocana	24.22	2	P	P	05 05 34.5	-2.0
	comp=Z,31nm,0.7s						
MAL2	Monte Alegre,	24.24	57		P	05 05 35.6	-1.0
FRTB	Fartura	24.31	111	eP	P	05 05 37.8	+0.6
PLCA	Paso Flores	24.74	173		P	05 05 42.7	+1.7
PLCA				IAmb	IAmb	05 05 56.9	
	comp=Z,37nm,1.4s						
PLCA	Paso Flores	24.74	173	P	P	05 05 39.9	-1.2
	comp=Z,10nm,1.1s,baz=358,slow=11,SNR=5.5						
PLCA				LR	LR	05 13 30.5	
	comp=Z,261nm,21.3s,baz=9.5,slow=32						
	comp=Z,10nm,1.1s						
PLCA	Paso Flores	24.74	173	eP	P	05 05 43.0	+1.9
BB19B	Bebedouro	24.87	105	eP	P	05 05 43.3	+0.9
IPMB	Ipameri, GO	24.97	98	eP	P	05 05 42.6	-0.7
SDV	Santo Domingo	25.10	8	LR	LR	05 16 36.1	
	comp=Z,614nm,18.3s,baz=215,slow=39						
SDV	Santo Domingo	25.10	8	eP	P	05 05 45.7	+1.1
CNLB	Canela	25.21	125	eP	P	05 05 46.0	+0.6
BDFB	Brasilia	25.25	93		P	05 05 45.5	-0.4
BDFB				IAmb	IAmb	05 05 46.9	
	comp=Z,51nm,1.2s						
BDFB	Brasilia	25.25	93	P	P	05 05 44.8	-1.1
	comp=Z,16nm,1.0s,baz=274,slow=13,SNR=15						
BDFB				LR	LR	05 17 17.6	
	comp=Z,324nm,20.5s,baz=276,slow=40						
	comp=Z,16nm,1.0s						
SJCC	San Jacinto, C	25.86	358	P	P	05 05 51.2	-0.1
PRPB	Parauapebas	25.91	70	eP	P	05 05 50.5	-1.4
SPB	Sao Paulo	26.28	111	P	P	05 05 54.4	-0.6
SPB	Sao Paulo	26.28	111	eP	P	05 05 57.3	+2.3
PMNB	Patos De Minas	26.66	99	eP	P	05 05 59.4	+0.7
SMTB	Santa Maria do	27.00	78	eP	P	05 06 01.4	-0.3
PCRV	Puerto La Cruz	27.81	21	LR	LR	05 18 16.1	
	comp=Z,1µm,19.9s,slow=39						
JTS	Las Juntas de	28.29	337	LR	LR	05 17 05.5	
	comp=Z,512nm,21.2s,baz=166,slow=36						
SDBA	SAO DESIDERIO	28.68	86	eP	P	05 06 16.8	+0.1
JANB	Januaria	28.86	92	eP	P	05 06 17.5	-0.8
DIAM	Diamantina, MG	29.29	99	eP	P	05 06 22.3	+0.1
MDP	Montagnes des	30.04	47	LR	LR	05 19 06.9	
	comp=Z,1µm,18.5s,baz=246,slow=38						
RIB01	Linhares ES	32.39	101	eP	P	05 06 50.6	+1.2
SJG	San Juan	34.94	14	LR	LR	05 24 22.2	
	comp=Z,193nm,18.2s,baz=180,slow=41						
CMIG	Matias Romero	38.76	327	LR	LR	05 22 16.0	
	comp=Z,262nm,20.0s,baz=174,slow=34						
USHA	Ushuaia	38.90	175	LR	LR	05 21 57.7	
	comp=Z,275nm,18.5s,baz=254,slow=33						
RCBR	Riachuelo	38.95	79	LR	LR	05 24 38.9	
	comp=Z,373nm,20.2s,baz=254,slow=37						
RCBR	Riachuelo	38.95	79	eP	P	05 07 45.0	-0.9
RCBR	Riachuelo	38.95	79	P	P	05 07 44.9	-0.9
RCBR				x	x	05 08 01.8	
PMSA	Palmer Station	49.11	174	LR	LR	05 26 55.1	
	comp=Z,100nm,19.0s,baz=312,slow=32						
JSC	Jenkinsville	50.56	352	P	P	05 09 16.7	-1.1
JSC				IAmb	IAmb	05 09 17.1	
	comp=Z,10nm,1.2s						
W57A	Gilead	51.27	354	P	P	05 09 22.4	-0.8
W57A				IAmb	IAmb	05 09 24.0	
	comp=Z,11nm,1.1s						
HNDO	Hondo	51.40	332	P	P	05 09 23.3	-1.1
HNDO				IAmb	IAmb	05 09 40.2	
	comp=Z,19nm,1.2s						
237A	Washetta, Mont	52.11	337	P	P	05 09 29.1	-0.5
237A				IAmb	IAmb	05 09 42.2	
	comp=Z,11nm,0.9s						
TKL	Tuckaleechee C	52.27	350	LR	LR	05 34 24.3	
	comp=Z,141nm,18.1s,baz=166,slow=39						
WHTX	Lake Whitney,	52.75	335	P	P	05 09 33.3	-1.0
WHTX				IAmb	IAmb	05 09 34.7	
	comp=Z,24nm,1.5s						
T59A	Double "B" Far	52.89	357		P	05 09 34.7	-0.5
T59A				IAmb	IAmb	05 09 35.8	
	comp=Z,22nm,1.4s						
LPIG	La Paz	53.26	318	LR	LR	05 27 15.9	
	comp=Z,79nm,20.3s,baz=161,slow=30						
TXAR	Lajitas Array	53.37	328	P	P	05 09 36.5	-2.5
	comp=Z,0.4nm,0.6s,baz=145,slow=7.2,SNR=6.5						
TXAR				LR	LR	05 31 02.5	
	comp=Z,94nm,19.0s,baz=142,slow=34						
	comp=Z,0.4nm,0.6s						
MIAR	Mount Ida	53.63	340		P	05 09 39.4	-1.3
MIAR				IAmb	IAmb	05 09 51.8	
	comp=Z,4.7nm,0.8s						
R58B	Mineral	53.90	356	P	P	05 09 41.8	-0.8
ABTX	Abilene, Hawle	54.21	334		P	05 09 44.0	-1.1
X34A	Smith Ranch, M	55.19	336		P	05 09 50.3	-1.9
WCI	Wyandotte Cave	55.22	348	P	P	05 09 49.5	-2.7
TUL3	Leonard	55.61	339		P	05 09 54.1	-1.0
N58A	Sunbury	56.71	358		P	05 10 02.0	-0.8
N58A				IAmb	IAmb	05 10 14.6	
	comp=Z,11nm,0.9s						
M57A	Sunshine Farm,	57.22	357		P	05 10 06.2	-0.2
M57A				IAmb	IAmb	05 10 18.3	
	comp=Z,12nm,0.9s						
L59A	Walton	58.02	359		P	05 10 11.5	-0.6
L59A				IAmb	IAmb	05 10 23.0	
	comp=Z,13nm,1.0s						
BINY	Binghamton	58.04	358	P	P	05 10 11.7	-0.5
ANMO	Albuquerque	59.28	329		P	05 10 20.5	-0.7
ANMO	Albuquerque	59.28	329	P	P	05 10 20.5	-0.7
ANMO	Albuquerque	59.28	329	LR	LR	05 34 41.4	
	comp=Z,146nm,18.5s,baz=222,slow=35						
ANMO	Albuquerque	59.28	329	P	P	05 10 20.9	-0.3
SADO	Sadowa	60.75	356	LR	LR	05 39 03.9	
	comp=Z,122nm,20.4s,baz=178,slow=38						
SDCO	Great Sand Dun	61.10	332		P	05 10 33.0	-0.8
SDCO				IAmb	IAmb	05 10 44.8	
	comp=Z,5.4nm,0.8s						
PV15	Paradox Valley	62.96	330	P	P	05 10 46.9	+0.7
PV15				IAmb	IAmb	05 10 57.8	
	comp=Z,7.3nm,0.9s						
TAOE	Nuku Hiva Isla	64.52	268	eP	P	05 10 54.6	-2.2
	comp=Z,54nm,22.0s						
TAOE				eS	S	05 19 36.3	+2.2
	comp=Z,76nm,27.1s						
TAOE	Nuku Hiva Isla	64.52	268	eLR	LR	05 30 13.0	

	comp=Z,591nm,25.1s						
BELA	**Belgrano 2**	**64.78**	**171**		**P**	**05 10 58.5**	**+1.1**
BELA				IAmb	IAmb	05 11 00.4	
	comp=Z,5.4nm,1.1s						
P18A	**Preston Nutter**	**64.82**	**330**	P	**P**	**05 10 58.0**	**-0.5**
MVU	**Marysvale**	**64.94**	**328**		**P**	**05 10 58.8**	**-0.4**
MVU				IAmb	IAmb	05 11 11.0	
	comp=Z,5.5nm,1.0s						
SHPR	**Sheep Range**	**65.04**	**324**		**P**	**05 10 59.5**	**-0.3**
VNA3	**Neumayer Olymp**	**66.77**	**161**	⇓P	**P**	**05 11 11.5**	**+1.2**
	comp=Z,4.2nm,1.1s						
PDAR	**Pinedale Array**	**66.98**	**332**	P	**P**	**05 11 10.8**	**-1.5**
	comp=Z,0.4nm,0.9s,baz=168,slow=2.9,SNR=3.7						
	comp=Z,0.4nm,0.9s						
VNA1	**Neumayer--Stat**	**67.02**	**161**	⇑P	**P**	**05 11 12.2**	**+0.4**
	comp=Z,7.2nm,1.1s						
NVAR	**Mina Array Bea**	**68.17**	**324**	P	**P**	**05 11 19.8**	**0.0**
	comp=Z,0.1nm,0.5s,baz=134,slow=4.3,SNR=3.7						
	comp=Z,0.1nm,0.5s						
ULM	**Lac du Bonnet**	**68.77**	**345**	P	**P**	**05 11 21.9**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=135,slow=4.3,SNR=2.5						
	comp=Z,0.6nm,0.4s						
SNAA	**Sanae**	**68.99**	**161**	⇑P	**P**	**05 11 24.8**	**+0.6**
	comp=Z,100nm,0.7s						
SNAA	**Sanae**	**68.99**	**161**		**P**	**05 11 25.1**	**+0.8**
SNAA				IAmb	IAmb	05 11 26.3	
	comp=Z,21nm,1.5s						
SNAA	**Sanae**	**68.99**	**161**	P	**P**	**05 11 24.4**	**+0.1**
	comp=Z,4.0nm,0.7s,baz=266,slow=9.0,SNR=15						
SNAA				LR	LR	05 38 41.7	
	comp=Z,86nm,20.8s,baz=282,slow=33						
	comp=Z,4.0nm,0.7s						
YHL	**Hebgen Lake**	**69.35**	**333**	P	**P**	**05 11 27.5**	**+0.4**
YHL				IAmb	IAmb	05 11 44.1	
	comp=Z,6.1nm,1.2s						
MFID	**Camas Ranch**	**70.42**	**329**		**P**	**05 11 32.8**	**-0.7**
MFID				IAmb	IAmb	05 11 45.1	
	comp=Z,6.8nm,0.9s						
TBI	**Tubuai**	**70.46**	**251**	*e*LR	LR	05 32 59.9	
	comp=Z,1µm,27.0s						
TROLL	**Troll, Antarti**	**70.70**	**161**	⇑P	**P**	**05 11 35.7**	**+0.8**
	comp=Z,187nm,0.8s						
SCHQ	**Schefferville**	**70.95**	**5**	P	**P**	**05 11 34.7**	**-1.6**
	comp=Z,2.5nm,1.0s,baz=201,slow=7.0,SNR=3.5						
SCHQ				LR	LR	05 43 33.5	
	comp=Z,82nm,19.9s,baz=205,slow=37						
	comp=Z,2.5nm,1.0s						
PPT2	**Papeete2**	**71.62**	**256**	*e*P	**P**	**05 11 41.4**	**+0.1**
	comp=Z,52nm,23.5s						
PPT2				*e*S	S	05 20 45.7	-13
	comp=Z,61nm,23.0s						
PPT2	**Papeete2**	**71.62**	**256**	*e*LR	LR	05 33 26.4	
	comp=Z,322nm,23.2s						
PPT2				*e*LR	LR	05 33 27.3	
	comp=Z,293nm,25.0s						
PPT	**Papeete**	**71.63**	**256**	LR	LR	05 35 04.9	
	comp=Z,232nm,18.7s,baz=119,slow=29						
DBIC	**Dimbokro**	**72.30**	**77**	P	**P**	**05 11 44.6**	**-0.8**
	comp=Z,8.5nm,1.0s,baz=215,slow=12,SNR=3.2						
DBIC				LR	LR	05 42 17.6	
	comp=Z,477nm,19.1s,baz=218,slow=35						
	comp=Z,8.5nm,1.0s						
PMOZ	**Porto Moniz, M**	**73.07**	**48**	*e*LR	LR	05 39 05.5	
PMOZ				*i* AMs_20		05 42 11.8	
	comp=Z,153nm,18.0s						
QSPA	**South Pole Qui**	**74.04**	**180**	P	**P**	**05 11 56.1**	**+1.2**
QSPA				IAmb	IAmb	05 12 07.1	
	comp=Z,22nm,1.4s						
QSPA	**South Pole Qui**	**74.04**	**180**	P	**P**	**05 11 55.4**	**+0.5**
	comp=Z,3.7nm,0.6s,baz=270,slow=4.1,SNR=17						
	comp=Z,3.7nm,0.6s						
FRB	**Frobisher Bay**	**79.73**	**3**	LR	LR	05 49 11.2	
	comp=Z,61nm,20.4s,baz=156,slow=37						
RAR	**Rarotonga**	**80.25**	**251**	LR	LR	05 38 17.6	
	comp=Z,180nm,21.8s,baz=136,slow=28						
TORD	**Torodi Ar. Bea**	**80.51**	**73**	P	**P**	**05 12 31.1**	**-0.8**
	comp=Z,6.5nm,0.9s,baz=284,slow=4.6,SNR=22						
TORD				LR	LR	05 47 04.9	
	comp=Z,264nm,20.2s,baz=238,slow=35						
	comp=Z,6.5nm,0.9s						
VNDA	**Vanda**	**81.22**	**191**	P	**P**	**05 12 33.8**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=177,slow=8.8,SNR=4.6						
VNDA				LR	LR	05 42 01.3	
	comp=Z,113nm,19.4s,baz=150,slow=31						
	comp=Z,1.2nm,0.8s						
PVAQ	**Vaqueiros**	**82.08**	**48**	*e*LR	LR	05 41 17.9	
PVAQ				*i* AMs_20		05 46 57.3	
	comp=Z,207nm,18.0s						
PMRV	**Marv??o**	**83.23**	**46**	*e*LR	LR	05 41 01.6	
PMRV				*i* AMs_20		05 47 26.0	
	comp=Z,240nm,20.0s						
SYO	**Syowa Base**	**83.27**	**161**	⇓*e*pP	pP	05 12 54.0	-1.9
PCBR	**Castelo Branco**	**83.36**	**45**	*e*P	**P**	**05 12 47.0**	**+0.7**
PVIS	**Viseu**	**83.48**	**44**	*e*P	**P**	**05 12 47.0**	**0.0**
MTE	**Manteigas**	**83.57**	**45**	*e*P	**P**	**05 12 47.8**	**+0.3**
MTE				*e*LR	LR	05 42 51.9	
MTE				*i* AMs_20		05 46 45.4	
	comp=Z,303nm,20.0s						
PGAV	**Gavieira, Arco**	**83.81**	**43**	*e*LR	LR	05 42 05.0	
PGAV				*i* AMs_20		05 47 44.4	
	comp=Z,160nm,18.0s						
MVO	**Moncorvo**	**84.26**	**44**	*e*P	**P**	**05 12 51.5**	**+0.5**
MVO				*e*LR	LR	05 43 37.5	
MVO				*i* AMs_20		05 47 06.2	
	comp=Z,226nm,22.0s						
YKA	**Yellowknife Ar**	**84.50**	**342**	P	**P**	**05 12 50.4**	**-1.2**
	comp=Z,0.7nm,0.8s,baz=141,slow=4.2,SNR=9.8						
	comp=Z,0.7nm,0.8s						
SFJD	**Kangerlussuaq**	**84.70**	**9**	LR	LR	05 50 26.6	
	comp=Z,64nm,21.5s,baz=212,slow=36						
PBRG	**Braganca**	**84.75**	**44**	*e*P	**P**	**05 12 53.6**	**+0.2**
ESDC	**Sonseca Array**	**85.72**	**47**	P	**P**	**05 12 57.9**	**-0.5**
ESDC				IAmb	IAmb	05 12 60.0	
	comp=Z,14nm,1.4s						
ESDC	**Sonseca Array**	**85.72**	**47**	P	**P**	**05 12 57.9**	**-0.5**
	comp=Z,4.7nm,1.1s,baz=249,slow=5.0,SNR=20						
	comp=Z,4.7nm,1.1s						
ESBB	**Sonseca Array**	**85.72**	**47**	P	**P**	**05 12 57.5**	**-0.9**
ESBB				IAmb	IAmb	05 12 60.0	
	comp=Z,5.5nm,0.9s						
TSUM	**Tsumeb**	**86.51**	**109**	LR	LR	05 50 44.1	
	comp=Z,155nm,18.1s,baz=246,slow=35						
BORG	**Borgarnes**	**90.04**	**20**	LR	LR	05 51 15.1	
	comp=Z,47nm,21.2s,baz=312,slow=34						
BOSA	**Boshof**	**90.48**	**120**	LR	LR	05 50 40.1	
	comp=Z,129nm,20.6s,baz=232,slow=33						
SUMG	**Summit**	**91.62**	**10**		**P**	**05 13 25.5**	**-0.5**
LBTB	**Lobatse**	**91.91**	**117**	LR	LR	05 52 39.0	
	comp=Z,70nm,19.0s,baz=242,slow=34						
URZ	**Urewera**	**94.10**	**228**	LR	LR	05 46 22.2	
	comp=Z,140nm,20.1s,baz=99,slow=29						
KEST	**Kesra**	**94.20**	**54**	LR	LR	05 56 07.9	
	comp=Z,132nm,20.3s,baz=320,slow=36						
INK	**Inuvik**	**94.21**	**341**	LR	LR	06 00 04.1	
	comp=Z,155nm,18.9s,baz=126,slow=38						
ILAR	**Eielson Array**	**97.25**	**336**	LR	LR	06 02 54.4	
	comp=Z,70nm,18.2s,baz=84,slow=39						
KDAK	**Kodiak Island**	**97.39**	**328**	LR	LR	05 58 21.4	
	comp=Z,49nm,18.3s,baz=104,slow=36						
DAVOX	**Davos/Dischmat**	**97.64**	**44**	LR	LR	05 57 03.9	
	comp=Z,92nm,18.6s,baz=258,slow=35						
VAE	**Valguarnera**	**98.59**	**54**	LR	LR	05 57 18.7	
	comp=Z,138nm,21.7s,baz=298,slow=35						
CLL	**Collm**	**100.72**	**40**	*e*PS	PS	05 27 18.0	+1.1
CLL				*e*(SS)		05 33 06.0	
CLL				*e*SSS	SSS	05 36 24.0	
CLL				AMS	AMS	05 57 00.0	
	comp=Z,100nm,19.5s						
DZM	**Mont Dzumac**	**109.46**	**239**	*e*LR	LR	05 51 04.0	
	comp=Z,262nm,29.2s						
H11S2	**WAKE ISLAND Hy**	**121.98**	**282**	T	T	07 32 54.6	
	baz=99,slow=75,SNR=450						
H11S1	**WAKE ISLAND Hy**	**121.99**	**282**	T	T	07 32 50.9	
	baz=99,slow=75,SNR=671						
H11S3	**WAKE ISLAND Hy**	**122.00**	**282**	T	T	07 32 48.8	
	baz=99,slow=75,SNR=682						
ASAR	**Alice Springs**	**131.82**	**216**	PKP	**PKPdf**	**05 19 32.6**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=135,slow=1.8,SNR=6.9						
BRVK	**Borovoye**	**133.83**	**29**	⇑Pn	**PKiKP**	**05 19 43.1**	**+6.0**
	comp=Z,1.6nm,1.0s						
BRVK				⇓Lg	Lg	05 20 10.8	
	comp=Z,0.6nm,0.2s						
BVA0	**Borovoye Array**	**133.90**	**29**	Pn	**PKiKP**	**05 19 41.9**	**+4.6**
	comp=Z,1.8nm,0.7s,baz=131,slow=14,SNR=6.1						
BVA0				⇑Lg	Lg	05 20 07.4	
	comp=Z,2.2nm,0.5s,baz=131,slow=26						
WRA	**Warramunga Arr**	**134.46**	**219**	PKP	**PKPdf**	**05 19 38.3**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=144,slow=1.8,SNR=6.5						
ZALV	**Zalesovo Beam**	**138.87**	**19**	PKP	**PKPdf**	**05 19 44.5**	**-0.7**
	comp=Z,5.7nm,1.1s,baz=253,slow=1.5,SNR=8.6						
KURBB	**Kurchatov Arra**	**139.22**	**26**	PKP	**PKPdf**	**05 19 46.1**	**+0.2**
	comp=Z,1.1nm,0.9s,baz=310,slow=2.9,SNR=5.7						
MJAR	**Matsushiro Arr**	**144.75**	**311**	PKP	**PKPab**	**05 19 54.2**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=185,slow=1.8,SNR=4.9						
BNX	**BinXian**	**145.34**	**333**	⇓P	**PKPbc**	**05 19 56.0**	**-0.8**
BNX				pmax	pmax		
	comp=Z,12nm,1.2s						
SONM	**Songino Array**	**148.37**	**359**	PKPbc	**PKPdf**	**05 20 03.1**	**+0.9**
	comp=Z,6.6nm,1.2s,baz=346,slow=2.2,SNR=16						
XLT	**XiLinHaoTe**	**150.94**	**344**	*e*PKPbc	**PKiKP**	**05 20 13.0**	**+0.3**
KSRS	**Korea Array**	**151.09**	**322**	PKP	**PKPdf**	**05 20 06.6**	**0.0**
	comp=Z,0.5nm,0.4s,baz=25,slow=1.4,SNR=1.8						
KSRS				PKPbc	**PKPbc**	**05 20 12.4**	**0.0**
	comp=Z,2.5nm,1.0s,baz=326,slow=1.6,SNR=9.8						
HHC	**Hu-ho-hao-te**	**154.84**	**350**	*e*P	**PKPdf**	**05 20 11.5**	**-0.7**
GTA	**Gaotai**	**156.22**	**11**	*e*P	**PKPdf**	**05 20 15.8**	**+1.7**
GTA				pP	pPKPdf	05 20 23.8	-1.2
GTA				sP	sPKPdf	05 20 28.3	-0.5
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
LZH	**Lanzhou**	**160.04**	**4**	*e*P	PKPab	05 20 46.3	-12
LZH				pmax	pmax		
	comp=Z,19nm,1.4s						
NJ2	**Nanjing**	**160.16**	**325**	*e*P	**PKPdf**	**05 20 19.3**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH	**PanZhiHua**	**169.01**	**19**	PKP	**PKPdf**	**05 20 25.3**	**-1.7**

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*IDC **29** 05:02:09.3±1.3, 6.°95N×125.°51E, h0^{km}, mb3.9/6, mbtmp3.9/6, MS3.4/1, Error ellipse: s-maj=80.8km s-min=18.6km az=64.0*

ISC 29 05:02:16.0±1.7**, 6.°9N**±0.°3×**125.°5E**±0.°5**, h51**^{km}**, n7, σ0.^{s}65**/6**, mb3.8**/6**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**17.83**	**121**	LR	LR	05 12 15.8	
	comp=Z,132nm,19.6s,baz=350,slow=34						
WRA	**Warramunga Arr**	**28.08**	**162**	P	**P**	**05 08 03.1**	**+0.1**
	0.4nm,0.4s,baz=342,slow=9.2,SNR=11						
	0.4nm,0.4s						
CMAR	**Chiang Mai Arr**	**28.29**	**296**	P	**P**	**05 08 04.7**	**-0.3**
	0.9nm,0.5s,baz=122,slow=7.2,SNR=5.1						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**31.50**	**165**	P	**P**	**05 08 33.2**	**0.0**
	0.3nm,0.6s,baz=339,slow=6.9,SNR=7.6						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**54.26**	**325**	P	**P**	**05 11 37.8**	**+0.9**
	1.7nm,0.3s,baz=119,slow=7.8,SNR=37						
	1.7nm,0.3s						
ZALV	**Zalesovo Beam**	**57.20**	**333**	P	**P**	**05 11 57.3**	**-0.5**
	0.5nm,0.4s,baz=107,slow=5.1,SNR=10						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**58.41**	**327**	P	**P**	**05 12 06.5**	**+0.1**
	1.7nm,0.4s,baz=130,slow=6.3,SNR=21						
	1.7nm,0.4s						

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*NEIC **29** 05:02:28.8±2.6, 8.°29N±0.°09×126.°9E±0.°1, h35^{km}±2^{km}, mb4.6/30, Error ellipse: s-maj=17.0km s-min=15.3km az=247.0*

*IDC **29** 05:02:28.9±0.8, 8.°19N×126.°64E, h48^{km}±7^{km}, mb4.1/18, mbtmp4.3/18, Error ellipse: s-maj=22.3km s-min=12.7km az=81.0*

ISC 29 05:02:28.3±0.5**, 8.°20N**±0.°06×**126.°81E**±0.°09**, h46**^{km}**, n60, σ1.^{s}47**/64**, mb4.5**/36**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.66**	**227**	Pn	**Pn**	**05 02 58.2**	**+3.2**
DAV	**Davao City (W)**	**1.66**	**227**	P	**Pn**	**05 02 54.5**	**-0.5**
	188nm,0.3s,baz=58,slow=5.4,SNR=9.6						
DAV				S	**Sn**	**05 03 15.4**	**+0.3**
	419nm,0.4s,baz=249,slow=9.0,SNR=6.9						
DAV				LR	LR	05 03 25.9	
	comp=Z,695nm,18.1s,baz=20,slow=37						
DAV	**Davao City (W)**	**1.66**	**227**	P	Pn	05 02 59.0	+4.0
TNTI	**Ternate**	**7.40**	**176**	Pn	**Pn**	**05 04 14.9**	**+1.1**
MYLDM	**Lahad Datu**	**8.78**	**251**	Pn	**Pn**	**05 04 33.2**	**+0.5**
MTN	**Manton Dam**	**21.35**	**168**	P	**P**	**05 07 11.3**	**-0.4**
MTN				IAmb	IAmb	05 07 51.4	
	comp=Z,32nm,1.4s						
KNRA	**Kununurra**	**23.81**	**175**	P	**P**	**05 07 37.5**	**+0.5**
NJ2	**Nanjing**	**24.86**	**344**	*e*P	**P**	**05 07 49.5**	**+2.9**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
FITZ	**Fitzroy Crossi**	**26.16**	**183**		**P**	**05 07 58.4**	**-0.1**
COEN	**Coen**	**27.36**	**143**	P	**P**	**05 08 08.9**	**-0.5**
COEN				IAmb	IAmb	05 08 42.0	
	comp=Z,11nm,1.0s						
WB0	**Warramunga Arr**	**28.78**	**165**	P	**P**	**05 08 22.5**	**+0.5**
CM31	**Chiang Mai Arr**	**28.92**	**293**	P	**P**	**05 08 25.6**	**+2.3**
CM31				IAmb	IAmb	05 08 26.7	
	comp=Z,16nm,1.4s						
CMAR	**Chiang Mai Arr**	**28.92**	**293**	P	**P**	**05 08 23.5**	**+0.1**
CMAR	**Chiang Mai Arr**	**28.92**	**293**	P	**P**	**05 08 21.9**	**-1.4**
	comp=Z,0.7nm,0.3s,baz=114,slow=6.5,SNR=6.1						
CMAR				pP	**pP**	**05 08 34.9**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=100,slow=5.9,SNR=2.0						
	comp=Z,0.7nm,0.3s						
WRA	**Warramunga Arr**	**28.93**	**165**	P	**P**	**05 08 22.9**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=344,slow=9.9,SNR=6.7						
	comp=Z,0.5nm,0.5s						
KSRS	**Korea Array**	**29.14**	**2**	P	**P**	**05 08 26.2**	**+1.2**
	comp=Z,0.6nm,0.4s,baz=165,slow=9.9,SNR=4.4						
	comp=Z,0.6nm,0.4s						
PZH	**PanZhiHua**	**29.95**	**311**	P	**P**	**05 08 36.0**	**+3.5**
AS31	**Alice Springs**	**32.42**	**168**	P	**P**	**05 08 55.6**	**+1.4**
ASAR	**Alice Springs**	**32.43**	**168**	P	**P**	**05 08 55.2**	**+1.1**
	comp=Z,0.9nm,0.4s,baz=343,slow=7.0,SNR=18						
ASAR				pP	**pwP**	**05 09 07.2**	**-2.9**
	comp=Z,1.8nm,0.5s,baz=344,slow=7.2,SNR=7.8						
ASAR				PcP	**PcP**	**05 11 41.6**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=344,slow=2.4,SNR=5.0						
	comp=Z,0.9nm,0.4s						
HHC	**Hu-ho-hao-te**	**35.23**	**340**	*e*P	P	05 09 24.0	+5.6
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,93nm,6.1s						
USA0B	**Ussuriysk Arra**	**36.14**	**6**	P	**P**	**05 09 26.3**	**+0.2**
USRK	**Ussuriysk Ar.**	**36.14**	**6**	P	**P**	**05 09 26.2**	**+0.1**
USRK	**Ussuriysk Ar.**	**36.14**	**6**	P	**P**	**05 09 26.9**	**+0.8**
	comp=Z,4.5nm,0.8s,baz=188,slow=9.3,SNR=8.2						
USRK				pP	**sP**	**05 09 40.0**	**-1.6**
	comp=Z,4.0nm,0.7s,baz=197,slow=10,SNR=5.4						
	comp=Z,4.5nm,0.8s						
GTA	**Gaotai**	**39.38**	**326**	*e*P	**P**	**05 09 51.3**	**-2.4**
GTA				pP	pP	05 09 54.5	-11
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BBOO	**Buckleboo**	**41.73**	**168**	P	**P**	**05 10 12.7**	**-0.2**
SONM	**Songino Array**	**43.13**	**340**	P	**P**	**05 10 23.5**	**-0.9**
	comp=Z,0.9nm,0.5s,baz=160,slow=9.5,SNR=6.6						
	comp=Z,0.9nm,0.5s						
MKAR	**Makanchi Array**	**53.99**	**323**	P	**P**	**05 11 48.1**	**+0.3**
	comp=Z,2.5nm,0.4s,baz=119,slow=8.2,SNR=23						
MKAR				PcP	**PcP**	**05 12 52.5**	**0.0**
	comp=Z,1.6nm,0.8s,baz=116,slow=5.5,SNR=5.1						
	comp=Z,2.5nm,0.4s						
TARG	**Taragay, Kyrgy**	**54.54**	**316**	P	**P**	**05 11 51.1**	**-1.3**
KDJ	**Kajisay**	**55.13**	**316**	P	**P**	**05 11 56.8**	**+0.4**
KDJ				IAmb	IAmb	05 11 57.8	
	comp=Z,5.0nm,0.7s						
ZALV	**Zalesovo Beam**	**56.68**	**332**	P	**P**	**05 12 06.2**	**-0.8**
	comp=Z,2.0nm,0.5s,baz=142,slow=4.9,SNR=7.2						
	comp=Z,2.0nm,0.5s						
KURK	**Kurchatov**	**58.06**	**326**		**P**	**05 12 16.4**	**-0.4**
KURBB	**Kurchatov Arra**	**58.07**	**326**	P	**P**	**05 12 17.1**	**+0.4**
	comp=Z,6.9nm,0.7s,baz=126,slow=6.2,SNR=42						
	comp=Z,6.9nm,0.7s						
KK31	**Karatay Array**	**60.08**	**315**		**P**	**05 12 30.7**	**-0.2**
KK31				IAmb	IAmb	05 12 31.7	
	comp=Z,3.8nm,0.8s						
KKAR	**Karatay Array**	**60.08**	**315**		**P**	**05 12 30.6**	**-0.3**
BVAR	**Borovoye Array**	**63.66**	**326**	P	**P**	**05 12 55.0**	**+0.2**
	comp=Z,7.3nm,0.7s,baz=117,slow=8.5,SNR=23						
	comp=Z,7.3nm,0.7s						
NRIK	**Noril'sk**	**66.14**	**346**	P	**P**	**05 13 11.1**	**+0.5**
	comp=Z,7.2nm,0.6s,baz=136,slow=6.1,SNR=6.5						
	comp=Z,7.2nm,0.6s						
D19K	**Kuna River**	**76.95**	**21**		**P**	**05 14 17.4**	**+1.7**
D19K				IAmb	IAmb	05 14 29.9	
	comp=Z,7.0nm,0.8s						
H19K	**Roundabout Mou**	**77.09**	**25**	P	**P**	**05 14 18.3**	**+1.8**
H19K				IAmb	IAmb	05 14 31.0	
	comp=Z,5.9nm,1.0s						
E19K	**Redstone River**	**77.09**	**23**		**P**	**05 14 18.5**	**+2.0**
E19K				IAmb	IAmb	05 14 33.2	
	comp=Z,5.1nm,1.0s						
G21K	**Allakaket**	**78.41**	**24**		**P**	**05 14 25.1**	**+1.2**
G21K				IAmb	IAmb	05 14 38.3	
	comp=Z,3.9nm,0.9s						
H21K	**Melozitna Rive**	**78.61**	**25**	P	**P**	**05 14 27.0**	**+2.0**
H21K				IAmb	IAmb	05 14 39.4	
	comp=Z,4.4nm,0.9s						
BPAW	**Bear Paw Mtn.**	**79.26**	**26**		**P**	**05 14 30.3**	**+1.7**
BPAW				IAmb	IAmb	05 14 42.6	
	comp=Z,5.6nm,0.8s						
MLY	**Manley**	**79.42**	**25**		**P**	**05 14 30.9**	**+1.4**
MLY				IAmb	IAmb	05 14 43.6	
	comp=Z,3.8nm,0.8s						
G23K	**Bananza Creek**	**79.81**	**24**		**P**	**05 14 33.5**	**+1.9**
H23K	**Yukon River**	**79.96**	**25**	P	**P**	**05 14 34.1**	**+1.7**
TOLK	**Toolik Lake Re**	**80.08**	**22**		**P**	**05 14 33.3**	**+0.3**
TOLK				IAmb	IAmb	05 14 47.5	
	comp=Z,5.5nm,0.8s						
PWL	**Port Wells**	**80.38**	**30**	P	**P**	**05 14 35.6**	**+0.9**
H24K	**Noodor Dome**	**80.65**	**25**		**P**	**05 14 38.0**	**+1.9**
F24K	**Squaw Lake**	**80.68**	**23**		**P**	**05 14 37.9**	**+1.7**
F24K				IAmb	IAmb	05 14 50.8	
	comp=Z,3.9nm,0.8s						
ILAR	**Eielson Array**	**81.06**	**26**	P	**P**	**05 14 39.0**	**+0.8**
	comp=Z,0.8nm,0.8s,baz=242,slow=5.0,SNR=12						
	comp=Z,0.8nm,0.8s						
F28M	**Old Crow**	**83.74**	**23**		**P**	**05 14 54.2**	**+1.9**
F28M				IAmb	IAmb	05 14 55.2	
	comp=Z,4.8nm,0.8s						
I28M	**Miner Creek**	**83.96**	**25**		**P**	**05 14 55.3**	**+1.8**
H29M	**Whitestone**	**84.50**	**24**		**P**	**05 14 57.5**	**+1.4**
I29M	**Ogilvie Camp,**	**84.64**	**25**	P	**P**	**05 14 58.5**	**+1.7**
I29M				IAmb	IAmb	05 14 59.6	
	comp=Z,6.0nm,1.0s						
ARCES	**ARCESS Array B**	**86.30**	**340**	P	**P**	**05 15 04.7**	**-0.4**
	comp=Z,2.2nm,0.7s,baz=84,slow=5.0,SNR=5.5						
ARCES				pP	**pwP**	**05 15 18.7**	**-3.8**
	comp=Z,3.8nm,0.8s,baz=75,slow=5.5,SNR=3.4						
	comp=Z,2.2nm,0.7s						
FINES	**FINESS Array B**	**87.95**	**332**	P	**P**	**05 15 12.5**	**-0.6**
	comp=Z,2.4nm,0.5s,baz=75,slow=4.1,SNR=28						
	comp=Z,2.4nm,0.5s						
AKASG	**Malin Array Be**	**88.49**	**321**	P	**P**	**05 15 14.9**	**-1.0**
	comp=Z,1.5nm,0.7s,baz=68,slow=5.2,SNR=5.4						
	comp=Z,1.5nm,0.7s						
HFS	**Hagfors**	**94.11**	**333**	P	**P**	**05 15 40.6**	**-1.3**
	comp=Z,0.6nm,0.4s,baz=132,slow=2.2,SNR=5.2						
	comp=Z,0.6nm,0.4s						
YKA	**Yellowknife Ar**	**95.42**	**24**	P	**P**	**05 15 48.8**	**+1.0**
	comp=Z,0.9nm,0.8s,baz=302,slow=5.3,SNR=8.3						
	comp=Z,0.9nm,0.8s						
GERES	**GERESS Array B**	**98.64**	**322**	P	Pdif	05 16 02.3	-0.4
	comp=Z,0.3nm,0.5s,baz=44,slow=5.9,SNR=3.6						
	comp=Z,0.3nm,0.5s						

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*ASIES **29** 05:05:54.0, 24.°91N×122.°42E, h24^{km}, ML3.6, Mw3.6, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}-2.46; $M_{\theta\theta}$2.52; $M_{\phi\phi}$-0.06; $M_{r\theta}$-1.12; $M_{\theta\phi}$1.31; $M_{\phi r}$-1.06; Fault plane solution: $M_0$3.21176×10^{21} NP1: ϕ_s261.48000°, δ32.77000°, λ-67.59000°. NP2: ϕ_s55.36000°, δ59.98000°, λ-103.79000°. Principal axes: T Plg13.9300°, Azm155.3550°; N Plg11.9080°, Azm62.3560°; P Plg71.5140°, Azm293.2480°;*

*JMA **29** 05:05:53.4±0.2, 24.°8N±0.°9×122.°4E±0.°3, h0^{km}±2^{km}, MV3.6/11, NW OFF ISHIGAKIJIMA IS*

*TAP **29** 05:05:54.0, 24.°91N×122.°42E, h24^{km}, ML3.6, C*

*IDC **29** 05:05:54.5±1.4, 24.°59N×121.°29E, h0^{km}, mb3.8/4, mbtmp3.9/5, ML3.6/1, MS3.5/2, Error ellipse: s-maj=68.8km s-min=23.3km az=67.0*

ISC 29 05:05:54.0±1.0**, 24.°88N**±0.°03×**122.°43E**±0.°02**, h16**^{km}±7^{km}**, n114, σ0.^{s}86**/149**, mb3.8**/4**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.42**	**287**	*e*P	**Pg**	**05 06 02.4**	**-0.2**
TWB1				S	**Sg**	**05 06 08.1**	**-0.3**
EGS		**0.46**	**265**	P	**Pg**	**05 06 03.4**	**+0.2**
EGS				S	**Sg**	**05 06 10.1**	**+0.6**
EOS2	**EOS2**	**0.50**	**202**	*e*P	**Pg**	**05 06 04.5**	**+0.6**
EOS2				S	**Sb**	**05 06 12.5**	**+1.2**
SXI1	**Grass Mountain**	**0.55**	**293**	*i* P	**Pg**	**05 06 05.1**	**+0.1**
SXI1				*i* S	**Sb**	**05 06 12.7**	**-0.2**
TIPB	**Shuangxi**	**0.56**	**279**	*i* P	**Pg**	**05 06 05.2**	**+0.1**
TIPB				S	**Sg**	**05 06 12.3**	**-0.3**
TWC	**Suao**	**0.60**	**243**	*i* P	**Pg**	**05 06 05.5**	**-0.4**
TWC				*e*S	**Sg**	**05 06 12.5**	**-1.2**
EOS3	**EOS3**	**0.60**	**190**	*i* P	**Pg**	**05 06 06.5**	**+0.6**
EOS3				S	**Sn**	**05 06 16.1**	**-1.0**
ESAO	**Su ao**	**0.62**	**240**	*i* P	**Pb**	**05 06 05.9**	**-0.6**
ESAO				S	**Sg**	**05 06 13.7**	**-0.7**
NWF	**Wu-fen Shan**	**0.62**	**288**	P	**Pg**	**05 06 06.3**	**0.0**
NWF				S	**Sg**	**05 06 14.7**	**+0.1**
WFSB	**Wu-fen Shan**	**0.62**	**288**	P	**Pg**	**05 06 06.3**	**+0.1**
WFSB				S	**Sg**	**05 06 14.8**	**+0.2**
JYNG	**Yonagunijimaku**	**0.63**	**133**	P	**Pb**	**05 06 05.8**	**-0.9**
JYNG				*e*S	**Sg**	**05 06 14.7**	**-0.3**
TNOU	**National Taiwa**	**0.66**	**294**	P	**Pb**	**05 06 06.6**	**-0.5**
TNOU				S	**Sb**	**05 06 15.4**	**-0.5**
YOJ	**Yonaguni jima**	**0.67**	**128**	P	**Pb**	**05 06 06.7**	**-0.7**
YOJ	**Yonaguni jima**	**0.67**	**128**	P	**Pb**	**05 06 06.4**	**-1.0**
YOJ				S	**Sb**	**05 06 15.5**	**-1.0**
YOJ	**Yonaguni jima**	**0.67**	**128**	P	**Pb**	**05 06 06.9**	**-0.4**
NDS	**Dongshan**	**0.70**	**249**	*e*P	**Pb**	**05 06 06.4**	**-1.4**
NDS				*e*S	**Sb**	**05 06 16.1**	**-1.1**
TWE	**Neicheng**	**0.71**	**257**	*e*P	**Pb**	**05 06 07.6**	**-0.5**
TWE				*e*S	**Sn**	**05 06 19.1**	**-0.9**
EWUT	**Wuta**	**0.74**	**234**	*i* P	**Pb**	**05 06 08.1**	**-0.4**
EWUT				*e*S	**Sb**	**05 06 18.1**	**-0.2**
EOS4	**EOS4**	**0.77**	**188**	*e*P	**Pg**	**05 06 09.2**	**+0.3**
EOS4				*e*S	**Sg**	**05 06 20.2**	**+1.2**
ENA	**Nanau**	**0.78**	**234**	*e*P	**Pb**	**05 06 08.6**	**-0.5**
ENA				*e*S	**Sb**	**05 06 19.4**	**0.0**
TWA	**Mucha**	**0.78**	**277**	*e*P	**Pb**	**05 06 08.9**	**-0.3**
TWA				*e*S	**Sg**	**05 06 20.1**	**+0.6**
FUSB	**Fushanzhiwuyua**	**0.78**	**261**	*e*P	**Pb**	**05 06 08.4**	**-0.8**
PCYT	**Pengchaiyu**	**0.81**	**336**	*e*P	**Pb**	**05 06 08.8**	**-1.0**
YM08	**YM08**	**0.82**	**292**	P	**Pb**	**05 06 09.1**	**-0.8**
ENTT	**Nioudou**	**0.82**	**253**	P	**Pb**	**05 06 10.2**	**+0.3**
ENTT				*e*S	**Sb**	**05 06 20.7**	**-0.1**
YM01	**YM01**	**0.83**	**289**	*e*P	**Pb**	**05 06 09.4**	**-0.6**
NHDH	**Xindian Distri**	**0.83**	**276**	P	**Pb**	**05 06 10.0**	**0.0**
NHDH				*e*S	**Sb**	**05 06 21.1**	**+0.2**
EAHA	**Aohua**	**0.84**	**229**	*e*P	**Pb**	**05 06 09.9**	**-0.3**
EAHA				*e*S	**Sb**	**05 06 20.3**	**-1.0**
TWY	**Chenhua**	**0.85**	**298**	P	**Pb**	**05 06 09.9**	**-0.5**
TWY				*e*S	**Sb**	**05 06 21.4**	**-0.2**
NWLT	**Wulai**	**0.85**	**263**	*e*P	**Pb**	**05 06 10.0**	**-0.5**
ZUZH	**Zhuzihu**	**0.85**	**289**	*e*P	**Pb**	**05 06 10.0**	**-0.5**
TATO	**Taipei**	**0.86**	**276**	P	**Pb**	**05 06 10.2**	**-0.4**
TATO	**Taipei**	**0.86**	**276**	P	**Pb**	**05 06 10.4**	**-0.2**
ANP	**Anpu**	**0.88**	**290**	*e*P	**Pb**	**05 06 10.4**	**-0.6**
LATG	**Datong**	**0.89**	**247**	P	**Pb**	**05 06 10.7**	**-0.5**
LATG				*e*S	**Sb**	**05 06 23.1**	**+0.1**
NTST	**Danshui**	**0.94**	**288**	*e*P	**Pb**	**05 06 11.7**	**-0.1**
TWS1	**Kuangyinshan**	**0.95**	**283**	*e*P	**Pn**	**05 06 13.2**	**+0.5**
YHNB	**Yeheng**	**0.98**	**258**	P	**Pb**	**05 06 12.5**	**-0.3**
YHNB	**Yeheng**	**0.98**	**258**	P	**Pb**	**05 06 12.8**	**0.0**
YHNB	**Yeheng**	**0.98**	**258**	*e*P	**Pb**	**05 06 12.4**	**-0.4**
YHNB				*e*S	**Sb**	**05 06 25.9**	**+0.4**
NSK	**Sanguang**	**1.00**	**258**	*e*P	**Pb**	**05 06 12.5**	**-0.5**
NSK				*e*S	**Sb**	**05 06 25.9**	**-0.1**
NACB	**Ninganchiao**	**1.04**	**227**	P	**Pb**	**05 06 12.6**	**-1.1**
NACB	**Ninganchiao**	**1.04**	**227**	P	**Pb**	**05 06 12.8**	**-0.9**
NACB	**Ninganchiao**	**1.04**	**227**	*e*P	**Pb**	**05 06 12.6**	**-1.1**
NACB				*e*S	**Sb**	**05 06 26.6**	**-0.4**
NNSB	**Datong**	**1.06**	**245**	P	**Pb**	**05 06 13.4**	**-0.6**
NNSB				*e*S	**Sb**	**05 06 28.2**	**+0.6**
NNS	**Nan Shan**	**1.06**	**246**	*e*P	**Pb**	**05 06 13.6**	**-0.5**
NNS				*e*S	**Sb**	**05 06 27.5**	**-0.2**
ETLH	**Xiulin Townshi**	**1.10**	**232**	*e*P	**Pb**	**05 06 14.5**	**-0.2**
ETLH				*e*S	**Sn**	**05 06 29.6**	**-0.1**
TWD	**Chiawan**	**1.10**	**224**	P	**Pn**	**05 06 14.3**	**-0.5**
TWD				*e*S	**Sb**	**05 06 29.0**	**+0.1**
NCUH	**Zhongli**	**1.14**	**275**	*e*P	**Pn**	**05 06 14.6**	**-0.7**

KSHI	Guanxi Townshi	1.15	265	eP	Pn	05 06 15.2	-0.3
NFF	Wufeng Townshi	1.22	258	eP	Pn	05 06 16.1	-0.4
ETM	Tongmen	1.25	223	eP	Pn	05 06 17.0	+0.1
FUSS	Fushou	1.25	240	eP	Pb	05 06 17.6	+0.1
FUSS				eS	Sn	05 06 34.0	+0.2
LXIB	Xiulin Townshi	1.26	227	eP	Pn	05 06 17.1	-0.1
WHF	Hehuan Shan	1.29	236	eP	Pn	05 06 17.7	-0.1
WHF				eS	Sb	05 06 34.4	-0.4
IRIF	Iriomote-Funau	1.30	115	eP	Pb	05 06 18.4	+0.3
TWT	Tachien	1.30	242	eP	Pn	05 06 17.9	+0.2
LIOB	Emei	1.31	260	eP	Pn	05 06 17.5	-0.2
LIOB				S	Sn	05 06 33.4	-1.4
TDCB	Techi	1.32	242	eP	Pb	05 06 18.4	-0.1
NSTT	Nanjuang	1.32	259	eP	Pn	05 06 17.2	-0.7
SHUL	Shoufeng	1.35	216	eP	Pn	05 06 18.2	0.0
ESL	Shilin	1.40	221	eP	Pn	05 06 19.4	+0.4
OWD	Renai	1.47	231	eP	Pn	05 06 20.5	+0.5
WHP	Taichung City	1.48	246	eP	Pb	05 06 21.4	+0.2
WHP				eS	Sb	05 06 39.8	-0.1
WUSB	Renai	1.49	234	P	Pb	05 06 21.2	-0.2
WUSB				eS	Sb	05 06 41.2	+1.0
HATJ	Hateruma jima	1.50	123	P	Pb	05 06 21.8	+0.4
WARBT	Fenglin Townsh	1.50	220	eP	Pn	05 06 19.8	-0.6
NMLH	Miaoli	1.53	257	eP	Pg	05 06 23.1	-0.5
JKRS	Kuro-shima	1.57	114	eP	Pb	05 06 22.4	-0.3
JKRS				eS	Sg	05 06 44.3	-0.4
NSY	Sanyi	1.59	253	eP	Pg	05 06 24.6	-0.1
TWQ1	Liyutan	1.60	251	eP	Pb	05 06 23.6	+0.4
WCS	Beigang Elemen	1.61	240	eP	Pb	05 06 23.5	+0.1
VWDT	VWDT	1.63	227	eP	Pn	05 06 22.7	+0.6
JIJ	Ishigaki jima	1.64	108	eP	Pb	05 06 23.2	-0.7
HGSD	Ruisui	1.66	214	eP	Pn	05 06 22.7	+0.1
EHY	Hungye	1.71	217	eP	Pn	05 06 21.6	-1.5
SMLT	Sun Moon Lake	1.72	235	eP	Pb	05 06 24.7	-0.6
SSLB	Suanglung	1.73	231	P	Pn	05 06 24.7	+1.2
SSLB	Suanglung	1.73	231	P	Pn	05 06 24.4	+0.9
SSLB	Suanglung	1.73	231	eP	Pn	05 06 24.2	+0.7
YULB	Yu-li	1.81	215	P	Pn	05 06 23.8	-0.8
YULB	Yu-li	1.81	215	P	Pb	05 06 25.9	-0.9
YULB	Yu-li	1.81	215	eP	Pn	05 06 23.6	-1.0
TWF1	Yuli	1.84	214	eP	Pn	05 06 23.8	-1.2
WHYT	Xinyi Township	1.86	231	eP	Pb	05 06 27.2	-0.6
WJS	Zhushan	1.88	236	eP	Pb	05 06 27.4	-0.5
WJS				eS	Sb	05 06 53.2	+1.9
WNT	Mingjian	1.88	238	eP	Pn	05 06 26.4	+0.8
CHKH	Chenggong	1.93	210	eP	Pn	05 06 25.6	-0.6
FULB	Fuli	1.97	212	eP	Pn	05 06 27.1	+0.3
ALS	Alishan	2.02	228	eP	Pn	05 06 29.1	+1.4
EHD	Haiduan	2.06	213	eP	Pn	05 06 26.6	-1.4
WDLH	Douliu	2.10	236	eP	Pb	05 06 30.4	-1.3
ELDTW	Lidau	2.13	218	eP	Pn	05 06 29.0	0.0
EDH	Donghe	2.16	209	eP	Pn	05 06 26.9	-2.5
EDH				eS	Sn	05 06 55.1	-0.8
TPUB	Ta-pu	2.28	227	P	Pb	05 06 33.2	-1.6
TPUB	Ta-pu	2.28	227	P	Pn	05 06 32.9	+1.9
TPUB	Ta-pu	2.28	227	eP	Pn	05 06 32.5	+1.5
STYH	Taoyuan	2.28	222	eP	Pn	05 06 32.5	+1.5
WTP	Ta-pu	2.33	226	eP	Pn	05 06 33.6	+1.9
TWK	Hsinying	2.40	228	eP	Pn	05 06 34.5	+1.8
TWGBT	Beinan	2.40	211	P	Pn	05 06 34.8	+2.1
TWGBT	Beinan	2.40	211	P	Pb	05 06 35.1	-1.8
TWG	Pinlang	2.40	212	eP	Pn	05 06 31.8	-0.9
WSL	Shuilin Townsh	2.43	237	eP	Pn	05 06 34.7	+1.7
CHN1	Nanshi	2.43	226	eP	Pn	05 06 35.3	+2.2
MATB	Ma-tsu	2.58	300	eP	Pn	05 06 36.9	+1.8
ECL	Taimali	2.65	211	eP	Pn	05 06 35.7	-0.3
KSRS	Korea Array	13.38	19	Pn	P	05 09 14.6	+1.9
	0.3nm,0.3s,baz=205,slow=13,SNR=8.6						
	1.6nm,0.6s						
KLR	Kul'dur	25.38	14	LR	LR	05 21 50.8	
	comp=Z,56nm,18.6s,baz=214,slow=37						
MKAR	Makanchi Array	38.64	315	P	P	05 13 15.6	-1.1
	1.4nm,0.7s,baz=108,slow=8.6,SNR=3.8						
	1.4nm,0.7s						
ZALV	Zalesovo Beam	40.29	326	P	P	05 13 29.6	-0.7
	0.9nm,0.6s,baz=105,slow=11,SNR=1.9						
	0.9nm,0.6s						
WRA	Warramunga Arr	46.04	164	P	P	05 14 19.5	+2.4
	2.3nm,1.0s,baz=344,slow=8.4,SNR=5.0						
	2.3nm,1.0s						
ASAR	Alice Springs	49.53	166	P	P	05 14 47.4	+3.3
	0.7nm,0.7s,baz=348,slow=8.9,SNR=4.1						
	0.7nm,0.7s						
VRAC	Vranov	81.13	320	LR	LR	05 57 14.5	
	comp=Z,54nm,19.9s,baz=252,slow=38						

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*CATAC **29** 05:33:03.4±0.6, 13°N±4°×9°0W±°, h27^{km}±3^{km}, M2.7/13, MLv2.7/13, Error ellipse: s-maj=8.2km s-min=4.4km az=13.8, confirmed*

*SNET **29** 05:33:04.2±1.0, 13°.28N×89°.46W, h69^{km}±10^{km}, ML2.6*

ISC 29 05:33:03.8±2.4**, 13°.1N**±0°.1×**89°.52W**±0°.07**, h43**^{km}**, n38, σ0ˢ.46**/40**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.47	24	eS	Sn	05 33 22.9	+1.2
JAYA	Jayaque - finc	0.60	7	eP	Pn	05 33 16.1	-0.2
JAYA				eS	Sn	05 33 25.2	+0.3
JAYA	Jayaque - finc	0.60	7	P	Pn	05 33 16.0	-0.2
PANCS	Alcalda de	0.65	31	S	Sn	05 33 26.1	+0.2
LOMA	Loma Larga	0.68	30	eP	Pn	05 33 16.1	-1.1
LOMA	Loma Larga	0.68	30	P	Pn	05 33 16.9	-0.3
LOMA	Loma Larga	0.68	30	S	Sn	05 33 26.9	+0.1
PMON	Piamonte	0.68	17	P	Pn	05 33 16.8	-0.4
PMON	Piamonte	0.68	17	S	Sn	05 33 27.3	+0.5
UEES	Universidad Ev	0.71	23	P	Pn	05 33 17.2	-0.4
UEES	Universidad Ev	0.71	23	S	Sn	05 33 27.5	0.0
BOQS	Boqueron	0.71	19	eP	Pn	05 33 17.2	-0.6
LFRS	El Faro	0.72	38	eP	Pn	05 33 17.7	0.0
COEG	Centro de Oper	0.84	48	eP	Pn	05 33 18.9	-0.5
COEG				eS	Sn	05 33 30.2	-0.4
COEG				IAML		05 33 33.2	
	comp=Z,238nm,0.3s						
COEG	Centro de Oper	0.84	48	P	Pn	05 33 18.7	-0.6
PAVA	Las Pavas	0.87	41	P	Pn	05 33 19.4	-0.3
PAVA	Las Pavas	0.87	41	S	Sn	05 33 31.6	+0.3
TECO	Alcaldia de Te	0.87	56	P	Pn	05 33 18.7	-1.0
TECO	Alcaldia de Te	0.87	56	S	Sn	05 33 30.9	-0.3
NUBE	Las Nubes	0.88	343	P	Pn	05 33 19.6	-0.4
NUBE	Las Nubes	0.88	343	S	Sn	05 33 31.7	0.0
FAME	Alcaldia de Sa	0.92	329	P	Pn	05 33 19.8	-0.6
UESV	Universidad de	0.92	51	P	Pn	05 33 19.8	-0.6
UESV	Universidad de	0.92	51	S	Sn	05 33 32.1	-0.4
ALJI	Alcalda de J	0.96	74	S	Sn	05 33 33.9	+0.4
ALJI	Alcalda de J	0.96	74	P	Pn	05 33 20.9	-0.1
SLOZ	Alcaldia de Sa	1.00	345	P	Pn	05 33 21.6	+0.1
SCLA	Alcaldia de Sa	1.00	50	P	Pn	05 33 21.3	-0.3
SCLA	Alcaldia de Sa	1.00	50	S	Sn	05 33 34.9	+0.3
PQSS	Presa 15 de Se	1.09	59	P	Pn	05 33 22.6	-0.1
PQSS	Presa 15 de Se	1.09	59	S	Sn	05 33 36.2	-0.5
PACA	Pacayal	1.24	70	P	Pn	05 33 25.0	+0.2
PACA	Pacayal	1.24	70	S	Sn	05 33 40.6	+0.2
MTO3	Montecristo	1.34	7	P	Pn	05 33 26.3	-0.1
LCND	La Caada	1.61	81	iP	Pn	05 33 30.0	+0.2
LCND				IAML		05 33 52.6	
	comp=Z,56nm,0.3s						
LCND	La Caada	1.61	81	P	Pn	05 33 29.8	+0.1
SARH	Santa Rosa de	1.86	23	P	Pn	05 33 34.0	+0.6
SARH	Santa Rosa de	1.86	23	S	Sn	05 33 56.2	+0.5

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*TEH **29** 05:36:58.8, 34°.83N×46°.11E, h6^{km}±65^{km}*

*ISN **29** 05:37:00.7±0.5, 34°.86N×46°.16E, h24^{km}±2^{km}, ML3.3*

ISC 29 05:37:00.3±1.4**, 34°.81N**±0°.04×**46°.11E**±0°.03**, h3**^{km}±12^{km}**, n26, σ1ˢ.08**/32**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDHR	Dehrash	0.25	116	Pg	Pg	05 37 05.3	+0.2
KGS1	Ghasr-e-Shirin	0.53	235	Pg	Pg	05 37 10.3	-0.1
IGHG	Ghaleghazi	0.61	142	Pg	Pg	05 37 11.9	-0.1
ILIN	Lien	0.71	81	Pg	Pg	05 37 13.0	-0.8
GLG1	Gilan-e-Gharb	0.71	193	Pg	Pg	05 37 14.0	0.0
GLG1				Sg	Sb	05 37 24.9	-0.7
KCHF	Cheshme Sefid,	0.94	125	Pg	Pg	05 37 17.6	-0.6
KCHF				Sg	Sn	05 37 33.2	-1.2
SNQR	Sonqor, Kerman	1.25	87	Pg	Pn	05 37 23.3	-1.5
IBZA	Bozab	1.48	103	Pg	Pn	05 37 28.1	+0.1
IKRK	Kirkuk	1.57	293	ePg	Pn	05 37 29.0	+0.1
IKRK				eSg	Sb	05 37 50.0	-0.1
IKRK				AML	AML	05 37 54.5	
	comp=N,561nm,0.4s						
IKRK				AML	AML	05 37 57.5	
	comp=E,418nm,0.9s						
IBDR	Badra	1.70	185	ePg	Pb	05 37 32.0	-0.2
IBDR				eSg	Sg	05 37 55.0	0.0
IKFM	Kafar-mosalman	1.93	131	Pn	Pb	05 37 36.3	+0.2
MAHB	Mahabad	1.98	351	Pn	Pn	05 37 35.0	+0.2
IDOB	Doab	1.99	120	Pn	Pb	05 37 36.8	-0.5
BHD	Baghdad	2.10	224	ePn	Pn	05 37 37.0	+0.7
BHD				eSn	Sb	05 38 04.0	-1.5
HAGD	Aghdareh	2.49	89	Pn	Pn	05 37 43.8	+1.9
IHSH	Hashtrud	2.66	20	Pn	Pn	05 37 45.8	+1.5
IAZR	Azarshahr	2.86	358	Pn	Pn	05 37 48.2	+1.1
RAFI	Al-Rafai	3.08	180	ePn	Pn	05 37 51.0	+1.3
RAFI				eSn	Sn	05 38 27.0	0.0
ISHB	Shabestar	3.49	354	Pn	Pn	05 37 56.0	+0.4
IHRS	Heris	3.58	12	Pn	Pn	05 37 58.4	+1.6
IQOM	Qom	4.08	88	Pn	Pn	05 38 04.7	+0.9
GRMI	Germi	4.24	19	Pn	Pn	05 38 06.9	+1.1
JHBN	Jahan bin	4.59	123	Pn	Pn	05 38 12.6	+1.7
KRSH	Karshahi	5.05	98	Pn	Pn	05 38 19.4	+2.3
ISFB	Sefidab	5.08	93	Pn	Pn	05 38 18.1	+0.8
KLNJ	Kolanjah	5.97	128	Pn	Pn	05 38 31.1	+1.3

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*IDC **29** 05:46:24.1±2.9, 34°.05S×179°.15W, h0^{km}, mb3.5/2, mbtmp3.6/3, ML3.6/1, Error ellipse: s-maj=69.4km s-min=35.7km az=118.0*

*WEL **29** 05:46:28.5±1.2, 34°S±8°×17°9W±1°4, h33^{km}, mB4.7/3, ML4.3/13, MLv4.0/8, Mw(mB)3.9/3, Error ellipse: s-maj=19.8km s-min=7.8km az=113.0, confirmed*

ISC 29 05:46:26.9±2.0**, 34°.19S**±0°.10×**178°.7W**±0°.2**, h35**^{km}**, n20, σ1ˢ.22**/32**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.17	215	P	Pn	05 47 27.8	-0.2
MXZ				S	Sn	05 48 16.5	+1.0
PKGZ	Pakihiroa	4.52	215	P	Pn	05 47 32.4	-0.5
PKGZ				S	Sn	05 48 24.2	0.0
HAZ	Te Kaha	4.58	218	P	Pn	05 47 34.2	+0.5
HAZ				S	Sn	05 48 26.7	+1.1
PUZ	Puketiti	4.61	212	P	Pn	05 47 34.0	-0.1
PUZ				S	Sn	05 48 28.2	+1.8
RUGZ	Raukumara Rang	4.79	217	P	Pn	05 47 37.4	+0.6
RUGZ				S	Sn	05 48 32.7	+1.6
TWGZ	Tauwhareparae	4.82	213	P	Pn	05 47 37.4	+0.4
TWGZ				S	Sn	05 48 33.1	+1.5
TKGZ	Te Karaka	5.09	213	P	Pn	05 47 43.3	+2.6
MWZ	Matawai	5.16	216	P	Pn	05 47 42.1	+0.4
MWZ				S	Sn	05 48 38.5	-1.4
URZ	Urewera	5.31	219	Pn	Pn	05 47 43.3	-0.4
	2.1nm,0.3s,baz=255,slow=5.6,SNR=22						
URZ				Sn	Sn	05 48 42.8	-0.8
	0.9nm,0.3s,baz=108,slow=3.4,SNR=3.9						
	5.2nm,0.3s						
URZ	Urewera	5.31	219	P	Pn	05 47 43.5	-0.1
URZ				S	Sn	05 48 41.5	-2.1
MARZ	Manawahe	5.35	224	P	Pn	05 47 46.7	+2.4
RIGZ	Rimuhau	5.35	212	S	Sn	05 48 42.7	-2.0
PRGZ	Paritu Road	5.48	209	P	Pn	05 47 45.1	-1.0
PRGZ				S	Sn	05 48 47.6	-0.3
SNGZ	Shannon Statio	5.60	214	P	Pn	05 47 48.2	+0.5
SNGZ				S	Sn	05 48 51.4	+0.5
MUGZ	Murupara	5.65	219	P	Pn	05 47 48.0	-0.4
MUGZ				S	Sn	05 48 50.8	-1.2
WCZ	Waipu Caves	5.99	251	P	Pn	05 47 54.1	+1.0
OUZ	Omahuta	6.46	259	P	Pn	05 47 59.5	0.0
ASAR	Alice Springs	42.49	271	P	P	05 54 17.9	-1.1
	0.5nm,0.7s,baz=116,slow=7.9,SNR=5.4						
	0.5nm,0.7s						
WRA	Warramunga Arr	43.82	276	P	P	05 54 28.7	-1.0
	0.3nm,0.3s,baz=117,slow=7.8,SNR=12						
	0.3nm,0.3s						
FINES	FINESS Array B	148.46	337	PKPbc	PKPbc	06 06 10.3	+1.3
	0.9nm,0.5s,baz=31,slow=4.4,SNR=8.1						

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*IDC **29** 06:05:33.8±1.2, 60°.27N×154°.31W, h155^{km}±12^{km}, mb3.4/9, mbtmp3.9/13, Error ellipse: s-maj=17.7km s-min=10.9km az=88.0*

*NEIC **29** 06:05:36.4±1.3, 60°.20N±0°.05×154°.0W±0°.1, h192^{km}±5^{km}, Error ellipse: s-maj=7.7km s-min=7.0km az=223.0*

*AEIC **29** 06:05:37.3±0.9, 60°.16N±0°.05×153°.9W±0°.1, h190^{km}±4^{km}, ML3.3, mb3.8/9(NEIC), ML3.5/172(NEIC), Error ellipse: s-maj=7.9km s-min=7.1km az=215.0*

ISC 29 06:05:36.9±0.7**, 60°.19N**±0°.05×**153°.89W**±0°.05, **h189**^{km}±5^{km}**, n220, σ1ˢ.10**/227**, mb3.7**/14**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
O19K	Port Alsworth	0.21	270		Pn	06 06 01.4	-0.6
O19K				IAML		06 06 20.5	
	comp=N,604nm,0.6s						
O19K				IAML		06 06 21.7	
	comp=E,520nm,0.4s						
O19K	Port Alsworth	0.21	270		Sn	06 06 20.1	-1.1
ILSW	Iliamna Southw	0.43	119		Pn	06 06 02.2	-0.5
ILSW				IAML		06 06 22.2	
	comp=N,313nm,1.1s						
ILSW	Iliamna Southw	0.43	119		Sn	06 06 22.1	-0.5
IVE	Iliamna Volcan	0.47	112		Pn	06 06 02.4	-0.5
IVE					Sn	06 06 23.5	+0.7
ILS	Iliamna Low So	0.48	120		Pn	06 06 02.2	-0.7
ILS					Sn	06 06 22.4	-0.4
RDWB	Redoubt West	0.60	60		Pn	06 06 03.3	-0.2
RDWB					Sn	06 06 23.1	-0.9
RED	Redoubt Volcan	0.60	68		Pn	06 06 02.8	-0.6
RED				IAML		06 06 23.6	
	comp=E,293nm,0.8s						
RED	Redoubt Volcan	0.60	68		Sn	06 06 23.2	-0.6
NCT	North Crescent	0.60	52		Pn	06 06 03.3	0.0
NCT					Sn	06 06 23.1	-0.8
RDSO	Redoubt South	0.63	65		Pn	06 06 03.3	-0.3
RDSO					Sn	06 06 23.6	-0.5
P19K	Oil Pt	0.64	148		Pn	06 06 02.9	-0.6
P19K	Oil Pt	0.64	148		Sn	06 06 23.9	0.0
O20K	Slope Mountain	0.65	100		Pn	06 06 03.4	-0.2
O20K					Sn	06 06 24.2	+0.1
RDJH	Redoubt Jeurge	0.67	53		Pn	06 06 03.8	+0.1
RDJH					Sn	06 06 23.9	-0.6
N19K	Bonanza Creek	0.69	335		Pn	06 06 03.1	-0.6
N19K				IAML		06 06 24.1	
	comp=E,351nm,0.8s						
N19K				IAML		06 06 24.5	
	comp=N,346nm,1.1s						
N19K	Bonanza Creek	0.69	335		Sn	06 06 23.4	-1.2
DFR	Drift River	0.72	56		Pn	06 06 03.8	-0.2
DFR					Sn	06 06 24.2	-0.7
O18K	Koktuh Hills	0.74	243		Pn	06 06 03.6	-0.4
O18K				IAML		06 06 24.8	
	comp=E,223nm,0.7s						
O18K				IAML		06 06 24.9	
	comp=N,341nm,0.9s						
RDT	Redoubt	0.83	62		Pn	06 06 04.3	-0.3
AUL	Augustine Lava	0.85	164		Pn	06 06 04.4	-0.2
AUCH	Augustine Cone	0.86	165		Pn	06 06 04.5	-0.3
P18K	Big Mountain,	1.05	221		Pn	06 06 05.0	-1.1
P18K				IAML		06 06 28.2	
	comp=E,273nm,0.8s						
P18K				IAML		06 06 28.4	
	comp=N,253nm,1.3s						
N18K	Kilae Creek	1.10	297		Pn	06 06 05.8	-0.5
N18K				IAML		06 06 28.7	
	comp=E,235nm,1.0s						
HOM	Homer	1.25	114		Pn	06 06 06.9	-0.6
Q19K	Cape Douglas,	1.28	174		Pn	06 06 07.0	-0.8
Q19K				IAML		06 06 36.6	
	comp=N,374nm,0.8s						
Q19K				IAML		06 06 41.8	
	comp=E,385nm,0.8s						
SPBG	Spurr Blockage	1.30	34		Pn	06 06 08.6	+0.5
SPCR	Spurr Chakacha	1.31	39		Pn	06 06 08.3	+0.3
SPCR	Spurr Chakacha	1.31	39		Pn	06 06 08.3	+0.3
SPCP	Crater Peak Br	1.37	38		Pn	06 06 09.1	+0.4
CAPN	Captain Cook N	1.47	66	Pn	Pn	06 06 09.9	+0.5
CAPN				IAML		06 06 39.3	
	comp=E,487nm,0.7s						
CAPN				IAML		06 06 47.7	
	comp=N,672nm,0.5s						
CNPM	China Poot	1.50	115		Pn	06 06 09.0	-0.7
BRLK	Bradley Lake	1.57	105		Pn	06 06 09.9	-0.5
M18K	Stony River	1.61	325		Pn	06 06 10.3	-0.4
P17K	Kvichak River	1.64	233		Pn	06 06 10.8	-0.2
STLK	Strandline Lak	1.65	37		Pn	06 06 11.3	+0.2
KAHC	Katmai Hardscr	1.65	201		Pn	06 06 10.4	-0.8
KAHC	Katmai Hardscr	1.65	201		Pn	06 06 10.3	-1.0
O17K	Koliganek Bris	1.66	257		Pn	06 06 10.9	-0.2
N17K	Nushagak Hills	1.67	283		Pn	06 06 11.2	0.0
M19K	Big River Lodg	1.73	352		Pn	06 06 11.8	-0.1
KAHG	Katmai Hook Gl	1.74	191		Pn	06 06 11.2	-0.8
SYI	Shuyak Island	1.77	154		Pn	06 06 11.1	-1.1
SYI				IAML		06 06 38.8	
	comp=E,582nm,0.4s						
SLKM	Skilak Lake	1.85	79		Pn	06 06 12.6	-0.5
SLKM				IAML		06 06 40.9	
	comp=N,420nm,0.2s						
SLKM				IAML		06 06 43.7	
	comp=E,316nm,0.2s						
SUA	Susitna One	2.00	49		Pn	06 06 14.2	-0.5
SUA				IAML		06 06 47.0	
	comp=E,221nm,0.7s						
SUA				IAML		06 06 48.0	
	comp=N,133nm,0.6s						
L19K	White Mountain	2.05	347		Pn	06 06 14.2	-0.9
Q16K	King Salmon	2.08	224		Pn	06 06 15.2	-0.2
O22K	Cooper Landing	2.09	80		Pn	06 06 14.6	-1.0
M17K	Holitna River	2.12	306		Pn	06 06 15.6	-0.2
M17K				IAML		06 06 47.2	
	comp=E,78nm,1.1s						
ACHA	Angle Creek He	2.12	201		Pn	06 06 14.9	-1.2
SKT	Skwentna	2.13	32		Pn	06 06 16.0	0.0
SKT				IAML		06 06 47.9	
	comp=N,132nm,0.3s						
SKT				IAML		06 06 49.6	
	comp=E,125nm,0.3s						
ANCK	Angle Creek	2.17	203		Pn	06 06 15.8	-0.7
CNTC	Contact Creek	2.19	209		Pn	06 06 15.9	-0.9
O16K	Kokwok River B	2.20	256		Pn	06 06 16.5	-0.3
O16K				IAML		06 06 48.9	
	comp=E,94nm,1.2s						
SEW	Seward	2.22	90		Pn	06 06 16.1	-0.8
SEW				IAML		06 06 48.8	
	comp=N,277nm,0.6s						
SEW				IAML		06 06 52.2	
	comp=E,236nm,0.5s						
RC01	Rabbit Creek A	2.24	65		Pn	06 06 15.9	-1.2
RC01				IAML		06 06 47.8	
	comp=E,352nm,0.4s						
CAHL	Cahill	2.27	199		Pn	06 06 16.6	-1.0
L20K	Farewell, AK	2.29	0		Pn	06 06 18.0	+0.2
L18K	Granite Mounta	2.44	328		Pn	06 06 18.9	-0.5
L18K				IAML		06 06 52.5	
	comp=N,75nm,1.1s						
KDAK	Kodiak Island	2.51	164		Pn	06 06 17.9	-2.4
KDAK				IAML		06 06 51.3	
	comp=N,306nm,0.3s						
KDAK				IAML		06 06 56.4	
	comp=N,227nm,0.3s						
KDAK	Kodiak Island	2.51	164	P	Pn	06 06 18.0	-2.3
	comp=N,123nm,0.3s,baz=36,slow=5.9,SNR=1248						
KDAK				S	Sn	06 06 50.3	-3.7
	comp=N,109nm,0.3s,baz=224,slow=23,SNR=18						
M16K	Timber Creek	2.63	291		Pn	06 06 21.4	-0.2
PMR	Palmer	2.72	57		Pn	06 06 22.3	-0.3
PMR				IAML		06 06 57.0	
	comp=E,143nm,0.6s						
PMR				IAML		06 07 00.5	
	comp=N,142nm,0.2s						
PMR	Palmer	2.72	57	P	Pn	06 06 22.2	-0.3
PLK2	Peulik 2	2.74	208		Pn	06 06 22.2	-0.7
PLK1	Peulik 1	2.78	212		Pn	06 06 22.7	-0.6
PLK3	Peulik 3	2.80	207		Pn	06 06 22.7	-0.9
CUT	Chulitna	2.82	37		Pn	06 06 23.3	-0.5
PWL	Port Wells	2.83	74		Pn	06 06 23.3	-0.7
PPLA	Purkeypile	2.83	16		Pn	06 06 24.3	+0.3
PLK4	Peulik 4	2.87	208		Pn	06 06 23.2	-1.4
PLK4				IAML		06 07 01.5	
	comp=E,84nm,0.9s						
PLK4				IAML		06 07 02.9	
	comp=N,88nm,1.1s						
L17K	Donlin	2.89	314		Pn	06 06 24.4	-0.2
GHO	Glory Hole Cre	2.89	55		Pn	06 06 23.0	-1.8
GHO				IAML		06 07 00.5	
	comp=E,286nm,0.4s						
GHO				IAML		06 07 02.7	
	comp=N,170nm,0.3s						
PLBL	Peulik Blue Cr	2.93	212		Pn	06 06 24.4	-0.8
KNK	Knik Glacier	2.93	63	IAML		06 07 02.5	
	comp=N,216nm,0.2s						
KNK				IAML		06 07 02.7	
	comp=E,194nm,0.5s						
OHAK	Old Harbor	3.00	174		Pn	06 06 23.0	-2.9
OHAK				IAML		06 07 01.8	
	comp=E,201nm,0.2s						
OHAK	Old Harbor	3.00	174	P	Pn	06 06 23.3	-2.7
N15K	Kwethluk River	3.10	272		Pn	06 06 26.9	-0.2
L16K	Owhat River	3.12	302		Pn	06 06 26.8	-0.5
K20K	Telida	3.17	359		Pn	06 06 27.8	-0.2
O15K	Ungalikthiuk R	3.18	254		Pn	06 06 27.9	-0.2
O15K				IAML		06 07 10.7	
	comp=N,40nm,1.4s						
P23K	Montague Islan	3.26	91		Pn	06 06 28.7	-0.4
K17K	Iditarod	3.30	322		Pn	06 06 28.9	-0.6
K17K				IAML		06 07 11.4	
	comp=E,56nm,1.3s						
K17K				IAML		06 07 11.9	
	comp=N,37nm,1.4s						
CAST	Castle Rocks	3.35	14		Pn	06 06 30.3	+0.2
GLI	Glacier Island	3.43	76		Pn	06 06 30.3	-0.9
J18K	Innoko River	3.54	339		Pn	06 06 32.1	-0.5
J18K				IAML		06 07 15.6	
	comp=N,56nm,0.9s						
SCM	Sheep Creek Mo	3.59	60		Pn	06 06 32.5	-0.8
SCM				IAML		06 07 19.8	
	comp=N,124nm,0.5s						
SII	Sitkinak Islan	3.65	183		Pn	06 06 31.7	-2.3
SII	Sitkinak Islan	3.65	183	P	Pn	06 06 31.3	-2.7
KTH	Kantishna Hill	3.65	21		Pn	06 06 33.2	-0.8
KTH				IAML		06 07 17.1	
	comp=E,48nm,0.9s						
KTH				IAML		06 07 17.2	
	comp=N,58nm,1.0s						
HIN	Hinchinbrook I	3.69	84		Pn	06 06 34.1	-0.2
HIN				IAML		06 07 18.8	
	comp=N,123nm,1.2s						
HIN				IAML		06 07 22.4	
	comp=E,117nm,0.7s						
TRF	Thorofare Moun	3.69	26		Pn	06 06 33.4	-1.1
TRF				IAML		06 07 19.2	
	comp=E,66nm,0.2s						
TRF				IAML		06 07 19.0	
	comp=N,86nm,0.2s						
FID	Port Fidalgo	3.71	78		Pn	06 06 33.7	-0.9
J19K	Poorman	3.90	349		Pn	06 06 36.8	-0.2
N14K	Kuskokwak Cree	3.92	269		Pn	06 06 37.2	0.0
N14K				IAML		06 07 29.9	
	comp=E,29nm,1.3s						
N14K				IAML		06 07 41.6	
	comp=N,44nm,1.5s						
J20K	Nowinta River	4.00	358		Pn	06 06 38.0	-0.1
RND	Reindeer	4.01	34		Pn	06 06 37.3	-1.1
RND				IAML		06 07 26.3	
	comp=N,97nm,0.4s						
RND				IAML		06 07 26.5	
	comp=E,103nm,0.4s						
J17K	VABM Dome	4.05	325		Pn	06 06 38.0	-0.8
J17K				IAML		06 07 26.7	
	comp=N,26nm,1.4s						
J17K				IAML		06 07 28.2	
	comp=E,23nm,1.4s						
EYAK	Cordova Ski Ar	4.06	81		Pn	06 06 38.4	-0.6
EYAK				IAML		06 07 29.6	
	comp=N,38nm,0.4s						
EYAK				IAML		06 07 36.1	
	comp=E,30nm,0.8s						
EYAK	Cordova Ski Ar	4.06	81	P	Pn	06 06 38.9	-0.1
DIV	Divide	4.11	73		Pn	06 06 39.3	-0.4
DIV				IAML		06 07 30.3	
	comp=E,73nm,0.3s						
ANPB	Aniakchak Plen	4.11	216		Pn	06 06 38.1	-1.6
KLU	Klutina	4.11	68		Pn	06 06 39.0	-0.8
BPAW	Bear Paw Mtn.	4.15	18		Pn	06 06 39.1	-1.0
BPAW				IAML		06 07 27.4	

	comp=N,54nm,0.8s						
BPAW				IAML		06 07 28.4	
	comp=E,40nm,0.7s						
M24K	Tolsona, Glenn	4.20	60		Pn	06 06 40.0	-0.9
M24K				IAML		06 07 34.4	
	comp=N,93nm,0.5s						
DHY	Denali Highway	4.24	44		Pn	06 06 40.5	-0.9
K15K	Wolf Creek Mou	4.25	303		Pn	06 06 41.6	+0.2
MCK	McKinley	4.25	31		Pn	06 06 40.9	-0.5
MCK				IAML		06 07 31.8	
	comp=E,67nm,0.4s						
MCK				IAML		06 07 33.9	
	comp=N,64nm,0.2s						
J16K	Anvik River	4.45	317		Pn	06 06 42.9	-1.0
L14K	Kuka Creek	4.46	289		Pn	06 06 43.9	-0.2
L14K				IAML		06 07 34.8	
	comp=E,24nm,1.3s						
CHIR	Chirikof Islan	4.48	193	P	Pn	06 06 41.1	-3.3
BWN	Browne	4.50	26		Pn	06 06 44.5	0.0
BWN	Browne	4.50	26	IAML		06 07 43.2	
	comp=E,39nm,0.7s						
BWN				IAML		06 07 45.5	
	comp=N,52nm,0.5s						
RAGM	Ragged Mountai	4.59	84		Pn	06 06 45.2	-0.6
RAGM				IAML		06 07 56.3	
	comp=E,69nm,0.6s						
I20K	Naaghedeneel	4.63	357		Pn	06 06 46.3	+0.2
I20K				IAML		06 07 57.0	
	comp=E,36nm,1.0s						
I20K				IAML		06 08 00.8	
	comp=N,41nm,1.2s						
BMRM	Bremner River	4.65	76		Pn	06 06 45.9	-0.6
BMRM				IAML		06 07 47.7	
	comp=E,52nm,0.5s						
BMRM				IAML		06 07 48.6	
	comp=N,52nm,0.4s						
N25K	Chitina, Valde	4.75	69		Pn	06 06 47.7	-0.2
HARP	HAARP	4.76	59		Pn	06 06 47.1	-0.8
HMT	Hamilton	4.80	84		Pn	06 06 48.9	+0.5
HMT				IAML		06 08 07.7	
	comp=N,59nm,0.7s						
PAX	Paxson	4.89	52		Pn	06 06 49.1	-0.6
PAX				IAML		06 07 48.7	
	comp=E,60nm,0.6s						
NEA2	Nenana	4.95	25		Pn	06 06 49.1	-1.2
NEA2				IAML		06 07 45.7	
	comp=N,15nm,0.5s						
NEA2				IAML		06 07 46.0	
	comp=E,18nm,0.7s						
NICHA	Nichawak Mount	4.95	85		Pn	06 06 49.8	-0.6
WACK	Wrangell Chich	4.98	65		Pn	06 06 50.2	-0.7
SUCK	Suckling Hills	5.06	87		Pn	06 06 51.5	-0.3
SUCK	Suckling Hills	5.06	87	IAML		06 08 09.7	
	comp=E,24nm,0.7s						
SUCK				IAML		06 08 15.0	
	comp=N,24nm,1.1s						
MLY	Manley	5.07	15		Pn	06 06 50.6	-1.3
WRH	Wood River Hil	5.07	30		Pn	06 06 51.0	-0.8
WRH				IAML		06 07 49.9	
	comp=E,20nm,0.5s						
WRH				IAML		06 07 50.4	
	comp=N,23nm,0.4s						
GLB	Gilahina Butte	5.09	71		Pn	06 06 52.0	-0.2
GLB				IAML		06 07 50.8	
	comp=N,39nm,0.4s						
GLB				IAML		06 07 53.3	
	comp=E,31nm,0.4s						
VRDI	Verde Repeater	5.23	74		Pn	06 06 53.7	-0.4
VRDI				IAML		06 07 55.1	
	comp=E,25nm,0.4s						
VRDI				IAML		06 07 55.1	
	comp=N,27nm,0.6s						
K24K	Donnelly Dome	5.26	43		Pn	06 06 54.5	+0.1
GRIN	Grindle Hills	5.27	84		Pn	06 06 53.8	-0.7
CCB	Clear Creek Bu	5.29	30		Pn	06 06 53.9	-0.7
CCB				IAML		06 07 54.6	
	comp=N,17nm,0.5s						
CCB				IAML		06 07 55.6	
	comp=E,23nm,0.5s						
J14K	Nanvaranak Lak	5.29	303		Pn	06 06 53.5	-1.2
KHIT	Khitrov Hills	5.30	83		Pn	06 06 54.1	-0.8
HDA	Harding Lake	5.33	34		Pn	06 06 53.9	-1.2
H18K	Honhosa River	5.38	339		Pn	06 06 55.3	-0.6
I23K	Minto, Yukon-K	5.39	21		Pn	06 06 54.4	-1.6
MCARA	McCarthy VSAT	5.46	73		Pn	06 06 55.4	-1.5
COLA	College	5.46	28	P	Pn	06 06 56.0	-0.9
WAX	Waxell Ridge	5.49	83		Pn	06 06 57.4	-0.1
H21K	Melozitna Rive	5.51	5		Pn	06 06 56.8	-0.6
K13K	Kusilvak Mount	5.51	293		Pn	06 06 57.4	-0.1
RIDG	Independent Ri	5.55	46		Pn	06 06 57.9	-0.2
ILAR	Eielson Array	5.62	32	P	Pn	06 06 57.7	-1.3
	comp=E,33nm,0.5s,baz=224,slow=12,SNR=414						
ILAR				S	Sn	06 07 59.9	-3.9
	comp=E,12nm,0.6s,baz=206,slow=23,SNR=18						
BARK	Barkley Ridge	5.67	83		Pn	06 06 59.0	-0.8
M26K	Nabesna, AK	5.70	62		Pn	06 07 00.6	+0.6
PTPK	Patty Peak	5.70	75		Pn	06 07 00.0	-0.2
KIAG	Kiagna River	5.74	78		Pn	06 07 00.5	-0.2
BALM	Baldy	5.75	77		Pn	06 07 00.2	-0.6
DOT	Dot Lake	5.79	49		Pn	06 07 00.8	-0.4
H22K	Ishtalitna Cre	5.83	10		Pn	06 07 00.9	-0.8
BAGL	Bagley Icefiel	5.87	82		Pn	06 07 00.2	-2.0
J25K	Salcha River,	5.94	38		Pn	06 07 02.3	-0.9
SCRK	Sand Creek	6.00	47		Pn	06 07 03.5	-0.6
BARN	Barnard Glacie	6.08	77		Pn	06 07 04.1	-1.1
G18K	Tagagawik	6.12	341		Pn	06 07 05.0	-0.3
M27K	Edge Creek, AK	6.19	64		Pn	06 07 06.8	+0.4
CHNA	Chernabura Isl	6.19	212	P	Pn	06 07 02.6	-3.8
H24K	Noodor Dome	6.29	23		Pn	06 07 06.2	-1.5
PRP	Porcupine Dome	6.57	32		Pn	06 07 09.8	-1.5
K27K	Chicken	6.74	50		Pn	06 07 13.0	-0.6
G23K	Bananza Creek	6.77	13		Pn	06 07 12.3	-1.6
O28M	Mount Upton	6.80	79		Pn	06 07 13.6	-1.0
G24K	Hadweenzic Riv	7.13	21		Pn	06 07 17.1	-1.6
COLD	Coldfoot	7.25	11		Pn	06 07 18.7	-1.4
PNL	Peninsula	7.30	88	P	Pn	06 07 21.7	+0.7
E19K	Redstone River	7.44	350		Pn	06 07 22.2	-0.4
M29M	Somme Creek	7.76	66		Pn	06 07 25.3	-1.7
F24K	Squaw Lake	7.81	17		Pn	06 07 25.6	-2.0
DAWY	Dawson	7.82	54		Pn	06 07 28.3	+0.6
G26K	Porcupine Rive	8.13	29		Pn	06 07 29.4	-2.3
E20K	Nigu River	8.16	354		Pn	06 07 32.2	+0.1
H27K	Steamboat Moun	8.22	37		Pn	06 07 31.7	-1.2
BMAR	Burnt Mountain	8.34	26		Pn	06 07 32.1	-2.3
K29M	Barlow Dome	8.51	58		Pn	06 07 37.6	+0.7
G27K	Doyon Strip	8.59	34		Pn	06 07 35.7	-2.0
D20K	Etivluk River	8.63	353		Pn	06 07 38.0	-0.3
F26K	Sheenjek River	8.65	25		Pn	06 07 36.0	-2.5
TOLK	Toolik Lake Re	8.68	11		Pn	06 07 36.7	-2.2
E25K	Arctic Village	8.74	21		Pn	06 07 37.6	-2.1
I29M	Ogilvie Camp,	8.81	47		Pn	06 07 40.2	-0.3
H29M	Whitestone	9.23	43		Pn	06 07 45.2	-0.9
J30M	Hart River	9.25	54		Pn	06 07 47.5	+1.0
E27K	Coleen River	9.62	28		Pn	06 07 48.9	-2.3
F28M	Old Crow	9.65	34		Pn	06 07 49.9	-1.6
G29M	Pine Creek	9.74	40		Pn	06 07 52.8	0.0
C24K	Franklin Bluff	9.81	11		Pn	06 07 52.5	-1.0
EPYK	Eagle Plains	9.88	44		Pn	06 07 53.7	-0.9
G30M	tAoh Zraii Nji	10.37	42		Pn	06 07 59.8	-1.1
H31M	Peel River	10.48	49		Pn	06 08 01.8	-0.6
E29M	Blow River	10.72	33		Pn	06 08 04.4	-1.0
F30M	Barrier River	10.86	39		Pn	06 08 07.0	-0.2
G31M	Satah River	11.00	44		Pn	06 08 08.2	-0.7
R33M	Jennings River	11.56	84		Pn	06 08 15.4	-1.0
INK	Inuvik	11.96	39		Pn	06 08 20.4	-0.8
INK	Inuvik	11.96	39	P	Pn	06 08 20.8	-0.4
	comp=E,5.4nm,0.4s,baz=228,slow=10,SNR=46						
DLBC	Dease Lake	12.30	88	P	Pn	06 08 26.6	+0.9
	comp=E,0.2nm,0.6s,baz=264,slow=14,SNR=5.8						
YKAW3	Yellowknife Wh	18.77	66	P	P	06 09 40.9	-0.4
YKAW3				IAmb	IAmb	06 09 59.5	
	comp=Z,1.5nm,0.9s						
YKA	Yellowknife Ar	18.78	66	P	P	06 09 41.2	-0.3
YKA	Yellowknife Ar	18.78	66	P	P	06 09 41.9	+0.4
	comp=Z,0.6nm,0.7s,baz=277,slow=17,SNR=12						
YKAW1	Yellowknife Wh	18.84	66	P	P	06 09 43.0	+0.9
YKAW1				IAmb	IAmb	06 09 56.3	
	comp=Z,1.4nm,0.8s						
NEW	Newport	24.23	103	P	P	06 10 38.0	+1.8
NEW				IAmb	IAmb	06 10 39.3	
	comp=Z,1.8nm,0.8s						
BLKN	Baker Lake	26.44	56	P	P	06 10 57.1	+1.4
K05A	Summer Lake	26.57	116	P	P	06 10 58.9	+1.5
K05A				IAmb	IAmb	06 11 14.6	
	comp=Z,2.3nm,1.0s						
PEA0B	Petropavlovsk-	26.99	277	P	P	06 11 00.4	-0.4
PETK	Petropavlovsk-	26.99	277	P	P	06 11 01.1	+0.2
BPMT	Black Pine Rid	27.30	102	P	P	06 11 05.1	+1.2
BOZ	Bozeman (W)	28.79	101	P	P	06 11 19.1	+2.1
BOZ				IAmb	IAmb	06 11 20.1	
	comp=Z,0.9nm,0.6s						
NVAR	Mina Array Bea	31.21	118	P	P	06 11 40.4	+1.9
	comp=Z,0.7nm,0.7s,baz=309,slow=10,SNR=5.6						
	comp=Z,0.7nm,0.7s						
PDAR	Pinedale Array	31.87	103	P	P	06 11 46.6	+2.4
	comp=Z,0.3nm,0.4s,baz=331,slow=3.0,SNR=6.2						
	comp=Z,0.3nm,0.4s						
TXAR	Lajitas Array	45.47	110	P	P	06 13 39.2	+2.1
	comp=Z,0.6nm,0.7s,baz=294,slow=6.8,SNR=10						
	comp=Z,0.6nm,0.7s						
ARCES	ARCESS Array B	50.56	0	P	P	06 14 15.0	-0.4
	comp=Z,1.2nm,0.6s,baz=19,slow=7.9,SNR=4.3						
	comp=Z,1.2nm,0.6s						
FINES	FINESS Array B	58.69	0	P	P	06 15 13.6	-0.3
	comp=Z,2.3nm,1.0s,baz=8.1,slow=9.2,SNR=6.6						
	comp=Z,2.3nm,1.0s						
HFS	Hagfors	59.62	7	P	P	06 15 19.9	-0.4
	comp=Z,1.1nm,0.8s,baz=22,slow=4.7,SNR=1.4						
	comp=Z,1.1nm,0.8s						
BVAR	Borovoye Array	61.68	331	P	P	06 15 33.4	-0.9
	comp=Z,2.0nm,0.5s,baz=40,slow=9.4,SNR=5.7						
	comp=Z,2.0nm,0.5s						
KURBB	Kurchatov Arra	61.72	325	P	P	06 15 34.2	-0.4
	comp=Z,0.6nm,0.6s,baz=25,slow=7.2,SNR=2.7						
	comp=Z,0.6nm,0.6s						
MKAR	Makanchi Array	64.00	321	P	P	06 15 49.3	-0.4
	comp=Z,0.2nm,0.4s,baz=17,slow=5.3,SNR=2.8						
	comp=Z,0.2nm,0.4s						
AB31	Akbulak array	67.51	337	P	P	06 16 11.9	-0.2
AB31				IAmb	IAmb	06 16 12.5	
	comp=Z,1.4nm,0.7s						
ABKAR	Akbulak array	67.51	337	P	P	06 16 11.7	-0.3
ABKAR				IAmb	IAmb	06 16 12.5	
	comp=Z,1.4nm,0.7s						
ABKAR	Akbulak array	67.51	337	P	P	06 16 11.3	-0.7

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*GII **29** 06:13:32.5±0.0, 29°.144N±0°.003×32°.636E±0°.001, h1^{km}, Mws2.8, confirmed*

*SGS **29** 06:13:36.7, 29°.61N×32°.71E, h6^{km}, Ml2.3*

ISC 29 06:13:32.7±2.7, **29°.48N**±0°.08×**32°.7E**±0°.1, **h2**^{km}, **n22**, σ**0ˢ.53**/26, **Egypt**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRMI	Paran Flat	1.87	70	P	Pb	06 14 08.0	+0.3
KRMI				S	Sg	06 14 33.3	+0.4
KRMI	Paran Flat	1.87	70	P	Pb	06 14 08.0	+0.3
KRMI	Paran Flat	1.87	70	S	Sg	06 14 34.4	+1.5
MBRI	Mt Berech	1.95	80	P	Pb	06 14 08.7	-0.4
MBRI				S	Sg	06 14 35.0	-0.5
MBRI	Mt Berech	1.95	80	P	Pb	06 14 09.0	-0.1
MBRI	Mt Berech	1.95	80	S	Sg	06 14 36.4	+0.8
EIL	Elat	1.97	84	P	Pb	06 14 08.9	-0.5
EIL				S	Sg	06 14 35.7	-0.4
EIL	Elat	1.97	84	P	Pb	06 14 08.8	-0.5
HAQS	Haql	1.99	102	P	Pb	06 14 09.5	-0.1
KZIT	Kziot	2.04	46	P	Pg	06 14 11.8	-0.2
HQLS		2.07	94	P	Pb	06 14 10.8	-0.2
HRFI	Mount Harif	2.11	74	P	Pb	06 14 11.4	-0.3
HRFI	Mount Harif	2.11	74	P	Pb	06 14 11.2	-0.5
HRFI	Mount Harif	2.11	74	S	Sg	06 14 40.4	-0.1
TAYS	Tayyib Ism	2.12	115	S	Sb	06 14 38.3	-0.2
TAYS	Tayyib Ism	2.12	115	P	Pn	06 14 09.6	+0.5
JMOS	Jabal al Moall	2.13	98	P	Pb	06 14 11.8	-0.2
PRNI	Paran	2.18	66	P	Pb	06 14 12.5	-0.5
PRNI				S	Sg	06 14 43.4	+0.5
PRNI	Paran	2.18	66	P	Pb	06 14 12.7	-0.2
ZFRI	Zfri	2.40	63	P	Pb	06 14 16.4	-0.3
ZFRI	Zfri	2.40	63	P	Pb	06 14 16.2	-0.4
ZFRI	Zfri	2.40	63	S	Sg	06 14 49.1	-0.8

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*MEX **29** 06:18:01.7±0.7, 14°.36N×93°.00W, h12^{km}±36^{km}, MD4.2*

*GCG **29** 06:18:01.1±1.3, 14°.32N×92°.90W, h30^{km}±7^{km}, MD4.1, ML3.6*

ISC 29 06:17:57.6±1.8, **14°.35N**±0°.07×**93°.06W**±0°.03, **h23**^{km}±15^{km}, **n31**, σ**2ˢ.19**/50, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.94	54	*e*P	Pn	06 18 15.9	+0.5
THIG				*e*S	Sn	06 18 28.3	0.0
THIG		0.94	54	*i* P	Pn	06 18 16.0	+0.5
THIG				*i* S	Sn	06 18 28.2	0.0
THIG				IAML		06 18 30.9	
	comp=E,2μm,0.4s						
SMCA	Catarina	1.07	62	*i* P	Pn	06 18 18.0	+0.8
SMCA				*i* S	Sn	06 18 32.2	+0.7
SMCA				IAML		06 18 39.6	
	comp=E,545nm,0.4s						
PATR	El Naranjo	1.10	46	*e*P	Pn	06 18 18.3	+0.4
PATR				*e*S	Sn	06 18 32.3	-0.1
PAVE	Pavencul	1.19	45	*e*P	Pn	06 18 19.8	+0.7
PAVE				*e*S	Sn	06 18 33.8	-0.9
RTAL	Retalhuleu	1.33	83	*e*P	Pn	06 18 21.7	+0.9
RTAL				*e*S	Sn	06 18 37.2	-0.7
PCIG		1.35	353	*e*P	Pn	06 18 21.8	+0.8
PCIG				*e*S	Sn	06 18 35.5	-2.9
STG8	El Palmar, Qui	1.66	86	*i* P	Pn	06 18 23.8	-1.7
STG8				IAML		06 18 49.5	
	comp=N,1μm,0.3s						
STG0	El Palmar, Qui	1.66	87	*i* P	Pn	06 18 23.3	-2.3
STG0				IAML		06 18 45.9	
	comp=E,2μm,0.0s						
SOKI	Kika Raxquin	1.67	74	*i* S	Sn	06 18 48.4	+1.7
HUEH	Huehuetenango	1.78	57	*e*P	Pn	06 18 29.5	+2.3
HUEH				*e*S	Sb	06 18 52.2	+0.4
HUEH	Huehuetenango	1.78	57	*i* P	Pn	06 18 29.7	+2.5
HUEH				*i* S	Sn	06 18 50.8	+1.5
HUEH				IAML		06 19 01.0	
	comp=N,1μm,0.6s						
CCIG	Comitan	2.11	25	*e*P	Pb	06 18 35.8	+0.5
CCIG				*e*S	Sb	06 19 01.2	0.0
CCIG	Comitan	2.11	25	*i* P	Pb	06 18 35.8	+0.5
CCIG				*i* S	Sb	06 19 01.3	+0.1
CCIG				IAML		06 19 06.5	
	comp=E,214nm,0.3s						
TGIG		2.41	359	*e*P	Pn	06 18 39.0	+3.2
TGIG				*e*S	Sn	06 19 05.5	+0.9
TGIG		2.41	359	*i* P	Pb	06 18 39.1	-1.3
TGIG				*i* S	Sb	06 19 08.8	-0.9
TGIG				IAML		06 19 11.7	
	comp=E,159nm,0.7s						
NUBE	Las Nubes	3.21	98	*i* P	Pn	06 18 48.4	+1.6
CMIG	Matias Romero	3.24	327	*e*P	Pn	06 18 49.5	+2.4
CMIG				*e*S	Sn	06 19 24.8	-0.2
HUIG	Huatulco	3.27	296	*e*P	Pn	06 18 49.5	+2.0
HUIG				*e*S	Sn	06 19 25.3	-0.4
PETF	Flores	3.99	50	*e*P	Pn	06 18 59.3	+1.9
PETF				*e*S	Sb	06 19 50.6	-4.5
PETF	Flores	3.99	50	*i* P	Pn	06 18 59.4	+2.0
NEUV	Arroyo Zacate	4.26	322	*e*P	Pn	06 19 03.5	+2.5
NEUV				*e*S	Sn	06 19 45.9	-4.2
PEIG	Puerto Escondi	4.27	293	*e*P	Pn	06 19 05.0	+3.7
PEIG				*e*S	Sn	06 19 46.6	-3.9
VHO	Vista Hermosa	4.45	308	*e*P	Pb	06 19 16.1	+0.8
VHO				*e*S	Sn	06 19 57.8	+2.6
YOIG	Yosondua	4.99	300	*e*P	Pb	06 19 19.0	-5.4
PNIG	Pinotepa	5.29	293	*e*P	Pn	06 19 20.9	+5.5
PNIG				*e*S	Sn	06 20 14.7	-1.0
TOIG	Toxpalan	5.35	315	*e*P	Pn	06 19 21.3	+5.0
TOIG				*e*S	Sn	06 20 18.1	+0.8
TXIG	Tlaxiaco	5.37	303	*e*P	Pn	06 19 22.8	+6.1
TXIG				*e*S	Sn	06 20 14.5	-3.5
FTIG	Fresnillo de T	6.02	307	*e*S	Sb	06 20 44.6	-9.1
JAUV	Jalcomulco	6.14	325	*e*P	Pn	06 19 27.9	+0.9
JAUV				*e*S	Sn	06 20 30.2	-6.4
CXUV	Coxquihui	7.23	324	*e*P	Pn	06 19 43.7	+1.8
CXUV				*e*S	Sn	06 21 00.5	-2.9

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*IDC **29** 06:28:03.7±2.9, 49°.41N×149°.33E, h426^{km}±28^{km}, mb2.6/4, mbtmp3.5/6, Error ellipse: s-maj=146.7km s-min=19.9km az=128.0*

ISC 29 06:28:05.0±1.9, **49°.5N**±0°.6×**149°.3E**±0°.7, **h450**^{km}, **n6**, σ**1ˢ.49**/6, **mb3.1**/4, **Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	6.39	52	P	P	06 29 41.4	-1.8
	2.7nm,0.7s,baz=221,slow=7.4,SNR=4.7						
MJAR	Matsushiro Arr	15.24	216	P	P	06 31 17.8	-0.9
	1.6nm,0.3s,baz=19,slow=12,SNR=7.4						
ILAR	Eielson Array	36.08	41	P	P	06 34 27.3	+0.7
	0.3nm,0.7s,baz=271,slow=7.8,SNR=4.9						
	0.3nm,0.7s						
NVAR	Mina Array Bea	63.39	61	P	P	06 37 50.6	+1.3
	0.3nm,0.6s,baz=329,slow=8.5,SNR=2.5						
	0.3nm,0.6s						
PDAR	Pinedale Array	65.16	53	P	P	06 38 01.0	+0.6
	0.3nm,0.6s,baz=316,slow=9.6,SNR=2.7						
	0.3nm,0.6s						
ASAR	Alice Springs	74.09	195	P	P	06 38 54.4	+0.5
	0.2nm,0.4s,baz=6.6,slow=4.9,SNR=4.1						
	0.2nm,0.4s						

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*VAO **29** 06:30:06.8±0.3, 31°.76S×69°.12W, h108^{km}, mb4.2*

*SJA **29** 06:30:07.3±0.7, 31°.78S×69°.31W, h120^{km}±2^{km}, ML4.2, MW4.2*

*NEIC **29** 06:30:08.5±1.2, 31°.72S±0°.05×69°.36W±0°.06, h114^{km}±5^{km}, mb4.4/30, Error ellipse: s-maj=7.6km s-min=7.0km az=145.0*

*IDC **29** 06:30:09.4±0.6, 31°.66S×69°.18W, h120^{km}±4^{km}, mb3.8/11, mbtmp4.1/15, Error ellipse: s-maj=14.4km s-min=12.6km az=86.0*

ISC 29 06:30:08.1±0.5, **31°.76S**±0°.03×**69°.26W**±0°.03, **h119**^{km}±4^{km}, **n142**, σ**1ˢ.75**/175, **mb4.3**/25, **4D**, **San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLS	Leoncito	0.05	218	*e*P	Pn	06 30 25.3	+0.5
RTLS				*e*S	Sn	06 30 37.9	+0.7
RTLS				IAML		06 30 39.8	
	comp=Z,8μm,0.6s						
ZON	Zonda	0.54	67		Pn	06 30 27.0	+0.7
ZON	Zonda	0.54	67	*e*P	Pn	06 30 26.4	+0.1
ZON				*e*S	Sn	06 30 40.8	+0.9
ZON				IAML		06 30 43.0	
	comp=Z,4μm,0.6s						
SJA	San Juan	0.64	69	*e*P	Pn	06 30 27.0	+0.1
SJA				IAML		06 30 45.5	
	comp=Z,4μm,1.1s						
RTLL	Cerro Villicun	0.80	58	*e*P	Pn	06 30 29.1	+0.9
RTLL				*e*S	Sn	06 30 44.2	+0.8
DOCA	Reserva Natura	0.83	11	*e*P	Pn	06 30 28.3	-0.5
CFA	Coronel Fontan	0.89	80	P	Pn	06 30 29.9	+0.8
CFA				S	Sn	06 30 45.6	+0.9
ASAL	Salagasta	0.90	156	*e*P	Pn	06 30 25.1	-4.1
ACCO	Cerro Coronel	1.18	8	*e*P	Pn	06 30 32.9	+0.6
VA03	San Esteban	1.48	227		Pn	06 30 35.9	+0.6
VA03	San Esteban	1.48	227	*e*P	Pn	06 30 36.0	+0.7
VA03				*e*S	Sn	06 30 57.6	+1.7
VA03				IAML		06 30 58.4	
	comp=Z,2μm,0.2s						
CO03	El Pedregal	1.53	307		Pn	06 30 35.5	-0.4
CO03	El Pedregal	1.53	307	*e*P	Pn	06 30 35.9	-0.1
CO03				*e*S	Sn	06 30 57.0	0.0
CO03				IAML		06 31 01.9	
	comp=Z,3μm,0.4s						
CO02	Combarbal	1.58	290		Pn	06 30 35.7	-0.8
CO02	Combarbal	1.58	290	*e*P	Pn	06 30 36.3	-0.3
CO02				*e*S	Sn	06 30 59.0	+0.8
CO02				IAML		06 31 00.2	
	comp=Z,3μm,0.4s						
ACDV	Cuesta del Vie	1.59	4	*e*P	Pn	06 30 37.8	+1.1
ACDV				*e*S	Sn	06 30 54.1	-4.4
ACDV				IAML		06 30 60.0	
	comp=Z,2μm,0.5s						
AROD	Rodeo	1.60	353	*e*P	Pn	06 30 38.1	+1.1
MT08	Bocatoma Ro	1.79	201		Pn	06 30 41.2	+2.0
MT08	Bocatoma Ro	1.79	201	*e*P	Pn	06 30 35.8	-3.4
MT08				*e*S	Sn	06 31 01.8	-1.1
MT08				IAML		06 31 15.2	
	comp=Z,619nm,0.8s						
MT04	Ro Olivares	1.80	204	*e*P	Pn	06 30 41.0	+1.8
MT04				*e*S	Sn	06 31 14.6	+12
PEL	Peldehue	1.83	221		Pn	06 30 39.6	+0.2
PEL	Peldehue	1.83	221	*e*P	Pn	06 30 34.5	-4.9
PEL				*e*S	Sn	06 31 04.6	+1.3
ACAN	Cantantal	1.83	107	*e*P	Pn	06 30 40.4	+0.9
ACAN				IAML		06 31 12.4	
	comp=Z,5μm,0.4s						
VA06	Catapilco	1.90	245		Pn	06 30 39.3	-0.9
AVFE	Valle Fertil	1.90	55	*e*P	Pn	06 30 41.3	+0.9
AVFE				IAML		06 31 07.3	
	comp=Z,769nm,0.3s						
ROC1	El Roble	1.91	230	*e*P	Pn	06 30 40.2	-0.5
ROC1				*e*S	Sn	06 30 59.7	-5.8
CO01	Juntas del Tor	1.92	338		Pn	06 30 41.8	+1.1
CO01	Juntas del Tor	1.92	338	*e*P	Pn	06 30 42.1	+1.4
CO01				*e*S	Sn	06 31 07.7	+2.1
CO01				IAML		06 31 09.6	
	comp=Z,2μm,0.6s						
MT16	CCHEN	1.97	212		Pn	06 30 42.3	+1.1
MT05	Renca	2.05	217		Pn	06 30 42.4	+0.3
MT05	Renca	2.05	217	*e*P	Pn	06 30 41.8	-0.3
MT05				*e*S	Sn	06 31 07.5	-0.7
MT05				IAML		06 31 14.0	
	comp=Z,813nm,0.8s						
GO04	Tololo Observa	2.06	320		Pn	06 30 41.8	-0.8
GO04	Tololo Observa	2.06	320	*e*P	Pn	06 30 42.0	-0.5
GO04				*e*S	Sn	06 31 08.9	+0.1
MT02	Curacav	2.18	226		Pn	06 30 43.6	-0.1
MT02	Curacav	2.18	226	*e*P	Pn	06 30 43.4	-0.4
MT02				*e*S	Sn	06 31 10.3	-0.7
MT02				IAML		06 31 13.8	
	comp=Z,583nm,0.8s						
ACHE	Chepes	2.30	76	*e*P	Pn	06 30 46.5	+1.1
ACHE				*e*S	Sn	06 31 09.8	-4.3
CO06	Fray Jorge	2.30	298		Pn	06 30 43.3	-2.0
AGUA	GUANDACOL	2.36	17	*e*P	Pn	06 30 47.6	+1.4
AGUA				IAML		06 31 27.1	
	comp=Z,457nm,1.2s						
VA01	Torpederas	2.38	237		Pn	06 30 44.4	-1.9
VA01	Torpederas	2.38	237	*e*P	Pn	06 30 45.8	-0.4
VA01				*e*S	Sn	06 31 07.5	-7.9
VA01				IAML		06 31 18.6	
	comp=Z,505nm,0.5s						
MT09	Talagante	2.48	215		Pn	06 30 47.6	-0.1
BO04	La Punta	2.49	207		Pn	06 30 48.2	+0.4
CO05	La Serena	2.50	317		Pn	06 30 46.5	-1.4
MT01	Popeta	2.68	218		Pn	06 30 49.4	-0.8
MT01	Popeta	2.68	218	*e*P	Pn	06 30 49.1	-1.0
MT01				*e*S	Sn	06 31 15.5	-7.1
APLL	PUNTA DE LOS L	2.71	61	*e*P	Pn	06 30 51.5	+0.9
VA05	Santo Domingo	2.74	226		Pn	06 30 49.9	-1.0
LCO	Las Campanas	3.01	335		Pn	06 30 54.0	-0.8
LCO	Las Campanas	3.01	335	*e*P	Pn	06 30 54.4	-0.4
LCO				*e*S	Sn	06 31 29.6	-1.1
LCO				IAML		06 31 30.5	
	comp=Z,1μm,0.3s						
BO01	Tunca	3.04	210		Pn	06 30 53.8	-1.0
BO01	Tunca	3.04	210	*e*P	Pn	06 30 54.0	-0.8
BO01				*e*S	Sn	06 31 29.8	-1.0
VCA	Vinchina	3.15	17	*e*S	Sn	06 31 34.1	+0.2
VCA				IAML		06 31 37.7	
	comp=Z,558nm,0.4s						
BO02	Sierra Bellavi	3.28	202		Pn	06 30 57.8	-0.3
BO02	Sierra Bellavi	3.28	202	*e*S	Sn	06 31 33.1	-3.6
BO02				*e*S	Sn	06 31 33.1	-3.6
AC04	Llanos de Chal	3.88	336		Pn	06 31 05.0	-1.1
AC04	Llanos de Chal	3.88	336	*e*S	Sn	06 31 32.5	-18
AC04				IAML		06 31 56.7	
	comp=Z,256nm,0.6s						
GO03	Copiapo	4.24	348	Pn	Pn	06 31 10.2	-0.8
ML02	Panimavida	4.37	204		Pn	06 31 11.1	-1.5
ML02	Panimavida	4.37	204	*e*P	Pn	06 31 11.1	-1.5
ML02				*e*S	Sn	06 31 55.4	-7.3
AC06	Mina Casimiro	4.49	348		Pn	06 31 13.0	-1.2
AC02	Maricunga	4.91	1		Pn	06 31 20.4	+0.1
BI02	San Fabin de	5.16	198		Pn	06 31 22.4	-0.9
AC01	Pan de Azucar	5.72	348		Pn	06 31 28.4	-2.3
GO02	Mina Guanaco	6.58	357		Pn	06 31 40.5	-2.2
TRQA	Tornquist	8.67	138		Pn	06 32 10.3	-0.2
PB05	IPOC Station P	8.91	354		Pn	06 32 09.9	-4.2
PLCA	Paso Flores	9.01	186	P	Pn	06 32 16.3	+1.0

	comp=Z,1.3nm,0.6s,baz=1.3,slow=10,SNR=4.2						
PLCA	Paso Flores	9.01	186	eP	Pn	06 32 14.7	-0.6
PLCA				eS	Sn	06 33 54.2	-0.8
ITQB	Itaqui	11.08	82		Pn	06 32 41.2	-1.9
CPUP	Villa Florida	11.76	66	P	Pn	06 32 50.1	-2.0
	comp=Z,2.0nm,0.8s,baz=102,slow=11,SNR=13						
PLTB	Pedras Altas	13.33	94		Pn	06 33 11.1	-1.6
LPAZ	La Paz	15.44	4	P	P	06 33 41.3	-0.8
LPAZ	La Paz	15.44	4	P	Pn	06 33 38.3	-1.9
	comp=Z,1.6nm,0.6s,baz=178,slow=5.7,SNR=16						
LPAZ	La Paz	15.44	4	eP	Pn	06 33 38.7	-1.5
ITAB	Concordia	15.58	78	P	P	06 33 40.9	-2.1
ITAB				IAmb	IAmb	06 33 53.9	
	comp=Z,14nm,1.0s						
BBSD	Serra de San D	16.50	30	eP	Pn	06 33 50.9	-1.7
BBSD				eS	Sn	06 36 54.2	-1.9
PTGB	Pitanga	16.69	69	eP	Pn	06 33 53.2	-1.8
PTGB				eS	Sn	06 36 58.0	-2.8
SIV	San Ignacio	17.38	27	P	Pn	06 34 03.1	-0.3
	comp=Z,4.8nm,0.8s,baz=202,slow=11,SNR=24						
PTLB	Pontes e Lacer	18.68	32	P	Pn	06 34 17.7	-1.2
PTLB	Pontes e Lacer	18.68	32	eP	P	06 34 15.8	-1.4
PTLB				eS	S	06 37 42.7	-1.2
PCMB	Pacaembu	18.98	62	eP	P	06 34 18.6	-1.8
PCMB				eS	S	06 37 48.3	-1.3
SALV	Santo Antonio	20.05	41	eP	P	06 34 30.3	-1.7
SALV				eS	S	06 38 10.1	-0.9
VILB	Vilhena	20.49	26	P	P	06 34 36.7	-0.1
VILB				IAmb	IAmb	06 34 38.2	
	comp=Z,24nm,0.8s						
EFI	East Falkland	21.53	161	P	P	06 34 48.4	+0.8
PDRB	Porto dos Gac	23.15	33	eP	P	06 35 03.6	-0.7
CZSB	Cruzeiro do Su	24.13	352	P	P	06 35 12.6	-0.5
CZSB				IAmb	IAmb	06 35 17.3	
	comp=Z,11nm,0.9s						
CZSB	Cruzeiro do Su	24.13	352	eP	P	06 35 12.8	-0.2
CZSB				eS	S	06 39 23.8	+1.4
CLDB	Colider	24.23	34	eP	P	06 35 13.6	-0.5
CLDB				eS	S	06 39 24.4	+0.2
BDFB	Brasilia	25.15	55	P	P	06 35 22.4	-0.1
	comp=Z,1.4nm,0.4s,baz=325,slow=4.8,SNR=3.3						
	comp=Z,1.4nm,0.4s						
SNDB	Serra Nova Dou	25.73	44	eP	P	06 35 26.4	-1.3
TBTG	Tabatinga, AM	27.44	359	eP	P	06 35 42.3	-0.6
TEFE	Tefe	28.44	10	eP	P	06 35 51.1	-0.7
RIB01	Linhares ES	28.75	71	eP	P	06 35 53.1	-1.5
SDBA	SAO DESIDERIO	29.55	55	eP	P	06 36 00.5	-1.3
MACA	Manacapuru-AM	29.57	18	P	P	06 36 01.3	-0.6
MACA				IAmb	IAmb	06 36 38.9	
	comp=Z,7.0nm,0.9s						
MACA	Manacapuru-AM	29.57	18	eP	P	06 36 01.2	-0.6
PRPB	Parauapebas	31.29	40	eP	P	06 36 16.0	-1.1
ESPZ	Base Esperanza	32.60	170	P	P	06 36 30.7	+2.8
RUSC	La Rusia	37.62	354	P	P	06 37 12.3	+0.3
CELP	Cerrillos	49.62	3	P	P	06 38 47.6	+0.1
VNA3	Neumayer Olymp	50.57	159	⇓P	P	06 38 55.9	+1.8
	comp=Z,2.9nm,0.7s						
VNA2	Neumayer--Watz	51.19	158	⇓P	P	06 38 54.4	-4.4
	comp=Z,8.5nm,0.4s,baz=292,slow=5.8						
SNAA	Sanae	52.79	159	⇓P	P	06 39 12.5	+1.8
	comp=Z,98nm,0.9s						
SNAA	Sanae	52.79	159	P	P	06 39 11.7	+1.0
SNAA				IAmb	IAmb	06 39 13.4	
	comp=Z,5.1nm,0.9s						
SNAA	Sanae	52.79	159	P	P	06 39 12.6	+1.9
	comp=Z,3.7nm,0.8s,baz=283,slow=7.0,SNR=14						
	comp=Z,3.7nm,0.8s						
TROLL	Troll, Antarti	54.51	159	⇓P	P	06 39 25.0	+1.7
	comp=Z,189nm,0.8s						
TEIG	Tepich	54.81	338	P	P	06 39 26.3	+0.4
QSPA	South Pole Qui	58.47	180		P	06 39 52.9	+1.4
QSPA	South Pole Qui	58.47	180	P	P	06 39 53.3	+1.8
	comp=Z,6.5nm,0.8s,baz=160,slow=2.1,SNR=39						
QSPA				pP	pP	06 40 22.6	+1.9
	comp=Z,3.3nm,0.7s,baz=159,slow=4.7,SNR=4.5						
	comp=Z,6.5nm,0.8s						
VNDA	Vanda	66.73	191	P	P	06 40 48.0	+2.1
	comp=Z,0.9nm,0.6s,baz=139,slow=7.6,SNR=3.8						
	comp=Z,0.9nm,0.6s						
TKL	Tuckaleechee C	68.44	347	P	P	06 40 56.4	-0.7
TKL				IAmb	IAmb	06 41 31.3	
	comp=Z,6.9nm,1.4s						
SWET	Sewanee	68.44	345	P	P	06 40 57.2	0.0
SWET				IAmb	IAmb	06 40 58.5	
	comp=Z,5.8nm,0.9s						
SAND	Sanderson	68.86	330		P	06 40 60.0	+0.1
SAND				IAmb	IAmb	06 41 02.2	
	comp=Z,4.3nm,0.9s						
TX31	Lajitas Ar. Si	69.00	328		P	06 41 00.7	-0.1
TXAR	Lajitas Array	69.00	328	P	P	06 41 02.1	+1.2
	comp=Z,0.9nm,0.6s,baz=151,slow=7.8,SNR=14						
TXAR				pP	pP	06 41 32.1	+1.4
	comp=Z,0.6nm,0.8s,baz=150,slow=7.7,SNR=4.0						
	comp=Z,0.9nm,0.6s						
OZNA	Ozona	69.28	331		P	06 41 02.5	0.0
OZNA				IAmb	IAmb	06 41 04.4	
	comp=Z,5.8nm,0.7s						
WVT	Waverly	69.75	344		P	06 41 05.4	+0.2
MNHN	Monahans	70.33	330		P	06 41 09.6	+0.7
MNHN				IAmb	IAmb	06 41 10.9	
	comp=Z,5.5nm,0.7s						
LCAR	Lake Charles	70.53	341		P	06 41 10.1	+0.2
LCAR				IAmb	IAmb	06 41 11.3	
	comp=Z,4.4nm,0.8s						
HHAR	Hobbs	71.53	339		P	06 41 16.1	+0.1
HHAR				IAmb	IAmb	06 41 17.5	
	comp=Z,4.0nm,1.0s						
DBIC	Dimbokro	72.24	70	P	P	06 41 21.4	+0.7
	comp=Z,5.8nm,0.9s,baz=303,slow=5.6,SNR=4.6						
	comp=Z,5.8nm,0.9s						
R40A	Maddies Statio	72.92	341	P	P	06 41 24.6	+0.4
R40A				IAmb	IAmb	06 41 25.7	
	comp=Z,9.3nm,0.8s						
P40A	Paris	74.02	342		P	06 41 30.6	0.0
P40A				IAmb	IAmb	06 41 32.1	
	comp=Z,5.5nm,0.8s						
MAW	Mawson	74.64	163	P	P	06 41 35.6	+1.7
	comp=Z,3.6nm,0.8s,baz=198,slow=6.7,SNR=4.2						
	comp=Z,3.6nm,0.8s						
L40A	Anamosa	76.19	343		P	06 41 43.1	+0.1
SDCO	Great Sand Dun	76.98	331		P	06 41 48.0	+0.1
TRQ	Mont Tremblant	77.77	356	P	P	06 41 51.9	+0.1
ECSD	EROS Data Cent	79.19	340		P	06 41 59.3	-0.3
ECSD				IAmb	IAmb	06 42 01.1	
	comp=Z,4.0nm,0.8s						
TORD	Torodi Ar. Bea	81.24	69		P	06 42 11.8	+0.5
TORD	Torodi Ar. Bea	81.24	69	P	P	06 42 12.8	+1.5
	comp=Z,2.5nm,0.7s,baz=274,slow=4.1,SNR=4.3						
	comp=Z,2.5nm,0.7s						
PDAR	Pinedale Array	82.88	331	P	P	06 42 20.0	+0.5
	comp=Z,0.6nm,0.7s,baz=117,slow=5.2,SNR=6.0						
PDAR				pP	pP	06 42 50.7	+0.4
	comp=Z,0.4nm,0.7s,baz=151,slow=3.4,SNR=2.8						
	comp=Z,0.6nm,0.7s						
NVAR	Mina Array Bea	83.44	323	P	P	06 42 23.4	+0.9
	comp=Z,0.4nm,0.6s,baz=154,slow=6.4,SNR=5.2						
	comp=Z,0.4nm,0.6s						
ULM	Lac du Bonnet	84.99	343	P	P	06 42 29.9	+0.2
	comp=Z,2.0nm,0.8s,baz=121,slow=3.2,SNR=4.7						
	comp=Z,2.0nm,0.8s						
PLID	Pearl Lake	87.49	329		P	06 42 43.5	+1.1
PLID				IAmb	IAmb	06 42 44.4	
	comp=Z,3.1nm,0.8s						
WRA	Warramunga Arr	123.83	207	PKP	PKPdf	06 48 52.8	+0.1
	comp=Z,1.4nm,1.1s,baz=170,slow=1.7,SNR=7.0						
SEY	Seymchan	139.20	332	PKP	PKPdf	06 49 21.6	+1.4
	comp=Z,0.5nm,0.3s,baz=37,slow=2.0,SNR=5.1						
BVAR	Borovoye Array	144.06	42	PKP	PKPdf	06 49 29.3	+0.1
	comp=Z,0.6nm,0.4s,baz=347,slow=6.1,SNR=3.9						
KURBB	Kurchatov Arra	149.65	42	PKPbc	PKiKP	06 49 44.5	+0.2
	comp=Z,2.4nm,0.8s,baz=296,slow=3.0,SNR=15						
KSH	Kashi	150.84	65	PKPbc	PKiKP	06 49 47.5	+0.1
ZALV	Zalesovo Beam	151.09	32	PKPbc	PKiKP	06 49 47.7	+0.5
	comp=Z,8.4nm,0.7s,baz=316,slow=4.1,SNR=25						
ZALV				pPKPbc	pPKPbc	06 50 19.2	-0.5
	comp=Z,1.6nm,0.4s,baz=316,slow=4.1,SNR=3.4						
MKAR	Makanchi Array	153.54	47	PKPbc	PKiKP	06 49 53.0	+0.4
	comp=Z,0.7nm,0.6s,baz=290,slow=2.3,SNR=7.7						
MKAR				PKPab	PKPab	06 50 06.2	+0.8
	comp=Z,1.7nm,0.7s,baz=294,slow=4.9,SNR=17						
PZH	PanZhiHua	170.55	121	PKP	PKPdf	06 50 03.0	+0.5

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*SNET **29** 06:33:42.5±0.8, 12°.14N×87°.95W, h15km±12km, ML3.1*
*CATAC **29** 06:33:42.5±0.5, 12°N±2°×8°8W±°, h22km±4km, M3.8/24, MLv3.8/24, Error ellipse: s-maj=5.9km s-min=2.1km az=30.4, confirmed*
*UCR **29** 06:33:43.6±0.7, 12°.14N×87°.78W, h21km±10km, MW4.2*
ISC 29 06:33:42.7±2.0, **12°.15N**±0°.05×**87°.89W**±0°.04, **h20**km±7km, **n64**, σ0.58/77, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
POTN	Potosi Cosigui	0.92	24	eP	Pb	06 34 00.0	+0.1
POTN				eS	Sb	06 34 11.8	0.0
POTN	Potosi Cosigui	0.92	24	P	Pb	06 33 59.9	-0.1
POTN				S	Sb	06 34 12.1	+0.3
CRIN	San Cristobal	0.98	56	eP	Pb	06 34 01.2	+0.1
CRIN	San Cristobal	0.98	56	S	Sg	06 34 15.5	+0.7
CRIN	San Cristobal	0.98	56	P	Pb	06 34 01.2	+0.1
PKGN	Cerro Pekin	1.02	60	P	Pb	06 34 01.2	-0.6
PKGN				S	Sg	06 34 16.5	+0.4
CNCH	Conchagua	1.12	3	eP	Pn	06 34 02.7	-0.7
CNCH				eP	Pg	06 34 11.0	+6.6
CNCH				eS	Sg	06 34 19.3	+0.2
CNCH	Conchagua	1.12	3	S	Sb	06 34 17.7	+0.1
CNCH	Conchagua	1.12	3	P	Pn	06 34 02.5	-0.9
LCND	La Caada	1.15	360	eP	Pn	06 34 03.0	-0.7
LCND				eS	Sn	06 34 19.1	+0.3
LCND				IAML		06 34 24.8	
	comp=Z,591nm,0.3s						
LCND	La Caada	1.15	360	P	Pn	06 34 02.8	-0.8
CNGA	Al SSO del Vol	1.21	74	P	Pn	06 34 04.1	-0.4
CNGN	Cerro Negro	1.21	73	eP	Pn	06 34 03.5	-1.1
CNGN	Cerro Negro	1.21	73	P	Pn	06 34 03.8	-0.8
ILCN	San Idelfonso	1.23	70	P	Pn	06 34 03.6	-1.3
ILCN				S	Sn	06 34 21.5	+0.6
COPN	Copaltepe	1.27	89	eP	Pn	06 34 04.4	-0.9
COPN	Copaltepe	1.27	89	P	Pn	06 34 04.3	-1.0
BLLM	Bellamira	1.33	345	eP	Pn	06 34 05.9	-0.3
MOMN	Momotombo	1.34	79	P	Pn	06 34 05.6	-0.8
MOMN				S	Sn	06 34 23.0	-0.6
ALJI	Alcalda de J	1.34	330	S	Sn	06 34 23.0	-0.6
ALJI	Alcalda de J	1.34	330	P	Pn	06 34 06.0	-0.4
PACA	Pacayal	1.38	342	S	Sb	06 34 25.1	0.0
PACA	Pacayal	1.38	342	P	Pn	06 34 06.7	-0.2
MOM2	El Cardon	1.40	78	P	Pn	06 34 06.4	-0.7
MOM2				S	Sn	06 34 25.0	0.0
SAPS	Ciudad Sandino	1.45	89	P	Pn	06 34 07.1	-0.7
SAPS	Ciudad Sandino	1.45	89	S	Sn	06 34 26.2	0.0
APQ3	Volcan Apoyequ	1.49	85	P	Pn	06 34 07.6	-0.7
APQ3				S	Sn	06 34 27.0	-0.2
CHOHN	Orocuina	1.50	28	P	Pn	06 34 07.9	-0.7
CHOHN	Orocuina	1.50	28	S	Sn	06 34 27.0	-0.6
APQ2	Apoyeque	1.53	88	S	Sn	06 34 27.7	-0.4
UNAN	Cigeo UNAN	1.58	91	P	Pn	06 34 09.7	+0.1
UNAN				S	Sn	06 34 29.8	+0.3
R4DEC	Barrio San Lui	1.60	90	S	Sn	06 34 29.9	-0.2
R4DEC	Barrio San Lui	1.60	90	P	Pn	06 34 09.4	-0.4
MGAN	Managua	1.60	90	eP	Pn	06 34 09.3	-0.6
MGAN	Managua	1.60	90	S	Sn	06 34 29.6	-0.4
MGAN	Managua	1.60	90	P	Pn	06 34 09.3	-0.6
PQSS	Presa 15 de Se	1.60	336	S	Sb	06 34 31.1	-0.4
PQSS	Presa 15 de Se	1.60	336	P	Pn	06 34 10.0	+0.1
TECO	Alcaldia de Te	1.63	328	S	Sn	06 34 29.8	-1.0
TECO	Alcaldia de Te	1.63	328	P	Pn	06 34 09.8	-0.5
CAHU	Cacacuatique	1.64	349	eP	Pn	06 34 11.0	+0.4
WILN	Americas 2	1.66	90	P	Pn	06 34 10.2	-0.5
WILN				S	Sn	06 34 31.6	+0.1
MAS3	Al N del Volca	1.68	94	P	Pn	06 34 10.6	-0.4
MAS3				S	Sn	06 34 31.5	-0.4
UESV	Universidad de	1.72	329	S	Sn	06 34 32.9	0.0
NANN	Nandasmo	1.74	97	S	Sn	06 34 34.1	+0.6
NANN	Nandasmo	1.74	97	P	Pn	06 34 12.5	+0.7
SCLA	Alcaldia de Sa	1.75	332	S	Sn	06 34 34.5	+0.8
SCLA	Alcaldia de Sa	1.75	332	P	Pn	06 34 12.0	+0.1
COEG	Centro de Oper	1.75	326	eP	Pn	06 34 12.5	+0.4
COEG				IAML		06 34 39.5	
	comp=Z,113nm,0.5s						
COEG	Centro de Oper	1.75	326	P	Pn	06 34 12.3	+0.3
LFRS	El Faro	1.86	322	eP	Pn	06 34 13.4	-0.1
PAVA	Las Pavas	1.86	327	S	Sn	06 34 35.9	-0.7
LOMA	Loma Larga	1.94	320	eS	Sn	06 34 39.2	+0.5
LOMA	Loma Larga	1.94	320	S	Sn	06 34 38.5	-0.1
TGUH	Tegucigalpa,Un	1.98	17	P	Pn	06 34 15.5	+0.2
TGUH				S	Sn	06 34 40.3	+0.6
YUSH	Yuscaran	2.06	29	P	Pn	06 34 16.1	-0.2
MATN	Matagalpa	2.06	68	P	Pn	06 34 15.3	-1.0
MATN	Matagalpa	2.06	68	S	Sn	06 34 41.8	+0.2
BOQS	Boqueron	2.08	319	eS	Sb	06 34 43.9	-1.5
RCVN	Varillal2	2.18	49	P	Pn	06 34 18.1	+0.1
LCRUZ	La Cruz	2.45	116	eP	Pn	06 34 22.0	+0.4
SACU	Santa Cruz	2.94	130	eP	Pn	06 34 28.0	-0.3
MESS	Mesas	2.99	118	eP	Pn	06 34 29.8	+0.8
CMARA	Lajas Hojancha	3.21	131	eP	Pn	06 34 31.9	-0.2

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*DJA **29** 06:47:02.4±0.2, 9°S±2°×10°9E±°, h71km±3km, M5.1/53, mb5.2/53, mB5.6/19, MLv5.0/28, Mw(mB)5.1/19*
*MOS **29** 06:47:03.2±0.7, 8°.00S×109°.12E, h82km, mb4.8/27, Error ellipse: s-maj=12.7km s-min=7.5km az=111.9*
*IDC **29** 06:47:04.8±1.1, 8°.11S×109°.16E, h81km±8km, mb4.4/31, mbtmp4.7/33, MS3.7/32, Error ellipse: s-maj=12.3km s-min=8.0km az=54.0*
*NEIC **29** 06:47:04.3±1.7, 8°.19S±0°.09×108°.96E±0°.06, h79km±7km, mb5.1/47, Error ellipse: s-maj=13.8km s-min=8.3km az=201.0*
ISC 29 06:47:04.0±0.4, **8°.29S**±0°.04×**108°.98E**±0°.04, **h78**km±3km, **h78**km**:pP-P, n319,** σ1.52/320, **mb4.9**/87, **18C-10D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBJI	Bungbulang	1.56	302	P	Pn	06 47 27.5	-2.5
UGM	Wanagama	1.57	76		Pn	06 47 29.6	-0.6
UGM	Wanagama	1.57	76	P	Pn	06 47 29.4	-0.8
UGM	Wanagama	1.57	76	P	Pn	06 47 32.0	+1.8
SMRI	Semarang	1.90	50		Pn	06 47 36.2	+1.7
SMRI	Semarang	1.90	50	P	Pn	06 47 36.6	+2.1
WOJI	Wonogiri, Jawa	1.97	77	P	Pn	06 47 34.2	-1.3
LEM	Lembang	1.99	317	P	Pn	06 47 35.0	-0.8
	839nm,0.5s,baz=351,slow=23,SNR=57						
LEM				S	Sn	06 48 03.0	+2.9
	3μm,0.6s,baz=71,slow=19,SNR=16						
LEM				LR	LR	06 48 41.0	
	comp=Z,1μm,19.3s,baz=68,slow=48						
CNJI	Cibinong	2.08	298	P	Pn	06 47 34.7	-2.2
PCJI	Pacitan	2.17	88	P	Pn	06 47 37.7	-0.5
NGJI	Ngawi	2.62	70	P	Pn	06 47 46.8	+2.6
SKJI	Sukabumi	2.72	298	P	Pn	06 47 44.2	-1.4
DBJI	Dramaga	2.81	308	P	Pn	06 47 46.8	+0.1
TNG	Tangerang	3.13	312	P	Pn	06 47 51.5	+0.4
TBJI	Tambak Boyo	3.19	63	P	Pn	06 47 53.1	+1.1
SBJI	Serang	3.56	307	P	Pn	06 47 57.1	+0.2
GRJI	Gresik	3.72	69	P	Pn	06 48 00.7	+1.5
XMI	Christmas Isla	3.90	236	P	Pn	06 47 55.8	-5.7
BWJI	Bawean	4.38	57	P	Pn	06 48 08.3	+0.2
GMJI	Gumukmas	4.41	90	P	Pn	06 48 08.8	+0.2
KMMI	Kalianget	5.09	76	P	Pn	06 48 16.5	-1.3
JAGI	Jajag, Banyuwa	5.12	92		Pn	06 48 17.6	-0.6
JAGI	Jajag, Banyuwa	5.12	92	P	Pn	06 48 18.8	+0.6
JAGI	Jajag, Banyuwa	5.12	92	P	Pn	06 48 18.1	-0.1
	18μm539nm,0.8s						
KASI	Kota Agung	5.23	301	P	Pn	06 48 20.9	+1.1
KLI	Kotabumi	5.33	309	P	Pn	06 48 20.9	-0.2
	1.7nm267nm,0.7s						
TPI	Tanjungpandan	5.65	346	P	Pn	06 48 26.1	+0.6
	0.7nm122nm,0.8s						
LWLI	Liwa	5.87	303	P	Pn	06 48 28.8	+0.2
	2.8nm10μm444nm,0.8s						
MDSI	Maura Dua	6.09	308	P	Pn	06 48 31.6	+0.1
	0.4nm108nm,1.0s						
SRBI	Singaraja	6.17	89	P	Pn	06 48 32.0	-0.6
	392nm,0.6s						
PPBI	Pangkal Pinang	6.71	335	P	Pn	06 48 39.4	-0.6
MNAI	Manna	7.15	303	Pn	Pn	06 48 45.7	-0.3
MNAI	Manna	7.15	303	P	Pn	06 48 43.7	-2.3
MNAI	Manna	7.15	303	P	Pn	06 48 46.4	+0.4
	334nm,2.0s						
TWSI	Taliwang, Sumb	7.83	94	P	Pn	06 48 54.7	-0.5
	0.9nm4μm197nm,0.5s						
KSI	Kapahiang	7.85	306	P	Pn	06 48 55.6	0.0
STKI	Sintang	8.66	17	P	Pn	06 49 09.2	+2.6
	151nm,0.6s						
PLAI	Plampang	8.71	94	P	Pn	06 49 07.9	+0.6
PLAI	Plampang	8.71	94	P	Pn	06 49 07.8	+0.5
KSM	Kuching	9.79	8		Pn	06 49 21.0	-1.0
WBSI	Waikabubak, Su	10.37	98	P	Pn	06 49 26.7	-3.3
	70nm,0.6s						
SBUM	Sibu	11.14	17		Pn	06 49 43.4	+2.9
KAPI	Kappang	11.18	74		Pn	06 49 43.8	+2.9
KAPI	Kappang	11.18	74	P	Pn	06 49 42.2	+1.2
	26nm,0.6s,baz=258,slow=9.5,SNR=11						
KAPI				LR	LR	06 54 42.3	
	comp=Z,418nm,19.8s,baz=264,slow=42						
KAPI	Kappang	11.18	74	P	Pn	06 49 43.8	+2.9
MYKOM	Kota Tinggi	11.24	333		Pn	06 49 44.2	+2.4
WSI	Waingapu	11.26	98	P	Pn	06 49 41.6	-0.5
SPSI	Sidrap Palu	11.55	69	P	Pn	06 49 49.1	+3.1
	44nm,0.6s						
BSSI	Bau Bau, Buton	11.61	80	P	Pn	06 49 48.3	+1.4
	169nm,1.0s						
BNSI	Bone	11.71	71	P	Pn	06 49 51.2	+3.0
	73nm,1.0s						
SISI	Saibi	12.04	305	P	Pn	06 49 50.9	-1.8
	112nm,1.1s						
EDFI	Ende, Flores	12.58	93	P	Pn	06 49 56.8	-3.3
	79nm,0.7s						
MMRI	Maumere	13.12	92		Pn	06 50 04.3	-2.9
MMRI	Maumere	13.12	92	P	Pn	06 50 05.4	-1.8
	3μm161nm,0.6s						
MPSI	Mapaga	13.85	52	P	P	06 50 20.3	-2.3
	86nm,0.9s						
APSI	Ampana	14.59	60	P	P	06 50 31.4	+0.5
BATI	Baumata	14.61	99	P	Pn	06 50 24.0	-2.9
	40nm,0.4s,baz=333,slow=1.1,SNR=3.9						
BATI				S	Sn	06 52 59.7	-8.2
	35nm,0.5s,baz=111,slow=20,SNR=1.8						
TOLI2	Tolitoli	15.02	52		P	06 50 34.7	-1.0
TOLI2	Tolitoli	15.02	52	P	P	06 50 34.2	-1.4
GIRL	Giralia	15.14	161	P	Pn	06 50 31.5	-2.0
SOEI	Soe	15.16	97		Pn	06 50 30.5	-3.6
SOEI	Soe	15.16	97	P	Pn	06 50 34.8	+0.7
SOEI	Soe	15.16	97	P	Pn	06 50 31.0	-3.1
	2μm258nm,0.8s						
LUWI	Luwuk	15.51	63	P	P	06 50 41.3	+0.2
	4μm172nm,1.0s						
MRSI	Marisa	15.58	57	P	P	06 50 41.5	-0.3
	2μm107nm,1.1s						
KKM	Kota Kinabalu	15.96	27		P	06 50 45.7	-0.5
MYLDM	Lahad Datu	16.40	36	P	P	06 50 51.8	+0.8
MBWA	Marble Bar	16.47	142	Pn	Pn	06 50 45.8	-4.5
MBWA	Marble Bar	16.47	142	P	Pn	06 50 49.5	-0.8
PSA00	Pilbara Seismi	16.85	143	Pn	Pn	06 50 49.6	-5.5
PSA00	Pilbara Seismi	16.85	143	P	Pn	06 50 54.4	-0.7
SANI	Sanana	18.03	71	P	Pn	06 51 11.6	+2.1
SANI	Sanana	18.03	71	P	Pn	06 51 10.1	+0.6
	1μm84nm,1.1s						
NLAI	Namlea	18.70	75	P	Pn	06 51 19.7	+2.1
FITZ	Fitzroy Crossi	18.91	123	P	P	06 51 16.5	-2.1
FITZ	Fitzroy Crossi	18.91	123	P	P	06 51 18.2	-0.3
	comp=Z,7.0nm,0.9s						
FITZ	Fitzroy Crossi	18.91	123	P	P	06 51 18.6	0.0
	comp=Z,16nm,0.8s,baz=288,slow=7.6,SNR=35						
FITZ				S	S	06 54 38.1	-11
	comp=Z,4.5nm,0.5s,baz=68,slow=20,SNR=5.2						
FITZ	Fitzroy Crossi	18.91	123	P	P	06 51 19.0	+0.4
SRIT	Nakonsritamara	19.20	331	P	Pn	06 51 22.9	-0.7
AAI	Ambon	19.64	78	P	P	06 51 27.2	+0.6
MEEK	Meekatharra	20.41	155	P	Pn	06 51 37.9	+0.3
MEEK	Meekatharra	20.41	155	P	P	06 51 34.0	-0.9
TNTI	Ternate	20.41	65	P	Pn	06 51 38.1	+0.3
TNTI	Ternate	20.41	65	P	P	06 51 36.2	+1.2
	comp=Z,2μmcomp=Z,172nm,0.8s						
MSAI	Masohi	20.43	77	P	P	06 51 34.4	-0.8
	comp=Z,89nm,0.6s						
KNRA	Kununurra	20.68	113		P	06 51 37.9	0.0
KNRA	Kununurra	20.68	113	P	P	06 51 38.2	+0.3
	comp=Z,154nm,1.0s						
MORW	Morawa	21.71	163	P	P	06 51 49.5	+0.7
DRS	Darwin Rock St	21.94	103	P	P	06 51 52.9	+1.5
MTN	Manton Dam	22.23	104	P	P	06 51 54.5	0.0
DAV	Davao City (W)	22.51	48	LR	LR	07 01 10.9	
	comp=Z,159nm,20.9s,baz=176,slow=38						
BLDU	Ballidu	23.36	163	P	P	06 52 07.4	+1.6
SWI	Sorong	23.38	73	P	P	06 52 05.4	-0.8
	comp=Z,45nm,0.6s						
KDU	Kakadu	23.50	103	P	P	06 52 08.2	+1.0
FAKI	Fak Fak	23.75	78	P	P	06 52 11.8	+2.3
FAKI	Fak Fak	23.75	78	P	P	06 52 07.0	-2.5
	comp=Z,46nm,0.5s						
NWAO	Narrogin (SRO)	25.68	164	LR	LR	07 02 09.0	
	comp=Z,178nm,20.8s,baz=289,slow=35						
NWAO	Narrogin (SRO)	25.68	164	P	P	06 52 27.4	+0.6
RKPI	Ransiki, Papua	25.97	76	P	P	06 52 29.4	-0.3
	comp=Z,149nm,1.0s						
WB0	Warramunga Arr	27.12	118	P	P	06 52 40.3	+0.4
WB0				IAmb	IAmb	06 52 41.8	
	comp=Z,21nm,0.7s						
WRA	Warramunga Arr	27.14	118	P	P	06 52 40.2	+0.1
WRA	Warramunga Arr	27.14	118	P	P	06 52 40.9	+0.8
	comp=Z,19nm,0.8s,baz=291,slow=11,SNR=151						
	comp=Z,19nm,0.8s						
WRA	Warramunga Arr	27.14	118	P	P	06 52 40.2	+0.1
WRA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WRAB	Tennant Creek	27.14	118	ceP	P	06 52 40.7	+0.6
WRAB				pmax	pmax		
	comp=Z,34nm,0.7s						
QIZ	Qiongzhong	27.16	2	P	P	06 52 40.5	+0.3
QIZ				S	S	06 57 15.5	+2.2
QIZ				LR	LR		
	comp=Z,230nm,14.6s						
QIZ				LR	LR		
	comp=Z,190nm,11.0s						
ASAR	Alice Springs	28.34	126	P	P	06 52 51.5	+0.7
	comp=Z,7.3nm,0.5s,baz=301,slow=8.8,SNR=94						
ASAR				PcP	PcP	06 56 03.1	+1.1
	comp=Z,2.3nm,0.8s,baz=308,slow=2.5,SNR=6.0						
ASAR				ScP	ScP	06 59 37.1	+0.7
	comp=Z,2.3nm,0.9s,baz=290,slow=2.5,SNR=5.9						
ASAR				LR	LR	07 05 52.0	
	comp=Z,107nm,18.8s,baz=292,slow=40						
	comp=Z,7.3nm,0.5s						
AS31	Alice Springs	28.34	126	P	P	06 52 50.6	-0.2
CMAR	Chiang Mai Arr	28.36	340	P	P	06 52 50.3	-0.7
	comp=Z,3.3nm,0.5s,baz=176,slow=9.0,SNR=19						
CMAR				PcP	PcP	06 56 03.8	+1.7
	comp=Z,0.7nm,0.3s,baz=215,slow=2.2,SNR=4.0						
CMAR				LR	LR	07 04 52.4	
	comp=Z,132nm,20.2s,baz=165,slow=38						
	comp=Z,3.3nm,0.5s						
CMAR	Chiang Mai Arr	28.36	340	i P	P	06 52 50.5	-0.5
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AS01	Alice Springs	28.38	125	P	P	06 52 51.6	+0.4
QIS	Mount Isa	32.00	116	P	P	06 53 24.6	+1.5
PALK	Pallekele	32.15	298	LR	LR	07 06 44.4	
	comp=Z,114nm,18.4s,baz=101,slow=37						
COEN	Coen	33.99	103	P	P	06 53 41.2	+0.6
COEN				IAmb	IAmb	06 53 42.4	
	comp=Z,29nm,0.7s						
COEN	Coen	33.99	103	P	P	06 53 42.2	+1.6
NACB	Ninganchiao	34.53	21	P	P	06 53 47.4	+2.3
YHNB	Yeheng	34.92	20	P	P	06 53 50.6	+2.1
BBOO	Buckleboo	34.98	138	P	P	06 53 49.4	+0.5
PZH	PanZhiHua	35.29	349	P	P	06 53 54.8	+3.1
H08S2	Diego Garcia H	36.14	268	T	T	07 32 08.2	
	baz=93,slow=75,SNR=158						
H08S3	Diego Garcia H	36.15	268	T	T	07 31 58.6	
	baz=93,slow=75,SNR=228						
H08S1	Diego Carcia H	36.16	268	T	T	07 32 09.6	
	baz=93,slow=75,SNR=136						
HTT	Hallett	37.28	136	P	P	06 54 09.0	+0.4
QLP	Quilpie	38.05	123	P	P	06 54 15.9	+0.8
STKA	Stephens Creek	38.32	132	P	P	06 54 18.5	+1.1
STKA	Stephens Creek	38.32	132	P	P	06 54 18.8	+1.4
	comp=Z,15nm,0.3s,baz=306,slow=8.0,SNR=22						
STKA				PcP	PcP	06 56 31.3	+1.4
	comp=Z,2.6nm,0.5s,baz=283,slow=4.0,SNR=1.9						
STKA				LR	LR	07 13 24.1	
	comp=Z,60nm,18.0s,baz=264,slow=41						
	comp=Z,15nm,0.3s						
STKA	Stephens Creek	38.32	132	P	P	06 54 18.4	+1.0
STKA	Stephens Creek	38.32	132	P	P	06 54 18.5	+1.1
STKA				pmax	pmax		
	comp=Z,116nm,0.9s						
MANU	Manus Island	38.70	83	P	P	06 54 21.0	+0.2
HYB	Hyderabad	39.46	310	eP	P	06 54 26.6	-0.3
HYB				epP	pP	06 54 45.9	+0.2
NJ2	Nanjing	41.21	13	eP	P	06 54 43.3	+2.1
NJ2				pmax	pmax		

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         comp=Z,5.0nm,0.6s
CMSA  Cobar Meteorol   41.23 129   P      P       06 54 43.6 +2.1
GUMO  Guam             41.73  59   P      P       06 54 44.8 -1.0
GUMO  Guam             41.73  59   LR     LR      07 10 53.1
         comp=Z,38nm,20.3s,baz=128,slow=34
GUMO  Guam             41.73  59   P      P       06 54 44.8 -1.0
GUMO                               pmax   pmax
         comp=Z,394nm,1.9s
EVN   Everest          41.93 330   P      P       06 54 45.9 -2.1
EVN                                IAmb   IAmb    06 55 46.0
         comp=Z,14nm,0.5s
XAN   Xi'an            42.09 360 ⇑P      P       06 54 48.0 -0.5
XAN                                pmax   pmax
         comp=Z,11nm,0.6s
CAN   Canberra         45.39 132   P      P       06 55 16.0 +1.0
CAN                                IAmb   IAmb    06 56 21.6
         comp=Z,32nm,1.4s
CAN   Canberra         45.39 132   P      P       06 55 16.0 +1.0
CAN                                pmax   pmax
         comp=Z,33nm,1.4s
ARMA  Armidale         45.49 125   P      P       06 55 17.2 +1.2
ARMA                               IAmb   IAmb    06 55 34.1
         comp=Z,38nm,1.6s
ARMA  Armidale         45.49 125   P      P       06 55 17.1 +1.2
JNU   Nakatsue         46.15  26   P      P       06 55 19.9 -1.1
JNU                                IAmb   IAmb    06 56 45.8
         comp=Z,38nm,1.5s
JNU   Nakatsue         46.15  26   LR     LR      07 15 34.5
         comp=Z,62nm,20.4s,baz=177,slow=37
JNU   Nakatsue         46.15  26   P      P       06 55 22.1 +1.2
JTU   Tsushima         46.76  23   P      P       06 55 27.8 +2.2
TJN   Taejon           47.67  20⇑eP     P       06 55 30.6 -2.0
JMN   Monobe           48.01  28   P      P       06 55 34.6 -0.8
JMN   Monobe           48.01  28   P      P       06 55 37.8 +2.4
GTA   Gaotai           48.21 350  eP      P       06 55 37.5 +0.5
GTA                                pP     pP      06 55 54.5 -1.7
GTA                                sP     sP      06 56 04.3 -0.8
GTA                                PcP    PcP     06 57 04.8 +1.7
GTA                                pmax   pmax
         comp=Z,2.0nm,1.2s
GTA                                LR     LR
         comp=Z,120nm,17.4s
GTA                                LR     LR
         comp=Z,180nm,17.8s
GTA                                LR     LR
         comp=Z,100nm,18.9s
BTO   Baotou           48.66   1  eP      P       06 55 41.5 +1.2
BTO                                pP     sP      06 56 04.8 -3.6
BTO                                sP     pP      06 56 16.3  +17
BTO                                PP     PP      06 57 36.8 +2.7
BTO                                pmax   pmax
         comp=Z,30nm,0.6s
BTO                                pmax   pmax
         comp=Z,220nm,6.8s
KSRS  Korea Array      48.83  20   P      P       06 55 39.4 -2.2
         comp=Z,2.7nm,0.8s,baz=200,slow=8.5,SNR=12
KSRS                               PcP    PcP     06 57 05.2  0.0
         comp=Z,1.7nm,0.7s,baz=188,slow=4.2,SNR=5.2
         comp=Z,2.7nm,0.8s
HHC   Hu-ho-hao-te     48.95   3  eP      P       06 55 45.5 +2.9
HHC                                pmax   pmax
         comp=Z,13nm,0.6s
HHC                                pmax   pmax
         comp=Z,45nm,3.8s
TATA  Tatamba Isabel   50.25  94   P      P       06 55 54.7 +1.9
JGF   Kuroka           51.20  30   P      P       06 55 58.0 -1.6
JGF                                IAmb   IAmb    06 56 20.1
         comp=Z,59nm,1.8s
MAJO  Matsushiro       52.36  30          P       06 56 05.9 -2.2
MAJO                               IAmb   IAmb    06 56 28.9
         comp=Z,53nm,1.9s
MAJO  Matsushiro       52.36  30ceP      P       06 56 06.0 -2.2
MAJO                               pmax   pmax
         comp=Z,7.0nm,0.9s
MJAR  Matsushiro Arr   52.36  30   P      P       06 56 06.2 -2.0
         comp=Z,9.2nm,0.7s,baz=201,slow=7.8,SNR=24
MJAR                               LR     LR      07 19 27.3
         comp=Z,30nm,19.1s,baz=219,slow=37
         comp=Z,9.2nm,0.7s
MJB9  Matsu-Tunnel     52.36  30          P       06 56 06.1 -2.1
MSEY  Mahe Island      53.25 270 i P      P       06 56 16.7 +1.4
JSD   Sado             53.57  29          P       06 56 15.9 -1.2
JSD                                IAmb   IAmb    06 56 16.9
         comp=Z,14nm,0.9s
NIL   Nilore           53.76 323          P       06 56 17.5 -1.1
NIL                                IAmb   IAmb    06 56 18.5
         comp=Z,13nm,0.7s
NIL   Nilore           53.76 323   P      P       06 56 17.5 -1.1
NIL                                pmax   pmax
         comp=Z,13nm,0.7s
NIL   Nilore           53.76 323   P      P       06 56 16.9 -1.7
NIL                                pP     pP      06 56 37.5 -0.7
NIL                                sP     sP      06 56 46.9  0.0
PSTR  Posyet           54.47  20⇑eP     P       06 56 21.3 -2.2
JMM   Marumori         54.68  31   P      P       06 56 23.5 -1.7
JMM   Marumori         54.68  31   P      P       06 56 27.2 +2.1
WMQ   Urumqi           55.34 341  eP      P       06 56 31.3 +1.4
SONM  Songino Array    55.92 358          P       06 56 33.6 -0.5
SONM  Songino Array    55.92 358   P      P       06 56 34.0 -0.1
         comp=Z,4.7nm,0.5s,baz=178,slow=8.6,SNR=32
SONM                               PcP    PcP     06 57 31.3 -0.5
         comp=Z,2.4nm,0.5s,baz=174,slow=4.5,SNR=5.1
SONM                               ScP    ScP     07 01 24.2  0.0
         comp=Z,0.9nm,0.6s,baz=186,slow=4.0,SNR=4.9
         comp=Z,4.7nm,0.5s
SONM  Songino Array    55.92 358   P      P       06 56 33.6 -0.5
SONM                               pmax   pmax
         comp=Z,3.0nm,0.5s
ULN   Ulaanbaatar      55.93 358   P      P       06 56 33.5 -0.7
ULN                                IAmb   IAmb    06 56 35.6
         comp=Z,6.2nm,0.5s
ULN   Ulaanbaatar      55.93 358ceP      P       06 56 33.9 -0.3
ULN                                pmax   pmax
         comp=Z,5.0nm,0.7s
ULN   Ulaanbaatar      55.93 358   P      P       06 56 33.5 -0.7
ULN                                sP     sP      06 57 03.9 +1.3
USA0B Ussuriysk Arra   56.24  20⇓eP     P       06 56 34.7 -1.5
USRK  Ussuriysk Ar.    56.24  20   P      P       06 56 35.4 -0.8
         comp=Z,5.5nm,0.7s,baz=207,slow=5.8,SNR=9.0
         comp=Z,5.5nm,0.7s
BNX   BinXian          56.26  15 ⇓P      P       06 56 35.8 -0.5
BNX                                pmax   pmax
         comp=Z,20nm,0.6s
KSH   Kashi            56.55 330   P      P       06 56 37.0 -1.7
KSH                                pmax   pmax
         comp=Z,7.0nm,0.7s
DZM   Mont Dzumac      56.82 111   LR     LR      07 22 23.4
         comp=Z,82nm,18.4s,baz=178,slow=37
JTM   Tenmabayashi     57.08  29   P      P       06 56 40.6 -1.5
JTM   Tenmabayashi     57.08  29   P      P       06 56 44.2 +2.0
CASY  Casey            57.91 179   P      P       06 56 47.9 +0.2
CASY                               IAmb   IAmb    06 57 01.7
         comp=Z,32nm,1.9s
CASY  Casey            57.91 179   P      P       06 56 48.8 +1.1
KDJ   Kajisay          58.00 332          P       06 56 49.1 +0.2
KDJ                                IAmb   IAmb    06 56 49.9
         comp=Z,8.4nm,0.6s
KDJ   Kajisay          58.00 332   P      P       06 56 49.1 +0.2
KDJ                                pmax   pmax
         comp=Z,8.0nm,0.6s
NRN   Naryn            58.01 331   P      P       06 56 47.8 -1.3
NRN   Naryn            58.01 331   P      P       06 56 47.8 -1.3
NRN                                pmax   pmax
         comp=Z,6.0nm,1.0s
WSAR  Wadi Sarin       58.35 304   P      P       06 56 51.4 -0.2
         baz=141,slow=24,SNR=4.6
TEY   Ternei           58.62  23  eP      P       06 56 47.3 -5.6
DRK   Karamyk          58.70 327   P      P       06 56 52.7 -1.3
DRK   Karamyk          58.70 327   P      P       06 56 52.7 -1.3
DRK                                pmax   pmax
         comp=Z,34nm,0.5s
BOOM  Boomskoye usch   58.85 332          P       06 56 53.9 -0.9
BOOM  Boomskoye usch   58.85 332   P      P       06 56 53.9 -0.9
BOOM                               pmax   pmax
         comp=Z,4.0nm,0.7s
ERM   Erimo            59.02  29   P      P       06 56 54.9 -0.9
ERM   Erimo            59.02  29   P      P       06 56 58.1 +2.3
ERM   Erimo            59.02  29   P      P       06 56 54.9 -0.9
ERM                                pmax   pmax
         comp=Z,78nm,0.8s
GAR   Garm             59.18 325          P       06 56 55.3 -1.8
GAR                                IAmb   IAmb    06 56 58.8
         comp=Z,13nm,0.7s
BTK   Batken           59.64 327   P      P       06 56 59.6 -0.6
BTK                                IAmb   IAmb    06 57 00.5
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         comp=Z,6.6nm,0.8s
BTK   Batken           59.64 327   P      P       06 56 59.6 -0.6
BTK                                pmax   pmax
         comp=Z,7.0nm,0.8s
AAK   Ala-Archa        59.65 331   LR     LR      07 28 03.5
         comp=Z,62nm,19.0s,baz=134,slow=41
AAK   Ala-Archa        59.65 331⇑eP     P       06 57 00.6 +0.3
AAK                                pmax   pmax
         comp=Z,2.0nm,0.9s
SIMJ  Simiganj         59.69 324          P       06 56 58.1 -2.5
SIMJ                               IAmb   IAmb    06 56 59.1
         comp=Z,7.3nm,0.5s
SIMJ  Simiganj         59.69 324   P      P       06 56 58.4 -2.3
SIMJ                               sP     sP      06 57 28.9 -0.3
MK31  Makanchi Array   59.77 339deP      P       06 56 59.5 -1.4
MKAR  Makanchi Array   59.77 339          P       06 56 59.3 -1.6
MKAR  Makanchi Array   59.77 339   P      P       06 56 59.6 -1.2
         comp=Z,5.6nm,0.5s,baz=148,slow=7.2,SNR=50
MKAR                               LR     LR      07 26 37.7
         comp=Z,50nm,19.0s,baz=166,slow=40
         comp=Z,5.6nm,0.5s
MAKZ  Makanchi         59.90 339   P      P       06 57 01.9 +0.1
ASAJ  Asahikawa        60.38  27   P      P       06 57 04.2 -0.8
         comp=Z,11nm,0.6s,baz=238,slow=6.7,SNR=14
ASAJ                               LR     LR      07 23 30.2
         comp=Z,31nm,20.7s,baz=222,slow=36
         comp=Z,11nm,0.6s
ASAJ  Asahikawa        60.38  27   P      P       06 57 04.1 -0.9
ASAJ                               pmax   pmax
         comp=Z,104nm,1.0s
JKA   Kamikawa-asahi   60.38  27          P       06 57 04.1 -1.0
HEH   HeiHe            60.47  13  eP      P       06 57 04.8 -0.7
HEH                                pmax   pmax
         comp=Z,39nm,0.6s
KLR   Kul'dur          60.65  17   P      P       06 57 05.7 -1.1
         comp=Z,12nm,0.5s,baz=224,slow=4.6,SNR=39
KLR                                LR     LR      07 23 28.6
         comp=Z,36nm,20.8s,baz=230,slow=36
         comp=Z,12nm,0.5s
KLR   Kul'dur          60.65  17c iP     P       06 57 05.4 -1.4
KLR                                pmax   pmax
         comp=Z,6.0nm,0.7s
H04N2 CROZET ISLANDS   61.59 222   T      T       08 04 16.8
         baz=71,slow=75,SNR=219
H04N1 CROZET ISLANDS   61.60 222   T      T       08 04 17.0
         baz=71,slow=75,SNR=220
H04N3 CROZET ISLANDS   61.61 222   T      T       08 04 19.3
         baz=71,slow=75,SNR=216
KKAR  Karatay Array    61.97 329   P      P       06 57 14.5 -1.3
KKAR  Karatay Array    61.97 329   P      P       06 57 14.5 -1.3
DRV   Dumont d'Urvil   62.02 167   P      P       06 57 16.4 +0.7
YSS   Yuzhno-Sakhali   62.66  25d iP     P       06 57 20.0 -0.3
YSS                                pmax   pmax
         comp=Z,13nm,0.9s
JCZ   Jackson Bay      62.74 136   P      P       06 57 21.7 +0.5
ZEA   Zeya             63.70  12  eP      P       06 57 26.8 -0.3
ZEA                                pmax   pmax
         comp=Z,10.0nm,0.7s
KURBB Kurchatov Arra   64.34 339   P      P       06 57 30.4 -1.0
         comp=Z,2.4nm,0.3s,baz=151,slow=6.1,SNR=29
         comp=Z,2.4nm,0.3s
KURK  Kurchatov        64.39 339          P       06 57 30.4 -1.2
KURK  Kurchatov        64.39 339   P      P       06 57 30.4 -1.2
KURK                               pmax   pmax
         comp=Z,5.0nm,0.8s
KURK  Kurchatov        64.39 339   P      P       06 57 30.4 -1.2
ZAA0  Zalesovo Array   65.28 345   P      P       06 57 36.0 -1.3
ZALV  Zalesovo Beam    65.28 345   P      P       06 57 35.6 -1.8
ZALV  Zalesovo Beam    65.28 345   P      P       06 57 35.7 -1.6
         comp=Z,3.8nm,0.3s,baz=158,slow=5.8,SNR=12
ZALV                               LR     LR      07 29 40.0
         comp=Z,44nm,19.1s,baz=228,slow=39
         comp=Z,3.8nm,0.3s
ZALV  Zalesovo Beam    65.28 345   P      P       06 57 35.6 -1.8
MAW   Mawson           66.72 197   P      P       06 57 47.8 +1.3
         comp=Z,3.9nm,0.6s,baz=49,slow=6.9,SNR=12
MAW                                LR     LR      07 23 21.5
         comp=Z,80nm,18.2s,baz=82,slow=32
         comp=Z,3.9nm,0.6s
CCD   Concordia, Ant   67.27 176   P      P       06 57 51.9 +1.5
BKZ   Black Stump Fm   67.39 129   P      P       06 57 52.2 +0.8
BKZ                                IAmb   IAmb    06 57 53.5
         comp=Z,28nm,1.2s
BKZ   Black Stump Fm   67.39 129   P      P       06 57 52.5 +1.1
RTZ   Ruatahuna        67.70 128   P      P       06 57 54.1 +0.8
RTZ                                IAmb   IAmb    06 57 55.6
         comp=Z,39nm,1.1s
URZ   Urewera          67.75 128   LR     LR      07 30 10.4
         comp=Z,68nm,18.1s,baz=274,slow=38
MXZ   Matakaoa Point   68.61 127   P      P       06 57 59.8 +0.8
MXZ   Matakaoa Point   68.61 127   P      P       06 58 00.3 +1.3
BVAR  Borovoye Array   69.32 336   P      P       06 58 02.1 -0.8
         comp=Z,4.3nm,0.5s,baz=134,slow=8.5,SNR=16
BVAR                               LR     LR      07 31 27.8
         comp=Z,47nm,18.4s,baz=129,slow=38
         comp=Z,4.3nm,0.5s
BRVK  Borovoye         69.39 336   P      P       06 58 02.2 -1.2
BRVK  Borovoye         69.39 336ceP      P       06 58 02.3 -1.1
BRVK                               pmax   pmax
         comp=Z,4.0nm,1.0s
BRVK  Borovoye         69.39 336   P      P       06 58 02.4 -1.1
BRVK                               sP     sP      06 58 33.1 +0.9
AB31  Akbulak array    71.53 329   P      P       06 58 15.0 -1.5
AB31                               IAmb   IAmb    06 58 17.0
         comp=Z,14nm,0.6s
ABKAR Akbulak array    71.53 329          P       06 58 15.5 -1.0
YAK   Yakutsk          71.93  10   P      P       06 58 17.9 -0.7
         comp=Z,56nm,0.5s,baz=97,slow=1.0,SNR=7.0
YAK   Yakutsk          71.93  10  eP      P       06 58 17.5 -1.1
YAK                               e*PP    pP      06 58 42.1 +3.0
YAK                               e               07 00 58.6
YAK                               eS      S       07 07 31.2 -2.2
YAK                               e*SS    SKSac   07 08 14.7 -0.6
YAK                               eSS     SS      07 12 09.1 -2.6
YAK                                pmax   pmax
         comp=Z,31nm,0.8s
YAK                                pmax   pmax
         comp=E,3.0nm,1.0s
YAK                                pmax   pmax
         comp=Z,125nm,5.3s
YAK                                pmax   pmax
         comp=N,33nm,3.0s
YAK                                smax   smax
         comp=E,12nm,1.3s
YAK                                smax   smax
         comp=N,5.0nm,0.7s
YAK   Yakutsk          71.93  10   P      P       06 58 17.8 -0.7
PETK  Petropavlovsk-   73.77  28   P      P       06 58 28.7 -1.1
PETK  Petropavlovsk-   73.77  28   P      P       06 58 28.9 -0.8
         comp=N,3.2nm,0.5s,baz=183,slow=1.3,SNR=11
PETK                               LR     LR      07 33 12.9
         comp=N,22nm,19.1s,baz=207,slow=38
         comp=N,3.2nm,0.5s
PETK  Petropavlovsk-   73.77  28   P      P       06 58 28.7 -1.1
VNDA  Vanda            74.35 170   P      P       06 58 34.0 +1.3
         comp=N,0.9nm,0.4s,baz=316,slow=5.3,SNR=6.7
         comp=N,0.9nm,0.4s
SYO   Syowa Base       74.98 200⇑eP     P       06 58 37.8 +1.3
SYO   Syowa Base       74.98 200⇑esP    sP      06 59 06.2 +2.0
ARTI  Arti             76.68 334          P       06 58 45.4 -1.0
ARTI                               IAmb   IAmb    06 58 47.2
         comp=Z,19nm,0.5s
ARTI  Arti             76.68 334   LR     LR      07 38 12.1
         comp=Z,33nm,21.7s,baz=173,slow=40
ARTI  Arti             76.68 334c iP     P       06 58 46.1 -0.3
ARTI                                              07 01 36.3
ARTI                               S      S       07 08 25.3 -1.5
ARTI                               pmax   pmax
         comp=Z,8.0nm,0.6s
MATP  Matopo           78.28 251   LR     LR      07 27 32.5
         comp=Z,34nm,19.1s,baz=77,slow=31
SEY   Seymchan         78.37  19   P      P       06 58 55.1 -0.5
         comp=Z,4.4nm,0.6s,baz=222,slow=5.0,SNR=17
         comp=Z,4.4nm,0.6s
SEY   Seymchan         78.37  19⇓eP     P       06 58 55.3 -0.3
SEY                                pmax   pmax
         comp=Z,3.0nm,0.4s
NRIK  Noril'sk         78.87 352   P      P       06 58 57.7 -0.6
         comp=Z,4.5nm,0.4s,baz=125,slow=5.7,SNR=8.8
NRIK                               LR     LR      07 36 07.4
         comp=Z,38nm,20.6s,baz=158,slow=37
         comp=Z,4.5nm,0.4s
NRIK  Noril'sk         78.87 352ceP      P       06 58 57.4 -0.8
NRIK                               pmax   pmax
         comp=Z,6.0nm,1.0s
KBZ   Khabaz           78.92 318   P      P       06 58 58.9 -0.1
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         comp=Z,9.5nm,0.9s,baz=126,slow=3.0,SNR=11
         comp=Z,9.5nm,0.9s
KBZ   Khabaz           78.92 318deP      P       06 58 59.9 +0.8
KBZ                                pmax   pmax
         comp=Z,11nm,0.9s
LSZ   Lusaka           79.03 256   LR     LR      07 30 53.6
         comp=Z,59nm,18.7s,baz=133,slow=33
KIV   Kislovodsk       79.15 318  eP      P       06 59 00.3 -0.2
KIV                                pmax   pmax
         comp=Z,10.0nm,1.0s
ASF   Jabal al Asfar   79.50 305   P      P       06 59 03.3 +0.7
         comp=Z,6.4nm,0.7s,baz=344,slow=23,SNR=5.6
         comp=Z,6.4nm,0.7s
BELG  Belogornoye      79.77 327d iP     P       06 59 02.1 -1.4
BELG                               pmax   pmax
         comp=Z,4.0nm,1.1s
EIL   Elat             80.42 302   P      P       06 59 08.3 +0.8
         comp=Z,6.5nm,0.6s,baz=48,slow=5.0,SNR=6.9
         comp=Z,6.5nm,0.6s
LBTB  Lobatse          80.58 246   LR     LR      07 29 57.7
         comp=Z,76nm,19.8s,baz=84,slow=32
BOSA  Boshof           80.60 242   P      P       06 59 10.3 +1.5
         comp=Z,1.0nm,0.4s,baz=119,slow=2.9,SNR=7.3
BOSA                               LR     LR      07 31 00.8
         comp=Z,60nm,18.3s,baz=73,slow=33
         comp=Z,1.0nm,0.4s
TIXI  Tiksi            80.85   6   LR     LR      07 38 21.0
         comp=Z,38nm,18.3s,baz=180,slow=38
TIXI  Tiksi            80.85   6⇑eP     P       06 59 07.6 -1.3
TIXI                               pmax   pmax
         comp=Z,10.0nm,0.8s
MMAI  Mount Meron Ar   80.94 305   P      P       06 59 11.2 +0.8
         comp=Z,4.2nm,0.5s,baz=112,slow=6.4,SNR=11
         comp=Z,4.2nm,0.5s
QSPA  South Pole Qui   81.71 180   P      P       06 59 14.7 +0.9
QSPA  South Pole Qui   81.71 180   P      P       06 59 15.0 +1.1
         comp=Z,2.8nm,0.5s,baz=312,slow=0.8,SNR=47
QSPA                               LR     LR      07 30 02.7
         comp=Z,87nm,21.7s,baz=321,slow=32
         comp=Z,2.8nm,0.5s
KIRV  Kirov            81.92 333deP      P       06 59 14.9 +0.1
BR104 Keskin Array S   84.14 311   P      P       06 59 26.0 -0.9
         comp=Z,76nmcomp=Z,8.4nm,0.9s
BR131 Keskin Array S   84.15 311          P       06 59 26.4 -0.6
BR131                              IAmb   IAmb    06 59 27.9
         comp=Z,7.4nm,0.7s
BR131 Keskin Array S   84.15 311⇓eP     P       06 59 26.4 -0.6
BRTR  Keskin Array B   84.15 311          P       06 59 26.1 -0.9
BRTR  Keskin Array B   84.15 311   P      P       06 59 27.1 +0.1
         comp=Z,5.6nm,0.8s,baz=134,slow=7.2,SNR=20
         comp=Z,5.6nm,0.8s
BR105 Keskin Array S   84.16 311   P      P       06 59 25.5 -1.6
         comp=Z,6.8nm,0.8s
BR106 Keskin Array S   84.17 311   P      P       06 59 26.2 -0.9
         comp=Z,60nmcomp=Z,7.5nm,0.9s
BILL  Bilibino         86.07  18⇑eP     P       06 59 34.9 -0.9
BILL                               pmax   pmax
         comp=Z,3.0nm,0.7s
OBN   Obninsk          86.87 327⇑iP     P       06 59 40.0 +0.1
OBN                                pmax   pmax
         comp=Z,25nm,0.7s
OBN   Obninsk          86.87 327   P      P       06 59 38.9 -1.0
ADK   Adak             86.95  37   P      P       06 59 41.7 +1.3
KLMR  Klimovskoe       87.42 333  eP      P       06 59 40.8 -1.6
KLMR                               pmax   pmax
         comp=Z,43nm,1.3s
SNAA  Sanae            88.89 197   P      P       06 59 50.6 +1.2
         comp=Z,1.2nm,0.5s,baz=163,slow=9.2,SNR=12
SNAA                               LR     LR      07 33 38.6
         comp=Z,74nm,21.3s,baz=29,slow=31
         comp=Z,1.2nm,0.5s
AK10  Malin Array Si   89.88 321   P      P       06 59 52.8 -1.5
AK08  Malin Array Si   89.89 321   P      P       06 59 52.9 -1.4
AK07  Malin Array Si   89.90 321   P      P       06 59 53.0 -1.4
AK06  Malin Array Si   89.91 321   P      P       06 59 53.3 -1.1
AKASG Malin Array Be   89.92 321   P      P       06 59 53.7 -0.8
         comp=Z,1.5nm,0.4s,baz=89,slow=4.9,SNR=17
AKASG                              LR     LR      07 45 24.6
         comp=Z,18nm,19.2s,baz=57,slow=39
         comp=Z,1.5nm,0.4s
AKBB  Malin Array Si   89.92 321   P      P       06 59 53.4 -1.1
AKBB                               IAmb   IAmb    06 59 54.2
         comp=Z,5.2nm,0.5s
AKBB  Malin Array Si   89.92 321ceP      P       06 59 53.6 -0.9
AKBB  Malin Array Si   89.92 321   P      P       06 59 53.0 -1.5
KIEV  Kiev             89.93 321          P       06 59 53.2 -1.3
KIEV                               IAmb   IAmb    06 59 54.2
         comp=Z,4.2nm,0.5s
KIEV  Kiev             89.93 321   P      P       06 59 53.2 -1.3
KIEV                               pmax   pmax
         comp=Z,4.0nm,0.5s
KIEV  Kiev             89.93 321   P      P       06 59 53.1 -1.4
         comp=Z,21nm,1.0s
PLOR  Plostina         90.58 316 ⇑S      S       07 10 47.4 +0.3
NDNU  Novodnistrovsk   90.65 319   P      P       06 59 56.7 -1.2
LUBAR Lubar, Ukraine   90.67 320   P      P       06 59 56.8 -1.2
BURAR Bucovina Array   91.88 318   P      P       07 00 03.8  0.0
BUR08 Bucovina Ar. S   91.89 318          P       07 00 03.5 -0.4
BUR08                              IAmb   IAmb    07 00 07.5
         comp=Z,3.8nm,0.8s
APA   Apatity          92.16 338⇓iP     P       07 00 00.9 -3.6
APA                                pmax   pmax
         comp=Z,5.0nm,1.1s
APA                                MLR    MLR
         comp=Z,300nm,20.0s
FINES FINESS Array B   93.83 331   P      P       07 00 11.7 -0.6
         comp=Z,4.2nm,0.8s,baz=102,slow=8.0,SNR=9.9
         comp=Z,4.2nm,0.8s
FINES FINESS Array B   93.83 331 i P      P       07 00 12.6 +0.3
FINES                              pmax   pmax
         comp=Z,4.0nm,0.8s
ARCES ARCESS Array B   95.42 339   P      P       07 00 18.4 -1.1
         comp=Z,2.3nm,0.7s,baz=99,slow=7.5,SNR=13
ARCES                              LR     LR      07 48 22.2
         comp=Z,57nm,20.4s,baz=91,slow=39
         comp=Z,2.3nm,0.7s
MORC  Moravsky Berou   97.19 319  eP      P       07 00 27.9 -0.1
VRAC  Vranov           97.78 319   LR     LR      07 52 32.8
         comp=Z,22nm,18.4s,baz=66,slow=40
VRAC  Vranov           97.78 319  eP      P       07 00 28.9 -1.7
SPITS Spitsbergen Ar   98.59 348   P      P       07 00 32.8 -0.9
         comp=Z,3.9nm,0.6s,baz=121,slow=8.2,SNR=5.1
         comp=Z,3.9nm,0.6s
YKA   Yellowknife Ar  117.37  21   PKP    PKPdf   07 05 40.1 -0.1
         comp=Z,0.3nm,0.3s,baz=344,slow=2.1,SNR=17
NVAR  Mina Array Bea  128.02  47   PKP    PKiKP   07 06 02.4  0.0
         comp=Z,0.7nm,0.7s,baz=255,slow=2.1,SNR=7.4
PDAR  Pinedale Array  131.83  38   PKP    PKiKP   07 06 10.4 +0.5
         comp=Z,0.6nm,0.6s,baz=154,slow=1.2,SNR=7.4
PDAR                               SKPbc  SKPab   07 09 28.8  0.0
         comp=Z,1.3nm,0.9s,baz=238,slow=4.5,SNR=6.8
ULM   Lac du Bonnet   133.34  22   SKPbc  SKPab   07 09 33.7 -1.0
         comp=Z,1.6nm,0.8s,baz=265,slow=4.9,SNR=4.2
SCHQ  Schefferville   133.46 357   PKP    PKiKP   07 06 12.1 -0.4
         comp=Z,1.4nm,0.6s,baz=308,slow=2.6,SNR=5.5
TXAR  Lajitas Array   142.88  51   PKP    PKPdf   07 06 26.9 -2.5
         comp=Z,1.2nm,0.5s,baz=295,slow=0.6,SNR=24
TXAR                               SKPbc  SKiKP   07 10 02.2 +0.1
         comp=Z,1.2nm,0.7s,baz=295,slow=1.1,SNR=9.5
BDFB  Brasilia        147.07 224   PKPbc  PKPbc   07 06 39.7 +0.5
         comp=Z,1.8nm,0.5s,baz=42,slow=1.9,SNR=6.2
LPAZ  La Paz          155.41 187   PKPab  PKPab   07 07 16.7 +0.9
         comp=Z,1.1nm,0.6s,baz=225,slow=1.4,SNR=6.4
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DSN ***29*** *06:49:46.5±1.6, 27°.27N×53°.77E, h10km, ML3.6/16, Error ellipse: s-maj=18.7km s-min=4.6km az=173.0*

IDC ***29*** *06:49:46.8±1.3, 27°.09N×53°.81E, h0km, mb3.8/11, mbtmp3.8/13, ML2.8/2, MS3.2/10, Error ellipse: s-maj=27.6km s-min=19.9km az=166.0*

THR ***29*** *06:49:47.2±0.0, 26°.92N×53°.85E, h10km±6km, ML4.1*

TEH ***29*** *06:49:47.9, 27°.02N×53°.85E, h14km±23km*

OMAN ***29*** *06:49:50.8±0.1, 26°.96N×53°.90E, h12km, mb4.8/4, ml3.8/21, Error ellipse: s-maj=1.0km s-min=0.5km az=358.0*

ISC 29 06:49:47.3±1.7**, 26°.99N**±0°.03×**53°.86E**±0°.02**, h5**km±12km**, n116, σ1s.73**/130**, mb3.5**/10**, MS3.1**/9**, Southern Iran**

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Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                   Op     ISC       h  m  s     ISC
LAR1  LAR               0.81  34   Pg     Pg      06 50 03.5 +0.6
GHIR  Ghir-Karzin       1.50 329  ePnA            06 50 16.2
GHIR                               IAML           06 50 48.0
         comp=Z,1.4nm,1.0s
JHRM  Jahrom            1.53 351   Pg     Pb      06 50 16.1 -0.1
QIR1  Qir               1.65 334   Pg     Pb      06 50 17.6 -0.6
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BNDS	Bandar-Abbas	2.10	78	*e*PnA		06 50 25.0	
BNDS				IAML		06 51 16.5	
	comp=Z,2.0nm,1.0s						
GENO	Geno	2.10	78	Pn	Pb	06 50 24.6	-1.3
JRN	Qarnain Island	2.24	204	P	Pb	06 50 28.0	-0.1
	SNR=16						
JRN				S	Sb	06 50 57.2	+1.0
SHME	Shamm	2.25	114	P	Pn	06 50 26.2	+1.0
	SNR=23						
SHME				S	Sb	06 50 55.7	-0.8
SHME	Shamm	2.25	114	*e*P	Pn	06 50 25.9	+0.8
	SNR=22						
IBND	Bandar-abas	2.43	79	Pn	Pn	06 50 29.1	+1.5
BANOM	Banah	2.43	115	P	Pn	06 50 29.1	+1.4
BANOM				S	Sb	06 51 01.2	-0.6
BANOM	Banah	2.43	115	*e*P	Pn	06 50 28.8	+1.1
	SNR=19						
BANOM				S	Sb	06 51 01.7	-0.1
NAZ	Nazwa, Dubai	2.57	141	P	Pb	06 50 32.9	-1.0
	SNR=30						
NAZ				S	Sb	06 51 04.0	-1.7
NAZ	Nazwa, Dubai	2.57	141	*e*P	Pb	06 50 32.8	-1.0
	SNR=20						
MASF	Masafi	2.62	128	P	Pb	06 50 33.0	-1.7
	SNR=7.0						
AJN	Ajban	2.62	157	P	Pn	06 50 32.5	+2.2
AJN				S	Sb	06 51 06.2	-1.1
AJN	Ajban	2.62	157	*e*P	Pb	06 50 33.4	-1.4
	SNR=7.0						
MSFE	Esma-Masafi	2.63	128	*e*P	Pb	06 50 33.0	-1.9
	SNR=7.9						
DSBU	Dashti - Bushe	2.68	301	Pn	Pn	06 50 32.4	+1.2
ASUD	Al Ashush, Dub	2.70	150	P	Pb	06 50 35.3	-0.9
	SNR=14						
ASUD				S	Sb	06 51 08.3	-1.3
ASUD	Al Ashush, Dub	2.70	150	*e*P	Pb	06 50 34.7	-1.4
	SNR=6.6						
FAQ	Al Faqa, Dubai	2.73	145	P	Pb	06 50 35.0	-1.5
FAQ				S	Sb	06 51 08.7	-1.6
FAQ	Al Faqa, Dubai	2.73	145	P	Pb	06 50 34.6	-2.0
MDH	Madha	2.76	127	P	Pn	06 50 34.5	+2.2
	SNR=19						
MDH				S	Sb	06 51 10.1	-1.3
MDH	Madha	2.76	127	*i* P	Pn	06 50 34.4	+2.2
	SNR=14						
SHMA	Al-Shehemyia	2.83	247	P	Pb	06 50 36.4	-2.0
	SNR=27						
SHMA				S	Sb	06 51 11.8	-1.6
SHI	Shiraz	2.90	336	Pn	Pn	06 50 35.6	+1.4
UOSS	Minazif	2.93	134	P	Pn	06 50 36.7	+2.1
UOSS	Minazif	2.93	134	*i* P	Pn	06 50 36.4	+1.8
	SNR=8.6						
HATD	Hatta, Dubai	2.97	136	P	Pn	06 50 37.7	+2.6
HATD	Hatta, Dubai	2.97	136	*i* P	Pn	06 50 37.3	+2.2
	SNR=9.1						
ASHO	Ashiyiah	3.03	139	P	Pn	06 50 38.7	+2.6
	SNR=56						
ASHO	Ashiyiah	3.03	139	*i* P	Pn	06 50 38.1	+2.1
	SNR=56						
GHWR	Ruwais	3.15	197	P	Pn	06 50 39.8	+2.3
GHWR				S	Sn	06 51 18.5	+3.0
SAKB	Bahrain	3.15	252	P	Pb	06 50 40.4	-3.4
SAKB				S	Sb	06 51 20.4	-2.1
TRNA	Turayna	3.28	227	P	Pn	06 50 42.1	+2.8
	SNR=23						
TRNA				S	Sn	06 51 21.8	+3.0
ALNE	Al Ain	3.38	149	P	Pn	06 50 44.0	+3.2
	SNR=6.1						
ALNE				S	Sn	06 51 24.1	+2.7
ALNE	Al Ain	3.38	149	*i* P	Pn	06 50 43.5	+2.6
	SNR=15						
SLWR	Sila	3.51	214	P	Pn	06 50 44.8	+2.3
SLWR				S	Sn	06 51 27.5	+3.0
SMRA	Abu-Samra	3.54	231	P	Pn	06 50 46.4	+3.5
	SNR=16						
SMRA				S	Sb	06 51 28.8	-4.8
KHNJ	Kahnooj	3.54	74	Pn	Pn	06 50 44.3	+1.2
NGRK	Negar Kerman	3.66	43	Pn	Pn	06 50 46.0	+1.1
SOHO	SOHO	3.73	139	P	Pn	06 50 47.7	+2.1
SOHO				S	Sn	06 51 31.1	+1.2
SOHO	SOHO	3.73	139	*i* P	Pn	06 50 47.0	+1.5
	SNR=13						
JASK	Jask - Hormozg	3.76	106	Pn	Pn	06 50 47.7	+1.7
JASK	Jask - Hormozg	3.76	106	P	Pn	06 50 48.0	+2.1
JASK				S	Sn	06 51 32.7	+2.1
KRBR	Kerman	3.92	40	Pn	Pn	06 50 50.2	+1.8
KRBR	Kerman	3.92	40	*e*PnA		06 50 50.6	
KRBR				IAML		06 52 08.4	
	comp=Z,0.4nm,1.0s						
MZR	Muzera	3.99	185	P	Pn	06 50 51.6	+2.5
MZR				S	Sn	06 51 36.6	+0.3
MZR	Muzera	3.99	185	*i* P	Pn	06 50 51.0	+1.9
	SNR=7.2						
KHGB	Koh Gabri	4.08	34	Pn	Pn	06 50 51.7	+1.1
CHMN	Cheshme madani	4.32	48	Pn	Pn	06 50 55.6	+1.6
ARQ	Araqi	4.37	146	P	Pn	06 50 56.4	+2.1
	SNR=24						
ARQ				S	Sn	06 51 48.0	+2.4
UMZA	Um Al Zommool	4.42	164	P	Pn	06 50 57.4	+2.4
UMZA				S	Sn	06 51 49.1	+2.2
IMEH	Mehriz	4.43	8	Pn	Pn	06 50 56.6	+1.1
KLNJ	Kolanjah	4.47	334	Pn	Pn	06 50 56.6	+0.5
KBAM	BAM	4.58	61	Pn	Pn	06 50 58.9	+1.6
ZRDN	Zarand Kerman	4.60	30	Pn	Pn	06 50 59.0	+1.2
HOQ	Hoqain	4.61	137	Pn	Pn	06 50 59.5	+1.8
HOQ	Hoqain	4.61	137	P	Pn	06 51 00.4	+2.6
	SNR=8.0						
HOQ				S	Sn	06 51 52.0	+0.3
ISAD	Sadrabad	4.91	358	Pn	Pn	06 51 02.6	+0.6
IRAM	Ramesheh	4.97	345	Pn	Pn	06 51 04.1	+1.3
BIDO	Bidbid	5.18	131	P	Pn	06 51 07.9	+2.4
BIDO				S	Sn	06 52 04.8	-1.0
BSY	Bisya	5.20	144	P	Pn	06 51 08.3	+2.4
	SNR=12						
BSY				S	Sn	06 52 07.4	+1.1
ICHK	Chekchek	5.25	5	Pn	Pn	06 51 07.5	+0.7
IBRJ	Brojen	5.40	336	Pn	Pn	06 51 09.4	+0.6
YZKH	Yazd	5.42	7	*e*PnA		06 51 10.1	
YZKH				IAML		06 52 28.9	
	comp=Z,0.1nm,1.0s						
SMDO	Samad	5.45	135	P	Pn	06 51 11.4	+2.1
	SNR=20						
SMDO				S	Sn	06 52 12.8	+0.2
IGAR	Gharneh	5.62	344	Pn	Pn	06 51 12.9	+1.2
WSAR	Wadi Sarin	5.71	130	Pn	Pn	06 51 13.6	+0.8
	baz=314,slow=24,SNR=20						
WSAR				Sn	Sn	06 52 18.4	-0.5
	baz=253,slow=24,SNR=5.8						
WSAR	Wadi Sarin	5.71	130	P	Pn	06 51 14.5	+1.6
WSAR				S	Sn	06 52 16.5	-2.4
NASN	Na'in	5.86	351	IAML		06 52 30.9	
	comp=Z,0.2nm,1.0s						
JMDO	Jabal Madar	6.00	139	P	Pn	06 51 19.5	+2.6
JMDO				S	Sn	06 52 24.9	-1.1
IPIR	Pirpir	6.23	336	Pn	Pn	06 51 20.3	0.0
WBK	Wadi Bani Khal	6.37	132	Pn	Pn	06 51 23.3	+1.5
WBK	Wadi Bani Khal	6.37	132	P	Pn	06 51 23.5	+1.6
WBK				S	Sn	06 52 34.7	-0.3
TPRV	Parvadeh(Tabas	6.49	21	Pn	Pn	06 51 24.3	+0.7
IKLH	Kolahrood	6.61	343	Pn	Pn	06 51 26.0	+0.6
ZHSF	Zahedan	6.63	65	*e*Pn	Pn	06 51 27.8	+2.2
ZHSF				IAML		06 53 26.7	
	comp=Z,18nm,1.0s						
BSRN	Basiran	6.75	42	Pn	Pn	06 51 28.5	+1.3
BSRN	Basiran	6.75	42	*e*PnA		06 51 28.8	
BSRN				IAML		06 53 43.7	
	comp=Z,0.1nm,1.0s						
IKOO	Kooshah	7.02	38	Pn	Pn	06 51 32.0	+1.0
MHTO	MHTO	7.06	147	P	Pn	06 51 33.1	+1.8
TABS	Tabas	7.21	22	*e*Pn	Pn	06 51 34.5	+1.1
TABS				IAML		06 53 56.4	
	comp=Z,36nm,1.0s						
TNSJ	Nastanj	7.34	18	Pn	Pn	06 51 35.6	+0.3
SRVN	Saravan	7.61	85	Pn	Pn	06 51 41.0	+1.9
ASAO	Ashtian	8.22	337	*e*Pn	Pn	06 51 48.8	+1.3
RAYN	Ar Rayn	8.32	247	P	Pn	06 51 49.9	+1.2
DOK	Doka	8.34	178	P	Pn	06 51 49.8	+0.9
SHRT	Shahrakht	8.65	38	*e*PnA		06 51 55.2	
HAGD	Aghdareh	8.79	334	Pn	Pn	06 51 56.4	+1.1
WHFO	Wadi Hawf	9.03	181	P	Pn	06 51 59.2	+0.7
DMTO	DMTO	9.29	174	P	Pn	06 52 03.6	+1.7
RBK	Rabkut	9.45	178	P	Pn	06 52 05.8	+1.6
GNI	Garni	15.15	332	Pn	Pn	06 53 23.9	+1.8
	comp=Z,3.7nm,0.4s,baz=255,slow=7.2,SNR=4.1						
EIL	Elat	16.86	284	Pn	Pn	06 53 44.5	+0.3
	comp=Z,0.2nm,0.3s,baz=35,slow=9.6,SNR=3.6						
EIL				LR	LR	07 01 18.8	
	comp=Z,66nm,18.4s,baz=62,slow=41						
	comp=Z,2.6nm,0.8s						
MMAI	Mount Meron Ar	17.07	295	LR	LR	07 02 00.9	
	comp=Z,47nm,18.1s,baz=120,slow=43						
BRTR	Keskin Array B	21.07	312	P	P	06 54 32.9	+0.3
	comp=Z,0.6nm,0.4s,baz=129,slow=13,SNR=3.9						
	comp=Z,0.6nm,0.4s						
AAK	Ala-Archa	22.94	42	LR	LR	07 04 12.9	
	comp=Z,47nm,19.4s,baz=246,slow=38						
BVAR	Borovoye Array	28.78	21	P	P	06 55 45.3	-0.6
	comp=Z,0.7nm,0.4s,baz=207,slow=9.3,SNR=6.2						
BVAR				LR	LR	07 09 08.9	
	comp=Z,56nm,18.2s,baz=195,slow=40						
	comp=Z,0.7nm,0.4s						
ARTI	Arti	29.55	5	LR	LR	07 09 41.6	
	comp=Z,46nm,19.1s,baz=194,slow=41						
MKAR	Makanchi Array	29.87	41	P	P	06 55 57.0	+1.3
	comp=Z,0.4nm,0.6s,baz=242,slow=6.7,SNR=4.5						
	comp=Z,0.4nm,0.6s						
KURBB	Kurchatov Arra	30.17	32	P	P	06 55 57.8	-0.5
	comp=Z,0.4nm,0.7s,baz=233,slow=8.4,SNR=4.8						
	comp=Z,0.4nm,0.7s						
AKASG	Malin Array Be	30.21	328	P	P	06 55 57.4	-1.2
	comp=Z,0.2nm,0.3s,baz=139,slow=8.1,SNR=2.0						
	comp=Z,0.2nm,0.3s						
ZALV	Zalesovo Beam	35.27	32	P	P	06 56 42.4	-0.4
	comp=Z,0.7nm,0.3s,baz=242,slow=9.5,SNR=5.7						
	comp=Z,0.7nm,0.3s						
VRAC	Vranov	36.29	318	LR	LR	07 14 29.4	
	comp=Z,24nm,18.6s,baz=82,slow=41						
FINES	FINESS Array B	39.17	339	P	P	06 57 14.4	-1.4
	comp=Z,1.9nm,0.8s,baz=141,slow=11,SNR=8.3						
	comp=Z,1.9nm,0.8s						
CLL	Collm	39.19	319	*e*P	P	06 57 16.0	-0.2
CLL				AMS	AMS	09 12 00.0	
	comp=N,100nm,18.3s						
CLL				AMS	AMS	09 12 00.0	
	comp=E,100nm,18.8s						
CLL				AMS	AMS	09 12 00.0	
	comp=Z,100nm,18.6s						
HFS	Hagfors	42.94	332	LR	LR	07 17 02.2	
	comp=Z,27nm,21.4s,baz=96,slow=38						
NOA	NORSAR Array B	44.45	332	LR	LR	07 18 10.0	
	comp=Z,23nm,18.8s,baz=90,slow=38						
EKA	Eskdalemuir Ar	49.61	321	P	P	06 58 37.9	-1.5
	comp=Z,0.2nm,0.4s,baz=106,slow=8.5,SNR=3.6						
	comp=Z,0.2nm,0.4s						
TORD	Torodi Ar. Bea	50.57	265	P	P	06 58 47.8	+0.5
	comp=Z,1.1nm,0.3s,baz=61,slow=8.5,SNR=2.1						
	comp=Z,1.1nm,0.3s						
DBIC	Dimbokro	59.18	261	P	P	06 59 49.5	-0.3
	comp=Z,4.5nm,0.7s,baz=61,slow=5.9,SNR=4.3						
	comp=Z,4.5nm,0.7s						
YAK	Yakutsk	59.92	32	LR	LR	07 29 02.4	
	comp=Z,46nm,18.6s,baz=256,slow=39						
ILAR	Eielson Array	87.12	9	P	P	07 02 34.2	+0.2
	comp=Z,0.1nm,0.7s,baz=320,slow=4.7,SNR=4.2						
	comp=Z,0.1nm,0.7s						
KDAK	Kodiak Island	92.68	14	LR	LR	07 51 37.7	
	comp=Z,39nm,18.0s,baz=237,slow=40						

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*IDC **29** 06:57:44.6±0.9, 42°.87N×146°.17E, h0^{km}, mb3.9/15, mbtmp3.9/17, ML3.5/2, MS3.1/1, Error ellipse: s-maj=20.9km s-min=19.2km az=2.0*

*JMA **29** 06:57:46.4±0.2, 42°.8N±0°.6×14°6E±°, h36^{km}±2^{km}, MD3.9/35, MV4.1/35, OFF NEMURO PENINSULA*

JMA Felt I J1 at OFF NEMURO PENINSULA .

*NIED **29** 06:57:46.4, 42°.80N×146°.24E, h36^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.55; $M_{\theta\theta}$1.28; $M_{\phi\phi}$-2.83; $M_{r\theta}$6.72; $M_{\theta\phi}$-1.60; $M_{\phi r}$1.61; Fault plane solution: $M_0$7.39000×10^{14} NP1: ϕ_s170.00000°, δ21.00000°, λ13.00000°. NP2: ϕ_s69.00000°, δ85.00000°, λ111.00000°.*

*SKHL **29** 06:57:47.8±0.0, 42°.80N×146°.10E, h39^{km}±5^{km}, mb5.0/4*

*MOS **29** 06:57:48.2±0.8, 42°.83N×146°.15E, h40^{km}, mb4.3/7, Error ellipse: s-maj=11.8km s-min=7.9km az=96.5*

*NEIC **29** 06:57:49.9±1.1, 42°.72N±0°.06×146°.1E±0°.1, h42^{km}±8^{km}, mb4.4/19, Error ellipse: s-maj=13.6km s-min=8.4km az=70.0*

ISC 29 06:57:45.9±1.4, **42°.76N**±0°.04×**146°.15E**±0°.04, **h13**^{km}±7^{km}, **n99**, σ**1^s.30**/105, **mb4.2**/30, **9C-1D, Off southeast coast of Hokkaido**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.67	334	P	Pg	06 57 59.3	+0.4
NEM2				*e*S	Sg	06 58 08.5	+0.8
NEM2	Nemuro 2	0.67	334	A	A	06 57 59.3	
	comp=N,10.0nm,0.4s,comp=E,9.0nm,0.6s						
NMR	Nemuro--Hokkai	0.68	333	*e*P	Pb	06 57 59.9	+0.3
NMR				*e*S	Sg	06 58 09.0	+0.9
JKHN	Kushirohamanak	0.79	294	P	Pg	06 58 01.9	+0.7
JKHN				*e*S	Sn	06 58 13.7	-0.8
JKHN	Kushirohamanak	0.79	294	A	A	06 58 01.9	
	comp=N,9.0nm,0.9s,comp=E,9.0nm,1.0s						
AKK	Akkeshi	0.99	285	*e*P	Pb	06 58 03.5	-1.4
GLVR	Golovnino	1.08	335	⇓*i*PN	Pn	06 58 05.9	-0.8
GLVR				*i* S	Sb	06 58 21.1	+0.6
GLVR				pmax	pmax		
	comp=N,441nm,0.1s						
GLVR				pmax	pmax		
	comp=E,113nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,4µm,0.1s						
GLVR				smax	smax		
	comp=N,32µm,0.3s						
GLVR				smax	smax		
	comp=E,26µm,0.3s						
GLVR	Golovnino	1.08	335	*i* P	Pn	06 58 05.9	-0.8
GLVR				AMB	AMB	06 58 06.0	
	comp=E,410nm,0.2s						
GLVR				*i* S	Sb	06 58 21.0	+0.6
GLVR				A	A	06 58 21.3	
	comp=E,3µm,0.3s						
GLVR				A	A	06 58 21.3	
	comp=E,3µm,0.3s						
JAK	Akkeshi	1.09	283	P	Pb	06 58 06.3	-0.3
JAK				*e*S	Sn	06 58 21.3	-0.5
JAK	Akkeshi	1.09	283	A	A	06 58 06.3	
	comp=N,3.0nm,0.6s,comp=E,5.0nm,0.3s						
SHO	Shikotan	1.22	24	*c i*PN	Pn	06 58 08.8	+0.2
SHO				*i* S	Sn	06 58 25.4	+0.5
SHO				pmax	pmax		
	comp=N,158nm,0.3s						
SHO				pmax	pmax		
	comp=Z,359nm,0.3s						
SHO				pmax	pmax		
	comp=E,106nm,0.2s						
SHO				smax	smax		
	comp=N,2µm,0.2s						
SHO				smax	smax		
	comp=E,2µm,0.3s						
SHO	Shikotan	1.22	24	*i* P	Pn	06 58 08.5	-0.1
SHO				AMB	AMB	06 58 10.4	
	comp=E,390nm,0.4s						
SHO				*i* S	Sb	06 58 25.0	+0.6
SHO				A	A	06 58 27.6	
	comp=E,3µm,0.4s						
SHO				A	A	06 58 27.6	
	comp=E,2µm,0.4s						
YUK	Yuzh-Kuril'sk	1.29	351	*c i*PN	Pn	06 58 08.4	-1.2
YUK				*i* S	Sn	06 58 24.9	-1.8
YUK				pmax	pmax		
	comp=Z,2µm,0.2s						
YUK				pmax	pmax		
	comp=N,441nm,0.1s						
YUK				pmax	pmax		
	comp=E,402nm,0.2s						
YUK				smax	smax		
	comp=N,3µm,0.4s						
YUK				smax	smax		
	comp=E,4µm,0.5s						
YUK	Yuzh-Kuril'sk	1.29	351	*i* P	Pn	06 58 08.5	-1.2
YUK				AMB	AMB	06 58 10.4	
	comp=E,2µm,0.2s						
YUK				*i* S	Sn	06 58 24.0	-2.7
YUK				A	A	06 58 25.4	
	comp=E,4µm,0.5s						
YUK				A	A	06 58 25.4	
	comp=E,5µm,0.5s						
JNSB	Nemuroshibetsu	1.31	321	A	A	06 58 09.2	
	comp=N,9.0nm,1.0s,comp=E,6.0nm,1.0s						
JNK	Nakash	1.33	309	*i* P	Pn	06 58 09.3	-0.9
JNK				*e*S	Sn	06 58 26.1	-1.6
JRA	Rausu	1.39	328	P	Pn	06 58 10.4	-0.6
JOB	Onbets	1.71	276	P	Pn	06 58 15.0	-0.3
JOB				*e*S	Sn	06 58 36.8	-0.2
JAR	Ashorobuto	1.82	288	P	Pn	06 58 16.5	-0.4
JTKR	Abashiri--Toko	2.03	307	*e*P	Pn	06 58 20.0	+0.2
JCH	Churui	2.06	267	*e*P	Pb	06 58 21.1	-1.9
ERM	Erimo	2.34	252		Pb	06 58 26.2	-1.6
ERM	Erimo	2.34	252	*ce*PN	Pb	06 58 26.5	-1.3
KUR	Kuril'sk	2.77	26	*e*PN	Pn	06 58 29.9	0.0
KUR				*i* S	Sn	06 59 02.9	-0.3
KUR	Kuril'sk	2.77	26	*e*P	Pn	06 58 29.9	0.0
KUR				AMB	AMB	06 58 31.3	
	comp=E,90nm,0.4s						
KUR				*i* S	Sn	06 59 00.7	-2.5
KUR				A	A	06 59 09.7	
	comp=E,230nm,0.3s						
KUR				A	A	06 59 09.7	
	comp=E,150nm,0.3s						
JKA	Kamikawa-asahi	2.92	299		Pn	06 58 33.2	+1.3
ASAJ	Asahikawa	2.92	299	Pn	Pn	06 58 32.6	+0.6
	comp=E,8.6nm,0.3s,baz=111,slow=10.0,SNR=23						
ASAJ				Sn	Sn	06 59 08.7	+1.7
	comp=E,6.7nm,0.3s,baz=44,slow=32,SNR=8.2						
	comp=E,11nm,0.3s						
JTM	Tenmabayashi	4.28	244	Pn	Pn	06 58 52.0	+1.3
YSS	Yuzhno-Sakhali	4.83	331	Pn	Pn	06 59 00.2	+1.9
YSS	Yuzhno-Sakhali	4.83	331	*ce*PN	Pn	06 59 00.5	+2.2
YSS	Yuzhno-Sakhali	4.83	331	*e*P	Pn	06 59 00.0	+1.7
JMM	Marumori	6.37	222	Pn	Pn	06 59 19.7	+0.2
TYV	Tymovskoe	8.45	345	*e*PN	Pn	06 59 44.3	-3.6
TYV				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TYV				pmax	pmax		
	comp=Z,100nm,2.2s						
TYV	Tymovskoe	8.45	345	*e*P	Pn	06 59 50.0	+2.1
MJAR	Matsushiro Arr	8.72	227	Pn	Pn	06 59 53.8	+2.1
	comp=Z,0.1nm,0.3s,baz=23,slow=14,SNR=4.4						
	comp=Z,1.0nm,0.3s						
KLR	Kul'dur	11.91	308	LR	LR	07 04 33.3	
	comp=Z,90nm,18.8s,baz=186,slow=34						
KLR	Kul'dur	11.91	308	⇑*e*PN	Pn	07 00 34.1	-1.2
KLR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KLR	Kul'dur	11.91	308	*e*P	Pn	07 00 34.1	-1.2
INCN	Inchon	15.82	257	P	P	07 01 31.1	-1.0
INCN				IAmb	IAmb	07 01 51.2	
	comp=Z,12nm,0.7s						
INCN	Inchon	15.82	257	P	P	07 01 31.1	-1.0
INCN				pmax	pmax		
	comp=Z,12nm,0.7s						
JOW	Kunigami	21.56	228	P	P	07 02 34.6	-0.5
BJT	Baijiatuau	22.60	273	P	P	07 02 46.2	+0.1
BJT	Baijiatuau	22.60	273	P	P	07 02 46.2	+0.1
BJT				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HNS	HongShan	24.56	268	*e*P	P	07 03 10.0	+4.7
HHC	Hu-ho-hao-te	25.74	278	*e*P	P	07 03 15.0	-1.2
HHC				pmax	pmax		
	comp=Z,11nm,0.5s						
HHC				pmax	pmax		
	comp=Z,47nm,5.2s						
BILL	Bilibino	27.51	16	⇑*e*P	P	07 03 29.3	-2.5
BILL				pmax	pmax		
	comp=Z,2.0nm,1.3s						
BILL	Bilibino	27.51	16	*e*P	P	07 03 33.7	+1.9
ULN	Ulaanbaatar	27.75	294	P	P	07 03 32.8	-1.5
ULN				IAmb	IAmb	07 04 13.4	
	comp=Z,2.7nm,0.5s						
ULN	Ulaanbaatar	27.75	294	⇑*e*P	P	07 03 35.3	+1.0
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ULN	Ulaanbaatar	27.75	294	*e*P	P	07 03 35.3	+1.0
SONM	Songino Array	28.19	294	P	P	07 03 38.6	+0.4
SONM	Songino Array	28.19	294	P	P	07 03 39.0	+0.8
	comp=Z,2.1nm,0.6s,baz=95,slow=8.1,SNR=10						
	comp=Z,2.1nm,0.6s						
H11N2	WAKE ISLAND Hy	28.86	136	T	T	07 34 33.2	
	baz=328,slow=75,SNR=47						
H11N1	WAKE ISLAND Hy	28.88	136	T	T	07 34 34.2	
	baz=328,slow=75,SNR=43						
H11N3	WAKE ISLAND Hy	28.88	136	T	T	07 34 34.6	
	baz=328,slow=75,SNR=40						
H11S1	WAKE ISLAND Hy	29.80	138	T	T	07 35 44.1	
	baz=329,slow=76,SNR=38						
H11S3	WAKE ISLAND Hy	29.80	138	T	T	07 35 50.5	
	baz=329,slow=76,SNR=16						
H11S2	WAKE ISLAND Hy	29.82	138	T	T	07 35 40.2	
	baz=329,slow=76,SNR=9.2						
LZH	Lanzhou	33.08	273	*e*P	P	07 04 21.0	-0.5
LZH				pP	pwP	07 04 32.3	+4.5
LZH				sP	sP	07 04 38.3	+12
LZH				pmax	pmax		
	comp=Z,22nm,1.2s						
M16K	Timber Creek	37.15	41	P	P	07 04 56.7	+0.7
M16K				IAmb	IAmb	07 04 57.1	
	comp=Z,7.6nm,1.2s						
C18K	Utukok River	37.53	29	P	P	07 04 58.9	-0.3
G18K	Tagagawik	37.87	33	P	P	07 05 02.6	+0.5
G18K				IAmb	IAmb	07 05 22.6	
	comp=Z,5.2nm,1.2s						
H18K	Honhosa River	37.87	35	P	P	07 05 02.6	+0.5
H18K				IAmb	IAmb	07 05 09.2	
	comp=Z,13nm,1.4s						
H19K	Roundabout Mou	38.72	34		P	07 05 09.5	+0.3
H19K				IAmb	IAmb	07 05 11.1	
	comp=Z,3.7nm,0.7s						
PZH	PanZhiHua	39.49	260	P	P	07 05 15.3	-1.0
E22K	Anaktuvuk Pass	40.84	30		P	07 05 26.4	-0.5
E22K				IAmb	IAmb	07 05 27.9	
	comp=Z,6.0nm,1.4s						
WMQ	Urumqi	41.78	292	*e*P	P	07 05 33.5	-1.5
WMQ				pmax	pmax		
	comp=Z,34nm,0.7s						
ILAR	Eielson Array	42.72	36	P	P	07 05 42.5	+0.2
	comp=Z,0.4nm,0.9s,baz=275,slow=9.0,SNR=8.2						
	comp=Z,0.4nm,0.9s						
MK31	Makanchi Array	44.40	298	*ce*P	P	07 05 56.2	+0.1
MKAR	Makanchi Array	44.40	298	P	P	07 05 56.7	+0.6
	comp=Z,1.5nm,0.7s,baz=83,slow=8.6,SNR=9.5						
	comp=Z,1.5nm,0.7s						
KURK	Kurchatov	45.48	305	P	P	07 06 04.7	+0.1
KURBB	Kurchatov Arra	45.56	304	P	P	07 06 04.7	-0.5
	comp=Z,1.9nm,0.5s,baz=70,slow=8.6,SNR=5.3						
	comp=Z,1.9nm,0.5s						
I28M	Miner Creek	45.59	34		P	07 06 05.7	+0.3
F30M	Barrier River	46.91	31	P	P	07 06 16.6	+1.0
F30M				IAmb	IAmb	07 06 18.7	
	comp=Z,3.8nm,0.9s						
BVAR	Borovoye Array	49.56	310	P	P	07 06 37.1	+0.8
	comp=Z,0.9nm,0.4s,baz=82,slow=9.0,SNR=6.6						
	comp=Z,0.9nm,0.4s						
ARTI	Arti	54.67	317	*c i*P	P	07 07 12.4	-1.9
ARTI				S	S	07 14 50.7	-3.1
ARTI				SS	SKiKP	07 18 26.8	+4.6
ARTI				pmax	pmax		
	comp=Z,12nm,3.4s						
RES	Resolute Bay	56.12	16		P	07 07 24.0	-0.4
RES				IAmb	IAmb	07 07 25.4	
	comp=Z,2.2nm,0.7s						
RES	Resolute Bay	56.12	16	P	P	07 07 24.0	-0.4
RES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AB31	Akbulak array	57.11	309	P	P	07 07 31.9	+0.1
AB31				IAmb	IAmb	07 07 40.1	
	comp=Z,3.0nm,0.5s						
ABKAR	Akbulak array	57.11	309		P	07 07 31.9	+0.1
ABKAR				IAmb	IAmb	07 07 40.1	
	comp=Z,3.0nm,0.5s						
ARCES	ARCESS Array B	59.92	340	P	P	07 07 50.4	-0.7
	comp=Z,2.2nm,0.8s,baz=31,slow=7.3,SNR=6.2						
	comp=Z,2.2nm,0.8s						
WRA	Warramunga Arr	63.33	192	P	P	07 08 15.3	+0.7
	comp=Z,0.2nm,0.6s,baz=7.0,slow=6.6,SNR=1.2						
	comp=Z,0.2nm,0.6s						
SUMG	Summit	64.92	2	P	P	07 08 25.0	0.0
SUMG	Summit	64.92	2	P	P	07 08 25.0	0.0
SUMG				pmax	pmax		
	comp=Z,9.0nm,1.3s						
FIA1	FINESS Array S	65.42	333	P	P	07 08 27.6	-0.2
FINES	FINESS Array B	65.42	333	P	P	07 08 27.7	-0.2
FINES	FINESS Array B	65.42	333	P	P	07 08 27.8	-0.1

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,4.1nm,0.5s,baz=42,slow=7.4,SNR=33						
	comp=Z,4.1nm,0.5s						
ASAR	**Alice Springs**	**67.05**	**192**	P	**P**	**07 08 40.4**	**+1.6**
	comp=Z,0.3nm,0.8s,baz=8.8,slow=6.7,SNR=1.7						
	comp=Z,0.3nm,0.8s						
BOZ	**Bozeman (W)**	**68.15**	**48**	P	**P**	**07 08 46.2**	**+0.4**
BOZ	**Bozeman (W)**	**68.15**	**48**	P	**P**	**07 08 46.2**	**+0.4**
BOZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
NVAR	**Mina Array Bea**	**68.73**	**57**	P	**P**	**07 08 50.8**	**+1.2**
	comp=Z,0.3nm,0.7s,baz=286,slow=8.4,SNR=2.4						
	comp=Z,0.3nm,0.7s						
NB2	**NORSAR Subarra**	**70.26**	**339**	P	**P**	**07 08 58.6**	**+0.2**
	comp=Z,2.9nm,0.5s,baz=32,slow=6.9						
NOA	**NORSAR Array B**	**70.26**	**339**	P	**P**	**07 08 58.6**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=32,slow=6.6,SNR=12						
	comp=Z,1.2nm,0.5s						
HFS	**Hagfors**	**70.31**	**337**	P	**P**	**07 08 58.7**	**-0.1**
	comp=Z,2.8nm,0.5s,baz=54,slow=7.5,SNR=19						
	comp=Z,2.8nm,0.5s						
PDAR	**Pinedale Array**	**71.11**	**49**	P	**P**	**07 09 04.8**	**+0.7**
PDAR	**Pinedale Array**	**71.11**	**49**	P	**P**	**07 09 04.4**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=291,slow=3.4,SNR=2.7						
	comp=Z,0.3nm,0.6s						
AKASG	**Malin Array Be**	**71.94**	**323**	P	**P**	**07 09 09.0**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=41,slow=5.4,SNR=4.3						
	comp=Z,0.2nm,0.3s						
AKASG	**Malin Array Be**	**71.94**	**323**	P	**P**	**07 09 09.0**	**+0.3**
EKA	**Eskdalemuir Ar**	**78.85**	**343**	P	**P**	**07 09 48.8**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=26,slow=5.2,SNR=4.9						
	comp=Z,0.4nm,0.5s						

IDC 29 07:02:45.5±2.9, 31°.06S×178°.23W, h0^{km}, mb3.5/2, mbtmp3.5/3, ML2.9/1, Error ellipse: s-maj=70.4km s-min=36.5km az=112.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.14**	**207**	Pn	Pn	07 04 44.1	-0.8
	0.1nm,0.3s,baz=352,slow=19,SNR=3.0						
URZ				Sn	Sn	07 06 19.9	+2.3
	0.5nm,0.3s,baz=48,slow=22,SNR=6.6						
	3.3nm,1.0s						
ASAR	**Alice Springs**	**42.88**	**268**	P	P	07 10 46.1	+0.2
	0.4nm,0.6s,baz=105,slow=7.5,SNR=5.8						
	0.4nm,0.6s						
WRA	**Warramunga Arr**	**43.92**	**273**	P	P	07 10 54.0	-0.4
	0.6nm,0.7s,baz=111,slow=8.2,SNR=5.0						
	0.6nm,0.7s						
FINES	**FINESS Array B**	**145.69**	**339**	PKPbc	PKPdf	07 22 24.8	-0.4
	0.6nm,0.3s,baz=59,slow=4.1,SNR=9.2						

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*NEIC **29** 07:02:48.0±2.2, 21°.7N±0°.1×144°.0E±0°.2, h155^{km}±9^{km}, mb4.2/19, Error ellipse: s-maj=21.6km s-min=16.1km az=92.0*

*IDC **29** 07:02:53.0±2.9, 21°.70N×143°.74E, h205^{km}±22^{km}, mb3.5/14, mbtmp4.1/16, Error ellipse: s-maj=22.4km s-min=20.5km az=3.0*

ISC 29 07:02:52.0±0.8, 21°.69N±0°.09×143°.8E±0°.1, h200^{km}, n41, σ1^s.05/42, mb4.0/19, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.58**	**345**	Pn	Pn	07 04 07.9	-6.0
JCJ	**Chichijima**	**5.58**	**345**	P	**Pn**	**07 04 15.2**	**+1.3**
	16nm,0.3s						
JCJ				S	**Sn**	**07 05 18.6**	**-0.1**
JMN	**Monobe**	**14.86**	**326**	P	**P**	**07 06 12.7**	**-0.7**
JGF	**Kuroka**	**14.97**	**339**	Pn	**Pn**	**07 06 11.8**	**-2.0**
MAJO	**Matsushiro**	**15.59**	**343**		**P**	**07 06 19.3**	**-2.0**
MAJO				IAmb	IAmb	07 06 24.2	
	comp=Z,10nm,1.1s						
MJB9	**Matsu-Tunnel**	**15.59**	**343**		**P**	**07 06 19.3**	**-2.1**
MJB9				IAmb	IAmb	07 06 24.2	
	comp=Z,9.8nm,1.1s						
JNU	**Nakatsue**	**16.15**	**318**	P	**Pn**	**07 06 27.4**	**-0.8**
JNU				IAmb	IAmb	07 06 33.6	
	comp=Z,29nm,1.4s						
JNU	**Nakatsue**	**16.15**	**318**	P	**Pn**	**07 06 28.1**	**-0.1**
	comp=Z,9.0nm,0.9s,baz=258,slow=5.5,SNR=4.3						
TJN	**Taejon**	**20.47**	**319**	P	**P**	**07 07 15.0**	**+0.7**
NACB	**Ninganchiao**	**20.60**	**281**	P	**P**	**07 07 15.7**	**-0.3**
NACB				IAmb	IAmb	07 07 59.1	
	comp=Z,10nm,0.9s						
KSRS	**Korea Array**	**20.87**	**322**	P	**P**	**07 07 19.3**	**+0.7**
	comp=Z,7.2nm,0.8s,baz=148,slow=8.8,SNR=32						
	comp=Z,7.2nm,0.8s						
KSAR	**Wonju Array Be**	**20.89**	**322**	P	**P**	**07 07 19.0**	**+0.3**
KS19	**Wonju Array Si**	**20.94**	**322**	P	**P**	**07 07 20.1**	**+0.7**
KS19				IAmb	IAmb	07 07 22.7	
	comp=Z,12nm,1.1s						
SSLB	**Suanglung**	**21.18**	**280**	P	**P**	**07 07 22.3**	**+0.3**
SSLB				IAmb	IAmb	07 07 53.7	
	comp=Z,9.5nm,1.0s						
SONM	**Songino Array**	**39.72**	**320**	P	**P**	**07 10 05.3**	**+0.3**
SONM	**Songino Array**	**39.72**	**320**	P	**P**	**07 10 05.3**	**+0.3**
	comp=Z,1.1nm,0.4s,baz=124,slow=6.9,SNR=10						
	comp=Z,1.1nm,0.4s						
WRA	**Warramunga Arr**	**42.40**	**193**	P	**P**	**07 10 25.4**	**-1.6**
WRA	**Warramunga Arr**	**42.40**	**193**	P	**P**	**07 10 26.7**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=14,slow=8.6,SNR=2.2						
	comp=Z,0.1nm,0.3s						
GSTR	**Great Sitkin T**	**43.30**	**35**	P	**P**	**07 10 31.5**	**-2.4**
KULM	**Kulim**	**44.82**	**255**	P	**P**	**07 10 46.6**	**+0.1**
ZALV	**Zalesovo Beam**	**54.58**	**322**	P	**P**	**07 11 59.2**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=92,slow=8.9,SNR=4.8						
	comp=Z,1.2nm,0.5s						
MKAR	**Makanchi Array**	**55.13**	**313**	P	**P**	**07 12 03.4**	**-0.2**
MKAR	**Makanchi Array**	**55.13**	**313**	P	**P**	**07 12 04.0**	**+0.4**
	comp=Z,1.6nm,0.5s,baz=91,slow=8.9,SNR=21						
MKAR				PcP	**PcP**	**07 13 02.0**	**-0.3**
	comp=Z,0.9nm,0.4s,baz=70,slow=3.4,SNR=9.9						
	comp=Z,1.6nm,0.5s						
MAKZ	**Makanchi**	**55.35**	**313**	P	**P**	**07 12 05.2**	**0.0**
MAKZ				IAmb	IAmb	07 12 06.0	
	comp=Z,2.4nm,0.6s						
KURBB	**Kurchatov Arra**	**57.93**	**317**	P	**P**	**07 12 23.2**	**0.0**
	comp=Z,4.5nm,0.4s,baz=94,slow=7.6,SNR=37						
	comp=Z,4.5nm,0.4s						
C19K	**Lookout Ridge**	**58.23**	**21**	P	**P**	**07 12 26.0**	**+0.9**
BOOM	**Boomskoye usch**	**59.57**	**307**	P	**P**	**07 12 35.4**	**+0.5**
BOOM				IAmb	IAmb	07 12 36.4	
	comp=Z,3.0nm,0.6s						
TOLK	**Toolik Lake Re**	**61.51**	**22**	P	**P**	**07 12 48.0**	**+0.6**
TOLK				IAmb	IAmb	07 13 20.4	
	comp=Z,5.9nm,1.4s						
ILAR	**Eielson Array**	**61.78**	**27**	P	**P**	**07 12 49.1**	**-0.1**
	comp=Z,0.3nm,0.8s,baz=265,slow=5.5,SNR=4.3						
	comp=Z,0.3nm,0.8s						
D25K	**Kavik River**	**62.78**	**22**	P	**P**	**07 12 57.0**	**+1.2**
BVAR	**Borovoye Array**	**63.05**	**320**	P	**P**	**07 12 58.1**	**+0.2**
	comp=Z,4.9nm,0.4s,baz=90,slow=7.8,SNR=22						
	comp=Z,4.9nm,0.4s						
BMAR	**Burnt Mountain**	**63.12**	**24**	P	**P**	**07 13 00.3**	**+2.3**
BRVK	**Borovoye**	**63.12**	**320**	P	**P**	**07 12 58.1**	**-0.2**
BRVK				IAmb	IAmb	07 12 59.2	
	comp=Z,4.5nm,1.1s						
I28M	**Miner Creek**	**64.78**	**27**	P	**P**	**07 13 10.6**	**+1.6**
G31M	**Satah River**	**67.10**	**25**	P	**P**	**07 13 23.7**	**+0.1**
G31M				IAmb	IAmb	07 13 26.0	
	comp=Z,2.1nm,0.7s						
SPITS	**Spitsbergen Ar**	**75.94**	**350**	P	**P**	**07 14 15.8**	**-0.4**
	comp=Z,1.4nm,0.3s,baz=75,slow=17,SNR=29						
	comp=Z,1.4nm,0.3s						
YKA	**Yellowknife Ar**	**76.19**	**28**	P	**P**	**07 14 18.9**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=242,slow=5.7,SNR=13						
	comp=Z,0.5nm,0.7s						
ARCES	**ARCESS Array B**	**79.11**	**342**	P	**P**	**07 14 34.0**	**0.0**
	comp=Z,1.3nm,0.7s,baz=77,slow=7.7,SNR=4.9						
	comp=Z,1.3nm,0.7s						
NVAR	**Mina Array Bea**	**82.70**	**52**	P	**P**	**07 14 55.8**	**+2.0**
	comp=Z,0.1nm,0.4s,baz=334,slow=4.2,SNR=2.6						
	comp=Z,0.1nm,0.4s						
KBZ	**Khabaz**	**82.79**	**314**	P	**P**	**07 14 54.0**	**+0.2**
	comp=Z,3.5nm,0.9s,baz=95,slow=8.6,SNR=5.0						
	comp=Z,3.5nm,0.9s						
FINES	**FINESS Array B**	**83.44**	**335**	P	**P**	**07 14 55.9**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=66,slow=4.4,SNR=12						
	comp=Z,0.8nm,0.4s						

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*GCG **29** 07:16:23.9±1.2, 14°.26N×92°.99W, h16^{km}±10^{km}, MD4.2, ML3.4*

*MEX **29** 07:16:25.3±0.6, 14°.35N×93°.02W, h7^{km}±22^{km}, MD3.9*

ISC 29 07:16:21.1±1.8, 14°.39N±0°.07×93°.10W±0°.04, h5^{km}±11^{km}, n18, σ1^s.79/33, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**0.96**	**57**	*e*P	**Pb**	**07 16 40.8**	**+0.6**
THIG				*e*S	**Sn**	**07 16 54.6**	**-0.6**
THIG		**0.96**	**57**	*i* P	**Pb**	**07 16 41.0**	**+0.8**
THIG				*i* S	**Sb**	**07 16 53.4**	**+0.3**
SMCA	**Catarina**	**1.10**	**65**	*i* P	**Pg**	**07 16 42.5**	**+0.4**
SMCA				*i* S	**Sg**	**07 16 57.1**	**+0.7**
PATR	**El Naranjo**	**1.11**	**49**	*e*P	**Pb**	**07 16 43.0**	**+0.1**
PATR				*e*S	**Sb**	**07 16 57.1**	**-0.5**
PAVE	**Pavencul**	**1.20**	**48**	*e*P	**Pb**	**07 16 44.4**	**0.0**
PAVE				*e*S	**Sg**	**07 16 58.4**	**-1.3**
RTAL	**Retalhuleu**	**1.37**	**84**	*e*P	**Pn**	**07 16 46.1**	**-0.7**
RTAL				*e*S	**Sb**	**07 17 02.3**	**-2.7**
STG0	**El Palmar, Qui**	**1.71**	**89**	IAML		07 16 46.6	
	comp=E,2μm,0.3s						
HUEH	**Huehuetenango**	**1.80**	**59**	*e*P	**Pb**	**07 16 54.6**	**-0.1**
HUEH				*e*S	**Sn**	**07 17 16.4**	**0.0**
HUEH	**Huehuetenango**	**1.80**	**59**	*i* S	**Sg**	**07 17 18.8**	**-0.2**
HUEH				IAML		07 17 24.4	
	comp=E,227nm,0.3s						
CCIG	**Comitan**	**2.10**	**26**	*e*P	**Pg**	**07 17 00.3**	**-1.1**
CCIG				*e*S	**Sg**	**07 17 27.6**	**-1.0**
CCIG	**Comitan**	**2.10**	**26**	*i* P	**Pg**	**07 17 00.7**	**-0.6**
CCIG				*i* S	**Sg**	**07 17 28.2**	**-0.4**
CCIG				IAML		07 17 34.5	
	comp=N,57nm,0.5s						
TGIG		**2.38**	**360**	*e*P	**Pb**	**07 17 03.6**	**-0.8**
TGIG				*e*S	**Sb**	**07 17 33.1**	**-0.9**
TGIG		**2.38**	**360**	*i* P	**Pb**	**07 17 03.7**	**-0.6**
TGIG				*i* S	**Sb**	**07 17 34.0**	**0.0**
CMIG	**Matias Romero**	**3.19**	**328**	*e*P	**Pn**	**07 17 14.3**	**+2.4**
CMIG				*e*S	**Sn**	**07 17 50.9**	**+0.6**
HUIG	**Huatulco**	**3.21**	**296**	*e*P	**Pn**	**07 17 15.2**	**+3.0**
HUIG				*e*S	**Sn**	**07 17 49.8**	**-1.1**
PETF	**Flores**	**4.00**	**51**	*e*P	**Pn**	**07 17 26.1**	**+3.0**
PETF				*e*S	**Sn**	**07 18 11.2**	**+0.8**
PEIG	**Puerto Escondi**	**4.22**	**293**	*e*P	**Pn**	**07 17 28.3**	**+2.2**
PEIG				*e*S	**Sn**	**07 18 11.4**	**-4.4**
SCIG	**Sabancuy**	**4.91**	**22**	*e*P	**Pn**	**07 17 39.0**	**+3.5**
SCIG				*e*S	**Sn**	**07 18 29.1**	**-3.6**

WEL 29 07:37:35.5±0.8, 35°S±10°×17°9E±1°2, h205^{km}±14^{km}, M3.7/17, ML4.0/18, MLv3.7/17, Error ellipse: s-maj=16.9km s-min=10.0km az=123.7, confirmed, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.33**	**192**	P	Pn	07 38 17.7	-0.1
MXZ				S	S	07 38 50.3	-0.2
HAZ	**Te Kaha**	**2.64**	**200**	P	Pn	07 38 21.1	-0.1
HAZ				S	S	07 38 57.1	+0.6
PKGZ	**Pakihiroa**	**2.67**	**195**	P	Pn	07 38 22.1	+0.6
PUZ	**Puketiti**	**2.84**	**191**	P	Pn	07 38 23.6	+0.1
PUZ				S	S	07 39 01.6	+0.9
RUGZ	**Raukumara Rang**	**2.87**	**200**	P	Pn	07 38 23.9	0.0
RUGZ				S	S	07 39 01.2	-0.1
TWGZ	**Tauwhareparae**	**2.99**	**195**	P	Pn	07 38 25.3	0.0
TWGZ				S	S	07 39 06.7	+2.8
CNGZ	**Carnagh Statio**	**3.25**	**190**	P	Pn	07 38 29.0	+0.7
MWZ	**Matawai**	**3.25**	**200**	P	Pn	07 38 28.8	+0.4
MWZ				S	S	07 39 11.1	+1.8
TKGZ	**Te Karaka**	**3.27**	**195**	P	Pn	07 38 28.7	+0.1
TKGZ				S	S	07 39 11.2	+1.6
URZ	**Urewera**	**3.32**	**206**	P	Pn	07 38 29.1	0.0
URZ				S	S	07 39 11.2	+0.6
RIGZ	**Rimuhau**	**3.55**	**195**	P	Pn	07 38 31.8	-0.1
RIGZ				S	S	07 39 15.8	+0.1
MBAZ	**Motutapu North**	**3.60**	**244**	P	Pn	07 38 32.1	-0.4
MUGZ	**Murupara**	**3.63**	**208**	P	Pn	07 38 33.0	+0.1
MUGZ				S	S	07 39 18.1	+0.6
RTZ	**Ruatahuna**	**3.68**	**205**	P	Pn	07 38 33.2	-0.4
RTZ				S	S	07 39 19.4	+0.8
SNGZ	**Shannon Statio**	**3.72**	**200**	P	Pn	07 38 34.2	+0.2
SNGZ				S	S	07 39 19.9	+0.4
PRGZ	**Paritu Road**	**3.73**	**193**	P	Pn	07 38 33.9	-0.2
PRGZ				S	S	07 39 19.1	-0.6
PRRZ	**Plateau Road**	**3.81**	**212**	P	Pn	07 38 35.6	+0.6
KNZ	**Kokohu**	**3.87**	**195**	P	Pn	07 38 34.6	-1.1
MTHZ	**Maungataniwha**	**3.94**	**205**	P	Pn	07 38 36.6	-0.1
MTHZ				S	S	07 39 26.3	+1.9
MHGZ	**Mahia Peninsul**	**3.95**	**192**	P	Pn	07 38 36.8	0.0
WHHZ	**Waihua**	**4.03**	**199**	P	Pn	07 38 37.5	-0.2
WHHZ				S	S	07 39 28.1	+1.9
MRHZ	**Matea Rd**	**4.08**	**209**	P	Pn	07 38 38.0	-0.5
MRHZ				S	S	07 39 27.1	-0.4
ARHZ	**Aropaoanui**	**4.27**	**201**	P	Pn	07 38 40.3	-0.4
ARHZ				S	S	07 39 34.3	+2.7
HIZ	**Hauiti**	**4.60**	**224**	P	Pn	07 38 47.4	+2.5
TMVZ	**Te Maari**	**4.62**	**213**	P	Pn	07 38 45.2	-0.1
ETVZ	**East Tongariro**	**4.63**	**213**	P	Pn	07 38 45.4	0.0
OTVZ	**Oturere**	**4.67**	**213**	P	Pn	07 38 45.9	-0.1
SNVZ	**South Ngauruho**	**4.70**	**213**	P	Pn	07 38 46.5	+0.1
TUVZ	**Tukino**	**4.76**	**212**	P	Pn	07 38 47.4	+0.3
KAHZ	**Kahuranaki**	**4.79**	**199**	P	Pn	07 38 46.4	-1.0
KAHZ				S	S	07 39 45.7	+1.9
KRHZ	**Kereru**	**4.81**	**204**	P	Pn	07 38 46.0	-1.6
KRHZ				S	S	07 39 44.1	0.0
MOVZ	**Moawhango**	**4.84**	**211**	P	Pn	07 38 47.4	-0.6
MOVZ				S	S	07 39 43.8	-1.0
WNVZ	**Wahianoa**	**4.84**	**212**	P	Pn	07 38 48.3	+0.2
MTVZ	**Mangateitei**	**4.94**	**213**	P	Pn	07 38 49.7	+0.4
PXZ	**Pawanui**	**5.02**	**199**	P	Pn	07 38 48.5	-1.7
WPHZ	**Waipukurau**	**5.17**	**202**	P	Pn	07 38 50.6	-1.5
PRHZ	**Porangahau**	**5.30**	**199**	P	Pn	07 38 52.2	-1.6
TSZ	**Takapari Road**	**5.32**	**205**	P	Pn	07 38 52.5	-1.6
BFZ	**Birch Farm**	**5.80**	**201**	P	Pn	07 38 58.6	-1.5
MRZ	**Mangatainoka R**	**5.99**	**205**	P	Pn	07 39 00.3	-2.4

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*KRSC **29** 07:37:50.1±1.3, 56°.17N×164°.19E, h50^{km}±18^{km}, Ml3.8*

*IDC **29** 07:37:50.4±1.8, 56°.12N×164°.27E, h0^{km}, mb3.2/2, mbtmp3.2/3, ML2.4/1, Error ellipse: s-maj=181.9km s-min=25.5km az=145.0*

ISC 29 07:37:51.5±0.9, 56°.19N±0°.05×164°.20E±0°.04, h19^{km}, n37, σ1^s.22/40, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.77**	**272**	*e*P	**Pb**	**07 38 03.5**	**-2.7**
KBTR				*e*S	**Sb**	**07 38 15.2**	**-1.1**
KBG	**Krutoberegovo**	**0.83**	**275**	*e*P	**Pb**	**07 38 05.3**	**-2.1**
KBG				*e*S	**Sb**	**07 38 16.8**	**-1.4**
BKI	**Bering**	**1.41**	**134**	*e*P	**Pn**	**07 38 15.2**	**-0.9**
BKI				*e*S	**Sn**	**07 38 33.6**	**-0.5**
SMKR	**Semkarok**	**1.57**	**286**	*e*P	**Pn**	**07 38 17.3**	**-1.0**
SRKR	**Sorokina**	**1.75**	**287**	*e*P	**Pn**	**07 38 20.7**	**-0.1**
ZLN	**Zelenaya**	**1.91**	**266**	*e*P	**Pn**	**07 38 23.5**	**+0.4**
CIRR	**Tsirk**	**1.93**	**269**	*e*P	**Pn**	**07 38 23.6**	**+0.2**
LGNR	**Loginova**	**1.97**	**268**	*e*P	**Pn**	**07 38 24.2**	**+0.2**
BZGR	**Bezymyannyi-Gr**	**1.98**	**264**	*e*P	**Pn**	**07 38 24.2**	**+0.1**
KRSR	**Krestovskiy**	**2.03**	**272**	*e*P	**Pn**	**07 38 24.4**	**-0.3**
BZWR	**Bezymyannyi-We**	**2.09**	**265**	*e*P	**Pn**	**07 38 25.6**	**0.0**
BZMR	**Bezymyannaya**	**2.09**	**264**	*e*P	**Pn**	**07 38 26.0**	**+0.3**
MKZ	**Mys Kozlova**	**2.16**	**222**	*e*P	**Pn**	**07 38 24.4**	**-2.0**
KIRR	**Kirishev**	**2.17**	**265**	*e*P	**Pn**	**07 38 27.0**	**+0.2**
KPT	**Kopyto**	**2.24**	**266**	*e*P	**Pn**	**07 38 27.9**	**+0.2**
KMNR	**Kamenistaya**	**2.27**	**261**	*e*P	**Pn**	**07 38 28.8**	**+0.7**
TUMD	**Tumrok D**	**2.37**	**247**	*e*P	**Pn**	**07 38 29.1**	**-0.2**
TUMD				*e*S	**Sn**	**07 38 57.4**	**-0.4**
KOZ	**Kozyrevsk**	**2.42**	**269**	*e*P	**Pn**	**07 38 31.0**	**+0.9**
SRDR	**Sredinnyy**	**2.50**	**275**	*e*P	**Pn**	**07 38 31.9**	**+0.7**
ESO	**Esso**	**3.09**	**267**	*e*P	**Pn**	**07 38 40.6**	**+1.3**
OSSR	**Ossora**	**3.13**	**349**	*e*P	**Pn**	**07 38 39.7**	**0.0**
OSSR				*e*S	**Sn**	**07 39 15.7**	**-0.7**
KII	**Karymskiy**	**3.48**	**234**	*e*P	**Pn**	**07 38 45.7**	**+1.1**
SPN	**Mys Shipunski**	**3.94**	**220**	*e*P	**Pn**	**07 38 49.8**	**-1.0**
SDLR	**Sedlovina**	**4.24**	**229**	*e*P	**Pn**	**07 38 55.1**	**-0.1**
SMAR	**Somma**	**4.29**	**229**	*e*P	**Pn**	**07 38 55.8**	**-0.1**
AVH	**Avacha**	**4.31**	**229**	*e*P	**Pn**	**07 38 57.8**	**+1.7**
UGLR	**Uglovaya**	**4.32**	**228**	*e*P	**Pn**	**07 38 56.3**	**+0.1**
KOK	**Koryaka**	**4.34**	**230**	*e*P	**Pn**	**07 38 56.9**	**+0.5**
GNL	**Ganaly**	**4.39**	**238**	*e*P	**Pn**	**07 38 58.3**	**+1.1**
DALK	**Dalny**	**4.48**	**227**	*e*P	**Pn**	**07 38 58.7**	**+0.4**
PETK	**Petropavlovsk-**	**4.88**	**233**	Pn	**Pn**	**07 39 04.5**	**+0.8**
	0.7nm,0.3s,baz=72,slow=18,SNR=15						
PETK				Sn	**Sn**	**07 40 03.4**	**+3.8**
	0.5nm,0.3s,baz=89,slow=25,SNR=5.2						
	1.1nm,0.5s						
RUS	**Russkaya**	**5.02**	**224**	*e*P	**Pn**	**07 39 05.4**	**-0.4**
ILAR	**Eielson Array**	**24.96**	**50**	P	**P**	**07 43 14.9**	**+1.6**
	0.4nm,0.7s,baz=253,slow=7.4,SNR=7.3						
	0.4nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**36.46**	**176**	T	T	08 23 31.7	
	baz=357,slow=76,SNR=314						
H11N3	**WAKE ISLAND Hy**	**36.47**	**176**	T	T	08 23 27.9	
	baz=357,slow=76,SNR=180						
H11N1	**WAKE ISLAND Hy**	**36.48**	**176**	T	T	08 23 37.9	
	baz=357,slow=76,SNR=228						
TXAR	**Lajitas Array**	**67.30**	**71**	P	**P**	**07 48 47.0**	**+2.1**
	0.1nm,0.4s,baz=295,slow=5.0,SNR=5.0						
	0.1nm,0.4s						

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*UCR **29** 07:39:56.7±0.8, 11°.47N×87°.43W, h3^{km}±70^{km}, MW3.7*

*SNET **29** 07:40:03.9±1.5, 11°.69N×87°.28W, h35^{km}±724^{km}, ML3.0*

*CATAC **29** 07:40:03.4±0.5, 12°N±2°×8°7W±°, h23^{km}±3^{km}, M3.2/20, MLv3.2/20, Error ellipse: s-maj=5.6km s-min=3.4km az=31.7, confirmed*

ISC 29 07:40:04.5±1.8, 11°.77N±0°.07×87°.17W±0°.04, h34^{km}±3^{km}, n46, σ0^s.75/59, 10D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.69**	**54**	*e*P	**Pn**	**07 40 17.4**	**-0.5**
COPN	**Copaltepe**	**0.69**	**54**	⇓P	**Pn**	**07 40 17.5**	**-0.5**
SAPS	**Ciudad Sandino**	**0.84**	**62**	P	**Pn**	**07 40 19.9**	**-0.1**
CNGA	**Al SSO del Vol**	**0.85**	**32**	S	**Sn**	**07 40 31.7**	**+0.1**
CNGN	**Cerro Negro**	**0.86**	**32**	*e*P	**Pn**	**07 40 19.6**	**-0.7**
CNGN	**Cerro Negro**	**0.86**	**32**	⇓P	**Pn**	**07 40 19.7**	**-0.7**
MOMN	**Momotombo**	**0.88**	**44**	⇓P	**Pn**	**07 40 20.0**	**-0.6**
MOMN				S	**Sn**	**07 40 32.4**	**+0.1**
PLRN	**Geotermica Pol**	**0.90**	**26**	⇓P	**Pn**	**07 40 20.0**	**-0.8**
PLRN				S	**Sn**	**07 40 32.1**	**-0.5**
PKGN	**Cerro Pekin**	**0.91**	**12**	⇓P	**Pn**	**07 40 20.3**	**-0.7**
PKGN				S	**Sn**	**07 40 33.5**	**+0.5**
ILCN	**San Idelfonso**	**0.92**	**30**	⇓P	**Pn**	**07 40 19.9**	**-1.3**
ILCN				S	**Sn**	**07 40 33.2**	**0.0**
APQ3	**Volcan Apoyequ**	**0.93**	**57**	P	**Pn**	**07 40 21.4**	**+0.3**
CRIN	**San Cristobal**	**0.93**	**7**	*e*P	**Pn**	**07 40 20.6**	**-0.7**
CRIN	**San Cristobal**	**0.93**	**7**	S	**Sb**	**07 40 35.7**	**+1.2**
CRIN	**San Cristobal**	**0.93**	**7**	⇓P	**Pn**	**07 40 20.7**	**-0.6**
POLN	**Al Sur del Vol**	**0.94**	**21**	S	**Sn**	**07 40 31.9**	**-1.8**
UNAN	**Cigeo UNAN**	**0.94**	**69**	P	**Pn**	**07 40 21.0**	**-0.4**
UNAN				S	**Sb**	**07 40 35.2**	**+0.6**
MOM2	**El Cardon**	**0.94**	**45**	P	**Pn**	**07 40 20.8**	**-0.6**
MOM2				S	**Sn**	**07 40 34.1**	**+0.5**
MGAN	**Managua**	**0.97**	**67**	*e*P	**Pn**	**07 40 21.6**	**-0.3**
MGAN	**Managua**	**0.97**	**67**	P	**Pn**	**07 40 21.7**	**-0.1**
MGAN	**Managua**	**0.97**	**67**	S	**Sn**	**07 40 35.4**	**+0.9**
R4DEC	**Barrio San Lui**	**0.97**	**67**	P	**Pn**	**07 40 21.7**	**-0.1**
R4DEC	**Barrio San Lui**	**0.97**	**67**	S	**Sn**	**07 40 35.5**	**+1.0**
MAS3	**Al N del Volca**	**1.00**	**75**	P	**Pn**	**07 40 21.9**	**-0.4**
MAS3				S	**Sb**	**07 40 36.4**	**0.0**
WILN	**Americas 2**	**1.03**	**68**	P	**Pn**	**07 40 22.5**	**-0.1**
WILN				S	**Sn**	**07 40 36.9**	**+0.9**
NANN	**Nandasmo**	**1.04**	**81**	⇓P	**Pb**	**07 40 23.6**	**-0.5**
NADN	**Granada**	**1.11**	**91**	*e*P	**Pn**	**07 40 22.9**	**-0.9**
NADN	**Granada**	**1.11**	**91**	P	**Pn**	**07 40 23.0**	**-0.7**
NADN				S	**Sn**	**07 40 38.3**	**+0.4**
POTN	**Potosi Cosigui**	**1.27**	**345**	*e*P	**Pn**	**07 40 24.6**	**-1.2**
BOAB	**BOACO BROADBAN**	**1.61**	**65**	P	**Pn**	**07 40 30.2**	**-0.4**
BOAB	**BOACO BROADBAN**	**1.61**	**65**	S	**Sn**	**07 40 51.3**	**+1.0**
CNCH	**Conchagua**	**1.63**	**337**	*e*P	**Pn**	**07 40 30.6**	**-0.4**
CNCH				*e*S	**Sn**	**07 40 52.1**	**+1.1**
CNCH	**Conchagua**	**1.63**	**337**	P	**Pn**	**07 40 30.4**	**-0.7**
CNCH	**Conchagua**	**1.63**	**337**	S	**Sn**	**07 40 51.5**	**+0.5**
MATN	**Matagalpa**	**1.67**	**46**	S	**Sn**	**07 40 51.6**	**-0.3**
MATN	**Matagalpa**	**1.67**	**46**	⇓P	**Pn**	**07 40 30.3**	**-1.3**
LCND	**La Caada**	**1.69**	**335**	*e*P	**Pn**	**07 40 31.0**	**-0.7**
LCND				IAML		07 40 54.9	
	comp=Z,193nm,0.3s						
LCND	**La Caada**	**1.69**	**335**	P	**Pn**	**07 40 30.8**	**-0.9**
ACON	**Acoyapa**	**1.96**	**84**	*e*P	**Pn**	**07 40 35.1**	**-0.3**
OCON	**Estacion meteo**	**1.97**	**20**	⇓P	**Pn**	**07 40 35.7**	**+0.1**
OCON				S	**Sn**	**07 41 00.1**	**+1.0**
PACA	**Pacayal**	**2.03**	**326**	*e*P	**Pn**	**07 40 36.7**	**+0.2**
PACA				*e*S	**Sn**	**07 41 02.5**	**+1.7**
RCPN	**Sur Rio San Ju**	**2.04**	**31**	P	**Pn**	**07 40 36.5**	**-0.1**
RCVN	**Varillal2**	**2.04**	**28**	P	**Pn**	**07 40 36.7**	**+0.1**
RCVN	**Varillal2**	**2.04**	**28**	S	**Sn**	**07 41 02.1**	**+1.1**
SCLA	**Alcaldia de Sa**	**2.45**	**322**	P	**Pn**	**07 40 42.0**	**-0.2**
SCLA	**Alcaldia de Sa**	**2.45**	**322**	S	**Sn**	**07 41 11.9**	**+0.8**
COEG	**Centro de Oper**	**2.49**	**318**	*e*P	**Pn**	**07 40 42.5**	**-0.2**
COEG				*e*S	**Sn**	**07 41 11.1**	**-0.9**
COEG				IAML		07 41 22.3	
	comp=Z,48nm,0.5s						

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*DJA **29** 07:46:38.1±0.6, 4°S±3°×12°9E±°, h193^{km}±6^{km}, M3.9/9, MLv3.9/9*

*IDC **29** 07:46:40.8±3.9, 4°.51S×130°.05E, h274^{km}±44^{km}, mb2.9/2, mbtmp3.6/4, Error ellipse: s-maj=132.0km s-min=13.3km az=73.0*

ISC 29 07:46:34.6±0.9, 4°.67S±0°.07×129°.37E±0°.06, h200^{km}, n11, σ2^s.62/17, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.55**	**75**	P	**Pn**	**07 47 05.1**	**+3.2**
BNDI				S	**Sn**	**07 47 27.8**	**+4.9**
MSAI	**Masohi**	**1.38**	**341**	P	**Pn**	**07 47 07.1**	**-0.2**
NLAI	**Namlea**	**2.67**	**302**	P	**Pn**	**07 47 22.7**	**+2.2**
NLAI				S	**Sn**	**07 47 57.4**	**+1.1**
FAKI	**Fak Fak**	**3.35**	**59**	P	**Pn**	**07 47 30.7**	**+2.2**
FAKI				S	**Sn**	**07 48 09.7**	**-0.9**
SWI	**Sorong**	**4.22**	**27**	P	**Pn**	**07 47 39.9**	**+0.7**
SWI				S	**Sn**	**07 48 26.5**	**-3.5**
SANI	**Sanana**	**4.26**	**307**	P	**Pn**	**07 47 40.2**	**+0.5**
KMPI	**Kaimana, Papua**	**4.43**	**77**	P	**Pn**	**07 47 44.0**	**+2.2**
WRA	**Warramunga Arr**	**15.94**	**163**	P	**Pn**	**07 50 08.2**	**0.0**
	0.5nm,0.5s,baz=342,slow=12,SNR=20						
WRA				S	**S**	**07 52 59.8**	**-5.1**
	0.4nm,0.8s,baz=350,slow=23,SNR=1.8						
ASAR	**Alice Springs**	**19.39**	**167**	P	**Pn**	**07 50 47.4**	**-1.8**
	1.9nm,0.5s,baz=350,slow=12,SNR=31						
ASAR				S	**S**	**07 54 12.7**	**-1.5**
	0.9nm,0.7s,baz=352,slow=27,SNR=6.1						
MKAR	**Makanchi Array**	**65.94**	**327**	P	**P**	**07 56 59.4**	**+0.1**
	0.4nm,0.6s,baz=116,slow=8.2,SNR=5.3						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**70.21**	**328**	P	**P**	**07 57 25.5**	**-0.1**
	0.2nm,0.5s,baz=132,slow=5.1,SNR=4.0						
	0.2nm,0.5s						

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*NOU **29** 07:53:40.6, 12°.55S×165°.83E, h0^{km}, MLv4.7/8, Santa Cruz Islands*

*IDC **29** 07:54:03.4±13.0, 10°.10S×161°.30E, h0^{km}, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=419.3km s-min=48.7km az=121.0*

ISC 29 07:53:43.3±2.1, 12°.7S±0°.2×165°.9E±0°.2, h35^{km}, n9, σ1^s.70/9, mb3.8/3, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUES	**Luesalemba Tem**	**2.02**	**1**	P	**Pn**	**07 54 13.5**	**-1.4**
HURO	**Huro Makira**	**4.48**	**299**	P	**Pn**	**07 54 47.9**	**-0.7**
NGOA	**Tingoa Renbel**	**5.79**	**281**	P	**Pn**	**07 55 06.0**	**-0.8**
ALEG	**Aligegeo Malai**	**6.42**	**307**	P	**Pn**	**07 55 14.7**	**-0.7**
SAVO	**Savo Central**	**6.91**	**300**	P	**Pn**	**07 55 22.4**	**+0.2**
TATA	**Tatamba Isabel**	**7.34**	**305**	P	**Pn**	**07 55 28.4**	**+0.4**
WRA	**Warramunga Arr**	**31.07**	**252**	P	**P**	**07 59 56.2**	**-2.2**
	0.3nm,0.6s,baz=65,slow=7.1,SNR=1.6						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**32.20**	**246**	P	**P**	**08 00 07.5**	**-0.7**
	1.1nm,0.8s,baz=65,slow=9.9,SNR=8.1						
	1.1nm,0.8s						
MKAR	**Makanchi Array**	**94.80**	**317**	P	**P**	**08 07 04.3**	**+2.9**
	0.3nm,0.6s,baz=99,slow=5.4,SNR=6.9						
	0.3nm,0.6s						

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*NEIC **29** 07:58:58.9±1.0, 36°.391N±0°.007×113°.82W±0°.02, h6^{km}±5^{km}, mb3.8/11, ML4.1/126, Mwr3.8/101, ML4.1/10(REN), Error ellipse: s-maj=2.2km s-min=0.9km az=107.0, Moment Tensor Solution. Moment tensor:*

Scale 10^{14}Nm; M_{rr}-6.65; $M_{\theta\theta}$0.43; $M_{\phi\phi}$6.22; $M_{r\theta}$-1.19; $M_{\theta\phi}$2.28; $M_{\phi r}$0.58; Fault plane solution: $M_0$6.96000×10^{14} NP1:ϕ_s30.24000°,δ45.44000°,λ-74.02000°. NP2: ϕ_s188.03000°,δ46.76000°,λ-105.62000°. Principal axes: T 7.0143, Plg1.0000°, Azm289.0000°; N -0.0998, Plg11.0000°, Azm199.0000°; P -6.9144, Plg79.0000°, Azm22.0000°;

*NEIC **29** 07:58:59.6, 36°.40N×113°.82W, h16^{km}*

*REN **29** 07:58:59.5±1.3, 36°.39N±0°.01×113°.76W±0°.02, h1^{km}±2^{km}, Error ellipse: s-maj=2.3km s-min=1.7km az=143.0*

*IDC **29** 07:58:59.2±0.7, 36°.38N×113°.85W, h0^{km}, mb3.6/4, mbtmp3.6/11, ML2.4/4, MS2.6/6, Error ellipse: s-maj=9.7km s-min=8.3km az=83.0*

ISC 29 07:59:00.0±0.6, **36°.38N**±0°.03×**113°.81W**±0°.03, **h10**^{km}, **n132**, σ**1^{s}31**/138, **mb3.9**/7, **Western Arizona**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ICU	Indian Springs	0.77	353		Pg	07 59 14.3	-0.7
LCMT	Little Creek M	0.77	36		Pg	07 59 14.2	-0.8
LCMT					Sg	07 59 24.1	-1.0
LCMT				IAML		07 59 24.6	
	comp=N,13µm,0.2s						
KNB	Kanab	1.01	51		Pg	07 59 18.6	-0.9
KNB					Sg	07 59 31.2	-1.6
KNB				IAML		07 59 32.4	
	comp=N,8µm,0.2s						
KNB				IAML		07 59 33.8	
	comp=E,5µm,0.7s						
V12A	Nelson	1.07	233		Pg	07 59 20.1	-0.5
V12A				Sg	Sg	07 59 34.3	-0.3
V12A				IAML		07 59 37.0	
	comp=E,4µm,0.6s						
V12A				IAML		07 59 37.4	
	comp=N,2µm,0.5s						
SHPR	Sheep Range	1.10	277		Pg	07 59 19.9	-1.3
SHPR				Sg	Sg	07 59 34.2	-1.3
ZNPU	Zion National	1.11	29		Pg	07 59 20.6	-0.8
U15A	North Rim	1.22	87		Pn	07 59 22.4	-1.0
U15A				IAML		07 59 42.3	
	comp=N,6µm,0.7s						
U15A				IAML		07 59 44.0	
	comp=E,3µm,0.7s						
W13A	Hualapai Mount	1.28	183		Pn	07 59 23.6	-0.6
W13A				IAML		07 59 48.4	
	comp=N,2µm,0.6s						
PRN	Pahroc Range	1.43	316		Pn	07 59 25.9	-0.2
PRN				IAML		07 59 45.9	
	comp=E,5µm,0.9s						
PRN				IAML		07 59 49.1	
	comp=N,5µm,0.7s						
MTPC	Mountain Pass	1.68	238		Pn	07 59 29.6	0.0
NEE2	Needles Airpor	1.74	203		Pn	07 59 29.9	-0.4
MCY	Mercury	1.76	280		Pn	07 59 30.9	+0.2
CPY	CP-1	1.89	288		Pn	07 59 32.5	0.0
TUQ	Turquoise Moun	1.96	242		Pn	07 59 33.4	-0.1
NSP	Numbskull Pass	1.97	281		Pn	07 59 34.1	+0.5
AMDNV	Amargosa	2.00	273		Pn	07 59 34.4	+0.6
S11A	Rachel	2.00	310		Pn	07 59 33.7	-0.3
S11A				IAML		08 00 08.5	
	comp=E,2µm,0.6s						
S11A				IAML		08 00 08.9	
	comp=N,2µm,0.6s						
TPNV	Topopah Spring	2.04	287		Pn	07 59 34.7	+0.1
TPNV				IAML		07 59 45.2	
	comp=N,875nm,0.5s						
TPNV				IAML		08 00 16.8	
	comp=N,1µm,0.5s						
SDH	Striped Hills	2.06	278		Pn	07 59 35.3	+0.6
PSUT	Pine Spring	2.15	359		Pn	07 59 36.1	0.0
PSUT				IAML		08 00 20.6	
	comp=E,562nm,1.0s						
WUAZ	Wupatki	2.15	113		Pn	07 59 37.2	+1.0
GMRC	Granite Mounta	2.20	224		Pn	07 59 36.5	-0.2
WCT	Wildcat Mounta	2.31	281		Pn	07 59 38.1	0.0
GWY	Greenwater Val	2.32	266		Pn	07 59 38.3	-0.2
GWY				IAML		08 00 19.6	
	comp=E,1µm,0.8s						
GWY				IAML		08 00 21.4	
	comp=N,960nm,0.7s						
R11B	Troy Canyon, C	2.42	325		Pn	07 59 38.5	-1.4
MVU	Marysvale	2.47	30		Pn	07 59 41.4	+0.8
MVU				IAML		08 00 18.1	
	comp=E,1µm,0.6s						
MVU				IAML		08 00 23.8	
	comp=N,1µm,0.4s						
QSM	Queen of Sheba	2.51	261		Pn	07 59 41.6	+0.6
QSM				IAML		08 00 25.8	
	comp=E,479nm,0.7s						
QSM				IAML		08 00 26.9	
	comp=N,481nm,0.8s						
SGV	South Grapevin	2.66	284		Pn	07 59 43.9	+0.8
BLYC	Blythe	2.69	193		Pn	07 59 43.1	-0.3
BLYC				IAML		08 00 35.7	
	comp=E,470nm,0.8s						
BLYC				IAML		08 00 35.8	
	comp=N,478nm,0.7s						
X16A	Lo Mia Camp, P	2.75	135		Pn	07 59 44.1	-0.4
X16A				IAML		08 00 32.0	
	comp=N,363nm,1.0s						
X16A				IAML		08 00 32.3	
	comp=E,483nm,0.9s						
Q12A	Willow Creek R	2.77	343		Pn	07 59 45.3	+0.6
HMU	Henry Mountain	2.90	57		Pn	07 59 47.1	+0.6
GMN	Gold Mountain	2.92	289		Pn	07 59 46.5	-0.2
GMN				IAML		08 00 36.8	
	comp=N,301nm,0.7s						
TPC	Twentynine Pal	2.92	220		Pn	07 59 46.7	+0.1
GRAC	Grapevine Rang	2.93	283		Pn	07 59 47.7	+1.1
GRAC				IAML		08 00 09.6	
	comp=N,483nm,0.6s						
GRAC				IAML		08 00 41.8	
	comp=E,754nm,0.6s						
GTM	Goat Mountain	2.95	226		Pn	07 59 47.4	+0.5
BLAC	Blackrock camp	3.13	223		Pn	07 59 49.8	+0.3
MZP	Montezuma Peak	3.15	296		Pn	07 59 49.9	0.0
LCH	Last Change Ra	3.19	287		Pn	07 59 51.0	+0.5
TPH	Tonopah	3.21	303	Pn	Pn	07 59 50.8	+0.2
TPH				IAML		08 00 31.5	
	comp=N,2µm,0.6s						
TPH				IAML		08 00 42.7	
	comp=E,930nm,0.8s						
EW2	E Wide Canyon	3.24	222		Pn	07 59 51.3	+0.4
FRK	Frink	3.33	207		Pn	07 59 52.7	+0.5
GLA	Glamis	3.43	194		Pn	07 59 53.9	+0.3
GLA				IAML		08 00 56.2	
	comp=E,582nm,0.7s						
GLA				IAML		08 00 56.9	
	comp=N,385nm,0.6s						
PMD	Palm Desert	3.45	218		Pn	07 59 53.9	0.0
DSP	Deep Springs	3.48	288		Pn	07 59 54.0	-0.2
XPFO	Pinon Flat	3.52	219		Pn	07 59 55.7	+0.8
PFO	Pinyon Flats O	3.52	219		Pn	07 59 53.9	-1.0
PFO	Pinyon Flats O	3.52	219	Pn	Pn	07 59 54.9	0.0
	comp=N,12nm,0.3s,baz=43,slow=13,SNR=49						
PFO				Lg	Lg	08 00 50.4	
	comp=N,10nm,0.3s,baz=311,slow=23,SNR=15						
PFO				LR	LR	08 01 04.4	
	comp=N,49nm,19.7s,baz=94,slow=36						
TMUT	Trail Mountain	3.56	34		Pn	07 59 56.4	+0.8
TMUT				IAML		08 01 14.3	
	comp=N,403nm,0.6s						
TMUT				IAML		08 01 17.3	
	comp=E,372nm,0.6s						
Q09A	Carvers	3.63	313		Pn	07 59 56.1	-0.3
Q09A				IAML		08 00 42.2	
	comp=E,826nm,0.7s						
Q09A				IAML		08 01 11.8	
	comp=N,711nm,1.1s						
SNDA	J Saunders Pla	3.65	220		Pn	07 59 57.4	+0.8
FRD	Ford Ranch, An	3.69	219		Pn	07 59 57.6	+0.5
CRY	Cary Ranch	3.70	221		Pn	07 59 58.0	+0.7
POB	Polly Butte	3.71	224		Pn	07 59 58.2	+0.7
BZNA	Buzz No.'s Pla	3.72	220		Pn	07 59 58.5	+0.8
HMTC	Hemet	3.74	225		Pn	07 59 58.5	+0.6
BORC	Borrego Spring	3.78	215		Pn	07 59 59.0	+0.6
DGR	Domenigoni Val	3.79	225		Pn	07 59 59.3	+0.8
BHPR	Bishop	3.86	285		Pn	08 00 01.3	+1.5
CRR	Carrizo Plain	3.92	208		Pn	08 00 00.7	+0.5
MATG	Mataguay Scout	3.94	217		Pn	08 00 01.3	+0.6
JUEM	Julian Eagle M	4.02	216		Pn	08 00 02.4	+0.6
NV11	Mina Array Sit	4.02	302		Pn	08 00 01.2	-0.6
ELS	Elsinore Mount	4.03	228		Pn	08 00 01.2	-0.7
ELS				IAML		08 01 10.7	
	comp=N,109nm,1.1s						
ELS				IAML		08 01 12.3	
	comp=E,122nm,0.9s						
BENR	Benton	4.04	291		Pn	08 00 03.0	+0.8
YUH	Yuha Desert	4.12	206		Pn	08 00 02.8	-0.2
NV08	Mina Array Sit	4.12	301		Pn	08 00 03.8	+0.6
NVAR	Mina Array Bea	4.12	301	Pn	Pn	08 00 03.5	+0.2
	comp=E,15nm,0.4s,baz=120,slow=14,SNR=162						
NVAR				Pg	Pg	08 00 16.4	-2.6
	comp=E,33nm,0.3s,baz=118,slow=15,SNR=24						
NVAR				LR	LR	08 01 03.1	
	comp=E,58nm,18.5s,baz=250,slow=31						
NV09	Mina Array Sit	4.15	301		Pn	08 00 04.4	+0.8
LHV	Little Huntoon	4.18	298		Pn	08 00 04.0	+0.2
LHV				IAML		08 01 16.6	
	comp=N,192nm,0.8s						
LHV				IAML		08 01 25.5	
	comp=E,233nm,0.8s						
DPP	Dos Picos Cty	4.25	218		Pn	08 00 05.4	+0.6
EML	El Monte Cty P	4.29	217		Pn	08 00 06.1	+0.7
PV20	West Nyswonger	4.32	62		Pn	08 00 07.2	+1.2
PV18	Skein Mesa, Pa	4.32	63		Pn	08 00 07.0	+0.9
PV23	Carpenter Ridg	4.34	60		Pn	08 00 08.2	+1.8
PV13	Radium Mtn., P	4.35	64		Pn	08 00 07.1	+0.7
RYN	Ryan	4.37	302		Pn	08 00 06.4	-0.2
RYN				IAML		08 01 19.4	
	comp=E,150nm,0.8s						
RYN				IAML		08 01 20.6	
	comp=N,121nm,0.7s						
PV03	Paradox Valley	4.37	63		Pn	08 00 07.2	+0.5
PV11	David Mesa, Pa	4.37	63		Pn	08 00 08.1	+1.4
BAR	Barrett	4.39	213		Pn	08 00 07.4	+0.7
PV04	Paradox Valley	4.39	61		Pn	08 00 08.7	+1.8
PV21	Cone Mtn., Par	4.42	59		Pn	08 00 08.7	+1.4
PV02	Paradox Valley	4.43	64		Pn	08 00 09.2	+1.7
SDRC	San Diego Road	4.46	216		Pn	08 00 08.7	+0.9
214A	Organ Pipe Nat	4.49	169		Pn	08 00 09.2	+1.0
214A				IAML		08 01 26.3	
	comp=N,150nm,0.9s						
214A				IAML		08 01 35.3	
	comp=E,172nm,1.5s						
DUZA	Dulzura	4.49	214		Pn	08 00 09.2	+1.0
ELK	Elko	4.50	346		Pn	08 00 08.0	-0.5
ELK	Elko	4.50	346	Pn	Pn	08 00 08.4	0.0
	comp=E,0.5nm,0.3s,baz=177,slow=9.9,SNR=9.4						
ELK				Pg	Pb	08 00 21.8	+2.6
	comp=E,4.0nm,0.3s,baz=182,slow=14,SNR=32						
ELK				Lg	Lg	08 01 18.9	
	comp=E,9.2nm,0.3s,baz=7.7,slow=1.4,SNR=15						
ELK				LR	LR	08 01 22.8	
	comp=E,27nm,21.6s,baz=138,slow=32						
	comp=E,1.2nm,0.3s						
PV01	Paradox Valley	4.53	66		Pn	08 00 10.1	+1.3
PV22	Blue Mesa, Par	4.53	60		Pn	08 00 10.2	+1.3
PV07	Paradox Valley	4.59	62		Pn	08 00 11.4	+1.7
PV15	Paradox Valley	4.67	64		Pn	08 00 12.1	+1.2
CBX	Cerro Bola	4.70	211		Pn	08 00 12.1	+1.0
CBX				IAML		08 01 33.4	
	comp=N,95nm,0.9s						
CBX				IAML		08 01 39.5	
	comp=E,140nm,1.2s						
ESJX	Sierra Juarez	4.71	203		Pn	08 00 12.4	+1.0
TUC	Tucson	4.77	148		Pn	08 00 13.1	+1.1
TUC				IAML		08 01 37.7	
	comp=E,76nm,1.3s						
CCX	Cicese	5.09	209		Pn	08 00 18.2	+1.8
VTX	Valle De La Tr	5.24	199		Pn	08 00 19.9	+1.4
PNTR	Pine Nut	5.33	302		Pn	08 00 19.6	-0.3
PNTR				IAML		08 02 01.4	
	comp=N,112nm,0.8s						
PNTR				IAML		08 02 03.3	
	comp=E,124nm,1.1s						
SFX	San Felipe	5.40	190		Pn	08 00 21.6	+1.0
DUN6	Lazy B Ranch	5.46	133		Pn	08 00 23.2	+1.7
CMB	Columbia Colle	5.50	289		Pn	08 00 22.6	+0.5
PAHR	Pah Rah Range	5.51	309		Pn	08 00 23.6	+1.3
ANMO	Albuquerque	6.15	101		Pn	08 00 32.8	+1.6
ANMO	Albuquerque	6.15	101	Pn	Pn	08 00 33.3	+2.2
	comp=E,12nm,0.3s,baz=19,slow=12,SNR=22						
ANMO				Pg	Pg	08 00 53.2	-4.7
	comp=E,2.1nm,0.3s,baz=30,slow=15,SNR=6.4						
ANMO				Lg	Lg	08 02 09.5	
	comp=E,9.2nm,0.3s,baz=227,slow=15,SNR=3.5						
ANMO				LR	LR	08 03 11.8	
	comp=E,128nm,18.2s,baz=349,slow=41						
BEKR	Beckworth	6.23	306		Pn	08 00 33.3	+1.1
319A	Douglas	6.25	142		Pn	08 00 33.6	+1.1
SDCO	Great Sand Dun	6.78	76		Pn	08 00 41.0	+1.1
BW06	Boulder Array	7.17	26		Pn	08 00 48.2	+3.1
PD31	Pinedale Array	7.17	26		Pn	08 00 48.1	+3.0
PDAR	Pinedale Array	7.17	26		Pn	08 00 48.6	+3.5
PDAR	Pinedale Array	7.17	26	Pn	Pn	08 00 48.5	+3.3
	comp=E,2.5nm,0.5s,baz=178,slow=12,SNR=43						
PDAR				Pg	Pg	08 01 13.6	-3.7
	comp=E,0.9nm,0.3s,baz=210,slow=15,SNR=8.4						
PDAR				Lg	Lg	08 02 45.2	
	comp=E,0.6nm,0.3s,baz=198,slow=28,SNR=2.2						
PDAR				LR	LR	08 03 20.1	
	comp=E,16nm,21.1s,baz=188,slow=36						
ISCO	Idaho Springs	7.30	60		Pn	08 00 48.8	+1.7
Q24A	Divide	7.33	67		Pn	08 00 49.3	+1.9
YBH	Yreka Blue Hor	8.74	310	Pn	Pn	08 01 09.4	+2.8
	baz=147,slow=6.8,SNR=5.5						
TXAR	Lajitas Array	11.04	127	Pn	Pn	08 01 42.0	+3.8
	baz=302,slow=12,SNR=7.0						
TXAR				Lg	Lg	08 04 46.4	
	comp=E,0.1nm,0.3s,baz=313,slow=28,SNR=4.5						
	comp=E,0.1nm,0.5s						
U38A	Gravette	15.64	84		Pn	08 02 38.3	-2.2
U38A				IAmb	IAmb	08 02 47.8	
	comp=Z,5.1nm,1.1s						
F33A	5 Mile Ranch,	16.20	49	Pn	Pn	08 02 47.5	-0.1
FCAR	Ozark Folk Cen	17.52	85	P	Pn	08 03 02.4	-2.0
T42A	Van Buren	18.22	81	P	Pn	08 03 13.2	+0.2
T42A				IAmb	IAmb	08 03 20.8	
	comp=Z,3.9nm,1.0s						
L40A	Anamosa	18.37	65	P	Pn	08 03 12.9	-2.0
L40A				IAmb	IAmb	08 03 37.4	
	comp=Z,6.2nm,1.2s						
ULM	Lac du Bonnet	18.96	37	P	Pn	08 03 22.4	+0.5
	comp=Z,0.1nm,0.3s,baz=239,slow=8.4,SNR=4.1						
	comp=Z,1.3nm,0.8s						
FFC	Flin Flon	20.07	20	P	P	08 03 31.7	-1.7
COWI	Conover	20.86	55	P	P	08 03 41.2	-0.8
COWI				IAmb	IAmb	08 03 48.9	
	comp=Z,4.2nm,1.1s						
H43A	Windswept, Lux	21.34	60	P	P	08 03 45.3	-1.9
H43A				IAmb	IAmb	08 03 50.7	
	comp=Z,3.9nm,0.6s						
T47A	Sharon Grove	21.40	80	P	P	08 03 45.8	-2.1
T47A				IAmb	IAmb	08 03 50.8	
	comp=Z,5.3nm,1.1s						
TBO	Thunder Bay	21.66	48	P	P	08 03 47.8	-2.7
TBO				IAmb	IAmb	08 03 53.7	
	comp=Z,8.0nm,1.2s						
V48A	Smith Brothers	21.80	84	P	P	08 03 49.4	-2.9
TKL	Tuckaleechee C	24.26	83	P	P	08 04 18.2	+0.9
	comp=Z,2.2nm,1.1s,baz=219,slow=3.6,SNR=5.0						
	comp=Z,2.2nm,1.1s						
YKA	Yellowknife Ar	26.14	359	P	P	08 04 35.6	+1.6
	comp=Z,0.5nm,0.8s,baz=182,slow=8.9,SNR=6.4						
	comp=Z,0.5nm,0.8s						
ILAR	Eielson Array	34.57	336	P	P	08 05 50.9	+2.3
	comp=Z,0.6nm,0.9s,baz=138,slow=7.2,SNR=7.2						
	comp=Z,0.6nm,0.9s						
SCHQ	Schefferville	36.84	45	P	P	08 06 08.0	-0.2
	comp=Z,1.7nm,0.7s,baz=261,slow=14,SNR=3.6						
	comp=Z,1.7nm,0.7s						
FRB	Frobisher Bay	38.59	30	LR	LR	08 24 25.5	
	comp=Z,50nm,18.2s,baz=341,slow=40						

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*MOS **29** 08:08:23.2±0.8, 8°.26N×126°.66E, h33^{km}, mb5.0/48, MS4.0/4, Error ellipse: s-maj=12.9km s-min=5.6km az=111.8*

*BJI **29** 08:08:25.7, 8°.12N×126°.81E, h68^{km}, mB4.8/16, mb4.8/47, Ms4.4/41, Ms7 4.2/40*

*NEIC **29** 08:08:26.1±1.6, 8°.33N±0°.07×126°.85E±0°.06, h35^{km}±2^{km}, mb5.0/86, Error ellipse: s-maj=12.3km s-min=9.7km az=169.0*

*DJA **29** 08:08:26.4±0.5, 8°N±3°×12°7E±°, h67^{km}±5^{km}, M4.9/31, mb5.0/31, mB5.3/11, MLv5.3/6, Mw(mB)4.7/11, MwMwp4.6/1, Mwp4.9/1*

*GCMT **29** 08:08:27.1±0.3, 8°.25N±0°.02×127°.19E±0°.03, h27^{km}±1^{km}, MW5.0/80, Moment Tensor Solution. s36,c43; s80,c104; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.49±.19; $M_{\theta\theta}$0.26±.11; $M_{\phi\phi}$-2.75±.13; $M_{r\theta}$-0.08±.18; $M_{\theta\phi}$0.02±.07; $M_{\phi r}$2.85±.21; Best double couple: $M_0$3.87200×10^{16} NP1:ϕ_s181.00000°,δ21.00000°,λ92.00000°. NP2: ϕ_s359.00000°,δ69.00000°,λ89.00000°. Principal axes: T 3.7420, Plg66.0000°, Azm267.0000°; N 0.2560, Plg1.0000°, Azm359.0000°; P -4.0020, Plg24.0000°, Azm89.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **29** 08:08:28.7±2.5, 8°.24N×126°.81E, h69^{km}±22^{km}, mb4.3/27, mbtmp4.6/28, MS4.0/47 Error ellipse: s-maj=21.9km s-min=11.1km az=75.0*

ISC 29 08:08:28.3±0.8, **8°.23N**±0°.04×**126°.84E**±0°.06, **h65**^{km}±7^{km}, **n556**, σ**1^{s}22**/541, **mb4.9**/121, **17C-10D**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.70	227		Pn	08 08 55.0	-0.9
DAV	Davao City (W)	1.70	227	P	Pn	08 08 56.6	+0.7
	1µm,0.6s,baz=51,slow=3.4,SNR=16						
DAV				S	Sn	08 09 21.5	+4.8
	2µm,0.6s,baz=272,slow=21,SNR=14						
DAV	Davao City (W)	1.70	227	P	Pn	08 08 58.0	+2.1
SGSI	Sangihe	4.70	196	P	Pn	08 09 38.3	+1.5
SGSI				S	Sn	08 10 35.0	+4.9
TNTI	Ternate	7.43	176		Pn	08 10 14.3	+0.1
TNTI	Ternate	7.43	176	P	Pn	08 10 14.3	+0.1
	0.6nm2µm105nm,0.8s						
KMSI	Cibinong	8.12	201	P	Pn	08 10 26.4	+2.8
TGY	Tagaytay City	8.22	316	LR	LR	08 13 55.9	
	comp=Z,2µm,19.2s,baz=140,slow=40						
MRSI	Marisa	9.12	213	P	Pn	08 10 37.8	+0.5
	1µm106nm,0.8s						
MRSI				S	Sn	08 12 18.9	+0.4
	1µm106nm,0.8s						
TOLI2	Tolitoli	9.30	221	Pn	Pn	08 10 39.3	-0.5
SWI	Sorong	10.05	154	P	Pn	08 10 49.9	-0.2
	31nm,0.7s						
LUWI	Luwuk	10.07	204	Pn	Pn	08 10 48.8	-1.4
LUWI	Luwuk	10.07	204	P	Pn	08 10 48.8	-1.4
	95nm,0.7s						
SANI	Sanana	10.25	185	P	Pn	08 10 51.9	-0.8
	65nm,1.0s						
KKM	Kota Kinabalu	10.76	259		Pn	08 10 58.7	-1.2
NLAI	Namlea	11.40	179	P	Pn	08 11 06.1	-2.3
	76nm,0.6s						
RKPI	Ransiki, Papua	12.13	143	P	Pn	08 11 15.1	-3.4
	118nm,1.1s						
FAKI	Fak Fak	12.32	154	P	Pn	08 11 17.7	-3.4
	59nm,1.0s						
TTSI	Tana Toraja	13.21	212	P	Pn	08 11 34.9	+1.8
	93nm,1.4s						
BNSI	Bone	14.23	208	P	Pn	08 11 46.2	-0.5
	51nm,1.2s						
KAPI	Kappang	14.94	208	LR	LR	08 18 51.4	
	comp=Z,272nm,18.1s,baz=42,slow=42						
SBUM	Sibu	15.64	249		Pn	08 12 03.4	-1.5
TPUB	Ta-pu	16.12	339	Pn	Pn	08 12 09.5	-1.5
MMRI	Maumere	17.37	195	P	Pn	08 12 26.3	-0.3
MMRI				IAmb	IAmb	08 12 34.2	
	comp=Z,141nm,1.6s						
MMRI	Maumere	17.37	195	P	Pn	08 12 26.1	-0.4
	comp=Z,149nm,1.4s						
JAY	Jayapura	17.47	127	LR	LR	08 17 42.3	
	comp=Z,707nm,21.7s,baz=10,slow=32						
EDFI	Ende, Flores	17.63	197	P	Pn	08 12 29.6	-0.2
	comp=Z,52nm,1.1s						
KSM	Kuching	17.78	249		Pn	08 12 29.3	-2.2
SOEI	Soe	18.05	188	P	P	08 12 34.8	+0.1
QZH	Quanzhou	18.39	336	P	Pn	08 12 39.5	+0.7
QZH				S	S	08 16 05.8	+1.4
QZH				pmax	pmax		
	comp=Z,310nm,8.0s						
QZH				LR	LR		
	comp=Z,690nm,15.8s						
QZH				LR	LR		
	comp=Z,380nm,13.1s						
QZH				LR	LR		
	comp=Z,690nm,16.7s						
GUMO	Guam	18.48	72	LR	LR	08 20 21.0	
	comp=Z,352nm,18.6s,baz=238,slow=38						
JOW	Kunigami	18.55	4	LR	LR	08 20 08.1	
	comp=Z,413nm,18.3s,baz=130,slow=38						
BATI	Baumata	18.59	190	P	Pn	08 12 41.0	-0.4
	comp=Z,32nm,0.5s,baz=219,slow=2.0,SNR=4.2						
BATI				LR	LR	08 21 18.8	
	comp=Z,557nm,18.8s,baz=258,slow=41						
QIZ	Qiongzhong	19.68	305	P	P	08 12 51.3	-1.0
QIZ				S	Sn	08 16 33.8	-1.1
QIZ				pmax	pmax		
	comp=Z,33nm,2.2s						
QIZ				pmax	pmax		
	comp=Z,350nm,2.9s						
QIZ				LR	LR		
	comp=Z,550nm,15.0s						
QIZ				LR	LR		
	comp=Z,840nm,17.1s						
MTN	Manton Dam	21.37	168		P	08 13 08.8	-1.7
SSE	Sheshan	23.35	348	P	P	08 13 30.3	-0.8
SSE				S	S	08 17 44.0	+5.1
SSE				pmax	pmax		
	comp=Z,15nm,1.3s						
SSE				LR	LR		
	comp=Z,100nm,16.1s						
SSE				LR	LR		
	comp=Z,240nm,12.7s						
KNRA	Kununurra	23.83	175		P	08 13 34.9	-0.7
KNRA				IAmb	IAmb	08 13 50.8	
	comp=Z,35nm,0.8s						
LEM	Lembang	24.31	233	LR	LR	08 24 22.4	
	comp=Z,483nm,18.3s,baz=19,slow=39						
NJ2	Nanjing	24.84	344	*e*P	P	08 13 47.0	+2.4
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
JNU	Nakatsue	25.05	8	LR	LR	08 24 12.0	
	comp=Z,184nm,19.9s,baz=187,slow=38						
IPM	Ipoh	25.92	263	P	P	08 13 53.9	-0.8
IPM				IAmb	IAmb	08 14 12.3	
	comp=Z,58nm,1.4s						
FITZ	Fitzroy Crossi	26.19	183		P	08 13 57.2	+0.2
FITZ	Fitzroy Crossi	26.19	183	LR	LR	08 24 52.0	
	comp=Z,206nm,19.7s,baz=24,slow=38						
SRIT	Nakonsritamara	26.94	273	P	P	08 14 02.3	-1.6
JHJ2	Mitsune	27.52	24	P	P	08 14 08.3	-0.5
TJN	Taejon	28.02	1	⇑*e*P	P	08 14 12.0	-1.2
WB0	Warramunga Arr	28.80	165	P	P	08 14 18.6	-1.8
CM31	Chiang Mai Arr	28.94	293	P	P	08 14 22.6	+0.9
CMAR	Chiang Mai Arr	28.94	293	P	P	08 14 21.8	+0.1
	comp=Z,2.7nm,0.4s,baz=103,slow=7.2,SNR=18						
CMAR				PcP	PcP	08 17 30.4	+0.9
	comp=Z,1.1nm,0.4s,baz=131,slow=0.4,SNR=4.3						
	comp=Z,2.7nm,0.4s						
CMAR	Chiang Mai Arr	28.94	293	*i* P	P	08 14 23.1	+1.4
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WRAB	Tennant Creek	28.95	165	⇑*e*P	P	08 14 21.6	-0.1
WRAB				pmax	pmax		
	comp=Z,24nm,3.8s						
WRA	Warramunga Arr	28.96	165	P	P	08 14 21.2	-0.6
	comp=Z,0.8nm,0.5s,baz=348,slow=9.6,SNR=11						
WRA				LR	LR	08 29 11.3	
	comp=Z,121nm,18.3s,baz=8.5,slow=43						
	comp=Z,0.8nm,0.5s						
WRA	Warramunga Arr	28.96	165	*i* P	P	08 14 22.7	+0.9
WRA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CHTO	Chiang Mai	29.04	294	P	P	08 14 22.6	0.0
CHTO	Chiang Mai	29.04	294	P	P	08 14 22.6	0.0
CHTO				pmax	pmax		
	comp=Z,31nm,1.5s						
KSAR	Wonju Array Be	29.09	2	P	P	08 14 22.4	-0.4
KSAR	Wonju Array Be	29.09	2	P	P	08 14 22.4	-0.4
KSRS	Korea Array	29.11	2	P	P	08 14 22.3	-0.6
	comp=Z,1.7nm,0.8s,baz=192,slow=10,SNR=6.7						
	comp=Z,1.7nm,0.8s						
PZH	PanZhiHua	29.96	310	P	P	08 14 32.5	+1.7
MAJO	Matsushiro	30.02	18	⇑*e*P	P	08 14 30.2	-0.9
MAJO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MJAR	Matsushiro Arr	30.02	19	LR	LR	08 25 13.5	

	comp=Z,136nm,21.4s,baz=202,slow=34						
MBWA	**Marble Bar**	**30.03**	**193**	P	**P**	**08 14 31.5**	**+0.3**
PSA00	**Pilbara Seismi**	**30.41**	**193**	P	**P**	**08 14 34.8**	**+0.3**
PSA00				IAmb	IAmb	08 14 49.8	
	comp=Z,26nm,1.1s						
XAN	**Xi'an**	**30.53**	**330**	⇓P	**P**	**08 14 34.0**	**-1.7**
XAN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
XAN				LR	LR		
	comp=Z,200nm,17.2s						
XAN				LR	LR		
	comp=Z,330nm,21.3s						
XAN				LR	LR		
	comp=Z,190nm,20.6s						
HNS	**HongShan**	**31.05**	**341**	⇑P	**P**	**08 14 39.3**	**-0.8**
HNS				pmax	pmax		
	comp=Z,11nm,1.2s						
HNS				LR	LR		
	comp=Z,460nm,16.1s						
HNS				LR	LR		
	comp=Z,230nm,16.9s						
HNS				LR	LR		
	comp=Z,520nm,19.1s						
TNCH	**TengChong**	**31.75**	**305**	⇑P	**P**	**08 14 44.5**	**-2.2**
TNCH				S	**S**	**08 19 49.0**	**-3.3**
TNCH				pmax	pmax		
	comp=Z,32nm,0.4s						
TNCH				pmax	pmax		
	comp=Z,200nm,5.7s						
TNCH				LR	LR		
	comp=Z,330nm,9.4s						
TNCH				LR	LR		
	comp=Z,350nm,12.2s						
TNCH				LR	LR		
	comp=Z,520nm,17.5s						
AS31	**Alice Springs**	**32.45**	**168**		**P**	**08 14 53.0**	**+0.5**
ASAR	**Alice Springs**	**32.45**	**168**	P	**P**	**08 14 52.6**	**+0.1**
	comp=Z,1.2nm,0.4s,baz=347,slow=7.5,SNR=19						
ASAR				PcP	**PcP**	**08 17 39.4**	**+0.8**
	comp=Z,1.2nm,0.8s,baz=350,slow=3.0,SNR=3.0						
	comp=Z,1.2nm,0.4s						
BJT	**Baijiatuau**	**33.06**	**345**		**P**	**08 14 56.6**	**-1.1**
BJT				IAmb	IAmb	08 14 58.2	
	comp=Z,22nm,1.1s						
BJT	**Baijiatuau**	**33.06**	**345**	P	**P**	**08 14 56.6**	**-1.1**
BJT				pmax	pmax		
	comp=Z,21nm,1.1s						
BJT	**Baijiatuau**	**33.06**	**345**	P	**P**	**08 14 56.8**	**-0.9**
BJI	**Beijing**	**33.08**	**345**	P	**P**	**08 14 57.0**	**-0.8**
BJI				S	**S**	**08 20 11.0**	**-1.1**
BJI				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BJI				LR	LR		
	comp=Z,41nm,13.9s						
BJI				LR	LR		
	comp=Z,77nm,15.9s						
BJI				LR	LR		
	comp=Z,120nm,14.8s						
CTAO	**Charters Tower**	**34.02**	**146**	P	**P**	**08 15 08.0**	**+1.7**
CTAO				IAmb	IAmb	08 15 32.6	
	comp=Z,22nm,1.2s						
CTAO	**Charters Tower**	**34.02**	**146**	P	**P**	**08 15 08.0**	**+1.7**
CTAO				pmax	pmax		
	comp=Z,22nm,1.3s						
LZH	**Lanzhou**	**34.77**	**326**	*e*P	**P**	**08 15 12.5**	**-0.3**
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
LZH				LR	LR		
	comp=Z,570nm,12.7s						
LZH				LR	LR		
	comp=Z,470nm,13.0s						
LZH				LR	LR		
	comp=Z,650nm,13.0s						
HHC	**Hu-ho-hao-te**	**35.21**	**340**	*e*P	**P**	**08 15 17.0**	**+0.5**
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,74nm,4.1s						
HHC				LR	LR		
	comp=Z,260nm,13.8s						
HHC				LR	LR		
	comp=Z,160nm,13.0s						
HHC				LR	LR		
	comp=Z,240nm,13.9s						
CN2	**Changchun**	**35.45**	**358**	*e*P	**P**	**08 15 17.3**	**-1.0**
CN2				*e*S	**S**	**08 20 46.8**	**-1.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,100nm,6.0s						
CN2				LR	LR		
	comp=Z,300nm,18.0s						
CN2				LR	LR		
	comp=Z,200nm,18.0s						
CN2				LR	LR		
	comp=Z,300nm,20.0s						
USA0B	**Ussuriysk Arra**	**36.11**	**6**	P	**P**	**08 15 23.3**	**-0.7**
USA0B				IAmb	IAmb	08 15 40.8	
	comp=Z,13nm,0.9s						
USA0B	**Ussuriysk Arra**	**36.11**	**6**	⇑*e*P	**P**	**08 15 24.4**	**+0.4**
USRK	**Ussuriysk Ar.**	**36.11**	**6**		**P**	**08 15 23.7**	**-0.3**
USRK	**Ussuriysk Ar.**	**36.11**	**6**	P	**P**	**08 15 24.1**	**+0.1**
	comp=Z,6.0nm,0.8s,baz=194,slow=8.7,SNR=9.7						
	comp=Z,6.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**36.11**	**6**	P	**P**	**08 15 23.7**	**-0.3**
MDJ	**Mudanjiang**	**36.32**	**3**		**P**	**08 15 26.2**	**+0.4**
MDJ	**Mudanjiang**	**36.32**	**3**	P	**P**	**08 15 27.0**	**+1.2**
MDJ				pmax	pmax		
	comp=Z,30nm,1.5s						
BRDH	**Bariadhala**	**36.72**	**297**	LR	LR	08 31 04.6	
	comp=Z,360nm,20.0s,baz=136,slow=37						
XLT	**XiLinHaoTe**	**36.75**	**347**	*e*P	**P**	**08 15 29.5**	**-0.1**
XLT				pmax	pmax		
	comp=Z,20nm,0.9s						
XLT				pmax	pmax		
	comp=Z,140nm,8.7s						
HNR	**Honiara**	**37.35**	**117**	LR	LR	08 29 09.6	
	comp=Z,163nm,21.7s,baz=267,slow=33						
BNX	**BinXian**	**37.37**	**1**	⇑P	**P**	**08 15 34.3**	**-0.4**
BNX				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ASAJ	**Asahikawa**	**38.30**	**18**	LR	LR	08 30 37.1	
	comp=Z,233nm,20.7s,baz=212,slow=35						
ASAJ	**Asahikawa**	**38.30**	**18**	P	**P**	**08 15 41.7**	**-0.8**
ASAJ				pmax	pmax		
	comp=Z,66nm,1.7s						
JKA	**Kamikawa-asahi**	**38.30**	**18**	P	**P**	**08 15 41.7**	**-0.8**
JKA				IAmb	IAmb	08 15 56.5	
	comp=Z,66nm,1.7s						
MORW	**Morawa**	**38.52**	**195**	P	**P**	**08 15 44.7**	**+0.2**
MORW				IAmb	IAmb	08 16 13.0	
	comp=Z,65nm,1.6s						
GTA	**Gaotai**	**39.37**	**326**	P	**P**	**08 15 51.8**	**0.0**
GTA				PcP	**PcP**	**08 18 01.0**	**+1.9**
GTA				pmax	pmax		
	comp=Z,20nm,0.8s						
GTA				LR	LR		
	comp=Z,250nm,17.4s						
GTA				LR	LR		
	comp=Z,280nm,16.7s						
GTA				LR	LR		
	comp=Z,390nm,17.5s						
GOMU	**GeErMu**	**40.32**	**318**	P	**P**	**08 15 59.8**	**-0.2**
GOMU				S	**S**	**08 22 05.0**	**+1.6**
GOMU				pmax	pmax		
	comp=Z,12nm,1.2s						
GOMU				LR	LR		
	comp=Z,270nm,19.5s						
GOMU				LR	LR		
	comp=Z,180nm,20.0s						
GOMU				LR	LR		
	comp=Z,410nm,21.7s						
H11N1	**WAKE ISLAND Hy**	**40.40**	**69**	T	T	08 59 58.8	
	baz=265,slow=74,SNR=8.0						
H11N2	**WAKE ISLAND Hy**	**40.41**	**69**	T	T	08 59 58.8	
	baz=265,slow=74,SNR=4.4						
H11N3	**WAKE ISLAND Hy**	**40.42**	**69**	T	T	08 59 49.2	
	baz=265,slow=74,SNR=7.1						
YSS	**Yuzhno-Sakhali**	**40.91**	**17**	*e*P	**P**	**08 16 05.3**	**+1.1**
YSS				*e*		08 17 47.2	
YSS				*e*S	**S**	**08 22 12.4**	**+1.3**
YSS				pmax	pmax		
	comp=Z,100nm,7.1s						
YSS				smax	smax		
	comp=E,100nm,12.0s						
YSS				MLR	MLR		
	comp=Z,200nm,19.0s						
YSS				MLR	MLR		
	comp=N,100nm,20.0s						
YSS				MLR	MLR		
	comp=E,100nm,20.0s						
KLR	**Kul'dur**	**41.07**	**5**	*c i*P	**P**	**08 16 05.8**	**+0.3**
KLR				pmax	pmax		
	comp=Z,6.0nm,1.2s						
HIA	**Hailar**	**41.33**	**353**	P	**P**	**08 16 07.9**	**+0.2**
HIA				x	x	08 16 19.2	
HEH	**HeiHe**	**41.89**	**1**	*e*P	**P**	**08 16 12.5**	**+0.4**
HEH				pmax	pmax		
	comp=Z,12nm,0.8s						
STKA	**Stephens Creek**	**42.30**	**161**	P	**P**	**08 16 15.1**	**-0.7**
	comp=Z,1.3nm,0.4s,baz=345,slow=9.1,SNR=7.2						
STKA				LR	LR	08 37 41.4	
	comp=Z,75nm,19.0s,baz=8.2,slow=41						
	comp=Z,1.3nm,0.4s						
STKA	**Stephens Creek**	**42.30**	**161**	⇑*e*P	**P**	**08 16 12.9**	**-2.9**
EVN	**Everest**	**42.53**	**303**	P	**P**	**08 16 18.7**	**+0.2**
EVN				IAmb	IAmb	08 16 20.2	
	comp=Z,16nm,0.7s						
ULN	**Ulaanbaatar**	**42.92**	**340**	P	**P**	**08 16 19.7**	**-1.0**
ULN	**Ulaanbaatar**	**42.92**	**340**	*c i*P	**P**	**08 16 20.4**	**-0.4**
ULN				pmax	pmax		
	comp=Z,19nm,1.7s						
ULN	**Ulaanbaatar**	**42.92**	**340**	P	**P**	**08 16 20.5**	**-0.2**
SONM	**Songino Array**	**43.11**	**340**	P	**P**	**08 16 21.1**	**-1.2**
SONM	**Songino Array**	**43.11**	**340**	P	**P**	**08 16 21.1**	**-1.2**
	comp=Z,3.8nm,1.0s,baz=161,slow=8.8,SNR=18						
SONM				PcP	**PcP**	**08 18 11.6**	**+0.4**
	comp=Z,1.8nm,1.0s,baz=148,slow=2.7,SNR=2.9						
SONM				LR	LR	08 36 07.8	
	comp=Z,225nm,20.1s,baz=162,slow=38						
	comp=Z,3.8nm,1.0s						
SONM	**Songino Array**	**43.11**	**340**	P	**P**	**08 16 21.1**	**-1.2**
SONM				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ZEA	**Zeya**	**45.38**	**0**	*e*P	**P**	**08 16 40.3**	**+0.2**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZEA				MLR	MLR		
	comp=Z,100nm,19.0s						
PALK	**Pallekele**	**45.70**	**272**	LR	LR	08 38 31.7	
	comp=Z,182nm,18.7s,baz=82,slow=40						
HYB	**Hyderabad**	**47.84**	**286**	*e*P	**P**	**08 17 00.3**	**+0.2**
DZM	**Mont Dzumac**	**49.14**	**129**	*e*S	**S**	**08 24 06.9**	**-3.9**
	comp=Z,105nm,25.1s						
DZM				*e*LR	LR	08 31 14.4	
	comp=Z,256nm,23.9s						
DZM	**Mont Dzumac**	**49.14**	**129**	LR	LR	08 37 31.6	
	comp=Z,89nm,20.4s,baz=167,slow=36						
WMQ	**Urumqi**	**49.17**	**323**	*e*P	**P**	**08 17 11.5**	**+1.6**
WMQ				PP	**PP**	**08 19 06.8**	**+2.6**
WMQ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WMQ				LR	LR		
	comp=Z,560nm,16.7s						
WMQ				LR	LR		
	comp=Z,220nm,17.7s						
BOD	**Bodaibo**	**50.46**	**351**	*e*P	**P**	**08 17 19.1**	**-0.2**
BOD				pmax	pmax		
	comp=Z,24nm,1.3s						
PETK	**Petropavlovsk-**	**51.26**	**23**	P	**P**	**08 17 23.6**	**-1.9**
	comp=Z,3.0nm,0.9s,baz=298,slow=3.2,SNR=4.6						
PETK				LR	LR	08 40 48.1	
	comp=Z,49nm,18.8s,baz=206,slow=38						
	comp=Z,3.0nm,0.9s						
ZSN	**Zaisan**	**52.85**	**325**	*e*P	**P**	**08 17 37.1**	**-0.3**
ZSN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ZSN	**Zaisan**	**52.85**	**325**	*e*P	**P**	**08 17 37.1**	**-0.3**
	comp=Z,4.2nm,0.7s						
YAK	**Yakutsk**	**53.73**	**2**	P	**P**	**08 17 44.7**	**+1.2**
	comp=Z,15nm,0.4s,baz=24,slow=1.7,SNR=8.4						
	comp=Z,15nm,0.4s						
YAK	**Yakutsk**	**53.73**	**2**	*e*P	**P**	**08 17 44.1**	**+0.6**
YAK				*e**PP	**pP**	**08 17 58.4**	**-0.4**
YAK				*e*		08 19 45.0	
YAK				*e*S	**S**	**08 25 14.6**	**+1.8**
YAK				*e*SSS	SSS	08 30 54.9	
YAK				pmax	pmax		
	comp=Z,28nm,0.9s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.3s						
YAK				pmax	pmax		
	comp=N,19nm,1.3s						
YAK				pmax	pmax		
	comp=Z,122nm,4.5s						
YAK				pmax	pmax		
	comp=N,56nm,4.1s						
YAK				pmax	pmax		
	comp=E,52nm,5.3s						
YAK				smax	smax		
	comp=E,30nm,2.4s						
YAK	**Yakutsk**	**53.73**	**2**	P	**P**	**08 17 44.2**	**+0.7**
MK31	**Makanchi Array**	**53.98**	**323**	*c i*P	**P**	**08 17 45.5**	**-0.2**
MKAR	**Makanchi Array**	**53.98**	**323**	P	**P**	**08 17 45.0**	**-0.8**
MKAR	**Makanchi Array**	**53.98**	**323**	P	**P**	**08 17 45.6**	**-0.1**
	comp=E,3.4nm,0.6s,baz=122,slow=7.8,SNR=42						
MKAR				PcP	**PcP**	**08 18 49.6**	**-0.6**
	comp=E,2.8nm,0.8s,baz=106,slow=4.4,SNR=4.8						
MKAR				LR	LR	08 42 53.0	
	comp=E,297nm,18.5s,baz=110,slow=38						
	comp=E,3.4nm,0.6s						
MAKZ	**Makanchi**	**54.17**	**323**	P	**P**	**08 17 46.8**	**-0.3**
MAKZ	**Makanchi**	**54.17**	**323**	P	**P**	**08 17 46.8**	**-0.3**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MAKZ	**Makanchi**	**54.17**	**323**	P	**P**	**08 17 46.8**	**-0.3**
UZB	**Uzynbulak**	**54.31**	**318**	*e*P	**P**	**08 17 47.7**	**-0.6**
UZB				pmax	pmax		
	comp=Z,7.0nm,1.1s						
UZB	**Uzynbulak**	**54.31**	**318**	*e*P	**P**	**08 17 47.8**	**-0.6**
	comp=Z,6.8nm,1.1s						
TARG	**Taragay, Kyrgy**	**54.54**	**316**	P	**P**	**08 17 49.9**	**-0.5**
TARG	**Taragay, Kyrgy**	**54.54**	**316**	P	**P**	**08 17 49.9**	**-0.5**
TARG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KPKS	**Kokpek**	**54.67**	**318**	*e*P	**P**	**08 17 50.3**	**-0.5**
KPKS	**Kokpek**	**54.67**	**318**	*e*P	**P**	**08 17 50.4**	**-0.5**
KSH	**Kashi**	**55.01**	**313**	P	**P**	**08 17 55.3**	**+1.8**
KSH				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KSH				LR	LR		
	comp=Z,1µm,24.0s						
KSH				LR	LR		
	comp=Z,690nm,24.4s						
KSH				LR	LR		
	comp=Z,370nm,16.8s						
KDJ	**Kajisay**	**55.13**	**316**	P	**P**	**08 17 54.4**	**+0.1**
KDJ	**Kajisay**	**55.13**	**316**	P	**P**	**08 17 54.4**	**+0.1**
KDJ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
NIL	**Nilore**	**55.35**	**305**	P	**P**	**08 17 55.5**	**-0.4**
NIL	**Nilore**	**55.35**	**305**	P	**P**	**08 17 55.5**	**-0.4**
NIL				pmax	pmax		
	comp=Z,37nm,1.0s						
NIL	**Nilore**	**55.35**	**305**	P	**P**	**08 17 56.1**	**+0.2**
NRN	**Naryn**	**55.68**	**315**	P	**P**	**08 17 57.9**	**-0.6**
NRN	**Naryn**	**55.68**	**315**	P	**P**	**08 17 57.9**	**-0.6**
NRN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AAA	**Alma-Ata**	**55.74**	**317**	*e*P	**P**	**08 17 58.0**	**-0.5**
AAA	**Alma-Ata**	**55.74**	**317**	*e*P	**P**	**08 17 58.1**	**-0.5**
KUU	**Kurty**	**56.39**	**318**	*e*P	**P**	**08 18 02.6**	**-0.5**
KUU				pmax	pmax		
	comp=Z,16nm,1.4s						
KUU	**Kurty**	**56.39**	**318**	*e*P	**P**	**08 18 02.7**	**-0.5**
	comp=Z,16nm,1.4s						
ZAA0	**Zalesovo Array**	**56.67**	**332**		**P**	**08 18 03.9**	**-1.0**
ZALV	**Zalesovo Beam**	**56.67**	**332**		**P**	**08 18 03.6**	**-1.3**
ZALV	**Zalesovo Beam**	**56.67**	**332**	P	**P**	**08 18 04.1**	**-0.8**
	comp=Z,4.4nm,0.7s,baz=115,slow=6.7,SNR=17						
ZALV				LR	LR	08 45 15.7	
	comp=Z,131nm,18.1s,baz=100,slow=39						
	comp=Z,4.4nm,0.7s						
AAK	**Ala-Archa**	**57.16**	**316**	P	**P**	**08 18 08.5**	**-0.3**
AAK	**Ala-Archa**	**57.16**	**316**	P	**P**	**08 18 07.8**	**-1.0**
	comp=Z,1.7nm,0.4s,baz=203,slow=8.6,SNR=1.9						
AAK				LR	LR	08 44 42.8	
	comp=Z,270nm,21.0s,baz=96,slow=38						
	comp=Z,1.7nm,0.4s						
AAK	**Ala-Archa**	**57.16**	**316**	⇓*e*P	**P**	**08 18 09.4**	**+0.6**
AAK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
SEY	**Seymchan**	**57.65**	**14**	⇓*e*P	**P**	**08 18 13.9**	**+2.3**
SEY				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURK	**Kurchatov**	**58.06**	**326**	P	**P**	**08 18 14.3**	**-0.4**
KURK	**Kurchatov**	**58.06**	**326**	*c i*P	**P**	**08 18 14.5**	**-0.1**
KURK				pmax	pmax		
	comp=Z,32nm,1.0s						
KURK	**Kurchatov**	**58.06**	**326**	P	**P**	**08 18 14.6**	**-0.1**
KURBB	**Kurchatov Arra**	**58.06**	**326**	P	**P**	**08 18 14.9**	**+0.2**
	comp=Z,14nm,0.8s,baz=126,slow=6.2,SNR=123						
	comp=Z,14nm,0.8s						
BTLS	**Baital**	**58.35**	**318**	*e*P	**P**	**08 18 16.5**	**-0.4**
BTLS				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BTLS	**Baital**	**58.35**	**318**	*e*P	**P**	**08 18 16.5**	**-0.4**
	comp=Z,4.5nm,0.7s						
BTK	**Batken**	**58.95**	**312**		**P**	**08 18 20.7**	**-0.5**
BTK	**Batken**	**58.95**	**312**	P	**P**	**08 18 20.7**	**-0.5**
BTK				pmax	pmax		
	comp=Z,47nm,1.7s						
GAR	**Garm**	**59.03**	**311**	P	**P**	**08 18 21.3**	**-0.5**
SIMJ	**Simiganj**	**59.93**	**310**	P	**P**	**08 18 27.2**	**-0.8**
SIMJ				IAmb	IAmb	08 18 31.2	
	comp=Z,10nm,1.1s						
SIMJ	**Simiganj**	**59.93**	**310**	P	**P**	**08 18 27.7**	**-0.3**
KK31	**Karatay Array**	**60.08**	**315**	P	**P**	**08 18 28.5**	**-0.4**
KK31				IAmb	IAmb	08 18 29.8	
	comp=Z,27nm,1.4s						
KK31	**Karatay Array**	**60.08**	**315**	P	**P**	**08 18 28.5**	**-0.4**
KK31				pmax	pmax		
	comp=Z,27nm,1.4s						
KKAR	**Karatay Array**	**60.08**	**315**	P	**P**	**08 18 28.3**	**-0.6**
KKAR	**Karatay Array**	**60.08**	**315**	P	**P**	**08 18 28.5**	**-0.4**
KKAR				IAmb	IAmb	08 18 29.8	
	comp=Z,28nm,1.4s						
KKAR	**Karatay Array**	**60.08**	**315**	P	**P**	**08 18 28.5**	**-0.4**
KKAR				pmax	pmax		
	comp=Z,28nm,1.4s						
IUG	**Iuzhnay**	**60.13**	**314**	*e*P	**P**	**08 18 28.8**	**-0.5**
IUG				pmax	pmax		
	comp=Z,9.0nm,0.7s						
IUG	**Iuzhnay**	**60.13**	**314**	*e*P	**P**	**08 18 28.8**	**-0.5**
	comp=Z,9.1nm,0.7s						
CHM	**Chimkent**	**60.48**	**314**	*e*P	**P**	**08 18 31.2**	**-0.4**
CHM	**Chimkent**	**60.48**	**314**	*e*P	**P**	**08 18 31.3**	**-0.4**
BRLS	**Borolday**	**60.53**	**315**	*e*P	**P**	**08 18 31.9**	**-0.1**
BRLS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BRLS	**Borolday**	**60.53**	**315**	*e*P	**P**	**08 18 31.9**	**-0.1**
	comp=Z,7.5nm,0.9s						
BRZS	**Berezniki**	**61.13**	**323**	*e*P	**P**	**08 18 35.8**	**-0.1**
BRZS	**Berezniki**	**61.13**	**323**	*e*P	**P**	**08 18 35.8**	**-0.1**
TIXI	**Tiksi**	**63.37**	**1**	P	**P**	**08 18 50.6**	**+0.2**
TIXI	**Tiksi**	**63.37**	**1**	P	**P**	**08 18 51.5**	**+1.1**
	comp=Z,11nm,0.5s,baz=206,slow=4.7,SNR=9.8						
TIXI				LR	LR	08 47 21.1	
	comp=Z,147nm,20.6s,baz=190,slow=37						
	comp=Z,11nm,0.5s						
TIXI	**Tiksi**	**63.37**	**1**	*de*P	**P**	**08 18 51.0**	**+0.6**
TIXI				pmax	pmax		
	comp=Z,41nm,1.7s						
TIXI	**Tiksi**	**63.37**	**1**	P	**P**	**08 18 50.8**	**+0.4**
BVAR	**Borovoye Array**	**63.65**	**326**	P	**P**	**08 18 52.4**	**-0.2**
	comp=Z,15nm,0.8s,baz=124,slow=8.0,SNR=38						
BVAR				LR	LR	08 49 00.1	
	comp=Z,119nm,18.2s,baz=122,slow=38						
	comp=Z,15nm,0.8s						
BRVK	**Borovoye**	**63.72**	**326**	P	**P**	**08 18 52.7**	**-0.4**
BRVK	**Borovoye**	**63.72**	**326**	P	**P**	**08 18 52.7**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,24nm,0.9s						
BRVK	**Borovoye**	**63.72**	**326**	P	**P**	**08 18 53.1**	**0.0**
BILL	**Bilibino**	**65.20**	**15**	⇓*e*P	**P**	**08 19 03.9**	**+1.4**
BILL				pmax	pmax		
	comp=Z,11nm,1.9s						
RPZ	**Rata Peaks**	**65.39**	**146**	LR	LR	08 45 17.5	
	comp=Z,135nm,21.9s,baz=304,slow=34						
URZ	**Urewera**	**65.78**	**138**	LR	LR	08 45 24.5	
	comp=Z,137nm,21.6s,baz=312,slow=34						
BKZ	**Black Stump Fm**	**65.88**	**140**	P	**P**	**08 19 08.8**	**+1.4**
BKZ				IAmb	IAmb	08 19 22.7	
	comp=Z,19nm,0.9s						
NRIK	**Noril'sk**	**66.11**	**346**	P	**P**	**08 19 08.6**	**+0.2**
NRIK	**Noril'sk**	**66.11**	**346**	P	**P**	**08 19 08.8**	**+0.5**
	comp=Z,15nm,0.7s,baz=117,slow=6.4,SNR=18						
NRIK				LR	LR	08 51 54.5	
	comp=Z,124nm,18.1s,baz=148,slow=39						
	comp=Z,15nm,0.7s						
NRIK	**Noril'sk**	**66.11**	**346**	*c i*P	**P**	**08 19 08.7**	**+0.4**
NRIK				pmax	pmax		
	comp=Z,30nm,1.1s						
NIKH	**Nikolski High**	**68.11**	**36**	P	**P**	**08 19 21.1**	**-0.2**
	baz=254						
SPIA	**Saint Paul Isl**	**68.61**	**31**	P	**P**	**08 19 24.7**	**+0.4**
	baz=251						
AB31	**Akbulak array**	**68.78**	**320**	P	**P**	**08 19 25.1**	**-0.4**
ABKAR	**Akbulak array**	**68.78**	**320**		**P**	**08 19 25.1**	**-0.5**
UNV	**Unalaska Valle**	**69.70**	**35**	P	**P**	**08 19 32.1**	**+1.0**
	baz=256						
SVE	**Sverdlovsk**	**70.22**	**328**	*e*P	**P**	**08 19 33.3**	**-1.0**
SVE				pmax	pmax		
	comp=Z,22nm,1.2s						
AKTO	**Aktyubinsk**	**70.24**	**321**	LR	LR	08 53 17.2	
	comp=Z,322nm,18.3s,baz=98,slow=38						
GAMB	**Gambell**	**70.27**	**24**	P	**P**	**08 19 35.5**	**+1.0**
	baz=248						
ARTI	**Arti**	**71.31**	**327**	P	**P**	**08 19 39.2**	**-1.7**
ARTI				IAmb	IAmb	08 19 41.3	
	comp=Z,7.9nm,0.7s						
ARTI	**Arti**	**71.31**	**327**	*d i*P	**P**	**08 19 40.6**	**-0.3**
ARTI				S	**S**	**08 28 56.6**	**+3.0**
ARTI				SS	**SS**	**08 33 26.1**	**-2.6**
ARTI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TNA	**Tin City**	**72.43**	**23**	P	**P**	**08 19 48.1**	**+0.7**
	baz=251						
K13K	**Kusilvak Mount**	**72.73**	**27**	P	**P**	**08 19 50.1**	**+0.8**
	baz=255						
M13K	**Dall Lake**	**72.96**	**29**	P	**P**	**08 19 51.7**	**+1.1**
	baz=256						
F14K	**Arctic Creek**	**73.03**	**24**	P	**P**	**08 19 51.8**	**+0.7**
	baz=252						
ANM	**Nome**	**73.15**	**25**	P	**P**	**08 19 52.7**	**+0.9**
	baz=253						
J14K	**Nanvaranak Lak**	**73.44**	**27**	P	**P**	**08 19 54.4**	**+1.0**
	baz=256						
SDPT	**Sand Point**	**73.44**	**35**	P	**P**	**08 19 54.3**	**+0.7**
	baz=260						
L14K	**Kuka Creek**	**73.50**	**28**	P	**P**	**08 19 54.7**	**+0.9**
L14K	**Kuka Creek**	**73.50**	**28**	P	**P**	**08 19 54.7**	**+0.9**
	baz=257						
N14K	**Kuskokwak Cree**	**73.66**	**30**	P	**P**	**08 19 55.6**	**+0.8**
	baz=258						
M14K	**Bethel**	**73.71**	**29**	P	**P**	**08 19 55.8**	**+0.8**
	baz=258						
O14K	**Tigyukauivet M**	**73.74**	**31**	P	**P**	**08 19 55.6**	**+0.3**
	baz=259						
F15K	**North Star Dit**	**73.77**	**24**	P	**P**	**08 19 56.1**	**+0.7**
	baz=254						
G15K	**Niukluk**	**73.82**	**24**	P	**P**	**08 19 56.6**	**+1.0**
	baz=254						
CHNA	**Chernabura Isl**	**73.86**	**35**	P	**P**	**08 19 57.1**	**+1.0**
	baz=261						
L15K	**Ungalak Mounta**	**74.13**	**28**	P	**P**	**08 19 58.4**	**+0.9**
	baz=258						
K15K	**Wolf Creek Mou**	**74.24**	**27**	P	**P**	**08 19 59.0**	**+0.8**
	baz=258						
C16K	**Lisburne Hills**	**74.27**	**21**	P	**P**	**08 19 59.0**	**+0.8**
	baz=252						
M15K	**Kasigluk River**	**74.31**	**29**	P	**P**	**08 19 59.5**	**+1.0**
	baz=259						
O15K	**Ungalikthiuk R**	**74.45**	**31**	P	**P**	**08 20 00.6**	**+1.2**
	baz=260						
H16K	**Elim**	**74.47**	**25**	P	**P**	**08 20 00.6**	**+1.2**
	baz=256						
N15K	**Kwethluk River**	**74.50**	**30**	P	**P**	**08 20 01.3**	**+1.6**
N15K				IAmb	IAmb	08 20 14.5	
	comp=Z,30nm,1.2s						
N15K	**Kwethluk River**	**74.50**	**30**	P	**P**	**08 20 00.5**	**+0.8**
	baz=259						
G16K	**Koyuk River**	**74.61**	**24**	P	**P**	**08 20 01.3**	**+1.1**
	baz=256						
CHGN	**Chignik**	**74.74**	**34**	P	**P**	**08 20 02.4**	**+1.3**
	baz=262						
J16K	**Anvik River**	**74.87**	**27**	P	**P**	**08 20 02.7**	**+0.9**
	baz=258						
D17K	**Noatak River**	**74.92**	**22**	P	**P**	**08 20 02.6**	**+0.6**

	baz=255						
I17K	Unalakleet	74.96	26	P	P	08 20 02.8	+0.6
	baz=258						
RDOG	Red Dog Mine	75.08	21	P	P	08 20 03.9	+0.9
	baz=255						
L16K	Owhat River	75.08	28	P	P	08 20 03.6	+0.7
L16K				IAmb	IAmb	08 20 17.8	
	comp=Z,26nm,1.1s						
L16K	Owhat River	75.08	28	P	P	08 20 03.5	+0.5
	baz=260						
C17K	DeLong Mountai	75.09	21	P	P	08 20 03.3	+0.3
	baz=254						
M16K	Timber Creek	75.20	29	P	P	08 20 05.4	+1.7
M16K				IAmb	IAmb	08 20 18.5	
	comp=Z,28nm,1.1s						
M16K	Timber Creek	75.20	29	P	P	08 20 04.4	+0.6
	baz=260						
N16K	Nishlik Lake	75.20	30	P	P	08 20 04.5	+0.7
	baz=260						
E17K	Hotham Inlet	75.23	23	P	P	08 20 04.4	+0.6
	baz=256						
F17K	Baldwin Pennin	75.30	23	P	P	08 20 04.3	+0.2
	baz=257						
G17K	Kiwalik Mounta	75.33	24	P	P	08 20 04.8	+0.5
	baz=257						
P16K	Nushagak River	75.36	31	P	P	08 20 05.2	+0.5
	baz=262						
O16K	Kokwok River B	75.39	31	P	P	08 20 05.6	+0.8
O16K				IAmb	IAmb	08 20 19.6	
	comp=Z,29nm,1.2s						
O16K	Kokwok River B	75.39	31	P	P	08 20 05.6	+0.8
	baz=261						
H17K	Granite Mounta	75.51	25	P	P	08 20 06.2	+0.8
	baz=258						
J17K	VABM Dome	75.57	27	P	P	08 20 06.0	+0.2
	baz=259						
L17K	Donlin	75.70	28	P	P	08 20 06.8	+0.2
	baz=260						
E18K	Tukpahlearik C	75.77	22		P	08 20 06.1	-0.8
E18K				IAmb	IAmb	08 20 21.6	
	comp=Z,16nm,0.9s						
E18K	Tukpahlearik C	75.77	22	P	P	08 20 06.7	-0.2
	baz=257						
K17K	Iditarod	75.80	27	P	P	08 20 07.9	+0.8
K17K	Iditarod	75.80	27	P	P	08 20 07.2	+0.1
	baz=260						
B18K	Kokolik River	75.81	20	P	P	08 20 07.0	0.0
	baz=255						
C18K	Utukok River	75.84	21	P	P	08 20 07.3	0.0
	baz=256						
O17K	Koliganek Bris	75.92	30	P	P	08 20 08.1	+0.3
	baz=262						
F18K	Selawik	75.96	23	P	P	08 20 08.4	+0.5
	baz=258						
N17K	Nushagak Hills	75.98	30	P	P	08 20 07.6	-0.6
	baz=262						
M17K	Holitna River	75.99	29	P	P	08 20 08.3	0.0
	baz=261						
R17L	Mt. Peulik Vol	76.03	33	P	P	08 20 08.6	+0.1
	baz=263						
P17K	Kvichak River	76.17	31	P	P	08 20 09.6	+0.3
	baz=263						
H18K	Honhosa River	76.20	25	P	P	08 20 09.3	0.0
	baz=260						
G18K	Tagagawik	76.21	24	P	P	08 20 09.8	+0.3
	baz=259						
CHIR	Chirikof Islan	76.23	35	P	P	08 20 10.0	+0.3
	baz=264						
A19K	Wainwright	76.26	19	P	P	08 20 10.3	+0.7
	baz=256						
Q17K	Contact Creek	76.35	32	P	P	08 20 10.5	0.0
	baz=264						
L18K	Granite Mounta	76.46	28	P	P	08 20 11.3	+0.5
L18K				IAmb	IAmb	08 20 26.0	
	comp=Z,15nm,1.1s						
L18K	Granite Mounta	76.46	28	P	P	08 20 11.1	+0.2
	baz=262						
KIRV	Kirov	76.46	328	LR	LR	08 57 09.4	
	comp=Z,124nm,18.2s,baz=103,slow=38						
KIRV	Kirov	76.46	328	*de*P	P	08 20 10.7	-0.2
C19K	Lookout Ridge	76.51	21	P	P	08 20 11.3	+0.2
	baz=258,SNR=6.4						
J18K	Innoko River	76.63	27	P	P	08 20 11.7	-0.2
	baz=262						
N18K	Kilae Creek	76.63	30	P	P	08 20 11.5	-0.5
	baz=263						
F19K	Shaleruckik Mo	76.74	23	P	P	08 20 12.0	-0.3
	baz=260						
GCSA	Galena City Sc	76.75	25	P	P	08 20 12.2	-0.2
	baz=261						
M18K	Stony River	76.77	29	P	P	08 20 12.6	-0.1
	baz=263,SNR=5.7						
P18K	Big Mountain,	76.81	31	P	P	08 20 12.7	-0.3
	baz=264						
Q18K	Katmai Hardscr	76.85	32	P	P	08 20 13.3	0.0
	baz=264						
O18K	Koktuh Hills	76.88	30	P	P	08 20 13.9	+0.6
O18K	Koktuh Hills	76.88	30	P	P	08 20 13.6	+0.3
	baz=264,SNR=11						
G19K	Purcell Mounta	76.89	24	P	P	08 20 14.1	+0.9
	baz=261						
D19K	Kuna River	76.91	21	P	P	08 20 13.1	-0.3
D19K				IAmb	IAmb	08 20 27.9	
	comp=Z,22nm,0.9s						
D19K	Kuna River	76.91	21	P	P	08 20 13.6	+0.2
	baz=259,SNR=5.3						
BELG	Belogornoye	76.94	322	LR	LR	08 57 32.2	
	comp=Z,130nm,18.6s,baz=55,slow=38						
R18K	Karluk	77.04	33	P	P	08 20 14.7	+0.5
	baz=265						
H19K	Roundabout Mou	77.05	25	P	P	08 20 14.7	+0.6
	baz=261,SNR=10						
E19K	Redstone River	77.05	23	P	P	08 20 14.1	0.0
	baz=260,SNR=9.6						
SII	Sitkinak Islan	77.10	34	P	P	08 20 14.9	+0.3
	baz=265						
J19K	Poorman	77.18	26	P	P	08 20 15.7	+0.7
	baz=262						
L19K	White Mountain	77.31	28	P	P	08 20 16.5	+0.8
	baz=264						
N19K	Bonanza Creek	77.33	30	P	P	08 20 16.3	+0.3
N19K				IAmb	IAmb	08 20 30.9	
	comp=Z,22nm,1.1s						
N19K	Bonanza Creek	77.33	30	P	P	08 20 16.7	+0.7
	baz=264						
O19K	Port Alsworth	77.35	30	P	P	08 20 16.5	+0.6
	baz=264						
M19K	Big River Lodg	77.49	28	P	P	08 20 17.3	+0.6
	baz=264						
D20K	Etivluk River	77.50	21	P	P	08 20 17.2	+0.5
	baz=260,SNR=11						
B20K	Meade River	77.53	20	P	P	08 20 17.0	+0.3
	baz=260						
F20K	Avaraart Lake	77.57	23	P	P	08 20 17.2	+0.2
	baz=262						
E20K	Nigu River	77.58	22	P	P	08 20 17.2	0.0
	baz=261,SNR=8.2						
Q19K	Cape Douglas,	77.58	31	P	P	08 20 17.2	-0.1
	baz=265						
OHAK	Old Harbor	77.64	33	P	P	08 20 17.6	0.0
	baz=266						
H20K	Anotleneega Mo	77.69	25	P	P	08 20 18.3	+0.5
	baz=263,SNR=8.5						
RAR	Rarotonga	77.71	114	LR	LR	08 49 20.6	
	comp=Z,101nm,18.9s,baz=274,slow=32						
I20K	Naaghedeneel	77.78	25	P	P	08 20 18.5	+0.3
I20K	Naaghedeneel	77.78	25	P	P	08 20 18.3	+0.1
	baz=263						
L20K	Farewell, AK	77.79	28	P	P	08 20 18.7	+0.3
	baz=264						
K20K	Telida	77.79	27	P	P	08 20 18.6	+0.2
	baz=264						
J20K	Nowinta River	77.85	26	P	P	08 20 19.0	+0.4
	baz=264						
P19K	Oil Pt	77.85	31	P	P	08 20 19.0	+0.2
	baz=266						
KDAK	Kodiak Island	78.06	33	P	P	08 20 20.9	+1.0
KDAK				IAmb	IAmb	08 20 34.3	
	comp=Z,22nm,0.8s						
KDAK	Kodiak Island	78.06	33	LR	LR	08 51 23.7	
	comp=Z,70nm,20.2s,baz=238,slow=33						
KDAK	Kodiak Island	78.06	33	P	P	08 20 20.9	+1.0
KDAK				pmax	pmax		
	comp=Z,22nm,0.9s						
KDAK	Kodiak Island	78.06	33	P	P	08 20 20.1	+0.2
	baz=266						
M20K	Styx River	78.08	28	P	P	08 20 20.5	+0.3
	baz=265						
O20K	Slope Mountain	78.19	30	P	P	08 20 21.1	+0.3
	baz=266						
Q20K	Shuyak Island	78.21	32	P	P	08 20 20.7	0.0
	baz=266						
IMAR	Indian Mountai	78.22	24	P	P	08 20 22.6	+2.0
C21K	Knifeblade Rid	78.22	21	P	P	08 20 20.8	+0.2
	baz=262						
B21K	Ikpikpuk River	78.34	21	P	P	08 20 21.4	+0.1
	baz=262						
G21K	Allakaket	78.37	24	P	P	08 20 23.4	+1.9
G21K				IAmb	IAmb	08 20 36.2	
	comp=Z,21nm,1.1s						
G21K	Allakaket	78.37	24	P	P	08 20 21.7	+0.2
	baz=264,SNR=8.9						
E21K	Killik River	78.42	22	P	P	08 20 22.0	+0.3
	baz=263						
A22K	Sinclair Lake	78.42	19	P	P	08 20 21.8	+0.2
	baz=262						
F21K	Alatna River	78.46	23	P	P	08 20 22.4	+0.4
	baz=264						
H21K	Melozitna Rive	78.57	25	P	P	08 20 23.0	+0.4
	baz=265,SNR=9.6						
PPLA	Purkeypile	78.60	27	P	P	08 20 22.7	-0.3
	baz=266						
CHUM	Lake Minchumin	78.62	26	P	P	08 20 23.6	+0.7
	baz=266						
CAST	Castle Rocks	78.69	27	P	P	08 20 24.1	+0.8
	baz=266,SNR=10						
GNI	Garni	78.72	309	LR	LR	09 00 12.5	
	comp=Z,43nm,19.8s,baz=100,slow=39						
B22K	Teshekpuk Lake	78.84	20	P	P	08 20 24.5	+0.5
	baz=263						
SKT	Skwentna	78.85	28	P	P	08 20 24.8	+0.5
	baz=267,SNR=7.5						
D22K	Ayikyak River	78.94	21	P	P	08 20 25.3	+0.7
	baz=264						
F22K	John River	78.99	23	P	P	08 20 25.3	+0.4
	baz=265						
H22K	Ishtalitna Cre	79.18	24	P	P	08 20 26.9	+0.9
	baz=266,SNR=9.2						
E22K	Anaktuvuk Pass	79.18	22	P	P	08 20 27.0	+1.0
E22K				IAmb	IAmb	08 20 41.4	
	comp=Z,16nm,1.1s						
E22K	Anaktuvuk Pass	79.18	22	P	P	08 20 26.7	+0.7
	baz=265,SNR=8.8						
SUA	Susitna One	79.19	29	P	P	08 20 27.0	+0.7
	baz=267						
G22K	Bettles	79.20	23	P	P	08 20 27.2	+1.2
	baz=266						
KTH	Kantishna Hill	79.22	27	P	P	08 20 26.6	+0.3
KTH				IAmb	IAmb	08 20 41.1	
	comp=Z,25nm,1.2s						
BPAW	Bear Paw Mtn.	79.22	26	P	P	08 20 27.2	+1.0
	baz=267,SNR=21						
MLY	Manley	79.39	25	P	P	08 20 28.0	+0.9
MLY				IAmb	IAmb	08 20 41.5	
	comp=Z,12nm,1.0s						
MLY	Manley	79.39	25	P	P	08 20 27.5	+0.4
	baz=267,SNR=10						
TRF	Thorofare Moun	79.50	27	P	P	08 20 28.8	+0.8
TRF				IAmb	IAmb	08 20 44.0	
	comp=Z,26nm,1.2s						
TRF	Thorofare Moun	79.50	27	P	P	08 20 28.5	+0.6
	baz=267,SNR=7.7						
M22K	Willow	79.50	29	P	P	08 20 28.3	+0.6
	baz=268,SNR=10						
D23K	Nanushuk River	79.66	21	P	P	08 20 30.3	+1.8
D23K				IAmb	IAmb	08 20 43.6	
	comp=Z,21nm,1.1s						
D23K	Nanushuk River	79.66	21	P	P	08 20 29.9	+1.4
	baz=266,SNR=9.4						
RC01	Rabbit Creek A	79.67	29	P	P	08 20 29.0	+0.3
	baz=268						
COLD	Coldfoot	79.73	23	P	P	08 20 29.9	+0.9
	baz=267,SNR=10						
C23K	Itkillik River	79.75	20	P	P	08 20 29.7	+0.8
	baz=266,SNR=9.1						
G23K	Bananza Creek	79.77	24	P	P	08 20 29.6	+0.4
	baz=267,SNR=9.9						
SEW	Seward	79.78	30	P	P	08 20 30.9	+1.6
SEW				IAmb	IAmb	08 20 50.1	
	comp=Z,13nm,0.7s						
SEW	Seward	79.78	30	P	P	08 20 29.8	+0.6
	baz=269						
H23K	Yukon River	79.92	25	P	P	08 20 31.1	+1.0
H23K				IAmb	IAmb	08 20 44.9	
	comp=Z,11nm,0.9s						
H23K	Yukon River	79.92	25	P	P	08 20 30.6	+0.5
	baz=268,SNR=9.4						
PMR	Palmer	79.97	29	P	P	08 20 30.4	+0.1
	baz=269,SNR=7.5						
I23K	Minto, Yukon-K	79.97	25	P	P	08 20 30.4	+0.2
	baz=268,SNR=11						
KBZ	Khabaz	80.00	313	P	P	08 20 30.3	-0.5
	comp=Z,5.4nm,1.1s,baz=57,slow=10.0,SNR=4.0						
KBZ				LR	LR	09 01 28.9	
	comp=Z,112nm,18.2s,baz=88,slow=40						
	comp=Z,5.4nm,1.1s						
KBZ	Khabaz	80.00	313⇑	*e*P	P	08 20 31.6	+0.8
KBZ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
E23K	Chandalar	80.00	22	P	P	08 20 31.0	+0.5
	baz=267,SNR=14						
TOLK	Toolik Lake Re	80.05	22	P	P	08 20 31.3	+0.7
	baz=267,SNR=10						
NEA2	Nenana	80.08	26	P	P	08 20 31.3	+0.4
	baz=268,SNR=11						
MCK	McKinley	80.11	27	P	P	08 20 31.8	+0.7
	baz=269,SNR=7.7						
KIV	Kislovodsk	80.14	313	*e*P	P	08 20 28.6	-3.1
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,141nm,19.0s						
WAT1	Susitna Watana	80.27	28	P	P	08 20 32.7	+0.7
	baz=269						
KNK	Knik Glacier	80.29	29	P	P	08 20 32.9	+0.8
	baz=269						
D24K	Happy Valley	80.34	21	P	P	08 20 33.7	+1.5
D24K				IAmb	IAmb	08 20 47.0	
	comp=Z,18nm,1.0s						
D24K	Happy Valley	80.34	21	P	P	08 20 33.2	+1.1
	baz=268,SNR=6.7						
PWL	Port Wells	80.34	30	P	P	08 20 33.2	+0.8
	baz=270						
C24K	Franklin Bluff	80.41	21	P	P	08 20 33.1	+0.7
	baz=268						
E24K	Your Creek	80.42	22	P	P	08 20 33.0	+0.3
	baz=268						
COLA	College	80.61	26⇓	*e*P	P	08 20 33.2	-0.4
COLA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
COLA	College	80.61	26	P	P	08 20 34.2	+0.6
	baz=269						
H24K	Noodor Dome	80.61	25	P	P	08 20 34.6	+0.8
	baz=269,SNR=11						
F24K	Squaw Lake	80.64	23	P	P	08 20 34.7	+0.9
	baz=269,SNR=5.3						
WAT6	Susitna Watana	80.64	28	P	P	08 20 34.4	+0.3
	baz=270,SNR=22						
G24K	Hadweenzic Riv	80.78	24	P	P	08 20 35.4	+0.8
	baz=269,SNR=7.9						
DHY	Denali Highway	80.81	27	P	P	08 20 35.3	+0.3
DHY				IAmb	IAmb	08 20 49.9	
	comp=Z,26nm,1.5s						
DHY	Denali Highway	80.81	27	P	P	08 20 35.6	+0.7
	baz=270,SNR=7.1						
P23K	Montague Islan	80.81	31	P	P	08 20 36.2	+1.4
	baz=271						
SCM	Sheep Creek Mo	80.83	29	P	P	08 20 36.5	+1.4
	baz=270						
GURO	Guroymak-BITLI	80.88	308	P	P	08 20 36.0	+0.2
GURO				IAmb	IAmb	08 20 38.0	
	comp=Z,13nm,0.7s						
GLI	Glacier Island	80.95	30	P	P	08 20 36.6	+1.1
	baz=271						
HDA	Harding Lake	80.99	26	P	P	08 20 36.0	+0.3
HDA				IAmb	IAmb	08 20 50.2	
	comp=Z,11nm,1.0s						
HDA	Harding Lake	80.99	26	P	P	08 20 37.0	+1.2
	baz=270,SNR=7.5						
IL31		81.02	26	P	P	08 20 36.0	+0.2
ILAR	Eielson Array	81.02	26	P	P	08 20 36.3	+0.4
	comp=Z,2.5nm,0.8s,baz=254,slow=4.6,SNR=22						
	comp=Z,2.5nm,0.8s						
D25K	Kavik River	81.22	21	P	P	08 20 38.2	+1.3
	baz=270						
G25K	Bearman Lake	81.33	24	P	P	08 20 38.6	+1.2
	baz=271,SNR=8.2						
Q23K	Middleton Isla	81.35	31	P	P	08 20 38.8	+1.1
	baz=272						
M24K	Tolsona, Glenn	81.37	28	P	P	08 20 39.3	+1.4
	baz=271						
H25L	Birch Creek	81.45	24	P	P	08 20 39.7	+1.6
	baz=271,SNR=8.4						
F25K	Christian Rive	81.50	23	P	P	08 20 40.1	+1.6
	baz=271,SNR=9.6						
KLU	Klutina	81.51	29	P	P	08 20 39.8	+1.2
	baz=272						
K24K	Donnelly Dome	81.52	27	P	P	08 20 39.2	+0.6
	baz=271,SNR=8.1						
E25K	Arctic Village	81.52	22	P	P	08 20 40.1	+1.5
	baz=271,SNR=13						
KLMR	Klimovskoe	81.56	330	*e*P	P	08 20 36.5	-2.3
KLMR				*e*		08 23 42.5	
KLMR				pmax	pmax		
	comp=Z,25nm,1.5s						
PRP	Porcupine Dome	81.59	25	P	P	08 20 39.5	+0.5
	baz=271						
EYAK	Cordova Ski Ar	81.62	30	P	P	08 20 39.9	+0.8
EYAK				IAmb	IAmb	08 20 53.8	
	comp=Z,12nm,1.1s						
EYAK	Cordova Ski Ar	81.62	30	P	P	08 20 40.4	+1.3
	baz=272						
J25K	Salcha River,	81.67	26	P	P	08 20 40.3	+0.9
	baz=272						
PAX	Paxson	81.68	27	P	P	08 20 40.6	+1.1
PAX				IAmb	IAmb	08 20 53.8	
	comp=Z,14nm,1.1s						
PAX	Paxson	81.68	27	P	P	08 20 40.6	+1.1
PAX				pmax	pmax		
	comp=Z,14nm,1.1s						
PAX	Paxson	81.68	27	P	P	08 20 41.5	+2.0
	baz=272,SNR=12						
HARP	HAARP	81.84	28	P	P	08 20 42.1	+1.8
	baz=272						
RIDG	Independent Ri	81.93	27	P	P	08 20 41.0	+0.2
RIDG	Independent Ri	81.93	27	P	P	08 20 42.4	+1.6
	baz=272,SNR=28						
F26K	Sheenjek River	82.07	23	P	P	08 20 44.1	+2.7
	baz=272,SNR=8.6						
N25K	Chitina, Valde	82.14	29	P	P	08 20 43.9	+1.9
	baz=273,SNR=6.0						
C27K	Jago River	82.15	21	P	P	08 20 43.8	+2.0
	baz=272,SNR=8.2						
BMRM	Bremner River	82.16	29	P	P	08 20 43.8	+1.8
	baz=273						
G26K	Porcupine Rive	82.24	23	P	P	08 20 44.6	+2.4
	baz=273,SNR=9.1						
SCRK	Sand Creek	82.30	26	P	P	08 20 44.4	+1.6
	baz=273,SNR=9.5						
KAIM	Kayak Island	82.31	31	P	P	08 20 44.4	+1.6
	baz=273						
J26L	Joseph Creek	82.46	26	P	P	08 20 44.9	+1.3
	baz=273,SNR=11						
I26K	Coal Creek Min	82.59	25	P	P	08 20 45.5	+1.4
	baz=274						
L26K	Log Cabin Wild	82.64	27	P	P	08 20 46.3	+1.8
	baz=274						
M26K	Nabesna, AK	82.84	28	P	P	08 20 47.8	+2.2
	baz=274						
BGLC	Bering Glacier	82.86	30	P	P	08 20 47.3	+1.8
	baz=274						
MCARA	McCarthy VSAT	82.90	29	P	P	08 20 47.6	+1.8
	baz=274						
CRQE	Cirque	82.92	30	P	P	08 20 47.7	+1.6
	baz=274						
E27K	Coleen River	83.00	22	P	P	08 20 48.2	+2.0
	baz=275,SNR=6.2						
G27K	Doyon Strip	83.09	24	P	P	08 20 48.8	+2.1
	baz=275,SNR=9.1						
K27K	Chicken	83.14	26	P	P	08 20 49.5	+2.5
	baz=275						
D27M	Malcolm River	83.14	21	P	P	08 20 48.6	+1.6
	baz=275						
H27K	Steamboat Moun	83.19	24	P	P	08 20 49.8	+2.5
	baz=275,SNR=9.1						
I27K	Kandik River	83.20	25	P	P	08 20 49.6	+2.2
	baz=275,SNR=50						
LVZ	Lovozero	83.26	338⇑	*e*P	P	08 20 48.3	+0.7
LVZ				pmax	pmax		
	comp=Z,26nm,1.3s						
LVZ	Lovozero	83.26	338	P	P	08 20 46.5	-1.1
	comp=Z,35nm,1.5s						
L27K	Beaver Creek,	83.33	27	P	P	08 20 50.0	+2.0
	baz=275,SNR=12						
BCAR	Beaver Creek A	83.35	27	P	P	08 20 49.7	+1.6
M27K	Edge Creek, AK	83.37	28	P	P	08 20 50.2	+1.9
	baz=275,SNR=5.7						
OBN	Obninsk	83.47	325⇑	*e*P	P	08 20 48.8	0.0
OBN				*e*		08 24 01.5	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,59nm,15.0s						
MESA	MESA	83.53	30	P	P	08 20 51.4	+2.1
	baz=275						
GRNC	Granite Creek	83.57	30	P	P	08 20 51.1	+1.5
F28M	Old Crow	83.70	23	P	P	08 20 51.0	+1.1
F28M	Old Crow	83.70	23	P	P	08 20 51.7	+1.8
	baz=276,SNR=28						
E28M	Babbage River	83.72	22	P	P	08 20 52.1	+2.2
	baz=276,SNR=26						
CTG	Chitna Glacier	83.75	29	P	P	08 20 52.9	+2.5
	baz=276,SNR=13						
BVCY	Beaver Creek	83.83	28	P	P	08 20 52.7	+2.1
	baz=276,SNR=7.5						
I28M	Miner Creek	83.92	25	P	P	08 20 53.1	+2.0
	baz=276,SNR=57						
D28M	Stokes Point	83.92	21	P	P	08 20 53.1	+2.3
	baz=277						
YUK3	Moose Creek	84.09	29	P	P	08 20 54.0	+1.8
	baz=276,SNR=5.6						
DAWY	Dawson	84.31	26		P	08 20 54.4	+1.3
DAWY				IAmb	IAmb	08 21 07.8	
	comp=Z,21nm,1.1s						
DAWY	Dawson	84.31	26	P	P	08 20 54.8	+1.7
	baz=277,SNR=23						
O28M	Mount Upton	84.33	30	P	P	08 20 54.9	+1.4
	baz=277,SNR=9.0						
E29M	Blow River	84.35	22	P	P	08 20 54.5	+1.4
	baz=278,SNR=13						
PINM	Pinnacle	84.38	30	P	P	08 20 55.2	+1.7
	baz=277						
H29M	Whitestone	84.46	24	P	P	08 20 55.9	+2.2
	baz=278,SNR=23						
YUK8	Steele Glacier	84.48	29	P	P	08 20 56.4	+2.2
	baz=277						
G29M	Pine Creek	84.50	23	P	P	08 20 56.2	+2.3
	baz=278,SNR=39						
I29M	Ogilvie Camp,	84.60	25	P	P	08 20 56.5	+2.0
	baz=278,SNR=41						
J29N	Klondike Camp	84.77	26	P	P	08 20 57.3	+1.9
	baz=278						
PNL	Peninsula	84.86	31	P	P	08 20 57.8	+1.9
	baz=278						
M29M	Somme Creek	84.94	28	P	P	08 20 58.8	+2.4
	baz=278,SNR=11						
L29M	L29M	85.00	27	P	P	08 20 59.1	+2.6
	baz=278,SNR=23						
YUK4	Talbot Arm	85.00	29	P	P	08 20 59.1	+2.4
	baz=278						
EPYK	Eagle Plains	85.10	24	P	P	08 20 58.7	+1.8
	baz=279,SNR=20						
K29M	Barlow Dome	85.16	26	P	P	08 20 59.1	+1.7
K29M				IAmb	IAmb	08 21 01.0	
	comp=Z,19nm,1.4s						
K29M	Barlow Dome	85.16	26	P	P	08 20 59.5	+2.1
	baz=279,SNR=11						
O29M	Mount Kennedy	85.18	30	P	P	08 20 59.4	+1.8
	baz=278						
G30M	tAoh Zraii Nji	85.19	23		P	08 20 58.0	+0.6
G30M				IAmb	IAmb	08 20 59.9	
	comp=Z,19nm,1.1s						
G30M	tAoh Zraii Nji	85.19	23	P	P	08 20 58.7	+1.3
	baz=280,SNR=19						
YUK6	Outpost Mounta	85.20	29	P	P	08 20 59.8	+2.0
	baz=278						
F30M	Barrier River	85.25	22	P	P	08 20 60.0	+2.3
	baz=280,SNR=17						
I30M	Mount Dempster	85.43	25	P	P	08 21 00.5	+1.7
	baz=280,SNR=16						
J30M	Hart River	85.56	25	P	P	08 21 00.8	+1.5
J30M				IAmb	IAmb	08 21 03.6	
	comp=Z,14nm,1.3s						
J30M	Hart River	85.56	25	P	P	08 21 01.5	+2.1

	baz=280,SNR=13						
HYT	Haines Junctio	85.63	29	P	P	08 21 01.9	+2.0
	baz=279						
M30M	Minto, Yukon	85.68	27	P	P	08 21 01.8	+1.8
	baz=280,SNR=13						
P29M	Windy Craggy	85.70	30	P	P	08 21 01.8	+1.7
	baz=279						
N30M	Aishikik Lake	85.73	29	P	P	08 21 01.8	+1.5
	baz=279						
INK	Inuvik	85.96	22	P	P	08 21 01.8	+0.7
INK				IAmb	IAmb	08 21 03.7	
	comp=Z,19nm,1.4s						
INK	Inuvik	85.96	22	P	P	08 21 01.8	+0.7
INK				pmax	pmax		
	comp=Z,19nm,1.4s						
INK	Inuvik	85.96	22	P	P	08 21 02.4	+1.3
	baz=282,SNR=8.4						
G31M	Satah River	85.96	23	P	P	08 21 02.4	+1.3
	baz=281,SNR=8.1						
P30M	Million Dollar	86.01	30	P	P	08 21 02.7	+1.1
	baz=280						
F31M	Tsiigehtchic	86.06	22	P	P	08 21 02.7	+1.1
	baz=282						
SPITS	Spitsbergen Ar	86.11	349	LR	LR	09 06 25.3	
	comp=Z,52nm,18.0s,baz=55,slow=40						
H31M	Peel River	86.15	24	P	P	08 21 03.4	+1.2
	baz=282						
ARCES	ARCESS Array B	86.29	340	P	P	08 21 02.7	0.0
	comp=Z,3.7nm,0.7s,baz=74,slow=5.3,SNR=7.8						
ARCES				LR	LR	09 04 07.3	
	comp=Z,70nm,19.6s,baz=100,slow=39						
	comp=Z,3.7nm,0.7s						
O30N	Mendenhall	86.32	29	P	P	08 21 04.6	+1.4
	baz=280						
N31M	Braeburn, Yuko	86.34	28	P	P	08 21 04.4	+1.2
	baz=280,SNR=5.5						
PPT	Papeete	86.40	108	LR	LR	08 59 29.3	
	comp=Z,70nm,18.2s,baz=296,slow=35						
PPT2	Papeete2	86.40	108	eLR	LR	08 48 10.0	
	comp=Z,211nm,30.8s						
PLBC	Pleasant Camp	86.42	31	P	P	08 21 04.7	+1.2
	baz=280						
S31K	Pelican	86.75	32	P	P	08 21 06.1	+0.9
	baz=280						
MMAI	Mount Meron Ar	86.77	303	LR	LR	09 03 39.1	
	comp=Z,47nm,18.2s,baz=79,slow=38						
WHY	Whitehorse	86.93	29	P	P	08 21 07.4	+1.2
	baz=281						
BRTR	Keskin Array B	87.25	310	P	P	08 21 07.5	-0.7
	comp=Z,0.9nm,0.6s,baz=97,slow=5.9,SNR=4.6						
	comp=Z,0.9nm,0.6s						
BR104	Keskin Array S	87.25	310	P	P	08 21 07.3	-0.9
	comp=Z,3.0nm,0.9s						
BR105	Keskin Array S	87.27	310	P	P	08 21 07.4	-0.9
	comp=Z,2.7nm,0.7s						
FARO	Faro, Yukon	87.33	28	P	P	08 21 09.2	+1.2
	baz=283						
SIT	Sitka	87.40	33	P	P	08 21 09.5	+1.2
	baz=281						
TBI	Tubuai	87.49	114	eLR	LR	08 48 59.9	
	comp=Z,1µm,28.0s						
R32K	Eaglecrest	87.58	32	P	P	08 21 10.5	+1.2
	baz=282						
EIL	Elat	87.61	299	LR	LR	09 06 33.6	
	comp=Z,73nm,18.1s,baz=66,slow=40						
A36M	Sachs Harbour	87.68	17	P	P	08 21 11.0	+1.6
	baz=290						
N32M	Quiet Lake	87.69	29	P	P	08 21 11.0	+1.3
	baz=283						
S32K	Killisnoo	87.72	32	P	P	08 21 11.1	+1.3
	baz=282						
P32M	Atlin	87.72	30	P	P	08 21 11.4	+1.5
	baz=282						
VNDA	Vanda	87.85	173	P	P	08 21 10.3	+0.2
	comp=Z,1.3nm,0.8s,baz=312,slow=4.9,SNR=4.5						
VNDA				LR	LR	09 00 31.6	
	comp=Z,72nm,19.7s,baz=22,slow=36						
	comp=Z,1.3nm,0.8s						
FINES	FINESS Array B	87.94	332	P	P	08 21 10.7	-0.2
	comp=Z,11nm,0.9s,baz=76,slow=5.2,SNR=17						
FINES				LR	LR	09 04 28.5	
	comp=Z,150nm,19.3s,baz=80,slow=38						
	comp=Z,11nm,0.9s						
P33M	Teslin, Yukon	88.02	29	P	P	08 21 12.5	+1.1
	baz=283						
MMPY	Sheldon Lake,	88.18	27	P	P	08 21 13.3	+1.3
	baz=284						
CSS	Mathiatis	88.20	305	P	P	08 21 11.9	-0.8
	comp=Z,11nm,0.7s						
VSU	Vasula	88.30	329	deP	P	08 21 11.5	-1.1
VSU				pmax	pmax		
	comp=Z,63nm,2.5s						
AK09	Malin Array Si	88.47	321	P	P	08 21 12.9	-0.7
AK08	Malin Array Si	88.48	321	P	P	08 21 12.7	-0.9
AK03	Malin Array Si	88.48	321	P	P	08 21 12.5	-1.2
AKASG	Malin Array Be	88.49	321	P	P	08 21 12.6	-1.1
	comp=Z,2.5nm,0.7s,baz=66,slow=5.4,SNR=7.8						
AKASG				LR	LR	09 05 27.4	
	comp=Z,106nm,18.9s,baz=56,slow=39						
	comp=Z,2.5nm,0.7s						
AKBB	Malin Array Si	88.49	321	P	P	08 21 12.6	-1.1
AK01	Malin Array Si	88.50	321	P	P	08 21 12.6	-1.1
KIEV	Kiev	88.50	321	P	P	08 21 12.6	-1.1
	comp=Z,15nm,1.2s						
AK02	Malin Array Si	88.51	321	P	P	08 21 12.7	-1.1
Q32M	Nakina River	88.58	31	P	P	08 21 15.2	+0.9
	baz=284						
AK13	Malin Array Si	88.61	321	P	P	08 21 13.0	-1.2
U33K	Whale Pass	88.79	33	P	P	08 21 16.5	+1.6
	baz=283						
CRAG	Craig	88.93	34	P	P	08 21 16.6	+1.0
	baz=283						
R33M	Jennings River	89.13	30	P	P	08 21 17.5	+0.8
	baz=285						
S34M	Telegraph Cree	89.42	31	P	P	08 21 20.0	+2.1
	baz=285						
LUBAR	Lubar, Ukraine	89.57	320	P	P	08 21 17.8	-1.0
KMBO	Kilima Mbogo	89.75	269	deP	P	08 21 18.7	-2.0
V35K	Ketchikan	89.80	34	P	P	08 21 20.9	+1.2
	baz=284						
TGTN	Hyland Airport	89.83	28	P	P	08 21 21.6	+1.8
	baz=287						
DLBC	Dease Lake	89.85	31	P	P	08 21 21.2	+1.2
	baz=286						
WTLY	Watson Lake, Y	89.99	29	P	P	08 21 22.4	+1.8
	baz=287						
NDNU	Novodnistrovsk	90.10	319	P	P	08 21 20.5	-0.8
RNPP9	Sopachiv	90.39	322	P	P	08 21 22.1	-0.5
RNPP8	Varash	90.43	322	P	P	08 21 21.7	-1.1
RNPP5	Staryi Chortor	90.44	322	P	P	08 21 22.0	-0.8
KMPD	K-Podol'skiy	90.69	319	P	P	08 21 22.6	-1.4
WRGLY	Wrigley	91.39	25	P	P	08 21 28.8	+1.9
	baz=291						
LIRD	Liard River Hi	91.51	29	P	P	08 21 29.5	+1.9
	baz=289						
MLR	Muntele Rosu	91.75	316	LR	LR	09 08 29.2	
	comp=Z,114nm,19.3s,baz=72,slow=39						
TOAD	Toad River Com	92.11	30	P	P	08 21 32.2	+1.7
	baz=290						
KOTAN	Kotaneelee Air	92.24	28	P	P	08 21 32.6	+1.7
	baz=291						
KWP	Kalwaria Pacla	92.81	321	P	P	08 21 32.8	-1.1
	comp=Z,15nm,0.6s						
HOLU	Holmets	93.32	320	P	P	08 21 36.1	-0.1
HFS	Hagfors	94.10	333	P	P	08 21 38.6	-0.9
	comp=Z,4.8nm,0.9s,baz=90,slow=7.4,SNR=5.2						
HFS				LR	LR	09 08 09.6	
	comp=Z,101nm,18.4s,baz=64,slow=38						
	comp=Z,4.8nm,0.9s						
TAOE	Nuku Hiva Isla	94.20	98	eLR	LR	08 51 43.6	
	comp=Z,126nm,30.2s						
NIE	Niedzica	94.37	321	P	P	08 21 40.5	-0.6
	comp=Z,3.3nm,1.3s						
NB2	NORSAR Subarra	94.82	334	P	P	08 21 41.7	-1.2
	comp=Z,2.8nm,0.9s,baz=65,slow=4.4						
NB2	NORSAR Subarra	94.82	334	P	P	08 21 41.7	-1.2
	baz=65,slow=4.4						
NOA	NORSAR Array B	94.82	334	P	P	08 21 41.7	-1.2
	comp=Z,1.5nm,0.8s,baz=64,slow=4.6,SNR=4.8						
NOA				LR	LR	09 09 44.6	
	comp=Z,88nm,18.1s,baz=70,slow=39						
	comp=Z,1.5nm,0.8s						
YKA	Yellowknife Ar	95.38	24	P	P	08 21 45.8	+0.5
	comp=Z,2.0nm,0.9s,baz=302,slow=5.0,SNR=17						
	comp=Z,2.0nm,0.9s						
YKA	Yellowknife Ar	95.38	24	*i* P	P	08 21 46.7	+1.4
YKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
VYHS	Vyhne	95.58	321	eP	P	08 21 47.5	+0.9
VYHS	Vyhne	95.58	321	eP	P	08 21 47.5	+0.9
MORC	Moravsky Berou	95.95	322	eP	P	08 21 45.1	-3.2
KONO	Kongsberg	96.17	333	⇑eP	P	08 21 48.2	-0.8
KONO				pmax	pmax		
	comp=Z,12nm,1.7s						
JAVC	Velka Javorina	96.19	321	eP	P	08 21 49.3	-0.1
KSP	Ksiaz	96.33	323	P	P	08 21 49.3	-0.6
VRAC	Vranov	96.70	322	LR	LR	09 09 06.0	
	comp=Z,69nm,18.5s,baz=83,slow=38						
BRG	Berggiesshubel	97.70	324	eP	Pdif	08 21 56.6	+0.4
BRG				Amp		08 21 58.3	
	comp=Z,3.8nm,1.1s						
GERES	GERESS Array B	98.63	322	P	Pdif	08 22 00.9	+0.4
	comp=Z,1.2nm,0.7s,baz=56,slow=7.1,SNR=9.4						
GERES				LR	LR	09 11 09.3	
	comp=Z,74nm,18.6s,baz=86,slow=38						
	comp=Z,1.2nm,0.7s						
NVAR	Mina Array Bea	103.81	47	Pdiff	Pdif	08 22 26.4	+2.5
	comp=Z,0.1nm,0.5s,baz=255,slow=4.0,SNR=3.7						
TXAR	Lajitas Array	118.71	50	PKP	PKPdf	08 27 09.8	-0.2
	comp=Z,0.4nm,0.8s,baz=288,slow=1.2,SNR=3.8						
PLCA	Paso Flores	144.12	157	PKP	PKPdf	08 27 56.9	-0.2
	comp=Z,3.7nm,1.0s,baz=223,slow=4.1,SNR=3.7						

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*TAP **29** 08:15:21.4, 24°.90N×122°.42E, h19^{km}±1^{km}, ML2.6, D*
*JMA **29** 08:15:22.1±0.3, 25°N±2°×122°.4E±0°.4, h2^{km}±4^{km}, MV2.3/7, NW OFF ISHIGAKIJIMA IS*
ISC 29 08:15:21.8±1.1**, 24°.86N**±0°.05×**122°.42E**±0°.03**, h14**^{km}±10^{km}**, n27, σ0ˢ.51**/38**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.42	291	eP	Pg	08 15 30.1	-0.1
TWB1				eS	Sg	08 15 36.5	+0.7
EOS2	EOS2	0.47	201	eP	Pb	08 15 32.3	+0.5
EOS2				eS	Sb	08 15 40.2	+1.7
SXI1	Grass Mountain	0.55	295	*i* P	Pg	08 15 32.8	+0.2
TIPB	Shuangxi	0.55	282	*i* P	Pb	08 15 33.2	-0.1
TIPB				S	Sb	08 15 40.9	-0.1
TWC	Suao	0.58	245	eP	Pb	08 15 33.3	-0.4
EOS3	EOS3	0.58	189	eP	Pb	08 15 34.1	+0.5
EOS3				eS	Sn	08 15 43.6	-1.0
NWF	Wu-fen Shan	0.62	290	eP	Pb	08 15 34.4	0.0
WFSB	Wu-fen Shan	0.62	290	eP	Pb	08 15 34.5	+0.1
JYNG	Yonagunijimaku	0.63	130	eP	Pg	08 15 33.7	-0.3
JYNG				eS	Sg	08 15 42.1	-0.2
YOJ	Yonaguni jima	0.67	126	eP	Pg	08 15 34.8	0.0
YOJ				eS	Sg	08 15 43.1	-0.5
YOJ	Yonaguni jima	0.67	126	P	Pg	08 15 34.2	-0.6
TWE	Neicheng	0.70	259	P	Pb	08 15 35.8	+0.1
EWUT	Wuta	0.71	235	P	Pb	08 15 35.9	-0.1
EOS4	EOS4	0.74	187	eP	Pb	08 15 36.8	+0.6
FUSB	Fushanzhiwuyua	0.76	263	P	Pb	08 15 37.1	+0.2
ENTT	Nioudou	0.81	254	eP	Pb	08 15 38.1	+0.5
ENTT				eS	Sn	08 15 49.8	-0.7
EAHA	Aohua	0.81	230	eP	Pb	08 15 37.8	+0.1
YM01	YM01	0.82	290	eP	Pg	08 15 37.8	0.0
LATG	Datong	0.88	249	*i* P	Pb	08 15 39.0	+0.2
LATG				S	Sb	08 15 51.0	+0.6
YHNB	Yeheng	0.97	259	eP	Pg	08 15 40.3	-0.2
YHNB				eS	Sg	08 15 52.8	-0.4
NSK	Sanguang	0.98	260	eP	Pg	08 15 40.3	-0.5
NSK				eS	Sb	08 15 53.9	+0.4
NNSB	Datong	1.04	246	eP	Pg	08 15 41.4	-0.4
ETLH	Xiulin Townshi	1.07	233	P	Pg	08 15 42.0	-0.5
WHF	Hehuan Shan	1.27	236	eP	Pb	08 15 45.8	0.0
WHF				eS	Sn	08 16 02.8	+0.2
IRIF	Iriomote-Funau	1.30	113	eP	Pb	08 15 46.3	+0.3
OWD	Renai	1.45	232	eP	Pb	08 15 48.5	-0.2
WUSB	Renai	1.47	234	eP	Pb	08 15 49.1	+0.1

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*SOME **29** 08:21:16.3, 42°.65N×83°.03E, h20^{km}*
*NNC **29** 08:21:23.8±2.3, 42°.71N×83°.04E, h0^{km}, mb3.1, mpv2.7, Error ellipse: s-maj=18.7km s-min=8.2km az=141.0*
ISC 29 08:21:24.1±4.5**, 42°.5N**±0°.2×**83°.2E**±0°.2**, h35**^{km}**, n4, σ1ˢ.14**/8**, 8C, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	Podgornoye	2.89	289	⇑Pn	Pn	08 22 07.8	0.0
	2.0nm,0.4s						
PDGK				⇑Sn	Sn	08 22 42.7	+1.3
	48nm,0.8s						
DJR	Jarkent	3.13	308	eP	Pn	08 22 09.2	-1.9
	1.1nm,0.1s						
DJR				eS	Sn	08 22 48.0	+0.7
	5.7nm,0.2s						
MK31	Makanchi Array	4.38	351	⇑Pn	Pn	08 22 28.5	+0.3
	baz=170,slow=25,SNR=4.3						
MK31				⇑Sn	Sn	08 23 18.3	+0.3
	0.5nm,0.3s,baz=175,slow=27						
MK31				⇑Lg	Lg	08 23 34.8	
	8.5nm,0.6s,baz=170,slow=25						
MAKZ	Makanchi	4.44	349	⇑Pn	Pn	08 22 29.3	+0.4
	0.5nm,0.4s						
MAKZ				⇑Sn	Sn	08 23 18.7	-0.6
	0.7nm,0.5s						
MAKZ				⇑Lg	Lg	08 23 35.8	
	3.6nm,0.7s						

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*CATAC **29** 08:36:40.4±0.5, 12°N±5°×8°7W±°, h126^{km}±3^{km}, M2.5/19, MLv2.5/19, Error ellipse: s-maj=13.3km s-min=5.0km az=39.3, confirmed*
*SNET **29** 08:36:41.4±1.0, 11°.55N×86°.98W, h35^{km}±461^{km}, ML2.8*
ISC 29 08:36:39.9±1.9**, 12°.16N**±0°.08×**86°.51W**±0°.06**, h139**^{km}±10^{km}**, n33, σ0ˢ.62**/43**, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	Copaltepe	0.09	283	P	Pn	08 36 57.7	-0.9
SAPS	Ciudad Sandino	0.10	85	P	Pn	08 36 58.5	-0.1
SAPS	Ciudad Sandino	0.10	85	S	Sn	08 37 12.7	-0.1
APQ2	Apoyeque	0.18	78	P	Pn	08 36 58.5	-0.3
UNAN	Cigeo UNAN	0.24	102	P	Pn	08 36 58.5	-0.4
UNAN				S	Sn	08 37 13.3	+0.1
MOMN	Momotombo	0.25	352	P	Pn	08 36 58.6	-0.4
MOMN				S	Sn	08 37 13.1	-0.4
MOM2	El Cardon	0.28	4	P	Pn	08 36 59.1	+0.1
MOM2				S	Sn	08 37 13.7	+0.1
WILN	Americas 2	0.31	90	P	Pn	08 36 59.1	0.0
WILN				S	Sn	08 37 13.8	+0.2
MAS3	Al N del Volca	0.35	113	P	Pn	08 36 59.2	-0.1
MAS3				S	Sn	08 37 14.0	0.0
CNGA	Al SSO del Vol	0.38	330	P	Pn	08 36 59.7	+0.2
CNGN	Cerro Negro	0.39	331	P	Pn	08 36 59.4	-0.1
SABN	Sabanita	0.39	121	P	Pn	08 36 59.0	-0.5
NANN	Nandasmo	0.44	120	S	Sn	08 37 15.1	+0.5
NANN	Nandasmo	0.44	120	P	Pn	08 37 00.4	+0.7
ILCN	San Idelfonso	0.46	335	P	Pn	08 36 58.8	-0.9
PLRN	Geotermica Pol	0.49	329	P	Pn	08 36 59.7	-0.3
PLRN				S	Sn	08 37 16.6	+1.5
PKGN	Cerro Pekin	0.68	318	P	Pn	08 37 00.9	-0.2
CRIN	San Cristobal	0.75	315	P	Pn	08 37 01.5	-0.1
BOAB	BOACO BROADBAN	0.87	71	P	Pn	08 37 02.5	0.0
BOAB	BOACO BROADBAN	0.87	71	S	Sn	08 37 19.7	+0.1
MATN	Matagalpa	0.95	37	P	Pn	08 37 02.7	-0.6
MATN	Matagalpa	0.95	37	S	Sn	08 37 20.6	-0.6
ACON	Acoyapa	1.32	98	P	Pn	08 37 06.8	+0.1
CARN	Rivas	1.37	135	P	Pn	08 37 07.3	+0.1
CARN				S	Sn	08 37 28.0	0.0
RCPN	Sur Rio San Ju	1.42	16	P	Pn	08 37 07.9	0.0
CNCH	Conchagua	1.71	311	eS	Sn	08 37 35.5	+0.7
CNCH	Conchagua	1.71	311	P	Pn	08 37 11.3	+0.2
CNCH	Conchagua	1.71	311	S	Sn	08 37 35.4	+0.6
LCND	La Caada	1.77	310	eP	Pn	08 37 11.8	+0.2
LCND				eS	Sn	08 37 36.8	+0.8
LCND				IAML		08 37 41.2	
	comp=Z,70nm,0.4s						
LCND	La Caada	1.77	310	P	Pn	08 37 11.9	+0.2
PACA	Pacayal	2.20	306	eP	Pn	08 37 18.1	+1.2
COEG	Centro de Oper	2.73	302	eP	Pn	08 37 23.3	-0.2
COEG				eS	Sn	08 37 57.1	0.0
JAYA	Jayaque - finc	3.23	298	eP	Pn	08 37 29.8	-0.2
JAYA				eS	Sn	08 38 06.3	-2.4

GCG 29 09:05:41.9±0.7**, 13°.25N**×**89°.84W, h40**^{km}±999^{km}**, MD3.7, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	0.55	43	*i* P	Pn	09 05 53.3	-0.2
JAYA				*i* S	Sn	09 06 02.7	+1.0
LALI	Alcalda de L	0.56	65	*i* P	Pn	09 05 53.3	-0.1
LALI				eS	Sn	09 06 01.2	-0.4
NUBE	Las Nubes	0.65	5	*i* P	Pn	09 05 55.0	+0.1
NUBE				*i* S	Sn	09 06 05.3	+1.3

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*NEIC **29** 09:07:46.6, 36°.43N×113°.82W, h9^{km}*
*REN **29** 09:07:46.1±1.5, 36°.40N±0°.01×113°.79W±0°.02, h0^{km}±2^{km}, Error ellipse: s-maj=2.2km s-min=1.9km az=132.0*
*NEIC **29** 09:07:46.1±0.7, 36°.38N±0°.02×113°.79W±0°.03, h14^{km}±8^{km}, ML3.8/144, Mwr3.5/88, ML4.1/3(REN), Error ellipse: s-maj=3.9km s-min=2.4km az=137.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.69; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$1.70; $M_{r\theta}$-0.97; $M_{\theta\phi}$1.00; $M_{\phi r}$-0.24; Fault plane solution: $M_0$2.21000×10^{14} NP1:ϕ_s181.31000°, δ41.25000°, λ-128.08000°. NP2:ϕ_s47.49000°, δ58.74000°, λ-61.59000°. Principal axes: T 2.2629, Plg9.0000°, Azm118.0000°; N -0.1159, Plg24.0000°, Azm212.0000°; P -2.1470, Plg64.0000°, Azm8.0000°;*
*IDC **29** 09:07:46.1±0.8, 36°.44N×113°.88W, h0^{km}, mb3.0/1, mbtmp3.2/7, ML3.7/6, MS2.6/2 Error ellipse: s-maj=12.5km s-min=9.2km az=98.0*
ISC 29 09:07:46.7±0.8**, 36°.37N**±0°.03×**113°.79W**±0°.03**, h10**^{km}**, n91, σ1ˢ.43**/95**, Western Arizona**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCMT	Little Creek M	0.78	34		Pg	09 08 01.0	-0.7
LCMT				Sg	Sg	09 08 10.8	-1.0
LCMT				IAML		09 08 11.3	
	comp=E,8µm,0.2s						
LCMT				IAML		09 08 11.3	
	comp=N,3µm,0.3s						
ICU	Indian Springs	0.79	352		Pg	09 08 00.9	-1.0
ICU					Sg	09 08 11.2	-1.0
KNB	Kanab	1.01	50		Pg	09 08 05.3	-0.8
KNB				Sg	Sg	09 08 17.9	-1.5
KNB				IAML		09 08 20.4	
	comp=N,1µm,0.7s						
KNB				IAML		09 08 20.5	
	comp=E,1µm,0.7s						
V12A	Nelson	1.07	234		Pg	09 08 06.9	-0.3
V12A				Sg	Sg	09 08 21.0	-0.3
V12A				IAML		09 08 23.6	
	comp=E,1µm,0.4s						
SHPR	Sheep Range	1.11	277		Pg	09 08 06.7	-1.4
ZNPU	Zion National	1.12	28		Pg	09 08 07.3	-0.9
U15A	North Rim	1.21	87		Pb	09 08 09.6	-0.3
U15A				IAML		09 08 28.9	
	comp=N,1µm,0.6s						
U15A				IAML		09 08 30.8	
	comp=E,1µm,0.7s						
W13A	Hualapai Mount	1.27	184		Pn	09 08 11.0	+0.3
W13A				IAML		09 08 35.0	
	comp=N,1µm,0.5s						
PRN	Pahroc Range	1.45	316		Pn	09 08 12.7	-0.3
PRN				IAML		09 08 32.5	
	comp=E,2µm,0.8s						
PRN				IAML		09 08 35.8	
	comp=N,3µm,0.6s						
MTPC	Mountain Pass	1.68	239		Pn	09 08 16.2	-0.1
MCY	Mercury	1.77	280		Pn	09 08 17.6	+0.1
CPY	CP-1	1.91	288		Pn	09 08 19.4	0.0
TUQ	Turquoise Moun	1.97	242		Pn	09 08 20.3	+0.2
NSP	Numbskull Pass	1.98	281		Pn	09 08 20.9	+0.5
AMDNV	Amargosa	2.01	273		Pn	09 08 21.1	+0.5
S11A	Rachel	2.02	310		Pn	09 08 20.6	-0.3
S11A				IAML		09 08 54.1	
	comp=E,746nm,0.3s						
S11A				IAML		09 08 56.9	
	comp=N,758nm,0.6s						
TPNV	Topopah Spring	2.06	287		Pn	09 08 21.9	+0.4
TPNV				IAML		09 08 52.9	
	comp=N,555nm,0.5s						
TPNV				IAML		09 08 53.7	
	comp=N,581nm,0.3s						
SDH	Striped Hills	2.07	278		Pn	09 08 22.0	+0.5
WUAZ	Wupatki	2.14	113		Pn	09 08 23.7	+1.1
WUAZ				IAML		09 08 54.0	
	comp=N,1µm,0.5s						
WUAZ				IAML		09 09 03.4	
	comp=N,950nm,0.7s						
PSUT	Pine Spring	2.16	359		Pn	09 08 23.3	+0.4
GMRC	Granite Mounta	2.20	224		Pn	09 08 23.1	-0.2
WCT	Wildcat Mounta	2.32	281		Pn	09 08 25.8	+0.8
GWY	Greenwater Val	2.33	266		Pn	09 08 27.0	+1.8
GWY	Greenwater Val	2.33	266	IAML		09 09 06.5	
	comp=E,687nm,0.7s						
GWY				IAML		09 09 08.0	
	comp=N,466nm,0.8s						
R11B	Troy Canyon, C	2.44	325		Pn	09 08 26.4	-0.3
QSM	Queen of Sheba	2.52	262		Pn	09 08 28.4	+0.7
QSM				IAML		09 09 07.5	
	comp=N,242nm,0.5s						
QSM				IAML		09 09 12.4	
	comp=E,243nm,0.7s						
SPR3	Spring Creek 3	2.66	351		Pn	09 08 29.0	-0.9
SPR3				IAML		09 09 13.8	
	comp=N,197nm,0.6s						
SPR3				IAML		09 09 14.7	
	comp=E,228nm,0.6s						
GSC	Goldstone, Bar	2.67	247		Pn	09 08 29.9	0.0
GSC				IAML		09 09 13.5	
	comp=N,302nm,0.8s						
GSC				IAML		09 09 19.4	
	comp=E,570nm,0.6s						
SGV	South Grapevin	2.68	284		Pn	09 08 30.5	+0.6
BLYC	Blythe	2.68	193		Pn	09 08 30.5	+0.6
BLYC				IAML		09 09 13.8	
	comp=E,256nm,0.8s						
BLYC				IAML		09 09 22.4	
	comp=N,200nm,0.7s						
X16A	Lo Mia Camp, P	2.73	135		Pn	09 08 32.6	+1.8
Q12A	Willow Creek R	2.79	343		Pn	09 08 32.0	+0.5
HMU	Henry Mountain	2.90	56	IAML		09 09 20.6	
	comp=N,850nm,0.7s						
GMN	Gold Mountain	2.94	289		Pn	09 08 33.5	-0.1
GMN				IAML		09 09 26.6	
	comp=N,158nm,0.7s						
GRAC	Grapevine Rang	2.94	283		Pn	09 08 34.6	+1.1
GRAC				IAML		09 09 24.3	
	comp=N,342nm,0.5s						
GRAC				IAML		09 09 28.4	
	comp=E,351nm,0.6s						
MZP	Montezuma Peak	3.17	296		Pn	09 08 37.1	+0.3
LCH	Last Change Ra	3.21	287		Pn	09 08 37.6	+0.3
TPH	Tonopah	3.23	303		Pn	09 08 37.8	+0.3
TPH				IAML		09 09 32.7	
	comp=E,427nm,0.8s						
Q16A	Castle Valley	3.29	38		Pn	09 08 39.1	+0.8
Q16A				IAML		09 09 33.1	
	comp=N,140nm,0.8s						
GLA	Glamis	3.42	195		Pn	09 08 40.9	+0.8
GLA				IAML		09 09 43.4	
	comp=N,167nm,0.6s						
GLA				IAML		09 09 49.2	
	comp=E,226nm,0.7s						
DSP	Deep Springs	3.50	288		Pn	09 08 41.7	+0.6
PFO	Pinyon Flats O	3.52	219		Pn	09 08 41.5	0.0
PFO	Pinyon Flats O	3.52	219	Pn	Pn	09 08 42.3	+0.9
	comp=E,1.4nm,0.3s,baz=32,slow=12,SNR=14						
PFO				Pg	Pg	09 08 52.7	-1.3
	comp=E,4.7nm,0.3s,baz=24,slow=15,SNR=17						
PFO				Lg	Lg	09 09 37.2	
	comp=E,5.9nm,0.3s,baz=306,slow=23,SNR=10.0						
PFO				LR	LR	09 10 20.2	
	comp=E,86nm,18.5s,baz=238,slow=44						
	comp=E,3.5nm,0.3s						
TMUT	Trail Mountain	3.57	34		Pn	09 08 43.2	+0.9
TMUT				IAML		09 09 46.0	
	comp=N,118nm,0.5s						
TMUT				IAML		09 10 15.9	
	comp=E,94nm,0.7s						
113A	Mohawk Valley,	3.59	180	Pn	Pn	09 08 40.9	-1.5
113A				IAML		09 09 45.1	
	comp=N,86nm,0.8s						
113A				IAML		09 09 47.1	
	comp=E,109nm,1.3s						

CCAC	**Calif City Air**	**3.65**	**252**		**Pn**	**09 08 44.0**	**+0.8**
CCAC				IAML		09 09 47.0	
	comp=N,154nm,1.4s						
CCAC				IAML		09 09 55.8	
	comp=E,148nm,1.2s						
BHPR	**Bishop**	**3.88**	**285**		**Pn**	**09 08 48.0**	**+1.4**
ELS	**Elsinore Mount**	**4.04**	**229**		**Pn**	**09 08 49.2**	**+0.6**
NV11	**Mina Array Sit**	**4.04**	**302**		**Pn**	**09 08 48.1**	**-0.6**
BENR	**Benton**	**4.06**	**291**		**Pn**	**09 08 49.6**	**+0.6**
YUH	**Yuha Desert**	**4.11**	**206**		**Pn**	**09 08 50.3**	**+0.8**
PV05	**Paradox Valley**	**4.11**	**64**		**Pn**	**09 08 52.1**	**+2.3**
NV08	**Mina Array Sit**	**4.14**	**301**		**Pn**	**09 08 50.4**	**+0.3**
NVAR	**Mina Array Bea**	**4.14**	**301**		**Pn**	**09 08 48.9**	**-1.2**
NVAR	**Mina Array Bea**	**4.14**	**301**	Pn	**Pn**	**09 08 50.0**	**-0.1**
	comp=E,5.5nm,0.3s,baz=113,slow=14,SNR=167						
NVAR				Pg	**Pb**	**09 09 01.1**	**+1.3**
	comp=E,13nm,0.3s,baz=118,slow=16,SNR=20						
	comp=E,5.4nm,0.4s						
NV09	**Mina Array Sit**	**4.17**	**301**		**Pn**	**09 08 50.9**	**+0.4**
LHV	**Little Huntoon**	**4.20**	**298**		**Pn**	**09 08 51.3**	**+0.5**
LHV				IAML		09 10 08.0	
	comp=E,111nm,0.9s						
LHV				IAML		09 10 09.4	
	comp=N,87nm,1.1s						
PASC	**Pasadena Art C**	**4.21**	**240**	IAML		09 10 04.4	
	comp=N,53nm,1.1s						
PV10	**Paradox Valley**	**4.28**	**61**		**Pn**	**09 08 52.4**	**+0.2**
PV14	**Lion Creek, Pa**	**4.29**	**61**		**Pn**	**09 08 53.9**	**+1.7**
P18A	**Preston Nutter**	**4.29**	**40**		**Pn**	**09 08 54.7**	**+2.4**
P18A				IAML		09 10 03.7	
	comp=E,115nm,0.6s						
P18A				IAML		09 10 15.9	
	comp=N,72nm,0.8s						
PV19	**Morning Glory**	**4.29**	**62**		**Pn**	**09 08 54.1**	**+1.9**
PV17	**East Wray Mesa**	**4.30**	**62**		**Pn**	**09 08 54.8**	**+2.5**
PV20	**West Nyswonger**	**4.32**	**61**		**Pn**	**09 08 54.5**	**+2.0**
PV18	**Skein Mesa, Pa**	**4.32**	**63**		**Pn**	**09 08 54.8**	**+2.2**
MVCO	**Mesa Verde**	**4.33**	**77**		**Pn**	**09 08 55.5**	**+2.7**
MVCO				IAML		09 10 04.8	
	comp=N,251nm,1.1s						
PV23	**Carpenter Ridg**	**4.33**	**60**		**Pn**	**09 08 55.3**	**+2.4**
PV16	**Nyswonger Mesa**	**4.34**	**62**		**Pn**	**09 08 55.2**	**+2.4**
PV13	**Radium Mtn., P**	**4.35**	**64**		**Pn**	**09 08 55.2**	**+2.2**
PV03	**Paradox Valley**	**4.37**	**63**		**Pn**	**09 08 55.5**	**+2.2**
PV11	**David Mesa, Pa**	**4.37**	**62**		**Pn**	**09 08 55.7**	**+2.5**
RYN	**Ryan**	**4.39**	**302**		**Pn**	**09 08 53.5**	**0.0**
RYN				IAML		09 10 06.0	
	comp=E,60nm,0.8s						
RYN				IAML		09 10 13.4	
	comp=N,46nm,0.8s						
PV21	**Cone Mtn., Par**	**4.41**	**59**		**Pn**	**09 08 56.3**	**+2.4**
PV12	**Saucer Basin,**	**4.42**	**62**		**Pn**	**09 08 56.3**	**+2.3**
PV02	**Paradox Valley**	**4.43**	**64**		**Pn**	**09 08 56.1**	**+2.0**
ELK	**Elko**	**4.51**	**346**		**Pn**	**09 08 54.9**	**-0.4**
ELK	**Elko**	**4.51**	**346**	Pn	**Pn**	**09 08 55.4**	**+0.1**
	comp=N,0.4nm,0.3s,baz=161,slow=14,SNR=7.8						
ELK				Pg	**Pb**	**09 09 08.3**	**+2.2**
	comp=N,2.1nm,0.3s,baz=185,slow=14,SNR=25						
ELK				Lg	Lg	09 10 04.5	
	comp=N,4.9nm,0.3s,baz=98,slow=0.9,SNR=12						
	comp=N,0.9nm,0.3s						
PV01	**Paradox Valley**	**4.52**	**66**		**Pn**	**09 08 57.6**	**+2.2**
PV01				IAML		09 10 09.8	
	comp=E,219nm,0.5s						
PV01				IAML		09 10 10.1	
	comp=N,202nm,1.1s						
PV22	**Blue Mesa, Par**	**4.53**	**60**		**Pn**	**09 08 57.4**	**+1.9**
PV22				IAML		09 10 12.7	
	comp=N,184nm,0.8s						
PV22				IAML		09 10 20.2	
	comp=E,212nm,0.9s						
PV07	**Paradox Valley**	**4.59**	**62**		**Pn**	**09 08 58.5**	**+2.3**
PV07				IAML		09 10 17.3	
	comp=N,175nm,1.0s						
PV15	**Paradox Valley**	**4.67**	**63**		**Pn**	**09 08 59.8**	**+2.4**
CBX	**Cerro Bola**	**4.69**	**211**		**Pn**	**09 08 59.1**	**+1.5**
CBX				IAML		09 10 23.8	
	comp=N,45nm,1.1s						
CBX				IAML		09 10 25.5	
	comp=E,59nm,1.2s						
ESJX	**Sierra Juarez**	**4.71**	**203**		**Pn**	**09 08 59.2**	**+1.3**
TUC	**Tucson**	**4.75**	**148**		**Pn**	**09 08 59.8**	**+1.4**
PNTR	**Pine Nut**	**5.35**	**302**		**Pn**	**09 09 07.6**	**+0.9**
PNTR	**Pine Nut**	**5.35**	**302**	IAML		09 10 49.6	
	comp=N,47nm,0.9s						
PNTR				IAML		09 10 50.0	
	comp=E,50nm,1.1s						
ANMO	**Albuquerque**	**6.14**	**101**	Pn	**Pn**	**09 09 20.6**	**+3.0**
	comp=E,2.8nm,0.3s,baz=16,slow=14,SNR=21						
ANMO				Pg	**Pg**	**09 09 40.0**	**-4.1**
	comp=E,0.8nm,0.3s,baz=31,slow=14,SNR=5.4						
ANMO				Lg	Lg	09 10 57.3	
	comp=E,1.6nm,0.3s,baz=283,slow=21,SNR=8.8						
	comp=E,8.6nm,0.5s						
BEKR	**Beckworth**	**6.25**	**306**	Pn	**Pn**	**09 09 20.4**	**+1.3**
PDAR	**Pinedale Array**	**7.18**	**26**	Pn	**Pn**	**09 09 34.0**	**+2.2**
	comp=E,0.4nm,0.3s,baz=203,slow=13,SNR=17						
PDAR				Pg	**Pg**	**09 10 01.8**	**-2.3**
	comp=E,0.3nm,0.3s,baz=207,slow=17,SNR=6.5						
PDAR				LR	LR	09 12 30.5	
	comp=E,31nm,18.5s,baz=270,slow=40						
	comp=E,0.9nm,0.5s						
TXAR	**Lajitas Array**	**11.03**	**127**	Pn	Pn	09 10 29.8	+5.3
	comp=E,0.1nm,0.3s,baz=282,slow=6.9,SNR=2.2						
	comp=E,0.1nm,0.3s						
YKA	**Yellowknife Ar**	**26.16**	**359**	P	**P**	**09 13 21.1**	**+0.4**
	comp=E,0.2nm,0.9s,baz=175,slow=8.1,SNR=2.6						
	comp=E,0.2nm,0.9s						

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*CATAC **29** 09:19:30.6±0.9, 8°N±5°×8°3W±°, h8^{km}±6^{km}, M3.9/9, MLv3.9/9, Error ellipse: s-maj=14.9km s-min=10.1km az=70.4, confirmed*
*UPA **29** 09:19:31.9±1.6, 8°.40N×82°.84W, h30^{km}±5^{km}, MW4.0*
*UCR **29** 09:20:05.1±1.0, 9°.92N×84°.80W, h0^{km}±61^{km}, MW3.5*
ISC 29 09:19:31.4±1.0, **8°.37N**±0°.04×**82°.84W**±0°.03, **h33**^{km}±2^{km}, **n53,** σ**1^{s}.39**/68, **2C-11D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LESP3	**La Esperanza,**	**0.06**	**56**	⇓*i*P	**Pb**	**09 19 36.8**	**-0.2**
LESP3				*e*S	**Sb**	**09 19 40.9**	**0.0**
CDITO	**Canoas**	**0.20**	**350**	P	**Pn**	**09 19 37.6**	**+0.4**
CDITO	**Canoas**	**0.20**	**350**	S	**Sb**	**09 19 42.9**	**+0.3**
LIMO3	**Limones**	**0.27**	**186**	⇑*i*P	**Pb**	**09 19 38.9**	**0.0**
LIMO3				*e*S	**Sb**	**09 19 46.1**	**+2.2**
DVD	**David**	**0.39**	**81**	⇓*i*P	**Pb**	**09 19 40.2**	**-0.2**
DVD				*e*S	**Sb**	**09 19 46.0**	**-0.5**
PEDE3	**Pedregal, Chir**	**0.41**	**89**	⇓*i*P	**Pb**	**09 19 40.4**	**-0.3**
PEDE3				*e*S	**Sn**	**09 19 47.4**	**0.0**
MLIR3	**Monte Lirio, C**	**0.42**	**2**	⇑*e*P	**Pb**	**09 19 41.0**	**+0.1**
MLIR3				*e*S	**Sn**	**09 19 50.8**	**+3.1**
LOCO3	**Loma Colorada,**	**0.42**	**85**	⇓*i*P	**Pb**	**09 19 40.6**	**-0.1**
LOCO3				*e*S	**Sb**	**09 19 47.2**	**0.0**
BRU2	**Volcan**	**0.44**	**19**	P	**Pb**	**09 19 41.0**	**-0.3**
BRU2	**Volcan**	**0.44**	**19**	⇓*i*P	**Pb**	**09 19 41.0**	**-0.3**
BRU2				*i* S	**Sn**	**09 19 49.2**	**+0.8**
LOMA3	**Las Lomas, Chi**	**0.45**	**83**	⇓*i*P	**Pb**	**09 19 40.9**	**-0.3**
LOMA3				*e*S	**Sn**	**09 19 48.2**	**-0.2**
PTAR3	**Potrerillos Ar**	**0.46**	**47**	⇓*i*P	**Pb**	**09 19 41.4**	**-0.2**
PTAR3				*e*S	**Sn**	**09 19 49.4**	**+0.5**
BC3P	**Paso Ancho**	**0.49**	**27**	⇓*i*P	**Pb**	**09 19 41.6**	**-0.5**
BC3P				*e*S	**Sn**	**09 19 51.6**	**+1.7**
CHIR3	**Chiriqui UPA,**	**0.50**	**88**	⇓*i*P	**Pb**	**09 19 41.7**	**-0.4**
CHIR3				*e*S	**Sn**	**09 19 49.6**	**-0.2**
BQSF3	**Alto Boquete,**	**0.54**	**48**	⇓*i*P	**Pb**	**09 19 42.2**	**-0.6**
BQSF3				*i* S	**Sn**	**09 19 50.9**	**0.0**
PSOM3	**Paja de Sombre**	**0.60**	**59**	⇓*i*P	**Pn**	**09 19 42.9**	**-0.6**
PSOM3				*i* S	**Sb**	**09 19 51.9**	**-0.1**
DRK0	**Durika**	**0.97**	**336**	P	**Pn**	**09 19 48.2**	**-0.7**
DRK0	**Durika**	**0.97**	**336**	S	**Sn**	**09 20 01.6**	**0.0**
DRK0	**Durika**	**0.97**	**336**	*i* P	**Pn**	**09 19 48.2**	**-0.7**
DRK0				*e*S	**Sn**	**09 20 00.6**	**-1.0**
MESA3	**La Mesa, Verag**	**1.65**	**98**	*e*P	**Pn**	**09 19 58.8**	**+0.8**
MESA3				*e*S	**Sb**	**09 20 21.7**	**0.0**
GMAL	**Guarumal, Vera**	**1.70**	**111**	*e*P	**Pn**	**09 19 58.7**	**-0.1**
LCR2	**La Lucha 2**	**1.78**	**320**	S	**Sb**	**09 20 24.8**	**-0.9**
LCR2	**La Lucha 2**	**1.78**	**320**	P	**Pn**	**09 20 00.0**	**0.0**
VTCV	**VTCV, Calle Va**	**1.82**	**331**	*e*P	**Sb**	**09 20 25.8**	**-1.1**
CVTV	**Tajo**	**1.85**	**331**	*e*P	**Sb**	**09 20 26.6**	**-1.2**
CALO3	**Calobre, Verag**	**1.98**	**91**	*e*P	**Pb**	**09 20 05.2**	**-1.6**
TCS1	**Tacares**	**2.20**	**319**	P	**Pn**	**09 20 07.3**	**+1.7**
CRIS3	**El Cristo, Coc**	**2.20**	**93**	*e*P	**Pn**	**09 20 07.2**	**+1.5**
CACAO	**El Cacao, Vera**	**2.21**	**117**	*e*P	**Pn**	**09 20 05.5**	**-0.2**
TRT2	**Tortugero**	**2.34**	**338**	S	**Sb**	**09 20 43.2**	**+1.7**
TRT2	**Tortugero**	**2.34**	**338**	P	**Pn**	**09 20 08.7**	**+1.1**
AZU	**Azuero**	**2.60**	**103**	*e*P	**Pb**	**09 20 14.5**	**-2.9**
SOCE	**Pocosol**	**2.66**	**319**	P	**Pn**	**09 20 14.1**	**+2.2**
TUNA	**La Fortuna**	**2.74**	**320**	*e*P	**Pb**	**09 20 17.2**	**-2.6**
VACR	**Volcan Arenal**	**2.77**	**319**	*e*P	**Pb**	**09 20 17.7**	**-2.5**
CEDE	**Laguna Cedeo**	**2.79**	**319**	*e*P	**Pn**	**09 20 16.9**	**+3.0**
JTS	**Las Juntas de**	**2.83**	**313**	*e*P	**Pn**	**09 20 14.8**	**+0.5**
JTS	**Las Juntas de**	**2.83**	**313**	*e*P	**Pn**	**09 20 14.9**	**+0.7**
INDI	**Punta indio, G**	**3.02**	**300**	P	**Pn**	**09 20 17.2**	**+0.4**
INDI	**Punta indio, G**	**3.02**	**300**	S	**Sn**	**09 20 50.7**	**-1.3**
CMARA	**Lajas Hojancha**	**3.03**	**303**	*e*P	**Pn**	**09 20 17.9**	**+0.8**
CMARA	**Lajas Hojancha**	**3.03**	**303**	S	**Sn**	**09 20 51.5**	**-0.8**
BCIP	**Isla Barro Col**	**3.07**	**75**	*e*P	**Pn**	**09 20 19.0**	**+1.5**
TIMP	**Tierras Morena**	**3.07**	**316**	*e*P	**Pn**	**09 20 20.6**	**+2.8**
NICO	**Nicoya**	**3.11**	**304**	*e*P	**Pn**	**09 20 19.4**	**+1.2**
PLVR	**Palo Verde**	**3.16**	**309**	*e*P	**Pn**	**09 20 20.2**	**+1.1**
CUI	**Cuipilapa**	**3.23**	**315**	*e*P	**Pn**	**09 20 22.1**	**+2.2**
HORNC	**Hornillas**	**3.27**	**315**	*e*P	**Pn**	**09 20 23.2**	**+2.7**
SACU	**Santa Cruz**	**3.30**	**305**	*e*P	**Pn**	**09 20 21.8**	**+1.1**
ALIBA	**Liberia Airpor**	**3.46**	**310**	*e*P	**Pn**	**09 20 25.6**	**+2.6**
LAPC	**Finca la Perla**	**3.49**	**313**	*e*P	**Pn**	**09 20 25.7**	**+2.2**
ELI1	**Hacienda Flor**	**3.50**	**310**	*e*P	**Pn**	**09 20 26.1**	**+2.6**
BLUN	**Bluefields**	**3.72**	**346**	P	**Pn**	**09 20 27.3**	**+0.8**

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*JMA **29** 09:29:34.2±0.1, 25°N±1°×122°.4E±0°.4, h0^{km}, MV3.3/10, NW OFF ISHIGAKIJIMA IS*
*TAP **29** 09:29:35.0, 24°.92N×122°.45E, h14^{km}, ML3.4, C*
*IDC **29** 09:29:36.5±1.6, 24°.72N×121°.40E, h0^{km}, mb3.6/5, mbtmp3.6/6, ML3.4/1, Error ellipse: s-maj=64.3km s-min=25.8km az=66.0*
ISC 29 09:29:35.1±1.0, **24°.86N**±0°.02×**122°.42E**±0°.02, **h9**^{km}±7^{km}, **n92,** σ**1^{s}.04**/162, **mb3.5**/5, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.42**	**292**	P	**Pg**	**09 29 43.2**	**-0.1**
TWB1				S	**Sg**	**09 29 49.8**	**+1.0**
EGS		**0.44**	**269**	*i* P	**Pg**	**09 29 44.2**	**+0.5**
EGS				S	**Sb**	**09 29 51.2**	**-0.4**
EOS2	**EOS2**	**0.47**	**201**	*e*P	**Pb**	**09 29 45.1**	**-0.2**
EOS2				*e*S	**Sb**	**09 29 53.1**	**+0.9**
SXI1	**Grass Mountain**	**0.55**	**296**	P	**Pg**	**09 29 45.8**	**+0.1**
SXI1				*e*S	**Sg**	**09 29 54.3**	**+1.4**
TIPB	**Shuangxi**	**0.55**	**282**	P	**Pg**	**09 29 45.9**	**+0.1**
TIPB				*i* S	**Sg**	**09 29 54.1**	**+1.1**
TWC	**Suao**	**0.57**	**245**	*e*P	**Pg**	**09 29 46.0**	**-0.2**
TWC				*e*S	**Sg**	**09 29 53.7**	**0.0**
EOS3	**EOS3**	**0.57**	**189**	P	**Pb**	**09 29 47.3**	**+0.1**
EOS3				*e*S	**Sb**	**09 29 57.2**	**+1.9**
ESAO	**Su ao**	**0.59**	**242**	*e*P	**Pg**	**09 29 46.8**	**+0.3**
ESAO				S	**Sb**	**09 29 55.9**	**-0.1**
NWF	**Wu-fen Shan**	**0.61**	**291**	*e*P	**Pg**	**09 29 47.2**	**+0.1**
NWF				*i* S	**Sg**	**09 29 55.8**	**+0.6**
WFSB	**Wu-fen Shan**	**0.61**	**291**	P	**Pg**	**09 29 46.7**	**-0.3**
WFSB				*e*S	**Sb**	**09 29 56.7**	**0.0**
JYNG	**Yonagunijimaku**	**0.63**	**130**	*i* P	**Pg**	**09 29 46.7**	**-0.5**
JYNG				S	**Sg**	**09 29 55.5**	**+0.1**
TNOU	**National Taiwa**	**0.65**	**297**	*e*P	**Pg**	**09 29 47.9**	**+0.1**
TNOU				*e*S	**Sg**	**09 29 57.4**	**+1.1**
YOJ	**Yonaguni jima**	**0.67**	**126**	P	**Pg**	**09 29 47.2**	**-0.8**
YOJ	**Yonaguni jima**	**0.67**	**126**	*e*P	**Pg**	**09 29 47.2**	**-0.8**
YOJ				S	**Sg**	**09 29 56.5**	**-0.3**
YOJ	**Yonaguni jima**	**0.67**	**126**	P	**Pg**	**09 29 47.9**	**-0.1**
YOJ				*i* S	**Sg**	**09 29 56.9**	**+0.1**
NDS	**Dongshan**	**0.67**	**251**	*e*P	**Pg**	**09 29 47.5**	**-0.6**
NDS				*e*S	**Sb**	**09 29 59.4**	**+1.0**
TWE	**Neicheng**	**0.69**	**259**	*e*P	**Pg**	**09 29 48.2**	**-0.3**
TWE				S	**Sb**	**09 29 58.8**	**-0.2**
EWUT	**Wuta**	**0.71**	**235**	*e*P	**Pg**	**09 29 48.9**	**+0.1**
EWUT				*e*S	**Sg**	**09 29 58.4**	**+0.4**
EOS4	**EOS4**	**0.74**	**187**	P	**Pb**	**09 29 50.1**	**+0.2**
EOS4				*e*S	**Sb**	**09 30 01.3**	**+1.4**
ENA	**Nanau**	**0.75**	**235**	P	**Pg**	**09 29 49.4**	**-0.1**
ENA				*e*S	**Sb**	**09 30 01.4**	**+0.9**
FUSB	**Fushanzhiwuyua**	**0.76**	**263**	*e*P	**Pg**	**09 29 49.4**	**-0.3**
FUSB				*e*S	**Sb**	**09 30 01.3**	**+0.4**
TWA	**Mucha**	**0.77**	**280**	*e*P	**Pg**	**09 29 49.0**	**-0.9**
TWA				S	**Sg**	**09 30 00.6**	**+0.7**
NHY	**Taipei**	**0.79**	**284**	*e*S	**Sg**	**09 30 01.3**	**+0.7**
ENTT	**Nioudou**	**0.80**	**255**	*i* P	**Pg**	**09 29 50.5**	**0.0**
ENTT				*e*S	**Sb**	**09 30 02.4**	**+0.2**
EAHA	**Aohua**	**0.81**	**230**	P	**Pg**	**09 29 50.1**	**-0.5**
EAHA				S	**Sb**	**09 30 02.1**	**-0.1**
NHDH	**Xindian Distri**	**0.82**	**278**	*e*P	**Pg**	**09 29 50.7**	**-0.1**
NHDH				*e*S	**Sg**	**09 30 01.6**	**+0.1**
YM08	**YM08**	**0.82**	**294**	*i* P	**Pg**	**09 29 50.2**	**-0.7**
YM01	**YM01**	**0.82**	**291**	*e*P	**Pg**	**09 29 50.6**	**-0.3**
YM01				S	**Sg**	**09 30 01.3**	**-0.4**
PCYT	**Pengchaiyu**	**0.83**	**338**	P	**Pg**	**09 29 49.9**	**-1.3**
PCYT				S	**Sg**	**09 29 59.6**	**-2.4**
NWLT	**Wulai**	**0.83**	**265**	*e*P	**Pg**	**09 29 50.8**	**-0.4**
NWLT				*e*S	**Sg**	**09 30 02.2**	**+0.2**
ZUZH	**Zhuzihu**	**0.85**	**291**	P	**Pg**	**09 29 50.6**	**-0.8**
ZUZH				S	**Sg**	**09 30 02.1**	**-0.4**
TATO	**Taipei**	**0.85**	**278**	P	**Pg**	**09 29 51.1**	**-0.4**
TATO	**Taipei**	**0.85**	**278**	*i* P	**Pg**	**09 29 50.9**	**-0.6**
TATO				*i* S	**Sg**	**09 30 02.7**	**+0.1**
TWY	**Chenhua**	**0.85**	**300**	P	**Pg**	**09 29 50.4**	**-1.1**
TWY				*e*S	**Sg**	**09 30 03.3**	**+0.7**
LATG	**Datong**	**0.87**	**249**	P	**Pg**	**09 29 51.6**	**-0.3**
LATG				*e*S	**Sb**	**09 30 04.5**	**+0.4**
ANP	**Anpu**	**0.88**	**292**	P	**Pg**	**09 29 50.6**	**-1.4**
ANP				S	**Sg**	**09 30 02.5**	**-0.9**
YHNB	**Yeheng**	**0.96**	**259**	P	**Pg**	**09 29 53.5**	**-0.1**
YHNB	**Yeheng**	**0.96**	**259**	P	**Pg**	**09 29 52.9**	**-0.7**
YHNB				*e*S	**Sg**	**09 30 06.0**	**-0.2**
NSK	**Sanguang**	**0.98**	**260**	P	**Pg**	**09 29 53.3**	**-0.7**
NSK				*e*S	**Sg**	**09 30 06.6**	**-0.1**
ETL	**Fush Village**	**1.00**	**226**	P	**Pg**	**09 29 54.0**	**-0.4**
ETL				*e*S	**Sb**	**09 30 07.9**	**0.0**
NACB	**Ninganchiao**	**1.01**	**228**	P	**Pg**	**09 29 53.7**	**-0.8**
NACB	**Ninganchiao**	**1.01**	**228**	*e*P	**Pg**	**09 29 54.0**	**-0.5**
NACB				*e*S	**Sb**	**09 30 08.8**	**+0.7**
NNSB	**Datong**	**1.03**	**246**	*e*P	**Pg**	**09 29 54.3**	**-0.6**
NNSB				*e*S	**Sg**	**09 30 08.3**	**-0.1**
NNSH	**Datong**	**1.03**	**246**	*e*P	**Pg**	**09 29 54.4**	**-0.5**
NNSH				*e*S	**Sg**	**09 30 08.3**	**-0.1**
NNS	**Nan Shan**	**1.03**	**247**	*e*P	**Pg**	**09 29 54.1**	**-0.9**
NNS				*e*S	**Sg**	**09 30 08.2**	**-0.3**
ETLH	**Xiulin Townshi**	**1.07**	**233**	*e*P	**Pg**	**09 29 54.2**	**-1.4**
ETLH				*e*S	**Sg**	**09 30 09.2**	**-0.3**
TWD	**Chiawan**	**1.07**	**224**	P	**Pg**	**09 29 55.2**	**-0.5**
TWD				S	**Sb**	**09 30 09.8**	**-0.1**
KSHI	**Guanxi Townshi**	**1.13**	**266**	P	**Pg**	**09 29 56.2**	**-0.6**
KSHI				*e*S	**Sg**	**09 30 09.6**	**-1.9**
NFF	**Wufeng Townshi**	**1.20**	**260**	P	**Pg**	**09 29 56.9**	**-1.3**
NFF				*e*S	**Sg**	**09 30 11.7**	**-2.1**
ETM	**Tongmen**	**1.22**	**224**	P	**Pg**	**09 29 57.8**	**-0.8**
ETM				*e*S	**Sg**	**09 30 13.1**	**-1.4**
FUSS	**Fushou**	**1.23**	**241**	P	**Pg**	**09 29 58.1**	**-0.5**
FUSS				*e*S	**Sb**	**09 30 15.4**	**+0.9**
LXIB	**Xiulin Townshi**	**1.23**	**228**	*i* P	**Pg**	**09 29 58.1**	**-0.7**
LXIB				S	**Sb**	**09 30 15.3**	**+0.6**
WHF	**Hehuan Shan**	**1.26**	**236**	P	**Pg**	**09 29 58.6**	**-0.8**
WHF				*e*S	**Sb**	**09 30 16.3**	**+0.5**
LIOB	**Emei**	**1.29**	**261**	*e*P	**Pg**	**09 29 57.9**	**-1.9**
LIOB				*i* S	**Sg**	**09 30 15.9**	**-0.7**
TDCB	**Techi**	**1.29**	**243**	*e*P	**Pg**	**09 29 57.4**	**-2.6**
TDCB				*e*S	**Sg**	**09 30 14.5**	**-2.2**
IRIF	**Iriomote-Funau**	**1.30**	**113**	P	**Pg**	**09 29 59.2**	**-0.9**
NSTT	**Nanjuang**	**1.30**	**260**	P	**Pg**	**09 29 58.1**	**-2.0**
NSTT				*e*S	**Sg**	**09 30 15.2**	**-2.0**
ESL	**Shilin**	**1.37**	**221**	*e*P	**Pg**	**09 29 59.8**	**-1.6**
ESL				*e*S	**Sg**	**09 30 17.3**	**-1.9**
OWD	**Renai**	**1.44**	**232**	*i* P	**Pn**	**09 30 01.4**	**-0.1**
OWD				*i* S	**Sg**	**09 30 20.8**	**-0.8**
WHP	**Taichung City**	**1.46**	**247**	*e*P	**Pn**	**09 30 02.1**	**+0.5**
WHP				*e*S	**Sn**	**09 30 22.2**	**+1.3**
WUSB	**Renai**	**1.46**	**234**	*e*P	**Pn**	**09 30 02.3**	**+0.5**
WUSB				*e*S	**Sb**	**09 30 22.0**	**+0.7**
WARBT	**Fenglin Townsh**	**1.47**	**220**	*e*P	**Pn**	**09 30 00.4**	**-1.3**
WARBT				*e*S	**Sg**	**09 30 19.4**	**-3.1**
HATJ	**Hateruma jima**	**1.50**	**122**	*e*P	**Pn**	**09 30 03.1**	**+1.0**
JKRS	**Kuro-shima**	**1.58**	**113**	*e*P	**Pn**	**09 30 03.1**	**0.0**
WCS	**Beigang Elemen**	**1.58**	**240**	*e*P	**Pg**	**09 30 05.6**	**+0.1**
WCS				*e*S	**Sg**	**09 30 25.5**	**-0.5**
VWDT	**VWDT**	**1.60**	**227**	P	**Pn**	**09 30 03.3**	**-0.2**
VWDT				*e*S	**Sg**	**09 30 26.8**	**+0.3**
HGSD	**Ruisui**	**1.63**	**214**	P	**Pn**	**09 30 04.4**	**+0.5**
HGSD				*e*S	**Sg**	**09 30 27.6**	**0.0**
SSLB	**Suanglung**	**1.71**	**232**	P	**Pn**	**09 30 05.8**	**+0.8**
SSLB	**Suanglung**	**1.71**	**232**	S	**Sg**	**09 30 29.5**	**-0.4**
SSLB	**Suanglung**	**1.71**	**232**	*i* P	**Pn**	**09 30 05.2**	**+0.2**
SSLB				*e*S	**Sb**	**09 30 28.6**	**+0.4**
TYC	**Yuchr**	**1.71**	**237**	*e*P	**Pb**	**09 30 06.9**	**+0.3**
TYC				S	**Sn**	**09 30 28.0**	**+1.1**
YULB	**Yu-li**	**1.78**	**215**	P	**Pb**	**09 30 07.7**	**-0.1**
YULB	**Yu-li**	**1.78**	**215**	*e*P	**Pn**	**09 30 04.4**	**-1.6**
YULB				*e*S	**Sn**	**09 30 27.2**	**-1.6**
TWF1	**Yuli**	**1.81**	**215**	*e*P	**Pn**	**09 30 04.5**	**-2.0**
TWF1				*e*S	**Sn**	**09 30 28.1**	**-1.4**
WHYT	**Xinyi Township**	**1.83**	**231**	*e*P	**Pn**	**09 30 08.2**	**+1.4**
WHYT				*e*S	**Sg**	**09 30 33.0**	**-1.1**
WNT	**Mingjian**	**1.85**	**239**	*e*P	**Pb**	**09 30 09.0**	**-0.1**
WNT				*e*S	**Sb**	**09 30 33.5**	**+1.1**
ALS	**Alishan**	**1.99**	**228**	*e*P	**Pn**	**09 30 10.1**	**+0.9**
CHN4	**Tsaushan**	**2.24**	**228**	*e*P	**Pn**	**09 30 14.0**	**+1.7**
CHN4				*e*S	**Sn**	**09 30 40.7**	**+0.6**
TPUB	**Ta-pu**	**2.25**	**227**	P	**Pn**	**09 30 14.0**	**+1.5**
TPUB	**Ta-pu**	**2.25**	**227**	*e*P	**Pn**	**09 30 14.3**	**+1.8**
TPUB				*e*S	**Sb**	**09 30 43.8**	**-0.1**
STYH	**Taoyuan**	**2.25**	**222**	P	**Pn**	**09 30 12.9**	**+0.5**
STYH				S	**Sn**	**09 30 41.0**	**+0.7**
STYT	**Tauyuan**	**2.27**	**222**	*e*P	**Pn**	**09 30 13.4**	**+0.7**
WTP	**Ta-pu**	**2.30**	**226**	*e*P	**Pn**	**09 30 14.3**	**+1.2**
WTP				*e*S	**Sn**	**09 30 44.2**	**+2.6**
TWK	**Hsinying**	**2.37**	**228**	*e*P	**Pn**	**09 30 15.7**	**+1.6**
TWK				*e*S	**Sb**	**09 30 46.4**	**-0.9**
SNST	**Tainan City**	**2.39**	**228**	P	**Pn**	**09 30 15.5**	**+1.1**
SNST				*e*S	**Sn**	**09 30 41.9**	**-1.9**
CHN1	**Nanshi**	**2.40**	**226**	*e*P	**Pn**	**09 30 16.2**	**+1.7**
KSRS	**Korea Array**	**13.41**	**19**	Pn	**P**	**09 32 54.5**	**-0.5**
	0.2nm,0.3s,baz=197,slow=12,SNR=8.4						
	1.2nm,0.8s						
SONM	**Songino Array**	**26.21**	**335**	P	**P**	**09 35 10.6**	**+0.4**
	0.3nm,0.4s,baz=153,slow=8.1,SNR=1.8						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**38.65**	**315**	P	**P**	**09 36 56.9**	**-1.9**
	0.6nm,0.6s,baz=107,slow=9.8,SNR=7.2						
	0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**42.33**	**319**	P	**P**	**09 37 27.9**	**-1.2**
	0.3nm,0.5s,baz=119,slow=7.5,SNR=1.6						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**46.02**	**164**	P	**P**	**09 38 02.9**	**+3.9**
	1.0nm,1.0s,baz=348,slow=9.0,SNR=4.7						
	1.0nm,1.0s						
BVAR	**Borovoye Array**	**47.87**	**320**	P	**P**	**09 38 12.3**	**-1.0**
	0.7nm,0.5s,baz=111,slow=7.9,SNR=3.0						
	0.7nm,0.5s						

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*KRNET **29** 09:40:44.3±0.1, 41°.15N×78°.69E, h17^{km}, mb2.6*
*SOME **29** 09:40:47.9, 41°.48N×78°.80E, h0^{km}*
*NNC **29** 09:40:48.2±1.3, 41°.43N×78°.83E, h0^{km}, mb3.4, mpv3.1, Error ellipse: s-maj=8.9km s-min=6.1km az=135.0*
ISC 29 09:40:43.0±2.7, **41°.10N**±0°.10×**78°.68E**±0°.07, **h11**^{km}±13^{km}, **n22,** σ**1^{s}.07**/34, **10C-8D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**0.91**	**314**	⇓*i*P	**Pb**	**09 41 01.1**	**0.0**
TARG				⇓*i*S	**Sg**	**09 41 13.5**	**+0.9**
PRZ	**Przheval'sk**	**1.40**	**352**	⇑*e*P	**Pg**	**09 41 09.9**	**-0.1**
PRZ				⇑*e*S	**Sg**	**09 41 28.3**	**+0.1**
KDJ	**Kajisay**	**1.52**	**313**	⇑*i*P	**Pb**	**09 41 11.8**	**+0.4**
KDJ				⇑*i*S	**Sg**	**09 41 32.1**	**0.0**
NRN	**Naryn**	**2.04**	**280**	⇓*e*P	**Pb**	**09 41 21.7**	**+1.3**
NRN				⇓*e*S	**Sg**	**09 41 48.7**	**-0.1**
UZB	**Uzynbulak**	**2.07**	**7**	S	**Sn**	**09 41 43.1**	**-0.5**
	3.3nm,0.3s						
ULHL	**Ulahol**	**2.15**	**303**	⇑*i*P	**Pb**	**09 41 23.3**	**+1.1**
ULHL				⇑*i*S	**Sg**	**09 41 51.1**	**-1.2**
PDGK	**Podgornoye**	**2.31**	**15**	⇑Pn	**Pn**	**09 41 20.7**	**-0.5**
	3.5nm,0.6s						
PDGK				⇑Sn	**Sb**	**09 41 53.8**	**+0.4**
	15nm,0.7s						
KOTS	**Kotyrbulak**	**2.43**	**332**	Pg	**Pg**	**09 41 29.2**	**-0.5**
KOTS				Lg	Lg	09 41 59.1	
KOTS	**Kotyrbulak**	**2.43**	**332**	*e*P	**Pg**	**09 41 28.9**	**-0.8**
	5.0nm,0.2s						
KOTS				*e*S	**Sb**	**09 41 58.3**	**+1.4**
	26nm,0.4s						
BOOM	**Boomskoye usch**	**2.48**	**305**	⇓*i*P	**Pb**	**09 41 27.2**	**-0.4**
BOOM				⇓*i*S	**Sb**	**09 41 58.5**	**+0.4**
MTBS	**Maitube**	**2.63**	**321**	Pg	**Pg**	**09 41 33.2**	**-0.3**
	5.0nm,0.4s						
MTBS				Lg	Lg	09 42 06.0	
	23nm,0.4s						
MTBS	**Maitube**	**2.63**	**321**	*e*P	**Pg**	**09 41 33.2**	**-0.3**
	5.0nm,0.4s						
MTBS				*e*S	**Sg**	**09 42 06.0**	**-1.5**
	23nm,0.4s						
KST	**Kastek**	**2.80**	**315**	Pg	**Pg**	**09 41 37.7**	**+0.9**
KST				Lg	Lg	09 42 13.5	
KST	**Kastek**	**2.80**	**315**	*e*P	**Pg**	**09 41 37.7**	**+0.9**
	3.1nm,0.3s						
KST				*e*S	**Sg**	**09 42 13.5**	**+0.4**
	14nm,0.5s						
TKM2	**Tokmak 2**	**2.93**	**309**	⇓Pn	**Pb**	**09 41 34.4**	**-1.0**
	1.9nm,0.6s						
TKM2				⇓Sn	**Sg**	**09 42 18.0**	**+0.8**
	2.9nm,0.6s						
TKM2	**Tokmak 2**	**2.93**	**309**	⇑*i*P	**Pb**	**09 41 33.6**	**-1.8**
TKM2				⇑*i*S	**Sb**	**09 42 09.7**	**-1.6**
KTBS	**Karatobe**	**3.00**	**331**	Pg	**Pg**	**09 41 38.9**	**-1.6**
	1.7nm,0.3s						
KTBS				Lg	Lg	09 42 15.9	
	22nm,0.5s						
BLB	**Baldybastay**	**3.00**	**357**	Pg	**Pb**	**09 41 36.1**	**-0.5**
	10nm,0.6s						
BLB				Lg	Lg	09 42 10.7	
	9.8nm,0.5s						
CHKK	**Chushkaly**	**3.03**	**336**	Pg	**Pb**	**09 41 38.7**	**+1.8**
	17nm,0.4s						
CHKK				Lg	Lg	09 42 15.5	
	17nm,0.5s						
CHKK	**Chushkaly**	**3.03**	**336**	*e*P	**Pb**	**09 41 38.7**	**+1.8**
	17nm,0.4s						
CHKK				*e*S	**Sb**	**09 42 15.5**	**+1.7**
	17nm,0.5s						
ARXS	**Arharly**	**3.18**	**349**	Pg	**Pb**	**09 41 40.7**	**+1.2**
	2.4nm,0.4s						
ARXS				Lg	Lg	09 42 18.6	
	6.1nm,0.4s						
KRBS	**Karabastau**	**3.42**	**320**	Lg	Lg	09 42 29.0	
	7.0nm,0.4s						

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*NEIC **29** 09:51:42.4±2.1, 35°.133N±0°.006×95°.34W±0°.02, h5^{km}±1^{km}, mb_Lg2.1/21, ML2.6/12, ML2.4/7, Error ellipse: s-maj=3.0km s-min=2.8km az=106.0*
NEIC 29 09:51:42.2±1.8, **35°.133N**±0°.006×**95°.34W**±0°.02, **h5**^{km}±1^{km}, **Error ellipse: s-maj=3.0km s-min=2.8km az=106.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUL3	**Leonard**	**0.86**	**335**		Pg	09 51 58.6	0.0
TUL3					Sg	09 52 10.3	+0.5
RLO	**Rose Lookout**	**1.06**	**14**		Pg	09 52 02.1	-0.5
RLO					Sg	09 52 16.7	+0.4
DEOK	**Depew**	**1.18**	**307**		Pg	09 52 04.4	-0.4
DEOK					Sg	09 52 20.1	0.0
DEOK				IAML		09 52 22.0	
	comp=E,133nm,0.1s						
DEOK				IAML		09 52 24.7	
	comp=N,130nm,0.3s						
OK052	**Battle Ridge R**	**1.47**	**306**		Pn	09 52 09.3	-0.1
OK052					Sb	09 52 29.1	+0.2
U38A	**Gravette**	**1.52**	**31**		Pn	09 52 10.2	+0.1
U38A					Sb	09 52 30.4	0.0
QUOK	**Quay**	**1.52**	**313**		Pn	09 52 10.1	+0.1
QUOK					Sg	09 52 31.0	0.0
MIAR	**Mount Ida**	**1.57**	**111**		Pn	09 52 11.1	+0.4
MIAR					Sb	09 52 32.0	+0.2
HHAR	**Hobbs**	**1.62**	**44**		Pn	09 52 11.9	+0.5
HHAR					Sb	09 52 33.1	-0.2

FNO	**Franklin**	1.69	275		Pb	09 52 13.1	-0.7
FNO					Sg	09 52 36.2	-0.3
OKCSW	**OKLAHOMA CITY**	1.74	280		Pb	09 52 14.0	-0.6
OK004	**Okla Sci Mus**	1.79	283		Pg	09 52 15.9	-0.5
OK048	**Pawnee Station**	1.83	315		Pn	09 52 14.9	+0.6
OK051	**E0350 and S346**	1.83	319		Pb	09 52 15.5	-0.7
OK051					Sg	09 52 40.4	-0.6
Z38A	**Mt. Pleasant**	1.89	171		Pn	09 52 16.1	+1.0
Z38A					Sg	09 52 42.4	-0.6
Z38A				IAmb_Lg		09 52 43.4	
	comp=Z,11nm,0.7s						
T35A	**Sooner Cattle**	2.02	332		Pb	09 52 18.5	-0.9
T35A					Sb	09 52 45.3	+0.6
X34A	**Smith Ranch, M**	2.12	256		Pb	09 52 20.5	-0.5
X34A					Sg	09 52 49.7	-0.4
X40A	**Basin Creek Fa**	2.16	107	IAmb_Lg		09 52 55.1	
	comp=Z,7.8nm,0.9s						
Z35A	**Perchaven, San**	2.40	222		Pn	09 52 20.8	-1.3
Z35A					Sb	09 52 54.1	-1.5
WHAR	**Wooly Hollow**	2.51	86	Pn	Pn	09 52 24.3	+0.7
FCAR	**Ozark Folk Cen**	2.73	73		Pn	09 52 27.3	+0.6
WMOK	**Wichita Mounta**	2.85	263	Pn	Pn	09 52 29.4	+1.1
237A	**Washetta, Mont**	3.15	187	IAmb_Lg		09 53 29.5	
	comp=Z,4.6nm,0.8s						
LCAR	**Lake Charles**	3.54	73	Pn	Pn	09 52 37.5	-0.3
T42A	**Van Buren**	3.93	60	IAmb_Lg		09 53 48.8	
	comp=Z,5.7nm,0.8s						
R40A	**Maddies Statio**	4.00	37	IAmb_Lg		09 53 48.9	
	comp=Z,4.3nm,0.7s						
R32A	**Long Quarter,**	4.25	322	IAmb_Lg		09 54 04.4	
	comp=Z,4.1nm,0.7s						
PBMO	**Poplar Bluff**	4.31	66	IAmb_Lg		09 54 05.4	
	comp=Z,4.8nm,0.8s						
CCM	**Cathedral Cave**	4.40	47	IAmb_Lg		09 54 07.6	
	comp=Z,2.7nm,0.7s						
P38A	**Dawn**	4.71	17	IAmb_Lg		09 54 16.8	
	comp=Z,3.3nm,0.7s						
P40A	**Paris**	5.11	30	IAmb_Lg		09 54 22.5	
	comp=Z,4.5nm,0.7s						
N35A	**Tabor**	5.72	358	IAmb_Lg		09 54 54.9	
	comp=Z,4.9nm,0.8s						

NNC 29 09:55:04.8±10.0**, 37°.31N×70°.67E, h0^{km}, mb3.6, mpv4.0, 3C, Error ellipse: s-maj=95.6km s-min=78.1km az=126.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	4.86	354	Pg	Pn	09 56 21.2	+1.9
	39nm,0.2s						
IUG				Lg	Lg	09 57 22.1	
MRKS	**Merke**	5.77	19	Pg	Pn	09 56 29.5	-2.3
	5.0nm,0.6s						
MRKS				Lg	Lg	09 57 37.0	
	18nm,0.6s						
KK31	**Karatay Array**	5.79	359	⇑P	Pn	09 56 32.0	0.0
	1.0nm,0.3s,baz=175,slow=12,SNR=19						
KK31				⇑S	Sn	09 57 40.3	+1.2
	13nm,0.8s,baz=180,slow=23						
AB31	**Akbulak array**	14.25	330	⇑P	Pn	09 58 27.9	+0.1
	0.1nm,0.2s,baz=166,slow=11,SNR=11						

*SOME **29** 09:56:20.8, 44°.42N×82°.12E, h20^{km}*
*NNC **29** 09:56:23.4±0.6, 44°.74N×81°.92E, h0^{km}, mb3.6, mpv3.4, Error ellipse: s-maj=8.1km s-min=2.3km az=121.0, Suspected Mining explosion.*
ISC 29 09:56:16.4±2.8**, 44°.5N**±0°.1×**82°.4E**±0°.2**, h0^{km}, n9, σ0^{s}.53**/13**, 3C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DJR	**Jarkent**	1.86	265	S	**Sn**	**09 57 14.0**	**+0.1**
	11nm,0.2s						
DJR	**Jarkent**	1.86	265	*e*P	**Pg**	**09 56 51.6**	**-0.4**
	14nm,0.2s						
DJR				*e*S	**Sn**	**09 57 13.9**	**0.0**
	16nm,0.2s						
MK31	**Makanchi Array**	2.26	359	⇓Pn	**Pg**	**09 56 59.4**	**-0.3**
	5.0nm,0.3s,baz=189,slow=14,SNR=73						
MK31				⇑Sn	**Sb**	**09 57 27.1**	**+0.4**
	6.0nm,0.3s,baz=186,slow=25						
MAKZ	**Makanchi**	2.29	353	⇑Pn	**Pb**	**09 56 59.2**	**+0.5**
	3.3nm,0.3s						
MAKZ				⇓Sn	**Sb**	**09 57 26.9**	**-0.7**
	5.7nm,0.3s						
KNOS	**Konyrlen**	2.29	267	Pg	**Pb**	**09 56 59.0**	**+0.2**
	24nm,0.1s						
KNOS				Lg	Lg	09 57 26.6	
	26nm,0.4s						
PDGK	**Podgornoye**	2.41	241	⇓Pn	**Pg**	**09 57 01.8**	**-0.7**
	6.2nm,0.5s						
PDGK				⇑Sn	**Sb**	**09 57 31.9**	**+1.0**
	12nm,0.5s						
UZB	**Uzynbulak**	2.79	241	Pg	**Pb**	**09 57 07.3**	**+0.1**
	8.6nm,0.3s						
UZB				Lg	Lg	09 57 41.4	
	2.5nm,0.1s						
BLB	**Baldybastay**	2.83	263	Pg	**Pb**	**09 57 08.0**	**+0.2**
	23nm,0.2s						
BLB				Lg	Lg	09 57 42.4	
	42nm,0.3s						
KPKS	**Kokpek**	2.87	249	Pg	**Pb**	**09 57 08.7**	**+0.2**
	1.3nm,0.2s						
KPKS				Lg	Lg	09 57 43.2	
	17nm,0.3s						

*MOS **29** 10:01:12.0±1.1, 45°.21N×149°.76E, h94^{km}, mb4.4/15, Error ellipse: s-maj=8.0km s-min=6.1km az=69.0*
*NEIC **29** 10:01:13.2±1.3, 45°.23N±0°.07×149°.59E±0°.05, h87^{km}±8^{km}, mb4.4/106, Error ellipse: s-maj=11.1km s-min=3.1km az=202.0*
*SKHL **29** 10:01:13.7±0.8, 45°.10N×149°.80E, h101^{km}±8^{km}, mb5.4/7, msha6.0/6*
*IDC **29** 10:01:14.6±2.1, 45°.42N×149°.55E, h97^{km}±18^{km}, mb3.8/19, mbtmp4.1/25, Error ellipse: s-maj=23.3km s-min=12.4km az=162.0*
*NIED **29** 10:01:14.5, 44°.63N×149°.80E, h108^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.08; $M_{\theta\theta}$0.58; $M_{\phi\phi}$-0.66; $M_{r\theta}$2.10; $M_{\theta\phi}$-0.19; $M_{\phi r}$0.40; Fault plane solution: $M_0$2.19000×10^{15} NP1: ϕ_s156.00000°, δ12.00000°, λ-10.00000°. NP2: ϕ_s255.00000°, δ88.00000°, λ-102.00000°.*
*JMA **29** 10:01:14.5±0.5, 45°N±3°×15°0E±°, h108^{km}, MV4.4/15, SE OFF ETOROFU*
ISC 29 10:01:13.0±0.4**, 45°.08N**±0°.05×**149°.81E**±0°.05**, h100^{km}, n454, σ1^{s}.16**/449**, mb4.4**/80**, 5C-12D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	1.38	277	*d i*PN	**Pn**	**10 01 36.8**	**-0.9**
KUR				*i* S	**Sn**	**10 01 54.8**	**-1.8**
KUR	**Kuril'sk**	1.38	277	*i* P	**Pn**	**10 01 37.5**	**-0.2**
KUR				AMB	AMB	10 01 38.3	
	3µm,0.5s						
KUR				*i* S	**Sn**	**10 01 54.7**	**-1.8**
KUR				A	A	10 01 56.6	
	9µm,0.4s						
KUR				A	A	10 01 56.6	
	14µm,0.4s						
SHO	**Shikotan**	2.45	242	*e*PN	**Pn**	**10 01 51.8**	**+0.4**
SHO				*i* S	**Sn**	**10 02 19.0**	**-1.9**
SHO				pmax	pmax		
	comp=Z,75nm,0.3s						
SHO				pmax	pmax		
	comp=N,46nm,0.2s						
SHO				pmax	pmax		
	comp=E,76nm,0.3s						
SHO				smax	smax		
	comp=N,733nm,0.2s						
SHO				smax	smax		
	comp=E,1µm,0.2s						
SHO	**Shikotan**	2.45	242	*e*P	**Pn**	**10 01 51.7**	**+0.4**
SHO				AMB	AMB	10 01 52.7	
	comp=E,50nm,0.2s						
SHO				*i* S	**Sn**	**10 02 18.8**	**-2.1**
SHO				A	A	10 02 24.0	
	comp=E,1µm,0.4s						
SHO				A	A	10 02 24.0	
	comp=E,1µm,0.4s						
YUK	**Yuzh-Kuril'sk**	3.01	251	*e*PN	**Pn**	**10 01 59.7**	**+1.0**
YUK				*i* S	**Sn**	**10 02 33.9**	**-0.1**
YUK				pmax	pmax		
	comp=Z,473nm,0.2s						
YUK				pmax	pmax		
	comp=N,69nm,0.1s						
YUK				pmax	pmax		
	comp=E,58nm,0.2s						
YUK				smax	smax		
	comp=E,1µm,0.2s						
YUK				smax	smax		
	comp=N,2µm,0.6s						
YUK	**Yuzh-Kuril'sk**	3.01	251	*e*P	**Pn**	**10 01 59.8**	**+1.0**
YUK				AMB	AMB	10 02 00.0	
	comp=N,470nm,0.2s						
YUK				*i* S	**Sn**	**10 02 34.0**	**-0.1**
YUK				A	A	10 02 38.6	
	comp=N,2µm,0.4s						
YUK				A	A	10 02 38.6	
	comp=N,1µm,0.4s						
GLVR	**Golovnino**	3.35	248	*e*PN	**Pn**	**10 02 04.6**	**+1.2**
GLVR				*i* S	**Sn**	**10 02 42.5**	**+0.2**
GLVR				pmax	pmax		
	comp=Z,137nm,0.4s						
GLVR				pmax	pmax		
	comp=N,158nm,0.3s						
GLVR				pmax	pmax		
	comp=E,101nm,0.2s						
GLVR				smax	smax		
	comp=N,985nm,0.4s						
GLVR				smax	smax		
	comp=E,2µm,0.3s						
GLVR	**Golovnino**	3.35	248	*e*P	**Pn**	**10 02 04.6**	**+1.2**
GLVR				AMB	AMB	10 02 11.1	
	comp=E,140nm,0.4s						
GLVR				*i* S	**Sn**	**10 02 42.5**	**+0.2**
GLVR				A	A	10 02 47.7	
	comp=E,990nm,0.3s						
GLVR				A	A	10 02 47.7	
	comp=E,2µm,0.3s						
NEM2	**Nemuro 2**	3.39	241	P	**Pn**	**10 02 03.5**	**-0.4**
NEM2				S	**Sn**	**10 02 40.6**	**-2.5**
NMR	**Nemuro--Hokkai**	3.39	241	*e*PN	**Pn**	**10 02 03.4**	**-0.5**
NMR				*i* S	**Sn**	**10 02 40.7**	**-2.6**
NMR	**Nemuro--Hokkai**	3.39	241	*e*P	**Pn**	**10 02 03.4**	**-0.5**
NMR				*i* S	**Sn**	**10 02 40.8**	**-2.6**
RUSJ	**Misakicho**	3.40	255	PN	**Pn**	**10 02 07.0**	**+3.0**
RUSJ				*i* S	**Sn**	**10 02 46.9**	**+3.4**
JRA	**Rausu**	3.54	253	P	**Pn**	**10 02 07.3**	**+1.4**
JRA				*e*S	**Sn**	**10 02 48.2**	**+1.3**
JNK	**Nakash**	3.94	250	P	**Pn**	**10 02 12.2**	**+0.8**
JNK				*e*S	**Sn**	**10 02 55.8**	**-0.8**
AKK	**Akkeshi**	4.13	242	*e*P	**Pn**	**10 02 13.4**	**-0.5**
JAK	**Akkeshi**	4.23	242	P	**Pn**	**10 02 15.0**	**-0.2**
JAK				S	**Sn**	**10 03 00.6**	**-2.9**
JTKR	**Abashiri--Toko**	4.36	257	P	**Pn**	**10 02 18.2**	**+1.3**
JAR	**Ashorobuto**	4.69	250	P	**Pn**	**10 02 22.7**	**+1.2**
JAR				*e*S	**Sn**	**10 03 14.8**	**0.0**
JOB	**Onbets**	4.83	245	P	**Pn**	**10 02 23.8**	**+0.5**
JOB				*e*S	**Sn**	**10 03 16.5**	**-1.5**
JKK2	**Kamakawa 2**	5.19	259	P	**Pn**	**10 02 29.9**	**+1.6**
JKA	**Kamikawa-asahi**	5.24	262		**Pn**	**10 02 26.9**	**-1.9**
ASAJ	**Asahikawa**	5.24	262	P	**Pn**	**10 02 29.7**	**+0.8**
	comp=E,4.5nm,0.4s,baz=79,slow=19,SNR=23						
ASAJ				S	**Sn**	**10 03 26.9**	**-1.1**
	comp=E,6.3nm,0.4s,baz=20,slow=15,SNR=1.8						
YSS	**Yuzhno-Sakhali**	5.26	293		**Pn**	**10 02 25.6**	**-3.5**
YSS				Sn	**Sn**	**10 03 25.1**	**-3.3**
YSS	**Yuzhno-Sakhali**	5.26	293	κ*e*PN	**Pn**	**10 02 30.1**	**+1.0**
YSS				*e*S	**Sn**	**10 03 27.8**	**-0.6**
YSS				pmax	pmax		
	comp=Z,40nm,0.8s						
YSS				pmax	pmax		
	comp=Z,100nm,2.9s						
YSS				smax	smax		
	comp=N,100nm,3.7s						
YSS				smax	smax		
	comp=N,20nm,1.3s						
YSS				smax	smax		
	comp=E,30nm,1.0s						
YSS	**Yuzhno-Sakhali**	5.26	293	*e*P	**Pn**	**10 02 30.1**	**+1.0**
YSS				*e*S	**Sn**	**10 03 27.8**	**-0.6**
JCH	**Churui**	5.27	244	P	**Pn**	**10 02 29.9**	**+0.5**
JCH				*e*S	**Sn**	**10 03 27.2**	**-1.5**
ERM	**Erimo**	5.72	240		**Pn**	**10 02 35.0**	**-0.5**
ERM				Sn	**Sn**	**10 03 37.4**	**-2.3**
ERM	**Erimo**	5.72	240	*ce*PN	**Pn**	**10 02 35.5**	**+0.1**
JNBK	**Urakawa-nobuka**	5.83	244	P	**Pn**	**10 02 36.4**	**-0.5**
JRBN	**Rebuntou**	6.18	276	*e*P	Pn	10 02 44.6	+2.9
SKR	**Severo-Kuril's**	7.03	35	*e*PN	**Pn**	**10 02 52.3**	**-0.8**
SKR				*e*S	**Sn**	**10 04 08.0**	**-3.4**
SKR				pmax	pmax		
	comp=Z,53nm,0.4s						
SKR				smax	smax		
	comp=N,30nm,0.7s						
SKR				smax	smax		
	comp=E,50nm,0.5s						
SKR				MLR	MLR		
	comp=Z,100nm,15.0s						
SKR	**Severo-Kuril's**	7.03	35	*e*P	**Pn**	**10 02 52.3**	**-0.8**
SKR				AMB	AMB	10 02 53.9	
	comp=Z,50nm,0.4s						
SKR				*e*S	**Sn**	**10 04 08.0**	**-3.4**
SKR				A	A	10 04 15.4	
	comp=Z,30nm,0.6s						
SKR				A	A	10 04 15.4	
	comp=Z,50nm,0.6s						
TYV	**Tymovskoe**	7.52	323	*e*PN	**Pn**	**10 03 01.8**	**+2.1**
TYV				pmax	pmax		
	comp=Z,6.0nm,1.4s						
TYV				pmax	pmax		
	comp=Z,100nm,2.1s						
TYV	**Tymovskoe**	7.52	323	*e*P	**Pn**	**10 03 01.8**	**+2.1**
JANG	**Nango**	7.70	235	P	**Pn**	**10 03 00.6**	**-1.8**
JANG				S	**Sn**	**10 04 20.1**	**-7.9**
JTM	**Tenmabayashi**	7.71	239	Pn	**Pn**	**10 03 01.9**	**-0.6**
JTH	**Tanohata**	7.80	232	*e*S	**Sn**	**10 04 22.8**	**-7.4**
PAU	**Pauzhetka**	7.92	34	*e*P	**Pn**	**10 03 04.9**	**-0.2**
PAU				AMB	AMB	10 03 08.7	
	comp=Z,30nm,0.4s						
PAU				*e*S	**Sn**	**10 04 29.8**	**-3.1**
PAU				A	A	10 04 33.3	
	comp=Z,40nm,0.3s						
PAU				A	A	10 04 33.3	
	comp=Z,40nm,0.3s						
PEA0B	**Petropavlovsk-**	9.55	30	Pn	**Pn**	**10 03 26.8**	**-0.6**
PEA0B	**Petropavlovsk-**	9.55	30	PN	**Pn**	**10 03 26.8**	**-0.6**
PETK	**Petropavlovsk-**	9.55	30	Pn	**Pn**	**10 03 26.1**	**-1.4**
PETK	**Petropavlovsk-**	9.55	30	P	**Pn**	**10 03 25.6**	**-1.8**
	comp=Z,5.6nm,0.7s,baz=210,slow=7.5,SNR=6.2						
PETK	**Petropavlovsk-**	9.55	30	PN	**Pn**	**10 03 26.1**	**-1.4**
OKH	**Okha**	9.59	335	*e*P	**Pn**	**10 03 29.5**	**+1.6**
OKH				AMB	AMB	10 03 30.5	
	comp=Z,90nm,0.2s						
PET	**Petropavlovsk**	9.84	33	Pn	**Pn**	**10 03 30.8**	**-0.5**
PET	**Petropavlovsk**	9.84	33	*e*P	**Pn**	**10 03 32.7**	**+1.4**
JMM	**Marumori**	9.88	226	Pn	**Pn**	**10 03 30.7**	**-1.3**
NKL	**Nikolayevsk**	10.04	327	*e*P	**Pn**	**10 03 34.4**	**+0.3**
MAJO	**Matsushiro**	12.23	230	Pn	**Pn**	**10 04 03.6**	**-0.1**
MAJO	**Matsushiro**	12.23	230	⇑*e*PN	**Pn**	**10 04 04.5**	**+0.8**
MJAR	**Matsushiro Arr**	12.23	230	P	**Pn**	**10 04 04.8**	**+1.1**
	comp=Z,0.3nm,0.4s,baz=32,slow=16,SNR=1.5						
MJAR				S	**Sn**	**10 06 20.2**	**+2.0**
	comp=Z,0.4nm,0.4s,baz=216,slow=48,SNR=1.3						
MJB9	**Matsu-Tunnel**	12.23	230	Pn	**Pn**	**10 04 03.3**	**-0.4**
USRK	**Ussuriysk Ar.**	12.73	272	P	**Pn**	**10 04 09.8**	**-0.3**
	comp=Z,1.2nm,0.6s,baz=82,slow=12,SNR=2.1						
KLR	**Kul'dur**	12.97	295	⇑*e*PN	**Pn**	**10 04 13.6**	**+0.3**
KLR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KLR	**Kul'dur**	12.97	295	*e*P	**Pn**	**10 04 13.6**	**+0.3**
JGF	**Kuroka**	13.39	229	Pn	**Pn**	**10 04 19.1**	**+0.2**
MSHR	**Mys Shultsa**	13.70	266	*ce*P	**Pn**	**10 04 20.5**	**-2.3**
MSHR				pmax	pmax		
	comp=Z,51nm,1.1s						
MA2	**Magadan**	14.53	2	⇑*e*P	**Pn**	**10 04 32.1**	**-1.4**
MA2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MA2	**Magadan**	14.53	2	*e*P	**Pn**	**10 04 32.1**	**-1.4**
JMN	**Monobe**	16.70	233		**Pn**	**10 05 00.6**	**-0.2**
JMN				IAmb	IAmb	10 05 40.2	
	comp=Z,32nm,1.2s						
SEY	**Seymchan**	17.95	4	P	**P**	**10 05 13.2**	**-1.8**
	comp=Z,5.1nm,0.6s,baz=169,slow=7.6,SNR=22						
SEY	**Seymchan**	17.95	4	*i* P	**Pn**	**10 05 14.2**	**-1.5**
SEY	**Seymchan**	17.95	4	*e*P	**Pn**	**10 05 14.2**	**-1.5**
KSRS	**Korea Array**	18.09	253	P	**Pn**	**10 05 18.3**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=64,slow=9.9,SNR=5.8						
YAK	**Yakutsk**	20.61	333	P	**P**	**10 05 42.7**	**-1.1**
	comp=Z,15nm,0.3s,baz=117,slow=3.9,SNR=9.7						
	comp=Z,15nm,0.3s						
BILL	**Bilibino**	24.57	15	⇓*e*P	**P**	**10 06 25.9**	**+2.8**
BILL				pmax	pmax		
	comp=Z,9.0nm,2.0s						
BILL	**Bilibino**	24.57	15	*e*P	**P**	**10 06 25.9**	**+2.8**
P08K	**Saint George I**	27.71	51	P	**P**	**10 06 50.7**	**-0.8**
	baz=263						
NIKH	**Nikolski High**	27.90	59	P	**P**	**10 06 52.0**	**-1.3**
	baz=271						
HHC	**Hu-ho-hao-te**	28.12	275	*e*P	**P**	**10 06 55.5**	**0.0**
HHC				pmax	pmax		
	comp=Z,16nm,0.6s						
HHC				pmax	pmax		
	comp=Z,67nm,4.7s						
TIK	**Tiksi**	28.47	346	*e*P	**P**	**10 06 57.8**	**-0.3**
TIXI	**Tiksi**	28.48	346	P	**P**	**10 06 56.0**	**-2.2**
TIXI				IAmb	IAmb	10 07 32.3	
	comp=Z,9.6nm,1.1s						
TIXI	**Tiksi**	28.48	346	⇓*e*P	**P**	**10 06 57.8**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.5s						
GAMB	**Gambell**	28.52	35	P	**P**	**10 06 57.7**	**-1.0**
	baz=248						
H11N2	**WAKE ISLAND Hy**	28.98	145	T	T	10 38 01.2	
	baz=335,slow=76						
H11N1	**WAKE ISLAND Hy**	28.99	145	T	T	10 38 00.5	
	baz=335,slow=76						
H11N3	**WAKE ISLAND Hy**	29.00	145	T	T	10 38 00.7	
	baz=335,slow=76						
UNV	**Unalaska Valle**	29.30	57	P	**P**	**10 07 05.1**	**-0.5**
	baz=271						
SONM	**Songino Array**	29.75	291	P	**P**	**10 07 08.7**	**-1.1**
SONM	**Songino Array**	29.75	291	P	**P**	**10 07 09.8**	**0.0**
	comp=Z,0.5nm,0.5s,baz=70,slow=9.5,SNR=2.4						
	comp=Z,0.5nm,0.5s						
H11S1	**WAKE ISLAND Hy**	30.00	147	T	T	10 39 19.0	
	baz=336,slow=76						
H11S3	**WAKE ISLAND Hy**	30.01	147	T	T	10 39 25.1	
	baz=336,slow=76						
H11S2	**WAKE ISLAND Hy**	30.02	147	T	T	10 39 16.9	
	baz=336,slow=76						
M11K	**Mekoryuk**	30.04	44	P	**P**	**10 07 13.1**	**+1.0**
M11K	**Mekoryuk**	30.04	44	P	**P**	**10 07 10.9**	**-1.2**
	baz=260						
TNA	**Tin City**	30.70	33	P	**P**	**10 07 17.0**	**-0.9**
	baz=249						
F14K	**Arctic Creek**	31.30	34	P	**P**	**10 07 21.7**	**-1.4**
	baz=251						
ANM	**Nome**	31.40	36	P	**P**	**10 07 22.4**	**-1.7**
	baz=254						
M13K	**Dall Lake**	31.44	44	P	**P**	**10 07 23.4**	**-1.0**
	baz=262						
J14K	**Nanvaranak Lak**	31.74	40	P	**P**	**10 07 28.2**	**+1.2**
J14K				IAmb	IAmb	10 08 09.0	
	comp=Z,12nm,1.3s						
J14K	**Nanvaranak Lak**	31.74	40	P	**P**	**10 07 26.2**	**-0.8**
	baz=259						
S12K	**Black Hills**	31.85	53	P	**P**	**10 07 27.5**	**-0.6**
	baz=271						
L14K	**Kuka Creek**	31.90	42	P	**P**	**10 07 28.3**	**-0.1**
	baz=262						
F15K	**North Star Dit**	32.03	34	P	**P**	**10 07 28.9**	**-0.6**
	baz=253						
G15K	**Niukluk**	32.07	35	P	**P**	**10 07 28.7**	**-1.2**
	baz=254						
M14K	**Bethel**	32.17	43	P	**P**	**10 07 29.7**	**-1.1**
	baz=263						
N14K	**Kuskokwak Cree**	32.21	45	P	**P**	**10 07 30.5**	**-0.6**
	baz=265						
O14K	**Tigyukauivet M**	32.37	46	P	**P**	**10 07 34.1**	**+1.5**
O14K	**Tigyukauivet M**	32.37	46	P	**P**	**10 07 32.1**	**-0.5**
	baz=266						
L15K	**Ungalak Mounta**	32.51	42	P	**P**	**10 07 32.9**	**-0.9**
	baz=262						
C16K	**Lisburne Hills**	32.65	29	P	**P**	**10 07 35.0**	**+0.1**
C16K	**Lisburne Hills**	32.65	29	P	**P**	**10 07 34.5**	**-0.5**
	baz=248						
M15K	**Kasigluk River**	32.78	44	P	**P**	**10 07 35.7**	**-0.5**
	baz=265						
G16K	**Koyuk River**	32.86	35	P	**P**	**10 07 36.7**	**-0.1**
	baz=256						
N15K	**Kwethluk River**	33.03	45	P	**P**	**10 07 37.7**	**-0.6**
	baz=266						
O15K	**Ungalikthiuk R**	33.11	47	P	**P**	**10 07 38.2**	**-0.8**
	baz=268						
J16K	**Anvik River**	33.16	39	P	**P**	**10 07 38.9**	**-0.6**
	baz=261						
I17K	**Unalakleet**	33.23	38	P	**P**	**10 07 39.4**	**-0.6**
	baz=260						
D17K	**Noatak River**	33.25	31	P	**P**	**10 07 40.0**	**-0.1**
	baz=252						
CHNA	**Chernabura Isl**	33.30	55	P	**P**	**10 07 40.0**	**-0.7**
	baz=275						
L16K	**Owhat River**	33.47	42	P	**P**	**10 07 43.7**	**+1.6**
L16K	**Owhat River**	33.47	42	P	**P**	**10 07 42.2**	**0.0**
	baz=264						
C17K	**DeLong Mountai**	33.47	29	P	**P**	**10 07 41.8**	**-0.3**
	baz=250						
E17K	**Hotham Inlet**	33.52	32	P	**P**	**10 07 42.5**	**0.0**
	baz=254						
F17K	**Baldwin Pennin**	33.57	33	P	**P**	**10 07 44.5**	**+1.6**
F17K	**Baldwin Pennin**	33.57	33	P	**P**	**10 07 42.8**	**-0.1**
	baz=255						
G17K	**Kiwalik Mounta**	33.58	35	P	**P**	**10 07 43.6**	**+0.6**
	baz=257						
M16K	**Timber Creek**	33.65	43	P	**P**	**10 07 45.6**	**+1.8**
M16K				IAmb	IAmb	10 08 09.7	
	comp=Z,15nm,1.5s						
M16K	**Timber Creek**	33.65	43	P	**P**	**10 07 44.0**	**+0.2**
	baz=266						
N16K	**Nishlik Lake**	33.71	44	P	**P**	**10 07 44.6**	**+0.3**
	baz=267						
H17K	**Granite Mounta**	33.76	36	P	**P**	**10 07 44.7**	**0.0**
	baz=259						
J17K	**VABM Dome**	33.86	39	P	**P**	**10 07 44.8**	**-0.8**
	baz=262						
O16K	**Kokwok River B**	34.01	46	P	**P**	**10 07 45.7**	**-1.1**
	baz=269						
L17K	**Donlin**	34.07	41	P	**P**	**10 07 46.4**	**-0.9**
	baz=265						
E18K	**Tukpahlearik C**	34.07	32	P	**P**	**10 07 45.9**	**-1.4**
	baz=255						
K17K	**Iditarod**	34.13	40	P	**P**	**10 07 47.8**	**0.0**
	baz=264						
C18K	**Utukok River**	34.22	29	P	**P**	**10 07 49.4**	**+0.8**
C18K				IAmb	IAmb	10 07 50.0	
	comp=Z,6.2nm,0.9s						
C18K	**Utukok River**	34.22	29	P	**P**	**10 07 48.1**	**-0.5**
	baz=252						
F18K	**Selawik**	34.23	33	P	**P**	**10 07 48.4**	**-0.2**
	baz=257						
B18K	**Kokolik River**	34.24	28	P	**P**	**10 07 48.2**	**-0.6**
	baz=251						
M17K	**Holitna River**	34.41	43	P	**P**	**10 07 50.3**	**0.0**
	baz=267						
H18K	**Honhosa River**	34.45	36	P	**P**	**10 07 50.3**	**-0.3**
	baz=260						
G18K	**Tagagawik**	34.47	35	P	**P**	**10 07 50.8**	**+0.1**
	baz=259						
N17K	**Nushagak Hills**	34.49	44	P	**P**	**10 07 51.4**	**+0.3**
	baz=268						
O17K	**Koliganek Bris**	34.52	46	P	**P**	**10 07 52.0**	**+0.8**
	baz=269						
A19K	**Wainwright**	34.77	27	P	**P**	**10 07 53.5**	**+0.2**
	baz=250						
L18K	**Granite Mounta**	34.83	41	P	**P**	**10 07 53.8**	**-0.1**
	baz=266						
P17K	**Kvichak River**	34.85	47	P	**P**	**10 07 53.9**	**-0.2**
	baz=271						
C19K	**Lookout Ridge**	34.91	29	P	**P**	**10 07 54.3**	**-0.3**
	baz=253						
J18K	**Innoko River**	34.92	39	P	**P**	**10 07 54.5**	**-0.2**
	baz=264						
R17L	**Mt. Peulik Vol**	34.93	49	P	**P**	**10 07 54.4**	**-0.4**
	baz=273						
F19K	**Shaleruckik Mo**	35.01	33		**P**	**10 07 56.1**	**+0.8**
F19K				IAmb	IAmb	10 08 01.4	
	comp=Z,2.6nm,0.7s						
F19K	**Shaleruckik Mo**	35.01	33	P	**P**	**10 07 54.8**	**-0.5**
	baz=258						
GCSA	**Galena City Sc**	35.01	37	P	**P**	**10 07 54.8**	**-0.6**
	baz=262						
N18K	**Kilae Creek**	35.14	44	P	**P**	**10 07 59.0**	**+2.4**

N18K				IAmb	IAmb	10 07 59.8	
	comp=Z,4.5nm,0.9s						
N18K	**Kilae Creek**	**35.14**	**44**	P	**P**	**10 07 56.3**	**-0.3**
	baz=269						
G19K	**Purcell Mounta**	**35.15**	**34**	P	**P**	**10 07 56.6**	**0.0**
	baz=260						
Q17K	**Contact Creek**	**35.16**	**48**	P	**P**	**10 07 56.6**	**-0.3**
	baz=272						
M18K	**Stony River**	**35.19**	**43**	P	**P**	**10 07 57.2**	**+0.2**
	baz=268						
D19K	**Kuna River**	**35.26**	**30**		**P**	**10 07 58.8**	**+1.2**
D19K	**Kuna River**	**35.26**	**30**	P	**P**	**10 07 57.7**	**+0.2**
	baz=256						
H19K	**Roundabout Mou**	**35.30**	**36**	P	**P**	**10 07 58.1**	**+0.2**
	baz=262						
E19K	**Redstone River**	**35.34**	**32**		**P**	**10 07 59.5**	**+1.2**
E19K				IAmb	IAmb	10 08 00.5	
	comp=Z,9.1nm,1.1s						
E19K	**Redstone River**	**35.34**	**32**	P	**P**	**10 07 58.4**	**+0.1**
	baz=258,SNR=6.6						
J19K	**Poorman**	**35.46**	**38**		**P**	**10 08 00.7**	**+1.4**
J19K				IAmb	IAmb	10 08 01.3	
	comp=Z,4.4nm,1.0s						
J19K	**Poorman**	**35.46**	**38**	P	**P**	**10 07 59.2**	**-0.1**
	baz=265						
P18K	**Big Mountain,**	**35.47**	**46**	P	**P**	**10 07 59.1**	**-0.3**
	baz=271						
O18K	**Koktuh Hills**	**35.47**	**45**	P	**P**	**10 07 59.4**	**0.0**
	baz=271						
CHIR	**Chirikof Islan**	**35.47**	**52**	P	**P**	**10 07 58.7**	**-0.8**
	baz=276						
Q18K	**Katmai Hardscr**	**35.60**	**48**	P	**P**	**10 08 00.1**	**-0.6**
	baz=273						
L19K	**White Mountain**	**35.68**	**41**	P	**P**	**10 08 01.0**	**-0.2**
	baz=268						
N19K	**Bonanza Creek**	**35.83**	**44**	P	**P**	**10 08 01.8**	**-0.7**
	baz=270						
F20K	**Avaraart Lake**	**35.84**	**33**	P	**P**	**10 08 02.6**	**+0.2**
	baz=260						
D20K	**Etivluk River**	**35.85**	**30**		**P**	**10 08 03.6**	**+1.0**
D20K	**Etivluk River**	**35.85**	**30**	P	**P**	**10 08 02.2**	**-0.4**
	baz=257,SNR=9.9						
E20K	**Nigu River**	**35.90**	**31**	P	**P**	**10 08 02.5**	**-0.6**
	baz=258,SNR=9.4						
H20K	**Anotleneega Mo**	**35.95**	**36**	P	**P**	**10 08 03.2**	**-0.2**
	baz=263,SNR=6.2						
R18K	**Karluk**	**35.96**	**49**	P	**P**	**10 08 04.1**	**+0.5**
	baz=275						
B20K	**Meade River**	**35.98**	**28**	P	**P**	**10 08 03.6**	**0.0**
	baz=255						
I20K	**Naaghedeneel**	**36.04**	**37**	P	**P**	**10 08 04.4**	**+0.2**
	baz=265						
K20K	**Telida**	**36.10**	**39**	P	**P**	**10 08 05.0**	**+0.2**
	baz=267						
J20K	**Nowinta River**	**36.12**	**38**		**P**	**10 08 06.8**	**+1.8**
J20K				IAmb	IAmb	10 08 07.4	
	comp=Z,3.1nm,0.8s						
J20K	**Nowinta River**	**36.12**	**38**	P	**P**	**10 08 05.0**	**+0.1**
	baz=266,SNR=5.0						
L20K	**Farewell, AK**	**36.15**	**41**	P	**P**	**10 08 05.5**	**+0.3**
	baz=268						
SII	**Sitkinak Islan**	**36.20**	**51**	P	**P**	**10 08 06.4**	**+0.7**
	baz=276						
IMAR	**Indian Mountai**	**36.47**	**35**	P	**P**	**10 08 08.7**	**+0.9**
M20K	**Styx River**	**36.49**	**42**	P	**P**	**10 08 08.4**	**+0.2**
	baz=270						
C21K	**Knifeblade Rid**	**36.59**	**30**	P	**P**	**10 08 08.6**	**-0.3**
	baz=258						
G21K	**Allakaket**	**36.63**	**34**		**P**	**10 08 10.7**	**+1.5**
G21K				IAmb	IAmb	10 08 13.5	
	comp=Z,5.0nm,0.8s						
G21K	**Allakaket**	**36.63**	**34**	P	**P**	**10 08 09.2**	**0.0**
	baz=263,SNR=6.9						
F21K	**Alatna River**	**36.73**	**33**		**P**	**10 08 12.1**	**+2.0**
F21K				IAmb	IAmb	10 08 13.8	
	comp=Z,3.2nm,0.7s						
F21K	**Alatna River**	**36.73**	**33**	P	**P**	**10 08 10.5**	**+0.4**
	baz=262						
E21K	**Killik River**	**36.74**	**31**	P	**P**	**10 08 10.0**	**-0.2**
	baz=260						
B21K	**Ikpikpuk River**	**36.75**	**29**		**P**	**10 08 11.7**	**+1.6**
B21K	**Ikpikpuk River**	**36.75**	**29**	P	**P**	**10 08 10.3**	**+0.2**
	baz=258,SNR=6.0						
O20K	**Slope Mountain**	**36.76**	**45**	P	**P**	**10 08 10.4**	**-0.1**
	baz=273						
H21K	**Melozitna Rive**	**36.82**	**36**		**P**	**10 08 12.3**	**+1.5**
H21K				IAmb	IAmb	10 08 13.3	
	comp=Z,8.4nm,1.4s						
H21K	**Melozitna Rive**	**36.82**	**36**	P	**P**	**10 08 11.0**	**+0.1**
	baz=265,SNR=7.5						
CHUM	**Lake Minchumin**	**36.91**	**39**	P	**P**	**10 08 11.7**	**+0.1**
	baz=268						
PPLA	**Purkeypile**	**36.94**	**40**	P	**P**	**10 08 12.0**	**-0.1**
	baz=269						
KDAK	**Kodiak Island**	**36.94**	**49**	P	**P**	**10 08 12.2**	**+0.3**
	baz=276						
A22K	**Sinclair Lake**	**36.95**	**27**	P	**P**	**10 08 11.8**	**-0.1**
	baz=256						
GTA	**Gaotai**	**36.96**	**279**	*e*P	**P**	**10 08 14.3**	**+1.8**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.5s						
CAST	**Castle Rocks**	**37.00**	**39**		**P**	**10 08 14.7**	**+2.3**
CAST				IAmb	IAmb	10 08 15.2	
	comp=Z,3.6nm,0.8s						
CAST	**Castle Rocks**	**37.00**	**39**	P	**P**	**10 08 12.4**	**0.0**
	baz=269,SNR=5.1						
SKT	**Skwentna**	**37.24**	**42**	P	**P**	**10 08 14.6**	**+0.1**
	baz=271						
F22K	**John River**	**37.27**	**33**	P	**P**	**10 08 14.5**	**-0.2**
	baz=263						
D22K	**Ayikyak River**	**37.28**	**30**	IAmb	IAmb	10 08 17.9	
	comp=Z,4.6nm,0.8s						
D22K	**Ayikyak River**	**37.28**	**30**	P	**P**	**10 08 14.9**	**+0.1**
	baz=261						
B22K	**Teshekpuk Lake**	**37.30**	**28**	P	**P**	**10 08 14.7**	**-0.1**
	baz=258						
H22K	**Ishtalitna Cre**	**37.43**	**35**	P	**P**	**10 08 16.1**	**+0.1**
	baz=266						
G22K	**Bettles**	**37.47**	**34**	P	**P**	**10 08 16.5**	**+0.2**
	baz=265						
E22K	**Anaktuvuk Pass**	**37.49**	**32**	IAmb	IAmb	10 08 18.7	
	comp=Z,6.2nm,0.8s						
E22K	**Anaktuvuk Pass**	**37.49**	**32**	P	**P**	**10 08 16.5**	**0.0**
	baz=263,SNR=9.8						
BPAW	**Bear Paw Mtn.**	**37.50**	**38**	P	**P**	**10 08 18.5**	**+1.8**
BPAW	**Bear Paw Mtn.**	**37.50**	**38**	P	**P**	**10 08 16.7**	**0.0**
	baz=269						
KTH	**Kantishna Hill**	**37.52**	**39**	IAmb	IAmb	10 08 19.7	
	comp=Z,7.2nm,1.0s						
SUA	**Susitna One**	**37.63**	**43**	P	**P**	**10 08 18.3**	**+0.4**
	baz=272						
MLY	**Manley**	**37.64**	**37**		**P**	**10 08 19.8**	**+1.9**
MLY				IAmb	IAmb	10 08 20.0	
	comp=Z,2.4nm,0.7s						
MLY	**Manley**	**37.64**	**37**	P	**P**	**10 08 18.1**	**+0.3**
	baz=268,SNR=6.2						
TRF	**Thorofare Moun**	**37.81**	**39**	P	**P**	**10 08 20.0**	**+0.6**
	baz=270						
COLD	**Coldfoot**	**38.00**	**33**	P	**P**	**10 08 22.2**	**+1.4**
COLD				IAmb	IAmb	10 08 24.4	
	comp=Z,3.4nm,0.6s						
COLD	**Coldfoot**	**38.00**	**33**	P	**P**	**10 08 20.7**	**-0.1**
	baz=265,SNR=5.2						
D23K	**Nanushuk River**	**38.01**	**30**	P	**P**	**10 08 21.0**	**+0.1**
	baz=263						
G23K	**Bananza Creek**	**38.03**	**34**	IAmb	IAmb	10 08 24.3	
	comp=Z,3.1nm,0.8s						
G23K	**Bananza Creek**	**38.03**	**34**	P	**P**	**10 08 21.1**	**0.0**
	baz=266,SNR=6.1						
RC01	**Rabbit Creek A**	**38.14**	**43**	P	**P**	**10 08 22.3**	**+0.3**
	baz=274						
C23K	**Itkillik River**	**38.16**	**29**	P	**P**	**10 08 22.2**	**+0.1**
	baz=262,SNR=6.1						
H23K	**Yukon River**	**38.18**	**36**	IAmb	IAmb	10 08 25.1	
	comp=Z,4.1nm,0.8s						
H23K	**Yukon River**	**38.18**	**36**	P	**P**	**10 08 21.8**	**-0.6**
	baz=268,SNR=6.6						
O22K	**Cooper Landing**	**38.18**	**44**	P	**P**	**10 08 22.6**	**+0.3**
	baz=275						
I23K	**Minto, Yukon-K**	**38.23**	**37**	P	**P**	**10 08 23.1**	**+0.4**
	baz=269						
E23K	**Chandalar**	**38.30**	**32**	IAmb	IAmb	10 08 25.9	
	comp=Z,9.9nm,1.2s						
E23K	**Chandalar**	**38.30**	**32**	P	**P**	**10 08 23.8**	**+0.4**
	baz=265,SNR=7.1						
NEA2	**Nenana**	**38.35**	**38**	IAmb	IAmb	10 08 25.9	
	comp=Z,5.2nm,0.8s						
NEA2	**Nenana**	**38.35**	**38**	P	**P**	**10 08 23.8**	**+0.1**
	baz=270,SNR=8.6						
SEW	**Seward**	**38.35**	**45**	P	**P**	**10 08 24.4**	**+0.6**
	baz=275						
TOLK	**Toolik Lake Re**	**38.37**	**31**	IAmb	IAmb	10 08 26.5	
	comp=Z,4.7nm,1.0s						
TOLK	**Toolik Lake Re**	**38.37**	**31**	P	**P**	**10 08 24.1**	**+0.2**
	baz=264						
PMR	**Palmer**	**38.40**	**42**	P	**P**	**10 08 23.9**	**-0.2**
	baz=274						
MCK	**McKinley**	**38.41**	**39**	P	**P**	**10 08 24.2**	**0.0**
	baz=271						
GHO	**Glory Hole Cre**	**38.48**	**42**	P	**P**	**10 08 26.3**	**+1.3**
GHO				IAmb	IAmb	10 08 33.4	
	comp=Z,4.8nm,0.8s						
WAT1	**Susitna Watana**	**38.61**	**40**	P	**P**	**10 08 26.4**	**+0.4**
	baz=273						
D24K	**Happy Valley**	**38.70**	**30**	P	**P**	**10 08 28.1**	**+1.5**
D24K	**Happy Valley**	**38.70**	**30**	P	**P**	**10 08 27.4**	**+0.8**
	baz=264						
E24K	**Your Creek**	**38.72**	**32**	P	**P**	**10 08 27.5**	**+0.6**
	baz=266						
KNK	**Knik Glacier**	**38.73**	**43**	P	**P**	**10 08 27.1**	**+0.1**
	baz=274						
C24K	**Franklin Bluff**	**38.80**	**29**	P	**P**	**10 08 27.3**	**-0.1**
	baz=264						
PWL	**Port Wells**	**38.84**	**43**	P	**P**	**10 08 27.9**	**+0.1**
	baz=275						
H24K	**Noodor Dome**	**38.86**	**36**	P	**P**	**10 08 28.2**	**+0.1**
	baz=269						
COLA	**College**	**38.87**	**37**	P	**P**	**10 08 29.8**	**+1.7**
COLA	**College**	**38.87**	**37**	P	**P**	**10 08 29.8**	**+1.7**
COLA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
COLA	**College**	**38.87**	**37**	P	**P**	**10 08 28.4**	**+0.3**
	baz=271						
F24K	**Squaw Lake**	**38.92**	**33**	P	**P**	**10 08 28.6**	**+0.1**
	baz=267						
WAT6	**Susitna Watana**	**38.99**	**41**	P	**P**	**10 08 29.4**	**0.0**
	baz=274						
G24K	**Hadweenzic Riv**	**39.05**	**34**	P	**P**	**10 08 30.1**	**+0.6**
	baz=269,SNR=7.7						
DHY	**Denali Highway**	**39.13**	**40**		**P**	**10 08 31.1**	**+0.6**
DHY				IAmb	IAmb	10 08 32.2	
	comp=Z,3.4nm,0.6s						
DHY	**Denali Highway**	**39.13**	**40**	P	**P**	**10 08 30.5**	**0.0**
	baz=273,SNR=5.2						
SCM	**Sheep Creek Mo**	**39.24**	**42**	P	**P**	**10 08 30.9**	**-0.4**
	baz=275						
HDA	**Harding Lake**	**39.27**	**38**	IAmb	IAmb	10 08 33.0	
	comp=Z,4.8nm,0.6s						
HDA	**Harding Lake**	**39.27**	**38**	P	**P**	**10 08 31.4**	**0.0**
	baz=272,SNR=6.8						
ILAR	**Eielson Array**	**39.28**	**37**	P	**P**	**10 08 32.2**	**+0.7**
	comp=Z,1.3nm,0.6s,baz=265,slow=7.6,SNR=26						
	comp=Z,1.3nm,0.6s						
P23K	**Montague Islan**	**39.38**	**45**	P	**P**	**10 08 32.2**	**-0.1**
	baz=277						
GLI	**Glacier Island**	**39.44**	**43**	P	**P**	**10 08 32.4**	**-0.4**
	baz=276						
D25K	**Kavik River**	**39.58**	**30**	P	**P**	**10 08 33.9**	**-0.1**
	baz=266,SNR=15						
G25K	**Bearman Lake**	**39.59**	**34**	P	**P**	**10 08 34.2**	**+0.2**
	baz=270						
H25L	**Birch Creek**	**39.70**	**35**	P	**P**	**10 08 34.9**	**-0.1**
	baz=271						
M24K	**Tolsona, Glenn**	**39.76**	**41**	P	**P**	**10 08 36.2**	**+0.6**
	baz=276						
F25K	**Christian Rive**	**39.78**	**33**	P	**P**	**10 08 36.2**	**+0.5**
	baz=269						
K24K	**Donnelly Dome**	**39.81**	**39**	IAmb	IAmb	10 08 37.8	
	comp=Z,7.4nm,0.8s						
K24K	**Donnelly Dome**	**39.81**	**39**	P	**P**	**10 08 35.7**	**-0.2**
	baz=274						
E25K	**Arctic Village**	**39.82**	**32**	IAmb	IAmb	10 08 42.0	
	comp=Z,5.1nm,1.1s						
E25K	**Arctic Village**	**39.82**	**32**	P	**P**	**10 08 36.6**	**+0.6**
	baz=269,SNR=5.8						
PRP	**Porcupine Dome**	**39.84**	**36**	IAmb	IAmb	10 08 39.1	
	comp=Z,3.0nm,0.7s						
PRP	**Porcupine Dome**	**39.84**	**36**	P	**P**	**10 08 36.0**	**-0.3**
	baz=272						
KLU	**Klutina**	**39.94**	**42**	P	**P**	**10 08 37.5**	**+0.4**
	baz=276						
J25K	**Salcha River,**	**39.94**	**37**	P	**P**	**10 08 37.2**	**+0.1**
	baz=273						
PAX	**Paxson**	**40.01**	**40**	P	**P**	**10 08 37.8**	**+0.1**
	baz=275						
EYAK	**Cordova Ski Ar**	**40.13**	**44**	P	**P**	**10 08 39.1**	**+0.5**
	baz=278						
BMAR	**Burnt Mountain**	**40.19**	**33**	P	**P**	**10 08 41.2**	**+2.2**
HARP	**HAARP**	**40.20**	**41**	P	**P**	**10 08 39.4**	**+0.2**
	baz=276						
RIDG	**Independent Ri**	**40.23**	**39**	P	**P**	**10 08 39.5**	**+0.1**
	baz=275						
F26K	**Sheenjek River**	**40.35**	**33**	P	**P**	**10 08 41.2**	**+0.8**
	baz=271,SNR=5.9						
G26K	**Porcupine Rive**	**40.51**	**34**	IAmb	IAmb	10 08 45.4	
	comp=Z,6.8nm,1.1s						
G26K	**Porcupine Rive**	**40.51**	**34**	P	**P**	**10 08 42.0**	**+0.5**
	baz=272,SNR=9.3						
C27K	**Jago River**	**40.53**	**30**	IAmb	IAmb	10 08 46.4	
	comp=Z,6.8nm,0.8s						
C27K	**Jago River**	**40.53**	**30**	P	**P**	**10 08 41.8**	**0.0**
	baz=269,SNR=6.6						
N25K	**Chitina, Valde**	**40.55**	**42**	P	**P**	**10 08 42.6**	**+0.5**
	baz=277						
DOT	**Dot Lake**	**40.58**	**39**	P	**P**	**10 08 42.8**	**+0.4**
DOT				IAmb	IAmb	10 08 43.5	
	comp=Z,2.5nm,0.6s						
SCRK	**Sand Creek**	**40.59**	**38**	IAmb	IAmb	10 08 43.5	
	comp=Z,2.5nm,0.5s						
SCRK	**Sand Creek**	**40.59**	**38**	P	**P**	**10 08 42.7**	**+0.2**
	baz=275						
BMRM	**Bremner River**	**40.63**	**43**	P	**P**	**10 08 43.1**	**+0.3**
	baz=278						
J26L	**Joseph Creek**	**40.73**	**38**		**P**	**10 08 44.5**	**+0.9**
J26L	**Joseph Creek**	**40.73**	**38**	P	**P**	**10 08 44.0**	**+0.4**
	baz=275						
I26K	**Coal Creek Min**	**40.84**	**36**	P	**P**	**10 08 44.7**	**+0.4**
	baz=274						
KAIM	**Kayak Island**	**40.88**	**45**	P	**P**	**10 08 46.0**	**+1.2**
	baz=279						
L26K	**Log Cabin Wild**	**40.97**	**40**	IAmb	IAmb	10 08 48.4	
	comp=Z,3.1nm,0.7s						
L26K	**Log Cabin Wild**	**40.97**	**40**	P	**P**	**10 08 46.2**	**+0.7**
	baz=277						
M26K	**Nabesna, AK**	**41.20**	**41**	IAmb	IAmb	10 08 50.7	
	comp=Z,7.4nm,1.1s						
M26K	**Nabesna, AK**	**41.20**	**41**	P	**P**	**10 08 48.3**	**+0.8**
	baz=278,SNR=7.7						
E27K	**Coleen River**	**41.31**	**32**	P	**P**	**10 08 49.4**	**+1.2**
	baz=272						
MCARA	**McCarthy VSAT**	**41.33**	**42**	P	**P**	**10 08 49.5**	**+1.0**
	baz=279						
G27K	**Doyon Strip**	**41.35**	**34**	P	**P**	**10 08 49.8**	**+1.2**
	baz=274						
CRQE	**Cirque**	**41.40**	**43**	P	**P**	**10 08 50.2**	**+1.1**
	baz=280						
K27K	**Chicken**	**41.42**	**38**	P	**P**	**10 08 49.7**	**+0.6**
	baz=277						
H27K	**Steamboat Moun**	**41.44**	**35**	IAmb	IAmb	10 08 52.1	
	comp=Z,2.9nm,0.7s						
H27K	**Steamboat Moun**	**41.44**	**35**	P	**P**	**10 08 49.8**	**+0.5**
	baz=275,SNR=5.4						
I27K	**Kandik River**	**41.46**	**36**	P	**P**	**10 08 50.7**	**+1.2**
	baz=275						
D27M	**Malcolm River**	**41.50**	**30**	P	**P**	**10 08 50.7**	**+0.9**
	baz=272						
L27K	**Beaver Creek,**	**41.65**	**40**		**P**	**10 08 52.6**	**+1.5**
L27K	**Beaver Creek,**	**41.65**	**40**	P	**P**	**10 08 52.4**	**+1.4**
	baz=278,SNR=21						
BCAR	**Beaver Creek A**	**41.67**	**40**	P	**P**	**10 08 53.2**	**+2.0**
M27K	**Edge Creek, AK**	**41.73**	**41**	P	**P**	**10 08 52.1**	**+0.3**
M27K	**Edge Creek, AK**	**41.73**	**41**	P	**P**	**10 08 53.0**	**+1.2**
	baz=279						
ISLE	**Juniper Island**	**41.79**	**43**	P	**P**	**10 08 53.3**	**+0.9**
ISLE				IAmb	IAmb	10 09 12.0	
	comp=Z,7.5nm,0.9s						
F28M	**Old Crow**	**41.99**	**33**	P	**P**	**10 08 55.2**	**+1.5**
	baz=274						
E28M	**Babbage River**	**42.05**	**31**	P	**P**	**10 08 55.2**	**+1.0**
	baz=274,SNR=5.5						
I28M	**Miner Creek**	**42.17**	**36**	IAmb	IAmb	10 08 57.8	
	comp=Z,5.8nm,0.6s						
I28M	**Miner Creek**	**42.17**	**36**	P	**P**	**10 08 56.3**	**+1.0**
	baz=277,SNR=13						
BVCY	**Beaver Creek**	**42.19**	**40**	P	**P**	**10 08 56.6**	**+1.1**
	baz=279						
CTG	**Chitna Glacier**	**42.21**	**43**	P	**P**	**10 08 57.0**	**+1.3**
	baz=281						
D28M	**Stokes Point**	**42.29**	**30**	P	**P**	**10 08 56.3**	**+0.2**
	baz=274						
YUK3	**Moose Creek**	**42.48**	**41**	P	**P**	**10 08 58.2**	**+0.1**
	baz=280						
PZH	**PanZhiHua**	**42.48**	**261**	P	**P**	**10 08 59.3**	**+0.9**
DAWY	**Dawson**	**42.59**	**38**		**P**	**10 09 00.0**	**+1.3**
DAWY	**Dawson**	**42.59**	**38**	P	**P**	**10 08 59.9**	**+1.2**
	baz=279						
E29M	**Blow River**	**42.67**	**31**	IAmb	IAmb	10 09 02.2	
	comp=Z,6.1nm,1.1s						
E29M	**Blow River**	**42.67**	**31**	P	**P**	**10 09 00.1**	**+0.9**
	baz=275,SNR=9.1						
H29M	**Whitestone**	**42.72**	**35**	P	**P**	**10 09 01.1**	**+1.4**
	baz=277						
G29M	**Pine Creek**	**42.77**	**34**	IAmb	IAmb	10 09 03.3	
	comp=Z,3.8nm,0.7s						
G29M	**Pine Creek**	**42.77**	**34**	P	**P**	**10 09 00.7**	**+0.6**
	baz=277						
O28M	**Mount Upton**	**42.80**	**43**	IAmb	IAmb	10 09 04.2	
	comp=Z,14nm,1.5s						
O28M	**Mount Upton**	**42.80**	**43**	P	**P**	**10 09 01.2**	**+0.5**
	baz=282						
I29M	**Ogilvie Camp,**	**42.86**	**36**	IAmb	IAmb	10 09 03.2	
	comp=Z,5.0nm,0.8s						
I29M	**Ogilvie Camp,**	**42.86**	**36**	P	**P**	**10 09 01.7**	**+0.8**
	baz=278,SNR=9.7						
YUK8	**Steele Glacier**	**42.90**	**42**	P	**P**	**10 09 01.8**	**+0.3**
	baz=282						
M29M	**Somme Creek**	**43.28**	**40**	P	**P**	**10 09 04.7**	**+0.3**
	baz=281						
L29M	**L29M**	**43.30**	**39**	IAmb	IAmb	10 09 07.3	
	comp=Z,3.0nm,0.6s						
L29M	**L29M**	**43.30**	**39**	P	**P**	**10 09 04.5**	**0.0**
	baz=281,SNR=5.1						
EPYK	**Eagle Plains**	**43.36**	**34**	IAmb	IAmb	10 09 07.4	
	comp=Z,5.0nm,0.9s						
EPYK	**Eagle Plains**	**43.36**	**34**	P	**P**	**10 09 05.5**	**+0.7**
	baz=279,SNR=6.5						
YUK4	**Talbot Arm**	**43.41**	**42**	P	**P**	**10 09 05.5**	**-0.1**
	baz=282						
PNL	**Peninsula**	**43.42**	**44**	P	**P**	**10 09 05.3**	**-0.1**
	baz=284						
K29M	**Barlow Dome**	**43.44**	**38**	P	**P**	**10 09 06.0**	**+0.4**
	baz=281						
G30M	**tAoh Zraii Nji**	**43.47**	**33**		**P**	**10 09 07.3**	**+1.5**
G30M				IAmb	IAmb	10 09 07.8	
	comp=Z,4.4nm,0.5s						
G30M	**tAoh Zraii Nji**	**43.47**	**33**	P	**P**	**10 09 06.1**	**+0.4**
	baz=278,SNR=6.8						
F30M	**Barrier River**	**43.55**	**32**	P	**P**	**10 09 06.1**	**-0.2**
	baz=278,SNR=7.9						
O29M	**Mount Kennedy**	**43.68**	**43**	P	**P**	**10 09 08.2**	**+0.6**
	baz=283						
I30M	**Mount Dempster**	**43.68**	**36**		**P**	**10 09 09.1**	**+1.5**
I30M				IAmb	IAmb	10 09 10.1	
	comp=Z,7.3nm,0.8s						
I30M	**Mount Dempster**	**43.68**	**36**	P	**P**	**10 09 08.0**	**+0.5**
	baz=280,SNR=15						
J30M	**Hart River**	**43.82**	**37**	P	**P**	**10 09 09.2**	**+0.6**
	baz=281,SNR=5.3						
M30M	**Minto, Yukon**	**44.01**	**40**	P	**P**	**10 09 10.3**	**+0.2**
	baz=282						
HYT	**Haines Junctio**	**44.07**	**42**	P	**P**	**10 09 10.6**	**-0.1**
	baz=284						
N30M	**Aishikik Lake**	**44.12**	**41**	P	**P**	**10 09 11.3**	**+0.3**
	baz=283						
MAYO	**Mayo, Yukon**	**44.20**	**38**	P	**P**	**10 09 12.1**	**+0.5**
	baz=282						
G31M	**Satah River**	**44.23**	**33**	IAmb	IAmb	10 09 15.6	
	comp=Z,3.3nm,0.7s						
G31M	**Satah River**	**44.23**	**33**	P	**P**	**10 09 12.3**	**+0.5**
	baz=280						
P29M	**Windy Craggy**	**44.25**	**44**	P	**P**	**10 09 11.9**	**-0.1**
	baz=285						
INK	**Inuvik**	**44.29**	**31**		**P**	**10 09 13.6**	**+1.5**
INK				IAmb	IAmb	10 09 15.5	
	comp=Z,3.2nm,0.6s						
INK	**Inuvik**	**44.29**	**31**	P	**P**	**10 09 13.6**	**+1.5**
INK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
INK	**Inuvik**	**44.29**	**31**	P	**P**	**10 09 11.5**	**-0.7**
	baz=279						
F31M	**Tsiigehtchic**	**44.35**	**32**	P	**P**	**10 09 12.6**	**-0.1**
	baz=280						
H31M	**Peel River**	**44.41**	**35**		**P**	**10 09 14.8**	**+1.5**
H31M				IAmb	IAmb	10 09 18.3	
	comp=Z,3.4nm,0.8s						
H31M	**Peel River**	**44.41**	**35**	P	**P**	**10 09 12.7**	**-0.6**
	baz=281						
P30M	**Million Dollar**	**44.50**	**43**	P	**P**	**10 09 13.1**	**-1.1**
	baz=285						
N31M	**Braeburn, Yuko**	**44.72**	**41**	P	**P**	**10 09 16.0**	**+0.2**
	baz=284						
O30N	**Mendenhall**	**44.76**	**42**	P	**P**	**10 09 15.8**	**-0.3**
	baz=285						
PLBC	**Pleasant Camp**	**44.97**	**44**	P	**P**	**10 09 17.4**	**-0.3**
	baz=286						
M31M	**Drury Creek, Y**	**45.19**	**40**	P	**P**	**10 09 19.3**	**-0.2**
	baz=285						
WHY	**Whitehorse**	**45.36**	**42**	P	**P**	**10 09 21.0**	**+0.1**
	baz=286						
SKAG	**Skagway**	**45.48**	**44**	P	**P**	**10 09 22.4**	**+0.7**
	baz=287						
FARO	**Faro, Yukon**	**45.65**	**40**	P	**P**	**10 09 23.6**	**+0.5**
	baz=286						
MK31	**Makanchi Array**	**45.66**	**297**⇓	*e*P	**P**	**10 09 24.1**	**+0.7**
MKAR	**Makanchi Array**	**45.66**	**297**	P	**P**	**10 09 23.6**	**+0.2**
MKAR	**Makanchi Array**	**45.66**	**297**	P	**P**	**10 09 23.2**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=73,slow=8.0,SNR=6.9						
MKAR				PcP	**PcP**	**10 11 01.2**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=68,slow=5.0,SNR=2.1						
	comp=Z,0.7nm,0.6s						
MKAR	**Makanchi Array**	**45.66**	**297**	*e*P	**P**	**10 09 24.0**	**+0.6**
N32M	**Quiet Lake**	**46.07**	**41**	P	**P**	**10 09 26.5**	**0.0**
	baz=287						
SIT	**Sitka**	**46.20**	**47**	P	**P**	**10 09 28.6**	**+1.2**
SIT	**Sitka**	**46.20**	**47**	P	**P**	**10 09 28.6**	**+1.2**
SIT				pmax	pmax		
	comp=Z,25nm,1.3s						
SIT	**Sitka**	**46.20**	**47**	P	**P**	**10 09 27.6**	**+0.1**
	baz=289						
P32M	**Atlin**	**46.22**	**43**	P	**P**	**10 09 27.3**	**-0.4**
	baz=288						
R32K	**Eaglecrest**	**46.23**	**45**	P	**P**	**10 09 28.1**	**+0.4**
	baz=288						
A36M	**Sachs Harbour**	**46.36**	**25**	P	**P**	**10 09 28.4**	**-0.1**
A36M	**Sachs Harbour**	**46.36**	**25**	P	**P**	**10 09 28.0**	**-0.5**
	baz=283						
KURK	**Kurchatov**	**46.37**	**304**	P	**P**	**10 09 28.6**	**-0.3**
KURK	**Kurchatov**	**46.37**	**304**	P	**P**	**10 09 28.8**	**-0.1**
S32K	**Killisnoo**	**46.46**	**46**	P	**P**	**10 09 29.2**	**-0.2**
	baz=289						
KURBB	**Kurchatov Arra**	**46.46**	**304**	P	**P**	**10 09 28.8**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=74,slow=8.4,SNR=5.7						
	comp=Z,0.5nm,0.3s						
P33M	**Teslin, Yukon**	**46.47**	**42**	P	**P**	**10 09 30.8**	**+1.2**
P33M	**Teslin, Yukon**	**46.47**	**42**	P	**P**	**10 09 29.5**	**-0.1**
	baz=288						
MMPY	**Sheldon Lake,**	**46.48**	**39**	P	**P**	**10 09 29.3**	**-0.4**
	baz=287						
Q32M	**Nakina River**	**47.13**	**44**	P	**P**	**10 09 34.3**	**-0.6**
	baz=289						
R33M	**Jennings River**	**47.62**	**43**	P	**P**	**10 09 38.0**	**-0.6**
	baz=290						
U33K	**Whale Pass**	**47.67**	**48**	P	**P**	**10 09 38.4**	**-0.4**
	baz=291						
CRAG	**Craig**	**47.90**	**48**	P	**P**	**10 09 40.0**	**-0.7**
	baz=292						
S34M	**Telegraph Cree**	**48.05**	**45**	P	**P**	**10 09 41.0**	**-0.8**
	baz=291						
DLBC	**Dease Lake**	**48.41**	**44**	P	**P**	**10 09 43.7**	**-0.9**
	baz=291						
V35K	**Ketchikan**	**48.75**	**48**	P	**P**	**10 09 46.8**	**-0.4**
	baz=293						
T35M	**Bob Quinn**	**48.83**	**46**	P	**P**	**10 09 47.3**	**-0.6**
	baz=292						
RABL	**Rabaul**	**49.09**	**177**	P	**P**	**10 09 52.1**	**+1.8**
WRGLY	**Wrigley**	**49.65**	**36**	P	**P**	**10 09 53.7**	**-0.2**
	baz=292						
BVAR	**Borovoye Array**	**50.13**	**309**	PcP	**PcP**	**10 11 16.9**	**+1.1**
	comp=Z,0.8nm,0.5s,baz=64,slow=3.4,SNR=4.2						
TOAD	**Toad River Com**	**50.56**	**42**	P	**P**	**10 10 01.3**	**+0.3**
	baz=294						
YKA	**Yellowknife Ar**	**53.63**	**35**	P	**P**	**10 10 24.6**	**+1.1**
	comp=Z,1.0nm,0.7s,baz=303,slow=12,SNR=20						
	comp=Z,1.0nm,0.7s						

KK31	Karatay Array	54.77	298	P	P	10 10 32.7	+0.5
KK31	Karatay Array	54.77	298	P	P	10 10 32.7	+0.5
KK31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KKAR	Karatay Array	54.77	298	P	P	10 10 32.4	+0.2
KKAR	Karatay Array	54.77	298	P	P	10 10 32.4	+0.2
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARTI	Arti	54.78	317	d iP	P	10 10 32.4	+0.4
ARTI				S	S	10 18 04.5	-0.2
ARTI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
AB31	Akbulak array	57.71	309		P	10 10 52.7	-0.2
AB31				IAmb	IAmb	10 10 54.3	
	comp=Z,2.5nm,0.6s						
ABKAR	Akbulak array	57.71	309	P	P	10 10 52.6	-0.3
POIN	Pond Inlet	57.93	15	P	P	10 10 53.9	-0.2
POIN				IAmb	IAmb	10 10 54.6	
	comp=Z,2.8nm,0.7s						
SIMJ	Simiganj	58.15	295		P	10 10 56.7	+0.4
ARCES	ARCESS Array B	58.66	340	P	P	10 10 57.5	-1.7
	comp=Z,5.6nm,1.0s,baz=46,slow=8.7,SNR=5.2						
	comp=Z,5.6nm,1.0s						
SUMG	Summit	62.51	3		P	10 11 26.1	+0.3
SUMG	Summit	62.51	3	P	P	10 11 26.1	+0.3
SUMG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PLID	Pearl Lake	62.52	53	P	P	10 11 27.9	+1.8
FINES	FINESS Array B	64.54	334	P	P	10 11 37.3	-1.5
	comp=Z,2.4nm,0.4s,baz=27,slow=7.9,SNR=27						
	comp=Z,2.4nm,0.4s						
FINES	FINESS Array B	64.54	334	i P	P	10 11 37.7	-1.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
NVAR	Mina Array Bea	65.26	60	P	P	10 11 45.8	+1.6
	comp=Z,0.4nm,0.6s,baz=298,slow=6.8,SNR=4.4						
	comp=Z,0.4nm,0.6s						
WRA	Warramunga Arr	66.23	196	i P	P	10 11 47.2	-2.9
WRA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
PDAR	Pinedale Array	67.59	52	P	P	10 12 00.3	+1.3
	comp=Z,0.4nm,0.7s,baz=332,slow=6.8,SNR=5.8						
	comp=Z,0.4nm,0.7s						
NB2	NORSAR Subarra	69.03	340	P	P	10 12 06.6	-0.8
	comp=Z,1.3nm,0.4s,baz=28,slow=6.5						
NOA	NORSAR Array B	69.03	340	P	P	10 12 06.6	-0.8
	comp=Z,1.8nm,0.5s,baz=28,slow=6.6,SNR=20						
	comp=Z,1.8nm,0.5s						
HFS	Hagfors	69.18	338	P	P	10 12 07.3	-1.0
	comp=Z,2.9nm,0.3s,baz=45,slow=4.4,SNR=30						
	comp=Z,2.9nm,0.3s						
KIV	Kislovodsk	70.28	313	eP	P	10 12 14.7	-0.7
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KIV	Kislovodsk	70.28	313	eP	P	10 12 15.4	0.0
KBZ	Khabaz	70.33	313	P	P	10 12 15.5	0.0
	comp=Z,5.4nm,0.8s,baz=30,slow=5.9,SNR=8.6						
	comp=Z,5.4nm,0.8s						
KBZ	Khabaz	70.33	313	deP	P	10 12 17.3	+1.8
KBZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KBZ	Khabaz	70.33	313	eP	P	10 12 17.3	+1.8
AKASG	Malin Array Be	71.62	325	P	P	10 12 22.0	-1.2
	comp=Z,1.2nm,0.3s,baz=38,slow=6.1,SNR=9.2						
	comp=Z,1.2nm,0.3s						
AKASG	Malin Array Be	71.62	325	i P	P	10 12 22.7	-0.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BUR08	Bucovina Ar. S	75.65	325		P	10 12 47.9	+0.9
BURAR	Bucovina Array	75.67	325	P	P	10 12 48.0	+0.8
BURAR				IAmb	IAmb	10 12 48.9	
	comp=Z,4.7nm,0.7s						
SCHQ	Schefferville	75.72	21	P	P	10 12 48.1	+0.9
	comp=Z,1.3nm,0.6s,baz=324,slow=6.8,SNR=6.5						
	comp=Z,1.3nm,0.6s						
STHS	Stebnicka Huta	75.76	328	eP	P	10 12 48.9	+1.4
STHS	Stebnicka Huta	75.76	328	eP	P	10 12 48.9	+1.4
STEB	Steborice	76.58	330	eP	P	10 12 53.1	+0.9
DPC	Dobruska-Polom	76.73	331	eP	P	10 12 54.2	+1.2
DPC	Dobruska-Polom	76.73	331	eP	P	10 12 54.2	+1.2
MORC	Moravsky Berou	76.80	330	eP	P	10 12 54.2	+0.8
CLL	Collm	76.99	334	i P	P	10 12 54.6	+0.2
CLL				pmax	pmax		
	comp=Z,5.0nm,0.4s						
CLL	Collm	76.99	334	i P	P	10 12 54.6	+0.2
	comp=Z,5.0nm,0.4s						
EKA	Eskdalemuir Ar	77.38	345	P	P	10 12 56.8	+0.3
	comp=Z,0.4nm,0.3s,baz=22,slow=4.5,SNR=12						
	comp=Z,0.4nm,0.3s						
VYHS	Vyhne	77.41	329	eP	P	10 12 58.1	+1.2
VYHS	Vyhne	77.41	329	eP	P	10 12 58.1	+1.2
VRAC	Vranov	77.53	331	eP	P	10 12 58.9	+1.4
JAVC	Velka Javorina	77.53	330	eP	P	10 12 59.6	+2.1
KRUC	Moravsky	77.80	331	eP	P	10 13 00.0	+1.0
BRTR	Keskin Array B	77.98	315	P	P	10 13 01.1	+0.7
	comp=Z,1.8nm,0.9s,baz=73,slow=2.0,SNR=5.3						
	comp=Z,1.8nm,0.9s						
BRTR	Keskin Array B	77.98	315	i P	P	10 13 01.6	+1.3
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MODS	Modra-Piesok	78.08	330	eP	P	10 13 01.5	+1.0
MODS	Modra-Piesok	78.08	330	eP	P	10 13 01.5	+1.0
KHC	Kasperske Hory	78.69	332	eP	P	10 13 05.1	+1.1
KHC	Kasperske Hory	78.69	332	eP	P	10 13 05.1	+1.1
GERES	GERESS Array B	78.90	332	P	P	10 13 05.2	+0.1
	comp=Z,1.1nm,0.3s,baz=37,slow=6.1,SNR=12						
	comp=Z,1.1nm,0.3s						
BGES	Gesves	80.10	338	dP	P	10 13 11.7	+0.2
BMRD	Maredsous	80.26	338	dP	P	10 13 12.4	+0.1
TXAR	Lajitas Array	80.33	58	P	P	10 13 15.1	+1.9
	comp=Z,0.7nm,0.5s,baz=302,slow=4.1,SNR=10.0						
	comp=Z,0.7nm,0.5s						
DOU	Dourbes	80.50	338	dP	P	10 13 14.1	+0.4
DOU				dPcP	PcP	10 13 20.8	+0.5
H03N2	Juan Fernandez	141.06	90	T	T	12 58 31.8	
	baz=305,slow=77						
H03N3	Juan Fernandez	141.07	90	T	T	12 58 34.8	
	baz=305,slow=77						
H03N1	Juan Fernandez	141.07	90	T	T	12 58 32.0	
	baz=305,slow=77						
SNAA	Sanae	150.29	197	PKPbc	PKiKP	10 20 53.2	+1.3
	comp=Z,1.2nm,1.1s,baz=334,slow=2.4,SNR=3.3						

*IDC **29** 10:06:58.4±0.8, 2°.57S×138°.50E, h0^{km}, mb4.1/7, mbtmp4.1/10, ML3.6/3, MS3.6/6, Error ellipse: s-maj=23.1km s-min=19.8km az=92.0*

*DJA **29** 10:07:01.8±0.5, 3°S±3°×13°9E±°, h10^{km}, M4.2/5, MLv4.2/5*

ISC 29 10:07:02.4±0.6, 2°.59S±0°.06×138°.46E±0°.05, h32^{km}, n19, σ2^{s}.64/19, mb4.0/7, MS3.9/4, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.64	23	P	Pb	10 07 12.0	-3.2
SMPI				S	Sb	10 07 24.0	0.0
GENI	Genyem	1.70	90	P	Pn	10 07 30.1	+0.2
JAY	Jayapura	2.24	88	Pn	Pn	10 07 36.3	-1.0
	6.8nm,0.3s,baz=229,slow=12,SNR=29						
JAY				Sn	Sn	10 08 04.4	+0.5
	7.6nm,0.3s,baz=285,slow=22,SNR=4.6						
	73nm,0.7s						
SRPI	Serui, Papua	2.33	288	P	Pn	10 07 39.7	+1.2
BAKI	Biak	2.73	300	P	Pb	10 07 47.8	-2.8
GUMO	Guam	17.28	21	LR	LR	10 16 13.5	
	comp=Z,23nm,21.4s,baz=178,slow=32						
WRA	Warramunga Arr	17.71	193	P	Pn	10 11 05.5	-1.2
	0.3nm,0.3s,baz=22,slow=12,SNR=16						
WRA				S	Sn	10 14 12.0	-11
	1.9nm,0.9s,baz=15,slow=22,SNR=3.2						
WRA				LR	LR	10 18 18.0	
	comp=Z,232nm,21.8s,baz=2.0,slow=38						
	3.3nm,0.8s						
FITZ	Fitzroy Crossi	19.89	218	P	P	10 11 32.0	+0.7
	0.2nm,0.3s,baz=247,slow=13,SNR=3.2						
FITZ				S	S	10 15 05.0	-8.7
	3.4nm,1.0s,baz=34,slow=15,SNR=2.0						
	4.7nm,1.0s						
ASAR	Alice Springs	21.41	192	P	P	10 11 48.0	+0.2
	6.3nm,0.8s,baz=23,slow=10,SNR=27						
ASAR				S	S	10 15 45.9	+2.0
	1.0nm,0.8s,baz=1.3,slow=12,SNR=4.8						
ASAR				LR	LR	10 20 41.2	
	comp=Z,304nm,18.9s,baz=4.0,slow=38						
	6.3nm,0.8s						
NWAO	Narrogin (SRO)	36.16	211	LR	LR	10 29 59.6	
	comp=Z,293nm,18.8s,baz=66,slow=38						
PETK	Petropavlovsk-	57.80	14	LR	LR	10 41 50.4	
	comp=Z,20nm,19.3s,baz=175,slow=36						
MKAR	Makanchi Array	69.54	322	P	P	10 18 09.2	+1.0
	0.9nm,0.9s,baz=114,slow=6.0,SNR=4.7						
	0.9nm,0.9s						
KURBB	Kurchatov Arra	73.49	325	P	P	10 18 32.8	+1.0
	0.6nm,0.2s,baz=108,slow=5.6,SNR=5.0						
	0.6nm,0.2s						
VNDA	Vanda	75.92	175	P	P	10 18 47.0	+1.5
	1.4nm,0.9s,baz=313,slow=6.5,SNR=4.8						
	1.4nm,0.9s						
BVAR	Borovoye Array	79.07	325	P	P	10 19 05.1	+1.6
	1.0nm,0.7s,baz=140,slow=5.3,SNR=3.7						
	1.0nm,0.7s						
MAW	Mawson	82.15	202	LR	LR	10 54 01.6	
	comp=Z,71nm,18.3s,baz=40,slow=34						
ILAR	Eielson Array	85.82	24	P	P	10 19 38.7	+0.2
	0.7nm,0.7s,baz=263,slow=4.2,SNR=11						
	0.7nm,0.7s						
QSPA	South Pole Qui	87.36	180	P	P	10 19 47.4	+1.3
	2.7nm,0.7s,baz=331,slow=0.7,SNR=22						
	2.7nm,0.7s						
LPAZ	La Paz	147.72	126	PKPbc	PKPbc	10 26 47.0	+1.3
	2.2nm,0.9s,baz=228,slow=2.0,SNR=4.9						

ROM 29 10:11:01.9±0.1, 42°.910N±0°.004×13°.066E±0°.005, h9^{km}, ML1.4/12, 5C-2D, Error ellipse: s-maj=0.4km s-min=0.3km az=28.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FEMA	Monte Fema	0.05	347	P	Pg	10 11 04.2	+0.2
FEMA				S	Sg	10 11 05.5	0.0
NRCA	Norcia	0.08	155	⇓P	Pg	10 11 04.7	+0.5
NRCA				S	Sg	10 11 06.6	+0.7
NRCA				AML	AML		
	comp=E,438µm,0.1s						
NRCA				AML	AML		
	comp=N,466µm,0.2s						
NRCA				AML	AML		
	comp=N,466µm,1.8s						
MC2	Monte Cornacci	0.09	88	P	Pg	10 11 04.8	+0.3
MC2				S	Sg	10 11 06.7	+0.4
FDMO	Fiordimonte	0.13	7	⇑P	Pg	10 11 05.2	+0.4
FDMO				S	Sg	10 11 07.3	+0.4
FDMO				AML	AML		
	comp=E,178µm,0.3s						
FDMO				AML	AML		
	comp=N,257µm,0.2s						
FDMO				AML	AML		
	comp=N,257µm,1.8s						
CESI	CESI - Serrava	0.15	309	⇑P	Pg	10 11 05.8	+0.5
CESI				S	Sg	10 11 08.5	+0.9
CESI				AML	AML		
	comp=N,424µm,0.1s						
CESI				AML	AML		
	comp=E,222µm,0.2s						
MMO1	Montemonaco	0.19	93	⇑P	Pg	10 11 06.4	+0.5
MMO1				S	Sg	10 11 09.6	+1.0
GAVE	Gavelli	0.25	210	⇑P	Pg	10 11 07.7	+0.8
GAVE				S	Sb	10 11 11.9	-1.3
GAVE				AML	AML		
	comp=N,240µm,0.9s						
GAVE				AML	AML		
	comp=E,257µm,0.1s						
MTRA	Matera	0.29	122	⇑P	Pg	10 11 08.2	+0.6
MTRA				S	Sb	10 11 12.9	-1.3
MTRA				AML	AML		
	comp=E,58µm,0.3s						
MTRA				AML	AML		
	comp=N,76µm,1.4s						
MTRA				AML	AML		
	comp=N,76µm,0.6s						
MF5	Montefalcone A	0.30	75	⇓P	Pb	10 11 08.7	-0.7
MF5				S	Sb	10 11 14.2	-0.4

*IDC **29** 10:17:14.7±1.4, 5°.83S×151°.85E, h0^{km}, mb3.9/6, mbtmp3.9/6, Error ellipse: s-maj=54.0km s-min=25.9km az=124.0*

ISC 29 10:17:20.2±1.3, 5°.9S±0°.2×151°.9E±0°.3, h36^{km}, n6, σ1^{s}.03/6, mb3.8/6, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.02	229	P	P	10 22 11.5	-0.1
	2.0nm,0.6s,baz=53,slow=10,SNR=16						
	2.0nm,0.6s						
ASAR	Alice Springs	24.70	223	P	P	10 22 39.0	+0.9
	1.3nm,0.7s,baz=56,slow=9.1,SNR=18						
	1.3nm,0.7s						
FITZ	Fitzroy Crossi	28.32	242	P	P	10 23 09.8	-1.0
	2.1nm,0.6s,baz=60,slow=6.9,SNR=9.6						
	2.1nm,0.6s						
MKAR	Makanchi Array	80.58	319	P	P	10 29 30.0	+0.9
	0.4nm,0.6s,baz=95,slow=3.5,SNR=2.4						
	0.4nm,0.6s						
ILAR	Eielson Array	83.55	22	P	P	10 29 43.5	-0.6
	1.0nm,0.9s,baz=249,slow=4.9,SNR=5.6						
	1.0nm,0.9s						
QSPA	South Pole Qui	84.03	180	P	P	10 29 47.0	+0.2
	1.4nm,1.1s,baz=341,slow=2.9,SNR=3.5						
	1.4nm,1.1s						

*GCG **29** 10:18:09.7±1.1, 13°.95N×90°.05W, h103^{km}±16^{km}, MD3.6, ML3.5, MW3.1*

*SNET **29** 10:18:10.6±0.8, 13°.72N×90°.26W, h78^{km}±5^{km}, ML2.7*

ISC 29 10:18:11.0±2.0, 13°.7N±0°.1×90°.1W±0°.1, h100^{km}, n7, σ1^{s}.32/12, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NUBE	Las Nubes	0.37	51	i P	Pn	10 18 24.4	-1.7
CEVE	Cerro Verde	0.47	70	eP	Pn	10 18 25.7	-1.2
CEVE				eS	Sn	10 18 37.5	-1.2
CEVE				eS	Sn	10 18 38.5	-0.2
CEVE				IAML		10 18 39.8	
	comp=Z,257nm,0.2s						
JAYA	Jayaque - finc	0.61	91	eP	Pn	10 18 27.5	-0.3
JAYA				eS	Sn	10 18 39.6	-0.8
JAYA				IAML		10 18 40.0	
	comp=Z,284nm,0.3s						
JAYA	Jayaque - finc	0.61	91	i P	Pn	10 18 27.4	-0.3
FG16	Alotenango, Sa	0.74	325	i P	Pn	10 18 30.1	+1.1
ESQI	Esquipulas	1.14	39	eP	Pn	10 18 32.8	-0.3
ESQI				eS	Sn	10 18 50.0	+0.3
COEG	Centro de Oper	1.16	92	eP	Pn	10 18 34.0	+0.7
COEG				eS	Sn	10 18 52.9	+2.7
COEG				IAML		10 18 56.6	
	comp=Z,54nm,0.4s						

IDC 29 10:22:09.3±2.1, 5°.38S×151°.40E, h0^{km}, mb3.5/3, mbtmp3.5/3, MS3.6/1, Error ellipse: s-maj=143.1km s-min=30.5km az=126.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	5.80	226	Sn	Sn	10 24 47.7	+3.6
	baz=340,slow=15						
PMG				LR	LR	10 25 34.6	
	comp=Z,613nm,20.5s,baz=204,slow=35						
WRA	Warramunga Arr	22.02	227	P	P	10 27 06.7	+1.1
	0.6nm,0.5s,baz=53,slow=10.0,SNR=8.7						
	0.6nm,0.5s						
ASAR	Alice Springs	24.79	221	P	P	10 27 32.5	-0.8
	1.0nm,0.8s,baz=54,slow=9.2,SNR=12						
	1.0nm,0.8s						
ILAR	Eielson Array	83.22	22	P	P	10 34 37.4	+0.1
	0.3nm,0.5s,baz=261,slow=5.9,SNR=4.3						
	0.3nm,0.5s						

*SOME **29** 10:32:37.6, 44°.58N×82°.00E, h20^{km}*

*NNC **29** 10:32:40.0±0.8, 44°.73N×81°.96E, h0^{km}, mb3.5, mpv3.0, Error ellipse: s-maj=12.6km s-min=2.8km az=118.0, Suspected Mining explosion.*

ISC 29 10:32:37.3±3.0, 44°.6N±0°.2×82°.1E±0°.2, h0^{km}, n4, σ0^{s}.38/8, 2C-4D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	Jarkent	1.64	263	eP	Pn	10 33 07.9	+0.4
	11nm,0.2s						
DJR				eS	Sn	10 33 29.6	+0.2
	21nm,0.4s						
PDGK	Podgornoye	2.23	237	⇑Pn	Pb	10 33 18.4	-0.2
	5.4nm,0.5s						
PDGK				⇓Sn	Sg	10 33 48.7	-0.3
	9.9nm,0.7s						
MK31	Makanchi Array	2.24	4	⇓Pn	Pn	10 33 16.0	+0.4
	5.5nm,0.4s,baz=185,slow=14,SNR=227						
MK31				⇑Sn	Sn	10 33 44.2	+0.2
	11nm,0.3s,baz=187,slow=23						
MAKZ	Makanchi	2.25	359	⇓Pn	Pn	10 33 15.9	+0.1
	3.5nm,0.3s						
MAKZ				⇓Sn	Sn	10 33 43.7	-0.5
	11nm,0.3s						

ATH 29 10:37:00.9, 40°.22N×21°.10E, h11^{km}±1^{km}, ML1.4/4, Manual Solution by N.Liadopoulou First location: 2019/06/29 10:38:38, This location: 2019/06/29 10:51:51 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PENT	Pentalofos	0.04	123	P	Pg	10 37 03.3	+0.2
PENT				S	Sg	10 37 05.1	+0.5
NEST	Nestorio	0.20	350	P	Pg	10 37 05.5	+0.3
KPRO	Kipourio	0.33	142	P	Pg	10 37 07.8	+0.2
MSVA	Metsovo	0.45	172	P	Pg	10 37 10.0	+0.2
KZN	Kozani	0.52	80	P	Pg	10 37 11.6	+0.5
FNA	Florina	0.61	21	P	Pg	10 37 12.8	+0.1
IGT	Igoumenitsa	0.90	221	P	Pb	10 37 18.5	0.0
KEK	Kerkira	1.12	244	P	Pg	10 37 22.4	0.0

TIR 29 10:37:16.9, 40°.46N×20°.77E, h14^{km}±1^{km}, Ml2.5/4, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	Korca	0.17	6	Pg	Pg	10 37 20.8	-0.2
KBN				Sg	Sg	10 37 23.5	-0.3
KBN				AML	AML	10 37 24.9	
	5.0nm,0.3s						
KBN				AML	AML	10 37 25.3	
	4.2nm,0.2s						
NEST	Nestorio	0.22	102	Pg	Pg	10 37 22.0	+0.1
NEST				Sg	Sb	10 37 26.0	-0.7
NEST				AML	AML	10 37 27.7	
	3.9nm,0.2s						
FNA	Florina	0.57	55	Pg	Pn	10 37 29.8	-0.8
FNA				Sg	Sb	10 37 36.3	-0.4
FNA				AML	AML	10 37 38.1	
	0.7nm,0.2s						
SRN	Sarande	0.82	226	Pg	Pn	10 37 33.7	-0.4
SRN				Sg	Sn	10 37 46.1	0.0
SRN				AML	AML	10 37 48.5	
	0.2nm,0.4s						
IGT	Igoumenitsa	0.98	200	Pg	Pn	10 37 36.3	0.0
IGT				Sg	Sn	10 37 50.8	+0.8
PUK	Puka	1.71	338	Pn	Pg	10 37 51.0	+1.1
PUK				Sn	Sg	10 38 13.1	+1.0

CATAC 29 10:40:41.5±0.5, 11°N±2°×8°3W±°, h10^{km}±3^{km}, M3.2/11, MLv3.2/11, Error ellipse: s-maj=5.4km s-min=3.9km az=79.5, confirmed, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRT2	Tortugero	0.62	267	P	Pb	10 40 54.6	+0.2
TRT2	Tortugero	0.62	267	S	Sb	10 41 03.3	+0.1
HDC	Heredia	1.16	239	P	Pb	10 41 03.0	-0.6
HDC				S	Sb	10 41 17.3	-1.4
LCR2	La Lucha 2	1.23	226	S	Sb	10 41 18.6	-2.2
LCR2	La Lucha 2	1.23	226	P	Pn	10 41 03.5	-1.3
COVE	Coope Vega, Sa	1.28	276	P	Pb	10 41 05.6	-0.1
COVE	Coope Vega, Sa	1.28	276	S	Sb	10 41 22.0	-0.2
TCS1	Tacares	1.30	245	P	Pb	10 41 06.0	0.0
DRK0	Durika	1.33	186	P	Pn	10 41 04.9	-1.3
SOCE	Pocosol	1.50	262	P	Pb	10 41 09.5	0.0
SOCE	Pocosol	1.50	262	S	Sn	10 41 27.8	-0.4
BLUN	Bluefields	1.55	335	P	Pn	10 41 08.5	-0.6
BLUN				S	Sn	10 41 26.5	-2.8
BRU2	Volcan	1.83	167	P	Pb	10 41 14.5	-0.7
BRU2	Volcan	1.83	167	S	Sn	10 41 36.5	0.0
ACON	Acoyapa	2.45	304	P	Pn	10 41 21.6	+0.2
ACON	Acoyapa	2.45	304	S	Sb	10 41 54.2	-1.6

*UCR **29** 11:00:40.0±1.2, 7°.33N×81°.96W, h35^{km}, MW3.9*

*UPA **29** 11:00:57.7±0.9, 8°.40N×82°.88W, h28^{km}±2^{km}, MW4.3*

ISC 29 11:00:50.6±1.4, 8°.08N±0°.05×83°.03W±0°.04, h16^{km}±9^{km}, n49, σ1^{s}.28/67, 1C, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LESP3	La Esperanza,	0.40	37	eP	Pn	11 01 02.9	+1.2
LESP3				eS	Sg	11 01 06.2	+1.8
DVD	David	0.68	59	eP	Pn	11 01 06.6	+1.1
DVD				eS	Sg	11 01 13.8	+1.0
PEDE3	Pedregal, Chir	0.68	64	eP	Pn	11 01 06.9	+1.4
PEDE3				eS	Sg	11 01 13.8	+0.9
LOCO3	Loma Colorada,	0.69	62	eP	Pn	11 01 07.1	+1.3
LOCO3				eS	Sg	11 01 13.9	+0.5
MLIR3	Monte Lirio, C	0.74	16	eP	Pn	11 01 06.8	+0.3
MLIR3				eS	Sg	11 01 13.1	-1.8
CHIR3	Chiriqui UPA,	0.76	66	eP	Pn	11 01 08.1	+1.3
CHIR3				eS	Sg	11 01 16.8	+1.2
BRU2	Volcan	0.79	26	eP	Pn	11 01 07.3	+0.1
BRU2				eS	Sb	11 01 15.1	-1.4
PTAR3	Potrerillos Ar	0.81	41	eP	Pn	11 01 07.7	+0.2
PTAR3				eS	Sb	11 01 16.0	-1.2
BC3P	Paso Ancho	0.84	30	eP	Pn	11 01 07.9	-0.2
BC3P				eS	Sb	11 01 16.8	-1.4
PSOM3	Paja de Sombre	0.93	49	eP	Pn	11 01 09.1	+0.1
PSOM3				eS	Sb	11 01 18.1	-2.3
DRK0	Durika	1.19	350	eP	Pg	11 01 14.0	+0.3
DRK0				eS	Sb	11 01 26.8	-1.5
GMAL	Guarumal, Vera	1.81	100	eP	Pg	11 01 25.1	-0.3
GMAL				eS	Sb	11 01 46.5	+0.6
MESA3	La Mesa, Verag	1.83	88	eP	Pg	11 01 25.6	-0.2
MESA3				eS	Sb	11 01 46.6	+0.1
ABE2	San Pablo	1.90	328	eP	Pg	11 01 27.6	+0.4
RESJ	San Isidro (Tu	2.03	343	eP	Pb	11 01 27.8	+0.6
ACOS	Acosta	2.04	327	eP	Pg	11 01 29.3	-0.5
CVTV	Tajo	2.04	340	eP	Pb	11 01 28.0	+0.6
CVTQ	Turrialba Volc	2.04	339	eP	Pb	11 01 28.2	+0.6
VTLA	Turrialba Volc	2.04	339	eP	Pb	11 01 28.1	+0.5
VTR0	Volcan Turrial	2.05	340	eP	Pb	11 01 28.4	+0.5
PURI	Puriscal	2.16	324	eP	Pg	11 01 31.1	-1.0
HEME	Heredia, Merce	2.19	330	eP	Pb	11 01 30.8	+0.8
BELE	Belen	2.20	329	eP	Pg	11 01 31.9	-1.0
PILE	Guapiles	2.25	341	eP	Pb	11 01 31.3	+0.4
CACAO	El Cacao, Vera	2.27	109	eP	Pg	11 01 33.4	-0.9
CACAO				eS	Sb	11 01 59.9	+0.6
VBV1	V. Barva	2.28	333	eP	Pb	11 01 31.7	+0.1
ATEO	Atenas	2.31	325	eP	Pg	11 01 33.7	-1.2
CRIS3	El Cristo, Coc	2.40	86	eP	Pb	11 01 33.1	-0.3
CRIS3				eS	Sn	11 01 59.2	+0.9
PALD	Palmares	2.40	325	eP	Pg	11 01 35.5	-1.2
CBL1	Cabuya	2.53	307	eP	Pb	11 01 35.6	0.0
ITAL	Pital	2.65	333	eP	Pb	11 01 38.1	+0.3
AZU	Azuero	2.75	96	eP	Pb	11 01 37.9	-1.5
AZU				eS	Sb	11 02 09.5	-3.4
SOCE	Pocosol	2.77	326	eP	Pg	11 01 41.6	-2.1
CASO	Castillo	2.88	324	eP	Pb	11 01 42.1	+0.5
VACR	Volcan Arenal	2.88	326	eP	Pb	11 01 43.1	+1.5
ARE1	Arenal 1	2.89	325	eP	Pb	11 01 42.4	+0.5
VARE2	V. Arenal	2.89	325	eP	Pb	11 01 42.3	+0.4
JTS	Las Juntas de	2.90	319	eP	Pb	11 01 40.6	-1.4
JTS	Las Juntas de	2.90	319	eP	Pb	11 01 40.1	-1.9
JTS				eS	Sn	11 02 13.1	+2.3
CEDE	Laguna Cedeo	2.90	326	eP	Pb	11 01 43.7	+1.6
ACHO3	Achotines, Los	2.91	103	eP	Pb	11 01 40.9	-1.3
NICO	Nicoya	3.14	311	eP	Pb	11 01 45.5	-0.5
CUI	Cuipilapa	3.31	321	eP	Pb	11 01 48.0	-1.1
BCIP	Isla Barro Col	3.34	71	⇑eP	Pn	11 01 44.8	+2.6
BCIP				eS	Sn	11 02 20.0	-1.6
MESS	Mesas	3.40	321	eP	Pb	11 01 49.0	-1.5
VRLE	La Escondida,	3.54	320	eP	Pb	11 01 51.6	-1.4

ELI1	Hacienda Flor	3.56	316	eP	Pb	11 01 52.2	-1.0
LAPC	Finca la Perla	3.57	319	eP	Pb	11 01 51.6	-1.8
BLUN	Bluefields	3.97	349	eP	Pn	11 01 53.4	+2.6

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*HEL **29** 11:08:46.4±0.2, 67°.54N×30°.30E, h0km, ML1.9, Suspected explosion*
*KOLA **29** 11:08:47.4, 67°.54N×30°.62E, h0km, ML2.2, Error ellipse: s-maj=4.6km s-min=2.5km az=40.0, Murmansk region, Kovdor district*
ISC 29 11:08:44.5±0.8**, 67°.58N**±0°.02×**30°.47E**±0°.02**, h0km, n27, σ0ˢ.97**/39**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRF	Varrio	0.37	297	PG	Pg	11 08 52.2	+0.6
	baz=123						
VRF				SG	Sg	11 08 56.9	+0.6
APA0	Apatity Array	0.97	88	P	Pb	11 09 03.4	-0.7
APA0				S	Sg	11 09 15.9	+0.4
APA	Apatity	1.13	89	P	Pb	11 09 06.5	-0.3
RAJF	Raja-Jooseppi	1.21	319	PG	Pb	11 09 07.9	-0.3
RAJF				SG	Sb	11 09 23.6	-0.8
KVDA	Kovda	1.30	133	P	Pg	11 09 08.5	-0.9
KVDA				S	Sg	11 09 25.7	-0.4
KU6	Riekki	1.58	189	PG	Pn	11 09 13.7	-0.1
KU6				MSG		11 09 32.3	
	comp=Z,6.9nm,0.2s						
KU6				SN	Sg	11 09 35.6	+0.3
LVZ	Lovozero	1.62	77	P	Pg	11 09 15.4	-0.2
LVZ				S	Sg	11 09 36.8	+0.2
LVZ	Lovozero	1.62	77	SN	Sg	11 09 36.6	0.0
MSF	Maaselka	1.77	199	PG	Pn	11 09 16.8	+0.4
MSF				SG	Sn	11 09 39.2	-0.4
RNF	Rovaniemi	2.00	243	PG	Pb	11 09 20.9	-0.8
RNF				SG	Sb	11 09 47.5	+0.4
KU1	Kurvinen	2.06	191	PG	Pb	11 09 22.5	-0.2
RANF	Ranua	2.15	224	PG	Pb	11 09 23.0	-1.3
	baz=40						
RANF				SG	Sb	11 09 50.7	-0.7
TERR	Teriberka	2.36	44	S	Sn	11 09 55.5	+1.3
KEV	Kevo	2.52	331	PG	Pb	11 09 30.0	-0.6
KEV				MSG		11 10 01.3	
	comp=Z,6.0nm,0.2s						
KEV				SG	Sb	11 10 02.2	+0.1
KLF	Kolari	2.54	265	MSG		11 09 59.2	
	comp=Z,5.6nm,0.2s						
KLF				SG	Sb	11 10 02.0	-0.5
VADS	Vadso	2.58	352	P	Pb	11 09 30.4	-1.2
VADS				S	Sb	11 10 02.8	-1.0
ARA0	ARCESS Array S	2.68	319	SG	Sg	11 10 08.5	-1.9
ARCES	ARCESS Array B	2.68	319	S	Sb	11 10 06.5	-0.1
HEF	Hetta	2.69	291	MSG		11 10 04.4	
	comp=Z,6.7nm,0.2s						
HEF				SB	Sb	11 10 06.8	-0.3
TOF	Tornio	2.86	241	MSG		11 10 08.3	
	comp=Z,2.8nm,0.2s						
TOF				SG	Sb	11 10 12.0	+0.1
PAJU	Pajala	2.91	262	SB	Sb	11 10 13.0	-0.2
OUL	Oulu	3.11	218	SB	Sb	11 10 18.1	-1.1
KALU	Kalix	3.31	242	SG	Sb	11 10 26.8	+2.0
RMF	Romuvaara	3.39	184	PN	Pn	11 09 39.9	+1.3
	baz=358						
ERTU	Ertsjaerv	3.40	256	SN	Sn	11 10 21.6	+1.8
KIF	Kilpisjarvi	3.87	296	PN	Pn	11 09 46.9	+1.8
KIF				SG	Sg	11 10 46.2	-2.3
OUF	Merijarvi	3.99	219	PN	Pn	11 09 47.2	+0.4

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*TRN **29** 11:12:52.9, 11°.11N×62°.20W, h88km, MD3.0, North of Paria peninsula.*
*FUNV **29** 11:12:53.1, 10°.91N×62°.35W, h5km, MW2.9*
ISC 29 11:12:51.7±1.3**, 11°.10N**±0°.07×**62°.31W**±0°.06**, h89km, n7, σ0ˢ.90**/11**, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.99	116	eP	Pn	11 13 11.8	+0.5
TRN				eS	Sn	11 13 25.2	-0.7
GRFF	Grenada Fort F	1.10	30	eP	Pn	11 13 13.4	+0.8
GRFF				eS	Sn	11 13 28.0	-0.2
GRGR	Grenville	1.21	32	eP	Pn	11 13 14.4	+0.5
GRGR				eS	Sn	11 13 29.8	-0.8
GCMP	Grenada, Carri	1.63	32	eP	Pn	11 13 19.2	0.0
GCMP				eS	Sn	11 13 39.5	-0.3
PCRV	Puerto La Cruz	2.46	248	eP	Pn	11 13 30.9	+0.7
CACV	CAICARA DEL OR	5.45	230	eP	Pn	11 14 06.2	-4.3
CACV				eS	Sn	11 15 00.5	-12
BAUV	El Baul	6.04	250	eP	Pn	11 14 19.4	+0.8
BAUV				eS	Sn	11 15 24.7	-1.6

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*PRU **29** 11:27:44.5, 41°.07N×20°.61E, h1km*
*RHSSO **29** 11:27:51.1±0.6, 41°.48N×20°.18E, h6km±3km, ML3.5/10*
*SKO **29** 11:27:51.7, 41°.24N×19°.74E, h0km, ML3.2*
*PDG **29** 11:27:51.4±0.1, 41°.51N×20°.09E, h9km, MD3.5/7, ML3.5/11, Error ellipse: s-maj=0.2km s-min=0.3km az=0.0*
*BEO **29** 11:27:53.6±0.4, 41°.63N×20°.16E, h12km±3km, ML2.9/23*
*THE **29** 11:27:53.1, 42°N±11°×2°0E±1°4, h2km±29km, M2.9/21, MLh2.9/21*
ISC 29 11:27:51.7±1.2**, 41°.59N**±0°.02×**20°.13E**±0°.02**, h3km**±10km**, n135, σ1ˢ.11**/189**, 25C-15D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	Ohrid	0.69	133	i Pg	Pb	11 28 06.0	-0.5
OHR				i Sg	Sn	11 28 17.4	-2.4
OHR				eLg	Lg	11 28 18.1	
	comp=N,580nm,0.7s						
OHR				eLg	Lg	11 28 19.6	
	comp=E,287nm,0.6s						
ULC	Ulcinj	0.76	300	i Pg	Pg	11 28 06.3	0.0
ULC	Ulcinj	0.76	300	⇑iPg	Pg	11 28 05.9	-0.4
ULC				i Sg	Sb	11 28 18.1	-0.3
DRME	Dracevica, Mon	0.93	311	ePg	Pg	11 28 09.3	-0.1
DRME	Dracevica, Mon	0.93	311	⇑iPg	Pg	11 28 09.1	-0.3
DRME				i Sg	Sb	11 28 24.2	+1.1
PDG	Podgorica	1.06	323	⇑iPg	Pg	11 28 11.4	-0.7
PDG				eSg	Sn	11 28 28.9	+0.1
PDG	Podgorica	1.06	323	⇑P	Pg	11 28 11.8	-0.2
PDG				⇓S	Sg	11 28 26.0	+0.1
PDG	Podgorica	1.06	323	ePg	Pg	11 28 11.9	-0.2
PDG				eSg	Sn	11 28 28.4	-0.4
PDG	Podgorica	1.06	323	⇑iPg	Pg	11 28 11.9	-0.2
PDG				i Sg	Sn	11 28 29.4	+0.6
BUM	Brajici-Budva	1.17	308	⇓iPg	Pg	11 28 13.5	-0.5
BUM				i Sg	Sn	11 28 32.2	+0.8
FNA	Florina	1.24	130	P	Pn	11 28 15.3	-0.6
FNA				S	Sn	11 28 34.2	+1.0
FNA	Florina	1.24	130	i Pg	Pn	11 28 15.4	-0.6
FNA				i Sg	Sn	11 28 33.8	+0.6
FNA	Florina	1.24	130	ePg	Pn	11 28 15.5	-0.5
FNA				eSg	Sn	11 28 34.2	+1.0
BEY	Berane	1.29	352	i Pn	Pg	11 28 16.2	-0.3
IVA	Berane	1.29	352	⇓iPg	Pg	11 28 16.3	-0.3
IVA				i Sg	Sn	11 28 38.3	+3.6
CEME	Cevo	1.32	317	⇓iPg	Pg	11 28 16.4	-0.5
CEME				i Sg	Sn	11 28 37.7	+2.5
KOME	Kolasin	1.34	340	ePg	Pg	11 28 16.8	-0.6
KOME	Kolasin	1.34	340	⇑iPg	Pg	11 28 16.9	-0.5
KOME				i Sg	Sn	11 28 39.4	+3.5
NEST	Nestorio	1.36	149	P	Pb	11 28 18.5	+0.6
NEST				S	Sn	11 28 40.1	+3.8
HCY	Herceg Novi	1.49	306	ePn	Pn	11 28 19.1	-0.4
HCY				eSn	Sg	11 28 40.9	+1.3
HCY	Herceg Novi	1.49	306	⇓iPg	Pn	11 28 19.0	-0.4
HCY				i Sg	Sg	11 28 42.2	+2.6
PENT	Pentalofos	1.59	151	P	Pg	11 28 22.6	+0.5
SJES	Sjenica	1.68	356	ePn	Pb	11 28 22.7	-0.6
SJES				eSn	Sg	11 28 45.6	0.0
SJES	Sjenica	1.68	356	ePg	Pb	11 28 23.5	+0.2
SJES				eSg	Sg	11 28 46.4	+0.8
TREB	Trebinje	1.74	311	ePn	Pn	11 28 23.0	+0.2
TREB				eSn	Sb	11 28 46.4	-0.1
BARS	Barje	1.75	45	ePn	Pn	11 28 23.0	0.0
BARS				eSg	Sg	11 28 48.3	+0.2
BRY	Bratogost	1.77	319	ePn	Pn	11 28 23.9	+0.6
BRY				eSn	Sg	11 28 48.4	0.0
BRY	Bratogost	1.77	319	⇓iPn	Pn	11 28 23.9	+0.6
BRY				i Sn	Sg	11 28 49.7	+1.3
KZN	Kozani	1.79	135	P	Pb	11 28 24.1	-1.0
SELS	Selova	1.79	24	ePn	Pn	11 28 23.1	-0.4
SELS				eSg	Sb	11 28 48.2	+0.2
PLE	Pljevlja	1.82	343	⇓iPn	Pb	11 28 25.2	-0.6
PLE				i Sn	Sg	11 28 50.9	+0.6
UPM	Unac-Piva	1.85	331	⇑iPn	Pb	11 28 25.6	-0.7
UPM				eSn	Sb	11 28 49.7	-0.2
UPM	Unac-Piva	1.85	331	⇑iPn	Pn	11 28 25.1	+0.6
UPM				i Sn	Sg	11 28 51.7	+0.5
VAY	Valandovo	1.85	97	i Pn	Pn	11 28 24.1	-0.2
VAY				i Sn	Sg	11 28 51.0	-0.3
	comp=N,86nm,0.5s						
VAY				i Sn	Sb	11 28 53.8	+3.9
	comp=E,98nm,0.7s						
VAY				eLg	Lg	11 28 54.0	
KPRO	Kipourio	1.88	150	P	Pb	11 28 26.0	-0.7
KTI	Kastanea	1.92	128	P	Pb	11 28 25.8	-1.7
BOSS	Bosilegrad	1.97	62	ePn	Pn	11 28 26.0	0.0
IVAS	Ivanjica	1.99	0	ePn	Pn	11 28 26.4	+0.1
GOCS	Kraljevo Serbi	2.05	15	ePn	Pn	11 28 26.7	-0.5
IGT	Igoumenitsa	2.06	176	P	Pb	11 28 28.9	-0.8
IGT	Igoumenitsa	2.06	176	ePn	Pb	11 28 28.9	-0.8
RUDO	Rudo	2.10	345	⇑iPn	Pn	11 28 28.5	+0.6
RUDO				eSn	Sb	11 28 56.4	-0.7
KNT	Kendrikon	2.13	101	P	Pn	11 28 27.9	-0.3
KNT	Kendrikon	2.13	101	i Pn	Pn	11 28 28.2	+0.1
STON	Ston	2.21	306	ePn	Pn	11 28 29.1	-0.2
STON				eSn	Sn	11 28 58.5	+1.3
STON	Ston	2.21	306	ePn	Pn	11 28 29.2	-0.1
STON				eSg	Sg	11 29 02.8	0.0
KKB	Krupnik	2.26	83	P	Pn	11 28 30.3	+0.3
KKB	Krupnik	2.26	83	i Pn	Pn	11 28 29.9	-0.1
BBLS	Lazi&#263i	2.34	347	ePn	Pn	11 28 32.2	+1.1
BBLS				eSn	Sn	11 29 02.4	+2.0
BBLS	Lazi&#263i	2.34	347	ePn	Pn	11 28 32.0	+0.9
GRUS	Gruza	2.34	10	ePn	Pn	11 28 31.7	+0.6
THE	Thessaloniki	2.35	113	i Pn	Pn	11 28 30.7	-0.4
BOVS	Bovan	2.35	29	⇑P	Pn	11 28 31.1	-0.2
BOVS	Bovan	2.35	29	ePn	Pn	11 28 30.7	-0.6
TETR	Tetrakomo, Epi	2.41	158	P	Pb	11 28 35.3	-0.3
HORT	Hortiatis	2.45	113	P	Pn	11 28 32.4	-0.3
TYRN	Tyrnavos	2.46	139	P	Pb	11 28 34.6	-2.1
THL	Klokotos Trika	2.48	144	P	Pb	11 28 35.4	-1.4
ZAPS	Zavoj	2.50	47	ePn	Pn	11 28 33.1	-0.3
DIVS	Divibare	2.51	358	ePn	Pn	11 28 34.0	+0.5
VTS	Vitosha	2.53	65	P	Pn	11 28 33.5	-0.4
VTS				S	Sn	11 29 03.1	-2.2
VTS	Vitosha	2.53	65	ePn	Pn	11 28 33.9	+0.1
TRUS	Trudelj	2.64	4	ePn	Pn	11 28 35.9	+0.7
SRS	Serrai	2.65	99	P	Pn	11 28 35.1	-0.2
SRS	Serrai	2.65	99	ePn	Pn	11 28 35.1	-0.2
ZAGS	Zajecar	2.71	34	ePn	Pn	11 28 36.4	+0.2
MATE	Matera	2.75	251	⇑P	Pn	11 28 35.7	-1.0
BLKB	Belogradchik	2.77	42	⇑S	Sn	11 29 09.6	-1.4
BLKB	Belogradchik	2.77	42	ePn	Pn	11 28 37.5	+0.5
PLG	Polygyros	2.79	115	P	Pn	11 28 38.0	+0.7
AMPL	Ampelaki	2.79	162	P	Pb	11 28 39.3	-2.9
LKD2	Lefkada island	2.83	172	P	Pn	11 28 38.5	+0.7
BORS2	Bor- Borsko je	2.86	28	ePn	Pn	11 28 38.5	+0.2
NYDR	Nydri-Lefkada	2.90	171	P	Pn	11 28 39.4	+0.6
TEKS	Tekeris	2.99	352	ePn	Pn	11 28 40.3	+0.2
TEKS				eSn	Sn	11 29 18.3	+1.8
TEKS	Tekeris	2.99	352	ePn	Pn	11 28 40.5	+0.4
MAKR	Makrakomi, Fth	2.99	149	P	Pn	11 28 41.8	+1.7
KUBS	Kucevo	3.04	21	ePn	Pn	11 28 40.8	+0.1
AGG	Agios Georgios	3.07	146	P	Pn	11 28 42.1	+1.0
PAIG	Paliouri	3.17	120	P	Pn	11 28 42.3	-0.1
KAVA	Kavala	3.36	99	P	Pn	11 28 44.9	-0.1
MDVR	Moldovita	3.40	19	⇑P	Pn	11 28 45.3	-0.4
MDVR	Moldovita	3.40	19	ePn	Pn	11 28 46.0	+0.4
PLD	Plovdiv	3.49	79	ePn	Pn	11 28 48.5	+1.6
TIP	Timpagrande	3.52	228	⇑P	Pn	11 28 46.5	-0.9
TIP				⇓S	Sn	11 29 28.8	-0.8
FRGS	Fruska Gora	3.58	356	ePn	Pn	11 28 48.0	-0.1
FRGS				eSn	Sn	11 29 31.3	+0.4
FRGS	Fruska Gora	3.58	356	ePn	Pn	11 28 48.6	+0.5
VRSS	Vrsac	3.64	13	ePn	Pn	11 28 48.5	-0.4
SRE	Strehaia	3.81	35	⇑P	Pn	11 28 51.3	0.0
BLY	Banja Luka	3.82	327	⇑iPn	Pn	11 28 52.7	+1.3
BLY				eSn	Sn	11 29 37.2	+0.3
BLY	Banja Luka	3.82	327	ePn	Pn	11 28 52.8	+1.3
A050A	Klekovaca	3.91	319	⇑iPn	Pn	11 28 53.6	+0.8
A050A				eSn	Sn	11 29 39.5	+0.2
A051A	Mrakovica	4.15	327	⇑iPn	Pn	11 28 55.9	-0.2
A051A				eSn	Sn	11 29 45.3	+0.2
BZS	Buzias	4.17	15	⇑P	Pn	11 28 55.4	-0.8
BZS				⇑S	Sn	11 29 44.7	-0.7
BZS	Buzias	4.17	15	ePn	Pn	11 28 55.6	-0.6
GZR	Gura Zlata	4.26	26	⇑P	Pn	11 28 57.7	+0.1
GZR	Gura Zlata	4.26	26	ePn	Pn	11 28 57.6	+0.1
SURR	Surduc	4.41	18	⇓P	Pn	11 28 59.1	-0.4
LOT	Lotru	4.68	33	⇑P	Pn	11 29 02.9	-0.4
MORH	Mrgy, Hungar	4.75	347	⇑P	Pn	11 29 04.2	0.0
MORH	Mrgy, Hungar	4.75	347	ePn	Pn	11 29 04.8	+0.7
SIRR	Siria	4.81	13	⇓P	Pn	11 29 04.5	-0.5
SIRR	Siria	4.81	13	ePn	Pn	11 29 04.4	-0.5
ARR	Arges	5.00	39	⇓P	Pn	11 29 07.7	0.0
VOIR		5.25	41	⇓P	Pn	11 29 11.2	+0.1
BOJS	Bojanci	5.28	319	ePn	Pn	11 29 11.6	+0.1
BOJS				eSn	Sn	11 30 12.4	-0.4
BOJS	Bojanci	5.28	319	ePn	Pn	11 29 11.9	+0.4
CRES	Cresnjevec Ost	5.42	323	ePn	Pn	11 29 13.8	+0.4
CRES				eSn	Sn	11 30 15.4	-1.0
DRGR		5.52	19	⇑P	Pn	11 29 15.1	+0.2
DRGR		5.52	19	ePn	Pn	11 29 14.9	0.0
MLR	Muntele Rosu	5.75	45	⇓P	Pn	11 29 18.3	+0.2
CEY	Cerknica	5.86	317	ePn	Pn	11 29 19.8	+0.4
CEY				eSn	Sn	11 30 25.6	-1.5
CEY	Cerknica	5.86	317	ePn	Pn	11 29 20.2	+0.8
SOKA	Soboth	6.27	326	ePn	Pn	11 29 25.7	+0.6
	comp=E,4.6nm,0.3s,SNR=12						
SOKA				i Sn	Sn	11 30 34.7	-2.6
	comp=E,1.6nm,0.6s						
PSZ	Piszkesteto	6.33	359	⇓P	Pn	11 29 25.7	-0.2
OBKA	Obir	6.35	323	⇑iPn	Pn	11 29 26.3	0.0
OBKA				eSn	Sn	11 30 37.6	-1.8
OBKA	Obir	6.35	323	i Pn	Pn	11 29 27.2	+0.9
	comp=E,2.1nm,0.2s						
OBKA				i Sn	Sn	11 30 42.0	+2.6
	comp=E,1.5nm,0.3s						
VRI	Vrincioaia	6.41	46	⇓P	Pn	11 29 26.3	-0.8
ARSA	Arzberg	6.55	331	i Pn	Pn	11 29 30.0	+1.0
	comp=E,1.0nm,0.3s						
ARSA				i Sn	Sn	11 30 42.6	-1.5
	comp=E,2.2nm,0.4s						
RONA	Rosalia, Austr	6.69	337	i Sn	Sn	11 30 46.0	-1.7
	comp=E,2.1nm,0.4s						
MYKA	Terra Mystica	6.87	319	i Pn	Pn	11 29 33.9	+0.5
	comp=E,1.4nm,0.3s						
KECS	Kecovo	6.90	2	ePN	Pn	11 29 35.2	+1.5
KECS				eSN	Sn	11 30 50.1	-2.6
VYHS	Vyhne	6.97	353	eSN	Sn	11 30 53.2	-1.2
CONA	Conrad Observa	7.03	336	i Pn	Pn	11 29 35.9	+0.3
	comp=E,0.7nm,0.3s						
CONA				i Sn	Sn	11 30 55.0	-1.0
	comp=E,1.1nm,0.4s						
MODS	Modra-Piesok	7.08	344	ePN	Pn	11 29 37.2	+1.0
KOLS	Kolonicke sedl	7.50	11	ePN	Pn	11 29 44.5	+2.6
ABTA	Abfaltersbach	7.52	316	ePn	Pn	11 29 42.5	+0.2
	comp=E,2.7nm,0.3s,SNR=5.9						
ABTA				i Sn	Sn	11 31 06.5	-1.6
	comp=E,4.4nm,0.7s						
MOA	Molln	7.52	328	i Pn	Pn	11 29 43.6	+1.3
	comp=E,1.4nm,0.5s						
MOA				eSn	Sn	11 31 07.1	-1.0
	comp=E,3.6nm,0.5s						
LESA	Schwarzleotal	7.90	320	i Pn	Pn	11 29 48.0	+0.5
	comp=E,3.1nm,0.4s						
WTTA	Wattenberg	8.31	316	ePn	Pn	11 29 54.1	+0.8
	comp=E,3.7nm,0.3s,SNR=4.3						
WATA	Walderalm	8.39	316	ePn	Pn	11 29 54.9	+0.6
	comp=E,5.1nm,0.3s,SNR=5.4						
SQTA	Sankt Quirin	8.51	314	i Pn	Pn	11 29 57.2	+1.3
	comp=E,2.0nm,0.2s						
MOTA	Moosalm	8.64	315	i Pn	Pn	11 29 58.7	+0.9
	comp=E,1.4nm,0.2s						
MOTA				i Sn	Sn	11 31 33.8	-2.0
	comp=E,2.7nm,0.4s						
KHC	Kasperske Hory	8.84	331	eSN	Sn	11 31 43.1	+2.7
RETA	Reutte	8.91	315	i Pn	Pn	11 30 02.3	+0.9
	comp=E,1.3nm,0.3s						
RETA				eSn	Sn	11 31 39.8	-2.5
	comp=E,2.5nm,0.4s						

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*IDC **29** 11:45:07.4±2.0, 44°.48N×129°.60W, h0km, mb3.4/6, mbtmp3.5/9, ML0.8/1, MS3.3/16, Error ellipse: s-maj=38.8km s-min=18.5km az=42.0*
*NEIC **29** 11:45:10.4±1.4, 44°.40N±0°.09×129°.6W±0°.2, h10km±2km, ML3.1/46, Error ellipse: s-maj=20.3km s-min=14.2km az=239.0*
ISC 29 11:45:10.1±1.3**, 44°.5N**±0°.1×**129°.6W**±0°.1**, h13km, n88, σ1ˢ.23**/71**, mb3.5**/4**, MS3.4**/11**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I02E	Swisshome, OR	4.12	93		Pn	11 46 12.2	-0.5
I02E				IAML		11 47 23.3	
	comp=E,18nm,3.0s						
HEBO	Mount Hebo	4.20	78		Pn	11 46 14.1	+0.2
HEBO				IAML		11 47 04.2	
	comp=N,23nm,3.2s						
J01E	Myrtle Point	4.28	106		Pn	11 46 15.3	+0.4
COR	Corvallis	4.48	86		Pn	11 46 18.6	+0.9
COR				IAML		11 47 22.9	
	comp=N,13nm,2.4s						
COR				IAML		11 47 33.2	
	comp=N,15nm,2.3s						
F03A	Seaside	4.49	69		Pn	11 46 17.9	0.0
RADR	Rader Ridge	4.51	62		Pn	11 46 18.9	+0.9
RADR				IAML		11 47 45.1	
	comp=N,17nm,3.6s						
RADR				IAML		11 48 29.1	
	comp=E,19nm,3.2s						
G03D	McMinnville, O	4.54	78		Pn	11 46 19.1	+0.6
G03D				IAML		11 46 53.5	
	comp=N,18nm,0.8s						
G03D				IAML		11 47 57.9	
	comp=E,18nm,2.7s						
I03D	Drain, OR	4.54	98		Pn	11 46 18.5	0.0
K02D	Willamette Mer	4.64	110		Pn	11 46 18.6	-1.3
E03A	Lebam	4.71	62		Pn	11 46 21.1	+0.4
E03A				IAML		11 46 56.7	
	comp=E,16nm,0.6s						
E03A				IAML		11 46 57.6	
	comp=N,17nm,1.1s						
BUCK	Buck Mountain	4.73	91		Pn	11 46 21.7	+0.5
BUCK				IAML		11 46 58.6	
	comp=E,11nm,2.9s						
BUCK				IAML		11 47 59.3	
	comp=N,14nm,2.8s						
WISH	Wishkah	4.84	55		Pn	11 46 23.8	+1.1
WISH				IAML		11 48 48.2	
	comp=E,18nm,2.4s						
H04D	Lebanon	4.88	87		Pn	11 46 24.2	+0.9
H04D				IAML		11 47 11.0	
	comp=N,13nm,2.9s						
H04D				IAML		11 47 57.5	
	comp=E,14nm,2.4s						
F04D	Rainier, OR	4.90	68		Pn	11 46 24.2	+0.7
C03A	Quillayute Air	4.92	43		Pn	11 46 24.6	+1.0
NLWA	Neilton Lookou	4.94	52		Pn	11 46 24.4	+0.4
NLWA				IAML		11 47 12.8	
	comp=E,11nm,2.3s						
NLWA				IAML		11 47 24.7	
	comp=E,14nm,0.8s						
G04A	Mulino	5.09	79		Pn	11 46 27.0	+0.8
BBOR	Butler Butte	5.24	105		Pn	11 46 28.9	+0.7
BBOR				IAML		11 47 47.5	
	comp=N,8.4nm,2.8s						
H04A	Detroit Lake	5.28	85		Pn	11 46 29.5	+0.9
H04A				IAML		11 47 38.7	
	comp=N,7.2nm,0.5s						
J04A	Umpqua Nationa	5.53	100		Pn	11 46 34.3	+2.0
GNW	Green Mountain	5.63	54		Pn	11 46 34.1	+0.7
HOOD	Mount Hood Mea	5.69	79		Pn	11 46 36.2	+1.8
YBH	Yreka Blue Hor	5.71	116	Pn	Pn	11 46 35.7	+1.0
	baz=319,slow=9.3,SNR=3.2						
CLRS	Cowichan Lake	5.74	39		Pn	11 46 35.8	+0.8
I05D	Terrebonne, OR	5.89	88		Pn	11 46 37.7	+0.5
LON	Longmire	5.90	64		Pn	11 46 38.0	+0.7
G05A	Wamic	5.92	80		Pn	11 46 38.8	+1.3
PGC	Sidney	5.94	43		Pn	11 46 38.2	+0.5
D05A	Enumclaw	5.96	60		Pn	11 46 40.2	+2.3
PINE	Pine Mountain	6.24	93		Pn	11 46 42.6	+0.5
HOLB	Holberg	6.26	8	Pn	Pn	11 46 43.9	+1.8
CBB	Campbell River	6.26	26		Pn	11 46 43.5	+1.4
A04D	Lummi Island	6.36	46		Pn	11 46 44.6	+1.2
G06A	Carlson Farm,	6.40	80		Pn	11 46 44.8	+0.8
LTY	Liberty	6.81	63		Pn	11 46 51.2	+1.5
I07A	Izee	7.23	90		Pn	11 46 56.2	+0.6
HOPS	Hopland Field	7.31	136	Pn	Pn	11 46 56.1	-0.4
HAWA	Hanford	7.32	71		Pn	11 46 57.9	+1.2
G08A	Pilot Rock	7.58	80		Pn	11 47 00.7	+0.3
BBB	Bella Bella	7.79	7	Pn	Pn	11 47 05.3	+2.3
BBB	Bella Bella	7.79	7	Pn	Pn	11 47 04.7	+1.6
	comp=N,0.2nm,0.3s,baz=215,slow=14,SNR=4.9						
LLLB	Lillooet	8.05	37		Pn	11 47 08.5	+1.8
B08A	Colville Reser	8.07	58		Pn	11 47 07.8	+0.8
C09A	Chrisman Ranch	8.52	63		Pn	11 47 14.0	+0.8
BMO	Blue Mountains	8.75	83		Pn	11 47 17.3	+1.0
DIB	Dawson Inlet,	8.96	349	Pn	Pn	11 47 19.5	+0.5
NEW	Newport	9.40	62		Pn	11 47 25.5	+0.2
NEW	Newport	9.40	62	Pn	Pn	11 47 25.3	0.0
	comp=N,3.3nm,0.7s,baz=242,slow=7.9,SNR=8.4						
NEW				LR	LR	11 50 57.8	
	comp=N,201nm,19.9s,baz=254,slow=37						
PLID	Pearl Lake	9.67	82		Pn	11 47 28.5	-0.6
NVAR	Mina Array Bea	10.38	122	Pn	Pn	11 47 43.2	+4.4
	comp=N,0.2nm,0.3s,baz=290,slow=12,SNR=7.3						
JTMT	Jette	11.11	67		Pn	11 47 46.9	-1.8
ELK	Elko	11.19	104	Pn	Pn	11 47 48.1	-1.8
ELK	Elko	11.19	104	Pn	Pn	11 47 52.5	+2.5
	comp=N,3.3nm,1.0s,baz=294,slow=12,SNR=6.5						
ELK				LR	LR	11 51 50.6	
	comp=N,65nm,21.0s,baz=289,slow=36						
MSO	Missoula	11.19	72		Pn	11 47 49.7	-0.1
BPMT	Black Pine Rid	11.50	74		Pn	11 47 54.4	+0.2
OVMT	Ovando	11.86	72	Pn	Pn	11 47 58.6	-0.4
MCMT	McKenzie Canyo	11.92	82		Pn	11 47 59.5	-0.4
LRM	Limekiln Ridge	12.16	78	Pn	Pn	11 48 02.0	-1.3
YHL	Hebgen Lake	13.10	82		Pn	11 48 15.2	-0.9
TPAW	Teton Pass	13.45	88		Pn	11 48 20.1	-0.7
LOHW	Long Hollow	13.67	87	Pn	Pn	11 48 22.3	-1.5
DLBC	Dease Lake	14.00	359	Pn	P	11 48 35.4	-0.7
	baz=155,slow=14,SNR=2.8						
DLBC				LR	LR	11 53 20.8	
	comp=N,4.3nm,18.6s,baz=162,slow=35						
EGMT	Eagleton	14.16	68	Pn	Pn	11 48 31.3	+1.0
PDAR	Pinedale Array	14.59	90	Pn	Pn	11 48 38.5	+2.1
	comp=N,0.6nm,1.0s,baz=286,slow=15,SNR=1.9						
PDAR				LR	LR	11 54 22.3	
	comp=N,108nm,18.6s,baz=270,slow=38						
Q16A	Castle Valley	14.81	106	Pn	Pn	11 48 38.9	-0.5
PFO	Pinyon Flats O	14.85	132	LR	LR	11 53 45.1	
	comp=N,93nm,19.1s,baz=274,slow=35						
KDAK	Kodiak Island	19.53	321	LR	LR	11 55 16.5	
	comp=N,41nm,19.4s,baz=133,slow=31						
YKA	Yellowknife Ar	20.04	20	P	P	11 49 42.4	-0.2
	comp=N,0.6nm,0.9s,baz=218,slow=10,SNR=6.5 comp=N,0.6nm,0.9s						
ANMO	Albuquerque	20.10	110	P	P	11 49 44.4	+0.8
	comp=N,0.7nm,0.8s,baz=46,slow=3.4,SNR=3.2 comp=N,0.7nm,0.8s						
ILAR	Eielson Array	22.53	341	P	P	11 50 07.6	-1.8
	comp=N,1.6nm,1.2s,baz=138,slow=6.8,SNR=9.9						
ILAR				LR	LR	11 57 23.8	
	comp=N,42nm,21.3s,baz=262,slow=33 comp=N,1.6nm,1.2s						
ULM	Lac du Bonnet	23.41	64	P	P	11 50 18.1	-0.5
	comp=N,5.8nm,1.0s,baz=270,slow=7.4,SNR=5.5						
ULM				LR	LR	11 59 03.7	
	comp=N,88nm,19.1s,baz=243,slow=36 comp=N,5.8nm,1.0s						
INK	Inuvik	23.99	356	LR	LR	12 00 00.9	
	comp=N,22nm,21.9s,baz=214,slow=37						
TXAR	Lajitas Array	25.49	118	P	P	11 50 36.5	-1.6
	comp=N,0.6nm,0.8s,baz=290,slow=7.3,SNR=6.2 comp=N,0.6nm,0.8s						
LPIG	La Paz	25.68	136	LR	LR	12 00 57.4	
	comp=N,32nm,18.0s,baz=183,slow=37						
SADO	Sadowa	35.42	71	LR	LR	12 06 47.7	
	comp=N,82nm,19.2s,baz=343,slow=37						
TKL	Tuckaleechee C	35.74	88	LR	LR	12 07 08.8	
	comp=N,108nm,20.9s,baz=316,slow=37						
SCHQ	Schefferville	40.61	52	LR	LR	12 09 26.1	
	comp=N,73nm,19.4s,baz=280,slow=36						

SFJD	Kangerlussuaq	45.91	32	LR	LR	12 12 57.4	
	comp=N,39nm,18.9s,baz=284,slow=36						
SEY	Seymchan	46.49	322	LR	LR	12 11 36.6	
	comp=N,51nm,18.7s,baz=34,slow=34						
H11N3	WAKE ISLAND Hy	57.67	266	T	T	12 56 58.4	
	baz=49,slow=75						
H11N2	WAKE ISLAND Hy	57.67	266	T	T	12 56 56.8	
	baz=49,slow=75						
H11N1	WAKE ISLAND Hy	57.68	266	T	T	12 56 55.6	
	baz=49,slow=75						
H11S1	WAKE ISLAND Hy	58.60	265	T	T	12 58 12.3	
	baz=48,slow=75						
H11S2	WAKE ISLAND Hy	58.61	265	T	T	12 58 10.1	
	baz=48,slow=75						
H11S3	WAKE ISLAND Hy	58.62	265	T	T	12 58 10.4	
	baz=48,slow=75						
ROSC	El Rosal	62.27	112	LR	LR	12 26 50.2	
	comp=N,24nm,18.1s,baz=186,slow=40						
USRK	Ussuriysk Ar.	65.84	309	LR	LR	12 23 06.8	
	comp=N,38nm,18.5s,baz=211,slow=35						
KURBB	Kurchatov Arra	82.20	342	P	P	11 57 30.5	0.0
	comp=N,0.3nm,0.5s,baz=14,slow=4.6,SNR=2.5						
	comp=N,0.3nm,0.5s						

IDC 29 12:06:52.5±2.1**,3°.46S**×**152°.04E,h0^{km},mb3.3**/3**,**
mbtmp3.3/3**,Error ellipse: s-maj=158.4km**
s-min=29.6km az=126.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.80	225	P	P	12 12 08.2	+1.0
	0.5nm,0.6s,baz=51,slow=10.0,SNR=5.6						
	0.5nm,0.6s						
ASAR	Alice Springs	26.66	219	P	P	12 12 33.5	+0.2
	0.2nm,0.7s,baz=62,slow=8.6,SNR=8.3						
	0.2nm,0.7s						
ILAR	Eielson Array	81.21	22	P	P	12 19 09.0	-1.0
	0.3nm,1.0s,baz=243,slow=4.0,SNR=2.2						
	0.3nm,1.0s						

WEL ***29*** *12:07:00.7±1.0,32°S±6°×17°8W±1°9,h33^{km},M4.2/5,*
mB4.4/2,ML4.6/9,MLv4.2/5,Mw(mB)3.6/2,Error ellipse:
s-maj=26.2km s-min=3.5km az=105.2,confirmed
IDC ***29*** *12:07:10.9±3.1,31°.62S×179°.66W,h0^{km},mb4.2/2,*
mbtmp4.0/3,ML3.0/1,Error ellipse: s-maj=65.7km
s-min=36.5km az=99.0
ISC 29 12:07:02.1±2.1**,31°.6S**±0°.1×**177°.9W**±0°.4**,h35^{km},n26,**
σ2^{s}23/35**,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.30	359	P	Pn	12 07 38.2	+0.7
GLKZ				S	Sn	12 08 01.5	-3.2
RIZ	Raoul Island	2.32	359	P	Pn	12 07 38.4	+0.6
WMGZ	Waiomatatini S	6.94	205	P	Pn	12 08 44.7	+3.5
WMGZ				S	Sn	12 10 00.6	+1.7
PKGZ	Pakihiroa	7.10	207	P	Pn	12 08 44.3	+0.8
PKGZ				S	Sn	12 10 04.5	+1.5
HAZ	Te Kaha	7.12	209	P	Pn	12 08 43.4	-0.4
HAZ				S	Sn	12 10 04.3	+0.8
PUZ	Puketiti	7.22	205	P	Pn	12 08 46.4	+1.3
PUZ				S	Sn	12 10 03.8	-2.0
RUGZ	Raukumara Rang	7.35	209	P	Pn	12 08 47.1	+0.1
RUGZ				S	Sn	12 10 08.3	-0.9
TWGZ	Tauwhareparae	7.41	206	P	Pn	12 08 48.9	+1.1
TWGZ				S	Sn	12 10 11.7	+1.0
TKGZ	Te Karaka	7.69	206	P	Pn	12 08 55.7	+4.1
TKGZ				S	Sn	12 10 17.9	+0.5
MWZ	Matawai	7.72	208	P	Pn	12 08 52.1	0.0
MWZ				S	Sn	12 10 18.9	+0.6
WCZ	Waipu Caves	7.79	234	P	Pn	12 08 59.8	+6.8
URZ	Urewera	7.83	210	Pn	Pn	12 08 54.9	+1.4
	0.2nm,0.3s,baz=356,slow=22,SNR=1.0						
URZ				Sn	Sn	12 10 19.5	-1.5
	0.9nm,0.3s,baz=168,slow=8.2,SNR=10.0						
	1.0nm,0.2s						
URZ	Urewera	7.83	210	P	Pn	12 08 50.6	-3.0
URZ				S	Sn	12 10 22.2	+1.3
RIGZ	Rimuhau	7.96	205	S	Sn	12 10 25.9	+1.8
PRGZ	Paritu Road	8.11	204	S	Sn	12 10 28.1	+0.4
MUGZ	Murupara	8.16	211	P	Pn	12 09 01.6	+3.5
MUGZ				S	Sn	12 10 29.2	+0.2
SNGZ	Shannon Statio	8.18	207	P	Pn	12 08 59.1	+0.8
SNGZ				S	Sn	12 10 29.7	+0.1
MHGZ	Mahia Peninsul	8.30	203	P	Pn	12 08 59.7	-0.3
MHGZ				S	Sn	12 10 31.3	-1.3
KAHZ	Kahuranaki	9.24	206	P	Pn	12 09 05.7	-7.2
KAHZ				S	Sn	12 10 53.6	-2.0
PXZ	Pawanui	9.45	205	S	Sn	12 10 53.4	-7.4
PNHZ	Pukenui	9.61	208	S	Sn	12 11 01.8	-2.8
WPHZ	Waipukurau	9.64	207	S	Sn	12 10 59.9	-5.5
TSZ	Takapari Road	9.83	209	P	Pn	12 09 08.6	-12
TSZ				S	Sn	12 11 06.9	-3.1
ASAR	Alice Springs	43.15	268	P	P	12 15 01.3	+1.7
	1.1nm,0.5s,baz=106,slow=7.6,SNR=25						
	1.1nm,0.5s						
WRA	Warramunga Arr	44.25	273	P	P	12 15 10.0	+1.7
	2.3nm,0.3s,baz=111,slow=8.0,SNR=45						
	2.3nm,0.3s						
FINES	FINESS Array B	146.27	339	PKPbc	PKiKP	12 26 50.5	+9.2
	1.8nm,0.9s,baz=29,slow=3.2,SNR=3.7						

WEL 29 12:10:54.0±1.1**,31°S**±8°×**18°0E**±1°3**,h33^{km},M4.2**/4**,**
mB4.4/4**,ML4.5**/7**,MLv4.3**/2**,Mw(mB)3.5**/4**,Error ellipse:**
s-maj=19.2km s-min=5.3km az=120.7,confirmed,
Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.50	57	S	Sn	12 12 04.1	+2.2
WCZ	Waipu Caves	6.91	219	P	Pn	12 12 37.4	+4.4
MXZ	Matakaoa Point	7.00	189	P	Pn	12 12 33.5	-0.7
HAZ	Te Kaha	7.27	192	P	Pn	12 12 37.6	-0.3
HAZ				S	Sn	12 14 02.6	+3.4
PKGZ	Pakihiroa	7.33	190	P	Pn	12 12 39.1	+0.4
PKGZ				S	Sn	12 14 03.0	+2.3
RUGZ	Raukumara Rang	7.49	192	P	Pn	12 12 39.7	-1.3
RUGZ				S	Sn	12 14 06.0	+1.1
PUZ	Puketiti	7.50	189	P	Pn	12 12 40.1	-1.1
PUZ				S	Sn	12 14 05.7	+0.6
MWZ	Matawai	7.88	192	P	Pn	12 12 45.3	-1.0
MWZ				S	Sn	12 14 15.2	+0.9
URZ	Urewera	7.89	195	P	Pn	12 12 44.2	-2.2
URZ				S	Sn	12 14 15.8	+1.4
TKGZ	Te Karaka	7.92	190	P	Pn	12 12 45.1	-1.8
TKGZ				S	Sn	12 14 16.7	+1.4
RIGZ	Rimuhau	8.20	191	S	Sn	12 14 23.0	+0.8
SNGZ	Shannon Statio	8.34	193	P	Pn	12 12 50.2	-2.5
SNGZ				S	Sn	12 14 26.4	+0.6

IDC ***29*** *12:24:08.3±0.9,13°.80N×119°.98E,h0^{km},mb3.7/8,*
mbtmp3.7/8,Error ellipse: s-maj=20.1km s-min=11.3km
az=169.0
ISC 29 12:24:15.1±0.9**,13°.9N**±0°.2×**120°.2E**±0°.1**,h57^{km},n10,**
σ1^{s}81/9**,mb3.8**/7**,Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.73	71	Pg	Pn	12 24 28.0	-1.6
	216nm,0.3s,baz=240,slow=4.7,SNR=9.5						
TGY				Lg	Lg	12 24 40.5	
	332nm,0.3s,baz=121,slow=6.9,SNR=9.5						
DAV	Davao City (W)	8.56	142	LR	LR	12 29 19.3	
	comp=Z,49nm,21.7s,baz=326,slow=36						
CMAR	Chiang Mai Arr	20.94	285	P	P	12 28 50.1	-3.3
	0.3nm,0.3s,baz=101,slow=9.3,SNR=4.4						
	0.3nm,0.3s						
MJAR	Matsushiro Arr	27.73	32	P	P	12 29 58.6	+0.3
	1.7nm,1.0s,baz=205,slow=12,SNR=4.1						
	1.7nm,1.0s						
WRA	Warramunga Arr	36.36	157	P	P	12 31 14.1	+0.1
	0.6nm,0.5s,baz=336,slow=9.4,SNR=7.0						
	0.6nm,0.5s						
ASAR	Alice Springs	39.63	160	P	P	12 31 42.2	+0.7
	0.5nm,0.6s,baz=334,slow=8.4,SNR=9.2						
	0.5nm,0.6s						
KURBB	Kurchatov Arra	49.79	326	P	P	12 33 01.7	-0.4
	0.5nm,0.7s,baz=125,slow=7.4,SNR=2.6						
	0.5nm,0.7s						
BVAR	Borovoye Array	55.38	326	P	P	12 33 44.8	+1.5
	0.4nm,0.4s,baz=124,slow=9.1,SNR=2.8						
	0.4nm,0.4s						
ARCES	ARCESS Array B	78.76	339	P	P	12 36 13.1	+1.8
	2.2nm,0.9s,baz=102,slow=6.7,SNR=4.2						
	2.2nm,0.9s						
NOA	NORSAR Array B	86.90	333	P	P	12 36 54.2	+0.5
	0.6nm,0.7s,baz=66,slow=4.7,SNR=3.6						
	0.6nm,0.7s						

IDC ***29*** *12:31:22.8±2.1,23°.68S×179°.92W,h521^{km}±22^{km},mb3.2/6,*
mbtmp4.1/8,Error ellipse: s-maj=23.6km s-min=18.1km
az=98.0
ISC 29 12:31:23.8±0.9**,23°.77S**±0°.10×**180°.0E**±0°.2**,h550^{km},n14,**
σ1^{s}87/13**,mb3.6**/6**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.27	343	P	P	12 33 02.6	-2.6
	6.1nm,0.4s,baz=305,slow=22,SNR=5.0						
URZ	Urewera	14.64	189	P	P	12 34 29.2	-0.2
	2.9nm,0.3s,baz=249,slow=0.6,SNR=12						
URZ				S	S	12 36 58.7	-3.7
	5.0nm,0.9s,baz=60,slow=20,SNR=2.0						
RPZ	Rata Peaks	21.20	198	P	P	12 35 32.0	+1.5
	3.6nm,0.4s,baz=335,slow=4.0,SNR=5.1						
	3.6nm,0.4s						
ASAR	Alice Springs	42.02	260	P	P	12 38 29.4	+1.6
	1.7nm,0.6s,baz=99,slow=6.9,SNR=22						
	1.7nm,0.6s						
WRA	Warramunga Arr	42.38	266	P	P	12 38 31.9	+1.4
	3.7nm,0.6s,baz=102,slow=8.5,SNR=35						
	3.7nm,0.6s						
QSPA	South Pole Qui	66.31	180	P	P	12 41 19.8	+2.0
	0.7nm,0.8s,baz=0.0,slow=7.1,SNR=6.5						
	0.7nm,0.8s						
PETK	Petropavlovsk-	78.97	347	P	P	12 42 31.4	+1.0
	0.8nm,0.6s,baz=182,slow=7.1,SNR=4.2						
	0.8nm,0.6s						
TXAR	Lajitas Array	90.39	58	P	P	12 43 27.8	+0.6
	0.3nm,0.7s,baz=246,slow=5.6,SNR=3.5						
	0.3nm,0.7s						
FINES	FINESS Array B	138.32	341	PKhKP	PKPpre	12 49 39.0	
	1.3nm,0.8s,baz=0.0,slow=2.9,SNR=3.3						
HFS	Hagfors	142.42	349	PKhKP	PKPpre	12 49 51.0	
	1.7nm,0.3s,baz=60,slow=3.6,SNR=18						
AKASG	Malin Array Be	144.85	327	PKP	PKPab	12 49 59.3	-0.3
	0.6nm,0.3s,baz=51,slow=3.7,SNR=5.9						
BRTR	Keskin Array B	147.48	307	PKPbc	PKPbc	12 50 06.5	-0.1
	1.0nm,0.7s,baz=59,slow=3.2,SNR=3.9						
MMAI	Mount Meron Ar	147.62	295	PKPbc	PKPab	12 50 09.8	-1.5
	1.4nm,0.4s,baz=93,slow=2.9,SNR=7.0						
EKA	Eskdalemuir Ar	148.39	3	PKPbc	PKiKP	12 50 08.9	-0.4
	0.2nm,0.3s,baz=336,slow=2.7,SNR=4.7						

JMA ***29*** *12:50:10.9±0.1,25°N±2°×122°8E±0°5,h94^{km}±1^{km},*
MV3.0/17,NW OFF ISHIGAKIJIMA IS
TAP ***29*** *12:50:10.8,24°.55N×122°.78E,h95^{km},ML3.4,C*
ISC 29 12:50:11.0±1.2**,24°.52N**±0°.03×**122°.77E**±0°.02**,h95^{km}**±6^{km}**,**
n136,σ1^{s}01/265**,7C,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.17	113	P	Pn	12 50 24.5	0.0
JYNG				eS	Sn	12 50 34.4	-0.2
YOJ	Yonaguni jima	0.23	104	P	Pn	12 50 25.0	+0.3
YOJ	Yonaguni jima	0.23	104	eP	Pn	12 50 24.7	0.0
YOJ				S	Sn	12 50 34.7	-0.2
YOJ	Yonaguni jima	0.23	104	iP	Pn	12 50 24.7	0.0
YOJ				S	Sn	12 50 34.5	-0.4
EOS3	EOS3	0.47	241	iP	Pn	12 50 26.5	+0.6
EOS3				iS	Sn	12 50 38.6	+1.6
EOS2	EOS2	0.50	259	iP	Pn	12 50 26.5	+0.4
EOS2				iS	Sn	12 50 38.6	+1.2
EOS4	EOS4	0.57	226	iP	Pn	12 50 26.8	+0.4
EOS4				iS	Sn	12 50 38.8	+0.8
EGS		0.83	293	P	Pn	12 50 29.4	+0.2
EGS				eS	Sn	12 50 43.3	+0.4
TWC	Suao	0.84	276	⇑iP	Pn	12 50 29.2	-0.2
TWC				iS	Sn	12 50 42.1	-1.1
ESAO	Su ao	0.85	274	iP	Pn	12 50 29.5	+0.1
ESAO				iS	Sn	12 50 42.5	-0.7
TWB1	Santiao Chiao	0.86	305	eP	Pn	12 50 29.3	-0.3
TWB1				iS	Sn	12 50 42.6	-0.9
IRIF	Iriomote-Funau	0.89	102	P	Pn	12 50 30.0	+0.1
IRIF				S	Sn	12 50 44.1	+0.1
EWUT	Wuta	0.91	266	iP	Pn	12 50 30.0	0.0
EWUT				S	Sn	12 50 44.0	-0.4
ENA	Nanau	0.94	265	iP	Pn	12 50 30.6	+0.2
ENA				S	Sn	12 50 45.2	+0.1
EAHA	Aohua	0.96	259	iP	Pn	12 50 30.7	+0.1
EAHA				S	Sn	12 50 44.1	-1.2
ILA	Ilan	0.96	285	eP	Pn	12 50 31.0	+0.4
ILA				iS	Sn	12 50 44.9	-0.5
NDS	Dongshan	0.97	277	iP	Pn	12 50 30.2	-0.5
NDS				S	Sn	12 50 44.0	-1.6
TIPB	Shuangxi	0.97	298	iP	Pn	12 50 30.9	+0.2
TIPB				S	Sn	12 50 44.6	-1.1
SXI1	Grass Mountain	1.00	305	iP	Pn	12 50 31.4	+0.3
SXI1				eS	Sn	12 50 45.9	-0.3
TWE	Neicheng	1.03	282	⇑iP	Pn	12 50 31.5	+0.2
TWE				eS	Sn	12 50 45.7	-0.9
HATJ	Hateruma jima	1.05	116	eP	Pn	12 50 32.4	+0.8
HATJ				eS	Sn	12 50 48.0	+0.9
NWF	Wu-fen Shan	1.06	302	eP	Pn	12 50 33.9	+2.1
NWF				S	Sn	12 50 48.1	+0.7
WFSB	Wu-fen Shan	1.06	302	iP	Pn	12 50 34.2	+2.6
WFSB				S	Sn	12 50 47.2	0.0
FUSB	Fushanzhiwuyua	1.10	283	iP	Pn	12 50 32.5	+0.2
FUSB				S	Sn	12 50 47.8	-0.5
ENTT	Nioudou	1.10	277	iP	Pn	12 50 32.8	+0.6
ENTT				eS	Sn	12 50 48.1	-0.1
ETL	Fush Village	1.11	251	iP	Pn	12 50 31.9	-0.4
ETL				S	Sn	12 50 48.0	-0.4
NACB	Ninganchiao	1.13	253	P	Pn	12 50 32.2	-0.3
NACB	Ninganchiao	1.13	253	iP	Pn	12 50 32.1	-0.4
NACB				S	Sn	12 50 47.5	-1.2
LATG	Datong	1.14	271	iP	Pn	12 50 32.9	+0.2
LATG				iS	Sn	12 50 48.8	-0.2
TWD	Chiawan	1.16	248	⇑iP	Pn	12 50 32.4	-0.4
TWD				iS	Sn	12 50 48.3	-1.0
JKRS	Kuro-shima	1.16	104	P	Pn	12 50 33.4	+0.5
JKRS				S	Sn	12 50 49.8	+0.4
TWA	Mucha	1.17	293	iP	Pn	12 50 33.4	+0.4
TWA				S	Sn	12 50 49.4	-0.3
NWLT	Wulai	1.18	283	iP	Pn	12 50 33.6	+0.4
NWLT				iS	Sn	12 50 49.4	-0.6
HWA	Hwalien	1.19	243	iP	Pn	12 50 33.3	+0.1
HWA				S	Sn	12 50 49.9	-0.1
ETLH	Xiulin Townshi	1.22	256	iP	Pn	12 50 33.5	-0.1
ETLH				S	Sn	12 50 50.4	-0.3
NHDH	Xindian Distri	1.22	292	iP	Pn	12 50 33.5	0.0
NHDH				iS	Sn	12 50 50.2	-0.3
TEYL	Yanliau Villag	1.25	239	iP	Pn	12 50 33.7	-0.2
TEYL				iS	Sn	12 50 50.9	-0.4
JIJ	Ishigaki jima	1.26	97	eP	Pn	12 50 34.0	0.0
JIJ				S	Sn	12 50 50.6	-0.9
YM01	YM01	1.26	300	iP	Pn	12 50 34.3	+0.3
YM01				S	Sn	12 50 52.7	+1.2
YM08	YM08	1.26	302	eP	Pn	12 50 34.0	-0.1
YM08				S	Sn	12 50 51.6	0.0
NNSB	Datong	1.27	266	iP	Pn	12 50 34.2	0.0
NNSB				S	Sn	12 50 51.4	-0.5
NNS	Nan Shan	1.28	267	iP	Pn	12 50 34.6	+0.2
NNS				iS	Sn	12 50 51.6	-0.4
YHNB	Yeheng	1.28	277	P	Pn	12 50 35.1	+0.7
YHNB	Yeheng	1.28	277	iP	Pn	12 50 34.7	+0.4
YHNB				iS	Sn	12 50 51.7	-0.3
ZUZH	Zhuzihu	1.29	300	iP	Pn	12 50 34.7	+0.3
ZUZH				S	Sn	12 50 51.1	-1.0
ETM	Tongmen	1.29	245	iP	Pn	12 50 34.0	-0.4
ETM				eS	Sn	12 50 51.6	-0.5
NSK	Sanguang	1.30	277	iP	Pn	12 50 34.9	+0.3
NSK				S	Sn	12 50 51.1	-1.2
TWY	Chenhua	1.30	306	iP	Pn	12 50 34.8	+0.2
TWY				eS	Sn	12 50 53.4	+1.0
SHUL	Shoufeng	1.32	237	⇑iP	Pn	12 50 34.7	-0.1
SHUL				iS	Sn	12 50 52.8	+0.1
LXIB	Xiulin Townshi	1.33	249	iP	Pn	12 50 34.7	-0.4
LXIB				S	Sn	12 50 52.2	-1.1
TWS1	Kuangyinshan	1.36	296	iP	Pn	12 50 35.6	+0.4
TWS1				iS	Sn	12 50 53.5	-0.1
NTST	Danshui	1.36	298	eP	Pn	12 50 34.2	-1.0
NTST				iS	Sn	12 50 53.5	-0.2
TEGC	Jichi Village	1.38	235	iP	Pn	12 50 35.6	0.0
TEGC				eS	Sn	12 50 54.0	-0.1
JISG	Ishigakijimahi	1.40	87	P	Pn	12 50 35.9	+0.1
JISG				eS	Sn	12 50 54.0	-0.5
ESL	Shilin	1.41	240	iP	Pn	12 50 35.5	-0.4
ESL				S	Sn	12 50 53.7	-1.0
FUSS	Fushou	1.42	259	iP	Pn	12 50 36.8	+0.6
FUSS				S	Sn	12 50 55.4	+0.1
WHF	Hehuan Shan	1.42	255	iP	Pn	12 50 36.5	0.0
WHF				iS	Sn	12 50 55.0	-0.7
KSHI	Guanxi Townshi	1.48	280	iP	Pn	12 50 37.6	+0.9
KSHI				iS	Sn	12 50 56.5	+0.4
TWT	Tachien	1.48	260	iP	Pn	12 50 37.8	+0.9
TWT				iS	Sn	12 50 56.7	+0.2
EGFH	Guangfu	1.49	236	iP	Pn	12 50 36.6	-0.3
EGFH				S	Sn	12 50 56.3	-0.2
TDCB	Techi	1.50	260	iP	Pn	12 50 37.7	+0.7
TDCB				iS	Sn	12 50 56.0	-0.8
WARBT	Fenglin Townsh	1.50	238	⇑iP	Pn	12 50 36.4	-0.5
WARBT				S	Sn	12 50 54.0	-2.7
NFF	Wufeng Townshi	1.51	275	iP	Pn	12 50 37.7	+0.6
NFF				iS	Sn	12 50 56.9	-0.2
NCUH	Zhongli	1.51	288	eP	Pn	12 50 37.9	+0.8
NCUH				iS	Sn	12 50 57.1	+0.2
OWD	Renai	1.56	249	iP	Pn	12 50 38.0	+0.1
OWD				S	Sn	12 50 57.0	-1.3
WUSB	Renai	1.60	251	⇑iP	Pn	12 50 38.7	+0.3
WUSB				eS	Sn	12 50 58.9	-0.2
HGSD	Ruisui	1.60	231	iP	Pn	12 50 37.9	-0.4
HGSD				eS	Sn	12 50 58.0	-0.9
LIOB	Emei	1.60	275	iP	Pn	12 50 38.9	+0.6
LIOB				S	Sn	12 50 59.6	+0.5
NSTT	Nanjuang	1.62	274	iP	Pn	12 50 39.0	+0.6
NSTT				iS	Sn	12 50 59.1	-0.2
SBCB	Hsinchu	1.65	280	eP	Pn	12 50 38.5	-0.3
SBCB				S	Sn	12 51 00.2	+0.2
EHYH	Wanrong	1.66	232	iP	Pn	12 50 38.7	-0.2
EHYH				eS	Sn	12 50 59.4	-0.8
EHY	Hungye	1.67	233	iP	Pn	12 50 38.5	-0.6
EHY				S	Sn	12 50 59.5	-0.9
VWDT	VWDT	1.67	243	iP	Pn	12 50 39.6	+0.5
VWDT				S	Sn	12 51 00.2	-0.4
WHP	Taichung City	1.68	262	iP	Pn	12 50 40.8	+1.4
WHP				S	Sn	12 51 01.5	+0.6
ECBN	Changbin	1.70	226	iP	Pn	12 50 39.4	-0.1
ECBN				S	Sn	12 51 00.5	-0.7
YULB	Yu-li	1.75	231	P	Pn	12 50 39.9	-0.3
YULB	Yu-li	1.75	231	iP	Pn	12 50 39.8	-0.3
YULB				eS	Sn	12 51 02.5	0.0
WCS	Beigang Elemen	1.76	255	iP	Pn	12 50 41.4	+1.1
WCS				S	Sn	12 51 03.9	+1.4
JTJ	Tarama	1.76	86	P	Pn	12 50 40.7	+0.4
JTJ				S	Sn	12 51 02.8	+0.3
TWF1	Yuli	1.78	230	⇑iP	Pn	12 50 40.2	-0.3
TWF1				S	Sn	12 51 01.3	-1.8
NMLH	Miaoli	1.80	271	iP	Pn	12 50 41.6	+0.8
NMLH				iS	Sn	12 51 04.1	+0.5
SSLB	Suanglung	1.81	247	P	Pn	12 50 41.6	+0.6
SSLB	Suanglung	1.81	247	iP	Pn	12 50 41.4	+0.4
SSLB				S	Sn	12 51 04.0	+0.2
SMLT	Sun Moon Lake	1.82	250	iP	Pn	12 50 42.0	+0.8
SMLT				S	Sn	12 51 04.5	+0.3
CHKH	Chenggong	1.82	224	iP	Pn	12 50 40.4	-0.7
CHKH				iS	Sn	12 51 02.9	-1.2
TWQ1	Liyutan	1.83	265	P	Pn	12 50 43.1	+1.9
TWQ1				S	Sn	12 51 05.0	+0.9
NSY	Sanyi	1.83	267	eP	Pn	12 50 41.6	+0.4
NSY				iS	Sn	12 51 03.7	-0.6
FULB	Fuli	1.89	226	iP	Pn	12 50 41.4	-0.5
FULB				iS	Sn	12 51 05.9	+0.4
CHKT	Chengkung	1.91	223	iP	Pn	12 50 41.4	-0.8
CHKT				iS	Sn	12 51 04.5	-1.5
WHYT	Xinyi Township	1.94	245	iP	Pn	12 50 43.8	+1.2
WHYT				iS	Sn	12 51 07.6	+0.9
TCU	Taichung	1.95	260	eP	Pn	12 50 44.4	+1.7
TCU				iS	Sn	12 51 08.3	+1.4
WDJ	Dajia District	1.95	265	eP	Pn	12 50 43.8	+1.1
WDJ				S	Sn	12 51 07.9	+1.0
EHD	Haiduan	1.98	227	iP	Pn	12 50 42.5	-0.6
EHD				S	Sn	12 51 06.2	-1.4
WJS	Zhushan	1.99	250	iP	Pn	12 50 44.9	+1.6
WJS				iS	Sn	12 51 09.8	+1.9
ECS	Chishang	2.01	225	P	Pn	12 50 42.9	-0.6
ECS				eS	Sn	12 51 10.6	+2.3
WNT	Mingjian	2.01	252	iP	Pn	12 50 44.9	+1.5
WNT				iS	Sn	12 51 09.4	+1.1
EDH	Donghe	2.04	221	iP	Pn	12 50 43.5	-0.5
EDH				iS	Sn	12 51 07.8	-1.3
ALS	Alishan	2.06	241	iP	Pn	12 50 45.2	+0.8
ALS				iS	Sn	12 51 10.8	+0.9
WCHH	Zhanghua	2.07	258	P	Pn	12 50 44.7	+0.5
WCHH				iS	Sn	12 51 10.0	+0.4
ELDTW	Lidau	2.08	231	iP	Pn	12 50 44.3	-0.3
ELDTW				S	Sn	12 51 08.9	-1.2
LONT	Longtian	2.20	224	iP	Pn	12 50 45.8	-0.2
LONT				S	Sn	12 51 12.5	-0.3
WDLH	Douliu	2.20	248	iP	Pn	12 50 47.7	+1.7
WDLH				iS	Sn	12 51 15.0	+2.2
JIRB	Irabujima	2.21	81	eP	Pn	12 50 46.7	+0.6
JIRB				eS	Sn	12 51 11.8	-1.1
WCKO	Fanlu	2.25	242	iP	Pn	12 50 48.4	+1.6
WCKO				S	Sn	12 51 16.1	+2.0
STYH	Taoyuan	2.27	234	iP	Pn	12 50 48.1	+1.3
STYH				S	Sn	12 51 16.2	+1.9
JIKM	Ikemajima	2.29	79	eP	Pn	12 50 47.5	+0.4
JIKM				eS	Sn	12 51 14.4	-0.4
TWGBT	Beinan	2.30	223	P	Pn	12 50 47.3	0.0
TWGBT	Beinan	2.30	223	iP	Pn	12 50 46.9	-0.4
TWGBT				eS	Sn	12 51 14.7	-0.3
TWG	Pinlang	2.30	223	iP	Pn	12 50 47.0	-0.3
TWG				eS	Sn	12 51 14.0	-1.1
TPUB	Ta-pu	2.31	239	P	Pn	12 50 49.2	+1.8
TPUB	Ta-pu	2.31	239	iP	Pn	12 50 48.7	+1.4
TPUB				S	Sn	12 51 16.9	+1.6
WTK	Tuku	2.33	250	iP	Pn	12 50 48.4	+0.7
WTK				iS	Sn	12 51 16.3	+0.5
JMJ2	Miyako jima3	2.34	84	P	Pn	12 50 48.1	+0.3
JMJ2				eS	Sn	12 51 16.2	+0.3
WTP	Ta-pu	2.35	238	P	Pn	12 50 49.3	+1.3
WTP				eS	Sn	12 51 19.4	+3.1
CHY	Chiayi	2.38	245	P	Pn	12 50 49.5	+1.2
CHY				iS	Sn	12 51 19.1	+2.2
CHN1	Nanshi	2.45	238	iP	Pn	12 50 50.6	+1.4
CHN1				iS	Sn	12 51 20.8	+2.2
SNST	Tainan City	2.45	239	iP	Pn	12 50 50.9	+1.6
SNST				iS	Sn	12 51 20.8	+2.1
WSL	Shuilin Townsh	2.53	247	iP	Pn	12 50 50.8	+0.5
WSL				S	Sn	12 51 21.2	+0.7
ECL	Taimali	2.54	221	iP	Pn	12 50 49.4	-1.0
ECL				eS	Sn	12 51 19.5	-1.2
ICHU	Yijhu	2.56	244	iP	Pn	12 50 51.1	+0.5
ICHU				S	Sn	12 51 23.7	+2.5
CHN8	Yiju	2.62	244	eP	Pn	12 50 52.6	+1.1
CHN8				eS	Sn	12 51 24.7	+2.0
SSD	Sandimen	2.64	228	iP	Pn	12 50 52.9	+1.1
SSD				S	Sn	12 51 24.4	+1.2
SCST	Cishan	2.65	233	iP	Pn	12 50 53.2	+1.4
SCST				eS	Sn	12 51 26.7	+3.4
TSMG	Majia	2.66	228	iP	Pn	12 50 52.8	+0.7
TSMG				S	Sn	12 51 25.3	+1.7
LAY	Lan-yu	2.71	205	iP	Pn	12 50 52.1	-0.7
LAY				S	Sn	12 51 22.2	-2.7
MASBT	Mashibuluo	2.73	226	iP	Pn	12 50 54.1	+1.1
MASBT				S	Sn	12 51 26.1	+0.8
EAST	Anshuo	2.76	220	iP	Pn	12 50 53.6	+0.1
EAST				S	Sn	12 51 26.0	-0.2
TAWH	Dawu Township	2.77	219	iP	Pn	12 50 52.3	-1.3
TAWH				eS	Sn	12 51 25.0	-1.3
TSCK	Chigu Township	2.81	242	iP	Pn	12 50 54.6	+0.5
TSCK				S	Sn	12 51 27.6	+0.3
SCZT	Fangliau	2.91	223	P	Pn	12 50 56.5	+1.1
SCZT				eS	Sn	12 51 31.8	+2.2
SLIU	Shizi	2.92	219	iP	Pn	12 50 55.4	-0.1
SLIU				eS	Sn	12 51 29.4	-0.5
VWUC	VWUC	3.06	280	iP	Pn	12 50 56.6	-0.7
VWUC				S	Sn	12 51 30.0	-3.1
WDGT	Dungji	3.11	247	iP	Pn	12 50 58.3	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
WDGT				*e*S	Sn	12 51 33.2	-1.2
PTMZ	Houxiangcun	3.36	280	P	Pn	12 51 01.2	-0.2
PTMZ				*e*S	Sn	12 51 38.5	-1.9
KNMB	Chin-men Tao	3.99	270	P	Pn	12 51 09.3	-0.7
KNMB				*e*S	Sn	12 51 53.4	-2.3
AXDP	Jialang	4.38	276	*e*P	Pn	12 51 15.3	0.0
AXDP				*e*S	Sn	12 52 02.6	-2.6

IDC 29 12:50:42.0±1.7,**2°.72S**×**138°.36E**,**h0^{km}**,**mb3.4**/2,**mbtmp3.5**/4,**ML3.5**/2,**MS2.5**/1,**Error ellipse: s-maj=31.9km s-min=18.4km az=167.0,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	2.35	85	Pn	Pn	12 51 22.4	+0.5
	4.2nm,0.3s,baz=228,slow=13,SNR=16						
JAY				Lg	Lg	12 51 56.5	
	3.9nm,0.3s,baz=107,slow=19,SNR=4.4						
JAY				LR	LR	12 52 09.3	
	comp=Z,104nm,20.4s,baz=302,slow=37 12nm,0.3s						
WRA	Warramunga Arr	17.56	193	P	Pn	12 54 48.6	+0.2
	0.3nm,0.3s,baz=16,slow=12,SNR=9.6 1.0nm,0.8s						
ASAR	Alice Springs	21.26	191	P	P	12 55 29.9	-0.2
	1.5nm,0.7s,baz=21,slow=11,SNR=18 1.5nm,0.7s						
MKAR	Makanchi Array	69.59	323	P	P	13 01 53.0	-0.1
	0.2nm,0.5s,baz=131,slow=5.7,SNR=2.8 0.2nm,0.5s						

IDC ***29*** *12:53:51.3±0.8,11°.81N×125°.40E,h0^{km},mb3.8/11,mbtmp3.8/11,MS3.3/5,Error ellipse: s-maj=45.7km s-min=15.5km az=67.0*

ISC 29 12:53:56.6±0.8,**11°.8N**±0°.1×**125°.3E**±0°.3,**h36^{km},n14,**σ**0^{s}.70**/12,**mb4.0**/11,**MS3.7**/4,**Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	19.13	83	LR	LR	13 04 38.9	
	comp=Z,16nm,20.3s,baz=229,slow=34						
CMAR	Chiang Mai Arr	26.31	288	P	P	12 59 28.6	-0.6
	0.8nm,0.6s,baz=86,slow=10,SNR=4.3						
CMAR				LR	LR	13 09 22.8	
	comp=Z,14nm,18.0s,baz=190,slow=35 0.8nm,0.6s						
FITZ	Fitzroy Crossi	29.71	179	P	P	13 00 00.5	+1.1
	1.5nm,0.9s,baz=11,slow=10,SNR=1.0 1.5nm,0.9s						
WRA	Warramunga Arr	32.77	164	P	P	13 00 26.0	-0.4
	0.2nm,0.7s,baz=344,slow=7.5,SNR=1.0						
WRA				PcP	PcP	13 03 10.5	-0.8
	0.3nm,0.7s,baz=346,slow=3.0,SNR=1.7 0.2nm,0.7s						
ASAR	Alice Springs	36.23	167	P	P	13 00 56.0	-0.3
	0.4nm,0.5s,baz=346,slow=8.6,SNR=11 0.4nm,0.5s						
STKA	Stephens Creek	46.14	161	P	P	13 02 17.4	-0.2
	3.5nm,0.9s,baz=5.7,slow=10,SNR=2.9 3.5nm,0.9s						
MKAR	Makanchi Array	50.27	322	P	P	13 02 50.0	+0.6
	1.1nm,0.6s,baz=118,slow=7.6,SNR=11 1.1nm,0.6s						
ZALV	Zalesovo Beam	52.85	331	P	P	13 03 08.7	+0.1
	0.8nm,0.4s,baz=109,slow=8.0,SNR=5.0 0.8nm,0.4s						
KURBB	Kurchatov Arra	54.30	325	P	P	13 03 20.0	+0.8
	2.0nm,0.6s,baz=125,slow=7.2,SNR=23						
KURBB				LR	LR	13 29 16.2	
	comp=Z,99nm,18.3s,baz=188,slow=39 2.0nm,0.6s						
BVAR	Borovoye Array	59.90	325	P	P	13 03 59.3	+0.5
	0.5nm,0.5s,baz=132,slow=8.0,SNR=4.2 0.5nm,0.5s						
NRIK	Noril'sk	62.31	346	LR	LR	13 31 27.8	
	comp=Z,54nm,19.4s,baz=258,slow=36						
KVAR	Kislovodsk Arr	76.64	313	LR	LR	13 41 54.6	
	comp=Z,34nm,21.5s,baz=135,slow=38						
ILAR	Eielson Array	78.47	26	P	P	13 05 54.1	+0.5
	0.2nm,0.7s,baz=268,slow=7.3,SNR=2.1 0.2nm,0.7s						
ARCES	ARCESS Array B	82.45	340	P	P	13 06 14.1	-0.8
	4.2nm,0.9s,baz=76,slow=5.0,SNR=4.1 4.2nm,0.9s						

IDC ***29*** *12:56:31.8±11.0,14°.18S×178°.03W,h401^{km}±59^{km},mb3.7/6,mbtmp4.4/8,Error ellipse: s-maj=183.3km s-min=26.5km az=28.0*

NEIC ***29*** *12:56:38.7±0.8,15°.0S±0°.3×178°.3W±0°.1,h422^{km}±14^{km},mb4.2/11,Error ellipse: s-maj=38.3km s-min=10.4km az=160.0*

ISC 29 12:56:37.5±1.0,**15°.2S**±0°.2×**178°.3W**±0°.1,**h400^{km},n23,**σ**1^{s}.91**/23,**mb4.2**/13,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUTU	Fugatoga	0.89	11	P	Pn	12 57 31.2	+2.9
MSVF	Nonsavu	4.32	234	P	Pn	12 57 55.8	+3.0
MSVF	Nonsavu	4.32	234	P	Pn	12 57 55.6	+2.8
	18nm,0.4s,baz=52,slow=6.2,SNR=12						
AFI	Afiamalu	6.44	79		Pn	12 58 16.6	+1.5
DZM	Mont Dzumac	15.99	242	P	P	13 00 03.7	+2.9
	7.7nm,0.9s,baz=75,slow=20,SNR=1.4						
CTAO	Charters Tower	34.09	257	P	P	13 02 45.8	-0.9
COEN	Coen	37.28	267	P	P	13 03 13.4	-0.1
COEN				IAmb	IAmb	13 03 34.8	
	comp=Z,16nm,1.1s						
BBOO	Buckleboo	44.86	239	P	P	13 04 14.7	+0.5
BBOO				IAmb	IAmb	13 04 35.4	
	comp=Z,16nm,1.1s						
WR8	Warramunga Arr	45.14	257	P	P	13 04 14.7	-1.9
WB0	Warramunga Arr	45.24	257	P	P	13 04 15.5	-1.9
WB0				IAmb	IAmb	13 04 16.0	
	comp=Z,4.6nm,1.0s						
WRA	Warramunga Arr	45.29	257	P	P	13 04 15.7	-2.0
WRA	Warramunga Arr	45.29	257	P	P	13 04 14.8	-3.0
	comp=Z,0.5nm,0.5s,baz=92,slow=7.6,SNR=11 comp=Z,0.5nm,0.5s						
AS31	Alice Springs	45.69	252	P	P	13 04 19.5	-1.3
AS31				IAmb	IAmb	13 04 19.9	
	comp=Z,6.4nm,0.4s						
ASAR	Alice Springs	45.69	252	P	P	13 04 19.1	-1.6
ASAR	Alice Springs	45.69	252	P	P	13 04 19.4	-1.3
	comp=Z,12nm,0.5s,baz=84,slow=8.5,SNR=290 comp=Z,12nm,0.5s						
MTN	Manton Dam	49.03	266	P	P	13 04 45.2	-1.1
MTN				IAmb	IAmb	13 04 51.1	
	comp=Z,15nm,1.1s						
FITZ	Fitzroy Crossi	53.62	259	P	P	13 05 18.0	-1.9
	comp=Z,2.3nm,0.9s,baz=74,slow=8.9,SNR=2.0 comp=Z,2.3nm,0.9s						
CASY	Casey	68.64	204	P	P	13 06 57.7	-0.8
CASY				IAmb	IAmb	13 06 58.7	
	comp=Z,5.8nm,1.1s						
QSPA	South Pole Qui	74.85	180	P	P	13 07 35.6	+0.3
QSPA	South Pole Qui	74.85	180	P	P	13 07 35.2	-0.1
	comp=Z,6.6nm,0.6s,baz=8.4,slow=1.4,SNR=79 comp=Z,6.6nm,0.6s						
BELA	Belgrano 2	84.84	173	P	P	13 08 27.5	-0.3
BELA				IAmb	IAmb	13 08 28.0	
	comp=Z,2.4nm,0.9s						
MAW	Mawson	86.44	200	P	P	13 08 35.3	-0.4
	comp=Z,2.4nm,0.6s,baz=146,slow=3.6,SNR=7.5 comp=Z,2.4nm,0.6s						
SNAA	Sanae	93.30	179	P	P	13 09 05.7	-2.0
	comp=Z,1.1nm,0.7s,baz=203,slow=15,SNR=3.6 comp=Z,1.1nm,0.7s						

NAO ***29*** *13:01:02.9,40°.04N×25°.42E,h10^{km},mb4.6*

MOS ***29*** *13:01:14.7±1.2,40°.38N×20°.65E,h11^{km},mb4.7/15,MS4.4/11,Error ellipse: s-maj=5.4km s-min=3.1km az=83.9*

IDC ***29*** *13:01:15.1±0.5,40°.46N×20°.81E,h0^{km},mb4.2/33,mbtmp4.2/47,ML3.8/12,MS3.8/63,Error ellipse: s-maj=8.6km s-min=7.6km az=19.0*

TIR ***29*** *13:01:16.0,40°.45N×20°.78E,h18^{km},Ml4.5/9*

PDG ***29*** *13:01:16.9±0.5,40°.43N×20°.77E,h11^{km}±1^{km},MD4.7/10,ML4.6/12,Error ellipse: s-maj=0.9km s-min=1.2km az=0.0*

THE ***29*** *13:01:17.0,40°N±1°×2°1E±°,h0^{km}±1^{km},M4.3/53,MLh4.3/53*

NEIC ***29*** *13:01:16.6±2.1,40°.40N±0°.05×20°.80E±0°.06,h10^{km}±1^{km},mb4.8/78,Error ellipse: s-maj=10.3km s-min=5.3km az=143.0*

MCSM ***29*** *13:01:16.7±0.4,40°N±3°×2°1E±°,h9^{km}±2^{km},mb4.6,mB5.0,MLv4.9,Mw(mB)4.3*

BGR ***29*** *13:01:16.6±3.7,39°.92N×20°.40E,h10^{km},ML4.1,Error ellipse: s-maj=67.8km s-min=44.5km az=140.0*

GCMT ***29*** *13:01:17.6±0.4,40°.55N±0°.05×20°.75E±0°.03,h17^{km}±1^{km},MW4.8/66,Moment Tensor Solution. s19,c19; s66,c82; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.29±.15; M$_{θθ}$-0.07±.10; M$_{φφ}$1.37±.09; M$_{rθ}$0.54±.40; M$_{θφ}$0.95±.07; M$_{φr}$-0.15±.22; Best double couple: M$_0$1.71700×10^{16} NP1:φ$_s$1.00000°,δ50.00000°,λ-128.00000°. NP2: φ$_s$231.00000°,δ53.00000°,λ-54.00000°. Principal axes: T 1.8470, Plg2.0000°, Azm297.0000°; N -0.2570, Plg28.0000°, Azm28.0000°; P -1.5860, Plg62.0000°, Azm203.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

SKO ***29*** *13:01:17.9,40°.47N×20°.81E,h12^{km},ML4.4*

MED_RC ***29*** *13:01:17.0±0.2,40°.60N×20°.87E,h12^{km}±1^{km},MW4.7/35,Moment Tensor Solution.Mantle waves: s35,c50; Duration: 1^{s}.1 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.63±.08; M$_{θθ}$-0.36±.05; M$_{φφ}$0.99±.05; M$_{rθ}$0.53±.15; M$_{θφ}$0.66±.04; M$_{φr}$-0.77±.13; Best double couple: M$_0$1.44000×10^{16} NP1:φ$_s$237.00000°,δ45.00000°,λ-26.00000°. NP2:φ$_s$346.00000°,δ72.00000°,λ-132.00000°. Principal axes: T 1.4100, Plg16.0000°, Azm106.0000°; N 0.0600, Plg39.0000°, Azm2.0000°; P -1.4600, Plg46.0000°, Azm214.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=40s.*

ATH ***29*** *13:01:18.3,40°.52N×20°.87E,h5^{km}±1^{km},ML4.3/9,Manual Solution by A.Moschou First location: 2019/06/29 13:02:09, This location: 2020/10/13 06:26:56 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

BEO ***29*** *13:01:18.0±0.3,40°.51N×20°.76E,h4^{km}±3^{km},ML4.4/24*

AFAD ***29*** *13:01:18.0,40°.56N×21°.11E,h47^{km}±5^{km},MW4.3*

ISC 29 13:01:17.1±0.8,**40°.46N**±0°.01×**20°.80E**±0°.01,**h10^{km}**±4^{km},**n601,**σ**1^{s}.66**/644,**mb4.7**/89,**MS3.9**/59,**65C-31D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBN	Korca	0.16	358	Pg	Pg	13 01 20.2	-0.5
KBN				Sg	Sg	13 01 23.4	+0.2
KBN				AML	AML	13 01 24.5	
	983nm,0.5s						
KBN	Korca	0.16	358	S	Sg	13 01 23.2	0.0
NEST	Nestorio	0.20	104	Pn	Pg	13 01 21.5	+0.1
NEST				Sn	Sg	13 01 25.4	+1.2
NEST				AML	AML	13 01 30.9	
	305nm,0.7s						
NEST	Nestorio	0.20	104	P	Pg	13 01 21.5	+0.1
NEST				S	Sg	13 01 24.8	+0.5
NEST	Nestorio	0.20	104	P	Pg	13 01 21.9	+0.6
NEST				S	Sg	13 01 24.7	+0.5
PENT	Pentalofos	0.37	135	P	Pg	13 01 24.2	-0.3
PENT				S	Sb	13 01 30.8	-1.0
PENT	Pentalofos	0.37	135	P	Pg	13 01 24.9	+0.4
PENT				S	Sg	13 01 30.2	+0.7
FNA	Florina	0.55	54	Pg	Pg	13 01 27.3	-0.4
FNA				Sg	Sb	13 01 37.1	+0.4
FNA	Florina	0.55	54	Pg	Pg	13 01 27.5	-0.2
FNA				Sg	Sb	13 01 36.2	-0.5
FNA				AML	AML	13 01 37.1	
	144nm,0.6s						
FNA	Florina	0.55	54	P	Pg	13 01 27.3	-0.4
FNA				S	Sb	13 01 36.7	0.0
FNA	Florina	0.55	54	P	Pb	13 01 28.1	-0.6
FNA				S	Sb	13 01 35.7	-1.0
FNA				*i* IAML		13 01 37.0	
	comp=N,1μm,0.3s						
FNA				*i* IAML		13 01 37.0	
	comp=E,9μm,0.3s						
FNA	Florina	0.55	54	*i* Pg	Pg	13 01 27.4	-0.4
FNA				*i* Sg	Sb	13 01 36.9	+0.2
FNA	Florina	0.55	54	P	Pg	13 01 27.3	-0.4
FNA						13 01 37.1	
FNA	Florina	0.55	54	*e*Pg	Pg	13 01 27.9	+0.2
FNA				*e*Sg	Sb	13 01 36.8	+0.1
FNA	Florina	0.55	54	P	Pg	13 01 27.7	0.0
FNA				S	Sg	13 01 34.0	-0.9
OHR	Ohrid	0.65	0	*i* Pg	Pg	13 01 29.2	-0.5
OHR				*i* Sg	Sb	13 01 40.4	+0.7
OHR				*e*Lg	Lg	13 01 41.0	
	comp=E,31μm,0.7s						
OHR				*e*Lg	Lg	13 01 41.6	
	comp=N,14μm,0.6s						
KPRO	Kipourio	0.67	139	P	Pg	13 01 29.1	-0.9
KPRO				S	Sb	13 01 40.5	+0.3
KZN	Kozani	0.76	101	P	Pg	13 01 30.9	-0.9
JAN	Janina	0.81	177	P	Pg	13 01 30.8	-1.8
JAN				S	Sb	13 01 43.6	-0.5
SRN	Sarande	0.84	227	Pg	Pg	13 01 32.3	-1.0
SRN				Sg	Sb	13 01 45.0	-0.1
SRN				AML	AML	13 01 47.6	
	comp=N,62nm,1.0s						
SRN	Sarande	0.84	227	P	Pg	13 01 32.6	-0.7
SRN				S	Sb	13 01 45.4	+0.2
NASA	Naoussa	0.98	80	P	Pb	13 01 36.1	-0.1
NASA				S	Sg	13 01 48.3	-0.5
VLO	Vlora	0.99	271	Pg	Pg	13 01 35.4	-0.7
VLO	Vlora	0.99	271	P	Pn	13 01 36.8	-0.2
IGT	Igoumenitsa	0.99	201	Pg	Pg	13 01 34.9	-1.3
IGT				Sg	Sg	13 01 49.2	+0.1
IGT				AML	AML	13 01 56.9	
	comp=N,27nm,0.7s						
IGT	Igoumenitsa	0.99	201	P	Pg	13 01 34.5	-1.7
IGT				S	Sn	13 01 51.2	0.0
IGT	Igoumenitsa	0.99	201	*i* Pg	Pg	13 01 34.6	-1.6
IGT				*i* Sg	Sn	13 01 51.0	-0.2
IGT	Igoumenitsa	0.99	201	*e*Pg	Pg	13 01 35.8	-0.4
IGT				*e*Sg	Sn	13 01 50.9	-0.2
KEK	Kerkira	1.07	226		Pn	13 01 38.2	+0.1
KEK	Kerkira	1.07	226	P	Pn	13 01 38.2	+0.1
KEK	Kerkira	1.07	226	P	Pn	13 01 40.4	+2.3
KEK				S	Sn	13 01 55.5	+2.5
TETR	Tetrakomo, Epi	1.18	162	P	Pb	13 01 38.5	-1.0
TETR	Tetrakomo, Epi	1.18	162	P	Pg	13 01 42.4	+2.7
THL	Klokotos Trika	1.30	133	P	Pn	13 01 40.6	-0.6
THL				S	Sg	13 02 00.7	+2.0
THL	Klokotos Trika	1.30	133	P	Pb	13 01 41.3	-0.2
THL				S	Sg	13 01 59.2	+0.5
TYRN	Tyrnavos	1.33	124	P	Pn	13 01 41.0	-0.7
TYRN	Tyrnavos	1.33	124	P	Pg	13 01 43.2	+0.5
GINA	Giannouli	1.46	122	P	Pg	13 01 45.3	+0.3
LRSO	Larissa Observ	1.46	122	P	Pb	13 01 44.3	+0.1
AMPL	Ampelaki	1.57	168	P	Pn	13 01 45.0	0.0
VAY	Valandovo	1.59	57	*i* Pn	Pb	13 01 46.1	-0.5
VAY				*i* Sn	Sg	13 02 10.7	+2.3
VAY				*e*Lg	Lg	13 02 14.4	
	comp=N,8μm,1.2s						
TSLK	Tsoukalades, L	1.64	184	P	Pb	13 01 47.5	+0.1
TSLK	Tsoukalades, L	1.64	184	P	Pg	13 01 48.6	+0.1
THE	Thessaloniki	1.66	83	Pn	Pn	13 01 46.3	+0.1
THE	Thessaloniki	1.66	83	P	Pn	13 01 46.3	+0.1
THE	Thessaloniki	1.66	83	*i* Pn	Pn	13 01 46.4	+0.1
THE				*i* Sn	Sg	13 02 15.1	+4.6
THE	Thessaloniki	1.66	83	P	Pn	13 01 46.4	+0.2
THE				S	Sb	13 02 09.0	+0.3
LKD2	Lefkada island	1.68	184	Pn	Pb	13 01 47.4	-0.6
LKD2	Lefkada island	1.68	184	P	Pn	13 01 47.0	+0.6
LKD2	Lefkada island	1.68	184	P	Pg	13 01 49.5	+0.3
LKD2				S	Sg	13 02 12.2	+1.3
PUK	Puka	1.72	337	Pn	Pb	13 01 48.2	-0.6
PUK				Sn	Sg	13 02 12.6	+0.2
PUK				AML	AML	13 02 20.0	
	comp=N,35nm,0.7s						
EVR	Evrytania	1.73	153	P	Pb	13 01 49.2	+0.3
KNT	Kendrikon	1.74	66	P	Pn	13 01 47.5	+0.1
KNT	Kendrikon	1.74	66	*i* Pn	Pn	13 01 48.0	+0.6
KNT				*i* Sn	Sg	13 02 15.8	+2.8
KNT	Kendrikon	1.74	66	P	Pn	13 01 47.7	+0.4
KNT				S	Sn	13 02 09.8	+0.2
NYDR	Nydri-Lefkada	1.75	182	P	Pb	13 01 48.5	-0.7
HORT	Hortiatis	1.76	85	P	Pn	13 01 47.7	0.0
MAKR	Makrakomi, Fth	1.78	144	P	Pn	13 01 48.4	+0.6
MAKR	Makrakomi, Fth	1.78	144	P	Pg	13 01 50.3	-0.8
MAKR				S	Sg	13 02 13.4	-0.7
SCTE	Santa Cesarea	1.82	258		Pn	13 01 48.4	-0.1
SCTE	Santa Cesarea	1.82	258	Pn	Pn	13 01 48.0	-0.5
SCTE				AML	AML	13 02 19.8	
	comp=N,48nm,1.0s						
EVGI	Lefkada island	1.84	183	P	Pb	13 01 50.3	-0.5
EVGI	Lefkada island	1.84	183	P	Pb	13 01 50.9	0.0
EVGI				S	Sb	13 02 14.9	+1.0
AGG	Agios Georgios	1.86	140	P	Pn	13 01 49.5	+0.4
AGG	Agios Georgios	1.86	140	P	Pn	13 01 49.2	+0.2
AGG				S	Sg	13 02 16.3	-0.6
AGG				*i* IAML		13 02 26.0	
	comp=N,968nm,0.8s						
ULC	Ulcinj	1.90	323	Pn	Pb	13 01 51.0	-0.8
ULC	Ulcinj	1.90	323	*i* Pn	Pb	13 01 51.1	-0.8
ULC	Ulcinj	1.90	323	⇓*i*Pn	Pb	13 01 50.6	-1.3
ULC				*i* Sn	Sb	13 02 16.8	+1.1
PVO	Paravola	1.93	163	P	Pb	13 01 51.8	-0.5
BCI	Bajram Curri	1.98	344	Pn	Pb	13 01 54.0	+0.8
BCI				Sn	Sg	13 02 22.7	+1.9
BCI				AML	AML	13 02 24.0	
	comp=N,37nm,0.9s						
BCI	Bajram Curri	1.98	344	P	Pb	13 01 52.1	-1.1
FSK	Fiskardo	2.01	185	P	Pb	13 01 52.2	-1.4
PLG	Polygyros	2.02	92	P	Pn	13 01 51.7	+0.4
PLG	Polygyros	2.02	92	P	Pn	13 01 52.2	+0.9
ANX	Ano Chora	2.06	155	P	Pb	13 01 53.7	-0.9
PEHC	Pehcevo	2.06	50	*i* Pn	Pn	13 01 46.5	-5.3
PEHC				*i* Sn	Sn	13 02 08.8	-8.9
PEHC				*e*Lg	Lg	13 02 09.1	
	comp=E,12μm,0.5s						
DRME	Dracevica, Mon	2.11	325	⇑*i*Pn	Pb	13 01 53.8	-1.6
DRME	Dracevica, Mon	2.11	325	*e*Pg	Pb	13 01 54.6	-0.8
DRME	Dracevica, Mon	2.11	325	⇑*i*Pn	Pn	13 01 53.5	+1.1
DRME				*i* Sn	Sb	13 02 22.0	+0.4
NEO	Neokhori	2.20	121	P	Pn	13 01 54.2	+0.6
PVY	Plav	2.22	344	⇑*i*Pn	Pb	13 01 56.3	-1.1
PVY				*i* Sn	Sb	13 02 25.3	+0.3
SRS	Serrai	2.22	72	P	Pn	13 01 54.1	+0.1
SRS	Serrai	2.22	72	*i* Pn	Pn	13 01 54.4	+0.5
SRS				*i* Sn	Sb	13 02 23.4	-1.4
SRS	Serrai	2.22	72	*e*Pn	Pn	13 01 55.1	+1.1
AXAR	Agios Charalam	2.22	139	P	Pn	13 01 54.9	+0.9
KKB	Krupnik	2.24	51	P	Pn	13 01 55.6	+1.4
KKB	Krupnik	2.24	51	*i* Pn	Pn	13 01 55.2	+1.0
KKB				*i* Sn	Sb	13 02 25.9	+0.5
DMLN	Damoulianata-K	2.25	189	P	Pn	13 01 55.0	+0.7
SERG	Sergoula	2.27	154	P	Pb	13 01 56.9	-1.2
PAIG	Paliouri	2.27	103	P	Pn	13 01 54.9	+0.2
PDG	Podgorica	2.28	330		Pn	13 01 56.4	+1.6
PDG	Podgorica	2.28	330	⇑*i*Pn	Pb	13 01 56.5	-1.8
PDG	Podgorica	2.28	330	⇑P	Pb	13 01 56.7	-1.6
PDG	Podgorica	2.28	330	*e*Pn	Pb	13 01 56.8	-1.6
PDG				*e*Sg	Sb	13 02 28.3	+1.7
PDG	Podgorica	2.28	330	⇑*i*Pn	Pn	13 01 56.3	+1.6
PDG				*i* Sn	Sb	13 02 27.3	+0.7
VLS	Valsamata	2.29	184	P	Pn	13 01 55.9	+1.0
BUM	Brajici-Budva	2.33	323	⇑*i*Pn	Pn	13 01 56.7	+1.2
BUM				*i* Sn	Sb	13 02 26.9	-1.1
PSDA	Pessada-Kefalo	2.35	184	P	Pn	13 01 56.8	+1.1
RTZL	Ratzakli, Kefa	2.38	180	P	Pn	13 01 57.7	+1.6
BOSS	Bosilegrad	2.39	31	*e*Pn	Pn	13 01 57.2	+0.9
OUR	Ouranopolis	2.44	92	P	Pn	13 01 57.3	+0.4
RLS	Riolos of Patr	2.46	168	P	Pb	13 01 59.9	-1.4
KOKK	Kokkinochori,	2.46	81	P	Pn	13 01 57.7	+0.4
BARS	Barje	2.47	18	*i* Pn	Pn	13 01 58.2	+0.8
BARS	Barje	2.47	18	*e*Pn	Pn	13 01 58.2	+0.8
MMB	Musomishta	2.48	63	P	Pn	13 01 58.5	+0.9
MMB	Musomishta	2.48	63	*i* Pn	Pn	13 01 58.5	+0.9
MMB				*i* Sn	Sb	13 02 29.9	-2.5
LKR	Lokris	2.48	136	P	Pn	13 01 58.1	+0.6
BEY	Berane	2.50	345	*i* Pn	Pb	13 01 60.0	-2.1
IVA	Berane	2.50	345	⇑*i*Pn	Pb	13 02 00.1	-2.0
IVA				*i* Sn	Sb	13 02 31.8	-1.2
CEME	Cevo	2.52	327	⇓*i*Pn	Pn	13 01 59.3	+1.2
CEME				*i* Sn	Sb	13 02 31.6	-1.8
KOME	Kolasin	2.57	339	*e*Pg	Pb	13 02 01.8	-1.6
KOME	Kolasin	2.57	339	⇑*i*Pn	Pb	13 02 01.7	-1.6
KOME				*i* Sn	Sb	13 02 33.8	-1.2
HCY	Herceg Novi	2.63	320	⇑*i*Pn	Pn	13 02 00.0	+0.4
HCY	Herceg Novi	2.63	320	⇑*i*Pn	Pn	13 02 00.0	+0.4
HCY				*i* Sn	Sb	13 02 34.0	-2.7
AOS	Alonnisos	2.70	118	P	Pn	13 02 00.5	-0.1
LTHK	Lithakia	2.75	179	P	Pn	13 02 03.2	+2.0
SELS	Selova	2.77	5	*e*Pn	Pn	13 02 03.2	+1.7
GUR	Goura	2.79	154	P	Pb	13 02 05.1	-2.1
VTS	Vitosha	2.83	40	P	Pn	13 02 03.2	+0.8
VTS	Vitosha	2.83	40	*e*Pn	Pn	13 02 03.3	+0.9
SJES	Sjenica	2.86	348	*e*Pn	Pn	13 02 03.9	+1.0
SJES	Sjenica	2.86	348	*e*Pn	Pn	13 02 04.4	+1.5
KAVA	Kavala	2.88	78	P	Pn	13 02 02.9	0.0
TREB	Trebinje	2.91	322	⇑*i*Pn	Pn	13 02 03.6	+0.3
BRY	Bratogost	2.97	326	*e*Pn	Pn	13 02 05.2	+0.9
BRY	Bratogost	2.97	326	⇓*i*Pn	Pn	13 02 05.5	+1.2
BRY				*i* Sn	Sn	13 02 42.7	+2.7
THAS	Thassos island	2.99	86	P	Pn	13 02 04.1	-0.4
PLE	Pljevlja	3.05	340	⇑*i*Pn	Pn	13 02 07.0	+1.5
PLE				*i* Sn	Sb	13 02 45.3	-3.6
UPM	Unac-Piva	3.08	333	*e*Pn	Pn	13 02 08.5	+2.6
UPM	Unac-Piva	3.08	333	⇓*i*Pn	Pn	13 02 07.1	+1.2
UPM				*i* Sn	Sn	13 02 45.5	+2.6
GOCS	Kraljevo Serbi	3.10	1	*e*Pn	Pn	13 02 08.7	+2.6
MATE	Matera	3.12	275	⇑P	Pn	13 02 06.2	-0.1
ZAPS	Zavoj	3.13	25	*e*Pn	Pn	13 02 07.7	+1.3
IVAS	Ivanjica	3.15	351	*e*Pn	Pn	13 02 07.1	+0.3
RZN	Rozhen	3.22	66	P	Pn	13 02 09.4	+1.5
RUDO	Rudo	3.33	342	*e*Pn	Pn	13 02 10.8	+1.6
STON	Ston	3.34	317	⇑*i*Pn	Pn	13 02 08.9	-0.4
STON	Ston	3.34	317	*e*Pn	Pn	13 02 09.2	-0.1
TIP	Timpagrande	3.36	249		Pn	13 02 10.2	+0.5
TIP	Timpagrande	3.36	249	⇓P	Pn	13 02 09.6	-0.1
TIP	Timpagrande	3.36	249	Pn	Pn	13 02 08.9	-0.8
ITM	Ithomi	3.40	165		Pn	13 02 12.9	+2.8
PLD	Plovdiv	3.42	59	*e*Pn	Pn	13 02 12.5	+2.1
GRUS	Gruza	3.42	359	*e*Pn	Pn	13 02 11.6	+1.1
BLKB	Belogradchik	3.45	23	*e*Pn	Pn	13 02 12.1	+1.2
BLKB				*e*Sn	Sn	13 02 51.5	-0.4
ZAGS	Zajecar	3.51	17	*e*Pn	Pn	13 02 12.5	+0.8
BBLS	Lazi&#263i	3.56	344	⇑*i*Pn	Pn	13 02 14.2	+1.9
BBLS	Lazi&#263i	3.56	344	*e*Pn	Pn	13 02 14.4	+2.1
RDO	Rodhopi	3.66	78		Pn	13 02 14.1	+0.3
DIVS	Divibare	3.68	351	*e*Pn	Pn	13 02 14.9	+0.8
ACER	Acerenza	3.71	277		Pn	13 02 14.1	-0.4
BORS2	Bor- Borsko je	3.74	14	*e*Pn	Pn	13 02 14.1	-0.7
TRUS	Trudelj	3.77	356	*e*Pn	Pn	13 02 16.4	+1.2
SVIS	Svilajnac	3.81	5	*e*Pn	Pn	13 02 18.5	+2.7
CUC	Castrocucco	3.84	265		Pn	13 02 16.6	+0.3
GOAD	anakkale-G¶	3.92	93	P	Pn	13 02 18.8	+1.5
KUBS	Kucevo	4.00	9	*e*Pn	Pn	13 02 17.1	-1.3
ALN	Alexandroupoli	4.02	82		Pn	13 02 19.0	+0.4
ALN	Alexandroupoli	4.02	82	P	Pn	13 02 16.8	-1.8
ALN				S	Sn	13 03 01.0	-4.7
ALN				*i* IAML		13 03 33.0	
	comp=E,231nm,1.2s						
ALN	Alexandroupoli	4.02	82	P	Pn	13 02 19.0	+0.4
SGRT	San Giovanni R	4.03	290		Pn	13 02 18.4	-0.4
CAVK	Edirne/Enez-Ca	4.10	85	P	Pn	13 02 19.3	-0.4
CAVK	Edirne/Enez-Ca	4.10	85	⇑P	Pn	13 02 22.3	+2.6
TEKS	Tekeris	4.19	348	⇑*i*Pn	Pn	13 02 21.4	+0.4
TEKS	Tekeris	4.19	348	*e*Pn	Pn	13 02 22.4	+1.4
KOCA	Canakkale, Ayv	4.21	101	P	Pn	13 02 20.8	-0.5
BEO	Beograd	4.35	357	*e*Pn	Pn	13 02 23.8	+0.6
MDVR	Moldovita	4.37	9	⇑P	Pn	13 02 26.3	+2.8
MDVR	Moldovita	4.37	9	*e*Pn	Pn	13 02 25.4	+1.9
CEL	Celeste	4.39	241		Pn	13 02 23.1	-0.8
CEL	Celeste	4.39	241	Pn	Pn	13 02 23.0	-0.8
DJES	Djerdap	4.39	16	⇓P	Pn	13 02 27.1	+3.4
RMGR	Halanga-Turnu	4.42	18	⇑P	Pn	13 02 26.4	+2.2
VLAD	Vladila	4.43	36	⇑P	Pn	13 02 27.5	+3.2
KESN	Edirne-Kesan	4.49	83	P	Pn	13 02 22.8	-2.6
SRE	Strehaia	4.56	22	⇑P	Pn	13 02 29.2	+3.1
SRE	Strehaia	4.56	22	P	Pn	13 02 29.1	+3.1
HERR	Herculane	4.58	15	⇑P	Pn	13 02 29.2	+2.9
VRSS	Vrsac	4.67	5	*e*Pn	Pn	13 02 27.3	-0.4
AYVA	Ayvalik	4.68	102	P	Pn	13 02 26.9	-0.9
FRGS	Fruska Gora	4.75	352	*e*Pn	Pn	13 02 28.7	0.0
FRGS	Fruska Gora	4.75	352	*e*Pn	Pn	13 02 29.2	+0.5
PAOL	Paolisi	4.76	279		Pn	13 02 29.3	+0.4

SART	**Tekirdag**	**4.87**	**85**	P	**Pn**	**13 02 26.9**	**-3.5**
BUHA	**Balikesir, Bur**	**4.92**	**99**	P	**Pn**	**13 02 32.9**	**+1.8**
BUHA				S	**Sn**	**13 03 24.6**	**-3.4**
BANR	**Banloc**	**4.92**	**3**	*e*Pn	**Pn**	**13 02 31.0**	**-0.1**
URLA	**Izmir**	**4.96**	**113**	P	**Pn**	**13 02 31.9**	**+0.3**
APE	**Apeiranthos**	**5.02**	**131**	P	**Pn**	**13 02 31.4**	**-1.1**
APE	**Apeiranthos**	**5.02**	**131**	⇑P	**Pn**	**13 02 33.7**	**+1.2**
APE	**Apeiranthos**	**5.02**	**131**	P	**Pn**	**13 02 33.6**	**+1.2**
BLY	**Banja Luka**	**5.04**	**329**	⇑*i*Pn	**Pn**	**13 02 33.7**	**+1.0**
BLY	**Banja Luka**	**5.04**	**329**	*e*Pn	**Pn**	**13 02 34.3**	**+1.6**
SLATY	**Slatina**	**5.07**	**331**	*e*Pn	**Pn**	**13 02 33.1**	**+0.1**
A050A	**Klekovaca**	**5.11**	**323**	⇑*i*Pn	**Pn**	**13 02 34.9**	**+1.2**
HUMR	**Humele**	**5.11**	**36**	⇑P	**Pn**	**13 02 36.1**	**+2.5**
GZR	**Gura Zlata**	**5.14**	**16**	⇑P	**Pn**	**13 02 36.4**	**+2.2**
GZR	**Gura Zlata**	**5.14**	**16**	P	**Pn**	**13 02 36.3**	**+2.2**
GZR	**Gura Zlata**	**5.14**	**16**	*e*Pn	**Pn**	**13 02 35.0**	**+0.9**
BZS	**Buzias**	**5.19**	**6**	*e*Pn	**Pn**	**13 02 33.9**	**-0.8**
A051A	**Mrakovica**	**5.37**	**329**	⇑*i*Pn	**Pn**	**13 02 38.0**	**+0.7**
SURR	**Surduc**	**5.38**	**10**	⇑P	**Pn**	**13 02 39.1**	**+1.8**
INTR	**Introdacqua**	**5.42**	**289**		**Pn**	**13 02 38.2**	**+0.2**
STEP	**BALIKESIR_Sava**	**5.43**	**99**	P	**Pn**	**13 02 37.9**	**-0.2**
LOT	**Lotru**	**5.44**	**23**	⇑P	**Pn**	**13 02 41.0**	**+2.8**
VIZE	**Kirklareli, Vi**	**5.44**	**76**	P	**Pn**	**13 02 39.9**	**+1.7**
DEV	**Deva**	**5.63**	**15**	⇓P	**Pn**	**13 02 44.2**	**+3.4**
DEV	**Deva**	**5.63**	**15**	P	**Pn**	**13 02 44.2**	**+3.4**
VAE	**Valguarnera**	**5.80**	**241**	Pn	**Pn**	**13 02 41.7**	**-1.4**
	comp=E,9.7nm,0.6s,baz=355,slow=3.7,SNR=4.7						
VAE				Sn	**Sn**	**13 03 50.7**	**+1.0**
	comp=E,3.1nm,0.3s,baz=123,slow=20,SNR=3.5						
SIRR	**Siria**	**5.84**	**6**	⇑P	**Pn**	**13 02 45.3**	**+1.7**
SIRR	**Siria**	**5.84**	**6**	*e*Pn	**Pn**	**13 02 45.0**	**+1.4**
VOIR		**5.87**	**31**	⇑P	**Pn**	**13 02 46.5**	**+2.4**
VOIR		**5.87**	**31**	P	**Pn**	**13 02 46.5**	**+2.4**
AQU	**L'Aquila**	**5.87**	**291**	Pn	**Pn**	**13 02 43.5**	**-0.7**
	comp=E,1.1nmcomp=E,2µmcomp=E,247nm,1.2s						
CAMP	**Campotosto**	**5.92**	**293**		**Pn**	**13 02 45.0**	**+0.1**
MORH	**Mrgy, Hungar**	**5.96**	**345**	⇓P	**Pn**	**13 02 46.4**	**+1.1**
MORH	**Mrgy, Hungar**	**5.96**	**345**	*e*Pn	**Pn**	**13 02 45.6**	**+0.3**
MORH	**Mrgy, Hungar**	**5.96**	**345**	Pn	**Pn**	**13 02 45.4**	**+0.1**
	comp=E,0.3nmcomp=E,672nmcomp=E,49nm,1.1s						
IDI	**Anoyia**	**6.10**	**147**		**Pn**	**13 02 49.5**	**+2.3**
IDI	**Anoyia**	**6.10**	**147**	Pn	**Pn**	**13 02 47.0**	**-0.2**
	comp=E,5.6nm,0.4s,baz=315,slow=13,SNR=17						
IDI				Sn	**Sn**	**13 03 57.7**	**+0.6**
	comp=E,4.9nm,0.3s,baz=346,slow=11,SNR=4.9						
IDI				LR	LR	13 06 02.8	
	comp=E,422nm,20.7s,baz=337,slow=47						
GUMA	**Gualdo di Mace**	**6.15**	**297**		**Pn**	**13 02 47.8**	**-0.2**
NRCA	**Norcia**	**6.22**	**295**		**Pn**	**13 02 49.3**	**+0.3**
MLR	**Muntele Rosu**	**6.29**	**35**		**Pn**	**13 02 52.7**	**+2.8**
MLR	**Muntele Rosu**	**6.29**	**35**	Pn	**Pn**	**13 02 51.1**	**+1.2**
	comp=E,2.3nm,0.3s,baz=254,slow=11,SNR=11						
MLR				Sn	**Sn**	**13 04 02.4**	**+0.6**
	comp=E,0.4nm,0.3s,baz=297,slow=15,SNR=3.8						
MLR				Lg	Lg	13 04 33.6	
	baz=162,slow=21						
MLR				LR	LR	13 06 03.8	
	comp=E,608nm,21.8s,baz=242,slow=46						
	comp=E,7.0nm,0.4s						
MLR	**Muntele Rosu**	**6.29**	**35**	⇓P	**Pn**	**13 02 53.3**	**+3.4**
MLR	**Muntele Rosu**	**6.29**	**35**	*e*Pn	**Pn**	**13 02 49.8**	**-0.1**
ISR	**Istrita**	**6.29**	**40**	⇑P	**Pn**	**13 02 53.0**	**+3.1**
ISR	**Istrita**	**6.29**	**40**	P	**Pn**	**13 02 52.9**	**+3.1**
MANT	**Manisa**	**6.32**	**106**		**Pn**	**13 02 52.2**	**+1.7**
ICOR	**Ion Corvin**	**6.35**	**53**	⇑P	**Pn**	**13 02 54.0**	**+3.4**
MARR	**Marisel-Cluj**	**6.44**	**14**	⇑P	**Pn**	**13 02 55.1**	**+3.2**
DOPR	**Dopca**	**6.44**	**30**	⇑P	**Pn**	**13 02 55.1**	**+3.1**
BOJS	**Bojanci**	**6.47**	**323**	⇑*i*Pn	**Pn**	**13 02 52.4**	**+0.1**
BOJS	**Bojanci**	**6.47**	**323**	*i* Pn	**Pn**	**13 02 52.4**	**+0.1**
BOJS				*i*		13 03 12.0	
BOJS				*i*		13 03 17.4	
BOJS				*i* Sn	**Sn**	**13 04 05.1**	**-1.1**
BOJS				*e*Sg	**Sg**	**13 04 50.7**	**+5.9**
BOJS				*i*		13 04 54.6	
BOJS	**Bojanci**	**6.47**	**323**	*e*Pn	**Pn**	**13 02 52.4**	**+0.1**
DRGR		**6.48**	**12**	⇑P	**Pn**	**13 02 55.7**	**+3.2**
DRGR		**6.48**	**12**	P	**Pn**	**13 02 55.6**	**+3.2**
DRGR		**6.48**	**12**	*e*Pn	**Pn**	**13 02 54.0**	**+1.5**
CRES	**Cresnjevec Ost**	**6.63**	**326**	⇑*i*Pn	**Pn**	**13 02 54.4**	**-0.1**
BEHE	**Becsehely**	**6.68**	**335**		**Pn**	**13 02 56.3**	**+1.1**
BISRR	**Bisoca**	**6.68**	**39**	⇑P	**Pn**	**13 02 58.5**	**+3.3**
MFTR	**Murfatlar**	**6.76**	**54**	⇓P	**Pn**	**13 02 59.9**	**+3.6**
TURR	**Turia**	**6.76**	**33**	⇑P	**Pn**	**13 02 59.3**	**+2.9**
PLOR	**Plostina**	**6.88**	**37**	⇑P	**Pn**	**13 03 00.8**	**+2.8**
PLOR	**Plostina**	**6.88**	**37**	P	**Pn**	**13 03 00.7**	**+2.8**
TIRR	**Tirgusor**	**6.90**	**52**	⇓P	**Pn**	**13 03 01.2**	**+2.9**
TIRR	**Tirgusor**	**6.90**	**52**	P	**Pn**	**13 03 01.1**	**+2.9**
TIRR	**Tirgusor**	**6.90**	**52**	Pn	**Pn**	**13 02 58.9**	**+0.7**
	comp=E,0.5nmcomp=E,30nm,1.2s						
VRI	**Vrincioaia**	**6.92**	**37**	⇓P	**Pn**	**13 03 01.5**	**+2.9**
VRI	**Vrincioaia**	**6.92**	**37**	P	**Pn**	**13 03 01.4**	**+2.9**
ODBI	**Odobesti**	**7.00**	**39**	⇑P	**Pn**	**13 03 03.4**	**+3.8**
CEY	**Cerknica**	**7.04**	**321**	⇑*i*Pn	**Pn**	**13 03 00.1**	**0.0**
CEY	**Cerknica**	**7.04**	**321**	*e*Pn	**Pn**	**13 03 00.2**	**+0.1**
MPLH	**Magyarpolny**	**7.11**	**342**	Pn	**Pn**	**13 03 01.1**	**+0.1**
	comp=E,1.1nmcomp=E,2µmcomp=E,216nm,1.1s						
TPGR	**Topolog**	**7.13**	**49**	⇓P	**Pn**	**13 03 03.8**	**+2.4**
ONER	**Baraj Valea Uz**	**7.14**	**33**	⇑P	**Pn**	**13 03 04.4**	**+2.8**
CFR	**Carcaliu**	**7.16**	**46**	⇑P	**Pn**	**13 03 04.9**	**+3.1**
CFR	**Carcaliu**	**7.16**	**46**	P	**Pn**	**13 03 04.9**	**+3.1**
LJU	**Ljubljana**	**7.21**	**323**	*e*Pn	**Pn**	**13 03 02.4**	**-0.1**
TESR	**Tescani**	**7.39**	**33**	⇑P	**Pn**	**13 03 07.1**	**+2.1**
PSZ	**Piszkesteto**	**7.48**	**355**		**Pn**	**13 03 06.5**	**+0.2**
PSZ	**Piszkesteto**	**7.48**	**355**	⇑P	**Pn**	**13 03 07.8**	**+1.6**
PSZ	**Piszkesteto**	**7.48**	**355**	P	**Pn**	**13 03 07.8**	**+1.6**
PSZ	**Piszkesteto**	**7.48**	**355**	*e*P	**Pn**	**13 03 07.5**	**+1.2**
SOKA	**Soboth**	**7.49**	**328**	*i* Pn	**Pn**	**13 03 06.1**	**-0.2**
	comp=E,20nm,0.6s,SNR=18						
SOKA				*i* Sn	**Sn**	**13 04 25.6**	**-5.7**
	comp=E,21nm,0.8s						
OBKA	**Obir**	**7.56**	**325**	⇑*i*Pn	**Pn**	**13 03 06.6**	**-0.7**
OBKA	**Obir**	**7.56**	**325**	*i* Pn	**Pn**	**13 03 06.7**	**-0.6**
	comp=E,13nm,0.7s,SNR=12						
OBKA				*e*Sn	**Sn**	**13 04 31.1**	**-1.9**
	comp=E,63nm,0.5s						
SRO	**Srobarova**	**7.56**	**347**	*e*SN	**Sn**	**13 04 33.5**	**+0.5**
VLDR	**Vladesti**	**7.57**	**42**	⇓P	**Pn**	**13 03 10.8**	**+3.4**
ARSA	**Arzberg**	**7.78**	**332**	*i* Pn	**Pn**	**13 03 10.6**	**+0.3**
	comp=E,14nm,0.7s,SNR=14						
ARSA				*i* Sn	**Sn**	**13 04 35.2**	**-3.3**
	comp=E,12nm,0.6s						
ARSA	**Arzberg**	**7.78**	**332**	*e*Pn	**Pn**	**13 03 10.5**	**+0.2**
BURAR	**Bucovina Array**	**7.83**	**23**		**Pn**	**13 03 14.5**	**+3.5**
BURAR	**Bucovina Array**	**7.83**	**23**	⇓P	**Pn**	**13 03 15.0**	**+3.9**
BURAR	**Bucovina Array**	**7.83**	**23**	P	**Pn**	**13 03 14.9**	**+3.9**
BERU	**Beregovo**	**7.88**	**9**	Pn	**Pn**	**13 03 11.8**	**+0.1**
RONA	**Rosalia, Austr**	**7.92**	**337**	*i* Pn	**Pn**	**13 03 12.9**	**+0.6**
	comp=E,9.6nm,0.7s,SNR=15						
RONA				*i* Sn	**Sn**	**13 04 43.5**	**+1.5**
	comp=E,12nm,0.7s						
RAKU	**Rahkiv**	**7.94**	**17**	Pn	**Pn**	**13 03 15.1**	**+2.6**
KECS	**Kecovo**	**8.02**	**359**	*e*P	**Pn**	**13 03 15.2**	**+1.6**
KECS				*e*		13 04 41.9	
KECS	**Kecovo**	**8.02**	**359**	*e*PN	**Pn**	**13 03 15.2**	**+1.6**
KECS				*e*SN	**Sn**	**13 04 41.9**	**-2.4**
MYKA	**Terra Mystica**	**8.06**	**322**	*i* Pn	**Pn**	**13 03 13.7**	**-0.4**
	comp=E,4.7nm,0.5s,SNR=9.7						
MYKA				*e*Sn	**Sn**	**13 04 42.8**	**-2.5**
	comp=E,15nm,0.5s						
HOLU	**Holmets**	**8.14**	**7**	Pn	**Pn**	**13 03 15.6**	**+0.4**
VYHS	**Vyhne**	**8.15**	**351**	*e*P	**Pn**	**13 03 16.8**	**+1.4**
VYHS				*e*		13 04 46.3	
VYHS	**Vyhne**	**8.15**	**351**	*e*PN	**Pn**	**13 03 16.8**	**+1.4**
VYHS				*e*SN	**Sn**	**13 04 46.3**	**-1.2**
CONA	**Conrad Observa**	**8.26**	**336**	*i* Pn	**Pn**	**13 03 16.9**	**-0.1**
	comp=E,3.4nm,0.6s,SNR=7.4						
CONA				*i* Sn	**Sn**	**13 04 48.6**	**-1.7**
	comp=E,14nm,0.6s						
MODS	**Modra-Piesok**	**8.30**	**344**	*e*P	**Pn**	**13 03 18.5**	**+1.1**
MODS				*e*		13 04 50.3	
MODS	**Modra-Piesok**	**8.30**	**344**	*e*PN	**Pn**	**13 03 18.5**	**+1.1**
MODS				*e*SN	**Sn**	**13 04 50.2**	**-1.0**
KSV	**Kosov**	**8.42**	**20**	Pn	**Pn**	**13 03 19.2**	**+0.1**
KOLS	**Kolonicke sedl**	**8.54**	**7**	*e*P	**Pn**	**13 03 23.7**	**+3.1**
KOLS	**Kolonicke sedl**	**8.54**	**7**	*e*PN	**Pn**	**13 03 23.7**	**+3.1**
MILM	**Milestii Mici**	**8.68**	**39**	*e*P	Pn	13 03 29.0	+6.4
MILM				*e*L	L	13 06 07.0	
MILM				LqM		13 06 23.0	
	comp=E,2µm,13.0s						
MILM				LRM	MLR	13 08 01.0	
	comp=E,900nm,9.5s						
JAVC	**Velka Javorina**	**8.69**	**346**	*e*PN	**Pn**	**13 03 23.9**	**+1.2**
ABTA	**Abfaltersbach**	**8.69**	**319**	*i* Pn	**Pn**	**13 03 21.9**	**-0.9**
	comp=E,10nm,0.4s,SNR=19						
ABTA				*i* Sn	**Sn**	**13 05 01.4**	**+0.5**
	comp=E,97nm,1.1s						
LANS	**Liptovska Anna**	**8.74**	**354**	*e*P	**Pn**	**13 03 26.9**	**+3.4**
LANS				*e*		13 05 03.0	
LANS	**Liptovska Anna**	**8.74**	**354**	*e*PN	**Pn**	**13 03 26.9**	**+3.4**
LANS				*e*SN	**Sn**	**13 05 03.0**	**+1.0**
MOA	**Molln**	**8.75**	**330**	*i* Pn	**Pn**	**13 03 24.1**	**+0.6**
	comp=E,6.7nm,0.5s,SNR=15						
MOA				*e*Sn	**Sn**	**13 05 03.0**	**+0.8**
	comp=E,22nm,1.0s						
MOA	**Molln**	**8.75**	**330**	*e*Pn	**Pn**	**13 03 24.2**	**+0.6**
BIOA	**Bad Ischl, Aus**	**8.87**	**327**	*i* Pn	**Pn**	**13 03 25.4**	**+0.2**
	comp=E,13nm,0.5s,SNR=12						
BIOA				*e*Sn	**Sn**	**13 05 04.9**	**-0.3**
	comp=E,25nm,0.7s						
STHS	**Stebnicka Huta**	**8.96**	**2**	*e*P	**Pn**	**13 03 30.6**	**+4.1**
STHS	**Stebnicka Huta**	**8.96**	**2**	*e*PN	**Pn**	**13 03 30.6**	**+4.1**
NIE	**Niedzica**	**8.96**	**358**	*e*P	Pn	13 03 31.2	+4.7
LESA	**Schwarzleotal**	**9.09**	**323**	*i* Pn	**Pn**	**13 03 28.2**	**-0.2**
	comp=E,9.7nm,0.4s,SNR=19						
LESA				*e*Sn	**Sn**	**13 05 08.7**	**-2.0**
	comp=E,24nm,0.6s						
MAUC	**Maruska**	**9.15**	**348**	*e*PN	**Pn**	**13 03 31.5**	**+2.4**
KRUC	**Moravsky**	**9.15**	**341**	*e*PN	**Pn**	**13 03 29.7**	**+0.7**
RJOB	**Jochberg**	**9.27**	**324**	*e*Pn	**Pn**	**13 03 31.4**	**+0.6**
VRAC	**Vranov**	**9.33**	**343**	Pn	**Pn**	**13 03 31.5**	**0.0**
	comp=E,0.5nm,0.3s,baz=169,slow=12,SNR=14						
VRAC				Sn	**Sn**	**13 05 15.1**	**-1.4**
	baz=275,slow=11						
VRAC				LR	LR	13 07 15.2	
	comp=E,767nm,19.2s,baz=168,slow=39						
	comp=E,6.5nm,0.6s						
VRAC	**Vranov**	**9.33**	**343**	*e*PN	**Pn**	**13 03 32.5**	**+0.9**
VRAC	**Vranov**	**9.33**	**343**	⇑P	**Pn**	**13 03 33.4**	**+1.8**
WTTA	**Wattenberg**	**9.48**	**319**	*i* Pn	**Pn**	**13 03 33.3**	**-0.5**
	comp=E,26nm,0.4s,SNR=24						
WTTA				*e*Sn	**Sn**	**13 05 16.9**	**-3.5**
	comp=E,52nm,0.6s						
CKRC	**Cesky Krumlov**	**9.54**	**333**	*e*PN	**Pn**	**13 03 36.3**	**+1.8**
CKRC				AMS	AMS	13 07 50.0	
	comp=E,2µm,12.2s						
CKRC	**Cesky Krumlov**	**9.54**	**333**	*e*P	**Pn**	**13 03 36.3**	**+1.8**
CKRC				MLR	MLR		
	comp=Z,2µm,12.2s						
OKC	**Ostrava-Krasne**	**9.56**	**350**	AMS	AMS	13 08 30.0	
	comp=Z,3µm,8.2s						
WATA	**Walderalm**	**9.56**	**319**	*i* Pn	**Pn**	**13 03 35.2**	**+0.4**
	comp=Z,33nm,0.4s,SNR=38						
WATA				*i* Sn	**Sn**	**13 05 20.5**	**-1.8**
	comp=Z,65nm,0.6s						
MORC	**Moravsky Berou**	**9.59**	**347**	*e*PN	**Pn**	**13 03 35.7**	**+0.5**
MORC				*e*SN	**Sn**	**13 05 23.4**	**+0.4**
MORC	**Moravsky Berou**	**9.59**	**347**	⇓P	**Pn**	**13 03 37.7**	**+2.5**
MORC	**Moravsky Berou**	**9.59**	**347**	P	**Pn**	**13 03 37.6**	**+2.5**
TREC	**Trest**	**9.60**	**339**	*e*PN	**Pn**	**13 03 36.4**	**+1.2**
TREC				AMS	AMS	13 07 40.0	
	comp=Z,4µm,9.0s						
TREC	**Trest**	**9.60**	**339**	*e*P	**Pn**	**13 03 36.4**	**+1.2**
TREC				MLR	MLR		
	comp=Z,4µm,9.0s						
SQTA	**Sankt Quirin**	**9.67**	**317**	*i* Pn	**Pn**	**13 03 36.5**	**+0.2**
	comp=Z,19nm,0.3s,SNR=28						
SQTA				*i* Sn	**Sn**	**13 05 22.9**	**-2.1**
	comp=Z,43nm,0.7s						
GEC2	**GERESS Array S**	**9.78**	**331**	*e*Pn	**Pn**	**13 03 38.7**	**+0.9**
GERES	**GERESS Array B**	**9.78**	**331**	Pn	**Pn**	**13 03 37.9**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=156,slow=13,SNR=27						
GERES				Sn	**Sn**	**13 05 26.3**	**-1.4**
	baz=160,slow=23,SNR=1.6						
GERES				LR	LR	13 08 09.9	
	comp=Z,1µm,21.4s,baz=144,slow=42						
	comp=Z,2.7nm,0.4s						
OJC	**Ojcow**	**9.78**	**356**	*e*P	**Pn**	**13 03 41.0**	**+3.3**
FETA	**Feichten**	**9.79**	**315**	*i* Pn	**Pn**	**13 03 37.5**	**-0.5**
	comp=Z,16nm,0.5s,SNR=23						
FETA				*i* Sn	**Sn**	**13 05 27.5**	**-0.6**
	comp=Z,18nm,0.7s						
MOTA	**Moosalm**	**9.80**	**318**	*i* Pn	**Pn**	**13 03 38.0**	**-0.2**
	comp=Z,65nm,0.9s,SNR=38						
MOTA				*e*Sn	**Sn**	**13 05 27.8**	**-0.6**
	comp=Z,66nm,0.7s						
BR131	**Keskin Array S**	**9.87**	**90**	⇑*e*P	**Pn**	**13 03 41.1**	**+2.0**
BRTR	**Keskin Array B**	**9.87**	**90**	Pn	**Pn**	**13 03 40.0**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=276,slow=11,SNR=5.1						
BRTR				Sn	**Sn**	**13 05 28.5**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=286,slow=16,SNR=0.8						
BRTR				Lg	Lg	13 06 27.5	
	comp=Z,0.1nm,0.3s,baz=277,slow=33,SNR=1.2						
BRTR				LR	LR	13 08 19.2	
	comp=Z,682nm,19.0s,baz=284,slow=43						
	comp=Z,0.5nm,0.4s						
KRLC	**Kraliky**	**10.02**	**345**	*e*PN	**Pn**	**13 03 43.3**	**+2.3**
KRLC				AMS	AMS	13 08 20.0	
	comp=Z,3µm,11.8s						
KRLC	**Kraliky**	**10.02**	**345**	*e*P	**Pn**	**13 03 43.3**	**+2.3**
KRLC				MLR	MLR		
	comp=Z,3µm,11.8s						
KHC	**Kasperske Hory**	**10.07**	**332**	*e*PN	**Pn**	**13 03 42.3**	**+0.7**
KHC				*e*SN	**Sn**	**13 05 35.7**	**+1.1**
KHC				AMS	AMS	13 09 30.0	
	comp=Z,3µm,9.1s						
KHC	**Kasperske Hory**	**10.07**	**332**	*e*P	**Pn**	**13 03 42.3**	**+0.7**
KHC				*e*		13 05 35.7	
KHC				MLR	MLR		
	comp=Z,3µm,9.1s						
KHC	**Kasperske Hory**	**10.07**	**332**	P	**Pn**	**13 03 41.6**	**0.0**
	comp=Z,23nm,1.0s						
RETA	**Reutte**	**10.07**	**318**	*i* Pn	**Pn**	**13 03 41.2**	**-0.6**
	comp=Z,5.7nm,0.4s,SNR=12						
RETA				*e*Sn	**Sn**	**13 05 33.5**	**-1.3**
	comp=Z,32nm,0.8s						
DAVOX	**Davos/Dischmat**	**10.12**	**312**	Pn	**Pn**	**13 03 43.0**	**+0.5**
	comp=Z,19nm,0.4s,baz=127,slow=13,SNR=40						
DAVOX				Sn	**Sn**	**13 05 36.2**	**+0.1**
	comp=Z,1.6nm,0.3s,baz=83,slow=21,SNR=5.1						
DAVOX				LR	LR	13 08 46.9	
	comp=Z,577nm,19.9s,baz=88,slow=45						
KEST	**Kesra**	**10.18**	**246**	Pn	**Pn**	**13 03 42.7**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=37,slow=5.1,SNR=8.4						
KEST				LR	LR	13 08 44.3	
	comp=Z,403nm,18.4s,baz=43,slow=44						
	comp=Z,7.3nm,1.2s						
TUE	**Stuetta**	**10.26**	**310**		**Pn**	**13 03 44.0**	**-0.4**
TUE	**Stuetta**	**10.26**	**310**	P	**Pn**	**13 03 43.8**	**-0.6**
	comp=Z,3µmcomp=Z,200nm,0.7s						
OBER	**Oberstdorf**	**10.27**	**316**	*e*Pn	**Pn**	**13 03 44.2**	**-0.3**
WET	**Wettzell**	**10.34**	**330**	*e*Pn	**Pn**	**13 03 45.9**	**+0.5**
GOPC	**GO Pecny, Ondr**	**10.35**	**338**	AMS	AMS	13 08 10.0	
	comp=Z,4µm,10.0s						
DPC	**Dobruska-Polom**	**10.37**	**344**	*e*PN	**Pn**	**13 03 47.5**	**+1.6**
DPC				AMS	AMS	13 08 20.0	
	comp=Z,4µm,10.0s						
DPC	**Dobruska-Polom**	**10.37**	**344**	*e*P	**Pn**	**13 03 47.5**	**+1.6**
DPC				MLR	MLR		
	comp=Z,4µm,10.0s						
DPC	**Dobruska-Polom**	**10.37**	**344**	P	**Pn**	**13 03 45.7**	**-0.2**
	comp=Z,12nm,1.2s						
DAVA	**Damuels**	**10.42**	**315**	*i* Pn	**Pn**	**13 03 47.5**	**+0.9**
	comp=Z,39nm,0.5s,SNR=28						
DAVA				*e*Sn	**Sn**	**13 05 42.1**	**-1.2**
	comp=Z,38nm,1.0s						
PRU	**Pruhonice**	**10.49**	**337**	*e*PN	**Pn**	**13 03 48.2**	**+0.8**
PRU				AMS	AMS	13 08 20.0	
	comp=Z,4µm,9.6s						
PRU	**Pruhonice**	**10.49**	**337**	*e*P	**Pn**	**13 03 48.2**	**+0.8**
PRU				MLR	MLR		
	comp=Z,4µm,9.6s						
UPC	**Upice**	**10.59**	**343**	*e*PN	**Pn**	**13 03 50.0**	**+1.2**
UPC				AMS	AMS	13 08 30.0	
	comp=Z,4µm,10.0s						
UPC	**Upice**	**10.59**	**343**	*e*P	**Pn**	**13 03 50.0**	**+1.2**
UPC				MLR	MLR		
	comp=Z,4µm,10.0s						
OSTC	**Ostas**	**10.59**	**344**	*e*PN	**Pn**	**13 03 50.8**	**+2.0**
OSTC				AMS	AMS	13 08 20.0	
	comp=Z,4µm,9.6s						
OSTC	**Ostas**	**10.59**	**344**	*e*P	**Pn**	**13 03 50.8**	**+2.0**
OSTC				MLR	MLR		
	comp=Z,4µm,9.6s						
PRA	**Prague**	**10.60**	**337**	AMS	AMS	13 08 20.0	
	comp=Z,4µm,9.0s						
CHVC	**Chvalec**	**10.65**	**343**	*e*PN	**Pn**	**13 03 51.5**	**+1.8**
CHVC				AMS	AMS	13 08 30.0	
	comp=Z,4µm,9.7s						
CHVC	**Chvalec**	**10.65**	**343**	*e*P	**Pn**	**13 03 51.5**	**+1.8**
CHVC				MLR	MLR		
	comp=Z,4µm,9.7s						
KSP	**Ksiaz**	**10.85**	**345**	*e*P	**Pn**	**13 03 53.4**	**+1.1**
KSP	**Ksiaz**	**10.85**	**345**	P	**Pn**	**13 03 52.7**	**+0.4**
	comp=Z,10nm,1.0s						
PVCC	**Panska Ves**	**10.97**	**339**	*e*PN	**Pn**	**13 03 54.3**	**+0.4**
PVCC				AMS	AMS	13 08 30.0	
	comp=Z,3µm,9.5s						
PVCC	**Panska Ves**	**10.97**	**339**	*e*P	**Pn**	**13 03 54.3**	**+0.4**
PVCC				MLR	MLR		
	comp=Z,3µm,9.5s						
BNI	**Bardonecchia**	**11.34**	**298**		**Pn**	**13 03 56.9**	**-2.4**
BNI	**Bardonecchia**	**11.34**	**298**	P	**Pn**	**13 03 56.9**	**-2.4**
BRG	**Berggiesshubel**	**11.46**	**338**	*e*P	**Pn**	**13 04 01.1**	**+0.4**
BRG				Amp		13 04 01.9	
	comp=Z,5.2nm,0.9s						
STU	**Stuttgart**	**11.71**	**319**	*e*P	**Pn**	**13 04 01.1**	**-3.0**
AKASG	**Malin Array Be**	**11.81**	**27**	Pn	**Pn**	**13 04 03.4**	**-2.1**
	comp=Z,0.4nm,0.3s,baz=208,slow=12,SNR=7.6						
AKASG				LR	LR	13 09 21.6	
	comp=Z,391nm,21.1s,baz=224,slow=41						
BFO	**Black Forest**	**11.88**	**316**		**Pn**	**13 04 04.2**	**-2.2**
BFO	**Black Forest**	**11.88**	**316**	P	**Pn**	**13 04 04.2**	**-2.2**
BFO	**Black Forest**	**11.88**	**316**	*e*Pn	**Pn**	**13 04 04.2**	**-2.2**
MOX	**Moxa**	**12.03**	**331**	*e*Pn	**Pn**	**13 04 09.3**	**+0.8**
CLL	**Collm**	**12.12**	**336**	P	**Pn**	**13 04 09.3**	**-0.4**
	comp=Z,8.0nm,1.8s						
CLL	**Collm**	**12.12**	**336**	*e*Pn	**Pn**	**13 04 09.0**	**-0.7**
CLL				*e*x	x	13 04 24.0	
CLL				*e*x	x	13 06 07.0	
CLL				*e*Sn	Sn	13 06 15.0	-10
CLL				*e*x	x	13 06 56.0	
CLL				*e*Sb		13 07 12.0	
CLL				*e*x	x	13 07 31.0	
CLL				*e*Sg		13 07 42.0	
CLL				AMS	AMS	13 08 00.0	
	comp=N,900nm,19.1s						
CLL				AMS	AMS	13 08 00.0	
	comp=E,2µm,18.0s						
CLL				AMS	AMS	13 09 00.0	
SSB	**Saint Sauveur**	**12.85**	**297**	Pn	**Pn**	**13 04 18.5**	**-1.3**
SSB	**Saint Sauveur**	**12.85**	**297**	P	**Pn**	**13 04 18.5**	**-1.3**
ANN	**Anapa**	**12.99**	**65**	*e*P	**Pn**	**13 04 23.2**	**+1.6**
ANN				pmax	pmax		
	comp=Z,33nm,1.0s						
ANN				MLR	MLR		
	comp=Z,341nm,13.0s						
WLF	**Walferdange**	**13.83**	**317**	*d*P	**Pn**	**13 04 33.0**	**0.0**
MMAI	**Mount Meron Ar**	**13.86**	**118**	Pn	**Pn**	**13 04 32.5**	**-1.2**
	comp=Z,0.8nm,0.3s,baz=316,slow=15,SNR=6.6						
	comp=Z,0.4nm,0.3s						
BTNL	**Ternell**	**14.40**	**320**	*d*P	**Pn**	**13 04 41.3**	**+0.4**
SOC	**Sochi**	**14.40**	**71**	*e*P	**Pn**	**13 04 42.7**	**+1.8**
SOC				*e*		13 07 25.4	
SOC				MLR	MLR		
	comp=Z,174nm,17.0s						
MEM	**Membach**	**14.47**	**319**	*d*P	**Pn**	**13 04 41.4**	**-0.4**
BCLA	**Clavier**	**14.71**	**318**	*d*P	**Pn**	**13 04 43.4**	**-1.7**
BGES	**Gesves**	**14.81**	**317**	*d*P	**Pn**	**13 04 46.3**	**-0.1**
MNK	**Minsk**	**14.83**	**16**	*i* P	**Pn**	**13 04 46.0**	**-0.7**
	comp=E,8.0nm,0.6s						
MNK				*i* P	**Pn**	**13 04 46.0**	**-0.7**
	comp=N,10.0nm,0.7s						
MNK				*i* P	**Pn**	**13 04 46.0**	**-0.7**
	comp=Z,14nm,0.7s,baz=202						
MNK				*i* PP	**P**	**13 04 52.8**	**+0.3**
MNK				*i* PPP	PPP	13 04 58.6	
MNK				*i* S	**Sn**	**13 07 30.7**	**-0.2**
MNK				*i* SS	**SnSn**	**13 07 42.8**	**-0.6**
MNK				*i* SSS	SSS	13 07 56.2	
MNK				*i* LQ	LQ	13 09 13.0	
MNK				*i* LR	LR	13 09 53.1	
MNK				*i* LRM	MLR	13 10 53.5	
	comp=Z,255nm,12.9s						
MNK				*i* LRM	MLR	13 12 04.4	
	comp=N,672nm,12.7s						
MNK				*i* LRM	MLR	13 12 05.2	
	comp=E,611nm,10.9s						
MNK	**Minsk**	**14.83**	**16**	*i* P	**Pn**	**13 04 45.9**	**-0.7**
MNK				*i* S	**Sn**	**13 07 30.6**	**-0.2**
MNK				pmax	pmax		
	comp=Z,14nm,0.7s						
MNK				pmax	pmax		
	comp=E,8.0nm,0.6s						
MNK				pmax	pmax		
	comp=N,10.0nm,0.7s						
MNK				MLR	MLR		
	comp=Z,255nm,13.0s						
MNK				MLR	MLR		
	comp=N,672nm,13.0s						
MNK				MLR	MLR		
	comp=E,611nm,11.0s						
DOU	**Dourbes**	**14.90**	**316**	*d*P	**Pn**	**13 04 46.6**	**-1.0**
BMRD	**Maredsous**	**14.92**	**317**	*d*P	**Pn**	**13 04 47.2**	**-0.7**
NACGM	**Naroch**	**14.99**	**13**	*e*P	**Pn**	**13 04 50.2**	**+1.4**
	comp=Z,38nm,0.9s,baz=198						
PABE	**Paberze**	**15.20**	**7**	*e*P	**Pn**	**13 04 53.4**	**+1.9**
LABN	**Labinsk**	**15.26**	**68**	*e*P	**P**	**13 04 59.3**	**+1.9**
LABN				pmax	pmax		
	comp=Z,88nm,1.1s						
LABN				MLR	MLR		
	comp=Z,199nm,10.0s						
LABN				MLR	MLR		
	comp=N,527nm,11.0s						
LABN				MLR	MLR		
	comp=E,233nm,13.0s						
ERBR	**Yeremizino-Bor**	**15.30**	**63**	*e*P	**Pn**	**13 04 52.3**	**-0.7**
ERBR				pmax	pmax		
	comp=Z,38nm,0.7s						
ERBR				MLR	MLR		
	comp=Z,184nm,14.0s						
ASF	**Jabal al Asfar**	**15.38**	**117**	Pn	**Pn**	**13 04 53.1**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=198,slow=4.3,SNR=5.1						
	comp=Z,1.0nm,0.3s						
ISAL	**Salakas**	**15.53**	**11**	*e*P	**P**	**13 04 58.3**	**-2.0**
EIL	**Elat**	**15.80**	**129**	Pn	**Pn**	**13 04 57.6**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=282,slow=1.6,SNR=3.5						
EIL				Sn	**Sn**	**13 07 54.9**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=337,slow=7.7,SNR=3.6						
	comp=Z,3.6nm,0.9s						
SHA1	**Shidzhatmaz**	**16.54**	**71**	⇑*e*P	**Pn**	**13 05 08.9**	**-0.4**
KIV	**Kislovodsk**	**16.58**	**71**	*e*P	**Pn**	**13 05 08.9**	**-0.7**
KIV				*e*S	**Sn**	**13 08 14.5**	**+0.8**
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
KIV				MLR	MLR		
	comp=Z,83nm,14.0s						
VORD	**Divnogorie**	**16.60**	**45**	*e*P	**P**	**13 05 11.0**	**-1.2**
VORD				pmax	pmax		
	comp=Z,20nm,0.8s						
VSR	**Storozhevoye**	**16.67**	**44**	*e*P	**Pn**	**13 05 10.7**	**+0.1**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KBZ	**Khabaz**	**16.72**	**71**	Pn	**Pn**	**13 05 12.0**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=292,slow=11,SNR=3.9						
KBZ				LR	LR	13 13 01.0	
	comp=Z,112nm,20.5s,baz=288,slow=42						
	comp=Z,1.1nm,0.8s						
KBZ	**Khabaz**	**16.72**	**71**	⇑*e*P	**P**	**13 05 14.1**	**+0.6**
KBZ				pmax	pmax		
	comp=Z,13nm,1.4s						
VORR	**Voronezh**	**16.94**	**42**	P	**P**	**13 05 17.8**	**+1.8**
VORR				pmax	pmax		
	comp=Z,21nm,1.3s						
GOF	**Gofitskoye**	**16.95**	**67**	*ce*P	**P**	**13 05 18.4**	**+2.2**
LPSR	**Galich'ya Gora**	**17.35**	**40**	P	**P**	**13 05 24.6**	**+4.2**
LPSR				pmax	pmax		
	comp=Z,32nm,1.3s						
OBN	**Obninsk**	**18.02**	**30**	LR	LR	13 13 22.9	
	comp=Z,240nm,18.1s,baz=7.0,slow=40						
OBN	**Obninsk**	**18.02**	**30**	⇑*e*P	**P**	**13 05 28.1**	**+0.2**
OBN				*e*S	**Sn**	**13 08 43.9**	**-4.4**
OBN				pmax	pmax		
	comp=Z,34nm,1.2s						
OBN				MLR	MLR		
	comp=Z,296nm,17.0s						
VRH	**Novokhopyorsk**	**18.04**	**47**	P	**P**	**13 05 28.4**	**+0.3**
VRH				pmax	pmax		
	comp=Z,51nm,2.1s						
GNI	**Garni**	**18.26**	**83**	P	**P**	**13 05 31.4**	**+0.6**
	comp=Z,1.3nm,0.3s,baz=282,slow=19,SNR=1.8						
GNI				LR	LR	13 12 36.0	
	comp=Z,245nm,19.7s,baz=255,slow=37						
	comp=Z,7.5nm,0.5s						

MTSE	Matsula	18.37	5	eP	P	13 05 31.9	+0.2
VSU	Vasula	18.41	10⇑	eP	Pn	13 05 33.1	+0.9
VSU				pmax	pmax		
	comp=Z,22nm,0.7s						
VSU	Vasula	18.41	10	eP	Pn	13 05 34.3	+2.1
MOS	Moscow	18.89	30	eP	Pn	13 05 37.7	-0.3
MOS				eS	Sn	13 09 09.8	+0.5
MOS				pmax	pmax		
	comp=Z,31nm,0.7s						
ESBB	Sonseca Array	18.95	276	P	P	13 05 37.4	-0.9
ESBB					Pn	13 05 39.0	0.0
ESDC	Sonseca Array	18.95	276		P	13 05 34.1	-4.2
ESDC	Sonseca Array	18.95	276	P	P	13 05 38.5	+0.1
	comp=Z,0.1nm,0.3s,baz=74,slow=10,SNR=37						
ESDC				LR	LR	13 12 56.4	
	comp=Z,275nm,18.2s,baz=82,slow=37						
	comp=Z,9.4nm,1.0s						
PAB	San Pablo	19.27	275	P	P	13 05 40.0	-1.9
PAB	San Pablo	19.27	275	P	P	13 05 40.0	-1.9
PAB				pmax	pmax		
	comp=Z,33nm,1.5s						
MONM	Monmouth	19.82	313	eP	P	13 05 48.2	+0.5
MONM				IAmb	IAmb	13 05 49.7	
	comp=Z,11nm,0.8s						
DYA	Yadsworthy	19.92	308	eP	P	13 05 48.9	+0.2
DYA				IAmb	IAmb	13 05 50.2	
	comp=Z,15nm,0.7s						
MCH1	Michaelchurch	20.00	313	eP	P	13 05 49.9	+0.3
MCH1				IAmb	IAmb	13 05 50.8	
	comp=Z,9.7nm,0.7s						
MAK	Makhachkala	20.07	74d	iP	P	13 05 45.2	-5.2
MAK				eS	S	13 09 28.3	-7.5
MAK				pmax	pmax		
	comp=Z,236nm,1.8s						
MAK				MLR	MLR		
	comp=Z,219nm,14.0s						
HLM1	Long Mynd	20.17	315	eP	P	13 05 52.0	+0.5
HLM1				IAmb	IAmb	13 05 54.9	
	comp=Z,8.6nm,0.8s						
HFS	Hagfors	20.19	350	P	P	13 05 51.2	-0.3
	comp=Z,5.3nm,0.5s,baz=161,slow=11,SNR=23						
	comp=Z,5.3nm,0.5s						
HPK	Haverah Park	20.23	319	eP	P	13 05 52.2	+0.1
HPK				IAmb	IAmb	13 05 53.1	
	comp=Z,19nm,0.7s						
AKT	Akhty	20.34	78	eP	Pn	13 05 57.1	+1.6
AKT				e		13 06 15.1	
AKT				pmax	pmax		
	comp=Z,25nm,1.2s						
AKT				MLR	MLR		
	comp=Z,221nm,17.0s						
KONO	Kongsberg	20.45	344⇑	eP	Pn	13 05 57.3	+0.7
KONO				pmax	pmax		
	comp=Z,16nm,1.2s						
FOEL	Foel Wylfa	20.51	315	eP	P	13 05 55.5	+0.3
FOEL				IAmb	IAmb	13 05 56.5	
	comp=Z,11nm,0.7s						
RAF	Rauma	20.60	1	eP	P	13 05 55.4	-0.5
CCA1	Carnmenellis	20.62	307	eP	P	13 05 56.3	-0.1
CCA1				IAmb	IAmb	13 05 57.4	
	comp=Z,13nm,0.7s						
PBRG	Braganca	20.75	283	eP	P	13 05 58.5	+0.6
PBRG				i Amb		13 06 01.9	
	comp=Z,27nm,1.6s						
MVO	Moncorvo	21.04	281	eP	P	13 06 02.0	+0.9
MVO				i Amb		13 06 11.3	
	comp=Z,19nm,1.6s						
MVO				eS	Sn	13 09 58.4	-3.1
MVO				eLR	LR	13 14 41.8	
MVO				i AMs_20		13 17 07.3	
	comp=Z,203nm,16.0s						
NC602	NORSAR Array S	21.09	347	P	P	13 05 58.5	-2.8
FINES	FINESS Array B	21.26	7	P	P	13 06 04.0	+0.9
FINES	FINESS Array B	21.26	7	P	P	13 06 01.3	-1.8
	comp=Z,2.1nm,0.4s,baz=163,slow=12,SNR=20						
FINES				LR	LR	13 15 01.5	
	comp=Z,275nm,18.9s,baz=202,slow=39						
	comp=Z,2.1nm,0.4s						
FINES	FINESS Array B	21.26	7	P	P	13 06 04.0	+0.9
FIA1	FINESS Array S	21.26	7	P	P	13 06 04.5	+1.4
NAO01	NORSAR Array S	21.30	347	P	P	13 06 04.1	+0.5
NC405	NORSAR Array S	21.42	348	P	P	13 06 02.9	-2.0
NC405				IAmb	IAmb	13 06 07.7	
	comp=Z,49nm,1.1s						
NB201	NORSAR Array S	21.43	347	P	P	13 06 04.3	-0.7
NB2	NORSAR Subarra	21.43	347	P	P	13 06 04.5	-0.6
	comp=Z,26nm,1.0s,baz=151,slow=10						
NOA	NORSAR Array B	21.43	347	P	P	13 06 03.8	-1.3
	comp=Z,6.2nm,0.9s,baz=160,slow=11,SNR=20						
	comp=Z,6.2nm,0.9s						
NBO00	NORSAR Array S	21.50	347	P	P	13 06 05.8	0.0
NBO00				IAmb	IAmb	13 06 11.9	
	comp=Z,47nm,1.1s						
MTE	Manteigas	21.54	279	eP	P	13 06 06.0	-0.4
MTE				i Amb		13 06 13.2	
	comp=Z,47nm,1.9s						
MTE				eLR	LR	13 13 58.8	
MTE				i AMs_20		13 15 02.2	
	comp=Z,248nm,16.0s						
MTE	Manteigas	21.54	279	eP	P	13 06 05.8	-0.7
NC303	NORSAR Array S	21.58	348	P	P	13 06 06.0	-0.6
PCBR	Castelo Branco	21.59	278	eP	P	13 06 06.3	-0.5
PCBR				i Amb		13 06 18.3	
	comp=Z,23nm,1.6s						
POLO	Lamas de Olo	21.59	282	i AMs_20		13 17 41.1	
	comp=Z,90nm,20.3s						
PMRV	Marv??o	21.60	276	eP	P	13 06 06.8	-0.3
PMRV				i Amb		13 06 15.7	
	comp=Z,32nm,1.3s						
PMRV				eLR	LR	13 13 57.5	
PMRV				i AMs_20		13 14 51.9	
	comp=Z,178nm,18.0s						
PBAR	Barrancos	21.62	273	eP	P	13 06 07.5	+0.2
PBAR				i Amb		13 06 12.6	
	comp=Z,36nm,1.9s						
MDT	Midelt	21.72	257	P	P	13 06 07.8	-0.6
	comp=Z,6.6nm,1.0s,baz=84,slow=15,SNR=5.6						
MDT				LR	LR	13 14 23.8	
	comp=Z,112nm,20.1s,baz=48,slow=36						
	comp=Z,6.6nm,1.0s						
NC204	NORSAR Array S	21.73	347	P	P	13 06 07.7	-0.6
EKA	Eskdalemuir Ar	21.73	321	P	P	13 06 07.8	-0.5
	comp=Z,21nm,1.1s,baz=122,slow=11,SNR=19						
	comp=Z,21nm,1.1s						
ESK	Eskdalemuir	21.75	321	P	P	13 06 07.0	-1.4
ESK				IAmb	IAmb	13 06 13.9	
	comp=Z,32nm,0.9s						
ESK	Eskdalemuir	21.75	321	eP	P	13 06 08.0	-0.4
ESK				IAmb	IAmb	13 06 10.9	
	comp=Z,8.9nm,0.9s						
ESK	Eskdalemuir	21.75	321	P	P	13 06 07.1	-1.4
ESK				pmax	pmax		
	comp=Z,32nm,1.0s						
EKB	Eskdalemuir	21.75	321	P	P	13 06 06.9	-1.6
EKB				IAmb	IAmb	13 06 18.1	
	comp=Z,45nm,1.2s						
PVIS	Viseu	21.75	280	eP	P	13 06 08.4	-0.3
BELG	Belogornoye	21.87	48	P	P	13 06 10.4	+0.7
	comp=Z,8.6nm,0.7s,baz=197,slow=20,SNR=7.3						
BELG				LR	LR	13 15 01.4	
	comp=Z,182nm,19.3s,baz=235,slow=38						
	comp=Z,8.6nm,0.7s						
KEF	Keuruu	21.88	5	eP	P	13 06 11.8	+2.0
PESTR	Estremoz	21.88	275	eP	P	13 06 10.6	+0.6
PGAV	Gavieira, Arco	21.88	283	eP	P	13 06 10.7	+0.6
PGAV				i Amb		13 06 25.9	
	comp=Z,50nm,2.9s						
PSARD	Sardoal	22.15	277	eP	P	13 06 12.5	-0.4
IWEX	Carrickbyrne,	22.28	312	P	P	13 06 17.6	+3.4
PBEJ	Beja	22.29	273	eP	P	13 06 15.2	+0.7
PBEJ				i Amb		13 06 20.9	
	comp=Z,26nm,1.3s						
PMTG	Montargil	22.31	276	eP	P	13 06 14.2	-0.4
PMTG				i Amb		13 06 27.5	
	comp=Z,32nm,1.0s						
PCAS	Casmilo, Conde	22.32	279	eP	P	13 06 15.4	+0.6
PVAQ	Vaqueiros	22.35	271	eP	P	13 06 16.7	+1.6
PVAQ				i Amb		13 06 22.5	
	comp=Z,60nm,1.3s						
DSB	Dublin	22.39	314	P	P	13 06 18.9	+3.5
PCVE	Castro Verde	22.53	272	eP	P	13 06 18.8	+1.8
ILTH	Belurgan, Co L	22.70	316	P	P	13 06 21.2	+2.6
CLGH	Cloghs, Cushen	23.06	318	eP	P	13 06 21.3	-1.1
KLMR	Klimovskoe	23.45	23	eP	P	13 06 24.5	-1.8
KLMR				e		13 10 10.2	
KLMR				pmax	pmax		
	comp=Z,23nm,1.2s						
IDGL	Inch Island, C	23.77	317	eP	P	13 06 28.3	-1.2
IDGL				IAmb	IAmb	13 06 30.0	
	comp=Z,5.3nm,0.8s						
IDGL	Inch Island, C	23.77	317	P	P	13 06 28.8	-0.7
IGLA	Glengowla, Co	24.12	313	P	P	13 06 36.2	+3.4
VAL	Valentia	24.17	309	P	P	13 06 38.9	+5.7
KIRV	Kirov	25.65	35	LR	LR	13 18 03.1	
	comp=Z,171nm,20.6s,baz=236,slow=39						
KIRV	Kirov	25.65	35d	eP	P	13 06 47.7	+1.1
LVZ	Lovozero	28.52	11⇑	eP	P	13 07 11.5	-0.9
LVZ				pmax	pmax		
	comp=Z,19nm,1.2s						
AB31	Akbulak array	28.83	59	P	P	13 07 14.3	-1.0
ABKAR	Akbulak array	28.83	59	P	P	13 07 15.2	-0.1
ARTI	Arti	29.14	44	P	P	13 07 17.3	-0.6
	comp=Z,1.3nm,0.5s,baz=262,slow=9.3,SNR=4.6						
ARTI				LR	LR	13 19 14.0	
	comp=Z,116nm,21.6s,baz=235,slow=37						
	comp=Z,1.3nm,0.5s						
ARTI	Arti	29.14	44	P	P	13 07 16.5	-1.4
ARTI						13 08 06.8	
ARTI				S	S	13 12 10.9	+1.2
ARCES	ARCESS Array B	29.24	3	P	P	13 07 16.6	-2.2
ARCES	ARCESS Array B	29.24	3	P	P	13 07 17.1	-1.6
	comp=Z,1.4nm,0.6s,baz=188,slow=11,SNR=7.8						
ARCES				LR	LR	13 18 57.6	
	comp=Z,132nm,19.5s,baz=226,slow=36						
	comp=Z,1.4nm,0.6s						
TORD	Torodi Ar. Bea	31.96	217	P	P	13 07 41.5	-1.7
	comp=Z,2.4nm,0.5s,baz=25,slow=11,SNR=5.3						
TORD				LR	LR	13 21 40.1	
	comp=Z,86nm,19.9s,baz=358,slow=38						
	comp=Z,2.4nm,0.5s						
JMIC	Jan Mayen	34.02	343	LR	LR	13 23 36.7	
	comp=Z,126nm,18.1s,baz=354,slow=39						
BRVK	Borovoye	35.46	52	P	P	13 08 12.8	-0.5
BRVK	Borovoye	35.46	52c	eP	P	13 08 13.8	+0.5
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BVAR	Borovoye Array	35.52	52	P	P	13 08 12.7	-1.2
	comp=Z,0.7nm,0.5s,baz=264,slow=3.0,SNR=4.4						
	comp=Z,0.7nm,0.5s						
SCO	Scoresbysund	37.14	338	P	P	13 08 27.6	+0.1
SCO	Scoresbysund	37.14	338	P	P	13 08 27.6	+0.1
SCO				pmax	pmax		
	comp=Z,11nm,1.0s						
SPITS	Spitsbergen Ar	37.87	359	P	P	13 08 31.9	-1.7
	comp=Z,0.8nm,0.4s,baz=144,slow=12,SNR=5.3						
SPITS				LR	LR	13 25 54.7	
	comp=Z,157nm,19.1s,baz=140,slow=39						
	comp=Z,0.8nm,0.4s						
KBS	Kingsbay	38.74	357⇓	eP	P	13 08 41.3	+0.4
KBS				pmax	pmax		
	comp=Z,16nm,1.0s						
LODK	Lodwar	39.15	157	P	P	13 08 44.0	-1.1
DBIC	Dimbokro	40.73	221	LR	LR	13 28 23.1	
	comp=Z,137nm,18.3s,baz=56,slow=40						
KURBB	Kurchatov Arra	40.73	56	P	P	13 08 56.9	-0.9
	comp=Z,1.4nm,0.9s,baz=283,slow=9.4,SNR=9.5						
KURBB				PcP	PcP	13 10 58.6	-0.4
	comp=Z,0.4nm,0.6s,baz=271,slow=4.0,SNR=4.2						
	comp=Z,1.4nm,0.9s						
KURK	Kurchatov	40.77	55	P	P	13 08 56.9	-1.2
KURK						13 10 58.6	
BBTS	Babate	41.43	242	LR	LR	13 29 03.2	
	comp=Z,146nm,18.2s,baz=290,slow=40						
MBAR	Mbarara	41.86	165⇓	eP	P	13 09 08.4	+0.8
MBAR				pmax	pmax		
	comp=Z,14nm,1.3s						
TARG	Taragay, Kyrgy	42.30	69	P	P	13 09 10.7	-0.6
TARG	Taragay, Kyrgy	42.30	69	P	P	13 09 10.7	-0.6
TARG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MK31	Makanchi Array	43.96	60c	eP	P	13 09 23.7	-0.5
MKAR	Makanchi Array	43.96	60	P	P	13 09 23.5	-0.7
MKAR	Makanchi Array	43.96	60	P	P	13 09 23.4	-0.8
	comp=Z,3.0nm,0.8s,baz=282,slow=6.9,SNR=20						
MKAR				PcP	PcP	13 11 10.4	+0.5
	comp=Z,2.1nm,0.9s,baz=273,slow=5.2,SNR=3.7						
MKAR				LR	LR	13 28 54.7	
	comp=Z,176nm,20.6s,baz=336,slow=38						
	comp=Z,3.0nm,0.8s						
ZALV	Zalesovo Beam	44.03	50	P	P	13 09 24.1	-0.5
	comp=Z,1.2nm,0.5s,baz=283,slow=8.9,SNR=6.3						
ZALV				LR	LR	13 29 06.9	
	comp=Z,120nm,20.4s,baz=258,slow=38						
	comp=Z,1.2nm,0.5s						
NRIK	Noril'sk	44.67	28	P	P	13 09 30.6	+1.1
	comp=Z,3.2nm,0.7s,baz=181,slow=1.2,SNR=5.2						
	comp=Z,3.2nm,0.7s						
NRIK	Noril'sk	44.67	28⇓	eP	P	13 09 32.9	+3.4
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SFJD	Kangerlussuaq	46.37	329	LR	LR	13 30 29.7	
	comp=Z,280nm,18.2s,baz=86,slow=38						
WMQ	Urumqi	48.49	63	eP	P	13 10 02.8	+2.8
WMQ				LR	LR		
	comp=N,290nm,8.3s						
WMQ				LR	LR		
	comp=E,330nm,10.7s						
DRLN	Deer Lake	53.86	307	P	P	13 10 39.3	-0.8
DRLN				IAmb	IAmb	13 10 46.3	
	comp=Z,8.3nm,0.9s						
FRB	Frobisher Bay	54.35	327	LR	LR	13 34 43.0	
	comp=Z,244nm,18.4s,baz=75,slow=37						
LSZ	Lusaka	55.88	171	LR	LR	13 38 18.5	
	comp=Z,121nm,18.1s,baz=336,slow=40						
SCHQ	Schefferville	56.94	316	P	P	13 11 01.4	-0.7
	comp=Z,4.1nm,0.7s,baz=70,slow=6.6,SNR=10						
SCHQ				LR	LR	13 34 58.9	
	comp=Z,150nm,18.5s,baz=58,slow=36						
	comp=Z,4.1nm,0.7s						
TIXI	Tiksi	57.44	21	LR	LR	13 39 46.0	
	comp=Z,206nm,18.3s,baz=357,slow=40						
RES	Resolute Bay	57.64	344	LR	LR	13 37 11.5	
	comp=Z,121nm,18.0s,baz=353,slow=37						
GBN	Guysborough	57.94	305	P	P	13 11 08.6	-0.8
GBN				IAmb	IAmb	13 11 15.4	
	comp=Z,9.4nm,1.0s						
GTA	Gaotai	58.58	63	P	P	13 11 19.5	+5.4
GTA				pP	sP	13 11 23.8	+4.7
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GTA				LR	LR		
	comp=N,140nm,19.3s						
GTA				LR	LR		
	comp=E,120nm,19.3s						
GTA				LR	LR		
	comp=Z,190nm,18.5s						
SONM	Songino Array	58.86	52	P	P	13 11 14.9	-1.1
	comp=Z,0.7nm,0.8s,baz=286,slow=11,SNR=7.0						
SONM				LR	LR	13 38 21.2	
	comp=Z,184nm,19.6s,baz=270,slow=38						
	comp=Z,0.7nm,0.8s						
TSUM	Tsumeb	59.43	184	LR	LR	13 40 14.4	
	comp=Z,111nm,19.8s,baz=350,slow=39						
LMN	Caledonia Moun	59.79	306	P	P	13 11 20.2	-2.0
LMN				IAmb	IAmb	13 11 35.4	
	comp=Z,13nm,1.4s						
MATP	Matopo	61.00	172	LR	LR	13 41 24.0	
	comp=Z,34nm,20.1s,baz=23,slow=40						
PALK	Pallekele	62.56	105	LR	LR	13 41 39.7	
	comp=Z,96nm,18.2s,baz=310,slow=39						
PALK	Pallekele	62.56	105⇑	eP	P	13 11 42.3	+0.9
YAK	Yakutsk	63.02	30d	eP	P	13 11 44.1	+0.3
YAK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
LBTB	Lobatse	65.29	175	LR	LR	13 42 32.6	
	comp=Z,110nm,19.3s,baz=358,slow=38						
HHC	Hu-ho-hao-te	65.58	56	eP	P	13 11 59.5	-1.6
HHC				pmax	pmax		
	comp=Z,18nm,0.5s						
HHC				pmax	pmax		
	comp=Z,83nm,4.4s						
HHC				LR	LR		
	comp=N,120nm,10.1s						
HHC				LR	LR		
	comp=E,110nm,11.4s						
HHC				LR	LR		
	comp=Z,210nm,10.8s						
PZH	PanZhiHua	66.77	74	P	P	13 12 11.3	+2.4
PZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZEA	Zeya	66.94	38	eP	P	13 12 13.6	+4.2
ZEA				MLR	MLR		
	comp=Z,100nm,12.0s						
BILL	Bilibino	68.75	13⇑	eP	P	13 12 22.4	+1.8
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BOSA	Boshof	68.85	176	P	P	13 12 21.7	0.0
	comp=Z,5.3nm,1.0s,baz=342,slow=10,SNR=3.8						
BOSA				LR	LR	13 44 27.6	
	comp=Z,117nm,18.4s,baz=20,slow=38						
	comp=Z,5.3nm,1.0s						
SADO	Sadowa	68.91	311	P	P	13 12 22.6	+0.7
	comp=Z,4.2nm,0.7s,baz=56,slow=6.6,SNR=5.5						
SADO				LR	LR	13 41 36.3	
	comp=Z,112nm,18.5s,baz=125,slow=35						
	comp=Z,4.2nm,0.7s						
HEH	HeiHe	69.17	41	eP	P	13 12 26.8	+3.3
HEH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CMAR	Chiang Mai Arr	69.38	83	P	P	13 12 24.4	-0.8
	comp=Z,0.5nm,0.5s,baz=302,slow=5.6,SNR=5.1						
	comp=Z,0.5nm,0.5s						
SEY	Seymchan	69.93	21	P	P	13 12 26.8	-1.1
	comp=Z,0.8nm,0.6s,baz=329,slow=6.4,SNR=9.9						
SEY				LR	LR	13 48 53.1	
	comp=Z,67nm,19.1s,baz=353,slow=41						
	comp=Z,0.8nm,0.6s						
SEY	Seymchan	69.93	21⇑	eP	P	13 12 28.5	+0.5
SEY				pmax	pmax		
	comp=Z,6.0nm,2.3s						
E29M	Blow River	70.30	352		P	13 12 31.5	+1.4
E29M				IAmb	IAmb	13 12 35.2	
	comp=Z,9.4nm,1.1s						
YKA	Yellowknife Ar	71.32	340	P	P	13 12 35.3	-1.1
	comp=Z,1.4nm,0.9s,baz=31,slow=6.7,SNR=9.1						
YKA				LR	LR	13 46 03.4	
	comp=Z,123nm,18.1s,baz=18,slow=38						
	comp=Z,1.4nm,0.9s						
YKA	Yellowknife Ar	71.32	340	i P	P	13 12 36.9	+0.5
G29M	Pine Creek	71.73	351	IAmb	IAmb	13 12 51.9	
	comp=Z,5.8nm,0.9s						
KLR	Kul'dur	71.98	40⇓	eP	P	13 12 43.0	+2.3
KLR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TBO	Thunder Bay	72.00	319	P	P	13 12 41.6	+0.9
TBO				IAmb	IAmb	13 12 51.8	
	comp=Z,9.5nm,1.0s						
MA2	Magadan	72.12	24d	eP	P	13 12 42.5	+1.2
MA2				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CN2	Changchun	72.17	47	eP	P	13 12 44.8	+2.9
CN2				eS	S	13 22 03.5	-0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,100nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,14.0s						
CN2				LR	LR		
	comp=E,200nm,14.0s						
CN2				LR	LR		
	comp=Z,100nm,12.0s						
H27K	Steamboat Moun	72.77	353		P	13 12 43.5	-1.6
ULM	Lac du Bonnet	73.99	323	P	P	13 12 52.2	-0.4
	comp=Z,11nm,0.8s,baz=41,slow=5.4,SNR=22						
ULM				LR	LR	13 45 33.9	
	comp=Z,146nm,21.2s,baz=3.5,slow=36						
	comp=Z,11nm,0.8s						
ULM	Lac du Bonnet	73.99	323c	eP	P	13 12 54.4	+1.8
DAWY	Dawson	74.64	351	IAmb	IAmb	13 13 00.7	
	comp=Z,9.3nm,1.2s						
ILAR	Eielson Array	74.66	355	P	P	13 12 56.2	+0.1
	comp=Z,0.2nm,0.5s,baz=7.9,slow=5.8,SNR=4.8						
ILAR				LR	LR	13 47 57.0	
	comp=Z,42nm,18.7s,baz=276,slow=38						
	comp=Z,0.2nm,0.5s						
USRK	Ussuriysk Ar.	75.48	44	P	P	13 13 03.9	+2.6
	comp=Z,2.6nm,0.7s,baz=251,slow=5.8,SNR=5.3						
NJ2	Nanjing	75.49	60	eP	P	13 13 01.0	-0.5
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BCAR	Beaver Creek A	75.88	352		P	13 13 05.3	+2.0
SJG	San Juan	76.21	282	LR	LR	13 40 14.6	
	comp=Z,27nm,21.9s,baz=164,slow=31						
DHY	Denali Highway	76.37	354		P	13 13 05.1	-1.1
DHY				IAmb	IAmb	13 13 13.7	
	comp=Z,13nm,1.2s						
TKL	Tuckaleechee C	77.36	306	P	P	13 13 11.8	-0.3
	comp=Z,2.8nm,0.8s,baz=54,slow=5.8,SNR=3.7						
TKL				LR	LR	13 49 11.3	
	comp=Z,98nm,18.0s,baz=36,slow=37						
	comp=Z,2.8nm,0.8s						
KSRS	Korea Array	77.72	51	P	P	13 13 12.5	-1.6
	comp=Z,2.1nm,0.8s,baz=311,slow=4.8,SNR=10.0						
	comp=Z,2.1nm,0.8s						
DLBC	Dease Lake	78.50	345	P	P	13 13 18.9	+0.8
	comp=Z,0.1nm,0.9s,baz=6.2,slow=13,SNR=3.7						
YSS	Yuzhno-Sakhali	78.80	36	eP	P	13 13 23.7	+3.9
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				MLR	MLR		
	comp=Z,200nm,18.0s						
PETK	Petropavlovsk-	79.64	25	LR	LR	13 52 37.9	
	comp=Z,61nm,18.8s,baz=313,slow=39						
ASAJ	Asahikawa	80.86	38	LR	LR	13 51 26.3	
	comp=Z,78nm,21.0s,baz=345,slow=37						
EGMT	Eagleton	81.60	329	P	P	13 13 35.4	+0.4
KDAK	Kodiak Island	81.96	356	LR	LR	13 53 33.8	
	comp=Z,25nm,18.2s,baz=352,slow=38						
BBB	Bella Bella	83.85	341	LR	LR	13 55 21.7	
	comp=Z,44nm,18.7s,baz=36,slow=39						
NEW	Newport	84.11	333	P	P	13 13 49.0	+0.9
	comp=Z,3.2nm,0.7s,baz=50,slow=7.3,SNR=6.3						
NEW				LR	LR	13 52 39.9	
	comp=Z,93nm,20.2s,baz=36,slow=37						
	comp=Z,3.2nm,0.7s						
NEW	Newport	84.11	333	P	P	13 13 49.0	+0.9
MJAR	Matsushiro Arr	84.24	46	P	P	13 13 48.2	-0.7
	comp=Z,5.0nm,1.0s,baz=326,slow=4.4,SNR=11						
	comp=Z,5.0nm,1.0s						
BDFB	Brasilia	84.69	244	P	P	13 13 53.2	+1.7
	comp=Z,1.7nm,0.4s,baz=143,slow=0.9,SNR=4.1						
BDFB				LR	LR	13 53 50.3	
	comp=Z,36nm,18.5s,baz=104,slow=37						
	comp=Z,1.7nm,0.4s						
CBB	Campbell River	85.10	339	IAmb	IAmb	13 13 58.4	
	comp=Z,10nm,1.1s						
SDV	Santo Domingo	85.39	278	LR	LR	13 48 14.9	
	comp=Z,19nm,18.9s,baz=60,slow=33						
D08A	Wollman Farm,	85.77	334	IAmb	IAmb	13 14 04.1	
	comp=Z,5.7nm,1.0s						
TPAW	Teton Pass	85.78	327	IAmb	IAmb	13 14 01.9	
	comp=Z,8.4nm,1.4s						
PDAR	Pinedale Array	85.78	326		P	13 13 54.4	-2.4
PDAR	Pinedale Array	85.78	326	P	P	13 13 58.0	+1.2
	comp=Z,0.8nm,0.3s,baz=93,slow=3.1,SNR=6.2						
PDAR				LR	LR	13 54 58.9	
	comp=Z,79nm,18.8s,baz=20,slow=38						
	comp=Z,0.8nm,0.3s						
GNW	Green Mountain	86.58	336	IAmb	IAmb	13 14 05.2	
	comp=Z,9.7nm,1.0s						
BMO	Blue Mountains	87.11	332	IAmb	IAmb	13 14 06.7	
	comp=Z,7.5nm,1.1s						
O20A	White River Ci	87.33	323	IAmb	IAmb	13 14 08.2	
	comp=Z,5.8nm,0.9s						
MFID	Camas Ranch	87.79	330	IAmb	IAmb	13 14 11.1	
	comp=Z,7.4nm,1.1s						
G06A	Carlson Farm,	87.94	334	IAmb	IAmb	13 14 11.9	
	comp=Z,5.6nm,1.0s						
APMT	Aspermont	88.55	314	IAmb	IAmb	13 14 15.6	
	comp=Z,4.8nm,0.9s						
H04A	Detroit Lake	88.94	335	IAmb	IAmb	13 14 20.0	
	comp=Z,4.6nm,0.8s						
DUG	Dugway, Tooele	89.29	326	IAmb	IAmb	13 14 17.9	
	comp=Z,7.5nm,0.8s						
PINE	Pine Mountain	89.31	333	IAmb	IAmb	13 14 19.2	
	comp=Z,7.1nm,1.0s						
TMUT	Trail Mountain	89.34	325	IAmb	IAmb	13 14 17.8	
	comp=Z,7.4nm,1.0s						
BRDY	Brady	89.46	312	IAmb	IAmb	13 14 20.5	
	comp=Z,6.7nm,1.0s						
ELK	Elko	89.83	328	P	P	13 14 16.1	-0.2
	comp=Z,2.4nm,1.0s,baz=67,slow=7.7,SNR=5.8						
	comp=Z,2.4nm,1.0s						
J05D	Fort Rock, OR	89.86	333	IAmb	IAmb	13 14 21.5	
	comp=Z,8.1nm,0.9s						
MVU	Marysvale	90.43	325	IAmb	IAmb	13 14 23.8	
	comp=Z,6.1nm,0.9s						
ANMO	Albuquerque	90.62	319	LR	LR	13 56 28.8	
	comp=Z,116nm,18.4s,baz=130,slow=37						

BBOR	**Butler Butte**	**90.70**	**334**	IAmb	IAmb	13 14 23.8	
	comp=Z,3.8nm,0.8s						
ROSC	**El Rosal**	**90.78**	**277**	LR	LR	13 52 26.4	
	comp=Z,35nm,19.1s,baz=78,slow=34						
SPR3	**Spring Creek 3**	**90.93**	**327**		**P**	**13 14 22.1**	**+0.5**
SPR3				IAmb	IAmb	13 14 30.6	
	comp=Z,4.5nm,1.0s						
PSUT	**Pine Spring**	**91.12**	**326**	IAmb	IAmb	13 14 27.1	
	comp=Z,6.0nm,1.0s						
YBH	**Yreka Blue Hor**	**91.74**	**334**	P	**P**	**13 14 23.7**	**-1.3**
	comp=Z,0.1nm,0.9s,baz=53,slow=4.7,SNR=4.0						
YBH				LR	LR	13 57 45.0	
	comp=Z,11nm,18.5s,baz=39,slow=37						
U15A	**North Rim**	**92.19**	**324**	IAmb	IAmb	13 14 31.5	
	comp=Z,5.2nm,1.1s						
SAND	**Sanderson**	**92.22**	**313**	IAmb	IAmb	13 14 33.7	
	comp=Z,6.3nm,0.9s						
WUAZ	**Wupatki**	**92.52**	**323**	IAmb	IAmb	13 14 33.4	
	comp=Z,4.3nm,0.9s						
PRN	**Pahroc Range**	**92.57**	**326**	IAmb	IAmb	13 14 37.8	
	comp=Z,4.1nm,1.2s						
ALPN	**Alpine**	**92.73**	**314**		**P**	**13 14 29.0**	**-0.8**
ALPN				IAmb	IAmb	13 14 36.0	
	comp=Z,4.4nm,0.8s						
NVAR	**Mina Array Bea**	**93.03**	**329**	P	**P**	**13 14 31.2**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=107,slow=1.5,SNR=3.6						
NVAR				LR	LR	13 59 50.9	
	comp=Z,144nm,18.2s,baz=22,slow=38						
	comp=Z,0.6nm,0.8s						
TXAR	**Lajitas Array**	**93.55**	**314**		**P**	**13 14 34.6**	**+1.1**
TXAR	**Lajitas Array**	**93.55**	**314**	P	**P**	**13 14 34.2**	**+0.7**
	comp=Z,3.0nm,0.8s,baz=79,slow=6.5,SNR=29						
TXAR				LR	LR	13 57 09.6	
	comp=Z,47nm,21.8s,baz=44,slow=36						
	comp=Z,3.0nm,0.8s						
TXAR	**Lajitas Array**	**93.55**	**314**	P	**P**	**13 14 34.6**	**+1.1**
JTS	**Las Juntas de**	**95.11**	**288**	LR	LR	13 54 09.5	
	comp=Z,43nm,20.3s,baz=60,slow=33						
PFO	**Pinyon Flats O**	**96.40**	**325**	LR	LR	14 01 03.7	
	comp=Z,104nm,18.4s,baz=42,slow=37						
DAV	**Davao City (W)**	**96.56**	**75**	LR	LR	14 03 21.5	
	comp=Z,42nm,20.5s,baz=334,slow=39						
CMIG	**Matias Romero**	**97.32**	**300**	LR	LR	14 00 10.6	
	comp=Z,39nm,18.1s,baz=360,slow=36						
CPUP	**Villa Florida**	**98.30**	**243**	LR	LR	14 01 33.9	
	comp=Z,11nm,18.2s,baz=228,slow=37						
LPAZ	**La Paz**	**99.58**	**257**	LR	LR	14 02 25.6	
	comp=Z,23nm,18.1s,baz=71,slow=37						
ASAR	**Alice Springs**	**122.18**	**95**	PKP	**PKPdf**	**13 20 11.2**	**-1.0**
	comp=Z,2.1nm,0.8s,baz=302,slow=1.6,SNR=13						

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*TIR **29** 13:15:12.1, 40°.48N×20°.80E, h12km±1km, Md2.5/4, Ml2.3/4*
*SKO **29** 13:15:14.9, 40°.54N×20°.89E, h20km, ML1.9*
ISC 29 13:15:12.4±0.9**, 40°.49N**±0°.04×**20°.78E**±0°.05**, h9**km**, n8, σ1ˢ.00**/16**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	**Korca**	**0.14**	**2**	Pg	**Pg**	**13 15 15.6**	**0.0**
KBN				Sg	**Sg**	**13 15 17.7**	**0.0**
KBN				AML	AML	13 15 19.1	
	4.1nm,0.3s						
NEST	**Nestorio**	**0.21**	**109**	Pg	**Pg**	**13 15 17.3**	**+0.5**
NEST				Sg	**Sg**	**13 15 20.1**	**+0.3**
NEST				AML	AML	13 15 24.3	
	1.9nm,0.3s						
NEST				AMd		13 15 44.6	
FNA	**Florina**	**0.54**	**56**	Pg	**Pb**	**13 15 23.1**	**-1.1**
FNA				Sg	**Sb**	**13 15 31.1**	**-0.9**
FNA				AML	AML	13 15 32.9	
	3.5nm,0.3s						
FNA				AMd		13 16 04.9	
FNA	**Florina**	**0.54**	**56**	*i* Pg	**Pb**	**13 15 23.4**	**-0.7**
FNA				*i* Sg	**Sb**	**13 15 32.3**	**+0.2**
OHR	**Ohrid**	**0.63**	**1**	*i* Pg	**Pb**	**13 15 25.7**	**+0.2**
OHR				*i* Sg	**Sb**	**13 15 35.5**	**+1.0**
OHR				*e*Lg	Lg	13 15 36.1	
	comp=E,75nm,0.6s						
OHR				*e*Lg	Lg	13 15 37.4	
	comp=N,28nm,0.6s						
SRN	**Sarande**	**0.85**	**225**	Pg	**Pn**	**13 15 29.5**	**-1.0**
SRN				Sg	**Sn**	**13 15 42.6**	**-0.5**
SRN				AML	AML	13 15 43.5	
	comp=N,0.2nm,0.5s						
SRN				AMd		13 16 13.7	
IGT	**Igoumenitsa**	**1.01**	**200**	Pg	**Pn**	**13 15 32.0**	**-0.8**
IGT				Sg	**Sb**	**13 15 44.7**	**-0.8**
IGT				AMd		13 16 29.3	
IGT	**Igoumenitsa**	**1.01**	**200**	*i* Pg	**Pn**	**13 15 34.9**	**+2.1**
IGT				*i* Sg	**Sn**	**13 15 48.6**	**+1.5**

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*BJI **29** 13:20:19.2, 33°.60N×82°.69E, h6km, mB4.6/8, mb4.5/36, Ms4.0/26, Ms7 3.8/24*
*NEIC **29** 13:20:21.4±2.3, 33°.63N±0°.08×82°.57E±0°.09, h10km±1km, mb4.6/110, Error ellipse: s-maj=15.8km s-min=11.1km az=218.0*
*MOS **29** 13:20:21.9±0.9, 33°.55N×82°.66E, h32km, mb4.8/20, Error ellipse: s-maj=9.2km s-min=5.1km az=114.6*
*NDI **29** 13:20:24.7±1.4, 33°.63N×82°.90E, h15km, ML4.5, MW4.6, mb4.6(NEIC)*
*IDC **29** 13:20:24.7±3.0, 33°.57N×82°.59E, h42km±27km, mb4.1/23, mbtmp4.3/26, ML3.7/3, MS3.6/10, Error ellipse: s-maj=18.8km s-min=11.1km az=30.0*
ISC 29 13:20:21.4±1.0**, 33°.64N**±0°.03×**82°.62E**±0°.03**, h13**km±5km**, n510, σ1ˢ.44**/487**, mb4.6**/122**, MS3.8**/19**, 12C-17D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOSI	**Joshimath**	**4.03**	**221**	*e*P	**Pb**	**13 21 28.1**	**-4.1**
JOSI				*e*S	**Sn**	**13 22 13.5**	**+3.5**
JOSI				IAML		13 22 28.6	
	comp=N,862nm,1.6s						
JOSI				IAML		13 22 34.2	
	comp=E,876nm,1.6s						
KLP	**Kalpa**	**4.25**	**242**	*e*P	**Pb**	**13 21 31.5**	**-4.5**
KLP				*e*S	**Sn**	**13 22 20.1**	**+4.5**
KLP				IAML		13 22 29.6	
	comp=N,708nm,1.9s						
KLP				IAML		13 22 31.0	
	comp=E,668nm,1.6s						
PTH	**Pithoragarh**	**4.56**	**207**	*e*P	Pn	13 21 34.5	+4.2
PTH				*e*S	**Sn**	**13 22 24.9**	**+1.7**
PTH				IAML		13 22 31.0	
	comp=E,763nm,1.8s						
DDI	**Dehra Dun**	**5.10**	**231**	*e*P	Pn	13 21 43.1	+5.7
DDI				*e*S	**Sn**	**13 22 39.9**	**+3.7**
DDI				IAML		13 22 57.4	
	comp=E,761nm,1.5s						
DDI				IAML		13 23 00.3	
	comp=N,795nm,1.5s						
SMLA	**Simla**	**5.25**	**243**	*e*P	Pn	13 21 45.0	+5.5
SMLA				*e*S	**Sn**	**13 22 44.0**	**+4.1**
SMLA				IAML		13 22 47.9	
	comp=N,879nm,0.5s						
SMLA				IAML		13 22 48.5	
	comp=E,778nm,0.6s						
DANN	**Dangsing**	**5.36**	**169**	Pn	**Pn**	**13 21 42.2**	**+0.9**
	baz=167,slow=0.0						
DANN				Sn	**Sn**	**13 22 44.8**	**+1.8**
	comp=E,158nm,0.5s,baz=167,slow=0.0						
DHRM	**DHARAMSHALA**	**5.49**	**257**	*e*P	Pn	13 21 48.5	+5.5
DHRM				*e*S	**Sn**	**13 22 50.1**	**+3.9**
DHRM				IAML		13 22 51.9	
	comp=N,605nm,0.6s						
PYUN	**Piuthan**	**5.53**	**177**	Pn	**Pn**	**13 21 44.6**	**+1.1**
	baz=174,slow=0.0						
PYUN				Sn	**Sn**	**13 22 46.1**	**-1.0**
	comp=N,200nm,0.6s,baz=174,slow=0.0						
BHK	**Bhakra**	**5.69**	**249**	*e*P	**Pn**	**13 21 46.0**	**+0.4**
BHK				*e*S	**Sn**	**13 22 44.8**	**-6.0**
BHK				IAML		13 23 01.9	
	comp=N,623nm,0.9s						
GKN	**Gorkha**	**5.88**	**162**	Pn	**Pn**	**13 21 49.2**	**+0.9**
	baz=161,slow=0.0						
GKN				Sn	**Sn**	**13 22 56.7**	**+1.1**
	comp=N,162nm,0.6s,baz=161,slow=0.0						
KOLN	**Koldanda**	**5.91**	**172**	Pn	**Pn**	**13 21 49.1**	**+0.3**
	baz=170,slow=0.0						
KOLN				Sn	**Sn**	**13 22 57.1**	**+0.7**
	comp=N,238nm,0.7s,baz=170,slow=0.0						
THN	**Thein Dam**	**5.92**	**260**	*e*P	Pn	13 21 53.5	+4.7
THN				*e*S	**Sn**	**13 22 59.8**	**+3.4**
THN				IAML		13 23 19.2	
	comp=N,756nm,0.9s						
KKN	**Kakani**	**6.26**	**158**	Pn	**Pn**	**13 21 54.8**	**+1.2**
	baz=157,slow=0.0						
KKN				Sn	**Sn**	**13 23 05.7**	**+0.6**
	comp=N,321nm,0.9s,baz=157,slow=0.0						
GUN	**Gumba**	**6.36**	**153**	Pn	**Pn**	**13 21 56.4**	**+1.3**
	baz=152,slow=0.0						
GUN				Sn	**Sn**	**13 23 08.4**	**+0.7**
	comp=N,280nm,0.9s,baz=152,slow=0.0						
DMN	**Daman**	**6.38**	**160**	Pn	**Pn**	**13 21 55.7**	**+0.4**
	baz=159,slow=0.0						
DMN				Sn	**Sn**	**13 23 07.9**	**-0.2**
	comp=N,221nm,0.7s,baz=159,slow=0.0						
PKIN	**Phulchoki**	**6.50**	**158**	Pn	**Pn**	**13 21 57.9**	**+1.0**
	baz=157,slow=0.0						
PKIN				Sn	**Sn**	**13 23 11.1**	**+0.1**
	baz=157,slow=0.0						
PKI	**Pulchoki**	**6.50**	**158**	Pn	**Pn**	**13 21 57.9**	**+0.8**
	baz=157,slow=0.0						
PKI				Sn	**Sn**	**13 23 11.3**	**0.0**
	comp=N,206nm,0.8s,baz=157,slow=0.0						
JMU	**Jammu**	**6.54**	**264**	*e*P	Pn	13 22 03.9	+6.7
JMU				*e*S	**Sn**	**13 23 16.1**	**+4.4**
JMU				IAML		13 23 22.1	
	comp=N,553nm,0.7s						
EVN	**Everest**	**6.71**	**146**		**Pn**	**13 22 01.4**	**+1.2**
NDI	**New Delhi**	**6.77**	**225**	*e*P	**Pn**	**13 22 03.1**	**+2.7**
NDI				*e*S	**Sn**	**13 23 18.3**	**+0.9**
NDI				IAML		13 23 24.5	
	comp=N,858nm,1.0s						
RAMN	**Ramite**	**7.50**	**152**	Pn	**Pn**	**13 22 11.5**	**+0.9**
	baz=151,slow=0.0						
RAMN				Sn	**Sn**	**13 23 34.7**	**-1.0**
	comp=N,180nm,0.6s,baz=151,slow=0.0						
KUDL	**Kundal**	**7.60**	**226**	*e*P	Pn	13 22 16.6	+4.8
KUDL				*e*S	**Sn**	**13 23 38.6**	**+0.9**
KUDL				IAML		13 23 43.2	
	comp=E,627nm,0.9s						
NIL	**Nilore**	**7.82**	**273**		**Pn**	**13 22 17.1**	**+2.3**
NIL	**Nilore**	**7.82**	**273**	P	**Pn**	**13 22 17.1**	**+2.3**
ODAN	**Odare**	**7.91**	**147**	Pn	**Pn**	**13 22 17.1**	**+0.8**
	baz=147,slow=0.0						
ODAN				Sn	**Sn**	**13 23 45.5**	**-0.3**
	comp=E,236nm,0.7s,baz=147,slow=0.0						
KSH	**Kashi**	**7.94**	**320**	P	Pn	13 22 23.0	+6.5
KSH				S	**Sn**	**13 23 47.8**	**+1.5**
KSH				LR	LR		
	comp=E,730nm,18.6s						
KSH				LR	LR		
	comp=E,1µm,10.6s						
KSH				LR	LR		
	comp=E,760nm,9.3s						
GTK	**Tadong**	**8.14**	**139**	*e*P	**Pn**	**13 22 20.1**	**+0.8**
GTK				*e*S	**Sn**	**13 23 44.0**	**-7.2**
GTK				IAML		13 23 59.2	
	comp=E,455nm,0.9s						
GTK				IAML		13 24 04.5	
	comp=N,552nm,1.0s						
LSA	**Lhasa**	**8.26**	**116**		Pn	13 22 25.9	+4.6
LSA	**Lhasa**	**8.26**	**116**	P	**Pn**	**13 22 25.0**	**+3.7**
LSA				LR	LR		
	comp=N,1µm,12.6s						
LSA	**Lhasa**	**8.26**	**116**	P	Pn	13 22 25.9	+4.6
ALBI	**Allahabad**	**8.33**	**185**	*e*P	**Pn**	**13 22 24.0**	**+2.2**
ALBI				*e*S	**Sn**	**13 23 52.1**	**-3.6**
ALBI				IAML		13 23 55.6	
	comp=E,750nm,0.5s						
ALBI				IAML		13 23 57.4	
	comp=N,744nm,0.6s						
TARG	**Taragay, Kyrgy**	**8.93**	**336**		**Pn**	**13 22 34.3**	**+3.8**
TARG	**Taragay, Kyrgy**	**8.93**	**336**	P	**Pn**	**13 22 34.3**	**+3.8**
NRN	**Naryn**	**9.39**	**328**		**Pn**	**13 22 40.6**	**+4.0**
NRN	**Naryn**	**9.39**	**328**	P	**Pn**	**13 22 40.6**	**+4.0**
KDJ	**Kajisay**	**9.51**	**335**		Pn	13 22 43.4	+5.3
KDJ	**Kajisay**	**9.51**	**335**	P	Pn	13 22 43.4	+5.3
BOOM	**Boomskoye usch**	**10.29**	**331**		**Pn**	**13 22 52.6**	**+3.9**
BOOM	**Boomskoye usch**	**10.29**	**331**	P	**Pn**	**13 22 52.7**	**+3.9**
WMQ	**Urumqi**	**10.91**	**20**	*e*P	**Pn**	**13 23 01.3**	**+4.1**
WMQ				LR	LR		
	comp=N,280nm,8.3s						
WMQ				LR	LR		
	comp=N,340nm,7.5s						
AAK	**Ala-Archa**	**11.03**	**327**	P	**Pn**	**13 23 01.1**	**+2.2**
	comp=N,0.3nm,0.3s,baz=128,slow=18,SNR=7.5						
	comp=N,1.0nm,0.3s						
AAK	**Ala-Archa**	**11.03**	**327**	⇑*e*P	**Pn**	**13 23 02.2**	**+3.3**
AAK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GAR	**Garm**	**11.28**	**302**		**Pn**	**13 23 01.5**	**-0.8**
KBL	**Kabul**	**11.30**	**278**		**Pn**	**13 23 04.1**	**+1.4**
KBL	**Kabul**	**11.30**	**278**	P	**Pn**	**13 23 04.1**	**+1.4**
SIMJ	**Simiganj**	**12.09**	**298**		**Pn**	**13 23 14.2**	**+0.8**
KOHI	**KOHIMA**	**12.72**	**125**	*e*P	**Pn**	**13 23 20.5**	**-1.6**
KOHI				*e*S	Sn	13 25 30.5	-13
KOHI				IAML		13 25 43.9	
	comp=N,419nm,0.8s						
KOHI				IAML		13 25 46.6	
	comp=E,429nm,0.6s						
MK31	**Makanchi Array**	**13.14**	**359**	*d i*P	**Pn**	**13 23 28.4**	**+0.7**
MKAR	**Makanchi Array**	**13.14**	**359**		**Pn**	**13 23 28.1**	**+0.3**
MKAR	**Makanchi Array**	**13.14**	**359**	P	**Pn**	**13 23 27.9**	**+0.3**
	comp=E,0.6nm,0.3s,baz=178,slow=12,SNR=29						
	comp=E,2.4nm,0.5s						
MKAR	**Makanchi Array**	**13.14**	**359**	P	**Pn**	**13 23 28.1**	**+0.3**
MAKZ	**Makanchi**	**13.17**	**358**		**Pn**	**13 23 28.7**	**+0.7**
MAKZ	**Makanchi**	**13.17**	**358**	P	**Pn**	**13 23 28.7**	**+0.7**
KKAR	**Karatay Array**	**13.39**	**318**		**Pn**	**13 23 29.9**	**-1.1**
KKAR	**Karatay Array**	**13.39**	**318**		**Pn**	**13 23 30.4**	**-0.7**
KKAR	**Karatay Array**	**13.39**	**318**	P	**Pn**	**13 23 29.9**	**-1.1**
GTA	**Gaotai**	**14.97**	**62**	*e*P	**P**	**13 24 00.0**	**+1.8**
GTA				pP		13 24 05.5	
GTA				sP		13 24 09.0	
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GTA				LR	LR		
	comp=N,450nm,14.5s						
GTA				LR	LR		
	comp=E,380nm,12.7s						
GTA				LR	LR		
	comp=Z,410nm,13.4s						
HYB	**Hyderabad**	**16.56**	**194**	*e*P	**Pn**	**13 24 14.9**	**+1.5**
KURBB	**Kurchatov Arra**	**17.24**	**351**	P	**Pn**	**13 24 21.2**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=175,slow=11,SNR=37						
	comp=Z,4.3nm,0.9s						
KURK	**Kurchatov**	**17.32**	**351**		**Pn**	**13 24 22.8**	**+0.1**
KURK	**Kurchatov**	**17.32**	**351**	*ce*P	**Pn**	**13 24 23.3**	**+0.6**
KURK				pmax	pmax		
	comp=Z,30nm,1.7s						
LZH	**Lanzhou**	**17.59**	**76**	*e*P	**Pn**	**13 24 27.5**	**+1.2**
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				LR	LR		
	comp=Z,300nm,10.3s						
LZH				LR	LR		
	comp=Z,230nm,10.3s						
LZH				LR	LR		
	comp=Z,220nm,10.3s						
KMI	**Kunming**	**19.45**	**111**	P	**P**	**13 24 48.5**	**+0.5**
KMI				pmax	pmax		
	comp=Z,14nm,0.8s						
ZAA0	**Zalesovo Array**	**20.36**	**4**		**P**	**13 24 58.1**	**+0.6**
ZALV	**Zalesovo Beam**	**20.36**	**4**		**P**	**13 24 58.5**	**+1.0**
ZALV	**Zalesovo Beam**	**20.36**	**4**	P	**P**	**13 24 58.3**	**+0.9**
	comp=Z,9.3nm,0.6s,baz=198,slow=9.0,SNR=40						
	comp=Z,9.3nm,0.6s						
ZALV	**Zalesovo Beam**	**20.36**	**4**	*i* P	**P**	**13 24 58.9**	**+1.5**
ZALV				pmax	pmax		
	comp=Z,9.0nm,0.6s						
CHTO	**Chiang Mai**	**20.75**	**131**		**P**	**13 25 00.9**	**-1.0**
CHTO				IAmb	IAmb	13 25 06.0	
	comp=Z,24nm,0.8s						
CHTO	**Chiang Mai**	**20.75**	**131**	P	**P**	**13 25 00.9**	**-1.0**
CHTO				pmax	pmax		
	comp=Z,24nm,0.8s						
CM31	**Chiang Mai Arr**	**21.01**	**132**	P	**P**	**13 25 04.1**	**-0.7**
CM31				IAmb	IAmb	13 25 10.9	
	comp=Z,31nm,0.8s						
CMAR	**Chiang Mai Arr**	**21.01**	**132**		**P**	**13 25 04.4**	**-0.3**
CMAR	**Chiang Mai Arr**	**21.01**	**132**	P	**P**	**13 25 04.2**	**-0.6**
	comp=Z,14nm,0.8s,baz=305,slow=10,SNR=55						
CMAR				PcP	**PcP**	**13 29 11.1**	**-0.6**
	comp=Z,1.8nm,0.8s,baz=312,slow=4.5,SNR=7.1						
	comp=Z,14nm,0.8s						
BVAR	**Borovoye Array**	**21.27**	**339**	P	**P**	**13 25 08.8**	**+1.5**
	comp=Z,6.0nm,0.5s,baz=133,slow=8.3,SNR=25						
BVAR				PcP	**PcP**	**13 29 10.6**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=132,slow=4.3,SNR=2.5						
	comp=Z,6.0nm,0.5s						
BRVK	**Borovoye**	**21.33**	**339**		**P**	**13 25 07.9**	**0.0**
BRVK				IAmb	IAmb	13 25 14.8	
	comp=Z,33nm,1.1s						
BRVK	**Borovoye**	**21.33**	**339**	*de*P	**P**	**13 25 08.7**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,36nm,1.3s						
XAN	**Xi'an**	**21.83**	**82**	⇑P	**P**	**13 25 13.8**	**+0.3**
XAN				pmax	pmax		
	comp=Z,11nm,1.1s						
XAN				LR	LR		
	comp=Z,130nm,7.6s						
XAN				LR	LR		
	comp=Z,250nm,8.9s						
XAN				LR	LR		
	comp=Z,190nm,9.6s						
SLVN	**Son La**	**22.46**	**118**	P	**P**	**13 25 21.3**	**+1.0**
SONM	**Songino Array**	**22.80**	**44**	P	**P**	**13 25 24.6**	**+0.7**
	comp=Z,3.5nm,0.8s,baz=234,slow=11,SNR=18						
SONM				PcP	**PcP**	**13 29 14.0**	**-1.0**
	comp=Z,1.2nm,0.6s,baz=222,slow=3.3,SNR=5.6						
	comp=Z,3.5nm,0.8s						
BTO	**Baotou**	**22.87**	**64**	*e*P	**P**	**13 25 26.8**	**+2.2**
BTO				PP	**PnPn**	**13 25 55.5**	**+6.6**
BTO				S	**S**	**13 29 28.8**	**-5.1**
BTO				sS	**sS**	**13 29 42.5**	**-0.5**
BTO				SS	**SnSn**	**13 30 12.5**	**+7.6**
BTO				pmax	pmax		
	comp=Z,45nm,1.2s						
BTO				pmax	pmax		
	comp=Z,160nm,7.2s						
BTO				LR	LR		
	comp=Z,750nm,15.6s						
BTO				LR	LR		
	comp=Z,370nm,13.2s						
BTO				LR	LR		
	comp=Z,380nm,12.4s						
AB31	**Akbulak array**	**22.95**	**320**		**P**	**13 25 23.2**	**-2.0**
ABKAR	**Akbulak array**	**22.95**	**320**		**P**	**13 25 25.4**	**+0.2**
ABKAR	**Akbulak array**	**22.95**	**320**		**P**	**13 25 25.0**	**-0.2**
ULN	**Ulaanbaatar**	**23.21**	**45**	P	**P**	**13 25 28.6**	**+0.5**
ULN	**Ulaanbaatar**	**23.21**	**45**	⇓*e*P	**P**	**13 25 29.4**	**+1.3**
ULN				pmax	pmax		
	comp=Z,10.0nm,1.7s						
HHC	**Hu-ho-hao-te**	**24.07**	**64**	*e*P	**P**	**13 25 36.0**	**-0.4**
HHC				pmax	pmax		
	comp=Z,16nm,0.6s						
HHC				pmax	pmax		
	comp=Z,37nm,3.5s						
HHC				LR	LR		
	comp=Z,120nm,10.2s						
HHC				LR	LR		
	comp=Z,120nm,11.4s						
HHC				LR	LR		
	comp=Z,200nm,10.5s						
HNS	**HongShan**	**26.31**	**73**	⇓P	**P**	**13 26 01.5**	**+4.8**
HNS				pmax	pmax		
	comp=Z,15nm,0.7s						
XLT	**XiLinHaoTe**	**27.86**	**59**	*e*P	**P**	**13 26 15.8**	**+5.1**
XLT				pmax	pmax		
	comp=Z,9.0nm,1.0s						
XLT				LR	LR		
	comp=Z,260nm,12.4s						
XLT				LR	LR		
	comp=Z,140nm,12.6s						
ARTI	**Arti**	**28.20**	**331**	P	**P**	**13 26 11.3**	**-2.2**
ARTI				IAmb	IAmb	13 26 18.1	
	comp=Z,7.8nm,0.7s						
ARTI	**Arti**	**28.20**	**331**	LR	LR	13 38 12.6	
	comp=Z,48nm,19.4s,baz=181,slow=38						
ARTI	**Arti**	**28.20**	**331**	*d i*P	**P**	**13 26 13.9**	**+0.4**
ARTI						13 27 03.7	
ARTI				S	**S**	**13 31 04.4**	**+5.8**
ARTI				SS	**SnSn**	**13 32 18.5**	**+3.7**
ARTI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AKT	**Akhty**	**28.60**	**296**	*e*P	**P**	**13 26 18.1**	**+0.7**
AKT				*e*		13 27 07.0	
AKT				pmax	pmax		
	comp=Z,16nm,0.7s						
MAK	**Makhachkala**	**28.91**	**299**	*c i*P	P	13 26 14.6	-5.4
MAK				*e*		13 27 07.7	
MAK				*e*S	**S**	**13 31 03.4**	**-6.7**
MAK				pmax	pmax		
	comp=Z,133nm,1.2s						
MAK				MLR	MLR		
	comp=Z,180nm,12.0s						
NJ2	**Nanjing**	**30.39**	**83**	*e*P	**P**	**13 26 34.0**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BELG	**Belogornoye**	**31.30**	**317**	LR	LR	13 40 43.3	
	comp=Z,134nm,18.1s,baz=67,slow=39						
NCK	**Nalchik**	**31.81**	**300**	⇑*e*P	**P**	**13 26 46.7**	**+1.1**
NCK				pmax	pmax		
	comp=Z,17nm,1.0s						
KBZ	**Khabaz**	**32.34**	**300**	P	**P**	**13 26 50.3**	**+0.1**
	comp=Z,2.6nm,0.8s,baz=139,slow=10,SNR=5.6						
	comp=Z,2.6nm,0.8s						
KBZ	**Khabaz**	**32.34**	**300**	*de*P	**P**	**13 26 50.4**	**+0.2**
KBZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KIV	**Kislovodsk**	**32.51**	**300**	*e*P	**P**	**13 26 52.0**	**+0.2**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,37nm,15.0s						
KIRV	**Kirov**	**33.35**	**329**	*d i*P	**P**	**13 26 59.3**	**+0.4**
CN2	**Changchun**	**34.58**	**60**	*e*P	**P**	**13 27 10.5**	**+0.8**
CN2				*e*S	S	13 32 30.5	-8.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,200nm,11.0s						
CN2				LR	LR		
	comp=Z,200nm,11.0s						
CN2				LR	LR		
	comp=Z,100nm,11.0s						
NRIK	**Noril'sk**	**35.86**	**3**	P	**P**	**13 27 19.8**	**-0.7**
NRIK				IAmb	IAmb	13 27 25.9	
	comp=Z,11nm,1.1s						
NRIK	**Noril'sk**	**35.86**	**3**	⇑*e*P	**P**	**13 27 20.6**	**+0.2**
NRIK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KSRS	**Korea Array**	**36.79**	**71**	P	**P**	**13 27 28.8**	**+0.1**
	comp=Z,2.5nm,0.7s,baz=283,slow=8.1,SNR=14						
	comp=Z,2.5nm,0.7s						
OBN	**Obninsk**	**38.38**	**318**	⇓*e*P	**P**	**13 27 43.0**	**+1.0**
OBN				pmax	pmax		
	comp=Z,11nm,1.2s						
OBN				MLR	MLR		
	comp=Z,60nm,19.0s						
KLMR	**Klimovskoe**	**38.84**	**328**	*e*P	**P**	**13 27 44.3**	**-1.5**
KLMR				pmax	pmax		
	comp=Z,16nm,1.1s						
MMAI	**Mount Meron Ar**	**39.19**	**283**	LR	LR	13 44 18.8	
	comp=Z,59nm,18.1s,baz=145,slow=37						
KLR	**Kul'dur**	**39.26**	**52**	*de*P	**P**	**13 27 49.6**	**+0.1**
KLR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRTR	**Keskin Array B**	**39.36**	**293**	P	**P**	**13 27 51.3**	**+0.7**
	comp=Z,1.3nm,0.7s,baz=75,slow=6.1,SNR=5.5						
	comp=Z,1.3nm,0.7s						
BRTR	**Keskin Array B**	**39.36**	**293**	*ce*P	**P**	**13 27 52.0**	**+1.4**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
EIL	**Elat**	**40.50**	**278**	LR	LR	13 48 44.7	
	comp=Z,47nm,18.5s,baz=70,slow=42						
SBUM	**Sibu**	**41.57**	**132**	P	**P**	**13 28 09.6**	**+0.7**
AK09	**Malin Array Si**	**42.07**	**310**	P	**P**	**13 28 12.3**	**-0.4**
AK08	**Malin Array Si**	**42.09**	**310**	P	**P**	**13 28 12.5**	**-0.3**
AK10	**Malin Array Si**	**42.09**	**310**	P	**P**	**13 28 12.5**	**-0.3**
AKASG	**Malin Array Be**	**42.11**	**310**	P	**P**	**13 28 12.3**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=82,slow=7.8,SNR=6.9						
	comp=Z,0.9nm,0.5s						
AKASG	**Malin Array Be**	**42.11**	**310**	*ce*P	**P**	**13 28 13.0**	**0.0**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKBB	**Malin Array Si**	**42.11**	**310**	⇑*e*P	**P**	**13 28 14.1**	**+1.1**
AKBB	**Malin Array Si**	**42.11**	**310**	P	**P**	**13 28 12.8**	**-0.2**
KIEV	**Kiev**	**42.12**	**310**	P	**P**	**13 28 12.4**	**-0.7**
	comp=Z,22nm,2.2s						

AK06	Malin Array Si	42.12	310	P	P	13 28 12.7	-0.4
AK12	Malin Array Si	42.15	310	P	P	13 28 12.9	-0.4
ELL	Elmali	42.75	290	P	P	13 28 18.7	+0.2
ELL	Elmali	42.75	290	P	P	13 28 18.7	+0.2
ELL				pmax	pmax		
	comp=Z,68nm,0.7s						
LUBAR	Lubar, Ukraine	43.03	309	P	P	13 28 20.1	-0.4
MNK	Minsk	43.22	316	*i* P	P	13 28 21.1	-0.9
	comp=E,13nm,0.8s						
MNK				*i* P	P	13 28 21.1	-0.9
	comp=N,10.0nm,0.7s						
MNK				*i* P	P	13 28 21.1	-0.9
	comp=Z,10.0nm,0.7s,baz=96						
MNK				*i* PP	PP	13 29 40.0	-22
MNK				*i* PcP	PcP	13 30 09.6	-1.5
MNK				*i* PPP	PPP	13 30 38.5	
MNK				*i* S	S	13 34 49.5	+1.2
MNK				*i* SS	SnSn	13 38 14.3	-3.8
MNK	Minsk	43.22	316	*i* P	P	13 28 21.0	-0.9
MNK				*i*		13 30 09.5	
MNK				*i* PPP	PPP	13 30 38.5	
MNK				*i* S	S	13 34 49.5	+1.2
MNK				*i* SS	SnSn	13 38 14.3	-3.8
MNK				pmax	pmax		
	comp=N,10.0nm,0.7s						
MNK				pmax	pmax		
	comp=E,13nm,0.8s						
MNK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MNK				MLR	MLR		
	comp=N,777nm,15.0s						
MNK				MLR	MLR		
	comp=E,992nm,15.0s						
MNK				MLR	MLR		
	comp=Z,137nm,17.0s						
KMPD	K-Podol'skiy	43.89	307	P	P	13 28 27.2	-0.2
KMPD				pP	P	13 28 30.2	+2.8
HORU	Horodok	43.90	308	P	P	13 28 27.4	-0.1
RNPP9	Sopachiv	44.24	311	P	P	13 28 30.0	-0.2
RNPP5	Staryi Chortor	44.24	311	P	P	13 28 29.9	-0.3
RNPP8	Varash	44.26	311	P	P	13 28 30.1	-0.3
MLR	Muntele Rosu	44.42	303		P	13 28 32.3	+0.4
MLR	Muntele Rosu	44.42	303	P	P	13 28 32.3	+0.4
MLR				pmax	pmax		
	comp=Z,19nm,0.9s						
MAJO	Matsushiro	45.04	70	*ce*P	P	13 28 36.8	0.0
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MJAR	Matsushiro Arr	45.04	70	P	P	13 28 36.6	-0.3
	comp=Z,4.8nm,0.8s,baz=288,slow=9.5,SNR=16						
	comp=Z,4.8nm,0.8s						
FINES	FINESS Array B	45.21	326	P	P	13 28 37.5	-0.2
	comp=Z,3.8nm,0.5s,baz=105,slow=8.6,SNR=24						
FINES				LR	LR	13 48 18.8	
	comp=Z,49nm,19.4s,baz=122,slow=37						
	comp=Z,3.8nm,0.5s						
HOLU	Holmets	46.59	307	P	P	13 28 48.5	-0.4
ASAJ	Asahikawa	46.91	59	P	P	13 28 51.0	-0.4
	comp=Z,2.3nm,0.7s,baz=283,slow=18,SNR=1.8						
	comp=Z,2.3nm,0.7s						
ARCES	ARCESS Array B	47.51	336	P	P	13 28 56.0	+0.2
	comp=Z,1.6nm,0.5s,baz=93,slow=7.3,SNR=14						
ARCES				PcP	PcP	13 30 24.8	-0.9
	comp=Z,6.2nm,1.0s,baz=104,slow=4.5,SNR=4.6						
	comp=Z,1.6nm,0.5s						
VYHS	Vyhne	48.94	308	*e*P	P	13 29 07.8	+0.6
VYHS	Vyhne	48.94	308	*e*P	P	13 29 07.8	+0.6
MORH	Mrgy, Hungar	49.39	305	P	P	13 29 10.4	-0.2
	comp=Z,5.3nm,1.0s						
MORC	Moravsky Berou	49.63	309	*e*P	P	13 29 13.1	+0.6
MPLH	Magyarpolny	49.99	306	P	P	13 29 15.0	-0.2
	comp=Z,11nm,0.9s						
VRAC	Vranov	50.31	309	*e*P	P	13 29 18.5	+1.0
DPC	Dobruska-Polom	50.34	310	*e*P	P	13 29 18.5	+0.6
DPC	Dobruska-Polom	50.34	310	*e*P	P	13 29 18.5	+0.6
DPC	Dobruska-Polom	50.34	310	P	P	13 29 17.5	-0.4
	comp=Z,4.9nm,1.7s						
KRUC	Moravsky	50.47	309	*e*P	P	13 29 19.2	+0.4
CHVC	Chvalec	50.48	311	*e*P	P	13 29 19.6	+0.7
CHVC	Chvalec	50.48	311	*e*P	P	13 29 19.6	+0.7
RONA	Rosalia, Austr	50.74	307	*i* P	P	13 29 21.6	+0.7
	comp=Z,7.4nm,1.3s						
CONA	Conrad Observa	50.99	307	*i* P	P	13 29 23.6	+0.7
	comp=Z,9.6nm,1.0s						
HFS	Hagfors	51.14	323	P	P	13 29 23.4	-0.2
	comp=Z,6.9nm,0.5s,baz=99,slow=9.2,SNR=33						
	comp=Z,6.9nm,0.5s						
ARSA	Arzberg	51.34	307	*i* P	P	13 29 24.9	-0.4
	comp=Z,3.2nm,1.1s						
SEY	Seymchan	51.52	33	⇓*e*P	P	13 29 26.9	+0.5
SEY				pmax	pmax		
	comp=Z,6.0nm,1.5s						
SOKA	Soboth	51.77	306	*i* P	P	13 29 29.2	+0.6
	comp=Z,9.8nm,0.7s						
BRG	Berggiesshubel	51.78	311	*e*P	P	13 29 29.2	+0.7
BRG				Amp		13 29 30.1	
	comp=Z,4.3nm,1.0s						
MOA	Molln	52.06	307	*i* P	P	13 29 30.4	-0.4
	comp=Z,5.2nm,0.8s						
NC405	NORSAR Array S	52.09	324	P	P	13 29 31.1	+0.4
NC405				IAmb	IAmb	13 29 32.8	
	comp=Z,8.9nm,0.8s						
OBKA	Obir	52.13	306	*e*P	P	13 29 32.2	+0.8
	comp=Z,5.6nm,1.1s						
GEC2	GERESS Array S	52.26	309	IAmb	IAmb	13 29 33.7	
	comp=Z,6.1nm,1.1s						
GERES	GERESS Array B	52.26	309	P	P	13 29 32.1	-0.2
GERES	GERESS Array B	52.26	309	P	P	13 29 31.4	-0.8
	comp=Z,3.7nm,0.9s,baz=76,slow=5.6,SNR=22						
	comp=Z,3.7nm,0.9s						
GERES	GERESS Array B	52.26	309	P	P	13 29 32.1	-0.2
KHC	Kasperske Hory	52.29	309	*e*P	P	13 29 33.3	+0.9
KHC	Kasperske Hory	52.29	309	*e*P	P	13 29 33.3	+0.9
KHC	Kasperske Hory	52.29	309	P	P	13 29 32.0	-0.4
	comp=Z,7.6nm,2.2s						
NB2	NORSAR Subarra	52.33	324	P	P	13 29 31.8	-0.8
	comp=Z,6.4nm,0.9s,baz=88,slow=7.4						
NOA	NORSAR Array B	52.33	324	P	P	13 29 31.4	-1.1
	comp=Z,2.7nm,0.6s,baz=87,slow=7.3,SNR=21						
NOA				LR	LR	13 52 04.5	
	comp=Z,30nm,20.3s,baz=65,slow=36						
	comp=Z,2.7nm,0.6s						
BIOA	Bad Ischl, Aus	52.51	307	*e*P	P	13 29 34.1	0.0
	comp=Z,1.6nm,0.6s						
NC204	NORSAR Array S	52.54	325	P	P	13 29 33.8	-0.4
MYKA	Terra Mystica	52.72	306	*e*P	P	13 29 33.5	-2.2
	comp=Z,2.6nm,1.0s						
LESA	Schwarzleotal	53.20	307	*i* P	P	13 29 39.3	+0.1
	comp=Z,6.0nm,0.9s						
STAL	STALIGIAL	53.43	306	IAmb	IAmb	13 29 44.4	
	comp=Z,9.1nm,1.1s						
ABTA	Abfaltersbach	53.45	306	*e*P	P	13 29 40.4	-0.8
	comp=Z,2.0nm,0.9s						
WTTA	Wattenberg	53.93	307	*i* P	P	13 29 44.3	-0.5
	comp=Z,9.4nm,1.1s						
WATA	Walderalm	53.95	307	*e*P	P	13 29 44.0	-0.8
	comp=Z,2.1nm,0.5s						
SQTA	Sankt Quirin	54.22	307	*i* P	P	13 29 46.1	-0.7
	comp=Z,6.3nm,0.8s						
MOTA	Moosalm	54.26	307	*e*P	P	13 29 46.5	-0.7
	comp=Z,4.5nm,0.8s						
RETA	Reutte	54.46	308	*e*P	P	13 29 48.2	-0.2
	comp=Z,2.8nm,0.6s						
FETA	Feichten	54.59	307	*i* P	P	13 29 48.6	-0.9
	comp=Z,3.9nm,0.9s						
FUORN	Ofenpass-Fuorn	54.99	307		P	13 29 51.6	-0.9
FUORN				IAmb	IAmb	13 29 56.2	
	comp=Z,5.6nm,0.9s						
DAVA	Damuels	55.09	308	*e*P	P	13 29 52.8	-0.3
	comp=Z,9.9nm,0.9s						
DAVOX	Davos/Dischmat	55.21	307	LR	LR	13 54 56.2	
	comp=Z,44nm,18.8s,baz=72,slow=38						
TUE	Stuetta	55.64	307	P	P	13 29 57.0	-0.2
	comp=Z,19nm,0.8s						
MEM	Membach	56.77	312	*d*P	P	13 30 04.5	-0.4
WLF	Walferdange	56.91	311	*d*P	P	13 30 06.4	+0.4
BILL	Bilibino	56.94	26	⇓*e*P	P	13 30 07.1	+1.3
BILL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BGES	Gesves	57.40	312	*d*P	P	13 30 09.6	+0.3
BMRD	Maredsous	57.62	312	*d*P	P	13 30 11.4	+0.5
DOU	Dourbes	57.78	312	*d*P	P	13 30 11.9	-0.2
BATI	Baumata	58.51	131	LR	LR	14 02 33.4	
	comp=Z,644nm,18.2s,baz=324,slow=43						
MBAR	Mbarara	59.39	246	P	P	13 30 22.2	-1.7
MBAR	Mbarara	59.39	246	⇑*i*P	P	13 30 24.5	+0.5
MBAR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
EKA	Eskdalemuir Ar	60.82	319	P	P	13 30 32.3	-0.7
	comp=Z,3.2nm,0.7s,baz=78,slow=7.0,SNR=12						
	comp=Z,3.2nm,0.7s						
C16K	Lisburne Hills	66.72	22	P	P	13 31 10.3	-1.4
	baz=303						
GAMB	Gambell	66.81	28	P	P	13 31 11.8	-0.5
	baz=299						
A19K	Wainwright	66.90	19	P	P	13 31 11.7	-1.0
	baz=306						
ESDC	Sonseca Array	67.11	303	P	P	13 31 13.8	-0.9
	comp=Z,1.2nm,0.8s,baz=65,slow=6.3,SNR=8.6						
	comp=Z,1.2nm,0.8s						
B18K	Kokolik River	67.18	20	P	P	13 31 13.5	-1.1
	baz=305						
C17K	DeLong Mountai	67.28	21	P	P	13 31 14.3	-1.0
	baz=304						
TNA	Tin City	67.31	25	P	P	13 31 14.2	-1.2
	baz=302						
A21K	Barrow	67.39	17	P	P	13 31 14.8	-1.0
	baz=309						
D17K	Noatak River	67.75	22	P	P	13 31 17.4	-0.8
	baz=305						
C18K	Utukok River	67.78	21	P	P	13 31 17.9	-0.5
	baz=306						
F14K	Arctic Creek	67.92	25	P	P	13 31 18.1	-1.2
	baz=303						
C19K	Lookout Ridge	67.97	20	P	P	13 31 19.3	-0.4
	baz=307						
A22K	Sinclair Lake	68.00	17	P	P	13 31 18.8	-0.9
	baz=311						
B20K	Meade River	68.08	19	P	P	13 31 19.2	-1.1
	baz=309						
F15K	North Star Dit	68.37	24	P	P	13 31 21.5	-0.7
	baz=304						
E17K	Hotham Inlet	68.51	22	P	P	13 31 22.3	-0.6
	baz=306						
E18K	Tukpahlearik C	68.69	22	P	P	13 31 23.4	-0.7
	baz=307						
ANM	Nome	68.76	25	P	P	13 31 24.3	-0.3
	baz=304						
D19K	Kuna River	68.77	20	P	P	13 31 23.8	-0.8
	baz=309						
B22K	Teshekpuk Lake	68.83	18	P	P	13 31 23.8	-1.1
	baz=312						
G15K	Niukluk	68.99	25	P	P	13 31 25.2	-0.8
	baz=305						
B21K	Ikpikpuk River	69.01	18	P	P	13 31 25.3	-0.7
	baz=311						
D20K	Etivluk River	69.06	20	P	P	13 31 25.7	-0.7
	baz=310						
F17K	Baldwin Pennin	69.07	23	P	P	13 31 25.7	-0.7
	baz=307						
C21K	Knifeblade Rid	69.27	19	P	P	13 31 27.1	-0.6
	baz=311						
G16K	Koyuk River	69.33	24	P	P	13 31 27.7	-0.4
	baz=306						
E20K	Nigu River	69.47	20	P	P	13 31 27.7	-1.3
	baz=310						
F18K	Selawik	69.49	22	P	P	13 31 28.4	-0.6
	baz=308						
E19K	Redstone River	69.69	21	IAmb	IAmb	13 31 35.2	
	comp=Z,5.9nm,0.8s						
E19K	Redstone River	69.69	21	P	P	13 31 29.7	-0.6
	baz=310						
H16K	Elim	69.82	25	P	P	13 31 30.8	-0.3
	baz=306						
G17K	Kiwalik Mounta	69.84	23	P	P	13 31 31.1	-0.1
	baz=308						
C23K	Itkillik River	69.88	17	P	P	13 31 31.2	-0.2
	baz=315						
F19K	Shaleruckik Mo	69.92	21	P	P	13 31 31.6	-0.1
	baz=310						
E21K	Killik River	69.97	19	P	P	13 31 31.2	-0.8
	baz=312						
D22K	Ayikyak River	70.02	18	P	P	13 31 31.5	-0.8
	baz=313						
G18K	Tagagawik	70.24	23	P	P	13 31 33.2	-0.6
	baz=309						
F20K	Avaraart Lake	70.40	21	P	P	13 31 33.9	-0.8
	baz=311						
C24K	Franklin Bluff	70.43	17	P	P	13 31 34.0	-0.8
	baz=316						
H17K	Granite Mounta	70.43	24	P	P	13 31 34.0	-0.9
	baz=308						
J14K	Nanvaranak Lak	70.47	27	P	P	13 31 33.9	-1.2
	baz=306						
D23K	Nanushuk River	70.48	18	P	P	13 31 34.5	-0.6
	baz=315						
K13K	Kusilvak Mount	70.53	28	P	P	13 31 34.7	-0.8
	baz=305						
G19K	Purcell Mounta	70.58	22	P	P	13 31 34.7	-1.0
	baz=310						
E22K	Anaktuvuk Pass	70.77	19	IAmb	IAmb	13 31 41.3	
	comp=Z,7.0nm,1.2s						
E22K	Anaktuvuk Pass	70.77	19	P	P	13 31 35.6	-1.3
	baz=314						
M11K	Mekoryuk	70.80	29	P	P	13 31 36.3	-0.9
	baz=305						
H18K	Honhosa River	70.81	23	P	P	13 31 36.0	-1.2
	baz=310						
D24K	Happy Valley	70.81	17	P	P	13 31 35.2	-1.9
	baz=316						
I17K	Unalakleet	70.81	25	P	P	13 31 36.7	-0.5
	baz=308						
SPIA	Saint Paul Isl	70.82	33	P	P	13 31 36.3	-1.0
	baz=302						
F21K	Alatna River	70.93	20	IAmb	IAmb	13 31 42.5	
	comp=Z,4.4nm,0.9s						
F21K	Alatna River	70.93	20	P	P	13 31 36.9	-1.1
	baz=313						
TOLK	Toolik Lake Re	70.99	18	P	P	13 31 36.8	-1.6
	baz=316						
F22K	John River	71.10	19	P	P	13 31 38.1	-0.9
	baz=314						
H19K	Roundabout Mou	71.18	22	P	P	13 31 38.6	-0.8
	baz=311						
J16K	Anvik River	71.22	25	P	P	13 31 38.9	-0.8
	baz=308						
D25K	Kavik River	71.28	16	IAmb	IAmb	13 31 45.2	
	comp=Z,3.9nm,0.9s						
D25K	Kavik River	71.28	16	P	P	13 31 39.2	-0.9
	baz=318						
E23K	Chandalar	71.40	18	IAmb	IAmb	13 31 45.8	
	comp=Z,4.5nm,0.9s						
E23K	Chandalar	71.40	18	P	P	13 31 40.0	-0.8
	baz=316						
G21K	Allakaket	71.41	21	IAmb	IAmb	13 31 41.9	
	comp=Z,5.1nm,0.8s						
G21K	Allakaket	71.41	21	P	P	13 31 40.1	-0.7
	baz=313						
P08K	Saint George I	71.45	34	P	P	13 31 40.9	-0.3
	baz=303						
K15K	Wolf Creek Mou	71.49	26	P	P	13 31 40.2	-1.2
	baz=308						
GCSA	Galena City Sc	71.55	23	P	P	13 31 40.9	-0.8
	baz=311						
L14K	Kuka Creek	71.64	27	P	P	13 31 41.6	-0.7
	baz=307						
C27K	Jago River	71.66	15	P	P	13 31 41.8	-0.5
	baz=321						
E24K	Your Creek	71.68	18	IAmb	IAmb	13 31 47.5	
	comp=Z,3.9nm,0.8s						
E24K	Your Creek	71.68	18	P	P	13 31 42.3	-0.2
	baz=317						
J17K	VABM Dome	71.69	25	P	P	13 31 42.0	-0.5
	baz=309						
H20K	Anotleneega Mo	71.69	22	P	P	13 31 42.4	-0.2
	baz=312						
G22K	Bettles	71.70	20	P	P	13 31 42.2	-0.4
	baz=315						
IMAR	Indian Mountai	71.70	21	P	P	13 31 42.3	-0.3
COLD	Coldfoot	71.84	19	IAmb	IAmb	13 31 45.5	
	comp=Z,3.7nm,0.8s						
COLD	Coldfoot	71.84	19	P	P	13 31 42.5	-1.0
	baz=316						
L15K	Ungalak Mounta	71.89	27	P	P	13 31 42.9	-0.8
	baz=308						
M13K	Dall Lake	71.94	28	P	P	13 31 43.5	-0.6
	baz=307						
H21K	Melozitna Rive	72.21	21	IAmb	IAmb	13 31 50.8	
	comp=Z,5.9nm,0.9s						
H21K	Melozitna Rive	72.21	21	P	P	13 31 44.2	-1.4
	baz=314,SNR=6.9						
F24K	Squaw Lake	72.25	18	P	P	13 31 44.5	-1.4
	baz=318						
G23K	Bananza Creek	72.26	19	P	P	13 31 45.0	-1.0
	baz=316						
M14K	Bethel	72.28	28	P	P	13 31 45.4	-0.7
	baz=308						
I20K	Naaghedeneel	72.29	22	P	P	13 31 45.5	-0.6
	baz=313						
E25K	Arctic Village	72.38	17	P	P	13 31 46.0	-0.7
	baz=319						
K17K	Iditarod	72.39	25	P	P	13 31 46.3	-0.5
	baz=310,SNR=6.6						
J18K	Innoko River	72.45	24	P	P	13 31 47.1	-0.1
	baz=311						
J19K	Poorman	72.46	23	IAmb	IAmb	13 31 52.8	
	comp=Z,5.1nm,0.9s						
J19K	Poorman	72.46	23	P	P	13 31 47.1	-0.1
	baz=312						
H22K	Ishtalitna Cre	72.47	20	P	P	13 31 47.0	-0.2
	baz=315						
D27M	Malcolm River	72.56	15	P	P	13 31 47.3	-0.5
	baz=323						
WRA	Warramunga Arr	72.58	129	P	P	13 31 47.8	-0.7
	comp=Z,5.6nm,0.8s,baz=324,slow=6.2,SNR=48						
	comp=Z,5.6nm,0.8s						
WRAB	Tennant Creek	72.58	129	⇑*e*P	P	13 31 48.4	-0.1
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.1s						
L16K	Owhat River	72.62	26	P	P	13 31 48.4	+0.3
	baz=310						
F25K	Christian Rive	72.76	17	P	P	13 31 48.4	-0.6
	baz=319						
L17K	Donlin	72.77	25	P	P	13 31 48.0	-1.1
	baz=310,SNR=8.6						
M15K	Kasigluk River	72.80	27	P	P	13 31 48.6	-0.6
	baz=309						
J20K	Nowinta River	72.82	23	IAmb	IAmb	13 31 54.8	
	comp=Z,5.2nm,0.8s						
J20K	Nowinta River	72.82	23	P	P	13 31 48.7	-0.6
	baz=313,SNR=5.5						
A36M	Sachs Harbour	72.87	9	P	P	13 31 48.8	-0.6
	baz=336						
N14K	Kuskokwak Cree	72.89	28	P	P	13 31 49.3	-0.5
	baz=308						
D28M	Stokes Point	72.96	14	P	P	13 31 48.8	-1.2
	baz=325						
G24K	Hadweenzic Riv	72.96	19	IAmb	IAmb	13 31 55.5	
	comp=Z,4.7nm,0.9s						
G24K	Hadweenzic Riv	72.96	19	P	P	13 31 49.7	-0.4
	baz=318						
H23K	Yukon River	73.04	20	IAmb	IAmb	13 31 56.1	
	comp=Z,3.7nm,0.9s						
H23K	Yukon River	73.04	20	P	P	13 31 49.9	-0.7
	baz=316						
F26K	Sheenjek River	73.06	17	P	P	13 31 49.3	-1.4
	baz=321						
BMAR	Burnt Mountain	73.15	17		P	13 31 51.8	+0.5
M16K	Timber Creek	73.25	27	P	P	13 31 51.1	-0.8
	baz=310						
E27K	Coleen River	73.27	16	IAmb	IAmb	13 31 57.0	
	comp=Z,6.2nm,1.1s						
E27K	Coleen River	73.27	16	P	P	13 31 51.5	-0.5
	baz=323,SNR=5.9						
MLY	Manley	73.27	21	IAmb	IAmb	13 31 57.1	
	comp=Z,5.3nm,0.9s						
MLY	Manley	73.27	21	P	P	13 31 51.3	-0.7
	baz=316,SNR=11						
G25K	Bearman Lake	73.28	18	P	P	13 31 51.7	-0.3
	baz=319						
L18K	Granite Mounta	73.29	25	IAmb	IAmb	13 31 57.8	
	comp=Z,7.4nm,0.8s						
L18K	Granite Mounta	73.29	25	P	P	13 31 51.9	-0.2
	baz=312,SNR=5.8						
N15K	Kwethluk River	73.36	28	P	P	13 31 52.5	-0.1
	baz=309						
E28M	Babbage River	73.38	15	P	P	13 31 52.8	+0.2
	baz=324						
K20K	Telida	73.41	23	IAmb	IAmb	13 31 58.3	
	comp=Z,5.6nm,0.8s						
K20K	Telida	73.41	23	P	P	13 31 52.1	-0.7
	baz=313,SNR=7.4						
O14K	Tigyukauivet M	73.48	29	P	P	13 31 53.2	0.0
	baz=309						
H24K	Noodor Dome	73.50	19	P	P	13 31 53.0	-0.4
	baz=318						
M17K	Holitna River	73.56	26	P	P	13 31 53.9	+0.2
	baz=311						
I23K	Minto, Yukon-K	73.59	20	IAmb	IAmb	13 31 59.0	
	comp=Z,5.1nm,0.9s						
I23K	Minto, Yukon-K	73.59	20	P	P	13 31 53.6	-0.2
	baz=317,SNR=8.0						
CHUM	Lake Minchumin	73.60	22	P	P	13 31 53.7	-0.2
	baz=315						
N16K	Nishlik Lake	73.67	27	P	P	13 31 53.7	-0.8
	baz=310						
G26K	Porcupine Rive	73.72	17	P	P	13 31 53.4	-1.2
	baz=321						
H25L	Birch Creek	73.73	18	P	P	13 31 53.5	-1.1
	baz=320						
NIKH	Nikolski High	73.81	37	P	P	13 31 54.8	-0.5
	baz=305						
BPAW	Bear Paw Mtn.	73.86	22	IAmb	IAmb	13 31 59.6	
	comp=Z,5.6nm,1.0s						
BPAW	Bear Paw Mtn.	73.86	22	P	P	13 31 55.7	+0.2
	baz=316,SNR=6.8						
E29M	Blow River	73.91	15	IAmb	IAmb	13 32 00.9	
	comp=Z,12nm,1.4s						
E29M	Blow River	73.91	15	P	P	13 31 55.2	-0.4
	baz=326,SNR=7.2						
L19K	White Mountain	73.95	24	IAmb	IAmb	13 32 01.9	
	comp=Z,6.1nm,0.8s						
L19K	White Mountain	73.95	24	P	P	13 31 55.1	-0.9
	baz=313						
CAST	Castle Rocks	74.00	22	IAmb	IAmb	13 32 01.5	
	comp=Z,7.3nm,0.8s						
CAST	Castle Rocks	74.00	22	P	P	13 31 55.8	-0.6
	baz=315,SNR=13						
L20K	Farewell, AK	74.08	24	P	P	13 31 56.4	-0.4
	baz=314						
M18K	Stony River	74.08	25	P	P	13 31 56.6	-0.2
	baz=312						
NEA2	Nenana	74.08	21	P	P	13 31 55.9	-0.8
	baz=317,SNR=24						
O15K	Ungalikthiuk R	74.10	28	P	P	13 31 56.7	-0.2
	baz=310						
F28M	Old Crow	74.12	16	P	P	13 31 56.7	-0.2
	baz=324						
COLA	College	74.22	20	P	P	13 31 57.8	+0.2
COLA	College	74.22	20	*d i*P	P	13 31 57.8	+0.2
COLA				pmax	pmax		
	comp=Z,11nm,0.9s						
COLA	College	74.22	20	P	P	13 31 57.7	+0.2
	baz=318						
N17K	Nushagak Hills	74.23	26	P	P	13 31 57.6	-0.1
	baz=312						
KTH	Kantishna Hill	74.28	22	IAmb	IAmb	13 31 59.3	
	comp=Z,6.9nm,0.9s						
M19K	Big River Lodg	74.30	24	P	P	13 31 56.6	-1.5
	baz=314						
PPLA	Purkeypile	74.34	23	IAmb	IAmb	13 32 03.4	
	comp=Z,6.3nm,0.7s						
PPLA	Purkeypile	74.34	23	P	P	13 31 57.6	-0.8
	baz=315						
G27K	Doyon Strip	74.35	17	P	P	13 31 57.2	-1.2
	baz=323						
PRP	Porcupine Dome	74.38	19	P	P	13 31 57.8	-0.8
	baz=320						
UNV	Unalaska Valle	74.45	35	P	P	13 31 57.5	-1.5
	baz=306						
WRH	Wood River Hil	74.46	20	IAmb	IAmb	13 32 04.4	
	comp=Z,4.2nm,0.8s						
O16K	Kokwok River B	74.51	27	P	P	13 31 57.8	-1.4
	baz=311						
TRF	Thorofare Moun	74.55	22	P	P	13 31 58.0	-1.7
	baz=316						
IL31		74.58	20	IAmb	IAmb	13 32 03.6	
	comp=Z,4.7nm,0.8s						
ILAR	Eielson Array	74.58	20	P	P	13 31 59.2	-0.4
ILAR	Eielson Array	74.58	20	P	P	13 31 59.5	-0.1
	comp=Z,4.2nm,0.9s,baz=312,slow=5.3,SNR=40						
	comp=Z,4.2nm,0.9s						
N18K	Kilae Creek	74.61	26	P	P	13 31 58.6	-1.3
	baz=312						
M20K	Styx River	74.74	24	P	P	13 31 59.8	-0.9
	baz=314						
MCK	McKinley	74.75	21	P	P	13 31 60.0	-0.7
	baz=317						
O17K	Koliganek Bris	74.77	27	P	P	13 32 00.0	-0.7
	baz=312						
HDA	Harding Lake	74.83	20	P	P	13 32 00.3	-0.8
	baz=319						
H27K	Steamboat Moun	74.85	17	P	P	13 32 00.5	-0.7

	baz=323						
INK	Inuvik	74.85	13	P	P	13 32 00.6	-0.5
	baz=329						
P16K	Nushagak River	74.92	28	P	P	13 32 01.0	-0.6
	baz=311						
F30M	Barrier River	75.00	14	IAmb	IAmb	13 32 06.4	
	comp=Z,6.0nm,1.1s						
F30M	Barrier River	75.00	14	P	P	13 32 01.8	-0.2
	baz=328						
N19K	Bonanza Creek	75.02	25	P	P	13 32 01.8	-0.6
	baz=314						
ASAR	Alice Springs	75.02	132	P	P	13 32 02.2	-0.5
	comp=Z,3.1nm,0.7s,baz=315,slow=5.9,SNR=48						
ASAR				LR	LR	14 10 03.5	
	comp=Z,68nm,18.1s,baz=308,slow=40						
	comp=Z,3.1nm,0.7s						
G29M	Pine Creek	75.11	15	P	P	13 32 02.3	-0.4
	baz=326						
J25K	Salcha River,	75.12	19	P	P	13 32 01.6	-1.2
	baz=320						
I26K	Coal Creek Min	75.17	18	P	P	13 32 02.4	-0.7
	baz=322						
SKT	Skwentna	75.21	23	P	P	13 32 02.4	-0.9
	baz=316,SNR=13						
I27K	Kandik River	75.33	17	P	P	13 32 03.0	-1.0
	baz=323						
P17K	Kvichak River	75.41	27	P	P	13 32 04.0	-0.4
	baz=312						
O18K	Koktuh Hills	75.42	26	P	P	13 32 04.1	-0.5
	baz=313						
G30M	tAoh Zraii Nji	75.44	15	P	P	13 32 03.8	-0.9
	baz=327						
O19K	Port Alsworth	75.51	26	P	P	13 32 04.4	-0.6
	baz=314						
WAT1	Susitna Watana	75.54	22	P	P	13 32 04.9	-0.4
	baz=318						
F31M	Tsiigehtchic	75.56	14	P	P	13 32 04.6	-0.5
	baz=329						
H29M	Whitestone	75.60	16	IAmb	IAmb	13 32 13.1	
	comp=Z,12nm,1.4s						
H29M	Whitestone	75.60	16	P	P	13 32 04.2	-1.3
	baz=326,SNR=5.3						
K24K	Donnelly Dome	75.63	20	P	P	13 32 04.7	-1.1
	baz=320,SNR=13						
Q16K	King Salmon	75.67	28	P	P	13 32 05.2	-0.7
	baz=312						
J26L	Joseph Creek	75.70	19	P	P	13 32 05.3	-0.9
	baz=322,SNR=16						
DHY	Denali Highway	75.71	21	IAmb	IAmb	13 32 09.1	
	comp=Z,3.3nm,0.7s						
DHY	Denali Highway	75.71	21	P	P	13 32 05.3	-1.1
	baz=319						
P18K	Big Mountain,	75.73	27	P	P	13 32 05.5	-0.8
	baz=313						
M22K	Willow	75.84	23	P	P	13 32 06.1	-0.7
	baz=317						
SUA	Susitna One	75.84	23	P	P	13 32 06.4	-0.7
	baz=316						
EPYK	Eagle Plains	75.85	15	P	P	13 32 06.4	-0.5
	baz=327						
I28M	Miner Creek	75.87	17	P	P	13 32 06.5	-0.7
	baz=324,SNR=6.9						
G31M	Satah River	75.90	14	IAmb	IAmb	13 32 11.3	
	comp=Z,8.2nm,1.2s						
G31M	Satah River	75.90	14	P	P	13 32 06.5	-0.6
	baz=329						
RIDG	Independent Ri	75.94	20	P	P	13 32 07.2	-0.3
	baz=321,SNR=10						
WAT6	Susitna Watana	75.98	22	P	P	13 32 07.6	-0.3
	baz=319						
SCRK	Sand Creek	76.00	19	IAmb	IAmb	13 32 09.1	
	comp=Z,5.1nm,0.9s						
SCRK	Sand Creek	76.00	19	P	P	13 32 07.4	-0.5
	baz=321,SNR=9.6						
O20K	Slope Mountain	76.19	25	P	P	13 32 08.5	-0.5
	baz=315						
DOT	Dot Lake	76.23	20	P	P	13 32 06.4	-2.8
DOT				IAmb	IAmb	13 32 13.4	
	comp=Z,4.4nm,0.8s						
Q17K	Contact Creek	76.25	28	P	P	13 32 08.9	-0.6
	baz=313						
PMR	Palmer	76.28	23	IAmb	IAmb	13 32 13.8	
	comp=Z,5.6nm,0.8s						
PMR	Palmer	76.28	23	P	P	13 32 08.6	-0.8
	baz=318,SNR=7.1						
P19K	Oil Pt	76.28	26	P	P	13 32 09.0	-0.5
	baz=315						
Q18K	Katmai Hardscr	76.32	27	P	P	13 32 10.2	+0.3
	baz=314						
PAX	Paxson	76.36	20	IAmb	IAmb	13 32 15.8	
	comp=Z,3.6nm,0.8s						
PAX	Paxson	76.36	20	P	P	13 32 09.5	-0.5
	baz=320						
RC01	Rabbit Creek A	76.45	23	P	P	13 32 09.7	-0.7
	baz=317						
K27K	Chicken	76.47	19	IAmb	IAmb	13 32 12.3	
	comp=Z,5.3nm,0.9s						
K27K	Chicken	76.47	19	P	P	13 32 10.4	-0.1
	baz=323						
R17L	Mt. Peulik Vol	76.50	28	P	P	13 32 10.5	-0.3
	baz=313						
M23K	Glacier View	76.57	22	P	P	13 32 11.1	0.0
	baz=319						
Q19K	Cape Douglas,	76.64	26	P	P	13 32 11.4	-0.2
	baz=315						
SCM	Sheep Creek Mo	76.67	22	P	P	13 32 11.6	-0.1
	baz=319						
M24K	Tolsona, Glenn	76.81	21	P	P	13 32 12.7	+0.1
	baz=320						
H31M	Peel River	76.84	15	IAmb	IAmb	13 32 12.9	
	comp=Z,3.0nm,0.6s						
H31M	Peel River	76.84	15	P	P	13 32 12.5	-0.1
	baz=329						
HARP	HAARP	76.89	21	P	P	13 32 12.6	-0.3
	baz=321						
I30M	Mount Dempster	76.89	16	IAmb	IAmb	13 32 17.3	
	comp=Z,3.5nm,0.8s						
I30M	Mount Dempster	76.89	16	P	P	13 32 13.3	+0.3
	baz=328						
O22K	Cooper Landing	76.90	24	P	P	13 32 12.7	-0.2
	baz=317						
L26K	Log Cabin Wild	76.92	20	P	P	13 32 13.4	+0.3
	baz=322						
CHNA	Chernabura Isl	77.02	32	P	P	13 32 12.9	-0.8
	baz=311						
PWL	Port Wells	77.08	23	P	P	13 32 13.6	-0.4
	baz=318						
DAWY	Dawson	77.14	18	P	P	13 32 13.3	-1.0
	baz=325						
SEW	Seward	77.27	24	P	P	13 32 14.2	-0.8
	baz=318						
R18K	Karluk	77.29	28	P	P	13 32 14.9	-0.2
	baz=314						
L27K	Beaver Creek,	77.31	19	P	P	13 32 14.5	-0.8
	baz=323,SNR=6.7						
BCAR	Beaver Creek A	77.32	19		P	13 32 14.3	-1.0
Q20K	Shuyak Island	77.32	26	P	P	13 32 14.6	-0.8
	baz=316						
KLU	Klutina	77.36	22	P	P	13 32 15.4	-0.2
	baz=320						
J30M	Hart River	77.45	16	P	P	13 32 16.3	+0.1
	baz=328,SNR=6.1						
GLI	Glacier Island	77.47	22	P	P	13 32 15.8	-0.4
	baz=319						
M26K	Nabesna, AK	77.52	20	P	P	13 32 16.0	-0.5
	baz=322						
N25K	Chitina, Valde	77.68	21	IAmb	IAmb	13 32 19.2	
	comp=Z,9.8nm,1.1s						
N25K	Chitina, Valde	77.68	21	P	P	13 32 16.8	-0.6
	baz=321,SNR=6.7						
K29M	Barlow Dome	77.78	17	IAmb	IAmb	13 32 18.9	
	comp=Z,2.9nm,0.7s						
K29M	Barlow Dome	77.78	17	P	P	13 32 17.8	-0.2
	baz=327						
KDAK	Kodiak Island	77.85	27	P	P	13 32 17.7	-0.6
	baz=316						
M27K	Edge Creek, AK	77.87	20	IAmb	IAmb	13 32 28.1	
	comp=Z,5.3nm,1.2s						
M27K	Edge Creek, AK	77.87	20	P	P	13 32 17.7	-0.8
	baz=323						
OHAK	Old Harbor	77.98	27	P	P	13 32 19.5	+0.5
	baz=315						
CHIR	Chirikof Islan	78.03	29	P	P	13 32 19.2	-0.1
	baz=314						
P23K	Montague Islan	78.03	23	P	P	13 32 19.1	-0.2
	baz=319						
SII	Sitkinak Islan	78.10	28	P	P	13 32 19.5	-0.3
	baz=315						
BVCY	Beaver Creek	78.10	19	P	P	13 32 19.6	-0.1
	baz=324						
EYAK	Cordova Ski Ar	78.14	22	P	P	13 32 20.2	+0.3
	baz=320						
BMRM	Bremner River	78.17	21	P	P	13 32 20.3	+0.1
	baz=321						
L29M	L29M	78.25	18	P	P	13 32 20.6	+0.1
	baz=326						
VRDI	Verde Repeater	78.32	21	IAmb	IAmb	13 32 26.1	
	comp=Z,4.1nm,0.8s						
MCARA	McCarthy VSAT	78.32	21	P	P	13 32 21.1	+0.2
	baz=323						
MAYO	Mayo, Yukon	78.39	17	P	P	13 32 21.0	-0.2
	baz=328						
M29M	Somme Creek	78.72	18	P	P	13 32 22.9	-0.3
	baz=326						
YUK3	Moose Creek	78.73	19	P	P	13 32 23.3	-0.1
	baz=325						
CRQE	Cirque	78.80	21	P	P	13 32 22.8	-0.9
	baz=323						
Q23K	Middleton Isla	78.81	23	P	P	13 32 23.3	-0.3
	baz=320						
M30M	Minto, Yukon	79.03	17	P	P	13 32 23.7	-1.2
	baz=327						
KAIM	Kayak Island	79.05	22	P	P	13 32 24.9	0.0
	baz=322						
CTG	Chitna Glacier	79.14	20	P	P	13 32 25.8	+0.2
	baz=324						
BGLC	Bering Glacier	79.25	21	P	P	13 32 25.2	-0.7
	baz=322						
YUK8	Steele Glacier	79.33	19	P	P	13 32 26.5	-0.3
	baz=325						
YUK4	Talbot Arm	79.58	19	P	P	13 32 27.1	-0.9
	baz=326						
MESA	MESA	79.60	21	P	P	13 32 27.5	-0.7
	baz=324						
O28M	Mount Upton	79.63	20	P	P	13 32 27.3	-1.1
	baz=325						
N30M	Aishikik Lake	79.90	18	P	P	13 32 29.0	-0.6
	baz=327						
M31M	Drury Creek, Y	79.94	17	P	P	13 32 29.3	-0.5
	baz=329						
YUK6	Outpost Mounta	79.99	19	P	P	13 32 29.4	-1.0
	baz=326						
FARO	Faro, Yukon	80.16	16	P	P	13 32 30.6	-0.4
	baz=330						
PINM	Pinnacle	80.17	20	P	P	13 32 30.0	-1.1
	baz=325						
N31M	Braeburn, Yuko	80.21	18	P	P	13 32 31.0	-0.2
	baz=328						
MMPY	Sheldon Lake,	80.29	15	P	P	13 32 30.8	-0.9
	baz=332						
HYT	Haines Junctio	80.32	19		P	13 32 32.7	+0.7
HYT				IAmb	IAmb	13 32 37.1	
	comp=Z,5.0nm,0.7s						
HYT	Haines Junctio	80.32	19	P	P	13 32 31.7	-0.3
	baz=327						
O29M	Mount Kennedy	80.47	19	P	P	13 32 31.7	-1.1
	baz=326						
O30N	Mendenhall	80.74	18	P	P	13 32 33.7	-0.4
	baz=328						
PNL	Peninsula	80.76	20	P	P	13 32 33.7	-0.6
	baz=326						
P30M	Million Dollar	81.06	19	P	P	13 32 35.5	-0.4
	baz=328						
WHY	Whitehorse	81.15	18	P	P	13 32 35.1	-1.3
	baz=329						
N32M	Quiet Lake	81.16	17	P	P	13 32 35.9	-0.5
	baz=331						
WRGLY	Wrigley	81.24	12	P	P	13 32 36.0	-0.7
	baz=338						
P29M	Windy Craggy	81.27	19	P	P	13 32 36.4	-0.5
	baz=327						
PLBC	Pleasant Camp	81.79	19	P	P	13 32 38.8	-0.8
	baz=328						
TGTN	Hyland Airport	81.90	14	P	P	13 32 39.2	-1.1
	baz=334						
P33M	Teslin, Yukon	82.05	17	IAmb	IAmb	13 32 45.6	
	comp=Z,6.5nm,1.2s						
P33M	Teslin, Yukon	82.05	17	P	P	13 32 40.4	-0.7
	baz=331						
SKAG	Skagway	82.06	18	IAmb	IAmb	13 32 43.1	
	comp=Z,6.7nm,0.9s						
SKAG	Skagway	82.06	18	P	P	13 32 41.1	0.0
	baz=329						
BOSA	Boshof	82.36	228	P	P	13 32 41.6	-1.6
	comp=Z,8.4nm,0.8s,baz=329,slow=1.9,SNR=19						
	comp=Z,8.4nm,0.8s						
P32M	Atlin	82.37	18	P	P	13 32 42.4	-0.3
	baz=330						
WTLY	Watson Lake, Y	83.07	15	IAmb	IAmb	13 32 46.6	
	comp=Z,3.0nm,1.0s						
WTLY	Watson Lake, Y	83.07	15	P	P	13 32 45.8	-0.6
	baz=334						
S31K	Pelican	83.10	20	P	P	13 32 45.1	-1.3
	baz=328						
YKAW3	Yellowknife Wh	83.14	8	IAmb	IAmb	13 32 50.4	
	comp=Z,4.7nm,0.9s						
YKA	Yellowknife Ar	83.20	8	P	P	13 32 45.8	-1.2
	comp=Z,2.5nm,0.8s,baz=343,slow=5.4,SNR=16						
	comp=Z,2.5nm,0.8s						
R33M	Jennings River	83.22	17	P	P	13 32 46.7	-0.6
	baz=332						
YKAW1	Yellowknife Wh	83.23	8	IAmb	IAmb	13 32 47.5	
	comp=Z,5.8nm,1.0s						
Q32M	Nakina River	83.28	17	P	P	13 32 47.1	-0.6
	baz=331						
R32K	Eaglecrest	83.30	19	P	P	13 32 47.4	-0.2
	baz=330						
DLBC	Dease Lake	84.29	17	P	P	13 32 52.1	-0.6
	baz=333						
S34M	Telegraph Cree	84.49	17	P	P	13 32 54.0	+0.4
	baz=332						
TOAD	Toad River Com	84.98	14	P	P	13 32 56.1	0.0
	baz=337						
WRAK	Wrangell Islan	85.50	19	P	P	13 32 58.5	-0.1
	baz=331						
T35M	Bob Quinn	85.54	17	P	P	13 32 58.8	-0.1
	baz=333						
U33K	Whale Pass	85.56	19	P	P	13 32 58.1	-0.8
	baz=331						
STKA	Stephens Creek	85.64	133	LR	LR	14 16 38.1	
	comp=Z,64nm,18.1s,baz=354,slow=39						
CRAG	Craig	86.12	19	P	P	13 33 01.4	-0.4
	baz=331						
V35K	Ketchikan	86.66	19	P	P	13 33 03.7	-0.7
	baz=332						
SCHQ	Schefferville	88.05	343	P	P	13 33 10.3	-0.9
	comp=Z,3.0nm,0.7s,baz=39,slow=5.0,SNR=5.0						
SCHQ				LR	LR	14 17 12.2	
	comp=Z,31nm,18.1s,baz=280,slow=39						
	comp=Z,3.0nm,0.7s						
QSPA	South Pole Qui	123.42	180	PKP	PKPdf	13 39 15.0	-2.4
	comp=Z,3.2nm,0.8s,baz=272,slow=1.2,SNR=19						
CPUP	Villa Florida	144.72	271	PKP	PKPab	13 39 54.0	-2.9
	comp=Z,0.8nm,0.7s,baz=300,slow=5.0,SNR=5.4						
PLCA	Paso Flores	157.54	244	PKP	PKPdf	13 40 17.6	+0.3
	comp=Z,1.2nm,1.0s,baz=153,slow=4.5,SNR=1.7						

SJA ***29*** *13:20:46.7±0.9, 31°.47S×69°.42W, h116^{km}±2^{km}, ML4.3, MW4.2*
NEIC ***29*** *13:20:48.1±2.2, 31°.47S±0°.05×69°.46W±0°.06, h110^{km}±6^{km}, mb4.4/38, Error ellipse: s-maj=8.0km s-min=6.8km az=215.0*
IDC ***29*** *13:20:48.2±1.3, 31°.43S×69°.39W, h110^{km}±11^{km}, mb4.0/9, mbtmp4.5/11, MS3.0/1, Error ellipse: s-maj=25.2km s-min=14.7km az=82.0*
VAO ***29*** *13:20:58.1±1.3, 30°.72S×68°.87W, h104^{km}±33^{km}, mb4.1*
ISC 29 13:20:47.8±0.5**, 31°.47S**±0°.03×**69°.41W**±0°.03**, h111**^{km}±4^{km}**, n144,** σ1^{s}.49/169**, mb4.4**/24**, 3D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLS	Leoncito	0.34	164	eP	Pn	13 21 04.4	+0.1
RTLS				eS	Sn	13 21 16.6	0.0
RTLS				IAML		13 21 18.1	
	comp=Z,31μm,0.6s						
DOCA	Reserva Natura	0.58	28	eP	Pn	13 21 05.9	+0.1
DOCA				eS	Sn	13 21 19.6	+0.3
ZON	Zonda	0.63	97		Pn	13 21 06.3	+0.6
ZON				Sn	Sn	13 21 19.9	+0.7
ZON	Zonda	0.63	97	eP	Pn	13 21 06.1	+0.4
ZON				eS	Sn	13 21 20.2	+1.0
ZON				IAML		13 21 21.5	
	comp=Z,8μm,0.4s						
SJA	San Juan	0.72	95	eP	Pn	13 21 07.0	+0.5
SJA				eS	Sn	13 21 21.7	+1.1
SJA				IAML		13 21 25.5	
	comp=Z,4μm,0.6s						
ACCO	Cerro Coronel	0.92	19	eP	Pn	13 21 09.2	+0.5
ACCO				eS	Sn	13 21 26.0	+1.6
CFA	Coronel Fontan	1.01	98	P	Pn	13 21 09.8	+0.6
	comp=Z,2μm,0.3s,baz=288,slow=11,SNR=4550						
CFA				S	Sn	13 21 25.7	+0.4
	comp=Z,307nm,0.3s,baz=217,slow=6.5,SNR=6.4						
ASAL	Salagasta	1.22	157	eP	Pn	13 21 12.5	+1.0
ASAL				eS	Sn	13 21 30.1	+0.6
CO03	El Pedregal	1.27	299		Pn	13 21 12.5	+0.4
CO03	El Pedregal	1.27	299	eP	Pn	13 21 12.4	+0.4
CO03				eS	Sn	13 21 31.3	+1.0
CO03				IAML		13 21 36.0	
	comp=Z,3μm,0.5s						
AROD	Rodeo	1.30	357	eP	Pn	13 21 13.4	+0.8
AROD				eS	Sn	13 21 32.2	+0.9
ACDV	Cuesta del Vie	1.31	11	eP	Pn	13 21 13.3	+0.6
ACDV				eS	Sn	13 21 32.1	+0.6
ACDV				IAML		13 21 33.9	
	comp=Z,4μm,0.5s						
CO02	Combarbal	1.39	280		Pn	13 21 13.8	+0.3
CO02	Combarbal	1.39	280	eP	Pn	13 21 13.7	+0.3
CO02				eS	Sn	13 21 33.9	+1.0
CO02				IAML		13 21 38.2	
	comp=Z,2μm,0.7s						
CO01	Juntas del Tor	1.60	338		Pn	13 21 17.7	+1.6
CO01	Juntas del Tor	1.60	338	eP	Pn	13 21 17.7	+1.6
CO01				eS	Sn	13 21 41.9	+4.3
CO01				IAML		13 21 42.4	
	comp=Z,2μm,0.3s						
VA03	San Esteban	1.62	217		Pn	13 21 16.7	+0.5
VA03	San Esteban	1.62	217	eP	Pn	13 21 16.3	+0.2
VA03				eS	Sn	13 21 37.8	+0.1
VA03				IAML		13 21 42.9	
	comp=Z,2μm,0.7s						
GO04	Tololo Observa	1.76	317		Pn	13 21 17.7	-0.4
GO04	Tololo Observa	1.76	317	eP	Pn	13 21 18.0	-0.1
GO04				eS	Sn	13 21 41.4	+0.3
AVFE	Valle Fertil	1.86	65	eP	Pn	13 21 19.7	+0.6
AVFE				eS	Sn	13 21 43.9	+0.9
AVFE				IAML		13 21 45.8	
	comp=Z,3μm,0.4s						
VA06	Catapilco	1.94	235		Pn	13 21 19.1	-0.9
PEL	Peldehue	1.99	213		Pn	13 21 20.9	+0.1
PEL	Peldehue	1.99	213	eP	Pn	13 21 20.7	-0.1
PEL				eS	Sn	13 21 48.2	+2.2
MT04	Ro Olivares	2.03	198	eP	Pn	13 21 22.0	+0.6
ROC1	El Roble	2.03	222	eP	Pn	13 21 20.7	-0.8
ROC1				eP		13 21 20.9	
ROC1				eS	Sn	13 21 47.1	0.0
MT08	Bocatoma Ro	2.04	194		Pn	13 21 22.9	+1.4
MT08	Bocatoma Ro	2.04	194	eP	Pn	13 21 22.4	+0.8
MT08				eS	Sn	13 21 57.5	+10
ACAN	Cantantal	2.05	114	eP	Pn	13 21 22.2	+0.7
ACAN				IAML		13 21 50.4	
	comp=Z,4μm,0.3s						
CO06	Fray Jorge	2.07	292		Pn	13 21 20.5	-1.2
AGUA	GUANDACOL	2.12	22	eP	Pn	13 21 23.8	+1.3
AGUA				eS	Sn	13 21 52.5	+3.4
AGUA				IAML		13 22 01.6	
	comp=Z,2μm,0.6s						
MT16	CCHEN	2.17	205		Pn	13 21 23.9	+0.8
CO05	La Serena	2.21	314		Pn	13 21 22.9	-0.5
MT03	Universidad Ad	2.23	204		Pn	13 21 24.6	+0.8
MT03	Universidad Ad	2.23	204	eP	Pn	13 21 23.9	+0.1
MT03				eS	Sn	13 21 51.8	+0.5
MT03				IAML		13 21 56.3	
	comp=Z,2μm,0.7s						
MT05	Renca	2.23	210		Pn	13 21 24.0	+0.2
MT05	Renca	2.23	210	eP	Pn	13 21 23.9	+0.1
MT05				eP		13 21 24.1	
MT05				eS	Sn	13 21 51.2	0.0
MT05				IAML		13 21 54.1	
	comp=Z,1μm,0.5s						
MT02	Curacav	2.31	219		Pn	13 21 23.9	-0.9
MT02	Curacav	2.31	219	eP	Pn	13 21 24.1	-0.7
MT02				eS	Sn	13 21 54.4	+1.3
ACHE	Chepes	2.37	83	eP	Pn	13 21 20.7	-5.0
ACHE				eP		13 21 26.2	
ACHE				eS	Sn	13 21 53.5	-1.2
VA01	Torpederas	2.45	230		Pn	13 21 25.2	-1.4
VA01	Torpederas	2.45	230	eP	Pn	13 21 25.8	-0.8
VA01				eS	Sn	13 21 54.7	-1.7
VA01				IAML		13 22 01.6	
	comp=Z,568nm,0.8s						
MT09	Talagante	2.66	210		Pn	13 21 28.9	-0.6
LCO	Las Campanas	2.69	335		Pn	13 21 29.9	-0.1
LCO	Las Campanas	2.69	335	eP	Pn	13 21 30.0	-0.1
LCO				eS	Sn	13 22 02.4	-0.1
LCO				IAML		13 22 06.5	
	comp=Z,2μm,0.4s						
APLL	PUNTA DE LOS L	2.69	67	eP	Pn	13 21 30.2	+0.4
APLL				eS	Sn	13 21 57.9	-4.3
BO04	La Punta	2.71	202		Pn	13 21 30.4	+0.3
MT01	Popeta	2.85	213		Pn	13 21 30.6	-1.2
MT01	Popeta	2.85	213	eP	Pn	13 21 30.7	-1.1
MT01				eS	Sn	13 22 04.5	-1.2
VA05	Santo Domingo	2.87	220		Pn	13 21 30.8	-1.3
VCA	Vinchina	2.91	21	eP	Pn	13 21 33.2	+0.4
VCA				eS	Sn	13 22 10.9	+3.4
VCA				IAML		13 22 42.3	
	comp=Z,1μm,0.4s						
ACLC	CERRO LA CRUZ	2.94	47	eP	Pn	13 21 33.5	+0.3
ACLC				eS	Sn	13 21 57.7	-10
ACLC				IAML		13 22 10.5	
	comp=Z,862nm,0.5s						
BO01	Tunca	3.24	205		Pn	13 21 35.7	-1.3
BO01	Tunca	3.24	205	eP	Pn	13 21 35.8	-1.3
BO01				eS	Sn	13 22 14.6	-0.4
BO01				IAML		13 22 16.0	
	comp=Z,475nm,0.4s						
MRA	San Martin	3.28	108	eP	Pn	13 21 37.9	+0.4
MRA				eS	Sn	13 22 15.9	-0.1
MRA				IAML		13 22 35.0	
	comp=Z,449nm,0.9s						
RFA	San Rafael	3.39	167	eP	Pn	13 21 38.8	-0.2
RFA				eS	Sn	13 22 17.8	-0.8
BO02	Sierra Bellavi	3.51	199		Pn	13 21 40.4	-0.3
BO02	Sierra Bellavi	3.51	199	eP	Pn	13 21 40.4	-0.3
BO02				eS	Sn	13 22 23.0	+1.4
BO02				IAML		13 22 25.3	
	comp=Z,374nm,0.2s						
AC04	Llanos de Chal	3.56	336		Pn	13 21 40.4	-0.9
AC04	Llanos de Chal	3.56	336	eP	Pn	13 21 40.5	-0.8
AC04				eS	Sn	13 22 21.7	-0.9
AC04				IAML		13 22 30.9	
	comp=Z,403nm,1.1s						
GO03	Copiapo	3.93	349		Pn	13 21 45.8	-0.4
GO03	Copiapo	3.93	349	eP	Pn	13 21 46.0	-0.3
GO03				eS	Sn	13 22 31.2	-0.4
TCA	Tanti	4.12	89	eP	Pn	13 21 48.7	-0.1
TCA				eS	Sn	13 22 46.2	+10
TCA				IAML		13 23 11.5	
	comp=Z,488nm,0.8s						
AC06	Mina Casimiro	4.18	348		Pn	13 21 48.8	-0.8
CYA	Choya	4.34	47	eP	Pn	13 21 50.9	-0.9
CYA				eS	Sn	13 22 40.1	-1.4
CYA				IAML		13 23 26.2	
	comp=Z,310nm,0.7s						
ML02	Panimavida	4.60	201	eP	Pn	13 21 44.5	-11
ML02				eS	Sn	13 22 45.8	-1.8
ML02				IAML		13 22 49.5	
	comp=Z,452nm,0.6s						
AC02	Maricunga	4.62	3		Pn	13 21 56.2	+0.2
AC02	Maricunga	4.62	3	eP	Pn	13 21 55.9	-0.1
AC02				IAML		13 22 56.4	
	comp=Z,126nm,0.6s						
BI02	San Fabin de	5.41	196		Pn	13 22 04.5	-1.8
GO02	Mina Guanaco	6.28	358		Pn	13 22 15.0	-3.3
PB05	IPOC Station P	8.61	355		Pn	13 22 45.7	-4.0
PB06	IPOC Station P	8.73	359		Pn	13 22 48.3	-3.0
TRQA	Tornquist	8.97	139		Pn	13 22 53.3	-1.2
PLCA	Paso Flores	9.29	185		Pn	13 22 56.4	-2.4
PLCA	Paso Flores	9.29	185	P	Pn	13 22 56.2	-2.6
	comp=Z,2.1nm,0.3s,baz=336,slow=9.9,SNR=21						
PLCA				S	Sn	13 24 42.4	+0.9
	comp=Z,1.7nm,0.5s,baz=30,slow=16,SNR=1.1						
PLCA				LR	LR	13 27 05.4	
	comp=Z,101nm,21.3s,baz=327,slow=40						
PLCA	Paso Flores	9.29	185	eP	Pn	13 23 19.8	+21

PB09	IPOC Station P	9.63	1		Pn	13 22 59.9	-3.7
PB01	IPOC Station P	10.38	360		Pn	13 23 09.7	-4.0
PB08	IPOC Station P	11.28	1		Pn	13 23 22.7	-3.4
PB11	IPOC Station P	11.66	359		Pn	13 23 25.8	-5.1
CPUP	Villa Florida	11.75	67	P	Pn	13 23 27.8	-4.2
	comp=Z,0.7nm,0.5s,baz=98,slow=9.3,SNR=5.0						
CPUP				S	Sn	13 25 39.0	-2.2
	comp=Z,1.2nm,0.3s,baz=115,slow=17,SNR=1.6						
GO07	Milladeo Hill,	12.11	195		Pn	13 23 31.1	-5.5
PLTB	Pedras Altas	13.47	95	Pn	Pn	13 23 52.8	-1.7
PB18	Visviri	13.82	360	P	P	13 24 02.4	-1.9
LPAZ	La Paz	15.15	5		Pn	13 24 17.7	+1.1
LPAZ				IAmb	IAmb	13 24 19.2	
	comp=Z,16nm,0.7s						
LPAZ	La Paz	15.15	5	P	Pn	13 24 17.3	+0.7
	comp=Z,19nm,0.7s,baz=170,slow=7.4,SNR=58						
LPAZ	La Paz	15.15	5	*e*P	Pn	13 24 17.6	+1.0
BBSD	Serra de San D	16.31	31	*e*P	Pn	13 24 29.3	-1.1
SIV	San Ignacio	17.18	28	P	P	13 24 40.1	-0.8
	comp=Z,33nm,0.7s,baz=209,slow=8.9,SNR=92						
PTLB	Pontes e Lacer	18.50	33	*e*P	Pn	13 24 56.4	-0.4
PCMB	Pacaembu	18.95	63	*e*P	Pn	13 25 03.5	+1.3
GO09	Cerro Castillo	19.91	185	P	P	13 25 10.0	-0.5
GO09				IAmb	IAmb	13 25 13.2	
	comp=Z,15nm,1.0s						
SALV	Santo Antonio	19.91	42	*e*P	Pn	13 25 13.0	-0.5
VILB	Vilhena	20.28	27	*e*P	P	13 25 15.2	+0.4
EFI	East Falkland	21.85	161	P	P	13 25 28.4	-2.9
MG03	Isla Dawson	22.38	182	P	P	13 25 35.3	-1.4
PDRB	Porto dos Gac	22.97	33	*e*P	P	13 25 44.8	+1.8
USHA	Ushuaia	23.37	179	P	P	13 25 47.5	+1.3
	comp=Z,14nm,0.9s,baz=8.9,slow=9.9,SNR=6.0						
	comp=Z,14nm,0.9s						
ESPZ	Base Esperanza	32.91	170	P	P	13 27 14.9	+3.9
VA02	Isla de Pascua	35.03	267	P	P	13 27 26.0	-3.9
RUSC	La Rusia	37.31	354	P	P	13 27 49.5	-0.5
RUSC				IAmb	IAmb	13 27 55.2	
	comp=Z,4.7nm,0.7s						
GDHS	Morne Mazeau,	48.03	10	P	P	13 29 17.8	+1.8
BELA	Belgrano 2	49.00	171	P	P	13 29 23.8	+1.1
VNA3	Neumayer Olymp	50.89	159	⇓P	P	13 29 38.0	+0.9
	comp=Z,1.9nm,0.7s						
SNAA	Sanae	53.11	159	⇓P	P	13 29 54.2	+0.7
	comp=Z,64nm,0.7s						
SNAA	Sanae	53.11	159	P	P	13 29 53.5	-0.1
	comp=Z,2.8nm,0.8s,baz=304,slow=10,SNR=9.1						
	comp=Z,2.8nm,0.8s						
TROLL	Troll, Antarti	54.83	159	⇓P	P	13 30 07.0	+0.9
	comp=Z,148nm,0.8s						
QSPA	South Pole Qui	58.77	180	P	P	13 30 35.3	+1.3
QSPA				IAmb	IAmb	13 30 52.0	
	comp=Z,2.3nm,0.6s						
QSPA	South Pole Qui	58.77	180	P	P	13 30 35.3	+1.3
	comp=Z,2.3nm,0.6s,baz=169,slow=1.0,SNR=21						
	comp=Z,2.3nm,0.6s						
TXAR	Lajitas Array	68.69	328	P	P	13 31 39.7	+0.3
	comp=Z,1.2nm,0.6s,baz=152,slow=8.8,SNR=16						
	comp=Z,1.2nm,0.6s						
V48A	Smith Brothers	68.82	345	P	P	13 31 39.1	-0.9
V48A				IAmb	IAmb	13 31 41.4	
	comp=Z,6.6nm,0.7s						
OZNA	Ozona	68.96	331	IAmb	IAmb	13 31 43.0	
	comp=Z,5.8nm,0.7s						
PBMO	Poplar Bluff	70.69	342	P	P	13 31 50.7	-0.8
DBIC	Dimbokro	72.25	70	P	P	13 32 01.1	-0.2
	comp=Z,2.8nm,0.5s,baz=245,slow=7.1,SNR=4.0						
	comp=Z,2.8nm,0.5s						
R40A	Maddies Statio	72.60	341	P	P	13 32 03.4	+0.5
P38A	Dawn	74.20	341	IAmb	IAmb	13 32 15.0	
	comp=Z,4.2nm,0.6s						
ANMO	Albuquerque	74.69	329		P	13 32 17.3	+1.8
SDCO	Great Sand Dun	76.66	331	IAmb	IAmb	13 32 28.8	
	comp=Z,2.5nm,0.7s						
I37A	Lemond, Waseca	78.25	343	IAmb	IAmb	13 32 36.4	
	comp=Z,8.1nm,0.6s						
PV18	Skein Mesa, Pa	78.53	329	IAmb	IAmb	13 32 39.3	
	comp=Z,6.6nm,0.8s						
ECSD	EROS Data Cent	78.87	340	IAmb	IAmb	13 32 40.0	
	comp=Z,6.0nm,0.8s						
KNB	Kanab	79.31	326	IAmb	IAmb	13 32 44.4	
	comp=Z,5.6nm,1.0s						
SRU	San Rafael Swe	79.95	329	IAmb	IAmb	13 32 46.8	
	comp=Z,4.9nm,0.8s						
TORD	Torodi Ar. Bea	81.25	69	P	P	13 32 52.1	+0.2
	comp=Z,4.4nm,0.7s,baz=256,slow=5.7,SNR=2.6						
	comp=Z,4.4nm,0.7s						
PDAR	Pinedale Array	82.56	331	P	P	13 32 58.2	-0.2
	comp=Z,1.2nm,0.7s,baz=138,slow=4.0,SNR=8.9						
	comp=Z,1.2nm,0.7s						
CASY	Casey	82.57	180		P	13 32 58.0	-0.1
CASY				IAmb	IAmb	13 33 00.1	
	comp=Z,3.9nm,0.7s						
NVAR	Mina Array Bea	83.13	323	P	P	13 33 02.2	+0.7
	comp=Z,1.3nm,0.7s,baz=151,slow=5.6,SNR=8.5						
	comp=Z,1.3nm,0.7s						
ELK	Elko	83.42	327	IAmb	IAmb	13 33 04.9	
	comp=Z,2.2nm,0.8s						
ULM	Lac du Bonnet	84.67	343	P	P	13 33 08.7	0.0
	comp=Z,2.6nm,0.7s,baz=144,slow=3.9,SNR=5.2						
	comp=Z,2.6nm,0.7s						
HLID	Hailey	85.27	329	IAmb	IAmb	13 33 14.6	
	comp=Z,4.7nm,1.0s						
PLID	Pearl Lake	87.17	329	IAmb	IAmb	13 33 23.6	
	comp=Z,5.8nm,0.8s						
YBH	Yreka Blue Hor	87.84	323	IAmb	IAmb	13 33 25.8	
	comp=Z,1.9nm,0.8s						
FCC	Fort Churchill	92.22	347		P	13 33 45.2	+0.8
ASAR	Alice Springs	120.81	205	PKP	PKPdf	13 39 26.7	-0.8
	comp=Z,0.3nm,0.5s,baz=145,slow=1.8,SNR=7.3						
WRA	Warramunga Arr	124.04	207	PKP	PKPdf	13 39 33.2	-0.6
	comp=Z,0.9nm,0.4s,baz=162,slow=1.7,SNR=21						
BVAR	Borovoye Array	143.92	41	PKP	PKPdf	13 40 09.2	-0.4
	comp=Z,0.7nm,0.6s,baz=352,slow=4.4,SNR=4.4						
KURBB	Kurchatov Arra	149.51	42	PKPbc	PKiKP	13 40 24.6	-0.1
	comp=Z,1.4nm,0.4s,baz=297,slow=3.1,SNR=25						
KURBB				pPKPbc	pPKPbc	13 40 54.1	-0.4
	comp=Z,0.8nm,0.7s,baz=292,slow=3.0,SNR=2.1						
KSH	Kashi	150.83	64	PKPbc	PKiKP	13 40 28.3	+0.3
ZALV	Zalesovo Beam	150.91	32	PKPbc	PKiKP	13 40 27.9	+0.4
	comp=Z,6.1nm,0.4s,baz=304,slow=3.4,SNR=31						
ZALV				pPKPbc	pPKPbc	13 40 57.4	-0.1
	comp=Z,3.9nm,0.7s,baz=314,slow=4.1,SNR=4.1						
MKAR	Makanchi Array	153.42	47	PKPbc	PKPbc	13 40 32.6	-0.2
	comp=Z,1.6nm,0.8s,baz=317,slow=2.7,SNR=8.7						
MKAR				PKPab	PKPab	13 40 46.1	+0.6
	comp=Z,1.2nm,0.7s,baz=305,slow=4.3,SNR=7.1						
MKAR				pPKPbc	pPKPbc	13 41 03.5	-0.2
	comp=Z,0.6nm,0.7s,baz=352,slow=2.9,SNR=2.5						
MJAR	Matsushiro Arr	156.59	290	PKPab	PKPab	13 40 59.4	-0.1
	comp=Z,1.7nm,0.6s,baz=95,slow=3.0,SNR=8.0						
SONM	Songino Array	163.34	10	PKPab	PKPab	13 41 29.1	+0.7
	comp=Z,0.9nm,0.5s,baz=324,slow=3.9,SNR=4.4						
PZH	PanZhiHua	170.81	120	PKP	PKPdf	13 40 41.8	-1.5
LZH	Lanzhou	172.73	49	*e*PKP	PKPdf	13 40 50.3	+6.3
LZH				sPKP		13 41 27.8	

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*JMA **29** 13:21:29.2±0.3, 33°N±3°×13°8E±°, h367km, MV3.1/21, FAR S OFF TOKAI DISTRICT*

*IDC **29** 13:21:35.2±2.2, 32.°78N×138.°14E, h311km±21km, mb2.9/5, mbtmp3.6/9, Error ellipse: s-maj=25.4km s-min=24.6km az=53.0*

ISC 29 13:21:34.9±1.1**, 32.°9N**±0.°1×**138.°21E**±0.°09**, h300**km**, n23, σ1.s87**/25**, mb3.0**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTO4	TONANKAI O.B.S	1.28	334	*e*P	Pn	13 22 19.3	+3.0
TTO2	TONANKAI O.B.S	1.32	312	*e*P	Pn	13 22 19.9	+3.3
TTO1	TONANKAI O.B.S	1.42	303	*e*P	Pn	13 22 20.1	+3.0
JIE	Ise	1.98	321	*e*P	Pn	13 22 23.6	+2.1
JTNC	Tanabenakahech	2.38	295	*e*P	Pn	13 22 26.4	+1.6
JOD2	Odawara 2	2.51	17	*e*P	Pn	13 22 28.1	+2.1
JWY	Kouya	2.57	303	P	Pn	13 22 28.6	+1.9
JYN	Shimob	2.65	6	*e*P	Pn	13 22 29.8	+2.5
BSO1	Boso 1	2.92	51	*e*P	Pn	13 22 29.8	+0.5
BSO1				*e*S	S	13 23 12.9	+0.2
JYTA	Yamagatataniai	2.99	336	*e*P	Pn	13 22 32.0	+1.5
JRY	Ryogami san	3.21	10	*e*P	Pn	13 22 34.8	+2.1
JAI	Aioi	3.28	288	*e*P	Pn	13 22 34.9	+1.4
JWT	Wachi	3.36	317	*e*P	Pn	13 22 35.6	+1.3
MJAR	Matsushiro Arr	3.68	0	P	Pn	13 22 38.7	+1.1
	1.0nm,0.3s,baz=173,slow=11,SNR=12						
JAG	Ashikaga	3.71	16	*e*P	Pn	13 22 37.8	-0.1
JAG				*e*S	S	13 23 25.7	-2.6
KSRS	Korea Array	9.59	301	P	Pn	13 23 49.0	+1.1
	3.2nm,0.7s,baz=110,slow=13,SNR=15						
ASAJ	Asahikawa	11.76	16	P	Pn	13 24 15.5	+1.2
	4.3nm,1.0s,baz=252,slow=20,SNR=2.4						
USRK	Ussuriysk Ar.	12.32	339	P	Pn	13 24 22.0	+0.7
	1.1nm,0.4s,baz=156,slow=9.8,SNR=2.7						
SONM	Songino Array	28.25	311	P	P	13 27 01.3	+0.3
	0.6nm,0.5s,baz=106,slow=9.2,SNR=2.8						
	0.6nm,0.5s						
MKAR	Makanchi Array	44.24	305	P	P	13 29 14.1	-1.1
	0.3nm,0.3s,baz=84,slow=9.9,SNR=4.1						
	0.3nm,0.3s						
KURBB	Kurchatov Arra	46.61	311	P	P	13 29 32.1	-1.4
	0.5nm,0.3s,baz=92,slow=8.8,SNR=8.7						
	0.5nm,0.3s						
WRA	Warramunga Arr	52.63	185	P	P	13 30 17.4	-1.4
	0.6nm,1.0s,baz=1.1,slow=7.5,SNR=3.1						
	0.6nm,1.0s						
ILAR	Eielson Array	54.42	31	P	P	13 30 31.3	0.0
	0.3nm,0.7s,baz=288,slow=6.9,SNR=4.7						
	0.3nm,0.7s						

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*UCR **29** 13:50:58.8±1.3, 8.°35N×82.°85W, h20km±5km, MW3.7*

*UPA **29** 13:50:58.2±0.5, 8.°38N×82.°82W, h41km±1km, ML3.6, MW3.7*

ISC 29 13:50:58.6±1.1**, 8.°35N**±0.°03×**82.°81W**±0.°03**, h33**km±2km**, n44, σ1.s07**/57**, 1D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.06	23	*e*P	Pb	13 51 03.6	-0.6
LESP3				*e*S	Sb	13 51 10.0	+2.0
LPPC	Paso Canoas	0.18	351	*e*P	Pn	13 51 04.2	0.0
LPPC				*e*S	Sb	13 51 08.9	-0.5
LIMO3	Limones	0.26	192	*e*P	Pn	13 51 06.1	+0.3
LIMO3				*e*S	Sb	13 51 12.1	+1.4
LMNES	Limones	0.26	191	*e*P	Pn	13 51 06.0	+0.2
NELY	Ciudad Neily	0.32	336	*e*P	Pb	13 51 05.6	-1.1
NELY				*e*S	Sn	13 51 11.5	-0.7
DVD	David	0.37	77	*e*P	Pb	13 51 07.4	+0.2
DVD				*e*S	Sn	13 51 13.5	+0.1
CSTBL	De las Acacias	0.37	81	*e*P	Pb	13 51 07.5	+0.2
PEDE3	Pedregal, Chir	0.39	86	*e*P	Pb	13 51 07.4	-0.1
PEDE3				*e*S	Sn	13 51 14.8	+0.8
LOCO3	Loma Colorada,	0.39	82	*e*P	Pb	13 51 07.4	-0.2
FITO	Golfito	0.43	309	*e*P	Pb	13 51 06.2	-2.0
CLLRA	Cordillera,	0.43	27	*e*P	Pb	13 51 08.1	-0.3
MLIR3	Monte Lirio, C	0.44	358	*e*P	Pb	13 51 07.6	-0.8
MLIR3				*e*S	Sn	13 51 15.5	0.0
BRU2	Volcan	0.45	15	*e*P	Pb	13 51 08.3	-0.4
BRU2				*e*S	Sn	13 51 16.0	0.0
BRU2	Volcan	0.45	15	*e*P	Pb	13 51 08.4	-0.2
BRU2				AMP		13 51 08.7	
	comp=Z,2μm,0.1s						
BRU2				*e*S	Sn	13 51 16.0	0.0
EDAD	Golfito	0.46	310	*e*P	Pb	13 51 06.7	-1.9
PTAR3	Potrerillos Ar	0.46	43	*e*P	Pb	13 51 08.5	-0.1
RSRNO	Rio Sereno	0.46	354	*e*P	Pb	13 51 08.5	-0.2
TBS2		0.46	19	*e*P	Pn	13 51 09.3	+0.2
SCLRA	Santa Clara, W	0.48	4	*e*P	Pb	13 51 08.7	-0.2
VITO	San Vito	0.49	341	*e*P	Pb	13 51 08.6	-0.6
BC3P	Paso Ancho	0.50	23	*e*P	Pb	13 51 08.9	-0.5
BC3P				AMP		13 51 09.7	
	comp=Z,5μm,0.1s						
BC3P				*e*S	Sn	13 51 17.6	+0.3
BQTLY	Boquete Panama	0.53	41	*e*P	Pb	13 51 09.5	-0.3
PSOM3	Paja de Sombre	0.59	56	*e*P	Pn	13 51 10.0	-0.6
ALCO	Alturas Coton,	0.59	358	*e*P	Pn	13 51 09.8	-1.1
EDP2	Potrero Grande	0.75	331	*e*P	Pn	13 51 12.2	-0.7
PBNVO	Pueblo Nuevo,	0.81	49	*e*P	Pn	13 51 13.3	-0.4
RBALA	Bur	0.83	51	*e*P	Pn	13 51 13.9	-0.1
DRK0	Durika	1.00	335	*e*P	Pn	13 51 15.8	-0.7
DRK0	Durika	1.00	335	*e*P	Pn	13 51 15.8	-0.7
DRK0				*e*S	Sn	13 51 28.6	-0.9
EDPE	Pejibaye, P	1.10	317	*e*P	Pn	13 51 17.2	-0.4
KKNTU	Kakintº	1.11	64	*e*P	Pn	13 51 17.7	-0.1
SAJE	San Jernim	1.20	325	*e*P	Pn	13 51 18.7	-0.5
GMAL	Guarumal, Vera	1.67	110	*e*P	Pn	13 51 24.9	-0.7
GMAL				*e*S	Sn	13 51 43.2	-2.6
LLNJ	Naranjito	1.69	311	*e*P	Pn	13 51 26.5	+0.7
PISJ	San Jernim	1.81	315	*e*P	Pn	13 51 29.2	+1.6
ABE2	San Pablo	1.82	318	*e*P	Pn	13 51 29.6	+1.8
PICV	PH. Pirrs	1.86	313	*e*P	Pn	13 51 29.1	+0.8
ABRB	Las Abras (San	1.87	332	*e*P	Pb	13 51 31.6	-0.6
CVTV	Tajo	1.88	331	*e*P	Pn	13 51 30.0	+1.3
PAR1A	Puntarenas Pro	1.88	311	*e*P	Pn	13 51 29.5	+1.1
RVLA	Villa Bonita	1.91	336	*e*P	Pn	13 51 30.1	+1.3
AZU	Azuero	2.58	102	*e*P	Pn	13 51 37.6	-0.3
AZU				⇓*e*S	Sn	13 52 07.3	-0.9
ARE1	Arenal 1	2.81	318	*e*P	Pn	13 51 44.2	+2.9
VARE2	V. Arenal	2.81	318	*e*P	Pn	13 51 44.3	+2.9

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*TIR **29** 14:05:41.5, 40.°40N×20.°86E, h15km, Md2.5/4, Ml2.3/5*

*ATH **29** 14:05:43.2, 40.°48N×20.°75E, h13km±1km, ML1.9/5, Manual Solution by F.Xalaris First location: 2019/06/29 14:06:58, This location: 2020/10/06 20:35:41 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

ISC 29 14:05:42.3±1.0**, 40.°45N**±0.°05×**20.°81E**±0.°04**, h14**km±8km**, n12, σ1.s18**/22**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.18	354	Pg	Pg	14 05 46.9	+0.2
KBN				Sg	Sg	14 05 50.2	+0.6
KBN				AML	AML	14 05 51.8	
	3.3nm,0.3s						
NEST	Nestorio	0.18	100	Pg	Pg	14 05 45.4	-1.3
NEST				Sg	Sb	14 05 51.9	+1.0
NEST				AML	AML	14 05 54.5	
	1.6nm,0.2s						
NEST				AMd		14 06 14.3	
NEST	Nestorio	0.18	100	P	Pb	14 05 48.6	+1.1
NEST				S	Sb	14 05 52.4	+1.5
PENT	Pentalofos	0.35	135	P	Pn	14 05 51.2	-1.9
PENT				S	Sn	14 05 57.5	-2.4
FNA	Florina	0.55	52	Pg	Pb	14 05 52.9	-0.7
FNA				Sg	Sb	14 06 01.5	+0.1
FNA				AML	AML	14 06 09.4	
	0.8nm,0.2s						
FNA				AMd		14 06 40.4	
KZN	Kozani	0.74	100	P	Pn	14 05 59.0	+0.6
KZN				S	Sn	14 06 09.5	-0.1
JAN	Janina	0.79	178	P	Pn	14 05 59.3	+0.4
JAN				S	Sn	14 06 10.1	-0.5
SRN	Sarande	0.84	228	Pg	Pn	14 05 58.5	-1.1
SRN				Sg	Sn	14 06 11.1	-0.6
SRN				AML	AML	14 06 15.4	
	0.1nm,0.4s						
SRN				AMd		14 06 39.2	
IGT	Igoumenitsa	0.98	202	Pg	Pn	14 06 00.2	-1.5
IGT				Sg	Sn	14 06 14.2	-1.1
IGT				AMd		14 07 01.5	
IGT	Igoumenitsa	0.98	202	P	Pn	14 06 02.6	+1.0
IGT				S	Sn	14 06 16.3	+1.0
TYRN	Tyrnavos	1.31	124	P	Pg	14 06 08.2	+0.6
SCTE	Santa Cesarea	1.83	259	Sn	Sg	14 06 42.0	+0.7
SCTE				AML	AML	14 07 06.5	
	0.3nm,1.0s						

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*UCR **29** 14:07:50.8±1.1, 8.°35N×82.°82W, h28km±2km, MW3.6*

*UPA **29** 14:07:50.9±0.8, 8.°37N×82.°82W, h33km±4km, ML3.6, MW3.4*

ISC 29 14:07:50.8±1.0**, 8.°37N**±0.°03×**82.°83W**±0.°03**, h32**km±6km**, n34, σ0.s68**/47**, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.06	43	*e*P	Pb	14 07 56.0	-0.3
LESP3				AMP		14 07 56.1	
	comp=Z,14μm,0.1s						
LESP3				*e*S	Sb	14 08 00.2	+0.2
LPPC	Paso Canoas	0.17	356	*e*P	Pb	14 07 56.7	-0.3
LPPC				*e*S	Sn	14 08 01.8	+0.8
LIMO3	Limones	0.27	188	*e*P	Pn	14 07 58.4	-0.1
LIMO3				*e*S	Sn	14 08 03.5	+0.1
LMNES	Limones	0.27	187	*e*P	Pb	14 07 58.2	+0.2
NELY	Ciudad Neily	0.31	337	*e*P	Pb	14 07 58.1	-0.4
NELY				*e*S	Sb	14 08 04.3	+0.5
DVD	David	0.38	79	*e*P	Pb	14 07 59.4	-0.1
DVD				*e*S	Sn	14 08 06.2	0.0
PEDE3	Pedregal, Chir	0.40	87	*e*P	Pb	14 07 59.7	-0.2
PEDE3				*e*S	Sn	14 08 06.7	-0.1
LOCO3	Loma Colorada,	0.41	84	*e*P	Pb	14 07 59.8	-0.1
LOCO3				AMP		14 07 59.9	
	comp=Z,5μm,0.1s						
FITO	Golfito	0.41	309	*e*P	Pb	14 07 58.6	-1.4
FITO				*e*S	Sb	14 08 05.5	-0.9
MLIR3	Monte Lirio, C	0.42	0	*e*P	Pb	14 08 00.6	+0.3
MLIR3				*e*S	Sn	14 08 07.8	+0.2
EDAD	Golfito	0.44	310	*e*P	Pb	14 07 59.2	-1.3
BRU2	Volcan	0.45	18	*e*P	Pb	14 08 00.0	-0.7
BRU2	Volcan	0.45	18	*e*P	Pb	14 08 00.2	-0.5
BRU2				*e*S	Sn	14 08 08.3	+0.1
TBS2		0.46	22	*e*P	Pn	14 08 01.4	+0.2
PTAR3	Potrerillos Ar	0.46	45	*e*P	Pb	14 08 00.7	-0.2
PTAR3				*e*S	Sn	14 08 08.4	-0.1
SCLRA	Santa Clara, W	0.47	6	*e*P	Pb	14 08 00.9	-0.1
VITO	San Vito	0.47	343	*e*P	Pb	14 08 01.0	0.0
BC3P	Paso Ancho	0.50	26	*e*P	Pb	14 08 01.2	-0.3
BC3P				AMP		14 08 01.8	
	comp=Z,2μm,0.1s						
BC3P				*e*S	Sn	14 08 09.9	+0.5
ALCO	Alturas Coton,	0.58	359	*e*P	Pb	14 08 02.1	-0.7
PSOM3	Paja de Sombre	0.59	58	*e*P	Pb	14 08 02.2	-0.7
PSOM3				*e*S	Sb	14 08 11.0	-0.1
EDP2	Potrero Grande	0.73	332	*e*P	Pn	14 08 04.5	-0.4
PBNVO	Pueblo Nuevo,	0.82	50	*e*P	Pn	14 08 05.4	-0.7
DRK0	Durika	0.98	335	*e*P	Pn	14 08 07.8	-0.8
DRK0	Durika	0.98	335	*e*P	Pn	14 08 07.9	-0.6
DRK0				*e*S	Sn	14 08 22.1	+0.7
EDPE	Pejibaye, P	1.08	317	*e*P	Pn	14 08 09.5	-0.2
SAJE	San Jernim	1.18	325	*e*P	Pn	14 08 10.6	-0.7
PIEC	Cerro El Cedra	1.68	318	*e*P	Pn	14 08 18.5	+0.3
ABE2	San Pablo	1.80	318	*e*P	Pn	14 08 20.9	+1.0
PICV	PH. Pirrs	1.84	313	*e*P	Pn	14 08 21.1	+0.9
ABRB	Las Abras (San	1.85	332	*e*P	Pn	14 08 22.1	+1.5
CVTV	Tajo	1.86	331	*e*P	Pn	14 08 22.1	+1.3
PAR1A	Puntarenas Pro	1.86	311	*e*P	Pn	14 08 21.6	+1.1
CVTQ	Turrialba Volc	1.87	330	*e*P	Pn	14 08 21.6	+0.7
VTR0	Volcan Turrial	1.88	331	*e*P	Pn	14 08 22.4	+1.3

IDC 29 14:08:13.2±1.1**, 28.°32N**×**104.°56E, h0**km**, mb3.5**/5**, mbtmp3.5**/6**, ML3.5**/1**, MS3.2**/4**, Error ellipse: s-maj=41.0km s-min=20.3km az=59.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.08	209	LR	LR	14 15 54.0	
	comp=Z,55nm,19.9s,baz=225,slow=42						
SONM	Songino Array	19.54	4	P	P	14 12 42.0	-0.4
	0.2nm,0.3s,baz=186,slow=13,SNR=4.1						
	0.4nm,0.3s						
KSRS	Korea Array	21.59	59	P	P	14 13 04.2	-0.3
	1.6nm,0.8s,baz=246,slow=9.2,SNR=5.9						
	1.6nm,0.8s						
MKAR	Makanchi Array	25.38	323	P	P	14 13 41.0	-1.1
	1.1nm,0.8s,baz=123,slow=8.7,SNR=12						
	1.1nm,0.8s						
AAK	Ala-Archa	28.17	308	LR	LR	14 26 07.3	
	comp=Z,65nm,18.8s,baz=130,slow=38						
KURBB	Kurchatov Arra	29.73	326	P	P	14 14 22.6	+1.6
	0.5nm,0.6s,baz=131,slow=9.9,SNR=5.6						
	0.5nm,0.6s						
GUMO	Guam	40.19	103	LR	LR	14 32 50.4	
	comp=Z,18nm,18.9s,baz=91,slow=37						
TIXI	Tiksi	45.41	11	LR	LR	14 36 59.0	
	comp=Z,50nm,18.6s,baz=172,slow=38						
WRA	Warramunga Arr	55.95	146	P	P	14 17 53.5	+0.1
	0.5nm,0.7s,baz=335,slow=7.5,SNR=5.7						
	0.5nm,0.7s						
ASAR	Alice Springs	58.92	148	P	P	14 18 14.1	-0.3
	0.1nm,0.4s,baz=326,slow=6.1,SNR=6.8						
	0.1nm,0.4s						

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*TIR **29** 14:09:07.0, 40.°48N×20.°81E, h23km±1km, Md2.7/6, Ml2.6/6*

*ATH **29** 14:09:07.1, 40.°44N×20.°70E, h8km±2km, ML2.4/5, Manual Solution by A.Moschou First location: 2019/06/29 14:10:19, This location: 2019/06/29 15:39:39 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*

*SKO **29** 14:09:09.2, 40.°46N×20.°85E, h14km, ML2.2*

ISC 29 14:09:07.1±0.9**, 40.°48N**±0.°02×**20.°79E**±0.°03**, h12**km±6km**, n19, σ1.s13**/36**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.14	358	Pg	Pg	14 09 10.2	-0.5
KBN				Sg	Sg	14 09 13.5	+0.2
KBN				AML	AML	14 09 15.6	
	7.8nm,0.5s						
NEST	Nestorio	0.21	108	Pg	Pb	14 09 12.5	-0.3
NEST				Sg	Sg	14 09 14.0	-0.8
NEST				AML	AML	14 09 19.0	
	3.3nm,0.2s						
NEST				AMd		14 10 00.9	
NEST	Nestorio	0.21	108	P	Pb	14 09 12.7	-0.1
NEST				S	Sb	14 09 16.6	+1.8
PENT	Pentalofos	0.39	137	P	Pb	14 09 15.5	-0.4
PENT				S	Sb	14 09 20.9	-1.0
FNA	Florina	0.54	55	Pg	Pg	14 09 17.8	+0.1
FNA				Sg	Sb	14 09 26.1	-0.1
FNA				AML	AML	14 09 29.7	
	1.9nm,0.3s						
FNA				AMd		14 10 03.7	
FNA	Florina	0.54	55	*i* Pg	Pb	14 09 18.7	+0.2
FNA				*i* Sg	Sn	14 09 27.7	-1.9
FNA	Florina	0.54	55	P	Pb	14 09 18.7	+0.2
FNA				S	Sb	14 09 27.4	+1.2
OHR	Ohrid	0.63	0	*i* Pg	Pn	14 09 21.2	-0.7
OHR				*i* Sg	Sn	14 09 31.4	-0.6
OHR				*e*Lg	Lg	14 09 32.4	
	comp=E,110nm,0.5s						
OHR				*e*Lg	Lg	14 09 32.6	
	comp=N,55nm,0.4s						
KPRO	Kipourio	0.68	140	P	Pb	14 09 20.4	-0.5
KPRO				S	Sb	14 09 29.6	-0.7
SRN	Sarande	0.85	226	Pg	Pn	14 09 24.3	-0.6
SRN				Sg	Sn	14 09 37.4	+0.2
SRN				AML	AML	14 09 40.6	
	comp=N,0.3nm,0.4s						
SRN				AMd		14 10 22.4	
IGT	Igoumenitsa	1.01	201	Pg	Pg	14 09 26.5	0.0
IGT				Sg	Sn	14 09 41.4	+0.2
IGT				AMd		14 10 37.7	
IGT	Igoumenitsa	1.01	201	*i* Pg	Pn	14 09 27.3	+0.2
IGT				*i* Sg	Sn	14 09 43.6	+2.5
TIR	Tirane	1.12	321	Pn	Pb	14 09 28.3	0.0
TIR				Sn	Sn	14 09 44.5	+0.7
TIR				AML	AML	14 09 57.4	
TIR				AMd		14 10 13.7	
THL	Klokotos Trika	1.31	134	P	Pg	14 09 32.0	-0.2
THL				S	Sg	14 09 49.2	-0.1
TYRN	Tyrnavos	1.34	124	P	Pg	14 09 32.6	-0.3
VAY	Valandovo	1.59	57	*i* Pn	Pg	14 09 37.7	+0.2
VAY				*i* Sn	Sg	14 10 01.0	+2.8
VAY				*e*Lg	Lg	14 10 02.5	
	comp=E,23nm,0.4s						
VAY				*e*Lg	Lg	14 10 04.9	
	comp=N,48nm,0.8s						
KNT	Kendrikon	1.74	66	*i* Pn	Pg	14 09 40.2	-0.2
KNT				*i* Sn	Sg	14 10 06.1	+3.1
SCTE	Santa Cesarea	1.82	258	Pn	Pb	14 09 40.7	+0.3
SCTE				Sn	Sg	14 10 05.7	0.0
SCTE				AML	AML	14 10 18.8	
	comp=N,0.4nm,1.1s						
SCTE				AMd		14 10 41.5	
BARS	Barje	2.46	18	*i* Pn	Pb	14 09 49.2	-1.9

IDC 29 14:42:54.2±3.3**, 3.°94S**×**136.°26E, h0**km**, mb3.4**/1**, mbtmp3.3**/4**, ML3.0**/3**, MS3.5**/1**, Error ellipse: s-maj=113.0km s-min=32.1km az=86.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.01	187	Pn	Pn	14 46 40.1	-0.9
	baz=5.9,slow=11,SNR=1.6						

	0.2nm,0.7s						
FITZ	**Fitzroy Crossi**	**17.49**	**216**	P	Pn	14 46 59.8	0.0
	baz=24,slow=10,SNR=1.6						
FITZ				LR	LR	14 54 37.8	
	comp=Z,166nm,18.9s,baz=330,slow=40						
	2.3nm,1.1s						
ASAR	**Alice Springs**	**19.74**	**186**	P	P	14 47 26.2	+0.4
	0.1nm,0.3s,baz=11,slow=11,SNR=8.3						
	0.7nm,0.8s						
MKAR	**Makanchi Array**	**69.30**	**324**	P	P	14 54 03.5	0.0
	0.3nm,0.7s,baz=116,slow=6.6,SNR=2.4						
	0.3nm,0.7s						

*ISU **29** 14:52:05, 40°.06N×67°.90E, h6^{km}*

ISC 29 14:52:05.0±1.5, **40°.02N**±0°.06×**67°.7E**±0°.1, **h10**^{km}, **n4**, σ**1**^{s}**.56**/7, **1C-2D, Southeastern Uzbekistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZI	**Dzhizak**	**0.12**	**33**	P	**Pg**	**14 52 08.1**	**+0.2**
DZI				S	**Sg**	**14 52 09.8**	**-0.1**
BXML	**Bakhmal**	**0.40**	**146**	P	**Pb**	**14 52 13.4**	**-0.9**
BXML				S	**Sg**	**14 52 18.7**	**+0.5**
KK31	**Karatay Array**	**3.72**	**33**	⇑Pn	**Pn**	**14 53 04.8**	**+2.3**
	0.3nm,0.2s,baz=230,slow=14,SNR=8.2						
KK31				⇓Pg	**Pg**	**14 53 14.4**	**-1.8**
	0.7nm,0.4s,baz=220,slow=15,SNR=6.4						
KK31				⇓Lg	Lg	14 54 03.4	
	0.9nm,0.3s,baz=221,slow=28						
AB31	**Akbulak array**	**10.77**	**332**	P	**Pn**	**14 54 38.8**	**-0.4**
	0.1nm,0.2s,baz=159,slow=14,SNR=6.9						

*UCR **29** 14:56:56.0±1.1, 8°.35N×82°.81W, h20^{km}±4^{km}, MW3.5*
*UPA **29** 14:56:56.2±0.9, 8°.39N×82°.82W, h22^{km}±8^{km}, ML3.3, MW3.3*

ISC 29 14:56:56.0±1.1, **8°.37N**±0°.04×**82°.81W**±0°.03, **h32**^{km}±7^{km}, **n36**, σ**0**^{s}**.99**/48, **Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LESP3	**La Esperanza,**	**0.04**	**33**	*e*P	**Pb**	**14 57 00.4**	**-1.0**
LESP3				*e*S	**Sb**	**14 57 07.6**	**+2.6**
LPPC	**Paso Canoas**	**0.16**	**351**	*e*P	**Pb**	**14 57 01.2**	**-0.9**
LPPC				*e*S	**Sb**	**14 57 05.6**	**-0.6**
LIMO3	**Limones**	**0.27**	**191**	*e*P	**Pb**	**14 57 02.9**	**-0.4**
LIMO3				*e*S	**Sb**	**14 57 08.0**	**-0.2**
LMNES	**Limones**	**0.27**	**190**	*e*P	**Pb**	**14 57 02.7**	**-0.6**
DVD	**David**	**0.36**	**80**	*e*P	**Pb**	**14 57 04.2**	**-0.2**
DVD				*e*S	**Sb**	**14 57 10.7**	**+0.4**
CSTBL	**De las Acacias**	**0.37**	**84**	*e*P	**Pb**	**14 57 04.2**	**-0.4**
PEDE3	**Pedregal, Chir**	**0.39**	**88**	*e*P	**Pb**	**14 57 04.4**	**-0.4**
PEDE3				*e*S	**Sb**	**14 57 10.7**	**-0.2**
LOCO3	**Loma Colorada,**	**0.39**	**84**	*e*P	**Pb**	**14 57 04.7**	**-0.2**
CLLRA	**Cordillera,**	**0.42**	**28**	*e*P	**Pb**	**14 57 05.0**	**-0.4**
MLIR3	**Monte Lirio, C**	**0.42**	**359**	*e*P	**Pb**	**14 57 05.4**	**0.0**
MLIR3				*e*S	**Sb**	**14 57 10.7**	**-1.1**
FITO	**Golfito**	**0.42**	**307**	*e*P	**Pb**	**14 57 03.6**	**-1.7**
FITO				*e*S	**Sb**	**14 57 10.1**	**-1.6**
BRU2	**Volcan**	**0.44**	**16**	*e*P	**Pb**	**14 57 05.2**	**-0.5**
BRU2	**Volcan**	**0.44**	**16**	*e*P	**Pb**	**14 57 05.3**	**-0.4**
BRU2				*e*S	**Sb**	**14 57 12.7**	**+0.3**
EDAD	**Golfito**	**0.45**	**309**	*e*P	**Pb**	**14 57 04.1**	**-1.7**
PTAR3	**Potrerillos Ar**	**0.45**	**44**	*e*P	**Pb**	**14 57 05.5**	**-0.3**
PTAR3				*e*S	**Sb**	**14 57 12.0**	**-0.5**
TBS2		**0.45**	**20**	*e*P	**Pb**	**14 57 06.2**	**+0.4**
SCLRA	**Santa Clara, W**	**0.46**	**4**	*e*P	**Pb**	**14 57 05.8**	**-0.3**
VITO	**San Vito**	**0.47**	**341**	*e*P	**Pb**	**14 57 06.3**	**+0.2**
BC3P	**Paso Ancho**	**0.49**	**24**	*e*P	**Pb**	**14 57 05.9**	**-0.6**
BC3P				AMP		14 57 05.9	
	comp=Z,2μm,0.1s						
BC3P				*e*S	**Sb**	**14 57 14.3**	**+0.7**
BQTLY	**Boquete Panama**	**0.52**	**42**	*e*P	**Pb**	**14 57 06.4**	**-0.6**
ALCO	**Alturas Coton,**	**0.58**	**358**	*e*P	**Pb**	**14 57 07.1**	**-0.8**
PSOM3	**Paja de Sombre**	**0.58**	**57**	*e*P	**Pb**	**14 57 07.0**	**-0.8**
PSOM3				*e*S	**Sb**	**14 57 15.8**	**-0.1**
PBNVO	**Pueblo Nuevo,**	**0.80**	**50**	*e*P	**Pb**	**14 57 10.3**	**-1.3**
RBALA	**Bur**	**0.82**	**52**	*e*P	**Pn**	**14 57 10.9**	**-0.5**
RMDIO	**Remedios, Chir**	**0.98**	**98**	*e*P	**Pn**	**14 57 13.6**	**+0.1**
DRK0	**Durika**	**0.98**	**334**	*e*P	**Pn**	**14 57 13.2**	**-0.5**
DRK0	**Durika**	**0.98**	**334**	*e*P	**Pn**	**14 57 13.4**	**-0.4**
DRK0				*e*S	**Sn**	**14 57 27.3**	**+0.6**
EDPE	**Pejibaye, P**	**1.08**	**316**	*e*P	**Pn**	**14 57 14.8**	**-0.2**
KKNTU	**Kakintº**	**1.10**	**65**	*e*P	**Pn**	**14 57 14.5**	**-0.7**
SAJE	**San Jernim**	**1.19**	**325**	*e*P	**Pn**	**14 57 16.3**	**-0.3**
LCR2	**La Lucha 2**	**1.80**	**319**	*e*P	**Pn**	**14 57 26.4**	**+1.3**
ABE2	**San Pablo**	**1.81**	**317**	*e*P	**Pn**	**14 57 27.2**	**+2.0**
PICV	**PH. Pirrs**	**1.85**	**313**	*e*P	**Pn**	**14 57 27.4**	**+1.8**
ABRB	**Las Abras (San**	**1.85**	**331**	*e*P	**Pn**	**14 57 27.6**	**+1.7**
CVTV	**Tajo**	**1.87**	**330**	*e*P	**Pn**	**14 57 27.7**	**+1.6**
VTR0	**Volcan Turrial**	**1.89**	**330**	*e*P	**Pn**	**14 57 28.0**	**+1.6**

*NEIC **29** 15:02:39.8±2.3, 14°.7S±0°.1×77°.1W±0°.3, h15^{km}±7^{km}, mb4.3/5, Error ellipse: s-maj=38.3km s-min=11.0km az=66.0*
*IDC **29** 15:02:50.6±5.8, 12°.76S×75°.46W, h0^{km}, mb4.0/2, mbtmp4.0/3, ML4.2/1, MS3.3/11, Error ellipse: s-maj=264.2km s-min=28.1km az=35.0*

ISC 29 15:02:40.2±1.2, **14°.74S**±0°.10×**76°.9W**±0°.1, **h10**^{km}, **n39**, σ**2**^{s}**.34**/19, **MS3.3**/9, **Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**2.73**	**2**		**Pn**	**15 03 25.4**	**+1.2**
ATAH	**Atahualpa**	**7.69**	**349**	LR	LR	15 06 24.1	
	comp=Z,19nm,21.0s,baz=187,slow=34						
PB18	**Visviri**	**7.71**	**113**	Pn	**Pn**	**15 04 37.2**	**+4.1**
PB16	**IPOC Station P**	**7.98**	**118**	Pn	**Pn**	**15 04 38.9**	**+2.1**
CZSB	**Cruzeiro do Su**	**8.11**	**31**	Pn	**Pn**	**15 04 39.2**	**+1.1**
PB11	**IPOC Station P**	**8.57**	**127**	Pn	**Pn**	**15 04 46.6**	**+2.1**
LPAZ	**La Paz**	**8.63**	**101**	Pn	**Pn**	**15 04 47.5**	**+1.7**
LPAZ	**La Paz**	**8.63**	**101**	Pn	**Pn**	**15 04 47.9**	**+2.1**
	1.4nm,0.3s,baz=296,slow=8.5,SNR=28						
LPAZ				Sn	**Sn**	**15 06 21.3**	**-2.3**
	0.2nm,0.3s,baz=126,slow=18,SNR=1.4						
LPAZ				LR	LR	15 08 32.3	
	comp=Z,156nm,18.2s,baz=277,slow=43						
	5.5nm,0.4s						
TA01	**Diego Aracena**	**8.67**	**133**	Pn	**Pn**	**15 04 45.7**	**0.0**
GO01	**Chusmiza**	**8.88**	**125**	Pn	**Pn**	**15 04 51.2**	**+2.1**
PB08	**IPOC Station P**	**9.17**	**127**	Pn	**Pn**	**15 04 54.4**	**+1.3**
PB01	**IPOC Station P**	**9.47**	**133**	Pn	**Pn**	**15 05 00.0**	**+3.2**
SIV	**San Ignacio**	**15.36**	**97**	LR	LR	15 11 12.4	
	comp=Z,70nm,20.3s,baz=290,slow=35						
H03N1	**Juan Fernandez**	**18.71**	**185**	T	T	15 26 39.6	
	baz=8.0,slow=74,SNR=2736						
H03N2	**Juan Fernandez**	**18.71**	**185**	T	T	15 26 38.9	
	baz=8.0,slow=74,SNR=2185						
H03N3	**Juan Fernandez**	**18.73**	**185**	T	T	15 26 38.3	
	baz=8.0,slow=74,SNR=2511						
BO02	**Sierra Bellavi**	**20.73**	**166**	P	**P**	**15 07 19.9**	**-1.1**
BO02				IAmb	IAmb	15 07 27.0	
	comp=Z,24nm,1.4s						
RUSC	**La Rusia**	**20.85**	**11**	P	**P**	**15 07 20.8**	**-2.1**
RUSC				IAmb	IAmb	15 07 34.1	
	comp=Z,18nm,1.1s						
AQDB	**Aquidauana**	**21.03**	**109**	P	**P**	**15 07 20.9**	**-3.4**
BOAV	**Boa Vista**	**23.54**	**45**	P	**P**	**15 07 50.6**	**-0.2**
BOAV				IAmb	IAmb	15 07 53.4	
	comp=Z,5.4nm,0.7s						
SDV	**Santo Domingo**	**24.29**	**15**	LR	LR	15 18 37.3	
	comp=Z,112nm,18.4s,baz=235,slow=43						
PCRV	**Puerto La Cruz**	**27.59**	**27**	LR	LR	15 19 36.7	
	comp=Z,79nm,19.8s,slow=40						
BDFB	**Brasilia**	**27.92**	**96**	LR	LR	15 20 23.5	
	comp=Z,131nm,18.2s,baz=146,slow=39						
MDP	**Montagnes des**	**31.12**	**52**	LR	LR	15 20 17.1	
	comp=Z,54nm,20.7s,baz=224,slow=36						
RCBR	**Riachuelo**	**41.28**	**82**	LR	LR	15 27 15.7	
	comp=Z,13nm,19.1s,baz=248,slow=37						
TXAR	**Lajitas Array**	**50.85**	**330**	P	P	15 11 47.1	+5.7
	comp=Z,0.3nm,0.6s,baz=143,slow=5.3,SNR=4.8						
	comp=Z,0.3nm,0.6s						
SADO	**Sadowa**	**59.25**	**358**	LR	LR	15 44 07.3	
	comp=Z,14nm,18.1s,baz=100,slow=43						
HAL	**Halifax**	**60.32**	**11**	P	**P**	**15 12 46.8**	**-2.4**
SCHQ	**Schefferville**	**69.82**	**6**	LR	LR	15 43 41.0	
	comp=Z,9.5nm,20.6s,baz=224,slow=36						
DBIC	**Dimbokro**	**74.55**	**79**	LR	LR	15 45 00.5	
	comp=Z,50nm,19.1s,baz=202,slow=35						
TORD	**Torodi Ar. Bea**	**82.61**	**74**	P	**P**	**15 15 06.2**	**+1.8**
	comp=Z,1.8nm,0.4s,baz=262,slow=5.2,SNR=1.9						
	comp=Z,1.8nm,0.4s						
DAVOX	**Davos/Dischmat**	**98.44**	**44**	LR	LR	15 58 12.4	
	comp=Z,35nm,19.2s,baz=230,slow=35						
H11N3	**WAKE ISLAND Hy**	**119.11**	**285**	T	T	17 32 26.8	
	baz=96,slow=74,SNR=77						
H11N2	**WAKE ISLAND Hy**	**119.12**	**285**	T	T	17 32 26.4	
	baz=96,slow=74,SNR=83						
H11N1	**WAKE ISLAND Hy**	**119.13**	**285**	T	T	17 32 26.9	
	baz=96,slow=74,SNR=36						
H11S2	**WAKE ISLAND Hy**	**119.16**	**283**	T	T	17 32 31.3	
	baz=97,slow=75,SNR=126						
H11S1	**WAKE ISLAND Hy**	**119.17**	**283**	T	T	17 32 31.1	
	baz=97,slow=75,SNR=143						
H11S3	**WAKE ISLAND Hy**	**119.18**	**283**	T	T	17 32 32.9	
	baz=97,slow=75,SNR=132						
SONM	**Songino Array**	**146.88**	**356**	PKPbc	**PKiKP**	**15 22 27.8**	**+2.1**
	comp=Z,0.8nm,0.6s,baz=347,slow=5.9,SNR=3.6						

*TIR **29** 15:03:23.3, 40°.44N×20°.77E, h20^{km}±1^{km}, Md2.7/5, Ml3.0/5*
*ATH **29** 15:03:23.4, 40°.56N×20°.95E, h22^{km}±2^{km}, ML2.4/3, Manual Solution by A.Moschou First location: 2019/06/29 15:04:43, This location: 2019/06/29 15:44:37 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 4 km*
*SKO **29** 15:03:25.3, 40°.46N×20°.84E, h22^{km}, ML2.4*
*BEO **29** 15:03:25.7±0.4, 40°.42N×21°.00E, h22^{km}±5^{km}, ML2.1/5*
*THE **29** 15:03:26.8, 40°N±6°×2°1E±°, h0^{km}±4^{km}, M2.3/13, MLh2.3/13*

ISC 29 15:03:25.1±0.9, **40°.45N**±0°.02×**20°.81E**±0°.03, **h8**^{km}±8^{km}, **n36**, σ**1**^{s}**.31**/55, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	**0.18**	**354**	Pg	**Pg**	**15 03 27.8**	**-1.1**
KBN				Sg	**Sg**	**15 03 31.1**	**-0.2**
KBN				AML	AML	15 03 32.1	
	9.4nm,0.3s						
NEST	**Nestorio**	**0.18**	**101**	Pg	**Pg**	**15 03 28.7**	**-0.3**
NEST				Sg	**Sg**	**15 03 32.8**	**+1.3**
NEST				AML	AML	15 03 35.6	
	8.7nm,0.3s						
NEST				AMd		15 04 06.7	
NEST	**Nestorio**	**0.18**	**101**	P	**Pg**	**15 03 29.2**	**+0.3**
NEST	**Nestorio**	**0.18**	**101**	P	**Pg**	**15 03 29.2**	**+0.3**
NEST				S	**Sg**	**15 03 32.2**	**+0.7**
PENT	**Pentalofos**	**0.35**	**135**	P	**Pg**	**15 03 31.8**	**-0.3**
PENT	**Pentalofos**	**0.35**	**135**	P	**Pg**	**15 03 32.0**	**-0.1**
PENT				S	**Sg**	**15 03 37.9**	**+1.1**
FNA	**Florina**	**0.54**	**52**	Pn	**Pg**	**15 03 34.9**	**-0.8**
FNA				Sg	**Sg**	**15 03 43.6**	**+0.7**
FNA				AML	AML	15 03 46.5	
	3.4nm,0.4s						
FNA				AMd		15 04 23.8	
FNA	**Florina**	**0.54**	**52**	*i* Pg	**Pg**	**15 03 35.2**	**-0.5**
FNA				*i* Sg	**Sb**	**15 03 45.1**	**+0.1**
FNA	**Florina**	**0.54**	**52**	*e*Pg	**Pg**	**15 03 35.1**	**-0.6**
FNA				*e*Sg	**Sg**	**15 03 44.1**	**+1.3**
KPRO	**Kipourio**	**0.65**	**139**	P	**Pg**	**15 03 36.9**	**-0.8**
KPRO	**Kipourio**	**0.65**	**139**	P	**Pg**	**15 03 36.9**	**-0.8**
KPRO				S	**Sg**	**15 03 46.1**	**0.0**
OHR	**Ohrid**	**0.66**	**359**	*i* Pg	**Pg**	**15 03 37.7**	**-0.3**
OHR				*i* Sg	**Sg**	**15 03 48.2**	**+1.6**
OHR				*e*Lg	Lg	15 03 49.0	
	comp=N,84nm,0.4s						
OHR				*e*Lg	Lg	15 03 49.2	
	comp=E,194nm,0.5s						
KZN	**Kozani**	**0.74**	**101**	P	**Pg**	**15 03 39.9**	**+0.4**
SRN	**Sarande**	**0.84**	**228**	Pg	**Pb**	**15 03 39.7**	**-2.3**
SRN				Sg	**Sb**	**15 03 51.7**	**-1.8**
SRN				AML	AML	15 03 55.2	
	comp=E,0.6nm,0.4s						
SRN				AMd		15 04 33.2	
IGT	**Igoumenitsa**	**0.99**	**202**	Pn	**Pb**	**15 03 41.9**	**-2.6**
IGT				Sn	**Sb**	**15 03 55.9**	**-1.7**
IGT				AMd		15 04 53.0	
IGT	**Igoumenitsa**	**0.99**	**202**	P	**Pb**	**15 03 43.5**	**-0.9**
IGT				S	**Sn**	**15 04 00.6**	**+1.1**
IGT	**Igoumenitsa**	**0.99**	**202**	*i* Pg	**Pb**	**15 03 43.5**	**-0.9**
IGT				*i* Sg	**Sb**	**15 03 55.9**	**-1.7**
IGT	**Igoumenitsa**	**0.99**	**202**	*e*Pg	**Pb**	**15 03 43.5**	**-0.9**
IGT				*e*Sg	**Sg**	**15 03 59.1**	**+2.2**
IGT	**Igoumenitsa**	**0.99**	**202**	P	**Pb**	**15 03 43.7**	**-0.8**
IGT				S	**Sg**	**15 03 59.0**	**+2.1**
KEK	**Kerkira**	**1.07**	**227**	P	**Pn**	**15 03 47.3**	**+0.8**
KEK				S	**Sg**	**15 04 02.8**	**+3.2**
TIR	**Tirane**	**1.15**	**322**	*e*Pg	**Pn**	**15 03 48.1**	**+0.5**
TIR				*e*Sg	**Sg**	**15 04 06.4**	**+4.2**
THL	**Klokotos Trika**	**1.28**	**133**	P	**Pn**	**15 03 48.4**	**-0.9**
TYRN	**Tyrnavos**	**1.31**	**124**	P	**Pn**	**15 03 49.5**	**-0.3**
AMPL	**Ampelaki**	**1.56**	**168**	P	**Pb**	**15 03 54.5**	**+0.3**
VAY	**Valandovo**	**1.59**	**56**	*i* Pn	**Pn**	**15 03 53.8**	**+0.2**
VAY				*i* Sn	**Sg**	**15 04 17.1**	**+0.8**
VAY				*e*Lg	Lg	15 04 20.2	
	comp=E,42nm,0.8s						
VAY				*e*Lg	Lg	15 04 26.2	
	comp=N,40nm,0.6s						
LKD2	**Lefkada island**	**1.66**	**184**	P	**Pb**	**15 03 56.1**	**+0.1**
NYDR	**Nydri-Lefkada**	**1.73**	**183**	P	**Pb**	**15 03 57.3**	**0.0**
KNT	**Kendrikon**	**1.74**	**65**	P	**Pb**	**15 03 57.7**	**+0.4**
KNT	**Kendrikon**	**1.74**	**65**	*i* Pn	**Pb**	**15 03 57.6**	**+0.4**
SCTE	**Santa Cesarea**	**1.83**	**259**	Pn	**Pn**	**15 03 56.3**	**-0.6**
SCTE				Sn	**Sn**	**15 04 21.4**	**+1.1**
SCTE				AML	AML	15 04 27.3	
	comp=N,0.5nm,0.8s						
SCTE				AMd		15 05 10.3	
AGG	**Agios Georgios**	**1.84**	**140**	P	**Pn**	**15 03 57.7**	**+0.6**
VLS	**Valsamata**	**2.27**	**184**	P	**Pn**	**15 04 04.0**	**+1.0**
BARS	**Barje**	**2.48**	**17**	*i* Pn	**Pn**	**15 04 04.3**	**-1.5**
BARS	**Barje**	**2.48**	**17**	*e*Pn	**Pn**	**15 04 04.7**	**-1.2**
DRO	**Drossia**	**2.59**	**164**	P	**Pb**	**15 04 10.0**	**-1.8**
SELS	**Selova**	**2.78**	**5**	*e*Pn	**Pn**	**15 04 10.0**	**0.0**

IDC 29 15:08:20.6±1.8, **31°.00S**×**177°.69W**, **h0**^{km}, **mb3.7**/3, **mbtmp3.8**/4, **ML3.4**/1, **Error ellipse: s-maj=42.4km s-min=31.8km az=80.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**8.41**	**209**	Pn	Pn	15 10 22.6	-1.1
	0.5nm,0.3s,baz=12,slow=23,SNR=2.4						
URZ				Sn	Sn	15 11 57.8	-1.5
	1.1nm,0.3s,baz=172,slow=20,SNR=3.5						
	11nm,1.1s						
ASAR	**Alice Springs**	**43.34**	**267**	P	P	15 16 24.8	0.0
	0.5nm,0.5s,baz=104,slow=7.5,SNR=8.0						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**44.39**	**273**	P	P	15 16 33.5	+0.3
	0.4nm,0.3s,baz=111,slow=8.0,SNR=7.2						
	0.4nm,0.3s						
QSPA	**South Pole Qui**	**59.11**	**180**	P	P	15 18 22.8	+0.2
	1.0nm,0.7s,baz=32,slow=6.0,SNR=7.5						
	1.0nm,0.7s						
FINES	**FINESS Array B**	**145.80**	**340**	PKPbc	PKPdf	15 27 59.6	-0.8
	3.4nm,0.9s,baz=53,slow=4.2,SNR=12						

*SKHL **29** 15:45:22.5±0.1, 45°.30N×151°.50E, h111^{km}±8^{km}, mb4.7/4, msha5.3/4*
*IDC **29** 15:45:23.1±3.7, 46°.34N×150°.74E, h146^{km}±46^{km}, mb3.1/3, mbtmp3.6/7, Error ellipse: s-maj=85.2km s-min=18.7km az=138.0*
*JMA **29** 15:45:27.1±0.9, 46°N±5°×15°0E±°, h148^{km}, MV3.5/12, KURILE ISLANDS REGION*

ISC 29 15:45:20.3±1.3, **45°.5N**±0°.2×**151°.4E**±0°.1, **h100**^{km}, **n23**, σ**2**^{s}**.54**/33, **mb3.4**/3, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.50**	**266**	*e*P	**Pn**	**15 46 02.4**	**+3.1**
KUR				AMB	AMB	15 46 03.2	
	60nm,0.5s						
KUR				*e*S	**Sn**	**15 46 32.4**	**+3.2**
KUR				A	A	15 46 35.8	
	60nm,0.4s						
KUR				A	A	15 46 35.8	
	70nm,0.4s						
SHO	**Shikotan**	**3.62**	**246**	*i* P	**Pn**	**15 46 17.2**	**+2.9**
SHO				AMB	AMB	15 46 21.5	
	20nm,0.3s						
SHO				*i* S	**Sn**	**15 46 58.1**	**+2.0**
SHO				A	A	15 47 01.0	
	50nm,0.3s						
SHO				A	A	15 47 01.0	
	60nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.19**	**252**	*e*P	**Pn**	**15 46 24.9**	**+2.9**
YUK				AMB	AMB	15 46 27.5	
	50nm,0.4s						
YUK				*i* S	**Sn**	**15 47 11.0**	**+1.2**
YUK				A	A	15 47 15.0	
	100nm,0.6s						
YUK				A	A	15 47 15.0	
	130nm,0.6s						
GLVR	**Golovnino**	**4.53**	**250**	*e*P	**Pn**	**15 46 29.7**	**+3.1**
GLVR				AMB	AMB	15 46 31.1	
	40nm,0.3s						
GLVR				*i* S	**Sn**	**15 47 18.8**	**+0.7**
GLVR				A	A	15 47 24.0	
	140nm,0.4s						
GLVR				A	A	15 47 24.0	
	210nm,0.4s						
NEM2	**Nemuro 2**	**4.55**	**245**	P	**Pn**	**15 46 29.1**	**+2.2**
NEM2				S	**Sn**	**15 47 17.6**	**-1.1**
NMR	**Nemuro--Hokkai**	**4.56**	**245**	*e*P	**Pn**	**15 46 29.3**	**+2.3**
NMR				*i* S	**Sn**	**15 47 17.8**	**-1.0**
JNK	**Nakash**	**5.12**	**251**	*e*P	**Pn**	**15 46 36.5**	**+1.8**
AKK	**Akkeshi**	**5.30**	**245**	*e*P	**Pn**	**15 46 39.1**	**+2.1**
AKK				*e*S	**Sn**	**15 47 33.7**	**-3.0**
JAK	**Akkeshi**	**5.40**	**245**	*e*P	**Pn**	**15 46 39.8**	**+1.3**
JAK				*e*S	**Sn**	**15 47 36.9**	**-2.3**
JTKR	**Abashiri--Toko**	**5.54**	**257**	*e*P	**Pn**	**15 46 40.7**	**+0.4**
JAR	**Ashorobuto**	**5.87**	**251**	*e*P	**Pn**	**15 46 46.7**	**+1.9**
JAR				*e*S	**Sn**	**15 47 49.3**	**-1.5**
JOB	**Onbets**	**6.00**	**248**	*e*P	**Pn**	**15 46 48.0**	**+1.5**
JOB				*e*S	**Sn**	**15 47 50.7**	**-3.1**
JKK2	**Kamakawa 2**	**6.36**	**259**	*e*P	**Pn**	**15 46 51.3**	**-0.2**
ASAJ	**Asahikawa**	**6.40**	**261**	P	**Pn**	**15 46 51.6**	**-0.4**
	8.4nm,0.7s,baz=69,slow=16,SNR=18						
JCH	**Churui**	**6.44**	**247**	*e*P	**Pn**	**15 46 53.3**	**+0.7**
JCH				*e*S	**Sn**	**15 47 59.6**	**-5.0**
JNBK	**Urakawa-nobuka**	**7.00**	**246**	*e*P	**Pn**	**15 46 59.3**	**-0.9**
JNBK				*e*S	**Sn**	**15 48 13.4**	**-4.8**
PETK	**Petropavlovsk-**	**8.70**	**26**	P	Pn	15 47 18.2	-5.0
	2.2nm,0.6s,baz=202,slow=11,SNR=11						
JANG	**Nango**	**8.84**	**238**	*e*S	Sn	15 48 54.2	-8.9
MJAR	**Matsushiro Arr**	**13.34**	**233**	P	**Pn**	**15 48 30.1**	**+4.4**
	1.4nm,0.7s,baz=46,slow=9.8,SNR=14						
KSRS	**Korea Array**	**19.27**	**254**	P	**P**	**15 49 35.0**	**-1.9**
	0.6nm,0.5s,baz=54,slow=10.0,SNR=4.6						
NVAR	**Mina Array Bea**	**64.11**	**61**	P	**P**	**15 55 41.6**	**-2.4**
	0.3nm,0.5s,baz=310,slow=8.1,SNR=2.4						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**66.90**	**197**	P	**P**	**15 56 03.2**	**+1.4**
	0.4nm,0.8s,baz=15,slow=6.5,SNR=2.2						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**70.61**	**197**	P	**P**	**15 56 27.2**	**+2.5**
	0.3nm,0.6s,baz=8.8,slow=6.2,SNR=11						
	0.3nm,0.6s						

*IDC **29** 15:54:10.3±3.0, 43°.31N×81°.72E, h0^{km}, mbtmp3.4/6, ML3.0/5, Error ellipse: s-maj=30.1km s-min=27.8km az=139.0*
*SOME **29** 15:54:11.9, 43°.33N×81°.75E, h15^{km}*
*NNC **29** 15:54:20.0±1.4, 43°.97N×81°.23E, h0^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=17.8km s-min=5.4km az=137.0*

ISC 29 15:54:18.6±2.0, **43°.8N**±0°.1×**81°.38E**±0°.09, **h10**^{km}, **n32**, σ**1**^{s}**.80**/35, **11C-1D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDGK	**Podgornoye**	**1.46**	**251**	⇑P	**Pn**	**15 54 45.3**	**+0.1**
	71nm,0.4s						
PDGK				⇑S	**Sg**	**15 55 06.1**	**+0.5**
	908nm,0.6s						
KNOS	**Konyrlen**	**1.67**	**289**	Lg	Lg	15 55 19.8	
	204nm,0.3s						
UZB	**Uzynbulak**	**1.85**	**249**	Lg	Lg	15 55 16.1	
	789nm,0.6s						
KPKS	**Kokpek**	**1.99**	**260**	Pg	**Pn**	**15 54 52.5**	**+0.1**
	4.5nm,0.2s						
KPKS				Lg	Lg	15 55 21.6	
	843nm,0.3s						
BLB	**Baldybastay**	**2.11**	**278**	Pg	**Pg**	**15 54 57.7**	**-1.4**
	81nm,0.1s						
BLB				Lg	Lg	15 55 30.4	
	413nm,0.3s						
ARXS	**Arharly**	**2.59**	**280**	Pg	**Pg**	**15 55 06.4**	**-1.9**
	48nm,0.3s						
MAKZ	**Makanchi**	**3.00**	**8**	⇑Pn	**Pn**	**15 55 08.1**	**+1.8**
	3.3nm,0.2s						
MAKZ				⇑Lg	Lg	15 55 53.0	
	72nm,0.5s						
MK31	**Makanchi Array**	**3.03**	**12**	Pn	**Pn**	**15 55 07.9**	**+1.3**
	2.1nm,0.3s,baz=194,slow=13,SNR=220						
MK31				⇑Lg	Lg	15 55 52.3	
	181nm,0.6s,baz=196,slow=28						
MKAR	**Makanchi Array**	**3.03**	**12**	Pn	**Pn**	**15 55 08.0**	**+1.4**
	3.0nm,0.3s,baz=186,slow=12,SNR=145						
MKAR				Sn	**Sb**	**15 55 49.3**	**-0.3**
	13nm,0.3s,baz=175,slow=22,SNR=5.7						
MKAR				Lg	Lg	15 56 03.4	
	13nm,0.3s,baz=186,slow=29,SNR=5.2						
	3.4nm,0.3s						
KOTS	**Kotyrbulak**	**3.16**	**261**	*e*P	**Pb**	**15 55 14.6**	**-0.3**
	30nm,0.4s						
KOTS				*e*S	**Sg**	**15 55 59.6**	**-0.4**
	452nm,0.5s						
CHKK	**Chushkaly**	**3.18**	**272**	Pg	**Pb**	**15 55 15.7**	**+0.6**
	24nm,0.3s						
CHKK				Lg	Lg	15 56 01.6	
	124nm,0.2s						
CHKK	**Chushkaly**	**3.18**	**272**	*e*P	**Pb**	**15 55 15.7**	**+0.6**
	24nm,0.3s						
CHKK				*e*S	**Sg**	**15 56 01.6**	**+1.0**
	124nm,0.2s						
KNDC	**Almaty**	**3.27**	**261**	⇑Pg	**Pb**	**15 55 18.5**	**+1.8**
	52nm,0.6s						
KNDC				⇓Lg	Lg	15 56 01.5	
	255nm,0.8s						
KTBS	**Karatobe**	**3.41**	**270**	Pg	**Pb**	**15 55 18.9**	**-0.1**
	27nm,0.4s						
KTBS				Lg	Lg	15 56 06.6	
	103nm,0.5s						
MTBS	**Maitube**	**3.67**	**261**	Pg	**Pb**	**15 55 23.2**	**-0.4**
	14nm,0.3s						
MTBS				Lg	Lg	15 56 13.8	
	178nm,0.4s						
MTBS	**Maitube**	**3.67**	**261**	*e*P	**Pb**	**15 55 23.2**	**-0.4**
	14nm,0.3s						
MTBS				*e*S	**Sg**	**15 56 13.8**	**-2.7**
	178nm,0.4s						
KST	**Kastek**	**4.02**	**261**	Pg	**Pb**	**15 55 29.6**	**0.0**
	14nm,0.4s						
KST				Lg	Lg	15 56 24.9	
	164nm,0.4s						
KST	**Kastek**	**4.02**	**261**	*e*P	**Pb**	**15 55 29.6**	**0.0**
	14nm,0.4s						
KST				*e*S	**Sg**	**15 56 24.9**	**-2.8**
	164nm,0.4s						
KRBS	**Karabastau**	**4.13**	**270**	Pg	**Pb**	**15 55 32.7**	**+1.3**
	4.2nm,0.2s						
KRBS				Lg	Lg	15 56 30.8	
	73nm,0.5s						
TKM2	**Tokmak 2**	**4.31**	**260**	⇑Pg	**Pb**	**15 55 37.0**	**+2.4**
	5.8nm,0.4s						
TKM2				⇑Lg	Lg	15 56 36.1	
	67nm,0.9s						
ZSN	**Zaisan**	**4.37**	**33**	*e*P	**Pb**	**15 55 37.3**	**+1.9**
	16nm,0.5s						
ZSN				*e*S	**Sg**	**15 56 38.6**	**-0.1**
	52nm,1.0s						
WMQ	**Urumqi**	**4.57**	**88**	*e*Pn	Pn	15 55 24.0	-3.8
WMQ				smax	smax		
	comp=N,27nm,0.7s						
WMQ				smax	smax		
	comp=E,31nm,0.5s						
CHMS	**Chumysh**	**4.90**	**262**	⇑Lg	Lg	15 56 53.9	
	comp=E,92nm,0.8s						
SGDS	**Sogindy**	**4.91**	**268**	Lg	Lg	15 56 54.3	
	comp=E,29nm,1.1s						
MRKS	**Merke**	**6.05**	**262**	Pg	**Pb**	**15 56 08.4**	**+4.3**
	comp=E,5.7nm,0.6s						
MRKS	**Merke**	**6.05**	**262**	*e*P	**Pb**	**15 56 08.4**	**+4.3**
	comp=E,5.7nm,0.6s						
MRKS				*e*S	**Sg**	**15 57 31.4**	**-1.3**

	comp=E,27nm,0.5s						
KURBB	Kurchatov Arra	7.06	345	Pn	Pn	15 56 02.9	+1.0
	comp=E,0.2nm,0.3s,baz=171,slow=12,SNR=14						
KURBB				Sn	Sn	15 57 25.7	+3.5
	comp=E,0.5nm,0.3s,baz=160,slow=23,SNR=8.9						
KURBB				Lg	Lg	15 58 12.9	
	comp=E,0.3nm,0.3s,baz=154,slow=26,SNR=2.6						
	comp=E,0.6nm,0.3s						
KK31	Karatay Array	7.94	268	⇑Pg	Pg	15 56 43.2	-7.4
	comp=E,0.4nm,0.3s,baz=71,slow=14,SNR=4.8						
KK31				⇑Lg	Lg	15 58 30.1	
	comp=E,4.3nm,0.6s,baz=74,slow=32						
ZALV	Zalesovo Beam	10.37	11	Pn	Pn	15 56 46.1	-1.2
	comp=E,0.2nm,0.3s,baz=191,slow=15,SNR=2.0						
ZALV				Sn	Sn	15 58 41.1	-2.4
	comp=E,0.7nm,0.3s,baz=190,slow=25,SNR=5.1						
ZALV				Lg	Lg	15 59 54.3	
	comp=E,0.3nm,0.3s,baz=193,slow=25,SNR=5.5						
	comp=E,0.3nm,0.3s						
BVAR	Borovoye Array	11.73	325	Pn	Pn	15 57 05.5	-0.3
	comp=E,0.1nm,0.3s,baz=131,slow=14,SNR=4.9						
BVAR				Lg	Lg	16 00 35.1	
	baz=150,slow=33,SNR=2.1						
	comp=E,0.6nm,0.4s						
AKTO	Aktyubinsk	17.17	301	P	Pn	15 58 18.1	-0.4
	comp=E,0.1nm,0.3s,baz=100,slow=12,SNR=2.0						
	comp=E,0.7nm,0.5s						
SONM	Songino Array	17.86	68	P	Pn	15 58 21.0	-6.1
	comp=E,0.4nm,0.5s,baz=267,slow=16,SNR=1.8						

IDC ***29*** *15:54:55.9±0.9, 19°.02N×121°.20E, h0^{km}, mb3.6/7, mbtmp3.6/8, ML3.8/1, MS3.1/6, Error ellipse: s-maj=46.3km s-min=19.0km az=73.0*

JMA ***29*** *15:55:01.6±0.5, 20°N±2°×12°1E±°, h0^{km}, MV4.2/13, FAR FIELD*

ISC 29 15:55:01.2±0.9**, 19°.03N**±0°.09×**121°.3E**±0°.2**, h35^{km}, n28, σ1^{s}12**/23**, mb3.5**/7**, MS3.1**/6**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATJ	Hateruma jima	5.52	25	*e*P	Pn	15 56 22.7	+1.7
HATJ				*e*S	Sn	15 57 23.0	-0.3
JYNG	Yonagunijimaku	5.61	16	*e*P	Pn	15 56 23.4	+1.3
YOJ	Yonaguni jima	5.64	16	*e*P	Pn	15 56 23.9	+1.4
YOJ				*e*S	Sn	15 57 27.0	+0.9
IRIF	Iriomote-Funau	5.75	23	*e*P	Pn	15 56 25.3	+1.3
IRIF				*e*S	Sn	15 57 27.1	-1.7
JKRS	Kuro-shima	5.77	26	*e*P	Pn	15 56 25.8	+1.5
JKRS				*e*S	Sn	15 57 28.7	-0.6
JIJ	Ishigaki jima	5.94	26	*e*P	Pn	15 56 27.4	+0.8
JIJ				*e*S	Sn	15 57 31.7	-1.7
JISG	Ishigakijimahi	6.20	26	*e*P	Pn	15 56 31.0	+0.7
JISG				*e*S	Sn	15 57 38.5	-1.5
JTJ	Tarama	6.42	29	*e*S	Sn	15 57 44.8	-0.6
KSRS	Korea Array	19.25	16	P	P	15 59 22.1	-0.5
	0.3nm,0.3s,baz=197,slow=11,SNR=12						
	1.2nm,0.6s						
CMAR	Chiang Mai Arr	21.16	272	LR	LR	16 07 25.9	
	comp=Z,26nm,18.4s,baz=210,slow=36						
GUMO	Guam	23.26	100	LR	LR	16 09 17.2	
	comp=Z,17nm,18.5s,baz=186,slow=37						
ASAJ	Asahikawa	30.73	31	LR	LR	16 14 21.1	
	comp=Z,26nm,18.4s,baz=211,slow=38						
SONM	Songino Array	31.18	340	P	P	16 01 16.8	-0.3
	0.9nm,0.6s,baz=142,slow=7.2,SNR=3.7						
	0.9nm,0.6s						
WRA	Warramunga Arr	40.79	161	P	P	16 02 38.5	-0.8
	0.2nm,0.6s,baz=342,slow=8.5,SNR=2.0						
WRA				PcP	PcP	16 04 40.8	+0.6
	0.3nm,0.7s,baz=336,slow=3.1,SNR=1.9						
	0.2nm,0.6s						
MKAR	Makanchi Array	42.21	320	P	P	16 02 49.5	-1.3
	0.6nm,0.6s,baz=102,slow=11,SNR=4.6						
	0.6nm,0.6s						
H11S3	WAKE ISLAND Hy	42.90	83	T	T	16 48 45.9	
	baz=278,slow=75						
H11S1	WAKE ISLAND Hy	42.91	83	T	T	16 48 54.6	
	baz=278,slow=75						
H11S2	WAKE ISLAND Hy	42.92	83	T	T	16 48 55.0	
	baz=278,slow=75						
H11N1	WAKE ISLAND Hy	42.93	81	T	T	16 48 55.3	
	baz=277,slow=75						
H11N2	WAKE ISLAND Hy	42.94	81	T	T	16 48 56.1	
	baz=277,slow=75						
H11N3	WAKE ISLAND Hy	42.95	81	T	T	16 48 56.3	
	baz=277,slow=75						
YAK	Yakutsk	43.36	6	LR	LR	16 23 58.2	
	comp=Z,38nm,19.8s,baz=308,slow=40						
ASAR	Alice Springs	44.19	163	P	P	16 03 06.9	-0.1
	0.2nm,0.4s,baz=346,slow=7.1,SNR=9.8						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	46.18	323	P	P	16 03 22.4	0.0
	1.1nm,0.6s,baz=118,slow=8.3,SNR=6.7						
	1.1nm,0.6s						
TIXI	Tiksi	52.81	3	LR	LR	16 30 19.1	
	comp=Z,35nm,18.7s,baz=168,slow=40						
ILAR	Eielson Array	73.75	26	P	P	16 06 31.7	+0.2
	0.2nm,0.6s,baz=274,slow=5.7,SNR=2.7						
	0.2nm,0.6s						
NOA	NORSAR Array B	82.81	333	LR	LR	16 47 26.5	
	comp=Z,16nm,19.9s,baz=120,slow=38						
YKA	Yellowknife Ar	87.67	23	P	P	16 07 46.4	+0.6
	0.4nm,0.6s,baz=311,slow=5.2,SNR=7.7						
	0.4nm,0.6s						

KRSC 29 16:06:42.3±1.2**, 56°.20N×164°.29E, h46^{km}**±18^{km}**, Ml3.7, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.82	271	*e*P	Pn	16 06 57.1	-0.4
KBTR				*e*S	Sn	16 07 08.6	-0.1
KBG	Krutoberegovo	0.89	274	*e*P	Pn	16 06 58.2	-0.2
KBG				*e*S	Sn	16 07 10.6	+0.5
BKI	Bering	1.38	136	*e*P	Pn	16 07 07.3	+2.3
BKI				*e*S	Sn	16 07 25.6	+3.5
SMKR	Semkarok	1.62	285	*e*P	Pn	16 07 10.9	+2.5
ZLN	Zelenaya	1.96	266	*e*P	Pn	16 07 16.5	+3.3
CIRR	Tsirk	1.98	269	*e*P	Pn	16 07 15.7	+2.2
LGNR	Loginova	2.02	268	*e*P	Pn	16 07 16.8	+2.7
BZGR	Bezymyannyi-Gr	2.03	264	*e*P	Pn	16 07 17.0	+2.9
KRSR	Krestovskiy	2.08	272	*e*P	Pn	16 07 17.2	+2.4
BZWR	Bezymyannyi-We	2.14	265	*e*P	Pn	16 07 18.3	+2.6
BZMR	Bezymyannaya	2.15	264	*e*P	Pn	16 07 19.0	+3.2
MKZ	Mys Kozlova	2.20	223	*e*P	Pn	16 07 17.6	+1.3
MKZ				*e*S	Sn	16 07 43.5	+1.2
KIRR	Kirishev	2.23	265	*e*P	Pn	16 07 20.5	+3.6
KPT	Kopyto	2.29	266	*e*P	Pn	16 07 21.2	+3.6
KMNR	Kamenistaya	2.32	261	*e*P	Pn	16 07 21.4	+3.4
TUMD	Tumrok D	2.42	247	*e*P	Pn	16 07 22.2	+2.9
TUMD				*e*S	Sn	16 07 51.7	+4.0
KOZ	Kozyrevsk	2.48	269	*e*P	Pn	16 07 24.1	+4.0
SRDR	Sredinnyy	2.56	275	*e*P	Pn	16 07 25.1	+3.9
OSSR	Ossora	3.13	348	*e*P	Pn	16 07 31.6	+2.6
OSSR				*e*S	Sn	16 08 07.5	+2.4
ESO	Esso	3.15	267	*e*P	Pn	16 07 34.2	+4.9
KII	Karymskiy	3.53	234	*e*P	Pn	16 07 38.5	+3.9
SPN	Mys Shipunski	3.98	220	*e*P	Pn	16 07 42.3	+1.7
SDLR	Sedlovina	4.29	229	*e*P	Pn	16 07 48.6	+3.5
KRER	Koryakskii	4.33	230	*e*P	Pn	16 07 49.7	+4.0
KRX	Arik	4.33	231	*e*P	Pn	16 07 49.4	+3.7
SMAR	Somma	4.33	230	*e*P	Pn	16 07 49.0	+3.2
AVH	Avacha	4.36	230	*e*P	Pn	16 07 49.7	+3.7
UGLR	Uglovaya	4.36	229	*e*P	Pn	16 07 50.3	+4.2
KOK	Koryaka	4.38	231	*e*P	Pn	16 07 51.2	+4.8
GNL	Ganaly	4.44	238	*e*P	Pn	16 07 51.6	+4.5
DALK	Dalny	4.52	228	*e*P	Pn	16 07 51.1	+2.9
KRMR	Karymshinskiy	4.93	229	*e*P	Pn	16 07 58.3	+4.6
RUS	Russkaya	5.07	224	*e*P	Pn	16 07 58.7	+3.1
GRL	Gorelyy	5.16	227	*e*P	Pn	16 08 01.5	+4.6
MTVR	Mutnovka	5.16	226	*e*P	Pn	16 08 01.4	+4.3
ASAK	Asacha	5.35	227	*e*P	Pn	16 08 04.0	+4.4
KMSK	Kamenskaya	6.36	8	*e*P	Pn	16 08 18.0	+4.7

TIR ***29*** *16:07:30.5, 40°.49N×20°.80E, h17^{km}, Md2.6/5, Ml3.4/4*

ATH ***29*** *16:07:31.6, 40°.51N×20°.74E, h6^{km}±1^{km}, ML2.8/7, Manual Solution by A.Moschou First location: 2019/06/29 16:08:36, This location: 2020/10/13 06:30:06 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*

THE ***29*** *16:07:31.1, 40°N±1°×2°1E±°, h0^{km}±1^{km}, M2.8/19, MLh2.8/19*

BEO ***29*** *16:07:32.7±0.3, 40°.47N×21°.00E, h19^{km}±3^{km}, ML2.6/9*

SKO ***29*** *16:07:33.0, 40°.47N×20°.86E, h11^{km}, ML2.7*

ISC 29 16:07:31.9±1.0**, 40°.47N**±0°.02×**20°.78E**±0°.02**, h6^{km}**±8^{km}**, n82, σ1^{s}04**/121**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	Korca	0.15	2	Pg	Pg	16 07 34.3	-0.8
KBN				Sg	Sg	16 07 37.0	-0.1
KBN				AML	AML	16 07 38.1	
	51nm,0.4s						
NEST	Nestorio	0.21	106	Pg	Pg	16 07 35.6	-0.6
NEST				Sg	Sg	16 07 39.5	+0.5
NEST				AML	AML	16 07 40.6	
	14nm,0.2s						
NEST				AMd		16 08 15.0	
NEST	Nestorio	0.21	106	P	Pg	16 07 36.2	0.0
NEST				S	Sg	16 07 40.1	+1.1
NEST	Nestorio	0.21	106	P	Pg	16 07 36.3	+0.1
NEST				S	Sg	16 07 40.3	+1.2
PENT	Pentalofos	0.39	135	P	Pg	16 07 39.2	-0.3
PENT	Pentalofos	0.39	135	P	Pg	16 07 39.4	-0.1
PENT				S	Sb	16 07 46.2	-1.4
LMS2	Laimos Florina	0.46	37	P	Pg	16 07 40.6	-0.1
LMS2				S	Sg	16 07 46.8	0.0
FNA	Florina	0.55	55	Pg	Pg	16 07 40.1	-2.4
FNA				Sg	Sg	16 07 49.6	-0.1
FNA				AML	AML	16 07 53.7	
	9.3nm,0.3s						
FNA				AMd		16 08 24.1	
FNA	Florina	0.55	55	P	Pg	16 07 42.0	-0.5
FNA				S	Sg	16 07 50.5	+0.7
FNA	Florina	0.55	55	*i* Pg	Pg	16 07 42.1	-0.4
FNA				*i* Sg	Sg	16 07 50.8	+1.1
FNA	Florina	0.55	55	*e*Pg	Pg	16 07 42.1	-0.4
FNA				*e*Sg	Sg	16 07 50.8	+1.1
FNA	Florina	0.55	55	P	Pg	16 07 42.1	-0.4
FNA				S	Sg	16 07 50.6	+0.9
OHR	Ohrid	0.64	1	*i* Pg	Pg	16 07 44.7	+0.5
OHR				*i* Sg	Sb	16 07 54.5	-0.3
OHR				*e*Lg	Lg	16 07 55.1	
	comp=N,157nm,0.7s						
OHR				*e*Lg	Lg	16 07 55.4	
	comp=E,380nm,0.4s						
KPRO	Kipourio	0.68	139	P	Pg	16 07 44.4	-0.7
KPRO				S	Sb	16 07 55.4	-0.7
KPRO	Kipourio	0.68	139	P	Pg	16 07 44.3	-0.7
KPRO				S	Sb	16 07 55.4	-0.7
KZN	Kozani	0.78	102	P	Pg	16 07 46.0	-0.8
KZN				S	Sb	16 07 59.5	+0.8
JAN	Janina	0.82	176	P	Pg	16 07 47.4	-0.2
JAN				S	Sb	16 07 59.3	-0.5
SRN	Sarande	0.84	225	Pg	Pg	16 07 47.7	-0.3
SRN				Sg	Sb	16 08 01.0	+0.5
SRN				AMd		16 08 49.2	
IGT	Igoumenitsa	1.00	200	Pn	Pg	16 07 50.4	-0.7
IGT				AMd		16 08 54.9	
IGT	Igoumenitsa	1.00	200	P	Pg	16 07 51.3	+0.2
IGT	Igoumenitsa	1.00	200	*i* Pg	Pg	16 07 51.3	+0.2
IGT				*i* Sg	Sn	16 08 07.8	+0.8
IGT	Igoumenitsa	1.00	200	*e*Pg	Pg	16 07 51.2	+0.1
IGT				*e*Sg	Sn	16 08 07.3	+0.4
IGT	Igoumenitsa	1.00	200	P	Pg	16 07 51.3	+0.2
IGT				S	Sb	16 08 05.1	0.0
KTI	Kastanea	1.02	94	P	Pg	16 07 51.1	-0.5
TIR	Tirane	1.11	322	*e*Pg	Pg	16 07 53.2	-0.1
TIR				*e*Sg	Sn	16 08 13.5	+3.7
TETR	Tetrakomo, Epi	1.19	161	P	Pg	16 07 54.2	-0.5
TETR				S	Sn	16 08 13.6	+1.8
THL	Klokotos Trika	1.31	133	P	Pn	16 07 55.7	-1.1
THL				S	Sn	16 08 15.5	+0.9
THL	Klokotos Trika	1.31	133	P	Pb	16 07 56.9	0.0
THL				S	Sn	16 08 16.1	+1.4
TYRN	Tyrnavos	1.35	124	P	Pg	16 07 57.9	+0.1
TYRN				S	Sn	16 08 16.8	+1.3
VAY	Valandovo	1.60	57	*i* Pn	Pn	16 08 01.0	+0.2
VAY				*i* Sn	Sn	16 08 21.0	-0.7
VAY				*e*Lg	Lg	16 08 25.6	
	comp=E,48nm,0.7s						
VAY				*e*Lg	Lg	16 08 28.5	
	comp=N,92nm,0.8s						
LKD2	Lefkada island	1.68	183	Pg	Pg	16 08 04.2	0.0
LKD2				Sg	Sg	16 08 27.5	+1.5
LKD2				AML	AML	16 08 34.6	
	comp=N,0.9nm,0.7s						
LKD2				AMd		16 09 32.6	
LKD2	Lefkada island	1.68	183	P	Pg	16 08 03.9	-0.3
PUK	Puka	1.71	337	Pg	Pb	16 08 03.4	-0.4
PUK				Sg	Sb	16 08 26.0	+0.5
PUK				AML	AML	16 08 33.5	
	comp=N,0.7nm,0.6s						
PUK				AMd		16 09 22.2	
KNT	Kendrikon	1.75	66	*i* Pn	Pn	16 08 03.0	+0.1
KNT	Kendrikon	1.75	66	P	Pn	16 08 02.2	-0.6
KNT				S	Sn	16 08 25.1	-0.4
NYDR	Nydri-Lefkada	1.76	182	P	Pb	16 08 04.6	+0.1
HORT	Hortiatis	1.77	85	P	Pn	16 08 02.6	-0.7
MAKR	Makrakomi, Fth	1.79	144	P	Pb	16 08 04.7	-0.5
SCTE	Santa Cesarea	1.81	258	Pn	Pn	16 08 03.5	-0.2
SCTE				Sn	Sg	16 08 30.0	-0.1
SCTE				AML	AML	16 08 34.5	
	comp=N,1.1nm,0.8s						
SCTE				AMd		16 09 19.5	
SCTE	Santa Cesarea	1.81	258	Pg	Pn	16 08 01.5	-2.2
SCTE				Sg	Sn	16 08 22.6	-4.4
SCTE				AML	AML	16 08 34.5	
	comp=N,1.1nm,0.8s						
SCTE				AMd		16 09 30.8	
EVGI	Lefkada island	1.85	183	P	Pb	16 08 06.1	0.0
AGG	Agios Georgios	1.88	140	P	Pn	16 08 05.0	+0.4
ULC	Ulcinj	1.89	323	Pg	Pn	16 08 05.3	+0.6
ULC				AMd		16 09 26.0	
ULC	Ulcinj	1.89	323	*i* Pn	Pb	16 08 06.5	-0.3
BCI	Bajram Curri	1.97	344	Pg	Pb	16 08 08.5	+0.4
BCI				Sg	Sb	16 08 33.8	+0.9
BCI				AML	AML	16 08 52.9	
	comp=N,0.7nm,0.9s						
SOH	Sokhos	1.99	79	P	Pn	16 08 06.1	-0.1
FSK	Fiskardo	2.02	185	P	Pn	16 08 07.7	+1.2
PLG	Polygyros	2.04	92	P	Pn	16 08 07.0	+0.1
PLG				S	Sn	16 08 32.5	-0.1
DRME	Dracevica, Mon	2.09	325	Pg	Pn	16 08 08.3	+0.7
DRME				AMd		16 09 49.7	
SRS	Serrai	2.23	72	*i* Pn	Pn	16 08 10.5	+1.0
SRS				*i* Sn	Sn	16 08 37.8	+0.5
SRS	Serrai	2.23	72	*e*Pg	Pn	16 08 09.9	+0.4
SRS				*e*Sg	Sn	16 08 36.5	-0.8
KKB	Krupnik	2.24	52	*i* Pn	Pn	16 08 10.6	+1.0
KKB				*i* Sn	Sn	16 08 39.0	+1.4
PDG	Podgorica	2.27	330	*e*Pn	Pn	16 08 11.4	+1.5
PDG				*e*Sg	Sg	16 08 44.9	+0.2
PAIG	Paliouri	2.29	103	P	Pn	16 08 10.1	-0.1
BUM	Brajici-Budva	2.31	323	Pg	Pn	16 08 11.4	+0.7
BUM				AMd		16 09 42.0	
BOSS	Bosilegrad	2.39	32	*e*Pn	Pn	16 08 09.7	-2.0
BARS	Barje	2.47	18	*i* Pn	Pn	16 08 13.1	+0.4
BARS	Barje	2.47	18	*e*Pn	Pn	16 08 12.9	+0.2
BEY	Berane	2.49	345	Pg	Pb	16 08 15.4	-1.7
BEY				AMd		16 09 37.2	
MMB	Musomishta	2.49	64	*i* Pn	Pn	16 08 10.0	-3.1
MMB				*i* Sn	Sn	16 08 44.1	+0.3
CEME	Cevo	2.50	327	Pg	Pn	16 08 14.4	+1.2
CEME				AMd		16 09 47.5	
HCY	Herceg Novi	2.62	320	Pg	Pn	16 08 15.2	+0.5
HCY				AMd		16 09 52.9	
SELS	Selova	2.76	5	*e*Pn	Pn	16 08 16.2	-0.5
NOCI	Noci	2.84	278	Pg	Pn	16 08 17.2	-0.7
NOCI				Sg	Sn	16 08 50.2	-2.2
NOCI				AML	AML	16 08 58.7	
	comp=N,0.2nm,0.5s						
NOCI				AMd		16 10 06.6	
SJES	Sjenica	2.85	348	*e*Pn	Pn	16 08 18.0	-0.1
ZAPS	Zavoj	3.12	26	*e*Pn	Pn	16 08 20.2	-1.5
IVAS	Ivanjica	3.14	352	*e*Pn	Pn	16 08 21.6	-0.4
BOVS	Bovan	3.23	12	*e*Pn	Pn	16 08 21.0	-2.2
GRUS	Gruza	3.41	359	*e*Pn	Pn	16 08 26.2	+0.5
ZAGS	Zajecar	3.51	17	*e*Pn	Pn	16 08 26.6	-0.4
BBLS	Lazi&#263i	3.54	344	*e*Pn	Pn	16 08 27.9	+0.4
DIVS	Divibare	3.67	351	*e*Pn	Pn	16 08 29.8	+0.5
TEKS	Tekeris	4.18	348	*e*Pn	Pn	16 08 35.4	-0.8
SOKA	Soboth	7.47	328	*i* Pn	Pn	16 09 22.2	+0.7
	comp=N,0.3nm,0.2s						
OBKA	Obir	7.54	325	*i* Pn	Pn	16 09 23.4	+0.9
	comp=N,0.5nm,0.3s						
MYKA	Terra Mystica	8.04	322	*e*Pn	Pb	16 09 52.7	+1.0
	comp=N,0.6nm,0.2s						
ABTA	Abfaltersbach	8.67	319	*i* Pn	Pn	16 09 38.5	+0.5
	comp=N,0.3nm,0.2s						
WTTA	Wattenberg	9.46	319	*i* Pn	Pn	16 09 50.3	+1.4
	comp=N,0.9nm,0.4s						
WATA	Walderalm	9.54	319	*i* Pn	Pn	16 09 51.3	+1.4
	comp=N,1.7nm,0.3s						
MOTA	Moosalm	9.79	318	*e*Pn	Pn	16 09 53.9	+0.5
	comp=N,1.9nm,0.5s						
KHC	Kasperske Hory	10.05	332	*e*PN	Pn	16 09 56.6	-0.2
DAVA	Damuels	10.40	315	*i* Pn	Pn	16 10 00.1	-1.6
	comp=N,0.7nm,0.3s						

BJI ***29*** *16:20:01.8, 24°.81N×122°.42E, h151^{km}, mB4.6/9, mb4.4/41*

NEIC ***29*** *16:20:05.7±2.2, 25°.04N±0°.09×122°.20E±0°.07, h156^{km}±7^{km}, mb4.3/33, Error ellipse: s-maj=12.4km s-min=9.1km az=181.0*

ASIES ***29*** *16:20:06.1, 25°.07N×122°.18E, h152^{km}, ML5.1, Mw4.2, Moment Tensor Solution. Moment tensor: Scale 10^{22}Nm; M_{rr}-2.02; $M_{\theta\theta}$-0.19; $M_{\phi\phi}$2.21; $M_{r\theta}$-0.93; $M_{\theta\phi}$0.53; $M_{\phi r}$-1.16; Fault plane solution: $M_0$2.64113×10^{22} NP1: ϕ_s175.15000°, δ31.53000°, λ-118.25000°. NP2: ϕ_s27.38000°, δ62.57000°, λ-73.81000°. Principal axes: T Plg16.0800°, Azm105.5340°; N Plg14.3310°, Azm199.7570°; P Plg68.1940°, Azm329.4400°;*

JMA ***29*** *16:20:06.4±0.2, 25°N±1°×122°.2E±0°.5, h148^{km}±1^{km}, MD4.1/18, MV4.4/18, TAIWAN REGION*

TAP ***29*** *16:20:06.1, 25°.07N×122°.18E, h152^{km}, ML5.1, B*

IDC ***29*** *16:20:06.5±1.8, 25°.13N×122°.25E, h162^{km}±15^{km}, mb3.9/19, mbtmp4.3/21, Error ellipse: s-maj=18.0km s-min=11.2km az=62.0*

NIED ***29*** *16:20:06.4, 24°.94N×122°.15E, h148^{km}, MW4.6, Moment Tensor Solution. s1 Moment tensor: Scale 10^{15}Nm; M_{rr}-2.16; $M_{\theta\theta}$-5.93; $M_{\phi\phi}$8.09; $M_{r\theta}$3.91; $M_{\theta\phi}$-3.84; $M_{\phi r}$-3.24; Fault plane solution: $M_0$9.51000×10^{15} NP1: ϕ_s210.00000°, δ56.00000°, λ-8.00000°. NP2: ϕ_s304.00000°, δ84.00000°, λ-145.00000°.*

ISC 29 16:20:05.9±0.5**, 25°.05N**±0°.03×**122°.19E**±0°.02**, h158^{km}**±4^{km}**, n299, σ1^{s}11**/464**, mb4.2**/39**, 13C-8D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao	0.19	259	⇓*i*P	Pn	16 20 26.6	-0.5
TWB1				S	Sn	16 20 42.3	-0.9
SXI1	Grass Mountain	0.29	280	P	Pn	16 20 26.9	-0.5
SXI1				*e*S	Sn	16 20 42.3	-1.6
EGS		0.31	230	P	Pn	16 20 27.1	-0.3
EGS				S	Sn	16 20 42.6	-1.1
TIPB	Shuangxi	0.34	258	*i* P	Pn	16 20 27.1	-0.4
TIPB				*e*S	Sn	16 20 42.2	-1.8
NWF	Wu-fen Shan	0.37	274	*i* P	Pn	16 20 27.3	-0.4
NWF				*e*S	Sn	16 20 42.3	-2.0
WFSB	Wu-fen Shan	0.37	274	P	Pn	16 20 27.4	-0.2
WFSB				S	Sn	16 20 42.7	-1.4
NTC	Toucheng	0.38	240	P	Pn	16 20 27.6	0.0
NTC				*e*S	Sn	16 20 45.6	+1.5
TNOU	National Taiwa	0.39	285	*i* P	Pn	16 20 27.4	-0.3
TNOU				*e*S	Sn	16 20 42.5	-1.7
ILA	Ilan	0.49	235	⇑*e*P	Pn	16 20 27.8	-0.3
ILA				*i* S	Sn	16 20 43.2	-1.8
NWRT	Kuosheng	0.51	288	*e*P	Pn	16 20 29.0	+0.9
NWRT				S	Sn	16 20 43.3	-1.8
TWC	Suao	0.53	216	⇓*i*P	Pn	16 20 27.6	-0.7
TWC				*e*S	Sn	16 20 42.6	-2.8
TWA	Mucha	0.55	263	⇓*e*P	Pn	16 20 28.0	-0.4
TWA				*e*S	Sn	16 20 45.0	-0.5
YM08	YM08	0.56	285	⇑*e*P	Pn	16 20 27.8	-0.7
YM08				S	Sn	16 20 44.9	-0.8
NHY	Taipei	0.56	270	P	Pn	16 20 28.1	-0.3
NHY				*e*S	Sn	16 20 43.4	-2.2
ESAO	Su ao	0.56	214	⇓*i*P	Pn	16 20 27.9	-0.6
ESAO				*e*S	Sn	16 20 45.6	-0.1
YM01	YM01	0.57	280	P	Pn	16 20 28.0	-0.6
YM01				*e*S	Sn	16 20 46.2	+0.3
TWE	Neicheng	0.57	236	*e*P	Pn	16 20 27.9	-0.6
TWE				*i* S	Sn	16 20 45.4	-0.3
TWY	Chenhua	0.58	293	⇑P	Pn	16 20 28.3	-0.2
TWY				*i* S	Sn	16 20 44.4	-1.5
PCYT	Pengchaiyu	0.59	350	⇑*e*P	Pn	16 20 28.7	+0.1
PCYT				*e*S	Sn	16 20 45.2	-0.9
NDS	Dongshan	0.59	227	⇓*e*P	Pn	16 20 27.5	-1.2
NDS				*i* S	Sn	16 20 44.7	-1.3
NSM	Shimen	0.60	294	P	Pn	16 20 28.6	0.0
NSM				S	Sn	16 20 44.5	-1.5
ZUZH	Zhuzihu	0.60	281	*e*P	Pn	16 20 28.0	-0.7
ZUZH				*e*S	Sn	16 20 44.1	-2.0
NHDH	Xindian Distri	0.61	262	P	Pn	16 20 28.1	-0.6
NHDH				*i* S	Sn	16 20 45.1	-1.0
FUSB	Fushanzhiwuyua	0.62	243	*i* P	Pn	16 20 28.4	-0.4
FUSB				S	Sn	16 20 44.4	-1.9
TAP	Taipei	0.62	270	*e*P	Pn	16 20 28.9	+0.1
TAP				*e*S	Sn	16 20 44.2	-2.0
ANP	Anpu	0.62	283	*e*P	Pn	16 20 28.5	-0.4
ANP				*e*S	Sn	16 20 46.5	0.0
EOS2	EOS2	0.62	176	*i* P	Pn	16 20 28.7	0.0
EOS2				*e*S	Sn	16 20 45.6	-0.4
TATO	Taipei	0.64	264		Pn	16 20 28.2	-0.7
TATO	Taipei	0.64	264	P	Pn	16 20 28.4	-0.5
TATO	Taipei	0.64	264	P	Pn	16 20 28.2	-0.7
TATO	Taipei	0.64	264	S	Sn	16 20 45.6	-0.8
NWLT	Wulai	0.68	247	*i* P	Pn	16 20 29.0	-0.2
NWLT				*e*S	Sn	16 20 44.9	-2.0
NTST	Danshui	0.68	280	*e*P	Pn	16 20 28.8	-0.3
NTST				S	Sn	16 20 46.5	-0.3
ENTT	Nioudou	0.70	235	*i* P	Pn	16 20 29.0	-0.3
ENTT				*i* S	Sn	16 20 46.1	-1.0
TWS1	Kuangyinshan	0.70	275	*i* P	Pn	16 20 28.9	-0.3
TWS1				*i* S	Sn	16 20 45.6	-1.4
EWUT	Wuta	0.70	212	*e*P	Pn	16 20 29.4	+0.1
EWUT				*e*S	Sn	16 20 46.8	-0.4
ENA	Nanau	0.74	214	*i* P	Pn	16 20 29.3	-0.2
ENA				*i* S	Sn	16 20 46.4	-1.1
EOS3	EOS3	0.77	171	*e*P	Pn	16 20 29.7	+0.2
EOS3				*e*S	Sn	16 20 47.4	-0.1
LATG	Datong	0.79	230	*e*P	Pn	16 20 29.9	-0.1
LATG				*i* S	Sn	16 20 47.6	-0.8
EAHA	Aohua	0.82	210	⇓P	Pn	16 20 30.0	-0.1
EAHA				*e*S	Sn	16 20 48.0	-0.5
YHNB	Yeheng	0.83	243	Pn	Pn	16 20 29.1	-1.1
YHNB	Yeheng	0.83	243	P	Pn	16 20 29.7	-0.6
YHNB	Yeheng	0.83	243	P	Pn	16 20 29.5	-0.7
YHNB	Yeheng	0.83	243	*i* P	Pn	16 20 29.6	-0.6
YHNB				S	Sn	16 20 46.6	-2.1
EHP	Heping Village	0.84	209	*e*P	Pn	16 20 30.0	-0.3
EHP				S	Sn	16 20 47.9	-0.9
NSK	Sanguang	0.84	244	*i* P	Pn	16 20 29.6	-0.7
NSK				*e*S	Sn	16 20 46.1	-2.8
JYNG	Yonagunijimaku	0.91	131	*e*P	Pn	16 20 30.3	-0.4
JYNG				*e*S	Sn	16 20 48.0	-1.7
JYNG	Yonagunijimaku	0.91	131	A	A	16 20 30.3	
	comp=N,5.0nm,3.7s,comp=E,5.0nm,1.1s						
NCUH	Zhongli	0.92	265	*i* P	Pn	16 20 30.5	-0.2
NCUH				*i* S	Sn	16 20 48.5	-1.2
EOS4	EOS4	0.93	173	*i* P	Pn	16 20 30.0	-0.4
EOS4				*e*S	Sn	16 20 47.7	-1.6
YOJ	Yonaguni jima	0.95	128		Pn	16 20 30.4	-0.6
YOJ	Yonaguni jima	0.95	128	P	Pn	16 20 30.5	-0.4
YOJ	Yonaguni jima	0.95	128	P	Pn	16 20 30.6	-0.4
YOJ	Yonaguni jima	0.95	128	*e*P	Pn	16 20 30.7	-0.3
YOJ				*e*S	Sn	16 20 48.5	-1.7
YOJ	Yonaguni jima	0.95	128	*i* P	Pn	16 20 30.7	-0.3
YOJ				*e*S	Sn	16 20 49.2	-0.9
NNS	Nan Shan	0.96	231	*i* P	Pn	16 20 31.0	-0.3
NNS				S	Sn	16 20 49.1	-1.5
NNSB	Datong	0.96	230	*i* P	Pn	16 20 31.0	-0.2
NNSB				*i* S	Sn	16 20 49.5	-1.1
NNSH	Datong	0.96	230	*e*P	Pn	16 20 31.2	-0.1
NNSH				*e*S	Sn	16 20 49.1	-1.5
KSHI	Guanxi Townshi	0.96	254	*i* P	Pn	16 20 30.8	-0.3
KSHI				*i* S	Sn	16 20 49.4	-0.9
ETL	Fush Village	1.02	210	*i* P	Pn	16 20 31.0	-0.7

ETL				eS	Sn	16 20 49.2	-2.2
NACB	Ninganchiao	1.02	212		Pn	16 20 30.2	-1.5
NACB	Ninganchiao	1.02	212	P	Pn	16 20 30.8	-0.9
NACB	Ninganchiao	1.02	212	P	Pn	16 20 30.9	-0.8
NACB	Ninganchiao	1.02	212	P	Pn	16 20 30.7	-0.9
NACB				eS	Sn	16 20 49.0	-2.3
NHW	Xinwu Township	1.04	268	P	Pn	16 20 31.7	-0.1
NHW				eS	Sn	16 20 50.8	-0.6
NJD	Zhudong	1.05	253	P	Pn	16 20 32.0	+0.2
NJD				S	Sn	16 20 50.6	-1.0
ETLH	Xiulin Townshi	1.05	218	eP	Pn	16 20 31.4	-0.7
ETLH				iS	Sn	16 20 49.8	-2.1
NFF	Wufeng Townshi	1.06	247	iP	Pn	16 20 31.4	-0.6
NFF				eS	Sn	16 20 50.0	-1.9
HSN1	Hsinchu	1.10	256	P	Pn	16 20 32.1	-0.1
HSN1				eS	Sn	16 20 51.4	-1.0
TWD	Chiawan	1.10	209	iP	Pn	16 20 31.4	-0.9
TWD				eS	Sn	16 20 50.0	-2.5
SBCB	Hsinchu	1.12	257	iP	Pn	16 20 32.4	-0.1
SBCB				eS	Sn	16 20 51.7	-1.1
HSN	Hsinchu	1.13	258	iP	Pn	16 20 32.0	-0.5
HSN				iS	Sn	16 20 51.0	-2.0
LIOB	Emei	1.14	250	iP	Pn	16 20 32.3	-0.3
LIOB				iS	Sn	16 20 51.0	-2.1
NSTT	Nanjuang	1.16	249	iP	Pn	16 20 32.4	-0.4
NSTT				iS	Sn	16 20 52.3	-1.0
FUSS	Fushou	1.17	228	eP	Pn	16 20 33.5	+0.2
FUSS				S	Sn	16 20 53.4	-0.6
HWA	Hwalien	1.19	207	eP	Pn	16 20 33.0	-0.1
HWA				iS	Sn	16 20 53.1	-0.8
TWT	Tachien	1.21	230	eP	Pn	16 20 33.8	+0.3
TWT				iS	Sn	16 20 53.6	-1.0
TDCB	Techi	1.23	230	iP	Pn	16 20 33.9	+0.3
TDCB				iS	Sn	16 20 53.7	-1.1
WHF	Hehuan Shan	1.23	223	P	Pn	16 20 33.8	-0.1
WHF				eS	Sn	16 20 53.5	-1.9
LXIB	Xiulin Townshi	1.24	215	eP	Pn	16 20 32.8	-1.0
LXIB				S	Sn	16 20 54.0	-1.0
ETM	Tongmen	1.25	211	iP	Pn	16 20 32.7	-0.9
ETM				eS	Sn	16 20 52.0	-2.9
NJN	Zhunan	1.25	254	P	Pn	16 20 33.4	-0.3
NJN				S	Sn	16 20 53.6	-1.3
TEYL	Yanliau Villag	1.29	205	iP	Pn	16 20 33.6	-0.4
TEYL				iS	Sn	16 20 54.5	-1.1
WHP	Taichung City	1.37	236	iP	Pn	16 20 34.9	+0.1
WHP				iS	Sn	16 20 55.7	-1.3
NMLH	Miaoli	1.37	249	iP	Pn	16 20 34.5	-0.2
NMLH				iS	Sn	16 20 55.5	-1.4
SHUL	Shoufeng	1.38	205	iP	Pn	16 20 34.6	-0.3
SHUL				iS	Sn	16 20 56.2	-0.9
ESL	Shilin	1.41	210	eP	Pn	16 20 33.9	-1.3
ESL				eS	Sn	16 20 54.7	-2.9
OWD	Renai	1.43	221	iP	Pn	16 20 35.7	+0.2
OWD				eS	Sn	16 20 57.4	-0.8
WUSB	Renai	1.43	223	P	Pn	16 20 36.0	+0.4
WUSB				iS	Sn	16 20 57.6	-0.7
NSY	Sanyi	1.44	245	iP	Pn	16 20 35.7	+0.2
NSY				iS	Sn	16 20 57.4	-0.8
TEGC	Jichi Village	1.46	204	eP	Pn	16 20 35.5	-0.1
TEGC				S	Sn	16 20 57.8	-0.6
TWQ1	Liyutan	1.46	242	iP	Pn	16 20 35.5	-0.2
TWQ1				iS	Sn	16 20 57.0	-1.5
WARBT	Fenglin Townsh	1.51	209	eP	Pn	16 20 34.9	-1.4
WARBT				eS	Sn	16 20 56.9	-2.7
WPL	Puli Township	1.52	228	P	Pn	16 20 36.2	-0.1
WPL				eS	Sn	16 20 59.2	-0.5
WCS	Beigang Elemen	1.52	230	iP	Pn	16 20 36.5	+0.1
WCS				iS	Sn	16 20 58.4	-1.2
DPDB	Guoxing	1.53	229	P	Pn	16 20 36.6	+0.1
DPDB				eS	Sn	16 20 58.7	-1.2
EGFH	Guangfu	1.54	207	eP	Pn	16 20 35.3	-1.1
EGFH				eS	Sn	16 20 56.9	-3.1
IRIF	Iriomote-Funau	1.57	116	eP	Pn	16 20 36.3	-0.4
IRIF				eS	Sn	16 20 59.1	-1.4
IRIF	Iriomote-Funau	1.57	116	A	A	16 20 36.3	
	comp=N,5.0nm,3.7s,comp=E,6.0nm,1.3s						
WDJ	Dajia District	1.57	244	iP	Pn	16 20 36.9	0.0
WDJ				iS	Sn	16 20 59.7	-0.8
VWDT	VWDT	1.60	217	iP	Pn	16 20 37.6	+0.5
VWDT				eS	Sn	16 21 01.6	+0.5
TCU	Taichung	1.64	237	iP	Pn	16 20 37.5	0.0
TCU				eS	Sn	16 21 01.6	-0.3
SMLT	Sun Moon Lake	1.65	226	iP	Pn	16 20 37.8	0.0
SMLT				eS	Sn	16 21 02.1	-0.1
TYC	Yuchr	1.66	227	iP	Pn	16 20 37.7	-0.1
TYC				eS	Sn	16 21 01.9	-0.4
SSLB	Suanglung	1.69	222		Pn	16 20 37.6	-0.5
SSLB	Suanglung	1.69	222	P	Pn	16 20 37.9	-0.2
SSLB	Suanglung	1.69	222	P	Pn	16 20 38.1	0.0
SSLB				iS	Sn	16 21 02.2	-0.6
WWF	Wufeng	1.69	234	⇑P	Pn	16 20 37.8	-0.2
WWF				eS	Sn	16 21 02.1	-0.6
HGSD	Ruisui	1.70	204	iP	Pn	16 20 38.0	-0.2
HGSD				eS	Sn	16 21 02.2	-0.7
EHY	Hungye	1.73	208	eP	Pn	16 20 37.2	-1.3
EHY				eS	Sn	16 21 01.3	-2.3
EHYH	Wanrong	1.73	207	P	Pn	16 20 37.9	-0.6
EHYH				eS	Sn	16 21 01.4	-2.2
HATJ	Hateruma jima	1.77	123	eP	Pn	16 20 39.0	+0.1
HATJ				eS	Sn	16 21 03.0	-1.3
HATJ	Hateruma jima	1.77	123	A	A	16 20 39.0	
	comp=N,11nm,3.4s,comp=E,7.0nm,5.4s						
WCHH	Zhanghua	1.77	237	P	Pn	16 20 39.3	+0.3
WCHH				eS	Sn	16 21 03.6	-0.7
WCH1	Changhua City	1.78	237	eP	Pn	16 20 39.1	0.0
WCH1				iS	Sn	16 21 03.7	-0.9
WNT	Mingjian	1.80	230	⇑eP	Pn	16 20 39.3	+0.1
WNT				iS	Sn	16 21 03.8	-1.1
WJS	Zhushan	1.81	228	P	Pn	16 20 39.5	+0.1
WJS				iS	Sn	16 21 04.5	-0.5
WHYT	Xinyi Township	1.81	222	eP	Pn	16 20 39.6	+0.1
WHYT				iS	Sn	16 21 04.5	-0.8
YULB	Yu-li	1.84	207		Pn	16 20 38.2	-1.5
YULB	Yu-li	1.84	207	P	Pn	16 20 38.3	-1.5
YULB	Yu-li	1.84	207	P	Pn	16 20 38.5	-1.2
YULB	Yu-li	1.84	207	eP	Pn	16 20 38.4	-1.4
YULB				eS	Sn	16 21 04.1	-1.6
JKRS	Kuro-shima	1.84	116	eP	Pn	16 20 39.8	+0.1
JKRS				eS	Sn	16 21 04.2	-1.5
JKRS	Kuro-shima	1.84	116	A	A	16 20 39.8	
	comp=N,5.0nm,2.3s,comp=E,6.0nm,5.9s						
ECBN	Changbin	1.85	202	P	Pn	16 20 39.5	-0.3
ECBN				eS	Sn	16 21 04.9	-1.1
EYUL	Yuli	1.87	205	eP	Pn	16 20 40.1	+0.1
TWF1	Yuli	1.87	206	eP	Pn	16 20 38.8	-1.3
TWF1				eS	Sn	16 21 04.0	-2.4
JIJ	Ishigaki jima	1.90	111	iP	Pn	16 20 40.2	-0.2
JIJ				S	Sn	16 21 05.2	-1.8
JIJ	Ishigaki jima	1.90	111	A	A	16 20 40.2	
	comp=N,3.0nm,1.5s,comp=E,4.0nm,0.8s						
YUS	Yu-Shan	1.92	216	eP	Pn	16 20 41.3	+0.2
YUS				eS	Sn	16 21 08.3	+0.2
JISG	Ishigakijimahi	1.98	103	iP	Pn	16 20 41.1	-0.1
JISG				S	Sn	16 21 06.9	-1.6
JISG	Ishigakijimahi	1.98	103	A	A	16 20 41.1	
	comp=N,4.0nm,1.2s,comp=E,3.0nm,1.5s						
ALS	Alishan	1.98	220	iP	Pn	16 20 41.6	-0.1
ALS				S	Sn	16 21 08.1	-1.0
CHKH	Chenggong	1.98	202	eP	Pn	16 20 41.0	-0.4
CHKH				S	Sn	16 21 07.4	-1.2
WDL	Douliou City	2.00	229	eS	Sn	16 21 08.7	-0.3
WGK	Gukeng	2.01	228	iP	Pn	16 20 41.6	0.0
WGK				S	Sn	16 21 08.7	-0.4
FULB	Fuli	2.01	204	iP	Pn	16 20 41.1	-0.6
FULB				eS	Sn	16 21 08.9	-0.4
WDLH	Douliu	2.02	228	iP	Pn	16 20 41.7	-0.1
WDLH				iS	Sn	16 21 08.7	-0.7
RLNB	Erlin	2.03	236	⇑P	Pn	16 20 41.1	-0.7
RLNB				S	Sn	16 21 07.9	-1.5
CHKT	Chengkung	2.08	201	eP	Pn	16 20 41.9	-0.5
CHKT				eS	Sn	16 21 08.4	-2.1
EHD	Haiduan	2.09	206	eP	Pn	16 20 43.8	+1.2
EHD				eS	Sn	16 21 08.1	-2.8
WTCT	Ta-ch'eng	2.10	236	iP	Pn	16 20 42.2	-0.5
WTCT				iS	Sn	16 21 08.8	-2.2
WTK	Tuku	2.13	231	eP	Pn	16 20 42.9	-0.1
WTK				iS	Sn	16 21 11.0	-0.6
ECS	Chishang	2.13	205	eP	Pn	16 20 43.1	-0.1
ECS				iS	Sn	16 21 10.6	-1.2
ELDTW	Lidau	2.14	210	eP	Pn	16 20 43.8	+0.5
ELDTW				eS	Sn	16 21 10.3	-1.7
WCKO	Fanlu	2.16	222	P	Pn	16 20 43.3	-0.1
WCKO				iS	Sn	16 21 11.4	-0.8
EDH	Donghe	2.22	202	P	Pn	16 20 43.3	-0.8
EDH				eS	Sn	16 21 11.8	-1.7
CHY	Chiayi	2.23	227	eP	Pn	16 20 43.9	-0.3
CHY				iS	Sn	16 21 12.6	-1.1
TPUB	Ta-pu	2.25	220		Pn	16 20 44.0	-0.5
TPUB	Ta-pu	2.25	220	P	Pn	16 20 44.0	-0.5
TPUB	Ta-pu	2.25	220	iP	Pn	16 20 44.1	-0.3
TPUB				iS	Sn	16 21 13.0	-1.2
STYH	Taoyuan	2.27	215	iP	Pn	16 20 44.8	+0.1
STYH				eS	Sn	16 21 13.2	-1.4
WSF	Szhu	2.28	232	iP	Pn	16 20 44.3	-0.4
WSF				iS	Sn	16 21 13.7	-1.0
STYT	Tauyuan	2.29	215	P	Pn	16 20 45.0	0.0
STYT				eS	Sn	16 21 13.7	-1.3
WTP	Ta-pu	2.30	219	iP	Pn	16 20 44.7	-0.4
WTP				iS	Sn	16 21 13.9	-1.3
MATB	Ma-tsu	2.31	299	eP	Pn	16 20 44.4	-0.7
JTJ	Tarama	2.32	99	P	Pn	16 20 45.6	+0.4
JTJ				S	Sn	16 21 14.2	-1.3
JTJ	Tarama	2.32	99	A	A	16 20 45.6	
	comp=N,4.0nm,2.8s,comp=E,4.0nm,5.4s						
LONT	Longtian	2.34	205	eP	Pn	16 20 44.5	-1.0
LONT				eS	Sn	16 21 14.2	-1.9
WSL	Shuilin Townsh	2.35	230	iP	Pn	16 20 45.4	-0.2
WSL				iS	Sn	16 21 15.7	-0.5
TWK	Hsinying	2.36	222	eP	Pn	16 20 45.5	-0.3
TWK				eS	Sn	16 21 15.2	-1.3
SNST	Tainan City	2.39	221	eP	Pn	16 20 45.9	-0.2
SNST				S	Sn	16 21 15.7	-1.4
CHN1	Nanshi	2.40	220	iP	Pn	16 20 46.1	-0.1
CHN1				iS	Sn	16 21 15.9	-1.4
ICHU	Yijhu	2.42	227	eP	Pn	16 20 46.1	-0.4
ICHU				eS	Sn	16 21 15.9	-1.8
TWGBT	Beinan	2.44	205	P	Pn	16 20 45.5	-1.2
TWGBT	Beinan	2.44	205	P	Pn	16 20 45.0	-1.7
TWGBT	Beinan	2.44	205	S	Sn	16 21 17.1	-1.1
TWGBT	Beinan	2.44	205	eP	Pn	16 20 45.4	-1.3
TWGBT				eS	Sn	16 21 15.8	-2.4
TWG	Pinlang	2.44	205		Pn	16 20 44.5	-2.2
TWG	Pinlang	2.44	205	eP	Pn	16 20 46.6	-0.2
TWG				eS	Sn	16 21 16.8	-1.4
SGST	Jiashian	2.44	217	eP	Pn	16 20 45.8	-1.0
SGST				eS	Sn	16 21 16.2	-2.2
TTN	Taitung	2.47	203	eP	Pn	16 20 47.6	+0.5
TTN				eS	Sn	16 21 19.1	+0.2
CHN8	Yiju	2.48	227	iP	Pn	16 20 46.8	-0.3
CHN8				iS	Sn	16 21 18.1	-0.8
VWUC	VWUC	2.49	269	iP	Pn	16 20 46.6	-0.6
VWUC				eS	Sn	16 21 17.4	-1.8
CHN3	Shinhua	2.57	221	eP	Pn	16 20 48.9	+0.6
CHN3				eS	Sn	16 21 21.3	+0.2
SSHA	Shanhua	2.58	223	P	Pn	16 20 48.6	+0.2
SSHA				eS	Sn	16 21 21.0	-0.1
XPSS	Dashiqiu	2.60	317	eP	Pn	16 20 48.1	-0.5
XPSS				eS	Sn	16 21 19.2	-2.5
SCLT	Jiali	2.61	225	iP	Pn	16 20 48.6	-0.1
SCLT				iS	Sn	16 21 21.1	-0.7
SHHT	Tainan City	2.63	220	eP	Pn	16 20 49.8	+0.8
SHHT				eS	Sn	16 21 19.9	-2.4
SCST	Cishan	2.65	216	iP	Pn	16 20 49.7	+0.4
SCST				eS	Sn	16 21 22.5	-0.3
TAI1	Yung-k'ang	2.68	222	eP	Pn	16 20 50.0	+0.3
TAI1				eS	Sn	16 21 23.2	-0.2
ECL	Taimali	2.69	205	eP	Pn	16 20 48.4	-1.4
ECL				eS	Sn	16 21 21.7	-1.9
TSCK	Chigu Township	2.70	226	⇑P	Pn	16 20 49.4	-0.4
TSCK				iS	Sn	16 21 22.4	-1.4
SSD	Sandimen	2.70	212	eP	Pn	16 20 50.2	+0.4
SSD				eS	Sn	16 21 23.6	-0.3
JIRB	Irabujima	2.72	94	eP	Pn	16 20 50.3	+0.3
JIRB				S	Sn	16 21 23.3	-0.8
TSMG	Majia	2.73	212	eP	Pn	16 20 50.4	+0.2
TSMG				eS	Sn	16 21 23.2	-1.3
TAI	Tainan	2.74	222	P	Pn	16 20 50.7	+0.4
TAI				eS	Sn	16 21 24.4	-0.2
TWM1	Shoushan	2.74	217	eP	Pn	16 20 51.5	+1.1
TWM1				eS	Sn	16 21 27.1	+2.3
JIKM	Ikemajima	2.78	92	eP	Pn	16 20 51.5	+0.7
JIKM				S	Sn	16 21 25.1	-0.5
PTMZ	Houxiangcun	2.79	271	eP	Pn	16 20 50.4	-0.5
SGLT	Jiouru	2.79	214	S	Sn	16 21 24.9	-0.8
MASBT	Mashibuluo	2.81	211	P	Pn	16 20 51.5	+0.3
MASBT				eS	Sn	16 21 26.1	-0.2
PNG	Penghu	2.82	239	iP	Pn	16 20 50.4	-0.9
PNG				iS	Sn	16 21 24.1	-2.4
TSPT	Pingtung City	2.82	214	P	Pn	16 20 52.5	+1.1
TSPT				eS	Sn	16 21 27.8	+1.2
JMJ	Miyako jima 2	2.83	94	P	Pn	16 20 52.5	+1.1
JMJ	Miyako jima 2	2.83	94	⇑eP	Pn	16 20 52.8	+1.4
JMJ				eS	Sn	16 21 26.6	0.0
PHUB	P'eng-hu	2.83	238	iP	Pn	16 20 50.7	-0.8
PHUB				eS	Sn	16 21 24.7	-2.1
SNJT	Kaohsiung City	2.84	217	P	Pn	16 20 51.8	+0.2
SNJT				eS	Sn	16 21 27.5	+0.5
JMJ2	Miyako jima3	2.87	95	eP	Pn	16 20 52.7	+0.8
JMJ2				S	Sn	16 21 26.6	-0.9
WDGT	Dungji	2.92	233	iP	Pn	16 20 51.9	-0.7
WDGT				iS	Sn	16 21 26.3	-2.3
EAST	Anshuo	2.92	205	eP	Pn	16 20 52.9	+0.2
EAST				eS	Sn	16 21 27.5	-1.4
TAW	Tawu	2.93	204	eP	Pn	16 20 54.9	+2.2
TAW				eS	Sn	16 21 27.8	-1.2
JOGS	Gusukube	2.93	95	P	Pn	16 20 53.8	+1.1
JOGS				S	Sn	16 21 28.3	-0.8
TAWH	Dawu Township	2.95	204	P	Pn	16 20 52.9	0.0
TAWH				S	Sn	16 21 28.0	-1.4
WSSB	Gushan	2.97	217	P	Pn	16 20 53.6	+0.2
WSSB				eS	Sn	16 21 28.3	-1.8
SCZT	Fangliau	3.02	209	eP	Pn	16 20 54.1	+0.1
MHZQ	Yeshan	3.04	291	eP	Pn	16 20 53.5	-0.6
MHZQ				S	Sn	16 21 28.9	-2.6
LAY	Lan-yu	3.05	191	eP	Pn	16 20 53.3	-1.0
LYUB	Lan-yu	3.08	191	eP	Pn	16 20 53.5	-1.1
SLIU	Shizi	3.09	205	eP	Pn	16 20 54.8	0.0
VCHM	Qimei	3.12	235	eP	Pn	16 20 54.5	-0.6
QZH	Quanzhou	3.27	269	⇑iP	Pn	16 20 56.3	-0.6
QZH				S	Sn	16 21 33.8	-2.7
QZH				smax	smax		
	comp=E,220nm,0.6s						
QZH				smax	smax		
	comp=E,140nm,0.9s						
HEN	Hengchun	3.31	204	⇑P	Pn	16 20 57.8	+0.3
TWKBT	Hengchun	3.34	203	P	Pn	16 20 58.3	+0.4
KNM	Kinmen	3.47	260	eP	Pn	16 21 00.5	+1.0
KNMB	Chin-men Tao	3.50	261		Pn	16 20 58.9	-1.1
KNMB	Chin-men Tao	3.50	261	eP	Pn	16 20 59.2	-0.7
AXDP	Jialang	3.83	269	eP	Pn	16 21 04.0	-0.2
ZPLA	Ao Xicun	4.20	256	eP	Pn	16 21 08.6	-0.3
SXFK	Yanhouchang	4.32	289	eP	Pn	16 21 10.3	-0.2
DSXP	Dongshan	4.54	254	⇓P	Pn	16 21 13.2	-0.3
JOW	Kunigami	5.76	71	P	Pn	16 21 28.2	-1.3
	comp=E,95nm,0.4s,baz=156,slow=14,SNR=78						
JOW				S	Sn	16 22 30.9	-4.0
	comp=E,37nm,0.3s,baz=108,slow=25,SNR=2.6						
JOW	Kunigami	5.76	71	P	Pn	16 21 28.2	-1.3
JOW	Kunigami	5.76	71	eP	Pn	16 21 28.1	-1.4
NJ2	Nanjing	7.57	338	eP	Pn	16 21 54.8	+1.3
JMZ	Minamidaito 2	8.20	83	Pn	Pn	16 21 59.3	-2.6
GZH	Guangzhou	8.32	258	P	Pn	16 21 58.0	-5.5
WHN	Wuhan	8.84	310	⇓P	Pn	16 22 11.0	+0.6
KSAR	Wonju Array Be	13.28	20	P	P	16 23 13.3	+0.9
KSRS	Korea Array	13.30	20	P	Pn	16 23 09.9	+1.4
	comp=E,19nm,0.6s,baz=203,slow=12,SNR=101						
KS19	Wonju Array Si	13.33	20	P	P	16 23 14.1	+1.1
HNS	HongShan	13.87	334	⇑P	P	16 23 21.5	+2.5
HNS				pmax	pmax		
	comp=E,19nm,0.7s						
XAN	Xi'an	14.61	311	⇑P	P	16 23 29.3	+2.1
XAN				pmax	pmax		
	comp=E,12nm,1.3s						
CD2	Chengdu	17.29	294	P	Pn	16 23 58.0	+0.1
CD2				pmax	pmax		
	comp=E,20nm,0.5s						
MJAR	Matsushiro Arr	17.88	46	P	P	16 24 03.3	0.0
	comp=E,1.1nm,0.9s,baz=226,slow=10,SNR=5.2						
HHC	Hu-ho-hao-te	18.08	333	eP	Pn	16 24 07.3	0.0
HHC				pmax	pmax		
	comp=E,37nm,0.5s						
HHC				pmax	pmax		
	comp=E,110nm,4.5s						
PZH	PanZhiHua	18.47	279	P	P	16 24 11.3	+1.3
PZH				pmax	pmax		
	comp=E,10.0nm,0.7s						
BTO	Baotou	18.55	330	eP	Pn	16 24 14.8	+2.0
BTO				pmax	pmax		
	comp=E,29nm,0.9s						
BTO				pmax	pmax		
	comp=E,140nm,6.9s						
CN2	Changchun	18.90	7	eP	P	16 24 14.3	0.0
CN2				eS	Sn	16 27 47.8	-1.9
CN2				pmax	pmax		
	comp=E,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=E,100nm,4.0s						
CN2				LR	LR		
	comp=E,200nm,11.0s						
CN2				LR	LR		
	comp=E,300nm,11.0s						
CN2				LR	LR		
	comp=E,100nm,12.0s						
XLT	XiLinHaoTe	19.46	347	eP	P	16 24 21.0	+0.5
XLT				pmax	pmax		
	comp=E,12nm,1.1s						
USRK	Ussuriysk Ar.	20.71	20	P	P	16 24 35.7	+2.0
	comp=E,2.5nm,0.7s,baz=214,slow=11,SNR=8.3						
CMAR	Chiang Mai Arr	22.55	258	P	P	16 24 53.7	+0.8
	comp=E,1.2nm,0.5s,baz=57,slow=8.4,SNR=7.4						
	comp=E,1.2nm,0.5s						
GTA	Gaotai	23.65	313	P	P	16 25 03.8	+0.8
GTA				pP	pP	16 25 37.8	+4.3
GTA				sP	PP	16 25 57.0	-2.9
GTA				pmax	pmax		
	comp=E,13nm,0.9s						
JKA	Kamikawa-asahi	25.26	36	P	P	16 25 15.0	-2.4
JKA				IAmb	IAmb	16 25 15.2	
	comp=Z,9.2nm,1.1s						
HEH	HeiHe	25.49	8	eP	P	16 25 20.3	+0.9
HEH				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ULN	Ulaanbaatar	25.73	336		P	16 25 21.9	+0.1
SONM	Songino Array	25.95	335		P	16 25 23.4	-0.3
SONM	Songino Array	25.95	335	P	P	16 25 24.2	+0.5
	comp=Z,35nm,0.7s,baz=150,slow=9.5,SNR=145						
SONM				ScP	ScP	16 32 12.0	-0.9
	comp=Z,0.3nm,0.3s,baz=132,slow=2.1,SNR=3.7						
	comp=Z,35nm,0.7s						
EVN	Everest	31.72	283		P	16 26 14.9	-0.8
EVN				IAmb	IAmb	16 26 17.2	
	comp=Z,5.2nm,0.6s						
WMQ	Urumqi	33.74	312	eP	P	16 26 34.8	+2.4
MKAR	Makanchi Array	38.37	315		P	16 27 11.9	+0.3
MKAR	Makanchi Array	38.37	315	P	P	16 27 11.8	+0.1
	comp=Z,5.9nm,0.5s,baz=100,slow=10.0,SNR=112						
MKAR				PcP	PcP	16 29 21.5	-0.4
	comp=Z,1.0nm,0.7s,baz=102,slow=4.9,SNR=5.7						
MKAR				ScP	S	16 32 54.2	-0.3
	comp=Z,0.4nm,0.8s,baz=114,slow=4.6,SNR=3.0						
	comp=Z,5.9nm,0.5s						
MAKZ	Makanchi	38.58	315		P	16 27 13.6	+0.2
MAKZ				IAmb	IAmb	16 27 14.4	
	comp=Z,15nm,1.1s						
ZAA0	Zalesovo Array	40.03	326		P	16 27 23.6	-1.6
ZALV	Zalesovo Beam	40.03	326	P	P	16 27 24.4	-0.8
ZALV	Zalesovo Beam	40.03	326	P	P	16 27 24.6	-0.7
	comp=Z,14nm,0.5s,baz=108,slow=8.3,SNR=69						
	comp=Z,14nm,0.5s						
TARG	Taragay, Kyrgy	40.15	306	P	P	16 27 27.1	+0.1
TARG				IAmb	IAmb	16 27 29.5	
	comp=Z,9.4nm,1.4s						
KSH	Kashi	41.21	302	P	P	16 27 38.8	+3.5
KSH				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BOOM	Boomskoye usch	41.65	306	P	P	16 27 39.5	+0.6
KURK	Kurchatov	42.03	319		P	16 27 41.5	-0.1
KURK				IAmb	IAmb	16 27 42.4	
	comp=Z,9.4nm,0.8s						
KURBB	Kurchatov Arra	42.05	319	P	P	16 27 41.6	-0.2
	comp=Z,7.3nm,0.8s,baz=100,slow=7.5,SNR=59						
	comp=Z,7.3nm,0.8s						
ARSB	Arslanbob	43.67	304	P	P	16 27 56.0	+0.7
KKAR	Karatay Array	45.69	307		P	16 28 11.2	+0.3
WB0	Warramunga Arr	46.10	164	P	P	16 28 13.4	-0.9
WB0				IAmb	IAmb	16 28 44.8	
	comp=Z,8.0nm,1.2s						
WRA	Warramunga Arr	46.25	164	P	P	16 28 16.1	+0.6
	comp=Z,2.2nm,0.6s,baz=347,slow=8.6,SNR=6.3						
WRA				PcP	PcP	16 29 48.2	-0.3
	comp=Z,0.3nm,0.6s,baz=345,slow=3.1,SNR=1.5						
	comp=Z,2.2nm,0.6s						
WR8	Warramunga Arr	46.31	164	P	P	16 28 16.1	+0.2
WR8				IAmb	IAmb	16 28 17.1	
	comp=Z,4.5nm,0.6s						
TIXI	Tiksi	46.79	3	P	P	16 28 18.9	-0.1
TIXI				IAmb	IAmb	16 28 19.7	
	comp=Z,15nm,0.9s						
BVAR	Borovoye Array	47.60	320	P	P	16 28 25.6	-0.1
	comp=Z,6.8nm,0.5s						
	comp=Z,6.8nm,0.5s						
BRVK	Borovoye	47.67	320		P	16 28 26.1	0.0
BRVK				IAmb	IAmb	16 28 27.1	
	comp=Z,16nm,1.1s						
NRIK	Noril'sk	48.82	344	P	P	16 28 33.7	-1.0
	comp=Z,5.1nm,0.9s,baz=122,slow=7.5,SNR=5.0						
	comp=Z,5.1nm,0.9s						
ASAR	Alice Springs	49.74	166	P	P	16 28 43.3	+1.0
	comp=Z,0.6nm,0.5s,baz=347,slow=6.6,SNR=5.4						
ASAR				PcP	PcP	16 30 00.8	-0.2
	comp=Z,0.3nm,0.7s,baz=333,slow=3.5,SNR=1.7						
ASAR				ScP	ScP	16 33 40.4	-1.2
	comp=Z,0.3nm,0.8s,baz=348,slow=3.4,SNR=2.1						
	comp=Z,0.6nm,0.5s						
AB31	Akbulak array	53.50	314		P	16 29 09.9	0.0
AB31				IAmb	IAmb	16 29 11.1	
	comp=Z,9.6nm,0.8s						
ABKAR	Akbulak array	53.50	314	P	P	16 29 10.1	+0.1
ABKAR	Akbulak array	53.50	314	IAmb	IAmb	16 29 11.1	
	comp=Z,9.7nm,0.8s						
ARTI	Arti	55.07	323		P	16 29 20.2	-0.9
STKA	Stephens Creek	59.56	161	P	P	16 29 53.4	+0.6
	comp=Z,1.6nm,0.6s,baz=324,slow=6.3,SNR=2.9						
	comp=Z,1.6nm,0.6s						
H23K	Yukon River	66.74	27	P	P	16 30 41.0	+1.2
H23K				IAmb	IAmb	16 30 42.8	
	comp=Z,6.8nm,1.5s						
F24K	Squaw Lake	67.10	25	IAmb	IAmb	16 30 44.5	
	comp=Z,3.2nm,0.8s						
RND	Reindeer	67.46	29		P	16 30 42.6	-1.8
RND				IAmb	IAmb	16 30 46.6	
	comp=Z,3.2nm,0.7s						
ILAR	Eielson Array	68.03	28	P	P	16 30 48.0	0.0
	comp=Z,0.3nm,0.5s,baz=289,slow=7.0,SNR=6.1						
	comp=Z,0.3nm,0.5s						
BMAR	Burnt Mountain	68.37	24	P	P	16 30 51.5	+1.5
KEV	Kevo	68.52	338	P	P	16 30 50.4	-0.4
G26K	Porcupine Rive	68.78	25	IAmb	IAmb	16 30 55.3	
	comp=Z,3.2nm,1.0s						
SPITS	Spitsbergen Ar	68.84	348	P	P	16 30 52.0	-0.7
	comp=Z,4.0nm,0.5s,baz=74,slow=6.2,SNR=12						
	comp=Z,4.0nm,0.5s						
ARCES	ARCESS Array B	69.08	338	P	P	16 30 53.3	-1.1
ARCES	ARCESS Array B	69.08	338	P	P	16 30 54.1	-0.3
	comp=Z,2.1nm,0.5s,baz=57,slow=8.2,SNR=17						
	comp=Z,2.1nm,0.5s						
H27K	Steamboat Moun	69.84	25	P	P	16 30 59.7	+0.5
E28M	Babbage River	69.89	23	IAmb	IAmb	16 31 01.5	
	comp=Z,2.2nm,0.7s						
E29M	Blow River	70.54	23	IAmb	IAmb	16 31 07.2	
	comp=Z,4.8nm,1.4s						
FINES	FINESS Array B	71.17	330	P	P	16 31 06.6	-0.6
FINES	FINESS Array B	71.17	330	P	P	16 31 06.9	-0.2
	comp=Z,3.4nm,0.8s,baz=64,slow=4.7,SNR=11						
	comp=Z,3.4nm,0.8s						
F30M	Barrier River	71.55	23	P	P	16 31 10.2	+0.8
F30M				IAmb	IAmb	16 31 11.3	
	comp=Z,4.6nm,0.8s						
AKASG	Malin Array Be	72.84	318	P	P	16 31 16.7	-0.6
	comp=Z,0.4nm,0.3s,baz=57,slow=6.8,SNR=6.9						
	comp=Z,0.4nm,0.3s						
BRTR	Keskin Array B	73.40	306	P	P	16 31 21.5	+0.5
	comp=Z,1.0nm,0.8s,baz=54,slow=7.3,SNR=3.5						
	comp=Z,1.0nm,0.8s						
HFS	Hagfors	77.26	331	P	P	16 31 42.4	-0.1
	comp=Z,1.7nm,0.6s,baz=70,slow=5.7,SNR=11						
	comp=Z,1.7nm,0.6s						

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NB2   NORSAR Subarra  77.89 332  P       P         16 31 45.0 -1.0
      comp=Z,1.3nm,0.8s,baz=60,slow=5.6
NOA   NORSAR Array B  77.89 332  P       P         16 31 45.3 -0.7
      comp=Z,0.7nm,0.6s,baz=59,slow=5.6,SNR=5.3
      comp=Z,0.7nm,0.6s
YKA   Yellowknife Ar  81.82  23  P       P         16 32 06.8 -0.2
      comp=Z,0.6nm,0.6s,baz=316,slow=5.9,SNR=9.6
      comp=Z,0.6nm,0.6s
QSPA  South Pole Qui 114.83 180  PKP     PKiKP     16 38 27.4 +0.3
      comp=Z,0.9nm,1.1s,baz=285,slow=4.6,SNR=1.6
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DJA **29** *16:20:22.5±0.2, 0°N±3°×12°6E±°, h10km, M3.9/13, mb3.7/3, MLv4.0/13*

NEIC **29** *16:20:23.5±2.5, 0°.48N±0°.06×126°.35E±0°.07, h35km±2km, mb4.4/9, Error ellipse: s-maj=14.0km s-min=6.4km az=305.0*

IDC **29** *16:20:25.3±4.6, 0°.53N×126°.21E, h57km±47km, mb3.8/10, mbtmp4.1/11, ML4.4/1, MS3.0/1, Error ellipse: s-maj=35.8km s-min=15.6km az=75.0*

ISC 29 16:20:24.3±0.6**, 0°.47N**±0°.05×**126°.30E**±0°.05**, h50km, n43, σ2s.09**/41**, mb4.3**/14**, Northern Molucca Sea**

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Code  Station Name      Δ°   AZ°   Phase ID          Time      Res
                                 Op      ISC        h  m  s    ISC
TNTI  Ternate          1.11  74          Pn        16 20 44.1 +0.6
TNTI  Ternate          1.11  74  P       Pn        16 20 43.8 +0.3
TNTI  Ternate          1.11  74  P       Pn        16 20 44.2 +0.7
TNTI                             S       Sn        16 21 04.8 +7.1
KMSI  Cibinong         2.32 273  P       Pn        16 20 58.1 -2.0
SANI  Sanana           2.52 187  P       Pn        16 21 03.1 +0.2
SANI  Sanana           2.52 187  S       Sn        16 21 34.1 +1.7
SANI  Sanana           2.52 187  P       Pn        16 21 02.5 -0.4
SGSI  Sangihe          3.28 346  P       Pn        16 21 14.7 +1.4
NLAI  Namlea           3.77 168  P       Pn        16 21 21.0 +1.0
LUWI  Luwuk            3.83 247          Pn        16 21 24.2 +3.4
LUWI  Luwuk            3.83 247  P       Pn        16 21 24.0 +3.2
LUWI  Luwuk            3.83 247  P       Pn        16 21 22.2 +1.4
MRSI  Marisa           4.36 270  P       Pn        16 21 41.7  +14
APSI  Ampana           4.85 254  P       Pn        16 21 33.3 -1.5
TOLI2 Tolitoli         5.55 277  Pn      Pn        16 21 50.2 +5.7
TOLI2 Tolitoli         5.55 277  P       Pn        16 21 47.1 +2.7
KDI   Kendari          5.74 220  P       Pn        16 21 47.6 +0.7
      0.4nm,0.5s
KAPI  Kappang          8.51 230  Pn      Pn        16 22 25.2 +0.2
KAPI  Kappang          8.51 230  P       Pn        16 22 26.3 +1.3
      4.7nm,0.3s,baz=70,slow=12,SNR=6.1
      9.1nm,0.3s
KAPI  Kappang          8.51 230  P       Pn        16 22 27.1 +2.1
SBUM  Sibu            14.21 278  P       P         16 23 49.4 +0.3
KSM   Kuching         16.02 274  P       P         16 24 09.3 +0.2
KSM                              IAmb    IAmb      16 24 09.9
      comp=Z,12nm,0.7s
WB0   Warramunga Arr  21.62 159  P       P         16 25 10.6 +0.2
WB0                              IAmb    IAmb      16 25 16.0
      comp=Z,18nm,0.9s
WRA   Warramunga Arr  21.77 159  P       P         16 25 11.8 -0.1
WRA   Warramunga Arr  21.77 159  P       P         16 25 11.8 -0.1
      comp=Z,12nm,0.9s,baz=338,slow=11,SNR=20
      comp=Z,12nm,0.9s
WR8   Warramunga Arr  21.83 159  P       P         16 25 13.0 +0.4
WR8                              IAmb    IAmb      16 25 18.1
      comp=Z,14nm,1.0s
COEN  Coen            22.02 131  P       P         16 25 11.1 -3.7
COEN                             IAmb    IAmb      16 25 23.5
      comp=Z,29nm,1.2s
GUMO  Guam            22.54  54  P       P         16 25 14.5 -5.7
GUMO  Guam            22.54  54  LR      LR        16 32 49.4
      comp=Z,36nm,20.8s,baz=140,slow=33
AS31  Alice Springs   25.11 163  P       P         16 25 47.0 +2.4
ASAR  Alice Springs   25.11 163  P       P         16 25 44.8 +0.2
ASAR  Alice Springs   25.11 163  P       P         16 25 46.5 +1.9
      comp=Z,2.0nm,0.3s,baz=342,slow=9.0,SNR=29
      comp=Z,2.0nm,0.3s
STKA  Stephens Creek  35.28 157  P       P         16 27 15.4 +0.9
      comp=Z,1.7nm,0.6s,baz=315,slow=10.0,SNR=2.3
      comp=Z,1.7nm,0.6s
KSRS  Korea Array     36.83   2  P       P         16 27 27.2 -0.4
      comp=Z,0.5nm,0.5s,baz=183,slow=10,SNR=2.4
      comp=Z,0.5nm,0.5s
MJAR  Matsushiro Arr  37.55  16  P       P         16 27 33.1 -0.7
      comp=Z,0.8nm,0.6s,baz=189,slow=9.5,SNR=4.9
      comp=Z,0.8nm,0.6s
USRK  Ussuriysk Ar.   43.83   6  P       P         16 28 26.3 +0.9
      comp=Z,1.6nm,0.9s,baz=187,slow=7.8,SNR=2.4
      comp=Z,1.6nm,0.9s
PETK  Petropavlovsk-  58.59  22  P       P         16 30 16.9 +0.9
      comp=Z,3.4nm,1.1s,baz=198,slow=8.9,SNR=1.8
      comp=Z,3.4nm,1.1s
MKAR  Makanchi Array  59.99 327  P       P         16 30 25.4 -0.4
MKAR  Makanchi Array  59.99 327  P       P         16 30 25.6 -0.3
      comp=Z,2.3nm,0.6s,baz=120,slow=7.4,SNR=18
      comp=Z,2.3nm,0.6s
KURBB Kurchatov Arra  64.25 328  P       P         16 30 53.0 -1.2
      comp=Z,1.2nm,0.6s,baz=126,slow=6.3,SNR=10
      comp=Z,1.2nm,0.6s
KURK  Kurchatov       64.26 329  P       P         16 30 53.6 -0.6
KURK                             IAmb    IAmb      16 30 57.0
      comp=Z,2.2nm,0.8s
QSPA  South Pole Qui  90.40 180  P       P         16 33 18.1 -2.1
QSPA  South Pole Qui  90.40 180  P       P         16 33 21.0 +0.8
      comp=Z,2.3nm,1.0s,baz=288,slow=2.9,SNR=3.4
      comp=Z,2.3nm,1.0s
```

NEIC **29** *16:56:39.0±2.3, 63°.4S±0°.1×170°.7E±0°.3, h10km±1km, mb4.5/12, Error ellipse: s-maj=20.9km s-min=17.5km az=221.0*

IDC **29** *16:56:42.5±1.6, 63°.68S×169°.43E, h0km, mb3.8/5, mbtmp3.9/6, ML3.5/1, MS4.4/28, Error ellipse: s-maj=72.3km s-min=21.0km az=80.0*

GCMT **29** *16:56:45.0±0.1, 63°.31S±0°.01×171°.13E±0°.02, h13km, MW5.2/128, Moment Tensor Solution. s77,c111; s128,c209; Duration: 1s.0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.16±.01; $M_{\theta\theta}$0.86±.02; $M_{\phi\phi}$-0.70±.01; $M_{r\theta}$-0.30±.04; $M_{\theta\phi}$-0.12±.01; $M_{\phi r}$-0.16±.03; Best double couple: $M_0$0.85900×10^{17} NP1:ϕ_s320.00000°, δ67.00000°, λ-2.00000°. NP2:ϕ_s51.00000°, δ88.00000°, λ-157.00000°. Principal axes: T 0.9480, Plg15.0000°, Azm183.0000°; N -0.1790, Plg67.0000°, Azm55.0000°; P -0.7700, Plg18.0000°, Azm278.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 16:56:38.5±0.6**, 63°.25S**±0°.06×**171°.7E**±0°.1**, h10km, n61, σ2s.36**/23**, mb4.0**/7**, MS4.5**/27**, Balleny Islands region**

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Code  Station Name      Δ°   AZ°   Phase ID          Time      Res
                                 Op      ISC        h  m  s    ISC
VNDA  Vanda           14.67 188  P       Pn        17 00 07.0 +1.3
VNDA  Vanda           14.67 188  Pn      Pn        17 00 04.3 -1.4
      0.2nm,0.3s,baz=30,slow=16,SNR=16
      6.3nm,0.9s
SBA   Scott Base      14.75 184          P         17 00 13.2 +0.3
PYZ   Puysegur Point  17.35 348  Pn      Pn        17 00 36.9 -3.6
WHZ   Wether Hill Ro  17.52 351          P         17 00 47.5 +3.8
WHZ                              IAmb    IAmb      17 01 29.1
      comp=Z,72nm,1.4s
ODZ   Otahua Downs    18.25 358          P         17 00 52.1 +0.3
RPZ   Rata Peaks      19.58 359  P       Pn        17 01 16.5 +8.8
      comp=Z,14nm,1.0s,baz=168,slow=1.4,SNR=15
RPZ                              LR      LR        17 07 24.8
      comp=Z,3µm,20.6s,baz=202,slow=32
      comp=Z,14nm,1.0s
INZ   Inchbonnie      20.56 360  P       P         17 01 18.4 +1.3
INZ                              IAmb    IAmb      17 01 37.2
      comp=Z,28nm,1.3s
URZ   Urewera         25.24  10  LR      LR        17 10 32.5
      comp=Z,2µm,21.6s,baz=180,slow=32
CASY  Casey           25.32 236  P       P         17 02 01.8 -3.0
CASY                             IAmb    IAmb      17 02 26.9
      comp=Z,17nm,1.3s
TOZ   Tahuroa Road    25.66   7  P       P         17 02 10.5 +2.4
TOZ                              IAmb    IAmb      17 02 37.6
      comp=Z,24nm,1.4s
QSPA  South Pole Qui  26.84 180  P       P         17 02 18.4 -0.5
QSPA                             IAmb    IAmb      17 02 29.3
      comp=Z,6.3nm,1.2s
QSPA  South Pole Qui  26.84 180  P       P         17 02 19.7 +0.9
      comp=Z,2.4nm,1.1s,baz=54,slow=4.3,SNR=4.8
QSPA                             LR      LR        17 11 17.0
      comp=Z,902nm,21.0s,baz=29,slow=33
      comp=Z,2.4nm,1.1s
TOO   Toolangi        30.22 316  P       P         17 02 48.0 -0.9
TOO                              IAmb    IAmb      17 03 02.5
      comp=Z,22nm,1.5s
RAO   Raoul Island    34.67  16  LR      LR        17 16 05.8
      comp=Z,622nm,21.6s,baz=120,slow=33
STKA  Stephens Creek  36.70 314  LR      LR        17 16 32.9
      comp=Z,730nm,18.1s,baz=151,slow=33
BELA  Belgrano 2      38.20 171  P       P         17 03 58.0 +0.4
MAW   Mawson          39.84 214  LR      LR        17 20 28.7
      comp=Z,1µm,19.7s,baz=134,slow=37
DZM   Mont Dzumac     41.31 353  eS      S         17 10 48.8  +11
      comp=Z,266nm,22.2s
DZM                              eSS     SnSn      17 13 55.2 +4.9
      comp=Z,201nm,27.2s
DZM                              eLR     LR        17 16 06.6
      comp=Z,1µm,22.6s
H01W1 Cape Leeuwin H  44.96 281  T       T         17 53 02.4
      baz=147,slow=76,SNR=161
H01W2 Cape Leeuwin H  44.96 281  T       T         17 53 01.7
      baz=147,slow=76,SNR=146
H01W3 Cape Leeuwin H  44.97 281  T       T         17 53 03.8
      baz=147,slow=76,SNR=152
NWAO  Narrogin (SRO)  45.27 286  LR      LR        17 19 13.3
      comp=Z,1µm,20.5s,baz=145,slow=30
SNAA  Sanae           45.30 182  P       P         17 04 57.4 +1.7
      comp=Z,1.8nm,1.1s,baz=174,slow=9.0,SNR=4.0
SNAA                             LR      LR        17 23 11.2
      comp=Z,777nm,18.4s,baz=216,slow=36
      comp=Z,1.8nm,1.1s
MSVF  Nonsavu         45.69   9  P       P         17 04 59.8 +0.4
MSVF  Nonsavu         45.69   9  LR      LR        17 22 52.2
      comp=Z,942nm,18.1s,baz=205,slow=34
PMSA  Palmer Station  45.85 150  LR      LR        17 21 35.4
      comp=Z,388nm,18.4s,baz=216,slow=32
RAR   Rarotonga       46.24  38  LR      LR        17 20 01.2
      comp=Z,296nm,19.6s,baz=197,slow=30
ASAR  Alice Springs   46.85 310  P       P         17 05 04.9 -3.6
ASAR  Alice Springs   46.85 310  P       P         17 05 10.7 +2.2
      comp=Z,0.8nm,0.9s,baz=150,slow=7.7,SNR=5.8
ASAR                             LR      LR        17 23 16.8
      comp=Z,354nm,21.6s,baz=148,slow=34
      comp=Z,0.8nm,0.9s
TBI   Tubuai          47.53  51  eS      S         17 12 04.9 -3.5
      comp=Z,1µm,28.2s
TBI                              eSS     ScS       17 15 23.7  +16
      comp=Z,3µm,26.0s
TBI                              eLR     LR        17 18 05.0
      comp=Z,1µm,29.5s
TBI                              eLR     LR        17 18 29.9
      comp=Z,4µm,26.2s
WRA   Warramunga Arr  50.14 312  P       P         17 05 33.1 -0.8
WRA   Warramunga Arr  50.14 312  P       P         17 05 35.3 +1.4
      comp=Z,0.7nm,1.1s,baz=167,slow=7.5,SNR=2.0
WRA                              LR      LR        17 25 24.0
      comp=Z,396nm,18.1s,baz=62,slow=35
      comp=Z,0.7nm,1.1s
PPT2  Papeete2        52.81  49  eS      S         17 13 20.7 -1.6
      comp=Z,92nm,25.5s
PPT2                             eLR     LR        17 20 23.0
      comp=Z,614nm,28.0s
PPT2                             eLR     LR        17 20 27.3
      comp=Z,880nm,26.0s
PPT   Papeete         52.84  49  LR      LR        17 23 23.6
      comp=Z,281nm,18.6s,baz=198,slow=30
FITZ  Fitzroy Crossi  54.96 303  LR      LR        17 26 30.9
      comp=Z,387nm,19.9s,baz=148,slow=33
TAOE  Nuku Hiva Isla  64.25  55  eLR     LR        17 26 09.1
      comp=Z,535nm,25.5s
H03S2 Juan Fernandez  68.34 122  T       T         18 23 18.5
      baz=205,slow=74,SNR=21
H03S1 Juan Fernandez  68.34 122  T       T         18 23 20.0
      baz=205,slow=74,SNR=19
H03S3 Juan Fernandez  68.36 122  T       T         18 23 14.7
      baz=205,slow=74,SNR=18
H03N3 Juan Fernandez  68.68 122  T       T         18 23 49.5
      baz=213,slow=74
H03N2 Juan Fernandez  68.69 122  T       T         18 23 40.7
      baz=213,slow=74
H03N1 Juan Fernandez  68.70 122  T       T         18 23 42.5
      baz=213
DAV   Davao City (W)  78.32 313  LR      LR        17 42 24.5
      comp=Z,106nm,19.6s,baz=144,slow=35
CPUP  Villa Florida   82.71 137  LR      LR        17 43 00.9
      comp=Z,49nm,18.8s,baz=54,slow=34
BOSA  Boshof          84.64 209  LR      LR        17 43 38.0
      comp=Z,254nm,21.9s,baz=176,slow=34
H08S2 Diego Garcia H  87.34 258  T       T         18 46 08.4
      baz=152,slow=76,SNR=150
H08S1 Diego Carcia H  87.35 258  T       T         18 46 11.4
      baz=152,slow=76,SNR=113
H08S3 Diego Garcia H  87.36 258  T       T         18 46 14.0
      baz=152,slow=76,SNR=131
LBTB  Lobatse         88.03 210  LR      LR        17 47 24.5
      comp=Z,252nm,18.1s,baz=160,slow=35
LPAZ  La Paz          88.28 124  LR      LR        17 40 47.8
      comp=Z,30nm,19.1s,baz=228,slow=30
NNA   Nana            88.75 114  LR      LR        17 39 56.6
      comp=Z,99nm,20.5s,baz=196,slow=29
SIV   San Ignacio     91.11 130  LR      LR        17 44 45.1
      comp=Z,89nm,21.4s,baz=357,slow=32
MATP  Matopo          91.73 214  LR      LR        17 47 16.2
      comp=Z,196nm,20.3s,baz=160,slow=33
ATAH  Atahualpa       92.47 111  LR      LR        17 43 05.6
      comp=Z,154nm,19.1s,baz=225,slow=30
TSUM  Tsumeb          95.34 205  LR      LR        17 52 07.2
      comp=Z,391nm,18.0s,baz=166,slow=35
BDFB  Brasilia        95.54 142  LR      LR        17 50 06.3
      comp=Z,81nm,20.6s,baz=164,slow=33
LSZ   Lusaka          96.74 215  LR      LR        17 50 57.0
      comp=Z,204nm,19.7s,baz=164,slow=34
PALK  Pallekele       96.87 272  LR      LR        17 48 14.7
      comp=Z,159nm,18.0s,baz=112,slow=32
H02S1 DAWSON INLET T124.03  37  T       T         19 32 16.1
      SNR=40
BRTR  Keskin Array B 145.80 247  PKP     PKiKP     17 16 21.1 +0.4
      comp=Z,2.1nm,1.0s,baz=145,slow=3.5,SNR=5.2
```

IDC **29** *17:02:52.9±0.7, 30°.11N×131°.02E, h0km, mb3.9/21, mbtmp3.9/26, ML3.2/5, MS3.8/26, Error ellipse: s-maj=19.8km s-min=14.3km az=97.0*

NIED **29** *17:02:55.5, 30°.02N×131°.27E, h26km, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}3.55; $M_{\theta\theta}$-0.22; $M_{\phi\phi}$-3.34; $M_{r\theta}$2.48; $M_{\theta\phi}$-3.34; $M_{\phi r}$4.08; Fault plane solution: $M_0$6.57000×10^{15} NP1: ϕ_s215.00000°, δ22.00000°, λ93.00000°. NP2:ϕ_s31.00000°, δ68.00000°, λ89.00000°.*

JMA **29** *17:02:55.5±0.2, 30°.0N±0°.5×131°.3E±0°.6, h26km±1km, MD4.2/22, MV3.8/22, E OFF TANEGASHIMA ISLAND*

ISC 29 17:02:57.3±1.5**, 30°.07N**±0°.06×**131°.16E**±0°.07**, h30km**±9km**, n65, σ1s.06**/49**, mb4.0**/22**, MS3.8**/26**, 1C-6D, Kyushu**

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Code  Station Name      Δ°   AZ°   Phase ID          Time      Res
                                 Op      ISC        h  m  s    ISC
JMTN  Minamitane       0.40 326 ⇓iP      Pb        17 03 05.4 -0.8
JMTN                            ⇓eS      Sb        17 03 12.2 -0.1
JMTN  Minamitane       0.40 326  A       A         17 03 05.4
      comp=N,27nm,2.3s,comp=E,25nm,1.2s
JYAK  Yakushimahirau   0.59 287 ⇓iP      Pb        17 03 08.8 -0.4
JYAK                            ⇓eS      Sn        17 03 18.2  0.0
JYAK  Yakushimahirau   0.59 287  A       A         17 03 08.8
      comp=N,22nm,2.3s,comp=E,11nm,3.9s
JTN   Tanegashima 3    0.61 345 ⇓P       Pb        17 03 08.8 -0.8
JTN                             ⇓eS      Sb        17 03 18.3 +0.4
JTN   Tanegashima 3    0.61 345  A       A         17 03 08.8
      comp=N,35nm,1.8s,comp=E,33nm,1.4s
JKC   Kuchinoerabu     0.92 296  eP      Pb        17 03 14.4 -0.3
JKC                              eS      Sb        17 03 27.9 +1.2
JKC   Kuchinoerabu     0.92 296  A       A         17 03 14.4
      comp=N,8.0nm,3.8s,comp=E,9.0nm,2.2s
JTSR  Tashiro 2        1.12 350  eP      Pn        17 03 16.6 -0.4
JTSR                             eS      Sb        17 03 32.1 -0.2
JTSR  Tashiro 2        1.12 350  A       A         17 03 16.6
      comp=N,7.0nm,2.1s,comp=E,5.0nm,1.4s
JNN   Nakanoshima      1.14 259  eP      Pn        17 03 17.0 -0.2
JNN   Nakanoshima      1.14 259  A       A         17 03 17.0
      comp=N,11nm,1.1s,comp=E,17nm,1.7s
JNAR  Kushima--Naru    1.46   4  eP      Pn        17 03 21.8 +0.1
JNAR  Kushima--Naru    1.46   4  A       A         17 03 21.8
      comp=N,10.0nm,1.6s,comp=E,7.0nm,1.8s
JNKG  Nichinankitago   1.60   7  A       A         17 03 23.5
      comp=N,5.0nm,2.9s,comp=E,6.0nm,3.6s
JNU   Nakatsue         3.06 356  Pn      Pn        17 03 43.7  0.0
      comp=E,5.1nm,0.3s,baz=236,slow=9.8,SNR=16
JNU                              Sn      Sn        17 04 19.7 +0.5
      comp=E,6.3nm,0.3s,baz=82,slow=4.1,SNR=5.5
      comp=E,21nm,0.4s
JOW   Kunigami         4.10 219  Pn      Pn        17 03 58.1 +0.1
      comp=E,5.8nm,0.3s,baz=121,slow=28,SNR=17
JOW                              Sn      Sn        17 04 44.2 -0.8
      comp=E,28nm,0.3s,baz=157,slow=25,SNR=9.3
      comp=E,16nm,0.4s
KSRS  Korea Array      7.85 341  Pn      Pn        17 04 51.1 +1.7
      comp=E,0.3nm,0.3s,baz=159,slow=14,SNR=8.3
MJAR  Matsushiro Arr   8.75  41  Pn      Pn        17 05 03.2 +1.5
      comp=E,0.1nm,0.3s,baz=234,slow=14,SNR=13
      comp=E,1.3nm,0.4s
NJ2   Nanjing         10.74 284  eP      Pn        17 05 20.5 -8.5
NJ2                              pmax    pmax
      comp=Z,16nm,0.5s
NJ2                              LR      LR
      comp=N,260nm,14.7s
NJ2                              LR      LR
      comp=E,620nm,14.2s
NJ2                              LR      LR
      comp=Z,860nm,12.3s
USRK  Ussuriysk Ar.   14.12   2  Pn      P         17 06 21.8 -0.7
      comp=Z,0.2nm,0.3s,baz=182,slow=14,SNR=6.0
USRK                             LR      LR        17 11 32.7
      comp=Z,282nm,21.3s,baz=184,slow=37
ASAJ  Asahikawa       16.71  30  Pn      Pn        17 06 50.2 +1.1
      comp=Z,0.1nm,0.3s,baz=173,slow=13,SNR=1.2
ASAJ                             LR      LR        17 13 33.0
      comp=Z,339nm,20.9s,baz=239,slow=38
      comp=Z,1.5nm,0.7s
KLR   Kul'dur         19.15   1  P       P         17 07 17.2 -0.8
      comp=Z,0.2nm,0.3s,baz=194,slow=11,SNR=4.6
KLR                              LR      LR        17 15 16.7
      comp=Z,188nm,19.9s,baz=179,slow=39
      comp=Z,1.8nm,0.9s
XAN   Xi'an           19.25 288 ⇑P       Pn        17 07 21.0 +0.5
XAN                              pmax    pmax
      comp=Z,6.0nm,1.9s
XAN                              LR      LR
      comp=N,630nm,14.4s
XAN                              LR      LR
      comp=E,460nm,15.8s
XAN                              LR      LR
      comp=Z,490nm,13.7s
HEH   HeiHe           20.36 353  eP      P         17 07 30.5 -0.8
HEH                              pmax    pmax
      comp=Z,5.0nm,1.0s
HEH                              LR      LR
      comp=N,290nm,12.1s
HEH                              LR      LR
      comp=E,100nm,9.1s
HEH                              LR      LR
      comp=Z,460nm,13.8s
GUMO  Guam            20.72 139  LR      LR        17 15 27.8
      comp=Z,94nm,18.6s,baz=324,slow=36
QIZ   Qiongzhong      22.25 245  P       P         17 07 55.3 +3.5
QIZ                              S       S         17 11 53.5 -1.6
QIZ                              LR      LR
      comp=E,260nm,12.4s
QIZ                              LR      LR
      comp=Z,340nm,17.7s
DAV   Davao City (W)  23.47 194  LR      LR        17 19 11.6
      comp=Z,68nm,18.4s,baz=344,slow=42
SONM  Songino Array   26.01 320  P       P         17 08 26.8 -0.9
      comp=Z,1.2nm,0.5s,baz=133,slow=8.3,SNR=8.3
SONM                             LR      LR        17 19 36.0
      comp=Z,227nm,21.1s,baz=122,slow=39
      comp=Z,1.2nm,0.5s
PETK  Petropavlovsk-  30.09  33  LR      LR        17 22 37.6
      comp=Z,124nm,18.1s,baz=233,slow=39
CMAR  Chiang Mai Arr  31.45 256  P       P         17 09 15.2 -1.2
      comp=Z,0.5nm,0.8s,baz=71,slow=9.3,SNR=2.2
CMAR                             LR      LR        17 23 50.0
      comp=Z,178nm,18.0s,baz=75,slow=40
      comp=Z,0.5nm,0.8s
MA2   Magadan         32.36  19  LR      LR        17 22 38.2
      comp=Z,66nm,21.2s,baz=218,slow=37
H11N2 WAKE ISLAND Hy  33.89  99  T       T         17 45 40.4
      baz=296,slow=74,SNR=25
H11N1 WAKE ISLAND Hy  33.89  99  T       T         17 45 40.4
      baz=296,slow=74,SNR=15
H11N3 WAKE ISLAND Hy  33.90  99  T       T         17 45 41.0
      baz=296,slow=74,SNR=22
SEY   Seymchan        35.62  17  LR      LR        17 24 47.8
      comp=Z,134nm,19.9s,baz=215,slow=37
ZALV  Zalesovo Beam   40.90 319  P       P         17 10 35.7 -1.0
      comp=Z,0.5nm,0.4s,baz=123,slow=9.5,SNR=4.0
ZALV                             LR      LR        17 30 27.1
      comp=Z,42nm,19.9s,baz=93,slow=41
      comp=Z,0.5nm,0.4s
MKAR  Makanchi Array  41.06 308  P       P         17 10 37.6 -0.5
      comp=Z,0.6nm,0.4s,baz=97,slow=9.2,SNR=15
MKAR                             PcP     PcP       17 12 36.9 -0.6
      comp=Z,0.2nm,0.5s,baz=107,slow=3.9,SNR=2.8
MKAR                             LR      LR        17 28 34.9
      comp=Z,95nm,19.2s,baz=119,slow=38
      comp=Z,0.6nm,0.4s
KURBB Kurchatov Arra  43.99 313  P       P         17 11 01.1 -0.7
      comp=Z,0.3nm,0.4s,baz=102,slow=8.8,SNR=8.8
KURBB                            LR      LR        17 31 09.3
      comp=Z,272nm,19.1s,baz=184,slow=39
      comp=Z,0.3nm,0.4s
KSH   Kashi           45.67 297  P       P         17 11 19.0 +3.5
KSH                              pmax    pmax
      comp=Z,3.0nm,0.5s
KSH                              LR      LR
      comp=N,2µm,22.7s
KSH                              LR      LR
      comp=E,600nm,20.3s
KSH                              LR      LR
      comp=Z,180nm,19.2s
NRIK  Noril'sk        46.46 340  LR      LR        17 32 50.2
      comp=Z,211nm,21.4s,baz=146,slow=39
AAK   Ala-Archa       46.53 302  LR      LR        17 33 48.6
      comp=Z,129nm,18.6s,baz=94,slow=40
BVAR  Borovoye Array  49.23 316  P       P         17 11 42.7 -0.2
      comp=Z,1.5nm,0.5s
      comp=Z,1.5nm,0.5s
WRA   Warramunga Arr  49.81 176  P       P         17 11 48.2 +0.6
      comp=Z,0.6nm,0.7s,baz=350,slow=8.0,SNR=5.2
      comp=Z,0.6nm,0.7s
ASAR  Alice Springs   53.49 177  P       P         17 12 15.7 +0.7
      comp=Z,0.7nm,0.8s,baz=7.3,slow=6.4,SNR=11
      comp=Z,0.7nm,0.8s
ARTI  Arti            56.15 320  LR      LR        17 39 01.9
      comp=Z,238nm,19.0s,baz=86,slow=39
AKTO  Aktyubinsk      57.04 313  LR      LR        17 38 55.6
      comp=Z,309nm,21.4s,baz=56,slow=38
ILAR  Eielson Array   59.84  29  P       P         17 12 58.9 -0.8
      comp=Z,0.2nm,0.6s,baz=266,slow=6.1,SNR=2.1
      comp=Z,0.2nm,0.6s
KIRV  Kirov           60.67 324  LR      LR        17 42 29.7
      comp=Z,162nm,18.1s,baz=83,slow=39
BELG  Belogornoye     63.02 317  LR      LR        17 43 17.4
      comp=Z,139nm,18.3s,baz=71,slow=38
SPITS Spitsbergen Ar  65.62 348  P       P         17 13 37.9 -0.1
      comp=Z,8.6nm,1.1s,baz=72,slow=7.5,SNR=5.2
SPITS                            LR      LR        17 44 36.0
      comp=Z,70nm,20.2s,baz=15,slow=38
      comp=Z,8.6nm,1.1s
ARCES ARCESS Array B  67.40 338  P       P         17 13 48.8 -0.6
      comp=Z,1.0nm,0.5s,baz=58,slow=9.1,SNR=9.2
ARCES                            LR      LR        17 48 54.7
      comp=Z,150nm,18.6s,baz=50,slow=41
      comp=Z,1.0nm,0.5s
KBZ   Khabaz          68.75 309  P       P         17 13 58.2 -0.1
      comp=Z,3.5nm,0.9s,baz=159,slow=3.8,SNR=4.4
KBZ                              LR      LR        17 46 03.4
      comp=Z,53nm,18.3s,baz=102,slow=38
      comp=Z,3.5nm,0.9s
FINES FINESS Array B  70.81 331  P       P         17 14 09.7 -1.0
      comp=Z,1.8nm,0.4s,baz=69,slow=6.1,SNR=34
FINES                            LR      LR        17 48 32.4
      comp=Z,150nm,18.1s,baz=78,slow=39
      comp=Z,1.8nm,0.4s
YKA   Yellowknife Ar  73.96  26  P       P         17 14 29.9 +0.4
      comp=Z,0.7nm,1.0s,baz=294,slow=6.3,SNR=3.1
      comp=Z,0.7nm,1.0s
AKASG Malin Array Be  74.29 320  P       P         17 14 30.0 -1.7
      comp=Z,0.4nm,0.4s,baz=59,slow=6.5,SNR=1.5
      comp=Z,0.4nm,0.4s
HFS   Hagfors         76.62 333  P       P         17 14 44.4 -0.4
      comp=Z,2.2nm,0.8s,baz=83,slow=6.4,SNR=13
      comp=Z,2.2nm,0.8s
BRTR  Keskin Array B  76.71 308  P       P         17 14 46.1 +0.1
      comp=Z,1.2nm,0.9s,baz=104,slow=5.2,SNR=5.2
      comp=Z,1.2nm,0.9s
NB2   NORSAR Subarra  77.01 334  P       P         17 14 46.5 -0.6
      comp=Z,1.4nm,0.6s,baz=50,slow=5.9
NOA   NORSAR Array B  77.01 334  P       P         17 14 46.5 -0.6
      comp=Z,0.6nm,0.5s,baz=49,slow=5.6,SNR=5.0
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NOA				LR	LR	17 52 17.6	
	comp=Z,41nm,18.2s,baz=55,slow=38						
	comp=Z,0.6nm,0.5s						
MLR	Muntele Rosu	78.80	316	LR	LR	17 51 47.8	
	comp=Z,49nm,21.3s,baz=81,slow=37						
NVAR	Mina Array Bea	86.00	48	P	P	17 15 35.7	+0.4
	comp=Z,1.0nm,0.9s,baz=308,slow=7.1,SNR=4.0						
	comp=Z,1.0nm,0.9s						
EKA	Eskdalemuir Ar	86.39	336	P	P	17 15 36.9	+0.3
	comp=Z,0.5nm,0.4s,baz=45,slow=4.7,SNR=7.8						
	comp=Z,0.5nm,0.4s						
PDAR	Pinedale Array	88.57	40	P	P	17 15 48.5	+0.8
	comp=Z,0.6nm,0.8s,baz=318,slow=2.0,SNR=4.9						
	comp=Z,0.6nm,0.8s						
PFO	Pinyon Flats O	90.05	51	LR	LR	17 50 40.7	
	comp=Z,141nm,21.2s,baz=230,slow=32						

NOU 29 17:07:41.8,23°.11S×170°.42E,h0^{km},mb4.5/10, Southeast of Loyalty Islands,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	2.74	306	P	Pn	17 08 26.9	-0.2
MARNC	Mare, Loyalty	2.74	306	S	Sn	17 09 01.3	+0.3
PINNC	Pines Island,	2.79	280	P	Pn	17 08 27.4	-0.3
OUENC	Ouen Island, N	3.37	281	P	Pn	17 08 36.1	+0.3
YATNC	Mamie plateau,	3.42	287	P	Pn	17 08 36.0	-0.5
INH	Isangel	3.70	343	P	Pn	17 08 40.3	0.0
ONTNC	Ouen Toro	3.75	282	P	Pn	17 08 39.5	-1.4
DZM	Mont Dzumac	3.82	285	P	Pn	17 08 42.1	+0.1
KOUNC	Koumac, New Ca	6.24	293	P	Pn	17 09 16.1	+0.9

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*JMA **29** 17:10:23.4±0.2, 30°.0N±0°.5×131°.3E±0°.6, h26^{km}±1^{km}, MD3.9/24, MV3.5/24, E OFF TANEGASHIMA ISLAND*

*NIED **29** 17:10:23.4, 30°.02N×131°.26E, h26^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.60; $M_{\theta\theta}$-0.43; $M_{\phi\phi}$-1.17; $M_{r\theta}$0.70; $M_{\theta\phi}$-0.97; $M_{\phi r}$1.35; Fault plane solution: $M_0$2.30000×10^{15} NP1: ϕ_s221.00000°, δ25.00000°, λ100.00000°. NP2: ϕ_s29.00000°, δ66.00000°, λ85.00000°.*

*IDC **29** 17:10:25.2±6.3, 30°.07N×130°.93E, h28^{km}±46^{km}, mb3.7/9, mbtmp3.8/13, ML3.0/4 Error ellipse: s-maj=34.9km s-min=18.7km az=95.0*

ISC 29 17:10:24.3±1.7**, 30°.04N**±0°.05×**131°.14E**±0°.07**, h26**^{km}±11^{km}**, n27,** σ**0^{s}.86**/32**, mb3.6**/9**, 6D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMTN	Minamitane	0.41	330	⇓iP	Pb	17 10 33.1	0.0
JMTN				⇓eS	Sn	17 10 40.0	-1.3
JMTN	Minamitane	0.41	330	A	A	17 10 33.1	
	comp=N,11nm,1.1s,comp=E,12nm,1.8s						
JYAK	Yakushimahirau	0.58	290	⇓iP	Pn	17 10 36.5	-0.3
JYAK				⇓eS	Sn	17 10 45.4	-0.1
JYAK	Yakushimahirau	0.58	290	A	A	17 10 36.5	
	comp=N,11nm,2.3s,comp=E,4.0nm,1.0s						
JTN	Tanegashima 3	0.62	347	⇓P	Pb	17 10 36.6	-0.1
JTN				⇓eS	Sn	17 10 45.8	-0.8
JTN	Tanegashima 3	0.62	347	A	A	17 10 36.6	
	comp=N,13nm,2.9s,comp=E,12nm,1.3s						
JKC	Kuchinoerabu	0.92	297	eP	Pb	17 10 42.3	+0.8
JKC				eS	Sn	17 10 56.1	+2.3
JKC	Kuchinoerabu	0.92	297	A	A	17 10 42.3	
	comp=N,4.0nm,2.9s,comp=E,6.0nm,1.4s						
JNN	Nakanoshima	1.12	260	eP	Pb	17 10 45.2	+0.3
JTSR	Tashiro 2	1.14	350	P	Pn	17 10 44.4	-0.1
JTSR				eS	Sb	17 10 59.8	+0.1
JNAR	Kushima--Naru	1.48	4	eP	Pn	17 10 49.2	0.0
JSU	Suzuyama	1.57	338	eP	Pn	17 10 50.5	0.0
JSU				eS	Sb	17 11 11.3	-0.9
JNKG	Nichinankitago	1.63	7	eP	Pn	17 10 51.1	-0.1
JNKG				eS	Sn	17 11 11.1	-0.2
JNU	Nakatsue	3.08	356	Pn	Pn	17 11 11.7	+0.5
	comp=E,4.6nm,0.3s,baz=178,slow=20,SNR=15						
JNU				Sn	Sn	17 11 47.9	+0.7
	comp=E,3.3nm,0.3s,baz=198,slow=4.7,SNR=4.3						
	comp=E,10.0nm,0.3s						
JOW	Kunigami	4.07	219	Pn	Pn	17 11 23.4	-1.5
	comp=E,3.4nm,0.3s,baz=133,slow=28,SNR=11						
JOW				Sn	Sn	17 12 10.7	-1.0
	comp=E,9.4nm,0.3s,baz=42,slow=28,SNR=4.2						
	comp=E,8.1nm,0.3s						
KSRS	Korea Array	7.86	341	Pn	Pn	17 12 17.9	+1.0
	comp=E,0.1nm,0.3s,baz=158,slow=14,SNR=7.6						
	comp=E,2.4nm,0.8s						
MJAR	Matsushiro Arr	8.77	41	Pn	Pn	17 12 30.3	+0.9
	comp=E,0.1nm,0.3s,baz=257,slow=14,SNR=5.3						
	comp=E,0.4nm,0.4s						
USRK	Ussuriysk Ar.	14.15	2	Pn	P	17 13 50.4	+0.2
	comp=E,0.1nm,0.3s,baz=179,slow=13,SNR=3.3						
SONM	Songino Array	26.02	320	P	P	17 15 54.7	-0.5
	comp=E,1.0nm,0.6s,baz=127,slow=8.5,SNR=4.4						
	comp=E,1.0nm,0.6s						
MKAR	Makanchi Array	41.06	308	P	P	17 18 04.8	-0.8
	comp=E,0.8nm,0.7s,baz=96,slow=9.4,SNR=9.0						
	comp=E,0.8nm,0.7s						
KURBB	Kurchatov Arra	44.00	313	P	P	17 18 28.4	-0.9
	comp=E,0.7nm,0.7s,baz=99,slow=9.0,SNR=5.8						
	comp=E,0.7nm,0.7s						
BVAR	Borovoye Array	49.24	316	P	P	17 19 09.8	-0.5
	comp=E,2.8nm,0.8s						
	comp=E,2.8nm,0.8s						
ASAR	Alice Springs	53.47	177	P	P	17 19 43.9	+1.7
	comp=E,0.5nm,0.8s,baz=360,slow=6.8,SNR=3.3						
	comp=E,0.5nm,0.8s						
ARTI	Arti	56.16	320	P	P	17 20 01.1	-0.3
	comp=E,1.6nm,0.4s,baz=80,slow=5.1,SNR=4.2						
	comp=E,1.6nm,0.4s						
FINES	FINESS Array B	70.82	331	P	P	17 21 37.7	-0.5
	comp=E,0.7nm,0.5s,baz=66,slow=6.2,SNR=8.3						
	comp=E,0.7nm,0.5s						
HFS	Hagfors	76.63	333	P	P	17 22 12.8	+0.4
	comp=E,2.0nm,0.8s,baz=46,slow=6.2,SNR=1.9						
	comp=E,2.0nm,0.8s						
NOA	NORSAR Array B	77.02	334	P	P	17 22 14.4	-0.2
	comp=E,0.4nm,0.6s,baz=51,slow=5.7,SNR=3.2						
	comp=E,0.4nm,0.6s						

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*IDC **29** 17:14:27.0±0.6, 8°.96S×158°.71E, h0^{km}, mb4.0/13, mbtmp4.1/14, ML3.7/1, MS4.0/11, Error ellipse: s-maj=17.2km s-min=15.0km az=54.0*

*NEIC **29** 17:14:28.8±1.1, 9°.0S±0°.1×158°.73E±0°.07, h10^{km}±1^{km}, mb4.6/60, Error ellipse: s-maj=19.9km s-min=9.0km az=208.0*

ISC 29 17:14:31.2±0.4**, 9°.01S**±0°.06×**158°.73E**±0°.05**, h29**^{km}**, n120,** σ**1^{s}.02**/101**, mb4.5**/45**, MS4.0**/11**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAVO	Savo Central	1.08	97	P	Pn	17 14 50.4	-0.1
TATA	Tatamba Isabel	1.23	60	P	Pn	17 14 52.7	+0.2
HNR	Honiara	1.27	109		Pn	17 14 52.0	-1.1
HNR				Sn	Sb	17 15 09.4	-1.2
HNR	Honiara	1.27	109	Pn	Pn	17 14 52.5	-0.6
	720nm,0.3s,baz=238,slow=3.4,SNR=315						
HNR				Sn	Sb	17 15 11.8	+1.2
	1µm,0.3s,baz=44,slow=5.0,SNR=19						
HNR	Honiara	1.27	109	P	Pn	17 14 52.8	-0.3
ALEG	Aligegeo Malai	1.96	83	P	Pb	17 15 04.8	-1.5
NGOA	Tingoa Renbel	2.85	153	P	Pn	17 15 13.2	-1.5
HURO	Huro Makira	3.45	115	P	Pn	17 15 22.9	-0.1
RABL	Rabaul	8.09	306		Pn	17 16 24.0	-2.8
DZM	Mont Dzumac	14.95	151	Pn	Pn	17 17 59.9	-0.9
DZM	Mont Dzumac	14.95	151	eLR	LR	17 21 21.5	
	533nm,24.1s						
DZM	Mont Dzumac	14.95	151	Pn	Pn	17 18 01.5	+0.7
	0.3nm,0.3s,baz=273,slow=22,SNR=1.4						
	5.9nm,0.8s						
PATS	Pohnpei	15.75	358		Pn	17 18 09.2	-2.0
COEN	Coen	16.01	251	Pn	Pn	17 18 13.1	-1.5
COEN	Coen	16.01	251	P	P	17 18 16.9	-0.9
CTAO	Charters Tower	16.33	226		Pn	17 18 17.2	-1.3
CTAO	Charters Tower	16.33	226	P	Pn	17 18 18.8	+0.2
MTSU	Mount Surprise	16.68	236	P	P	17 18 24.6	-0.5
EIDS	Eidsvold	17.82	203		P	17 18 38.9	+1.2
QIS	Mount Isa	21.73	236	P	P	17 19 21.9	+1.4
ARMA	Armidale	22.31	196		P	17 19 27.1	+0.5
ARMA				IAmb	IAmb	17 19 36.3	
	comp=Z,29nm,1.2s						
ARMA	Armidale	22.31	196	P	P	17 19 27.8	+1.2
CMSA	Cobar Meteorol	25.48	207	P	P	17 19 57.8	+0.8
WR8	Warramunga Arr	25.82	242	P	P	17 19 59.8	-0.5
WR8				IAmb	IAmb	17 20 14.9	
	comp=Z,8.9nm,0.8s						
WB0	Warramunga Arr	25.84	243		P	17 20 00.1	-0.4
WB0				IAmb	IAmb	17 20 14.2	
	comp=Z,11nm,1.1s						
WRA	Warramunga Arr	25.95	243	P	P	17 19 59.9	-1.6
WRA	Warramunga Arr	25.95	243	P	P	17 20 01.4	0.0
	comp=Z,2.0nm,0.5s,baz=69,slow=9.6,SNR=26						
WRA				PcP	PcP	17 23 30.2	+0.4
	comp=Z,0.5nm,0.8s,baz=79,slow=2.7,SNR=2.4						
	comp=Z,2.0nm,0.5s						
KDU	Kakadu	26.04	260	P	P	17 20 02.6	+0.4
MTN	Manton Dam	27.35	260	P	P	17 20 13.3	-0.8
MTN	Manton Dam	27.35	260	P	P	17 20 17.0	+2.9
STKA	Stephens Creek	27.76	213		P	17 20 16.5	-1.1
STKA	Stephens Creek	27.76	213	P	P	17 20 18.2	+0.6
	comp=Z,2.0nm,0.5s,baz=43,slow=14,SNR=10						
STKA				LR	LR	17 31 21.3	
	comp=Z,293nm,18.2s,baz=19,slow=36						
	comp=Z,2.0nm,0.5s						
STKA	Stephens Creek	27.76	213	P	P	17 20 18.8	+1.2
AS01	Alice Springs	27.81	235	P	P	17 20 20.3	+2.1
ASAR	Alice Springs	27.85	235	P	P	17 20 17.2	-1.4
ASAR	Alice Springs	27.85	235	P	P	17 20 17.8	-0.8
	comp=Z,0.8nm,0.7s,baz=62,slow=9.5,SNR=12						
ASAR				PcP	PcP	17 23 34.3	0.0
	comp=Z,0.4nm,0.6s,baz=77,slow=2.6,SNR=2.1						
	comp=Z,0.8nm,0.7s						
KNRA	Kununurra	29.99	254	P	P	17 20 36.4	-1.2
TOO	Toolangi	30.85	201	P	P	17 20 43.9	-1.1
TOO				IAmb	IAmb	17 20 57.9	
	comp=Z,20nm,1.4s						
BBOO	Buckleboo	31.62	218	P	P	17 20 51.2	-0.6
BBOO	Buckleboo	31.62	218	P	P	17 20 51.5	-0.3
TOZ	Tahuroa Road	32.36	155	P	P	17 20 59.1	+0.9
FITZ	Fitzroy Crossi	33.36	251	P	P	17 21 06.8	-0.4
MXZ	Matakaoa Point	33.48	151	P	P	17 21 08.8	+0.8
URZ	Urewera	33.49	153	LR	LR	17 32 30.9	
	comp=Z,261nm,19.4s,baz=314,slow=32						
BKZ	Black Stump Fm	33.98	155		P	17 21 12.4	0.0
BKZ	Black Stump Fm	33.98	155	P	P	17 21 13.0	+0.6
MRZ	Mangatainoka R	34.89	157	P	P	17 21 19.9	-0.3
TUWZ	Tuamarina	34.98	160	P	P	17 21 21.2	+0.3
MSWZ	Moikau Station	35.43	158	P	P	17 21 23.1	-1.7
KHZ	Kahutara	35.73	161	P	P	17 21 27.8	+0.4
GVZ	Greta Valley S	36.07	162	P	P	17 21 30.3	0.0
OXZ	Oxford	36.11	163	P	P	17 21 30.5	-0.1
RAR	Rarotonga	41.73	112	LR	LR	17 35 29.1	
	comp=Z,152nm,20.7s,baz=286,slow=30						
JMZ	Minamidaito 2	43.76	323	P	P	17 22 34.3	-0.1
MJAR	Matsushiro Arr	49.25	338	P	P	17 23 17.1	-0.3
	comp=Z,0.7nm,0.7s,baz=152,slow=8.3,SNR=1.8						
	comp=Z,0.7nm,0.7s						
MAJO	Matsushiro	49.25	338	P	P	17 23 16.9	-0.4
MAJO				IAmb	IAmb	17 23 33.8	
	comp=Z,5.3nm,1.0s						
KSM	Kuching	49.35	280	P	P	17 23 18.3	-0.2
KSM				IAmb	IAmb	17 23 40.6	
	comp=Z,8.7nm,1.1s						
PPT	Papeete	50.89	105	LR	LR	17 40 04.1	
	comp=Z,109nm,21.6s,baz=216,slow=30						
PPT2	Papeete2	50.89	105	eLR	LR	17 38 01.8	
	comp=Z,176nm,23.0s						
PPT2				eLR	LR	17 38 05.3	
	comp=Z,215nm,22.8s						
TBI	Tubuai	51.49	113	eLR	LR	17 38 17.9	
	comp=Z,797nm,25.2s						
TBI				eLR	LR	17 38 18.6	
	comp=Z,1µm,26.5s						
KSRS	Korea Array	54.48	330	P	P	17 23 56.1	-0.2
	comp=Z,0.4nm,0.7s,baz=160,slow=7.5,SNR=2.1						
	comp=Z,0.4nm,0.7s						
NJ2	Nanjing	55.84	319	eP	P	17 24 07.0	+0.8
NJ2				pmax	pmax		
	comp=Z,2.0nm,0.6s						
PETK	Petropavlovsk-	61.88	359	P	P	17 24 47.2	-0.5
PETK	Petropavlovsk-	61.88	359	P	P	17 24 47.8	0.0
	comp=Z,2.8nm,0.9s,baz=149,slow=5.8,SNR=4.2						
	comp=Z,2.8nm,0.9s						
CMAR	Chiang Mai Arr	64.98	295	P	P	17 25 09.3	+0.3
	comp=Z,0.7nm,0.6s,baz=120,slow=4.8,SNR=5.2						
	comp=Z,0.7nm,0.6s						
XLT	XiLinHaoTe	65.31	327	eP	P	17 25 12.0	+1.2
XLT				pP	pP	17 25 19.0	-0.6
XLT				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH	PanZhiHua	65.59	304	P	P	17 25 13.8	+0.8
HHC	Hu-ho-hao-te	65.92	322	eP	P	17 25 16.8	+2.1
HHC				pmax	pmax		
	comp=Z,31nm,0.5s						
HHC				pmax	pmax		
	comp=Z,64nm,4.3s						
VNDA	Vanda	68.50	179	P	P	17 25 31.4	+1.0
VNDA				IAmb	IAmb	17 25 32.3	
	comp=Z,3.8nm,0.9s						
VNDA	Vanda	68.50	179	P	P	17 25 31.5	+1.0
	comp=Z,1.8nm,0.8s,baz=333,slow=6.0,SNR=10						
	comp=Z,1.8nm,0.8s						
LVA	Lava Point	69.60	21	P	P	17 25 37.6	0.0
ULN	Ulaanbaatar	72.70	326	P	P	17 25 57.0	+0.3
ULN				IAmb	IAmb	17 26 05.9	
	comp=Z,8.7nm,1.2s						
GTA	Gaotai	72.74	316	eP	P	17 25 58.8	+1.7
GTA				pP	pP	17 26 05.3	-0.4
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SONM	Songino Array	73.04	326		P	17 25 58.7	0.0
SONM				IAmb	IAmb	17 26 10.7	
	comp=Z,3.9nm,0.8s						
SONM	Songino Array	73.04	326	P	P	17 25 59.7	+1.1
	comp=Z,2.9nm,0.7s,baz=130,slow=5.6,SNR=13						
	comp=Z,2.9nm,0.7s						
YAK	Yakutsk	74.34	346	P	P	17 26 05.8	0.0
K13K	Kusilvak Mount	76.24	17	P	P	17 26 17.4	+0.7
K13K				IAmb	IAmb	17 26 40.6	
	comp=Z,8.3nm,1.1s						
L14K	Kuka Creek	76.36	18	P	P	17 26 17.4	0.0
M16K	Timber Creek	77.30	20	P	P	17 26 23.5	+0.8
M16K				IAmb	IAmb	17 26 34.5	
	comp=Z,6.2nm,0.9s						
K15K	Wolf Creek Mou	77.44	18	P	P	17 26 24.1	+0.6
K15K				IAmb	IAmb	17 26 25.4	
	comp=Z,8.5nm,1.1s						
M17K	Holitna River	78.09	20	P	P	17 26 26.9	-0.2
L18K	Granite Mounta	78.92	20	P	P	17 26 32.5	+0.8
M19K	Big River Lodg	79.48	21		P	17 26 35.2	+0.4
M19K				IAmb	IAmb	17 26 46.8	
	comp=Z,4.7nm,0.8s						
L19K	White Mountain	79.51	20		P	17 26 35.0	0.0
L19K				IAmb	IAmb	17 26 46.2	
	comp=Z,4.9nm,0.8s						
SLKM	Skilak Lake	80.09	23	P	P	17 26 38.0	-0.1
SLKM				IAmb	IAmb	17 26 39.2	
	comp=Z,4.7nm,0.8s						
QSPA	South Pole Qui	80.98	180	P	P	17 26 43.7	+0.6
	comp=Z,2.1nm,0.7s,baz=312,slow=1.7,SNR=18						
QSPA				LR	LR	17 58 33.7	
	comp=Z,62nm,18.6s,baz=40,slow=33						
	comp=Z,2.1nm,0.7s						
PWL	Port Wells	81.04	23	P	P	17 26 43.1	-0.1
PWL				IAmb	IAmb	17 26 44.5	
	comp=Z,7.6nm,0.8s						
CAST	Castle Rocks	81.29	20		P	17 26 44.2	-0.3
GHO	Glory Hole Cre	81.37	22	IAmb	IAmb	17 26 56.0	
	comp=Z,5.6nm,0.7s						
F19K	Shaleruckik Mo	81.92	16	P	P	17 26 47.6	-0.1
TRF	Thorofare Moun	81.93	21	IAmb	IAmb	17 27 00.5	
	comp=Z,2.8nm,0.6s						
C18K	Utukok River	82.42	14	P	P	17 26 50.7	+0.4
MLY	Manley	82.78	19		P	17 26 52.5	+0.1
WMQ	Urumqi	82.82	316	eP	P	17 26 56.0	+3.0
WMQ				pmax	pmax		
	comp=Z,18nm,0.7s						
NEA2	Nenana	83.06	20	IAmb	IAmb	17 27 04.0	
	comp=Z,4.1nm,0.9s						
H23K	Yukon River	83.68	19	P	P	17 26 57.1	+0.2
H23K				IAmb	IAmb	17 27 08.3	
	comp=Z,4.3nm,0.9s						
ILAR	Eielson Array	83.92	21	P	P	17 26 57.6	-0.5
	comp=Z,0.8nm,0.5s,baz=236,slow=4.6,SNR=16						
	comp=Z,0.8nm,0.5s						
MENT	Mentasta	84.03	23	IAmb	IAmb	17 27 25.4	
	comp=Z,2.6nm,0.7s						
G23K	Bananza Creek	84.08	18	IAmb	IAmb	17 27 00.7	
	comp=Z,2.5nm,0.8s						
J25K	Salcha River,	84.36	21	IAmb	IAmb	17 27 15.0	
	comp=Z,3.6nm,0.9s						
M27K	Edge Creek, AK	84.44	24	IAmb	IAmb	17 27 12.5	
	comp=Z,4.4nm,0.8s						
G24K	Hadweenzic Riv	84.88	19	IAmb	IAmb	17 27 14.0	
	comp=Z,4.0nm,1.0s						
J26L	Joseph Creek	84.94	22	IAmb	IAmb	17 27 16.1	
	comp=Z,2.7nm,0.8s						
G26K	Porcupine Rive	86.22	19	IAmb	IAmb	17 27 21.4	
	comp=Z,4.1nm,0.9s						
N31M	Braeburn, Yuko	86.56	26		P	17 27 11.4	-0.1
K29M	Barlow Dome	86.90	23	IAmb	IAmb	17 27 24.9	
	comp=Z,3.3nm,1.0s						
BBB	Bella Bella	86.93	36	LR	LR	17 57 55.2	
	comp=Z,255nm,21.3s,baz=216,slow=30						
MK31	Makanchi Array	87.36	318	P	P	17 27 14.4	-1.2
MKAR	Makanchi Array	87.36	318	P	P	17 27 14.9	-0.8
MKAR	Makanchi Array	87.36	318	P	P	17 27 15.3	-0.3
	comp=Z,1.1nm,0.6s,baz=100,slow=5.9,SNR=15						
	comp=Z,1.1nm,0.6s						
E27K	Coleen River	87.59	19		P	17 27 18.0	+1.7
E27K				IAmb	IAmb	17 27 28.7	
	comp=Z,3.3nm,0.8s						
DLBC	Dease Lake	88.01	30	LR	LR	18 02 49.0	
	comp=Z,13nm,19.4s,baz=212,slow=33						
NVAR	Mina Array Bea	90.08	51	P	P	17 27 29.7	+0.8
	comp=Z,0.5nm,0.7s,baz=258,slow=4.1,SNR=2.4						
	comp=Z,0.5nm,0.7s						
AAK	Ala-Archa	91.82	313	LR	LR	18 08 40.6	
	comp=Z,52nm,20.6s,baz=121,slow=36						
BVAR	Borovoye Array	96.13	323	LR	LR	18 15 07.4	
	comp=Z,37nm,18.1s,baz=112,slow=38						
YKA	Yellowknife Ar	96.38	28	LR	LR	18 06 15.8	
	comp=Z,197nm,21.2s,baz=236,slow=32						
SNAA	Sanae	98.56	186	LR	LR	18 08 59.7	
	comp=Z,102nm,20.8s,baz=218,slow=33						
GERES	GERESS Array B	130.66	330	PKP	PKiKP	17 33 40.2	-0.4
	comp=Z,0.1nm,0.3s,baz=74,slow=1.8,SNR=3.5						
MAL2	Monte Alegre,	145.42	107		PKPbc	17 34 05.9	-1.7
ESDC	Sonseca Array	145.77	336	PKPbc	PKPdf	17 34 06.0	-1.6
	comp=Z,0.4nm,0.9s,baz=39,slow=2.9,SNR=2.5						

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*IDC **29** 17:17:16.6±4.7, 37°.41N×72°.29E, h181^{km}±33^{km}, mb3.3/8, mbtmp3.8/13, Error ellipse: s-maj=49.4km s-min=27.0km az=152.0*

*NNC **29** 17:17:19.8±4.8, 37°.81N×72°.37E, h0^{km}, mb4.6, mpv4.2, Error ellipse: s-maj=37.9km s-min=30.6km az=153.0*

ISC 29 17:17:19.3±1.4**, 37°.6N**±0°.1×**72°.3E**±0°.1**, h200**^{km}**, n29,** σ**0^{s}.74**/34**, mb3.4**/7**, 4C-3D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	4.65	13	P	Pn	17 18 29.9	+0.3
	SNR=42						
IUG	Iuzhnay	4.86	340	Pg	Pn	17 18 32.2	+0.3
	70nm,0.2s						
IUG				Lg	Lg	17 19 25.6	
	227nm,0.5s						
UCH	Uchtor	4.93	20	P	Sn	17 19 30.3	-1.1
	SNR=17						
EKS2	Erkin-Say	5.18	12	P	Pn	17 18 36.7	+0.6
	SNR=20						
AAK	Ala-Archa	5.31	18	P	Pn	17 18 38.6	+0.9
	SNR=17						
AAK	Ala-Archa	5.31	18	P	Pn	17 18 38.5	+0.9
	24nm,0.4s,baz=179,slow=5.3,SNR=28						
AAK				S	Sn	17 19 39.6	0.0
	22nm,0.6s,baz=326,slow=22,SNR=12						
AAK	Ala-Archa	5.31	18	⇑Pn	Pn	17 18 37.7	0.0
	2.5nm,0.4s						
AAK				⇓Sn	Sn	17 19 38.8	-0.9
	11nm,0.8s						
ULHL	Ulahol	5.55	32	P	Pn	17 18 41.0	+0.2
	SNR=17						
KK31	Karatay Array	5.66	347	Pn	Pn	17 18 41.8	-0.2
	8.2nm,0.5s,baz=154,slow=10,SNR=116						
KK31				⇑Sn	Sn	17 19 46.7	-0.8
	22nm,0.3s,baz=160,slow=22						
CHMS	Chumysh	5.71	19	P	Pn	17 18 43.6	+0.9
	SNR=14						
CHMS	Chumysh	5.71	19	⇓Pn	Pn	17 18 43.2	+0.5
	9.8nm,0.5s						
CHMS				⇑Sn	Sn	17 19 48.1	-0.7
	29nm,0.7s						
TKM2	Tokmak 2	5.89	25	P	Pn	17 18 45.9	+0.7
	SNR=11						
TKM2	Tokmak 2	5.89	25	⇑Pn	Pn	17 18 45.2	+0.1
	14nm,0.8s						
TKM2				⇓Sn	Sn	17 19 53.6	+0.4
	4.9nm,0.7s						
USP	Ospenovka	5.91	16	P	Pn	17 18 45.2	0.0
	SNR=7.8						
KST	Kastek	6.12	26	Pg	Pn	17 18 48.9	+0.8
	18nm,0.5s						
MTBS	Maitube	6.37	29	Pg	Pn	17 18 51.9	+0.7
	20nm,0.4s						
MKAR	Makanchi Array	11.80	36	P	Pn	17 20 01.4	-0.1
	0.5nm,0.4s,baz=226,slow=14,SNR=4.2						
KURBB	Kurchatov Arra	13.76	17	P	Pn	17 20 25.1	-1.0
	0.6nm,0.3s,baz=203,slow=11,SNR=4.4						
BVAR	Borovoye Array	15.48	356	P	Pn	17 20 47.4	+0.3
	1.9nm,0.7s						
ZALV	Zalesovo Beam	18.49	24	P	Pn	17 21 21.5	-1.3
	3.1nm,0.3s,baz=218,slow=9.4,SNR=29						
BRTR	Keskin Array B	30.09	286	P	P	17 23 10.9	+0.9
	0.4nm,0.4s,baz=90,slow=8.4,SNR=2.0						
	0.4nm,0.4s						
FINES	FINESS Array B	37.15	325	P	P	17 24 11.0	+0.6
	2.9nm,1.1s,baz=114,slow=7.8,SNR=1.5						
	2.9nm,1.1s						
ARCES	ARCESS Array B	40.52	337	P	P	17 24 39.5	+1.1
	0.5nm,0.5s,baz=105,slow=7.8,SNR=5.3						
	0.5nm,0.5s						
HFS	Hagfors	42.84	321	P	P	17 24 57.7	+0.5
	1.9nm,0.6s,baz=95,slow=9.5,SNR=9.2						
	1.9nm,0.6s						
NB2	NORSAR Subarra	44.12	322	P	P	17 25 07.7	+0.2
	comp=Z,0.4nm,0.5s,baz=92,slow=7.9						
NOA	NORSAR Array B	44.12	322	P	P	17 25 07.7	+0.2
	comp=Z,0.5nm,0.5s,baz=93,slow=7.6,SNR=3.7						
	comp=Z,0.5nm,0.5s						
ESDC	Sonseca Array	57.85	298	P	P	17 26 49.7	-0.3
	comp=Z,0.4nm,0.7s,baz=62,slow=6.9,SNR=2.8						
	comp=Z,0.4nm,0.7s						
TORD	Torodi Ar. Bea	66.76	269	P	P	17 27 47.6	-1.8
	comp=Z,1.4nm,0.6s,baz=41,slow=5.8,SNR=1.6						
	comp=Z,1.4nm,0.6s						
YKA	Yellowknife Ar	80.09	3	P	P	17 29 07.0	+0.7
	comp=Z,0.3nm,0.5s,baz=351,slow=5.5,SNR=6.1						
	comp=Z,0.3nm,0.5s						

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*IDC **29** 17:31:54.1±1.8, 23°.58S×179°.98W, h514^{km}±19^{km}, mb3.1/6, mbtmp4.0/7, Error ellipse: s-maj=20.3km s-min=18.1km az=21.0*

*NEIC **29** 17:31:54.9±1.9, 23°.75S±0°.10×179°.9W±0°.2, h524^{km}±7^{km}, mb4.2/18, Error ellipse: s-maj=21.7km s-min=13.4km az=105.0*

ISC 29 17:31:54.1±0.6**, 23°.80S**±0°.06×**179°.92E**±0°.08**, h500**^{km}**, n77,** σ**1^{s}.88**/85**, mb4.2**/14**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	5.78	161	P	P	17 33 31.3	+3.2
GLKZ				S	S	17 34 42.8	-2.3
MSVF	Nonsavu	6.28	344	P	P	17 33 34.2	+0.9
MSVF	Nonsavu	6.28	344	P	P	17 33 32.9	-0.4
	3.9nm,0.5s,baz=95,slow=12,SNR=4.1						
NIUE	Niue	10.56	66	P	P	17 34 20.1	+2.7
PINNC	Pines Island,	11.53	273	P	P	17 34 31.1	+3.5
OUZ	Omahuta	12.64	204	P	P	17 34 43.3	+4.1
WCZ	Waipu Caves	13.03	200	P	P	17 34 47.7	+4.4
WMGZ	Waiomatatini S	14.04	185	P	P	17 34 56.8	+2.8
PKGZ	Pakihiroa	14.12	186	P	P	17 34 55.8	+0.9
TGRZ	Tauranga	14.24	192	P	P	17 35 01.5	+5.4
RUGZ	Raukumara Rang	14.26	187	S	S	17 37 28.3	+1.5
PUZ	Puketiti	14.30	185	P	P	17 34 59.8	+3.0
PUZ				S	S	17 37 26.1	-1.4
TOZ	Tahuroa Road	14.40	194	P	P	17 34 59.2	+1.5
TWGZ	Tauwhareparae	14.43	186	P	P	17 34 59.9	+1.7
TWGZ				S	S	17 37 28.4	-1.6
URZ	Urewera	14.62	189	P	P	17 34 57.9	-2.2
	4.7nm,0.3s,baz=353,slow=6.0,SNR=15						

URZ				S	S	17 37 31.1	-2.3
	6.6nm,0.9s,baz=351,slow=8.7,SNR=2.0						
URZ	Urewera	14.62	189	P	P	17 35 00.6	+0.5
URZ				S	S	17 37 31.8	-1.6
MWZ	Matawai	14.64	187	P	P	17 34 59.6	-0.8
MWZ				S	S	17 37 31.8	-2.1
TKGZ	Te Karaka	14.71	186	P	P	17 35 02.2	+1.3
CNGZ	Carnagh Statio	14.72	185	P	P	17 35 03.9	+2.8
MUGZ	Murupara	14.88	190	P	P	17 35 02.6	-0.3
MUGZ				S	S	17 37 36.2	-2.3
PRRZ	Plateau Road	14.96	191	P	P	17 35 06.0	+2.3
TLZ	Tolley Road	14.96	193	P	P	17 35 05.3	+1.6
RIGZ	Rimuhau	14.98	187	P	P	17 35 05.7	+1.9
MTHZ	Maungataniwha	15.24	189	P	P	17 35 07.0	+0.4
MRHZ	Matea Rd	15.29	190	P	P	17 35 08.1	+1.0
HIZ	Hauiti	15.29	195	P	P	17 35 12.4	+5.2
BKZ	Black Stump Fm	15.60	190	P	P	17 35 08.8	-1.6
NTVZ	North Tongarir	15.68	192	P	P	17 35 12.7	+1.4
TMVZ	Te Maari	15.69	192	P	P	17 35 12.6	+1.3
TWVZ	Taurewa	15.70	193	P	P	17 35 13.9	+2.5
ETVZ	East Tongariro	15.71	192	P	P	17 35 12.3	+0.7
OTVZ	Oturere	15.74	192	P	P	17 35 12.1	+0.1
SNVZ	South Ngauruho	15.77	192	P	P	17 35 12.8	+0.5
MCHZ	McNeill Hill	15.84	189	P	P	17 35 11.9	-1.0
TUVZ	Tukino	15.84	192	P	P	17 35 13.4	+0.4
FWVZ	Far West T-bar	15.85	192	P	P	17 35 13.2	0.0
WHVZ	Whangaehu Hut	15.87	192	P	P	17 35 13.6	+0.2
VRZ	Vera Road	15.90	195	P	P	17 35 17.0	+3.6
WNVZ	Wahianoa	15.91	192	P	P	17 35 13.8	0.0
KRHZ	Kereru	16.08	190	P	P	17 35 14.7	-0.7
KAHZ	Kahuranaki	16.16	188	P	P	17 35 15.8	-0.4
LREZ	Lake Rotokare	16.30	195	P	P	17 35 21.5	+3.9
PNHZ	Pukenui	16.38	190	P	P	17 35 16.0	-2.5
PXZ	Pawanui	16.39	188	P	P	17 35 18.2	-0.4
TSZ	Takapari Road	16.56	191	P	P	17 35 19.4	-1.0
DVHZ	Dannevirke	16.76	190	P	P	17 35 20.4	-2.0
TKNZ	Takaka Hill	18.15	197	P	P	17 35 35.5	-0.1
TUWZ	Tuamarina	18.28	194	P	P	17 35 36.3	-0.5
THZ	Tophouse	18.85	196	P	P	17 35 42.2	+0.2
EIDS	Eidsvold	26.25	261	P	P	17 36 50.2	+1.6
CTAO	Charters Tower	31.40	270	P	P	17 37 35.0	+1.3
AS31	Alice Springs	41.98	261	P	P	17 39 01.3	+0.4
AS31				IAmb	IAmb	17 39 02.3	
	comp=Z,1.7nm,0.4s						
ASAR	Alice Springs	41.98	261	P	P	17 39 00.8	-0.1
ASAR	Alice Springs	41.98	261	P	P	17 39 01.3	+0.4
	comp=Z,3.2nm,0.7s,baz=95,slow=7.2,SNR=88						
ASAR				ScP	ScP	17 43 47.2	-0.2
	comp=Z,0.8nm,0.9s,baz=96,slow=4.0,SNR=5.5						
ASAR				S	S	17 44 42.7	-0.5
	comp=Z,0.2nm,0.8s,baz=94,slow=13,SNR=1.6						
	comp=Z,3.2nm,0.7s						
WR8	Warramunga Arr	42.19	266	P	P	17 39 02.4	-0.2
WR8				IAmb	IAmb	17 39 31.0	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	42.34	266	P	P	17 39 03.4	-0.3
WRA	Warramunga Arr	42.34	266	P	P	17 39 03.5	-0.3
	comp=Z,5.3nm,0.5s,baz=104,slow=8.3,SNR=129						
WRA				S	S	17 44 44.3	-4.1
	comp=Z,0.5nm,0.8s,baz=108,slow=13,SNR=2.6						
	comp=Z,5.3nm,0.5s						
MTN	Manton Dam	47.37	274	P	P	17 39 41.6	-1.0
MTN				IAmb	IAmb	17 39 49.2	
	comp=Z,18nm,1.2s						
KNRA	Kununurra	48.61	270	P	P	17 39 51.7	-0.2
KNRA				IAmb	IAmb	17 40 08.4	
	comp=Z,10nm,1.1s						
FAKI	Fak Fak	50.48	287	P	P	17 40 04.6	-1.1
FITZ	Fitzroy Crossi	50.76	266	P	P	17 40 08.2	+0.4
VNDA	Vanda	54.48	185	P	P	17 40 34.7	+1.3
VNDA	Vanda	54.48	185	P	P	17 40 34.2	+0.8
	comp=Z,0.5nm,0.5s,baz=8.3,slow=5.5,SNR=3.8						
	comp=Z,0.5nm,0.5s						
SOEI	Soe	54.76	275	P	P	17 40 37.0	+0.4
MORW	Morawa	56.84	250	P	P	17 40 49.5	-1.2
MORW				IAmb	IAmb	17 41 16.3	
	comp=Z,18nm,1.3s						
CASY	Casey	60.17	206	P	P	17 41 11.7	-0.8
CASY				IAmb	IAmb	17 41 53.8	
	comp=Z,13nm,1.4s						
TOLI2	Tolitoli	62.48	285	P	P	17 41 28.2	-0.3
TOLI2				IAmb	IAmb	17 41 28.5	
	comp=Z,6.9nm,0.8s						
QSPA	South Pole Qui	66.29	180	P	P	17 41 52.2	+0.1
QSPA				IAmb	IAmb	17 41 56.4	
	comp=Z,4.0nm,1.0s						
QSPA	South Pole Qui	66.29	180	P	P	17 41 52.1	+0.1
	comp=Z,1.6nm,0.6s,baz=43,slow=0.9,SNR=19						
	comp=Z,1.6nm,0.6s						
KKM	Kota Kinabalu	68.80	287	P	P	17 42 07.3	-1.0
KKM				IAmb	IAmb	17 42 27.7	
	comp=Z,18nm,1.1s						
MJAR	Matsushiro Arr	71.77	326	P	P	17 42 22.8	-2.5
	comp=Z,0.6nm,0.7s,baz=163,slow=7.4,SNR=2.1						
	comp=Z,0.6nm,0.7s						
BELA	Belgrano 2	76.55	173	P	P	17 42 50.0	-1.8
TXAR	Lajitas Array	90.44	58	P	P	17 43 59.6	-2.6
	comp=Z,0.2nm,0.7s,baz=237,slow=4.7,SNR=2.5						
	comp=Z,0.2nm,0.7s						
HFS	Hagfors	142.43	349	PKhKP	PKPpre	17 50 22.4	
	comp=Z,1.3nm,0.3s,baz=64,slow=3.4,SNR=17						
AKASG	Malin Array Be	144.84	327	PKP	PKPdf	17 50 30.5	-2.9
	comp=Z,0.8nm,0.4s,baz=59,slow=1.8,SNR=4.1						
MMAI	Mount Meron Ar	147.59	294	PKPbc	PKPdf	17 50 41.2	+2.5
	comp=Z,0.8nm,0.4s,baz=85,slow=3.1,SNR=6.0						
EKA	Eskdalemuir Ar	148.42	3	PKPbc	PKPdf	17 50 40.2	+1.0
	comp=Z,0.1nm,0.3s,baz=353,slow=3.3,SNR=1.4						

*VIE **29** 17:37:42.8±1.1, 51°.48N×16°.32E, h0^{km}, mb2.4/8, ml2.7/8, ms3.1/1, Error ellipse: s-maj=10.1km s-min=6.9km az=60.0 65 km NW of Wroclaw Suspected Mining induced.*
*IPEC **29** 17:37:43.3±0.2, 51°.51N×16°.14E, h1^{km}, ML2.3/5, Error ellipse: s-maj=3.2km s-min=1.5km az=71.0*
*PRU **29** 17:37:44.5, 51°.49N×16°.10E, h0^{km}*
ISC 29 17:37:42.1±0.9**, 51°.57N**±0°.03×**16°.13E**±0°.03**, h0^{km}, n39, σ0^{s}81**/76**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.73	172	*i* Pg	Pg	17 37 56.5	+0.4
KSP				*e*Sg	Sg	17 38 05.4	-0.2
CHVC	Chvalec	0.98	183	*e*PG	Pg	17 38 01.3	+0.4
CHVC				*e*SG	Sg	17 38 13.4	-0.2
	comp=Z,32nm,0.3s						
OSTC	Ostas	1.01	177	*e*PG	Pb	17 38 02.1	-0.4
OSTC				*e*SG	Sg	17 38 14.5	-0.1
	comp=Z,44nm,0.3s						
UPC	Upice	1.06	184	*e*PG	Pg	17 38 02.8	+0.3
UPC				*e*SG	Sg	17 38 15.7	-0.5
DPC	Dobruska-Polom	1.22	174	*e*PG	Pg	17 38 05.4	-0.2
DPC				*e*SG	Sg	17 38 20.3	-1.1
	comp=Z,38nm,0.7s						
PIVO	Bartosovice	1.41	169	*e*Pg	Pg	17 38 08.8	-0.3
	baz=349						
PIVO				*e*Sg	Sg	17 38 25.5	-1.8
	54nm,0.4s,baz=349						
PVCC	Panska Ves	1.43	224	*e*PG	Pn	17 38 09.6	+0.3
PVCC				*e*SG	Sb	17 38 28.4	0.0
BRG	Berggiesshubel	1.54	244	Pg	Pn	17 38 11.1	+0.3
BRG				Sg	Sn	17 38 31.5	0.0
BRG				Amp		17 38 32.2	
	comp=Z,41nm,0.4s						
KRLC	Kraliky	1.55	164	*e*PG	Pn	17 38 11.0	0.0
KRLC				*e*SG	Sg	17 38 31.2	-0.7
PRA	Prague	1.84	216	*e*PN	Pn	17 38 14.8	-0.2
GOPC	GO Pecny, Ondr	1.86	208	*e*PG	Pb	17 38 17.0	0.0
PRU	Pruhonice	1.87	213	*e*PG	Pb	17 38 17.0	-0.2
PRU				*e*SG	Sb	17 38 41.1	0.0
	comp=Z,11nm,0.3s						
STEB	Steborice	1.94	147	*e*PG	Pb	17 38 18.7	+0.4
CLL	Collm	1.97	264	*e*Pn	Pn	17 38 17.0	+0.2
CLL				*e*Pg	Pb	17 38 20.0	+1.1
CLL				*e*Sg	Sg	17 38 46.0	+0.6
	comp=Z,13nm,0.5s						
CLL				AMS	AMS	18 37 00.0	
	comp=Z,100nm,20.9s						
MORC	Moravsky Berou	2.00	153	*e*Pn	Pn	17 38 17.3	0.0
	baz=333						
MORC				*e*Sg	Sb	17 38 44.5	-0.5
	comp=Z,19nm,0.5s,baz=333						
OKC	Ostrava-Krasne	2.16	143	*e*PG	Pg	17 38 23.1	-0.3
VRAC	Vranov	2.28	172	*e*Pn	Pn	17 38 21.2	+0.2
	baz=353						
VRAC				*e*Sg	Sb	17 38 52.8	-0.1
	comp=Z,18nm,0.6s,baz=353						
VRAC	Vranov	2.28	172	*e*PN	Pn	17 38 21.3	+0.2
VRAC				*e*SG	Sb	17 38 52.9	0.0
KRUC	Moravsky	2.51	176	*e*Pn	Pn	17 38 24.4	+0.2
	baz=356						
KRUC				*e*Sg	Sb	17 39 00.2	+0.7
	comp=Z,14nm,0.7s,baz=356						
OJC	Ojcow	2.69	119	*e*Pg	Pg	17 38 34.6	+0.9
OJC				*e*Sg	Sg	17 39 10.0	+1.5
JAVC	Velka Javorina	2.89	159	*e*Pn	Pn	17 38 29.3	-0.1
	baz=340						
JAVC	Velka Javorina	2.89	159	*e*PN	Pn	17 38 29.4	0.0
KHC	Kasperske Hory	2.93	215	*e*PN	Pn	17 38 29.9	-0.1
KHC				*e*PG	Pb	17 38 35.3	0.0
KHC				*e*SG	Sg	17 39 14.9	-1.4
	comp=Z,9.1nm,0.3s						
CKRC	Cesky Krumlov	2.99	204	*e*PN	Pn	17 38 31.4	+0.7
CKRC				*e*PG	Pb	17 38 37.3	+1.1
LANS	Liptovska Anna	3.23	137	*e*PG	Pg	17 38 44.0	0.0
LANS				*e*SG	Sg	17 39 26.4	+0.6
MODS	Modra-Piesok	3.28	166	*e*PG	Pg	17 38 44.0	-1.0
MODS				*e*SG	Sg	17 39 26.8	-0.7
VYHS	Vyhne	3.54	149	*e*PN	Pn	17 38 39.3	+1.0
VYHS				*e*PG	Pg	17 38 51.2	+1.3
VYHS				*e*SG	Sg	17 39 35.0	-0.7
CONA	Conrad Observa	3.65	183	*i* Pn	Pn	17 38 39.0	-0.9
	comp=Z,1.2nm,0.2s						
CONA				*e*Sg	Sg	17 39 39.3	+0.1
	comp=Z,2.3nm,0.2s						
RONA	Rosalia, Austr	3.87	178	*i* Pn	Pn	17 38 43.2	+0.3
	comp=Z,0.6nm,0.2s						
RONA				*e*Sg	Sg	17 39 46.0	-0.5
	comp=Z,1.6nm,0.2s						
MOA	Molln	3.91	199	*i* Pn	Pn	17 38 44.0	+0.5
	comp=Z,1.4nm,0.2s						
MOA				*i* Sn	Sn	17 39 30.6	+0.5
	comp=Z,3.0nm,0.3s						
STHS	Stebnicka Huta	3.91	121	*e*PN	Pn	17 38 43.2	-0.3
STHS				*e*PG	Pg	17 38 57.3	+0.2
STHS				*e*SG	Sg	17 39 48.6	+0.8
BIOA	Bad Ischl, Aus	4.20	204	*i* Pn	Pn	17 38 47.5	0.0
	comp=Z,2.1nm,0.3s						
BIOA				*e*Sg	Sg	17 39 56.8	-0.2
	comp=Z,6.8nm,0.4s						
ARSA	Arzberg	4.34	185	*i* Pn	Pn	17 38 48.0	-1.3
	comp=Z,0.3nm,0.2s						
ARSA				*e*Sg	Sg	17 40 03.0	+1.6
	comp=Z,9.0nm,0.8s						
LESA	Schwarzleotal	4.71	210	*i* Pn	Pn	17 38 54.9	+0.4
	comp=Z,1.1nm,0.4s						
LESA				*e*Sg	Sg	17 40 12.8	-0.7
	comp=Z,3.9nm,0.5s						
BLEU	Blekinge	4.75	358	*i* P	Pn	17 38 56.1	+1.2
BLEU				*i* S	Sn	17 39 48.6	-2.1
BLEU				IAML		17 39 51.1	
	comp=Z,0.8nm,0.4s						
BJUU	Bjuv	4.88	339	*i* P	Pn	17 38 56.1	-0.5
BJUU				*i* S	Sn	17 39 51.4	-2.4
WTTA	Wattenberg	5.21	216	*i* Pn	Pn	17 39 03.1	+1.7
	comp=Z,0.7nm,0.2s						
WTTA				*e*Sg	Sg	17 40 27.8	-1.6
	comp=Z,0.3nm,0.3s						
RETA	Reutte	5.37	223	*i* Pn	Pn	17 39 03.5	-0.1
	comp=Z,1.0nm,0.2s						
RETA				*e*Sg	Sg	17 40 34.2	-0.3
	comp=Z,2.0nm,0.4s						
DAVA	Damuels	5.91	226	*e*Pn	Pn	17 39 11.8	+0.8
	comp=Z,1.1nm,0.3s						
DAVA				*e*Sg	Sg	17 40 53.4	+1.6
	comp=Z,1.7nm,0.4s						

*FUNV **29** 17:52:27.8, 10°.87N×62°.08W, h99^{km}, MW3.7*
*TRN **29** 17:52:28.2, 10°.97N×62°.29W, h28^{km}, MD2.9, North of the Paria peninsula.*
ISC 29 17:52:24.0±1.8**, 10°.85N**±0°.05×**62°.12W**±0°.07**, h121^{km}**±17^{km}**, n10, σ2^{s}06**/18**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSMG	Mucurapo Girls	0.61	107	*e*P	Pn	17 52 44.3	+1.5
TRN	Trinidad (W)	0.73	106	*e*P	Pn	17 52 45.2	+1.5
TRN				*e*S	Sn	17 52 57.3	-1.2
GRFF	Grenada Fort F	1.25	18	*e*P	Pn	17 52 49.2	+0.5
GRFF				*e*S	Sn	17 53 05.1	-2.3
GRGR	Grenville	1.35	20	*e*P	Pn	17 52 50.8	+1.0
GRGR				*e*S	Sn	17 53 07.4	-2.0
GRSS	Sisters	1.52	19	*e*P	Pn	17 52 53.1	+1.4
GRSS				*e*S	Sn	17 53 12.5	-0.4
GCMP	Grenada, Carri	1.76	23	*e*P	Pn	17 52 55.9	+1.3
GCMP				*e*S	Sn	17 53 16.6	-1.2
PCRV	Puerto La Cruz	2.56	255	*e*P	Pn	17 53 07.5	+2.8
PCRV				*e*S	Sn	17 53 35.5	-0.5
LUEV	Luepa	5.02	172	*e*P	Pn	17 53 39.6	+2.2
LUEV				*e*S	Sn	17 54 32.3	-2.3
CACV	CAICARA DEL OR	5.45	234	*e*P	Pn	17 53 40.7	-2.3
CACV				*e*S	Sn	17 54 33.3	-11
BAUV	El Baul	6.13	252	*e*P	Pn	17 53 55.0	+2.8
BAUV				*e*S	Sn	17 54 58.7	-2.5

*IDC **29** 18:07:15.2±7.0, 7°.79S×116°.20E, h261^{km}±52^{km}, mb2.8/5, mbtmp3.5/6, Error ellipse: s-maj=97.6km s-min=17.8km az=71.0*
ISC 29 18:07:14.3±1.5**, 7°.8S**±0°.1×**116°.2E**±0°.2**, h250^{km}, n7, σ2^{s}43**/10**, mb3.1**/5**, Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	Kappang	4.53	52	P	Pn	18 08 25.3	+0.9
	12nm,0.6s,baz=227,slow=12,SNR=4.6						
FITZ	Fitzroy Crossi	13.76	139	P	P	18 10 24.8	+4.2
	1.7nm,0.9s,baz=339,slow=16,SNR=1.5						
FITZ				S	S	18 12 47.9	-4.3
	1.9nm,0.7s,baz=315,slow=20,SNR=7.1						
WRA	Warramunga Arr	21.34	126	P	P	18 11 42.2	-0.2
	0.1nm,0.3s,baz=315,slow=9.6,SNR=2.0						
WRA				PcP	PcP	18 15 35.3	-0.8
	0.2nm,0.3s,baz=316,slow=1.9,SNR=2.1						
	0.1nm,0.3s						
ASAR	Alice Springs	23.19	135	P	P	18 11 59.1	-0.2
	0.3nm,0.4s,baz=308,slow=9.6,SNR=16						
ASAR				PcP	PcP	18 15 39.5	-0.4
	0.2nm,0.6s,baz=312,slow=1.9,SNR=4.7						
	0.3nm,0.4s						
KSRS	Korea Array	46.36	13	P	P	18 15 16.2	+0.4
	0.9nm,0.7s,baz=189,slow=6.9,SNR=2.5						
	0.9nm,0.7s						
MJAR	Matsushiro Arr	48.74	24	P	P	18 15 32.9	-1.2
	1.1nm,0.7s,baz=190,slow=9.0,SNR=3.5						
	1.1nm,0.7s						
SONM	Songino Array	56.08	352	P	P	18 16 26.4	-1.4
	0.4nm,0.6s,baz=160,slow=8.8,SNR=2.9						
	0.4nm,0.6s						

*IDC **29** 18:08:52.6±1.5, 30°.67S×179°.59W, h361^{km}±14^{km}, mb3.2/9, mbtmp3.9/10, Error ellipse: s-maj=18.6km s-min=15.9km az=75.0*
*WEL **29** 18:08:55.4±0.9, 31°S±7°×17°9W±1°7, h304^{km}±10^{km}, mB4.8/12, ML4.9/11, MLv5.2/13, Mw(mB)4.0/12, Error ellipse: s-maj=23.3km s-min=5.1km az=108.3, confirmed*
ISC 29 18:08:50.9±0.5**, 30°.90S**±0°.06×**179°.6W**±0°.1**, h350^{km}, n46, σ2^{s}02**/58**, mb3.6**/9**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	2.17	42	P	Pn	18 09 44.2	+0.8
GLKZ				S	S	18 10 27.7	+2.1
RIZ	Raoul Island	2.18	41	P	Pn	18 09 44.3	+0.8
RIZ				S	S	18 10 23.2	-2.6
RAO	Raoul Island	2.18	42	P	Pn	18 09 44.9	+1.4
	284nm,0.3s,baz=285,slow=20,SNR=1.9						
RAO				S	S	18 10 19.5	-6.2
	699nm,0.3s,baz=63,slow=23,SNR=5.1						
MXZ	Matakaoa Point	6.87	194	P	Pn	18 10 32.0	+0.4
WMGZ	Waiomatatini S	7.10	193	P	Pn	18 10 35.1	+0.9
WMGZ				S	S	18 11 57.0	-1.4
WCZ	Waipu Caves	7.15	224	P	Pn	18 10 39.8	+4.9
OUZ	Omahuta	7.17	231	P	Pn	18 10 39.4	+4.3
HAZ	Te Kaha	7.18	197	P	Pn	18 10 35.5	+0.3
HAZ				S	S	18 11 56.9	-3.2
PUZ	Puketiti	7.38	193	P	Pn	18 10 37.8	+0.2
PUZ				S	S	18 12 01.3	-3.0
RUGZ	Raukumara Rang	7.41	197	P	Pn	18 10 38.2	+0.3
RUGZ				S	S	18 12 01.2	-4.0
TWGZ	Tauwhareparae	7.54	195	P	Pn	18 10 40.4	+1.0
TWGZ				S	S	18 12 05.6	-2.2
MARZ	Manawahe	7.72	203	P	Pn	18 10 45.7	+4.1
MARZ				S	S	18 12 13.1	+1.3
CNGZ	Carnagh Statio	7.78	193	P	Pn	18 10 43.1	+0.8
CNGZ				S	S	18 12 03.6	-10
MWZ	Matawai	7.79	197	P	Pn	18 10 41.3	-1.1
MWZ				S	S	18 12 09.3	-4.1
TKGZ	Te Karaka	7.82	195	P	Pn	18 10 42.7	0.0
TKGZ				S	S	18 12 09.5	-4.4
URZ	Urewera	7.83	200	P	Pn	18 10 42.7	-0.2
	12nm,0.3s,baz=259,slow=5.1,SNR=55						
URZ				S	S	18 12 11.6	-2.7
	42nm,0.3s,baz=213,slow=24,SNR=14						
URZ	Urewera	7.83	200	P	Pn	18 10 42.2	-0.7
URZ				S	S	18 12 10.8	-3.4
TOZ	Tahuroa Road	7.94	210	P	Pn	18 10 48.5	+4.4
RAGZ	Rawiri	7.97	197	P	Pn	18 10 44.7	+0.1
RIGZ	Rimuhau	8.09	195	P	Pn	18 10 45.6	-0.4
MUGZ	Murupara	8.14	201	P	Pn	18 10 46.6	+0.1
PRGZ	Paritu Road	8.27	194	P	Pn	18 10 47.9	-0.3
HIZ	Hauiti	8.87	210	P	P	18 10 60.0	+2.4
MSVF	Nonsavu	13.29	350	P	Pn	18 11 47.2	-0.7
	3.4nm,0.5s,baz=235,slow=23,SNR=4.8						
RPZ	Rata Peaks	14.79	208	P	P	18 12 01.3	-1.7
	2.7nm,0.7s,baz=46,slow=15,SNR=1.1						
RPZ				S	S	18 14 36.7	-5.7
	3.1nm,0.3s,baz=137,slow=23,SNR=10.0						
STKA	Stephens Creek	33.05	258	P	P	18 14 56.8	+1.9
	1.8nm,0.6s,baz=105,slow=13,SNR=3.9						
	1.8nm,0.6s						
ASAR	Alice Springs	41.73	268	P	P	18 16 07.3	+0.2
	0.5nm,0.6s,baz=105,slow=7.2,SNR=15						
ASAR				ScP	ScP	18 21 12.4	0.0
	0.7nm,1.1s,baz=98,slow=3.8,SNR=2.4						
	0.5nm,0.6s						
WRA	Warramunga Arr	42.77	274	P	P	18 16 15.8	+0.4
	1.3nm,0.4s,baz=111,slow=8.0,SNR=22						
	1.3nm,0.4s						
VNDA	Vanda	47.47	185	P	P	18 16 53.9	+2.8
	0.4nm,0.6s,baz=30,slow=23,SNR=3.0						
	0.4nm,0.6s						
FITZ	Fitzroy Crossi	51.01	271	P	P	18 17 18.6	+0.1
	2.8nm,0.9s,baz=193,slow=16,SNR=1.9						
	2.8nm,0.9s						
QSPA	South Pole Qui	59.21	180	P	P	18 18 18.6	+2.6
	1.2nm,0.6s,baz=54,slow=1.5,SNR=17						
	1.2nm,0.6s						
SNAA	Sanae	77.69	179	P	P	18 20 10.7	+1.5
	0.7nm,0.6s,baz=217,slow=4.1,SNR=2.1						
	0.7nm,0.6s						
MJAR	Matsushiro Arr	77.89	326	P	P	18 20 10.7	+0.1
	0.5nm,0.4s,baz=166,slow=5.1,SNR=4.5						
	0.5nm,0.4s						
PETK	Petropavlovsk-	85.97	346	P	P	18 20 51.9	+0.1
	0.5nm,0.5s,baz=134,slow=6.2,SNR=4.9						
	0.5nm,0.5s						
KURBB	Kurchatov Arra	120.45	314	PKP	PKiKP	18 27 00.0	-0.7
	0.9nm,0.3s,baz=120,slow=2.5,SNR=6.5						
BVAR	Borovoye Array	125.81	316	PKP	PKiKP	18 27 10.6	-0.7
	0.6nm,0.5s,baz=116,slow=3.4,SNR=4.2						
ARCES	ARCESS Array B	138.78	347	PKhKP	PKPpre	18 27 28.2	
	3.0nm,1.0s,baz=42,slow=2.2,SNR=6.3						
ARCES				PKP	PKiKP	18 27 36.1	-0.9
	2.6nm,0.9s,baz=64,slow=2.1,SNR=6.3						
KBZ	Khabaz	144.26	303	PKP	PKPdf	18 27 44.7	-0.6
	1.0nm,0.4s,baz=97,slow=8.1,SNR=2.2						
FINES	FINESS Array B	145.13	339	PKP	PKPab	18 27 46.2	-1.0
	4.4nm,0.4s,baz=66,slow=2.0,SNR=95						
NB2	NORSAR Subarra	149.02	350	PKP	PKPbc	18 27 57.1	-0.2
	comp=Z,0.7nm,0.5s,baz=13,slow=2.6						
NOA	NORSAR Array B	149.02	350	PKPbc	PKPbc	18 27 56.9	-0.4
	comp=Z,1.3nm,0.4s,baz=16,slow=4.2,SNR=6.9						
HFS	Hagfors	149.44	347	PKPbc	PKPbc	18 27 57.3	-0.9
	comp=Z,1.8nm,0.5s,baz=21,slow=2.4,SNR=16						
MMAI	Mount Meron Ar	150.33	283	PKPbc	PKiKP	18 28 01.9	-0.1
	comp=Z,0.3nm,0.3s,baz=117,slow=3.2,SNR=6.1						
AKASG	Malin Array Be	150.85	321	PKPbc	PKiKP	18 28 01.5	-0.9
	comp=Z,0.3nm,0.3s,baz=47,slow=3.8,SNR=4.5						
BRTR	Keskin Array B	151.63	297	PKPbc	PKiKP	18 28 03.7	-0.9
	comp=Z,0.9nm,0.6s,baz=102,slow=2.6,SNR=5.2						
BRTR				PKPab	PKPab	18 28 14.4	-0.1
	comp=Z,0.7nm,0.7s,baz=82,slow=3.3,SNR=2.7						
TORD	Torodi Ar. Bea	162.29	184	PKPab	PKPab	18 29 01.4	+0.7
	comp=Z,0.9nm,0.3s,baz=171,slow=4.7,SNR=2.5						

*ATH **29** 18:23:07.9, 40°.47N×20°.63E, h5^{km}±2^{km}, Manual Solution by A.Moschou First location: 2019/06/29 18:24:15, This location: 2019/06/29 19:25:05 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **29** 18:23:09.1, 40°N±2°×2°1E±°, h0^{km}±2^{km}, M2.5/13, MLh2.5/13*
*SKO **29** 18:23:11.2, 40°.46N×20°.85E, h13^{km}, ML2.3*
*BEO **29** 18:23:11.8±0.5, 40°.42N×20°.81E, h0^{km}, ML2.3/4*
ISC 29 18:23:09.3±1.1**, 40°.47N**±0°.02×**20°.72E**±0°.03**, h9^{km}**±9^{km}**, n37, σ0^{s}89**/57**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEST	Nestorio	0.26	103	P	Pg	18 23 14.4	0.0
NEST				S	Sg	18 23 18.4	+0.4
NEST	Nestorio	0.26	103	P	Pg	18 23 14.5	0.0
NEST				S	Sg	18 23 18.2	+0.2
PENT	Pentalofos	0.42	131	P	Pg	18 23 17.3	-0.3
PENT				S	Sg	18 23 23.7	+0.6
PENT	Pentalofos	0.42	131	P	Pg	18 23 17.3	-0.3
PENT				S	Sg	18 23 23.3	+0.2
FNA	Florina	0.59	58	P	Pg	18 23 20.5	-0.2
FNA				S	Sb	18 23 29.4	-0.9
FNA	Florina	0.59	58	*i* Pg	Pg	18 23 20.6	-0.1
FNA				*i* Sg	Sb	18 23 29.4	-0.9
FNA	Florina	0.59	58	*e*Pg	Pg	18 23 20.5	-0.2
FNA				*e*Sg	Sb	18 23 30.5	+0.2
FNA	Florina	0.59	58	P	Pg	18 23 20.6	-0.2
FNA				S	Sb	18 23 29.2	-1.1
OHR	Ohrid	0.64	5	*i* Pg	Pb	18 23 23.1	+0.4
OHR				*i* Sg	Sb	18 23 33.1	+1.3
OHR				*e*Lg	Lg	18 23 33.9	
	comp=E,207nm,0.6s						
OHR				*e*Lg	Lg	18 23 36.0	
	comp=N,80nm,0.3s						
KPRO	Kipourio	0.71	136	P	Pg	18 23 22.3	-0.7
KPRO				S	Sb	18 23 33.7	-0.2
KPRO	Kipourio	0.71	136	P	Pg	18 23 22.4	-0.7
KPRO				S	Sg	18 23 32.9	+0.6
KZN	Kozani	0.82	101	P	Pg	18 23 25.0	-0.1
KZN				S	Sb	18 23 37.6	+0.6
KZN	Kozani	0.82	101	P	Pg	18 23 25.1	0.0
KZN				S	Sb	18 23 37.5	+0.6
IGT	Igoumenitsa	0.98	198	P	Pg	18 23 28.7	+0.5
IGT	Igoumenitsa	0.98	198	*i* Pg	Pn	18 23 29.4	+0.1
IGT				*i* Sg	Sn	18 23 44.7	+1.4
IGT	Igoumenitsa	0.98	198	*e*Pg	Pn	18 23 29.3	0.0
KEK	Kerkira	1.04	223	P	Pb	18 23 26.9	-2.5
TETR	Tetrakomo, Epi	1.20	159	P	Pn	18 23 32.5	+0.1
THL	Klokotos Trika	1.34	132	P	Pn	18 23 32.8	-1.4
THL				S	Sg	18 23 54.3	+1.8
THL	Klokotos Trika	1.34	132	P	Pn	18 23 33.8	-0.4
THL				S	Sg	18 23 53.4	+0.8
TYRN	Tyrnavos	1.39	123	P	Pn	18 23 34.6	-0.2
VAY	Valandovo	1.64	58	*i* Pn	Pg	18 23 40.4	-0.3
VAY				*i* Sn	Sg	18 24 01.5	-0.5
VAY				*e*Lg	Lg	18 24 04.3	
	comp=N,39nm,0.6s						
VAY				*e*Lg	Lg	18 24 06.1	
	comp=E,28nm,0.7s						
LKD2	Lefkada island	1.68	182	P	Pb	18 23 41.1	+0.7
KNT	Kendrikon	1.79	67	*i* Pn	Pg	18 23 43.5	-0.1
KNT				*i* Sn	Sg	18 24 07.9	+1.0
HORT	Hortiatis	1.82	85	P	Pn	18 23 40.8	0.0
ULC	Ulcinj	1.86	324	*i* Pn	Pg	18 23 45.0	0.0
AGG	Agios Georgios	1.91	139	P	Pb	18 23 43.5	-0.7
DRME	Dracevica, Mon	2.07	326	*e*Pn	Pb	18 23 47.7	+0.7
PLG	Polygyros	2.08	92	P	Pn	18 23 45.6	+1.2
SRS	Serrai	2.27	73	*i* Pn	Pn	18 23 47.3	+0.3
SRS				*i* Sn	Sn	18 24 14.5	-0.7
KKB	Krupnik	2.28	52	*i* Pn	Pg	18 23 52.2	-0.7

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSS	Bosilegrad	2.42	33	ePn	Pb	18 23 53.1	+0.1
MMB	Musomishta	2.53	64	i Pn	Pg	18 23 56.7	-1.1
MMB				i Sn	Sn	18 24 22.6	+1.0
KOME	Kolasin	2.54	340	ePn	Pb	18 23 55.5	+0.3
SELS	Selova	2.76	6	ePn	Pb	18 23 58.6	-0.3
SJES	Sjenica	2.84	349	ePn	Pb	18 24 00.2	-0.1
BBLS	Lazi&#263i	3.53	344	ePn	Pb	18 24 08.5	-3.5

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*IDC **29** 18:35:55.2±4.2, 2°.37N×128°.62E, h222km±42km, mb3.3/12, mbtmp3.9/12, Error ellipse: s-maj=33.5km s-min=10.8km az=74.0*

*DJA **29** 18:35:57.8±0.6, 2°N±6°×12°8E±°, h216km±5km, M3.8/10, MLv3.8/10*

ISC 29 18:35:57.8±0.7**, 2°.28N**±0°.09×**128°.29E**±0°.09**, h250km, n17, σ1s.57**/19**, mb3.6**/11**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.76	212	P	Pn	18 36 37.7	-0.5
SGSI	Sangihe	3.09	297	P	Pn	18 36 50.5	-0.8
SGSI				S	S	18 37 30.3	-3.3
SWI	Sorong	4.31	136	P	Pn	18 37 03.2	-2.1
KMSI	Cibinong	4.63	249	P	Pn	18 37 06.4	-2.7
SANI	Sanana	4.88	208	P	Pn	18 37 11.8	-0.4
FITZ	Fitzroy Crossi	20.42	187	P	P	18 40 16.8	+0.3
	1.7nm,0.6s,baz=35,slow=11,SNR=7.4						
	1.7nm,0.6s						
WRA	Warramunga Arr	22.87	165	P	P	18 40 39.8	-0.1
	1.5nm,0.4s,baz=344,slow=10,SNR=23						
	1.5nm,0.4s						
ASAR	Alice Springs	26.36	168	P	P	18 41 11.7	+0.3
	1.0nm,0.5s,baz=353,slow=7.6,SNR=66						
ASAR				PcP	PcP	18 44 31.1	+0.7
	0.3nm,0.4s,baz=344,slow=2.6,SNR=11						
	1.0nm,0.5s						
CMAR	Chiang Mai Arr	32.95	301	P	P	18 42 12.0	+2.6
	0.6nm,0.6s,baz=111,slow=8.5,SNR=1.9						
	0.6nm,0.6s						
KSRS	Korea Array	35.01	359	P	P	18 42 26.4	-0.4
	0.7nm,0.6s,baz=175,slow=9.5,SNR=4.9						
	0.7nm,0.6s						
MJAR	Matsushiro Arr	35.30	14	P	P	18 42 27.4	-2.0
	1.1nm,0.7s,baz=194,slow=10,SNR=3.2						
	1.1nm,0.7s						
STKA	Stephens Creek	36.24	161	P	P	18 42 36.4	-1.0
	1.3nm,0.4s,baz=352,slow=7.1,SNR=4.1						
	1.3nm,0.4s						
MKAR	Makanchi Array	59.63	325	P	P	18 45 36.7	+0.9
	0.7nm,0.4s,baz=117,slow=8.2,SNR=15						
	0.7nm,0.4s						
KURBB	Kurchatov Arra	63.79	327	P	P	18 46 03.9	+0.5
	1.8nm,0.6s,baz=127,slow=6.0,SNR=27						
	1.8nm,0.6s						
BVAR	Borovoye Array	69.38	327	P	P	18 46 39.5	+0.9
	0.4nm,0.6s,baz=107,slow=7.7,SNR=2.6						
	0.4nm,0.6s						
VNDA	Vanda	81.80	173	P	P	18 47 49.3	+0.9
	0.6nm,0.5s,baz=316,slow=5.1,SNR=4.3						
	0.6nm,0.5s						
QSPA	South Pole Qui	92.19	180	P	P	18 48 39.7	+0.6
	0.8nm,0.9s,baz=147,slow=1.4,SNR=8.1						
	0.8nm,0.9s						

IDC 29 18:41:39.6±7.9**, 30°.41S×177°.92W, h0km, mb3.3**/2**, mbtmp3.3**/2**, Error ellipse: s-maj=328.8km s-min=60.8km az=155.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.17	267	P	P	18 49 42.0	-0.4
	0.1nm,0.3s,baz=102,slow=7.3,SNR=5.6						
	0.1nm,0.3s						
WRA	Warramunga Arr	44.16	272	P	P	18 49 50.5	+0.1
	0.2nm,0.4s,baz=111,slow=8.1,SNR=4.9						
	0.2nm,0.4s						
FINES	FINESS Array B	145.18	340	PKPbc	PKPbc	19 01 17.1	-0.8
	0.6nm,0.6s,baz=35,slow=3.4,SNR=4.6						

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*UCR **29** 18:42:54.6±0.9, 8°.34N×82°.82W, h28km±2km, MW4.0, Fault plane solution: NP1:φs324.69000°, δ74.24000°, λ37.25000°.*

*UPA **29** 18:42:55.6±1.2, 8°.43N×82°.80W, h19km±2km, MW3.9, Fault plane solution: NP1:φs128.00000°, δ72.00000°, λ56.00000°.*

*CATAC **29** 18:42:55.2±0.7, 8°N±4°×8°3W±°, h6km±3km, M4.2/12, MLv4.2/12, Error ellipse: s-maj=9.0km s-min=8.0km az=29.9, confirmed*

ISC 29 18:42:55.1±0.9**, 8°.40N**±0°.02×**82°.82W**±0°.02**, h19**km±2km**, n100, σ1s.05**/140**, 24C-18D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.03	85	⇑iP	Pg	18 42 59.9	+1.5
LESP3				eS	Sg	18 43 01.2	+0.5
LPPC	Paso Canoas	0.13	351	⇑eP	Pg	18 43 00.7	+1.5
LPPC				eS	Sg	18 43 05.6	+3.6
CDITO	Canoas	0.18	342	P	Pg	18 43 01.1	+1.3
CDITO	Canoas	0.18	342	S	Sg	18 43 06.4	+3.4
NELY	Ciudad Neily	0.28	333	⇑eP	Pg	18 43 02.2	+0.9
NELY				eS	Sn	18 43 08.4	-1.4
LIMO3	Limones	0.30	189	⇓iP	Pg	18 43 02.0	+0.2
LIMO3				eS	Sb	18 43 08.8	+2.4
LIMO3	Limones	0.30	189	⇓iP	Pg	18 43 01.9	+0.2
LIMO3				i S	Sb	18 43 08.5	+2.0
LMNES	Limones	0.30	188	⇓eP	Pg	18 43 01.9	+0.2
DVD	David	0.36	85	⇓eP	Pb	18 43 03.3	+0.3
DVD				eS	Sb	18 43 09.4	+1.0
DVD	David	0.36	85	⇓iP	Pb	18 43 03.2	+0.2
DVD				eS	Sb	18 43 09.4	+1.0
CSTBL	De las Acacias	0.37	89	⇓eP	Pb	18 43 03.3	+0.1
MLIR3	Monte Lirio, C	0.39	359	⇑iP	Pb	18 43 04.4	+0.9
MLIR3				eS	Sb	18 43 09.8	+0.6
PEDE3	Pedregal, Chir	0.39	93	⇓iP	Pg	18 43 03.5	+0.2
PEDE3				i S	Sb	18 43 10.2	+0.9
PEDE3	Pedregal, Chir	0.39	93	⇓iP	Pg	18 43 03.1	-0.2
PEDE3				i S	Sb	18 43 10.2	+0.9
CLLRA	Cordillera,	0.39	31	⇑eP	Pb	18 43 04.1	+0.5
LOCO3	Loma Colorada,	0.40	89	⇓iP	Pb	18 43 03.7	+0.1
LOCO3				i S	Sb	18 43 09.6	+0.3
LOCO3	Loma Colorada,	0.40	89	eP	Pg	18 43 03.1	-0.3
LOCO3				i S	Sb	18 43 09.6	+0.3
FITO	Golfito	0.40	303	eP	Pg	18 43 02.8	-0.6
FITO				eS	Sg	18 43 09.7	+0.7
BRU2	Volcan	0.41	18	⇑eP	Pb	18 43 04.4	+0.5
BRU2				eS	Sn	18 43 11.8	-1.4
BRU2	Volcan	0.41	18	S	Sn	18 43 12.0	-1.3
BRU2	Volcan	0.41	18	P	Pb	18 43 04.5	+0.6
BRU2	Volcan	0.41	18	⇑iP	Pb	18 43 04.4	+0.5
BRU2				i S	Sb	18 43 10.7	+0.9
BRU2	Volcan	0.41	18	⇑iP	Pb	18 43 04.2	+0.3
BRU2				i S	Sb	18 43 10.7	+0.9
RSRNO	Rio Sereno	0.41	354	eP	Pb	18 43 04.9	+1.0
TBS2		0.42	22	⇑eP	Pn	18 43 05.4	-0.9
EDAD	Golfito	0.42	306	⇓eP	Pg	18 43 03.4	-0.5
SCLRA	Santa Clara, W	0.43	5	⇑eP	Pb	18 43 04.9	+0.7
PTAR3	Potrerillos Ar	0.43	48	⇑eP	Pb	18 43 04.7	+0.5
PTAR3				eS	Sb	18 43 11.1	+0.7
PTAR3	Potrerillos Ar	0.43	48	eP	Pg	18 43 04.0	0.0
PTAR3				eS	Sb	18 43 11.1	+0.7
VITO	San Vito	0.44	340	⇑eP	Pb	18 43 05.1	+0.7
BC3P	Paso Ancho	0.46	27	⇑iP	Pb	18 43 05.0	+0.2
BC3P				eS	Sb	18 43 12.5	+1.2
BC3P	Paso Ancho	0.46	27	i P	Pb	18 43 04.8	+0.1
BC3P				eS	Sg	18 43 10.6	-0.4
CHIR3	Chiriqui UPA,	0.48	91	⇓eP	Pg	18 43 04.7	-0.2
CHIR3				eS	Sb	18 43 12.4	+0.7
CHIR3	Chiriqui UPA,	0.48	91	eP	Pg	18 43 04.1	-0.8
CHIR3				eS	Sb	18 43 12.4	+0.7
BQTLY	Boquete Panama	0.50	45	⇑eP	Pb	18 43 05.5	+0.2
BQSF3	Alto Boquete,	0.51	48	⇑iP	Pb	18 43 05.5	+0.1
BQSF3				eS	Sb	18 43 13.0	+0.5
BQSF3	Alto Boquete,	0.51	48	eP	Pg	18 43 04.9	-0.5
BQSF3				eS	Sb	18 43 13.3	+0.8
GUAL3	Gualaca, Chiri	0.53	76	⇓iP	Pg	18 43 05.6	-0.2
GUAL3				eS	Sb	18 43 13.4	+0.5
GUAL3	Gualaca, Chiri	0.53	76	eP	Pg	18 43 05.4	-0.3
GUAL3				eS	Sb	18 43 13.4	+0.5
PSOM3	Paja de Sombre	0.56	60	⇑iP	Pb	18 43 06.1	-0.2
PSOM3				eS	Sb	18 43 14.3	+0.3
PSOM3	Paja de Sombre	0.56	60	⇑iP	Pb	18 43 05.6	-0.7
PSOM3				eS	Sb	18 43 14.3	+0.3
EDP2	Potrero Grande	0.70	330	eP	Pb	18 43 08.8	0.0
EDP2				eS	Sn	18 43 20.2	-0.2
PBNVO	Pueblo Nuevo,	0.79	52	⇑eP	Pb	18 43 09.2	-0.9
PANP	Palmar Norte	0.84	311	eP	Pb	18 43 10.2	-0.9
BURE	Buenos Aires	0.92	326	eP	Pb	18 43 11.9	-0.6
DRK0	Durika	0.95	334	⇑eP	Pb	18 43 12.1	-1.0
DRK0	Durika	0.95	334	S	Sb	18 43 25.5	+0.1
DRK0	Durika	0.95	334	P	Pb	18 43 12.3	-0.8
DRK0	Durika	0.95	334	⇑eP	Pb	18 43 12.2	-1.0
DRK0				i S	Sg	18 43 26.1	-0.3
DRK0	Durika	0.95	334	eP	Pb	18 43 12.0	-1.1
DRK0				i S	Sg	18 43 26.1	-0.3
RMDIO	Remedios, Chir	0.99	100	eP	Pb	18 43 12.2	-1.5
EDPE	Pejibaye, P	1.06	315	eP	Pb	18 43 13.6	-1.2
OCHAL	Ojochal	1.07	310	S	Sb	18 43 28.5	-0.1
OCHAL	Ojochal	1.07	310	P	Pb	18 43 13.8	-1.2
KKNTU	Kakintº	1.09	66	eP	Pb	18 43 13.7	-1.7
ISBTO	Bastimentos Is	1.11	33	eP	Pn	18 43 16.1	+0.4
PDCAN	Manzana , Fuen	1.11	96	eP	Pn	18 43 13.4	-2.4
SAJE	San Jernim	1.16	324	eP	Pn	18 43 14.9	-1.5
BRIBI	Bribri	1.21	360	⇑eP	Pb	18 43 17.7	+0.3
MESA3	La Mesa, Verag	1.64	99	⇑iP	Pn	18 43 21.8	-1.1
MESA3				eS	Sn	18 43 42.0	-1.5
MESA3	La Mesa, Verag	1.64	99	eP	Pn	18 43 20.7	-2.1
MESA3				eS	Sn	18 43 42.0	-1.5
PIEC	Cerro El Cedra	1.65	317	eP	Pn	18 43 22.4	-1.0
LLNJ	Naranjito	1.66	310	eP	Pn	18 43 22.5	-0.6
GMAL	Guarumal, Vera	1.69	112	eP	Pn	18 43 22.0	-1.6
GMAL	Guarumal, Vera	1.69	112	⇑eP	Pn	18 43 23.6	0.0
GMAL				eS	Sn	18 43 45.2	+0.4
GMAL	Guarumal, Vera	1.69	112	eP	Pn	18 43 22.9	-0.7
GMAL				eS	Sn	18 43 45.2	+0.4
RSUS3	Rio de Jesus,	1.69	104	eP	Pn	18 43 24.4	+0.8
RSUS3				eS	Sn	18 43 43.6	-1.2
SAFE3	Santa Fe, Vera	1.73	86	eS	Sb	18 43 47.0	-0.5
LCR2	La Lucha 2	1.77	319	⇓eP	Pn	18 43 24.0	-1.0
LCR2	La Lucha 2	1.77	319	P	Pn	18 43 24.2	-0.8
PISJ	San Jernim	1.77	314	eP	Pn	18 43 25.0	+0.1
RESJ	San Isidro (Tu	1.81	333	eP	Pn	18 43 26.0	+0.7
ABRB	Las Abras (San	1.82	331	eP	Pn	18 43 26.0	+0.3
CVTV	Tajo	1.84	330	⇓eP	Pn	18 43 26.1	+0.2
CVTQ	Turrialba Volc	1.85	330	eP	Pn	18 43 26.2	+0.2
PAR1A	Puntarenas Pro	1.85	310	⇓eP	Pn	18 43 26.0	+0.2
STIA3	Santiago, Vera	1.85	99	eS	Sn	18 43 47.6	-1.1
VTR0	Volcan Turrial	1.85	330	⇓eP	Pn	18 43 26.3	0.0
BELE	Belen	2.07	319	eP	Pn	18 43 29.2	+0.3
TCS1	Tacares	2.19	318	P	Pn	18 43 32.1	+1.5
CACAO	El Cacao, Vera	2.21	118	eP	Pn	18 43 30.7	0.0
TRT2	Tortugero	2.32	337	S	Sb	18 44 03.3	-1.4
TRT2	Tortugero	2.32	337	P	Pn	18 43 33.2	+0.8
CBL1	Cabuya	2.54	298	eP	Pn	18 43 33.8	-1.4
AZU	Azuero	2.59	103	eP	Pn	18 43 36.5	+0.6
AZU	Azuero	2.59	103	⇑eP	Pn	18 43 36.7	+0.7
AZU				eS	Sn	18 44 07.2	+0.2
AZU	Azuero	2.59	103	eP	Pn	18 43 36.7	+0.7
AZU				eS	Sn	18 44 07.2	+0.2
SOCE	Pocosol	2.65	318	eP	Pn	18 43 37.8	+0.9
SOCE	Pocosol	2.65	318	S	Sb	18 44 12.1	-2.1
SOCE	Pocosol	2.65	318	P	Pn	18 43 38.3	+1.4
COVE	Coope Vega, Sa	2.78	326	P	Pn	18 43 40.7	+2.0
JTS	Las Juntas de	2.82	312	⇓eP	Pn	18 43 38.6	-0.6
JTS	Las Juntas de	2.82	312	⇓eP	Pn	18 43 38.9	-0.3
JTS				eS	Sn	18 44 12.9	+0.1
JTS	Las Juntas de	2.82	312	eP	Pn	18 43 39.7	+0.5
JTS				eS	Sn	18 44 12.9	+0.1
INDI	Punta indio, G	3.02	299	S	Sn	18 44 13.9	-3.7
INDI	Punta indio, G	3.02	299	P	Pn	18 43 41.6	-0.3
CMARA	Lajas Hojancha	3.03	302	S	Sn	18 44 17.1	-0.9
CMARA	Lajas Hojancha	3.03	302	P	Pn	18 43 41.8	-0.3
LAPC	Finca la Perla	3.49	313	eP	Pn	18 43 48.8	+0.4
CARN	Rivas	3.84	316	P	Pn	18 43 55.6	+2.4

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*NOU **29** 18:45:14.4, 16°.00S×177°.58W, h141km, mb4.5/14, Fiji Islands Region*

*IDC **29** 18:45:59.2±2.7, 17°.71S×178°.70W, h518km±29km, mb3.4/15, mbtmp4.2/16, Error ellipse: s-maj=18.8km s-min=13.7km az=86.0*

*NEIC **29** 18:46:00.5±1.5, 17°.75S±0°.09×178°.6W±0°.1, h541km±6km, mb4.2/35, Error ellipse: s-maj=19.1km s-min=12.1km az=72.0*

ISC 29 18:46:01.7±0.5**, 17°.75S**±0°.09×**178°.8W**±0°.1**, h547km, n86, σ0s.92**/85**, mb4.1**/30**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.05	270	P	P	18 47 18.1	+1.2
MSVF	Nonsavu	3.05	270	P	P	18 47 18.6	+1.7
	9.1nm,0.8s,baz=288,slow=22,SNR=5.2						
MARNC	Mare, Loyalty	13.00	251	P	P	18 48 34.3	-16
PINNC	Pines Island,	13.84	247	P	P	18 48 59.1	-0.1
DZM	Mont Dzumac	14.58	250	P	P	18 49 06.6	-0.4
DZM	Mont Dzumac	14.58	250	P	P	18 49 06.1	-0.9
	10nm,0.8s,baz=293,slow=23,SNR=7.4						
KOUNC	Koumac, New Ca	16.27	257	P	P	18 49 12.7	-11
OUZ	Omahuta	18.69	200	P	P	18 49 44.1	-1.8
MXZ	Matakaoa Point	19.91	187	P	P	18 49 56.8	-0.2
URZ	Urewera	20.76	189	P	P	18 50 02.6	-2.0
	2.6nm,0.3s,baz=267,slow=3.6,SNR=7.6						
	2.6nm,0.3s						
URZ	Urewera	20.76	189	P	P	18 50 03.9	-0.7
HNR	Honiara	22.28	289	P	P	18 50 05.4	-13
BFZ	Birch Farm	23.26	190	P	P	18 50 27.3	+0.3
QRZ	Quartz Range	24.20	196	P	P	18 50 34.1	-1.3
QRZ	Quartz Range	24.20	196	P	P	18 50 36.0	+0.6
KHZ	Kahutara	25.46	193	P	P	18 50 43.7	-2.7
KHZ				IAmb	IAmb	18 50 46.7	
	comp=Z,9.1nm,1.0s						
KHZ	Kahutara	25.46	193	P	P	18 50 45.9	-0.5
FOZ	Fox Glacier	27.47	198	P	P	18 51 02.5	-1.6
JCZ	Jackson Bay	28.27	199	P	P	18 51 10.9	-0.4
WKZ	Wanaka	28.88	198	P	P	18 51 14.9	-1.6
EIDS	Eidsvold	29.02	250	P	P	18 51 18.1	+0.1
EIDS				IAmb	IAmb	18 51 57.6	
	comp=Z,12nm,1.2s						
ARMA	Armidale	29.75	239	P	P	18 51 25.0	+0.7
WHZ	Wether Hill Ro	30.17	199	P	P	18 51 27.2	-0.4
CTAO	Charters Tower	33.16	260	P	P	18 51 53.2	-0.3
CNB	Canberra Magne	33.27	232	P	P	18 51 55.5	+1.2
CAN	Canberra	33.55	232	P	P	18 51 57.4	+0.8
CMSA	Cobar Meteorol	34.95	240	P	P	18 52 08.9	+0.6
QLP	Quilpie	35.29	249	P	P	18 52 10.5	-0.7
TOO	Toolangi	37.02	230	P	P	18 52 26.4	+1.0
TOO				IAmb	IAmb	18 52 27.1	
	comp=Z,8.2nm,0.8s						
STKA	Stephens Creek	38.43	241	P	P	18 52 37.6	+0.7
STKA	Stephens Creek	38.43	241	P	P	18 52 37.7	+0.9
	comp=Z,4.1nm,0.5s,baz=88,slow=9.4,SNR=14						
	comp=Z,4.1nm,0.5s						
STKA	Stephens Creek	38.43	241	P	P	18 52 37.8	+0.9
BBOO	Buckleboo	43.20	241	P	P	18 53 14.9	+0.1
WB0	Warramunga Arr	44.31	260	P	P	18 53 22.9	-0.7
WRA	Warramunga Arr	44.35	259	P	P	18 53 22.7	-1.2
WRA				PcP	PcP	18 54 55.6	-0.5
WRA	Warramunga Arr	44.35	259	P	P	18 53 23.1	-0.8
	comp=Z,1.2nm,0.5s,baz=95,slow=7.0,SNR=28						
	comp=Z,1.2nm,0.5s						
AS31	Alice Springs	44.52	254		P	18 53 25.0	-0.3
AS31				IAmb	IAmb	18 53 25.8	
	comp=Z,5.7nm,0.6s						
ASAR	Alice Springs	44.53	254		P	18 53 24.8	-0.5
ASAR	Alice Springs	44.53	254	P	P	18 53 25.2	-0.1
	comp=Z,18nm,0.6s,baz=89,slow=7.9,SNR=546						
ASAR				ScP	ScP	18 57 59.5	+2.6
	comp=Z,0.2nm,0.7s,baz=86,slow=4.0,SNR=1.6						
	comp=Z,18nm,0.6s						
FORT	Forrest	49.79	244	P	P	18 54 04.2	-0.5
FORT				IAmb	IAmb	18 54 12.6	
	comp=Z,7.1nm,0.9s						
KNRA	Kununurra	50.19	264	P	P	18 54 07.4	-0.4
KNRA				IAmb	IAmb	18 54 17.8	
	comp=Z,14nm,1.3s						
FITZ	Fitzroy Crossi	52.74	260	P	P	18 54 26.4	+0.2
PSA00	Pilbara Seismi	57.64	255	P	P	18 54 59.8	-0.6
PSA00				IAmb	IAmb	18 55 18.2	
	comp=Z,34nm,1.4s						
VNDA	Vanda	60.58	185	P	P	18 55 19.4	+0.4
VNDA	Vanda	60.58	185	P	P	18 55 20.3	+1.3
	comp=Z,0.6nm,0.6s,baz=360,slow=6.5,SNR=3.6						
	comp=Z,0.6nm,0.6s						
CASY	Casey	66.15	205	P	P	18 55 54.0	-0.8
CASY				IAmb	IAmb	18 55 56.4	
	comp=Z,3.9nm,0.8s						
MJAR	Matsushiro Arr	67.59	324	P	P	18 56 03.7	-0.5
	comp=Z,1.9nm,0.6s,baz=158,slow=5.7,SNR=11						
	comp=Z,1.9nm,0.6s						
MAJO	Matsushiro	67.59	324	P	P	18 56 03.9	-0.3
MAJO				IAmb	IAmb	18 56 18.2	
	comp=Z,6.5nm,1.2s						
MJB9	Matsu-Tunnel	67.59	324	P	P	18 56 04.8	+0.6
MJB9				IAmb	IAmb	18 56 19.2	
	comp=Z,6.4nm,1.2s						
JKA	Kamikawa-asahi	70.98	332	P	P	18 56 25.6	+1.3
ASAJ	Asahikawa	70.98	332	P	P	18 56 24.6	+0.3
	comp=Z,6.5nm,1.1s,baz=187,slow=5.3,SNR=5.5						
	comp=Z,6.5nm,1.1s						
QSPA	South Pole Qui	72.31	180	P	P	18 56 32.4	+0.5
QSPA	South Pole Qui	72.31	180	P	P	18 56 32.2	+0.3
	comp=Z,4.3nm,0.8s,baz=304,slow=1.0,SNR=31						
	comp=Z,4.3nm,0.8s						
PETK	Petropavlovsk-	73.44	345	P	P	18 56 37.9	-0.4
PETK	Petropavlovsk-	73.44	345	P	P	18 56 38.1	-0.2
	comp=Z,1.7nm,0.6s,baz=133,slow=4.7,SNR=2.8						
	comp=Z,1.7nm,0.6s						
KSRS	Korea Array	74.37	318	P	P	18 56 44.0	+0.2
	comp=Z,0.5nm,0.6s,baz=124,slow=6.6,SNR=2.8						
	comp=Z,0.5nm,0.6s						
S12K	Black Hills	74.51	10	P	P	18 56 42.8	-1.5
S12K				IAmb	IAmb	18 57 23.4	
	comp=Z,13nm,1.0s						
PLK4	Peulik 4	77.37	12	P	P	18 56 59.5	-0.7
J05D	Fort Rock, OR	80.39	39	P	P	18 57 16.5	-0.1
SUA	Susitna One	82.05	13	P	P	18 57 23.8	-0.8
SUA				IAmb	IAmb	18 57 25.3	
	comp=Z,3.9nm,0.8s						
GHO	Glory Hole Cre	82.73	14	P	P	18 57 27.5	-0.5
GHO				IAmb	IAmb	18 57 28.1	
	comp=Z,5.7nm,0.7s						
SCM	Sheep Creek Mo	83.15	14	P	P	18 57 29.3	-0.9
SCM				IAmb	IAmb	18 57 30.6	
	comp=Z,4.8nm,0.7s						
CAST	Castle Rocks	83.53	12		P	18 57 30.0	-2.0
N25K	Chitina, Valde	83.63	16	P	P	18 57 32.0	-0.6
N25K				IAmb	IAmb	18 57 32.9	
	comp=Z,4.1nm,0.7s						
MAW	Mawson	83.90	200	P	P	18 57 34.2	+0.4
	comp=Z,1.3nm,0.7s,baz=302,slow=21,SNR=2.2						
	comp=Z,1.3nm,0.7s						
RND	Reindeer	84.18	13		P	18 57 34.5	-0.7
RND				IAmb	IAmb	18 57 35.3	
	comp=Z,4.7nm,0.8s						
ILAR	Eielson Array	85.80	13	P	P	18 57 41.8	-1.2
	comp=Z,0.6nm,0.5s,baz=225,slow=5.2,SNR=10						
	comp=Z,0.6nm,0.5s						
TXAR	Lajitas Array	86.18	58	P	P	18 57 46.8	+1.0
	comp=Z,0.8nm,0.8s,baz=202,slow=5.8,SNR=10						
	comp=Z,0.8nm,0.8s						
YHL	Hebgen Lake	87.38	41		pwP	18 59 52.1	-0.6
PDAR	Pinedale Array	87.45	44	P	P	18 57 51.5	-0.1
	comp=Z,0.5nm,0.6s,baz=169,slow=3.6,SNR=5.2						
	comp=Z,0.5nm,0.6s						
SNAA	Sanae	90.77	179	P	P	18 58 05.8	-0.5
	comp=Z,0.6nm,0.5s,baz=176,slow=20,SNR=6.1						
	comp=Z,0.6nm,0.5s						
BRTR	Keskin Array B	144.44	315	PKP	PKPdf	19 04 36.4	+0.1
	comp=Z,0.8nm,0.5s,baz=80,slow=1.7,SNR=5.8						
CLL	Collm	145.24	347	i PKPbc	PKPdf	19 04 37.1	0.0
CLL				i PKiKP	PKiKP	19 04 40.7	-0.6
MMAI	Mount Meron Ar	145.79	303	PKPbc	PKPdf	19 04 38.2	-0.5
	comp=Z,1.4nm,0.7s,baz=58,slow=3.6,SNR=2.3						
GERES	GERESS Array B	147.37	345	PKPbc	PKPbc	19 04 44.3	0.0
	comp=Z,1.2nm,0.5s,baz=25,slow=3.2,SNR=13						
CONA	Conrad Observa	147.61	342	i PKP	PKPbc	19 04 45.3	+0.4
	comp=Z,1.2nm,0.5s						
RONA	Rosalia, Austr	147.68	341	ePKiKP	PKPbc	19 04 45.0	0.0
	comp=Z,1.6nm,0.6s						
ARSA	Arzberg	148.32	341	ePKP	PKPdf	19 04 42.8	+0.4
	comp=Z,0.8nm,0.3s						
BIOA	Bad Ischl, Aus	148.45	344	i PKiKP	PKPbc	19 04 45.9	-1.0
	comp=Z,4.0nm,1.1s						
LESA	Schwarzleotal	148.95	345	i PKP	PKPdf	19 04 45.4	+1.9
	comp=Z,0.7nm,0.2s						
RETA	Reutte	149.33	347	i PKiKP	PKPbc	19 04 48.9	-0.2
	comp=Z,0.6nm,0.4s						
WTTA	Wattenberg	149.35	346	ePKiKP	PKPbc	19 04 49.1	-0.3
	comp=Z,2.0nm,0.4s						
SQTA	Sankt Quirin	149.48	347	i PKiKP	PKPbc	19 04 49.3	-0.3
	comp=Z,1.7nm,0.4s						
ABTA	Abfaltersbach	149.62	345	ePKiKP	PKPbc	19 04 49.2	-0.7
	comp=Z,1.7nm,0.6s						
DAVA	Damuels	149.70	348	i PKiKP	PKPbc	19 04 49.6	-0.5
	comp=Z,2.3nm,0.9s						
FETA	Feichten	149.78	347	ePKiKP	PKiKP	19 04 50.8	-0.2
	comp=Z,3.0nm,1.0s						

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*NEIC **29** 18:55:31.4±1.3, 21°.64N±0°.10×143°.0E±0°.2, h293km±7km, mb3.9/15, Error ellipse: s-maj=24.6km s-min=12.3km az=109.0*

*IDC **29** 18:55:31.1±2.4, 21°.69N×143°.12E, h300km±23km, mb3.2/8, mbtmp3.8/10, Error ellipse: s-maj=34.1km s-min=13.3km az=82.0*

ISC 29 18:55:32.5±0.9**, 21°.74N**±0°.09×**143°.0E**±0°.2**, h311km, n28, σ1s.20**/30**, mb3.8**/15**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	5.38	352	P	Pn	18 56 54.0	-0.8
	24nm,0.4s,baz=180,slow=0.0						
JCJ				S	S	18 57 57.8	-3.3
	baz=180,slow=0.0						
MJAR	Matsushiro Arr	15.33	345	P	P	18 58 52.6	+0.1
	0.7nm,0.6s,baz=161,slow=12,SNR=5.2						
MAJO	Matsushiro	15.33	345	P	P	18 58 52.3	-0.2
MAJO				IAmb	IAmb	18 59 09.3	
	comp=Z,14nm,1.5s						
MJB9	Matsu-Tunnel	15.33	345	P	P	18 58 53.0	+0.5
MJB9				IAmb	IAmb	18 59 10.3	
	comp=Z,13nm,1.5s						
JMM	Marumori	16.18	354	P	Pn	18 59 06.1	+1.9
KNRA	Kununurra	39.73	202	P	P	19 02 34.6	-1.1
WB0	Warramunga Arr	42.11	192	P	P	19 02 53.9	-1.1
WB0				IAmb	IAmb	19 03 11.4	
	comp=Z,8.7nm,1.3s						
WR8	Warramunga Arr	42.27	192	P	P	19 02 55.1	-1.3
WR8				IAmb	IAmb	19 03 03.0	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	42.29	192	P	P	19 02 55.6	-0.9
	comp=Z,1.0nm,0.6s,baz=13,slow=8.1,SNR=16						
	comp=Z,1.0nm,0.6s						
FITZ	Fitzroy Crossi	43.09	205	P	P	19 03 01.8	-1.1
KULM	Kulim	44.12	255	P	P	19 03 12.0	+0.8
AS31	Alice Springs	45.99	192	P	P	19 03 24.0	-1.7
ASAR	Alice Springs	46.00	192	P	P	19 03 24.6	-1.1
	comp=Z,0.3nm,0.7s,baz=13,slow=6.5,SNR=7.9						
	comp=Z,0.3nm,0.7s						
EVN	Everest	51.00	289	P	P	19 04 04.8	+0.5
EVN				IAmb	IAmb	19 04 38.0	
	comp=Z,10nm,1.5s						
MKAR	Makanchi Array	54.55	313	P	P	19 04 30.0	+0.9
MKAR	Makanchi Array	54.55	313	P	P	19 04 29.9	+0.8
	comp=Z,0.1nm,0.3s,baz=87,slow=9.0,SNR=3.0						
MKAR				PcP	PcP	19 05 27.8	-0.3
	comp=Z,0.2nm,0.4s,baz=94,slow=3.1,SNR=3.1						
	comp=Z,0.1nm,0.3s						
KURBB	Kurchatov Arra	57.38	317	P	P	19 04 49.3	+0.4
	comp=Z,0.8nm,0.6s,baz=95,slow=7.6,SNR=13						
	comp=Z,0.8nm,0.6s						
J20K	Nowinta River	58.87	27	P	P	19 05 00.6	+1.6
BPAW	Bear Paw Mtn.	60.20	28	P	P	19 05 08.8	+0.7
BPAW				IAmb	IAmb	19 05 51.1	
	comp=Z,4.8nm,1.5s						
ILAR	Eielson Array	62.07	27	P	P	19 05 19.5	-0.9
	comp=Z,0.2nm,0.6s,baz=283,slow=6.4,SNR=2.6						
	comp=Z,0.2nm,0.6s						
BVAR	Borovoye Array	62.53	319	P	P	19 05 24.4	+0.7
	comp=Z,1.5nm,0.3s,baz=97,slow=7.9,SNR=16						
	comp=Z,1.5nm,0.3s						
D25K	Kavik River	63.01	22	P	P	19 05 28.1	+1.5
D25K				IAmb	IAmb	19 05 37.4	
	comp=Z,2.4nm,0.9s						
BMAR	Burnt Mountain	63.37	24	P	P	19 05 30.8	+1.8
AB31	Akbulak array	69.41	316	P	P	19 06 06.7	-0.5
AB31				IAmb	IAmb	19 06 08.1	
	comp=Z,1.5nm,0.6s						

ABKAR	Akbulak array	69.41	316	P	P	19 06 07.1	-0.1
ABKAR				IAmb	IAmb	19 06 08.1	
	comp=Z,1.5nm,0.6s						
ARCES	ARCESS Array B	78.83	341	P	P	19 07 01.4	+0.4
	comp=Z,4.8nm,1.0s,baz=62,slow=7.1,SNR=6.3						
	comp=Z,4.8nm,1.0s						
FINES	FINESS Array B	83.07	334	P	P	19 07 22.5	-0.9
	comp=Z,0.9nm,0.5s,baz=59,slow=5.8,SNR=11						
	comp=Z,0.9nm,0.5s						
PLCA	Paso Flores	145.91	131	PKPbc	PKPbc	19 14 36.0	0.0
	comp=Z,0.6nm,0.5s,baz=248,slow=4.8,SNR=4.2						

BJI ***29*** *19:00:04.2, 9°.31N×125°.38E, h60^{km}, mB5.0/22, mb5.2/78, Ms4.4/66, Ms7 4.3/65*

MAN ***29*** *19:00:06.8, 9°.64N×124°.97E, h35^{km}, mb5.6, ML4.7, MS5.0*

MAN INTENSITY IV - LIMASAWA PINTUYAN SAN FRANCISCO AND SAN RICARDO SOUTHERN LEYTE; INTENSITY III - BIEN UNIDO AND DUERO BOHOL; MAMBAJAO CAMIGUIN; CARCAR CITY; CEBU CITY; DANAO CITY; LAPU-LAPU CITY; MANDAUE CITY; NAGA CITY; TALISAY CITY; COMPOSTELA ; CONSOLACION CORDOVA LILOAN MINGLANILLA AND SAN FERNANDO CEBU; INTENSITY II - ARGAO CEBU; PALO LEYTE.

MOS ***29*** *19:00:06.1±0.8, 9°.75N×125°.05E, h52^{km}, mb5.3/71, MS4.5/9, Error ellipse: s-maj=7.2km s-min=3.9km az=113.8*

NEIC ***29*** *19:00:07.4, 9°.71N×125°.06E, h46^{km}, Moment Tensor Solution. Duration: 1^{s}6 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.46; M$_{\theta\theta}$-0.83; M$_{\phi\phi}$-2.63; M$_{r\theta}$1.18; M$_{\theta\phi}$-2.06; M$_{\phi r}$-0.37; Fault plane solution: M$_{0}$3.94000×10^{16} NP1: φ$_{s}$194.76000°, δ45.59000°, λ62.44000°. NP2: φ$_{s}$51.48000°, δ50.71000°, λ115.28000°. Principal axes: T 3.8865, Plg70.0000°, Azm26.0000°; N 0.1009, Plg19.0000°, Azm215.0000°; P -3.9873, Plg3.0000°, Azm124.0000°;*

NEIC ***29*** *19:00:07.3±1.5, 9°.71N±0°.05×125°.07E±0°.05, h45^{km}±4^{km}, mb5.3/171, Mww5.0/21 Error ellipse: s-maj=8.8km s-min=6.0km az=131.0*

NEIC ***29*** *19:00:07.4, 9°.71N×125°.06E, h46^{km}*

DJA ***29*** *19:00:08.0±1.4, 10°N±4°×12°5E±°, h38^{km}±28^{km}, M5.1/19, mb5.4/19, mB5.5/17, MLv5.5/5, Mw(mB)4.9/17, MwMwp4.6/4, Mwp5.0/4*

IDC ***29*** *19:00:08.8±0.6, 9°.70N×125°.04E, h64^{km}±5^{km}, mb4.8/33, mbtmp5.0/36, MS4.0/41, Error ellipse: s-maj=15.8km s-min=7.0km az=75.0*

GCMT ***29*** *19:00:09.3±0.2, 9°.69N±0°.01×124°.97E±0°.01, h43^{km}, MW5.0/101, Moment Tensor Solution. s59,c85; s101,c164; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.03±.17; M$_{\theta\theta}$-0.33±.11; M$_{\phi\phi}$-2.70±.12; M$_{r\theta}$1.37±.08; M$_{\theta\phi}$-3.07±.07; M$_{\phi r}$-0.87±.11; Best double couple: M$_{0}$4.47400×10^{16} NP1: φ$_{s}$185.00000°, δ54.00000°, λ46.00000°. NP2: φ$_{s}$64.00000°, δ55.00000°, λ134.00000°. Principal axes: T 4.1410, Plg56.0000°, Azm34.0000°; N 0.6650, Plg34.0000°, Azm215.0000°; P -4.8060, Plg0.0000°, Azm125.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 19:00:06.8±0.3, **9°.68N**±0°.03×**125°.01E**±0°.04, **h47^{km}**±2^{km}, **h47^{km}:pP-P, n962,** σ1^{s}**18**/1009, **mb5.2**/233, **MS4.2**/72, **35C-26D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	2.66	168		Pn	19 00 48.4	+1.2
DAV	Davao City (W)	2.66	168	P	Pn	19 00 49.2	+2.0
	1μm,0.6s,baz=317,slow=2.3,SNR=13						
DAV				S	Sn	19 01 21.1	+3.0
	2μm,0.6s,baz=276,slow=16,SNR=4.9						
DAV				LR	LR	19 02 02.3	
	comp=Z,3μm,20.9s,baz=2.5,slow=43						
DAV	Davao City (W)	2.66	168	P	Pn	19 00 50.6	+3.4
DAV	Davao City (W)	2.66	168	P	Pn	19 00 48.0	+0.8
TGY	Tagaytay City	5.93	318	P	Pn	19 01 35.6	+3.3
	140nm,0.5s,baz=210,slow=3.2,SNR=8.7						
TGY				LR	LR	19 04 12.1	
	comp=Z,2μm,19.4s,baz=118,slow=41						
SGSI	Sangihe	5.98	175	P	Pn	19 01 34.1	+1.3
MYLDM	Lahad Datu	7.86	236		Pn	19 02 00.4	+1.8
MYLDM	Lahad Datu	7.86	236	P	Pn	19 02 04.4	+5.8
KMSI	Cibinong	9.11	187	P	Pn	19 02 15.6	-0.1
	4μm398nm,0.9s						
TNTI	Ternate	9.16	165		Pn	19 02 16.3	-0.1
TNTI	Ternate	9.16	165	P	Pn	19 02 19.6	+3.2
TNTI	Ternate	9.16	165	P	Pn	19 02 16.9	+0.5
	976nm3μm245nm,1.3s						
KKM	Kota Kinabalu	9.44	248		Pn	19 02 21.7	+1.4
TOLI2	Tolitoli	9.50	207		Pn	19 02 20.1	-1.0
TOLI2	Tolitoli	9.50	207	P	Pn	19 02 26.8	+5.7
MRSI	Marisa	9.64	199	P	Pn	19 02 27.9	+4.8
LUWI	Luwuk	10.88	192		Pn	19 02 39.6	-0.4
LUWI	Luwuk	10.88	192	P	Pn	19 02 45.1	+5.0
LUWI	Luwuk	10.88	192	P	Pn	19 02 42.3	+2.2
	2μm184nm,1.1s						
APSI	Ampana	11.04	198	P	Pn	19 02 55.2	+13
SANI	Sanana	11.70	175	P	Pn	19 02 46.5	-4.7
SWI	Sorong	12.18	149	P	Pn	19 02 58.7	+0.9
	2μm188nm,0.9s						
NLAI	Namlea	13.00	171	P	Pn	19 03 06.7	-2.3
MSAI	Masohi	13.52	163	P	Pn	19 03 16.1	0.0
BKB	Balikpapan	13.55	217	P	Pn	19 03 13.9	-2.6
TWGBT	Beinan	13.60	344	P	Pn	19 03 21.1	+4.0
TWG	Pinlang	13.60	344		Pn	19 03 17.2	+0.1
TTSI	Tana Toraja	13.66	203	P	Pn	19 03 19.8	+1.8
	79nm,0.8s						
YULB	Yu-li	14.09	346		Pn	19 03 23.5	-0.3
YULB	Yu-li	14.09	346	P	P	19 03 27.6	-2.8
TPUB	Ta-pu	14.18	343		Pn	19 03 24.3	-0.7
TPUB	Ta-pu	14.18	343	P	Pn	19 03 28.2	+3.2
RKPI	Ransiki, Papua	14.38	140	P	Pn	19 03 28.3	+0.5
	1μm153nm,0.9s						
FAKI	Fak Fak	14.45	150		Pn	19 03 27.5	-1.1
SPSI	Sidrap Palu	14.53	201	P	P	19 03 35.3	0.0
SSLB	Suanglung	14.55	345		Pn	19 03 30.5	+0.5
SSLB	Suanglung	14.55	345	P	P	19 03 34.0	-1.6
SBUM	Sibu	14.60	241		Pn	19 03 32.0	+1.3
SBUM	Sibu	14.60	241	P	P	19 03 35.8	-0.3
NACB	Ninganchiao	14.78	348		Pn	19 03 33.0	+0.1
NACB	Ninganchiao	14.78	348	P	P	19 03 36.4	-1.6
BNSI	Bone	14.82	199	P	P	19 03 39.5	+1.0
BNDI	Bandanaira	14.93	161	P	P	19 03 37.6	-2.1
YHNB	Yeheng	15.30	347	P	Pn	19 03 42.4	+2.5
BAKI	Biak	15.45	134	P	Pn	19 03 43.7	+1.9
	2μm131nm,1.1s						
KAPI	Kappang	15.51	200		Pn	19 03 43.6	+1.0
KAPI	Kappang	15.51	200	P	P	19 03 46.2	0.0
	18nm,0.4s,baz=24,slow=7.9,SNR=7.7						
KAPI				LR	LR	19 10 49.3	
	comp=Z,187nm,18.6s,baz=44,slow=41						
KAPI	Kappang	15.51	200	⇑eP	P	19 03 46.2	0.0
KAPI				pmax	pmax		
	comp=Z,16nm,0.3s						
SRPI	Serui, Papua	16.02	135	P	Pn	19 03 50.2	+1.1
	comp=Z,66nm,1.2s						
QZH	Quanzhou	16.36	339	P	P	19 03 57.5	+1.9
QZH				S	S	19 07 02.5	-2.0
QZH				LR	LR		
	comp=Z,1μm,23.4s						
QZH				LR	LR		
	comp=Z,470nm,23.0s						
QZH				LR	LR		
	comp=Z,2μm,19.9s						
KSM	Kuching	16.74	242		P	19 03 59.2	-0.7
KSM	Kuching	16.74	242	P	P	19 04 03.1	+3.2
JOW	Kunigami	17.34	10		Pn	19 04 05.4	-0.1
JOW				IAmb	IAmb	19 04 12.8	
	comp=Z,130nm,0.9s						
JOW	Kunigami	17.34	10	P	P	19 04 08.6	+2.2
	comp=Z,78nm,0.6s,baz=220,slow=12,SNR=11						
JOW				LR	LR	19 10 08.4	
	comp=Z,643nm,21.1s,baz=80,slow=35						
JOW	Kunigami	17.34	10	P	Pn	19 04 06.3	+0.8
QIZ	Qiongzhong	17.37	304		P	19 04 06.4	-0.4
QIZ	Qiongzhong	17.37	304	P	P	19 04 07.5	+0.6
QIZ				pP	pP	19 04 17.8	+0.3
QIZ				S	S	19 07 24.5	-0.8
QIZ				pmax	pmax		
	comp=Z,22nm,1.8s						
QIZ				LR	LR		
	comp=Z,400nm,20.6s						
QIZ				LR	LR		
	comp=Z,700nm,18.4s						
QIZ	Qiongzhong	17.37	304	P	P	19 04 10.4	+3.5
MMRI	Maumere	18.41	189	P	P	19 04 17.7	-0.5
MMRI	Maumere	18.41	189	P	Pn	19 04 21.5	+2.8
SOEI	Soe	19.32	182		P	19 04 28.6	+0.2
SOEI	Soe	19.32	182	P	Pn	19 04 30.6	+0.8
GENI	Genyem	19.41	128	P	Pn	19 04 31.3	+0.6
GUMO	Guam	19.83	77	P	P	19 04 33.8	-0.1
	comp=Z,28nm,0.6s,baz=36,slow=1.8,SNR=4.2						
GUMO				LR	LR	19 10 59.1	
	comp=Z,197nm,21.7s,baz=248,slow=33						
JAGI	Jajag, Banyuwa	21.03	211	P		19 04 50.3	
SSE	Sheshan	21.60	351	P	P	19 04 54.3	+1.5
SSE				S	S	19 08 49.5	-0.2
SSE				pmax	pmax		
	comp=Z,58nm,1.1s						
SSE				pmax	pmax		
	comp=Z,210nm,3.3s						
SSE				LR	LR		
	comp=Z,300nm,17.4s						
SSE				LR	LR		
	comp=Z,240nm,24.0s						
MYKOM	Kota Tinggi	22.45	251	P	P	19 05 04.5	+2.3
DRS	Darwin Rock St	22.73	165	P	P	19 05 06.5	+1.4
NJ2	Nanjing	22.98	347	⇑P	P	19 05 08.3	+0.8
NJ2				S	S	19 09 17.5	+3.0
NJ2				pmax	pmax		
	comp=Z,77nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,170nm,3.5s						
NJ2				LR	LR		
	comp=Z,380nm,18.5s						
NJ2				LR	LR		
	comp=Z,390nm,15.6s						
NJ2				LR	LR		
	comp=Z,410nm,17.5s						
WHN	Wuhan	23.02	336	⇓P	P	19 05 09.8	+1.9
WHN				sP	sP	19 05 26.0	+1.2
WHN				S	S	19 09 18.5	+3.4
WHN				pmax	pmax		
	comp=Z,92nm,0.9s						
WHN				LR	LR		
	comp=Z,4μm,19.4s						
WHN				LR	LR		
	comp=Z,680nm,9.8s						
WHN				LR	LR		
	comp=Z,4μm,19.5s						
MTN	Manton Dam	23.19	165		P	19 05 09.1	-0.6
MTN				IAmb	IAmb	19 05 13.6	
	comp=Z,88nm,0.9s						
MTN					PcP	19 08 56.1	-0.9
MTN	Manton Dam	23.19	165	P	P	19 05 09.5	-0.2
MTN	Manton Dam	23.19	165	P	P	19 05 10.0	+0.3
SLVN	Son La	23.37	302	P	P	19 05 12.2	+0.6
SLVN	Son La	23.37	302	P	P	19 05 13.4	+1.8
KDU	Kakadu	23.43	161	P	P	19 05 12.0	0.0
	comp=Z,138nm,0.9s						
KDU	Kakadu	23.43	161	P	P	19 05 12.6	+0.6
JCJ	Chichijima	23.73	41		P	19 05 13.8	-1.0
JCJ	Chichijima	23.73	41	P	P	19 05 15.6	+0.8
JNU	Nakatsue	23.95	12	P	P	19 05 15.2	-1.6
JNU				IAmb	IAmb	19 05 18.5	
	comp=Z,48nm,0.9s						
JNU	Nakatsue	23.95	12	P	P	19 05 16.0	-0.8
	comp=Z,32nm,0.8s,baz=118,slow=4.8,SNR=8.8						
JNU				LR	LR	19 14 06.0	
	comp=Z,300nm,21.1s,baz=178,slow=35						
	comp=Z,32nm,0.8s						
JNU	Nakatsue	23.95	12	P	P	19 05 17.8	+1.0
GYA	Guiyang	24.08	316	⇑P	P	19 05 20.5	+2.3
GYA				sP	sP	19 05 38.8	+3.2
GYA				S	S	19 09 36.3	+3.5
GYA				pmax	pmax		
	comp=Z,19nm,0.8s						
GYA				LR	LR		
	comp=Z,870nm,22.4s						
IPM	Ipoh	24.35	259		P	19 05 20.5	-0.2
IPM				IAmb	IAmb	19 05 41.0	
	comp=Z,47nm,0.8s						
IPM	Ipoh	24.35	259	P	P	19 05 22.9	+2.2
KULM	Kulim	24.54	262	P	P	19 05 22.5	+0.2
KULM	Kulim	24.54	262	P	P	19 05 25.1	+2.7
ENH	Enshi	25.09	327		P	19 05 27.3	0.0
ENH	Enshi	25.09	327	P	P	19 05 28.9	+1.6
MANU	Manus Island	25.13	116	P	P	19 05 27.4	-0.3
MANU				IAmb	IAmb	19 05 56.2	
	comp=Z,131nm,1.8s						
JMN	Monobe	25.28	18	P	P	19 05 29.4	+0.4
JMN	Monobe	25.28	18	P	P	19 05 30.1	+1.1
KNRA	Kununurra	25.47	172		P	19 05 31.1	+0.4
KNRA				IAmb	IAmb	19 06 01.3	
	comp=Z,48nm,0.8s						
KNRA	Kununurra	25.47	172	P	P	19 05 31.8	+1.2
	comp=Z,75nm,1.0s						
KMI	Kunming	26.15	309	P	P	19 05 40.0	+2.8
KMI				S	S	19 10 06.0	-0.1
KMI				pmax	pmax		
	comp=Z,13nm,0.8s						
KMI				LR	LR		
	comp=Z,250nm,12.4s						
KMI				LR	LR		
	comp=Z,520nm,19.4s						
KMI				LR	LR		
	comp=Z,530nm,20.2s						
TJN	Taejon	26.66	4	P	P	19 05 41.2	-0.1
TJN				IAmb	IAmb	19 05 44.6	
	comp=Z,80nm,0.6s						
TJN	Taejon	26.66	4	⇑eP	P	19 05 42.6	+1.3
CM31	Chiang Mai Arr	26.72	292	P	P	19 05 42.1	0.0
CMAR	Chiang Mai Arr	26.72	292	P	P	19 05 41.9	-0.2
CMAR					PcP	19 09 05.1	+0.3
CMAR	Chiang Mai Arr	26.72	292	P	P	19 05 43.1	+1.0
	comp=Z,3.3nm,1.0s,baz=87,slow=7.5,SNR=13						
CMAR				PcP	PcP	19 09 05.2	+0.4
	comp=Z,3.0nm,0.7s,baz=94,slow=0.6,SNR=13						
CMAR				LR	LR	19 15 39.1	
	comp=Z,259nm,20.7s,baz=105,slow=35						
CMAR				PKiKP	PKiKP	19 16 42.1	-1.3
	comp=Z,0.6nm,0.7s,baz=127,slow=1.5,SNR=4.5						
	comp=Z,3.3nm,1.0s						
PSI	Prapat	26.80	257	P	P	19 05 44.8	+1.8
PSI	Prapat	26.80	257	P	P	19 05 42.9	-0.1
PSI				pmax	pmax		
	comp=Z,31nm,1.1s						
CHTO	Chiang Mai	26.82	293		P	19 05 42.9	-0.1
CHTO	Chiang Mai	26.82	293	P	P	19 05 46.8	+3.8
CHTO	Chiang Mai	26.82	293	P	P	19 05 42.9	-0.1
CHTO				pmax	pmax		
	comp=Z,11nm,1.1s						
RPSI	Rantau Prapat	26.83	257	P	P	19 05 42.9	-0.2
LYN	LuoYang	27.29	337	⇑P	P	19 05 48.3	+1.3
LYN				sP	sP	19 06 08.8	+4.4
LYN				S	S	19 10 23.5	+0.2
LYN				pmax	pmax		
	comp=Z,62nm,0.8s						
LYN				LR	LR		
	comp=Z,1μm,19.7s						
LYN				LR	LR		
	comp=Z,440nm,17.8s						
LYN				LR	LR		
	comp=Z,2μm,21.9s						
TIA	Tai'an	27.37	346	P	P	19 05 48.0	+0.3
TIA				pmax	pmax		
	comp=Z,89nm,1.0s						
TIA				LR	LR		
	comp=Z,460nm,21.6s						
TIA				LR	LR		
	comp=Z,340nm,19.6s						
TIA				LR	LR		
	comp=Z,450nm,18.1s						
FITZ	Fitzroy Crossi	27.61	179	P	P	19 05 49.7	-0.3
PZH	PanZhiHua	27.65	310	P	P	19 05 52.0	+1.5
PZH				S	S	19 10 31.5	+2.0
PZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PZH				LR	LR		
	comp=Z,210nm,16.9s						
PZH				LR	LR		
	comp=Z,360nm,20.0s						
PZH				LR	LR		
	comp=Z,360nm,22.6s						
KSAR	Wonju Array Be	27.76	5	P	P	19 05 50.7	-0.5
KSAR	Wonju Array Be	27.76	5	P	P	19 05 50.7	-0.5
KSRS	Korea Array	27.77	5	P	P	19 05 51.7	+0.4
	comp=Z,23nm,0.8s,baz=182,slow=9.8,SNR=97						
	comp=Z,23nm,0.8s						
INU	Inuyama	27.80	21	P	P	19 05 50.1	-1.4
INU				IAmb	IAmb	19 05 52.5	
	comp=Z,47nm,1.2s						
INU	Inuyama	27.80	21	P	P	19 05 51.6	0.0
KS19	Wonju Array Si	27.82	5	P	P	19 05 50.8	-0.9
JGF	Kuroka	28.15	22	P	P	19 05 53.4	-1.3
JGF				IAmb	IAmb	19 05 58.8	
	comp=Z,133nm,2.0s						
XAN	Xi'an	28.39	331	⇑P	P	19 05 57.0	+0.1
XAN				pmax	pmax		
	comp=Z,38nm,0.7s						
XAN				LR	LR		
	comp=Z,460nm,24.1s						
XAN				LR	LR		
	comp=Z,360nm,21.3s						
XAN				LR	LR		
	comp=Z,310nm,20.6s						
GSI	Gunungsitoli	28.53	255	P	P	19 05 58.5	+0.2
GSI	Gunungsitoli	28.53	255	P	P	19 06 01.7	+3.4
CD2	Chengdu	28.93	320	P	P	19 06 02.3	+0.5
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CD2				LR	LR		
	comp=Z,600nm,17.1s						
CD2				LR	LR		
	comp=Z,840nm,17.1s						
CD2				LR	LR		
	comp=Z,850nm,19.0s						
HNS	HongShan	29.12	343	⇑P	P	19 06 04.0	+0.7
HNS				eS	S	19 10 54.5	+2.4
HNS				pmax	pmax		
	comp=Z,46nm,1.2s						
HNS				LR	LR		
	comp=Z,410nm,21.1s						
HNS				LR	LR		
	comp=Z,390nm,16.5s						
HNS				LR	LR		
	comp=Z,480nm,21.0s						
DL2	Dalian	29.26	355	P	P	19 06 05.3	+0.8
DL2				S	S	19 10 58.0	+3.9
DL2				pmax	pmax		
	comp=Z,72nm,1.1s						
DL2				pmax	pmax		
	comp=Z,240nm,3.7s						
DL2				LR	LR		
	comp=Z,380nm,21.3s						
DL2				LR	LR		
	comp=Z,390nm,18.1s						
DL2				LR	LR		
	comp=Z,500nm,17.7s						
MAJO	Matsushiro	29.30	22	P	P	19 06 03.6	-1.3
MAJO	Matsushiro	29.30	22	P	P	19 06 04.8	-0.1
MAJO	Matsushiro	29.30	22	P	P	19 06 04.2	-0.7
MJAR	Matsushiro Arr	29.30	22	P	P	19 06 03.3	-1.6
MJAR	Matsushiro Arr	29.30	22	P	P	19 06 03.9	-1.1
	comp=Z,11nm,1.0s,baz=197,slow=8.7,SNR=19						
MJAR				LR	LR	19 16 07.1	
	comp=Z,422nm,21.8s,baz=214,slow=33						
	comp=Z,11nm,1.0s						
TNCH	TengChong	29.45	305	P	P	19 06 07.8	+1.2
TNCH				pP	sP	19 06 22.0	-2.1
TNCH				sP	pP	19 06 27.5	+8.9
TNCH				S	S	19 10 50.5	-7.4
TNCH				pmax	pmax		
	comp=Z,45nm,1.0s						
TNCH				LR	LR		
	comp=Z,230nm,7.2s						
TNCH				LR	LR		
	comp=Z,240nm,7.4s						
TNCH				LR	LR		
	comp=Z,460nm,19.2s						
COEN	Coen	29.60	142	P	P	19 06 07.7	-0.1
COEN	Coen	29.60	142	P	P	19 06 13.4	+5.6
TIY	Taiyuan	30.13	340	P	P	19 06 13.5	+1.2
TIY				S	S	19 11 03.8	-4.2
TIY				pmax	pmax		
	comp=Z,64nm,0.6s						
TIY				LR	LR		
	comp=Z,530nm,20.6s						
TIY				LR	LR		
	comp=Z,220nm,19.9s						
TIY				LR	LR		
	comp=Z,640nm,22.7s						
JSD	Sado	30.65	21	P	P	19 06 16.4	-0.4
WB0	Warramunga Arr	30.69	162	P	P	19 06 17.1	-0.2
WRAB	Tennant Creek	30.83	163	⇓eP	P	19 06 16.2	-2.4
WRAB				pmax	pmax		
	comp=Z,12nm,0.6s						
WRA	Warramunga Arr	30.84	163	P	P	19 06 16.9	-1.8
WRA					PcP	19 09 14.8	-0.2
WRA	Warramunga Arr	30.84	163	P	P	19 06 18.9	+0.2
	comp=Z,5.2nm,0.6s,baz=344,slow=9.4,SNR=63						
WRA				PcP	PcP	19 09 15.0	-0.1
	comp=Z,9.2nm,0.8s,baz=340,slow=3.0,SNR=16						
WRA				ScP	ScP	19 12 51.6	-2.5
	comp=Z,1.8nm,0.9s,baz=346,slow=3.6,SNR=5.5						
WRA				PKiKP	PKiKP	19 16 44.0	-1.9
	comp=Z,0.5nm,0.7s,baz=312,slow=1.4,SNR=2.7						
WRA				LR	LR	19 21 04.3	
	comp=Z,174nm,18.3s,baz=13,slow=41						
	comp=Z,5.2nm,0.6s						
BJT	Baijiatuau	31.22	347	P	P	19 06 21.8	0.0
BJT				IAmb	IAmb	19 06 23.7	
	comp=Z,58nm,1.1s						
BJT	Baijiatuau	31.22	347	P	P	19 06 23.8	+2.0
BJT	Baijiatuau	31.22	347	P	P	19 06 21.8	0.0
BJT				pmax	pmax		
	comp=Z,58nm,1.1s						
BJT	Baijiatuau	31.22	347	P	P	19 06 22.4	+0.6
BJT				pP	pP	19 06 34.0	0.0
BJI	Beijing	31.24	347	P	P	19 06 22.5	+0.5
BJI				pmax	pmax		
	comp=Z,26nm,1.0s						
JMM	Marumori	31.46	24	P	P	19 06 23.2	-0.7
JMM				IAmb	IAmb	19 06 24.6	
	comp=Z,53nm,1.1s						
JMM	Marumori	31.46	24	P	P	19 06 24.3	+0.4
LZH	Lanzhou	32.57	327	eP	P	19 06 36.0	+2.0
LZH				sP	sP	19 06 52.5	+1.2
LZH				pmax	pmax		
	comp=Z,36nm,1.3s						
LZH				LR	LR		
	comp=Z,490nm,15.5s						
LZH				LR	LR		
	comp=Z,700nm,15.5s						
LZH				LR	LR		
	comp=Z,1μm,16.1s						
PATS	Pohnpei	33.07	92	P	P	19 06 38.6	+0.3
PATS				IAmb	IAmb	19 07 51.5	
	comp=Z,96nm,1.4s						
PSTR	Posyet	33.23	8	⇑eP	P	19 06 39.6	+0.2
HHC	Hu-ho-hao-te	33.25	341	eP	P	19 06 41.0	+1.2
HHC				pP	pP	19 06 53.3	+1.3
HHC				sP	sP	19 06 58.5	+1.0
HHC				S	S	19 11 55.0	-1.8
HHC				ScS	ScS	19 17 01.3	-1.5
HHC				pmax	pmax		
	comp=Z,50nm,0.9s						
HHC				pmax	pmax		
	comp=Z,77nm,4.0s						
HHC				LR	LR		
	comp=Z,490nm,17.3s						
HHC				LR	LR		
	comp=Z,190nm,16.7s						
HHC				LR	LR		
	comp=Z,620nm,19.2s						
QIS	Mount Isa	33.30	155	P	P	19 06 40.3	0.0
	comp=Z,41nm,0.9s						
QIS	Mount Isa	33.30	155	P	P	19 06 41.0	+0.7
BTO	Baotou	33.55	339	eP	P	19 06 44.5	+2.1
BTO				pP	sP	19 06 59.5	-0.7
BTO				sP	pP	19 07 06.8	+12
BTO				PP	PP	19 07 59.3	+0.4
BTO				S	S	19 12 05.3	+3.9
BTO				sS	sS	19 12 29.3	+7.4
BTO				SS	SnSn	19 14 13.0	+5.6
BTO				pmax	pmax		
	comp=Z,38nm,0.7s						
BTO				pmax	pmax		
	comp=Z,220nm,4.4s						
BTO				LR	LR		

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       comp=Z,1µm,21.0s
BTO                              LR      LR
       comp=Z,420nm,21.6s
BTO                              LR      LR
       comp=Z,2µm,21.8s
VLA    Vladivostok       33.85   9d iP   P       19 06 45.4 +0.6
VLA                              pmax    pmax
       comp=Z,72nm,1.0s
CN2    Changchun         33.99   1 eP    P       19 06 46.0  0.0
CN2                              epP     sP      19 07 03.8 -0.1
CN2                              eS      S       19 12 09.0 +1.0
CN2                              pmax    pmax
       comp=Z,20nm,0.7s
CN2                              pmax    pmax
       comp=Z,100nm,3.0s
CN2                              LR      LR
       comp=Z,300nm,15.0s
CN2                              LR      LR
       comp=Z,200nm,15.0s
CN2                              LR      LR
       comp=Z,200nm,16.1s
JTM    Tenmabayashi      34.09  22   P   P       19 06 47.0  0.0
JTM                              IAmb    IAmb    19 07 57.8
       comp=Z,77nm,1.2s
AS31   Alice Springs     34.26 165   P   P       19 06 48.5 -0.2
AS31   Alice Springs     34.26 165   P   P       19 06 49.1 +0.4
       comp=Z,5.8nm,0.6s
ASAR   Alice Springs     34.27 165   P   P       19 06 49.2 +0.5
       comp=Z,6.4nm,0.6s,baz=339,slow=6.6,SNR=136
ASAR                             PcP     PcP     19 09 24.3 -0.2
       comp=Z,5.2nm,0.4s,baz=341,slow=2.8,SNR=25
ASAR                             ScP     ScP     19 13 03.8 -2.1
       comp=Z,1.5nm,0.9s,baz=335,slow=2.5,SNR=4.9
ASAR                             PKiKP   PKiKP   19 16 47.0 -1.3
       comp=Z,0.7nm,0.7s,baz=38,slow=0.9,SNR=5.7
ASAR                             LR      LR      19 22 30.6
       comp=Z,201nm,19.3s,baz=352,slow=39
       comp=Z,6.4nm,0.6s
AS01   Alice Springs     34.27 165   P   P       19 06 50.1 +1.4
BRDH   Bariadhala        34.46 296   LR  LR      19 21 03.5
       comp=Z,392nm,19.3s,baz=106,slow=36
WRKA   Warakurna         34.66 175   P   P       19 06 52.5 +0.5
       comp=Z,9.8nm,0.7s
USA0B  Ussuriysk Arra    34.92   9       P       19 06 54.7 +0.7
USA0B                            PcP     PcP     19 09 24.1 -1.9
USA0B  Ussuriysk Arra    34.92   9   P   P       19 06 54.7 +0.7
USA0B                                            19 09 24.1
USA0B                            pmax    pmax
       comp=Z,94nm,0.8s
USRK   Ussuriysk Ar.     34.92   9   P   P       19 06 54.9 +0.9
       comp=Z,86nm,0.7s,baz=194,slow=7.7,SNR=132
USRK                             LR      LR      19 20 09.6
       comp=Z,215nm,21.4s,baz=190,slow=34
       comp=Z,86nm,0.7s
XLT    XiLinHaoTe        34.96 349  eP   P       19 06 55.0 +0.4
XLT                              pP      sP      19 07 11.5 -0.8
XLT                              pmax    pmax
       comp=Z,38nm,0.9s
XLT                              LR      LR
       comp=Z,24nm,19.2s
XLT                              LR      LR
       comp=Z,220nm,15.9s
XLT                              LR      LR
       comp=Z,280nm,19.3s
MDJ    Mudanjiang        35.03   6   P   P       19 06 55.2 +0.2
MDJ                              IAmb    IAmb    19 06 57.1
       comp=Z,78nm,1.2s
MDJ    Mudanjiang        35.03   6   P   P       19 06 55.5 +0.5
MDJ    Mudanjiang        35.03   6   P   P       19 06 56.5 +1.5
MDJ    Mudanjiang        35.03   6   P   P       19 06 56.0 +1.0
ERM    Erimo             35.94  23deP    P       19 07 02.3 -0.5
ERM                              pmax    pmax
       comp=Z,48nm,1.4s
BNX    BinXian           35.99   3 ⇓P    P       19 07 03.8 +0.6
BNX                              pmax    pmax
       comp=Z,53nm,0.6s
CTAO   Charters Tower    36.23 145   P   P       19 07 05.5 -0.1
CTAO   Charters Tower    36.23 145   P   P       19 07 05.5 -0.1
CTAO                             pmax    pmax
       comp=Z,27nm,1.3s
TEY    Ternei            36.62  14⇑eP    P       19 07 05.0 -3.6
TEY                              pmax    pmax
       comp=N,30nm,1.1s
TEY                              pmax    pmax
       comp=E,10.0nm,1.1s
TEY                              pmax    pmax
       comp=Z,40nm,1.1s
GTA    Gaotai            37.18 327   P   P       19 07 16.0 +2.4
GTA                              sP      sP      19 07 32.5 +1.4
GTA                              PcP     PcP     19 09 33.8 +0.8
GTA                              pmax    pmax
       comp=Z,74nm,0.7s
GTA                              LR      LR
       comp=Z,430nm,20.0s
GTA                              LR      LR
       comp=Z,430nm,17.1s
GTA                              LR      LR
       comp=Z,760nm,18.9s
LSA    Lhasa             37.38 307   P   P       19 07 17.7 +1.9
LSA                              IAmb    IAmb    19 07 19.0
       comp=Z,16nm,0.6s
LSA    Lhasa             37.38 307   P   P       19 07 17.7 +1.9
LSA                              pmax    pmax
       comp=Z,16nm,0.6s
LSA    Lhasa             37.38 307   P   P       19 07 18.0 +2.2
ASAJ   Asahikawa         37.55  21   P   P       19 07 17.9 +1.4
       comp=Z,19nm,0.5s,baz=233,slow=10,SNR=28
ASAJ                             LR      LR      19 21 19.2
       comp=Z,179nm,21.3s,baz=230,slow=34
       comp=Z,19nm,0.5s
JKA    Kamikawa-asahi    37.55  21       P       19 07 17.6 +1.1
JKA                              IAmb    IAmb    19 07 19.9
       comp=Z,88nm,1.3s
GOMU   GeErMu            38.05 319   P   P       19 07 23.5 +2.2
GOMU                             pmax    pmax
       comp=Z,34nm,1.1s
GOMU                             LR      LR
       comp=Z,310nm,17.9s
GOMU                             LR      LR
       comp=Z,210nm,18.3s
GOMU                             LR      LR
       comp=Z,540nm,21.4s
TATA   Tatamba Isabel    39.02 116   P   P       19 07 30.9 +1.6
MORW   Morawa            39.48 192   P   P       19 07 33.5 +0.6
MORW                             IAmb    IAmb    19 07 43.2
       comp=Z,110nm,2.0s
HIA    Hailar            39.70 355   P   P       19 07 34.6 +0.1
HIA    Hailar            39.70 355   P   P       19 07 37.2 +2.6
HIA    Hailar            39.70 355   P   P       19 07 34.6 +0.1
HIA                              pmax    pmax
       comp=Z,23nm,1.0s
HIA    Hailar            39.70 355   P   P       19 07 35.0 +0.4
KLR    Kul'dur           39.82   7   LR  LR      19 22 54.2
       comp=Z,157nm,21.7s,baz=202,slow=34
KLR    Kul'dur           39.82   7c iP   P       19 07 35.7 +0.2
KLR                              pmax    pmax
       comp=Z,22nm,1.4s
ALEG   Aligegeo Malai    39.97 116   P   P       19 07 38.9 +1.7
YSS    Yuzhno-Sakhali    40.09  19   P   P       19 07 37.6 -0.1
YSS                              IAmb    IAmb    19 07 39.6
       comp=Z,69nm,1.5s
YSS    Yuzhno-Sakhali    40.09  19   P   P       19 07 38.7 +0.9
YSS    Yuzhno-Sakhali    40.09  19  eP   P       19 07 37.8  0.0
YSS                              pmax    pmax
       comp=Z,30nm,1.4s
YSS                              MLR     MLR
       comp=Z,200nm,14.0s
YSS    Yuzhno-Sakhali    40.09  19   P   P       19 07 38.4 +0.6
EVN    Everest           40.24 302       P       19 07 40.9 +0.8
EVN                              IAmb    IAmb    19 08 05.5
       comp=Z,25nm,0.8s
FORT   Forrest           40.34 176   P   P       19 07 40.1 +0.1
HEH    HeiHe             40.49   2  eP   P       19 07 41.3 +0.3
HEH                              pmax    pmax
       comp=Z,34nm,1.0s
HEH                              LR      LR
       comp=Z,250nm,19.3s
HEH                              LR      LR
       comp=Z,140nm,20.3s
HEH                              LR      LR
       comp=Z,300nm,20.9s
QLP    Quilpie           40.60 153   P   P       19 07 43.7 +1.5
ULN    Ulaanbaatar       40.97 342   P   P       19 07 45.6 +0.4
ULN    Ulaanbaatar       40.97 342   P   P       19 07 46.1 +0.9
ULN    Ulaanbaatar       40.97 342   P   P       19 07 45.9 +0.7
SONM   Songino Array     41.15 341   P   P       19 07 46.9 +0.2
SONM   Songino Array     41.15 341   P   P       19 07 47.1 +0.4
       comp=Z,5.2nm,0.5s,baz=156,slow=9.9,SNR=19
SONM                             PcP     PcP     19 09 45.4  0.0
       comp=Z,1.2nm,0.5s,baz=166,slow=3.9,SNR=4.5
SONM                             LR      LR      19 26 21.6
       comp=Z,404nm,21.7s,baz=157,slow=38
       comp=Z,5.2nm,0.5s
H11N1  WAKE ISLAND Hy    41.62  71   T   T       19 51 17.4
       baz=265,slow=74,SNR=20
H11N2  WAKE ISLAND Hy    41.62  71   T   T       19 51 17.4
       baz=265,slow=74,SNR=12
H11N3  WAKE ISLAND Hy    41.63  71   T   T       19 51 19.9
       baz=265,slow=74,SNR=16
UGL    Uglegorsk         41.78  17  eP   P       19 07 44.7 -6.9
NWAO   Narrogin (SRO)    43.02 190   P   P       19 08 01.8 -0.1
NWAO   Narrogin (SRO)    43.02 190   LR  LR      19 26 43.7
       comp=Z,54nm,21.9s,baz=47,slow=37
NWAO   Narrogin (SRO)    43.02 190   P   P       19 08 01.8 -0.1
NWAO                             pmax    pmax
       comp=Z,230nm,2.0s
EIDS   Eidsvold          43.11 144   P   P       19 08 01.9 -0.9
CIT    Chita             43.24 350  eP   P       19 08 04.0 +0.5
CIT                              e               19 08 22.2
CIT                              pmax    pmax
       comp=Z,54nm,1.9s
BBOO   Buckleboo         43.55 166   P   P       19 08 07.2 +1.0
BBOO                             IAmb    IAmb    19 08 12.2
       comp=Z,190nm,1.9s
TYV    Tymovskoe         43.56  16  eP   P       19 08 06.8 +0.8
TYV                              eS      S       19 14 33.6 +1.8
TYV                              pmax    pmax
       comp=Z,18nm,1.1s
TYV                              pmax    pmax
       comp=Z,100nm,3.7s
TYV                              smax    smax
       comp=N,200nm,3.7s
TYV                              smax    smax
       comp=E,100nm,3.7s
PALK   Pallekele         43.87 270   LR  LR      19 25 35.4
       comp=E,124nm,22.0s,baz=86,slow=35
PALK   Pallekele         43.87 270   P   P       19 08 09.6 +0.4
ZEA    Zeya              43.97   2  eP   P       19 08 09.1 -0.2
ZEA                              pmax    pmax
       comp=N,10.0nm,0.6s
ZEA                              pmax    pmax
       comp=Z,10.0nm,0.9s
ZEA                              MLR     MLR
       comp=Z,100nm,20.0s
WHYH   Whyalla           44.13 165   P   P       19 08 12.2 +1.4
STKA   Stephens Creek    44.27 160   P   P       19 08 12.8 +0.9
STKA   Stephens Creek    44.27 160   P   P       19 08 13.2 +1.3
       comp=Z,30nm,0.7s,baz=334,slow=8.5,SNR=47
       comp=Z,30nm,0.7s
STKA   Stephens Creek    44.27 160   P   P       19 08 13.5 +1.6
ZAK    Zakamensk         44.38 340  eP   P       19 08 12.6 -0.2
ZAK                              pmax    pmax
       comp=Z,3.0nm,1.1s
CMSA   Cobar Meteorol    45.52 155   P   P       19 08 24.4 +2.5
HYB    Hyderabad         45.72 285  eP   P       19 08 25.1 +1.3
HYB                              esP     sP      19 08 42.0 +0.6
WMQ    Urumqi            46.93 323  eP   P       19 08 35.3 +2.3
WMQ                              pmax    pmax
       comp=Z,23nm,1.5s
WMQ                              LR      LR
       comp=Z,550nm,13.9s
WMQ                              LR      LR
       comp=Z,430nm,18.9s
WMQ                              LR      LR
       comp=Z,400nm,20.5s
ARMA   Armidale          47.37 148   P   P       19 08 36.9 +0.3
ARMA                             IAmb    IAmb    19 09 40.7
       comp=Z,68nm,1.9s
SKR    Severo-Kuril's    48.24  26  i P  P       19 08 42.9  0.0
BOD    Bodaibo           48.77 352  eP   P       19 08 46.9  0.0
BOD                              pmax    pmax
       comp=Z,26nm,1.2s
CAN    Canberra          50.17 154   P   P       19 08 59.4 +1.4
CAN                              IAmb    IAmb    19 09 35.2
       comp=Z,73nm,1.5s
CAN    Canberra          50.17 154   P   P       19 08 59.4 +1.4
CAN                              pmax    pmax
       comp=Z,73nm,1.5s
ZSN    Zaisan            50.64 326  eP   P       19 09 01.9 +0.6
ZSN                              pmax    pmax
       comp=Z,12nm,1.0s
ZSN    Zaisan            50.64 326  eP   P       19 09 02.0 +0.6
       comp=Z,12nm,1.0s
PEA0B  Petropavlovsk-    50.69  25       P       19 09 02.6 +1.0
PEA0B  Petropavlovsk-    50.69  25   P   P       19 09 02.6 +1.0
PEA0B                            pmax    pmax
       comp=Z,61nm,0.6s
PETK   Petropavlovsk-    50.69  25   P   P       19 09 01.6  0.0
PETK   Petropavlovsk-    50.69  25   P   P       19 09 01.9 +0.3
       comp=Z,36nm,0.6s,baz=182,slow=3.6,SNR=86
PETK                             LR      LR      19 28 37.3
       comp=Z,263nm,22.0s,baz=224,slow=34
       comp=Z,36nm,0.6s
TOO    Toolangi          50.77 159   P   P       19 09 03.7 +1.3
TOO    Toolangi          50.77 159   P   P       19 09 03.7 +1.3
TOO                              pmax    pmax
       comp=Z,9.0nm,0.7s
PET    Petropavlovsk     51.02  25   P   P       19 09 04.7 +0.6
PET    Petropavlovsk     51.02  25   P   P       19 09 05.1 +1.0
PET    Petropavlovsk     51.02  25  eP   P       19 09 05.0 +1.0
PET                              e*SP    sP      19 09 21.9 -0.1
PET                              eS      S       19 16 32.3  +14
PET                              pmax    pmax
       comp=Z,200nm,1.5s
PET                              pmax    pmax
       comp=Z,97nm,1.0s
PET                              MLR     MLR
       comp=Z,200nm,16.0s
PET                              MLR     MLR
       comp=Z,200nm,16.0s
PET    Petropavlovsk     51.02  25   P   P       19 09 05.1 +1.0
PET                              sP      sP      19 09 21.8 -0.2
DZM    Mont Dzumac       51.45 128   P   P       19 09 07.8  0.0
DZM                              IAmb    IAmb    19 10 20.3
       comp=Z,52nm,1.4s
DZM    Mont Dzumac       51.45 128  eS   S       19 16 14.8  -10
       comp=Z,111nm,29.3s
DZM                              eSS     SS      19 19 54.7 -6.7
       comp=Z,89nm,25.8s
DZM                              eLR     LR      19 23 53.2
       comp=Z,295nm,23.8s
MK31   Makanchi Array    51.75 324c iP   P       19 09 10.8 +1.1
MKAR   Makanchi Array    51.75 324   P   P       19 09 10.5 +0.8
MKAR                             PcP     PcP     19 10 22.1 -0.4
MKAR   Makanchi Array    51.75 324   P   P       19 09 11.0 +1.3
       comp=Z,41nm,0.8s,baz=125,slow=8.3,SNR=334
MKAR                             PcP     PcP     19 10 22.4 -0.1
       comp=Z,26nm,0.7s,baz=106,slow=4.3,SNR=15
MKAR                             LR      LR      19 34 50.0
       comp=Z,192nm,18.3s,baz=118,slow=40
       comp=Z,41nm,0.8s
PDGK   Podgornoye        51.81 319   P   P       19 09 10.8 +0.5
MAKZ   Makanchi          51.94 323   P   P       19 09 12.2 +1.0
MAKZ                             PcP     PcP     19 10 22.9 -0.3
MAKZ   Makanchi          51.94 323   P   P       19 09 12.2 +1.0
MAKZ                                             19 10 22.9
MAKZ                             pmax    pmax
       comp=Z,69nm,1.2s
MAKZ   Makanchi          51.94 323   P   P       19 09 12.3 +1.1
UZB    Uzynbulak         52.03 318  eP   P       19 09 12.5 +0.5
UZB                              pmax    pmax
       comp=Z,6.0nm,0.5s
UZB    Uzynbulak         52.03 318  eP   P       19 09 12.5 +0.5
       comp=Z,6.3nm,0.5s
PRZ    Przheval'sk       52.16 317   P   P       19 09 14.1 +1.1
PRZ                                      PcP     19 10 24.7 +0.3
PRZ                              IAmb    IAmb    19 10 26.3
       comp=Z,31nm,0.6s
PRZ    Przheval'sk       52.16 317   P   P       19 09 14.1 +1.1
PRZ                              pmax    pmax
       comp=Z,31nm,0.6s
TARG   Taragay, Kyrgy    52.26 316   P   P       19 09 14.2 +0.2
TARG   Taragay, Kyrgy    52.26 316   P   P       19 09 14.2 +0.2
TARG                             pmax    pmax
       comp=Z,9.0nm,0.8s
YAK    Yakutsk           52.37   3   P   P       19 09 13.6 -0.3
YAK    Yakutsk           52.37   3   LR  LR      19 32 30.3
       comp=Z,151nm,19.3s,baz=186,slow=37
YAK    Yakutsk           52.37   3  eP   P       19 09 12.7 -1.2
YAK                              e*PP    sP      19 09 32.7 +0.7
YAK                              e               19 11 12.8
YAK                              eS      S       19 16 37.9 +1.8
YAK                              eSS     SS      19 20 13.9 -0.4
YAK                              pmax    pmax
       comp=Z,46nm,0.9s
YAK                              pmax    pmax
       comp=E,4.0nm,1.1s
YAK                              pmax    pmax
       comp=N,15nm,1.0s
YAK                              pmax    pmax
       comp=Z,18nm,1.9s
YAK                              pmax    pmax
       comp=E,12nm,2.1s
YAK                              pmax    pmax
       comp=N,21nm,2.3s
YAK                              smax    smax
       comp=N,24nm,2.3s
YAK                              smax    smax
       comp=E,34nm,3.5s
YAK    Yakutsk           52.37   3   P   P       19 09 13.6 -0.3
KPKS   Kokpek            52.40 318  eP   P       19 09 15.1 +0.5
KPKS   Kokpek            52.40 318  eP   P       19 09 15.2 +0.5
KSH    Kashi             52.71 313   P   P       19 09 19.8 +2.7
KSH                              pP      sP      19 09 35.8 +1.0
KSH                              PcP     PcP     19 10 28.0 +1.6
KSH                              S       S       19 16 43.3 +1.4
KSH                              pmax    pmax
       comp=E,11nm,0.9s
KSH                              LR      LR
       comp=E,370nm,23.0s
KSH                              LR      LR
       comp=E,370nm,17.9s
KSH                              LR      LR
       comp=E,470nm,19.2s
KDJ    Kajisay           52.84 316       P       19 09 19.2 +1.2
KDJ                              IAmb    IAmb    19 09 21.1
       comp=Z,14nm,0.6s
KDJ    Kajisay           52.84 316   P   P       19 09 19.3 +1.2
KDJ                              pmax    pmax
       comp=Z,14nm,0.6s
NIL    Nilore            53.05 305   P   P       19 09 20.0 +0.5
NIL    Nilore            53.05 305   P   P       19 09 20.0 +0.5
NIL                              pmax    pmax
       comp=Z,58nm,0.8s
NIL    Nilore            53.05 305   P   P       19 09 20.7 +1.1
TDK    Taldyqorghan      53.25 320  eP   P       19 09 21.4 +0.6
TDK                              pmax    pmax
       comp=Z,12nm,0.6s
TDK    Taldyqorghan      53.25 320  eP   P       19 09 21.5 +0.6
       comp=Z,12nm,0.6s
NRN    Naryn             53.39 315       P       19 09 22.9 +0.6
NRN    Naryn             53.39 315   P   P       19 09 22.9 +0.6
NRN                              pmax    pmax
       comp=Z,11nm,0.9s
MA2    Magadan           53.43  16   P   P       19 09 21.9 +0.1
MA2                              IAmb    IAmb    19 09 23.4
       comp=Z,32nm,0.7s
MA2    Magadan           53.43  16   LR  LR      19 30 06.4
       comp=Z,71nm,21.8s,baz=201,slow=34
MA2    Magadan           53.43  16   P   P       19 09 22.4 +0.5
MA2    Magadan           53.43  16c iP   P       19 09 22.3 +0.5
MA2                              pmax    pmax
       comp=Z,39nm,1.0s
MA2    Magadan           53.43  16   P   P       19 09 22.4 +0.5
AAA    Alma-Ata          53.46 317  eP   P       19 09 22.9 +0.5
AAA                              pmax    pmax
       comp=Z,13nm,0.5s
AAA    Alma-Ata          53.46 317  eP   P       19 09 23.0 +0.5
       comp=Z,12nm,0.5s
ULHL   Ulahol            53.53 316   P   P       19 09 24.7 +1.5
       SNR=13
BOOM   Boomskoye usch    53.83 316       P       19 09 26.2 +1.0
BOOM                             PcP     PcP     19 10 31.2 +0.5
BOOM   Boomskoye usch    53.83 316   P   P       19 09 26.3 +1.0
BOOM                                             19 10 31.2
BOOM                             pmax    pmax
       comp=Z,10.0nm,0.7s
KUU    Kurty             54.12 318  eP   P       19 09 27.6 +0.4
KUU                              pmax    pmax
       comp=Z,17nm,0.6s
KUU    Kurty             54.12 318  eP   P       19 09 27.7 +0.5
       comp=Z,16nm,0.6s
TKM2   Tokmak 2          54.23 317   P   P       19 09 29.6 +1.3
       SNR=22
ZAA0   Zalesovo Array    54.55 332       P       19 09 29.9 -0.3
ZAA0                             IAmb    IAmb    19 09 31.1
       comp=Z,15nm,0.9s
ZALV   Zalesovo Beam     54.55 332   P   P       19 09 29.7 -0.4
ZALV   Zalesovo Beam     54.55 332   P   P       19 09 30.1 -0.1
       comp=Z,5.9nm,0.3s,baz=115,slow=6.7,SNR=45
ZALV                             PcP     PcP     19 10 31.8 -1.1
       comp=Z,6.3nm,0.5s,baz=108,slow=3.3,SNR=5.4
ZALV                             LR      LR      19 34 07.3
       comp=Z,245nm,20.8s,baz=118,slow=37
       comp=Z,5.9nm,0.3s
KBK    Karagaybulak      54.57 316   P   P       19 09 32.3 +1.6
       SNR=11
UCH    Uchtor            54.71 315   P   P       19 09 34.0 +1.9
       SNR=6.1
AAK    Ala-Archa         54.88 316   P   P       19 09 33.2 +0.3
AAK    Ala-Archa         54.88 316   LR  LR      19 34 36.4
       comp=Z,387nm,21.9s,baz=99,slow=38
AAK    Ala-Archa         54.88 316ceP    P       19 09 34.8 +1.9
AAK                              pmax    pmax
       comp=Z,21nm,2.5s
AAK    Ala-Archa         54.88 316   P   P       19 09 34.6 +1.7
USP    Ospenovka         55.10 317   P   P       19 09 35.5 +1.1
       SNR=31
AML    Almayashu         55.25 315   P   P       19 09 37.6 +1.7
       SNR=22
EKS2   Erkin-Say         55.38 316   P   P       19 09 38.1 +1.7
       SNR=27
ARSB   Arslanbob         55.47 314   P   P       19 09 37.8 +0.6
ARSB                             IAmb    IAmb    19 09 40.1
       comp=Z,16nm,1.0s
ARSB   Arslanbob         55.47 314   P   P       19 09 37.8 +0.6
ARSB                             pmax    pmax
       comp=Z,16nm,1.0s
DRK    Karamyk           55.75 311   P   P       19 09 40.4 +0.9
DRK                              IAmb    IAmb    19 09 42.3
       comp=Z,36nm,1.0s
DRK    Karamyk           55.75 311   P   P       19 09 40.4 +0.9
DRK                              pmax    pmax
       comp=Z,36nm,1.0s
KURK   Kurchatov         55.86 326   P   P       19 09 40.0 +0.5
KURK   Kurchatov         55.86 326   P   P       19 09 40.4 +0.8
KURK                             *PP     sP      19 09 56.1 -1.4
KURK   Kurchatov         55.86 326   P   P       19 09 40.5 +1.0
KURBB  Kurchatov Arra    55.86 326   P   P       19 09 40.4 +0.8
       comp=Z,36nm,0.6s,baz=124,slow=7.3,SNR=320
KURBB                            pP      sP      19 09 56.1 -1.4
       comp=Z,25nm,0.8s,baz=128,slow=6.5,SNR=9.5
KURBB                            LR      LR      19 35 26.2
       comp=Z,199nm,19.5s,baz=153,slow=38
       comp=Z,36nm,0.6s
BTLS   Baital            56.08 318  eP   P       19 09 41.9 +0.6
BTLS   Baital            56.08 318  eP   P       19 09 41.9 +0.6
KBL    Kabul             56.65 305   P   P       19 09 45.6 -0.2
KBL                              IAmb    IAmb    19 09 47.4
       comp=Z,37nm,1.2s
KBL    Kabul             56.65 305   P   P       19 09 45.6 -0.2
KBL                              pmax    pmax
       comp=Z,37nm,1.2s
SEY    Seymchan          56.69  15   LR  LR      19 32 25.0
       comp=Z,105nm,22.0s,baz=202,slow=34
SEY    Seymchan          56.69  15c iP   P       19 09 46.4 +1.1
SEY                              pmax    pmax
       comp=Z,12nm,0.8s
GAR    Garm              56.72 310       P       19 09 46.8 +0.7
DZA    Taraz             57.15 315  eP   P       19 09 49.4 +0.5
DZA    Taraz             57.15 315  eP   P       19 09 49.5 +0.5
SIMJ   Simiganj          57.62 310   P   P       19 09 52.2 -0.3
SIMJ                             IAmb    IAmb    19 09 55.0
       comp=Z,16nm,1.1s
SIMJ   Simiganj          57.62 310   P   P       19 09 52.8 +0.2
SIMJ                             sP      sP      19 10 09.6 -0.8
KK31   Karatay Array     57.79 315       P       19 09 54.0 +0.5
KK31                             IAmb    IAmb    19 10 12.6
       comp=Z,16nm,0.9s
KK31   Karatay Array     57.79 315   P   P       19 09 54.0 +0.5
KK31                             pmax    pmax
       comp=Z,16nm,0.9s
KKAR   Karatay Array     57.79 315   P   P       19 09 54.0 +0.5
KKAR                             PcP     PcP     19 10 45.4 -0.3
KKAR   Karatay Array     57.79 315   P   P       19 09 54.0 +0.5
KKAR                                             19 10 45.4
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IUG	Iuzhnay	57.83	314	*e*P	P	19 09 54.2	+0.4
IUG				pmax	pmax		
	comp=Z,13nm,0.8s						
IUG	Iuzhnay	57.83	314	*e*P	P	19 09 54.3	+0.4
	comp=Z,13nm,0.8s						
CHM	Chimkent	58.18	314	*e*P	P	19 09 56.8	+0.5
CHM				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CHM	Chimkent	58.18	314	*e*P	P	19 09 56.8	+0.5
	comp=Z,5.6nm,0.6s						
BRLS	Borolday	58.23	315	*e*P	P	19 09 57.3	+0.7
BRLS	Borolday	58.23	315	*e*P	P	19 09 57.3	+0.7
BRZS	Berezniki	58.90	323	*e*P	P	19 10 01.7	+0.6
BRZS	Berezniki	58.90	323	*e*P	P	19 10 01.8	+0.6
AMKA	Amchitka	60.60	36		P	19 10 13.4	+0.7
BVA0	Borovoye Array	61.45	326	*i* P	P	19 10 18.3	-0.2
BVAR	Borovoye Array	61.45	326	P	P	19 10 18.9	+0.4
	comp=Z,29nm,0.9s,baz=117,slow=8.5,SNR=90						
BVAR				pP	sP	19 10 35.4	-1.1
	comp=Z,15nm,0.8s,baz=125,slow=7.8,SNR=8.1						
BVAR				PcP	PcP	19 11 00.0	-0.1
	comp=Z,20nm,0.7s,baz=122,slow=4.3,SNR=13						
BVAR				LR	LR	19 38 44.8	
	comp=Z,185nm,21.9s,baz=111,slow=38						
	comp=Z,29nm,0.9s						
BRVK	Borovoye	61.52	326	P	P	19 10 19.0	0.0
BRVK	Borovoye	61.52	326*c*	*i*P	P	19 10 19.5	+0.6
BRVK				pmax	pmax		
	comp=Z,43nm,1.0s						
BRVK	Borovoye	61.52	326	P	P	19 10 19.5	+0.6
BRVK				pP	pP	19 10 32.4	+0.6
TIXI	Tiksi	61.96	1	P	P	19 10 20.6	-0.9
TIXI				IAmb	IAmb	19 10 22.0	
	comp=Z,45nm,1.3s						
TIXI	Tiksi	61.96	1	P	P	19 10 21.4	-0.1
TIXI	Tiksi	61.96	1	P	P	19 10 20.9	-0.6
TIXI				sP	sP	19 10 38.2	-1.7
ADK	Adak	63.11	36	P	P	19 10 29.6	0.0
ADK	Adak	63.11	36	P	P	19 10 29.6	0.0
ADK				pmax	pmax		
	comp=Z,44nm,0.7s						
NRIK	Noril'sk	64.28	346	P	P	19 10 37.0	+0.1
NRIK				IAmb	IAmb	19 10 38.1	
	comp=Z,24nm,1.1s						
NRIK	Noril'sk	64.28	346	P	P	19 10 37.2	+0.2
	comp=Z,12nm,0.8s,baz=132,slow=6.2,SNR=12						
NRIK				LR	LR	19 40 48.9	
	comp=Z,397nm,20.9s,baz=148,slow=38						
	comp=Z,12nm,0.8s						
BILL	Bilibino	64.30	16	P	P	19 10 36.9	-0.2
BILL				IAmb	IAmb	19 10 38.5	
	comp=Z,26nm,0.9s						
BILL	Bilibino	64.30	16	P	P	19 10 37.5	+0.3
BILL	Bilibino	64.30	16	P	P	19 10 37.3	+0.2
BILL				sP	sP	19 10 54.3	-1.2
ATKA	Atka Island	64.67	36		P	19 10 39.8	0.0
ATKA	Atka Island	64.67	36	P	P	19 10 39.9	+0.1
AB31	Akbulak array	66.52	320		P	19 10 51.9	+0.1
AB31	Akbulak array	66.52	320	P	P	19 10 51.1	-0.7
ABKAR	Akbulak array	66.52	320	P	P	19 10 51.8	0.0
ABKAR	Akbulak array	66.52	320		P	19 10 51.9	+0.1
ABKAR				IAmb	IAmb	19 11 21.3	
	comp=Z,11nm,0.8s						
MSFE	Esma-Masafi	66.86	293	P	P	19 10 55.8	+1.3
SHME	Shamm	66.88	294	P	P	19 10 55.6	+1.0
HATD	Hatta, Dubai	66.89	293	P	P	19 10 54.9	+0.2
ASHO	Ashiyiah	66.95	293	P	P	19 10 55.3	+0.2
ALNE	Al Ain	67.24	292	*i* P	P	19 10 57.2	+0.3
	SNR=9.5						
NAZ	Nazwa, Dubai	67.31	293	P	P	19 10 57.3	0.0
ASUD	Al Ashush, Dub	67.62	293	P	P	19 10 59.9	+0.6
AKTO	Aktyubinsk	67.98	321	LR	LR	19 42 43.9	
	comp=Z,284nm,20.8s,baz=106,slow=38						
AKTO	Aktyubinsk	67.98	321	P	P	19 10 59.9	-1.2
NIKH	Nikolski High	68.02	37		P	19 11 00.8	-0.4
NIKH	Nikolski High	68.02	37	P	P	19 11 01.9	+0.7
NIKH	Nikolski High	68.02	37	P	P	19 11 01.1	-0.1
	baz=256,SNR=8.1						
SVE	Sverdlovsk	68.04	328	*de*P	P	19 11 01.6	+0.3
SVE				pmax	pmax		
	comp=Z,71nm,1.1s						
BKZ	Black Stump Fm	68.14	139	P	P	19 11 02.1	-0.2
BKZ				IAmb	IAmb	19 11 24.7	
	comp=Z,13nm,0.7s						
SPIA	Saint Paul Isl	68.33	32	P	P	19 11 02.7	-0.4
	baz=254						
P08K	Saint George I	68.54	33	P	P	19 11 03.8	-0.6
	baz=254						
ARTI	Arti	69.12	327	P	P	19 11 07.5	-0.6
ARTI				IAmb	IAmb	19 11 08.7	
	comp=Z,22nm,0.7s						
ARTI	Arti	69.12	327	LR	LR	19 43 28.7	
	comp=Z,244nm,21.2s,baz=102,slow=38						
ARTI	Arti	69.12	327*c*	*i*P	P	19 11 07.3	-0.8
ARTI						19 11 30.7	
ARTI				S	S	19 20 09.3	-0.8
ARTI				SS	SS	19 24 31.7	-5.0
ARTI				pmax	pmax		
	comp=Z,27nm,0.9s						
ARTI	Arti	69.12	327	P	P	19 11 07.7	-0.4
ARTI				pP	pP	19 11 20.1	-1.1
MZR	Muzera	69.35	291	*i* P	P	19 11 10.8	+0.7
	SNR=7.0						
UNV	Unalaska Valle	69.58	36		P	19 11 10.6	-0.4
UNV	Unalaska Valle	69.58	36	P	P	19 11 11.0	+0.1
	baz=258,SNR=14						
GAMB	Gambell	69.72	25	P	P	19 11 12.6	+1.0
	baz=250						
AKUT	Akutan	70.06	36		P	19 11 13.8	-0.1
AKUT	Akutan	70.06	36	P	P	19 11 14.6	+0.7
M11K	Mekoryuk	71.20	29	P	P	19 11 21.5	+0.8
	baz=256						
FALS	False Pass	71.55	35	P	P	19 11 24.3	+1.4
FALS	False Pass	71.55	35	P	P	19 11 23.0	+0.1
	baz=260						
TNA	Tin City	71.83	24	P	P	19 11 24.2	-0.2
	baz=253						
K13K	Kusilvak Mount	72.29	28	P	P	19 11 27.0	-0.2
K13K				IAmb	IAmb	19 11 29.5	
	comp=Z,42nm,0.9s						
K13K	Kusilvak Mount	72.29	28	P	P	19 11 28.3	+1.1
	baz=257,SNR=12						
F14K	Arctic Creek	72.45	24	P	P	19 11 29.6	+1.5
	baz=254						
S12K	Black Hills	72.45	35	P	P	19 11 27.7	-0.6
	baz=261						
M13K	Dall Lake	72.59	30	P	P	19 11 30.4	+1.4
	baz=259,SNR=11						
ANM	Nome	72.60	25	P	P	19 11 30.0	+0.9
	baz=256						
J14K	Nanvaranak Lak	72.97	27	P	P	19 11 32.3	+1.1
	baz=258,SNR=7.1						
L14K	Kuka Creek	73.09	29		P	19 11 33.1	+1.2
L14K	Kuka Creek	73.09	29	P	P	19 11 33.4	+1.4
	baz=259,SNR=25						
F15K	North Star Dit	73.18	24	P	P	19 11 33.6	+1.1
	baz=256,SNR=7.6						
G15K	Niukluk	73.26	25	P	P	19 11 33.5	+0.6
	baz=257,SNR=12						
SDPT	Sand Point	73.29	35	P	P	19 11 33.9	+0.6
SDPT	Sand Point	73.29	35	P	P	19 11 33.0	-0.2
	baz=263,SNR=7.8						
N14K	Kuskokwak Cree	73.32	30		P	19 11 34.0	+0.6
N14K	Kuskokwak Cree	73.32	30	P	P	19 11 34.4	+1.0
	baz=260,SNR=12						
M14K	Bethel	73.33	29	P	P	19 11 34.7	+1.4
	baz=260,SNR=46						
O14K	Tigyukauivet M	73.42	31	P	P	19 11 34.9	+1.0
	baz=261,SNR=7.9						
C16K	Lisburne Hills	73.58	21	P	P	19 11 35.3	+0.6
C16K	Lisburne Hills	73.58	21	P	P	19 11 35.5	+0.8
	baz=254,SNR=6.4						
L15K	Ungalak Mounta	73.72	28	P	P	19 11 36.6	+0.9
	baz=260,SNR=13						
CHNA	Chernabura Isl	73.73	36	P	P	19 11 36.2	+0.3
CHNA	Chernabura Isl	73.73	36	P	P	19 11 36.1	+0.3
	baz=264,SNR=5.5						
K15K	Wolf Creek Mou	73.80	28	P	P	19 11 37.5	+1.3
	baz=260,SNR=17						
S14K	Fog Glacier	73.92	34	P	P	19 11 36.9	-0.3
	baz=263						
H16K	Elim	73.94	25	P	P	19 11 37.6	+0.7
	baz=258,SNR=9.2						
M15K	Kasigluk River	73.94	30	P	P	19 11 37.7	+0.7
	baz=261,SNR=31						
G16K	Koyuk River	74.04	25	P	P	19 11 38.4	+0.9
	baz=258,SNR=8.6						
AKT	Akhty	74.14	310	*e*P	P	19 11 37.3	-1.4
AKT				*e*		19 11 51.4	
AKT				*e**SP	sP	19 11 55.5	-1.4
AKT				pmax	pmax		
	comp=Z,17nm,1.0s						
AKT				MLR	MLR		
	comp=Z,189nm,21.0s						
O15K	Ungalikthiuk R	74.14	31	P	P	19 11 39.0	+0.8
	baz=262,SNR=12						
N15K	Kwethluk River	74.15	30	P	P	19 11 39.4	+1.1
	baz=262,SNR=21						
D17K	Noatak River	74.26	22	P	P	19 11 40.2	+1.5
	baz=257,SNR=24						
KIRV	Kirov	74.29	328	LR	LR	19 46 42.5	
	comp=Z,321nm,21.9s,baz=96,slow=38						
KIRV	Kirov	74.29	328*c*	*i*P	P	19 11 38.7	-0.3
J16K	Anvik River	74.40	27		P	19 11 40.9	+1.3
J16K				IAmb	IAmb	19 11 42.0	
	comp=Z,45nm,1.1s						
J16K	Anvik River	74.40	27	P	P	19 11 40.9	+1.3
	baz=260,SNR=12						
C17K	DeLong Mountai	74.40	21	P	P	19 11 40.6	+1.0
	baz=256,SNR=9.9						
RDOG	Red Dog Mine	74.40	22	P	P	19 11 40.1	+0.6
RDOG				IAmb	IAmb	19 11 41.1	
	comp=Z,30nm,0.6s						
RDOG	Red Dog Mine	74.40	22	P	P	19 11 40.7	+1.1
	baz=257						
I17K	Unalakleet	74.46	26	P	P	19 11 41.5	+1.6
	baz=260,SNR=10						
CHGN	Chignik	74.55	34	P	P	19 11 40.2	-0.4
CHGN	Chignik	74.55	34	P	P	19 11 40.4	-0.3
	baz=264,SNR=10.0						
E17K	Hotham Inlet	74.60	23	P	P	19 11 41.9	+1.2
	baz=258,SNR=24						
L16K	Owhat River	74.67	29	P	P	19 11 42.4	+1.2
	baz=262,SNR=31						
F17K	Baldwin Pennin	74.69	24	P	P	19 11 42.1	+0.8
	baz=259,SNR=7.8						
BELG	Belogornoye	74.69	322	LR	LR	19 49 07.1	
	comp=Z,58nm,18.6s,baz=92,slow=39						
BELG	Belogornoye	74.69	322*c*	*i*P	P	19 11 41.1	-0.4
BELG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
G17K	Kiwalik Mounta	74.76	25	P	P	19 11 43.0	+1.3
	baz=260,SNR=36						
M16K	Timber Creek	74.82	29	P	P	19 11 43.4	+1.2
	baz=262,SNR=29						
N16K	Nishlik Lake	74.84	30	P	P	19 11 43.8	+1.5
	baz=263,SNR=31						
H17K	Granite Mounta	74.97	25	P	P	19 11 44.2	+1.3
	baz=260,SNR=35						
P16K	Nushagak River	75.06	31	P	P	19 11 44.5	+1.0
	baz=264						
O16K	Kokwok River B	75.07	31	P	P	19 11 44.7	+1.1
	baz=264,SNR=28						
B18K	Kokolik River	75.09	21	P	P	19 11 45.2	+1.7
	baz=258,SNR=7.3						
J17K	VABM Dome	75.09	27	P	P	19 11 45.2	+1.6
	baz=262,SNR=37						
E18K	Tukpahlearik C	75.13	23	P	P	19 11 45.3	+1.5
	baz=259,SNR=32						
C18K	Utukok River	75.15	21	P	P	19 11 44.9	+0.9
	baz=258,SNR=13						
L17K	Donlin	75.28	28	P	P	19 11 46.3	+1.6
	baz=263,SNR=47						
K17K	Iditarod	75.35	28	P	P	19 11 46.7	+1.6
	baz=262,SNR=44						
F18K	Selawik	75.35	24	P	P	19 11 46.0	+1.0
	baz=260,SNR=31						
A19K	Wainwright	75.51	20	P	P	19 11 47.5	+1.6
	baz=258						
O17K	Koliganek Bris	75.60	31	P	P	19 11 47.6	+1.0
	baz=264,SNR=17						
M17K	Holitna River	75.60	29	P	P	19 11 48.3	+1.7
	baz=264,SNR=24						
N17K	Nushagak Hills	75.63	30	P	P	19 11 48.5	+1.7
	baz=264,SNR=25						
G18K	Tagagawik	75.64	24	P	P	19 11 47.5	+0.8
	baz=261,SNR=28						
H18K	Honhosa River	75.65	25	P	P	19 11 47.8	+0.9
	baz=262,SNR=22						
Q16K	King Salmon	75.72	32	P	P	19 11 48.4	+1.1
	baz=265						
R17L	Mt. Peulik Vol	75.79	33	P	P	19 11 48.7	+0.9
	baz=266						
C19K	Lookout Ridge	75.81	21	P	P	19 11 49.4	+1.7
	baz=260,SNR=20						
P17K	Kvichak River	75.88	31	P	P	19 11 49.2	+1.1
	baz=265,SNR=20						
L18K	Granite Mounta	76.04	28	P	P	19 11 50.3	+1.2
L18K				IAmb	IAmb	19 11 51.5	
	comp=Z,37nm,0.9s						
L18K	Granite Mounta	76.04	28	P	P	19 11 50.4	+1.4
	baz=264,SNR=45						
CHIR	Chirikof Islan	76.08	35	P	P	19 11 50.1	+0.7
CHIR	Chirikof Islan	76.08	35	P	P	19 11 50.6	+1.2
	baz=267,SNR=5.9						
Q17K	Contact Creek	76.09	32	P	P	19 11 49.1	-0.5
	baz=266,SNR=11						
F19K	Shaleruckik Mo	76.13	23	P	P	19 11 49.8	+0.4
	baz=262,SNR=18						
J18K	Innoko River	76.16	27	P	P	19 11 50.5	+0.7
	baz=264,SNR=27						
GCSA	Galena City Sc	76.23	26	P	P	19 11 50.9	+0.9
	baz=263,SNR=14						
D19K	Kuna River	76.24	22	P	P	19 11 51.3	+1.1
	baz=261						
N18K	Kilae Creek	76.28	30	P	P	19 11 51.8	+1.3
	baz=265,SNR=14						
G19K	Purcell Mounta	76.31	24	P	P	19 11 51.6	+1.0
	baz=263,SNR=33						
M18K	Stony River	76.38	29	P	P	19 11 52.4	+1.4
	baz=265,SNR=41						
GNI	Garni	76.41	309	P	P	19 11 52.2	+0.4
GNI				IAmb	IAmb	19 12 11.6	
	comp=Z,25nm,1.2s						
GNI	Garni	76.41	309	*de*P	P	19 11 53.5	+1.6
GNI				pmax	pmax		
	comp=Z,11nm,1.1s						
E19K	Redstone River	76.42	23	P	P	19 11 52.4	+1.2
	baz=262						
H19K	Roundabout Mou	76.50	25	P	P	19 11 53.0	+1.5
	baz=264,SNR=95						
CASY	Casey	76.50	186	P	P	19 11 51.1	-0.4
P18K	Big Mountain,	76.51	31	P	P	19 11 52.0	+0.1
	baz=266						
O18K	Koktuh Hills	76.55	31	P	P	19 11 53.3	+1.2
	baz=266,SNR=37						
Q18K	Katmai Hardscr	76.58	32	P	P	19 11 52.0	-0.4
	baz=266,SNR=7.1						
RAYN	Ar Rayn	76.64	292	P	P	19 11 53.0	-0.3
RAYN				IAmb	IAmb	19 11 55.0	
	comp=Z,32nm,1.0s						
RAYN	Ar Rayn	76.64	292	P	P	19 11 53.8	+0.5
RAYN	Ar Rayn	76.64	292	*i* P	P	19 11 53.7	+0.3
	SNR=29						
J19K	Poorman	76.69	26	P	P	19 11 53.8	+1.1
	baz=265,SNR=30						
B20K	Meade River	76.80	20	P	P	19 11 54.6	+1.4
	baz=262,SNR=18						
R18K	Karluk	76.81	33	P	P	19 11 53.2	-0.3
	baz=267						
D20K	Etivluk River	76.81	22	P	P	19 11 54.5	+1.1
	baz=263						
L19K	White Mountain	76.89	28	P	P	19 11 55.2	+1.2
	baz=266,SNR=41						
E20K	Nigu River	76.91	22	P	P	19 11 55.1	+1.0
	baz=263,SNR=38						
SII	Sitkinak Islan	76.92	34	P	P	19 11 55.2	+1.0
	baz=268						
F20K	Avaraart Lake	76.95	23	P	P	19 11 55.4	+1.3
	baz=264,SNR=46						
N19K	Bonanza Creek	76.97	30	P	P	19 11 55.9	+1.4
	baz=266,SNR=31						
O19K	Port Alsworth	77.02	30	P	P	19 11 55.5	+0.9
	baz=267						
M19K	Big River Lodg	77.09	29	P	P	19 11 56.3	+1.3
	baz=266						
H20K	Anotleneega Mo	77.14	25	P	P	19 11 56.5	+1.2
	baz=265,SNR=116						
A21K	Barrow	77.16	19	P	P	19 11 56.3	+1.1
	baz=262						
NCK	Nalchik	77.19	312⇓	*e*P	P	19 11 56.6	+0.6
NCK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
I20K	Naaghedeneel	77.25	26	P	P	19 11 57.3	+1.4
	baz=266,SNR=13						
Q19K	Cape Douglas,	77.30	32	P	P	19 11 56.0	-0.3
	baz=268						
K20K	Telida	77.33	27	P	P	19 11 57.7	+1.3
	baz=266,SNR=29						
J20K	Nowinta River	77.35	26	P	P	19 11 57.8	+1.4
	baz=266,SNR=48						
L20K	Farewell, AK	77.36	28	P	P	19 11 57.7	+1.1
	baz=267,SNR=14						
OHAK	Old Harbor	77.43	33		P	19 11 57.5	+0.5
OHAK				IAmb	IAmb	19 11 58.6	
	comp=Z,42nm,0.9s						
OHAK	Old Harbor	77.43	33	P	P	19 11 57.7	+0.7
OHAK	Old Harbor	77.43	33	P	P	19 11 57.8	+0.7
	baz=268,SNR=16						
C21K	Knifeblade Rid	77.52	21	P	P	19 11 58.5	+1.1
	baz=264,SNR=8.0						
P19K	Oil Pt	77.54	31	P	P	19 11 58.2	+0.6
	baz=268						
B21K	Ikpikpuk River	77.63	21	P	P	19 11 59.2	+1.4
	baz=264,SNR=30						
IMAR	Indian Mountai	77.65	24	P	P	19 11 58.7	+0.6
A22K	Sinclair Lake	77.65	19	P	P	19 11 59.3	+1.3
	baz=264						
M20K	Styx River	77.68	29	P	P	19 11 59.8	+1.3
	baz=267,SNR=30						
KBZ	Khabaz	77.69	313	P	P	19 11 57.3	-1.4
	comp=Z,4.6nm,0.8s,baz=159,slow=4.2,SNR=6.2						
	comp=Z,4.6nm,0.8s						
KBZ	Khabaz	77.69	313	*de*P	P	19 11 58.4	-0.3
KBZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
E21K	Killik River	77.75	22	P	P	19 11 59.5	+0.8
	baz=265,SNR=38						
G21K	Allakaket	77.78	24	P	P	19 12 00.0	+1.2
	baz=266						
KDAK	Kodiak Island	77.82	33	P	P	19 11 59.3	+0.1
KDAK	Kodiak Island	77.82	33	LR	LR	19 44 46.2	
	comp=Z,110nm,19.8s,baz=250,slow=34						
KDAK	Kodiak Island	77.82	33*c*	*i*P	P	19 11 59.7	+0.5
KDAK				pmax	pmax		
	comp=Z,40nm,0.9s						
KDAK	Kodiak Island	77.82	33	P	P	19 11 59.9	+0.7
	baz=269						
KIV	Kislovodsk	77.84	313	P	P	19 11 59.7	0.0
KIV				IAmb	IAmb	19 12 02.0	
	comp=Z,26nm,0.6s						
KIV	Kislovodsk	77.84	313	⇑P	P	19 11 59.9	+0.1
KIV	Kislovodsk	77.84	313	*e*P	P	19 11 59.7	0.0
KIV				pmax	pmax		
	comp=Z,22nm,1.0s						
KIV	Kislovodsk	77.84	313	*i* P	P	19 12 00.7	+0.9
	SNR=5.9						
F21K	Alatna River	77.84	23	P	P	19 11 59.9	+0.7
	baz=266,SNR=12						
O20K	Slope Mountain	77.86	31	P	P	19 11 59.4	-0.1
	baz=268						
Q20K	Shuyak Island	77.94	32	P	P	19 12 00.1	+0.2
	baz=269						
H21K	Melozitna Rive	78.02	25	P	P	19 12 01.5	+1.4
	baz=267,SNR=56						
N20K	Mount Spurr	78.10	29	P	P	19 12 00.9	+0.1
	baz=268						
SPCR	Spurr Chakacha	78.10	29	P	P	19 12 00.8	0.0
	baz=268						
B22K	Teshekpuk Lake	78.10	20	P	P	19 12 01.5	+1.0
	baz=265,SNR=8.9						
CHUM	Lake Minchumin	78.14	27	P	P	19 12 01.8	+1.0
	baz=268,SNR=12						
PPLA	Purkeypile	78.16	28	P	P	19 12 01.2	0.0
PPLA				IAmb	IAmb	19 12 02.8	
	comp=Z,28nm,0.8s						
PPLA	Purkeypile	78.16	28	P	P	19 12 01.8	+0.6
	baz=268						
CAST	Castle Rocks	78.23	27		P	19 12 01.6	+0.2
CAST	Castle Rocks	78.23	27	P	P	19 12 02.2	+0.8
	baz=268						
D22K	Ayikyak River	78.25	22	P	P	19 12 02.6	+1.2
	baz=266,SNR=21						
STLK	Strandline Lak	78.29	29	P	P	19 12 01.0	-0.9
VRH	Novokhopyorsk	78.33	320	*e*P	P	19 12 01.8	-0.3
VRH				pmax	pmax		
	comp=Z,21nm,0.9s						
F22K	John River	78.36	23	P	P	19 12 03.5	+1.4
	baz=267,SNR=60						
SKT	Skwentna	78.44	29	P	P	19 12 02.2	-0.4
SKT				IAmb	IAmb	19 12 03.4	
	comp=Z,34nm,0.9s						
SKT	Skwentna	78.44	29	P	P	19 12 02.2	-0.4
	baz=269,SNR=36						
E22K	Anaktuvuk Pass	78.53	22	P	P	19 12 04.2	+1.2
	baz=267,SNR=31						
GURO	Guroymak-BITLI	78.57	307	P	P	19 12 04.6	+0.7
GURO				IAmb	IAmb	19 12 06.4	
	comp=Z,24nm,0.7s						
G22K	Bettles	78.60	24	P	P	19 12 04.1	+0.8
	baz=268						
CAPN	Captain Cook N	78.61	30	P	P	19 12 04.3	+0.9
	baz=269						
H22K	Ishtalitna Cre	78.61	25	P	P	19 12 05.0	+1.5
	baz=268,SNR=60						
BPAW	Bear Paw Mtn.	78.73	26	P	P	19 12 05.0	+0.8
	baz=269						
SUA	Susitna One	78.81	29	P	P	19 12 04.1	-0.6
SUA	Susitna One	78.81	29	P	P	19 12 04.6	-0.2
	baz=270						
MLY	Manley	78.86	25	P	P	19 12 04.9	+0.1
MLY				IAmb	IAmb	19 12 06.7	
	comp=Z,46nm,0.8s						
MLY	Manley	78.86	25	P	P	19 12 05.8	+0.9
	baz=269						
D23K	Nanushuk River	78.98	21	P	P	19 12 07.0	+1.5
	baz=268,SNR=28						
C23K	Itkillik River	79.03	21	P	P	19 12 06.6	+0.9
	baz=268,SNR=23						
TRF	Thorofare Moun	79.03	27	P	P	19 12 05.8	-0.2
TRF				IAmb	IAmb	19 12 07.1	
	comp=Z,45nm,0.8s						
TRF	Thorofare Moun	79.03	27	P	P	19 12 06.1	+0.1
	baz=270,SNR=32						
CUT	Chulitna	79.04	28	P	P	19 12 06.7	+0.9
	baz=270						
M22K	Willow	79.11	29	P	P	19 12 06.1	-0.1
	baz=270,SNR=11						
COLD	Coldfoot	79.12	23	P	P	19 12 07.4	+1.2
	baz=269						
G23K	Bananza Creek	79.18	24	P	P	19 12 08.0	+1.4
	baz=269,SNR=57						
RC01	Rabbit Creek A	79.30	30	P	P	19 12 07.0	-0.3
	baz=270,SNR=18						
O22K	Cooper Landing	79.31	30	P	P	19 12 07.4	+0.1
	baz=271						
E23K	Chandalar	79.35	22	P	P	19 12 09.1	+1.5
	baz=269,SNR=69						
H23K	Yukon River	79.37	25	P	P	19 12 08.9	+1.3
	baz=270,SNR=55						
TOLK	Toolik Lake Re	79.38	22	P	P	19 12 08.4	+0.7
TOLK	Toolik Lake Re	79.38	22	P	P	19 12 08.9	+1.2
	baz=269,SNR=47						
KLMR	Klimovskoe	79.42	330	*e*P	P	19 12 06.1	-1.8
KLMR				pmax	pmax		
	comp=Z,104nm,1.5s						
I23K	Minto, Yukon-K	79.44	25	P	P	19 12 08.9	+0.9
	baz=270,SNR=61						
SEW	Seward	79.45	31	P	P	19 12 07.6	-0.5
SEW				IAmb	IAmb	19 12 09.2	
	comp=Z,66nm,1.2s						
SEW	Seward	79.45	31	P	P	19 12 08.3	+0.3
	baz=271,SNR=12						
NEA2	Nenana	79.57	26	P	P	19 12 08.7	0.0
	baz=270,SNR=58						
PMR	Palmer	79.58	29	P	P	19 12 08.9	+0.1
PMR	Palmer	79.58	29	P	P	19 12 08.7	-0.1
	baz=271,SNR=16						
MCK	McKinley	79.64	27	P	P	19 12 09.3	+0.1
	baz=271,SNR=46						
D24K	Happy Valley	79.65	21	P	P	19 12 10.3	+1.3
	baz=270,SNR=23						
C24K	Franklin Bluff	79.70	21	P	P	19 12 10.2	+0.9
	baz=270						
E24K	Your Creek	79.78	22	P	P	19 12 11.1	+1.2
	baz=270,SNR=48						
WAT1	Susitna Watana	79.83	28	P	P	19 12 10.0	-0.2
	baz=271						
VORD	Divnogorie	79.86	320	*e*P	P	19 12 07.5	-3.0
VORD				pmax	pmax		

	comp=Z,10.0nm,0.9s						
VORR	Voronezh	79.88	321	P	P	19 12 10.7	+0.1
VORR				pmax	pmax		
	comp=Z,22nm,0.8s						
KNK	Knik Glacier	79.91	29	P	P	19 12 11.0	+0.4
	baz=272						
VSR	Storozhevoye	79.93	320	*e*P	P	19 12 07.3	-3.6
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
RAR	Rarotonga	79.94	114	LR	LR	19 46 15.2	
	comp=Z,89nm,19.0s,baz=267,slow=35						
PWL	Port Wells	79.99	30	P	P	19 12 11.0	-0.1
PWL	Port Wells	79.99	30	P	P	19 12 11.4	+0.4
	baz=272						
WRH	Wood River Hil	80.00	26	P	P	19 12 11.0	0.0
WRH				IAmb	IAmb	19 12 12.1	
	comp=Z,51nm,1.4s						
SOC	Sochi	80.01	313	*e*P	P	19 12 10.0	-1.5
SOC				*e*		19 15 09.8	
SOC				*e*S	S	19 22 10.8	-1.4
SOC				*e*SS	SS	19 27 20.2	-2.5
SOC				*e*SSS	SSS	19 30 45.5	
LPSR	Galich'ya Gora	80.01	322	*e*P	P	19 12 10.8	-0.5
LPSR				pmax	pmax		
	comp=Z,31nm,1.0s						
F24K	Squaw Lake	80.01	23	P	P	19 12 12.6	+1.5
	baz=271,SNR=90						
H24K	Noodor Dome	80.05	25	P	P	19 12 12.4	+1.1
	baz=271,SNR=54						
COLA	College	80.09	26	P	P	19 12 10.7	-0.7
COLA				IAmb	IAmb	19 12 12.4	
	comp=Z,19nm,0.7s						
COLA	College	80.09	26	P	P	19 12 12.4	+1.0
COLA	College	80.09	26	*c i*P	P	19 12 11.0	-0.4
COLA				pmax	pmax		
	comp=Z,14nm,0.9s						
COLA	College	80.09	26	P	P	19 12 11.7	+0.3
	baz=272						
CCB	Clear Creek Bu	80.11	26	P	P	19 12 11.4	-0.2
CCB				IAmb	IAmb	19 12 12.6	
	comp=Z,16nm,0.6s						
G24K	Hadweenzic Riv	80.19	24	P	P	19 12 13.2	+1.1
	baz=272,SNR=60						
WAT6	Susitna Watana	80.21	28	P	P	19 12 12.7	+0.3
	baz=272,SNR=79						
M23K	Glacier View	80.25	29	P	P	19 12 12.5	+0.1
	baz=272,SNR=18						
DHY	Denali Highway	80.36	27		P	19 12 12.6	-0.6
DHY				IAmb	IAmb	19 12 14.6	
	comp=Z,18nm,0.6s						
DHY	Denali Highway	80.36	27	P	P	19 12 13.1	-0.1
	baz=272,SNR=29						
SCM	Sheep Creek Mo	80.43	29	P	P	19 12 13.7	+0.2
SCM	Sheep Creek Mo	80.43	29	P	P	19 12 13.7	+0.2
SCM				pmax	pmax		
	comp=Z,77nm,0.9s						
SCM	Sheep Creek Mo	80.43	29	P	P	19 12 14.1	+0.6
	baz=272,SNR=30						
P23K	Montague Islan	80.48	31	P	P	19 12 14.4	+0.7
	baz=273						
HDA	Harding Lake	80.49	26	P	P	19 12 12.9	-0.8
	baz=272,SNR=50						
ILAR	Eielson Array	80.50	26	P	P	19 12 12.2	-1.5
ILAR	Eielson Array	80.50	26	P	P	19 12 12.4	-1.3
	comp=Z,13nm,0.6s,baz=246,slow=4.8,SNR=145						
ILAR				LR	LR	19 46 35.6	
	comp=Z,50nm,21.6s,baz=268,slow=35						
	comp=Z,13nm,0.6s						
D25K	Kavik River	80.52	21	P	P	19 12 14.6	+0.8
	baz=272,SNR=43						
GLI	Glacier Island	80.59	30	P	P	19 12 14.7	+0.4
	baz=273,SNR=30						
MOS	Moscow	80.61	325	*e*P	P	19 12 12.6	-1.8
MOS				*e*		19 12 27.4	
MOS				pmax	pmax		
	comp=Z,30nm,0.9s						
G25K	Bearman Lake	80.74	24	P	P	19 12 16.4	+1.5
	baz=273,SNR=33						
E25K	Arctic Village	80.87	22	P	P	19 12 17.2	+1.5
	baz=273,SNR=25						
F25K	Christian Rive	80.87	23	P	P	19 12 17.3	+1.6
	baz=273,SNR=38						
H25L	Birch Creek	80.88	24	P	P	19 12 17.2	+1.5
	baz=273,SNR=38						
FID	Port Fidalgo	80.90	30	P	P	19 12 15.5	-0.5
FID				IAmb	IAmb	19 12 17.4	
	comp=Z,27nm,0.8s						
HIN	Hinchinbrook I	80.91	30		P	19 12 15.8	-0.2
HIN				IAmb	IAmb	19 12 17.2	
	comp=Z,29nm,0.7s						
M24K	Tolsona, Glenn	80.96	28	P	P	19 12 17.5	+1.2
	baz=274,SNR=22						
C26K	Camden Bay	81.00	20	P	P	19 12 18.1	+1.8
	baz=273						
K24K	Donnelly Dome	81.04	27	P	P	19 12 16.7	+0.1
	baz=274,SNR=11						
Q23K	Middleton Isla	81.05	31	P	P	19 12 16.8	+0.1
	baz=274						
KLU	Klutina	81.12	29	P	P	19 12 17.8	+0.6
	baz=274,SNR=19						
J25K	Salcha River,	81.16	26	P	P	19 12 16.4	-0.9
	baz=274,SNR=36						
PAX	Paxson	81.23	28	P	P	19 12 17.9	+0.1
PAX				IAmb	IAmb	19 12 20.9	
	comp=Z,27nm,0.7s						
PAX	Paxson	81.23	28	P	P	19 12 17.9	+0.1
PAX				pmax	pmax		
	comp=Z,27nm,0.7s						
PAX	Paxson	81.23	28	P	P	19 12 18.4	+0.6
	baz=274,SNR=55						
LVZ	Lovozero	81.24	337	P	P	19 12 16.8	-0.9
LVZ	Lovozero	81.24	337	P	P	19 12 16.8	-0.9
LVZ				pmax	pmax		
	comp=Z,181nm,1.9s						
OBN	Obninsk	81.25	324	P	P	19 12 17.1	-0.7
OBN	Obninsk	81.25	324	LR	LR	19 51 04.8	
	comp=Z,195nm,19.3s,baz=340,slow=38						
OBN	Obninsk	81.25	324	*d i*P	P	19 12 17.7	-0.1
OBN				*i*		19 12 34.1	
OBN				*e*		19 15 25.9	
OBN				pmax	pmax		
	comp=Z,24nm,1.3s						
OBN				MLR	MLR		
	comp=Z,234nm,21.0s						
EYAK	Cordova Ski Ar	81.27	30	P	P	19 12 18.9	+1.0
EYAK	Cordova Ski Ar	81.27	30	P	P	19 12 18.6	+0.8
	baz=274,SNR=6.1						
BMAR	Burnt Mountain	81.29	23	P	P	19 12 19.1	+1.1
ARPR	Arapgir-MALATY	81.41	308	P	P	19 12 19.7	+0.4
ARPR				IAmb	IAmb	19 12 29.5	
	comp=Z,21nm,1.0s						
HARP	HAARP	81.42	28	P	P	19 12 19.5	+0.8
	baz=274						
F26K	Sheenjek River	81.44	23	P	P	19 12 20.2	+1.5
	baz=274,SNR=23						
C27K	Jago River	81.44	21	P	P	19 12 20.0	+1.3
	baz=274,SNR=16						
RIDG	Independent Ri	81.46	27		P	19 12 18.9	0.0
RIDG	Independent Ri	81.46	27	P	P	19 12 19.2	+0.3
	baz=274,SNR=63						
G26K	Porcupine Rive	81.64	23	P	P	19 12 21.1	+1.4
	baz=275,SNR=46						
APA	Apatity	81.74	337	⇓*i*P	P	19 12 17.4	-2.8
APA				pmax	pmax		
	comp=Z,19nm,1.0s						
APA				MLR	MLR		
	comp=Z,600nm,18.0s						
N25K	Chitina, Valde	81.75	29	P	P	19 12 21.3	+0.7
	baz=275,SNR=33						
ABPO	Ambohimpanom	81.77	249	P	P	19 12 20.6	-0.9
ABPO				IAmb	IAmb	19 14 01.6	
	comp=Z,73nm,1.9s						
ABPO	Ambohimpanom	81.77	249	P	P	19 12 20.6	-0.9
ABPO				pmax	pmax		
	comp=Z,73nm,1.9s						
BMRM	Bremner River	81.80	30	P	P	19 12 21.3	+0.6
BMRM				IAmb	IAmb	19 12 23.2	
	comp=Z,37nm,0.9s						
BMRM	Bremner River	81.80	30	P	P	19 12 21.4	+0.6
	baz=275,SNR=18						
SCRK	Sand Creek	81.82	26	P	P	19 12 21.0	+0.1
	baz=275,SNR=36						
J26L	Joseph Creek	81.95	26	P	P	19 12 21.6	+0.1
	baz=275,SNR=34						
KAIM	Kayak Island	81.99	31		P	19 12 22.7	+1.1
KAIM	Kayak Island	81.99	31	P	P	19 12 22.8	+1.1
	baz=275,SNR=15						
MENT	Mentasta	82.03	27	P	P	19 12 23.5	+1.6
I26K	Coal Creek Min	82.05	25	P	P	19 12 22.1	+0.2
	baz=276						
L26K	Log Cabin Wild	82.19	27	P	P	19 12 23.6	+0.9
	baz=276,SNR=19						
E27K	Coleen River	82.35	22	P	P	19 12 24.8	+1.3
	baz=277,SNR=52						
M26K	Nabesna, AK	82.42	28	P	P	19 12 24.9	+0.9
	baz=276,SNR=40						
D27M	Malcolm River	82.45	21	P	P	19 12 25.4	+1.4
	baz=277,SNR=46						
G27K	Doyon Strip	82.49	24	P	P	19 12 25.6	+1.3
	baz=277,SNR=33						
GAZ	Gaziantep	82.49	306		P	19 12 25.1	+0.2
GAZ				IAmb	IAmb	19 12 26.8	
	comp=Z,24nm,0.9s						
MCARA	McCarthy VSAT	82.52	29	P	P	19 12 25.2	+0.8
	baz=276						
CRQE	Cirque	82.56	30	P	P	19 12 25.6	+0.7
	baz=276						
H27K	Steamboat Moun	82.61	24	P	P	19 12 26.2	+1.4
	baz=277,SNR=30						
K27K	Chicken	82.65	26	P	P	19 12 26.7	+1.7
	baz=277						
I27K	Kandik River	82.65	25	P	P	19 12 26.4	+1.3
	baz=277,SNR=102						
VOI	Vohitsoka	82.82	246	P	P	19 12 26.1	-0.8
VOI				IAmb	IAmb	19 14 10.6	
	comp=Z,50nm,1.5s						
L27K	Beaver Creek,	82.88	27	P	P	19 12 27.7	+1.3
	baz=277,SNR=70						
VADS	Vadso	82.89	340	*e*P	P	19 12 26.4	+0.2
BCAR	Beaver Creek A	82.90	27	P	P	19 12 27.4	+1.0
M27K	Edge Creek, AK	82.94	28	P	P	19 12 27.9	+1.1
	baz=277,SNR=32						
E28M	Babbage River	83.05	22	P	P	19 12 28.4	+1.3
	baz=279,SNR=54						
F28M	Old Crow	83.07	23	P	P	19 12 28.4	+1.2
	baz=278,SNR=87						
MESA	MESA	83.19	30	P	P	19 12 29.5	+1.3
	baz=277						
GRNC	Granite Creek	83.21	30	P	P	19 12 29.0	+0.7
GRNC				IAmb	IAmb	19 12 30.5	
	comp=Z,35nm,0.7s						
D28M	Stokes Point	83.22	21	P	P	19 12 29.1	+1.2
	baz=279						
BNN	Bunyan	83.36	308		P	19 12 29.3	-0.2
BNN				IAmb	IAmb	19 12 34.0	
	comp=Z,29nm,1.0s						
I28M	Miner Creek	83.37	25	P	P	19 12 30.4	+1.5
	baz=279,SNR=99						
CTG	Chitna Glacier	83.38	29	P	P	19 12 30.6	+1.5
	baz=278						
BVCY	Beaver Creek	83.41	28	P	P	19 12 30.4	+1.3
	baz=278,SNR=10						
TABL	Table Mountain	83.55	30	P	P	19 12 30.7	+0.6
E29M	Blow River	83.68	22	P	P	19 12 31.2	+0.9
	baz=280,SNR=34						
YUK3	Moose Creek	83.69	28	P	P	19 12 31.9	+1.1
	baz=278,SNR=31						
KEV	Kevo	83.75	340	P	P	19 12 30.0	-0.6
KEV	Kevo	83.75	340	P	P	19 12 30.0	-0.6
KEV				pmax	pmax		
	comp=Z,188nm,2.0s						
DAWY	Dawson	83.81	26	P	P	19 12 31.9	+0.8
DAWY				IAmb	IAmb	19 12 33.3	
	comp=Z,43nm,0.9s						
DAWY	Dawson	83.81	26	P	P	19 12 32.3	+1.2
	baz=279,SNR=43						
SIM	Simferopol'	83.88	314	*e*P	P	19 12 32.4	+0.6
SIM				pmax	pmax		
	comp=Z,31nm,0.9s						
H29M	Whitestone	83.88	24	P	P	19 12 32.5	+1.1
	baz=280,SNR=54						
G29M	Pine Creek	83.89	23	P	P	19 12 32.5	+1.1
	baz=280,SNR=83						
O28M	Mount Upton	83.97	29	P	P	19 12 33.6	+1.4
	baz=279,SNR=23						
PINM	Pinnacle	84.04	30	P	P	19 12 33.8	+1.4
	baz=279						
I29M	Ogilvie Camp,	84.05	25	P	P	19 12 33.2	+0.9
	baz=280,SNR=75						
YUK8	Steele Glacier	84.09	29	P	P	19 12 34.3	+1.5
	baz=279,SNR=22						
J29N	Klondike Camp	84.25	26	P	P	19 12 35.1	+1.7
	baz=280,SNR=11						
ARA0	ARCESS Array S	84.31	340	*e*P	P	19 12 33.6	+0.1
ARCES	ARCESS Array B	84.31	340	P	P	19 12 33.2	-0.3
ARCES	ARCESS Array B	84.31	340	P	P	19 12 33.5	0.0
	comp=Z,10nm,0.4s,baz=79,slow=6.1,SNR=98						
ARCES				LR	LR	19 54 33.0	
	comp=Z,108nm,20.5s,baz=70,slow=39						
	comp=Z,10nm,0.4s						
SPA0	Spitsbergen Ar	84.35	349	*e*P	P	19 12 34.4	+0.8
SPITS	Spitsbergen Ar	84.35	349	P	P	19 12 32.8	-0.8
	comp=Z,12nm,0.9s,baz=95,slow=7.6,SNR=8.5						
SPITS				LR	LR	19 55 31.7	
	comp=Z,114nm,19.1s,baz=28,slow=39						
	comp=Z,12nm,0.9s						
SPITS	Spitsbergen Ar	84.35	349	P	P	19 12 33.5	-0.1
SPITS				pmax	pmax		
	comp=Z,61nm,1.4s						
MMAI	Mount Meron Ar	84.48	302	P	P	19 12 35.4	+0.2
	comp=Z,1.8nm,0.6s,baz=82,slow=12,SNR=5.5						
	comp=Z,1.8nm,0.6s						
M29M	Somme Creek	84.50	28	P	P	19 12 36.5	+1.8
	baz=280,SNR=122						
EPYK	Eagle Plains	84.50	24	P	P	19 12 35.0	+0.4
	baz=281,SNR=60						
L29M	L29M	84.53	27	P	P	19 12 36.7	+1.9
	baz=280,SNR=137						
PNL	Peninsula	84.54	30	P	P	19 12 36.6	+1.7
PNL	Peninsula	84.54	30	P	P	19 12 36.3	+1.5
	baz=280						
GHAJ	Ghor Haditha	84.58	301	P	P	19 12 35.7	+0.1
GHAJ				IAmb	IAmb	19 12 37.5	
	comp=Z,25nm,1.2s						
G30M	tAoh Zraii Nji	84.58	23	P	P	19 12 35.2	+0.2
	baz=282,SNR=41						
F30M	Barrier River	84.61	22	P	P	19 12 36.0	+0.9
	baz=282,SNR=51						
YUK4	Talbot Arm	84.61	29	P	P	19 12 37.0	+1.5
	baz=280,SNR=26						
K29M	Barlow Dome	84.66	26	P	P	19 12 36.8	+1.3
	baz=281,SNR=71						
HAMF	Hammerfest	84.67	341	*e*P	P	19 12 35.0	-0.3
KIRS	Kirsehir-Merke	84.82	309	⇑P	P	19 12 36.7	-0.1
YUK6	Outpost Mounta	84.82	29	P	P	19 12 38.0	+1.5
	baz=280,SNR=22						
O29M	Mount Kennedy	84.83	30	P	P	19 12 37.9	+1.4
	baz=280,SNR=7.4						
I30M	Mount Dempster	84.88	25	P	P	19 12 37.4	+0.8
	baz=282,SNR=96						
BR131	Keskin Array S	84.94	309		P	19 12 36.9	-0.6
BR131	Keskin Array S	84.94	309	*c i*P	P	19 12 37.0	-0.6
BRTR	Keskin Array B	84.94	309	P	P	19 12 37.1	-0.4
	comp=Z,5.6nm,0.7s,baz=111,slow=4.4,SNR=32						
	comp=Z,5.6nm,0.7s						
J30M	Hart River	85.03	25	P	P	19 12 38.5	+1.1
	baz=282,SNR=34						
M30M	Minto, Yukon	85.24	27	P	P	19 12 39.9	+1.5
	baz=282						
HYT	Haines Junctio	85.25	29		P	19 12 39.4	+0.8
HYT	Haines Junctio	85.25	29	P	P	19 12 40.0	+1.4
	baz=281,SNR=51						
INK	Inuvik	85.28	21		P	19 12 38.5	+0.1
INK	Inuvik	85.28	21	LR	LR	19 51 48.0	
	comp=Z,46nm,21.8s,baz=286,slow=36						
INK	Inuvik	85.28	21	P	P	19 12 38.5	+0.1
INK				pmax	pmax		
	comp=Z,54nm,0.9s						
INK	Inuvik	85.28	21	P	P	19 12 38.9	+0.5
	baz=284,SNR=37						
N30M	Aishikik Lake	85.33	29	P	P	19 12 40.4	+1.6
	baz=282,SNR=55						
G31M	Satah River	85.34	23	P	P	19 12 38.9	+0.2
	baz=284,SNR=36						
P29M	Windy Craggy	85.37	30	P	P	19 12 40.7	+1.6
	baz=281,SNR=20						
F31M	Tsiigehtchic	85.41	22	P	P	19 12 39.3	+0.3
	baz=284,SNR=15						
MAYO	Mayo, Yukon	85.42	26	P	P	19 12 40.0	+0.8
	baz=282						
H31M	Peel River	85.57	24	P	P	19 12 40.3	+0.3
	baz=284,SNR=44						
P30M	Million Dollar	85.66	30	P	P	19 12 41.7	+1.2
	baz=282						
FIA1	FINESS Array S	85.82	332		P	19 12 40.7	-0.4
FINES	FINESS Array B	85.82	332	P	P	19 12 40.4	-0.8
FINES	FINESS Array B	85.82	332	P	P	19 12 41.0	-0.2
	comp=Z,17nm,0.7s,baz=78,slow=4.6,SNR=94						
	comp=Z,17nm,0.7s						
CSS	Mathiatis	85.90	305		P	19 12 42.2	0.0
CSS				IAmb	IAmb	19 12 43.5	
	comp=Z,20nm,0.8s						
N31M	Braeburn, Yuko	85.94	28	P	P	19 12 43.4	+1.5
	baz=283,SNR=35						
O30N	Mendenhall	85.94	29	P	P	19 12 43.1	+1.2
	baz=282,SNR=22						
JETT	Jettan, Norway	86.04	340	*e*P	P	19 12 41.8	-0.4
PLBC	Pleasant Camp	86.09	30	P	P	19 12 43.6	+1.0
	baz=282,SNR=9.1						
VSU	Vasula	86.13	329	*d i*P	P	19 12 41.7	-1.1
VSU				pmax	pmax		
	comp=Z,28nm,0.9s						
AKASG	Malin Array Be	86.23	321	P	P	19 12 42.8	-0.7
AKASG				IAmb	IAmb	19 12 44.3	
	comp=Z,26nm,1.1s						
AKASG	Malin Array Be	86.23	321	P	P	19 12 42.8	-0.7
	comp=Z,21nm,0.9s,baz=68,slow=4.6,SNR=46						
	comp=Z,21nm,0.9s						
AKBB	Malin Array Si	86.23	321	*d i*P	P	19 12 43.1	-0.4
KIEV	Kiev	86.24	321	P	P	19 12 42.8	-0.7
KIEV				IAmb	IAmb	19 12 44.5	
	comp=Z,30nm,1.0s						
KIEV	Kiev	86.24	321	P	P	19 12 42.8	-0.7
KIEV				pmax	pmax		
	comp=Z,30nm,1.0s						
KIEV	Kiev	86.24	321	*i* P	P	19 12 43.0	-0.5
	SNR=20						
MNK	Minsk	86.31	325	*i* P	P	19 12 42.5	-1.3
	comp=E,15nm,1.0s						
MNK				*i* P	P	19 12 42.5	-1.3
	comp=N,10.0nm,1.0s						
MNK				*i* P	P	19 12 42.5	-1.3
	comp=Z,16nm,1.0s,baz=78						
MNK				*i* pP	pP	19 12 57.1	-0.2
MNK				*i* sP	sP	19 13 02.9	+0.6
MNK				*i* PP	PP	19 16 14.4	+9.5
MNK				*i* PPP	PPP	19 18 02.9	
MNK				*i* SKS	S	19 22 37.4	-38
MNK				*i* S	SKSac	19 23 03.7	-2.6
MNK				*i* sS	pS	19 23 29.7	-3.2
MNK				*i* PS	PnS	19 23 48.4	-30
MNK				*i* SS	SS	19 29 08.6	+13
MNK				*i* SSS	SSS	19 31 32.4	
MNK				*i* LQ	LQ	19 46 19.4	
MNK				*i* LRM	MLR	19 53 09.4	
	comp=E,104nm,19.1s						
MNK				*i* LRM	MLR	19 53 27.1	
	comp=Z,235nm,19.1s						
MNK				*i* LRM	MLR	19 53 30.8	
	comp=N,134nm,18.8s						
MNK	Minsk	86.31	325	*i* P	P	19 12 42.4	-1.3
MNK				*i* *PP	pP	19 12 57.0	-0.2
MNK				*i* *SP	sP	19 13 02.9	+0.6
MNK				*i* PPP	PPP	19 18 02.8	
MNK				*i* S	SKSac	19 23 03.6	-2.6
MNK				pmax	pmax		
	comp=E,15nm,1.0s						
MNK				pmax	pmax		
	comp=N,10.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,16nm,1.0s						
MNK				MLR	MLR		
	comp=E,104nm,19.0s						
MNK				MLR	MLR		
	comp=Z,235nm,19.0s						
MNK				MLR	MLR		
	comp=N,134nm,19.0s						
M31M	Drury Creek, Y	86.41	27	P	P	19 12 45.2	+1.0
	baz=284,SNR=13						
WHY	Whitehorse	86.55	29		P	19 12 45.6	+0.6
WHY	Whitehorse	86.55	29	P	P	19 12 46.1	+1.1
	baz=284,SNR=37						
PURM	Purcari	86.57	316	⇑P	P	19 12 45.1	-0.1
SKAG	Skagway	86.61	30	P	P	19 12 46.1	+1.0
SKAG	Skagway	86.61	30	P	P	19 12 46.3	+1.2
	baz=283,SNR=6.9						
A36M	Sachs Harbour	86.84	17	P	P	19 12 46.6	+0.6
	baz=292,SNR=8.5						
NACGM	Naroch	86.85	325	*e*P	P	19 12 47.1	+0.7
	comp=Z,14nm,0.8s,baz=77						
FARO	Faro, Yukon	86.88	27	P	P	19 12 47.8	+1.3
	baz=285						
SIT	Sitka	87.16	33	P	P	19 12 48.9	+1.1
	baz=283						
N32M	Quiet Lake	87.28	28	P	P	19 12 49.5	+1.1
	baz=285						
SORM	Soroca	87.28	318	⇑P	P	19 12 48.3	-0.3
SORM	Soroca	87.28	318	P	P	19 12 48.3	-0.3
R32K	Eaglecrest	87.30	31	P	P	19 12 49.6	+1.1
	baz=284						
P32M	Atlin	87.38	30	P	P	19 12 49.9	+0.9
	baz=284						
KIBK	Kibwezi	87.40	267	P	P	19 12 50.1	+0.1
KIBK				IAmb	IAmb	19 12 52.3	
	comp=Z,22nm,1.2s						
S32K	Killisnoo	87.46	32	P	P	19 12 50.3	+1.0
	baz=284						
TLCR		87.54	315	⇓P	P	19 12 49.2	-0.8
TLCR		87.54	315	P	P	19 12 49.1	-0.8
P33M	Teslin, Yukon	87.65	29	P	P	19 12 50.9	+0.6
	baz=285						
MMPY	Sheldon Lake,	87.71	27	P	P	19 12 51.5	+1.0
	baz=286,SNR=12						
TIRR	Tirgusor	87.97	315	P	P	19 12 51.3	-0.7
TIRR				IAmb	IAmb	19 16 10.1	
	comp=Z,38nm,1.5s						
TIRR	Tirgusor	87.97	315	P	P	19 12 51.3	-0.7
TIRR				pmax	pmax		
	comp=Z,38nm,1.5s						
KMBO	Kilima Mbogo	87.98	269	P	P	19 12 53.4	+0.4
KMBO				IAmb	IAmb	19 12 55.2	
	comp=Z,18nm,1.0s						
KMBO	Kilima Mbogo	87.98	269	P	P	19 12 53.4	+0.4
KMBO				pmax	pmax		
	comp=Z,18nm,1.0s						
KMBO	Kilima Mbogo	87.98	269	*i* P	P	19 12 54.2	+1.2
	SNR=12						
CFR	Carcaliu	88.02	315	⇑P	P	19 12 51.6	-0.6
CFR	Carcaliu	88.02	315	P	P	19 12 51.6	-0.6
Q32M	Nakina River	88.26	30	P	P	19 12 54.3	+0.9
	baz=286						
STEI	Steigen	88.36	339	*e*P	P	19 12 52.1	-1.2
FAUS	Fauske	88.55	339	*e*P	P	19 12 53.0	-1.2
PPT	Papeete	88.56	108	LR	LR	19 44 46.4	
	comp=Z,65nm,21.3s,baz=332,slow=30						
PPT2	Papeete2	88.56	108	*e*LR	LR	19 40 45.4	
	comp=Z,168nm,28.5s						
PPT2				*e*LR	LR	19 41 05.0	
	comp=Z,192nm,27.2s						
U33K	Whale Pass	88.58	33	P	P	19 12 55.1	+0.5
	baz=285						
MAW	Mawson	88.73	200	P	P	19 12 53.4	-1.6
	comp=Z,2.1nm,1.0s,baz=328,slow=15,SNR=2.2						
	comp=Z,2.1nm,1.0s						
CRAG	Craig	88.74	34	P	P	19 12 56.2	+0.8
	baz=285						
TESR	Tescani	88.75	317	⇑P	P	19 12 55.1	-0.6
R33M	Jennings River	88.78	30	P	P	19 12 56.8	+1.1
	baz=287,SNR=8.9						
VRI	Vrincioaia	88.84	316	⇑P	P	19 12 56.6	+0.4
VRI	Vrincioaia	88.84	316	P	P	19 12 56.5	+0.4
PLOR	Plostina	88.90	316	⇑P	P	19 12 55.7	-0.7
PLOR	Plostina	88.90	316	P	P	19 12 55.7	-0.7
WRAK	Wrangell Islan	88.91	33	P	P	19 12 56.6	+0.5
	baz=286						
LODK	Lodwar	89.09	273	P	P	19 12 57.7	-0.3
SUW	Suwalki	89.11	325	*e*P	P	19 12 55.8	-1.4
SUW	Suwalki	89.11	325	P	P	19 12 56.4	-0.8
SUW	Suwalki	89.11	325	P	P	19 12 56.4	-0.8
S34M	Telegraph Cree	89.13	31	P	P	19 12 58.0	+0.8
	baz=287						
MOR8	Moi Rana	89.32	338	*e*P	P	19 12 56.1	-1.9
TGTN	Hyland Airport	89.38	27	P	P	19 12 59.3	+0.9
	baz=289,SNR=7.6						
OZUR		89.43	317	⇓P	P	19 12 58.9	0.0
BURAR	Bucovina Array	89.45	318	P	P	19 12 58.7	-0.4
BURAR				IAmb	IAmb	19 13 01.6	
	comp=Z,10nm,0.9s						
BURAR	Bucovina Array	89.45	318	⇓P	P	19 12 58.5	-0.6

BURAR	Bucovina Array	89.45	318	P	P	19 12 58.5	-0.6
BUR08	Bucovina Ar. S	89.46	318		P	19 12 58.7	-0.4
BUR08				IAmb	IAmb	19 13 01.3	
	comp=Z,7.9nm,0.9s						
MLR	Muntele Rosu	89.46	316	P	P	19 12 58.4	-0.8
	comp=Z,4.0nm,0.7s,baz=196,slow=4.4,SNR=7.1						
	comp=Z,4.0nm,0.7s						
MLR	Muntele Rosu	89.46	316	⇑P	P	19 12 59.6	+0.4
MLR	Muntele Rosu	89.46	316	P	P	19 12 59.6	+0.4
VNDA	Vanda	89.51	173	P	P	19 12 58.6	+0.1
VNDA				IAmb	IAmb	19 13 15.4	
	comp=Z,9.3nm,0.8s						
VNDA	Vanda	89.51	173	P	P	19 12 58.3	-0.2
	comp=Z,6.5nm,0.8s,baz=312,slow=6.1,SNR=28						
	comp=Z,6.5nm,0.8s						
VNDA	Vanda	89.51	173	P	P	19 12 58.6	+0.1
VNDA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
DLBC	Dease Lake	89.53	31	LR	LR	19 48 03.2	
	comp=Z,7.3nm,21.7s,baz=260,slow=32						
DLBC	Dease Lake	89.53	31	P	P	19 13 00.0	+0.9
	baz=288,SNR=5.5						
WTLY	Watson Lake, Y	89.60	29	P	P	19 13 00.3	+0.9
	baz=289						
TBI	Tubuai	89.72	114	*e*LR	LR	19 41 38.8	
	comp=Z,1µm,29.8s						
STOK	Stokkvaagen	89.78	338	*e*P	P	19 12 59.0	-1.1
LEIR	Leirfjorden	89.84	338	*e*P	P	19 12 59.0	-1.3
T35M	Bob Quinn	89.86	32	P	P	19 13 01.4	+0.8
	baz=288						
SBA	Scott Base	90.43	172	P	P	19 13 03.8	+1.0
SBA				IAmb	IAmb	19 13 20.8	
	comp=Z,10nm,1.1s						
SBA	Scott Base	90.43	172	P	P	19 13 03.8	+1.0
SBA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KWP	Kalwaria Pacla	90.56	321	*e*P	P	19 13 04.4	+0.3
CJR	Cluj-Napoca	90.75	318	⇓P	P	19 13 05.9	+0.8
CJR	Cluj-Napoca	90.75	318	P	P	19 13 05.8	+0.8
WRGLY	Wrigley	90.85	25	P	P	19 13 05.6	+0.4
	baz=293						
NSS	Namsos	90.93	337	*e*P	P	19 13 05.0	-0.5
KOLS	Kolonicke sedl	91.02	320	*e*P	P	19 13 07.3	+1.0
KOLS				pmax	pmax		
	comp=Z,11nm,1.4s						
KOLS	Kolonicke sedl	91.02	320	*e*P	P	19 13 07.2	+1.0
MARR	Marisel-Cluj	91.08	318	⇑P	P	19 13 06.6	-0.1
STHS	Stebnicka Huta	91.53	321	*e*P	P	19 13 09.5	+0.9
STHS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
STHS	Stebnicka Huta	91.53	321	*e*P	P	19 13 09.5	+0.9
TOAD	Toad River Com	91.75	29	P	P	19 13 09.7	+0.2
	baz=292						
KOTAN	Kotaneelee Air	91.82	28	P	P	19 13 10.1	+0.4
	baz=293						
SURR	Surduc	91.99	317	⇓P	P	19 13 10.8	0.0
HFS	Hagfors	91.99	332	P	P	19 13 09.6	-0.9
	comp=Z,11nm,0.8s,baz=94,slow=4.5,SNR=22						
	comp=Z,11nm,0.8s						
NIE	Niedzica	92.12	321	*e*P	P	19 13 12.0	+0.6
SIRR	Siria	92.16	318	⇑P	P	19 13 11.3	-0.3
OJC	Ojcow	92.19	322	*e*P	P	19 13 11.8	+0.2
OJC	Ojcow	92.19	322		P	19 13 11.3	-0.3
OJC	Ojcow	92.19	322	P	P	19 13 11.3	-0.3
RES	Resolute Bay	92.29	10		P	19 13 11.4	-0.1
RES				IAmb	IAmb	19 13 12.8	
	comp=Z,12nm,1.0s						
RES	Resolute Bay	92.29	10	P	P	19 13 11.4	-0.1
RES				pmax	pmax		
	comp=Z,12nm,1.0s						
NC405	NORSAR Array S	92.48	333		P	19 13 11.3	-1.4
NC405				IAmb	IAmb	19 13 12.7	
	comp=Z,16nm,0.9s						
MDVR	Moldovita	92.53	316	⇑P	P	19 13 12.7	-0.8
BBB	Bella Bella	92.55	36	LR	LR	19 49 21.2	
	comp=Z,41nm,21.7s,baz=310,slow=32						
NC303	NORSAR Array S	92.58	334	P	P	19 13 11.9	-1.3
NC303				IAmb	IAmb	19 13 13.2	
	comp=Z,13nm,1.0s						
LANS	Liptovska Anna	92.72	321	*e*P	P	19 13 15.6	+1.4
LANS				pmax	pmax		
	comp=Z,6.0nm,1.5s						
LANS	Liptovska Anna	92.72	321	*e*P	P	19 13 15.6	+1.4
NB2	NORSAR Subarra	92.73	334	P	P	19 13 12.5	-1.4
	comp=Z,12nm,0.9s,baz=63,slow=4.6						
NB2	NORSAR Subarra	92.73	334	P	P	19 13 12.5	-1.4
	baz=63,slow=4.6						
NOA	NORSAR Array B	92.73	334	P	P	19 13 12.5	-1.4
	comp=Z,5.1nm,0.8s,baz=64,slow=4.7,SNR=20						
NOA				LR	LR	19 58 18.2	
	comp=Z,348nm,21.0s,baz=205,slow=38						
	comp=Z,5.1nm,0.8s						
DOMB	Dombas	93.21	335	*e*P	P	19 13 15.6	-0.5
VYHS	Vyhne	93.32	320	*e*P	P	19 13 17.0	+0.1
VYHS				pmax	pmax		
	comp=Z,8.0nm,1.6s						
VYHS	Vyhne	93.32	320	*e*P	P	19 13 17.0	+0.1
OSL	Oslo	93.43	333	*e*P	P	19 13 16.5	-0.6
STEB	Steborice	93.52	322	*e*P	P	19 13 18.4	+0.7
MOL	Molde	93.58	336	*e*P	P	19 13 17.4	-0.4
MAUC	Maruska	93.67	321	*e*P	P	19 13 19.5	+1.0
MORC	Moravsky Berou	93.71	322		P	19 13 17.9	-0.8
MORC				IAmb	IAmb	19 13 19.4	
	comp=Z,10nm,1.3s						
MORC	Moravsky Berou	93.71	322	*e*P	P	19 13 18.3	-0.5
MORC	Moravsky Berou	93.71	322	⇑P	P	19 13 18.2	-0.5
MORC	Moravsky Berou	93.71	322	P	P	19 13 18.2	-0.5
SRO	Srobarova	93.87	320	*e*P	P	19 13 19.9	+0.5
SRO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SRO	Srobarova	93.87	320	*e*P	P	19 13 19.9	+0.5
JAVC	Velka Javorina	93.94	321	*e*P	P	19 13 20.8	+1.0
AKN	Aaknes	94.00	335	*e*P	P	19 13 19.5	-0.2
KSP	Ksiaz	94.09	323	*e*P	P	19 13 20.6	+0.2
SKAR	Skarslia	94.17	334	*e*P	P	19 13 20.0	-0.6
MORH	Mrgy, Hungar	94.17	318	⇑P	P	19 13 20.9	+0.1
OSTC	Ostas	94.24	323	*e*P	P	19 13 21.8	+0.7
OSTC	Ostas	94.24	323	*e*P	P	19 13 21.8	+0.7
DPC	Dobruska-Polom	94.25	323	*e*P	P	19 13 21.4	+0.2
DPC				AMS	AMS	19 57 10.0	
	comp=Z,200nm,23.1s						
DPC	Dobruska-Polom	94.25	323	*e*P	P	19 13 21.4	+0.2
DPC				MLR	MLR		
	comp=Z,200nm,23.1s						
MBAR	Mbarara	94.31	270	⇓*e*P	P	19 13 22.5	+0.1
MBAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MODS	Modra-Piesok	94.34	320	*e*P	P	19 13 21.7	+0.1
MODS	Modra-Piesok	94.34	320	*e*P	P	19 13 21.7	+0.1
UPC	Upice	94.38	323	*e*P	P	19 13 22.3	+0.6
UPC				AMS	AMS	19 58 40.0	
	comp=Z,200nm,18.8s						
UPC	Upice	94.38	323	*e*P	P	19 13 22.3	+0.6
UPC				MLR	MLR		
	comp=Z,200nm,18.8s						
VRAC	Vranov	94.45	321	P	P	19 13 22.3	+0.2
	comp=Z,11nm,0.9s,baz=81,slow=3.6,SNR=19						
	comp=Z,11nm,0.9s						
VRAC	Vranov	94.45	321	*e*P	P	19 13 22.8	+0.7
VRAC	Vranov	94.45	321	⇓P	P	19 13 22.1	0.0
KRUC	Moravsky	94.66	321	*e*P	P	19 13 23.1	+0.1
YKA	Yellowknife Ar	94.79	24	P	P	19 13 22.8	-0.5
YKA	Yellowknife Ar	94.79	24	P	P	19 13 23.5	+0.2
	comp=Z,7.0nm,0.8s,baz=305,slow=5.2,SNR=55						
	comp=Z,7.0nm,0.8s						
TREC	Trest	95.13	322	*e*P	P	19 13 25.9	+0.7
TREC	Trest	95.13	322	*e*P	P	19 13 25.9	+0.7
RONA	Rosalia, Austr	95.19	320	*i* PcP	P	19 13 25.2	-0.3
	comp=Z,3.9nm,1.2s						
CONA	Conrad Observa	95.39	320	*e*PcP	P	19 13 27.2	+0.7
	comp=Z,4.8nm,1.4s						
PRU	Pruhonice	95.45	323	*e*P	P	19 13 26.9	+0.3
PRU				AMS	AMS	19 59 20.0	
	comp=Z,200nm,19.9s						
PRU	Pruhonice	95.45	323	*e*P	P	19 13 26.9	+0.3
PRU				MLR	MLR		
	comp=Z,200nm,19.9s						
BRG	Berggiesshubel	95.47	324	*e*P	P	19 13 27.0	+0.3
	comp=Z,8.0nm,1.0s,baz=65,slow=4.7						
BRG	Berggiesshubel	95.47	324	*e*P	P	19 13 27.0	+0.3
BRG				Amp		19 13 27.9	
	comp=Z,8.0nm,1.0s						
PRA	Prague	95.48	323	AMS	AMS	19 59 40.0	
	comp=Z,200nm,14.3s						
BLS5	Blasjo	95.59	333	*e*P	P	19 13 26.4	-0.6
ARSA	Arzberg	95.84	320	*e*PcP	P	19 13 29.2	+0.7
	comp=Z,1.3nm,0.5s						
CLL	Collm	95.85	324	*i* P	P	19 13 27.8	-0.6
CLL				pmax	pmax		
	comp=Z,9.0nm,1.2s						
CLL	Collm	95.85	324	*e*P	P	19 13 28.3	-0.1
	comp=Z,11nm,1.4s,baz=65,slow=4.7						
CLL	Collm	95.85	324	*i* P	P	19 13 27.8	-0.6
	comp=Z,9.0nm,1.2s						
CLL				*e*pPP		19 17 34.0	
CLL				*e*PPPP		19 21 12.0	
CLL				*e*PS	PS	19 26 00.0	-7.1
CLL				*e*SS	SS	19 31 12.0	-0.8
CLL				AMS	AMS	19 36 00.0	
	comp=Z,100nm,20.3s						
CLL				*e*x	x	19 38 18.0	
CLL				AMS	AMS	19 59 00.0	
	comp=Z,200nm,21.9s						
ZVC	Zvikov	95.86	322	*e*P	P	19 13 28.8	+0.3
CKRC	Cesky Krumlov	96.03	322	*e*P	P	19 13 29.6	+0.3
CKRC	Cesky Krumlov	96.03	322	*e*P	P	19 13 29.6	+0.3
GORT1	Trebel	96.11	326	*e*P	P	19 13 30.0	+0.6
	comp=Z,21nm,1.2s,baz=65,slow=4.7						
TAOE	Nuku Hiva Isla	96.19	98	*e*LR	LR	19 44 21.6	
	comp=Z,208nm,26.3s						
KHC	Kasperske Hory	96.35	322	*e*P	P	19 13 30.8	0.0
KHC	Kasperske Hory	96.35	322	*e*P	P	19 13 30.8	0.0
SOKA	Soboth	96.36	319	*i* PcP	P	19 13 31.3	+0.3
	comp=Z,4.2nm,1.3s						
GEC2	GERESS Array S	96.39	322		P	19 13 30.4	-0.7
GEC2				IAmb	IAmb	19 13 32.0	
	comp=Z,11nm,0.9s						
GEC2	GERESS Array S	96.39	322	*e*P	P	19 13 31.4	+0.4
	comp=Z,11nm,0.9s,baz=65,slow=4.7						
GERES	GERESS Array B	96.39	322	P	P	19 13 30.5	-0.5
GERES	GERESS Array B	96.39	322	P	P	19 13 31.4	+0.4
	comp=Z,7.5nm,0.8s,baz=57,slow=4.9,SNR=48						
	comp=Z,7.5nm,0.8s						
GERES	GERESS Array B	96.39	322	P	P	19 13 30.5	-0.5
MOA	Molln	96.42	321	*i* PcP	P	19 13 31.8	+0.7
	comp=Z,16nm,1.0s						
FLTG	Flechtingen	96.43	326	*e*P	P	19 13 30.7	-0.3
	comp=Z,6.7nm,1.1s,baz=65,slow=4.7						
TANN	Tannenbergstha	96.52	324	*e*P	P	19 13 31.7	+0.2
	comp=Z,4.9nm,0.9s,baz=65,slow=4.7						
OBKA	Obir	96.73	319	*e*PcP	P	19 13 32.7	0.0
	comp=Z,5.2nm,1.1s						
WET	Wettzell	96.77	322	*e*P	P	19 13 33.1	+0.4
	comp=Z,10nm,1.4s,baz=65,slow=4.7						
NLWA	Neilton Lookou	96.82	40	P	P	19 13 32.9	0.0
NLWA				IAmb	IAmb	19 13 34.9	
	comp=Z,4.8nm,0.8s						
ASSE	Asse, Remlinge	96.83	326	*e*P	P	19 13 33.2	+0.4
	comp=Z,14nm,1.4s,baz=65,slow=4.7						
BIOA	Bad Ischl, Aus	96.87	321	*i* PcP	P	19 13 33.6	+0.4
	comp=Z,4.4nm,0.9s						
MANZ	Manzenberg	96.90	323	*e*P	P	19 13 33.8	+0.5
	comp=Z,0.9nm,1.1s,baz=65,slow=4.7						
MOX	Moxa	96.92	324	*e*P	P	19 13 33.5	+0.2
	comp=Z,5.6nm,1.0s,baz=65,slow=4.7						
ROTZ	Rotzenmuhle	96.93	323	*e*P	P	19 13 34.0	+0.6
	comp=Z,2.0nm,1.0s,baz=65,slow=4.7						
NRDL	Niedersach Rie	96.99	326	*e*P	P	19 13 34.0	+0.6
	comp=Z,7.8nm,1.0s,baz=65,slow=4.7						
CLZ	Clausthal	97.12	325	*e*P	P	19 13 34.8	+0.6
	comp=Z,8.2nm,0.9s,baz=65,slow=4.7						
MYKA	Terra Mystica	97.27	320	*i* PcP	P	19 13 35.6	+0.6
	comp=Z,6.7nm,1.6s						
LESA	Schwarzleotal	97.57	321	*i* PcP	P	19 13 36.3	-0.1
	comp=Z,7.4nm,1.1s						
ABTA	Abfaltersbach	97.94	320	*e*P	P	19 13 36.7	-1.4
	comp=Z,5.5nm,1.3s						
I02E	Swisshome, OR	98.06	43	P	P	19 13 39.0	+0.5
WTTA	Wattenberg	98.28	321	*i* PcP	P	19 13 39.5	-0.2
	comp=Z,15nm,1.1s						
WATA	Walderalm	98.29	321	*e*PcP	P	19 13 39.6	-0.1
	comp=Z,8.5nm,1.0s						
IBBN	Ibbenburen	98.36	327	*e*P	P	19 13 40.1	+0.4
	comp=Z,10nm,0.8s,baz=65,slow=4.7						
KASTN	Kahler Asten	98.50	325	*e*P	P	19 13 40.8	+0.4
	comp=Z,5.5nm,0.9s,baz=65,slow=4.7						
SQTA	Sankt Quirin	98.57	321	*e*Pdiff	P	19 13 41.1	+0.2
	comp=Z,10nm,1.1s						
MOTA	Moosalm	98.58	321	*i* Pdiff	P	19 13 40.6	-0.5
	comp=Z,8.9nm,1.1s						
RETA	Reutte	98.73	321	*i* Pdiff	P	19 13 41.8	+0.2
	comp=Z,3.1nm,1.1s						
TNS	Taunus Mts	98.93	324	*e*P	P	19 13 42.8	+0.4
	comp=Z,10.0nm,1.2s,baz=65,slow=4.7						
FETA	Feichten	98.95	321	*i* Pdiff	P	19 13 42.8	+0.1
	comp=Z,7.9nm,1.1s						
B08A	Colville Reser	99.22	38		Pdif	19 13 43.2	-0.5
B08A				IAmb	IAmb	19 13 44.9	
	comp=Z,5.2nm,0.9s						
DAVA	Damuels	99.36	321	*i* Pdiff	Pdif	19 13 45.0	+0.4
	comp=Z,3.0nm,1.1s						
FUORN	Ofenpass-Fuorn	99.41	321		Pdif	19 13 43.9	-0.9
FUORN				IAmb	IAmb	19 13 46.1	
	comp=Z,7.5nm,0.9s						
QSPA	South Pole Qui	99.55	180	PKiKP	PKiKP	19 18 13.4	-0.1
	comp=Z,1.2nm,0.7s,baz=178,slow=0.3,SNR=7.1						
DAVOX	Davos/Dischmat	99.58	321	P	Pdif	19 13 45.2	-0.3
	comp=Z,4.8nm,0.8s,baz=113,slow=7.1,SNR=7.4						
	comp=Z,4.8nm,0.8s						
MEM	Membach	100.13	326	*d*Pdif	Pdif	19 13 47.7	+0.1
BSTI	Sart Tilman	100.39	326	*d*Pdif	Pdif	19 13 48.4	-0.3
WLF	Walferdange	100.50	325	*d*Pdif	Pdif	19 13 50.2	+0.9
WLF	Walferdange	100.50	325	*e*P	Pdif	19 13 50.5	+1.1
	comp=Z,11nm,0.8s,baz=65,slow=4.7						
BCLA	Clavier	100.61	326	*d*Pdif	Pdif	19 13 49.8	0.0
BMRD	Maredsous	100.97	326	*d*Pdif	Pdif	19 13 51.6	+0.2
DOU	Dourbes	101.17	326	*d*Pdif	Pdif	19 13 52.2	-0.1
	comp=Z,5.1nm,0.8s						
EKA	Eskdalemuir Ar	102.18	333	P	Pdif	19 13 56.0	-0.6
	comp=Z,0.7nm,0.6s,baz=159,slow=7.2,SNR=5.0						
NVAR	Mina Array Bea	104.14	46	Pdiff	Pdif	19 14 05.8	-0.3
	comp=Z,0.7nm,0.7s,baz=232,slow=4.9,SNR=4.5						
NVAR				PP	PKiKP	19 18 22.1	-0.9
	comp=Z,0.9nm,0.8s,baz=282,slow=8.1,SNR=3.9						
SCHQ	Schefferville	114.96	8	PKP	PKiKP	19 18 40.9	-1.7
	comp=Z,0.9nm,0.4s,baz=46,slow=4.2,SNR=2.3						
TXAR	Lajitas Array	119.14	49	PKP	PKPdf	19 18 50.9	-0.6
	comp=Z,0.6nm,0.5s,baz=12,slow=0.9,SNR=8.1						
TXAR				pPKP	sPKPdf	19 19 09.8	-0.7
	comp=Z,0.6nm,0.8s,baz=214,slow=0.9,SNR=3.1						
TXAR				PP	PP	19 20 09.9	-1.6
	comp=Z,0.6nm,0.8s,baz=318,slow=6.6,SNR=3.5						
TORD	Torodi Ar. Bea	119.33	291		PKPdf	19 18 51.0	-1.0
TORD	Torodi Ar. Bea	119.33	291	PKP	PKPdf	19 18 50.8	-1.3
	comp=Z,2.8nm,0.5s,baz=48,slow=2.2,SNR=8.4						
SMAI	San Martin Ant	121.07	175		PKPdf	19 18 53.7	-0.1
GBN	Guysborough	124.85	6	PKPdf	PKPdf	19 19 01.9	0.0
WVT	Waverly	124.93	32		PKPdf	19 19 01.8	-0.5
WVT	Waverly	124.93	32	PKIKP	PKPdf	19 19 01.8	-0.5
SSPA	Standing Stone	125.65	21	PKPdf	PKPdf	19 19 03.0	-0.6
ESPZ	Base Esperanza	126.36	179		PKPdf	19 19 04.3	+0.2
M65A	Busby, Falmout	127.01	15	P	PKPdf	19 19 06.1	0.0
	baz=340						
DBIC	Dimbokro	127.48	286	PKP	PKPdf	19 19 07.0	-0.7
	comp=Z,3.9nm,0.5s,baz=5.3,slow=1.5,SNR=6.9						
LL02	Futaleuf	143.52	159		PKPbc	19 19 35.0	+1.0
LL01	San Ignacio de	144.02	158		PKPbc	19 19 36.4	+0.9
LL03	Petrohue	145.09	157	PKPbc	PKPbc	19 19 39.1	+0.1
LR05	Currie	146.02	156	PKPdf	PKPdf	19 19 41.4	+0.3
PLCA	Paso Flores	146.14	159		PKPdf	19 19 41.4	0.0
PLCA	Paso Flores	146.14	159	PKPbc	PKPdf	19 19 42.1	+0.8
	comp=Z,31nm,0.8s,baz=226,slow=2.2,SNR=72						
LR03	Panguipulli	146.40	155		PKPdf	19 19 41.7	-0.1
TRQA	Tornquist	151.06	169		PKPbc	19 19 54.8	-0.4
TRQA	Tornquist	151.06	169	PKIKP	PKPbc	19 19 54.8	-0.4
CPUP	Villa Florida	163.29	173	PKP	PKPdf	19 20 04.5	-0.5
	comp=Z,0.7nm,0.8s,baz=193,slow=2.6,SNR=5.4						
CPUP				PKPab	PKPab	19 20 55.4	-0.1
	comp=Z,1.0nm,0.8s,baz=244,slow=1.3,SNR=5.2						
LPAZ	La Paz	165.61	118	PKP	PKPdf	19 20 07.5	-0.7
	comp=Z,2.4nm,0.7s,baz=264,slow=3.0,SNR=6.9						
LPAZ				pPKP	sPKPdf	19 20 26.0	-1.4
	comp=Z,6.1nm,0.9s,baz=33,slow=2.5,SNR=8.7						
BDFB	Brasilia	170.98	228	PKP	PKPdf	19 20 09.0	-2.1
	comp=Z,1.8nm,0.6s,baz=101,slow=5.2,SNR=3.4						
BDFB	Brasilia	170.98	228	PKIKP	PKPdf	19 20 09.0	-2.1

GCMT 29 19:00:49.0±0.4**, 1°.70S**±0°.04×**12°.93W**±0°.03**, h21**km±1km**,**
MW4.9/72**, Moment Tensor Solution. s29,c30; s72,c93; Duration: 0 Moment tensor: Scale** 10^{16}**Nm;**
M_{rr}-2.62±.20; $M_{\theta\theta}$0.39±.11; $M_{\phi\phi}$2.23±.14; $M_{r\theta}$0.26±.22; $M_{\theta\phi}$-0.03±.08; $M_{\phi r}$-0.59±.21; **Best double couple:** $M_0$2.50700×10^{16} **NP1:**ϕ_s183.00000°,δ38.00000°, λ-83.00000°. **NP2:**ϕ_s354.00000°,δ52.00000°, λ-96.00000°. **Principal axes:** T 2.3030, Plg7.0000°, Azm88.0000°**;** N 0.4050, Plg4.0000°, Azm358.0000°**;** P -2.7120, Plg82.0000°, Azm235.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function North of Ascension Island**

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*IDC **29** 19:07:58.5±1.0, 30°.96N×98°.77E, h0km, mb3.6/9, mbtmp3.6/11, ML3.4/2, MS3.3/1 Error ellipse: s-maj=34.6km s-min=18.1km az=57.0*

ISC 29 19:07:60.0±0.8**, 31°.00N**±0°.10×**98°.8E**±0°.1**, h10**km**, n21,**
σ**0°.78**/18**, mb3.7**/8**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ODAN	Odare	10.81	250	Pn	Pn	19 10 38.3	+3.3
	30nm,0.5s,baz=238,slow=0.0						
RAMN	Ramite	11.41	252	Pn	Pn	19 10 45.4	+2.1
	baz=242,slow=0.0						
GUN	Gumba	11.67	258	Pn	Pn	19 10 47.1	+0.2
	baz=250,slow=0.0						
PKI	Pulchoki	12.17	257	Pn	Pn	19 10 54.2	+0.4
	baz=249,slow=0.0						
PKIN	Phulchoki	12.18	257	Pn	Pn	19 10 54.2	+0.3
	baz=249,slow=0.0						
KKN	Kakani	12.21	258	Pn	Pn	19 10 53.9	-0.3
	baz=250,slow=0.0						
DMN	Daman	12.42	258	Pn	Pn	19 10 57.5	+0.5
	baz=250,slow=0.0						
CMAR	Chiang Mai Arr	12.49	179	Pn	Pn	19 10 57.2	-0.6
	0.1nm,0.3s,baz=5.7,slow=13,SNR=5.4						
	1.8nm,1.0s						
DANN	Dangsing	13.34	262	Pn	Pn	19 11 08.3	-1.4
	baz=257,slow=0.0						
KOLN	Koldanda	13.63	260	Pn	Pn	19 11 12.8	-0.8
	105nm,2.6s,baz=254,slow=0.0						
SONM	Songino Array	17.79	17	P	Pn	19 12 07.2	-0.5
	0.1nm,0.3s,baz=201,slow=12,SNR=4.1						
	0.9nm,0.6s						
MKAR	Makanchi Array	20.27	326	P	Pn	19 12 37.4	-0.2
	0.8nm,0.6s,baz=128,slow=12,SNR=3.0						
	0.8nm,0.6s						
AAK	Ala-Archa	22.57	308	LR	LR	19 23 10.0	
	comp=Z,89nm,21.7s,baz=123,slow=40						
KURBB	Kurchatov Arra	24.75	328	P	P	19 13 21.6	+0.1
	0.5nm,0.6s,baz=135,slow=11,SNR=1.8						
	0.5nm,0.6s						
KSRS	Korea Array	24.87	67	P	P	19 13 23.1	+0.4
	0.5nm,0.5s,baz=265,slow=9.5,SNR=5.7						
	0.5nm,0.5s						
ZALV	Zalesovo Beam	25.05	340	P	P	19 13 24.4	+0.2
	2.4nm,0.6s,baz=150,slow=8.3,SNR=5.5						
	2.4nm,0.6s						
AKASG	Malin Array Be	54.12	313	P	P	19 17 24.6	-0.4
	0.1nm,0.2s,baz=68,slow=8.0,SNR=1.8						
	0.1nm,0.2s						
ARCES	ARCESS Array B	55.49	336	P	P	19 17 35.4	+0.7
	2.7nm,0.9s,baz=78,slow=5.8,SNR=1.7						
	2.7nm,0.9s						
WRA	Warramunga Arr	61.08	141	P	P	19 18 14.1	-0.2
	0.6nm,0.9s,baz=325,slow=6.9,SNR=2.9						
	0.6nm,0.9s						
ASAR	Alice Springs	63.93	144	P	P	19 18 33.6	+0.2
	0.3nm,0.7s,baz=324,slow=6.3,SNR=4.7						
	0.3nm,0.7s						
GERES	GERESS Array B	64.33	313	P	P	19 18 35.8	-0.1
	0.2nm,0.4s,baz=79,slow=5.9,SNR=1.7						
	0.2nm,0.4s						

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*IDC **29** 19:09:30.6±1.0, 30°.99N×98°.79E, h0km, mb3.7/8, mbtmp3.7/10, ML3.4/2, Error ellipse: s-maj=36.4km s-min=17.6km az=58.0*

ISC 29 19:09:32.1±0.8**, 31°.0N**±0°.1×**98°.7E**±0°.1**, h10**km**, n16,**
σ**1°.66**/14**, mb3.8**/7**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ODAN	Odare	10.77	250	Sn	Pn	19 11 57.5	-9.1
	baz=238,slow=0.0						
RAMN	Ramite	11.37	252	Sn	Pn	19 12 10.6	-4.3
	14nm,0.5s,baz=242,slow=0.0						
PKI	Pulchoki	12.13	257	Sn	Pn	19 12 25.3	0.0
	14nm,0.5s,baz=249,slow=0.0						
PKIN	Phulchoki	12.14	257	Sn	Pn	19 12 25.4	0.0
	10nm,0.4s,baz=249,slow=0.0						
DMN	Daman	12.37	257	Sn	Pn	19 12 31.1	+2.5
	20nm,0.8s,baz=250,slow=0.0						
CMAR	Chiang Mai Arr	12.51	179	Pn	Pn	19 12 31.5	+1.3
	0.1nm,0.3s,baz=353,slow=12,SNR=4.1						
	1.1nm,0.9s						
KOLN	Koldanda	13.59	260	Sn	P	19 12 59.1	+4.8
	baz=254,slow=0.0						
SONM	Songino Array	17.79	17	P	Pn	19 13 38.8	-1.1
	0.1nm,0.3s,baz=201,slow=12,SNR=4.5						
	1.2nm,0.8s						
MKAR	Makanchi Array	20.23	326	P	P	19 14 08.2	+0.8
	2.3nm,0.7s,baz=131,slow=12,SNR=6.1						
	2.3nm,0.7s						
KURBB	Kurchatov Arra	24.70	328	P	P	19 14 53.8	+0.5
	1.1nm,0.7s,baz=142,slow=9.4,SNR=5.8						
	1.1nm,0.7s						
KSRS	Korea Array	24.91	67	P	P	19 14 55.7	+0.4
	0.9nm,0.7s,baz=256,slow=10,SNR=4.3						
	0.9nm,0.7s						
ZALV	Zalesovo Beam	25.02	340	P	P	19 14 56.3	+0.2
	3.1nm,0.6s,baz=157,slow=8.0,SNR=8.2						
	3.1nm,0.6s						
WRA	Warramunga Arr	61.13	141	P	P	19 19 46.0	-0.8
	0.6nm,0.7s,baz=320,slow=8.8,SNR=5.6						
	0.6nm,0.7s						
HFS	Hagfors	61.25	325	P	P	19 19 47.1	-0.1
	2.5nm,0.9s,baz=97,slow=6.1,SNR=2.2						
	2.5nm,0.9s						
ASAR	Alice Springs	63.97	144	P	P	19 20 05.2	-0.6
	0.8nm,1.0s,baz=326,slow=6.8,SNR=4.9						
	0.8nm,1.0s						
GERES	GERESS Array B	64.28	313	P	P	19 20 08.3	+0.6
	0.2nm,0.5s,baz=82,slow=8.2,SNR=2.1						
	0.2nm,0.5s						

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*SOME **29** 19:11:41.7, 39°.08N×71°.43E, h5km*

*NNC **29** 19:11:43.5±5.1, 38°.59N×69°.99E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=42.1km s-min=33.9km az=128.0*

ISC 29 19:11:40.8±3.8**, 38°.3N**±0°.2×**70°.7E**±0°.2**, h10**km**, n7,** σ**1°.96**/9**,**
1C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	3.84	352	Pg	Pn	19 12 42.1	+2.1
	18nm,0.2s						
IUG				Lg	Lg	19 13 25.5	
	40nm,0.4s						
BRLS	Boroldaу	4.73	352	Pg	Pb	19 12 56.2	-7.6
	4.4nm,0.4s						
BRLS				Lg	Lg	19 13 50.1	
	11nm,0.7s						
BRLS	Borolday	4.73	352	*e*P	Pn	19 12 54.8	+2.6
	0.6nm,0.2s						
BRLS				*e*S	Sn	19 13 47.4	+0.3
	4.8nm,0.4s						
KK31	Karatay Array	4.76	358	Pn	Pn	19 12 52.7	+0.1
	0.8nm,0.2s,baz=182,slow=13,SNR=47						
KK31				⇑Sn	Sn	19 13 47.9	+0.1
	2.8nm,0.3s,baz=187,slow=25						
KK31				⇓Lg	Lg	19 14 05.8	
	11nm,0.6s						
MRKS	Merke	4.79	23	Pg	Pn	19 12 54.8	+1.6
	4.2nm,0.3s						
MRKS				Lg	Lg	19 13 48.4	
	6.3nm,0.6s						
MRKS	Merke	4.79	23	*e*P	Pn	19 12 54.6	+1.4
	1.8nm,0.3s						
MRKS				*e*S	Sn	19 13 47.1	-1.7
	3.4nm,0.4s						
AB31	Akbulak array	13.38	328	P	Pn	19 14 48.6	-2.0
	0.3nm,0.3s,baz=143,slow=12,SNR=20						

IDC 29 19:18:30.9±2.6**,31°.05S**×**177°.97W,h0^{km},mb3.9**/2**,mbtmp3.9**/3**,MS3.5**/1**,Error ellipse: s-maj=69.2km s-min=44.0km az=128.0,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.25	208	Pn	Pn	19 20 31.7	-0.1
	4.7nm,0.8s,baz=60,slow=14,SNR=1.8						
URZ				Sn	Sn	19 21 58.6	-7.2
	0.5nm,0.3s,baz=40,slow=20,SNR=8.2						
DZM	Mont Dzumac	16.55	299	LR	LR	19 27 18.5	
	comp=Z,162nm,19.8s,baz=250,slow=32						
ASAR	Alice Springs	43.10	268	P	P	19 26 33.0	-0.1
	1.0nm,0.5s,baz=107,slow=7.5,SNR=36						
	1.0nm,0.5s						
WRA	Warramunga Arr	44.15	273	P	P	19 26 41.5	-0.1
	1.0nm,0.4s,baz=111,slow=8.1,SNR=14						
	1.0nm,0.4s						
KBZ	Khabaz	145.49	303	PKPbc	PKPdf	19 38 09.9	-0.9
	2.1nm,0.8s,baz=149,slow=5.9,SNR=3.8						
FINES	FINESS Array B	145.77	340	PKPbc	PKPdf	19 38 10.5	-0.2
	1.5nm,0.8s,baz=52,slow=5.4,SNR=5.8						

IDC ***29*** *19:23:53.7±0.7, 56°.20N×164°.53E, h0^{km}, mb3.9/21, mbtmp3.9/23, ML3.4/4, MS3.6/4, Error ellipse: s-maj=18.5km s-min=12.1km az=165.0*

KRSC ***29*** *19:23:54.1±1.4, 56°.09N×164°.72E, h42^{km}±18^{km}, Ml4.2*

NEIC ***29*** *19:23:55.6±1.6, 56°.20N±0°.09×164°.6E±0°.1, h10^{km}±1^{km}, mb4.2/30, Error ellipse: s-maj=14.9km s-min=12.8km az=182.0*

MOS ***29*** *19:23:57.0±0.9, 56°.09N×164°.61E, h45^{km}, mb4.6/4, Error ellipse: s-maj=7.9km s-min=5.4km az=53.7*

ISC 29 19:23:54.7±0.4**,56°.14N**±0°.04×**164°.60E**±0°.03**,h10^{km},n362,**σ**1ˢ.21**/353**,mb4.1**/33**,MS3.7**/5**,Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	1.00	275	PN	Pg	19 24 12.5	-1.4
KBTR				S	Sg	19 24 25.9	-0.9
KBTR	Krutoberegovo	1.00	275	*e*P	Pg	19 24 12.5	-1.4
KBTR				*e*S	Sg	19 24 26.0	-0.9
KBG	Krutoberegovo	1.06	277	PN	Pb	19 24 14.0	-1.2
KBG				S	Sg	19 24 28.3	-0.6
KBG	Krutoberegovo	1.06	277	*e*P	Pb	19 24 14.0	-1.2
KBG				*e*S	Sg	19 24 28.4	-0.6
BKI	Bering	1.22	140	PN	Pb	19 24 15.4	-2.3
BKI				S	Sb	19 24 30.6	-2.9
BKI	Bering	1.22	140	*e*P	Pb	19 24 15.4	-2.3
BKI				*e*S	Sb	19 24 30.6	-2.9
ZLN	Zelenaya	2.13	268	PN	Pb	19 24 31.4	-2.0
ZLN	Zelenaya	2.13	268	*e*P	Pb	19 24 31.5	-2.0
CIRR	Tsirk	2.16	271	PN	Pb	19 24 32.7	-1.2
CIRR	Tsirk	2.16	271	*e*P	Pb	19 24 32.7	-1.2
BZGR	Bezymyannyi-Gr	2.20	266	PN	Pb	19 24 32.2	-2.4
BZGR				S	Sn	19 24 58.6	0.0
BZGR	Bezymyannyi-Gr	2.20	266	*e*P	Pb	19 24 32.2	-2.4
BZGR				*e*S	Sn	19 24 58.6	0.0
KLY	Klyuchi	2.21	276	PN	Pn	19 24 30.1	-1.3
KLY				S	Sn	19 24 57.5	-1.2
KLY	Klyuchi	2.21	276	*e*P	Pn	19 24 30.2	-1.3
KLY				*e*S	Sn	19 24 57.5	-1.2
MKZ	Mys Kozlova	2.28	227	PN	Pn	19 24 31.3	-1.0
MKZ				S	Sn	19 24 57.6	-2.8
MKZ	Mys Kozlova	2.28	227	*e*P	Pn	19 24 31.4	-1.0
MKZ				*e*S	Sn	19 24 57.6	-2.8
BZWR	Bezymyannyi-We	2.31	267	PN	Pb	19 24 33.8	-2.6
BZWR	Bezymyannyi-We	2.31	267	*e*P	Pb	19 24 33.9	-2.6
BZMR	Bezymyannaya	2.31	267	PN	Pb	19 24 33.7	-2.8
BZMR	Bezymyannaya	2.31	267	*e*P	Pb	19 24 33.8	-2.8
KIRR	Kirishev	2.40	267	PN	Pn	19 24 34.9	+0.8
KIRR				S	Sb	19 25 05.0	-2.6
KIRR	Kirishev	2.40	267	*e*P	Pn	19 24 35.0	+0.8
KIRR				*e*S	Sb	19 25 05.0	-2.6
KPT	Kopyto	2.46	268	PN	Pb	19 24 36.1	-2.9
KPT	Kopyto	2.46	268	*e*P	Pb	19 24 36.2	-2.9
KMNR	Kamenistaya	2.48	263	PN	Pb	19 24 37.3	-2.1
KMNR	Kamenistaya	2.48	263	*e*P	Pb	19 24 37.3	-2.1
TUMD	Tumrok D	2.56	250	PN	Pn	19 24 36.6	+0.4
TUMD	Tumrok D	2.56	250	*e*P	Pn	19 24 36.7	+0.4
KOZ	Kozyrevsk	2.65	270	PN	Pb	19 24 39.7	-2.5
KOZ	Kozyrevsk	2.65	270	*e*P	Pb	19 24 39.8	-2.5
SRDR	Sredinnyy	2.73	276	PN	Pb	19 24 40.7	-2.9
SRDR	Sredinnyy	2.73	276	*e*P	Pb	19 24 40.8	-2.9
OSSR	Ossora	3.23	346	PN	Pn	19 24 44.6	-0.7
OSSR	Ossora	3.23	346	*e*P	Pn	19 24 44.6	-0.7
ESO	Esso	3.32	269	PN	Pb	19 24 49.6	-4.0
ESO	Esso	3.32	269	*e*P	Pb	19 24 49.6	-4.0
SPN	Mys Shipunski	4.04	223	PN	Pn	19 24 56.5	-0.1
SPN	Mys Shipunski	4.04	223	*e*P	Pn	19 24 56.6	-0.1
SDLR	Sedlovina	4.38	232	PN	Pn	19 25 02.0	+0.7
SDLR	Sedlovina	4.38	232	*e*P	Pn	19 25 02.1	+0.7
KRER	Koryakskii	4.42	232	PN	Pn	19 25 04.1	+2.1
KRER	Koryakskii	4.42	232	*e*P	Pn	19 25 04.1	+2.1
SMAR	Somma	4.43	232	PN	Pn	19 25 02.9	+0.9
SMAR	Somma	4.43	232	*e*P	Pn	19 25 03.0	+0.9
KRX	Arik	4.43	234	PN	Pn	19 25 03.9	+1.9
KRX	Arik	4.43	234	*e*P	Pn	19 25 04.0	+1.9
AVH	Avacha	4.45	232	PN	Pn	19 25 03.4	+1.1
AVH	Avacha	4.45	232	*e*P	Pn	19 25 03.5	+1.1
UGLR	Uglovaya	4.46	231	PN	Pn	19 25 03.3	+1.0
UGLR	Uglovaya	4.46	231	*e*P	Pn	19 25 03.4	+1.0
KOK	Koryaka	4.48	233	PN	Pn	19 25 03.8	+1.2
KOK	Koryaka	4.48	233	*e*P	Pn	19 25 03.9	+1.2
GNL	Ganaly	4.55	240	PN	Pn	19 25 05.2	+1.5
GNL	Ganaly	4.55	240	*e*P	Pn	19 25 05.3	+1.5
PET	Petropavlovsk	4.66	230		Pn	19 25 05.3	+0.3
PET	Petropavlovsk	4.66	230	*e*PN	Pn	19 25 04.7	-0.3
PET				*e*S	Sn	19 25 58.8	-0.2
PET				pmax	pmax		
	comp=Z,21nm,0.4s						
PET				smax	smax		
	comp=E,42nm,0.6s						
PET				smax	smax		
	comp=N,37nm,0.6s						
PEA0B	Petropavlovsk-	5.03	236	Pn	Pn	19 25 11.7	+1.6
PEA0B	Petropavlovsk-	5.03	236	PN	Pn	19 25 11.7	+1.6
PETK	Petropavlovsk-	5.03	236	Pn	Pn	19 25 11.7	+1.6
PETK	Petropavlovsk-	5.03	236	Pn	Pn	19 25 10.8	+0.7
	comp=N,1.0nm,0.3s,baz=64,slow=17,SNR=8.9						
PETK				Sn	Sn	19 26 09.4	+1.1
	baz=89,slow=19						
RUS	Russkaya	5.15	226	PN	Pn	19 25 12.2	+0.5
RUS	Russkaya	5.15	226	*e*P	Pn	19 25 12.2	+0.5
GRL	Gorelyy	5.24	229	PN	Pn	19 25 15.0	+1.9
GRL	Gorelyy	5.24	229	*e*P	Pn	19 25 15.0	+1.9
MTVR	Mutnovka	5.25	228	PN	Pn	19 25 14.7	+1.5
MTVR	Mutnovka	5.25	228	*e*P	Pn	19 25 14.7	+1.5
ASAK	Asacha	5.44	229	PN	Pn	19 25 17.7	+1.9
ASAK	Asacha	5.44	229	*e*P	Pn	19 25 17.7	+1.9
SMY	Shemya	6.51	118	Pn	Pn	19 25 31.6	+1.3
SMY	Shemya	6.51	118	PN	Pn	19 25 31.7	+1.3
MA2	Magadan	8.14	301	Pn	Pn	19 25 53.4	+0.7
	comp=N,0.1nm,0.3s,baz=174,slow=21,SNR=0.9						
	comp=N,1.2nm,0.5s						
SEY	Seymchan	9.20	323	Pn	Pn	19 26 07.3	0.0
	comp=N,0.1nm,0.3s,baz=19,slow=22,SNR=1.1						
SPIA	Saint Paul Isl	13.85	75	P	Pn	19 27 11.7	+0.9
	baz=277						
GAMB	Gambell	14.05	47	P	Pn	19 27 13.7	+0.3
	baz=248						
M11K	Mekoryuk	15.87	62	P	P	19 27 38.8	-2.7
	baz=268						
YSS	Yuzhno-Sakhali	16.34	245	*e*P	P	19 27 52.3	+5.4
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
UNV	Unalaska Valle	16.68	86	P	P	19 27 48.9	-1.8
	baz=290						
K13K	Kusilvak Mount	16.73	57	P	P	19 27 48.9	-2.3
	baz=264						
F14K	Arctic Creek	16.82	45	P	P	19 27 50.9	-1.2
	baz=250						
ANM	Nome	16.93	48	P	P	19 27 51.4	-1.9
	baz=255						
J14K	Nanvaranak Lak	17.35	55	P	P	19 27 56.0	-1.9
	baz=262						
F15K	North Star Dit	17.56	45	P	P	19 27 58.9	-1.3
	baz=252						
G15K	Niukluk	17.59	47	P	P	19 27 59.7	-1.0
	baz=255						
L14K	Kuka Creek	17.63	59	P	P	19 28 00.7	-0.3
L14K	Kuka Creek	17.63	59	P	P	19 28 01.1	+0.1
	baz=268						
M14K	Bethel	17.97	61		P	19 28 05.4	+0.6
M14K	Bethel	17.97	61	P	P	19 28 05.5	+0.8
	baz=270						
N14K	Kuskokwak Cree	18.12	64	P	P	19 28 07.1	+0.6
	baz=273						
L15K	Ungalak Mounta	18.22	58	P	P	19 28 07.1	-0.4
	baz=268						
K15K	Wolf Creek Mou	18.23	56	P	P	19 28 09.8	+2.1
K15K	Wolf Creek Mou	18.23	56	P	P	19 28 07.6	-0.1
	baz=266						
H16K	Elim	18.25	49	P	P	19 28 07.3	-0.7
	baz=258						
C16K	Lisburne Hills	18.29	36	P	P	19 28 08.0	-0.4
	baz=244						
G16K	Koyuk River	18.38	46	P	P	19 28 08.4	-0.9
	baz=256						
O14K	Tigyukauivet M	18.39	66	P	P	19 28 09.5	+0.1
	baz=276						
JKA	Kamikawa-asahi	18.44	239		Pn	19 28 11.2	+1.0
JKA				IAmb	IAmb	19 28 20.0	
	comp=Z,18nm,0.9s						
ASAJ	Asahikawa	18.44	239	P	Pn	19 28 09.6	-0.5
	comp=Z,0.4nm,0.3s,baz=84,slow=10,SNR=9.5						
	comp=Z,5.8nm,0.7s						
ASAJ	Asahikawa	18.44	239	P	Pn	19 28 11.2	+1.0
ASAJ				pmax	pmax		
	comp=Z,18nm,0.9s						
S12K	Black Hills	18.59	77	P	Pn	19 28 12.1	+0.2
	baz=286						
M15K	Kasigluk River	18.59	61	P	Pn	19 28 12.1	+0.2
	baz=272						
J16K	Anvik River	18.75	53	P	Pn	19 28 14.1	+0.3
	baz=264						
I17K	Unalakleet	18.78	51	P	Pn	19 28 14.4	+0.2
	baz=262						
D17K	Noatak River	18.83	39	P	Pn	19 28 14.1	-0.6
	baz=248						
N15K	Kwethluk River	18.91	63	P	Pn	19 28 15.6	-0.1
	baz=274						
E17K	Hotham Inlet	19.07	42	P	Pn	19 28 17.0	-0.7
	baz=252						
C17K	DeLong Mountai	19.11	37	P	Pn	19 28 17.2	-0.9
	baz=246						
O15K	Ungalikthiuk R	19.13	66	P	Pn	19 28 17.5	-0.9
	baz=277						
L16K	Owhat River	19.18	58	P	Pn	19 28 18.3	-0.6
	baz=270						
H17K	Granite Mounta	19.29	48		Pn	19 28 21.0	+0.7
H17K				IAmb	IAmb	19 28 23.2	
	comp=Z,15nm,1.2s						
H17K	Granite Mounta	19.29	48	P	Pn	19 28 18.2	-2.1
	baz=260						
M16K	Timber Creek	19.43	60	P	Pn	19 28 22.1	+0.1
M16K	Timber Creek	19.43	60	P	Pn	19 28 20.8	-1.2
	baz=272						
J17K	VABM Dome	19.45	53	P	Pn	19 28 20.7	-1.5
	baz=265						
N16K	Nishlik Lake	19.55	62	P	Pn	19 28 21.9	-1.6
	baz=274						
SDPT	Sand Point	19.55	78	P	Pn	19 28 21.7	-1.8
	baz=287						
E18K	Tukpahlearik C	19.63	41	P	Pn	19 28 22.6	-1.8
	baz=252						
L17K	Donlin	19.74	57	P	P	19 28 23.0	-1.3
	baz=270						
K17K	Iditarod	19.75	55		Pn	19 28 25.9	0.0
K17K	Iditarod	19.75	55	P	Pn	19 28 24.0	-1.9
	baz=268,SNR=5.9						
F18K	Selawik	19.76	44	P	Pn	19 28 23.5	-2.4
	baz=256						
S14K	Fog Glacier	19.80	75	P	Pn	19 28 25.5	-1.1
	baz=285						
C18K	Utukok River	19.84	37	P	Pn	19 28 24.7	-2.2
	baz=248						
B18K	Kokolik River	19.93	35	P	Pn	19 28 26.2	-1.7
	baz=246						
O16K	Kokwok River B	19.96	65	P	Pn	19 28 26.1	-2.2
	baz=277						
H18K	Honhosa River	19.98	48	P	Pn	19 28 27.0	-1.5
	baz=261						
G18K	Tagagawik	19.99	46	P	Pn	19 28 26.4	-2.3
	baz=259						
P16K	Nushagak River	20.09	66	P	Pn	19 28 27.9	-1.9
	baz=278						
M17K	Holitna River	20.15	59		Pn	19 28 31.1	+0.5
M17K				IAmb	IAmb	19 28 36.0	
	comp=Z,12nm,0.8s						
M17K	Holitna River	20.15	59	P	Pn	19 28 29.0	-1.6
	baz=272						
N17K	Nushagak Hills	20.33	62	P	Pn	19 28 30.7	-2.0
	baz=275						
CHGN	Chignik	20.41	74	P	Pn	19 28 32.0	-1.6
	baz=285						
O17K	Koliganek Bris	20.45	64	P	Pn	19 28 31.9	-2.1
	baz=277						
L18K	Granite Mounta	20.49	57	P	Pn	19 28 32.6	-2.0
	baz=271						
J18K	Innoko River	20.51	53		Pn	19 28 34.2	-0.5
J18K				IAmb	IAmb	19 28 35.8	
	comp=Z,11nm,1.0s						
J18K	Innoko River	20.51	53	P	Pn	19 28 32.6	-2.2
	baz=267,SNR=8.9						
A19K	Wainwright	20.52	33	P	Pn	19 28 32.0	-2.8
	baz=244						
F19K	Shaleruckik Mo	20.54	44	P	Pn	19 28 32.9	-2.1
	baz=257,SNR=7.3						
GCSA	Galena City Sc	20.54	50	P	Pn	19 28 33.7	-1.4
	baz=264						
C19K	Lookout Ridge	20.55	37	P	Pn	19 28 33.0	-2.3
	baz=249,SNR=5.4						
G19K	Purcell Mounta	20.67	46	P	Pn	19 28 35.0	-1.6
	baz=260						
H19K	Roundabout Mou	20.82	47	P	Pn	19 28 36.2	-2.2
	baz=262						
P17K	Kvichak River	20.85	65	P	Pn	19 28 36.2	-2.6
	baz=279						
D19K	Kuna River	20.86	39	P	Pn	19 28 36.3	-2.5
	baz=252						
E19K	Redstone River	20.89	42	P	P	19 28 35.9	-0.8
	baz=256						
M18K	Stony River	20.93	59	P	Pn	19 28 37.5	-2.1
	baz=273						
N18K	Kilae Creek	20.95	61	P	Pn	19 28 37.9	-2.1
	baz=275						
J19K	Poorman	21.02	52	P	P	19 28 38.1	-0.1
	baz=267						
R17L	Mt. Peulik Vol	21.18	70	P	P	19 28 40.0	0.0
	baz=283						
Q17K	Contact Creek	21.30	68	P	P	19 28 41.6	+0.4
	baz=282						
L19K	White Mountain	21.35	57	P	P	19 28 42.4	+0.6
	baz=272						
F20K	Avaraart Lake	21.37	43	P	P	19 28 42.6	+0.7
	baz=259						
O18K	Koktuh Hills	21.38	63	P	P	19 28 43.1	+1.0
	baz=278						
P18K	Big Mountain,	21.44	65	P	P	19 28 43.8	+1.2
	baz=279						
D20K	Etivluk River	21.45	39	P	P	19 28 43.3	+0.6
	baz=254						
H20K	Anotleneega Mo	21.47	48	P	P	19 28 43.4	+0.4
	baz=264						
E20K	Nigu River	21.48	40	P	P	19 28 42.8	-0.3
	baz=255						
TIXI	Tiksi	21.58	330	P	P	19 28 43.9	-0.1
TIXI				IAmb	IAmb	19 28 56.0	
	comp=Z,9.8nm,1.1s						
TIXI	Tiksi	21.58	330	P	P	19 28 42.9	-1.1
	comp=Z,5.0nm,0.6s,baz=93,slow=4.0,SNR=5.5						
	comp=Z,5.0nm,0.6s						
TIXI	Tiksi	21.58	330	P	P	19 28 43.9	-0.1
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
M19K	Big River Lodg	21.58	58	P	P	19 28 44.8	+0.6
	baz=274						
N19K	Bonanza Creek	21.63	61	P	P	19 28 45.0	+0.2
	baz=276						
B20K	Meade River	21.67	35	P	P	19 28 44.6	-0.4
	baz=250						
Q18K	Katmai Hardscr	21.68	67	P	P	19 28 45.5	+0.2
	baz=281						
J20K	Nowinta River	21.68	51		P	19 28 46.1	+0.9
J20K	Nowinta River	21.68	51	P	P	19 28 45.1	-0.1
	baz=268						
K20K	Telida	21.70	54	P	P	19 28 44.9	-0.5
	baz=270						
JTM	Tenmabayashi	21.73	235	P	P	19 28 46.1	+0.2
L20K	Farewell, AK	21.80	56	P	P	19 28 46.9	+0.4
	baz=272						
IMAR	Indian Mountai	21.99	47	P	P	19 28 49.5	+1.0
CHIR	Chirikof Islan	22.05	74	P	P	19 28 49.8	+0.6
	baz=288						
G21K	Allakaket	22.15	45	P	P	19 28 50.4	+0.1
	baz=263						
M20K	Styx River	22.18	58	P	P	19 28 50.8	+0.1
	baz=274						
C21K	Knifeblade Rid	22.21	38	P	P	19 28 50.5	-0.3
	baz=255						
F21K	Alatna River	22.27	43	P	P	19 28 52.1	+0.6
	baz=261						
E21K	Killik River	22.32	40	P	P	19 28 51.7	-0.3
	baz=258						
Q19K	Cape Douglas,	22.32	65	P	P	19 28 51.7	-0.5
	baz=281						
H21K	Melozitna Rive	22.34	48	P	P	19 28 51.6	-0.8
	baz=266						
B21K	Ikpikpuk River	22.39	37	P	P	19 28 52.1	-0.7
	baz=254						
P19K	Oil Pt	22.40	63	P	P	19 28 53.1	+0.1
	baz=280						
PPLA	Purkeypile	22.56	55	P	P	19 28 54.5	-0.2
	baz=273						
CAST	Castle Rocks	22.59	53		P	19 28 55.6	+0.6
CAST	Castle Rocks	22.59	53	P	P	19 28 54.3	-0.7
	baz=272						
SII	Sitkinak Islan	22.60	72	P	P	19 28 55.5	+0.3
	baz=287						
SKT	Skwentna	22.93	57	P	P	19 28 58.7	+0.2
	baz=276						
H22K	Ishtalitna Cre	22.95	47	P	P	19 28 58.5	-0.2
	baz=266						
B22K	Teshekpuk Lake	22.99	35	P	P	19 28 58.4	-0.7
	baz=254						
G22K	Bettles	22.99	44	P	P	19 28 59.1	0.0
	baz=264						
Q20K	Shuyak Island	23.03	66	P	P	19 28 59.3	-0.3
	baz=283						
E22K	Anaktuvuk Pass	23.05	41	P	P	19 28 59.1	-0.7
	baz=261						
BPAW	Bear Paw Mtn.	23.07	52		P	19 29 00.9	+0.9
BPAW				IAmb	IAmb	19 29 42.1	
	comp=Z,9.9nm,1.4s						
BPAW	Bear Paw Mtn.	23.07	52	P	P	19 28 59.1	-0.8
	baz=271						
KDAK	Kodiak Island	23.12	68	P	P	19 28 59.6	-0.9
	baz=285						
SUA	Susitna One	23.35	58	P	P	19 29 02.2	-0.8
	baz=277						
TRF	Thorofare Moun	23.39	53	P	P	19 29 03.2	-0.2
TRF				IAmb	IAmb	19 29 06.5	
	comp=Z,14nm,1.5s						
TRF	Thorofare Moun	23.39	53	P	P	19 29 02.7	-0.7
	baz=273						
COLD	Coldfoot	23.53	44	P	P	19 29 04.4	-0.2
	baz=264						
G23K	Bananza Creek	23.56	45	P	P	19 29 04.7	-0.2
	baz=266						
D23K	Nanushuk River	23.60	39	P	P	19 29 05.1	-0.2
	baz=260						
H23K	Yukon River	23.70	47	P	P	19 29 07.2	+0.9
H23K				IAmb	IAmb	19 29 20.2	
	comp=Z,8.4nm,1.2s						
H23K	Yukon River	23.70	47	P	P	19 29 06.3	0.0
	baz=268,SNR=5.2						
I23K	Minto, Yukon-K	23.76	49	P	P	19 29 06.5	-0.3
	baz=270,SNR=5.3						
C23K	Itkillik River	23.80	37	P	P	19 29 06.4	-0.7
	baz=258						
E23K	Chandalar	23.85	42	P	P	19 29 07.4	-0.4
	baz=263						
TOLK	Toolik Lake Re	23.95	40	P	P	19 29 08.8	+0.2
TOLK	Toolik Lake Re	23.95	40	P	P	19 29 07.8	-0.8
	baz=262						
MCK	McKinley	23.98	53	P	P	19 29 07.8	-1.2
	baz=274						
SEW	Seward	24.20	61	P	P	19 29 09.9	-1.0
	baz=281						
E24K	Your Creek	24.27	42	P	P	19 29 10.7	-1.0
	baz=264,SNR=7.3						
D24K	Happy Valley	24.29	39	P	P	19 29 11.3	-0.5
	baz=262						
H24K	Noodor Dome	24.39	47	P	P	19 29 12.7	0.0
	baz=270						
C24K	Franklin Bluff	24.43	38	P	P	19 29 12.5	-0.5
	baz=260						
KNK	Knik Glacier	24.45	58	P	P	19 29 12.8	-0.5
	baz=279						
F24K	Squaw Lake	24.45	43	P	P	19 29 12.7	-0.6
	baz=266						
G24K	Hadweenzic Riv	24.57	45		P	19 29 14.9	+0.6
G24K				IAmb	IAmb	19 29 47.6	
	comp=Z,8.1nm,1.2s						
G24K	Hadweenzic Riv	24.57	45	P	P	19 29 13.6	-0.7
	baz=268,SNR=5.3						
PWL	Port Wells	24.60	59	P	P	19 29 14.3	-0.4
PWL	Port Wells	24.60	59	P	P	19 29 14.1	-0.6
	baz=280,SNR=19						
WAT6	Susitna Watana	24.63	55	P	P	19 29 15.0	-0.1
	baz=277						
DHY	Denali Highway	24.74	54	P	P	19 29 15.7	-0.4
	baz=276						
M23K	Glacier View	24.74	57	P	P	19 29 15.8	-0.2
	baz=279						
HDA	Harding Lake	24.82	51	P	P	19 29 16.5	-0.1
	baz=274						
ILAR	Eielson Array	24.82	50	P	P	19 29 16.3	-0.4
ILAR	Eielson Array	24.82	50	P	P	19 29 15.2	-1.4
	comp=Z,0.8nm,0.9s,baz=258,slow=8.3,SNR=8.8						
	comp=Z,0.8nm,0.9s						
ILAR	Eielson Array	24.82	50	P	P	19 29 16.3	-0.4
SCM	Sheep Creek Mo	24.92	57	P	P	19 29 17.6	0.0
SCM	Sheep Creek Mo	24.92	57	P	P	19 29 17.6	0.0
SCM				pmax	pmax		
	comp=Z,14nm,0.8s						
SCM	Sheep Creek Mo	24.92	57	P	P	19 29 17.5	-0.1
	baz=279,SNR=8.1						
G25K	Bearman Lake	25.11	45	P	P	19 29 19.2	0.0
	baz=269						
D25K	Kavik River	25.18	39	P	P	19 29 18.9	-1.0
	baz=264						
GLI	Glacier Island	25.19	59	P	P	19 29 19.8	-0.2
	baz=281						
P23K	Montague Islan	25.22	61	P	P	19 29 20.0	-0.3
	baz=283						
H25L	Birch Creek	25.23	46	P	P	19 29 20.3	0.0
	baz=271						
F25K	Christian Rive	25.32	43	P	P	19 29 20.7	-0.4
	baz=268						
E25K	Arctic Village	25.37	42	P	P	19 29 21.1	-0.5
	baz=267						
K24K	Donnelly Dome	25.38	52	P	P	19 29 21.4	-0.3
	baz=276						
M24K	Tolsona, Glenn	25.42	56	P	P	19 29 21.7	-0.3
	baz=279						
J25K	Salcha River,	25.48	50	P	P	19 29 22.6	-0.1
	baz=275						
KLU	Klutina	25.64	57	P	P	19 29 24.5	+0.3
	baz=281						
BMAR	Burnt Mountain	25.72	44	P	P	19 29 25.3	+0.5
F26K	Sheenjek River	25.89	43	P	P	19 29 26.4	+0.1
	baz=269						
EYAK	Cordova Ski Ar	25.91	60	P	P	19 29 26.0	-0.4
	baz=283						
G26K	Porcupine Rive	26.03	45	P	P	19 29 27.1	-0.4
	baz=271						
C27K	Jago River	26.14	39	P	P	19 29 27.9	-0.7
	baz=266						
SCRK	Sand Creek	26.15	51		P	19 29 28.0	-0.8
SCRK				IAmb	IAmb	19 29 29.0	
	comp=Z,6.9nm,1.3s						
SCRK	Sand Creek	26.15	51	P	P	19 29 28.0	-0.8
	baz=277,SNR=5.5						
N25K	Chitina, Valde	26.24	57	P	P	19 29 29.2	-0.4
	baz=281						
J26L	Joseph Creek	26.27	50	P	P	19 29 28.6	-1.2
	baz=276						
BMRM	Bremner River	26.37	58	P	P	19 29 30.3	-0.4
	baz=283						
I26K	Coal Creek Min	26.37	48	P	P	19 29 29.5	-1.1
	baz=275						
MJB9	Matsu-Tunnel	26.48	233	P	P	19 29 33.5	+1.6
MJB9				IAmb	IAmb	19 29 56.6	
	comp=Z,8.9nm,1.1s						
MAJO	Matsushiro	26.48	233	P	P	19 29 32.9	+1.0

MAJO				IAmb	IAmb	19 29 55.6	
	comp=Z,9.2nm,1.1s						
MAJO	**Matsushiro**	**26.48**	**233**	P	**P**	**19 29 32.9**	**+1.0**
MAJO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MJAR	**Matsushiro Arr**	**26.48**	**233**	P	**P**	**19 29 31.7**	**-0.2**
	comp=Z,1.5nm,0.6s,baz=32,slow=7.6,SNR=9.2						
	comp=Z,1.5nm,0.6s						
KAIM	**Kayak Island**	**26.70**	**61**	P	**P**	**19 29 32.6**	**-1.0**
	baz=285						
M26K	**Nabesna, AK**	**26.83**	**55**	P	**P**	**19 29 34.1**	**-0.8**
	baz=281						
E27K	**Coleen River**	**26.86**	**42**	P	**P**	**19 29 34.4**	**-0.7**
	baz=271						
G27K	**Doyon Strip**	**26.88**	**45**	P	**P**	**19 29 34.1**	**-1.1**
	baz=273						
H27K	**Steamboat Moun**	**26.96**	**46**	P	**P**	**19 29 34.5**	**-1.6**
	baz=275						
K27K	**Chicken**	**26.97**	**51**	P	**P**	**19 29 35.1**	**-1.0**
	baz=278						
I27K	**Kandik River**	**26.98**	**48**	P	**P**	**19 29 35.5**	**-0.7**
	baz=276						
MCARA	**McCarthy VSAT**	**27.02**	**57**	P	**P**	**19 29 35.8**	**-0.8**
	baz=283						
D27M	**Malcolm River**	**27.09**	**40**	P	**P**	**19 29 36.4**	**-0.8**
	baz=269						
CRQE	**Cirque**	**27.14**	**58**	P	**P**	**19 29 36.9**	**-0.8**
	baz=284						
L27K	**Beaver Creek,**	**27.24**	**53**	P	**P**	**19 29 37.6**	**-0.9**
	baz=280,SNR=5.2						
BCAR	**Beaver Creek A**	**27.26**	**53**	P	**P**	**19 29 38.4**	**-0.4**
M27K	**Edge Creek, AK**	**27.35**	**55**	P	**P**	**19 29 38.3**	**-1.3**
	baz=282						
F28M	**Old Crow**	**27.53**	**43**	P	**P**	**19 29 40.0**	**-1.0**
	baz=273						
E28M	**Babbage River**	**27.61**	**41**	P	**P**	**19 29 40.6**	**-1.1**
	baz=272						
I28M	**Miner Creek**	**27.69**	**48**	P	**P**	**19 29 41.3**	**-1.4**
	baz=277						
D28M	**Stokes Point**	**27.89**	**39**	P	**P**	**19 29 42.9**	**-1.2**
	baz=271						
CTG	**Chitna Glacier**	**27.92**	**58**	P	**P**	**19 29 43.8**	**-0.9**
	baz=285						
YUK3	**Moose Creek**	**28.13**	**56**	P	**P**	**19 29 45.9**	**-0.8**
	baz=284						
DAWY	**Dawson**	**28.14**	**51**	P	**P**	**19 29 45.3**	**-1.2**
	baz=280						
E29M	**Blow River**	**28.23**	**41**	P	**P**	**19 29 45.9**	**-1.4**
	baz=274						
H29M	**Whitestone**	**28.24**	**46**	P	**P**	**19 29 46.9**	**-0.5**
	baz=277						
G29M	**Pine Creek**	**28.30**	**44**	P	**P**	**19 29 47.3**	**-0.7**
	baz=276						
I29M	**Ogilvie Camp,**	**28.38**	**48**	P	**P**	**19 29 48.1**	**-0.6**
	baz=279						
O28M	**Mount Upton**	**28.51**	**58**	P	**P**	**19 29 49.4**	**-0.8**
	baz=286						
PINM	**Pinnacle**	**28.67**	**59**	P	**P**	**19 29 50.7**	**-0.6**
	baz=287						
L29M	**L29M**	**28.88**	**52**	P	**P**	**19 29 52.4**	**-0.7**
	baz=283						
EPYK	**Eagle Plains**	**28.88**	**45**	P	**P**	**19 29 52.1**	**-1.0**
	baz=278						
M29M	**Somme Creek**	**28.88**	**54**	P	**P**	**19 29 53.4**	**+0.1**
	baz=284						
K29M	**Barlow Dome**	**28.99**	**51**	P	**P**	**19 29 53.1**	**-1.1**
	baz=282						
G30M	**tAoh Zraii Nji**	**28.99**	**44**	P	**P**	**19 29 53.4**	**-0.7**
	baz=278						
YUK4	**Talbot Arm**	**29.08**	**56**	P	**P**	**19 29 54.5**	**-0.6**
	baz=286						
F30M	**Barrier River**	**29.09**	**43**	P	**P**	**19 29 54.4**	**-0.5**
	baz=277						
I30M	**Mount Dempster**	**29.20**	**48**	P	**P**	**19 29 54.9**	**-1.2**
	baz=281						
PNL	**Peninsula**	**29.21**	**60**	P	**P**	**19 29 55.6**	**-0.5**
	baz=288						
YUK6	**Outpost Mounta**	**29.32**	**57**	P	**P**	**19 29 56.4**	**-0.9**
	baz=287						
J30M	**Hart River**	**29.35**	**49**	P	**P**	**19 29 56.2**	**-1.2**
	baz=282						
O29M	**Mount Kennedy**	**29.41**	**58**	P	**P**	**19 29 57.3**	**-0.7**
	baz=288						
M30M	**Minto, Yukon**	**29.60**	**53**	P	**P**	**19 29 58.9**	**-0.7**
	baz=285						
HYT	**Haines Junctio**	**29.76**	**57**	P	**P**	**19 30 00.6**	**-0.4**
	baz=287						
G31M	**Satah River**	**29.76**	**44**	P	**P**	**19 30 00.2**	**-0.7**
	baz=279						
N30M	**Aishikik Lake**	**29.77**	**55**	P	**P**	**19 30 01.3**	**+0.2**
	baz=287						
F31M	**Tsiigehtchic**	**29.89**	**43**	P	**P**	**19 30 02.1**	**+0.1**
	baz=279						
H31M	**Peel River**	**29.93**	**46**	P	**P**	**19 30 01.2**	**-1.2**
	baz=281						
P29M	**Windy Craggy**	**30.02**	**59**	P	**P**	**19 30 02.6**	**-0.6**
	baz=289						
P30M	**Million Dollar**	**30.23**	**58**	P	**P**	**19 30 05.1**	**-0.1**
	baz=289						
O30N	**Mendenhall**	**30.44**	**56**	P	**P**	**19 30 06.2**	**-0.7**
	baz=288						
M31M	**Drury Creek, Y**	**30.78**	**53**	P	**P**	**19 30 09.8**	**-0.2**
	baz=287						
KSRS	**Korea Array**	**30.79**	**248**	P	**P**	**19 30 10.1**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=30,slow=9.1,SNR=4.4						
	comp=Z,0.6nm,0.6s						
WHY	**Whitehorse**	**31.04**	**56**	P	**P**	**19 30 12.1**	**-0.3**
	baz=289						
S31K	**Pelican**	**31.35**	**62**	P	**P**	**19 30 13.9**	**-1.0**
	baz=293						
P32M	**Atlin**	**31.95**	**58**	P	**P**	**19 30 19.9**	**-0.4**
	baz=292						
MMPY	**Sheldon Lake,**	**32.04**	**52**	P	**P**	**19 30 20.2**	**-0.9**
	baz=288						
R32K	**Eaglecrest**	**32.06**	**60**	P	**P**	**19 30 21.0**	**-0.3**
	baz=293						
P33M	**Teslin, Yukon**	**32.15**	**56**	P	**P**	**19 30 21.4**	**-0.7**
	baz=291						
A36M	**Sachs Harbour**	**32.15**	**33**	P	**P**	**19 30 21.2**	**-0.7**
	baz=278						
SIT	**Sitka**	**32.16**	**63**	P	**P**	**19 30 20.9**	**-1.1**
	baz=294						
S32K	**Killisnoo**	**32.36**	**62**	P	**P**	**19 30 23.1**	**-0.7**
	baz=294						
Q32M	**Nakina River**	**32.88**	**58**	P	**P**	**19 30 27.4**	**-1.2**
	baz=293						
R33M	**Jennings River**	**33.33**	**57**	P	**P**	**19 30 31.6**	**-0.8**
	baz=293						
U33K	**Whale Pass**	**33.66**	**63**	P	**P**	**19 30 34.5**	**-0.7**
	baz=297						
S34M	**Telegraph Cree**	**33.86**	**60**	P	**P**	**19 30 36.8**	**-0.1**
	baz=295						
DLBC	**Dease Lake**	**34.16**	**58**	P	**P**	**19 30 39.2**	**-0.4**
	baz=295						
T35M	**Bob Quinn**	**34.69**	**61**	P	**P**	**19 30 45.3**	**+1.1**
	baz=297						
SONM	**Songino Array**	**35.80**	**282**	P	**P**	**19 30 54.0**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=51,slow=8.4,SNR=7.5						
	comp=Z,0.4nm,0.5s						
TOAD	**Toad River Com**	**36.23**	**56**	P	**P**	**19 30 58.2**	**+0.7**
	baz=297						
H11N2	**WAKE ISLAND Hy**	**36.39**	**176**	T	T	20 08 55.2	
	baz=356						
H11N3	**WAKE ISLAND Hy**	**36.41**	**176**	T	T	20 08 55.1	
	baz=356,slow=74						
H11N1	**WAKE ISLAND Hy**	**36.41**	**176**	T	T	20 08 56.1	
	baz=356,slow=74						
YKA	**Yellowknife Ar**	**39.15**	**47**	P	**P**	**19 31 21.7**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=302,slow=8.9,SNR=4.4						
	comp=Z,0.5nm,0.7s						
SPITS	**Spitsbergen Ar**	**44.54**	**351**	P	**P**	**19 32 05.2**	**-0.7**
	comp=Z,9.2nm,0.9s,baz=32,slow=8.5,SNR=6.3						
	comp=Z,9.2nm,0.9s						
GTA	**Gaotai**	**44.87**	**277**	*e*P	**P**	**19 32 12.0**	**+2.9**
GTA				pP	pwP	19 32 17.3	+0.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BLKN	**Baker Lake**	**45.09**	**37**		**P**	**19 32 10.5**	**+0.2**
J05D	**Fort Rock, OR**	**47.34**	**73**	P	**P**	**19 32 30.7**	**+2.1**
J05D				IAmb	IAmb	19 32 30.8	
	comp=Z,3.2nm,0.9s						
YBH	**Yreka Blue Hor**	**47.61**	**75**	LR	LR	19 50 36.3	
	comp=Z,4.9nm,21.0s,baz=296,slow=34						
JTMT	**Jette**	**47.95**	**64**	P	**P**	**19 32 34.4**	**+1.2**
KURK	**Kurchatov**	**48.35**	**302**	P	**P**	**19 32 37.0**	**+1.0**
KURBB	**Kurchatov Arra**	**48.45**	**302**	P	**P**	**19 32 37.0**	**+0.1**
	comp=Z,0.8nm,0.2s,baz=54,slow=8.0,SNR=6.5						
	comp=Z,0.8nm,0.2s						
MKAR	**Makanchi Array**	**49.19**	**296**	P	**P**	**19 32 42.3**	**-0.3**
MKAR	**Makanchi Array**	**49.19**	**296**	P	**P**	**19 32 41.9**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=52,slow=5.4,SNR=5.6						
	comp=Z,0.5nm,0.8s						
BPMT	**Black Pine Rid**	**49.25**	**65**	P	**P**	**19 32 44.1**	**+0.7**
BVAR	**Borovoye Array**	**50.54**	**309**	P	**P**	**19 32 53.4**	**+0.7**
	comp=Z,2.6nm,0.6s,baz=53,slow=8.7,SNR=16						
	comp=Z,2.6nm,0.6s						
BRVK	**Borovoye**	**50.56**	**309**		**P**	**19 32 53.3**	**+0.4**
BRVK	**Borovoye**	**50.56**	**309**	P	**P**	**19 32 53.3**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ELK	**Elko**	**52.31**	**71**	LR	LR	19 54 23.6	
	comp=Z,82nm,19.5s,baz=293,slow=35						
NVAR	**Mina Array Bea**	**52.33**	**75**	P	**P**	**19 33 07.7**	**+1.0**
	comp=Z,1.0nm,0.8s,baz=315,slow=10,SNR=5.0						
NVAR				LR	LR	19 54 04.0	
	comp=Z,75nm,19.0s,baz=227,slow=34						
	comp=Z,1.0nm,0.8s						
PD31	**Pinedale Array**	**53.81**	**66**	P	**P**	**19 33 17.9**	**+0.5**
PD31				IAmb	IAmb	19 33 19.4	
	comp=Z,2.3nm,0.9s						
PDAR	**Pinedale Array**	**53.81**	**66**	P	**P**	**19 33 18.0**	**+0.5**
PDAR	**Pinedale Array**	**53.81**	**66**	P	**P**	**19 33 18.8**	**+1.3**
	comp=Z,1.4nm,0.8s,baz=318,slow=4.0,SNR=11						
PDAR				LR	LR	19 56 30.4	
	comp=Z,73nm,20.5s,baz=308,slow=36						
	comp=Z,1.4nm,0.8s						
PFO	**Pinyon Flats O**	**56.90**	**78**	LR	LR	19 56 19.3	
	comp=Z,24nm,18.7s,baz=246,slow=34						
KKAR	**Karatay Array**	**57.66**	**300**	P	**P**	**19 33 44.7**	**-0.2**
KKAR	**Karatay Array**	**57.66**	**300**	P	**P**	**19 33 44.7**	**-0.2**
KKAR				IAmb	IAmb	19 33 54.4	
	comp=Z,5.0nm,0.9s						
KKAR	**Karatay Array**	**57.66**	**300**	P	**P**	**19 33 44.7**	**-0.2**
FINES	**FINESS Array B**	**58.32**	**338**	P	**P**	**19 33 49.5**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=14,slow=11,SNR=3.9						
	comp=Z,1.1nm,0.7s						
NB2	**NORSAR Subarra**	**61.29**	**346**	P	**P**	**19 34 10.1**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=17,slow=6.9						
NOA	**NORSAR Array B**	**61.29**	**346**	P	**P**	**19 34 10.2**	**+0.5**
	comp=Z,1.4nm,0.7s,baz=18,slow=6.9,SNR=7.6						
	comp=Z,1.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**61.33**	**260**	P	**P**	**19 34 11.9**	**+1.5**
	comp=Z,0.9nm,0.7s,baz=29,slow=6.3,SNR=4.7						
	comp=Z,0.9nm,0.7s						
SIMJ	**Simiganj**	**61.78**	**298**	P	**P**	**19 34 14.2**	**+0.7**
SIMJ				IAmb	IAmb	19 34 22.8	
	comp=Z,3.7nm,1.1s						
HFS	**Hagfors**	**61.80**	**344**	P	**P**	**19 34 12.2**	**-0.8**
	comp=Z,2.6nm,0.7s,baz=51,slow=5.9,SNR=13						
	comp=Z,2.6nm,0.7s						
TXAR	**Lajitas Array**	**67.10**	**71**	P	**P**	**19 34 49.5**	**+1.1**
	comp=Z,1.0nm,0.7s,baz=298,slow=4.6,SNR=14						
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**67.28**	**331**	P	**P**	**19 34 49.0**	**0.0**
	comp=Z,0.4nm,0.4s,baz=29,slow=6.3,SNR=2.2						
	comp=Z,0.4nm,0.4s						
AKASG	**Malin Array Be**	**67.28**	**331**	P	**P**	**19 34 49.0**	**0.0**
EKA	**Eskdalemuir Ar**	**68.44**	**353**	P	**P**	**19 34 56.7**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=24,slow=5.7,SNR=3.9						
	comp=Z,1.1nm,0.7s						
CLL	**Collm**	**70.37**	**342**	*e*P	**P**	**19 35 09.0**	**+0.8**
CLL	**Collm**	**70.37**	**342**	*e*P	**P**	**19 35 09.0**	**+0.8**
GERES	**GERESS Array B**	**72.60**	**340**	P	**P**	**19 35 22.8**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=36,slow=7.0,SNR=4.9						
	comp=Z,0.6nm,0.6s						
BRTR	**Keskin Array B**	**75.85**	**323**	P	**P**	**19 35 41.3**	**+0.3**
BRTR	**Keskin Array B**	**75.85**	**323**	P	**P**	**19 35 41.3**	**+0.3**
ESDC	**Sonseca Array**	**84.06**	**351**	P	**P**	**19 36 26.0**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=11,slow=5.0,SNR=2.3						
	comp=Z,0.4nm,0.7s						

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*IDC **29** 19:26:53.8±1.1, 37°.37N×2°.58W, h0^{km}, mb3.8/7, mbtmp3.7/11, ML3.4/4, MS3.4/6, Error ellipse: s-maj=24.2km s-min=16.6km az=52.0*

*MED_RC **29** 19:26:54.0±1.0, 37°.37N×2°.60W, h13^{km}±3^{km}, MW4.3/16, Moment Tensor Solution.Mantle waves: s16,c19; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M_{rr}-2.66±.70; $M_{\theta\theta}$1.59±.42; $M_{\phi\phi}$1.07±.38; $M_{r\theta}$2.14±.77; $M_{\theta\phi}$-1.17±.26; $M_{\phi r}$0.85±.54; Best double couple: $M_0$3.36000×10^{15} NP1:ϕ_s146.00000°, δ36.00000°, λ-48.00000°. NP2:ϕ_s279.00000°, δ64.00000°, λ-115.00000°. Principal axes: T 2.8500, Plg15.0000°, Azm27.0000°; N 1.0100, Plg23.0000°, Azm290.0000°; P -3.8600, Plg62.0000°, Azm148.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*MDD **29** 19:26:55.5±0.2, 37°.39N×2°.61W, h2^{km}, mb_Lg4.1/88 Error ellipse: s-maj=1.3km s-min=0.9km az=152.0*

*CNRM **29** 19:26:55.7, 37°.41N×2°.58W, h19^{km}*

*SFS **29** 19:26:55.2, 37°.41N×2°.57W, h0^{km}, mb4.7/4, ML4.6/21, ML4.6/23, MLv4.5/23*

*IGIL **29** 19:26:55.9, 37°.39N×2°.61W, h2^{km}*

*LDG **29** 19:26:56.5±0.1, 37°.32N×2°.53W, h10^{km}, Ml4.2/19, Error ellipse: s-maj=2.6km s-min=1.7km az=152.0*

*INMG **29** 19:26:56.1±2.0, 37°.36N×2°.57W, h12^{km}±2^{km}, ML4.1, Error ellipse: s-maj=2.1km s-min=1.9km az=136.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Almeria (ESP)*

ISC 29 19:26:54.9±1.0**, 37°.41N**±0°.02×**2°.60W**±0°.01**, h10**^{km}±7^{km}**, n208, σ2^{s}13**/385**, mb3.7**/7**, 3C, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENIJ	**Nijar**	**0.54**	**145**	Pg	**Pg**	**19 27 04.7**	**-0.6**
ENIJ				Sg	**Sg**	**19 27 11.5**	**-0.9**
ENIJ	**Nijar**	**0.54**	**145**	Pg	**Pg**	**19 27 04.8**	**-0.6**
ENIJ				Sg	**Sg**	**19 27 11.4**	**-1.1**
ENIJ				*i* IVmb_Lg		19 27 13.0	
EQES	**Quesada**	**0.54**	**316**	Pg	**Pg**	**19 27 05.1**	**-0.4**
EQES				Sg	**Sg**	**19 27 13.7**	**+0.9**
EQES				*i* IVmb_Lg		19 27 21.7	
EQUE	**Quentar**	**0.70**	**253**	⇑Pg	**Pg**	**19 27 07.9**	**-0.6**
EQUE				Sg	**Sg**	**19 27 17.6**	**-0.2**
EQUE				*i* IVmb_Lg		19 27 19.5	
EQTA	**Presa de Quent**	**0.70**	**253**	Pg	**Pg**	**19 27 07.9**	**-0.6**
EQTA				Sg	**Sb**	**19 27 18.3**	**-0.8**
ELOR	**Lorca, Murcia**	**0.71**	**71**	⇑Pg	**Pg**	**19 27 07.1**	**-1.7**
ELOR				Sg	**Sg**	**19 27 18.1**	**0.0**
ELOR				*i* IVmb_Lg		19 27 21.6	
TLOR	**Lorca, Murcia**	**0.76**	**71**	Pg	**Pg**	**19 27 09.5**	**-0.2**
TLOR				Sg	**Sg**	**19 27 20.2**	**+0.6**
TLOR	**Lorca, Murcia**	**0.76**	**71**	Pg	**Pg**	**19 27 09.4**	**-0.2**
TLOR				Sg	**Sb**	**19 27 20.4**	**-0.2**
E0803	**Jimena (Jaen)**	**0.81**	**302**	Pg	**Pg**	**19 27 11.0**	**+0.4**
E0803				Sg	**Sb**	**19 27 22.4**	**+0.1**
EZAR	**Zarzadilla de**	**0.85**	**57**	Pg	**Pg**	**19 27 08.9**	**-2.5**
EZAR				Sg	**Sg**	**19 27 22.9**	**+0.4**
EZAR				*i* IVmb_Lg		19 27 31.7	
E0802	**Ubeda,Jaen**	**0.87**	**315**	Pg	**Pg**	**19 27 12.0**	**+0.3**
E0802				Sg	**Sb**	**19 27 24.5**	**+0.6**
ELGU	**Los Guajares,**	**0.99**	**237**	Pg	**Pg**	**19 27 13.1**	**-0.8**
ELGU	**Los Guajares,**	**0.99**	**237**	⇑Pg	**Pg**	**19 27 13.1**	**-0.8**
ELGU				Sg	**Sg**	**19 27 25.0**	**-1.7**
ELGU				*i* IVmb_Lg		19 27 34.4	
EGOR	**Sierra Gorda,**	**1.24**	**256**	Pg	**Pn**	**19 27 17.4**	**-1.0**
EGOR	**Sierra Gorda,**	**1.24**	**256**	Pg	**Pn**	**19 27 17.6**	**-0.9**
EGOR				Sg	**Sg**	**19 27 39.4**	**+4.4**
EGOR				*i* IVmb_Lg		19 27 46.4	
CART	**Cartagena**	**1.28**	**82**	Pg	**Pn**	**19 27 17.2**	**-1.6**
CART				Sg	**Sb**	**19 27 35.2**	**-0.3**
CART	**Cartagena**	**1.28**	**82**	P	**Pn**	**19 27 17.7**	**-1.1**
CART	**Cartagena**	**1.28**	**82**	S	**Sn**	**19 27 35.6**	**-0.4**
EALB	**Alboran**	**1.51**	**194**	Pn	**Pn**	**19 27 21.4**	**-0.5**
EALB				Pg	**Pb**	**19 27 22.7**	**-0.2**
EALB				Sg	**Sb**	**19 27 41.2**	**-1.0**
EALB				*i* IVmb_Lg		19 27 47.9	
ETRV	**Los Montesinos**	**1.58**	**67**	Pn	**Pn**	**19 27 22.7**	**-0.1**
ETRV				Sn	**Sb**	**19 27 43.6**	**-0.5**
ETRV				Sg	**Sg**	**19 27 47.2**	**+1.6**
ETRV				*i* IVmb_Lg		19 27 59.1	
EMAL	**Malaga-Limoner**	**1.60**	**247**	Pn	**Pb**	**19 27 24.1**	**-0.4**
PSIM	**Granatula de C**	**1.68**	**327**	Pn	**Pn**	**19 27 24.6**	**+0.3**
PSIM				Sn	**Sn**	**19 27 46.5**	**+0.5**
EADA	**Adamuz**	**1.74**	**296**	Pn	**Pn**	**19 27 25.3**	**+0.1**
EADA				Sn	**Sb**	**19 27 49.2**	**+0.3**
EADA	**Adamuz**	**1.74**	**296**	Pn	**Pn**	**19 27 25.5**	**+0.3**
EADA				Sn	**Sn**	**19 27 47.9**	**+0.4**
EADA				Sg	**Sg**	**19 27 51.4**	**+0.5**
EADA				*i* IVmb_Lg		19 27 53.1	
EMIJ	**Mijas**	**1.94**	**245**	Pn	**Pn**	**19 27 28.2**	**+0.3**
EMIJ	**Mijas**	**1.94**	**245**	Pn	**Pn**	**19 27 28.1**	**+0.3**
EMIJ				Sg	**Sg**	**19 27 56.0**	**-1.2**
EMIJ				*i* IVmb_Lg		19 28 05.3	
WMELI	**Melilla**	**2.11**	**188**	Pn	**Pb**	**19 27 31.8**	**-1.4**
EMEL	**Melilla**	**2.13**	**188**	Pn	**Pn**	**19 27 29.8**	**-0.6**
EVIV	**Cofrentes, Val**	**2.19**	**32**	Pn	**Pn**	**19 27 31.7**	**+0.4**
EVIV				Pg	**Pb**	**19 27 35.8**	**+1.2**
EVIV				Sn	**Sn**	**19 27 59.5**	**+1.0**
EVIV				Sg	**Sg**	**19 28 04.8**	**-0.4**
EVIV				*i* IVmb_Lg		19 28 11.7	
GOG	**Mont Gurugu**	**2.21**	**189**	P	**Pn**	**19 27 31.3**	**-0.4**
GOG	**Mont Gurugu**	**2.21**	**189**	S	**Sn**	**19 27 59.4**	**+0.4**
EBEN2	**Beniarda presa**	**2.28**	**56**	Pn	**Pn**	**19 27 32.5**	**-0.1**
EBEN2				Pg	**Pb**	**19 27 35.2**	**-1.0**
EBEN2				Sn	**Sn**	**19 28 02.2**	**+1.4**
EBEN2				Sg	**Sg**	**19 28 09.9**	**+1.7**
EBEN2				*i* IVmb_Lg		19 28 23.9	
ECAB	**El Cabril**	**2.33**	**287**	Pn	**Pn**	**19 27 33.4**	**+0.1**
ECAB				Sn	**Sn**	**19 28 03.1**	**+1.0**
ECAB	**El Cabril**	**2.33**	**287**	Pn	**Pn**	**19 27 33.7**	**+0.4**
ECAB				Sg	**Sb**	**19 28 07.8**	**+1.9**
ECAB				*i* IVmb_Lg		19 28 10.6	
PALE	**Palemas**	**2.44**	**207**	P	**Pn**	**19 27 34.3**	**-0.5**
PALE	**Palemas**	**2.44**	**207**	S	**Sn**	**19 28 05.1**	**+0.3**
ESDC	**Sonseca Array**	**2.50**	**335**	Pn	**Pn**	**19 27 35.5**	**-0.2**
ESDC				Pg	**Pb**	**19 27 40.8**	**+0.9**
ESDC				Sn	**Sn**	**19 28 05.8**	**-0.4**
ESDC				Sg	**Sg**	**19 28 13.7**	**-1.6**
ESDC				*i* IVmb_Lg		19 28 17.1	
ESDC	**Sonseca Array**	**2.50**	**335**	Pn	**Pn**	**19 27 36.0**	**+0.3**
	2.7nm,0.3s,baz=152,slow=12,SNR=99						
ESDC				Pg	**Pb**	**19 27 41.6**	**+1.7**
	14nm,0.3s,baz=154,slow=17,SNR=45						
ESDC				Sn	**Sn**	**19 28 05.8**	**-0.4**
	44nm,0.3s,baz=154,slow=22,SNR=4.6						
ESDC				Lg	Lg	19 28 14.1	
	75nm,0.3s,baz=156,slow=30,SNR=5.2						
	6.1nm,0.4s						
ESBB	**Sonseca Array**	**2.50**	**335**	Pn	**Pn**	**19 27 36.1**	**+0.4**
ESBB				Pg	**Pb**	**19 27 40.5**	**+0.6**
ESBB				Sn	**Sn**	**19 28 05.7**	**-0.5**
ESBB				Sg	**Sg**	**19 28 14.0**	**-1.3**
ECHE	**Chera**	**2.52**	**30**	Pn	**Pn**	**19 27 36.4**	**+0.5**
ECHE				Sn	**Sn**	**19 28 06.6**	**-0.2**
ECHE	**Chera**	**2.52**	**30**	Pn	**Pn**	**19 27 36.8**	**+0.9**
ECHE				Pg	**Pg**	**19 27 43.3**	**0.0**
ECHE				Sn	**Sn**	**19 28 08.0**	**+1.2**
ECHE				Sg	**Sg**	**19 28 15.8**	**-0.2**
ECHE				*i* IVmb_Lg		19 28 24.5	
PAB	**San Pablo**	**2.54**	**328**	Pn	**Pn**	**19 27 36.6**	**+0.4**
PAB				Sn	**Sn**	**19 28 06.6**	**-0.6**
PAB				Sg	**Sg**	**19 28 15.4**	**-1.0**
PAB				*i* IVmb_Lg		19 28 24.9	
TAF	**Taforalt**	**2.60**	**177**	P	**Pn**	**19 27 36.8**	**-0.1**
ESPR	**Espera**	**2.66**	**259**	Pn	**Pn**	**19 27 39.3**	**+1.5**
ESPR	**Espera**	**2.66**	**259**	Pn	**Pn**	**19 27 38.0**	**+0.3**
ESPR				Pg	**Pb**	**19 27 42.4**	**-0.2**
ESPR				Sn	**Sn**	**19 28 08.9**	**-1.2**
ESPR				*i* IVmb_Lg		19 28 35.5	
ECEU	**Ceuta**	**2.70**	**237**	Pn	**Pn**	**19 27 38.0**	**-0.3**
ECEU				Sn	**Sn**	**19 28 09.8**	**-1.2**
SMIR	**Smir Dam**	**2.83**	**233**	P	**Pn**	**19 27 40.4**	**+0.3**
UCM	**Universidad Co**	**2.94**	**350**	Pn	**Pn**	**19 27 41.6**	**-0.1**
UCM				Sn	**Sn**	**19 28 16.6**	**-0.3**
CNIL	**Conil**	**2.96**	**250**	Pn	**Pn**	**19 27 44.3**	**+2.4**
JBK	**JBK**	**3.07**	**180**	P	**Pn**	**19 27 43.8**	**+0.2**
AKLM	**AKL**	**3.07**	**200**	P	**Pn**	**19 27 42.6**	**-0.9**
AKLM	**AKL**	**3.07**	**200**	S	**Sn**	**19 28 19.4**	**-0.9**
CHEFC	**Chefchaouen**	**3.19**	**225**	P	**Pn**	**19 27 45.2**	**0.0**
EMIN	**Mina Concepcio**	**3.26**	**278**	Pn	**Pn**	**19 27 45.9**	**-0.1**
EMIN				Sn	**Sn**	**19 28 25.3**	**+0.5**
EMIN	**Mina Concepcio**	**3.26**	**278**	Pn	**Pn**	**19 27 46.2**	**+0.2**
EMIN				Sn	**Sn**	**19 28 25.8**	**+1.0**
EMIN				Sg	**Sg**	**19 28 37.4**	**-2.1**
EMIN				*i* IVmb_Lg		19 28 43.3	
E0901	**Celadas (Terue**	**3.27**	**20**	Pn	**Pn**	**19 27 47.3**	**+1.0**
E0901				Pg	**Pb**	**19 27 55.0**	**+1.9**
E0901				Sn	**Sn**	**19 28 25.8**	**+0.5**
E0901				Sg	**Sg**	**19 28 40.4**	**+0.4**
EMOS	**Mosqueruela**	**3.38**	**29**	Pn	**Pn**	**19 27 48.7**	**+0.8**
EMOS				Pg	**Pg**	**19 27 58.0**	**-1.8**
EMOS				Sn	**Sn**	**19 28 29.1**	**+0.9**
EMOS				Sg	**Sg**	**19 28 44.3**	**+0.8**
EMOS				*i* IVmb_Lg		19 28 55.0	
ETOR	**Torete**	**3.43**	**7**	Pn	**Pn**	**19 27 49.2**	**+0.7**
ETOR				Pg	**Pb**	**19 27 57.2**	**+1.4**
ETOR				Sn	**Sn**	**19 28 29.2**	**0.0**
ETOR				Sg	**Sg**	**19 28 42.8**	**-2.3**
ETOR				*i* IVmb_Lg		19 28 47.3	
GUD	**Guadarrama**	**3.45**	**340**	Pn	**Pn**	**19 27 49.2**	**+0.4**
GUD				Pg	**Pb**	**19 27 56.7**	**+0.6**
GUD				Sn	**Sn**	**19 28 29.5**	**-0.2**
GUD				Sg	**Sb**	**19 28 41.5**	**+3.4**
GUD				*i* IVmb_Lg		19 28 54.1	
EIBI	**Ibiza**	**3.50**	**61**	Pn	**Pn**	**19 27 48.5**	**-0.8**
EIBI				Sn	**Sn**	**19 28 27.5**	**-3.2**
EIBI	**Ibiza**	**3.50**	**61**	Pn	**Pn**	**19 27 49.1**	**-0.2**
EIBI				Sn	**Sn**	**19 28 27.6**	**-3.2**
ECOL	**Islas Columbre**	**3.57**	**45**	Pn	**Pn**	**19 27 51.2**	**+0.9**
ECOL				Sn	**Sn**	**19 28 32.4**	**-0.2**
PBAR	**Barrancos**	**3.60**	**284**	Pn	**Pn**	**19 27 50.6**	**-0.1**
PBAR				Sn	**Sn**	**19 28 34.0**	**+0.8**
PBAR	**Barrancos**	**3.60**	**284**	*e*Pn	**Pn**	**19 27 50.9**	**+0.2**
PBAR				*e*Pg	**Pb**	**19 27 59.3**	**+0.7**
PBAR				*e*Sn	**Sn**	**19 28 33.3**	**0.0**
PBAR				*e*Sg	**Sg**	**19 28 47.1**	**-3.5**
PBAR				*i* AML	AML	19 28 58.4	
PBAR				*i* AML	AML	19 28 59.6	
PBAR				*i* AML	AML	19 29 02.8	
EBAD	**Badajoz**	**3.73**	**292**	Pn	**Pn**	**19 27 52.3**	**-0.2**
EBAD	**Badajoz**	**3.73**	**292**	Pn	**Pn**	**19 27 52.6**	**0.0**
EBAD				Sn	**Sn**	**19 28 35.3**	**-1.2**
EBAD				Sg	**Sg**	**19 28 51.2**	**-3.6**
EBAD				*i* IVmb_Lg		19 28 57.1	
EPLA	**Plasencia**	**3.80**	**315**	Pn	**Pn**	**19 27 53.9**	**+0.4**
EPLA				Pg	**Pb**	**19 28 02.0**	**0.0**
EPLA				Sn	**Sn**	**19 28 38.6**	**+0.4**
EPLA				Sg	**Sb**	**19 28 52.1**	**+4.0**
EPLA				*i* IVmb_Lg		19 29 02.5	
EGRO	**El Granado**	**3.89**	**273**	Pn	**Pn**	**19 27 54.3**	**-0.3**
EGRO				Sn	**Sn**	**19 28 39.1**	**-1.3**
EGRO	**El Granado**	**3.89**	**273**	Pn	**Pn**	**19 27 55.0**	**+0.4**
EGRO				Sn	**Sn**	**19 28 39.9**	**-0.5**
EGRO				Sg	**Sg**	**19 28 57.6**	**-2.2**
EGRO				*i* IVmb_Lg		19 29 01.3	
PVAQ	**Vaqueiros**	**4.08**	**271**	Pn	**Pn**	**19 27 56.6**	**-0.6**
PVAQ	**Vaqueiros**	**4.08**	**271**	*e*Pn	**Pn**	**19 27 56.9**	**-0.3**
PVAQ				*e*Sn	**Sn**	**19 28 44.3**	**-0.8**
PVAQ				*e*Sg	**Sg**	**19 29 03.5**	**-2.3**
PVAQ				*i* AML	AML	19 29 10.3	
PVAQ				*i* AML	AML	19 29 17.4	
PVAQ				*i* AML	AML	19 29 19.7	
PVAQ	**Vaqueiros**	**4.08**	**271**	P	**Pn**	**19 27 57.6**	**+0.3**
PESTR	**Estremoz**	**4.20**	**292**	Pn	**Pn**	**19 27 58.8**	**-0.1**
PESTR				P	**Pn**	**19 27 58.9**	**-0.1**
PESTR				Sn	**Sn**	**19 28 47.3**	**-0.7**
PESTR	**Estremoz**	**4.20**	**292**	*e*Pn	**Pn**	**19 27 59.1**	**+0.2**
PESTR				*e*Pg	**Pb**	**19 28 11.3**	**+2.5**
PESTR				*e*Sn	**Sn**	**19 28 48.3**	**+0.3**
PESTR				*e*Sg	**Sg**	**19 29 07.1**	**-2.5**
PESTR				*i* AML	AML	19 29 14.7	
PESTR				*i* AML	AML	19 29 15.0	
PESTR				*i* AML	AML	19 29 15.7	
PESTR	**Estremoz**	**4.20**	**292**	P	**Pn**	**19 27 58.7**	**-0.2**
ERTA	**Horta de San J**	**4.21**	**32**	Pn	**Pn**	**19 28 00.0**	**+0.9**
ERTA				Sn	**Sn**	**19 28 48.1**	**-0.2**
ERTA				*i* IVmb_Lg		19 29 34.8	
PBEJ	**Beja**	**4.22**	**280**	*e*Pn	**Pn**	**19 28 00.2**	**+0.9**
PBEJ				*e*Sn	**Sg**	**19 29 07.3**	**-3.2**
PBEJ				*e*Sg	Sb	19 29 09.4	+9.2
PBEJ				*i* AML	AML	19 29 15.2	
PBEJ				*i* AML	AML	19 29 18.6	
PBEJ				*i* AML	AML	19 29 20.5	
PBDV	**Barranco-do-Ve**	**4.25**	**269**	*e*Pn	**Pn**	**19 27 59.9**	**+0.2**
PBDV				*e*Sn	**Sn**	**19 28 48.5**	**-0.9**
PBDV				*e*Sg	**Sg**	**19 29 11.0**	**-0.5**
PBDV				*i* AML	AML	19 29 20.2	
PBDV				*i* AML	AML	19 29 22.1	
PBDV				*i* AML	AML	19 29 33.3	

PMRV	Marv??o	4.27	300	*e*Pn	Pn	19 28 00.1	+0.1
PMRV				*e*Pg	Pg	19 28 14.1	-2.7
PMRV				*e*Sn	Sn	19 28 49.4	-0.4
PMRV				*e*Sg	Sg	19 29 09.0	-3.1
PMRV				*i* AML	AML	19 29 15.5	
PMRV				*i* AML	AML	19 29 15.8	
PMRV				*i* AML	AML	19 29 24.6	
PCVE	Castro Verde	4.33	275	Pn	Pn	19 28 01.0	+0.2
PCVE				Sn	Sn	19 28 50.8	-0.5
PCVE	Castro Verde	4.33	275	*e*Pn	Pn	19 28 01.4	+0.6
PCVE				*e*Sn	Sn	19 28 50.1	-1.2
PCVE				*e*Sg	Sg	19 29 11.6	-2.4
PCVE				*i* AML	AML	19 29 17.6	
PCVE				*i* AML	AML	19 29 18.1	
PCVE				*i* AML	AML	19 29 25.2	
EVO	Evora	4.42	286	Pn	Pn	19 28 02.9	+0.9
EVO				Sn	Sn	19 28 51.8	-1.8
EVO	Evora	4.42	286	*e*Pn	Pn	19 28 02.9	+0.9
EVO				*e*Sn	Sn	19 28 53.2	-0.3
EVO				*e*Sg	Sg	19 29 13.1	-3.9
EVO				*i* AML	AML	19 29 18.9	
EVO				*i* AML	AML	19 29 20.5	
EVO				*i* AML	AML	19 29 27.6	
EJUZ	Juzbado, Salam	4.47	326	Pn	Pn	19 28 03.6	+0.9
EJUZ				Sn	Sn	19 28 53.2	-1.7
EJUZ				Sg	Sg	19 29 14.8	-3.7
MESJ	Messejana	4.49	277	*e*P	Pn	19 28 02.8	-0.1
PCBR	Castelo Branco	4.53	304	*e*Pn	Pn	19 28 03.8	+0.4
PCBR				*e*Sn	Sn	19 28 55.9	-0.2
PCBR				*e*Sg	Sg	19 29 16.6	-3.6
PCBR				*i* AML	AML	19 29 22.0	
PCBR				*i* AML	AML	19 29 27.3	
PCBR				*i* AML	AML	19 29 27.7	
ESAC	San Caprasio	4.61	20	Pn	Pn	19 28 05.3	+0.6
ESAC				Pg	Pb	19 28 16.9	+1.1
ESAC				Sn	Sn	19 28 57.6	-0.6
ESAC				Sg	Sg	19 29 20.8	-2.0
ESAC				*i* IVmb_Lg		19 29 29.2	
PMTG	Montargil	4.73	292	*e*Pn	Pn	19 28 06.7	+0.4
PMTG				*e*Sn	Sn	19 28 59.5	-1.7
PMTG				*e*Sg	Sg	19 29 22.2	-4.5
PMTG				*i* AML	AML	19 29 31.0	
PMTG				*i* AML	AML	19 29 33.8	
PMTG				*i* AML	AML	19 29 34.4	
MORF	Marmelete	4.83	271	*e*P	Pn	19 28 07.4	-0.2
MORF	Marmelete	4.83	271	*e*Pn	Pn	19 28 07.9	+0.3
MORF				*e*Sn	Sn	19 29 02.9	-0.6
MORF				*e*Sg	Sg	19 29 28.6	-1.3
MORF				*i* AML	AML	19 29 33.3	
MORF				*i* AML	AML	19 29 33.5	
MORF				*i* AML	AML	19 29 37.7	
ETOS	Mallorca	4.85	59	Pn	Pn	19 28 07.3	-0.6
ETOS				Sn	Sn	19 29 02.6	-1.5
ETOS	Mallorca	4.85	59	Pn	Pn	19 28 07.8	-0.1
ETOS				Sn	Sn	19 29 02.4	-1.7
EPOB	Poblet	4.86	35	Pn	Pn	19 28 08.9	+0.9
EPOB				Sn	Sn	19 29 04.3	-0.1
MD31	MD31	4.87	202	P	Pn	19 28 07.8	-0.4
MDT	Midelt	4.87	200	Pn	Pn	19 28 07.9	-0.4
	0.4nm,0.3s,baz=301,slow=4.3,SNR=1.8						
MDT				Sn	Sn	19 29 03.2	-1.6
	1.3nm,0.3s,baz=314,slow=15,SNR=3.7						
MDT				LR	LR	19 29 56.7	
	comp=Z,156nm,21.4s,baz=44,slow=38						
	2.6nm,0.4s						
MDT	Midelt	4.87	200	P	Pn	19 28 08.5	+0.2
PTEO	Sao Teotonio	4.88	273	*e*Pn	Pn	19 28 09.6	+1.4
PTEO				*e*Sn	Sn	19 29 04.9	+0.2
PTEO				*e*Sg	Sg	19 29 27.3	-4.2
PTEO				*i* AML	AML	19 29 42.0	
PTEO				*i* AML	AML	19 29 42.9	
PTEO				*i* AML	AML	19 29 45.9	
MTE	Manteigas	4.88	309	*e*Pn	Pn	19 28 09.5	+1.1
MTE				*e*Sn	Sn	19 29 04.1	-0.8
MTE				*e*Sg	Sg	19 29 27.9	-3.7
MTE				*i* AML	AML	19 29 31.5	
MTE				*i* AML	AML	19 29 35.1	
MTE				*i* AML	AML	19 29 40.2	
PSARD	Sardoal	4.88	298	*e*Pn	Pn	19 28 09.3	+1.0
PSARD				*e*Sn	Sn	19 29 04.1	-0.8
PSARD				*e*Sg	Sg	19 29 28.5	-3.1
PSARD				*i* AML	AML	19 29 33.0	
PSARD				*i* AML	AML	19 29 35.7	
PSARD				*i* AML	AML	19 29 37.8	
PFVI	Vila Bisbo	4.98	269	Pn	Pn	19 28 09.3	-0.4
PFVI				Sn	Sn	19 29 05.2	-2.0
PFVI	Vila Bisbo	4.98	269	*e*Pn	Pn	19 28 10.3	+0.7
PFVI				*e*Sn	Sn	19 29 06.3	-0.9
PFVI				*i* AML	AML	19 29 11.3	
PFVI				*i* AML	AML	19 29 40.0	
PFVI				*i* AML	AML	19 29 45.6	
PFVI	Vila Bisbo	4.98	269	P	Pn	19 28 09.9	+0.3
PFVI	Vila Bisbo	4.98	269	S	Sn	19 29 07.2	-0.1
MVO	Moncorvo	5.09	319	*e*Pn	Pn	19 28 12.4	+1.2
MVO				*e*Sn	Sn	19 29 08.8	-1.2
MVO				*e*Sg	Sg	19 29 34.3	-3.9
MVO				*i* AML	AML	19 29 41.6	
MVO				*i* AML	AML	19 29 43.0	
MVO				*i* AML	AML	19 29 45.9	
PACT	Alcochete	5.10	287	*e*Pn	Pn	19 28 12.4	+1.1
PACT				*e*Sn	Sn	19 29 10.2	-0.1
PACT				*e*Sg	Sg	19 29 35.1	-3.6
PACT				*i* AML	AML	19 29 46.6	
PACT				*i* AML	AML	19 29 49.1	
PACT				*i* AML	AML	19 29 51.2	
ZHG	ZHG	5.15	221	P	Pn	19 28 13.6	+1.5
ZHG	ZHG	5.15	221	S	Sn	19 29 14.9	+3.2
PARRA	Arraiolos	5.27	287	*e*Pn	Pn	19 28 03.8	-10
PARRA				*e*Pg	Pn	19 28 16.7	+3.0
PARRA				*e*Sn	Sn	19 28 55.2	-19
PARRA				*e*Sg	Sn	19 29 16.9	+2.4
PARRA				*i* AML	AML	19 29 21.7	
PARRA				*i* AML	AML	19 29 25.6	
PARRA				*i* AML	AML	19 29 29.3	
PVIS	Viseu	5.28	310	*e*Pn	Pn	19 28 14.9	+1.0
PVIS				*e*Sn	Sn	19 29 13.1	-1.7
PVIS				*e*Sg	Sg	19 29 42.4	-2.0
PSBE	So Bento	5.30	295	*e*Pn	Pn	19 28 15.4	+1.3
PSBE				*e*Sn	Sn	19 29 13.9	-1.3
PSBE				*e*Sg	Sg	19 29 41.1	-3.9
PSBE				*i* AML	AML	19 29 52.0	
PSBE				*i* AML	AML	19 29 53.1	
PSBE				*i* AML	AML	19 29 54.2	
PCAS	Casmilo, Conde	5.32	302	*e*Pn	Pn	19 28 15.4	+1.1
PCAS				*e*Sn	Sn	19 29 14.8	-0.7
PCAS				*e*Sg	Sg	19 29 40.9	-4.7
PCAS				*i* AML	AML	19 29 50.6	
PCAS				*i* AML	AML	19 29 52.7	
PCAS				*i* AML	AML	19 29 54.7	
COI	Coimbra	5.33	303	*e*Pn	Pn	19 28 15.6	+1.1
COI				*e*Sn	Sn	19 29 14.4	-1.5
COI				*e*Sg	Sg	19 29 41.4	-4.7
COI				*i* AML	AML	19 29 46.5	
COI				*i* AML	AML	19 29 48.1	
COI				*i* AML	AML	19 29 50.6	
EARA	Aranguren	5.41	8	Pn	Pn	19 28 17.3	+1.7
EARA				Sn	Sn	19 29 18.9	+1.0
EARA				Sg	Sg	19 29 47.3	-1.3
EARA				*i* IVmb_Lg		19 30 11.8	
PBRG	Braganca	5.43	325	*e*Pn	Pn	19 28 17.1	+1.1
PBRG				*e*Sn	Sn	19 29 16.6	-1.9
PBRG				*e*Sg	Sg	19 29 44.7	-4.5
PBRG				*i* AML	AML	19 29 50.9	
PBRG				*i* AML	AML	19 29 55.1	
PBRG				*i* AML	AML	19 30 01.7	
PMAFR	Mafra	5.49	288	Pn	Pn	19 28 17.3	+0.6
PMAFR				Sn	Sn	19 29 17.8	-2.0
PMAFR	Mafra	5.49	288	*e*Pn	Pn	19 28 17.9	+1.2
PMAFR				*e*Sn	Sn	19 29 18.5	-1.4
PMAFR				*e*Sg	Sg	19 29 45.4	-5.7
PMAFR				*i* AML	AML	19 29 56.7	
PMAFR				*i* AML	AML	19 30 01.2	
PMAFR				*i* AML	AML	19 30 02.4	
PVRL	Vila Real	5.54	316	*e*Pn	Pn	19 28 17.7	+0.4
PVRL				*e*Sn	Sn	19 29 18.9	-2.2
PVRL				*e*Sg	Sg	19 29 48.5	-4.0
PVRL				*i* AML	AML	19 30 02.5	
PVRL				*i* AML	AML	19 30 03.0	
PVRL				*i* AML	AML	19 30 07.0	
ECAL	Calabor	5.54	326	Pn	Pn	19 28 18.4	+1.0
ECAL				Sn	Sn	19 29 18.6	-2.5
ECAL	Calabor	5.54	326	Pn	Pn	19 28 17.7	+0.3
ECAL				Sn	Sn	19 29 20.1	-1.1
ECAL				Sg	Sg	19 29 49.3	-3.4
ECAL				*i* IVmb_Lg		19 30 04.8	
EORO	Oroz-Betelu	5.56	10	Pn	Pn	19 28 19.7	+1.9
EORO				Sg	Sg	19 29 51.5	-2.0
EORO				*i* IVmb_Lg		19 30 02.9	
POLO	Lamas de Olo	5.64	316	*e*Pn	Pn	19 28 19.3	+0.4
POLO				*e*Sn	Sn	19 29 21.6	-2.2
POLO				*e*Sg	Sg	19 29 52.3	-3.8
POLO				*i* AML	AML	19 30 03.4	
POLO				*i* AML	AML	19 30 06.1	
POLO				*i* AML	AML	19 30 06.8	
ECHI	Chisagues Biel	5.67	21	Pn	Pn	19 28 20.1	+0.9
ECHI				Sn	Sn	19 29 23.1	-1.3
ECHI				Sg	Sg	19 29 57.0	+0.2
ECHI				*i* IVmb_Lg		19 30 15.0	
ETSF	Etsaut	5.70	15	*e*Pn	Pn	19 28 21.0	+1.4
ETSF				*e*Sg	Sg	19 29 55.6	-2.2
	325nm,1.3s						
SJPF	Ste Jean	5.79	10	*e*Pn	Pn	19 28 22.7	+1.9
SJPF				*e*Sn	Sn	19 29 25.3	-2.0
SJPF				*e*Sg	Sg	19 29 58.3	-2.5
	126nm,0.7s						
ELAN	Lanestosa	5.85	354	Pn	Pn	19 28 22.6	+0.9
ELAN				Sn	Sn	19 29 27.0	-1.7
ELAN				Sg	Sg	19 30 01.6	-1.0
ELAN				*i* IVmb_Lg		19 30 17.2	
EALK	Alkurruntz	5.86	8	Pn	Pn	19 28 23.3	+1.5
EALK				Sn	Sn	19 29 27.3	-1.8
EALK				Sg	Sg	19 29 59.5	-3.5
EALK				*i* IVmb_Lg		19 30 11.2	
PCAB	Cabril	6.00	317	*e*Pn	Pn	19 28 23.4	-0.4
PCAB				*e*Sn	Sn	19 29 29.7	-2.8
PCAB				*e*Sg	Sg	19 30 02.2	-5.4
PCAB				*i* AML	AML	19 30 13.5	
PCAB				*i* AML	AML	19 30 17.4	
PCAB				*i* AML	AML	19 30 21.1	
EPF	Esparros	6.05	21	*e*Pn	Pn	19 28 25.7	+1.3
EPF				*e*Sg	Sg	19 30 06.0	-2.9
	86nm,0.8s						
ALT01	Santillana del	6.07	349	Pn	Pn	19 28 25.4	+0.8
ALT01				Sn	Sn	19 29 32.5	-1.6
ALT01				Sg	Sg	19 30 06.1	-3.7
ALT03	Santillana del	6.07	349	Pn	Pn	19 28 24.6	-0.1
ALT03				Sn	Sn	19 29 32.9	-1.2
ALT03				Sg	Sg	19 30 07.7	-2.0
ALT02	Santillana del	6.07	349	Pn	Pn	19 28 25.9	+1.3
ALT02				Sn	Sn	19 29 32.9	-1.3
ALT02				Sg	Sg	19 30 05.8	-4.0
ELOB	Lobios	6.13	318	Pn	Pn	19 28 26.3	+0.7
ELOB				Sn	Sn	19 29 32.2	-3.5
ELOB				Sg	Sb	19 30 03.2	+8.0
ELOB				*i* IVmb_Lg		19 30 20.2	
EARI	Arriondas	6.21	342	Pn	Pn	19 28 28.0	+1.4
EARI				Sn	Sn	19 29 31.5	-6.2
EARI				Sg	Sg	19 30 10.5	-3.8
EARI				*i* IVmb_Lg		19 30 27.2	
PGAV	Gavieira, Arco	6.31	318	*e*Pn	Pn	19 28 28.7	+0.6
PGAV				*e*Sn	Sn	19 29 38.0	-2.2
PGAV				*e*Sg	Sg	19 30 11.9	-5.5
PGAV				*i* AML	AML	19 30 18.8	
PGAV				*i* AML	AML	19 30 22.2	
PGAV				*i* AML	AML	19 30 22.4	
EZAM	Zamans	6.67	317	Pn	Pn	19 28 33.8	+0.9
EZAM				Sn	Sn	19 29 45.3	-3.5
EZAM				Sg	Sg	19 30 22.8	-6.0
EZAM				*i* IVmb_Lg		19 30 38.5	
EAGO	Agolada(Pontev	6.83	324	Pn	Pn	19 28 35.9	+0.7
EAGO				Sn	Sn	19 29 50.1	-2.9
EAGO				Sg	Sg	19 30 26.7	-7.5
EAGO				*i* IVmb_Lg		19 30 49.0	
EPON	Pontenova	6.86	331	Pn	Pn	19 28 36.7	+1.3
EPON				Sn	Sn	19 29 47.3	-6.2
EPON				Sg	Sg	19 30 28.4	-6.5
EPON				*i* IVmb_Lg		19 30 50.8	
MTLF	Montolieu	6.97	30	*e*Pn	Pn	19 28 37.9	+0.9
MTLF				*e*Sg	Sg	19 30 35.2	-3.3
	125nm,1.3s						
OUZM	OUZ	7.34	209	P	Pn	19 28 44.6	+2.3
EMAZ	Mazaricos	7.38	321	Pn	Pn	19 28 44.1	+1.5
EMAZ				Sn	Sn	19 30 01.8	-4.5
EMAZ				Sg	Sg	19 30 50.0	-1.6
EMAZ				*i* IVmb_Lg		19 31 10.5	
TIO	Tiouine	7.53	212	Pn	Pn	19 28 45.8	+0.9
LFF	La Frestale	7.93	17	*e*Pn	Pn	19 28 49.5	-0.7
LASF	Ste Croix	8.26	34	*e*Pn	Pn	19 28 54.6	-0.2
LASF				*e*Sg	Sg	19 31 15.6	-4.4
	131nm,1.6s						
CAF	Calviac	8.29	24	*e*Pn	Pn	19 28 55.2	+0.1
CAF				*e*Sn	Sn	19 30 24.9	-3.9
	60nm,1.3s						
TTIG	Tnine Tigouga,	8.39	217	P	Pn	19 28 56.7	0.0
RJF	Les Rejaudoux	8.47	20	*e*Pn	Pn	19 28 57.5	-0.1
RJF				*e*Sn	Sn	19 30 28.2	-5.0
	38nm,1.1s						
LMR	La Mourre	9.12	47	*e*P	Pn	19 29 10.8	+4.3
LMR				*e*Sn	Sn	19 30 43.0	-6.2
	26nm,1.0s						
MFF	Saint Martin d	9.36	10	*e*Pn	Pn	19 29 09.1	-0.7
MFF	Saint Martin d	9.36	10	*e*Pn	Pn	19 29 09.8	0.0
TCF	Toulx Ste Croi	9.56	20	*e*Pn	Pn	19 29 12.1	-0.5
TCF				*e*Sg	Sn	19 31 56.0	+56
	36nm,1.2s						
VSL	Villasalto	9.62	74	Pn	Pn	19 29 14.8	+1.4
VSL				Sn	Sn	19 30 56.3	-5.2
KEST	Kesra	9.75	96	Pn	Pn	19 29 16.0	+0.7
	0.3nm,0.3s,baz=286,slow=10.0,SNR=9.2						
KEST				Sn	Sn	19 30 59.7	-5.1
	baz=15,slow=18,SNR=1.1						
	4.8nm,0.9s						
BGF	Bois d'Agland	9.99	22	*e*Pn	Pn	19 29 18.7	+0.2
BGF				*e*Sn	Sn	19 31 03.8	-6.8
	66nm,1.3s						
PGF	Pioggiola	10.27	56	*e*Pn	Pn	19 29 21.7	-0.6
AVF	Avril sur Loir	10.36	23	*e*Sn	Sn	19 31 13.0	-6.5
	51nm,1.4s						
SMF	Signal de Mont	10.39	25	*e*Pn	Pn	19 29 24.1	+0.2
QUIF	Quistinic	10.51	358	*e*Pn	Pn	19 29 25.2	-0.3
QUIF				*e*Sn	Sn	19 31 16.6	-6.5
	20nm,0.7s						
SSF	Saint Saulge	10.65	23	*e*Pn	Pn	19 29 26.4	-1.0
SSF				*e*Sg		19 32 29.8	
	40nm,1.3s						
SGMF	Saint Gilles	10.84	0	*e*Pn	Pn	19 29 30.0	0.0
SGMF				*e*Sn	Sn	19 31 24.8	-6.4
	2.8nm,0.3s						
ROSF	Rostrenen	10.93	358	*e*Pn	Pn	19 29 31.1	-0.2
ROSF				*e*Sn	Sn	19 31 27.1	-6.4
	8.1nm,0.6s						
LOR	Lormes	10.94	24	*e*Sg		19 32 38.8	
	56nm,1.5s						
GRR	Gorron	11.04	6	*e*Pn	Pn	19 29 33.8	+1.0
CABF	La Chapelle	11.23	32	*e*Sg		19 32 47.7	
	70nm,1.4s						
DAVOX	Davos/Dischmat	13.15	41	Pn	Pn	19 30 06.5	+4.6
	0.3nm,0.3s,baz=236,slow=13,SNR=6.0						
DAVA	Damuels	13.49	39	*e*Pn	Pn	19 30 07.0	+0.6
	5.8nm,1.4s						
VAE	Valguarnera	13.52	85	LR	LR	19 35 27.2	
	comp=Z,173nm,19.4s,baz=138,slow=38						
BAIF	Baives	13.56	19	*e*Pn	Pn	19 30 07.0	-0.1
FETA	Feichten	13.76	42	*e*Pn	Pn	19 30 13.9	+3.9
	6.6nm,0.9s						
RETA	Reutte	14.07	40	*i* Pn	Pn	19 30 16.4	+2.1
	4.8nm,1.4s						
SQTA	Sankt Quirin	14.14	42	*e*Pn	Pn	19 30 18.0	+2.9
	9.5nm,1.4s						
MOTA	Moosalm	14.16	41	*e*Pn	Pn	19 30 16.5	+1.0
	6.0nm,1.1s						
WTTA	Wattenberg	14.39	42	*e*Pn	Pn	19 30 19.6	+0.8
	9.2nm,1.4s						
WATA	Walderalm	14.40	42	*i* Pn	Pn	19 30 20.5	+1.6
	3.7nm,1.2s						
ABTA	Abfaltersbach	14.57	45	*e*Pn	P	19 30 25.3	-2.3
	6.0nm,1.0s						
LESA	Schwarzleotal	15.05	44	*e*Pn	Pn	19 30 29.3	+1.7
	3.6nm,0.6s						
MYKA	Terra Mystica	15.16	47	*i* Pn	Pn	19 30 30.8	+1.8
	3.1nm,0.8s						
OBKA	Obir	15.63	49	*e*Pn	P	19 30 40.1	+0.6
	8.4nm,1.1s						
BIOA	Bad Ischl, Aus	15.74	44	*e*Pn	P	19 30 40.1	-0.5
	6.4nm,1.5s						
SOKA	Soboth	16.01	49	*e*Pn	P	19 30 42.1	-1.6
	3.0nm,1.0s						
MOA	Molln	16.18	45	*i* Pn	Pn	19 30 42.9	+0.7
	5.5nm,1.6s						
GERES	GERESS Array B	16.46	41	Pn	P	19 30 49.2	+0.7
	baz=229,slow=12,SNR=19						
GERES				LR	LR	19 37 49.9	
	comp=Z,152nm,18.6s,baz=230,slow=40						
KHC	Kasperske Hory	16.57	40	*e*P	P	19 30 53.5	+3.7
KHC				AMS	AMS	19 38 10.0	
	comp=Z,200nm,16.3s						
ARSA	Arzberg	16.58	48	*e*Pn	P	19 30 48.7	-1.2
	4.5nm,1.1s						
CKRC	Cesky Krumlov	16.76	42	AMS	AMS	19 38 30.0	
	comp=Z,200nm,12.2s						
ZVC	Zvikov	17.08	40	AMS	AMS	19 38 40.0	
	comp=Z,200nm,11.4s						
CONA	Conrad Observa	17.12	46	*e*Pn	Pn	19 30 52.2	-2.1
	3.6nm,1.5s						
RONA	Rosalia, Austr	17.26	47	*i* Pn	P	19 30 58.9	+1.4
	2.0nm,1.0s						
PRA	Prague	17.60	39	AMS	AMS	19 38 40.0	
	comp=Z,200nm,14.6s						
PRU	Pruhonice	17.60	39	AMS	AMS	19 38 50.0	
	comp=Z,200nm,14.7s						
TREC	Trest	17.67	42	AMS	AMS	19 39 00.0	
	comp=Z,300nm,13.7s						
GOPC	GO Pecny, Ondr	17.68	40	AMS	AMS	19 38 40.0	
	comp=Z,300nm,16.0s						
BRG	Berggiesshubel	17.89	36	*e*P	P	19 31 08.4	+4.2
BRG				Amp		19 31 12.2	
	comp=Z,5.7nm,1.2s						
EKA	Eskdalemuir Ar	17.93	359	P	P	19 31 05.6	+0.9
	baz=188,slow=13						
	comp=Z,0.2nm,0.3s						
MODS	Modra-Piesok	18.17	47	*e*P	P	19 31 09.4	+2.0
VRAC	Vranov	18.27	43	LR	LR	19 39 12.1	
	comp=Z,90nm,19.2s,baz=212,slow=40						
UPC	Upice	18.66	40	AMS	AMS	19 39 10.0	
	comp=Z,200nm,15.9s						
DPC	Dobruska-Polom	18.73	40	AMS	AMS	19 39 20.0	
	comp=Z,200nm,16.1s						
OSTC	Ostas	18.80	40	AMS	AMS	19 39 10.0	
	comp=Z,200nm,13.9s						
KRLC	Kraliky	18.80	42	AMS	AMS	19 39 40.0	
	comp=Z,200nm,13.4s						
MLR	Muntele Rosu	22.78	60	LR	LR	19 41 28.7	
	comp=Z,160nm,20.4s,baz=262,slow=38						
HFS	Hagfors	25.01	19	P	P	19 32 20.3	+1.6
	comp=Z,0.7nm,0.5s,baz=213,slow=16,SNR=4.0						
	comp=Z,0.7nm,0.5s						
NOA	NORSAR Array B	25.20	16	LR	LR	19 43 52.9	
	comp=Z,97nm,18.5s,baz=65,slow=40						
AKASG	Malin Array Be	26.22	49	P	P	19 32 28.6	-1.1
	comp=Z,0.4nm,0.5s,baz=251,slow=8.4,SNR=1.1						
	comp=Z,0.4nm,0.5s						
KURBB	Kurchatov Arra	57.00	49	P	P	19 36 40.9	+0.4
	comp=Z,2.2nm,0.2s,baz=292,slow=8.1,SNR=4.6						
	comp=Z,2.2nm,0.2s						
MKAR	Makanchi Array	60.77	52	P	P	19 37 08.1	+1.3
	comp=Z,0.5nm,0.7s,baz=290,slow=6.0,SNR=4.9						
	comp=Z,0.5nm,0.7s						
YKA	Yellowknife Ar	66.59	332	P	P	19 37 43.9	-1.0
	comp=Z,0.5nm,0.7s,baz=45,slow=6.0,SNR=5.3						
	comp=Z,0.5nm,0.7s						
PDAR	Pinedale Array	76.22	314	P	P	19 38 44.6	+0.9
	comp=Z,0.2nm,0.3s,baz=31,slow=6.0,SNR=4.6						
	comp=Z,0.2nm,0.3s						
TXAR	Lajitas Array	80.72	300	P	P	19 39 10.2	+1.6
	comp=Z,0.7nm,0.8s,baz=44,slow=5.8,SNR=8.1						
	comp=Z,0.7nm,0.8s						

IDC ***29*** *19:27:06.2±1.1, 1°.77S×12°.72W, h0^{km}, mb4.0/10, mbtmp4.1/11, ML3.2/1, MS3.7/6, Error ellipse: s-maj=63.6km s-min=18.7km az=104.0*

NEIC ***29*** *19:27:08.6±1.5, 1°.7S±0°.1×12°.9W±0°.2, h10^{km}±1^{km}, mb4.6/16, Error ellipse: s-maj=28.7km s-min=19.1km az=290.0*

GCMT ***29*** *19:27:11.6±0.4, 1°.62S±0°.04×13°.01W±0°.02, h17^{km}±1^{km}, MW4.9/84, Moment Tensor Solution. s19,c24; s84,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.49±.20; $M_{\theta\theta}$0.43±.11; $M_{\phi\phi}$2.06±.14; $M_{r\theta}$0.66±.35; $M_{\theta\phi}$-0.58±.07; $M_{\phi r}$0.14±.27; Best double couple: $M_0$2.44400×10^{16} NP1:ϕ_s175.00000°,δ46.00000°,λ-72.00000°. NP2: ϕ_s330.00000°,δ47.00000°,λ-108.00000°. Principal axes: T 2.2450, Plg1.0000°, Azm72.0000°; N 0.4010, Plg13.0000°, Azm342.0000°; P -2.6440, Plg77.0000°, Azm166.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 19:27:08.2±0.8, **1°.74S**±0°.10×**12°.8W**±0°.2, **h10**^{km}**, n57, σ1ˢ26**/46, **mb4.4**/31, **MS3.6**/5, **North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	6.28	195	T	T	19 35 10.1	
	baz=15,slow=74,SNR=20						
H10N1	ASCENSION HYDR	6.29	195	T	T	19 35 10.4	
	baz=15,slow=74,SNR=30						
H10N3	ASCENSION HYDR	6.29	196	T	T	19 35 08.9	
	baz=15,slow=74,SNR=22						
DBIC	Dimbokro	11.52	43	Pn	Pn	19 29 53.7	+0.8
DBIC	Dimbokro	11.52	43	Pn	Pn	19 29 51.1	-1.7
	0.2nm,0.3s,baz=320,slow=19,SNR=1.7						
DBIC				Sn	Sn	19 31 52.6	-9.1
	0.1nm,0.3s,baz=58,slow=19,SNR=1.5						
DBIC				LR	LR	19 33 39.0	
	comp=Z,438nm,20.7s,baz=220,slow=34						
	3.8nm,0.9s						
ACRG	Accra	14.56	60	Pn	Pn	19 30 33.4	-1.1
TORD	Torodi Ar. Bea	20.63	44	P	P	19 31 46.5	-1.6
TORD	Torodi Ar. Bea	20.63	44	P	P	19 31 46.6	-1.4
	1.7nm,0.5s,baz=225,slow=11,SNR=9.8						
TORD				LR	LR	19 39 03.6	
	comp=Z,291nm,20.1s,baz=192,slow=35						
	1.7nm,0.5s						
TSUM	Tsumeb	34.44	122	LR	LR	19 45 12.4	
	comp=Z,121nm,21.4s,baz=314,slow=32						
MDT	Midelt	35.23	12	LR	LR	19 47 37.4	
	comp=Z,96nm,20.5s,baz=199,slow=35						
BDFB	Brasilia	37.36	246	LR	LR	19 46 53.7	
	comp=Z,59nm,21.0s,baz=45,slow=32						
GRTLG	Ghanzi	38.45	123	P	P	19 34 30.6	0.0
GRTLG				IAmb	IAmb	19 34 32.8	
	comp=Z,10nm,1.1s						
MDP	Montagnes des	40.37	280	LR	LR	19 47 33.8	
	comp=Z,89nm,20.0s,baz=120,slow=30						
PAB	San Pablo	41.81	10	P	P	19 34 57.6	-0.6
LSZ	Lusaka	42.60	111	P	P	19 35 06.5	+1.3
LSZ				IAmb	IAmb	19 35 14.3	
	comp=Z,22nm,1.4s						
MBAR	Mbarara	43.55	89	P	P	19 35 14.0	+1.1
MBAR				IAmb	IAmb	19 35 23.5	
	comp=Z,6.1nm,0.8s						
CEST	Esterri de Car	45.92	14	P	P	19 35 31.4	+0.1
CEST				IAmb	IAmb	19 35 55.9	
	comp=Z,13nm,1.4s						
TUE	Stuetta	51.83	19	P	P	19 36 17.9	+1.3
DAVOX	Davos/Dischmat	52.27	20	P	P	19 36 19.7	-0.3
	comp=Z,1.0nm,0.4s,baz=218,slow=2.9,SNR=3.6						
	comp=Z,1.0nm,0.4s						
KARP	Karpathos	52.60	41	P	P	19 36 23.9	+1.5
DAVA	Damuels	52.72	19	*e*P	P	19 36 22.3	-0.9
	comp=Z,4.0nm,0.8s						
FETA	Feichten	52.77	20	*i* P	P	19 36 26.6	+3.0
	comp=Z,4.2nm,0.9s						
SQTA	Sankt Quirin	53.11	20	*i* P	P	19 36 25.9	-0.1
	comp=Z,5.4nm,0.9s						
ABTA	Abfaltersbach	53.17	22	*i* P	P	19 36 33.0	+6.5
	comp=Z,4.0nm,1.1s						
MOTA	Moosalm	53.18	20	*i* P	P	19 36 33.0	+6.3
	comp=Z,5.3nm,1.1s						
RETA	Reutte	53.18	20	*e*P	P	19 36 31.4	+4.8
	comp=Z,1.9nm,1.1s						
WTTA	Wattenberg	53.29	21	*i* P	P	19 36 27.8	+0.3
	comp=Z,6.5nm,1.1s						
WATA	Walderalm	53.33	20	*e*P	P	19 36 28.4	+0.6
	comp=Z,5.6nm,1.6s						
MYKA	Terra Mystica	53.49	22	*e*P	P	19 36 31.8	+3.0
	comp=Z,4.8nm,1.0s						
OBKA	Obir	53.74	23	*i* P	P	19 36 34.3	+3.6
	comp=Z,5.3nm,0.9s						

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LESA  Schwarzleotal      53.80  21 i P      P       19 36 31.7 +0.6
      comp=Z,7.1nm,1.3s
SOKA  Soboth             54.07  23 i P      P       19 36 33.1  0.0
      comp=Z,2.2nm,0.9s
ARSA  Arzberg            54.73  23 i P      P       19 36 39.5 +1.7
      comp=Z,0.8nm,0.4s
MOA   Molln              54.74  22 i P      P       19 36 38.1 +0.2
      comp=Z,3.2nm,1.2s
GEC2  GERESS Array S     55.37  21   P      P       19 36 41.9 -0.5
GEC2                                 IAmb   IAmb    19 37 03.1
      comp=Z,12nm,1.3s
GERES GERESS Array B     55.37  21   P      P       19 36 42.2 -0.2
GERES GERESS Array B     55.37  21   P      P       19 36 42.0 -0.5
      comp=Z,3.2nm,1.0s,baz=201,slow=6.4,SNR=14
      comp=Z,3.2nm,1.0s
RONA  Rosalia, Austr     55.41  24 i P      P       19 36 43.6 +0.9
      comp=Z,3.4nm,0.9s
CONA  Conrad Observa     55.42  23 i P      P       19 36 43.7 +0.8
      comp=Z,3.4nm,1.2s
VYHS  Vyhne              57.07  25 e        P       19 36 56.0 +1.4
VYHS                               e                19 43 12.5
BRG   Berggiesshubel     57.16  20 eP       P       19 36 57.6 +2.5
BRG                                  Amp            19 36 58.2
      comp=Z,1.7nm,0.8s
BRG   Berggiesshubel     57.16  20   P      P       19 37 03.7 +8.6
BRG                                  Amp            19 37 05.6
      comp=Z,3.0nm,0.9s
ESK   Eskdalemuir        57.41   6   P      P       19 36 57.9 +1.2
ESK                                  IAmb   IAmb    19 37 03.5
      comp=Z,8.5nm,1.1s
EKA   Eskdalemuir Ar     57.43   7   P      P       19 36 56.3 -0.6
      comp=Z,0.5nm,0.7s,baz=187,slow=10.0,SNR=5.8
      comp=Z,0.5nm,0.7s
BR131 Keskin Array S     59.20  41   P      P       19 37 10.5 +0.7
BRTR  Keskin Array B     59.20  41   P      P       19 37 09.8  0.0
      comp=Z,3.0nm,1.1s,baz=224,slow=3.4,SNR=7.6
      comp=Z,3.0nm,1.1s
BURAR Bucovina Array     59.30  29   P      P       19 37 10.4 +0.1
BNN   Bunyan             60.21  42   P      P       19 37 16.4 -0.3
SUW   Suwalki            63.06  23   P      P       19 37 35.5  0.0
AKASG Malin Array Be     63.33  28   P      P       19 37 36.8 -0.5
      comp=Z,0.2nm,0.3s,baz=236,slow=7.4,SNR=1.2
      comp=Z,0.2nm,0.3s
NOA   NORSAR Array B     65.29  13   P      P       19 37 49.9 -0.2
      comp=Z,1.4nm,1.0s,baz=205,slow=6.5,SNR=3.5
      comp=Z,1.4nm,1.0s
SNAA  Sanae              70.12 177   P      P       19 38 20.9 +0.4
SNAA                                 IAmb   IAmb    19 38 28.1
      comp=Z,4.2nm,1.0s
SNAA  Sanae              70.12 177   P      P       19 38 19.5 -1.0
      comp=Z,2.3nm,0.9s,baz=338,slow=7.5,SNR=6.0
      comp=Z,2.3nm,0.9s
BELA  Belgrano 2         76.96 185   P      P       19 39 01.0 +0.4
BELA                                 IAmb   IAmb    19 39 08.0
      comp=Z,5.0nm,1.3s
MAW   Mawson             82.96 158   P      P       19 39 32.3 -0.8
      comp=Z,4.2nm,1.1s,baz=293,slow=7.7,SNR=3.5
      comp=Z,4.2nm,1.1s
QSPA  South Pole Qui     88.34 180   P      P       19 39 58.8 -1.3
QSPA  South Pole Qui     88.34 180   P      P       19 40 00.2 +0.1
      comp=Z,6.7nm,1.1s,baz=206,slow=3.7,SNR=9.5
      comp=Z,6.7nm,1.1s
```

UCR ***29*** *19:28:12.8±0.9, 8°.34N×82°.83W, h30^{km}±2^{km}, MW4.0, Fault plane solution: NP1:ϕ_s292.81000°, δ61.12000°, λ-8.50000°.*
CATAC ***29*** *19:28:12.4±0.7, 8°N±4°×8°3W±°, h8^{km}±3^{km}, M4.2/14, MLv4.2/14, Error ellipse: s-maj=8.6km s-min=7.9km az=59.4, confirmed*
ISC 29 19:28:11.6±1.0**, 8°.33N**±0°.04×**82°.86W**±0°.03**, h13**^{km}**, n67,** σ**1**^{s}**14**/71**, 20C-8D, Panama-Costa Rica border region**

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Code  Station Name        Δ°   AZ°   Phase ID            Time      Res
                                    Op      ISC        h  m  s    ISC
LPPC  Paso Canoas         0.20   7⇑eP       Pb      19 28 19.0 +1.8
LPPC                                 eS     Sb      19 28 24.0 +3.0
LMNES Limones             0.23 179⇑eP       Pb      19 28 20.3 +2.7
CDITO Canoas              0.24 358   S      Sb      19 28 24.6 +2.4
CDITO Canoas              0.24 358   P      Pb      19 28 19.3 +1.4
NELY  Ciudad Neily        0.33 346⇑eP       Pb      19 28 20.4 +1.0
NELY                                 eS     Sb      19 28 26.6 +2.0
FITO  Golfito             0.41 316⇑eP       Pb      19 28 20.9 +0.1
CSTBL De las Acacias      0.43  79⇓eP       Pb      19 28 21.6 +0.6
EDAD  Golfito             0.44 317⇑eP       Pb      19 28 21.4 +0.1
CLLRA Cordillera,         0.48  31⇓eP       Pb      19 28 22.4 +0.3
RSRNO Rio Sereno          0.48   0⇑eP       Pb      19 28 23.1 +1.0
BRU2  Volcan              0.49  20⇑eP       Pb      19 28 22.5 +0.2
BRU2                                 eS     Sb      19 28 30.2 +0.8
BRU2  Volcan              0.49  20   P      Pb      19 28 22.8 +0.5
VITO  San Vito            0.50 348⇑eP       Pb      19 28 23.2 +0.8
TBS2                      0.51  24⇓eP       Pb      19 28 23.7 +1.2
SCLRA Santa Clara, W      0.51   9 eP       Pb      19 28 23.2 +0.7
BQTLY Boquete Panama      0.58  43⇓eP       Pg      19 28 23.6 +0.5
ALCO  Alturas Coton,      0.62   3⇑eP       Pb      19 28 24.3 -0.2
EDP2  Potrero Grande      0.75 336⇑eP       Pb      19 28 26.7 +0.1
PANP  Palmar Norte        0.86 317⇑eP       Pg      19 28 28.1 -0.2
PBNVO Pueblo Nuevo,       0.87  50⇓eP       Pg      19 28 27.5 -1.0
RBALA Bur                 0.89  52⇓eP       Pg      19 28 28.1 -0.7
BURE  Buenos Aires        0.96 331 eP       Pb      19 28 29.7 -0.5
DRK0  Durika              1.00 338⇑eP       Pb      19 28 29.9 -1.1
DRK0  Durika              1.00 338   S      Sg      19 28 43.4 -0.7
DRK0  Durika              1.00 338   P      Pb      19 28 30.0 -0.9
RMDIO Remedios, Chir      1.03  96 eP       Pb      19 28 30.6 -0.7
EDPE  Pejibaye, P         1.08 320⇑eP       Pb      19 28 31.5 -0.8
OCHAL Ojochal             1.09 315   S      Sg      19 28 46.5 -0.3
OCHAL Ojochal             1.09 315   P      Pb      19 28 31.6 -0.8
PDCAN Manzana , Fuen      1.16  92 eP       Pb      19 28 31.8 -1.7
KKNTU Kakintº             1.16  64⇓eP       Pn      19 28 31.8 -1.9
SAJE  San Jernim          1.20 328⇑eP       Pn      19 28 32.8 -1.4
BRIBI Bribri              1.28   2⇑eP       Pb      19 28 35.7  0.0
PIEC  Cerro El Cedra      1.68 320 eP       Pn      19 28 40.4 -0.6
PISJ  San Jernim          1.79 316 eP       Pn      19 28 42.9 +0.4
LCR2  La Lucha 2          1.80 321⇑eP       Pn      19 28 41.8 -0.8
LCR2  La Lucha 2          1.80 321   S      Sn      19 29 04.5 -1.0
LCR2  La Lucha 2          1.80 321   P      Pn      19 28 42.2 -0.4
VERB  Verbena             1.80 333 eP       Pn      19 28 42.7 +0.1
PAR1A Puntarenas Pro      1.86 313⇓eP       Pn      19 28 43.6 +0.4
RAFA  San Farael, Vo      1.87 330 eP       Pn      19 28 43.4 -0.2
CVTV  Tajo                1.88 332⇑eP       Pn      19 28 44.1 +0.3
CVTQ  Turrialba Volc      1.89 332⇑eP       Pn      19 28 44.1 +0.1
VTR0  Volcan Turrial      1.90 332⇑eP       Pn      19 28 44.2 +0.1
VICA  Volcano Irazu       1.91 330⇑eP       Pn      19 28 44.0 -0.3
HDC   Heredia             2.07 323   P      Pb      19 28 48.1 -1.1
HDC                                  S      Sn      19 29 12.8 +0.8
PILE  Guapiles            2.09 334 eP       Pn      19 28 47.1 +0.7
VBV1  V. Barva            2.15 326 eP       Pn      19 28 47.6  0.0
TCS1  Tacares             2.21 320   P      Pn      19 28 46.8 -1.4
TRT2  Tortugero           2.38 339 eP       Pn      19 28 50.4 +0.1
TRT2  Tortugero           2.38 339   S      Sn      19 29 21.3 +1.9
TRT2  Tortugero           2.38 339   P      Pn      19 28 50.9 +0.6
SOCE  Pocosol             2.68 320   S      Sb      19 29 30.8 -1.4
SOCE  Pocosol             2.68 320   P      Pn      19 28 56.2 +1.6
CEDE  Laguna Cedeo        2.81 320 eP       Pn      19 28 56.7 +0.3
COVE  Coope Vega, Sa      2.82 328   P      Pn      19 28 58.6 +2.2
JTS   Las Juntas de       2.84 314 eP       Pn      19 28 56.5 -0.2
INDI  Punta indio, G      3.02 301   S      Sn      19 29 32.6 -2.7
INDI  Punta indio, G      3.02 301   P      Pn      19 28 59.2  0.0
CMARA Lajas Hojancha      3.04 304 eP       Pn      19 28 59.6 +0.1
CMARA Lajas Hojancha      3.04 304   P      Pn      19 28 59.8 +0.3
CMARA Lajas Hojancha      3.04 304   S      Sn      19 29 34.0 -1.7
BCIP  Isla Barro Col      3.10  74 eP       Pn      19 29 00.3 -0.1
ALIBA Liberia Airpor      3.47 311 eP       Pn      19 29 07.2 +1.8
BLUN  Bluefields          3.76 346   P      Pn      19 29 09.5 +0.1
ACON  Acoyapa             4.27 328 eP       Pn      19 29 17.0 +0.6
ACON  Acoyapa             4.27 328   P      Pn      19 29 17.7 +1.3
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SDD ***29*** *19:32:36.6±1.5, 18°.47N×72°.01W, h25^{km}±8^{km}, MD3.3, ML3.0, MW3.3*
OSPL ***29*** *19:32:37.9±2.3, 18°.52N×71°.92W, h0^{km}±13^{km}, ML2.9*
ISC 29 19:32:37.1±1.1**, 18°.52N**±0°.04×**71°.91W**±0°.04**, h25**^{km}±7^{km}**, n13,** σ**0**^{s}**67**/24**, 8C-4D, Dominican Republic region**

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Code  Station Name        Δ°   AZ°   Phase ID            Time      Res
                                    Op      ISC        h  m  s    ISC
JIDR  Jimani              0.06 121⇑ePg      Pb      19 32 41.2 -0.2
JIDR                              ⇓eSg      Sb      19 32 44.9 +0.4
JIDR                                 IAML           19 32 45.1
      comp=N,2µm,0.2s
PAPH  Port-au-Prince      0.37 270 i P      Pb      19 32 44.9 -0.3
PAPH                                 eS     Sb      19 32 50.6 -0.1
LODU1 El Espartillar      0.45 112 i P      Pb      19 32 45.9 -0.5
LODU1                                eS     Sb      19 32 52.1 -0.6
LODU1                                IAML           19 32 55.3
      comp=Z,2µm,0.3s
PODR  Polo                0.69 121⇑ePg      Pb      19 32 49.9 -0.8
PODR                              ⇑eSg      Sb      19 33 00.3 +0.4
PODR                                 IAML           19 33 05.2
      comp=N,554nm,0.2s
PODR  Polo                0.69 121 i P      Pb      19 32 49.9 -0.8
PODR                                 eS     Sb      19 33 00.1 +0.2
SDDR  Presa de Saban      0.74  52⇑ePg      Pb      19 32 50.9 -0.6
SDDR                              ⇓eSg      Sb      19 33 01.5 +0.2
SDDR                                 IAML           19 33 02.0
      comp=N,566nm,0.6s
SDDR  Presa de Saban      0.74  52 i P      Pb      19 32 50.9 -0.6
SDDR                                 eS     Sb      19 33 01.3 +0.1
SDDR                                 IAML           19 33 04.7
      comp=Z,350nm,0.5s
REDR  Restauracion        0.80  37⇓ePg      Pb      19 32 51.4 -1.0
REDR                              ⇑eSg      Sb      19 33 02.5 -0.4
REDR                                 IAML           19 33 03.3
      comp=N,1µm,0.1s
LOVI  El Cajuil, Ovi      0.88 144 i P      Pb      19 32 53.2 -0.6
LOVI                                 eS     Sn      19 33 06.2 +0.3
LOVI                                 IAML           19 33 20.1
      comp=Z,390nm,0.6s
LODA1 ITESIL, Dajabo      1.03  11 i P      Pn      19 32 55.7 -0.3
LODA1                                IAML           19 33 09.1
      comp=Z,2µm,3.9s
LODA1                                eS     Sb      19 33 09.2 -0.3
ABDR  Alto Bandera        1.25  76⇑ePg      Pn      19 32 59.5 +0.3
ABDR                              ⇑eSg      Sb      19 33 16.9 +1.0
ABDR                                 IAML           19 33 18.0
      comp=N,489nm,0.2s
MCDR  Montecristi         1.38  10⇓ePg      Pn      19 33 01.8 +1.0
MCDR                                 IAML           19 34 48.4
      comp=N,54nm,1.1s
SC01  Santiago de lo      1.43  51⇑eSg      Sb      19 33 22.5 +1.5
SC01                                 IAML           19 33 30.8
      comp=N,322nm,0.8s
```

IDC ***29*** *19:33:21.9±1.5, 1°.77S×12°.79W, h0^{km}, mb3.9/7, mbtmp3.9/8, ML2.9/1, Error ellipse: s-maj=71.3km s-min=24.0km az=110.0*
NEIC ***29*** *19:33:22.1±1.3, 1°.66S±0°.04×13°.0W±0°.1, h10^{km}±1^{km}, mb4.5/11, Error ellipse: s-maj=18.8km s-min=5.1km az=254.0*
ISC 29 19:33:22.6±0.7**, 1°.7S**±0°.1×**13°.0W**±0°.2**, h14**^{km}**, n26,** σ**1**^{s}**48**/24**, mb4.4**/11**, North of Ascension Island**

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Code  Station Name        Δ°   AZ°   Phase ID            Time      Res
                                    Op      ISC        h  m  s    ISC
H10N2 ASCENSION HYDR      6.24 194   T      T       19 41 23.5
      baz=15,slow=74,SNR=12
H10N1 ASCENSION HYDR      6.26 194   T      T       19 41 22.5
      baz=15,slow=74,SNR=21
H10N3 ASCENSION HYDR      6.26 194   T      T       19 41 22.1
      baz=15,slow=74,SNR=13
ASCN  Ascension           6.31 192   Pn     Pn      19 34 55.1 -0.2
DBIC  Dimbokro           11.65  44   Pn     Pn      19 36 05.9 -2.6
DBIC  Dimbokro           11.65  44   Pn     Pn      19 36 07.2 -1.4
      0.1nm,0.3s,baz=331,slow=2.6,SNR=1.6
DBIC                                 Sn     Sn      19 38 20.8 +2.2
      0.2nm,0.3s,baz=160,slow=17,SNR=1.4
      3.3nm,0.9s
TORD  Torodi Ar. Bea     20.76  44   P      P       19 38 02.1 -1.2
TORD  Torodi Ar. Bea     20.76  44   P      P       19 38 02.4 -0.9
      5.4nm,0.9s,baz=230,slow=10,SNR=8.5
      5.4nm,0.9s
KOOLE Kule               38.53 126   P      P       19 40 44.9 -0.2
KOOLE                                IAmb   IAmb    19 40 47.5
      comp=Z,6.4nm,0.7s
GRTLG Ghanzi             38.63 123   P      P       19 40 44.4 -1.6
GRTLG                                IAmb   IAmb    19 40 49.4
      comp=Z,15nm,1.2s
ESDC  Sonseca Array      42.02  10   P      P       19 41 14.8 +1.0
      comp=Z,0.8nm,1.1s,baz=188,slow=9.5,SNR=3.3
      comp=Z,0.8nm,1.1s
KEST  Kesra              42.71  27   P      P       19 41 22.1 +2.6
      comp=Z,2.6nm,0.8s,baz=196,slow=7.4,SNR=4.7
      comp=Z,2.6nm,0.8s
BOSA  Boshof             45.23 130   P      P       19 41 39.0 -0.8
BOSA                                 IAmb   IAmb    19 41 48.3
      comp=Z,5.5nm,1.1s
CEST  Esterri de Car     45.96  15   P      P       19 41 44.3 -1.1
CEST                                 IAmb   IAmb    19 42 01.1
      comp=Z,8.8nm,1.3s
VILB  Vilhena            48.03 254   P      P       19 42 00.2 -1.7
SSB   Saint Sauveur      49.33  16   P      P       19 42 10.5 -0.9
GEC2  GERESS Array S     55.43  21   P      P       19 42 56.3 -0.5
GEC2                                 IAmb   IAmb    19 43 05.7
      comp=Z,4.2nm,0.9s
GERES GERESS Array B     55.43  21   P      P       19 42 56.1 -0.6
GERES GERESS Array B     55.43  21   P      P       19 42 57.6 +0.9
      comp=Z,2.4nm,0.9s,baz=213,slow=6.5,SNR=14
      comp=Z,2.4nm,0.9s
BR131 Keskin Array S     59.32  41   P      P       19 43 22.4 -2.0
BR131                                IAmb   IAmb    19 43 34.3
      comp=Z,5.9nm,1.1s
BRTR  Keskin Array B     59.32  41   P      P       19 43 23.1 -1.4
BRTR  Keskin Array B     59.32  41   P      P       19 43 25.7 +1.2
      comp=Z,1.5nm,0.8s,baz=234,slow=9.6,SNR=6.5
      comp=Z,1.5nm,0.8s
AKASG Malin Array Be     63.41  29   P      P       19 43 52.5 +0.8
      comp=Z,0.1nm,0.3s,baz=233,slow=6.7,SNR=1.6
      comp=Z,0.1nm,0.3s
SNAA  Sanae              70.15 177   P      P       19 44 35.7 +1.3
      comp=Z,2.1nm,0.9s,baz=326,slow=8.4,SNR=5.8
      comp=Z,2.1nm,0.9s
BELA  Belgrano 2         76.96 185   P      P       19 45 15.2 +0.8
BELA                                 IAmb   IAmb    19 45 23.8
      comp=Z,5.2nm,1.3s
QSPA  South Pole Qui     88.36 180   P      P       19 46 15.2 +1.3
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BJI ***29*** *19:36:41.8, 8°.61S×158°.13E, h6^{km}, mB5.1/10, mb5.0/52, Ms5.1/7, Ms7 4.6/6*
MOS ***29*** *19:36:41.3±0.7, 8°.94S×158°.07E, h10^{km}, mb5.3/35, Error ellipse: s-maj=9.3km s-min=7.0km az=115.3*
IDC ***29*** *19:36:41.3±0.4, 8°.96S×158°.09E, h0^{km}, mb4.7/22, mbtmp4.6/23, ML3.5/1, MS3.8/6, Error ellipse: s-maj=15.3km s-min=13.6km az=88.0*
NEIC ***29*** *19:36:43.4±1.8, 9°.00S±0°.07×158°.18E±0°.07, h10^{km}±1^{km}, mb5.2/105, Error ellipse: s-maj=13.9km s-min=8.2km az=224.0*
ISC 29 19:36:44.8±0.3**, 9°.00S**±0°.05×**158°.13E**±0°.06**, h23**^{km}**, n618,** σ**0**^{s}**89**/610**, mb5.1**/116**, MS3.8**/7**, 11C-17D, Bougainville-Solomon Islands region**

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Code  Station Name        Δ°   AZ°   Phase ID            Time      Res
                                    Op      ISC        h  m  s    ISC
HNR   Honiara             1.85 103          Pn      19 37 13.6 -1.6
HNR   Honiara             1.85 103   Pn     Pn      19 37 13.7 -1.4
      195nm,0.3s,baz=218,slow=6.7,SNR=87
HNR                                  Sn     Sn      19 37 38.7 +0.9
      432nm,0.3s,baz=185,slow=15,SNR=5.9
HNR                                  LR     LR      19 37 41.0
      comp=Z,1µm,18.1s,baz=84,slow=32
RABL  Rabaul              7.61 309   Pn     Pn      19 38 37.2 +2.8
DZM   Mont Dzumac        15.26 149          Pn      19 40 18.7 -0.3
DZM   Mont Dzumac        15.26 149 eLR      LR      19 43 49.4
      605nm,30.6s
DZM   Mont Dzumac        15.26 149   Pn     Pn      19 40 19.9 +0.9
      0.2nm,0.3s,baz=338,slow=16,SNR=7.0
DZM                                  LR     LR      19 45 11.8
      comp=Z,396nm,20.2s,baz=336,slow=33
      36nm,1.0s
PATS  Pohnpei            15.74   1          Pn      19 40 23.9 -1.3
PATS                                 IAmb   IAmb    19 40 33.2
      comp=Z,197nm,1.1s
CTAO  Charters Tower     15.91 225   Pn     Pn      19 40 26.9 -0.5
CTAO  Charters Tower     15.91 225   P      Pn      19 40 26.9 -0.5
CTAO                                 pmax   pmax
      comp=Z,24nm,1.4s
EIDS  Eidsvold           17.60 202          P       19 40 49.2 -0.4
GENI  Genyem             18.96 289   P      Pn      19 41 15.8 +10
SMPI  Sarmi              20.53 289   P      Pn      19 41 23.9 -0.2
ARMA  Armidale           22.16 195          P       19 41 40.0 +0.8
WB0   Warramunga Arr     25.32 242          P       19 42 09.3 -0.7
WRAB  Tennant Creek      25.42 242⇑eP       P       19 42 09.3 -1.7
WRAB                                 pmax   pmax
      comp=Z,6.0nm,0.9s
WRA   Warramunga Arr     25.43 242   P      P       19 42 10.1 -1.0
WRA   Warramunga Arr     25.43 242   P      P       19 42 10.1 -1.0
      comp=Z,5.6nm,0.8s,baz=68,slow=9.0,SNR=20
WRA                                  PcP    PcP     19 45 43.7 +0.6
      comp=Z,4.0nm,0.7s,baz=69,slow=2.5,SNR=17
WRA                                  LR     LR      19 51 10.1
      comp=Z,276nm,20.9s,baz=46,slow=34
      comp=Z,5.6nm,0.8s
MTN   Manton Dam         26.77 259          P       19 42 22.7 -0.5
ASAR  Alice Springs      27.37 235   P      P       19 42 27.6 -1.0
      comp=Z,1.7nm,0.8s,baz=62,slow=7.8,SNR=12
ASAR                                 PcP    PcP     19 45 48.1 +0.6
      comp=Z,2.5nm,0.7s,baz=66,slow=2.4,SNR=12
ASAR                                 LR     LR      19 53 19.7
      comp=Z,186nm,19.6s,baz=60,slow=36
      comp=Z,1.7nm,0.8s
STKA  Stephens Creek     27.45 212          P       19 42 30.6 +1.4
STKA                                 IAmb   IAmb    19 42 33.2
      comp=Z,43nm,0.8s
STKA  Stephens Creek     27.45 212   P      P       19 42 29.8 +0.6
      comp=Z,9.1nm,0.7s,baz=37,slow=13,SNR=16
STKA                                 LR     LR      19 53 35.9
      comp=Z,196nm,18.1s,baz=24,slow=37
      comp=Z,9.1nm,0.7s
STKA  Stephens Creek     27.45 212   P      P       19 42 30.6 +1.4
STKA                                 pmax   pmax
      comp=Z,43nm,0.8s
H11S3 WAKE ISLAND Hy     28.60  17   T      T       20 11 09.3
      baz=199,slow=76
H11S2 WAKE ISLAND Hy     28.60  17   T      T       20 11 09.9
      baz=199,slow=76
H11S1 WAKE ISLAND Hy     28.62  17   T      T       20 11 12.1
      baz=199,slow=76
KNRA  Kununurra          29.42 254   P      P       19 42 46.0 -0.9
H11N1 WAKE ISLAND Hy     29.81  17   T      T       20 13 08.6
      baz=196
H11N3 WAKE ISLAND Hy     29.82  17   T      T       20 13 10.8
      baz=196
H11N2 WAKE ISLAND Hy     29.83  17   T      T       20 13 03.7
      baz=196
URZ   Urewera            33.78 153   LR     LR      19 55 46.7
      comp=Z,247nm,18.4s,baz=312,slow=34
MMRI  Maumere            35.46 268   P      P       19 43 38.5 -1.3
LTZ   Lake Taylor        35.86 162   P      P       19 43 42.9 -0.1
LTZ                                  IAmb   IAmb    19 44 44.5
      comp=Z,65nm,1.9s
KAPI  Kappang            38.28 273   P      P       19 44 03.9 +0.1
KAPI  Kappang            38.28 273   P      P       19 44 03.5 -0.3
      comp=Z,19nm,0.9s,baz=117,slow=8.7,SNR=6.9
      comp=Z,19nm,0.9s
KAPI  Kappang            38.28 273   P      P       19 44 03.9 +0.1
KAPI                                 pmax   pmax
      comp=Z,26nm,1.0s
TOLI2 Tolitoli           38.54 283   P      P       19 44 04.2 -1.8
PCI   Palu               38.95 280   P      P       19 44 10.4 +0.9
RAR   Rarotonga          42.29 112   LR     LR      19 59 45.4
      comp=Z,69nm,18.6s,baz=237,slow=33
KKM   Kota Kinabalu      44.37 288   P      P       19 44 53.9 -0.1
KKM                                  IAmb   IAmb    19 44 54.8
      comp=Z,29nm,0.9s
JMN   Monobe             48.34 333   P      P       19 45 25.0 +0.2
INU   Inuyama            48.41 337   P      P       19 45 24.9 -0.4
INU                                  IAmb   IAmb    19 45 34.0
      comp=Z,28nm,1.1s
KSM   Kuching            48.77 280   P      P       19 45 27.7 -0.7
KSM                                  IAmb   IAmb    19 45 29.1
      comp=Z,16nm,0.8s
MJAR  Matsushiro Arr     49.02 339   P      P       19 45 28.9 -1.1
MJAR  Matsushiro Arr     49.02 339   P      P       19 45 28.7 -1.3
      comp=Z,3.0nm,0.8s,baz=173,slow=8.1,SNR=11
      comp=Z,3.0nm,0.8s
MJAR  Matsushiro Arr     49.02 339   P      P       19 45 28.9 -1.1
MJAR                                 pmax   pmax
      comp=Z,11nm,1.7s
MAJO  Matsushiro         49.02 339   P      P       19 45 29.1 -0.9
MAJO  Matsushiro         49.02 339   P      P       19 45 29.1 -0.9
MAJO                                 pmax   pmax
      comp=Z,16nm,1.3s
PPT2  Papeete2           51.47 105 eLR      LR      20 00 36.1
      comp=Z,64nm,22.0s
KSRS  Korea Array        54.18 330   P      P       19 46 08.8 +0.3
      comp=Z,2.0nm,0.9s,baz=142,slow=7.1,SNR=8.4
      comp=Z,2.0nm,0.9s
JKA   Kamikawa-asahi     54.71 346   P      P       19 46 12.4 +0.1
JKA                                  IAmb   IAmb    19 47 11.8
      comp=Z,33nm,1.6s
ASAJ  Asahikawa          54.71 346   P      P       19 46 12.4 +0.2
ASAJ                                 pmax   pmax
      comp=Z,33nm,1.6s
NJ2   Nanjing            55.44 319 eP       P       19 46 18.0 +0.3
NJ2                                  pmax   pmax
      comp=Z,7.0nm,0.7s
YSS   Yuzhno-Sakhali     57.37 348   P      P       19 46 31.2 +0.1
YSS                                  IAmb   IAmb    19 46 32.5
      comp=Z,14nm,0.8s
YSS   Yuzhno-Sakhali     57.37 348 eP       P       19 46 31.7 +0.5
YSS                                  pmax   pmax
      comp=Z,20nm,0.8s
YSS                                  pmax   pmax
      comp=Z,100nm,3.4s
USA0B Ussuriysk Arra     58.01 338   P      P       19 46 36.1 +0.4
USA0B                                IAmb   IAmb    19 46 37.8
      comp=Z,30nm,1.1s
USA0B Ussuriysk Arra     58.01 338   P      P       19 46 36.1 +0.4
USA0B                                pmax   pmax
      comp=Z,30nm,1.2s
USRK  Ussuriysk Ar.      58.01 338          P       19 46 36.5 +0.8
USRK  Ussuriysk Ar.      58.01 338   P      P       19 46 36.4 +0.7
      comp=Z,19nm,1.0s,baz=135,slow=6.8,SNR=18
      comp=Z,19nm,1.0s
MDJ   Mudanjiang         59.27 337   P      P       19 46 45.5 +0.9
MDJ   Mudanjiang         59.27 337   P      P       19 46 39.5 -5.0
MDJ                                  pmax   pmax
      comp=Z,21nm,3.5s
CN2   Changchun          60.34 333 eP       P       19 46 52.3 +0.4
CN2                                  PP     PP      19 49 07.5 +2.2
CN2                                  eS     S       19 54 57.0 -8.3
CN2                                  pmax   pmax
      comp=Z,10.0nm,0.9s
CN2                                  pmax   pmax
      comp=Z,100nm,4.0s
CN2                                  LR     LR
      comp=Z,200nm,12.0s
CN2                                  LR     LR
      comp=Z,300nm,12.0s
CN2                                  LR     LR
      comp=Z,100nm,14.0s
ENH   Enshi              60.87 312   P      P       19 46 55.2 -0.6
BNX   BinXian            61.07 336 ⇓P       P       19 46 56.3 -0.5
BNX                                  pmax   pmax
      comp=Z,41nm,1.1s
TYV   Tymovskoe          61.11 349 eP       P       19 46 57.6 +0.6
TYV                                  eS     S       19 55 16.2 +1.4
TYV                                  pmax   pmax
      comp=Z,9.0nm,0.8s
TYV                                  pmax   pmax
      comp=Z,100nm,3.1s
TYV                                  smax   smax
      comp=N,200nm,6.3s
TYV                                  smax   smax
      comp=E,200nm,6.3s
GSI   Gunungsitoli       61.18 276   P      P       19 46 57.0 -1.3
GSI                                  IAmb   IAmb    19 46 58.3
      comp=Z,31nm,1.0s
HNS   HongShan           61.48 321 ⇑P       P       19 47 00.3 +0.5
HNS                                  pmax   pmax
      comp=Z,8.0nm,0.8s
PET   Petropavlovsk      61.78   0 deP      P       19 47 02.3 +0.8
PET                                  pmax   pmax
      comp=Z,21nm,1.7s
PEA0B Petropavlovsk-     61.87 360   P      P       19 47 01.8 -0.3
PEA0B Petropavlovsk-     61.87 360   P      P       19 47 01.8 -0.3
PEA0B                                pmax   pmax
      comp=Z,43nm,1.1s
PETK  Petropavlovsk-     61.87 360   P      P       19 47 01.9 -0.2
PETK  Petropavlovsk-     61.87 360   P      P       19 47 02.1  0.0
      comp=Z,25nm,0.9s,baz=151,slow=6.4,SNR=22
      comp=Z,25nm,0.9s
PETK  Petropavlovsk-     61.87 360   P      P       19 47 01.9 -0.2
KLR   Kul'dur            62.43 341 d iP     P       19 47 06.2 +0.2
KLR                                  pmax   pmax
      comp=Z,18nm,1.4s
XAN   Xi'an              63.30 315 ⇑P       P       19 47 12.0 -0.1
XAN                                  sP     pP      19 47 19.8 +0.7
XAN                                  pmax   pmax
      comp=Z,13nm,0.8s
KMI   Kunming            63.70 304   P      P       19 47 16.8 +1.6
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KMI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KIWB	**Kanaga Island**	**64.24**	**17**	P	**P**	**19 47 18.5**	**+0.6**
ADK	**Adak**	**64.40**	**17**	P	**P**	**19 47 18.0**	**-0.9**
ADK	**Adak**	**64.40**	**17**	P	**P**	**19 47 18.0**	**-0.9**
ADK				pmax	pmax		
	comp=Z,73nm,1.3s						
CM31	**Chiang Mai Arr**	**64.44**	**295**	P	**P**	**19 47 20.2**	**+0.3**
CM31				IAmb	IAmb	19 49 32.4	
	comp=Z,23nm,1.0s						
CMAR	**Chiang Mai Arr**	**64.44**	**295**	P	**P**	**19 47 20.1**	**+0.2**
CMAR	**Chiang Mai Arr**	**64.44**	**295**	P	**P**	**19 47 20.8**	**+0.9**
	comp=Z,4.1nm,0.8s,baz=122,slow=5.2,SNR=20						
	comp=Z,4.1nm,0.8s						
CHTO	**Chiang Mai**	**64.56**	**296**	P	**P**	**19 47 20.8**	**+0.1**
CHTO	**Chiang Mai**	**64.56**	**296**	P	**P**	**19 47 20.8**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,41nm,1.2s						
HEH	**HeiHe**	**64.79**	**339**	*e*P	**P**	**19 47 21.3**	**-0.2**
HEH				pmax	pmax		
	comp=Z,49nm,0.7s						
XLT	**XiLinHaoTe**	**64.98**	**328**	*e*P	**P**	**19 47 23.5**	**+0.5**
XLT				pmax	pmax		
	comp=Z,18nm,0.7s						
PZH	**PanZhiHua**	**65.10**	**305**	P	**P**	**19 47 25.5**	**+1.3**
CD2	**Chengdu**	**65.47**	**310**	P	**P**	**19 47 26.3**	**-0.1**
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
HHC	**Hu-ho-hao-te**	**65.55**	**323**	*e*P	**P**	**19 47 26.5**	**-0.3**
HHC				pmax	pmax		
	comp=Z,18nm,0.5s						
HHC				pmax	pmax		
	comp=Z,97nm,5.4s						
CASY	**Casey**	**65.69**	**199**	P	**P**	**19 47 28.0**	**+0.8**
TNCH	**TengChong**	**67.17**	**302**	⇓P	**P**	**19 47 38.0**	**+0.4**
TNCH				pP	pP	19 47 41.5	-3.1
TNCH				sP	sP	19 47 43.8	-3.6
TNCH				S	**S**	**19 56 32.0**	**+0.7**
TNCH				sS	pS	19 56 36.8	-3.3
TNCH				pmax	pmax		
	comp=Z,22nm,1.0s						
TNCH				LR	LR		
	comp=Z,200nm,4.8s						
TNCH				LR	LR		
	comp=Z,120nm,4.8s						
TNCH				LR	LR		
	comp=Z,230nm,10.3s						
ZEA	**Zeya**	**67.75**	**341**	*e*P	**P**	**19 47 40.9**	**+0.5**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=N,20nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,40nm,0.7s						
NIKH	**Nikolski High**	**67.84**	**21**	P	**P**	**19 47 41.1**	**+0.1**
	baz=216						
LZH	**Lanzhou**	**67.92**	**315**	*e*P	**P**	**19 47 42.5**	**+0.4**
LZH				pP	pP	19 47 47.0	-2.1
LZH				sP	sP	19 47 50.3	-1.6
VNDA	**Vanda**	**68.52**	**179**	P	**P**	**19 47 46.8**	**+1.8**
VNDA	**Vanda**	**68.52**	**179**	P	**P**	**19 47 47.1**	**+2.1**
	comp=Z,0.8nm,0.8s,baz=331,slow=5.7,SNR=5.3						
	comp=Z,0.8nm,0.8s						
MA2	**Magadan**	**68.61**	**356**	P	**P**	**19 47 45.4**	**-0.3**
MA2				IAmb	IAmb	19 47 46.4	
	comp=Z,25nm,0.9s						
MA2	**Magadan**	**68.61**	**356**	P	**P**	**19 47 45.4**	**-0.3**
MA2				pmax	pmax		
	comp=Z,25nm,0.9s						
MA2	**Magadan**	**68.61**	**356**	P	**P**	**19 47 44.8**	**-0.9**
	comp=Z,33nm,0.9s						
UNV	**Unalaska Valle**	**69.39**	**21**	P	**P**	**19 47 50.7**	**+0.1**
	baz=218						
P08K	**Saint George I**	**70.60**	**18**	P	**P**	**19 47 58.4**	**+0.4**
	baz=214						
SPIA	**Saint Paul Isl**	**70.87**	**18**	P	**P**	**19 48 00.5**	**+0.8**
	baz=213						
CIT	**Chita**	**71.78**	**333**	*e*P	**P**	**19 48 06.8**	**+1.4**
CIT				pmax	pmax		
	comp=Z,34nm,1.3s						
SEY	**Seymchan**	**71.86**	**357**	*d i*P	**P**	**19 48 05.4**	**-0.1**
SEY				pmax	pmax		
	comp=Z,12nm,1.0s						
GTA	**Gaotai**	**72.32**	**316**	P	**P**	**19 48 10.3**	**+1.3**
GTA				pP	pP	19 48 15.5	-0.6
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ULN	**Ulaanbaatar**	**72.36**	**327**	P	**P**	**19 48 09.8**	**+0.7**
ULN	**Ulaanbaatar**	**72.36**	**327**	*de*P	**P**	**19 48 09.9**	**+0.8**
ULN				pmax	pmax		
	comp=Z,17nm,1.7s						
S12K	**Black Hills**	**72.46**	**22**	P	**P**	**19 48 09.0**	**-0.3**
	baz=222						
SONM	**Songino Array**	**72.70**	**326**	P	**P**	**19 48 11.2**	**+0.2**
SONM	**Songino Array**	**72.70**	**326**	P	**P**	**19 48 11.8**	**+0.7**
	comp=Z,9.4nm,0.8s,baz=140,slow=5.6,SNR=50						
	comp=Z,9.4nm,0.8s						
CHNA	**Chernabura Isl**	**72.78**	**24**	P	**P**	**19 48 10.5**	**-0.7**
	baz=224						
SDPT	**Sand Point**	**72.81**	**23**	P	**P**	**19 48 10.7**	**-0.6**
	baz=223						
S14K	**Fog Glacier**	**73.84**	**23**	P	**P**	**19 48 17.3**	**-0.2**
	baz=224						
YAK	**Yakutsk**	**74.19**	**347**	P	**P**	**19 48 19.3**	**-0.1**
YAK				IAmb	IAmb	19 48 21.0	
	comp=Z,31nm,0.8s						
YAK	**Yakutsk**	**74.19**	**347**	*e*P	**P**	**19 48 19.5**	**+0.2**
YAK				e*PP	**pP**	**19 48 22.8**	**-3.7**
YAK				*e*S	**S**	**19 57 52.4**	**+1.2**
YAK				*e*SS	**SS**	**20 02 38.6**	**+1.4**
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,36nm,0.9s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.0s						
YAK				smax	smax		
	comp=E,27nm,2.8s						
YAK				smax	smax		
	comp=N,41nm,2.7s						
CHGN	**Chignik**	**74.30**	**23**	P	**P**	**19 48 20.1**	**0.0**
	baz=225						
M11K	**Mekoryuk**	**74.71**	**17**	P	**P**	**19 48 22.0**	**-0.4**
	baz=217						
LSA	**Lhasa**	**74.96**	**304**	P	**P**	**19 48 25.6**	**+0.5**
LSA				IAmb	IAmb	19 50 14.5	
	comp=Z,13nm,0.8s						
LSA	**Lhasa**	**74.96**	**304**	P	**P**	**19 48 25.6**	**+0.5**
LSA				pmax	pmax		
	comp=Z,13nm,0.8s						
CHIR	**Chirikof Islan**	**75.10**	**25**	P	**P**	**19 48 24.4**	**-0.4**
	baz=228						
O14K	**Tigyukauivet M**	**75.41**	**20**	P	**P**	**19 48 26.6**	**+0.1**
	baz=222						
M13K	**Dall Lake**	**75.61**	**19**	P	**P**	**19 48 27.7**	**+0.2**
	baz=219						
BOD	**Bodaibo**	**75.63**	**337**	*e*P	**P**	**19 48 27.3**	**-0.5**
BOD				pmax	pmax		
	comp=Z,33nm,1.3s						
N14K	**Kuskokwak Cree**	**75.77**	**20**	P	**P**	**19 48 28.6**	**+0.1**
	baz=221						
ZAK	**Zakamensk**	**75.83**	**327**	*e*P	**P**	**19 48 29.1**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.8s						
O15K	**Ungalikthiuk R**	**75.85**	**21**	P	**P**	**19 48 28.8**	**-0.2**
	baz=223						
R17L	**Mt. Peulik Vol**	**76.04**	**23**	P	**P**	**19 48 30.1**	**0.0**
	baz=226						
GAMB	**Gambell**	**76.11**	**13**	P	**P**	**19 48 30.9**	**+0.6**
	baz=211						
SII	**Sitkinak Islan**	**76.19**	**25**	P	**P**	**19 48 31.0**	**0.0**
	baz=229						
M14K	**Bethel**	**76.31**	**19**		**P**	**19 48 32.1**	**+0.6**
M14K				IAmb	IAmb	19 48 33.2	
	comp=Z,16nm,0.8s						
M14K	**Bethel**	**76.31**	**19**	P	**P**	**19 48 32.1**	**+0.6**
	baz=221						
P16K	**Nushagak River**	**76.40**	**22**	P	**P**	**19 48 32.2**	**+0.1**
	baz=225						
K13K	**Kusilvak Mount**	**76.40**	**17**	P	**P**	**19 48 30.9**	**-1.1**
K13K				IAmb	IAmb	19 48 33.9	
	comp=Z,11nm,0.8s						
K13K	**Kusilvak Mount**	**76.40**	**17**	P	**P**	**19 48 32.8**	**+0.7**
	baz=218						
N15K	**Kwethluk River**	**76.49**	**20**	P	**P**	**19 48 33.0**	**+0.4**
	baz=222						
L14K	**Kuka Creek**	**76.53**	**18**	P	**P**	**19 48 33.4**	**+0.6**
	baz=220,SNR=5.1						
Q17K	**Contact Creek**	**76.66**	**23**	P	**P**	**19 48 34.0**	**+0.3**
	baz=227						
M15K	**Kasigluk River**	**76.68**	**19**	P	**P**	**19 48 34.2**	**+0.5**
	baz=222,SNR=5.3						
R18K	**Karluk**	**76.75**	**24**	P	**P**	**19 48 34.2**	**+0.1**
	baz=228						
O16K	**Kokwok River B**	**76.77**	**21**	P	**P**	**19 48 34.4**	**+0.3**
	baz=224						
ACHA	**Angle Creek He**	**76.84**	**23**	P	**P**	**19 48 35.0**	**+0.2**
OHAK	**Old Harbor**	**77.00**	**25**		**P**	**19 48 35.8**	**+0.3**
OHAK				IAmb	IAmb	19 48 37.2	
	comp=Z,14nm,1.0s						
OHAK	**Old Harbor**	**77.00**	**25**	P	**P**	**19 48 35.6**	**+0.1**
	baz=229						
BILL	**Bilibino**	**77.07**	**3**	P	**P**	**19 48 36.0**	**+0.3**
BILL				IAmb	IAmb	19 48 37.1	
	comp=Z,40nm,1.2s						
BILL	**Bilibino**	**77.07**	**3**	*de*P	**P**	**19 48 36.0**	**+0.3**
BILL				pmax	pmax		
	comp=Z,24nm,1.0s						
P17K	**Kvichak River**	**77.09**	**22**	P	**P**	**19 48 36.4**	**+0.4**
	baz=226						
N16K	**Nishlik Lake**	**77.16**	**20**	P	**P**	**19 48 37.3**	**+0.9**
	baz=224						
L15K	**Ungalak Mounta**	**77.16**	**18**	P	**P**	**19 48 36.6**	**+0.2**
	baz=221						
O17K	**Koliganek Bris**	**77.25**	**21**	P	**P**	**19 48 37.4**	**+0.5**
	baz=225						
Q18K	**Katmai Hardscr**	**77.25**	**23**	P	**P**	**19 48 36.9**	**-0.2**
	baz=228,SNR=8.3						
J14K	**Nanvaranak Lak**	**77.36**	**17**	P	**P**	**19 48 38.1**	**+0.6**
	baz=219						
M16K	**Timber Creek**	**77.50**	**20**	P	**P**	**19 48 39.0**	**+0.7**
	baz=224,SNR=9.9						
K15K	**Wolf Creek Mou**	**77.62**	**18**	P	**P**	**19 48 40.0**	**+1.1**
	baz=221,SNR=9.6						
KDAK	**Kodiak Island**	**77.65**	**25**	P	**P**	**19 48 39.5**	**+0.3**
KDAK				IAmb	IAmb	19 49 31.9	
	comp=Z,33nm,1.4s						
KDAK	**Kodiak Island**	**77.65**	**25**	P	**P**	**19 48 39.5**	**+0.3**
KDAK				pmax	pmax		
	comp=Z,33nm,1.5s						
KDAK	**Kodiak Island**	**77.65**	**25**	P	**P**	**19 48 39.4**	**+0.2**
	baz=230						
P18K	**Big Mountain,**	**77.67**	**22**	P	**P**	**19 48 39.8**	**+0.5**
	baz=227						
N17K	**Nushagak Hills**	**77.75**	**21**	P	**P**	**19 48 39.8**	**+0.1**
N17K	**Nushagak Hills**	**77.75**	**21**	P	**P**	**19 48 40.5**	**+0.8**
	baz=225						
L16K	**Owhat River**	**77.83**	**19**	P	**P**	**19 48 40.5**	**+0.4**
	baz=223						
Q19K	**Cape Douglas,**	**77.97**	**23**	P	**P**	**19 48 40.7**	**-0.3**
	baz=229						
O18K	**Koktuh Hills**	**78.00**	**22**	P	**P**	**19 48 41.1**	**0.0**
	baz=227						
EVN	**Everest**	**78.02**	**301**		**P**	**19 48 42.5**	**-0.2**
Q20K	**Shuyak Island**	**78.26**	**24**	P	**P**	**19 48 42.6**	**0.0**
	baz=230						
M17K	**Holitna River**	**78.28**	**20**	P	**P**	**19 48 43.7**	**+1.0**
	baz=225						
ANM	**Nome**	**78.31**	**15**	P	**P**	**19 48 44.2**	**+1.5**
	baz=217						
N18K	**Kilae Creek**	**78.32**	**21**	P	**P**	**19 48 43.7**	**+0.8**
	baz=226						
TNA	**Tin City**	**78.49**	**14**	P	**P**	**19 48 44.2**	**+0.5**
	baz=214						
L17K	**Donlin**	**78.52**	**19**	P	**P**	**19 48 45.0**	**+1.1**
	baz=224,SNR=6.5						
P19K	**Oil Pt**	**78.61**	**23**	P	**P**	**19 48 45.1**	**+0.6**
	baz=229						
J16K	**Anvik River**	**78.64**	**18**	P	**P**	**19 48 45.8**	**+1.2**
	baz=222,SNR=8.0						
F14K	**Arctic Creek**	**78.80**	**14**	P	**P**	**19 48 45.9**	**+0.5**
	baz=216						
M18K	**Stony River**	**78.90**	**21**	P	**P**	**19 48 47.3**	**+1.2**
	baz=226,SNR=5.7						
N19K	**Bonanza Creek**	**78.91**	**22**	P	**P**	**19 48 46.2**	**-0.1**
	baz=228						
K17K	**Iditarod**	**78.94**	**19**	P	**P**	**19 48 47.0**	**+0.8**
	baz=224,SNR=9.7						
G15K	**Niukluk**	**79.00**	**15**	P	**P**	**19 48 47.0**	**+0.6**
	baz=218						
I17K	**Unalakleet**	**79.07**	**17**	P	**P**	**19 48 48.1**	**+1.3**
	baz=221						
L18K	**Granite Mounta**	**79.11**	**20**	P	**P**	**19 48 48.4**	**+1.2**
	baz=226,SNR=15						
O20K	**Slope Mountain**	**79.12**	**23**	P	**P**	**19 48 46.8**	**-0.6**
	baz=230						
J17K	**VABM Dome**	**79.19**	**18**	P	**P**	**19 48 48.7**	**+1.1**
	baz=223,SNR=9.7						
H16K	**Elim**	**79.20**	**16**	P	**P**	**19 48 48.1**	**+0.5**
	baz=220						
HOM	**Homer**	**79.23**	**23**	P	**P**	**19 48 48.0**	**+0.2**
	baz=231						
CNPM	**China Poot**	**79.31**	**24**		**P**	**19 48 48.9**	**+0.5**
CNPM				IAmb	IAmb	19 48 50.5	
	comp=Z,19nm,0.9s						
F15K	**North Star Dit**	**79.41**	**15**	P	**P**	**19 48 49.3**	**+0.6**
	baz=217						
M19K	**Big River Lodg**	**79.68**	**21**	P	**P**	**19 48 51.3**	**+1.0**
	baz=228						
L19K	**White Mountain**	**79.71**	**20**		**P**	**19 48 51.1**	**+0.6**
L19K				IAmb	IAmb	19 48 53.1	
	comp=Z,26nm,0.9s						
L19K	**White Mountain**	**79.71**	**20**	P	**P**	**19 48 51.5**	**+1.0**
	baz=227,SNR=29						
G16K	**Koyuk River**	**79.75**	**16**	P	**P**	**19 48 51.4**	**+0.8**
	baz=220,SNR=10						
J18K	**Innoko River**	**79.98**	**19**	P	**P**	**19 48 52.5**	**+0.5**
	baz=225						
SPCR	**Spurr Chakacha**	**80.00**	**22**	P	**P**	**19 48 52.7**	**+0.5**
	baz=230						
H17K	**Granite Mounta**	**80.08**	**17**	P	**P**	**19 48 53.1**	**+0.7**
	baz=222,SNR=5.3						
M20K	**Styx River**	**80.11**	**21**	P	**P**	**19 48 53.3**	**+0.5**
	baz=229						
CAPN	**Captain Cook N**	**80.12**	**23**	P	**P**	**19 48 53.6**	**+0.9**
	baz=231						
L20K	**Farewell, AK**	**80.25**	**21**	P	**P**	**19 48 54.3**	**+0.9**
	baz=228,SNR=20						
G17K	**Kiwalik Mounta**	**80.30**	**16**	P	**P**	**19 48 54.4**	**+0.8**
	baz=221,SNR=9.3						
SLKM	**Skilak Lake**	**80.32**	**23**		**P**	**19 48 54.0**	**+0.2**
SLKM				IAmb	IAmb	19 48 55.0	
	comp=Z,20nm,1.1s						
SEW	**Seward**	**80.37**	**24**	P	**P**	**19 48 54.5**	**+0.4**
	baz=232						
O22K	**Cooper Landing**	**80.50**	**23**	P	**P**	**19 48 54.8**	**+0.1**
	baz=232						
H18K	**Honhosa River**	**80.69**	**17**	P	**P**	**19 48 55.8**	**+0.1**
	baz=224						
J19K	**Poorman**	**80.70**	**19**	P	**P**	**19 48 56.6**	**+0.8**
	baz=226,SNR=11						
SUA	**Susitna One**	**80.72**	**22**	P	**P**	**19 48 55.7**	**-0.4**
	baz=231						
SKT	**Skwentna**	**80.75**	**22**	P	**P**	**19 48 56.0**	**-0.1**
	baz=230						
K20K	**Telida**	**80.77**	**20**	P	**P**	**19 48 57.1**	**+1.0**
	baz=228						
GCSA	**Galena City Sc**	**80.84**	**18**	P	**P**	**19 48 57.2**	**+0.8**
	baz=225						
F17K	**Baldwin Pennin**	**80.85**	**15**	P	**P**	**19 48 57.5**	**+1.0**
	baz=221						
RC01	**Rabbit Creek A**	**80.86**	**23**	P	**P**	**19 48 56.9**	**+0.2**
RC01				IAmb	IAmb	19 48 58.0	
	comp=Z,25nm,1.4s						
RC01	**Rabbit Creek A**	**80.86**	**23**	P	**P**	**19 48 56.9**	**+0.2**
	baz=232,SNR=5.6						
QSPA	**South Pole Qui**	**80.99**	**180**	P	**P**	**19 48 57.8**	**+0.2**
QSPA	**South Pole Qui**	**80.99**	**180**	P	**P**	**19 48 58.0**	**+0.5**
	comp=Z,2.3nm,0.9s,baz=326,slow=1.3,SNR=12						
	comp=Z,2.3nm,0.9s						
PPLA	**Purkeypile**	**81.11**	**21**	P	**P**	**19 48 58.7**	**+0.6**
	baz=230						
M22K	**Willow**	**81.13**	**22**	P	**P**	**19 48 58.6**	**+0.5**
	baz=232						
P23K	**Montague Islan**	**81.14**	**24**	P	**P**	**19 48 58.7**	**+0.6**
	baz=234						
G18K	**Tagagawik**	**81.15**	**17**	P	**P**	**19 48 58.5**	**+0.4**
	baz=223,SNR=13						
E17K	**Hotham Inlet**	**81.19**	**15**	P	**P**	**19 48 59.1**	**+0.8**
	baz=220,SNR=9.9						
PWL	**Port Wells**	**81.27**	**23**	P	**P**	**19 48 59.3**	**+0.4**
PWL				IAmb	IAmb	19 49 00.8	
	comp=Z,25nm,0.8s						
PWL	**Port Wells**	**81.27**	**23**	P	**P**	**19 48 59.3**	**+0.4**
	baz=233,SNR=16						
J20K	**Nowinta River**	**81.30**	**19**	P	**P**	**19 48 59.8**	**+0.9**
	baz=228,SNR=19						
C16K	**Lisburne Hills**	**81.30**	**13**	P	**P**	**19 48 59.4**	**+0.5**
	baz=216						
D17K	**Noatak River**	**81.36**	**14**	P	**P**	**19 49 00.2**	**+1.0**
	baz=219						
F18K	**Selawik**	**81.39**	**16**	P	**P**	**19 49 00.0**	**+0.7**
	baz=222,SNR=11						
PMR	**Palmer**	**81.41**	**23**	P	**P**	**19 48 59.7**	**+0.2**
PMR				IAmb	IAmb	19 49 00.8	
	comp=Z,18nm,1.0s						
PMR	**Palmer**	**81.41**	**23**	P	**P**	**19 48 59.7**	**+0.2**
PMR				pmax	pmax		
	comp=Z,18nm,1.0s						
PMR	**Palmer**	**81.41**	**23**	P	**P**	**19 49 00.0**	**+0.5**
	baz=233						
CUT	**Chulitna**	**81.48**	**22**	P	**P**	**19 49 00.7**	**+0.8**
	baz=232						
CAST	**Castle Rocks**	**81.48**	**20**		**P**	**19 48 59.8**	**-0.3**
CAST				IAmb	IAmb	19 49 00.8	
	comp=Z,19nm,0.8s						
CAST	**Castle Rocks**	**81.48**	**20**	P	**P**	**19 48 59.7**	**-0.3**
	baz=230,SNR=29						
H19K	**Roundabout Mou**	**81.52**	**17**	P	**P**	**19 49 00.7**	**+0.6**
	baz=225,SNR=16						
KNK	**Knik Glacier**	**81.55**	**23**	P	**P**	**19 49 00.9**	**+0.6**
	baz=233						
I20K	**Naaghedeneel**	**81.61**	**19**	P	**P**	**19 49 01.6**	**+1.0**
	baz=227						
RDOG	**Red Dog Mine**	**81.68**	**14**	P	**P**	**19 49 01.8**	**+0.9**
	baz=219						
E18K	**Tukpahlearik C**	**81.76**	**15**	P	**P**	**19 49 02.0**	**+0.7**
	baz=221,SNR=6.1						
G19K	**Purcell Mounta**	**81.77**	**17**	P	**P**	**19 49 02.2**	**+0.8**
	baz=225,SNR=20						
GLI	**Glacier Island**	**81.77**	**24**	P	**P**	**19 49 01.7**	**+0.2**
GLI	**Glacier Island**	**81.77**	**24**	P	**P**	**19 49 01.7**	**+0.2**
	baz=235,SNR=6.8						
C17K	**DeLong Mountai**	**81.95**	**13**	P	**P**	**19 49 03.1**	**+0.7**
	baz=218						
H20K	**Anotleneega Mo**	**81.97**	**18**	P	**P**	**19 49 03.1**	**+0.6**
	baz=227,SNR=16						
M23K	**Glacier View**	**82.06**	**23**	P	**P**	**19 49 03.4**	**+0.3**
	baz=234						
F19K	**Shaleruckik Mo**	**82.07**	**16**	P	**P**	**19 49 03.5**	**+0.5**
	baz=224,SNR=16						
EYAK	**Cordova Ski Ar**	**82.13**	**24**	P	**P**	**19 49 03.6**	**+0.2**
	baz=236						
TRF	**Thorofare Moun**	**82.13**	**21**	P	**P**	**19 49 02.9**	**-0.7**
	baz=231,SNR=17						
SCM	**Sheep Creek Mo**	**82.24**	**23**	P	**P**	**19 49 04.6**	**+0.5**
SCM				IAmb	IAmb	19 49 05.7	
	comp=Z,20nm,1.0s						
SCM	**Sheep Creek Mo**	**82.24**	**23**	P	**P**	**19 49 04.6**	**+0.5**
SCM				pmax	pmax		
	comp=Z,20nm,1.0s						
SCM	**Sheep Creek Mo**	**82.24**	**23**	P	**P**	**19 49 04.5**	**+0.5**
	baz=234,SNR=7.9						
BPAW	**Bear Paw Mtn.**	**82.30**	**20**	P	**P**	**19 49 03.7**	**-0.6**
	baz=231,SNR=12						
KAIM	**Kayak Island**	**82.34**	**25**	P	**P**	**19 49 05.1**	**+0.6**
	baz=237						
WAT1	**Susitna Watana**	**82.37**	**22**	P	**P**	**19 49 04.7**	**0.0**
	baz=233						
WMQ	**Urumqi**	**82.40**	**317**	*e*P	**P**	**19 49 07.0**	**+1.7**
WMQ				pmax	pmax		
	comp=Z,18nm,0.9s						
WAT6	**Susitna Watana**	**82.52**	**22**	P	**P**	**19 49 05.8**	**+0.2**
	baz=234,SNR=15						
C18K	**Utukok River**	**82.55**	**14**	P	**P**	**19 49 05.9**	**+0.4**
	baz=220						
KLU	**Klutina**	**82.59**	**24**	P	**P**	**19 49 06.5**	**+0.6**
	baz=236,SNR=6.7						
IMAR	**Indian Mountai**	**82.64**	**18**	P	**P**	**19 49 06.4**	**+0.4**
E19K	**Redstone River**	**82.67**	**16**	P	**P**	**19 49 07.2**	**+1.1**
	baz=224,SNR=33						
H21K	**Melozitna Rive**	**82.72**	**18**	P	**P**	**19 49 07.2**	**+0.8**
	baz=229,SNR=9.6						
MCK	**McKinley**	**82.78**	**21**	P	**P**	**19 49 06.6**	**-0.2**
	baz=233,SNR=33						
TIXI	**Tiksi**	**82.79**	**351**	P	**P**	**19 49 06.6**	**0.0**
TIXI				IAmb	IAmb	19 49 07.3	
	comp=Z,38nm,1.8s						
TIXI	**Tiksi**	**82.79**	**351**	P	**P**	**19 49 06.6**	**0.0**
TIXI				pmax	pmax		
	comp=Z,38nm,1.8s						
F20K	**Avaraart Lake**	**82.80**	**17**	P	**P**	**19 49 07.5**	**+0.8**
	baz=226,SNR=10						
BMRM	**Bremner River**	**82.83**	**24**	P	**P**	**19 49 07.4**	**+0.3**
	baz=237						
M24K	**Tolsona, Glenn**	**82.84**	**23**	P	**P**	**19 49 08.2**	**+1.0**
	baz=235,SNR=11						
HYB	**Hyderabad**	**82.85**	**289**	*e*P	**P**	**19 49 08.8**	**+0.7**
BGLC	**Bering Glacier**	**82.92**	**26**	P	**P**	**19 49 08.4**	**+0.9**
	baz=238						
DHY	**Denali Highway**	**82.95**	**22**	P	**P**	**19 49 08.0**	**+0.2**
	baz=234,SNR=12						
MLY	**Manley**	**82.97**	**19**	P	**P**	**19 49 08.0**	**+0.3**
	baz=231						
G21K	**Allakaket**	**83.08**	**18**	P	**P**	**19 49 08.9**	**+0.7**
	baz=228						
N25K	**Chitina, Valde**	**83.18**	**24**	P	**P**	**19 49 09.6**	**+0.6**
	baz=237,SNR=9.0						
D19K	**Kuna River**	**83.19**	**15**	P	**P**	**19 49 09.3**	**+0.4**
	baz=223						
NEA2	**Nenana**	**83.26**	**20**	P	**P**	**19 49 08.7**	**-0.5**
	baz=232,SNR=19						
C19K	**Lookout Ridge**	**83.28**	**14**	P	**P**	**19 49 10.1**	**+0.8**
	baz=222						
H22K	**Ishtalitna Cre**	**83.32**	**19**	P	**P**	**19 49 10.2**	**+0.7**
	baz=230,SNR=14						
CRQE	**Cirque**	**83.34**	**25**	P	**P**	**19 49 10.3**	**+0.5**
	baz=238						
HARP	**HAARP**	**83.40**	**23**	P	**P**	**19 49 10.8**	**+0.8**
	baz=236						
GLB	**Gilahina Butte**	**83.41**	**24**		**P**	**19 49 10.5**	**+0.4**
GLB				IAmb	IAmb	19 49 11.6	
	comp=Z,14nm,0.9s						
I23K	**Minto, Yukon-K**	**83.50**	**20**	P	**P**	**19 49 10.3**	**-0.1**
	baz=232,SNR=11						
E20K	**Nigu River**	**83.52**	**16**	P	**P**	**19 49 11.4**	**+0.9**
	baz=225,SNR=20						
WRH	**Wood River Hil**	**83.52**	**21**	P	**P**	**19 49 10.1**	**-0.4**
WRH				IAmb	IAmb	19 49 11.1	
	comp=Z,21nm,1.0s						
MESA	**MESA**	**83.52**	**26**	P	**P**	**19 49 11.2**	**+0.3**
	baz=239						
F21K	**Alatna River**	**83.56**	**17**	P	**P**	**19 49 11.1**	**+0.4**
	baz=228,SNR=11						
PAX	**Paxson**	**83.60**	**23**	P	**P**	**19 49 11.3**	**+0.2**
	baz=236						
MCARA	**McCarthy VSAT**	**83.70**	**24**	P	**P**	**19 49 12.1**	**+0.6**
MCARA				IAmb	IAmb	19 49 13.2	
	comp=Z,13nm,1.0s						
MCARA	**McCarthy VSAT**	**83.70**	**24**	P	**P**	**19 49 12.1**	**+0.6**
	baz=238						
D20K	**Etivluk River**	**83.73**	**15**	P	**P**	**19 49 12.2**	**+0.6**
	baz=225,SNR=5.2						
MAW	**Mawson**	**83.75**	**203**	P	**P**	**19 49 11.8**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=95,slow=8.0,SNR=6.5						
	comp=Z,1.7nm,0.8s						
COLA	**College**	**83.85**	**20**	*d i*P	**P**	**19 49 11.6**	**-0.6**
COLA				pmax	pmax		
	comp=Z,33nm,0.9s						
COLA	**College**	**83.85**	**20**	P	**P**	**19 49 11.9**	**-0.3**
	baz=234						
H23K	**Yukon River**	**83.86**	**19**	P	**P**	**19 49 12.8**	**+0.5**
	baz=232,SNR=30						
HDA	**Harding Lake**	**83.89**	**21**	P	**P**	**19 49 12.3**	**-0.1**
HDA				IAmb	IAmb	19 49 13.9	
	comp=Z,30nm,1.2s						
HDA	**Harding Lake**	**83.89**	**21**	P	**P**	**19 49 12.3**	**-0.1**
	baz=234,SNR=7.6						
G22K	**Bettles**	**83.94**	**18**	P	**P**	**19 49 13.3**	**+0.7**
	baz=230						
K24K	**Donnelly Dome**	**83.96**	**22**	P	**P**	**19 49 13.3**	**+0.4**
	baz=236,SNR=6.5						
IL31		**84.12**	**21**	P	**P**	**19 49 12.9**	**-0.7**
IL31				IAmb	IAmb	19 49 14.0	
	comp=Z,21nm,1.2s						
ILAR	**Eielson Array**	**84.12**	**21**	P	**P**	**19 49 12.8**	**-0.9**
	comp=Z,9.7nm,0.9s,baz=265,slow=4.3,SNR=63						
	comp=Z,9.7nm,0.9s						

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F22K  John River        84.12  17  P       P       19 49 14.4 +0.8
      baz=229
CTG   Chitna Glacier    84.18  25  P       P       19 49 15.0 +0.8
      baz=240,SNR=5.4
PINM  Pinnacle          84.22  26  P       P       19 49 15.0 +0.7
      baz=241,SNR=6.9
E21K  Killik River      84.24  16  P       P       19 49 14.9 +0.7
      baz=227,SNR=8.5
M26K  Nabesna, AK       84.25  24  P       P       19 49 15.1 +0.7
      baz=238,SNR=13
G23K  Bananza Creek     84.26  18  P       P       19 49 15.1 +0.7
      baz=231,SNR=17
RIDG  Independent Ri    84.27  22  P       P       19 49 14.3  -0.1
RIDG  Independent Ri    84.27  22  P       P       19 49 14.7 +0.3
      baz=236,SNR=22
PNL   Peninsula         84.39  27  P       P       19 49 15.7 +0.6
      baz=242,SNR=5.6
H24K  Noodor Dome       84.41  20  P       P       19 49 15.4 +0.3
      baz=233,SNR=12
L26K  Log Cabin Wild    84.44  23  P       P       19 49 16.0 +0.7
      baz=238,SNR=8.3
DOT   Dot Lake          84.51  22  P       P       19 49 15.7 +0.1
C21K  Knifeblade Rid    84.52  15  P       P       19 49 16.3 +0.8
      baz=227
B20K  Meade River       84.52  14  P       P       19 49 16.2 +0.7
      baz=224
COLD  Coldfoot          84.53  18  P       P       19 49 16.6 +1.0
      baz=231
J25K  Salcha River,     84.56  21  P       P       19 49 16.2 +0.2
      baz=236,SNR=37
O28M  Mount Upton       84.58  26  P       P       19 49 17.5 +1.1
      baz=241,SNR=8.3
E22K  Anaktuvuk Pass    84.64  17  P       P       19 49 16.9 +0.7
      baz=230,SNR=7.5
M27K  Edge Creek, AK    84.67  24  P       P       19 49 17.8 +1.2
      baz=239,SNR=22
SCRK  Sand Creek        84.72  22          P       19 49 17.4 +0.7
SCRK                               IAmb    IAmb    19 49 18.4
      comp=Z,17nm,0.9s
SCRK  Sand Creek        84.72  22  P       P       19 49 17.5 +0.7
      baz=237,SNR=36
B21K  Ikpikpuk River    84.88  15  P       P       19 49 18.5 +1.2
      baz=227
D22K  Ayikyak River     84.89  16  P       P       19 49 18.8 +1.3
      baz=229,SNR=11
YUK3  Moose Creek       84.96  25  P       P       19 49 19.1 +0.9
      baz=240,SNR=7.1
YUK8  Steele Glacier    85.01  25  P       P       19 49 19.6 +1.1
      baz=241,SNR=7.1
L27K  Beaver Creek,     85.05  23  P       P       19 49 19.5 +1.1
      baz=239,SNR=19
O29M  Mount Kennedy     85.06  27  P       P       19 49 19.5 +0.9
      baz=242
G24K  Hadweenzic Riv    85.06  19  P       P       19 49 19.1 +0.8
      baz=234,SNR=19
BCAR  Beaver Creek A    85.07  23  P       P       19 49 19.8 +1.3
S31K  Pelican           85.09  29  P       P       19 49 19.8 +1.2
      baz=245
BVCY  Beaver Creek      85.11  24  P       P       19 49 20.0 +1.3
      baz=240
P29M  Windy Craggy      85.12  27  P       P       19 49 19.6 +0.8
      baz=243
SIT   Sitka             85.15  30  P       P       19 49 19.4 +0.5
      baz=245
J26L  Joseph Creek      85.15  22  P       P       19 49 19.6 +0.6
      baz=238,SNR=12
E23K  Chandalar         85.23  17  P       P       19 49 20.2 +1.0
      baz=232,SNR=8.6
H25L  Birch Creek       85.35  20  P       P       19 49 20.7 +0.9
      baz=235
MOBC  Moresby Island    85.39  35          P       19 49 21.4 +1.1
MOBC                               IAmb    IAmb    19 49 22.8
      comp=Z,13nm,0.9s
F24K  Squaw Lake        85.42  18          P       19 49 21.2 +1.1
F24K  Squaw Lake        85.42  18  P       P       19 49 21.4 +1.3
      baz=233,SNR=10.0
YUK6  Outpost Mounta    85.44  26  P       P       19 49 21.9 +1.2
      baz=242
K27K  Chicken           85.46  22  P       P       19 49 21.8 +1.5
      baz=239
ZSN   Zaisan            85.47 319 eP       P       19 49 20.5  -0.3
ZSN                                pmax    pmax
      comp=Z,10.0nm,0.9s
ZSN   Zaisan            85.47 319 eP       P       19 49 20.5  -0.3
      comp=Z,9.8nm,0.9s
D23K  Nanushuk River    85.50  16  P       P       19 49 22.0 +1.5
      baz=230,SNR=9.1
YUK4  Talbot Arm        85.51  26  P       P       19 49 22.8 +1.9
      baz=242,SNR=14
G25K  Bearman Lake      85.54  19  P       P       19 49 21.7 +1.0
      baz=235,SNR=10
E24K  Your Creek        85.57  18  P       P       19 49 21.5 +0.5
      baz=233,SNR=5.4
TOLK  Toolik Lake Re    85.60  17  P       P       19 49 21.7 +0.6
      baz=232,SNR=8.8
CRAG  Craig             85.64  32  P       P       19 49 22.5 +1.1
      baz=247
PLBC  Pleasant Camp     85.67  28  P       P       19 49 22.4 +0.9
      baz=244,SNR=13
B22K  Teshekpuk Lake    85.67  15  P       P       19 49 21.9 +0.6
      baz=228
S32K  Killisnoo         85.69  30  P       P       19 49 22.5 +1.0
      baz=246
P30M  Million Dollar    85.69  27  P       P       19 49 22.8 +1.1
      baz=244
I26K  Coal Creek Min    85.73  21  P       P       19 49 22.3 +0.6
      baz=238,SNR=10
A22K  Sinclair Lake     85.75  14  P       P       19 49 22.2 +0.5
      baz=226
HYT   Haines Junctio    85.77  26          P       19 49 23.4 +1.3
HYT                                IAmb    IAmb    19 49 24.5
      comp=Z,29nm,1.1s
HYT   Haines Junctio    85.77  26  P       P       19 49 23.5 +1.3
      baz=243,SNR=22
U33K  Whale Pass        85.89  32  P       P       19 49 23.7 +1.1
      baz=247
R32K  Eaglecrest        86.05  29  P       P       19 49 24.5 +1.1
      baz=246
C23K  Itkillik River    86.07  16  P       P       19 49 24.1 +0.9
      baz=230
M29M  Somme Creek       86.10  25  P       P       19 49 24.6 +0.8
      baz=242,SNR=12
D24K  Happy Valley      86.14  17  P       P       19 49 24.8 +1.2
      baz=232
SKAG  Skagway           86.15  28  P       P       19 49 25.1 +1.3
      baz=245
F25K  Christian Rive    86.16  19  P       P       19 49 25.1 +1.2
      baz=235,SNR=9.4
N30M  Aishikik Lake     86.23  26  P       P       19 49 25.3 +1.0
      baz=244,SNR=11
O30N  Mendenhall        86.36  27  P       P       19 49 26.0 +1.0
      baz=244,SNR=25
V35K  Ketchikan         86.38  33  P       P       19 49 26.2 +1.1
      baz=249,SNR=5.4
WRAK  Wrangell Islan    86.40  31  P       P       19 49 26.1 +1.0
      baz=248
G26K  Porcupine Rive    86.40  20  P       P       19 49 26.4 +1.4
      baz=237,SNR=39
BMAR  Burnt Mountain    86.41  19  P       P       19 49 26.3 +1.2
I27K  Kandik River      86.44  21  P       P       19 49 26.3 +1.0
      baz=239,SNR=17
E25K  Arctic Village    86.49  18  P       P       19 49 26.4 +1.0
      baz=235
DAWY  Dawson            86.50  23          P       19 49 26.4 +0.8
DAWY                               IAmb    IAmb    19 49 27.9
      comp=Z,11nm,1.0s
DAWY  Dawson            86.50  23  P       P       19 49 26.8 +1.3
      baz=241,SNR=11
C24K  Franklin Bluff    86.52  16  P       P       19 49 26.7 +1.2
      baz=232
L29M  L29M              86.55  24  P       P       19 49 27.2 +1.4
      baz=242,SNR=17
F26K  Sheenjek River    86.69  19  P       P       19 49 27.7 +1.2
      baz=237,SNR=7.1
H27K  Steamboat Moun    86.79  21  P       P       19 49 28.2 +1.2
      baz=239,SNR=18
N31M  Braeburn, Yuko    86.81  26  P       P       19 49 28.5 +1.4
      baz=245,SNR=28
M30M  Minto, Yukon      86.85  25  P       P       19 49 28.2 +0.9
      baz=244
WHY   Whitehorse        86.86  27          P       19 49 28.1 +0.7
WHY                                IAmb    IAmb    19 49 29.3
      comp=Z,20nm,0.9s
WHY   Whitehorse        86.86  27  P       P       19 49 28.2 +0.7
      baz=246,SNR=7.7
D25K  Kavik River       86.94  17  P       P       19 49 28.2 +0.6
      baz=235
MK31  Makanchi Array    86.95 318  P       P       19 49 27.6  -0.5
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MK31  Makanchi Array    86.95 318deP       P       19 49 27.8  -0.4
MKAR  Makanchi Array    86.95 318  P       P       19 49 27.9  -0.3
      comp=Z,11nm,0.7s,baz=98,slow=6.1,SNR=122
      comp=Z,11nm,0.7s
MKAR  Makanchi Array    86.95 318  P       P       19 49 28.0  -0.2
P32M  Atlin             86.95  28  P       P       19 49 29.0 +1.1
      baz=247,SNR=6.8
I28M  Miner Creek       86.97  22  P       P       19 49 28.8 +0.9
      baz=241,SNR=12
G27K  Doyon Strip       87.04  20  P       P       19 49 29.6 +1.4
      baz=239,SNR=17
K29M  Barlow Dome       87.13  24  P       P       19 49 30.1 +1.4
      baz=243,SNR=25
J29N  Klondike Camp     87.14  23  P       P       19 49 30.2 +1.5
      baz=242
MAKZ  Makanchi          87.16 318          P       19 49 28.9  -0.3
MAKZ  Makanchi          87.16 318  P       P       19 49 28.9  -0.3
MAKZ                               pmax    pmax
      comp=Z,35nm,0.8s
Q32M  Nakina River      87.40  29  P       P       19 49 31.3 +1.0
      baz=248
I29M  Ogilvie Camp,     87.52  22  P       P       19 49 31.4 +0.9
      baz=242,SNR=20
S34M  Telegraph Cree    87.57  30  P       P       19 49 31.3 +0.5
      baz=249,SNR=5.8
ZAA0  Zalesovo Array    87.57 325          P       19 49 29.8  -1.2
ZALV  Zalesovo Beam     87.57 325          P       19 49 29.6  -1.3
ZALV  Zalesovo Beam     87.57 325  P       P       19 49 29.9  -1.1
      comp=Z,5.1nm,0.6s,baz=107,slow=5.0,SNR=23
      comp=Z,5.1nm,0.6s
ZALV  Zalesovo Beam     87.57 325  P       P       19 49 29.6  -1.3
P33M  Teslin, Yukon     87.61  28  P       P       19 49 31.9 +0.7
      baz=247
T35M  Bob Quinn         87.69  31  P       P       19 49 32.6 +1.2
      baz=250
C26K  Camden Bay        87.70  17  P       P       19 49 32.8 +1.6
      baz=236
M31M  Drury Creek, Y    87.71  26  P       P       19 49 32.0 +0.5
      baz=246,SNR=11
E27K  Coleen River      87.77  19  P       P       19 49 33.2 +1.6
      baz=239,SNR=21
N32M  Quiet Lake        87.86  27  P       P       19 49 33.3 +1.0
      baz=247
C27K  Jago River        87.89  17  P       P       19 49 33.2 +1.1
      baz=237
H29M  Whitestone        87.90  21  P       P       19 49 33.2 +0.9
      baz=242,SNR=6.1
J30M  Hart River        87.92  23  P       P       19 49 33.7 +1.1
      baz=244,SNR=13
F28M  Old Crow          88.05  20  P       P       19 49 34.2 +1.2
      baz=241,SNR=12
R33M  Jennings River    88.18  29  P       P       19 49 35.5 +1.5
      baz=249,SNR=6.8
I30M  Mount Dempster    88.19  23  P       P       19 49 34.5 +0.7
      baz=244,SNR=18
UZB   Uzynbulak         88.24 314 eP       P       19 49 34.0  -0.6
UZB                                pmax    pmax
      comp=Z,4.0nm,0.8s
UZB   Uzynbulak         88.24 314 eP       P       19 49 34.1  -0.6
      comp=Z,4.2nm,0.8s
CBB   Campbell River    88.29  39          P       19 49 34.4   0.0
CBB                                IAmb    IAmb    19 49 36.8
      comp=Z,21nm,1.7s
DLBC  Dease Lake        88.30  30  P       P       19 49 35.6 +1.2
      baz=250,SNR=6.0
G29M  Pine Creek        88.35  21  P       P       19 49 35.5 +1.1
      baz=242,SNR=21
D27M  Malcolm River     88.51  18  P       P       19 49 36.5 +1.4
      baz=240,SNR=9.3
PRZ   Przheval'sk       88.53 313          P       19 49 36.6 +0.6
PRZ   Przheval'sk       88.53 313  P       P       19 49 36.6 +0.6
PRZ                                pmax    pmax
      comp=Z,30nm,0.9s
KPKS  Kokpek            88.55 314 eP       P       19 49 35.7  -0.3
KPKS  Kokpek            88.55 314 eP       P       19 49 35.8  -0.3
EPYK  Eagle Plains      88.56  21  P       P       19 49 36.5 +1.0
      baz=244,SNR=23
E28M  Babbage River     88.64  19  P       P       19 49 37.2 +1.4
      baz=241,SNR=9.8
TARG  Taragay, Kyrgy    88.78 312  P       P       19 49 37.7 +0.2
TARG                               IAmb    IAmb    19 52 05.1
      comp=Z,33nm,1.4s
TARG  Taragay, Kyrgy    88.78 312  P       P       19 49 37.7 +0.2
TARG                               pmax    pmax
      comp=Z,33nm,1.4s
CMB   Columbia Colle    88.85  51          P       19 49 37.9 +0.4
CMB   Columbia Colle    88.85  51  P       P       19 49 37.9 +0.4
CMB                                pmax    pmax
      comp=Z,8.0nm,1.5s
G30M  tAoh Zraii Nji    89.01  21  P       P       19 49 38.1 +0.5
      baz=244,SNR=9.1
E29M  Blow River        89.08  19  P       P       19 49 38.4 +0.7
      baz=243
TDK   Taldyqorghan      89.11 316 eP       P       19 49 38.2  -0.2
TDK                                pmax    pmax
      comp=Z,7.0nm,0.8s
TDK   Taldyqorghan      89.11 316 eP       P       19 49 38.3  -0.2
      comp=Z,6.7nm,0.8s
H31M  Peel River        89.20  22  P       P       19 49 39.0 +0.5
      baz=246
MMPY  Sheldon Lake,     89.21  26  P       P       19 49 39.4 +0.8
      baz=249,SNR=6.1
D28M  Stokes Point      89.25  18  P       P       19 49 39.6 +1.1
      baz=242
GNW   Green Mountain    89.27  42  P       P       19 49 39.6 +0.5
KDJ   Kajisay           89.33 313          P       19 49 39.8   0.0
KDJ   Kajisay           89.33 313  P       P       19 49 39.8   0.0
KDJ                                pmax    pmax
      comp=Z,23nm,0.9s
F30M  Barrier River     89.44  21  P       P       19 49 40.1 +0.6
      baz=244,SNR=10
KSH   Kashi             89.67 310  P       P       19 49 43.0 +1.6
KSH                                sP      sP      19 49 51.0  -0.3
KSH                                pmax    pmax
      comp=Z,9.0nm,1.2s
G31M  Satah River       89.69  21  P       P       19 49 41.2 +0.7
      baz=246,SNR=5.7
AAA   Alma-Ata          89.75 314 eP       P       19 49 41.5  -0.1
AAA                                pmax    pmax
      comp=Z,12nm,0.9s
AAA   Alma-Ata          89.75 314 eP       P       19 49 41.5  -0.1
      comp=Z,12nm,0.9s
PAHR  Pah Rah Range     89.96  50          P       19 49 43.7 +0.9
PAHR                               IAmb    IAmb    19 49 45.4
      comp=Z,12nm,1.1s
NRN   Naryn             90.04 312          P       19 49 43.4 +0.1
NRN   Naryn             90.04 312  P       P       19 49 43.4 +0.1
NRN                                pmax    pmax
      comp=Z,48nm,0.8s
F31M  Tsiigehtchic      90.08  21  P       P       19 49 42.8 +0.4
      baz=246
TGTN  Hyland Airport    90.16  27  P       P       19 49 43.5 +0.4
      baz=251
BOOM  Boomskoye usch    90.30 313          P       19 49 44.6 +0.3
BOOM                               IAmb    IAmb    19 52 16.3
      comp=Z,11nm,0.8s
BOOM  Boomskoye usch    90.30 313  P       P       19 49 44.6 +0.3
BOOM                               pmax    pmax
      comp=Z,11nm,0.8s
KUU   Kurty             90.31 314 eP       P       19 49 43.9  -0.2
KUU                                pmax    pmax
      comp=Z,9.0nm,0.9s
KUU   Kurty             90.31 314 eP       P       19 49 44.0  -0.2
      comp=Z,9.2nm,0.9s
KURK  Kurchatov         90.32 321          P       19 49 43.1  -0.8
KURK  Kurchatov         90.32 321  P       P       19 49 43.2  -0.8
KURK                               pmax    pmax
      comp=Z,25nm,0.7s
LHV   Little Huntoon    90.35  51  P       P       19 49 45.6 +1.3
LHV                                IAmb    IAmb    19 49 47.4
      comp=Z,14nm,0.9s
KURBB Kurchatov Arra    90.36 321  P       P       19 49 42.8  -1.4
      comp=Z,2.1nm,0.8s,baz=100,slow=3.4,SNR=15
      comp=Z,2.1nm,0.8s
INK   Inuvik            90.50  20  P       P       19 49 44.6 +0.2
      baz=247
NVAR  Mina Array Bea    90.54  51  P       P       19 49 46.6 +1.0
NVAR  Mina Array Bea    90.54  51  P       P       19 49 47.5 +1.9
      comp=Z,12nm,0.9s,baz=244,slow=6.4,SNR=34
      comp=Z,12nm,0.9s
LIRD  Liard River Hi    90.54  30  P       P       19 49 45.1 +0.3
      baz=253
TOAD  Toad River Com    90.81  30  P       P       19 49 46.3 +0.2
      baz=254
WVOR  Wild Horse Val    91.05  47  P       P       19 49 48.2 +0.5
WVOR                               IAmb    IAmb    19 49 50.3
      comp=Z,9.2nm,1.1s
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WVOR  Wild Horse Val    91.05  47  P       P       19 49 48.3 +0.5
WVOR                               pmax    pmax
      comp=Z,9.0nm,1.1s
TPH   Tonopah           91.31  52  P       P       19 49 49.8 +0.7
TPH   Tonopah           91.31  52  P       P       19 49 49.8 +0.7
TPH                                pmax    pmax
      comp=Z,72nm,1.1s
J08A  Circle Bar Ran    91.35  46          P       19 49 49.9 +0.8
J08A                               IAmb    IAmb    19 49 51.2
      comp=Z,12nm,0.9s
AAK   Ala-Archa         91.38 313  P       P       19 49 49.1  -0.2
AAK                                IAmb    IAmb    19 52 25.1
      comp=Z,12nm,0.8s
AAK   Ala-Archa         91.38 313  P       P       19 49 49.1  -0.2
AAK                                pmax    pmax
      comp=Z,12nm,0.9s
NRIK  Noril'sk          91.64 340  P       P       19 49 48.6  -1.1
      comp=Z,1.0nm,0.4s,baz=127,slow=7.3,SNR=1.9
      comp=Z,1.0nm,0.4s
TPNV  Topopah Spring    91.87  53          P       19 49 52.7 +0.9
TPNV                               IAmb    IAmb    19 49 54.3
      comp=Z,21nm,1.5s
TPNV  Topopah Spring    91.87  53  P       P       19 49 52.7 +0.9
TPNV                               pmax    pmax
      comp=Z,21nm,1.5s
BTLS  Baital            92.14 315 eP       P       19 49 52.0  -0.6
BTLS                               pmax    pmax
      comp=Z,5.0nm,0.7s
BTLS  Baital            92.14 315 eP       P       19 49 52.0  -0.6
      comp=Z,4.7nm,0.7s
ARSB  Arslanbob         92.25 311  P       P       19 49 53.0  -0.3
ARSB  Arslanbob         92.25 311  P       P       19 49 53.0  -0.3
ARSB                               pmax    pmax
      comp=Z,33nm,1.3s
BMO   Blue Mountains    92.45  45          P       19 49 54.5 +0.3
BMO                                IAmb    IAmb    19 49 55.8
      comp=Z,7.6nm,1.1s
BMO   Blue Mountains    92.45  45  P       P       19 49 54.5 +0.3
BMO                                pmax    pmax
      comp=Z,8.0nm,1.1s
WRGLY Wrigley           92.80  26  P       P       19 49 55.5 +0.4
      baz=256
DRK   Karamyk           92.83 309  P       P       19 49 56.8 +0.5
DRK   Karamyk           92.83 309  P       P       19 49 56.8 +0.5
DRK                                pmax    pmax
      comp=Z,70nm,1.6s
BELA  Belgrano 2        92.97 177          P       19 49 55.4  -0.4
MFID  Camas Ranch       93.26  47  P       P       19 49 57.7  -0.2
ELK   Elko              93.27  49          P       19 49 58.7 +0.5
ELK   Elko              93.27  49  P       P       19 49 58.7 +0.5
ELK                                pmax    pmax
      comp=Z,6.0nm,1.1s
DZA   Taraz             93.72 313 eP       P       19 49 59.4  -0.5
DZA                                pmax    pmax
      comp=Z,3.0nm,0.5s
DZA   Taraz             93.72 313 eP       P       19 49 59.5  -0.5
      comp=Z,3.1nm,0.5s
BRZS  Berezniki         93.91 320 eP       P       19 50 00.0  -0.6
BRZS  Berezniki         93.91 320 eP       P       19 50 00.1  -0.6
KK31  Karatay Array     94.34 313          P       19 50 01.7  -1.1
KK31                               IAmb    IAmb    19 52 47.8
      comp=Z,16nm,0.9s
KK31  Karatay Array     94.34 313  P       P       19 50 01.7  -1.1
KK31                               pmax    pmax
      comp=Z,16nm,1.0s
KKAR  Karatay Array     94.34 313          P       19 50 01.8  -1.0
KKAR  Karatay Array     94.34 313  P       P       19 50 01.8  -1.0
A36M  Sachs Harbour     94.40  18  P       P       19 50 02.5 +0.1
      baz=254
IUG   Iuzhnay           94.56 312 eP       P       19 50 03.4  -0.5
IUG                                pmax    pmax
      comp=Z,7.0nm,1.2s
IUG   Iuzhnay           94.56 312 eP       P       19 50 03.5  -0.5
      comp=Z,7.4nm,1.2s
BRLS  Borolday          94.82 313 eP       P       19 50 05.0   0.0
BRLS  Borolday          94.82 313 eP       P       19 50 05.0   0.0
SIMJ  Simiganj          94.86 308  P       P       19 50 04.5  -1.0
CHM   Chimkent          94.90 312 eP       P       19 50 04.9  -0.4
CHM                                pmax    pmax
      comp=Z,4.0nm,0.4s
CHM   Chimkent          94.90 312 eP       P       19 50 05.0  -0.4
      comp=Z,4.3nm,0.4s
BVAR  Borovoye Array    95.76 323  P       P       19 50 07.8  -1.2
      comp=Z,6.2nm,0.9s,baz=101,slow=6.2,SNR=27
      comp=Z,6.2nm,0.9s
BRVK  Borovoye          95.83 323          P       19 50 07.9  -1.4
BRVK  Borovoye          95.83 323  P       P       19 50 07.9  -1.4
BRVK                               pmax    pmax
      comp=Z,19nm,0.7s
YKA   Yellowknife Ar    96.65  28  P       P       19 50 12.9 +0.1
YKA   Yellowknife Ar    96.65  28  P       P       19 50 13.1 +0.2
      comp=Z,2.2nm,0.9s,baz=267,slow=4.7,SNR=18
      comp=Z,2.2nm,0.9s
SMAI  San Martin Ant    96.69 164  P       P       19 50 11.3  -1.6
PDAR  Pinedale Array    97.73  48          P       19 50 18.4  -0.1
PDAR  Pinedale Array    97.73  48  P       Pdif    19 50 19.1 +0.6
      comp=Z,0.9nm,0.4s,baz=232,slow=1.7,SNR=6.6
      comp=Z,0.9nm,0.4s
TXAR  Lajitas Array    101.47  62  P       Pdif    19 50 37.1 +1.7
      comp=Z,0.3nm,0.7s,baz=248,slow=4.2,SNR=3.6
KIV   Kislovodsk       114.45 314 ePKIKP   PKPdf   19 55 21.2  -2.1
KIV                                pmax    pmax
      comp=Z,14nm,1.0s
LPSR  Galich'ya Gora   114.65 324 ePKIKP   PKiKP   19 55 14.0  -9.2
LPSR                               pmax    pmax
      comp=Z,21nm,1.0s
VORR  Voronezh         114.78 323  PKIKP   PKiKP   19 55 14.0  -9.5
VORR                               pmax    pmax
      comp=Z,24nm,1.3s
TRQA  Tornquist        120.07 144          PKPdf   19 55 33.6  -0.7
TRQA  Tornquist        120.07 144  PKIKP   PKPdf   19 55 33.6  -0.7
AK03  Malin Array Si   120.95 325  PKP     PKPdf   19 55 34.4  -1.0
AKASG Malin Array Be   120.96 325  PKP     PKPdf   19 55 34.9  -0.5
      comp=Z,3.6nm,0.6s,baz=66,slow=2.2,SNR=13
AKBB  Malin Array Si   120.96 325          PKPdf   19 55 34.9  -0.5
AKBB  Malin Array Si   120.96 325  PKIKP   PKPdf   19 55 34.9  -0.5
AKBB  Malin Array Si   120.96 325  PKP     PKPdf   19 55 34.3  -1.1
KIEV  Kiev             120.97 325  PKP     PKPdf   19 55 34.4  -1.0
AK05  Malin Array Si   121.01 325  PKP     PKPdf   19 55 34.6  -0.9
BRTR  Keskin Array B   122.03 311  PKP     PKPdf   19 55 37.0  -1.0
      comp=Z,0.9nm,0.6s,baz=140,slow=6.0,SNR=5.6
LUBAR Lubar, Ukraine   122.15 324  PKP     PKPdf   19 55 36.8  -1.0
MMAI  Mount Meron Ar   122.21 303  PKP     PKPdf   19 55 38.4  -0.1
      comp=Z,4.6nm,1.0s,baz=304,slow=3.3,SNR=3.5
HFS   Hagfors          122.46 340  PKP     PKPdf   19 55 37.4  -0.7
      comp=Z,1.0nm,0.7s,baz=54,slow=5.7,SNR=1.2
RNPP9 Sopachiv         122.48 327  PKP     PKPdf   19 55 37.3  -1.0
NB2   NORSAR Subarra122.59 342     PKPdf   PKPdf   19 55 37.6  -0.7
      comp=Z,5.4nm,0.9s,baz=40,slow=1.8
NB2   NORSAR Subarra122.59 342     PKPdf   PKPdf   19 55 37.6  -0.7
      baz=40,slow=1.8
NOA   NORSAR Array B122.59 342     PKP     PKPdf   19 55 37.6  -0.7
      comp=Z,1.8nm,0.7s,baz=43,slow=1.8,SNR=9.5
SORM  Soroca           122.60 322 ⇑P       PKPdf   19 55 38.4  -0.3
NDNU  Novodnistrovsk   122.98 323  PKP     PKPdf   19 55 38.4  -1.0
CFR   Carcaliu         123.98 319 ⇑P       PKPdf   19 55 41.5 +0.1
BUR08 Bucovina Ar. S   124.71 323          PKiKP   19 55 43.6 +0.4
BURAR Bucovina Array   124.72 323  PKPdf   PKiKP   19 55 44.0 +0.8
BURAR Bucovina Array   124.72 323 ⇓P       PKiKP   19 55 44.7 +1.4
KWP   Kalwaria Pacla   125.14 326  PKP     PKPdf   19 55 42.2  -1.3
KOLS  Kolonicke sedl   125.75 326 ePKIKP   PKiKP   19 55 45.3 +0.2
KOLS  Kolonicke sedl   125.75 326 ePKP     PKiKP   19 55 45.3 +0.2
HUMR  Humele           126.29 320 ⇑P       PKiKP   19 55 46.4 +0.1
MARR  Marisel-Cluj     126.42 323 ⇑P       PKPdf   19 55 44.5  -1.7
LOT   Lotru            126.62 321 ⇓P       PKPdf   19 55 45.3  -1.3
LANS  Liptovska Anna   127.17 327 ePKIKP   PKiKP   19 55 49.4 +1.4
LANS  Liptovska Anna   127.17 327 ePKP     PKiKP   19 55 49.4 +1.4
GZR   Gura Zlata       127.26 322 ⇓P       PKPdf   19 55 47.7  -0.1
SURR  Surduc           127.48 322 ⇑P       PKPdf   19 55 48.0  -0.1
SIRR  Siria            127.50 323 ⇓P       PKiKP   19 55 49.0 +0.3
HERR  Herculane        127.74 321 ⇑P       PKPdf   19 55 48.2  -0.4
MORC  Moravsky Berou   127.81 329          PKPdf   19 55 48.9 +0.2
MORC  Moravsky Berou   127.81 329 ePKP     PKiKP   19 55 49.0  -0.3
MORC  Moravsky Berou   127.81 329 ⇓P       PKiKP   19 55 49.8 +0.5
MORC  Moravsky Berou   127.81 329  PKIKP   PKPdf   19 55 48.9 +0.2
BZS   Buzias           127.86 322 ⇑P       PKPdf   19 55 48.7  -0.1
VYHS  Vyhne            127.89 327 ePKIKP   PKiKP   19 55 49.1  -0.3
VYHS  Vyhne            127.89 327 ePKP     PKiKP   19 55 49.1  -0.3
MAUC  Maruska          127.92 328 ePKPDF   PKiKP   19 55 49.8 +0.3
OSTC  Ostas            128.00 330 ePKPDF   PKPdf   19 55 48.1  -0.9
OSTC  Ostas            128.00 330 ePKIKP   PKPdf   19 55 48.1  -0.9
KRLC  Kraliky          128.02 329 ePKPDF   PKiKP   19 55 49.8 +0.1
KRLC  Kraliky          128.02 329 ePKIKP   PKiKP   19 55 49.8 +0.1
MDVR  Moldovita        128.22 321 ⇓P       PKiKP   19 55 50.1  -0.1
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JAVC	Velka Javorina	128.30	328	ePKP	PKiKP	19 55 50.9	+0.6
VRAC	Vranov	128.59	329	ePKP	PKPdf	19 55 49.1	-1.0
VRAC	Vranov	128.59	329	⇓P	PKPdf	19 55 49.8	-0.3
BOVS	Bovan	128.79	320	⇑P	PKPdf	19 55 50.6	-0.1
MODS	Modra-Piesok	128.80	327	ePKIKP	PKPdf	19 55 50.7	+0.1
MODS	Modra-Piesok	128.80	327	ePKP	PKPdf	19 55 50.7	+0.1
KRUC	Moravsky	128.84	328	ePKP	PKPdf	19 55 50.8	+0.2
BRG	Berggiesshubel	128.89	332	ePKP	PKiKP	19 55 51.6	+0.3
BRG				Amp		19 55 52.4	
	comp=Z,2.8nm,0.7s						
BRG	Berggiesshubel	128.89	332	P	PKiKP	19 55 56.9	+5.6
BRG				Amp		19 55 58.9	
	comp=Z,4.3nm,1.1s						
CLL	Collm	129.03	332	i PKIKP	PKPdf	19 55 50.7	-0.2
CLL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CLL	Collm	129.03	332	i PKPdf	PKPdf	19 55 50.7	-0.2
	comp=Z,6.0nm,0.9s						
CLL				i x	x	19 55 57.9	
MORH	Mrgy, Hungar	129.29	324	⇓P	PKiKP	19 55 53.2	+0.9
RONA	Rosalia, Austr	129.73	327	i PKiKP	PKiKP	19 55 53.5	+0.4
	comp=Z,3.7nm,0.9s						
CKRC	Cesky Krumlov	130.06	329	ePKPDF	PKPdf	19 55 52.7	-0.3
CKRC	Cesky Krumlov	130.06	329	ePKIKP	PKPdf	19 55 52.7	-0.3
KHC	Kasperske Hory	130.22	330	ePKPDF	PKiKP	19 55 53.7	-0.4
KHC				epPKP	pPKPdf	19 55 58.0	-2.8
KHC	Kasperske Hory	130.22	330	ePKIKP	PKiKP	19 55 53.7	-0.4
KHC				e		19 55 58.0	
GEC2	GERESS Array S	130.35	330		PKPdf	19 55 53.6	0.0
GERES	GERESS Array B	130.35	330		PKPdf	19 55 53.9	+0.3
GERES	GERESS Array B	130.35	330	PKP	PKPdf	19 55 53.4	-0.2
	comp=Z,2.4nm,0.6s,baz=81,slow=1.3,SNR=28						
GERES	GERESS Array B	130.35	330	PKIKP	PKPdf	19 55 53.9	+0.3
CPUP	Villa Florida	130.81	137	PKPdf	PKPdf	19 55 54.4	-0.7
CPUP	Villa Florida	130.81	137	PKP	PKPdf	19 55 55.1	0.0
	comp=Z,2.2nm,0.5s,baz=356,slow=1.8,SNR=7.3						
SOKA	Soboth	131.04	327	i PKiKP	PKiKP	19 55 55.9	0.0
	comp=Z,2.5nm,1.0s						
BIOA	Bad Ischl, Aus	131.14	329	i PKiKP	PKiKP	19 55 56.0	+0.1
	comp=Z,1.5nm,0.6s						
LESA	Schwarzleotal	131.80	329	i PKiKP	PKPdf	19 55 56.6	+0.2
	SNR=5.7						
LESA	Schwarzleotal	131.80	329	eP	PKPdf	19 55 56.6	+0.2
	SNR=5.7						
ABTA	Abfaltersbach	132.33	328	ePKP	PKPdf	19 55 56.7	-0.8
	comp=Z,3.5nm,0.7s,SNR=5.4						
WATA	Walderalm	132.42	329	i PKiKP	PKPdf	19 55 57.5	-0.2
	comp=Z,3.5nm,0.8s						
WTTA	Wattenberg	132.44	329	ePKiKP	PKPdf	19 55 58.0	+0.3
	comp=Z,4.4nm,0.6s,SNR=4.5						
WTTA	Wattenberg	132.44	329	P	PKPdf	19 55 58.0	+0.3
	comp=Z,4.4nm,0.6s,SNR=4.5						
STAL	STALIGIAL	132.55	328		PKPdf	19 55 57.0	-0.7
MOTA	Moosalm	132.65	330	ePKiKP	PKPdf	19 55 57.8	-0.2
	comp=Z,4.0nm,0.7s,SNR=5.9						
MOTA	Moosalm	132.65	330	eP	PKPdf	19 55 57.8	-0.2
	comp=Z,4.0nm,0.7s,SNR=5.9						
SQTA	Sankt Quirin	132.68	330	i PKiKP	PKPdf	19 55 58.5	+0.4
	comp=Z,2.9nm,0.6s						
RETA	Reutte	132.72	330	ePKiKP	PKPdf	19 55 58.5	+0.4
	comp=Z,1.8nm,0.6s						
FETA	Feichten	133.06	330	i PKiKP	PKPdf	19 55 59.3	+0.4
	comp=Z,5.6nm,0.9s,SNR=4.4						
DAVA	Damuels	133.29	331	i PKP	PKPdf	19 55 59.0	-0.3
	comp=Z,5.7nm,0.7s						
SGRT	San Giovanni R	133.52	321	PKPdf	PKPdf	19 55 59.7	-0.1
FUORN	Ofenpass-Fuorn	133.56	330		PKiKP	19 56 00.9	-0.3
TUE	Stuetta	134.12	330		PKPdf	19 56 00.5	-0.5
NRCA	Norcia	134.48	324		PKPdf	19 56 02.2	+0.6
ZCCA	Zocca	134.72	327		PKiKP	19 56 02.7	-0.7
BDFB	Brasilia	144.36	133		PKPbc	19 56 18.7	0.0
BDFB	Brasilia	144.36	133	PKP	PKPbc	19 56 19.0	+0.4
	comp=Z,17nm,1.0s,baz=102,slow=2.4,SNR=7.1						
PBRG	Braganca	144.70	340	ePKP	PKPab	19 56 18.9	0.0
PGAV	Gavieira, Arco	145.04	342	ePKP	PKPab	19 56 20.3	+0.2
PCAB	Cabril	145.20	342	ePKP	PKPdf	19 56 21.0	0.0
PCAB				i tx	tx	19 56 26.2	
MVO	Moncorvo	145.37	340	ePKP	PKPdf	19 56 21.4	+0.1
MVO				i tx	tx	19 56 28.1	
POLO	Lamas de Olo	145.44	341	ePKP	PKPab	19 56 21.9	+0.3
PVRL	Vila Real	145.50	341	ePKP	PKPab	19 56 22.1	+0.4
ESBB	Sonseca Array	145.52	335		PKPdf	19 56 20.9	-0.8
ESDC	Sonseca Array	145.52	335		PKPdf	19 56 21.1	-0.5
ESDC	Sonseca Array	145.52	335	PKPbc	PKPbc	19 56 21.6	0.0
	comp=Z,5.4nm,0.9s,baz=24,slow=3.0,SNR=35						
PTO	Porto	145.90	342	ePKP	PKPab	19 56 23.0	-0.1
PVIS	Viseu	146.06	341	ePKP	PKPab	19 56 23.7	-0.2
PVIS				i tx	tx	19 56 32.7	
MTE	Manteigas	146.23	340	ePKP	PKPab	19 56 24.8	+0.2
PCBR	Castelo Branco	146.71	340	ePKP	PKPab	19 56 25.8	-0.5
PCBR				i tx	tx	19 56 34.9	
PCAS	Casmilo, Conde	146.86	341	ePKP	PKPbc	19 56 25.6	0.0
PCAS				i tx	tx	19 56 35.1	
PMRV	Marv??o	147.05	339	ePKP	PKPbc	19 56 26.8	+0.6
PMRV				i tx	tx	19 56 35.8	
PSARD	Sardoal	147.16	340	ePKP	PKPab	19 56 27.4	-0.7
PSARD				i tx	tx	19 56 36.0	
PSBE	So Bento	147.44	341	ePKP	PKPbc	19 56 27.6	+0.3
PESTR	Estremoz	147.62	339	ePKP	PKPbc	19 56 28.4	+0.6
PMTG	Montargil	147.66	340	ePKP	PKPbc	19 56 28.4	+0.5
PBAR	Barrancos	148.03	338	ePKP	PKPbc	19 56 29.2	+0.3
EVO	Evora	148.06	339	ePKP	PKPbc	19 56 29.7	+0.7
PBEJ	Beja	148.46	339	ePKP	PKPbc	19 56 30.5	+0.4

WEL 29 19:40:16.4±1.8**,33°S**±41°×**18°0E**±6°2**,h408**^{km}±39^{km}**, M3.6**/7**,mB4.0**/7**,ML4.3**/7**,MLv4.2**/6**,Mw(mB)3.1**/7**,Error ellipse: s-maj=92.6km s-min=29.0km az=120.9, confirmed,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	Te Kaha	5.01	199	P	P	19 41 39.2	+0.7
HAZ				S	S	19 42 45.8	0.0
PUZ	Puketiti	5.20	194	P	P	19 41 39.7	-0.7
PUZ				S	S	19 42 49.4	+0.1
RUGZ	Raukumara Rang	5.23	199	P	P	19 41 41.1	+0.2
RUGZ				S	S	19 42 51.0	+0.7
TWGZ	Tauwhareparae	5.36	196	P	P	19 41 43.5	+1.4
TWGZ				S	S	19 42 52.0	-0.4
MWZ	Matawai	5.62	199	P	P	19 41 45.4	+0.6
TKGZ	Te Karaka	5.64	196	P	P	19 41 45.9	+0.9
TKGZ				S	S	19 42 59.9	+2.1
URZ	Urewera	5.67	202	P	P	19 41 43.2	-2.2
URZ				S	S	19 42 58.5	0.0
RAGZ	Rawiri	5.80	199	P	P	19 41 47.6	+0.8
MUGZ	Murupara	5.98	204	P	P	19 41 48.5	-0.2
MUGZ				S	S	19 43 04.3	-0.2
SNGZ	Shannon Statio	6.09	199	P	P	19 41 50.1	+0.3
PRGZ	Paritu Road	6.09	195	P	P	19 41 51.1	+1.2
NMHZ	Naumai	6.54	201	P	P	19 41 56.3	+0.8
ARHZ	Aropaoanui	6.63	200	P	P	19 41 56.9	+0.4
BKZ	Black Stump Fm	6.70	203	P	P	19 41 56.7	-0.6
BKZ				S	S	19 43 18.2	-0.7
KWHZ	Kaweka Forest	6.96	202	P	P	19 41 59.7	-0.4
OTVZ	Oturere	6.99	208	P	P	19 42 00.4	-0.2
FWVZ	Far West T-bar	7.12	208	P	P	19 42 01.2	-0.8
WNVZ	Wahianoa	7.16	207	P	P	19 42 01.8	-0.7
PNHZ	Pukenui	7.47	202	P	P	19 42 04.8	-1.0
TSZ	Takapari Road	7.68	203	P	P	19 42 07.0	-1.0
MRZ	Mangatainoka R	8.35	203	P	P	19 42 14.2	-1.1

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*MOS **29** 19:44:10.0±0.8,22°.25N×122°.48E,h21^{km},mb5.2/71, MS4.4/8,Error ellipse: s-maj=6.5km s-min=3.9km az=108.1*

*IDC **29** 19:44:11.8±3.1,22°.26N×122°.54E,h22^{km}±19^{km},mb4.4/26, mbtmp4.7/30,ML4.8/5,MS4.2/17,Error ellipse: s-maj=16.1km s-min=11.0km az=82.0*

*NIED **29** 19:44:11.7,22°.34N×122°.41E,h41^{km},MW4.9,Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.80; $M_{\theta\theta}$2.49; $M_{\phi\phi}$-1.68; $M_{r\theta}$-0.08; $M_{\theta\phi}$-1.49; $M_{\phi r}$-1.26; Fault plane solution: $M_0$2.94000×10^{16} NP1: ϕ_s67.00000°,δ65.00000°,λ-161.00000°. NP2: ϕ_s329.00000°,δ73.00000°,λ-26.00000°.*

*NEIC **29** 19:44:11.5,22°.29N×122°.44E,h20^{km}*

*NEIC **29** 19:44:11.5,22°.39N×122°.55E,h20^{km},Moment Tensor Solution. Duration: 1^s6 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.49; $M_{\theta\theta}$3.79; $M_{\phi\phi}$-3.30; $M_{r\theta}$-0.39; $M_{\theta\phi}$-1.81; $M_{\phi r}$0.41; Fault plane solution: $M_0$4.04000×10^{16} NP1: ϕ_s238.43000°,δ82.02000°,λ179.79000°. NP2: ϕ_s328.46000°,δ89.80000°,λ7.98000°. Principal axes: T 4.2717, Plg6.0000°, Azm194.0000°; N -0.5104, Plg82.0000°, Azm330.0000°; P -3.7613, Plg5.0000°, Azm103.0000°;*

*JMA **29** 19:44:11.7±0.3,22°N±1°×122°.4E±0°.6,h41^{km},MD5.2/20, MV5.8/20,FAR S OFF ISHIGAKIJIMA*

*BJI **29** 19:44:12.1,22°.41N×122°.31E,h30^{km},mB5.0/41,mb4.7/83, ML5.0/9,Ms4.8/90,Ms7 4.5/88*

*NEIC **29** 19:44:12.4±1.7,22°.30N±0°.06×122°.46E±0°.06,h20^{km}±4^{km}, mb5.2/153,Mww5.0/32,Error ellipse: s-maj=8.7km s-min=7.4km az=220.0*

*ASIES **29** 19:44:12.7,22°.32N×122°.36E,h47^{km},ML5.8,Mw4.9, Moment Tensor Solution. Moment tensor: Scale 10^{23}Nm; M_{rr}0.13; $M_{\theta\theta}$2.35; $M_{\phi\phi}$-2.44; $M_{r\theta}$-0.28; $M_{\theta\phi}$-1.10; $M_{\phi r}$-0.70; Fault plane solution: $M_0$2.74260×10^{23} NP1: ϕ_s326.44000°,δ78.01000°,λ-7.98000°. NP2:ϕ_s58.11000°, δ82.19000°,λ-167.89000°. Principal axes: T Plg2.9160°, Azm191.9190°; N Plg75.6300°, Azm90.4520°; P Plg14.0590°, Azm282.6500°;*

*TAP **29** 19:44:12.7,22°.32N×122°.36E,h47^{km},ML5.8,D*

*GCMT **29** 19:44:13.4±0.2,22°.26N±0°.01×122°.45E±0°.01,h26^{km}±1^{km}, MW5.1/118,Moment Tensor Solution. s45,c56; s118,c185; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.57±.18; $M_{\theta\theta}$4.60±.13; $M_{\phi\phi}$-4.02±.13; $M_{r\theta}$-1.10±.23; $M_{\theta\phi}$-2.33±.11; $M_{\phi r}$0.26±.26; Best double couple: $M_0$5.00600×10^{16} NP1:ϕ_s330.00000°,δ82.00000°, λ7.00000°. NP2:ϕ_s239.00000°,δ83.00000°,λ172.00000°. Principal axes: T 5.4030, Plg11.0000°, Azm194.0000°; N -0.7870, Plg79.0000°, Azm15.0000°; P -4.6100, Plg0.0000°, Azm284.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 19:44:12.7±0.4**,22°.27N**±0°.02×**122°.43E**±0°.02**,h27**^{km}±2^{km}**, h27**^{km}**:pP-P,n1091,**σ**1^s65**/1258**,mb5.0**/203**,MS4.4**/38**, 75C-126D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LYUB	Lan-yu	0.83	251	⇓iP	Pb	19 44 27.1	-1.5
LYUB				i S	Sb	19 44 36.9	-2.5
LAY	Lan-yu	0.85	254	⇓P	Pn	19 44 26.7	-2.2
EDH	Donghe	1.26	304	⇓iP	Pn	19 44 32.3	-2.2
EDH				eS	Sn	19 44 46.1	-4.4
TTN	Taitung	1.28	292	⇓iP	Pn	19 44 33.3	-1.6
CHKT	Chengkung	1.29	310	⇓iP	Pn	19 44 32.4	-2.6
CHKT				i S	Sn	19 44 46.6	-4.6
CHKH	Chenggong	1.33	314	⇓P	Pn	19 44 33.0	-2.5
CHKH				eS	Sn	19 44 47.6	-4.7
LONT	Longtian	1.36	298	eP	Pn	19 44 33.9	-2.0
LONT				eS	Sn	19 44 50.3	-2.9
TWGBT	Beinan	1.36	294	P	Pn	19 44 34.6	-1.4
TWGBT	Beinan	1.36	294	S	Sn	19 44 51.2	-2.0
TWGBT	Beinan	1.36	294	⇓iP	Pn	19 44 34.2	-1.8
TWGBT				i S	Sn	19 44 50.4	-2.8
TWG	Pinlang	1.37	294		Pn	19 44 34.1	-2.1
TWG				Sn	Sn	19 44 51.3	-2.1
TWG	Pinlang	1.37	294	⇓iP	Pn	19 44 34.2	-1.9
TWG				S	Sn	19 44 50.2	-3.2
ECBN	Changbin	1.38	319	⇓P	Pn	19 44 33.9	-2.4
ECBN				S	Sn	19 44 49.9	-3.7
ECS	Chishang	1.39	306	⇓iP	Pn	19 44 34.7	-1.6
ECS				S	Sn	19 44 51.3	-2.6
FULB	Fuli	1.40	312	⇓P	Pn	19 44 34.1	-2.5
FULB				eS	Sn	19 44 49.8	-4.4
ECL	Taimali	1.41	284	⇓iP	Pn	19 44 35.4	-1.2
ECL				eS	Sn	19 44 51.4	-2.9
TAW	Tawu	1.43	274	⇓iP	Pn	19 44 35.5	-1.3
TAW				S	Sn	19 44 51.3	-3.4
EHD	Haiduan	1.43	308	⇓iP	Pn	19 44 35.0	-2.0
EHD				eS	Sn	19 44 51.8	-3.1
TAWH	Dawu Township	1.43	273	⇓iP	Pn	19 44 35.6	-1.3
TAWH				S	Sn	19 44 51.5	-3.3
TSEB	Hengchuen, Pin	1.47	256	⇓iP	Pn	19 44 37.6	+0.1
TSEB				eS	Sn	19 44 55.4	-0.4
EAST	Anshuo	1.47	275	⇓iP	Pn	19 44 36.3	-1.2
EAST				S	Sn	19 44 52.5	-3.4
EYUL	Yuli	1.49	316	⇓P	Pn	19 44 35.7	-2.0
SMST	Manzhou Townsh	1.50	261	⇓iP	Pn	19 44 37.0	-0.8
SMST				eS	Sn	19 44 53.9	-2.6
TWF1	Yuli	1.50	316	⇓iP	Pn	19 44 35.8	-2.2
TWF1				eS	Sn	19 44 52.7	-4.0
SLIU	Shizi	1.52	268	⇓iP	Pn	19 44 36.8	-1.3
SLIU				eS	Sn	19 44 54.1	-2.9
HGSD	Ruisui	1.53	323	⇓P	Pn	19 44 35.7	-2.6
HGSD				eS	Sn	19 44 52.3	-5.0
YULB	Yu-li	1.53	317		Pn	19 44 36.3	-2.0
YULB	Yu-li	1.53	317	P	Pn	19 44 36.8	-1.5
YULB	Yu-li	1.53	317	S	Sn	19 44 54.2	-3.2
YULB	Yu-li	1.53	317	⇓iP	Pn	19 44 36.3	-2.0
YULB				eS	Sn	19 44 53.8	-3.6
TWKBT	Hengchun	1.54	258	⇓iP	Pn	19 44 37.8	-0.6
TWKBT				eS	Sn	19 44 54.9	-2.6
TWK1	Hengchun	1.54	258	⇓iP	Pn	19 44 37.7	-0.7
TWK1				eS	Sn	19 44 54.9	-2.7
EHYH	Wanrong	1.58	321	eP	Pn	19 44 36.8	-2.2
EHYH				eS	Sn	19 44 55.9	-2.6
HEN	Hengchun	1.59	261	⇓iP	Pn	19 44 38.6	-0.5
HEN				S	Sn	19 44 57.2	-1.6
ELDTW	Lidau	1.60	305	eP	Pn	19 44 37.4	-1.9
ELDTW				eS	Sn	19 44 55.1	-4.0
EHY	Hungye	1.60	320	⇓P	Pn	19 44 37.0	-2.3
EHY				eS	Sn	19 44 55.9	-3.2
TEGC	Jichi Village	1.65	330	eP	Pn	19 44 38.1	-1.9
TEGC				eS	Sn	19 44 56.7	-3.6
EGFH	Guangfu	1.67	327	eP	Pn	19 44 38.4	-1.8
EGFH				eS	Sn	19 44 57.6	-3.3
SCZT	Fangliau	1.68	274	⇓iP	Pn	19 44 39.6	-0.7
MASBT	Mashibuluo	1.70	282	⇓iP	Pn	19 44 39.9	-0.7
MASBT				eS	Sn	19 45 00.1	-1.4
SHUL	Shoufeng	1.71	332	⇓P	Pn	19 44 39.1	-1.7
SHUL				S	Sn	19 44 58.2	-3.5
TSMG	Majia	1.71	285	⇓P	Pn	19 44 39.8	-0.9
SSD	Sandimen	1.73	286	⇓iP	Pn	19 44 40.0	-1.0
WARBT	Fenglin Townsh	1.73	326	⇓iP	Pn	19 44 39.2	-1.9
WARBT				S	Sn	19 44 58.6	-3.8
TEYL	Yanliau Villag	1.77	334	⇑eP	Pn	19 44 40.2	-1.4
TEYL				eS	Sn	19 45 00.8	-2.4
STYH	Taoyuan	1.77	301	⇓P	Pn	19 44 40.7	-1.0
STYH				eS	Sn	19 45 00.7	-2.6
STYT	Tauyuan	1.79	300	⇓iP	Pn	19 44 40.8	-1.1
STYT				eS	Sn	19 45 00.5	-3.2
ESL	Shilin	1.79	329	P	Pn	19 44 39.7	-2.2
ESL				S	Sn	19 45 00.1	-3.7
YUS	Yu-Shan	1.83	312	⇓iP	Pn	19 44 41.5	-1.3
YUS				eS	Sn	19 45 02.1	-3.3
TSPT	Pingtung City	1.84	283	⇓eP	Pn	19 44 43.0	+0.5
EOS4	EOS4	1.84	357	⇑P	Pn	19 44 40.7	-1.5
EOS4				eS	Sn	19 45 01.9	-2.6
SGLT	Jiouru	1.85	285	⇓eP	Pn	19 44 43.3	+0.6
HWA	Hwalien	1.86	336	eP	Pn	19 44 41.4	-1.4
HWA				eS	Sn	19 45 02.8	-2.7
SGST	Jiashian	1.89	296	⇓P	Pn	19 44 42.6	-0.7
SGST				eS	Sn	19 45 04.9	-1.3
SCST	Cishan	1.90	289	eP	Pn	19 44 42.5	-0.8
ETM	Tongmen	1.90	333	⇑P	Pn	19 44 41.4	-2.0
VWDT	VWDT	1.90	321	⇓iP	Pn	19 44 42.3	-1.0
VWDT				S	Sn	19 45 03.2	-3.1
WLCH	Liuqiu	1.90	273	⇓eP	Pb	19 44 46.0	-0.7
TWP	Hsiaoliuchiu	1.92	273	eP	Pb	19 44 46.1	-1.0
TWM1	Shoushan	1.94	287	⇓iP	Pn	19 44 45.4	+1.4
WTP	Ta-pu	1.94	300	⇓iP	Pn	19 44 44.1	+0.2
WTP				eS	Sn	19 45 07.3	-0.2
ALS	Alishan	1.94	310	⇓P	Pn	19 44 43.8	-0.4
ALS				eS	Sn	19 45 06.8	-1.2
TPUB	Ta-pu	1.96	302		Pn	19 44 44.2	+0.1
TPUB	Ta-pu	1.96	302	P	Pn	19 44 44.7	+0.5
TPUB	Ta-pu	1.96	302	S	Sn	19 45 08.6	+0.7
TPUB	Ta-pu	1.96	302	⇓iP	Pn	19 44 44.3	+0.1
TPUB				eS	Sn	19 45 06.1	-1.8
TWD	Chiawan	1.96	337	⇑iP	Pn	19 44 42.4	-1.8
TWD				eS	Sn	19 45 03.8	-4.1
LXIB	Xiulin Townshi	1.98	332	⇓iP	Pn	19 44 42.9	-1.7
LXIB				eS	Sn	19 45 04.8	-3.8
CHN1	Nanshi	1.98	298	⇓eP	Pn	19 44 45.2	+0.7
CHN1				eS	Sn	19 45 08.9	+0.4
KAU	Kaohsiung	1.99	279	eP	Pb	19 44 46.4	-1.8
SNJT	Kaohsiung City	2.00	284	eP	Pb	19 44 46.7	-1.7
EOS3	EOS3	2.01	357	⇑iP	Pn	19 44 43.6	-1.1
EOS3				eS	Sn	19 45 06.8	-2.1
CHN4	Tsaushan	2.01	303	⇓P	Pn	19 44 45.3	+0.4
CHN4				eS	Sn	19 45 09.9	+0.7
SNST	Tainan City	2.02	298	⇓iP	Pn	19 44 45.9	+0.8
SNST				eS	Sn	19 45 10.6	+1.1
ETL	Fush Village	2.02	339	eP	Pn	19 44 43.2	-1.9
ETL				eS	Sn	19 45 05.9	-3.7
WHYT	Xinyi Township	2.03	315	eP	Pn	19 44 44.5	-0.7
WHYT				eS	Sn	19 45 08.6	-1.2
SSLB	Suanglung	2.04	318		Pn	19 44 44.1	-1.1
SSLB	Suanglung	2.04	318	P	Pn	19 44 44.6	-0.7
SSLB	Suanglung	2.04	318	⇓P	Pn	19 44 44.1	-1.1
OWD	Renai	2.04	326	⇓P	Pn	19 44 44.2	-1.2
OWD				eS	Sn	19 45 05.9	-4.2
WSSB	Gushan	2.04	281	eP	Pn	19 44 46.7	+1.3
NACB	Ninganchiao	2.05	338		Pn	19 44 43.4	-1.9
NACB	Ninganchiao	2.05	338	P	Pn	19 44 43.7	-1.7
NACB	Ninganchiao	2.05	338	⇑iP	Pn	19 44 43.5	-1.9
NACB				eS	Sn	19 45 05.1	-5.0
WCKO	Fanlu	2.05	305	⇓P	Pn	19 44 46.0	+0.5
WCKO				eS	Sn	19 45 10.8	+0.7
TWK	Hsinying	2.05	299	⇓iP	Pn	19 44 46.2	+0.7
TWK				eS	Sn	19 45 11.1	+0.9
CHN3	Shinhua	2.07	293	⇓P	Pb	19 44 47.8	-1.8
CHN3				eS	Sb	19 45 14.0	-1.0
WUSB	Renai	2.10	325	⇓P	Pn	19 44 45.2	-1.0
ETLH	Xiulin Townshi	2.12	336	⇑P	Pn	19 44 45.0	-1.5
ETLH				eS	Sn	19 45 08.0	-3.9
EHP	Heping Village	2.13	343	eP	Pn	19 44 44.9	-1.6
EHP				eS	Sn	19 45 08.6	-3.5
SMLT	Sun Moon Lake	2.14	319	⇓P	Pn	19 44 46.2	-0.6
SMLT				eS	Sn	19 45 10.9	-1.6
EAHA	Aohua	2.15	343	⇑P	Pn	19 44 45.5	-1.3
EOS2	EOS2	2.15	355	⇑P	Pn	19 44 45.9	-0.8
EOS2				eS	Sn	19 45 10.5	-1.9
WHF	Hehuan Shan	2.15	330	⇓P	Pn	19 44 45.7	-1.5
WHF				eS	Sn	19 45 09.6	-3.8
SSHA	Shanhua	2.16	294	eP	Pn	19 44 48.2	+1.3
TAI1	Yung-k'ang	2.18	291	⇓eP	Pn	19 44 48.2	+1.1
TYC	Yuchr	2.18	319	⇓P	Pn	19 44 46.9	-0.3
HATJ	Hateruma jima	2.18	35	P	Pn	19 44 46.3	-0.9
HATJ				S	Sn	19 45 10.9	-2.5
HATJ	Hateruma jima	2.18	35	A	A	19 44 46.3	
	comp=N,50nm,1.0s,comp=E,47nm,2.3s						
TAI	Tainan	2.19	290	eP	Pn	19 44 48.1	+0.8
CHN2	Minshiung	2.20	305	⇓eP	Pn	19 44 48.8	+1.3
CHN2				eS	Sn	19 45 15.9	+2.1
WJS	Zhushan	2.20	315	⇓eP	Pn	19 44 48.2	+0.6
WJS				eS	Sn	19 45 13.3	-0.6
WPL	Puli Township	2.20	322	eP	Pn	19 44 46.9	-0.7
CHY	Chiayi	2.22	304	⇓eP	Pn	19 44 48.6	+0.9
CHY				eS	Sn	19 45 15.0	+0.7
JYNG	Yonagunijimaku	2.22	12	P	Pn	19 44 46.6	-1.2
JYNG				eS	Sn	19 45 12.0	-2.3
JYNG	Yonagunijimaku	2.22	12	A	A	19 44 46.6	
	comp=N,17nm,0.6s,comp=E,10.0nm,2.0s						
WGK	Gukeng	2.23	310	⇓iP	Pn	19 44 49.0	+1.2
WGK				eS	Sn	19 45 15.9	+1.4
DPDB	Guoxing	2.24	322	⇓eP	Pn	19 44 47.7	-0.3
ENA	Nanau	2.24	344	⇑iP	Pn	19 44 46.8	-1.2
ENA				eS	Sn	19 45 12.1	-2.8
YOJ	Yonaguni jima	2.25	14		Pn	19 44 47.0	-1.1
YOJ	Yonaguni jima	2.25	14	P	Pn	19 44 47.2	-1.0
YOJ	Yonaguni jima	2.25	14	S	Sn	19 45 14.0	-1.0
YOJ	Yonaguni jima	2.25	14	P	Pn	19 44 47.0	-1.1
YOJ	Yonaguni jima	2.25	14	i P	Pn	19 44 47.0	-1.1
YOJ				eS	Sn	19 45 13.1	-1.8
YOJ	Yonaguni jima	2.25	14	A	A	19 44 47.0	
	comp=N,16nm,4.2s,comp=E,15nm,1.5s						
YOJ	Yonaguni jima	2.25	14	⇑iP	Pn	19 44 47.1	-1.0
YOJ				i S	Sn	19 45 12.7	-2.3
WDLH	Douliu	2.25	309	⇓eP	Pn	19 44 49.3	+1.2
EWUT	Wuta	2.25	345	⇑P	Pn	19 44 47.1	-1.1
EWUT				eS	Sn	19 45 12.2	-2.8
FUSS	Fushou	2.25	331	⇑P	Pn	19 44 47.6	-0.8
FUSS				eS	Sn	19 45 12.3	-3.1
SCLT	Jiali	2.25	294	⇓eP	Pn	19 44 49.2	+0.9
SCLT				eS	Sn	19 45 16.4	+1.2
WDL	Douliou City	2.26	310	⇓P	Pn	19 44 49.6	+1.3
WDL				eS	Sn	19 45 16.2	+0.9
WCS	Beigang Elemen	2.26	322	eP	Pn	19 44 47.9	-0.5
ICHU	Yijhu	2.27	299	⇓eP	Pn	19 44 49.3	+0.9
ICHU				eS	Sn	19 45 15.6	+0.1
WNT	Mingjian	2.27	315	⇓P	Pn	19 44 49.3	+0.9
WNT				eS	Sn	19 45 15.6	0.0
TWT	Tachien	2.29	330	eP	Pn	19 44 48.4	-0.5
WNT1	Nantou City	2.29	316	⇓eP	Pn	19 44 49.7	+0.9
WNT1				eS	Sn	19 45 15.8	-0.4
TDCB	Techi	2.30	330	eP	Pn	19 44 48.2	-0.8
TDCB				S	Sn	19 45 13.0	-3.4
CHN8	Yiju	2.31	298	⇓P	Pn	19 44 49.8	+0.7
CHN8				eS	Sn	19 45 17.1	+0.5
TSCK	Chigu Township	2.34	292	eP	Pn	19 44 50.1	+0.7
WTK	Tuku	2.35	307	⇓eP	Pn	19 44 50.3	+0.7
WTK				eS	Sn	19 45 17.7	0.0
NNSB	Datong	2.36	336	⇑P	Pn	19 44 48.8	-0.9
NNSB				eS	Sn	19 45 13.5	-4.3
NNSH	Datong	2.36	336	⇑eP	Pn	19 44 48.9	-0.9
ESAO	Su ao	2.36	347	⇑eP	Pn	19 44 49.0	-0.7
ESAO				eS	Sn	19 45 14.9	-2.8
NNS	Nan Shan	2.37	336	⇑P	Pn	19 44 49.0	-0.9
NNS				eS	Sn	19 45 14.1	-4.1
IRIF	Iriomote-Funau	2.38	30	i P	Pn	19 44 49.1	-0.8
IRIF				eS	Sn	19 45 16.0	-2.2
IRIF	Iriomote-Funau	2.38	30	A	A	19 44 49.1	
	comp=N,17nm,1.0s,comp=E,17nm,1.0s						
WWF	Wufeng	2.38	318	⇓eP	Pn	19 44 51.1	+1.1
WWF				eS	Sn	19 45 18.2	-0.1
WSL	Shuilin Townsh	2.39	302	⇓eP	Pn	19 44 50.6	+0.5
WSL				eS	Sn	19 45 18.6	+0.2
TWC	Suao	2.39	347	⇑iP	Pn	19 44 49.5	-0.7
TWC				eS	Sn	19 45 16.1	-2.4
LATG	Datong	2.40	340	⇑iP	Pn	19 44 49.5	-0.9
LATG				eS	Sn	19 45 15.0	-4.1
WHP	Taichung City	2.42	326	eP	Pn	19 44 50.3	-0.4
JKRS	Kuro-shima	2.44	36	i P	Pn	19 44 50.0	-0.7
JKRS				S	Sn	19 45 17.2	-2.4
JKRS	Kuro-shima	2.44	36	A	A	19 44 50.0	
	comp=N,30nm,2.2s,comp=E,33nm,0.7s						
NDS	Dongshan	2.44	344	eP	Pn	19 44 48.8	-2.1
WSF	Szhu	2.45	304	⇓eP	Pn	19 44 51.6	+0.6
WSF				eS	Sn	19 45 20.2	+0.2
TCU	Taichung	2.47	319	⇓eP	Pn	19 44 52.3	+1.1
TCU				eS	Sn	19 45 21.0	+0.4
ENTT	Nioudou	2.49	342	⇑P	Pn	19 44 50.9	-0.7
ENTT				eS	Sn	19 45 17.7	-3.3
WCHH	Zhanghua	2.49	317	⇓eP	Pn	19 44 52.5	+1.0
WCHH				eS	Sn	19 45 21.4	+0.3
WCH1	Changhua City	2.50	316	⇓eP	Pn	19 44 52.6	+1.1
WCH1				eS	Sn	19 45 21.7	+0.5
RLNB	Erlin	2.50	311	⇓iP	Pn	19 44 52.4	+0.8
RLNB				S	Sn	19 45 21.2	-0.1
WTCT	Ta-ch'eng	2.54	309	eP	Pn	19 44 52.4	+0.2
WTCT				eS	Sn	19 45 22.0	-0.2
TWE	Neicheng	2.54	344	⇑iP	Pn	19 44 51.8	-0.4
TWE				eS	Sn	19 45 20.4	-1.8
ILA	Ilan	2.56	346	eP	Pn	19 44 52.5	0.0
TWQ1	Liyutan	2.57	324	⇓P	Pn	19 44 53.9	+1.3
TWQ1				eS	Sn	19 45 23.3	+0.2
YHNB	Yeheng	2.58	338	P	Pn	19 44 52.3	-0.5
YHNB	Yeheng	2.58	338	⇑iP	Pn	19 44 52.4	-0.4
YHNB				eS	Sn	19 45 20.0	-3.3
NSK	Sanguang	2.59	338	⇑iP	Pn	19 44 52.5	-0.4
NSK				eS	Sn	19 45 20.5	-3.1
FUSB	Fushanzhiwuyua	2.60	343	⇑P	Pn	19 44 52.6	-0.4
EGS		2.60	350	⇑P	Pn	19 44 52.9	-0.2
EGS				eS	Sn	19 45 22.6	-1.2
JIJ	Ishigaki jima	2.61	37	i P	Pn	19 44 51.9	-1.2
JIJ				S	Sn	19 45 20.6	-3.3
JIJ	Ishigaki jima	2.61	37	A	A	19 44 51.9	
	comp=N,20nm,1.8s,comp=E,28nm,0.5s						
NSY	Sanyi	2.63	325	⇓P	Pn	19 44 54.9	+1.5
NSY				eS	Sn	19 45 24.8	+0.2
NTC	Toucheng	2.63	348	eP	Pn	19 44 53.1	-0.3
NWLT	Wulai	2.64	341	eP	Pn	19 44 53.2	-0.4
NFF	Wufeng Townshi	2.64	333	eP	Pn	19 44 53.7	+0.1
NFF				eS	Sn	19 45 23.5	-1.4

NSTT	Nanjuang	2.69	331	⇓eP	Pn	19 44 55.0	+0.7
NSTT				eS	Sn	19 45 24.5	-1.5
LIOB	Emei	2.70	331	eP	Pn	19 44 55.3	+0.9
LIOB				eS	Sn	19 45 25.8	-0.4
NMLH	Miaoli	2.71	327	eP	Pn	19 44 55.3	+0.7
WDGT	Dungji	2.74	292	⇓iP	Pn	19 44 55.1	+0.1
WDGT				eS	Sn	19 45 24.0	-3.2
TIPB	Shuangxi	2.75	348	⇑P	Pn	19 44 54.9	-0.1
TIPB				eS	Sn	19 45 25.6	-1.8
NJD	Zhudong	2.75	334	eP	Pn	19 44 55.7	+0.7
KSHI	Guanxi Townshi	2.75	335	⇑P	Pn	19 44 56.1	+1.1
KSHI				eS	Sn	19 45 26.9	-0.5
TWB1	Santiao Chiao	2.76	352	⇑eP	Pn	19 44 54.3	-0.8
TWB1				eS	Sn	19 45 24.6	-2.9
NJN	Zhunan	2.80	329	eP	Pn	19 44 55.9	+0.1
NJN				eS	Sn	19 45 28.0	-0.6
NHDH	Xindian Distri	2.81	343	⇑P	Pn	19 44 56.2	+0.3
NHDH				eS	Sn	19 45 27.7	-1.1
TWA	Mucha	2.81	344	⇑P	Pn	19 44 56.3	+0.4
TWA				eS	Sn	19 45 26.9	-2.0
HSN1	Hsinchu	2.81	333	eP	Pn	19 44 57.0	+1.1
HSN1				eS	Sn	19 45 28.3	-0.7
TATO	Taipei	2.83	342		Pn	19 44 56.3	+0.1
TATO	Taipei	2.83	342	P	Pn	19 44 56.5	+0.3
TATO	Taipei	2.83	342	S	Sn	19 45 28.8	-0.6
TATO	Taipei	2.83	342	⇑iP	Pn	19 44 56.3	+0.1
TATO				iS	Sn	19 45 27.6	-1.8
SBCB	Hsinchu	2.84	332	⇑P	Pn	19 44 57.7	+1.4
SBCB				eS	Sn	19 45 28.8	-0.9
NWF	Wu-fen Shan	2.85	348	eP	Pn	19 44 56.6	0.0
NWF				eS	Sn	19 45 28.0	-2.1
WFSB	Wu-fen Shan	2.85	348	⇑P	Pn	19 44 56.4	-0.1
WFSB				S	Sn	19 45 27.6	-2.4
HSN	Hsinchu	2.86	332	⇑P	Pn	19 44 57.9	+1.3
HSN				eS	Sn	19 45 29.6	-0.4
SXI1	Grass Mountain	2.86	350	⇑P	Pn	19 44 56.1	-0.5
SXI1				eS	Sn	19 45 27.1	-3.1
BACT	New Taipei Cit	2.86	342	eP	Pn	19 44 57.0	+0.4
JISG	Ishigakijimahi	2.88	36	iP	Pn	19 44 55.5	-1.3
JISG				S	Sn	19 45 27.6	-3.0
JISG	Ishigakijimahi	2.88	36	A	A	19 44 55.5	
	comp=N,43nm,0.5s,comp=E,49nm,0.6s						
TAP	Taipei	2.88	343	⇑eP	Pn	19 44 57.0	+0.1
TAP				eS	Sn	19 45 29.4	-1.4
NTY	Taoyuan	2.91	339	eP	Pn	19 44 58.0	+0.7
PHUB	P'eng-hu	2.92	296	eP	Pn	19 44 56.9	-0.4
PHUB				eS	Sn	19 45 28.6	-2.9
NCUH	Zhongli	2.92	337	eP	Pn	19 44 57.3	-0.1
NCUH				eS	Sn	19 45 30.8	-0.9
VCHM	Qimei	2.93	289	⇓P	Pn	19 44 57.4	-0.1
VCHM				eS	Sn	19 45 28.4	-3.4
TNOU	National Taiwa	2.93	348	eP	Pn	19 44 56.7	-0.8
TNOU				eS	Sn	19 45 29.8	-2.1
PNG	Penghu	2.95	296	⇓P	Pn	19 44 57.7	-0.1
TWS1	Kuangyinshan	2.97	342	⇑P	Pn	19 44 58.1	+0.1
TWS1				eS	Sn	19 45 31.5	-1.3
YM01	YM01	2.97	345	⇑P	Pn	19 44 58.1	-0.1
YM01				eS	Sn	19 45 31.4	-1.6
ZUZH	Zhuzihu	2.99	344	⇑eP	Pn	19 44 58.4	-0.1
ZUZH				eS	Sn	19 45 31.2	-2.3
NWRT	Kuosheng	3.00	347	eP	Pn	19 44 58.5	0.0
NHW	Xinwu Township	3.01	335	eP	Pn	19 44 58.8	+0.2
NHW				eS	Sn	19 45 32.1	-1.7
YM08	YM08	3.01	345	⇑P	Pn	19 44 58.2	-0.4
YM08				eS	Sn	19 45 31.2	-2.6
NTST	Danshui	3.02	343	eP	Pn	19 44 58.9	+0.2
NTST				eS	Sn	19 45 33.8	-0.3
ANP	Anpu	3.02	344	⇑eP	Pn	19 44 58.4	-0.5
TWY	Chenhua	3.09	346	⇑eP	Pn	19 44 59.7	0.0
NSM	Shimen	3.10	346	eP	Pn	19 45 00.1	+0.2
JTJ	Tarama	3.15	41	iP	Pn	19 44 59.1	-1.4
JTJ				S	Sn	19 45 34.5	-2.7
JTJ	Tarama	3.15	41	A	A	19 44 59.1	
	comp=N,32nm,1.3s,comp=E,36nm,1.6s						
PCYT	Pengchaiyu	3.36	354	eP	Pn	19 45 02.3	-1.2
JIRB	Irabujima	3.58	44	P	Pn	19 45 04.7	-1.8
JIRB				S	Sn	19 45 44.5	-3.3
JIRB	Irabujima	3.58	44	A	A	19 45 04.7	
	comp=N,13nm,1.6s,comp=E,22nm,1.2s						
JMJ2	Miyako jima3	3.62	47	iP	Pn	19 45 05.4	-1.7
JMJ2				S	Sn	19 45 46.2	-2.7
JMJ2	Miyako jima3	3.62	47	A	A	19 45 05.4	
	comp=N,15nm,2.4s,comp=E,17nm,3.2s						
JOGS	Gusukube	3.69	47	P	Pn	19 45 06.2	-1.7
JOGS				S	Sn	19 45 48.0	-2.6
JOGS	Gusukube	3.69	47	A	A	19 45 06.2	
	comp=N,27nm,0.8s,comp=E,26nm,0.9s						
JIKM	Ikemajima	3.69	44	P	Pn	19 45 06.3	-1.7
JIKM				S	Sn	19 45 47.7	-3.0
JIKM	Ikemajima	3.69	44	A	A	19 45 06.3	
	comp=N,19nm,0.9s,comp=E,19nm,1.3s						
VWUC	VWUC	3.85	315	⇓P	Pn	19 45 09.7	-0.5
VWUC				eS	Sn	19 45 51.2	-3.4
PTMZ	Houxiangcun	4.10	313	⇓P	Pn	19 45 13.1	-0.6
PTMZ				eS	Sn	19 45 57.6	-3.2
KNM	Kinmen	4.25	301	⇓P	Pn	19 45 16.8	+1.1
KNMB	Chin-men Tao	4.31	301		Pn	19 45 15.9	-0.6
KNMB	Chin-men Tao	4.31	301	⇓P	Pn	19 45 16.0	-0.6
KNMB				eS	Sn	19 46 02.4	-3.5
QZH	Quanzhou	4.42	308	⇓iPn	Pn	19 45 17.3	-0.7
QZH				Sn	Sn	19 46 05.5	-3.0
QZH				smax	smax		
	comp=E,3µm,0.7s						
QZH				smax	smax		
	comp=E,3µm,0.6s						
QZH				LR	LR		
	comp=E,11µm,11.0s						
QZH				LR	LR		
	comp=E,6µm,10.7s						
QZH				LR	LR		
	comp=E,2µm,9.3s						
MATB	Ma-tsu	4.48	330	eP	Pn	19 45 18.1	-0.8
MSUT	Lienchiang	4.51	330	eP	Pn	19 45 18.7	-0.5
ZPLA	Ao Xicun	4.62	292	⇓eP	Pn	19 45 20.7	0.0
DSXP	Dongshan	4.83	288	eP	Pn	19 45 23.4	-0.3
AXDP	Jialang	4.86	303	⇓eP	Pn	19 45 23.7	-0.4
MHZQ	Yeshan	4.92	321	⇓eP	Pn	19 45 24.2	-0.7
SZP	Santa	5.05	202	P	Pn	19 45 28.0	+1.3
XPSS	Dashiqiu	5.07	337	⇑P	Pn	19 45 25.7	-1.2
VDOS	Pratas Island	5.54	255	⇓P	Pn	19 45 34.1	+0.7
JKE	Kume jima 2	5.66	44	P	Pn	19 45 32.3	-2.8
JKE				eS	Sn	19 46 33.5	-5.7
SXFK	Yanhouchang	6.00	314	⇓eP	Pn	19 45 39.0	-0.8
JOW	Kunigami	6.99	48		Pn	19 45 50.4	-3.0
JOW	Kunigami	6.99	48	Pn	Pn	19 45 50.6	-2.8
	comp=E,28nm,0.3s,baz=132,slow=19,SNR=38						
JOW				Sn	Sn	19 47 03.8	-8.3
	comp=E,42nm,0.3s,baz=104,slow=29,SNR=13						
	comp=E,62nm,0.3s						
HKPS	Hong Kong Po S	7.68	272		Pn	19 46 03.2	+0.4
HKPS	Hong Kong Po S	7.68	272	eP	Pn	19 46 02.7	-0.2
TGY	Tagaytay City	8.25	190	Pn	Pn	19 46 09.8	-0.9
	comp=E,60nm,0.3s,baz=236,slow=5.4,SNR=4.9						
TGY				Sn	Sn	19 47 35.4	-7.7
	comp=E,87nm,0.3s,baz=223,slow=16,SNR=1.5						
TGY				LR	LR	19 49 48.8	
	comp=E,2µm,19.8s,baz=56,slow=41						
GZH	Guangzhou	8.43	277	P	Pn	19 46 10.8	-2.4
GZH				sP	Pb	19 46 18.3	-20
GZH				S	Sn	19 47 38.8	-8.7
GZH				smax	smax		
	comp=E,750nm,1.0s						
GZH				smax	smax		
	comp=E,600nm,0.9s						
JMZ	Minamidaito 2	8.78	65	Pn	Pn	19 46 17.4	-0.5
SSE	Sheshan	8.86	353	P	Pn	19 46 17.3	-1.7
SSE				S	Sn	19 47 52.5	-5.5
SSE				pmax	pmax		
	comp=E,22nm,0.9s						
SSE				smax	smax		
	comp=E,58nm,1.2s						
SSE				smax	smax		
	comp=E,110nm,0.9s						
NJ2	Nanjing	10.25	343	⇓P	Pn	19 46 36.5	-1.5
NJ2				sP		19 46 46.0	
NJ2				S	Sn	19 48 27.3	-4.8
NJ2				pmax	pmax		
	comp=E,36nm,0.5s						
NJ2				pmax	pmax		
	comp=E,230nm,4.0s						
NJ2				LR	LR		
	comp=E,2µm,13.3s						
NJ2				LR	LR		
	comp=E,2µm,12.3s						
NJ2				LR	LR		
	comp=E,2µm,10.9s						
CNSH	ChangSha	10.42	306	P	Pn	19 46 40.0	-0.4
CNSH				S	Sn	19 48 28.3	-8.0
CNSH				pmax	pmax		
	comp=E,42nm,0.8s						
WHN	Wuhan	10.97	320	⇓P	Pn	19 46 47.0	-0.9
WHN				S	Sn	19 48 45.0	-4.7
WHN				LR	LR		
	comp=E,13µm,11.5s						
WHN				LR	LR		
	comp=E,15µm,11.4s						
WHN				LR	LR		
	comp=E,7µm,11.0s						
GULI	GuiLin	11.45	288	P	Pn	19 46 53.3	-1.2
GULI				S	Sn	19 48 53.5	-8.1
GULI				pmax	pmax		
	comp=E,20nm,1.1s						
GULI				LR	LR		
	comp=E,810nm,14.6s						
GULI				LR	LR		
	comp=E,1µm,16.3s						
GULI				LR	LR		
	comp=E,2µm,13.0s						
QIZ	Qiongzhong	12.22	257	P	Pn	19 47 04.8	-0.3
QIZ				sP	P	19 47 13.0	-4.3
QIZ				S	Sn	19 49 24.0	+3.5
QIZ				pmax	pmax		
	comp=E,23nm,1.5s						
QIZ				pmax	pmax		
	comp=E,220nm,2.7s						
QIZ				LR	LR		
	comp=E,1µm,12.1s						
QIZ				LR	LR		
	comp=E,1µm,13.2s						
QIZ	Qiongzhong	12.22	257	P	Pn	19 47 05.4	+0.3
JNU	Nakatsue	13.14	33	Pn	Pn	19 47 15.9	-1.7
	comp=E,3.5nm,0.3s,baz=183,slow=8.7,SNR=7.1						
	comp=E,24nm,0.5s						
JNU	Nakatsue	13.14	33	P	Pn	19 47 16.9	-0.7
ENH	Enshi	14.08	307		Pn	19 47 30.9	+0.4
ENH	Enshi	14.08	307	P	Pn	19 47 30.8	+0.4
TJN	Taejon	14.70	16		Pn	19 47 38.6	-0.2
TJN	Taejon	14.70	16	P	Pn	19 47 39.8	+1.0
TJN	Taejon	14.70	16	P	Pn	19 47 38.6	-0.2
GYA	Guiyang	14.96	289	⇑P	Pn	19 47 43.3	+0.7
GYA				pmax	pmax		
	comp=E,64nm,0.7s						
GYA				LR	LR		
	comp=E,2µm,14.4s						
LYN	LuoYang	15.04	327	⇓P	P	19 47 50.8	+2.3
LYN				sP	pwP	19 48 01.5	+0.8
LYN				S	S	19 50 46.5	+0.3
LYN				sS	sS	19 50 47.5	-7.9
LYN				SS	SnSn	19 51 02.8	+21
LYN				pmax	pmax		
	comp=Z,120nm,0.9s						
LYN				pmax	pmax		
	comp=Z,150nm,3.9s						
LYN				LR	LR		
	comp=N,4µm,12.8s						
LYN				LR	LR		
	comp=E,5µm,14.8s						
LYN				LR	LR		
	comp=Z,3µm,14.5s						
INCN	Inchon	15.59	13	P	Pn	19 47 51.5	+0.9
KSAR	Wonju Array Be	15.84	16	Pn	Pn	19 47 54.0	+0.2
KSAR	Wonju Array Be	15.84	16	P	Pn	19 47 54.0	+0.2
KSRS	Korea Array	15.86	16	Pn	Pn	19 47 53.6	-0.4
	comp=Z,7.2nm,0.3s,baz=201,slow=12,SNR=328						
	comp=Z,143nm,0.8s						
KS19	Wonju Array Si	15.89	16		Pn	19 47 53.9	-0.6
KS19				IAmb	IAmb	19 47 54.7	
	comp=Z,137nm,0.8s						
HNS	HongShan	16.49	338	⇓P	P	19 48 04.8	+0.2
HNS				S	Sn	19 51 05.8	+1.5
HNS				pmax	pmax		
	comp=Z,39nm,1.3s						
HNS				LR	LR		
	comp=Z,1µm,11.4s						
HNS				LR	LR		
	comp=Z,2µm,14.3s						
HNS				LR	LR		
	comp=Z,2µm,15.8s						
DL2	Dalian	16.60	358	P	P	19 48 05.0	-0.8
DL2				S	Sn	19 51 11.5	+4.6
DL2				pmax	pmax		
	comp=Z,130nm,1.2s						
DL2				pmax	pmax		
	comp=Z,680nm,4.5s						
DL2				LR	LR		
	comp=Z,990nm,15.6s						
DL2				LR	LR		
	comp=Z,910nm,10.9s						
DL2				LR	LR		
	comp=Z,2µm,13.8s						
XAN	Xi'an	16.70	318	⇑P	Pn	19 48 05.5	+0.7
XAN				sP	pwP	19 48 19.0	-0.3
XAN				sS	S	19 51 17.5	-2.6
XAN				pmax	pmax		
	comp=Z,12nm,0.9s						
XAN				pmax	pmax		
	comp=Z,400nm,6.8s						
XAN				LR	LR		
	comp=Z,6µm,15.1s						
XAN				LR	LR		
	comp=Z,5µm,15.8s						
XAN				LR	LR		
	comp=Z,860nm,15.1s						
KKM	Kota Kinabalu	17.21	201		Pn	19 48 11.6	+0.1
KKM				IAmb	IAmb	19 48 16.5	
	comp=Z,160nm,0.9s						
KKM	Kota Kinabalu	17.21	201	P	Pn	19 48 11.7	+0.2
SLVN	Son La	17.23	270	P	P	19 48 12.8	-0.2
SLVN	Son La	17.23	270	P	P	19 48 14.0	+1.0
MYLDM	Lahad Datu	17.41	193		Pn	19 48 13.2	-0.6
MYLDM	Lahad Datu	17.41	193	P	P	19 48 15.9	+1.0
TIY	Taiyuan	17.64	333	P	P	19 48 19.8	+2.4
TIY				PP	sP	19 48 26.0	-0.1
TIY				S	Sn	19 51 34.5	+2.1
TIY				pmax	pmax		
	comp=Z,32nm,0.6s						
TIY				pmax	pmax		
	comp=Z,340nm,4.3s						
TIY				LR	LR		
	comp=Z,2µm,10.8s						
TIY				LR	LR		
	comp=Z,890nm,11.4s						
TIY				LR	LR		
	comp=Z,1µm,13.3s						
INU	Inuyama	18.22	41		Pn	19 48 23.3	-0.4
INU	Inuyama	18.22	41	P	P	19 48 26.1	+2.3
KMI	Kunming	18.26	283	P	P	19 48 27.5	+3.0
KMI				pmax	pmax		
	comp=Z,21nm,0.9s						
KMI				pmax	pmax		
	comp=Z,280nm,4.3s						
KMI				LR	LR		
	comp=Z,770nm,12.7s						
KMI				LR	LR		
	comp=Z,850nm,15.1s						
KMI				LR	LR		
	comp=Z,820nm,11.4s						
BJT	Baijiatuau	18.48	345		Pn	19 48 26.9	+0.1
BJT	Baijiatuau	18.48	345	P	Pn	19 48 28.9	+2.1
BJT	Baijiatuau	18.48	345	P	Pn	19 48 26.9	+0.1
BJT				pmax	pmax		
	comp=Z,101nm,1.4s						
BJI	Beijing	18.50	345	P	Pn	19 48 28.3	+1.3
BJI				sP	pwP	19 48 39.3	+0.3
BJI				S	Sn	19 51 52.3	-0.6
BJI				pmax	pmax		
	comp=Z,26nm,1.0s						
BJI				pmax	pmax		
	comp=Z,180nm,3.9s						
BJI				LR	LR		
	comp=Z,220nm,17.8s						
BJI				LR	LR		
	comp=Z,680nm,18.4s						
BJI				LR	LR		
	comp=Z,420nm,13.7s						
JGF	Kuroka	18.60	41		P	19 48 26.4	-1.6
JGF	Kuroka	18.60	41	P	Pn	19 48 30.0	+1.7
SGSI	Sangihe	18.72	170	P	P	19 48 28.8	-0.5
	comp=Z,214nm,0.9s						
CD2	Chengdu	18.77	301	P	Pn	19 48 31.3	+0.8
CD2				pmax	pmax		
	comp=Z,90nm,0.9s						
CD2				pmax	pmax		
	comp=Z,970nm,3.9s						
CD2				LR	LR		
	comp=Z,3µm,10.6s						
CD2				LR	LR		
	comp=Z,2µm,9.9s						
CD2				LR	LR		
	comp=Z,2µm,10.1s						
PZH	PanZhiHua	19.31	287	P	Pn	19 48 37.8	+0.7
PZH				S	Sn	19 52 05.5	-7.5
PZH				pmax	pmax		
	comp=Z,30nm,1.0s						
PZH				pmax	pmax		
	comp=Z,410nm,4.3s						
PZH				LR	LR		
	comp=Z,320nm,10.8s						
PZH				LR	LR		
	comp=Z,520nm,14.3s						
PZH				LR	LR		
	comp=Z,630nm,13.1s						
SNY	Shenyang	19.52	3	⇑P	Pn	19 48 39.5	+0.1
SNY				S	Sn	19 52 19.5	+1.8
SNY				pmax	pmax		
	comp=Z,64nm,1.1s						
SNY				LR	LR		
	comp=Z,390nm,7.5s						
SNY				LR	LR		
	comp=Z,790nm,10.5s						
SNY				LR	LR		
	comp=Z,830nm,15.6s						
MAJO	Matsushiro	19.74	40		P	19 48 40.0	-0.4
MAJO				IAmb	IAmb	19 48 43.8	
	comp=Z,180nm,1.8s						
MAJO	Matsushiro	19.74	40	P	Pn	19 48 41.8	-0.2
MAJO	Matsushiro	19.74	40	ceP	P	19 48 40.8	+0.4
MAJO				pmax	pmax		
	comp=Z,37nm,1.0s						
MJAR	Matsushiro Arr	19.74	40	P	P	19 48 39.6	-0.8
	comp=Z,1.0nm,0.3s,baz=246,slow=8.9,SNR=93						
MJAR				LR	LR	19 56 48.7	
	comp=Z,404nm,19.9s,baz=218,slow=38						
	comp=Z,25nm,0.6s						
HHC	Hu-ho-hao-te	20.68	336	eP	Pn	19 48 52.5	-0.6
HHC				sP	sP	19 49 00.5	+1.1
HHC				S	S	19 52 39.8	-0.6
HHC				sS	Sn	19 52 47.0	+1.3
HHC				pmax	pmax		
	comp=Z,29nm,0.9s						
HHC				pmax	pmax		
	comp=Z,300nm,3.5s						
HHC				LR	LR		
	comp=Z,390nm,10.2s						
HHC				LR	LR		
	comp=Z,830nm,9.8s						
HHC				LR	LR		
	comp=Z,1µm,10.6s						
JSD	Sado	20.79	37	P	Pn	19 48 54.1	-0.2
BTO	Baotou	21.09	333	eP	P	19 48 57.8	+2.7
BTO				pP	pP	19 49 01.8	+0.8
BTO				sP	sP	19 49 05.0	+1.1
BTO				PP	PnPn	19 49 21.8	+7.2
BTO				pmax	pmax		
	comp=Z,31nm,1.0s						
BTO				pmax	pmax		
	comp=Z,320nm,7.9s						
BTO				LR	LR		
	comp=Z,3µm,20.5s						
BTO				LR	LR		
	comp=Z,6µm,19.3s						
BTO				LR	LR		
	comp=Z,4µm,14.8s						
TOLI2	Tolitoli	21.09	185	P	P	19 48 54.1	-1.1
TOLI2				IAmb	IAmb	19 48 59.2	
	comp=Z,124nm,0.9s						
TOLI2	Tolitoli	21.09	185	P	P	19 48 55.0	-0.2
LZH	Lanzhou	21.23	315	eP	P	19 48 59.3	+2.5
LZH				sP	pwP	19 49 07.8	-1.4
LZH				S	S	19 52 52.8	+1.2
LZH				pmax	pmax		
	comp=Z,70nm,1.3s						
LZH				LR	LR		
	comp=Z,3µm,13.1s						
LZH				LR	LR		
	comp=Z,2µm,13.4s						
LZH				LR	LR		
	comp=Z,3µm,12.7s						
MSHR	Mys Shultsa	21.52	18	⇑eP	P	19 49 00.1	+0.5
MSHR				pmax	pmax		
	comp=Z,93nm,1.3s						
KMSI	Cibinong	21.62	176	P	P	19 49 00.6	-0.2
	comp=Z,3µmcomp=Z,370nm,0.9s						
CN2	Changchun	21.62	6	eP	P	19 49 01.0	+0.3
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,1µm,13.0s						
CN2				LR	LR		
	comp=Z,1µm,13.0s						
CN2				LR	LR		
	comp=Z,1µm,13.0s						
MRSI	Marisa	21.67	181	P	P	19 49 02.1	+0.7
	comp=Z,3µmcomp=Z,205nm,0.9s						
TNTI	Ternate	21.90	167	P	P	19 49 02.7	-1.2
TNTI				IAmb	IAmb	19 49 09.0	
	comp=Z,156nm,1.2s						
TNTI	Ternate	21.90	167	P	P	19 49 05.2	+1.3
TNTI	Ternate	21.90	167	P	P	19 49 04.6	+0.7
	comp=Z,1µmcomp=Z,124nm,1.2s						
MPSI	Mapaga	21.94	187	P	P	19 49 03.4	-0.9
	comp=Z,2µmcomp=Z,168nm,1.1s						
SBUM	Sibu	22.06	208	P	P	19 49 05.1	-0.5
SBUM				IAmb	IAmb	19 49 12.9	
	comp=Z,68nm,1.0s						
SBUM	Sibu	22.06	208	P	P	19 49 05.6	0.0
TNCH	TengChong	22.07	282	⇓P	P	19 49 06.8	+0.9
TNCH				pP	pP	19 49 09.5	-2.4
TNCH				PP	PnPn	19 49 32.3	+4.1
TNCH				S	S	19 53 01.0	-7.2
TNCH				sS	pS	19 53 11.0	-5.6
TNCH				SS	SnSn	19 53 38.5	+3.4
TNCH				pmax	pmax		
	comp=Z,120nm,1.1s						
TNCH				LR	LR		
	comp=Z,790nm,11.0s						
TNCH				LR	LR		
	comp=Z,580nm,11.4s						
TNCH				LR	LR		
	comp=Z,790nm,14.8s						
JMM	Marumori	22.16	41	P	P	19 49 04.0	-2.6
JMM				IAmb	IAmb	19 49 06.1	
	comp=Z,85nm,0.9s						
JMM	Marumori	22.16	41	P	P	19 49 04.9	-1.7
XLT	XiLinHaoTe	22.20	348	eP	P	19 49 07.0	-0.1
XLT				S	S	19 53 08.3	-1.9
XLT				pmax	pmax		
	comp=Z,68nm,0.9s						
XLT				pmax	pmax		
	comp=Z,340nm,4.4s						
XLT				LR	LR		
	comp=Z,1µm,20.6s						
XLT				LR	LR		
	comp=Z,250nm,17.5s						
VLA	Vladivostok	22.23	19	⇓eP	P	19 49 05.2	-2.0
VLA				pmax	pmax		
	comp=Z,23nm,1.1s						
CHTO	Chiang Mai	22.26	265	P	P	19 49 08.5	+0.7
CHTO	Chiang Mai	22.26	265	P	P	19 49 09.5	+1.7
CHTO	Chiang Mai	22.26	265	P	P	19 49 08.5	+0.7
CHTO				pmax	pmax		
	comp=Z,41nm,1.2s						
CM31	Chiang Mai Arr	22.34	264	P	P	19 49 07.5	-1.2
CMAR	Chiang Mai Arr	22.34	264	P	P	19 49 10.2	+1.6
	comp=Z,14nm,1.0s,baz=67,slow=8.2,SNR=33						
CMAR				PcP	PcP	19 53 03.6	0.0
	comp=Z,0.9nm,0.7s,baz=86,slow=2.2,SNR=4.6						
CMAR				LR	LR	19 57 55.0	
	comp=Z,624nm,20.7s,baz=80,slow=37						
	comp=Z,14nm,1.0s						
GUMO	Guam	23.00	108	P	P	19 49 14.2	-1.4

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GUMO  Guam              23.00 108    LR      LR      19 56 37.5
      comp=Z,287nm,21.9s,baz=270,slow=33
GUMO  Guam              23.00 108    P       P       19 49 14.3  -1.4
GUMO                                 pmax    pmax
      comp=Z,339nm,1.1s
APSI  Ampana            23.05 182    P       P       19 49 16.9  +0.8
MDJ   Mudanjiang        23.05  13            P       19 49 15.1  -0.9
MDJ                                  IAmb    IAmb    19 49 32.8
      comp=Z,73nm,1.0s
MDJ   Mudanjiang        23.05  13    P       P       19 49 15.8  -0.1
MDJ                                  S       S       19 53 27.5  +2.4
MDJ                                  pmax    pmax
      comp=Z,24nm,1.0s
MDJ                                  LR      LR
      comp=Z,1μm,14.5s
MDJ                                  LR      LR
      comp=Z,2μm,13.5s
MDJ                                  LR      LR
      comp=Z,500nm,11.8s
MDJ   Mudanjiang        23.05  13    P       P       19 49 15.6  -0.3
LUWI  Luwuk             23.17 179    P       P       19 49 15.8  -1.5
LUWI  Luwuk             23.17 179    P       P       19 49 18.4  +1.1
LUWI  Luwuk             23.17 179    P       P       19 49 17.0  -0.3
      comp=Z,3μmcomp=Z,284nm,1.1s
PCI   Palu              23.17 187    P       P       19 49 16.7  -0.7
      comp=Z,307nm,1.0s
USA0B Ussuriysk Arra    23.25  18            P       19 49 16.3  -1.6
USA0B Ussuriysk Arra    23.25  18deP         P       19 49 16.6  -1.3
USRK  Ussuriysk Ar.     23.25  18    P       P       19 49 16.4  -1.6
USRK  Ussuriysk Ar.     23.25  18    P       P       19 49 16.6  -1.3
      comp=Z,11nm,0.7s,baz=205,slow=9.1,SNR=19
      comp=Z,11nm,0.7s
BNX   BinXian           23.76   9 ⇑P       P       19 49 20.8  -2.0
BNX                                  pP      pP      19 49 29.3  +0.1
BNX                                  sP      sP      19 49 33.3  +1.4
BNX                                  S       S       19 53 36.0  -0.6
BNX                                  pmax    pmax
      comp=Z,110nm,1.0s
BNX                                  pmax    pmax
      comp=Z,240nm,4.6s
BNX                                  LR      LR
      comp=Z,890nm,13.6s
BNX                                  LR      LR
      comp=Z,1μm,14.1s
BNX                                  LR      LR
      comp=Z,1μm,14.1s
KSM   Kuching           23.80 211    P       P       19 49 22.6  -0.8
KSM                                  IAmb    IAmb    19 49 24.8
      comp=Z,94nm,0.9s
KSM   Kuching           23.80 211    P       P       19 49 23.2  -0.3
BKB   Balikpapan        24.00 194    P       P       19 49 25.1  -0.3
BKB   Balikpapan        24.00 194    P       P       19 49 26.1  +0.7
JTM   Tenmabayashi      24.26  36    P       P       19 49 26.6  -1.0
JTM   Tenmabayashi      24.26  36    P       P       19 49 29.9  +2.3
SANI  Sanana            24.42 171    P       P       19 49 29.0  -0.2
SANI  Sanana            24.42 171    P       P       19 49 26.6  -2.6
      comp=Z,1μmcomp=Z,159nm,0.9s
STKI  Sintang           24.52 207    P       P       19 49 30.9  +0.8
SWI   Sorong            24.55 158    P       P       19 49 30.6  +0.2
TTSI  Tana Toraja       25.29 186    P       P       19 49 36.4  -0.7
      comp=Z,968nmcomp=Z,111nm,0.9s
GTA   Gaotai            25.75 317    P       P       19 49 42.3  +1.0
GTA                                  pP      pP      19 49 49.0  +1.3
GTA                                  sP      pwP     19 49 53.5  -0.7
GTA                                  S       S       19 54 08.8  -0.1
GTA                                  sS      sS      19 54 23.5  +4.0
GTA                                  pmax    pmax
      comp=Z,10.0nm,0.9s
GTA                                  LR      LR
      comp=Z,2μm,17.4s
GTA                                  LR      LR
      comp=Z,1μm,17.1s
GTA                                  LR      LR
      comp=Z,1μm,15.6s
NLAI  Namlea            25.76 169    P       P       19 49 42.4  +1.1
MSAI  Masohi            26.24 165    P       P       19 49 47.5  +1.8
ERM   Erimo             26.25  37    P       P       19 49 45.5   0.0
ERM                                  IAmb    IAmb    19 49 54.8
      comp=Z,59nm,0.8s
ERM   Erimo             26.25  37    P       P       19 49 47.1  +1.5
ERM   Erimo             26.25  37ceP         P       19 49 46.5  +0.9
ERM                                  pmax    pmax
      comp=Z,117nm,1.7s
JEM   Erimo             26.25  37    P       P       19 49 47.2  +1.6
RKPI  Ransiki, Papua    26.27 153    P       P       19 49 54.4  +8.4
FAKI  Fak Fak           26.81 158    P       P       19 49 49.8  -1.1
FAKI                                 IAmb    IAmb    19 49 53.7
      comp=Z,46nm,0.8s
FAKI  Fak Fak           26.81 158    P       P       19 49 52.1  +1.2
KULM  Kulim             27.00 235    P       P       19 49 53.2  +0.7
HIA   Hailar            27.03 356            P       19 49 51.6  -1.0
HIA   Hailar            27.03 356    P       P       19 49 54.8  +2.2
HIA   Hailar            27.03 356    P       P       19 49 51.6  -1.0
HIA                                  pmax    pmax
      comp=Z,30nm,1.0s
MYKOM Kota Tinggi       27.22 224    P       P       19 49 53.7  -0.9
MYKOM                                IAmb    IAmb    19 49 58.5
      comp=Z,33nm,1.0s
MYKOM Kota Tinggi       27.22 224    P       P       19 49 55.5  +0.9
KAPI  Kappang           27.24 186    P       P       19 49 53.7  -1.0
KAPI                                 IAmb    IAmb    19 49 59.9
      comp=Z,51nm,1.0s
KAPI  Kappang           27.24 186    P       P       19 49 53.9  -0.8
      comp=Z,27nm,1.0s,baz=14,slow=11,SNR=11
      comp=Z,27nm,1.0s
KAPI  Kappang           27.24 186    P       P       19 49 55.7  +1.0
KAPI  Kappang           27.24 186d iP        P       19 49 54.4  -0.3
KAPI                                 pmax    pmax
      comp=Z,42nm,1.1s
IPM   Ipoh              27.25 233    P       P       19 49 54.7  -0.1
IPM                                  IAmb    IAmb    19 50 17.9
      comp=Z,52nm,1.4s
ASAJ  Asahikawa         27.42  33    P       P       19 49 56.7  +0.6
ASAJ                                 pmax    pmax
      comp=Z,82nm,1.1s
JKA   Kamikawa-asahi    27.42  33    P       P       19 49 56.7  +0.6
JKA                                  IAmb    IAmb    19 49 59.6
      comp=Z,82nm,1.1s
GOMU  GeErMu            27.70 306    P       P       19 49 59.5  +0.4
GOMU                                 S       S       19 54 41.5  +1.4
GOMU                                 pmax    pmax
      comp=Z,17nm,1.0s
GOMU                                 LR      LR
      comp=Z,2μm,15.3s
GOMU                                 LR      LR
      comp=Z,330nm,14.1s
GOMU                                 LR      LR
      comp=Z,710nm,16.1s
KLR   Kul'dur           27.90  13    LR      LR      20 01 01.1
      comp=Z,454nm,21.8s,baz=222,slow=36
KLR   Kul'dur           27.90  13c iP        P       19 50 00.5  +0.1
KLR                                  pmax    pmax
      comp=Z,37nm,0.9s
HEH   HeiHe             28.20   7  eP        P       19 50 03.8  +0.8
HEH                                  pP      sP      19 50 13.0  +0.9
HEH                                  S       S       19 54 51.5  +4.5
HEH                                  pmax    pmax
      comp=Z,32nm,1.4s
HEH                                  pmax    pmax
      comp=Z,240nm,5.2s
HEH                                  LR      LR
      comp=Z,890nm,15.6s
HEH                                  LR      LR
      comp=Z,900nm,13.1s
HEH                                  LR      LR
      comp=Z,1μm,13.4s
ULN   Ulaanbaatar       28.36 338    P       P       19 50 04.5  -0.2
ULN   Ulaanbaatar       28.36 338    P       P       19 50 04.5  -0.2
ULN                                  pmax    pmax
      comp=Z,10.0nm,0.8s
SONM  Songino Array     28.57 337    P       P       19 50 06.3  -0.2
SONM  Songino Array     28.57 337    P       P       19 50 06.5   0.0
      comp=Z,6.2nm,0.9s,baz=152,slow=9.7,SNR=9.0
SONM                                 PcP     PcP     19 53 17.7  +0.3
      comp=Z,1.8nm,1.0s,baz=158,slow=4.2,SNR=1.8
SONM                                 LR      LR      20 02 53.1
      comp=Z,924nm,18.1s,baz=148,slow=39
      comp=Z,6.2nm,0.9s
LSA   Lhasa             29.02 291            P       19 50 11.2  +0.1
LSA   Lhasa             29.02 291    P       P       19 50 13.0  +1.9
LSA                                  LR      LR
      comp=Z,890nm,17.6s
LSA                                  LR      LR
      comp=Z,320nm,15.1s
LSA   Lhasa             29.02 291    P       P       19 50 11.2  +0.1
LSA                                  pmax    pmax
      comp=Z,13nm,0.8s
YSS   Yuzhno-Sakhali    29.59  29    P       P       19 50 16.0  +0.6
YSS   Yuzhno-Sakhali    29.59  29    P       P       19 50 17.6  +2.2
YSS   Yuzhno-Sakhali    29.59  29ceP         P       19 50 17.0  +1.6
YSS                                e                 19 51 24.5
YSS                                eS        S       19 55 14.0  +5.1
YSS                                  pmax    pmax
      comp=Z,160nm,1.0s
YSS                                  pmax    pmax
      comp=Z,200nm,3.0s
YSS                                  MLR     MLR
      comp=Z,500nm,15.0s
YSS                                  MLR     MLR
      comp=N,500nm,14.0s
YSS                                  MLR     MLR
      comp=E,300nm,14.0s
PMBI  Palembang         30.41 217    P       P       19 50 23.1  +0.1
CIT   Chita             30.48 349  eP        P       19 50 24.4  +1.1
CIT                                e                 19 50 35.8
CIT                                e                 19 51 24.8
CIT                                e                 19 51 38.0
CIT                                e                 19 55 28.0
CIT                                  pmax    pmax
      comp=Z,52nm,2.4s
MMRI  Maumere           30.71 180            P       19 50 24.7  -0.9
MMRI  Maumere           30.71 180    P       P       19 50 26.8  +1.2
SMRI  Semarang          31.42 203    P       P       19 50 32.5  +0.7
SMRI  Semarang          31.42 203    P       P       19 50 33.2  +1.4
ZEA   Zeya              31.63   5  eP        P       19 50 34.3  +1.0
ZEA                                  pmax    pmax
      comp=Z,100nm,2.4s
ZEA                                  pmax    pmax
      comp=N,20nm,1.3s
ZEA                                  pmax    pmax
      comp=Z,40nm,1.1s
ZEA                                  MLR     MLR
      comp=E,300nm,13.0s
ZEA                                  MLR     MLR
      comp=N,300nm,15.0s
ZEA                                  MLR     MLR
      comp=Z,400nm,14.0s
GSI   Gunungsitoli      31.92 233    P       P       19 50 35.8  -0.5
GSI                                  IAmb    IAmb    19 51 41.1
      comp=Z,63nm,1.5s
UGM   Wanagama          32.19 203    P       P       19 50 38.7  +0.1
MNAI  Manna             32.61 218    P       P       19 50 42.8  +0.5
TYV   Tymovskoe         32.62  24  eP        P       19 50 44.3  +2.3
TYV                                eS        S       19 56 05.0  +8.9
TYV                                  pmax    pmax
      comp=Z,20nm,1.4s
TYV                                  pmax    pmax
      comp=Z,100nm,2.9s
TYV                                  smax    smax
      comp=N,300nm,5.5s
TYV                                  smax    smax
      comp=E,300nm,5.5s
EVN   Everest           32.67 287    P       P       19 50 44.2  +0.7
BBJI  Bungbulang        32.91 208    P       P       19 50 46.1  +1.1
IRK   Irkutsk           33.04 339  eP        P       19 50 42.7  -3.0
IRK                                  pmax    pmax
      comp=Z,21nm,2.1s
MOY   Mondy             33.72 336  eP        P       19 50 51.1  -0.7
MOY                                  pmax    pmax
      comp=Z,16nm,1.3s
WMQ   Urumqi            35.81 315  eP        P       19 51 11.5  +1.6
WMQ                                  LR      LR
      comp=Z,2μm,13.1s
WMQ                                  LR      LR
      comp=Z,760nm,11.1s
WMQ                                  LR      LR
      comp=Z,360nm,15.1s
MTN   Manton Dam        35.92 165    P       P       19 51 08.3  -2.7
MTN                                  IAmb    IAmb    19 51 38.2
      comp=Z,56nm,1.6s
MTN   Manton Dam        35.92 165    P       P       19 51 08.9  -2.1
      comp=Z,28nm,1.6s
KDU   Kakadu            36.11 163    P       P       19 51 07.2  -5.3
KDU   Kakadu            36.11 163    P       P       19 51 11.3  -1.2
PATS  Pohnpei           37.83 108    P       P       19 51 25.8  -1.5
      comp=Z,87nm,1.3s
PATS  Pohnpei           37.83 108    P       P       19 51 28.6  +1.3
KNRA  Kununurra         38.22 170    P       P       19 51 28.9  -1.5
KNRA  Kununurra         38.22 170    P       P       19 51 28.4  -2.1
      comp=Z,21nm,1.4s
SKR   Severo-Kuril's    38.64  34  eP        P       19 51 35.3  +1.6
SKR                                eS        S       19 57 29.7  +1.2
SKR                                  pmax    pmax
      comp=Z,96nm,0.8s
SKR                                  MLR     MLR
      comp=Z,400nm,19.0s
ZSN   Zaisan            39.19 319  eP        P       19 51 39.1  +0.7
ZSN   Zaisan            39.19 319  eP        P       19 51 39.2  +0.8
RABL  Rabaul            39.20 129    P       P       19 51 38.1  -0.8
RABL                                 IAmb    IAmb    19 51 45.5
      comp=Z,83nm,1.5s
YAK   Yakutsk           40.05   5    P       P       19 51 44.8  -0.5
YAK   Yakutsk           40.05   5  eP        P       19 51 45.8  +0.5
YAK                                e*PP      pP      19 51 51.3  -0.5
YAK                                e                 19 53 19.4
YAK                                eS        S       19 57 55.4  +6.1
YAK                                e*SS      sS      19 58 02.4  +2.3
YAK                                eSS       SS      20 00 45.9  -1.0
YAK                                  pmax    pmax
      comp=Z,108nm,1.3s
YAK                                  pmax    pmax
      comp=E,12nm,1.2s
YAK                                  pmax    pmax
      comp=N,58nm,1.3s
YAK                                  pmax    pmax
      comp=Z,14nm,1.1s
YAK                                  pmax    pmax
      comp=E,18nm,1.5s
YAK                                  pmax    pmax
      comp=N,31nm,2.1s
YAK                                  smax    smax
      comp=E,73nm,3.5s
YAK                                  smax    smax
      comp=N,34nm,1.9s
YAK                                  MLR     MLR
      comp=Z,399nm,12.0s
YAK                                  MLR     MLR
      comp=N,341nm,14.0s
YAK                                  MLR     MLR
      comp=E,230nm,12.0s
FITZ  Fitzroy Crossi    40.24 175    P       P       19 51 44.9  -2.5
FITZ  Fitzroy Crossi    40.24 175    P       P       19 51 45.0  -2.4
      comp=Z,3.5nm,0.9s
FITZ  Fitzroy Crossi    40.24 175    P       P       19 51 45.7  -1.6
MK31  Makanchi Array    40.51 317d iP        P       19 51 50.0  +0.6
MK31                                 pmax    pmax
      comp=Z,50nm,1.0s
MKAR  Makanchi Array    40.51 317    P       P       19 51 49.6  +0.1
MKAR  Makanchi Array    40.51 317    P       P       19 51 50.2  +0.8
      comp=Z,22nm,0.8s,baz=112,slow=9.9,SNR=71
MKAR                                 ScP     ScP     19 57 39.5  +0.1
      comp=Z,0.7nm,0.9s,baz=104,slow=4.6,SNR=2.3
      comp=Z,22nm,0.8s
MAKZ  Makanchi          40.71 317    P       P       19 51 51.6  +0.6
MAKZ                                 IAmb    IAmb    19 51 53.0
      comp=Z,35nm,0.8s
MAKZ  Makanchi          40.71 317    P       P       19 51 51.7  +0.6
PEA0B Petropavlovsk-    40.84  32    P       P       19 51 52.3  +0.3
PEA0B                                IAmb    IAmb    19 52 31.7
      comp=Z,93nm,1.7s
PEA0B Petropavlovsk-    40.84  32    P       P       19 51 52.3  +0.3
PEA0B                                pmax    pmax
      comp=Z,93nm,1.7s
PETK  Petropavlovsk-    40.84  32    P       P       19 51 52.1  +0.2
PETK  Petropavlovsk-    40.84  32    P       P       19 51 51.9   0.0
      comp=Z,9.5nm,0.9s,baz=169,slow=3.7,SNR=26
      comp=Z,9.5nm,0.9s
PETK  Petropavlovsk-    40.84  32    P       P       19 51 52.2  +0.2
PDGK  Podgornoye        41.20 311    P       P       19 51 55.1  -0.2
PET   Petropavlovsk     41.26  33    P       P       19 51 56.4  +1.0
PET   Petropavlovsk     41.26  33  eP        P       19 51 54.6  -0.8
PET                                eS        S       19 58 05.8  -1.9
PET                                  pmax    pmax
      comp=Z,34nm,0.9s
PET                                  MLR     MLR
      comp=Z,200nm,17.0s
PET                                  MLR     MLR
      comp=Z,300nm,15.0s
PET   Petropavlovsk     41.26  33    P       P       19 51 54.9  -0.5
      comp=Z,33nm,0.7s
COEN  Coen              41.35 149    P       P       19 51 57.0  +0.5
COEN                                 IAmb    IAmb    19 51 58.8
      comp=Z,61nm,0.8s
COEN  Coen              41.35 149    P       P       19 51 56.8  +0.3
      comp=Z,100nm,1.1s
COEN  Coen              41.35 149    P       P       19 51 57.5  +0.9
HYB   Hyderabad         41.45 271  eP        P       19 51 58.8  +1.3
HYB                                ePP       PP      19 53 34.3  +0.8
HYB                                eS        S       19 58 13.2  +1.7
UZB   Uzynbulak         41.48 311  eP        P       19 51 58.2  +0.7
UZB   Uzynbulak         41.48 311  eP        P       19 51 58.3  +0.7
H11N1 WAKE ISLAND Hy    41.48  85    T       T       20 36 12.0
      baz=282
H11N2 WAKE ISLAND Hy    41.48  85    T       T       20 36 11.1
      baz=282
H11N3 WAKE ISLAND Hy    41.49  85    T       T       20 36 12.9
      baz=282
H11S3 WAKE ISLAND Hy    41.55  87    T       T       20 36 11.3
      baz=283
H11S1 WAKE ISLAND Hy    41.55  87    T       T       20 36 14.8
      baz=283
H11S2 WAKE ISLAND Hy    41.56  87    T       T       20 36 18.1
      baz=283
PRZ   Przheval'sk       41.74 309            P       19 52 00.9  +1.1
PRZ                                  IAmb    IAmb    19 52 03.1
      comp=Z,31nm,1.0s
PRZ   Przheval'sk       41.74 309    P       P       19 52 00.9  +1.1
PRZ                                  pmax    pmax
      comp=Z,31nm,1.0s
KPKS  Kokpek            41.80 311  eP        P       19 52 00.8  +0.7
KPKS  Kokpek            41.80 311  eP        P       19 52 00.9  +0.7
TARG  Taragay, Kyrgy    41.99 308    P       P       19 52 02.9  +0.8
TARG  Taragay, Kyrgy    41.99 308    P       P       19 52 02.9  +0.8
TARG                                 pmax    pmax
      comp=Z,33nm,1.4s
MA2   Magadan           42.33  21    P       P       19 52 04.5  +0.4
MA2                                  IAmb    IAmb    19 52 09.6
      comp=Z,28nm,1.0s
MA2   Magadan           42.33  21    P       P       19 52 06.4  +2.3
MA2   Magadan           42.33  21ceP         P       19 52 04.6  +0.5
MA2                                  pmax    pmax
      comp=Z,52nm,1.7s
MA2   Magadan           42.33  21    P       P       19 52 04.3  +0.2
      comp=Z,452nmcomp=Z,36nm,1.3s
TDK   Taldyqorghan      42.43 313  eP        P       19 52 05.9  +0.7
TDK                                  pmax    pmax
      comp=Z,38nm,0.9s
TDK   Taldyqorghan      42.43 313  eP        P       19 52 06.0  +0.7
      comp=Z,38nm,0.9s
ZAA0  Zalesovo Array    42.47 328            P       19 52 05.0  -0.4
ZAA0                                 IAmb    IAmb    19 52 06.2
      comp=Z,43nm,0.8s
ZALV  Zalesovo Beam     42.47 328            P       19 52 05.0  -0.3
ZALV  Zalesovo Beam     42.47 328    P       P       19 52 05.2  -0.1
      comp=Z,40nm,0.8s,baz=110,slow=8.1,SNR=110
ZALV                                 LR      LR      20 10 45.0
      comp=Z,320nm,19.4s,baz=122,slow=38
      comp=Z,40nm,0.8s
KDJ   Kajisay           42.53 309            P       19 52 06.6  +0.3
KDJ   Kajisay           42.53 309    P       P       19 52 06.6  +0.3
KDJ                                  pmax    pmax
      comp=Z,23nm,0.9s
ARXS  Arharly           42.60 312  eP        P       19 52 06.8  +0.1
KSH   Kashi             42.91 305    P       P       19 52 13.3  +4.0
KSH                                  sP      pwP     19 52 22.8  +0.5
KSH                                  pmax    pmax
      comp=Z,27nm,0.9s
KSH                                  pmax    pmax
      comp=Z,120nm,6.2s
KSH                                  LR      LR
      comp=Z,940nm,15.1s
KSH                                  LR      LR
      comp=Z,280nm,16.5s
KSH                                  LR      LR
      comp=Z,550nm,13.1s
AAA   Alma-Ata          42.98 310  eP        P       19 52 10.4  +0.7
AAA                                  pmax    pmax
      comp=Z,10.0nm,0.6s
AAA   Alma-Ata          42.98 310  eP        P       19 52 10.5  +0.7
      comp=Z,10nm,0.6s
ULHL  Ulahol            43.24 309    P       P       19 52 13.6  +1.6
      SNR=15
NRN   Naryn             43.24 307            P       19 52 13.1  +0.9
NRN                                  IAmb    IAmb    19 52 14.8
      comp=Z,48nm,0.8s
NRN   Naryn             43.24 307    P       P       19 52 13.1  +0.9
NRN                                  pmax    pmax
      comp=Z,48nm,0.8s
WB0   Warramunga Arr    43.38 163            P       19 52 11.4  -1.6
BOOM  Boomskoye usch    43.51 309            P       19 52 14.4  +0.2
BOOM  Boomskoye usch    43.51 309    P       P       19 52 14.4  +0.2
BOOM                                 pmax    pmax
      comp=Z,11nm,0.8s
WRAB  Tennant Creek     43.53 164⇓eP         P       19 52 13.4  -0.8
WRAB                                 pmax    pmax
      comp=Z,8.0nm,0.9s
WRA   Warramunga Arr    43.54 164    P       P       19 52 13.6  -0.7
WRA   Warramunga Arr    43.54 164    P       P       19 52 12.8  -1.5
      comp=Z,5.6nm,0.6s,baz=344,slow=9.3,SNR=32
      comp=Z,5.6nm,0.6s
WRA   Warramunga Arr    43.54 164    P       P       19 52 13.6  -0.7
WRA                                  pmax    pmax
      comp=Z,1.0nm,1.2s
KUU   Kurty             43.55 311  eP        P       19 52 15.0  +0.7
KUU                                  pmax    pmax
      comp=Z,23nm,1.2s
KUU   Kurty             43.55 311  eP        P       19 52 15.1  +0.7
      comp=Z,23nm,1.2s
WB1   Warramunga Ar.    43.55 164    P       P       19 52 13.2  -1.3
PSA00 Pilbara Seismi    43.65 183    P       P       19 52 13.3  -1.8
PSA00 Pilbara Seismi    43.65 183    P       P       19 52 13.0  -2.1
      comp=Z,32nm,1.2s
PSA00 Pilbara Seismi    43.65 183    P       P       19 52 16.6  +1.4
TKM2  Tokmak 2          43.85 309    P       P       19 52 18.4  +1.4
      SNR=34
TKM2  Tokmak 2          43.85 309  i P       P       19 52 17.7  +0.8
TKM2                                 pmax    pmax
      comp=Z,37nm,0.9s
KBK   Karagaybulak      44.26 309    P       P       19 52 21.9  +1.7
      SNR=7.5
KURK  Kurchatov         44.29 321    P       P       19 52 19.9  -0.2
KURK                                 IAmb    IAmb    19 52 21.4
      comp=Z,25nm,0.7s
KURK  Kurchatov         44.29 321    P       P       19 52 20.6  +0.5
KURBB Kurchatov Arra    44.31 321    P       P       19 52 20.6  +0.4
      comp=Z,21nm,0.6s,baz=114,slow=8.3,SNR=102
      comp=Z,21nm,0.6s
KURBB Kurchatov Arra    44.31 321    P       P       19 52 20.3  +0.1
CHMS  Chumysh           44.48 309    P       P       19 52 23.0  +1.3
      SNR=5.3
UCH   Uchtor            44.49 308    P       P       19 52 24.6  +2.2
      SNR=8.3
NIL   Nilore            44.53 296            P       19 52 22.5  +0.2
NIL                                  IAmb    IAmb    19 52 24.1
      comp=Z,43nm,0.9s
NIL   Nilore            44.53 296    P       P       19 52 22.5  +0.2
NIL                                  pmax    pmax
      comp=Z,43nm,1.0s
AAK   Ala-Archa         44.59 309    P       P       19 52 23.5  +0.7
      SNR=6.7
AAK   Ala-Archa         44.59 309    P       P       19 52 23.2  +0.4
AAK   Ala-Archa         44.59 309    LR      LR      20 13 47.2
      comp=Z,425nm,18.3s,baz=96,slow=40
AAK   Ala-Archa         44.59 309deP         P       19 52 23.9  +1.1
AAK                                  pmax    pmax
      comp=Z,20nm,1.3s
SGDS  Sogindy           44.66 310  eP        P       19 52 23.8  +0.6
USP   Ospenovka         44.71 310    P       P       19 52 24.6  +0.9
      SNR=12
AML   Almayashu         45.07 308    P       P       19 52 28.8  +1.8
      SNR=30
EKS2  Erkin-Say         45.11 309    P       P       19 52 28.1  +1.2
      SNR=14
SEY   Seymchan          45.40  19    LR      LR      20 12 32.1
      comp=Z,303nm,18.9s,baz=216,slow=38
SEY   Seymchan          45.40  19⇑eP         P       19 52 28.8  +0.1
SEY                                  pmax    pmax
      comp=Z,15nm,1.3s
BTLS  Baital            45.42 312  eP        P       19 52 29.8  +0.6
BTLS  Baital            45.42 312  eP        P       19 52 29.8  +0.6
ARSB  Arslanbob         45.46 307    P       P       19 52 30.6  +0.9
ARSB                                 IAmb    IAmb    19 52 32.1
      comp=Z,33nm,1.3s
ARSB  Arslanbob         45.46 307    P       P       19 52 30.6  +0.9
ARSB                                 pmax    pmax
      comp=Z,33nm,1.3s
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MTSU  Mount Surprise    45.51 150   P       P       19 52 31.4 +1.3
      comp=Z,53nm,0.7s
MTSU  Mount Surprise    45.51 150   P       P       19 52 31.9 +1.8
QIS   Mount Isa         45.75 157   P       P       19 52 31.7 -0.3
      comp=Z,150nm,0.8s
QIS   Mount Isa         45.75 157   P       P       19 52 32.3 +0.3
DRK   Karamyk           46.11 304   P       P       19 52 35.6 +0.6
DRK   Karamyk           46.11 304   P       P       19 52 35.6 +0.6
DRK                                 pmax    pmax
      comp=Z,70nm,1.6s
DZA   Taraz             46.92 308  eP       P       19 52 41.8 +0.8
DZA                                 pmax    pmax
      comp=Z,5.0nm,0.6s
DZA   Taraz             46.92 308  eP       P       19 52 41.9 +0.8
      comp=Z,5.3nm,0.6s
AS31  Alice Springs     47.00 166           P       19 52 40.9 -0.9
AS31  Alice Springs     47.00 166   P       P       19 52 41.5 -0.3
      comp=Z,5.6nm,0.7s
ASAR  Alice Springs     47.00 166   P       P       19 52 40.7 -1.1
ASAR  Alice Springs     47.00 166   P       P       19 52 41.0 -0.8
      comp=Z,4.1nm,0.5s,baz=351,slow=12,SNR=81
      comp=Z,4.1nm,0.5s
ASAR  Alice Springs     47.00 166   P       P       19 52 41.0 -0.8
AS01  Alice Springs     47.01 166   P       P       19 52 41.9  0.0
GAR   Garm              47.21 303           P       19 52 43.9 +0.4
WRKA  Warakurna         47.37 173   P       P       19 52 42.6 -2.0
      comp=Z,9.5nm,0.8s
KK31  Karatay Array     47.55 309  i P      P       19 52 47.0 +1.1
KKAR  Karatay Array     47.55 309   P       P       19 52 46.1 +0.2
KKAR  Karatay Array     47.55 309           P       19 52 46.4 +0.4
KKAR                                IAmb    IAmb    19 52 47.8
      comp=Z,16nm,0.9s
KKAR  Karatay Array     47.55 309   P       P       19 52 46.4 +0.4
KKAR                                pmax    pmax
      comp=Z,16nm,1.0s
BRZS  Berezniki         47.62 318  eP       P       19 52 46.7 +0.4
BRZS  Berezniki         47.62 318  eP       P       19 52 46.7 +0.4
IUG   Iuzhnay           47.76 307  eP       P       19 52 48.6 +0.9
IUG                                 pmax    pmax
      comp=Z,8.0nm,0.8s
IUG   Iuzhnay           47.76 307  eP       P       19 52 48.6 +0.9
      comp=Z,7.6nm,0.8s
BRLS  Borolday          48.03 308  eP       P       19 52 50.9 +1.3
BRLS  Borolday          48.03 308  eP       P       19 52 50.9 +1.3
KBL   Kabul             48.03 297   P       P       19 52 50.5 +0.5
KBL                                 IAmb    IAmb    19 52 52.3
      comp=Z,26nm,0.9s
KBL   Kabul             48.03 297   P       P       19 52 50.5 +0.5
KBL                                 pmax    pmax
      comp=Z,26nm,0.9s
CTAO  Charters Tower    48.10 149   P       P       19 52 51.1 +0.8
CTAO                                IAmb    IAmb    19 52 52.4
      comp=Z,17nm,0.7s
CTAO  Charters Tower    48.10 149   P       P       19 52 51.3 +0.9
CTAO  Charters Tower    48.10 149   P       P       19 52 51.1 +0.8
CTAO                                pmax    pmax
      comp=Z,17nm,0.7s
CHM   Chimkent          48.10 307  eP       P       19 52 50.9 +0.7
CHM   Chimkent          48.10 307  eP       P       19 52 50.1 -0.1
SIMJ  Simiganj          48.20 302   P       P       19 52 50.9 -0.3
SIMJ                                IAmb    IAmb    19 53 27.8
      comp=Z,18nm,1.3s
HNR   Honiara           48.42 127   LR      LR      20 11 50.5
      comp=Z,97nm,19.7s,baz=248,slow=34
MEEK  Meekatharra       48.76 185   P       P       19 52 52.6 -2.7
TIXI  Tiksi             49.54   3   P       P       19 53 01.1 +0.4
TIXI  Tiksi             49.54   3   LR      LR      20 15 35.8
      comp=Z,671nm,21.3s,baz=197,slow=38
TIXI  Tiksi             49.54   3   P       P       19 53 01.1 +0.4
TIXI                                pmax    pmax
      comp=Z,58nm,1.3s
BVA0  Borovoye Array    49.88 321  i P      P       19 53 03.6  0.0
BVAR  Borovoye Array    49.88 321   P       P       19 53 04.1 +0.5
      comp=Z,10nm,0.5s,baz=103,slow=8.6,SNR=48
BVAR                                ScP     ScP     19 58 17.4 -0.4
      comp=Z,1.4nm,1.0s,baz=85,slow=3.0,SNR=3.3
BVAR                                LR      LR      20 13 51.4
      comp=Z,217nm,18.4s,baz=100,slow=36
      comp=Z,10nm,0.5s
BRVK  Borovoye          49.95 321   P       P       19 53 04.4 +0.2
BRVK                                IAmb    IAmb    19 53 16.4
      comp=Z,19nm,0.7s
BRVK  Borovoye          49.95 321 deP       P       19 53 04.4 +0.2
BRVK                                pmax    pmax
      comp=Z,19nm,0.9s
MORW  Morawa            51.41 187   P       P       19 53 13.3 -2.0
      comp=Z,40nm,0.9s
MORW  Morawa            51.41 187   P       P       19 53 14.2 -1.2
NRIK  Noril'sk          51.54 345   P       P       19 53 15.5 -0.4
NRIK                                IAmb    IAmb    19 53 17.5
      comp=Z,33nm,1.1s
NRIK  Noril'sk          51.54 345   P       P       19 53 16.3 +0.4
      comp=Z,26nm,1.0s,baz=130,slow=8.6,SNR=13
NRIK                                LR      LR      20 16 15.6
      comp=Z,230nm,19.5s,baz=144,slow=37
      comp=Z,26nm,1.0s
QLP   Quilpie           52.95 155   P       P       19 53 26.2 -0.7
      comp=Z,90nm,0.9s
QLP   Quilpie           52.95 155   P       P       19 53 27.6 +0.7
BILL  Bilibino          53.10  19   P       P       19 53 28.3 +0.8
BILL                                IAmb    IAmb    19 53 43.1
      comp=Z,25nm,1.0s
BILL  Bilibino          53.10  19 deP       P       19 53 28.6 +1.1
BILL                                pmax    pmax
      comp=Z,16nm,1.0s
KLBR  Kellerberrin      53.74 185   P       P       19 53 31.8 -0.8
EIDS  Eidsvold          54.91 148   P       P       19 53 41.2  0.0
EIDS                                IAmb    IAmb    19 53 43.1
      comp=Z,20nm,0.8s
EIDS  Eidsvold          54.91 148   P       P       19 53 41.0 -0.2
      comp=Z,28nm,0.5s
EIDS  Eidsvold          54.91 148   P       P       19 53 42.0 +0.8
AB31  Akbulak array     55.60 315           P       19 53 46.3 +0.3
AB31                                IAmb    IAmb    19 53 47.0
      comp=Z,9.2nm,0.6s
AB31  Akbulak array     55.60 315  i P      P       19 53 46.0  0.0
ABKAR Akbulak array     55.60 315           P       19 53 46.4 +0.4
SVE   Sverdlovsk        56.26 324ceP        P       19 53 51.1 +0.5
SVE                                 pmax    pmax
      comp=Z,29nm,0.9s
BBOO  Buckleboo         56.30 166   P       P       19 53 50.2 -0.9
BBOO  Buckleboo         56.30 166   P       P       19 53 50.1 -0.9
      comp=Z,54nm,0.9s
BBOO  Buckleboo         56.30 166   P       P       19 53 51.3 +0.2
STKA  Stephens Creek    56.88 161   P       P       19 53 55.0 -0.2
STKA  Stephens Creek    56.88 161   P       P       19 53 54.9 -0.3
      comp=Z,100nm,1.1s
STKA  Stephens Creek    56.88 161   P       P       19 53 55.3 +0.1
      comp=Z,17nm,0.9s,baz=337,slow=7.8,SNR=13
      comp=Z,17nm,0.9s
STKA  Stephens Creek    56.88 161   P       P       19 53 55.7 +0.5
AKTO  Aktyubinsk        56.94 317   P       P       19 53 54.5 -1.1
ARTI  Arti              57.41 324           P       19 53 58.6 -0.2
ARTI  Arti              57.41 324d iP       P       19 53 58.4 -0.4
ARTI                                                19 54 48.8
ARTI                                S       S       20 01 57.7 +3.8
ARTI                                                20 03 45.6
ARTI                                SS      SS      20 05 37.6 -5.8
ARTI                                pmax    pmax
      comp=Z,16nm,0.7s
CMSA  Cobar Meteorol    57.96 157   P       P       19 54 03.4 +0.6
      comp=Z,98nm,0.9s
CMSA  Cobar Meteorol    57.96 157   P       P       19 54 04.0 +1.2
SPIA  Saint Paul Isl    59.30  36   P       P       19 54 09.1 -2.8
      baz=264
ARMA  Armidale          59.42 151   P       P       19 54 14.5 +1.3
GAMB  Gambell           59.61  28   P       P       19 54 11.9 -2.0
      baz=258
P08K  Saint George I    59.62  36   P       P       19 54 12.4 -1.7
      baz=265
NIKH  Nikolski High     59.77  41   P       P       19 54 13.3 -2.0
      baz=267
UNV   Unalaska Valle    61.21  40   P       P       19 54 23.1 -1.9
      baz=269
YNG   Young             61.44 156   P       P       19 54 27.8 +1.0
      comp=Z,65nm,1.3s
DZM   Mont Dzumac       61.50 133   P       P       19 54 26.4 -1.1
DZM   Mont Dzumac       61.50 133  eLR      LR      20 12 34.0
      comp=Z,236nm,24.1s
TNA   Tin City          61.53  26   P       P       19 54 25.7 -1.3
      baz=261
M11K  Mekoryuk          61.70  32   P       P       19 54 26.5 -1.8
      baz=265
F14K  Arctic Creek      62.18  27   P       P       19 54 29.1 -2.3
      baz=263
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ANM   Nome              62.47  28   P       P       19 54 30.7 -2.6
      baz=264
K13K  Kusilvak Mount    62.57  31   P       P       19 54 32.5 -1.5
      baz=266
CAN   Canberra          62.57 156           P       19 54 35.6 +1.2
CAN   Canberra          62.57 156   P       P       19 54 36.5 +2.1
CAN   Canberra          62.57 156   P       P       19 54 35.6 +1.2
CAN                                 pmax    pmax
      comp=Z,31nm,0.8s
CNB   Canberra Magne    62.71 155   P       P       19 54 37.1 +1.8
F15K  North Star Dit    62.90  26   P       P       19 54 36.9 +0.7
F15K                                IAmb    IAmb    19 54 42.5
      comp=Z,21nm,1.0s
F15K  North Star Dit    62.90  26   P       P       19 54 34.1 -2.1
      baz=264
C16K  Lisburne Hills    62.94  23   P       P       19 54 35.0 -1.4
      baz=262
FALS  False Pass        63.02  39   P       P       19 54 35.1 -2.0
      baz=271
G15K  Niukluk           63.08  27   P       P       19 54 35.7 -1.7
      baz=265
M13K  Dall Lake         63.12  32   P       P       19 54 36.5 -1.2
      baz=268
J14K  Nanvaranak Lak    63.13  30   P       P       19 54 36.5 -1.3
      baz=266
L14K  Kuka Creek        63.48  31           P       19 54 41.6 +1.5
L14K  Kuka Creek        63.48  31   P       P       19 54 38.9 -1.2
      baz=268,SNR=18
D17K  Noatak River      63.71  24   P       P       19 54 40.6 -1.0
      baz=264
C17K  DeLong Mountai    63.76  23   P       P       19 54 40.9 -1.0
      baz=264
S12K  Black Hills       63.78  38   P       P       19 54 41.1 -1.1
      baz=271
M14K  Bethel            63.81  32   P       P       19 54 40.7 -1.6
      baz=269,SNR=5.3
RDOG  Red Dog Mine      63.81  24   P       P       19 54 40.8 -1.4
      baz=264
G16K  Koyuk River       63.82  27   P       P       19 54 40.3 -2.0
      baz=266
H16K  Elim              63.83  28   P       P       19 54 41.0 -1.4
      baz=267
N14K  Kuskokwak Cree    63.94  33   P       P       19 54 41.8 -1.4
      baz=270
K15K  Wolf Creek Mou    64.05  30           P       19 54 45.5 +1.6
K15K                                IAmb    IAmb    19 54 50.3
      comp=Z,10nm,0.8s
K15K  Wolf Creek Mou    64.05  30   P       P       19 54 42.6 -1.2
      baz=269
L15K  Ungalak Mounta    64.06  31   P       P       19 54 42.5 -1.5
      baz=269
E17K  Hotham Inlet      64.15  25   P       P       19 54 43.7 -0.8
      baz=266
O14K  Tigyukauivet M    64.15  34   P       P       19 54 42.8 -1.7
      baz=270
F17K  Baldwin Pennin    64.34  26   P       P       19 54 44.5 -1.1
      baz=267
B18K  Kokolik River     64.34  22   P       P       19 54 44.5 -1.2
      baz=265
AKT   Akhty             64.39 307  eP       P       19 54 45.8 -0.8
AKT                                e                19 55 17.7
AKT                                 pmax    pmax
      comp=Z,13nm,1.0s
M15K  Kasigluk River    64.44  32   P       P       19 54 45.0 -1.4
      baz=270
I17K  Unalakleet        64.47  29   P       P       19 54 45.1 -1.5
      baz=269
C18K  Utukok River      64.50  23   P       P       19 54 45.5 -1.3
      baz=266
J16K  Anvik River       64.50  29           P       19 54 48.2 +1.5
J16K                                IAmb    IAmb    19 54 53.9
      comp=Z,11nm,1.0s
J16K  Anvik River       64.50  29   P       P       19 54 45.7 -1.1
      baz=269
G17K  Kiwalik Mounta    64.54  27   P       P       19 54 44.9 -2.1
      baz=268,SNR=14
E18K  Tukpahlearik C    64.64  25           P       19 54 49.0 +1.3
E18K                                IAmb    IAmb    19 55 08.6
      comp=Z,15nm,0.8s
E18K  Tukpahlearik C    64.64  25   P       P       19 54 45.6 -2.0
      baz=267
A19K  Wainwright        64.66  22   P       P       19 54 45.9 -1.8
      baz=265
SDPT  Sand Point        64.69  38   P       P       19 54 46.3 -1.8
      baz=273
N15K  Kwethluk River    64.74  33   P       P       19 54 47.0 -1.4
      baz=271,SNR=12
H17K  Granite Mounta    64.83  27   P       P       19 54 47.9 -1.1
      baz=269,SNR=12
O15K  Ungalikthiuk R    64.90  34   P       P       19 54 46.7 -2.8
      baz=272
F18K  Selawik           64.98  26   P       P       19 54 48.0 -1.9
      baz=268,SNR=13
L16K  Owhat River       65.02  31   P       P       19 54 48.1 -2.0
      baz=271
C19K  Lookout Ridge     65.11  23   P       P       19 54 49.5 -1.3
      baz=267
S14K  Fog Glacier       65.16  37   P       P       19 54 49.3 -2.1
      baz=273
J17K  VABM Dome         65.19  29   P       P       19 54 49.8 -1.4
      baz=270,SNR=23
CHNA  Chernabura Isl    65.23  39   P       P       19 54 50.1 -1.6
      baz=274
M16K  Timber Creek      65.28  32           P       19 54 53.2 +1.3
M16K  Timber Creek      65.28  32   P       P       19 54 50.5 -1.4
      baz=271,SNR=20
G18K  Tagagawik         65.37  26   P       P       19 54 51.3 -1.2
      baz=269,SNR=6.0
N16K  Nishlik Lake      65.39  32   P       P       19 54 51.5 -1.2
      baz=272
H18K  Honhosa River     65.49  27   P       P       19 54 52.0 -1.2
      baz=270
K17K  Iditarod          65.55  30   P       P       19 54 53.1 -0.6
      baz=271,SNR=17
L17K  Donlin            65.57  30   P       P       19 54 52.7 -1.0
      baz=272,SNR=19
D19K  Kuna River        65.62  23   P       P       19 54 53.0 -1.1
      baz=269
F19K  Shaleruckik Mo    65.73  25   P       P       19 54 53.7 -1.0
      baz=270,SNR=5.6
O16K  Kokwok River B    65.77  33   P       P       19 54 53.0 -2.1
      baz=273
CHGN  Chignik           65.80  37   P       P       19 54 53.9 -1.3
      baz=274
P16K  Nushagak River    65.85  34   P       P       19 54 53.8 -1.7
      baz=273
E19K  Redstone River    65.94  25           P       19 54 57.4 +1.3
E19K                                IAmb    IAmb    19 55 10.2
      comp=Z,24nm,1.1s
E19K  Redstone River    65.94  25   P       P       19 54 55.4 -0.7
      baz=270,SNR=12
B20K  Meade River       65.99  22   P       P       19 54 55.4 -0.9
      baz=269
M17K  Holitna River     66.00  31   P       P       19 54 55.5 -1.1
      baz=273,SNR=9.1
G19K  Purcell Mounta    66.01  26   P       P       19 54 55.3 -1.3
      baz=271,SNR=6.9
GCSA  Galena City Sc    66.13  28   P       P       19 54 55.7 -1.6
      baz=272
N17K  Nushagak Hills    66.17  32   P       P       19 54 56.5 -1.2
      baz=273,SNR=11
D20K  Etivluk River     66.17  23   P       P       19 54 56.7 -0.9
      baz=270
A21K  Barrow            66.19  20   P       P       19 54 56.5 -1.1
      baz=269
J18K  Innoko River      66.25  29   P       P       19 54 56.8 -1.4
      baz=272
O17K  Koliganek Bris    66.26  33   P       P       19 54 56.6 -1.6
      baz=274,SNR=5.2
H19K  Roundabout Mou    66.29  27   P       P       19 54 57.4 -0.9
      baz=272,SNR=34
L18K  Granite Mounta    66.32  30   P       P       19 54 56.6 -1.9
      baz=273,SNR=15
E20K  Nigu River        66.33  24   P       P       19 54 57.0 -1.7
      baz=271,SNR=16
F20K  Avaraart Lake     66.54  25   P       P       19 54 58.5 -1.4
      baz=272,SNR=6.1
P17K  Kvichak River     66.64  34   P       P       19 54 58.5 -2.1
      baz=274
J19K  Poorman           66.71  28   P       P       19 54 59.4 -1.7
      baz=273,SNR=30
A22K  Sinclair Lake     66.73  21   P       P       19 54 59.9 -1.1
      baz=271
M18K  Stony River       66.77  31   P       P       19 54 60.0 -1.5
      baz=274,SNR=12
N18K  Kilae Creek       66.80  32   P       P       19 55 00.0 -1.7
      baz=274
R17L  Mt. Peulik Vol    66.81  35   P       P       19 55 00.3 -1.5
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      baz=275
C21K  Knifeblade Rid    66.83  23   P       P       19 54 59.3 -2.5
      baz=272
GNI   Garni             66.84 305   P       P       19 55 03.1 +0.6
GNI                                 IAmb    IAmb    19 55 44.2
      comp=Z,11nm,0.9s
GNI   Garni             66.84 305   P       P       19 55 03.1 +0.6
GNI                                 pmax    pmax
      comp=Z,11nm,0.9s
B21K  Ikpikpuk River    66.88  22           P       19 55 02.4 +0.4
B21K  Ikpikpuk River    66.88  22   P       P       19 55 00.1 -1.9
      baz=272
H20K  Anotleneega Mo    66.94  27   P       P       19 55 00.6 -1.9
      baz=273,SNR=9.8
Q17K  Contact Creek     67.00  35   P       P       19 55 00.4 -2.7
      baz=275
E21K  Killik River      67.15  23   P       P       19 55 02.0 -1.9
      baz=273,SNR=6.1
I20K  Naaghedeneel      67.16  27   P       P       19 55 01.8 -2.1
      baz=274,SNR=5.6
L19K  White Mountain    67.18  30   P       P       19 55 01.9 -2.2
      baz=274,SNR=22
O18K  Koktuh Hills      67.20  33   P       P       19 55 02.0 -2.3
      baz=275
P18K  Big Mountain,     67.24  33   P       P       19 55 01.9 -2.6
      baz=275
VRH   Novokhopyorsk     67.24 318  eP       P       19 55 04.1 -0.5
VRH                                 pmax    pmax
      comp=Z,20nm,1.0s
B22K  Teshekpuk Lake    67.26  21   P       P       19 55 02.8 -1.6
      baz=272
J20K  Nowinta River     67.34  28   P       P       19 55 03.2 -1.9
      baz=274,SNR=26
IMAR  Indian Mountai    67.38  26   P       P       19 55 06.3 +1.0
KLMR  Klimovskoe        67.39 328  eP       P       19 55 03.9 -1.5
KLMR                                pmax    pmax
      comp=Z,29nm,1.2s
CHIR  Chirikof Islan    67.40  37   P       P       19 55 06.5 +1.0
CHIR  Chirikof Islan    67.40  37   P       P       19 55 03.3 -2.3
      baz=276
F21K  Alatna River      67.40  25           P       19 55 07.2 +1.7
F21K  Alatna River      67.40  25   P       P       19 55 03.9 -1.5
      baz=274
M19K  Big River Lodg    67.42  31   P       P       19 55 03.9 -1.8
      baz=275
Q18K  Katmai Hardscr    67.42  34   P       P       19 55 03.4 -2.4
      baz=276
K20K  Telida            67.44  29   P       P       19 55 04.1 -1.6
      baz=275
G21K  Allakaket         67.44  26   P       P       19 55 04.1 -1.5
      baz=274
N19K  Bonanza Creek     67.47  32   P       P       19 55 04.3 -1.8
      baz=275
KBZ   Khabaz            67.57 310   P       P       19 55 07.5 +0.6
      comp=Z,5.4nm,0.9s,baz=56,slow=8.0,SNR=5.3
      comp=Z,5.4nm,0.9s
D22K  Ayikyak River     67.60  23   P       P       19 55 04.9 -1.7
      baz=274,SNR=6.3
L20K  Farewell, AK      67.61  30   P       P       19 55 04.7 -2.1
      baz=275,SNR=12
KIV   Kislovodsk        67.69 310           P       19 55 07.7 -0.1
KIV                                 IAmb    IAmb    19 55 34.9
      comp=Z,23nm,1.0s
KIV   Kislovodsk        67.69 310  ⇑P       P       19 55 07.8 +0.1
KIV   Kislovodsk        67.69 310  eP       P       19 55 08.1 +0.4
KIV                                 pmax    pmax
      comp=Z,15nm,1.1s
KIV                                 MLR     MLR
      comp=Z,175nm,17.0s
KIV   Kislovodsk        67.69 310   P       P       19 55 07.8 +0.1
      comp=Z,18nm,1.2s
H21K  Melozitna Rive    67.79  26   P       P       19 55 06.1 -1.8
      baz=275,SNR=39
R18K  Karluk            67.84  35   P       P       19 55 06.1 -2.1
      baz=277
F22K  John River        67.89  24   P       P       19 55 06.7 -1.8
      baz=275,SNR=6.6
E22K  Anaktuvuk Pass    67.97  24   P       P       19 55 06.8 -2.2
      baz=275,SNR=23
M20K  Styx River        68.01  31   P       P       19 55 06.6 -2.9
      baz=276
Q19K  Cape Douglas,     68.10  34   P       P       19 55 07.1 -2.9
      baz=277
SII   Sitkinak Islan    68.11  36   P       P       19 55 06.9 -3.1
      baz=277
P19K  Oil Pt            68.22  33   P       P       19 55 08.0 -2.7
      baz=277
C23K  Itkillik River    68.25  22   P       P       19 55 08.6 -2.1
      baz=275
D23K  Nanushuk River    68.31  23   P       P       19 55 09.5 -1.6
      baz=275,SNR=6.4
CAST  Castle Rocks      68.33  29           P       19 55 12.0 +0.7
CAST  Castle Rocks      68.33  29   P       P       19 55 09.6 -1.8
      baz=276,SNR=46
PPLA  Purkeypile        68.34  29   P       P       19 55 10.1 -1.5
      baz=276,SNR=6.2
H22K  Ishtalitna Cre    68.36  26   P       P       19 55 09.2 -2.3
      baz=276,SNR=46
GEVA  Gevas             68.47 304   P       P       19 55 11.9 -1.0
GEVA                                IAmb    IAmb    19 55 14.8
      comp=Z,16nm,0.9s
O20K  Slope Mountain    68.47  32   P       P       19 55 09.4 -2.9
      baz=277
OHAK  Old Harbor        68.51  36           P       19 55 12.7 +0.2
OHAK                                IAmb    IAmb    19 55 24.2
      comp=Z,17nm,1.0s
OHAK  Old Harbor        68.51  36   P       P       19 55 15.6 +3.1
OHAK  Old Harbor        68.51  36   P       P       19 55 10.0 -2.5
      baz=278
N20K  Mount Spurr       68.53  31   P       P       19 55 10.1 -2.7
      baz=277
SPCR  Spurr Chakacha    68.53  31   P       P       19 55 10.5 -2.2
      baz=277
COLD  Coldfoot          68.68  25   P       P       19 55 11.5 -1.9
      baz=277
MLY   Manley            68.72  27           P       19 55 14.4 +0.6
MLY                                 IAmb    IAmb    19 55 20.2
      comp=Z,19nm,0.8s
MLY   Manley            68.72  27   P       P       19 55 11.7 -2.1
      baz=277
BPAW  Bear Paw Mtn.     68.73  28   P       P       19 55 11.6 -2.2
      baz=277,SNR=29
TOLK  Toolik Lake Re    68.75  23   P       P       19 55 11.7 -2.2
      baz=277
SKT   Skwentna          68.75  30   P       P       19 55 11.2 -2.8
      baz=277,SNR=8.2
Q20K  Shuyak Island     68.78  34   P       P       19 55 11.7 -2.5
      baz=278
VORD  Divnogorie        68.79 318  eP       P       19 55 12.4 -1.9
VORD                                pmax    pmax
      comp=Z,7.0nm,1.0s
TAU   Tasmania Unive    68.79 161           P       19 55 15.8 +1.5
TAU   Tasmania Unive    68.79 161   P       P       19 55 15.8 +1.5
TAU                                 pmax    pmax
      comp=Z,132nm,1.5s
E23K  Chandalar         68.80  24   P       P       19 55 11.6 -2.6
      baz=277,SNR=9.1
KDAK  Kodiak Island     68.80  35           P       19 55 14.9 +0.6
KDAK  Kodiak Island     68.80  35   LR      LR      20 24 40.5
      comp=Z,64nm,21.6s,baz=272,slow=35
KDAK  Kodiak Island     68.80  35   P       P       19 55 14.9 +0.6
KDAK                                pmax    pmax
      comp=Z,79nm,1.8s
KDAK  Kodiak Island     68.80  35   P       P       19 55 11.8 -2.5
      baz=278
G23K  Bananza Creek     68.81  25   P       P       19 55 12.2 -2.1
      baz=277,SNR=24
VSR   Storozhevoye      68.82 318  eP       P       19 55 12.4 -2.2
VSR                                 pmax    pmax
      comp=Z,8.0nm,1.0s
KTH   Kantishna Hill    68.83  29   P       P       19 55 16.0 +1.5
KTH                                 IAmb    IAmb    19 55 28.2
      comp=Z,12nm,0.8s
ERBR  Yeremizino-Bor    68.92 312  eP       P       19 55 14.8 -0.5
ERBR                               eS       S       20 04 19.2 +1.2
ERBR                                pmax    pmax
      comp=Z,24nm,0.9s
C24K  Franklin Bluff    68.93  22   P       P       19 55 12.8 -2.1
      baz=277
LABN  Labinsk           68.95 311  eP       P       19 55 15.3 -0.2
LABN                               eS       S       20 04 21.6 +3.1
LABN                                pmax    pmax
      comp=Z,23nm,0.8s
LABN                                MLR     MLR
      comp=Z,302nm,13.0s
D24K  Happy Valley      68.95  23   P       P       19 55 13.1 -2.0
      baz=277
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MOS	Moscow	69.01	323	eP	P	19 55 13.8	-1.9
MOS				e		19 55 23.7	
MOS				pmax	pmax		
	comp=Z,25nm,0.9s						
HOM	Homer	69.02	33	P	P	19 55 14.0	-1.7
	baz=278						
CAPN	Captain Cook N	69.10	32	P	P	19 55 13.6	-2.5
	baz=278						
H23K	Yukon River	69.11	26	P	P	19 55 14.0	-2.2
	baz=278,SNR=39						
TRF	Thorofare Moun	69.12	29		P	19 55 17.1	+0.7
TRF				IAmb	IAmb	19 55 23.5	
	comp=Z,9.1nm,0.8s						
TRF	Thorofare Moun	69.12	29	P	P	19 55 14.1	-2.4
	baz=278,SNR=6.1						
SUA	Susitna One	69.19	31	P	P	19 55 15.0	-1.9
	baz=278						
GURO	Guroymak-BITLI	69.21	304	P	P	19 55 17.3	-0.2
GURO				IAmb	IAmb	19 55 35.1	
	comp=Z,19nm,1.3s						
E24K	Your Creek	69.22	24	P	P	19 55 15.1	-1.7
	baz=278,SNR=10						
CNPM	China Poot	69.24	33		P	19 55 17.6	+0.4
CNPM				IAmb	IAmb	19 55 23.0	
	comp=Z,27nm,1.2s						
APA	Apatity	69.27	336	⇓iP	P	19 55 26.2	+9.1
APA				pmax	pmax		
	comp=Z,11nm,1.1s						
APA				MLR	MLR		
	comp=Z,600nm,19.0s						
CUT	Chulitna	69.28	30	P	P	19 55 15.5	-1.7
	baz=278						
I23K	Minto, Yukon-K	69.28	27	P	P	19 55 16.2	-1.0
	baz=278,SNR=8.7						
M22K	Willow	69.45	31	P	P	19 55 17.2	-1.0
	baz=279						
NEA2	Nenana	69.49	27	P	P	19 55 16.9	-1.6
	baz=279,SNR=12						
F24K	Squaw Lake	69.52	24	P	P	19 55 17.0	-1.7
	baz=279,SNR=15						
MCK	McKinley	69.68	28		P	19 55 20.1	+0.4
MCK				IAmb	IAmb	19 55 25.8	
	comp=Z,27nm,1.0s						
MCK	McKinley	69.68	28	P	P	19 55 20.1	+0.4
MCK				pmax	pmax		
	comp=Z,27nm,1.0s						
MCK	McKinley	69.68	28	P	P	19 55 18.4	-1.3
	baz=279,SNR=7.8						
OBN	Obninsk	69.71	322	P	P	19 55 19.1	-0.8
OBN	Obninsk	69.71	322	deP	P	19 55 19.6	-0.4
OBN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
RC01	Rabbit Creek A	69.73	31	P	P	19 55 18.5	-1.6
	baz=279						
RND	Reindeer	69.77	29		P	19 55 20.7	+0.3
RND	Reindeer	69.77	29	P	P	19 55 20.7	+0.3
RND				pmax	pmax		
	comp=Z,47nm,0.8s						
H24K	Noodor Dome	69.79	26	P	P	19 55 18.4	-2.0
	baz=279,SNR=19						
D25K	Kavik River	69.80	22	P	P	19 55 18.5	-1.9
	baz=279,SNR=9.2						
G24K	Hadweenzic Riv	69.81	25	P	P	19 55 18.4	-2.0
	baz=279,SNR=11						
O22K	Cooper Landing	69.84	32	P	P	19 55 19.2	-1.5
	baz=280						
PMR	Palmer	69.94	31	P	P	19 55 24.2	+2.9
PMR	Palmer	69.94	31	P	P	19 55 19.9	-1.4
	baz=280						
COLA	College	69.96	27	P	P	19 55 23.8	+2.5
COLA	College	69.96	27	P	P	19 55 19.9	-1.5
	baz=280						
WAT1	Susitna Watana	70.00	29	P	P	19 55 20.1	-1.6
	baz=280						
RAYN	Ar Rayn	70.01	288		P	19 55 22.1	-0.4
RAYN	Ar Rayn	70.01	288	P	P	19 55 23.2	+0.7
SEW	Seward	70.04	32	P	P	19 55 20.3	-1.6
	baz=280						
C26K	Camden Bay	70.20	22	P	P	19 55 21.5	-1.2
	baz=280						
KNK	Knik Glacier	70.29	31	P	P	19 55 22.3	-1.2
	baz=280						
E25K	Arctic Village	70.29	23	P	P	19 55 22.2	-1.2
	baz=280,SNR=6.3						
G25K	Bearman Lake	70.34	25	P	P	19 55 22.6	-1.1
	baz=280,SNR=9.2						
F25K	Christian Rive	70.36	24	P	P	19 55 23.2	-0.7
	baz=280,SNR=13						
ILAR	Eielson Array	70.38	27	P	P	19 55 23.8	-0.2
	comp=Z,2.0nm,0.9s,baz=281,slow=6.2,SNR=16						
ILAR				LR	LR	20 28 38.0	
	comp=Z,170nm,18.1s,baz=276,slow=38						
	comp=Z,2.0nm,0.9s						
WAT6	Susitna Watana	70.41	29	P	P	19 55 22.9	-1.5
	baz=280,SNR=27						
HDA	Harding Lake	70.42	27	P	P	19 55 24.2	-0.1
HDA				IAmb	IAmb	19 55 29.4	
	comp=Z,18nm,1.0s						
HDA	Harding Lake	70.42	27	P	P	19 55 23.1	-1.2
	baz=280,SNR=10						
PWL	Port Wells	70.45	31	P	P	19 55 23.8	-0.7
	baz=281,SNR=8.5						
DHY	Denali Highway	70.48	29	P	P	19 55 24.1	-0.7
	baz=281,SNR=9.0						
H25L	Birch Creek	70.54	25	P	P	19 55 25.4	+0.5
	baz=281						
M23K	Glacier View	70.56	30	P	P	19 55 25.2	0.0
	baz=281						
C27K	Jago River	70.66	22	P	P	19 55 25.8	+0.2
	baz=282						
SCM	Sheep Creek Mo	70.74	30	P	P	19 55 26.3	0.0
SCM	Sheep Creek Mo	70.74	30	P	P	19 55 26.3	0.0
SCM				pmax	pmax		
	comp=Z,36nm,0.8s						
SCM	Sheep Creek Mo	70.74	30	P	P	19 55 26.2	-0.2
	baz=281,SNR=31						
BMAR	Burnt Mountain	70.79	24		P	19 55 27.3	+0.8
F26K	Sheenjek River	70.90	24	P	P	19 55 27.2	0.0
	baz=282,SNR=18						
GLI	Glacier Island	71.04	31	P	P	19 55 28.1	+0.1
GLI				IAmb	IAmb	19 55 33.4	
	comp=Z,27nm,1.0s						
GLI	Glacier Island	71.04	31	P	P	19 55 27.3	-0.8
	baz=282,SNR=7.9						
K24K	Donnelly Dome	71.05	28	P	P	19 55 27.4	-0.7
	baz=282,SNR=9.6						
J25K	Salcha River,	71.05	27	P	P	19 55 27.8	-0.3
	baz=282						
P23K	Montague Islan	71.07	32	P	P	19 55 27.0	-1.2
	baz=282						
KEV	Kevo	71.17	339	P	P	19 55 28.7	0.0
KEV	Kevo	71.17	339	P	P	19 55 28.7	0.0
KEV				pmax	pmax		
	comp=Z,220nm,1.9s						
G26K	Porcupine Rive	71.20	25	P	P	19 55 28.8	-0.1
	baz=282,SNR=15						
M24K	Tolsona, Glenn	71.22	30	P	P	19 55 28.3	-0.9
	baz=282,SNR=7.7						
PAX	Paxson	71.36	29	P	P	19 55 28.9	-1.2
	baz=282,SNR=9.0						
RIDG	Independent Ri	71.46	28	P	P	19 55 29.7	-0.9
	baz=283,SNR=8.5						
KLU	Klutina	71.47	30	P	P	19 55 29.6	-1.1
	baz=282,SNR=8.0						
SPITS	Spitsbergen Ar	71.59	348	P	P	19 55 30.3	-0.8
	comp=Z,5.7nm,0.9s,baz=79,slow=9.4,SNR=9.2						
SPITS				LR	LR	20 31 24.3	
	comp=Z,317nm,18.0s,baz=135,slow=40						
	comp=Z,5.7nm,0.9s						
HARP	HAARP	71.62	29	P	P	19 55 30.9	-0.7
	baz=283						
D27M	Malcolm River	71.69	22	P	P	19 55 31.0	-0.9
	baz=284						
Q23K	Middleton Isla	71.71	33	P	P	19 55 31.2	-0.8
	baz=283						
E27K	Coleen River	71.73	23	P	P	19 55 31.0	-1.1
	baz=284,SNR=11						
ARCES	ARCESS Array B	71.73	338	P	P	19 55 32.1	0.0
ARCES	ARCESS Array B	71.73	338	P	P	19 55 31.7	-0.4
	comp=Z,1.9nm,0.6s,baz=71,slow=9.1,SNR=8.0						
	comp=Z,1.9nm,0.6s						
ARCES	ARCESS Array B	71.73	338	P	P	19 55 32.1	0.0
ARCES				pmax	pmax		
	comp=Z,101nm,2.0s						
EYAK	Cordova Ski Ar	71.76	31	P	P	19 55 34.0	+1.7
EYAK	Cordova Ski Ar	71.76	31	P	P	19 55 31.5	-0.9
	baz=283						
SCRK	Sand Creek	71.78	28	P	P	19 55 31.1	-1.6
	baz=283,SNR=11						
I26K	Coal Creek Min	71.82	26	P	P	19 55 31.5	-1.1
	baz=284,SNR=11						
J26L	Joseph Creek	71.84	27	P	P	19 55 32.0	-0.9
	baz=283,SNR=23						
G27K	Doyon Strip	72.05	24	P	P	19 55 33.8	-0.3
	baz=284,SNR=8.1						
N25K	Chitina, Valde	72.06	30	P	P	19 55 33.9	-0.4
	baz=284,SNR=6.9						
MENT	Mentasta	72.14	29	P	P	19 55 37.5	+2.8
BMRM	Bremner River	72.21	31	P	P	19 55 33.6	-1.5
	baz=284,SNR=6.3						
H27K	Steamboat Moun	72.25	25	P	P	19 55 35.3	+0.1
	baz=285,SNR=11						
E28M	Babbage River	72.36	22	P	P	19 55 35.6	-0.3
	baz=286						
I27K	Kandik River	72.37	26	P	P	19 55 34.8	-1.2
	baz=285,SNR=15						
D28M	Stokes Point	72.44	22	P	P	19 55 35.7	-0.6
	baz=286						
GLB	Gilahina Butte	72.47	30		P	19 55 37.7	+1.0
GLB				IAmb	IAmb	19 55 43.2	
	comp=Z,26nm,1.1s						
F28M	Old Crow	72.51	23	P	P	19 55 35.8	-1.0
	baz=286,SNR=12						
KAIM	Kayak Island	72.55	32	P	P	19 55 36.0	-1.1
	baz=284						
K27K	Chicken	72.59	27	P	P	19 55 36.3	-1.0
	baz=285						
M26K	Nabesna, AK	72.60	29	P	P	19 55 35.6	-1.9
	baz=285,SNR=29						
VRDI	Verde Repeater	72.69	30		P	19 55 38.7	+0.5
VRDI				IAmb	IAmb	19 55 43.9	
	comp=Z,13nm,1.0s						
MCARA	McCarthy VSAT	72.85	30	P	P	19 55 37.3	-1.6
	baz=285,SNR=5.9						
L27K	Beaver Creek,	72.95	28	P	P	19 55 38.0	-1.5
	baz=285,SNR=11						
BCAR	Beaver Creek A	72.97	28		P	19 55 41.2	+1.6
CRQE	Cirque	72.98	31	P	P	19 55 38.7	-1.2
	baz=285,SNR=5.3						
E29M	Blow River	73.00	22	P	P	19 55 39.3	-0.4
	baz=287						
BGLC	Bering Glacier	73.05	31	P	P	19 55 39.3	-0.7
	baz=285						
I28M	Miner Creek	73.09	26	P	P	19 55 39.5	-0.8
	baz=286						
M27K	Edge Creek, AK	73.11	29	P	P	19 55 39.9	-0.7
	baz=286,SNR=9.3						
GAZ	Gaziantep	73.24	304	P	P	19 55 41.7	-0.1
GAZ				IAmb	IAmb	19 55 43.8	
	comp=Z,21nm,1.1s						
G29M	Pine Creek	73.40	24	P	P	19 55 40.8	-1.3
	baz=288						
SIM	Simferopol'	73.46	312	eP	P	19 55 43.8	+1.0
SIM				pmax	pmax		
	comp=Z,26nm,0.9s						
H29M	Whitestone	73.48	25	P	P	19 55 41.2	-1.4
	baz=287						
BVCY	Beaver Creek	73.55	29	P	P	19 55 41.7	-1.4
	baz=286						
FIA1	FINESS Array S	73.67	330	P	P	19 55 43.4	-0.3
FIA1				IAmb	IAmb	19 56 05.7	
	comp=Z,38nm,1.0s						
FINES	FINESS Array B	73.67	330	P	P	19 55 43.6	-0.1
FINES	FINESS Array B	73.67	330	P	P	19 55 43.7	0.0
	comp=Z,2.3nm,0.7s,baz=44,slow=5.6,SNR=16						
	comp=Z,2.3nm,0.7s						
MESA	MESA	73.68	31	P	P	19 55 42.8	-1.3
	baz=286						
DAWY	Dawson	73.71	27	P	P	19 55 42.5	-1.5
	baz=287						
CTG	Chitna Glacier	73.75	30	P	P	19 55 42.7	-1.7
	baz=286,SNR=7.1						
I29M	Ogilvie Camp,	73.76	26	P	P	19 55 42.8	-1.4
	baz=288						
BNN	Bunyan	73.83	306		P	19 55 45.5	+0.2
BNN				IAmb	IAmb	19 55 46.9	
	comp=Z,40nm,1.1s						
YUK3	Moose Creek	73.92	29	P	P	19 55 43.4	-2.1
	baz=287						
F30M	Barrier River	74.00	23	P	P	19 55 44.5	-1.1
	baz=289						
G30M	tAoh Zraii Nji	74.05	24	P	P	19 55 44.1	-1.9
	baz=289						
EPYK	Eagle Plains	74.06	24	P	P	19 55 44.7	-1.3
	baz=289						
J29N	Klondike Camp	74.08	26	P	P	19 55 44.7	-1.5
	baz=288						
O28M	Mount Upton	74.34	30	P	P	19 55 46.5	-1.5
	baz=287,SNR=7.5						
YUK8	Steele Glacier	74.38	30	P	P	19 55 46.8	-1.5
	baz=288						
PINM	Pinnacle	74.52	31	P	P	19 55 46.9	-1.9
	baz=288						
L29M	L29M	74.54	28	P	P	19 55 47.1	-1.7
	baz=288,SNR=14						
INK	Inuvik	74.56	22		P	19 55 49.9	+1.1
INK	Inuvik	74.56	22	P	P	19 55 49.9	+1.1
INK				pmax	pmax		
	comp=Z,14nm,1.2s						
K29M	Barlow Dome	74.56	27	P	P	19 55 46.9	-2.2
	baz=289						
I30M	Mount Dempster	74.58	25	P	P	19 55 47.2	-1.9
	baz=290,SNR=16						
M29M	Somme Creek	74.61	28	P	P	19 55 47.8	-1.6
	baz=288,SNR=20						
MNK	Minsk	74.74	323	i P	P	19 55 49.8	-0.3
	comp=E,8.0nm,0.9s						
MNK				i P	P	19 55 49.8	-0.3
	comp=N,9.0nm,0.9s						
MNK				i P	P	19 55 49.8	-0.3
	comp=Z,8.0nm,0.7s,baz=73						
MNK				i PcP	pwP	19 56 03.6	+0.1
MNK				i PP	PP	19 58 36.9	-0.1
MNK				i PPP	PPP	20 00 22.5	
MNK				i S	S	20 05 27.4	+2.6
MNK				i SS	SS	20 10 41.1	+29
MNK				i SSS	SSS	20 15 03.6	
MNK				i LQ	LQ	20 24 06.5	
MNK				i LR	LR	20 27 58.0	
MNK				i LRM	MLR	20 31 07.3	
	comp=Z,687nm,15.6s						
MNK				i LRM	MLR	20 31 10.0	
	comp=N,586nm,16.1s						
MNK				i LRM	MLR	20 31 22.4	
	comp=E,380nm,13.7s						
MNK	Minsk	74.74	323	i P	P	19 55 49.8	-0.3
MNK				i		19 56 03.5	
MNK				i		19 58 36.8	
MNK				i PPP	PPP	20 00 22.5	
MNK				i S	S	20 05 27.3	+2.6
MNK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MNK				pmax	pmax		
	comp=N,9.0nm,0.9s						
MNK				pmax	pmax		
	comp=E,8.0nm,0.9s						
MNK				MLR	MLR		
	comp=Z,687nm,16.0s						
MNK				MLR	MLR		
	comp=N,586nm,16.0s						
MNK				MLR	MLR		
	comp=E,380nm,14.0s						
G31M	Satah River	74.79	23	P	P	19 55 48.8	-1.3
	baz=291						
F31M	Tsiigehtchic	74.80	23	P	P	19 55 48.6	-1.5
	baz=291						
J30M	Hart River	74.81	26	P	P	19 55 48.0	-2.5
	baz=290						
YUK4	Talbot Arm	74.88	30	P	P	19 55 49.3	-1.8
	baz=289,SNR=6.2						
PNL	Peninsula	75.06	31	P	P	19 55 54.2	+2.3
PNL	Peninsula	75.06	31	P	P	19 55 50.4	-1.4
	baz=288						
AKASG	Malin Array Be	75.06	319	P	P	19 55 51.3	-0.7
AKASG	Malin Array Be	75.06	319	P	P	19 55 51.4	-0.6
	comp=E,2.4nm,0.6s,baz=63,slow=6.0,SNR=11						
	comp=E,2.4nm,0.6s						
AKBB	Malin Array Si	75.06	319		P	19 55 51.9	-0.1
AKBB	Malin Array Si	75.06	319	P	P	19 55 51.9	-0.1
AKBB				pmax	pmax		
	comp=Z,11nm,1.2s						
AKBB	Malin Array Si	75.06	319	P	P	19 55 51.2	-0.8
KIEV	Kiev	75.07	319		P	19 55 51.9	-0.2
KIEV	Kiev	75.07	319	P	P	19 55 51.9	-0.2
KIEV				pmax	pmax		
	comp=Z,10.0nm,1.2s						
AK22	Malin Array Si	75.14	319	P	P	19 55 51.4	-1.0
YUK6	Outpost Mounta	75.14	30	P	P	19 55 50.6	-2.0
	baz=289						
H31M	Peel River	75.17	25	P	P	19 55 51.0	-1.4
	baz=291						
NACGM	Naroch	75.23	324	eP	P	19 55 53.2	+0.3
	comp=Z,14nm,1.0s,baz=72						
BR131	Keskin Array S	75.23	307		P	19 55 52.6	-0.8
BR131	Keskin Array S	75.23	307	ceP	P	19 55 53.8	+0.4
BRTR	Keskin Array B	75.23	307		P	19 55 52.7	-0.7
BRTR	Keskin Array B	75.23	307	P	P	19 55 54.0	+0.6
	comp=Z,6.8nm,0.9s,baz=102,slow=6.7,SNR=22						
	comp=Z,6.8nm,0.9s						
O29M	Mount Kennedy	75.25	31	P	P	19 55 51.8	-1.3
	baz=289						
M30M	Minto, Yukon	75.30	28	P	P	19 55 52.2	-1.1
	baz=290						
N30M	Aishikik Lake	75.55	29	P	P	19 55 53.6	-1.1
	baz=290,SNR=10						
HYT	Haines Junctio	75.57	30		P	19 55 55.2	+0.3
HYT	Haines Junctio	75.57	30	P	P	19 55 53.8	-1.2
	baz=290						
A36M	Sachs Harbour	75.60	17	P	P	19 55 54.4	-0.3
	baz=298						
ANTO	Ankara	75.81	307	P	P	19 55 56.3	-0.4
ANTO				IAmb	IAmb	19 55 58.0	
	comp=Z,17nm,0.9s						
ANTO	Ankara	75.81	307	⇓P	P	19 55 56.9	+0.2
ANTO	Ankara	75.81	307	P	P	19 55 56.9	+0.2
P29M	Windy Craggy	75.87	31	P	P	19 55 55.7	-0.9
	baz=290						
P30M	Million Dollar	76.07	30	P	P	19 55 57.0	-0.7
	baz=290						
N31M	Braeburn, Yuko	76.13	29	P	P	19 55 57.9	0.0
	baz=291,SNR=7.9						
LUBAR	Lubar, Ukraine	76.19	318	P	P	19 55 57.2	-1.3
O30N	Mendenhall	76.24	30	P	P	19 55 58.4	-0.3
	baz=291						
SORM	Soroca	76.37	317	⇑P	P	19 55 59.1	-0.5
SORM	Soroca	76.37	317	P	P	19 55 59.1	-0.5
M31M	Drury Creek, Y	76.48	28	P	P	19 55 59.7	-0.3
	baz=292						
PLBC	Pleasant Camp	76.58	31	P	P	19 56 00.3	-0.2
	baz=291						
WHY	Whitehorse	76.84	30	P	P	19 56 00.9	-1.2
	baz=292,SNR=5.4						
NDNU	Novodnistrovsk	76.85	317	P	P	19 56 01.3	-1.0
CSS	Mathiatis	76.89	303		P	19 56 02.3	-0.5
CSS				IAmb	IAmb	19 56 04.0	
	comp=Z,18nm,0.8s						
CSS	Mathiatis	76.89	303	P	P	19 56 03.0	+0.2
	comp=Z,23nm,1.4s						
RNPP5	Staryi Chortor	76.90	320	P	P	19 56 01.9	-0.6
FARO	Faro, Yukon	76.92	28	P	P	19 56 02.3	-0.2
	baz=293						
TLCR		76.99	314	⇑P	P	19 56 03.1	0.0
TLCR		76.99	314	P	P	19 56 03.1	0.0
SKAG	Skagway	77.07	31	P	P	19 56 05.5	+2.2
SKAG	Skagway	77.07	31	P	P	19 56 03.0	-0.3
	baz=292						
S31K	Pelican	77.19	32	P	P	19 56 03.5	-0.5
	baz=291						
HORU	Horodok	77.24	318	P	P	19 56 04.3	-0.2
TPGR	Topolog	77.36	313	⇑P	P	19 56 04.8	-0.5
VARL	Varlezi	77.41	315	⇑P	P	19 56 06.3	+0.8
CFR	Carcaliu	77.45	314	⇓P	P	19 56 05.4	-0.4
CFR	Carcaliu	77.45	314	P	P	19 56 05.3	-0.4
N32M	Quiet Lake	77.46	29	P	P	19 56 05.2	-0.3
	baz=293						
SUW	Suwalki	77.51	323	P	P	19 56 05.2	-0.6
SUW	Suwalki	77.51	323	P	P	19 56 05.3	-0.6
BORA	Eskisehir	77.53	308		P	19 56 06.2	-0.2
BORA				IAmb	IAmb	19 56 07.2	
	comp=Z,15nm,1.1s						
MMPY	Sheldon Lake,	77.65	27	P	P	19 56 06.2	-0.4
	baz=294						
HARR	Harsova	77.75	313	⇓P	P	19 56 07.6	+0.3
HARR	Harsova	77.75	313	P	P	19 56 07.6	+0.3
P32M	Atlin	77.78	30	P	P	19 56 06.5	-0.9
	baz=293						
PANC	Panciu	77.88	315	⇑P	P	19 56 08.8	+0.7
R32K	Eaglecrest	77.91	32	P	P	19 56 07.0	-1.1
	baz=293						
P33M	Teslin, Yukon	77.95	30	P	P	19 56 06.9	-1.4
	baz=294						
ODBI	Odobesti	77.98	315	⇑P	P	19 56 09.6	+1.0
SIT	Sitka	77.98	33	P	P	19 56 07.3	-1.1
	baz=292						
TESR	Tescani	77.99	315	⇓P	P	19 56 08.9	+0.2
QRZ	Quartz Range	78.14	143	P	P	19 56 10.0	+0.6
QRZ	Quartz Range	78.14	143	P	P	19 56 11.9	+2.5
S32K	Killisnoo	78.20	33	P	P	19 56 08.3	-1.3
	baz=293						
PLOR	Plostina	78.22	315	⇑P	P	19 56 10.3	+0.3
PLOR	Plostina	78.22	315	P	P	19 56 10.3	+0.3
ONER	Baraj Valea Uz	78.22	315	⇓P	P	19 56 10.5	+0.5
BURAR	Bucovina Array	78.54	317		P	19 56 12.2	+0.4
BURAR	Bucovina Array	78.54	317	⇑P	P	19 56 11.9	+0.1
BURAR	Bucovina Array	78.54	317	P	P	19 56 11.9	+0.1
BUR08	Bucovina Ar. S	78.54	317		P	19 56 12.2	+0.3
TURR	Turia	78.56	315	⇑P	P	19 56 13.2	+1.3
NEF	NEVSHA	78.67	312	eP	P	19 56 13.3	+0.8
OZUR		78.70	315	⇑P	P	19 56 13.1	+0.4
Q32M	Nakina River	78.72	31	P	P	19 56 11.3	-1.5
	baz=294						
MLR	Muntele Rosu	78.80	315		P	19 56 13.3	-0.1
MLR				IAmb	IAmb	19 56 14.7	
	comp=Z,14nm,0.7s						
MLR	Muntele Rosu	78.80	315	⇓P	P	19 56 14.5	+1.1
MLR	Muntele Rosu	78.80	315	P	P	19 56 14.5	+1.1
NNZ	Nelson	78.88	143	P	P	19 56 13.3	-0.1
ELL	Elmali	78.95	305	P	P	19 56 14.2	-0.2
ELL				IAmb	IAmb	19 56 32.2	
	comp=Z,21nm,0.9s						
ELL	Elmali	78.95	305	P	P	19 56 14.2	-0.2
ELL				pmax	pmax		
	comp=Z,21nm,0.9s						
R33M	Jennings River	79.14	30	P	P	19 56 14.1	-0.9
	baz=295						
ARCR	ARCALIA	79.27	316	⇑P	P	19 56 17.0	+1.2
KWP	Kalwaria Pacla	79.37	319	eP	P	19 56 16.8	+0.5
TGTN	Hyland Airport	79.39	27	P	P	19 56 16.0	-0.2
	baz=297						
U33K	Whale Pass	79.47	33	P	P	19 56 16.5	-0.1
	baz=294						
S34M	Telegraph Cree	79.70	31	P	P	19 56 17.0	-0.9
	baz=295						
ARR	Arges	79.71	315	⇓P	P	19 56 18.7	+0.5
CRAG	Craig	79.74	34	P	P	19 56 17.9	-0.2
	baz=294						
WRAK	Wrangell Islan	79.74	33	P	P	19 56 17.9	-0.2
	baz=295						
HUMR	Humele	79.78	314	⇑P	P	19 56 18.1	-0.5
TRSU	Trosnyk	79.78	318	P	P	19 56 19.4	+0.9
HFS	Hagfors	79.79	331	P	P	19 56 17.7	-0.6
	comp=Z,2.1nm,0.7s,baz=123,slow=5.5,SNR=11						
	comp=Z,2.1nm,0.7s						
KOLS	Kolonicke sedl	79.89	319	eP	P	19 56 20.1	+1.0
KOLS				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KOLS	Kolonicke sedl	79.89	319	eP	P	19 56 20.1	+1.0
DLBC	Dease Lake	80.00	31	P	P	19 56 18.9	-0.6
	baz=296						
MARR	Marisel-Cluj	80.21	316	⇓P	P	19 56 21.7	+0.7
LOT	Lotru	80.25	315	⇑P	P	19 56 21.5	+0.2
RES	Resolute Bay	80.36	9		P	19 56 21.9	+0.8
RES	Resolute Bay	80.36	9	P	P	19 56 21.9	+0.8
RES				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NEEM	North Greenlan	80.43	359	i P	P	19 56 22.0	+0.2
NEEM				IAmb	IAmb	19 56 35.1	
	comp=Z,26nm,0.9s						
NB2	NORSAR Subarra	80.44	333	P	P	19 56 20.9	-1.0
	comp=Z,5.8nm,1.0s,baz=59,slow=5.6						
NOA	NORSAR Array B	80.44	333	P	P	19 56 21.3	-0.6
	comp=Z,1.4nm,0.7s,baz=58,slow=5.7,SNR=8.2						
	comp=Z,1.4nm,0.7s						
WRGLY	Wrigley	80.53	25	P	P	19 56 22.0	-0.2
	baz=301						
T35M	Bob Quinn	80.54	32	P	P	19 56 21.4	-1.1
	baz=296						
V35K	Ketchikan	80.58	34	P	P	19 56 21.8	-0.8
	baz=296						

RDO	Rodhopi	80.62	311	P	P	19 56 22.6	-0.6
RDO				IAmb	IAmb	19 56 23.9	
	comp=Z,12nm,0.9s						
OJC	Ojcow	80.87	321	eP	P	19 56 24.2	-0.1
OJC	Ojcow	80.87	321		P	19 56 24.2	-0.1
OJC	Ojcow	80.87	321	P	P	19 56 24.2	-0.1
OJC	Ojcow	80.87	321	P	P	19 56 24.4	0.0
	comp=Z,20nm,0.9s						
NIE	Niedzica	80.90	320	eP	P	19 56 25.1	+0.5
NIE	Niedzica	80.90	320	P	P	19 56 24.5	0.0
	comp=Z,5.1nm,1.1s						
GZR	Gura Zlata	80.92	315	⇓P	P	19 56 25.2	+0.4
GZR	Gura Zlata	80.92	315	P	P	19 56 25.2	+0.4
MPEP	Malo Peshtene	81.05	313	eP	P	19 56 26.3	+0.9
PGB	Panagyurishte	81.07	312	eP	P	19 56 26.3	+0.7
SURR	Surduc	81.20	316	⇑P	P	19 56 26.9	+0.8
SIRR	Siria	81.30	316	⇓P	P	19 56 26.8	+0.1
HERR	Herculane	81.35	315	⇑P	P	19 56 27.1	+0.1
LANS	Liptovska Anna	81.50	320	eP	P	19 56 28.8	+1.0
LANS				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LANS	Liptovska Anna	81.50	320	eP	P	19 56 28.8	+1.0
BZS	Buzias	81.58	316	⇓P	P	19 56 27.9	-0.4
BZS	Buzias	81.58	316	P	P	19 56 27.8	-0.4
PLNA	Plana	81.59	312	eP	P	19 56 29.6	+1.1
VTS	Vitosha	81.67	313	eP	P	19 56 29.9	+1.0
MDVR	Moldovita	81.85	315	⇓P	P	19 56 29.5	-0.2
VYHS	Vyhne	82.16	319	eP	P	19 56 32.0	+0.8
VYHS				pmax	pmax		
	comp=Z,11nm,1.1s						
VYHS	Vyhne	82.16	319	eP	P	19 56 32.0	+0.8
BOVS	Bovan	82.31	314	⇑P	P	19 56 31.8	-0.2
MORC	Moravsky Berou	82.38	321	P	P	19 56 31.9	-0.5
MORC	Moravsky Berou	82.38	321	eP	P	19 56 32.7	+0.3
MORC	Moravsky Berou	82.38	321	⇓P	P	19 56 33.4	+1.0
MORC	Moravsky Berou	82.38	321	P	P	19 56 33.4	+1.0
VAY	Valandovo	82.63	312	i P	P	19 56 33.8	0.0
KSP	Ksiaz	82.64	322	eP	P	19 56 34.1	+0.5
KSP	Ksiaz	82.64	322	P	P	19 56 33.7	+0.1
	comp=Z,7.9nm,0.8s						
JAVC	Velka Javorina	82.70	320	eP	P	19 56 35.9	+1.8
DPC	Dobruska-Polom	82.84	322	eP	P	19 56 36.3	+1.5
DPC	Dobruska-Polom	82.84	322	eP	P	19 56 36.3	+1.5
DPC	Dobruska-Polom	82.84	322	P	P	19 56 34.8	0.0
	comp=Z,3.1nm,0.8s						
VRAC	Vranov	83.14	321	eP	P	19 56 37.1	+0.8
VRAC				e		19 56 47.4	
VRAC	Vranov	83.14	321	⇓P	P	19 56 37.6	+1.3
VRAC	Vranov	83.14	321	P	P	19 56 37.6	+1.3
MODS	Modra-Piesok	83.15	320	eP	P	19 56 36.3	-0.1
MODS				pmax	pmax		
	comp=Z,15nm,1.3s						
MODS	Modra-Piesok	83.15	320	eP	P	19 56 36.3	-0.1
MORH	Mrgy, Hungar	83.23	317	⇑P	P	19 56 36.9	0.0
MORH	Mrgy, Hungar	83.23	317	P	P	19 56 36.8	0.0
	comp=Z,6.7nm,1.2s						
KRUC	Moravsky	83.37	320	eP	P	19 56 37.9	+0.4
KRUC				e		19 56 49.0	
MPLH	Magyarpolny	83.51	318	P	P	19 56 38.1	-0.1
	comp=Z,33nm,1.2s						
FNA	Florina	83.67	311	P	P	19 56 38.6	-0.7
FNA				IAmb	IAmb	19 56 39.1	
	comp=Z,9.3nm,0.8s						
FNA	Florina	83.67	311	P	P	19 56 38.6	-0.7
FNA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TREC	Trest	83.80	321	eP	P	19 56 40.1	+0.4
TREC				ex	x	19 56 56.8	
TREC	Trest	83.80	321	eP	P	19 56 40.1	+0.4
OHR	Ohrid	83.94	312	i P	P	19 56 40.5	-0.1
BRG	Berggiesshubel	83.95	323	eP	P	19 56 40.7	+0.3
BRG				Amp		19 56 42.4	
	comp=Z,3.1nm,0.9s						
RONA	Rosalia, Austr	84.03	319	i P	P	19 56 40.8	-0.2
	comp=Z,4.6nm,1.0s						
CONA	Conrad Observa	84.19	320	eP	P	19 56 41.8	0.0
	comp=Z,8.8nm,1.4s,SNR=4.4						
CLL	Collm	84.27	323	i P	P	19 56 41.7	-0.3
CLL				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CLL	Collm	84.27	323	P	P	19 56 42.1	+0.1
	comp=Z,8.1nm,1.0s						
CLL	Collm	84.27	323	i P	P	19 56 41.7	-0.3
	comp=Z,8.0nm,1.0s						
CLL				i pP	pP	19 56 50.0	+1.0
YKA	Yellowknife Ar	84.28	23	P	P	19 56 41.5	-0.3
YKA	Yellowknife Ar	84.28	23	P	P	19 56 42.0	+0.2
	comp=Z,1.6nm,1.0s,baz=317,slow=5.4,SNR=14						
	comp=Z,1.6nm,1.0s						
YKA	Yellowknife Ar	84.28	23	P	P	19 56 41.5	-0.3
TIR	Tirane	84.48	312	P	P	19 56 43.4	+0.1
	comp=Z,35nm,1.1s						
ZVC	Zvikov	84.48	321	eP	P	19 56 43.1	0.0
ZVC				ex	x	19 56 59.5	
SUMG	Summit	84.51	354		P	19 56 43.8	+0.4
SUMG				IAmb	IAmb	19 56 56.8	
	comp=Z,16nm,1.1s						
SUMG	Summit	84.51	354	P	P	19 56 43.8	+0.4
SUMG				pmax	pmax		
	comp=Z,16nm,1.1s						
SUMG	Summit	84.51	354	i P	P	19 56 43.0	-0.4
SUMG				IAmb	IAmb	19 56 56.4	
	comp=Z,16nm,1.1s						
KOGS	Kog	84.62	318	eP	P	19 56 44.0	+0.1
CKRC	Cesky Krumlov	84.70	321	eP	P	19 56 44.7	+0.4
CKRC				ex	x	19 57 00.4	
CKRC	Cesky Krumlov	84.70	321	eP	P	19 56 44.7	+0.4
ARSA	Arzberg	84.70	319	i P	P	19 56 43.4	-1.0
	comp=Z,2.8nm,1.3s						
ITM	Ithomi	84.73	308		P	19 56 43.7	-1.0
KHC	Kasperske Hory	84.98	321	eP	P	19 56 45.9	+0.2
KHC	Kasperske Hory	84.98	321	eP	P	19 56 45.9	+0.2
GEC2	GERESS Array S	85.05	321		P	19 56 45.8	-0.3
GERES	GERESS Array B	85.05	321	P	P	19 56 46.3	+0.2
	comp=Z,2.8nm,0.8s,baz=49,slow=4.1,SNR=14						
	comp=Z,2.8nm,0.8s						
MOA	Molln	85.18	320	i P	P	19 56 47.4	+0.6
	comp=Z,6.7nm,1.2s						
PERS	Pernice	85.23	319	i P	P	19 56 47.1	+0.1
SOKA	Soboth	85.27	319	i P	P	19 56 47.3	0.0
	comp=Z,5.6nm,1.1s						
OBKA	Obir	85.64	319	eP	P	19 56 47.4	-1.7
	comp=Z,5.3nm,1.3s						
BOJS	Bojanci	85.67	318	i P	P	19 56 49.8	+0.6
KIBK	Kibwezi	85.69	266	P	P	19 56 50.1	+0.2
KIBK				IAmb	IAmb	19 57 03.6	
	comp=Z,15nm,1.4s						
LESA	Schwarzleotal	86.33	320	eP	P	19 56 52.2	-0.3
	comp=Z,5.3nm,1.4s						
ABTA	Abfaltersbach	86.76	320	i P	P	19 56 53.7	-1.0
	comp=Z,3.2nm,1.1s						
WTTA	Wattenberg	87.03	320	i P	P	19 56 55.5	-0.5
	comp=Z,3.8nm,1.3s						
SQTA	Sankt Quirin	87.30	320	i P	P	19 56 57.3	0.0
	comp=Z,2.9nm,0.9s						
FETA	Feichten	87.68	320	eP	P	19 56 59.0	-0.2
	comp=Z,4.4nm,1.4s						
ICESG	Greenland Ices	87.98	354	i P	P	19 56 59.4	-1.0
ICESG				IAmb	IAmb	19 57 13.7	
	comp=Z,11nm,0.7s						
FUORN	Ofenpass-Fuorn	88.16	320	P	P	19 57 01.4	-0.2
FDMO	Fiordimonte	88.21	316		P	19 57 01.9	+0.2
FDMO				IAmb	IAmb	20 00 20.2	
	comp=Z,11nm,1.0s						
CEL	Celeste	88.58	311	P	P	19 57 03.0	-0.5
CEL	Celeste	88.58	311	P	P	19 57 03.7	+0.2
BLKN	Baker Lake	88.68	16		P	19 57 04.3	+1.0
EKA	Eskdalemuir Ar	89.93	332	P	P	19 57 08.4	-1.0
	comp=Z,0.4nm,0.6s,baz=41,slow=3.8,SNR=1.9						
	comp=Z,0.4nm,0.6s						
B08A	Colville Reser	90.66	36		P	19 57 13.6	+0.6
B08A				IAmb	IAmb	19 57 29.2	
	comp=Z,8.4nm,1.0s						
HAWA	Hanford	91.68	38	P	P	19 57 18.9	+1.1
HAWA				IAmb	IAmb	19 57 35.4	
	comp=Z,7.0nm,1.1s						
YBH	Yreka Blue Hor	92.38	43	P	P	19 57 21.1	-0.1
YBH				IAmb	IAmb	19 57 35.7	
	comp=Z,8.5nm,1.3s						
YBH	Yreka Blue Hor	92.38	43	P	P	19 57 21.1	-0.1
YBH				pmax	pmax		
	comp=Z,8.0nm,1.3s						
FRB	Frobisher Bay	93.84	5	LR	LR	20 44 09.3	
	comp=Z,196nm,18.6s,baz=10.0,slow=38						
PPT2	Papeete2	94.71	107	eLR	LR	20 27 55.8	
	comp=Z,268nm,32.0s						
PPT2				eLR	LR	20 27 59.2	
	comp=Z,353nm,29.0s						
TBI	Tubuai	96.91	112	eLR	LR	20 29 02.7	
	comp=Z,2µm,30.5s						
NVAR	Mina Array Bea	97.03	44	P	Pdif	19 57 43.2	+0.4
NVAR	Mina Array Bea	97.03	44	P	P	19 57 42.3	-0.4
	comp=Z,0.3nm,0.5s,baz=227,slow=7.6,SNR=3.8						
	comp=Z,0.3nm,0.5s						
TAOE	Nuku Hiva Isla	100.13	95	eLR	LR	20 30 33.8	
	comp=Z,285nm,31.5s						
SYO	Syowa Base	108.05	202	⇓ePdiff	Pdif	19 58 31.2	+0.6
SYO	Syowa Base	108.05	202	⇑epPdiff	pPdif	19 58 38.5	+0.8
TXAR	Lajitas Array	112.16	43	PKiKP	PKiKP	20 02 47.5	+1.0
	comp=Z,0.3nm,0.6s,baz=344,slow=1.5,SNR=4.3						
OTAV	Otavalo	149.75	45	eP	PKPdf	20 03 58.6	+1.7

MOS ***29*** *19:46:35.0±0.9, 56°.22S×27°.23W, h104*^{km}*, mb5.7/4, MS5.5/10, Error ellipse: s-maj=24.1km s-min=14.7km az=118.8*

NEIC ***29*** *19:46:36.5±1.3, 56°.26S±0°.10×27°.2W±0°.2, h101*^{km}*±4*^{km}*, mb5.3/90, Mww5.0/10, Error ellipse: s-maj=15.1km s-min=12.1km az=209.0*

NEIC ***29*** *19:46:36.7, 56°.26S×27°.23W, h130*^{km}

NEIC ***29*** *19:46:36.7, 56°.06S×26°.15W, h130*^{km}*, Moment Tensor Solution. Duration: 1*^{s}*5 Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*0.95;* $M_{\theta\theta}$*1.35;* $M_{\phi\phi}$*-2.30;* $M_{r\theta}$*-3.31;* $M_{\theta\phi}$*1.16;* $M_{\phi r}$*1.64; Fault plane solution:* M_0*4.36000×10*^{16} *NP1:* ϕ_s*201.03000°, δ30.74000°, λ166.18000°. NP2:* ϕ_s*302.97000°, δ82.98000°, λ59.99000°. Principal axes: T 4.4777, Plg44.0000°, Azm184.0000°; N -0.2466, Plg30.0000°, Azm307.0000°; P -4.2311, Plg31.0000°, Azm57.0000°;*

BJI ***29*** *19:46:37.0, 56°.30S×27°.20W, h107*^{km}*, mB5.0/2*

IDC ***29*** *19:46:38.4±1.1, 56°.22S×27°.08W, h117*^{km}*±8*^{km}*, mb4.9/13, mbtmp5.3/15, MS3.8/5, Error ellipse: s-maj=15.0km s-min=10.7km az=65.0*

GCMT ***29*** *19:46:38.7±0.3, 56°.32S±0°.02×26°.94W±0°.04, h111*^{km}*±4*^{km}*, MW5.1/101, Moment Tensor Solution. s25,c28; s101,c137; Duration: 0 Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*0.54±.24;* $M_{\theta\theta}$*1.16±.34;* $M_{\phi\phi}$*-1.70±.31;* $M_{r\theta}$*-4.39±.15;* $M_{\theta\phi}$*2.93±.20;* $M_{\phi r}$*2.43±.14; Best double couple:* M_0*5.90800×10*^{16} *NP1:* ϕ_s*196.00000°, δ31.00000°, λ173.00000°. NP2:* ϕ_s*292.00000°, δ86.00000°, λ59.00000°. Principal axes: T 5.2950, Plg41.0000°, Azm173.0000°; N 1.2250, Plg31.0000°, Azm294.0000°; P -6.5210, Plg34.0000°, Azm48.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 19:46:37.3±0.6**, 56°.31S**±0°.05×**27°.28W**±0°.06**, h112**^{km}±5^{km}**, n652,** σ**0**^{s}**91**/674**, mb5.3**/86**, 12C-7D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	5.64	287		Pn	19 47 58.1	-0.5
HOPE	Hope Point	5.64	287	P	Pn	19 47 58.2	-0.5
ESPZ	Base Esperanza	16.40	232	P	P	19 50 22.0	+0.7
VNA1	Neumayer--Stat	16.58	158	⇑P	Pn	19 50 21.9	-0.7
	comp=Z,62nm,0.6s						
VNA3	Neumayer Olymp	16.77	160	⇑P	Pn	19 50 24.4	-0.5
	comp=Z,81nm,0.6s						
VNA2	Neumayer--Watz	16.97	157	⇑P	Pn	19 50 26.5	-1.0
	comp=Z,14nm,0.7s,baz=312,slow=13						
SNAA	Sanae	18.53	156	⇑P	P	19 50 45.1	+0.4
	comp=Z,4µm,0.5s						
SNAA	Sanae	18.53	156		P	19 50 44.9	+0.2
SNAA	Sanae	18.53	156	P	P	19 50 45.2	+0.5
	comp=Z,188nm,0.6s,baz=305,slow=9.8,SNR=1172						
SNAA				S	S	19 54 00.3	-10
	comp=Z,3.3nm,0.6s,baz=353,slow=5.4,SNR=1.4						
SNAA				PcP	PcP	19 55 10.0	+0.9
	comp=Z,3.6nm,0.5s,baz=270,slow=4.0,SNR=2.7						
SNAA				LR	LR	19 56 40.5	
	comp=Z,78nm,21.8s,baz=281,slow=32						
SNAA				ScP	ScP	19 58 34.9	+1.0
	comp=Z,7.2nm,0.7s,baz=284,slow=5.0,SNR=14						
EFI	East Falkland	18.59	271	P	P	19 50 45.7	+0.2
EFI	East Falkland	18.59	271	⇑eP	Pn	19 50 46.3	-0.7
EFI				pmax	pmax		
	comp=Z,58nm,1.0s						
PMSA	Palmer Station	19.69	230	P	Pn	19 50 58.7	-1.1
PMSA	Palmer Station	19.69	230	P	Pn	19 51 00.5	+0.7
	comp=Z,211nm,0.7s,baz=64,slow=6.0,SNR=40						
PMSA	Palmer Station	19.69	230	eP	Pn	19 51 00.5	+0.7
TROLL	Troll, Antarti	20.04	153	⇑P	P	19 51 01.4	+0.2
	comp=Z,9µm,0.9s						
SMAI	San Martin Ant	21.54	221	P	P	19 51 18.5	+1.5
BELA	Belgrano 2	21.82	184		P	19 51 20.1	+0.2
USHA	Ushuaia	23.07	256	LR	LR	19 58 22.3	
	comp=Z,327nm,21.8s,baz=104,slow=30						
MG02	Cerro Sombrero	24.31	261	P	P	19 51 43.6	-0.4
MG03	Isla Dawson	24.55	257	P	P	19 51 46.2	+0.1
MG05	Puerto Natales	26.60	261	P	P	19 52 04.1	-0.7
TRQA	Tornquist	29.38	294	P	P	19 52 29.3	-0.4
TRQA	Tornquist	29.38	294	P	P	19 52 29.3	-0.4
TRQA				pmax	pmax		
	comp=Z,29nm,1.3s						
COYC	Coyhaique	29.69	272		P	19 52 32.0	-0.3
PLTB	Pedras Altas	30.63	312		P	19 52 40.4	-0.3
PLTB				IAmb	IAmb	19 52 42.2	
	comp=Z,29nm,0.7s						
PLTB	Pedras Altas	30.63	312	eP	P	19 52 41.3	+0.5
SYO	Syowa Base	31.42	141	⇑iP	P	19 52 47.6	+0.4
SYO	Syowa Base	31.42	141	⇑esP	sP	19 53 22.2	-1.5
CPSB	Cacapava Do Su	31.76	314	eP	P	19 52 51.5	+0.9
PLCA	Paso Flores	32.00	281	P	P	19 52 51.7	-1.0
PLCA	Paso Flores	32.00	281	P	P	19 52 51.6	-1.1
	comp=Z,2.0nm,0.7s,baz=144,slow=9.0,SNR=8.9						
PLCA				PcP	PcP	19 55 40.8	+0.9
	comp=Z,5.9nm,0.7s,baz=127,slow=1.3,SNR=11						
PLCA				ScP	ScP	19 59 11.3	-1.4
	comp=Z,3.5nm,0.7s,baz=108,slow=2.6,SNR=8.5						
PLCA	Paso Flores	32.00	281	P	P	19 52 51.7	-1.0
PLCA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ITQB	Itaqui	33.72	310		P	19 53 07.5	-0.2
ITQB				IAmb	IAmb	19 53 08.8	
	comp=Z,56nm,1.2s						
ITQB	Itaqui	33.72	310	eP	P	19 53 08.0	+0.3
QSPA	South Pole Qui	33.94	180	P	P	19 53 10.9	+1.4
QSPA	South Pole Qui	33.94	180	P	P	19 53 11.1	+1.6
	comp=Z,116nm,0.6s,baz=187,slow=3.0,SNR=795						
QSPA				PcP	PcP	19 55 45.6	+0.7
	comp=Z,24nm,0.6s,baz=138,slow=0.1,SNR=6.7						
QSPA				ScP	ScP	19 59 18.3	-0.8
	comp=Z,12nm,0.6s,baz=296,slow=0.6,SNR=13						
QSPA				LR	LR	20 06 18.8	
	comp=Z,113nm,18.9s,baz=208,slow=35						
	comp=Z,116nm,0.6s						
QSPA	South Pole Qui	33.94	180	P	P	19 53 11.3	+1.8
ITAB	Concordia	34.08	318	P	P	19 53 11.2	+0.3
ITAB				IAmb	IAmb	19 53 37.8	
	comp=Z,88nm,1.8s						
VAO	Valinhos	36.28	328		P	19 53 30.4	+0.5
VAO				IAmb	IAmb	19 53 32.6	
	comp=Z,18nm,0.6s						
VAO	Valinhos	36.28	328	eP	P	19 53 29.7	-0.1
PTGB	Pitanga	36.35	320	eP	P	19 53 30.7	+0.3
CPUP	Villa Florida	36.94	312		P	19 53 35.1	-0.3
CPUP	Villa Florida	36.94	312	P	P	19 53 35.4	0.0
	comp=Z,5.3nm,0.9s,baz=7.9,slow=7.1,SNR=25						
CPUP				ScP	ScP	19 59 29.8	-0.7
	comp=Z,1.1nm,0.8s,baz=27,slow=2.4,SNR=4.9						
	comp=Z,5.3nm,0.9s						
CPUP	Villa Florida	36.94	312	P	P	19 53 34.0	-1.4
CPUP				pP	pP	19 53 57.2	-2.9
MT08	Bocatoma Ro	37.09	290	P	P	19 53 36.3	-0.5
BSCB	Bom Sucesso	37.59	333	eP	P	19 53 40.9	0.0
SJPY	San Joaquin	37.63	314	eP	P	19 53 40.8	-0.4
PEL	Peldehue	37.67	289		P	19 53 41.0	-0.5
PEL	Peldehue	37.67	289	P	P	19 53 41.0	-0.5
PEL				pmax	pmax		
	comp=Z,124nm,1.7s						
MT02	Curacav	37.82	289	P	P	19 53 41.5	-1.2
ZON	Zonda	37.89	293	P	P	19 53 42.0	-1.4
ZON	Zonda	37.89	293	P	P	19 53 42.0	-1.4
ZON				pmax	pmax		
	comp=Z,13nm,0.7s						
VA03	San Esteban	37.90	290	P	P	19 53 43.3	-0.2
PCMB	Pacaembu	38.94	323	eP	P	19 53 52.6	+0.5
CO02	Combarbal	39.36	291		P	19 53 55.1	-0.6
CO02				IAmb	IAmb	19 55 11.9	
	comp=Z,63nm,1.4s						
CO03	El Pedregal	39.49	292	P	P	19 53 56.2	-0.6
CO01	Juntas del Tor	39.87	293	P	P	19 54 00.3	+0.2
DIAM	Diamantina, MG	39.91	335	eP	P	19 54 01.6	+1.2
MAW	Mawson	39.97	143	P	P	19 53 59.6	-0.6
	comp=Z,15nm,0.7s						
MAW	Mawson	39.97	143	P	P	19 54 00.8	+0.6
	comp=Z,64nm,0.7s,baz=211,slow=11,SNR=170						
MAW				PcP	PcP	19 56 03.0	+0.1
	comp=Z,5.6nm,0.5s,baz=245,slow=6.7,SNR=1.6						
MAW				ScP	ScP	19 59 41.5	+0.1
	comp=Z,8.6nm,0.9s,baz=231,slow=5.5,SNR=9.6						
	comp=Z,64nm,0.7s						
PMNB	Patos De Minas	40.37	331	eP	P	19 54 04.6	+0.5
ITRB	Iturama	40.42	325	eP	P	19 54 05.1	+0.7
RPRD	Ribas do Rio P	40.82	320	eP	P	19 54 08.5	+0.8
IPMB	Ipameri, GO	41.39	329	eP	P	19 54 13.2	+0.7
AQDB	Aquidauana	41.56	318	P	P	19 54 13.2	-0.5
AQDB				IAmb	IAmb	19 54 14.2	
	comp=Z,88nm,1.8s						
AC02	Maricunga	41.95	297	P	P	19 54 17.1	-0.4
AC02				IAmb	IAmb	19 54 19.8	
	comp=Z,40nm,0.8s						
AC02					PcP	19 56 09.6	-1.2
BDQN	Bodoquena, MS	41.98	316	eP	P	19 54 16.2	-0.9
AC06	Mina Casimiro	42.13	295	P	P	19 54 17.2	-1.1
GRHM	Grahamstown, E	43.10	81	P	P	19 54 25.9	-0.3
GRHM				IAmb	IAmb	19 55 23.8	
	comp=Z,122nm,1.6s						
BDFB	Brasilia	43.56	330	P	P	19 54 30.2	+0.1
BDFB	Brasilia	43.56	330	P	P	19 54 31.0	+0.9
	comp=Z,6.9nm,0.6s,baz=164,slow=7.1,SNR=11						
	comp=Z,6.9nm,0.6s						
GO02	Mina Guanaco	43.57	298	P	P	19 54 29.8	-0.5
AF01	San Pedro de A	44.75	301	P	P	19 54 39.8	0.0
PB06	IPOC Station P	45.62	300	P	P	19 54 45.6	-0.9
PB06				IAmb	IAmb	19 54 47.7	
	comp=Z,26nm,0.7s						
SALV	Santo Antonio	45.76	320	eP	P	19 54 47.8	+0.4
PB05	IPOC Station P	45.81	299	P	P	19 54 46.9	-0.9
PB05				IAmb	IAmb	19 54 48.9	
	comp=Z,43nm,0.9s						
SBA	Scott Base	45.82	184	P	P	19 54 48.8	+1.6
SBA				IAmb	IAmb	19 54 51.7	
	comp=Z,62nm,1.1s						
SBA	Scott Base	45.82	184	P	P	19 54 48.8	+1.6
SBA				pmax	pmax		
	comp=Z,62nm,1.1s						
SBA	Scott Base	45.82	184	P	P	19 54 49.4	+2.3
SDBA	SAO DESIDERIO	45.88	336	eP	P	19 54 49.2	+0.8
BOSA	Boshof	46.08	76	P	P	19 54 49.1	-0.9
BOSA	Boshof	46.08	76	P	P	19 54 49.4	-0.6
	comp=Z,8.6nm,0.7s,baz=210,slow=7.9,SNR=20						
	comp=Z,8.6nm,0.7s						
VNDA	Vanda	46.31	183	P	P	19 54 52.8	+1.7
VNDA				IAmb	IAmb	19 54 54.6	
	comp=Z,50nm,0.6s						
VNDA	Vanda	46.31	183	P	P	19 54 53.0	+1.9
	comp=Z,47nm,0.6s,baz=186,slow=6.8,SNR=310						
VNDA				ScP	ScP	20 00 07.2	+0.3
	comp=Z,3.5nm,0.7s,baz=250,slow=1.4,SNR=6.8						
VNDA				LR	LR	20 13 03.0	
	comp=Z,105nm,19.6s,baz=218,slow=34						
	comp=Z,47nm,0.6s						
VNDA	Vanda	46.31	183	P	P	19 54 53.0	+1.9
VNDA	Vanda	46.31	183	P	P	19 54 53.0	+1.9
BBSD	Serra de San D	46.45	314	eP	P	19 54 52.6	-0.2
WIN	Windhoek	46.76	63	P	P	19 54 54.7	-0.7
WIN				IAmb	IAmb	19 54 57.3	
	comp=Z,74nm,2.0s						
WIN	Windhoek	46.76	63	P	P	19 54 54.7	-0.7
WIN				pmax	pmax		
	comp=Z,74nm,2.0s						
PB01	IPOC Station P	47.00	301	P	P	19 54 57.8	+0.6
CCD	Concordia, Ant	47.43	170	P	P	19 55 01.3	+1.1
PTLB	Pontes e Lacer	47.45	316	P	P	19 55 00.6	+0.1
PTLB	Pontes e Lacer	47.45	316	eP	P	19 55 00.6	+0.1
H04S2	CROZET ISLANDS	47.49	114	T	T	20 47 06.2	
	baz=230,slow=75,SNR=5.5						
H04S3	CROZET ISLANDS	47.50	114	T	T	20 47 03.4	
	baz=230,slow=75,SNR=11						
H04S1	CROZET ISLANDS	47.51	114	T	T	20 47 06.9	
	baz=230,slow=75,SNR=3.0						
PB08	IPOC Station P	47.61	302		P	19 55 03.3	+1.0
PB08				IAmb	IAmb	19 55 04.4	
	comp=Z,50nm,0.6s						
KOOLE	Kule	47.96	66	P	P	19 55 04.2	-0.5
KOOLE				IAmb	IAmb	19 55 05.3	
	comp=Z,43nm,0.6s						
KOOLE	Kule	47.96	66	i P	P	19 55 04.7	0.0
SNDB	Serra Nova Dou	47.99	328	eP	P	19 55 06.0	+1.2
MAKGR	Makgori	48.06	73	P	P	19 55 04.7	-0.7
MAKGR	Makgori	48.06	73	i P	P	19 55 05.0	-0.4
H10S2	ASCENSION HYDR	48.26	17	T	T	20 47 58.4	
	baz=32,slow=74,SNR=58						
H10S3	ASCENSION HYDR	48.26	17	T	T	20 47 54.3	
	baz=188,slow=74,SNR=55						
SKOMA	Sekoma	48.65	71	i P	P	19 55 09.8	-0.1
KGCAE	Kacgae	49.11	68	P	P	19 55 12.7	-0.8
KGCAE				IAmb	IAmb	19 55 14.3	
	comp=Z,52nm,1.0s						
KGCAE	Kacgae	49.11	68	i P	P	19 55 13.6	+0.1
LBTB	Lobatse	49.13	73		P	19 55 13.1	-0.5
LBTB				IAmb	IAmb	19 55 14.3	
	comp=Z,32nm,0.8s						
LBTB	Lobatse	49.13	73	P	P	19 55 13.1	-0.5
LBTB				pmax	pmax		
	comp=Z,32nm,0.8s						
LBTB	Lobatse	49.13	73	P	P	19 55 13.5	-0.1
LBTB				x	x	19 55 40.2	
H10N1	ASCENSION HYDR	49.38	17	T	T	20 49 21.4	
	baz=188						
H10N3	ASCENSION HYDR	49.38	17	T	T	20 49 23.1	
	baz=188,slow=74						
H10N2	ASCENSION HYDR	49.40	17	T	T	20 49 20.1	
	baz=188,slow=74,SNR=32						
GRTLG	Ghanzi	49.84	66	P	P	19 55 18.5	-0.4
GRTLG				IAmb	IAmb	19 55 20.0	
	comp=Z,86nm,1.6s						
TSUM	Tsumeb	49.85	61	P	P	19 55 18.7	-0.4
SMTB	Santa Maria do	49.94	333	eP	P	19 55 20.7	+1.1
KDWAN	Kaudwane	49.96	71	P	P	19 55 19.4	-0.4
KDWAN				IAmb	IAmb	19 55 21.3	
	comp=Z,19nm,0.8s						
KDWAN	Kaudwane	49.96	71	i P	P	19 55 19.7	-0.2
PDRB	Porto dos Gac	50.09	321	eP	P	19 55 20.7	-0.1
VILB	Vilhena	50.13	316	P	P	19 55 20.9	-0.3
VILB				IAmb	IAmb	19 55 22.0	
	comp=Z,30nm,0.7s						
VILB	Vilhena	50.13	316	eP	P	19 55 21.3	+0.2
CLDB	Colider	50.46	323	eP	P	19 55 23.4	-0.1
LPAZ	La Paz	50.48	305		P	19 55 25.1	+0.6
LPAZ	La Paz	50.48	305	P	P	19 55 25.5	+1.0
	comp=Z,38nm,0.7s,baz=144,slow=4.8,SNR=155						
LPAZ				PcP	PcP	19 56 41.5	+0.6
	comp=Z,10nm,0.6s,baz=203,slow=2.6,SNR=1.6						
LPAZ				ScP	ScP	20 00 25.4	-0.9
	comp=Z,2.7nm,0.5s,baz=101,slow=7.5,SNR=6.3						
	comp=Z,38nm,0.7s						
LPAZ	La Paz	50.48	305	eP	P	19 55 25.0	+0.6
LPAZ	La Paz	50.48	305	P	P	19 55 25.5	+1.0
LPAZ				x	x	19 55 51.7	
LPHEP	Lephephe	50.61	72	P	P	19 55 24.1	-0.6
LPHEP				IAmb	IAmb	19 55 26.5	
	comp=Z,65nm,1.4s						
LPHEP	Lephephe	50.61	72	i P	P	19 55 24.6	-0.1
QNGWA	Qangwa	51.35	65	P	P	19 55 29.9	-0.4
QNGWA				IAmb	IAmb	19 55 31.6	
	comp=Z,35nm,0.9s						
QNGWA	Qangwa	51.35	65	i P	P	19 55 30.6	+0.3
MREMI	Moremi	52.09	73	P	P	19 55 35.5	-0.3
MREMI	Moremi	52.09	73	i P	P	19 55 35.8	0.0
PHDHD	Phuduhudu	52.51	68	P	P	19 55 38.6	-0.3
PHDHD				IAmb	IAmb	19 55 39.3	
	comp=Z,37nm,0.7s						
PHDHD	Phuduhudu	52.51	68	i P	P	19 55 39.1	+0.1
BROLN	Tlhalogang	53.23	72	i P	P	19 55 44.0	-0.2
CASY	Casey	53.68	160	P	P	19 55 47.6	+0.8
CASY				IAmb	IAmb	19 55 49.2	
	comp=Z,44nm,1.1s						

NPGB	Novo Progresso	53.90	325	eP	P	19 55 49.1	+0.1
KSANE	Kasane	54.83	67	P	P	19 55 55.4	-0.4
KSANE				IAmb	IAmb	19 55 56.8	
	comp=Z,44nm,0.9s						
KSANE	Kasane	54.83	67	iP	P	19 55 56.1	+0.3
ITTB	Itaituba	56.54	325	eP	P	19 56 08.2	+0.3
DRV	Dumont d'Urvil	56.98	174	P	P	19 56 11.1	+0.8
MAL2	Monte Alegre,	58.28	328		P	19 56 21.1	+0.9
MAL2	Monte Alegre,	58.28	328		P	19 56 20.9	+0.8
MAL2				IAmb	IAmb	19 56 22.0	
	comp=Z,39nm,0.8s						
NNA	Nana	58.33	299	deP	P	19 56 21.2	+0.6
NNA				pmax	pmax		
	comp=Z,40nm,0.9s						
LSZ	Lusaka	58.51	69	P	P	19 56 21.1	-0.8
LSZ				IAmb	IAmb	19 56 22.9	
	comp=Z,42nm,0.9s						
LSZ	Lusaka	58.51	69	P	P	19 56 21.1	-0.8
LSZ				pmax	pmax		
	comp=Z,42nm,0.9s						
LSZ	Lusaka	58.51	69	P	P	19 56 21.8	-0.1
LSZ				x	x	19 56 49.3	
MACA	Manacapuru-AM	59.33	320	P	P	19 56 26.4	-1.1
CZSB	Cruzeiro do Su	60.09	305	P	P	19 56 31.4	-1.3
CZSB				IAmb	IAmb	19 56 32.8	
	comp=Z,28nm,0.7s						
TEFE	Tefe	60.48	316	eP	P	19 56 34.9	-0.4
VOI	Vohitsoka	63.25	90	P	P	19 56 53.8	-0.2
VOI				IAmb	IAmb	19 57 32.5	
	comp=Z,36nm,1.3s						
BOAV	Boa Vista	64.45	323	P	P	19 57 01.4	-0.3
BOAV				IAmb	IAmb	19 57 02.2	
	comp=Z,24nm,0.7s						
DBIC	Dimbokro	65.42	25	P	P	19 57 07.7	-0.2
DBIC				IAmb	IAmb	19 57 08.9	
	comp=Z,32nm,0.8s						
DBIC	Dimbokro	65.42	25	P	P	19 57 08.2	+0.3
	comp=Z,31nm,0.7s,baz=200,slow=6.6,SNR=9.0						
DBIC				LR	LR	20 19 44.4	
	comp=Z,197nm,22.0s,baz=108,slow=30						
	comp=Z,31nm,0.7s						
DBIC	Dimbokro	65.42	25	P	P	19 57 08.1	+0.2
MCRA	Macar, Loja	66.44	300	P	P	19 57 14.8	+0.3
	comp=Z,51nm,0.9s						
COHC	Cochancay	67.76	302		P	19 57 23.8	+1.0
COHC				IAmb	IAmb	19 57 25.1	
	comp=Z,20nm,0.7s						
FLOC	Florencia	69.68	307		P	19 57 34.4	-0.3
FLOC	Florencia	69.68	307	P	P	19 57 34.5	-0.3
	comp=Z,415nmcomp=Z,25nm,1.2s						
OTAV	Otavalo	69.76	304	P	P	19 57 36.2	+0.5
OTAV	Otavalo	69.76	304	eP	P	19 57 36.6	+0.8
OTAV	Otavalo	69.76	304	eP	P	19 57 37.3	+1.6
OTAV	Otavalo	69.76	304	P	P	19 57 37.0	+1.2
	comp=Z,618nmcomp=Z,48nm,1.3s						
OTAV	Otavalo	69.76	304	P	P	19 57 37.2	+1.4
OTAV				pP	pP	19 58 02.1	-1.0
GARC	Garzon, Huila	70.15	308	P	P	19 57 37.8	-0.1
	comp=Z,57nm,0.6s						
BETC	Betania	70.56	308	P	P	19 57 41.0	+0.8
URMC	La Uribe, Meta	70.61	309	P	P	19 57 40.7	+0.2
	comp=Z,51nm,0.6s						
BBAC	Balboa, Cauca	70.78	306	P	P	19 57 42.3	+0.6
	comp=Z,1µmcomp=Z,21nm,0.9s						
PRAC	Prado	71.24	309	P	P	19 57 44.4	+0.1
	comp=Z,803nmcomp=Z,55nm,0.7s						
ORTC	Ortega, Tolima	71.57	309	P	P	19 57 46.2	-0.1
	comp=Z,825nmcomp=Z,75nm,0.9s						
JAMC	Jamundi, Valle	71.58	307	P	P	19 57 46.1	-0.4
	comp=Z,12nm,0.5s						
YOTC	Yotoco, Valle	72.12	308	P	P	19 57 48.8	-0.8
	comp=Z,2µmcomp=Z,20nm,0.6s						
MBAR	Mbarara	72.31	63	P	P	19 57 51.0	+0.1
MBAR	Mbarara	72.31	63	⇑eP	P	19 57 51.2	+0.3
MBAR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
RUSC	La Rusia	72.43	312	P	P	19 57 51.1	-0.8
RUSC	La Rusia	72.43	312	P	P	19 57 51.4	-0.5
	comp=Z,24nm,1.2s						
MALC	Bahia Malaga	72.59	307	P	P	19 57 53.1	+0.8
SPBC	San Pablo de B	72.63	311	P	P	19 57 51.0	-1.6
	comp=Z,1µmcomp=Z,19nm,0.6s						
NORC	Norcasia	72.89	310	P	P	19 57 52.4	-1.7
	comp=Z,423nmcomp=Z,50nm,0.7s						
PLMC	San Jos del P	72.92	308	P	P	19 57 53.8	-0.5
	comp=Z,2µmcomp=Z,60nm,0.8s						
BARC	Barichara	73.11	312	P	P	19 57 53.3	-2.3
TORD	Torodi Ar. Bea	73.30	30	P	P	19 57 56.7	+0.3
TORD				IAmb	IAmb	19 57 57.8	
	comp=Z,32nm,0.7s						
TORD	Torodi Ar. Bea	73.30	30	P	P	19 57 57.0	+0.6
	comp=Z,32nm,0.6s,baz=201,slow=6.2,SNR=32						
TORD				pP	pP	19 58 24.3	+0.6
	comp=Z,20nm,0.7s,baz=202,slow=5.6,SNR=6.4						
	comp=Z,32nm,0.6s						
PTBC	PUERTO BERRIO,	73.59	311	P	P	19 57 55.9	-2.3
	comp=Z,600nmcomp=Z,60nm,0.6s						
CBOC	Ciudad Bolivar	73.66	309	P	P	19 57 57.7	-1.0
	comp=Z,9.5nm,0.6s						
SDV	Santo Domingo	74.16	315	P	P	19 58 01.5	-0.1
SDV				IAmb	IAmb	19 58 03.0	
	comp=Z,31nm,0.8s						
ZARC	Zaragoza, Cauc	74.62	311	P	P	19 58 02.5	-1.6
	comp=Z,25nm,0.8s						
UREC	San Jos de Ur	75.14	310	P	P	19 58 06.2	-0.9
	comp=Z,12nm,0.7s						
PTAC	Punta Ardita,	75.59	308	P	P	19 58 10.5	+0.9
WHZ	Wether Hill Ro	77.37	191	P	P	19 58 20.1	+0.7
WHZ				IAmb	IAmb	19 58 21.7	
	comp=Z,29nm,0.8s						
CBE	Ff, Capester	77.64	326	P	P	19 58 21.6	+0.5
SMRC	Santa Marta, M	77.66	313	P	P	19 58 21.8	+0.5
SMRC				IAmb	IAmb	19 58 23.1	
	comp=Z,42nm,0.6s						
GDHS	Morne Mazeau,	77.88	326	P	P	19 58 22.9	+0.4
ODZ	Otahua Downs	77.90	193	P	P	19 58 23.3	+0.9
LBZ	Lake Benmore	78.60	193	P	P	19 58 27.4	+1.2
RPZ	Rata Peaks	79.16	193	P	P	19 58 29.7	+0.4
FOZ	Fox Glacier	79.49	193	P	P	19 58 31.3	+0.3
LTZ	Lake Taylor	79.91	194	P	P	19 58 34.1	+0.7
LTZ				IAmb	IAmb	19 58 36.5	
	comp=Z,46nm,1.0s						
LTZ	Lake Taylor	79.91	194	P	P	19 58 34.1	+0.7
INZ	Inchbonnie	80.08	194	P	P	19 58 34.2	0.0
KHZ	Kahutara	80.08	195	P	P	19 58 34.5	+0.2
LCR2	La Lucha 2	80.69	303		P	19 58 38.8	+0.7
LCR2				IAmb	IAmb	19 58 40.1	
	comp=Z,39nm,0.7s						
PAWZ	Paruwai Farm	80.80	197	P	P	19 58 39.0	+0.8
THZ	Tophouse	80.82	195	P	P	19 58 38.9	+0.6
PDPR	Patillas Dam,	80.89	323	P	P	19 58 38.0	-0.7
HUMP	Col San Antoni	80.95	323	P	P	19 58 39.7	+0.7
TUWZ	Tuamarina	80.99	196	P	P	19 58 44.6	+5.5
DSZ	Denniston Nort	80.99	194	P	P	19 58 38.1	-1.1
TMWZ	Te Maipa	80.99	198	P	P	19 58 40.3	+1.1
MTW	Mount Morrison	81.00	197	P	P	19 58 39.8	+0.6
TAU	Tasmania Unive	81.05	176	P	P	19 58 39.7	+0.3
TAU	Tasmania Unive	81.05	176	P	P	19 58 39.7	+0.3
TAU				pmax	pmax		
	comp=Z,96nm,0.9s						
OBIP	Obispado Ponce	81.11	322	P	P	19 58 39.2	-0.7
OBIP				IAmb	IAmb	19 58 42.6	
	comp=Z,103nm,1.8s						
CAW	Cannon Point	81.12	197	P	P	19 58 40.2	+0.3
TCW	Tory Channel	81.15	196	P	P	19 58 40.3	+0.3
HOWZ	Holdsworth Sta	81.26	197	P	P	19 58 41.3	+0.7
NNZ	Nelson	81.28	196	P	P	19 58 41.1	+0.4
BFZ	Birch Farm	81.34	198	P	P	19 58 41.7	+0.7
MRZ	Mangatainoka R	81.48	197	P	P	19 58 42.3	+0.6
MOO	Moorlands	81.51	176	P	P	19 58 42.2	+0.3
	comp=Z,160nm,1.3s						
DUWZ	D'Urville Isla	81.61	196	P	P	19 58 42.8	+0.4
JTS	Las Juntas de	81.61	303	P	P	19 58 43.0	+0.3
JTS				IAmb	IAmb	19 58 44.9	
	comp=Z,74nm,1.4s						
JTS	Las Juntas de	81.61	303	P	P	19 58 44.2	+1.5
	comp=Z,23nm,1.0s,baz=52,slow=4.0,SNR=8.7						
	comp=Z,23nm,1.0s						
DVHZ	Dannevirke	81.73	198	P	P	19 58 43.9	+0.8
QRZ	Quartz Range	81.79	195	P	P	19 58 42.3	-1.1
PXZ	Pawanui	81.87	198	P	P	19 58 35.5	-8.3
TSZ	Takapari Road	82.00	198	P	P	19 58 44.7	+0.2
PNHZ	Pukenui	82.10	198	P	P	19 58 45.8	+0.7
KRHZ	Kereru	82.33	198	P	P	19 58 47.2	+0.9
WAZ	Wanganui	82.46	197	P	P	19 58 48.9	+2.0
KWHZ	Kaweka Forest	82.54	198	P	P	19 58 48.8	+1.4
BANI	BANI	82.75	319	P	P	19 58 48.0	-0.6
WNVZ	Wahianoa	82.77	198	P	P	19 58 49.5	+0.8
BKZ	Black Stump Fm	82.78	198	P	P	19 58 49.6	+1.0
TRVZ	Turoa	82.81	198	P	P	19 58 49.8	+0.8
WHVZ	Whangaehu Hut	82.82	198	P	P	19 58 50.3	+1.2
MAVZ	Matarangi	82.84	198	P	P	19 58 50.2	+1.0
LREZ	Lake Rotokare	82.84	197	P	P	19 58 49.8	+0.9
FWVZ	Far West T-bar	82.85	198	P	P	19 58 50.0	+0.8
PKVZ	Pokaka	82.85	198	P	P	19 58 49.6	+0.6
SNVZ	South Ngauruho	82.90	198	P	P	19 58 50.3	+0.9
NGZ	Ngauruhoe	82.92	198	P	P	19 58 50.4	+0.9
OTVZ	Oturere	82.92	198	P	P	19 58 50.2	+0.7
NNVZ	North Ngauruho	82.96	198	P	P	19 58 50.5	+0.8
TMVZ	Te Maari	82.96	198	P	P	19 58 50.3	+0.6
ESPN	Las Esperanzas	82.97	304	P	P	19 58 49.7	0.0
ESPN				IAmb	IAmb	19 58 50.7	
	comp=Z,44nm,0.8s						
NTVZ	North Tongarir	82.98	198	P	P	19 58 50.7	+0.9
TWVZ	Taurewa	83.05	198	P	P	19 58 50.4	+0.3
KHEZ	Kahui Hut	83.06	196	P	P	19 58 50.0	-0.2
NEZ	North Egmont	83.08	197	P	P	19 58 50.5	+0.3
VRZ	Vera Road	83.11	197	P	P	19 58 50.2	0.0
ACON	Acoyapa	83.18	303		P	19 58 50.6	-0.2
MWZ	Matawai	83.40	199	P	P	19 58 52.8	+1.0
PUZ	Puketiti	83.51	200	P	P	19 58 53.7	+1.3
TAM	Tamanrasset	83.54	30	P	P	19 58 52.7	+0.1
TAM	Tamanrasset	83.54	30	P	P	19 58 52.7	+0.1
TAM				pmax	pmax		
	comp=Z,31nm,0.3s						
URZ	Urewera	83.55	199	P	P	19 58 52.9	+0.4
HIZ	Hauiti	83.69	197	P	P	19 58 52.4	-0.8
BOAB	BOACO BROADBAN	83.83	303		P	19 58 54.0	-0.1
BOAB				IAmb	IAmb	19 58 55.3	
	comp=Z,44nm,0.7s						
HAZ	Te Kaha	83.91	200	P	P	19 58 55.1	+0.7
TOO	Toolangi	86.28	174		P	19 59 06.2	-0.1
TOO	Toolangi	86.28	174	P	P	19 59 06.2	-0.1
	comp=Z,16nm,1.1s						
TOO	Toolangi	86.28	174	P	P	19 59 06.2	-0.1
TOO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WCZ	Waipu Caves	86.29	197	P	P	19 59 05.6	-0.6
OUZ	Omahuta	87.12	197	P	P	19 59 10.4	+0.1
CAN	Canberra	88.68	177		P	19 59 18.6	+0.8
CAN	Canberra	88.68	177	P	P	19 59 17.6	-0.2
	comp=Z,35nm,1.2s						
CAN	Canberra	88.68	177	P	P	19 59 18.6	+0.8
CAN				pmax	pmax		
	comp=Z,84nm,1.6s						
MORW	Morawa	89.42	148	P	P	19 59 21.3	0.0
MORW				IAmb	IAmb	20 00 43.8	
	comp=Z,38nm,1.4s						
YNG	Young	89.68	176	P	P	19 59 23.0	+0.6
	comp=Z,32nm,1.1s						
HTT	Hallett	89.85	168	P	P	19 59 23.8	+0.4
	comp=Z,10nm,1.0s						
BBOO	Buckleboo	90.11	166	P	P	19 59 24.5	0.0
FORT	Forrest	90.75	159	P	P	19 59 27.5	0.0
FORT				IAmb	IAmb	19 59 31.4	
	comp=Z,12nm,0.7s						
STKA	Stephens Creek	91.66	171		P	19 59 31.8	+0.1
STKA	Stephens Creek	91.66	171	P	P	19 59 31.9	+0.3
	comp=Z,98nm,0.9s						
STKA	Stephens Creek	91.66	171	P	P	19 59 32.3	+0.6
	comp=Z,12nm,0.6s,baz=157,slow=3.6,SNR=16						
STKA				PP	PP	20 03 09.6	-0.9
	comp=Z,5.2nm,0.8s,baz=190,slow=7.9,SNR=4.3						
	comp=Z,12nm,0.6s						
TEIG	Tepich	91.81	305	P	P	19 59 33.1	+0.8
CMIG	Matias Romero	92.26	298	P	P	19 59 35.0	+0.6
	comp=Z,9.0nm,0.7s,baz=148,slow=4.0,SNR=10						
	comp=Z,9.0nm,0.7s						
CMSA	Cobar Meteorol	92.30	174	P	P	19 59 35.0	+0.4
	comp=Z,19nm,0.7s						
ARMA	Armidale	93.62	179	P	P	19 59 41.4	+0.6
GIRL	Giralia	94.89	145	P	P	19 59 40.7	-5.9
QLP	Quilpie	97.13	172	P	P	19 59 56.4	-0.3
	comp=Z,35nm,0.7s						
EIDS	Eidsvold	98.64	178	P	P	20 00 03.0	-0.5
ASAR	Alice Springs	98.76	163	P	P	20 00 03.9	-0.4
ASAR	Alice Springs	98.76	163	P	P	20 00 04.2	0.0
	comp=Z,8.6nm,0.7s,baz=186,slow=3.8,SNR=45						
ASAR				PP	PP	20 04 02.6	-3.1
	comp=Z,3.5nm,0.7s,baz=187,slow=7.2,SNR=13						
ASAR				PKKP	PKKPdf	20 16 30.8	0.0
	comp=Z,0.4nm,0.6s,baz=32,slow=2.0,SNR=6.8						
	comp=Z,8.6nm,0.7s						
AS31	Alice Springs	98.76	163		P	20 00 04.0	-0.2
AS31	Alice Springs	98.76	163	P	P	20 00 04.1	-0.2
	comp=Z,4.8nm,0.7s						
WRA	Warramunga Arr	102.48	162	P	Pdif	20 00 20.9	+0.1
	comp=Z,1.7nm,0.5s,baz=196,slow=4.3,SNR=15						
WRA				PP	PP	20 04 30.6	-3.2
	comp=Z,1.8nm,0.8s,baz=192,slow=6.0,SNR=4.5						
WRA				PKKPbc	PKKPbc	20 16 20.4	+2.2
	comp=Z,0.4nm,0.3s,baz=356,slow=2.9,SNR=9.0						
TXAR	Lajitas Array	106.87	298	Pdiff	Pdif	20 00 40.6	+0.7
	comp=Z,0.4nm,0.9s,baz=163,slow=1.6,SNR=3.6						
BMRD	Maredsous	109.52	21	dPdif	Pdif	20 00 52.9	+1.8
MEM	Membach	110.06	22	dPdif	Pdif	20 00 53.8	+0.3
GERES	GERESS Array B	110.20	27	PKKPbc	PKKPbc	20 15 55.6	-0.2
	comp=Z,0.1nm,0.3s,baz=358,slow=5.8,SNR=3.4						
EKA	Eskdalemuir Ar	113.00	15	PKKPbc	PKKPbc	20 15 46.9	+0.3
	comp=Z,0.4nm,0.4s,baz=352,slow=2.8,SNR=9.0						
EKA				PKKPab	PKKPab	20 15 52.5	+1.3
	comp=Z,1.0nm,0.7s,baz=15,slow=3.6,SNR=3.6						
KIV	Kislovodsk	115.87	49	ePKIKP	PKiKP	20 05 06.2	+0.3
PV18	Skein Mesa, Pa	116.61	299		PKiKP	20 05 08.2	+0.5
W13A	Hualapai Mount	116.63	294		PKiKP	20 05 08.2	+0.4
PV10	Paradox Valley	116.78	299		PKiKP	20 05 08.3	+0.3
HMU	Henry Mountain	117.27	298		PKiKP	20 05 09.5	+0.5
SRU	San Rafael Swe	118.08	299		PKiKP	20 05 10.5	+0.1
SRU	San Rafael Swe	118.08	299	PKIKP	PKiKP	20 05 10.5	+0.1
P18A	Preston Nutter	118.34	299		PKPdf	20 05 11.0	-0.1
SHPR	Sheep Range	118.37	294		PKiKP	20 05 11.8	+0.7
FAKI	Fak Fak	118.65	157	PKPdf	PKPdf	20 05 10.7	-1.5
TPNV	Topopah Spring	119.27	293		PKiKP	20 05 13.5	+0.7
TPNV	Topopah Spring	119.27	293	PKIKP	PKiKP	20 05 13.5	+0.7
DUG	Dugway, Tooele	120.03	298		PKiKP	20 05 14.8	+0.6
DUG	Dugway, Tooele	120.03	298	PKIKP	PKiKP	20 05 14.8	+0.6
ULM	Lac du Bonnet	120.40	316	PKP	PKPdf	20 05 13.5	-0.7
	comp=Z,2.9nm,0.6s,baz=150,slow=3.0,SNR=3.8						
PDAR	Pinedale Array	120.44	302	PKP	PKPdf	20 05 14.4	-0.4
	comp=Z,1.0nm,0.5s,baz=235,slow=6.5,SNR=7.4						
HWUT	Hardware Ranch	120.51	300		PKiKP	20 05 15.1	0.0
HFS	Hagfors	120.54	22	PKP	PKPdf	20 05 12.8	-1.3
	comp=Z,1.3nm,0.8s,baz=99,slow=4.7,SNR=5.8						
HFS				PKKPbc	PKKPbc	20 15 19.4	-0.5
	comp=Z,4.1nm,0.9s,baz=72,slow=4.8,SNR=10						
NOA	NORSAR Array B	120.86	21	PKP	PKiKP	20 05 15.0	0.0
	comp=Z,0.4nm,0.8s,baz=307,slow=18,SNR=4.0						
NOA				SKP		20 08 38.6	
	comp=Z,0.6nm,0.8s,baz=201,slow=1.7,SNR=3.2						
NOA				PKKPbc	PKKPbc	20 15 18.5	-0.3
	comp=Z,1.2nm,0.6s,baz=25,slow=4.3,SNR=8.0						
NOA	NORSAR Array B	120.86	21	PKIKP	PKiKP	20 05 15.0	0.0
HVU	Hansel Valley	121.22	299		PKiKP	20 05 16.5	0.0
HVU	Hansel Valley	121.22	299	PKIKP	PKiKP	20 05 16.5	0.0
NV11	Mina Array Sit	121.38	293		PKiKP	20 05 17.9	+1.0
NVAR	Mina Array Bea	121.45	293		PKiKP	20 05 17.8	+0.7
NVAR	Mina Array Bea	121.45	293	PKP	PKiKP	20 05 18.3	+1.2
	comp=Z,3.0nm,0.6s,baz=134,slow=3.0,SNR=22						
LOHW	Long Hollow	121.58	302		PKiKP	20 05 17.3	+0.1
ELK	Elko	121.65	297		PKiKP	20 05 17.9	+0.4
ELK	Elko	121.65	297	PKIKP	PKiKP	20 05 17.9	+0.4
OBN	Obninsk	122.58	38	⇓iPKIKP	PKiKP	20 05 18.4	0.0
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HLID	Hailey	123.36	300		PKiKP	20 05 21.2	+0.6
FRB	Frobisher Bay	123.87	339	PKP	PKiKP	20 05 20.6	-0.1
	comp=Z,4.7nm,0.6s,baz=135,slow=5.1,SNR=2.2						
LRM	Limekiln Ridge	124.11	303		PKiKP	20 05 22.6	+0.4
SFJD	Kangerlussuaq	124.22	349	PKP	PKiKP	20 05 21.6	+0.3
	comp=Z,6.9nm,0.5s,baz=158,slow=5.4,SNR=2.4						
BELG	Belogornoye	124.55	46	⇓iPKIKP	PKiKP	20 05 22.9	+0.5
FINES	FINESS Array B	124.63	28	PKPdf	PKPdf	20 05 21.9	-0.1
FINES	FINESS Array B	124.63	28	PKP	PKPdf	20 05 22.0	0.0
	comp=Z,3.8nm,0.4s,baz=162,slow=2.1,SNR=66						
FINES				PKKPbc	PKKPbc	20 15 03.4	-0.7
	comp=Z,1.6nm,0.9s,baz=329,slow=3.3,SNR=4.2						
FIA1	FINESS Array S	124.64	28	PKPdf	PKPdf	20 05 21.8	-0.2
CMAR	Chiang Mai Arr	125.02	111	PKPdf	PKPdf	20 05 23.7	-0.4
CMAR	Chiang Mai Arr	125.02	111	PKP	PKiKP	20 05 24.4	0.0
	comp=Z,1.7nm,0.8s,baz=219,slow=3.7,SNR=8.6						
OVMT	Ovando	125.28	303		PKiKP	20 05 24.4	+0.2
BMO	Blue Mountains	125.72	299		PKiKP	20 05 25.1	-0.1
BMO	Blue Mountains	125.72	299	PKIKP	PKiKP	20 05 25.1	-0.1
J05D	Fort Rock, OR	126.54	295		PKiKP	20 05 27.6	+0.6
G08A	Pilot Rock	126.84	298		PKiKP	20 05 27.7	+0.2
BBOR	Butler Butte	126.98	294		PKPdf	20 05 27.1	-0.2
AKTO	Aktyubinsk	127.52	53	PKP	PKPdf	20 05 27.9	+0.1
	comp=Z,1.8nm,0.6s,baz=205,slow=3.1,SNR=5.2						
AKTO	Aktyubinsk	127.52	53	PKIKP	PKPdf	20 05 28.0	+0.1
AB31	Akbulak array	127.56	56		PKPdf	20 05 28.0	+0.1
ABKAR	Akbulak array	127.56	56		PKPdf	20 05 27.9	-0.1
HAWA	Hanford	127.91	299		PKiKP	20 05 29.7	+0.3
KLMR	Klimovskoe	128.06	35	ePKIKP	PKiKP	20 05 29.6	+0.5
KLMR				pmax	pmax		
	comp=Z,15nm,1.5s						
WAH2	Wahluke Slope	128.19	299		PKiKP	20 05 30.0	+0.2
KSH	Kashi	128.68	75	PKP	PKiKP	20 05 31.3	0.0
KIRV	Kirov	129.80	42	SKPbc	SKPab	20 08 41.3	-2.0
	comp=Z,11nm,0.8s,baz=58,slow=4.2,SNR=5.4						
LSA	Lhasa	129.80	95	PKPdf	PKiKP	20 05 34.8	+0.5
LSA	Lhasa	129.80	95	PKIKP	PKiKP	20 05 34.8	+0.5
AAK	Ala-Archa	130.11	71	⇓iPKIKP	PKPdf	20 05 33.6	+0.3
QIZ	Qiongzhong	130.95	122	PKP	PKPdf	20 05 35.0	-0.4
QIZ				PP	PP	20 07 53.0	0.0
QIZ				SS	SS	20 25 17.5	+3.0
QIZ				LR	LR		
	comp=Z,300nm,16.0s						
QIZ				LR	LR		
	comp=Z,350nm,23.6s						
ARCES	ARCESS Array B	131.20	22	PKPdf	PKPdf	20 05 34.1	-0.2
ARCES	ARCESS Array B	131.20	22	PKP	PKPdf	20 05 33.9	-0.4
	comp=Z,3.1nm,0.7s,baz=208,slow=3.3,SNR=25						
ARCES				PP	PP	20 07 52.0	-2.5
	comp=Z,2.6nm,1.0s,baz=204,slow=5.9,SNR=4.0						
ARCES				SKPbc	SKPbc	20 08 46.9	-1.7
	comp=Z,7.2nm,0.9s,baz=194,slow=2.5,SNR=5.8						
BLKN	Baker Lake	131.24	327		PKPdf	20 05 34.5	+0.1
ARTI	Arti	131.81	48	PKP	PKiKP	20 05 36.5	-0.4
	comp=Z,0.8nm,0.3s,baz=77,slow=12,SNR=3.2						
ARTI				SKPbc	SKPbc	20 08 50.0	-1.2
	comp=Z,3.9nm,0.7s,baz=267,slow=2.9,SNR=6.9						
PZH	PanZhiHua	133.07	108	PKP	PKPdf	20 05 39.0	-0.4
BVAR	Borovoye Array	134.96	58	PKP	PKiKP	20 05 42.6	-0.8
	comp=Z,2.0nm,0.6s,baz=228,slow=1.9,SNR=9.7						
BVAR				SKPbc	SKPbc	20 09 00.5	-1.3
	comp=Z,4.0nm,0.8s,baz=243,slow=2.7,SNR=12						
BVAR				SKP		20 09 06.0	
	comp=Z,2.1nm,0.7s,baz=228,slow=3.1,SNR=6.0						
YKA	Yellowknife Ar	136.33	318		PKPdf	20 05 43.5	-0.6
YKA	Yellowknife Ar	136.33	318	PKP	PKPdf	20 05 44.5	+0.4
	comp=Z,4.6nm,0.7s,baz=122,slow=2.0,SNR=18						
YKA				PP	PP	20 08 25.7	-1.5
	comp=Z,1.5nm,0.8s,baz=126,slow=6.0,SNR=5.9						
YKA				SKPbc	SKPbc	20 09 04.5	-1.2
	comp=Z,3.2nm,1.0s,baz=109,slow=2.9,SNR=9.0						
SPITS	Spitsbergen Ar	136.83	12	PKP	PKiKP	20 05 46.0	-0.5
	comp=Z,5.4nm,0.8s,baz=165,slow=3.5,SNR=6.3						
SPITS	Spitsbergen Ar	136.83	12	PKIKP	PKiKP	20 05 46.0	-0.5
MK31	Makanchi Array	137.01	72	⇑iPKIKP	PKiKP	20 05 50.8	+3.0
MKAR	Makanchi Array	137.01	72	PKhKP	PKPpre	20 05 37.8	
	comp=Z,0.3nm,0.6s,baz=245,slow=5.3,SNR=2.0						
MKAR				SKPbc	SKPbc	20 09 07.2	-1.2
	comp=Z,2.3nm,0.8s,baz=252,slow=3.5,SNR=12						
KURBB	Kurchatov Arra	137.46	65	PKhKP	PKPpre	20 05 39.8	
	comp=Z,0.6nm,0.7s,baz=243,slow=3.8,SNR=5.7						
KURBB				SKPbc	SKPbc	20 09 08.9	-0.6
	comp=Z,3.9nm,0.8s,baz=233,slow=3.2,SNR=21						
WMQ	Urumqi	138.00	79	ePKP	PKiKP	20 05 49.5	-0.5
TOAD	Toad River Com	138.54	309	P	PKiKP	20 05 49.6	-0.9
	baz=124						
LIRD	Liard River Hi	139.22	309	P	PKiKP	20 05 50.7	-1.1
	baz=122						
T35M	Bob Quinn	139.75	304	P	PKiKP	20 05 52.0	-1.0
	baz=123						
WRGLY	Wrigley	140.12	315	P	PKiKP	20 05 52.5	-1.0
	baz=120						
CRAG	Craig	140.28	301	P	PKiKP	20 05 52.8	-1.2
	baz=123						
WRAK	Wrangell Islan	140.43	303	P	PKiKP	20 05 53.4	-0.9
	baz=122						
DLBC	Dease Lake	140.43	306	P	PKPdf	20 05 53.0	+1.1
	baz=121						
S34M	Telegraph Cree	140.66	305	P	PKiKP	20 05 53.6	-1.2
	baz=121						
TGTN	Hyland Airport	141.23	311	P	PKPdf	20 05 54.4	+1.2
	baz=119						
R33M	Jennings River	141.34	307	P	PKPdf	20 05 54.5	+1.0
	baz=120						
GTA	Gaotai	141.76	93	ePKP	PKPdf	20 05 55.0	0.0
ZALV	Zalesovo Beam	142.53	64	PKhKP	PKPpre	20 05 50.6	
	comp=Z,1.1nm,0.4s,baz=240,slow=3.2,SNR=4.5						
ZALV				SKPbc	SKPbc	20 09 20.6	-2.2
	comp=Z,0.6nm,0.4s,baz=289,slow=4.5,SNR=4.9						
XAN	Xi'an	142.81	108	⇑PKP	PKiKP	20 05 59.5	-0.6
XAN				LR	LR		
	comp=Z,410nm,17.9s						
XAN				LR	LR		
	comp=Z,390nm,17.2s						
XAN				LR	LR		
	comp=Z,460nm,16.5s						
WHN	Wuhan	142.83	118	PKP	PKiKP	20 06 01.5	+1.4
M31M	Drury Creek, Y	144.12	310		PKPbc	20 05 57.0	+0.3
O30N	Mendenhall	144.25	307	P	PKPdf	20 05 58.0	-0.5
	baz=115						
P30M	Million Dollar	144.36	306	P	PKPdf	20 05 58.5	-0.3
	baz=116						
A36M	Sachs Harbour	144.40	328		PKPdf	20 05 58.2	-0.2
A36M	Sachs Harbour	144.40	328	P	PKPdf	20 05 58.0	-0.4
	baz=108						
N31M	Braeburn, Yuko	144.42	309	P	PKPbc	20 05 58.1	+0.4
	baz=115						
P29M	Windy Craggy	144.50	305	P	PKPdf	20 05 58.5	-0.5
	baz=116						
HYT	Haines Junctio	144.91	307		PKPdf	20 06 00.3	+0.6
HYT	Haines Junctio	144.91	307	P	PKPdf	20 06 00.5	+0.7
	baz=114						
N30M	Aishikik Lake	144.98	308	P	PKPdf	20 06 00.8	+1.0
	baz=114						
LYN	LuoYang	145.07	111	⇓PKPbc	PKPdf	20 06 01.0	+0.3
PNL	Peninsula	145.28	304	P	PKPab	20 06 01.1	+0.5
	baz=115						
M30M	Minto, Yukon	145.30	310	P	PKPab	20 06 00.7	0.0
	baz=113						
MAYO	Mayo, Yukon	145.31	312	P	PKPab	20 06 01.2	+0.6
	baz=112						
YUK6	Outpost Mounta	145.34	307	P	PKPab	20 06 01.5	+0.4
	baz=114						
H31M	Peel River	145.48	316	P	PKPab	20 06 01.3	+0.1
	baz=110						
YUK4	Talbot Arm	145.62	307	P	PKPab	20 06 02.7	+0.5
	baz=113						
F31M	Tsiigehtchic	145.79	319	P	PKPab	20 06 02.0	-0.3
	baz=108						
G31M	Satah River	145.82	318	P	PKPab	20 06 02.1	-0.3
	baz=108						
J30M	Hart River	145.84	313	P	PKPab	20 06 02.8	0.0
	baz=110,SNR=12						
PINM	Pinnacle	145.85	305	P	PKPab	20 06 03.0	+0.1
	baz=114						
M29M	Somme Creek	145.97	309	P	PKPab	20 06 03.4	+0.1
	baz=112,SNR=25						
INK	Inuvik	145.97	320		PKPbc	20 06 02.1	-0.1
INK	Inuvik	145.97	320	PKP2	PKPbc	20 06 02.1	-0.1
INK	Inuvik	145.97	320	P	PKPab	20 06 02.9	-0.1
	baz=107						
L29M	L29M	146.07	310	P	PKPab	20 06 03.7	+0.1
	baz=111						
K29M	Barlow Dome	146.07	312	P	PKPbc	20 06 03.2	+0.3
	baz=110						
I30M	Mount Dempster	146.08	314	P	PKPbc	20 06 03.1	+0.3
	baz=109						
O28M	Mount Upton	146.09	306	P	PKPab	20 06 04.1	0.0
	baz=113,SNR=6.0						
YUK8	Steele Glacier	146.10	307	P	PKPab	20 06 03.8	-0.2
	baz=113						
NJ2	Nanjing	146.25	122	ePKPbc	PKPbc	20 06 04.0	-0.1
TABL	Table Mountain	146.39	305		PKPbc	20 06 04.2	+0.2
J29N	Klondike Camp	146.57	313	P	PKPab	20 06 05.0	-0.5
	baz=109						
G30M	tAoh Zraii Nji	146.57	318	P	PKPbc	20 06 04.2	+0.1
	baz=107,SNR=77						
EPYK	Eagle Plains	146.58	316	PKPdf	PKPbc	20 06 04.1	0.0
EPYK	Eagle Plains	146.58	316	P	PKPbc	20 06 04.4	+0.2
	baz=107						

F30M	Barrier River	146.59	319	P	PKPbc	20 06 04.4	+0.4
	baz=106,SNR=28						
YUK3	Moose Creek	146.59	307	P	PKPbc	20 06 04.7	+0.1
	baz=112						
MESA	MESA	146.66	304	P	PKPbc	20 06 05.4	+0.7
	baz=113						
CTGM	Chitina Glacie	146.68	306		PKPbc	20 06 04.8	+0.1
CTG	Chitna Glacier	146.68	306	P	PKPbc	20 06 05.2	+0.5
	baz=112						
I29M	Ogilvie Camp,	146.89	314	P	PKPbc	20 06 05.1	+0.1
	baz=108						
DAWY	Dawson	146.93	312		PKPbc	20 06 04.5	-0.7
DAWY	Dawson	146.93	312	P	PKPbc	20 06 05.4	+0.2
	baz=109						
BVCY	Beaver Creek	147.00	308	P	PKPbc	20 06 05.8	+0.4
	baz=110						
ISLE	Juniper Island	147.00	305		PKPbc	20 06 05.8	+0.2
H29M	Whitestone	147.17	316	P	PKPbc	20 06 06.2	+0.4
	baz=106,SNR=51						
G29M	Pine Creek	147.23	317	P	PKPbc	20 06 06.4	+0.4
	baz=106,SNR=6.6						
TGL	Tana Glacier	147.28	305		PKPbc	20 06 06.4	+0.1
CRQE	Cirque	147.40	305	P	PKPbc	20 06 07.1	+0.4
	baz=111						
M27K	Edge Creek, AK	147.42	308	P	PKPbc	20 06 07.1	+0.4
	baz=110,SNR=6.2						
E29M	Blow River	147.56	320	P	PKPbc	20 06 06.8	+0.1
	baz=104						
I28M	Miner Creek	147.57	314	P	PKPbc	20 06 07.1	+0.1
	baz=106,SNR=26						
MCARA	McCarthy VSAT	147.60	306	P	PKPbc	20 06 07.7	+0.7
	baz=110						
BCAR	Beaver Creek A	147.62	309	PKPdf	PKPdf	20 06 03.9	-0.3
BCAR				PKPbc	PKPbc	20 06 07.6	+0.5
L27K	Beaver Creek,	147.63	309	P	PKPbc	20 06 07.7	+0.5
	baz=109						
KAIM	Kayak Island	147.71	303	P	PKiKP	20 06 08.4	-0.8
	baz=112						
M26K	Nabesna, AK	147.93	308	P	PKPbc	20 06 08.1	+0.1
	baz=109						
K27K	Chicken	148.04	311	P	PKiKP	20 06 09.0	-0.8
	baz=107						
D28M	Stokes Point	148.06	321	P	PKiKP	20 06 08.9	-0.8
	baz=101						
F28M	Old Crow	148.10	318	P	PKPbc	20 06 08.7	+0.5
	baz=103						
BMRM	Bremner River	148.17	305	P	PKPbc	20 06 09.2	+0.6
	baz=110						
E28M	Babbage River	148.19	320	P	PKPbc	20 06 08.3	-0.2
	baz=102						
BTO	Baotou	148.23	101	*e*PKPbc	PKiKP	20 06 10.3	-0.8
BTO				PP	PP	20 09 47.0	+7.5
BTO				SS	SS	20 28 44.3	+6.7
BTO				AMB	AMB		
	comp=Z,440nm,12.4s						
BTO				LR	LR		
	comp=Z,750nm,17.2s						
BTO				LR	LR		
	comp=Z,730nm,19.5s						
BTO				LR	LR		
	comp=Z,950nm,20.6s						
I27K	Kandik River	148.29	314	P	PKPbc	20 06 09.4	+0.6
	baz=105,SNR=8.0						
N25K	Chitina, Valde	148.38	306	P	PKiKP	20 06 10.1	-0.6
	baz=109						
H27K	Steamboat Moun	148.41	315	P	PKPbc	20 06 09.7	+0.6
	baz=104,SNR=24						
HNS	HongShan	148.41	111	⇑PKPbc	PKPbc	20 06 10.5	+0.6
HNS				SS	SS	20 28 37.3	-1.9
HNS				LR	LR		
	comp=Z,370nm,19.6s						
HNS				LR	LR		
	comp=Z,180nm,16.7s						
HNS				LR	LR		
	comp=Z,340nm,19.4s						
MENT	Mentasta	148.41	309		PKPbc	20 06 09.6	+0.4
EYAK	Cordova Ski Ar	148.55	304		PKiKP	20 06 10.3	-0.6
EYAK	Cordova Ski Ar	148.55	304	P	PKiKP	20 06 10.4	-0.5
	baz=110						
G27K	Doyon Strip	148.59	316	P	PKPbc	20 06 09.8	+0.3
	baz=103						
TIA	Tai'an	148.74	115	PKPbc	PKPbc	20 06 11.0	+0.2
DOT	Dot Lake	148.77	310		PKPdf	20 06 05.5	-0.6
DOT				PKPbc	PKiKP	20 06 11.1	-0.3
J26L	Joseph Creek	148.79	311	P	PKiKP	20 06 10.9	-0.6
	baz=105,SNR=7.7						
D27M	Malcolm River	148.82	321	P	PKiKP	20 06 10.9	-0.5
	baz=100						
SCRK	Sand Creek	148.83	310	P	PKiKP	20 06 11.0	-0.6
	baz=106						
I26K	Coal Creek Min	148.83	313	P	PKiKP	20 06 10.8	-0.6
	baz=104,SNR=27						
E27K	Coleen River	148.86	319	P	PKPbc	20 06 10.8	+0.6
	baz=101						
HARP	HAARP	148.88	307	P	PKiKP	20 06 11.2	-0.5
	baz=108						
KLU	Klutina	148.95	305	P	PKiKP	20 06 11.7	-0.1
	baz=108						
RIDG	Independent Ri	149.13	310	P	PKiKP	20 06 12.0	-0.1
	baz=106						
P23K	Montague Islan	149.14	302	P	PKiKP	20 06 11.8	-0.3
	baz=110						
PAX	Paxson	149.19	308	P	PKiKP	20 06 11.8	-0.6
	baz=106						
HHC	Hu-ho-hao-te	149.24	103	*e*PKPbc	PKPdf	20 06 09.0	+1.3
NRIK	Noril'sk	149.24	39		PKiKP	20 06 11.9	-0.2
NRIK	Noril'sk	149.24	39	PKPbc	PKPbc	20 06 09.7	-1.3
	comp=Z,4.8nm,0.8s,baz=194,slow=1.4,SNR=7.1						
NRIK	Noril'sk	149.24	39	PKP2	PKiKP	20 06 11.9	-0.2
M24K	Tolsona, Glenn	149.25	306	P	PKiKP	20 06 12.6	+0.2
	baz=107						
GLI	Glacier Island	149.29	304	P	PKiKP	20 06 12.0	-0.5
	baz=109						
G26K	Porcupine Rive	149.45	316	P	PKiKP	20 06 12.1	-0.5
	baz=101,SNR=16						
K24K	Donnelly Dome	149.55	310	P	PKiKP	20 06 12.5	-0.5
	baz=105						
J25K	Salcha River,	149.58	311	P	PKiKP	20 06 12.8	-0.3
	baz=104						
SCM	Sheep Creek Mo	149.69	306	P	PKiKP	20 06 13.4	0.0
	baz=107						
F26K	Sheenjek River	149.72	318	P	PKiKP	20 06 13.4	+0.1
	baz=100						
MOY	Mondy	149.84	77	*e*PKP2	PKiKP	20 06 15.9	+1.8
MOY				pmax	pmax		
	comp=Z,13nm,1.9s						
C27K	Jago River	149.84	321	P	PKiKP	20 06 13.2	-0.2
	baz=97,SNR=10						
BMAR	Burnt Mountain	149.84	317	PKPdf	PKPdf	20 06 06.9	-0.8
BMAR					PKiKP	20 06 13.4	-0.1
PWL	Port Wells	149.86	303	P	PKiKP	20 06 13.5	-0.1
	baz=108						
M23K	Glacier View	149.86	305	P	PKiKP	20 06 13.6	-0.1
	baz=107						
DHY	Denali Highway	150.06	308	P	PKiKP	20 06 14.4	+0.2
	baz=105						
KNK	Knik Glacier	150.08	304		PKiKP	20 06 14.1	0.0
KNK	Knik Glacier	150.08	304	P	PKiKP	20 06 14.1	0.0
	baz=107						
WAT6	Susitna Watana	150.09	307	P	PKiKP	20 06 14.3	0.0
	baz=106						
H25L	Birch Creek	150.11	314	P	PKiKP	20 06 14.2	+0.3
	baz=101						
SEW	Seward	150.14	302	P	PKiKP	20 06 13.9	-0.4
	baz=109						
HDA	Harding Lake	150.19	311	P	PKiKP	20 06 13.9	-0.3
	baz=103						
ILAR	Eielson Array	150.25	311	PKP	PKPdf	20 06 06.2	-2.1
	comp=Z,1.5nm,0.9s,baz=317,slow=1.6,SNR=15						
ILAR				PKPbc	PKPbc	20 06 13.9	+0.3
	comp=Z,37nm,0.8s,baz=131,slow=1.6,SNR=166						
F25K	Christian Rive	150.27	317	P	PKiKP	20 06 14.6	+0.2
	baz=98,SNR=15						
G25K	Bearman Lake	150.31	315	P	PKiKP	20 06 14.9	+0.5
	baz=100						
E25K	Arctic Village	150.32	318	P	PKiKP	20 06 14.5	+0.1
	baz=98,SNR=13						
O22K	Cooper Landing	150.39	302	P	PKiKP	20 06 14.8	0.0
	baz=108						
ZAK	Zakamensk	150.44	80	*e*PKIKP	PKPbc	20 06 14.6	0.0
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
PMR	Palmer	150.44	305	P	PKiKP	20 06 14.7	-0.1
	baz=106						
WAT1	Susitna Watana	150.51	307	P	PKiKP	20 06 14.7	-0.3
	baz=104						
POKR	Poker Plat Res	150.55	312	P	PKPbc	20 06 14.5	+0.2
	baz=101						
RC01	Rabbit Creek A	150.58	303	P	PKiKP	20 06 15.5	+0.4
	baz=107						
COLA	College	150.67	311		PKPbc	20 06 14.5	-0.1
COLA				PKPab	PKPab	20 06 22.7	+0.7
COLA	College	150.67	311	PKIKP	PKPbc	20 06 14.5	-0.1
COLA	College	150.67	311	P	PKPbc	20 06 14.7	+0.2
	baz=102						
D25K	Kavik River	150.74	321	P	PKiKP	20 06 15.1	-0.2
	baz=95						
SONM	Songino Array	150.79	87		PKPbc	20 06 15.6	0.0
SONM	Songino Array	150.79	87	PKPbc	PKPbc	20 06 15.8	+0.2
	comp=Z,3.9nm,0.5s,baz=219,slow=3.9,SNR=40						
G24K	Hadweenzic Riv	150.84	315	P	PKiKP	20 06 15.8	+0.3
	baz=99						
H24K	Noodor Dome	150.86	313	P	PKiKP	20 06 15.6	-0.1
	baz=100						
KDAK	Kodiak Island	150.89	296		PKiKP	20 06 16.0	+0.2
KDAK	Kodiak Island	150.89	296	PKIKP	PKiKP	20 06 16.0	+0.2
KDAK	Kodiak Island	150.89	296	P	PKiKP	20 06 15.8	0.0
	baz=111						
MCK	McKinley	150.89	309	P	PKiKP	20 06 15.9	+0.1
	baz=103						
M22K	Willow	150.94	305	P	PKiKP	20 06 16.0	+0.1
	baz=105						
OHAK	Old Harbor	151.04	295	P	PKiKP	20 06 16.4	+0.3
	baz=111						
HOM	Homer	151.05	300	P	PKiKP	20 06 16.6	+0.4
	baz=108						
Q20K	Shuyak Island	151.08	298	P	PKiKP	20 06 16.6	+0.4
	baz=110						
F24K	Squaw Lake	151.11	317	P	PKiKP	20 06 16.4	+0.2
	baz=97						
NEA2	Nenana	151.13	311	P	PKPbc	20 06 15.9	+0.2
	baz=101						
CAPN	Captain Cook N	151.15	302	P	PKiKP	20 06 17.4	+1.2
	baz=106						
SUA	Susitna One	151.15	304	P	PKiKP	20 06 16.7	+0.2
	baz=106						
CUT	Chulitna	151.17	306		PKiKP	20 06 16.6	+0.4
CUT	Chulitna	151.17	306	P	PKiKP	20 06 16.4	+0.1
	baz=104						
SII	Sitkinak Islan	151.25	293	P	PKiKP	20 06 16.6	-0.1
	baz=112						
I23K	Minto, Yukon-K	151.35	312	P	PKPbc	20 06 15.9	-0.2
	baz=100						
E24K	Your Creek	151.40	318	P	PKiKP	20 06 17.0	+0.3
	baz=95						
TRF	Thorofare Moun	151.42	308	P	PKiKP	20 06 17.1	+0.1
	baz=102						
H23K	Yukon River	151.54	313	P	PKiKP	20 06 17.1	+0.1
	baz=98						
C24K	Franklin Bluff	151.58	321	P	PKiKP	20 06 17.2	+0.3
	baz=92						
D24K	Happy Valley	151.60	320	P	PKiKP	20 06 17.3	+0.3
	baz=93						
SKT	Skwentna	151.65	305	P	PKiKP	20 06 17.7	+0.4
	baz=104						
O20K	Slope Mountain	151.65	301	P	PKiKP	20 06 17.5	0.0
	baz=107						
CHIR	Chirikof Islan	151.71	291	P	PKiKP	20 06 18.0	+0.4
	baz=113						
R18K	Karluk	151.75	295	P	PKiKP	20 06 17.9	+0.2
	baz=110						
N20K	Mount Spurr	151.76	303	P	PKiKP	20 06 17.5	-0.2
	baz=105						
SPCR	Spurr Chakacha	151.76	303	P	PKiKP	20 06 17.5	-0.2
	baz=105						
Q19K	Cape Douglas,	151.80	298	P	PKPbc	20 06 17.6	+0.2
	baz=108						
P19K	Oil Pt	151.82	300	P	PKPbc	20 06 17.6	+0.1
	baz=107						
E23K	Chandalar	151.82	318	P	PKiKP	20 06 17.8	+0.2
	baz=94						
TOLK	Toolik Lake Re	151.84	319	P	PKiKP	20 06 18.0	+0.4
	baz=93						
G23K	Bananza Creek	151.85	315	P	PKiKP	20 06 18.3	+0.7
	baz=96						
BPAW	Bear Paw Mtn.	151.86	309	P	PKiKP	20 06 17.9	+0.1
	baz=100						
MLY	Manley	151.91	311	P	PKPbc	20 06 17.2	-0.3
	baz=99						
COLD	Coldfoot	151.97	316	P	PKiKP	20 06 18.7	+0.9
	baz=95						
PPLA	Purkeypile	152.15	306	P	PKiKP	20 06 18.6	+0.1
	baz=102						
CAST	Castle Rocks	152.21	308	P	PKiKP	20 06 18.8	+0.3
	baz=101						
C23K	Itkillik River	152.25	322	P	PKiKP	20 06 18.8	+0.5
	baz=90						
D23K	Nanushuk River	152.26	320	P	PKiKP	20 06 18.8	+0.4
	baz=92						
H22K	Ishtalitna Cre	152.30	313	P	PKiKP	20 06 19.0	+0.4
	baz=97						
M20K	Styx River	152.36	304	P	PKPbc	20 06 18.6	0.0
	baz=103						
Q18K	Katmai Hardscr	152.39	297	P	PKPbc	20 06 18.8	-0.1
	baz=108						
CHUM	Lake Minchumin	152.39	309	P	PKiKP	20 06 19.2	+0.5
	baz=100						
G22K	Bettles	152.45	315	P	PKiKP	20 06 19.5	+0.7
	baz=95						
O19K	Port Alsworth	152.50	300	P	PKiKP	20 06 19.4	+0.3
	baz=106						
E22K	Anaktuvuk Pass	152.65	318	P	PKiKP	20 06 19.6	+0.3
	baz=92						
Q17K	Contact Creek	152.70	296	P	PKiKP	20 06 19.8	+0.1
	baz=108						
P18K	Big Mountain,	152.72	298	P	PKPbc	20 06 19.2	-0.2
	baz=106						
N19K	Bonanza Creek	152.74	302	P	PKPbc	20 06 19.4	-0.1
	baz=104						
R17L	Mt. Peulik Vol	152.74	294	P	PKPbc	20 06 19.4	-0.1
	baz=109						
F22K	John River	152.76	316	P	PKiKP	20 06 20.1	+0.6
	baz=93						
L20K	Farewell, AK	152.83	305	P	PKPbc	20 06 19.6	0.0
	baz=102						
O18K	Koktuh Hills	152.83	299	P	PKiKP	20 06 19.8	-0.1
	baz=106						
H21K	Melozitna Rive	152.85	312	P	PKiKP	20 06 20.2	+0.5
	baz=96						
M19K	Big River Lodg	152.94	304	P	PKiKP	20 06 20.1	+0.1
	baz=102						
D22K	Ayikyak River	152.98	319	P	PKiKP	20 06 20.7	+0.8
	baz=90						
K20K	Telida	153.08	307	P	PKiKP	20 06 20.3	0.0
	baz=100						
L19K	White Mountain	153.21	304	P	PKiKP	20 06 20.9	+0.3
	baz=101						
G21K	Allakaket	153.22	314	P	PKiKP	20 06 20.7	+0.3
	baz=94						
Q16K	King Salmon	153.22	296	P	PKiKP	20 06 21.2	+0.6
	baz=107						
J20K	Nowinta River	153.24	309	P	PKiKP	20 06 20.8	+0.3
	baz=98						
F21K	Alatna River	153.25	316	P	PKiKP	20 06 21.0	+0.5
	baz=92						
P17K	Kvichak River	153.26	298	P	PKiKP	20 06 21.6	+0.9
	baz=106						
IMAR	Indian Mountai	153.27	313		PKiKP	20 06 21.1	+0.5
CHGN	Chignik	153.34	291	P	PKiKP	20 06 21.5	+0.6
	baz=111						
N18K	Kilae Creek	153.37	301	P	PKiKP	20 06 21.6	+0.6
	baz=104						
CHNA	Chernabura Isl	153.42	287	P	PKiKP	20 06 21.1	0.0
	baz=113						
E21K	Killik River	153.46	318	P	PKiKP	20 06 21.7	+0.8
	baz=90						
I20K	Naaghedeneel	153.46	310	P	PKiKP	20 06 21.6	+0.7
	baz=96						
M18K	Stony River	153.52	303	P	PKiKP	20 06 22.2	+1.0
	baz=102						
B21K	Ikpikpuk River	153.65	321	P	PKiKP	20 06 22.6	+1.4
	baz=87						
A22K	Sinclair Lake	153.65	324	P	PKiKP	20 06 22.5	+1.4
	baz=83						
H20K	Anotleneega Mo	153.70	312	P	PKiKP	20 06 22.3	+0.8
	baz=95						
C21K	Knifeblade Rid	153.73	320	P	PKiKP	20 06 22.4	+0.9
	baz=87						
O17K	Koliganek Bris	153.73	299	P	PKiKP	20 06 21.7	+0.1
	baz=105						
J19K	Poorman	153.85	308	P	PKiKP	20 06 22.9	+1.1
	baz=97						
S14K	Fog Glacier	153.93	290	P	PKiKP	20 06 22.8	+0.5
	baz=110						
N17K	Nushagak Hills	153.96	300	P	PKiKP	20 06 23.5	+1.4
	baz=103						
P16K	Nushagak River	153.98	297	P	PKiKP	20 06 23.1	+0.9
	baz=106						
L18K	Granite Mounta	154.07	304	P	PKiKP	20 06 23.8	+1.5
	baz=100						
SDPT	Sand Point	154.09	288	P	PKiKP	20 06 22.9	+0.4
	baz=112						
F20K	Avaraart Lake	154.12	315	P	PKPab	20 06 37.1	+0.6
	baz=91						
A21K	Barrow	154.14	325	P	PKPab	20 06 37.6	+1.2
	baz=81						
O16K	Kokwok River B	154.18	298	P	PKPab	20 06 37.6	+0.6
	baz=104						
M17K	Holitna River	154.26	302	P	PKPab	20 06 38.0	+0.7
	baz=101						
J18K	Innoko River	154.27	307	P	PKPab	20 06 38.2	+0.9
	baz=97						
E20K	Nigu River	154.28	318	P	PKPab	20 06 38.6	+1.3
	baz=88						
H19K	Roundabout Mou	154.35	312	P	PKPab	20 06 38.9	+1.3
	baz=93						
D20K	Etivluk River	154.42	319	P	PKPab	20 06 38.9	+1.1
	baz=86						
GCSA	Galena City Sc	154.48	310	P	PKPab	20 06 39.2	+1.1
	baz=95						
B20K	Meade River	154.50	322	P	PKPab	20 06 39.3	+1.3
	baz=83						
G19K	Purcell Mounta	154.64	313	P	PKPab	20 06 39.5	+0.7
	baz=92						
E19K	Redstone River	154.70	316	P	PKPab	20 06 39.8	+0.7
	baz=89						
N16K	Nishlik Lake	154.71	300	P	PKPab	20 06 40.1	+0.9
	baz=102						
L17K	Donlin	154.80	304	P	PKPab	20 06 40.7	+1.2
	baz=99						
KSRS	Korea Array	154.88	128	PKPab	PKPab	20 06 40.4	-0.2
	comp=Z,2.1nm,0.8s,baz=120,slow=38,SNR=6.7						
K17K	Iditarod	154.88	305	P	PKPab	20 06 41.0	+1.0
	baz=98						
M16K	Timber Creek	154.91	301	P	PKPab	20 06 41.7	+1.6
	baz=101						
F19K	Shaleruckik Mo	154.92	315	P	PKPab	20 06 40.3	+0.4
	baz=89						
O15K	Ungalikthiuk R	154.93	296	P	PKPab	20 06 39.8	-0.5
	baz=104						
D19K	Kuna River	154.98	319	P	PKPab	20 06 41.0	+0.7
	baz=86						
S12K	Black Hills	155.05	288	P	PKPab	20 06 40.7	-0.2
	baz=110						
H18K	Honhosa River	155.13	311	P	PKPab	20 06 42.3	+1.4
	baz=92						
G18K	Tagagawik	155.28	313	P	PKPab	20 06 42.5	+1.0
	baz=91						
L16K	Owhat River	155.28	302	P	PKPab	20 06 43.0	+1.4
	baz=99						
N15K	Kwethluk River	155.29	299	P	PKPab	20 06 42.8	+1.0
	baz=102						
J17K	VABM Dome	155.32	307	P	PKPab	20 06 43.0	+1.3
	baz=96						
C19K	Lookout Ridge	155.45	320	P	PKPab	20 06 43.5	+1.2
	baz=83						
FALS	False Pass	155.47	285	P	PKPab	20 06 43.7	+1.1
	baz=112						
O14K	Tigyukauivet M	155.67	296	P	PKPab	20 06 44.4	+1.0
	baz=103						
F18K	Selawik	155.67	314	P	PKPab	20 06 43.9	+0.8
	baz=88						
M15K	Kasigluk River	155.69	300	P	PKPab	20 06 44.6	+1.2
	baz=100						
H17K	Granite Mounta	155.78	310	P	PKPab	20 06 44.8	+1.1
	baz=92						
J16K	Anvik River	155.99	306	P	PKPab	20 06 45.7	+1.0
	baz=95						
E18K	Tukpahlearik C	156.00	316	P	PKPab	20 06 46.0	+1.4
	baz=85						
N14K	Kuskokwak Cree	156.02	298	P	PKPab	20 06 46.1	+1.2
	baz=102						
I17K	Unalakleet	156.08	308	P	PKPab	20 06 46.2	+1.2
	baz=93						
C18K	Utukok River	156.09	319	P	PKPab	20 06 46.5	+1.5
	baz=82						
G17K	Kiwalik Mounta	156.10	312	P	PKPab	20 06 46.9	+1.9
	baz=90						
B18K	Kokolik River	156.19	321	P	PKPab	20 06 47.2	+1.8
	baz=80						
L15K	Ungalak Mounta	156.22	302	P	PKPab	20 06 46.9	+1.2
	baz=98						
M14K	Bethel	156.31	300	P	PKPab	20 06 47.4	+1.4
	baz=99						
K15K	Wolf Creek Mou	156.32	304	P	PKPab	20 06 47.6	+1.5
	baz=96						
F17K	Baldwin Pennin	156.32	314	P	PKPab	20 06 47.5	+1.5
	baz=87						
E17K	Hotham Inlet	156.50	316	P	PKPab	20 06 47.8	+1.1
	baz=85						
L14K	Kuka Creek	156.75	301	P	PKPab	20 06 48.7	+0.8
	baz=98						
UNV	Unalaska Valle	156.77	281	P	PKPab	20 06 49.1	+0.9
	baz=113						
H16K	Elim	156.77	309	P	PKPab	20 06 48.8	+0.9
	baz=90						
RDOG	Red Dog Mine	156.80	318	P	PKPab	20 06 49.2	+1.1
	baz=82						
G16K	Koyuk River	156.81	311	P	PKPab	20 06 49.4	+1.3
	baz=88						
C17K	DeLong Mountai	156.84	319	P	PKPab	20 06 49.4	+1.2
	baz=80						
D17K	Noatak River	156.92	317	P	PKPab	20 06 49.5	+1.0
	baz=82						
M13K	Dall Lake	156.93	299	P	PKPab	20 06 50.4	+1.6
	baz=99						
J14K	Nanvaranak Lak	157.29	304	P	PKPab	20 06 51.0	+0.8
	baz=94						
G15K	Niukluk	157.54	310	P	PKPab	20 06 52.1	+0.8
	baz=88						
C16K	Lisburne Hills	157.66	319	P	PKPab	20 06 52.4	+0.7
	baz=78						
NIKH	Nikolski High	157.72	278	P	PKPab	20 06 52.9	+0.6
	baz=114						
K13K	Kusilvak Mount	157.75	302	P	PKPab	20 06 53.3	+1.1
	baz=95						
F15K	North Star Dit	157.75	312	P	PKPab	20 06 53.3	+1.1
	baz=85						
MJAR	Matsushiro Arr	157.93	148	PKPab	PKPab	20 06 54.0	+0.3
	comp=Z,2.1nm,0.6s,baz=180,slow=4.2,SNR=7.3						
MJAR	Matsushiro Arr	157.93	148	PKP2	PKPab	20 06 54.0	+0.3
ANM	Nome	158.13	309	P	PKPab	20 06 54.6	+0.7
	baz=88						
M11K	Mekoryuk	158.33	298	P	PKPab	20 06 54.7	-0.1
	baz=97						
F14K	Arctic Creek	158.47	312	P	PKPab	20 06 56.2	+0.9
	baz=84						
TNA	Tin City	159.12	312	P	PKPab	20 06 58.4	+0.4
	baz=82						
P08K	Saint George I	159.32	287	P	PKPab	20 06 59.2	0.0
	baz=105						
USRK	Ussuriysk Ar.	162.13	124	PKPab	PKPab	20 07 10.8	-1.1
	comp=Z,1.6nm,0.6s,baz=187,slow=5.0,SNR=5.0						
PETK	Petropavlovsk-	175.69	224	PKP	PKPdf	20 06 31.9	-0.8
	comp=Z,3.2nm,0.8s,baz=208,slow=8.4,SNR=4.0						
PETK				PKPab	PKPab	20 08 11.3	-0.2
	comp=Z,2.6nm,0.6s,baz=167,slow=5.6,SNR=4.0						

BJI ***29*** *19:51:18.0, 1.°29S×13.°55W, h6^{km}, mb4.9/4, Ms5.3/8, Ms7 5.0/9*

IDC ***29*** *19:51:19.6±0.5, 1.°71S×12.°81W, h0^{km}, mb4.4/26, mbtmp4.4/28, ML4.2/2, MS4.8/65, Error ellipse: s-maj=22.9km s-min=12.2km az=115.0*

NEIC ***29*** *19:51:20.8, 1.°71S×13.°01W, h18^{km}*

NEIC ***29*** *19:51:20.8, 1.°71S×13.°01W, h18^{km}, Moment Tensor Solution. Duration: 2^{s}7 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.49; M$_{\theta\theta}$-0.00; M$_{\phi\phi}$1.49; M$_{r\theta}$-0.79; M$_{\theta\phi}$-0.25; M$_{\phi r}$2.01; Fault plane solution: M$_0$2.63000×10^{17} NP1:ϕ_s0.32000°, δ18.30000°, λ-71.38000°. NP2:ϕ_s160.78000°, δ72.69000°, λ-96.03000°. Principal axes: T 2.6301, Plg27.0000°, Azm256.0000°; N 0.0025, Plg6.0000°, Azm163.0000°; P -2.6326, Plg62.0000°, Azm62.0000°;*

NEIC ***29*** *19:51:20.8±1.2, 1.°72S±0.°08×13.°01W±0.°09, h10^{km}±1^{km}, mb5.0/112, Ms_20 5.0/354, Mww5.5/29 Error ellipse: s-maj=17.0km s-min=12.6km az=123.0*

GCMT ***29*** *19:51:22.8±0.1, 1.°66S±0.°01×12.°95W±0.°01, h12^{km}, MW5.4/163, Moment Tensor Solution. s107,c167; s163,c333; Duration: 1^{s}3 Moment tensor: Scale 10^{17}*

Nm; M_{rr}-1.64±.02; $M_{\theta\theta}$0.18±.01; $M_{\phi\phi}$1.46±.01; $M_{r\theta}$0.58±.05; $M_{\theta\phi}$-0.36±.01; $M_{\phi r}$-0.42±.04; Best double couple: $M_0$1.74400×10^{17} NP1:ϕ_s177.00000°,δ37.00000°, λ-69.00000°. NP2:ϕ_s332.00000°,δ56.00000°, λ-105.00000°. Principal axes: T 1.6510, Plg10.0000°, Azm72.0000°; N 0.1820, Plg12.0000°, Azm340.0000°; P -1.8380, Plg74.0000°, Azm200.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 29 19:51:20.3±0.3**, 1.79S**±0.06×**13.00W**±0.07**, h10**km**, n488, σ1.53**/266**, mb4.9**/106**, MS5.0**/256**, 2C, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	6.18	194	T	T	19 59 20.7	
	baz=16,slow=74,SNR=431						
H10N1	ASCENSION HYDR	6.19	194	T	T	19 59 20.6	
	baz=16,slow=74,SNR=605						
H10N3	ASCENSION HYDR	6.19	194	T	T	19 59 22.8	
	baz=16,slow=74,SNR=461						
ASCN	Ascension	6.25	192	Pn	Pn	19 52 51.7	-1.0
DBIC	Dimbokro	11.69	44	Pn	Pn	19 54 05.0	-2.4
	0.7nm,0.3s,baz=246,slow=13,SNR=10						
DBIC				Sn	Sn	19 56 05.0	-13
	0.1nm,0.3s,baz=165,slow=14,SNR=2.0						
DBIC				LR	LR	19 57 39.7	
	comp=Z,15µm,21.9s,baz=240,slow=33						
	5.0nm,0.5s						
ACRG	Accra	14.76	60		Pn	19 54 48.8	-0.5
BBTS	Babate	16.72	348	Pn	P	19 55 15.8	-1.3
	1.9nm,0.3s,baz=46,slow=3.2,SNR=3.7						
BBTS				LR	LR	20 00 56.9	
	comp=Z,753nm,19.5s,baz=56,slow=35						
	40nm,1.1s						
TORD	Torodi Ar. Bea	20.81	44		P	19 55 59.7	-2.4
TORD	Torodi Ar. Bea	20.81	44	P	P	19 56 00.3	-1.8
	21nm,0.9s,baz=233,slow=9.3,SNR=33						
TORD				LR	LR	20 03 14.7	
	comp=Z,8µm,20.1s,baz=225,slow=35						
	21nm,0.9s						
RCBR	Riachuelo	23.20	259	IAMs_20	IAMs_20	20 03 01.9	
	comp=Z,4µm,20.0s						
RCBR	Riachuelo	23.20	259	LR	LR	20 03 12.8	
	comp=Z,1µm,20.4s,baz=82,slow=30						
TSUM	Tsumeb	34.58	122	P	P	19 58 09.6	-0.2
TSUM				IAmb	IAmb	19 58 14.7	
	comp=Z,18nm,1.3s						
TSUM	Tsumeb	34.58	122	IAMs_20	IAMs_20	20 09 30.6	
	comp=Z,3µm,20.0s						
TSUM	Tsumeb	34.58	122	LR	LR	20 09 23.0	
	comp=Z,3µm,21.7s,baz=289,slow=31						
MDT	Midelt	35.32	12	LR	LR	20 12 21.7	
	comp=Z,2µm,19.8s,baz=199,slow=36						
WIN	Windhoek	35.79	128	P	P	19 58 19.0	-1.2
WIN				IAmb	IAmb	19 58 31.7	
	comp=Z,63nm,2.0s						
WIN				IAMs_20	IAMs_20	20 09 20.6	
	comp=Z,3µm,20.0s						
BDFB	Brasilia	37.16	246	P	P	19 58 30.9	-1.0
BDFB				IAmb	IAmb	19 58 43.5	
	comp=Z,45nm,1.6s						
BDFB	Brasilia	37.16	246	P	P	19 58 33.6	+1.7
	comp=Z,6.3nm,0.9s,baz=126,slow=8.4,SNR=4.0						
	comp=Z,6.3nm,0.9s						
QNGWA	Qangwa	37.79	120	P	P	19 58 36.3	-0.9
KOOLE	Kule	38.48	126	P	P	19 58 42.8	-0.3
KOOLE				IAmb	IAmb	19 58 47.8	
	comp=Z,44nm,1.3s						
GRTLG	Ghanzi	38.59	123	P	P	19 58 43.8	-0.1
PVAQ	Vaqueiros	39.30	7	eS	S	20 05 00.6	+10
PVAQ				eLR	LR	20 11 29.9	
PVAQ				i AMs_20		20 15 25.9	
	comp=Z,493nm,20.0s						
PTEO	Sao Teotonio	39.34	5	eP	P	19 58 52.4	+2.6
KGCAE	Kacgae	40.06	124	P	P	19 58 56.1	-0.2
KGCAE				IAmb	IAmb	19 58 58.3	
	comp=Z,73nm,1.6s						
PBAR	Barrancos	40.15	7	eP	P	19 58 58.9	+2.3
MDP	Montagnes des	40.19	280	LR	LR	20 11 45.7	
	comp=Z,2µm,21.3s,baz=90,slow=30						
EVO	Evora	40.39	6	eP	P	19 59 01.6	+3.0
KSANE	Kasane	40.70	115	P	P	19 59 00.5	-1.0
KSANE				IAmb	IAmb	19 59 11.0	
	comp=Z,53nm,1.6s						
PESTR	Estremoz	40.76	6	eP	P	19 59 04.9	+3.2
PMTG	Montargil	40.90	6	eP	P	19 59 06.3	+3.5
PHDHD	Phuduhudu	40.97	119	P	P	19 59 03.8	0.0
PSBE	So Bento	41.28	5	eP	P	19 59 09.3	+3.3
PMRV	Marv??o	41.34	7	eP	P	19 59 09.6	+3.2
PMRV				eS	S	20 05 31.5	+11
PMRV				eLR	LR	20 13 36.0	
PMRV				i AMs_20		20 15 40.2	
	comp=Z,550nm,16.0s						
PSARD	Sardoal	41.43	6	eP	P	19 59 10.0	+2.8
PCBR	Castelo Branco	41.74	6	eP	P	19 59 12.7	+3.0
PHPEN	Phepeng	41.80	127	P	P	19 59 10.6	+0.1
PCAS	Casmilo, Conde	41.84	5	eP	P	19 59 13.7	+3.1
PAB	San Pablo	41.90	10	P	P	19 59 11.3	+0.2
ESDC	Sonseca Array	42.09	10		P	19 59 11.6	-1.0
ESDC	Sonseca Array	42.09	10	P	P	19 59 13.3	+0.7
	comp=Z,1.7nm,0.8s,baz=190,slow=9.3,SNR=12						
ESDC				LR	LR	20 16 32.3	
	comp=Z,732nm,20.5s,baz=183,slow=36						
	comp=Z,1.7nm,0.8s						
ESBB	Sonseca Array	42.09	10	P	P	19 59 11.7	-1.0
MTE	Manteigas	42.28	6	eP	P	19 59 17.7	+3.5
MTE				eS	S	20 05 47.7	+13
MTE				eLR	LR	20 13 55.0	
MTE				i AMs_20		20 16 09.2	
	comp=Z,497nm,18.0s						
KDWAN	Kaudwane	42.33	124	P	P	19 59 15.0	+0.1
KDWAN				IAmb	IAmb	19 59 20.8	
	comp=Z,27nm,1.2s						
PVIS	Viseu	42.56	6	eP	P	19 59 19.4	+3.0
KEST	Kesra	42.77	27		P	19 59 17.8	-0.4
KEST				IAmb	IAmb	19 59 41.8	
	comp=Z,36nm,1.5s						
KEST	Kesra	42.77	27	P	P	19 59 18.4	+0.2
	comp=Z,6.4nm,0.8s,baz=260,slow=1.1,SNR=9.9						
KEST				LR	LR	20 18 23.3	
	comp=Z,2µm,18.2s,baz=224,slow=38						
	comp=Z,6.4nm,0.8s						
LSZ	Lusaka	42.77	111		P	19 59 18.3	-0.3
LSZ	Lusaka	42.77	111	LR	LR	20 14 03.4	
	comp=Z,2µm,21.8s,baz=297,slow=32						
MVO	Moncorvo	43.10	7	eP	P	19 59 24.1	+3.4
MVO				eS	S	20 05 58.9	+12
MVO				eLR	LR	20 13 57.2	
MVO				i AMs_20		20 16 28.8	
	comp=Z,497nm,20.0s						
POLO	Lamas de Olo	43.22	6	eP	P	19 59 24.5	+2.6
LPHEP	Lephephe	43.33	123	P	P	19 59 23.3	+0.3
MBAR	Mbarara	43.74	89	P	P	19 59 26.6	-0.1
MBAR				IAmb	IAmb	19 59 41.6	
	comp=Z,26nm,1.5s						
TRCB	Terra Rica	43.75	238	P	P	19 59 25.8	-0.6
PBRG	Braganca	43.76	7	eP	P	19 59 28.5	+2.4
PGAV	Gavieira, Arco	43.76	5	eP	P	19 59 28.5	+2.3
PGAV				eS	S	20 06 06.3	+10
PGAV				eLR	LR	20 13 51.6	
PGAV				i AMs_20		20 17 00.1	
	comp=Z,904nm,20.0s						
LBTB	Lobatse	43.80	125		P	19 59 26.9	+0.1
LBTB	Lobatse	43.80	125	LR	LR	20 14 37.7	
	comp=Z,2µm,21.4s,baz=289,slow=32						
MAHO	Mahon	44.40	19	P	P	19 59 31.2	0.0
MAHO				IAmb	IAmb	19 59 36.5	
	comp=Z,24nm,1.1s						
BOSA	Boshof	45.18	130	P	P	19 59 38.1	+0.3
BOSA				IAmb	IAmb	19 59 51.5	
	comp=Z,23nm,1.3s						
BOSA	Boshof	45.18	130	P	P	19 59 37.6	-0.2
	comp=Z,6.8nm,1.0s,baz=309,slow=11,SNR=4.5						
BOSA				LR	LR	20 15 36.8	
	comp=Z,1µm,19.9s,baz=304,slow=32						
	comp=Z,6.8nm,1.0s						
WDD	Wied Dalam	45.40	32	IAMs_20	IAMs_20	20 19 16.7	
	comp=Z,2µm,19.0s						
VSL	Villasalto	45.93	24	P	P	19 59 43.0	-0.4
CEST	Esterri de Car	46.02	15		P	19 59 43.7	-0.6
CEST				IAmb	IAmb	19 59 59.3	
	comp=Z,48nm,1.8s						
VAE	Valguarnera	46.60	30	LR	LR	20 21 34.9	
	comp=Z,2µm,18.6s,baz=166,slow=39						
PTLB	Pontes e Lacer	47.46	251	P	P	19 59 55.2	-0.5
PTLB				IAmb	IAmb	20 00 08.0	
	comp=Z,31nm,1.8s						
BOAV	Boa Vista	47.69	275	P	P	19 59 56.2	-1.5
BOAV				IAmb	IAmb	20 00 09.2	
	comp=Z,16nm,1.2s						
CEL	Celeste	47.95	31	P	P	19 59 58.7	-0.6
CEL				IAmb	IAmb	20 00 11.1	
	comp=Z,14nm,0.9s						
CEL				IAMs_20	IAMs_20	20 21 03.2	
	comp=Z,2µm,20.0s						
GRHM	Grahamstown, E	48.38	135	P	P	20 00 03.9	+1.1
PLTB	Pedras Altas	48.50	228	P	P	20 00 04.1	+0.5
LODK	Lodwar	48.62	84	P	P	20 00 03.9	-1.0
LODK				IAmb	IAmb	20 00 37.8	
	comp=Z,25nm,1.9s						
LODK				IAMs_20	IAMs_20	20 18 13.8	
	comp=Z,1µm,19.0s						
CPUP	Villa Florida	49.05	236		P	20 00 07.8	-0.1
CPUP	Villa Florida	49.05	236	P	P	20 00 10.3	+2.4
	comp=Z,0.5nm,0.4s,baz=291,slow=2.5,SNR=3.3						
CPUP				LR	LR	20 18 20.2	
	comp=Z,548nm,20.5s,baz=290,slow=33						
	comp=Z,0.5nm,0.4s						
TIP	Timpagrande	49.09	31	P	P	20 00 07.0	-1.1
TIP				IAMs_20	IAMs_20	20 22 54.3	
	comp=Z,1µm,20.0s						
CUC	Castrocucco	49.24	29	IAMs_20	IAMs_20	20 22 17.2	
	comp=Z,1µm,18.0s						
SSB	Saint Sauveur	49.39	16	P	P	20 00 10.1	-0.2
SSB				IAmb	IAmb	20 00 56.2	
	comp=Z,24nm,1.8s						
SSB	Saint Sauveur	49.39	16	IAMs_20	IAMs_20	20 22 12.9	
	comp=Z,1µm,18.0s						
SIV	San Ignacio	49.39	250	LR	LR	20 18 55.8	
	comp=Z,4µm,21.3s,baz=90,slow=33						
BNI	Bardonecchia	49.82	18		P	20 00 13.5	-0.1
BNI				IAmb	IAmb	20 00 19.1	
	comp=Z,39nm,1.9s						
BNI				IAMs_20	IAMs_20	20 21 19.2	
	comp=Z,2µm,21.0s						
CESX	Cesi	49.86	25	P	P	20 00 13.6	-0.3
CESX				IAmb	IAmb	20 00 18.4	
	comp=Z,21nm,1.4s						
INTR	Introdacqua	49.94	26	P	P	20 00 14.4	-0.2
INTR				IAmb	IAmb	20 00 25.7	
	comp=Z,23nm,1.4s						
MSSA	Maissana	50.12	21	P	P	20 00 15.7	-0.2
MSSA				IAmb	IAmb	20 00 20.6	
	comp=Z,26nm,1.2s						
KMBO	Kilima Mbogo	50.24	90	P	P	20 00 17.7	+0.2
NRCA	Norcia	50.27	25	P	P	20 00 17.6	+0.6
FDMO	Fiordimonte	50.42	25		P	20 00 18.4	+0.3
FDMO				IAmb	IAmb	20 00 28.2	
	comp=Z,16nm,1.0s						
ZCCA	Zocca	50.69	22	P	P	20 00 20.2	+0.1
GDSD	La Dsirade Is	50.75	293	IAMs_20	IAMs_20	20 16 02.1	
	comp=Z,1µm,20.0s						
IDI	Anoyia	51.14	40	LR	LR	20 25 38.9	
	comp=Z,976nm,18.2s,baz=242,slow=40						
CBE	Ff, Capester	51.18	292	IAMs_20	IAMs_20	20 17 37.7	
	comp=Z,2µm,20.0s						
SENIN	Lac Senin/Sane	51.19	18	P	P	20 00 23.9	-0.1
SENIN				IAmb	IAmb	20 00 35.2	
	comp=Z,28nm,1.9s						
CLF	Chambon-Foret	51.37	13	IAMs_20	IAMs_20	20 24 30.2	
	comp=Z,1µm,19.0s						
ANWB	Willy Bob	51.79	294	IAMs_20	IAMs_20	20 16 53.7	
	comp=Z,1µm,21.0s						
TUE	Stuetta	51.94	19	P	P	20 00 28.8	-0.9
TIR	Tirane	52.29	31	IAMs_20	IAMs_20	20 25 30.0	
	comp=Z,1µm,18.0s						
FUORN	Ofenpass-Fuorn	52.38	20	P	P	20 00 32.4	-0.6
FUORN				IAMs_20	IAMs_20	20 23 17.1	
	comp=Z,1µm,19.0s						
CTI	Castel Tesino	52.38	22	P	P	20 00 32.5	-0.3
CTI				IAmb	IAmb	20 00 51.0	
	comp=Z,44nm,1.9s						
CTI	Castel Tesino	52.38	22	P	P	20 00 32.5	-0.3
CTI	Castel Tesino	52.38	22	pmax	pmax		
	comp=Z,44nm,1.9s						
DAVOX	Davos/Dischmat	52.39	20	LR	LR	20 23 27.1	
	comp=Z,2µm,19.5s,baz=216,slow=37						
PCRV	Puerto La Cruz	52.75	284	LR	LR	20 21 10.0	
	comp=Z,726nm,21.7s,slow=34						
KARP	Karpathos	52.77	41	IAMs_20	IAMs_20	20 25 53.3	
	comp=Z,1µm,20.0s						
ECH	Echery	52.81	17	P	P	20 00 35.3	-0.6
DAVA	Damuels	52.83	19	eP	P	20 00 36.6	+0.4
	comp=Z,16nm,0.8s						
FETA	Feichten	52.89	20	eP	P	20 00 37.1	+0.5
	comp=Z,4.1nm,0.9s						
CEY	Cerknica	53.19	24	ePdiff	P	20 00 40.5	+1.8
CEY				e		20 08 19.3	
SQTA	Sankt Quirin	53.23	20	i P	P	20 00 39.2	+0.1
	comp=Z,12nm,0.8s						
BFO	Black Forest	53.26	18	P	P	20 00 38.5	-0.7
BFO				IAmb	IAmb	20 01 00.1	
	comp=Z,43nm,1.9s						
BFO	Black Forest	53.26	18	P	P	20 00 38.5	-0.7
BFO	Black Forest	53.26	18	eP	P	20 00 39.5	+0.3
	comp=Z,10nm,1.2s,baz=210,slow=7.0						
BFO	Black Forest	53.26	18	pmax	pmax		
	comp=Z,43nm,1.9s						
ABTA	Abfaltersbach	53.29	22	i P	P	20 00 39.8	+0.2
	comp=Z,4.5nm,1.1s						
MOTA	Moosalm	53.30	20	i P	P	20 00 39.8	+0.2
	comp=Z,13nm,1.3s						
RETA	Reutte	53.30	20	i P	P	20 00 39.6	0.0
	comp=Z,3.6nm,0.6s						
WTTA	Wattenberg	53.41	21	eP	P	20 00 41.2	+0.6
	comp=Z,12nm,0.9s						
WATA	Walderalm	53.45	21	i P	P	20 00 41.1	+0.3
	comp=Z,10nm,1.3s						
LJU	Ljubljana	53.48	24	ePdiff	P	20 00 43.6	+2.8
MYKA	Terra Mystica	53.62	23	i P	P	20 00 43.7	+1.8
	comp=Z,6.0nm,0.8s						
WLF	Walferdange	53.85	15	P	P	20 00 42.7	-0.7
WLF				IAmb	IAmb	20 00 54.5	
	comp=Z,53nm,2.0s						
WLF				IAMs_20	IAMs_20	20 21 51.8	
	comp=Z,974nm,20.0s						
WLF	Walferdange	53.85	15	P	P	20 00 42.7	-0.7
WLF	Walferdange	53.85	15	MLR	MLR		
	comp=Z,1µm,20.0s						
WLF	Walferdange	53.85	15	pmax	pmax		
	comp=Z,53nm,2.0s						
OBKA	Obir	53.87	23	eP	P	20 00 46.0	+2.2
	comp=Z,4.6nm,0.8s						
STU	Stuttgart	53.92	18	IAMs_20	IAMs_20	20 24 52.7	
	comp=Z,1µm,18.0s						
LESA	Schwarzleotal	53.92	21	i P	P	20 00 44.6	+0.5
	comp=Z,8.7nm,1.0s						
FUR	Furstenfeldbru	54.06	20	eP	P	20 00 45.4	+0.3
	comp=Z,13nm,0.7s,baz=210,slow=7.0						
SOKA	Soboth	54.20	24	eP	P	20 00 47.5	+1.3
	comp=Z,3.6nm,1.0s						
RJOB	Jochberg	54.23	21	eP	P	20 00 46.2	-0.2
	comp=Z,8.9nm,0.8s,baz=210,slow=7.0						
UCC	Uccle	54.45	13	P	P	20 00 46.8	-1.0
UCC				IAmb	IAmb	20 01 06.2	
	comp=Z,22nm,1.6s						
UCC	Uccle	54.45	13	P	P	20 00 46.8	-1.0
UCC	Uccle	54.45	13	pmax	pmax		
	comp=Z,22nm,1.6s						
BIOA	Bad Ischl, Aus	54.50	22	eP	P	20 00 48.2	-0.1
	comp=Z,3.0nm,0.7s						
KOGS	Kog	54.51	25	ePdiff	P	20 00 50.8	+2.4
ARSA	Arzberg	54.86	23		P	20 00 49.9	-1.0
ARSA	Arzberg	54.86	23	eP	P	20 00 51.7	+0.7
	comp=Z,4.2nm,1.0s						
MOA	Molln	54.87	22	i P	P	20 00 51.0	0.0
	comp=Z,5.8nm,0.9s						
ELL	Elmali	55.28	42	P	P	20 00 53.6	-0.7
ELL				IAmb	IAmb	20 00 59.8	
	comp=Z,36nm,1.4s						
GRFO	Grafenberg	55.36	19	IAMs_20	IAMs_20	20 25 56.9	
	comp=Z,941nm,19.0s						
GRA1	Grafenberg Arr	55.36	19	IAMs_20	IAMs_20	20 25 57.0	
	comp=Z,924nm,19.0s						
GRF	Grafenberg Arr	55.36	19	eL	L	20 24 50.0	
	comp=Z,897nm,19.4s						
EIL	Elat	55.44	52	LR	LR	20 26 05.1	
	comp=Z,3µm,18.1s,baz=250,slow=38						
WET	Wettzell	55.45	20	eP	P	20 00 55.5	+0.4
	comp=Z,7.1nm,0.9s,baz=210,slow=7.0						
GEC2	GERESS Array S	55.49	21		P	20 00 54.9	-0.6
GEC2				IAmb	IAmb	20 00 57.0	
	comp=Z,14nm,1.0s						
GEC2	GERESS Array S	55.49	21	eP	P	20 00 55.9	+0.4
	comp=Z,13nm,0.9s,baz=210,slow=7.0						
GERES	GERESS Array B	55.49	21	P	P	20 00 54.9	-0.6
GERES	GERESS Array B	55.49	21	P	P	20 00 54.7	-0.8
	comp=Z,8.0nm,0.8s,baz=201,slow=6.7,SNR=37						
GERES				LR	LR	20 25 40.1	
	comp=Z,989nm,19.3s,baz=233,slow=37						
	comp=Z,8.0nm,0.8s						
GERES	GERESS Array B	55.49	21	P	P	20 00 54.9	-0.6
RONA	Rosalia, Austr	55.53	24	i P	P	20 00 57.0	+1.2
	comp=Z,10nm,0.8s						
CONA	Conrad Observa	55.55	23	i P	P	20 00 57.0	+1.1
	comp=Z,4.5nm,1.1s						
KHC	Kasperske Hory	55.69	21	eP	P	20 00 54.0	-2.8
KHC				epP	pwP	20 01 02.0	-1.8
KHC				ePP	PP	20 03 03.0	+1.7
KHC				eS	S	20 08 45.5	+2.3
KHC				AMS	AMS	20 25 20.0	
	comp=Z,1µm,20.4s						
KHC	Kasperske Hory	55.69	21	eP	P	20 00 54.0	-2.8
KHC	Kasperske Hory	55.69	21	MLR	MLR		
	comp=Z,1µm,20.4s						
CKRC	Cesky Krumlov	55.69	22	eP	P	20 00 57.0	+0.2
CKRC				eS	S	20 08 44.7	+1.5
CKRC				AMS	AMS	20 25 20.0	
	comp=Z,1µm,19.2s						
CKRC	Cesky Krumlov	55.69	22	eP	P	20 00 57.0	+0.2
CKRC	Cesky Krumlov	55.69	22	MLR	MLR		
	comp=Z,1µm,19.2s						
KASTN	Kahler Asten	55.86	16	eP	P	20 01 01.1	+3.0
	comp=Z,12nm,1.5s,baz=210,slow=7.0						
MANZ	Manzenberg	55.91	19	eP	P	20 00 58.8	+0.3
	comp=Z,1.3nm,0.8s,baz=210,slow=7.0						
SJG	San Juan	55.91	293	IAMs_20	IAMs_20	20 18 49.8	
	comp=Z,2µm,22.0s						
SJG	San Juan	55.91	293	LR	LR	20 19 33.2	
	comp=Z,1µm,21.4s,baz=106,slow=30						
UBBA	Unterbreizbach	55.97	17	eP	P	20 01 01.7	+3.0
	comp=Z,19nm,1.5s,baz=210,slow=7.0						
LPAZ	La Paz	56.12	252	P	P	20 01 00.6	-0.6
LPAZ	La Paz	56.12	252	LR	LR	20 23 46.9	
	comp=Z,3µm,20.3s,baz=79,slow=35						
ZVC	Zvikov	56.16	21	eS	S	20 08 52.2	+2.7
ZVC				AMS	AMS	20 25 20.0	
	comp=Z,1µm,16.4s						
ISP	Isparta	56.29	41	IAMs_20	IAMs_20	20 28 04.4	
	comp=Z,895nm,19.0s						
MOX	Moxa	56.32	19	eL	L	20 24 11.1	
	comp=Z,998nm,21.5s						
TANN	Tannenbergstha	56.39	19	eP	P	20 01 02.1	+0.2
	comp=Z,5.8nm,0.9s,baz=210,slow=7.0						
MODS	Modra-Piesok	56.47	24	eP	P	20 01 02.5	+0.1
MODS	Modra-Piesok	56.47	24	eP	P	20 01 02.5	+0.1
TREC	Trest	56.52	22	AMS	AMS	20 24 20.0	
	comp=Z,1µm,14.9s						
KRUC	Moravsky	56.67	23	eP	P	20 01 02.9	-0.9
PRU	Pruhonice	56.75	21	eS	S	20 08 56.5	-0.7
PRU				AMS	AMS	20 26 20.0	
	comp=Z,1µm,17.0s						
GOPC	GO Pecny, Ondr	56.77	21	eS	S	20 09 03.2	+5.6
GOPC				AMS	AMS	20 26 30.0	
	comp=Z,1µm,18.7s						
PRA	Prague	56.78	21	AMS	AMS	20 26 30.0	
	comp=Z,2µm,17.1s						
VRAC	Vranov	56.95	23	LR	LR	20 26 17.7	
	comp=Z,853nm,19.4s,baz=210,slow=37						
VRAC	Vranov	56.95	23	eP	P	20 01 05.5	-0.3
CLZ	Clausthal	56.98	17	eP	P	20 01 09.1	+3.0
	comp=Z,19nm,1.9s,baz=210,slow=7.0						
RICC	Richard	57.06	20	AMS	AMS	20 26 10.0	
	comp=Z,1µm,20.3s						
ATD	Arta Tunnel	57.06	75	IAMs_20	IAMs_20	20 23 38.2	
	comp=Z,856nm,20.0s						
VYHS	Vyhne	57.20	25	eP	P	20 01 08.7	+1.1
VYHS	Vyhne	57.20	25	eP	P	20 01 08.7	+1.1
PVCC	Panska Ves	57.21	21	eP	P	20 01 08.1	+0.5
PVCC				AMS	AMS	20 26 30.0	
	comp=Z,1µm,18.4s						
PVCC	Panska Ves	57.21	21	eP	P	20 01 08.1	+0.5
PVCC	Panska Ves	57.21	21	MLR	MLR		
	comp=Z,1µm,18.4s						
PSZ	Piszkesteto	57.21	26		P	20 01 07.9	+0.1
PSZ				IAMs_20	IAMs_20	20 27 45.0	
	comp=Z,1µm,18.0s						
PSZ	Piszkesteto	57.21	26	P	P	20 01 07.9	+0.1
PSZ	Piszkesteto	57.21	26	MLR	MLR		
	comp=Z,1µm,18.0s						
PSZ	Piszkesteto	57.21	26	pmax	pmax		
	comp=Z,9.0nm,1.0s						
MMAI	Mount Meron Ar	57.27	48	LR	LR	20 28 23.8	
	comp=Z,721nm,18.5s,baz=207,slow=39						
BRG	Berggiesshubel	57.28	20	eP	P	20 01 08.2	+0.1
BRG				Amp		20 01 11.7	
	comp=Z,4.2nm,1.0s						
BRG	Berggiesshubel	57.28	20	S	S	20 09 12.0	+7.8
CLL	Collm	57.34	19	IAMs_20	IAMs_20	20 26 50.1	
	comp=Z,994nm,18.0s						
CLL	Collm	57.34	19	eP	P	20 01 07.0	-1.5
CLL	Collm	57.34	19	eP	P	20 01 07.0	-1.5
CLL				i x	x	20 01 18.8	
	comp=Z,12nm,1.4s						
CLL				i x	x	20 02 17.9	
CLL				ePP	PP	20 03 15.0	-0.9
CLL				eS	S	20 09 05.0	+0.1
CLL				eSS	SS	20 12 57.0	+2.5
CLL				eSSS	SSS	20 15 12.0	
CLL				AMS	AMS	20 22 00.0	
	comp=N,600nm,19.9s						
CLL				AMS	AMS	20 22 00.0	
	comp=E,1µm,18.6s						
CLL				AMS	AMS	20 26 00.0	
	comp=N,800nm,19.8s						
CLL				AMS	AMS	20 26 00.0	
	comp=E,700nm,20.8s						
CLL				AMS	AMS	20 26 00.0	
	comp=Z,900nm,19.4s						
CLL				AMS	AMS	20 27 00.0	
MAUC	Maruska	57.48	23	eP	P	20 01 10.3	+0.7
MAUC				eS	S	20 09 11.7	+4.8
EKA	Eskdalemuir Ar	57.50	7	P	P	20 01 09.7	+0.1
	comp=Z,2.7nm,0.7s,baz=190,slow=7.6,SNR=12						
	comp=Z,2.7nm,0.7s						
EKA	Eskdalemuir Ar	57.50	7	P	P	20 01 09.7	+0.1
TRQA	Tornquist	57.53	225		P	20 01 10.2	0.0
TRQA				IAmb	IAmb	20 01 22.1	
	comp=Z,32nm,1.5s						
KRLC	Kraliky	57.64	22	eP	P	20 01 10.9	+0.1
KRLC				eS	S	20 09 13.2	+4.1
KRLC				AMS	AMS	20 27 30.0	
	comp=Z,1µm,16.4s						
KRLC	Kraliky	57.64	22	eP	P	20 01 10.9	+0.1
KRLC	Kraliky	57.64	22	MLR	MLR		
	comp=Z,1µm,16.4s						
DPC	Dobruska-Polom	57.69	22	eP	P	20 01 11.1	0.0
DPC				eS	S	20 09 13.6	+3.8
DPC				AMS	AMS	20 25 00.0	
	comp=Z,1µm,17.0s						
DPC	Dobruska-Polom	57.69	22	eP	P	20 01 11.1	0.0
DPC	Dobruska-Polom	57.69	22	MLR	MLR		
	comp=Z,1µm,17.0s						
MORC	Moravsky Berou	57.69	23		P	20 01 11.1	0.0
MORC				IAmb	IAmb	20 01 22.0	
	comp=Z,27nm,1.7s						
MORC	Moravsky Berou	57.69	23	eP	P	20 01 11.5	+0.4
MORC	Moravsky Berou	57.69	23	P	P	20 01 11.1	0.0
MORC	Moravsky Berou	57.69	23	pmax	pmax		
	comp=Z,27nm,1.7s						
UPC	Upice	57.71	21	eP	P	20 01 11.6	+0.5
UPC				eS	S	20 09 12.0	+2.1
UPC				AMS	AMS	20 25 00.0	
	comp=Z,1µm,14.9s						
UPC	Upice	57.71	21	eP	P	20 01 11.6	+0.5
UPC	Upice	57.71	21	MLR	MLR		
	comp=Z,1µm,14.9s						
CHVC	Chvalec	57.79	21	eP	P	20 01 12.1	+0.3
CHVC				AMS	AMS	20 25 00.0	
	comp=Z,900nm,14.7s						
CHVC	Chvalec	57.79	21	eP	P	20 01 12.1	+0.3
CHVC	Chvalec	57.79	21	MLR	MLR		
	comp=Z,900nm,14.7s						
OSTC	Ostas	57.82	22	eP	P	20 01 13.0	+1.0
OSTC				eS	S	20 09 15.3	+3.9

OSTC				AMS	AMS	20 25 00.0	
	comp=Z,1µm,14.2s						
OSTC	Ostas	57.82	22	*e*P	P	20 01 13.0	+1.0
OSTC	Ostas	57.82	22	MLR	MLR		
	comp=Z,1µm,14.2s						
STEB	Steborice	57.91	23	*e*P	P	20 01 12.6	0.0
LANS	Liptovska Anna	57.98	25	*e*P	P	20 01 14.7	+1.6
LANS	Liptovska Anna	57.98	25	*e*P	P	20 01 14.7	+1.6
OKC	Ostrava-Krasne	57.98	23	AMS	AMS	20 25 30.0	
	comp=Z,900nm,20.1s						
ASF	Jabal al Asfar	58.02	50	LR	LR	20 26 20.4	
	comp=Z,2µm,21.6s,baz=244,slow=36						
GORT1	Trebel	58.27	17	*e*P	P	20 01 14.6	-0.3
	comp=Z,22nm,1.2s,baz=210,slow=7.0						
MLR	Muntele Rosu	58.35	31		P	20 01 16.1	+0.2
MLR				IAmb	IAmb	20 01 19.9	
	comp=Z,16nm,1.2s						
MLR	Muntele Rosu	58.35	31	LR	LR	20 27 45.7	
	comp=Z,2µm,20.8s,baz=224,slow=38						
SDV	Santo Domingo	58.40	282	LR	LR	20 24 08.7	
	comp=Z,605nm,20.6s,baz=88,slow=34						
BSEG	Bad Segeberg	58.82	16	*e*P	P	20 01 19.3	+0.5
	comp=Z,6.6nm,0.9s,baz=210,slow=7.0						
ANTO	Ankara	58.90	40	P	P	20 01 19.4	-0.4
ANTO				IAmb	IAmb	20 01 24.9	
	comp=Z,17nm,0.9s						
OJC	Ojcow	58.94	24		P	20 01 19.1	-0.7
OJC	Ojcow	58.94	24	P	P	20 01 19.1	-0.7
TIRR	Tirgusor	58.99	34	IAMs_20	IAMs_20	20 27 13.5	
	comp=Z,828nm,20.0s						
KOLS	Kolonicke sedl	59.02	26	*e*P	P	20 01 21.6	+1.3
GO02	Mina Guanaco	59.21	242	P	P	20 01 22.7	+0.1
BR131	Keskin Array S	59.37	41		P	20 01 23.1	0.0
BRTR	Keskin Array B	59.37	41	P	P	20 01 23.6	+0.4
BRTR	Keskin Array B	59.37	41	P	P	20 01 23.9	+0.8
	comp=Z,7.1nm,0.9s,baz=226,slow=7.0,SNR=27						
	comp=Z,7.1nm,0.9s						
BURAR	Bucovina Array	59.44	29	P	P	20 01 23.4	0.0
CZSB	Cruzeiro do Su	59.74	262	P	P	20 01 25.5	-0.5
CFA	Coronel Fontan	59.84	234	LR	LR	20 24 09.8	
	comp=Z,786nm,21.6s,baz=46,slow=33						
BNN	Bunyan	60.38	43	P	P	20 01 29.4	-0.8
RUSC	La Rusia	60.48	278	P	P	20 01 30.1	-1.6
GAZ	Gaziantep	60.51	45	P	P	20 01 31.1	+0.2
GAZ				IAmb	IAmb	20 01 43.7	
	comp=Z,18nm,1.2s						
OPO	Ambohidratompo	61.24	110	LR	LR	20 25 13.3	
	comp=Z,516nm,21.3s,baz=218,slow=33						
ROSC	El Rosal	61.61	276	P	P	20 01 42.7	+3.4
	comp=Z,6.3nm,0.4s,baz=141,slow=5.6,SNR=3.7						
ROSC				LR	LR	20 26 21.5	
	comp=Z,3µm,19.1s,baz=79,slow=34						
	comp=Z,6.3nm,0.4s						
ROSC	El Rosal	61.61	276	P	P	20 01 42.7	+3.4
RAYN	Ar Rayn	62.16	62	P	P	20 01 42.3	-0.1
RAYN				IAmb	IAmb	20 01 54.7	
	comp=Z,9.3nm,1.3s						
FLOC	Florencia	62.73	273	P	P	20 01 46.3	0.0
SUW	Suwalki	63.19	23	P	P	20 01 47.9	-0.6
SUW				IAMs_20	IAMs_20	20 29 54.0	
	comp=Z,795nm,21.0s						
KIEV	Kiev	63.45	29	P	P	20 01 49.0	-1.3
AKASG	Malin Array Be	63.47	29	P	P	20 01 49.3	-1.1
AKASG				IAmb	IAmb	20 01 59.6	
	comp=Z,27nm,1.8s						
AKASG	Malin Array Be	63.47	29	P	P	20 01 49.1	-1.3
	comp=Z,0.1nm,0.3s,baz=230,slow=5.5,SNR=7.4						
	comp=Z,0.1nm,0.3s						
AKBB	Malin Array Si	63.47	29	P	P	20 01 48.8	-1.6
NNA	Nana	64.05	258	LR	LR	20 28 53.3	
	comp=Z,1µm,18.0s,baz=75,slow=35						
GURO	Guroymak-BITLI	64.54	45	P	P	20 01 57.1	-0.9
GURO				IAmb	IAmb	20 02 11.4	
	comp=Z,7.6nm,1.0s						
PLCA	Paso Flores	64.68	225	P	P	20 02 00.6	+1.8
	comp=Z,1.7nm,0.8s,baz=48,slow=5.0,SNR=3.7						
PLCA				LR	LR	20 25 33.3	
	comp=Z,974nm,21.6s,baz=82,slow=32						
	comp=Z,1.7nm,0.8s						
HFS	Hagfors	65.16	14	P	P	20 02 00.5	-0.9
	comp=Z,7.5nm,1.0s,baz=199,slow=8.8,SNR=6.1						
HFS				LR	LR	20 31 43.8	
	comp=Z,630nm,18.7s,baz=244,slow=37						
	comp=Z,7.5nm,1.0s						
ATAH	Atahualpa	65.37	263	LR	LR	20 29 18.0	
	comp=Z,2µm,20.6s,baz=96,slow=35						
NB2	NORSAR Subarra	65.38	13	P	P	20 02 02.9	0.0
	comp=Z,123nm,3.3s,baz=208,slow=6.5						
NB2	NORSAR Subarra	65.38	13	P	P	20 02 02.9	0.0
	baz=208,slow=6.5						
NOA	NORSAR Array B	65.38	13	P	P	20 02 02.6	-0.3
	comp=Z,2.3nm,0.8s,baz=208,slow=6.5,SNR=6.8						
	comp=Z,2.3nm,0.8s						
MNK	Minsk	65.45	25	*i* P	P	20 02 02.7	-0.6
	comp=E,13nm,1.0s						
MNK				*i* P	P	20 02 02.7	-0.6
	comp=N,17nm,1.0s						
MNK				*i* P	P	20 02 02.7	-0.6
	comp=Z,9.0nm,0.9s,baz=226						
MNK				*i* PcP	PcP	20 02 34.9	-0.3
MNK				*i* PP	PP	20 04 26.1	-1.4
MNK				*i* PPP	PPP	20 05 58.6	
MNK				*i* S	S	20 10 46.8	-1.1
MNK				*i* SS	SS	20 15 00.6	-0.9
MNK				*i* SSS	SSS	20 17 56.6	
MNK				*i* LQ	LQ	20 24 10.8	
MNK				*i* LRM	MLR	20 31 21.5	
	comp=E,497nm,15.6s						
OTAV	Otavalo	65.47	271	IAMs_20	IAMs_20	20 27 20.1	
	comp=Z,970nm,22.0s						
LMN	Caledonia Moun	65.81	323	P	P	20 02 05.8	-0.1
LMN				IAmb	IAmb	20 02 08.9	
	comp=Z,19nm,1.5s						
LL03	Petrohue	66.13	225	P	P	20 02 08.2	+0.1
COHC	Cochancay	66.21	268		P	20 02 08.3	-0.8
LL02	Futaleuf	66.46	223	P	P	20 02 11.2	+1.0
BORG	Borgarnes	66.66	356	LR	LR	20 28 14.1	
	comp=Z,221nm,19.2s,baz=165,slow=33						
GNI	Garni	67.11	45	LR	LR	20 33 36.0	
	comp=Z,344nm,21.3s,baz=250,slow=38						
G65A	Princeton	67.18	321	IAMs_20	IAMs_20	20 28 21.1	
	comp=Z,605nm,18.0s						
BATG	Bathurst New B	67.28	324	P	P	20 02 15.4	+0.2
BATG				IAmb	IAmb	20 02 27.3	
	comp=Z,25nm,1.6s						
KIV	Kislovodsk	67.33	40	pmax	pmax		
	comp=Z,5.0nm,1.1s						
KVAR	Kislovodsk Arr	67.33	40	LR	LR	20 35 23.7	
	comp=Z,246nm,18.2s,baz=110,slow=39						
KBZ	Khabaz	67.36	41	P	P	20 02 16.7	+0.9
	comp=Z,3.1nm,0.8s,baz=202,slow=8.5,SNR=3.8						
	comp=Z,3.1nm,0.8s						
M65A	Busby, Falmout	67.61	317	IAMs_20	IAMs_20	20 25 48.7	
	comp=Z,1µm,21.0s						
L64A	Middleborough	67.89	317	IAMs_20	IAMs_20	20 26 09.2	
	comp=Z,1µm,20.0s						
F64A	Sherman	67.98	322	P	P	20 02 19.9	+0.3
F64A				IAmb	IAmb	20 02 28.8	
	comp=Z,7.8nm,1.1s						
F64A				IAMs_20	IAMs_20	20 24 42.2	
	comp=Z,740nm,22.0s						
WES	Weston	68.41	317	IAMs_20	IAMs_20	20 26 24.6	
	comp=Z,981nm,20.0s						
M63A	Gales Ferry	68.51	316	IAMs_20	IAMs_20	20 26 52.6	
	comp=Z,780nm,18.0s						
HRV	Adam Dziewonsk	68.61	317	IAMs_20	IAMs_20	20 26 20.2	
	comp=Z,924nm,20.0s						
D62A	Allapoint, All	68.97	323	P	P	20 02 25.2	-0.7
D62A				IAMs_20	IAMs_20	20 26 13.4	
	comp=Z,705nm,21.0s						
I62A	Tamworth	69.02	319	IAMs_20	IAMs_20	20 25 12.9	
	comp=Z,793nm,22.0s						
E62A	Clayton Lake	69.05	322	IAMs_20	IAMs_20	20 25 50.5	
	comp=Z,720nm,22.0s						
K62A	Royalston	69.14	317	IAMs_20	IAMs_20	20 26 26.0	
	comp=Z,836nm,20.0s						
USHA	Ushuaia	69.30	211	LR	LR	20 28 06.9	
	comp=Z,1µm,20.0s,baz=48,slow=32						
N62A	Caumsett State	69.33	315	IAMs_20	IAMs_20	20 25 23.2	
	comp=Z,824nm,20.0s						
L61B	Northampton	69.35	317	IAMs_20	IAMs_20	20 27 21.8	
	comp=Z,821nm,18.0s						
LBNH	Lisbon	69.56	319	IAMs_20	IAMs_20	20 25 41.1	
	comp=Z,829nm,22.0s						
HNH	Hanover	69.58	318	IAMs_20	IAMs_20	20 26 54.8	
	comp=Z,780nm,20.0s						
J61A	Chester	69.62	318	IAMs_20	IAMs_20	20 26 20.7	
	comp=Z,709nm,20.0s						
OBN	Obninsk	69.69	28	LR	LR	20 34 09.3	
	comp=Z,671nm,21.9s,baz=184,slow=37						
R61A	Willards	69.77	312	IAMs_20	IAMs_20	20 25 28.1	
	comp=Z,664nm,20.0s						
FINES	FINESS Array B	69.78	19	P	P	20 02 30.1	-0.5
FINES	FINESS Array B	69.78	19	P	P	20 02 30.9	+0.3
	comp=Z,5.5nm,0.8s,baz=243,slow=4.9,SNR=9.8						
FINES				LR	LR	20 34 29.6	
	comp=Z,486nm,19.2s,baz=230,slow=37						
	comp=Z,5.5nm,0.8s						
P61A	Hammonton	69.82	314	IAMs_20	IAMs_20	20 26 45.4	
	comp=Z,962nm,19.0s						
SNAA	Sanae	70.08	177	P	P	20 02 33.1	+0.7
SNAA				IAmb	IAmb	20 02 37.1	
	comp=Z,15nm,1.3s						
SNAA	Sanae	70.08	177	P	P	20 02 33.6	+1.3
	comp=Z,4.6nm,0.8s,baz=285,slow=7.7,SNR=10						
SNAA				LR	LR	20 27 46.6	
	comp=Z,120nm,19.6s,baz=37,slow=31						
	comp=Z,4.6nm,0.8s						
TRY	Troy	70.14	317	IAMs_20	IAMs_20	20 27 27.5	
	comp=Z,944nm,20.0s						
VT1	Waterbury	70.14	319	IAMs_20	IAMs_20	20 26 31.4	
	comp=Z,834nm,21.0s						
LDAQ	Lac Daran	70.70	323	P	P	20 02 36.0	-0.6
LDAQ				IAmb	IAmb	20 02 52.6	
	comp=Z,31nm,1.9s						
060A	Indiantown	70.78	299	IAMs_20	IAMs_20	20 26 45.6	
	comp=Z,1µm,20.0s						
L59A	Walton	70.88	316	P	P	20 02 36.5	-1.3
L59A				IAmb	IAmb	20 02 47.0	
	comp=Z,10.0nm,1.1s						
L59A				IAMs_20	IAMs_20	20 26 45.3	
	comp=Z,928nm,21.0s						
J59A	Piesco	70.98	317	IAMs_20	IAMs_20	20 27 52.7	
	comp=Z,764nm,20.0s						
BINY	Binghamton	71.54	316	IAMs_20	IAMs_20	20 27 02.8	
	comp=Z,845nm,21.0s						
SCHQ	Schefferville	71.58	331	LR	LR	20 28 39.9	
	comp=Z,309nm,21.6s,baz=132,slow=31						
N58A	Sunbury	71.60	314	IAMs_20	IAMs_20	20 28 11.5	
	comp=Z,795nm,20.0s						
HDC	Heredia	71.74	281	IAMs_20	IAMs_20	20 33 35.8	
	comp=Z,694nm,20.0s						
DWPF	Disney Wildern	71.94	300	IAMs_20	IAMs_20	20 27 01.2	
	comp=Z,936nm,22.0s						
J57A	Williamstown	71.97	317	IAMs_20	IAMs_20	20 29 10.1	
	comp=Z,888nm,19.0s						
UOSS	Minazif	71.99	63	P	P	20 02 44.8	0.0
UOSS				IAmb	IAmb	20 02 48.5	
	comp=Z,12nm,1.0s						
NHSC	New Hope	72.03	306	IAMs_20	IAMs_20	20 27 35.3	
	comp=Z,704nm,21.0s						
TRQ	Mont Tremblant	72.05	320	P	P	20 02 44.3	-0.5
WBO	Williamsburg	72.06	319	P	P	20 02 45.3	+0.5
M57A	Sunshine Farm,	72.06	315	IAMs_20	IAMs_20	20 27 35.5	
	comp=Z,733nm,19.0s						
K57A	Scipio Center	72.09	316	IAMs_20	IAMs_20	20 27 22.4	
	comp=Z,802nm,22.0s						
T57A	Hurt	72.32	310	IAMs_20	IAMs_20	20 28 05.8	
	comp=Z,621nm,21.0s						
W57A	Gilead	72.40	308	IAMs_20	IAMs_20	20 27 31.0	
	comp=Z,977nm,22.0s						
JTS	Las Juntas de	72.59	281	LR	LR	20 34 14.3	
	comp=Z,374nm,19.4s,baz=100,slow=35						
L56A	Greenwood	72.62	315	IAMs_20	IAMs_20	20 28 18.4	
	comp=Z,646nm,20.0s						
PMSA	Palmer Station	72.70	200	LR	LR	20 27 01.6	
	comp=Z,691nm,22.0s,baz=43,slow=29						
Q56A	Snyder Ridge,	72.85	312	P	P	20 02 50.0	+0.3
Q56A				IAmb	IAmb	20 02 57.3	
	comp=Z,26nm,1.7s						
J55A	Hilton	73.17	316	IAMs_20	IAMs_20	20 28 15.9	
	comp=Z,902nm,21.0s						
BLA	Blacksburg	73.28	310	IAMs_20	IAMs_20	20 29 16.1	
	comp=Z,634nm,19.0s						
V55A	Taylorsville	73.55	308	IAMs_20	IAMs_20	20 28 20.2	
	comp=Z,807nm,22.0s						
WSAR	Wadi Sarin	73.89	65	LR	LR	20 36 49.0	
	comp=Z,4.5nm,18.1s,baz=271,slow=37						
BELG	Belogornoye	73.98	34	P	P	20 02 55.9	0.0
	comp=Z,11nm,1.1s,baz=57,slow=17,SNR=4.3						
BELG				LR	LR	20 35 50.9	
	comp=Z,514nm,21.7s,baz=227,slow=36						
	comp=Z,11nm,1.1s						
SADO	Sadowa	74.56	317	LR	LR	20 31 01.5	
	comp=Z,850nm,19.0s,baz=150,slow=32						
N53A	Lisbon	74.57	313	IAMs_20	IAMs_20	20 29 51.1	
	comp=Z,546nm,20.0s						
M52A	Chesterland	75.15	314	IAMs_20	IAMs_20	20 30 01.4	
	comp=Z,690nm,20.0s						
TGUH	Tegucigalpa,Un	75.20	285	IAMs_20	IAMs_20	20 31 38.4	
	comp=Z,750nm,22.0s						
TKL	Tuckaleechee C	75.52	307	LR	LR	20 29 47.9	
	comp=Z,856nm,21.5s,baz=120,slow=30						
SYO	Syowa Base	75.66	163⇑	*e*sP	sP	20 03 10.8	+2.6
SYO	Syowa Base	75.66	163⇑	*e*PcP	PcP	20 03 20.0	+1.9
ARCES	ARCESS Array B	75.76	13	P	P	20 03 05.8	-0.2
	comp=Z,2.2nm,0.9s,baz=222,slow=1.6,SNR=5.4						
ARCES				LR	LR	20 36 43.3	
	comp=Z,431nm,19.6s,baz=211,slow=36						
	comp=Z,2.2nm,0.9s						
Q51A	Peebles	75.97	311	IAMs_20	IAMs_20	20 30 03.3	
	comp=Z,734nm,22.0s						
451A	Vernon	76.12	302	IAMs_20	IAMs_20	20 30 22.9	
	comp=Z,639nm,21.0s						
X51A	Calhoun	76.15	306	IAMs_20	IAMs_20	20 30 01.4	
	comp=Z,563nm,21.0s						
M50A	Fremont	76.34	313	IAMs_20	IAMs_20	20 31 05.8	
	comp=Z,573nm,20.0s						
K50A	Casco	76.39	315	IAMs_20	IAMs_20	20 36 04.2	
	comp=Z,592nm,19.0s						
W50A	Signal Mountai	76.65	307	IAMs_20	IAMs_20	20 29 56.5	
	comp=Z,632nm,22.0s						
T50A	Nancy	76.66	309	P	P	20 03 12.1	+0.3
T50A				IAMs_20	IAMs_20	20 30 06.6	
	comp=Z,917nm,22.0s						
I49A	Point Hope	76.85	316	IAMs_20	IAMs_20	20 30 49.1	
	comp=Z,708nm,21.0s						
BELA	Belgrano 2	76.89	185	P	P	20 03 12.3	0.0
AAM	Ann Arbor	77.01	314	P	P	20 03 13.4	-0.2
AAM				IAmb	IAmb	20 03 28.5	
	comp=Z,15nm,1.0s						
AAM				IAMs_20	IAMs_20	20 31 29.5	
	comp=Z,640nm,20.0s						
N49A	Columbus Grove	77.05	313	IAMs_20	IAMs_20	20 30 08.8	
	comp=Z,576nm,22.0s						
Y49A	Blount Mountai	77.28	305	IAMs_20	IAMs_20	20 33 51.2	
	comp=Z,605nm,19.0s						
U49A	Red Boiling Sp	77.29	308	P	P	20 03 15.4	+0.1
U49A				IAMs_20	IAMs_20	20 30 11.4	
	comp=Z,948nm,22.0s						
BRAL	Brewton	77.32	302	IAMs_20	IAMs_20	20 31 01.6	
	comp=Z,887nm,21.0s						
KIRV	Kirov	77.53	28	LR	LR	20 39 19.5	
	comp=Z,806nm,21.1s,baz=249,slow=37						
O48B	Farmland	77.62	312	IAMs_20	IAMs_20	20 30 33.8	
	comp=Z,691nm,22.0s						
P48A	Milroy	77.64	311	IAMs_20	IAMs_20	20 30 53.5	
	comp=Z,722nm,22.0s						
V48A	Smith Brothers	77.96	307	IAMs_20	IAMs_20	20 31 12.3	
	comp=Z,578nm,20.0s						
J47A	Sunmer	78.07	315	IAMs_20	IAMs_20	20 31 20.6	
	comp=Z,636nm,22.0s						
N47A	Urbana	78.16	312	IAMs_20	IAMs_20	20 30 41.1	
	comp=Z,647nm,22.0s						
GLMI	Grayling	78.32	316	IAMs_20	IAMs_20	20 31 56.0	
	comp=Z,784nm,20.0s						
T47A	Sharon Grove	78.43	308	IAMs_20	IAMs_20	20 30 57.5	
	comp=Z,875nm,22.0s						
E46A	Sault Ste Mari	78.50	318	IAMs_20	IAMs_20	20 33 09.6	
	comp=Z,772nm,20.0s						
WVT	Waverly	78.84	307	IAMs_20	IAMs_20	20 31 17.5	
	comp=Z,766nm,22.0s						
P46A	Rosedale	79.02	311	IAMs_20	IAMs_20	20 32 08.1	
	comp=Z,750nm,20.0s						
SFIN	Lafayette	79.09	312	IAMs_20	IAMs_20	20 32 00.9	
	comp=Z,536nm,20.0s						
I45A	Fountain	79.25	315	IAMs_20	IAMs_20	20 37 52.9	
	comp=Z,572nm,19.0s						
AKTO	Aktyubinsk	79.39	38	P	P	20 03 26.8	+0.2
	comp=Z,1.3nm,0.6s,baz=154,slow=5.0,SNR=5.9						
AKTO				LR	LR	20 41 08.5	
	comp=Z,342nm,21.8s,baz=249,slow=38						
	comp=Z,1.3nm,0.6s						
T45A	Paducah	79.64	308	IAMs_20	IAMs_20	20 31 32.7	
	comp=Z,723nm,22.0s						
HQIL	Hanson Quary C	79.94	313	IAMs_20	IAMs_20	20 32 00.2	
	comp=Z,545nm,22.0s						
M44A	Midewin, Midew	80.00	312	IAMs_20	IAMs_20	20 31 57.8	
	comp=Z,800nm,22.0s						
L44A	Lake County Fo	80.06	313	IAMs_20	IAMs_20	20 31 51.3	
	comp=Z,614nm,22.0s						
Q44A	Meyer Farm, Va	80.27	310	IAMs_20	IAMs_20	20 31 01.1	
	comp=Z,630nm,22.0s						
AB31	Akbulak array	80.29	39		P	20 03 31.0	-0.5
ABKAR	Akbulak array	80.29	39		P	20 03 31.0	-0.6
H43A	Windswept, Lux	80.43	316	IAMs_20	IAMs_20	20 32 56.9	
	comp=Z,686nm,21.0s						
K43A	Burlington	80.47	314	IAMs_20	IAMs_20	20 33 33.1	
	comp=Z,599nm,21.0s						
HDIL	Hopedale	80.77	311	IAMs_20	IAMs_20	20 32 41.3	
	comp=Z,765nm,22.0s						
P43A	Skaggs, Pawnee	80.78	310	IAMs_20	IAMs_20	20 33 51.7	
	comp=Z,621nm,20.0s						
F42A	Maple Grove Fa	80.95	317	IAMs_20	IAMs_20	20 33 05.5	
	comp=Z,785nm,21.0s						
I42A	Draeger Farm,	81.11	315	IAMs_20	IAMs_20	20 33 45.2	
	comp=Z,530nm,20.0s						
ARTI	Arti	81.28	32	IAMs_20	IAMs_20	20 42 38.9	
	comp=Z,586nm,21.0s						
ARTI	Arti	81.28	32	P	P	20 03 36.2	-0.5
	comp=Z,1.6nm,0.5s,baz=238,slow=5.2,SNR=3.4						
ARTI				LR	LR	20 42 59.3	
	comp=Z,461nm,18.8s,baz=259,slow=38						
	comp=Z,1.6nm,0.5s						
L42A	Oliver, Polo	81.31	313	IAMs_20	IAMs_20	20 40 05.4	
	comp=Z,518nm,18.0s						
LCAR	Lake Charles	81.49	307	P	P	20 03 37.0	-1.2
LCAR				IAmb	IAmb	20 03 48.2	
	comp=Z,17nm,1.5s						
T42A	Van Buren	81.58	308	IAMs_20	IAMs_20	20 32 51.0	
	comp=Z,694nm,22.0s						
COWI	Conover	81.70	317	P	P	20 03 37.9	-1.3
COWI				IAMs_20	IAMs_20	20 33 28.5	
	comp=Z,813nm,22.0s						
CCM	Cathedral Cave	81.85	309	P	P	20 03 38.9	-1.2
JFWS	Jewell Farm	81.89	314	IAMs_20	IAMs_20	20 34 25.8	
	comp=Z,655nm,20.0s						
G40A	Rib Lake	82.28	316	IAMs_20	IAMs_20	20 34 15.8	
	comp=Z,740nm,20.0s						
I40A	Norwalk	82.33	315	IAMs_20	IAMs_20	20 36 43.2	
	comp=Z,543nm,20.0s						
TBO	Thunder Bay	82.38	319	P	P	20 03 42.2	-0.5
TBO				IAmb	IAmb	20 03 53.0	
	comp=Z,38nm,1.9s						
L40A	Anamosa	82.46	313	IAMs_20	IAMs_20	20 33 35.9	
	comp=Z,646nm,22.0s						
441A	DeRidder	82.48	301	IAMs_20	IAMs_20	20 36 03.3	
	comp=Z,662nm,20.0s						
MAW	Mawson	82.98	158	P	P	20 03 46.3	+0.9
	comp=Z,3.8nm,0.6s,baz=283,slow=6.5,SNR=14						
MAW				LR	LR	20 32 53.1	
	comp=Z,251nm,20.9s,baz=308,slow=30						
	comp=Z,3.8nm,0.6s						
MIAR	Mount Ida	83.25	305	IAMs_20	IAMs_20	20 33 59.3	
	comp=Z,521nm,20.0s						
S39A	Bolivar	83.43	308	IAMs_20	IAMs_20	20 34 11.6	
	comp=Z,704nm,22.0s						
E38A	The Farm, Brul	83.44	317	IAMs_20	IAMs_20	20 34 43.4	
	comp=Z,730nm,21.0s						
EYMN	Ely	83.62	318	IAMs_20	IAMs_20	20 34 22.3	
	comp=Z,754nm,22.0s						
N38A	Joes South For	83.77	311	IAMs_20	IAMs_20	20 34 52.7	
	comp=Z,804nm,22.0s						
P38A	Dawn	83.84	310		P	20 03 49.2	-1.2
P38A				IAmb	IAmb	20 03 58.2	
	comp=Z,12nm,1.1s						
P38A				IAMs_20	IAMs_20	20 34 22.7	
	comp=Z,710nm,22.0s						
NATX	Nacogdoches	83.84	302	IAMs_20	IAMs_20	20 36 53.3	
	comp=Z,526nm,21.0s						
SPMN	Marine on St.	84.08	316	IAMs_20	IAMs_20	20 37 51.6	
	comp=Z,599nm,19.0s						
I37A	Lemond, Waseca	84.33	314	IAMs_20	IAMs_20	20 36 02.3	
	comp=Z,537nm,20.0s						
POIN	Pond Inlet	84.44	344	P	P	20 03 52.4	-0.3
HKT	Hockley	84.67	300	IAMs_20	IAMs_20	20 39 36.6	
	comp=Z,523nm,20.0s						
TUL3	Leonard	85.20	306	IAMs_20	IAMs_20	20 38 53.9	
	comp=Z,462nm,20.0s						
N35A	Tabor	85.59	311	IAMs_20	IAMs_20	20 35 58.9	
	comp=Z,678nm,22.0s						
T35A	Sooner Cattle	85.87	307	IAMs_20	IAMs_20	20 41 43.7	
	comp=Z,445nm,19.0s						
GAR	Garm	85.92	51	P	P	20 04 00.3	-0.8
OK051	E0350 and S346	86.09	307	IAMs_20	IAMs_20	20 45 59.6	
	comp=Z,706nm,21.0s						
OK048	Pawnee Station	86.17	306	IAMs_20	IAMs_20	20 41 00.7	
	comp=Z,432nm,19.0s						
WHTX	Lake Whitney,	86.23	302	IAMs_20	IAMs_20	20 39 50.6	
	comp=Z,433nm,19.0s						
735A	Kenedy	86.31	299	IAMs_20	IAMs_20	20 38 44.7	
	comp=Z,594nm,22.0s						
KKAR	Karatay Array	86.47	47	P	P	20 04 03.1	-0.5
ECSD	EROS Data Cent	86.61	314		P	20 04 03.3	-0.9
ECSD	EROS Data Cent	86.61	314	IAMs_20	IAMs_20	20 37 51.5	
	comp=Z,529nm,20.0s						
ULM	Lac du Bonnet	86.80	320	LR	LR	20 37 55.2	
	comp=Z,418nm,20.5s,baz=104,slow=32						
FCC	Fort Churchill	86.89	329	P	P	20 04 05.0	-0.2
WTFS	Witchita Falls	87.21	304	P	P	20 04 06.4	-0.9
WTFS				IAmb	IAmb	20 04 15.7	
	comp=Z,12nm,0.8s						
BVAR	Borovoye Array	87.43	37	P	P	20 04 08.5	+0.5
	comp=Z,1.1nm,0.8s,baz=250,slow=4.3,SNR=5.8						
BVAR				LR	LR	20 45 49.8	
	comp=Z,327nm,21.1s,baz=262,slow=38						
	comp=Z,1.1nm,0.8s						
BGNE	Belgrade	87.53	311	IAMs_20	IAMs_20	20 37 43.1	
	comp=Z,595nm,21.0s						
WMOK	Wichita Mounta	87.54	305	P	P	20 04 08.4	-0.6
WMOK				IAmb	IAmb	20 04 17.2	
	comp=Z,7.7nm,1.1s						
R32A	Long Quarter,	87.73	308	IAMs_20	IAMs_20	20 36 31.9	
	comp=Z,643nm,22.0s						
ABTX	Abilene, Hawle	88.12	303	IAMs_20	IAMs_20	20 38 32.6	
	comp=Z,583nm,20.0s						
ARSB	Arslanbob	88.15	49	P	P	20 04 11.5	-0.4
QSPA	South Pole Qui	88.29	180	P	P	20 04 12.8	+0.8
QSPA	South Pole Qui	88.29	180	P	P	20 04 14.1	+2.1
	comp=Z,5.0nm,0.6s,baz=253,slow=1.0,SNR=22						
QSPA				LR	LR	20 37 07.3	
	comp=Z,297nm,21.6s,baz=198,slow=31						
	comp=Z,5.0nm,0.6s						
APMT	Aspermont	88.56	303		P	20 04 12.5	-1.4
APMT				IAmb	IAmb	20 04 22.8	
	comp=Z,13nm,1.0s						
AAK	Ala-Archa	89.35	47	P	P	20 04 17.3	-0.3
AAK				IAmb	IAmb	20 04 28.9	
	comp=Z,12nm,1.3s						
AAK	Ala-Archa	89.35	47	LR	LR	20 47 47.1	
	comp=Z,430nm,20.3s,baz=272,slow=38						
KSH	Kashi	90.33	51	P	P	20 04 22.0	-0.2
KSH				sP	pwP	20 04 29.8	+0.6
KSH				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KSH				LR	LR		
	comp=Z,590nm,21.6s						
KSH				LR	LR		
	comp=Z,770nm,22.3s						
KSH				LR	LR		
	comp=Z,1µm,23.4s						
NRN	Naryn	90.42	49		P	20 04 22.3	-0.5
NRN				IAmb	IAmb	20 04 33.7	
	comp=Z,4.8nm,0.8s						
OGNE	Ogallala	90.43	311	IAMs_20	IAMs_20	20 41 21.9	
	comp=Z,496nm,20.0s						
KSCO	Kaye Shedlock’	90.82	309	IAMs_20	IAMs_20	20 38 53.6	
	comp=Z,612nm,21.0s						
TXAR	Lajitas Array	91.45	299	LR	LR	20 41 45.6	
	comp=Z,241nm,21.2s,baz=70,slow=33						
TARG	Taragay, Kyrgy	91.78	48	P	P	20 04 27.7	-1.5
TARG				IAmb	IAmb	20 04 40.1	
	comp=Z,9.6nm,1.2s						
RSSD	Black Hills	91.98	314	IAMs_20	IAMs_20	20 43 44.7	
	comp=Z,468nm,20.0s						
KURBB	Kurchatov Arra	92.35	40	P	P	20 04 31.5	+0.5
	comp=Z,0.1nm,0.4s,baz=267,slow=4.4,SNR=2.8						
KURBB				LR	LR	20 52 55.6	
	comp=Z,150nm,18.4s,baz=162,slow=40						
	comp=Z,0.1nm,0.4s						
VHRN	Van Horn	92.61	301	P	P	20 04 31.9	-1.0
VHRN				IAmb	IAmb	20 04 42.4	

	comp=Z,17nm,1.5s						
SDCO	Great Sand Dun	93.07	308	IAMs_20	IAMs_20	20 47 30.0	
	comp=Z,451nm,18.0s						
ANMO	Albuquerque	93.85	305	LR	LR	20 41 07.8	
	comp=Z,989nm,21.8s,baz=198,slow=32						
PALK	Pallekele	93.90	83	LR	LR	20 42 05.9	
	comp=Z,590nm,21.7s,baz=276,slow=32						
MKAR	Makanchi Array	94.93	43	P	P	20 04 43.3	+0.2
	comp=Z,0.6nm,0.9s,baz=242,slow=2.6,SNR=3.6						
MKAR				LR	LR	20 54 37.8	
	comp=Z,186nm,18.1s,baz=310,slow=40						
	comp=Z,0.6nm,0.9s						
O20A	White River Ci	95.16	310	IAMs_20	IAMs_20	20 42 01.2	
	comp=Z,589nm,20.0s						
NRIK	Noril'sk	95.39	21	LR	LR	20 51 16.1	
	comp=Z,273nm,20.4s,baz=278,slow=38						
MVCO	Mesa Verde	95.46	307	IAMs_20	IAMs_20	20 41 26.3	
	comp=Z,431nm,22.0s						
RLMT	Red Lodge	95.69	315	IAMs_20	IAMs_20	20 44 07.8	
	comp=Z,519nm,20.0s						
ZALV	Zalesovo Beam	96.05	36	LR	LR	20 52 03.9	
	comp=Z,146nm,20.4s,baz=258,slow=38						
YKA	Yellowknife Ar	96.94	333	LR	LR	20 44 05.7	
	comp=Z,245nm,20.2s,baz=92,slow=33						
BOZ	Bozeman (W)	97.32	316	IAMs_20	IAMs_20	20 43 53.8	
	comp=Z,499nm,21.0s						
LPIG	La Paz	97.40	294	LR	LR	20 48 16.0	
	comp=Z,75nm,18.2s,baz=67,slow=35						
HWUT	Hardware Ranch	97.59	312	IAMs_20	IAMs_20	20 44 45.5	
	comp=Z,473nm,20.0s						
WUAZ	Wupatki	97.86	305	IAMs_20	IAMs_20	20 43 29.0	
	comp=Z,579nm,22.0s						
WMQ	Urumqi	98.96	46	*e*P	Pdif	20 05 03.3	+1.8
WMQ				LR	LR		
	comp=Z,330nm,24.2s						
PLID	Pearl Lake	100.44	315	IAMs_20	IAMs_20	20 45 35.4	
	comp=Z,409nm,20.0s						
BMO	Blue Mountains	101.39	315	IAMs_20	IAMs_20	20 46 11.6	
	comp=Z,501nm,20.0s						
TPNV	Topopah Spring	101.66	307	IAMs_20	IAMs_20	20 45 25.5	
	comp=Z,526nm,22.0s						
WVOR	Wild Horse Val	102.73	313	IAMs_20	IAMs_20	20 46 54.2	
	comp=Z,412nm,20.0s						
LSA	Lhasa	103.17	60	IAMs_20	IAMs_20	20 57 08.3	
	comp=Z,482nm,19.0s						
PASC	Pasadena Art C	103.56	305	IAMs_20	IAMs_20	20 47 14.1	
	comp=Z,461nm,21.0s						
CMB	Columbia Colle	104.77	309	IAMs_20	IAMs_20	20 48 32.6	
	comp=Z,391nm,21.0s						
HATC	Hat Creek Radi	105.09	312	IAMs_20	IAMs_20	20 47 34.0	
	comp=Z,391nm,21.0s						
ORV	Oroville	105.36	311	IAMs_20	IAMs_20	20 49 28.1	
	comp=Z,466nm,19.0s						
P33M	Teslin, Yukon	105.97	333	IAMs_20	IAMs_20	20 49 38.9	
	comp=Z,340nm,20.0s						
TIXI	Tiksi	106.17	12	IAMs_20	IAMs_20	21 00 36.2	
	comp=Z,499nm,20.0s						
P32M	Atlin	106.64	333	IAMs_20	IAMs_20	20 52 41.9	
	comp=Z,335nm,20.0s						
O30N	Mendenhall	107.15	335	IAMs_20	IAMs_20	20 53 06.1	
	comp=Z,352nm,19.0s						
WRAK	Wrangell Islan	107.34	330	IAMs_20	IAMs_20	20 50 14.5	
	comp=Z,334nm,20.0s						
R32K	Eaglecrest	107.60	332	IAMs_20	IAMs_20	20 50 00.3	
	comp=Z,435nm,22.0s						
P29M	Windy Craggy	108.43	334	IAMs_20	IAMs_20	20 52 57.0	
	comp=Z,313nm,20.0s						
S31K	Pelican	108.56	332	IAMs_20	IAMs_20	20 52 47.5	
	comp=Z,444nm,20.0s						
BARN	Barnard Glacie	109.32	336	IAMs_20	IAMs_20	20 54 00.3	
	comp=Z,297nm,19.0s						
WAX	Waxell Ridge	110.15	336	IAMs_20	IAMs_20	20 55 25.3	
	comp=Z,324nm,20.0s						
HMT	Hamilton	110.78	336	IAMs_20	IAMs_20	20 53 28.0	
	comp=Z,315nm,20.0s						
ULN	Ulaanbaatar	111.10	39	IAMs_20	IAMs_20	21 00 44.2	
	comp=Z,458nm,21.0s						
EYAK	Cordova Ski Ar	111.24	337	IAMs_20	IAMs_20	21 04 53.0	
	comp=Z,341nm,19.0s						
FID	Port Fidalgo	111.39	337	IAMs_20	IAMs_20	20 53 32.7	
	comp=Z,395nm,22.0s						
PZH	PanZhiHua	112.87	62	PKP	PKiKP	20 09 56.5	-2.0
BRLK	Bradley Lake	113.70	338	IAMs_20	IAMs_20	20 54 57.5	
	comp=Z,321nm,19.0s						
CNPM	China Poot	114.00	338	IAMs_20	IAMs_20	20 54 51.9	
	comp=Z,417nm,21.0s						
SLVN	Son La	115.65	67	IAMs_20	IAMs_20	21 00 43.2	
	comp=Z,367nm,20.0s						
O16K	Kokwok River B	116.34	341	IAMs_20	IAMs_20	21 01 05.5	
	comp=Z,264nm,20.0s						
HHC	Hu-ho-hao-te	116.77	44	*e*PKP	PKPdf	20 10 01.8	-3.8
HHC				LR	LR		
	comp=Z,240nm,16.9s						
HHC				LR	LR		
	comp=Z,240nm,16.3s						
HHC				LR	LR		
	comp=Z,430nm,16.8s						
N14K	Kuskokwak Cree	117.19	343	IAMs_20	IAMs_20	20 59 01.9	
	comp=Z,274nm,21.0s						
SII	Sitkinak Islan	117.19	337	IAMs_20	IAMs_20	20 56 02.5	
	comp=Z,349nm,21.0s						
HIA	Hailar	117.89	33	IAMs_20	IAMs_20	21 07 19.2	
	comp=Z,420nm,20.0s						
ENH	Enshi	118.69	56	IAMs_20	IAMs_20	21 05 03.4	
	comp=Z,348nm,22.0s						
BJT	Baijiatuau	120.31	44	IAMs_20	IAMs_20	21 04 02.6	
	comp=Z,275nm,21.0s						
WHN	Wuhan	122.61	55	PKPbc	PKiKP	20 10 23.0	+5.9
NJ2	Nanjing	125.64	51	*e*PKP	PKPdf	20 10 22.0	-0.7
TAOE	Nuku Hiva Isla	126.28	258	*e*LR	LR	20 49 49.0	
	comp=Z,395nm,26.3s						
TBI	Tubuai	130.82	237	*e*SS	SS	20 30 04.5	-14
	comp=Z,2µm,30.5s						
TBI	Tubuai	130.82	237	*e*LR	LR	20 51 57.3	
	comp=Z,1µm,28.8s						
TBI				*e*LR	LR	20 51 59.0	
	comp=Z,4µm,24.0s						
PPT2	Papeete2	133.09	244	*e*LR	LR	20 52 53.5	
	comp=Z,511nm,35.8s						
PPT2				*e*LR	LR	20 52 59.7	
	comp=Z,519nm,23.8s						
ASAR	Alice Springs	139.06	130	PKhKP	PKPpre	20 10 38.9	
	comp=Z,1.4nm,0.9s,baz=230,slow=2.6,SNR=13						
WRA	Warramunga Arr	141.36	126	PKhKP	PKPpre	20 10 46.9	
	comp=Z,0.8nm,1.0s,baz=233,slow=2.7,SNR=9.1						
DZM	Mont Dzumac	156.28	179	*e*LR	LR	21 03 45.3	
	comp=Z,393nm,30.8s						

*CNRM **29** 19:59:01.5, 37°.35N×2°.59W, h0^{km}, ML2.3*
*MDD **29** 19:59:04.2±0.2, 37°.38N×2°.56W, h4^{km}±1^{km}, mb_Lg2.4/31, Error ellipse: s-maj=2.0km s-min=1.3km az=162.0*
*SFS **29** 19:59:05.5, 37°.19N×2°.55W, h29^{km}, ML2.5/8, ML2.4/8, MLv2.4/8*
*INMG **29** 19:59:05.0±1.5, 37°.37N×2°.52W, h12^{km}±3^{km}, ML2.3, Error ellipse: s-maj=2.1km s-min=1.9km az=162.0, #DIST_RANGE: REGIONAL #IPMA_REGION: S Almeria (ESP)*
ISC 29 19:59:02.9±1.0**, 37°.39N**±0°.02×**2°.56W**±0°.02**, h9**^{km}±9^{km}**, n51,** σ**1°.23**/103**, Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENIJ	Nijar	0.50	146	Sg	Sg	19 59 19.8	+0.5
ENIJ				Pg	Pb	19 59 14.1	+0.2
ENIJ	Nijar	0.50	146	Pg	Pb	19 59 13.9	+0.1
ENIJ				Sg	Sg	19 59 19.7	+0.5
ENIJ				*i* IVmb_Lg		19 59 22.9	
EQES	Quesada	0.58	315	Pg	Pb	19 59 15.9	+0.6
EQES				Sg	Sb	19 59 23.5	-0.2
EQES				*i* IVmb_Lg		19 59 29.3	
ELOR	Lorca, Murcia	0.69	69	Pg	Pb	19 59 17.1	0.0
ELOR				Sg	Sb	19 59 26.1	-0.7
ELOR				*i* IVmb_Lg		19 59 31.7	
EQUE	Quentar	0.73	256	Pg	Pg	19 59 17.1	+0.2
EQUE				Sg	Sb	19 59 27.6	-0.3
EQUE				*i* IVmb_Lg		19 59 30.4	
EQTA	Presa de Quent	0.73	256	Sg	Sg	19 59 26.9	+0.4
EQTA				Pg	Pg	19 59 17.2	+0.3
TLOR	Lorca, Murcia	0.74	69	Sg	Sn	19 59 31.9	+1.0
TLOR	Lorca, Murcia	0.74	69	Pg	Pb	19 59 18.1	+0.1
TLOR				Sg	Sb	19 59 28.3	+0.1
EZAR	Zarzadilla de	0.84	55	Pg	Pg	19 59 19.3	+0.2
EZAR				Sg	Sb	19 59 31.8	+0.7
EZAR				*i* IVmb_Lg		19 59 36.0	
E0803	Jimena (Jaen)	0.85	302	Pg	Pb	19 59 20.4	+0.5
E0803				Sg	Sb	19 59 31.5	+0.1
E0802	Ubeda,Jaen	0.91	315	Pg	Pn	19 59 21.9	0.0
E0802				Sg	Sb	19 59 33.8	+0.8
ELGU	Los Guajares,	1.00	239	Pg	Pg	19 59 21.9	-0.2
ELGU				Sg	Sg	19 59 34.0	-1.2
ELGU	Los Guajares,	1.00	239	Pg	Pg	19 59 22.3	+0.2
ELGU				Sg	Sb	19 59 35.7	0.0
ELGU				*i* IVmb_Lg		19 59 38.6	
CART	Cartagena	1.25	81	Sn	Sb	19 59 40.9	-1.9
CART				Pn	Pn	19 59 24.9	-1.6
CART	Cartagena	1.25	81	P	Pn	19 59 26.3	-0.3
CART	Cartagena	1.25	81	S	Sg	19 59 43.2	-0.1
EGOR	Sierra Gorda,	1.27	258	Pn	Pn	19 59 26.6	-0.3
EGOR	Sierra Gorda,	1.27	258	Pg	Pg	19 59 27.3	0.0
EGOR				Sg	Sn	19 59 45.5	+1.3
EGOR				*i* IVmb_Lg		19 59 52.5	
PSIM	Granatula de C	1.71	327	Pn	Pb	19 59 34.0	-0.6
PSIM				Pg	Pg	19 59 35.7	0.0
PSIM				Sn	Sn	19 59 55.5	+0.6
EADA	Adamuz	1.78	296	Pn	Pn	19 59 33.4	-0.4
EADA				Sn	Sb	19 59 57.6	-0.5
EADA	Adamuz	1.78	296	Pn	Pb	19 59 34.9	-0.8
EADA				Sn	Sn	19 59 57.4	+0.9
EADA				Sg	Sg	20 00 01.5	+1.5
EADA				*i* IVmb_Lg		20 00 02.4	
EMIJ	Mijas	1.96	246	Pn	Pn	19 59 34.7	-1.5
EMIJ	Mijas	1.96	246	Pn	Pn	19 59 36.5	+0.2
EMIJ				Pg	Pb	19 59 39.1	+0.4
EMIJ				Sn	Sn	20 00 00.8	-0.1
EMIJ				Sg	Sg	20 00 06.8	+1.0
EMIJ				*i* IVmb_Lg		20 00 18.3	
EVIV	Cofrentes, Val	2.19	31	Pn	Pn	19 59 40.3	+0.8
EVIV				Sn	Sn	20 00 07.1	+0.5
EVIV				Sg	Sg	20 00 14.1	+0.9
EVIV				*i* IVmb_Lg		20 00 18.3	
EBEN2	Beniarda presa	2.27	55	Pn	Pn	19 59 41.4	+0.9
EBEN2				Sn	Sn	20 00 08.1	-0.5
EBEN2				*i* IVmb_Lg		20 00 22.0	
ECAB	El Cabril	2.37	288	Pn	Pn	19 59 42.9	+1.0
ECAB				Sn	Sn	20 00 10.9	-0.2
ECAB	El Cabril	2.37	288	Pn	Pn	19 59 43.1	+1.2
ECAB				Sn	Sn	20 00 11.2	0.0
ECAB				Sg	Sg	20 00 18.9	-0.2
ECAB				*i* IVmb_Lg		20 00 24.6	
ECHE	Chera	2.53	29	Pn	Pb	19 59 46.6	-1.8
ECHE				Sn	Sn	20 00 16.6	+1.6
ECHE	Chera	2.53	29	Pn	Pn	19 59 44.9	+0.8
ECHE				Sn	Sn	20 00 15.7	+0.7
ECHE				Sg	Sg	20 00 25.4	+1.4
ECHE				*i* IVmb_Lg		20 00 34.9	
ESBB	Sonseca Array	2.53	335	Pn	Pn	19 59 45.3	+1.1
ESBB				Sn	Sn	20 00 15.2	0.0
ESBB				Sg	Sg	20 00 24.2	-0.1
ESDC	Sonseca Array	2.53	335	Pn	Pn	19 59 45.1	+0.9
ESDC				Sn	Sn	20 00 15.3	+0.1
ESDC				Sg	Sg	20 00 24.2	-0.1
ESDC				*i* IVmb_Lg		20 00 26.3	
PAB	San Pablo	2.57	327	Pn	Pn	19 59 46.0	+1.3
PAB				Sn	Sn	20 00 15.6	-0.6
PAB				Sg	Sg	20 00 25.9	+0.4
PAB				*i* IVmb_Lg		20 00 29.7	
SMIR	Smir Dam	2.84	234	P	Pn	19 59 48.3	-0.1
UCM	Universidad Co	2.96	350	Pn	Pb	19 59 53.4	-2.4
JBK	JBK	3.05	180	P	Pn	19 59 51.5	+0.1
ETOR	Torete	3.45	6	Pn	Pn	19 59 58.3	+1.5
ETOR				Sn	Sn	20 00 37.1	-0.6
ETOR				Sg	Sg	20 00 53.5	-0.1
ETOR				*i* IVmb_Lg		20 00 59.3	
GUD	Guadarrama	3.48	340	Pn	Pn	19 59 58.3	+1.1
GUD				Sn	Sn	20 00 37.9	-0.7
GUD				Sg	Sg	20 00 52.8	-1.8
GUD				*i* IVmb_Lg		20 00 58.6	
EIBI	Ibiza	3.48	61	Pn	Pn	19 59 58.6	+1.4
EIBI				Sn	Sn	20 00 36.3	-2.2
EIBI				*i* IVmb_Lg		20 00 56.6	
PBAR	Barrancos	3.64	284	*e*Pn	Pn	20 00 00.5	+1.2
PBAR				*i* AML	AML	20 01 00.4	
PBAR				*i* AML	AML	20 01 06.6	
PBAR				*i* AML	AML	20 01 07.7	
EGRO	El Granado	3.92	274	Pn	Pn	20 00 03.9	+0.6
EGRO				Sn	Sn	20 00 48.2	-1.1
EGRO				*i* IVmb_Lg		20 01 08.0	
PVAQ	Vaqueiros	4.11	272	*e*Pn	Pn	20 00 07.3	+1.5
PVAQ				*e*Sn	Sn	20 00 54.4	+0.4
PVAQ				*i* AML	AML	20 00 57.8	
PVAQ				*i* AML	AML	20 00 57.8	
PVAQ	Vaqueiros	4.11	272	P	Pn	20 00 06.1	+0.3
PVAQ	Vaqueiros	4.11	272	S	Sn	20 00 51.5	-2.5
PESTR	Estremoz	4.23	292	*e*Pn	Pn	20 00 09.1	+1.5
PESTR				*e*Sn	Sn	20 00 56.2	-0.8
PESTR				*i* AML	AML	20 01 20.8	
PESTR				*i* AML	AML	20 01 24.1	
PESTR				*i* AML	AML	20 01 25.5	
PESTR	Estremoz	4.23	292	P	Pn	20 00 09.3	+1.8
PBDV	Barranco-do-Ve	4.29	270	*e*P	Pn	20 00 11.3	+3.0
PBDV				*e*Sn	Sn	20 00 58.5	+0.1
PMRV	Marv??o	4.31	300	*e*Pn	Pn	20 00 10.1	+1.5
PMRV				*e*Sn	Sn	20 00 59.0	+0.1
PMRV				*e*Sg	Sg	20 01 18.7	-2.5
PMRV				*i* AML	AML	20 01 24.0	
PMRV				*i* AML	AML	20 01 25.1	
PMRV				*i* AML	AML	20 01 26.5	
PCBR	Castelo Branco	4.56	304	*e*Pn	Pn	20 00 14.2	+2.1
PCBR				*i* AML	AML	20 01 31.8	
PCBR				*i* AML	AML	20 01 38.2	
PCBR				*i* AML	AML	20 01 39.6	
PMTG	Montargil	4.77	292	*e*Pn	Pn	20 00 18.1	+3.3
PMTG				*e*Sn	Sn	20 01 10.1	-0.1
PMTG				*e*Sg	Sg	20 01 32.3	-3.7
PMTG				*i* AML	AML	20 01 42.0	
PMTG				*i* AML	AML	20 01 43.9	
PMTG				*i* AML	AML	20 01 45.6	
PSARD	Sardoal	4.92	298	*e*Pn	Pn	20 00 19.2	+2.2
PSARD				*e*Sn	Sn	20 01 14.3	+0.3
PSARD				*e*Sg	Sg	20 01 37.5	-3.4
PSARD				*i* AML	AML	20 01 42.3	
PSARD				*i* AML	AML	20 01 43.5	
PSARD				*i* AML	AML	20 01 44.7	
PARRA	Arraiolos	5.31	288	*e*Sg	Sn	20 01 26.3	+2.8
PARRA				*i* AML	AML	20 01 30.5	
PARRA				*i* AML	AML	20 01 34.4	
PARRA				*i* AML	AML	20 01 38.6	

*IDC **29** 19:59:20.1±0.6, 1°.64S×12°.96W, h0^{km}, mb4.3/22, mbtmp4.3/24, ML4.0/2, Error ellipse: s-maj=23.1km s-min=12.8km az=116.0*
*NEIC **29** 19:59:22.6±1.3, 1°.64S±0°.09×12°.74W±0°.10, h10^{km}±1^{km}, mb4.9/60, Error ellipse: s-maj=16.7km s-min=14.1km az=296.0*
*GCMT **29** 19:59:23.5±0.4, 1°.52S±0°.04×12°.99W±0°.03, h23^{km}±1^{km}, MW5.0/74, Moment Tensor Solution. s14,c14; s74,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.31±.45; $M_{\theta\theta}$0.77±.22; $M_{\phi\phi}$3.54±.27; $M_{r\theta}$1.47±.28; $M_{\theta\phi}$-0.17±.11; $M_{\phi r}$1.03±.27; Best double couple: $M_0$4.25300×10^{16} NP1:ϕ_s344.00000°,δ40.00000°,λ-113.00000°. NP2: ϕ_s193.00000°,δ54.00000°,λ-72.00000°. Principal axes: T 3.6730, Plg7.0000°, Azm270.0000°; N 1.1630, Plg15.0000°, Azm2.0000°; P -4.8340, Plg74.0000°, Azm154.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BGR **29** 19:59:27.9, 0°.66S×12°.77W, h10^{km}, mb4.7*
ISC 29 19:59:22.1±0.4**, 1°.62S**±0°.07×**12°.82W**±0°.08**, h14**^{km}**, n165,** σ**1°.09**/163**, mb4.8**/80**, 4C-6D, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N2	ASCENSION HYDR	6.38	195	T	T	20 07 22.3	
	baz=15,slow=74,SNR=94						
H10N1	ASCENSION HYDR	6.40	195	T	T	20 07 24.4	
	baz=15,slow=74,SNR=139						
H10N3	ASCENSION HYDR	6.40	195	T	T	20 07 18.4	
	baz=15,slow=74,SNR=102						
DBIC	Dimbokro	11.45	44	Pn	Pn	20 02 05.1	-0.2
DBIC	Dimbokro	11.45	44	Pn	Pn	20 02 05.2	-0.1
	0.3nm,0.3s,baz=130,slow=23,SNR=2.4						
DBIC				Sn	Sn	20 04 13.4	+0.2
	0.3nm,0.3s,baz=180,slow=7.4,SNR=3.1						
	4.1nm,0.8s						
ACRG	Accra	14.52	60	Pn	Pn	20 02 48.7	+1.3
SHEL	Horse Pasture	15.86	154	Pn	Pn	20 03 05.6	+0.4
MBO	M'Bour	16.43	346	Pn	Pn	20 03 12.1	-0.4
MBO				IAmb	IAmb	20 03 18.0	
	comp=Z,50nm,0.8s						
BBTS	Babate	16.59	347	Pn	Pn	20 03 14.2	-0.3
	comp=Z,2.2nm,0.3s,baz=321,slow=6.0,SNR=1.5						
	comp=Z,7.6nm,0.4s						
TORD	Torodi Ar. Bea	20.56	44		P	20 03 58.9	-1.7
TORD	Torodi Ar. Bea	20.56	44	P	P	20 04 00.9	+0.2
	comp=Z,14nm,0.9s,baz=234,slow=9.7,SNR=22						
	comp=Z,14nm,0.9s						
TSUM	Tsumeb	34.52	122	P	P	20 06 08.7	-1.8
TSUM				IAmb	IAmb	20 06 12.9	
	comp=Z,13nm,1.2s						
WIN	Windhoek	35.75	128	P	P	20 06 19.8	-1.3
WIN				IAmb	IAmb	20 06 23.8	
	comp=Z,48nm,1.9s						
BDFB	Brasilia	37.39	246	P	P	20 06 33.0	-2.1
	comp=Z,3.7nm,0.9s,baz=64,slow=7.5,SNR=4.4						
	comp=Z,3.7nm,0.9s						
QNGWA	Qangwa	37.72	120	P	P	20 06 37.2	-0.7
QNGWA				IAmb	IAmb	20 08 01.4	
	comp=Z,30nm,2.0s						
KOOLE	Kule	38.43	126	P	P	20 06 43.0	-0.8
KOOLE				IAmb	IAmb	20 06 45.6	
	comp=Z,12nm,0.7s						
KOOLE	Kule	38.43	126	*i* P	P	20 06 45.2	+1.4
GMARE	Gumare	38.52	120	P	P	20 06 43.5	-1.1
GRTLG	Ghanzi	38.52	123	P	P	20 06 44.0	-0.7
GRTLG				IAmb	IAmb	20 06 47.0	
	comp=Z,31nm,1.1s						
GRTLG	Ghanzi	38.52	123	*i* P	P	20 06 46.0	+1.4
ESDC	Sonseca Array	41.89	10	P	P	20 07 13.1	+0.9
ESDC	Sonseca Array	41.89	10	P	P	20 07 12.8	+0.5
	comp=Z,2.5nm,1.2s,baz=201,slow=7.3,SNR=8.8						
ESDC				PP	PP	20 08 50.7	+1.4
	comp=Z,2.1nm,0.9s,baz=194,slow=11,SNR=10						
	comp=Z,2.5nm,1.2s						
SKOMA	Sekoma	42.17	126	*i* P	P	20 07 15.3	+0.6
KDWAN	Kaudwane	42.27	124	P	P	20 07 15.0	-0.7
KDWAN				IAmb	IAmb	20 07 17.7	
	comp=Z,18nm,1.1s						
KDWAN	Kaudwane	42.27	124	*i* P	P	20 07 16.6	+1.0
KEST	Kesra	42.54	27		P	20 07 17.7	+0.1
KEST	Kesra	42.54	27	P	P	20 07 19.6	+2.0
	comp=Z,5.0nm,0.9s,baz=286,slow=3.8,SNR=7.9						
	comp=Z,5.0nm,0.9s						
LSZ	Lusaka	42.66	111		P	20 07 19.0	+0.1
MBAR	Mbarara	43.56	89	P	P	20 07 25.9	-0.4
MBAR				IAmb	IAmb	20 07 30.1	
	comp=Z,17nm,1.1s						
LBTB	Lobatse	43.74	125	P	P	20 07 27.3	-0.3
MAHO	Mahon	44.19	19	P	P	20 07 31.6	+0.9
BOSA	Boshof	45.15	130	P	P	20 07 38.2	-0.6
BOSA				IAmb	IAmb	20 07 40.1	
	comp=Z,22nm,1.2s						
BOSA	Boshof	45.15	130	P	P	20 07 39.1	+0.4
	comp=Z,6.9nm,1.0s,baz=286,slow=9.8,SNR=5.9						
	comp=Z,6.9nm,1.0s						
VSL	Villasalto	45.71	24		P	20 07 43.1	+0.3
VSL				IAmb	IAmb	20 07 46.8	
	comp=Z,18nm,1.1s						
CEST	Esterri de Car	45.82	14		P	20 07 44.1	+0.3
CEST				IAmb	IAmb	20 07 46.7	
	comp=Z,8.6nm,1.0s						
CEL	Celeste	47.72	31	P	P	20 07 58.7	0.0
BOAV	Boa Vista	47.86	275	P	P	20 08 02.6	+2.5
LODK	Lodwar	48.42	84	P	P	20 08 03.4	-1.2
LODK				IAmb	IAmb	20 08 04.7	
	comp=Z,22nm,1.9s						
CASP	Castiglione de	49.10	23	P	P	20 08 09.4	+0.2
CASP				IAmb	IAmb	20 08 12.0	
	comp=Z,23nm,1.3s						
CPUP	Villa Florida	49.30	236		P	20 08 12.8	+1.7
CPUP	Villa Florida	49.30	236	P	P	20 08 11.1	+0.1
	comp=Z,0.3nm,0.5s,baz=258,slow=6.7,SNR=3.3						
	comp=Z,0.3nm,0.5s						
BNI	Bardonecchia	49.60	18		P	20 08 14.3	+1.1
BNI				IAmb	IAmb	20 08 17.0	
	comp=Z,11nm,1.1s						
SIV	San Ignacio	49.62	250	P	P	20 08 12.7	-0.9
	comp=Z,1.6nm,0.7s,baz=82,slow=9.1,SNR=5.1						
	comp=Z,1.6nm,0.7s						
INTR	Introdacqua	49.71	26	P	P	20 08 14.7	+0.7
INTR				IAmb	IAmb	20 08 17.1	
	comp=Z,11nm,1.0s						
MSSA	Maissana	49.90	21		P	20 08 16.8	+1.4
MSSA				IAmb	IAmb	20 08 18.7	
	comp=Z,26nm,1.2s						
NRCA	Norcia	50.04	25	P	P	20 08 16.7	+0.2
NRCA				IAmb	IAmb	20 08 35.5	
	comp=Z,41nm,1.9s						
FDMO	Fiordimonte	50.20	25	P	P	20 08 18.4	+0.8
SENIN	Lac Senin/Sane	50.97	18	P	P	20 08 24.1	+0.4
TUE	Stuetta	51.72	19	P	P	20 08 29.9	+0.6
TUE				IAmb	IAmb	20 08 32.2	
	comp=Z,21nm,1.9s						
CTI	Castel Tesino	52.16	21	P	P	20 08 32.1	-0.2
CTI				IAmb	IAmb	20 08 34.5	
	comp=Z,32nm,1.9s						
FUORN	Ofenpass-Fuorn	52.16	20	P	P	20 08 32.5	-0.1
FNA	Florina	52.45	33	P	P	20 08 35.0	+0.5
ECH	Echery	52.60	17	P	P	20 08 36.2	+0.7
DAVA	Damuels	52.61	19	*i* P	P	20 08 36.5	+0.7
	comp=Z,23nm,1.0s,SNR=9.7						
FETA	Feichten	52.67	20	*i* P	P	20 08 37.1	+0.9
	comp=Z,14nm,1.2s,SNR=5.7						
SQTA	Sankt Quirin	53.01	20	*e*P	P	20 08 39.7	+1.1
	comp=Z,13nm,0.9s,SNR=7.2						
BFO	Black Forest	53.05	18	P	P	20 08 39.2	+0.4
BFO				IAmb	IAmb	20 08 40.8	
	comp=Z,36nm,1.8s						
BFO	Black Forest	53.05	18	*e*P	P	20 08 39.5	+0.7
	comp=Z,58nm,2.2s,baz=210,slow=7.3						
ABTA	Abfaltersbach	53.07	22	*e*P	P	20 08 41.2	+2.1
	comp=Z,11nm,1.2s,SNR=5.0						
MOTA	Moosalm	53.08	20	*i* P	P	20 08 39.7	+0.5
	comp=Z,10nm,1.1s						
RETA	Reutte	53.08	20	*i* P	P	20 08 39.6	+0.4
	comp=Z,4.5nm,1.1s						
WTTA	Wattenberg	53.19	21	*i* P	P	20 08 40.9	+0.8
	comp=Z,20nm,1.2s,SNR=6.4						
WATA	Walderalm	53.23	21	*i* P	P	20 08 40.8	+0.4
	comp=Z,17nm,1.4s,SNR=5.7						
MYKA	Terra Mystica	53.39	22	*i* P	P	20 08 44.5	+3.0
	comp=Z,7.5nm,0.9s						
WLF	Walferdange	53.64	15	*d*P	P	20 08 44.1	+1.0
	comp=Z,4.9nm,1.3s						
OBKA	Obir	53.65	23	*i* pP	pP	20 08 47.6	+0.8
	comp=Z,12nm,1.5s						
DOU	Dourbes	53.65	14	*d*P	P	20 08 43.8	+0.7
	comp=Z,4.3nm,1.2s						
LESA	Schwarzleotal	53.70	21	*i* P	P	20 08 44.3	+0.6
	comp=Z,13nm,1.2s,SNR=6.6						
BMRD	Maredsous	53.88	14	*d*P	P	20 08 45.2	+0.4
SOKA	Soboth	53.98	23	*i* P	P	20 08 47.5	+1.7
	comp=Z,8.1nm,1.0s,SNR=5.0						
RJOB	Jochberg	54.01	21	*e*P	P	20 08 46.3	+0.3
	comp=Z,7.0nm,0.8s,baz=210,slow=7.3						
BGES	Gesves	54.03	14	*d*P	P	20 08 47.0	+1.0
	comp=Z,5.5nm,1.0s						
UCC	Uccle	54.25	13	P	P	20 08 48.2	+0.7
BIOA	Bad Ischl, Aus	54.28	22	*i* P	P	20 08 48.1	+0.3
	comp=Z,4.1nm,0.9s						
MEM	Membach	54.47	15	*d*P	P	20 08 51.1	+2.0
BTNL	Ternell	54.48	15	*d*P	P	20 08 50.3	+1.0
	comp=Z,4.4nm,1.1s						
ARSA	Arzberg	54.64	23	P	P	20 08 51.0	+0.5
ARSA				IAmb	IAmb	20 08 53.0	
	comp=Z,10nm,1.2s						
ARSA	Arzberg	54.64	23	*i* P	P	20 08 51.9	+1.5
	comp=Z,5.7nm,1.0s						
MOA	Molln	54.65	22	*i* P	P	20 08 51.0	+0.5
	comp=Z,7.5nm,1.1s						
WET	Wettzell	55.23	20	*e*P	P	20 08 55.7	+0.9
	comp=Z,14nm,1.1s,baz=210,slow=7.3						
GEC2	GERESS Array S	55.27	21	P	P	20 08 55.5	+0.4
GEC2				IAmb	IAmb	20 08 57.2	
	comp=Z,20nm,1.1s						
GEC2	GERESS Array S	55.27	21	*e*P	P	20 08 56.1	+0.9
	comp=Z,22nm,1.1s,baz=210,slow=7.3						
GERES	GERESS Array B	55.27	21	P	P	20 08 55.5	+0.4
GERES	GERESS Array B	55.27	21	P	P	20 08 56.0	+0.9

	comp=Z,9.8nm,0.9s,baz=202,slow=6.6,SNR=49						
GERES				PP	PP	20 10 58.5	-0.3
	comp=Z,1.5nm,0.9s,baz=206,slow=8.9,SNR=4.6						
	comp=Z,9.8nm,0.9s						
RONA	Rosalia, Austr	55.31	24	*i* P	P	20 08 57.4	+2.0
	comp=Z,13nm,1.0s,SNR=11						
CONA	Conrad Observa	55.32	23	*e*P	P	20 08 56.9	+1.4
	comp=Z,16nm,2.2s,SNR=5.1						
KHC	Kasperske Hory	55.47	21	*e*P	P	20 08 56.9	+0.4
CKRC	Cesky Krumlov	55.47	21	*e*P	P	20 08 57.4	+0.9
ROTZ	Rotzenmuhle	55.54	19	*e*P	P	20 08 57.5	+0.6
	comp=Z,1.1nm,1.1s,baz=210,slow=7.3						
MANZ	Manzenberg	55.69	19	*e*P	P	20 08 58.7	+0.6
	comp=Z,2.8nm,1.2s,baz=210,slow=7.3						
UBBA	Unterbreizbach	55.76	17	*e*P	P	20 08 59.5	+1.2
	comp=Z,16nm,1.8s,baz=210,slow=7.3						
ZVC	Zvikov	55.94	21	*e*P	P	20 09 00.5	+0.7
MOX	Moxa	56.10	18	*e*P	P	20 09 01.7	+0.8
	comp=Z,14nm,1.4s,baz=210,slow=7.3						
TANN	Tannenbergstha	56.18	19	*e*P	P	20 09 02.1	+0.6
	comp=Z,12nm,1.2s,baz=210,slow=7.3						
SRO	Srobarova	56.23	25	*e*P	P	20 09 03.7	+1.8
MODS	Modra-Piesok	56.24	24	*e*P	P	20 09 02.1	+0.1
KRUC	Moravsky	56.45	23	*e*P	P	20 09 03.7	+0.2
VRAC	Vranov	56.73	23	*e*P	P	20 09 06.2	+0.8
VYHS	Vyhne	56.98	25	*e*P	P	20 09 08.9	+1.7
PSZ	Piszkesteto	56.98	26	P	P	20 09 07.8	+0.5
PSZ				IAmb	IAmb	20 09 10.1	
	comp=Z,13nm,1.0s						
BRG	Berggiesshubel	57.06	20	*e*P	P	20 09 09.0	+1.3
BRG				Amp		20 09 11.2	
	comp=Z,5.5nm,1.1s						
CLL	Collm	57.12	19	*i* P	P	20 09 08.8	+0.6
	comp=Z,9.0nm,1.4s						
CLL				*i* x	x	20 09 18.9	
CLL				*e*PP	PP	20 11 10.0	-5.2
CLL				AMS	AMS	20 33 00.0	
	comp=Z,500nm,18.2s						
MAUC	Maruska	57.25	23	*e*P	P	20 09 10.2	+1.0
EKA	Eskdalemuir Ar	57.32	7	P	P	20 09 09.8	+0.4
	comp=Z,3.5nm,0.9s,baz=181,slow=7.5,SNR=9.5						
	comp=Z,3.5nm,0.9s						
KRLC	Kraliky	57.42	22	*e*P	P	20 09 11.2	+0.8
MORC	Moravsky Berou	57.47	23		P	20 09 11.1	+0.3
MORC	Moravsky Berou	57.47	23	*e*P	P	20 09 12.0	+1.3
CHVC	Chvalec	57.57	21	*e*P	P	20 09 12.1	+0.7
STEB	Steborice	57.69	23	*e*P	P	20 09 13.4	+1.2
LANS	Liptovska Anna	57.75	24	*e*P	P	20 09 14.9	+2.2
KSP	Ksiaz	57.87	21	*e*P	P	20 09 14.3	+0.9
NIE	Niedzica	58.30	25	*e*P	P	20 09 19.1	+2.5
OJC	Ojcow	58.72	24	*e*P	P	20 09 19.7	+0.3
OJC	Ojcow	58.72	24		P	20 09 20.1	+0.7
KOLS	Kolonicke sedl	58.79	26	*e*P	P	20 09 22.1	+2.1
BRTR	Keskin Array B	59.12	41	P	P	20 09 23.6	+0.9
BRTR	Keskin Array B	59.12	41	P	P	20 09 24.5	+1.9
	comp=Z,8.1nm,0.9s,baz=223,slow=6.7,SNR=28						
	comp=Z,8.1nm,0.9s						
BR131	Keskin Array S	59.13	41	P	P	20 09 23.2	+0.5
BURAR	Bucovina Array	59.21	29	P	P	20 09 23.8	+0.8
BNN	Bunyan	60.14	43	P	P	20 09 29.4	-0.2
RAYN	Ar Rayn	61.92	62	P	P	20 09 41.5	-0.4
RAYN				IAmb	IAmb	20 09 45.4	
	comp=Z,18nm,1.6s						
SUW	Suwalki	62.96	23	*e*P	P	20 09 48.9	+0.7
SUW	Suwalki	62.96	23	P	P	20 09 48.5	+0.3
KIEV	Kiev	63.22	28	P	P	20 09 49.9	-0.1
KIEV				IAmb	IAmb	20 09 51.3	
	comp=Z,16nm,1.2s						
AKASG	Malin Array Be	63.23	28	P	P	20 09 49.6	-0.5
	comp=Z,1.7nm,0.8s,baz=233,slow=6.3,SNR=9.1						
	comp=Z,1.7nm,0.8s						
AKBB	Malin Array Si	63.23	28	P	P	20 09 49.3	-0.8
VA01	Torpederas	63.26	234	P	P	20 09 51.3	+0.7
GURO	Guroymak-BITLI	64.29	45	P	P	20 09 58.0	+0.5
PABE	Paberze	64.39	22	P	P	20 09 58.3	+0.8
HFS	Hagfors	64.96	14	P	P	20 10 01.6	+0.3
	comp=Z,7.5nm,1.0s,baz=191,slow=3.0,SNR=5.9						
	comp=Z,7.5nm,1.0s						
NACGM	Naroch	65.05	24	*e*P	P	20 10 03.3	+1.4
	comp=Z,17nm,0.9s,baz=224						
NB2	NORSAR Subarra	65.18	13	P	P	20 10 03.0	+0.3
	comp=Z,6.9nm,1.0s,baz=210,slow=6.9						
NOA	NORSAR Array B	65.18	13	P	P	20 10 02.9	+0.1
	comp=Z,3.6nm,0.9s,baz=209,slow=6.6,SNR=8.2						
	comp=Z,3.6nm,0.9s						
LL02	Futaleuf	66.71	223		P	20 10 12.8	-0.1
KBZ	Khabaz	67.12	41	P	P	20 10 16.6	+1.1
	comp=Z,5.0nm,0.9s,baz=245,slow=4.1,SNR=4.4						
	comp=Z,5.0nm,0.9s						
BATG	Bathurst New B	67.25	324	P	P	20 10 16.3	+0.1
BATG				IAmb	IAmb	20 10 23.5	
	comp=Z,14nm,1.4s						
VNA2	Neumayer--Watz	69.28	178	⇑P	P	20 10 27.8	-0.8
	comp=Z,8.9nm,0.8s,baz=348,slow=8.0						
VNA3	Neumayer Olymp	69.54	179	⇑P	P	20 10 29.7	-0.5
	comp=Z,6.5nm,0.9s						
FINES	FINESS Array B	69.57	19	P	P	20 10 31.0	+0.6
	comp=Z,6.9nm,0.9s,baz=241,slow=3.5,SNR=8.6						
	comp=Z,6.9nm,0.9s						
SNAA	Sanae	70.23	177	⇑P	P	20 10 34.3	-0.2
	comp=Z,109nm,0.9s						
SNAA	Sanae	70.23	177		P	20 10 34.2	-0.3
SNAA	Sanae	70.23	177	P	P	20 10 34.3	-0.2
	comp=Z,4.9nm,0.9s,baz=318,slow=5.7,SNR=9.6						
	comp=Z,4.9nm,0.9s						
TROLL	Troll, Antarti	70.95	175	⇑P	P	20 10 39.2	+0.2
	comp=Z,356nm,0.8s						
TRQ	Mont Tremblant	72.04	320	P	P	20 10 45.2	-0.7
TRQ				IAmb	IAmb	20 10 52.6	
	comp=Z,10nm,1.4s						
BELG	Belogornoye	73.74	34	P	P	20 10 56.0	+0.3
	comp=Z,11nm,1.1s,baz=260,slow=23,SNR=5.5						
	comp=Z,11nm,1.1s						
BELA	Belgrano 2	77.07	185	P	P	20 11 14.3	-0.2
BELA				IAmb	IAmb	20 11 22.4	
	comp=Z,29nm,2.0s						
AB31	Akbulak array	80.05	39	P	P	20 11 31.0	-0.4
ABKAR	Akbulak array	80.05	39	P	P	20 11 30.5	-0.9
ABKAR	Akbulak array	80.05	39	P	P	20 11 31.0	-0.4
ABKAR				IAmb	IAmb	20 11 33.5	
	comp=Z,15nm,2.0s						
MAW	Mawson	83.07	158	P	P	20 11 48.1	+1.1
	comp=Z,4.5nm,0.9s,baz=318,slow=13,SNR=7.0						
	comp=Z,4.5nm,0.9s						
KKAR	Karatay Array	86.22	47	P	P	20 12 03.1	-0.5
BVAR	Borovoye Array	87.19	37	P	P	20 12 09.0	+1.0
	comp=Z,0.6nm,0.7s,baz=247,slow=3.0,SNR=3.3						
	comp=Z,0.6nm,0.7s						
ARSB	Arslanbob	87.90	49	P	P	20 12 11.6	-0.3
ARSB				IAmb	IAmb	20 12 14.5	
	comp=Z,13nm,1.4s						
QSPA	South Pole Qui	88.45	180	P	P	20 12 14.3	+0.4
QSPA	South Pole Qui	88.45	180	P	P	20 12 14.5	+0.6
	comp=Z,11nm,1.0s,baz=214,slow=3.2,SNR=18						
	comp=Z,11nm,1.0s						
KSH	Kashi	90.09	51	P	P	20 12 21.5	-0.7
KSH				pmax	pmax		
	comp=Z,4.0nm,1.2s						
TXAR	Lajitas Array	91.53	299	P	P	20 12 28.3	-0.7
	comp=Z,0.4nm,0.7s,baz=222,slow=48,SNR=2.6						
	comp=Z,0.4nm,0.7s						
TARG	Taragay, Kyrgy	91.54	48	P	P	20 12 27.7	-1.6
TARG				IAmb	IAmb	20 12 31.4	
	comp=Z,4.3nm,1.0s						
KURBB	Kurchatov Arra	92.10	40	P	P	20 12 31.1	0.0
	comp=Z,0.2nm,0.4s,baz=281,slow=4.4,SNR=4.2						
	comp=Z,0.2nm,0.4s						
WMQ	Urumqi	98.71	46	*e*P	P	20 13 02.0	+0.5
WMQ				LR	LR		
	comp=N,260nm,19.3s						
WMQ				LR	LR		
	comp=E,300nm,17.3s						
WMQ				LR	LR		
	comp=Z,260nm,24.3s						
PZH	PanZhiHua	112.63	62	PKP	PKiKP	20 17 58.5	-0.7
HHC	Hu-ho-hao-te	116.52	44	*e*P	PKPdf	20 18 03.0	-3.3
NJ2	Nanjing	125.40	51	*e*P	PKiKP	20 18 25.5	+1.7
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ASAR	Alice Springs	139.02	130	PKhKP	PKPpre	20 18 40.4	
	comp=Z,0.8nm,0.9s,baz=186,slow=2.5,SNR=4.6						
WRA	Warramunga Arr	141.31	125	PKhKP	PKPpre	20 18 49.0	
	comp=Z,0.4nm,0.8s,baz=230,slow=2.2,SNR=1.8						

IDC ***29*** *20:05:05.0±0.8, 14°.71N×93°.59W, h0^{km}, mb4.2/16, mbtmp4.2/18, ML4.0/2, MS3.5/2, Error ellipse: s-maj=32.6km s-min=14.3km az=60.0*
GCG ***29*** *20:05:05.7±2.7, 14°.36N×94°.07W, h35^{km}±31^{km}, MD4.9, ML4.5, MW4.0*
MEX ***29*** *20:05:06.6±0.9, 14°.37N×94°.09W, h16^{km}±11^{km}, MD4.5*
NEIC ***29*** *20:05:06.9±1.6, 14°.63N±0°.05×93°.94W±0°.04, h10^{km}±1^{km}, mb4.5/101, Md4.5/79(MEX), Error ellipse: s-maj=9.7km s-min=6.2km az=206.0*
ISC 29 20:05:04.4±2.1**, 14°.54N**±0°.04×**94°.01W**±0°.03**, h3**^{km}±12^{km}**,**
n486, σ1^{s}**65**/532**, mb4.6**/62**, 5D, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.39	33		Pb	20 05 30.4	-0.6
PCIG					Sg	20 05 49.2	+0.1
PCIG		1.39	33	*e*P	Pb	20 05 30.4	-0.6
PCIG				*e*S	Sg	20 05 49.2	+0.1
THIG		1.73	77		Pn	20 05 34.0	-1.4
THIG					Sn	20 05 55.3	-2.6
THIG		1.73	77	*e*P	Pn	20 05 34.0	-1.4
THIG				*e*S	Sn	20 05 55.3	-2.6
THIG		1.73	77	*e*P	Pn	20 05 34.5	-0.8
THIG				*e*S	Sn	20 05 56.2	-1.7
THIG				*i* S	Sb	20 05 56.7	-2.2
THIG				*e*S	Sb	20 05 56.7	-2.2
THIG				IAML		20 05 57.0	
	comp=E,3μm,0.4s						
PATR	El Naranjo	1.81	71	*e*P	Pn	20 05 35.6	-1.2
PATR				*e*S	Sn	20 05 57.8	-2.5
PAVE	Pavencul	1.89	70	*e*P	Pn	20 05 37.0	-0.8
PAVE				*e*S	Sn	20 05 59.6	-2.6
SMCA	Catarina	1.90	80	*e*P	Pn	20 05 36.8	-1.0
SMCA				*e*S	Sn	20 05 59.6	-2.6
SMCA				IAML		20 06 11.2	
	comp=E,2μm,0.5s						
RTAL	Retalhuleu	2.24	90		Pn	20 05 42.0	-0.5
RTAL				Sn	Sn	20 06 07.7	-2.9
RTAL	Retalhuleu	2.24	90	*e*P	Pn	20 05 41.3	-1.1
RTAL				*e*S	Sn	20 06 07.8	-2.9
HUIG	Huatulco	2.37	301	*e*P	Pn	20 05 43.6	-0.6
HUIG				*e*S	Sn	20 06 08.7	-5.1
HUIG	Huatulco	2.37	301	*e*P	Pn	20 05 43.6	-0.6
HUIG				*i* S	Sn	20 06 08.7	-5.1
TGIG		2.39	21		Pn	20 05 45.6	+1.0
TGIG		2.39	21	*e*P	Pn	20 05 45.6	+1.0
TGIG				*e*S	Sb	20 06 15.4	-2.6
TGIG		2.39	21	*e*P	Pb	20 05 46.1	-2.0
TGIG				*e*S	Sn	20 06 12.4	-1.9
TGIG				IAML		20 06 27.7	
	comp=E,2μm,0.6s						
CCIG	Comitan	2.50	46		Pb	20 05 47.9	-2.3
CCIG	Comitan	2.50	46	*e*P	Pb	20 05 48.4	-1.8
CCIG				*e*S	Sb	20 06 19.6	-1.9
CCIG	Comitan	2.50	46	*e*P	Pb	20 05 48.1	-2.0
CCIG				*e*S	Sb	20 06 17.7	-3.8
CCIG				IAML		20 06 25.3	
	comp=N,3μm,0.5s						
HUEH	Huehuetenango	2.54	72		Pn	20 05 47.6	+0.8
HUEH	Huehuetenango	2.54	72	*e*P	Pn	20 05 46.8	-0.1
HUEH				*e*S	Sb	20 06 19.5	-3.2
HUEH	Huehuetenango	2.54	72	*e*P	Pn	20 05 47.6	+0.8
STG8	El Palmar, Qui	2.58	92	*e*P	Pn	20 05 43.0	-4.3
STG8				*i* S	Sn	20 06 09.6	-10
STG8				IAML		20 06 17.2	
	comp=N,2μm,0.4s						
CMIG	Matias Romero	2.68	342		Pn	20 05 49.3	+0.8
CMIG					Sn	20 06 19.9	-1.5
CMIG	Matias Romero	2.68	342	Pn	Pn	20 05 49.5	+1.0
	comp=N,25nm,0.3s,baz=164,slow=11,SNR=130						
CMIG				Sn	Sn	20 06 21.1	-0.3
	comp=N,44nm,0.3s,baz=167,slow=8.3,SNR=8.1						
	comp=N,230nm,0.7s						
CMIG	Matias Romero	2.68	342	*e*P	Pn	20 05 49.3	+0.8
CMIG				*e*S	Sn	20 06 19.9	-1.5
PEIG	Puerto Escondi	3.36	296	*e*P	Pn	20 05 56.0	-1.8
PEIG				*e*S	Sn	20 06 32.5	-5.9
TUIG	Tuzandepetl	3.50	354	*e*P	Pn	20 06 00.1	+0.4
TUIG				*e*S	Sn	20 06 37.1	-4.6
NEUV	Arroyo Zacate	3.60	332	*e*P	Pn	20 05 60.0	-1.1
NEUV				*e*S	Sn	20 06 44.4	+0.2
VHO	Vista Hermosa	3.64	314	*e*P	Pn	20 06 00.8	-1.1
VHO				*e*S	Sn	20 06 37.9	-7.5
YOIG	Yosondua	4.11	305		Pn	20 06 08.6	+0.1
YOIG					Sn	20 06 56.6	-0.7
YOIG	Yosondua	4.11	305	*e*P	Pn	20 06 08.6	+0.1
YOIG				*e*S	Sn	20 06 56.6	-0.7
PNIG	Pinotepa	4.38	295		Pn	20 06 12.2	+0.3
PNIG	Pinotepa	4.38	295	*e*P	Pn	20 06 12.2	+0.3
PNIG				*e*S	Sn	20 06 57.0	-6.5
MTO3	Montecristo	4.50	91		Pn	20 06 14.3	+0.5
TXIG	Tlaxiaco	4.51	307		Pn	20 06 15.4	+1.4
TXIG	Tlaxiaco	4.51	307	*e*P	Pn	20 06 15.4	+1.4
TXIG				*e*S	Sn	20 07 04.8	-2.4
ESQI	Esquipulas	4.52	89		Pn	20 06 14.9	+1.0
TOIG	Toxpalan	4.60	321		Pn	20 06 18.1	+3.1
TOIG	Toxpalan	4.60	321	*e*P	Pn	20 06 18.1	+3.1
TOIG				*e*S	Sn	20 07 10.7	+1.7
PETF	Flores	4.64	59		Pn	20 06 15.3	-0.1
PETF	Flores	4.64	59	*e*P	Pn	20 06 16.4	+1.0
PETF				*e*S	Sn	20 07 10.5	+0.6
PETF	Flores	4.64	59	*i* P	Pn	20 06 16.5	+1.1
HLIG	Huajuapan de L	4.90	312		Pn	20 06 20.6	+1.3
HLIG	Huajuapan de L	4.90	312	*e*P	Pn	20 06 20.6	+1.3
HLIG				*e*S	Sn	20 07 12.2	-4.4
TPIG	Tehuac#an	5.03	321		Pn	20 06 23.9	+3.0
TPIG	Tehuac#an	5.03	321	*e*P	Pn	20 06 23.9	+3.0
TPIG				*e*S	Sn	20 07 20.2	+0.5
SCIG	Sabancuy	5.17	31	*e*P	Pn	20 06 21.8	-0.9
SCIG				*e*S	Sn	20 07 28.3	+5.4
SCIG	Sabancuy	5.17	31	*e*P	Pn	20 06 23.6	+0.9
SCIG				IAML		20 08 03.3	
	comp=E,500nm,0.9s						
FTIG	Fresnillo de T	5.19	311		Pn	20 06 24.6	+1.5
FTIG	Fresnillo de T	5.19	311	*e*P	Pn	20 06 24.6	+1.5
FTIG				*e*S	Sn	20 07 19.5	-4.1
MGIG	Malinaltepec	5.20	302		Pn	20 06 25.6	+2.4
MGIG	Malinaltepec	5.20	302	*e*P	Pn	20 06 25.6	+2.4
MGIG				*e*S	Sn	20 07 21.8	-2.1
TLIG	Tlapa	5.32	305		Pn	20 06 27.9	+3.1
TLIG	Tlapa	5.32	305	*e*P	Pn	20 06 27.3	+2.4
TLIG				*e*S	Sn	20 07 27.1	+0.4
CRIG	Cruz Grande	5.40	295		Pn	20 06 27.2	+1.3
CRIG	Cruz Grande	5.40	295	*e*P	Pn	20 06 27.2	+1.3
CRIG				*e*S	Sn	20 07 21.2	-7.4
POHV	Veracruz	5.49	326	*e*S	Sn	20 07 33.5	+1.9
JAUV	Jalcomulco	5.50	331	*e*P	Pn	20 06 27.1	-0.2
JAUV				*e*S	Sn	20 07 27.5	-3.6
LVIG	Laguna Verde	5.65	336	*e*P	Pn	20 06 29.0	-0.3
LVIG				*e*S	Sn	20 07 30.9	-3.8
DAIG	Los Arroyos	5.97	295	*e*P	Pn	20 06 32.4	-1.4
DAIG				*e*S	Sn	20 07 34.1	-8.5
PBXN	Popocatepetl	6.29	316	*e*P	Pn	20 06 40.2	+1.6
PBPN	Popocatepetl	6.29	316	*e*P	Pn	20 06 40.2	+1.5
PBPN				*e*P	Pn	20 06 43.3	+4.5
PPM	Popocatepetl	6.31	316	*e*P	Pn	20 06 44.7	+5.7
MEIG	Mezcala	6.36	303		Pn	20 06 39.3	+0.2
MEIG					Sn	20 07 53.0	+0.6
MEIG	Mezcala	6.36	303	*e*P	Pn	20 06 39.3	+0.2
MEIG				*e*S	Sn	20 07 53.0	+0.6
YAIG	Yautepec	6.48	312		Pn	20 06 42.4	+1.5
YAIG					Sn	20 07 57.0	+1.5
YAIG	Yautepec	6.48	312	*e*P	Pn	20 06 42.4	+1.5
YAIG				*e*S	Sn	20 07 57.0	+1.5
PLIG	Platanillo	6.52	307		Pn	20 06 44.7	+3.4
PLIG					Sn	20 07 57.9	+1.6
PLIG	Platanillo	6.52	307	*e*P	Pn	20 06 44.7	+3.4
PLIG				*e*S	Sn	20 07 57.9	+1.6
CAIG	El Cayaco	6.52	293	*e*P	Pn	20 06 39.5	-1.8
CAIG				*e*S	Sn	20 07 46.1	-10
TGUH	Tegucigalpa,Un	6.55	93	Pn	Pn	20 06 43.3	+1.5
CXUV	Coxquihui	6.57	329	*e*P	Pn	20 06 42.5	+0.5
CXUV				*e*S	Sn	20 08 00.8	+3.4
MAVM	Malinalco, Edo	6.85	311	*e*P	Pn	20 06 49.8	+3.8
MAVM				*e*S	Sn	20 08 01.9	-2.8
AOVM	Tlapan	6.93	314	*e*P	Pn	20 06 52.6	+5.3
AOVM				*e*S	Sn	20 08 05.2	-1.8
ARIG	Puente Sto Nin	7.13	302	*e*P	Pn	20 06 48.2	-1.6
ARIG				*e*S	Sn	20 08 08.6	-2.7
CNGN	Cerro Negro	7.39	105	Pn	Pn	20 06 55.8	+2.5
DEIG	Demacu	7.47	321	*e*P	Pn	20 06 58.4	+3.8
ZIIG	Zihuatanejo	7.79	294		Pn	20 06 59.9	+1.1
ZIIG	Zihuatanejo	7.79	294	*e*P	Pn	20 06 59.9	+1.1
TEIG	Tepich	7.87	43		Pn	20 06 59.4	-0.4
CTUV	Llano Grande	8.04	330	*e*P	Pn	20 07 05.0	+2.8
CTUV				*e*S	Sn	20 08 25.8	-7.9
BOAB	BOACO BROADBAN	8.38	103	Pn	Pn	20 07 09.0	+2.2
MOIG	Morelia	8.56	308	Pn	Pn	20 07 13.3	+3.8
JRQG	Juriquilla Cam	8.68	316	Pn	Pn	20 07 13.3	+2.1
RPIG	Rio Verde	9.25	323	*e*P	Pn	20 07 09.9	-9.0
GTIG	Gomez Farias	9.79	331		Pn	20 07 26.1	-0.2
GTIG	Gomez Farias	9.79	331	*e*P	Pn	20 07 26.1	-0.2
JTS	Las Juntas de	9.80	114	Pn	Pn	20 07 29.5	+3.2
	comp=E,1.4nm,0.3s,baz=283,slow=10,SNR=5.7						
INCO	Volcan de Coli	10.43	300	*e*P	Pn	20 07 41.6	+6.2
SOMAC	Volcano de Col	10.45	300	*e*P	Pn	20 07 35.7	+0.1
CDAR	Ciudad de Arme	10.53	296	*e*P	Pn	20 07 41.4	+5.0
CEGR	Campo Tres	10.59	298	*e*P	Pn	20 07 42.0	+4.7
LCR2	La Lucha 2	10.88	115		Pn	20 07 43.4	+2.0
ZAIG	Zacatecas	11.52	317	Pn	Pn	20 07 52.1	+1.9
833A	Chaparral WMA,	14.60	341		Pn	20 08 32.6	+0.5
HNDO	Hondo	15.70	343		Pn	20 08 47.4	+0.8
HNDO				IAmb	IAmb	20 08 57.7	
	comp=Z,23nm,0.7s						
DRIO	Del Rio	16.02	339		Pn	20 08 52.3	+1.4
HPIG		16.45	320	Pn	Pn	20 08 56.8	+0.2
435B	Jarrell	16.50	349		P	20 08 59.6	-0.1
435B				IAmb	IAmb	20 09 10.6	
	comp=Z,31nm,0.7s						
JCT	Junction City	16.74	342	P	Pn	20 09 01.2	+1.1
SAND	Sanderson	17.07	335		P	20 09 05.8	-0.3
NATX	Nacogdoches	17.16	358	Pn	Pn	20 09 05.0	-0.2
NATX				IAmb	IAmb	20 09 20.7	
	comp=Z,77nm,1.5s						
TXAR	Lajitas Array	17.22	330		Pn	20 09 06.6	+0.4
TXAR	Lajitas Array	17.22	330	P	P	20 09 09.2	+1.4
	comp=Z,0.1nm,0.3s,baz=158,slow=10,SNR=14						
	comp=Z,4.9nm,1.0s						
TX31	Lajitas Ar. Si	17.22	330		P	20 09 07.4	-0.4
BRDY	Brady	17.29	345		Pn	20 09 07.7	+0.8
OZNA	Ozona	17.57	339		P	20 09 12.0	+0.4
OZNA				IAmb	IAmb	20 09 19.9	
	comp=Z,44nm,1.1s						
Z41A	Richland Creek	18.67	3	P	Pn	20 09 23.6	-0.3
Z41A				IAmb	IAmb	20 09 48.2	
	comp=Z,27nm,1.0s						
LRAL	Lakeview Retre	19.49	18		Pn	20 09 33.1	-0.7
MIAR	Mount Ida	19.93	1		P	20 09 36.7	-0.8
MIAR				IAmb	IAmb	20 09 43.9	
	comp=Z,23nm,0.8s						
MNTX	Cornudas Mount	20.00	331	P	Pn	20 09 39.7	-0.4
UALR	University of	20.21	4	P	P	20 09 40.2	-0.2
UALR				IAmb	IAmb	20 09 50.6	
	comp=Z,16nm,1.0s						
OXF	Oxford	20.32	11		P	20 09 41.3	-0.4
OXF				IAmb	IAmb	20 09 52.7	
	comp=Z,40nm,1.1s						
WMOK	Wichita Mounta	20.57	349	P	P	20 09 44.6	+0.1
MSTX	Muleshoe	20.91	339		P	20 09 48.2	-0.1
MSTX				IAmb	IAmb	20 10 02.9	
	comp=Z,39nm,1.0s						
PLAL	Pickwick Lake	21.05	14	P	P	20 09 49.2	-0.4
PLAL				IAmb	IAmb	20 10 06.1	
	comp=Z,24nm,1.2s						
HSIG		21.30	315	P	P	20 09 52.8	+0.4
FPAL	Fort Paine	21.31	19		P	20 09 51.4	-1.1
AMTX	Amarillo	21.41	342	P	P	20 09 53.6	0.0
AMTX				IAmb	IAmb	20 09 59.8	
	comp=Z,20nm,0.7s						
ROSC	El Rosal	21.65	114	P	P	20 09 57.2	+0.6
	comp=Z,21nm,0.8s,baz=309,slow=5.4,SNR=8.1						
SWET	Sewanee	21.84	18	P	P	20 09 57.2	-0.9
SWET				IAmb	IAmb	20 10 11.7	
	comp=Z,22nm,1.4s						
SDDR	Presa de Saban	22.19	75	P	P	20 10 00.7	-1.5
SDDR				IAmb	IAmb	20 10 10.9	
	comp=Z,18nm,1.1s						
WVT	Waverly	22.20	13		P	20 10 01.8	-0.2
FLOC	Florencia	22.24	124		P	20 10 04.5	+1.9
FLOC				IAmb	IAmb	20 10 10.7	
	comp=Z,21nm,1.2s						
RUSC	La Rusia	22.29	111		P	20 10 03.7	0.0
RUSC				IAmb	IAmb	20 10 09.2	
	comp=Z,32nm,1.0s						
COHC	Cochancay	22.34	138		P	20 10 05.1	+1.5
CPCT	Cooper Cave	22.50	21		P	20 10 05.2	0.0
TKL	Tuckaleechee C	22.95	22	P	P	20 10 08.7	-1.3
TKL	Tuckaleechee C	22.95	22	P	P	20 10 09.1	-0.9
	comp=Z,1.2nm,0.6s,baz=151,slow=14,SNR=2.0						
	comp=Z,1.2nm,0.6s						
ANMO	Albuquerque	23.21	333		P	20 10 12.3	-0.6
TUC	Tucson	23.39	322		P	20 10 15.3	+0.7
TUC				IAmb	IAmb	20 10 19.6	
	comp=Z,14nm,1.1s						
CCM	Cathedral Cave	23.55	5		P	20 10 14.8	-1.2
T25A	Trinidad	24.34	340		P	20 10 24.8	+1.0
T25A				IAmb	IAmb	20 10 28.2	
	comp=Z,15nm,1.0s						
WCI	Wyandotte Cave	24.57	15		P	20 10 24.5	-1.1
P38A	Dawn	25.00	1		P	20 10 28.5	-0.9
SDCO	Great Sand Dun	25.27	338		P	20 10 33.4	+1.1
MVCO	Mesa Verde	26.01	333		P	20 10 40.1	+1.1
MVCO				IAmb	IAmb	20 10 42.9	
	comp=Z,7.4nm,0.8s						
WUAZ	Wupatki	26.07	326		P	20 10 41.0	+1.5
WUAZ				IAmb	IAmb	20 10 46.5	
	comp=Z,13nm,0.9s						
ISCO	Idaho Springs	27.15	340		P	20 10 49.9	+0.5
ISCO				IAmb	IAmb	20 10 52.8	
	comp=Z,6.6nm,0.9s						
OGNE	Ogallala	27.23	347	P	P	20 10 50.5	+0.7
SCIA	State Center	27.28	1	P	P	20 10 49.7	-0.5
HMU	Henry Mountain	27.63	331	P	P	20 10 55.2	+1.5
HMU				IAmb	IAmb	20 11 25.8	
	comp=Z,9.7nm,1.2s						
PFO	Pinyon Flats O	27.83	317	LR	LR	20 21 22.0	
	comp=Z,97nm,20.3s,baz=210,slow=35						
JFWS	Jewell Farm	28.46	6	P	P	20 10 59.8	-0.9
JFWS				IAmb	IAmb	20 11 08.6	
	comp=Z,5.5nm,0.6s						
SHPR	Sheep Range	28.91	323	P	P	20 11 06.9	+2.0
ECSD	EROS Data Cent	29.18	356		P	20 11 06.6	-0.5
PSUT	Pine Spring	29.64	327		P	20 11 11.8	+0.3
PSUT				IAmb	IAmb	20 11 18.7	
	comp=Z,5.3nm,0.9s						
BSUT	Blindstream Ca	29.75	334		P	20 11 13.9	+1.3
BSUT				IAmb	IAmb	20 11 16.1	
	comp=Z,10nm,1.5s						
PD31	Pinedale Array	31.16	338	P	P	20 11 25.0	+0.2
PDAR	Pinedale Array	31.16	338	P	P	20 11 25.7	+0.8
PDAR	Pinedale Array	31.16	338	P	P	20 11 26.1	+1.3
	comp=Z,0.5nm,0.6s,baz=128,slow=12,SNR=4.5						
	comp=Z,0.5nm,0.6s						
NV11	Mina Array Sit	31.96	323	P	P	20 11 33.6	+1.7
NV11				IAmb	IAmb	20 11 36.8	
	comp=Z,10.0nm,1.1s						
ELK	Elko	32.00	329		P	20 11 33.2	+0.9
ELK				IAmb	IAmb	20 11 36.7	
	comp=Z,5.5nm,0.9s						
NVAR	Mina Array Bea	32.05	322	P	P	20 11 34.3	+1.6
NVAR	Mina Array Bea	32.05	322	P	P	20 11 36.1	+3.4
	comp=Z,5.5nm,0.8s,baz=142,slow=8.8,SNR=31						
	comp=Z,5.5nm,0.8s						
TPAW	Teton Pass	32.30	337		P	20 11 36.1	+1.2
TPAW				IAmb	IAmb	20 11 42.1	
	comp=Z,11nm,1.3s						
RLMT	Red Lodge	33.11	340	P	P	20 11 42.3	+0.3
RLMT				IAmb	IAmb	20 11 44.6	
	comp=Z,5.7nm,0.9s						
AGMN	Agassiz Nation	33.70	358		P	20 11 45.8	-1.0
HLID	Hailey	33.79	333		P	20 11 48.6	+0.7
GCMT	Greycliff	33.84	340	P	P	20 11 48.9	+0.7
TBO	Thunder Bay	34.22	5	P	P	20 11 49.6	-1.7
TBO				IAmb	IAmb	20 11 52.1	
	comp=Z,8.8nm,1.0s						
BOZ	Bozeman (W)	34.35	338	P	P	20 11 52.8	+0.1
LRM	Limekiln Ridge	34.84	337	P	P	20 11 57.3	+0.2
DGMT	Dagmar	34.87	348	P	P	20 11 56.8	-0.2
EPLO	Experimental L	35.04	0		P	20 11 57.0	-1.4
EPLO				IAmb	IAmb	20 11 58.9	
	comp=Z,10nm,0.9s						
ULM	Lac du Bonnet	35.65	358	P	P	20 12 02.3	-1.3
ULM				IAmb	IAmb	20 12 03.2	
	comp=Z,7.2nm,0.8s						
ULM	Lac du Bonnet	35.65	358	P	P	20 12 01.9	-1.8

	comp=Z,5.7nm,0.7s,baz=182,slow=9.8,SNR=8.5						
	comp=Z,5.7nm,0.7s						
PLID	Pearl Lake	35.69	333		P	20 12 04.8	+0.5
PLID				IAmb	IAmb	20 12 07.5	
	comp=Z,8.3nm,0.9s						
BPMT	Black Pine Rid	35.74	337	P	P	20 12 05.5	+0.8
HOOD	Mount Hood Mea	38.56	328	P	P	20 12 30.4	+1.8
LLLB	Lillooet	42.47	334	P	P	20 13 01.5	+0.8
FCC	Fort Churchill	44.15	360		P	20 13 13.6	-0.5
FCC				IAmb	IAmb	20 13 14.6	
	comp=Z,7.6nm,0.8s						
SIV	San Ignacio	44.49	132	P	P	20 13 17.8	+0.4
	comp=Z,1.4nm,0.7s,baz=316,slow=6.5,SNR=4.9						
	comp=Z,1.4nm,0.7s						
TOAD	Toad River Com	49.94	339	P	P	20 14 00.7	+1.2
	baz=139						
V35K	Ketchikan	49.98	333	P	P	20 14 01.6	+1.9
	baz=129						
YKAW1	Yellowknife Wh	50.04	348		P	20 14 00.5	+0.4
YKAW1				IAmb	IAmb	20 14 02.1	
	comp=Z,16nm,0.8s						
YKA	Yellowknife Ar	50.07	348	P	P	20 14 01.1	+0.7
YKA	Yellowknife Ar	50.07	348	P	P	20 14 01.3	+1.0
	comp=Z,7.2nm,0.8s,baz=155,slow=6.9,SNR=51						
YKA				PcP	PcP	20 15 20.1	+0.1
	comp=Z,0.9nm,0.8s,baz=142,slow=3.1,SNR=3.5						
	comp=Z,7.2nm,0.8s						
T35M	Bob Quinn	50.48	335	P	P	20 14 04.2	+0.6
	baz=132						
KOTAN	Kotaneelee Air	50.54	341	P	P	20 14 06.0	+2.1
	baz=141						
LIRD	Liard River Hi	50.66	339	P	P	20 14 06.8	+1.9
	baz=138						
CRAG	Craig	50.74	332	P	P	20 14 06.7	+1.2
	baz=128						
U33K	Whale Pass	51.13	333	P	P	20 14 09.8	+1.4
	baz=128						
DLBC	Dease Lake	51.38	337	P	P	20 14 11.8	+1.4
	baz=133						
S34M	Telegraph Cree	51.46	336	P	P	20 14 12.3	+1.4
	baz=131						
CFA	Coronel Fontan	52.12	152	P	P	20 14 17.0	+0.8
	comp=Z,1.4nm,0.7s,baz=0.4,slow=8.3,SNR=4.1						
	comp=Z,1.4nm,0.7s						
R33M	Jennings River	52.39	337		P	20 14 18.4	+0.4
R33M	Jennings River	52.39	337	P	P	20 14 19.7	+1.7
	baz=132						
S32K	Killisnoo	52.60	334	P	P	20 14 21.3	+1.9
	baz=127						
Q32M	Nakina River	52.60	336		P	20 14 20.6	+0.9
Q32M				IAmb	IAmb	20 14 23.9	
	comp=Z,4.8nm,0.9s						
Q32M	Nakina River	52.60	336	P	P	20 14 21.1	+1.5
	baz=131						
SIT	Sitka	52.68	333	P	P	20 14 21.5	+1.6
	baz=126						
WRGLY	Wrigley	52.82	344	P	P	20 14 23.2	+2.3
	baz=143						
TGTN	Hyland Airport	52.95	340	P	P	20 14 23.7	+1.7
	baz=137						
R32K	Eaglecrest	53.07	335	P	P	20 14 24.2	+1.3
	baz=128						
P32M	Atlin	53.58	336	P	P	20 14 28.0	+1.4
	baz=129						
S31K	Pelican	53.61	334	P	P	20 14 29.0	+2.3
	baz=126						
P33M	Teslin, Yukon	53.64	337	P	P	20 14 29.0	+1.9
	baz=131						
R31K	City Hall, Gus	53.67	334	P	P	20 14 29.5	+2.3
	baz=126						
BDFB	Brasilia	54.45	122	P	P	20 14 33.2	-0.5
BDFB				IAmb	IAmb	20 14 37.3	
	comp=Z,6.3nm,0.9s						
BDFB	Brasilia	54.45	122	P	P	20 14 33.4	-0.4
	comp=Z,3.8nm,0.7s,baz=236,slow=6.3,SNR=6.0						
	comp=Z,3.8nm,0.7s						
PLBC	Pleasant Camp	54.55	335	P	P	20 14 35.9	+2.2
	baz=126						
WHY	Whitehorse	54.71	337	P	P	20 14 36.4	+1.4
	baz=129						
MMPY	Sheldon Lake,	54.72	340		P	20 14 36.4	+1.4
MMPY				IAmb	IAmb	20 14 38.6	
	comp=Z,6.4nm,0.9s						
MMPY	Sheldon Lake,	54.72	340	P	P	20 14 36.5	+1.5
	baz=134						
P30M	Million Dollar	55.20	335	P	P	20 14 40.3	+1.8
	baz=126						
P29M	Windy Craggy	55.22	335	P	P	20 14 41.1	+2.5
	baz=125						
O30N	Mendenhall	55.24	336	P	P	20 14 40.0	+1.3
	baz=128						
ILON	Igloolik, Nuna	55.34	5		P	20 14 38.6	-0.6
M31M	Drury Creek, Y	55.52	338	P	P	20 14 41.7	+1.0
	baz=130						
N31M	Braeburn, Yuko	55.57	337	P	P	20 14 42.4	+1.3
	baz=128						
HYT	Haines Junctio	55.83	336	P	P	20 14 44.8	+1.7
	baz=126						
PNL	Peninsula	55.94	334	P	P	20 14 45.4	+1.7
	baz=123						
O29M	Mount Kennedy	55.95	335	P	P	20 14 44.8	+0.8
	baz=124						
N30M	Aishikik Lake	56.05	337	P	P	20 14 46.2	+1.7
	baz=127						
YUK6	Outpost Mounta	56.24	336	P	P	20 14 47.2	+1.0
	baz=125						
PINM	Pinnacle	56.53	334	P	P	20 14 49.6	+1.6
	baz=123						
YUK4	Talbot Arm	56.59	336	P	P	20 14 49.7	+1.1
	baz=125						
M30M	Minto, Yukon	56.62	338	P	P	20 14 49.2	+0.6
M30M				IAmb	IAmb	20 14 59.7	
	comp=Z,4.7nm,1.2s						
M30M	Minto, Yukon	56.62	338	P	P	20 14 50.4	+1.8
	baz=128						
O28M	Mount Upton	56.88	335	P	P	20 14 52.2	+1.4
	baz=123						
YUK8	Steele Glacier	56.99	336	P	P	20 14 52.7	+1.2
	baz=124						
M29M	Somme Creek	57.16	337	P	P	20 14 53.2	+0.7
M29M	Somme Creek	57.16	337	P	P	20 14 53.6	+1.1
	baz=126						
MESA	MESA	57.30	334	P	P	20 14 54.8	+1.2
	baz=121						
L29M	L29M	57.44	338	P	P	20 14 55.8	+1.4
	baz=126						
CTG	Chitna Glacier	57.46	335	P	P	20 14 55.8	+1.1
	baz=122						
GRNC	Granite Creek	57.51	334	P	P	20 14 56.1	+1.0
GRNC				IAmb	IAmb	20 14 58.7	
	comp=Z,7.7nm,1.0s						
YUK3	Moose Creek	57.55	336	P	P	20 14 56.6	+1.3
	baz=123						
K29M	Barlow Dome	57.66	339	P	P	20 14 57.0	+1.0
	baz=128						
J30M	Hart River	57.72	340	P	P	20 14 57.6	+1.2
	baz=129						
H31M	Peel River	57.89	342	P	P	20 14 58.6	+1.1
	baz=132						
BVCY	Beaver Creek	58.06	336	P	P	20 15 00.1	+1.3
	baz=123						
I30M	Mount Dempster	58.15	340	P	P	20 15 00.4	+0.9
	baz=130						
KAIM	Kayak Island	58.24	333	P	P	20 15 01.2	+1.1
	baz=118						
MCARA	McCarthy VSAT	58.37	335	P	P	20 15 02.3	+1.4
	baz=120						
M27K	Edge Creek, AK	58.42	336	P	P	20 15 02.1	+0.6
	baz=122						
DAWY	Dawson	58.46	338	P	P	20 15 02.7	+1.2
	baz=126						
G31M	Satah River	58.63	343		P	20 15 03.0	+0.4
G31M				IAmb	IAmb	20 15 04.7	
	comp=Z,6.8nm,0.9s						
G31M	Satah River	58.63	343	P	P	20 15 03.4	+0.9
	baz=132						
BCAR	Beaver Creek A	58.77	337		P	20 15 04.6	+0.8
L27K	Beaver Creek,	58.79	337	P	P	20 15 05.7	+1.9
	baz=123,SNR=5.6						
BMRM	Bremner River	58.83	334	P	P	20 15 05.9	+1.7
	baz=119						
I29M	Ogilvie Camp,	58.87	340	P	P	20 15 05.6	+1.3
	baz=128						
Q23K	Middleton Isla	58.88	332	P	P	20 15 05.9	+1.5
	baz=116						
M26K	Nabesna, AK	58.89	336	P	P	20 15 06.0	+1.4
	baz=121						
POIN	Pond Inlet	58.91	6	P	P	20 15 04.5	+0.1
POIN				IAmb	IAmb	20 15 05.6	
	comp=Z,5.1nm,0.9s						
EPYK	Eagle Plains	59.00	341	P	P	20 15 06.9	+1.7
	baz=130						
EYAK	Cordova Ski Ar	59.12	333	P	P	20 15 07.6	+1.5
	baz=117						
N25K	Chitina, Valde	59.14	335	P	P	20 15 07.6	+1.3
	baz=119						
PLCA	Paso Flores	59.14	159	P	P	20 15 07.8	+1.2
	comp=Z,1.7nm,1.0s,baz=282,slow=6.3,SNR=2.9						
	comp=Z,1.7nm,1.0s						
G30M	tAoh Zraii Nji	59.24	342	P	P	20 15 08.6	+1.7
	baz=130						
L26K	Log Cabin Wild	59.35	336	P	P	20 15 09.8	+2.0
	baz=121						
INK	Inuvik	59.38	344	P	P	20 15 08.1	+0.3
INK	Inuvik	59.38	344	P	P	20 15 09.4	+1.6
	baz=134						
K27K	Chicken	59.41	338	P	P	20 15 10.1	+2.0
	baz=123						
H29M	Whitestone	59.42	341		P	20 15 09.0	+0.9
H29M				IAmb	IAmb	20 15 10.5	
	comp=Z,6.0nm,0.9s						
H29M	Whitestone	59.42	341	P	P	20 15 09.7	+1.5
	baz=128,SNR=5.2						
I28M	Miner Creek	59.47	340	P	P	20 15 09.7	+1.2
	baz=126						
F30M	Barrier River	59.53	343	P	P	20 15 09.8	+0.9
	baz=131						
P23K	Montague Islan	59.61	332	P	P	20 15 10.6	+1.1
	baz=115						
KLU	Klutina	59.64	334	P	P	20 15 11.0	+1.2
	baz=118						
G29M	Pine Creek	59.74	342	P	P	20 15 11.4	+1.0
	baz=128						
HARP	HAARP	59.76	335	P	P	20 15 11.7	+1.1
	baz=119						
GLI	Glacier Island	59.87	333	P	P	20 15 12.7	+1.4
	baz=116						
M24K	Tolsona, Glenn	60.04	335	P	P	20 15 13.6	+1.1
	baz=118						
SCRK	Sand Creek	60.09	337	P	P	20 15 13.5	+0.5
	baz=121,SNR=6.6						
I27K	Kandik River	60.13	339	P	P	20 15 14.6	+1.6
	baz=124,SNR=6.3						
RES	Resolute Bay	60.15	360		P	20 15 12.8	-0.2
RES				IAmb	IAmb	20 15 14.0	
	comp=Z,4.4nm,0.9s						
PAX	Paxson	60.16	336	P	P	20 15 13.7	+0.4
PAX				IAmb	IAmb	20 15 15.4	
	comp=Z,3.8nm,0.8s						
PAX	Paxson	60.16	336	P	P	20 15 14.3	+0.9
	baz=119,SNR=5.8						
J26L	Joseph Creek	60.21	338	P	P	20 15 15.3	+1.6
	baz=122,SNR=8.5						
RIDG	Independent Ri	60.30	337		P	20 15 14.8	+0.5
RIDG	Independent Ri	60.30	337	P	P	20 15 15.2	+0.9
	baz=120,SNR=5.9						
A36M	Sachs Harbour	60.35	349	P	P	20 15 15.0	+0.6
	baz=144						
SCM	Sheep Creek Mo	60.39	334	P	P	20 15 16.5	+1.5
	baz=116						
PWL	Port Wells	60.40	333	P	P	20 15 15.9	+0.9
	baz=115						
H27K	Steamboat Moun	60.45	340		P	20 15 15.6	+0.3
H27K				IAmb	IAmb	20 15 18.0	
	comp=Z,5.4nm,0.9s						
H27K	Steamboat Moun	60.45	340	P	P	20 15 16.4	+1.1
	baz=124,SNR=8.9						
I26K	Coal Creek Min	60.50	339	P	P	20 15 17.1	+1.6
	baz=122						
M23K	Glacier View	60.54	334	P	P	20 15 17.4	+1.5
	baz=116						
SEW	Seward	60.59	332	P	P	20 15 17.7	+1.5
	baz=113						
E29M	Blow River	60.65	343		P	20 15 17.3	+0.9
E29M	Blow River	60.65	343	P	P	20 15 18.1	+1.7
	baz=129,SNR=5.8						
K24K	Donnelly Dome	60.69	336	P	P	20 15 18.0	+1.1
	baz=119						
KNK	Knik Glacier	60.69	333	P	P	20 15 18.4	+1.5
	baz=115						
F28M	Old Crow	60.74	342		P	20 15 18.1	+0.9
F28M	Old Crow	60.74	342	P	P	20 15 18.3	+1.1
	baz=127,SNR=17						
G27K	Doyon Strip	60.83	340	P	P	20 15 18.7	+0.9
	baz=125,SNR=8.1						
WAT6	Susitna Watana	60.90	335	P	P	20 15 19.5	+1.0
	baz=116						
J25K	Salcha River,	60.94	337	P	P	20 15 19.5	+0.9
	baz=120						
DHY	Denali Highway	60.98	335	P	P	20 15 20.2	+1.2
	baz=117						
PMR	Palmer	61.06	333	P	P	20 15 20.4	+1.0
	baz=114						
RC01	Rabbit Creek A	61.12	333	P	P	20 15 21.2	+1.4
	baz=114						
KDAK	Kodiak Island	61.24	329	P	P	20 15 21.9	+1.2
	baz=109						
E28M	Babbage River	61.25	343	P	P	20 15 21.6	+1.0
	baz=128						
WAT1	Susitna Watana	61.35	335	P	P	20 15 22.6	+1.2
	baz=116						
Q20K	Shuyak Island	61.43	330	P	P	20 15 23.2	+1.3
	baz=110						
HDA	Harding Lake	61.44	337	P	P	20 15 22.6	+0.7
HDA				IAmb	IAmb	20 15 23.5	
	comp=Z,4.3nm,0.8s						
HDA	Harding Lake	61.44	337	P	P	20 15 22.7	+0.7
	baz=118						
HOM	Homer	61.44	331	P	P	20 15 23.4	+1.4
	baz=111						
D28M	Stokes Point	61.48	343	P	P	20 15 23.0	+0.9
	baz=129						
IL31		61.59	337	P	P	20 15 23.2	+0.3
ILAR	Eielson Array	61.59	337	P	P	20 15 23.1	+0.2
ILAR	Eielson Array	61.59	337	P	P	20 15 23.9	+1.0
	comp=Z,4.0nm,0.9s,baz=144,slow=4.4,SNR=29						
	comp=Z,4.0nm,0.9s						
G26K	Porcupine Rive	61.61	340	P	P	20 15 23.6	+0.6
	baz=122						
E27K	Coleen River	61.61	342	P	P	20 15 24.3	+1.2
	baz=125,SNR=7.5						
CAPN	Captain Cook N	61.63	332	P	P	20 15 24.7	+1.5
	baz=112						
SII	Sitkinak Islan	61.68	327	P	P	20 15 25.0	+1.3
	baz=107						
SUA	Susitna One	61.72	333	P	P	20 15 25.2	+1.1
	baz=113						
RND	Reindeer	61.73	335		P	20 15 25.1	+1.1
CCB	Clear Creek Bu	61.88	337	P	P	20 15 25.1	+0.2
CCB				IAmb	IAmb	20 15 26.3	
	comp=Z,1.9nm,0.7s						
MCK	McKinley	61.90	336	P	P	20 15 26.0	+0.9
	baz=116						
H25L	Birch Creek	61.94	339	P	P	20 15 26.0	+0.8
	baz=120						
POKR	Poker Plat Res	61.96	337	P	P	20 15 26.2	+0.7
	baz=118						
NUUG	Nuugaatsiaq	61.97	14	*i* P	P	20 15 24.5	-0.8
NUUG				IAmb	IAmb	20 15 27.1	
	comp=Z,21nm,1.1s						
COLA	College	62.00	337	P	P	20 15 26.7	+1.1
	baz=117						
D27M	Malcolm River	62.05	343	P	P	20 15 27.0	+0.9
	baz=126						
O20K	Slope Mountain	62.05	331	P	P	20 15 27.7	+1.5
	baz=110						
BMAR	Burnt Mountain	62.13	340		P	20 15 27.7	+1.1
F26K	Sheenjek River	62.13	341	P	P	20 15 27.7	+1.1
	baz=122						
Q19K	Cape Douglas,	62.15	330	P	P	20 15 27.9	+1.1
	baz=109						
P19K	Oil Pt	62.19	330	P	P	20 15 28.1	+1.0
	baz=110						
CHIR	Chirikof Islan	62.24	326	P	P	20 15 28.8	+1.3
	baz=105						
SKT	Skwentna	62.26	333	P	P	20 15 28.1	+0.6
	baz=112						
N20K	Mount Spurr	62.27	332	P	P	20 15 28.6	+1.0
	baz=111						
G25K	Bearman Lake	62.29	339	P	P	20 15 29.5	+1.9
	baz=120						
TRF	Thorofare Moun	62.33	335	P	P	20 15 29.1	+0.9
	baz=114,SNR=6.9						
NEA2	Nenana	62.34	336	P	P	20 15 28.6	+0.6
	baz=116						
H24K	Noodor Dome	62.46	338	P	P	20 15 29.6	+0.8
	baz=118,SNR=8.5						
F25K	Christian Rive	62.56	340	P	P	20 15 30.2	+0.7
	baz=121,SNR=5.9						
I23K	Minto, Yukon-K	62.70	337	P	P	20 15 30.9	+0.6
	baz=116,SNR=10.0						
G24K	Hadweenzic Riv	62.73	339	P	P	20 15 31.7	+1.1
	baz=119,SNR=6.2						
Q18K	Katmai Hardscr	62.74	329	P	P	20 15 31.2	+0.3
	baz=107						
E25K	Arctic Village	62.81	341	P	P	20 15 31.9	+0.7
	baz=121						
BPAW	Bear Paw Mtn.	62.88	336	P	P	20 15 32.7	+1.0
	baz=114,SNR=6.5						
PPLA	Purkeypile	62.90	334	P	P	20 15 32.5	+0.6
	baz=112						
M20K	Styx River	62.93	333	P	P	20 15 32.6	+0.5
	baz=111						
CAST	Castle Rocks	63.05	335		P	20 15 33.1	+0.3
CAST				IAmb	IAmb	20 15 34.5	
	comp=Z,5.0nm,0.9s						
CAST	Castle Rocks	63.05	335	P	P	20 15 33.5	+0.7
	baz=112,SNR=7.8						
Q17K	Contact Creek	63.06	328	P	P	20 15 33.4	+0.3
	baz=106						
H23K	Yukon River	63.06	338	P	P	20 15 33.5	+0.7
	baz=116						
C27K	Jago River	63.07	343	P	P	20 15 33.7	+1.0
	baz=124						
P18K	Big Mountain,	63.07	330	P	P	20 15 33.5	+0.5
	baz=108						
R17L	Mt. Peulik Vol	63.13	328	P	P	20 15 34.2	+0.8
	baz=106						
MLY	Manley	63.17	337	P	P	20 15 34.4	+0.8
MLY	Manley	63.17	337	P	P	20 15 33.8	+0.2
	baz=114						
N19K	Bonanza Creek	63.17	331	P	P	20 15 34.1	+0.4
	baz=109						
O18K	Koktuh Hills	63.20	330	P	P	20 15 34.6	+0.7
	baz=108						
F24K	Squaw Lake	63.27	340	P	P	20 15 34.8	+0.6
	baz=118						
L20K	Farewell, AK	63.47	333	P	P	20 15 36.0	+0.4
	baz=110						
M19K	Big River Lodg	63.49	333	P	P	20 15 36.7	+0.9
	baz=110						
C26K	Camden Bay	63.58	343	P	P	20 15 37.1	+1.0
	baz=123						
P17K	Kvichak River	63.61	329	P	P	20 15 37.6	+1.2
	baz=106						
G23K	Bananza Creek	63.63	338	P	P	20 15 37.2	+0.5
	baz=116						
D25K	Kavik River	63.69	342	P	P	20 15 37.6	+0.6
	baz=121,SNR=5.5						
E24K	Your Creek	63.74	340	P	P	20 15 38.5	+1.2
	baz=118						
H22K	Ishtalitna Cre	63.78	337	P	P	20 15 39.0	+1.5
	baz=114						
N18K	Kilae Creek	63.78	331	P	P	20 15 39.4	+1.7
	baz=108						
L19K	White Mountain	63.79	333	P	P	20 15 39.2	+1.4
	baz=109						
K20K	Telida	63.86	334	P	P	20 15 39.2	+1.0
	baz=110,SNR=5.8						
COLD	Coldfoot	63.93	339	P	P	20 15 39.3	+0.8
	baz=116						
M18K	Stony River	64.00	332	P	P	20 15 40.3	+1.2
	baz=108						
O17K	Koliganek Bris	64.09	330	P	P	20 15 40.8	+1.1
	baz=106						
E23K	Chandalar	64.11	340	P	P	20 15 40.7	+0.9
	baz=117,SNR=5.3						
J20K	Nowinta River	64.19	335	P	P	20 15 41.5	+1.2
	baz=111						
ICESG	Greenland Ices	64.19	19	*i* P	P	20 15 39.2	-1.4
ICESG				IAmb	IAmb	20 15 41.3	
	comp=Z,11nm,0.9s						
CHNA	Chernabura Isl	64.21	324	P	P	20 15 42.2	+1.7
	baz=101						
H21K	Melozitna Rive	64.22	337	P	P	20 15 41.6	+1.2
	baz=113						
G22K	Bettles	64.26	338	P	P	20 15 41.5	+0.8
	baz=115						
P16K	Nushagak River	64.33	329	P	P	20 15 42.7	+1.5
	baz=105						
N17K	Nushagak Hills	64.35	331	P	P	20 15 42.8	+1.4
	baz=106						
TOLK	Toolik Lake Re	64.36	340	P	P	20 15 42.7	+1.4
TOLK	Toolik Lake Re	64.36	340	P	P	20 15 42.8	+1.4
	baz=117						
D24K	Happy Valley	64.36	341	P	P	20 15 42.5	+1.2
	baz=118						
O16K	Kokwok River B	64.53	330	P	P	20 15 43.7	+1.1
	baz=105						
I20K	Naaghedeneel	64.55	336	P	P	20 15 43.8	+1.3
	baz=111						
C24K	Franklin Bluff	64.60	342	P	P	20 15 44.2	+1.4
	baz=119						
L18K	Granite Mounta	64.62	333	P	P	20 15 44.0	+0.9
	baz=107						
IMAR	Indian Mountai	64.70	337	P	P	20 15 43.4	-0.2
M17K	Holitna River	64.72	332	P	P	20 15 44.6	+0.8
	baz=106						
J19K	Poorman	64.73	335	P	P	20 15 44.5	+0.7
	baz=109,SNR=7.3						
F22K	John River	64.74	339	P	P	20 15 45.1	+1.2
	baz=114						
SDPT	Sand Point	64.81	325	P	P	20 15 45.5	+1.0
	baz=101						
G21K	Allakaket	64.82	338	P	P	20 15 45.3	+0.9
	baz=112						
D23K	Nanushuk River	64.87	341	P	P	20 15 45.3	+0.6
	baz=116						
E22K	Anaktuvuk Pass	64.88	340	P	P	20 15 45.6	+0.8
	baz=115,SNR=5.2						
H20K	Anotleneega Mo	64.96	336	P	P	20 15 46.3	+1.0
	baz=111						
J18K	Innoko River	65.02	334	P	P	20 15 46.8	+1.1
	baz=108						
F21K	Alatna River	65.09	338	P	P	20 15 47.2	+1.1
	baz=113,SNR=20						
N16K	Nishlik Lake	65.09	330	P	P	20 15 47.3	+1.0
	baz=105						
C23K	Itkillik River	65.24	341	P	P	20 15 48.5	+1.5
	baz=117						
O15K	Ungalikthiuk R	65.28	329	P	P	20 15 49.2	+1.7
	baz=103						
L17K	Donlin	65.32	332	P	P	20 15 49.0	+1.4
	baz=106						
M16K	Timber Creek	65.32	331	P	P	20 15 49.1	+1.4
	baz=105						
D22K	Ayikyak River	65.48	340	P	P	20 15 49.6	+1.0
	baz=114						
K17K	Iditarod	65.48	333	P	P	20 15 50.3	+1.6
	baz=106						
H19K	Roundabout Mou	65.58	336	P	P	20 15 50.1	+0.9
	baz=109						
EUNU	Eureka	65.64	1		P	20 15 50.3	+0.8
N15K	Kwethluk River	65.65	330	P	P	20 15 50.9	+1.1
	baz=103						
E21K	Killik River	65.74	339	P	P	20 15 51.3	+0.9
	baz=113						
L16K	Owhat River	65.74	332	P	P	20 15 51.4	+1.1
	baz=105						
S12K	Black Hills	65.76	325	P	P	20 15 52.7	+2.1
	baz=100						
F20K	Avaraart Lake	65.83	338	P	P	20 15 51.8	+0.9
	baz=110,SNR=5.2						
J17K	VABM Dome	66.02	333	P	P	20 15 53.7	+1.6
	baz=106						
O14K	Tigyukauivet M	66.02	329	P	P	20 15 53.5	+1.2
	baz=102						
M15K	Kasigluk River	66.06	330	P	P	20 15 54.4	+2.0
	baz=103						
H18K	Honhosa River	66.22	335	P	P	20 15 55.3	+1.8
	baz=107						
SUMG	Summit	66.24	16		P	20 15 54.2	+0.2
SUMG	Summit	66.24	16	*i* P	P	20 15 54.0	+0.1
SUMG				IAmb	IAmb	20 15 55.0	
	comp=Z,9.1nm,0.8s						
C21K	Knifeblade Rid	66.29	340	P	P	20 15 55.7	+1.9
	baz=112						
B22K	Teshekpuk Lake	66.33	341	P	P	20 15 56.0	+2.0
	baz=114						
N14K	Kuskokwak Cree	66.38	329	P	P	20 15 56.0	+1.6
	baz=102						
B21K	Ikpikpuk River	66.41	341	P	P	20 15 56.6	+2.0
	baz=113						
E20K	Nigu River	66.43	339	P	P	20 15 56.1	+1.3

	baz=110						
NEEM	North Greenlan	66.52	9	iP	P	20 15 54.6	-0.9
NEEM				IAmb	IAmb	20 15 58.1	
	comp=Z,12nm,0.8s						
F19K	Shaleruckik Mo	66.52	337	P	P	20 15 56.7	+1.4
	baz=108						
E19K	Redstone River	66.52	338	P	P	20 15 56.6	+1.2
	baz=109						
G18K	Tagagawik	66.56	336	P	P	20 15 57.1	+1.5
	baz=107						
J16K	Anvik River	66.65	333	P	P	20 15 57.8	+1.6
	baz=104						
L15K	Ungalak Mounta	66.66	331	P	P	20 15 58.0	+1.7
	baz=103						
M14K	Bethel	66.68	330	P	P	20 15 58.2	+1.8
	baz=102						
D20K	Etivluk River	66.74	339	P	P	20 15 58.2	+1.5
	baz=110						
H17K	Granite Mounta	66.79	335	P	P	20 15 58.8	+1.7
	baz=106						
K15K	Wolf Creek Mou	66.82	332	P	P	20 15 59.3	+1.9
	baz=103						
I17K	Unalakleet	66.84	334	P	P	20 15 59.1	+1.7
	baz=104						
A22K	Sinclair Lake	67.07	342	P	P	20 15 59.8	+1.1
	baz=113						
L14K	Kuka Creek	67.15	331	P	P	20 16 00.6	+1.2
	baz=101						
F18K	Selawik	67.16	337	P	P	20 16 01.0	+1.6
	baz=106						
D19K	Kuna River	67.18	339	P	P	20 16 01.0	+1.4
	baz=109						
G17K	Kiwalik Mounta	67.24	335	P	P	20 16 01.3	+1.4
	baz=105						
M13K	Dall Lake	67.29	330	P	P	20 16 02.2	+1.9
	baz=100						
B20K	Meade River	67.38	341	P	P	20 16 01.9	+1.2
	baz=110						
H16K	Elim	67.68	334	P	P	20 16 04.1	+1.4
	baz=103						
A21K	Barrow	67.69	342	P	P	20 16 04.2	+1.5
	baz=111						
F17K	Baldwin Pennin	67.73	336	P	P	20 16 04.3	+1.3
	baz=105						
E18K	Tukpahlearik C	67.75	337	P	P	20 16 04.4	+1.2
	baz=106						
J14K	Nanvaranak Lak	67.84	332	P	P	20 16 05.2	+1.5
	baz=101						
C19K	Lookout Ridge	67.89	339	P	P	20 16 05.6	+1.6
	baz=108						
G16K	Koyuk River	67.91	335	P	P	20 16 05.8	+1.6
	baz=103						
UNV	Unalaska Valle	68.07	322	P	P	20 16 06.8	+1.4
	baz=95						
E17K	Hotham Inlet	68.12	337	P	P	20 16 06.5	+1.0
	baz=105						
K13K	Kusilvak Mount	68.19	331	P	P	20 16 07.2	+1.2
	baz=100						
C18K	Utukok River	68.31	339	P	P	20 16 07.8	+1.1
	baz=106						
G15K	Niukluk	68.51	335	P	P	20 16 09.8	+1.9
	baz=102						
M11K	Mekoryuk	68.68	329	P	P	20 16 10.7	+1.6
	baz=98						
A19K	Wainwright	68.71	340	P	P	20 16 10.6	+1.5
	baz=106						
B18K	Kokolik River	68.72	339	P	P	20 16 10.7	+1.5
	baz=106						
D17K	Noatak River	68.74	338	P	P	20 16 10.4	+1.1
	baz=104						
RDOG	Red Dog Mine	68.77	338	P	P	20 16 10.9	+1.4
	baz=104						
C17K	DeLong Mountai	68.97	338	P	P	20 16 12.2	+1.4
	baz=104						
ANM	Nome	68.99	334	P	P	20 16 12.4	+1.5
	baz=100						
NIKH	Nikolski High	69.41	321	P	P	20 16 14.9	+1.2
	baz=93						
F14K	Arctic Creek	69.55	335	P	P	20 16 15.7	+1.4
	baz=100						
C16K	Lisburne Hills	69.70	338	P	P	20 16 16.5	+1.2
	baz=102						
P08K	Saint George I	70.03	325	P	P	20 16 18.5	+1.0
	baz=94						
TNA	Tin City	70.22	335	P	P	20 16 19.2	+0.7
	baz=98						
SPIA	Saint Paul Isl	70.45	326	P	P	20 16 20.6	+0.5
	baz=93						
GAMB	Gambell	71.63	333	P	P	20 16 27.4	+0.4
	baz=94						
NOR	Nord	73.86	9	iP	P	20 16 39.0	-1.1
EKA	Eskdalemuir Ar	78.67	36	P	P	20 17 06.8	-1.1
	comp=Z,2.6nm,0.8s,baz=291,slow=7.0,SNR=9.5						
	comp=Z,2.6nm,0.8s						
ESDC	Sonseca Array	80.91	51	P	P	20 17 18.5	-1.9
	comp=Z,1.3nm,0.8s,baz=294,slow=5.3,SNR=9.9						
	comp=Z,1.3nm,0.8s						
NC204	NORSAR Array S	84.31	28	P	P	20 17 38.4	+0.6
DOU	Dourbes	84.40	40	dP	P	20 17 37.7	-0.6
	comp=Z,2.3nm,1.2s						
NB2	NORSAR Subarra	84.60	28	P	P	20 17 39.8	+0.6
	comp=Z,3.3nm,0.7s,baz=292,slow=5.1						
NOA	NORSAR Array B	84.60	28	P	P	20 17 39.3	+0.1
	comp=Z,5.5nm,0.8s,baz=292,slow=5.0,SNR=26						
NOA				LR	LR	20 54 43.6	
	comp=Z,24nm,18.4s,baz=225,slow=35						
	comp=Z,5.5nm,0.8s						
BGES	Gesves	84.63	39	dP	P	20 17 39.4	-0.1
BCLA	Clavier	84.75	39	dP	P	20 17 40.3	+0.2
	comp=Z,2.7nm,0.8s						
MEM	Membach	85.13	39	dP	P	20 17 41.5	-0.5
WLF	Walferdange	85.49	40	dP	P	20 17 44.1	+0.3
	comp=Z,4.8nm,1.0s						
HFS	Hagfors	86.07	29	P	P	20 17 45.6	-0.8
	comp=Z,4.1nm,0.8s,baz=248,slow=7.8,SNR=5.4						
	comp=Z,4.1nm,0.8s						
ARCES	ARCESS Array B	86.23	18	P	P	20 17 46.3	-0.8
ARCES	ARCESS Array B	86.23	18	P	P	20 17 46.1	-1.1
	comp=Z,2.0nm,0.7s,baz=297,slow=5.5,SNR=5.8						
	comp=Z,2.0nm,0.7s						
ECH	Echery	86.56	41	P	P	20 17 49.0	-0.2
FUORN	Ofenpass-Fuorn	89.07	42	P	P	20 18 01.9	+0.4
FUORN				IAmb	IAmb	20 18 03.1	
	comp=Z,2.7nm,0.7s						
BRG	Berggiesshubel	89.78	37	eP	P	20 18 05.3	+0.8
BRG				Amp		20 18 06.0	
	comp=Z,3.2nm,0.9s						
GERES	GERESS Array B	90.42	39	P	P	20 18 07.7	+0.1
	comp=Z,1.4nm,0.8s,baz=305,slow=4.7,SNR=11						
	comp=Z,1.4nm,0.8s						
KRUC	Moravsky	91.96	38	eP	P	20 18 14.8	+0.2
VRAC	Vranov	91.97	38	eP	P	20 18 15.3	+0.6
TORD	Torodi Ar. Bea	92.14	76	P	P	20 18 14.5	-1.6
TORD				IAmb	IAmb	20 18 33.0	
	comp=Z,2.4nm,1.5s						
MORC	Moravsky Berou	92.33	37	eP	P	20 18 16.8	+0.4
KURBB	Kurchatov Arra	114.79	5	PKP	PKiKP	20 23 46.3	-0.3
	comp=Z,0.3nm,0.6s,baz=349,slow=1.9,SNR=2.3						
MKAR	Makanchi Array	118.86	3	PKP	PKPdf	20 23 53.7	-0.9
	comp=Z,0.2nm,0.6s,baz=237,slow=5.0,SNR=3.5						
WRA	Warramunga Arr	133.63	256	PKP	PKPdf	20 24 24.2	+0.7
	comp=Z,0.4nm,0.7s,baz=86,slow=2.3,SNR=4.5						
PZH	PanZhiHua	136.43	339	PKP	PKPdf	20 24 28.3	-0.4
CMAR	Chiang Mai Arr	144.82	338	PKP	PKPbc	20 24 43.0	+0.2
	comp=Z,4.0nm,0.8s,baz=343,slow=3.5,SNR=22						

VAO ***29*** *20:14:38.4±0.5, 18°.51S×69°.23W, h59km±4km, mb4.9*
SJA ***29*** *20:14:41.6±0.7, 18°.48S×69°.36W, h140km±5km, ML4.6, MW4.4*
NEIC ***29*** *20:14:44.2±2.0, 18°.53S±0°.04×69°.38W±0°.06, h126km±5km, mb4.9/79, Mwr4.5(GUC), Error ellipse: s-maj=8.9km s-min=5.7km az=81.0*
IDC ***29*** *20:14:45.1±0.6, 18°.46S×69°.14W, h131km±5km, mb4.1/16, mbtmp4.5/20, Error ellipse: s-maj=13.3km s-min=10.5km az=91.0*
GUC ***29*** *20:14:45.2±0.6, 18°.55S×69°.40W, h123km±3km, ML4.6*
ISC 29 20:14:43.3±0.4**, 18°.53S**±0°.03×**69°.33W**±0°.05**, h123**km±3km**,**
n257, σ1s.57/276**, mb4.9**/57**, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB16	IPOC Station P	0.25	319		Pn	20 15 01.9	+0.7
PB16				Sn	Sn	20 15 14.6	-0.1
PB18	Visviri	0.94	351		Pn	20 15 07.5	+1.8
PB18				Sn	Sn	20 15 23.5	+0.9
PB18	Visviri	0.94	351	eP	Pn	20 15 07.8	+2.1
PB18				iS	Sn	20 15 25.0	+2.4
AP01	Chacalluta	0.97	279		Pn	20 15 05.8	+0.5
AP01				Sn	Sn	20 15 22.3	+0.3
AP01	Chacalluta	0.97	279	eP	Pn	20 15 05.8	+0.5
AP01				iS	Sn	20 15 22.5	+0.5
AP01				IAML		20 15 23.1	
	comp=N,28µm,0.4s						
AP01	Chacalluta	0.97	279	eP	Pn	20 15 05.7	+0.5
AP01				eS	Sn	20 15 22.8	+0.9
AP01				IAML		20 15 23.8	
	comp=Z,7µm,0.2s						
GO01	Chusmiza	1.14	173		Pn	20 15 09.0	+1.5
GO01				Sn	Sn	20 15 27.9	+1.9
GO01	Chusmiza	1.14	173	eP	Pn	20 15 09.2	+1.6
GO01				iS	Sn	20 15 28.1	+2.2
GO01				IAML		20 15 29.2	
	comp=N,16µm,0.2s						
GO01	Chusmiza	1.14	173	eP	Pn	20 15 08.4	+0.8
GO01				eS	Sn	20 15 28.5	+2.6
GO01				IAML		20 15 28.6	
	comp=Z,8µm,0.4s						
PB11	IPOC Station P	1.26	194		Pn	20 15 09.3	+0.8
PB11				Sn	Sn	20 15 28.1	+0.5
PB11	IPOC Station P	1.26	194	eP	Pn	20 15 09.3	+0.8
PB11				iS	Sn	20 15 28.8	+1.1
PB11	IPOC Station P	1.26	194	eP	Pn	20 15 08.7	+0.2
PB11				eS	Sn	20 15 29.9	+2.2
PB11				IAML		20 15 31.6	
	comp=Z,6µm,0.4s						
PB08	IPOC Station P	1.61	174		Pn	20 15 14.0	+1.4
PB08				Sn	Sn	20 15 36.1	+1.1
PB08	IPOC Station P	1.61	174	eP	Pn	20 15 14.2	+1.6
PB08				iS	Sn	20 15 36.0	+1.1
PB08				IAML		20 15 39.2	
	comp=E,4µm,0.3s						
PB08	IPOC Station P	1.61	174	eP	Pn	20 15 14.2	+1.6
PB08				eS	Sn	20 15 39.0	+4.0
PB08				IAML		20 15 42.0	
	comp=Z,2µm,0.5s						
PX03	IPOC Station P	1.89	189	iS	Sn	20 15 41.1	+0.7
TA02	Huaiquique	1.89	203		Pn	20 15 16.1	+0.6
TA02	Huaiquique	1.89	203	eP	Pn	20 15 16.1	+0.6
TA02				iS	Sn	20 15 39.7	-0.6
TA02	Huaiquique	1.89	203	eP	Pn	20 15 16.5	+0.9
TA02				eS	Sn	20 15 42.6	+2.3
TA02				IAML		20 15 45.8	
	comp=Z,3µm,0.5s						
TA01	Diego Aracena	2.18	201		Pn	20 15 19.5	+0.4
TA01				Sn	Sn	20 15 44.8	-1.8
TA01	Diego Aracena	2.18	201	eP	Pn	20 15 19.5	+0.4
TA01				iS	Sn	20 15 45.4	-1.2
TA01	Diego Aracena	2.18	201	eP	Pn	20 15 19.7	+0.6
TA01				eS	Sn	20 15 45.4	-1.2
TA01				IAML		20 15 59.1	
	comp=Z,1µm,0.3s						
LPAZ	La Paz	2.51	27	P	Pn	20 15 25.9	+2.0
	comp=Z,245nm,0.3s,baz=205,slow=7.0,SNR=1066						
LPAZ				S	Sn	20 15 56.2	+1.3
	comp=Z,95nm,0.5s,baz=335,slow=22,SNR=4.1						
LPAZ	La Paz	2.51	27	eP	Pn	20 15 16.9	-7.0
LPAZ	La Paz	2.51	27	P	Pn	20 15 25.4	+1.5
PB01	IPOC Station P	2.51	183		Pn	20 15 24.3	+0.9
PB01				Sn	Sn	20 15 53.9	-0.3
PB01	IPOC Station P	2.51	183	eP	Pn	20 15 24.3	+0.9
PB01				iS	Sn	20 15 54.5	+0.3
PB01				IAML		20 15 55.7	
	comp=E,4µm,0.6s						
PB01	IPOC Station P	2.51	183	eP	Pn	20 15 24.2	+0.9
PB01				eS	Sn	20 15 55.1	+0.8
PB01				IAML		20 15 57.5	
	comp=Z,1µm,0.3s						
PB09	IPOC Station P	3.25	179		Pn	20 15 34.5	+1.3
PB09	IPOC Station P	3.25	179	eP	Pn	20 15 34.4	+1.3
PB09				eS		20 18 45.7	
PB03	IPOC Station P	3.52	186		Pn	20 15 37.0	+0.3
PB06	IPOC Station P	4.16	183		Pn	20 15 45.5	+0.3
PB06	IPOC Station P	4.16	183	eP	Pn	20 15 45.7	+0.4
PB06				IAML		20 16 58.8	
	comp=Z,662nm,0.4s						
PB05	IPOC Station P	4.38	191		Pn	20 15 47.8	-0.3
PB05	IPOC Station P	4.38	191	eP	Pn	20 15 47.9	-0.1
PB05				eS	Sn	20 16 37.9	-0.5
PB05				IAML		20 16 38.4	
	comp=Z,882nm,0.4s						
AF01	San Pedro de A	4.53	166		Pn	20 15 50.5	+0.2
PB10	IPOC Station P	5.09	193		Pn	20 15 55.8	-1.7
PB10	IPOC Station P	5.09	193	eP	Pn	20 15 56.6	-0.9
PB10				eS	Sn	20 16 51.7	-3.5
PB10				IAML		20 16 53.8	
	comp=Z,319nm,0.5s						
PB14	IPOC Station P	6.15	189		Pn	20 16 09.6	-2.5
GO02	Mina Guanaco	6.61	182		Pn	20 16 16.4	-1.8
AC01	Pan de Azucar	7.67	189		Pn	20 16 29.4	-2.9
AC02	Maricunga	8.27	179		Pn	20 16 39.2	-1.6
SIV	San Ignacio	8.29	74	P	Pn	20 16 38.4	-2.2
	comp=Z,84nm,0.5s,baz=260,slow=11,SNR=156						
BBSD	Serra de San D	8.41	82	eP	Pn	20 16 36.7	-5.7
NNA	Nana	9.73	311	Pn	Pn	20 16 58.9	-1.4
NNA	Nana	9.73	311	P	Pn	20 16 57.3	-2.9
	comp=Z,13nm,0.3s,baz=151,slow=12,SNR=8.1						
NNA				S	Sn	20 18 40.1	-7.7
	comp=Z,29nm,0.5s,baz=278,slow=5.0,SNR=4.1						
NNA	Nana	9.73	311	P	Pn	20 16 58.6	-1.6
	comp=Z,26nm,2.0s						
NNA				S	Sn	20 18 39.7	-8.2
	comp=Z,26nm,2.0s						
PTLB	Pontes e Lacer	10.22	74		Pn	20 17 04.8	-1.9
PTLB	Pontes e Lacer	10.22	74	eP	Pn	20 17 00.9	-5.9
VILB	Vilhena	10.39	59		Pn	20 17 07.7	-1.4
VILB	Vilhena	10.39	59	eP	Pn	20 17 02.7	-6.4
CZSB	Cruzeiro do Su	11.22	343		Pn	20 17 18.8	-1.4
CZSB	Cruzeiro do Su	11.22	343	eP	Pn	20 17 16.1	-4.1
CZSB	Cruzeiro do Su	11.22	343	P	Pn	20 17 18.6	-1.6
	comp=Z,1µmcomp=Z,96nm,0.8s						
MURT	Porto Murtinho	11.45	108	eP	Pn	20 17 17.7	-5.4
BDQN	Bodoquena, MS	12.02	101	eP	Pn	20 17 27.5	-3.2
AQDB	Aquidauana	13.00	101		Pn	20 17 42.1	-1.3
AQDB	Aquidauana	13.00	101	eP	Pn	20 17 39.0	-4.4
CFA	Coronel Fontan	13.06	176	P	Pn	20 17 40.5	-3.6
	comp=Z,3.1nm,0.3s,baz=355,slow=14,SNR=39						
CFA				S	Sn	20 19 56.4	-12
	comp=Z,2.7nm,0.6s,baz=167,slow=16,SNR=4.3						
SALV	Santo Antonio	13.29	81	eP	Pn	20 17 43.0	-4.2
CPUP	Villa Florida	13.54	127		Pn	20 17 49.8	-0.5
CPUP	Villa Florida	13.54	127	P	Pn	20 17 48.9	-1.5
	comp=Z,1.7nm,0.7s,baz=172,slow=12,SNR=11						
CPUP	Villa Florida	13.54	127	eP	Pn	20 17 45.9	-4.4
SJPY	San Joaquin	13.87	120	eP	Pn	20 17 50.4	-4.2
PDRB	Porto dos Gac	13.97	62	eP	Pn	20 17 52.0	-4.1
TBTG	Tabatinga, AM	14.27	358	eP	Pn	20 17 56.9	-2.8
ATAH	Atahualpa	14.36	321	P	Pn	20 18 01.8	+0.5
	comp=Z,3.0nm,0.6s,baz=143,slow=17,SNR=6.9						
RPRD	Ribas do Rio P	14.87	100	eP	Pn	20 18 03.9	-3.5
CLDB	Colider	15.14	62	eP	Pn	20 18 08.3	-2.5
TEFE	Tefe	15.62	18	eP	Pn	20 18 14.4	-2.3
ITQB	Itaqui	16.04	136		Pn	20 18 20.4	-1.4
TRCB	Terra Rica	16.19	108	P	P	20 18 24.4	-0.2
TRCB	Terra Rica	16.19	108	eP	Pn	20 18 20.9	-2.9
H03N1	Juan Fernandez	17.15	208	T	T	20 35 54.2	
	baz=30,slow=73,SNR=23						
H03N2	Juan Fernandez	17.16	208	T	T	20 35 54.9	
	baz=30,slow=73,SNR=20						
H03N3	Juan Fernandez	17.17	208	T	T	20 35 55.3	
	baz=30,slow=73,SNR=22						
PTGB	Pitanga	17.19	114	eP	P	20 18 33.5	-2.2
PCMB	Pacaembu	17.25	103	eP	P	20 18 33.9	-2.4
MACA	Manacapuru-AM	17.46	30		P	20 18 37.6	-1.1
MACA	Manacapuru-AM	17.46	30	eP	P	20 18 37.4	-1.3
MCRA	Macar, Loja	17.49	322	P	Pn	20 18 39.9	+0.2
	comp=Z,38nm,0.7s						
NPGB	Novo Progresso	17.76	52	eP	P	20 18 39.4	-2.6
ITRB	Iturama	17.97	97	eP	P	20 18 44.1	-0.2
ITAB	Concordia	18.05	122		P	20 18 44.8	-0.2
ITAB	Concordia	18.05	122	eP	P	20 18 44.0	-1.0
SNDB	Serra Nova Dou	18.57	72	eP	P	20 18 50.2	-0.7
CPSB	Cacapava Do Su	18.66	132	eP	P	20 18 51.9	+0.2
COHC	Cochancay	18.69	328	P	Pn	20 18 53.7	-0.2
COHC	Cochancay	18.69	328	P	Pn	20 18 54.5	+0.6
	comp=Z,571nmcomp=Z,61nm,0.6s						
FRTB	Fartura	19.07	108	eP	P	20 18 55.8	-0.5
ITTB	Itaituba	19.36	45	eP	P	20 18 58.1	-1.3
PLTB	Pedras Altas	19.37	136		P	20 18 58.1	-1.3
PLTB	Pedras Altas	19.37	136	eP	P	20 18 59.1	-0.3
PIAT	Ana Tenorio	19.50	332	P	Pn	20 19 03.5	-0.3
	comp=Z,65nm,0.6s						
CNLB	Canela	19.99	126	eP	P	20 19 05.6	-0.5
IPMB	Ipameri, GO	20.07	92	eP	P	20 19 05.5	-1.6
TRQA	Tornquist	20.49	163		P	20 19 12.2	+0.7
TRQA	Tornquist	20.49	163	eP	P	20 19 10.7	-0.7
BONI	La Bonita	20.51	336	P	Pn	20 19 13.9	-1.6
	comp=Z,2µmcomp=Z,150nm,1.0s						
BDFB	Brasilia	20.58	85		P	20 19 11.8	-0.9
BDFB	Brasilia	20.58	85	P	P	20 19 11.4	-1.2
	comp=Z,69nm,0.4s,baz=252,slow=8.4,SNR=53						
	comp=Z,69nm,0.4s						
MAJ01	Sao Joao Batis	20.67	119	eP	P	20 19 12.5	-0.9
OTAV	Otavalo	20.69	333		P	20 19 14.4	+0.2
OTAV	Otavalo	20.69	333	eP	P	20 19 15.6	+1.4
OTAV	Otavalo	20.69	333	P	P	20 19 15.9	+1.7
	comp=Z,36nm,0.8s						
FLOC	Florencia	20.93	342		P	20 19 14.7	-1.6
FLOC	Florencia	20.93	342	P	P	20 19 16.6	+0.3
	comp=Z,5µmcomp=Z,391nmcomp=Z,32nm,1.2s						
MACC	Macarena, Meta	21.02	347	P	P	20 19 16.8	-0.5
	comp=Z,13µmcomp=Z,591nmcomp=Z,12nm,0.6s						
SPB	Sao Paulo	21.04	108		P	20 19 16.2	-1.2
SPB	Sao Paulo	21.04	108	eP	P	20 19 16.1	-1.4
GCUF	Volcan Galeras	21.15	337	P	P	20 19 21.5	+2.3
	comp=Z,1µmcomp=Z,143nm,0.8s						
PET01	Itanhaem-SP	21.31	109	eP	P	20 19 20.2	-0.1
CRUC	La Cruz	21.33	339	P	P	20 19 23.5	+2.5
	comp=Z,234nm,0.6s						
VAO	Valinhos	21.38	106	P	P	20 19 19.4	-1.8
VAO	Valinhos	21.38	106	eP	P	20 19 19.5	-1.6
PMNB	Patos De Minas	21.71	94	eP	P	20 19 23.1	-1.6
BBAC	Balboa, Cauca	21.86	338	P	P	20 19 28.6	+2.2
	comp=Z,72nm,0.9s						
MAL2	Monte Alegre,	22.13	44		P	20 19 27.8	-1.3
POPC	Popayan, Colom	22.15	340	P	P	20 19 30.3	+0.8
PLCA	Paso Flores	22.16	182		P	20 19 29.8	+0.7
PLCA	Paso Flores	22.16	182	P	P	20 19 31.1	+1.9
	comp=Z,6.5nm,1.1s,baz=9.9,slow=14,SNR=5.1						
	comp=Z,6.5nm,1.1s						
PLCA	Paso Flores	22.16	182	eP	P	20 19 29.8	+0.7
BOAV	Boa Vista	22.53	24	P	P	20 19 32.0	-1.1
PARB	Paraibuna	22.65	106	eP	P	20 19 32.6	-1.6
SLP01	Ubatuba-SP	23.07	106	eP	P	20 19 39.1	+0.8
SMTB	Santa Maria do	23.18	68	eP	P	20 19 38.9	-0.4
BSCB	Bom Sucesso	23.24	100	eP	P	20 19 39.2	-0.7
ROSC	El Rosal	23.73	348	P	P	20 19 45.8	+1.1
	comp=Z,11nm,0.5s,baz=210,slow=19,SNR=5.7						
	comp=Z,11nm,0.5s						
MAN01	Angra dos Reis	24.11	105	eP	P	20 19 47.6	-0.1
JANB	Januaria	24.19	86	eP	P	20 19 48.6	0.0
SDBA	SAO DESIDERIO	24.30	79	eP	P	20 19 49.3	-0.3
DIAM	Diamantina, MG	24.34	94	eP	P	20 19 50.6	+0.6
VAS01	Vassouras-RJ	24.54	103	eP	P	20 19 52.1	+0.5
RUSC	La Rusia	24.55	351		P	20 19 51.6	-0.6
RUSC				IAmb	IAmb	20 19 54.1	
	comp=Z,49nm,1.0s						
DUB01	Friburgo-RJ	25.52	103	eP	P	20 20 00.1	-0.4
CAM01	Campos-RJ	26.17	102	eP	P	20 20 07.3	+1.0
SJMB	Sao Joao De Ma	26.67	95	eP	P	20 20 11.6	+0.7
SDV	Santo Domingo	27.27	357	P	P	20 20 15.2	-1.3
SDV				IAmb	IAmb	20 21 03.6	
	comp=Z,26nm,0.5s						
GUA01	Guaratinga, BA	28.20	91	eP	P	20 20 25.5	+0.9
CMC01	Camacan, BA	28.68	88	eP	P	20 20 30.4	+1.6
NBPB	Pedra_Branca-C	31.76	70	eP	P	20 20 55.8	-0.2
SOCE	Pocosol	32.45	331	P	P	20 21 03.6	+1.6
SOCE				IAmb	IAmb	20 21 06.1	
	comp=Z,25nm,0.6s						
RCBR	Riachuelo	34.95	73	P	P	20 21 23.3	-0.5
RCBR				IAmb	IAmb	20 21 52.9	
	comp=Z,44nm,1.3s						
CELP	Cerrillos	36.48	4	P	P	20 21 35.5	-1.0
CELP				IAmb	IAmb	20 21 36.8	
	comp=Z,23nm,0.6s						
GCPR	Guaynabo City	36.75	5	P	P	20 21 36.7	-2.1
GCPR				IAmb	IAmb	20 22 25.8	
	comp=Z,52nm,1.4s						
TEIG	Tepich	42.76	333		P	20 22 29.0	+0.4
TEIG				IAmb	IAmb	20 22 30.2	
	comp=Z,22nm,0.8s						
CAMR	Camarioca	42.98	344	P	P	20 22 31.0	+0.7
CAMR				IAmb	IAmb	20 22 39.4	
	comp=Z,117nm,0.9s						
656A	Willston	49.29	345	P	P	20 23 19.8	+0.2
ZAIG	Zacatecas	52.34	320		P	20 23 44.0	+1.0
ZAIG				IAmb	IAmb	20 23 46.4	
	comp=Z,11nm,0.8s						
154A	Montrose	52.53	345	P	P	20 23 43.9	0.0
GOGA	Godfrey	53.38	345		P	20 23 49.8	-0.3
GOGA				IAmb	IAmb	20 23 50.8	
	comp=Z,16nm,1.1s						
HODGE	Hodges	53.89	347	P	P	20 23 54.0	+0.1
HODGE				IAmb	IAmb	20 23 54.8	
	comp=Z,36nm,1.5s						
LRAL	Lakeview Retre	53.98	342	P	P	20 23 54.1	-0.4
LRAL				IAmb	IAmb	20 23 55.2	
	comp=Z,14nm,0.9s						
PAULI	Pauline	54.37	347		P	20 23 57.2	0.0
BG3	Lake Jocassee	54.77	346	P	P	20 24 00.1	-0.2
BG3				IAmb	IAmb	20 24 01.4	
	comp=Z,10nm,0.8s						
V58A	Windy Hill, Pi	54.81	350	P	P	20 23 59.6	-0.8
833A	Chaparral WMA,	54.91	327	P	P	20 24 01.8	+0.5
FPAL	Fort Paine	55.00	344		P	20 24 01.5	-0.4
X48A	Hartselle	55.32	342	P	P	20 24 03.7	-0.4
CPCT	Cooper Cave	55.58	345		P	20 24 05.6	-0.4
CPCT				IAmb	IAmb	20 24 06.8	
	comp=Z,19nm,1.1s						
NATX	Nacogdoches	55.59	334	P	P	20 24 07.2	+1.1
TKL	Tuckaleechee C	55.60	346	P	P	20 24 05.7	-0.4
TKL				IAmb	IAmb	20 24 06.7	
	comp=Z,16nm,0.8s						
SWET	Sewanee	55.72	344	P	P	20 24 06.6	-0.5
OXF	Oxford	56.10	340		P	20 24 09.5	-0.2
PLAL	Pickwick Lake	56.12	341	P	P	20 24 08.9	-0.9
PLAL				IAmb	IAmb	20 24 10.1	
	comp=Z,14nm,0.9s						
CLTN	Cedars of Leba	56.66	344		P	20 24 13.1	-0.5
CLTN				IAmb	IAmb	20 24 14.3	
	comp=Z,15nm,0.8s						
WLAR	White Oak Lake	56.66	336		P	20 24 14.8	+1.1
JCT	Junction City	56.87	328	P	P	20 24 15.9	+0.6
JCT				IAmb	IAmb	20 24 17.1	
	comp=Z,11nm,0.9s						
WVT	Waverly	57.11	342	P	P	20 24 16.1	-0.7
HPIG		57.31	321		P	20 24 19.1	+0.4
HPIG				IAmb	IAmb	20 24 21.1	
	comp=Z,12nm,1.1s						
MIAR	Mount Ida	57.60	336		P	20 24 20.6	+0.3
MIAR				IAmb	IAmb	20 24 21.6	
	comp=Z,14nm,1.1s						
TXAR	Lajitas Array	57.98	324	P	P	20 24 23.4	+0.1
TXAR	Lajitas Array	57.98	324	P	P	20 24 24.1	+0.9
	comp=Z,1.7nm,0.6s,baz=149,slow=8.8,SNR=25						
TXAR				PcP	PcP	20 25 15.8	+1.8
	comp=Z,0.7nm,0.6s,baz=152,slow=5.7,SNR=3.8						
	comp=Z,1.7nm,0.6s						
WCI	Wyandotte Cave	58.66	344	P	P	20 24 26.6	-1.0
MCWV	Mont Chateau	58.71	351	P	P	20 24 28.2	+0.3
X34A	Smith Ranch, M	59.38	333		P	20 24 33.1	+0.4
X34A				IAmb	IAmb	20 24 34.6	
	comp=Z,24nm,1.0s						
SSPA	Standing Stone	59.39	352	P	P	20 24 32.9	+0.3
SSPA				IAmb	IAmb	20 24 33.3	
	comp=Z,6.2nm,0.6s						
ACSO	Alum Creek Sta	59.82	348	P	P	20 24 35.1	-0.5
ACSO				IAmb	IAmb	20 24 36.8	
	comp=Z,17nm,0.8s						
DEOK	Depew	59.89	335		P	20 24 36.5	+0.4
WMOK	Wichita Mounta	59.92	332	P	P	20 24 37.1	+0.8
WMOK				IAmb	IAmb	20 24 37.4	
	comp=Z,16nm,1.8s						
CCM	Cathedral Cave	59.93	340	P	P	20 24 36.0	-0.3
CCM				IAmb	IAmb	20 24 37.6	
	comp=Z,13nm,0.8s						
KSPA	Keystone Colle	60.08	354	P	P	20 24 36.8	-0.4
KSPA				IAmb	IAmb	20 24 37.7	
	comp=Z,7.4nm,0.6s						
BINY	Binghamton	60.73	354	P	P	20 24 41.9	+0.2
BINY				IAmb	IAmb	20 24 42.9	
	comp=Z,18nm,0.8s						
ERPA	Erie	61.14	351	P	P	20 24 44.6	+0.1

HDIL	Hopedale	61.65	343		P	20 24 47.2	-0.7
HSIG		62.04	319	P	P	20 24 51.7	+0.8
G62A	West of Eustis	63.45	359	P	P	20 25 00.0	+0.2
G62A				IAmb	IAmb	20 25 01.5	
	comp=Z,19nm,0.8s						
WBO	Williamsburg	63.45	355	P	P	20 25 00.0	+0.3
PKME	Peaks-Kenny Pk	63.48	0	P	P	20 25 00.3	+0.3
PKME				IAmb	IAmb	20 25 01.1	
	comp=Z,9.5nm,0.7s						
ANMO	Albuquerque	63.81	326	P	P	20 25 03.7	+1.1
JFWS	Jewell Farm	64.10	343		P	20 25 04.1	-0.1
TUC	Tucson	64.27	322	P	P	20 25 06.5	+0.9
TRQ	Mont Tremblant	64.62	356		P	20 25 07.6	+0.1
TRQ				IAmb	IAmb	20 25 08.4	
	comp=Z,10nm,0.7s						
SNAA	Sanae	65.21	161	P	P	20 25 12.3	+1.2
	comp=Z,1.5nm,0.9s,baz=327,slow=7.2,SNR=2.8						
	comp=Z,1.5nm,0.9s						
SDCO	Great Sand Dun	65.50	329		P	20 25 14.9	+1.1
SDCO				IAmb	IAmb	20 25 16.2	
	comp=Z,12nm,0.8s						
BATG	Bathurst New B	65.56	2	P	P	20 25 13.9	+0.4
BATG				IAmb	IAmb	20 25 14.6	
	comp=Z,11nm,0.9s						
MVCO	Mesa Verde	66.60	327		P	20 25 21.9	+1.2
MVCO				IAmb	IAmb	20 25 23.1	
	comp=Z,9.9nm,0.7s						
COWI	Conover	66.78	345	P	P	20 25 21.2	-0.1
ECSD	EROS Data Cent	66.82	339		P	20 25 21.2	-0.4
ECSD				IAmb	IAmb	20 25 23.1	
	comp=Z,22nm,1.4s						
WUAZ	Wupatki	66.91	324		P	20 25 24.0	+1.4
WUAZ				IAmb	IAmb	20 25 25.8	
	comp=Z,10.0nm,0.8s						
ISCO	Idaho Springs	67.18	330		P	20 25 25.3	+0.9
DBIC	Dimbokro	68.31	75	P	P	20 25 31.0	-0.6
DBIC				IAmb	IAmb	20 25 32.2	
	comp=Z,17nm,0.7s						
DBIC	Dimbokro	68.31	75	P	P	20 25 30.7	-0.9
	comp=Z,14nm,0.6s,baz=267,slow=6.6,SNR=23						
	comp=Z,14nm,0.6s						
LCMT	Little Creek M	69.03	324	P	P	20 25 37.2	+1.4
MVU	Marysvale	69.53	325	P	P	20 25 40.9	+1.9
MVU				IAmb	IAmb	20 25 42.2	
	comp=Z,14nm,0.8s						
AGMN	Agassiz Nation	70.63	342		P	20 25 45.3	+0.1
DUG	Dugway, Tooele	71.08	326		P	20 25 49.6	+1.4
PD31	Pinedale Array	71.35	330	P	P	20 25 50.5	+0.5
PDAR	Pinedale Array	71.35	330		P	20 25 50.3	+0.3
PDAR	Pinedale Array	71.35	330	P	P	20 25 50.8	+0.8
	comp=Z,2.3nm,0.8s,baz=159,slow=5.9,SNR=16						
	comp=Z,2.3nm,0.8s						
QSPA	South Pole Qui	71.65	180	P	P	20 25 53.4	+2.1
QSPA	South Pole Qui	71.65	180	P	P	20 25 53.5	+2.2
	comp=Z,3.4nm,0.9s,baz=297,slow=0.8,SNR=25						
	comp=Z,3.4nm,0.9s						
ULM	Lac du Bonnet	72.38	342		P	20 25 55.6	0.0
ULM				IAmb	IAmb	20 25 56.4	
	comp=Z,15nm,0.7s						
ULM	Lac du Bonnet	72.38	342	P	P	20 25 55.6	0.0
	comp=Z,14nm,0.6s,baz=146,slow=6.9,SNR=22						
ULM				pP	pP	20 26 28.1	+0.3
	comp=Z,6.6nm,0.6s,baz=154,slow=7.1,SNR=4.8						
	comp=Z,14nm,0.6s						
FXWY	Fox Creek	72.71	330	P	P	20 25 59.0	+0.9
NVAR	Mina Array Bea	72.92	322	P	P	20 26 00.5	+1.1
NVAR	Mina Array Bea	72.92	322	P	P	20 26 00.7	+1.3
	comp=Z,3.6nm,0.8s,baz=153,slow=6.7,SNR=13						
	comp=Z,3.6nm,0.8s						
SCHQ	Schefferville	73.09	2	P	P	20 25 59.1	-0.6
	comp=Z,2.1nm,0.8s,baz=181,slow=5.0,SNR=3.9						
	comp=Z,2.1nm,0.8s						
YHH	Holmes Hill	73.50	331	P	P	20 26 04.5	+1.8
GCMT	Greycliff	73.72	332	P	P	20 26 04.9	+1.1
BOZ	Bozeman (W)	74.47	331	P	P	20 26 09.4	+1.2
MFID	Camas Ranch	74.95	327		P	20 26 12.8	+1.8
TORD	Torodi Ar. Bea	76.75	71	P	P	20 26 21.1	-0.6
	comp=Z,7.3nm,0.6s,baz=255,slow=5.4,SNR=13						
	comp=Z,7.3nm,0.6s						
G08A	Pilot Rock	77.87	327		P	20 26 28.7	+1.3
VNDA	Vanda	79.69	190	P	P	20 26 39.3	+2.5
	comp=Z,0.8nm,0.9s,baz=148,slow=3.3,SNR=2.8						
	comp=Z,0.8nm,0.9s						
PGC	Sidney	82.39	327		P	20 26 53.3	+2.0
PGC				IAmb	IAmb	20 26 54.3	
	comp=Z,14nm,0.7s						
TAM	Tamanrasset	83.85	64	P	P	20 27 00.3	+0.6
ESDC	Sonseca Array	84.01	45		P	20 27 01.1	+1.1
ESDC	Sonseca Array	84.01	45	P	P	20 27 00.9	+0.9
	comp=Z,1.9nm,0.9s,baz=250,slow=5.6,SNR=11						
	comp=Z,1.9nm,0.9s						
YKA	Yellowknife Ar	88.27	341	P	P	20 27 21.5	+1.3
YKA	Yellowknife Ar	88.27	341	P	P	20 27 21.2	+1.0
	comp=Z,9.8nm,0.8s,baz=134,slow=4.3,SNR=73						
YKA				pP	pP	20 27 53.5	-0.2
	comp=Z,1.6nm,0.7s,baz=133,slow=4.2,SNR=3.4						
YKA				sP	sP	20 28 08.8	+1.5
	comp=Z,1.1nm,0.6s,baz=139,slow=4.3,SNR=2.4						
	comp=Z,9.8nm,0.8s						
ICESG	Greenland Ices	89.94	10	*i* P	P	20 27 28.4	0.0
ICESG				IAmb	IAmb	20 27 29.9	
	comp=Z,13nm,1.0s						
EKA	Eskdalemuir Ar	92.30	32	P	P	20 27 38.0	-1.2
	comp=Z,0.4nm,0.5s,baz=235,slow=4.0,SNR=4.2						
	comp=Z,0.4nm,0.5s						
SUMG	Summit	93.20	9		P	20 27 44.5	+1.0
SUMG				IAmb	IAmb	20 27 46.8	
	comp=Z,5.7nm,0.8s						
SUMG	Summit	93.20	9	*i* P	P	20 27 44.0	+0.5
SUMG				IAmb	IAmb	20 27 48.3	
	comp=Z,8.2nm,1.1s						
NEEM	North Greenlan	96.38	4	*i* P	P	20 27 58.2	+0.4
NEEM				IAmb	IAmb	20 28 01.5	
	comp=Z,19nm,1.7s						
H11S2	WAKE ISLAND Hy	127.06	279	T	T	22 53 14.4	
	baz=101,slow=74,SNR=42						
H11N3	WAKE ISLAND Hy	127.06	281	T	T	22 53 12.7	
	baz=100,slow=74,SNR=15						
H11S1	WAKE ISLAND Hy	127.06	280	T	T	22 53 14.2	
	baz=101,slow=74,SNR=29						
H11N2	WAKE ISLAND Hy	127.07	281	T	T	22 53 14.0	
	baz=100,slow=74,SNR=12						
H11S3	WAKE ISLAND Hy	127.07	279	T	T	22 53 13.1	
	baz=101,slow=74,SNR=21						
H11N1	WAKE ISLAND Hy	127.08	281	T	T	22 53 15.5	
	baz=100,slow=74,SNR=12						
ASAR	Alice Springs	132.32	209	PKP	PKiKP	20 33 44.4	-0.3
	comp=Z,0.8nm,0.6s,baz=140,slow=1.9,SNR=15						
BVAR	Borovoye Array	133.55	33	PKP	PKiKP	20 33 46.1	-0.1
	comp=Z,0.7nm,0.6s,baz=300,slow=1.6,SNR=4.9						
WRA	Warramunga Arr	135.27	212	PKP	PKiKP	20 33 50.4	-0.4
	comp=Z,1.4nm,0.7s,baz=146,slow=1.7,SNR=11						
WRA				pPKP	pPKPdf	20 34 25.4	+1.2
	comp=Z,0.4nm,0.5s,baz=140,slow=1.7,SNR=2.0						
KURBB	Kurchatov Arra	139.05	31	PKP	PKPdf	20 33 55.9	+0.7
	comp=Z,0.9nm,0.7s,baz=304,slow=2.6,SNR=7.7						
ZALV	Zalesovo Beam	139.42	23	PKP	PKPdf	20 33 56.6	+0.9
	comp=Z,2.8nm,0.5s,baz=316,slow=4.1,SNR=16						
MKAR	Makanchi Array	143.42	33	PKP	PKPdf	20 34 03.3	+0.1
	comp=Z,0.8nm,0.5s,baz=336,slow=3.2,SNR=5.3						
HEH	HeiHe	145.63	341	*e*P	PKPab	20 34 08.0	+0.2
HEH				pmax	pmax		
	comp=Z,17nm,0.7s						
USRK	Ussuriysk Ar.	148.78	330	PKPbc	PKiKP	20 34 18.1	+0.5
	comp=Z,7.7nm,0.8s,baz=41,slow=3.0,SNR=9.1						
MJAR	Matsushiro Arr	149.86	312	PKPbc	PKiKP	20 34 20.7	+0.6
	comp=Z,5.2nm,0.7s,baz=89,slow=1.7,SNR=20						
SONM	Songino Array	150.56	6	PKPbc	PKiKP	20 34 22.1	+0.7
	comp=Z,7.9nm,0.7s,baz=322,slow=1.5,SNR=35						
SONM				pPKPbc	pPKPbc	20 34 56.5	+1.2
	comp=Z,1.6nm,0.7s,baz=318,slow=1.9,SNR=2.4						
KSRS	Korea Array	155.83	325	PKPbc	PKPdf	20 34 33.7	+11
	comp=Z,0.9nm,0.7s,baz=30,slow=3.0,SNR=2.9						
KSRS				PKPab	PKPab	20 34 51.5	+1.3
	comp=Z,1.4nm,0.9s,baz=47,slow=2.4,SNR=4.6						
HHC	Hu-ho-hao-te	157.74	358	*e*P	PKPdf	20 34 26.8	+1.3
LZH	Lanzhou	161.50	18	*e*PKP	PKPdf	20 34 33.3	+3.3
LZH				pPKP	pPKPdf	20 34 58.8	-6.1
LZH				sPKP		20 35 07.0	
NJ2	Nanjing	164.64	333	*e*P	PKPdf	20 34 32.0	-0.9
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
PZH	PanZhiHua	168.56	44	PKP	PKPdf	20 34 34.0	-2.2

NNC 29 20:31:01.1±5.3, 36°.93N×82°.48E, h0^{km}, mb4.0, mpv3.5, 2C-3D, Error ellipse: s-maj=56.1km s-min=39.8km az=70.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDGK	Podgornoye	6.79	341	⇓Pn	Pn	20 32 42.7	+0.5
	1.6nm,0.5s						
PDGK				⇑Sn	Sn	20 34 02.7	+2.4
	12nm,0.6s						
MRKS	Merke	9.19	312	Pg		20 31 56.6	
	7.0nm,0.3s						
MRKS				Lg	Lg	20 33 06.7	
	5.4nm,0.4s						
MK31	Makanchi Array	9.86	359	Pn	Pn	20 33 23.9	-0.2
	0.4nm,0.3s,baz=182,slow=12,SNR=20						
MK31				⇑Sn	Sn	20 35 15.9	+0.3
	1.4nm,0.6s,baz=181,slow=25						
MAKZ	Makanchi	9.88	358	⇓Pn	Pn	20 33 23.7	-0.7
	1.0nm,0.5s						
MAKZ				⇓Sn	Sn	20 35 16.3	+0.2
	1.2nm,0.5s						
IUG	Iuzhnay	10.93	302	Pg		20 31 46.3	
	12nm,0.1s						
IUG				Lg	Lg	20 32 47.8	
	13nm,0.3s						
GTA	Gaotai	13.86	74	P	P	20 34 26.3	-1.3
GTA				pP	Pn	20 34 36.5	+18
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						

DJA ***29*** *20:31:04.9±4.0, 15°N±43°×14°5E±°, h50^{km}±25^{km}, M5.3/5, mb5.2/5, mB5.3/2, MLv5.4/1, Mw(mB)4.7/2*

IDC ***29*** *20:31:12.1±1.0, 13°.32N×145°.07E, h42^{km}±6^{km}, mb4.0/19, mbtmp4.2/19, MS3.7/10, Error ellipse: s-maj=21.2km s-min=11.9km az=80.0*

NEIC ***29*** *20:31:13.0±1.8, 13°.19N±0°.06×144°.94E±0°.06, h48^{km}±5^{km}, mb4.7/72, Error ellipse: s-maj=9.0km s-min=8.8km az=200.0*

ISC 29 20:31:11.3±0.4, **13°.15N**±0°.05×**145°.08E**±0°.08, **h35**^{km}, **n135**, σ**1**^{s}**40**/135, **mb4.6**/61, **MS3.9**/14, **2D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	0.48	335		Pn	20 31 22.8	+1.1
GUMO					Sn	20 31 29.9	+0.9
GUMO	Guam	0.48	335	P	Pn	20 31 22.7	+0.9
	6µm,0.3s,baz=128,slow=16,SNR=3439						
GUMO				S	Sn	20 31 29.5	+0.5
	9µm,0.3s,baz=327,slow=6.5,SNR=7.5						
GUMO				LR	LR	20 31 40.5	
	comp=Z,15µm,19.1s,baz=181,slow=87						
JCJ	Chichijima	14.14	349	Pn	Pn	20 34 31.5	+2.4
PATS	Pohnpei	14.46	114	Pn	Pn	20 34 31.9	-1.7
RABL	Rabaul	18.61	157	P	P	20 35 24.4	-1.4
RABL				IAmb	IAmb	20 35 31.9	
	comp=Z,32nm,0.6s						
SWI	Sorong	19.53	226	P	Pn	20 35 43.2	+5.8
DAV	Davao City (W)	20.11	254	LR	LR	20 42 01.4	
	comp=Z,189nm,21.3s,baz=73,slow=32						
FAKI	Fak Fak	20.42	219		P	20 35 47.0	+1.3
FAKI	Fak Fak	20.42	219	P	Pn	20 35 50.9	+3.0
	comp=Z,73nm,0.9s						
JOW	Kunigami	20.81	313	P	P	20 35 48.7	-1.2
JOW				IAmb	IAmb	20 35 53.7	
	comp=Z,30nm,0.7s						
JOW	Kunigami	20.81	313	P	P	20 35 50.2	+0.4
	comp=Z,28nm,0.6s,baz=137,slow=10.0,SNR=6.1						
JOW				LR	LR	20 42 13.2	
	comp=Z,213nm,21.6s,baz=42,slow=32						
	comp=Z,28nm,0.6s						
H11S3	WAKE ISLAND Hy	21.45	73	T	T	20 58 39.5	
	baz=259,slow=75,SNR=61						
H11S1	WAKE ISLAND Hy	21.47	73	T	T	20 58 39.6	
	baz=259,slow=75,SNR=61						
H11S2	WAKE ISLAND Hy	21.47	73	T	T	20 58 37.2	
	baz=259,slow=75,SNR=43						
H11N1	WAKE ISLAND Hy	21.91	70	T	T	20 58 49.8	
	baz=257,slow=75,SNR=142						
H11N2	WAKE ISLAND Hy	21.92	70	T	T	20 58 50.8	
	baz=257,slow=75,SNR=115						
H11N3	WAKE ISLAND Hy	21.92	70	T	T	20 58 51.2	
	baz=257,slow=75,SNR=200						
JNU	Nakatsue	23.73	329	P	P	20 36 19.9	-0.5
JNU	Nakatsue	23.73	329	LR	LR	20 44 08.6	
	comp=Z,38nm,19.7s,baz=158,slow=33						
MJAR	Matsushiro Arr	24.10	346	P	P	20 36 22.7	-1.0
MJAR	Matsushiro Arr	24.10	346	P	P	20 36 22.0	-1.6
	comp=Z,2.1nm,0.7s,baz=168,slow=7.8,SNR=7.8						
MJAR				LR	LR	20 45 00.5	
	comp=Z,117nm,21.1s,baz=157,slow=35						
	comp=Z,2.1nm,0.7s						
MAJO	Matsushiro	24.10	346	P	P	20 36 23.2	-0.5
YULB	Yu-li	24.73	298	P	P	20 36 27.1	-2.6
YULB				IAmb	IAmb	20 36 52.9	
	comp=Z,18nm,1.0s						
TWG	Pinlang	24.74	296	P	P	20 36 26.7	-3.0
TWG				IAmb	IAmb	20 36 30.5	
	comp=Z,19nm,1.1s						
SSLB	Suanglung	25.17	298	P	P	20 36 31.4	-2.2
SSLB				IAmb	IAmb	20 36 46.5	
	comp=Z,22nm,0.9s						
TPUB	Ta-pu	25.28	297	P	P	20 36 32.2	-2.4
TPUB				IAmb	IAmb	20 36 43.5	
	comp=Z,31nm,1.1s						
MRSI	Marisa	26.15	243	P	P	20 36 42.9	+0.3
LUWI	Luwuk	26.23	239	P	P	20 36 41.4	-1.8
HNR	Honiara	26.86	146	LR	LR	20 46 55.6	
	comp=Z,112nm,21.8s,baz=308,slow=35						
TOLI2	Tolitoli	26.87	246	P	P	20 36 47.2	-1.8
TOLI2				IAmb	IAmb	20 36 50.4	
	comp=Z,12nm,0.9s						
COEN	Coen	27.00	184	P	P	20 36 50.4	+0.2
MYLDM	Lahad Datu	27.38	256	P	P	20 36 52.9	-0.8
MYLDM				IAmb	IAmb	20 37 01.7	
	comp=Z,16nm,0.8s						
KSRS	Korea Array	28.64	331	P	P	20 37 03.8	-0.9
	comp=Z,2.6nm,0.6s,baz=144,slow=9.4,SNR=14						
KSRS				PcP	PcP	20 40 15.5	+0.5
	comp=Z,2.6nm,1.0s,baz=154,slow=2.6,SNR=6.1						
	comp=Z,2.6nm,0.6s						
MTN	Manton Dam	29.29	209	P	P	20 37 09.9	-0.7
MTN				IAmb	IAmb	20 37 11.6	
	comp=Z,13nm,0.8s						
NJ2	Nanjing	30.52	312	*e*P	P	20 37 22.0	+0.6
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SOEI	Soe	30.74	223	P	P	20 37 21.2	-2.3
JKA	Kamikawa-asahi	30.93	357	P	P	20 37 24.8	0.0
KNRA	Kununurra	32.88	210		P	20 37 41.9	-0.3
USRK	Ussuriysk Ar.	32.91	343	P	P	20 37 41.6	-0.6
	comp=Z,1.4nm,0.7s,baz=182,slow=10,SNR=2.3						
	comp=Z,1.4nm,0.7s						
SBUM	Sibu	34.19	255	P	P	20 37 52.2	-1.6
SBUM				IAmb	IAmb	20 37 54.7	
	comp=Z,13nm,1.5s						
WB0	Warramunga Arr	34.36	198	P	P	20 37 54.8	-0.3
WB0				IAmb	IAmb	20 38 05.6	
	comp=Z,21nm,1.4s						
WRA	Warramunga Arr	34.54	198		P	20 37 55.8	-0.9
WRA	Warramunga Arr	34.54	198	P	P	20 37 57.1	+0.4
	comp=Z,7.6nm,0.8s,baz=19,slow=9.4,SNR=29						
WRA				PcP	PcP	20 40 32.3	+1.1
	comp=Z,4.1nm,0.8s,baz=9.2,slow=3.3,SNR=14						
	comp=Z,7.6nm,0.8s						
BNX	BinXian	35.77	339	⇓P	P	20 38 09.8	+2.8
BNX				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HNS	HongShan	36.29	317	⇓P	P	20 38 11.0	-0.5
HNS				pP	pP	20 38 23.5	+2.3
HNS				pmax	pmax		
	comp=Z,15nm,0.7s						
HNS				LR	LR		
	comp=N,170nm,15.2s						
HNS				LR	LR		
	comp=E,120nm,12.3s						
HNS				LR	LR		
	comp=Z,180nm,23.0s						
KSM	Kuching	36.32	254	P	P	20 38 10.2	-1.9
KSM				IAmb	IAmb	20 38 12.5	
	comp=Z,7.9nm,0.7s						
FITZ	Fitzroy Crossi	36.49	212		P	20 38 13.5	+0.1
AS31	Alice Springs	38.19	197		P	20 38 28.1	+0.3
ASAR	Alice Springs	38.19	197	P	P	20 38 28.1	+0.3
ASAR	Alice Springs	38.19	197	P	P	20 38 28.6	+0.8
	comp=Z,3.0nm,0.6s,baz=19,slow=11,SNR=53						
ASAR				PP	PnPn	20 39 59.0	+1.6
	comp=Z,1.4nm,1.0s,baz=20,slow=11,SNR=4.1						
ASAR				PcP	PcP	20 40 43.3	+1.2
	comp=Z,3.3nm,0.8s,baz=34,slow=2.9,SNR=12						
	comp=Z,3.0nm,0.6s						
EIDS	Eidsvold	38.73	171	P	P	20 38 33.0	+0.7
EIDS				IAmb	IAmb	20 38 57.5	
	comp=Z,24nm,1.5s						
HEH	HeiHe	39.72	342	*e*P	P	20 38 39.8	-0.5
HEH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC	Hu-ho-hao-te	40.23	320	*e*P	P	20 38 44.5	-0.4
HHC				pmax	pmax		
	comp=Z,29nm,0.6s						
HHC				pmax	pmax		
	comp=Z,28nm,4.1s						
DZM	Mont Dzumac	40.80	149	P	P	20 38 49.3	-0.3
BTO	Baotou	41.09	318	*e*P	P	20 38 53.0	+1.1
BTO				pP	sP	20 39 05.5	-0.2
BTO				sP	pP	20 39 10.8	+9.1
BTO				S	S	20 45 04.0	+1.4
BTO				sS	sS	20 45 24.0	+6.2
BTO				SS	SS	20 48 02.8	-3.0
BTO				pmax	pmax		
	comp=Z,26nm,0.7s						
BTO				pmax	pmax		
	comp=Z,250nm,6.5s						
BTO				LR	LR		
	comp=N,780nm,18.7s						
BTO				LR	LR		
	comp=E,730nm,19.3s						
BTO				LR	LR		
	comp=Z,950nm,20.3s						
MBWA	Marble Bar	42.22	216		P	20 39 01.1	-0.1
MYKOM	Kota Tinggi	42.33	258	P	P	20 39 00.7	-1.6
MYKOM				IAmb	IAmb	20 39 02.5	
	comp=Z,18nm,1.1s						
PSA00	Pilbara Seismi	42.48	216	P	P	20 39 03.2	0.0
PSA00				IAmb	IAmb	20 39 04.8	
	comp=Z,13nm,0.9s						
PSA00	Pilbara Seismi	42.48	216	P	P	20 39 03.3	0.0
PSA00				IAmb	IAmb	20 39 04.9	
	comp=Z,36nm,0.9s						
PZH	PanZhiHua	42.67	295	P	P	20 39 04.0	-1.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LZH	Lanzhou	43.45	309	*e*P	P	20 39 11.5	+0.2
LZH				pP	pP	20 39 22.0	+0.8
LZH				sP	sP	20 39 27.5	+2.3
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
LZH				LR	LR		
	comp=N,400nm,15.5s						
LZH				LR	LR		
	comp=E,400nm,15.8s						
LZH				LR	LR		
	comp=Z,540nm,14.8s						
ARMA	Armidale	43.77	172	P	P	20 39 14.7	+0.9
ARMA				IAmb	IAmb	20 39 19.2	
	comp=Z,12nm,1.1s						
KULM	Kulim	44.48	264	P	P	20 39 18.8	-0.9
KULM				IAmb	IAmb	20 39 32.5	
	comp=Z,16nm,1.3s						
CM31	Chiang Mai Arr	44.61	283	P	P	20 39 19.9	-0.7
CM31				IAmb	IAmb	20 39 21.1	
	comp=Z,9.7nm,1.1s						
CMAR	Chiang Mai Arr	44.61	283	P	P	20 39 19.9	-0.7
CMAR	Chiang Mai Arr	44.61	283	P	P	20 39 20.6	-0.1
	comp=Z,2.6nm,0.8s,baz=84,slow=6.5,SNR=24						
CMAR				PcP	PcP	20 41 03.6	+0.4
	comp=Z,0.8nm,0.6s,baz=95,slow=3.4,SNR=7.3						
	comp=Z,2.6nm,0.8s						
STKA	Stephens Creek	44.89	184	P	P	20 39 22.2	-0.4
STKA	Stephens Creek	44.89	184	P	P	20 39 22.6	0.0
	comp=Z,4.9nm,0.9s,baz=24,slow=7.5,SNR=6.9						
	comp=Z,4.9nm,0.9s						
BBOO	Buckleboo	46.51	190	P	P	20 39 35.3	-0.1
FORT	Forrest	46.64	200	P	P	20 39 36.9	+0.5
FORT				IAmb	IAmb	20 39 44.6	
	comp=Z,9.7nm,0.9s						
SONM	Songino Array	47.20	325	P	P	20 39 40.2	-0.7
SONM	Songino Array	47.20	325	P	P	20 39 40.1	-0.7
	comp=Z,1.6nm,0.7s,baz=141,slow=7.7,SNR=10						
SONM				PcP	PcP	20 41 12.0	+0.1
	comp=Z,1.4nm,0.9s,baz=130,slow=2.3,SNR=2.5						
SONM				ScP	ScP	20 45 00.7	-2.7
	comp=Z,0.2nm,0.5s,baz=123,slow=5.3,SNR=3.7						
	comp=Z,1.6nm,0.7s						
GTA	Gaotai	47.61	312	*e*P	P	20 39 41.3	-2.9
GTA				sP	sP	20 40 03.3	+5.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				LR	LR		
	comp=N,290nm,18.2s						
GTA				LR	LR		
	comp=E,320nm,18.9s						
GTA				LR	LR		
	comp=Z,440nm,18.5s						
ADK	Adak	49.34	30	P	P	20 39 57.2	+0.2
YAK	Yakutsk	50.05	351		P	20 40 01.8	-0.5
TOO	Toolangi	50.45	180	P	P	20 40 06.3	+0.6
MORW	Morawa	50.48	213	P	P	20 40 06.0	0.0
LSA	Lhasa	52.38	297		P	20 40 20.1	-0.8
LSA				IAmb	IAmb	20 40 22.8	
	comp=Z,4.7nm,0.7s						
MKAR	Makanchi Array	61.94	316	P	P	20 41 26.4	-1.3
MKAR	Makanchi Array	61.94	316	P	P	20 41 26.4	-1.4
	comp=Z,1.7nm,0.6s,baz=92,slow=8.4,SNR=19						
	comp=Z,1.7nm,0.6s						
ZALV	Zalesovo Beam	62.10	324	P	P	20 41 26.8	-1.7
	comp=Z,0.4nm,0.4s,baz=110,slow=8.3,SNR=1.9						
	comp=Z,0.4nm,0.4s						
MAKZ	Makanchi	62.16	316		P	20 41 27.9	-1.3
MAKZ				IAmb	IAmb	20 41 50.1	
	comp=Z,3.2nm,0.7s						
K17K	Iditarod	63.41	25	P	P	20 41 37.8	+0.6
K17K				IAmb	IAmb	20 42 05.2	
	comp=Z,6.1nm,0.8s						
J19K	Poorman	65.03	25		P	20 41 47.5	-0.3
KURK	Kurchatov	65.05	320		P	20 41 46.1	-1.9
KURK				IAmb	IAmb	20 41 46.9	
	comp=Z,3.5nm,0.6s						
KURBB	Kurchatov Arra	65.09	320	P	P	20 41 46.6	-1.8
	comp=Z,3.3nm,0.6s,baz=103,slow=6.5,SNR=31						
KURBB				LR	LR	21 10 35.7	
	comp=Z,118nm,19.8s,baz=174,slow=36						
	comp=Z,3.3nm,0.6s						
K20K	Telida	65.44	26	P	P	20 41 50.3	-0.1
K20K				IAmb	IAmb	20 42 04.9	
	comp=Z,3.6nm,0.7s						
CAST	Castle Rocks	66.30	26		P	20 41 54.8	-1.2
CAST				IAmb	IAmb	20 42 08.8	
	comp=Z,4.5nm,0.7s						
BPAW	Bear Paw Mtn.	66.98	25		P	20 42 00.1	-0.2
PWL	Port Wells	67.26	29	P	P	20 42 01.4	-0.7
MLY	Manley	67.37	24		P	20 42 02.5	-0.3
NIL	Nilore	67.78	301	P	P	20 42 04.8	-1.2
NIL				IAmb	IAmb	20 42 22.1	
	comp=Z,8.5nm,0.9s						
SCM	Sheep Creek Mo	67.97	28	P	P	20 42 06.5	-0.2
KLU	Klutina	68.54	29	P	P	20 42 09.8	-0.5
ILAR	Eielson Array	68.88	25	P	P	20 42 10.2	-2.0
ILAR	Eielson Array	68.88	25	P	P	20 42 09.9	-2.3
	comp=Z,1.2nm,0.6s,baz=250,slow=5.9,SNR=21						
	comp=Z,1.2nm,0.6s						
J25K	Salcha River,	69.47	26		P	20 42 14.9	-1.0
VRDI	Verde Repeater	69.66	29		P	20 42 15.6	-1.8
DOT	Dot Lake	69.83	27	P	P	20 42 17.5	-0.7
KKAR	Karatay Array	69.89	311	P	P	20 42 17.7	-1.2
BVAR	Borovoye Array	70.39	322	P	P	20 42 19.6	-2.2
	comp=Z,2.0nm,0.7s,baz=102,slow=8.5,SNR=9.5						
BVAR				LR	LR	21 12 19.4	
	comp=Z,123nm,21.5s,baz=136,slow=35						
	comp=Z,2.0nm,0.7s						
GRNC	Granite Creek	70.40	30	P	P	20 42 21.3	-0.6
GRNC				IAmb	IAmb	20 42 50.1	
	comp=Z,5.9nm,0.7s						
BCAR	Beaver Creek A	70.74	27	P	P	20 42 23.6	-0.1
H02S1	DAWSON INLET T	75.07	38	T	T	22 05 28.7	
	SNR=7.3						
R33M	Jennings River	75.72	32		P	20 42 52.6	-0.7
AB31	Akbulak array	77.00	318		P	20 42 59.1	-1.5
ABKAR	Akbulak array	77.00	318		P	20 42 58.9	-1.7
ARTI	Arti	77.34	325	P	P	20 43 01.9	-0.5
	comp=Z,0.5nm,0.3s,baz=174,slow=23,SNR=1.6						
	comp=Z,0.5nm,0.3s						

AKTO	Aktyubinsk	78.13	319	LR	LR	21 18 40.0	
	comp=Z,70nm,19.0s,baz=84,slow=36						
YBH	Yreka Blue Hor	83.01	49		P	20 43 34.1	+0.7
YBH				IAmb	IAmb	20 43 59.6	
	comp=Z,11nm,1.5s						
YKA	Yellowknife Ar	83.16	27	P	P	20 43 32.2	-1.3
	comp=Z,0.7nm,0.6s,baz=230,slow=6.1,SNR=4.2						
	comp=Z,0.7nm,0.6s						
PINE	Pine Mountain	83.86	47		P	20 43 38.6	+0.7
K05A	Summer Lake	84.12	48	P	P	20 43 39.6	+0.3
K05A				IAmb	IAmb	20 43 54.2	
	comp=Z,5.2nm,0.9s						
NEW	Newport	85.42	42		P	20 43 45.3	-0.1
NEW				IAmb	IAmb	20 43 47.5	
	comp=Z,4.9nm,0.9s						
BMO	Blue Mountains	86.16	45		P	20 43 49.1	-0.1
BMO				IAmb	IAmb	20 43 51.5	
	comp=Z,4.8nm,1.0s						
PLID	Pearl Lake	86.99	44		P	20 43 52.7	-0.8
PLID				IAmb	IAmb	20 44 08.0	
	comp=Z,3.0nm,0.7s						
NVAR	Mina Array Bea	87.04	51	P	P	20 43 54.3	+0.5
NVAR	Mina Array Bea	87.04	51	P	P	20 43 54.5	+0.7
	comp=Z,1.0nm,0.6s,baz=254,slow=6.9,SNR=7.5						
	comp=Z,1.0nm,0.6s						
HLID	Hailey	88.51	46		P	20 44 01.0	+0.3
HLID				IAmb	IAmb	20 44 03.3	
	comp=Z,3.0nm,0.9s						
ELK	Elko	88.71	49		P	20 44 01.8	0.0
ELK				IAmb	IAmb	20 44 30.2	
	comp=Z,3.8nm,0.8s						
WCT	Wildcat Mounta	88.74	53	P	P	20 44 00.9	-0.9
WCT				IAmb	IAmb	20 44 04.0	
	comp=Z,3.4nm,1.0s						
QSM	Queen of Sheba	88.77	53	P	P	20 44 01.8	-0.1
QSM				IAmb	IAmb	20 44 13.3	
	comp=Z,4.1nm,1.0s						
VNDA	Vanda	91.02	176	P	P	20 44 12.8	+1.5
	comp=Z,1.3nm,0.8s,baz=355,slow=6.8,SNR=7.3						
	comp=Z,1.3nm,0.8s						
PDAR	Pinedale Array	92.13	45	P	P	20 44 16.8	-0.9
	comp=Z,0.2nm,0.3s,baz=306,slow=4.0,SNR=2.3						
	comp=Z,0.2nm,0.3s						
NOA	NORSAR Array B	97.53	339	LR	LR	21 32 03.4	
	comp=Z,30nm,19.6s,baz=45,slow=38						
MAW	Mawson	99.10	203	P	Pdif	20 44 48.9	+0.5
	comp=Z,1.9nm,0.9s,baz=90,slow=8.1,SNR=3.7						
MAW				LR	LR	21 26 40.1	
	comp=Z,87nm,21.9s,baz=284,slow=34						
SNAA	Sanae	118.39	191	PKP	PKPdf	20 49 54.4	-0.2
	comp=Z,1.2nm,0.8s,baz=215,slow=5.2,SNR=6.3						
ESDC	Sonseca Array	120.06	333	PKP	PKPdf	20 49 58.7	-0.2
	comp=Z,0.3nm,0.7s,baz=360,slow=2.7,SNR=5.2						
BOSA	Boshof	122.25	244	PKP	PKPdf	20 50 02.7	-0.7
	comp=Z,4.9nm,1.1s,baz=139,slow=4.7,SNR=4.3						
WIN	Windhoek	129.81	252	PKPdf	PKPdf	20 50 18.0	-0.1
TORD	Torodi Ar. Bea	135.28	304	PKP	PKPdf	20 50 27.9	-0.5
	comp=Z,2.0nm,0.4s,baz=39,slow=2.5,SNR=4.7						
PLCA	Paso Flores	138.47	138	PKP	PKPdf	20 50 34.6	+0.9
	comp=Z,2.4nm,0.8s,baz=258,slow=2.8,SNR=4.9						
DBIC	Dimbokro	144.22	302	PKP	PKPab	20 50 42.0	-0.4
	comp=Z,11nm,0.6s,baz=88,slow=3.3,SNR=17						
CFA	Coronel Fontan	144.34	127	PKP	PKPab	20 50 43.9	+1.4
	comp=Z,10nm,0.8s,baz=245,slow=3.6,SNR=25						
LPAZ	La Paz	147.75	100	PKPbc	PKPdf	20 50 53.0	+1.7
	comp=Z,2.1nm,0.4s,baz=244,slow=1.6,SNR=11						

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*TIR **29** 20:33:53.7, 40°.42N×20°.77E, h25^{km}±2^{km}, Md2.9/6, Ml3.1/5*
*THE **29** 20:33:55.5, 40°N±2°×2°1E±°, h0^{km}±2^{km}, M2.5/18, MLh2.5/18*
*ATH **29** 20:33:55.3, 40°.43N×20°.79E, h12^{km}±2^{km}, ML2.6/13, Manual Solution by A.Agalos First location: 2019/06/29 20:34:52, This location: 2019/06/29 20:52:18 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*SKO **29** 20:33:56.4, 40°.43N×20°.86E, h17^{km}, ML2.6*
*BEO **29** 20:33:56.5±0.3, 40°.47N×20°.90E, h0^{km}, ML2.2/4*
ISC 29 20:33:55.3±1.0, **40°.43N**±0°.02×**20°.76E**±0°.02, **h5**^{km}±9^{km}, **n78**, σ**1^{s}.16**/101, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.19	6	Pg	Pg	20 33 58.5	-0.7
KBN				Sg	Sg	20 34 02.1	+0.4
KBN				AML	AML	20 34 04.2	
	7.3nm,0.3s						
NEST	Nestorio	0.22	95	Pg	Pg	20 33 59.8	+0.2
NEST				Sg	Sg	20 34 03.1	+0.6
NEST				AML	AML	20 34 04.9	
	9.6nm,0.4s						
NEST				AMd		20 34 35.2	
NEST	Nestorio	0.22	95	P	Pg	20 34 00.1	+0.5
NEST				S	Sg	20 34 04.3	+1.8
NEST	Nestorio	0.22	95	P	Pg	20 34 00.0	+0.4
NEST				S	Sg	20 34 03.2	+0.6
PENT	Pentalofos	0.37	129	P	Pg	20 34 02.7	+0.2
PENT				S	Sg	20 34 08.4	+1.0
PENT	Pentalofos	0.37	129	P	Pg	20 34 02.7	+0.2
PENT				S	Sg	20 34 07.9	+0.5
FNA	Florina	0.58	53	Pg	Pg	20 34 05.5	-1.0
FNA				Sg	Sg	20 34 14.6	+0.5
FNA				AML	AML	20 34 19.8	
	4.8nm,0.3s						
FNA				AMd		20 34 53.5	
FNA	Florina	0.58	53	P	Pg	20 34 06.2	-0.3
FNA				S	Sb	20 34 15.6	-1.1
FNA	Florina	0.58	53	*i* Pg	Pg	20 34 06.3	-0.3
FNA				*i* Sg	Sb	20 34 15.8	-0.9
FNA	Florina	0.58	53	*e*Pg	Pg	20 34 06.3	-0.3
FNA				*e*Sg	Sg	20 34 12.9	-1.3
FNA	Florina	0.58	53	P	Pg	20 34 06.3	-0.3
FNA				S	Sg	20 34 14.4	+0.3
KPRO	Kipourio	0.66	136	P	Pg	20 34 07.8	-0.2
KPRO	Kipourio	0.66	136	P	Pg	20 34 07.6	-0.4
OHR	Ohrid	0.68	2	*i* Pg	Pb	20 34 09.1	-0.6
OHR				*i* Sg	Sb	20 34 19.7	+0.3
OHR				*e*Lg	Lg	20 34 20.1	
	comp=E,418nm,0.5s						
OHR				*e*Lg	Lg	20 34 22.6	
	comp=N,182nm,0.4s						
JAN	Janina	0.78	175	S	Sb	20 34 22.3	+0.2
JAN	Janina	0.78	175	P	Pg	20 34 09.9	-0.3
JAN				S	Sb	20 34 21.3	-0.8
KZN	Kozani	0.78	99	P	Pg	20 34 10.2	-0.1
KZN	Kozani	0.78	99	P	Pg	20 34 10.4	+0.1
KZN				S	Sb	20 34 20.9	-1.4
SRN	Sarande	0.80	227	Pg	Pg	20 34 09.8	-0.9
SRN				Sg	Sb	20 34 22.2	-0.6
SRN				AML	AML	20 34 26.7	
	comp=N,0.8nm,0.8s						
SRN				AMd		20 35 12.0	
IGT	Igoumenitsa	0.96	200	Pg	Pg	20 34 12.1	-1.6
IGT				Sg	Sg	20 34 25.9	-0.1
IGT				AMd		20 35 23.0	
IGT	Igoumenitsa	0.96	200	P	Pg	20 34 13.7	+0.1
IGT	Igoumenitsa	0.96	200	*i* Pg	Pb	20 34 14.2	-0.1
IGT	Igoumenitsa	0.96	200	*e*Pg	Pg	20 34 13.9	+0.2
IGT				*e*Sg	Sn	20 34 30.2	+0.9
IGT	Igoumenitsa	0.96	200	P	Pg	20 34 13.8	+0.2
VLO	Vlora	0.97	273	Pn	Pg	20 34 12.2	-1.6
VLO				Sn	Sg	20 34 26.3	-0.1
VLO				AMd		20 35 12.8	
KEK	Kerkira	1.03	226	P	Pb	20 34 15.4	-0.1
TIR	Tirane	1.14	324	*e*Pg	Pg	20 34 18.5	+1.3
TIR				*e*Sg	Sn	20 34 35.8	+1.9
TIR	Tirane	1.14	324	P	Pn	20 34 17.5	-0.4
TETR	Tetrakomo, Epi	1.16	160	P	Pb	20 34 17.3	-0.5
TETR	Tetrakomo, Epi	1.16	160	P	Pb	20 34 16.7	-1.1
THL	Klokotos Trika	1.29	132	P	Pn	20 34 19.0	-1.0
THL				S	Sg	20 34 40.0	+3.1
THL	Klokotos Trika	1.29	132	P	Pn	20 34 19.0	-1.0
THL				S	Sg	20 34 37.6	+0.8
TYRN	Tyrnavos	1.34	122	P	Pn	20 34 19.8	-0.8
TYRN	Tyrnavos	1.34	122	P	Pn	20 34 19.8	-0.8
AMPL	Ampelaki	1.55	167	P	Pb	20 34 24.2	-0.1
VAY	Valandovo	1.63	56	*i* Pn	Pb	20 34 25.5	-0.3
VAY				*i* Sn	Sg	20 34 50.1	+2.3
VAY				*e*Lg	Lg	20 34 55.1	
	comp=E,49nm,0.6s						
VAY				*e*Lg	Lg	20 34 55.4	
	comp=N,138nm,1.3s						
LKD2	Lefkada island	1.64	183	P	Pb	20 34 26.1	+0.1
THE	Thessaloniki	1.69	83	*i* Pn	Pb	20 34 25.6	-1.2
THE				*i* Sn	Sg	20 34 49.7	+0.1
EVR	Evrytania	1.71	152	P	Pb	20 34 27.4	+0.1
EVR	Evrytania	1.71	152	P	Pb	20 34 27.4	+0.1
NYDR	Nydri-Lefkada	1.72	182	P	Pn	20 34 25.1	-0.6
MAKR	Makrakomi, Fth	1.77	143	P	Pn	20 34 25.7	-0.8
KNT	Kendrikon	1.78	65	P	Pn	20 34 26.6	0.0
KNT	Kendrikon	1.78	65	*i* Pn	Pb	20 34 26.9	-1.4
KNT				*i* Sn	Sg	20 34 54.0	+1.6
KNT	Kendrikon	1.78	65	P	Pn	20 34 25.6	-1.0
HORT	Hortiatis	1.79	84	P	Pn	20 34 26.7	-0.2
HORT	Hortiatis	1.79	84	P	Pn	20 34 25.7	-1.2
SCTE	Santa Cesarea	1.79	259	Pn	Pn	20 34 26.1	-0.7
SCTE				Sn	Sb	20 34 50.3	-1.0
SCTE				AML	AML	20 34 58.0	
	comp=N,0.6nm,0.7s						
SCTE				AMd		20 35 44.4	
SCTE	Santa Cesarea	1.79	259	P	Pn	20 34 26.9	+0.1
AGG	Agios Georgios	1.86	139	P	Pb	20 34 28.7	-0.9
AGG	Agios Georgios	1.86	139	P	Pn	20 34 26.9	-0.8
FSK	Fiskardo	1.98	185	P	Pb	20 34 30.8	-0.9
FSK	Fiskardo	1.98	185	P	Pn	20 34 29.8	+0.4
ANX	Ano Chora	2.04	154	P	Pb	20 34 31.6	-1.3
PLG	Polygyros	2.05	91	P	Pb	20 34 31.1	-1.9
PLG	Polygyros	2.05	91	P	Pn	20 34 30.4	0.0
DRME	Dracevica, Mon	2.12	326	*e*Pg	Pb	20 34 33.5	-0.6
SRS	Serrai	2.25	71	P	Pn	20 34 33.8	+0.6
SRS	Serrai	2.25	71	*i* Pn	Pb	20 34 34.4	-2.1
SRS	Serrai	2.25	71	*e*Pg	Pb	20 34 34.8	-1.7
SRS				*e*Sg	Sb	20 35 03.6	-1.1
KKB	Krupnik	2.27	51	*i* Pn	Pb	20 34 36.9	+0.1
KKB				*i* Sn	Sb	20 35 04.3	-0.9
BARS	Barje	2.51	18	*i* Pn	Pn	20 34 37.4	+0.7
BARS	Barje	2.51	18	*e*Pg	Pb	20 34 39.5	-1.3
BARS				*e*Sg	Sg	20 35 14.5	-1.4
MMB	Musomishta	2.52	63	*i* Pn	Pn	20 34 37.9	+1.0
MMB				*i* Sn	Sb	20 35 09.1	-3.2
KOME	Kolasin	2.59	339	*e*Pg	Pb	20 34 40.9	-1.4
KOME				*e*Sg	Sg	20 35 17.5	-1.0
SELS	Selova	2.80	5	*e*Pn	Pn	20 34 42.1	+1.4
SJES	Sjenica	2.89	348	*e*Pn	Pn	20 34 44.2	+2.2
IVAS	Ivanjica	3.17	352	*e*Pn	Pn	20 34 48.0	+2.1
DIVS	Divibare	3.71	351	*e*Pn	Pn	20 34 55.1	+1.8
TRUS	Trudelj	3.80	356	*e*Pn	Pn	20 34 55.9	+1.5
SOKA	Soboth	7.50	328	*e*Pn	Pn	20 35 50.4	+5.0
	comp=N,3.5nm,1.5s						
OBKA	Obir	7.57	325	*e*Pn	Pn	20 35 51.7	+5.5
	comp=N,8.0nm,1.6s						
RONA	Rosalia, Austr	7.94	338	*e*Pn	Pn	20 35 56.5	+5.2
	comp=N,3.2nm,1.3s						
ABTA	Abfaltersbach	8.70	319	*e*Pn	Pn	20 36 08.8	+7.0
	comp=N,2.3nm,0.8s						
WTTA	Wattenberg	9.49	319	*e*Pn	Pn	20 36 17.0	+4.3
	comp=N,2.1nm,0.9s						
WATA	Walderalm	9.57	319	*e*Pn	Pn	20 36 20.8	+7.1
	comp=N,1.3nm,0.4s						
FETA	Feichten	9.80	316	*e*Pn	Pn	20 36 22.4	+5.5
MOTA	Moosalm	9.81	318	*e*Pn	Pn	20 36 23.0	+5.9
	comp=N,0.4nm,0.2s						

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*ISK **29** 20:39:09.4, 40°.44N×32°.95E, h5^{km}, ML3.5/28*
*AFAD **29** 20:39:10.0, 40°.44N×32°.94E, h7^{km}±2^{km}, MW3.5*
*CFUSG **29** 20:39:12.5, 40°.50N×33°.01E, h9^{km}, mb2.6/5, North Turkey Magtype MSH 3.0 from 4 stations*
ISC 29 20:39:10.2±1.0, **40°.44N**±0°.02×**32°.96E**±0°.02, **h7**^{km}±9^{km}, **n76**, σ**0^{s}.91**/104, **8C-3D**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELDT	Eldivan	0.36	82	P	Pg	20 39 17.8	+0.5
ELDT				S	Sb	20 39 23.7	-1.3
ELDT				*i* IAML		20 39 24.0	
	comp=E,5µm,0.3s						
ELDT				*i* IAML		20 39 26.0	
	comp=N,5µm,0.5s						
CMDR	Camlidere-ANKA	0.38	279	P	Pg	20 39 17.4	-0.2
DERS	Karabk-Eskip	0.52	323	P	Pg	20 39 20.3	+0.1
DERS				S	Sg	20 39 27.6	+0.6
DERS				*i* IAML		20 39 28.0	
	comp=E,6µm,0.5s						
DERS				*i* IAML		20 39 28.0	
	comp=N,3µm,0.5s						
CANT	Cankiri	0.53	71	Pg	Pb	20 39 21.1	-0.8
CANT				Sg	Sb	20 39 29.5	-0.3
GOKD	Ankara-Kalecik	0.54	133	P	Pg	20 39 20.7	0.0
GOKD				S	Sb	20 39 29.7	-0.4
GOKD				*i* IAML		20 39 33.0	
	comp=E,2µm,0.4s						
LOD	Lodumlu	0.57	195	Pg	Pg	20 39 21.0	-0.2
LOD				Sg	Sb	20 39 30.3	-0.7
ANTO	Ankara	0.58	193	Pg	Pg	20 39 21.3	-0.2
ANTO	Ankara	0.58	193	⇑P	Pg	20 39 21.6	+0.1
YENC	ankr-Yen	0.71	70	P	Pb	20 39 24.5	-0.6
YENC				S	Sg	20 39 34.1	+0.8
BCAM	Yenicaga	0.78	299	P	Pg	20 39 24.8	-0.4
SAFT	Safranbolu	0.83	346	Pg	Pg	20 39 25.2	-0.9
KBUK	KARABUK-Merkez	0.84	342	P	Pg	20 39 25.6	-0.7
ILGA	Ilgaz	0.84	43	P	Pg	20 39 26.1	-0.3
ILGA				S	Sb	20 39 38.2	-0.7
ILGA				*i* IAML		20 39 46.0	
	comp=E,1µm,0.5s						
KIBS	BOLU	0.85	269	P	Pg	20 39 25.9	-0.6
DELI	KIRIKKALE	0.86	121	P	Pg	20 39 26.4	-0.3
BR131	Keskin Array S	0.88	144	Pg	Pg	20 39 27.2	0.0
PELI	Kastamonı-Ara	0.90	17	P	Pg	20 39 27.5	-0.1
PELI				S	Sb	20 39 39.8	-0.7
PELI				*i* IAML		20 39 45.0	
	comp=E,882nm,0.4s						
BBAL	Bala	0.90	172	P	Pg	20 39 27.2	-0.4
KESK	Krkkale-Ke	0.93	149	P	Pg	20 39 28.3	+0.2
KESK				S	Sb	20 39 40.9	-0.5
KESK				*i* IAML		20 39 45.0	
	comp=N,1µm,0.6s						
KESK				*i* IAML		20 39 45.0	
	comp=E,807nm,0.3s						
YUVA	Yuva-Kibriscik	0.97	268	Pg	Pg	20 39 28.3	-0.6
YUVA				Sg	Sn	20 39 43.8	-0.8
AFSR	Afar-Bala (An	0.99	175	Pg	Pb	20 39 29.5	-0.4
AFSR				Sg	Sn	20 39 45.2	+0.1
TOS	Tosya	1.00	53	Pg	Pg	20 39 29.0	-0.5
TOS				Sg	Sn	20 39 45.0	-0.3
SUNG	orum-Sungurl	1.01	104	P	Pg	20 39 29.4	-0.3
SUNG				S	Sg	20 39 43.1	+0.2
SUNG				*i* IAML		20 39 53.0	
	comp=N,552nm,0.6s						
DEVR	Zonguldak/Devr	1.03	313	P	Pg	20 39 29.1	-0.8
DEVR				S	Sg	20 39 42.8	-0.5
DEVR				*i* IAML		20 39 48.0	
	comp=E,902nm,0.7s						
KMON	Kastamonu	1.12	33	Pn	Pn	20 39 32.3	-0.2
KMON				Sn	Sn	20 39 48.6	+0.4
KAMT	Kaman	1.22	151	Pn	Pg	20 39 33.4	-0.2
AKPI	Kirsehir/Akpin	1.23	139	P	Pg	20 39 33.5	-0.3
AKPI				S	Sg	20 39 49.7	0.0
AKPI				*i* IAML		20 39 56.0	
	comp=N,653nm,0.5s						
KKUL	Konya-Kulu	1.27	182	P	Pb	20 39 34.3	-0.2
KKUL				S	Sn	20 39 53.0	+1.1
KKUL				*i* IAML		20 39 56.0	
	comp=E,672nm,0.4s						
AUMIH	MIHALICIK	1.27	244	P	Pn	20 39 33.8	-0.7
CORM	Corum	1.30	101	Pn	Pg	20 39 35.2	0.0
BTIN	Bartın	1.31	336	P	Pn	20 39 34.6	-0.4
SEYI	Kastamonu-Seyd	1.33	26	P	Pg	20 39 35.7	-0.1
SEYI				S	Sb	20 39 51.9	-1.1
MDUB	Mudurnu	1.35	272	Pn	Pg	20 39 36.4	+0.3
CDAG	Cicekdag	1.35	127	P	Pn	20 39 35.7	0.0
KULU	Kulu	1.40	179	Pn	Pg	20 39 37.2	+0.2
KURC	Kurucasile-Bar	1.41	353	Pn	Pg	20 39 37.2	-0.2
CIDE	Kastamonu/Cide	1.44	360	P	Pn	20 39 36.5	-0.2
CIDE	Kastamonu/Cide	1.44	360	⇑P	Pb	20 39 37.1	-0.3
AYAZ	Ayas K¶y, M	1.46	80	P	Pn	20 39 37.4	+0.2
AYAZ				S	Sn	20 39 54.0	-2.6
AYAZ				*i* IAML		20 40 02.0	
	comp=E,298nm,0.6s						
AUSIV	SIVRIHISAR	1.48	228	P	Pn	20 39 36.8	-0.6
SVRH	Sivrihisar-ESK	1.48	229	Pn	Pb	20 39 37.8	-0.4
KIRS	Kirsehir-Merke	1.50	150	P	Pb	20 39 38.2	-0.3
KIRS				S	Sg	20 39 58.1	-0.2
KIRS				*i* IAML		20 40 02.0	
	comp=E,551nm,0.5s						
KIRS				*i* IAML		20 40 03.0	
	comp=N,326nm,0.3s						
KIRS	Kirsehir-Merke	1.50	150	⇑P	Pb	20 39 38.1	-0.3
KIRS				⇓S	Sg	20 39 59.2	+0.8
YOZG	Bozok Univ. Me	1.55	114	P	Pb	20 39 39.0	-0.4
YOZG				S	Sn	20 39 58.7	-0.2
YOZG				*i* IAML		20 40 02.0	
	comp=N,764nm,0.6s						
SERE	Sereflikochisa	1.56	162	Pn	Pg	20 39 39.8	-0.4
SUSU	Bolu-G¶ynk-	1.62	267	P	Pb	20 39 39.8	-0.7
SUSU				S	Sg	20 40 02.5	+0.2
SUSU				*i* IAML		20 40 09.0	
	comp=E,143nm,0.6s						
SAHE	Sakarya_HENDEK	1.66	285	P	Pb	20 39 40.1	-1.0
SAHE	Sakarya_HENDEK	1.66	285	⇑P	Pb	20 39 40.7	-0.4
SAHE				⇑S	Sb	20 40 02.1	-0.1
BZK	Bozkurt	1.71	27	Pn	Pb	20 39 41.9	-0.1
BZK	Bozkurt	1.71	27	⇑P	Pb	20 39 41.4	-0.6
CIFT	Cifteler, Eski	1.81	234	Pn	Pb	20 39 43.2	-0.6
CHBY	Cihanbeyli	1.86	182	Pn	Pb	20 39 44.1	-0.5
GULT	Gulveren	1.87	271	Pn	Pb	20 39 44.0	-0.7
KOZK	Kozakli-Nevseh	1.91	129	Pn	Pb	20 39 44.5	-1.1
YOZ	Yozgat	1.98	113	Pn	Pn	20 39 44.9	+0.6
SAUV	Serdivan-Sakar	2.03	279	Pn	Pb	20 39 46.3	-1.1
GEYV	SAKARYA_Geyve	2.03	272	P	Pn	20 39 45.6	+0.6
KAYN	Sakarya, Kayna	2.06	286	P	Pn	20 39 45.8	+0.6
DIKM	Dikmen	2.12	54	Pn	Pb	20 39 47.6	-1.3
DIKM	Dikmen	2.12	54	⇑P	Pb	20 39 49.2	+0.2
DIKM				⇑S	Sg	20 40 18.8	+0.6
SULT	Sultanhani-AKS	2.28	169	Pn	Pb	20 39 50.3	-1.5
LADK	Ladik-KONYA	2.28	192	Pn	Pb	20 39 50.2	-1.7
GULA	Gulagac	2.31	154	Pn	Pb	20 39 50.9	-1.5
CAVI	Cavuskoy	2.40	265	Pn	Pn	20 39 51.3	+1.4
KVT	Kavak	2.43	74	Pn	Pn	20 39 52.1	+1.7
ADVT	Abdulvahap	2.46	271	Pn	Pn	20 39 52.1	+1.3
SHUT	Suhut-Afyon	2.65	225	Pn	Pn	20 39 55.4	+1.9
BNN	Bunyan	2.73	125	Pn	Pn	20 39 56.7	+2.0
TVSB	Tavsanli	2.87	251	Pn	Pn	20 39 58.5	+2.0
SEV	Sevastopol'	4.14	7	Pm		20 40 14.5	
	comp=Z,4.0nm,0.2s						
SEV				*e*S	Sn	20 41 02.6	+0.2
SEV				Sm		20 41 04.2	
	comp=N,1.0nm,0.3s						
SEV				Sm		20 41 04.2	
	comp=E,3.0nm,0.3s						
YAL	Yalta	4.14	12	*e*P	Pn	20 40 14.9	+1.0
YAL				Pm		20 40 19.1	
	comp=Z,6.0nm,0.4s						
YAL				*e*S	Sn	20 41 03.4	+0.9
YAL				Sm		20 41 04.0	
	comp=N,3.0nm,0.5s						
YAL				Sm		20 41 04.0	
	comp=E,12nm,0.4s						
ALU	Alushta	4.37	14	*e*P	Pn	20 40 17.8	+0.8
ALU				Pm		20 40 18.1	
	comp=Z,3.0nm,0.2s						
ALU				*e*S	Sn	20 41 08.8	+0.6
ALU				Sm		20 41 13.7	
	comp=N,42nm,0.4s						
ALU				Sm		20 41 13.7	
	comp=E,10.0nm,0.3s						
SUDU	Sudak	4.70	18	*e*P	Pn	20 40 22.1	+0.6
SUDU				Pm		20 40 27.8	
	comp=Z,7.0nm,0.3s						
SUDU				*e*S	Sn	20 41 16.9	+0.7
SUDU				Sm		20 41 17.9	
	comp=N,20nm,0.4s						
SUDU				Sm		20 41 17.9	
	comp=E,6.0nm,0.3s						
DNZ2	Donuzlav2	4.94	2	*i* P	Pn	20 40 26.5	+1.7
DNZ2				Pm		20 40 26.9	
	comp=Z,23nm,0.3s						
DNZ2				*e*x	x	20 41 25.3	
ICOR	Ion Corvin	5.31	316	⇓P	Pn	20 40 33.6	+3.8
CFR	Carcaliu	5.92	325	⇓P	Pn	20 40 40.1	+1.8

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*HEL **29** 20:42:29.8±0.0, 67°.18N×20°.67E, h1^{km}, ML1.9, ML2.5(UPP), ML1.8(BER), Confirmed Induced event*
*IDC **29** 20:42:29.5±0.8, 67°.12N×21°.21E, h0^{km}, mbtmp2.9/4, ML2.1/4, Error ellipse: s-maj=14.6km s-min=5.9km az=115.0*
*UPP **29** 20:42:29.1±0.0, 67°.19N×20°.64E, h0^{km}, ML2.5, Confirmed Induced event*
*BER **29** 20:42:31.1±3.4, 67°.09N×20°.69E, h0^{km}, ML1.8, Suspected explosion*
ISC 29 20:42:28.4±0.7, **67°.17N**±0°.02×**20°.70E**±0°.02, **h0**^{km}, **n58**, σ**1^{s}.14**/84, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.07	225	P	Pg	20 42 30.8	+1.1
DUNU				S	Sg	20 42 31.9	+1.3
DUNU	Dundret	0.07	225	*i* P	Pg	20 42 30.8	+1.1
DUNU				*i* S	Sg	20 42 31.9	+1.3
MASU	Masugnsbyn	0.58	60	P	Pg	20 42 40.5	+1.0
MASU				S	Sg	20 42 48.0	+1.0
MASU	Masugnsbyn	0.58	60	*i* P	Pg	20 42 40.5	+1.0
MASU				*i* S	Sg	20 42 48.0	+1.0
RATU	Laukkuluspa	0.78	328	P	Pg	20 42 43.2	-0.1
RATU				S	Sg	20 42 53.5	0.0
RATU	Laukkuluspa	0.78	328	*i* P	Pg	20 42 43.2	-0.1
RATU				*i* S	Sg	20 42 53.5	0.0
KUA	Kurravaara	0.80	350	P	Pg	20 42 43.5	-0.2
KUA				S	Sg	20 42 54.5	+0.5
KUA	Kurravaara	0.80	350	*i* P	Pg	20 42 43.5	-0.2
KUA				*i* S	Sg	20 42 54.5	+0.5
ERTU	Ertsjaerv	0.85	136	P	Pg	20 42 45.3	+0.5
ERTU	Ertsjaerv	0.85	136	*e*P	Pg	20 42 45.0	+0.2
ERTU				*e*S	Sg	20 42 56.6	+0.8
SALU	Saltoluokta	0.88	285	P	Pg	20 42 45.2	0.0
SALU				S	Sg	20 42 56.6	+0.2
SALU	Saltoluokta	0.88	285	*e*P	Pg	20 42 45.1	0.0
SALU				*e*S	Sg	20 42 56.0	-0.5
SALU	Saltoluokta	0.88	285	*i* P	Pg	20 42 45.2	0.0
SALU				*i* S	Sg	20 42 56.6	+0.2
PAJU	Pajala	0.96	98	P	Pg	20 42 47.2	+0.4
PAJU				S	Sb	20 43 00.7	-0.4
PAJU	Pajala	0.96	98	*e*P	Pg	20 42 47.1	+0.3
PAJU				*e*S	Sg	20 42 59.4	+0.3
HARU	Harads	1.02	174	P	Pg	20 42 47.9	+0.1
HARU	Harads	1.02	174	*e*P	Pg	20 42 47.9	+0.1
KOVU	Salmi	1.08	349	P	Pg	20 42 48.5	-0.5
KOVU	Salmi	1.08	349	*e*P	Pg	20 42 48.5	-0.5
KLF	Kolari	1.27	86	*e*P	Pg	20 42 52.7	-0.1
KLF				*e*S	Sg	20 43 09.5	+0.1
HEF	Hetta	1.68	41	*e*P	Pn	20 42 59.4	+0.3
HEF				*e*S	Sn	20 43 21.6	+0.4
HEF	Hetta	1.68	41	*e*P	Pn	20 42 59.3	+0.3
HEF				*e*S	Sn	20 43 21.2	0.0
HEF				MSG		20 43 25.7	
	comp=Z,6.0nm,0.1s						
KALU	Kalix	1.69	140	P	Pn	20 43 00.1	+0.9
KALU	Kalix	1.69	140	*e*P	Pn	20 43 00.0	+0.9
SJUU	Sjulsmark	1.71	167	P	Pn	20 43 00.3	+0.9
SJUU	Sjulsmark	1.71	167	*e*P	Pn	20 43 00.3	+0.9
TOF	Tornio	1.81	125	*e*P	Pn	20 43 02.3	+1.4
TOF				MSG		20 43 30.6	
	comp=Z,4.6nm,0.1s						
KIF	Kilpisjarvi	1.84	1	*e*P	Pn	20 43 02.5	+1.3
KIF				*e*S	Sg	20 43 27.6	+0.1
KIF	Kilpisjarvi	1.84	1	MSG		20 43 31.0	
	comp=Z,14nm,0.2s						
FAUS	Fauske	2.11	278	*e*P	Pn	20 43 06.5	+1.6
FAUS	Fauske	2.11	278	*e*P	Pn	20 43 06.5	+1.6
RNF	Rovaniemi	2.17	103	*e*P	Pn	20 43 07.3	+1.6
RNF				MSG		20 43 38.7	
	comp=Z,7.9nm,0.2s						
STEI	Steigen	2.23	293	*e*P	Pn	20 43 08.2	+1.7
STEI	Steigen	2.23	293	*e*P	Pn	20 43 08.2	+1.7
SGF	Sodankyl	2.28	80	MSG		20 43 41.5	
	comp=Z,5.5nm,0.2s						
JETT	Jettan, Norway	2.40	358	*e*P	Pn	20 43 11.1	+2.1
JETT				*e*S	Sb	20 43 43.0	+0.5
JETT				IAML		20 43 44.7	
	comp=Z,25nm,0.3s						
JETT	Jettan, Norway	2.40	358	*e*PB	Pn	20 43 11.1	+2.1
JETT				*e*SG	Sb	20 43 43.0	+0.5
JETT				IAML		20 43 44.7	
	comp=Z,25nm,0.3s						

TRO	**Tromso**	**2.56**	**346**	*e*P	**Pn**	**20 43 13.8**	**+2.7**
TRO				*e*S	**Sb**	**20 43 46.1**	**-1.0**
TRO				IAML		20 43 51.1	
	comp=Z,8.1nm,0.4s						
TRO	**Tromso**	**2.56**	**346**	*e*P	**Pn**	**20 43 12.4**	**+1.4**
MOR8	**Moi Rana**	**2.68**	**251**	*e*P	**Pn**	**20 43 13.7**	**+0.9**
MOR8				IAML		20 43 50.1	
	comp=Z,9.6nm,0.4s						
MOR8	**Moi Rana**	**2.68**	**251**	*e*P	**Pn**	**20 43 13.7**	**+0.9**
MOR8				IAML		20 43 50.1	
	comp=Z,9.6nm,0.4s						
LOF	**Lofoten**	**2.90**	**293**	*e*P	**Pn**	**20 43 17.3**	**+1.6**
LOF	**Lofoten**	**2.90**	**293**	*e*P	**Pn**	**20 43 17.3**	**+1.6**
VAGH	**Vaagaholmen**	**2.96**	**265**	*e*P	**Pn**	**20 43 17.7**	**+1.2**
VAGH	**Vaagaholmen**	**2.96**	**265**	*e*P	**Pn**	**20 43 17.7**	**+1.2**
ARA0	**ARCESS Array S**	**2.97**	**35**	*e*P	**Pn**	**20 43 18.1**	**+1.4**
ARA0				*e*S	**Sn**	**20 43 54.0**	**+1.0**
ARA0				IAML		20 44 10.6	
	comp=Z,3.3nm,0.6s						
ARA0	**ARCESS Array S**	**2.97**	**35**	*e*P	**Pn**	**20 43 18.1**	**+1.4**
ARA0				*e*S	**Sn**	**20 43 54.0**	**+1.0**
ARA0				IAML		20 44 10.6	
	comp=Z,3.3nm,0.6s						
ARCES	**ARCESS Array B**	**2.97**	**35**	Pn	**Pn**	**20 43 17.8**	**+1.0**
	comp=Z,0.5nm,0.3s,baz=214,slow=13,SNR=75						
ARCES				Pg	**Pb**	**20 43 20.4**	**-1.8**
	comp=Z,0.6nm,0.3s,baz=212,slow=15,SNR=3.5						
ARCES				Sn	**Sn**	**20 43 53.6**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=213,slow=24,SNR=7.1						
ARCES				Lg	Lg	20 43 58.7	
	comp=Z,0.8nm,0.3s,baz=213,slow=28,SNR=3.3						
	comp=Z,1.3nm,0.3s						
KONS	**Konsvik**	**3.07**	**261**	*e*P	**Pn**	**20 43 19.5**	**+1.4**
KONS	**Konsvik**	**3.07**	**261**	*e*P	**Pn**	**20 43 19.5**	**+1.4**
UMAU	**Umeaa**	**3.30**	**180**	*e*P	**Pn**	**20 43 22.6**	**+1.4**
KEV	**Kevo**	**3.49**	**39**	*e*P	**Pn**	**20 43 24.3**	**+0.5**
KEV	**Kevo**	**3.49**	**39**	*e*P	**Pn**	**20 43 24.3**	**+0.5**
VADS	**Vadso**	**4.34**	**43**	*e*P	**Pn**	**20 43 36.5**	**+1.1**
VADS	**Vadso**	**4.34**	**43**	*e*P	**Pn**	**20 43 36.5**	**+1.1**
FINES	**FINESS Array B**	**6.21**	**155**	Pn	**Pn**	**20 44 01.8**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=344,slow=13,SNR=9.8						
FINES				Sn	**Sn**	**20 45 10.4**	**-2.2**
	comp=Z,0.3nm,0.3s,baz=345,slow=23,SNR=5.2						
FINES				Lg	Lg	20 45 40.3	
	comp=Z,0.6nm,0.3s,baz=345,slow=28,SNR=8.1						
	comp=Z,0.6nm,0.3s						
NOA	**NORSAR Array B**	**7.41**	**218**	Pn	**Pn**	**20 44 18.6**	**+0.9**
	baz=31,slow=11,SNR=2.0						
NOA				Sn	**Sn**	**20 45 41.8**	**-0.7**
	baz=309,slow=21,SNR=1.5						
NOA				Lg	Lg	20 46 25.4	
	baz=37,slow=24,SNR=1.9						
	comp=Z,0.4nm,0.9s						
HFS	**Hagfors**	**7.71**	**207**	Pn	**Pn**	**20 44 21.0**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=23,slow=12,SNR=5.7						
HFS				Sn	**Sn**	**20 45 45.7**	**-4.0**
	comp=Z,0.1nm,0.3s,baz=25,slow=24,SNR=2.5						
HFS				Lg	Lg	20 46 31.9	
	comp=Z,0.2nm,0.3s,baz=34,slow=26,SNR=2.4						
	comp=Z,1.2nm,0.6s						

*NNC **29** 20:47:05.5±0.4, 43°.37N×77°.65E, h0^{km}, mb1.9, mpv2.6,*
Error ellipse: s-maj=4.4km s-min=2.2km az=172.0
*KRNET **29** 20:47:06.7±0.1, 43°.39N×77°.62E, h22^{km}, mb2.4*
*SOME **29** 20:47:06.8, 43°.38N×77°.62E, h10^{km}*
ISC 29 20:47:06.5±1.0**, 43°.39N**±0°.02×**77°.64E**±0°.02**, h10**^{km}±9^{km}**,**
n31, σ0^{s}.50/60**, 11C-7D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOTS	**Kotyrbulak**	**0.41**	**249**	S	**Sg**	**20 47 20.9**	**+0.8**
	22nm,0.1s						
KOTS	**Kotyrbulak**	**0.41**	**249**	*e*P	**Pg**	**20 47 14.9**	**+0.2**
KOTS				*e*S	**Sg**	**20 47 20.9**	**+0.8**
KOTS	**Kotyrbulak**	**0.41**	**249**	*e*P	**Pg**	**20 47 14.9**	**+0.2**
	3.0nm,0.1s						
KOTS				*e*S	**Sg**	**20 47 20.9**	**+0.8**
	47nm,0.2s						
CHKK	**Chushkaly**	**0.67**	**315**	P	**Pg**	**20 47 19.3**	**-0.1**
	4.8nm,0.1s						
CHKK				S	**Sg**	**20 47 28.2**	**+0.1**
	28nm,0.3s						
CHKK	**Chushkaly**	**0.67**	**315**	*e*P	**Pg**	**20 47 19.3**	**-0.1**
CHKK				*e*S	**Sg**	**20 47 28.2**	**+0.1**
CHKK	**Chushkaly**	**0.67**	**315**	*e*P	**Pg**	**20 47 19.3**	**-0.1**
	6.9nm,0.1s						
CHKK				*e*S	**Sg**	**20 47 28.2**	**+0.1**
	28nm,0.3s						
KPKS	**Kokpek**	**0.77**	**84**	P	**Pg**	**20 47 21.3**	**0.0**
	0.3nm,0.1s						
KPKS				S	**Sg**	**20 47 32.2**	**+0.9**
	6.2nm,0.2s						
KPKS	**Kokpek**	**0.77**	**84**	*e*P	**Pg**	**20 47 21.3**	**0.0**
KPKS				*e*S	**Sg**	**20 47 32.2**	**+0.9**
KTBS	**Karatobe**	**0.77**	**296**	P	**Pg**	**20 47 21.0**	**-0.3**
	2.3nm,0.1s						
KTBS				S	**Sg**	**20 47 31.4**	**0.0**
	17nm,0.3s						
KTBS	**Karatobe**	**0.77**	**296**	*e*P	**Pg**	**20 47 21.1**	**-0.3**
KTBS				*e*S	**Sg**	**20 47 31.4**	**0.0**
ARXS	**Arharly**	**0.84**	**9**	P	**Pg**	**20 47 22.3**	**-0.4**
	4.5nm,0.1s						
ARXS				S	**Sg**	**20 47 33.6**	**0.0**
	13nm,0.1s						
MTBS	**Maitube**	**0.92**	**254**	P	**Pg**	**20 47 23.5**	**-0.7**
	1.6nm,0.1s						
MTBS				S	**Sg**	**20 47 35.9**	**-0.2**
	5.1nm,0.2s						
MTBS	**Maitube**	**0.92**	**254**	*e*P	**Pg**	**20 47 23.5**	**-0.7**
MTBS				*e*S	**Sg**	**20 47 36.0**	**-0.2**
MTBS	**Maitube**	**0.92**	**254**	*e*P	**Pg**	**20 47 23.5**	**-0.7**
	1.6nm,0.1s						
MTBS				*e*S	**Sg**	**20 47 36.0**	**-0.2**
	5.1nm,0.2s						
BLB	**Baldybastay**	**0.94**	**40**	P	**Pg**	**20 47 23.9**	**-0.6**
	6.3nm,0.2s						
BLB				S	**Sg**	**20 47 36.2**	**-0.5**
	11nm,0.3s						
UZB	**Uzynbulak**	**1.04**	**103**	P	**Pg**	**20 47 25.7**	**-0.8**
	1.2nm,0.1s						
UZB				S	**Sg**	**20 47 39.3**	**-0.7**
	7.3nm,0.1s						
UZB	**Uzynbulak**	**1.04**	**103**	*e*P	**Pg**	**20 47 25.7**	**-0.8**
UZB				*e*S	**Sg**	**20 47 39.3**	**-0.7**
PRZ	**Przheval'sk**	**1.06**	**148**	⇑*e*P	**Pg**	**20 47 27.1**	**+0.2**
PRZ				⇑*e*S	**Sg**	**20 47 40.7**	**0.0**
KST	**Kastek**	**1.27**	**255**	P	**Pn**	**20 47 30.0**	**-0.4**
	0.8nm,0.1s						
KST				S	**Sb**	**20 47 46.8**	**-0.3**
	3.9nm,0.2s						
KST	**Kastek**	**1.27**	**255**	*e*P	**Pn**	**20 47 30.0**	**-0.4**
	0.8nm,0.1s						
KST				*e*S	**Sb**	**20 47 46.8**	**-0.3**
	3.9nm,0.2s						
KDJ	**Kajisay**	**1.30**	**195**	⇓*i*P	**Pn**	**20 47 30.8**	**-0.1**
KDJ				⇓*i*S	**Sb**	**20 47 47.4**	**-0.5**
PDGK	**Podgornoye**	**1.35**	**92**	⇑Pn	**Pn**	**20 47 31.9**	**+0.3**
	1.0nm,0.6s						
PDGK				⇑Sn	**Sb**	**20 47 50.0**	**+0.6**
	1.6nm,0.7s						
KRBS	**Karabastau**	**1.46**	**283**	P	**Pn**	**20 47 33.1**	**+0.2**
	1.6nm,0.2s						
KRBS	**Karabastau**	**1.46**	**283**	*e*P	**Pn**	**20 47 33.2**	**+0.2**
KRBS				*e*S	**Sn**	**20 47 52.1**	**-0.1**
KNOS	**Konyrlen**	**1.48**	**48**	P	**Pn**	**20 47 33.7**	**+0.4**
	0.8nm,0.2s						
KNOS				S	**Sn**	**20 47 53.0**	**+0.2**
	3.8nm,0.2s						
ULHL	**Ulahol**	**1.53**	**223**	⇑*i*P	**Pn**	**20 47 34.4**	**+0.3**
ULHL				⇑*i*S	**Sn**	**20 47 54.2**	**0.0**
BOOM	**Boomskoye usch**	**1.54**	**235**	⇓*i*P	**Pn**	**20 47 34.5**	**+0.4**
BOOM				⇓*i*S	**Sb**	**20 47 54.3**	**-0.4**
TKM2	**Tokmak 2**	**1.56**	**253**	⇑Pn	**Pb**	**20 47 35.8**	**+0.1**
	0.1nm,0.1s						
TKM2				⇓Sn	**Sg**	**20 47 56.0**	**-0.8**
	2.1nm,0.3s						
TKM2	**Tokmak 2**	**1.56**	**253**	⇑*i*P	**Pb**	**20 47 35.3**	**-0.4**
TKM2				⇑*i*S	**Sb**	**20 47 55.7**	**+0.1**
TARG	**Taragay, Kyrgy**	**1.66**	**176**	⇓*i*P	**Pn**	**20 47 36.4**	**+0.4**
TARG				⇓*i*S	**Sb**	**20 47 58.5**	**0.0**
USP	**Ospenovka**	**2.29**	**268**	⇑*i*P	**Pn**	**20 47 45.4**	**+1.0**
USP				⇑*i*S	**Sn**	**20 48 14.0**	**+1.3**

IDC 29 20:59:26.7±4.7**, 2°.40S×139°.34E, h0**^{km}**, mb3.4**/2**,**
mbtmp3.5/3**, ML3.4**/1**, Error ellipse: s-maj=186.0km**
s-min=29.7km az=88.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.10**	**195**	P	P	21 03 40.5	+0.3
	0.1nm,0.3s,baz=16,slow=12,SNR=8.4						
	1.1nm,0.8s						
ASAR	**Alice Springs**	**21.78**	**194**	P	P	21 04 19.8	-0.6
	0.8nm,0.7s,baz=19,slow=11,SNR=10						
	0.8nm,0.7s						
MKAR	**Makanchi Array**	**69.94**	**322**	P	P	21 10 40.0	+0.1
	0.5nm,1.0s,baz=107,slow=4.8,SNR=4.3						
	0.5nm,1.0s						

*IDC **29** 21:12:02.2±1.6, 31°.00S×177°.40W, h0^{km}, mb4.0/5,*
mbtmp4.0/5, Error ellipse: s-maj=45.5km s-min=34.3km
az=31.0
ISC 29 21:12:06.4±1.5**, 31°.4S**±0°.1×**177°.8W**±0°.2**, h10**^{km}**, n8,**
σ2^{s}.21/9**, mb4.1**/5**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.02**	**210**	Pn	**Pn**	**21 14 01.6**	**-1.3**
	0.2nm,0.3s,baz=193,slow=8.7,SNR=1.2						
URZ				Sn	**Sn**	**21 15 34.6**	**+1.0**
	0.7nm,0.3s,baz=145,slow=21,SNR=4.5						
STKA	**Stephens Creek**	**34.47**	**258**	P	**P**	**21 18 56.3**	**+1.8**
	2.1nm,0.8s,baz=105,slow=16,SNR=3.1						
	2.1nm,0.8s						
ASAR	**Alice Springs**	**43.28**	**268**	P	**P**	**21 20 08.1**	**-0.4**
	0.7nm,0.6s,baz=103,slow=7.2,SNR=9.0						
	0.7nm,0.6s						
WRA	**Warramunga Arr**	**44.36**	**273**	P	**P**	**21 20 16.9**	**-0.3**
	0.9nm,0.5s,baz=112,slow=7.8,SNR=9.9						
	0.9nm,0.5s						
FITZ	**Fitzroy Crossi**	**52.58**	**271**	P	**P**	**21 21 19.1**	**-1.5**
	2.3nm,0.7s,baz=104,slow=4.2,SNR=5.6						
	2.3nm,0.7s						
QSPA	**South Pole Qui**	**58.69**	**180**	P	**P**	**21 22 04.0**	**+0.1**
	1.6nm,1.0s,baz=360,slow=0.9,SNR=7.2						
	1.6nm,1.0s						
FINES	**FINESS Array B**	**146.18**	**340**	PKPbc	**PKPdf**	**21 31 42.5**	**-2.7**
	2.0nm,0.6s,baz=49,slow=4.2,SNR=9.0						
AKASG	**Malin Array Be**	**152.24**	**322**	PKPbc	**PKPdf**	**21 31 58.9**	**+3.7**
	0.7nm,0.5s,baz=49,slow=3.7,SNR=1.8						

*TIR **29** 21:15:47.0, 40°.48N×20°.79E, h11^{km}±1^{km}, Md2.5/4, Ml2.2/4*
*ATH **29** 21:15:47.7, 40°.47N×20°.83E, h9^{km}±2^{km}, ML2.0/7, Manual Solution by A.Agalos First location: 2019/06/29 21:17:02, This location: 2019/06/29 21:38:13 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*SKO **29** 21:15:49.1, 40°.47N×20°.85E, h16^{km}, ML1.8*
ISC 29 21:15:47.6±0.9**, 40°.47N**±0°.02×**20°.81E**±0°.03**, h8**^{km}±8^{km}**,**
n24, σ0^{s}.57/38**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBN	**Korca**	**0.15**	**353**	Pg	**Pg**	**21 15 50.3**	**-0.5**
KBN				Sg	**Sg**	**21 15 52.7**	**-0.4**
KBN				AML	AML	21 15 57.6	
	2.5nm,0.4s						
NEST	**Nestorio**	**0.19**	**107**	Pg	**Pg**	**21 15 51.5**	**0.0**
NEST				Sg	**Sg**	**21 15 55.3**	**+1.1**
NEST				AML	AML	21 15 57.1	
	2.2nm,0.1s						
NEST				AMd		21 16 26.6	
NEST	**Nestorio**	**0.19**	**107**	P	**Pg**	**21 15 51.7**	**+0.2**
NEST				S	**Sg**	**21 15 54.4**	**+0.2**
PENT	**Pentalofos**	**0.37**	**138**	P	**Pg**	**21 15 55.3**	**+0.4**
PENT				S	**Sg**	**21 15 59.8**	**-0.1**
FNA	**Florina**	**0.53**	**54**	Pg	**Pg**	**21 15 58.1**	**+0.3**
FNA				Sg	**Sb**	**21 16 06.3**	**-0.7**
FNA				AML	AML	21 16 07.6	
	0.6nm,0.4s						
FNA				AMd		21 16 46.0	
FNA	**Florina**	**0.53**	**54**	*i*Pg	**Pb**	**21 15 58.5**	**-0.7**
FNA				*i*Sg	**Sb**	**21 16 07.7**	**+0.7**
FNA	**Florina**	**0.53**	**54**	P	**Pg**	**21 15 58.1**	**+0.3**
FNA				S	**Sg**	**21 16 05.3**	**+0.5**
OHR	**Ohrid**	**0.64**	**359**	*i*Pg	**Pb**	**21 16 01.0**	**0.0**
OHR				*i*Sg	**Sb**	**21 16 11.1**	**+1.0**
OHR				*e*Lg	Lg	21 16 11.8	
	comp=E,35nm,0.5s						
OHR				*e*Lg	Lg	21 16 12.5	
	comp=N,26nm,0.6s						
KPRO	**Kipourio**	**0.67**	**141**	P	**Pg**	**21 16 00.1**	**-0.4**
KPRO				S	**Sg**	**21 16 09.7**	**+0.5**
KZN	**Kozani**	**0.75**	**102**	P	**Pg**	**21 16 02.2**	**+0.1**
KZN				S	**Sg**	**21 16 12.1**	**+0.3**
SRN	**Sarande**	**0.86**	**227**	Pg	**Pg**	**21 16 03.6**	**-0.4**
SRN				Sg	**Sb**	**21 16 17.2**	**+0.9**
SRN				AML	AML	21 16 20.5	
	comp=N,0.2nm,0.6s						
SRN				AMd		21 16 58.1	
IGT	**Igoumenitsa**	**1.01**	**202**	Pg	**Pg**	**21 16 07.0**	**+0.1**
IGT				Sg	**Sn**	**21 16 21.9**	**-0.4**
IGT				AMd		21 17 05.8	
IGT	**Igoumenitsa**	**1.01**	**202**	*i*Pg	**Pb**	**21 16 07.5**	**+0.3**
IGT				*i*Sg	**Sn**	**21 16 23.2**	**+0.9**
IGT	**Igoumenitsa**	**1.01**	**202**	P	**Pb**	**21 16 07.2**	**0.0**
KEK	**Kerkira**	**1.08**	**226**	P	**Pn**	**21 16 08.9**	**-0.1**
TETR	**Tetrakomo, Epi**	**1.18**	**162**	P	**Pn**	**21 16 10.1**	**-0.3**
THL	**Klokotos Trika**	**1.29**	**134**	P	**Pb**	**21 16 11.8**	**-0.3**
THL				S	**Sn**	**21 16 28.6**	**-0.7**
TYRN	**Tyrnavos**	**1.33**	**124**	P	**Pb**	**21 16 12.4**	**-0.3**
KNT	**Kendrikon**	**1.73**	**66**	*i*Pn	**Pb**	**21 16 19.8**	**+0.3**
KNT	**Kendrikon**	**1.73**	**66**	P	**Pn**	**21 16 17.8**	**-0.1**
EVR	**Evrytania**	**1.73**	**153**	P	**Pb**	**21 16 19.7**	**0.0**
HORT	**Hortiatis**	**1.75**	**85**	P	**Pn**	**21 16 17.8**	**-0.4**
AGG	**Agios Georgios**	**1.86**	**141**	P	**Pb**	**21 16 20.8**	**-1.0**
ANX	**Ano Chora**	**2.06**	**155**	P	**Pb**	**21 16 24.1**	**-1.2**

IDC 29 21:16:18.1±2.0**, 1°.60S×12°.89W, h0**^{km}**, mb3.9**/5**,**
mbtmp3.9/5**, MS3.5**/6**, Error ellipse: s-maj=121.6km**
s-min=34.8km az=112.0, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**6.39**	**194**	T	T	21 24 19.2	
	baz=15,slow=74,SNR=45						
H10N1	**ASCENSION HYDR**	**6.41**	**194**	T	T	21 24 19.5	
	baz=15,slow=74,SNR=66						
H10N3	**ASCENSION HYDR**	**6.41**	**194**	T	T	21 24 13.2	
	baz=15,slow=74,SNR=40						
DBIC	**Dimbokro**	**11.48**	**44**	LR	LR	21 22 45.7	
	comp=Z,162nm,19.4s,baz=338,slow=34						
TORD	**Torodi Ar. Bea**	**20.59**	**44**	P	P	21 20 57.6	-1.3
	4.3nm,0.9s,baz=226,slow=10,SNR=6.4						
	4.3nm,0.9s						
RCBR	**Riachuelo**	**23.34**	**259**	LR	LR	21 28 56.6	
	comp=Z,15nm,18.7s,baz=85,slow=32						
LBTB	**Lobatse**	**43.82**	**125**	LR	LR	21 38 00.6	
	comp=Z,57nm,21.9s,baz=330,slow=30						
EIL	**Elat**	**55.23**	**52**	LR	LR	21 50 13.3	
	comp=Z,60nm,18.1s,baz=245,slow=37						
GERES	**GERESS Array B**	**55.27**	**21**	P	P	21 25 53.0	-0.3
	1.6nm,0.9s,baz=197,slow=4.6,SNR=13						
	1.6nm,0.9s						
BRTR	**Keskin Array B**	**59.15**	**41**	P	P	21 26 22.3	+1.3
	1.0nm,0.8s,baz=238,slow=7.8,SNR=5.3						
	1.0nm,0.8s						
AKASG	**Malin Array Be**	**63.24**	**29**	P	P	21 26 47.9	-0.4
	0.1nm,0.2s,baz=234,slow=7.6,SNR=2.0						
	0.1nm,0.2s						
BVAR	**Borovoye Array**	**87.21**	**37**	LR	LR	22 12 31.7	
	comp=Z,54nm,20.6s,baz=97,slow=39						
QSPA	**South Pole Qui**	**88.48**	**180**	P	P	21 29 12.0	-0.3
	1.7nm,1.0s,baz=236,slow=5.1,SNR=3.8						
	1.7nm,1.0s						
AAK	**Ala-Archa**	**89.14**	**47**	LR	LR	22 14 37.7	
	comp=Z,56nm,18.0s,baz=52,slow=39						

*IDC **29** 21:50:54.4±0.9, 6°.46S×143°.01E, h0^{km}, mb3.9/10,*
mbtmp4.0/13, ML4.1/2, MS3.5/1, Error ellipse:
s-maj=42.1km s-min=16.2km az=89.0
ISC 29 21:51:00.1±0.8**, 6°.58S**±0°.08×**142°.6E**±0°.2**, h35**^{km}**, n13,**
σ1^{s}.81/15**, mb3.8**/10**, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**4.43**	**335**	Pn	**Pn**	**21 52 04.5**	**-0.4**
	8.0nm,0.3s						
WRA	**Warramunga Arr**	**15.50**	**210**	Pn	**Pn**	**21 54 37.3**	**+1.1**
	0.7nm,0.3s,baz=30,slow=11,SNR=14						
WRA				Sn	**Sn**	**21 57 23.2**	**-3.6**
	0.2nm,0.3s,baz=31,slow=21,SNR=4.4						
WRA				Lg	Lg	21 59 14.9	
	0.2nm,0.3s,baz=37,slow=27,SNR=4.6						
WRA				LR	LR	22 01 18.2	
	comp=Z,161nm,20.6s,baz=30,slow=39						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**18.92**	**205**	P	**Pn**	**21 55 21.8**	**+2.9**
	0.9nm,0.3s,baz=33,slow=9.5,SNR=72						
ASAR				S	**S**	**21 58 50.1**	**-1.1**
	1.2nm,0.8s,baz=16,slow=27,SNR=3.6						
ASAR				Lg	Lg	22 00 57.1	
	0.1nm,0.3s,baz=23,slow=29,SNR=2.7						
	7.3nm,0.6s						
STKA	**Stephens Creek**	**25.19**	**182**	P	**P**	**21 56 21.8**	**-0.6**
	2.0nm,0.8s,baz=355,slow=13,SNR=3.3						
	2.0nm,0.8s						
KSRS	**Korea Array**	**45.88**	**344**	P	**P**	**21 59 19.0**	**-0.1**
	0.9nm,0.7s,baz=163,slow=8.9,SNR=3.3						
	0.9nm,0.7s						
PETK	**Petropavlovsk-**	**60.83**	**10**	P	**P**	**22 01 07.6**	**-1.1**
	3.2nm,0.8s,baz=201,slow=7.1,SNR=3.8						
	3.2nm,0.8s						
SONM	**Songino Array**	**62.84**	**333**	P	**P**	**22 01 24.2**	**+1.6**
	0.4nm,0.8s,baz=156,slow=7.9,SNR=1.5						
	0.4nm,0.8s						
VNDA	**Vanda**	**71.64**	**176**	P	**P**	**22 02 19.1**	**+1.4**
	0.6nm,0.9s,baz=344,slow=5.9,SNR=3.5						
	0.6nm,0.9s						
MKAR	**Makanchi Array**	**75.17**	**322**	P	**P**	**22 02 39.7**	**+0.7**
	0.6nm,0.7s,baz=111,slow=8.0,SNR=5.4						
	0.6nm,0.7s						
KURBB	**Kurchatov Arra**	**79.08**	**324**	P	**P**	**22 03 00.8**	**0.0**
	0.9nm,0.9s,baz=112,slow=4.5,SNR=6.2						
	0.9nm,0.9s						
QSPA	**South Pole Qui**	**83.40**	**180**	P	**P**	**22 03 24.2**	**+0.5**
	0.9nm,0.8s,baz=320,slow=2.0,SNR=7.4						
	0.9nm,0.8s						
BVAR	**Borovoye Array**	**84.65**	**325**	P	**P**	**22 03 30.9**	**+0.7**
	4.3nm,0.8s,baz=111,slow=6.3,SNR=25						
	4.3nm,0.8s						
ILAR	**Eielson Array**	**87.77**	**24**	P	**P**	**22 03 42.5**	**-2.7**
	1.1nm,0.7s,baz=232,slow=4.4,SNR=4.6						
	1.1nm,0.7s						

*KOLA **29** 22:02:07.4, 67°.66N×34°.22E, h0^{km}, ML1.4, Error ellipse:*
s-maj=4.4km s-min=1.8km az=130.0, Murmansk region,
Kirovsk district
HEL 29 22:02:07.2±0.3**, 67°.68N×34°.18E, h0**^{km}**, ML1.2,**
Suspected explosion, Baltic
States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVZ	**Lovozero**	**0.29**	**39**	P	Pg	22 02 12.8	+0.2
LVZ				S	Sg	22 02 16.7	+0.3
LVZ	**Lovozero**	**0.29**	**39**	PG	Pg	22 02 12.8	+0.1
LVZ				SG	Sg	22 02 15.7	-0.7
APA	**Apatity**	**0.31**	**250**	P	Pg	22 02 13.2	0.0
APA				S	Sg	22 02 17.5	+0.3
APA0	**Apatity Array**	**0.46**	**262**	P	Pg	22 02 15.7	-0.2
APA0				S	Sg	22 02 22.0	+0.1
KVDA	**Kovda**	**1.11**	**208**	S	Sg	22 02 41.5	-1.4
TERR	**Teriberka**	**1.57**	**12**	P	Pn	22 02 35.7	-0.6
TERR				S	Sn	22 02 56.0	-1.3
VRF	**Varrio**	**1.74**	**274**	PG	Pn	22 02 38.5	-0.1
VRF				MSG		22 02 59.3	
	comp=Z,1.8nm,0.2s						
VRF				SG	Sn	22 03 00.8	-0.8
RAJF	**Raja-Jooseppi**	**2.34**	**293**	PG	Pb	22 02 49.1	-1.1
RAJF				SB	Sn	22 03 18.0	+1.6
KU6	**Riekki**	**2.37**	**228**	PG	Pb	22 02 49.0	-1.7
	baz=41						
KU6				MSG		22 03 17.2	
	comp=Z,0.7nm,0.2s						
KU6				SG	Sb	22 03 20.1	-0.4
MSF	**Maaselka**	**2.70**	**231**	SG	Sb	22 03 29.9	0.0
KEV	**Kevo**	**3.34**	**312**	PG	Pb	22 03 08.8	+1.5
KEV				SN	Sn	22 03 42.4	+1.4
RNF	**Rovaniemi**	**3.36**	**255**	PN	Pn	22 03 01.0	+0.1
ARA0	**ARCESS Array S**	**3.68**	**304**	PN	Pn	22 03 05.8	+0.5
ARA0				SG	Sb	22 04 01.6	+3.4
ARCES	**ARCESS Array B**	**3.68**	**304**	P	Pn	22 03 05.5	+0.2
ARCES				S	Sn	22 03 48.8	-0.6
HEF	**Hetta**	**4.02**	**285**	PG	Pb	22 03 19.3	+0.6
	baz=98						
KTK1	**Kautokeino**	**4.27**	**293**	SN	Sn	22 03 59.5	-4.3
LANU	**Lannavaara**	**4.62**	**280**	PN	Pn	22 03 17.2	-1.1

*HEL **29** 22:03:02.3±0.3, 67°.18N×20°.58E, h0^{km}, ML1.2, Suspected*
explosion
UPP 29 22:03:02.1±0.0**, 67°.19N×20°.64E, h0**^{km}**, ML2.1, Unknown,**
Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.07**	**203**	P	Pg	22 03 03.9	+0.4
DUNU				S	Sg	22 03 04.9	+0.5
MASU	**Masugnsbyn**	**0.59**	**62**	P	Pg	22 03 13.5	+0.1
MASU				S	Sg	22 03 21.3	+0.3
RATU	**Laukkuluspa**	**0.76**	**328**	P	Pg	22 03 16.3	-0.2
RATU				S	Sg	22 03 26.2	-0.1
KUA	**Kurravaara**	**0.78**	**351**	P	Pg	22 03 16.7	-0.3
SALU	**Saltoluokta**	**0.85**	**284**	P	Pg	22 03 18.1	-0.3
ERTU	**Ertsjaerv**	**0.88**	**136**	P	Pg	22 03 18.3	-0.7
ERTU	**Ertsjaerv**	**0.88**	**136**	PG	Pg	22 03 18.3	-0.7
ERTU				SB	Sg	22 03 30.7	+0.3
PAJU	**Pajala**	**0.98**	**99**	P	Pg	22 03 20.3	-0.5
PAJU	**Pajala**	**0.98**	**99**	PB	Pg	22 03 20.3	-0.6
PAJU	**Pajala**	**0.98**	**99**	PG	Pg	22 03 20.3	-0.6
	baz=280						
PAJU				SG	Sg	22 03 33.6	+0.1
HARU	**Harads**	**1.04**	**173**	P	Pg	22 03 21.1	-0.9
KOVU	**Salmi**	**1.05**	**350**	P	Pg	22 03 21.8	-0.5
KLF	**Kolari**	**1.29**	**86**	PG	Pg	22 03 26.0	-0.9
KLF				MSG		22 03 42.0	
	comp=Z,1.1nm,0.2s						
KLF				SG	Sg	22 03 42.8	-0.8
HEF	**Hetta**	**1.68**	**42**	PG	Pn	22 03 32.8	+0.1
HEF				MSG		22 03 53.1	
	comp=Z,0.9nm,0.2s						
HEF				SN	Sg	22 03 56.6	+0.6
KALU	**Kalix**	**1.72**	**140**	P	Pn	22 03 33.6	+0.3
KALU	**Kalix**	**1.72**	**140**	PG	Pn	22 03 33.7	+0.5
KALU				SN	Sg	22 03 57.0	-0.3
SJUU	**Sjulsmark**	**1.73**	**167**	P	Pn	22 03 33.4	0.0
KIF	**Kilpisjarvi**	**1.82**	**2**	PG	Pb	22 03 35.9	-0.4
	baz=178						
KIF				MSG		22 03 58.0	
	comp=Z,1.7nm,0.2s						
KIF				SG	Sg	22 04 01.8	+1.1
TOF	**Tornio**	**1.84**	**125**	PG	Pn	22 03 35.5	+0.6
TOF				MSG		22 03 57.8	
	comp=Z,1.3nm,0.2s						
TOF				SN	Sb	22 04 00.0	-0.1
RNF	**Rovaniemi**	**2.20**	**103**	PG	Pb	22 03 41.5	-1.2
RNF				SG	Sb	22 04 10.9	+0.5
RANF	**Ranua**	**2.72**	**113**	SG	Sb	22 04 26.1	+0.6
KU6	**Riekki**	**3.87**	**103**	SG	Sg	22 05 03.9	-2.3

TAP 29 22:11:59.8, 24°.81N×121°.93E, h10^{km}±1^{km}**, ML1.6, 2C-1D,**
B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.04**	**359**	*i*P	Pg	22 12 02.3	+0.6
EGS				S	Sg	22 12 03.5	+0.4
TIPB	**Shuangxi**	**0.19**	**329**	⇑*i*P	Pb	22 12 04.8	-0.5
TIPB				*i*S	Sg	22 12 07.7	+1.1
TWB1	**Santiao Chiao**	**0.20**	**14**	*i*P	Pg	22 12 04.5	+0.4
TWB1				*i*S	Sg	22 12 07.2	+0.2
TWC	**Suao**	**0.21**	**201**	*i*P	Pb	22 12 05.3	-0.3
TWC				*i*S	Sg	22 12 08.3	+1.1
ESAO	**Su ao**	**0.25**	**199**	P	Pb	22 12 06.2	0.0

ESAO				*i* S	Sg	22 12 09.2	+1.0
TWE	**Neicheng**	**0.26**	**250**	⇓ *i* P	Pb	22 12 06.2	-0.2
TWE				*i* S	Sb	22 12 10.5	-0.5
NDS	**Dongshan**	**0.26**	**229**	*e*P	Pg	22 12 05.2	0.0
NDS				S	Sg	22 12 09.3	+0.6
SXI1	**Grass Mountain**	**0.29**	**350**	⇑ *i* P	Pb	22 12 06.5	-0.5
SXI1				S	Sb	22 12 10.8	-1.1
FUSB	**Fushanzhiwuyua**	**0.32**	**261**	*i* P	Pb	22 12 07.5	-0.1
FUSB				S	Sb	22 12 12.1	-0.7
TWA	**Mucha**	**0.36**	**298**	P	Pb	22 12 08.3	+0.1
TWA				S	Sb	22 12 13.6	-0.3
TNOU	**National Taiwa**	**0.37**	**337**	*i* P	Pb	22 12 08.4	0.0
TNOU				*e*S	Sb	22 12 13.8	-0.4
ENTT	**Nioudou**	**0.37**	**243**	*i* P	Pb	22 12 08.5	0.0
ENTT				*e*S	Sb	22 12 13.8	-0.6
EWUT	**Wuta**	**0.39**	**201**	*i* P	Pb	22 12 08.5	-0.2
EWUT				S	Sg	22 12 13.1	+0.5
NWLT	**Wulai**	**0.39**	**265**	*i* P	Pb	22 12 08.7	-0.1
NWLT				*i* S	Sb	22 12 14.0	-0.9
NHDH	**Xindian Distri**	**0.40**	**293**	*e*P	Pb	22 12 09.6	+0.7
NHDH				S	Sb	22 12 15.3	+0.2
ENA	**Nanau**	**0.42**	**205**	*e*P	Pb	22 12 09.9	+0.7
ENA				S	Sg	22 12 14.5	+1.0
LATG	**Datong**	**0.46**	**234**	*i* P	Pb	22 12 09.5	-0.5
LATG				S	Sb	22 12 17.0	+0.1
YM01	**YM01**	**0.47**	**316**	*i* P	Pb	22 12 10.5	+0.3
YM01				S	Sb	22 12 16.8	-0.3
EOS2	**EOS2**	**0.47**	**145**	*e*P	Pb	22 12 10.3	+0.2
EOS2				*e*S	Sb	22 12 19.3	+2.2
YM08	**YM08**	**0.49**	**321**	*e*P	Pb	22 12 10.5	+0.1
YM08				*e*S	Sb	22 12 17.2	-0.5
YHNB	**Yeheng**	**0.53**	**255**	*i* P	Pb	22 12 11.0	-0.1
YHNB				S	Sb	22 12 18.3	-0.5
NSK	**Sanguang**	**0.54**	**256**	*i* P	Pb	22 12 11.0	-0.3
NSK				*i* S	Sb	22 12 18.8	-0.3
EOS3	**EOS3**	**0.63**	**146**	*e*P	Pb	22 12 13.1	+0.4
EOS3				*e*S	Sn	22 12 23.3	-1.2
NNSB	**Datong**	**0.63**	**233**	*i* P	Pb	22 12 13.0	+0.2
NNSB				S	Sb	22 12 21.8	+0.1
NACB	**Ninganchiao**	**0.70**	**206**	*i* P	Pb	22 12 14.4	+0.3
NACB				S	Sb	22 12 24.3	+0.5
ETLH	**Xiulin Townshi**	**0.73**	**215**	P	Pb	22 12 15.2	+0.6
ETLH				*e*S	Sb	22 12 24.6	+0.1
NFF	**Wufeng Townshi**	**0.76**	**257**	*e*P	Pn	22 12 16.3	-0.3
NFF				*e*S	Sn	22 12 27.2	-0.9
LXIB	**Xiulin Townshi**	**0.92**	**211**	*e*P	Pn	22 12 19.0	+0.2
LXIB				*i* S	Sb	22 12 30.6	+0.5

JMA 29 22:12:02.7±0.3**, 25°N**±3°×**123°.5E**±0°.8**, h179**^{km}±4^{km}**,**
MV2.8/13**, NW OFF ISHIGAKIJIMA IS, Northeast of**
Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.91**	**207**	P	Pn	22 12 29.9	+0.2
IRIF	**Iriomote-Funau**	**0.97**	**166**	P	Pn	22 12 30.2	+0.1
IRIF				*e*S	Sn	22 12 50.9	-0.4
JISG	**Ishigakijimahi**	**1.03**	**132**	P	Pn	22 12 30.6	0.0
JISG				*e*S	Sn	22 12 51.7	-0.4
JIJ	**Ishigaki jima**	**1.10**	**146**	*e*P	Pn	22 12 31.1	0.0
JIJ				*e*S	Sn	22 12 52.9	-0.2
JKRS	**Kuro-shima**	**1.15**	**154**	*e*P	Pn	22 12 31.9	+0.4
JKRS				*e*S	Sn	22 12 54.2	+0.4
HATJ	**Hateruma jima**	**1.25**	**166**	*e*S	Sn	22 12 55.8	+0.5
JTJ	**Tarama**	**1.29**	**119**	*e*P	Pn	22 12 33.1	+0.4
JTJ				*e*S	Sn	22 12 56.1	+0.3
JIRB	**Irabujima**	**1.61**	**106**	*e*P	Pn	22 12 35.7	0.0
JIRB				*e*S	Sn	22 13 00.4	-0.8
JMJ2	**Miyako jima3**	**1.77**	**107**	*e*P	Pn	22 12 37.8	+0.4
JMJ2				*e*S	Sn	22 13 04.0	0.0

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*IDC **29** 22:15:10.9±1.2, 63°.34S×172°.94E, h0^{km}, mb3.7/4,*
mbtmp3.9/5, ML4.1/1, MS4.2/12, Error ellipse:
s-maj=52.8km s-min=24.2km az=70.0

*GCMT **29** 22:15:15.0±0.3, 63°.47S±0°.02×171°.04E±0°.06, h17^{km}±1^{km},*
MW5.0/71, Moment Tensor Solution. s14,c15; s71,c85;
Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.87±.20;
$M_{\theta\theta}$3.20±.18; $M_{\phi\phi}$-2.34±.14; $M_{r\theta}$-0.73±.38; $M_{\theta\phi}$-0.37±.12;
$M_{\phi r}$-1.63±.46; Best double couple: $M_0$3.39900×10^{16}
NP1:ϕ_s314.00000°, δ60.00000°, λ-18.00000°. NP2:
ϕ_s53.00000°, δ74.00000°, λ-148.00000°. Principal axes:
T 3.3300, Plg10.0000°, Azm181.0000°; N 0.1300,
Plg55.0000°, Azm77.0000°; P -3.4680, Plg33.0000°,
Azm277.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s. Surface-wave
location Triangular moment-rate function

ISC 29 22:15:13.8±1.3**, 63°.5S**±0°.1×**172°.0E**±0°.4**, h10**^{km}**, n29,**
σ**1^{s}.04**/9**, mb3.7**/4**, MS4.2**/10**, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**14.47**	**189**	Pn	**Pn**	**22 18 38.4**	**+0.1**
	0.9nm,0.3s,baz=32,slow=17,SNR=64						
VNDA				LR	LR	22 22 58.9	
	comp=Z,1μm,20.3s,baz=21,slow=32						
	8.5nm,0.5s						
RPZ	**Rata Peaks**	**19.81**	**358**	LR	LR	22 26 28.7	
	comp=Z,775nm,19.8s,baz=195,slow=34						
URZ	**Urewera**	**25.43**	**9**	LR	LR	22 29 56.5	
	comp=Z,466nm,19.2s,baz=190,slow=35						
QSPA	**South Pole Qui**	**26.61**	**180**	P	**P**	**22 20 52.7**	**+0.6**
	1.1nm,0.8s,baz=326,slow=0.4,SNR=5.1						
QSPA				LR	LR	22 30 04.3	
	comp=Z,626nm,20.1s,baz=36,slow=33						
	1.1nm,0.8s						
MAW	**Mawson**	**39.75**	**214**	LR	LR	22 38 57.6	
	comp=Z,422nm,20.2s,baz=134,slow=36						
SNAA	**Sanae**	**45.08**	**182**	P	**P**	**22 23 28.9**	**-0.4**
	0.9nm,0.7s,baz=178,slow=5.8,SNR=4.1						
SNAA				LR	LR	22 41 38.6	
	comp=Z,632nm,19.1s,baz=196,slow=35						
	0.9nm,0.7s						
H01W1	**Cape Leeuwin H**	**45.16**	**281**	T	T	23 12 16.0	
	baz=147,slow=75,SNR=46						
H01W2	**Cape Leeuwin H**	**45.16**	**281**	T	T	23 11 57.7	
	baz=147,slow=75,SNR=40						
H01W3	**Cape Leeuwin H**	**45.17**	**281**	T	T	23 12 19.0	
	baz=147,slow=75,SNR=36						
NWAO	**Narrogin (SRO)**	**45.48**	**285**	LR	LR	22 38 16.3	
	comp=Z,404nm,21.1s,baz=106,slow=30						
PMSA	**Palmer Station**	**45.58**	**150**	LR	LR	22 39 43.0	
	comp=Z,154nm,18.0s,baz=202,slow=32						
ASAR	**Alice Springs**	**47.11**	**309**	P	**P**	**22 23 46.1**	**+0.3**
	1.2nm,0.9s,baz=153,slow=8.2,SNR=6.3						
	1.2nm,0.9s						
WRA	**Warramunga Arr**	**50.41**	**312**	P	**P**	**22 24 11.8**	**+0.6**
	0.8nm,0.9s,baz=173,slow=18,SNR=2.2						
	0.8nm,0.9s						
H03S2	**Juan Fernandez**	**68.08**	**122**	T	T	23 41 33.0	
	baz=203,slow=74,SNR=6.4						
H03S1	**Juan Fernandez**	**68.09**	**122**	T	T	23 41 29.5	
	baz=203,slow=74,SNR=7.4						
H03S3	**Juan Fernandez**	**68.10**	**122**	T	T	23 41 26.8	
	baz=203,slow=74,SNR=6.1						
DAV	**Davao City (W)**	**78.59**	**313**	LR	LR	23 04 11.0	
	comp=Z,66nm,18.1s,baz=133,slow=37						
BOSA	**Boshof**	**84.52**	**209**	LR	LR	23 02 48.9	
	comp=Z,169nm,20.6s,baz=208,slow=34						
PSI	**Prapat**	**85.01**	**286**	LR	LR	23 01 58.1	
	comp=Z,97nm,18.7s,baz=156,slow=33						
H08S2	**Diego Garcia H**	**87.45**	**258**	T	T	00 04 56.6	
	baz=153,slow=76,SNR=56						
H08S1	**Diego Carcia H**	**87.46**	**258**	T	T	00 04 56.7	
	baz=153,slow=76,SNR=30						
H08S3	**Diego Garcia H**	**87.47**	**258**	T	T	00 04 58.1	
	baz=153,slow=76,SNR=84						
PALK	**Pallekele**	**97.04**	**272**	LR	LR	23 04 39.6	
	comp=Z,91nm,19.1s,baz=110,slow=30						
H06S1	**SOCORRO T**	**100.94**	**70**	T	T	00 21 58.2	
H02S1	**DAWSON INLET T**	**124.11**	**37**	T	T	00 50 33.9	
	SNR=60						
ILAR	**Eielson Array**	**131.47**	**22**	PKP	**PKPdf**	**22 34 23.4**	**-1.3**
	0.3nm,0.8s,baz=234,slow=3.4,SNR=2.6						
KBZ	**Khabaz**	**145.17**	**260**	PKPbc	**PKPbc**	**22 34 48.7**	**-1.3**
	1.9nm,0.7s,baz=133,slow=6.0,SNR=2.1						
BRTR	**Keskin Array B**	**145.86**	**246**	PKPbc	**PKPdf**	**22 34 51.8**	**-0.1**
	1.0nm,0.9s,baz=222,slow=1.7,SNR=4.2						
SCHQ	**Schefferville**	**149.67**	**79**	PKPbc	**PKPdf**	**22 34 59.0**	**+1.5**
	baz=222,slow=16						

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*NEOC **29** 22:26:01.9±2.7, 18°.7S±0°.1×173°.1W±0°.1, h10^{km}±1^{km},*
mb4.9/36, Error ellipse: s-maj=22.1km s-min=16.5km
az=176.0

*IDC **29** 22:26:02.7±0.6, 18°.74S×173°.53W, h0^{km}, mb4.3/18,*
mbtmp4.3/18, MS4.0/13, Error ellipse: s-maj=22.9km
s-min=16.1km az=111.0

*NOU **29** 22:26:06.7, 18°.09S×172°.58W, h90^{km}, mb4.8/9, Tonga*
Islands Region

*BGR **29** 22:26:12.3, 17°.54S×173°.37W, h33^{km}*

ISC 29 22:26:01.8±0.3**, 18°.75S**±0°.09×**173°.03W**±0°.05**, h10**^{km}**,**
n198, σ**1^{s}.81**/183**, mb4.7**/34**, MS4.2**/12**, 24C-3D, Tonga**
Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**2.96**	**97**	Pn	**Pn**	**22 26 47.8**	**-1.0**
NIUE				Sn	**Sn**	**22 27 20.9**	**-3.4**
NIUE	**Niue**	**2.96**	**97**	P	**Pn**	**22 26 48.2**	**-0.6**
NIUE	**Niue**	**2.96**	**97**	P	**Pn**	**22 26 46.9**	**-1.9**
NIUE				S	**Sn**	**22 27 21.0**	**-3.4**
LKBA	**Tubou, Lakemba**	**5.51**	**274**	P	Pn	22 27 28.8	+4.8
TAVE	**Taveuni**	**6.86**	**286**	P	Pn	22 27 49.2	+6.7
DGTI	**Dogotuki**	**7.32**	**288**	P	Pn	22 27 54.2	+5.4
MSVF	**Nonsavu**	**8.54**	**275**		Pn	22 28 10.7	+5.0
MSVF	**Nonsavu**	**8.54**	**275**	Pn	Pn	22 28 10.8	+5.2
	0.9nm,0.3s,baz=123,slow=12,SNR=11						
MSVF				LR	LR	22 31 00.2	
	comp=Z,2μm,19.1s,baz=131,slow=37						
MSVF	**Nonsavu**	**8.54**	**275**	P	Pn	22 28 12.0	+6.4
RAR	**Rarotonga**	**12.70**	**103**		**Pn**	**22 29 01.2**	**-1.4**
RAR	**Rarotonga**	**12.70**	**103**	Pn	**Pn**	**22 29 01.4**	**-1.2**
	11nm,0.3s,baz=240,slow=4.4,SNR=14						
RAR				LR	LR	22 33 12.8	
	comp=Z,233nm,21.5s,baz=264,slow=33						
PINNC	**Pines Island,**	**18.66**	**255**	P	**P**	**22 30 20.0**	**0.0**
PINNC				IAmb	IAmb	22 30 36.6	
	comp=Z,138nm,1.2s						
VLAKA	**Lakatoro**	**18.84**	**275**	P	**Pn**	**22 30 22.5**	**0.0**
DZM	**Mont Dzumac**	**19.52**	**257**	P	**P**	**22 30 29.8**	**+0.3**
DZM				IAmb	IAmb	22 30 34.0	
	comp=Z,70nm,1.3s						
DZM	**Mont Dzumac**	**19.52**	**257**	*e*P	**P**	**22 30 28.0**	**-1.5**
	comp=Z,112nm,1.4s						
DZM				*e*S	**Sn**	**22 34 07.1**	**-2.9**
	comp=Z,880nm,28.7s						
DZM				*e*LR	LR	22 35 00.3	
	comp=Z,612nm,22.1s						
DZM	**Mont Dzumac**	**19.52**	**257**	P	**P**	**22 30 30.1**	**+0.5**
	comp=Z,28nm,0.9s,baz=111,slow=22,SNR=9.7						
WCZ	**Waipu Caves**	**20.43**	**211**	P	Pn	22 30 42.0	+0.6
URZ	**Urewera**	**21.25**	**202**	P	**P**	**22 30 49.2**	**+1.1**
	comp=Z,9.7nm,0.4s,baz=10,slow=1.9,SNR=16						
URZ				S	S	22 34 33.6	-11
	comp=Z,2.3nm,0.5s,baz=309,slow=14,SNR=1.7						
	comp=Z,9.7nm,0.4s						
URZ	**Urewera**	**21.25**	**202**	P	**P**	**22 30 50.6**	**+2.5**
TOZ	**Tahuroa Road**	**21.40**	**206**		**P**	**22 30 50.8**	**+1.0**
BKZ	**Black Stump Fm**	**22.28**	**202**	P	**P**	**22 31 00.4**	**+1.2**
BKZ	**Black Stump Fm**	**22.28**	**202**	P	**P**	**22 31 04.1**	**+4.9**
PPT2	**Papeete2**	**22.31**	**91**	*e*P	**P**	**22 31 00.5**	**+0.7**
	comp=Z,80nm,24.0s						
PPT2				*e*S	**S**	**22 35 01.0**	**-4.4**
	comp=Z,456nm,26.2s						
PPT2				*e*LR	LR	22 36 11.8	
	comp=Z,425nm,25.8s						
PPT2				*e*LR	LR	22 36 18.3	
	comp=Z,296nm,25.0s						
PPT	**Papeete**	**22.32**	**91**	LR	LR	22 37 38.4	
	comp=Z,192nm,20.0s,baz=248,slow=30						
HIZ	**Hauiti**	**22.34**	**206**		**P**	**22 31 01.4**	**+1.6**
TBI	**Tubuai**	**22.46**	**106**	*e*S	S	22 34 52.8	-15
	comp=Z,3μm,41.0s						
TBI				*e*LR	LR	22 36 18.3	
	comp=Z,1μm,26.0s						
BFZ	**Birch Farm**	**23.72**	**201**	P	**P**	**22 31 17.9**	**+3.9**
BFZ	**Birch Farm**	**23.72**	**201**	P	**P**	**22 31 16.5**	**+2.5**
MRZ	**Mangatainoka R**	**23.93**	**202**	P	**P**	**22 31 16.9**	**+0.9**
OGWZ	**Otaki Gorge**	**24.21**	**202**	P	**P**	**22 31 20.4**	**+1.8**
DUWZ	**D'Urville Isla**	**24.66**	**204**	P	**P**	**22 31 25.6**	**+2.8**
TCW	**Tory Channel**	**24.88**	**203**	P	**P**	**22 31 24.8**	**0.0**
TUWZ	**Tuamarina**	**25.20**	**203**	P	**P**	**22 31 29.4**	**+1.9**
NNZ	**Nelson**	**25.23**	**205**	P	**P**	**22 31 29.6**	**+1.7**
QRZ	**Quartz Range**	**25.25**	**206**	P	**P**	**22 31 30.0**	**+2.0**
QRZ	**Quartz Range**	**25.25**	**206**	P	**P**	**22 31 31.8**	**+3.8**
QRZ	**Quartz Range**	**25.25**	**206**	P	**P**	**22 31 31.3**	**+3.3**
BSWZ	**Blackbirch Sta**	**25.47**	**203**	P	**P**	**22 31 29.1**	**-0.9**
THZ	**Tophouse**	**25.88**	**205**	P	**P**	**22 31 35.8**	**+1.9**
RPZ	**Rata Peaks**	**28.26**	**205**	P	P	22 32 02.4	+7.2
JCZ	**Jackson Bay**	**29.50**	**207**	P	**P**	**22 32 10.8**	**+4.5**
EIDS	**Eidsvold**	**33.83**	**252**	P	**P**	**22 32 42.3**	**-2.3**
ARMA	**Armidale**	**34.03**	**243**	P	**P**	**22 32 45.0**	**-1.3**
ARMA				IAmb	IAmb	22 32 59.7	
	comp=Z,33nm,1.6s						
CAN	**Canberra**	**37.37**	**236**	P	**P**	**22 33 13.9**	**-0.9**
CAN				IAmb	IAmb	22 33 19.1	
	comp=Z,45nm,1.5s						
CTAO	**Charters Tower**	**38.36**	**261**		**P**	**22 33 21.4**	**-1.9**
CTAO				IAmb	IAmb	22 33 22.1	
	comp=Z,21nm,0.9s						
TOO	**Toolangi**	**40.70**	**234**	P	**P**	**22 33 42.5**	**-0.2**
TOO				IAmb	IAmb	22 33 58.9	
	comp=Z,35nm,1.6s						
COEN	**Coen**	**42.22**	**270**	P	**P**	**22 33 53.7**	**-1.7**
COEN				IAmb	IAmb	22 34 04.1	
	comp=Z,29nm,1.4s						
STKA	**Stephens Creek**	**42.76**	**243**	P	**P**	**22 33 57.3**	**-2.3**
	comp=Z,5.4nm,0.7s,baz=95,slow=9.4,SNR=7.4						
STKA				LR	LR	22 50 21.4	
	comp=Z,160nm,18.2s,baz=36,slow=34						
	comp=Z,5.4nm,0.7s						
JAY	**Jayapura**	**48.06**	**284**	LR	LR	22 54 39.9	
	comp=Z,210nm,18.0s,baz=0.5,slow=36						
WR8	**Warramunga Arr**	**49.35**	**259**		**P**	**22 34 49.4**	**-2.4**
WR8				IAmb	IAmb	22 35 00.3	
	comp=Z,14nm,1.2s						
AS31	**Alice Springs**	**49.49**	**255**		**P**	**22 34 51.0**	**-1.8**
AS31				IAmb	IAmb	22 34 52.4	
	comp=Z,5.9nm,0.7s						
ASAR	**Alice Springs**	**49.49**	**255**	P	**P**	**22 34 51.0**	**-1.8**
	comp=Z,25nm,0.7s,baz=94,slow=7.9,SNR=204						
ASAR				PcP	**PcP**	**22 36 16.1**	**+1.2**
	comp=Z,2.2nm,0.7s,baz=104,slow=4.4,SNR=4.5						
ASAR				S	**S**	**22 41 53.2**	**-7.5**
	comp=Z,0.7nm,0.8s,baz=95,slow=14,SNR=5.2						
ASAR				LR	LR	22 55 33.2	
	comp=Z,221nm,18.7s,baz=92,slow=36						
	comp=Z,25nm,0.7s						
WRA	**Warramunga Arr**	**49.50**	**259**	P	**P**	**22 34 50.8**	**-2.2**
WRA	**Warramunga Arr**	**49.50**	**259**	P	**P**	**22 34 50.2**	**-2.7**
	comp=Z,3.6nm,0.4s,baz=98,slow=6.0,SNR=44						
WRA				PcP	**PcP**	**22 36 14.1**	**-0.9**
	comp=Z,1.4nm,0.8s,baz=102,slow=3.0,SNR=2.3						
WRA				LR	LR	22 55 14.7	
	comp=Z,339nm,18.1s,baz=126,slow=36						
	comp=Z,3.6nm,0.4s						
GUMO	**Guam**	**52.48**	**305**	LR	LR	22 54 39.8	
	comp=Z,71nm,20.1s,baz=96,slow=33						
MTN	**Manton Dam**	**53.88**	**268**		**P**	**22 35 23.6**	**-2.1**
MTN				IAmb	IAmb	22 35 24.5	
	comp=Z,14nm,0.7s						
FORT	**Forrest**	**54.28**	**245**	P	**P**	**22 35 26.7**	**-1.7**
FORT				IAmb	IAmb	22 35 43.1	
	comp=Z,17nm,1.1s						
KNRA	**Kununurra**	**55.48**	**264**	P	**P**	**22 35 35.7**	**-1.6**
FAKI	**Fak Fak**	**55.75**	**279**	P	**P**	**22 35 38.0**	**-1.4**
FITZ	**Fitzroy Crossi**	**57.92**	**260**	P	**P**	**22 35 53.1**	**-1.6**
FITZ	**Fitzroy Crossi**	**57.92**	**260**	LR	LR	22 59 39.3	
	comp=Z,328nm,19.4s,baz=100,slow=35						
VNDA	**Vanda**	**60.10**	**186**	P	**P**	**22 36 10.3**	**+1.5**
VNDA	**Vanda**	**60.10**	**186**	P	**P**	**22 36 11.2**	**+2.4**
	comp=Z,0.8nm,1.0s,baz=31,slow=3.3,SNR=6.5						
	comp=Z,0.8nm,1.0s						
SOEI	**Soe**	**61.17**	**269**	P	**P**	**22 36 16.6**	**-0.8**
PSA00	**Pilbara Seismi**	**62.63**	**255**	P	**P**	**22 36 25.3**	**-1.6**
NWAO	**Narrogin (SRO)**	**63.33**	**242**	LR	LR	23 03 53.2	
	comp=Z,128nm,18.0s,baz=106,slow=36						
QSPA	**South Pole Qui**	**71.31**	**180**	P	**P**	**22 37 23.4**	**+1.9**
QSPA				IAmb	IAmb	22 37 48.5	
	comp=Z,7.9nm,1.1s						
QSPA	**South Pole Qui**	**71.31**	**180**	P	**P**	**22 37 24.7**	**+3.1**
	comp=Z,1.8nm,0.9s,baz=330,slow=1.9,SNR=7.3						
QSPA				LR	LR	23 05 00.3	
	comp=Z,86nm,19.3s,baz=48,slow=33						
	comp=Z,1.8nm,0.9s						
MJAR	**Matsushiro Arr**	**71.72**	**320**	P	**P**	**22 37 24.8**	**+0.6**
	comp=Z,1.8nm,0.7s,baz=156,slow=7.0,SNR=4.9						
MJAR				LR	LR	23 03 11.3	
	comp=Z,63nm,21.5s,baz=151,slow=31						
	comp=Z,1.8nm,0.7s						
ASAJ	**Asahikawa**	**74.56**	**328**	P	**P**	**22 37 42.7**	**+1.9**
	comp=Z,4.4nm,0.8s,baz=209,slow=9.8,SNR=4.3						
	comp=Z,4.4nm,0.8s						
PETK	**Petropavlovsk-**	**75.91**	**342**	P	**P**	**22 37 49.4**	**+1.0**
	comp=Z,5.7nm,1.0s,baz=196,slow=10,SNR=5.3						
	comp=Z,5.7nm,1.0s						
NVAR	**Mina Array Bea**	**76.59**	**41**	P	**P**	**22 37 52.2**	**-0.7**
NVAR	**Mina Array Bea**	**76.59**	**41**	P	**P**	**22 37 55.5**	**+2.6**
	comp=Z,0.7nm,0.8s,baz=203,slow=7.7,SNR=3.7						
	comp=Z,0.7nm,0.8s						
KSM	**Kuching**	**77.86**	**276**	P	**P**	**22 37 59.9**	**-0.4**
KSRS	**Korea Array**	**78.79**	**316**	P	**P**	**22 38 07.6**	**+2.7**
	comp=Z,2.8nm,0.8s,baz=136,slow=6.5,SNR=11						
	comp=Z,2.8nm,0.8s						
KSAR	**Wonju Array Be**	**78.81**	**316**	P	**P**	**22 38 04.2**	**-0.9**
P18K	**Big Mountain,**	**79.22**	**9**	P	**P**	**22 38 07.4**	**+0.6**
P18K				IAmb	IAmb	22 38 26.5	
	comp=Z,12nm,0.9s						
USRK	**Ussuriysk Ar.**	**80.27**	**323**	LR	LR	23 08 48.7	
	comp=Z,108nm,19.6s,baz=106,slow=32						
TX31	**Lajitas Ar. Si**	**82.19**	**56**	P	**P**	**22 38 23.1**	**-0.4**
TXAR	**Lajitas Array**	**82.19**	**56**	P	**P**	**22 38 24.1**	**+0.6**
TXAR	**Lajitas Array**	**82.19**	**56**	P	P	22 38 28.4	+4.9
	comp=Z,0.9nm,1.0s,baz=214,slow=8.7,SNR=7.1						
	comp=Z,0.9nm,1.0s						
NJ2	**Nanjing**	**82.46**	**307**	*e*P	**P**	**22 38 25.3**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GHO	**Glory Hole Cre**	**82.53**	**11**	P	**P**	**22 38 23.9**	**-0.6**
GHO				IAmb	IAmb	22 38 27.8	
	comp=Z,6.9nm,0.6s						
J18K	**Innoko River**	**82.94**	**7**	P	**P**	**22 38 25.2**	**-1.3**
H03S2	**Juan Fernandez**	**83.07**	**123**	T	T	00 11 15.2	
	baz=249,slow=75,SNR=5.7						
H03S1	**Juan Fernandez**	**83.08**	**123**	T	T	00 11 19.9	
	baz=249,slow=75,SNR=5.2						
H03S3	**Juan Fernandez**	**83.09**	**123**	T	T	00 11 15.0	
	baz=249,slow=75,SNR=5.6						
CAST	**Castle Rocks**	**83.53**	**9**	P	**P**	**22 38 27.3**	**-2.3**
BNX	**BinXian**	**83.80**	**323**	⇓P	**P**	**22 38 33.3**	**+2.0**
BNX				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TRF	**Thorofare Moun**	**83.84**	**10**	P	**P**	**22 38 29.8**	**-1.6**
TRF				IAmb	IAmb	22 38 51.8	
	comp=Z,8.3nm,1.0s						
J20K	**Nowinta River**	**83.95**	**8**		**P**	**22 38 29.1**	**-2.5**
PDAR	**Pinedale Array**	**84.52**	**41**	P	**P**	**22 38 38.2**	**+2.8**
	comp=Z,0.4nm,0.6s,baz=281,slow=5.2,SNR=3.4						
	comp=Z,0.4nm,0.6s						
MAW	**Mawson**	**84.74**	**199**	P	**P**	**22 38 37.1**	**+1.3**
	comp=Z,2.4nm,0.9s,baz=41,slow=6.6,SNR=2.7						
	comp=Z,2.4nm,0.9s						
NEA2	**Nenana**	**85.11**	**10**	P	**P**	**22 38 37.5**	**0.0**
WRH	**Wood River Hil**	**85.16**	**11**	P	**P**	**22 38 38.5**	**+0.7**
SCRK	**Sand Creek**	**85.49**	**12**		**P**	**22 38 40.6**	**+0.9**
SCRK				IAmb	IAmb	22 38 59.0	
	comp=Z,5.5nm,1.0s						
ILAR	**Eielson Array**	**85.65**	**11**	P	**P**	**22 38 40.2**	**0.0**
ILAR	**Eielson Array**	**85.65**	**11**	P	**P**	**22 38 42.4**	**+2.1**
	comp=Z,2.1nm,0.9s,baz=214,slow=5.0,SNR=17						
	comp=Z,2.1nm,0.9s						
IMAR	**Indian Mountai**	**85.73**	**8**	P	**P**	**22 38 41.2**	**+0.6**
DAWY	**Dawson**	**86.57**	**14**		**P**	**22 38 45.1**	**+0.3**
DAWY				IAmb	IAmb	22 39 04.8	
	comp=Z,6.7nm,1.0s						
SYO	**Syowa Base**	**89.40**	**191**	⇑*e*P	**P**	**22 38 58.8**	**+0.4**
SNAA	**Sanae**	**89.56**	**177**	P	**P**	**22 38 59.4**	**+0.2**
SNAA				IAmb	IAmb	22 39 20.8	
	comp=Z,13nm,1.7s						
SNAA	**Sanae**	**89.56**	**177**	P	**P**	**22 39 03.7**	**+4.4**
	comp=Z,2.0nm,0.9s,baz=286,slow=2.2,SNR=6.2						
	comp=Z,2.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**91.55**	**313**	*e*P	**P**	**22 39 09.5**	**+0.5**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,49nm,3.8s						
HHC				LR	LR		
	comp=N,90nm,11.0s						
HHC				LR	LR		
	comp=E,130nm,11.8s						
HHC				LR	LR		
	comp=Z,98nm,12.9s						
MIAR	**Mount Ida**	**92.13**	**54**		**P**	**22 39 10.2**	**-1.5**
CMAR	**Chiang Mai Arr**	**93.99**	**288**	P	**P**	**22 39 22.9**	**+2.2**
	comp=Z,0.6nm,0.3s,baz=122,slow=2.9,SNR=7.4						
	comp=Z,0.6nm,0.3s						
PZH	**PanZhiHua**	**94.08**	**296**	P	**P**	**22 39 20.5**	**-0.6**
SONM	**Songino Array**	**97.56**	**318**	P	Pdif	22 39 38.8	+2.2
	comp=Z,0.4nm,0.6s,baz=108,slow=4.7,SNR=1.8						
	comp=Z,0.4nm,0.6s						
MKAR	**Makanchi Array**	**113.40**	**314**	PKiKP	**PKiKP**	**22 44 40.5**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=93,slow=2.9,SNR=5.2						
KURBB	**Kurchatov Arra**	**115.93**	**318**	PKP	**PKiKP**	**22 44 44.9**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=79,slow=2.0,SNR=4.7						
SPITS	**Spitsbergen Ar**	**120.36**	**358**	PKP	**PKiKP**	**22 44 54.9**	**+2.2**
	comp=Z,3.0nm,0.7s,baz=316,slow=12,SNR=1.3						
BVAR	**Borovoye Array**	**120.72**	**321**	PKP	**PKiKP**	**22 44 55.9**	**+1.9**
	comp=Z,0.9nm,0.5s,baz=76,slow=2.0,SNR=5.5						
FINES	**FINESS Array B**	**135.27**	**347**	PKhKP	PKPpre	22 45 20.5	
	comp=Z,1.7nm,0.8s,baz=11,slow=9.0,SNR=4.2						
AKASG	**Malin Array Be**	**143.54**	**336**	PKhKP	PKPpre	22 45 35.7	
	comp=Z,0.8nm,0.5s,baz=42,slow=3.5,SNR=8.6						
GURO	**Guroymak-BITLI**	**143.75**	**310**	PKPdf	**PKPdf**	**22 45 37.0**	**-0.7**
BEL	**Belsk**	**145.24**	**345**	*e*PKP	**PKiKP**	**22 45 43.3**	**-0.2**
GORT1	**Trebel**	**145.66**	**355**	*e*PKPbc	**PKiKP**	**22 45 43.7**	**-0.6**
	baz=8.2,slow=2.8						
SORM	**Soroca**	**145.93**	**334**	⇑P	**PKiKP**	**22 45 43.7**	**-1.3**
RETH	**Rethem/Aller,**	**146.03**	**357**	*e*PKPbc	**PKiKP**	**22 45 44.7**	**-0.4**
	baz=8.2,slow=2.8						
NRDL	**Niedersach Rie**	**146.24**	**357**	*e*PKPbc	**PKiKP**	**22 45 45.2**	**-0.3**
	baz=8.2,slow=2.8						
FLTG	**Flechtingen**	**146.32**	**355**	*e*PKPbc	**PKiKP**	**22 45 45.2**	**-0.5**
	baz=8.2,slow=2.8						
PURM	**Purcari**	**146.49**	**331**	⇑P	**PKiKP**	**22 45 45.9**	**-0.3**
ASSE	**Asse, Remlinge**	**146.57**	**356**	*e*PKPbc	**PKiKP**	**22 45 46.2**	**0.0**
	baz=8.2,slow=2.8						
KWP	**Kalwaria Pacla**	**146.70**	**341**	*e*PKP	**PKiKP**	**22 45 47.3**	**+0.7**
CLZ	**Clausthal**	**146.87**	**356**	*e*PKPbc	**PKiKP**	**22 45 47.4**	**+0.5**
	baz=8.2,slow=2.8						
OJC	**Ojcow**	**146.97**	**345**	*e*PKP	**PKiKP**	**22 45 47.8**	**+0.6**
KSP	**Ksiaz**	**147.13**	**349**	*e*PKP	**PKiKP**	**22 45 48.5**	**+1.0**
CLL	**Collm**	**147.17**	**353**	*e*PKPbc	**PKiKP**	**22 45 47.8**	**+0.3**
	baz=8.2,slow=2.8						
CLL	**Collm**	**147.17**	**353**	*i* PKiKP	**PKiKP**	**22 45 47.6**	**+0.1**
	comp=Z,13nm,0.9s						
CLL				*i* x	x	22 45 50.9	
	comp=Z,14nm,1.1s						
CLL				*i* PKPmax		22 46 02.8	
	comp=Z,25nm,1.0s						
CHVC	**Chvalec**	**147.42**	**349**	*e*PKP	**PKiKP**	**22 45 49.4**	**+1.3**
OSTC	**Ostas**	**147.42**	**349**	*e*PKP	**PKiKP**	**22 45 49.0**	**+0.9**
KOLS	**Kolonicke sedl**	**147.45**	**341**	*e*PKP	**PKiKP**	**22 45 49.5**	**+1.3**
BRG	**Berggiesshubel**	**147.47**	**352**	*e*PKPbc	**PKiKP**	**22 45 48.9**	**+0.8**
	baz=8.2,slow=2.8						
BUR08	**Bucovina Ar. S**	**147.57**	**337**	PKPbc	**PKPbc**	**22 45 45.6**	**-0.9**
NIE	**Niedzica**	**147.58**	**344**	*e*PKP	**PKiKP**	**22 45 50.1**	**+1.6**
BURAR	**Bucovina Array**	**147.58**	**337**	⇑P	**PKiKP**	**22 45 50.2**	**+1.5**
DPC	**Dobruska-Polom**	**147.60**	**349**	*e*PKP	**PKiKP**	**22 45 49.6**	**+1.1**
STEB	**Steborice**	**147.71**	**347**	*e*PKP	**PKPab**	**22 45 49.8**	**+0.9**
KRLC	**Kraliky**	**147.78**	**348**	*e*PKP	**PKPab**	**22 45 49.8**	**+0.6**
MORC	**Moravsky Berou**	**147.91**	**347**	*e*PKP	**PKPab**	**22 45 49.6**	**-0.2**
MORC	**Moravsky Berou**	**147.91**	**347**	⇑P	**PKPab**	**22 45 50.6**	**+0.8**
MOX	**Moxa**	**147.97**	**354**	*e*PKPbc	**PKPab**	**22 45 50.2**	**+0.3**
	baz=8.2,slow=2.8						
TLCR		**147.99**	**330**	⇑P	**PKPab**	**22 45 50.9**	**+0.8**
LANS	**Liptovska Anna**	**148.04**	**344**	*e*PKP	**PKPab**	**22 45 52.9**	**+2.6**
TANN	**Tannenbergstha**	**148.11**	**353**	*e*PKPbc	**PKPab**	**22 45 50.8**	**+0.2**
	baz=8.2,slow=2.8						
ONER	**Baraj Valea Uz**	**148.17**	**334**	⇑P	**PKPab**	**22 45 51.6**	**+0.7**
MAUC	**Maruska**	**148.23**	**346**	*e*PKP	**PKPab**	**22 45 51.9**	**+0.8**
MAUC				*e*x	x	22 46 03.6	
ARCR	**ARCALIA**	**148.35**	**337**	⇑P	**PKPab**	**22 45 51.7**	**+0.2**
TPGR	**Topolog**	**148.42**	**330**	⇑P	**PKPab**	**22 45 51.0**	**-1.0**
VRAC	**Vranov**	**148.55**	**348**	*e*PKP	**PKPab**	**22 45 51.7**	**-0.6**
VRAC				*e*		22 46 06.0	
VRAC	**Vranov**	**148.55**	**348**	⇑P	**PKPab**	**22 45 51.4**	**-0.9**
TURR	**Turia**	**148.55**	**334**	⇑P	**PKiKP**	**22 45 50.6**	**0.0**
MANZ	**Manzenberg**	**148.57**	**354**	*e*PKPbc	**PKPab**	**22 45 52.0**	**-0.4**
	baz=8.2,slow=2.8						

OZUR		148.61	334	⇑P	PKPab	22 45 53.1	+0.4
HARR	Harsova	148.77	331	⇑P	PKPab	22 45 52.5	-0.8
ROTZ	Rotzenmuhle	148.78	353	*e*PKPbc	PKPab	22 45 52.4	-0.8
	baz=8.2,slow=2.8						
VYHS	Vyhne	148.81	345	*e*PKP	PKPab	22 45 52.8	-0.6
VYHS				*e*		22 46 07.9	
KRUC	Moravsky	148.82	348	*e*PKP	PKPab	22 45 52.4	-1.0
KRUC				*e*		22 46 06.3	
TLBR	Topalu	148.83	330	⇑P	PKPab	22 45 52.8	-0.7
ZVC	Zvikov	148.84	351	*e*PKP	PKPab	22 45 53.1	-0.4
ZVC				*e*x	x	22 46 03.7	
BRTR	Keskin Array B	148.92	318	PKPbc	PKiKP	22 45 52.6	+0.8
	comp=Z,3.5nm,0.8s,baz=136,slow=3.1,SNR=18						
CJR	Cluj-Napoca	148.94	338	⇑P	PKPab	22 45 53.9	-0.1
MLR	Muntele Rosu	149.03	334	⇑P	PKiKP	22 45 52.9	+1.1
MARR	Marisel-Cluj	149.14	338	⇑P	PKiKP	22 45 53.1	+1.2
WLF	Walferdange	149.16	1	*e*PKPbc	PKPab	22 45 54.0	-0.7
	baz=8.2,slow=2.8						
KHC	Kasperske Hory	149.23	352	*e*PKP	PKPab	22 45 53.5	-1.6
KHC				*e*x	x	22 46 04.3	
MODS	Modra-Piesok	149.29	346	*e*PKP	PKiKP	22 45 53.4	+1.4
MODS				*e*		22 46 08.5	
CKRC	Cesky Krumlov	149.42	350	*e*PKP	PKPab	22 45 54.4	-1.5
VOIR		149.45	335	⇑P	PKiKP	22 45 53.7	+1.2
GEC2	GERESS Array S	149.49	351	*e*PKPbc	PKiKP	22 45 54.1	+1.6
	baz=8.2,slow=2.8						
GERES	GERESS Array B	149.49	351	PKPbc	PKiKP	22 45 53.9	+1.3
	comp=Z,2.1nm,0.9s,baz=15,slow=2.1,SNR=12						
ARR	Arges	149.67	335	⇑P	PKPab	22 45 56.4	-0.7
LOT	Lotru	149.94	336	⇓P	PKiKP	22 45 55.0	+1.4
CONA	Conrad Observa	150.01	348	*e*pPKiKP	PKiKP	22 45 55.8	+2.2
	comp=Z,7.6nm,1.1s						
RONA	Rosalia, Austr	150.14	347	*i* pPKiKP	PKiKP	22 45 55.9	+2.1
	comp=Z,3.5nm,0.9s						
SURR	Surduc	150.29	338	⇑P	PKiKP	22 45 56.1	+2.0
GZR	Gura Zlata	150.36	337	⇑P	PKiKP	22 45 56.1	+1.7
MOA	Molln	150.37	350	*e*PKP	PKPab	22 45 59.1	-0.7
	comp=Z,5.5nm,1.4s						
BIOA	Bad Ischl, Aus	150.63	351	*e*pPKP	PKiKP	22 45 56.4	+1.6
	comp=Z,1.4nm,0.8s						
ARSA	Arzberg	150.72	348	*e*pPKP	PKiKP	22 45 56.7	+1.6
	comp=Z,1.6nm,0.8s						
MMAI	Mount Meron Ar	150.85	305	PKPbc	PKiKP	22 45 57.9	+2.0
	comp=Z,4.3nm,0.7s,baz=64,slow=7.5,SNR=10						
HERR	Herculane	150.93	337	⇑P	PKiKP	22 45 57.6	+2.1
MORH	Mrgy, Hungar	150.96	343	⇓P	PKiKP	22 45 57.5	+2.0
LESA	Schwarzleotal	151.02	352	*e*pPKiKP	PKiKP	22 45 58.4	+2.7
	comp=Z,5.6nm,1.2s						
RETA	Reutte	151.17	355	*i* pPKiKP	PKiKP	22 45 57.8	+1.8
	comp=Z,1.5nm,0.6s						
WATA	Walderalm	151.24	353	*e*pPKiKP	PKiKP	22 45 58.5	+2.2
	comp=Z,3.3nm,0.9s						
MDVR	Moldovita	151.28	338	⇑P	PKiKP	22 45 58.6	+2.3
MOTA	Moosalm	151.28	354	*i* pPKiKP	PKiKP	22 45 58.9	+2.6
	comp=Z,5.4nm,1.0s						
WTTA	Wattenberg	151.31	353	*i* pPKP	PKiKP	22 45 57.8	+1.4
	comp=Z,4.1nm,0.8s						
SOKA	Soboth	151.37	348	*i* pPKP	PKiKP	22 45 58.3	+1.8
	comp=Z,4.9nm,1.0s						
SQTA	Sankt Quirin	151.40	354	*i* pPKP	PKiKP	22 45 57.6	+1.0
	comp=Z,2.9nm,0.7s						
DAVA	Damuels	151.44	356	*i* pPKiKP	PKiKP	22 45 59.5	+2.8
	comp=Z,3.8nm,0.8s						
OBKA	Obir	151.62	349	*i* pPKiKP	PKiKP	22 46 00.4	+3.4
	comp=Z,5.8nm,1.4s						
FETA	Feichten	151.64	355	*i* pPKiKP	PKiKP	22 45 59.6	+2.5
	comp=Z,2.1nm,0.7s						
MYKA	Terra Mystica	151.66	350	*i* pPKiKP	PKiKP	22 45 59.8	+2.7
	comp=Z,2.6nm,0.9s						
ABTA	Abfaltersbach	151.71	352	*e*pPKP	PKiKP	22 45 58.7	+1.5
	comp=Z,4.1nm,0.7s						
FUORN	Ofenpass-Fuorn	152.08	355	PKPbc	PKPbc	22 45 56.4	-1.4
BOVS	Bovan	152.26	337	⇑P	PKiKP	22 46 00.2	+2.0

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*TIR **29** 22:28:10.4, 40.°41N×20.°82E, h5^{km}±2^{km}, Ml2.8/7*
*SKO **29** 22:28:12.0, 40.°47N×20.°86E, h16^{km}, ML2.5*
*BEO **29** 22:28:11.5±0.4, 40.°50N×20.°97E, h3^{km}±3^{km}, ML2.3/4*
*ATH **29** 22:28:11.0, 40.°44N×20.°86E, h15^{km}±1^{km}, ML2.5/8, Manual Solution by A.Agalos First location: 2019/06/29 22:29:08, This location: 2019/06/29 22:48:14 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
ISC 29 22:28:10.6±1.0, **40.°44N**±0.°02×**20.°79E**±0.°02, **h7**^{km}±8^{km}, **n48**, σ**1.^{s}20**/72, **2C-4D**, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.18	359	⇑*i*Pg	Pg	22 28 14.0	-0.3
KBN				Sg	Sg	22 28 16.7	-0.2
KBN				AML	AML	22 28 20.6	
	13nm,0.5s						
NEST	Nestorio	0.20	98	⇑*i*Pg	Pg	22 28 15.4	+0.8
NEST				Sg	Sg	22 28 18.0	+0.6
NEST				AML	AML	22 28 20.4	
	8.3nm,0.2s						
NEST	Nestorio	0.20	98	P	Pg	22 28 15.4	+0.8
NEST				S	Sg	22 28 17.8	+0.5
PENT	Pentalofos	0.36	133	P	Pg	22 28 18.1	+0.4
PENT				S	Sg	22 28 22.8	+0.3
FNA	Florina	0.56	52	⇓*e*Pg	Pg	22 28 21.4	-0.1
FNA				Sg	Sb	22 28 30.5	-0.4
FNA				AML	AML	22 28 30.5	
	2.7nm,0.4s						
FNA	Florina	0.56	52	*i* Pg	Pg	22 28 21.3	-0.1
FNA				*i* Sg	Sb	22 28 30.5	-0.4
FNA	Florina	0.56	52	*e*Pg	Pg	22 28 21.3	-0.1
FNA				*e*Sg	Sg	22 28 25.5	-3.3
FNA	Florina	0.56	52	P	Pg	22 28 21.4	-0.1
FNA				S	Sg	22 28 29.1	+0.3
KPRO	Kipourio	0.66	138	P	Pg	22 28 23.1	-0.1
KPRO				S	Sg	22 28 32.0	+0.2
OHR	Ohrid	0.67	1	*i* Pg	Pb	22 28 24.0	-0.6
OHR				*i* Sg	Sb	22 28 34.0	-0.1
OHR				*e*Lg	Lg	22 28 34.5	
	comp=E,191nm,0.5s						
OHR				*e*Lg	Lg	22 28 37.3	
	comp=N,95nm,0.5s						
KZN	Kozani	0.76	100	P	Pg	22 28 25.2	+0.1
JAN	Janina	0.79	177	P	Pb	22 28 26.3	-0.3
SRN	Sarande	0.83	227	⇓*e*Pn	Pb	22 28 26.7	-0.5
SRN				Sn	Sn	22 28 39.6	-1.4
SRN				AML	AML	22 28 47.3	
	comp=N,0.5nm,0.4s						
IGT	Igoumenitsa	0.97	201	⇓*e*Pn	Pb	22 28 29.5	-0.3
IGT				Sn	Sn	22 28 43.5	-1.2
IGT				AML	AML	22 28 55.3	
	comp=N,0.2nm,0.4s						
IGT	Igoumenitsa	0.97	201	*i* Pg	Pn	22 28 30.4	-0.2
IGT				*i* Sg	Sn	22 28 47.5	+2.8
IGT	Igoumenitsa	0.97	201	*e*Pn	Pn	22 28 30.1	-0.5
IGT				*e*Sg	Sn	22 28 47.7	+3.0
IGT	Igoumenitsa	0.97	201	P	Pn	22 28 29.9	-0.7
VLO	Vlora	0.99	272	Pn	Pb	22 28 29.7	-0.2
VLO				Sn	Sn	22 28 44.4	-0.6
VLO				AML	AML	22 28 50.1	
	comp=N,2.1nm,0.5s						
KEK	Kerkira	1.05	227	P	Pn	22 28 32.1	+0.4
TIR	Tirane	1.15	322	*e*Pg	Pn	22 28 33.8	+0.8
TIR				*e*Sg	Sn	22 28 49.7	+0.8
TIR	Tirane	1.15	322	P	Pn	22 28 33.0	0.0
TETR	Tetrakomo, Epi	1.16	161	P	Pg	22 28 32.7	-0.1
THL	Klokotos Trika	1.28	133	P	Pn	22 28 33.3	-1.6
TYRN	Tyrnavos	1.33	123	P	Pn	22 28 34.4	-1.0
VAY	Valandovo	1.61	56	*i* Pn	Pb	22 28 40.1	-0.4
VAY				*i* Sn	Sg	22 29 03.6	+1.3
VAY				*e*Lg	Lg	22 29 05.4	
	comp=N,71nm,0.8s						
VAY				*e*Lg	Lg	22 29 07.5	
	comp=E,41nm,0.6s						
THE	Thessaloniki	1.67	83	*i* Pn	Pg	22 28 42.9	+0.4
PUK	Puka	1.74	337	⇓*e*Pn	Pg	22 28 43.7	-0.2
PUK				Sn	Sg	22 29 10.0	+3.6
PUK				AML	AML	22 29 12.7	
	comp=E,0.7nm,0.8s						
KNT	Kendrikon	1.75	65	*i* Pn	Pb	22 28 43.0	-0.1
KNT				*i* Sn	Sg	22 29 08.6	+1.7
KNT	Kendrikon	1.75	65	P	Pn	22 28 40.3	-1.0
HORT	Hortiatis	1.77	84	P	Pn	22 28 40.8	-0.8
SCTE	Santa Cesarea	1.82	259	P	Pb	22 28 42.9	-1.2
PEHC	Pehcevo	2.08	49	*i* Pn	Pn	22 28 41.7	-4.2
DRME	Dracevica, Mon	2.12	326	*e*Pg	Pb	22 28 49.0	-0.3
NEO	Neokhori	2.19	120	P	Pn	22 28 46.7	-0.6
SRS	Serrai	2.23	72	*i* Pn	Pn	22 28 48.7	+0.8
SRS				*i* Sn	Sn	22 29 17.3	+1.6
SRS	Serrai	2.23	72	*e*Sg	Sn	22 29 16.1	+0.4
KKB	Krupnik	2.25	51	*i* Pn	Pn	22 28 49.5	+1.3
KKB				*i* Sn	Sb	22 29 18.2	-1.4
PDG	Podgorica	2.30	330	*e*Pg	Pb	22 28 51.6	-0.7
PDG				*e*Sg	Sg	22 29 24.2	-0.1
BARS	Barje	2.49	18	*i* Pn	Pn	22 28 52.0	+0.5
BARS	Barje	2.49	18	*e*Pn	Pn	22 28 52.0	+0.5
BARS				*e*Sg	Sb	22 29 26.7	+0.2
MMB	Musomishta	2.50	63	*i* Pn	Pn	22 28 51.4	-0.2
MMB				*i* Sn	Sn	22 29 23.2	+0.9
BEY	Berane	2.52	345	*i* Pn	Pg	22 28 57.3	-1.5
KOME	Kolasin	2.59	339	*e*Pn	Pb	22 28 55.9	-1.4
SELS	Selova	2.79	5	*e*Pn	Pn	22 28 56.6	+1.0
SJES	Sjenica	2.88	348	*e*Pn	Pn	22 28 58.5	+1.5
ZAPS	Zavoj	3.15	25	*e*Pn	Pn	22 29 01.1	+0.6
BOVS	Bovan	3.26	12	*e*Pn	Pn	22 29 02.3	+0.2
ZAGS	Zajecar	3.53	17	*e*Pn	Pn	22 29 06.2	+0.4

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*NEIC **29** 22:32:15.4±1.2, 43.°60N±0.°03×105.°20W±0.°04, h0^{km}±1^{km}, ML3.1/45, Error ellipse: s-maj=6.7km s-min=2.7km az=37.0*
*IDC **29** 22:32:17.6±1.3, 43.°86N×105.°69W, h0^{km}, mbtmp3.1/3, ML2.4/2, Error ellipse: s-maj=24.2km s-min=10.4km az=150.0*
ISC 29 22:32:15.8±1.1, **43.°61N**±0.°06×**105.°17W**±0.°06, **h0**^{km}, **n32**, σ**1.^{s}34**/31, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.96	58	Pn	Pn	22 32 38.0	+1.2
K22A	Casper	1.38	226		Pg	22 32 41.1	-1.2
K22A				IAML		22 33 08.5	
	176nm,0.3s						
LAO	LASA Array	3.17	347	Pn	Pn	22 33 08.6	+1.6
LAO				IAML		22 34 04.7	
	54nm,1.1s						
RLMT	Red Lodge	3.31	299	Pn	Pn	22 33 09.3	+0.2
RLMT				IAML		22 34 15.0	
	46nm,2.5s						
RLMT				IAML		22 34 19.8	
	43nm,2.6s						
PD31	Pinedale Array	3.32	257	Pn	Pn	22 33 09.5	+0.3
PDAR	Pinedale Array	3.32	257	Pn	Pn	22 33 11.0	+1.8
PDAR	Pinedale Array	3.32	257	Pn	Pn	22 33 10.1	+0.8
	2.6nm,0.3s,baz=77,slow=15,SNR=35						
PDAR				Lg	Lg	22 33 52.6	
	2.1nm,0.3s,baz=99,slow=12,SNR=4.3						
OGNE	Ogallala	3.54	138		Pn	22 33 14.6	+2.5
YMP	Mirror Lake Pl	3.76	289	Pn	Pn	22 33 15.3	0.0
ISCO	Idaho Springs	3.82	185		Pn	22 33 16.4	+0.1
GCMT	Greycliff	3.88	306		Pn	22 33 15.9	-0.9
LOHW	Long Hollow	3.95	272		Pn	22 33 18.4	+0.5
LOHW				IAML		22 34 21.2	
	19nm,0.8s						
SNOW	Snow King Moun	4.07	270		Pn	22 33 20.6	+1.1
SNOW				IAML		22 34 47.7	
	31nm,1.1s						
SNOW				IAML		22 34 47.8	
	35nm,1.1s						
O20A	White River Ci	4.16	214	Pn	Pn	22 33 21.8	+1.0
TPAW	Teton Pass	4.21	270		Pn	22 33 23.5	+2.0
TPAW				IAML		22 34 42.5	
	19nm,1.1s						
TPAW				IAML		22 34 53.8	
	28nm,2.3s						
FXWY	Fox Creek	4.25	272		Pn	22 33 25.0	+2.9
E28A	Huff	4.34	45	Pn	Pn	22 33 25.0	+1.9
YHL	Hebgen Lake	4.50	288		Pn	22 33 26.4	+1.0
YHL				IAML		22 34 54.9	
	comp=N,19nm,1.4s						
YHL				IAML		22 35 48.4	
	comp=E,20nm,4.9s						
DGMT	Dagmar	4.91	8		Pn	22 33 32.2	+1.4
BOZ	Bozeman (W)	5.02	296		Pn	22 33 33.3	+0.7
BOZ				IAML		22 36 06.8	
	comp=E,12nm,3.6s						
BOZ				IAML		22 36 35.0	
	comp=E,16nm,4.7s						
HWUT	Hardware Ranch	5.13	249	Pn	Pn	22 33 33.9	-0.1
HWUT				IAML		22 35 15.8	
	comp=E,17nm,0.9s						
BSUT	Blindstream Ca	5.17	235	Pn	Pn	22 33 36.2	+1.3
BSUT				IAML		22 35 58.0	
	comp=E,11nm,3.4s						
BSUT				IAML		22 36 04.2	
	comp=N,11nm,2.7s						
TCUT	Toone Canyon	5.25	244		Pn	22 33 37.4	+1.6
EGMT	Eagleton	5.45	326		Pn	22 33 37.5	-0.9
P18A	Preston Nutter	5.51	225		Pn	22 33 41.4	+2.0
PV18	Skein Mesa, Pa	6.06	209		Pn	22 33 47.0	+0.1
ECSD	EROS Data Cent	6.20	86	Pn	Pn	22 33 47.9	-0.8
BPMT	Black Pine Rid	6.51	299		Pn	22 33 53.6	+0.5
HMU	Henry Mountain	7.07	219		Pn	22 33 60.0	-0.8
ULM	Lac du Bonnet	9.19	40	Pn	Pn	22 34 30.1	+0.6
	comp=N,0.1nm,0.3s,baz=234,slow=11,SNR=3.0						
ULM				Lg	Lg	22 37 03.9	
	comp=N,0.4nm,0.3s,baz=299,slow=13,SNR=2.1						
	comp=N,1.0nm,0.3s						
I56US	NEWPORT INFRAS	9.54	303	I	I	23 24 10.0	
	baz=116,slow=309,SNR=5.3						
TXAR	Lajitas Array	14.30	175	Pn	P	22 35 46.4	-0.7
	baz=353,slow=5.9,SNR=2.0						
TXAR				Lg	Lg	22 39 52.9	
	baz=356,slow=32,SNR=1.0						
	comp=N,0.1nm,0.6s						

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*CATAC **29** 22:42:53.0±0.3, 12°N±2°×8°8W±°, h35^{km}, M3.0/25, MLv3.0/25, Error ellipse: s-maj=5.2km s-min=2.2km az=24.0, confirmed*
*SNET **29** 22:42:54.6±0.8, 12.°35N×88.°15W, h25^{km}±6^{km}, ML3.0*
ISC 29 22:42:52.9±2.5, **12.°16N**±0.°06×**88.°07W**±0.°04, **h35**^{km}±17^{km}, **n59**, σ**0.^{s}68**/71, **7C-7D**, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
POTN	Potosi Cosigui	1.00	33	⇑P	Pn	22 43 10.3	-0.2
POTN				S	Sn	22 43 23.6	+0.2
CRIN	San Cristobal	1.13	62	S	Sb	22 43 28.6	+1.8
CRIN	San Cristobal	1.13	62	⇑P	Pn	22 43 12.7	+0.3
CNCH	Conchagua	1.13	12	*e*P	Pn	22 43 12.1	-0.3
CNCH				*e*S	Sn	22 43 26.4	-0.5
CNCH				IAML		22 43 30.7	
	comp=Z,883nm,0.4s						
CNCH	Conchagua	1.13	12	⇑P	Pn	22 43 12.1	-0.3
LCND	La Caada	1.16	9	*e*P	Pn	22 43 12.5	-0.2
LCND				*e*S	Sn	22 43 26.5	-0.8
LCND				IAML		22 43 30.4	
	comp=Z,175nm,0.3s						
LCND	La Caada	1.16	9	⇑P	Pn	22 43 12.5	-0.2
PKGN	Cerro Pekin	1.18	65	⇑P	Pn	22 43 12.9	-0.1
PKGN				S	Sn	22 43 28.5	+0.6
ALJI	Alcalda de J	1.26	337	S	Sn	22 43 29.4	-0.4
ALJI	Alcalda de J	1.26	337	P	Pn	22 43 14.2	+0.2
LCY	Lacayo	1.27	350	*e*P	Pn	22 43 14.2	-0.2
LCY				*e*S	Sn	22 43 29.4	-0.9
VSM	San Miguel	1.28	351	*e*P	Pn	22 43 14.6	0.0
BLLM	Bellamira	1.28	353	*e*P	Pn	22 43 14.2	-0.3
POLN	Al Sur del Vol	1.32	68	⇑P	Pn	22 43 14.2	-0.7
POLN				S	Sn	22 43 32.5	+1.1
PACA	Pacayal	1.32	349	*e*P	Pn	22 43 15.1	0.0
PACA				*i* Sg	Sn	22 43 30.7	-0.9
PACA				IAML		22 43 34.9	
	comp=Z,2µm,0.2s						
PACA	Pacayal	1.32	349	S	Sn	22 43 31.8	+0.2
PACA	Pacayal	1.32	349	⇓P	Pn	22 43 15.1	0.0
TECA	Tecapa	1.39	342	*e*P	Pn	22 43 15.4	-0.6
TECA				*e*P		22 43 15.7	
ILCN	San Idelfonso	1.40	73	⇑P	Pn	22 43 16.8	+0.8
ILCN				S	Sn	22 43 33.8	+0.5
COPN	Copaltepe	1.45	89	⇓P	Pn	22 43 16.4	-0.2
MOMN	Momotombo	1.52	80	P	Pn	22 43 17.6	-0.1
MOMN				S	Sn	22 43 36.4	+0.2
PQSS	Presa 15 de Se	1.53	342	*e*P	Pn	22 43 17.8	0.0
PQSS				IAML		22 43 38.0	
	comp=Z,46nm,0.1s						
PQSS	Presa 15 de Se	1.53	342	S	Sn	22 43 36.3	-0.2
PQSS	Presa 15 de Se	1.53	342	⇓P	Pn	22 43 17.8	0.0
TECO	Alcaldia de Te	1.53	333	P	Pn	22 43 17.3	-0.5
TECO	Alcaldia de Te	1.53	333	S	Sn	22 43 36.2	-0.4
CHOHN	Orocuina	1.58	34	S	Sn	22 43 37.9	-0.1
CHOHN	Orocuina	1.58	34	⇓P	Pn	22 43 18.6	0.0
CAHU	Cacacuatique	1.61	355	*e*P	Pn	22 43 19.4	+0.4
UESV	Universidad de	1.62	335	P	Pn	22 43 19.7	+0.5
UESV	Universidad de	1.62	335	S	Sn	22 43 38.9	0.0
SAPS	Ciudad Sandino	1.63	90	S	Sn	22 43 40.4	+1.4
SAPS	Ciudad Sandino	1.63	90	P	Pn	22 43 18.6	-0.6
COEG	Centro de Oper	1.65	332	P	Pn	22 43 19.4	-0.1
COEG	Centro de Oper	1.65	332	S	Sn	22 43 39.6	0.0
SCLA	Alcaldia de Sa	1.66	337	*e*P	Pn	22 43 19.9	+0.2
SCLA	Alcaldia de Sa	1.66	337	S	Sn	22 43 38.6	-1.2
SCLA	Alcaldia de Sa	1.66	337	⇓P	Pn	22 43 19.9	+0.2
UNAN	Cigeo UNAN	1.76	91	⇓P	Pn	22 43 18.8	-2.2
UNAN				S	Sn	22 43 42.6	+0.4
TISN	Laguna Tiscapa	1.76	90	⇓P	Pn	22 43 21.4	+0.4
LOMA	Loma Larga	1.82	324	P	Pn	22 43 20.8	-1.2
LOMA	Loma Larga	1.82	324	S	Sn	22 43 44.4	+0.5
WILN	Americas 2	1.84	90	P	Pn	22 43 21.9	-0.2
WILN				S	Sn	22 43 43.7	-0.5
MAS3	Al N del Volca	1.86	94	P	Pn	22 43 21.5	-0.8
PMON	Piamonte	1.96	322	P	Pn	22 43 23.9	0.0
MARCA	Marcala la Paz	1.99	1	P	Pn	22 43 25.2	+1.0
MARCA	Marcala la Paz	1.99	1	S	Sn	22 43 48.2	+0.3
JAYA	Jayaque - finc	2.00	318	S	Sn	22 43 49.1	+0.7
JAYA	Jayaque - finc	2.00	318	P	Pn	22 43 25.3	+0.9
TGUH	Tegucigalpa,Un	2.04	22	P	Pn	22 43 25.9	+1.0
TGUH				S	Sn	22 43 49.2	0.0
YUSH	Yuscaran	2.15	34	P	Pn	22 43 27.1	+0.7
YUSH	Yuscaran	2.15	34	S	Sn	22 43 50.6	-1.3
RCPN	Sur Rio San Ju	2.36	55	P	Pn	22 43 28.8	-0.5
RCPN	Sur Rio San Ju	2.36	55	S	Sn	22 43 56.8	-0.3
NUBE	Las Nubes	2.40	316	*e*P	Pn	22 43 30.2	+0.2
NUBE	Las Nubes	2.40	316	P	Pn	22 43 30.2	+0.2
NUBE	Las Nubes	2.40	316	S	Sn	22 43 57.8	-0.4
FAME	Alcaldia de Sa	2.53	312	S	Sn	22 44 01.2	0.0
MTO3	Montecristo	2.56	331	P	Pn	22 43 33.6	+1.5

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*IDC **29** 23:02:55.8±1.1, 31.°71N×93.°67E, h0^{km}, mb3.6/10, mbtmp3.6/13, ML3.4/3, Error ellipse: s-maj=41.6km s-min=19.5km az=57.0*
ISC 29 23:03:00.4±0.8, **31.°7N**±0.°1×**93.°7E**±0.°2, **h35**^{km}, **n13**, σ**1.^{s}19**/13, **mb3.6**/10, **Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.01	159	Pn	Pn	23 06 15.6	-0.8
	0.1nm,0.3s,baz=337,slow=12,SNR=4.1						
	0.7nm,0.7s						
MKAR	Makanchi Array	17.44	333	P	Pn	23 07 00.2	-0.7
	baz=148,slow=13,SNR=1.9						
	0.5nm,0.7s						
SONM	Songino Array	18.84	27	P	Pn	23 07 18.6	+0.6
	0.3nm,0.3s,baz=216,slow=11,SNR=7.5						
	1.4nm,0.5s						
KURBB	Kurchatov Arra	22.01	334	P	P	23 07 51.7	+0.3
	1.9nm,0.9s,baz=139,slow=11,SNR=8.7						
	1.9nm,0.9s						
ZALV	Zalesovo Beam	23.14	347	P	P	23 08 01.3	-2.1
	0.3nm,0.3s,baz=180,slow=8.9,SNR=4.2						
	0.3nm,0.3s						
BVAR	Borovoye Array	27.17	329	P	P	23 08 41.4	+1.0
	0.6nm,0.7s,baz=130,slow=11,SNR=4.1						
	0.6nm,0.7s						
AKTO	Aktyubinsk	32.34	316	P	P	23 09 26.8	+0.6
	1.2nm,0.6s,baz=103,slow=4.5,SNR=3.9						
	1.2nm,0.6s						
AKASG	Malin Array Be	50.40	312	P	P	23 11 53.0	-1.1
	0.2nm,0.3s,baz=82,slow=5.3,SNR=1.9						
	0.2nm,0.3s						
FINES	FINESS Array B	52.08	326	P	P	23 12 07.1	+0.6
	1.3nm,0.8s,baz=101,slow=9.9,SNR=4.2						
	1.3nm,0.8s						
HFS	Hagfors	58.21	325	P	P	23 12 52.1	+1.4
	1.5nm,0.8s,baz=71,slow=9.3,SNR=2.4						
	1.5nm,0.8s						
NOA	NORSAR Array B	59.26	326	P	P	23 12 59.5	+1.4
	0.3nm,0.6s,baz=76,slow=9.2,SNR=2.1						
	0.3nm,0.6s						
ASAR	Alice Springs	67.17	140	P	P	23 13 52.0	+1.1
	1.0nm,0.7s,baz=316,slow=5.3,SNR=6.9						
	1.0nm,0.7s						
ILAR	Eielson Array	73.00	23	P	P	23 14 25.6	-0.5
	0.5nm,0.8s,baz=321,slow=5.0,SNR=3.4						
	0.5nm,0.8s						

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*IDC **29** 23:03:02.2±0.6, 1.°71S×13.°02W, h0^{km}, mb4.4/22, mbtmp4.4/24, ML3.7/2, MS4.0/57, Error ellipse: s-maj=23.4km s-min=12.9km az=121.0*
*NEIC **29** 23:03:03.4±1.6, 1.°88S±0.°08×13.°00W±0.°10, h10^{km}±1^{km}, mb4.9/103, Error ellipse: s-maj=17.1km s-min=12.7km az=114.0*
*GCMT **29** 23:03:06.4±0.3, 1.°79S±0.°03×12.°94W±0.°02, h12^{km}±1^{km}, MW4.8/108, Moment Tensor Solution. s19,c20; s108,c146; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.21±.16; M$_{\theta\theta}$0.06±.08; M$_{\phi\phi}$2.15±.11; M$_{r\theta}$-0.36±.34; M$_{\theta\phi}$-0.34±.05; M$_{\phi r}$0.42±.24; Best double couple: M$_0$2.27500×10^{16} NP1:φ$_s$358.00000°,δ39.00000°, λ-79.00000°. NP2:φ$_s$164.00000°,δ51.00000°, λ-99.00000°. Principal axes: T 2.2550, Plg6.0000°, Azm260.0000°; N 0.0450, Plg7.0000°, Azm169.0000°; P -2.2950, Plg81.0000°, Azm31.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BGR **29** 23:03:17.5, 0.°30S×12.°30W, h33^{km}, mb4.9, Ms4.0*
ISC 29 23:03:03.0±0.3, **1.°81S**±0.°06×**12.°96W**±0.°07, **h10**^{km}, **n301**, σ**1.^{s}05**/251, **mb4.8**/120, **MS4.0**/63, **6C-10D**, **North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	6.17	194	T	T	23 10 59.4	
	baz=15,slow=74,SNR=265						
H10N1	ASCENSION HYDR	6.19	194	T	T	23 11 04.5	
	baz=15,slow=74,SNR=316						
H10N3	ASCENSION HYDR	6.19	194	T	T	23 11 02.3	
	baz=15,slow=74,SNR=196						
ASCN	Ascension	6.24	193	Pn	Pn	23 04 30.8	-4.5
H10S3	ASCENSION HYDR	7.30	193	T	T	23 12 27.0	
	baz=198,slow=74,SNR=6.2						
H10S2	ASCENSION HYDR	7.30	193	T	T	23 12 33.4	
	baz=22,slow=74,SNR=4.9						
DBIC	Dimbokro	11.68	44	Pn	Pn	23 05 48.6	-1.3
DBIC	Dimbokro	11.68	44	Pn	Pn	23 05 48.7	-1.1
	0.2nm,0.3s,baz=252,slow=11,SNR=1.8						
DBIC				Sn	Sn	23 08 01.9	+1.6
	0.2nm,0.3s,baz=135,slow=22,SNR=5.5						
DBIC				LR	LR	23 09 31.8	
	comp=Z,2µm,19.9s,baz=240,slow=33						
	9.6nm,1.3s						
ACRG	Accra	14.73	60	Pn	Pn	23 06 28.1	-3.5
BBTS	Babate	16.74	348	Pn	Pn	23 06 57.2	-0.6
	0.6nm,0.3s,baz=227,slow=0.4,SNR=4.8						
	61nm,1.1s						
TORD	Torodi Ar. Bea	20.79	44	P	P	23 07 43.2	-1.3
	9.2nm,1.0s,baz=237,slow=7.9,SNR=11						
TORD				LR	LR	23 15 06.5	
	comp=Z,928nm,19.5s,baz=186,slow=35						
	9.2nm,1.0s						
RCBR	Riachuelo	23.23	259	LR	LR	23 15 49.5	
	comp=Z,168nm,18.0s,baz=79,slow=33						
TAM	Tamanrasset	30.37	35	P	P	23 09 15.3	-0.3
DIAM	Diamantina, MG	34.29	239	*e*P	P	23 09 50.9	+0.9
TSUM	Tsumeb	34.54	122	P	P	23 09 51.4	-0.7
TSUM				IAmb	IAmb	23 09 55.9	
	comp=Z,21nm,1.5s						
TSUM	Tsumeb	34.54	122	LR	LR	23 21 04.4	
	comp=Z,386nm,21.7s,baz=290,slow=31						
MDT	Midelt	35.33	12	LR	LR	23 24 14.2	
	comp=Z,245nm,19.5s,baz=196,slow=36						
BDFB	Brasilia	37.19	246		P	23 10 13.3	-1.6
BDFB	Brasilia	37.19	246	P	P	23 10 15.3	+0.5
	comp=Z,2.0nm,0.6s,baz=72,slow=12,SNR=5.5						
BDFB				LR	LR	23 22 56.9	
	comp=Z,168nm,20.3s,baz=117,slow=32						
	comp=Z,2.0nm,0.6s						
QNGWA	Qangwa	37.74	120	P	P	23 10 19.0	-0.6
QNGWA				IAmb	IAmb	23 10 28.4	
	comp=Z,39nm,1.8s						

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IPMB  Ipameri, GO      38.15 243 eP     P     23 10 24.5 +1.6
GRTLG Ghanzi           38.54 123  P     P     23 10 26.4 +0.1
PVAQ  Vaqueiros        39.31   7 eLR    LR    23 24 21.7
PVAQ                             i AMs_20     23 27 07.7
      comp=Z,56nm,20.0s
SNDB  Serra Nova Dou   39.32 253 eP     P     23 10 34.1 +1.3
PCVE  Castro Verde     39.51   6 epP    pP    23 10 36.2 +0.3
PBEJ  Beja             39.91   6 epP    pP    23 10 39.5 +0.2
MDP   Montagnes des    40.23 280  LR    LR    23 23 28.0
      comp=Z,275nm,20.9s,baz=103,slow=30
KSANE Kasane           40.65 115        P     23 10 43.5 -0.4
KSANE                             IAmb  IAmb  23 10 47.9
      comp=Z,38nm,1.5s
CART  Cartagena        40.73  15  P     P     23 10 43.7 -0.4
CART                              IAmb  IAmb  23 10 46.9
      comp=Z,24nm,1.1s
PHDHD Phuduhudu        40.92 119  P     P     23 10 46.1  0.0
PMRV  Marv??o          41.35   7 eLR    LR    23 25 24.0
PMRV                             i AMs_20     23 30 04.9
      comp=Z,75nm,18.0s
PSARD Sardoal          41.44   6 epP    pP    23 10 52.8 +0.8
PCBR  Castelo Branco   41.75   6 epP    pP    23 10 55.0 +0.6
PHPEN Phepeng          41.75 127  P     P     23 10 52.6 -0.3
PHPEN                             IAmb  IAmb  23 10 56.3
      comp=Z,42nm,1.4s
PCAS  Casmilo, Conde   41.86   5 epP    pP    23 10 56.8 +1.4
PAB   San Pablo        41.91  10  P     P     23 10 54.3 +0.5
ESDC  Sonseca Array    42.10  10        P     23 10 55.7 +0.3
ESDC  Sonseca Array    42.10  10  P     P     23 10 56.1 +0.7
      comp=Z,5.0nm,1.2s,baz=195,slow=8.1,SNR=15
ESDC                              PP    PP    23 12 33.2 +0.2
      comp=Z,2.6nm,1.1s,baz=203,slow=10,SNR=7.4
ESDC                              LR    LR    23 28 54.2
      comp=Z,84nm,18.2s,baz=170,slow=37
      comp=Z,5.0nm,1.2s
PCMB  Pacaembu         42.15 239 eP     P     23 10 58.7 +2.6
MTE   Manteigas        42.30   6  P     P     23 10 57.7 +0.7
MTE                               IAmb  IAmb  23 11 00.1
      comp=Z,41nm,1.3s
MTE   Manteigas        42.30   6 epP    pP    23 10 59.6 +0.6
MTE                              i Amb        23 11 01.6
      comp=Z,45nm,2.1s
MTE                              eLR    LR    23 25 43.5
MTE                              i AMs_20     23 27 51.8
      comp=Z,53nm,18.0s
PVIS  Viseu            42.57   6 epP    pP    23 11 02.8 +1.6
NPGB  Novo Progresso   42.57 262 eP     P     23 11 00.5 +0.8
LSZ   Lusaka           42.73 111        P     23 11 01.1 +0.1
LSZ                               IAmb  IAmb  23 11 04.8
      comp=Z,46nm,1.6s
LSZ   Lusaka           42.73 111  LR    LR    23 25 45.1
      comp=Z,306nm,21.4s,baz=300,slow=32
KEST  Kesra            42.76  27        P     23 11 01.2 +0.3
KEST  Kesra            42.76  27  P     P     23 11 02.8 +1.9
      comp=Z,7.8nm,1.0s,baz=196,slow=4.5,SNR=8.6
KEST                              LR    LR    23 30 05.7
      comp=Z,297nm,18.0s,baz=305,slow=38
      comp=Z,7.8nm,1.0s
ITTB  Itaituba         42.78 266 eP     P     23 11 02.4 +1.1
PVRL  Vila Real        43.15   6 epP    pP    23 11 06.0 +0.1
PVRL                             i Amb        23 11 08.3
      comp=Z,35nm,1.7s
LPHEP Lephephe         43.28 123  P     P     23 11 05.9 +0.6
LPHEP                             IAmb  IAmb  23 11 09.0
      comp=Z,44nm,1.4s
MAKGR Makgori          43.46 127  P     P     23 11 07.7 +0.9
MAKGR                             IAmb  IAmb  23 11 10.0
      comp=Z,40nm,1.7s
MBAR  Mbarara          43.70  89  P     P     23 11 08.4 -0.5
MBAR                              IAmb  IAmb  23 11 13.4
      comp=Z,19nm,1.1s
LBTB  Lobatse          43.75 125        P     23 11 06.1 -3.0
LBTB  Lobatse          43.75 125  LR    LR    23 26 28.8
      comp=Z,191nm,19.6s,baz=290,slow=32
PBRG  Braganca         43.77   7 epP    pP    23 11 11.6 +0.6
PBRG                             i Amb        23 11 13.8
      comp=Z,22nm,1.7s
PGAV  Gavieira, Arco   43.78   5 eLR    LR    23 25 56.2
PGAV                             i AMs_20     23 28 42.8
      comp=Z,119nm,20.0s
TRCB  Terra Rica       43.78 238  P     P     23 11 07.5 -1.8
RPRD  Ribas do Rio P   43.87 242 eP     P     23 11 12.8 +2.7
MAHO  Mahon            44.40  19        P     23 11 14.9 +1.0
PDRB  Porto dos Gac    44.48 255 eP     P     23 11 16.5 +1.4
MATP  Matopo           44.49 118  LR    LR    23 27 29.6
      comp=Z,175nm,18.7s,baz=290,slow=33
BOSA  Boshof           45.14 130  P     P     23 11 20.1 -0.1
BOSA                              IAmb  IAmb  23 11 23.4
      comp=Z,34nm,1.4s
BOSA  Boshof           45.14 130  P     P     23 11 21.1 +0.9
      comp=Z,6.6nm,1.0s,baz=288,slow=10,SNR=4.5
BOSA                              LR    LR    23 27 07.5
      comp=Z,140nm,18.3s,baz=261,slow=32
      comp=Z,6.6nm,1.0s
VSL   Villasalto       45.93  24        P     23 11 27.5 +1.3
VSL                               IAmb  IAmb  23 11 29.7
      comp=Z,26nm,1.3s
CEST  Esterri de Car   46.03  15        P     23 11 28.3 +1.3
CEST                              IAmb  IAmb  23 11 30.3
      comp=Z,23nm,1.3s
VAE   Valguarnera      46.59  30  LR    LR    23 33 16.2
      comp=Z,215nm,18.0s,baz=144,slow=39
PTLB  Pontes e Lacer   47.49 251        P     23 11 37.6 -1.1
PTLB  Pontes e Lacer   47.49 251 eP     P     23 11 41.0 +2.2
SJPY  San Joaquin      47.55 237 eP     P     23 11 40.9 +1.8
CEL   Celeste          47.94  31  P     P     23 11 43.4 +1.4
LODK  Lodwar           48.58  84        P     23 11 47.2 -0.1
CPUP  Villa Florida    49.08 236  P     P     23 11 50.8  0.0
CPUP  Villa Florida    49.08 236  P     P     23 11 52.0 +1.1
      comp=Z,3.6nm,1.2s,baz=96,slow=10,SNR=5.3
CPUP                              LR    LR    23 29 51.9
      comp=Z,65nm,20.9s,baz=292,slow=33
      comp=Z,3.6nm,1.2s
CASP  Castiglione de   49.32  23  P     P     23 11 52.1 -0.3
SSB   Saint Sauveur    49.40  16        P     23 11 53.7 +0.7
SSB                               IAmb  IAmb  23 11 56.1
      comp=Z,19nm,1.4s
SIV   San Ignacio      49.43 251  LR    LR    23 30 37.8
      comp=Z,406nm,21.4s,baz=103,slow=34
BNI   Bardonecchia     49.82  18        P     23 11 57.1 +0.7
BNI                               IAmb  IAmb  23 12 00.8
      comp=Z,26nm,1.4s
CESX  Cesi             49.86  25  P     P     23 11 56.4 -0.1
CESX                              IAmb  IAmb  23 11 59.3
      comp=Z,20nm,1.4s
AQU   L'Aquila         50.00  25  P     P     23 11 57.5 -0.2
      comp=Z,16nm,1.3s
MSSA  Maissana         50.12  21  P     P     23 11 59.5 +1.0
FDMO  Fiordimonte      50.42  25  P     P     23 12 01.1 +0.3
FDMO                              IAmb  IAmb  23 12 05.5
      comp=Z,24nm,1.4s
IDI   Anoyia           51.12  40  LR    LR    23 37 29.8
      comp=Z,138nm,18.0s,baz=286,slow=40
SENIN Lac Senin/Sane   51.19  18  P     P     23 12 06.5 -0.3
CLF   Chambon-Foret    51.38  13  P     P     23 12 08.2 +0.4
TUE   Stuetta          51.94  19  P     P     23 12 12.2 -0.2
TUE   Stuetta          51.94  19  P     P     23 12 12.6 +0.2
      comp=Z,28nm,2.2s
FUORN Ofenpass-Fuorn   52.38  20  P     P     23 12 15.8 +0.1
FNA   Florina          52.67  33  P     P     23 12 18.5 +0.7
PCRV  Puerto La Cruz   52.80 284  LR    LR    23 33 13.8
      comp=Z,109nm,19.7s,slow=34
ECH   Echery           52.81  17  P     P     23 12 18.3 -0.3
DAVA  Damuels          52.83  19 eP     P     23 12 19.3 +0.4
      comp=Z,23nm,1.1s,SNR=13
FETA  Feichten         52.89  20 i P    P     23 12 20.3 +0.9
      comp=Z,14nm,1.3s,SNR=6.8
SQTA  Sankt Quirin     53.23  20 i P    P     23 12 22.4 +0.6
      comp=Z,23nm,1.2s,SNR=9.0
BFO   Black Forest     53.26  18 eP     P     23 12 22.5 +0.6
      comp=Z,16nm,1.3s,baz=210,slow=7.3
ABTA  Abfaltersbach    53.29  22 eP     P     23 12 23.8 +1.6
      comp=Z,13nm,1.5s
MOTA  Moosalm          53.30  20 i P    P     23 12 22.9 +0.6
      comp=Z,15nm,1.3s,SNR=5.9
RETA  Reutte           53.30  20 i P    P     23 12 21.9 -0.4
      comp=Z,7.9nm,1.3s
WTTA  Wattenberg       53.41  21 eP     P     23 12 24.2 +1.0
      comp=Z,20nm,1.3s,SNR=8.7
WATA  Walderalm        53.45  21 i P    P     23 12 24.4 +0.9
      comp=Z,22nm,1.4s,SNR=6.5
MYKA  Terra Mystica    53.62  23 i P    P     23 12 27.0 +2.4
      comp=Z,9.0nm,1.1s
WLF   Walferdange      53.85  15  P     P     23 12 26.9 +0.7
WLF                               IAmb  IAmb  23 12 28.7
      comp=Z,12nm,1.2s
WLF   Walferdange      53.85  15 dP     P     23 12 27.1 +0.9
      comp=Z,4.4nm,1.4s
DOU   Dourbes          53.86  14 dP     P     23 12 26.9 +0.7
      comp=Z,6.3nm,1.3s
OBKA  Obir             53.87  23 i P    P     23 12 28.9 +2.4
      comp=Z,12nm,1.1s
STU   Stuttgart        53.92  18  P     P     23 12 26.8 +0.1
LESA  Schwarzleotal    53.92  21 i P    P     23 12 27.9 +1.1
      comp=Z,17nm,1.4s,SNR=11
BMRD  Maredsous        54.09  14 dP     P     23 12 28.8 +0.8
      comp=Z,4.2nm,1.3s
SOKA  Soboth           54.20  23 i P    P     23 12 31.0 +2.1
      comp=Z,9.5nm,1.2s,SNR=6.4
RJOB  Jochberg         54.23  21 eP     P     23 12 29.2 +0.1
      comp=Z,7.6nm,1.1s,baz=210,slow=7.3
BGES  Gesves           54.24  14 dP     P     23 12 30.1 +1.0
BCLA  Clavier          54.33  14 dP     P     23 12 30.6 +0.9
      comp=Z,4.6nm,1.3s
BCLA                             dPcP   PcP   23 13 33.1 -0.5
UCC   Uccle            54.46  13  P     P     23 12 30.2 -0.3
UCC                               IAmb  IAmb  23 12 32.7
      comp=Z,25nm,1.6s
BIOA  Bad Ischl, Aus   54.50  22 eP     P     23 12 32.2 +1.2
      comp=Z,0.3nm,0.4s
BSTI  Sart Tilman      54.55  14 dP     P     23 12 32.1 +0.9
MEM   Membach          54.68  15 dP     P     23 12 34.2 +2.0
BTNL  Ternell          54.69  15 dP     P     23 12 33.6 +1.3
      comp=Z,7.2nm,1.4s
BEHE  Becsehely        54.74  25  P     P     23 12 33.2 +0.5
ARSA  Arzberg          54.86  23  P     P     23 12 33.5 -0.1
ARSA  Arzberg          54.86  23 i P    P     23 12 35.0 +1.4
      comp=Z,7.3nm,1.4s
MOA   Molln            54.87  22 eP     P     23 12 34.3 +0.6
      comp=Z,12nm,1.5s,SNR=6.2
TNS   Taunus Mts       54.99  17 eP     P     23 12 35.1 +0.5
      comp=Z,9.3nm,1.1s,baz=210,slow=7.3
MORH  Mrgy, Hungar     55.35  26  P     P     23 12 38.0 +0.9
      comp=Z,4.1nm,1.6s
GRFO  Grafenberg       55.37  19  P     P     23 12 37.1 -0.1
GRFO                              IAmb  IAmb  23 12 39.0
      comp=Z,25nm,1.5s
GRF   Grafenberg Arr   55.37  19 eL     L     23 37 39.9
      comp=Z,111nm,19.5s
WET   Wettzell         55.45  20 eP     P     23 12 38.5 +0.6
      comp=Z,21nm,1.3s,baz=210,slow=7.3
GEC2  GERESS Array S   55.49  21  P     P     23 12 38.4 +0.1
GEC2  GERESS Array S   55.49  21 eP     P     23 12 38.8 +0.6
      comp=Z,42nm,1.4s,baz=210,slow=7.3
GERES GERESS Array B   55.49  21  P     P     23 12 38.3 +0.1
GERES GERESS Array B   55.49  21  P     P     23 12 38.8 +0.6
      comp=Z,7.8nm,1.0s,baz=204,slow=5.9,SNR=53
GERES                             PP    PP    23 14 41.3 -1.0
      comp=Z,8.0nm,1.3s,baz=210,slow=7.7,SNR=6.6
GERES                             LR    LR    23 37 22.8
      comp=Z,124nm,18.9s,baz=260,slow=37
      comp=Z,7.8nm,1.0s
RONA  Rosalia, Austr   55.53  24 i P    P     23 12 40.3 +1.8
      comp=Z,21nm,1.3s,SNR=14
CONA  Conrad Observa   55.55  23 eP     P     23 12 39.8 +1.2
      comp=Z,11nm,1.3s
MPLH  Magyarpolny      55.62  25  P     P     23 12 40.4 +1.3
      comp=Z,27nm,1.5s
KHC   Kasperske Hory   55.69  21 eP     P     23 12 39.9 +0.3
KHC                              epP    sP    23 12 43.0 +0.6
KHC                               AMS   AMS   23 37 00.0
      comp=Z,100nm,19.3s
KHC   Kasperske Hory   55.69  21  P     P     23 12 39.7 +0.1
      comp=Z,7.2nm,1.5s
CKRC  Cesky Krumlov    55.69  22 eP     P     23 12 40.6 +1.0
CKRC                              AMS   AMS   23 38 30.0
      comp=Z,100nm,18.5s
MANZ  Manzenberg       55.91  19 eP     P     23 12 41.6 +0.5
      comp=Z,3.1nm,1.3s,baz=210,slow=7.3
SJG   San Juan         55.95 293  LR    LR    23 31 26.0
      comp=Z,167nm,20.8s,baz=124,slow=30
LPAZ  La Paz           56.16 252  P     P     23 12 44.5 +0.3
      comp=Z,1.3nm,0.9s,baz=48,slow=4.1,SNR=3.6
LPAZ                              LR    LR    23 35 29.0
      comp=Z,362nm,20.2s,baz=73,slow=35
      comp=Z,1.3nm,0.9s
ZVC   Zvikov           56.16  21 eP     P     23 12 43.9 +1.0
ZVC                               AMS   AMS   23 37 40.0
      comp=Z,200nm,17.6s
MOX   Moxa             56.32  19 eP     P     23 12 44.5 +0.5
      comp=Z,16nm,1.4s,baz=210,slow=7.3
MOX                              eL     L     23 36 03.9
      comp=Z,121nm,20.1s
TANN  Tannenbergstha   56.40  19 eP     P     23 12 45.1 +0.5
      comp=Z,16nm,1.3s,baz=210,slow=7.3
SRO   Srobarova        56.45  25 eP     P     23 12 46.5 +1.5
MODS  Modra-Piesok     56.47  24 eP     P     23 12 45.8 +0.7
KRUC  Moravsky         56.67  23 eP     P     23 12 47.1 +0.5
PRU   Pruhonice        56.75  21  AMS   AMS   23 38 20.0
      comp=Z,200nm,15.0s
PRA   Prague           56.78  21  AMS   AMS   23 38 20.0
      comp=Z,200nm,16.8s
VRAC  Vranov           56.95  23  LR    LR    23 38 00.2
      comp=Z,105nm,19.5s,baz=204,slow=37
VRAC  Vranov           56.95  23 eP     P     23 12 49.3 +0.8
JAVC  Velka Javorina   57.01  24 eP     P     23 12 50.7 +1.6
VYHS  Vyhne            57.20  25 eP     P     23 12 51.8 +1.5
PSZ   Piszkesteto      57.21  26  P     P     23 12 50.9 +0.4
PSZ                               IAmb  IAmb  23 12 53.0
      comp=Z,14nm,1.2s
MMAI  Mount Meron Ar   57.25  48  LR    LR    23 39 57.6
      comp=Z,83nm,18.3s,baz=200,slow=39
BRG   Berggiesshubel   57.28  20 eP     P     23 12 51.8 +1.0
BRG                               Amp         23 12 54.2
      comp=Z,14nm,1.3s
BRG                               PP    PP    23 14 57.4 -0.7
BRG                               Amp         23 14 58.5
      comp=Z,8.6nm,1.4s
CLL   Collm            57.34  19  P     P     23 12 51.2  0.0
CLL   Collm            57.34  19  P     P     23 12 51.7 +0.5
      comp=Z,7.1nm,1.6s
CLL   Collm            57.34  19 i P    P     23 12 51.6 +0.4
      comp=Z,14nm,1.3s
CLL                              i x    x     23 12 56.8
CLL                              ePP    PP    23 14 59.0 +0.4
CLL                              ePPP   PPP   23 16 17.0
CLL                               AMS   AMS   23 34 00.0
      comp=N,100nm,21.1s
CLL                               AMS   AMS   23 34 00.0
      comp=E,200nm,21.1s
CLL                               AMS   AMS   23 37 00.0
      comp=Z,100nm,20.6s
NRDL  Niedersach Rie   57.49  17 eP     P     23 12 53.2 +1.0
      comp=Z,27nm,1.7s,baz=210,slow=7.3
ESK   Eskdalemuir      57.49   7  P     P     23 12 52.6 +0.4
ESK                               IAmb  IAmb  23 12 54.1
      comp=Z,18nm,1.1s
EKA   Eskdalemuir Ar   57.52   7  P     P     23 12 52.9 +0.5
      comp=Z,5.5nm,1.1s,baz=181,slow=6.7,SNR=7.5
      comp=Z,5.5nm,1.1s
TRQA  Tornquist        57.54 225  P     P     23 12 53.2 +0.2
TRQA                              IAmb  IAmb  23 13 01.4
      comp=Z,23nm,1.3s
KRLC  Kraliky          57.64  22 eP     P     23 12 53.2 -0.3
KRLC                              AMS   AMS   23 39 20.0
      comp=Z,200nm,18.6s
DPC   Dobruska-Polom   57.69  22  P     P     23 12 54.2 +0.4
      comp=Z,6.3nm,1.4s
MORC  Moravsky Berou   57.69  23  P     P     23 12 54.0 +0.1
MORC                              IAmb  IAmb  23 12 56.1
      comp=Z,17nm,1.4s
MORC  Moravsky Berou   57.69  23 eP     P     23 12 54.8 +1.0
LANS  Liptovska Anna   57.97  25 eP     P     23 12 58.2 +2.4
ASF   Jabal al Asfar   58.00  50  LR    LR    23 37 50.9
      comp=Z,218nm,21.3s,baz=243,slow=36
KSP   Ksiaz            58.09  21  P     P     23 12 56.8 +0.3
      comp=Z,9.1nm,1.5s
MDUB  Mudurnu          58.21  39  P     P     23 12 58.2 +0.5
GORT1 Trebel           58.27  17 eP     P     23 12 59.2 +1.6
      comp=Z,50nm,1.3s,baz=210,slow=7.3
MLR   Muntele Rosu     58.34  31  P     P     23 12 58.2 -0.3
MLR                               IAmb  IAmb  23 13 01.4
      comp=Z,18nm,1.3s
SDV   Santo Domingo    58.45 282  LR    LR    23 35 18.9
      comp=Z,85nm,20.3s,baz=73,slow=33
NIE   Niedzica         58.53  25  P     P     23 13 00.5 +0.8
      comp=Z,5.2nm,1.4s
BERU  Beregovo         58.67  27  P     P     23 13 01.0 +0.4
HOLU  Holmets          58.76  27  P     P     23 13 01.7 +0.4
MUKU  Mukachevo        58.85  27  P     P     23 13 02.1 +0.3
ANTO  Ankara           58.88  40  P     P     23 13 03.3 +0.9
ANTO  Ankara           58.88  40  P     P     23 13 03.6 +1.2
      comp=Z,9.4nm,1.5s
OJC   Ojcow            58.94  24  P     P     23 13 02.3 -0.2
OJC   Ojcow            58.94  24  P     P     23 13 03.0 +0.5
      comp=Z,12nm,1.5s
KOLS  Kolonicke sedl   59.01  26 eP     P     23 13 05.0 +2.0
RAKU  Rahkiv           59.22  28  P     P     23 13 05.2 +0.7
BR105 Keskin Array S   59.34  41  P     P     23 13 06.0 +0.4
      comp=Z,106nmcomp=Z,9.7nm,1.2s
BR106 Keskin Array S   59.34  41  P     P     23 13 06.7 +1.0
      comp=Z,104nmcomp=Z,9.9nm,1.4s
BR104 Keskin Array S   59.35  41  P     P     23 13 06.9 +1.2
      comp=Z,105nmcomp=Z,9.8nm,1.2s
BRTR  Keskin Array B   59.35  41  P     P     23 13 06.9 +1.2
BRTR  Keskin Array B   59.35  41  P     P     23 13 07.6 +1.8
      comp=Z,10nm,1.2s,baz=218,slow=7.4,SNR=24
      comp=Z,10nm,1.2s
BR131 Keskin Array S   59.35  41  P     P     23 13 06.5 +0.7
BUR08 Bucovina Ar. S   59.45  29  P     P     23 13 06.9 +0.7
BUR08                             IAmb  IAmb  23 13 20.4
      comp=Z,17nm,1.6s
KWP   Kalwaria Pacla   59.72  26  P     P     23 13 08.3 +0.4
      comp=Z,15nm,1.2s
KSV   Kosov            59.85  28  P     P     23 13 09.2 +0.4
CFA   Coronel Fontan   59.86 234  LR    LR    23 35 30.0
      comp=Z,160nm,22.0s,baz=16,slow=32
STNU  Starunia         59.87  28  P     P     23 13 09.3 +0.4
ZON   Zonda            60.20 234  P     P     23 13 11.3 -0.4
BNN   Bunyan           60.37  43  P     P     23 13 13.3 +0.6
RUSC  La Rusia         60.52 278  P     P     23 13 14.8 +0.1
RUSC                              IAmb  IAmb  23 13 28.9
      comp=Z,16nm,1.3s
KMPD  K-Podol'skiy     60.69  29  P     P     23 13 14.8 +0.3
KMPD                              pP    sP    23 13 18.2 +0.8
ROSC  El Rosal         61.66 276  LR    LR    23 37 53.8
      comp=Z,267nm,19.7s,baz=71,slow=34
RAYN  Ar Rayn          62.13  62  P     P     23 13 25.1 +0.2
RAYN                              IAmb  IAmb  23 13 28.7
      comp=Z,12nm,1.4s
LUBAR Lubar, Ukraine   62.24  28  P     P     23 13 24.8 -0.2
RNPP5 Staryi Chortor   62.28  26  P     P     23 13 25.2  0.0
RNPP8 Varash           62.34  26  P     P     23 13 26.0 +0.3
RNPP9 Sopachiv         62.41  26  P     P     23 13 26.4 +0.3
FLOC  Florencia        62.78 273  P     P     23 13 29.2 -0.1
SUW   Suwalki          63.19  23  P     P     23 13 30.9 -0.3
AK19  Malin Array Si   63.37  28  P     P     23 13 32.6 +0.1
AK12  Malin Array Si   63.39  29  P     P     23 13 32.9 +0.3
KIEV  Kiev             63.45  29  P     P     23 13 33.1 +0.1
      comp=Z,33nm,1.4s
AKASG Malin Array Be   63.46  29  P     P     23 13 32.6 -0.5
AKASG                             IAmb  IAmb  23 13 34.6
      comp=Z,17nm,1.6s
AKASG Malin Array Be   63.46  29  P     P     23 13 32.8 -0.3
      comp=Z,1.1nm,0.7s,baz=231,slow=6.9,SNR=11
AKASG                             LR    LR    23 43 28.3
      comp=Z,77nm,18.5s,baz=208,slow=38
      comp=Z,1.1nm,0.7s
AKBB  Malin Array Si   63.46  29  P     P     23 13 32.4 -0.7
AKBB                              IAmb  IAmb  23 13 34.2
      comp=Z,11nm,1.1s
AKBB  Malin Array Si   63.46  29  P     P     23 13 33.1  0.0
NNA   Nana             64.09 258  LR    LR    23 40 44.4
      comp=Z,152nm,18.3s,baz=70,slow=35
GURO  Guroymak-BITLI   64.52  45  P     P     23 13 41.5 +0.9
PABE  Paberze          64.61  22  P     P     23 13 41.0 +0.4
PLCA  Paso Flores      64.69 225  LR    LR    23 38 25.5
      comp=Z,102nm,19.2s,baz=70,slow=33
HFS   Hagfors          65.17  14  P     P     23 13 44.4 +0.3
      comp=Z,14nm,1.1s,baz=209,slow=12,SNR=6.8
      comp=Z,14nm,1.1s
NB2   NORSAR Subarra   65.39  13  P     P     23 13 46.6 +1.0
      comp=Z,1.6nm,1.1s,baz=207,slow=6.5
NOA   NORSAR Array B   65.39  13  P     P     23 13 45.6  0.0
      comp=Z,5.1nm,1.1s,baz=206,slow=6.4,SNR=5.1
NOA                               LR    LR    23 44 52.4
      comp=Z,39nm,18.2s,baz=215,slow=38
      comp=Z,5.1nm,1.1s
ATAH  Atahualpa        65.41 263  LR    LR    23 41 00.1
      comp=Z,272nm,20.5s,baz=100,slow=35
MNK   Minsk            65.44  25 i P    P     23 13 45.3 -0.7
      comp=E,11nm,0.8s
MNK                              i P    P     23 13 45.3 -0.7
      comp=N,5.0nm,0.9s
MNK                              i P    P     23 13 45.3 -0.7
      comp=Z,6.0nm,0.9s,baz=226
MNK                              i PcP  PcP   23 14 17.2 -0.7
MNK                              i PP   PP    23 16 08.9 -1.2
MNK                              i PPP  PPP   23 17 41.6
MNK                              i S    S     23 22 30.0 -0.6
MNK                              i SS   SS    23 26 44.1  0.0
MNK                              i SSS  SSS   23 30 36.8
MNK                              i LQ   LQ    23 38 11.9
LMN   Caledonia Moun   65.85 323  P     P     23 13 47.5 -1.4
LMN                               IAmb  IAmb  23 13 56.8
      comp=Z,10nm,1.2s
COHC  Cochancay        66.25 268  P     P     23 13 50.9 -1.1
LL02  Futaleuf         66.48 223  P     P     23 13 53.4 +0.4
GNI   Garni            67.09  45  LR    LR    23 45 27.8
      comp=Z,57nm,20.2s,baz=246,slow=38
BATG  Bathurst New B   67.31 324  P     P     23 13 58.3 +0.1
BATG                              IAmb  IAmb  23 14 06.5
      comp=Z,13nm,1.1s
VNA1  Neumayer--Stat   68.80 178 ⇑P     P     23 14 09.5 +2.4
      comp=Z,12nm,1.3s
VNA2  Neumayer--Watz   69.11 178 ⇑P     P     23 14 10.8 +1.8
      comp=Z,7.3nm,0.8s,baz=344,slow=7.8
USHA  Ushuaia          69.31 211  LR    LR    23 42 02.4
      comp=Z,146nm,18.5s,baz=204,slow=34
VNA3  Neumayer Olymp   69.36 179 ⇑P     P     23 14 12.1 +1.5
      comp=Z,5.8nm,1.1s
J61A  Chester          69.66 318  P     P     23 14 13.5 +0.6
J61A                              IAmb  IAmb  23 14 16.8
      comp=Z,9.0nm,1.0s
FINES FINESS Array B   69.78  19  P     P     23 14 13.3  0.0
FINES FINESS Array B   69.78  19  P     P     23 14 13.5 +0.2
      comp=Z,7.6nm,1.1s,baz=171,slow=14,SNR=6.1
FINES                             LR    LR    23 46 02.3
      comp=Z,92nm,20.1s,baz=232,slow=37
      comp=Z,7.6nm,1.1s
SNAA  Sanae            70.06 177 ⇑P     P     23 14 16.7 +1.8
      comp=Z,81nm,0.8s
SNAA  Sanae            70.06 177  P     P     23 14 15.7 +0.7
SNAA                              IAmb  IAmb  23 14 17.9
      comp=Z,13nm,1.2s
SNAA  Sanae            70.06 177  P     P     23 14 16.3 +1.4
      comp=Z,7.5nm,1.1s,baz=333,slow=5.5,SNR=12
      comp=Z,7.5nm,1.1s
TROLL Troll, Antarti   70.78 175 ⇑P     P     23 14 21.6 +2.1
      comp=Z,304nm,1.0s
TRQ   Mont Tremblant   72.09 320  P     P     23 14 28.1 +0.3
TRQ                               IAmb  IAmb  23 14 35.6
      comp=Z,12nm,1.3s
JTS   Las Juntas de    72.63 281  LR    LR    23 45 57.0
      comp=Z,46nm,19.8s,baz=86,slow=36
PMSA  Palmer Station   72.70 200  LR    LR    23 38 29.0
      comp=Z,149nm,20.0s,baz=60,slow=29
WVNY  West Valley, N   73.49 315  P     P     23 14 36.9 +0.8
WVNY                              IAmb  IAmb  23 14 38.4
      comp=Z,21nm,1.2s
BELG  Belogornoye      73.97  34  LR    LR    23 51 04.9
      comp=Z,64nm,18.6s,baz=148,slow=39
Q54A  Coxs Mills       74.11 311  P     P     23 14 40.0 +0.2
Q54A                              IAmb  IAmb  23 14 48.2
      comp=Z,15nm,1.4s
SADO  Sadowa           74.60 317  LR    LR    23 41 45.0
      comp=Z,93nm,19.4s,baz=160,slow=31
Q52A  Bidwell          75.19 311  P     P     23 14 46.3 +0.3
Q52A                              IAmb  IAmb  23 14 48.9
      comp=Z,19nm,1.3s
TKL   Tuckaleechee C   75.56 307  LR    LR    23 41 19.4
      comp=Z,125nm,21.9s,baz=129,slow=30
SMAI  San Martin Ant   75.62 198  P     P     23 14 48.8 +0.9
SMAI                              IAmb  IAmb  23 14 52.1
      comp=Z,22nm,1.4s
SYO   Syowa Base       75.63 163⇑epP    pP    23 14 50.0  0.0
SYO   Syowa Base       75.63 163⇓esP    sP    23 14 53.6 +2.8
ARCES ARCESS Array B   75.76  13  LR    LR    23 51 18.0
      comp=Z,86nm,18.6s,baz=212,slow=38
N51A  Ashland          75.77 313  P     P     23 14 50.2 +0.9
BELA  Belgrano 2       76.88 185  P     P     23 14 55.3 +0.3
BELA                              IAmb  IAmb  23 15 04.0
      comp=Z,14nm,1.1s
KIRV  Kirov            77.52  28  LR    LR    23 50 51.0
      comp=Z,109nm,21.2s,baz=268,slow=37
CLTN  Cedars of Leba   77.69 307        P     23 14 59.6 -0.6
WVT   Waverly          78.89 307  P     P     23 15 06.6 -0.3
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AKTO	Aktyubinsk	79.38	38	P	P	23 15 08.9	-0.4
	comp=Z,3.8nm,1.1s,baz=232,slow=4.8,SNR=7.0						
AKTO				LR	LR	23 54 08.4	
	comp=Z,51nm,19.3s,baz=244,slow=39						
	comp=Z,3.8nm,1.1s						
ABKAR	Akbulak array	80.28	39		P	23 15 14.2	+0.1
ABKAR	Akbulak array	80.28	39	P	P	23 15 14.0	-0.2
ABKAR				IAmb	IAmb	23 15 16.9	
	comp=Z,6.0nm,1.4s						
ARTI	Arti	81.27	32	P	P	23 15 19.2	-0.2
	comp=Z,1.6nm,0.7s,baz=283,slow=8.4,SNR=4.3						
	comp=Z,1.6nm,0.7s						
COWI	Conover	81.74	317	P	P	23 15 21.7	-0.5
CCM	Cathedral Cave	81.90	309		P	23 15 22.4	-0.7
CMIG	Matias Romero	82.81	287	LR	LR	23 49 31.6	
	comp=Z,47nm,21.6s,baz=36,slow=34						
MAW	Mawson	82.95	158	LR	LR	23 44 00.7	
	comp=Z,48nm,19.1s,baz=306,slow=30						
SIMJ	Simiganj	84.84	51	P	P	23 15 38.2	-0.2
SIMJ				IAmb	IAmb	23 15 41.3	
	comp=Z,8.8nm,1.4s						
EPLO	Experimental L	85.39	320		P	23 15 40.0	-0.7
EPLO				IAmb	IAmb	23 15 47.9	
	comp=Z,9.8nm,1.2s						
GAR	Garm	85.89	51	P	P	23 15 44.2	+0.5
KKAR	Karatay Array	86.45	47	P	P	23 15 45.1	-1.1
KKAR	Karatay Array	86.45	47	P	P	23 15 44.9	-1.3
KKAR				IAmb	IAmb	23 15 48.2	
	comp=Z,5.9nm,1.4s						
AGMN	Agassiz Nation	86.61	318		P	23 15 46.3	-0.5
AGMN				IAmb	IAmb	23 15 48.2	
	comp=Z,12nm,1.4s						
ECSD	EROS Data Cent	86.65	314		P	23 15 46.5	-0.6
ECSD				IAmb	IAmb	23 15 48.5	
	comp=Z,20nm,1.6s						
ULM	Lac du Bonnet	86.84	320	LR	LR	23 49 27.4	
	comp=Z,66nm,20.8s,baz=136,slow=32						
BVAR	Borovoye Array	87.42	37	LR	LR	23 57 31.9	
	comp=Z,40nm,21.1s,baz=262,slow=37						
BRDY	Brady	87.54	301		P	23 15 49.9	-1.9
BRDY				IAmb	IAmb	23 15 53.3	
	comp=Z,10nm,1.4s						
WMOK	Wichita Mounta	87.58	305	P	P	23 15 51.1	-0.8
WMOK				IAmb	IAmb	23 15 59.5	
	comp=Z,9.5nm,1.2s						
ARSB	Arslanbob	88.13	49	P	P	23 15 53.1	-1.4
JCT	Junction City	88.18	300	P	P	23 15 54.1	-0.7
JCT				IAmb	IAmb	23 15 56.7	
	comp=Z,9.2nm,1.1s						
QSPA	South Pole Qui	88.27	180	P	P	23 15 56.8	+2.2
	comp=Z,18nm,1.1s,baz=216,slow=2.8,SNR=26						
QSPA				LR	LR	23 49 28.1	
	comp=Z,46nm,18.9s,baz=222,slow=32						
	comp=Z,18nm,1.1s						
AAK	Ala-Archa	89.33	47	P	P	23 16 00.2	0.0
AAK				IAmb	IAmb	23 16 03.7	
	comp=Z,14nm,1.4s						
AAK	Ala-Archa	89.33	47	P	P	23 16 01.3	+1.1
	comp=Z,1.6nm,0.4s,baz=259,slow=5.9,SNR=7.6						
AAK				LR	LR	23 59 49.2	
	comp=Z,79nm,18.6s,baz=276,slow=38						
	comp=Z,1.6nm,0.4s						
KSH	Kashi	90.31	51	P	P	23 16 05.0	+0.2
KSH				pmax	pmax		
	comp=Z,8.0nm,1.3s						
NRN	Naryn	90.40	49	P	P	23 16 04.0	-1.4
NRN				IAmb	IAmb	23 16 08.4	
	comp=Z,8.7nm,1.1s						
FFC	Flin Flon	90.89	325	P	P	23 16 06.6	-0.3
FFC				IAmb	IAmb	23 16 08.5	
	comp=Z,9.9nm,1.5s						
TXAR	Lajitas Array	91.49	299	P	P	23 16 09.8	-0.7
	comp=Z,0.7nm,0.9s,baz=111,slow=6.9,SNR=7.0						
TXAR				LR	LR	23 53 48.7	
	comp=Z,22nm,20.5s,baz=74,slow=33						
	comp=Z,0.7nm,0.9s						
TARG	Taragay, Kyrgy	91.76	48	P	P	23 16 11.6	-0.3
TARG				IAmb	IAmb	23 16 14.3	
	comp=Z,7.7nm,1.2s						
KURBB	Kurchatov Arra	92.33	40	P	P	23 16 14.9	+1.2
	comp=Z,0.7nm,1.0s,baz=274,slow=5.9,SNR=4.8						
	comp=Z,0.7nm,1.0s						
SDCO	Great Sand Dun	93.11	308	P	P	23 16 16.8	-1.2
SDCO				IAmb	IAmb	23 16 26.5	
	comp=Z,7.5nm,1.4s						
PALK	Pallekele	93.86	83	LR	LR	23 55 25.2	
	comp=Z,78nm,19.6s,baz=272,slow=34						
ANMO	Albuquerque	93.90	305	LR	LR	23 52 50.1	
	comp=Z,126nm,21.3s,baz=200,slow=32						
MKAR	Makanchi Array	94.91	43	LR	LR	00 03 32.4	
	comp=Z,31nm,19.9s,baz=331,slow=38						
NRIK	Noril'sk	95.39	21	LR	LR	00 04 14.0	
	comp=Z,31nm,18.4s,baz=306,slow=38						
ZALV	Zalesovo Beam	96.04	36	LR	LR	00 03 48.2	
	comp=Z,32nm,19.2s,baz=238,slow=38						
PDAR	Pinedale Array	96.07	313	LR	LR	23 54 28.6	
	comp=Z,68nm,21.4s,baz=103,slow=32						
YKA	Yellowknife Ar	96.97	333	P	P	23 16 33.7	-1.0
	comp=Z,0.4nm,0.7s,baz=74,slow=4.5,SNR=3.7						
	comp=Z,0.4nm,0.7s						
LPIG	La Paz	97.44	294	LR	LR	23 58 29.9	
	comp=Z,30nm,18.1s,baz=180,slow=34						
WMQ	Urumqi	98.94	46	*e*P	Pdif	23 16 46.3	+2.2
PZH	PanZhiHua	112.84	62	PKP	PKiKP	23 21 41.0	-0.2
HHC	Hu-ho-hao-te	116.75	44	*e*P	PKPdf	23 21 44.0	-4.3
NJ2	Nanjing	125.62	51	*e*P	PKPdf	23 22 05.3	-0.1
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
TBI	Tubuai	130.85	237	*e*LR	LR	00 03 33.8	
	comp=Z,484nm,29.2s						
PPT2	Papeete2	133.12	244	*e*LR	LR	00 04 40.5	
	comp=Z,73nm,23.8s						
PPT2				*e*LR	LR	00 04 43.1	
	comp=Z,146nm,27.8s						
ASAR	Alice Springs	139.01	130	PKP	PKPdf	23 22 31.1	+0.1
	comp=Z,1.0nm,1.1s,baz=183,slow=2.1,SNR=4.2						
DZM	Mont Dzumac	156.26	179	*e*LR	LR	00 15 16.5	
	comp=Z,115nm,23.2s						

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*IDC **29** 23:03:25.0±6.1, 4.°76S×143.°74E, h82^{km}±54^{km}, mb3.8/5, mbtmp4.1/7, ML4.0/2, Error ellipse: s-maj=59.5km s-min=18.6km az=83.0*

ISC 29 23:03:27.0±1.2**, 4.°8S**±0.°1×**143.°6E**±0.°2**, h101^{km}, n8, σ1.^{s}17**/9**, mb3.8**/5**, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	3.68	307	P	Pn	23 04 21.4	-0.5
	6.4nm,0.3s,baz=173,slow=9.3,SNR=30						
JAY				S	Sn	23 05 04.4	0.0
	14nm,0.3s,baz=183,slow=17,SNR=4.9						
	13nm,0.3s						
WRA	Warramunga Arr	17.59	210	P	P	23 07 25.5	+0.1
	0.7nm,0.3s,baz=24,slow=13,SNR=22						
	2.2nm,0.7s						
ASAR	Alice Springs	21.00	206	P	P	23 08 03.5	+1.0
	1.0nm,0.6s,baz=25,slow=11,SNR=37						
	1.0nm,0.6s						
STKA	Stephens Creek	27.04	184	P	P	23 08 57.9	-1.9
	2.7nm,0.8s,baz=18,slow=13,SNR=2.6						
	2.7nm,0.8s						
BVAR	Borovoye Array	83.81	324	P	P	23 15 46.1	+1.0
	0.7nm,0.5s,baz=134,slow=6.2,SNR=3.8						
	0.7nm,0.5s						
QSPA	South Pole Qui	85.19	180	P	P	23 15 52.8	+0.8
	17nm,1.1s,baz=291,slow=0.7,SNR=18						
	17nm,1.1s						
QSPA	South Pole Qui	85.19	180	P	P	23 15 52.9	-2.0
ILAR	Eielson Array	85.69	24	P	P	23 15 53.8	-0.5
	0.7nm,0.7s,baz=258,slow=5.3,SNR=6.1						
	0.7nm,0.7s						

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*HEL **29** 23:17:44.3±0.1, 67.°81N×20.°17E, h0^{km}, ML1.6, Suspected explosion*

*UPP **29** 23:17:44.5±0.0, 67.°85N×20.°21E, h0^{km}, ML2.3, Unknown*

*IDC **29** 23:17:45.1±1.2, 67.°82N×20.°42E, h0^{km}, mbtmp3.1/4, ML1.7/4, Error ellipse: s-maj=19.2km s-min=9.0km az=115.0*

ISC 29 23:17:44.6±0.8**, 67.°86N**±0.°02×**20.°21E**±0.°03**, h0^{km}, n33, σ0.^{s}99**/54**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.11	26	P	Pg	23 17 47.0	+0.4
	baz=232						
KUA				S	Sg	23 17 48.6	+0.7
RATU	Laukkuluspa	0.24	262	P	Pg	23 17 49.1	0.0
RATU				S	Sg	23 17 52.4	+0.2
KOVU	Salmi	0.37	357	P	Pg	23 17 51.7	+0.1
KOVU				S	Sg	23 17 56.8	+0.5
DUNU	Dundret	0.75	169	P	Pg	23 17 58.4	-0.6
DUNU				S	Sg	23 18 08.7	0.0
MASU	Masugnsbyn	0.79	120	P	Pg	23 17 59.5	-0.2
MASU				S	Sg	23 18 10.2	+0.2
SALU	Saltoluokta	0.81	234	P	Pg	23 17 59.6	-0.5
SALU				S	Sg	23 18 10.4	-0.2
SALU	Saltoluokta	0.81	234	*e*P	Pg	23 17 59.7	-0.5
KIF	Kilpisjarvi	1.17	10	*e*P	Pg	23 18 06.8	-0.2
KIF	Kilpisjarvi	1.17	10	PG	Pg	23 18 06.7	-0.2
KIF				MSG		23 18 22.7	
	comp=Z,11nm,0.2s						
KIF				SG	Sb	23 18 22.8	-0.5
PAJU	Pajala	1.40	126	P	Pn	23 18 10.0	-1.3
PAJU				S	Sg	23 18 28.7	-0.7
HEF	Hetta	1.40	65	PG	Pn	23 18 10.4	-1.0
	baz=245						
HEF				MSG		23 18 27.6	
	comp=Z,3.7nm,0.2s						
HEF				SG	Sg	23 18 29.0	-0.6
ERTU	Ertsjaerv	1.52	149	P	Pn	23 18 12.1	-0.8
ERTU	Ertsjaerv	1.52	149	PN	Pn	23 18 11.8	-1.1
ERTU				SN	Sg	23 18 32.7	-0.6
KLF	Kolari	1.57	112	PN	Pn	23 18 13.0	-0.7
	baz=298						
KLF				MSG		23 18 31.2	
	comp=Z,3.2nm,0.2s						
KLF				SN	Sn	23 18 34.8	+0.1
HARU	Harads	1.73	170	P	Pn	23 18 15.9	+0.1
TRO	Tromso	1.84	346	PG	Pb	23 18 18.5	-0.6
TRO				SG	Sb	23 18 42.3	-0.3
KALU	Kalix	2.36	147	PG	Pn	23 18 25.4	+0.9
	baz=329						
KALU				SG	Sn	23 18 56.0	+1.9
TOF	Tornio	2.41	136	PG	Pn	23 18 26.4	+1.2
	baz=320						
TOF				MSG		23 18 54.8	
	comp=Z,2.3nm,0.2s						
TOF				SG	Sb	23 18 59.0	+0.1
ARCES	ARCESS Array B	2.56	47	Pn	Pn	23 18 27.8	+0.5
	comp=Z,0.3nm,0.3s,baz=227,slow=15,SNR=25						
ARCES				Sn	Sn	23 19 00.2	+1.1
	comp=Z,1.0nm,0.3s,baz=227,slow=24,SNR=14						
	comp=Z,0.8nm,0.2s						
ARA0	ARCESS Array S	2.56	47	PB	Pn	23 18 28.6	+1.4
	baz=226						
ARA0				SB	Sb	23 19 02.4	-1.0
RNF	Rovaniemi	2.58	116	PB	Pn	23 18 29.1	+1.6
RNF				SG	Sb	23 19 03.3	-0.6
RAJF	Raja-Jooseppi	3.09	75	PN	Pn	23 18 34.9	+0.4
RAJF				SG	Sb	23 19 18.0	-0.5
KEV	Kevo	3.12	49	PB	Pb	23 18 38.5	-2.3
KEV				SB	Sb	23 19 18.4	-0.8
RANF	Ranua	3.18	123	PB	Pn	23 18 36.8	+1.0
RANF				SG	Sb	23 19 21.8	+0.7
VRF	Varrio	3.57	87	PG	Pb	23 18 48.5	+0.1
	baz=274						
OUL	Oulu	3.60	138	SG	Sb	23 19 34.0	+0.9
KU2	Taivalkoski	3.84	120	PN	Pn	23 18 45.7	+1.0
MSF	Maaselka	3.99	115	PG	Pb	23 18 56.6	+1.0
UMAU	Umeaa	4.00	177	PB	Pn	23 18 50.0	+3.1
	baz=353						
KU6	Riekki	4.23	111	PG	Pb	23 19 00.4	+0.7
	baz=303						
FINES	FINESS Array B	6.91	156	Pn	Pn	23 19 27.3	+0.4
	baz=345,slow=13,SNR=1.9						
FINES				Sn	Sn	23 20 45.1	-1.1
	comp=Z,0.1nm,0.3s,baz=345,slow=21,SNR=3.5						
FINES				Lg	Lg	23 21 17.2	
	comp=Z,0.2nm,0.3s,baz=341,slow=25,SNR=4.9						
	comp=Z,2.1nm,0.9s						
NOA	NORSAR Array B	7.87	214	Pn	Pn	23 19 38.6	-1.5
	baz=25,slow=12,SNR=2.2						
NOA				Lg	Lg	23 21 54.4	
	baz=4.6,slow=16,SNR=1.4						
	comp=Z,1.3nm,1.1s						
HFS	Hagfors	8.26	203	Pn	Pn	23 19 43.5	-2.0
	comp=Z,0.1nm,0.3s,baz=24,slow=12,SNR=2.8						
	comp=Z,1.8nm,0.8s						

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*IDC **29** 23:25:12.8±6.3, 19.°43N×146.°60E, h65^{km}±50^{km}, mb3.5/9, mbtmp3.8/10, ML4.0/1, Error ellipse: s-maj=93.3km s-min=24.0km az=85.0*

ISC 29 23:25:09.9±2.4**, 19.°54N**±0.°08×**146.°7E**±0.°6**, h35^{km}, n16, σ1.^{s}30**/11**, mb3.8**/9**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	6.19	197	P	Pn	23 26 41.0	+2.2
	3.7nm,0.3s,baz=20,slow=15,SNR=1.1						
GUMO				S	Sn	23 27 46.5	-1.8
	13nm,0.3s,baz=25,slow=22,SNR=1.3						
	11nm,0.3s						
H11S3	WAKE ISLAND Hy	18.89	90	T	T	23 50 39.7	
	baz=275,slow=74,SNR=12						
H11S1	WAKE ISLAND Hy	18.90	90	T	T	23 50 24.6	
	baz=275,slow=74,SNR=16						
H11S2	WAKE ISLAND Hy	18.91	90	T	T	23 50 25.5	
	baz=275,slow=74,SNR=14						
H11N1	WAKE ISLAND Hy	18.98	86	T	T	23 50 50.2	
	baz=274						
H11N2	WAKE ISLAND Hy	18.99	86	T	T	23 50 34.0	
	baz=274						
H11N3	WAKE ISLAND Hy	19.00	86	T	T	23 50 39.8	
	baz=274						
KSRS	Korea Array	24.25	321	P	P	23 30 23.6	0.0
	1.3nm,0.7s,baz=148,slow=9.2,SNR=6.3						
	1.3nm,0.7s						
KLR	Kul'dur	31.97	341	P	P	23 31 32.7	+0.2
	2.0nm,0.5s,baz=184,slow=8.1,SNR=6.3						
	2.0nm,0.5s						
WRA	Warramunga Arr	41.08	198	P	P	23 32 49.7	-0.7
	0.5nm,0.5s,baz=19,slow=8.5,SNR=3.2						
	0.5nm,0.5s						
SONM	Songino Array	43.11	320	P	P	23 33 08.0	+1.1
	0.3nm,0.4s,baz=115,slow=6.8,SNR=2.2						
	0.3nm,0.4s						
ZALV	Zalesovo Beam	57.95	322	P	P	23 34 58.4	-0.2
	0.4nm,0.3s,baz=126,slow=9.1,SNR=2.0						
	0.4nm,0.3s						
MKAR	Makanchi Array	58.59	313	P	P	23 35 03.2	-0.1
	0.3nm,0.7s,baz=76,slow=7.6,SNR=2.4						
	0.3nm,0.7s						
KURBB	Kurchatov Arra	61.36	318	P	P	23 35 20.6	-1.6
	0.3nm,0.4s,baz=91,slow=7.4,SNR=5.3						
	0.3nm,0.4s						
BVAR	Borovoye Array	66.46	320	P	P	23 35 55.5	-0.1
	0.9nm,0.4s,baz=95,slow=8.4,SNR=7.7						
	0.9nm,0.4s						
FINES	FINESS Array B	86.53	336	P	P	23 37 48.1	-0.9
	0.6nm,0.4s,baz=56,slow=4.8,SNR=11						
	0.6nm,0.4s						

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*IDC **29** 23:50:39.5±0.8, 35.°86N×25.°76E, h0^{km}, mb3.9/8, mbtmp3.7/13, ML3.0/5, Error ellipse: s-maj=20.3km s-min=8.5km az=143.0*

*ISK **29** 23:50:41.5, 35.°82N×25.°66E, h16^{km}, ML3.6/7*

*HLW **29** 23:50:41.8, 35.°94N×25.°73E, h30^{km}±19^{km}, Md3.9, Ml3.2*

*THE **29** 23:50:42.8, 36°N±2°×2°6E±°, h17^{km}±3^{km}, M3.1/21, MLh3.1/21*

*ATH **29** 23:50:42.3, 35.°81N×25.°68E, h18^{km}±2^{km}, ML3.5/12, Manual Solution by A.Agalos First location: 2019/06/29 23:51:48, This location: 2019/06/30 00:16:47 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*

*AFAD **29** 23:50:45.2, 35.°83N×26.°05E, h7^{km}±2^{km}, MW3.6*

ISC 29 23:50:41.8±1.2**, 35.°78N**±0.°02×**25.°71E**±0.°02**, h16^{km}**±8^{km}**, n132, σ1.^{s}43**/159**, mb3.9**/7**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THR6	Thira Island,	0.63	336	P	Pb	23 50 54.0	-0.4
THR9	Santorini-Faro	0.65	334	P	Pb	23 50 54.4	-0.3
THR8	Santorini-Mono	0.66	343	P	Pb	23 50 54.4	-0.4
THRA	Thira	0.68	340	P	Pb	23 50 55.0	-0.2
THRA				S	Sb	23 51 04.0	-0.3
THR3	Thira Island,	0.68	338	P	Pb	23 50 55.1	-0.2
SFIR	Foira Santorin	0.69	340	P	Pb	23 50 54.9	-0.5
IACM	Heraklion	0.70	228	P	Pb	23 50 55.9	+0.3
IACM				S	Sb	23 51 05.8	+0.9
THR5	Thira Island,	0.71	335	P	Pb	23 50 55.3	-0.4
THR2	Thira island,	0.71	341	P	Pb	23 50 56.1	+0.4
SAP3	Santorini-Thir	0.72	336	P	Pb	23 50 55.6	-0.3
SAP3				S	Sb	23 51 05.3	-0.4
SAP3	Santorini-Thir	0.72	336	P	Pb	23 50 55.7	-0.3
SAP3				S	Sb	23 51 05.1	-0.5
CMBO	Columbo, Santo	0.74	340	P	Pb	23 50 56.3	+0.1
CMBO				S	Sb	23 51 06.0	0.0
CMBO	Columbo, Santo	0.74	340	P	Pb	23 50 56.0	-0.2
CMBO				S	Sb	23 51 05.8	-0.3
ZKR	Zakros	0.78	148	Pg	Pn	23 50 58.7	+0.7
ZKR				Sg	Sn	23 51 10.3	+1.0
ZKR	Zakros	0.78	148	P	Pn	23 50 58.9	+0.9
ZKR	Zakros	0.78	148	P	Pn	23 50 58.7	+0.7
ZKR				S	Sb	23 51 09.4	+2.2
IDI	Anoyia	0.83	234	Pg	Pb	23 50 57.7	0.0
IDI				Sg	Sb	23 51 09.7	+1.0
IDI	Anoyia	0.83	234	P	Pb	23 50 57.8	0.0
IDI				S	Sb	23 51 09.1	+0.4
IDI	Anoyia	0.83	234	Pg	Pb	23 50 57.8	0.0
	95nm,0.3s,baz=23,slow=4.7,SNR=1122						
IDI				Lg	Lg	23 51 09.3	
	655nm,0.3s,baz=332,slow=18,SNR=59						
IDI	Anoyia	0.83	234	P	Pb	23 50 57.8	0.0
ASTA	Astypalaia	0.93	34	P	Pb	23 50 59.5	+0.1
ASTA				S	Sb	23 51 12.2	+0.7
TMBK	Timbaki Herakl	1.04	228	P	Pb	23 51 01.8	+0.4
TMBK				S	Sn	23 51 16.5	+0.6
TMBK	Timbaki Herakl	1.04	228	P	Pn	23 51 01.9	+0.3
TMBK				S	Sb	23 51 15.8	+1.0
PRNS	Prines Rethymn	1.07	248	P	Pg	23 51 01.7	-0.7
PRNS				S	Sn	23 51 17.9	+1.4
PRNS	Prines Rethymn	1.07	248	P	Pb	23 51 02.1	+0.3
PRNS				S	Sn	23 51 18.0	+1.5
KARP	Karpathos	1.20	100	Pn	Pg	23 51 05.1	+0.1
KARP				Sn	Sn	23 51 21.9	+2.1
KARP	Karpathos	1.20	100	P	Pb	23 51 04.5	+0.4
KARP				S	Sg	23 51 20.9	+0.2
KARP	Karpathos	1.20	100	P	Pb	23 51 04.4	+0.4
APE	Apeiranthos	1.30	354	Pn	Pn	23 51 04.9	-0.4
APE	Apeiranthos	1.30	354	P	Pn	23 51 04.5	-0.8
APE	Apeiranthos	1.30	354	P	Pn	23 51 04.4	-0.8
CHNB	Souda	1.37	258	P	Pn	23 51 06.3	+0.1
CHAN	Chania	1.39	260	P	Pn	23 51 06.3	-0.1
CHAN	Chania	1.39	260	P	Pn	23 51 06.7	+0.4
CHAN				S	Sb	23 51 24.2	-0.4
MHLO	Agia Marina, M	1.40	311	P	Pn	23 51 06.6	0.0
MHLO				S	Sg	23 51 25.7	-1.2
MHLO	Agia Marina, M	1.40	311	P	Pn	23 51 06.5	-0.1
GVD	Gavdhos	1.62	235	Pn	Pn	23 51 10.4	+0.7
GVD	Gavdhos	1.62	235	P	Pb	23 51 10.9	-0.5
GVD	Gavdhos	1.62	235	P	Pb	23 51 10.8	-0.5
KNDR	Palaiochora Ch	1.74	253	Pn	Pb	23 51 12.7	-0.6
KNDR	Palaiochora Ch	1.74	253	P	Pb	23 51 13.0	-0.3
KNDR	Palaiochora Ch	1.74	253	P	Pb	23 51 12.7	-0.6
BODT	Bodrum	1.82	45	P	Pn	23 51 12.4	0.0
ANKY	Antikythira Is	1.96	273	P	Pn	23 51 14.1	-0.2
ANKY	Antikythira Is	1.96	273	P	Pn	23 51 14.1	-0.2
ARG	Arkhangelos	2.00	77	P	Pn	23 51 16.6	+1.7
ARG	Arkhangelos	2.00	77	P	Pn	23 51 16.4	+1.4
SMG	Samos	2.13	25	P	Pn	23 51 16.4	-0.3
SMG	Samos	2.13	25	P	Pn	23 51 16.3	-0.3
KTHA	Kythira Island	2.20	283	Pn	Pn	23 51 17.4	-0.3
KTHA	Kythira Island	2.20	283	P	Pn	23 51 17.4	-0.3
TURN	Turunc	2.28	63	P	Pn	23 51 20.3	+1.7
MNVA	Monemvasia	2.35	294	P	Pn	23 51 19.7	+0.1
VLI	Veliai	2.43	294	P	Pn	23 51 20.5	-0.3
VLI	Veliai	2.43	294	P	Pn	23 51 20.2	-0.6
KARY	Karystos	2.47	336	P	Pn	23 51 21.1	-0.3
KARY	Karystos	2.47	336	P	Pn	23 51 21.2	-0.1
MULA	Mugla, Merkez-	2.57	54	P	Pb	23 51 27.1	-0.4
CHOS	Chios island	2.62	6	P	Pn	23 51 23.7	+0.2
CHOS	Chios island	2.62	6	P	Pn	23 51 23.7	+0.2
MET6	Megalochori,Me	2.62	314	P	Pn	23 51 23.4	0.0
MET5	Makryloggos,Me	2.64	315	P	Pn	23 51 24.1	+0.5
ATHU	Athens Univers	2.68	325	P	Pn	23 51 24.2	0.0
ATHU	Athens Univers	2.68	325	P	Pn	23 51 23.7	-0.5
DION	Dionisos Attik	2.71	329	P	Pn	23 51 24.8	+0.3
DION	Dionisos Attik	2.71	329	P	Pn	23 51 24.7	+0.1
PTL	Penteli	2.71	327	P	Pn	23 51 25.1	+0.4
PTL	Penteli	2.71	327	P	Pn	23 51 24.6	-0.1
SABU	Mula-Dalaman	2.83	67	P	Pn	23 51 29.3	+3.1
SABU				S	Sn	23 52 03.4	+3.3
SABU				*i* IAML		23 52 08.0	
	comp=N,47nm,0.8s						
SABU				*i* IAML		23 52 13.0	
	comp=E,49nm,0.5s						
IZZE	Mula-Seydike	2.92	76	P	Pn	23 51 29.0	+1.5
ESEN	Aydn-Nazilli	2.92	46	P	Pb	23 51 32.2	-1.3
DNZT	Denizli-Tavas-	3.06	60	P	Pn	23 51 33.0	+3.4
DNZT				S	Sn	23 52 09.5	+3.6
DNZT				*i* IAML		23 52 15.0	
	comp=E,34nm,0.7s						
VILL	Villia	3.06	322	P	Pn	23 51 30.0	+0.5
TAVA	DENIZLI_Tavas	3.08	56	P	Pb	23 51 33.8	-2.4
TAVA				S	Sb	23 52 13.6	+0.1
TAVA				*i* IAML		23 52 19.0	
	comp=E,14nm,0.3s						
VLX	Vlachokerasia	3.12	302	P	Pn	23 51 31.6	+1.3
VLX	Vlachokerasia	3.12	302	P	Pn	23 51 30.6	+0.3
VIL2	Platees	3.12	322	P	Pn	23 51 29.5	-0.8
KYMI	Kymi, Euboea I	3.13	336	P	Pn	23 51 30.3	-0.1
KYMI	Kymi, Euboea I	3.13	336	P	Pn	23 51 30.2	-0.2
LTK	Loutraki	3.14	316	P	Pn	23 51 31.9	+1.3
LTK	Loutraki	3.14	316	P	Pn	23 51 31.4	+0.8
KSL	Kastellorizon	3.16	82	P	Pn	23 51 33.3	+2.5
KSL	Kastellorizon	3.16	82	P	Pn	23 51 32.3	+1.5
CAEL	Denizli, Camel	3.20	64	P	Pb	23 51 35.6	-2.7
DNIZ	Denizli-Tavas-	3.25	54	P	Pn	23 51 33.5	+1.4
KNIK	Mula-Seydike	3.29	70	P	Pn	23 51 35.9	+3.1
GOLH	Golhisar	3.43	64	P	Pn	23 51 38.0	+3.5
GUR	Goura	3.46	310	P	Pn	23 51 35.8	+0.8
GUR	Goura	3.46	310	P	Pn	23 51 35.1	+0.1
LKR	Lokris	3.60	324	P	Pn	23 51 37.3	+0.6
KLV	Kalavryta, Ach	3.64	309	P	Pn	23 51 38.4	+0.9
KLV	Kalavryta, Ach	3.64	309	P	Pn	23 51 38.3	+0.8
INCE	Denizli-Bozkur	3.65	57	P	Pn	23 51 41.1	+3.5
AXAR	Agios Charalam	3.85	322	P	Pn	23 51 41.5	+1.1
AXAR	Agios Charalam	3.85	322	P	Pn	23 51 41.2	+0.9
DRO	Drossia	3.88	305	P	Pn	23 51 42.7	+2.0
KORT	Korkueli	3.94	71	P	Pn	23 51 45.6	+4.0
EFP	Efpalio	4.03	312	P	Pn	23 51 44.9	+2.1
NEO	Neokhori	4.04	331	P	Pn	23 51 43.4	+0.5
NEO	Neokhori	4.04	331	P	Pn	23 51 43.2	+0.3
EZN	Ezine	4.07	7	P	Pn	23 51 43.2	-0.1
ANX	Ano Chora	4.13	314	P	Pn	23 51 45.7	+1.5
ANX	Ano Chora	4.13	314	P	Pn	23 51 44.1	-0.1
AGG	Agios Georgios	4.21	321	P	Pn	23 51 46.4	+1.0
AGG	Agios Georgios	4.21	321	P	Pn	23 51 45.1	-0.2
SLUM	Salum	4.29	186	P	Pn	23 51 47.8	+1.5
SLUM				S	Sn	23 52 35.0	-1.1
MAKR	Makrakomi, Fth	4.31	320	P	Pn	23 51 48.6	+2.0
PAIG	Paliouri	4.45	339	P	Pn	23 51 48.8	+0.3
VLS	Valsamata	4.75	302	P	Pn	23 51 53.6	+1.0
TYRN	Tyrnavos	4.80	326	P	Pn	23 51 54.8	+1.5
PLG	Polygyros	4.93	339	P	Pn	23 51 55.0	-0.1
EVGI	Lefkada island	4.94	307	P	Pn	23 51 57.2	+2.0
NYDR	Nydri-Lefkada	4.96	308	P	Pn	23 51 57.6	+2.1
LKD2	Lefkada island	5.03	308	P	Pn	23 51 58.7	+2.2
DB3	El Dabaa	5.29	153	P	Pn	23 52 01.3	+1.3
DB3				S	Sn	23 52 58.0	-2.5
SWA2		6.52	182	P	Pn	23 52 18.0	+1.1
BRTR	Keskin Array B	7.41	56	Pn	Pn	23 52 29.4	0.0
	0.1nm,0.3s,baz=229,slow=15,SNR=6.4						
	0.4nm,0.6s						
RYAN	Fayoum	7.71	149	P	Pn	23 52 34.4	+1.1
RYAN				S	Sn	23 53 56.5	-3.7
MMAI	Mount Meron Ar	8.47	106	Pn	Pn	23 52 43.4	-0.4
	1.0nm,0.3s,baz=315,slow=11,SNR=7.1						
MMAI				Sn	Sn	23 54 14.5	-4.6
	1.9nm,0.3s,baz=338,slow=11,SNR=6.4						
	0.3nm,0.2s						
HFRF	Wahat Farafira	8.88	165	P	Pn	23 52 50.6	+1.2
EIL	Elat	9.88	125	Pn	Pn	23 53 02.1	-0.9
	0.3nm,0.3s,baz=324,slow=2.0,SNR=13						
EIL				Sn	Sn	23 54 46.2	-7.3
	2.0nm,0.3s,baz=352,slow=13,SNR=11						
	0.7nm,0.3s						

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ASF    Jabal al Asfar      9.96 108  Pn        Pn        23 53 03.8  -0.4
       0.2nm,0.3s,baz=331,slow=24,SNR=1.6
ASF                                  Sn        Sn        23 54 46.5  -9.2
       0.1nm,0.3s,baz=333,slow=24,SNR=1.4
       0.7nm,0.4s
AKASG  Malin Array Be     15.13   9  Pn        Pn        23 54 17.1  +2.4
       0.9nm,0.3s,baz=202,slow=11,SNR=3.0
GERES  GERESS Array B     15.77 330  Pn        Pn        23 54 24.4  +1.3
       baz=159,slow=13,SNR=4.7
       0.4nm,0.6s
ESDC   Sonseca Array      23.74 288  P         P         23 55 52.9  -0.3
       0.4nm,0.7s,baz=86,slow=9.7,SNR=1.7
       0.4nm,0.7s
EKA    Eskdalemuir Ar     27.81 324  P         P         23 56 29.0  -0.9
       0.3nm,0.4s,baz=121,slow=8.6,SNR=3.9
       0.3nm,0.4s
TORD   Torodi Ar. Bea     31.23 230  P         P         23 57 00.4  -0.2
       1.6nm,0.5s,baz=32,slow=9.6,SNR=1.2
       1.6nm,0.5s
ARCES  ARCESS Array B     33.82 360  P         P         23 57 22.1  -0.6
       1.8nm,0.8s,baz=169,slow=8.3,SNR=1.5
       1.8nm,0.8s
KURBB  Kurchatov Arra     40.38  52  P         P         23 58 18.6  -0.1
       1.7nm,0.3s,baz=270,slow=8.4,SNR=25
       1.7nm,0.3s
MKAR   Makanchi Array     43.06  57  P         P         23 58 41.1  +0.4
       1.6nm,0.3s,baz=268,slow=8.5,SNR=44
       1.6nm,0.3s
ZALV   Zalesovo Beam      44.25  47  P         P         23 58 48.7  -1.5
       0.7nm,0.4s,baz=274,slow=9.6,SNR=4.1
       0.7nm,0.4s
SONM   Songino Array      58.75  51  P         P         00 00 38.6  -0.3
       0.3nm,0.4s,baz=273,slow=8.2,SNR=2.5
       0.3nm,0.4s
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*IDC **30** 00:56:53.3±1.6, 2°.51S×121°.40E, h0^{km}, mb3.5/4, mbtmp3.6/5, ML3.5/1, MS3.5/1, Error ellipse: s-maj=37.0km s-min=26.7km az=71.0*
*DJA **30** 00:56:54.7±0.4, 3°S±4°×12°1E±°, h10^{km}, M3.7/9, MLv3.7/9*
ISC 30 00:56:54.5±0.9**, 2°.57S**±0°.05×**121°.20E**±0°.06**, h10^{km}, n14, σ1^s.32**/17**, mb3.4**/4**, Sulawesi**

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Code   Station Name        Δ°  AZ°   Phase ID            Time      Res
                                     Op        ISC       h  m  s   ISC
TTSI   Tana Toraja         1.46 251  P         Pn        00 57 17.9  -3.0
TTSI                                 S         Sn        00 57 39.2  -0.9
APSI   Ampana              1.71  15  P         Pn        00 57 23.6  -0.8
SPSI   Sidrap Palu         1.99 226  P         Pn        00 57 28.5  +0.2
BNSI   Bone                2.12 211  P         Pn        00 57 31.8  +1.7
PCI    Palu                2.14 320  P         Pn        00 57 32.1  +1.7
PCI                                  S         Sb        00 58 00.4  +0.3
LUWI   Luwuk               2.19  46  P         Pn        00 57 29.9  -1.0
LUWI                                 S         Sn        00 57 58.5  +0.4
KAPI   Kappang             2.83 211  Pn        Pn        00 57 41.8  +2.0
       6.5nm,0.3s,baz=29,slow=13,SNR=21
KAPI                                 Sn        Sb        00 58 19.1  -0.7
       4.5nm,0.3s,baz=234,slow=23,SNR=11
       38nm,0.5s
MRSI   Marisa              3.12  14  P         Pn        00 57 44.2  +0.4
MPSI   Mapaga              3.17 336  P         Pn        00 57 44.9  +0.4
BATI   Baumata             7.97 162  LR        LR        01 02 46.9
       comp=Z,305nm,18.6s,baz=291,slow=44
WRA    Warramunga Arr     21.52 144  P         P         01 01 42.8  -1.1
       0.9nm,0.7s,baz=324,slow=11,SNR=6.7
       0.9nm,0.7s
ASAR   Alice Springs      24.31 151  P         P         01 02 12.8  +0.2
       0.7nm,0.8s,baz=333,slow=8.7,SNR=5.1
       0.7nm,0.8s
STKA   Stephens Creek     34.91 149  P         P         01 03 46.4  -0.2
       2.1nm,0.7s,baz=328,slow=13,SNR=3.2
       2.1nm,0.7s
MKAR   Makanchi Array     59.88 330  P         P         01 07 01.2  +0.6
       0.2nm,0.5s,baz=128,slow=8.2,SNR=1.9
       0.2nm,0.5s
```

IDC 30 01:01:14.6±8.3**, 0°.84S**×**13°.00W, h0^{km}, mb3.8**/3**, mbtmp3.9**/4**, ML3.1**/1**, MS3.2**/3**, Error ellipse: s-maj=221.9km s-min=85.0km az=162.0, North of Ascension Island**

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Code   Station Name        Δ°  AZ°   Phase ID            Time      Res
                                     Op        ISC       h  m  s   ISC
H10N2  ASCENSION HYDR      7.10 192  T         T         01 09 13.6
       baz=15,slow=74,SNR=40
H10N1  ASCENSION HYDR      7.12 192  T         T         01 09 13.5
       baz=15,slow=74,SNR=41
H10N3  ASCENSION HYDR      7.12 192  T         T         01 09 09.4
       baz=15,slow=74,SNR=37
DBIC   Dimbokro           11.03  47  Pn        Pn        01 03 54.6  +0.9
       0.1nm,0.3s,baz=225,slow=13,SNR=1.7
DBIC                                 LR        LR        01 07 37.1
       comp=Z,60nm,18.5s,baz=259,slow=35
       3.4nm,0.8s
TORD   Torodi Ar. Bea     20.13  46  P         P         01 05 49.7  -0.8
       3.2nm,0.7s,baz=235,slow=11,SNR=2.0
       3.2nm,0.7s
LSZ    Lusaka             43.11 112  LR        LR        01 23 07.7
       comp=Z,37nm,21.5s,baz=134,slow=30
GERES  GERESS Array B     54.60  21  P         P         01 10 45.0   0.0
       0.9nm,0.8s,baz=204,slow=6.2,SNR=6.4
       0.9nm,0.8s
EIL    Elat               54.85  52  LR        LR        01 33 20.6
       comp=Z,39nm,19.7s,baz=341,slow=35
BRTR   Keskin Array B     58.65  41  P         P         01 11 14.1   0.0
       1.1nm,0.8s,baz=238,slow=8.3,SNR=4.3
       1.1nm,0.8s
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*IDC **30** 01:10:31.4±0.7, 6°.85N×123°.77E, h0^{km}, mb4.1/9, mbtmp4.2/10, ML3.7/1, MS3.2/5, Error ellipse: s-maj=18.0km s-min=14.3km az=30.0*
*DJA **30** 01:10:34.1±1.2, 7°N±10°×12°4E±°, h10^{km}, M5.1/7, mb5.0/6, mB5.5/5, MLv5.1/7, Mw(mB)5.0/5, MwMwp4.5/1, Mwp4.9/1*
*NEIC **30** 01:10:38.9±1.1, 6°.92N±0°.08×123°.88E±0°.07, h57^{km}±9^{km}, mb4.9/13, Error ellipse: s-maj=13.2km s-min=7.7km az=138.0*
ISC 30 01:10:37.9±0.6**, 6°.86N**±0°.06×**123°.89E**±0°.07**, h46^{km}, n46, σ1^s.31**/43**, mb4.4**/15**, MS3.1**/4**, 1C, Mindanao**

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Code   Station Name        Δ°  AZ°   Phase ID            Time      Res
                                     Op        ISC       h  m  s   ISC
DAV    Davao City (W)      1.69  83            Pn        01 11 06.0  +1.1
DAV    Davao City (W)      1.69  83  Pn        Pn        01 11 05.2  +0.2
       481nm,0.3s,baz=288,slow=6.7,SNR=44
DAV                                  Lg        Lg        01 11 27.6
       246nm,0.3s,baz=233,slow=20,SNR=3.5
DAV    Davao City (W)      1.69  83  P         Pn        01 11 03.0  -2.0
SGSI   Sangihe             3.55 153  P         Pn        01 11 27.7  -2.8
SGSI                                 S         Sn        01 12 13.0  +1.7
MYLDM  Lahad Datu          5.61 253            Pn        01 11 59.5  +0.6
KMSI   Cibinong            6.24 179  P         Pn        01 12 06.7  -0.8
TOLI2  Tolitoli            6.50 209  Pn        Pn        01 12 06.6  -4.4
MRSI   Marisa              6.63 197  P         Pn        01 12 10.3  -2.6
       0.8nm45nm,0.5s
TNTI   Ternate             6.97 150  Pn        Pn        01 12 18.3  +0.8
TGY    Tagaytay City       7.76 338  LR        LR        01 15 30.9
       comp=Z,258nm,19.1s,baz=40,slow=39
LUWI   Luwuk               7.93 188            Pn        01 12 32.0  +1.3
LUWI   Luwuk               7.93 188  P         Pn        01 12 32.3  +1.7
APSI   Ampana              8.04 196  P         Pn        01 12 32.5  +0.4
SBUM   Sibu               12.43 250            Pn        01 13 33.4  +1.1
FAKI   Fak Fak            12.81 139  Pn        Pn        01 13 38.4  +0.9
JAY    Jayapura           19.20 118  P         Pn        01 14 58.7  -0.7
       0.2nm,0.3s,baz=317,slow=8.0,SNR=6.6
       9.9nm,0.8s
KNRA   Kununurra          22.91 168  P         P         01 15 37.5  -0.4
FITZ   Fitzroy Crossi     24.86 176  P         P         01 15 55.3  -1.0
MBWA   Marble Bar         28.14 188  P         P         01 16 26.3  +0.4
MBWA                                 IAmb      IAmb      01 16 40.4
       comp=Z,56nm,1.6s
WB0    Warramunga Arr     28.41 159  P         P         01 16 27.9  -0.3
WB0                                  IAmb      IAmb      01 16 31.3
       comp=Z,11nm,1.2s
PSA00  Pilbara Seismi     28.53 188  P         P         01 16 30.2  +0.8
PSA00                                IAmb      IAmb      01 16 46.0
       comp=Z,106nm,1.9s
WRA    Warramunga Arr     28.55 159  P         P         01 16 28.8  -0.7
       comp=Z,4.3nm,0.7s,baz=335,slow=10,SNR=22
WRA                                  PcP       PcP       01 19 39.7  -0.7
       comp=Z,0.4nm,0.6s,baz=335,slow=3.0,SNR=2.5
       comp=Z,4.3nm,0.7s
WR8    Warramunga Arr     28.62 159  P         P         01 16 29.5  -0.7
WR8                                  IAmb      IAmb      01 17 06.3
       comp=Z,28nm,1.8s
ASAR   Alice Springs      31.88 162  P         P         01 16 58.8  -0.1
ASAR   Alice Springs      31.88 162  P         P         01 16 59.2  +0.3
       comp=Z,1.4nm,0.7s,baz=341,slow=7.0,SNR=13
ASAR                                 PcP       PcP       01 19 48.4  -0.6
       comp=Z,0.8nm,0.5s,baz=345,slow=2.6,SNR=6.7
       comp=Z,1.4nm,0.7s
MJAR   Matsushiro Arr     32.31  22  LR        LR        01 31 21.9
       comp=Z,36nm,18.1s,baz=204,slow=39
MORW   Morawa             36.51 192  P         P         01 17 37.3  -1.8
FORT   Forrest            37.64 174  P         P         01 17 48.7  +0.2
FORT                                 IAmb      IAmb      01 18 46.4
       comp=Z,24nm,1.3s
USRK   Ussuriysk Ar.      37.86  10  LR        LR        01 34 43.8
       comp=Z,25nm,19.4s,baz=213,slow=38
ASAJ   Asahikawa          40.56  21  LR        LR        01 36 10.6
       comp=Z,19nm,19.6s,baz=178,slow=38
STKA   Stephens Creek     42.06 157  P         P         01 18 26.3  +1.0
STKA   Stephens Creek     42.06 157  P         P         01 18 26.4  +1.0
       comp=Z,16nm,0.7s,baz=331,slow=8.2,SNR=26
       comp=Z,16nm,0.7s
MKAR   Makanchi Array     53.39 325  P         P         01 19 52.0  -1.0
       comp=Z,0.6nm,0.8s,baz=120,slow=7.9,SNR=5.1
       comp=Z,0.6nm,0.8s
PETK   Petropavlovsk-     53.70  25  P         P         01 19 55.3  +0.3
       comp=Z,1.9nm,0.7s,baz=231,slow=9.1,SNR=2.8
       comp=Z,1.9nm,0.7s
ZALV   Zalesovo Beam      56.54 333  P         P         01 20 16.7  +1.1
       comp=Z,0.5nm,0.4s,baz=145,slow=5.3,SNR=2.4
       comp=Z,0.5nm,0.4s
KURBB  Kurchatov Arra     57.60 328  P         P         01 20 22.9  -0.2
       comp=Z,0.6nm,0.5s,baz=125,slow=5.9,SNR=6.6
       comp=Z,0.6nm,0.5s
SNZO   South Karori       66.76 141  P         P         01 21 24.1  -0.5
PLWZ   Palliser           67.25 141  P         P         01 21 27.3  -0.5
SPIA   Saint Paul Isl     71.30  32  P         P         01 21 50.6  -1.8
D19K   Kuna River         79.25  22  P         P         01 22 37.2  -0.9
D19K                                 IAmb      IAmb      01 24 15.9
       comp=Z,41nm,1.8s
VNDA   Vanda              86.88 172  P         P         01 23 17.3  +0.2
VNDA                                 IAmb      IAmb      01 26 11.1
       comp=Z,10nm,1.9s
VNDA   Vanda              86.88 172  P         P         01 23 17.1  -0.1
       comp=Z,1.1nm,0.9s,baz=312,slow=6.5,SNR=7.4
       comp=Z,1.1nm,0.9s
SPITS  Spitsbergen Ar     86.88 349  LR        LR        02 08 43.6
       comp=Z,22nm,18.2s,baz=49,slow=40
FINES  FINESS Array B     87.75 332  P         P         01 23 21.1  -0.6
       comp=Z,2.3nm,0.9s,baz=46,slow=6.4,SNR=5.0
       comp=Z,2.3nm,0.9s
SYO    Syowa Base         94.31 201 ⇑eP        P         01 23 53.0  +1.0
CLL    Collm              97.46 324  eP        Pdif      01 24 08.0  +1.1
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*IDC **30** 01:13:32.0±0.6, 35°.96N×141°.18E, h0^{km}, mb4.1/16, mbtmp4.1/19, ML3.6/2, MS3.4/9, Error ellipse: s-maj=16.8km s-min=15.4km az=57.0*
*NIED **30** 01:13:37.1, 36°.06N×141°.10E, h42^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.71; $M_{\theta\theta}$-2.32; $M_{\phi\phi}$-0.39; $M_{r\theta}$-0.79; $M_{\theta\phi}$-0.09; $M_{\phi r}$0.49; Fault plane solution: $M_0$2.68000×10^{15} NP1:ϕ_s79.00000°, δ37.00000°, λ76.00000°. NP2:ϕ_s277.00000°, δ54.00000°, λ101.00000°.*
*JMA **30** 01:13:37.1±0.2, 36°.1N±0°.4×141°.1E±0°.9, h42^{km}±1^{km}, MD4.3/37, MV4.0/37, E OFF IBARAKI PREF*
JMA Felt II J1 at E OFF IBARAKI PREF .
*NEIC **30** 01:13:40.6±1.7, 36°.32N±0°.07×141°.06E±0°.10, h35^{km}±2^{km}, mb4.5/12, Error ellipse: s-maj=18.2km s-min=3.0km az=133.0*
ISC 30 01:13:36.5±1.3**, 36°.05N**±0°.04×**141°.20E**±0°.05**, h27^{km}**±9^{km}**, n105, σ1^s.57**/82**, mb4.4**/29**, MS3.5**/11**, 5D, Near east coast of eastern Honshu**

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Code   Station Name        Δ°  AZ°   Phase ID            Time      Res
                                     Op        ISC       h  m  s   ISC
JIHU   Itakohorinouch      0.56 261 iP         Pb        01 13 48.1  +0.4
JIHU                                eS         Sb        01 13 56.2  +0.9
JIHU   Itakohorinouch      0.56 261  A         A         01 13 48.1
       comp=N,36nm,1.2s,comp=E,44nm,0.6s
JHYU   Hitachinakayam      0.57 300  P         Pb        01 13 48.1  +0.1
JHYU                                eS         Sb        01 13 55.5  -0.3
JHYU   Hitachinakayam      0.57 300  A         A         01 13 48.1
       comp=N,20nm,2.9s,comp=E,18nm,0.6s
JSMT   Sammumatsuo         0.74 236  P         Pb        01 13 50.9  +0.2
JSMT                                eS         Sb        01 14 01.0  +0.6
JSMT   Sammumatsuo         0.74 236  A         A         01 13 50.9
       comp=N,46nm,4.6s,comp=E,68nm,1.0s
JHO    Hitachi             0.76 318 ⇓P         Pb        01 13 50.4  -0.6
JHO                                ⇓eS         Sb        01 14 00.2  -0.8
JHO    Hitachi             0.76 318  A         A         01 13 50.4
       comp=N,7.0nm,2.3s,comp=E,5.0nm,2.5s
JYT    Yasato              0.83 282  P         Pn        01 13 51.3  -1.1
JYT                                 eS         Sb        01 14 01.2  -2.0
JYT    Yasato              0.83 282  A         A         01 13 51.3
       comp=N,18nm,0.4s,comp=E,14nm,0.4s
ONAJ   Iwakimizuishiy      1.09 343 ⇓iP        Pn        01 13 55.4  -0.7
ONAJ   Iwakimizuishiy      1.09 343  A         A         01 13 55.4
       comp=N,5.0nm,5.9s,comp=E,8.0nm,0.3s
JFFD   Fukushimafurud      1.16 334  A         A         01 13 56.6
       comp=N,4.0nm,4.7s,comp=E,6.0nm,3.5s
JKUC   kamogawauchiur      1.21 223  A         A         01 13 57.3
       comp=N,13nm,2.9s,comp=E,13nm,3.3s
TOK    Tokyo               1.23 253  A         A         01 13 57.2
       comp=N,17nm,0.6s,comp=E,21nm,2.2s
JFK    Kawauchi            1.34 349 iP         Pn        01 13 58.7  -0.7
JFK                                 eS         Sn        01 14 14.2  -2.0
BSO3   Boso 3              1.37 205 eP         Pn        01 14 00.3  +0.7
JSB    Shiboa              1.38 312  A         A         01 13 59.6
       comp=N,13nm,1.2s,comp=E,8.0nm,1.1s
JAG    Ashikaga            1.46 285  P         Pn        01 14 00.3  -0.8
JAG                                 eS         Sn        01 14 17.0  -2.3
JAG    Ashikaga            1.46 285  A         A         01 14 00.3
       comp=N,4.0nm,0.7s,comp=E,4.0nm,0.6s
JOTO   OTAMA OYAMA         1.66 335  A         A         01 14 03.9
       comp=N,28nm,1.1s,comp=E,29nm,1.1s
JKT    Katashina           1.73 295  A         A         01 14 04.4
       comp=N,16nm,0.8s,comp=E,16nm,0.7s
JMM    Marumori            1.84 350            Pn        01 14 06.4  +0.2
JMM    Marumori            1.84 350  P         Pn        01 14 07.2  +1.0
JMM    Marumori            1.84 350  S         Sn        01 14 28.6   0.0
JYAR   Yonezawaarcadi      2.04 336  A         A         01 14 09.4
       comp=N,7.0nm,1.3s,comp=E,7.0nm,0.9s
JYS    Shirataka           2.35 338  A         A         01 14 13.9
       comp=N,6.0nm,1.3s,comp=E,6.0nm,1.6s
JOU    Okura               2.35 350  A         A         01 14 14.1
       comp=N,5.0nm,2.1s,comp=E,5.0nm,2.4s
MJAR   Matsushiro Arr      2.47 282            Pn        01 14 15.8  +0.9
MJAR   Matsushiro Arr      2.47 282  Pn        Pn        01 14 15.2  +0.3
       comp=E,3.0nm,0.3s,baz=106,slow=7.3,SNR=96
MJAR                                 Sn        Sn        01 14 44.9  +0.8
       comp=E,4.8nm,0.3s,baz=82,slow=22,SNR=4.1
MJAR                                 LR        LR        01 15 28.1
       comp=E,539nm,19.4s,baz=116,slow=47
       comp=E,28nm,0.5s
MAJO   Matsushiro          2.47 282            Pn        01 14 15.9  +1.0
MAJO   Matsushiro          2.47 282  P         Pn        01 14 15.8  +0.9
MJB9   Matsu-Tunnel        2.47 282            Pn        01 14 16.9  +2.0
JSG    Sagara              2.82 242            Pb        01 14 23.6  -2.5
JSD    Sado                3.08 311  P         Pn        01 14 25.1  +1.9
JHJ2   Mitsune             3.15 202  P         Pn        01 14 26.8  +2.5
JHJ2   Mitsune             3.15 202  S         Sn        01 15 01.3  +0.4
JGF    Kuroka              3.16 263            Pn        01 14 27.7  +3.3
JGF    Kuroka              3.16 263  P         Pn        01 14 27.3  +2.9
INU    Inuyama             3.48 260            Pn        01 14 31.3  +2.5
INU    Inuyama             3.48 260  P         Pn        01 14 31.1  +2.3
JTM    Tenmabayashi        4.73 359            Pn        01 14 48.4  +2.5
JTM    Tenmabayashi        4.73 359  P         Pn        01 14 48.6  +2.7
ERM    Erimo               6.14  14  Pn        Pn        01 15 05.4  +0.1
ERM    Erimo               6.14  14  P         Pn        01 15 05.3  -0.1
JEM    Erimo               6.14  14  P         Pn        01 15 06.2  +0.8
ASAJ   Asahikawa           8.12   7  Pn        Pn        01 15 33.2  +0.7
       comp=E,1.5nm,0.3s,baz=254,slow=7.7,SNR=7.6
ASAJ                                 Sn        Sn        01 16 59.1  -4.3
       comp=E,0.7nm,0.3s,baz=357,slow=19,SNR=1.3
       comp=E,2.9nm,0.3s
JKA    Kamikawa-asahi      8.12   7            Pn        01 15 31.6  -0.9
JCJ    Chichijima          8.97 174  Pn        Pn        01 15 41.6  -2.6
       comp=E,15nm,0.3s
JCJ                                  Sn        Sn        01 17 10.7   -14
JNU    Nakatsue            9.00 254  LR        LR        01 19 28.3
       comp=E,386nm,18.1s,baz=58,slow=40
KSRS   Korea Array        10.75 281  Pn        Pn        01 16 12.8  +4.3
       comp=E,0.1nm,0.3s,baz=95,slow=12,SNR=7.8
USRK   Ussuriysk Ar.      10.76 322  Pn        Pn        01 16 14.2  +5.6
       comp=E,0.3nm,0.3s,baz=119,slow=13,SNR=4.1
USRK                                 LR        LR        01 20 07.1
       comp=E,160nm,20.0s,baz=165,slow=36
NJ2    Nanjing            18.93 264  eP        Pn        01 17 57.8  +1.8
NJ2                                  pmax      pmax
       comp=Z,16nm,0.7s
PETK   Petropavlovsk-     20.62  29  LR        LR        01 25 44.9
       comp=Z,66nm,22.0s,baz=218,slow=35
XLT    XiLinHaoTe         20.73 300  eP        P         01 18 13.3  -1.6
XLT                                  pP        pP        01 18 22.5  +0.4
XLT                                  pmax      pmax
       comp=Z,10.0nm,1.1s
XLT                                  pmax      pmax
       comp=Z,55nm,4.2s
XLT                                  LR        LR
       comp=N,8.0nm,11.6s
XLT                                  LR        LR
       comp=E,180nm,18.3s
XLT                                  LR        LR
       comp=Z,180nm,17.4s
HNS    HongShan           21.26 282 ⇓P         P         01 18 17.8  -2.7
HNS                                  pmax      pmax
       comp=Z,15nm,0.8s
HNS                                  LR        LR
       comp=N,130nm,14.7s
HNS                                  LR        LR
       comp=E,130nm,16.7s
HNS                                  LR        LR
       comp=Z,150nm,19.6s
HHC    Hu-ho-hao-te       23.64 291  eP        P         01 18 47.5  +2.0
HHC                                  pmax      pmax
       comp=Z,20nm,0.6s
HHC                                  pmax      pmax
       comp=Z,76nm,5.0s
HHC                                  LR        LR
       comp=N,95nm,11.8s
HHC                                  LR        LR
       comp=E,110nm,11.1s
HHC                                  LR        LR
       comp=Z,88nm,11.1s
MA2    Magadan            24.34  12  LR        LR        01 27 56.2
       comp=Z,77nm,21.6s,baz=175,slow=35
XAN    Xi'an              26.44 275 ⇓P         P         01 19 10.0  -1.1
XAN                                  pmax      pmax
       comp=Z,9.0nm,0.7s
H11N2  WAKE ISLAND Hy     27.81 119  T         T         01 48 26.4
       baz=311,slow=75,SNR=72
H11N1  WAKE ISLAND Hy     27.82 119  T         T         01 48 33.8
       baz=311,slow=75,SNR=54
H11N3  WAKE ISLAND Hy     27.83 119  T         T         01 48 33.9
       baz=311,slow=75,SNR=65
SONM   Songino Array      28.20 306  P         P         01 19 26.2  -0.7
SONM   Songino Array      28.20 306  P         P         01 19 26.4  -0.4
       comp=Z,1.5nm,0.8s,baz=105,slow=8.1,SNR=7.6
       comp=Z,1.5nm,0.8s
H11S1  WAKE ISLAND Hy     28.49 121  T         T         01 49 21.0
       baz=313,slow=75,SNR=86
H11S3  WAKE ISLAND Hy     28.49 121  T         T         01 49 22.5
       baz=313,slow=75,SNR=73
H11S2  WAKE ISLAND Hy     28.50 121  T         T         01 49 25.0
       baz=313,slow=75,SNR=57
DAV    Davao City (W)     32.20 210  LR        LR        01 30 57.5
       comp=Z,56nm,21.7s,baz=350,slow=33
GTA    Gaotai             32.70 289  P         P         01 20 07.0  +0.3
GTA                                  pP        sP        01 20 17.5  -0.4
GTA                                  pmax      pmax
       comp=Z,5.0nm,1.1s
GTA                                  LR        LR
       comp=N,140nm,16.0s
GTA                                  LR        LR
       comp=E,76nm,17.4s
GTA                                  LR        LR
       comp=Z,140nm,16.4s
PZH    PanZhiHua          34.84 265  P         P         01 20 29.0  +3.6
PZH                                  pmax      pmax
       comp=Z,10.0nm,0.7s
PZH                                  pmax      pmax
       comp=Z,100nm,4.8s
CMAR   Chiang Mai Arr     41.09 256  P         P         01 21 16.8  -1.3
       comp=Z,0.7nm,0.3s,baz=52,slow=8.2,SNR=4.2
       comp=Z,0.7nm,0.3s
WMQ    Urumqi             41.14 298  eP        P         01 21 18.0  -0.3
WMQ                                  pP        sP        01 21 31.3  +1.8
WMQ                                  pmax      pmax
       comp=Z,39nm,0.9s
WMQ                                  LR        LR
       comp=Z,100nm,24.3s
ZALV   Zalesovo Beam      42.45 313  P         P         01 21 28.3  -0.5
ZALV   Zalesovo Beam      42.45 313  P         P         01 21 28.1  -0.7
       comp=Z,1.9nm,0.7s,baz=98,slow=8.9,SNR=6.7
ZALV                                 PcP       PcP       01 23 20.7  -0.6
       comp=Z,1.9nm,0.8s,baz=93,slow=3.9,SNR=4.5
       comp=Z,1.9nm,0.7s
MK31   Makanchi Array     44.50 303  P         P         01 21 45.6  +0.2
MKAR   Makanchi Array     44.50 303            P         01 21 46.0  +0.5
MKAR   Makanchi Array     44.50 303  P         P         01 21 45.9  +0.5
       comp=Z,4.7nm,0.7s,baz=90,slow=9.9,SNR=22
       comp=Z,4.7nm,0.7s
MAKZ   Makanchi           44.71 303  P         P         01 21 47.5  +0.3
MAKZ                                 IAmb      IAmb      01 21 48.4
       comp=Z,6.0nm,0.8s
KURK   Kurchatov          46.41 309            P         01 22 00.6  +0.2
E19K   Redstone River     46.41  28  P         P         01 22 02.9  +2.7
E19K                                 IAmb      IAmb      01 22 03.8
       comp=Z,6.3nm,1.1s
KURBB  Kurchatov Arra     46.48 309  P         P         01 22 00.6  -0.4
       comp=Z,8.1nm,0.7s,baz=84,slow=7.9,SNR=44
       comp=Z,8.1nm,0.7s
ILAR   Eielson Array      50.41  32  P         P         01 22 31.9  +0.8
       comp=Z,0.9nm,0.9s,baz=271,slow=6.4,SNR=11
       comp=Z,0.9nm,0.9s
BVAR   Borovoye Array     51.11 313  P         P         01 22 36.5   0.0
       comp=Z,5.9nm,1.0s,baz=77,slow=7.6,SNR=10.0
BVAR                                 LR        LR        01 44 51.6
       comp=Z,39nm,18.6s,baz=110,slow=37
       comp=Z,5.9nm,1.0s
SCRK   Sand Creek         51.72  33  P         P         01 22 42.3  +1.3
I28M   Miner Creek        53.29  31  P         P         01 22 54.7  +2.0
I28M                                 IAmb      IAmb      01 23 06.9
       comp=Z,6.3nm,1.5s
L29M   L29M               54.44  33            P         01 23 03.4  +2.4
L29M                                 IAmb      IAmb      01 23 16.0
       comp=Z,5.3nm,1.1s
EPYK   Eagle Plains       54.46  29  IAmb      IAmb      01 23 15.4
       comp=Z,14nm,1.4s
I30M   Mount Dempster     54.80  31  IAmb      IAmb      01 23 18.5
       comp=Z,5.7nm,1.1s
WRA    Warramunga Arr     56.07 188  P         P         01 23 12.2  -0.9
       comp=Z,3.0nm,0.8s,baz=4.7,slow=7.6,SNR=13
       comp=Z,3.0nm,0.8s
ASAR   Alice Springs      59.80 188  P         P         01 23 38.5  -0.7
       comp=Z,1.9nm,0.8s,baz=11,slow=6.2,SNR=13
       comp=Z,1.9nm,0.8s
YKA    Yellowknife Ar     64.74  30  P         P         01 24 12.3  +0.4
       comp=Z,1.2nm,0.9s,baz=306,slow=7.2,SNR=4.7
       comp=Z,1.2nm,0.9s
FINES  FINESS Array B     69.60 332  LR        LR        01 56 27.0
       comp=Z,28nm,18.0s,baz=63,slow=37
AKASG  Malin Array Be     74.97 322  P         P         01 25 14.6  -0.4
       comp=Z,2.1nm,0.7s,baz=47,slow=6.0,SNR=4.9
AKASG                                LR        LR        02 00 48.0
       comp=Z,40nm,19.0s,baz=53,slow=38
       comp=Z,2.1nm,0.7s
NB2    NORSAR Subarra     75.02 337  P         P         01 25 15.2   0.0
       comp=Z,6.7nm,1.1s,baz=40,slow=6.2
NOA    NORSAR Array B     75.02 337  P         P         01 25 15.3  +0.1
       comp=Z,2.7nm,0.8s,baz=39,slow=5.8,SNR=10
       comp=Z,2.7nm,0.8s
NVAR   Mina Array Bea     75.71  53  P         P         01 25 20.4  +0.6
       comp=Z,0.7nm,0.8s,baz=312,slow=7.7,SNR=4.5
       comp=Z,0.7nm,0.8s
PDAR   Pinedale Array     78.47  45  P         P         01 25 35.9  +0.6
       comp=Z,0.1nm,0.3s,baz=302,slow=3.0,SNR=1.9
       comp=Z,0.1nm,0.3s
CLL    Collm              81.86 330 iP         P         01 25 53.4  +0.4
       comp=Z,6.0nm,1.2s
GERES  GERESS Array B     83.45 328  P         P         01 26 01.5   0.0
       comp=Z,0.7nm,0.7s,baz=352,slow=2.7,SNR=6.4
       comp=Z,0.7nm,0.7s
TXAR   Lajitas Array      90.85  52  P         P         01 26 38.0  +0.2
       comp=Z,0.2nm,0.5s,baz=313,slow=7.2,SNR=3.6
       comp=Z,0.2nm,0.5s
QSPA   South Pole Qui    125.80 180  PKP       PKPdf     01 32 33.7  -1.0
       comp=Z,1.5nm,1.0s,baz=342,slow=3.6,SNR=4.2
H03N2  Juan Fernandez    147.08  97  T         T         04 17 46.3
       baz=290,slow=76,SNR=10
H03N3  Juan Fernandez    147.09  97  T         T         04 17 45.6
       baz=290,slow=76,SNR=11
H03N1  Juan Fernandez    147.09  97  T         T         04 17 51.4
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      baz=290,slow=76,SNR=9.6
LPAZ  La Paz          147.33  61 PKPbc PKPbc  01 33 18.3 -0.5
      comp=Z,1.0nm,0.7s,baz=10,slow=4.8,SNR=4.9
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*IDC **30** 01:18:38.4±0.9, 39°.69N×54°.31E, h0km, mb3.9/18, mbtmp4.1/28, ML4.1/10, MS3.1/14, Error ellipse: s-maj=18.0km s-min=8.5km az=166.0*

*NEIC **30** 01:18:42.1±2.1, 39°.77N±0°.09×54°.52E±0°.08, h26km±5km, mb4.4/26, Error ellipse: s-maj=12.4km s-min=8.5km az=178.0*

*MOS **30** 01:18:42.4±1.0, 40°.05N×54°.39E, h33km, mb4.8/5, Error ellipse: s-maj=7.7km s-min=4.4km az=44.2*

*NNC **30** 01:18:47.5±4.0, 40°.04N×54°.94E, h57km±80km, mb4.0, Error ellipse: s-maj=37.3km s-min=20.9km az=57.0*

ISC 30 01:18:43.8±0.5**, 40°.00N**±0°.06×**54°.45E**±0°.04**, h42km, n203, σ1s.99**/222**, mb4.1**/42**, MS3.0**/7**, 20C-21D, Turkmenistan**

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Code  Station Name       Δ°  AZ°   Phase ID            Time     Res
                                 Op    ISC       h  m  s     ISC
AKT   Akhty             5.31 288 eP    Pn     01 20 02.0 +1.3
AKT                              eS    Sn     01 21 04.1 +3.5
AKT                              pmax  pmax
      comp=Z,27nm,0.2s
AKT                              smax  smax
      comp=N,275nm,0.3s
AKT                              smax  smax
      comp=E,294nm,0.3s
AKT                              smax  smax
      comp=E,270nm,0.3s
AKT                              MLR   MLR
      comp=Z,64nm,11.0s
MAK   Makhachkala       6.00 302 eP    Pn     01 20 07.5 -2.4
MAK                              eS    Sn     01 21 16.9 -0.3
MAK                              pmax  pmax
      comp=Z,248nm,1.1s
MAK                              MLR   MLR
      comp=Z,110nm,13.0s
VSHL  Vashlovani        6.25 284 P     Pn     01 20 15.3 +1.9
VSHL                             S     Sn     01 21 22.7 -0.8
DGRG  David-gareji      7.04 285 P     Pn     01 20 25.2 +0.8
DGRG                             S     Sn     01 21 43.4 +0.2
DGRG  David-gareji      7.04 285 eP    Pn     01 20 25.1 +0.8
DGRG                             eS    Sn     01 21 43.3 +0.2
GNI   Garni             7.45 274       Pn     01 20 31.1 +1.1
GNI   Garni             7.45 274 Pn    Pn     01 20 30.9 +0.9
      comp=Z,3.6nm,0.3s,baz=83,slow=1.4,SNR=22
GNI                              Sn    Sn     01 21 52.1 -1.1
      comp=Z,3.6nm,0.3s,baz=18,slow=20,SNR=4.5
GNI                              LR    LR     01 24 29.0
      comp=Z,47nm,19.6s,baz=66,slow=48
      comp=Z,14nm,0.5s
GNI   Garni             7.45 274 Pn    Pn     01 20 30.0  0.0
SHTL  Shatili           7.48 294 P     Pn     01 20 32.8 +2.3
SHTL  Shatili           7.48 294 eP    Pn     01 20 32.7 +2.3
CHRG  Chargali          7.55 291 P     Pn     01 20 32.8 +1.4
CHRG                             S     Sn     01 21 53.9 -1.8
TBLG  Delisi            7.56 286 P     Pn     01 20 31.5  0.0
TBLG                             S     Sn     01 21 51.9 -4.0
TBLG  Delisi            7.56 286 eP    Pn     01 20 31.4  0.0
TBLG                             eS    Sn     01 21 51.8 -4.0
GUDG  Gudauri           7.91 291 P     Pn     01 20 38.9 +2.6
GUDG  Gudauri           7.91 291 eP    Pn     01 20 38.9 +2.6
ALIG  Mtskhetisjvari    8.43 288 P     Pn     01 20 43.9 +0.5
ALIG                             S     Sn     01 22 13.7 -3.5
ALIG  Mtskhetisjvari    8.43 288 eP    Pn     01 20 43.8 +0.5
ALIG                             eS    Sn     01 22 13.6 -3.5
NCK   Nalchik           8.83 297c iP   Pn     01 20 50.0 +1.2
NCK                              pmax  pmax
      comp=Z,7.0nm,0.8s
TKB   Tkibuli           8.95 289 P     Pn     01 20 51.6 +1.1
TKB   Tkibuli           8.95 289 eP    Pn     01 20 51.5 +1.1
KBZ   Khabaz            9.39 297 Pn    Pn     01 20 55.9 -0.5
      comp=Z,1.4nm,0.3s,baz=119,slow=4.1,SNR=14
KBZ                              Sn    Sn     01 22 35.1 -5.5
      comp=Z,2.2nm,0.3s,baz=288,slow=20,SNR=3.9
      comp=Z,6.4nm,0.4s
SHA1  Shidzhatmaz       9.55 297d iP   Pn     01 20 58.3 -0.6
KIV   Kislovodsk        9.61 298       Pn     01 20 59.5  0.0
KIV   Kislovodsk        9.61 298 eP    Pn     01 20 59.2 -0.3
KIV                              eS    Sn     01 22 47.7 +1.6
KIV                              pmax  pmax
      comp=Z,20nm,0.9s
KIV                              MLR   MLR
      comp=Z,14nm,13.0s
KIV   Kislovodsk        9.61 298 Pn    Pn     01 20 59.2 -0.3
      comp=Z,360nmcomp=Z,27nm,0.6s
AB31  Akbulak array    10.05  21       Pn     01 21 07.6 +2.2
AB31  Akbulak array    10.05  21⇓Pn    Pn     01 21 07.3 +1.9
      comp=Z,5.5nm,0.6s,baz=204,slow=13,SNR=142
AB31                            ⇓Sn    Sn     01 22 57.4 +0.8
      comp=Z,3.6nm,0.3s,baz=37,slow=58,SNR=5.6
ABKAR Akbulak array    10.05  21       Pn     01 21 07.6 +2.2
ABKAR Akbulak array    10.05  21       Pn     01 21 07.6 +2.2
AKTO  Aktyubinsk       10.73  12 Pn    Pn     01 21 16.8 +2.0
      comp=Z,1.2nm,0.3s,baz=181,slow=13,SNR=14
AKTO                             Sn    Sn     01 23 12.8 -0.7
      comp=Z,4.6nm,0.3s,baz=251,slow=23,SNR=5.7
AKTO                             LR    LR     01 26 44.6
      comp=Z,156nm,18.0s,baz=230,slow=44
      comp=Z,3.3nm,0.4s
AKTO  Aktyubinsk       10.73  12⇓Pn    Pn     01 21 16.8 +2.0
      comp=Z,6.0nm,0.6s
AKTO                            ⇑Sn    Sn     01 23 14.0 +0.5
      comp=Z,14nm,0.7s
SIMJ  Simiganj         11.36  92       Pn     01 21 22.5 -1.1
GAR   Garm             12.30  90       Pn     01 21 34.6 -1.8
KK31  Karatay Array    12.43  70       Pn     01 21 35.7 -2.3
KK31  Karatay Array    12.43  70⇑P     Pn     01 21 35.4 -2.6
      comp=Z,3.9nm,0.5s,baz=253,slow=17,SNR=16
KK31                            ⇓S     Sn     01 23 50.0 -5.1
      comp=Z,1.9nm,0.3s,baz=266,slow=25,SNR=3.7
KK31  Karatay Array    12.43  70 P     Pn     01 21 35.7 -2.3
KKAR  Karatay Array    12.43  70       Pn     01 21 35.2 -2.8
KKAR  Karatay Array    12.43  70       Pn     01 21 35.8 -2.2
KKAR  Karatay Array    12.43  70 P     Pn     01 21 35.2 -2.8
BELG  Belogornoye      13.26 341 Pn    Pn     01 21 49.3 +0.1
      comp=Z,2.0nm,0.3s,baz=163,slow=19,SNR=7.4
BELG                             Sn    Sn     01 24 09.4 -5.7
      comp=Z,1.9nm,0.3s,baz=51,slow=23,SNR=8.5
BELG                             LR    LR     01 27 39.0
      comp=Z,61nm,21.3s,baz=91,slow=40
      comp=Z,9.4nm,0.5s
ARSB  Arslanbob        14.13  79       Pn     01 21 59.4 -2.0
ARSB  Arslanbob        14.13  79 P     Pn     01 21 59.4 -2.0
VRH   Novokhopyorsk    14.29 326 eP    Pn     01 22 01.5 -1.7
VRH                              eS    Sn     01 24 38.1 -2.1
VRH                              pmax  pmax
      comp=Z,9.0nm,0.9s
VRH                              smax  smax
      comp=N,60nm,0.7s
VORD  Divnogorie       15.24 321 eP    Pn     01 22 14.2 -1.6
VORD                             eS    Sn     01 25 06.7 +3.4
VORD                             pmax  pmax
      comp=Z,10.0nm,0.9s
VORD                             smax  smax
      comp=E,130nm,0.8s
AAK   Ala-Archa        15.29  74 Pn    Pn     01 22 15.8 -1.0
      comp=E,0.7nm,0.3s,baz=174,slow=19,SNR=1.7
AAK                              LR    LR     01 28 57.4
      comp=E,55nm,19.6s,baz=246,slow=40
      comp=E,2.0nm,0.3s
VSR   Storozhevoye     15.46 322 eP    Pn     01 22 16.2 -2.5
VSR                              eS    Sn     01 25 08.2 -0.6
VSR                              pmax  pmax
      comp=Z,10.0nm,0.8s
VSR                              smax  smax
      comp=N,30nm,0.8s
VORR  Voronezh         15.74 323 eP    Pn     01 22 23.0 +0.7
VORR                             pmax  pmax
      comp=Z,28nm,0.7s
BR131 Keskin Array S   15.98 276⇑eP    Pn     01 22 25.4 -0.3
BRTR  Keskin Array B   15.98 276 Pn    Pn     01 22 25.5 -0.2
      comp=Z,0.1nm,0.3s,baz=88,slow=11,SNR=5.8
      comp=Z,0.7nm,0.6s
BR106 Keskin Array S   16.00 276 P     Pn     01 22 26.0 +0.1
      comp=Z,2.3nm,0.7s
BR105 Keskin Array S   16.00 276 P     Pn     01 22 26.0 +0.1
      comp=Z,2.7nm,1.0s
TKM2  Tokmak 2         16.12  73⇓P     Pn     01 22 28.5 +1.1
      comp=Z,14nm,1.2s
BOOM  Boomskoye usch   16.35  74 Pn    Pn     01 22 27.6 -2.8
BOOM  Boomskoye usch   16.35  74 P     Pn     01 22 27.6 -2.8
BOOM                             pmax  pmax
      comp=Z,4.0nm,0.7s
NRN   Naryn            16.40  78       Pn     01 22 30.2 -1.0
NRN   Naryn            16.40  78 P     Pn     01 22 30.2 -1.0
NRN                              pmax  pmax
      comp=Z,4.0nm,0.8s
LPSR  Galich'ya Gora   16.50 325 eP    Pn     01 22 30.3 -1.7
LPSR                             eS    Sn     01 25 27.1 -6.8
LPSR                             pmax  pmax
      comp=Z,20nm,0.8s
LPSR                             smax  smax
      comp=N,20nm,0.9s
KSH   Kashi            16.56  85 P     P      01 22 37.5 +2.4
KSH                              pmax  pmax
      comp=Z,7.0nm,0.8s
ARTI  Arti             16.60   8 P     P      01 22 34.9 -0.3
ARTI                             IAmb  IAmb   01 22 48.1
      comp=Z,36nm,0.9s
ARTI  Arti             16.60   8 Pn    P      01 22 35.3  0.0
      comp=Z,0.5nm,0.3s,baz=175,slow=8.7,SNR=5.7
ARTI                             LR    LR     01 30 34.3
      comp=Z,112nm,19.6s,baz=204,slow=42
      comp=Z,25nm,0.8s
ARTI  Arti             16.60   8 P     P      01 22 35.4 +0.1
ARTI                             S     S      01 25 42.8 -3.6
BRVK  Borovoye         16.96  34       Pn     01 22 37.8 +0.1
BRVK  Borovoye         16.96  34 P     Pn     01 22 37.8 +0.1
BRVK                             pmax  pmax
      comp=Z,20nm,1.3s
BVA0  Borovoye Array   16.98  35⇓P     Pn     01 22 35.8 -2.2
      comp=Z,0.1nm,0.3s,baz=220,slow=7.6,SNR=39
BVAR  Borovoye Array   16.98  35 P     P      01 22 41.7 +2.2
      comp=Z,0.3nm,0.3s,baz=215,slow=12,SNR=23
BVAR                             Sn    Sn     01 25 39.1 -6.5
      comp=Z,0.1nm,0.3s,baz=236,slow=26,SNR=2.7
BVAR                             LR    LR     01 30 35.4
      comp=Z,75nm,18.4s,baz=214,slow=42
      comp=Z,4.6nm,0.5s
SVE   Sverdlovsk       17.32  11 eP    P      01 22 47.9 +4.7
SVE                              pmax  pmax
      comp=Z,17nm,1.1s
RAYN  Ar Rayn          18.08 207       Pn     01 22 46.9 -4.9
RAYN  Ar Rayn          18.08 207 P     Pn     01 22 47.3 -4.6
BORA  Eskisehir        18.39 277       Pn     01 22 56.9 +1.3
KIRV  Kirov            18.88 352 P     Pn     01 23 03.4 +2.2
      comp=Z,1.5nm,0.3s,baz=32,slow=8.0,SNR=4.9
KIRV                             LR    LR     01 32 33.4
      comp=Z,91nm,18.1s,baz=159,slow=44
      comp=Z,11nm,0.6s
OBN   Obninsk          19.26 328 P     Pn     01 23 06.7 +1.0
      comp=Z,3.8nm,0.3s,baz=184,slow=3.7,SNR=4.3
      comp=Z,14nm,0.4s
OBN   Obninsk          19.26 328 i P   Pn     01 23 06.5 +0.8
OBN                              pmax  pmax
      comp=Z,9.0nm,0.5s
OBN                              MLR   MLR
      comp=Z,54nm,16.0s
MOS   Moscow           19.29 330 eP    P      01 23 05.1 +0.3
MOS                              eS    S      01 26 40.6 -0.1
MOS                              pmax  pmax
      comp=Z,18nm,0.8s
TLCR                   19.53 294⇑P     Pn     01 23 08.5 -0.7
TLCR                   19.53 294 P     Pn     01 23 08.4 -0.7
MILM  Milestii Mici    19.80 299⇓P     P      01 23 11.0 +0.6
MILM  Milestii Mici    19.80 299 P     P      01 23 11.0 +0.6
AKAS  Kas              19.89 267 P     P      01 23 11.3 -0.4
KURBB Kurchatov Arra   19.90  50 P     Pn     01 23 15.3 +1.8
      comp=Z,1.1nm,0.7s,baz=249,slow=12,SNR=4.9
      comp=Z,1.1nm,0.7s
KURK  Kurchatov        19.99  50 P     Pn     01 23 15.3 +0.8
CFR   Carcaliu         20.01 294⇑P     P      01 23 13.5 +0.7
CFR   Carcaliu         20.01 294 P     P      01 23 13.4 +0.7
TLBR  Topalu           20.02 292⇓P     P      01 23 13.6 +0.7
VLDR  Vladesti         20.12 296⇑P     P      01 23 14.6 +0.6
ICOR  Ion Corvin       20.17 290⇑P     P      01 23 15.4 +0.9
SORM  Soroca           20.37 302⇑P     P      01 23 17.2 +0.5
SORM  Soroca           20.37 302 P     P      01 23 17.1 +0.5
AK07  Malin Array Si   20.56 309 P     P      01 23 19.7 +1.0
AK06  Malin Array Si   20.58 309 P     P      01 23 19.9 +1.0
AK05  Malin Array Si   20.59 309 P     P      01 23 19.9 +0.9
AK02  Malin Array Si   20.60 310 P     P      01 23 20.0 +0.9
AKASG Malin Array Be   20.61 310 P     P      01 23 20.3 +1.1
AKASG Malin Array Be   20.61 310 P     P      01 23 20.2 +1.1
      comp=Z,11nm,0.5s,baz=107,slow=9.2,SNR=48
AKASG                            LR    LR     01 33 08.0
      comp=Z,60nm,19.0s,baz=120,slow=42
      comp=Z,11nm,0.5s
AKASG Malin Array Be   20.61 310 P     P      01 23 20.3 +1.1
AKASG                            pmax  pmax
      comp=Z,32nm,1.0s
AKBB  Malin Array Si   20.61 310ceP    P      01 23 19.8 +0.6
AKBB  Malin Array Si   20.61 310 P     P      01 23 20.0 +0.8
KIEV  Kiev             20.61 310 P     P      01 23 20.2 +0.9
KIEV  Kiev             20.61 310⇑P     P      01 23 20.1 +0.9
KIEV  Kiev             20.61 310 P     P      01 23 20.2 +0.9
KIEV                             pmax  pmax
      comp=Z,33nm,0.6s
KIEV  Kiev             20.61 310 P     P      01 23 20.1 +0.9
      comp=Z,193nm,0.9s
AK20  Malin Array Si   20.75 310 P     P      01 23 21.5 +0.8
ODBI  Odobesti         20.83 295⇑P     P      01 23 22.6 +1.0
VRI   Vrincioaia       21.07 295⇓P     P      01 23 25.6 +1.3
VRI   Vrincioaia       21.07 295 P     P      01 23 25.5 +1.3
NDNU  Novodnistrovsk   21.11 303 P     P      01 23 24.7  0.0
PLOR  Plostina         21.12 295⇑P     P      01 23 25.9 +1.1
PLOR  Plostina         21.12 295 P     P      01 23 25.9 +1.1
TESR  Tescani          21.20 297⇓P     P      01 23 26.4 +0.8
LUBAR Lubar, Ukraine   21.23 307 P     P      01 23 25.5 -0.4
MK31  Makanchi Array   21.27  62⇑eP    P      01 23 26.8 +0.4
MKAR  Makanchi Array   21.27  62 P     P      01 23 29.0 +2.6
      comp=Z,1.5nm,0.6s,baz=258,slow=10,SNR=9.2
      comp=Z,1.5nm,0.6s
DRBR  Darabani         21.52 302⇓P     P      01 23 29.9 +0.9
MLR   Muntele Rosu     21.58 294 IAmb  IAmb   01 23 48.5
      comp=Z,9.0nm,0.8s
MLR   Muntele Rosu     21.58 294 P     P      01 23 31.7 +1.9
      comp=Z,5.3nm,0.7s,baz=139,slow=15,SNR=3.1
      comp=Z,5.3nm,0.7s
MLR   Muntele Rosu     21.58 294⇓P     P      01 23 30.7 +0.8
TURR  Turia            21.58 296⇓P     P      01 23 31.2 +1.4
PRAR  RASCA            21.61 299⇓P     P      01 23 30.5 +0.4
HORU  Horodok          21.87 304 P     P      01 23 32.9 +0.1
DOPR  Dopca            22.01 295⇓P     P      01 23 35.3 +1.0
VOIR                   22.20 294⇑P     P      01 23 37.3 +0.8
VOIR                   22.20 294 P     P      01 23 37.3 +0.8
BURAR Bucovina Array   22.33 300 P     P      01 23 36.3 -1.6
BURAR                            IAmb  IAmb   01 23 54.9
      comp=Z,7.7nm,0.6s
BURAR Bucovina Array   22.33 300⇑P     P      01 23 38.5 +0.6
BURAR Bucovina Array   22.33 300 P     P      01 23 38.5 +0.6
BUR08 Bucovina Ar. S   22.35 300 IAmb  IAmb   01 23 55.2
      comp=Z,7.6nm,0.8s
RNPP5 Staryi Chortor   22.77 309 P     P      01 23 43.4 +1.0
RNPP8 Varash           22.82 309 P     P      01 23 43.6 +0.7
KLMR  Klimovskoe       22.83 341 eP    P      01 23 42.1 -0.8
KLMR                             pmax  pmax
      comp=Z,44nm,1.6s
STNU  Starunia         23.00 302 P     P      01 23 45.5 +0.8
LOT   Lotru            23.10 294⇓P     P      01 23 47.3 +1.4
CJR   Cluj-Napoca      23.31 297⇑P     P      01 23 48.4 +0.5
CJR   Cluj-Napoca      23.31 297 P     P      01 23 48.4 +0.5
BMR   Baia Mare        23.49 299⇓P     P      01 23 50.6 +0.9
BMR   Baia Mare        23.49 299 P     P      01 23 50.5 +0.9
MARR  Marisel-Cluj     23.64 297⇑P     P      01 23 52.5 +1.4
NACGM Naroch           23.71 318 eP    P      01 23 53.9 +2.3
      comp=Z,11nm,0.9s,baz=118
GZR   Gura Zlata       23.80 294⇓P     P      01 23 52.9 +0.2
GZR   Gura Zlata       23.80 294 P     P      01 23 52.8 +0.2
BRIU  Brid             23.90 301 P     P      01 23 54.3 +0.9
DRGR                   23.93 297⇓P     P      01 23 54.7 +0.9
DRGR                   23.93 297 P     P      01 23 54.7 +0.9
SURR  Surduc           24.27 294⇑P     P      01 23 57.8 +1.0
KWP   Kalwaria Pacla   24.33 304 P     P      01 23 58.4 +1.0
HOLU  Holmets          24.35 301 P     P      01 23 58.6 +1.1
KOLS  Kolonicke sedl   24.48 302 eP    P      01 24 02.1 +3.2
KOLS  Kolonicke sedl   24.48 302 eP    P      01 24 02.0 +3.2
SIRR  Siria            24.61 296⇓P     P      01 24 00.3 +0.3
ZALV  Zalesovo Beam    24.75  46 P     P      01 24 02.5 +1.4
ZALV  Zalesovo Beam    24.75  46 P     P      01 24 03.3 +2.2
      comp=Z,2.7nm,0.6s,baz=258,slow=9.1,SNR=8.4
      comp=Z,2.7nm,0.6s
WMQ   Urumqi           24.94  70 eP    P      01 24 04.3 +1.3
FNA   Florina          25.12 283 P     P      01 24 05.6 +0.9
FNA   Florina          25.12 283 P     P      01 24 05.6 +0.9
FNA                              pmax  pmax
      comp=Z,3.0nm,0.7s
ITM   Ithomi           25.50 274 P     P      01 24 07.0 -1.1
ITM                              IAmb  IAmb   01 24 33.7
      comp=Z,16nm,1.3s
VYHS  Vyhne            26.69 300 eP    P      01 24 23.7 +4.9
VYHS  Vyhne            26.69 300 eP    P      01 24 23.7 +4.9
SRO   Srobarova        26.99 299 eP    P      01 24 26.8 +5.4
SRO   Srobarova        26.99 299 eP    P      01 24 26.8 +5.4
STEB  Steborice        27.53 303 eP    P      01 24 31.4 +5.1
FIA1  FINESS Array S   27.59 330 P     P      01 24 28.9 +2.3
FINES FINESS Array B   27.59 330 P     P      01 24 28.8 +2.1
      comp=Z,1.8nm,0.6s,baz=137,slow=11,SNR=10
FINES                            LR    LR     01 35 26.8
      comp=Z,28nm,18.5s,baz=219,slow=36
      comp=Z,1.8nm,0.6s
VRAC  Vranov           28.23 302 LR    LR     01 38 02.1
      comp=Z,31nm,20.2s,baz=88,slow=41
DPC   Dobruska-Polom   28.51 304 eP    P      01 24 44.5 +9.4
DPC   Dobruska-Polom   28.51 304 eP    P      01 24 44.5 +9.4
ARSA  Arzberg          28.86 298 eP    P      01 24 39.7 +1.5
      comp=Z,0.3nm,0.4s
LVZ   Lovozero         29.99 345 P     P      01 24 50.2 +2.3
LVZ   Lovozero         29.99 345 P     P      01 24 50.2 +2.3
LVZ                              pmax  pmax
      comp=Z,50nm,1.3s
GERES GERESS Array B   30.11 301 P     P      01 24 50.3 +1.0
      comp=Z,0.6nm,0.4s,baz=89,slow=9.1,SNR=11
      comp=Z,0.6nm,0.4s
LESA  Schwarzleotal    30.79 298 i P   P      01 24 56.6 +1.2
      comp=Z,2.7nm,0.5s
FDMO  Fiordimonte      30.89 289 P     P      01 24 57.7 +1.4
FDMO                             IAmb  IAmb   01 25 18.6
      comp=Z,5.3nm,1.1s
ABTA  Abfaltersbach    30.93 297 eP    P      01 24 57.0 +0.4
      comp=Z,3.4nm,1.0s
WTTA  Wattenberg       31.50 298 i P   P      01 25 02.9 +1.1
      comp=Z,1.1nm,0.7s
WATA  Walderalm        31.54 298 eP    P      01 25 03.0 +1.0
      comp=Z,1.2nm,0.5s
SQTA  Sankt Quirin     31.80 298 eP    P      01 25 06.0 +1.7
      comp=Z,1.4nm,0.6s
MOTA  Moosalm          31.86 298 i P   P      01 25 05.8 +1.0
      comp=Z,1.6nm,0.5s
FETA  Feichten         32.14 297 eP    P      01 25 08.1 +0.8
      comp=Z,1.0nm,0.8s
HFS   Hagfors          32.27 322 P     P      01 25 09.8 +1.7
      comp=Z,1.3nm,0.5s,baz=115,slow=8.4,SNR=14
HFS                              LR    LR     01 39 38.1
      comp=Z,43nm,18.4s,baz=103,slow=39
      comp=Z,1.3nm,0.5s
DAVA  Damuels          32.70 298 i P   P      01 25 12.0 -0.2
      comp=Z,1.8nm,0.5s
ARCES ARCESS Array B   33.30 342 P     P      01 25 19.9 +2.8
      comp=Z,0.9nm,0.4s,baz=129,slow=4.7,SNR=13
ARCES                            LR    LR     01 41 05.3
      comp=Z,49nm,18.4s,baz=104,slow=40
      comp=Z,0.9nm,0.4s
NB2   NORSAR Subarra   33.73 323 P     P      01 25 22.0 +1.1
      comp=Z,1.9nm,0.8s,baz=109,slow=9.3
NOA   NORSAR Array B   33.73 323 P     P      01 25 22.3 +1.5
      comp=Z,1.1nm,0.8s,baz=112,slow=8.7,SNR=3.9
NOA                              LR    LR     01 40 43.6
      comp=Z,31nm,19.2s,baz=110,slow=39
      comp=Z,1.1nm,0.8s
VSL   Villasalto       34.38 284 P     P      01 25 27.5 +0.8
VSL                              IAmb  IAmb   01 25 51.6
      comp=Z,3.6nm,1.0s
SENIN Lac Senin/Sane   34.55 296 P     P      01 25 28.6 +0.2
SENIN                            IAmb  IAmb   01 25 29.0
      comp=Z,2.3nm,0.6s
KEST  Kesra            35.57 278 P     P      01 25 38.5 +1.4
      comp=Z,1.0nm,0.5s,baz=52,slow=3.1,SNR=10
      comp=Z,1.0nm,0.5s
SONM  Songino Array    37.62  60 P     P      01 25 57.0 +2.6
      comp=Z,0.4nm,0.6s,baz=250,slow=10,SNR=1.7
      comp=Z,0.4nm,0.6s
ULN   Ulaanbaatar      38.05  60⇑eP    P      01 25 59.1 +0.9
ULN                              pmax  pmax
      comp=Z,4.0nm,1.1s
CEST  Esterri de Car   39.50 292 P     P      01 26 10.7 +0.3
CEST                             IAmb  IAmb   01 26 38.2
      comp=Z,6.9nm,1.3s
EKA   Eskdalemuir Ar   40.48 312 P     P      01 26 19.4 +1.2
      comp=Z,1.8nm,0.4s,baz=104,slow=8.8,SNR=18
      comp=Z,1.8nm,0.4s
ESK   Eskdalemuir      40.51 312 P     P      01 26 19.9 +1.5
ESK                              IAmb  IAmb   01 26 22.4
      comp=Z,21nm,1.4s
ESK   Eskdalemuir      40.51 312 P     P      01 26 19.9 +1.5
ESK                              pmax  pmax
      comp=Z,21nm,1.4s
PZH   PanZhiHua        41.32  94 P     P      01 26 24.5 -1.0
HHC   Hu-ho-hao-te     42.82  70 eP    P      01 26 36.0 -1.6
HHC                              pmax  pmax
      comp=Z,28nm,0.7s
HHC                              pmax  pmax
      comp=Z,71nm,4.5s
ESDC  Sonseca Array    44.14 289 P     P      01 26 48.2  0.0
      comp=Z,0.5nm,0.5s,baz=78,slow=7.8,SNR=6.0
      comp=Z,0.5nm,0.5s
TORD  Torodi Ar. Bea   53.30 255 P     P      01 27 56.9 -1.8
      comp=Z,1.9nm,0.4s,baz=37,slow=7.3,SNR=1.4
      comp=Z,1.9nm,0.4s
USRK  Ussuriysk Ar.    55.67  58 P     P      01 28 16.9 +1.4
      comp=Z,1.6nm,0.7s,baz=284,slow=5.8,SNR=4.5
      comp=Z,1.6nm,0.7s
KSRS  Korea Array      55.84  67 P     P      01 28 18.2 +1.4
      comp=Z,0.5nm,0.6s,baz=276,slow=5.1,SNR=2.8
      comp=Z,0.5nm,0.6s
JNU   Nakatsue         60.04  70 LR    LR     01 58 57.2
      comp=Z,25nm,18.7s,baz=215,slow=40
KOOLE Kule             70.34 213 P     P      01 29 52.1 -1.2
KOOLE                            IAmb  IAmb   01 30 27.9
      comp=Z,7.0nm,1.4s
E29M  Blow River       71.54   5 P     P      01 30 02.6 +2.8
E29M                             IAmb  IAmb   01 30 32.5
      comp=Z,5.5nm,1.4s
IMAR  Indian Mountai   72.12  12 P     P      01 30 03.8 +0.4
G30M  tAoh Zraii Nji   73.03   4 P     P      01 30 10.4 +1.5
G30M                             IAmb  IAmb   01 30 36.4
      comp=Z,5.9nm,1.4s
G31M  Satah River      73.20   4 P     P      01 30 11.7 +2.0
G31M                             IAmb  IAmb   01 30 12.8
      comp=Z,5.1nm,0.9s
ILAR  Eielson Array    74.23   9 P     P      01 30 17.6 +1.7
      comp=Z,0.4nm,0.8s,baz=335,slow=4.0,SNR=4.3
      comp=Z,0.4nm,0.8s
BCAR  Beaver Creek A   76.46   8 P     P      01 30 30.9 +2.2
```

*NEIC **30** 01:40:59.6±1.9, 13°.05N±0°.10×124°.6E±0°.1, h85km±10km, mb4.6/14, Error ellipse: s-maj=18.8km s-min=13.8km az=91.0*

*IDC **30** 01:41:04.2±8.7, 12°.88N×124°.00E, h135km±73km, mb3.9/3, mbtmp4.3/4, Error ellipse: s-maj=178.4km s-min=22.1km az=63.0*

ISC 30 01:40:60.0±0.6**, 13°.06N**±0°.07×**124°.5E**±0°.1**, h100km, n28, σ1s.16**/26**, mb4.4**/10**, Luzon**

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Code  Station Name       Δ°  AZ°   Phase ID            Time     Res
                                 Op    ISC       h  m  s     ISC
TGY   Tagaytay City     3.59 287 P     Pn     01 41 54.0 +0.4
      124nm,0.4s,baz=122,slow=13,SNR=3.9
YULB  Yu-li            10.71 344 Pn    Pn     01 43 29.1 -1.3
YOJ   Yonaguni jima    11.43 353 Pn    Pn     01 43 38.8 -1.2
YHNB  Yeheng           11.91 346 Pn    Pn     01 43 46.5 -0.1
TOLI2 Tolitoli         12.42 197 Pn    Pn     01 43 50.6 -2.6
SBUM  Sibu             16.06 230 P     P      01 44 44.1 +2.5
FAKI  Fak Fak          17.65 154       Pn     01 45 00.1 +0.5
FAKI                             IAmb  IAmb   01 45 06.7
      comp=Z,58nm,1.4s
BKNI  Bangkinang       26.44 243 P     P      01 46 29.0 +1.3
KNRA  Kununurra        28.86 171 P     P      01 46 49.9 +0.6
KNRA                             IAmb  IAmb   01 46 58.9
      comp=Z,12nm,1.3s
FITZ  Fitzroy Crossi   30.98 178 P     P      01 47 06.8 -1.1
WB0   Warramunga Arr   34.05 163 P     P      01 47 34.0 -0.7
WB0                              IAmb  IAmb   01 47 39.8
      comp=Z,8.0nm,1.2s
WRA   Warramunga Arr   34.20 163 P     P      01 47 35.7 -0.4
      comp=Z,1.1nm,0.4s,baz=344,slow=9.0,SNR=15
      comp=Z,1.1nm,0.4s
WR8   Warramunga Arr   34.26 163 P     P      01 47 36.4 -0.2
WR8                              IAmb  IAmb   01 48 15.3
      comp=Z,13nm,1.5s
AS31  Alice Springs    37.65 166 P     P      01 48 06.1 +0.6
```

ASAR	Alice Springs	37.65	166	P	P	01 48 05.7	+0.2
ASAR	Alice Springs	37.65	166	P	P	01 48 06.0	+0.5
	comp=Z,2.8nm,0.5s,baz=342,slow=7.6,SNR=55						
ASAR				PcP	PcP	01 50 21.3	+0.1
	comp=Z,0.3nm,0.5s,baz=335,slow=3.2,SNR=1.8						
	comp=Z,2.8nm,0.5s						
H11S3	WAKE ISLAND Hy	40.92	77	T	T	02 32 12.5	
	baz=270,slow=75,SNR=13						
H11S1	WAKE ISLAND Hy	40.93	77	T	T	02 32 27.3	
	baz=270,slow=75,SNR=7.6						
H11S2	WAKE ISLAND Hy	40.93	77	T	T	02 32 13.5	
	baz=270,slow=75,SNR=12						
MORW	Morawa	42.66	191	P	P	01 48 45.9	-0.9
MORW				IAmb	IAmb	01 49 22.5	
	comp=Z,32nm,1.4s						
BBOO	Buckleboo	46.93	167	P	P	01 49 21.4	+0.8
STKA	Stephens Creek	47.60	160	P	P	01 49 26.8	+0.9
STKA				IAmb	IAmb	01 49 27.3	
	comp=Z,24nm,0.9s						
STKA	Stephens Creek	47.60	160	P	P	01 49 26.9	+1.1
	comp=Z,3.3nm,0.7s,baz=339,slow=7.3,SNR=5.8						
	comp=Z,3.3nm,0.7s						
KURBB	Kurchatov Arra	52.79	325	P	P	01 50 04.1	-0.7
	comp=Z,0.1nm,0.3s,baz=117,slow=7.7,SNR=2.0						
LVA	Lava Point	67.52	37	P	P	01 51 44.7	-0.6
H19K	Roundabout Mou	73.68	25	P	P	01 52 23.3	+0.8
H19K				IAmb	IAmb	01 52 53.0	
	comp=Z,6.6nm,1.4s						
IMAR	Indian Mountai	74.82	25	P	P	01 52 30.7	+1.6
BPAW	Bear Paw Mtn.	75.97	27	P	P	01 52 37.1	+1.3
BPAW				IAmb	IAmb	01 52 37.8	
	comp=Z,3.3nm,1.0s						

IDC ***30*** *01:42:22.2±0.6, 50°.08N×176°.92W, h0^{km}, mb4.1/31, mbtmp4.1/31, MS3.3/12, Error ellipse: s-maj=19.2km s-min=10.8km az=4.0*

NEIC ***30*** *01:42:25.3±1.3, 50°.27N±0°.04×176°.83W±0°.07, h10^{km}±1^{km}, mb4.3/134, ML3.9/8, ML3.7(AEIC), Error ellipse: s-maj=8.0km s-min=5.6km az=115.0*

AEIC ***30*** *01:42:26.7±2.2, 50°.10N±0°.09×176°.75W±0°.09, h2^{km}±5^{km}, Error ellipse: s-maj=12.5km s-min=8.2km az=175.0*

ISC 30 01:42:26.4±3.0**, 50°.17N**±0°.07×**176°.81W**±0°.04**, h26**^{km}±20^{km}**, n440, σ1^{s}16**/389**, mb4.2**/89**, MS3.3**/14**,**
Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIMD	Kanaga Island	1.62	351		Pn	01 42 52.2	-1.1
KIMD					Sn	01 43 12.5	-0.8
KIWB	Kanaga Island	1.70	353		Pn	01 42 53.4	-1.0
KIWB					Sn	01 43 15.1	-0.3
KIWB	Kanaga Island	1.70	353	IAML		01 43 16.9	
	comp=N,2μm,0.8s						
ADK	Adak	1.72	2		Pn	01 42 53.3	-1.3
ADK				Sn	Sn	01 43 14.5	-1.3
ADK				IAML		01 43 15.7	
	comp=N,1μm,0.2s						
ADK	Adak	1.72	2	P	Pn	01 42 52.9	-1.7
ADK	Adak	1.72	2	S	Sn	01 43 14.4	-1.3
KIKV	Kanaga Island	1.73	352		Pn	01 42 54.0	-0.8
KIKV					Sn	01 43 15.6	-0.4
TAPA	Tanaga Point A	1.77	339		Pn	01 42 54.9	-0.4
ADAG	Mount Adagdak	1.82	4		Pn	01 42 55.4	-0.6
ADAG					Sn	01 43 18.4	+0.1
TASE	Tanaga Southea	1.84	335		Pn	01 42 55.8	-0.6
GSCK	Great Sitkin C	1.89	12		Pn	01 42 56.1	-0.9
GSCK					Sn	01 43 19.9	-0.1
GSIG	Igitkin Island	1.91	17		Pn	01 42 56.0	-1.2
GSIG					Sn	01 43 19.0	-1.3
GSTD	Great Sitkin T	1.94	12		Sn	01 43 20.4	-0.8
GSTR	Great Sitkin T	1.99	13	IAML		01 43 29.6	
	comp=E,1μm,0.3s						
GALAA	Gareloi Lava P	2.02	323		Pn	01 42 58.3	-0.5
GANO	Gareloi North	2.08	323		Pn	01 42 58.8	-0.8
ATKA	Atka Island	2.62	38		Pn	01 43 05.8	-1.2
ATKA				IAML		01 43 38.4	
	comp=N,456nm,0.7s						
ATKA	Atka Island	2.62	38		Sn	01 43 36.0	-1.8
ATKA	Atka Island	2.62	38	P	Pn	01 43 05.4	-1.5
ATKA	Atka Island	2.62	38	S	Sn	01 43 35.4	-2.4
AMKA	Amchitka	2.75	298		Pn	01 43 06.7	-2.1
CEPE	Semis' Perret	2.87	310		Pn	01 43 10.2	-0.3
CEPE					Sn	01 43 43.0	-1.1
CEAP	Semis' Anvil P	2.93	310		Pn	01 43 11.0	-0.2
CETU	Semis' Tuman	2.95	309		Pn	01 43 11.2	-0.3
LSSE	Little Sitkin	3.41	303		Pn	01 43 17.4	-0.5
NIKH	Nikolski High	5.70	57		Pn	01 43 48.9	-0.3
NIKH	Nikolski High	5.70	57	P	Pn	01 43 48.9	-0.3
NIKH	Nikolski High	5.70	57	S	Sn	01 44 50.0	-3.7
NIKH	Nikolski High	5.70	57	P	Pn	01 43 48.7	-0.5
	baz=244						
OKSP	Okmok Steeple	6.13	56		Pn	01 43 54.1	-1.0
SMY	Shemya	6.24	298	Pn	Pn	01 43 57.6	+1.0
UNV	Unalaska Valle	7.35	56		Pn	01 44 12.6	+0.8
UNV	Unalaska Valle	7.35	56	P	Pn	01 44 11.5	-0.3
	baz=245						
LVA	Lava Point	7.74	55		Pn	01 44 18.3	+1.1
P08K	Saint George I	7.77	31	P	Pn	01 44 16.6	-1.0
	baz=218						
AKUT	Akutan	7.86	55	Pn	Pn	01 44 20.0	+1.1
SPIA	Saint Paul Isl	8.03	26	P	Pn	01 44 20.1	-1.1
	baz=212						
FALS	False Pass	9.41	55	P	Pn	01 44 39.8	-0.3
	baz=246						
S12K	Black Hills	10.48	52		Pn	01 44 53.9	-0.9
S12K	Black Hills	10.48	52	P	Pn	01 44 53.4	-1.4
	baz=245						
SDPT	Sand Point	11.16	56		Pn	01 45 03.4	-0.7
SDPT	Sand Point	11.16	56	P	Pn	01 45 03.4	-0.7
SDPT	Sand Point	11.16	56	P	Pn	01 45 03.0	-1.1
	baz=250,SNR=6.9						
CNBA	Chernabura Isl	11.47	59		Pn	01 45 07.0	-1.3
CHNA	Chernabura Isl	11.48	59	P	Pn	01 45 06.7	-1.7
CHNA	Chernabura Isl	11.48	59	P	Pn	01 45 07.4	-1.0
	baz=254						
M11K	Mekoryuk	11.87	26	P	Pn	01 45 12.0	-1.7
	baz=216						
CHGN	Chignik	12.59	54	P	Pn	01 45 22.2	-1.4
	baz=249						
O14K	Tigyukauivet M	12.76	39		Pn	01 45 27.1	+1.2
O14K	Tigyukauivet M	12.76	39	P	Pn	01 45 23.5	-2.4
	baz=232						
M13K	Dall Lake	12.78	31	P	Pn	01 45 23.9	-2.2
	baz=223						
N14K	Kuskokwak Cree	13.03	36		Pn	01 45 32.2	+2.6
N14K	Kuskokwak Cree	13.03	36	P	Pn	01 45 27.4	-2.2
	baz=228						
O15K	Ungalikthiuk R	13.30	41		Pn	01 45 33.5	+0.2
O15K	Ungalikthiuk R	13.30	41	P	Pn	01 45 31.3	-2.0
	baz=235						
M14K	Bethel	13.50	33	P	Pn	01 45 33.9	-2.1
	baz=225						
K13K	Kusilvak Mount	13.57	25	P	Pn	01 45 34.0	-3.0
	baz=216						
L14K	Kuka Creek	13.69	30	P	Pn	01 45 35.8	-2.8
	baz=222						
N15K	Kwethluk River	13.80	37		Pn	01 45 41.3	+1.3
N15K	Kwethluk River	13.80	37	P	Pn	01 45 37.5	-2.6
	baz=231,SNR=11						
M15K	Kasigluk River	13.92	35	P	Pn	01 45 39.4	-2.3
	baz=228						
GAMB	Gambell	13.92	9	P	Pn	01 45 38.8	-2.9
	baz=194						
CHIR	Chirikof Islan	13.93	58	Pn	Pn	01 45 39.1	-2.8
CHIR	Chirikof Islan	13.93	58	P	Pn	01 45 38.7	-3.2
CHIR	Chirikof Islan	13.93	58	P	Pn	01 45 40.2	-1.6
	baz=255						
P16K	Nushagak River	14.02	44	P	Pn	01 45 41.1	-1.9
	baz=239						
R17L	Mt. Peulik Vol	14.14	50	P	Pn	01 45 43.1	-1.7
	baz=247,SNR=5.2						
PLK4	Peulik 4	14.14	50		Pn	01 45 43.4	-1.5
O16K	Kokwok River B	14.27	41		Pn	01 45 46.3	-0.2
O16K	Kokwok River B	14.27	41	P	Pn	01 45 44.7	-1.8
	baz=237,SNR=6.2						
L15K	Ungalak Mounta	14.33	31	P	Pn	01 45 44.8	-2.5
	baz=224,SNR=6.2						
N16K	Nishlik Lake	14.50	38	P	Pn	01 45 47.8	-1.9
	baz=233						
J14K	Nanvaranak Lak	14.54	25	P	Pn	01 45 47.8	-2.3
	baz=216						
Q17K	Contact Creek	14.63	48	P	Pn	01 45 50.2	-1.3
	baz=246						
K15K	Wolf Creek Mou	14.77	29		Pn	01 45 55.1	+1.8
K15K	Wolf Creek Mou	14.77	29	P	Pn	01 45 51.8	-1.5
	baz=222						
M16K	Timber Creek	14.77	36	P	Pn	01 45 51.9	-1.4
	baz=231						
P17K	Kvichak River	14.79	45	P	Pn	01 45 52.4	-1.2
	baz=242						
O17K	Koliganek Bris	14.79	42	P	Pn	01 45 52.7	-0.9
	baz=238						
SII	Sitkinak Islan	14.90	56	P	Pn	01 45 52.1	-3.0
SII	Sitkinak Islan	14.90	56	P	Pn	01 45 54.0	-1.1
	baz=254						
L16K	Owhat River	15.04	33	P	Pn	01 45 55.5	-1.4
	baz=228						
R18K	Karluk	15.07	52	P	Pn	01 45 55.9	-1.5
	baz=250						
N17K	Nushagak Hills	15.17	39	P	Pn	01 45 56.6	-2.0
	baz=236						
Q18K	Katmai Hardscr	15.21	48	P	Pn	01 45 57.4	-1.9
	baz=246,SNR=5.7						
P18K	Big Mountain,	15.43	45	IAmb	IAmb	01 46 02.3	
	comp=Z,11nm,1.1s						
P18K	Big Mountain,	15.43	45	P	Pn	01 46 00.1	-2.0
	baz=243						
OHAK	Old Harbor	15.56	54	P	Pn	01 46 02.7	-1.1
	baz=253						
M17K	Holitna River	15.59	36	IAmb	IAmb	01 46 13.4	
	comp=Z,14nm,0.8s						
M17K	Holitna River	15.59	36	P	Pn	01 46 02.2	-1.9
	baz=233						
ANM	Nome	15.65	18	P	Pn	01 46 03.1	-1.8
	baz=208						
O18K	Koktuh Hills	15.66	43	P	Pn	01 46 03.4	-1.6
	baz=242						
L17K	Donlin	15.73	33	P	Pn	01 46 05.1	-0.9
	baz=229,SNR=13						
N18K	Kilae Creek	15.79	40	P	Pn	01 46 05.7	-1.0
	baz=238						
J16K	Anvik River	15.80	28	IAmb	IAmb	01 46 15.8	
	comp=Z,21nm,1.1s						
J16K	Anvik River	15.80	28	P	Pn	01 46 05.5	-1.3
	baz=222						
Q19K	Cape Douglas,	15.97	48	P	Pn	01 46 08.1	-1.0
	baz=247						
PETK	Petropavlovsk-	16.07	290	Pn	Pn	01 46 11.8	+1.4
	comp=Z,0.4nm,0.3s,baz=83,slow=18,SNR=5.6						
KDAK	Kodiak Island	16.09	52		Pn	01 46 07.2	-3.3
KDAK	Kodiak Island	16.09	52	Pn	Pn	01 46 05.9	-4.7
	comp=Z,0.4nm,0.3s,baz=214,slow=1.5,SNR=36						
KDAK				Sn	Sn	01 49 10.9	+2.9
	comp=Z,0.2nm,0.3s,baz=2.9,slow=20,SNR=11						
KDAK	Kodiak Island	16.09	52	P	Pn	01 46 09.9	-0.6
	baz=252						
TNA	Tin City	16.11	13	P	Pn	01 46 08.5	-2.3
	baz=201						
K17K	Iditarod	16.12	32	IAmb	IAmb	01 46 19.3	
	comp=Z,20nm,1.1s						
K17K	Iditarod	16.12	32	P	Pn	01 46 09.3	-1.7
	baz=228						
O19K	Port Alsworth	16.21	43	P	Pn	01 46 11.2	-0.9
	baz=242						
I17K	Unalakleet	16.23	26	P	Pn	01 46 10.3	-2.0
	baz=220						
M18K	Stony River	16.26	38	P	Pn	01 46 12.2	-0.5
	baz=236,SNR=6.0						
F14K	Arctic Creek	16.29	16	P	Pn	01 46 11.9	-1.2
	baz=205						
G15K	Niukluk	16.31	20	P	Pn	01 46 12.2	-1.1
	baz=211						
J17K	VABM Dome	16.35	29	P	Pn	01 46 13.4	-0.4
	baz=224,SNR=23						
L18K	Granite Mounta	16.37	35	P	Pn	01 46 13.8	-0.3
	baz=232,SNR=8.5						
H16K	Elim	16.43	23	P	Pn	01 46 14.2	-0.5
	baz=215						
N19K	Bonanza Creek	16.45	41	IAmb	IAmb	01 46 17.3	
	comp=Z,20nm,0.9s						
N19K	Bonanza Creek	16.45	41	P	Pn	01 46 14.8	-0.4
	baz=240,SNR=18						
Q20K	Shuyak Island	16.46	50	P	Pn	01 46 14.0	-1.2
	baz=250						
P19K	Oil Pt	16.46	46	P	Pn	01 46 15.3	0.0
	baz=246						
F15K	North Star Dit	16.81	18	P	Pn	01 46 19.2	-0.5
	baz=208						
O20K	Slope Mountain	16.92	45	P	Pn	01 46 21.1	0.0
	baz=245						
G16K	Koyuk River	17.03	21	P	Pn	01 46 22.1	-0.2
	baz=214						
L19K	White Mountain	17.04	37	IAmb	IAmb	01 46 30.6	
	comp=Z,37nm,1.2s						
L19K	White Mountain	17.04	37	P	Pn	01 46 22.8	+0.2
	baz=235,SNR=19						
M19K	Big River Lodg	17.06	38	P	Pn	01 46 23.0	+0.1
	baz=237,SNR=8.1						
J18K	Innoko River	17.16	32	IAmb	IAmb	01 46 32.5	
	comp=Z,36nm,1.3s						
J18K	Innoko River	17.16	32	P	Pn	01 46 24.1	0.0
	baz=229,SNR=19						
H17K	Granite Mounta	17.26	25	IAmb	IAmb	01 46 30.2	
	comp=Z,15nm,0.8s						
H17K	Granite Mounta	17.26	25	P	Pn	01 46 25.5	+0.2
	baz=219,SNR=7.9						
G17K	Kiwalik Mounta	17.52	23	P	Pn	01 46 28.6	+0.1
	baz=217						
M20K	Styx River	17.56	39	P	Pn	01 46 29.7	+0.6
	baz=239,SNR=12						
L20K	Farewell, AK	17.58	37	P	Pn	01 46 30.4	+1.0
	baz=236,SNR=15						
N20K	Mount Spurr	17.60	42	P	Pn	01 46 30.1	+0.5
	baz=243						
SPCR	Spurr Chakacha	17.60	42	P	Pn	01 46 29.8	+0.1
	baz=242						
H18K	Honhosa River	17.85	26	IAmb	IAmb	01 46 39.6	
	comp=Z,25nm,1.1s						
H18K	Honhosa River	17.85	26	P	Pn	01 46 32.5	-0.1
	baz=222						
J19K	Poorman	17.88	31	IAmb	IAmb	01 46 41.1	
	comp=Z,26nm,1.1s						
J19K	Poorman	17.88	31	P	Pn	01 46 33.1	+0.2
	baz=230,SNR=20						
GCSA	Galena City Sc	17.99	28	P	Pn	01 46 34.3	+0.1
	baz=226						
K20K	Telida	18.02	34	P	Pn	01 46 34.6	-0.1
	baz=234,SNR=13						
F17K	Baldwin Pennin	18.15	20	P	Pn	01 46 36.0	-0.3
	baz=214						
SLKM	Skilak Lake	18.19	45	IAmb	IAmb	01 46 38.5	
	comp=Z,8.4nm,0.5s						
SKT	Skwentna	18.26	40	P	P	01 46 38.0	+0.4
	baz=242,SNR=12						
G18K	Tagagawik	18.34	24	P	P	01 46 38.8	+0.3
	baz=220,SNR=14						
SUA	Susitna One	18.35	42	P	P	01 46 39.5	+0.7
	baz=244						
SEW	Seward	18.39	47	P	Pn	01 46 40.2	+1.0
	baz=250						
O22K	Cooper Landing	18.41	46	P	P	01 46 39.9	+0.7
	baz=248						
PPLA	Purkeypile	18.46	37	P	P	01 46 40.6	+0.6
	baz=238						
J20K	Nowinta River	18.50	32	P	P	01 46 40.3	+0.1
	baz=232,SNR=14						
E17K	Hotham Inlet	18.57	19	P	P	01 46 41.0	-0.1
	baz=212						
RC01	Rabbit Creek A	18.64	44	P	P	01 46 42.5	+0.7
	baz=247						
F18K	Selawik	18.65	22	P	P	01 46 42.2	+0.4
	baz=217						
H19K	Roundabout Mou	18.68	27	P	P	01 46 42.3	+0.2
	baz=225,SNR=8.7						
I20K	Naaghedeneel	18.78	30	P	P	01 46 44.1	+0.8
	baz=230						
CAST	Castle Rocks	18.79	36	P	P	01 46 44.4	+0.9
	baz=237,SNR=18						
D17K	Noatak River	18.87	16	P	P	01 46 44.9	+0.6
	baz=208						
G19K	Purcell Mounta	18.95	25	P	P	01 46 46.3	+1.1
	baz=222,SNR=6.4						
CHUM	Lake Minchumin	18.96	34	P	P	01 46 46.5	+1.2
	baz=235						
CUT	Chulitna	18.98	40	P	P	01 46 46.6	+1.0
	baz=242						
C16K	Lisburne Hills	19.02	13	P	P	01 46 46.5	+0.6
	baz=203						
E18K	Tukpahlearik C	19.12	19	IAmb	IAmb	01 46 51.3	
	comp=Z,22nm,1.4s						
E18K	Tukpahlearik C	19.12	19	P	P	01 46 47.9	+1.0
	baz=214						
H20K	Anotleneega Mo	19.12	28	P	P	01 46 47.7	+0.6
	baz=227						
PWL	Port Wells	19.18	45	P	P	01 46 48.6	+0.8
	baz=249						
RDOG	Red Dog Mine	19.22	16	P	P	01 46 48.4	+0.3
	baz=208						
F19K	Shaleruckik Mo	19.30	23	IAmb	IAmb	01 46 52.8	
	comp=Z,14nm,1.0s						
F19K	Shaleruckik Mo	19.30	23	P	P	01 46 50.0	+1.0
	baz=220,SNR=6.9						
TRF	Thorofare Moun	19.49	37	IAmb	IAmb	01 46 59.9	
	comp=Z,31nm,1.4s						
TRF	Thorofare Moun	19.49	37	P	P	01 46 52.3	+1.0
	baz=240,SNR=12						
C17K	DeLong Mountai	19.55	15	P	P	01 46 52.2	+0.5
	baz=207						
BPAW	Bear Paw Mtn.	19.57	35	IAmb	IAmb	01 46 55.5	
	comp=Z,17nm,1.2s						
BPAW	Bear Paw Mtn.	19.57	35	P	P	01 46 53.5	+1.4
	baz=237,SNR=15						
Q23K	Middleton Isla	19.69	50	P	P	01 46 54.4	+1.2
	baz=256						
GLI	Glacier Island	19.76	46	P	Pn	01 46 55.7	+0.1
	baz=251						
IMAR	Indian Mountai	19.80	28	P	P	01 46 54.6	+0.1
M23K	Glacier View	19.80	43	P	P	01 46 55.9	+1.3
	baz=248						
H21K	Melozitna Rive	19.88	30	IAmb	IAmb	01 46 59.4	
	comp=Z,20nm,1.0s						
H21K	Melozitna Rive	19.88	30	P	P	01 46 56.5	+1.2
	baz=230,SNR=24						
WAT1	Susitna Watana	19.89	40	P	P	01 46 57.1	+1.6
	baz=244						
E19K	Redstone River	19.91	22	IAmb	IAmb	01 47 01.5	
	comp=Z,28nm,1.2s						
E19K	Redstone River	19.91	22	P	P	01 46 57.1	+1.4
	baz=220,SNR=7.5						
F20K	Avaraart Lake	19.99	24	IAmb	IAmb	01 47 03.5	
	comp=Z,22nm,1.1s						
F20K	Avaraart Lake	19.99	24	P	P	01 46 57.5	+1.0
	baz=223,SNR=7.3						
SCM	Sheep Creek Mo	19.99	43	P	P	01 46 58.4	+1.7
	baz=248						
RND	Reindeer	20.03	38	IAmb	IAmb	01 47 01.6	
	comp=Z,14nm,0.7s						
C18K	Utukok River	20.05	17	P	P	01 46 57.8	+0.6
	baz=211						
WAT6	Susitna Watana	20.11	41	P	P	01 46 59.1	+1.0
	baz=246						
MCK	McKinley	20.16	37	IAmb	IAmb	01 47 05.3	
	comp=Z,19nm,1.0s						
MCK	McKinley	20.16	37	P	P	01 46 59.8	+1.4
	baz=241						
MLY	Manley	20.18	33	IAmb	IAmb	01 47 06.7	
	comp=Z,26nm,1.2s						
MLY	Manley	20.18	33	P	P	01 47 00.0	+1.3
	baz=235,SNR=7.9						
G21K	Allakaket	20.23	27	IAmb	IAmb	01 47 06.2	
	comp=Z,20nm,1.0s						
G21K	Allakaket	20.23	27	P	P	01 47 00.4	+1.3
	baz=228,SNR=19						
EYAK	Cordova Ski Ar	20.28	47	P	P	01 47 01.4	+1.6
	baz=253						
DHY	Denali Highway	20.48	40	P	P	01 47 01.2	-0.8
DHY				IAmb	IAmb	01 47 09.6	
	comp=Z,25nm,1.4s						
DHY	Denali Highway	20.48	40	P	P	01 47 02.3	+0.3
	baz=245,SNR=15						
H22K	Ishtalitna Cre	20.49	30	P	P	01 47 02.2	+0.2
	baz=232,SNR=20						
KLU	Klutina	20.50	45	P	P	01 47 03.3	+1.1
	baz=251						
D19K	Kuna River	20.54	20	P	P	01 47 03.5	+1.1
	baz=216,SNR=15						
NEA2	Nenana	20.54	35	P	P	01 47 03.5	+1.0
	baz=239,SNR=6.2						
B18K	Kokolik River	20.57	15	P	P	01 47 03.9	+1.1
	baz=208						
M24K	Tolsona, Glenn	20.60	43	P	P	01 47 03.9	+0.7
	baz=249						
MA2	Magadan	20.70	309	P	P	01 47 03.7	-0.6
	comp=Z,3.6nm,0.9s,baz=73,slow=9.2,SNR=4.8						
	comp=Z,3.6nm,0.9s						
F21K	Alatna River	20.72	26	P	P	01 47 05.6	+1.1
F21K				IAmb	IAmb	01 47 09.8	
	comp=Z,13nm,1.0s						
F21K	Alatna River	20.72	26	P	P	01 47 05.7	+1.2
	baz=226,SNR=14						
I23K	Minto, Yukon-K	20.73	33	IAmb	IAmb	01 47 15.2	
	comp=Z,18nm,1.1s						
I23K	Minto, Yukon-K	20.73	33	P	P	01 47 06.0	+1.5
	baz=237,SNR=12						
C19K	Lookout Ridge	20.74	17	P	P	01 47 05.5	+0.7
	baz=213						
KAIM	Kayak Island	20.76	50	P	P	01 47 06.0	+1.1
	baz=257						
E20K	Nigu River	20.79	22	P	P	01 47 06.4	+1.2
	baz=220,SNR=14						
BMRM	Bremner River	20.94	47	P	P	01 47 08.1	+1.2
	baz=254						
SEY	Seymchan	20.99	319	P	P	01 47 06.1	-1.3
	comp=Z,6.9nm,0.8s,baz=110,slow=10,SNR=21						
	comp=Z,6.9nm,0.8s						
D20K	Etivluk River	21.04	21	P	P	01 47 09.1	+1.1
	baz=218						
H23K	Yukon River	21.05	32	IAmb	IAmb	01 47 18.4	
	comp=Z,15nm,1.1s						
H23K	Yukon River	21.05	32	P	P	01 47 09.1	+1.0
	baz=235,SNR=7.3						
G22K	Bettles	21.10	28	P	P	01 47 09.9	+1.4
	baz=230						
N25K	Chitina, Valde	21.14	45	P	P	01 47 10.1	+1.0
	baz=252,SNR=5.9						
HARP	HAARP	21.15	43	P	P	01 47 10.1	+0.9
	baz=250						
PAX	Paxson	21.23	41	P	P	01 47 11.0	+0.9
	baz=248,SNR=7.8						
HDA	Harding Lake	21.25	37	P	P	01 47 11.6	+1.5
HDA				IAmb	IAmb	01 47 13.1	
	comp=Z,12nm,0.6s						
HDA	Harding Lake	21.25	37	P	P	01 47 11.4	+1.2
	baz=242,SNR=9.4						
F22K	John River	21.29	26	P	P	01 47 11.4	+0.9
	baz=228						
G23K	Bananza Creek	21.42	29	P	P	01 47 13.1	+1.1
	baz=233						
A19K	Wainwright	21.43	15	P	P	01 47 12.6	+0.6
	baz=209						
K24K	Donnelly Dome	21.44	39	P	P	01 47 13.2	+1.0
	baz=245,SNR=14						
IL31		21.44	36	IAmb	IAmb	01 47 31.6	
	comp=Z,10nm,1.1s						
ILAR	Eielson Array	21.44	36	P	P	01 47 11.8	-0.5
	comp=Z,2.2nm,0.7s,baz=231,slow=11,SNR=33						
ILAR				S	S	01 51 05.3	-3.3
	comp=Z,0.7nm,0.8s,baz=233,slow=16,SNR=6.2						
ILAR				LR	LR	01 56 24.6	
	comp=Z,49nm,19.0s,baz=246,slow=39						
	comp=Z,2.2nm,0.7s						
E21K	Killik River	21.47	23	IAmb	IAmb	01 47 30.6	
	comp=Z,19nm,1.2s						
E21K	Killik River	21.47	23	P	P	01 47 13.4	+0.9
	baz=223						
CRQE	Cirque	21.60	48	P	P	01 47 15.4	+1.3
	baz=256						
H24K	Noodor Dome	21.63	33	IAmb	IAmb	01 47 19.5	
	comp=Z,8.4nm,0.9s						
H24K	Noodor Dome	21.63	33	P	P	01 47 15.4	+1.1
	baz=238,SNR=12						
COLD	Coldfoot	21.69	28	IAmb	IAmb	01 47 23.9	
	comp=Z,15nm,0.9s						
COLD	Coldfoot	21.69	28	P	P	01 47 16.1	+1.2
	baz=231						
RIDG	Independent Ri	21.79	39	P	P	01 47 15.9	-0.1
RIDG				IAmb	IAmb	01 47 23.1	
	comp=Z,16nm,1.0s						
RIDG	Independent Ri	21.79	39	P	P	01 47 16.8	+0.7
	baz=247						
MCARA	McCarthy VSAT	21.79	46	P	P	01 47 16.2	+0.2
	baz=255						
C21K	Knifeblade Rid	21.81	21	P	P	01 47 16.9	+0.8
	baz=221						
E22K	Anaktuvuk Pass	21.82	25		P	01 47 15.5	-0.8
E22K				IAmb	IAmb	01 47 26.7	
	comp=Z,18nm,1.3s						
E22K	Anaktuvuk Pass	21.82	25	P	P	01 47 17.1	+0.8
	baz=227						

J25K	Salcha River,	21.95	37	IAmb	IAmb	01 47 22.4	
	comp=Z,9.0nm,0.7s						
J25K	Salcha River,	21.95	37	P	P	01 47 18.0	+0.2
	baz=244,SNR=19						
B20K	Meade River	21.97	18	P	P	01 47 17.3	-0.6
	baz=216						
MESA	MESA	22.02	50	P	P	01 47 18.6	-0.1
	baz=259						
DOT	Dot Lake	22.07	40	P	P	01 47 17.3	-1.8
M26K	Nabesna, AK	22.10	44	IAmb	IAmb	01 47 34.5	
	comp=Z,10nm,1.1s						
M26K	Nabesna, AK	22.10	44	P	P	01 47 20.0	+0.6
	baz=252						
D22K	Ayikyak River	22.11	23	P	P	01 47 19.1	-0.3
	baz=224,SNR=5.6						
L26K	Log Cabin Wild	22.15	42	P	P	01 47 20.1	+0.2
	baz=250						
B21K	Ikpikpuk River	22.20	20	P	P	01 47 19.8	-0.5
	baz=220						
GRNC	Granite Creek	22.23	48	IAmb	IAmb	01 47 30.1	
	comp=Z,12nm,1.4s						
SCRK	Sand Creek	22.23	39	P	P	01 47 21.6	+0.7
	baz=247,SNR=41						
G24K	Hadweenzic Riv	22.24	31	P	P	01 47 21.5	+0.8
	baz=237						
PRP	Porcupine Dome	22.31	35	P	P	01 47 22.8	+1.1
	baz=242						
E23K	Chandalar	22.39	27	P	P	01 47 22.9	+0.5
	baz=231						
CTG	Chitna Glacier	22.48	48	P	P	01 47 24.5	+0.9
	baz=258						
H25L	Birch Creek	22.57	33	P	P	01 47 24.6	+0.3
	baz=240						
F24K	Squaw Lake	22.58	29	P	P	01 47 24.9	+0.4
	baz=234						
M27K	Edge Creek, AK	22.59	44	IAmb	IAmb	01 47 33.3	
	comp=Z,11nm,0.9s						
M27K	Edge Creek, AK	22.59	44	P	P	01 47 26.2	+1.5
	baz=254,SNR=14						
J26L	Joseph Creek	22.61	38	IAmb	IAmb	01 47 29.5	
	comp=Z,9.0nm,0.6s						
J26L	Joseph Creek	22.61	38	P	P	01 47 24.9	0.0
	baz=247,SNR=20						
D23K	Nanushuk River	22.69	24	P	P	01 47 25.9	+0.3
	baz=227						
E24K	Your Creek	22.73	27	P	P	01 47 27.0	+1.0
	baz=232						
TOLK	Toolik Lake Re	22.78	26	P	P	01 47 27.2	+0.6
	baz=230						
L27K	Beaver Creek,	22.82	42		P	01 47 27.2	+0.2
L27K				IAmb	IAmb	01 47 41.6	
	comp=Z,7.8nm,1.1s						
L27K	Beaver Creek,	22.82	42	P	P	01 47 27.7	+0.7
	baz=252,SNR=7.3						
BCAR	Beaver Creek A	22.84	42		P	01 47 27.5	+0.3
PINM	Pinnacle	22.84	50	P	P	01 47 28.0	+0.7
	baz=261						
O28M	Mount Upton	22.99	49	IAmb	IAmb	01 47 37.1	
	comp=Z,6.2nm,0.8s						
O28M	Mount Upton	22.99	49	P	P	01 47 29.2	+0.1
	baz=259						
B22K	Teshekpuk Lake	23.02	20	P	P	01 47 29.6	+0.7
	baz=221						
K27K	Chicken	23.03	40	P	P	01 47 30.1	+0.9
	baz=250						
BVCY	Beaver Creek	23.06	44	P	P	01 47 29.9	+0.5
	baz=255						
YUK3	Moose Creek	23.08	46	P	P	01 47 30.3	+0.4
	baz=257						
I26K	Coal Creek Min	23.10	36	P	P	01 47 30.0	+0.2
	baz=246						
A21K	Barrow	23.16	16	P	P	01 47 30.3	-0.1
	baz=215						
PNL	Peninsula	23.21	51	P	P	01 47 31.4	+0.4
	baz=263						
A22K	Sinclair Lake	23.21	18	P	P	01 47 31.0	+0.1
	baz=218						
YUK8	Steele Glacier	23.30	47	P	P	01 47 32.7	+0.6
	baz=259						
C23K	Itkillik River	23.31	23	P	P	01 47 32.5	+0.6
	baz=226						
D24K	Happy Valley	23.32	25	P	P	01 47 32.3	+0.3
	baz=230						
F25K	Christian Rive	23.33	30	P	P	01 47 32.6	+0.4
	baz=237						
G26K	Porcupine Rive	23.62	32	P	P	01 47 35.2	+0.3
	baz=241						
E25K	Arctic Village	23.64	29	P	P	01 47 35.5	+0.3
	baz=236						
O29M	Mount Kennedy	23.70	50	P	P	01 47 36.4	+0.5
	baz=262						
C24K	Franklin Bluff	23.72	24	P	P	01 47 36.1	+0.2
	baz=229						
I27K	Kandik River	23.81	36	P	P	01 47 37.2	+0.4
	baz=247						
YUK4	Talbot Arm	23.84	47	P	P	01 47 38.2	+0.9
	baz=260						
F26K	Sheenjek River	23.87	31	P	P	01 47 37.3	-0.1
	baz=239						
YUK6	Outpost Mounta	23.90	49	P	P	01 47 38.0	+0.1
	baz=261						
P29M	Windy Craggy	24.04	52	P	P	01 47 39.3	+0.3
	baz=264						
H27K	Steamboat Moun	24.10	35	P	P	01 47 40.0	+0.4
	baz=246						
D25K	Kavik River	24.10	26	P	P	01 47 39.6	0.0
	baz=233						
M29M	Somme Creek	24.15	45	P	P	01 47 40.5	+0.4
	baz=258						
DAWY	Dawson	24.16	41	IAmb	IAmb	01 47 53.5	
	comp=Z,11nm,1.3s						
DAWY	Dawson	24.16	41	P	P	01 47 41.2	+1.0
	baz=253,SNR=5.9						
G27K	Doyon Strip	24.30	34	P	P	01 47 42.1	+0.8
	baz=244						
HYT	Haines Junctio	24.30	49	P	P	01 47 42.6	+1.0
	baz=262						
I28M	Miner Creek	24.40	37	P	P	01 47 43.4	+1.1
	baz=249						
L29M	L29M	24.45	43	IAmb	IAmb	01 47 52.5	
	comp=Z,8.4nm,1.1s						
L29M	L29M	24.45	43	P	P	01 47 43.4	+0.6
	baz=256,SNR=9.5						
P30M	Million Dollar	24.48	51	P	P	01 47 44.0	+0.9
	baz=264						
N30M	Aishikik Lake	24.60	48	P	P	01 47 45.3	+1.2
	baz=261						
PLBC	Pleasant Camp	24.72	52	P	P	01 47 46.4	+1.2
	baz=266						
S31K	Pelican	24.73	56	P	P	01 47 46.6	+1.4
	baz=270						
C26K	Camden Bay	24.87	26	P	P	01 47 46.8	+0.3
	baz=234						
K29M	Barlow Dome	24.90	42		P	01 47 48.2	+1.4
K29M	Barlow Dome	24.90	42	P	P	01 47 47.9	+1.0
	baz=256						
M30M	Minto, Yukon	24.93	45	P	P	01 47 47.5	+0.4
	baz=259						
E27K	Coleen River	24.95	31	P	P	01 47 47.4	+0.2
	baz=242						
O30N	Mendenhall	24.98	49	IAmb	IAmb	01 48 08.3	
	comp=Z,7.9nm,1.4s						
O30N	Mendenhall	24.98	49	P	P	01 47 49.1	+1.5
	baz=264						
I29M	Ogilvie Camp,	25.01	38	P	P	01 47 48.0	+0.3
	baz=252						
C27K	Jago River	25.05	27	P	P	01 47 48.1	+0.1
	baz=236						
N31M	Braeburn, Yuko	25.22	48	P	P	01 47 50.4	+0.7
	baz=262						
SIT	Sitka	25.23	58	P	P	01 47 51.3	+1.6
	baz=272						
SKAG	Skagway	25.25	52	P	P	01 47 51.1	+1.2
	baz=267						
F28M	Old Crow	25.27	33	P	P	01 47 50.9	+0.8
	baz=245						
H29M	Whitestone	25.27	36	IAmb	IAmb	01 48 07.1	
	comp=Z,4.7nm,0.8s						
H29M	Whitestone	25.27	36	P	P	01 47 49.8	-0.3
	baz=250						
MAYO	Mayo, Yukon	25.54	43	P	P	01 47 53.3	+0.7
	baz=258						
WHY	Whitehorse	25.56	50	P	P	01 47 53.3	+0.4
	baz=265						
S32K	Killisnoo	25.62	57	P	P	01 47 53.3	0.0
	baz=272						
R32K	Eaglecrest	25.64	55	P	P	01 47 53.2	-0.3
	baz=270						
G29M	Pine Creek	25.65	35	IAmb	IAmb	01 47 59.4	
	comp=Z,5.3nm,1.0s						
G29M	Pine Creek	25.65	35	P	P	01 47 53.5	-0.1
	baz=249						
D27M	Malcolm River	25.67	29	P	P	01 47 53.1	-0.7
	baz=241						
I30M	Mount Dempster	25.74	39	P	P	01 47 54.2	-0.3
	baz=254,SNR=6.5						
E28M	Babbage River	25.82	31	IAmb	IAmb	01 48 04.5	
	comp=Z,6.7nm,1.1s						
E28M	Babbage River	25.82	31	P	P	01 47 55.1	0.0
	baz=244						
EPYK	Eagle Plains	25.95	36	IAmb	IAmb	01 48 13.8	
	comp=Z,4.2nm,0.8s						
EPYK	Eagle Plains	25.95	36	P	P	01 47 55.3	-1.1
	baz=251						
M31M	Drury Creek, Y	25.97	46	P	P	01 47 56.1	-0.5
	baz=262						
P32M	Atlin	26.08	52	IAmb	IAmb	01 48 06.6	
	comp=Z,6.0nm,1.1s						
P32M	Atlin	26.08	52	P	P	01 47 57.6	+0.1
	baz=268						
E29M	Blow River	26.27	32	IAmb	IAmb	01 48 07.1	
	comp=Z,6.9nm,1.2s						
E29M	Blow River	26.27	32	P	P	01 47 59.3	+0.1
	baz=246						
G30M	tAoh Zraii Nji	26.34	35	P	P	01 48 00.8	+1.0
	baz=251						
D28M	Stokes Point	26.41	29	P	P	01 48 01.6	+1.2
	baz=243						
U33K	Whale Pass	26.51	60	P	P	01 48 02.2	+0.9
	baz=276						
P33M	Teslin, Yukon	26.55	51	IAmb	IAmb	01 48 10.7	
	comp=Z,6.9nm,1.1s						
P33M	Teslin, Yukon	26.55	51	P	P	01 48 02.2	+0.4
	baz=268,SNR=6.7						
CRAG	Craig	26.58	62	P	P	01 48 02.8	+0.8
	baz=277						
H31M	Peel River	26.71	38	P	P	01 48 03.8	+0.5
	baz=255						
F30M	Barrier River	26.72	34	P	P	01 48 03.8	+0.7
	baz=250						
Q32M	Nakina River	26.81	54	IAmb	IAmb	01 48 26.6	
	comp=Z,6.4nm,1.1s						
Q32M	Nakina River	26.81	54	P	P	01 48 05.1	+0.7
	baz=271						
WRAK	Wrangell Islan	26.91	59	P	P	01 48 06.1	+1.2
	baz=276						
G31M	Satah River	27.05	36	P	P	01 48 07.3	+1.2
	baz=253						
F31M	Tsiigehtchic	27.41	35	P	P	01 48 10.5	+1.1
	baz=253						
V35K	Ketchikan	27.45	62	P	P	01 48 11.5	+1.7
	baz=278						
S34M	Telegraph Cree	27.45	56	P	P	01 48 10.6	+0.8
	baz=274						
MMPY	Sheldon Lake,	27.47	46	P	P	01 48 11.4	+1.4
	baz=265						
R33M	Jennings River	27.48	53	IAmb	IAmb	01 48 31.1	
	comp=Z,4.9nm,1.2s						
R33M	Jennings River	27.48	53	P	P	01 48 11.3	+1.1
	baz=271						
INK	Inuvik	27.75	33	P	P	01 48 13.5	+1.1
	baz=251						
DLBC	Dease Lake	28.00	55	P	P	01 48 17.2	+2.3
	comp=Z,0.2nm,0.8s,baz=252,slow=16,SNR=5.7						
	comp=Z,0.2nm,0.8s						
DLBC	Dease Lake	28.00	55	P	P	01 48 15.8	+1.0
	baz=274						
T35M	Bob Quinn	28.00	58	P	P	01 48 15.7	+0.8
	baz=276						
U35K	Hyder	28.26	60	P	P	01 48 18.8	+1.7
	baz=278						
BBB	Bella Bella	30.14	67	LR	LR	01 59 42.9	
	comp=Z,34nm,19.3s,baz=226,slow=34						
KOTAN	Kotaneelee Air	30.93	51	P	P	01 48 41.1	+0.3
	baz=275						
WRGLY	Wrigley	31.06	45	P	P	01 48 41.9	+0.1
	baz=271						
TIXI	Tiksi	32.31	331	LR	LR	02 02 32.9	
	comp=Z,33nm,18.4s,baz=176,slow=37						
KLR	Kul'dur	32.75	289	LR	LR	02 04 42.0	
	comp=Z,16nm,18.0s,baz=33,slow=41						
USRK	Ussuriysk Ar.	34.73	280	P	P	01 49 13.3	-0.7
	comp=Z,2.8nm,0.7s,baz=77,slow=12,SNR=4.2						
	comp=Z,2.8nm,0.7s						
YKA	Yellowknife Ar	35.16	45	P	P	01 49 19.2	+1.6
	comp=Z,1.8nm,0.9s,baz=285,slow=9.3,SNR=8.6						
YKA				LR	LR	02 06 02.2	
	comp=Z,56nm,18.6s,baz=346,slow=40						
	comp=Z,1.8nm,0.9s						
YBH	Yreka Blue Hor	37.80	82	P	P	01 49 41.7	+1.3
	baz=284,slow=4.2						
PINE	Pine Mountain	37.87	78	IAmb	IAmb	01 49 54.8	
	comp=Z,5.1nm,0.9s						
NEW	Newport	38.13	69	P	P	01 49 42.3	-0.8
	comp=Z,1.0nm,0.5s,baz=330,slow=8.1,SNR=2.2						
	comp=Z,1.0nm,0.5s						
K05A	Summer Lake	38.44	79	IAmb	IAmb	01 49 48.9	
	comp=Z,9.0nm,1.1s						
O02D	Mt. Diablo Mer	38.59	84	P	P	01 49 48.4	+1.3
O02D				IAmb	IAmb	01 49 50.1	
	comp=Z,6.5nm,1.0s						
RES	Resolute Bay	40.33	24	LR	LR	02 09 41.7	
	comp=Z,34nm,19.1s,baz=261,slow=40						
KSRS	Korea Array	40.95	274	P	P	01 50 06.9	+0.3
	comp=Z,1.5nm,0.9s,baz=56,slow=8.7,SNR=5.9						
KSRS				LR	LR	02 04 57.5	
	comp=Z,5µm,20.0s,baz=225,slow=33						
	comp=Z,1.5nm,0.9s						
PAHR	Pah Rah Range	41.03	82	IAmb	IAmb	01 50 09.5	
	comp=Z,4.2nm,0.8s						
NVAR	Mina Array Bea	42.45	83	P	P	01 50 19.9	+0.8
	comp=Z,1.3nm,0.9s,baz=292,slow=7.8,SNR=8.2						
NVAR				PcP	PcP	01 52 12.1	+0.4
	comp=Z,1.2nm,0.8s,baz=305,slow=4.9,SNR=7.0						
	comp=Z,1.3nm,0.9s						
ELK	Elko	43.07	78	P	P	01 50 24.4	+0.2
ELK	Elko	43.07	78	P	P	01 50 24.4	+0.2
	comp=Z,1.8nm,0.8s,baz=293,slow=10,SNR=8.6						
	comp=Z,1.8nm,0.8s						
R11B	Troy Canyon, C	44.22	81	P	P	01 50 34.3	+0.8
TPNV	Topopah Spring	44.63	83	P	P	01 50 37.7	+1.0
TPNV				IAmb	IAmb	01 50 38.4	
	comp=Z,4.6nm,0.8s						
XLT	XiLinHaoTe	44.77	289	*e*P	P	01 50 38.0	+0.4
XLT				pmax	pmax		
	comp=Z,7.0nm,0.7s						
QSM	Queen of Sheba	44.84	85	P	P	01 50 39.1	+1.0
QSM				IAmb	IAmb	01 50 41.4	
	comp=Z,3.8nm,0.9s						
DUG	Dugway, Tooele	44.90	77	P	P	01 50 39.5	+0.7
DUG				IAmb	IAmb	01 50 40.5	
	comp=Z,7.0nm,1.2s						
PDAR	Pinedale Array	45.47	72	P	P	01 50 43.6	+0.2
	comp=Z,0.7nm,0.6s,baz=315,slow=3.4,SNR=7.1						
	comp=Z,0.7nm,0.6s						
LCMT	Little Creek M	46.51	81	IAmb	IAmb	01 50 53.4	
	comp=Z,3.5nm,0.9s						
PFO	Pinyon Flats O	46.57	87	P	P	01 50 52.4	+0.4
	comp=Z,1.6nm,0.6s,baz=284,slow=4.2,SNR=2.7						
	comp=Z,1.6nm,0.6s						
SONM	Songino Array	48.33	299	P	P	01 51 05.8	+0.3
	comp=Z,0.4nm,0.5s,baz=46,slow=8.5,SNR=5.4						
SONM				PcP	PcP	01 52 31.6	-0.3
	comp=Z,1.3nm,0.7s,baz=85,slow=3.4,SNR=5.3						
	comp=Z,0.4nm,0.5s						
PV18	Skein Mesa, Pa	48.50	77	P	P	01 51 07.0	0.0
HHC	Hu-ho-hao-te	49.26	288	*e*P	P	01 51 11.5	-1.2
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,42nm,4.1s						
HHC				LR	LR		
	comp=N,90nm,10.7s						
HHC				LR	LR		
	comp=E,120nm,12.2s						
HHC				LR	LR		
	comp=Z,78nm,13.0s						
X16A	Lo Mia Camp, P	49.27	83	IAmb	IAmb	01 51 18.2	
	comp=Z,2.3nm,1.0s						
ULM	Lac du Bonnet	49.29	57	P	P	01 51 13.7	+1.0
	comp=Z,1.3nm,0.6s,baz=81,slow=7.3,SNR=4.0						
	comp=Z,1.3nm,0.6s						
MVCO	Mesa Verde	49.39	78	IAmb	IAmb	01 51 15.1	
	comp=Z,2.8nm,0.8s						
TUC	Tucson	51.05	84	P	P	01 51 26.5	+0.2
TUC				IAmb	IAmb	01 51 28.5	
	comp=Z,5.0nm,1.3s						
MNTX	Cornudas Mount	54.90	81	IAmb	IAmb	01 51 55.9	
	comp=Z,3.6nm,1.1s						
VHRN	Van Horn	55.76	82	IAmb	IAmb	01 52 02.3	
	comp=Z,4.3nm,1.1s						
SFJD	Kangerlussuaq	56.29	22	LR	LR	02 19 36.5	
	comp=Z,29nm,18.2s,baz=270,slow=40						
LZH	Lanzhou	56.95	288	*e*P	P	01 52 10.3	+0.8
LZH				pP	pP	01 52 13.5	-2.0
LZH				pmax	pmax		
	comp=Z,29nm,1.3s						
GTA	Gaotai	57.20	294	P	P	01 52 11.3	+0.1
GTA				pP	pP	01 52 16.3	-0.9
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TXAR	Lajitas Array	57.58	82	P	P	01 52 13.4	-0.5
	comp=Z,1.5nm,0.9s,baz=292,slow=5.7,SNR=13						
TXAR				PcP	PcP	01 53 07.2	+0.1
	comp=Z,0.9nm,0.7s,baz=281,slow=2.5,SNR=4.8						
	comp=Z,1.5nm,0.9s						
ARCES	ARCESS Array B	59.49	351	P	P	01 52 26.7	+0.1
	comp=Z,3.6nm,0.8s,baz=19,slow=7.7,SNR=7.4						
ARCES				LR	LR	02 19 47.1	
	comp=Z,19nm,20.1s,baz=206,slow=38						
	comp=Z,3.6nm,0.8s						
SCHQ	Schefferville	60.16	39	P	P	01 52 31.9	+0.5
	comp=Z,2.4nm,0.8s,baz=302,slow=13,SNR=5.3						
	comp=Z,2.4nm,0.8s						
KURK	Kurchatov	60.77	315	P	P	01 52 35.4	-0.2
KURBB	Kurchatov Arra	60.88	315	P	P	01 52 36.2	-0.1
	comp=Z,4.5nm,0.7s,baz=44,slow=6.6,SNR=39						
	comp=Z,4.5nm,0.7s						
MKAR	Makanchi Array	61.78	310	P	P	01 52 41.5	-1.0
	comp=Z,0.9nm,0.6s,baz=53,slow=7.2,SNR=10						
	comp=Z,0.9nm,0.6s						
BVAR	Borovoye Array	62.63	321	P	P	01 52 48.8	+0.7
	comp=Z,9.3nm,0.8s,baz=50,slow=7.2,SNR=39						
BVAR				LR	LR	02 21 09.6	
	comp=Z,19nm,21.3s,baz=100,slow=37						
	comp=Z,9.3nm,0.8s						
PZH	PanZhiHua	64.81	282	P	P	01 53 03.5	+0.5
FINES	FINESS Array B	67.24	348	P	P	01 53 17.8	-0.1
	comp=Z,2.9nm,0.8s,baz=44,slow=11,SNR=7.0						
	comp=Z,2.9nm,0.8s						
NB2	NORSAR Subarra	68.96	356	P	P	01 53 29.6	+0.8
	comp=Z,1.0nm,0.6s,baz=6.0,slow=6.5						
NOA	NORSAR Array B	68.96	356	P	P	01 53 29.1	+0.3
	comp=Z,2.1nm,0.8s,baz=5.2,slow=6.3,SNR=8.2						
	comp=Z,2.1nm,0.8s						
AB31	Akbulak array	69.67	324	P	P	01 53 33.6	+0.3
AB31				IAmb	IAmb	01 53 34.9	
	comp=Z,3.4nm,1.1s						
HFS	Hagfors	69.73	354	P	P	01 53 33.6	+0.1
	comp=Z,3.3nm,0.7s,baz=17,slow=6.2,SNR=9.1						
	comp=Z,3.3nm,0.7s						
CMAR	Chiang Mai Arr	72.42	278	P	P	01 53 50.0	-0.4
	comp=Z,1.2nm,0.3s,baz=30,slow=5.4,SNR=4.9						
	comp=Z,1.2nm,0.3s						
EKA	Eskdalemuir Ar	74.74	4	P	P	01 54 04.4	+1.0
	comp=Z,1.0nm,0.6s,baz=359,slow=5.6,SNR=6.0						
	comp=Z,1.0nm,0.6s						
AKASG	Malin Array Be	77.08	343	P	P	01 54 16.9	0.0
	comp=Z,2.2nm,0.7s,baz=16,slow=5.5,SNR=7.6						
AKASG				LR	LR	02 34 47.2	
	comp=Z,26nm,18.1s,baz=328,slow=41						
	comp=Z,2.2nm,0.7s						
KOLS	Kolonicke sedl	79.93	347	*e*P	P	01 54 36.1	+3.4
KBZ	Khabaz	80.28	332	P	P	01 54 35.5	+0.9
	comp=Z,2.4nm,0.7s,baz=90,slow=3.0,SNR=2.3						
	comp=Z,2.4nm,0.7s						
VYHS	Vyhne	80.80	350	*e*P	P	01 54 38.4	+1.0
VYHS				*e*		02 01 00.9	
GERES	GERESS Array B	80.96	353	P	P	01 54 38.9	+0.6
	comp=Z,0.6nm,0.7s,baz=19,slow=5.8,SNR=7.3						
	comp=Z,0.6nm,0.7s						
CONA	Conrad Observa	81.68	351	*i* pP	P	01 54 42.9	+0.7
	comp=Z,2.1nm,1.1s						
RONA	Rosalia, Austr	81.86	351	*e*P	P	01 54 41.1	-2.0
	comp=Z,1.9nm,1.2s						
MOA	Molln	81.90	352	*e*pP	P	01 54 44.0	+0.7
	comp=Z,1.4nm,0.9s						
BIOA	Bad Ischl, Aus	82.11	353	*e*pP	P	01 54 45.1	+0.8
	comp=Z,2.3nm,1.0s						
ARSA	Arzberg	82.38	352	*e*P	P	01 54 45.3	-0.4
	comp=Z,3.0nm,1.2s						
RETA	Reutte	82.51	355	*e*P	P	01 54 46.9	+0.4
	comp=Z,3.0nm,1.3s						
WATA	Walderalm	82.61	354	*i* pP	P	01 54 47.6	+0.5
	comp=Z,2.7nm,0.8s						
MOTA	Moosalm	82.63	355	*i* pP	P	01 54 47.7	+0.5
	comp=Z,2.9nm,1.1s						
WTTA	Wattenberg	82.68	354	*e*P	P	01 54 46.1	-1.4
	comp=Z,5.0nm,1.1s						
MLR	Muntele Rosu	82.70	344	LR	LR	02 37 40.4	
	comp=Z,33nm,18.0s,baz=78,slow=40						
SQTA	Sankt Quirin	82.75	355	*e*P	P	01 54 46.1	-1.7
	comp=Z,2.2nm,0.7s						
DAVA	Damuels	82.76	355	*e*P	P	01 54 46.9	-1.0
	comp=Z,2.3nm,1.2s						
FETA	Feichten	82.97	355	*i* P	P	01 54 49.3	+0.3
	comp=Z,4.4nm,1.2s						
ABTA	Abfaltersbach	83.13	354	*i* P	P	01 54 48.1	-1.6
	comp=Z,5.1nm,1.2s						
MYKA	Terra Mystica	83.16	353	*e*P	P	01 54 50.2	+0.3
	comp=Z,0.6nm,0.4s						
OBKA	Obir	83.20	352	*e*P	P	01 54 49.4	-0.8
	comp=Z,4.3nm,1.0s						
ASAR	Alice Springs	85.47	224	P	P	01 55 00.8	-0.8
	comp=Z,1.3nm,0.8s,baz=29,slow=4.3,SNR=8.6						
	comp=Z,1.3nm,0.8s						
BRTR	Keskin Array B	86.57	337	P	P	01 55 07.2	-0.1
	comp=Z,1.5nm,0.8s,baz=27,slow=2.9,SNR=7.3						
	comp=Z,1.5nm,0.8s						
ESDC	Sonseca Array	90.32	6	P	P	01 55 24.3	-0.6
	comp=Z,1.1nm,1.0s,baz=356,slow=4.9,SNR=7.0						
	comp=Z,1.1nm,1.0s						
EIL	Elat	95.67	333	LR	LR	02 48 09.7	
	comp=Z,19nm,18.1s,baz=210,slow=41						
QSPA	South Pole Qui	139.92	180	PKhKP	PKPpre	02 01 42.8	
	comp=Z,0.8nm,0.7s,baz=22,slow=1.1,SNR=5.2						
MAW	Mawson	146.28	217	PKPbc	PKPbc	02 02 02.6	-0.5
	comp=Z,3.1nm,0.7s,baz=100,slow=3.9,SNR=7.5						
BOSA	Boshof	152.73	314	PKPbc	PKPbc	02 02 20.0	-0.7
	comp=Z,2.3nm,1.0s,baz=97,slow=0.2,SNR=4.3						
SNAA	Sanae	158.25	175	PKPab	PKPab	02 02 51.9	-2.0
	comp=Z,0.5nm,0.6s,baz=243,slow=6.8,SNR=1.8						

DJA 30 01:43:53.7±0.6**, 2°S**±4°×**12°3E**±°**, h10^{km}, M3.3**/6**, MLv3.3**/6**,**
Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	Luwuk	1.13	3		Pn	01 44 15.9	+0.3
LUWI	Luwuk	1.13	3	P	Pn	01 44 15.6	0.0
LUWI				S	Sb	01 44 28.3	-1.9
APSI	Ampana	1.65	320	P	Pn	01 44 22.5	-0.3
KDI	Kendari	1.77	183	P	Pn	01 44 23.3	-1.1
MRSI	Marisa	2.75	344	P	Pn	01 44 38.8	+0.9

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*IDC **30** 01:50:21.3±1.7, 2°.78S×138°.56E, h0^{km}, mb3.6/2, mbtmp3.6/4, ML3.6/2, MS3.4/2, Error ellipse: s-maj=33.1km s-min=17.9km az=166.0*
*DJA **30** 01:50:23.6±0.4, 3°S±5°×13°9E±°, h10^{km}, M3.7/6, MLv3.7/6*
ISC 30 01:50:22.0±1.0**, 2°.74S**±0°.09×**138°.68E**±0°.09**, h10^{km}, n10,**
σ1^{s}04/8**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.74	3	P	Pg	01 50 35.2	-1.1
GENI	Genyem	1.50	85	P	Pb	01 50 50.5	+0.6
JAY	Jayapura	2.04	84	Pn	Pb	01 50 59.5	+0.3
	4.1nm,0.3s,baz=246,slow=9.8,SNR=28						
JAY				Lg	Lg	01 51 29.5	
	3.4nm,0.3s,baz=316,slow=20,SNR=4.4						
	8.5nm,0.3s						
SRPI	Serui, Papua	2.58	289	P	Pn	01 51 04.3	+0.5
BAKI	Biak	2.99	301	P	Pn	01 51 10.1	+0.6
RKPI	Ransiki, Papua	4.66	285	P	Pn	01 51 24.3	-8.1
WRA	Warramunga Arr	17.62	194	P	Pn	01 54 26.2	-1.6
	0.4nm,0.3s,baz=16,slow=12,SNR=9.4						
	1.3nm,0.6s						
ASAR	Alice Springs	21.31	192	P	P	01 55 09.3	+0.2
	3.0nm,0.8s,baz=21,slow=9.8,SNR=4.3						
ASAR				LR	LR	02 04 39.5	
	comp=Z,59nm,18.7s,baz=301,slow=40						
	3.0nm,0.8s						
MKAR	Makanchi Array	69.79	322	P	P	02 01 33.5	+0.8

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             0.5nm,0.9s,baz=101,slow=7.5,SNR=2.9
             0.5nm,0.9s
KURBB Kurchatov Arra     73.73 325  LR      LR         02 35 34.3
             comp=Z,30nm,18.8s,baz=162,slow=37
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IDC ***30*** *01:50:38.7±0.7, 19°.38N×65°.15W, h0km, mb3.9/13, mbtmp4.0/16, ML3.6/3, MS3.3/18, Error ellipse: s-maj=18.4km s-min=15.5km az=81.0*
RSPR ***30*** *01:50:42.5, 19°.26N×65°.06W, h7km±2km, MD4.0/16*
NEIC ***30*** *01:50:44.6±1.3, 19°.19N±0°.05×65°.23W±0°.05, h35km±2km, mb4.4/76, ML4.0/32, Md4.0/16(RSPR), Error ellipse: s-maj=11.2km s-min=4.5km az=222.0*
OSPL ***30*** *01:50:44.1±3.6, 19°.32N×65°.06W, h31km±161km, ML3.9*
ISC 30 01:50:40.1±1.9**, 19°.29N**±0°.04×**65°.12W**±0°.03**, h11**km±12km**, n170, σ1ˢ51**/131**, mb4.3**/49**, MS3.4**/14**, 22C, Puerto Rico region**

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Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC       h  m  s   ISC
HUMP  Col San Antoni      1.33 211           Pn        01 51 04.1 -0.6
HUMP                                 IAML              01 51 23.2
             comp=N,2µm,0.5s
HUMP                                 IAML              01 51 24.9
             comp=E,2µm,0.4s
HUMP  Col San Antoni      1.33 211⇑ eP       Pn        01 51 04.4 -0.2
GCPR  Guaynabo City       1.33 223           Sg        01 51 22.6 -0.5
GCPR  Guaynabo City       1.33 223           Pn        01 51 04.0 -0.8
GCPR  Guaynabo City       1.33 223⇑ eP       Pn        01 51 04.2 -0.5
GCPR  Guaynabo City       1.33 223  eS       Sg        01 51 22.6 -0.5
ECPR  Experimental S      1.52 231⇑ eP       Pb        01 51 07.7 -0.7
ECPR  Experimental S      1.52 231  eS       Sb        01 51 27.4 -0.2
SJG   San Juan            1.52 220           Pn        01 51 06.8 -0.5
SJG                                  IAML              01 51 31.8
             comp=E,1µm,0.7s
SJG   San Juan            1.52 220   Pn      Pn        01 51 07.1 -0.2
             comp=E,51nm,0.3s,baz=51,slow=13,SNR=56
SJG                                  Sn      Sn        01 51 25.4 -1.7
             comp=E,109nm,0.3s,baz=288,slow=22,SNR=13
SJG                                  LR      LR        01 51 58.1
             comp=E,844nm,19.7s,baz=347,slow=50
SJG   San Juan            1.52 220⇑ eP       Pn        01 51 07.1 -0.2
SJG   San Juan            1.52 220  eS       Sn        01 51 26.2 -1.0
SJG   San Juan            1.52 220  i P      Pn        01 51 07.0 -0.3
SJG                                  IAML              01 51 30.4
             comp=Z,1µm,0.6s
PDPR  Patillas Dam,       1.52 214           Pn        01 51 07.1 -0.3
PDPR                                 IAML              01 51 31.2
             comp=E,1µm,0.8s
PDPR  Patillas Dam,       1.52 214⇑ eP       Pn        01 51 07.2 -0.2
PDPR  Patillas Dam,       1.52 214  eS       Sn        01 51 26.1 -1.0
EMPR  Esperanza - Ma      1.56 239           Sn        01 51 27.5 -0.5
EMPR  Esperanza - Ma      1.56 239           Pn        01 51 08.2 +0.5
EMPR                                 IAML              01 51 31.9
             comp=N,4µm,0.8s
EMPR                                 IAML              01 51 34.0
             comp=E,5µm,0.8s
EMPR  Esperanza - Ma      1.56 239⇑ eP       Pb        01 51 08.4 -0.6
EMPR  Esperanza - Ma      1.56 239  eS       Sn        01 51 27.5 -0.5
IGPR  InterUniversit      1.61 216           Pn        01 51 08.5  0.0
IGPR                                         Sb        01 51 29.0 -1.3
IGPR  InterUniversit      1.61 216⇑ eP       Pn        01 51 08.5  0.0
IGPR  InterUniversit      1.61 216  eS       Sb        01 51 29.0 -1.3
AOPR  Arecibo Observ      1.81 239           Sb        01 51 34.5 -1.5
AOPR  Arecibo Observ      1.81 239           Pn        01 51 11.2  0.0
AOPR                                 IAML              01 51 43.8
             comp=N,2µm,0.6s
AOPR  Arecibo Observ      1.81 239⇑ eP       Pn        01 51 11.5 +0.2
AOPR  Arecibo Observ      1.81 239  eS       Sb        01 51 34.5 -1.5
CELP  Cerrillos           1.84 229           Sb        01 51 35.0 -1.7
CELP  Cerrillos           1.84 229           Pn        01 51 11.7 +0.1
CELP                                 IAML              01 51 39.8
             comp=N,1µm,0.7s
CELP  Cerrillos           1.84 229⇑ eP       Pn        01 51 12.0 +0.4
CELP  Cerrillos           1.84 229  eS       Sb        01 51 35.0 -1.7
OBIP  Obispado Ponce      1.88 229           Pn        01 51 12.6 +0.4
OBIP                                         Sn        01 51 35.4 -0.4
OBIP  Obispado Ponce      1.88 229   IAML              01 51 39.1
             comp=E,1µm,1.0s
OBIP  Obispado Ponce      1.88 229⇑ eP       Pn        01 51 12.6 +0.4
OBIP  Obispado Ponce      1.88 229  eS       Sn        01 51 35.4 -0.4
AGPR  Aguadilla, PR       2.06 247           Sn        01 51 40.2  0.0
AGPR  Aguadilla, PR       2.06 247           Pn        01 51 14.6  0.0
AGPR                                 IAML              01 51 45.9
             comp=N,678nm,0.9s
AGPR                                 IAML              01 52 04.5
             comp=E,664nm,0.7s
AGPR  Aguadilla, PR       2.06 247⇑ eP       Pn        01 51 15.1 +0.5
AGPR  Aguadilla, PR       2.06 247  eS       Sn        01 51 40.2  0.0
AGPR  Aguadilla, PR       2.06 247  i P      Pn        01 51 15.0 +0.4
AGPR                                eS       Sn        01 51 37.4 -2.8
AGPR                                 IAML              01 51 45.1
             comp=Z,301nm,0.4s
GBPR  Guanica, Bosqu      2.12 232           Pn        01 51 16.6 +1.1
GBPR  Guanica, Bosqu      2.12 232⇑ eP       Pn        01 51 16.6 +1.1
LSP   Las Mesas           2.17 240           Pn        01 51 16.6 +0.4
LSP                                          Sn        01 51 44.0 +0.9
LSP   Las Mesas           2.17 240⇑ eP       Pn        01 51 16.6 +0.4
LSP   Las Mesas           2.17 240  eS       Sn        01 51 44.0 +0.9
PRSN  Puerto Rico Se      2.19 241           Sn        01 51 43.8 +0.1
PRSN  Puerto Rico Se      2.19 241           Pn        01 51 17.0 +0.5
PRSN                                 IAML              01 51 56.0
             comp=E,1µm,0.3s
PRSN                                 IAML              01 52 02.4
             comp=N,1µm,0.3s
PRSN  Puerto Rico Se      2.19 241⇑ eP       Pn        01 51 17.9 +1.4
PRSN  Puerto Rico Se      2.19 241  eS       Sn        01 51 43.8 +0.1
MLPR  Magueyes Islan      2.25 235⇑ eP       Pn        01 51 18.0 +0.7
MLPR  Magueyes Islan      2.25 235  eS       Sn        01 51 45.3 +0.3
CRPR  Cabo Rojo, PR       2.28 236           Sb        01 51 46.9 -2.5
CRPR  Cabo Rojo, PR       2.28 236           Pn        01 51 18.3 +0.7
CRPR  Cabo Rojo, PR       2.28 236⇑ eP       Pn        01 51 18.3 +0.7
CRPR  Cabo Rojo, PR       2.28 236  eS       Sb        01 51 46.9 -2.5
CRPR  Cabo Rojo, PR       2.28 236  i P      Pn        01 51 18.1 +0.4
CRPR                                 IAML              01 52 02.1
             comp=Z,599nm,1.0s
IDE   Isla Desecheo       2.40 248           Pn        01 51 19.7 +0.3
IDE   Isla Desecheo       2.40 248⇑ eP       Pn        01 51 19.7 +0.3
SABA  Saba                2.43 133           Pb        01 51 21.9 -2.0
SABA                                 IAML              01 52 18.2
             comp=N,1µm,0.6s
SABA  Saba                2.43 133⇑ eP       Pb        01 51 22.1 -1.8
SKI   Saint Kitts         2.98 130  eP       Pn        01 51 21.7 -5.7
GDHS  Morne Mazeau,       4.38 133           Pn        01 51 49.4 +2.7
ABD   La Joyeuse, An      4.45 128   Pn      Pn        01 51 47.6 +0.1
ABD                                  IAML              01 52 33.6
             comp=E,293nm,2.5s
ABD                                  IAML              01 52 52.6
             comp=N,235nm,1.4s
ABD   La Joyeuse, An      4.45 128⇑ eP       Pn        01 51 47.8 +0.2
ABD   La Joyeuse, An      4.45 128  eS       Sn        01 52 38.4 -1.0
CBE   Ff, Capester        4.63 133           Sn        01 52 45.8 +1.9
CBE   Ff, Capester        4.63 133   Pn      Pn        01 51 51.9 +1.8
CBE   Ff, Capester        4.63 133⇑ eP       Pn        01 51 51.5 +1.4
CBE   Ff, Capester        4.63 133  eS       Sn        01 52 45.8 +1.9
BANI  BANI                5.04 261           Pn        01 51 56.8 +1.0
SC01  Santiago de lo      5.30 272           Sn        01 53 04.3 +4.0
SC01  Santiago de lo      5.30 272           Pn        01 51 58.6 -0.6
SC01  Santiago de lo      5.30 272⇑ eP       Pn        01 51 60.0 +0.7
SC01  Santiago de lo      5.30 272  eS       Sn        01 53 04.3 +4.0
SDDR  Presa de Saban      5.84 268           Pn        01 52 08.0 +1.2
SDDR  Presa de Saban      5.84 268  eP       Pn        01 52 07.2 +0.5
SDDR  Presa de Saban      5.84 268⇑ eP       Pn        01 52 08.3 +1.6
SDDR  Presa de Saban      5.84 268  eS       Sn        01 53 14.7 +0.9
SDDR  Presa de Saban      5.84 268  i P      Pn        01 52 07.9 +1.2
LONE3 El Aguacate, B      6.04 265  i P      Pn        01 52 09.6  0.0
GRTK  Grand Turk          6.06 292  eP       Pn        01 52 06.1 -3.6
GRTK                                eS       Sn        01 53 10.1 -9.0
GRTK  Grand Turk          6.06 292  i P      Pn        01 52 07.8 -1.9
GRTK                                eS       Sn        01 53 10.2 -8.9
GRTK                                 IAML              01 53 15.2
             comp=Z,116nm,2.2s
LODU1 El Espartillar      6.09 262  i P      Pn        01 52 12.2 +2.1
MASC  Masc                8.63 277  eP       Pn        01 52 41.3 -3.7
PCRV  Puerto La Cruz      9.07 177   Pn      Pn        01 52 54.0 +2.9
             comp=Z,1.0nm,0.3s,baz=56,slow=4.0,SNR=1.3
PCRV                                 Sn      Sn        01 54 29.2 -4.1
             comp=Z,0.5nm,0.3s,baz=29,slow=19,SNR=1.3
PCRV                                 LR      LR        01 56 24.5
             comp=Z,180nm,18.2s,slow=38
             comp=Z,6.7nm,0.5s
QMBU  Quimbuelo           9.17 277  eP       Pn        01 52 47.2 -5.3
NMDO  Nuevo Mundo         9.36 279           Pn        01 52 50.4 -4.6
NMDO  Nuevo Mundo         9.36 279  eP       Pn        01 52 49.6 -5.5
GTBY  Guantanamo Bay      9.44 276  eP       Pn        01 52 52.8 -3.3
RCC   Rio Carpintero      9.99 276  eP       Pn        01 52 58.6 -5.1
PINC  Pinares de May     10.11 279  eP       Pn        01 52 59.3 -6.0
YAR   Yar                10.63 278  eP       Pn        01 53 07.2 -5.3
LMGC  Las Mercedes       11.22 276  eP       Pn        01 53 14.8 -5.8
SDV   Santo Domingo      11.64 208   Pn      Pn        01 53 30.6 +4.2
             comp=Z,1.7nm,0.3s,baz=15,slow=9.0,SNR=8.6
SDV                                  Sn      Sn        01 55 39.2 +2.6
             comp=Z,1.0nm,0.3s,baz=108,slow=18,SNR=2.3
SDV                                  LR      LR        01 58 21.7
             comp=Z,186nm,18.3s,baz=53,slow=40
BBSR  BB Station         13.04   2   Pn      Pn        01 53 40.5 -4.8
RUSC  La Rusia           15.41 211           Pn        01 54 16.0 -2.1
RUSC                                 IAmb    IAmb      01 54 36.9
             comp=Z,17nm,0.8s
061Z  Ochoppi            15.98 297   Pn      Pn        01 54 23.1 -1.8
ROSC  El Rosal           16.93 213   Pn      P         01 54 38.8 -0.7
             comp=Z,2.0nm,0.3s,baz=74,slow=15,SNR=4.5
ROSC                                 LR      LR        02 01 48.6
             comp=Z,142nm,18.9s,baz=76,slow=39
             comp=Z,6.1nm,0.4s
MDP   Montagnes des      18.62 138   P       Pn        01 54 58.4 +0.3
             comp=Z,0.3nm,0.3s,baz=331,slow=13,SNR=1.0
MDP                                  LR      LR        02 03 23.8
             comp=Z,49nm,19.0s,baz=294,slow=41
             comp=Z,2.3nm,0.6s
456A  Hilliard           19.06 310   P       Pn        01 55 06.1 +2.8
W57A  Gilead             20.57 323           P         01 55 19.6 +0.7
W57A                                 IAmb    IAmb      01 55 30.0
             comp=Z,12nm,0.7s
JTS   Las Juntas de      21.14 248   P       P         01 55 24.3 -1.1
             comp=Z,5.7nm,0.6s,baz=63,slow=9.2,SNR=3.8
JTS                                  LR      LR        02 03 58.5
             comp=Z,29nm,21.5s,baz=73,slow=38
             comp=Z,5.7nm,0.6s
T57A  Hurt               21.56 328   IAmb    IAmb      01 55 55.1
             comp=Z,15nm,1.2s
GOGA  Godfrey            21.59 314   P       P         01 55 30.3 +0.4
Y52A  Lilburn            22.26 315           P         01 55 39.5 +2.3
Y52A                                 IAmb    IAmb      01 56 17.8
             comp=Z,7.3nm,0.4s
V53A  Saluda             22.58 320   P       P         01 55 41.6 +0.9
OTAV  Otavalo            23.01 216   P       P         01 55 46.1 +0.4
TKL   Tuckaleechee C     23.17 319   P       P         01 55 47.2 +0.5
             comp=Z,2.7nm,0.8s,baz=129,slow=8.2,SNR=4.5
TKL                                  S       S         01 59 52.8 -5.6
             comp=Z,1.2nm,0.3s,baz=30,slow=20,SNR=3.3
TKL                                  LR      LR        02 07 15.6
             comp=Z,69nm,18.1s,baz=148,slow=43
             comp=Z,2.7nm,0.8s
FPAL  Fort Paine         23.69 314   P       P         01 55 52.1 +0.1
MAL2  Monte Alegre,      23.75 152   P       P         01 55 52.3 -0.3
MAL2                                 IAmb    IAmb      01 56 12.5
             comp=Z,13nm,0.9s
S51A  Beattyville        24.38 322   P       P         01 55 58.5 +0.1
S51A                                 IAmb    IAmb      01 56 23.4
             comp=Z,11nm,1.1s
T50A  Nancy              24.70 320           P         01 56 02.0 +0.7
T50A                                 IAmb    IAmb      01 56 03.2
             comp=Z,6.5nm,0.8s
U49A  Red Boiling Sp     24.97 318   P       P         01 56 04.3 +0.5
CZSB  Cruzeiro do Su     27.87 196   P       P         01 56 28.1 -1.9
X40A  Basin Creek Fa     28.86 307   IAmb    IAmb      01 56 39.4
             comp=Z,5.1nm,0.8s
ATAH  Atahualpa          29.33 208   LR      LR        02 10 26.9
             comp=Z,114nm,18.7s,baz=355,slow=40
LPAZ  La Paz             35.48 185   P       P         01 57 40.5 +2.9
             comp=Z,1.0nm,0.5s,baz=28,slow=4.0,SNR=3.9
             comp=Z,1.0nm,0.5s
SCHQ  Schefferville      35.51 358   P       P         01 57 37.6 +0.8
             comp=Z,1.1nm,0.7s,baz=182,slow=6.4,SNR=1.3
SCHQ                                 LR      LR        02 12 16.8
             comp=Z,51nm,18.6s,baz=300,slow=37
             comp=Z,1.1nm,0.7s
TXAR  Lajitas Array      36.38 293   P       P         01 57 44.8 +0.1
             comp=Z,1.8nm,0.7s,baz=113,slow=11,SNR=24
TXAR                                 LR      LR        02 16 05.4
             comp=Z,12nm,21.5s,baz=71,slow=42
             comp=Z,1.8nm,0.7s
T25A  Trinidad           38.60 306   IAmb    IAmb      01 58 05.0
             comp=Z,5.3nm,0.8s
ULM   Lac du Bonnet      39.39 329   P       P         01 58 08.8 -1.0
             comp=Z,1.5nm,0.5s,baz=120,slow=10,SNR=4.6
             comp=Z,1.5nm,0.5s
SDCO  Great Sand Dun     39.60 306   IAmb    IAmb      01 58 13.7
             comp=Z,7.4nm,0.8s
ANMO  Albuquerque        39.66 302   P       P         01 58 12.3 -0.2
             comp=Z,0.4nm,0.4s,baz=196,slow=4.2,SNR=2.2
             comp=Z,0.4nm,0.4s
ISCO  Idaho Springs      40.30 309   P       P         01 58 18.0 +0.2
PV15  Paradox Valley     42.02 306   IAmb    IAmb      01 58 34.1
             comp=Z,7.8nm,0.9s
PV13  Radium Mtn., P     42.24 306   IAmb    IAmb      01 58 35.9
             comp=Z,9.5nm,0.9s
PV03  Paradox Valley     42.28 306   IAmb    IAmb      01 58 35.9
             comp=Z,5.9nm,0.8s
PV11  David Mesa, Pa     42.31 306   IAmb    IAmb      01 58 38.6
             comp=Z,6.3nm,0.7s
PV16  Nyswonger Mesa     42.35 306   IAmb    IAmb      01 58 36.5
             comp=Z,5.9nm,0.8s
PV17  East Wray Mesa     42.38 306   IAmb    IAmb      01 58 36.6
             comp=Z,7.9nm,0.8s
PV05  Paradox Valley     42.43 306   IAmb    IAmb      01 58 36.2
             comp=Z,5.3nm,0.8s
PV23  Carpenter Ridg     42.46 306   IAmb    IAmb      01 58 50.0
             comp=Z,5.5nm,1.0s
PV10  Paradox Valley     42.46 306   IAmb    IAmb      01 58 37.2
             comp=Z,7.7nm,0.9s
P18A  Preston Nutter     43.67 308   IAmb    IAmb      01 58 47.0
             comp=Z,3.7nm,0.7s
PDAR  Pinedale Array     44.05 312   P       P         01 58 48.3 -0.1
PDAR  Pinedale Array     44.05 312   P       P         01 58 48.5 +0.1
             comp=Z,2.6nm,0.7s,baz=108,slow=9.5,SNR=24
PDAR                                 PcP     PcP       02 00 33.7  0.0
             comp=Z,0.2nm,0.5s,baz=101,slow=3.6,SNR=2.1
PDAR                                 LR      LR        02 18 23.5
             comp=Z,21nm,19.2s,baz=126,slow=38
             comp=Z,2.6nm,0.7s
BW06  Boulder Array      44.05 312   IAmb    IAmb      01 58 49.7
             comp=Z,3.8nm,0.9s
BSUT  Blindstream Ca     44.28 309   IAmb    IAmb      01 58 53.9
             comp=Z,6.2nm,1.1s
TMUT  Trail Mountain     44.32 307   IAmb    IAmb      01 58 52.6
             comp=Z,3.3nm,0.8s
LOHW  Long Hollow        45.03 313   IAmb    IAmb      01 58 57.4
             comp=Z,4.2nm,0.9s
CTU   Camp Tracy         45.05 309   IAmb    IAmb      01 58 57.6
             comp=Z,5.3nm,0.8s
HWUT  Hardware Ranch     45.15 310   IAmb    IAmb      01 58 57.8
             comp=Z,5.4nm,0.9s
TPAW  Teton Pass         45.24 313   IAmb    IAmb      01 58 59.4
             comp=Z,3.8nm,0.8s
BGU   Big Grassy Mou     46.05 309           P         01 59 04.3 +0.1
BGU                                  IAmb    IAmb      01 59 05.4
             comp=Z,4.6nm,0.9s
HVU   Hansel Valley      46.07 310   IAmb    IAmb      01 59 05.3
             comp=Z,3.6nm,0.7s
DLMT  Dillon             46.93 315   IAmb    IAmb      01 59 12.9
             comp=Z,4.3nm,0.9s
ELK   Elko               47.65 308   P       P         01 59 17.3 +0.5
ELK   Elko               47.65 308   LR      LR        02 21 00.3
             comp=Z,48nm,19.2s,baz=109,slow=38
HLID  Hailey             47.68 312   IAmb    IAmb      01 59 18.7
             comp=Z,3.1nm,0.7s
PLID  Pearl Lake         49.16 313   IAmb    IAmb      01 59 29.0
             comp=Z,2.9nm,0.8s
NVAR  Mina Array Bea     49.62 304   P       P         01 59 32.2 +0.1
             comp=Z,0.4nm,0.5s,baz=96,slow=7.4,SNR=5.2
             comp=Z,0.4nm,0.5s
BMO   Blue Mountains     50.01 313   IAmb    IAmb      01 59 35.0
             comp=Z,2.3nm,0.8s
NEW   Newport            50.74 317   LR      LR        02 22 46.8
             comp=Z,41nm,19.7s,baz=94,slow=38
LNOR  Lincton Mounta     50.91 314   IAmb    IAmb      01 59 42.7
             comp=Z,2.9nm,0.8s
I07A  Izee               51.39 311   IAmb    IAmb      01 59 46.3
             comp=Z,3.5nm,0.8s
MXC   Moxie City         52.42 314   IAmb    IAmb      01 59 53.9
             comp=Z,4.7nm,0.8s
YBH   Yreka Blue Hor     53.37 308   P       P         01 59 59.0 -0.8
             comp=Z,0.1nm,0.8s,baz=74,slow=3.2,SNR=8.3
BBOR  Butler Butte       53.48 309   IAmb    IAmb      02 00 01.7
             comp=Z,4.3nm,0.9s
MDT   Midelt             55.35  63   LR      LR        02 21 53.8
             comp=Z,34nm,18.4s,baz=318,slow=34
ESDC  Sonseca Array      55.91  55   P       P         02 00 18.9 +0.5
             comp=Z,0.4nm,0.8s,baz=263,slow=5.9,SNR=2.4
ESDC                                 LR      LR        02 18 42.9
             comp=Z,26nm,21.5s,baz=306,slow=30
             comp=Z,0.4nm,0.8s
TORD  Torodi Ar. Bea     64.12  84   P       P         02 01 14.5 -0.5
             comp=Z,1.7nm,0.3s,baz=300,slow=6.7,SNR=1.4
             comp=Z,1.7nm,0.3s
NOA   NORSAR Array B     66.71  31   LR      LR        02 27 37.8
             comp=Z,20nm,19.7s,baz=280,slow=33
J26L  Joseph Creek       67.80 333   P       P         02 01 38.4 +0.4
J26L                                 IAmb    IAmb      02 01 39.6
             comp=Z,1.6nm,0.7s
HFS   Hagfors            67.92  32   LR      LR        02 27 35.2
             comp=Z,38nm,19.9s,baz=292,slow=33
ILAR  Eielson Array      69.23 333   P       P         02 01 45.9 -0.9
             comp=Z,0.6nm,0.7s,baz=109,slow=4.3,SNR=12
             comp=Z,0.6nm,0.7s
FINES FINESS Array B     73.83  30   P       P         02 02 14.3 -0.3
             comp=Z,2.2nm,1.0s,baz=297,slow=6.1,SNR=3.7
             comp=Z,2.2nm,1.0s
BELG  Belogornoye        87.95  34   LR      LR        02 40 03.7
             comp=Z,20nm,20.2s,baz=323,slow=34
TIXI  Tiksi              88.79 356   LR      LR        02 44 10.5
             comp=Z,15nm,19.8s,baz=355,slow=36
PZH   PanZhiHua         132.73  16   PKP     PKiKP     02 09 57.3 +0.1
ASAR  Alice Springs     161.77 253   PKPab   PKPab     02 11 26.6 -1.0
             comp=Z,0.9nm,0.7s,baz=102,slow=4.7,SNR=6.9
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DJA 30 02:12:15.0±0.9**, 2°S**±7°×**13°9E**±°**, h18**km±9km**, M3.8**/5**, mb4.2**/1**, MLv3.6**/5**, Irian Jaya**

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Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC       h  m  s   ISC
SMPI  Sarmi               0.45   6   P       Pb        02 12 25.3 +0.9
SMPI                                 S       Sn        02 12 39.4 +5.2
GENI  Genyem              1.51  96   P       Pn        02 12 41.3 +0.1
GENI                                 S       Sn        02 13 00.8 +0.3
BAKI  Biak                2.84 296   P       Pn        02 13 00.1 +0.7
FAKI  Fak Fak             6.42 266   P       Pn        02 13 47.8 -1.0
```

IDC ***30*** *02:14:08.9±0.9, 9°.83N×126°.05E, h0km, mb3.8/9, mbtmp3.8/10, ML4.2/1, MS3.0/7, Error ellipse: s-maj=42.6km s-min=13.9km az=88.0*
ISC 30 02:14:17.1±0.8**, 9°.7N**±0°.1×**125°.9E**±0°.3**, h67**km**, n18, σ1ˢ22**/10**, mb3.7**/9**, Mindanao**

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Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC       h  m  s   ISC
DAV   Davao City (W)      2.58 187   Pn      Pn        02 14 55.0 -1.6
             41nm,0.3s,baz=74,slow=5.3,SNR=1.7
DAV                                  Lg      Lg        02 15 37.1
             60nm,0.3s,baz=165,slow=20,SNR=1.8
DAV                                  LR      LR        02 15 55.2
             comp=Z,79nm,18.9s,baz=358,slow=38
             144nm,0.3s
GUMO  Guam               18.98  76   LR      LR        02 24 04.3
             comp=Z,40nm,19.7s,baz=102,slow=32
CMAR  Chiang Mai Arr     27.55 291   LR      LR        02 30 08.5
             comp=Z,17nm,19.1s,baz=100,slow=35
FITZ  Fitzroy Crossi     27.57 181   P       P         02 19 59.9 +1.9
             1.9nm,0.9s,baz=350,slow=6.1,SNR=1.1
             1.9nm,0.9s
WRA   Warramunga Arr     30.56 164   P       P         02 20 25.8 +1.2
             0.4nm,0.6s,baz=343,slow=8.8,SNR=2.5
             0.4nm,0.6s
ASAR  Alice Springs      34.03 167   P       P         02 20 55.7 +0.8
             0.4nm,0.5s,baz=345,slow=8.3,SNR=8.0
             0.4nm,0.5s
H11N1 WAKE ISLAND Hy     40.79  71   T       T         03 05 03.7
             baz=264,slow=74,SNR=27
H11N2 WAKE ISLAND Hy     40.80  71   T       T         03 05 07.2
             baz=264,slow=74,SNR=24
H11N3 WAKE ISLAND Hy     40.81  71   T       T         03 05 03.9
             baz=264,slow=74,SNR=26
PETK  Petropavlovsk-     50.35  24   P       P         02 23 07.3 +0.2
             1.3nm,0.7s,baz=227,slow=7.4,SNR=1.7
             1.3nm,0.7s
MKAR  Makanchi Array     52.30 323   P       P         02 23 22.5 +0.6
             0.6nm,0.7s,baz=123,slow=8.2,SNR=5.2
             0.6nm,0.7s
MA2   Magadan            53.22  15   LR      LR        02 44 58.3
             comp=Z,15nm,21.0s,baz=203,slow=35
AAK   Ala-Archa          55.51 316   LR      LR        02 49 11.5
             comp=Z,38nm,21.6s,baz=344,slow=38
KURBB Kurchatov Arra     56.38 326   P       P         02 23 51.6 +0.2
             0.5nm,0.7s,baz=122,slow=7.0,SNR=5.6
KURBB                                LR      LR        02 50 36.6
             comp=Z,30nm,18.6s,baz=166,slow=39
             0.5nm,0.7s
SEY   Seymchan           56.50  14   LR      LR        02 47 22.0
             comp=Z,14nm,20.4s,baz=52,slow=35
ILAR  Eielson Array      80.15  26   P       P         02 26 18.6 -1.2
             0.2nm,0.7s,baz=256,slow=4.5,SNR=2.9
             0.2nm,0.7s
ARCES ARCESS Array B     84.64 340   P       P         02 26 42.6 -0.5
             1.4nm,0.6s,baz=60,slow=4.7,SNR=3.7
             1.4nm,0.6s
FINES FINESS Array B     86.26 332   P       P         02 26 51.5 +0.3
             1.6nm,0.8s,baz=48,slow=2.8,SNR=5.4
             1.6nm,0.8s
```

CATAC ***30*** *02:25:38.6±0.8, 8°N±5°×8°3W±°, h7km±3km, M3.6/7, MLv3.6/7, Error ellipse: s-maj=10.1km s-min=9.8km az=20.6, confirmed*
UCR ***30*** *02:25:39.9±1.2, 8°.34N×82°.79W, h23km±2km, MW3.7*
UPA ***30*** *02:25:39.3±0.9, 8°.35N×82°.86W, h18km±9km, MD3.6*
ISC 30 02:25:40.2±1.0**, 8°.35N**±0°.04×**82°.81W**±0°.03**, h31**km±6km**, n86, σ1ˢ26**/99**, Panama-Costa Rica border region**

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Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC       h  m  s   ISC
LPPC  Paso Canoas         0.19 352  eP       Pb        02 25 45.8 -0.7
LPPC                                eS       Sb        02 25 50.9 +0.2
CDITO Canoas              0.23 345   S       Sb        02 25 51.7 +0.2
CDITO Canoas              0.23 345   P       Pb        02 25 46.2 -0.8
LMNES Limones             0.25 191  eP       Pb        02 25 46.7 -0.4
NELY  Ciudad Neily        0.33 337  eP       Pb        02 25 47.2 -1.0
NELY                                eS       Sb        02 25 53.8 +0.2
DVD   David               0.37  76  eP       Pb        02 25 48.1 -0.6
DVD                                 eS       Sb        02 25 54.9 +0.4
CSTBL De las Acacias      0.37  80  eP       Pb        02 25 48.3 -0.5
PEDE3 Pedregal, Chir      0.39  84  eP       Pb        02 25 48.2 -0.8
PEDE3                               eS       Sb        02 25 55.4 +0.4
LOCO3 Loma Colorada,      0.40  81  eP       Pb        02 25 48.4 -0.7
FITO  Golfito             0.44 310  eP       Pb        02 25 48.0 -1.8
FITO                                eS       Sb        02 25 54.8 -1.4
CLLRA Cordillera,         0.44  26  eP       Pb        02 25 49.3 -0.6
MLIR3 Monte Lirio, C      0.45 359  eP       Pb        02 25 49.4 -0.5
MLIR3                               eS       Sb        02 25 57.2 +0.6
BRU2  Volcan              0.46  15  eP       Pb        02 25 49.4 -0.8
BRU2  Volcan              0.46  15   P       Pb        02 25 49.5 -0.8
BRU2  Volcan              0.46  15  eP       Pb        02 25 49.3 -0.9
BRU2                                eS       Sb        02 25 57.0 -0.1
BRU2                                eS                 02 25 57.1
EDAD  Golfito             0.46 311  eP       Pb        02 25 48.2 -1.9
PTAR3 Potrerillos Ar      0.47  42  eP       Pb        02 25 49.5 -0.8
PTAR3                               eS       Sb        02 25 57.5 +0.3
RSRNO Rio Sereno          0.47 354  eP       Pb        02 25 49.9 -0.5
TBS2                      0.47  19  eP       Pb        02 25 50.5 +0.1
CHIR3 Chiriqui UPA,       0.48  84  eP       Pb        02 25 49.5 -0.9
CHIR3                               eS       Sb        02 25 57.9 +0.5
SCLRA Santa Clara, W      0.49   4  eP       Pb        02 25 50.0 -0.6
VITO  San Vito            0.50 342  eP       Pb        02 25 50.0 -0.7
BC3P  Paso Ancho          0.51  23  eP       Pb        02 25 49.9 -1.1
BC3P                                eS       Sb        02 25 59.2 +0.8
BQTLY Boquete Panama      0.54  40  eP       Pb        02 25 50.4 -1.1
BQSF3 Alto Boquete,       0.55  44  eP       Pb        02 25 50.3 -1.2
BQSF3                               eS       Sb        02 25 58.6 -0.7
PSOM3 Paja de Sombre      0.59  55  eP       Pb        02 25 50.8 -1.4
PSOM3                               eS       Sb        02 25 59.7 -0.8
ALCO  Alturas Coton,      0.60 358  eP       Pb        02 25 51.0 -1.5
EDP2  Potrero Grande      0.76 332  eP       Pn        02 25 53.5 -1.3
PBNVO Pueblo Nuevo,       0.82  49  eP       Pn        02 25 54.1 -1.6
RBALA Bur                 0.84  51  eP       Pn        02 25 54.9 -1.1
PANP  Palmar Norte        0.88 314  eP       Pn        02 25 55.0 -1.5
BURE  Buenos Aires        0.97 328  eP       Pn        02 25 55.0 -2.8
DRK0  Durika              1.01 335  eP       Pn        02 25 56.9 -1.5
DRK0  Durika              1.01 335   P       Pn        02 25 56.9 -1.5
DRK0  Durika              1.01 335   S       Sn        02 26 11.2 -0.4
DRK0  Durika              1.01 335  eP       Pn        02 25 56.9 -1.5
DRK0                                eS       Sn        02 26 10.8 -0.8
OCHAL Ojochal             1.11 312   P       Pn        02 25 58.2 -1.5
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OCHAL	Ojochal	1.11	312	S	Sn	02 26 13.7	-0.2
BRIBI	Bribri	1.27	360	eP	Pn	02 26 02.4	+0.6
GMAL	Guarumal, Vera	1.67	110	eP	Pn	02 26 06.0	-1.3
LLNJ	Naranjito	1.70	312	eP	Pn	02 26 07.7	0.0
RAZU	San Marcos de	1.77	318	eP	Pn	02 26 10.2	+1.3
PITB	Pirrs, San	1.77	318	eP	Pn	02 26 09.1	+0.2
TURIB	Turrialba	1.77	331	eP	Pn	02 26 08.9	0.0
VINA	Juan Vinas	1.79	329	eP	Pn	02 26 09.5	+0.3
REPA	Paraso	1.81	325	eP	Pn	02 26 09.4	0.0
VERB	Verbena	1.81	331	eP	Pn	02 26 09.7	+0.2
PISJ	San Jernim	1.82	315	eP	Pn	02 26 09.9	+0.4
LCR2	La Lucha 2	1.82	320	eP	Pn	02 26 09.7	+0.1
LCR2	La Lucha 2	1.82	320	P	Pn	02 26 08.6	-1.0
LCR2	La Lucha 2	1.82	320	S	Sn	02 26 31.6	-0.1
ABE2	San Pablo	1.82	318	eP	Pn	02 26 10.2	+0.5
VTCV	VTCV, Calle Va	1.86	331	eP	Pn	02 26 10.4	+0.2
PICV	PH. Pirrs	1.87	313	eP	Pn	02 26 10.2	+0.1
IRES	Siquirres	1.87	339	eP	Pn	02 26 10.8	+0.7
RAFA	San Farael, Vo	1.88	328	eP	Pn	02 26 10.6	+0.1
CVTV	Tajo	1.89	331	eP	Pn	02 26 11.0	+0.3
CVTQ	Turrialba Volc	1.90	330	eP	Pn	02 26 11.2	+0.3
VTLA	Turrialba Volc	1.90	330	eP	Pn	02 26 11.2	+0.3
VTR0	Volcan Turrial	1.91	331	eP	Pn	02 26 11.4	+0.4
RVLA	Villa Bonita	1.91	336	eP	Pn	02 26 11.5	+0.8
VICA	Volcano Irazu	1.92	328	eP	Pn	02 26 12.3	+1.1
ACOS	Acosta	1.96	317	eP	Pn	02 26 12.2	+0.6
CVIMO	Finca Echandi	2.01	326	eP	Pn	02 26 12.6	+0.4
SANTA	Santa Ana	2.08	319	eP	Pn	02 26 13.9	+0.8
HDC	Heredia	2.09	322	eP	Pn	02 26 14.4	+1.2
VBV1	V. Barva	2.17	324	eP	Pn	02 26 15.5	+1.0
CACAO	El Cacao, Vera	2.17	117	eP	Pn	02 26 14.9	+0.6
TRT2	Tortugero	2.38	338	eP	Pn	02 26 17.7	+0.6
TRT2	Tortugero	2.38	338	P	Pn	02 26 18.0	+0.8
TRT2	Tortugero	2.38	338	S	Sn	02 26 49.4	+4.1
VPL1	V. Platanar	2.44	321	eP	Pn	02 26 21.3	+3.1
VPL2	V. Platanar	2.49	322	eP	Pn	02 26 20.4	+1.6
SOCE	Pocosol	2.70	319	eP	Pn	02 26 23.7	+2.1
SOCE	Pocosol	2.70	319	S	Sn	02 26 57.1	+4.0
SOCE	Pocosol	2.70	319	P	Pn	02 26 23.6	+2.1
VACR	Volcan Arenal	2.80	319	eP	Pn	02 26 25.4	+2.5
ARE1	Arenal 1	2.82	318	eP	Pn	02 26 25.0	+1.8
CEDE	Laguna Cedeo	2.83	319	eP	Pn	02 26 26.6	+3.2
COVE	Coope Vega, Sa	2.83	327	P	Pn	02 26 24.3	+0.9
COVE	Coope Vega, Sa	2.83	327	S	Sb	02 27 03.3	-1.1
CMARA	Lajas Hojancha	3.07	303	S	Sn	02 27 02.0	-0.4
CMARA	Lajas Hojancha	3.07	303	P	Pn	02 26 26.6	0.0
TENO	El Achiote	3.17	318	eP	Pn	02 26 30.1	+2.0
CUI	Cuipilapa	3.26	315	eP	Pn	02 26 30.9	+1.6
VRLE	La Escondida,	3.50	314	eP	Pn	02 26 33.9	+1.3

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*IDC **30** 02:48:46.4±0.8,2°.69S×138°.73E,h0km,mb3.7/7, mbtmp3.7/8,ML3.8/1,Error ellipse: s-maj=21.2km s-min=15.9km az=173.0*

ISC 30 02:48:52.7±0.8,**2°.8S**±0°.1×**138°.9E**±0°.2,**h46**km,**n9**,σ**1s.34**/9, **mb3.6**/7,**Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	1.82	81	Pn	Pn	02 49 21.5	-0.1
	3.2nm,0.3s,baz=243,slow=8.5,SNR=18						
JAY				Lg	Lg	02 49 50.4	
	4.3nm,0.3s,baz=275,slow=18,SNR=4.9						
WRA	Warramunga Arr	17.62	194	P	Pn	02 52 53.5	-1.5
	0.3nm,0.3s,baz=17,slow=12,SNR=7.7 0.7nm,0.4s						
ASAR	Alice Springs	21.31	193	P	P	02 53 35.6	-0.2
	1.3nm,0.8s,baz=20,slow=10.0,SNR=12 1.3nm,0.8s						
MKAR	Makanchi Array	69.97	322	P	P	02 59 57.7	-1.7
	0.3nm,0.6s,baz=111,slow=7.9,SNR=2.9 0.3nm,0.6s						
KURBB	Kurchatov Arra	73.90	325	P	P	03 00 23.3	+0.4
	0.2nm,0.5s,baz=116,slow=5.3,SNR=2.0 0.2nm,0.5s						
VNDA	Vanda	75.69	175	P	P	03 00 34.1	+1.4
	0.4nm,0.5s,baz=350,slow=6.1,SNR=7.3 0.4nm,0.5s						
BVAR	Borovoye Array	79.49	325	P	P	03 00 55.8	+1.4
	0.7nm,0.5s,baz=127,slow=9.6,SNR=5.2 0.7nm,0.5s						
ILAR	Eielson Array	85.82	24	P	P	03 01 25.9	-1.2
	0.4nm,0.7s,baz=266,slow=4.5,SNR=9.5 0.4nm,0.7s						
QSPA	South Pole Qui	87.16	180	P	P	03 01 34.2	+0.4
	1.7nm,0.9s,baz=64,slow=11,SNR=3.0 1.7nm,0.9s						

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*IDC **30** 02:57:16.3±3.6,24°.44S×177°.09W,h0km,mb4.2/2, mbtmp4.2/2,MS3.1/1,Error ellipse: s-maj=198.0km s-min=49.4km az=155.0*

*NEIC **30** 02:57:22.0±1.4,24°.7S±0°.1×177°.0W±0°.1,h35km±2km, mb4.3/10,Error ellipse: s-maj=23.6km s-min=14.0km az=324.0*

ISC 30 02:57:21.7±0.8,**24°.7S**±0°.1×**177°.1W**±0°.1,**h35**km,**n19**, σ**0s.79**/18,**mb4.4**/6,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	8.63	51	Pn	Pn	02 59 23.0	-1.2
NIUE				Sn	Sn	03 00 47.7	-13
RAR	Rarotonga	16.28	81	LR	LR	03 06 29.5	
	comp=Z,74nm,21.9s,baz=285,slow=34						
BFZ	Birch Farm	16.93	198	Pn	Pn	03 01 15.5	-0.4
BFZ				IAmb	IAmb	03 01 45.9	
	comp=Z,20nm,1.2s						
MSWZ	Moikau Station	17.90	199	Pn	Pn	03 01 26.1	-1.7
KHZ	Kahutara	19.34	201	P	P	03 01 43.4	-0.6
KHZ				IAmb	IAmb	03 01 44.6	
	comp=Z,11nm,1.1s						
CTAO	Charters Tower	34.17	270	P	P	03 04 04.4	+0.5
CTAO				IAmb	IAmb	03 04 41.0	
	comp=Z,18nm,1.4s						
PTCN	Pitcairn Islan	42.43	101	P	P	03 05 14.4	+1.2
AS31	Alice Springs	44.57	261	P	P	03 05 31.1	+0.5
ASAR	Alice Springs	44.57	261		P	03 05 31.1	+0.5
ASAR	Alice Springs	44.57	261	P	P	03 05 30.4	-0.3
	comp=Z,1.1nm,0.4s,baz=99,slow=7.4,SNR=34						
ASAR				PcP	PcP	03 07 12.9	-0.4
	comp=Z,0.3nm,0.6s,baz=89,slow=4.1,SNR=1.8 comp=Z,1.1nm,0.4s						
WR8	Warramunga Arr	44.89	266	P	P	03 05 32.6	-0.5
WR8				IAmb	IAmb	03 05 53.0	
	comp=Z,14nm,1.5s						
WRA	Warramunga Arr	45.04	266	P	P	03 05 34.4	+0.1
WRA	Warramunga Arr	45.04	266	P	P	03 05 33.7	-0.7
	comp=Z,1.4nm,0.3s,baz=105,slow=7.7,SNR=22 comp=Z,1.4nm,0.3s						
KNRA	Kununurra	51.38	269	P	P	03 06 23.2	-0.1
FITZ	Fitzroy Crossi	53.45	265	P	P	03 06 38.6	0.0
FITZ				IAmb	IAmb	03 07 12.8	
	comp=Z,2.2nm,1.2s						
QSPA	South Pole Qui	65.43	180	P	P	03 08 01.6	+0.8
QSPA				IAmb	IAmb	03 08 36.5	
	comp=Z,6.2nm,1.3s						
HFS	Hagfors	143.77	351	PKhKP	PKPpre	03 16 48.4	
	comp=Z,1.9nm,1.0s,baz=62,slow=3.4,SNR=9.3						
AKASG	Malin Array Be	147.04	329	PKPbc	PKPdf	03 16 59.2	+0.8
	comp=Z,0.5nm,0.3s,baz=44,slow=4.6,SNR=9.4						
MMAI	Mount Meron Ar	150.47	294	PKPbc	PKPbc	03 17 10.3	+0.3
	comp=Z,0.8nm,0.4s,baz=67,slow=4.8,SNR=2.1						

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*SOME **30** 02:57:26.6,40°.43N×73°.45E,h15km*

*KRNET **30** 02:57:28.1±0.1,40°.41N×73°.43E,h21km,mb3.5*

*NNC **30** 02:57:29.5±1.3,40°.58N×73°.41E,h0km,mb3.8,mpv3.6, Error ellipse: s-maj=11.6km s-min=5.5km az=173.0*

*KNET **30** 02:57:30.1±0.3,40°.52N×73°.52E,h16km±2km,ml3.0,Error ellipse: s-maj=3.5km s-min=2.2km az=88.0*

ISC 30 02:57:28.6±1.1,**40°.39N**±0°.03×**73°.38E**±0°.02,**h10**km±9km, **n64**,σ**1s.29**/104,**47C-25D**,**Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.39	166	⇑iP	Pg	02 57 36.3	-0.1
SFK				⇑iS	Sg	02 57 41.9	+0.3
OHH	Osh	0.47	286	⇓iP	Pg	02 57 38.2	+0.4
OHH				⇓iS	Sg	02 57 45.2	+1.2
SALK	Salom-Alik	0.59	34	⇑iP	Pg	02 57 39.2	-0.9
SALK				⇑iS	Sg	02 57 46.9	-1.1
ARSB	Arslanbob	0.98	342	⇓iP	Pb	02 57 46.5	-1.2
ARSB				⇓iS	Sb	02 57 59.8	-1.0
DRK	Karamyk	1.52	234	⇓iP	Pn	02 57 56.5	+0.4
DRK				⇓iS	Sb	02 58 17.0	+0.5
AML	Almayashu	1.75	8	⇑P	Pn	02 58 00.0	+0.6
	137nm,0.2s,SNR=291						
AML				⇑S	Sb	02 58 23.3	0.0
	624nm,0.4s						
AML	Almayashu	1.75	8	⇓iP	Pn	02 57 59.5	+0.1
AML				⇓iS	Sn	02 58 22.2	+0.2
ARK	Arkit	1.77	323	⇑iP	Pn	02 57 59.9	+0.6
ARK				⇑iS	Sb	02 58 23.0	-0.4
BTK	Batken	1.99	261	⇑eP	Pn	02 58 03.4	+1.0
BTK				⇑eS	Sb	02 58 29.1	-0.7
UCH	Uchtor	2.02	25	⇓P	Pn	02 58 04.6	+1.4
	12nm,0.2s,SNR=8.0						
UCH				⇑S	Sb	02 58 30.9	-0.2
	46nm,0.2s						
UCH	Uchtor	2.02	25	⇓iP	Pn	02 58 03.1	-0.1
UCH				⇓iS	Sn	02 58 28.6	-0.2
TRKS	Terek-Say	2.04	305	⇑iP	Pn	02 58 03.1	-0.1
TRKS				⇑iS	Sn	02 58 28.6	-0.2
MNAS	Manas	2.19	343	⇑iP	Pn	02 58 05.7	+0.4
MNAS				⇑iS	Sn	02 58 33.0	+0.5
NRN	Naryn	2.24	62	⇑iP	Pn	02 58 05.5	-0.6
NRN				⇑iS	Sn	02 58 32.6	-1.4
EKS2	Erkin-Say	2.29	7	⇑P	Pn	02 58 08.1	+1.6
	12nm,0.2s,SNR=18						
EKS2				⇓S	Sb	02 58 38.4	0.0
	24nm,0.2s						
EKS2	Erkin-Say	2.29	7	⇓iP	Pn	02 58 06.6	+0.1
EKS2				⇓iS	Sn	02 58 34.7	-0.1
MRKS	Merke	2.35	357	Pg	Pn	02 58 09.4	+1.9
	27nm,0.2s						
MRKS				Lg	Lg	02 58 40.1	
	192nm,0.4s						
MRKS	Merke	2.35	357	eP	Pn	02 58 09.3	+1.9
	27nm,0.2s						
MRKS				eS	Sb	02 58 40.1	-0.2
	192nm,0.4s						
AAK	Ala-Archa	2.39	20	⇑P	Pn	02 58 09.6	+1.6
	25nm,0.2s,SNR=11						
AAK				⇑S	Sb	02 58 40.2	-1.3
	13nm,0.3s						
AAK	Ala-Archa	2.39	20	⇑Pn	Pn	02 58 09.3	+1.2
AAK				⇑Lg	Lg	02 58 41.0	
AAK	Ala-Archa	2.39	20	⇑iP	Pn	02 58 08.1	+0.1
AAK				⇑iS	Sn	02 58 37.1	-0.4
KBK	Karagaybulak	2.55	27	⇑P	Pn	02 58 11.8	+1.7
	16nm,0.2s,SNR=18						
KBK				⇓S	Sn	02 58 43.9	+2.5
	212nm,0.4s						
KBK	Karagaybulak	2.55	27	⇓iP	Pn	02 58 10.2	0.0
KBK				⇓iS	Sn	02 58 40.9	-0.5
FRU1	Bishkek	2.59	21	⇑iP	Pn	02 58 11.0	+0.4
FRU1				⇑iS	Sn	02 58 42.1	-0.1
GAR	Garm	2.74	240	⇑iP	Pn	02 58 13.8	+1.0
GAR				⇑iS	Sn	02 58 47.1	+1.0
CHMS	Chumysh	2.80	21	⇑P	Pn	02 58 15.1	+1.7
	5.1nm,0.2s,SNR=6.8						
CHMS	Chumysh	2.80	21	⇑Pn	Pn	02 58 15.1	+1.7
	3.8nm,0.3s						
CHMS				⇑Lg	Lg	02 58 54.0	
	49nm,0.6s						
CHMS	Chumysh	2.80	21	⇓iP	Pn	02 58 13.5	0.0
CHMS				⇓iS	Sn	02 58 46.7	-0.6
ULHL	Ulahol	2.84	48	⇑P	Pn	02 58 15.2	+1.0
	11nm,0.2s,SNR=7.2						
ULHL	Ulahol	2.84	48	⇑iP	Pn	02 58 14.2	0.0
ULHL				⇑iS	Sn	02 58 47.6	-1.0
BOOM	Boomskoye usch	2.84	42	⇓eP	Pn	02 58 14.3	+0.1
BOOM				⇓iS	Sn	02 58 47.8	-0.9
DZA	Taraz	2.93	329	Pg	Pb	02 58 19.4	-1.5
	168nm,0.1s						
DZA				Lg	Lg	02 58 57.5	
	152nm,0.3s						
DZA	Taraz	2.93	329	eP	Pb	02 58 19.4	-1.5
	168nm,0.1s						
DZA				eS	Sb	02 58 57.5	+0.6
	152nm,0.3s						
USP	Ospenovka	2.99	16	⇑iP	Pn	02 58 16.2	+0.1
USP				⇑iS	Sn	02 58 51.3	-0.8
TKM2	Tokmak 2	3.02	33	⇑Pn	Pn	02 58 19.0	+2.3
	6.2nm,0.4s						
TKM2				⇑Lg	Lg	02 58 59.5	
	25nm,0.5s						
TKM2	Tokmak 2	3.02	33	⇑iP	Pn	02 58 16.8	+0.1
TKM2				⇑iS	Sn	02 58 52.1	-1.0
IUG	Iuzhnay	3.07	306	Pg	Pb	02 58 22.2	-1.2
	39nm,0.3s						
IUG				Lg	Lg	02 59 02.1	
	124nm,0.4s						
KST	Kastek	3.28	35	Pg	Pb	02 58 25.6	-1.3
	4.6nm,0.2s						
KST				Lg	Lg	02 59 07.9	
	41nm,0.3s						
KST	Kastek	3.28	35	eP	Pb	02 58 25.6	-1.3
	4.6nm,0.2s						
KST				eS	Sb	02 59 07.9	+1.0
	41nm,0.3s						
KDJ	Kajisay	3.35	58	⇓iP	Pn	02 58 21.2	0.0
KDJ				⇓iS	Sn	02 59 00.0	-1.1
KK31	Karatay Array	3.45	323	Pn	Pn	02 58 23.6	+1.1
	0.4nm,0.2s,baz=130,slow=13,SNR=25						
KK31				⇓Pg	Pb	02 58 31.0	+1.1
	1.4nm,0.2s,baz=132,slow=16,SNR=16						
KK31				⇓Lg	Lg	02 59 19.3	
	9.0nm,0.5s,baz=142,slow=27,SNR=5.0						
KKAR	Karatay Array	3.45	323	⇑iP	Pn	02 58 23.2	+0.7
KKAR				⇑iS	Sn	02 59 03.5	0.0
MTBS	Maitube	3.56	39	Pg	Pb	02 58 30.2	-1.5
	10nm,0.4s						
MTBS				Lg	Lg	02 59 15.6	
	23nm,0.5s						
MTBS	Maitube	3.56	39	eP	Pb	02 58 30.2	-1.5
	10nm,0.4s						
MTBS				eS	Sb	02 59 15.6	+0.6
	23nm,0.5s						
KRBS	Karabastau	3.72	27	Pg	Pb	02 58 33.3	-1.1
	9.0nm,0.4s						
KRBS				Lg	Lg	02 59 21.0	
	31nm,0.6s						
BRLS	Borolday	3.74	316	Pg	Pb	02 58 32.8	-1.9
	5.3nm,0.3s						
BRLS				Lg	Lg	02 59 20.5	
	22nm,0.4s						
BRLS	Borolday	3.74	316	eP	Pb	02 58 32.8	-1.9
	5.3nm,0.3s						
BRLS				eS	Sb	02 59 20.5	+0.4
	22nm,0.4s						
TNSS	Tian-Shan	3.76	44	Pg	Pb	02 58 33.9	-1.4
	2.8nm,0.4s						
TNSS				Lg	Lg	02 59 22.1	
	12nm,0.7s						
TNSS	Tian-Shan	3.76	44	eP	Pb	02 58 33.9	-1.4
	2.8nm,0.4s						
TNSS				eS	Sb	02 59 22.1	+1.1
	12nm,0.7s						
KOTS	Kotyrbulak	3.98	43	Pg	Pb	02 58 38.2	-0.7
	17nm,0.5s						
KOTS				Lg	Lg	02 59 29.4	
	80nm,0.8s						
KOTS	Kotyrbulak	3.98	43	eP	Pb	02 58 38.1	-0.7
	17nm,0.5s						
KOTS				eS	Sb	02 59 29.4	+2.3
	80nm,0.8s						
KTBS	Karatobe	4.13	35	Pg	Pb	02 58 41.0	-0.4
	6.6nm,0.3s						
KTBS				Lg	Lg	02 59 34.1	
	41nm,0.6s						
PRZ	Przheval'sk	4.31	59	⇑iP	Pn	02 58 34.6	+0.2
PRZ				⇑iS	Sn	02 59 23.2	-1.7
CHKK	Chushkaly	4.38	37	Pg	Pb	02 58 45.7	+0.1
	29nm,0.4s						
CHKK				Lg	Lg	02 59 42.3	
	24nm,0.6s						
CHKK	Chushkaly	4.38	37	eP	Pb	02 58 45.7	+0.1
	29nm,0.4s						
CHKK				eS	Sb	02 59 42.3	+3.9
	24nm,0.6s						
BTLS	Baital	4.67	6	Pg	Pb	02 58 51.5	+1.0
	3.6nm,0.4s						
BTLS				Lg	Lg	02 59 52.4	
	12nm,0.5s						
BTLS	Baital	4.67	6	eP	Pb	02 58 51.5	+1.0
	3.6nm,0.4s						
BTLS				eS	Sb	02 59 52.4	+5.5
	12nm,0.5s						
KPKS	Kokpek	5.01	50	Pg	Pb	02 58 56.5	+0.1
	0.6nm,0.4s						
KPKS				Lg	Lg	03 00 00.9	
	49nm,0.6s						
UZB	Uzynbulak	5.04	55	Pg	Pb	02 58 57.3	+0.4
	5.3nm,0.4s						
UZB				Lg	Lg	03 00 02.3	
	18nm,0.5s						
ARXS	Arharly	5.04	39	Pg	Pb	02 58 57.8	+0.9
	3.3nm,0.7s						
ARXS				Lg	Lg	03 00 03.1	
	17nm,0.7s						
BLB	Baldybastay	5.29	44	Pg	Pb	02 59 03.5	+2.2
	24nm,0.7s						
BLB				Lg	Lg	03 00 12.3	
	14nm,0.5s						
PDGK	Podgornoye	5.42	55	⇑Pn	Pn	02 58 49.6	0.0
	5.3nm,0.8s						
PDGK				⇑Lg	Lg	03 00 15.0	
	27nm,1.0s						
KNOS	Konyrlen	5.84	45	Pg	Pb	02 59 13.9	+3.2
	4.2nm,0.6s						
KNOS				Lg	Lg	03 00 30.1	
	18nm,0.5s						
AB31	Akbulak array	13.00	317	P	Pn	03 00 32.0	-1.3
	0.1nm,0.2s,baz=235,slow=7.2,SNR=9.3						

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*AEIC **30** 02:59:14.6±0.8,53°.4N±0°.2×170°.1W±0°.2,h162km±9km, Error ellipse: s-maj=24.0km s-min=9.3km az=155.0*

*NEIC **30** 02:59:14.2±0.8,53°.2N±0°.4×169°.8W±0°.3,h173km±16km, ML3.1/16,ML2.7(AEIC),Error ellipse: s-maj=60.7km s-min=2.9km az=158.0*

ISC 30 02:59:13.8±2.3,**53°.2N**±0°.3×**169°.8W**±0°.1,**h175**km±22km, **n37**,σ**0s.75**/40,**Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.64	110		Pn	02 59 38.7	+0.1
NIKH				Sn	Sn	02 59 58.1	+0.5
NIKH				IAML		02 59 58.7	
	comp=N,149nm,0.5s						
NIKH	Nikolski High	0.64	110	P	Pn	02 59 38.9	+0.3
NIKH	Nikolski High	0.64	110	S	Sn	02 59 58.2	+0.6
OKSP	Okmok Steeple	0.93	86		Pn	02 59 40.7	+0.2
OKWE	Okmok W'ng Wal	1.00	73		Pn	02 59 41.1	+0.2
OKCE	Okmok Cone E	1.03	76		Pn	02 59 40.1	-1.1
OKCE					Sn	03 00 00.2	-2.2
OKTU	Okmok Mt. Tuli	1.10	79		Pn	02 59 41.7	0.0
OKFG	Magazine Ridge	1.18	79		Pn	02 59 42.5	+0.2
OKFG					Sn	03 00 06.2	+1.8
MAPS	Pakushin South	1.84	69		Pn	02 59 48.4	-0.3
MAPS					Sn	03 00 15.5	-0.3
MGOD	Makushin Gods	1.87	70		Pn	02 59 48.9	-0.2
MREP	Makushin Rep't	1.95	70		Pn	02 59 49.9	0.0
MTBL	Makushin Table	2.04	66		Pn	02 59 51.0	+0.1
UNV	Unalaska Valle	2.10	71		Sn	03 00 20.8	+0.1
UNV	Unalaska Valle	2.10	71		Pn	02 59 51.6	+0.2
UNV	Unalaska Valle	2.10	71	P	Pn	02 59 51.9	+0.5
UNV	Unalaska Valle	2.10	71	S	Sn	03 00 20.8	+0.1
AKRB	Akutan Reef Bi	2.43	66		Pn	02 59 55.6	+0.3
AKMO	Akutan Morgan	2.45	67		Pn	02 59 55.9	+0.4
AKMO					Sn	03 00 28.1	+0.1
LVA	Lava Point	2.46	65	Pn	Pn	02 59 56.1	+0.4
LVA				IAML		03 00 41.7	
	comp=E,67nm,1.3s						
LVA				IAML		03 00 41.8	
	comp=N,91nm,0.8s						
AKUT	Akutan	2.60	67	Pn	Pn	02 59 57.8	+0.6
AKUT				IAML		03 00 32.4	
	comp=E,43nm,1.0s						
AKUT				IAML		03 00 37.2	
	comp=N,36nm,0.5s						
AKUT	Akutan	2.60	67	P	Pn	02 59 57.8	+0.6
AKUT	Akutan	2.60	67	S	Sn	03 00 31.7	+0.7
ATKA	Atka Island	2.83	251		Pn	02 59 59.9	-0.1
ATKA	Atka Island	2.83	251	IAML		03 00 38.1	
	comp=E,32nm,0.9s						
ATKA	Atka Island	2.83	251	P	Pn	03 00 00.4	+0.4
ATKA	Atka Island	2.83	251	S	Sn	03 00 35.3	-0.7
WEBT	Westdahl Beart	3.32	63		Pn	03 00 06.5	+0.5
WESE	West Dahl East	3.37	66		Pn	03 00 07.3	+0.6
ADK	Adak	4.38	255	Pn	Pn	03 00 19.7	+0.3
ADK	Adak	4.38	255	P	Pn	03 00 20.0	+0.5
KIWB	Kanaga Island	4.66	256	Pn	Pn	03 00 23.6	+0.5
S12K	Black Hills	5.19	58	Pn	Pn	03 00 30.0	+0.1
S12K				IAML		03 01 30.0	
	comp=N,13nm,0.5s						
S12K				IAML		03 01 39.1	
	comp=E,16nm,1.2s						
SDPT	Sand Point	5.90	65	Pn	Pn	03 00 37.8	-1.4
CNBA	Chernabura Isl	6.26	71	Pn	Pn	03 00 42.3	-1.6
AMKA	Amchitka	6.91	259	Pn	Pn	03 00 51.5	-1.0
PLK4	Peulik 4	8.86	55	Pn	Pn	03 01 17.5	-0.8
OHAK	Old Harbor	10.28	60	Pn	Pn	03 01 33.0	-3.8

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*JMA **30** 03:18:18.6±0.1,38°.9N±0°.2×141°.6E±0°.4,h73km,MV3.5/39, NORTHERN MIYAGI PREF*

JMA Felt I J1 at NORTHERN MIYAGI PREF .

*IDC **30** 03:18:19.1±2.5,38°.86N×141°.66E,h82km±22km,mb3.4/8, mbtmp3.6/11,Error ellipse: s-maj=26.6km s-min=18.0km az=93.0*

ISC 30 03:18:18.1±0.9,**38°.89N**±0°.05×**141°.72E**±0°.07,**h76**km±6km, **n31**,σ**0s.95**/34,**mb3.8**/8,**8D**,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.20	349	P	Pn	03 18 29.8	+0.5
OFUJ				eS	Sn	03 18 37.8	+0.2
JKMT	Kesennumamotoy	0.21	248	P	Pn	03 18 29.5	+0.2
JKMT				S	Sn	03 18 37.3	-0.3
JMK	Ichinoseki	0.39	279	P	Pn	03 18 30.2	-0.3
JMK				eS	Sn	03 18 38.7	-0.9
JIO	Ouri	0.52	214	P	Pn	03 18 31.5	-0.1
JIO				eS	Sn	03 18 40.5	-1.0
JOM	Ohasama	0.67	331	⇓P	Pn	03 18 33.3	+0.2
JOM				⇓eS	Sn	03 18 44.0	-0.2
JOU	Okura	0.98	238	P	Pn	03 18 36.3	-0.3
JOU				eS	Sn	03 18 49.6	-0.8
JRG	Rokugo	0.98	301	⇓P	Pn	03 18 36.6	-0.1
JRG				⇓eS	Sn	03 18 49.9	-0.7
JYK	Kaneyama	1.06	272	⇓P	Pn	03 18 37.3	-0.3
JYK				⇓eS	Sn	03 18 51.1	-1.0
JMM	Marumori	1.25	216	i P	Pn	03 18 39.4	-0.7
JYS	Shirataka	1.46	243	P	Pn	03 18 42.6	0.0
JYS				eS	Sn	03 19 00.3	-0.9
JAH	Hinai	1.54	328	⇓iP	Pn	03 18 44.4	+0.6
JYA	Atsumi	1.59	260	⇓P	Pn	03 18 44.2	-0.2
JFK	Kawauchi	1.66	204	P	Pn	03 18 45.1	-0.2
MJAR	Matsushiro Arr	3.64	231	P	Pn	03 19 13.5	+1.5
	2.4nm,0.4s,baz=42,slow=11,SNR=14						
ASAJ	Asahikawa	5.26	7	P	Pn	03 19 33.8	-0.3
	1.3nm,0.3s,baz=206,slow=7.9,SNR=6.4						
ASAJ				S	Sn	03 20 29.6	-3.8
	2.2nm,0.4s,baz=225,slow=20,SNR=1.6						
USRK	Ussuriysk Ar.	9.02	309	P	Pn	03 20 26.4	+1.1
	1.4nm,0.6s,baz=113,slow=14,SNR=4.6						
KSRS	Korea Array	10.96	267	P	Pn	03 20 56.7	+4.9
	0.5nm,0.3s,baz=72,slow=14,SNR=3.0						
H11N2	WAKE ISLAND Hy	28.94	124	T	T	03 54 43.2	
	baz=318,slow=75,SNR=148						
H11N1	WAKE ISLAND Hy	28.95	124	T	T	03 54 45.0	
	baz=318,slow=75,SNR=147						
H11N3	WAKE ISLAND Hy	28.95	124	T	T	03 54 45.6	
	baz=318,slow=75,SNR=193						
H11S1	WAKE ISLAND Hy	29.71	126	T	T	03 55 40.2	
	baz=318,slow=75,SNR=20						
H11S3	WAKE ISLAND Hy	29.71	126	T	T	03 55 34.2	
	baz=318,slow=75,SNR=36						
H11S2	WAKE ISLAND Hy	29.73	126	T	T	03 55 41.3	
	baz=318,slow=75,SNR=26						
ZALV	Zalesovo Beam	40.87	311	P	P	03 25 52.6	+0.3
	1.1nm,0.5s,baz=54,slow=7.5,SNR=4.0 1.1nm,0.5s						
MKAR	Makanchi Array	43.36	301	P	P	03 26 12.4	-0.4
	0.5nm,0.5s,baz=86,slow=9.4,SNR=5.5 0.5nm,0.5s						
KURBB	Kurchatov Arra	45.07	307	P	P	03 26 26.4	+0.1
	0.7nm,0.4s,baz=82,slow=8.4,SNR=9.6 0.7nm,0.4s						
ILAR	Eielson Array	47.81	33	P	P	03 26 48.9	+1.4

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	0.4nm,0.6s,baz=260,slow=6.8,SNR=8.8						
	0.4nm,0.6s						
BVAR	Borovoye Array	49.52	311	P	P	03 27 00.8	0.0
	0.6nm,0.5s,baz=86,slow=8.8,SNR=2.6						
	0.6nm,0.5s						
WRA	Warramunga Arr	58.93	188	P	P	03 28 08.8	-0.6
	0.3nm,0.4s,baz=6.4,slow=7.4,SNR=5.8						
	0.3nm,0.4s						
ASAR	Alice Springs	62.66	188	P	P	03 28 34.6	0.0
	0.3nm,0.8s,baz=7.4,slow=4.5,SNR=1.7						
	0.3nm,0.8s						
HFS	Hagfors	72.50	336	P	P	03 29 36.5	+0.3
	1.1nm,0.8s,baz=15,slow=6.0,SNR=1.3						
	1.1nm,0.8s						

IDC 30 03:21:38.3±3.5,31°.71N×140°.81E,h0km,mb3.5/3, mbtmp3.5/5,ML2.3/1,Error ellipse: s-maj=144.6km s-min=20.9km az=69.0,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	4.75	165	Pn	Pn	03 22 53.0	+1.8
	15nm,0.4s,baz=180,slow=0.0						
JCJ				Sn	Sn	03 23 47.8	+0.6
	baz=180,slow=0.0						
MJAR	Matsushiro Arr	5.28	337	Pn	Pn	03 22 57.5	-1.0
	0.1nm,0.3s,baz=160,slow=11,SNR=5.5						
MJAR				Sn	Sn	03 23 55.0	-5.0
	0.1nm,0.3s,baz=144,slow=20,SNR=1.2						
	0.7nm,0.4s						
MKAR	Makanchi Array	46.70	306	P	P	03 30 09.0	+0.1
	0.3nm,0.5s,baz=98,slow=9.5,SNR=2.6						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	49.02	312	P	P	03 30 27.0	+0.2
	0.2nm,0.4s,baz=89,slow=6.9,SNR=6.5						
	0.2nm,0.4s						
WRA	Warramunga Arr	51.73	188	P	P	03 30 46.6	-0.9
	0.5nm,0.7s,baz=8.0,slow=7.4,SNR=6.2						
	0.5nm,0.7s						

RSNC 30 03:35:13.3±0.3,10°N±2°×7°2W±°,h0km,M2.4,ML2.3
FUNV 30 03:35:15.8,9°.92N×71°.66W,h20km,MW3.5
ISC 30 03:35:14.7±2.2,9°.94N±0°.04×71°.64W±0°.03,h16km±16km, n16,σ1s.89/27,Lake Maracaibo

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCQV	Machiques	0.88	277	eP	Pb	03 35 32.3	+0.6
MCQV				eS	Sg	03 35 43.2	-0.4
SDV	Santo Domingo	1.45	136	P	Pn	03 35 41.2	+0.7
SDV				S	Sn	03 35 58.3	-1.0
CRJC	Cerrejon, Guaj	1.62	311	P	Pn	03 35 42.4	-0.4
CRJC				S	Sn	03 36 02.9	-0.5
URIC	Uribia, Colomb	1.78	349	P	Pn	03 35 44.1	-0.8
URIC				S	Sb	03 36 09.9	+0.8
SOCV	Socops	1.82	155	eP	Pn	03 35 45.7	+0.2
SOCV				eS	Sn	03 36 07.0	-1.3
CAPV	Capacho	2.17	198	eP	Pn	03 35 50.6	+0.1
CAPV				eS	Sn	03 36 16.3	-0.9
OCAC	Ocana	2.37	224	P	Pn	03 35 53.9	+0.8
OCAC				S	Sb	03 36 25.6	-0.7
TEPV	Terepaima	2.42	89	eP	Pn	03 35 53.6	0.0
TEPV				eS	Sn	03 36 22.3	-0.7
ARGC	Ariguani, Magd	2.57	268	P	Pn	03 35 55.7	0.0
SJCC	San Jacinto, C	3.48	270	P	Pn	03 36 09.1	+0.7
SJCC				S	Sn	03 36 51.4	+2.0
BARC	Barichara	3.66	205	P	Pn	03 36 11.2	+0.2
BAUV	El Baul	3.69	105	eP	Pn	03 36 11.1	-0.1
BAUV				eS	Sn	03 36 51.2	-3.2
BENV	Beln	3.98	89	eP	Pn	03 36 16.0	+0.7
BENV				eS	Sn	03 36 58.6	-3.2
ZARC	Zaragoza, Cauc	4.00	233	P	Pn	03 36 13.6	-1.9
PTBC	PUERTO BERRIO,	4.38	220	P	Pn	03 36 19.4	-1.3
CACV	CAICARA DEL OR	5.57	115	eP	Pn	03 36 43.1	+6.0
CACV				eS	Sn	03 37 47.5	+6.6

JMA 30 03:53:35.9±0.2,33°N±2°×13°7E±°,h387km±2km,MV3.0/21, SE OFF KII PENINSULA
IDC 30 03:53:38.4±5.4,34°.16N×136°.73E,h397km±25km,mb2.8/4, mbtmp3.4/6,Error ellipse: s-maj=111.5km s-min=22.6km az=179.0
ISC 30 03:53:36.8±1.6,33°.9N±0°.2×136°.7E±0°.1,h400km,n11, σ1s.16/12,mb3.2/4,Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKN2	Miekihoku	0.50	313	eP	Pn	03 54 25.4	-1.1
JTNC	Tanabenakahech	0.92	266	eP	Pn	03 54 26.5	-1.2
JWY	Kouya	0.99	289	P	Pn	03 54 27.1	-0.8
JHMK	Hamakita	1.26	43	eP	Pn	03 54 28.0	-0.6
JAI	Aioi	1.89	268	P	Pn	03 54 30.9	-1.2
MJAR	Matsushiro Arr	2.91	24	P	Pn	03 54 38.7	-0.5
	4.9nm,0.7s,baz=190,slow=9.7,SNR=21						
MJAR				S	S	03 55 27.9	-2.0
	1.7nm,0.7s,baz=194,slow=18,SNR=1.5						
KSRS	Korea Array	7.99	299	P	P	03 55 32.2	+0.3
	1.6nm,0.5s,baz=117,slow=12,SNR=9.3						
SONM	Songino Array	26.63	311	P	P	03 58 41.6	+0.8
	0.6nm,0.5s,baz=96,slow=7.4,SNR=2.5						
	0.6nm,0.5s						
MKAR	Makanchi Array	42.62	304	P	P	04 00 56.0	+0.3
	0.2nm,0.4s,baz=84,slow=9.9,SNR=4.1						
	0.2nm,0.4s						
NVAR	Mina Array Bea	79.94	50	P	P	04 05 04.3	+1.3
	0.3nm,0.6s,baz=303,slow=6.6,SNR=2.1						
	0.3nm,0.6s						
PDAR	Pinedale Array	82.58	43	P	P	04 05 17.4	+0.7
	0.2nm,0.5s,baz=305,slow=7.4,SNR=2.9						
	0.2nm,0.5s						

IDC 30 03:59:08.8±3.3,6°.54S×127°.91E,h332km±38km,mb3.4/6, mbtmp4.2/10,Error ellipse: s-maj=42.9km s-min=14.9km az=60.0
NEIC 30 03:59:08.8±1.3,6°.52S±0°.06×127°.99E±0°.09,h326km±10km, mb4.5/7,Error ellipse: s-maj=13.3km s-min=8.4km az=105.0
ISC 30 03:59:10.0±0.6,6°.62S±0°.06×127°.98E±0°.07,h353km,n32, σ1s.50/33,mb3.8/8,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	3.56	113	Sn	S	04 01 01.3	-5.7
SOEI	Soe	4.81	229		Pn	04 00 26.4	-1.5
SOEI	Soe	4.81	229	P	Pn	04 00 26.6	-1.3
BATI	Baumata	5.56	230	P	Pn	04 00 34.9	-1.1
	121nm,0.4s,baz=79,slow=16,SNR=16						
BATI				S	S	04 01 42.3	-3.3
	41nm,0.4s,baz=343,slow=21,SNR=6.8						
FAKI	Fak Fak	5.62	49	Pn	Pn	04 00 32.4	-4.3
FAKI	Fak Fak	5.62	49	P	Pn	04 00 32.4	-4.3
DRS	Darwin Rock St	6.45	154	P	Pn	04 00 45.5	-0.6
MTN	Manton Dam	6.92	154		Pn	04 00 50.4	-1.1
MTN	Manton Dam	6.92	154	P	Pn	04 00 50.4	-1.1
KDU	Kakadu	7.48	144	P	Pn	04 00 57.2	-0.9
LUWI	Luwuk	7.60	317	P	Pn	04 00 52.4	-7.1
KNRA	Kununurra	9.03	175	Pn	Pn	04 01 15.9	-0.5
FITZ	Fitzroy Crossi	11.63	191		Pn	04 01 46.3	-1.1
FITZ	Fitzroy Crossi	11.63	191	P	P	04 01 48.4	+0.9
	1.5nm,0.4s,baz=35,slow=6.8,SNR=8.1						
FITZ				S	S	04 03 58.2	+1.1
	3.0nm,0.8s,baz=97,slow=19,SNR=2.8						
WB0	Warramunga Arr	14.48	155		P	04 02 19.4	+0.6
WRA	Warramunga Arr	14.61	156	P	P	04 02 20.8	+0.5
	6.7nm,0.5s,baz=330,slow=12,SNR=93						
WRA				S	S	04 04 58.1	+0.1
	0.8nm,0.7s,baz=337,slow=21,SNR=5.4						
WR8	Warramunga Arr	14.69	155		P	04 02 21.8	+0.6
COEN	Coen	16.63	117	P	P	04 02 42.9	+0.7
COEN				IAmb	IAmb	04 02 43.4	
	comp=Z,16nm,0.6s						
PSA00	Pilbara Seismi	16.82	207	P	P	04 02 44.2	+0.1
PSA00				IAmb	IAmb	04 03 09.6	
	comp=Z,26nm,1.4s						
AS31	Alice Springs	17.88	162	P	P	04 02 56.9	+1.3
ASAR	Alice Springs	17.88	162	P	P	04 02 56.8	+1.1
	comp=Z,9.8nm,0.7s,baz=344,slow=11,SNR=117						
ASAR				S	S	04 06 03.7	+1.1
	comp=Z,1.1nm,0.8s,baz=342,slow=20,SNR=5.2						
STKA	Stephens Creek	28.16	155	P	P	04 04 32.1	+1.0
STKA				IAmb	IAmb	04 05 16.2	
	comp=Z,81nm,1.5s						
STKA	Stephens Creek	28.16	155	P	P	04 04 32.1	+1.0
	comp=Z,2.0nm,0.5s,baz=333,slow=7.5,SNR=6.4						
	comp=Z,2.0nm,0.5s						
HKPS	Hong Kong Po S	31.76	335	P	P	04 05 02.5	-0.2
KSRS	Korea Array	43.85	360	P	P	04 06 41.9	-0.7
	comp=Z,1.0nm,0.5s,baz=176,slow=9.2,SNR=5.4						
	comp=Z,1.0nm,0.5s						
ERM	Erimo	50.35	15	P	P	04 07 33.0	+0.9
ERM				IAmb	IAmb	04 08 11.8	
	comp=Z,45nm,1.4s						
SONM	Songino Array	57.47	343	P	P	04 08 24.4	+1.1
	comp=Z,0.6nm,0.5s,baz=163,slow=7.5,SNR=3.3						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	66.82	328	P	P	04 09 24.7	0.0
MKAR	Makanchi Array	66.82	328	P	P	04 09 25.2	+0.5
	comp=Z,0.9nm,0.4s,baz=112,slow=8.8,SNR=13						
	comp=Z,0.9nm,0.4s						
ZALV	Zalesovo Beam	70.37	335	P	P	04 09 45.5	-0.8
	comp=Z,0.9nm,0.4s,baz=115,slow=10.0,SNR=4.4						
	comp=Z,0.9nm,0.4s						
KURBB	Kurchatov Arra	71.15	329	P	P	04 09 51.1	+0.2
	comp=Z,0.8nm,0.4s,baz=128,slow=4.9,SNR=5.8						
	comp=Z,0.8nm,0.4s						
QSPA	South Pole Qui	83.35	180	P	P	04 10 58.6	+0.6
QSPA				IAmb	IAmb	04 11 29.8	
	comp=Z,2.4nm,1.2s						

NEIC 30 04:01:45.3±1.0,19°.75N±0°.05×65°.24W±0°.09,h10km±2km, ML3.4/22,Md3.8/17(RSPR),Error ellipse: s-maj=14.9km s-min=6.2km az=116.0
IDC 30 04:01:47.0±2.2,19°.53N×65°.25W,h0km,mb3.5/5, mbtmp3.5/5,MS3.0/8,Error ellipse: s-maj=60.5km s-min=22.8km az=83.0
RSPR 30 04:01:47.1,19°.69N×65°.24W,h112km±8km,MD3.8/17
ISC 30 04:01:49.3±1.0,19°.58N±0°.05×65°.32W±0°.08,h16km,n72, σ1s.10/62,mb3.5/5,MS3.1/6,18C,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GCPR	Guaynabo City	1.46	210		Pn	04 02 13.7	-1.3
GCPR				IAML		04 02 36.8	
	comp=N,409nm,1.1s						
GCPR	Guaynabo City	1.46	210		Sg	04 02 36.6	+0.3
GCPR	Guaynabo City	1.46	210	⇑eP	Pn	04 02 13.9	-1.1
GCPR	Guaynabo City	1.46	210	eS	Sg	04 02 36.6	+0.3
HUMP	Col San Antoni	1.51	199		Pn	04 02 14.4	-1.3
HUMP					Sn	04 02 34.6	-0.6
HUMP				IAML		04 02 41.4	
	comp=E,350nm,0.6s						
HUMP				IAML		04 02 51.8	
	comp=N,354nm,1.2s						
HUMP	Col San Antoni	1.51	199	⇑eP	Pn	04 02 15.4	-0.4
HUMP	Col San Antoni	1.51	199	eS	Sn	04 02 35.0	-0.2
EMPR	Esperanza - Ma	1.58	227		Pn	04 02 15.6	-1.1
EMPR	Esperanza - Ma	1.58	227	⇑eP	Pn	04 02 16.2	-0.5
EMPR	Esperanza - Ma	1.58	227	eS	Sb	04 02 39.6	+1.6
ECPR	Experimental S	1.59	218	⇑eP	Pn	04 02 15.9	-1.0
ECPR	Experimental S	1.59	218	eS	Sn	04 02 37.7	+0.5
SJG	San Juan	1.66	209		Pn	04 02 17.1	-0.6
SJG	San Juan	1.66	209	IAML		04 02 40.7	
	comp=N,317nm,0.6s						
SJG				IAML		04 02 55.2	
	comp=N,301nm,1.2s						
SJG	San Juan	1.66	209	Pn	Pn	04 02 17.0	-0.8
	comp=N,25nm,0.3s,baz=42,slow=12,SNR=76						
SJG				Sn	Sn	04 02 35.3	-3.4
	comp=N,31nm,0.3s,baz=331,slow=19,SNR=5.9						
SJG				LR	LR	04 02 42.6	
	comp=N,174nm,19.5s,baz=68,slow=34						
SJG	San Juan	1.66	209	⇑eP	Pn	04 02 17.1	-0.6
SJG	San Juan	1.66	209	eS	Sb	04 02 40.5	+0.4
PDPR	Patillas Dam,	1.69	203		Pn	04 02 17.4	-0.8
PDPR	Patillas Dam,	1.69	203	⇑eP	Pn	04 02 17.4	-0.8
PDPR	Patillas Dam,	1.69	203	eS	Sb	04 02 41.9	+0.9
IGPR	InterUniversit	1.77	205		Pn	04 02 18.8	-0.5
IGPR					Sb	04 02 43.2	-0.1
IGPR	InterUniversit	1.77	205	⇑eP	Pn	04 02 18.8	-0.5
IGPR	InterUniversit	1.77	205	eS	Sb	04 02 43.2	-0.1
AOPR	Arecibo Observ	1.83	228		Pn	04 02 18.8	-1.4
AOPR	Arecibo Observ	1.83	228	⇑eP	Pn	04 02 19.2	-0.9
AOPR	Arecibo Observ	1.83	228	eS	Sn	04 02 43.3	+0.3
CELP	Cerrillos	1.91	219		Pn	04 02 20.2	-1.0
CELP	Cerrillos	1.91	219	IAML		04 03 00.1	
	comp=N,321nm,1.2s						
CELP				IAML		04 03 00.8	
	comp=E,226nm,1.3s						
CELP	Cerrillos	1.91	219	⇑eP	Pn	04 02 20.2	-1.0
CELP	Cerrillos	1.91	219	eS	Sn	04 02 46.4	+1.4
OBIP	Obispado Ponce	1.95	219		Pn	04 02 21.2	-0.7
OBIP	Obispado Ponce	1.95	219	IAML		04 02 53.3	
	comp=E,330nm,0.9s						
OBIP				IAML		04 03 02.4	
	comp=N,246nm,0.8s						
OBIP	Obispado Ponce	1.95	219	⇑eP	Pn	04 02 21.2	-0.7
OBIP	Obispado Ponce	1.95	219	eS	Sn	04 02 45.5	-0.5
AGPR	Aguadilla, PR	2.02	237		Pn	04 02 20.9	-1.9
AGPR	Aguadilla, PR	2.02	237	⇑eP	Pn	04 02 22.0	-0.8
GBPR	Guanica, Bosqu	2.17	223		Pn	04 02 24.4	-0.5
GBPR	Guanica, Bosqu	2.17	223	⇑eP	Pn	04 02 24.4	-0.5
LSP	Las Mesas	2.18	230		Pn	04 02 23.9	-1.1
LSP					Sn	04 02 52.3	+0.6
LSP	Las Mesas	2.18	230	⇑eP	Pn	04 02 23.9	-1.1
LSP	Las Mesas	2.18	230	eS	Sn	04 02 52.3	+0.6
PRSN	Puerto Rico Se	2.19	232		Pn	04 02 24.3	-0.8
PRSN	Puerto Rico Se	2.19	232	IAML		04 02 55.9	
	comp=N,548nm,0.3s						
PRSN	Puerto Rico Se	2.19	232	⇑eP	Pn	04 02 24.3	-0.8
PRSN	Puerto Rico Se	2.19	232	eS	Sn	04 02 53.0	+1.0
MLPR	Magueyes Islan	2.29	226	⇑eP	Pn	04 02 25.7	-0.7
MLPR	Magueyes Islan	2.29	226	eS	Sn	04 02 54.4	+0.1
CRPR	Cabo Rojo, PR	2.31	228		Pn	04 02 26.1	-0.6
CRPR	Cabo Rojo, PR	2.31	228	IAML		04 03 14.6	
	comp=E,156nm,1.6s						
CRPR				IAML		04 03 19.9	
	comp=N,155nm,1.1s						
CRPR	Cabo Rojo, PR	2.31	228	⇑eP	Pn	04 02 26.1	-0.6
CRPR	Cabo Rojo, PR	2.31	228	eS	Sn	04 02 55.8	+1.0
IDE	Isla Desecheo	2.36	240		Pn	04 02 25.1	-2.3
IDE	Isla Desecheo	2.36	240	⇑eP	Pn	04 02 25.1	-2.3
MIDR	Miches	3.57	261	⇑eP	Pn	04 02 42.1	-2.0
SDDR	Presa de Saban	5.67	265		Pn	04 03 11.2	-1.8
NMDO	Nuevo Mundo	9.13	278	Pn	Pn	04 03 54.6	-5.9
PCRV	Puerto La Cruz	9.37	176	LR	LR	04 07 11.9	
	comp=N,112nm,21.1s,slow=35						
SDV	Santo Domingo	11.81	207	LR	LR	04 10 06.9	
	comp=N,48nm,18.1s,baz=49,slow=42						
RUSC	La Rusia	15.56	210		Pn	04 05 27.1	-1.6
BOAV	Boa Vista	17.71	164	P	Pn	04 05 55.1	-0.3
TKL	Tuckaleechee C	22.83	318	LR	LR	04 16 54.6	
	comp=N,18nm,18.0s,baz=178,slow=40						
SADO	Sadowa	27.63	338	LR	LR	04 19 38.2	
	comp=N,48nm,18.1s,baz=151,slow=39						
ATAH	Atahualpa	29.50	207	LR	LR	04 20 46.6	
	comp=N,45nm,21.2s,baz=352,slow=39						
SCHQ	Schefferville	35.21	358	LR	LR	04 22 59.4	
	comp=N,39nm,19.2s,baz=212,slow=36						
LPAZ	La Paz	35.75	185	P	P	04 08 48.2	-0.1
	comp=N,1.0nm,0.8s,baz=11,slow=8.7,SNR=4.8						
	comp=N,1.0nm,0.8s						
TXAR	Lajitas Array	36.10	293	P	P	04 08 52.1	+1.4
	comp=N,0.9nm,0.8s,baz=107,slow=10,SNR=13						
	comp=N,0.9nm,0.8s						
PDAR	Pinedale Array	43.71	312	P	P	04 09 53.4	-0.7
	comp=N,0.2nm,0.5s,baz=116,slow=4.8,SNR=2.0						
	comp=N,0.2nm,0.5s						
NVAR	Mina Array Bea	49.31	304	P	P	04 10 39.0	+1.0
	comp=N,0.2nm,0.4s,baz=92,slow=6.3,SNR=3.9						
	comp=N,0.2nm,0.4s						
ESDC	Sonseca Array	55.90	55	LR	LR	04 31 23.0	
	comp=N,17nm,21.4s,baz=191,slow=32						
NOA	NORSAR Array B	66.56	31	LR	LR	04 41 37.2	
	comp=N,9.7nm,18.0s,baz=80,slow=36						
ILAR	Eielson Array	68.89	333	P	P	04 12 54.0	+0.9
	comp=N,0.3nm,0.8s,baz=87,slow=6.7,SNR=4.4						
	comp=N,0.3nm,0.8s						
ASAR	Alice Springs	161.67	254	PKPab	PKPab	04 22 35.8	+0.3
	comp=N,0.8nm,0.9s,baz=108,slow=4.9,SNR=5.6						

TAP 30 04:05:44.4,24°.91N×122°.45E,h17km±1km,ML2.5,D
JMA 30 04:05:45.2±0.1,24°.8N±0°.8×122°.4E±0°.4,h23km±3km, MV2.0/6,NW OFF ISHIGAKIJIMA IS
ISC 30 04:05:44.8±1.1,24°.87N±0°.03×122°.43E±0°.02,h18km±3km, n46,σ0s.53/91,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao	0.43	289	P	Pg	04 05 53.5	-0.1
TWB1				eS	Sg	04 05 59.0	-0.5
EGS		0.46	267	eP	Pb	04 05 54.5	+0.2
EGS				S	Sb	04 06 01.9	+1.2
EOS2	EOS2	0.48	202	P	Pg	04 05 55.3	+0.8
EOS2				iS	Sn	04 06 03.2	-1.3
SXI1	Grass Mountain	0.56	294	P	Pb	04 05 55.9	-0.1
SXI1				S	Sg	04 06 03.9	+0.5
TIPB	Shuangxi	0.56	281	P	Pg	04 05 56.1	+0.1
TIPB				iS	Sg	04 06 04.4	+0.7
EOS3	EOS3	0.59	190	eP	Pn	04 05 57.4	-0.7
EOS3				S	Sn	04 06 07.1	0.0
TWC	Suao	0.59	244	eP	Pb	04 05 56.2	-0.2
TWC				S	Sn	04 06 06.1	-1.2
ESAO	Su ao	0.61	242	P	Pb	04 05 56.9	+0.1
ESAO				S	Sn	04 06 07.2	-0.7
JYNG	Yonagunijimaku	0.62	132	eP	Pb	04 05 56.9	-0.2
JYNG				eS	Sb	04 06 05.4	0.0
NWF	Wu-fen Shan	0.63	289	P	Pb	04 05 57.2	0.0
NWF				eS	Sb	04 06 05.2	-0.3
WFSB	Wu-fen Shan	0.63	289	eP	Pn	04 05 58.0	-0.8
WFSB				S	Sg	04 06 06.1	+0.5
TNOU	National Taiwa	0.66	295	P	Pg	04 05 57.9	0.0
TNOU				S	Sg	04 06 07.0	+0.3
YOJ	Yonaguni jima	0.66	127	eP	Pb	04 05 57.6	-0.1
YOJ				eS	Sb	04 06 06.6	0.0
YOJ	Yonaguni jima	0.66	127	iP	Pb	04 05 57.8	0.0
YOJ				S	Sg	04 06 07.1	+0.3
NDS	Dongshan	0.69	251	eP	Pb	04 05 57.2	-1.1
NDS				eS	Sg	04 06 07.7	0.0
TWE	Neicheng	0.71	258	eP	Pg	04 05 58.8	0.0
TWE				S	Sn	04 06 09.4	-0.9
EWUT	Wuta	0.73	235	P	Pg	04 05 59.1	-0.1
EWUT				eS	Sg	04 06 09.2	+0.4
EOS4	EOS4	0.75	188	P	Pg	04 05 59.6	+0.2
EOS4				S	Sn	04 06 11.2	+0.4
ENA	Nanau	0.77	235	P	Pb	04 05 59.4	-0.2
ENA				S	Sn	04 06 10.8	-0.9
FUSB	Fushanzhiwuyua	0.78	262	P	Pb	04 05 59.8	0.0
FUSB				S	Sn	04 06 11.7	-0.4
ENTT	Nioudou	0.82	254	P	Pn	04 06 01.1	-0.3
ENTT				S	Sn	04 06 13.1	0.0
YM08	YM08	0.83	293	P	Pb	04 06 00.7	0.0
YM08				S	Sg	04 06 12.2	+0.1
YM01	YM01	0.83	290	P	Pb	04 06 00.5	-0.2
YM01				S	Sg	04 06 12.6	+0.5
NWLT	Wulai	0.85	264	eP	Pb	04 06 01.0	0.0
NWLT				eS	Sb	04 06 12.2	+0.1
ZUZH	Zhuzihu	0.86	290	P	Pb	04 06 01.3	+0.2
ZUZH				S	Sg	04 06 13.3	+0.3
LATG	Datong	0.89	248	P	Pg	04 06 02.1	-0.1
LATG				S	Sg	04 06 14.0	+0.1
YHNB	Yeheng	0.98	259	iP	Pn	04 06 03.5	-0.2
YHNB				S	Sg	04 06 18.2	+1.4
NSK	Sanguang	1.00	259	iP	Pn	04 06 03.6	-0.3
NSK				S	Sg	04 06 17.6	+0.3
NACB	Ninganchiao	1.03	228	P	Pg	04 06 04.5	-0.3
NACB				eS	Sg	04 06 18.3	-0.1
NNSB	Datong	1.05	246	eP	Pg	04 06 04.9	-0.3
NNSB				eS	Sn	04 06 18.9	0.0
NNSH	Datong	1.05	246	iP	Pn	04 06 04.8	+0.1
NNSH				eS	Sn	04 06 18.6	-0.3
NNS	Nan Shan	1.05	246	P	Pn	04 06 05.0	+0.2
NNS				eS	Sn	04 06 18.7	-0.3
ETLH	Xiulin Townshi	1.09	233	P	Pb	04 06 04.8	-0.4
ETLH				S	Sg	04 06 20.4	+0.1
NFF	Wufeng Townshi	1.22	259	P	Pn	04 06 07.0	+0.1
NFF				S	Sn	04 06 23.4	+0.4
LXIB	Xiulin Townshi	1.25	228	P	Pb	04 06 08.2	+0.2
LXIB				S	Sg	04 06 24.8	-0.8
WHF	Hehuan Shan	1.28	236	iP	Pn	04 06 08.3	+0.1
WHF				iS	Sg	04 06 25.8	-0.8
IRIF	Iriomote-Funau	1.29	114	eP	Pn	04 06 08.0	+0.1
OWD	Renai	1.46	232	P	Pb	04 06 11.8	+0.3
OWD				eS	Sg	04 06 32.3	+0.2
WHP	Taichung City	1.48	247	eP	Pg	04 06 13.1	-0.2
WHP				iS	Sb	04 06 30.7	+0.5
WUSB	Renai	1.48	234	eP	Pb	04 06 12.5	+0.6
WUSB				eS	Sg	04 06 33.4	+0.7
WARBT	Fenglin Townsh	1.49	220	iP	Pb	04 06 11.3	-0.6
WARBT				iS	Sb	04 06 31.2	+0.7
TWQ1	Liyutan	1.60	251	iP	Pb	04 06 13.2	-0.5
TWQ1				eS	Sb	04 06 34.9	+1.3
VWDT	VWDT	1.62	227	P	Pb	04 06 13.5	-0.6
VWDT				S	Sb	04 06 34.2	0.0
HGSD	Ruisui	1.65	214	P	Pb	04 06 14.7	0.0
HGSD				S	Sb	04 06 35.3	+0.2
SSLB	Suanglung	1.73	232	eP	Pb	04 06 16.7	+0.7
SSLB				eS	Sb	04 06 38.7	+1.4
YULB	Yu-li	1.80	215	P	Pn	04 06 15.7	+0.8
YULB				eS	Sb	04 06 38.7	-0.7

KRSC 30 04:08:52.2±1.2,55°.99N×164°.05E,h16km±20km,Ml3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.73	288	eP	Pg	04 09 05.9	-0.4
KBTR				eS	Sb	04 09 16.5	+0.4
KBG	Krutoberegovo	0.80	290	eP	Pb	04 09 06.8	-0.9
KBG				eS	Sb	04 09 18.6	+0.3
BKI	Bering	1.34	125	eP	Pn	04 09 16.2	0.0
BKI				eS	Sn	04 09 33.7	-0.1
SMKR	Semkarok	1.56	294	eP	Pn	04 09 18.9	-0.4
SMKR				eS	Sn	04 09 38.8	-0.5
BDR	Baidarnaya	1.69	291	eS	Sn	04 09 42.8	+0.3
ZLN	Zelenaya	1.82	272	eP	Pb	04 09 24.8	-0.4
CIRR	Tsirk	1.86	275	eP	Pb	04 09 25.1	-0.7
BZGR	Bezymyannyi-Gr	1.89	270	eP	Pb	04 09 25.6	-0.7
KLY	Klyuchi	1.93	281	eP	Pn	04 09 23.8	-0.6
MKZ	Mys Kozlova	1.95	224	eP	Pb	04 09 27.0	-0.3
MKZ				eS	Sb	04 09 51.9	+0.5
KRSR	Krestovskiy	1.97	278	eP	Pn	04 09 25.7	+0.8
BZWR	Bezymyannyi-We	2.00	271	eP	Pb	04 09 27.3	-1.0
BZMR	Bezymyannaya	2.00	270	eP	Pb	04 09 27.3	-1.0
KIRR	Kirishev	2.09	271	eP	Pb	04 09 28.4	-1.3
KPT	Kopyto	2.15	271	eP	Pb	04 09 29.8	-1.1
KMNR	Kamenistaya	2.16	265	eP	Pb	04 09 30.0	-1.0
TUMD	Tumrok D	2.22	251	eP	Pb	04 09 31.0	-0.9
KOZ	Kozyrevsk	2.35	273	eP	Pb	04 09 32.4	-1.7
SRDR	Sredinnyy	2.45	280	eP	Pn	04 09 33.4	+1.8
SPN	Mys Shipunski	3.73	221	eP	Pn	04 09 51.8	+2.8
SPN				eS	Sn	04 10 33.0	+0.5
SDLR	Sedlovina	4.05	230	eP	Pn	04 09 57.3	+3.7
KRER	Koryakskii	4.09	231	eP	Pn	04 09 58.9	+4.7
SMAR	Somma	4.09	230	eP	Pn	04 09 57.8	+3.5
KRX	Arik	4.09	232	eP	Pn	04 09 58.6	+4.4
AVH	Avacha	4.12	231	eP	Pn	04 09 58.7	+4.2
UGLR	Uglovaya	4.12	230	eP	Pn	04 09 58.3	+3.8
KOK	Koryaka	4.14	232	eP	Pn	04 09 59.1	+4.2
GNL	Ganaly	4.21	240	eP	Pn	04 09 60.0	+4.2
RUS	Russkaya	4.82	225	eP	Pn	04 10 06.7	+2.6
GRL	Gorelyy	4.91	228	eP	Pn	04 10 10.3	+4.9
MTVR	Mutnovka	4.92	227	eP	Pn	04 10 10.0	+4.5
ASAK	Asacha	5.11	228	eP	Pn	04 10 12.9	+4.8

IDC 30 04:14:24.9±1.3,28°.05N×104°.20E,h0km,mb3.5/4, mbtmp3.5/5,ML3.2/1,Error ellipse: s-maj=85.2km s-min=22.5km az=60.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	19.83	4	P	P	04 18 57.4	+0.1
	0.1nm,0.3s,baz=172,slow=12,SNR=2.7						
	0.4nm,0.5s						
MKAR	Makanchi Array	25.41	323	P	P	04 19 54.4	+0.3
	0.8nm,0.7s,baz=132,slow=11,SNR=7.8						
	0.8nm,0.7s						
KURBB	Kurchatov Arra	29.77	326	P	P	04 20 32.8	-0.4
	0.5nm,0.4s,baz=130,slow=9.2,SNR=4.7						
	0.5nm,0.4s						
WRA	Warramunga Arr	55.91	145	P	P	04 24 04.9	0.0
	0.3nm,0.7s,baz=337,slow=8.0,SNR=1.5						
	0.3nm,0.7s						
ASAR	Alice Springs	58.85	148	P	P	04 24 25.4	-0.2
	0.4nm,0.8s,baz=325,slow=6.6,SNR=2.3						

0.4nm,0.8s

MEX **30** *04:26:23.7±0.6, 14°.35N×94°.03W, h13^{km}±34^{km}, MD4.0*
GCG **30** *04:26:24.8±1.4, 14°.34N×93°.87W, h36^{km}±999^{km}, MD4.2, ML3.0*
ISC 30 04:26:14.4±3.0**, 14°.2N**±0°.1×**94°.1W**±0°.1**, h2**^{km}±15^{km}**, n10, σ1^{s}05**/16**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.70	31	eP	Pg	04 26 47.4	+0.2
PCIG				eS	Sn	04 27 06.0	-1.7
THIG		1.93	70	eS	Sn	04 27 11.9	-1.3
PATR	El Naranjo	2.04	64	eP	Pb	04 26 52.1	-0.2
PAVE	Pavencul	2.12	63	eP	Pb	04 26 53.6	-0.1
TGIG		2.71	21	eP	Pb	04 27 03.0	-0.6
TGIG				eS	Sn	04 27 34.0	+1.5
TGIG		2.71	21	eP	Pb	04 27 03.1	-0.6
TGIG				i S	Sn	04 27 34.2	+1.7
TGIG				IAML		04 27 44.2	
	comp=E,42nm,0.5s						
STG0	El Palmar, Qui	2.71	86	eP	Pn	04 26 60.0	+0.7
STG0				IAML		04 27 25.6	
	comp=E,179nm,0.8s						
CCIG	Comitan	2.80	43	eP	Pb	04 27 04.5	-0.9
CCIG				eS	Sn	04 27 34.1	-0.9
CCIG	Comitan	2.80	43	i P	Pb	04 27 05.5	+0.1
CCIG				i S	Sn	04 27 35.2	+0.2
CCIG				IAML		04 27 39.7	
	comp=N,50nm,0.7s						
CMIG	Matias Romero	2.92	346	eP	Pb	04 27 06.5	-0.9
CMIG				eS	Sn	04 27 38.1	+0.2

TAP **30** *04:26:32.8, 25°.49N×122°.34E, h243^{km}±1^{km}, ML3.1, D*
JMA **30** *04:26:34.6±0.3, 25°N±2°×122°.4E±0°.7, h222^{km}±3^{km}, MV2.8/14, TAIWAN REGION*
ISC 30 04:26:33.6±2.7**, 25°.4N**±0°.1×**122°.38E**±0°.05**, h230**^{km}±16^{km}**, n51, σ0^{s}73**/83**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCYT	Pengchaiyu	0.38	313	eP	Pn	04 27 04.2	+0.4
TWB1	Santiao Chiao	0.51	224	P	Pn	04 27 04.6	+0.3
SXI1	Grass Mountain	0.53	239	P	Pn	04 27 04.4	0.0
SXI1				eS	S	04 27 29.3	+0.9
TIPB	Shuangxi	0.64	231	i P	Pn	04 27 05.3	+0.5
TWC	Suao	0.90	212	P	Pn	04 27 06.2	+0.2
TWC				S	S	04 27 31.7	+0.5
TWE	Neicheng	0.92	225	eP	Pn	04 27 06.9	+0.8
TWE				eS	S	04 27 30.0	-1.3
FUSB	Fushanzhiwuyua	0.94	230	i P	Pn	04 27 06.7	+0.4
FUSB				i S	S	04 27 31.9	+0.1
EOS2	EOS2	0.96	188	P	Pn	04 27 06.7	+0.6
EOS2				eS	S	04 27 32.0	+0.4
NWLT	Wulai	0.99	233	P	Pn	04 27 06.5	0.0
NWLT				S	S	04 27 31.2	-0.9
ENTT	Nioudou	1.04	225	eP	Pn	04 27 07.3	+0.6
ENTT				eS	S	04 27 33.0	+0.3
YOJ	Yonaguni jima	1.08	147	eP	Pn	04 27 07.7	+0.7
YOJ				eS	S	04 27 34.4	+1.3
EOS3	EOS3	1.08	183	eP	Pn	04 27 07.6	+0.7
EOS3				eS	S	04 27 33.9	+1.0
ENA	Nanau	1.10	212	eP	Pn	04 27 07.4	+0.2
ENA				eS	S	04 27 33.4	0.0
LATG	Datong	1.14	223	P	Pn	04 27 08.0	+0.5
LATG				S	S	04 27 34.2	+0.2
YHNB	Yeheng	1.15	233	i P	Pn	04 27 07.4	-0.2
YHNB				S	S	04 27 32.8	-1.2
NSK	Sanguang	1.16	233	P	Pn	04 27 07.6	0.0
NSK				S	S	04 27 33.1	-1.0
KSHI	Guanxi Townshi	1.24	242	eP	Pn	04 27 07.8	-0.3
EOS4	EOS4	1.25	182	eP	Pn	04 27 07.8	0.0
EOS4				eS	S	04 27 33.3	-1.2
NNS	Nan Shan	1.30	225	P	Pn	04 27 09.3	+0.6
NNS				S	S	04 27 36.0	0.0
NNSB	Datong	1.30	224	P	Pn	04 27 09.1	+0.4
NNSB				S	S	04 27 35.7	-0.4
NFF	Wufeng Townshi	1.36	237	P	Pn	04 27 08.7	-0.3
NFF				eS	S	04 27 35.1	-1.6
NACB	Ninganchiao	1.39	211	eP	Pn	04 27 08.8	-0.4
NACB				S	S	04 27 36.2	-0.8
ETLH	Xiulin Townshi	1.42	215	eP	Pn	04 27 09.7	+0.2
ETLH				eS	S	04 27 37.0	-0.6
LIOB	Emei	1.43	240	eP	Pn	04 27 09.5	-0.1
NSTT	Nanjuang	1.45	240	P	Pn	04 27 09.7	+0.1
NSTT				eS	S	04 27 36.4	-1.4
FUSS	Fushou	1.52	223	eP	Pn	04 27 11.1	+0.6
FUSS				eS	S	04 27 39.5	+0.2
TDCB	Techi	1.57	225	eP	Pn	04 27 11.8	+1.0
WHF	Hehuan Shan	1.59	220	eP	Pn	04 27 11.8	+0.5
WHF				eS	S	04 27 40.1	-0.5
IRIF	Iriomote-Funau	1.61	130	eS	S	04 27 39.0	-1.0
LXIB	Xiulin Townshi	1.61	213	eP	Pn	04 27 10.8	-0.3
LXIB				eS	S	04 27 39.5	-0.8
WHP	Taichung City	1.70	230	eP	Pn	04 27 12.2	+0.4
WHP				eS	S	04 27 41.0	-0.6
SHUL	Shoufeng	1.75	205	eP	Pn	04 27 12.5	+0.3
SHUL				eS	S	04 27 43.2	+1.0
OWD	Renai	1.79	218	eP	Pn	04 27 13.4	+0.8
WUSB	Renai	1.79	220	P	Pn	04 27 13.3	+0.6
WUSB				eS	S	04 27 44.2	+1.0
HATJ	Hateruma jima	1.85	135	eS	S	04 27 43.2	-0.6
JKRS	Kuro-shima	1.87	127	eP	Pn	04 27 13.7	+0.5
JKRS				eS	S	04 27 43.2	-0.9
WCS	Beigang Elemen	1.87	226	P	Pn	04 27 13.4	+0.1
WARBT	Fenglin Townsh	1.88	209	eP	Pn	04 27 12.4	-1.0
WARBT				eS	S	04 27 43.5	-1.0
JIJ	Ishigaki jima	1.89	122	eP	Pn	04 27 13.4	0.0
JIJ				eS	S	04 27 42.5	-2.1
JISG	Ishigakijimahi	1.92	114	eP	Pn	04 27 13.6	-0.1
JISG				eS	S	04 27 43.6	-1.4
VWDT	VWDT	1.97	215	P	Pn	04 27 15.2	+1.0
VWDT				eS	S	04 27 47.0	+1.2
SMLT	Sun Moon Lake	2.00	222	eP	Pn	04 27 15.3	+0.7
TYC	Yuchr	2.01	224	eP	Pn	04 27 14.7	+0.1
SSLB	Suanglung	2.04	220	P	Pn	04 27 15.2	+0.2
HGSD	Ruisui	2.06	205	eP	Pn	04 27 15.2	+0.1
YULB	Yu-li	2.21	207	eP	Pn	04 27 16.3	-0.2
JTJ	Tarama	2.23	109	eP	Pn	04 27 17.3	+0.6
JTJ				eS	S	04 27 50.1	-0.2
JIRB	Irabujima	2.59	102	eP	Pn	04 27 20.8	+0.4
JIKM	Ikemajima	2.64	99	eP	Pn	04 27 21.6	+0.6
JMJ2	Miyako jima3	2.75	103	eP	Pn	04 27 22.9	+0.8
JOGS	Gusukube	2.81	102	eP	Pn	04 27 23.7	+0.9

SFS **30** *04:36:49.7, 37°.35N×2°.55W, h0^{km}, ML3.7/19, ML3.6/19, MLv3.7/18*
MDD **30** *04:36:49.7±0.2, 37°.33N×2°.57W, h0^{km}, mb_Lg3.3/39, Error ellipse: s-maj=2.2km s-min=1.3km az=166.0*
IGIL **30** *04:36:49.7, 37°.33N×2°.57W, h0^{km}, ML2.8*
IDC **30** *04:36:49.4±1.7, 37°.42N×2°.61W, h0^{km}, mb3.6/2, mbtmp3.3/4, ML2.4/2, MS2.9/2, Error ellipse: s-maj=28.1km s-min=17.2km az=71.0*
INMG **30** *04:36:50.3±1.9, 37°.37N×2°.53W, h12^{km}±3^{km}, ML3.2, Error ellipse: s-maj=3.1km s-min=2.4km az=16.0, #DIST_RANGE: REGIONAL #IPMA_REGION: S Almeria (ESP)*
CNRM **30** *04:36:51.7, 37°.39N×2°.55W, h30^{km}*
ISC 30 04:36:48.9±1.1**, 37°.40N**±0°.02×**2°.57W**±0°.02**, h5**^{km}±8^{km}**, n105, σ1^{s}51**/199**, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENIJ	Nijar	0.52	146	Pg	Pg	04 36 59.4	+0.6
ENIJ				Sg	Sg	04 37 05.2	-0.4
ENIJ				i IVmb_Lg		04 37 07.3	
EQES	Quesada	0.56	315	Pg	Pb	04 37 01.0	-0.3
EQES				Sg	Sb	04 37 10.5	+0.9
EQES				i IVmb_Lg		04 37 14.2	
ELOR	Lorca, Murcia	0.70	70	Pg	Pg	04 37 01.9	-0.4
ELOR				Sg	Sg	04 37 12.4	+1.0
ELOR				i IVmb_Lg		04 37 17.0	
EQUE	Quentar	0.72	254	Pg	Pg	04 37 02.2	-0.5
EQUE				Sg	Sg	04 37 12.3	+0.3
EQUE				i IVmb_Lg		04 37 15.5	
EQTA	Presa de Quent	0.72	255	Pg	Pg	04 37 02.2	-0.4
EQTA				Sg	Sg	04 37 12.8	+0.8
TLOR	Lorca, Murcia	0.75	70	Pg	Pg	04 37 03.5	+0.3
TLOR				Sg	Sb	04 37 14.6	-0.4
TLOR	Lorca, Murcia	0.75	70	Pg	Pg	04 37 03.4	+0.3
TLOR				Sg	Sb	04 37 15.7	+0.8
E0803	Jimena (Jaen)	0.83	302	Pg	Pb	04 37 06.0	+0.1
E0803				Sg	Sb	04 37 18.9	+1.5
EZAR	Zarzadilla de	0.84	56	Pg	Pg	04 37 03.5	-1.6
EZAR				Sg	Sb	04 37 17.3	-0.4
EZAR				i IVmb_Lg		04 37 23.5	
E0802	Ubeda,Jaen	0.89	315	Pg	Pb	04 37 07.0	+0.2
E0802				Sg	Sb	04 37 20.1	+1.0
ELGU	Los Guajares,	1.00	238	Pg	Pg	04 37 07.4	-0.6
ELGU	Los Guajares,	1.00	238	Pg	Pg	04 37 07.3	-0.6
ELGU				Sg	Sg	04 37 19.2	-1.6
ELGU				i IVmb_Lg		04 37 28.7	
EGOR	Sierra Gorda,	1.26	257	Pn	Pg	04 37 12.0	-0.9
EGOR	Sierra Gorda,	1.26	257	Pn	Pg	04 37 12.1	-0.9
EGOR				Sg	Sb	04 37 30.0	+0.3
EGOR				i IVmb_Lg		04 37 40.7	
CART	Cartagena	1.26	81	Pn	Pg	04 37 12.0	-1.1
CART				Sg	Sb	04 37 29.9	+0.1
CART	Cartagena	1.26	81	P	Pg	04 37 12.0	-1.1
CART	Cartagena	1.26	81	S	Sb	04 37 29.8	+0.1
EALB	Alboran	1.51	194	Pn	Pn	04 37 15.3	-1.2
EALB				Sn	Sn	04 37 35.3	-1.1
ETRV	Los Montesinos	1.56	66	Sn	Sb	04 37 38.6	+0.3
ETRV				i IVmb_Lg		04 37 49.6	
EMAL	Malaga-Limoner	1.62	247	Pn	Pn	04 37 18.0	0.0
PSIM	Granatula de C	1.69	327	Pn	Pn	04 37 19.1	-0.1
PSIM				Pg	Pb	04 37 20.8	+0.2
PSIM				Sn	Sn	04 37 42.0	+0.7
EADA	Adamuz	1.76	296	Pn	Pn	04 37 20.3	+0.2
EADA				Sn	Sg	04 37 45.6	+0.1
EADA	Adamuz	1.76	296	Pn	Pn	04 37 20.2	+0.2
EADA				Pg	Pb	04 37 22.3	+0.6
EADA				Sn	Sb	04 37 44.2	+0.1
EADA				Sg	Sg	04 37 47.0	+1.6
EADA				i IVmb_Lg		04 37 48.9	
EMIJ	Mijas	1.95	245	Pn	Pn	04 37 22.6	-0.1
EMIJ	Mijas	1.95	245	Pn	Pn	04 37 23.0	+0.4
EMIJ				Sn	Sn	04 37 48.0	+0.5
EMIJ				i IVmb_Lg		04 37 57.2	
WMELI	Melilla	2.10	188	Pn	Pn	04 37 24.5	-0.2
EVIV	Cofrentes, Val	2.19	31	Pn	Pn	04 37 26.3	+0.4
EVIV				Pg	Pg	04 37 31.6	+0.9
EVIV				Sn	Sg	04 37 58.1	-1.0
EVIV				i IVmb_Lg		04 38 06.6	
GOG	Mont Gurugu	2.20	189	P	Pn	04 37 25.8	-0.4
ECAB	El Cabril	2.35	287	Pn	Pn	04 37 28.0	-0.1
ECAB				Sn	Sn	04 37 59.9	+2.4
ECAB	El Cabril	2.35	287	Pn	Pn	04 37 28.1	-0.1
ECAB				Sn	Sn	04 37 59.5	+2.0
ECAB				i IVmb_Lg		04 38 06.0	
PALE	Palemas	2.44	207	P	Pn	04 37 30.0	+0.5
ESDC	Sonseca Array	2.52	335	Pn	Pn	04 37 30.8	+0.3
	0.3nm,0.3s,baz=151,slow=13,SNR=14						
ESDC				Pg	Pb	04 37 35.4	+0.9
	1.3nm,0.3s,baz=153,slow=15,SNR=15						
ESDC				Sn	Sn	04 37 59.0	-2.6
	2.9nm,0.3s,baz=155,slow=22,SNR=7.4						
ESDC				Lg	Lg	04 38 08.2	
	7.7nm,0.3s,baz=155,slow=29,SNR=6.2						
	1.6nm,0.4s						
ECHE	Chera	2.52	29	Pn	Pn	04 37 30.7	+0.2
ECHE				Pg	Pg	04 37 37.9	+0.7
ECHE				Sn	Sn	04 38 03.6	+1.9
ECHE				i IVmb_Lg		04 38 17.2	
PAB	San Pablo	2.55	327	Pn	Pn	04 37 30.8	-0.2
PAB				Pg	Pg	04 37 37.9	+0.1
PAB				Sn	Sn	04 38 03.3	+0.8
PAB				Sg	Sg	04 38 11.5	+0.7
PAB				i IVmb_Lg		04 38 18.0	
TAF	Taforalt	2.59	177	P	Pn	04 37 31.9	+0.4
ESPR	Espera	2.68	260	Pn	Pn	04 37 34.5	+1.9
SMIR	Smir Dam	2.84	234	P	Pn	04 37 34.9	+0.1
UCM	Universidad Co	2.95	350	Pn	Pn	04 37 38.3	+1.9
JBK	JBK	3.06	180	P	Pn	04 37 37.8	-0.3
AKLM	AKL	3.07	200	P	Pn	04 37 38.4	+0.3
CHEFC	Chefchaouen	3.20	225	P	Pn	04 37 40.9	+0.9
EMIN	Mina Concepcio	3.28	278	Pn	Pn	04 37 40.7	-0.2
EMIN				Sn	Sn	04 38 19.8	-0.4
EMIN	Mina Concepcio	3.28	278	Pn	Pn	04 37 40.3	-0.6
EMIN				Sn	Sn	04 38 19.5	-0.7
EMIN				Sg	Sg	04 38 32.4	-1.7
EMIN				i IVmb_Lg		04 38 37.2	
ETOR	Torete	3.44	7	Pn	Pn	04 37 44.4	+1.3
ETOR				Sg	Sg	04 38 43.0	+3.8
ETOR				i IVmb_Lg		04 38 47.9	
GUD	Guadarrama	3.46	340	Pn	Pn	04 37 44.6	+1.1
GUD				Sg	Sg	04 38 41.4	+1.3
GUD				i IVmb_Lg		04 38 48.3	
EIBI	Ibiza	3.49	61	Pn	Pn	04 37 42.7	-1.1
EIBI	Ibiza	3.49	61	Pn	Pn	04 37 43.3	-0.4
EIBI				Sn	Sn	04 38 22.1	-3.3
EIBI				i IVmb_Lg		04 38 26.3	
ECOL	Islas Columbre	3.57	45	Pn	Pn	04 37 45.4	+0.6
ECOL				Sn	Sn	04 38 26.9	-0.4
PBAR	Barrancos	3.62	284	Pn	Pn	04 37 44.7	-0.9
PBAR				Sn	Sn	04 38 29.3	+0.6
PBAR	Barrancos	3.62	284	ePn	Pn	04 37 45.5	-0.1
PBAR				eSn	Sn	04 38 29.6	+0.9
PBAR				eSg	Sg	04 38 42.9	-2.3
PBAR				i AML	AML	04 38 48.0	
PBAR				i AML	AML	04 38 49.5	
PBAR				i AML	AML	04 38 51.3	
EBAD	Badajoz	3.75	292	Pn	Pn	04 37 46.6	-0.9
EBAD				Sn	Sn	04 38 31.8	-0.2
EBAD	Badajoz	3.75	292	Pn	Pn	04 37 46.5	-0.9
EBAD				Sn	Sn	04 38 31.6	-0.4
EBAD				i IVmb_Lg		04 38 52.1	
EPLA	Plasencia	3.82	315	Pn	Pn	04 37 48.3	0.0
EPLA				Sn	Sn	04 38 34.2	+0.5
EPLA				i IVmb_Lg		04 38 54.6	
EGRO	El Granado	3.91	273	Pn	Pn	04 37 48.8	-0.7
EGRO				Sn	Sn	04 38 35.1	-0.7
EGRO	El Granado	3.91	273	Pn	Pn	04 37 49.2	-0.3
EGRO				Sn	Sn	04 38 35.4	-0.4
EGRO				i IVmb_Lg		04 38 55.8	
PVAQ	Vaqueiros	4.09	272	Pn	Pn	04 37 51.3	-0.8
PVAQ	Vaqueiros	4.09	272	ePn	Pn	04 37 51.7	-0.4
PVAQ				eSn	Sn	04 38 39.1	-1.3
PVAQ				i AML	AML	04 38 40.2	
PVAQ				i AML	AML	04 38 43.0	
PVAQ				eSg	Sg	04 39 01.2	+0.8
PVAQ				i AML	AML	04 39 02.6	
PVAQ	Vaqueiros	4.09	272	P	Pn	04 37 51.7	-0.4
PVAQ	Vaqueiros	4.09	272	S	Sn	04 38 39.7	-0.7
ERTA	Horta de San J	4.21	32	Pn	Pn	04 37 54.6	+0.9
PESTR	Estremoz	4.22	292	ePn	Pn	04 37 55.3	+1.5
PESTR				eSn	Sn	04 38 42.8	-0.7
PESTR				eSg	Sg	04 39 04.3	+0.1
PESTR				i AML	AML	04 39 10.1	
PESTR				i AML	AML	04 39 10.7	
PESTR				i AML	AML	04 39 12.0	
PESTR	Estremoz	4.22	292	P	Pn	04 37 55.1	+1.3
PBEJ	Beja	4.24	280	ePn	Pn	04 37 54.6	+0.4
PBEJ				eSn	Sn	04 38 43.0	-1.1
PBEJ				eSg	Sg	04 39 03.0	-2.1
PBEJ				i AML	AML	04 39 13.0	
PBEJ				i AML	AML	04 39 17.6	
PBEJ				i AML	AML	04 39 22.4	
PBDV	Barranco-do-Ve	4.27	269	ePn	Pn	04 37 54.4	-0.2
PBDV				eSn	Sn	04 38 43.9	-1.0
PBDV				i AML	AML	04 38 46.1	
PBDV				i AML	AML	04 38 50.8	
PBDV				eSg	Sg	04 39 10.1	+4.0
PBDV				i AML	AML	04 39 14.9	
PMRV	Marv??o	4.29	300	ePn	Pn	04 37 55.4	+0.5
PMRV				eSn	Sn	04 38 43.9	-1.4
PMRV				eSg	Sg	04 39 03.7	-2.9
PMRV				i AML	AML	04 39 09.3	
PMRV				i AML	AML	04 39 10.3	
PMRV				i AML	AML	04 39 11.8	
PCVE	Castro Verde	4.35	275	Pn	Pn	04 37 55.5	-0.2
PCVE				Sn	Sn	04 38 45.1	-1.6
PCVE	Castro Verde	4.35	275	ePn	Pn	04 37 55.6	0.0
PCVE				eSn	Sn	04 38 44.4	-2.4
PCVE				i AML	AML	04 39 12.5	
PCVE				i AML	AML	04 39 23.0	
PCVE				i AML	AML	04 39 23.1	
EVO	Evora	4.44	286	Pn	Pn	04 37 57.6	+0.7
EVO	Evora	4.44	286	ePn	Pn	04 37 57.8	+0.9
EVO				eSn	Sn	04 38 49.0	0.0
EVO				eSg	Sg	04 39 09.7	-1.9
EVO				i AML	AML	04 39 14.1	
EVO				i AML	AML	04 39 17.1	
EVO				i AML	AML	04 39 17.4	
EJUZ	Juzbado, Salam	4.49	326	Pn	Pn	04 37 58.9	+1.3
EJUZ				Sn	Sn	04 38 47.7	-2.5
MESJ	Messejana	4.50	277	eP	Pn	04 37 57.2	-0.5
MESJ				eS	Sn	04 38 46.8	-3.7
MESJ				IAML		04 39 15.0	
	comp=N,17nm,0.8s						
PCBR	Castelo Branco	4.55	304	ePn	Pn	04 37 59.2	+0.9
PCBR				eSn	Sn	04 38 50.8	-0.7
PCBR				eSg	Sg	04 39 10.9	-3.9
PCBR				i AML	AML	04 39 17.5	
PCBR				i AML	AML	04 39 17.6	
PCBR				i AML	AML	04 39 26.0	
PMTG	Montargil	4.75	292	ePn	Pn	04 38 02.1	+1.0
PMTG				eSn	Sn	04 38 54.9	-1.6
PMTG				eSg	Sg	04 39 17.2	-4.2
PMTG				i AML	AML	04 39 19.6	
PMTG				i AML	AML	04 39 20.6	
PMTG				i AML	AML	04 39 23.7	
MORF	Marmelete	4.84	271	ePn	Pn	04 38 02.8	+0.3
MORF				eSn	Sn	04 38 57.4	-1.5
MORF				i AML	AML	04 38 58.6	
MORF				i AML	AML	04 38 59.1	
MORF				i AML	AML	04 39 02.8	
EPOB	Poblet	4.86	35	Pn	Pn	04 38 03.6	+1.0
EPOB				Sn	Sn	04 38 57.7	-1.5
MD31	MD31	4.87	202	P	Pn	04 38 04.3	+1.5
PTEO	Sao Teotonio	4.89	274	ePn	Pn	04 38 03.7	+0.6
PTEO				eSn	Sn	04 38 59.7	-0.4
PTEO				i AML	AML	04 39 02.8	
PTEO				i AML	AML	04 39 03.9	
PTEO				i AML	AML	04 39 14.5	
MTE	Manteigas	4.90	309	ePn	Pn	04 38 04.3	+1.1
MTE				eSg	Sg	04 39 24.5	-1.7
MTE				i AML	AML	04 39 26.1	
MTE				i AML	AML	04 39 29.4	
MTE				i AML	AML	04 39 31.8	
PSARD	Sardoal	4.90	298	ePn	Pn	04 38 03.6	+0.4
PSARD				eSn	Sn	04 38 58.5	-1.9
PSARD				i AML	AML	04 39 00.6	
PSARD				i AML	AML	04 39 06.0	
PSARD				eSg	Sg	04 39 24.1	-2.1
PSARD				i AML	AML	04 39 25.3	
PFVI	Vila Bisbo	5.00	269	ePn	Pn	04 38 04.7	+0.3
PFVI				eSn	Sn	04 39 00.6	-2.0
PFVI				i AML	AML	04 39 02.4	
PFVI				i AML	AML	04 39 06.6	
PFVI				i AML	AML	04 39 07.7	
PFVI	Vila Bisbo	5.00	269	P	Pn	04 38 04.9	+0.4
MVO	Moncorvo	5.10	319	ePn	Pn	04 38 06.8	+0.7
MVO				eSn	Sn	04 39 03.1	-2.3
MVO				eSg	Sg	04 39 34.4	+1.7
MVO				i AML	AML	04 39 35.8	
MVO				i AML	AML	04 39 40.5	
MVO				i AML	AML	04 39 49.2	
PACT	Alcochete	5.12	287	ePn	Pn	04 38 08.0	+1.8
PACT				eSn	Sn	04 39 05.3	-0.4
PACT				eSg	Sg	04 39 34.1	+0.7
PACT				i AML	AML	04 39 41.1	
PACT				i AML	AML	04 39 41.1	
PACT				i AML	AML	04 39 45.6	
PARRA	Arraiolos	5.29	287	ePn	Pn	04 37 59.8	-8.7
PARRA				ePg	Pb	04 38 12.2	-10
PARRA				eSn	Sn	04 38 50.2	-20
PARRA				eSg	Sb	04 39 13.8	-12
PARRA				i AML	AML	04 39 17.8	
PARRA				i AML	AML	04 39 21.2	
PARRA				i AML	AML	04 39 23.5	
PVIS	Viseu	5.30	310	ePn	Pn	04 38 09.5	+0.8
PVIS				eSn	Sn	04 39 08.7	-1.5
PVIS				eSg	Sg	04 39 37.1	-2.0
PSBE	So Bento	5.32	295	ePn	Pn	04 38 10.7	+1.7
PSBE				eSn	Sn	04 39 10.0	-0.7
PSBE				eSg	Sg	04 39 41.5	+1.8
PSBE				i AML	AML	04 39 47.3	
PSBE				i AML	AML	04 39 48.0	
PSBE				i AML	AML	04 39 48.8	
PCAS	Casmilo, Conde	5.33	302	ePn	Pn	04 38 13.4	+4.2
PCAS				eSn	Sn	04 39 08.5	-2.5
PCAS				eSg	Sg	04 39 35.0	-5.2
PCAS				i AML	AML	04 39 49.1	
PCAS				i AML	AML	04 39 54.0	
PCAS				i AML	AML	04 39 55.3	
PBRG	Braganca	5.45	325	ePn	Pn	04 38 11.3	+0.5
PBRG				eSn	Sn	04 39 11.6	-2.3
PBRG				eSg	Sg	04 39 41.1	-2.7
PBRG				i AML	AML	04 39 47.0	
PBRG				i AML	AML	04 39 56.2	
PBRG				i AML	AML	04 39 59.3	
PMAFR	Mafra	5.51	288	ePn	Pn	04 38 12.1	+0.5
PMAFR				eSn	Sn	04 39 13.6	-1.7
PMAFR				eSg	Sg	04 39 46.5	+0.8
PMAFR				i AML	AML	04 39 48.6	
PMAFR				i AML	AML	04 39 53.7	
PMAFR				i AML	AML	04 40 02.5	
PVRL	Vila Real	5.55	316	ePn	Pn	04 38 14.0	+1.8
PVRL				eSn	Sn	04 39 14.5	-1.9
PVRL				eSg	Sg	04 39 41.5	-5.7
PVRL				i AML	AML	04 39 50.8	
PVRL				i AML	AML	04 39 58.6	
PVRL				i AML	AML	04 39 58.9	
ECAL	Calabor	5.55	326	Pn	Pn	04 38 12.6	+0.3
ECAL	Calabor	5.55	326	Pn	Pn	04 38 12.7	+0.5
ECAL				i IVmb_Lg		04 39 51.1	
POLO	Lamas de Olo	5.66	316	ePn	Pn	04 38 14.5	+0.7
POLO				eSn	Sn	04 39 18.3	-0.9
POLO				eSg	Sg	04 39 52.7	+2.0
POLO				i AML	AML	04 39 53.6	
POLO				i AML	AML	04 39 55.9	
POLO				i AML	AML	04 40 05.6	
ELAN	Lanestosa	5.86	354	Pn	Pn	04 38 18.5	+2.1
ELAN				Sn	Sn	04 39 21.3	-2.7
ELAN				i IVmb_Lg		04 40 05.9	
EALK	Alkurruntz	5.87	8	Pn	Pn	04 38 18.8	+2.2
EALK				Sn	Sn	04 39 21.6	-2.7
PCAB	Cabril	6.02	317	eSn	Sn	04 39 24.4	-3.6
PCAB				eSg	Sg	04 40 00.1	-2.1
PCAB				i AML	AML	04 40 05.7	
PCAB				i AML	AML	04 40 11.9	
PCAB				i AML	AML	04 40 12.6	
EARI	Arriondas	6.23	342	Pn	Pn	04 38 23.4	+2.0
PGAV	Gavieira, Arco	6.33	318	ePn	Pn	04 38 23.3	+0.4
PGAV				eSn	Sn	04 39 33.7	-1.9
PGAV				eSg	Sg	04 40 09.8	-2.2
PGAV				i AML	AML	04 40 16.6	
PGAV				i AML	AML	04 40 16.6	
PGAV				i AML	AML	04 40 21.5	
OUZM	OUZ	7.35	209	P	Pn	04 38 38.4	+1.5
TIO	Tiouine	7.54	212	Pn	Pn	04 38 40.8	+1.3
GERES	GERESS Array B	16.45	41	Pn	P	04 40 42.1	-1.2
	baz=235,slow=12,SNR=4.2						
	comp=N,0.2nm,0.6s						
TORD	Torodi Ar. Bea	24.45	170	P	P	04 42 09.9	+1.2
	comp=N,1.1nm,0.3s,baz=335,slow=9.0,SNR=2.0						
	comp=N,1.1nm,0.3s						
NOA	NORSAR Array B	25.21	16	LR	LR	04 52 32.6	
	comp=N,14nm,18.0s,baz=0.0,slow=37						
TXAR	Lajitas Array	80.73	300	P	P	04 49 04.9	+1.4
	comp=N,0.2nm,0.6s,baz=64,slow=5.6,SNR=2.6						
	comp=N,0.2nm,0.6s						
NNA	Nana	85.04	251	LR	LR	05 28 25.7	
	comp=N,9.9nm,18.2s,baz=102,slow=36						

IDC **30** *04:46:27.5±8.1, 0°.69S×13°.07W, h0^{km}, mb3.8/4, mbtmp3.9/5, ML3.0/1, MS3.3/12, Error ellipse: s-maj=199.7km s-min=69.3km az=168.0*
ISC 30 04:46:25.7±5.6**, 1°.5S**±1°.0×**12°.7W**±0°.5**, h10**^{km}**, n28, σ1^{s}92**/13**, mb4.2**/12**, MS3.3**/11**, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	6.53	196	T	T	04 54 31.8	

	baz=15,slow=74,SNR=42						
H10N1	ASCENSION HYDR	6.55	195	T	T	04 54 36.6	
	baz=15,slow=74,SNR=66						
H10N3	ASCENSION HYDR	6.55	196	T	T	04 54 34.7	
	baz=15,slow=74,SNR=43						
DBIC	Dimbokro	11.29	44	Pn	Pn	04 49 07.5	+0.3
	0.1nm,0.3s,baz=228,slow=14,SNR=3.0						
DBIC				LR	LR	04 52 39.3	
	comp=Z,193nm,21.9s,baz=198,slow=34						
	8.5nm,1.1s						
TORD	Torodi Ar. Bea	20.40	44	P	P	04 51 01.6	-1.5
	4.4nm,0.9s,baz=235,slow=9.3,SNR=4.8						
	4.4nm,0.9s						
MDT	Midelt	34.98	12	LR	LR	05 07 09.7	
	comp=Z,35nm,18.6s,baz=222,slow=36						
BDFB	Brasilia	37.53	246	LR	LR	05 05 42.1	
	comp=Z,40nm,20.8s,baz=196,slow=31						
MDP	Montagnes des	40.41	280	LR	LR	05 07 06.9	
	comp=Z,33nm,19.9s,baz=28,slow=31						
LBTB	Lobatse	43.74	126	LR	LR	05 10 21.7	
	comp=Z,26nm,21.4s,baz=225,slow=32						
BOSA	Boshof	45.16	130	LR	LR	05 09 59.3	
	comp=Z,34nm,19.8s,baz=216,slow=31						
CPUP	Villa Florida	49.45	236	LR	LR	05 14 36.3	
	comp=Z,8.0nm,18.6s,baz=284,slow=34						
SIV	San Ignacio	49.76	250	LR	LR	05 13 45.6	
	comp=Z,60nm,21.5s,baz=112,slow=33						
DAVOX	Davos/Dischmat	52.02	20	LR	LR	05 18 25.9	
	comp=Z,49nm,18.3s,baz=258,slow=37						
DAVA	Damuels	52.46	19	*e*P	P	04 55 38.1	-0.8
	4.5nm,0.9s						
SQTA	Sankt Quirin	52.85	20	*e*P	P	04 55 45.8	+4.1
	7.3nm,1.0s						
ABTA	Abfaltersbach	52.91	22	*e*P	P	04 55 43.8	+1.6
	3.8nm,1.3s						
MOTA	Moosalm	52.92	20	*e*P	P	04 55 45.0	+2.7
	0.8nm,0.7s						
RETA	Reutte	52.93	20	*e*P	P	04 55 43.6	+1.3
	1.7nm,0.9s						
LESA	Schwarzleotal	53.55	21	*e*P	P	04 55 52.5	+5.7
	1.5nm,0.6s						
SOKA	Soboth	53.82	23	*e*P	P	04 55 49.5	+0.7
	3.5nm,0.8s						
MOA	Molln	54.49	22	*e*P	P	04 55 52.7	-0.9
	1.9nm,0.9s						
EIL	Elat	55.03	52	LR	LR	05 19 16.5	
	comp=Z,55nm,19.3s,baz=246,slow=36						
GERES	GERESS Array B	55.12	21	P	P	04 55 57.2	-1.0
	1.5nm,0.8s,baz=204,slow=5.9,SNR=11						
	1.5nm,0.8s						
CONA	Conrad Observa	55.17	23	*e*P	P	04 55 58.7	+0.1
	3.2nm,1.4s						
LPAZ	La Paz	56.48	252	LR	LR	05 18 06.3	
	comp=Z,40nm,21.4s,baz=73,slow=34						
BRTR	Keskin Array B	58.97	41	P	P	04 56 26.8	+1.0
	1.6nm,0.9s,baz=221,slow=6.5,SNR=6.1						
	1.6nm,0.9s						
NOA	NORSAR Array B	65.04	13	P	P	04 57 04.6	-1.4
	0.6nm,0.8s,baz=212,slow=6.5,SNR=2.4						
	0.6nm,0.8s						
ATAH	Atahualpa	65.68	263	LR	LR	05 24 09.3	
	comp=Z,40nm,19.5s,baz=110,slow=35						

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*IDC **30** 04:57:48.0±1.2, 17°.24N×46°.18W, h0km, mb3.7/5, mbtmp3.9/6, ML3.5/1, MS3.2/20, Error ellipse: s-maj=40.0km s-min=28.1km az=79.0*

ISC 30 04:57:49.6±1.2**, 17°.2N**±0°.1×**46°.2W**±0°.2**, h10km, n27, σ0ˢ86**/7**, mb3.8**/5**, MS3.2**/19**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDP	Montagnes des	13.57	208	Pn	Pn	05 01 02.2	-0.2
	0.3nm,0.3s,baz=24,slow=14,SNR=2.5						
	11nm,1.1s						
SJG	San Juan	19.01	276	LR	LR	05 07 56.3	
	comp=Z,68nm,21.6s,baz=138,slow=32						
RCBR	Riachuelo	25.06	155	LR	LR	05 10 57.4	
	comp=Z,33nm,21.4s,baz=16,slow=32						
SDV	Santo Domingo	25.15	254	LR	LR	05 12 25.7	
	comp=Z,21nm,20.5s,baz=90,slow=35						
TKL	Tuckaleechee C	38.02	306	LR	LR	05 17 39.5	
	comp=Z,45nm,21.7s,baz=153,slow=31						
SADO	Sadowa	38.93	322	LR	LR	05 18 05.9	
	comp=Z,33nm,19.6s,baz=122,slow=31						
LPAZ	La Paz	39.67	214	P	P	05 05 22.8	0.0
	2.6nm,0.8s,baz=34,slow=8.4,SNR=11						
	2.6nm,0.8s						
H10N3	ASCENSION HYDR	40.04	126	T	T	05 48 07.7	
	baz=308,slow=75,SNR=86						
H10N2	ASCENSION HYDR	40.04	126	T	T	05 48 08.0	
	baz=308,slow=75,SNR=69						
H10N1	ASCENSION HYDR	40.06	126	T	T	05 48 09.3	
	baz=308,slow=75,SNR=140						
SCHQ	Schefferville	40.76	342	LR	LR	05 18 19.4	
	comp=Z,28nm,20.9s,baz=243,slow=30						
DBIC	Dimbokro	41.72	99	LR	LR	05 19 50.2	
	comp=Z,56nm,19.1s,baz=324,slow=32						
ESDC	Sonseca Array	42.87	50	LR	LR	05 19 30.9	
	comp=Z,23nm,19.9s,baz=256,slow=30						
FRB	Frobisher Bay	48.96	347	LR	LR	05 24 35.6	
	comp=Z,14nm,21.0s,baz=90,slow=33						
TXAR	Lajitas Array	53.67	294	P	P	05 07 12.2	+0.2
	0.3nm,0.9s,baz=95,slow=7.0,SNR=2.8						
TXAR				PcP	PcP	05 08 19.8	+1.5
	0.3nm,0.8s,baz=109,slow=4.6,SNR=4.5						
TXAR				LR	LR	05 28 25.0	
	comp=Z,14nm,21.6s,baz=68,slow=34						
	0.3nm,0.9s						
ANMO	Albuquerque	56.12	301	LR	LR	05 29 03.4	
	comp=Z,54nm,21.0s,baz=192,slow=33						
PDAR	Pinedale Array	59.01	310	P	P	05 07 49.4	-0.7
	0.3nm,0.8s,baz=87,slow=11,SNR=2.6						
PDAR				LR	LR	05 30 35.5	
	comp=Z,21nm,22.0s,baz=112,slow=33						
	0.3nm,0.8s						
NOA	NORSAR Array B	59.52	28	LR	LR	05 28 35.7	
	comp=Z,13nm,19.6s,baz=70,slow=31						
ELK	Elko	63.17	307	LR	LR	05 33 40.9	
	comp=Z,28nm,21.0s,baz=139,slow=34						
PFO	Pinyon Flats O	64.42	299	LR	LR	05 34 05.0	
	comp=Z,38nm,21.1s,baz=101,slow=34						
NEW	Newport	64.67	316	LR	LR	05 36 48.8	
	comp=Z,36nm,18.0s,baz=120,slow=36						
YKA	Yellowknife Ar	64.92	332	LR	LR	05 33 53.5	
	comp=Z,20nm,19.4s,baz=112,slow=33						
BBB	Bella Bella	71.65	320	LR	LR	05 40 41.6	
	comp=Z,18nm,18.1s,baz=201,slow=36						
INK	Inuvik	73.16	337	LR	LR	05 40 40.5	
	comp=Z,21nm,18.7s,baz=243,slow=35						
EIL	Elat	74.19	63	LR	LR	05 42 49.4	
	comp=Z,21nm,18.7s,baz=268,slow=36						
ILAR	Eielson Array	79.05	335	P	P	05 09 53.5	-0.3
	0.9nm,0.9s,baz=70,slow=4.9,SNR=9.0						
	0.9nm,0.9s						
BOSA	Boshof	82.72	123	P	P	05 10 14.1	-0.1
	1.2nm,0.6s,baz=287,slow=14,SNR=5.0						
	1.2nm,0.6s						

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*ASRS **30** 05:00:24.0±1.8, 52°.77N×87°.95E, h0km, M2.9, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

NNC 30 05:00:29.1±3.6**, 52°.72N×87°.84E, h0km, mb3.9, mpv3.6, 1C-3D, Error ellipse: s-maj=39.0km s-min=10.7km az=74.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	Zalesovo Array	2.19	305	Pn	Pn	05 01 06.0	-0.7
ZAA0				Sn	Sn	05 01 35.8	+1.3
MK31	Makanchi Array	6.93	213	⇓Pn	Pn	05 02 12.9	+1.0
	2.2nm,0.6s,baz=30,slow=12,SNR=42						
MK31				⇑Sn	Sn	05 03 31.3	-0.2
	1.2nm,0.6s,baz=39,slow=23,SNR=3.6						
MAKZ	Makanchi	7.03	215	⇓Pn	Pn	05 02 14.2	+0.9
	2.9nm,0.7s						
MAKZ				⇓Sn	Sn	05 03 34.2	+0.4
	1.2nm,0.5s						

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*SOME **30** 05:03:31.2, 42°.90N×83°.68E, h25km*

*NNC **30** 05:03:39.7±4.6, 42°.08N×82°.88E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=38.9km s-min=20.7km az=159.0*

ISC 30 05:03:42.0±3.7**, 42°.3N**±0°.2×**82°.9E**±0°.1**, h10km, n13, σ3ˢ42**/15**, 3C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDGK	Podgornoye	2.72	294	⇓Pn	Pb	05 04 28.5	-2.3
	4.7nm,0.5s						
PDGK				⇑Lg	Lg	05 05 11.6	
	28nm,0.4s						
UZB	Uzynbulak	2.99	288	Pg	Pb	05 04 33.0	-2.4
	5.6nm,0.3s						
UZB				Lg	Lg	05 05 18.4	
	27nm,0.5s						
KPKS	Kokpek	3.32	293	Pg	Pb	05 04 37.9	-3.0
	0.4nm,0.2s						
KPKS				Lg	Lg	05 05 26.8	
	17nm,0.4s						
BLB	Baldybastay	3.71	301	Pg	Pb	05 04 42.9	-4.8
	14nm,0.3s						
BLB				Lg	Lg	05 05 35.4	
	17nm,0.5s						
ARXS	Arharly	4.18	299	Pg	Pb	05 04 50.5	-5.1
	3.2nm,0.5s						
ARXS				Lg	Lg	05 05 48.4	
	9.8nm,0.3s						
TNSS	Tian-Shan	4.45	282	Pg	Pb	05 05 01.3	+0.8
	1.2nm,0.3s						
TNSS				Lg	Lg	05 06 06.9	
	2.2nm,0.7s						
TNSS	Tian-Shan	4.45	282	*e*P	Pb	05 05 01.3	+0.8
	1.2nm,0.3s						
TNSS				*e*S	Sg	05 06 06.9	+1.9
	2.2nm,0.7s						
MK31	Makanchi Array	4.55	355	⇓Pn	Pn	05 04 53.8	+2.9
	1.1nm,0.6s,baz=34,slow=16,SNR=12						
MK31				⇓Pg	Pg	05 05 06.6	-2.4
	5.0nm,0.6s,baz=167,slow=16,SNR=15						
MK31				⇑Lg	Lg	05 06 09.3	
	15nm,0.7s,baz=176,slow=30,SNR=7.5						
MAKZ	Makanchi	4.59	352	⇓Pg	Pg	05 05 08.1	-1.7
	1.8nm,0.6s						
MAKZ				⇑Lg	Lg	05 06 10.6	
	5.1nm,0.5s						
KTBS	Karatobe	4.78	290	Pg	Pb	05 05 08.0	+2.2
	1.2nm,0.4s						
KTBS				Lg	Lg	05 06 18.6	
	9.0nm,0.7s						
KST	Kastek	5.17	281	Pg	Pg	05 05 16.9	-4.1
	2.6nm,0.4s						
KST				Lg	Lg	05 06 33.5	
	5.6nm,0.7s						
KST	Kastek	5.17	281	*e*P	Pg	05 05 16.9	-4.1
	2.6nm,0.4s						
KST				*e*S	Sg	05 06 33.5	+5.6
	5.6nm,0.7s						
KRBS	Karabastau	5.49	288	Pg	Pb	05 05 20.3	+2.4
	1.6nm,0.3s						
KRBS				Lg	Lg	05 06 39.5	
	3.1nm,0.6s						

IDC 30 05:13:00.9±3.4**, 31°.40S×177°.89W, h0km, mb3.8**/2**, mbtmp3.7**/3**, ML2.9**/1**, MS3.3**/2**, Error ellipse: s-maj=76.8km s-min=49.4km az=117.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	7.98	210	Pn	Pn	05 14 57.4	-0.7
	0.1nm,0.3s,baz=36,slow=14,SNR=2.0						
URZ				Sn	Sn	05 16 22.7	-6.5
	0.8nm,0.3s,baz=116,slow=18,SNR=9.8						
	3.0nm,0.9s						
ASAR	Alice Springs	43.16	268	P	P	05 21 03.4	-0.1
	0.4nm,0.4s,baz=105,slow=7.5,SNR=8.2						
	0.4nm,0.4s						
WRA	Warramunga Arr	44.24	273	P	P	05 21 12.2	0.0
	0.8nm,0.4s,baz=113,slow=7.8,SNR=12						
	0.8nm,0.4s						
GUMO	Guam	57.25	316	LR	LR	05 43 40.3	
	comp=Z,14nm,21.8s,baz=96,slow=32						
ILAR	Eielson Array	98.87	13	LR	LR	06 11 54.0	
	comp=Z,21nm,18.1s,baz=319,slow=36						
FINES	FINESS Array B	146.11	340	PKPbc	PKPdf	05 32 41.3	+0.1
	2.6nm,1.1s,baz=38,slow=5.6,SNR=2.0						

WEL 30 05:13:58.3±1.0**, 41°S**±4°×**17°7E**±°**, h14km**±5km**, M2.0**/10**, ML2.3**/11**, MLv2.0**/10**, Error ellipse: s-maj=8.0km s-min=3.8km az=124.4, confirmed, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANWZ	Angora Road	0.21	337	P	Pb	05 14 03.5	-0.4
ANWZ				S	Sb	05 14 07.4	-0.2
BFZ	Birch Farm	0.26	263	P	Pb	05 14 04.7	-0.1
BFZ				S	Sb	05 14 09.5	+0.4
CPWZ	Castlepoint	0.39	228	P	Pb	05 14 08.1	+1.2
CPWZ				S	Sn	05 14 16.7	0.0
PRHZ	Porangahau	0.39	6	P	Pb	05 14 07.2	+0.2
PRHZ				S	Sb	05 14 14.3	+1.5
DVHZ	Dannevirke	0.47	318	P	Pb	05 14 08.3	-0.2
DVHZ				S	Sb	05 14 15.8	+0.4
PRWZ	Pori Road	0.47	282	P	Pb	05 14 08.8	+0.3
PRWZ				S	Sb	05 14 16.8	+1.5
TIWZ	Tintock	0.54	257	P	Pb	05 14 09.9	+0.2
WPHZ	Waipukurau	0.60	350	P	Pb	05 14 10.6	+0.1
WPHZ				S	Sb	05 14 20.3	+1.5
POWZ	Post Office Ro	0.67	292	P	Pb	05 14 11.9	+0.1
POWZ				S	Sn	05 14 22.6	-1.1
MRZ	Mangatainoka R	0.76	269	P	Pg	05 14 13.0	-0.1
MRZ				S	Sb	05 14 24.1	+0.4
PNHZ	Pukenui	0.79	338	P	Pg	05 14 13.6	-0.1
PNHZ				S	Sb	05 14 25.4	+0.9
HOWZ	Holdsworth Sta	0.85	253	P	Pg	05 14 14.1	-0.6
KRHZ	Kereru	1.02	351	P	Pb	05 14 17.4	-0.4
KRHZ				S	Sn	05 14 32.4	0.0

IDC 30 05:15:50.4±3.8**, 17°.28N×46°.37W, h0km, mb3.6**/3**, mbtmp3.7**/4**, ML3.1**/1**, MS3.0**/6**, Error ellipse: s-maj=117.1km s-min=33.9km az=97.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDP	Montagnes des	13.57	208	Pn	Pn	05 19 04.3	0.0
	0.1nm,0.3s,baz=28,slow=17,SNR=1.6						
	7.8nm,1.0s						
SJG	San Juan	18.86	275	LR	LR	05 25 58.4	
	comp=Z,34nm,19.7s,baz=130,slow=32						
PCRV	Puerto La Cruz	19.09	251	LR	LR	05 27 16.9	
	comp=Z,32nm,21.8s,slow=36						
SDV	Santo Domingo	25.04	254	LR	LR	05 30 08.2	
	comp=Z,29nm,21.1s,baz=328,slow=34						
TKL	Tuckaleechee C	37.87	306	LR	LR	05 35 18.5	
	comp=Z,23nm,20.6s,baz=166,slow=31						
LPAZ	La Paz	39.66	214	P	P	05 23 24.9	-0.1
	0.8nm,0.8s,baz=35,slow=7.4,SNR=4.3						
	0.8nm,0.8s						
H10N3	ASCENSION HYDR	40.19	126	T	T	06 06 09.6	
	baz=308,slow=75,SNR=27						
H10N2	ASCENSION HYDR	40.20	126	T	T	06 06 09.8	
	baz=308,slow=75,SNR=33						
H10N1	ASCENSION HYDR	40.21	126	T	T	06 06 11.1	
	baz=308,slow=75,SNR=40						
TXAR	Lajitas Array	53.51	294	P	P	05 25 13.1	-0.1
	0.4nm,1.0s,baz=93,slow=8.2,SNR=3.7						
	0.4nm,1.0s						
ANMO	Albuquerque	55.96	301	LR	LR	05 47 55.0	
	comp=Z,32nm,19.4s,baz=198,slow=34						
PDAR	Pinedale Array	58.86	310	LR	LR	05 51 31.9	
	comp=Z,10nm,18.8s,baz=136,slow=36						
ILAR	Eielson Array	78.93	335	P	P	05 27 55.6	+0.1
	0.7nm,0.9s,baz=69,slow=6.0,SNR=5.1						
	0.7nm,0.9s						

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*UCR **30** 05:21:27.9±0.9, 8°.34N×82°.82W, h28km±1km, MW4.0, Fault plane solution: NP1:φs334.84000°, δ61.98000°, λ-21.88000°.*

*CATAC **30** 05:21:28.2±0.7, 8°N±4°×8°3W±°, h8km±3km, M3.8/13, mb3.6/1, mB4.9/1, MLv4.0/13, Mw(mB)4.2/1, Error ellipse: s-maj=9.8km s-min=9.3km az=69.8, confirmed*

*UPA **30** 05:21:28.5±0.9, 8°.38N×82°.83W, h26km±4km, ML2.9*

ISC 30 05:21:28.5±0.9**, 8°.37N**±0°.03×**82°.82W**±0°.03**, h32km**±6km**, n85, σ1ˢ03**/100**, 21C-17D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LESP3	La Esperanza,	0.05	37	⇓*i*P	Pb	05 21 33.3	-0.6
LESP3				*e*S	Sb	05 21 38.3	+0.6
LPPC	Paso Canoas	0.16	353	⇑*e*P	Pn	05 21 34.0	-0.8
LPPC				*e*S	Sb	05 21 39.0	+0.1
CDITO	Canoas	0.21	345	P	Pb	05 21 34.4	-0.7
CDITO	Canoas	0.21	345	S	Sb	05 21 39.8	+0.2
LIMO3	Limones	0.27	190	⇑*e*P	Pb	05 21 35.4	-0.4
LIMO3				*e*S	Sb	05 21 40.4	-0.3
LMNES	Limones	0.27	189	⇑*e*P	Pb	05 21 35.2	-0.6
NELY	Ciudad Neily	0.31	336	⇑*e*P	Pb	05 21 35.4	-0.8
NELY				*e*S	Sb	05 21 41.7	+0.1
DVD	David	0.37	80	*i* P	Pb	05 21 36.7	-0.4
DVD				*i* S	Sb	05 21 42.6	-0.4
CSTBL	De las Acacias	0.38	84	⇓*e*P	Pb	05 21 36.7	-0.5
PEDE3	Pedregal, Chir	0.39	88	*e*P	Pb	05 21 36.8	-0.6
PEDE3				*e*S	Sn	05 21 44.1	-0.1
LOCO3	Loma Colorada,	0.40	84	*i* P	Pb	05 21 37.1	-0.4
LOCO3				*e*S	Sb	05 21 43.4	-0.3
FITO	Golfito	0.42	308	⇓*e*P	Pb	05 21 36.0	-1.8
FITO				*e*S	Sb	05 21 42.9	-1.3
MLIR3	Monte Lirio, C	0.42	359	⇑*i*P	Pb	05 21 37.8	-0.2
MLIR3				*i* S	Sn	05 21 46.5	+1.3
CLLRA	Cordillera,	0.42	28	⇑*e*P	Pb	05 21 37.5	-0.5
BRU2	Volcan	0.44	17	⇑*e*P	Pb	05 21 37.7	-0.5
BRU2				*e*S	Sn	05 21 45.3	-0.3
BRU2	Volcan	0.44	17	P	Pb	05 21 37.8	-0.5
BRU2	Volcan	0.44	17	⇑*i*P	Pb	05 21 37.8	-0.5
BRU2				AMP		05 21 38.0	
	comp=Z,936nm,0.3s						
BRU2				*e*S	Sn	05 21 45.7	0.0
EDAD	Golfito	0.45	309	⇓*e*P	Pb	05 21 36.6	-1.6
RSRNO	Rio Sereno	0.45	355	⇑*e*P	Pb	05 21 38.1	-0.2
TBS2		0.45	21	*e*P	Pn	05 21 38.7	-0.1
PTAR3	Potrerillos Ar	0.45	45	⇑*i*P	Pb	05 21 38.0	-0.4
PTAR3				*i* S	Sn	05 21 46.0	+0.1
SCLRA	Santa Clara, W	0.46	4	⇑*e*P	Pb	05 21 38.2	-0.4
VITO	San Vito	0.47	341	⇑*e*P	Pb	05 21 38.3	-0.4
VITO				*e*S	Sn	05 21 47.0	+0.6
BC3P	Paso Ancho	0.49	25	⇑*i*P	Pb	05 21 38.2	-0.8
BC3P				*i* S	Sn	05 21 46.7	-0.2
BQTLY	Boquete Panama	0.52	42	⇑*e*P	Pb	05 21 38.8	-0.7
BQSF3	Alto Boquete,	0.53	46	⇑*i*P	Pb	05 21 38.8	-0.8
BQSF3				*e*S	Sb	05 21 47.2	-0.1
ALCO	Alturas Coton,	0.58	358	⇑*e*P	Pb	05 21 39.3	-1.1
EDP2	Potrero Grande	0.73	331	⇑*e*P	Pn	05 21 42.0	-0.6
PBNVO	Pueblo Nuevo,	0.81	50	⇑*e*P	Pn	05 21 42.6	-1.0
RBALA	Bur	0.83	52	⇑*e*P	Pn	05 21 43.3	-0.6
PANP	Palmar Norte	0.86	313	*e*P	Pn	05 21 43.6	-0.8
BURE	Buenos Aires	0.95	327	⇓*e*P	Pn	05 21 45.0	-0.6
DRK0	Durika	0.98	335	*e*P	Pn	05 21 45.5	-0.7
DRK0	Durika	0.98	335	P	Pn	05 21 45.5	-0.7
DRK0	Durika	0.98	335	S	Sb	05 21 59.6	-0.4
DRK0	Durika	0.98	335	*e*P	Pn	05 21 45.5	-0.7
RMDIO	Remedios, Chir	0.99	98	⇓*e*P	Pn	05 21 45.8	-0.3
EDPE	Pejibaye, P	1.08	317	⇓*e*P	Pn	05 21 46.9	-0.5
OCHAL	Ojochal	1.09	312	S	Sn	05 22 02.0	+0.5
OCHAL	Ojochal	1.09	312	P	Pn	05 21 47.2	-0.4
KKNTU	Kakintº	1.10	65	⇑*e*P	Pn	05 21 46.8	-0.9
PDCAN	Manzana , Fuen	1.11	94	⇓*e*P	Pn	05 21 46.8	-1.0
ISBTO	Bastimentos Is	1.14	32	*e*P	Pb	05 21 49.3	-0.4
SAJE	San Jernim	1.19	325	⇓*e*P	Pn	05 21 48.1	-0.9
BRIBI	Bribri	1.24	0	⇑*e*P	Pb	05 21 51.0	-0.4
VERH	Veragua Rainfo	1.59	347	*e*P	Pn	05 21 54.8	+0.4
PIEC	Cerro El Cedra	1.68	318	*e*P	Pn	05 21 55.9	0.0
GMAL	Guarumal, Vera	1.68	111	*e*P	Pn	05 21 55.0	-0.6
REPA	Paraso	1.78	324	*e*P	Pn	05 21 57.6	+0.4
VERB	Verbena	1.79	331	*e*P	Pn	05 21 58.2	+0.9
LCR2	La Lucha 2	1.80	319	⇓*e*P	Pn	05 21 57.0	-0.5
LCR2	La Lucha 2	1.80	319	P	Pn	05 21 57.5	0.0
ABE2	San Pablo	1.80	317	*e*P	Pn	05 21 58.1	+0.5
VTCV	VTCV, Calle Va	1.84	331	⇓*e*P	Pn	05 21 58.8	+0.8
RESJ	San Isidro (Tu	1.84	334	*e*P	Pn	05 21 59.0	+1.1
ABRB	Las Abras (San	1.85	331	*e*P	Pn	05 21 59.2	+1.0
RAFA	San Farael, Vo	1.86	328	*e*P	Pn	05 21 59.0	+0.6
CVTV	Tajo	1.87	331	⇓*e*P	Pn	05 21 59.5	+1.0
PAR1A	Puntarenas Pro	1.87	311	⇓*e*P	Pn	05 21 59.2	+0.9
CVTQ	Turrialba Volc	1.88	330	*e*P	Pn	05 21 59.5	+0.8
VTR0	Volcan Turrial	1.88	330	*e*P	Pn	05 21 59.7	+0.9
ACOS	Acosta	1.94	317	*e*P	Pn	05 21 59.6	+0.2
LUJA	Lujan	1.98	321	*e*P	Pn	05 22 00.9	+1.0
VBV1	V. Barva	2.15	324	*e*P	Pn	05 22 02.7	+0.4
BITO	Garabito Jaco	2.17	305	*e*P	Pn	05 22 02.4	0.0
CACAO	El Cacao, Vera	2.19	118	*e*P	Pn	05 22 03.0	+0.3
TCS1	Tacares	2.21	319	P	Pn	05 22 05.0	+1.9
TRT2	Tortugero	2.36	337	*e*P	Pn	05 22 06.0	+1.1
TRT2	Tortugero	2.36	337	P	Pn	05 22 06.6	+1.7
TRT2	Tortugero	2.36	337	S	Sb	05 22 36.3	-2.7
VPL2	V. Platanar	2.47	321	⇓*e*P	Pn	05 22 08.4	+1.8
SOCE	Pocosol	2.68	319	P	Pn	05 22 11.3	+1.9
VACR	Volcan Arenal	2.78	319	*e*P	Pn	05 22 12.6	+1.8
COVE	Coope Vega, Sa	2.81	326	P	Pn	05 22 13.2	+2.0
JTS	Las Juntas de	2.84	312	⇓*e*P	Pn	05 22 12.0	+0.3
INDI	Punta indio, G	3.04	300	P	Pn	05 22 14.7	+0.4
CMARA	Lajas Hojancha	3.05	303	⇓*e*P	Pn	05 22 14.9	+0.4
CMARA	Lajas Hojancha	3.05	303	P	Pn	05 22 15.1	+0.5
ALIBA	Liberia Airpor	3.48	310	⇓*e*P	Pn	05 22 22.5	+2.1
CARN	Rivas	3.87	317	P	Pn	05 22 28.6	+2.9
ACON	Acoyapa	4.26	327	P	Pn	05 22 32.4	+1.3
BOAB	BOACO BROADBAN	4.93	326	P	Pn	05 22 42.0	+1.7
COPN	Copaltepe	5.30	316	*e*P	Pn	05 22 47.8	+2.3
COPN	Copaltepe	5.30	316	P	Pn	05 22 48.1	+2.6
IZABA	Izabal, Puerto	9.24	323	P	Pn	05 23 41.7	+2.3

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*TAP **30** 05:33:46.9, 24°.92N×122°.43E, h17km, ML3.1, C*

*JMA **30** 05:33:46.9±0.2, 25°N±1°×122°.4E±0°.6, h3km, MV3.3/9, NW OFF ISHIGAKIJIMA IS*

ISC 30 05:33:47.0±1.0**, 24°.89N**±0°.02×**122°.42E**±0°.02**, h11km**±9km**, n84, σ0ˢ78**/155**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao	0.41	287	*i* P	Pb	05 33 55.8	-0.4
TWB1				*i* S	Sb	05 34 02.0	-0.5
EGS		0.44	264	*i* P	Pb	05 33 56.3	-0.5
EGS				*e*S	Sb	05 34 03.7	+0.2
EOS2	EOS2	0.50	200	*i* P	Pb	05 33 57.9	+0.3
EOS2				S	Sb	05 34 06.0	+1.1
SXI1	Grass Mountain	0.53	293	*i* P	Pb	05 33 58.6	+0.2
SXI1				S	Sb	05 34 06.0	-0.1
TIPB	Shuangxi	0.54	279	*i* P	Pb	05 33 58.7	+0.1
TIPB				S	Sb	05 34 06.0	-0.4
TWC	Suao	0.59	242	*i* P	Pg	05 33 58.8	+0.4
TWC				*i* S	Sb	05 34 07.3	-0.3
WFSB	Wu-fen Shan	0.60	288	*i* P	Pb	05 33 59.9	+0.4
WFSB				*i* S	Sb	05 34 09.0	+0.9
EOS3	EOS3	0.61	189	*i* P	Pb	05 34 00.0	+0.5
EOS3				*i* S	Sn	05 34 09.9	-1.2
ESAO	Su ao	0.61	239	*i* P	Pb	05 33 59.5	-0.1
ESAO				*e*S	Sb	05 34 07.7	-0.5
TNOU	National Taiwa	0.64	294	*i* P	Pb	05 34 00.1	-0.1
TNOU				S	Sb	05 34 09.2	+0.1
JYNG	Yonagunijimaku	0.65	132	*e*P	Pg	05 33 59.6	+0.1
JYNG				*e*S	Sg	05 34 08.7	+0.6
NDS	Dongshan	0.69	248	*i* P	Pg	05 34 00.1	-0.2
NDS				S	Sb	05 34 10.7	+0.3
YOJ	Yonaguni jima	0.69	128	P	Pg	05 34 00.6	+0.3
YOJ	Yonaguni jima	0.69	128	*e*P	Pg	05 34 00.1	-0.2
YOJ				*e*S	Sg	05 34 09.0	-0.3
YOJ	Yonaguni jima	0.69	128	*i* P	Pg	05 34 00.3	0.0
YOJ				S	Sg	05 34 09.8	+0.5
TWE	Neicheng	0.70	256	*i* P	Pb	05 34 00.9	-0.3
TWE				*i* S	Sb	05 34 11.2	+0.3
EWUT	Wuta	0.73	233	*i* P	Pb	05 34 01.5	-0.2
EWUT				S	Sb	05 34 11.6	-0.2
TWA	Mucha	0.76	277	*i* P	Pb	05 34 02.1	-0.1
TWA				S	Sg	05 34 11.9	+0.3
FUSB	Fushanzhiwuyua	0.76	260	*i* P	Pg	05 34 01.9	+0.2
FUSB				*e*S	Sb	05 34 13.8	+1.0
ENA	Nanau	0.77	233	*i* P	Pg	05 34 02.0	+0.3
ENA				*i* S	Sg	05 34 12.3	+0.5
EOS4	EOS4	0.77	187	*i* P	Pb	05 34 02.4	+0.2
EOS4				S	Sb	05 34 13.6	+1.0
PCYT	Pengchaiyu	0.80	337	*i* P	Pg	05 34 02.1	-0.3
PCYT				*e*S	Sg	05 34 12.6	-0.3
YM08	YM08	0.81	292	*i* P	Pb	05 34 02.8	-0.2
YM08				*e*S	Sb	05 34 14.3	+0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
YM01	YM01	0.81	289	*i* P	Pb	05 34 03.0	-0.1
YM01				*e*S	Sn	05 34 16.1	-0.4
ENTT	Nioudou	0.81	252	P	Pb	05 34 03.5	+0.4
ENTT				*i* S	Sn	05 34 15.7	-0.7
NHDH	Xindian Distri	0.81	275	*i* P	Pb	05 34 03.4	+0.3
NHDH				S	Sg	05 34 13.5	+0.2
EAHA	Aohua	0.83	228	*i* P	Pg	05 34 03.2	+0.2
EAHA				*i* S	Sg	05 34 14.3	+0.5
TWY	Chenhua	0.83	298	*i* P	Pg	05 34 03.2	+0.1
TWY				S	Sb	05 34 15.5	+0.8
ZUZH	Zhuzihu	0.84	289	*i* P	Pg	05 34 03.3	+0.2
NWLT	Wulai	0.84	263	*i* P	Pb	05 34 03.9	+0.3
NWLT				S	Sb	05 34 15.7	+0.8
TATO	Taipei	0.85	276	P	Pb	05 34 03.9	+0.2
LATG	Datong	0.88	247	*i* P	Pb	05 34 04.2	-0.2
LATG				S	Sb	05 34 17.2	+1.0
YHNB	Yeheng	0.97	257	P	Pb	05 34 06.0	+0.1
YHNB	Yeheng	0.97	257	S	Sb	05 34 19.3	+0.5
YHNB	Yeheng	0.97	257	*i* P	Pg	05 34 05.7	0.0
YHNB				*e*S	Sb	05 34 18.8	0.0
NSK	Sanguang	0.98	258	*i* P	Pb	05 34 06.1	0.0
NSK				S	Sb	05 34 19.6	+0.5
ETL	Fush Village	1.02	225	*i* P	Pb	05 34 07.1	+0.3
ETL				*e*S	Sb	05 34 20.9	+0.6
NACB	Ninganchiao	1.03	227	P	Pg	05 34 06.4	-0.4
NACB	Ninganchiao	1.03	227	*i* P	Pg	05 34 06.0	-0.8
NACB				S	Sg	05 34 19.4	-0.9
NNSB	Datong	1.05	244	*i* P	Pg	05 34 06.9	-0.2
NNSB				S	Sb	05 34 21.4	+0.4
NNS	Nan Shan	1.05	245	*i* P	Pg	05 34 07.2	0.0
NNS				*i* S	Sn	05 34 22.1	-0.4
ETLH	Xiulin Townshi	1.09	232	*i* P	Pg	05 34 07.5	-0.4
ETLH				S	Sn	05 34 23.0	-0.4
TWD	Chiawan	1.10	223	*i* P	Pn	05 34 08.5	+0.2
TWD				*e*S	Sn	05 34 24.5	+0.9
KSHI	Guanxi Townshi	1.13	265	*i* P	Pb	05 34 07.8	-0.8
KSHI				*e*S	Sn	05 34 24.0	-0.3
NFF	Wufeng Townshi	1.21	258	*i* P	Pn	05 34 09.4	-0.5
NFF				*e*S	Sn	05 34 26.9	+0.6
FUSS	Fushou	1.24	239	*i* P	Pg	05 34 11.2	+0.3
FUSS				S	Sn	05 34 28.7	+1.3
ETM	Tongmen	1.25	223	*i* P	Pn	05 34 10.4	0.0
ETM				*e*S	Sn	05 34 27.7	+0.5
LXIB	Xiulin Townshi	1.26	227	*i* P	Pn	05 34 10.5	-0.2
LXIB				*e*S	Sn	05 34 29.8	+2.1
WHF	Hehuan Shan	1.28	235	*i* P	Pn	05 34 11.4	+0.1
WHF				S	Sg	05 34 28.5	0.0
TWT	Tachien	1.29	241	*i* P	Pn	05 34 10.8	-0.4
TWT				S	Sn	05 34 30.5	+1.9
LIOB	Emei	1.30	259	*i* P	Pn	05 34 10.9	-0.1
LIOB				*e*S	Sb	05 34 28.2	+0.1
TDCB	Techi	1.31	241	P	Pb	05 34 11.9	+0.2
TDCB				*e*S	Sg	05 34 29.3	+0.2
IRIF	Iriomote-Funau	1.32	115	*e*P	Pb	05 34 11.9	+0.2
IRIF				S	Sb	05 34 28.3	-0.4
SHUL	Shoufeng	1.34	216	*i* P	Pn	05 34 11.9	+0.2
SHUL				*e*S	Sg	05 34 30.9	+0.7
OWD	Renai	1.47	231	*i* P	Pb	05 34 14.2	-0.1
OWD				*e*S	Sg	05 34 34.3	+0.2
WHP	Taichung City	1.47	246	*i* P	Pg	05 34 15.0	-0.2
WHP				*e*S	Sg	05 34 35.1	+0.8
WUSB	Renai	1.48	233	*i* P	Pb	05 34 14.8	+0.1
WUSB				S	Sg	05 34 34.7	-0.1
WARBT	Fenglin Townsh	1.50	219	*i* P	Pn	05 34 11.4	-2.5
WARBT				*e*S	Sn	05 34 32.9	-0.5
HATJ	Hateruma jima	1.51	123	*e*P	Pb	05 34 15.3	+0.2
JKRS	Kuro-shima	1.59	114	*e*P	Pb	05 34 16.0	-0.4
WCS	Beigang Elemen	1.60	239	*i* P	Pg	05 34 17.4	-0.3
WCS				*e*S	Sb	05 34 36.9	0.0
VWDT	VWDT	1.62	226	*i* P	Pb	05 34 16.4	-0.6
VWDT				*e*S	Sn	05 34 35.9	-0.6
HGSD	Ruisui	1.66	213	*i* P	Pn	05 34 15.9	-0.1
HGSD				*e*S	Sn	05 34 37.7	+0.3
EHY	Hungye	1.70	216	*e*P	Pn	05 34 13.8	-2.9
EHY				*e*S	Sn	05 34 38.1	-0.3
SMLT	Sun Moon Lake	1.71	234	*i* P	Pb	05 34 18.3	-0.2
SMLT				*e*S	Sb	05 34 40.1	+0.1
SSLB	Suanglung	1.73	231	P	Pb	05 34 18.7	-0.1
SSLB	Suanglung	1.73	231	S	Sb	05 34 41.3	+0.8
SSLB	Suanglung	1.73	231	*i* P	Pb	05 34 18.1	-0.7
SSLB				S	Sg	05 34 42.0	-0.5
TYC	Yuchr	1.73	236	*i* P	Pb	05 34 18.7	0.0
TYC				*e*S	Sb	05 34 41.3	+0.8
YULB	Yu-li	1.81	215	P	Pn	05 34 18.4	+0.3
YULB	Yu-li	1.81	215	P	Pn	05 34 18.1	0.0
YULB				*e*S	Sn	05 34 41.0	-0.1
WHYT	Xinyi Township	1.86	231	*i* P	Pb	05 34 20.5	-0.4
WHYT				S	Sb	05 34 44.9	+0.7
FULB	Fuli	1.97	212	P	Pn	05 34 18.8	-1.6
FULB				*e*S	Sn	05 34 45.3	+0.2
ALS	Alishan	2.01	227	*i* P	Pn	05 34 22.3	+1.1
ALS				*e*S	Sb	05 34 48.0	-1.0
EHD	Haiduan	2.06	213	*i* P	Pn	05 34 22.0	+0.5
EHD				*e*S	Sn	05 34 46.7	-0.5
EDH	Donghe	2.16	208	*e*P	Pn	05 34 20.4	-2.6
EDH				*e*S	Sn	05 34 49.1	-0.7
TPUB	Ta-pu	2.27	226	P	Pb	05 34 26.6	-1.5
TPUB	Ta-pu	2.27	226	P	Pb	05 34 27.0	-1.1
TPUB				*e*S	Sb	05 34 55.0	-1.2
STYH	Taoyuan	2.28	222	*e*P	Pn	05 34 24.6	0.0
STYH				*e*S	Sn	05 34 53.5	+0.9
WTP	Ta-pu	2.32	226	*i* P	Pb	05 34 27.3	-1.6
TWK	Hsinying	2.39	228	*i* P	Pb	05 34 28.6	-1.5
TWK				*e*S	Sb	05 34 58.1	-1.6
SNST	Tainan City	2.42	227	*e*P	Pn	05 34 27.3	+0.9
SNST				*e*S	Sb	05 34 59.0	-1.3
CHN1	Nanshi	2.42	226	*e*P	Pb	05 34 29.4	-1.2
CHN1				*e*S	Sb	05 35 00.7	+0.3
MASBT	Mashibuluo	2.79	216	*i* P	Pn	05 34 34.2	+2.6
MASBT				S	Sn	05 35 08.1	+2.7

UCR ***30*** *05:37:49.7±0.9, 8°.32N×82°.81W, h29km±2km, MW3.5*
UPA ***30*** *05:37:49.7±1.0, 8°.35N×82°.81W, h36km±8km, MD3.4*
ISC 30 05:37:49.7±1.0, **8°.34N**±0°.03×**82°.81W**±0°.03, **h31**km±7km, **n49**, σ**0^{s}.72**/62, **2C-1D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.07	15	⇓*i*P	Pb	05 37 55.2	+0.1
LPPC	Paso Canoas	0.20	351	*e*P	Pb	05 37 56.0	-0.1
LPPC				*e*S	Sn	05 38 01.3	+0.5
LIMO3	Limones	0.24	193	⇑*i*P	Pn	05 37 57.0	-0.2
LIMO3				*e*S	Sn	05 38 02.2	+0.3
LMNES	Limones	0.24	192	*e*P	Pn	05 37 56.9	-0.2
NELY	Ciudad Neily	0.34	336	*e*P	Pb	05 37 57.5	-0.4
NELY				*e*S	Sn	05 38 04.1	-0.2
DVD	David	0.37	75	*e*P	Pb	05 37 58.4	+0.2
DVD				*e*S	Sn	05 38 05.3	+0.3
CSTBL	De las Acacias	0.37	79	*e*P	Pb	05 37 58.6	+0.3
PEDE3	Pedregal, Chir	0.39	83	*i* P	Pb	05 37 58.5	+0.1
LOCO3	Loma Colorada,	0.39	80	*e*P	Pb	05 37 58.7	+0.2
CLLRA	Cordillera,	0.45	25	*e*P	Pb	05 37 59.4	-0.1
MLIR3	Monte Lirio, C	0.45	358	⇑*i*P	Pb	05 37 59.8	+0.2
MLIR3				*e*S	Sn	05 38 08.9	+1.6
BRU2	Volcan	0.47	14	*e*P	Pb	05 37 59.6	-0.2
BRU2				*e*S	Sn	05 38 07.5	-0.2
BRU2	Volcan	0.47	14	*i* P	Pb	05 37 59.7	-0.2
BRU2				*e*S	Sn	05 38 07.6	-0.2
PTAR3	Potrerillos Ar	0.47	41	*e*P	Pb	05 37 57.0	-2.9
EDAD	Golfito	0.47	311	*e*P	Pb	05 37 58.5	-1.3
EDAD				*e*S	Sb	05 38 05.8	-0.9
TBS2		0.48	18	*e*P	Pn	05 38 00.6	+0.1
RSRNO	Rio Sereno	0.48	354	*e*P	Pb	05 38 00.3	+0.3
SCLRA	Santa Clara, W	0.49	3	*e*P	Pb	05 37 59.9	-0.4
VITO	San Vito	0.50	341	*e*P	Pb	05 38 00.3	0.0
VITO				*e*S	Sn	05 38 09.3	+0.7
BC3P	Paso Ancho	0.51	22	*e*P	Pb	05 38 00.3	-0.3
BC3P				*e*S	Sn	05 38 10.1	+1.1
BQTLY	Boquete Panama	0.54	39	*e*P	Pb	05 38 00.7	-0.2
BQSF3	Alto Boquete,	0.55	43	*e*P	Pb	05 38 00.7	-0.4
BQSF3				*e*S	Sb	05 38 08.5	-0.3
ALCO	Alturas Coton,	0.61	358	*e*P	Pb	05 38 01.4	-0.7
EDP2	Potrero Grande	0.77	332	*e*P	Pn	05 38 03.9	-0.5
EDP2				*e*S	Sb	05 38 15.5	+0.7
PBNVO	Pueblo Nuevo,	0.82	48	*e*P	Pn	05 38 04.5	-0.7
RBALA	Bur	0.84	50	*e*P	Pn	05 38 05.0	-0.4
RMDIO	Remedios, Chir	0.97	96	*e*P	Pn	05 38 07.5	+0.2
BURE	Buenos Aires	0.98	328	*e*P	Pn	05 38 06.8	-0.6
DRK0	Durika	1.01	335	*e*P	Pn	05 38 07.3	-0.7
DRK0	Durika	1.01	335	*e*P	Pn	05 38 07.2	-0.7
DRK0				*e*S	Sn	05 38 21.1	-0.1
KKNTU	Kakintº	1.11	63	*e*P	Pn	05 38 08.7	-0.4
EDPE	Pejibaye, P	1.11	317	*e*P	Pn	05 38 08.7	-0.4
SAJE	San Jernim	1.22	325	*e*P	Pn	05 38 10.0	-0.8
BRIBI	Bribri	1.27	360	*e*P	Pb	05 38 13.1	0.0
PIEC	Cerro El Cedra	1.71	318	*e*P	Pn	05 38 17.8	+0.2
VINA	Juan Vinas	1.80	329	*e*P	Pn	05 38 19.8	+1.0
PISJ	San Jernim	1.83	315	*e*P	Pn	05 38 19.9	+0.7
LCR2	La Lucha 2	1.83	320	*e*P	Pn	05 38 19.1	-0.1
ABE2	San Pablo	1.83	318	*e*P	Pn	05 38 19.8	+0.5
VTCV	VTCV, Calle Va	1.87	331	*e*P	Pn	05 38 20.6	+0.8
RESJ	San Isidro (Tu	1.87	334	*e*P	Pn	05 38 20.8	+1.1
PICV	PH. Pirrs	1.88	313	*e*P	Pn	05 38 20.5	+0.8
ABRB	Las Abras (San	1.88	332	*e*P	Pn	05 38 20.9	+0.9
PAR1A	Puntarenas Pro	1.90	311	*e*P	Pn	05 38 20.8	+0.8
CVTV	Tajo	1.90	331	*e*P	Pn	05 38 21.2	+1.0
CVTQ	Turrialba Volc	1.91	330	*e*P	Pn	05 38 21.2	+0.7
VTLA	Turrialba Volc	1.91	330	*e*P	Pn	05 38 21.5	+1.1
VTR0	Volcan Turrial	1.92	331	*e*P	Pn	05 38 21.6	+1.0
JTS	Las Juntas de	2.87	313	*e*P	Pn	05 38 33.2	-0.1

IDC ***30*** *05:45:07.9±1.0, 1°.88S×12°.13W, h0km, mb4.0/6, mbtmp4.1/7, ML3.1/1, MS3.4/27, Error ellipse: s-maj=50.3km s-min=19.7km az=124.0*
NEIC ***30*** *05:45:10.3±2.2, 1°.99S±0°.10×11°.97W±0°.09, h10km±1km, mb4.7/12, Error ellipse: s-maj=19.2km s-min=12.2km az=320.0*
ISC 30 05:45:09.7±0.6, **2°.00S**±0°.09×**12°.0W**±0°.1, **h10**km, **n47**, σ**0^{s}.86**/22, **mb4.5**/10, **MS3.4**/26, **North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	6.30	203	T	T	05 53 02.7	
	baz=15,slow=74						
H10N1	ASCENSION HYDR	6.32	203	T	T	05 53 12.4	
	baz=15,slow=74						
H10N3	ASCENSION HYDR	6.32	203	T	T	05 53 12.4	
	baz=15,slow=74						
ASCN	Ascension	6.35	202	Pn	Pn	05 46 44.8	+1.3
DBIC	Dimbokro	11.17	40	Pn	Pn	05 47 50.3	+0.7
	0.1nm,0.3s,baz=255,slow=16,SNR=2.3						
DBIC				Sn	Sn	05 49 55.0	+0.2
	0.1nm,0.3s,baz=192,slow=15,SNR=2.1						
DBIC				LR	LR	05 51 24.3	
	comp=Z,348nm,21.6s,baz=266,slow=34 4.6nm,0.9s						
SHEL	Horse Pasture	15.18	156	Pn	Pn	05 48 43.4	-1.0
TORD	Torodi Ar. Bea	20.27	42	P	P	05 49 45.2	-0.4
TORD	Torodi Ar. Bea	20.27	42	P	P	05 49 46.6	+1.0
	4.0nm,0.8s,baz=231,slow=9.6,SNR=6.9						
TORD				LR	LR	05 57 00.8	
	comp=Z,189nm,21.7s,baz=176,slow=35 4.0nm,0.8s						
RCBR	Riachuelo	24.15	260	P	P	05 50 26.6	+0.2
RCBR				IAmb	IAmb	05 50 28.1	
	comp=Z,13nm,1.0s						
RCBR	Riachuelo	24.15	260	LR	LR	05 58 11.0	
	comp=Z,29nm,18.8s,baz=76,slow=33						
TSUM	Tsumeb	33.62	123	LR	LR	06 02 57.5	
	comp=Z,80nm,21.1s,baz=324,slow=32						
MDT	Midelt	35.32	11	LR	LR	06 05 46.9	
	comp=Z,42nm,19.7s,baz=213,slow=35						
MORF	Marmelete	39.22	4	P	P	05 52 38.6	+0.3
MORF				IAmb	IAmb	05 53 02.1	
	comp=Z,22nm,1.1s						
SPB	Sao Paulo	40.47	235	P	P	05 52 48.6	-0.3
SPB				IAmb	IAmb	05 53 01.7	
	comp=Z,30nm,1.5s						
MDP	Montagnes des	41.22	280	LR	LR	06 06 22.5	
	comp=Z,63nm,20.8s,baz=68,slow=31						
ESDC	Sonseca Array	42.12	9	LR	LR	06 10 38.7	
	comp=Z,29nm,18.3s,baz=168,slow=36						
MTE	Manteigas	42.39	5	P	P	05 53 05.6	+1.2
LBTB	Lobatse	42.86	126	P	P	05 53 09.2	+0.6
LBTB	Lobatse	42.86	126	LR	LR	06 08 24.2	
	comp=Z,47nm,20.7s,baz=296,slow=32						
MATP	Matopo	43.54	118	LR	LR	06 09 54.1	
	comp=Z,43nm,18.1s,baz=289,slow=34						
BOSA	Boshof	44.28	130		P	05 53 19.5	-0.5
BOSA				IAmb	IAmb	05 53 44.3	
	comp=Z,15nm,1.4s						
CPUP	Villa Florida	49.78	237	LR	LR	06 13 42.2	
	comp=Z,14nm,18.9s,baz=299,slow=34						
SIV	San Ignacio	50.28	251	P	P	05 54 06.4	-0.5
	comp=Z,1.7nm,0.9s,baz=81,slow=7.2,SNR=5.3						
SIV				LR	LR	06 12 41.3	
	comp=Z,86nm,21.6s,baz=111,slow=33 comp=Z,1.7nm,0.9s						
DAVOX	Davos/Dischmat	52.25	19	LR	LR	06 17 23.9	
	comp=Z,45nm,20.1s,baz=266,slow=37						
EIL	Elat	54.77	51	LR	LR	06 19 32.4	
	comp=Z,67nm,18.8s,baz=245,slow=38						
GEC2	GERESS Array S	55.32	20	P	P	05 54 42.6	-1.1
GEC2				IAmb	IAmb	05 54 50.0	
	comp=Z,6.9nm,1.2s						
GERES	GERESS Array B	55.32	20	P	P	05 54 42.2	-1.5
GERES	GERESS Array B	55.32	20	P	P	05 54 42.0	-1.7
	comp=Z,1.9nm,0.9s,baz=204,slow=5.6,SNR=12						
GERES				LR	LR	06 18 30.1	
	comp=Z,30nm,20.9s,baz=322,slow=36 comp=Z,1.9nm,0.9s						
ISP	Isparta	55.79	40	P	P	05 54 46.9	-0.4
ISP				IAmb	IAmb	05 55 08.3	
	comp=Z,12nm,1.4s						
VRAC	Vranov	56.75	22	LR	LR	06 21 21.9	
	comp=Z,19nm,18.3s,baz=144,slow=38						
LPAZ	La Paz	57.02	252	LR	LR	06 17 42.1	
	comp=Z,69nm,20.2s,baz=80,slow=34						
ASF	Jabal al Asfar	57.39	49	LR	LR	06 19 11.1	
	comp=Z,54nm,21.9s,baz=247,slow=36						
MLR	Muntele Rosu	58.00	31	LR	LR	06 21 40.9	
	comp=Z,54nm,19.7s,baz=240,slow=38						
BRTR	Keskin Array B	58.87	40	P	P	05 55 09.0	-0.1
	comp=Z,1.5nm,0.9s,baz=246,slow=8.0,SNR=5.7 comp=Z,1.5nm,0.9s						
SDV	Santo Domingo	59.43	281	LR	LR	06 17 08.9	
	comp=Z,36nm,20.1s,baz=64,slow=32						
ROSC	El Rosal	62.64	276	LR	LR	06 19 55.2	
	comp=Z,68nm,18.5s,baz=145,slow=33						
NNA	Nana	64.99	258	LR	LR	06 23 40.0	
	comp=Z,50nm,18.3s,baz=112,slow=36						
HFS	Hagfors	65.11	14	LR	LR	06 24 23.7	
	comp=Z,23nm,20.0s,baz=156,slow=36						
PLCA	Paso Flores	65.25	226	LR	LR	06 21 38.8	
	comp=Z,34nm,19.0s,baz=99,slow=34						
NOA	NORSAR Array B	65.36	12	LR	LR	06 26 55.3	
	comp=Z,8.2nm,18.1s,baz=245,slow=38						
ATAH	Atahualpa	66.34	263	LR	LR	06 23 24.5	
	comp=Z,41nm,20.9s,baz=73,slow=35						
GNI	Garni	66.55	44	LR	LR	06 28 49.0	
	comp=Z,16nm,19.3s,baz=104,slow=39						
SNAA	Sanae	69.82	177	P	P	05 56 20.4	+0.3
	comp=Z,2.1nm,1.0s,baz=327,slow=5.9,SNR=4.4 comp=Z,2.1nm,1.0s						
TKL	Tuckaleechee C	76.45	307	LR	LR	06 23 09.9	
	comp=Z,29nm,20.4s,baz=142,slow=30						
BELA	Belgrano 2	76.77	185	P	P	05 57 00.5	-0.5
QSPA	South Pole Qui	88.08	180	P	P	05 58 00.4	0.0
QSPA	South Pole Qui	88.08	180	P	P	05 58 00.7	+0.3
	comp=Z,2.9nm,0.9s,baz=218,slow=5.9,SNR=6.5 comp=Z,2.9nm,0.9s						

SJA ***30*** *05:50:54.1±0.8, 31°.51S×71°.80W, h13km±4km, ML4.2, MW3.9*
GUC ***30*** *05:50:58.8±0.7, 31°.55S×71°.51W, h46km±3km, ML4.4*
IDC ***30*** *05:50:59.3±0.6, 31°.54S×71°.34W, h42km±4km, mb4.0/10, mbtmp4.2/14, ML3.9/4, MS2.6/2, Error ellipse: s-maj=20.5km s-min=13.7km az=95.0*
NEIC ***30*** *05:50:59.7±0.7, 31°.54S±0°.01×71°.50W±0°.07, h41km±7km, mb4.5/36, ML4.4(GUC), Error ellipse: s-maj=8.4km s-min=1.8km az=88.0*
ISC 30 05:50:58.7±0.5, **31°.51S**±0°.02×**71°.64W**±0°.04, **h41**km±4km, **n119**, σ**1^{s}.65**/136, **mb4.5**/26, **9C-6D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO02	Combarbal	0.62	61		Pn	05 51 10.9	-0.4
CO02				Sn	Sn	05 51 19.0	-1.2
CO02	Combarbal	0.62	61	⇓*i*P	Pn	05 51 10.9	-0.4
CO02				*i* S	Sn	05 51 19.0	-1.2
CO02	Combarbal	0.62	61	*e*P	Pn	05 51 09.9	-1.4
CO02				*e*S	Sn	05 51 19.4	-0.8
CO06	Fray Jorge	0.83	0	⇑*i*P	Pn	05 51 15.2	+1.2
CO06				*i* S	Sn	05 51 25.4	+0.4
CO03	El Pedregal	1.05	51		Pn	05 51 16.9	-0.2
CO03				Sn	Sn	05 51 29.9	-0.7
CO03	El Pedregal	1.05	51	⇓*i*P	Pn	05 51 16.9	-0.2
CO03				*i* S	Sn	05 51 29.6	-1.0
CO03				IAML		05 51 32.4	
	comp=E,13µm,0.1s						
CO03	El Pedregal	1.05	51	*e*P	Pn	05 51 16.1	-1.0
CO03				*e*S	Sn	05 51 31.4	+0.9
CO03				IAML		05 51 32.5	
	comp=Z,4µm,0.4s						
VA06	Catapilco	1.09	165		Pn	05 51 17.5	-0.1
VA06	Catapilco	1.09	165	⇑*i*P	Pn	05 51 17.1	-0.4
VA06				*i* S	Sn	05 51 31.1	-0.4
VA06				IAML		05 51 33.5	
	comp=E,16µm,0.4s						
GO04	Tololo Observa	1.51	29		Pn	05 51 24.1	+0.6
GO04	Tololo Observa	1.51	29	⇓*i*P	Pn	05 51 24.1	+0.6
GO04				*i* S	Sn	05 51 43.0	+0.9
GO04	Tololo Observa	1.51	29	*e*P	Pn	05 51 24.1	+0.6
GO04				*e*S	Sn	05 51 44.7	+2.6
GO04				IAML		05 51 45.3	
	comp=Z,8µm,0.3s						
VA01	Torpederas	1.51	180		Pn	05 51 23.9	+0.6
VA01				Sn	Sn	05 51 41.7	-0.1
VA01	Torpederas	1.51	180	*e*P	Pn	05 51 23.6	+0.3
VA01				IAML		05 51 47.2	
	comp=E,6µm,0.3s						
VA01	Torpederas	1.51	180	*e*P	Pn	05 51 23.2	-0.2
VA01				*e*P		05 51 23.7	
VA01				*e*S	Sn	05 51 36.2	-5.6
VA01				IAML		05 51 45.8	
	comp=Z,2µm,0.2s						
ROCH	El Roble	1.56	160	⇑*i*P	Pn	05 51 24.1	0.0
ROCH				⇑*i*P	Pn	05 51 24.2	0.0
ROCH				*i* S	Sn	05 51 43.6	+0.4
ROCH				*e*S		05 51 43.8	
ROCH				IAML		05 51 46.2	
	comp=N,10µm,0.3s						
VA03	San Esteban	1.56	144		Pn	05 51 23.7	-0.4
VA03	San Esteban	1.56	144	⇓*i*P	Pn	05 51 23.6	-0.4
VA03				*i* S	Sn	05 51 42.7	-0.3
VA03	San Esteban	1.56	144	*e*P	Pn	05 51 23.7	-0.4
VA03				*e*S	Sn	05 51 43.7	+0.7
VA03				IAML		05 51 45.1	
	comp=Z,5µm,0.2s						
CO05	La Serena	1.62	12		Pn	05 51 25.9	+1.1
CO05	La Serena	1.62	12	*e*P	Pn	05 51 26.2	+1.4
CO05				*i* S	Sn	05 51 46.0	+1.6
CO05				IAML		05 51 51.2	
	comp=E,4µm,0.2s						
MT02	Curacav	1.80	167		Pn	05 51 27.6	+0.2
MT02	Curacav	1.80	167	*e*P	Pn	05 51 27.5	+0.2
MT02				*e*S	Sn	05 51 52.0	+3.1
MT02				IAML		05 51 52.6	
	comp=Z,2µm,0.4s						
PEL	Peldehue	1.82	154		Pn	05 51 27.8	+0.1
PEL	Peldehue	1.82	154	⇓*i*P	Pn	05 51 27.7	+0.1
PEL				*e*S	Sn	05 51 49.7	+0.2
PEL				IAML		05 51 52.4	
	comp=E,9µm,0.2s						
MT10	Hacienda Santa	1.99	152	IAML		05 51 57.3	
	comp=E,10µm,0.5s						
RTLS	Leoncito	2.02	99	*e*P	Pn	05 51 31.9	+1.4
RTLS				*e*S	Sn	05 51 57.5	+2.9
RTLS				IAML		05 51 59.6	
	comp=Z,3µm,0.7s						
CO01	Juntas del Tor	2.02	41		Pn	05 51 32.0	+1.4
CO01	Juntas del Tor	2.02	41	⇓*i*P	Pn	05 51 31.9	+1.4
CO01				*i* S	Sn	05 51 56.0	+1.2
CO01				IAML		05 52 00.5	
	comp=N,2µm,0.3s						
CO01	Juntas del Tor	2.02	41	*e*P	Pn	05 51 32.0	+1.4
CO01				*e*S	Sn	05 51 57.9	+3.2
CO01				IAML		05 52 00.3	
	comp=Z,1µm,0.6s						
MT05	Renca	2.03	158		Pn	05 51 30.9	+0.3
MT05	Renca	2.03	158	IAML		05 51 58.9	
	comp=E,11µm,0.2s						
MT05	Renca	2.03	158	*e*P	Pn	05 51 30.9	+0.4
MT05				*e*S	Sn	05 51 44.6	-10
MT05				IAML		05 51 58.1	
	comp=Z,2µm,0.2s						
MT16	CCHEN	2.14	154		Pn	05 51 32.3	+0.3
VA05	Santo Domingo	2.15	180		Pn	05 51 32.5	+0.5
MT04	Ro Olivares	2.28	147	*e*P	Pn	05 51 34.7	+0.6
MT04				*e*S	Sn	05 52 06.5	+5.5
MT04				IAML		05 52 10.8	
	comp=Z,1µm,0.4s						
AROD	Rodeo	2.29	55	*e*P	Pn	05 51 37.0	+2.7
AROD				*e*S	Sn	05 52 07.3	+5.9
MT08	Bocatoma Ro	2.37	145		Pn	05 51 36.5	+1.2
MT08	Bocatoma Ro	2.37	145	*e*P	Pn	05 51 36.5	+1.2
MT08				*i* S	Sn	05 52 06.0	+2.7
MT08				IAML		05 52 10.6	
	comp=E,1µm,0.5s						
MT08	Bocatoma Ro	2.37	145	*e*P	Pn	05 51 36.1	+0.8
MT08				*e*S	Sn	05 52 08.7	+5.4
MT08				IAML		05 52 11.6	
	comp=Z,901nm,0.6s						
MT01	Popeta	2.38	172	*e*P	Pn	05 51 35.0	-0.2
MT01				*e*S	Sn	05 52 12.6	+10
MT01				IAML		05 52 13.7	
	comp=Z,1µm,0.3s						
ACCO	Cerro Coronel	2.39	68	*e*P	Pn	05 51 38.1	+2.5
ACCO				*e*S	Sn	05 52 12.2	+8.2
ZON	Zonda	2.52	92		Pn	05 51 39.3	+2.0
ZON	Zonda	2.52	92	*e*P	Pn	05 51 39.3	+2.0
ZON				*e*S	Sn	05 52 13.8	+6.9
ZON				IAML		05 52 18.9	
	comp=Z,722nm,0.3s						
ACDV	Cuesta del Vie	2.54	59	*e*P	Pn	05 51 40.8	+3.2
ACDV				*e*S	Sn	05 52 17.6	+10
ACDV				IAML		05 52 23.5	
	comp=Z,671nm,0.6s						
ASAL	Salagasta	2.61	115	*e*P	Pn	05 51 40.7	+2.1
ASAL				*e*S	Sn	05 52 15.7	+6.6
LCO	Las Campanas	2.61	18		Pn	05 51 39.5	+0.7
LCO	Las Campanas	2.61	18	*e*P	Pn	05 51 40.3	+1.5
LCO				*e*S	Sn	05 52 03.7	-5.7
LCO				IAML		05 52 25.9	
	comp=Z,2µm,0.3s						
BO04	La Punta	2.62	161	⇑*i*P	Pn	05 51 39.5	+0.8
BO04				*i* S	Sn	05 52 10.0	+0.6
BO04				IAML		05 52 21.4	
	comp=N,2µm,0.1s						
BO01	Tunca	2.92	171	*e*P	Pn	05 51 42.9	+0.3
BO01				*e*S	Sn	05 52 19.7	+3.3
BO01				IAML		05 52 37.9	
	comp=Z,588nm,0.3s						
AC04	Llanos de Chal	3.33	9		Pn	05 51 49.3	+1.0
BO02	Sierra Bellavi	3.36	168		Pn	05 51 49.2	+0.5
BO02	Sierra Bellavi	3.36	168	*e*S	Sn	05 52 27.9	+0.5
BO02				IAML		05 52 44.6	
	comp=Z,1µm,0.2s						
GO03	Copiapo	4.08	18		Pn	05 52 00.2	+1.4
BI05	Punta Hualpn	5.39	193		Pn	05 52 15.8	-0.8
H03N1	Juan Fernandez	6.45	251	T	T	05 59 17.1	
	baz=81,slow=73,SNR=1708						
H03N3	Juan Fernandez	6.46	251	T	T	05 59 10.1	
	baz=81,slow=73,SNR=2996						
H03N2	Juan Fernandez	6.46	251	T	T	05 59 17.5	
	baz=81,slow=73,SNR=3391						
H03S3	Juan Fernandez	6.55	247	T	T	05 59 27.0	
	baz=68,slow=80,SNR=36						
H03S1	Juan Fernandez	6.56	247	T	T	05 59 24.0	
	baz=68,slow=80,SNR=28						
H03S2	Juan Fernandez	6.57	247	T	T	05 59 26.0	
	baz=68,slow=80,SNR=31						
PLCA	Paso Flores	9.25	175	P	Pn	05 53 09.8	+0.2
	comp=Z,0.2nm,0.3s,baz=324,slow=12,SNR=11						
PLCA				LR	LR	05 57 14.4	
	comp=Z,51nm,20.9s,baz=344,slow=41 comp=Z,2.9nm,1.1s						
TRQA	Tornquist	10.28	132		Pn	05 53 22.6	-1.1
CPUP	Villa Florida	13.55	71	P	Pn	05 54 07.3	-1.0
	comp=Z,0.1nm,0.3s,baz=309,slow=18,SNR=3.0						
CPUP				S	Sn	05 56 31.8	-5.7
	comp=Z,1.9nm,0.8s,baz=337,slow=20,SNR=3.1						

CPUP				LR	LR	05 58 53.8	
	comp=Z,23nm,21.4s,baz=102,slow=36						
	comp=Z,0.4nm,0.8s						
PLTB	**Pedras Altas**	**15.37**	**96**	Pn	**Pn**	**05 54 31.9**	**-0.9**
LPAZ	**La Paz**	**15.48**	**13**		**Pn**	**05 54 35.0**	**+0.2**
LPAZ	**La Paz**	**15.48**	**13**	P	**Pn**	**05 54 35.9**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=180,slow=8.8,SNR=11						
	comp=Z,5.6nm,0.8s						
SIV	**San Ignacio**	**18.20**	**34**	P	**P**	**05 55 07.7**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=196,slow=8.6,SNR=35						
	comp=Z,4.0nm,0.5s						
PTLB	**Pontes e Lacer**	**19.64**	**38**	P	**P**	**05 55 24.1**	**+0.1**
VILB	**Vilhena**	**21.25**	**32**		**P**	**05 55 41.1**	**-0.4**
VILB				IAmb	IAmb	05 56 00.3	
	comp=Z,24nm,0.9s						
BDFB	**Brasilia**	**26.71**	**59**		**P**	**05 56 32.8**	**-1.6**
BDFB				IAmb	IAmb	05 56 35.0	
	comp=Z,16nm,1.3s						
BDFB	**Brasilia**	**26.71**	**59**	P	**P**	**05 56 32.3**	**-2.1**
	comp=Z,9.8nm,1.0s,baz=234,slow=7.2,SNR=9.5						
	comp=Z,9.8nm,1.0s						
MACA	**Manacapuru-AM**	**30.02**	**22**	P	**P**	**05 57 03.1**	**-0.7**
MACA				IAmb	IAmb	05 57 28.0	
	comp=Z,6.2nm,0.7s						
RUSC	**La Rusia**	**37.21**	**358**	P	**P**	**05 58 07.4**	**+0.6**
BELA	**Belgrano 2**	**49.27**	**170**	P	**P**	**05 59 43.2**	**+0.3**
VNA3	**Neumayer Olymp**	**51.54**	**159**	⇑P	**P**	**05 59 59.2**	**-1.0**
	comp=Z,2.2nm,0.6s						
VNA2	**Neumayer--Watz**	**52.18**	**158**	⇑P	**P**	**06 00 04.7**	**-0.1**
	comp=Z,2.9nm,0.5s,baz=272,slow=4.4						
SNAA	**Sanae**	**53.77**	**159**	⇑P	**P**	**06 00 16.2**	**-0.4**
	comp=Z,63nm,0.7s						
SNAA	**Sanae**	**53.77**	**159**	P	**P**	**06 00 16.8**	**+0.1**
SNAA				IAmb	IAmb	06 00 29.2	
	comp=Z,4.5nm,0.8s						
SNAA	**Sanae**	**53.77**	**159**	P	**P**	**06 00 16.2**	**-0.4**
	comp=Z,2.3nm,0.6s,baz=265,slow=7.6,SNR=24						
SNAA				pP	**pP**	**06 00 28.2**	**-0.3**
	comp=Z,3.7nm,0.7s,baz=261,slow=8.5,SNR=11						
	comp=Z,2.3nm,0.6s						
TEIG	**Tepich**	**53.86**	**341**	P	**P**	**06 00 18.9**	**+1.2**
TROLL	**Troll, Antarti**	**55.48**	**159**	⇑P	**P**	**06 00 28.8**	**-0.4**
	comp=Z,75nm,0.6s						
QSPA	**South Pole Qui**	**58.72**	**180**	P	**P**	**06 00 52.5**	**+0.4**
	comp=Z,3.1nm,0.8s,baz=170,slow=1.2,SNR=17						
QSPA				pP	**pP**	**06 01 04.3**	**+0.3**
	comp=Z,4.4nm,0.9s,baz=205,slow=1.6,SNR=5.9						
	comp=Z,3.1nm,0.8s						
X48A	**Hartselle**	**67.19**	**346**	IAmb	IAmb	06 01 49.8	
	comp=Z,3.1nm,0.7s						
W50A	**Signal Mountai**	**67.59**	**348**	IAmb	IAmb	06 01 52.3	
	comp=Z,5.8nm,1.0s						
SAND	**Sanderson**	**67.64**	**332**	IAmb	IAmb	06 01 54.6	
	comp=Z,5.3nm,1.2s						
SWET	**Sewanee**	**67.72**	**347**	IAmb	IAmb	06 01 53.0	
	comp=Z,5.0nm,0.9s						
TXAR	**Lajitas Array**	**67.74**	**330**	P	**P**	**06 01 53.5**	**+1.3**
	comp=Z,0.7nm,0.7s,baz=157,slow=8.0,SNR=9.9						
TXAR				pP	**pP**	**06 02 05.7**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=144,slow=8.5,SNR=4.3						
	comp=Z,0.7nm,0.7s						
V48A	**Smith Brothers**	**68.39**	**347**	IAmb	IAmb	06 01 57.4	
	comp=Z,8.5nm,1.3s						
WVT	**Waverly**	**68.97**	**346**		**P**	**06 02 00.4**	**+0.8**
WVT				IAmb	IAmb	06 02 01.2	
	comp=Z,6.7nm,0.9s						
HHAR	**Hobbs**	**70.60**	**341**		**P**	**06 02 10.7**	**+1.0**
HHAR				IAmb	IAmb	06 02 11.0	
	comp=Z,7.8nm,1.3s						
FVM	**French Village**	**71.32**	**344**	IAmb	IAmb	06 02 15.4	
	comp=Z,5.6nm,0.8s						
MSTX	**Muleshoe**	**71.44**	**333**	IAmb	IAmb	06 02 16.6	
	comp=Z,3.9nm,0.8s						
CCM	**Cathedral Cave**	**71.58**	**344**		**P**	**06 02 16.5**	**+1.0**
CCM				IAmb	IAmb	06 02 17.4	
	comp=Z,9.1nm,1.1s						
DBIC	**Dimbokro**	**74.07**	**72**	P	**P**	**06 02 29.7**	**-1.1**
	comp=Z,10.0nm,0.6s,baz=252,slow=6.9,SNR=15						
	comp=Z,10.0nm,0.6s						
MAW	**Mawson**	**75.47**	**164**	P	**P**	**06 02 38.0**	**0.0**
	comp=Z,1.3nm,0.5s,baz=233,slow=5.1,SNR=2.5						
	comp=Z,1.3nm,0.5s						
ECSD	**EROS Data Cent**	**78.29**	**342**		**P**	**06 02 55.3**	**+1.1**
ECSD				IAmb	IAmb	06 02 55.6	
	comp=Z,4.2nm,0.8s						
BOSA	**Boshof**	**80.93**	**118**	P	**P**	**06 03 09.0**	**-0.2**
BOSA				IAmb	IAmb	06 03 09.8	
	comp=Z,7.3nm,1.2s						
BOSA	**Boshof**	**80.93**	**118**	P	**P**	**06 03 08.7**	**-0.5**
	comp=Z,2.4nm,0.8s,baz=226,slow=10,SNR=4.3						
	comp=Z,2.4nm,0.8s						
GRTLG	**Ghanzi**	**81.45**	**110**	P	**P**	**06 03 11.8**	**-0.3**
NVAR	**Mina Array Bea**	**82.04**	**325**	P	**P**	**06 03 16.8**	**+2.1**
	comp=Z,0.6nm,0.8s,baz=157,slow=7.4,SNR=4.7						
	comp=Z,0.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**83.04**	**70**		**P**	**06 03 19.9**	**-0.4**
TORD				IAmb	IAmb	06 03 20.3	
	comp=Z,3.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**83.04**	**70**	P	**P**	**06 03 19.1**	**-1.2**
	comp=Z,3.7nm,0.8s,baz=275,slow=4.2,SNR=6.0						
	comp=Z,3.7nm,0.8s						
LBTB	**Lobatse**	**83.04**	**115**	P	**P**	**06 03 19.6**	**-0.7**
LBTB				IAmb	IAmb	06 03 42.4	
	comp=Z,7.7nm,1.4s						
ESDC	**Sonseca Array**	**94.60**	**46**	P	**P**	**06 04 14.1**	**-1.0**
	comp=Z,0.4nm,0.8s,baz=236,slow=6.0,SNR=2.2						
	comp=Z,0.4nm,0.8s						
ASAR	**Alice Springs**	**119.94**	**207**	PKP	**PKPdf**	**06 09 44.3**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=119,slow=1.6,SNR=4.4						
WRA	**Warramunga Arr**	**123.10**	**209**	PKP	**PKPdf**	**06 09 50.7**	**-0.7**
	comp=Z,0.8nm,0.3s,baz=154,slow=1.7,SNR=20						
H11S2	**WAKE ISLAND Hy**	**126.11**	**271**	T	T	08 28 54.0	
	baz=117,slow=74,SNR=150						
H11S1	**WAKE ISLAND Hy**	**126.12**	**271**	T	T	08 29 06.1	
	baz=117,slow=74,SNR=145						
H11S3	**WAKE ISLAND Hy**	**126.13**	**271**	T	T	08 28 59.2	
	baz=117,slow=74,SNR=96						
H11N3	**WAKE ISLAND Hy**	**126.46**	**272**	T	T	08 29 19.1	
	baz=116,slow=75,SNR=64						
H11N1	**WAKE ISLAND Hy**	**126.48**	**272**	T	T	08 29 21.5	
	baz=116,slow=75,SNR=28						
H11N2	**WAKE ISLAND Hy**	**126.48**	**272**	T	T	08 29 21.5	
	baz=116,slow=75,SNR=133						
BVAR	**Borovoye Array**	**145.20**	**41**	PKPbc	**PKPdf**	**06 10 31.6**	**+0.2**
	comp=Z,4.4nm,0.3s,baz=306,slow=2.6,SNR=31						
BVAR				pPKPbc	pPKPab	06 10 43.5	-0.4
	comp=Z,2.0nm,0.6s,baz=307,slow=3.1,SNR=5.6						
KURBB	**Kurchatov Arra**	**150.79**	**40**	PKPbc	**PKiKP**	**06 10 46.1**	**-0.8**
	comp=Z,0.7nm,0.3s,baz=302,slow=2.9,SNR=15						
KURBB				PKPab	**pPKPdf**	**06 10 53.6**	**+0.1**
	comp=Z,0.6nm,0.2s,baz=311,slow=4.8,SNR=4.5						
KURBB				pPKPbc	**sPKPdf**	**06 10 59.3**	**+1.3**
	comp=Z,1.1nm,0.7s,baz=291,slow=2.9,SNR=3.0						
ZALV	**Zalesovo Beam**	**151.92**	**30**	PKPbc	**PKiKP**	**06 10 48.8**	**-0.3**
	comp=Z,9.0nm,0.4s,baz=311,slow=2.9,SNR=34						
ZALV				pPKPbc	**pPKPbc**	**06 11 01.8**	**+0.2**
	comp=Z,3.1nm,0.4s,baz=323,slow=2.2,SNR=9.1						
MKAR	**Makanchi Array**	**154.82**	**45**	PKPbc	**PKiKP**	**06 10 54.8**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=297,slow=2.1,SNR=6.0						
MKAR				PKPab	**PKPab**	**06 11 10.0**	**-0.6**
	comp=Z,1.5nm,0.8s,baz=294,slow=4.2,SNR=11						
MKAR				pPKPab	**pPKPab**	**06 11 23.2**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=299,slow=3.5,SNR=4.1						
WMQ	**Urumqi**	**159.60**	**47**	*e*PKP	**PKPdf**	**06 10 53.8**	**+0.9**
WMQ				LR	LR		
	comp=Z,320nm,19.9s						
PZH	**PanZhiHua**	**172.36**	**129**	PKP	**PKPdf**	**06 11 03.3**	**-0.4**

RSNC 30 06:01:04.1±0.3**, 3°S**±2°×**7°5W**±°**, h0^{km}, M3.4, mB5.0, mb4.4, ML3.4, Mw(mB)4.3, Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTLC	**Puerto Leguiza**	**3.64**	**11**	P	Pn	06 01 57.5	-4.2
PTLC				S	Sn	06 02 35.1	-10
MCRA	**Macar, Loja**	**4.58**	**258**	P	Pn	06 02 13.6	-1.2
MCRA				S	Sn	06 03 04.1	-4.7
FLOC	**Florencia**	**4.98**	**358**	P	Pn	06 02 19.5	-0.8
CZSB	**Cruzeiro do Su**	**5.08**	**147**	P	Pn	06 02 22.6	+1.1
	1µm72nm,0.8s						
CZSB				S	Sn	06 03 19.6	-1.3
	1µm72nm,0.8s						
CRUC	**La Cruz**	**5.18**	**343**	P	Pg	06 02 40.2	-3.3
GARC	**Garzon, Huila**	**5.58**	**360**	P	Pn	06 02 28.6	-0.1
TBTG	**Tabatinga, AM**	**5.59**	**98**	P	Pn	06 02 30.4	+1.8
TBTG				S	Sn	06 03 33.7	+0.1
BBAC	**Balboa, Cauca**	**5.70**	**342**	P	Pn	06 02 30.6	+0.3
	13nm,0.5s						
MACC	**Macarena, Meta**	**5.77**	**16**	P	Pn	06 02 31.3	+0.2
	21nm,0.5s						
MACC				S	Sn	06 03 38.0	0.0
	21nm,0.5s						
POPC	**Popayan, Colom**	**6.05**	**348**	P	Pn	06 02 36.1	+0.9
	11nm,0.9s						
ORTC	**Ortega, Tolima**	**7.29**	**2**	P	Pn	06 02 52.2	+0.2
VILC	**Villavicencio,**	**7.70**	**13**	P	Pn	06 02 58.4	+0.7

DJA ***30*** *06:27:34.7±0.8, 6°S±4°×12°9E±°, h263^{km}±23^{km}, M4.5/7, mB4.9/4, mb4.4/6, MLv4.7/7, Mw(mB)4.2/4*

NEIC ***30*** *06:27:35.7±2.2, 6°.40S±0°.06×129°.21E±0°.09, h210^{km}±5^{km}, mb4.2/15, Error ellipse: s-maj=12.5km s-min=8.6km az=77.0*

IDC ***30*** *06:27:43.3±4.3, 6°.72S×129°.58E, h305^{km}±47^{km}, mb3.4/8, mbtmp4.1/10, Error ellipse: s-maj=38.2km s-min=18.2km az=75.0*

ISC 30 06:27:37.0±0.5**, 6°.56S**±0°.05×**129°.25E**±0°.06**, h250^{km}, n60,** σ**2^{s}.36**/57**, mb3.9**/14**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.48**	**125**	Pn	**Pn**	**06 28 22.9**	**-1.2**
SAUI				Sn	**S**	**06 28 54.3**	**-6.9**
SAUI	**Saumlaki**	**2.48**	**125**	P	**Pn**	**06 28 22.7**	**-1.4**
SAUI	**Saumlaki**	**2.48**	**125**	P	**Pn**	**06 28 22.4**	**-1.7**
FAKI	**Fak Fak**	**4.69**	**40**		**Pn**	**06 28 45.4**	**-3.8**
FAKI	**Fak Fak**	**4.69**	**40**	P	**Pn**	**06 28 45.2**	**-3.9**
FAKI	**Fak Fak**	**4.69**	**40**	P	**Pn**	**06 28 45.5**	**-3.6**
KMPI	**Kaimana, Papua**	**5.29**	**57**	P	**Pn**	**06 28 53.6**	**-2.8**
SOEI	**Soe**	**5.87**	**237**	Pn	**Pn**	**06 29 02.6**	**-1.1**
SOEI	**Soe**	**5.87**	**237**	P	**Pn**	**06 29 03.2**	**-0.5**
SWI	**Sorong**	**6.00**	**20**	P	**Pn**	**06 29 01.7**	**-3.6**
	0.5nm2µm25nm,0.5s						
DRS	**Darwin Rock St**	**6.06**	**165**	P	**Pn**	**06 29 05.5**	**-0.4**
MTN	**Manton Dam**	**6.51**	**164**		**Pn**	**06 29 10.8**	**-0.8**
BATI	**Baumata**	**6.61**	**236**	P	**Pn**	**06 29 12.2**	**-0.7**
	31nm,0.4s,baz=90,slow=6.1,SNR=5.8						
BATI				S	**S**	**06 30 23.9**	**-5.7**
	99nm,0.4s,baz=130,slow=9.0,SNR=12						
KDU	**Kakadu**	**6.87**	**153**	P	**Pn**	**06 29 15.3**	**-0.8**
LUWI	**Luwuk**	**8.47**	**310**	Pn	**Pn**	**06 29 32.5**	**-3.9**
KNRA	**Kununurra**	**9.07**	**183**		**Pn**	**06 29 43.5**	**-0.5**
PLAI	**Plampang**	**11.59**	**258**	P	**P**	**06 30 17.0**	**-2.2**
FITZ	**Fitzroy Crossi**	**12.00**	**197**	Pn	**Pn**	**06 30 21.0**	**+0.4**
FITZ	**Fitzroy Crossi**	**12.00**	**197**	P	**Pn**	**06 30 20.3**	**-0.3**
	1.8nm,0.3s,baz=16,slow=8.2,SNR=36						
FITZ				S	S	06 32 26.3	-8.2
	9.0nm,0.3s,baz=72,slow=19,SNR=11						
WB0	**Warramunga Arr**	**14.05**	**160**	Pn	**Pn**	**06 30 46.1**	**+0.2**
WRAB	**Tennant Creek**	**14.19**	**160**	Pn	**Pn**	**06 30 48.2**	**+0.7**
WRA	**Warramunga Arr**	**14.19**	**160**	Pn	**Pn**	**06 30 47.4**	**-0.2**
WRA	**Warramunga Arr**	**14.19**	**160**	P	**Pn**	**06 30 46.6**	**-1.0**
	1.2nm,0.3s,baz=349,slow=11,SNR=20						
WRA				S	**S**	**06 33 18.8**	**-6.0**
	3.6nm,0.5s,baz=330,slow=21,SNR=7.9						
WR8	**Warramunga Arr**	**14.26**	**160**	Pn	**Pn**	**06 30 48.2**	**-0.2**
JAGI	**Jajag, Banyuwa**	**15.09**	**262**	P	**Pn**	**06 31 00.2**	**+1.8**
COEN	**Coen**	**15.54**	**119**	P	**Pn**	**06 31 04.9**	**+1.0**
COEN				IAmb	IAmb	06 31 06.4	
	comp=Z,9.3nm,0.8s						
COEN	**Coen**	**15.54**	**119**	P	**Pn**	**06 31 05.8**	**+1.9**
QIS	**Mount Isa**	**17.16**	**145**	P	**Pn**	**06 31 24.3**	**+1.4**
MBWA	**Marble Bar**	**17.19**	**211**	P	**Pn**	**06 31 23.4**	**+0.1**
MBWA				IAmb	IAmb	06 31 29.5	
	comp=Z,10nm,1.1s						
PSA00	**Pilbara Seismi**	**17.48**	**210**	P	**Pn**	**06 31 26.1**	**-0.5**
PSA00	**Pilbara Seismi**	**17.48**	**210**	P	**Pn**	**06 31 26.0**	**-0.5**
PSA00				IAmb	IAmb	06 31 27.0	
	comp=Z,12nm,0.6s						
PSA00	**Pilbara Seismi**	**17.48**	**210**	P	**Pn**	**06 31 26.9**	**+0.4**
AS31	**Alice Springs**	**17.59**	**166**	P	**Pn**	**06 31 28.9**	**+1.1**
ASAR	**Alice Springs**	**17.59**	**166**	P	**Pn**	**06 31 27.7**	**-0.2**
ASAR	**Alice Springs**	**17.59**	**166**	P	**P**	**06 31 26.8**	**+1.5**
	comp=Z,8.9nm,0.6s,baz=342,slow=10,SNR=48						
ASAR				S	S	06 34 24.2	-11
	comp=Z,0.4nm,0.5s,baz=9.9,slow=11,SNR=2.2						
KKM	**Kota Kinabalu**	**18.05**	**314**	P	**P**	**06 31 28.5**	**-2.0**
KKM				IAmb	IAmb	06 31 30.4	
	comp=Z,11nm,0.9s						
CTAO	**Charters Tower**	**21.29**	**131**	P	**P**	**06 32 07.0**	**+2.4**
CTAO				IAmb	IAmb	06 32 35.8	
	comp=Z,12nm,1.4s						
FORT	**Forrest**	**24.12**	**183**	P	**P**	**06 32 32.4**	**+2.1**
FORT				IAmb	IAmb	06 32 51.7	
	comp=Z,8.5nm,1.0s						
MORW	**Morawa**	**25.63**	**208**	P	**P**	**06 32 46.9**	**+2.9**
NWAO	**Narrogin (SRO)**	**28.52**	**202**	P	**P**	**06 33 12.7**	**+3.1**
CHTO	**Chiang Mai**	**39.09**	**311**	P	**P**	**06 34 39.9**	**-0.6**
CHTO				IAmb	IAmb	06 34 42.3	
	comp=Z,6.0nm,1.2s						
MJAR	**Matsushiro Arr**	**43.69**	**10**	P	**P**	**06 35 18.4**	**+0.8**
	comp=Z,1.5nm,0.7s,baz=202,slow=10,SNR=2.4						
	comp=Z,1.5nm,0.7s						
KSRS	**Korea Array**	**43.80**	**358**	P	**P**	**06 35 20.3**	**+1.9**
	comp=Z,0.7nm,0.5s,baz=178,slow=9.0,SNR=6.2						
	comp=Z,0.7nm,0.5s						
USA0B	**Ussuriysk Arra**	**50.58**	**3**	P	**P**	**06 36 10.5**	**0.0**
USA0B				IAmb	IAmb	06 36 13.4	
	comp=Z,4.1nm,0.7s						
USRK	**Ussuriysk Ar.**	**50.58**	**3**	P	**P**	**06 36 10.8**	**+0.3**
SONM	**Songino Array**	**57.79**	**342**	P	P	06 37 05.0	+2.6
	comp=Z,1.1nm,0.5s,baz=156,slow=7.2,SNR=6.7						
	comp=Z,1.1nm,0.5s						
PEA0B	**Petropavlovsk-**	**64.14**	**19**	P	**P**	**06 37 45.7**	**+0.9**
PEA0B				IAmb	IAmb	06 37 58.4	
	comp=Z,4.5nm,1.0s						
PETK	**Petropavlovsk-**	**64.14**	**19**	P	**P**	**06 37 47.0**	**+2.2**
	comp=Z,2.5nm,0.7s,baz=124,slow=2.6,SNR=5.3						
	comp=Z,2.5nm,0.7s						
MKAR	**Makanchi Array**	**67.45**	**327**	P	P	06 38 08.8	+2.8
MKAR	**Makanchi Array**	**67.45**	**327**	P	P	06 38 09.0	+3.0
	comp=Z,0.7nm,0.3s,baz=117,slow=7.9,SNR=24						
	comp=Z,0.7nm,0.3s						
ZALV	**Zalesovo Beam**	**70.86**	**334**	P	P	06 38 29.2	+2.5
ZALV	**Zalesovo Beam**	**70.86**	**334**	P	**P**	**06 38 28.3**	**+1.7**
	comp=Z,0.8nm,0.3s,baz=129,slow=5.9,SNR=4.4						
	comp=Z,0.8nm,0.3s						
KURBB	**Kurchatov Arra**	**71.75**	**329**	P	P	06 38 34.8	+2.7
	comp=Z,1.1nm,0.5s,baz=132,slow=5.1,SNR=13						
	comp=Z,1.1nm,0.5s						
KURK	**Kurchatov**	**71.76**	**329**	P	**P**	**06 38 34.6**	**+2.5**
BVAR	**Borovoye Array**	**77.30**	**328**	P	P	06 39 06.5	+2.6
	comp=Z,0.5nm,0.5s,baz=120,slow=10,SNR=2.9						
	comp=Z,0.5nm,0.5s						
QSPA	**South Pole Qui**	**83.41**	**180**	P	**P**	**06 39 39.8**	**+3.5**
CNBA	**Chernabura Isl**	**84.66**	**33**	P	**P**	**06 39 44.9**	**+2.4**
CNBA				IAmb	IAmb	06 40 06.9	
	comp=Z,8.0nm,1.0s						
TKL	**Tuckaleechee C**	**138.09**	**42**	PKP	**PKPdf**	**06 46 30.9**	**-1.8**
	comp=Z,2.0nm,0.5s,baz=20,slow=7.0,SNR=4.5						
JTS	**Las Juntas de**	**145.98**	**81**	PKPbc	**PKPbc**	**06 46 47.3**	**-1.2**
	comp=Z,2.1nm,0.3s,baz=224,slow=9.0,SNR=2.5						
CPUP	**Villa Florida**	**146.69**	**169**	PKPbc	**PKPdf**	**06 46 47.5**	**-0.6**
	comp=Z,0.6nm,0.9s,baz=105,slow=3.5,SNR=3.0						

AEIC ***30*** *06:33:00.5±0.8, 53°.13N±0°.06×166°.68W±0°.07, h26^{km}±8^{km}, Error ellipse: s-maj=9.1km s-min=4.2km az=150.0*

NEIC 30 06:33:01.2±1.2**, 53°.13N**±0°.05×**166°.72W**±0°.06**, h35^{km}**±2^{km}**, ML3.1**/8**, ML3.0**(AEIC)**, Error ellipse: s-maj=9.6km s-min=5.0km az=331.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MGOD	**Makushin Gods**	**0.67**	**352**		Pn	06 33 13.8	-0.5
MGOD					Sn	06 33 23.4	-0.1
MREP	**Makushin Rep't**	**0.68**	**359**		Pn	06 33 13.9	-0.4
MAPS	**Pakushin South**	**0.69**	**349**		Pn	06 33 14.2	-0.2
MAPS					Sn	06 33 24.2	+0.2
UNV	**Unalaska Valle**	**0.72**	**10**		Pn	06 33 13.7	-1.2
OKFG	**Magazine Ridge**	**0.77**	**292**		Pn	06 33 15.3	-0.1
OKFG					Sn	06 33 26.5	+0.7
OKTU	**Okmok Mt. Tuli**	**0.83**	**288**		Pn	06 33 16.5	0.0
MTBL	**Makushin Table**	**0.84**	**2**		Pn	06 33 16.3	-0.2
MTBL					Sn	06 33 27.9	+0.2
OKNC	**Okmok New Cone**	**0.90**	**292**		Pn	06 33 17.4	+0.1
OKNC					Sn	06 33 29.8	+0.7
OKCE	**Okmok Cone E**	**0.91**	**289**		Pn	06 33 17.8	+0.3
OKRE	**Okmok R'deer P**	**0.95**	**295**		Pn	06 33 18.1	+0.1
OKRE					Sn	06 33 31.3	+1.0
OKSP	**Okmok Steeple**	**0.95**	**278**		Pn	06 33 17.8	-0.3
AKMO	**Akutan Morgan**	**1.05**	**24**		Pn	06 33 18.8	-0.5
AKRB	**Akutan Reef Bi**	**1.07**	**21**		Pn	06 33 19.5	-0.2
LVA	**Lava Point**	**1.11**	**21**		Pn	06 33 19.9	-0.3
LVA					Sn	06 33 35.2	+0.9
LVA				IAML		06 33 40.1	
	comp=E,514nm,0.5s						
AKGG	**Akutan Green G**	**1.15**	**22**		Pn	06 33 20.8	0.0
AKUT	**Akutan**	**1.15**	**29**		Pn	06 33 20.1	-0.7
AKUT				IAML		06 33 37.7	
	comp=E,336nm,0.3s						
AKUT				IAML		06 33 39.4	
	comp=N,251nm,0.3s						
NIKH	**Nikolski High**	**1.30**	**264**		Pn	06 33 22.3	-0.5
NIKH				IAML		06 33 41.0	
	comp=E,427nm,0.6s						
WESE	**West Dahl East**	**1.85**	**42**		Pn	06 33 30.5	+0.1
WEBT	**Westdahl Beart**	**1.87**	**38**		Pn	06 33 31.0	+0.3
SPIA	**Saint Paul Isl**	**4.53**	**335**	Pn	Pn	06 34 09.1	+2.0
CNBA	**Chernabura Isl**	**4.54**	**65**	Pn	Pn	06 34 06.3	-0.9
ATKA	**Atka Island**	**4.64**	**261**	Pn	Pn	06 34 10.6	+1.8
GSTR	**Great Sitkin T**	**5.78**	**263**	Pn	Pn	06 34 28.7	+4.2
ADK	**Adak**	**6.21**	**262**	Pn	Pn	06 34 34.2	+4.0
KIWB	**Kanaga Island**	**6.50**	**263**	Pn	Pn	06 34 36.4	+2.2
O14K	**Tigyukauivet M**	**6.85**	**24**	Pn	Pn	06 34 40.5	+1.6
O15K	**Ungalikthiuk R**	**7.18**	**30**	Pn	Pn	06 34 44.0	+0.5
M11K	**Mekoryuk**	**7.28**	**2**	Pn	Pn	06 34 45.6	+0.7
N15K	**Kwethluk River**	**7.94**	**25**	Pn	Pn	06 34 53.4	-0.5
L14K	**Kuka Creek**	**8.52**	**13**	Pn	Pn	06 35 01.4	-0.4
N17K	**Nushagak Hills**	**9.06**	**31**	Pn	Pn	06 35 07.0	-2.3
L16K	**Owhat River**	**9.44**	**21**	Pn	Pn	06 35 13.1	-1.4

IDC ***30*** *06:37:06.7±2.1, 2°.67S×138°.37E, h0^{km}, mb3.4/2, mbtmp3.5/4, ML3.6/2, MS2.8/3, Error ellipse: s-maj=45.9km s-min=25.9km az=138.0*

DJA ***30*** *06:37:12.2±0.5, 3°S±3°×13°9E±°, h10^{km}, M3.5/5, MLv3.5/5*

ISC 30 06:37:08.7±1.0**, 2°.72S**±0°.08×**138°.38E**±0°.08**, h10^{km}, n11,** σ**1^{s}.03**/10**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**0.80**	**24**	P	**Pg**	**06 37 22.6**	**-1.5**
SMPI				S	**Sb**	**06 37 37.2**	**+1.7**
GENI	**Genyem**	**1.79**	**86**	P	**Pn**	**06 37 40.8**	**+1.2**
JAY	**Jayapura**	**2.33**	**85**	Pn	**Pn**	**06 37 46.9**	**-0.2**
	7.1nm,0.3s,baz=245,slow=8.7,SNR=18						
JAY				Sn	**Sn**	**06 38 15.8**	**+0.1**
	5.6nm,0.3s,baz=279,slow=22,SNR=3.0						
	17nm,0.3s						
JAY	**Jayapura**	**2.33**	**85**	P	**Pn**	**06 37 47.4**	**+0.3**
BAKI	**Biak**	**2.74**	**304**	P	**Pb**	**06 37 58.3**	**+0.5**
KRVT	**Keravat (AS076**	**13.71**	**97**	LR	LR	06 44 35.4	
	comp=Z,6.3nm,20.9s,baz=172,slow=33						
WRA	**Warramunga Arr**	**17.56**	**193**	P	**Pn**	**06 41 13.9**	**+0.1**
	0.3nm,0.3s,baz=15,slow=12,SNR=8.6						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**21.27**	**191**	P	**P**	**06 41 55.2**	**-0.1**
	0.9nm,0.6s,baz=21,slow=11,SNR=13						
	0.9nm,0.6s						
MJAR	**Matsushiro Arr**	**39.06**	**360**	LR	LR	06 59 58.4	
	comp=Z,34nm,18.9s,baz=52,slow=35						
AAK	**Ala-Archa**	**72.99**	**316**	LR	LR	07 24 32.0	
	comp=Z,16nm,18.2s,baz=187,slow=39						
ILAR	**Eielson Array**	**85.98**	**24**	P	**P**	**06 49 48.3**	**-0.7**
	0.3nm,0.7s,baz=235,slow=3.2,SNR=2.6						
	0.3nm,0.7s						

RSNC ***30*** *06:37:49.9±0.5, 18°N±4°×6°9W±°, h165^{km}±9^{km}, M3.8, mb4.5, mB5.0, mBc5.8, ML3.8, MLv4.6, Mw(mB)4.3*

IDC ***30*** *06:37:53.7±1.7, 18°.46N×68°.61W, h125^{km}±17^{km}, mb3.5/11, mbtmp4.0/15, MS2.9/4, Error ellipse: s-maj=20.1km s-min=11.8km az=75.0*

SDD ***30*** *06:37:54.7±3.3, 18°.55N×68°.84W, h128^{km}±23^{km}, MD4.1, ML4.5, MW4.3*

OSPL ***30*** *06:37:54.4±4.3, 18°.45N×68°.83W, h136^{km}±26^{km}, ML4.4*

NEIC ***30*** *06:37:54.1±2.1, 18°.49N±0°.09×68°.85W±0°.05, h110^{km}±8^{km}, mb4.2/55, ML4.7/30, ML4.5/19(RSPR), Error ellipse: s-maj=12.9km s-min=6.0km az=188.0*

RSPR ***30*** *06:37:54.0, 18°.44N×68°.85W, h114^{km}±3^{km}, MD3.8/19*

ISC 30 06:37:53.4±0.6**, 18°.45N**±0°.04×**68°.90W**±0°.03**, h118^{km}**±6^{km}**, n226,** σ**1^{s}.76**/255**, mb4.1**/32**, 31C-11D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIDR	**Miches**	**0.55**	**345**	⇑*e*P	**Pn**	**06 38 11.1**	**-0.4**
MIDR	**Miches**	**0.55**	**345**	*e*S	**Sn**	**06 38 23.9**	**-1.2**
MIDR	**Miches**	**0.55**	**345**	⇑*e*Pg	**Pn**	**06 38 11.1**	**-0.4**
MIDR				⇑*e*Sg	**Sn**	**06 38 24.1**	**-1.0**
MIDR				IAML		06 38 25.3	
	comp=N,9µm,0.7s						
SMDR	**Samana, DR**	**0.88**	**342**	⇑*e*P	**Pn**	**06 38 13.6**	**-0.6**
SMDR	**Samana, DR**	**0.88**	**342**	*e*S	**Sn**	**06 38 30.7**	**+0.9**
SDD	**Santo Domingo**	**0.96**	**271**		**Pn**	**06 38 14.9**	**0.0**
SDD				Sn	**Sn**	**06 38 31.1**	**-0.1**
SDD	**Santo Domingo**	**0.96**	**271**	⇓*e*P	**Pn**	**06 38 14.9**	**0.0**
SDD	**Santo Domingo**	**0.96**	**271**	*i* P	**Pn**	**06 38 15.0**	**0.0**
SDD				*e*S	**Sn**	**06 38 31.3**	**+0.2**
LOSC1	**San Cristbal**	**1.15**	**268**	*i* P	Pn	06 38 29.3	+12
LOSC1				*e*S	Sn	06 38 48.1	+14
LONA1	**Toro Cenizo, N**	**1.30**	**316**	*i* P	**Pn**	**06 38 15.8**	**-2.7**
LONA1				*e*S	**Sn**	**06 38 35.1**	**-2.4**
LONA1				IAML		06 38 44.7	
	comp=Z,13µm,0.4s						
IDE	**Isla Desecheo**	**1.35**	**92**		**Pn**	**06 38 17.6**	**-1.5**
IDE	**Isla Desecheo**	**1.35**	**92**	⇑*e*P	**Pn**	**06 38 17.6**	**-1.5**
BANI	**BANI**	**1.39**	**268**		**Pn**	**06 38 20.1**	**+0.6**
BANI	**BANI**	**1.39**	**268**	⇓*e*Pg	**Pn**	**06 38 20.2**	**+0.7**
BANI				IAML		06 38 51.5	
	comp=N,5µm,0.3s						
CADR	**Cabrera**	**1.56**	**321**	*e*Pg	**Pn**	**06 38 20.9**	**-0.5**
CADR				*e*Sg	**Sn**	**06 38 41.6**	**-1.2**
CADR				IAML		06 38 53.2	
	comp=N,11µm,0.8s						
ABDR	**Alto Bandera**	**1.68**	**283**	⇓*e*Pg	**Pn**	**06 38 24.2**	**+1.0**
ABDR				*e*Sg	**Sn**	**06 38 47.5**	**+1.6**
ABDR				IAML		06 38 53.1	
	comp=N,3µm,0.4s						
PRSN	**Puerto Rico Se**	**1.68**	**98**		**Sn**	**06 38 45.8**	**+0.5**
PRSN	**Puerto Rico Se**	**1.68**	**98**		**Pn**	**06 38 22.1**	**-0.7**
PRSN	**Puerto Rico Se**	**1.68**	**98**	⇑*e*P	**Pn**	**06 38 23.2**	**+0.3**
PRSN	**Puerto Rico Se**	**1.68**	**98**	*e*S	**Sn**	**06 38 45.8**	**+0.5**
PRSN	**Puerto Rico Se**	**1.68**	**98**	⇑*e*Pg	**Pn**	**06 38 22.3**	**-0.6**
PRSN				*e*Sg	**Sn**	**06 38 44.3**	**-1.0**
PRSN				IAML		06 38 49.2	
	comp=N,9µm,0.3s						
AGPR	**Aguadilla, PR**	**1.70**	**89**		**Pn**	**06 38 22.8**	**-0.2**
AGPR				IAML		06 38 50.9	
	comp=E,8µm,0.5s						
AGPR				IAML		06 38 50.9	
	comp=N,7µm,0.6s						
AGPR	**Aguadilla, PR**	**1.70**	**89**	⇑*e*P	**Pn**	**06 38 23.2**	**+0.1**
AGPR	**Aguadilla, PR**	**1.70**	**89**	⇓*e*Pg	**Pn**	**06 38 22.9**	**-0.2**
AGPR				*e*Sg	**Sn**	**06 38 45.8**	**+0.1**
AGPR				IAML		06 38 51.1	
	comp=N,8µm,0.6s						
AGPR	**Aguadilla, PR**	**1.70**	**89**	*i* P	**Pn**	**06 38 22.8**	**-0.2**
AGPR				*e*S	**Sn**	**06 38 46.8**	**+1.1**
AGPR				IAML		06 38 50.5	
	comp=Z,4µm,0.2s						
LSP	**Las Mesas**	**1.74**	**99**		**Pn**	**06 38 24.0**	**+0.3**
LSP					**Sn**	**06 38 46.4**	**-0.3**
LSP	**Las Mesas**	**1.74**	**99**	⇑*e*P	**Pn**	**06 38 24.0**	**+0.3**
LSP	**Las Mesas**	**1.74**	**99**	*e*S	**Sn**	**06 38 46.4**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.76**	**104**		**Pn**	**06 38 22.5**	**-1.3**
CRPR	**Cabo Rojo, PR**	**1.76**	**104**	⇓*e*P	**Pn**	**06 38 23.0**	**-0.8**
CRPR	**Cabo Rojo, PR**	**1.76**	**104**	*e*S	**Sn**	**06 38 45.6**	**-1.3**
CRPR	**Cabo Rojo, PR**	**1.76**	**104**	⇑*e*Pg	**Pn**	**06 38 22.8**	**-0.9**
CRPR				IAML		06 38 55.9	
	comp=N,2µm,0.2s						
CRPR	**Cabo Rojo, PR**	**1.76**	**104**	*i* P	**Pn**	**06 38 22.9**	**-0.8**
CRPR				*e*S	**Sn**	**06 38 44.6**	**-2.4**
CRPR				IAML		06 38 59.4	
	comp=Z,2µm,0.5s						
MLPR	**Magueyes Islan**	**1.83**	**105**	⇑*e*P	**Pn**	**06 38 23.4**	**-1.2**
MLPR	**Magueyes Islan**	**1.83**	**105**	*e*S	**Sn**	**06 38 47.6**	**-0.8**
MLPR	**Magueyes Islan**	**1.83**	**105**	⇑*e*Pg	**Pn**	**06 38 23.4**	**-1.2**
MLPR				⇑*e*Sg	**Sn**	**06 38 46.3**	**-2.1**
MLPR				IAML		06 38 54.4	
	comp=N,574nm,0.3s						
GBPR	**Guanica, Bosqu**	**1.98**	**103**		**Pn**	**06 38 25.6**	**-0.8**
GBPR	**Guanica, Bosqu**	**1.98**	**103**	⇑*e*P	**Pn**	**06 38 25.6**	**-0.8**

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SC01  Santiago de lo   1.99 300          Pn    06 38 27.7 +1.0
SC01                          IAML             06 39 01.6
      comp=E,5µm,0.5s
SC01                          IAML             06 39 06.2
      comp=N,6µm,0.7s
SC01  Santiago de lo   1.99 300⇓ePg      Pn    06 38 28.0 +1.3
SC01                          IAML             06 39 00.5
      comp=N,6µm,0.7s
SC01  Santiago de lo   1.99 300 i P      Pn    06 38 27.9 +1.3
SC01                            eS       Sn    06 38 55.9 +3.9
SC01                          IAML             06 39 08.7
      comp=Z,2µm,0.6s
AOPR  Arecibo Observ   2.04  92          Sn    06 38 52.7 -0.6
AOPR  Arecibo Observ   2.04  92          Pn    06 38 26.5 -0.9
AOPR  Arecibo Observ   2.04  92⇑eP       Pn    06 38 26.4 -0.9
AOPR  Arecibo Observ   2.04  92 eS       Sn    06 38 52.7 -0.6
AOPR  Arecibo Observ   2.04  92⇓ePg      Pn    06 38 26.3 -1.0
AOPR                           ⇑eSg      Sn    06 38 52.7 -0.6
AOPR                          IAML             06 38 59.7
      comp=N,13µm,0.4s
OBIP  Obispado Ponce   2.22 100          Pn    06 38 28.6 -0.9
OBIP                          IAML             06 39 06.7
      comp=E,2µm,0.6s
OBIP                          IAML             06 39 08.5
      comp=N,3µm,0.5s
OBIP  Obispado Ponce   2.22 100⇑eP       Pn    06 38 29.4 -0.2
OBIP  Obispado Ponce   2.22 100 eS       Sn    06 38 55.3 -1.9
CELP  Cerrillos        2.23  99          Pn    06 38 28.8 -1.0
CELP                          IAML             06 39 03.7
      comp=N,4µm,0.5s
CELP                          IAML             06 39 07.4
      comp=E,4µm,0.5s
CELP  Cerrillos        2.23  99          Sn    06 38 56.8 -0.8
CELP  Cerrillos        2.23  99⇑eP       Pn    06 38 29.9 +0.2
CELP  Cerrillos        2.23  99 eS       Sn    06 38 56.8 -0.8
CELP  Cerrillos        2.23  99⇑ePg      Pn    06 38 28.8 -1.0
CELP                           ⇑eSg      Sn    06 38 56.2 -1.4
CELP                          IAML             06 39 03.5
      comp=N,4µm,0.6s
EMPR  Esperanza - Ma   2.25  89          Pn    06 38 28.6 -1.3
EMPR  Esperanza - Ma   2.25  89          Sn    06 38 56.6 -1.3
EMPR  Esperanza - Ma   2.25  89⇑eP       Pn    06 38 28.6 -1.3
EMPR  Esperanza - Ma   2.25  89 eS       Sn    06 38 56.6 -1.3
PODR  Polo             2.28 263⇑ePg      Pn    06 38 30.8 +0.2
PODR                          IAML             06 39 08.1
      comp=N,799nm,0.5s
PODR  Polo             2.28 263 i P      Pn    06 38 30.6  0.0
PODR                            eS       Sn    06 38 56.6 -2.4
SDDR  Presa de Saban   2.33 284          Pn    06 38 32.7 +1.7
SDDR                          IAML             06 39 07.8
      comp=N,3µm,0.8s
SDDR                          IAML             06 39 11.5
      comp=N,2µm,0.9s
SDDR  Presa de Saban   2.33 284 eP       Pn    06 38 32.5 +1.6
SDDR                            eS       Sn    06 39 02.7 +2.9
SDDR                          IAML             06 39 07.8
      comp=N,1µm,0.5s
SDDR                          IAML             06 39 08.7
      comp=N,2µm,0.9s
SDDR  Presa de Saban   2.33 284⇑eP       Pn    06 38 32.5 +1.6
SDDR  Presa de Saban   2.33 284⇑ePg      Pn    06 38 32.8 +1.9
SDDR                            eSg      Sn    06 39 01.2 +1.5
SDDR                          IAML             06 39 11.3
      comp=N,2µm,1.1s
SDDR  Presa de Saban   2.33 284 i P      Pn    06 38 32.8 +1.7
SDDR                            eS       Sn    06 39 01.6 +1.9
SDDR                          IAML             06 39 09.8
      comp=Z,958nm,0.7s
SDDR  Presa de Saban   2.33 284  P       Pn    06 38 32.4 +1.4
SDDR                             S       Sn    06 39 02.4 +2.6
MADR  Mao Valverde     2.36 298⇓ePg      Pn    06 38 31.6 +0.2
MADR                          IAML             06 39 12.4
      comp=N,4µm,0.8s
NEDR  Neiba UASD       2.39 271⇓ePg      Pn    06 38 32.6 +0.8
NEDR                          IAML             06 39 10.9
      comp=N,619nm,0.6s
ECPR  Experimental S   2.41  93⇑eP       Pn    06 38 30.4 -1.6
ECPR  Experimental S   2.41  93 eS       Sn    06 39 01.2 -0.5
LONE3 El Aguacate, B   2.43 274 i P      Pn    06 38 36.5 +4.0
LONE3                           eS       Sn    06 38 60.0 -2.4
LONE3                         IAML             06 39 15.4
      comp=Z,375nm,0.7s
LODU1 El Espartillar   2.45 268 i P      Pn    06 38 33.2 +0.8
SJG   San Juan         2.63  97          Pn    06 38 33.8 -1.1
SJG                           IAML             06 39 09.1
      comp=Z,4µm,0.5s
SJG                           IAML             06 39 09.8
      comp=Z,4µm,0.4s
SJG   San Juan         2.63  97  P       Pn    06 38 32.3 -2.6
      comp=Z,343nm,0.3s,baz=306,slow=11,SNR=254
SJG                              S       Sn    06 39 05.8 -1.0
      comp=Z,1µm,0.3s,baz=232,slow=19,SNR=34
SJG   San Juan         2.63  97⇑eP       Pn    06 38 34.4 -0.5
SJG   San Juan         2.63  97⇓ePg      Pn    06 38 33.5 -1.3
SJG                             eSg      Sn    06 39 06.8  0.0
SJG   San Juan         2.63  97 i P      Pn    06 38 34.0 -0.9
SJG                             eS       Sn    06 39 03.5 -3.3
SJG                           IAML             06 39 11.4
      comp=Z,1µm,0.2s
SJG   San Juan         2.63  97  P       Pn    06 38 33.6 -1.3
SJG                              S       Sn    06 39 07.0 +0.3
LOBH  Bahia de las A   2.67 258 i P      Pn    06 38 35.8 +0.5
LOBH                            eS       Sn    06 39 07.0 -0.6
LOBH                          IAML             06 39 12.1
      comp=Z,1µm,0.3s
GCPR  Guaynabo City    2.68  92          Sn    06 39 07.2 -0.6
GCPR  Guaynabo City    2.68  92          Pn    06 38 34.4 -1.1
GCPR                          IAML             06 39 09.7
      comp=E,1µm,0.7s
GCPR  Guaynabo City    2.68  92⇑eP       Pn    06 38 34.8 -0.6
GCPR  Guaynabo City    2.68  92 eS       Sn    06 39 07.2 -0.6
IGPR  InterUniversit   2.70 100          Pn    06 38 35.7  0.0
IGPR  InterUniversit   2.70 100⇑eP       Pn    06 38 35.7  0.0
IGPR  InterUniversit   2.70 100 eS       Sn    06 39 09.3 +1.1
PDPR  Patillas Dam,    2.77  98          Pn    06 38 35.6 -1.1
PDPR                          IAML             06 39 14.8
      comp=E,2µm,0.8s
PDPR                          IAML             06 39 16.1
      comp=N,2µm,0.5s
PDPR  Patillas Dam,    2.77  98⇑eP       Pn    06 38 36.4 -0.2
PDPR  Patillas Dam,    2.77  98 eS       Sn    06 39 08.4 -1.4
JIDR  Jimani           2.80 271⇓ePg      Pn    06 38 37.9 +0.9
JIDR                          IAML             06 39 18.9
      comp=N,570nm,0.7s
LODA1 ITESIL, Dajabo   2.87 293 i P      Pn    06 38 38.5 +0.5
LODA1                           eS       Sn    06 39 12.9 +0.6
LODA1                         IAML             06 39 15.2
      comp=Z,1µm,4.2s
HUMP  Col San Antoni   2.91  95          Pn    06 38 37.3 -1.2
HUMP                          IAML             06 39 18.3
      comp=E,2µm,0.2s
HUMP  Col San Antoni   2.91  95⇑eP       Pn    06 38 37.3 -1.2
HUMP  Col San Antoni   2.91  95 eS       Sn    06 39 14.1 +0.8
PAPH  Port-au-Prince   3.23 272 eP       Pn    06 38 43.3 +0.6
PAPH                            eS       Sn    06 39 22.3 +1.6
PAPH                          IAML             06 39 26.4
      comp=N,91nm,0.5s
PAPH                          IAML             06 39 26.9
      comp=E,307nm,0.5s
PAPH  Port-au-Prince   3.23 272 i P      Pn    06 38 43.4 +0.7
GRTK  Grand Turk       3.70 326          Pn    06 38 47.2 -1.7
GRTK  Grand Turk       3.70 326 eP       Pn    06 38 46.8 -2.2
GRTK                            eS       Sn    06 39 25.4 -6.6
GRTK                          IAML             06 39 30.1
      comp=E,393nm,0.2s
GRTK                          IAML             06 39 32.2
      comp=E,249nm,0.2s
GRTK  Grand Turk       3.70 326 i P      Pn    06 38 47.0 -1.9
GRTK                            eS       Sn    06 39 26.7 -5.3
GRTK                          IAML             06 39 36.9
      comp=Z,240nm,0.7s
GRTK  Grand Turk       3.70 326  P       Pn    06 38 46.7 -2.2
GRTK                             S       Sn    06 39 28.7 -3.3
MASC  Masc             5.32 290 eP       Pn    06 39 08.4 -2.2
MASC                            eS       Sn    06 40 06.0 -4.8
QMBU  Quimbuelo        5.85 288 eP       Pn    06 39 16.8 -1.1
GTBY  Guantanamo Bay   6.05 285  Pn      Pn    06 39 18.5 -2.0
GTBY  Guantanamo Bay   6.05 285 eP       Pn    06 39 17.8 -2.8
GTBY  Guantanamo Bay   6.05 285  P       Pn    06 39 18.4 -2.2
      comp=Z,38nm,1.1s
GTBY                             S       Sn    06 40 25.4 -3.2
      comp=Z,38nm,1.1s
NMDO  Nuevo Mundo      6.11 291 eP       Pn    06 39 17.5 -3.9
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MOAC  Moa              6.12 292 eP       Pn    06 39 18.1 -3.4
MBFL  Flemmings, Mon   6.60 104 eP       Pn    06 39 29.0 +1.0
RCC   Rio Carpintero   6.60 285 eP       Pn    06 39 25.6 -2.5
ANWB  Willy Bob        6.81  95 eP       Pn    06 39 23.7 -7.2
ANWB  Willy Bob        6.81  95 eP       Pn    06 39 27.2 -3.6
ANWB  Willy Bob        6.81  95  P       Pn    06 39 27.1 -3.7
      comp=Z,110nm,0.9s
ANWB                             S       Sn    06 40 44.5 -2.5
      comp=Z,110nm,0.9s
PINC  Pinares de May   6.81 288 eP       Pn    06 39 26.5 -4.3
GDHS  Morne Mazeau,    7.15 107  Pn      Pn    06 39 34.9 -0.6
HLGC  Holguin          7.17 291 eP       Pn    06 39 34.3 -1.4
YAR   Yar              7.30 286 eP       Pn    06 39 33.6 -3.8
URIC  Uribia, Colomb   7.34 204  P       Pn    06 39 37.2 -0.8
URIC                             S       Sn    06 40 55.2 -4.7
CBE   Ff, Capester     7.36 108          Sn    06 41 04.0 +3.7
CBE   Ff, Capester     7.36 108  Pn      Pn    06 39 37.9 -0.4
CBE   Ff, Capester     7.36 108⇑eP       Pn    06 39 40.8 +2.5
CBE   Ff, Capester     7.36 108 eS       Sn    06 41 04.0 +3.7
TDBA  Terre de Bas,    7.41 109  Pn      Pn    06 39 38.8 -0.2
MAGL  Barre de l'ile   7.69 108  Pn      Pn    06 39 41.4 -1.4
MAGL  Barre de l'ile   7.69 108 eP       Pn    06 39 42.6 -0.2
DSLB  Salisbury        7.76 112 eP       Pn    06 39 42.9 -0.8
GDSD  La Dsirade Is    7.77 105  Pn      Pn    06 39 43.6 -0.3
LMGC  Las Mercedes     7.82 283 eP       Pn    06 39 42.0 -2.5
PILO  Pilon            8.17 282 eP       Pn    06 39 46.0 -3.3
MTDJ  Mount Denham     8.21 270  Pn      Pn    06 39 50.1 +0.3
MTDJ  Mount Denham     8.21 270 eP       Pn    06 39 50.1 +0.3
MTDJ  Mount Denham     8.21 270  P       Pn    06 39 50.7 +0.9
FDF   Fort de France   8.29 115  Pn      Pn    06 39 51.1 +0.1
CRJC  Cerrejon, Guaj   8.33 208  P       Pn    06 39 50.3 -1.2
CRJC                             S       Sn    06 41 18.7 -5.3
BIM   Bigot            8.46 116  Pn      Pn    06 39 53.0 -0.3
BIM   Bigot            8.46 116 eP       Pn    06 39 53.0 -0.3
MPOM  Morne Pois Mar   8.68 116  Pn      Pn    06 39 57.7 +1.5
SLBI  Saint Lucia, B   8.79 119 eP       Pn    06 39 57.2 -0.5
SMRC  Santa Marta, M   8.88 216  P       Pn    06 39 56.3 -2.6
SMRC                             S       Sn    06 41 29.2 -8.1
SVB   Belmont          8.98 124 eP       Pn    06 40 00.6 +0.4
PCRV  Puerto La Cruz   9.20 153  P       Pn    06 40 02.6 -0.7
      comp=Z,15nm,0.9s,baz=269,slow=2.8,SNR=11
PCRV                             S       Sn    06 41 34.7  -10
      comp=Z,10nm,0.4s,baz=346,slow=4.2,SNR=8.3
SDV   Santo Domingo    9.65 190          Pn    06 40 11.8 +2.3
SDV   Santo Domingo    9.65 190  P       Pn    06 40 10.4 +0.9
      comp=Z,28nm,0.4s,baz=60,slow=6.3,SNR=16
SDV                              S       Sn    06 41 50.6 -5.7
      comp=Z,12nm,0.5s,baz=324,slow=17,SNR=3.0
SDV                              LR      LR    06 44 01.5
      comp=Z,52nm,18.1s,baz=239,slow=38
SDV   Santo Domingo    9.65 190  P       Pn    06 40 11.7 +2.2
ARGC  Ariguani, Magd   9.99 212  P       Pn    06 40 13.7 -0.2
ARGC                             S       Sn    06 41 58.6 -5.5
SJCC  San Jacinto, C  10.45 216  P       Pn    06 40 20.5 +0.3
SJCC                             S       Sn    06 42 06.2 -9.3
OCAC  Ocana           11.02 204  P       Pn    06 40 26.7 -1.2
OCAC                             S       Sn    06 42 21.7 -7.7
ZARC  Zaragoza, Cauc  12.34 209  P       Pn    06 40 47.3 +2.1
BRJC  Barrancabermej  12.34 203  P       Pn    06 40 46.9 +1.6
UREC  San Jos de Ur   12.44 212  P       Pn    06 40 49.2 +2.7
UREC                             P       P     06 40 49.5 -4.0
UREC                             P       P     06 40 49.9 -3.6
BARC  Barichara       12.50 200  P       Pn    06 40 48.8 +1.3
APAC  Apartado, Choc  12.87 216  P       Pn    06 40 53.8 +1.6
PTBC  PUERTO BERRIO,  13.02 205  P       Pn    06 40 55.2 +1.1
RUSC  La Rusia        13.13 199          Pn    06 40 57.5 +1.5
RUSC  La Rusia        13.13 199  P       Pn    06 40 58.3 +2.3
HELC  Santa Helena    13.79 209  P       Pn    06 41 06.6 +2.2
BCIP  Isla Barro Col  14.06 230  Pn      Pn    06 41 08.2 +0.7
CBOC  Ciudad Bolivar  14.30 210  P       Pn    06 41 13.5 +2.7
BBSR  BB Station      14.37  14  Pn      Pn    06 41 11.7 +0.3
ROSC  El Rosal        14.52 202  P       Pn    06 41 16.9 +3.1
      comp=Z,18nm,0.5s,baz=29,slow=13,SNR=11
GUY2C Guyana, Caldas  14.58 206  P       P     06 41 18.6 +0.8
656A  Willston        16.53 314          P     06 41 39.7 +0.9
LCR2  La Lucha 2      17.00 241  P       Pn    06 41 47.5 +3.1
LCR2                             IAmb    IAmb  06 42 26.3
      comp=Z,16nm,1.4s
456A  Hilliard        17.06 318          P     06 41 43.2 -1.5
JTS   Las Juntas de   17.53 245  LR      LR    06 49 35.5
      comp=Z,37nm,19.1s,baz=82,slow=40
BOAV  Boa Vista       17.94 152  P       P     06 41 55.6 +1.1
BOAV                             IAmb    IAmb  06 41 56.1
      comp=Z,8.3nm,0.7s
FLOC  Florencia       18.02 202          P     06 41 57.3 +1.9
FLOC                             IAmb    IAmb  06 41 58.7
      comp=Z,10nm,0.8s
X58A  Rowland         18.54 332  P       Pn    06 42 03.3 +0.8
X58A                             IAmb    IAmb  06 42 39.5
      comp=Z,19nm,1.4s
PAULI Pauline         19.95 327  P       P     06 42 17.9 +1.8
MTO3  Montecristo     20.03 261  P       P     06 42 17.4 -0.1
152A  Waverly Hall    20.07 318  P       P     06 42 19.7 +2.2
152A                             IAmb    IAmb  06 42 23.5
      comp=Z,8.9nm,0.7s
OTAV  Otavalo         20.38 208  P       P     06 42 23.1 +1.5
OTAV                             IAmb    IAmb  06 42 28.9
      comp=Z,20nm,1.2s
V55A  Taylorsville    20.48 330  P       P     06 42 21.4 -0.4
R58B  Mineral         20.97 340  P       P     06 42 29.1 +2.0
V53A  Saluda          21.12 327  P       P     06 42 30.5 +1.7
BLA   Blacksburg      21.26 334  P       P     06 42 32.1 +1.9
BLA                              IAmb    IAmb  06 42 36.0
      comp=Z,7.0nm,0.9s
TKL   Tuckaleechee C  21.62 325  P       P     06 42 34.7 +0.6
      comp=Z,2.1nm,0.8s,baz=169,slow=10.0,SNR=3.0
TKL                              LR      LR    06 50 50.7
      comp=Z,26nm,19.6s,baz=131,slow=36
      comp=Z,2.1nm,0.8s
LRAL  Lakeview Retre  21.79 315  P       P     06 42 35.4 -0.5
LRAL                             IAmb    IAmb  06 43 13.2
      comp=Z,8.9nm,0.9s
FPAL  Fort Paine      21.87 320  P       P     06 42 37.4 +0.6
CPCT  Cooper Cave     21.88 324  P       P     06 42 38.1 +1.3
S54A  Dingess, Beckl  22.13 333  P       P     06 42 40.5 +1.0
S54A                             IAmb    IAmb  06 43 16.6
      comp=Z,14nm,1.2s
TZTN  Tazewell        22.17 327  P       P     06 42 41.7 +1.8
TZTN                             IAmb    IAmb  06 43 18.8
      comp=Z,7.6nm,1.0s
Z47A  Carrollton      22.61 314          P     06 42 46.5 +2.2
Z47A                             IAmb    IAmb  06 42 47.0
      comp=Z,8.5nm,0.9s
346A  Big Creek Wild  22.62 309  P       P     06 42 49.3 +4.8
346A                             IAmb    IAmb  06 43 27.5
      comp=Z,11nm,0.8s
COHC  Cochancay       23.15 207  P       P     06 42 51.9 +2.3
T50A  Nancy           23.21 326          P     06 42 51.6 +1.6
WVT   Waverly         24.28 320          P     06 43 00.6 +0.9
WVT                              IAmb    IAmb  06 43 01.2
      comp=Z,5.5nm,0.6s
MAL2  Monte Alegre,   24.97 143  P       P     06 43 06.2  0.0
CZSB  Cruzeiro do Su  26.28 189  P       P     06 43 19.3 +1.2
LCAR  Lake Charles    26.35 316  P       P     06 43 20.1 +1.7
N47A  Urbana          26.61 331  IAmb    IAmb  06 43 22.4
      comp=Z,5.7nm,0.8s
CCM   Cathedral Cave  27.61 320  P       P     06 43 30.3 +0.5
OZNA  Ozona           31.69 299  IAmb    IAmb  06 44 08.0
      comp=Z,2.5nm,0.7s
MNHN  Monahans        33.15 299  IAmb    IAmb  06 44 22.4
      comp=Z,3.7nm,0.6s
TXAR  Lajitas Array   33.47 295  P       P     06 44 22.9 +1.3
      comp=Z,1.3nm,0.6s,baz=108,slow=9.2,SNR=32
TXAR                             PcP     PcP   06 47 00.6 +0.4
      comp=Z,1.0nm,0.8s,baz=125,slow=5.0,SNR=8.1
      comp=Z,1.3nm,0.6s
TX31  Lajitas Ar. Si  33.47 295  IAmb    IAmb  06 44 24.1
      comp=Z,2.4nm,0.9s
PECS  Pecos           34.08 299  IAmb    IAmb  06 44 28.6
      comp=Z,3.7nm,0.7s
ECSD  EROS Data Cent  34.33 323  P       P     06 44 29.5 +0.7
ECSD                             IAmb    IAmb  06 45 10.1
      comp=Z,3.7nm,1.1s
LPAZ  La Paz          34.52 179  P       P     06 44 30.8 -0.5
      comp=Z,1.0nm,0.5s,baz=355,slow=6.7,SNR=8.3
LPAZ                             PcP     PcP   06 47 03.0 -0.9
      comp=Z,0.6nm,0.4s,baz=18,slow=6.4,SNR=4.5
      comp=Z,1.0nm,0.5s
RTBA  Rita Blanca     34.73 308  IAmb    IAmb  06 44 34.5
      comp=Z,6.4nm,1.0s
PTLB  Pontes e Lacer  35.03 163  P       P     06 44 34.5 -0.4
SIV   San Ignacio     35.08 167  P       P     06 44 34.0 -1.4
      comp=Z,1.4nm,0.4s,baz=4.4,slow=11,SNR=13
      comp=Z,1.4nm,0.4s
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MNTX  Cornudas Mount  35.41 299  P       P     06 44 40.3 +2.1
MNTX                             IAmb    IAmb  06 44 40.6
      comp=Z,3.8nm,0.9s
SCHQ  Schefferville   36.35   2  P       P     06 44 46.0 +0.1
      comp=Z,1.5nm,0.5s,baz=180,slow=8.2,SNR=8.3
      comp=Z,1.5nm,0.5s
EPLO  Experimental L  36.98 333  P       P     06 44 52.0 +0.7
EPLO                             IAmb    IAmb  06 45 30.8
      comp=Z,4.8nm,0.8s
BNM   Barren Site     37.02 303  P       P     06 44 54.0 +1.8
CRNM  Carthage        37.06 302  P       P     06 44 54.2 +1.8
ANMO  Albuquerque     37.11 304  IAmb    IAmb  06 44 56.3
      comp=Z,2.0nm,1.0s
ANMO  Albuquerque     37.11 304  IAmb    IAmb  06 44 56.3
      comp=Z,1.9nm,1.0s
SDCO  Great Sand Dun  37.27 309  IAmb    IAmb  06 44 56.6
      comp=Z,2.2nm,0.8s
LENM  Lemitar         37.31 302  P       P     06 44 56.4 +1.9
PV15  Paradox Valley  39.68 308  P       P     06 45 15.1 +0.7
PV22  Blue Mesa, Par  39.97 308  P       P     06 45 18.4 +1.7
PV22                             IAmb    IAmb  06 45 19.2
      comp=Z,4.0nm,0.9s
PDAR  Pinedale Array  42.01 314  P       P     06 45 33.7 +0.3
      comp=Z,0.2nm,0.4s,baz=112,slow=15,SNR=3.9
PDAR                             PcP     PcP   06 47 26.0 -0.4
      comp=Z,0.8nm,0.6s,baz=126,slow=5.5,SNR=6.5
      comp=Z,0.2nm,0.4s
V12A  Nelson          43.96 303          P     06 45 49.4 +0.3
V12A                             IAmb    IAmb  06 45 53.0
      comp=Z,4.0nm,0.9s
SPR3  Spring Creek 3  44.26 307          P     06 45 52.3 +0.6
SPR3                             IAmb    IAmb  06 45 54.8
      comp=Z,3.5nm,0.9s
NVAR  Mina Array Bea  47.17 306  P       P     06 46 15.0 +0.6
NVAR  Mina Array Bea  47.17 306  P       P     06 46 16.4 +2.0
      comp=Z,0.9nm,0.5s,baz=90,slow=5.8,SNR=11
NVAR                             PcP     PcP   06 47 45.1 +0.8
      comp=Z,0.3nm,0.6s,baz=110,slow=3.1,SNR=1.9
      comp=Z,0.9nm,0.5s
YKA   Yellowknife Ar  54.10 336  P       P     06 47 05.1 -0.7
      comp=Z,0.7nm,0.7s,baz=112,slow=6.9,SNR=8.6
YKA                              PcP     PcP   06 48 08.1 -0.9
      comp=Z,0.3nm,0.5s,baz=113,slow=6.0,SNR=5.1
      comp=Z,0.7nm,0.7s
PLCA  Paso Flores     58.89 181  P       P     06 47 39.3 -0.7
      comp=Z,1.6nm,0.8s,baz=59,slow=2.1,SNR=3.9
      comp=Z,1.6nm,0.8s
ESDC  Sonseca Array   59.31  54  P       P     06 47 40.8 -2.3
      comp=Z,0.4nm,0.5s,baz=256,slow=6.5,SNR=4.4
      comp=Z,0.4nm,0.5s
ILAR  Eielson Array   68.36 333  P       P     06 48 42.1 +0.2
      comp=Z,0.5nm,0.7s,baz=111,slow=4.2,SNR=12
      comp=Z,0.5nm,0.7s
GERES GERESS Array B  71.53  44  LR      LR    07 18 03.9
      comp=Z,8.5nm,19.7s,baz=11,slow=34
PZH   PanZhiHua      134.40  12  PKP     PKPdf 06 56 58.3 -0.2
STKA  Stephens Creek 149.45 238  PKP     PKPdf 06 57 24.3 -0.4
      comp=Z,4.9nm,0.7s,baz=72,slow=6.6,SNR=1.5
STKA                             PKPbc   PKPbc 06 57 29.2 -0.1
      comp=Z,4.9nm,0.7s,baz=68,slow=5.4,SNR=3.0
WRA   Warramunga Arr 158.00 262  PKP     PKPdf 06 57 35.8 -1.4
      comp=Z,0.6nm,0.5s,baz=79,slow=1.5,SNR=3.5
ASAR  Alice Springs  158.10 252  PKP     PKPdf 06 57 37.0 -0.2
      comp=Z,0.2nm,0.5s,baz=76,slow=2.5,SNR=4.5
ASAR                             PKPab   PKPab 06 58 11.6 +0.2
      comp=Z,0.3nm,0.6s,baz=99,slow=3.6,SNR=4.8
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UCR ***30*** *06:38:20.6±0.7, 8°.33N×82°.83W, h29^{km}±1^{km}, MW4.3, Fault plane solution: NP1:φs354.78000°, δ50.18000°, λ4.18000°.*

CATAC ***30*** *06:38:21.8±1.1, 8°N±8°×8°3W±°, h21^{km}±3^{km}, M4.5/14, mb5.0/2, mB5.7/1, MLv4.3/14, Mw(mB)5.2/1, Error ellipse: s-maj=17.6km s-min=14.7km az=29.2, confirmed*

UPA ***30*** *06:38:21.3±0.9, 8°.38N×82°.82W, h26^{km}±3^{km}, MD3.7*

ISC 30 06:38:21.2±1.0, **8°.36N**±0°.04×**82°.82W**±0°.03, **h30**^{km}±6^{km}, **n100,** σ0ˢ.**82**/114, **26C-30D, Panama-Costa Rica border region**

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Code  Station Name     Δ°   AZ°   Phase ID        Time     Res
                                 Op      ISC     h  m  s   ISC
LESP3 La Esperanza,    0.05  31⇑iP       Pb    06 38 26.1 -0.2
LESP3                           eS       Sb    06 38 28.9 -1.0
LPPC  Paso Canoas      0.17 352⇑eP       Pb    06 38 26.9 -0.3
LPPC                            eS       Sn    06 38 31.8  0.0
CDITO Canoas           0.22 345  P       Pb    06 38 27.2 -0.5
CDITO Canoas           0.22 345  S       Sn    06 38 32.9 +0.1
LIMO3 Limones          0.27 190⇓iP       Pb    06 38 28.2  0.0
LIMO3                           i S      Sb    06 38 33.3 +0.4
LMNES Limones          0.27 189⇓eP       Pb    06 38 28.2 -0.1
NELY  Ciudad Neily     0.31 336⇑eP       Pb    06 38 28.3 -0.5
NELY                            eS       Sb    06 38 34.4 +0.4
DVD   David            0.37  79⇑iP       Pb    06 38 29.5 -0.2
DVD                             i S      Sn    06 38 36.1 -0.5
CSTBL De las Acacias   0.37  83⇑eP       Pb    06 38 29.5 -0.2
PEDE3 Pedregal, Chir   0.39  87⇑iP       Pb    06 38 29.6 -0.3
PEDE3                           eS       Sb    06 38 36.5 +0.6
LOCO3 Loma Colorada,   0.40  83⇑iP       Pb    06 38 29.9 -0.2
LOCO3                           i S      Sb    06 38 36.1  0.0
FITO  Golfito          0.42 308⇓eP       Pb    06 38 28.9 -1.6
FITO                            eS       Sb    06 38 35.7 -1.1
MLIR3 Monte Lirio, C   0.43 359⇑iP       Pb    06 38 30.6  0.0
MLIR3                           eS       Sn    06 38 39.7 +1.5
CLLRA Cordillera,      0.43  28⇑eP       Pb    06 38 30.3 -0.3
BRU2  Volcan           0.45  16⇑eP       Pb    06 38 30.5 -0.4
BRU2  Volcan           0.45  16  P       Pb    06 38 30.6 -0.4
BRU2  Volcan           0.45  16⇑iP       Pb    06 38 30.5 -0.4
BRU2                            i S      Sn    06 38 38.4 -0.4
EDAD  Golfito          0.45 310⇓eP       Pb    06 38 29.4 -1.5
RSRNO Rio Sereno       0.45 354⇑eP       Pb    06 38 31.0  0.0
PTAR3 Potrerillos Ar   0.46  44⇑iP       Pb    06 38 30.9 -0.2
TBS2                   0.46  20⇑eP       Pb    06 38 31.5 +0.4
SCLRA Santa Clara, W   0.47   4⇑eP       Pb    06 38 31.0 -0.3
VITO  San Vito         0.48 341⇑eP       Pb    06 38 31.2 -0.2
VITO                            eS       Sn    06 38 39.7 +0.2
BC3P  Paso Ancho       0.49  24⇑iP       Pb    06 38 31.1 -0.6
BQTLY Boquete Panama   0.53  42⇑eP       Pb    06 38 31.7 -0.5
BQSF3 Alto Boquete,    0.53  45⇑iP       Pb    06 38 31.6 -0.6
BQSF3                           eS       Sn    06 38 40.6 -0.3
ALCO  Alturas Coton,   0.58 358⇑eP       Pb    06 38 32.2 -1.0
ALCO                            eS       Sb    06 38 41.3 +0.1
PSOM3 Paja de Sombre   0.58  57⇑iP       Pb    06 38 32.2 -0.9
PSOM3                           eS       Sb    06 38 41.0 -0.2
EDP2  Potrero Grande   0.74 331⇓eP       Pb    06 38 34.8 -0.8
PBNVO Pueblo Nuevo,    0.81  50⇑eP       Pn    06 38 35.4 -1.1
RBALA Bur              0.83  52⇑eP       Pn    06 38 36.1 -0.8
PANP  Palmar Norte     0.87 313⇓eP       Pn    06 38 36.2 -1.1
BURE  Buenos Aires     0.96 327⇓eP       Pn    06 38 37.6 -1.0
RMDIO Remedios, Chir   0.98  98 eP       Pn    06 38 38.4 -0.6
DRK0  Durika           0.99 335⇓eP       Pn    06 38 38.0 -1.1
DRK0  Durika           0.99 335  P       Pn    06 38 38.1 -1.1
DRK0  Durika           0.99 335 eP       Pn    06 38 38.1 -1.1
DRK0                            eS       Sn    06 38 51.9 -0.3
EDPE  Pejibaye, P      1.09 317⇓eP       Pn    06 38 39.5 -0.9
OCHAL Ojochal          1.10 312  P       Pn    06 38 39.7 -0.8
PDCAN Manzana , Fuen   1.11  94⇓eP       Pn    06 38 39.7 -1.0
ISBTO Bastimentos Is   1.15  32⇑eP       Pb    06 38 42.2 -0.2
SAJE  San Jernim       1.19 325⇓eP       Pn    06 38 40.9 -1.1
BRIBI Bribri           1.25 360⇑eP       Pb    06 38 44.1 -0.1
LLNJ  Naranjito        1.68 311 eP       Pn    06 38 48.2 -0.4
TURIB Turrialba        1.76 331⇓eP       Pn    06 38 49.8 +0.1
REPA  Paraso           1.79 325 eP       Pn    06 38 49.8 -0.4
VERB  Verbena          1.79 331⇓eP       Pn    06 38 50.6 +0.4
LCR2  La Lucha 2       1.80 319⇓eP       Pn    06 38 49.9 -0.5
LCR2  La Lucha 2       1.80 319  P       Pn    06 38 50.0 -0.5
PISJ  San Jernim       1.80 314 eP       Pn    06 38 49.9 -0.4
ABE2  San Pablo        1.81 318 eP       Pn    06 38 50.2 -0.4
PCAYA Pacayas          1.83 328 eP       Pn    06 38 51.0 +0.2
VTCV  VTCV, Calle Va   1.84 331⇓eP       Pn    06 38 51.5 +0.5
RESJ  San Isidro (Tu   1.85 334⇓eP       Pn    06 38 51.6 +0.7
IRES  Siquirres        1.85 338⇓eP       Pn    06 38 51.5 +0.6
ABRB  Las Abras (San   1.86 331⇓eP       Pn    06 38 51.9 +0.7
RAFA  San Farael, Vo   1.86 328 eP       Pn    06 38 51.4  0.0
CVTV  Tajo             1.87 331⇓eP       Pn    06 38 52.0 +0.6
PAR1A Puntarenas Pro   1.88 311 eP       Pn    06 38 51.2  0.0
CVTQ  Turrialba Volc   1.88 330⇓eP       Pn    06 38 52.0 +0.4
VTLA  Turrialba Volc   1.88 330⇓eP       Pn    06 38 52.1 +0.4
VTR0  Volcan Turrial   1.89 331⇓eP       Pn    06 38 52.3 +0.5
RVLA  Villa Bonita     1.89 336 eP       Pn    06 38 52.5 +1.0
VICA  Volcano Irazu    1.90 328⇓eP       Pn    06 38 52.1 +0.1
TRIO  Tres Rios        1.92 323 eP       Pn    06 38 51.9 -0.1
ACOS  Acosta           1.95 317 eP       Pn    06 38 52.1 -0.2
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AMPA	Desamparados	1.96	321	eP	Pn	06 38 52.6	+0.2
CORON	Coronado	1.98	324	eP	Pn	06 38 53.0	+0.1
LUJA	Lujan	1.99	321	eP	Pn	06 38 53.1	+0.2
CVIMO	Finca Echandi	1.99	326	eP	Pn	06 38 53.2	+0.2
SANTA	Santa Ana	2.06	319	eP	Pn	06 38 53.6	-0.3
HDC	Heredia	2.07	322	⇓eP	Pn	06 38 54.2	+0.2
BELE	Belen	2.10	320	eP	Pn	06 38 54.6	+0.2
VBV1	V. Barva	2.15	324	⇓eP	Pn	06 38 55.5	+0.2
CARI	Cariari	2.19	336	eP	Pn	06 38 56.6	+1.1
TCS1	Tacares	2.22	319	⇓eP	Pn	06 38 56.0	-0.1
TCS1	Tacares	2.22	319	P	Pn	06 38 56.9	+0.8
ATEO	Atenas	2.23	316	eP	Pn	06 38 56.0	-0.1
TRT2	Tortugero	2.36	337	eP	Pn	06 38 58.2	+0.3
TRT2	Tortugero	2.36	337	P	Pn	06 38 58.8	+0.9
CBL1	Cabuya	2.56	299	eP	Pn	06 38 59.8	-0.8
AZU	Azuero	2.58	103	eP	Pn	06 39 01.8	+0.8
SOCE	Pocosol	2.68	319	eP	Pn	06 39 04.0	+1.7
SOCE	Pocosol	2.68	319	P	Pn	06 39 04.2	+1.9
COVE	Coope Vega, Sa	2.81	326	P	Pn	06 39 06.0	+1.8
JTS	Las Juntas de	2.85	312	⇓eP	Pn	06 39 04.5	-0.2
INDI	Punta indio, G	3.04	300	P	Pn	06 39 07.8	+0.5
BCIP	Isla Barro Col	3.05	75	⇑eP	Pn	06 39 08.2	+0.9
CMARA	Lajas Hojancha	3.06	303	P	Pn	06 39 08.0	+0.5
CUI	Cuipilapa	3.25	315	eP	Pn	06 39 10.9	+0.7
ALIBA	Liberia Airpor	3.49	310	⇓eP	Pn	06 39 15.4	+2.0
BLUN	Bluefields	3.74	345	⇓eP	Pn	06 39 16.8	-0.1
CARN	Rivas	3.87	317	P	Pn	06 39 21.4	+2.7
ACON	Acoyapa	4.27	327	⇓eP	Pn	06 39 24.1	-0.1
ACON	Acoyapa	4.27	327	P	Pn	06 39 25.1	+1.0
BOAB	BOACO BROADBAN	4.93	326	P	Pn	06 39 34.0	+0.7
COPN	Copaltepe	5.31	316	P	Pn	06 39 40.7	+2.2
RCVN	Varillal2	6.16	328	P	Pn	06 39 51.1	+0.9
SJCC	San Jacinto, C	7.69	78	P	Pn	06 40 21.6	+10
NUBE	Las Nubes	8.77	309	P	Pn	06 40 29.1	+2.9

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*IDC **30** 06:42:33.7±1.5, 1°.19S×128°.02E, h0^{km}, mb3.5/4, mbtmp3.6/5, ML3.7/1, MS3.4/2, Error ellipse: s-maj=129.3km s-min=21.7km az=70.0*

*DJA **30** 06:42:39.0±0.8, 2°S±4°×12°6E±°, h45^{km}±16^{km}, M3.9/6, MLv3.9/6*

ISC 30 06:42:38.6±1.1**, 1°.71S**±0°.10×**126°.75E**±0°.08**, h35^{km}, n11, σ2^{s}.59**/10**, mb3.6**/4**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANI	Sanana	0.83	246	P	Pn	06 42 52.5	-1.3
SANI				S	Sn	06 43 02.7	-2.2
NLAI	Namlea	1.56	167	P	Pn	06 43 05.1	+1.3
NLAI				S	Sn	06 43 24.6	+1.7
AAI	Ambon	2.44	144	P	Pn	06 43 11.4	-4.5
MSAI	Masohi	2.72	127	P	Pn	06 43 24.3	+4.5
WRA	Warramunga Arr	19.58	158	P	Pn	06 47 04.8	-0.5
	0.2nm,0.3s,baz=341,slow=12,SNR=9.2 1.1nm,0.5s						
ASAR	Alice Springs	22.90	163	P	P	06 47 40.5	+1.0
	1.4nm,0.7s,baz=343,slow=11,SNR=13 1.4nm,0.7s						
HNR	Honiara	33.89	104	LR	LR	07 04 52.9	
	comp=Z,52nm,18.0s,baz=346,slow=41						
SONM	Songino Array	52.44	343	P	P	06 51 46.7	-1.2
	0.2nm,0.4s,baz=139,slow=8.7,SNR=1.8 0.2nm,0.4s						
MKAR	Makanchi Array	62.05	327	P	P	06 52 58.2	+2.5
	0.2nm,0.3s,baz=133,slow=8.1,SNR=4.1 0.2nm,0.3s						
KURBB	Kurchatov Arra	66.33	329	P	P	06 53 26.1	+2.5
	0.3nm,0.5s,baz=132,slow=5.8,SNR=2.8 0.3nm,0.5s						
NRIK	Noril'sk	75.68	347	LR	LR	07 28 43.7	
	comp=Z,30nm,20.3s,baz=107,slow=37						

IDC 30 06:50:07.1±6.9**, 7°.54S×128°.57E, h101^{km}**±65^{km}**, mb3.3**/1**, mbtmp3.9**/4**, ML4.1**/3**, MS2.7**/1**, Error ellipse: s-maj=66.1km s-min=38.3km az=59.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	10.88	195	P	Pn	06 52 40.6	+0.8
	1.6nm,0.3s,baz=38,slow=11,SNR=33						
FITZ				S	Sn	06 54 36.6	-2.9
	2.5nm,0.3s,baz=301,slow=12,SNR=6.1 3.3nm,0.3s						
WRA	Warramunga Arr	13.54	156	P	Pn	06 53 14.9	-0.2
	1.0nm,0.3s,baz=342,slow=13,SNR=26						
WRA				S	Sn	06 55 38.9	-5.4
	0.7nm,0.4s,baz=340,slow=22,SNR=5.2 1.0nm,0.3s						
ASAR	Alice Springs	16.84	163	P	P	06 53 57.9	+0.7
	0.3nm,0.3s,baz=335,slow=9.8,SNR=26						
ASAR				S	Sn	06 56 58.4	-5.4
	0.4nm,0.5s,baz=316,slow=16,SNR=4.9 1.2nm,0.5s						
CMAR	Chiang Mai Arr	39.01	312	LR	LR	07 14 26.0	
	comp=Z,11nm,21.8s,baz=170,slow=37						
MKAR	Makanchi Array	67.90	328	P	P	07 00 54.6	-0.2
	0.5nm,0.7s,baz=126,slow=6.2,SNR=4.5 0.5nm,0.7s						
LPAZ	La Paz	151.13	145	PKPbc	PKPbc	07 09 50.3	0.0
	0.3nm,0.3s,baz=225,slow=4.3,SNR=1.9						

IDC 30 06:50:48.5±3.1**, 31°.50S×177°.84W, h0^{km}, mb4.0**/2**, mbtmp3.9**/3**, ML3.1**/1**, Error ellipse: s-maj=73.9km s-min=37.1km az=115.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	7.92	210	Pn	Pn	06 52 44.4	-0.5
	0.3nm,0.3s,baz=79,slow=5.2,SNR=1.9						
URZ				Sn	Sn	06 54 16.9	+1.8
	0.6nm,0.3s,baz=195,slow=22,SNR=10 3.1nm,0.9s						
ASAR	Alice Springs	43.20	268	P	P	06 58 51.5	0.0
	1.0nm,0.6s,baz=105,slow=7.0,SNR=6.5 1.0nm,0.6s						
WRA	Warramunga Arr	44.29	273	P	P	06 59 00.1	-0.2
	1.4nm,0.5s,baz=114,slow=7.8,SNR=5.8 1.4nm,0.5s						
FINES	FINESS Array B	146.22	339	PKPbc	PKPdf	07 10 29.3	+0.2
	1.3nm,0.9s,baz=51,slow=3.5,SNR=6.0						

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*MOS **30** 06:53:44.9±0.9, 43°.42N×142°.27E, h157^{km}, mb4.7/33, Error ellipse: s-maj=5.7km s-min=4.5km az=117.5*

*SKHL **30** 06:53:45.6±0.9, 43°.30N×142°.30E, h145^{km}±2^{km}, mb5.5/6, msha6.0/5*

*NIED **30** 06:53:46.6, 43°.27N×142°.40E, h166^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.31; $M_{\theta\theta}$2.08; $M_{\phi\phi}$-1.77; $M_{r\theta}$3.19; $M_{\theta\phi}$4.09; $M_{\phi r}$-0.47; Fault plane solution: $M_0$5.55000×10^{15} NP1:ϕ_s12.00000°, δ54.00000°, λ-179.00000°. NP2:ϕ_s282.00000°, δ89.00000°, λ-36.00000°.*

*IDC **30** 06:53:46.5±0.5, 43°.37N×142°.34E, h167^{km}±3^{km}, mb4.2/30, mbtmp4.6/36, MS2.9/4 Error ellipse: s-maj=9.3km s-min=8.4km az=129.0*

*JMA **30** 06:53:46.6±0.2, 43°.3N±0°.6×142°.4E±0°.8, h166^{km}±1^{km}, MD4.5/39, MW4.4/39, KAMIKAWA-SORACHI REGION*

JMA Felt II J1 at KAMIKAWA-SORACHI REGION .

*NEIC **30** 06:53:46.8±1.6, 43°.31N±0°.05×142°.3E±0°.1, h168^{km}±5^{km}, mb4.5/240, Error ellipse: s-maj=12.0km s-min=6.9km az=98.0*

ISC 30 06:53:46.3±0.4**, 43°.29N**±0°.03×**142°.39E**±0°.03**, h168^{km}**±3^{km}**, h168^{km}:pP-P, n784, σ0^{s}.99**/741**, mb4.5**/216**, 35C-31D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFR	Furan	0.20	129	P	Pn	06 54 08.7	-0.1
JFR				eS	Sn	06 54 25.2	-0.7
JFR	Furan	0.20	129	A	A	06 54 08.7	
	comp=N,12nm,1.8s,comp=E,9.0nm,1.1s						
JAB	Ashibetsu	0.25	332	P	Pn	06 54 08.9	+0.1
JAB				eS	Sn	06 54 25.9	-0.4
JAB	Ashibetsu	0.25	332	A	A	06 54 08.9	
	comp=N,12nm,0.9s,comp=E,6.0nm,1.3s						
JBT2	Biratori 2	0.51	182	P	Pn	06 54 09.9	+0.1
JBT2				eS	Sn	06 54 27.4	-0.3
JBT2	Biratori 2	0.51	182	A	A	06 54 09.9	
	comp=N,8.0nm,1.3s,comp=E,5.0nm,2.3s						
JKK2	Kamakawa 2	0.64	24	⇓P	Pn	06 54 10.7	+0.3
JKK2				⇓eS	Sn	06 54 28.6	-0.5
JKK2	Kamakawa 2	0.64	24	A	A	06 54 10.7	
	comp=N,7.0nm,2.7s,comp=E,10.0nm,2.0s						
JHR	Hokuryu	0.66	314	⇓P	Pn	06 54 11.0	+0.5
JHR				⇓eS	Sn	06 54 28.9	-0.3
JHR	Hokuryu	0.66	314	A	A	06 54 11.0	
	comp=N,16nm,1.1s,comp=E,14nm,1.7s						
JISS	Ishikarishitsu	0.71	269	A	A	06 54 11.0	
	comp=N,11nm,1.4s,comp=E,15nm,1.8s						
JIAM	Iburiatsuma	0.74	207	A	A	06 54 11.1	
	comp=N,54nm,0.5s,comp=E,25nm,0.5s						
JEW	Eniwo	0.82	237	P	Pn	06 54 11.9	+0.4
JEW				eS	Sn	06 54 30.2	-0.6
JEW	Eniwo	0.82	237	A	A	06 54 11.9	
	comp=N,23nm,0.8s,comp=E,23nm,1.8s						
JKA	Kamikawa-asahi	0.84	11		Pn	06 54 11.8	+0.1
JKA				Sn	Sn	06 54 30.5	-0.8
ASAJ	Asahikawa	0.84	10	P	Pn	06 54 11.8	+0.1
	comp=E,1µm,0.5s,baz=232,slow=9.8,SNR=2847						
ASAJ				S	Sn	06 54 31.0	-0.3
	comp=E,466nm,0.5s,baz=120,slow=20,SNR=7.2						
ASAJ	Asahikawa	0.84	10	PN	Pn	06 54 11.8	+0.1
ASAJ						06 54 30.5	
JCH	Churui	0.98	133	P	Pn	06 54 12.0	-0.7
JCH				eS	Sn	06 54 31.0	-2.0
JCH	Churui	0.98	133	A	A	06 54 12.0	
	comp=N,8.0nm,0.5s,comp=E,5.0nm,0.3s						
JMP	Maruseppu	1.01	44	A	A	06 54 13.1	
	comp=N,8.0nm,1.4s,comp=E,6.0nm,1.4s						
JAR	Ashorobuto	1.01	89	⇓P	Pn	06 54 13.2	+0.3
JAR				⇓eS	Sn	06 54 33.2	-0.1
JAR	Ashorobuto	1.01	89	A	A	06 54 13.2	
	comp=N,48nm,0.7s,comp=E,19nm,1.1s						
JNBK	Urakawa-nobuka	1.04	165	eP	Pn	06 54 13.7	+0.5
JNBK				eS	Sn	06 54 35.1	+1.3
JNBK	Urakawa-nobuka	1.04	165	A	A	06 54 13.7	
	comp=N,13nm,0.4s,comp=E,15nm,1.0s						
JOB	Onbets	1.13	109	A	A	06 54 13.9	
	comp=N,28nm,1.6s,comp=E,14nm,1.5s						
JSS	Shosan	1.18	341	⇓P	Pn	06 54 14.7	+0.4
JSS				⇓eS	Sn	06 54 36.1	+0.2
JTKR	Abashiri--Toko	1.30	58	⇓P	Pn	06 54 15.8	+0.5
JTKR				⇓eS	Sn	06 54 37.7	0.0
JEM	Erimo	1.39	156	P	Pn	06 54 16.9	+0.7
JEM	Erimo	1.39	156	A	A	06 54 16.3	
	comp=N,6.0nm,2.9s,comp=E,7.0nm,1.2s						
ERM	Erimo	1.39	156		Pn	06 54 16.8	+0.6
ERM				Sn	Sn	06 54 40.4	+1.2
ERM	Erimo	1.39	156	P	Pn	06 54 16.9	+0.6
ERM	Erimo	1.39	156	PN	Pn	06 54 16.8	+0.6
ERM						06 54 40.4	
JSE	Soyaes	1.68	5	⇓P	Pn	06 54 19.1	+0.1
JSE				⇓eS	Sn	06 54 43.6	-0.8
JAK	Akkeshi	1.72	99	⇓P	Pn	06 54 18.8	-0.6
JAK				⇓eS	Sn	06 54 43.5	-1.6
JAK	Akkeshi	1.72	99	A	A	06 54 18.8	
	comp=N,20nm,1.2s,comp=E,11nm,1.0s						
JKB	Kayabe	1.72	216	A	A	06 54 19.8	
	comp=N,12nm,1.0s,comp=E,18nm,1.4s						
AKK	Akkeshi	1.82	98	eP	Pn	06 54 20.1	-0.4
JNSB	Nemuroshibetsu	1.97	75	A	A	06 54 22.5	
	comp=N,21nm,2.4s,comp=E,12nm,2.3s						
JKHN	Kushirohamanak	2.04	95	A	A	06 54 23.2	
	comp=N,9.0nm,1.0s,comp=E,11nm,0.7s						
JWK2	Keihoku	2.06	350	⇓P	Pn	06 54 23.6	+0.5
JWK2				⇓eS	Sn	06 54 51.7	-0.1
JRA	Rausu	2.09	71	⇓P	Pn	06 54 24.1	+0.6
JRA				⇓eS	Sn	06 54 52.7	+0.3
JOT	Ohata	2.15	208	P	Pn	06 54 24.1	-0.1
JOT				eS	Sn	06 54 52.0	-1.5
JOT	Ohata	2.15	208	A	A	06 54 24.1	
	comp=N,7.0nm,1.0s,comp=E,10.0nm,1.3s						
JAHD	Aomorihigashid	2.16	201	A	A	06 54 24.7	
	comp=N,19nm,0.3s,comp=E,22nm,0.4s						
GLVR	Golovnino	2.33	78	ePN	Pn	06 54 26.8	+0.6
GLVR				S	Sn	06 54 57.8	+0.7
GLVR				pmax	pmax		
	comp=N,963nm,0.5s						
GLVR				pmax	pmax		
	comp=E,1µm,0.5s						
GLVR				pmax	pmax		
	comp=Z,3µm,0.5s						
GLVR				smax	smax		
	comp=N,3µm,0.3s						
GLVR				smax	smax		
	comp=E,916nm,0.6s						
GLVR	Golovnino	2.33	78	eP	Pn	06 54 26.6	+0.4
GLVR				AMB	AMB	06 54 31.8	
	comp=E,3µm,0.5s						
GLVR				eS	Sn	06 54 57.8	+0.7
GLVR				A	A	06 55 03.0	
	comp=E,3µm,0.4s						
GLVR				A	A	06 55 03.0	
	comp=E,920nm,0.4s						
JRBN	Rebuntou	2.34	337	P	Pn	06 54 26.2	-0.2
JRBN				eS	Sn	06 54 56.6	-0.9
JARK	Aomorirokkasho	2.40	199	A	A	06 54 27.5	
	comp=N,20nm,1.0s,comp=E,18nm,0.7s						
NMR	Nemuro--Hokkai	2.44	87	⇓iPN	Pn	06 54 26.8	-0.8
NMR				i S	Sn	06 54 56.7	-2.9
NMR	Nemuro--Hokkai	2.44	87	i P	Pn	06 54 26.8	-0.8
NMR				i S	Sn	06 54 56.9	-2.7
NEM2	Nemuro 2	2.45	87	⇓P	Pn	06 54 26.8	-0.9
NEM2				⇓eS	Sn	06 54 56.3	-3.5
YUK	Yuzh-Kuril'sk	2.63	72	d iPN	Pn	06 54 30.3	+0.5
YUK				i S	Sn	06 55 04.4	+0.8
YUK				pmax	pmax		
	comp=Z,3µm,0.6s						
YUK				pmax	pmax		
	comp=N,263nm,0.4s						
YUK				pmax	pmax		
	comp=E,614nm,0.5s						
YUK				smax	smax		
	comp=N,1µm,0.5s						
YUK				smax	smax		
	comp=E,2µm,0.8s						
YUK	Yuzh-Kuril'sk	2.63	72	i P	Pn	06 54 30.3	+0.5
YUK				AMB	AMB	06 54 31.1	
	comp=E,3µm,0.5s						
YUK				i S	Sn	06 55 04.2	+0.6
YUK				A	A	06 55 10.8	
	comp=E,1µm,0.6s						
YUK				A	A	06 55 10.8	
	comp=E,2µm,0.6s						
JSI2	Shiura 2	2.67	214	A	A	06 54 30.8	
	comp=N,15nm,0.7s,comp=E,7.0nm,0.6s						
JTM	Tenmabayashi	2.68	202		Pn	06 54 30.2	-0.4
JTM				Sn	Sn	06 55 02.5	-2.3
JTM	Tenmabayashi	2.68	202	P	Pn	06 54 30.1	-0.4
JTM	Tenmabayashi	2.68	202	A	A	06 54 30.9	
	comp=N,5.0nm,1.7s,comp=E,11nm,2.1s						
JANG	Nango	2.98	193	A	A	06 54 34.6	
	comp=N,4.0nm,0.9s,comp=E,4.0nm,3.3s						
JKEN	Kujiedanarisaw	3.12	190	A	A	06 54 36.4	
	comp=N,28nm,0.3s,comp=E,28nm,0.4s						
SHO	Shikotan	3.28	78	d iPN	Pn	06 54 38.2	+0.3
SHO				i S	Sn	06 55 15.5	-2.5
SHO				pmax	pmax		
	comp=Z,223nm,0.5s						
SHO				pmax	pmax		
	comp=N,106nm,0.4s						
SHO				pmax	pmax		
	comp=E,146nm,0.5s						
SHO				smax	smax		
	comp=E,699nm,0.3s						
SHO				smax	smax		
	comp=N,1µm,0.4s						
SHO	Shikotan	3.28	78	i P	Pn	06 54 37.8	-0.1
SHO				AMB	AMB	06 54 46.6	
	comp=N,220nm,0.4s						
SHO				i S	Sn	06 55 15.5	-2.5
SHO				A	A	06 55 17.6	
	comp=N,1µm,0.4s						
SHO				A	A	06 55 17.6	
	comp=N,700nm,0.4s						
YSS	Yuzhno-Sakhali	3.68	4		Pn	06 54 43.0	+0.2
YSS				Sn	Sn	06 55 25.2	-1.7
YSS	Yuzhno-Sakhali	3.68	4	cePN	Pn	06 54 42.9	+0.1
YSS				eS	Sn	06 55 25.7	-1.3
YSS				pmax	pmax		
	comp=Z,160nm,0.6s						
YSS				smax	smax		
	comp=N,1µm,1.1s						
YSS				smax	smax		
	comp=E,620nm,0.8s						
YSS				MLR	MLR		
	comp=Z,200nm,8.0s						
YSS	Yuzhno-Sakhali	3.68	4	eP	Pn	06 54 42.9	+0.1
YSS				AMB	AMB	06 54 44.2	
	comp=Z,160nm,0.6s						
YSS				eS	Sn	06 55 25.7	-1.3
YSS				A	A	06 55 27.0	
	comp=Z,1µm,0.8s						
YSS				A	A	06 55 27.0	
	comp=Z,620nm,0.8s						
KUR	Kuril'sk	4.39	62	⇑iPN	Pn	06 54 52.7	+0.7
KUR				eS	Sn	06 55 45.3	+1.9
KUR				pmax	pmax		
	comp=Z,249nm,0.5s						
KUR				pmax	pmax		
	comp=N,53nm,0.3s						
KUR				pmax	pmax		
	comp=E,42nm,0.3s						
KUR				smax	smax		
	comp=E,133nm,0.4s						
KUR				smax	smax		
	comp=N,46nm,0.3s						
KUR	Kuril'sk	4.39	62	eP	Pn	06 54 52.7	+0.7
KUR				AMB	AMB	06 54 53.3	
	comp=N,250nm,0.4s						
KUR				eS	Sn	06 55 45.3	+1.9
KUR				A	A	06 55 55.8	
	comp=N,80nm,0.4s						
KUR				A	A	06 55 55.8	
	comp=N,130nm,0.4s						
TEY	Ternei	4.51	295	⇑ePN	Pn	06 54 48.5	-5.1
TEY				e		06 55 39.9	
TEY				pmax	pmax		
	comp=Z,70nm,0.8s						
TEY				pmax	pmax		
	comp=N,20nm,0.8s						
TEY				pmax	pmax		
	comp=E,70nm,0.8s						
TEY				pmax	pmax		
	comp=E,100nm,4.4s						
TEY				pmax	pmax		
	comp=Z,200nm,4.4s						
JMM	Marumori	5.55	193		Pn	06 55 05.8	-1.4
JSD	Sado	6.11	212	P	Pn	06 55 15.0	+0.4
MJB9	Matsu-Tunnel	7.46	207		Pn	06 55 32.9	+0.4
MAJO	Matsushiro	7.46	207		Pn	06 55 32.8	+0.3
MAJO	Matsushiro	7.46	207	PN	Pn	06 55 32.8	+0.3
MJAR	Matsushiro Arr	7.46	207		Pn	06 55 33.4	+0.9
MJAR	Matsushiro Arr	7.46	207	PN	Pn	06 55 33.4	+0.9
TYV	Tymovskoe	7.58	1	ePN	Pn	06 55 33.8	-0.1
TYV				eS	Sn	06 56 59.0	+0.1
TYV				pmax	pmax		
	comp=Z,200nm,3.8s						
TYV				pmax	pmax		
	comp=Z,44nm,1.0s						
TYV				smax	smax		
	comp=N,200nm,3.9s						
TYV				smax	smax		
	comp=E,200nm,3.9s						
TYV				smax	smax		
	comp=N,10.0nm,1.1s						
TYV				smax	smax		
	comp=E,8.0nm,1.1s						
TYV	Tymovskoe	7.58	1	eP	Pn	06 55 33.8	-0.1
TYV				AMB	AMB	06 55 37.7	
	comp=E,40nm,0.5s						
TYV				eS	Sn	06 56 59.0	+0.1
USA0B	Ussuriysk Arra	7.58	280		Pn	06 55 34.6	+0.5
USA0B	Ussuriysk Arra	7.58	280	PN	Pn	06 55 34.6	+0.5
USRK	Ussuriysk Ar.	7.58	280		Pn	06 55 33.9	-0.1
USRK	Ussuriysk Ar.	7.58	280	P	Pn	06 55 33.5	-0.6
	comp=E,7.2nm,0.6s,baz=82,slow=14,SNR=17						
USRK	Ussuriysk Ar.	7.58	280	PN	Pn	06 55 33.9	-0.1
VLA	Vladivostok	7.67	272	i PN	Pn	06 55 35.2	0.0
MSHR	Mys Shultsa	8.27	269	cePN	Pn	06 55 42.1	-1.0
MSHR				pmax	pmax		
	comp=Z,85nm,1.7s						
PSTR	Posyet	8.52	270	i PN	Pn	06 55 46.6	+0.2
PSTR	Posyet	8.52	270	eP	Pn	06 55 46.0	-0.4
GRNR	Gornyy	8.52	334	⇑iPN	Pn	06 55 46.1	-0.3
GRNR				pmax	pmax		
	comp=Z,20nm,1.1s						
GRNR				MLR	MLR		
	comp=E,320nm,18.0s						
GRNR				MLR	MLR		
	comp=N,290nm,13.0s						
GRNR				MLR	MLR		
	comp=Z,90nm,14.0s						
JGF	Kuroka	8.60	209		Pn	06 55 48.4	+0.8
JGF	Kuroka	8.60	209	P	Pn	06 55 48.1	+0.5
INU	Inuyama	8.95	209		Pn	06 55 51.9	-0.3
INU	Inuyama	8.95	209	P	Pn	06 55 51.5	-0.7
MDJ	Mudanjiang	9.32	283		Pn	06 55 55.8	-1.3
KLR	Kul'dur	9.46	313	P	Pn	06 55 58.1	-0.7
	comp=Z,26nm,0.8s,baz=128,slow=12,SNR=53						
KLR				LR	LR	07 00 13.6	
	comp=Z,41nm,21.6s,baz=240,slow=41						
KLR	Kul'dur	9.46	313	eP	Pn	06 55 58.3	-0.5
JHJ2	Mitsune	10.36	192	Pn	Pn	06 56 09.5	-1.2
JMN	Monobe	11.63	218	Pn	Pn	06 56 27.1	-0.2
SKR	Severo-Kuril's	11.93	47	ePN	Pn	06 56 31.0	0.0
SKR				pmax	pmax		
	comp=Z,100nm,0.7s						
SKR				pmax	pmax		
	comp=Z,100nm,3.1s						
SKR				MLR	MLR		
	comp=Z,200nm,13.0s						
SKR	Severo-Kuril's	11.93	47	eP	Pn	06 56 31.0	0.0
SKR				AMB	AMB	06 56 31.4	
	comp=Z,100nm,0.7s						
KSRS	Korea Array	12.47	247	P	Pn	06 56 37.8	-0.2
	comp=Z,17nm,0.9s,baz=59,slow=12,SNR=34						
KS19	Wonju Array Si	12.48	247		Pn	06 56 37.7	-0.5
KSAR	Wonju Array Be	12.50	247	Pn	Pn	06 56 37.5	-0.9
KSAR	Wonju Array Be	12.50	247	PN	Pn	06 56 37.5	-0.9
TJN	Taejon	13.44	244	Pn	Pn	06 56 49.3	-1.0
TJN	Taejon	13.44	244	i PN	Pn	06 56 50.0	-0.3
JNU	Nakatsue	13.58	225		Pn	06 56 51.9	-0.3
JNU	Nakatsue	13.58	225	P	Pn	06 56 51.3	-1.0
	comp=Z,16nm,0.7s,baz=28,slow=10,SNR=12						
JNU				LR	LR	07 02 03.6	
	comp=Z,52nm,18.9s,baz=306,slow=36						
PEA0B	Petropavlovsk-	14.14	41	Pn	Pn	06 56 58.8	-0.2
PEA0B	Petropavlovsk-	14.14	41	i P	Pn	06 56 59.3	+0.3
PETK	Petropavlovsk-	14.14	41	Pn	Pn	06 56 58.6	-0.5
PETK	Petropavlovsk-	14.14	41	P	Pn	06 56 58.7	-0.4
	comp=Z,2.9nm,0.6s,baz=211,slow=9.7,SNR=8.6						
ZEA	Zeya	14.46	322	eP	Pn	06 57 01.1	-1.8
ZEA				pmax	pmax		
	comp=E,30nm,0.9s						
ZEA				pmax	pmax		
	comp=N,30nm,0.5s						
ZEA				pmax	pmax		
	comp=Z,50nm,0.6s						
ZEA	Zeya	14.46	322	eP	Pn	06 57 03.1	+0.2
HIA	Hailar	16.73	299		P	06 57 29.1	-1.1
HIA				IAmb	IAmb	06 57 31.0	
	comp=Z,22nm,0.9s						
HIA	Hailar	16.73	299	P	P	06 57 29.1	-1.1
HIA				pmax	pmax		
	comp=Z,23nm,0.9s						
MA2	Magadan	17.11	15		P	06 57 33.1	-1.1
MA2	Magadan	17.11	15	P	P	06 57 32.6	-1.5
	comp=Z,14nm,0.6s,baz=200,slow=11,SNR=12						
MA2				LR	LR	07 04 24.0	
	comp=Z,27nm,19.3s,baz=148,slow=37						
MA2	Magadan	17.11	15	ceP	P	06 57 33.6	-0.6
MA2				pmax	pmax		
	comp=Z,80nm,1.7s						
MA2	Magadan	17.11	15	eP	P	06 57 33.6	-0.6
BJI	Beijing	19.82	270	P	Pn	06 58 05.5	-1.8
BJI				S	Sn	07 01 45.3	-6.4
BJI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BJT	Baijiatuau	19.83	269	P	P	06 58 02.8	-1.2
BJT				IAmb	IAmb	06 58 08.1	
	comp=Z,13nm,1.1s						
BJT	Baijiatuau	19.83	269	P	P	06 58 02.8	-1.2
BJT				pmax	pmax		
	comp=Z,13nm,1.1s						
JOW	Kunigami	20.02	220	P	P	06 58 06.0	-0.2
JOW	Kunigami	20.02	220	P	P	06 58 05.8	-0.3
	comp=Z,58nm,0.9s,baz=358,slow=8.7,SNR=8.4 comp=Z,58nm,0.9s						
YAK	Yakutsk	20.22	343		P	06 58 05.0	-2.9

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YAK   Yakutsk          20.22 343   P      P       06 58 05.0 -2.9
      comp=Z,94nm,0.5s,baz=140,slow=3.2,SNR=22
YAK   Yakutsk          20.22 343 i P      P       06 58 04.7 -3.2
YAK                                pmax   pmax
      comp=Z,104nm,0.7s
YAK   Yakutsk          20.22 343 eP      P       06 58 04.7 -3.2
SEY   Seymchan         20.53  13   P      P       06 58 09.3 -1.9
      comp=Z,30nm,0.6s,baz=199,slow=8.3,SNR=79
      comp=Z,30nm,0.6s
SEY   Seymchan         20.53  13 i P      P       06 58 09.4 -1.8
SEY                                pmax   pmax
      comp=Z,26nm,0.6s
SEY   Seymchan         20.53  13 eP      P       06 58 09.4 -1.8
TIA   Tai'an           20.62 259   P      P       06 58 11.0 -1.5
TIA                                S      S       07 01 50.3 -3.3
TIA                                pmax   pmax
      comp=Z,28nm,0.9s
NJ2   Nanjing          21.67 247 ⇑P      P       06 58 25.8 +2.2
NJ2                                pmax   pmax
      comp=Z,29nm,0.8s
HNS   HongShan         21.84 264 ⇑P      P       06 58 27.0 +1.6
HNS                                S      S       07 02 20.0 +4.9
HNS                                pmax   pmax
      comp=Z,18nm,0.9s
HNS                                LR     LR
      comp=E,85nm,12.1s
HNS                                LR     LR
      comp=Z,100nm,10.3s
HHC   Hu-ho-hao-te     22.95 275 eP      P       06 58 34.5 -1.4
HHC                                pmax   pmax
      comp=Z,12nm,0.6s
HHC                                pmax   pmax
      comp=Z,38nm,4.0s
YOJ   Yonaguni jima    24.62 227   P      P       06 58 51.7 +0.6
YOJ   Yonaguni jima    24.62 227   P      P       06 58 51.7 +0.6
YOJ                                pmax   pmax
      comp=Z,137nm,1.1s
ULN   Ulaanbaatar      25.01 293ceP      P       06 58 54.8 +0.2
ULN                                pmax   pmax
      comp=Z,16nm,1.7s
ULN   Ulaanbaatar      25.01 293 eP      P       06 58 54.8 +0.2
SONM  Songino Array    25.45 293          P       06 58 59.1 +0.5
SONM                               IAmb   IAmb    06 59 01.1
      comp=Z,16nm,0.8s
SONM  Songino Array    25.45 293   P      P       06 58 59.0 +0.4
      comp=Z,14nm,0.8s,baz=82,slow=8.7,SNR=53
SONM                               ScP    ScP     07 05 49.9 +0.8
      comp=Z,0.7nm,0.6s,baz=163,slow=1.5,SNR=5.0
      comp=Z,14nm,0.8s
SONM  Songino Array    25.45 293   P      P       06 58 59.0 +0.4
WHN   Wuhan            25.64 250⇓iP      P       06 59 01.5 +1.2
WHN                                pmax   pmax
      comp=Z,120nm,0.7s
ZAK   Zakamensk        27.43 299 eP      P       06 59 16.3 +0.1
ZAK                                pmax   pmax
      comp=Z,10.0nm,1.2s
XAN   Xi'an            27.56 262 ⇓P      P       06 59 19.0 +1.5
XAN                                pmax   pmax
      comp=Z,9.0nm,0.8s
BILL  Bilibino         27.85  19 i P      P       06 59 21.7 +2.1
BILL                               pmax   pmax
      comp=Z,3.0nm,1.0s
BILL  Bilibino         27.85  19 eP      P       06 59 21.1 +1.5
TIK   Tiksi            29.19 351 eP      P       06 59 28.2 -3.2
TIXI  Tiksi            29.20 351          P       06 59 28.9 -2.6
TIXI                               IAmb   IAmb    06 59 35.7
      comp=Z,3.4nm,0.6s
TIXI  Tiksi            29.20 351   P      P       06 59 28.9 -2.6
TIXI                               pmax   pmax
      comp=Z,3.0nm,0.6s
GTA   Gaotai           31.94 278 eP      P       06 59 58.0 +1.8
GTA                                pP     pP      07 00 03.0  -28
GTA                                pmax   pmax
      comp=Z,3.0nm,0.8s
SPIA  Saint Paul Isl   32.61  48   P      P       07 00 01.3 -0.3
      baz=266
P08K  Saint George I   32.96  49   P      P       07 00 04.2 -0.4
      baz=267
GAMB  Gambell          33.09  36   P      P       07 00 05.5 -0.2
      baz=254
NIKH  Nikolski High    33.36  56   P      P       07 00 08.2  0.0
      baz=273
UNV   Unalaska Valle   34.72  54   P      P       07 00 19.6 -0.3
      baz=274
M11K  Mekoryuk         35.00  43   P      P       07 00 21.6 -0.5
      baz=264
TNA   Tin City         35.13  33   P      P       07 00 22.8 -0.5
      baz=256
F14K  Arctic Creek     35.76  34   P      P       07 00 28.1 -0.5
      baz=257
K13K  Kusilvak Mount   35.90  40   P      P       07 00 29.9  0.0
K13K                               IAmb   IAmb    07 00 32.0
      comp=Z,20nm,1.4s
K13K  Kusilvak Mount   35.90  40   P      P       07 00 29.9  0.0
      baz=264
ANM   Nome             35.97  36   P      P       07 00 30.4 -0.1
      baz=260
M13K  Dall Lake        36.41  43   P      P       07 00 34.1 -0.1
      baz=267
F15K  North Star Dit   36.49  34   P      P       07 00 35.4 +0.6
F15K                               IAmb   IAmb    07 00 57.3
      comp=Z,16nm,1.2s
F15K  North Star Dit   36.49  34   P      P       07 00 34.8 -0.1
      baz=259
J14K  Nanvaranak Lak   36.51  39   P      P       07 00 35.8 +0.9
J14K                               IAmb   IAmb    07 00 55.4
      comp=Z,22nm,1.4s
J14K  Nanvaranak Lak   36.51  39   P      P       07 00 34.9  0.0
      baz=264
G15K  Niukluk          36.61  35   P      P       07 00 36.1 +0.3
      baz=260
L14K  Kuka Creek       36.79  41   P      P       07 00 37.5 +0.1
      baz=266
C16K  Lisburne Hills   36.83  29   P      P       07 00 37.5 -0.1
C16K  Lisburne Hills   36.83  29   P      P       07 00 37.3 -0.3
      baz=255
PZH   PanZhiHua        36.89 256   P      P       07 00 39.8 +0.9
PZH                                pmax   pmax
      comp=Z,10.0nm,1.2s
PZH                                pmax   pmax
      comp=Z,100nm,4.7s
KMI   Kunming          37.04 254   P      P       07 00 41.8 +1.5
KMI                                pmax   pmax
      comp=Z,22nm,1.0s
M14K  Bethel           37.11  42   P      P       07 00 40.1  0.0
      baz=268
S12K  Black Hills      37.16  51   P      P       07 00 40.5 -0.1
      baz=274
N14K  Kuskokwak Cree   37.23  44   P      P       07 00 41.4 +0.3
      baz=269
H16K  Elim             37.32  36   P      P       07 00 41.4 -0.4
      baz=262
G16K  Koyuk River      37.38  35   P      P       07 00 43.3 +1.0
G16K                               IAmb   IAmb    07 00 45.1
      comp=Z,9.3nm,0.8s
G16K  Koyuk River      37.38  35   P      P       07 00 42.4 +0.1
      baz=261
L15K  Ungalak Mounta   37.38  41   P      P       07 00 42.4  0.0
      baz=267
K15K  Wolf Creek Mou   37.40  40   P      P       07 00 44.2 +1.7
K15K                               IAmb   IAmb    07 00 44.9
      comp=Z,7.8nm,0.8s
K15K  Wolf Creek Mou   37.40  40   P      P       07 00 42.6  0.0
      baz=266
O14K  Tigyukauivet M   37.44  45   P      P       07 00 43.0 +0.2
      baz=270
D17K  Noatak River     37.52  31   P      P       07 00 43.7 +0.2
      baz=258
C17K  DeLong Mountai   37.66  29   P      P       07 00 44.5 -0.2
      baz=257
RDOG  Red Dog Mine     37.66  30   P      P       07 00 44.8 +0.2
      baz=257
M15K  Kasigluk River   37.73  42   P      P       07 00 45.3 -0.1
      baz=269
E17K  Hotham Inlet     37.87  32   P      P       07 00 46.6 +0.2
      baz=260,SNR=5.0
J16K  Anvik River      37.90  38   P      P       07 00 46.7  0.0
      baz=266
I17K  Unalakleet       37.90  37   P      P       07 00 47.9 +1.2
I17K                               IAmb   IAmb    07 00 48.4
      comp=Z,7.8nm,0.7s
I17K  Unalakleet       37.90  37   P      P       07 00 46.7  0.0
      baz=265
F17K  Baldwin Pennin   37.99  33   P      P       07 00 48.0 +0.6
      baz=261
NRIK  Noril'sk         38.00 332   P      P       07 00 45.9 -1.6
      comp=Z,3.7nm,0.4s,baz=169,slow=1.8,SNR=6.0
      comp=Z,3.7nm,0.4s
N15K  Kwethluk River   38.03  43          P       07 00 50.0 +2.2
N15K  Kwethluk River   38.03  43   P      P       07 00 48.4 +0.6
      baz=270,SNR=5.2
SDPT  Sand Point       38.08  51   P      P       07 00 48.5 +0.2
      baz=276
G17K  Kiwalik Mounta   38.10  35   P      P       07 00 48.2 -0.1
      baz=263,SNR=5.6
O15K  Ungalikthiuk R   38.18  45   P      P       07 00 48.9 -0.2
      baz=272
H17K  Granite Mounta   38.34  35   P      P       07 00 51.0 +0.6
H17K                               IAmb   IAmb    07 00 52.1
      comp=Z,14nm,1.3s
H17K  Granite Mounta   38.34  35   P      P       07 00 50.9 +0.6
      baz=264
L16K  Owhat River      38.34  41          P       07 00 51.6 +1.1
L16K                               IAmb   IAmb    07 00 52.3
      comp=Z,7.6nm,0.8s
L16K  Owhat River      38.34  41   P      P       07 00 51.0 +0.6
      baz=269,SNR=5.8
B18K  Kokolik River    38.35  28   P      P       07 00 50.4 +0.1
      baz=257
E18K  Tukpahlearik C   38.40  31   P      P       07 00 50.8  0.0
      baz=261
C18K  Utukok River     38.41  29   P      P       07 00 50.5 -0.5
      baz=258
ZAA0  Zalesovo Array   38.50 307   P      P       07 00 51.6 -0.2
ZALV  Zalesovo Beam    38.50 307   P      P       07 00 51.8  0.0
ZALV  Zalesovo Beam    38.50 307   P      P       07 00 51.7 -0.2
      comp=Z,20nm,0.5s,baz=78,slow=7.7,SNR=67
ZALV                               ScP    ScP     07 06 33.5 +0.5
      comp=Z,3.3nm,0.8s,baz=64,slow=3.4,SNR=9.1
      comp=Z,20nm,0.5s
M16K  Timber Creek     38.58  42   P      P       07 00 53.5 +1.0
M16K                               IAmb   IAmb    07 00 55.4
      comp=Z,5.4nm,0.7s
M16K  Timber Creek     38.58  42   P      P       07 00 52.8 +0.3
      baz=270
J17K  VABM Dome        38.59  38          P       07 00 53.4 +0.9
J17K                               IAmb   IAmb    07 00 54.5
      comp=Z,13nm,1.1s
J17K  VABM Dome        38.59  38   P      P       07 00 52.9 +0.4
      baz=267
F18K  Selawik          38.64  33   P      P       07 00 53.0 +0.1
      baz=263
CHNA  Chernabura Isl   38.65  52   P      P       07 00 52.8 -0.3
      baz=278
N16K  Nishlik Lake     38.68  43   P      P       07 00 53.4 +0.1
      baz=271
A19K  Wainwright       38.79  27   P      P       07 00 54.2 +0.2
      baz=257
L17K  Donlin           38.91  40   P      P       07 00 55.3 +0.2
      baz=269,SNR=5.1
K17K  Iditarod         38.92  39   P      P       07 00 54.9 -0.3
      baz=269
G18K  Tagagawik        38.96  34   P      P       07 00 55.7 +0.1
      baz=264,SNR=12
H18K  Honhosa River    39.02  35   IAmb   IAmb    07 00 57.1
      comp=Z,10nm,1.1s
H18K  Honhosa River    39.02  35   P      P       07 00 56.1  0.0
      baz=266
WMQ   Urumqi           39.02 290 eP      P       07 00 57.8 +1.4
O16K  Kokwok River B   39.05  44   P      P       07 00 56.4 +0.1
      baz=273
C19K  Lookout Ridge    39.06  29   P      P       07 00 56.7 +0.3
      baz=260
M17K  Holitna River    39.32  41   P      P       07 01 00.3 +1.8
M17K  Holitna River    39.32  41   P      P       07 00 58.7 +0.2
      baz=271,SNR=5.1
F19K  Shaleruckik Mo   39.41  33   IAmb   IAmb    07 01 02.1
      comp=Z,8.9nm,0.7s
F19K  Shaleruckik Mo   39.41  33   P      P       07 00 59.2  0.0
      baz=264,SNR=12
N17K  Nushagak Hills   39.46  43   P      P       07 01 00.4 +0.6
      baz=272
D19K  Kuna River       39.49  30          P       07 00 59.5 -0.5
D19K                               IAmb   IAmb    07 01 00.5
      comp=Z,17nm,1.1s
D19K  Kuna River       39.49  30   P      P       07 01 00.3 +0.3
      baz=262
O17K  Koliganek Bris   39.55  44   P      P       07 01 00.3 -0.1
      baz=273
G19K  Purcell Mounta   39.62  34   IAmb   IAmb    07 01 28.1
      comp=Z,17nm,1.1s
G19K  Purcell Mounta   39.62  34   P      P       07 01 00.9 -0.1
      baz=266,SNR=7.5
J18K  Innoko River     39.65  38   P      P       07 01 01.9 +0.6
      baz=269
L18K  Granite Mounta   39.66  40   IAmb   IAmb    07 01 03.8
      comp=Z,7.6nm,0.8s
L18K  Granite Mounta   39.66  40   P      P       07 01 01.4 +0.1
      baz=271
E19K  Redstone River   39.69  32          P       07 01 01.6 +0.1
E19K  Redstone River   39.69  32   P      P       07 01 01.3 -0.2
      baz=264,SNR=12
ZSN   Zaisan           39.83 297 eP      P       07 01 03.2 +0.2
ZSN   Zaisan           39.83 297 eP      P       07 01 03.2 +0.2
H19K  Roundabout Mou   39.84  35   P      P       07 01 02.6 -0.2
      baz=267,SNR=21
B20K  Meade River      40.06  28   P      P       07 01 04.0 -0.5
      baz=261
D20K  Etivluk River    40.07  30   IAmb   IAmb    07 01 05.7
      comp=Z,18nm,1.1s
D20K  Etivluk River    40.07  30   P      P       07 01 04.0 -0.7
      baz=263,SNR=5.8
M18K  Stony River      40.09  41   P      P       07 01 05.0  0.0
      baz=272
N18K  Kilae Creek      40.10  42   P      P       07 01 04.8 -0.2
      baz=273
R17L  Mt. Peulik Vol   40.11  47   P      P       07 01 05.3 +0.1
      baz=276
J19K  Poorman          40.15  37   IAmb   IAmb    07 01 06.6
      comp=Z,8.4nm,0.9s
J19K  Poorman          40.15  37   P      P       07 01 05.0 -0.3
      baz=270,SNR=7.2
E20K  Nigu River       40.17  30   P      P       07 01 05.4 -0.2
      baz=264,SNR=13
F20K  Avaraart Lake    40.23  32   P      P       07 01 06.1  0.0
      baz=266
Q17K  Contact Creek    40.29  46   P      P       07 01 06.1 -0.6
      baz=276
A21K  Barrow           40.46  26   P      P       07 01 07.6 -0.2
      baz=260
O18K  Koktuh Hills     40.49  44   P      P       07 01 08.2 -0.1
      baz=275
H20K  Anotleneega Mo   40.49  35   P      P       07 01 08.0 -0.2
      baz=268,SNR=14
P18K  Big Mountain,    40.52  44   P      P       07 01 08.6 +0.1
      baz=275
L19K  White Mountain   40.52  40   P      P       07 01 08.3 -0.3
      baz=272
I20K  Naaghedeneel     40.65  36   P      P       07 01 09.9 +0.5
      baz=270
Q18K  Katmai Hardscr   40.71  45   P      P       07 01 10.4 +0.2
      baz=276
M19K  Big River Lodg   40.75  40   P      P       07 01 10.6 +0.2
      baz=273
C21K  Knifeblade Rid   40.77  29   P      P       07 01 10.7 +0.2
      baz=264
N19K  Bonanza Creek    40.78  42   P      P       07 01 10.7  0.0
      baz=274
J20K  Nowinta River    40.80  37          P       07 01 10.9 +0.3
J20K                               IAmb   IAmb    07 01 12.3
      comp=Z,9.0nm,0.8s
J20K  Nowinta River    40.80  37   P      P       07 01 10.6 -0.1
      baz=271,SNR=11
K20K  Telida           40.84  38          P       07 01 12.0 +0.9
K20K  Telida           40.84  38   P      P       07 01 11.2 +0.1
      baz=272,SNR=6.2
B21K  Ikpikpuk River   40.88  28   P      P       07 01 11.5 +0.2
      baz=264
A22K  Sinclair Lake    40.94  26   P      P       07 01 11.3 -0.4
      baz=262
L20K  Farewell, AK     40.96  39   P      P       07 01 12.1  0.0
      baz=273
IMAR  Indian Mountai   40.98  34   P      P       07 01 12.5 +0.4
E21K  Killik River     41.01  30   IAmb   IAmb    07 01 12.7
      comp=Z,7.1nm,0.7s
E21K  Killik River     41.01  30   P      P       07 01 12.4  0.0
      baz=266
G21K  Allakaket        41.09  33          P       07 01 13.7 +0.7
G21K                               IAmb   IAmb    07 01 14.2
      comp=Z,18nm,1.1s
G21K  Allakaket        41.09  33   P      P       07 01 13.3 +0.2
      baz=268,SNR=15
F21K  Alatna River     41.12  32   IAmb   IAmb    07 01 14.0
      comp=Z,6.1nm,0.8s
F21K  Alatna River     41.12  32   P      P       07 01 12.9 -0.4
      baz=268,SNR=9.0
R18K  Karluk           41.13  47   P      P       07 01 13.4  0.0
      baz=278
M20K  Styx River       41.35  40   P      P       07 01 15.2 -0.1
      baz=274
H21K  Melozitna Rive   41.36  35   P      P       07 01 15.6 +0.3
      baz=270,SNR=7.5
B22K  Teshekpuk Lake   41.37  27   P      P       07 01 14.9 -0.3
      baz=264
Q19K  Cape Douglas,    41.38  45   P      P       07 01 15.5  0.0
      baz=277
SII   Sitkinak Islan   41.43  48   P      P       07 01 16.5 +0.6
      baz=279
D22K  Ayikyak River    41.51  30   IAmb   IAmb    07 01 17.2
      comp=Z,11nm,0.7s
D22K  Ayikyak River    41.51  30   P      P       07 01 16.7 +0.3
      baz=267,SNR=7.0
P19K  Oil Pt           41.51  44   P      P       07 01 16.3 -0.3
      baz=277
CHUM  Lake Minchumin   41.61  37   P      P       07 01 18.2 +0.9
      baz=273
F22K  John River       41.63  32   P      P       07 01 17.9 +0.4
      baz=269
MK31  Makanchi Array   41.71 296 i P      P       07 01 18.8 +0.4
MKAR  Makanchi Array   41.71 296          P       07 01 19.0 +0.6
MKAR  Makanchi Array   41.71 296   P      P       07 01 18.4 +0.1
      comp=Z,12nm,0.7s,baz=82,slow=9.8,SNR=83
MKAR                               PcP    PcP     07 03 10.8 -0.8
      comp=Z,0.8nm,0.5s,baz=67,slow=2.9,SNR=1.9
MKAR                               ScP    ScP     07 06 46.2 +0.4
      comp=Z,1.2nm,0.7s,baz=50,slow=3.8,SNR=6.9
      comp=Z,12nm,0.7s
PPLA  Purkeypile       41.72  39   IAmb   IAmb    07 01 20.4
      comp=Z,8.1nm,1.0s
PPLA  Purkeypile       41.72  39   P      P       07 01 19.1 +0.7
      baz=274,SNR=5.5
CAST  Castle Rocks     41.73  38   IAmb   IAmb    07 01 20.4
      comp=Z,10nm,0.8s
CAST  Castle Rocks     41.73  38   P      P       07 01 19.2 +0.8
      baz=273,SNR=18
O20K  Slope Mountain   41.76  43   P      P       07 01 18.4 -0.3
      baz=277
E22K  Anaktuvuk Pass   41.79  31   P      P       07 01 18.9 +0.1
      baz=268,SNR=23
OHAK  Old Harbor       41.81  47   P      P       07 01 19.8 +0.8
      baz=279
G22K  Bettles          41.89  33   P      P       07 01 19.9 +0.4
      baz=270
MAKZ  Makanchi         41.91 297          P       07 01 20.6 +0.6
MAKZ  Makanchi         41.91 297   P      P       07 01 20.6 +0.6
MAKZ                               pmax   pmax
      comp=Z,18nm,0.8s
H22K  Ishtalitna Cre   41.95  34   P      P       07 01 20.8 +0.7
      baz=271,SNR=12
KDAK  Kodiak Island    42.10  46   P      P       07 01 21.4 +0.1
      baz=279
SKT   Skwentna         42.10  40   P      P       07 01 21.6 +0.3
      baz=275
BPAW  Bear Paw Mtn.    42.18  37   P      P       07 01 22.2 +0.3
      baz=274
D23K  Nanushuk River   42.23  30   P      P       07 01 22.1 -0.2
      baz=268
MLY   Manley           42.24  35   P      P       07 01 22.9 +0.4
      baz=273,SNR=6.6
KTH   Kantishna Hill   42.25  38   IAmb   IAmb    07 01 24.6
      comp=Z,16nm,0.8s
C23K  Itkillik River   42.29  28   P      P       07 01 22.5 -0.3
      baz=268
COLD  Coldfoot         42.40  32   IAmb   IAmb    07 01 24.6
      comp=Z,8.7nm,1.0s
COLD  Coldfoot         42.40  32   P      P       07 01 23.2 -0.5
      baz=271,SNR=9.9
CAPN  Captain Cook N   42.41  42   P      P       07 01 24.5 +0.7
      baz=277
G23K  Bananza Creek    42.48  33   IAmb   IAmb    07 01 25.1
      comp=Z,9.6nm,0.8s
G23K  Bananza Creek    42.48  33   P      P       07 01 24.6 +0.2
      baz=272,SNR=12
SUA   Susitna One      42.52  41   IAmb   IAmb    07 01 26.0
      comp=Z,5.6nm,0.5s
SUA   Susitna One      42.52  41   P      P       07 01 25.0 +0.2
      baz=277
TRF   Thorofare Moun   42.54  38   P      P       07 01 25.2 +0.2
      baz=275,SNR=6.2
E23K  Chandalar        42.62  31   IAmb   IAmb    07 01 26.4
      comp=Z,14nm,1.1s
E23K  Chandalar        42.62  31   P      P       07 01 25.4 -0.1
      baz=270,SNR=8.9
TOLK  Toolik Lake Re   42.63  30   IAmb   IAmb    07 01 26.2
      comp=Z,8.0nm,0.8s
TOLK  Toolik Lake Re   42.63  30   P      P       07 01 26.0 +0.4
      baz=270
CUT   Chulitna         42.64  39   P      P       07 01 26.4 +0.7
      baz=276
H23K  Yukon River      42.70  34   IAmb   IAmb    07 01 27.9
      comp=Z,8.4nm,0.8s
H23K  Yukon River      42.70  34   P      P       07 01 26.8 +0.7
      baz=273,SNR=13
M22K  Willow           42.78  40   P      P       07 01 27.6 +0.8
      baz=277
I23K  Minto, Yukon-K   42.82  35   IAmb   IAmb    07 01 28.6
      comp=Z,13nm,1.4s
I23K  Minto, Yukon-K   42.82  35   P      P       07 01 27.8 +0.7
      baz=274,SNR=7.7
KURK  Kurchatov        42.90 303          P       07 01 28.0 +0.2
KURK  Kurchatov        42.90 303   P      P       07 01 28.6 +0.7
KURK                                              07 03 14.3
KURK                               S      S       07 07 39.9 +0.3
KURK  Kurchatov        42.90 303 eP      P       07 01 28.1 +0.2
D24K  Happy Valley     42.91  29   P      P       07 01 27.8 +0.1
      baz=270,SNR=11
C24K  Franklin Bluff   42.95  29   P      P       07 01 28.0 -0.1
      baz=269
KURBB Kurchatov Arra   42.98 303   P      P       07 01 28.6  0.0
      comp=Z,29nm,0.6s,baz=76,slow=9.0,SNR=35
KURBB                              PcP    PcP     07 03 14.3 -1.4
      comp=Z,0.5nm,0.4s,baz=47,slow=4.0,SNR=2.4
KURBB                              ScP    ScP     07 06 51.2 +0.5
      comp=Z,1.1nm,0.9s,baz=81,slow=3.6,SNR=5.7
KURBB                              S      S       07 07 39.9 -0.9
      comp=Z,1.4nm,1.1s,baz=80,slow=18,SNR=5.4
      comp=Z,29nm,0.6s
KURBB Kurchatov Arra   42.98 303   P      P       07 01 28.1 -0.4
NEA2  Nenana           42.98  36   IAmb   IAmb    07 01 29.7
      comp=Z,12nm,0.7s
NEA2  Nenana           42.98  36   P      P       07 01 29.0 +0.6
      baz=275,SNR=13
E24K  Your Creek       43.04  31   IAmb   IAmb    07 01 29.9
      comp=Z,19nm,1.2s
E24K  Your Creek       43.04  31   P      P       07 01 29.3 +0.4
      baz=271
RC01  Rabbit Creek A   43.05  41   IAmb   IAmb    07 01 30.7
      comp=Z,5.8nm,0.7s
RC01  Rabbit Creek A   43.05  41   P      P       07 01 29.5 +0.5
      baz=278
MCK   McKinley         43.12  37          P       07 01 30.0 +0.5
MCK                                IAmb   IAmb    07 01 30.8
      comp=Z,8.6nm,0.9s
MCK   McKinley         43.12  37   P      P       07 01 30.0 +0.5
MCK                                pmax   pmax
      comp=Z,9.0nm,0.9s
MCK   McKinley         43.12  37   P      P       07 01 29.4 -0.1
      baz=276,SNR=5.5
O22K  Cooper Landing   43.14  42   P      P       07 01 29.6 -0.1
      baz=278
RND   Reindeer         43.19  38   IAmb   IAmb    07 01 31.0
      comp=Z,7.5nm,0.9s
PMR   Palmer           43.27  40          P       07 01 30.9 +0.2
PMR   Palmer           43.27  40   P      P       07 01 30.9 +0.2
PMR                                pmax   pmax
      comp=Z,5.0nm,0.9s
PMR   Palmer           43.27  40   P      P       07 01 30.5 -0.2
      baz=278,SNR=6.5
F24K  Squaw Lake       43.28  32   IAmb   IAmb    07 01 31.5
      comp=Z,5.6nm,0.6s
F24K  Squaw Lake       43.28  32   P      P       07 01 30.3 -0.5
      baz=273,SNR=9.8
SEW   Seward           43.33  43   P      P       07 01 31.4 +0.1
SEW                                IAmb   IAmb    07 01 34.6
      comp=Z,11nm,1.0s
SEW   Seward           43.33  43   P      P       07 01 31.8 +0.6
      baz=279
H24K  Noodor Dome      43.39  34   IAmb   IAmb    07 01 33.5
      comp=Z,7.2nm,0.9s
H24K  Noodor Dome      43.39  34   P      P       07 01 31.6  0.0
      baz=274,SNR=10
WAT1  Susitna Watana   43.39  39   P      P       07 01 30.9 -0.8
      baz=277
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WRH   Wood River Hil  43.41  36   IAmb   IAmb  07 01 33.3
      comp=Z,9.8nm,1.2s
COLA  College         43.48  36   P      P     07 01 32.8 +0.5
COLA  College         43.48  36   P      P     07 01 32.8 +0.5
COLA                              pmax   pmax
      comp=Z,17nm,0.8s
COLA  College         43.48  36   P      P     07 01 32.2 -0.1
      baz=275
G24K  Hadweenzic Riv  43.49  33   P      P     07 01 33.0 +0.6
      baz=274,SNR=6.8
KNK   Knik Glacier    43.62  41   P      P     07 01 33.8 +0.2
      baz=278
PWL   Port Wells      43.76  41   P      P     07 01 34.6 -0.1
      baz=279
D25K  Kavik River     43.77  29   IAmb   IAmb  07 01 35.1
      comp=Z,10nm,0.6s
D25K  Kavik River     43.77  29   P      P     07 01 34.7 -0.1
      baz=272
WAT6  Susitna Watana  43.79  39   P      P     07 01 34.9 -0.2
      baz=278
CHTO  Chiang Mai      43.84 250          P     07 01 37.5 +1.7
CHTO                              IAmb   IAmb  07 01 38.0
      comp=Z,8.7nm,0.7s
CHTO  Chiang Mai      43.84 250   P      P     07 01 37.5 +1.7
CHTO                              pmax   pmax
      comp=Z,9.0nm,0.7s
DHY   Denali Highway  43.89  38   IAmb   IAmb  07 01 36.9
      comp=Z,11nm,0.8s
DHY   Denali Highway  43.89  38   P      P     07 01 35.6 -0.3
      baz=278,SNR=13
ILAR  Eielson Array   43.90  36   P      P     07 01 36.1 +0.4
ILAR  Eielson Array   43.90  36   P      P     07 01 35.5 -0.2
      comp=Z,5.1nm,0.8s,baz=277,slow=7.5,SNR=64
ILAR                              PcP    PcP   07 03 17.8 -0.8
      comp=Z,0.4nm,0.5s,baz=286,slow=3.6,SNR=1.7
ILAR                              LR     LR    07 21 19.8
      comp=Z,23nm,18.4s,baz=276,slow=38
      comp=Z,5.1nm,0.8s
M23K  Glacier View    43.91  40   P      P     07 01 36.1 +0.2
      baz=279
HDA   Harding Lake    43.91  36   P      P     07 01 36.4 +0.6
      baz=277,SNR=5.8
G25K  Bearman Lake    44.03  33   P      P     07 01 36.0 -0.6
      baz=275
CMAR  Chiang Mai Arr  44.09 250   P      P     07 01 38.6 +0.9
      comp=Z,2.2nm,0.3s,baz=46,slow=7.2,SNR=11
      comp=Z,2.2nm,0.3s
CMAR  Chiang Mai Arr  44.09 250 i P      P     07 01 39.5 +1.7
CMAR                              pmax   pmax
      comp=Z,2.0nm,0.3s
SCM   Sheep Creek Mo  44.09  40   IAmb   IAmb  07 01 39.5
      comp=Z,8.4nm,0.7s
SCM   Sheep Creek Mo  44.09  40   P      P     07 01 37.7 +0.4
      baz=279,SNR=5.6
E25K  Arctic Village  44.13  31   P      P     07 01 37.6 +0.1
      baz=274,SNR=5.5
F25K  Christian Rive  44.14  32   IAmb   IAmb  07 01 40.0
      comp=Z,14nm,1.4s
F25K  Christian Rive  44.14  32   P      P     07 01 38.2 +0.5
      baz=274,SNR=7.1
H25L  Birch Creek     44.19  33   P      P     07 01 38.1 +0.1
      baz=276
GLI   Glacier Island  44.36  41   IAmb   IAmb  07 01 41.6
      comp=Z,6.5nm,0.7s
GLI   Glacier Island  44.36  41   P      P     07 01 40.2 +0.8
      baz=280
PRP   Porcupine Dome  44.39  35   IAmb   IAmb  07 01 41.4
      comp=Z,9.4nm,0.8s
PRP   Porcupine Dome  44.39  35   P      P     07 01 39.6 -0.2
      baz=277,SNR=16
FYU   Fort Yukon      44.39  33   IAmb   IAmb  07 01 44.0
      comp=Z,12nm,0.6s
K24K  Donnelly Dome   44.50  37   IAmb   IAmb  07 01 41.3
      comp=Z,11nm,0.9s
K24K  Donnelly Dome   44.50  37   P      P     07 01 40.3 -0.2
      baz=278,SNR=5.5
BMAR  Burnt Mountain  44.56  32          P     07 01 41.6 +0.6
J25K  Salcha River,   44.57  36   P      P     07 01 41.1  0.0
      baz=278
M24K  Tolsona, Glenn  44.58  39   P      P     07 01 41.5 +0.3
      baz=280
C27K  Jago River      44.70  29   P      P     07 01 42.3 +0.3
      baz=274
F26K  Sheenjek River  44.70  31   P      P     07 01 42.7 +0.6
F26K                              IAmb   IAmb  07 01 43.7
      comp=Z,13nm,1.1s
F26K  Sheenjek River  44.70  31   P      P     07 01 42.9 +0.8
      baz=276,SNR=11
PAX   Paxson          44.76  38   P      P     07 01 44.0 +1.2
      baz=279
KLU   Klutina         44.81  40   IAmb   IAmb  07 01 44.9
      comp=Z,10.0nm,0.6s
KLU   Klutina         44.81  40   P      P     07 01 44.1 +1.0
      baz=280,SNR=7.2
TDK   Taldyqorghan    44.87 295  eP      P     07 01 43.9 +0.2
TDK                               pmax   pmax
      comp=Z,7.0nm,0.5s
TDK   Taldyqorghan    44.87 295  eP      P     07 01 44.0 +0.2
      comp=Z,7.2nm,0.5s
RIDG  Independent Ri  44.92  37   P      P     07 01 43.8 -0.1
      baz=279,SNR=5.5
G26K  Porcupine Rive  44.92  32   IAmb   IAmb  07 01 45.6
      comp=Z,19nm,1.2s
G26K  Porcupine Rive  44.92  32   P      P     07 01 44.1 +0.3
      baz=277,SNR=6.3
DIV   Divide          44.95  41   P      P     07 01 45.1 +1.0
DIV                               IAmb   IAmb  07 01 46.1
      comp=Z,18nm,1.2s
HARP  HAARP           45.00  39   P      P     07 01 45.5 +1.0
      baz=280
UZB   Uzynbulak       45.16 293  eP      P     07 01 46.0 -0.2
UZB   Uzynbulak       45.16 293  eP      P     07 01 46.0 -0.2
SCRK  Sand Creek      45.26  37          P     07 01 46.5 -0.1
SCRK                              IAmb   IAmb  07 01 46.9
      comp=Z,8.2nm,0.6s
SCRK  Sand Creek      45.26  37   P      P     07 01 46.5 -0.1
      baz=280,SNR=20
KPKS  Kokpek          45.26 293  eP      P     07 01 47.0 +0.1
KPKS  Kokpek          45.26 293  eP      P     07 01 47.1 +0.1
DOT   Dot Lake        45.28  37   P      P     07 01 46.6 -0.1
J26L  Joseph Creek    45.35  36   P      P     07 01 47.5 +0.1
      baz=279,SNR=5.4
I26K  Coal Creek Min  45.40  35   P      P     07 01 48.4 +0.9
      baz=279
N25K  Chitina, Valde  45.41  40   P      P     07 01 48.6 +0.8
      baz=281
BMRM  Bremner River   45.53  41   P      P     07 01 49.6 +0.8
      baz=282
E27K  Coleen River    45.60  31   P      P     07 01 50.0 +0.8
      baz=278
D27M  Malcolm River   45.70  29   P      P     07 01 50.6 +0.7
      baz=277
L26K  Log Cabin Wild  45.71  38   P      P     07 01 50.7 +0.6
      baz=281,SNR=5.3
G27K  Doyon Strip     45.77  32   P      P     07 01 51.4 +0.8
      baz=279
KAIM  Kayak Island    45.85  42   P      P     07 01 52.1 +0.9
      baz=283
H27K  Steamboat Moun  45.92  33   P      P     07 01 52.2 +0.6
      baz=279,SNR=7.8
I27K  Kandik River    45.98  34   P      P     07 01 53.1 +0.9
      baz=280,SNR=9.5
M26K  Nabesna, AK     45.99  39   IAmb   IAmb  07 01 54.9
      comp=Z,10nm,0.9s
M26K  Nabesna, AK     45.99  39   P      P     07 01 52.9 +0.6
      baz=282,SNR=14
VRDI  Verde Repeater  46.03  40   IAmb   IAmb  07 01 54.9
      comp=Z,14nm,1.4s
K27K  Chicken         46.08  36   IAmb   IAmb  07 01 54.8
      comp=Z,24nm,1.4s
K27K  Chicken         46.08  36   P      P     07 01 53.8 +0.9
      baz=281
CHKK  Chushkaly       46.24 294  eP      P     07 01 54.6 +0.1
CHKK  Chushkaly       46.24 294  eP      P     07 01 54.6 +0.1
E28M  Babbage River   46.30  30   IAmb   IAmb  07 01 55.8
      comp=Z,12nm,1.2s
E28M  Babbage River   46.30  30   P      P     07 01 55.0 +0.4
      baz=279,SNR=5.4
CRQE  Cirque          46.30  41   P      P     07 01 55.8 +1.0
      baz=283
F28M  Old Crow        46.33  31   P      P     07 01 55.6 +0.7
      baz=280,SNR=7.8
L27K  Beaver Creek,   46.38  38   IAmb   IAmb  07 01 57.6
      comp=Z,15nm,1.0s
L27K  Beaver Creek,   46.38  38   P      P     07 01 56.8 +1.5
      baz=282,SNR=31
BCAR  Beaver Creek A  46.40  38          P     07 01 56.8 +1.3
D28M  Stokes Point    46.47  29   P      P     07 01 57.0 +1.1
      baz=279
M27K  Edge Creek, AK  46.51  39   P      P     07 01 57.5 +1.0
M27K                              IAmb   IAmb  07 01 58.8
      comp=Z,11nm,0.7s
M27K  Edge Creek, AK  46.51  39   P      P     07 01 57.3 +0.8
      baz=283,SNR=17
AAA   Alma-Ata        46.55 294  eP      P     07 01 57.0 +0.1
AAA                               pmax   pmax
      comp=Z,8.0nm,0.4s
AAA   Alma-Ata        46.55 294  eP      P     07 01 57.1 +0.1
      comp=Z,7.8nm,0.4s
TARG  Taragay, Kyrgy  46.55 291   IAmb   IAmb  07 02 06.9
      comp=Z,5.2nm,0.5s
TNSS  Tian-Shan       46.60 293  eP      P     07 01 57.4 -0.3
TNSS  Tian-Shan       46.60 293  eP      P     07 01 57.5 -0.3
KUU   Kurty           46.66 295  eP      P     07 01 57.7  0.0
KUU   Kurty           46.66 295  eP      P     07 01 57.7  0.0
I28M  Miner Creek     46.70  34   IAmb   IAmb  07 01 59.9
      comp=Z,20nm,1.2s
I28M  Miner Creek     46.70  34   P      P     07 01 58.8 +1.0
      baz=282,SNR=20
BRZS  Berezniki       46.74 304  eP      P     07 01 58.4 +0.1
BRZS  Berezniki       46.74 304  eP      P     07 01 58.5 +0.1
KDJ   Kajisay         46.81 292   P      P     07 01 58.9 -0.3
KDJ   Kajisay         46.81 292   P      P     07 01 58.9 -0.3
KDJ                               pmax   pmax
      comp=Z,7.0nm,1.0s
EVN   Everest         46.85 270          P     07 01 59.8 -0.4
EVN                               IAmb   IAmb  07 02 05.7
      comp=Z,9.2nm,0.6s
FAKI  Fak Fak         46.89 194   P      P     07 02 00.9 +1.2
E29M  Blow River      46.93  30          P     07 02 00.4 +1.0
E29M  Blow River      46.93  30   P      P     07 02 00.5 +1.0
      baz=280,SNR=5.9
BVCY  Beaver Creek    46.96  38   P      P     07 02 00.5 +0.7
      baz=284,SNR=10
MESA  MESA            46.99  41   P      P     07 02 00.6 +0.3
      baz=285
CTG   Chitna Glacier  47.09  40   P      P     07 02 01.4 +0.5
      baz=284
CTGM  Chitina Glacie  47.09  40   IAmb   IAmb  07 02 03.1
      comp=Z,23nm,1.5s
BVA0  Borovoye Array  47.09 308 i P      P     07 02 01.3 +0.3
BVAR  Borovoye Array  47.09 308   P      P     07 02 01.1 +0.1
      comp=Z,12nm,0.4s,baz=74,slow=9.5,SNR=40
      comp=Z,12nm,0.4s
BRVK  Borovoye        47.14 308          P     07 02 01.9 +0.7
BRVK  Borovoye        47.14 308ceP       P     07 02 02.0 +0.7
BRVK                              pmax   pmax
      comp=Z,31nm,1.0s
BRVK  Borovoye        47.14 308  eP      P     07 02 02.0 +0.7
G29M  Pine Creek      47.17  32   IAmb   IAmb  07 02 03.6
      comp=Z,17nm,1.4s
G29M  Pine Creek      47.17  32   P      P     07 02 02.3 +0.9
      baz=282
H29M  Whitestone      47.18  33          P     07 02 02.4 +0.9
H29M                              IAmb   IAmb  07 02 03.3
      comp=Z,13nm,1.4s
H29M  Whitestone      47.18  33   P      P     07 02 01.7 +0.2
      baz=282,SNR=5.6
DAWY  Dawson          47.22  36   P      P     07 02 02.3 +0.5
DAWY  Dawson          47.22  36   P      P     07 02 02.3 +0.5
      baz=283
YUK3  Moose Creek     47.30  39   P      P     07 02 03.6 +0.9
      baz=284,SNR=6.1
I29M  Ogilvie Camp,   47.39  34   P      P     07 02 03.9 +0.8
      baz=283,SNR=8.2
BTLS  Baital          47.71 297  eP      P     07 02 05.6 -0.2
BTLS  Baital          47.71 297  eP      P     07 02 05.7 -0.2
YUK8  Steele Glacier  47.74  40   P      P     07 02 06.6 +0.4
      baz=285
EPYK  Eagle Plains    47.79  33   IAmb   IAmb  07 02 07.5
      comp=Z,8.3nm,0.6s
EPYK  Eagle Plains    47.79  33   P      P     07 02 07.0 +0.8
      baz=283,SNR=8.8
PINM  Pinnacle        47.83  41   P      P     07 02 07.1 +0.4
      baz=286
G30M  tAoh Zraii Nji  47.85  32          P     07 02 07.1 +0.5
G30M                              IAmb   IAmb  07 02 08.9
      comp=Z,30nm,1.5s
G30M  tAoh Zraii Nji  47.85  32   P      P     07 02 07.1 +0.5
      baz=283,SNR=8.0
F30M  Barrier River   47.87  31          P     07 02 08.0 +1.2
F30M  Barrier River   47.87  31   P      P     07 02 07.9 +1.2
      baz=283,SNR=11
L29M  L29M            48.01  37   P      P     07 02 08.6 +0.8
      baz=285,SNR=25
M29M  Somme Creek     48.03  38   P      P     07 02 08.9 +0.7
      baz=285,SNR=6.3
K29M  Barlow Dome     48.08  36   IAmb   IAmb  07 02 10.7
      comp=Z,11nm,1.1s
K29M  Barlow Dome     48.08  36   P      P     07 02 08.9 +0.3
      baz=285,SNR=15
I30M  Mount Dempster  48.21  34   IAmb   IAmb  07 02 11.4
      comp=Z,13nm,1.1s
I30M  Mount Dempster  48.21  34   P      P     07 02 10.3 +0.8
      baz=285,SNR=17
YUK4  Talbot Arm      48.25  39   P      P     07 02 11.1 +1.2
      baz=286
PNL   Peninsula       48.37  42   P      P     07 02 11.3 +0.6
      baz=287
J30M  Hart River      48.39  35   P      P     07 02 11.8 +0.9
      baz=285,SNR=7.7
AAK   Ala-Archa       48.40 294ceP       P     07 02 11.5 +0.1
AAK                               pmax   pmax
      comp=Z,2.0nm,0.6s
AAK   Ala-Archa       48.40 294  eP      P     07 02 11.5 +0.1
YUK6  Outpost Mounta  48.49  40   P      P     07 02 12.7 +0.9
      baz=287
INK   Inuvik          48.53  30   IAmb   IAmb  07 02 12.9
      comp=Z,22nm,1.4s
INK   Inuvik          48.53  30   P      P     07 02 12.1 +0.4
      baz=284,SNR=11
O29M  Mount Kennedy   48.58  41   IAmb   IAmb  07 02 17.9
      comp=Z,5.2nm,0.6s
O29M  Mount Kennedy   48.58  41   P      P     07 02 13.8 +1.4
      baz=287
G31M  Satah River     48.61  31   IAmb   IAmb  07 02 13.0
      comp=Z,5.9nm,0.8s
G31M  Satah River     48.61  31   P      P     07 02 13.0 +0.7
      baz=285
F31M  Tsiigehtchic    48.67  31   P      P     07 02 13.9 +1.1
      baz=285
SBUM  Sibu            48.72 222   P      P     07 02 13.5 -0.3
M30M  Minto, Yukon    48.74  37   IAmb   IAmb  07 02 16.3
      comp=Z,6.2nm,0.8s
M30M  Minto, Yukon    48.74  37   P      P     07 02 14.4 +0.9
      baz=287,SNR=12
MAYO  Mayo, Yukon     48.84  36   P      P     07 02 15.5 +1.2
      baz=286
H31M  Peel River      48.87  33   P      P     07 02 15.4 +0.9
      baz=286,SNR=10
HYT   Haines Junctio  48.93  40   P      P     07 02 16.2 +1.1
      baz=288,SNR=14
N30M  Aishikik Lake   48.93  39   P      P     07 02 15.8 +0.8
      baz=287
P29M  Windy Craggy    49.18  41   P      P     07 02 18.1 +1.2
      baz=288,SNR=6.8
N31M  Braeburn, Yuko  49.52  39   IAmb   IAmb  07 02 22.4
      comp=Z,12nm,1.2s
N31M  Braeburn, Yuko  49.52  39   P      P     07 02 20.4 +1.0
      baz=288,SNR=8.0
O30N  Mendenhall      49.60  40   P      P     07 02 21.1 +1.0
      baz=289
PLBC  Pleasant Camp   49.90  41   P      P     07 02 22.8 +0.5
      baz=290
M31M  Drury Creek, Y  49.92  37   P      P     07 02 23.5 +1.1
      baz=289
WHY   Whitehorse      50.20  39   P      P     07 02 25.4 +0.8
      baz=290
A36M  Sachs Harbour   50.22  24   P      P     07 02 25.5 +1.1
      baz=288
FARO  Faro, Yukon     50.37  37   P      P     07 02 27.0 +1.2
      baz=290
DZA   Taraz           50.39 296  eP      P     07 02 26.4 +0.2
DZA   Taraz           50.39 296  eP      P     07 02 26.4 +0.2
SKAG  Skagway         50.40  41   P      P     07 02 27.0 +1.1
      baz=290
KK31  Karatay Array   50.84 296   IAmb   IAmb  07 02 36.9
      comp=Z,6.4nm,0.6s
KK31  Karatay Array   50.84 296 i P      P     07 02 29.4 -0.2
KKAR  Karatay Array   50.84 296   P      P     07 02 29.4 -0.2
KKAR  Karatay Array   50.84 296   IAmb   IAmb  07 02 36.9
      comp=Z,6.8nm,0.6s
KKAR  Karatay Array   50.84 296   P      P     07 02 29.4 -0.2
SVE   Sverdlovsk      51.07 316deP       P     07 02 31.6 +0.5
SVE                               pmax   pmax
      comp=Z,32nm,0.7s
P32M  Atlin           51.12  41   P      P     07 02 32.6 +1.1
      baz=291
MMPY  Sheldon Lake,   51.15  36   P      P     07 02 32.6 +0.9
      baz=291,SNR=6.3
R32K  Eaglecrest      51.22  42   P      P     07 02 33.2 +1.0
      baz=292
BRLS  Borolday        51.31 296  eP      P     07 02 34.5 +1.4
BRLS  Borolday        51.31 296  eP      P     07 02 34.5 +1.4
P33M  Teslin, Yukon   51.32  40   IAmb   IAmb  07 02 35.6
      comp=Z,7.5nm,1.1s
P33M  Teslin, Yukon   51.32  40   P      P     07 02 33.6 +0.7
      baz=291,SNR=9.3
S32K  Killisnoo       51.49  43   P      P     07 02 34.8 +0.7
      baz=292
IUG   Iuzhnay         51.58 295  eP      P     07 02 35.3 +0.1
IUG   Iuzhnay         51.58 295  eP      P     07 02 35.4 +0.1
CHM   Chimkent        51.79 296  eP      P     07 02 36.6  0.0
CHM                               pmax   pmax
      comp=Z,9.0nm,0.5s
CHM   Chimkent        51.79 296  eP      P     07 02 36.6  0.0
      comp=Z,8.9nm,0.5s
Q32M  Nakina River    52.05  41   P      P     07 02 39.4 +0.9
      baz=293
ARTI  Arti            52.39 316          P     07 02 40.9  0.0
ARTI  Arti            52.39 316c iP      P     07 02 40.5 -0.4
ARTI                              *PP    pP    07 03 19.2 +0.3
ARTI                                           07 03 48.3
ARTI                                           07 04 37.5
ARTI                              S      S     07 09 55.0 +1.7
ARTI                              SS     SS    07 13 31.2 -1.6
ARTI                              pmax   pmax
      comp=Z,31nm,0.7s
R33M  Jennings River  52.49  40   P      P     07 02 42.6 +0.8
      baz=293
U33K  Whale Pass      52.76  44   P      P     07 02 44.7 +1.2
      baz=294
S34M  Telegraph Cree  53.01  42   P      P     07 02 46.2 +0.8
      baz=294
WTLY  Watson Lake, Y  53.21  39   P      P     07 02 47.9 +1.0
      baz=294
DLBC  Dease Lake      53.33  41   P      P     07 02 48.8 +1.0
      baz=295
T35M  Bob Quinn       53.84  43   P      P     07 02 52.8 +1.4
      baz=296
V35K  Ketchikan       53.86  45   P      P     07 02 52.6 +1.0
      baz=296
EUNU  Eureka          53.90   9          P     07 02 51.8 +0.2
SIMJ  Simiganj        53.94 292   P      P     07 02 52.1 -0.5
SIMJ                              IAmb   IAmb  07 02 59.2
      comp=Z,6.0nm,0.9s
SPITS Spitsbergen Ar  54.55 348   P      P     07 02 55.1 -1.2
      comp=Z,1.5nm,0.3s,baz=74,slow=8.9,SNR=14
      comp=Z,1.5nm,0.3s
AB31  Akbulak array   54.62 307          P     07 02 57.6 +0.5
AB31  Akbulak array   54.62 307 i P      P     07 02 57.5 +0.4
ABKAR Akbulak array   54.62 307          P     07 02 57.5 +0.4
TOAD  Toad River Com  55.40  39   P      P     07 03 03.4 +0.8
      baz=298,SNR=8.0
KIRV  Kirov           55.79 321ceP       P     07 03 04.9 -0.5
VADS  Vadso           57.02 338  eP      P     07 03 14.0 +0.1
YKAW3 Yellowknife Wh  58.04  32   IAmb   IAmb  07 03 22.5
      comp=Z,5.1nm,0.8s
YKA   Yellowknife Ar  58.08  32   P      P     07 03 21.7 +0.3
      comp=Z,3.0nm,0.7s,baz=310,slow=7.2,SNR=30
      comp=Z,3.0nm,0.7s
YKAW1 Yellowknife Wh  58.13  32   IAmb   IAmb  07 03 23.2
      comp=Z,5.4nm,0.8s
HAMF  Hammerfest      58.19 340  eP      P     07 03 21.4 -0.7
ARCES ARCESS Array B  58.44 338   P      P     07 03 23.9  0.0
      comp=Z,2.4nm,0.4s,baz=45,slow=7.6,SNR=32
      comp=Z,2.4nm,0.4s
KLMR  Klimovskoe      58.93 326  eP      P     07 03 25.4 -1.9
KLMR                             e*PP    pP    07 04 05.7 -0.6
KLMR                              pmax   pmax
      comp=Z,10.0nm,0.7s
NEEM  North Greenlan  59.25   3 i P      P     07 03 28.3 -1.3
NEEM                              IAmb   IAmb  07 03 30.2
      comp=Z,32nm,1.1s
DAG   Danmarks Havn   59.62 355 i P      P     07 03 29.8 -2.0
DAG                               IAmb   IAmb  07 03 31.5
      comp=Z,20nm,0.9s
JETT  Jettan, Norway  59.75 340  eP      P     07 03 33.5 +0.6
BELG  Belogornoye     59.82 315 i P      P     07 03 33.6 +0.1
BELG                              pmax   pmax
      comp=Z,6.0nm,0.9s
TRO   Tromso          60.06 340  eP      P     07 03 34.8 -0.2
POIN  Pond Inlet      60.96  13          P     07 03 40.1 -0.9
POIN                              IAmb   IAmb  07 03 41.9
      comp=Z,9.9nm,1.1s
KULLO Kullorsuaq      61.69   6 i P      P     07 03 44.5 -1.3
KULLO                             IAmb   IAmb  07 03 46.8
      comp=Z,16nm,0.6s
LOF   Lofoten         62.49 341  eP      P     07 03 51.8 +0.5
FAUS  Fauske          62.63 340  eP      P     07 03 52.2  0.0
ILON  Igloolik, Nuna  63.04  16          P     07 03 53.3 -1.5
ILON                              IAmb   IAmb  07 03 54.6
      comp=Z,9.3nm,1.0s
WR8   Warramunga Arr  63.34 188   P      P     07 03 52.9 -4.5
WR8                               IAmb   IAmb  07 03 58.5
      comp=Z,5.5nm,0.8s
WRA   Warramunga Arr  63.35 188   P      P     07 03 54.7 -2.8
WRA   Warramunga Arr  63.35 188   P      P     07 03 57.0 -0.5
      comp=Z,3.5nm,0.7s,baz=3.1,slow=6.8,SNR=16
WRA                               PcP    PcP   07 04 32.8 -0.1
      comp=Z,1.9nm,0.8s,baz=2.5,slow=7.0,SNR=4.8
      comp=Z,3.5nm,0.7s
BLKN  Baker Lake      63.38  25          P     07 03 56.9 -0.2
UPNV  Upernavik       63.51   6 i P      P     07 03 57.7 -0.2
UPNV                              IAmb   IAmb  07 03 59.1
      comp=Z,33nm,1.0s
LON   Longmire        63.56  50   P      P     07 04 00.2 +1.4
LON   Longmire        63.56  50   P      P     07 04 00.2 +1.4
LON                               pmax   pmax
      comp=Z,2.0nm,0.7s
KEF   Keuruu          63.58 332  eP      P     07 03 58.0 -0.5
OBN   Obninsk         63.59 322  eP      P     07 03 58.0 -0.6
OBN                             i              07 06 21.4
OBN                               pmax   pmax
      comp=Z,4.0nm,0.5s
OBN   Obninsk         63.59 322  eP      P     07 03 58.6  0.0
OBN   Obninsk         63.59 322   P      P     07 03 58.3 -0.3
VAGH  Vaagaholmen     63.65 340  eP      P     07 03 58.4 -0.4
FIA1  FINESS Array S  63.66 331          P     07 03 58.8 -0.3
FINES FINESS Array B  63.66 331   P      P     07 03 58.5 -0.5
      comp=Z,16nm,0.6s,baz=49,slow=6.9,SNR=124
      comp=Z,16nm,0.6s
MOR8  Moi Rana        63.78 339  eP      P     07 03 58.2 -1.6
LTY   Liberty         63.89  49   IAmb   IAmb  07 04 02.3
      comp=Z,3.4nm,0.5s
SUMG  Summit          64.44   0 i P      P     07 04 04.0 -0.5
SUMG                              IAmb   IAmb  07 04 06.3
      comp=Z,22nm,0.7s
MXC   Moxie City      64.50  49   IAmb   IAmb  07 04 07.3
      comp=Z,6.5nm,0.9s
C09A  Chrisman Ranch  64.87  47   IAmb   IAmb  07 04 09.0
      comp=Z,7.2nm,0.8s
K02D  Willamette Mer  64.88  54   IAmb   IAmb  07 04 09.9
      comp=Z,7.4nm,1.1s
D08A  Wollman Farm,   64.97  48   IAmb   IAmb  07 04 09.6
      comp=Z,5.6nm,0.6s
HAWA  Hanford         65.04  49   IAmb   IAmb  07 04 10.5
      comp=Z,5.7nm,0.7s
MEF   Metsahovi       65.11 331  eP      P     07 04 08.2 -0.2
NEW   Newport         65.20  46   IAmb   IAmb  07 04 11.2
      comp=Z,4.8nm,0.8s
E08A  Dider Farm, El  65.24  49   IAmb   IAmb  07 04 11.6
      comp=Z,7.5nm,0.7s
I05D  Terrebonne, OR  65.26  52   IAmb   IAmb  07 04 12.0
      comp=Z,4.5nm,0.7s
RAF   Rauma           65.44 333  eP      P     07 04 10.3 -0.3
VSU   Vasula          65.48 329ceP       P     07 04 09.4 -1.4
VSU                               pmax   pmax
      comp=Z,54nm,2.5s
VSU   Vasula          65.48 329  eP      P     07 04 09.9 -0.9
E09A  Wood Farm, Sta  65.72  48   IAmb   IAmb  07 04 14.9
      comp=Z,8.9nm,0.8s
J05D  Fort Rock, OR   65.95  53   IAmb   IAmb  07 04 17.1
      comp=Z,4.0nm,0.8s
AKT   Akhty           66.03 305  eP      P     07 04 13.9 -1.0
AKT                               pmax   pmax
      comp=Z,35nm,1.8s
MTSE  Matsula         66.39 330  eP      P     07 04 17.0 +0.3
K05A  Summer Lake     66.49  53   IAmb   IAmb  07 04 20.6
      comp=Z,8.7nm,0.9s
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AS31	Alice Springs	67.07	188	P	P	07 04 22.3	+0.9
ASAR	Alice Springs	67.08	188	P	P	07 04 22.6	+1.1
	comp=Z,4.0nm,0.8s,baz=8.6,slow=7.6,SNR=37						
ASAR				PcP	PcP	07 04 49.4	+1.0
	comp=Z,0.9nm,0.6s,baz=9.9,slow=5.4,SNR=4.5						
ASAR				pP	pP	07 05 02.7	+1.3
	comp=Z,1.6nm,0.9s,baz=7.4,slow=4.0,SNR=2.1						
	comp=Z,4.0nm,0.8s						
BMO	Blue Mountains	67.22	49	IAmb	IAmb	07 04 24.4	
	comp=Z,6.4nm,1.2s						
ILULI	Ilulissat	67.38	5	*i* P	P	07 04 20.9	-1.8
ILULI				IAmb	IAmb	07 04 24.2	
	comp=Z,11nm,0.7s						
KIV	Kislovodsk	67.44	310		P	07 04 24.5	+0.8
KIV	Kislovodsk	67.44	310	⇑P	P	07 04 25.6	+1.9
KIV	Kislovodsk	67.44	310	P	P	07 04 25.6	+1.9
KIV	Kislovodsk	67.44	310	*e*P	P	07 04 24.9	+1.2
KIV	Kislovodsk	67.44	310	P	P	07 04 25.1	+1.4
	comp=Z,35nm,0.9s						
KBZ	Khabaz	67.46	309	P	P	07 04 24.2	+0.5
	comp=Z,10nm,0.7s,baz=56,slow=4.0,SNR=15						
	comp=Z,10nm,0.7s						
KBZ	Khabaz	67.46	309	*e*P	P	07 04 23.7	0.0
J08A	Circle Bar Ran	67.50	51	IAmb	IAmb	07 04 26.6	
	comp=Z,6.0nm,1.0s						
SHA1	Shidzhatmaz	67.59	309	*i* P	P	07 04 26.1	+1.3
MNK	Minsk	67.77	325	*i* P	P	07 04 26.2	+0.8
	comp=E,15nm,0.9s						
MNK				*i* P	P	07 04 26.2	+0.8
	comp=N,21nm,0.8s						
MNK				*i* P	P	07 04 26.2	+0.8
	comp=Z,21nm,0.9s,baz=46						
MNK				*i* pP	pP	07 05 08.1	+2.6
MNK				*i* PP	PP	07 06 58.2	+1.7
MNK				*i* PPP	PPP	07 08 38.8	
MNK				*i* S	S	07 13 11.5	+2.1
MNK				*i* sS	sS	07 14 22.3	+3.9
MNK				*i* SS	SS	07 17 40.7	+7.7
MNK				*i* SSS	SSS	07 20 23.0	
MNK				*i* LR	LR	07 36 22.0	
MNK	Minsk	67.77	325	*i* P	P	07 04 26.2	+0.8
MNK				*i* *PP	pP	07 05 08.0	+2.6
MNK				*i*		07 06 58.1	
MNK				*i* PPP	PPP	07 08 38.7	
MNK				*i* S	S	07 13 11.5	+2.1
MNK				*i* SS	SS	07 17 40.6	+7.7
MNK				pmax	pmax		
	comp=N,21nm,0.8s						
MNK				pmax	pmax		
	comp=Z,21nm,0.9s						
MNK				pmax	pmax		
	comp=E,15nm,0.9s						
MSO	Missoula	67.78	46	IAmb	IAmb	07 04 27.5	
	comp=Z,5.3nm,1.0s						
ICESG	Greenland Ices	67.94	1	*i* P	P	07 04 26.0	-0.7
ICESG				IAmb	IAmb	07 04 28.7	
	comp=Z,20nm,0.7s						
NACGM	Naroch	67.94	326	*e*P	P	07 04 26.6	+0.1
	comp=Z,17nm,0.9s,baz=45						
FFC	Flin Flon	68.09	34		P	07 04 27.6	+0.1
FFC				IAmb	IAmb	07 04 28.7	
	comp=Z,8.6nm,0.7s						
FFC	Flin Flon	68.09	34	P	P	07 04 27.6	+0.1
FFC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
FCC	Fort Churchill	68.11	28		P	07 04 27.6	+0.2
FCC	Fort Churchill	68.11	28	P	P	07 04 27.6	+0.2
FCC				pmax	pmax		
	comp=Z,26nm,1.5s						
OVMT	Ovando	68.12	45	P	P	07 04 28.4	+0.4
NC405	NORSAR Array S	68.52	337	IAmb	IAmb	07 04 31.8	
	comp=Z,8.4nm,0.8s						
PABE	Paberze	68.64	328	*e*P	P	07 04 31.0	+0.1
HFS	Hagfors	68.72	335	P	P	07 04 30.7	-0.5
	comp=Z,9.8nm,0.5s,baz=45,slow=6.5,SNR=99						
	comp=Z,9.8nm,0.5s						
NB2	NORSAR Subarra	68.72	337	P	P	07 04 30.6	-0.8
	comp=Z,9.5nm,0.8s,baz=35,slow=6.5						
NB2	NORSAR Subarra	68.72	337	P	P	07 04 30.6	-0.8
	baz=35,slow=6.5						
NOA	NORSAR Array B	68.72	337	P	P	07 04 30.9	-0.5
	comp=Z,6.6nm,0.7s,baz=36,slow=6.2,SNR=24						
	comp=Z,6.6nm,0.7s						
SOEG	Soedalen	68.74	358	*i* P	P	07 04 30.1	-1.1
SOEG				IAmb	IAmb	07 04 32.1	
	comp=Z,2.2nm,0.7s						
NC602	NORSAR Array S	68.88	337	*e*P	P	07 04 31.8	-0.5
SFJD	Kangerlussuaq	69.60	5	*i* P	P	07 04 35.2	-1.3
SFJD				IAmb	IAmb	07 04 36.9	
	comp=Z,28nm,1.2s						
BOZ	Bozeman (W)	69.80	46	IAmb	IAmb	07 04 40.4	
	comp=Z,7.9nm,0.8s						
AK03	Malin Array Si	69.83	321	P	P	07 04 37.8	-0.4
AKASG	Malin Array Be	69.84	321	P	P	07 04 37.6	-0.7
	comp=Z,4.0nm,0.4s,baz=44,slow=6.3,SNR=21						
	comp=Z,4.0nm,0.4s						
AKASG	Malin Array Be	69.84	321	*i* P	P	07 04 38.0	-0.3
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.4s						
AKBB	Malin Array Si	69.84	321	*ce*P	P	07 04 38.0	-0.4
AKBB				pmax	pmax		
	comp=Z,11nm,0.9s						
AKBB	Malin Array Si	69.84	321	P	P	07 04 37.9	-0.4
AK23	Malin Array Si	69.84	322	P	P	07 04 38.0	-0.3
AK01	Malin Array Si	69.85	321	P	P	07 04 38.0	-0.4
AK04	Malin Array Si	69.85	322	P	P	07 04 37.9	-0.5
KIEV	Kiev	69.85	321		P	07 04 38.0	-0.4
KIEV				IAmb	IAmb	07 04 41.5	
	comp=Z,10nm,0.8s						
KIEV	Kiev	69.85	321	⇑P	P	07 04 38.1	-0.4
KIEV	Kiev	69.85	321	P	P	07 04 38.0	-0.4
KIEV				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KIEV	Kiev	69.85	321	P	P	07 04 37.9	-0.4
	comp=Z,61nm,1.1s						
AK02	Malin Array Si	69.88	321	P	P	07 04 38.1	-0.5
AK11	Malin Array Si	69.88	321	P	P	07 04 38.1	-0.5
AK18	Malin Array Si	69.90	322	P	P	07 04 38.3	-0.4
AK05	Malin Array Si	69.91	321	P	P	07 04 38.3	-0.4
AK12	Malin Array Si	69.91	321	P	P	07 04 38.3	-0.5
AK16	Malin Array Si	69.92	322	P	P	07 04 38.4	-0.4
AK19	Malin Array Si	69.92	322	P	P	07 04 38.4	-0.4
AK17	Malin Array Si	69.93	322	P	P	07 04 38.5	-0.3
AK14	Malin Array Si	69.94	321	P	P	07 04 38.5	-0.4
AK07	Malin Array Si	69.96	321	P	P	07 04 38.6	-0.4
AK13	Malin Array Si	69.98	321	P	P	07 04 38.8	-0.4
YHL	Hebgen Lake	70.53	46	IAmb	IAmb	07 04 45.7	
	comp=Z,7.3nm,1.0s						
YHB	Horse Butte	70.59	46	IAmb	IAmb	07 04 45.9	
	comp=Z,7.9nm,0.8s						
LHV	Little Huntoon	70.72	55	IAmb	IAmb	07 04 46.8	
	comp=Z,4.9nm,0.9s						
NVAR	Mina Array Bea	70.73	55	P	P	07 04 44.9	+0.7
	comp=Z,1.9nm,0.7s,baz=289,slow=5.5,SNR=17						
NVAR				pP	pP	07 05 25.5	+0.6
	comp=Z,1.4nm,1.1s,baz=300,slow=5.1,SNR=2.6						
	comp=Z,1.9nm,0.7s						
RNPP5	Staryi Chortor	70.95	323	P	P	07 04 44.7	-0.3
LUBAR	Lubar, Ukraine	71.06	322	P	P	07 04 45.4	-0.3
SORM	Soroca	72.06	320	⇑P	P	07 04 51.5	-0.3
SORM	Soroca	72.06	320	P	P	07 04 51.4	-0.3
NDNU	Novodnistrovsk	72.19	321	P	P	07 04 52.5	0.0
NUUK	Nuuk	72.30	6	*i* P	P	07 04 52.5	-0.3
NUUK				IAmb	IAmb	07 04 53.8	
	comp=Z,17nm,0.8s						
KMPD	K-Podol'skiy	72.63	321	P	P	07 04 54.6	-0.5
COP	Copenhagen	72.69	333	*i* P	P	07 04 54.7	-0.6
PD31	Pinedale Array	72.81	47	IAmb	IAmb	07 04 58.2	
	comp=Z,4.9nm,0.8s						
PDAR	Pinedale Array	72.81	47	P	P	07 04 57.7	+1.1
PDAR	Pinedale Array	72.81	47	P	P	07 04 56.9	+0.3
	comp=Z,3.0nm,0.7s,baz=295,slow=2.6,SNR=31						
PDAR				pP	pP	07 05 37.4	0.0
	comp=Z,0.8nm,0.7s,baz=297,slow=2.4,SNR=2.1						
	comp=Z,3.0nm,0.7s						
BUR08	Bucovina Ar. S	73.88	321	IAmb	IAmb	07 05 03.8	
	comp=Z,7.7nm,0.8s						
BURAR	Bucovina Array	73.89	321		P	07 05 02.9	+0.3
BURAR				IAmb	IAmb	07 05 04.2	
	comp=Z,10.0nm,0.7s						
BURAR	Bucovina Array	73.89	321	⇑P	P	07 05 03.0	+0.3
BURAR	Bucovina Array	73.89	321	P	P	07 05 03.0	+0.3
ULM	Lac du Bonnet	73.91	35	P	P	07 05 02.6	0.0
	comp=Z,3.5nm,0.6s,baz=289,slow=10,SNR=5.0						
	comp=Z,3.5nm,0.6s						
TESR	Tescani	74.03	320	⇑P	P	07 05 03.6	+0.2
KOLS	Kolonicke sedl	74.22	324	*e*P	P	07 05 04.6	+0.2
KOLS				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KOLS	Kolonicke sedl	74.22	324	*e*P	P	07 05 04.6	+0.2
CFR	Carcaliu	74.28	318	⇓P	P	07 05 05.2	+0.4
CFR	Carcaliu	74.28	318	P	P	07 05 05.2	+0.4
STHS	Stebnicka Huta	74.29	325	*e*P	P	07 05 05.0	+0.2
STHS				pmax	pmax		
	comp=Z,6.0nm,0.7s						
STHS	Stebnicka Huta	74.29	325	*e*P	P	07 05 05.0	+0.2
TPGR	Topolog	74.38	318	⇓P	P	07 05 06.1	+0.7
VRI	Vrincioaia	74.47	319	⇓P	P	07 05 05.7	-0.2
VRI	Vrincioaia	74.47	319	P	P	07 05 05.7	-0.2
PLOR	Plostina	74.51	319	⇓P	P	07 05 07.6	+1.4
PLOR	Plostina	74.51	319	P	P	07 05 07.6	+1.4
RSSD	Black Hills	74.72	43	P	P	07 05 07.4	-0.2
RSSD				IAmb	IAmb	07 05 08.9	
	comp=Z,5.1nm,0.8s						
RSSD	Black Hills	74.72	43	P	P	07 05 07.4	-0.2
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BSEG	Bad Segeberg	74.83	333	*e*P	P	07 05 08.2	+0.5
	comp=Z,4.9nm,0.8s,baz=34,slow=4.7						
DOPR	Dopca	75.03	320	⇑P	P	07 05 09.3	+0.2
LANS	Liptovska Anna	75.24	325	*e*P	P	07 05 11.9	+1.6
LANS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
LANS	Liptovska Anna	75.24	325	*e*P	P	07 05 11.9	+1.6
BR131	Keskin Array S	75.29	311	*i* P	P	07 05 10.9	0.0
BRTR	Keskin Array B	75.29	311	P	P	07 05 11.2	+0.2
	comp=Z,2.0nm,0.8s,baz=75,slow=4.4,SNR=6.6						
	comp=Z,2.0nm,0.8s						
STEB	Steborice	75.32	327	*e*P	P	07 05 11.4	+0.7
OSTC	Ostas	75.45	328	*e*P	P	07 05 12.4	+0.9
OSTC	Ostas	75.45	328	*e*P	P	07 05 12.4	+0.9
IVI	Ivigtut	75.51	5	*i* P	P	07 05 10.1	-1.4
IVI				IAmb	IAmb	07 05 12.3	
	comp=Z,5.1nm,0.7s						
MORC	Moravsky Berou	75.54	327	IAmb	IAmb	07 05 13.7	
	comp=Z,5.6nm,0.8s						
MORC	Moravsky Berou	75.54	327	*e*P	P	07 05 12.6	+0.6
MORC	Moravsky Berou	75.54	327	⇑P	P	07 05 12.8	+0.8
MORC	Moravsky Berou	75.54	327	P	P	07 05 12.8	+0.8
DPC	Dobruska-Polom	75.57	328	*e*P	P	07 05 12.9	+0.7
DPC	Dobruska-Polom	75.57	328	*e*P	P	07 05 12.9	+0.7
VOIR		75.58	320	⇑P	P	07 05 13.7	+1.3
VOIR		75.58	320	P	P	07 05 13.6	+1.3
KRLC	Kraliky	75.61	327	*e*P	P	07 05 13.1	+0.7
KRLC	Kraliky	75.61	327	*e*P	P	07 05 13.1	+0.7
DRGR		75.64	322	⇑P	P	07 05 13.0	+0.3
DRGR		75.64	322	P	P	07 05 13.0	+0.3
FLTG	Flechtingen	75.84	332	*e*P	P	07 05 13.5	-0.1
	comp=Z,7.9nm,0.8s,baz=34,slow=4.7						
VYHS	Vyhne	76.02	325	*e*P	P	07 05 15.3	+0.6
VYHS	Vyhne	76.02	325	*e*P	P	07 05 15.3	+0.6
CLL	Collm	76.05	330	⇑*i*P	P	07 05 14.8	0.0
CLL				pmax	pmax		
	comp=Z,7.0nm,0.6s						
CLL	Collm	76.05	330	*e*P	P	07 05 14.8	0.0
	comp=Z,7.2nm,0.9s,baz=34,slow=4.7						
CLL	Collm	76.05	330	⇑*i*P	P	07 05 14.8	0.0
	comp=Z,7.0nm,0.6s						
CLL				*i* x	x	07 05 17.5	
	comp=Z,8.0nm,0.7s						
PV22	Blue Mesa, Par	76.17	50	IAmb	IAmb	07 05 17.9	
	comp=Z,6.1nm,0.8s						
JAVC	Velka Javorina	76.21	326	*e*P	P	07 05 17.3	+1.5
VRAC	Vranov	76.29	327	*e*P	P	07 05 16.9	+0.7
VRAC	Vranov	76.29	327	⇓P	P	07 05 17.4	+1.1
VRAC	Vranov	76.29	327	P	P	07 05 17.3	+1.1
PV18	Skein Mesa, Pa	76.30	50	IAmb	IAmb	07 05 18.8	
	comp=Z,10.0nm,0.8s						
GOPC	GO Pecny, Ondr	76.51	328	*e*P	P	07 05 18.3	+0.8
GOPC	GO Pecny, Ondr	76.51	328	*e*P	P	07 05 18.3	+0.8
PRU	Pruhonice	76.55	328	*e*P	P	07 05 18.3	+0.7
PRU	Pruhonice	76.55	328	*e*P	P	07 05 18.3	+0.7
CLZ	Clausthal	76.55	332	*e*P	P	07 05 18.2	+0.5
	comp=Z,7.7nm,0.7s,baz=34,slow=4.7						
KRUC	Moravsky	76.56	327	*e*P	P	07 05 18.4	+0.6
GZR	Gura Zlata	76.67	321	⇑P	P	07 05 18.5	-0.1
GZR	Gura Zlata	76.67	321	P	P	07 05 18.4	-0.1
SURR	Surduc	76.69	322	⇑P	P	07 05 19.0	+0.5
MODS	Modra-Piesok	76.75	326	*e*P	P	07 05 19.0	+0.1
MODS	Modra-Piesok	76.75	326	*e*P	P	07 05 19.0	+0.1
ZVC	Zvikov	77.12	328	*e*P	P	07 05 21.6	+0.7
HERR	Herculane	77.22	321	⇑P	P	07 05 21.9	+0.4
MANZ	Manzenberg	77.46	330	*e*P	P	07 05 23.0	+0.2
	comp=Z,0.5nm,0.6s,baz=34,slow=4.7						
EKA	Eskdalemuir Ar	77.49	341	P	P	07 05 22.9	+0.1
	comp=Z,1.3nm,0.5s,baz=23,slow=5.2,SNR=9.3						
	comp=Z,1.3nm,0.5s						
EYMN	Ely	77.50	34	IAmb	IAmb	07 05 23.8	
	comp=Z,7.3nm,0.9s						
CKRC	Cesky Krumlov	77.58	328	*e*P	P	07 05 23.7	+0.2
ROTZ	Rotzenmuhle	77.61	330	*e*P	P	07 05 24.1	+0.5
	comp=Z,1.1nm,1.0s,baz=34,slow=4.7						
KHC	Kasperske Hory	77.61	328	*e*P	P	07 05 24.2	+0.5
KHC	Kasperske Hory	77.61	328	*e*P	P	07 05 24.2	+0.5
CONA	Conrad Observa	77.68	326	*i* P	P	07 05 25.0	+0.8
	comp=Z,1.6nm,0.6s						
RONA	Rosalia, Austr	77.69	326	*i* P	P	07 05 25.1	+1.0
	comp=Z,4.1nm,0.6s						
GERES	GERESS Array B	77.80	328	P	P	07 05 24.6	-0.2
	comp=Z,1.3nm,0.6s,baz=35,slow=5.1,SNR=14						
	comp=Z,1.3nm,0.6s						
WET	Wettzell	77.87	329	*e*P	P	07 05 25.4	+0.3
	comp=Z,4.0nm,0.8s,baz=34,slow=4.7						
GRF	Grafenberg Arr	78.03	330	*e*P	P	07 05 26.4	+0.5
	comp=Z,11nm,0.7s,baz=34,slow=4.7						
ARSA	Arzberg	78.36	326	*e*P	P	07 05 28.5	+0.7
	comp=Z,2.6nm,0.7s						
MOA	Molln	78.38	327	*i* P	P	07 05 28.5	+0.6
	comp=Z,2.1nm,0.8s						
BOVS	Bovan	78.51	320	⇑P	P	07 05 27.7	-0.9
BIOA	Bad Ischl, Aus	78.76	328	*i* P	P	07 05 30.6	+0.6
	comp=Z,4.1nm,0.7s						
MMAI	Mount Meron Ar	78.97	305	P	P	07 05 32.4	+0.9
	comp=Z,2.9nm,0.5s,baz=47,slow=7.3,SNR=5.9						
	comp=Z,2.9nm,0.5s						
SOKA	Soboth	79.02	326	*i* P	P	07 05 31.5	0.0
	comp=Z,1.4nm,0.5s						
RJOB	Jochberg	79.05	328	*e*P	P	07 05 32.3	+0.7
	comp=Z,4.1nm,0.8s,baz=34,slow=4.7						
SCHQ	Schefferville	79.13	17	P	P	07 05 31.8	0.0
	comp=Z,5.9nm,0.6s,baz=348,slow=5.9,SNR=14						
	comp=Z,5.9nm,0.6s						
LESA	Schwarzleotal	79.35	328	*i* P	P	07 05 34.0	+0.8
	comp=Z,7.1nm,1.1s,SNR=4.1						
OBKA	Obir	79.36	326	*i* P	P	07 05 34.0	+0.6
	comp=Z,4.3nm,0.8s						
WATA	Walderalm	79.85	328	*i* P	P	07 05 36.5	+0.5
	comp=Z,5.8nm,0.7s,SNR=5.4						
WTTA	Wattenberg	79.89	328	*i* P	P	07 05 36.9	+0.7
	comp=Z,3.7nm,0.5s,SNR=5.9						
ABTA	Abfaltersbach	79.97	328	*e*P	P	07 05 37.1	+0.4
	comp=Z,2.3nm,1.0s						
MOTA	Moosalm	80.02	329	*e*P	P	07 05 37.2	+0.3
	comp=Z,7.2nm,0.7s,SNR=6.0						
RETA	Reutte	80.03	329	*e*P	P	07 05 37.5	+0.6
	comp=Z,4.9nm,0.8s						
ANMO	Albuquerque	80.03	51	*ce*P	P	07 05 34.6	-2.7
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.3s						
SQTA	Sankt Quirin	80.08	329	*i* P	P	07 05 37.6	+0.3
	comp=Z,4.5nm,0.7s						
FETA	Feichten	80.43	329	*i* P	P	07 05 39.1	-0.1
	comp=Z,2.4nm,0.7s						
DAVA	Damuels	80.53	329	*e*P	P	07 05 40.1	+0.4
	comp=Z,5.9nm,0.6s,SNR=4.8						
TXAR	Lajitas Array	85.75	53	P	P	07 06 07.1	+0.4
	comp=Z,0.9nm,0.8s,baz=293,slow=3.7,SNR=15						
TXAR				pP	pP	07 06 47.8	-1.0
	comp=Z,1.3nm,0.8s,baz=297,slow=3.9,SNR=6.5						
	comp=Z,0.9nm,0.8s						
ESDC	Sonseca Array	91.99	335	P	P	07 06 35.6	-0.2
	comp=Z,1.2nm,0.8s,baz=29,slow=4.0,SNR=6.1						
	comp=Z,1.2nm,0.8s						
LPAZ	La Paz	142.62	53	PKhKP	PKPpre	07 12 56.8	
	comp=Z,0.3nm,0.5s,baz=350,slow=3.1,SNR=4.8						
TROLL	Troll, Antarti	145.37	201	⇑P	PKPab	07 13 04.1	+0.5
	comp=Z,258nm,0.5s						
SNAA	Sanae	146.92	199	⇑P	PKPbc	07 13 08.2	+0.5
	comp=Z,19nm,0.4s						
SNAA	Sanae	146.92	199	PKPbc	PKPbc	07 13 07.9	+0.3
	comp=Z,0.7nm,0.5s,baz=208,slow=12,SNR=11						
VNA2	Neumayer--Watz	148.50	198	⇑P	PKPbc	07 13 12.2	+0.4
	comp=Z,2.5nm,0.6s,baz=130,slow=2.8						
VNA3	Neumayer Olymp	148.78	197	⇑P	PKPbc	07 13 13.0	+0.5
	comp=Z,0.7nm,0.4s						
BDFB	Brasilia	151.05	21	PKPbc	PKPbc	07 13 19.7	0.0
	comp=Z,3.3nm,0.7s,baz=76,slow=4.1,SNR=6.3						

IDC ***30*** *07:14:10.0±1.0, 18°.11S×178°.29W, h637km±11km,*
mb3.3/14, mbtmp4.2/15, Error ellipse: s-maj=15.4km
s-min=11.8km az=125.0

NEIC ***30*** *07:14:10.0±2.0, 18°.1S±0°.2×178°.3W±0°.2, h631km±9km,*
mb4.2/56, Error ellipse: s-maj=24.9km s-min=18.5km
az=146.0

ISC 30 07:14:10.7±0.4**, 18°.05S**±0°.09×**178°.34W**±0°.09**, h650**km**,**
n133, σ1§30/128**, mb4.1**/44**, 5D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.45	275		P	07 15 34.2	-2.4
MSVF	Nonsavu	3.45	275	P	P	07 15 33.8	-2.8
	26nm,0.6s,baz=127,slow=8.9,SNR=11						
MSVF				S	S	07 16 46.4	-0.2
	1.9nm,0.3s,baz=57,slow=22,SNR=1.0						
NIUE	Niue	8.04	99	P	P	07 16 10.2	-2.1
WCZ	Waipu Caves	18.96	199	P	P	07 17 54.0	+1.2
KUZ	Kuaotunu	19.35	195	P	P	07 17 56.3	0.0
HAZ	Te Kaha	19.93	189	P	P	07 17 60.0	-1.4
PUZ	Puketiti	20.17	188	P	P	07 18 02.5	-1.1
TOZ	Tahuroa Road	20.34	194	P	P	07 18 05.3	+0.2
URZ	Urewera	20.52	190	P	P	07 18 04.4	-2.3
	2.0nm,0.3s,baz=350,slow=12,SNR=10						
	2.0nm,0.3s						
URZ	Urewera	20.52	190	P	P	07 18 04.3	-2.5
MWZ	Matawai	20.53	189	P	P	07 18 05.6	-1.3
BKZ	Black Stump Fm	21.52	191	P	P	07 18 12.5	-3.2
VRZ	Vera Road	21.84	195	P	P	07 18 19.5	+1.0
NEZ	North Egmont	22.14	196	P	P	07 18 22.2	+0.9
PXZ	Pawanui	22.30	190	P	P	07 18 19.9	-2.6
TSZ	Takapari Road	22.48	191	P	P	07 18 22.7	-1.5
BFZ	Birch Farm	23.03	191	P	P	07 18 26.2	-2.8
MRZ	Mangatainoka R	23.14	192	P	P	07 18 26.9	-3.0
QRZ	Quartz Range	24.02	197	P	P	07 18 37.4	-0.3
NNZ	Nelson	24.16	195	P	P	07 18 37.3	-1.7
TUWZ	Tuamarina	24.22	194	P	P	07 18 38.1	-1.4
THZ	Tophouse	24.79	196	P	P	07 18 42.7	-1.9
DSZ	Denniston Nort	25.08	198	P	P	07 18 45.9	-1.3
KHZ	Kahutara	25.25	194	P	P	07 18 46.2	-2.3
LTZ	Lake Taylor	25.91	196	P	P	07 18 51.9	-2.5
INZ	Inchbonnie	26.08	197	P	P	07 18 54.1	-1.7
OXZ	Oxford	26.48	196	P	P	07 18 57.8	-1.5
WVZ	Waitaha Valley	26.61	198	P	P	07 18 59.0	-1.4
MQZ	McQueen's Vall	26.68	195	P	P	07 18 59.5	-1.5
RPZ	Rata Peaks	27.11	197	P	P	07 19 02.0	-2.8
FOZ	Fox Glacier	27.30	199	P	P	07 19 04.9	-1.6
FOZ	Fox Glacier	27.30	199	P	P	07 19 04.7	-1.7
TMZ	Timaru	27.74	197	P	P	07 19 07.8	-2.5
LBZ	Lake Benmore	27.97	198	P	P	07 19 10.1	-2.1
JCZ	Jackson Bay	28.12	200	P	P	07 19 12.0	-1.6
ODZ	Otahua Downs	28.45	197	P	P	07 19 14.6	-1.7
WKZ	Wanaka	28.72	199	P	P	07 19 17.0	-1.7
MSZ	Milford Sound	28.93	200	P	P	07 19 20.6	+0.1
EAZ	Earnscleugh	29.00	198	P	P	07 19 19.8	-1.3
MLZ	Mavora Lakes	29.49	200	P	P	07 19 25.1	-0.2
WHZ	Wether Hill Ro	30.01	199	P	P	07 19 29.5	-0.2
WHZ	Wether Hill Ro	30.01	199	P	P	07 19 29.2	-0.5
CAN	Canberra	33.67	233	P	P	07 20 01.2	+0.4
TOO	Toolangi	37.13	231	P	P	07 20 29.3	+0.2
TOO				IAmb	IAmb	07 21 13.2	
	comp=Z,7.2nm,1.1s						
COEN	Coen	37.17	271	P	P	07 20 30.6	+0.8
STKA	Stephens Creek	38.62	241	P	P	07 20 41.4	+0.2
STKA	Stephens Creek	38.62	241	P	P	07 20 41.6	+0.4
	comp=Z,3.4nm,0.6s,baz=88,slow=11,SNR=6.9						
	comp=Z,3.4nm,0.6s						
BBOO	Buckleboo	43.40	241	P	P	07 21 19.1	+0.4
WR8	Warramunga Arr	44.52	260	P	P	07 21 27.6	+0.1
WR8				IAmb	IAmb	07 21 43.6	
	comp=Z,16nm,1.5s						
WB0	Warramunga Arr	44.64	260	P	P	07 21 28.6	+0.2
WB0				IAmb	IAmb	07 21 48.1	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	44.67	260	P	P	07 21 28.2	-0.5
WRA	Warramunga Arr	44.67	260	P	P	07 21 29.0	+0.4
	comp=Z,1.1nm,0.5s,baz=94,slow=6.8,SNR=26						
WRA				PcP	PcP	07 22 56.0	-0.5
	comp=Z,0.3nm,0.5s,baz=97,slow=4.6,SNR=1.8						
	comp=Z,1.1nm,0.5s						
AS31	Alice Springs	44.81	254	P	P	07 21 29.6	-0.1
ASAR	Alice Springs	44.82	254	P	P	07 21 29.9	+0.1
ASAR	Alice Springs	44.82	254	P	P	07 21 30.4	+0.7
	comp=Z,8.2nm,1.0s,baz=90,slow=7.9,SNR=43						
ASAR				PcP	PcP	07 22 58.1	+1.1
	comp=Z,0.2nm,0.4s,baz=98,slow=3.9,SNR=1.4						
ASAR				S	S	07 27 23.6	+1.4
	comp=Z,0.7nm,1.0s,baz=98,slow=14,SNR=4.1						
	comp=Z,8.2nm,1.0s						
SBA	Scott Base	60.28	184	P	P	07 23 20.3	+2.2
VNDA	Vanda	60.31	185	P	P	07 23 20.1	+1.7
VNDA	Vanda	60.31	185	P	P	07 23 19.4	+1.0
	comp=Z,0.7nm,0.6s,baz=353,slow=7.6,SNR=5.4						
	comp=Z,0.7nm,0.6s						
MJAR	Matsushiro Arr	68.06	323	P	P	07 24 08.1	+0.4
	comp=Z,1.8nm,0.5s,baz=164,slow=6.6,SNR=4.8						
	comp=Z,1.8nm,0.5s						
QSPA	South Pole Qui	72.00	180	P	P	07 24 31.9	+1.2
QSPA				IAmb	IAmb	07 24 32.1	
	comp=Z,5.3nm,0.8s						
QSPA	South Pole Qui	72.00	180	P	P	07 24 31.6	+1.0
	comp=Z,5.2nm,0.8s,baz=298,slow=0.7,SNR=28						
	comp=Z,5.2nm,0.8s						
PETK	Petropavlovsk-	73.83	345	P	P	07 24 41.5	+0.6
	comp=Z,2.7nm,0.6s,baz=116,slow=8.4,SNR=3.9						
	comp=Z,2.7nm,0.6s						
OHAK	Old Harbor	77.85	14	P	P	07 25 03.1	+0.3
OHAK				IAmb	IAmb	07 25 32.9	
	comp=Z,11nm,1.2s						
NVAR	Mina Array Bea	79.48	44	P	P	07 25 12.9	+0.7
	comp=Z,1.2nm,0.7s,baz=226,slow=8.5,SNR=12						
	comp=Z,1.2nm,0.7s						
J04A	Umpqua Nationa	79.85	38	P	P	07 25 15.4	+1.5
K05A	Summer Lake	80.27	39	P	P	07 25 17.7	+1.5
K05A				IAmb	IAmb	07 25 18.2	
	comp=Z,5.0nm,0.9s						
M16K	Timber Creek	80.33	9	P	P	07 25 17.3	+1.5
M16K				IAmb	IAmb	07 25 18.1	
	comp=Z,15nm,1.2s						
J05D	Fort Rock, OR	80.39	38		P	07 25 18.3	+1.6
J05D				IAmb	IAmb	07 25 18.8	
	comp=Z,6.2nm,0.8s						
ILSW	Iliamna Southw	80.41	13	P	P	07 25 16.5	+0.2
PINE	Pine Mountain	80.86	38		P	07 25 20.8	+1.6
PINE				IAmb	IAmb	07 25 21.4	
	comp=Z,5.4nm,0.9s						
PRN	Pahroc Range	81.13	46		P	07 25 21.4	+0.7
K15K	Wolf Creek Mou	81.17	8		P	07 25 21.5	+1.4
WISH	Wishkah	81.27	34	P	P	07 25 22.5	+1.6
SEW	Seward	81.33	14	P	P	07 25 21.4	+0.5
SEW				IAmb	IAmb	07 25 30.8	
	comp=Z,11nm,1.4s						
MA2	Magadan	81.35	345	P	P	07 25 19.4	-1.7
MA2				IAmb	IAmb	07 25 48.2	
	comp=Z,9.5nm,1.0s						
WVOR	Wild Horse Val	81.47	40	P	P	07 25 23.2	+0.9
SLKM	Skilak Lake	81.51	14	P	P	07 25 21.8	-0.1
SLKM				IAmb	IAmb	07 25 22.6	
	comp=Z,6.2nm,0.6s						
L18K	Granite Mounta	81.82	10	P	P	07 25 24.4	+1.0
I07A	Izee	81.88	39	P	P	07 25 25.7	+1.4
BELA	Belgrano 2	82.02	173	P	P	07 25 24.7	+0.4
BELA				IAmb	IAmb	07 25 25.2	
	comp=Z,6.1nm,0.9s						
J08A	Circle Bar Ran	82.09	40	P	P	07 25 26.1	+0.8
J08A				IAmb	IAmb	07 25 27.1	
	comp=Z,8.5nm,1.4s						
L19K	White Mountain	82.10	11	P	P	07 25 25.6	+0.8
PMR	Palmer	82.72	14	P	P	07 25 27.9	+0.1
PMR				IAmb	IAmb	07 25 28.0	
	comp=Z,3.1nm,0.5s						
GHO	Glory Hole Cre	82.93	14	P	P	07 25 29.4	+0.3
J18K	Innoko River	82.99	10	P	P	07 25 29.7	+0.5
J18K				IAmb	IAmb	07 25 30.5	
	comp=Z,3.6nm,0.7s						
K20K	Telida	83.33	11	P	P	07 25 31.4	+0.5

K20K				IAmb	IAmb	07 25 31.9	
	comp=Z,3.7nm,0.8s						
SCM	Sheep Creek Mo	83.35	14	P	P	07 25 31.3	+0.1
CAST	Castle Rocks	83.75	12	IAmb	IAmb	07 25 33.0	
	comp=Z,4.9nm,0.8s						
N25K	Chitina, Valde	83.82	15	IAmb	IAmb	07 25 34.4	
	comp=Z,4.6nm,0.8s						
TRF	Thorofare Moun	84.13	12		P	07 25 34.7	-0.4
RND	Reindeer	84.39	13	IAmb	IAmb	07 25 36.9	
	comp=Z,6.1nm,0.7s						
HLID	Hailey	84.69	41		P	07 25 39.4	+1.1
M27K	Edge Creek, AK	85.16	16	IAmb	IAmb	07 25 41.6	
	comp=Z,4.5nm,1.1s						
WRH	Wood River Hil	85.49	13	IAmb	IAmb	07 25 41.9	
	comp=Z,8.9nm,1.4s						
MNTX	Cornudas Mount	85.60	55	P	P	07 25 44.2	+1.6
CCB	Clear Creek Bu	85.71	13	P	P	07 25 42.1	-0.3
CCB				IAmb	IAmb	07 25 42.1	
	comp=Z,3.4nm,0.5s						
IL31		86.01	13	IAmb	IAmb	07 25 44.2	
	comp=Z,1.9nm,0.6s						
ILAR	Eielson Array	86.01	13	P	P	07 25 43.5	-0.3
ILAR	Eielson Array	86.01	13	P	P	07 25 43.1	-0.7
	comp=Z,1.1nm,0.4s,baz=221,slow=4.8,SNR=61						
	comp=Z,1.1nm,0.4s						
TX31	Lajitas Ar. Si	86.02	58		P	07 25 46.6	+1.8
TXAR	Lajitas Array	86.02	58	P	P	07 25 46.5	+1.8
	comp=Z,1.2nm,0.7s,baz=219,slow=6.2,SNR=21						
	comp=Z,1.2nm,0.7s						
J25K	Salcha River,	86.20	14	IAmb	IAmb	07 25 45.4	
	comp=Z,2.4nm,0.5s						
J26L	Joseph Creek	86.52	14	IAmb	IAmb	07 25 47.5	
	comp=Z,2.3nm,0.7s						
M30M	Minto, Yukon	86.75	18	IAmb	IAmb	07 25 48.2	
	comp=Z,2.7nm,0.7s						
L29M	L29M	86.78	17	P	P	07 25 48.5	+0.9
L29M				IAmb	IAmb	07 25 49.9	
	comp=Z,2.5nm,0.8s						
PDAR	Pinedale Array	87.41	43	P	P	07 25 51.2	0.0
	comp=Z,1.2nm,0.7s,baz=226,slow=3.1,SNR=10						
	comp=Z,1.2nm,0.7s						
HHC	Hu-ho-hao-te	87.42	314	eP	P	07 25 49.0	-2.1
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,4.2s						
TROLL	Troll, Antarti	90.17	180	⇓P	P	07 26 03.1	-0.3
	comp=Z,90nm,0.5s						
SNAA	Sanae	90.45	179	⇓P	P	07 26 04.2	-0.4
	comp=Z,19nm,0.5s						
SNAA	Sanae	90.45	179	P	P	07 26 04.9	+0.2
SNAA	Sanae	90.45	179	P	P	07 26 04.3	-0.4
	comp=Z,1.1nm,0.7s,baz=191,slow=9.4,SNR=17						
	comp=Z,1.1nm,0.7s						
VNA3	Neumayer Olymp	90.59	176	⇓P	P	07 26 05.0	-0.2
	comp=Z,3.7nm,0.5s						
VNA2	Neumayer--Watz	91.03	177	⇓P	P	07 26 07.8	+0.6
	comp=Z,3.0nm,0.6s,baz=198,slow=4.1						
VNA1	Neumayer--Stat	91.26	177	⇓P	P	07 26 09.0	+0.8
	comp=Z,5.2nm,0.9s						
YKA	Yellowknife Ar	94.43	25	P	P	07 26 22.7	0.0
	comp=Z,0.2nm,0.6s,baz=256,slow=7.9,SNR=2.8						
	comp=Z,0.2nm,0.6s						
BRTR	Keskin Array B	144.93	315	PKPbc	PKPab	07 32 37.6	-0.5
	comp=Z,0.7nm,0.4s,baz=48,slow=2.5,SNR=5.0						
KOLS	Kolonicke sedl	144.96	336	ePKP	PKPab	07 32 37.5	-0.3
KOLS				e		08 02 52.4	
OSTC	Ostas	145.54	344	ePKP	PKPab	07 32 39.7	-0.3
CLL	Collm	145.62	347		PKPab	07 32 38.8	-1.4
CLL	Collm	145.62	347	i PKPbc	PKPab	07 32 39.0	-1.2
	comp=Z,6.0nm,0.6s						
DPC	Dobruska-Polom	145.70	343	ePKP	PKPab	07 32 39.9	-0.8
KRLC	Kraliky	145.82	343	ePKP	PKPab	07 32 40.1	-1.1
KRUC	Moravsky	146.84	342	ePKP	PKiKP	07 32 42.5	-1.0
ZVC	Zvikov	147.09	345	ePKP	PKPab	07 32 47.3	+1.1
KHC	Kasperske Hory	147.53	345	ePKP	PKiKP	07 32 44.5	-0.5
KHC				ex	x	07 32 49.3	
CKRC	Cesky Krumlov	147.63	344	ePKP	PKiKP	07 32 44.8	-0.4
GERES	GERESS Array B	147.76	345		PKiKP	07 32 44.6	-1.0
GERES	GERESS Array B	147.76	345	PKPbc	PKiKP	07 32 45.0	-0.6
	comp=Z,1.2nm,0.5s,baz=21,slow=4.0,SNR=12						
CONA	Conrad Observa	148.02	342	i PKiKP	PKiKP	07 32 45.6	-0.6
	comp=Z,2.4nm,0.9s						
MOA	Molln	148.54	344	ePKiKP	PKiKP	07 32 48.0	+0.8
	comp=Z,3.4nm,1.2s						
WTTA	Wattenberg	149.73	346	ePKiKP	PKiKP	07 32 50.0	+0.2
	comp=Z,2.4nm,0.5s						
SQTA	Sankt Quirin	149.87	347	ePKiKP	PKiKP	07 32 50.4	+0.4
	comp=Z,2.5nm,0.6s						
ABTA	Abfaltersbach	150.01	345	i PKiKP	PKiKP	07 32 50.1	-0.2
	comp=Z,2.9nm,0.7s						

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*NEIC **30** 07:41:05.6±2.1, 17°.19S±0°.06×69°.55W±0°.08, h166^{km}±4^{km}, mb4.4/24, ML4.2(GUC), Error ellipse: s-maj=12.1km s-min=7.6km az=121.0*

*GUC **30** 07:41:06.0±0.9, 17°.37S×69°.70W, h172^{km}±4^{km}, ML4.2*

*IDC **30** 07:41:07.8±0.9, 17°.10S×69°.25W, h182^{km}±7^{km}, mb3.6/12, mbtmp4.1/14, Error ellipse: s-maj=18.2km s-min=12.3km az=63.0*

*VAO **30** 07:41:11.8±1.1, 17°.00S×68°.83W, h174^{km}±5^{km}, mb4.2*

ISC 30 07:41:05.6±0.6**, 17°.23S**±0°.05×**69°.42W**±0°.06**, h166**^{km}±6^{km}**, n84, σ1^s.43**/91**, mb4.0**/16**, 2C-5D, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB18	Visviri	0.37	190		Pn	07 41 30.3	+1.3
PB18	Visviri	0.37	190	⇓iP	Pn	07 41 30.3	+1.3
PB18				i S	Sn	07 41 49.3	+2.4
PB16	IPOC Station P	1.11	185		Pn	07 41 34.5	+1.1
AP01	Chacalluta	1.44	218	Pn	Pn	07 41 34.8	-1.0
AP01				Sn	Sn	07 41 57.7	-1.5
AP01	Chacalluta	1.44	218	⇑iP	Pn	07 41 34.8	-1.0
AP01				i S	Sn	07 41 57.4	-1.8
LPAZ	La Paz	1.54	53		Pn	07 41 39.1	+1.6
LPAZ				Sn	Sn	07 42 03.3	+1.2
LPAZ	La Paz	1.54	53	P	Pn	07 41 39.3	+1.7
	548nm,0.3s,baz=287,slow=3.7,SNR=7708						
LPAZ				LR	LR	07 41 55.4	
	comp=Z,22nm,18.0s,baz=174,slow=36						
LPAZ				S	Sn	07 42 03.5	+1.4
	170nm,0.5s,baz=348,slow=19,SNR=26						
LPAZ	La Paz	1.54	53	eP	Pn	07 41 39.5	+1.9
PX02	IPOC Station P	1.88	203	eP	Pn	07 41 38.8	-1.7
PX02				eS	Sn	07 42 04.8	-2.9
GO01	Chusmiza	2.44	175		Pn	07 41 48.2	+0.9
GO01				Sn	Sn	07 42 20.8	+1.2
GO01	Chusmiza	2.44	175	⇓iP	Pn	07 41 48.2	+0.9
GO01				i S	Sn	07 42 20.5	+0.9
GO01				IAML		07 42 27.8	
	comp=N,565nm,0.2s						
PB11	IPOC Station P	2.53	185		Pn	07 41 48.0	0.0
PB11	IPOC Station P	2.53	185	⇑iP	Pn	07 41 47.9	-0.2
PB11				i S	Sn	07 42 19.9	-1.2
PB11				IAML		07 42 23.4	
	comp=N,887nm,0.5s						
PB08	IPOC Station P	2.91	175		Pn	07 41 53.9	+1.0
TA02	Huaiquique	3.10	193	Pn	Pn	07 41 53.8	-1.2
TA01	Diego Aracena	3.40	192	Pn	Pn	07 41 57.3	-1.3
PB01	IPOC Station P	3.80	181		Pn	07 42 03.4	-0.4
PB09	IPOC Station P	4.55	178	Pn	Pn	07 42 14.1	+0.5
PB06	IPOC Station P	5.45	182	Pn	Pn	07 42 24.5	-0.9
PB05	IPOC Station P	5.65	187		Pn	07 42 26.3	-1.6
AF01	San Pedro de A	5.81	169	Pn	Pn	07 42 31.2	+1.0
GO02	Mina Guanaco	7.90	181	Pn	Pn	07 42 57.8	-0.1
SIV	San Ignacio	8.09	82	P	Pn	07 42 58.7	-1.6
	comp=N,10nm,0.4s,baz=258,slow=9.0,SNR=67						
SIV				S	Sn	07 44 26.4	-4.4
	comp=N,5.3nm,0.7s,baz=174,slow=23,SNR=7.2						
BBSD	Serra de San D	8.41	91	eP	Pn	07 43 03.3	-1.2
NNA	Nana	8.88	305	Pn	Pn	07 43 08.6	-2.1
NNA	Nana	8.88	305	S	Sn	07 44 41.7	-7.9
	comp=N,12nm,0.5s,baz=218,slow=22,SNR=7.9						
AC01	Pan de Azucar	8.95	187	Pn	Pn	07 43 08.0	-3.5
AC02	Maricunga	9.57	178	Pn	Pn	07 43 19.1	-1.0
VILB	Vilhena	9.86	66		Pn	07 43 22.4	-1.2
VILB	Vilhena	9.86	66	eP	Pn	07 43 22.4	-1.2
PTLB	Pontes e Lacer	10.02	81		Pn	07 43 24.8	-0.9
PTLB	Pontes e Lacer	10.02	81	eP	Pn	07 43 24.3	-1.4
SALV	Santo Antonio	13.22	86	eP	Pn	07 44 05.2	-2.0
ATAH	Atahualpa	13.32	318	P	Pn	07 44 10.0	+1.2
	comp=N,2.7nm,0.7s,baz=145,slow=12,SNR=4.3						
PDRB	Porto dos Gac	13.49	67	eP	Pn	07 44 07.0	-3.6
CLDB	Colider	14.64	66	eP	Pn	07 44 24.3	-0.7
MACA	Manacapuru-AM	16.40	32		P	07 44 45.7	-0.5
MACA	Manacapuru-AM	16.40	32	eP	P	07 44 45.6	-0.7
MT09	Talagante	16.54	185	P	Pn	07 44 51.0	+2.7
MT09				IAmb	IAmb	07 44 56.6	
	comp=Z,34nm,1.4s						
MT01	Popeta	16.65	185	P	Pn	07 44 52.5	+3.1
MT01				IAmb	IAmb	07 45 08.6	
	comp=Z,21nm,1.3s						
NPGB	Novo Progresso	17.05	55	eP	P	07 44 53.0	-0.5
BO01	Tunca	17.16	185	P	Pn	07 44 56.8	+1.3
PTGB	Pitanga	17.82	118	eP	Pn	07 45 02.9	-0.7
SNDB	Serra Nova Dou	18.29	76	eP	P	07 45 07.6	+0.6
ITTB	Itaituba	18.52	48	eP	P	07 45 09.5	-0.1
ITAB	Concordia	18.83	125	P	P	07 45 13.5	+0.8
ITAB				IAmb	IAmb	07 45 14.9	
	comp=Z,26nm,1.4s						
IPMB	Ipameri, GO	20.23	95	eP	P	07 45 27.1	-0.9
PLTB	Pedras Altas	20.37	138	P	P	07 45 29.0	-0.4
PLTB				IAmb	IAmb	07 45 56.4	
	comp=Z,14nm,1.4s						
BDFB	Brasilia	20.59	89	P	P	07 45 31.7	-0.2
BDFB				IAmb	IAmb	07 45 35.0	
	comp=Z,7.9nm,0.5s						
BDFB	Brasilia	20.59	89	P	P	07 45 30.8	-1.2
	comp=Z,7.0nm,0.5s,baz=259,slow=6.8,SNR=16						
	comp=Z,7.0nm,0.5s						
MAL2	Monte Alegre,	21.27	46	P	P	07 45 39.1	0.0
MAL2				IAmb	IAmb	07 45 40.8	
	comp=Z,16nm,0.8s						
BOAV	Boa Vista	21.38	25	P	P	07 45 39.8	-0.5
TRQA	Tornquist	21.75	164	P	P	07 45 44.8	+0.7
TRQA				IAmb	IAmb	07 45 59.9	
	comp=Z,11nm,1.2s						
VAO	Valinhos	21.84	109	P	P	07 45 45.2	+0.1
SMTB	Santa Maria do	22.81	71	eP	P	07 45 54.6	+0.2
RUSC	La Rusia	23.26	351	P	P	07 45 58.1	-0.8
RUSC				IAmb	IAmb	07 46 03.9	
	comp=Z,11nm,1.3s						
PLCA	Paso Flores	23.45	182	P	P	07 46 01.5	+1.5
PLCA				IAmb	IAmb	07 46 03.5	
	comp=Z,8.5nm,1.1s						
PLCA	Paso Flores	23.45	182	P	P	07 46 00.9	+1.0
	comp=Z,4.3nm,1.0s,baz=0.2,slow=13,SNR=7.1						
	comp=Z,4.3nm,1.0s						
JANB	Januaria	24.21	88	eP	P	07 46 07.5	+0.4
TXAR	Lajitas Array	56.89	324	P	P	07 50 33.5	+0.1
	comp=Z,0.6nm,0.7s,baz=145,slow=8.5,SNR=9.0						
	comp=Z,0.6nm,0.7s						
TX31	Lajitas Ar. Si	56.89	324		P	07 50 32.5	-0.9
WTFS	Witchita Falls	57.78	331		P	07 50 38.9	-0.5
APMT	Aspermont	58.20	330		P	07 50 41.8	-0.6
X34A	Smith Ranch, M	58.20	332	P	P	07 50 41.8	-0.6
X34A				IAmb	IAmb	07 50 44.1	
	comp=Z,9.1nm,1.1s						
SDCO	Great Sand Dun	64.35	329		P	07 51 21.8	-2.3
VNA2	Neumayer--Watz	64.83	161	⇓P	P	07 51 27.6	+1.3
	comp=Z,2.0nm,1.0s,baz=293,slow=7.3						
K30B	Basset	65.77	336		P	07 51 33.1	+0.4
SNAA	Sanae	66.46	162	⇓P	P	07 51 36.5	-0.3
	comp=Z,25nm,0.5s						
SNAA	Sanae	66.46	162	P	P	07 51 38.0	+1.2
SNAA	Sanae	66.46	162	P	P	07 51 38.2	+1.4
	comp=Z,1.1nm,0.6s,baz=281,slow=8.3,SNR=16						
	comp=Z,1.1nm,0.6s						
F33A	5 Mile Ranch,	67.33	340	IAmb	IAmb	07 51 42.6	
	comp=Z,4.2nm,0.7s						
DBIC	Dimbokro	68.05	75	P	P	07 51 47.6	-0.1
	comp=Z,6.1nm,0.6s,baz=277,slow=6.2,SNR=9.8						
	comp=Z,6.1nm,0.6s						
DBIC	Dimbokro	68.05	75	P	P	07 51 47.8	-13
TROLL	Troll, Antarti	68.17	161	⇓P	P	07 51 49.1	+1.4
	comp=Z,49nm,0.5s						
PDAR	Pinedale Array	70.19	330	P	P	07 52 00.7	+0.1
	comp=Z,0.4nm,0.5s,baz=128,slow=6.7,SNR=6.4						
	comp=Z,0.4nm,0.5s						
ULM	Lac du Bonnet	71.12	342		P	07 52 05.3	-0.4
ULM				IAmb	IAmb	07 52 05.6	
	comp=Z,5.7nm,0.6s						
ULM	Lac du Bonnet	71.12	342	P	P	07 52 05.0	-0.7
	comp=Z,5.6nm,0.5s,baz=159,slow=6.6,SNR=13						
	comp=Z,5.6nm,0.5s						
NVAR	Mina Array Bea	71.86	321	P	P	07 52 11.9	+1.2
	comp=Z,0.5nm,0.8s,baz=165,slow=5.8,SNR=4.1						
	comp=Z,0.5nm,0.8s						
QSPA	South Pole Qui	72.94	180	P	P	07 52 17.9	+1.3
	comp=Z,0.9nm,0.7s,baz=134,slow=1.8,SNR=8.6						
	comp=Z,0.9nm,0.7s						
TORD	Torodi Ar. Bea	76.42	71	P	P	07 52 35.9	-1.4
	comp=Z,3.2nm,0.8s,baz=262,slow=5.2,SNR=6.4						
	comp=Z,3.2nm,0.8s						
VNDA	Vanda	80.95	190	P	P	07 53 02.6	+1.6
	comp=Z,0.8nm,0.8s,baz=167,slow=1.2,SNR=4.3						
	comp=Z,0.8nm,0.8s						
YKA	Yellowknife Ar	87.02	341	P	P	07 53 32.3	+0.6
	comp=Z,1.2nm,0.6s,baz=133,slow=4.2,SNR=14						
	comp=Z,1.2nm,0.6s						
SONM	Songino Array	149.28	6	PKPbc	PKiKP	08 00 35.8	-0.1
	comp=Z,1.6nm,0.5s,baz=331,slow=4.5,SNR=7.5						
PZH	PanZhiHua	167.65	40	PKP	PKPdf	08 00 50.5	-2.2

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*NEIC **30** 07:44:24.9±2.1, 38°.3N±0°.2×30°.27W±0°.03, h10^{km}±2^{km}, mb4.3/20, Error ellipse: s-maj=36.7km s-min=4.0km az=181.0*

*IDC **30** 07:44:29.8±1.3, 39°.59N×30°.12W, h0^{km}, mb3.8/17, mbtmp3.8/17, MS3.5/36, Error ellipse: s-maj=44.9km s-min=17.1km az=171.0*

*INMG **30** 07:44:32.1±0.7, 39°.49N×29°.78W, h10^{km}, ML3.8, Error ellipse: s-maj=8.2km s-min=3.2km az=45.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Crista Mdia Atlntico N*

*SVSA **30** 07:44:32.1±0.7, 39°.49N×29°.78W, h10^{km}, ML3.8(INMG), Error ellipse: s-maj=8.2km s-min=3.2km az=45.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Crista Mdia Atlntico N*

ISC 30 07:44:27.8±1.7**, 39°.0N**±0°.1×**30°.06W**±0°.06**, h8**^{km}±10^{km}**, n108, σ1^s.84**/106**, mb4.1**/26**, MS3.5**/36**, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCED	Cedros	1.11	107	eP	Pg	07 44 50.1	+1.0
PCED				eS	Sb	07 45 03.7	-0.1
PCED				i IAML		07 45 04.7	
PCED				i IAML		07 45 05.1	
PCED				i IAML		07 45 05.2	
PCED	Cedros	1.11	107	eP	Pg	07 44 50.1	+1.0
PCED				eS	Sb	07 45 03.7	-0.1
PCED				i IAML		07 45 04.7	
PCED				i IAML		07 45 05.1	
PCED				i IAML		07 45 05.2	
PCED	Cedros	1.11	107	eP	Pg	07 44 50.1	+1.0
PCED				eS	Sb	07 45 03.7	-0.1
PCED				i AML	AML	07 45 04.7	
PCED				i AML	AML	07 45 05.1	
PCED				i AML	AML	07 45 05.2	
CALA	Caldeira	1.13	109	eP	Pg	07 44 50.7	+1.4
CALA				eS	Sb	07 45 05.1	+0.7
CALA				i IAML		07 45 10.1	
CALA				i IAML		07 45 12.0	
CALA				i IAML		07 45 14.8	
CALA	Caldeira	1.13	109	eP	Pg	07 44 50.7	+1.4
CALA				eS	Sb	07 45 05.1	+0.7
CALA				i IAML		07 45 10.1	
CALA				i IAML		07 45 12.0	
CALA				i IAML		07 45 14.8	
CALA	Caldeira	1.13	109	eP	Pg	07 44 50.7	+1.4
CALA				eS	Sb	07 45 05.1	+0.7
CALA				i AML	AML	07 45 10.1	
CALA				i AML	AML	07 45 12.0	
CALA				i AML	AML	07 45 14.8	
PFCBR	Castelo Branco	1.14	112	eP	Pg	07 44 51.0	+1.5
PFCBR				eS	Sn	07 45 05.4	-0.3
PFCBR				i IAML		07 45 07.1	
PFCBR				i IAML		07 45 07.2	
PFCBR				i IAML		07 45 07.5	
PFCBR	Castelo Branco	1.14	112	eP	Pg	07 44 51.0	+1.5
PFCBR				eS	Sn	07 45 05.4	-0.3
PFCBR				i IAML		07 45 07.1	
PFCBR				i IAML		07 45 07.2	
PFCBR				i IAML		07 45 07.5	
PFCBR	Castelo Branco	1.14	112	eP	Pg	07 44 51.0	+1.5
PFCBR				eS	Sn	07 45 05.4	-0.3
PFCBR				i AML	AML	07 45 07.1	
PFCBR				i AML	AML	07 45 07.2	
PFCBR				i AML	AML	07 45 07.5	
HOR	Horta	1.20	111	eP	Pg	07 44 51.7	+1.0
HOR				eS	Sn	07 45 06.5	-0.8
HOR				i IAML		07 45 08.4	
HOR				i IAML		07 45 08.8	
HOR				i IAML		07 45 09.0	
HOR	Horta	1.20	111	eP	Pg	07 44 51.7	+1.0
HOR				eS	Sn	07 45 06.5	-0.8
HOR				i IAML		07 45 08.4	
HOR				i IAML		07 45 08.8	
HOR				i IAML		07 45 09.0	
HOR	Horta	1.20	111	eP	Pg	07 44 51.7	+1.0
HOR				eS	Sn	07 45 06.5	-0.8
HOR				i AML	AML	07 45 08.4	
HOR				i AML	AML	07 45 08.8	
HOR				i AML	AML	07 45 09.0	
PCAN	Candelaria	1.33	111	eP	Pg	07 44 53.7	+0.5
PCAN				eS	Sg	07 45 10.1	-0.3
PCAN				i IAML		07 45 11.9	
PCAN				i IAML		07 45 12.1	
PCAN				i IAML		07 45 13.8	
PCAN	Candelaria	1.33	111	eP	Pg	07 44 53.7	+0.5
PCAN				eS	Sg	07 45 10.1	-0.3
PCAN				i IAML		07 45 11.9	
PCAN				i IAML		07 45 12.1	
PCAN				i IAML		07 45 13.8	
PCAN	Candelaria	1.33	111	eP	Pg	07 44 53.7	+0.5
PCAN				eS	Sg	07 45 10.1	-0.3
PCAN				i AML	AML	07 45 11.9	
PCAN				i AML	AML	07 45 12.1	
PCAN				i AML	AML	07 45 13.8	
PICO	Pico	1.36	109	eP	Pg	07 44 53.9	+0.1
PICO				eS	Sn	07 45 10.2	-1.1
PICO				i IAML		07 45 12.4	
PICO				i IAML		07 45 12.9	
PICO				i IAML		07 45 13.4	
PICO	Pico	1.36	109	eP	Pg	07 44 53.9	+0.1
PICO				eS	Sn	07 45 10.2	-1.1
PICO				i IAML		07 45 12.4	
PICO				i IAML		07 45 12.9	
PICO				i IAML		07 45 13.4	
PICO	Pico	1.36	109	eP	Pg	07 44 53.9	+0.1
PICO				eS	Sn	07 45 10.2	-1.1
PICO				i AML	AML	07 45 12.4	
PICO				i AML	AML	07 45 12.9	
PICO				i AML	AML	07 45 13.4	
ROSA	Rosais	1.44	99	eP	Pn	07 44 53.4	-0.7
ROSA				eS	Sn	07 45 09.4	-3.9
ROSA				i IAML		07 45 10.3	
ROSA				i IAML		07 45 15.4	
ROSA				i IAML		07 45 25.4	
ROSA	Rosais	1.44	99	eP	Pn	07 44 53.4	-0.7
ROSA				eS	Sn	07 45 09.4	-3.9
ROSA				i IAML		07 45 10.3	
ROSA				i IAML		07 45 15.4	
ROSA				i IAML		07 45 25.4	
ROSA	Rosais	1.44	99	eP	Pn	07 44 53.4	-0.7
ROSA				eS	Sn	07 45 09.4	-3.9
ROSA				i AML	AML	07 45 10.3	
ROSA				i AML	AML	07 45 15.4	
ROSA				i AML	AML	07 45 25.4	
PPNO	Prainha do Nor	1.49	108	eP	Pg	07 44 55.4	-0.9
PPNO				eS	Sn	07 45 12.5	-2.0
PPNO				i IAML		07 45 20.8	
PPNO				i IAML		07 45 21.5	
PPNO	Prainha do Nor	1.49	108	eP	Pg	07 44 55.4	-0.9
PPNO				eS	Sn	07 45 12.5	-2.0
PPNO				i IAML		07 45 20.8	
PPNO				i IAML		07 45 21.5	
PPNO	Prainha do Nor	1.49	108	eP	Pg	07 44 55.4	-0.9
PPNO				eS	Sn	07 45 12.5	-2.0
PPNO				i AML	AML	07 45 20.8	
PPNO				i AML	AML	07 45 21.5	
PMAN	Manadas	1.57	101	eP	Pn	07 44 55.3	-0.7
PMAN				eS	Sn	07 45 12.7	-3.8
PMAN				i IAML		07 45 14.0	
PMAN				i IAML		07 45 14.2	
PMAN				i IAML		07 45 15.4	
PMAN	Manadas	1.57	101	eP	Pn	07 44 55.3	-0.7
PMAN				eS	Sn	07 45 12.7	-3.8
PMAN				i IAML		07 45 14.0	
PMAN				i IAML		07 45 14.2	
PMAN				i IAML		07 45 15.4	
PMAN	Manadas	1.57	101	eP	Pn	07 44 55.3	-0.7
PMAN				eS	Sn	07 45 12.7	-3.8
PMAN				i AML	AML	07 45 14.0	
PMAN				i AML	AML	07 45 14.2	
PMAN				i AML	AML	07 45 15.4	
SRBC	Serra Branca	1.58	86	eP	Pn	07 44 52.8	-3.2
SRBC				eS	Sn	07 45 08.6	-8.1
SRBC				i IAML		07 45 12.1	
SRBC				i IAML		07 45 13.9	
SRBC				i IAML		07 45 14.4	
SRBC	Serra Branca	1.58	86	eP	Pn	07 44 52.8	-3.2
SRBC				eS	Sn	07 45 08.6	-8.1
SRBC				i IAML		07 45 12.1	
SRBC				i IAML		07 45 13.9	
SRBC				i IAML		07 45 14.4	
SRBC	Serra Branca	1.58	86	eP	Pn	07 44 52.8	-3.2
SRBC				eS	Sn	07 45 08.6	-8.1
SRBC				i AML	AML	07 45 12.1	
SRBC				i AML	AML	07 45 13.9	
SRBC				i AML	AML	07 45 14.4	
PID	Ribeirinha	1.60	108	eP	Pg	07 44 56.8	-1.7
PID				eS	Sn	07 45 15.2	-2.1
PID				i IAML		07 45 17.2	
PID				i IAML		07 45 17.2	
PID				i IAML		07 45 18.1	
PID	Ribeirinha	1.60	108	eP	Pg	07 44 56.8	-1.7
PID				eS	Sn	07 45 15.2	-2.1
PID				i IAML		07 45 17.2	
PID				i IAML		07 45 17.2	
PID				i IAML		07 45 18.1	
PID	Ribeirinha	1.60	108	eP	Pg	07 44 56.8	-1.7
PID				eS	Sn	07 45 15.2	-2.1
PID				i AML	AML	07 45 17.2	
PID				i AML	AML	07 45 17.2	
PID				i AML	AML	07 45 18.1	
PGRA	Graciosa	1.62	87	eP	Pg	07 45 06.9	+8.0
PGRA				eS	Sb	07 45 23.3	+4.7
PGRA				i IAML		07 45 24.3	
PGRA				i IAML		07 45 24.5	
PGRA				i IAML		07 45 24.8	
PGRA	Graciosa	1.62	87	eP	Pg	07 45 06.9	+8.0
PGRA				eS	Sb	07 45 23.3	+4.7
PGRA				i IAML		07 45 24.3	
PGRA				i IAML		07 45 24.5	
PGRA				i IAML		07 45 24.8	
PGRA	Graciosa	1.62	87	eP	Pg	07 45 06.9	+8.0
PGRA				eS	Sb	07 45 23.3	+4.7
PGRA				i AML	AML	07 45 24.3	
PGRA				i AML	AML	07 45 24.5	
PGRA				i AML	AML	07 45 24.8	
CMLA	Cha da Macela	3.76	107	Pn	Pn	07 45 23.9	-2.2
PMOZ	Porto Moniz, M	12.09	116	Pn	Pn	07 47 13.5	-6.9
MTE	Manteigas	17.39	78	P	Pn	07 48 30.4	-0.4
PESTR	Estremoz	17.49	83	P	Pn	07 48 31.7	-0.3
ESDC	Sonseca Array	20.19	80	P	Pn	07 49 06.8	+2.1
	1.5nm,1.0s,baz=285,slow=8.3,SNR=11						
ESDC				LR	LR	07 55 27.4	
	comp=Z,125nm,19.0s,baz=275,slow=33						
	1.5nm,1.0s						
MDT	Midelt	21.48	99	LR	LR	07 56 25.2	
	comp=Z,84nm,18.0s,baz=305,slow=33						
DRLN	Deer Lake	22.12	307	P	P	07 49 20.9	-2.6
DRLN				IAmb	IAmb	07 49 32.0	
	comp=Z,12nm,0.9s						
GBN	Guysborough	24.08	296	P	P	07 49 41.3	-2.2
NRS	Narsarsuaq	24.19	342	P	P	07 49 44.6	+0.2
EKA	Eskdalemuir Ar	24.33	39	P	P	07 49 45.5	-0.2
	comp=Z,1.8nm,0.8s,baz=271,slow=6.5,SNR=2.9						
	comp=Z,1.8nm,0.8s						
CLF	Chambon-Foret	24.98	58	P	P	07 49 52.6	+0.9
HAL	Halifax	25.52	294	P	P	07 49 53.8	-2.8
HAL				IAmb	IAmb	07 50 16.4	
	comp=Z,10nm,1.0s						
SSB	Saint Sauveur	26.29	65	P	P	07 50 04.5	+0.8
BORG	Borgarnes	26.34	8	LR	LR	07 57 32.9	

	comp=Z,62nm,18.6s,baz=262,slow=30						
LMN	**Caledonia Moun**	26.41	296	P	P	07 50 02.3	-2.5
SENIN	**Lac Senin/Sane**	28.25	63	P	P	07 50 22.6	+1.1
F64A	**Sherman**	28.89	296	P	P	07 50 24.0	-2.9
F64A				IAmb	IAmb	07 50 38.8	
	comp=Z,6.4nm,1.0s						
SCHQ	**Schefferville**	29.30	315	LR	LR	08 01 22.1	
	comp=Z,78nm,18.7s,baz=92,slow=35						
D62A	**Allapoint, All**	29.39	299	P	P	07 50 29.8	-1.5
DAVOX	**Davos/Dischmat**	30.04	62	LR	LR	08 00 39.3	
	comp=Z,38nm,19.4s,baz=263,slow=32						
SFJD	**Kangerlussuaq**	30.38	344	LR	LR	08 00 00.9	
	comp=Z,77nm,19.6s,baz=169,slow=31						
GERES	**GERESS Array B**	32.64	58	P	P	07 51 01.6	+1.5
	comp=Z,0.3nm,0.6s,baz=296,slow=12,SNR=2.3						
	comp=Z,0.3nm,0.6s						
FRB	**Frobisher Bay**	33.67	330	LR	LR	08 01 29.3	
	comp=Z,68nm,18.7s,baz=69,slow=31						
NB2	**NORSAR Subarra**	33.67	35	P	P	07 51 09.1	+0.2
	comp=Z,5.4nm,1.1s,baz=248,slow=9.3						
NOA	**NORSAR Array B**	33.67	35	P	P	07 51 08.9	0.0
	comp=Z,1.6nm,0.9s,baz=249,slow=9.1,SNR=4.8						
NOA				LR	LR	08 02 22.8	
	comp=Z,34nm,21.1s,baz=280,slow=32						
	comp=Z,1.6nm,0.9s						
JMIC	**Jan Mayen**	33.98	12	LR	LR	08 01 02.7	
	comp=Z,34nm,19.3s,baz=35,slow=30						
HFS	**Hagfors**	34.52	38	LR	LR	08 04 08.3	
	comp=Z,40nm,18.1s,baz=216,slow=35						
VRAC	**Vranov**	34.54	57	LR	LR	08 04 10.2	
	comp=Z,16nm,18.0s,baz=258,slow=34						
VAE	**Valguarnera**	34.71	78	LR	LR	08 04 12.0	
	comp=Z,216nm,19.9s,baz=316,slow=34						
SADO	**Sadowa**	36.56	295	LR	LR	08 05 04.4	
	comp=Z,105nm,21.3s,baz=136,slow=34						
DBIC	**Dimbokro**	39.38	138	LR	LR	08 07 03.0	
	comp=Z,80nm,19.6s,baz=328,slow=34						
FINES	**FINESS Array B**	40.72	38	P	P	07 52 06.8	-1.8
	comp=Z,3.6nm,0.9s,baz=188,slow=7.7,SNR=8.5						
FINES				LR	LR	08 07 20.8	
	comp=Z,46nm,18.2s,baz=268,slow=34						
	comp=Z,3.6nm,0.9s						
TKL	**Tuckaleechee C**	42.34	283	LR	LR	08 08 19.4	
	comp=Z,48nm,18.6s,baz=74,slow=34						
AKASG	**Malin Array Be**	42.56	54	P	P	07 52 22.6	-1.3
	comp=Z,0.8nm,0.6s,baz=272,slow=8.6,SNR=5.3						
AKASG				LR	LR	08 08 17.9	
	comp=Z,31nm,21.1s,baz=228,slow=34						
	comp=Z,0.8nm,0.6s						
RES	**Resolute Bay**	46.23	341	LR	LR	08 07 58.6	
	comp=Z,25nm,21.9s,baz=358,slow=31						
ULM	**Lac du Bonnet**	46.75	306	LR	LR	08 11 38.1	
	comp=Z,80nm,18.0s,baz=122,slow=35						
BRTR	**Keskin Array B**	48.32	68	P	P	07 53 10.8	+1.0
	comp=Z,1.2nm,0.8s,baz=290,slow=7.3,SNR=4.0						
	comp=Z,1.2nm,0.8s						
MMAI	**Mount Meron Ar**	52.29	75	P	P	07 53 43.5	+3.6
	comp=Z,0.5nm,0.2s,baz=247,slow=13,SNR=1.3						
	comp=Z,0.5nm,0.2s						
ROSC	**El Rosal**	52.49	241	LR	LR	08 13 41.0	
	comp=Z,40nm,21.0s,baz=54,slow=33						
KBZ	**Khabaz**	53.35	60	P	P	07 53 48.1	+0.7
	comp=Z,3.5nm,0.9s,baz=284,slow=4.2,SNR=3.6						
	comp=Z,3.5nm,0.9s						
BELG	**Belogornoye**	53.36	48	LR	LR	08 15 48.2	
	comp=Z,50nm,19.7s,baz=20,slow=36						
YKA	**Yellowknife Ar**	53.91	325	LR	LR	08 14 32.2	
	comp=Z,49nm,18.0s,baz=30,slow=34						
JTS	**Las Juntas de**	56.47	255	LR	LR	08 15 23.8	
	comp=Z,34nm,19.9s,baz=66,slow=33						
PDAR	**Pinedale Array**	58.11	301	P	P	07 54 22.3	+0.3
	comp=Z,0.8nm,0.9s,baz=64,slow=6.8,SNR=6.5						
PDAR				LR	LR	08 19 14.9	
	comp=Z,46nm,18.2s,baz=88,slow=36						
	comp=Z,0.8nm,0.9s						
INK	**Inuvik**	59.08	335	LR	LR	08 17 34.1	
	comp=Z,44nm,18.0s,baz=238,slow=34						
AKTO	**Aktyubinsk**	60.12	47	LR	LR	08 19 09.4	
	comp=Z,34nm,19.7s,baz=62,slow=35						
TXAR	**Lajitas Array**	60.18	285	P	P	07 54 38.6	+2.2
	comp=Z,0.6nm,0.8s,baz=65,slow=8.4,SNR=8.6						
TXAR				LR	LR	08 18 49.8	
	comp=Z,30nm,20.6s,baz=72,slow=34						
	comp=Z,0.6nm,0.8s						
NEW	**Newport**	60.49	310	LR	LR	08 19 13.4	
	comp=Z,134nm,20.0s,baz=91,slow=35						
ELK	**Elko**	62.81	302	LR	LR	08 22 44.3	
	comp=Z,61nm,18.1s,baz=109,slow=37						
BBB	**Bella Bella**	64.78	318	LR	LR	08 20 23.8	
	comp=Z,78nm,18.6s,baz=49,slow=34						
ILAR	**Eielson Array**	65.48	335	LR	LR	08 21 00.3	
	comp=Z,36nm,18.5s,baz=82,slow=34						
BVAR	**Borovoye Array**	65.57	41	P	P	07 55 13.0	+1.3
	comp=Z,0.2nm,0.4s,baz=270,slow=1.4,SNR=1.7						
	comp=Z,0.2nm,0.4s						
NVAR	**Mina Array Bea**	66.02	301	P	P	07 55 16.8	+1.6
	comp=Z,0.2nm,0.5s,baz=55,slow=3.4,SNR=2.1						
	comp=Z,0.2nm,0.5s						
PFO	**Pinyon Flats O**	67.30	295	LR	LR	08 25 34.7	
	comp=Z,77nm,18.1s,baz=54,slow=37						
LPIG	**La Paz**	67.98	284	LR	LR	08 24 42.8	
	comp=Z,35nm,18.7s,baz=25,slow=36						
KURBB	**Kurchatov Arra**	71.07	40	P	P	07 55 47.0	+0.7
	comp=Z,1.4nm,0.9s,baz=346,slow=12,SNR=7.2						
	comp=Z,1.4nm,0.9s						
KK31	**Karatay Array**	71.24	49	P	P	07 55 45.8	-1.7
KK31				IAmb	IAmb	07 55 53.3	
	comp=Z,2.9nm,1.1s						
KKAR	**Karatay Array**	71.24	49	P	P	07 55 48.4	+0.9
KKAR	**Karatay Array**	71.24	49	P	P	07 55 45.6	-1.9
KKAR				IAmb	IAmb	07 55 53.3	
	comp=Z,3.1nm,1.1s						
ZAA0	**Zalesovo Array**	71.87	34	P	P	07 55 51.2	+0.2
ZAA0				IAmb	IAmb	07 55 57.1	
	comp=Z,4.7nm,1.3s						
ZALV	**Zalesovo Beam**	71.87	34	P	P	07 55 51.2	+0.2
	comp=Z,0.9nm,0.6s,baz=302,slow=8.5,SNR=4.4						
ZALV				LR	LR	08 26 38.4	
	comp=Z,38nm,18.2s,baz=161,slow=35						
	comp=Z,0.9nm,0.6s						
SIMJ	**Simiganj**	72.94	54	P	P	07 55 57.0	-0.8
SIMJ				IAmb	IAmb	07 56 14.2	
	comp=Z,3.0nm,1.1s						
MAKZ	**Makanchi**	75.28	41	P	P	07 56 11.4	+0.2
MAKZ				IAmb	IAmb	07 56 17.0	
	comp=Z,2.6nm,0.9s						
MK31	**Makanchi Array**	75.45	41	P	P	07 56 11.5	-0.7
MK31				IAmb	IAmb	07 56 14.1	
	comp=Z,3.3nm,1.1s						
MKAR	**Makanchi Array**	75.45	41	P	P	07 56 13.3	+1.1
	comp=Z,2.9nm,0.9s,baz=316,slow=5.1,SNR=20						
	comp=Z,2.9nm,0.9s						
NRN	**Naryn**	75.49	48	P	P	07 56 13.1	+0.2
NRN				IAmb	IAmb	07 56 16.3	
	comp=Z,2.3nm,0.8s						
LBTB	**Lobatse**	82.20	131	LR	LR	08 32 02.4	
	comp=Z,40nm,19.8s,baz=30,slow=34						
BOSA	**Boshof**	84.73	133	LR	LR	08 31 15.6	
	comp=Z,53nm,21.3s,baz=26,slow=33						
SONM	**Songino Array**	85.30	28	P	P	07 57 05.5	+0.2
	comp=Z,0.9nm,0.7s,baz=328,slow=5.6,SNR=8.0						
	comp=Z,0.9nm,0.7s						
QSPA	**South Pole Qui**	128.84	180	PKP	PKiKP	08 03 38.4	+2.9
	comp=Z,2.0nm,1.0s,baz=236,slow=3.0,SNR=4.1						
WRA	**Warramunga Arr**	156.75	40	PKPab	PKPab	08 04 53.6	+0.3
	comp=Z,1.3nm,0.8s,baz=348,slow=4.2,SNR=6.2						
ASAR	**Alice Springs**	159.55	46	PKPab	PKPab	08 05 06.3	+0.9
	comp=Z,1.4nm,0.9s,baz=326,slow=3.5,SNR=6.0						

*UCR **30** 07:45:14.9±1.2, 5.°06N×82.°50W, h165^{km}, MW3.7*
*RSNC **30** 07:45:24.2±0.5, 6°N±2°×8°2W±°, h0^{km}, M3.7, mB5.1, mb4.2, ML3.0, Mw(mB)4.4*
*UPA **30** 07:45:26.2±2.5, 5.°93N×82.°54W, h3^{km}±40^{km}*
ISC 30 07:45:23.5±1.8**, 5.°61N**±0.°08×**82.°69W**±0.°08**, h15**^{km}**, n82, σ1.^{s}62**/100**, 1C-2D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMNES	**Limones**	2.48	356	*e*P	Pn	07 46 02.2	-1.2
CACAO	**El Cacao, Vera**	2.50	46	P	Pn	07 46 02.1	-1.5
CACAO				S	Sn	07 46 30.7	-3.2
CACAO	**El Cacao, Vera**	2.50	46	*i* P	Pn	07 46 02.1	-1.5
CACAO				*e*S	Sn	07 46 30.1	-3.8
CACAO	**El Cacao, Vera**	2.50	46	*e*P	Pn	07 46 02.1	-1.5
GMAL	**Guarumal, Vera**	2.58	34	P	Pn	07 46 03.5	-1.2
GMAL				S	Sn	07 46 33.2	-2.6
GMAL	**Guarumal, Vera**	2.58	34	*e*P	Pn	07 46 03.5	-1.2
GMAL				*e*S	Sn	07 46 33.8	-2.1
GMAL	**Guarumal, Vera**	2.58	34	*e*P	Pn	07 46 03.5	-1.2
GMAL				*e*S	Sn	07 46 33.7	-2.2
DVD	**David**	2.81	5	*e*P	Pn	07 46 07.6	-0.4
DVD				*e*S	Sn	07 46 42.0	+0.3
DVD	**David**	2.81	5	*e*P	Pn	07 46 07.5	-0.4
NELY	**Ciudad Neily**	3.03	355	*e*P	Pn	07 46 10.5	-0.5
PTAR3	**Potrerillos Ar**	3.06	4	*e*P	Pn	07 46 11.9	+0.3
PSOM3	**Paja de Sombre**	3.07	7	*e*P	Pn	07 46 11.3	-0.3
CLLRA	**Cordillera,**	3.11	1	*e*P	Pn	07 46 11.8	-0.5
BQSF3	**Alto Boquete,**	3.12	5	*e*P	Pn	07 46 11.6	-0.7
BQSF3				*e*S	Sn	07 46 49.3	0.0
BQTLY	**Boquete Panama**	3.13	4	*e*P	Pn	07 46 12.0	-0.5
BRU2	**Volcan**	3.16	360	*e*P	Pn	07 46 12.6	-0.3
BRU2	**Volcan**	3.16	360	⇑*i*P	Pn	07 46 12.4	-0.5
BRU2				*e*S	Sn	07 46 50.5	+0.1
BRU2	**Volcan**	3.16	360	*e*P	Pn	07 46 12.7	-0.3
MLIR3	**Monte Lirio, C**	3.16	358	⇓*i*P	Pn	07 46 13.4	+0.5
MLIR3	**Monte Lirio, C**	3.16	358	*e*P	Pn	07 46 13.3	+0.5
BC3P	**Paso Ancho**	3.18	1	⇓*i*P	Pn	07 46 13.8	+0.5
BC3P				*e*S	Sn	07 46 48.7	-2.4
BC3P	**Paso Ancho**	3.18	1	*e*P	Pn	07 46 13.8	+0.5
AZU	**Azuero**	3.23	48	P	Pn	07 46 12.7	-0.9
AZU				S	Sn	07 46 49.6	-2.3
AZU	**Azuero**	3.23	48	*e*P	Pn	07 46 12.9	-0.8
AZU				*e*S	Sn	07 46 47.3	-4.6
AZU	**Azuero**	3.23	48	*e*P	Pn	07 46 12.8	-0.9
RBALA	**Bur**	3.29	9	*e*P	Pn	07 46 14.3	-0.2
PBNVO	**Pueblo Nuevo,**	3.29	9	*e*P	Pn	07 46 14.3	-0.3
ALCO	**Alturas Coton,**	3.32	357	*e*P	Pn	07 46 15.0	-0.1
BURE	**Buenos Aires**	3.59	350	*e*P	Pn	07 46 19.2	+0.4
EDPE	**Pejibaye, P**	3.63	346	*e*P	Pn	07 46 19.1	-0.2
DRK0	**Durika**	3.67	351	*e*P	Pn	07 46 19.9	0.0
DRK0	**Durika**	3.67	351	*e*P	Pn	07 46 20.0	0.0
SAJE	**San Jernim**	3.80	348	*e*P	Pn	07 46 21.7	0.0
BRIBI	**Bribri**	3.98	358	*e*P	Pn	07 46 26.4	+2.3
PIEC	**Cerro El Cedra**	4.18	343	*e*P	Pn	07 46 27.2	+0.2
PAR1A	**Puntarenas Pro**	4.25	339	*e*P	Pn	07 46 27.8	0.0
PICV	**PH. Pirrs**	4.26	340	*e*P	Pn	07 46 27.8	-0.1
ABE2	**San Pablo**	4.28	342	*e*P	Pn	07 46 28.8	+0.3
LCR2	**La Lucha 2**	4.30	342	*e*P	Pn	07 46 28.7	0.0
ACOS	**Acosta**	4.41	341	*e*P	Pn	07 46 29.8	-0.2
VERB	**Verbena**	4.42	347	*e*P	Pn	07 46 30.9	+0.7
VTCV	**VTCV, Calle Va**	4.46	347	*e*P	Pn	07 46 31.6	+0.7
CVTV	**Tajo**	4.49	346	*e*P	Pn	07 46 31.9	+0.6
RESJ	**San Isidro (Tu**	4.49	348	*e*P	Pn	07 46 32.0	+0.9
VICA	**Volcano Irazu**	4.49	345	*e*P	Pn	07 46 32.5	+1.0
CVTQ	**Turrialba Volc**	4.49	346	*e*P	Pn	07 46 32.7	+1.3
VTLA	**Turrialba Volc**	4.49	346	*e*P	Pn	07 46 32.7	+1.3
VTR0	**Volcan Turrial**	4.50	346	*e*P	Pn	07 46 33.0	+1.3
BCIP	**Isla Barro Col**	4.52	39	P	Pn	07 46 32.8	+1.3
CORON	**Coronado**	4.52	343	*e*P	Pn	07 46 32.7	+1.0
UPA	**Univ. de Panam**	4.58	43	*e*P	Pn	07 46 33.5	+1.2
BELE	**Belen**	4.58	341	*e*P	Pn	07 46 33.0	+0.5
HDC	**Heredia**	4.58	342	*e*P	Pn	07 46 32.5	0.0
PTAC	**Punta Ardita,**	5.08	72	P	Pn	07 46 40.3	+1.1
PTAC	**Punta Ardita,**	5.08	72	*e*P	Pn	07 46 40.3	+1.1
CMARA	**Lajas Hojancha**	5.15	328	*e*P	Pn	07 46 39.7	-0.5
JTS	**Las Juntas de**	5.16	334	*e*P	Pn	07 46 40.7	+0.4
JTS	**Las Juntas de**	5.16	334	P	Pn	07 46 40.4	+0.1
JTS	**Las Juntas de**	5.16	334	*e*P	Pn	07 46 40.5	+0.1
JTS				*e*S	Sn	07 47 40.8	+1.1
ARE1	**Arenal 1**	5.22	337	*e*P	Pn	07 46 43.1	+1.9
VARE2	**V. Arenal**	5.22	337	*e*P	Pn	07 46 43.1	+1.9
CUI	**Cuipilapa**	5.58	334	*e*P	Pn	07 46 47.2	+1.1
ALIBA	**Liberia Airpor**	5.70	330	*e*P	Pn	07 46 49.8	+2.1
LAPC	**Finca la Perla**	5.80	332	*e*P	Pn	07 46 50.3	+1.2
PLMC	**San Jos del P**	6.42	96	P	Pn	07 46 57.8	+0.2
	937nm20nm,0.6s						
PLMC				S	Sn	07 48 08.6	-2.1
	937nm20nm,0.6s						
JAMC	**Jamundi, Valle**	6.45	111	P	Pn	07 46 57.6	-0.6
APAC	**Apartado, Choc**	6.47	69	P	Pn	07 47 01.8	+3.4
APAC				S	Sn	07 48 17.1	+5.0
BBAC	**Balboa, Cauca**	6.49	123	P	Pn	07 46 58.7	-0.1
	565nm25nm,0.4s						
YOTC	**Yotoco, Valle**	6.52	104	P	Pn	07 46 58.1	-1.0
	16nm,0.5s						
YOTC				S	Sn	07 48 09.5	-3.9
	16nm,0.5s						
DBBC	**Dabeiba**	6.59	77	P	Pn	07 47 03.0	+3.0
CBOC	**Ciudad Bolivar**	6.64	88	P	Pn	07 47 03.2	+2.3
	4.1nm,0.8s						
CBOC				S	Sn	07 48 13.4	-3.1
	4.1nm,0.8s						
POPC	**Popayan, Colom**	6.73	117	P	Pn	07 47 01.8	-0.3
	16nm,0.5s						
OTAV	**Otavalo**	6.81	141	P	Pn	07 47 03.8	+0.4
	3.1nm,1.1s						
OTAV				S	Sn	07 48 11.7	-9.3
	3.1nm,1.1s						
GCUF	**Volcan Galeras**	6.88	129	P	Pn	07 47 05.5	+1.0
	18nm,0.9s						
CRUC	**La Cruz**	6.99	125	P	Pn	07 47 07.9	+2.1
HELC	**Santa Helena**	7.14	85	P	Pn	07 47 10.0	+2.1
	4.9nm,0.7s						
GUY2C	**Guyana, Caldas**	7.30	93	P	Pn	07 47 12.6	+2.5
	9.2nm,0.8s						
UREC	**San Jos de Ur**	7.42	73	*e*P	Pn	07 47 13.6	+2.3
UREC				*e*S	Sn	07 48 38.5	+3.3
ORTC	**Ortega, Tolima**	7.61	103	P	Pn	07 47 15.6	+1.7
	21nm,0.6s						
ORTC				S	Sn	07 48 40.9	+0.9
	21nm,0.6s						
ZARC	**Zaragoza, Cauc**	8.00	76	P	Pn	07 47 21.5	+2.2
PRAC	**Prado**	8.00	103	P	Pn	07 47 21.1	+1.7
	9.8nm,1.0s						
FLOC	**Florencia**	8.08	119	P	Pn	07 47 20.6	+0.1

*IDC **30** 07:45:26.0±1.0, 30.°78S×178.°40W, h0^{km}, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=33.6km s-min=20.2km az=99.0*
ISC 30 07:45:31.0±0.8**, 30.°8S**±0.°1×**178.°6W**±0.°2**, h35**^{km}**, n13, σ2.^{s}56**/15**, mb3.9**/7**, 5C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	1.65	21	Pn	Pn	07 45 56.4	-1.0
	92nm,0.3s,baz=80,slow=18,SNR=1.5						
RAO				Sn	Sn	07 46 15.2	-2.1
	326nm,0.3s,baz=170,slow=22,SNR=5.1						
URZ	**Urewera**	8.25	204	Pn	Pn	07 47 24.8	-3.3
	0.3nm,0.3s,baz=261,slow=4.6,SNR=11						
URZ				Sn	Sn	07 48 58.1	-1.8
	1.3nm,0.3s,baz=211,slow=23,SNR=8.1						
ASAR	**Alice Springs**	42.58	268	P	P	07 53 25.2	+1.3
	1.1nm,0.7s,baz=121,slow=7.4,SNR=7.2						
	1.1nm,0.7s						
WRA	**Warramunga Arr**	43.61	273	P	P	07 53 33.5	+1.4
	0.4nm,0.3s,baz=111,slow=8.0,SNR=5.4						
	0.4nm,0.3s						
QSPA	**South Pole Qui**	59.31	180	P	P	07 55 28.9	-0.2
	0.4nm,0.6s,baz=45,slow=7.1,SNR=15						
	0.4nm,0.6s						
TROLL	**Troll, Antarti**	77.47	180	⇑P	P	07 57 25.3	+2.8
	comp=Z,38nm,1.0s						
SNAA	**Sanae**	77.77	179	⇑P	P	07 57 26.1	+1.9
	comp=Z,16nm,0.9s						
SNAA	**Sanae**	77.77	179	P	P	07 57 25.4	+1.3
	comp=Z,1.0nm,0.8s,baz=180,slow=3.0,SNR=8.0						
	comp=Z,1.0nm,0.8s						
VNA3	**Neumayer Olymp**	77.94	176	⇑P	P	07 57 29.1	+4.1
	comp=Z,3.1nm,0.8s						
VNA2	**Neumayer--Watz**	78.37	177	⇑P	P	07 57 31.6	+4.2
	comp=Z,1.4nm,0.6s,baz=182,slow=6.2						
VNA1	**Neumayer--Stat**	78.61	177	⇑P	P	07 57 30.4	+1.8
	comp=Z,2.1nm,0.6s						
KURBB	**Kurchatov Arra**	120.99	314	PKP	PKiKP	08 04 21.2	+1.8
	comp=Z,0.1nm,0.4s,baz=95,slow=1.8,SNR=1.7						
FINES	**FINESS Array B**	145.34	339	PKPbc	PKPbc	08 05 02.8	-1.4
	comp=Z,1.4nm,0.7s,baz=66,slow=4.6,SNR=6.3						

*VAO **30** 07:52:30.3±1.6, 22.°48S×68.°68W, h121^{km}±11^{km}, mb4.0*
*SJA **30** 07:52:33.2±0.9, 22.°16S×68.°68W, h133^{km}, ML3.5, MW3.6*
*NEIC **30** 07:52:33.9±1.2, 22.°22S±0.°05×68.°72W±0.°05, h136^{km}±6^{km}, mb4.3/6, Error ellipse: s-maj=8.6km s-min=3.6km az=221.0*
*GUC **30** 07:52:34.6±0.9, 22.°15S×68.°67W, h129^{km}±4^{km}, ML3.7*
*IDC **30** 07:52:53.7±8.8, 20.°63S×67.°15W, h152^{km}±61^{km}, mb3.8/1, mbtmp4.0/3, Error ellipse: s-maj=107.0km s-min=48.0km az=39.0*
ISC 30 07:52:32.8±0.7**, 22.°20S**±0.°03×**68.°67W**±0.°05**, h139**^{km}±6^{km}**, n74, σ1.^{s}13**/101**, 4C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	0.66	307		Pn	07 52 54.6	+0.5
PB09				Sn	Sn	07 53 09.9	-0.4
PB09	**IPOC Station P**	0.66	307	⇑*i*P	Pn	07 52 54.6	+0.5
PB09				*i* S	Sn	07 53 09.6	-0.7
PB09				IAML		07 53 10.9	
	comp=E,2μm,0.3s						
PB09	**IPOC Station P**	0.66	307	*e*P	Pn	07 52 54.5	+0.3
PB09				*e*S	Sn	07 53 10.0	-0.4
PB09				IAML		07 53 10.4	
	comp=Z,2μm,0.3s						
AF01	**San Pedro de A**	0.88	149		Pn	07 52 56.7	+0.8
AF01				Sn	Sn	07 53 13.5	0.0
AF01	**San Pedro de A**	0.88	149	⇑*i*P	Pn	07 52 56.6	+0.8
AF01				*i* S	Sn	07 53 13.6	0.0
AF01				IAML		07 53 14.2	
	comp=N,5μm,0.2s						
AF01	**San Pedro de A**	0.88	149	*e*P	Pn	07 52 56.7	+0.8
AF01				*e*S	Sn	07 53 14.8	+1.3
AF01				IAML		07 53 30.1	
	comp=Z,2μm,0.5s						
PB06	**IPOC Station P**	0.97	239		Pn	07 52 57.4	+0.8
PB06				Sn	Sn	07 53 14.4	-0.2
PB06	**IPOC Station P**	0.97	239	⇑*i*P	Pn	07 52 57.2	+0.7
PB06				*i* S	Sn	07 53 14.7	+0.1
PB06				IAML		07 53 16.9	
	comp=N,2μm,0.1s						
PB06	**IPOC Station P**	0.97	239	*e*P	Pn	07 52 57.2	+0.7
PB06				*e*S	Sn	07 53 15.7	+1.1
PB06				IAML		07 53 17.5	
	comp=Z,1μm,0.2s						
PB03	**IPOC Station P**	1.01	278		Pn	07 52 57.4	+0.5
PB03				Sn	Sn	07 53 14.2	-1.0
PB01	**IPOC Station P**	1.38	326		Pn	07 53 00.6	+0.1
PB01	**IPOC Station P**	1.38	326	⇓*i*P	Pn	07 53 00.5	+0.1
PB01				*i* S	Sn	07 53 20.6	-0.9
PB01				IAML		07 53 21.9	
	comp=N,1μm,0.3s						
PB01	**IPOC Station P**	1.38	326	*e*P	Pn	07 53 00.6	+0.1
PB01				*e*S	Sn	07 53 21.1	-0.3
PB01				IAML		07 53 22.2	
	comp=Z,741nm,0.1s						
PB05	**IPOC Station P**	1.56	245		Pn	07 53 03.2	+0.8
PB05	**IPOC Station P**	1.56	245	⇑*i*P	Pn	07 53 03.2	+0.8
PB05				*i* S	Sn	07 53 24.6	-0.3
PB05				IAML		07 53 27.9	
	comp=N,458nm,0.2s						
PB05	**IPOC Station P**	1.56	245	*e*P	Pn	07 53 03.2	+0.8
PB05				*e*S	Sn	07 53 25.6	+0.7
PB05				IAML		07 53 27.8	
	comp=Z,197nm,0.2s						
PX03	**IPOC Station P**	2.00	333	*e*P	Pn	07 53 07.0	-0.4
PX03				*e*S	Sn	07 53 32.6	-1.3
PX03				IAML		07 53 38.4	
	comp=N,499nm,0.2s						
PB08	**IPOC Station P**	2.10	348		Pn	07 53 09.7	+0.7
PB08	**IPOC Station P**	2.10	348	⇓*e*P	Pn	07 53 09.9	+1.0
PB08				*e*S	Sn	07 53 35.6	-0.9
PB08				IAML		07 53 38.8	
	comp=N,204nm,0.2s						
PB08	**IPOC Station P**	2.10	348	*e*P	Pn	07 53 09.3	+0.4
PB08				*e*S	Sn	07 53 37.2	+0.7
PB08				IAML		07 53 38.5	
	comp=Z,167nm,0.2s						
TA01	**Diego Aracena**	2.15	319		Pn	07 53 09.7	+0.6
TA01	**Diego Aracena**	2.15	319	*e*P	Pn	07 53 08.9	-0.2
TA01				*i* S	Sn	07 53 36.0	-1.0
TA01				IAML		07 53 37.2	
	comp=N,383nm,0.2s						
TA01	**Diego Aracena**	2.15	319	*e*P	Pn	07 53 09.3	+0.2
TA01				*e*S	Sn	07 53 37.9	+0.9
TA01				IAML		07 53 41.4	
	comp=Z,117nm,0.2s						
PB10	**IPOC Station P**	2.17	233		Pn	07 53 09.9	+0.5
PB10	**IPOC Station P**	2.17	233	⇓*i*P	Pn	07 53 10.2	+0.8
PB10				*i* S	Sn	07 53 37.3	-0.2
PB10				IAML		07 53 38.5	
	comp=E,270nm,0.4s						
PB10	**IPOC Station P**	2.17	233	*e*P	Pn	07 53 10.3	+0.8
PB10				*e*S	Sn	07 53 38.2	+0.7
PB10				IAML		07 53 42.0	
	comp=Z,105nm,0.4s						
TA02	**Huaiquique**	2.35	324	Pn	Pn	07 53 11.9	+0.2
GO01	**Chusmiza**	2.56	349		Pn	07 53 15.9	+1.1
GO01	**Chusmiza**	2.56	349	*e*P	Pn	07 53 15.3	+0.5
GO01				*e*S	Sn	07 53 45.4	-1.6
GO01				IAML		07 53 53.2	
	comp=N,366nm,0.2s						
GO01	**Chusmiza**	2.56	349	*e*P	Pn	07 53 15.2	+0.4
GO01				*e*S	Sn	07 53 47.9	+0.9
GO01				IAML		07 53 48.8	
	comp=Z,122nm,0.5s						
PB11	**IPOC Station P**	2.59	339		Pn	07 53 14.6	-0.2
PB11	**IPOC Station P**	2.59	339	*i* P	Pn	07 53 14.5	-0.3
PB11				*i* S	Sn	07 53 45.3	-1.8
PB11				IAML		07 53 46.4	
	comp=E,315nm,0.3s						
PB11	**IPOC Station P**	2.59	339	*e*P	Pn	07 53 14.7	-0.2
PB11				*e*S	Sn	07 53 46.5	-0.7
PB11				IAML		07 53 50.7	
	comp=Z,141nm,0.3s						
PB14	**IPOC Station P**	2.89	213	Pn	Pn	07 53 19.9	+1.2
PB14	**IPOC Station P**	2.89	213	*e*P	Pn	07 53 19.9	+1.2
PB14				*e*S	Sn	07 53 53.8	-0.3
PB14				IAML		07 53 54.4	
	comp=Z,136nm,0.2s						
GO02	**Mina Guanaco**	3.07	196		Pn	07 53 22.1	+1.1
GO02	**Mina Guanaco**	3.07	196	*e*P	Pn	07 53 22.1	+1.1
GO02				*e*S	Sn	07 53 59.4	+1.2
GO02				IAML		07 54 05.0	
	comp=Z,256nm,0.2s						
PB16	**IPOC Station P**	3.92	348	Pn	Pn	07 53 33.8	+1.4
AC01	**Pan de Azucar**	4.31	204	Pn	Pn	07 53 36.5	-0.4
AC01	**Pan de Azucar**	4.31	204	*e*P	Pn	07 53 36.7	-0.2
AC01				*e*S	Sn	07 54 25.0	-1.7
AC01				IAML		07 54 26.0	
	comp=Z,78nm,0.3s						
AC02	**Maricunga**	4.63	185		Pn	07 53 41.8	+0.1
AC02	**Maricunga**	4.63	185	*e*P	Pn	07 53 42.6	+1.0
AC02				IAML		07 55 10.6	
	comp=Z,26nm,0.8s						
AC06	**Mina Casimiro**	5.36	196	Pn	Pn	07 53 50.0	-0.8
GO03	**Copiapo**	5.56	194	Pn	Pn	07 53 53.1	-0.4
LPAZ	**La Paz**	5.90	5		Pn	07 54 01.2	+2.4
LPAZ	**La Paz**	5.90	5	P	Pn	07 54 00.1	+1.3
	comp=Z,2.9nm,0.4s,baz=155,slow=4.6,SNR=41						
LPAZ				S	Sn	07 54 52.2	-13
	comp=Z,2.0nm,0.7s,baz=147,slow=4.9,SNR=3.6						
LPAZ	**La Paz**	5.90	5	*e*P	Pn	07 53 59.9	+1.1
AC04	**Llanos de Chal**	6.36	199	Pn	Pn	07 54 02.3	-2.0
LCO	**Las Campanas**	7.03	195	Pn	Pn	07 54 11.7	-1.8
CO01	**Juntas del Tor**	7.85	189	Pn	Pn	07 54 24.5	0.0
GO04	**Tololo Observa**	8.17	193	Pn	Pn	07 54 26.8	-1.9
CO03	**El Pedregal**	8.79	191	Pn	Pn	07 54 35.0	-2.0
CO06	**Fray Jorge**	8.85	197	Pn	Pn	07 54 34.0	-3.6
BBSD	**Serra de San D**	9.08	58	*e*P	Pn	07 54 38.8	-2.1
CO02	**Combarbal**	9.21	193	Pn	Pn	07 54 39.8	-2.7
PTLB	**Pontes e Lacer**	11.25	55	Pn	Pn	07 55 08.7	-1.0
SALV	**Santo Antonio**	13.77	65	*e*P	Pn	07 55 42.8	+0.4
PDRB	**Porto dos Gac**	15.53	49	*e*P	P	07 56 05.3	-0.4
ITAB	**Concordia**	15.84	112		P	07 56 09.3	+0.2
CPSB	**Cacapava Do Su**	15.91	124	*e*P	Pn	07 56 04.9	-4.0
PCMB	**Pacaembu**	16.17	91	*e*P	Pn	07 56 11.9	-0.4
CLDB	**Colider**	16.69	50	*e*P	Pn	07 56 19.7	+1.0
SNDB	**Serra Nova Dou**	19.46	61	*e*P	P	07 56 49.2	+0.3
IPMB	**Ipameri, GO**	19.66	81	*e*P	P	07 56 50.5	-0.7
NPGB	**Novo Progresso**	19.80	42	*e*P	P	07 56 54.2	+1.6
VAO	**Valinhos**	20.06	96	P	P	07 56 56.6	+1.3
VAO				IAmb	IAmb	07 57 09.1	
	comp=Z,16nm,1.2s						
MACA	**Manacapuru-AM**	20.45	23	P	P	07 57 00.9	+1.3
MACA				IAmb	IAmb	07 57 04.8	
	comp=Z,12nm,0.6s						
MACA	**Manacapuru-AM**	20.45	23	*e*P	P	07 57 00.8	+1.3
BDFB	**Brasilia**	20.59	75	P	P	07 57 02.7	+1.5
BDFB				IAmb	IAmb	07 57 33.3	
	comp=Z,12nm,1.5s						
BDFB	**Brasilia**	20.59	75	P	P	07 57 02.3	+1.1

	comp=Z,1.9nm,0.4s,baz=252,slow=9.5,SNR=7.3						
ITTB	**Itaituba**	**21.71**	**37**	*e*P	**P**	**07 57 12.6**	**-0.4**
PRVC	**Isla de Provid**	**37.48**	**339**	P	**P**	**07 59 33.7**	**+0.6**
QSPA	**South Pole Qui**	**68.00**	**180**	P	**P**	**08 03 17.9**	**+1.1**
QSPA				IAmb	IAmb	08 03 21.5	
	comp=Z,8.6nm,1.5s						
TORD	**Torodi Ar. Bea**	**77.38**	**70**	P	P	08 04 21.9	+9.0
	comp=Z,0.9nm,0.3s,baz=259,slow=5.7,SNR=5.7						
	comp=Z,0.9nm,0.3s						

*NEIC **30** 07:55:33.3±1.6, 38°.8N±0°.2×30°.3W±0°.1, h10^{km}±1^{km}, mb4.2/8, Error ellipse: s-maj=31.6km s-min=12.3km az=170.0*
*IDC **30** 07:55:37.2±2.3, 39°.62N×30°.10W, h0^{km}, mb3.8/11, mbtmp3.8/11, MS3.2/13, Error ellipse: s-maj=77.0km s-min=21.7km az=169.0*
*INMG **30** 07:55:38.8±1.1, 39°.38N×29°.94W, h10^{km}, ML3.5, Error ellipse: s-maj=8.7km s-min=4.6km az=44.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Crista Mdia Atlntico N*
*SVSA **30** 07:55:38.8±1.1, 39°.38N×29°.94W, h10^{km}, ML3.5(INMG), Error ellipse: s-maj=8.7km s-min=4.6km az=44.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Crista Mdia Atlntico N*
ISC 30 07:55:36.0±0.7, **39°.13N**±0°.07×**29°.93W**±0°.05, **h10^{km}, n90,** σ**1^{s}79**/117, **mb4.0**/13, **MS3.1**/13, **Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCED	**Cedros**	**1.08**	**117**	*e*P	**Pg**	**07 55 57.1**	**+0.3**
PCED				*e*S	**Sg**	**07 56 10.9**	**0.0**
PCED				*i* IAML		07 56 12.2	
PCED				*i* IAML		07 56 12.5	
PCED				*i* IAML		07 56 13.4	
PCED	**Cedros**	**1.08**	**117**	*e*P	**Pg**	**07 55 57.1**	**+0.3**
PCED				*e*S	**Sg**	**07 56 10.9**	**0.0**
PCED				*i* IAML		07 56 12.2	
PCED				*i* IAML		07 56 12.5	
PCED				*i* IAML		07 56 13.4	
PCED	**Cedros**	**1.08**	**117**	*e*P	**Pg**	**07 55 57.1**	**+0.3**
PCED				*e*S	**Sg**	**07 56 10.9**	**0.0**
PCED				*i* AML	AML	07 56 12.2	
PCED				*i* AML	AML	07 56 12.5	
PCED				*i* AML	AML	07 56 13.4	
CALA	**Caldeira**	**1.10**	**120**	*e*P	**Pg**	**07 55 57.8**	**+0.5**
CALA				*e*S	**Sg**	**07 56 11.8**	**+0.2**
CALA				*i* IAML		07 56 14.9	
CALA				*i* IAML		07 56 17.8	
CALA				*i* IAML		07 56 19.2	
CALA	**Caldeira**	**1.10**	**120**	*e*P	**Pg**	**07 55 57.8**	**+0.5**
CALA				*e*S	**Sg**	**07 56 11.8**	**+0.2**
CALA				*i* IAML		07 56 14.9	
CALA				*i* IAML		07 56 17.8	
CALA				*i* IAML		07 56 19.2	
CALA	**Caldeira**	**1.10**	**120**	*e*P	**Pg**	**07 55 57.8**	**+0.5**
CALA				*e*S	**Sg**	**07 56 11.8**	**+0.2**
CALA				*i* AML	AML	07 56 14.9	
CALA				*i* AML	AML	07 56 17.8	
CALA				*i* AML	AML	07 56 19.2	
PFCBR	**Castelo Branco**	**1.13**	**122**	*e*S	**Sb**	**07 56 12.7**	**+0.4**
PFCBR				*i* IAML		07 56 14.3	
PFCBR				*i* IAML		07 56 14.3	
PFCBR				*i* IAML		07 56 14.6	
PFCBR	**Castelo Branco**	**1.13**	**122**	*e*S	**Sb**	**07 56 12.7**	**+0.4**
PFCBR				*i* IAML		07 56 14.3	
PFCBR				*i* IAML		07 56 14.3	
PFCBR				*i* IAML		07 56 14.6	
PFCBR	**Castelo Branco**	**1.13**	**122**	*e*S	**Sb**	**07 56 12.7**	**+0.4**
PFCBR				*i* AML	AML	07 56 14.3	
PFCBR				*i* AML	AML	07 56 14.3	
PFCBR				*i* AML	AML	07 56 14.6	
PRIB2	**Ribeirinha**	**1.16**	**117**	*e*P	**Pb**	**07 55 58.5**	**+0.3**
PRIB2				*e*S	**Sb**	**07 56 12.7**	**-0.5**
PRIB2				*i* IAML		07 56 14.6	
PRIB2				*i* IAML		07 56 15.5	
PRIB2				*i* IAML		07 56 16.1	
PRIB2	**Ribeirinha**	**1.16**	**117**	*e*P	**Pb**	**07 55 58.5**	**+0.3**
PRIB2				*e*S	**Sb**	**07 56 12.7**	**-0.5**
PRIB2				*i* IAML		07 56 14.6	
PRIB2				*i* IAML		07 56 15.5	
PRIB2				*i* IAML		07 56 16.1	
PRIB2	**Ribeirinha**	**1.16**	**117**	*e*P	**Pb**	**07 55 58.5**	**+0.3**
PRIB2				*e*S	**Sb**	**07 56 12.7**	**-0.5**
PRIB2				*i* AML	AML	07 56 14.6	
PRIB2				*i* AML	AML	07 56 15.5	
PRIB2				*i* AML	AML	07 56 16.1	
HOR	**Horta**	**1.18**	**120**	*e*P	**Pb**	**07 55 58.7**	**+0.2**
HOR				*e*S	**Sb**	**07 56 13.8**	**0.0**
HOR				*i* IAML		07 56 15.6	
HOR				*i* IAML		07 56 16.1	
HOR				*i* IAML		07 56 16.1	
HOR	**Horta**	**1.18**	**120**	*e*P	**Pb**	**07 55 58.7**	**+0.2**
HOR				*e*S	**Sb**	**07 56 13.8**	**0.0**
HOR				*i* IAML		07 56 15.6	
HOR				*i* IAML		07 56 16.1	
HOR				*i* IAML		07 56 16.1	
HOR	**Horta**	**1.18**	**120**	*e*P	**Pb**	**07 55 58.7**	**+0.2**
HOR				*e*S	**Sb**	**07 56 13.8**	**0.0**
HOR				*i* AML	AML	07 56 15.6	
HOR				*i* AML	AML	07 56 16.1	
HOR				*i* AML	AML	07 56 16.1	
PCAN	**Candelaria**	**1.31**	**120**	*e*P	**Pn**	**07 56 00.7**	**+0.3**
PCAN				*e*S	**Sb**	**07 56 17.1**	**-0.5**
PCAN				*i* IAML		07 56 19.0	
PCAN				*i* IAML		07 56 19.9	
PCAN				*i* IAML		07 56 20.5	
PCAN	**Candelaria**	**1.31**	**120**	*e*P	**Pn**	**07 56 00.7**	**+0.3**
PCAN				*e*S	**Sb**	**07 56 17.1**	**-0.5**
PCAN				*i* IAML		07 56 19.0	
PCAN				*i* IAML		07 56 19.9	
PCAN				*i* IAML		07 56 20.5	
PCAN	**Candelaria**	**1.31**	**120**	*e*P	**Pn**	**07 56 00.7**	**+0.3**
PCAN				*e*S	**Sb**	**07 56 17.1**	**-0.5**
PCAN				*i* AML	AML	07 56 19.0	
PCAN				*i* AML	AML	07 56 19.9	
PCAN				*i* AML	AML	07 56 20.5	
PICO	**Pico**	**1.33**	**118**	*e*P	**Pn**	**07 56 00.9**	**+0.1**
PICO				*e*S	**Sb**	**07 56 17.6**	**-0.7**
PICO				*i* IAML		07 56 19.4	
PICO				*i* IAML		07 56 20.5	
PICO				*i* IAML		07 56 20.7	
PICO	**Pico**	**1.33**	**118**	*e*P	**Pn**	**07 56 00.9**	**+0.1**
PICO				*e*S	**Sb**	**07 56 17.6**	**-0.7**
PICO				*i* IAML		07 56 19.4	
PICO				*i* IAML		07 56 20.5	
PICO				*i* IAML		07 56 20.7	
PICO	**Pico**	**1.33**	**118**	*e*P	**Pn**	**07 56 00.9**	**+0.1**
PICO				*e*S	**Sb**	**07 56 17.6**	**-0.7**
PICO				*i* AML	AML	07 56 19.4	
PICO				*i* AML	AML	07 56 20.5	
PICO				*i* AML	AML	07 56 20.7	
ROSA	**Rosais**	**1.38**	**107**	*e*P	**Pn**	**07 56 00.5**	**-0.8**
ROSA				*e*S	**Sb**	**07 56 16.7**	**-2.8**
ROSA				*i* IAML		07 56 16.9	
ROSA				*i* IAML		07 56 25.1	
ROSA				*i* IAML		07 56 26.0	
ROSA	**Rosais**	**1.38**	**107**	*e*P	**Pn**	**07 56 00.5**	**-0.8**
ROSA				*e*S	**Sb**	**07 56 16.7**	**-2.8**
ROSA				*i* IAML		07 56 16.9	
ROSA				*i* IAML		07 56 25.1	
ROSA				*i* IAML		07 56 26.0	
ROSA	**Rosais**	**1.38**	**107**	*e*P	**Pn**	**07 56 00.5**	**-0.8**
ROSA				*e*S	**Sb**	**07 56 16.7**	**-2.8**
ROSA				*i* AML	AML	07 56 16.9	
ROSA				*i* AML	AML	07 56 25.1	
ROSA				*i* AML	AML	07 56 26.0	
PPNO	**Prainha do Nor**	**1.46**	**116**	*e*P	**Pn**	**07 56 02.4**	**-0.1**
PPNO				*e*S	**Sn**	**07 56 20.6**	**-1.1**
PPNO				*i* IAML		07 56 26.4	
PPNO				*i* IAML		07 56 35.2	
PPNO	**Prainha do Nor**	**1.46**	**116**	*e*P	**Pn**	**07 56 02.4**	**-0.1**
PPNO				*e*S	**Sn**	**07 56 20.6**	**-1.1**
PPNO				*i* IAML		07 56 26.4	
PPNO				*i* IAML		07 56 35.2	
PPNO	**Prainha do Nor**	**1.46**	**116**	*e*P	**Pn**	**07 56 02.4**	**-0.1**
PPNO				*e*S	**Sn**	**07 56 20.6**	**-1.1**
PPNO				*i* AML	AML	07 56 26.4	
PPNO				*i* AML	AML	07 56 35.2	
SRBC	**Serra Branca**	**1.47**	**93**	*e*S	**Sn**	**07 56 17.3**	**-4.7**
SRBC				*i* IAML		07 56 18.9	
SRBC				*i* IAML		07 56 19.6	
SRBC				*i* IAML		07 56 19.9	
SRBC	**Serra Branca**	**1.47**	**93**	*e*S	**Sn**	**07 56 17.3**	**-4.7**
SRBC				*i* IAML		07 56 18.9	
SRBC				*i* IAML		07 56 19.6	
SRBC				*i* IAML		07 56 19.9	
SRBC	**Serra Branca**	**1.47**	**93**	*e*S	**Sn**	**07 56 17.3**	**-4.7**
SRBC				*i* AML	AML	07 56 18.9	
SRBC				*i* AML	AML	07 56 19.6	
SRBC				*i* AML	AML	07 56 19.9	
PGRA	**Graciosa**	**1.52**	**93**	*e*P	Pg	07 56 13.8	+8.6
PGRA				*e*S	**Sg**	**07 56 30.5**	**+5.7**
PGRA				*i* IAML		07 56 31.4	
PGRA				*i* IAML		07 56 32.8	
PGRA				*i* IAML		07 56 33.7	
PGRA	**Graciosa**	**1.52**	**93**	*e*P	Pg	07 56 13.8	+8.6
PGRA				*e*S	**Sg**	**07 56 30.5**	**+5.7**
PGRA				*i* IAML		07 56 31.4	
PGRA				*i* IAML		07 56 32.8	
PGRA				*i* IAML		07 56 33.7	
PGRA	**Graciosa**	**1.52**	**93**	*e*P	Pg	07 56 13.8	+8.6
PGRA				*e*S	**Sg**	**07 56 30.5**	**+5.7**
PGRA				*i* AML	AML	07 56 31.4	
PGRA				*i* AML	AML	07 56 32.8	
PGRA				*i* AML	AML	07 56 33.7	
PMAN	**Manadas**	**1.52**	**109**	*e*P	**Pn**	**07 56 02.5**	**-0.8**
PMAN				*e*S	**Sn**	**07 56 20.4**	**-2.6**
PMAN				*i* IAML		07 56 20.9	
PMAN				*i* IAML		07 56 21.3	
PMAN				*i* IAML		07 56 22.5	
PMAN	**Manadas**	**1.52**	**109**	*e*P	**Pn**	**07 56 02.5**	**-0.8**
PMAN				*e*S	**Sn**	**07 56 20.4**	**-2.6**
PMAN				*i* IAML		07 56 20.9	
PMAN				*i* IAML		07 56 21.3	
PMAN				*i* IAML		07 56 22.5	
PMAN	**Manadas**	**1.52**	**109**	*e*P	**Pn**	**07 56 02.5**	**-0.8**
PMAN				*e*S	**Sn**	**07 56 20.4**	**-2.6**
PMAN				*i* AML	AML	07 56 20.9	
PMAN				*i* AML	AML	07 56 21.3	
PMAN				*i* AML	AML	07 56 22.5	
PID	**Ribeirinha**	**1.57**	**115**	*e*P	**Pn**	**07 56 03.9**	**-0.2**
PID				*e*S	**Sn**	**07 56 22.8**	**-1.7**
PID				*i* IAML		07 56 27.8	
PID				*i* IAML		07 56 31.1	
PID				*i* IAML		07 56 31.6	
PID	**Ribeirinha**	**1.57**	**115**	*e*P	**Pn**	**07 56 03.9**	**-0.2**
PID				*e*S	**Sn**	**07 56 22.8**	**-1.7**
PID				*i* IAML		07 56 27.8	
PID				*i* IAML		07 56 31.1	
PID				*i* IAML		07 56 31.6	
PID	**Ribeirinha**	**1.57**	**115**	*e*P	**Pn**	**07 56 03.9**	**-0.2**
PID				*e*S	**Sn**	**07 56 22.8**	**-1.7**
PID				*i* AML	AML	07 56 27.8	
PID				*i* AML	AML	07 56 31.1	
PID				*i* AML	AML	07 56 31.6	
ADH	**Angra Heroismo**	**2.15**	**102**	*e*P	**Pn**	**07 56 10.9**	**-1.1**
ADH				*e*S	**Sn**	**07 56 35.2**	**-3.5**
ADH				*i* IAML		07 56 39.0	
ADH				*i* IAML		07 56 39.2	
ADH				*i* IAML		07 56 39.5	
ADH	**Angra Heroismo**	**2.15**	**102**	*e*P	**Pn**	**07 56 10.9**	**-1.1**
ADH				*e*S	**Sn**	**07 56 35.2**	**-3.5**
ADH				*i* IAML		07 56 39.0	
ADH				*i* IAML		07 56 39.2	
ADH				*i* IAML		07 56 39.5	
ADH	**Angra Heroismo**	**2.15**	**102**	*e*P	**Pn**	**07 56 10.9**	**-1.1**
ADH				*e*S	**Sn**	**07 56 35.2**	**-3.5**
ADH				*i* AML	AML	07 56 39.0	
ADH				*i* AML	AML	07 56 39.2	
ADH				*i* AML	AML	07 56 39.5	
PAGU	**Agualva, Azore**	**2.17**	**99**	*e*P	**Pn**	**07 56 11.3**	**-1.0**
PAGU				*e*S	**Sn**	**07 56 35.8**	**-3.4**
PAGU				*i* IAML		07 56 39.4	
PAGU				*i* IAML		07 56 39.7	
PAGU				*i* IAML		07 56 40.1	
PAGU	**Agualva, Azore**	**2.17**	**99**	*e*P	**Pn**	**07 56 11.3**	**-1.0**
PAGU				*e*S	**Sn**	**07 56 35.8**	**-3.4**
PAGU				*i* IAML		07 56 39.4	
PAGU				*i* IAML		07 56 39.7	
PAGU				*i* IAML		07 56 40.1	
PAGU	**Agualva, Azore**	**2.17**	**99**	*e*P	**Pn**	**07 56 11.3**	**-1.0**
PAGU				*e*S	**Sn**	**07 56 35.8**	**-3.4**
PAGU				*i* AML	AML	07 56 39.4	
PAGU				*i* AML	AML	07 56 39.7	
PAGU				*i* AML	AML	07 56 40.1	
PSCM	**Serra do Cume**	**2.23**	**100**	*e*P	**Pn**	**07 56 12.2**	**-1.0**
PSCM				*e*S	**Sn**	**07 56 38.3**	**-2.5**
PSCM				*i* IAML		07 56 40.5	
PSCM				*i* IAML		07 56 40.8	
PSCM				*i* IAML		07 56 41.8	
PSCM	**Serra do Cume**	**2.23**	**100**	*e*P	**Pn**	**07 56 12.2**	**-1.0**
PSCM				*e*S	**Sn**	**07 56 38.3**	**-2.5**
PSCM				*i* IAML		07 56 40.5	
PSCM				*i* IAML		07 56 40.8	
PSCM				*i* IAML		07 56 41.8	
PSCM	**Serra do Cume**	**2.23**	**100**	*e*P	**Pn**	**07 56 12.2**	**-1.0**
PSCM				*e*S	**Sn**	**07 56 38.3**	**-2.5**
PSCM				*i* AML	AML	07 56 40.5	
PSCM				*i* AML	AML	07 56 40.8	
PSCM				*i* AML	AML	07 56 41.8	
PSET	**Sete Cidades**	**3.55**	**110**	*e*P	**Pn**	**07 56 31.1**	**-0.1**
PSET	**Sete Cidades**	**3.55**	**110**	*e*P	**Pn**	**07 56 31.1**	**-0.1**
CMLA	**Cha da Macela**	**3.72**	**110**		**Pn**	**07 56 34.2**	**+0.7**
BART	**Pico Bartolome**	**3.97**	**108**	*e*P	**Pn**	**07 56 36.9**	**-0.2**
BART	**Pico Bartolome**	**3.97**	**108**	*e*P	**Pn**	**07 56 36.9**	**-0.2**
PSMA	**Santa Maria**	**4.35**	**118**	*e*P	**Pn**	**07 56 42.4**	**+0.3**
PSMA	**Santa Maria**	**4.35**	**118**	*e*P	**Pn**	**07 56 42.4**	**+0.3**
PSMN	**Pico do Norte,**	**4.39**	**117**	*e*P	**Pn**	**07 56 42.7**	**0.0**
PSMN	**Pico do Norte,**	**4.39**	**117**	*e*P	**Pn**	**07 56 42.7**	**0.0**
MORF	**Marmelete**	**16.82**	**90**	P	**Pn**	**07 59 32.1**	**+0.5**
PVAQ	**Vaqueiros**	**17.52**	**89**	P	**Pn**	**07 59 41.9**	**+1.5**
PVAQ				IAmb	IAmb	07 59 46.4	
	comp=Z,16nm,1.0s						
ESDC	**Sonseca Array**	**20.05**	**80**	P	Pn	08 00 14.1	+2.9
	comp=Z,1.5nm,1.0s,baz=282,slow=9.1,SNR=9.9						
ESDC				LR	LR	08 06 44.2	
	comp=Z,57nm,18.8s,baz=274,slow=33						
	comp=Z,1.5nm,1.0s						
MDT	**Midelt**	**21.40**	**99**	LR	LR	08 07 43.5	
	comp=Z,50nm,18.5s,baz=331,slow=34						
DRLN	**Deer Lake**	**22.10**	**306**	P	**P**	**08 00 26.8**	**-4.5**
EKA	**Eskdalemuir Ar**	**24.13**	**39**	P	**P**	**08 00 52.4**	**+0.5**
	comp=Z,1.8nm,0.8s,baz=218,slow=9.0,SNR=2.5						
	comp=Z,1.8nm,0.8s						
BORG	**Borgarnes**	**26.15**	**8**	LR	LR	08 08 29.1	
	comp=Z,44nm,19.6s,baz=310,slow=30						
SCHQ	**Schefferville**	**29.25**	**315**	LR	LR	08 11 08.5	
	comp=Z,51nm,20.6s,baz=78,slow=32						
D62A	**Allapoint, All**	**29.40**	**299**	P	**P**	**08 01 37.5**	**-1.8**
D62A				IAmb	IAmb	08 02 05.3	
	comp=Z,4.7nm,1.2s						
SFJD	**Kangerlussuaq**	**30.24**	**344**	LR	LR	08 11 08.1	
	comp=Z,47nm,18.9s,baz=204,slow=31						
GERES	**GERESS Array B**	**32.46**	**58**	P	**P**	**08 02 06.9**	**+0.4**
NOA	**NORSAR Array B**	**33.47**	**35**	P	**P**	**08 02 16.6**	**+1.5**
	comp=Z,1.0nm,0.9s,baz=246,slow=7.5,SNR=3.3						
NOA				LR	LR	08 13 08.3	
	comp=Z,12nm,20.7s,baz=285,slow=32						
	comp=Z,1.0nm,0.9s						
FRB	**Frobisher Bay**	**33.57**	**330**	LR	LR	08 13 26.2	
	comp=Z,35nm,18.4s,baz=150,slow=32						
VAE	**Valguarnera**	**34.58**	**78**	LR	LR	08 15 19.8	
	comp=Z,101nm,20.2s,baz=320,slow=34						
SADO	**Sadowa**	**36.58**	**295**	LR	LR	08 15 36.7	
	comp=Z,66nm,21.5s,baz=147,slow=33						
DBIC	**Dimbokro**	**39.44**	**139**	LR	LR	08 17 40.4	
	comp=Z,35nm,21.0s,baz=336,slow=33						
FINES	**FINESS Array B**	**40.52**	**38**	P	**P**	**08 03 15.4**	**+0.6**
	comp=Z,2.2nm,0.7s,baz=242,slow=4.1,SNR=7.4						
	comp=Z,2.2nm,0.7s						
ARCES	**ARCESS Array B**	**41.96**	**26**	LR	LR	08 17 40.4	
	comp=Z,33nm,20.5s,baz=286,slow=32						
AKASG	**Malin Array Be**	**42.38**	**54**	P	**P**	**08 03 30.2**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=273,slow=8.7,SNR=2.6						
AKASG				LR	LR	08 19 57.3	
	comp=Z,19nm,19.8s,baz=254,slow=35						
	comp=Z,0.2nm,0.3s						
TKL	**Tuckaleechee C**	**42.40**	**283**	LR	LR	08 19 17.3	
	comp=Z,27nm,20.9s,baz=94,slow=34						
PDAR	**Pinedale Array**	**58.11**	**301**	P	**P**	**08 05 29.6**	**-0.3**
	comp=Z,0.5nm,0.9s,baz=70,slow=9.6,SNR=3.7						
	comp=Z,0.5nm,0.9s						
TXAR	**Lajitas Array**	**60.23**	**285**	P	**P**	**08 05 46.3**	**+1.6**
	comp=Z,0.4nm,0.7s,baz=77,slow=6.5,SNR=7.8						
	comp=Z,0.4nm,0.7s						
O02D	**Mt. Diablo Mer**	**68.03**	**304**	P	P	08 06 32.1	-3.5
KURK	**Kurchatov**	**70.86**	**40**	P	**P**	**08 06 53.0**	**+0.2**
KURK				IAmb	IAmb	08 06 54.9	
	comp=Z,2.7nm,1.1s						
KURBB	**Kurchatov Arra**	**70.87**	**40**	P	**P**	**08 06 53.2**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=309,slow=6.4,SNR=4.8						
	comp=Z,0.7nm,0.7s						
KKAR	**Karatay Array**	**71.05**	**50**	P	**P**	**08 06 53.6**	**-0.6**
ZAA0	**Zalesovo Array**	**71.67**	**34**	P	**P**	**08 06 56.8**	**-0.9**
ZAA0				IAmb	IAmb	08 06 59.7	
	comp=Z,2.8nm,1.1s						
ZALV	**Zalesovo Beam**	**71.67**	**34**	P	**P**	**08 06 58.2**	**+0.6**
ZALV	**Zalesovo Beam**	**71.67**	**34**	P	**P**	**08 06 58.4**	**+0.7**
	comp=Z,0.7nm,0.2s,baz=290,slow=6.1,SNR=3.6						
	comp=Z,0.7nm,0.2s						
MAKZ	**Makanchi**	**75.08**	**41**	P	**P**	**08 07 17.3**	**-0.7**
MKAR	**Makanchi Array**	**75.25**	**41**	P	**P**	**08 07 18.3**	**-0.7**
MKAR	**Makanchi Array**	**75.25**	**41**	P	**P**	**08 07 19.5**	**+0.6**
	comp=Z,2.2nm,0.8s,baz=316,slow=5.1,SNR=18						
	comp=Z,2.2nm,0.8s						
SONM	**Songino Array**	**85.09**	**28**	P	**P**	**08 08 13.8**	**+1.6**
	comp=Z,1.0nm,0.8s,baz=308,slow=4.9,SNR=5.5						
	comp=Z,1.0nm,0.8s						

BER 30 07:59:09.1±1.6, **72°.50N×3°.61E, h10^{km}, Mw3.8, Confirmed Earthquake, Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LOF	**Lofoten**	**5.52**	**138**	*e*P	Pn	08 00 28.4	-2.8
LOF				IAML		08 00 36.9	
	comp=Z,3.6nm,1.1s						
TRO	**Tromso**	**5.75**	**113**	*e*P	Pn	08 00 31.3	-3.0
TRO				IAML		08 00 32.8	
	comp=Z,3.3nm,0.3s						
STEI	**Steigen**	**6.04**	**134**	*e*P	Pn	08 00 36.4	-1.9
STEI				IAML		08 00 37.0	
	comp=Z,2.4nm,0.4s						
JETT	**Jettan, Norway**	**6.21**	**110**	*e*P	Pn	08 00 39.1	-1.6
SPA0	**Spitsbergen Ar**	**6.54**	**24**	*e*P	Pn	08 00 42.6	-2.5
VAGH	**Vaagaholmen**	**6.70**	**145**	*e*P	Pn	08 00 44.1	-3.2
KBS	**Kingsbay**	**6.77**	**14**	*e*P	Pn	08 00 45.6	-2.7
KONS	**Konsvik**	**6.88**	**146**	*e*P	Pn	08 00 47.2	-2.6
KONS				IAML		08 00 47.5	
	comp=Z,3.0nm,0.6s						
STOK	**Stokkvaagen**	**7.02**	**147**	*e*P	Pn	08 00 48.4	-3.3
LEIR	**Leirfjorden**	**7.24**	**148**	*e*P	Pn	08 00 52.4	-2.3
LEIR				IAML		08 00 53.3	
	comp=Z,1.3nm,0.3s						
MOR8	**Moi Rana**	**7.41**	**144**	*e*P	Pn	08 00 55.0	-2.0
MOR8				IAML		08 00 55.3	
	comp=Z,2.3nm,0.2s						

IDC 30 08:14:43.9±7.3, **6°.97S×130°.56E, h356^{km}**±79^{km}, **mb2.9**/1, **mbtmp3.3**/4, **Error ellipse: s-maj=56.3km s-min=32.3km az=60.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.05**	**203**	P	P	08 17 23.4	-2.4
	1.4nm,0.6s,baz=31,slow=12,SNR=8.3						
FITZ				S	S	08 19 39.0	-0.9
	0.8nm,0.3s,baz=38,slow=19,SNR=1.6						
WRA	**Warramunga Arr**	**13.40**	**164**	P	P	08 17 41.4	+0.6
	0.2nm,0.4s,baz=345,slow=11,SNR=7.9						
WRA				S	S	08 20 08.5	+1.1
	0.5nm,0.7s,baz=350,slow=19,SNR=6.4						
ASAR	**Alice Springs**	**16.91**	**169**	P	P	08 18 19.4	+0.5
	0.2nm,0.8s,baz=354,slow=10,SNR=7.4						
MKAR	**Makanchi Array**	**68.51**	**327**	P	P	08 25 09.1	+0.3
	0.2nm,0.3s,baz=114,slow=8.0,SNR=5.3						
	0.2nm,0.3s						
TXAR	**Lajitas Array**	**124.44**	**59**	PKP	PKPdf	08 33 01.1	-0.8
	0.3nm,0.9s,baz=233,slow=2.0,SNR=2.8						

*UCR **30** 08:54:03.8±0.9, 10°.27N×84°.17W, h98^{km}±2^{km}, MW3.5*
*CATAC **30** 08:54:05.0±0.5, 10°N±3°×8°4W±°, h78^{km}±6^{km}, M2.9/11, MLv2.9/11, Error ellipse: s-maj=8.2km s-min=4.4km az=42.3, confirmed*
ISC 30 08:54:04.5±1.6, **10°.21N**±0°.05×**84°.19W**±0°.04, **h96^{km}**±8^{km}, **n86,** σ**0^{s}35**/112, **Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VPL1	**V. Platanar**	**0.18**	**286**	*e*P	**Pn**	**08 54 18.4**	**0.0**
SARCI	**Sarchi**	**0.19**	**233**	*e*P	**Pn**	**08 54 18.3**	**-0.1**
SARCI				*e*S	**Sn**	**08 54 29.3**	**+0.7**
TCS1	**Tacares**	**0.20**	**213**	*e*P	**Pn**	**08 54 18.0**	**-0.3**
TCS1	**Tacares**	**0.20**	**213**	P	**Pn**	**08 54 18.2**	**-0.2**
NARAN	**Naranjo de Ala**	**0.21**	**240**	*e*P	**Pn**	**08 54 18.4**	**-0.1**
VPL2	**V. Platanar**	**0.21**	**298**	*e*P	**Pn**	**08 54 18.4**	**-0.1**
VPL2				*e*S	**Sn**	**08 54 29.3**	**+0.4**
HEME	**Heredia, Merce**	**0.22**	**166**	*e*P	**Pn**	**08 54 18.2**	**-0.2**
HEME				*e*S	**Sn**	**08 54 29.0**	**+0.2**
HDC	**Heredia**	**0.22**	**160**	*e*P	**Pn**	**08 54 18.3**	**-0.2**
HDC				*e*S	**Sn**	**08 54 28.9**	**+0.2**
BELE	**Belen**	**0.23**	**179**	*e*P	**Pn**	**08 54 18.1**	**-0.4**
BELE				*e*S	**Sn**	**08 54 28.6**	**-0.1**
DOMI	**Santo Domingo**	**0.24**	**156**	*e*P	**Pn**	**08 54 18.5**	**0.0**
DOMI				*e*S	**Sn**	**08 54 29.3**	**+0.3**
SANTA	**Santa Ana**	**0.27**	**179**	*e*P	**Pn**	**08 54 18.2**	**-0.5**
SANTA				*e*S	**Sn**	**08 54 28.9**	**-0.2**
PAVB	**Pavas, San Jos**	**0.27**	**165**	*e*P	**Pn**	**08 54 18.3**	**-0.4**
PAVB				*e*S	**Sn**	**08 54 29.4**	**+0.3**
PALD	**Palmares**	**0.28**	**238**	*e*P	**Pn**	**08 54 18.2**	**-0.5**
ATEO	**Atenas**	**0.29**	**220**	*e*P	**Pn**	**08 54 18.0**	**-0.8**
ATEO				*e*S	**Sn**	**08 54 29.3**	**0.0**
RAMO	**San Ramon**	**0.30**	**247**	*e*P	**Pn**	**08 54 18.4**	**-0.4**
SRA1	**San Ramn**	**0.31**	**247**	*e*P	**Pn**	**08 54 18.5**	**-0.3**
SRA1				*e*S	**Sn**	**08 54 29.5**	**0.0**
AMPA	**Desamparados**	**0.33**	**158**	*e*P	**Pn**	**08 54 18.6**	**-0.4**
AMPA				*e*S	**Sn**	**08 54 29.4**	**-0.3**
PURI	**Puriscal**	**0.38**	**198**	*e*P	**Pn**	**08 54 18.9**	**-0.3**
PURI				*e*S	**Sn**	**08 54 30.3**	**+0.2**
PILE	**Guapiles**	**0.40**	**89**	*e*P	**Pn**	**08 54 18.9**	**-0.2**
ACOS	**Acosta**	**0.41**	**176**	*e*P	**Pn**	**08 54 19.1**	**-0.4**
ACOS				*e*S	**Sn**	**08 54 30.6**	**+0.1**
OROT	**Orotina**	**0.44**	**229**	*e*P	**Pn**	**08 54 19.3**	**-0.1**
OROT				*e*S	**Sn**	**08 54 30.9**	**+0.3**
RAFA	**San Farael, Vo**	**0.45**	**123**	*e*P	**Pn**	**08 54 20.1**	**+0.3**
SOCE	**Pocosol**	**0.46**	**293**	*e*P	**Pn**	**08 54 19.6**	**0.0**
SOCE				*e*S	**Sn**	**08 54 31.1**	**+0.3**
SOCE	**Pocosol**	**0.46**	**293**	P	**Pn**	**08 54 19.5**	**-0.1**
VTLA	**Turrialba Volc**	**0.46**	**116**	*e*P	**Pn**	**08 54 19.8**	**-0.2**
CVTQ	**Turrialba Volc**	**0.46**	**116**	*e*P	**Pn**	**08 54 19.8**	**-0.2**
PCAYA	**Pacayas**	**0.47**	**128**	*e*P	**Pn**	**08 54 20.1**	**+0.1**
PCAYA				*e*S	**Sn**	**08 54 32.2**	**+0.8**
CARI	**Cariari**	**0.47**	**71**	*e*P	**Pn**	**08 54 19.5**	**-0.2**
CVTV	**Tajo**	**0.48**	**115**	*e*P	**Pn**	**08 54 20.1**	**0.0**
REPA	**Paraso**	**0.49**	**140**	*e*P	**Pn**	**08 54 19.9**	**-0.2**
REPA				*e*S	**Sn**	**08 54 31.4**	**-0.1**
LCR2	**La Lucha 2**	**0.50**	**158**	*e*P	**Pn**	**08 54 19.7**	**-0.4**
LCR2				*e*S	**Sn**	**08 54 31.9**	**+0.2**
LCR2	**La Lucha 2**	**0.50**	**158**	P	**Pn**	**08 54 19.6**	**-0.5**
ABRB	**Las Abras (San**	**0.51**	**113**	*e*P	**Pn**	**08 54 20.6**	**+0.3**
VTCV	**VTCV, Calle Va**	**0.51**	**116**	*e*P	**Pn**	**08 54 20.1**	**0.0**
ABE2	**San Pablo**	**0.52**	**165**	*e*P	**Pn**	**08 54 20.1**	**-0.2**
ABE2				*e*S	**Sn**	**08 54 32.3**	**+0.3**
ARZA	**Esparza**	**0.52**	**246**	*e*P	**Pn**	**08 54 19.7**	**-0.3**
FORC	**Fortuna**	**0.54**	**299**	*e*P	**Pn**	**08 54 20.3**	**+0.1**
FORC				*e*S	**Sn**	**08 54 32.4**	**+0.5**
VACR	**Volcan Arenal**	**0.55**	**299**	*e*P	**Pn**	**08 54 20.2**	**0.0**
VACR				*e*S	**Sn**	**08 54 32.6**	**+0.6**
COVE	**Coope Vega, Sa**	**0.55**	**338**	S	**Sn**	**08 54 31.9**	**-0.2**
COVE	**Coope Vega, Sa**	**0.55**	**338**	P	**Pn**	**08 54 19.6**	**-0.7**
VERB	**Verbena**	**0.55**	**118**	*e*P	**Pn**	**08 54 20.5**	**0.0**
PITB	**Pirrs, San**	**0.57**	**163**	*e*P	**Pn**	**08 54 20.4**	**-0.2**
RESJ	**San Isidro (Tu**	**0.57**	**108**	*e*P	**Pn**	**08 54 20.4**	**0.0**
RESJ				*e*S	**Sn**	**08 54 33.5**	**+1.1**
TRT2	**Tortugero**	**0.57**	**52**	*e*P	**Pn**	**08 54 19.9**	**-0.4**
TRT2	**Tortugero**	**0.57**	**52**	P	**Pn**	**08 54 19.7**	**-0.7**
PISJ	**San Jernim**	**0.57**	**173**	*e*P	**Pn**	**08 54 20.1**	**-0.5**
PICV	**PH. Pirrs**	**0.57**	**180**	*e*P	**Pn**	**08 54 20.2**	**-0.3**
CEDE	**Laguna Cedeo**	**0.58**	**299**	*e*P	**Pn**	**08 54 20.6**	**0.0**
ARE1	**Arenal 1**	**0.58**	**296**	*e*P	**Pn**	**08 54 20.7**	**+0.2**

VARE2	V. Arenal	0.58	296	eP	Pn	08 54 20.7	+0.1
CASO	Castillo	0.58	293	eP	Pn	08 54 20.7	+0.2
ROBF	Roble, Puntare	0.58	247	eP	Pn	08 54 20.5	0.0
PAR1A	Puntarenas Pro	0.61	186	eP	Pn	08 54 20.9	+0.2
PIEC	Cerro El Cedra	0.62	158	eP	Pn	08 54 20.7	-0.6
PIEC				eS	Sn	08 54 32.4	-1.2
MTEVE	Monteverde	0.64	280	eP	Pn	08 54 21.2	0.0
LLNJ	Naranjito	0.73	173	eP	Pn	08 54 21.7	-0.2
LLNJ				eS	Sn	08 54 35.4	+0.6
JTS	Las Juntas de	0.76	276	eP	Pn	08 54 22.0	-0.1
JTS				eS	Sn	08 54 35.2	0.0
JUNT	Juntas	0.76	276	eP	Pn	08 54 22.0	-0.1
JUNT				eS	Sn	08 54 35.5	+0.2
PAQE	Paquera	0.83	242	eP	Pn	08 54 23.2	+0.4
TIMP	Tierras Morena	0.90	295	eP	Pn	08 54 23.4	-0.2
INVE	Universidad In	0.90	287	eP	Pn	08 54 24.0	+0.4
CUI	Cuipilapa	1.06	295	eP	Pn	08 54 25.4	0.0
CBL1	Cabuya	1.08	235	eP	Pn	08 54 25.3	-0.2
SAJE	San Jernim	1.09	142	eP	Pn	08 54 25.4	-0.4
HORNC	Hornillas	1.09	297	eP	Pn	08 54 25.9	+0.1
COLC	Colonia	1.10	295	eP	Pn	08 54 25.9	+0.2
BAGA	Bagaces	1.10	287	eP	Pn	08 54 25.6	-0.2
MESS	Mesas	1.12	298	eP	Pn	08 54 25.7	-0.4
PLVR	Palo Verde	1.15	277	eP	Pn	08 54 26.6	0.0
EDPE	Pejibaye, P	1.21	150	eP	Pn	08 54 27.2	+0.1
OCHAL	Ojochal	1.23	154	P	Pn	08 54 27.5	+0.2
CMARA	Lajas Hojancha	1.23	261	eP	Pn	08 54 27.2	-0.1
CMARA	Lajas Hojancha	1.23	261	P	Pn	08 54 27.0	-0.4
NICO	Nicoya	1.24	267	eP	Pn	08 54 27.7	+0.3
VRLE	La Escondida,	1.29	297	eP	Pn	08 54 28.1	0.0
DRK0	Durika	1.32	135	eP	Pn	08 54 28.2	-0.3
DRK0	Durika	1.32	135	S	Sn	08 54 46.7	0.0
DRK0	Durika	1.32	135	P	Pn	08 54 28.3	-0.3
INDI	Punta indio, G	1.33	255	P	Pn	08 54 27.8	-0.7
INDI	Punta indio, G	1.33	255	S	Sn	08 54 46.1	-0.6
LAPC	Finca la Perla	1.34	295	eP	Pn	08 54 28.6	-0.1
ALIBA	Liberia Airpor	1.39	286	eP	Pn	08 54 29.4	+0.3
ALCO	Alturas Coton,	1.83	133	eP	Pn	08 54 34.7	-0.2
BRU2	Volcan	2.04	133	P	Pn	08 54 37.9	+0.3
BRU2	Volcan	2.04	133	S	Sn	08 55 03.1	+0.3
BOAB	BOACO BROADBAN	2.66	327	P	Pn	08 54 45.3	-0.4

NOU 30 08:54:08.4, 14°.51S×167°.12E, h12km, MLv4.8/18, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	3.36	162	P	Pn	08 55 01.0	+0.3
LUES	Luesalemba Tem	4.00	343	P	Pn	08 55 09.6	0.0
KOUNC	Koumac, New Ca	6.59	204	P	Pn	08 55 45.4	+0.3
MARNC	Mare, Loyalty	6.99	173	P	Pn	08 55 51.2	+0.6
NGOA	Tingoa Renbel	7.48	292	P	Pn	08 55 56.2	-1.2
YATNC	Mamie plateau,	7.51	182	P	Pn	08 55 57.7	-0.1
DZM	Mont Dzumac	7.55	185	P	Pn	08 55 57.1	-1.3
ONTNC	Ouen Toro	7.78	185	P	Pn	08 56 01.9	+0.4
OUENC	Ouen Island, N	7.87	182	P	Pn	08 56 03.4	+0.6
PINNC	Pines Island,	8.07	178	P	Pn	08 56 05.9	+0.5
SAVO	Savo Central	8.92	306	P	Pn	08 56 18.0	+0.8
TATA	Tatamba Isabel	9.40	310	P	Pn	08 56 23.8	0.0

IDC ***30*** *08:56:25.6±2.0, 5°.61S×147°.26E, h191km±18km, mb4.0/19, mbtmp4.5/20, MS3.3/8, Error ellipse: s-maj=17.7km s-min=9.4km az=84.0*

NEIC ***30*** *08:56:26.3±1.2, 5°.56S±0°.07×147°.22E±0°.08, h188km±7km, mb4.6/203, Error ellipse: s-maj=11.6km s-min=10.5km az=88.0*

GCMT ***30*** *08:56:27.3±0.4, 5°.64S±0°.03×147°.26E±0°.03, h196km±5km, MW4.9/77, Moment Tensor Solution. s7,c7; s77,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.12±.15; $M_{\theta\theta}$-2.31±.14; $M_{\phi\phi}$1.19±.15; $M_{r\theta}$1.10±.11; $M_{\theta\phi}$0.08±.15; $M_{\phi r}$-1.81±.11; Best double couple: $M_0$2.90100×10^{16} NP1:ϕ_s237.00000°, δ41.00000°, λ23.00000°. NP2: ϕ_s129.00000°, δ75.00000°, λ129.00000°. Principal axes: T 3.0630, Plg46.0000°, Azm79.0000°; N -0.3230, Plg37.0000°, Azm297.0000°; P -2.7400, Plg20.0000°, Azm191.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***30*** *08:56:29.5±0.7, 6°S±5°×14°7E±°, h227km±8km, M4.8/17, mb5.0/17, mB5.2/6, Mw(mB)4.6/6*

ISC 30 08:56:26.6±0.3, 5°.63S±0°.04×147°.16E±0°.04, h195km, n574, σ0^{s}.99/482, mb4.6/136, 1C-2D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	3.57	3		Pn	08 57 21.1	-1.8
RABL	Rabaul	5.18	74		Pn	08 57 40.5	-2.9
JAY	Jayapura	7.14	295	S	Sn	08 59 25.5	-4.4
	114nm,0.8s,baz=170,slow=19,SNR=3.6						
GENI	Genyem	7.60	293	P	Pn	08 58 12.3	-2.4
COEN	Coen	9.16	205		Pn	08 58 35.4	+0.3
COEN	Coen	9.16	205	P	Pn	08 58 34.6	-0.5
	comp=Z,171nm,1.3s						
COEN	Coen	9.16	205	P	Pn	08 58 35.0	-0.1
SMPI	Sarmi	9.17	293	P	Pn	08 58 40.8	+5.5
	comp=Z,77nm,0.7s						
SRPI	Serui, Papua	11.52	288	P	P	08 59 08.8	-2.5
	comp=Z,270nm,0.5s						
MTSU	Mount Surprise	12.74	192	P	Pn	08 59 21.4	+0.3
	comp=Z,168nm,0.8s						
MTSU	Mount Surprise	12.74	192	P	Pn	08 59 22.3	+1.2
TATA	Tatamba Isabel	12.84	103	P	P	08 59 24.9	-1.1
TATA	Tatamba Isabel	12.84	103	S	S	09 01 49.3	+2.6
SAVO	Savo Central	13.02	106	P	P	08 59 27.6	-0.5
HNR	Honiara	13.22	107		Pn	08 59 25.4	-1.8
HNR	Honiara	13.22	107	P	Pn	08 59 24.7	-2.5
	comp=Z,404nm,0.7s,baz=206,slow=2.1,SNR=7.3						
HNR	Honiara	13.22	107	P	P	08 59 29.7	-0.6
HNR	Honiara	13.22	107	S	S	09 01 58.6	+3.0
RKPI	Ransiki, Papua	13.59	287	P	P	08 59 34.1	-0.2
	comp=Z,87nm,0.8s						
ALEG	Aligegeo Malai	13.78	104	P	Pn	08 59 35.2	+1.1
ALEG	Aligegeo Malai	13.78	104	S	S	09 02 10.3	+1.8
NGOA	Tingoa Renbel	14.04	116	P	P	08 59 39.2	-0.2
CTAO	Charters Tower	14.40	183		Pn	08 59 41.6	-0.1
CTAO	Charters Tower	14.40	183	P	Pn	08 59 41.7	-0.1
FAKI	Fak Fak	15.11	280	Pn	Pn	08 59 49.2	-1.4
FAKI				IAmb	IAmb	09 00 04.3	
	comp=Z,29nm,0.9s						
FAKI	Fak Fak	15.11	280	P	P	08 59 52.1	+0.9
HURO	Huro Makira	15.36	109	P	P	08 59 54.9	+0.9
KDU	Kakadu	16.10	243	P	P	09 00 00.9	-1.2
	comp=Z,174nm,1.0s						
KDU	Kakadu	16.10	243	P	P	09 00 01.8	-0.3
KDU	Kakadu	16.10	243	S	Sn	09 03 02.7	-0.8
QIS	Mount Isa	16.56	206	P	P	09 00 07.2	+0.1
	comp=Z,216nm,0.8s						
QIS	Mount Isa	16.56	206	P	P	09 00 07.0	-0.1
QIS	Mount Isa	16.56	206	S	S	09 03 12.2	+1.9
SWI	Sorong	16.56	286	P	Pn	09 00 14.8	+6.7
PATS	Pohnpei	16.65	42		P	09 00 08.1	0.0
PATS	Pohnpei	16.65	42	P	P	09 00 07.2	-0.9
	comp=Z,135nm,1.0s						
PATS	Pohnpei	16.65	42	P	P	09 00 08.4	+0.3
MTN	Manton Dam	17.36	244		P	09 00 16.6	+0.6
MTN	Manton Dam	17.36	244	P	P	09 00 15.9	-0.1
	comp=Z,150nm,0.7s						
MTN	Manton Dam	17.36	244	P	P	09 00 16.4	+0.4
DRS	Darwin Rock St	17.42	246	P	P	09 00 17.2	+0.6
WB0	Warramunga Arr	18.76	220		P	09 00 31.6	+0.5
WR8	Warramunga Arr	18.83	220		P	09 00 32.6	+0.7
WRAB	Tennant Creek	18.91	220	P	P	09 00 33.4	+0.7
WRA	Warramunga Arr	18.92	220		P	09 00 33.3	+0.4
WRA	Warramunga Arr	18.92	220	P	P	09 00 33.4	+0.4
	comp=Z,192nm,0.7s,baz=51,slow=12,SNR=343						
WRA				S	S	09 03 53.8	-3.8
	comp=Z,23nm,0.9s,baz=39,slow=21,SNR=6.4						
WRA				ScP	ScP	09 08 07.9	0.0
	comp=Z,1.2nm,0.6s,baz=41,slow=2.4,SNR=2.9						
WRA				LR	LR	09 09 08.7	
	comp=Z,200nm,21.4s,baz=342,slow=40						
EIDS	Eidsvold	19.99	170		P	09 00 44.8	+0.6
EIDS	Eidsvold	19.99	170	P	P	09 00 44.4	+0.1
	comp=Z,70nm,0.8s						
KNRA	Kununurra	20.64	240		P	09 00 50.9	-0.4
KNRA	Kununurra	20.64	240	P	P	09 00 50.1	-1.2
	comp=Z,188nm,0.8s						
QLP	Quilpie	21.03	187	P	P	09 00 55.0	-0.3
	comp=Z,188nm,0.8s						
QLP	Quilpie	21.03	187	P	P	09 00 56.6	+1.3
AS01	Alice Springs	21.99	214	P	P	09 01 05.5	+0.2
AS31	Alice Springs	22.01	214	P	P	09 01 06.3	+0.7
AS31	Alice Springs	22.01	214	P	P	09 01 05.5	0.0
	comp=Z,70nm,0.8s						
ASAR	Alice Springs	22.02	214	P	P	09 01 06.4	+0.8
ASAR	Alice Springs	22.02	214	P	P	09 01 06.2	+0.6
	comp=Z,146nm,0.6s,baz=50,slow=8.4,SNR=2569						
ASAR				S	S	09 04 56.0	+1.6
	comp=Z,25nm,0.9s,baz=30,slow=20,SNR=14						
ASAR				ScP	ScP	09 08 16.0	+0.7
	comp=Z,1.3nm,0.8s,baz=22,slow=2.7,SNR=3.4						
ASAR				LR	LR	09 10 04.7	
	comp=Z,166nm,21.9s,baz=52,slow=37						
SOEI	Soe	23.05	258	P	P	09 01 15.8	+0.6
SOEI	Soe	23.05	258	P	P	09 01 20.0	+4.8
FITZ	Fitzroy Crossi	24.40	238		P	09 01 27.8	+0.5
DZM	Mont Dzumac	24.80	133	P	P	09 01 30.5	-0.4
DZM				IAmb	IAmb	09 01 32.4	
	comp=Z,11nm,0.7s						
DZM	Mont Dzumac	24.80	133	P	P	09 01 29.9	-1.1
	comp=Z,9.4nm,0.7s,baz=353,slow=17,SNR=6.5						
	comp=Z,9.4nm,0.7s						
DZM	Mont Dzumac	24.80	133	P	P	09 01 30.6	-0.4
MMRI	Maumere	24.91	262		P	09 01 31.2	-0.8
DAV	Davao City (W)	24.96	300	LR	LR	09 12 21.7	
	comp=Z,22nm,18.2s,baz=198,slow=38						
ARMA	Armidale	25.02	171		P	09 01 33.5	+0.6
ARMA	Armidale	25.02	171	P	P	09 01 33.2	+0.3
	comp=Z,42nm,0.9s						
ARMA	Armidale	25.02	171	P	P	09 01 33.8	+0.9
EDFI	Ende, Flores	25.46	262	P	P	09 01 35.6	-1.5
	comp=Z,44nm,0.7s						
CMSA	Cobar Meteorol	25.81	183	P	P	09 01 41.0	+1.0
	comp=Z,23nm,1.7s						
WRKA	Warakurna	26.45	221	P	P	09 01 45.8	0.0
	comp=Z,70nm,1.0s						
STKA	Stephens Creek	26.63	191	P	P	09 01 47.3	0.0
STKA	Stephens Creek	26.63	191	P	P	09 01 47.5	+0.2
	comp=Z,96nm,0.9s						
STKA	Stephens Creek	26.63	191	P	P	09 01 46.8	-0.4
	comp=Z,9.5nm,0.8s,baz=9.8,slow=11,SNR=9.2						
STKA				LR	LR	09 11 41.3	
	comp=Z,75nm,21.8s,baz=28,slow=34						
	comp=Z,9.5nm,0.8s						
STKA	Stephens Creek	26.63	191	P	P	09 01 48.4	+1.2
KAPI	Kappang	27.30	270	LR	LR	09 14 31.7	
	comp=Z,42nm,21.2s,baz=96,slow=40						
HTT	Hallett	28.71	194	P	P	09 02 06.2	+0.5
BBOO	Buckleboo	28.96	200	P	P	09 02 08.1	+0.2
BBOO	Buckleboo	28.96	200	P	P	09 02 07.9	0.0
CAN	Canberra	29.60	177	P	P	09 02 14.2	+0.6
CAN				IAmb	IAmb	09 02 14.7	
	comp=Z,9.1nm,0.7s						
CAN	Canberra	29.60	177	P	P	09 02 14.0	+0.4
CNB	Canberra Magne	29.61	176	P	P	09 02 14.0	+0.3
MBWA	Marble Bar	30.74	237	P	P	09 02 24.2	+0.4
MBWA	Marble Bar	30.74	237	P	P	09 02 23.9	+0.1
FORT	Forrest	30.80	213	P	P	09 02 24.7	+0.6
PSA00	Pilbara Seismi	30.83	236	P	P	09 02 24.4	-0.2
PSA00	Pilbara Seismi	30.83	236	P	P	09 02 25.1	+0.5
PSA00				IAmb	IAmb	09 02 25.6	
	comp=Z,48nm,0.6s						
PSA00	Pilbara Seismi	30.83	236	P	P	09 02 25.0	+0.5
TOO	Toolangi	31.83	183	P	P	09 02 33.7	+0.5
JAGI	Jajag, Banyuwa	32.88	263	P	P	09 02 41.2	-1.4
MEEK	Meekatharra	34.32	229	P	P	09 02 55.6	+0.7
GIRL	Giralia	36.00	239	P	P	09 03 10.2	+0.9
GIRL	Giralia	36.00	239	P	P	09 03 09.5	+0.3
JOW	Kunigami	37.09	331	LR	LR	09 17 43.6	
	comp=Z,36nm,19.2s,baz=238,slow=34						
KSM	Kuching	37.48	280	P	P	09 03 19.2	-2.6
KSM				IAmb	IAmb	09 03 19.3	
	comp=Z,11nm,0.7s						
MORW	Morawa	37.54	228	P	P	09 03 22.7	+0.5
MORW	Morawa	37.54	228	P	P	09 03 22.5	+0.3
KLBR	Kellerberrin	37.75	223	P	P	09 03 24.0	+0.1
BLDU	Ballidu	37.91	225	P	P	09 03 25.3	+0.1
YOJ	Yonaguni jima	38.05	323	P	P	09 03 27.5	+1.1
OUZ	Omahuta	38.22	144	P	P	09 03 28.9	+1.1
NACB	Ninganchiao	38.71	321	P	P	09 03 31.6	-0.4
NACB				IAmb	IAmb	09 03 41.9	
	comp=Z,30nm,1.5s						
NACB	Ninganchiao	38.71	321	P	P	09 03 33.3	+1.3
NWAO	Narrogin (SRO)	38.91	222	P	P	09 03 34.0	+0.4
NWAO	Narrogin (SRO)	38.91	222	LR	LR	09 20 08.5	
	comp=Z,178nm,19.8s,baz=148,slow=36						
NWAO	Narrogin (SRO)	38.91	222	P	P	09 03 33.9	+0.3
NWAO	Narrogin (SRO)	38.91	222	P	P	09 03 33.7	+0.1
MUN	Mundaring	39.04	224	P	P	09 03 34.9	+0.2
BBJI	Bungbulang	39.29	265	P	P	09 03 36.8	-0.2
RIZ	Raoul Island	40.48	130	P	P	09 03 46.5	-0.1
TOZ	Tahuroa Road	41.07	145	P	P	09 03 51.1	-0.1
HIZ	Hauiti	41.26	146	P	P	09 03 53.2	+0.4
NEZ	North Egmont	41.40	148	P	P	09 03 54.7	+0.8
VRZ	Vera Road	41.64	147	P	P	09 03 57.6	+1.8
QRZ	Quartz Range	41.77	151	P	P	09 03 58.3	+1.4
DSZ	Denniston Nort	42.14	152	P	P	09 04 01.7	+1.8
NGZ	Ngauruhoe	42.14	147	P	P	09 04 01.8	+1.7
URZ	Urewera	42.36	144	P	P	09 04 02.4	+0.7
URZ	Urewera	42.36	144	P	P	09 04 01.7	+0.1
HAZ	Te Kaha	42.42	143	P	P	09 04 03.5	+1.3
NNZ	Nelson	42.48	150	P	P	09 04 03.3	+0.8
RTZ	Ruatahuna	42.52	145	IAmb	IAmb	09 04 05.0	
	comp=Z,16nm,0.7s						
RTZ	Ruatahuna	42.52	145	P	P	09 04 02.9	-0.2
BKZ	Black Stump Fm	42.63	146	P	P	09 04 03.9	0.0
BKZ	Black Stump Fm	42.63	146	P	P	09 04 03.8	-0.1
BKZ	Black Stump Fm	42.63	146	P	P	09 04 04.3	+0.4
MWZ	Matawai	42.65	144	P	P	09 04 05.0	+0.9
THZ	Tophouse	42.67	151	P	P	09 04 05.9	+1.7
MJAR	Matsushiro Arr	42.78	349	P	P	09 04 05.0	-0.1
MJAR	Matsushiro Arr	42.78	349	P	P	09 04 04.4	-0.6
	comp=Z,4.5nm,1.0s,baz=164,slow=9.3,SNR=6.0						
	comp=Z,4.5nm,1.0s						
MAJO	Matsushiro	42.78	349	P	P	09 04 05.0	0.0
MAJO				IAmb	IAmb	09 04 34.3	
	comp=Z,19nm,1.4s						
MJB9	Matsu-Tunnel	42.78	349	P	P	09 04 05.0	-0.1
MJB9				IAmb	IAmb	09 04 34.3	
	comp=Z,18nm,1.3s						
PUZ	Puketiti	42.91	143	P	P	09 04 06.3	+0.2
TUWZ	Tuamarina	42.92	150	P	P	09 04 07.1	+1.0
TCW	Tory Channel	42.92	150	P	P	09 04 06.6	+0.5
TSZ	Takapari Road	42.96	147	P	P	09 04 07.0	+0.5
LTZ	Lake Taylor	43.16	153	P	P	09 04 09.2	+1.1
MRZ	Mangatainoka R	43.19	148	P	P	09 04 08.3	0.0
MRZ				IAmb	IAmb	09 04 14.2	
	comp=Z,18nm,1.0s						
MRZ	Mangatainoka R	43.19	148	P	P	09 04 08.4	0.0
RPZ	Rata Peaks	43.37	155	P	P	09 04 10.9	+1.2
PXZ	Pawanui	43.43	146	P	P	09 04 10.7	+0.5
KHZ	Kahutara	43.47	151	P	P	09 04 10.7	+0.2
BFZ	Birch Farm	43.56	148	P	P	09 04 11.7	+0.4
BFZ	Birch Farm	43.56	148	P	P	09 04 11.3	0.0
LBZ	Lake Benmore	43.56	156	P	P	09 04 11.3	0.0
MLZ	Mavora Lakes	43.59	159	P	P	09 04 12.2	+0.7
GVZ	Greta Valley S	43.66	152	P	P	09 04 12.3	+0.2
TMZ	Timaru	43.90	155	P	P	09 04 13.9	0.0
TUZ	Tuapeka	44.65	158	P	P	09 04 20.1	+0.3
NJ2	Nanjing	46.16	326	eP	P	09 04 34.5	+2.6
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
KSRS	Korea Array	46.46	339	P	P	09 04 33.8	-0.3
	comp=Z,2.7nm,0.8s,baz=149,slow=8.4,SNR=11						
	comp=Z,2.7nm,0.8s						
JTM	Tenmabayashi	46.52	354	P	P	09 04 34.8	+0.2
KS19	Wonju Array Si	46.53	339	P	P	09 04 34.8	+0.2
CTZ	Chatham Island	49.53	146	P	P	09 04 57.2	-0.4
JKA	Kamikawa-asahi	49.68	356	P	P	09 04 59.4	+0.7
JKA				IAmb	IAmb	09 05 15.3	
	comp=Z,19nm,1.2s						
ASAJ	Asahikawa	49.69	356	P	P	09 04 58.1	-0.6
	comp=Z,5.3nm,0.7s,baz=191,slow=8.2,SNR=6.0						
ASAJ				LR	LR	09 21 49.4	
	comp=Z,17nm,21.7s,baz=158,slow=31						
	comp=Z,5.3nm,0.7s						
USRK	Ussuriysk Ar.	51.45	346	P	P	09 05 11.8	0.0
	comp=Z,3.1nm,0.7s,baz=146,slow=10,SNR=4.6						
	comp=Z,3.1nm,0.7s						
HNS	HongShan	52.42	327	⇑P	P	09 05 19.0	-0.1
HNS				pmax	pmax		
	comp=Z,11nm,0.7s						
XAN	Xi'an	53.50	320	⇓P	P	09 05 31.3	+4.1
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BNX	BinXian	54.10	343	⇓P	P	09 05 31.0	-0.2
BNX				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PZH	PanZhiHua	54.35	308	P	P	09 05 36.3	+2.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.8s						
KLR	Kul'dur	56.26	348	P	P	09 05 46.8	+0.1
	comp=Z,3.3nm,0.9s,baz=226,slow=7.6,SNR=4.8						
	comp=Z,3.3nm,0.9s						
HHC	Hu-ho-hao-te	56.60	328	eP	P	09 05 53.5	+4.1
HHC	Hu-ho-hao-te	56.60	328	pmax	pmax		
	comp=Z,80nm,5.4s						
HHC	Hu-ho-hao-te	56.60	328	pmax	pmax		
	comp=Z,12nm,0.5s						
BTO	Baotou	57.26	327	sS	sS	09 14 54.8	+3.0
BTO	Baotou	57.26	327	SS	SS	09 17 34.3	+7.0
BTO				pmax	pmax		
	comp=Z,22nm,1.0s						
BTO				pmax	pmax		
	comp=Z,110nm,6.7s						
BTO	Baotou	57.26	327	eP	P	09 05 57.5	+3.5
BTO	Baotou	57.26	327	pP	pP	09 06 41.0	+3.2
BTO	Baotou	57.26	327	sP	sP	09 07 02.0	+3.1
BTO	Baotou	57.26	327	S	S	09 13 38.8	+4.2
LZH	Lanzhou	58.03	319	eP	P	09 06 03.5	+3.9
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
PEA0B	Petropavlovsk-	59.19	7	P	P	09 06 07.5	+0.5
PEA0B				IAmb	IAmb	09 06 12.8	
	comp=Z,24nm,1.3s						
PETK	Petropavlovsk-	59.19	7	P	P	09 06 06.9	-0.1
	comp=Z,5.9nm,0.8s,baz=179,slow=9.9,SNR=11						
	comp=Z,5.9nm,0.8s						
GTA	Gaotai	62.56	320	eP	P	09 06 31.5	+1.4
GTA				PcP	pwP	09 07 20.8	+3.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONM	Songino Array	64.16	331	P	P	09 06 40.6	+0.2
	comp=Z,2.7nm,0.9s,baz=154,slow=7.3,SNR=12						
	comp=Z,2.7nm,0.9s						
CASY	Casey	65.66	195	P	P	09 06 49.7	+0.1
CASY				IAmb	IAmb	09 07 18.8	
	comp=Z,13nm,1.5s						
YAK	Yakutsk	68.80	351	P	P	09 07 09.1	-0.2
NIKH	Nikolski High	69.17	27	P	P	09 07 12.5	+0.6
	baz=228						
UNV	Unalaska Valle	70.81	27	P	P	09 07 22.0	+0.2
UNV				IAmb	IAmb	09 08 02.2	
	comp=Z,22nm,1.4s						
UNV	Unalaska Valle	70.81	27	P	P	09 07 22.6	+0.9
	baz=230						
P08K	Saint George I	71.37	24	P	P	09 07 26.3	+1.2
	baz=226						
SPIA	Saint Paul Isl	71.50	23	P	P	09 07 27.0	+1.2
	baz=225						
VNDA	Vanda	72.27	177	P	P	09 07 30.4	+0.2
VNDA	Vanda	72.27	177	P	P	09 07 29.4	-0.8
	comp=Z,2.0nm,0.6s,baz=339,slow=6.8,SNR=14						
	comp=Z,2.0nm,0.6s						
WMQ	Urumqi	72.62	319	eP	P	09 07 34.8	+1.9
WMQ				LR	LR		
	comp=N,350nm,24.0s						
WMQ				LR	LR		
	comp=E,440nm,21.3s						
WMQ				LR	LR		
	comp=Z,160nm,24.0s						
S12K	Black Hills	73.98	27	P	P	09 07 40.9	+0.4
	baz=233						
SDPT	Sand Point	74.50	28	P	P	09 07 44.1	+0.6
	baz=235						
CHNA	Chernabura Isl	74.63	29	P	P	09 07 44.7	+0.4
	baz=236						
M11K	Mekoryuk	75.23	22	P	P	09 07 47.8	+0.2
	baz=228						
GAMB	Gambell	75.77	18	P	P	09 07 51.5	+1.0
	baz=222						
M13K	Dall Lake	76.33	23	P	P	09 07 54.3	+0.5
	baz=231						
O14K	Tigyukauivet M	76.45	24	P	P	09 07 54.3	-0.3
	baz=233						
N14K	Kuskokwak Cree	76.69	24	P	P	09 07 55.8	0.0
	baz=233						
K13K	Kusilvak Mount	76.82	21	P	P	09 07 56.4	-0.2
	baz=230						
O15K	Ungalikthiuk R	77.01	25	IAmb	IAmb	09 07 59.0	
	comp=Z,16nm,1.1s						
O15K	Ungalikthiuk R	77.01	25	P	P	09 07 57.5	-0.2
	baz=235						
CHIR	Chirikof Islan	77.07	29	P	P	09 07 57.8	-0.3
	baz=239						
M14K	Bethel	77.08	23	P	P	09 07 58.1	+0.1
	baz=232						
L14K	Kuka Creek	77.17	22	P	P	09 07 58.1	-0.4
	baz=232						
MKAR	Makanchi Array	77.31	320	P	P	09 07 58.2	-1.5
MKAR	Makanchi Array	77.31	320	P	P	09 07 58.8	-0.9
	comp=Z,1.2nm,0.5s,baz=103,slow=7.7,SNR=12						
	comp=Z,1.2nm,0.5s						
N15K	Kwethluk River	77.47	24	IAmb	IAmb	09 08 03.0	
	comp=Z,10nm,0.8s						
N15K	Kwethluk River	77.47	24	P	P	09 08 00.0	-0.3
	baz=234						
MAKZ	Makanchi	77.52	320	P	P	09 08 00.6	-0.3
M15K	Kasigluk River	77.55	23	P	P	09 08 00.1	-0.5
	baz=234						
R17L	Mt. Peulik Vol	77.67	27	P	P	09 08 00.9	-0.5
	baz=238						
P16K	Nushagak River	77.70	26	P	P	09 08 01.3	-0.2
	baz=236						
J14K	Nanvaranak Lak	77.74	21	P	P	09 08 01.8	+0.2
	baz=230						
L15K	Ungalak Mounta	77.83	22	P	P	09 08 02.2	0.0
	baz=233						
O16K	Kokwok River B	77.97	25	IAmb	IAmb	09 08 05.0	
	comp=Z,6.9nm,0.7s						
O16K	Kokwok River B	77.97	25	P	P	09 08 03.0	+0.1
	baz=236						
TIXI	Tiksi	78.06	354		P	09 08 02.1	-1.1
K15K	Wolf Creek Mou	78.19	22	IAmb	IAmb	09 08 07.2	
	comp=Z,11nm,0.7s						
K15K	Wolf Creek Mou	78.19	22	P	P	09 08 04.1	0.0
	baz=232						
N16K	Nishlik Lake	78.19	24	P	P	09 08 04.3	+0.1
	baz=235						
TNA	Tin City	78.19	17	P	P	09 08 04.5	+0.5
	baz=226						
Q17K	Contact Creek	78.22	27	P	P	09 08 04.1	-0.4
	baz=238						
ANM	Nome	78.30	19	P	P	09 08 04.9	+0.1
	baz=228						
M16K	Timber Creek	78.43	24	IAmb	IAmb	09 08 08.3	
	comp=Z,9.4nm,0.8s						
M16K	Timber Creek	78.43	24	P	P	09 08 05.6	+0.1
	baz=235,SNR=6.9						
P17K	Kvichak River	78.47	26	P	P	09 08 05.9	+0.2
	baz=238						
O17K	Koliganek Bris	78.50	25	P	P	09 08 05.8	-0.1
	baz=237,SNR=8.5						
R18K	Karluk	78.52	28	P	P	09 08 05.9	0.0
	baz=240						
F14K	Arctic Creek	78.61	18	P	P	09 08 06.0	-0.4
	baz=227						
L16K	Owhat River	78.62	23	IAmb	IAmb	09 08 07.6	
	comp=Z,13nm,1.3s						
L16K	Owhat River	78.62	23	P	P	09 08 06.0	-0.5
	baz=234						
ZALV	Zalesovo Beam	78.78	328	P	P	09 08 06.5	-1.1
ZALV	Zalesovo Beam	78.78	328	P	P	09 08 06.2	-1.4
	comp=Z,2.0nm,0.4s,baz=110,slow=8.1,SNR=5.9						
	comp=Z,2.0nm,0.4s						
Q18K	Katmai Hardscr	78.81	27	P	P	09 08 07.0	-0.8
	baz=239,SNR=5.7						
N17K	Nushagak Hills	78.87	25	P	P	09 08 08.0	+0.1
	baz=237						
OHAK	Old Harbor	78.89	29	P	P	09 08 07.9	-0.2
	baz=241						
G15K	Niukluk	79.02	19	P	P	09 08 08.5	-0.1
	baz=230						
P18K	Big Mountain,	79.10	26	P	P	09 08 09.4	+0.1
	baz=239						
J16K	Anvik River	79.13	21	IAmb	IAmb	09 08 11.1	
	comp=Z,19nm,1.4s						

J16K	Anvik River	79.13	21	P	P	09 08 09.7	+0.4
	baz=233						
M17K	Holitna River	79.25	24	P	P	09 08 10.3	+0.4
	baz=236						
F15K	North Star Dit	79.29	18	P	P	09 08 10.9	+0.8
	baz=229						
L17K	Donlin	79.32	23	P	P	09 08 11.1	+0.8
	baz=236						
O18K	Koktuh Hills	79.35	26	P	P	09 08 11.0	+0.5
	baz=239						
H16K	Elim	79.39	20	P	P	09 08 10.9	+0.2
	baz=231						
I17K	Unalakleet	79.46	21	P	P	09 08 11.5	+0.5
	baz=233						
N18K	Kilae Creek	79.49	25	P	P	09 08 11.6	+0.3
	baz=238						
KDAK	Kodiak Island	79.50	28	P	P	09 08 11.8	+0.5
	baz=242						
Q19K	Cape Douglas,	79.57	27	P	P	09 08 11.9	+0.2
	baz=240						
K17K	Iditarod	79.65	22	IAmb	IAmb	09 08 14.2	
	comp=Z,8.7nm,1.0s						
K17K	Iditarod	79.65	22	P	P	09 08 12.7	+0.7
	baz=236						
J17K	VABM Dome	79.75	22	IAmb	IAmb	09 08 15.6	
	comp=Z,7.7nm,0.8s						
J17K	VABM Dome	79.75	22	P	P	09 08 13.2	+0.5
	baz=235						
G16K	Koyuk River	79.82	19	P	P	09 08 13.6	+0.7
	baz=231						
M18K	Stony River	79.95	24	P	P	09 08 14.5	+0.8
	baz=238						
Q20K	Shuyak Island	79.98	28	P	P	09 08 14.3	+0.4
	baz=242						
L18K	Granite Mounta	80.00	23	P	P	09 08 14.5	+0.6
	baz=237						
P19K	Oil Pt	80.11	26	P	P	09 08 15.2	+0.6
	baz=241						
N19K	Bonanza Creek	80.15	25	P	P	09 08 15.6	+0.7
	baz=239						
H17K	Granite Mounta	80.36	20	IAmb	IAmb	09 08 18.6	
	comp=Z,8.1nm,0.8s						
H17K	Granite Mounta	80.36	20	P	P	09 08 16.6	+0.7
	baz=234						
G17K	Kiwalik Mounta	80.45	20	P	P	09 08 17.4	+1.1
	baz=233						
O20K	Slope Mountain	80.59	26	P	P	09 08 17.6	+0.4
	baz=241						
J18K	Innoko River	80.67	22	P	P	09 08 17.7	+0.1
	baz=237						
L19K	White Mountain	80.70	24	IAmb	IAmb	09 08 20.3	
	comp=Z,7.2nm,0.8s						
L19K	White Mountain	80.70	24	P	P	09 08 18.2	+0.4
	baz=239						
M19K	Big River Lodg	80.75	24	P	P	09 08 18.8	+0.8
	baz=239						
C16K	Lisburne Hills	80.80	16	P	P	09 08 19.0	+0.9
	baz=228						
HOM	Homer	80.82	27	P	P	09 08 18.7	+0.3
	baz=242						
F17K	Baldwin Pennin	80.83	19	P	P	09 08 19.3	+1.1
	baz=232						
H18K	Honhosa River	81.02	20	P	P	09 08 20.2	+0.8
	baz=235						
KURBB	Kurchatov Arra	81.03	323	P	P	09 08 19.4	-0.3
	comp=Z,1.3nm,0.9s,baz=104,slow=5.2,SNR=7.2						
	comp=Z,1.3nm,0.9s						
E17K	Hotham Inlet	81.05	18	P	P	09 08 20.5	+1.0
	baz=232						
D17K	Noatak River	81.06	17	P	P	09 08 20.7	+1.2
	baz=230						
BRLK	Bradley Lake	81.21	27	IAmb	IAmb	09 08 22.6	
	comp=Z,11nm,0.7s						
L20K	Farewell, AK	81.25	24	P	P	09 08 21.7	+1.1
	baz=240						
M20K	Styx River	81.25	24	IAmb	IAmb	09 08 22.9	
	comp=Z,7.8nm,0.7s						
M20K	Styx River	81.25	24	P	P	09 08 21.2	+0.4
	baz=240						
GCSA	Galena City Sc	81.31	21	P	P	09 08 21.0	+0.2
	baz=236						
RDOG	Red Dog Mine	81.34	17	P	P	09 08 21.3	+0.3
	baz=230						
G18K	Tagagawik	81.35	20	IAmb	IAmb	09 08 21.8	
	comp=Z,13nm,1.3s						
G18K	Tagagawik	81.35	20	P	P	09 08 21.3	+0.2
	baz=235,SNR=7.3						
J19K	Poorman	81.36	22	P	P	09 08 21.8	+0.6
	baz=238						
F18K	Selawik	81.44	19	P	P	09 08 22.2	+0.7
	baz=234						
C17K	DeLong Mountai	81.53	17	P	P	09 08 22.8	+0.8
	baz=230						
K20K	Telida	81.62	23	P	P	09 08 22.7	+0.1
	baz=239,SNR=6.3						
E18K	Tukpahlearik C	81.63	18	P	P	09 08 23.1	+0.6
	baz=233						
H19K	Roundabout Mou	81.90	21	IAmb	IAmb	09 08 25.6	
	comp=Z,7.9nm,0.9s						
H19K	Roundabout Mou	81.90	21	P	P	09 08 24.3	+0.4
	baz=237						
SKT	Skwentna	81.96	25	P	P	09 08 23.6	-0.8
	baz=242						
SEW	Seward	82.01	27	IAmb	IAmb	09 08 26.1	
	comp=Z,14nm,0.8s						
SEW	Seward	82.01	27	P	P	09 08 24.7	+0.2
	baz=244						
J20K	Nowinta River	82.01	22	P	P	09 08 24.6	+0.1
	baz=239						
G19K	Purcell Mounta	82.02	20	IAmb	IAmb	09 08 26.4	
	comp=Z,9.8nm,1.1s						
G19K	Purcell Mounta	82.02	20	P	P	09 08 24.9	+0.3
	baz=236,SNR=7.5						
O22K	Cooper Landing	82.05	26	P	P	09 08 24.8	-0.1
	baz=244						
SUA	Susitna One	82.05	25	IAmb	IAmb	09 08 31.9	
	comp=Z,9.3nm,1.1s						
SUA	Susitna One	82.05	25	P	P	09 08 24.3	-0.7
	baz=243						
PPLA	Purkeypile	82.13	24	P	P	09 08 25.3	-0.1
	baz=241						
F19K	Shaleruckik Mo	82.18	19	P	P	09 08 25.7	+0.4
	baz=235						
C18K	Utukok River	82.21	17	P	P	09 08 25.7	+0.1
	baz=232						
I20K	Naaghedeneel	82.21	22	P	P	09 08 25.5	0.0
	baz=239						
RC01	Rabbit Creek A	82.32	26	IAmb	IAmb	09 08 27.4	
	comp=Z,23nm,1.2s						
RC01	Rabbit Creek A	82.32	26	P	P	09 08 25.7	-0.5
	baz=244,SNR=9.3						
CAST	Castle Rocks	82.43	23	IAmb	IAmb	09 08 28.0	
	comp=Z,14nm,1.4s						
CAST	Castle Rocks	82.43	23	P	P	09 08 26.2	-0.6
	baz=241,SNR=13						
H20K	Anotleneega Mo	82.43	21	P	P	09 08 27.1	+0.3
	baz=238						
M22K	Willow	82.45	25	IAmb	IAmb	09 08 28.2	
	comp=Z,15nm,0.8s						
M22K	Willow	82.45	25	P	P	09 08 26.8	0.0
	baz=243						
CHUM	Lake Minchumin	82.56	23	P	P	09 08 27.1	-0.3
	baz=241,SNR=7.5						
CUT	Chulitna	82.69	25	P	P	09 08 28.0	-0.1
	baz=243						
E19K	Redstone River	82.71	19	IAmb	IAmb	09 08 30.8	
	comp=Z,8.5nm,0.8s						
E19K	Redstone River	82.71	19	P	P	09 08 28.1	0.0
	baz=236,SNR=11						
PMR	Palmer	82.80	26	IAmb	IAmb	09 08 29.7	
	comp=Z,6.5nm,0.8s						
PMR	Palmer	82.80	26	P	P	09 08 28.0	-0.6
	baz=244,SNR=7.3						
PWL	Port Wells	82.83	26	P	P	09 08 28.8	-0.1
	baz=245,SNR=13						
C19K	Lookout Ridge	82.95	17	P	P	09 08 29.7	+0.3
	baz=233						
KTH	Kantishna Hill	82.95	23	IAmb	IAmb	09 08 30.3	
	comp=Z,11nm,1.4s						
GHO	Glory Hole Cre	82.97	25	IAmb	IAmb	09 08 30.9	
	comp=Z,7.0nm,0.7s						
F20K	Avaraart Lake	82.97	19	IAmb	IAmb	09 08 30.7	
	comp=Z,11nm,1.4s						
F20K	Avaraart Lake	82.97	19	P	P	09 08 29.4	-0.1
	baz=237						
KNK	Knik Glacier	83.02	26	P	P	09 08 29.6	-0.2
	baz=245						
D19K	Kuna River	83.03	18	P	P	09 08 29.6	-0.2
	baz=235						
IMAR	Indian Mountai	83.08	21	P	P	09 08 30.4	+0.3
TRF	Thorofare Moun	83.16	24	IAmb	IAmb	09 08 32.2	
	comp=Z,12nm,1.4s						
TRF	Thorofare Moun	83.16	24	P	P	09 08 29.3	-1.4
	baz=243,SNR=5.0						
BPAW	Bear Paw Mtn.	83.18	23	P	P	09 08 30.2	-0.4
	baz=242						
A19K	Wainwright	83.21	16	P	P	09 08 30.6	0.0
	baz=232						
H21K	Melozitna Rive	83.26	21	P	P	09 08 30.6	-0.4
	baz=240						
GLI	Glacier Island	83.39	27	IAmb	IAmb	09 08 33.2	
	comp=Z,13nm,0.8s						
GLI	Glacier Island	83.39	27	P	P	09 08 30.6	-1.1
	baz=246,SNR=7.9						
E20K	Nigu River	83.48	18	P	P	09 08 31.4	-0.7
	baz=237						
M23K	Glacier View	83.49	26	P	P	09 08 31.7	-0.6
	baz=245						
WAT1	Susitna Watana	83.59	25	P	P	09 08 32.0	-0.8
	baz=244						
D20K	Etivluk River	83.61	18	P	P	09 08 32.0	-0.8
	baz=236						
FID	Port Fidalgo	83.62	27	IAmb	IAmb	09 08 34.3	
	comp=Z,13nm,0.9s						
SCM	Sheep Creek Mo	83.68	26	IAmb	IAmb	09 08 35.0	
	comp=Z,15nm,1.0s						
SCM	Sheep Creek Mo	83.68	26	P	P	09 08 32.6	-0.7
	baz=246,SNR=8.0						
MLY	Manley	83.71	22	IAmb	IAmb	09 08 33.7	
	comp=Z,6.6nm,0.7s						
MLY	Manley	83.71	22	P	P	09 08 32.6	-0.8
	baz=242,SNR=17						
RND	Reindeer	83.71	24	IAmb	IAmb	09 08 34.2	
	comp=Z,12nm,0.6s						
F21K	Alatna River	83.81	20	P	P	09 08 33.2	-0.6
	baz=239						
WAT6	Susitna Watana	83.82	25	P	P	09 08 33.3	-0.8
	baz=245						
MCK	McKinley	83.82	24	IAmb	IAmb	09 08 34.8	
	comp=Z,12nm,1.2s						
MCK	McKinley	83.82	24	P	P	09 08 33.1	-0.8
	baz=244,SNR=5.2						
EYAK	Cordova Ski Ar	83.87	27	P	P	09 08 33.6	-0.6
	baz=247						
H22K	Ishtalitna Cre	83.89	21	P	P	09 08 33.5	-0.6
	baz=242,SNR=5.4						
DIV	Divide	84.08	27	IAmb	IAmb	09 08 37.1	
	comp=Z,11nm,0.9s						
KK31	Karatay Array	84.15	314		P	09 08 34.4	-1.7
KKAR	Karatay Array	84.15	314	P	P	09 08 35.9	-0.2
NEA2	Nenana	84.15	23	P	P	09 08 34.3	-1.3
	baz=244,SNR=9.0						
KLU	Klutina	84.16	26	IAmb	IAmb	09 08 37.6	
	comp=Z,11nm,1.0s						
KLU	Klutina	84.16	26	P	P	09 08 35.0	-0.8
	baz=247						
B20K	Meade River	84.17	17	P	P	09 08 35.3	-0.2
	baz=236						
DHY	Denali Highway	84.18	25	IAmb	IAmb	09 08 37.4	
	comp=Z,6.8nm,0.7s						
DHY	Denali Highway	84.18	25	P	P	09 08 35.1	-0.8
	baz=246,SNR=10						
KAIM	Kayak Island	84.25	28	P	P	09 08 35.7	-0.4
	baz=248						
E21K	Killik River	84.28	19	P	P	09 08 35.8	-0.4
	baz=239						
I23K	Minto, Yukon-K	84.29	22	P	P	09 08 35.6	-0.5
	baz=244,SNR=8.9						
M24K	Tolsona, Glenn	84.29	26	IAmb	IAmb	09 08 39.2	
	comp=Z,11nm,0.8s						
M24K	Tolsona, Glenn	84.29	26	P	P	09 08 35.9	-0.4
	baz=247,SNR=5.3						
G22K	Bettles	84.33	20	P	P	09 08 35.9	-0.4
	baz=241,SNR=5.3						
QSPA	South Pole Qui	84.34	180	P	P	09 08 36.4	-0.3
QSPA	South Pole Qui	84.34	180	P	P	09 08 36.3	-0.3
	comp=Z,2.6nm,0.7s,baz=327,slow=1.2,SNR=21						
	comp=Z,2.6nm,0.7s						
F22K	John River	84.39	20	P	P	09 08 36.4	-0.3
	baz=241						
C21K	Knifeblade Rid	84.40	18	P	P	09 08 36.5	-0.2
	baz=238						
HMT	Hamilton	84.47	28	IAmb	IAmb	09 08 39.0	
	comp=Z,10nm,0.7s						
WRH	Wood River Hil	84.48	23	P	P	09 08 36.2	-1.0
H23K	Yukon River	84.52	22	P	P	09 08 37.5	+0.1
H23K	Yukon River	84.52	22	P	P	09 08 37.1	-0.3
	baz=243,SNR=8.8						
BMRM	Bremner River	84.55	27	IAmb	IAmb	09 08 39.3	
	comp=Z,14nm,1.2s						
BMRM	Bremner River	84.55	27	P	P	09 08 37.2	-0.4
	baz=248						
CCB	Clear Creek Bu	84.67	23	IAmb	IAmb	09 08 37.2	
	comp=Z,5.5nm,0.6s						
B21K	Ikpikpuk River	84.70	17	P	P	09 08 38.3	+0.2
	baz=238						
COLA	College	84.74	23	P	P	09 08 36.7	-1.8
COLA				IAmb	IAmb	09 08 38.1	
	comp=Z,9.1nm,0.8s						
COLA	College	84.74	23	P	P	09 08 37.4	-1.0
	baz=245						
G23K	Bananza Creek	84.75	21	IAmb	IAmb	09 08 40.4	
	comp=Z,5.4nm,0.7s						
G23K	Bananza Creek	84.75	21	P	P	09 08 38.1	-0.4
	baz=243,SNR=13						
N25K	Chitina, Valde	84.79	26	P	P	09 08 38.3	-0.6
	baz=248						
E22K	Anaktuvuk Pass	84.82	19	P	P	09 08 38.8	-0.1
	baz=241,SNR=5.2						
HARP	HAARP	84.84	26	P	P	09 08 39.0	-0.1
	baz=248						
BGLC	Bering Glacier	84.85	28	P	P	09 08 38.9	-0.2
	baz=249						
HDA	Harding Lake	84.90	23	P	P	09 08 38.8	-0.5
	baz=246						
D22K	Ayikyak River	84.91	18	IAmb	IAmb	09 08 40.7	
	comp=Z,15nm,1.4s						
D22K	Ayikyak River	84.91	18	P	P	09 08 39.4	+0.2
	baz=240,SNR=5.6						
COLD	Coldfoot	84.93	20	P	P	09 08 39.3	-0.1
	baz=242,SNR=8.8						
PAX	Paxson	84.93	25	P	P	09 08 39.1	-0.5
	baz=247						
NRIK	Noril'sk	84.97	342	P	P	09 08 39.0	-0.5
	comp=Z,4.1nm,0.8s,baz=140,slow=2.4,SNR=8.3						
	comp=Z,4.1nm,0.8s						
A21K	Barrow	85.06	16	P	P	09 08 39.9	0.0
	baz=236						
IL31		85.08	23	IAmb	IAmb	09 08 39.0	
	comp=Z,6.3nm,0.7s						
ILAR	Eielson Array	85.08	23	P	P	09 08 38.0	-2.1
ILAR	Eielson Array	85.08	23	P	P	09 08 38.3	-1.8
	comp=Z,6.0nm,0.7s,baz=252,slow=4.8,SNR=101						
	comp=Z,6.0nm,0.7s						
GLB	Gilahina Butte	85.08	27	IAmb	IAmb	09 08 42.0	
	comp=Z,6.0nm,0.7s						
K24K	Donnelly Dome	85.13	24	P	P	09 08 40.2	-0.3
	baz=247						
H24K	Noodor Dome	85.14	22	P	P	09 08 40.4	-0.2
	baz=245						
CRQE	Cirque	85.16	28	P	P	09 08 40.5	-0.3
	baz=250						
VRDI	Verde Repeater	85.17	27	IAmb	IAmb	09 08 42.5	
	comp=Z,13nm,1.4s						
A22K	Sinclair Lake	85.33	16	P	P	09 08 41.0	-0.2
	baz=238						
MCARA	McCarthy VSAT	85.41	27	P	P	09 08 41.5	-0.3
	baz=250						
B22K	Teshekpuk Lake	85.43	17	P	P	09 08 41.7	0.0
	baz=239						
RIDG	Independent Ri	85.49	24	P	P	09 08 42.1	-0.1
	baz=248						
MESA	MESA	85.50	28	P	P	09 08 41.8	-0.7
	baz=251						
E23K	Chandalar	85.51	20	P	P	09 08 42.1	-0.3
	baz=243						
D23K	Nanushuk River	85.58	19	IAmb	IAmb	09 08 44.2	
	comp=Z,9.5nm,0.8s						
D23K	Nanushuk River	85.58	19	P	P	09 08 42.6	0.0
	baz=242						
J25K	Salcha River,	85.61	24	IAmb	IAmb	09 08 42.7	
	comp=Z,8.9nm,0.7s						
J25K	Salcha River,	85.61	24	P	P	09 08 42.0	-0.9
	baz=247,SNR=14						
G24K	Hadweenzic Riv	85.66	21	P	P	09 08 43.0	0.0
	baz=245,SNR=6.9						
DOT	Dot Lake	85.78	25	IAmb	IAmb	09 08 44.8	
	comp=Z,6.6nm,1.0s						
TOLK	Toolik Lake Re	85.79	19	P	P	09 08 43.4	-0.3
	baz=243						
L26K	Log Cabin Wild	85.85	25	P	P	09 08 43.9	-0.2
	baz=249,SNR=7.1						
F24K	Squaw Lake	85.86	20	IAmb	IAmb	09 08 45.3	
	comp=Z,6.3nm,0.8s						
F24K	Squaw Lake	85.86	20	P	P	09 08 44.0	0.0
	baz=245,SNR=9.6						
E24K	Your Creek	85.90	20	P	P	09 08 44.2	0.0
	baz=244						
PRP	Porcupine Dome	85.90	23	P	P	09 08 44.6	+0.2
	baz=247						
SCRK	Sand Creek	85.93	24	P	P	09 08 44.5	0.0
	baz=248						
C23K	Itkillik River	86.02	18	P	P	09 08 45.0	+0.3
	baz=242						
CTG	Chitna Glacier	86.04	28	P	P	09 08 45.2	0.0
	baz=251,SNR=7.0						
H25L	Birch Creek	86.09	22	P	P	09 08 45.5	+0.5
	baz=247						
G25K	Bearman Lake	86.18	21	P	P	09 08 45.7	+0.2
	baz=246						
M27K	Edge Creek, AK	86.26	26	IAmb	IAmb	09 08 48.5	
	comp=Z,14nm,0.9s						
M27K	Edge Creek, AK	86.26	26	P	P	09 08 46.2	0.0
	baz=250,SNR=12						
D24K	Happy Valley	86.26	19	P	P	09 08 46.2	+0.3
	baz=244						
PINM	Pinnacle	86.28	29	P	P	09 08 46.5	+0.2
	baz=252						
J26L	Joseph Creek	86.29	24	P	P	09 08 46.6	+0.4
	baz=249						
O28M	Mount Upton	86.51	28	IAmb	IAmb	09 08 49.6	
	comp=Z,11nm,0.8s						
O28M	Mount Upton	86.51	28	P	P	09 08 47.6	-0.1
	baz=252,SNR=7.0						
L27K	Beaver Creek,	86.52	26	IAmb	IAmb	09 08 49.5	
	comp=Z,12nm,1.4s						
L27K	Beaver Creek,	86.52	26	P	P	09 08 47.6	+0.3
	baz=250,SNR=6.8						
BCAR	Beaver Creek A	86.53	26		P	09 08 47.3	-0.2
C24K	Franklin Bluff	86.56	18	P	P	09 08 47.6	+0.3
	baz=244						
PNL	Peninsula	86.56	29	P	P	09 08 47.6	+0.1
	baz=253						
BVAR	Borovoye Array	86.56	324	P	P	09 08 46.2	-1.5
	comp=Z,1.5nm,0.5s,baz=98,slow=6.1,SNR=8.5						
	comp=Z,1.5nm,0.5s						
F25K	Christian Rive	86.68	21	P	P	09 08 48.5	+0.5
	baz=247						
YUK3	Moose Creek	86.70	27	P	P	09 08 48.7	+0.2
	baz=252,SNR=12						
BVCY	Beaver Creek	86.72	26	P	P	09 08 48.8	+0.5
	baz=251,SNR=7.2						
K27K	Chicken	86.74	25	IAmb	IAmb	09 08 51.1	
	comp=Z,6.2nm,0.7s						
K27K	Chicken	86.74	25	P	P	09 08 48.5	+0.2
	baz=250,SNR=9.5						
I26K	Coal Creek Min	86.75	23	P	P	09 08 48.3	-0.1
	baz=249						
YUK8	Steele Glacier	86.87	28	P	P	09 08 49.6	+0.3
	baz=252						
E25K	Arctic Village	86.91	20	P	P	09 08 49.4	+0.3
	baz=247						
BMAR	Burnt Mountain	86.99	21	P	P	09 08 49.6	0.0
G26K	Porcupine Rive	87.10	22	IAmb	IAmb	09 08 51.3	
	comp=Z,6.2nm,0.8s						
G26K	Porcupine Rive	87.10	22	P	P	09 08 50.2	+0.3
	baz=248,SNR=9.4						
D25K	Kavik River	87.13	19	P	P	09 08 50.5	+0.4
	baz=246						
O29M	Mount Kennedy	87.14	29	P	P	09 08 50.6	+0.2
	baz=254						
F26K	Sheenjek River	87.25	21	P	P	09 08 51.3	+0.6
	baz=248						
P29M	Windy Craggy	87.36	29	P	P	09 08 51.9	+0.5
	baz=254,SNR=6.7						
YUK4	Talbot Arm	87.40	28	P	P	09 08 52.2	+0.3
	baz=254,SNR=11						
YUK6	Outpost Mounta	87.42	28	P	P	09 08 52.1	+0.2
	baz=254						
I27K	Kandik River	87.45	23	P	P	09 08 52.2	+0.4
	baz=251,SNR=10						
S31K	Pelican	87.68	31	P	P	09 08 53.4	+0.6
	baz=256						
H27K	Steamboat Moun	87.69	23	IAmb	IAmb	09 08 56.1	
	comp=Z,6.2nm,0.8s						
H27K	Steamboat Moun	87.69	23	P	P	09 08 53.4	+0.5
	baz=251,SNR=9.8						
HYT	Haines Junctio	87.79	28		P	09 08 53.3	-0.3
HYT				IAmb	IAmb	09 08 56.5	
	comp=Z,14nm,1.0s						
HYT	Haines Junctio	87.79	28	P	P	09 08 54.0	+0.5
	baz=254,SNR=15						
M29M	Somme Creek	87.80	27	IAmb	IAmb	09 08 55.2	
	comp=Z,5.5nm,0.7s						
M29M	Somme Creek	87.80	27	P	P	09 08 54.0	+0.5
	baz=254,SNR=9.2						
G27K	Doyon Strip	87.84	22	P	P	09 08 54.1	+0.5
	baz=250						
P30M	Million Dollar	87.86	29	P	P	09 08 54.2	+0.4
	baz=255						
DAWY	Dawson	87.87	25	P	P	09 08 54.1	+0.3
	baz=253,SNR=7.9						
SIT	Sitka	87.94	32	P	P	09 08 55.0	+0.9
	baz=256						
PLBC	Pleasant Camp	87.98	30	P	P	09 08 55.0	+0.7
	baz=256,SNR=7.4						
R31K	City Hall, Gus	88.04	31	P	P	09 08 55.0	+0.5
	baz=256						
I28M	Miner Creek	88.06	24	P	P	09 08 55.4	+0.7
	baz=252						
C27K	Jago River	88.11	19	P	P	09 08 55.3	+0.5
	baz=248						
L29M	L29M	88.13	26	IAmb	IAmb	09 08 58.0	
	comp=Z,5.0nm,0.8s						
L29M	L29M	88.13	26	P	P	09 08 55.7	+0.7
	baz=254						
N30M	Aishikik Lake	88.15	28	P	P	09 08 55.3	+0.1
	baz=255						
E27K	Coleen River	88.32	21	IAmb	IAmb	09 08 59.1	
	comp=Z,6.4nm,1.1s						
E27K	Coleen River	88.32	21	P	P	09 08 56.1	+0.3
	baz=250						
S32K	Killisnoo	88.43	32	P	P	09 08 56.7	+0.3
	baz=257						
O30N	Mendenhall	88.45	29	IAmb	IAmb	09 08 58.8	
	comp=Z,7.7nm,1.0s						
O30N	Mendenhall	88.45	29	P	P	09 08 57.4	+0.8
	baz=256,SNR=6.9						
SKAG	Skagway	88.50	30	IAmb	IAmb	09 08 59.0	
	comp=Z,6.8nm,0.9s						
SKAG	Skagway	88.50	30	P	P	09 08 57.1	+0.4
	baz=256						
M30M	Minto, Yukon	88.58	27	P	P	09 08 57.4	+0.3
	baz=255						
K29M	Barlow Dome	88.60	25	IAmb	IAmb	09 08 58.9	
	comp=Z,4.3nm,0.7s						
K29M	Barlow Dome	88.60	25	P	P	09 08 57.2	0.0
	baz=254,SNR=11						
I29M	Ogilvie Camp,	88.69	24	P	P	09 08 57.5	-0.1
	baz=254						
F28M	Old Crow	88.76	21	P	P	09 08 58.1	+0.2
	baz=252						
N31M	Braeburn, Yuko	88.77	28	P	P	09 08 58.4	+0.4
	baz=256						
CRAG	Craig	88.79	34	P	P	09 08 58.4	+0.2
	baz=258						
D27M	Malcolm River	88.89	20	P	P	09 08 59.1	+0.6
	baz=251						
H29M	Whitestone	88.91	23	P	P	09 08 59.0	+0.4
	baz=254						
U33K	Whale Pass	88.92	33	P	P	09 08 59.1	+0.3
	baz=258						
WHY	Whitehorse	89.00	29	P	P	09 08 59.6	+0.4
	baz=257						
E28M	Babbage River	89.18	21	P	P	09 09 00.2	+0.4
	baz=252						
MAYO	Mayo, Yukon	89.23	26	P	P	09 09 00.6	+0.5
	baz=256						
G29M	Pine Creek	89.24	22	IAmb	IAmb	09 09 01.1	
	comp=Z,4.1nm,0.7s						
G29M	Pine Creek	89.24	22	P	P	09 09 00.3	+0.2
	baz=254						
J30M	Hart River	89.29	25	IAmb	IAmb	09 09 02.5	
	comp=Z,3.9nm,0.7s						
J30M	Hart River	89.29	25	P	P	09 09 01.0	+0.4

	baz=255						
P32M	**Atlin**	**89.33**	**30**	P	**P**	**09 09 01.2**	**+0.5**
	baz=258						
WRAK	**Wrangell Islan**	**89.41**	**33**	P	**P**	**09 09 01.5**	**+0.5**
	baz=259						
I30M	**Mount Dempster**	**89.44**	**24**	P	**P**	**09 09 01.3**	**+0.1**
	baz=255						
M31M	**Drury Creek, Y**	**89.58**	**27**	P	**P**	**09 09 02.0**	**+0.2**
	baz=257						
EPYK	**Eagle Plains**	**89.59**	**23**	IAmb	IAmb	09 09 02.1	
	comp=Z,6.1nm,0.7s						
EPYK	**Eagle Plains**	**89.59**	**23**	P	**P**	**09 09 01.6**	**-0.2**
	baz=255						
V35K	**Ketchikan**	**89.61**	**34**	P	**P**	**09 09 02.0**	**0.0**
	baz=260						
D28M	**Stokes Point**	**89.67**	**20**	P	**P**	**09 09 02.4**	**+0.4**
	baz=253						
E29M	**Blow River**	**89.69**	**21**	P	**P**	**09 09 02.4**	**+0.2**
	baz=254						
P33M	**Teslin, Yukon**	**89.90**	**29**	P	**P**	**09 09 03.2**	**-0.2**
	baz=259						
Q32M	**Nakina River**	**89.93**	**31**	P	**P**	**09 09 03.2**	**-0.6**
	baz=259						
G30M	**tAoh Zraii Nji**	**89.94**	**22**	P	**P**	**09 09 02.8**	**-0.6**
	baz=256						
N32M	**Quiet Lake**	**89.96**	**29**	P	**P**	**09 09 03.7**	**+0.1**
	baz=258						
FARO	**Faro, Yukon**	**90.06**	**27**	P	**P**	**09 09 04.4**	**+0.4**
	baz=258						
RUBB	**Prince Rupert**	**90.21**	**36**	IAmb	IAmb	09 09 07.3	
	comp=Z,4.8nm,0.9s						
F30M	**Barrier River**	**90.26**	**22**	P	**P**	**09 09 05.0**	**+0.2**
	baz=256						
S34M	**Telegraph Cree**	**90.33**	**32**	P	**P**	**09 09 05.2**	**-0.1**
	baz=260						
H31M	**Peel River**	**90.40**	**24**	IAmb	IAmb	09 09 06.3	
	comp=Z,3.7nm,0.7s						
H31M	**Peel River**	**90.40**	**24**	P	**P**	**09 09 05.9**	**+0.3**
	baz=257						
U35K	**Hyder**	**90.59**	**34**	P	**P**	**09 09 06.5**	**-0.1**
	baz=261						
T35M	**Bob Quinn**	**90.64**	**33**	P	**P**	**09 09 06.8**	**0.0**
	baz=261						
R33M	**Jennings River**	**90.67**	**30**	P	**P**	**09 09 07.1**	**0.0**
	baz=260						
G31M	**Satah River**	**90.67**	**23**	IAmb	IAmb	09 09 07.5	
	comp=Z,5.6nm,0.7s						
G31M	**Satah River**	**90.67**	**23**	P	**P**	**09 09 06.5**	**-0.2**
	baz=257						
HOLB	**Holberg**	**90.95**	**39**	IAmb	IAmb	09 09 11.1	
	comp=Z,8.5nm,0.9s						
DLBC	**Dease Lake**	**90.99**	**31**	P	**P**	**09 09 08.7**	**+0.2**
	baz=261						
MMPY	**Sheldon Lake,**	**91.09**	**27**	P	**P**	**09 09 09.0**	**+0.2**
	baz=260						
BBB	**Bella Bella**	**91.17**	**38**	IAmb	IAmb	09 09 10.9	
	comp=Z,7.2nm,0.8s						
INK	**Inuvik**	**91.25**	**21**	IAmb	IAmb	09 09 10.5	
	comp=Z,3.4nm,0.8s						
INK	**Inuvik**	**91.25**	**21**	P	**P**	**09 09 09.1**	**-0.2**
	baz=258						
WTLY	**Watson Lake, Y**	**91.87**	**30**	IAmb	IAmb	09 09 15.4	
	comp=Z,5.9nm,1.0s						
WTLY	**Watson Lake, Y**	**91.87**	**30**	P	**P**	**09 09 12.6**	**+0.1**
	baz=262						
TGTN	**Hyland Airport**	**92.31**	**29**	P	**P**	**09 09 14.5**	**0.0**
	baz=263						
AB31	**Akbulak array**	**92.40**	**319**	P	**P**	**09 09 14.2**	**-0.9**
LIRD	**Liard River Hi**	**93.14**	**31**	P	**P**	**09 09 18.5**	**+0.2**
	baz=264						
K02D	**Willamette Mer**	**93.17**	**48**	IAmb	IAmb	09 09 20.6	
	comp=Z,6.3nm,1.2s						
CLRS	**Cowichan Lake**	**93.34**	**41**	IAmb	IAmb	09 09 20.7	
	comp=Z,5.7nm,0.9s						
TOAD	**Toad River Com**	**93.53**	**31**	P	**P**	**09 09 20.4**	**+0.3**
	baz=265						
YBH	**Yreka Blue Hor**	**93.80**	**49**	IAmb	IAmb	09 09 23.1	
	comp=Z,6.2nm,1.0s						
GNW	**Green Mountain**	**94.12**	**43**	IAmb	IAmb	09 09 24.9	
	comp=Z,5.8nm,1.0s						
KOTAN	**Kotaneelee Air**	**94.23**	**30**	P	**P**	**09 09 23.8**	**+0.5**
	baz=266						
J04A	**Umpqua Nationa**	**94.34**	**47**	IAmb	IAmb	09 09 26.6	
	comp=Z,5.6nm,0.9s						
LLLB	**Lillooet**	**94.91**	**40**	IAmb	IAmb	09 09 28.0	
	comp=Z,6.1nm,1.0s						
J05D	**Fort Rock, OR**	**94.98**	**47**		**P**	**09 09 26.6**	**-0.8**
J05D				IAmb	IAmb	09 09 29.0	
	comp=Z,8.2nm,1.3s						
K05A	**Summer Lake**	**95.20**	**48**	IAmb	IAmb	09 09 29.0	
	comp=Z,4.2nm,1.1s						
PINE	**Pine Mountain**	**95.22**	**47**	IAmb	IAmb	09 09 30.0	
	comp=Z,3.8nm,1.0s						
BEKR	**Beckworth**	**95.47**	**51**	P	**P**	**09 09 29.2**	**-0.5**
BEKR				IAmb	IAmb	09 09 30.3	
	comp=Z,3.4nm,0.9s						
LTY	**Liberty**	**95.56**	**43**	IAmb	IAmb	09 09 30.4	
	comp=Z,2.4nm,0.7s						
G08A	**Pilot Rock**	**96.69**	**45**	IAmb	IAmb	09 09 36.9	
	comp=Z,4.2nm,1.3s						
D08A	**Wollman Farm,**	**96.75**	**43**	IAmb	IAmb	09 09 36.0	
	comp=Z,3.6nm,0.7s						
WVOR	**Wild Horse Val**	**96.86**	**48**	IAmb	IAmb	09 09 36.6	
	comp=Z,2.4nm,0.8s						
J08A	**Circle Bar Ran**	**97.00**	**47**	IAmb	IAmb	09 09 37.6	
	comp=Z,4.1nm,0.9s						
NVAR	**Mina Array Bea**	**97.01**	**52**	P	**P**	**09 09 36.1**	**-0.6**
NVAR	**Mina Array Bea**	**97.01**	**52**	P	**P**	**09 09 36.3**	**-0.4**
	comp=Z,1.2nm,0.8s,baz=250,slow=4.6,SNR=13						
	comp=Z,1.2nm,0.8s						
E09A	**Wood Farm, Sta**	**97.28**	**44**	P	**P**	**09 09 37.3**	**-0.2**
BMO	**Blue Mountains**	**97.86**	**46**		**P**	**09 09 39.5**	**-0.8**
NEW	**Newport**	**97.97**	**42**		**P**	**09 09 39.9**	**-0.8**
YKA	**Yellowknife Ar**	**98.77**	**28**	P	**P**	**09 09 43.1**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=285,slow=5.3,SNR=5.3						
	comp=Z,1.2nm,0.8s						
PLID	**Pearl Lake**	**98.78**	**45**		**P**	**09 09 43.5**	**-1.1**
PLID				IAmb	IAmb	09 09 44.9	
	comp=Z,3.1nm,0.8s						
MFID	**Camas Ranch**	**98.93**	**47**	IAmb	IAmb	09 09 46.5	
	comp=Z,2.1nm,0.8s						
PDAR	**Pinedale Array**	**103.55**	**47**	Pdiff	**Pdif**	**09 10 04.9**	**-0.9**
	comp=Z,1.4nm,0.8s,baz=249,slow=2.9,SNR=11						
FINES	**FINESS Array B**	**109.41**	**334**	PKiKP	**PKiKP**	**09 14 32.7**	**-0.7**
	comp=Z,1.6nm,0.8s,baz=44,slow=5.8,SNR=3.4						
TXAR	**Lajitas Array**	**109.44**	**61**	PKiKP	**PKiKP**	**09 14 32.8**	**-1.8**
	comp=Z,0.3nm,0.9s,baz=287,slow=4.1,SNR=2.7						
TXAR				PP	**PP**	**09 15 06.4**	**-1.4**
	comp=Z,1.0nm,1.2s,baz=258,slow=6.3,SNR=3.9						
CONA	**Conrad Observa**	**120.92**	**324**	*i* PKP	**PKPdf**	**09 14 55.2**	**-0.8**
	comp=Z,1.5nm,0.6s						
GERES	**GERESS Array B**	**121.69**	**326**	PKP	**PKPdf**	**09 14 57.0**	**-0.5**
	comp=Z,2.1nm,0.5s,baz=75,slow=1.7,SNR=23						
MOA	**Molln**	**121.89**	**324**	*e*PKiKP	**PKiKP**	**09 14 58.4**	**+0.4**
	comp=Z,0.9nm,0.5s						
BIOA	**Bad Ischl, Aus**	**122.33**	**325**	*i* PKiKP	**PKiKP**	**09 15 00.1**	**+1.3**
	comp=Z,1.0nm,0.4s						
PLCA	**Paso Flores**	**122.34**	**147**	PKP	**PKPdf**	**09 14 58.5**	**-0.5**
	comp=Z,1.8nm,0.9s,baz=189,slow=1.9,SNR=6.3						
OBKA	**Obir**	**122.40**	**323**	*i* PKP	**PKPdf**	**09 14 58.2**	**-0.7**
	comp=Z,6.3nm,1.6s						
MYKA	**Terra Mystica**	**122.88**	**323**	*e*PKP	**PKPdf**	**09 14 58.3**	**-1.5**
	comp=Z,1.5nm,0.6s						
LESA	**Schwarzleotal**	**123.03**	**325**	*i* PKP	**PKPdf**	**09 14 59.1**	**-1.0**
	comp=Z,3.4nm,0.6s						
ABTA	**Abfaltersbach**	**123.48**	**324**	*i* PKP	**PKPdf**	**09 14 59.9**	**-1.0**
	comp=Z,3.2nm,0.7s						
WATA	**Walderalm**	**123.71**	**325**	*i* PKP	**PKPdf**	**09 15 00.4**	**-1.0**
	comp=Z,1.4nm,0.6s						
WTTA	**Wattenberg**	**123.71**	**325**	*i* PKP	**PKPdf**	**09 15 00.5**	**-1.1**
	comp=Z,3.8nm,0.5s						
MOTA	**Moosalm**	**123.97**	**325**	*i* PKP	**PKPdf**	**09 15 01.1**	**-0.9**
	comp=Z,4.5nm,0.5s						
SQTA	**Sankt Quirin**	**123.98**	**325**	*i* PKP	**PKPdf**	**09 15 00.2**	**-1.8**
	comp=Z,2.7nm,0.6s						
RETA	**Reutte**	**124.08**	**326**	*i* PKP	**PKPdf**	**09 15 00.7**	**-1.4**
	comp=Z,1.5nm,0.7s						
FETA	**Feichten**	**124.36**	**325**	*e*PKP	**PKPdf**	**09 15 01.3**	**-1.4**
	comp=Z,1.6nm,0.6s						
DAVA	**Damuels**	**124.69**	**326**	*i* PKP	**PKPdf**	**09 15 01.9**	**-1.5**
	comp=Z,4.0nm,1.1s						
EKA	**Eskdalemuir Ar**	**125.03**	**340**	PKP	**PKPdf**	**09 15 02.4**	**-1.2**
	comp=Z,1.7nm,0.6s,baz=14,slow=3.3,SNR=6.3						
ESDC	**Sonseca Array**	**137.27**	**327**	PKP	**PKPdf**	**09 15 26.4**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=8.1,slow=1.3,SNR=2.2						
ROSC	**El Rosal**	**138.69**	**89**	PKP	**PKPdf**	**09 15 29.4**	**-1.6**
	comp=Z,7.2nm,0.5s,baz=212,slow=9.1,SNR=5.3						
LPAZ	**La Paz**	**138.85**	**123**	PKhKP	PKPpre	09 15 22.9	
	comp=Z,1.0nm,0.7s,baz=242,slow=5.5,SNR=5.1						
TORD	**Torodi Ar. Bea**	**145.15**	**285**	PKPbc	**PKPbc**	**09 15 41.2**	**-0.7**
	comp=Z,4.9nm,0.6s,baz=65,slow=5.4,SNR=9.5						
BDFB	**Brasilia**	**154.07**	**145**	PKPbc	**PKPbc**	**09 16 04.1**	**-0.2**
	comp=Z,4.0nm,0.7s,baz=167,slow=4.8,SNR=7.0						

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*IDC **30** 09:25:06.4±1.8, 55°.19N×164°.57E, h0^{km}, mb3.3/4, mbtmp3.3/5, ML2.9/1, Error ellipse: s-maj=57.1km s-min=23.1km az=164.0*

*KRSC **30** 09:25:07.7±1.2, 54°.93N×164°.72E, h51^{km}±24^{km}, Ml3.8*

ISC 30 09:25:11.5±2.6**, 54°.95N**±0°.05×**164°.80E**±0°.04**, h36**^{km}±6^{km}**, n43, σ1^{s}62**/50**, mb3.5**/4**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.72**	**69**	*e*P	**Pn**	**09 25 23.9**	**-1.2**
BKI				*e*S	**Sn**	**09 25 34.0**	**-0.9**
KBTR	**Krutoberegovo**	**1.69**	**319**	*e*P	**Pn**	**09 25 35.5**	**-2.9**
KBTR				*e*S	**Sn**	**09 25 55.2**	**-3.5**
KBG	**Krutoberegovo**	**1.77**	**319**	*e*P	**Pn**	**09 25 36.8**	**-2.7**
KBG				*e*S	**Sn**	**09 25 57.6**	**-3.0**
MKZ	**Mys Kozlova**	**1.82**	**259**	*e*P	**Pn**	**09 25 38.3**	**-1.9**
MKZ				*e*S	**Sn**	**09 25 59.1**	**-3.0**
SMKR	**Semkarok**	**2.49**	**312**	*e*P	**Pn**	**09 25 48.8**	**-0.8**
ZLN	**Zelenaya**	**2.51**	**297**	*e*P	**Pn**	**09 25 49.9**	**+0.1**
BZGR	**Bezymyannyi-Gr**	**2.54**	**295**	*e*P	**Pn**	**09 25 49.6**	**-0.6**
BZGR				*e*S	**Sn**	**09 26 19.7**	**-0.2**
TUMD	**Tumrok D**	**2.54**	**277**	*e*P	**Pn**	**09 25 49.4**	**-0.7**
TUMD				*e*S	**Sn**	**09 26 19.5**	**-0.4**
BZWR	**Bezymyannyi-We**	**2.65**	**294**	*e*P	**Pn**	**09 25 51.4**	**-0.4**
KRSR	**Krestovskiy**	**2.72**	**300**	*e*P	**Pn**	**09 25 51.8**	**-0.9**
KLY	**Klyuchi**	**2.72**	**302**	*e*P	**Pn**	**09 25 50.3**	**-2.3**
KMNR	**Kamenistaya**	**2.73**	**289**	*e*P	**Pn**	**09 25 52.7**	**0.0**
KIRR	**Kirishev**	**2.73**	**293**	*e*P	**Pn**	**09 25 52.8**	**-0.1**
KPT	**Kopyto**	**2.80**	**293**	*e*P	**Pn**	**09 25 54.0**	**+0.3**
KOZ	**Kozyrevsk**	**3.02**	**294**	*e*S	**Sn**	**09 26 32.2**	**+0.7**
SRDR	**Sredinnyy**	**3.19**	**297**	*e*P	**Pn**	**09 25 59.8**	**+0.7**
KII	**Karymskiy**	**3.25**	**256**	*e*P	**Pn**	**09 25 59.5**	**-0.5**
SPN	**Mys Shipunski**	**3.38**	**239**	*e*P	**Pn**	**09 25 59.8**	**-1.7**
SPN				*e*S	**Sn**	**09 26 36.0**	**-4.3**
ESO	**Esso**	**3.61**	**288**	*e*P	**Pn**	**09 26 05.9**	**+1.1**
NLC	**Nalytchevo**	**3.68**	**243**	*e*P	**Pn**	**09 26 04.3**	**-1.4**
SDLR	**Sedlovina**	**3.87**	**247**	*e*P	**Pn**	**09 26 07.3**	**-1.1**
SMAR	**Somma**	**3.92**	**247**	*e*P	**Pn**	**09 26 08.4**	**-0.8**
KRER	**Koryakskii**	**3.92**	**248**	*e*P	**Pn**	**09 26 08.8**	**-0.5**
UGLR	**Uglovaya**	**3.93**	**246**	*e*P	**Pn**	**09 26 08.3**	**-1.0**
UGLR				*e*S	**Sn**	**09 26 51.6**	**-2.5**
AVH	**Avacha**	**3.95**	**247**	*e*P	**Pn**	**09 26 09.5**	**-0.1**
KRX	**Arik**	**3.95**	**249**	*e*P	**Pn**	**09 26 09.0**	**-0.6**
KOK	**Koryaka**	**3.99**	**248**	*e*P	**Pn**	**09 26 09.5**	**-0.6**
PET	**Petropavlovsk**	**4.11**	**244**	*e*P	**Pn**	**09 26 12.1**	**+0.5**
GNL	**Ganaly**	**4.21**	**255**	*e*P	**Pn**	**09 26 13.0**	**-0.1**
OSSR	**Ossora**	**4.41**	**348**	*e*P	**Pn**	**09 26 15.2**	**-0.6**
OSSR				*e*S	**Sn**	**09 27 03.2**	**-2.6**
KRMR	**Karymshinskiy**	**4.48**	**244**	*e*P	**Pn**	**09 26 15.6**	**-1.2**
RUS	**Russkaya**	**4.51**	**239**	*e*P	**Pn**	**09 26 16.0**	**-1.1**
PETK	**Petropavlovsk-**	**4.58**	**249**	Pn	**Pn**	**09 26 17.4**	**-0.7**
	2.6nm,0.3s,baz=66,slow=17,SNR=14						
PETK				Sn	**Sn**	**09 27 08.3**	**-1.7**
	baz=57,slow=34						
	5.1nm,0.4s						
MTVR	**Mutnovka**	**4.64**	**241**	*e*P	**Pn**	**09 26 18.5**	**-0.6**
GRL	**Gorelyy**	**4.66**	**242**	*e*P	**Pn**	**09 26 19.1**	**-0.3**
ASAK	**Asacha**	**4.84**	**241**	*e*P	**Pn**	**09 26 21.7**	**-0.1**
ILAR	**Eielson Array**	**25.52**	**48**	P	**P**	**09 30 35.5**	**-0.7**
	0.2nm,0.6s,baz=250,slow=8.1,SNR=4.3						
	0.2nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**35.20**	**177**	T	T	10 10 26.5	
	baz=359,slow=76,SNR=14						
H11N3	**WAKE ISLAND Hy**	**35.21**	**177**	T	T	10 10 25.2	
	baz=359,slow=76,SNR=11						
H11N1	**WAKE ISLAND Hy**	**35.21**	**177**	T	T	10 10 27.4	
	baz=359,slow=76,SNR=17						
KURBB	**Kurchatov Arra**	**49.19**	**303**	P	**P**	**09 33 55.0**	**-0.5**
	0.3nm,0.5s,baz=54,slow=7.9,SNR=4.9						
	0.3nm,0.5s						
BVAR	**Borovoye Array**	**51.38**	**310**	P	**P**	**09 34 09.0**	**-3.1**
	0.3nm,0.4s,baz=39,slow=7.4,SNR=2.0						
	0.3nm,0.4s						
TXAR	**Lajitas Array**	**67.38**	**71**	P	**P**	**09 36 03.9**	**+0.9**
	0.2nm,0.6s,baz=321,slow=5.4,SNR=2.7						
	0.2nm,0.6s						

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*IDC **30** 09:25:24.1±0.7, 2°.62S×138°.53E, h0^{km}, mb3.8/9, mbtmp3.9/12, ML3.7/3, MS3.4/17, Error ellipse: s-maj=17.9km s-min=15.7km az=3.0*

*DJA **30** 09:25:29.3±0.4, 3°S±5°×13°9E±°, h10^{km}, M4.3/6, mb4.2/1, MLv4.3/6*

ISC 30 09:25:29.0±0.7**, 2°.75S**±0°.07×**138°.72E**±0°.05**, h35**^{km}**, n35, σ2^{s}56**/23**, mb3.8**/9**, MS3.3**/13**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**0.76**	**359**	P	**Pn**	**09 25 40.5**	**-2.7**
GENI	**Genyem**	**1.45**	**84**	P	**Pn**	**09 25 54.9**	**+2.1**
JAY	**Jayapura**	**1.99**	**83**	Pn	**Pn**	**09 26 00.2**	**0.0**
	7.5nm,0.3s,baz=231,slow=9.9,SNR=31						
JAY				Lg	Lg	09 26 35.0	
	28nm,0.3s,baz=288,slow=20,SNR=6.3						
	32nm,0.5s						
JAY	**Jayapura**	**1.99**	**83**	P	**Pn**	**09 26 02.2**	**+1.9**
SRPI	**Serui, Papua**	**2.63**	**289**	P	Pn	09 26 17.6	+8.6
BAKI	**Biak**	**3.04**	**301**	P	**Pn**	**09 26 16.4**	**+1.7**
RKPI	**Ransiki, Papua**	**4.71**	**285**	P	**Pn**	**09 26 40.2**	**+2.6**
FAKI	**Fak Fak**	**6.47**	**268**	P	**Pn**	**09 27 04.4**	**+2.6**
DAV	**Davao City (W)**	**16.35**	**307**	LR	LR	09 35 45.0	
	comp=Z,47nm,18.0s,baz=154,slow=38						
GUMO	**Guam**	**17.34**	**20**	LR	LR	09 36 06.9	
	comp=Z,56nm,18.5s,baz=192,slow=37						
WRA	**Warramunga Arr**	**17.61**	**194**	P	**Pn**	**09 29 32.1**	**+0.3**
	0.5nm,0.3s,baz=17,slow=12,SNR=19						
WRA				S	**Sn**	**09 32 39.3**	**-7.8**
	2.4nm,1.1s,baz=18,slow=23,SNR=1.8						
WRA				LR	LR	09 37 21.7	
	comp=Z,116nm,21.1s,baz=340,slow=41						
	2.2nm,0.6s						
KAPI	**Kappang**	**19.06**	**263**	LR	LR	09 38 41.9	
	comp=Z,90nm,19.1s,baz=76,slow=42						
FITZ	**Fitzroy Crossi**	**19.93**	**219**	P	**P**	**09 29 59.0**	**+1.0**
	0.2nm,0.3s,baz=74,slow=20,SNR=4.3						
FITZ				S	**S**	**09 33 35.5**	**-5.0**
	11nm,1.1s,baz=27,slow=4.5,SNR=2.1						
	3.5nm,0.9s						
ASAR	**Alice Springs**	**21.31**	**192**	P	**P**	**09 30 13.3**	**+0.4**
	3.2nm,0.7s,baz=19,slow=8.8,SNR=30						
ASAR				S	**S**	**09 34 07.0**	**-0.9**
	0.8nm,0.9s,baz=20,slow=25,SNR=2.4						
ASAR				LR	LR	09 39 29.0	
	comp=Z,266nm,21.4s,baz=14,slow=40						
	3.2nm,0.7s						
JOW	**Kunigami**	**31.09**	**342**	LR	LR	09 41 51.9	
	comp=Z,66nm,20.0s,baz=201,slow=32						
NWAO	**Narrogin (SRO)**	**36.15**	**211**	LR	LR	09 48 38.9	
	comp=Z,382nm,19.8s,baz=334,slow=39						
JNU	**Nakatsue**	**36.44**	**349**	LR	LR	09 46 45.6	
	comp=Z,70nm,18.9s,baz=152,slow=35						
CMAR	**Chiang Mai Arr**	**44.47**	**300**	LR	LR	09 53 44.6	
	comp=Z,27nm,18.2s,baz=110,slow=38						
KLR	**Kul'dur**	**52.13**	**354**	P	**P**	**09 34 36.5**	**+0.7**
	0.7nm,0.2s,baz=109,slow=4.1,SNR=4.2						
KLR				LR	LR	09 55 22.8	
	comp=Z,24nm,18.5s,baz=227,slow=35						
	0.7nm,0.2s						
PETK	**Petropavlovsk-**	**57.90**	**13**	LR	LR	09 56 33.6	
	comp=Z,24nm,21.3s,baz=184,slow=32						
MA2	**Magadan**	**62.86**	**7**	LR	LR	09 59 53.1	
	comp=Z,19nm,21.7s,baz=175,slow=33						
SEY	**Seymchan**	**66.32**	**7**	LR	LR	10 03 27.0	
	comp=Z,15nm,21.5s,baz=12,slow=34						
MKAR	**Makanchi Array**	**69.83**	**322**	P	**P**	**09 36 36.0**	**-0.1**
	0.7nm,0.8s,baz=123,slow=8.8,SNR=6.0						
	0.7nm,0.8s						
ZALV	**Zalesovo Beam**	**71.98**	**330**	P	**P**	**09 36 47.1**	**-1.9**
	0.5nm,0.6s,baz=78,slow=6.6,SNR=2.0						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**73.77**	**325**	P	**P**	**09 36 58.7**	**-0.9**
	0.4nm,0.6s,baz=117,slow=5.2,SNR=2.6						
	0.4nm,0.6s						
TIXI	**Tiksi**	**74.55**	**357**	LR	LR	10 09 12.7	
	comp=Z,15nm,18.7s,baz=122,slow=35						
VNDA	**Vanda**	**75.74**	**175**	P	**P**	**09 37 12.6**	**+2.0**
	0.6nm,0.8s,baz=343,slow=4.3,SNR=3.6						
	0.6nm,0.8s						
BVAR	**Borovoye Array**	**79.36**	**325**	P	**P**	**09 37 30.8**	**-0.5**
	1.4nm,0.9s,baz=111,slow=8.1,SNR=6.4						
	1.4nm,0.9s						
KDAK	**Kodiak Island**	**81.13**	**30**	LR	LR	10 10 35.8	
	comp=Z,45nm,18.9s,baz=214,slow=33						
MAW	**Mawson**	**82.09**	**202**	LR	LR	10 12 08.9	
	comp=Z,66nm,19.0s,baz=95,slow=34						
ILAR	**Eielson Array**	**85.87**	**24**	P	**P**	**09 38 04.4**	**-0.5**
	0.5nm,0.8s,baz=274,slow=4.7,SNR=5.3						
	0.5nm,0.8s						
QSPA	**South Pole Qui**	**87.19**	**180**	P	**P**	**09 38 13.0**	**+1.4**
	1.0nm,0.8s,baz=254,slow=1.9,SNR=6.5						
	1.0nm,0.8s						
INK	**Inuvik**	**91.70**	**22**	LR	LR	10 18 41.3	
	comp=Z,30nm,19.4s,baz=225,slow=35						
CPUP	**Villa Florida**	**147.18**	**153**	PKPbc	**PKPbc**	**09 45 09.3**	**-0.1**
	1.2nm,1.1s,baz=270,slow=0.9,SNR=3.2						
LPAZ	**La Paz**	**147.41**	**126**	PKPbc	**PKPbc**	**09 45 11.4**	**+0.4**
	1.6nm,0.9s,baz=262,slow=3.6,SNR=5.0						

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*IDC **30** 09:43:18.9±1.3, 13°.87N×87°.69W, h0^{km}, mb3.3/4, mbtmp3.4/5, ML3.4/1, MS2.8/1, Error ellipse: s-maj=88.0km s-min=16.6km az=51.0*

*CATAC **30** 09:43:24.6±0.5, 13°N±3°×8°9W±°, h28^{km}±4^{km}, M4.3/30, MLv4.3/30, Error ellipse: s-maj=7.7km s-min=2.8km az=27.2, confirmed*

*SNET **30** 09:43:25.6±0.7, 12°.93N×88°.82W, h41^{km}, ML4.2*

*GCG **30** 09:43:26.3±0.9, 12°.97N×88°.83W, h44^{km}±32^{km}, MD4.5, ML3.8*

ISC 30 09:43:24.8±1.3**, 12°.87N**±0°.07×**88°.79W**±0°.04**, h47**^{km}±15^{km}**, n98, σ0^{s}59**/106**, mb3.4**/4**, 7C-20D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TECO	**Alcaldia de Te**	**0.66**	**1**	⇓*i*P	**Pn**	**09 43 37.9**	**-0.1**
TECO				*e*S	**Sn**	**09 43 47.4**	**0.0**
TECO	**Alcaldia de Te**	**0.66**	**1**	P	**Pn**	**09 43 37.9**	**-0.1**
TECA	**Tecapa**	**0.68**	**25**	⇓*i*P	**Pn**	**09 43 38.6**	**+0.2**
TECA				⇓*i*P		09 43 38.6	
LCY	**Lacayo**	**0.73**	**42**	⇓*i*P	**Pn**	**09 43 39.2**	**+0.2**
SNVI	**San Vicente**	**0.74**	**356**	⇓*e*P	**Pn**	**09 43 39.1**	**0.0**
COEG	**Centro de Oper**	**0.75**	**353**	⇓*i*P	**Pn**	**09 43 39.0**	**-0.1**
COEG	**Centro de Oper**	**0.75**	**353**	S	**Sn**	**09 43 49.1**	**-0.4**
COEG	**Centro de Oper**	**0.75**	**353**	P	**Pn**	**09 43 39.1**	**-0.1**
PACA	**Pacayal**	**0.75**	**38**	⇑*e*P	**Pn**	**09 43 39.6**	**+0.4**
PACA				*e*S	**Sn**	**09 43 50.0**	**+0.4**
PACA	**Pacayal**	**0.75**	**38**	P	**Pn**	**09 43 39.6**	**+0.4**
UESV	**Universidad de**	**0.76**	**0**	*e*P	**Pn**	**09 43 39.3**	**0.0**
UESV	**Universidad de**	**0.76**	**0**	P	**Pn**	**09 43 39.3**	**0.0**
UESV	**Universidad de**	**0.76**	**0**	S	**Sn**	**09 43 50.0**	**+0.3**
PQSS	**Presa 15 de Se**	**0.78**	**17**	*e*P	**Pn**	**09 43 39.7**	**+0.1**
PQSS	**Presa 15 de Se**	**0.78**	**17**	P	**Pn**	**09 43 39.7**	**+0.1**
PQSS	**Presa 15 de Se**	**0.78**	**17**	S	**Sn**	**09 43 51.3**	**+1.1**
LFRS	**El Faro**	**0.79**	**341**	⇑*i*P	**Pn**	**09 43 39.7**	**-0.1**
LALI	**Alcalda de L**	**0.80**	**320**	*e*P	**Pn**	**09 43 39.5**	**-0.3**
LALI	**Alcalda de L**	**0.80**	**320**	*i* P	**Pn**	**09 43 39.5**	**-0.3**
LALI				*i* S	**Sn**	**09 43 50.3**	**-0.4**
LALI				IAML		09 43 54.8	
	comp=E,994nm,0.4s						
LALI	**Alcalda de L**	**0.80**	**320**	P	**Pn**	**09 43 39.5**	**-0.3**
PANCS	**Alcalda de**	**0.82**	**333**	P	**Pn**	**09 43 39.4**	**-0.8**
PANCS	**Alcalda de**	**0.82**	**333**	S	**Sn**	**09 43 50.1**	**-1.3**
SCLA	**Alcaldia de Sa**	**0.83**	**4**	⇓*e*P	**Pn**	**09 43 40.5**	**+0.3**
SCLA	**Alcaldia de Sa**	**0.83**	**4**	P	**Pn**	**09 43 40.5**	**+0.3**
SCLA	**Alcaldia de Sa**	**0.83**	**4**	S	**Sn**	**09 43 53.3**	**+1.9**
PAVA	**Las Pavas**	**0.85**	**350**	⇓*i*P	**Pn**	**09 43 40.6**	**0.0**
PAVA	**Las Pavas**	**0.85**	**350**	P	**Pn**	**09 43 40.6**	**0.0**
PAVA	**Las Pavas**	**0.85**	**350**	S	**Sn**	**09 43 52.4**	**+0.5**
CNRM	**Centro Naciona**	**0.85**	**45**	*e*P	**Pn**	**09 43 40.6**	**+0.1**
CNRM	**Centro Naciona**	**0.85**	**45**	P	**Pn**	**09 43 40.5**	**0.0**
LOMA	**Loma Larga**	**0.85**	**334**	⇓*i*P	**Pn**	**09 43 40.5**	**-0.1**
LOMA				*e*S	**Sn**	**09 43 52.2**	**+0.1**
LOMA	**Loma Larga**	**0.85**	**334**	P	**Pn**	**09 43 40.6**	**-0.1**
LBRS	**Las Brisas**	**0.89**	**344**	*e*P	**Pn**	**09 43 41.4**	**+0.2**
UDBS	**Universidad Do**	**0.91**	**337**	*e*P	**Pn**	**09 43 41.3**	**-0.1**
UDBS	**Universidad Do**	**0.91**	**337**	P	**Pn**	**09 43 41.2**	**-0.1**
UDBS	**Universidad Do**	**0.91**	**337**	S	**Sn**	**09 43 53.5**	**+0.1**
IGN	**Direccin Gen**	**0.91**	**336**	⇓*e*P	**Pn**	**09 43 41.4**	**0.0**
IGN	**Direccin Gen**	**0.91**	**336**	P	**Pn**	**09 43 41.4**	**0.0**
IGN	**Direccin Gen**	**0.91**	**336**	S	**Sn**	**09 43 53.7**	**+0.2**
UTEC	**Universidad Te**	**0.91**	**334**	P	**Pn**	**09 43 41.2**	**-0.2**
LFU	**La Fuente**	**0.92**	**340**	⇓*e*P	**Pn**	**09 43 41.7**	**+0.1**
ITCA	**Escuela Especi**	**0.93**	**329**	⇑*e*P	**Pn**	**09 43 41.6**	**0.0**
ITCA	**Escuela Especi**	**0.93**	**329**	P	**Pn**	**09 43 41.4**	**-0.2**
SEMO	**Seminario San**	**0.93**	**333**	P	**Pn**	**09 43 41.4**	**-0.2**
UEES	**Universidad Ev**	**0.94**	**333**	*e*P	**Pn**	**09 43 41.8**	**-0.1**
UEES	**Universidad Ev**	**0.94**	**333**	P	**Pn**	**09 43 41.8**	**-0.1**
PMON	**Piamonte**	**0.98**	**329**	⇓*e*P	**Pn**	**09 43 42.2**	**0.0**
PMON	**Piamonte**	**0.98**	**329**	S	**Sn**	**09 43 55.2**	**+0.1**
PMON	**Piamonte**	**0.98**	**329**	P	**Pn**	**09 43 42.3**	**0.0**
PIC2	**El Picacho**	**0.98**	**332**	⇓*i*P	**Pn**	**09 43 42.7**	**+0.3**
BOQS	**Boqueron**	**0.98**	**331**	⇓*i*P	**Pn**	**09 43 42.6**	**+0.1**
LCND	**La Caada**	**0.98**	**64**	⇓*e*P	**Pn**	**09 43 42.5**	**+0.2**
LCND	**La Caada**	**0.98**	**64**	P	**Pn**	**09 43 42.5**	**+0.2**
JAYA	**Jayaque - finc**	**1.01**	**321**	⇑*e*P	**Pn**	**09 43 42.6**	**-0.1**
JAYA	**Jayaque - finc**	**1.01**	**321**	*i* P	**Pn**	**09 43 42.6**	**-0.1**
JAYA				*i* S	**Sn**	**09 43 55.9**	**0.0**
JAYA	**Jayaque - finc**	**1.01**	**321**	P	**Pn**	**09 43 42.6**	**-0.1**
CNCH	**Conchagua**	**1.02**	**67**	⇓*i*P	**Pn**	**09 43 42.9**	**+0.1**
CNCH	**Conchagua**	**1.02**	**67**	P	**Pn**	**09 43 42.9**	**+0.1**
QUEZ	**Alcaldia de Qu**	**1.06**	**334**	*e*P	**Pn**	**09 43 43.7**	**+0.3**
CEDA	**San Andres**	**1.09**	**328**	⇑*e*P	**Pn**	**09 43 44.2**	**+0.4**
CEDA	**San Andres**	**1.09**	**328**	P	**Pn**	**09 43 44.6**	**+0.8**
CEVE	**Cerro Verde**	**1.25**	**320**	⇑*e*P	**Pn**	**09 43 46.9**	**+0.7**
CEVE	**Cerro Verde**	**1.25**	**320**	P	**Pn**	**09 43 46.8**	**+0.7**
SBLS	**San Blas**	**1.25**	**320**	*e*P	**Pn**	**09 43 46.6**	**+0.4**
POTN	**Potosi Cosigui**	**1.26**	**84**	P	**Pn**	**09 43 46.2**	**+0.2**
SNJE	**San Jose**	**1.27**	**321**	⇑*e*P	**Pn**	**09 43 46.6**	**+0.3**
RTR	**El Retiro**	**1.31**	**321**	*e*P	**Pn**	**09 43 47.5**	**+0.6**
NUBE	**Las Nubes**	**1.40**	**317**	*e*P	**Pn**	**09 43 48.3**	**+0.1**
NUBE	**Las Nubes**	**1.40**	**317**	*e*P	**Pn**	**09 43 48.3**	**+0.1**
NUBE				*i* S	**Sn**	**09 44 05.5**	**-0.1**
NUBE	**Las Nubes**	**1.40**	**317**	P	**Pn**	**09 43 48.3**	**+0.1**
LOAL	**Lomas de Alarc**	**1.48**	**319**	⇓*e*P	**Pn**	**09 43 48.9**	**-0.2**
LOAL				*e*S	**Sn**	**09 44 07.8**	**+0.6**
LOAL	**Lomas de Alarc**	**1.48**	**319**	P	**Pn**	**09 43 49.7**	**+0.6**
LOAL	**Lomas de Alarc**	**1.48**	**319**	S	**Sn**	**09 44 09.4**	**+2.2**
SLOZ	**Alcaldia de Sa**	**1.50**	**320**	⇓*i*P	**Pn**	**09 43 49.6**	**+0.3**
SLOZ	**Alcaldia de Sa**	**1.50**	**320**	S	**Sn**	**09 44 08.9**	**+1.1**
SLOZ	**Alcaldia de Sa**	**1.50**	**320**	P	**Pn**	**09 43 49.7**	**+0.3**
FAME	**Alcaldia de Sa**	**1.53**	**309**	P	**Pn**	**09 43 49.6**	**-0.2**
MTO3	**Montecristo**	**1.61**	**340**	⇓*i*P	**Pn**	**09 43 51.1**	**0.0**
MTO3	**Montecristo**	**1.61**	**340**	*i* P	**Pn**	**09 43 51.1**	**0.0**
MTO3	**Montecristo**	**1.61**	**340**	P	**Pn**	**09 43 51.1**	**0.0**
CRIN	**San Cristobal**	**1.71**	**96**	P	**Pn**	**09 43 53.1**	**+0.9**
ESQI	**Esquipulas**	**1.76**	**342**	⇓*i*P	**Pn**	**09 43 53.5**	**+0.5**
ESQI	**Esquipulas**	**1.76**	**342**	P	**Pn**	**09 43 53.4**	**+0.5**
PKGN	**Cerro Pekin**	**1.78**	**96**	P	**Pn**	**09 43 53.6**	**+0.4**
PKGN				S	**Sn**	**09 44 14.0**	**-0.7**
SARH	**Santa Rosa de**	**1.89**	**1**	*e*P	**Pn**	**09 43 55.4**	**+0.6**
PLRN	**Geotermica Pol**	**2.00**	**98**	P	**Pn**	**09 43 56.1**	**0.0**
ILCN	**San Idelfonso**	**2.06**	**98**	P	**Pn**	**09 43 57.2**	**+0.2**
FG16	**Alotenango, Sa**	**2.17**	**310**	*e*P	Pn	09 44 05.0	+6.3
FG16				IAML		09 44 43.4	
	comp=N,2μm,0.2s						
COPN	**Copaltepe**	**2.26**	**108**	P	**Pn**	**09 43 59.8**	**+0.1**
MOM2	**El Cardon**	**2.29**	**101**	P	**Pn**	**09 44 00.9**	**+0.7**
OCON	**Estacion meteo**	**2.38**	**71**	P	**Pn**	**09 44 01.3**	**-0.1**
OCON				S	**Sn**	**09 44 28.7**	**-0.7**
JTS	**Las Juntas de**	**4.55**	**124**	Pn	**Pn**	**09 44 32.8**	**+1.6**
	comp=N,2.2nm,0.3s,baz=310,slow=17,SNR=24						
JTS				Pg		09 44 41.5	
	comp=N,10nm,0.3s,baz=306,slow=19,SNR=17						
JTS				Sn	**Sn**	**09 45 21.8**	**-1.2**
	comp=N,5.3nm,0.3s,baz=60,slow=21,SNR=4.6						
JTS				Lg	Lg	09 45 39.3	
	comp=N,3.5nm,0.3s,baz=300,slow=20,SNR=5.3						
CMIG	**Matias Romero**	**7.23**	**306**	Pn	**Pn**	**09 45 10.2**	**+2.2**
	comp=N,0.6nm,0.3s,baz=109,slow=10,SNR=8.2						
CMIG				Sn	**Sn**	**09 46 27.8**	**-0.9**
	comp=N,0.6nm,0.3s,baz=49,slow=20,SNR=3.5						
	comp=N,1.9nm,0.4s						
TXAR	**Lajitas Array**	**21.43**	**322**	P	**P**	**09 48 09.1**	**0.0**
	comp=N,0.7nm,0.7s,baz=136,slow=10,SNR=14						
	comp=N,0.7nm,0.7s						
PCRV	**Puerto La Cruz**	**23.82**	**94**	LR	LR	09 57 33.0	
	comp=N,20nm,19.0s,slow=37						
PDAR	**Pinedale Array**	**34.79**	**333**	P	**P**	**09 50 09.6**	**-1.7**
	comp=N,0.3nm,0.5s,baz=123,slow=11,SNR=4.7						

	comp=N,0.3nm,0.5s						
NVAR	Mina Array Bea	36.53	319	P	P	09 50 26.6	+0.3
	comp=N,0.4nm,0.8s,baz=155,slow=3.1,SNR=2.7						
	comp=N,0.4nm,0.8s						
ILAR	Eielson Array	65.11	336	P	P	09 53 56.3	-4.2
	comp=N,0.3nm,0.8s,baz=116,slow=6.5,SNR=4.4						
	comp=N,0.3nm,0.8s						

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*GCG **30** 09:50:09.2±0.9, 14°.59N×89°.15W, h6^{km}±12^{km}, MD3.7, ML1.7*

*SNET **30** 09:50:10.5±1.1, 14°.51N×89°.20W, h1^{km}±8^{km}, ML1.7*

ISC 30 09:50:09.9±1.4**, 14°.58N**±0°.07×**89°.15W**±0°.04**, h10^{km}, n8, σ0.ˢ28**/11**, 2C, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESQI	Esquipulas	0.19	265	⇑iP	Pg	09 50 13.9	0.0
ESQI				eS	Sg	09 50 17.2	+0.4
ESQI				IAML		09 50 19.0	
	comp=Z,344nm,0.2s						
MTO3	Montecristo	0.27	230	⇑iP	Pg	09 50 15.3	-0.2
MTO3				eS	Sg	09 50 19.4	+0.2
MTO3				IAML		09 50 20.0	
	comp=Z,147nm,0.2s						
MTO3	Montecristo	0.27	230	eP	Pg	09 50 15.3	-0.2
SARH	Santa Rosa de	0.42	62	eP	Pg	09 50 18.0	-0.3
SARH				eS	Sg	09 50 24.1	+0.3
SLOZ	Alcaldia de Sa	0.82	229	eP	Pg	09 50 25.4	-0.4
NUBE	Las Nubes	0.91	223	eP	Pg	09 50 27.2	-0.2
NUBE	Las Nubes	0.91	223	i P	Pg	09 50 27.2	-0.2
SCLA	Alcaldia de Sa	0.96	155	eP	Pg	09 50 28.4	0.0

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*CATAC **30** 09:53:41.9±0.6, 13°N±3°×9°0W±°, h26^{km}±3^{km}, M3.4/23, MLv3.4/23, Error ellipse: s-maj=7.9km s-min=4.6km az=30.1, confirmed*

*SNET **30** 09:53:43.0±0.8, 13°.12N×89°.49W, h46^{km}±8^{km}, ML3.4*

*GCG **30** 09:53:43.5±0.6, 13°.14N×89°.58W, h40^{km}±10^{km}, MD3.8, ML3.0*

ISC 30 09:53:42.4±2.7**, 13°.05N**±0°.07×**89°.53W**±0°.06**, h34**^{km}±5^{km}**, n73, σ0.ˢ32**/80**, 3C-3D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.49	25	⇓iP	Pn	09 53 53.0	0.0
LALI				eS	Sn	09 54 00.4	+0.2
LALI	Alcalda de L	0.49	25	eP	Pn	09 53 53.0	0.0
LALI				eS	Sn	09 54 00.4	+0.2
LALI				IAML		09 54 01.6	
	comp=N,355nm,0.3s						
LALI	Alcalda de L	0.49	25	P	Pn	09 53 52.8	-0.1
JAYA	Jayaque - finc	0.61	8	eP	Pn	09 53 54.5	-0.2
JAYA				eS	Sn	09 54 03.4	-0.1
JAYA				IAML		09 54 04.7	
	comp=Z,3µm,0.2s						
JAYA	Jayaque - finc	0.61	8	i P	Pn	09 53 54.5	-0.2
JAYA				eS	Sn	09 54 03.2	-0.3
JAYA	Jayaque - finc	0.61	8	P	Pn	09 53 54.5	-0.2
ITCA	Escuela Especi	0.67	22	eP	Pn	09 53 55.2	-0.3
ITCA	Escuela Especi	0.67	22	P	Pn	09 53 55.2	-0.3
LOMA	Loma Larga	0.69	31	eP	Pn	09 53 55.7	-0.2
LOMA				IAML		09 54 07.4	
	comp=Z,1µm,0.1s						
LOMA	Loma Larga	0.69	31	S	Sb	09 54 05.9	+0.2
LOMA	Loma Larga	0.69	31	P	Pn	09 53 55.6	-0.2
PMON	Piamonte	0.70	18	eP	Pn	09 53 55.6	-0.3
PMON	Piamonte	0.70	18	P	Pn	09 53 55.6	-0.3
SEMO	Seminario San	0.72	25	P	Sn	09 54 06.8	+0.7
UEES	Universidad Ev	0.72	23	eP	Pn	09 53 56.0	-0.3
UEES	Universidad Ev	0.72	23	P	Pn	09 53 56.1	-0.2
UTEC	Universidad Te	0.73	26	P	Pn	09 53 55.5	-0.8
BOQS	Boqueron	0.73	20	eP	Pn	09 53 56.3	-0.2
LFRS	El Faro	0.73	39	eP	Pn	09 53 56.2	-0.3
LFRS				eS	Sn	09 54 05.8	-0.7
UESS	Universidad de	0.74	26	eP	Pn	09 53 56.3	-0.3
IGN	Direccin Gen	0.75	28	P	Pn	09 53 56.2	-0.4
IGN	Direccin Gen	0.75	28	S	Sb	09 54 07.4	+0.1
UDBS	Universidad Do	0.76	29	eP	Pn	09 53 56.4	-0.4
CEDA	San Andres	0.77	10	eP	Pn	09 53 56.6	-0.2
CEDA				IAML		09 54 11.3	
	comp=Z,729nm,0.2s						
CEDA	San Andres	0.77	10	S	Sn	09 54 07.4	+0.3
CEDA	San Andres	0.77	10	P	Pn	09 53 56.6	-0.2
CEVE	Cerro Verde	0.78	353	eP	Pn	09 53 57.3	+0.1
CEVE	Cerro Verde	0.78	353	P	Pn	09 53 57.4	+0.1
SBLS	San Blas	0.79	354	eP	Pn	09 53 57.3	-0.1
LFU	La Fuente	0.81	30	eP	Pn	09 53 57.5	+0.1
SNJE	San Jose	0.82	355	eP	Pn	09 53 57.6	-0.1
LBRS	Las Brisas	0.84	35	eP	Pn	09 53 58.0	+0.2
COEG	Centro de Oper	0.85	48	eP	Pn	09 53 57.5	-0.5
COEG				IAML		09 54 10.8	
	comp=Z,2µm,0.2s						
COEG	Centro de Oper	0.85	48	P	Pn	09 53 57.5	-0.5
COEG	Centro de Oper	0.85	48	S	Sn	09 54 09.1	-0.2
RTR	El Retiro	0.85	353	⇓eP	Pn	09 53 58.2	0.0
TECO	Alcaldia de Te	0.88	56	eP	Pn	09 53 57.6	-0.8
TECO	Alcaldia de Te	0.88	56	P	Pn	09 53 57.5	-0.8
PAVA	Las Pavas	0.88	41	eP	Pn	09 53 58.4	-0.1
PAVA	Las Pavas	0.88	41	P	Pn	09 53 58.3	-0.1
PAVA	Las Pavas	0.88	41	S	Sb	09 54 10.8	-0.2
NUBE	Las Nubes	0.89	344	⇓eP	Pn	09 53 58.2	-0.3
NUBE	Las Nubes	0.89	344	eP	Pn	09 53 58.2	-0.3
NUBE				eS	Sn	09 54 10.2	0.0
NUBE	Las Nubes	0.89	344	P	Pn	09 53 58.1	-0.5
FAME	Alcaldia de Sa	0.92	329	P	Pn	09 53 58.6	-0.4
FAME	Alcaldia de Sa	0.92	329	S	Sn	09 54 11.0	0.0
UESV	Universidad de	0.93	51	P	Pn	09 53 58.6	-0.5
LOAL	Lomas de Alarc	0.98	346	P	Pn	09 53 59.7	-0.1
SLOZ	Alcaldia de Sa	1.00	346	eP	Pn	09 54 00.1	0.0
SLOZ	Alcaldia de Sa	1.00	346	P	Pn	09 54 00.1	0.0
SCLA	Alcaldia de Sa	1.02	50	eP	Pn	09 54 00.2	-0.1
SCLA	Alcaldia de Sa	1.02	50	P	Pn	09 54 00.3	0.0
TECA	Tecapa	1.10	66	eP	Pn	09 54 01.3	-0.2
PQSS	Presa 15 de Se	1.11	59	eP	Pn	09 54 01.1	-0.4
PQSS	Presa 15 de Se	1.11	59	P	Pn	09 54 01.0	-0.4
PACA	Pacayal	1.25	70	eP	Pn	09 54 03.9	+0.4
PACA	Pacayal	1.25	70	P	Pn	09 54 04.0	+0.4
PACA	Pacayal	1.25	70	S	Sn	09 54 19.3	+0.1
LCY	Lacayo	1.26	73	eP	Pn	09 54 03.7	0.0
MTO3	Montecristo	1.36	7	⇑eP	Pn	09 54 05.1	0.0
MTO3	Montecristo	1.36	7	i P	Pn	09 54 05.1	0.0
MTO3	Montecristo	1.36	7	P	Pn	09 54 05.0	0.0
MTO3	Montecristo	1.36	7	S	Sn	09 54 22.1	+0.1
ESQI	Esquipulas	1.52	7	⇑eP	Pn	09 54 07.5	+0.3
ESQI	Esquipulas	1.52	7	P	Pn	09 54 07.5	+0.3
LCND	La Caada	1.62	81	eP	Pn	09 54 08.5	0.0
LCND	La Caada	1.62	81	P	Pn	09 54 08.6	0.0
CNCH	Conchagua	1.67	82	⇑eP	Pn	09 54 09.4	0.0
CNCH	Conchagua	1.67	82	P	Pn	09 54 09.3	0.0
SARH	Santa Rosa de	1.88	23	i P	Pn	09 54 12.6	+0.5
SARH				eS	Sn	09 54 35.2	+0.5
POTN	Potosi Cosigui	1.98	91	P	Pn	09 54 13.4	0.0
PKGN	Cerro Pekin	2.52	98	P	Pn	09 54 20.9	0.0
COPN	Copaltepe	3.00	106	P	Pn	09 54 27.6	+0.1

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*SJA **30** 09:59:00.6±0.7, 24°.23S×67°.14W, h181^{km}±4^{km}, ML3.7, MW3.7*

*GUC **30** 09:59:01.9±0.7, 24°.22S×67°.42W, h211^{km}±8^{km}, ML4.0*

ISC 30 09:59:00.1±1.7**, 24°.21S**±0°.03×**67°.16W**±0°.04**, h189**^{km}±14^{km}**, n29, σ1.ˢ30**/55**, 1C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALTA		0.75	92	eP	Pn	09 59 27.7	-0.1
SALTA				eS	Sn	09 59 47.8	-1.2
AF01	San Pedro de A	1.56	323	eP	Pn	09 59 35.7	+1.9
AF01	San Pedro de A	1.56	323	eP	Pn	09 59 34.3	+0.5
AF01				eS	Sn	09 59 59.3	-0.6
SLA	San Lorenzo	1.59	109	eP	Pn	09 59 34.3	+0.4
SLA				eS	Sn	09 59 59.3	-0.8
FSA	Cafayete	2.18	151	eP	Pn	09 59 40.3	+0.3
FSA				eS	Sn	10 00 09.2	-1.8
GO02	Mina Guanaco	2.41	246	eP	Pn	09 59 43.6	+1.0
GO02				i S	Sn	10 00 15.2	-0.5
GO02	Mina Guanaco	2.41	246	eP	Pn	09 59 43.7	+1.0
GO02				eS	Sn	10 00 15.2	-0.5
YJA	Yavi	2.52	37	eP	Pn	09 59 45.2	+1.1
YJA				eS	Sn	10 00 18.3	0.0
PB06	IPOC Station P	2.67	303	⇑iP	Pn	09 59 46.7	+1.2
PB06				i S	Sn	10 00 20.2	-0.7
PB06				IAML		10 00 21.5	
	comp=E,433nm,0.3s						
PB06	IPOC Station P	2.67	303	eP	Pn	09 59 46.7	+1.2
PB06				eS	Sn	10 00 20.6	-0.3
PB06				IAML		10 00 21.3	
	comp=Z,436nm,0.3s						
PB14	IPOC Station P	2.99	261	eP	Pn	09 59 50.8	+1.5
PB14				eS	Sn	10 00 27.1	-0.6
PB14				IAML		10 00 31.4	
	comp=Z,173nm,0.4s						
PB09	IPOC Station P	3.07	321	eP	Pn	09 59 51.7	+1.4
PB09				i S	Sn	10 00 29.5	+0.1
PB09				IAML		10 00 33.9	
	comp=E,118nm,0.6s						
PB09	IPOC Station P	3.07	321	eP	Pn	09 59 51.8	+1.5
PB09				eS	Sn	10 00 30.4	+0.9
PB09				IAML		10 00 35.4	
	comp=Z,111nm,0.4s						
PB05	IPOC Station P	3.10	295	eP	Pn	09 59 51.2	+0.6
PB05				i S	Sn	10 00 28.0	-1.9
PB05				IAML		10 00 30.9	
	comp=N,190nm,0.4s						
PB05	IPOC Station P	3.10	295	eP	Pn	09 59 51.2	+0.6
PB05				eS	Sn	10 00 29.2	-0.7
PB05				IAML		10 00 30.4	
	comp=Z,104nm,0.9s						
AC02	Maricunga	3.17	214	eP	Pn	09 59 53.0	+1.4
AC02				eS	Sn	10 00 33.4	+1.4
PB10	IPOC Station P	3.18	282	eP	Pn	09 59 52.2	+0.8
PB10				i S	Sn	10 00 29.3	-2.2
PB10				IAML		10 00 35.6	
	comp=E,248nm,0.6s						
PB10	IPOC Station P	3.18	282	eP	Pn	09 59 52.8	+1.3
PB10				eS	Sn	10 00 31.1	-0.4
PB10				IAML		10 00 35.1	
	comp=Z,181nm,0.4s						
AC01	Pan de Azucar	3.67	237	⇓iP	Pn	09 59 57.4	+0.1
AC01				i S	Sn	10 00 40.2	-2.0
AC01	Pan de Azucar	3.67	237	eP	Pn	09 59 57.2	-0.1
AC01				eS	Sn	10 00 40.3	-2.0
AC01				IAML		10 00 47.2	
	comp=Z,65nm,0.3s						
PB01	IPOC Station P	3.81	325	eP	Pn	09 59 59.5	+0.2
PB01				i S	Sn	10 00 43.2	-2.5
PB01	IPOC Station P	3.81	325	eP	Pn	09 59 59.5	+0.2
PB01				eS	Sn	10 00 44.9	-0.8
PB01				IAML		10 00 46.9	
	comp=Z,96nm,0.2s						
GO03	Copiapo	4.37	219	eP	Pn	10 00 06.0	-0.2
GO03				eS	Sn	10 00 56.2	-1.9
CYA	Choya	4.39	164	eP	Pn	10 00 08.3	+1.9
TA01	Diego Aracena	4.58	322	eP	Pn	10 00 09.2	+0.3
TA01				eS	Sn	10 01 02.0	-0.9
TA01				IAML		10 01 13.1	
	comp=Z,40nm,2.9s						
VCA	Vinchina	4.61	192	eP	Pn	10 00 12.1	+2.7
VCA				eS	Sn	10 01 06.3	+2.5
GO01	Chusmiza	4.89	337	eS	Sn	10 01 12.2	+1.2
PB11	IPOC Station P	4.99	332	eP	Pn	10 00 13.6	-0.8
PB11				eS	Sn	10 01 10.0	-2.8
PB11				IAML		10 01 14.6	
	comp=Z,40nm,0.2s						
ACLC	CERRO LA CRUZ	5.20	178	eP	Pn	10 00 17.3	+0.3
ACLC				eS	Sn	10 01 17.0	-0.6

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*DJA **30** 10:09:27.9±0.8, 2°S±7°×14°0E±°, h10^{km}, M4.1/6, MLv4.1/6*

*IDC **30** 10:09:27.0±1.6, 1°.80S×139°.68E, h0^{km}, mb3.5/3, mbtmp3.6/4, ML3.7/1, MS2.7/2, Error ellipse: s-maj=31.1km s-min=14.5km az=29.0*

ISC 30 10:09:27.2±1.3**, 1°.58S**±0°.10×**139°.79E**±0°.06**, h10^{km}, n12, σ1.ˢ76**/13**, mb3.5**/3**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	1.08	160	P	Pg	10 09 47.8	-0.2
GENI				S	Sg	10 10 01.1	-0.9
SMPI	Sarmi	1.16	249	P	Pg	10 09 48.4	-1.1
SMPI				S	Sg	10 10 03.8	-0.8
JAY	Jayapura	1.30	136	Pg	Pn	10 09 51.2	-0.3
	44nm,0.3s,baz=291,slow=9.5,SNR=129						
JAY				Lg	Lg	10 10 07.5	
	164nm,0.3s,baz=127,slow=19,SNR=11						
JAY				LR	LR	10 10 30.6	
	comp=Z,410nm,20.6s,baz=3.0,slow=51						
JAY	Jayapura	1.30	136	P	Pn	10 09 51.0	-0.6
JAY				S	Sb	10 10 09.9	+1.2
WAMI	Wamena	2.53	205	P	Pn	10 10 11.4	+2.9
BAKI	Biak	3.70	276	P	Pn	10 10 24.4	-0.2
GUMO	Guam	15.89	18	LR	LR	10 18 10.2	
	comp=Z,27nm,21.9s,baz=158,slow=32						
DAV	Davao City (W)	16.58	301	LR	LR	10 20 08.3	
	comp=Z,28nm,19.7s,baz=136,slow=39						
WRA	Warramunga Arr	19.02	196	P	P	10 13 46.2	-3.3
	0.3nm,0.3s,baz=19,slow=12,SNR=16						
	1.2nm,0.6s						
FITZ	Fitzroy Crossi	21.51	219	P	P	10 14 16.2	-0.3
	1.4nm,0.7s,baz=29,slow=9.3,SNR=1.8						
	1.4nm,0.7s						
ASAR	Alice Springs	22.69	194	P	P	10 14 27.6	-1.6
	1.0nm,0.5s,baz=28,slow=11,SNR=34						
	1.0nm,0.5s						
MKAR	Makanchi Array	69.56	322	P	P	10 20 38.7	+2.1
	0.6nm,0.8s,baz=116,slow=6.6,SNR=4.7						
	0.6nm,0.8s						

KRSC 30 10:15:09.2±1.2**, 56°.23N**×**164°.36E, h50**^{km}±18^{km}**, Ml3.8, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.86	269	eP	Pn	10 15 25.3	+0.2
KBTR				eS	Sn	10 15 36.3	-0.3
KBG	Krutoberegovo	0.93	272	eP	Pn	10 15 26.1	+0.3
KBG				eS	Sn	10 15 37.6	-0.5
BKI	Bering	1.37	138	eP	Pn	10 15 34.5	+2.6
BKI				eS	Sn	10 15 51.6	+2.7
SMKR	Semkarok	1.65	284	eP	Pn	10 15 38.2	+2.5
SMKR				eS	Sn	10 15 58.6	+2.8
ZLN	Zelenaya	2.00	265	eP	Pn	10 15 44.1	+3.5
CIRR	Tsirk	2.02	268	eP	Pn	10 15 44.3	+3.3
KLY	Klyuchi	2.07	274	eP	Pn	10 15 43.0	+1.6
BZGR	Bezymyannyi-Gr	2.07	263	eP	Pn	10 15 44.5	+2.9
KRSR	Krestovskiy	2.12	271	eP	Pn	10 15 45.1	+2.9
BZWR	Bezymyannyi-We	2.18	265	eP	Pn	10 15 46.4	+3.3
MKZ	Mys Kozlova	2.25	223	eP	Pn	10 15 46.0	+2.1
MKZ				eS	Sn	10 16 11.3	+0.8
KIRR	Kirishev	2.27	265	eP	Pn	10 15 48.0	+3.7
KPT	Kopyto	2.33	265	eP	Pn	10 15 49.1	+3.9
KMNR	Kamenistaya	2.37	260	eP	Pn	10 15 49.7	+4.1
TUMD	Tumrok D	2.47	247	eP	Pn	10 15 50.3	+3.4
TUMD				eS	Sn	10 16 18.7	+2.9
KOZ	Kozyrevsk	2.52	268	eS	Sn	10 16 21.9	+4.9
SRDR	Sredinnyy	2.59	274	eP	Pn	10 15 52.7	+4.0
OSSR	Ossora	3.11	348	eP	Pn	10 15 58.5	+2.8
OSSR				eS	Sn	10 16 32.8	+1.3
ESO	Esso	3.19	267	eP	Pn	10 16 00.9	+4.1
KII	Karymskiy	3.57	234	eP	Pn	10 16 06.3	+4.2
PALN	Palana	3.71	322	eP	Pn	10 16 06.7	+2.8
SPN	Mys Shipunski	4.02	221	eP	Pn	10 16 10.8	+2.5
NLC	Nalytchevo	4.22	226	eP	Pn	10 16 14.4	+3.4
SDLR	Sedlovina	4.34	229	eP	Pn	10 16 16.3	+3.7
KRER	Koryakskii	4.38	230	eP	Pn	10 16 17.4	+4.2
KRX	Arik	4.38	231	eP	Pn	10 16 17.5	+4.2
SMAR	Somma	4.38	230	eP	Pn	10 16 16.9	+3.5
AVH	Avacha	4.41	230	eP	Pn	10 16 17.5	+3.9
UGLR	Uglovaya	4.41	229	eP	Pn	10 16 17.4	+3.7
KOK	Koryaka	4.43	231	eP	Pn	10 16 17.6	+3.7
DALK	Dalny	4.57	228	eP	Pn	10 16 19.0	+3.3
PET	Petropavlovsk	4.62	228	eP	Pn	10 16 19.1	+2.8
KRMR	Karymshinskiy	4.98	229	eS	Sn	10 17 21.9	+4.4
RUS	Russkaya	5.12	224	eP	Pn	10 16 26.4	+3.2
GRL	Gorelyy	5.20	228	eP	Pn	10 16 29.3	+4.8
MTVR	Mutnovka	5.21	226	eP	Pn	10 16 28.8	+4.2
ASAK	Asacha	5.40	227	eP	Pn	10 16 31.8	+4.6

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*BUT **30** 10:32:56.1±1.2, 46°.87N±0°.02×112°.53W±0°.03, h14^{km}±5^{km}, Error ellipse: s-maj=3.7km s-min=0.4km az=48.0*

NEIC 30 10:32:55.7±1.3**, 46°.90N**±0°.02×**112°.51W**±0°.03**, h10**^{km}±5^{km}**, ML2.7**/20**, ML2.9**/27(BUT)**, Error ellipse: s-maj=3.5km s-min=2.5km az=204.0, Montana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LYMT	Lyon Mountain	0.17	64		Pb	10 33 00.7	-0.4
LYMT					Sg	10 33 03.6	+1.4
BEMT	Mount Belmont	0.19	139		Pg	10 33 00.4	+0.6
BEMT					Sg	10 33 03.3	+0.5
OVMT	Ovando	0.37	297		Pg	10 33 03.5	+0.5
CHMT	Chamberlain Mo	0.51	272		Pg	10 33 06.0	+0.4
SLMT	Seeley Lake	0.76	298		Pg	10 33 10.5	+0.2
BPMT	Black Pine Rid	0.79	235		Pg	10 33 10.6	-0.3
BUT	Butte	0.88	182		Pg	10 33 12.6	-0.1
MSO	Missoula	0.98	267		Pg	10 33 14.1	-0.5
MSO	Missoula	0.98	267	Sg	Sg	10 33 27.1	-0.3
MSO				IAML		10 33 27.7	
	216nm,0.3s						
MSO				IAML		10 33 31.2	
	281nm,0.5s						
LRM	Limekiln Ridge	1.07	178		Pg	10 33 16.1	-0.3
PCMT	Pistol Creek	1.08	288		Pg	10 33 16.3	-0.3
HBMT	Mount Humbug	1.10	183		Pg	10 33 16.5	-0.4
SXM	Sixmile	1.17	129		Pb	10 33 18.0	-0.1
SWMT	Swartz Lake	1.19	302		Pb	10 33 17.6	-0.7
VCMT	Victor	1.24	249		Pn	10 33 18.9	-0.2
ALMT	Alberton, Mont	1.33	277		Pn	10 33 20.5	+0.1
FBMT	Ferry Basin	1.40	292		Pn	10 33 21.2	-0.2
YBMT	Yellow Bay	1.41	314		Pb	10 33 21.8	-0.3
BOZ	Bozeman (W)	1.44	154		Pb	10 33 22.7	+0.1
BOZ					Sb	10 33 41.1	+0.1
BOZ				IAML		10 33 41.9	
	187nm,0.2s						
BOZ				IAML		10 33 43.1	
	187nm,0.3s						
JTMT	Jette	1.48	306		Pn	10 33 22.7	+0.3
DLMT	Dillon	1.53	182		Pn	10 33 22.9	-0.3
DLMT	Dillon	1.53	182		Sb	10 33 44.2	+0.4
DLMT				IAML		10 33 45.1	
	76nm,0.7s						
DLMT				IAML		10 33 47.0	
	69nm,0.6s						
NDMT	Ninemile Divid	1.61	284		Pb	10 33 24.9	-0.6
BLMT	Blacktail Moun	1.68	312		Pb	10 33 26.4	-0.4
BGMT	Barton Gulch	1.69	169		Pn	10 33 25.8	+0.3
BZMT	Bozeman Pass	1.72	136		Pn	10 33 26.7	+0.8
MKMT	Mink Peak	1.79	278		Pn	10 33 26.7	-0.1
BSMT	Bassoo Peak	1.82	303		Pb	10 33 28.8	-0.4
BHMT	Big Hole Peak	1.85	293		Pb	10 33 29.2	-0.5
MSMT	Mission Creek	1.96	129		Pb	10 33 30.4	-1.1
MCMT	McKenzie Canyo	2.08	187		Pn	10 33 30.8	0.0
EGMT	Eagleton	2.19	58		Pn	10 33 31.9	-0.2
CRMT	Chrome Mountai	2.19	130		Pb	10 33 35.9	+0.4
YHL	Hebgen Lake	2.25	155		Pn	10 33 34.3	+1.1
YHL				IAML		10 34 10.1	
	comp=N,90nm,0.8s						
GCMT	Greycliff	2.26	118	Pn	Pn	10 33 34.4	+1.2
MKRVA	Milk River, Al	2.30	12		Pn	10 33 34.6	+0.8
MOMT	Monida	2.30	178		Pn	10 33 34.2	+0.3
YHH	Holmes Hill	2.41	151	Pn	Pn	10 33 33.6	-1.7
CMI	Centennial Mou	2.45	165		Pn	10 33 36.9	+0.9
LDM	Libby Dam	2.45	310		Pn	10 33 37.1	+1.3
HSPGA	Hill Springs,	2.58	343		Pb	10 33 40.4	-1.7
MCID	Moose Creek	2.86	160		Pg	10 33 49.3	-1.2
RLMT	Red Lodge	2.87	127		Pn	10 33 42.2	+0.5
RLMT				IAML		10 34 29.6	
	comp=N,28nm,0.3s						
PLID	Pearl Lake	3.03	235		Pn	10 33 44.5	+0.7
NEW	Newport	3.41	295		Pn	10 33 48.4	-0.5
HLID	Hailey	3.59	203		Pn	10 33 50.8	-0.8
HLID				IAML		10 34 49.3	
	comp=N,11nm,0.3s						
HLID				IAML		10 34 50.9	
	comp=N,9.6nm,0.4s						
MFID	Camas Ranch	4.20	215		Pn	10 33 58.7	-1.0

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*IDC **30** 10:46:06.4±0.7, 31°.18S×177°.20W, h0^{km}, mb4.0/9, mbtmp4.0/11, ML4.1/2, MS3.5/1, Error ellipse: s-maj=23.8km s-min=17.7km az=91.0*

*NEIC **30** 10:46:08.4±1.7, 31°.1S±0°.1×177°.10W±0°.09, h10^{km}±1^{km}, mb4.3/14, Error ellipse: s-maj=20.7km s-min=9.2km az=29.0*

*NOU **30** 10:46:58.2, 34°.25S×179°.58W, h113^{km}, mb3.9/5, South of Kermadec Islands*

ISC 30 10:46:11.9±0.5**, 31°.26S**±0°.05×**177°.4W**±0°.1**, h35^{km}, n66, σ1.ˢ60**/86**, mb4.2**/17**, 4C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.05	346	P	Pn	10 46 41.5	-2.3
GLKZ				S	Sn	10 47 06.0	-2.2
RAO	Raoul Island	2.06	347	Pn	Pn	10 46 41.9	-2.1
RAO	Raoul Island	2.06	347	Pn	Pn	10 46 42.2	-1.7
	219nm,0.3s,baz=96,slow=12,SNR=6.6						
RAO				Sn	Sn	10 47 08.2	-0.3
	560nm,0.3s,baz=52,slow=24,SNR=6.9						
	522nm,0.2s						
RIZ	Raoul Island	2.07	346	P	Pn	10 46 42.1	-2.0
RIZ				S	Sn	10 47 08.3	-0.4
PKGZ	Pakihiroa	7.58	208	P	Pn	10 47 58.2	-1.7
PKGZ				S	Sn	10 49 24.0	-0.6
HAZ	Te Kaha	7.61	210	P	Pn	10 47 59.6	-0.7
HAZ				S	Sn	10 49 24.2	-1.0
PUZ	Puketiti	7.69	207	P	Pn	10 47 59.1	-2.3
PUZ				S	Sn	10 49 25.2	-2.0
RUGZ	Raukumara Rang	7.83	210	P	Pn	10 48 02.4	-1.1
RUGZ				S	Sn	10 49 30.4	-0.6
TWGZ	Tauwhareparae	7.89	208	P	Pn	10 48 02.5	-1.6
TWGZ				S	Sn	10 49 31.2	-0.9
TKGZ	Te Karaka	8.17	207	S	Sn	10 49 38.3	-0.6
MWZ	Matawai	8.21	209	P	Pn	10 48 06.6	-1.8
MWZ				S	Sn	10 49 38.2	-1.8
URZ	Urewera	8.33	212	Pn	Pn	10 48 08.3	-1.7
	0.9nm,0.3s,baz=51,slow=14,SNR=8.6						
URZ				Sn	Sn	10 49 41.2	-1.7
	1.8nm,0.3s,baz=8.3,slow=21,SNR=11						
	1.8nm,0.3s						
URZ	Urewera	8.33	212	P	Pn	10 48 08.4	-1.7
URZ	Urewera	8.33	212	P	Pn	10 48 07.9	-2.1
URZ				S	Sn	10 49 40.2	-2.6
RIGZ	Rimuhau	8.43	207	P	Pn	10 48 07.7	-3.9
RIGZ				S	Sn	10 49 45.4	-0.1
OUZ	Omahuta	8.53	240	P	Pn	10 48 20.5	+7.6
OUZ	Omahuta	8.53	240	P	Pn	10 48 20.3	+7.3
PRGZ	Paritu Road	8.57	206	P	Pn	10 48 11.2	-2.3
PRGZ				S	Sn	10 49 46.1	-2.9
MUGZ	Murupara	8.66	212	P	Pn	10 48 12.1	-2.5
MUGZ				S	Sn	10 49 50.5	-0.5
SNGZ	Shannon Statio	8.66	209	P	Pn	10 48 14.6	-0.1
SNGZ				S	Sn	10 49 49.4	-1.8
RTZ	Ruatahuna	8.68	211	P	Pn	10 48 12.3	-2.7
RAHZ	Arahi	8.88	209	P	Pn	10 48 17.7	0.0
RAHZ				S	Sn	10 49 54.4	-2.2
BKZ	Black Stump Fm	9.35	211	P	Pn	10 48 22.3	-1.8
BKZ	Black Stump Fm	9.35	211	P	Pn	10 48 22.0	-2.1
BKZ				S	Sn	10 50 05.4	-2.5
OTVZ	Oturere	9.72	214	P	Pn	10 48 27.6	-1.8
OTVZ				S	Sn	10 50 14.8	-2.6
BFZ	Birch Farm	10.72	207	P	Pn	10 48 41.0	-1.9
KHZ	Kahutara	13.29	211	P	Pn	10 49 15.5	-2.5
RPZ	Rata Peaks	15.44	213	Pn	Pn	10 49 42.9	-4.1
	0.8nm,0.3s,baz=40,slow=7.9,SNR=1.2						
RAR	Rarotonga	18.67	62	LR	LR	10 57 31.5	
	comp=Z,138nm,18.7s,baz=280,slow=37						
CTAO	Charters Tower	34.48	280	P	P	10 52 58.9	+2.2
CTAO				IAmb	IAmb	10 53 00.5	
	comp=Z,9.4nm,1.1s						
STKA	Stephens Creek	34.82	258	P	P	10 53 01.5	+2.0
STKA	Stephens Creek	34.82	258	P	P	10 53 01.6	+2.0
	comp=Z,2.0nm,0.7s,baz=112,slow=8.6,SNR=3.7						
	comp=Z,2.0nm,0.7s						
AS31	Alice Springs	43.61	268	P	P	10 54 14.1	+1.0
ASAR	Alice Springs	43.61	268	P	P	10 54 13.3	+0.3
ASAR	Alice Springs	43.61	268	P	P	10 54 13.7	+0.6
	comp=Z,2.0nm,0.7s,baz=108,slow=7.5,SNR=19						
ASAR				PcP	PcP	10 56 00.9	+0.8
	comp=Z,0.3nm,0.6s,baz=125,slow=3.0,SNR=4.6						
	comp=Z,2.0nm,0.7s						
WR8	Warramunga Arr	44.53	273	P	P	10 54 20.8	+0.3
WR8				IAmb	IAmb	10 54 23.6	

	comp=Z,9.2nm,1.1s						
WRA	Warramunga Arr	44.67	273	P	P	10 54 22.1	+0.5
WRA	Warramunga Arr	44.67	273	P	P	10 54 21.9	+0.4
	comp=Z,2.1nm,0.6s,baz=111,slow=8.1,SNR=26						
WRA				PcP	PcP	10 56 04.5	+0.7
	comp=Z,0.6nm,0.7s,baz=121,slow=3.4,SNR=1.5						
	comp=Z,2.1nm,0.6s						
SBA	Scott Base	47.22	185	P	P	10 54 42.3	+1.4
SBA				IAmb	IAmb	10 55 05.7	
	comp=Z,1.3nm,0.9s						
VNDA	Vanda	47.30	186	P	P	10 54 43.8	+2.4
VNDA				IAmb	IAmb	10 54 45.2	
	comp=Z,1.4nm,1.1s						
FITZ	Fitzroy Crossi	52.90	270	P	P	10 55 26.4	+1.7
CASY	Casey	54.64	208	P	P	10 55 37.6	+0.9
CASY				IAmb	IAmb	10 55 38.1	
	comp=Z,4.3nm,0.8s						
QSPA	South Pole Qui	58.85	180	P	P	10 56 07.8	+1.0
QSPA				IAmb	IAmb	10 56 27.2	
	comp=Z,5.0nm,1.1s						
QSPA	South Pole Qui	58.85	180	P	P	10 56 08.1	+1.3
	comp=Z,1.9nm,0.9s,baz=65,slow=0.9,SNR=11						
	comp=Z,1.9nm,0.9s						
SMAI	San Martin Ant	68.43	158	P	P	10 57 10.0	+0.3
SMAI				IAmb	IAmb	10 57 12.0	
	comp=Z,0.4nm,0.6s						
TROLL	Troll, Antarti	77.01	180	⇑P	P	10 58 01.4	+0.5
	comp=Z,104nm,1.0s						
SNAA	Sanae	77.28	178	⇑P	P	10 58 01.1	-1.2
	comp=Z,26nm,0.8s						
SNAA	Sanae	77.28	178	P	P	10 58 02.5	+0.2
SNAA				IAmb	IAmb	10 58 16.1	
	comp=Z,2.6nm,1.1s						
SNAA	Sanae	77.28	178	P	P	10 58 02.1	-0.2
	comp=Z,1.1nm,0.8s,baz=111,slow=3.3,SNR=4.8						
	comp=Z,1.1nm,0.8s						
VNA3	Neumayer Olymp	77.41	176	⇑P	P	10 58 02.7	-0.2
	comp=Z,3.9nm,0.7s						
VNA2	Neumayer--Watz	77.85	177	⇑P	P	10 58 05.5	+0.2
	comp=Z,3.4nm,0.6s,baz=169,slow=5.4						
KSRS	Korea Array	85.35	319	P	P	10 58 46.9	+1.6
	comp=Z,0.9nm,0.8s,baz=148,slow=6.2,SNR=3.4						
	comp=Z,0.9nm,0.8s						
PEA0B	Petropavlovsk-	86.78	345	P	P	10 58 52.7	+0.7
PETK	Petropavlovsk-	86.78	345	P	P	10 58 51.0	-1.0
PETK	Petropavlovsk-	86.78	345	P	P	10 58 51.8	-0.2
	comp=Z,2.4nm,0.8s,baz=108,slow=8.9,SNR=6.1						
	comp=Z,2.4nm,0.8s						
CO01	Juntas del Tor	87.93	124	P	P	10 58 57.8	-0.9
NVAR	Mina Array Bea	88.50	42	P	P	10 59 00.3	-0.6
	comp=Z,0.4nm,0.6s,baz=235,slow=7.5,SNR=4.8						
	comp=Z,0.4nm,0.6s						
TXAR	Lajitas Array	92.40	57	P	P	10 59 18.5	-0.7
	comp=Z,0.2nm,0.8s,baz=252,slow=4.6,SNR=2.9						
	comp=Z,0.2nm,0.8s						
KURBB	Kurchatov Arra	122.07	313	PKP	PKiKP	11 05 02.5	0.0
	comp=Z,0.6nm,0.2s,baz=116,slow=2.2,SNR=2.6						
FINES	FINESS Array B	146.14	340	PKPbc	PKPbc	11 05 47.4	-0.2
	comp=Z,6.1nm,0.7s,baz=70,slow=3.8,SNR=22						
NB2	NORSAR Subarra	149.68	352	PKP	PKPbc	11 05 56.9	-0.3
	comp=Z,1.0nm,0.8s,baz=9.9,slow=2.6						
NOA	NORSAR Array B	149.68	352	PKPbc	PKPbc	11 05 56.2	-1.0
	comp=Z,1.3nm,0.7s,baz=13,slow=4.2,SNR=5.6						
HFS	Hagfors	150.19	349	PKPbc	PKPbc	11 05 57.7	-0.7
	comp=Z,3.7nm,0.8s,baz=300,slow=2.9,SNR=6.2						
HFS				PKPab	PKPab	11 06 03.7	-0.9
	comp=Z,1.9nm,0.9s,baz=23,slow=4.8,SNR=4.7						
AKASG	Malin Array Be	152.31	322	PKPbc	PKPbc	11 06 03.3	-0.3
	comp=Z,0.6nm,0.5s,baz=50,slow=2.9,SNR=4.4						
AKASG				PKPab	pPKPbc	11 06 13.0	0.0
	comp=Z,0.2nm,0.3s,baz=61,slow=2.6,SNR=4.7						
BRTR	Keskin Array B	153.48	297	PKPbc	PKiKP	11 06 07.9	+1.0
	comp=Z,0.4nm,0.6s,baz=12,slow=3.5,SNR=1.7						
BRTR				PKPab	PKPab	11 06 18.9	-0.3
	comp=Z,0.9nm,0.7s,baz=116,slow=4.8,SNR=4.5						
TORD	Torodi Ar. Bea	161.95	177	PKPab	PKPab	11 06 56.0	0.0
	comp=Z,1.5nm,0.3s,baz=165,slow=3.8,SNR=1.5						

KRSC ***30*** *10:46:40.6±1.3, 56°.20N×164°.32E, h60km±22km, Ml3.9*

IDC ***30*** *10:46:41.1±1.1, 56°.06N×164°.36E, h0km, mb3.7/7, mbtmp3.7/8, ML2.4/1, MS2.7/2, Error ellipse: s-maj=43.2km s-min=21.8km az=147.0*

ISC 30 10:46:42.6±0.7**, 56°.17N**±0°.04×**164°.26E**±0°.04**, h16km, n51, σ1ˢ.50**/53**, mb3.9**/7**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.81	273	*e*P	Pb	10 46 55.4	-2.8
KBG	Krutoberegovo	0.87	276	*e*P	Pb	10 46 57.0	-2.4
BKI	Bering	1.37	134	*e*P	Pb	10 47 05.9	-1.9
BKI				*e*S	Sg	10 47 23.9	-2.9
SMKR	Semkarok	1.61	286	*e*P	Pn	10 47 09.2	-1.2
ZLN	Zelenaya	1.94	267	*e*P	Pn	10 47 14.9	-0.2
CIRR	Tsirk	1.97	270	*e*P	Pn	10 47 15.0	-0.4
BZGR	Bezymyannyi-Gr	2.01	265	*e*P	Pn	10 47 15.9	-0.1
KLY	Klyuchi	2.02	275	*e*P	Pn	10 47 13.9	-2.1
KRSR	Krestovskiy	2.07	273	*e*P	Pn	10 47 16.1	-0.6
BZWR	Bezymyannyi-We	2.12	266	*e*P	Pn	10 47 17.5	0.0
MKZ	Mys Kozlova	2.17	223	*e*P	Pn	10 47 16.3	-1.7
MKZ				*e*S	Sn	10 47 42.3	-2.2
KIRR	Kirishev	2.21	266	*e*P	Pn	10 47 18.9	+0.1
KPT	Kopyto	2.27	266	*e*P	Pn	10 47 19.7	+0.1
KMNR	Kamenistaya	2.30	261	*e*P	Pn	10 47 20.4	+0.4
TUMD	Tumrok D	2.39	248	*e*P	Pn	10 47 20.7	-0.4
TUMD				*e*S	Sn	10 47 49.4	-0.7
KOZ	Kozyrevsk	2.46	269	*e*P	Pn	10 47 22.6	+0.6
SRDR	Sredinnyy	2.54	275	*e*P	Pn	10 47 23.7	+0.5
ESO	Esso	3.13	268	*e*P	Pn	10 47 31.5	+0.2
OSSR	Ossora	3.15	349	*e*P	Pn	10 47 29.6	-1.9
OSSR				*e*S	Sn	10 48 04.8	-3.9
KII	Karymskiy	3.50	234	*e*P	Pn	10 47 36.6	+0.2
PALN	Palana	3.73	323	*e*P	Pn	10 47 39.4	+0.1
SPN	Mys Shipunski	3.94	220	*e*P	Pn	10 47 40.7	-1.7
SPN				*e*S	Sn	10 48 23.8	-4.6
NLC	Nalytchevo	4.15	226	*e*P	Pn	10 47 44.8	-0.4
SDLR	Sedlovina	4.26	229	*e*P	Pn	10 47 46.7	-0.1
KRER	Koryakskii	4.30	230	*e*P	Pn	10 47 47.9	+0.4
KRX	Arik	4.30	231	*e*P	Pn	10 47 47.7	+0.2
SMAR	Somma	4.30	230	*e*P	Pn	10 47 47.5	0.0
AVH	Avacha	4.33	230	*e*P	Pn	10 47 49.3	+1.5
UGLR	Uglovaya	4.33	229	*e*P	Pn	10 47 47.8	0.0
KOK	Koryaka	4.36	231	*e*P	Pn	10 47 48.4	+0.2
GNL	Ganaly	4.41	238	*e*P	Pn	10 47 49.6	+0.7
DALK	Dalny	4.49	228	*e*P	Pn	10 47 49.5	-0.4
PET	Petropavlovsk	4.54	228	*e*P	Pn	10 47 50.1	-0.5
PETK	Petropavlovsk-	4.89	234	Pn	Pn	10 47 55.9	+0.4
	0.8nm,0.3s,baz=64,slow=16,SNR=16						
PETK				Sn	Sn	10 48 54.0	+2.2
	0.5nm,0.3s,baz=70,slow=16,SNR=2.5						
PETK				LR	LR	10 49 58.9	
	comp=Z,52nm,19.2s,baz=30,slow=41						
	1.7nm,0.5s						
KRMR	Karymshinskiy	4.90	229	*e*S	Sn	10 48 52.3	+0.5
RUS	Russkaya	5.04	224	*e*P	Pn	10 47 56.9	-0.5
GRL	Gorelyy	5.12	227	*e*P	Pn	10 47 59.7	+1.0
MTVR	Mutnovka	5.13	226	*e*P	Pn	10 47 59.5	+0.7
ASAK	Asacha	5.32	227	*e*P	Pn	10 48 02.4	+1.0
ILAR	Eielson Array	24.94	50	P	P	10 52 05.3	+0.6
	0.7nm,0.9s,baz=269,slow=8.1,SNR=9.3						
	0.7nm,0.9s						
H11N2	WAKE ISLAND Hy	36.44	176	T	T	11 32 27.8	
	baz=357,slow=76,SNR=685						
H11N3	WAKE ISLAND Hy	36.45	176	T	T	11 32 27.9	
	baz=357,slow=76,SNR=287						
H11N1	WAKE ISLAND Hy	36.46	176	T	T	11 32 29.8	
	baz=357,slow=76,SNR=361						
NVAR	Mina Array Bea	52.50	75	P	P	10 55 56.3	+1.4
	0.4nm,0.7s,baz=306,slow=8.0,SNR=2.9						
	0.4nm,0.7s						
PDAR	Pinedale Array	53.96	65	P	P	10 56 06.8	+1.2
	0.6nm,0.5s,baz=335,slow=2.6,SNR=7.7						
	0.6nm,0.5s						
ULM	Lac du Bonnet	54.96	51	P	P	10 56 13.6	+1.1
	1.4nm,0.6s,baz=300,slow=8.7,SNR=2.9						
	1.4nm,0.6s						
FINES	FINESS Array B	58.22	338	P	P	10 56 38.1	+2.7
	0.9nm,0.8s,baz=39,slow=5.3,SNR=1.6						
	0.9nm,0.8s						
SCHQ	Schefferville	61.77	31	P	P	10 57 00.3	+0.3
	0.9nm,0.5s,baz=0.6,slow=9.4,SNR=3.8						
	0.9nm,0.5s						
TXAR	Lajitas Array	67.27	71	P	P	10 57 38.0	+1.6
	0.6nm,0.7s,baz=300,slow=3.9,SNR=11						
	0.6nm,0.7s						
ESDC	Sonseca Array	84.00	351	LR	LR	11 38 19.7	
	comp=Z,6.6nm,18.5s,baz=152,slow=37						
QSPA	South Pole Qui	145.93	180	PKPbc	PKPbc	11 06 18.9	-0.9
	0.3nm,0.5s,baz=96,slow=4.2,SNR=6.3						

CATAC 30 10:53:33.6±0.3**, 10°N**±2°×**8°5W**±°**, h11km**±2km**, M2.8**/7**, MLv2.8**/7**, Error ellipse: s-maj=5.0km s-min=3.9km az=45.2, confirmed, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCE	Pocosol	0.09	299	P	Pg	10 53 37.6	+1.4
SOCE				S	Sg	10 53 40.2	+2.1
TCS1	Tacares	0.38	141	P	Pb	10 53 42.2	-0.2
COVE	Coope Vega, Sa	0.40	19	P	Pb	10 53 42.6	-0.2
COVE				S	Sb	10 53 48.6	-0.4
LCR2	La Lucha 2	0.79	138	S	Sg	10 53 59.1	-0.2
LCR2	La Lucha 2	0.79	138	P	Pg	10 53 48.7	-0.2
CMARA	Lajas Hojancha	0.93	250	P	Pg	10 53 49.8	-1.7
CMARA	Lajas Hojancha	0.93	250	S	Sb	10 54 05.0	+0.8
DRK0	Durika	1.66	130	P	Pb	10 54 04.0	-0.4
DRK0	Durika	1.66	130	S	Sb	10 54 25.4	-0.1

NNC 30 11:05:12.3±10.0**, 37°.33N**×**70°.87E, h120km**±244km**, mb3.2, mpv3.9, 2C-1D, Error ellipse: s-maj=159.5km s-min=68.5km az=56.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	5.78	357	⇓P	Pn	11 06 36.5	+0.8
	3.9nm,0.3s,baz=188,slow=14,SNR=75						
KK31				⇑S	Sn	11 07 41.2	+0.5
	6.3nm,0.2s,baz=188,slow=14,SNR=75						
AAK	Ala-Archa	5.99	27	⇑P	Pn	11 06 38.0	-0.7
AB31	Akbulak array	14.31	330	P	Pn	11 08 29.2	0.0
	0.5nm,0.4s,baz=146,slow=12,SNR=27						

MEX ***30*** *11:27:16.5±0.9, 13°.95N×93°.22W, h9km±117km, MD4.0*

GCG ***30*** *11:27:18.0±1.5, 14°.01N×93°.07W, h36km±999km, MD4.1, ML3.4*

ISC 30 11:27:12.5±3.0**, 13°.96N**±0°.10×**93°.22W**±0°.06**, h15km**±17km**, n15, σ1ˢ.49**/27**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.32	44	*e*P	Pb	11 27 37.6	+0.7
THIG				*e*S	Sn	11 27 53.7	0.0
SMCA	Catarina	1.42	51	*i* P	Pb	11 27 39.6	+0.9
PATR	El Naranjo	1.49	40	*i* P	Pb	11 27 40.0	-0.1
PATR				*e*S	Sb	11 27 58.6	-0.4
RTAL	Retalhuleu	1.58	69	*e*P	Pb	11 27 41.9	+0.5
RTAL				*e*S	Sb	11 28 01.0	-0.3
PAVE	Pavencul	1.59	39	*e*P	Pb	11 27 41.5	-0.2
PAVE				*e*S	Sb	11 28 00.9	-0.8
PCIG		1.73	0	*e*P	Pn	11 27 42.7	+0.6
PCIG				*e*S	Sn	11 28 02.7	-1.2
STG8	El Palmar, Qui	1.88	75	*e*P	Pn	11 27 44.1	-0.2
STG0	El Palmar, Qui	1.88	76	*e*P	Pn	11 27 44.2	-0.1
STG0				*e*S	Sn	11 28 05.5	-2.3
HUEH	Huehuetenango	2.14	51	*e*P	Pb	11 27 51.2	+0.1
HUEH				*e*S	Sg	11 28 21.9	+0.5
CCIG	Comitan	2.53	24	*e*P	Pb	11 27 57.0	-0.8
CCIG				*e*S	Sn	11 28 24.9	+0.9
CCIG	Comitan	2.53	24	*e*P	Pb	11 27 57.2	-0.6
CCIG				IAML		11 28 36.0	
	comp=N,160nm,0.4s						
TGIG		2.80	2	*e*P	Pb	11 27 60.0	-2.4
TGIG				*e*S	Sn	11 28 32.5	+2.1
TGIG		2.80	2	*e*P	Pb	11 27 59.9	-2.4
TGIG				*i* S	Sn	11 28 32.4	+1.9
TGIG				IAML		11 28 40.8	
	comp=E,164nm,0.5s						
CMIG	Matias Romero	3.50	333	*e*P	Pn	11 28 08.7	+2.3
CMIG				*e*S	Sn	11 28 44.6	-3.0
NEUV	Arroyo Zacate	4.48	327	*e*P	Pn	11 28 20.1	+0.3
NEUV				*e*S	Sn	11 29 14.1	+2.4

DJA ***30*** *11:35:14.4±0.7, 4°S±5°×13°7E±°, h156km±8km, M3.7/6, MLv3.7/6*

IDC ***30*** *11:35:15.9±5.0, 3°.73S×136°.69E, h139km±68km, mb3.0/1, mbtmp3.5/5, Error ellipse: s-maj=70.8km s-min=24.4km az=105.0*

ISC 30 11:35:13.9±0.9**, 3°.87S**±0°.06×**136°.67E**±0°.06**, h150km, n11, σ3ˢ.45**/16**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRPI	Serui, Papua	2.03	348	P	Pn	11 35 49.2	-0.2
SRPI				S	Sn	11 36 11.5	-5.3
BAKI	Biak	2.72	348	P	Pn	11 35 58.4	+0.6
BAKI				S	Sn	11 36 29.6	-2.1
SMPI	Sarmi	2.76	48	P	Pn	11 35 58.7	+0.4
KMPI	Kaimana, Papua	2.96	274	P	Pn	11 36 01.1	+0.3
JAY	Jayapura	4.25	72	P	Pn	11 36 17.3	-0.1
	2.4nm,0.4s,baz=231,slow=17,SNR=5.2						
JAY				S	Sn	11 37 03.4	-3.5
	7.5nm,0.4s,baz=323,slow=20,SNR=8.7						
JAY	Jayapura	4.25	72	P	Pn	11 36 17.4	-0.1
FAKI	Fak Fak	4.51	282	P	Pn	11 36 19.7	-1.2
WRA	Warramunga Arr	16.14	188	P	P	11 38 55.9	+3.0
	1.4nm,0.7s,baz=7.6,slow=12,SNR=6.5						
WRA				S	S	11 41 45.3	-6.7
	1.5nm,1.1s,baz=3.4,slow=23,SNR=1.9						
FITZ	Fitzroy Crossi	17.79	217	P	Pn	11 39 16.0	+3.6
	1.2nm,0.7s,baz=36,slow=13,SNR=1.7						
FITZ				S	S	11 42 22.6	-5.5
	2.3nm,1.0s,baz=34,slow=18,SNR=1.8						
ASAR	Alice Springs	19.86	187	P	Pn	11 39 37.2	+0.5
	0.4nm,0.4s,baz=10,slow=11,SNR=13						
MKAR	Makanchi Array	69.48	323	P	P	11 46 09.3	+3.2
	0.2nm,0.5s,baz=119,slow=6.7,SNR=2.4						
	0.2nm,0.5s						

IDC ***30*** *11:49:58.9±0.8, 2°.68S×138°.50E, h0km, mb4.0/7, mbtmp3.9/10, ML3.3/3, MS3.6/8, Error ellipse: s-maj=16.9km s-min=14.4km az=127.0*

DJA ***30*** *11:50:01.8±0.3, 3°S±5°×13°9E±°, h10km, M4.3/8, mb4.5/1, MLv4.2/8*

ISC 30 11:50:00.9±0.6**, 2°.62S**±0°.06×**138°.48E**±0°.04**, h10km, n34, σ1ˢ.55**/31**, mb4.0**/7**, MS3.7**/6**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.67	20	P	Pb	11 50 13.1	-1.6
GENI	Genyem	1.69	89	P	Pb	11 50 32.5	+0.4
GENI	Genyem	1.69	89	P	Pn	11 50 31.4	+0.9
JAY	Jayapura	2.23	87	Pn	Pn	11 50 38.0	+0.1
	13nm,0.3s,baz=242,slow=9.8,SNR=40						
JAY				Lg	Lg	11 51 09.1	
	8.0nm,0.3s,baz=343,slow=19,SNR=5.2						
	54nm,0.4s						
JAY	Jayapura	2.23	87	P	Pn	11 50 37.9	0.0
SRPI	Serui, Papua	2.36	288	P	Pn	11 50 39.5	-0.2
BAKI	Biak	2.76	301	P	Pn	11 50 46.5	+1.2
RKPI	Ransiki, Papua	4.44	284	P	Pn	11 51 09.3	+1.0
FAKI	Fak Fak	6.23	267	P	Pn	11 51 34.6	+1.6
FAKI	Fak Fak	6.23	267	P	Pn	11 51 33.9	+0.9
KDU	Kakadu	11.63	210	P	Pn	11 52 47.6	+0.5
COEN	Coen	12.18	158	P	Pn	11 52 55.0	+0.3
MTN	Manton Dam	12.49	215	P	Pn	11 52 59.3	+0.4
GUMO	Guam	17.31	21	LR	LR	12 00 40.2	
	comp=Z,116nm,18.2s,baz=203,slow=37						
WRA	Warramunga Arr	17.68	193	P	Pn	11 54 05.2	-2.4
	0.1nm,0.3s,baz=5.1,slow=13,SNR=5.5						
WRA				S	Sn	11 57 24.1	-0.6
	0.9nm,0.8s,baz=8.6,slow=24,SNR=2.3						
WRA				LR	LR	12 01 40.0	
	comp=Z,234nm,18.6s,baz=334,slow=40						
	1.5nm,0.5s						
QIS	Mount Isa	17.86	177	P	Pn	11 54 10.1	+0.4
TOLI2	Tolitoli	18.08	282	P	P	11 54 15.5	+2.7
FITZ	Fitzroy Crossi	19.88	218	P	P	11 54 32.2	-0.3
	0.1nm,0.3s,baz=58,slow=13,SNR=5.1						
FITZ				S	S	11 58 11.6	-4.8
	2.7nm,0.9s,baz=108,slow=19,SNR=1.8						
	2.0nm,0.7s						
FITZ	Fitzroy Crossi	19.88	218	P	P	11 54 32.9	+0.4
AS01	Alice Springs	21.37	191	P	P	11 54 48.3	-0.4
ASAR	Alice Springs	21.38	192	P	P	11 54 47.4	-1.5
	2.0nm,0.6s,baz=17,slow=8.6,SNR=36						
	2.0nm,0.6s						
TATA	Tatamba Isabel	21.98	106	P	P	11 54 57.1	+1.8
ALEG	Aligegeo Malai	22.92	106	P	P	11 55 08.5	+3.1
JNU	Nakatsue	36.27	349	LR	LR	12 08 51.7	
	comp=Z,78nm,20.2s,baz=184,slow=31						
SONM	Songino Array	57.54	335	LR	LR	12 23 55.6	
	comp=Z,63nm,20.3s,baz=154,slow=35						
PETK	Petropavlovsk-	57.83	14	LR	LR	12 20 47.6	
	comp=Z,37nm,21.6s,baz=195,slow=32						
MKAR	Makanchi Array	69.58	322	P	P	12 01 10.6	+0.3
	1.2nm,0.6s,baz=110,slow=7.7,SNR=9.0						
	1.2nm,0.6s						
KURBB	Kurchatov Arra	73.52	325	P	P	12 01 34.0	+0.1
	0.6nm,0.6s,baz=106,slow=6.0,SNR=4.4						
	0.6nm,0.6s						
VNDA	Vanda	75.89	175	P	P	12 01 46.8	-0.4
	0.6nm,0.7s,baz=331,slow=6.9,SNR=7.2						
VNDA				LR	LR	12 36 14.6	
	comp=Z,43nm,18.6s,baz=350,slow=37						
	0.6nm,0.7s						
BVAR	Borovoye Array	79.11	325	P	P	12 02 06.4	+0.7
	0.9nm,0.6s,baz=106,slow=7.7,SNR=3.5						
	0.9nm,0.6s						
KDAK	Kodiak Island	81.14	30	LR	LR	12 34 52.3	
	comp=Z,64nm,19.3s,baz=238,slow=33						
ILAR	Eielson Array	85.85	24	P	P	12 02 38.8	-1.8
	0.7nm,0.7s,baz=261,slow=4.6,SNR=11						
ILAR				LR	LR	12 40 33.1	
	comp=Z,27nm,18.7s,baz=264,slow=35						
	0.7nm,0.7s						
QSPA	South Pole Qui	87.32	180	P	P	12 02 47.1	-0.8
	2.4nm,0.9s,baz=356,slow=0.2,SNR=7.9						
	2.4nm,0.9s						
LPAZ	La Paz	147.68	126	PKPbc	PKPbc	12 09 47.9	+0.3
	2.2nm,1.1s,baz=291,slow=3.0,SNR=4.3						

IDC ***30*** *11:52:44.2±3.6, 35°.30N×80°.88E, h0km, mb3.6/3, mbtmp3.4/5, ML3.0/2, MS3.1/2, Error ellipse: s-maj=124.4km s-min=23.2km az=75.0*

ISC 30 11:52:46.7±2.9**, 35°.3N**±0°.1×**80°.3E**±0°.6**, h35km, n7, σ1ˢ.74**/6**, mb3.6**/3**, Kashmir-Xizang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	8.62	330	Lg	Lg	11 57 26.2	
	0.2nm,0.3s,baz=187,slow=15,SNR=1.3						
AAK				LR	LR	11 58 55.7	
	comp=Z,60nm,21.5s,baz=153,slow=42						
MKAR	Makanchi Array	11.62	7	Pn	Pn	11 55 30.7	+0.8
	0.3nm,0.3s,baz=188,slow=13,SNR=9.9						
MKAR				Sn	Sn	11 57 38.0	-0.3
	0.1nm,0.3s,baz=185,slow=27,SNR=2.0						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	15.40	356	Pn	Pn	11 56 19.7	-1.5
	baz=179,slow=11,SNR=2.3						
	0.2nm,0.3s						
CMAR	Chiang Mai Arr	23.56	130	P	P	11 57 52.1	-1.9
	0.3nm,0.3s,baz=318,slow=9.5,SNR=5.8						
	0.3nm,0.3s						
LSZ	Lusaka	70.43	234	LR	LR	12 36 48.2	
	comp=Z,28nm,19.2s,baz=246,slow=37						
WRA	Warramunga Arr	75.12	128	P	P	12 04 26.4	+1.0
	0.4nm,0.6s,baz=321,slow=6.1,SNR=1.7						
	0.4nm,0.6s						
ASAR	Alice Springs	77.57	131	P	P	12 04 40.5	+1.3
	0.5nm,0.6s,baz=319,slow=6.0,SNR=7.4						
	0.5nm,0.6s						

IDC ***30*** *11:53:48.0±1.3, 2°.57S×138°.43E, h0km, mb3.5/4, mbtmp3.6/6, ML3.5/2, Error ellipse: s-maj=27.4km s-min=18.4km az=170.0*

ISC 30 11:53:52.7±1.1**, 2°.6S**±0°.2×**138°.4E**±0°.2**, h32km, n6, σ1ˢ.12**/6**, mb3.6**/4**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.29	87	Pn	Pn	11 54 28.2	-0.1
	7.0nm,0.3s,baz=231,slow=10,SNR=12						
JAY				Lg	Lg	11 54 59.3	
	4.9nm,0.3s,baz=171,slow=19,SNR=2.5						
	29nm,0.5s						
WRA	Warramunga Arr	17.67	193	P	Pn	11 57 55.9	-0.7
	0.2nm,0.3s,baz=14,slow=12,SNR=5.0						
	2.2nm,0.9s						
ASAR	Alice Springs	21.37	191	P	P	11 58 37.0	-0.7
	1.0nm,0.6s,baz=15,slow=10,SNR=6.3						
	1.0nm,0.6s						
MKAR	Makanchi Array	69.54	322	P	P	12 04 58.6	+0.1
	0.5nm,0.7s,baz=113,slow=6.5,SNR=3.2						
	0.5nm,0.7s						
VNDA	Vanda	75.89	175	P	P	12 05 37.2	+1.6
	0.6nm,0.8s,baz=321,slow=7.5,SNR=2.5						
	0.6nm,0.8s						
ILAR	Eielson Array	85.87	24	P	P	12 06 28.6	-0.5
	0.3nm,0.7s,baz=259,slow=5.5,SNR=2.8						
	0.3nm,0.7s						

IDC 30 11:55:50.7±1.4**, 2°.56S**×**138°.40E, h0km, mb3.4**/3**, mbtmp3.5**/5**, ML3.3**/2**, MS3.7**/1**, Error ellipse: s-maj=28.8km s-min=18.4km az=174.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.30	89	Pn	Pn	11 56 30.6	+0.6
	5.4nm,0.3s,baz=264,slow=9.2,SNR=6.6						
JAY				Lg	Lg	11 57 04.4	
	6.3nm,0.3s,baz=358,slow=19,SNR=5.2						
	14nm,0.3s						
WRA	Warramunga Arr	17.73	193	P	P	12 00 00.5	+0.4
	0.1nm,0.3s,baz=18,slow=12,SNR=3.4						
	1.1nm,0.7s						
ASAR	Alice Springs	21.43	191	P	P	12 00 39.6	-1.0
	0.9nm,0.9s,baz=20,slow=11,SNR=6.9						
	0.9nm,0.9s						
RPZ	Rata Peaks	50.17	149	LR	LR	12 24 19.5	
	comp=Z,94nm,21.6s,baz=118,slow=34						
MKAR	Makanchi Array	69.48	322	P	P	12 07 02.2	+1.0
	0.6nm,1.0s,baz=116,slow=6.7,SNR=2.8						
	0.6nm,1.0s						
ILAR	Eielson Array	85.83	24	P	P	12 08 30.8	-1.2
	0.2nm,0.6s,baz=262,slow=5.1,SNR=4.8						
	0.2nm,0.6s						

NOU 30 12:11:04.5, 22°.10S×**170°.04E, h0km, MLv3.7**/12**, Southeast of Loyalty Islands, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.97	288	P	Pn	12 11 38.5	-0.6
MARNC	Mare, Loyalty	1.97	288	S	Sn	12 12 04.6	+0.1
PINNC	Pines Island,	2.46	258	P	Pn	12 11 45.7	-0.1
PINNC	Pines Island,	2.46	258	S	Sn	12 12 17.0	+0.5
YATNC	Mamie plateau,	2.92	270	P	Pn	12 11 51.6	-0.7
OUENC	Ouen Island, N	2.98	263	P	Pn	12 11 53.3	+0.3
OUENC	Ouen Island, N	2.98	263	S	Sn	12 12 30.3	+0.8
ONTNC	Ouen Toro	3.33	266	P	Pn	12 11 56.4	-1.5
ONTNC	Ouen Toro	3.33	266	S	Sn	12 12 38.2	+0.1
DZM	Mont Dzumac	3.33	270	P	Pn	12 11 58.4	+0.4
DZM	Mont Dzumac	3.33	270	S	Sn	12 12 38.8	+0.4
KOUNC	Koumac, New Ca	5.58	285	P	Pn	12 12 29.7	+0.9

JMA ***30*** *12:13:22.4±0.2, 25°N±1°×122°.4E±0°.4, h98km±1km, MV1.8/9, NW OFF ISHIGAKIJIMA IS*

TAP ***30*** *12:13:22.1, 24°.72N×122°.39E, h99km, ML2.7, C*

ISC 30 12:13:22.3±1.4**, 24°.69N**±0°.03×**122°.41E**±0°.03**, h98km**±7km**, n101, σ0ˢ.98**/199**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS2	EOS2	0.32	211	*e*P	Pn	12 13 37.4	+0.8
EOS2				*e*S	Sn	12 13 48.5	+1.3
EOS3	EOS3	0.41	192	*e*P	Pn	12 13 37.8	+0.7
EOS3				*e*S	Sn	12 13 49.9	+1.8
EGS		0.46	289	*e*P	Pn	12 13 38.8	+1.2
EGS				S	Sn	12 13 48.4	-0.6
TWB1	Santiao Chiao	0.50	309	*i* P	Pn	12 13 37.9	+0.1
TWB1				*e*S	Sn	12 13 49.2	-0.2
TWC	Suao	0.52	261	P	Pn	12 13 38.2	+0.3
TWC				*e*S	Sn	12 13 47.8	-2.0

ESAO	Su ao	0.53	257	*i* P	Pn	12 13 38.0	0.0
ESAO				*e*S	Sn	12 13 48.5	-1.3
JYNG	Yonagunijimaku	0.54	116	*e*P	Pn	12 13 38.2	0.0
EOS4	EOS4	0.58	189	*e*P	Pn	12 13 39.5	+1.5
EOS4				S	Sn	12 13 50.4	+0.6
YOJ	Yonaguni jima	0.59	113	*e*P	Pn	12 13 38.7	+0.2
YOJ				S	Sn	12 13 50.7	0.0
TIPB	Shuangxi	0.60	298	*i* P	Pn	12 13 38.6	0.0
TIPB				S	Sn	12 13 49.8	-1.2
EWUT	Wuta	0.63	247	*i* P	Pn	12 13 39.0	+0.1
EWUT				S	Sn	12 13 51.2	0.0
SXI1	Grass Mountain	0.63	309	*e*P	Pn	12 13 39.3	+0.4
SXI1				S	Sn	12 13 51.6	+0.1
NDS	Dongshan	0.64	265	P	Pn	12 13 39.1	+0.1
NDS				*e*S	Sn	12 13 49.8	-1.6
ENA	Nanau	0.67	247	*e*P	Pn	12 13 39.4	+0.2
ENA				*e*S	Sn	12 13 52.1	+0.2
TWE	Neicheng	0.68	272	*i* P	Pn	12 13 39.4	+0.1
TWE				*e*S	Sn	12 13 51.6	-0.5
NWF	Wu-fen Shan	0.69	303	P	Pn	12 13 39.1	-0.4
NWF				*e*S	Sn	12 13 52.6	+0.2
WFSB	Wu-fen Shan	0.69	303	*i* P	Pn	12 13 39.2	-0.1
WFSB				S	Sn	12 13 52.2	0.0
EAHA	Aohua	0.71	240	P	Pn	12 13 39.5	-0.1
EAHA				*e*S	Sn	12 13 52.7	+0.1
EHP	Heping Village	0.72	238	*e*P	Pn	12 13 40.1	+0.4
FUSB	Fushanzhiwuyua	0.75	275	*i* P	Pn	12 13 40.1	0.0
FUSB				*e*S	Sn	12 13 52.6	-0.8
ENTT	Nioudou	0.77	266	*e*P	Pn	12 13 40.8	+0.6
ENTT				S	Sn	12 13 53.6	0.0
TWA	Mucha	0.81	291	*i* P	Pn	12 13 40.4	-0.2
TWA				*i* S	Sn	12 13 53.5	-0.8
LATG	Datong	0.82	259	*i* P	Pn	12 13 41.2	+0.4
LATG				S	Sn	12 13 55.4	+0.7
NWLT	Wulai	0.83	276	*e*P	Pn	12 13 41.5	+0.7
NWLT				*e*S	Sn	12 13 54.2	-0.5
NHDH	Xindian Distri	0.85	289	P	Pn	12 13 41.2	+0.3
NHDH				S	Sn	12 13 53.9	-1.1
TATO	Taipei	0.89	289	P	Pn	12 13 41.2	-0.1
TATO				S	Sn	12 13 54.7	-0.9
YM01	YM01	0.89	301	P	Pn	12 13 41.5	+0.1
YM01				*i* S	Sn	12 13 54.5	-1.2
YM08	YM08	0.90	304	*i* P	Pn	12 13 41.3	-0.2
YM08				*e*S	Sn	12 13 54.7	-1.1
ETL	Fush Village	0.90	234	P	Pn	12 13 41.3	-0.2
ETL				*e*S	Sn	12 13 54.4	-1.5
NACB	Ninganchiao	0.91	235	*e*P	Pn	12 13 41.3	-0.3
NACB				*e*S	Sn	12 13 55.0	-1.0
ZUZH	Zhuzihu	0.92	301	P	Pn	12 13 41.5	-0.1
ZUZH				*e*S	Sn	12 13 55.4	-0.9
TWY	Chenhua	0.94	308	P	Pn	12 13 41.9	+0.1
TWY				S	Sn	12 13 57.0	+0.4
YHNB	Yeheng	0.94	269	P	Pn	12 13 42.3	+0.3
YHNB				*i* S	Sn	12 13 56.6	-0.2
ANP	Anpu	0.95	301	P	Pn	12 13 41.9	-0.1
ANP				*e*S	Sn	12 13 56.0	-0.9
NSK	Sanguang	0.96	269	*i* P	Pn	12 13 42.4	+0.2
NSK				*i* S	Sn	12 13 56.6	-0.5
TWD	Chiawan	0.96	231	*e*P	Pn	12 13 41.7	-0.4
TWD				*i* S	Sn	12 13 56.4	-0.7
NNSB	Datong	0.97	255	*e*P	Pn	12 13 42.6	+0.2
NNSB				*i* S	Sn	12 13 57.3	-0.2
NNSH	Datong	0.97	255	P	Pn	12 13 42.3	-0.1
NNSH				S	Sn	12 13 57.2	-0.3
ETLH	Xiulin Townshi	0.98	240	*e*P	Pn	12 13 42.5	+0.1
ETLH				*e*S	Sn	12 13 57.0	-0.6
NNS	Nan Shan	0.98	255	*e*P	Pn	12 13 42.6	+0.1
NNS				S	Sn	12 13 57.4	-0.3
PCYT	Pengchaiyu	0.98	342	*e*P	Pn	12 13 42.8	+0.5
PCYT				S	Sn	12 13 57.2	-0.3
TWS1	Kuangyinshan	0.99	294	*e*P	Pn	12 13 42.9	+0.5
TWS1				*i* S	Sn	12 13 57.6	0.0
NTST	Danshui	0.99	298	*e*P	Pn	12 13 43.5	+1.1
NTST				S	Sn	12 13 57.7	+0.1
TEYL	Yanliau Villag	1.11	222	*e*P	Pn	12 13 44.3	+0.6
TEYL				*e*S	Sn	12 13 58.9	-1.0
ETM	Tongmen	1.11	229	*e*P	Pn	12 13 43.3	-0.5
ETM				*e*S	Sn	12 13 57.9	-2.0
KSHI	Guanxi Townshi	1.13	274	*e*P	Pn	12 13 44.5	+0.5
KSHI				*i* S	Sn	12 14 00.8	+0.4
LXIB	Xiulin Townshi	1.13	234	*i* P	Pn	12 13 43.6	-0.6
LXIB				*e*S	Sn	12 14 00.2	-0.4
NCUH	Zhongli	1.15	284	*e*P	Pn	12 13 46.2	+2.0
FUSS	Fushou	1.16	248	*i* P	Pn	12 13 44.9	+0.4
FUSS				*e*S	Sn	12 14 00.7	-0.6
NFF	Wufeng Townshi	1.18	267	*i* P	Pn	12 13 44.9	+0.3
NFF				S	Sn	12 14 01.0	-0.5
WHF	Hehuan Shan	1.18	243	*e*P	Pn	12 13 44.9	-0.1
WHF				S	Sn	12 14 01.3	-0.8
SHUL	Shoufeng	1.19	221	*e*P	Pn	12 13 45.5	+0.8
SHUL				*i* S	Sn	12 14 01.2	-0.4
TDCB	Techi	1.23	249	*i* P	Pn	12 13 46.0	+0.8
TDCB				*i* S	Sn	12 14 02.3	-0.2
IRIF	Iriomote-Funau	1.25	106	*e*P	Pn	12 13 45.4	+0.1
IRIF				*e*S	Sn	12 14 02.7	-0.1
ESL	Shilin	1.25	226	*e*P	Pn	12 13 44.8	-0.7
ESL				*e*S	Sn	12 14 00.6	-2.3
TEGC	Jichi Village	1.26	219	P	Pn	12 13 46.2	+0.7
TEGC				S	Sn	12 14 03.1	0.0
LIOB	Emei	1.27	268	*e*P	Pn	12 13 46.0	+0.4
LIOB				*i* S	Sn	12 14 03.3	-0.1
SBCB	Hsinchu	1.30	275	*i* P	Pn	12 13 46.0	0.0
SBCB				S	Sn	12 14 04.2	+0.2
OWD	Renai	1.35	237	*e*P	Pn	12 13 46.6	-0.1
OWD				S	Sn	12 14 04.2	-1.0
WARBT	Fenglin Townsh	1.35	224	*e*P	Pn	12 13 45.6	-1.0
WARBT				*e*S	Sn	12 14 02.8	-2.2
EGFH	Guangfu	1.36	222	P	Pn	12 13 47.1	+0.4
EGFH				S	Sn	12 14 03.7	-1.5
WUSB	Renai	1.37	240	P	Pn	12 13 47.4	+0.4
WUSB				*e*S	Sn	12 14 05.1	-0.6
WHP	Taichung City	1.40	253	*e*P	Pn	12 13 48.1	+0.9
WHP				S	Sn	12 14 06.5	+0.3
NMLH	Miaoli	1.48	264	*i* P	Pn	12 13 48.6	+0.4
NMLH				*i* S	Sn	12 14 08.1	+0.2
VWDT	VWDT	1.49	231	*i* P	Pn	12 13 48.5	+0.2
VWDT				*e*S	Sn	12 14 07.6	-0.4
WPL	Puli Township	1.49	243	P	Pn	12 13 49.6	+1.3
WPL				S	Sn	12 14 08.7	+0.6
HGSD	Ruisui	1.50	217	*e*P	Pn	12 13 48.1	-0.3
HGSD				*e*S	Sn	12 14 07.8	-0.5
WCS	Beigang Elemen	1.51	245	*e*P	Pn	12 13 49.6	+1.1
WCS				*e*S	Sn	12 14 09.8	+1.3
JKRS	Kuro-shima	1.52	107	*e*P	Pn	12 13 49.2	+0.5
JKRS				*e*S	Sn	12 14 09.1	+0.4
EHY	Hungye	1.55	220	P	Pn	12 13 48.2	-0.8
EHY				*e*S	Sn	12 14 06.5	-2.8
SMLT	Sun Moon Lake	1.60	240	P	Pn	12 13 51.0	+1.2
SMLT				S	Sn	12 14 10.7	+0.1
JIJ	Ishigaki jima	1.61	101	*e*P	Pn	12 13 49.9	+0.2
JIJ				*e*S	Sn	12 14 10.2	-0.4
SSLB	Suanglung	1.61	236	*e*P	Pn	12 13 50.6	+0.8
SSLB				*e*S	Sn	12 14 11.6	+0.9
TYC	Yuchr	1.62	241	*e*P	Pn	12 13 50.9	+1.0
TYC				*e*S	Sn	12 14 11.3	+0.3
ECBN	Changbin	1.63	213	*e*P	Pn	12 13 50.8	+0.8
ECBN				*i* S	Sn	12 14 10.1	-1.0
YULB	Yu-li	1.65	218	*e*P	Pn	12 13 49.5	-0.8
YULB				S	Sn	12 14 09.4	-2.1
TWF1	Yuli	1.68	218	P	Pn	12 13 49.6	-1.1
TWF1				*e*S	Sn	12 14 10.0	-2.3
JISG	Ishigakijimahi	1.73	93	*e*P	Pn	12 13 51.4	+0.1
JISG				*e*S	Sn	12 14 13.3	0.0
WHYT	Xinyi Township	1.74	235	*i* P	Pn	12 13 52.8	+1.3
WHYT				*e*S	Sn	12 14 14.8	+1.1
CHKH	Chenggong	1.76	212	P	Pn	12 13 51.1	-0.6
CHKH				*e*S	Sn	12 14 11.8	-2.3
WJS	Zhushan	1.77	241	P	Pn	12 13 52.0	+0.3
WJS				*e*S	Sn	12 14 14.0	-0.2
WNT	Mingjian	1.77	243	*e*P	Pn	12 13 54.1	+2.2
WNT				*e*S	Sn	12 14 18.4	+4.0
FULB	Fuli	1.81	215	P	Pn	12 13 52.1	-0.2
FULB				*e*S	Sn	12 14 14.2	-0.9
CHKT	Chengkung	1.85	211	*e*P	Pn	12 13 51.9	-1.0
CHKT				*e*S	Sn	12 14 13.8	-2.5
ALS	Alishan	1.88	232	*e*P	Pn	12 13 54.7	+1.1
ALS				*e*S	Sn	12 14 17.8	+0.5
EHD	Haiduan	1.89	216	*e*P	Pn	12 13 53.4	0.0
EHD				*i* S	Sn	12 14 15.6	-1.5
CHN5	Tsauling	1.93	236	*e*P	Pn	12 13 55.1	+1.2
CHN5				S	Sn	12 14 19.6	+1.6
ELDTW	Lidau	1.97	221	*e*P	Pn	12 13 55.1	+0.7
ELDTW				S	Sn	12 14 17.3	-1.7
EDH	Donghe	1.99	211	*e*P	Pn	12 13 54.0	-0.7
EDH				*i* S	Sn	12 14 17.5	-1.9
WCKO	Fanlu	2.07	233	*e*P	Pn	12 13 57.2	+1.4
WCKO				*e*S	Sn	12 14 23.4	+2.2
WTK	Tuku	2.10	242	P	Pn	12 13 56.2	+0.2
WTK				S	Sn	12 14 22.5	+0.5
STYH	Taoyuan	2.13	225	P	Pn	12 13 57.2	+0.7
STYH				*e*S	Sn	12 14 22.7	+0.1
CHN4	Tsaushan	2.13	232	*e*P	Pn	12 13 57.2	+0.7
CHN4				*e*S	Sn	12 14 24.8	+2.1
TPUB	Ta-pu	2.14	230	P	Pn	12 13 57.9	+1.3
TPUB				S	Sn	12 14 24.6	+1.7
STYT	Tauyuan	2.15	225	P	Pn	12 13 57.9	+1.1
STYT				*e*S	Sn	12 14 24.3	+1.2
WTP	Ta-pu	2.19	229	*i* P	Pn	12 13 58.1	+0.9
WTP				S	Sn	12 14 25.2	+1.2
TWK	Hsinying	2.26	232	P	Pn	12 13 59.1	+0.9
TWK				*e*S	Sn	12 14 25.7	-0.1
CHN1	Nanshi	2.29	229	P	Pn	12 13 59.4	+0.9
CHN1				S	Sn	12 14 26.6	+0.3
MASBT	Mashibuluo	2.64	219	*e*P	Pn	12 14 04.0	+0.9
MASBT				*e*S	Sn	12 14 34.7	+0.1
MATB	Ma-tsu	2.66	304	*e*P	Pn	12 14 03.0	-0.5
MATB				*e*S	Sn	12 14 34.3	-0.8
VWUC	VWUC	2.71	277	*e*P	Pn	12 14 03.7	-0.4
VWUC				*e*S	Sn	12 14 33.7	-2.5

IDC ***30*** *12:20:24.0±1.6, 2°.77S×138°.56E, h0^{km}, mb3.3/2, mbtmp3.5/4, ML3.6/2, MS2.5/1, Error ellipse: s-maj=32.1km s-min=17.4km az=165.0*

DJA ***30*** *12:20:28.0±0.8, 3°S±4°×13°9E±°, h11^{km}±8^{km}, M3.7/6, MLv3.7/6*

ISC 30 12:20:25.5±1.0**, 2°.83S**±0°.07×**138°.68E**±0°.07**, h10^{km}, n8, σ1^{s}28**/9**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.83	2	P	Pg	12 20 40.3	-1.3
SMPI				S	Sb	12 20 55.5	+2.1
GENI	Genyem	1.50	81	P	Pg	12 20 54.7	+0.3
JAY	Jayapura	2.04	81	Pn	Pb	12 21 02.2	-0.6
	12nm,0.3s,baz=257,slow=11,SNR=42						
JAY				Lg	Lg	12 21 31.8	
	3.8nm,0.3s,baz=110,slow=19,SNR=5.8						
JAY				LR	LR	12 21 59.6	
	comp=Z,110nm,19.4s,baz=248,slow=44						
	22nm,0.3s						
JAY	Jayapura	2.04	81	P	Pb	12 21 01.8	-1.0
BAKI	Biak	3.04	302	P	Pn	12 21 14.9	+1.2
WRA	Warramunga Arr	17.53	194	P	Pn	12 24 29.9	-0.3
	0.3nm,0.3s,baz=16,slow=12,SNR=15						
	0.6nm,0.4s						
ASAR	Alice Springs	21.23	192	P	P	12 25 12.1	+0.4
	0.9nm,0.5s,baz=21,slow=10,SNR=20						
	0.9nm,0.5s						
MKAR	Makanchi Array	69.86	322	P	P	12 31 35.8	-0.8
	0.2nm,0.6s,baz=111,slow=6.3,SNR=2.0						
	0.2nm,0.6s						

IDC ***30*** *12:26:52.9±1.6, 23°.66S×178°.82E, h543^{km}±17^{km}, mb3.3/11, mbtmp4.2/12, Error ellipse: s-maj=18.3km s-min=15.0km az=126.0*

NOU ***30*** *12:26:53.8, 23°.62S×179°.11E, h578^{km}, mb4.1/19, South of Fiji Islands*

NEIC ***30*** *12:26:54.5±1.3, 23°.7S±0°.1×178°.8E±0°.1, h558^{km}±8^{km}, mb4.2/31, Error ellipse: s-maj=18.7km s-min=14.9km az=121.0*

ISC 30 12:26:52.9±0.5**, 23°.84S**±0°.06×**178°.97E**±0°.08**, h548^{km}, n93, σ1^{s}64**/97**, mb4.2**/26**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	5.95	21	P	P	12 28 31.5	+0.4
MSVF	Nonsavu	6.14	352	P	P	12 28 31.1	-1.8
MSVF	Nonsavu	6.14	352	P	P	12 28 32.0	-1.0
	4.6nm,0.4s,baz=191,slow=5.5,SNR=8.8						
MSVF	Nonsavu	6.14	352	P	P	12 28 32.4	-0.5
TAVE	Taveuni	7.17	9	P	P	12 28 43.8	+1.2
DGTI	Dogotuki	7.54	6	P	P	12 28 46.0	-0.2
PINNC	Pines Island,	10.67	274	P	P	12 29 18.5	+0.7
PINNC	Pines Island,	10.67	274	P	P	12 29 19.8	+2.1
OUZ	Omahuta	12.27	201	P	P	12 29 38.2	+4.2
OUZ	Omahuta	12.27	201	P	P	12 29 38.2	+4.2
GRZ	Great Barrier	12.74	193	P	P	12 29 42.1	+3.2
KUZ	Kuaotunu	13.16	192	P	P	12 29 46.8	+3.5
KUZ	Kuaotunu	13.16	192	P	P	12 29 46.3	+3.0
WIAZ	Waiheke Island	13.33	193	P	P	12 29 48.3	+3.2
MXZ	Matakaoa Point	13.69	182	P	P	12 29 49.1	+0.3
MXZ	Matakaoa Point	13.69	182	P	P	12 29 50.2	+1.5
MXZ	Matakaoa Point	13.69	182	P	P	12 29 48.2	-0.6
HAZ	Te Kaha	13.91	184	P	P	12 29 50.6	-0.4
HAZ				S	S	12 32 14.6	-3.0
RUGZ	Raukumara Rang	14.12	184	P	P	12 29 54.1	+0.7
RUGZ				S	S	12 32 20.4	-1.6
TOZ	Tahuroa Road	14.16	191	P	P	12 29 56.3	+2.7
TOZ	Tahuroa Road	14.16	191	P	P	12 29 56.7	+3.1
PUZ	Puketiti	14.20	182	P	P	12 29 52.8	-1.2
PUZ				S	S	12 32 19.2	-4.0
TWGZ	Tauwhareparae	14.32	183	P	P	12 29 55.0	-0.3
NGRZ	Ngongotaha	14.41	189	P	P	12 29 50.6	-5.7
URZ	Urewera	14.46	186	P	P	12 29 55.6	-1.1
	17nm,0.7s,baz=13,slow=14,SNR=12						
URZ				S	S	12 32 24.1	-4.1
	13nm,0.8s,baz=183,slow=19,SNR=8.1						
URZ	Urewera	14.46	186	P	P	12 29 59.0	+2.3
URZ	Urewera	14.46	186	P	P	12 29 55.9	-0.8
MWZ	Matawai	14.50	185	P	P	12 29 56.8	-0.4
TKGZ	Te Karaka	14.59	184	P	P	12 29 58.1	+0.1
RIGZ	Rimuhau	14.86	184	P	P	12 30 00.6	-0.2
BKZ	Black Stump Fm	15.42	187	P	P	12 30 08.5	+1.8
BKZ	Black Stump Fm	15.42	187	P	P	12 30 05.8	-0.9
TMVZ	Te Maari	15.48	190	P	P	12 30 09.5	+2.2
OTVZ	Oturere	15.53	190	P	P	12 30 09.3	+1.4
WNVZ	Wahianoa	15.70	190	P	P	12 30 09.6	0.0
PNHZ	Pukenui	16.20	188	P	P	12 30 14.4	+0.1
PNHZ				S	S	12 32 55.5	-3.1
BFZ	Birch Farm	16.95	187	P	P	12 30 22.1	+1.0
QRZ	Quartz Range	17.78	196	P	P	12 30 30.5	+1.8
SNZO	South Karori	17.78	191	P	P	12 30 30.4	+1.7
KHZ	Kahutara	19.07	192	P	P	12 30 42.1	+1.7
RPZ	Rata Peaks	20.87	196	P	P	12 30 57.4	+0.7
	6.5nm,0.8s,baz=23,slow=13,SNR=1.8						
	6.5nm,0.8s						
TATA	Tatamba Isabel	23.93	307	P	P	12 31 22.2	-2.3
ARMA	Armidale	25.16	249	P	P	12 31 37.7	+2.3
ARMA				IAmb	IAmb	12 31 54.7	
	comp=Z,17nm,1.4s						
CAN	Canberra	28.36	239	P	P	12 32 04.0	+0.6
CAN	Canberra	28.36	239	P	P	12 32 05.4	+2.1
CTAO	Charters Tower	30.53	271	P	P	12 32 22.1	-0.2
CTAO	Charters Tower	30.53	271	P	P	12 32 22.6	+0.3
QLP	Quilpie	31.49	258	P	P	12 32 31.2	+0.8
STKA	Stephens Creek	33.87	248	P	P	12 32 50.6	+0.1
STKA	Stephens Creek	33.87	248	P	P	12 32 49.8	-0.7
	comp=Z,2.4nm,0.5s,baz=93,slow=7.9,SNR=9.0						
	comp=Z,2.4nm,0.5s						
XMAS	Kiritimati	34.47	45	P	P	12 32 56.2	+0.6
COEN	Coen	35.18	280	P	P	12 33 01.5	-0.1
AS31	Alice Springs	41.12	261	P	P	12 33 49.4	-0.3
ASAR	Alice Springs	41.12	261	P	P	12 33 48.7	-1.1
ASAR	Alice Springs	41.12	261	P	P	12 33 49.6	-0.2
	comp=Z,6.9nm,0.9s,baz=103,slow=6.3,SNR=46						
ASAR				ScP	ScP	12 38 34.9	+0.9
	comp=Z,0.4nm,0.9s,baz=96,slow=3.9,SNR=4.5						
	comp=Z,6.9nm,0.9s						
WB0	Warramunga Arr	41.46	267		P	12 33 51.7	-0.8
WB0				IAmb	IAmb	12 33 52.7	
	comp=Z,10nm,0.8s						
WRA	Warramunga Arr	41.47	266		P	12 33 51.5	-1.1
WRA	Warramunga Arr	41.47	266	P	P	12 33 51.6	-1.0
	comp=Z,6.9nm,0.7s,baz=90,slow=5.8,SNR=69						
WRA				ScP	ScP	12 38 37.5	+2.0
	comp=Z,1.3nm,0.9s,baz=112,slow=3.3,SNR=1.7						
	comp=Z,6.9nm,0.7s						
FORT	Forrest	45.45	250	P	P	12 34 22.3	-1.1
FORT				IAmb	IAmb	12 34 38.1	
	comp=Z,16nm,1.3s						
STCH	Steam Cracks	49.84	33	P	P	12 34 55.6	-0.6
FITZ	Fitzroy Crossi	49.89	266	P	P	12 34 55.8	-0.9
VNDA	Vanda	54.36	185	P	P	12 35 29.8	+2.0
MBWA	Marble Bar	54.45	260	P	P	12 35 28.3	-1.1
MBWA				IAmb	IAmb	12 35 29.2	
	comp=Z,27nm,1.4s						
CASY	Casey	59.76	206	P	P	12 36 04.6	-0.2
CASY				IAmb	IAmb	12 36 38.5	
	comp=Z,10.0nm,1.4s						
TOLI2	Tolitoli	61.65	285	P	P	12 36 17.0	-1.2
TOLI2				IAmb	IAmb	12 36 53.7	
	comp=Z,17nm,1.3s						
QSPA	South Pole Qui	66.24	180	P	P	12 36 48.4	+1.7
QSPA				IAmb	IAmb	12 36 54.9	
	comp=Z,5.1nm,1.4s						
QSPA	South Pole Qui	66.24	180	P	P	12 36 48.7	+2.0
	comp=Z,2.2nm,0.6s,baz=319,slow=0.7,SNR=25						
	comp=Z,2.2nm,0.6s						
MJAR	Matsushiro Arr	71.32	326	P	P	12 37 16.0	-1.5
MJAR	Matsushiro Arr	71.32	326	P	P	12 37 16.0	-1.5
	comp=Z,1.9nm,0.8s,baz=155,slow=5.9,SNR=4.7						
	comp=Z,1.9nm,0.8s						
KSRS	Korea Array	77.60	321	P	P	12 37 51.9	-0.9
	comp=Z,1.0nm,0.8s,baz=126,slow=6.4,SNR=4.7						
	comp=Z,1.0nm,0.8s						
SLBS	Sierra La Lagu	83.59	61	P	P	12 38 25.7	+1.4
SLBS				IAmb	IAmb	12 38 26.8	
	comp=Z,5.5nm,0.8s						
O02D	Mt. Diablo Mer	83.63	41	P	P	12 38 25.6	+1.5
O02D				IAmb	IAmb	12 38 26.6	
	comp=Z,5.0nm,0.9s						
SNAA	Sanae	84.74	179	P	P	12 38 28.3	-0.8
SNAA	Sanae	84.74	179	P	P	12 38 28.8	-0.3
	comp=Z,0.7nm,0.9s,baz=207,slow=11,SNR=2.0						
	comp=Z,0.7nm,0.9s						
PNTR	Pine Nut	84.93	43	P	P	12 38 31.4	+0.7
PNTR				IAmb	IAmb	12 38 32.3	
	comp=Z,3.6nm,0.8s						
NVAR	Mina Array Bea	85.36	44	P	P	12 38 33.0	+0.2
NVAR	Mina Array Bea	85.36	44	P	P	12 38 33.3	+0.5
	comp=Z,1.2nm,0.8s,baz=222,slow=8.3,SNR=9.2						
	comp=Z,1.2nm,0.8s						
N15K	Kwethluk River	85.44	10	P	P	12 38 31.6	-0.8
N15K				IAmb	IAmb	12 38 42.0	
	comp=Z,9.8nm,1.2s						
NV11	Mina Array Sit	85.46	45	P	P	12 38 33.2	0.0
J05D	Fort Rock, OR	86.45	39		P	12 38 38.8	+1.0
J05D				IAmb	IAmb	12 38 39.4	
	comp=Z,3.4nm,0.7s						
WVOR	Wild Horse Val	87.48	41	P	P	12 38 43.4	+0.8
WVOR				IAmb	IAmb	12 38 44.4	
	comp=Z,3.9nm,1.1s						
I07A	Izee	87.94	39	P	P	12 38 45.3	+0.6
I07A				IAmb	IAmb	12 38 46.5	
	comp=Z,3.5nm,0.9s						
GNW	Green Mountain	88.22	35	P	P	12 38 46.7	+1.0
GNW				IAmb	IAmb	12 38 47.4	
	comp=Z,3.1nm,0.8s						
U15A	North Rim	88.27	49	P	P	12 38 47.8	+1.1
U15A				IAmb	IAmb	12 38 48.8	
	comp=Z,3.0nm,0.8s						
SRU	San Rafael Swe	90.84	47	P	P	12 38 57.6	-0.8
TXAR	Lajitas Array	91.20	58	P	P	12 39 01.2	+1.1
	comp=Z,1.0nm,0.9s,baz=218,slow=6.8,SNR=11						
	comp=Z,1.0nm,0.9s						
BSUT	Blindstream Ca	91.41	46		P	12 39 01.7	+0.5
BSUT				IAmb	IAmb	12 39 02.8	
	comp=Z,3.4nm,0.7s						
PDAR	Pinedale Array	93.30	44	P	P	12 39 09.6	-0.1
	comp=Z,0.2nm,0.4s,baz=171,slow=2.9,SNR=3.7						
	comp=Z,0.2nm,0.4s						
BVAR	Borovoye Array	119.77	319	PKP	PKPdf	12 44 39.9	-0.8
	comp=Z,0.4nm,0.3s,baz=150,slow=3.8,SNR=2.8						
HFS	Hagfors	142.30	348	PKhKP	PKPpre	12 45 17.7	
	comp=Z,1.2nm,0.4s,baz=64,slow=3.4,SNR=13						
AKASG	Malin Array Be	144.41	327	PKP	PKPbc	12 45 24.5	-2.1
	comp=Z,0.2nm,0.3s,baz=53,slow=3.0,SNR=4.9						
EKA	Eskdalemuir Ar	148.50	2	PKPbc	PKPbc	12 45 36.8	-0.9
	comp=Z,1.1nm,0.7s,baz=6.1,slow=3.0,SNR=1.9						
CLL	Collm	150.52	342	*e*PKPbc	PKiKP	12 45 43.0	-0.2
	comp=Z,6.0nm,0.8s						

WEL 30 12:28:00.5±1.1**, 40°S**±4°×**17°6E**±°**, h31^{km}**±8^{km}**, M0.9**/6**, ML1.4**/6**, MLv0.9**/6**, Error ellipse: s-maj=5.2km s-min=4.8km az=44.6, confirmed, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVHZ	Dannevirke	0.14	285	P	Pn	12 28 07.7	+1.1
DVHZ				S	Sn	12 28 12.1	+1.8
ANWZ	Angora Road	0.16	141	P	Pn	12 28 07.9	+1.0
ANWZ				S	Sn	12 28 12.7	+1.9
PRHZ	Porangahau	0.23	73	P	Pn	12 28 08.7	+0.8
PRHZ				S	Sn	12 28 14.6	+2.0
WPHZ	Waipukurau	0.28	16	S	Sn	12 28 15.9	+2.2
BFZ	Birch Farm	0.35	192	P	Pn	12 28 10.0	+0.4
PRWZ	Pori Road	0.36	232	S	Sn	12 28 17.9	+2.2
TSZ	Takapari Road	0.40	313	P	Pn	12 28 10.2	-0.1
TSZ				S	Sn	12 28 18.2	+1.5
PNHZ	Pukenui	0.43	345	P	Pn	12 28 11.0	+0.3
PNHZ				S	Sn	12 28 19.5	+1.9
POWZ	Post Office Ro	0.44	262	P	Pn	12 28 12.1	+1.4
MRZ	Mangatainoka R	0.67	241	P	Pb	12 28 13.7	-0.1

IDC ***30*** *12:44:22.7±0.7, 54°.95N×164°.70E, h0^{km}, mb3.7/13, mbtmp3.8/15, ML3.5/2, MS2.8/8, Error ellipse: s-maj=27.6km s-min=13.3km az=158.0*

KRSC ***30*** *12:44:23.9±1.1, 54°.95N×164°.70E, h51^{km}±24^{km}, Ml4.5*

NEIC ***30*** *12:44:24.0±1.3, 54°.9N±0°.1×164°.7E±0°.1, h10^{km}±2^{km}, mb4.1/21, Error ellipse: s-maj=21.3km s-min=12.3km az=171.0*

MOS ***30*** *12:44:25.6±0.7, 54°.94N×164°.79E, h38^{km}, mb4.5/7, Error ellipse: s-maj=6.3km s-min=5.4km az=48.7*

ISC 30 12:44:24.8±1.5**, 54°.97N**±0°.04×**164°.68E**±0°.05**, h15^{km}**±10^{km}**, n152, σ1^{s}29**/154**, mb3.9**/24**, MS3.0**/3**, 1C, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	0.78	72	PN	Pg	12 44 39.4	-0.5
BKI				S	Sg	12 44 50.0	-0.1
BKI	Bering	0.78	72	*i* P	Pg	12 44 39.5	-0.5
BKI				*e*S	Sg	12 44 50.1	-0.1
KBTR	Krutoberegovo	1.63	320	PN	Pn	12 44 51.6	-1.2
KBTR				S	Sn	12 45 11.0	-2.5
KBTR	Krutoberegovo	1.63	320	*e*P	Pn	12 44 51.6	-1.2
KBTR				*e*S	Sn	12 45 11.0	-2.5
KBG	Krutoberegovo	1.71	320	PN	Pn	12 44 52.8	-1.1
KBG				S	Sn	12 45 13.5	-1.9
KBG	Krutoberegovo	1.71	320	*e*P	Pn	12 44 52.8	-1.1
KBG				*e*S	Sn	12 45 13.5	-1.9
MKZ	Mys Kozlova	1.76	257	PN	Pn	12 44 54.4	-0.2
MKZ				S	Sn	12 45 14.7	-2.0
MKZ	Mys Kozlova	1.76	257	*e*P	Pn	12 44 54.5	-0.2
MKZ				*e*S	Sn	12 45 14.7	-2.0
SMKR	Semkarok	2.43	313	PN	Pn	12 45 04.2	+0.3
SMKR	Semkarok	2.43	313	*e*P	Pn	12 45 04.3	+0.3
ZLN	Zelenaya	2.44	297	PN	Pn	12 45 05.8	+1.7
ZLN	Zelenaya	2.44	297	*e*P	Pn	12 45 05.8	+1.7
BZGR	Bezymyannyi-Gr	2.47	295	PN	Pn	12 45 05.7	+1.3
BZGR				S	Sn	12 45 35.9	+1.6
BZGR	Bezymyannyi-Gr	2.47	295	*e*P	Pn	12 45 05.8	+1.3
BZGR				*e*S	Sn	12 45 36.0	+1.6
TUMD	Tumrok D	2.47	277	PN	Pn	12 45 05.1	+0.7
TUMD	Tumrok D	2.47	277	*e*P	Pn	12 45 05.2	+0.7
CIRR	Tsirk	2.51	299	PN	Pn	12 45 06.8	+1.7
CIRR	Tsirk	2.51	299	*e*P	Pn	12 45 06.9	+1.7
BZWR	Bezymyannyi-We	2.58	294	PN	Pn	12 45 07.7	+1.6
BZWR	Bezymyannyi-We	2.58	294	*e*P	Pn	12 45 07.7	+1.6
KRSR	Krestovskiy	2.65	300	PN	Pn	12 45 07.7	+0.8
KRSR	Krestovskiy	2.65	300	*e*P	Pn	12 45 07.8	+0.8
KLY	Klyuchi	2.65	302	PN	Pn	12 45 06.6	-0.2
KLY				S	Sn	12 45 38.0	-0.6
KLY	Klyuchi	2.65	302	*e*P	Pn	12 45 06.6	-0.2
KLY				*e*S	Sn	12 45 38.0	-0.6
KMNR	Kamenistaya	2.65	289	PN	Pn	12 45 08.6	+1.6
KMNR	Kamenistaya	2.65	289	*e*P	Pn	12 45 08.7	+1.6
KIRR	Kirishev	2.66	293	PN	Pn	12 45 08.6	+1.5
KIRR	Kirishev	2.66	293	*e*P	Pn	12 45 08.7	+1.5
KPT	Kopyto	2.73	293	PN	Pn	12 45 09.9	+1.9

KPT	Kopyto	2.73	293	eP	Pn	12 45 10.0	+1.9
KOZ	Kozyrevsk	2.94	294	PN	Pn	12 45 13.0	+2.1
KOZ	Kozyrevsk	2.94	294	eP	Pn	12 45 13.1	+2.1
SRDR	Sredinnyy	3.12	298	PN	Pn	12 45 15.4	+2.0
SRDR	Sredinnyy	3.12	298	eP	Pn	12 45 15.4	+2.0
KII	Karymskiy	3.19	255	PN	Pn	12 45 15.2	+0.9
KII	Karymskiy	3.19	255	eP	Pn	12 45 15.3	+0.9
SPN	Mys Shipunski	3.33	238	PN	Pn	12 45 15.9	-0.2
SPN	Mys Shipunski	3.33	238	eP	Pn	12 45 16.0	-0.2
ESO	Esso	3.54	288	PN	Pn	12 45 20.4	+1.4
ESO	Esso	3.54	288	eP	Pn	12 45 20.5	+1.4
NLC	Nalytchevo	3.62	242	PN	Pn	12 45 20.7	+0.5
NLC	Nalytchevo	3.62	242	eP	Pn	12 45 20.7	+0.5
NLC				eS	Sn	12 46 00.5	-2.2
SDLR	Sedlovina	3.81	246	PN	Pn	12 45 23.7	+0.8
SDLR	Sedlovina	3.81	246	eP	Pn	12 45 23.7	+0.8
SMAR	Somma	3.86	246	PN	Pn	12 45 24.7	+1.1
SMAR	Somma	3.86	246	eP	Pn	12 45 24.8	+1.1
KRER	Koryakskii	3.87	247	PN	Pn	12 45 25.2	+1.4
KRER	Koryakskii	3.87	247	eP	Pn	12 45 25.2	+1.4
UGLR	Uglovaya	3.87	245	PN	Pn	12 45 24.7	+0.9
UGLR	Uglovaya	3.87	245	eP	Pn	12 45 24.7	+0.9
AVH	Avacha	3.89	246	PN	Pn	12 45 25.4	+1.4
AVH	Avacha	3.89	246	eP	Pn	12 45 25.4	+1.4
KRX	Arik	3.89	248	PN	Pn	12 45 25.3	+1.2
KRX	Arik	3.89	248	eP	Pn	12 45 25.3	+1.2
KOK	Koryaka	3.93	247	PN	Pn	12 45 25.7	+1.1
KOK	Koryaka	3.93	247	eP	Pn	12 45 25.7	+1.1
DALK	Dalny	4.00	243	PN	Pn	12 45 26.5	+1.1
DALK	Dalny	4.00	243	eP	Pn	12 45 26.5	+1.1
PET	Petropavlovsk	4.05	244		Pn	12 45 26.5	+0.3
PET	Petropavlovsk	4.05	244	c iPN	Pn	12 45 27.0	+0.8
PET	Petropavlovsk	4.05	244	eP	Pn	12 45 26.7	+0.5
INSR	Institute	4.06	244	eS	Sn	12 46 11.1	-2.3
GNL	Ganaly	4.14	255	PN	Pn	12 45 29.4	+1.9
GNL	Ganaly	4.14	255	eP	Pn	12 45 29.4	+1.9
OSSR	Ossora	4.38	349	PN	Pn	12 45 30.9	+0.3
OSSR	Ossora	4.38	349	eP	Pn	12 45 30.9	+0.3
OSSR				eS	Sn	12 46 19.2	-2.1
KRMR	Karymshinskiy	4.43	244	PN	Pn	12 45 32.6	+1.3
KRMR	Karymshinskiy	4.43	244	eP	Pn	12 45 32.6	+1.3
RUS	Russkaya	4.46	238	PN	Pn	12 45 32.1	+0.4
RUS	Russkaya	4.46	238	eP	Pn	12 45 32.1	+0.4
PEA0B	Petropavlovsk-	4.52	248		Pn	12 45 33.9	+1.3
PEA0B	Petropavlovsk-	4.52	248	PN	Pn	12 45 33.8	+1.3
PETK	Petropavlovsk-	4.52	248		Pn	12 45 33.3	+0.7
PETK	Petropavlovsk-	4.52	248	Pn	Pn	12 45 33.8	+1.3
	5.1nm,0.3s,baz=68,slow=16,SNR=54						
PETK				Sn	Sn	12 46 23.8	-1.0
	8.1nm,0.3s,baz=90,slow=20,SNR=5.4						
PETK				LR	LR	12 46 53.1	
	comp=Z,27nm,21.8s,baz=348,slow=33						
	8.9nm,0.4s						
MTVR	Mutnovka	4.59	240	PN	Pn	12 45 34.5	+0.8
MTVR	Mutnovka	4.59	240	eP	Pn	12 45 34.6	+0.8
GRL	Gorelyy	4.61	241	PN	Pn	12 45 35.1	+1.2
GRL	Gorelyy	4.61	241	eP	Pn	12 45 35.2	+1.2
ASAK	Asacha	4.79	240	PN	Pn	12 45 37.9	+1.5
ASAK	Asacha	4.79	240	eP	Pn	12 45 37.9	+1.5
PALN	Palana	4.86	330	PN	Pn	12 45 38.1	+0.9
PALN	Palana	4.86	330	eP	Pn	12 45 38.2	+0.9
APC	Apacha	4.89	248	PN	Pn	12 45 39.8	+2.1
APC	Apacha	4.89	248	eP	Pn	12 45 39.8	+2.1
MIPR	Malaya Ipel'ka	5.43	243	PN	Pn	12 45 47.4	+2.3
MIPR	Malaya Ipel'ka	5.43	243	eP	Pn	12 45 47.5	+2.3
PAU	Pauzhetka	5.89	237	PN	Pn	12 45 53.8	+2.5
PAU	Pauzhetka	5.89	237	eP	Pn	12 45 53.8	+2.5
SMY	Shemya	6.01	108	Pn	Pn	12 45 52.4	-0.6
SMY	Shemya	6.01	108	PN	Pn	12 45 52.4	-0.6
SKR	Severo-Kuril's	6.73	234	ePN	Pn	12 46 03.7	+0.8
SKR				pmax	pmax		
	comp=Z,19nm,0.3s						
SKR				MLR	MLR		
	comp=Z,100nm,19.0s						
KMSK	Kamenskaya	7.56	5	PN	Pn	12 46 15.9	+1.7
KMSK	Kamenskaya	7.56	5	eP	Pn	12 46 15.9	+1.7
MA2	Magadan	8.83	307	LR	LR	12 49 46.3	
	comp=Z,52nm,22.0s,baz=105,slow=37						
SEY	Seymchan	10.18	327	LR	LR	12 50 41.9	
	comp=Z,28nm,18.7s,baz=76,slow=37						
KIWB	Kanaga Island	11.28	99	Pn	Pn	12 47 05.9	+0.6
UNV	Unalaska Valle	16.77	82		Pn	12 48 19.6	+0.9
UNV				IAmb	IAmb	12 48 45.1	
	comp=Z,13nm,1.1s						
JKA	Kamikawa-asahi	17.90	242	P	Pn	12 48 33.6	+0.7
JKA				IAmb	IAmb	12 48 49.3	
	comp=Z,13nm,1.0s						
ASAJ	Asahikawa	17.90	242	P	Pn	12 48 34.0	+1.1
	comp=Z,0.5nm,0.3s,baz=53,slow=17,SNR=7.6						
ASAJ				LR	LR	12 56 27.8	
	comp=Z,21nm,18.1s,baz=65,slow=40						
	comp=Z,4.2nm,0.7s						
S12K	Black Hills	18.84	74	P	P	12 48 44.9	+1.1
S12K				IAmb	IAmb	12 49 23.5	
	comp=Z,14nm,1.0s						
ERM	Erimo	19.17	236	P	P	12 48 46.1	-1.4
ERM	Erimo	19.17	236	P	P	12 48 46.1	-1.4
ERM				pmax	pmax		
	comp=Z,46nm,1.2s						
YAK	Yakutsk	19.40	306	LR	LR	12 56 47.2	
	comp=Z,45nm,18.4s,baz=144,slow=38						
YAK	Yakutsk	19.40	306	i P	P	12 48 47.1	-2.7
YAK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
M16K	Timber Creek	20.00	58	P	P	12 48 57.2	+0.9
M16K				IAmb	IAmb	12 48 58.0	
	comp=Z,14nm,1.4s						
H17K	Granite Mounta	20.05	46	P	P	12 48 57.7	+0.7
J17K	VABM Dome	20.13	51	P	P	12 48 58.7	+0.9
CNBA	Chernabura Isl	20.42	76	P	P	12 48 59.8	-1.2
CNBA				IAmb	IAmb	12 49 28.5	
	comp=Z,6.3nm,0.9s						
KLR	Kul'dur	20.89	268	LR	LR	12 57 33.9	
	comp=Z,49nm,18.2s,baz=70,slow=38						
KLR	Kul'dur	20.89	268	i P	P	12 49 04.1	-2.1
KLR				pmax	pmax		
	comp=Z,6.0nm,2.0s						
J18K	Innoko River	21.19	51	P	P	12 49 10.3	+1.0
J19K	Poorman	21.73	50	P	P	12 49 15.1	0.0
J20K	Nowinta River	22.39	49	P	P	12 49 22.7	+0.6
J20K				IAmb	IAmb	12 49 37.0	
	comp=Z,3.8nm,0.8s						
G21K	Allakaket	22.96	43	P	P	12 49 28.6	+0.4
G21K				IAmb	IAmb	12 50 06.0	
	comp=Z,6.2nm,1.4s						
CAST	Castle Rocks	23.27	51	P	P	12 49 31.7	+0.4
TRF	Thorofare Moun	24.08	51		P	12 49 39.4	+0.1
TRF				IAmb	IAmb	12 49 53.8	
	comp=Z,7.2nm,0.9s						
COLA	College	25.14	48	i P	P	12 49 46.4	-2.4
COLA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
G24K	Hadweenzic Riv	25.37	43		P	12 49 51.0	+0.2
G24K				IAmb	IAmb	12 50 04.3	
	comp=Z,3.1nm,0.8s						
ILAR	Eielson Array	25.56	48	P	P	12 49 52.0	-0.6
	comp=Z,2.1nm,0.8s,baz=260,slow=8.7,SNR=24						
	comp=Z,2.1nm,0.8s						
ILAR	Eielson Array	25.56	48	P	P	12 49 52.0	-0.6
MJB9	Matsu-Tunnel	25.84	235	P	P	12 49 54.3	-1.1
MAJO	Matsushiro	25.84	235	P	P	12 49 54.1	-1.3
MAJO	Matsushiro	25.84	235	P	P	12 49 54.1	-1.3
MAJO				pmax	pmax		
	comp=Z,16nm,1.4s						
MJAR	Matsushiro Arr	25.84	235	P	P	12 49 56.1	+0.7
	comp=Z,1.4nm,0.8s,baz=19,slow=9.2,SNR=6.0						
MJAR				LR	LR	13 01 37.8	
	comp=Z,39nm,18.2s,baz=205,slow=40						
	comp=Z,1.4nm,0.8s						
H11N2	WAKE ISLAND Hy	35.22	176	T	T	13 29 00.9	
	baz=359,slow=76,SNR=74						
H11N3	WAKE ISLAND Hy	35.24	176	T	T	13 28 52.1	
	baz=359,slow=76,SNR=55						
H11N1	WAKE ISLAND Hy	35.24	176	T	T	13 29 03.1	
	baz=359,slow=76,SNR=66						
NRIK	Noril'sk	35.96	324	i P	P	12 51 19.7	-4.5
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SONM	Songino Array	36.10	283	P	P	12 51 26.2	+0.4
	comp=Z,0.3nm,0.3s,baz=33,slow=8.6,SNR=1.7						
SONM				LR	LR	13 08 09.9	
	comp=Z,51nm,18.0s,baz=129,slow=40						
	comp=Z,0.3nm,0.3s						
H11S1	WAKE ISLAND Hy	36.43	177	T	T	13 30 51.6	
	baz=359						
H11S3	WAKE ISLAND Hy	36.44	177	T	T	13 31 11.6	
	baz=359						
H11S2	WAKE ISLAND Hy	36.45	177	T	T	13 30 40.2	
	baz=359						
JMZ	Minamidaito 2	38.05	234	P	P	12 51 41.5	-0.9
YKA	Yellowknife Ar	39.93	46	P	P	12 51 58.9	+1.2
	comp=Z,1.6nm,0.8s,baz=357,slow=4.9,SNR=2.5						
	comp=Z,1.6nm,0.8s						
SPITS	Spitsbergen Ar	45.71	351	P	P	12 52 45.1	+0.7
SPITS				pmax	pmax		
	comp=Z,59nm,1.4s						
KURK	Kurchatov	49.01	303	P	P	12 53 10.4	0.0
KURK				IAmb	IAmb	12 53 16.4	
	comp=Z,2.6nm,0.9s						
KURK	Kurchatov	49.01	303	P	P	12 53 11.6	+1.2
KURBB	Kurchatov Arra	49.12	303	P	P	12 53 11.6	+0.3
	comp=Z,0.6nm,0.5s,baz=57,slow=7.9,SNR=8.2						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	49.75	297	P	P	12 53 16.1	-0.1
	comp=Z,0.4nm,0.7s,baz=46,slow=8.8,SNR=5.0						
	comp=Z,0.4nm,0.7s						
BVAR	Borovoye Array	51.31	309	P	P	12 53 28.3	+0.5
	comp=Z,0.4nm,0.4s,baz=67,slow=5.2,SNR=4.1						
	comp=Z,0.4nm,0.4s						
NVAR	Mina Array Bea	52.59	74	P	P	12 53 38.1	+0.2
	comp=Z,0.4nm,0.7s,baz=295,slow=7.8,SNR=5.4						
	comp=Z,0.4nm,0.7s						
PDAR	Pinedale Array	54.26	65	P	P	12 53 50.1	+0.1
	comp=Z,0.2nm,0.4s,baz=315,slow=7.7,SNR=4.8						
	comp=Z,0.2nm,0.4s						
ULM	Lac du Bonnet	55.55	50	P	P	12 54 00.1	+1.2
	comp=Z,1.0nm,0.5s,baz=225,slow=4.4,SNR=3.2						
	comp=Z,1.0nm,0.5s						
KKAR	Karatay Array	58.29	301	P	P	12 54 18.8	+0.2
KKAR	Karatay Array	58.29	301	P	P	12 54 18.8	+0.2
AB31	Akbulak array	58.59	312	P	P	12 54 20.3	-0.2
AB31				IAmb	IAmb	12 54 33.6	
	comp=Z,2.5nm,1.2s						
ABKAR	Akbulak array	58.59	312	P	P	12 54 21.2	+0.7
OBN	Obninsk	62.34	329	i P	P	12 54 41.7	-4.2
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TXAR	Lajitas Array	67.44	71	P	P	12 55 20.3	+0.6
	comp=Z,0.7nm,0.6s,baz=298,slow=4.6,SNR=14						
	comp=Z,0.7nm,0.6s						
KIV	Kislovodsk	69.85	319	eP	P	12 55 29.0	-5.5
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
WRA	Warramunga Arr	78.98	209	P	P	12 56 27.1	-0.6
	comp=Z,0.7nm,0.8s,baz=25,slow=6.1,SNR=4.5						
	comp=Z,0.7nm,0.8s						
ASAR	Alice Springs	82.64	208	P	P	12 56 47.7	+0.5
	comp=Z,0.7nm,0.9s,baz=13,slow=5.0,SNR=7.7						
	comp=Z,0.7nm,0.9s						

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*IDC **30** 13:02:30.6±1.9, 2°.58S×138°.54E, h0^{km}, mb3.4/2, mbtmp3.6/4, ML3.4/3, MS2.6/1, Error ellipse: s-maj=37.7km s-min=17.2km az=159.0*

*DJA **30** 13:02:38.6±0.9, 2°S±7°×13°9E±°, h20^{km}±11^{km}, M3.5/6, MLv3.5/6*

ISC 30 13:02:36.4±1.0, **2°.70S**±0°.09×**138°.65E**±0°.07, **h35**^{km}, **n10**, σ**2^{s}00**/10, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.70	5	P	Pn	13 02 49.5	-0.4
GENI	Genyem	1.52	86	P	Pn	13 03 03.6	+2.5
JAY	Jayapura	2.06	85	Pn	Pn	13 03 06.9	-1.6
	4.6nm,0.3s,baz=238,slow=11,SNR=24						
JAY				Lg	Lg	13 03 40.0	
	4.3nm,0.3s,baz=120,slow=17,SNR=4.2						
JAY	Jayapura	2.06	85	P	Pn	13 03 11.6	+3.1
BAKI	Biak	2.95	300	P	Pn	13 03 23.2	+2.4
GUMO	Guam	17.32	21	LR	LR	13 11 25.6	
	comp=Z,22nm,21.1s,baz=89,slow=31						
WRA	Warramunga Arr	17.65	193	P	Pn	13 06 38.7	-1.0
	0.2nm,0.3s,baz=15,slow=13,SNR=7.2						
	0.7nm,0.4s						
FITZ	Fitzroy Crossi	19.93	219	P	P	13 07 04.6	-0.8
	0.1nm,0.3s,baz=29,slow=10,SNR=2.0						
	2.6nm,1.0s						
ASAR	Alice Springs	21.35	192	P	P	13 07 21.0	+0.3
	2.2nm,1.0s,baz=22,slow=12,SNR=12						
ASAR				S	S	13 11 14.7	-1.4
	1.1nm,1.1s,baz=11,slow=25,SNR=3.0						
	2.2nm,1.0s						
ILAR	Eielson Array	85.84	24	P	P	13 15 11.7	-0.4
	0.2nm,0.8s,baz=248,slow=3.8,SNR=2.1						
	0.2nm,0.8s						

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*IDC **30** 13:15:40.3±1.1, 6°.52S×130°.17E, h0^{km}, mb3.9/6, mbtmp4.0/9, ML4.4/3, Error ellipse: s-maj=49.0km s-min=20.3km az=69.0*

*DJA **30** 13:15:57.0±0.4, 7°S±4°×13°0E±°, h185^{km}±15^{km}, M4.3/13, mB4.8/4, mb4.1/10, MLv4.4/13, Mw(mB)4.1/4*

ISC 30 13:15:56.4±0.8, **7°.37S**±0°.06×**129°.40E**±0°.06, **h150**^{km}, **n30**, σ**2^{s}92**/32, **mb3.7**/6, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.98	108	P	Pn	13 16 33.3	+2.0
SAUI	Saumlaki	1.98	108	P	Pn	13 16 33.1	+1.8
BNDI	Bandanaira	2.88	10	P	Pn	13 16 42.7	+0.5
DRS	Darwin Rock St	5.24	164	P	Pn	13 17 15.7	+2.7
DRS	Darwin Rock St	5.24	164	S	Sn	13 18 14.9	+2.0
FAKI	Fak Fak	5.26	33	P	Pn	13 17 10.5	-2.8
	0.3nm1µm22nm,0.6s						
SOEI	Soe	5.60	245	P	Pn	13 17 21.7	+3.8
SOEI	Soe	5.60	245	P	Pn	13 17 21.0	+3.1
	0.5nm46nm,0.8s						
KMPI	Kaimana, Papua	5.65	50	P	Pn	13 17 18.3	-0.2
MTN	Manton Dam	5.70	163	P	Pn	13 17 21.4	+2.3
MTN	Manton Dam	5.70	163	S	Sn	13 18 23.2	-0.6
KDU	Kakadu	6.09	150	P	Pn	13 17 25.5	+1.2
KDU	Kakadu	6.09	150	S	Sn	13 18 32.0	-1.1
SANI	Sanana	6.29	327	P	Pn	13 17 35.0	+8.0
SANI	Sanana	6.29	327	P	Pn	13 17 27.6	+0.6
	10nm,0.7s						
BATI	Baumata	6.33	243	Pn	Pn	13 17 30.5	+2.9
	11nm,0.3s,baz=178,slow=1.8,SNR=9.6						
BATI				Sn	Sn	13 18 36.9	-2.0
	16nm,0.3s,baz=356,slow=21,SNR=8.9						
	36nm,0.5s						
BATI	Baumata	6.33	243	P	Pn	13 17 30.8	+3.2
	0.3nm41nm,1.3s						
SWI	Sorong	6.73	16	P	Pn	13 17 30.6	-2.3
	0.1nm608nm17nm,1.1s						
MMRI	Maumere	7.20	259	P	Pn	13 17 43.0	+3.8
	0.1nm21nm,0.6s						
RKPI	Ransiki, Papua	7.52	39	P	Pn	13 17 41.4	-2.1
	3µm31nm,0.5s						
EDFI	Ende, Flores	7.75	259	P	Pn	13 17 50.2	+3.5
FITZ	Fitzroy Crossi	11.27	199	Pn	Pn	13 18 33.4	+0.2
	2.1nm,0.3s,baz=17,slow=9.9,SNR=73						
FITZ				Sn	Sn	13 20 31.2	-6.7
	2.3nm,0.3s,baz=197,slow=15,SNR=5.1						
WRA	Warramunga Arr	13.38	160	Pn	Pn	13 18 57.9	-2.7
	1.4nm,0.3s,baz=347,slow=13,SNR=42						
WRA				Sn	Sn	13 21 20.4	-8.4
	3.5nm,0.3s,baz=341,slow=22,SNR=12						
	2.0nm,0.4s						
ASAR	Alice Springs	16.77	166	P	Pn	13 19 44.2	+1.6
	1.2nm,0.3s,baz=338,slow=9.1,SNR=104						
ASAR				S	S	13 22 42.0	-7.1
	1.3nm,0.5s,baz=345,slow=26,SNR=4.5						
	3.4nm,0.8s						
STKA	Stephens Creek	26.90	157	P	P	13 21 28.4	+4.9
	1.9nm,0.8s,baz=333,slow=6.8,SNR=4.0						
	1.9nm,0.8s						
CMAR	Chiang Mai Arr	39.52	311	P	P	13 23 12.9	+0.1
	0.5nm,0.5s,baz=118,slow=9.2,SNR=4.7						
	0.5nm,0.5s						
MKAR	Makanchi Array	68.21	327	P	P	13 26 41.3	+0.6
	1.0nm,0.4s,baz=116,slow=8.1,SNR=22						
	1.0nm,0.4s						
ZALV	Zalesovo Beam	71.65	334	P	P	13 27 01.5	0.0
	0.4nm,0.3s,baz=122,slow=6.7,SNR=2.4						
	0.4nm,0.3s						
KURBB	Kurchatov Arra	72.52	329	P	P	13 27 07.0	+0.3
	0.6nm,0.4s,baz=126,slow=5.4,SNR=13						
	0.6nm,0.4s						
BVAR	Borovoye Array	78.06	328	P	P	13 27 38.7	+0.3
	0.4nm,0.4s,baz=98,slow=10,SNR=4.2						
	0.4nm,0.4s						

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*ISK **30** 13:17:33.6, 34°.86N×33°.83E, h52^{km}, ML3.0/18*

*NIC **30** 13:17:34.9, 34°.95N×33°.82E, h50^{km}±1^{km}, Ml2.1/11*

*GRAL **30** 13:17:35.5±0.3, 34°.89N×33°.85E, h73^{km}±112^{km}, MD3.1*

*AFAD **30** 13:17:36.8, 35°.18N×33°.66E, h40^{km}, ML2.1*

*GII **30** 13:17:40.2±0.0, 34°.743N±0°.002×34°.261E±0°.001, h80^{km}, Mws2.4, confirmed*

ISC 30 13:17:34.9±1.2, **34°.94N**±0°.02×**33°.86E**±0°.03, **h53**^{km}±6^{km}, **n66**, σ**1^{s}41**/90, **1C-5D**, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAR1C	Paralimni Civi	0.14	47	S	Sn	13 17 49.7	+0.6
PARAL	Paralimni	0.16	70	⇑iP	Pn	13 17 43.1	-0.2
PARAL				S	Sn	13 17 49.4	+0.1
PARAL				AML	AML	13 17 54.0	
	0.7nm,0.3s						
PARAL				AML	AML	13 17 55.5	
	0.6nm,0.4s						
LAR1C	Larnaka City C	0.20	266	P	Pn	13 17 43.2	-0.2
LAR1C				S	Sn	13 17 50.0	+0.3
MVOU	Mavrovouni	0.20	293	⇓iP	Pn	13 17 43.0	-0.6
MVOU				S	Sn	13 17 49.3	-0.3
MVOU				AML	AML	13 17 50.0	
	2.3nm,0.3s						
MVOU				AML	AML	13 17 50.0	
	3.5nm,0.3s						
AKIN	Akıncılar- Kıb	0.33	284	Pg	Pn	13 17 43.6	-0.9
ATHAL	Athalassa	0.43	298	P	Pn	13 17 45.2	-0.3
ATHAL				S	Sn	13 17 53.3	+0.2
ATHAL				AML	AML	13 17 59.0	
	1.4nm,0.4s						
ATHAL				AML	AML	13 17 59.3	
	1.1nm,0.3s						
CSS	Mathiatis	0.43	273	Pg	Pn	13 17 44.6	-1.0
CSS				Sg	Sn	13 17 52.4	-0.9
CSS	Mathiatis	0.43	273	⇓iP	Pn	13 17 44.9	-0.7
CSS				S	Sn	13 17 52.5	-0.7
CSS				AML	AML	13 17 53.0	
	0.7nm,0.3s						
CSS				AML	AML	13 17 53.1	
	0.8nm,0.6s						
LFK	Lefkose	0.43	322	Pg	Pn	13 17 45.3	-0.3
LFK				Sg	Sn	13 17 53.8	+0.5
ASGA	Asgata	0.52	253	⇓iP	Pn	13 17 46.2	-0.4
ASGA				S	Sn	13 17 54.9	-0.1
ASGA				AML	AML	13 17 55.8	
	0.4nm,0.3s						
ASGA				AML	AML	13 17 56.1	
	0.4nm,0.4s						
EREN	Erenkoy	0.64	24	Pg	Pn	13 17 48.3	+0.2
EREN				Sg	Sn	13 17 58.9	+1.3
EREN	Erenkoy	0.64	24	P	Pn	13 17 48.5	+0.5
EREN				S	Sn	13 17 57.4	-0.2
EREN				i IAML		13 18 00.0	
	comp=N,103nm,0.4s						
EREN				i IAML		13 18 04.0	
	comp=E,110nm,0.3s						
XYLS	Xyliatos	0.67	277	⇓iP	Pn	13 17 47.8	-0.6
XYLS				S	Sn	13 17 58.1	-0.1
XYLS				AML	AML	13 17 59.7	
	0.4nm,0.3s						
XYLS				AML	AML	13 18 00.3	
	0.3nm,0.2s						
TROD	Troodos	0.81	271	⇓iP	Pn	13 17 50.2	-0.2
TROD				S	Sn	13 18 01.1	-0.6
TROD				AML	AML	13 18 05.2	
	0.1nm,0.6s						
TROD				AML	AML	13 18 06.1	
	0.2nm,0.5s						
APOL	The Sanctuary	0.86	252	P	Pn	13 17 50.4	-0.4
APOL				S	Sn	13 18 02.7	+0.2
APOL				AML	AML	13 18 06.6	
	0.2nm,0.1s						
APOL				AML	AML	13 18 07.7	
	0.2nm,0.1s						
ALFC	Alefka	1.05	282	P	Pn	13 17 52.8	-0.6
ALFC				S	Sn	13 18 07.0	-0.1
ALFC				AML	AML	13 18 07.8	
	0.2nm,0.3s						
ALFC				AML	AML	13 18 08.1	
	0.1nm,0.3s						
NATA	Nata	1.07	262	P	Pn	13 17 54.0	+0.4
NATA				S	Sn	13 18 08.4	+0.9
NATA				AML	AML	13 18 08.9	
	0.3nm,0.1s						
NATA				AML	AML	13 18 12.8	
	0.2nm,0.3s						
AKK1	Akkuyu-Mersin	1.23	348	Pn	Pn	13 17 56.2	+0.5
TISA	Tisan-Mersin	1.23	353	Pn	Pn	13 17 56.3	+0.5
AKMS	Akamas	1.25	274	P	Pn	13 17 56.3	+0.2
AKMS				AML	AML	13 18 15.9	
	0.1nm,0.2s						
AKMS				AML	AML	13 18 15.9	
	0.1nm,0.3s						
YESI	Yesilovacik-Me	1.27	352	Pn	Pn	13 17 56.8	+0.5
YORU	Yoruktepe-Mers	1.27	343	Pn	Pn	13 17 56.7	+0.4
GULN	MERSIN_Gulnar	1.27	349	P	Pn	13 17 56.1	-0.2
GULN				S	Sn	13 18 10.7	-1.6
IKL	Isikli	1.30	354	Pn	Pn	13 17 57.2	+0.4
TEKE	Tekeli-Mersin	1.34	334	Pn	Pn	13 17 57.6	+0.3
SILI	Silifke-Mersin	1.43	2	Pn	Pn	13 17 58.9	+0.5
SLFK	Silifke-Mersin	1.45	3	Pn	Pn	13 17 59.3	+0.5
BERE	Bereket-Mersin	1.50	340	Pn	Pn	13 18 00.0	+0.5
KEBE	Keben-Mersin	1.51	356	Pn	Pn	13 18 00.3	+0.7
TEVE	Tevekalti-Mers	1.53	347	Pn	Pn	13 18 00.5	+0.6
KIZK	Mersin	1.56	9	Pn	Pn	13 18 00.7	+0.5
KIZK	Mersin	1.56	9	P	Pn	13 18 01.9	+1.6
KIZK				S	Sn	13 18 15.6	-3.6
KIZK				i IAML		13 18 23.0	
	comp=N,26nm,1.2s						
KIZK				i IAML		13 18 34.0	
	comp=E,39nm,1.0s						
GAZI	Gazipasa	1.80	316	Pn	Pn	13 18 03.8	+0.2
GAZI	Gazipasa	1.80	316	P	Pn	13 18 04.0	+0.4
GAZI				S	Sn	13 18 20.0	-5.3
GAZI				i IAML		13 18 27.0	
	comp=N,23nm,0.3s						
GAZI				i IAML		13 18 28.0	
	comp=E,26nm,1.1s						
HWQ	Hawqa	1.85	110	eP	Pn	13 18 04.3	0.0
ERMK	Ermenek	1.86	336	P	Pn	13 18 07.0	+2.4
ERMK				S	Sn	13 18 25.3	-1.8
ERMK				i IAML		13 18 31.0	
	comp=E,24nm,0.6s						
ERMK				i IAML		13 18 34.0	
	comp=N,20nm,0.3s						
BEIL	Beino	1.96	101	eP	Pn	13 18 05.7	0.0
BEIL				eS	Sn	13 18 28.1	-1.1
ZAHL	Zahle	2.00	122	eP	Pn	13 18 06.0	-0.3
MERS	Mersin	2.00	16	Pn	Pn	13 18 07.1	+0.8
QRWL	Qaraoun	2.05	132	eP	Pn	13 18 06.6	-0.5
HNTI	Hanita	2.15	149	P	Pn	13 18 09.9	+1.6
HNTI	Hanita	2.15	149	S	Sn	13 18 32.4	-1.4
RCY	Rachaya	2.18	131	eP	Pn	13 18 08.5	-0.4
SHBL	Chebaa	2.23	135	eP	Pn	13 18 09.1	-0.4
SHBL				eS	Sn	13 18 33.9	-2.1
GEM	Giv'at Ha'Em	2.29	138	P	Pn	13 18 10.3	+0.2
GEM	Giv'at Ha'Em	2.29	138	S	Sn	13 18 34.6	-2.5
NATI	Neve Ativ	2.29	136	P	Pn	13 18 10.6	+0.4
NATI	Neve Ativ	2.29	136	S	Sn	13 18 35.1	-2.0
MMC7	Mount Meron ar	2.30	146	P	Pn	13 18 11.9	+1.5
MMA0B	Mount Meron ar	2.31	146	P	Pn	13 18 11.9	+1.4
MMA0B	Mount Meron ar	2.31	146	S	Sn	13 18 36.3	-1.5
KKBE	Karaman, Kazim	2.39	342	P	Pn	13 18 15.7	+3.9
KKBE				S	Sn	13 18 38.7	-1.2
GULE	Gulek	2.46	17	P	Pn	13 18 16.7	+4.0
GULE				S	Sn	13 18 39.0	-2.6
GULE				i IAML		13 19 07.0	
	comp=E,12nm,0.6s						
GULE				i IAML		13 19 45.0	
	comp=N,11nm,1.5s						
KERG	Konya-Eregli	2.48	5	P	Pn	13 18 14.9	+1.9
KERG				S	Sn	13 18 40.8	-1.3
KERG				i IAML		13 18 46.0	
	comp=E,8.2nm,0.3s						
KERG				i IAML		13 19 42.0	
	comp=N,14nm,3.0s						
KSHT	Keshet	2.54	140	P	Pn	13 18 14.7	+1.0
KSHT	Keshet	2.54	140	S	Sn	13 18 41.4	-2.0
SLTI	Sal'it	2.87	159	P	Pn	13 18 20.2	+2.0

SLTI	**Sal'it**	**2.87**	**159**	S	**Sn**	**13 18 50.6**	**-0.8**
HMDT	**Nahal Hemdat**	**3.02**	**152**	P	**Pn**	**13 18 21.6**	**+1.4**
HMDT	**Nahal Hemdat**	**3.02**	**152**	S	**Sn**	**13 18 53.4**	**-1.8**
DSI	**Dead Sea**	**3.59**	**159**	P	**Pn**	**13 18 29.3**	**+1.2**
DSI	**Dead Sea**	**3.59**	**159**	S	**Sn**	**13 19 07.7**	**-1.6**
YTIR	**Yattir**	**3.72**	**163**	P	**Pn**	**13 18 31.7**	**+1.8**
YTIR	**Yattir**	**3.72**	**163**	S	**Sn**	**13 19 11.9**	**-0.5**
KZIT	**Kziot**	**4.05**	**173**	P	**Pn**	**13 18 36.9**	**+2.5**
KZIT	**Kziot**	**4.05**	**173**	S	**Sn**	**13 19 20.5**	**+0.1**

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*IDC **30** 13:32:28.6±1.0, 28.°40N×104.°77E, h0^{km}, mb3.8/10, mbtmp3.8/11, Error ellipse: s-maj=32.1km s-min=17.1km az=55.0*

*NEIC **30** 13:32:31.1±1.6, 28.°4N±0.°1×104.°8E±0.°1, h10^{km}±1^{km}, mb4.3/10, Error ellipse: s-maj=22.6km s-min=20.4km az=186.0*

ISC 30 13:32:31.9±1.0**, 28.°4N**±0.°2×**104.°8E**±0.°1**, h19**^{km}**, n28, σ0^{s}.73**/28**, mb3.9**/16**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENH	**Enshi**	**4.52**	**65**		**Pn**	**13 33 40.5**	**+1.1**
SONM	**Songino Array**	**19.42**	**3**	P	**P**	**13 36 56.5**	**-0.7**
	0.5nm,0.6s,baz=182,slow=10,SNR=2.2						
KSRS	**Korea Array**	**21.39**	**59**	P	**P**	**13 37 17.6**	**-0.7**
	2.1nm,0.8s,baz=243,slow=9.6,SNR=8.4						
	2.1nm,0.8s						
MKAR	**Makanchi Array**	**25.41**	**322**	P	**P**	**13 37 59.3**	**+1.2**
MKAR	**Makanchi Array**	**25.41**	**322**	P	**P**	**13 37 58.9**	**+0.7**
	2.0nm,0.8s,baz=125,slow=11,SNR=17						
	2.0nm,0.8s						
MAKZ	**Makanchi**	**25.59**	**322**	P	**P**	**13 37 59.5**	**-0.2**
MAKZ				IAmb	IAmb	13 38 04.1	
	comp=Z,2.5nm,0.9s						
KDJ	**Kajisay**	**26.20**	**309**	P	**P**	**13 38 07.4**	**+1.8**
USA0B	**Ussuriysk Arra**	**26.84**	**47**	P	**P**	**13 38 11.3**	**+0.2**
USA0B				IAmb	IAmb	13 38 16.9	
	comp=Z,9.8nm,1.2s						
USRK	**Ussuriysk Ar.**	**26.84**	**47**	P	**P**	**13 38 11.0**	**-0.1**
USRK	**Ussuriysk Ar.**	**26.84**	**47**	P	**P**	**13 38 11.2**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=240,slow=14,SNR=1.6						
	comp=Z,1.8nm,0.6s						
ZALV	**Zalesovo Beam**	**29.38**	**336**	P	**P**	**13 38 34.5**	**+0.9**
ZALV	**Zalesovo Beam**	**29.38**	**336**	P	**P**	**13 38 33.3**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=122,slow=11,SNR=2.5						
	comp=Z,0.7nm,0.5s						
KURBB	**Kurchatov Arra**	**29.74**	**325**	P	**P**	**13 38 37.0**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=134,slow=9.4,SNR=11						
	comp=Z,0.7nm,0.5s						
KURK	**Kurchatov**	**29.75**	**326**	P	**P**	**13 38 37.7**	**+0.8**
KURK				IAmb	IAmb	13 38 42.1	
	comp=Z,4.4nm,1.5s						
BVAR	**Borovoye Array**	**35.26**	**324**	P	**P**	**13 39 24.5**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=123,slow=10,SNR=2.0						
	comp=Z,0.2nm,0.3s						
AB31	**Akbulak array**	**39.90**	**314**		**P**	**13 40 04.6**	**+0.1**
ABKAR	**Akbulak array**	**39.90**	**314**	P	**P**	**13 40 04.5**	**0.0**
NRIK	**Noril'sk**	**42.16**	**351**	P	**P**	**13 40 21.8**	**-1.0**
	comp=Z,2.5nm,0.6s,baz=140,slow=6.4,SNR=3.8						
	comp=Z,2.5nm,0.6s						
WRA	**Warramunga Arr**	**55.94**	**146**	P	**P**	**13 42 07.8**	**-1.1**
	comp=Z,0.9nm,0.8s,baz=338,slow=8.1,SNR=7.3						
	comp=Z,0.9nm,0.8s						
WR8	**Warramunga Arr**	**56.03**	**146**	P	**P**	**13 42 10.0**	**+0.4**
WR8				IAmb	IAmb	13 42 28.1	
	comp=Z,14nm,1.5s						
ASAR	**Alice Springs**	**58.91**	**149**	P	**P**	**13 42 29.8**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=332,slow=7.0,SNR=7.6						
	comp=Z,0.5nm,0.6s						
FINES	**FINESS Array B**	**60.11**	**327**	P	**P**	**13 42 37.5**	**-0.1**
FINES	**FINESS Array B**	**60.11**	**327**	P	**P**	**13 42 37.1**	**-0.5**
	comp=Z,1.9nm,1.0s,baz=89,slow=7.2,SNR=3.7						
	comp=Z,1.9nm,1.0s						
NC405	**NORSAR Array S**	**66.97**	**328**	P	**P**	**13 43 23.6**	**+0.6**
NB201	**NORSAR Array S**	**67.18**	**328**	P	**P**	**13 43 25.1**	**+0.7**
BMRM	**Bremner River**	**74.82**	**28**	P	**P**	**13 44 10.5**	**-0.3**
BMRM				IAmb	IAmb	13 44 13.2	
	comp=Z,3.3nm,0.8s						
BCAR	**Beaver Creek A**	**74.82**	**26**	P	**P**	**13 44 10.8**	**0.0**
N30M	**Aishikik Lake**	**77.54**	**26**	P	**P**	**13 44 25.5**	**-0.8**
N30M				IAmb	IAmb	13 44 54.0	
	comp=Z,2.2nm,1.1s						

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*NEIC **30** 13:33:05.5±0.8, 17.°2S±0.°2×179.°1W±0.°1, h551^{km}±11^{km}, mb4.3/21, Error ellipse: s-maj=30.1km s-min=17.1km az=164.0*

*IDC **30** 13:33:06.2±1.6, 17.°15S×179.°22W, h558^{km}±10^{km}, mb3.2/7, mbtmp4.1/9, Error ellipse: s-maj=38.1km s-min=21.8km az=7.0*

ISC 30 13:33:05.0±0.7**, 17.°2S**±0.°2×**179.°11W**±0.°09**, h550**^{km}**, n35, σ0^{s}.72**/36**, mb4.3**/18**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.77**	**258**		**P**	**13 34 19.3**	**+0.5**
MSVF	**Nonsavu**	**2.77**	**258**	P	**P**	**13 34 19.5**	**+0.7**
	65nm,0.6s,baz=114,slow=21,SNR=26						
MSVF				S	**S**	**13 35 20.9**	**+2.1**
	6.2nm,0.9s,baz=291,slow=23,SNR=1.1						
AFI	**Afiamalu**	**7.77**	**66**	P	**P**	**13 35 00.1**	**-0.5**
NIUE	**Niue**	**8.93**	**104**	P	**P**	**13 35 11.9**	**-0.2**
PINNC	**Pines Island,**	**13.76**	**245**	P	**P**	**13 36 00.7**	**-1.0**
DZM	**Mont Dzumac**	**14.46**	**248**	P	**P**	**13 36 09.2**	**+0.1**
	5.0nm,0.5s,baz=80,slow=12,SNR=9.2						
ARMA	**Armidale**	**29.75**	**238**	P	**P**	**13 38 27.2**	**-0.2**
ARMA				IAmb	IAmb	13 38 59.2	
	comp=Z,23nm,1.4s						
CTAO	**Charters Tower**	**32.92**	**259**	P	**P**	**13 38 54.0**	**-0.6**
CAN	**Canberra**	**33.63**	**231**	P	**P**	**13 39 00.4**	**-0.1**
CAN				IAmb	IAmb	13 39 39.5	
	comp=Z,21nm,1.4s						
COEN	**Coen**	**36.44**	**270**	P	**P**	**13 39 24.6**	**+0.6**
TOO	**Toolangi**	**37.13**	**230**	P	**P**	**13 39 28.8**	**-0.6**
TOO				IAmb	IAmb	13 39 30.9	
	comp=Z,10nm,1.4s						
STKA	**Stephens Creek**	**38.41**	**240**	P	**P**	**13 39 39.5**	**-0.3**
STKA	**Stephens Creek**	**38.41**	**240**	P	**P**	**13 39 40.3**	**+0.4**
	comp=Z,4.2nm,0.8s,baz=85,slow=12,SNR=9.7						
	comp=Z,4.2nm,0.8s						
BBOO	**Buckleboo**	**43.19**	**240**	P	**P**	**13 40 17.7**	**-0.1**
WR8	**Warramunga Arr**	**43.97**	**259**	P	**P**	**13 40 23.1**	**-1.0**
WB0	**Warramunga Arr**	**44.08**	**259**	P	**P**	**13 40 23.9**	**-1.0**
WB0				IAmb	IAmb	13 40 25.3	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	**44.12**	**259**	P	**P**	**13 40 23.8**	**-1.5**
	comp=Z,0.9nm,0.4s,baz=86,slow=6.9,SNR=45						
	comp=Z,0.9nm,0.4s						
AS31	**Alice Springs**	**44.35**	**254**	P	**P**	**13 40 26.3**	**-0.8**
AS31				IAmb	IAmb	13 40 27.3	
	comp=Z,3.4nm,0.6s						
ASAR	**Alice Springs**	**44.36**	**254**	P	**P**	**13 40 26.1**	**-0.9**
ASAR	**Alice Springs**	**44.36**	**254**	P	**P**	**13 40 26.8**	**-0.3**
	comp=Z,7.9nm,0.5s,baz=88,slow=8.0,SNR=286						
	comp=Z,7.9nm,0.5s						
MTN	**Manton Dam**	**48.16**	**268**	P	**P**	**13 40 55.8**	**-0.2**
MTN				IAmb	IAmb	13 41 35.6	
	comp=Z,21nm,1.4s						
FORT	**Forrest**	**49.73**	**244**	P	**P**	**13 41 06.9**	**-0.4**
FORT				IAmb	IAmb	13 41 07.0	
	comp=Z,13nm,1.1s						
KNRA	**Kununurra**	**49.91**	**264**	P	**P**	**13 41 08.4**	**-0.4**
KNRA				IAmb	IAmb	13 41 27.2	
	comp=Z,15nm,1.4s						
FITZ	**Fitzroy Crossi**	**52.50**	**260**	P	**P**	**13 41 28.0**	**+0.4**
FITZ	**Fitzroy Crossi**	**52.50**	**260**	P	**P**	**13 41 27.8**	**+0.2**
	comp=Z,1.8nm,0.5s,baz=75,slow=7.9,SNR=11						
	comp=Z,1.8nm,0.5s						
MBWA	**Marble Bar**	**57.61**	**256**	P	**P**	**13 42 02.8**	**-0.4**
MBWA				IAmb	IAmb	13 42 04.9	
	comp=Z,18nm,1.4s						
MORW	**Morawa**	**60.17**	**246**	P	**P**	**13 42 19.8**	**-0.5**
MORW				IAmb	IAmb	13 42 56.3	
	comp=Z,23nm,1.4s						
VNDA	**Vanda**	**61.12**	**185**	P	**P**	**13 42 26.2**	**+0.5**
GIRL	**Giralia**	**62.47**	**253**	P	**P**	**13 42 35.4**	**0.0**
QSPA	**South Pole Qui**	**72.88**	**180**	P	**P**	**13 43 38.8**	**+0.6**
QSPA	**South Pole Qui**	**72.88**	**180**	P	**P**	**13 43 38.8**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=318,slow=0.4,SNR=13						
	comp=Z,1.3nm,0.6s						
SLBS	**Sierra La Lagu**	**78.78**	**61**	P	**P**	**13 44 11.2**	**-0.4**
SLBS				IAmb	IAmb	13 44 16.8	
	comp=Z,16nm,1.4s						
BELA	**Belgrano 2**	**82.97**	**173**	P	**P**	**13 44 31.9**	**-0.3**
TXAR	**Lajitas Array**	**86.17**	**58**	P	**P**	**13 44 49.8**	**+1.1**
	comp=Z,0.2nm,0.8s,baz=235,slow=4.1,SNR=3.3						
	comp=Z,0.2nm,0.8s						
SNAA	**Sanae**	**91.34**	**179**	P	**P**	**13 45 11.7**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=168,slow=10,SNR=1.3						
	comp=Z,0.2nm,0.4s						

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*CATAC **30** 13:34:24.4±0.7, 8.°N±4.°×8.°3W±.°, h8^{km}±3^{km}, M4.2/13, MLv4.2/13, Error ellipse: s-maj=9.7km s-min=8.2km az=82.3, confirmed*

*UCR **30** 13:34:25.5±1.0, 8.°34N×82.°86W, h29^{km}±1^{km}, MW4.1, Fault plane solution: NP1:ϕ_s282.96000°, δ50.73000°, λ8.29000°.*

*UPA **30** 13:34:26.4±1.6, 8.°41N×82.°85W, h24^{km}±5^{km}, ML3.8, MW4.3*

ISC 30 13:34:26.0±0.9**, 8.°39N**±0.°03×**82.°87W**±0.°02**, h32**^{km}±5^{km}**, n100, σ0^{s}.94**/121**, 35C-13D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	**La Esperanza,**	**0.08**	**75**	*e*P	**Pb**	**13 34 31.2**	**-0.2**
LESP3				*e*S	**Sb**	**13 34 34.8**	**-0.3**
LPPC	**Paso Canoas**	**0.15**	**10**	⇑*e*P	**Pn**	**13 34 31.7**	**-0.4**
LPPC				*e*S	**Sb**	**13 34 36.7**	**+0.7**
CDITO	**Canoas**	**0.19**	**358**	S	**Sb**	**13 34 36.9**	**+0.4**
CDITO	**Canoas**	**0.19**	**358**	⇑P	**Pn**	**13 34 32.0**	**-0.7**
NELY	**Ciudad Neily**	**0.27**	**343**	⇑*e*P	**Pb**	**13 34 33.0**	**-0.3**
NELY				*e*S	**Sn**	**13 34 39.0**	**0.0**
LIMO3	**Limones**	**0.28**	**180**	⇑*i*P	**Pn**	**13 34 33.3**	**-0.6**
LIMO3				*e*S	**Sb**	**13 34 38.6**	**+0.2**
LMNES	**Limones**	**0.28**	**179**	⇑*e*P	**Pb**	**13 34 33.3**	**-0.1**
FITO	**Golfito**	**0.37**	**310**	⇑*e*P	**Pb**	**13 34 33.5**	**-1.1**
FITO				*e*S	**Sb**	**13 34 39.9**	**-0.6**
EDAD	**Golfito**	**0.40**	**312**	⇑*e*P	**Pb**	**13 34 33.9**	**-1.1**
EDAD				*e*S	**Sb**	**13 34 40.6**	**-0.5**
MLIR3	**Monte Lirio, C**	**0.41**	**6**	⇑*e*P	**Pb**	**13 34 35.5**	**+0.3**
MLIR3				*e*S	**Sn**	**13 34 42.9**	**+0.5**
DVD	**David**	**0.41**	**83**	*e*P	**Pb**	**13 34 34.6**	**-0.6**
DVD				*e*S	**Sb**	**13 34 40.6**	**-0.9**
CSTBL	**De las Acacias**	**0.42**	**87**	⇓*e*P	**Pb**	**13 34 34.7**	**-0.6**
RSRNO	**Rio Sereno**	**0.43**	**1**	⇑*e*P	**Pb**	**13 34 35.7**	**+0.2**
CLLRA	**Cordillera,**	**0.43**	**35**	⇓*e*P	**Pb**	**13 34 35.3**	**-0.4**
PEDE3	**Pedregal, Chir**	**0.44**	**90**	*e*P	**Pb**	**13 34 34.8**	**-0.8**
PEDE3				*e*S	**Sb**	**13 34 41.4**	**-0.7**
BRU2	**Volcan**	**0.44**	**23**	⇓*e*P	**Pb**	**13 34 35.4**	**-0.3**
BRU2				*e*S	**Sn**	**13 34 43.3**	**0.0**
BRU2	**Volcan**	**0.44**	**23**	⇓P	**Pb**	**13 34 35.4**	**-0.3**
BRU2	**Volcan**	**0.44**	**23**	⇓*i*P	**Pb**	**13 34 35.5**	**-0.3**
BRU2				AMP		13 34 38.2	
	comp=Z,8μm,0.2s						
BRU2				*e*S	**Sn**	**13 34 43.7**	**+0.4**
VITO	**San Vito**	**0.44**	**347**	⇑*e*P	**Pb**	**13 34 35.8**	**+0.1**
LOCO3	**Loma Colorada,**	**0.44**	**87**	⇓*i*P	**Pb**	**13 34 35.1**	**-0.6**
LOCO3				*i* S	**Sb**	**13 34 41.8**	**-0.4**
SCLRA	**Santa Clara, W**	**0.45**	**11**	*e*P	**Pb**	**13 34 35.9**	**0.0**
TBS2		**0.46**	**27**	*e*P	**Pn**	**13 34 36.5**	**0.0**
LOMA3	**Las Lomas, Chi**	**0.47**	**85**	*i* P	**Pb**	**13 34 35.3**	**-0.8**
LOMA3				*e*S	**Sb**	**13 34 42.6**	**-0.4**
PTAR3	**Potrerillos Ar**	**0.48**	**50**	⇓*i*P	**Pb**	**13 34 35.9**	**-0.4**
PTAR3				*e*S	**Sb**	**13 34 43.8**	**+0.5**
BC3P	**Paso Ancho**	**0.50**	**31**	⇓*i*P	**Pb**	**13 34 36.0**	**-0.6**
BC3P				*i* S	**Sb**	**13 34 44.4**	**+0.5**
CHIR3	**Chiriqui UPA,**	**0.53**	**89**	*e*P	**Pb**	**13 34 36.1**	**-0.9**
CHIR3				*e*S	**Sb**	**13 34 44.4**	**-0.2**
BQTLY	**Boquete Panama**	**0.55**	**47**	⇓*e*P	**Pb**	**13 34 36.6**	**-0.8**
BQSF3	**Alto Boquete,**	**0.56**	**50**	⇓*i*P	**Pb**	**13 34 36.7**	**-0.8**
BQSF3				AMP		13 34 36.9	
	comp=Z,6μm,0.3s						
BQSF3				*e*S	**Sb**	**13 34 44.3**	**-1.1**
ALCO	**Alturas Coton,**	**0.56**	**3**	⇑*e*P	**Pb**	**13 34 37.0**	**-0.7**
ALCO				*e*S	**Sb**	**13 34 45.7**	**+0.1**
PSOM3	**Paja de Sombre**	**0.61**	**61**	⇓*i*P	**Pn**	**13 34 37.4**	**-1.2**
PSOM3				*i* S	**Sb**	**13 34 45.7**	**-1.2**
EDP2	**Potrero Grande**	**0.70**	**334**	⇑*e*P	**Pn**	**13 34 39.2**	**-0.5**
PANP	**Palmar Norte**	**0.82**	**314**	*e*P	**Pn**	**13 34 40.5**	**-0.8**
PBNVO	**Pueblo Nuevo,**	**0.83**	**53**	⇓*e*P	**Pn**	**13 34 40.4**	**-1.2**
RBALA	**Bur**	**0.86**	**55**	⇓*e*P	**Pn**	**13 34 41.1**	**-0.8**
BURE	**Buenos Aires**	**0.91**	**329**	*e*P	**Pn**	**13 34 42.2**	**-0.4**
DRK0	**Durika**	**0.95**	**337**	⇑*e*P	**Pn**	**13 34 42.5**	**-0.8**
DRK0	**Durika**	**0.95**	**337**	S	**Sb**	**13 34 57.1**	**+0.7**
DRK0	**Durika**	**0.95**	**337**	⇑P	**Pn**	**13 34 42.6**	**-0.8**
DRK0	**Durika**	**0.95**	**337**	*e*P	**Pn**	**13 34 42.6**	**-0.8**
EDPE	**Pejibaye, P**	**1.04**	**318**	⇑*e*P	**Pn**	**13 34 44.0**	**-0.4**
EDPE				*e*S	**Sb**	**13 34 59.5**	**+0.7**
RMDIO	**Remedios, Chir**	**1.04**	**99**	*e*P	**Pn**	**13 34 43.8**	**-0.6**
OCHAL	**Ojochal**	**1.05**	**313**	S	**Sb**	**13 34 59.2**	**+0.2**
OCHAL	**Ojochal**	**1.05**	**313**	⇑P	**Pn**	**13 34 44.1**	**-0.4**
SAJE	**San Jernim**	**1.15**	**326**	⇑*e*P	**Pn**	**13 34 45.2**	**-0.8**
ISBTO	**Bastimentos Is**	**1.16**	**34**	*e*P	**Pb**	**13 34 47.1**	**-0.3**
PDCAN	**Manzana , Fuen**	**1.16**	**95**	*e*P	**Pn**	**13 34 45.0**	**-1.1**
BRIBI	**Bribri**	**1.23**	**2**	⇑*e*P	**Pb**	**13 34 48.1**	**-0.5**
VERH	**Veragua Rainfo**	**1.56**	**348**	⇑*e*P	**Pn**	**13 34 52.2**	**+0.5**
PIEC	**Cerro El Cedra**	**1.63**	**319**	⇑*e*P	**Pn**	**13 34 52.9**	**0.0**
TURIB	**Turrialba**	**1.71**	**332**	⇑*e*P	**Pn**	**13 34 54.2**	**+0.4**
GMAL	**Guarumal, Vera**	**1.73**	**111**	*e*P	**Pn**	**13 34 54.5**	**+0.6**
GMAL				*e*S	Sn	13 35 04.5	-10
VINA	**Juan Vinas**	**1.73**	**330**	*e*P	**Pn**	**13 34 54.7**	**+0.7**
REPA	**Paraso**	**1.74**	**325**	*e*P	**Pn**	**13 34 54.1**	**-0.1**
VERB	**Verbena**	**1.75**	**332**	⇑*e*P	**Pn**	**13 34 55.0**	**+0.7**
LCR2	**La Lucha 2**	**1.75**	**320**	⇑*e*P	**Pn**	**13 34 54.4**	**-0.1**
LCR2	**La Lucha 2**	**1.75**	**320**	S	**Sb**	**13 35 19.2**	**-0.3**
LCR2	**La Lucha 2**	**1.75**	**320**	⇑P	**Pn**	**13 34 54.3**	**-0.1**
ABE2	**San Pablo**	**1.76**	**318**	*e*P	**Pn**	**13 34 54.9**	**+0.4**
PCAYA	**Pacayas**	**1.78**	**329**	*e*P	**Pn**	**13 34 55.8**	**+0.9**
PICV	**PH. Pirrs**	**1.80**	**313**	*e*P	**Pn**	**13 34 55.3**	**+0.4**
VTCV	**VTCV, Calle Va**	**1.80**	**332**	⇑*e*P	**Pn**	**13 34 55.9**	**+0.8**
RESJ	**San Isidro (Tu**	**1.80**	**335**	⇑*e*P	**Pn**	**13 34 56.2**	**+1.2**
ABRB	**Las Abras (San**	**1.81**	**333**	⇑*e*P	**Pn**	**13 34 56.3**	**+1.0**
RAFA	**San Farael, Vo**	**1.82**	**329**	*e*P	**Pn**	**13 34 56.2**	**+0.8**
PAR1A	**Puntarenas Pro**	**1.82**	**311**	*e*P	**Pn**	**13 34 55.8**	**+0.6**
CVTV	**Tajo**	**1.83**	**332**	⇑*e*P	**Pn**	**13 34 56.5**	**+0.9**
CVTQ	**Turrialba Volc**	**1.84**	**331**	⇑*e*P	**Pn**	**13 34 56.6**	**+0.9**
VTLA	**Turrialba Volc**	**1.84**	**331**	⇑*e*P	**Pn**	**13 34 56.4**	**+0.7**
VTR0	**Volcan Turrial**	**1.85**	**332**	⇑*e*P	**Pn**	**13 34 56.7**	**+0.8**
RVLA	**Villa Bonita**	**1.85**	**337**	*e*P	**Pn**	**13 34 57.0**	**+1.3**
VICA	**Volcano Irazu**	**1.86**	**329**	⇑*e*P	**Pn**	**13 34 56.3**	**+0.2**
ACOS	**Acosta**	**1.90**	**318**	*e*P	**Pn**	**13 34 56.5**	**+0.1**
CALO3	**Calobre, Verag**	**2.00**	**92**	*e*P	**Pn**	**13 34 58.7**	**+1.0**
HDC	**Heredia**	**2.02**	**323**	*e*P	**Pn**	**13 34 58.8**	**+0.7**
HDC	**Heredia**	**2.02**	**323**	P	**Pn**	**13 34 59.1**	**+1.1**
HDC				S	**Sb**	**13 35 27.2**	**+0.1**
HEME	**Heredia, Merce**	**2.03**	**322**	*e*P	**Pn**	**13 34 59.3**	**+1.2**
VBV1	**V. Barva**	**2.10**	**325**	*e*P	**Pn**	**13 35 00.1**	**+0.7**
TCS1	**Tacares**	**2.17**	**319**	P	**Pn**	**13 35 02.0**	**+2.0**
CRIS3	**El Cristo, Coc**	**2.23**	**93**	*e*P	**Pb**	**13 35 08.6**	**+2.9**
CACAO	**El Cacao, Vera**	**2.24**	**117**	*e*P	**Pn**	**13 35 01.1**	**+0.2**
TRT2	**Tortugero**	**2.32**	**338**	⇑*e*P	**Pn**	**13 35 02.9**	**+0.8**
TRT2	**Tortugero**	**2.32**	**338**	S	**Sb**	**13 35 34.1**	**-1.4**
TRT2	**Tortugero**	**2.32**	**338**	⇑P	**Pn**	**13 35 03.0**	**+1.0**
CBL1	**Cabuya**	**2.50**	**299**	*e*P	**Pn**	**13 35 04.1**	**-0.4**
SOCE	**Pocosol**	**2.63**	**319**	P	**Pn**	**13 35 08.8**	**+2.4**
SOCE	**Pocosol**	**2.63**	**319**	S	**Sb**	**13 35 42.5**	**-2.0**
AZU	**Azuero**	**2.63**	**103**	*e*P	**Pn**	**13 35 08.3**	**+1.9**
COVE	**Coope Vega, Sa**	**2.77**	**327**	P	**Pn**	**13 35 10.4**	**+2.2**
JTS	**Las Juntas de**	**2.80**	**313**	*e*P	**Pn**	**13 35 09.2**	**+0.6**
JTS	**Las Juntas de**	**2.80**	**313**	*e*P	**Pn**	**13 35 09.3**	**+0.7**
ACHO3	**Achotines, Los**	**2.84**	**110**	*e*P	**Pn**	**13 35 11.7**	**+2.6**
ACHO3				*e*S	**Sb**	**13 35 47.1**	**-3.2**
INDI	**Punta indio, G**	**2.99**	**300**	P	**Pn**	**13 35 11.6**	**+0.4**
INDI	**Punta indio, G**	**2.99**	**300**	S	**Sn**	**13 35 44.7**	**-1.3**
CMARA	**Lajas Hojancha**	**3.00**	**303**	P	**Pn**	**13 35 11.5**	**0.0**
BCIP	**Isla Barro Col**	**3.09**	**75**	⇑*e*P	**Pn**	**13 35 13.3**	**+0.6**
ALIBA	**Liberia Airpor**	**3.43**	**310**	*e*P	**Pn**	**13 35 19.6**	**+2.2**
BLUN	**Bluefields**	**3.71**	**346**	P	**Pn**	**13 35 21.7**	**+0.6**
ESPN	**Las Esperanzas**	**4.04**	**340**	P	**Pn**	**13 35 26.5**	**+0.8**
ACON	**Acoyapa**	**4.22**	**328**	P	**Pn**	**13 35 28.9**	**+0.7**
PLRN	**Geotermica Pol**	**5.67**	**318**	P	Pn	13 35 53.8	+5.7

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*UCR **30** 13:39:36.5±0.6, 8.°32N×82.°87W, h31^{km}±2^{km}, MW3.5*

*UPA **30** 13:39:37.8±1.2, 8.°39N×82.°81W, h29^{km}±6^{km}, MW3.3, Fault plane solution: NP1:ϕ_s88.00000°, δ38.00000°, λ60.00000°.*

ISC 30 13:39:37.4±0.9**, 8.°39N**±0.°03×**82.°84W**±0.°03**, h32**^{km}±6^{km}**, n44, σ0^{s}.59**/68**, 1C-9D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	**La Esperanza,**	**0.05**	**74**	*e*P	**Pb**	**13 39 42.7**	**-0.1**
LESP3				*e*S	**Sb**	**13 39 46.8**	**+0.3**
LESP3	**La Esperanza,**	**0.05**	**74**	⇑*i*P	**Pb**	**13 39 42.7**	**-0.1**
LESP3				*e*S	**Sb**	**13 39 45.9**	**-0.6**
LPPC	**Paso Canoas**	**0.14**	**0**	*e*P	**Pn**	**13 39 43.2**	**-0.1**
LPPC				*e*S	**Sb**	**13 39 48.2**	**+0.8**
NELY	**Ciudad Neily**	**0.28**	**338**	*e*P	**Pb**	**13 39 44.5**	**-0.3**
NELY				*e*S	**Sn**	**13 39 50.8**	**+0.5**
LIMO3	**Limones**	**0.29**	**185**	*e*P	**Pb**	**13 39 44.8**	**-0.1**
LIMO3				*e*S	**Sn**	**13 39 52.0**	**+1.4**
LIMO3	**Limones**	**0.29**	**185**	⇓*i*P	**Pb**	**13 39 44.9**	**-0.1**
LIMO3				*e*S	**Sn**	**13 39 50.5**	**-0.1**
DVD	**David**	**0.39**	**84**	*i* P	**Pb**	**13 39 46.1**	**-0.1**
DVD				*e*S	**Sn**	**13 39 53.3**	**+0.3**
DVD	**David**	**0.39**	**84**	⇓*i*P	**Pb**	**13 39 46.1**	**-0.1**
DVD				*e*S	**Sn**	**13 39 53.2**	**+0.2**
FITO	**Golfito**	**0.39**	**307**	*e*P	**Pb**	**13 39 45.1**	**-1.2**
CSTBL	**De las Acacias**	**0.39**	**87**	*e*P	**Pb**	**13 39 46.2**	**-0.2**
MLIR3	**Monte Lirio, C**	**0.40**	**2**	*e*P	**Pn**	**13 39 46.9**	**0.0**
MLIR3	**Monte Lirio, C**	**0.40**	**2**	*e*P	**Pn**	**13 39 47.0**	**0.0**
MLIR3				*e*S	**Sn**	**13 39 53.8**	**+0.3**
EDAD	**Golfito**	**0.41**	**309**	*e*P	**Pb**	**13 39 45.4**	**-1.2**
PEDE3	**Pedregal, Chir**	**0.41**	**91**	*i* P	**Pb**	**13 39 46.3**	**-0.3**
PEDE3				*e*S	**Sb**	**13 39 52.9**	**-0.1**
LOCO3	**Loma Colorada,**	**0.42**	**88**	*e*P	**Pb**	**13 39 46.5**	**-0.2**
LOCO3	**Loma Colorada,**	**0.42**	**88**	⇓*i*P	**Pb**	**13 39 46.5**	**-0.2**
BRU2	**Volcan**	**0.42**	**20**	*e*P	**Pb**	**13 39 46.9**	**0.0**
BRU2				*e*S	**Sn**	**13 39 54.8**	**+0.6**
BRU2	**Volcan**	**0.42**	**20**	⇓*i*P	**Pb**	**13 39 46.9**	**0.0**
BRU2				*e*S	**Sn**	**13 39 54.7**	**+0.6**
BRU2	**Volcan**	**0.42**	**20**	⇓*i*P	**Pb**	**13 39 46.9**	**0.0**
BRU2				*e*S	**Sn**	**13 39 54.8**	**+0.6**
TBS2		**0.44**	**24**	*e*P	**Pn**	**13 39 47.9**	**+0.3**
SCLRA	**Santa Clara, W**	**0.44**	**7**	*e*P	**Pn**	**13 39 47.5**	**-0.1**
VITO	**San Vito**	**0.44**	**343**	*e*P	**Pb**	**13 39 47.2**	**0.0**
VITO				*e*S	**Sn**	**13 39 55.7**	**+1.1**
PTAR3	**Potrerillos Ar**	**0.45**	**49**	*e*P	**Pb**	**13 39 47.3**	**0.0**
PTAR3				*e*S	**Sn**	**13 39 55.4**	**+0.6**
PTAR3	**Potrerillos Ar**	**0.45**	**49**	⇓*i*P	**Pb**	**13 39 47.3**	**0.0**
PTAR3				*e*S	**Sb**	**13 39 53.9**	**-0.2**
BC3P	**Paso Ancho**	**0.48**	**28**	*e*P	**Pb**	**13 39 47.5**	**-0.2**
BC3P				*e*S	**Sn**	**13 39 56.6**	**+1.0**
BC3P	**Paso Ancho**	**0.48**	**28**	⇓*i*P	**Pb**	**13 39 47.5**	**-0.2**
BC3P				*e*S	**Sn**	**13 39 56.6**	**+1.0**
BQTLY	**Boquete Panama**	**0.52**	**46**	*e*P	**Pb**	**13 39 48.1**	**-0.3**
BQSF3	**Alto Boquete,**	**0.53**	**49**	*e*P	**Pb**	**13 39 48.1**	**-0.4**
BQSF3				*e*S	**Sn**	**13 39 57.5**	**+0.8**
BQSF3	**Alto Boquete,**	**0.53**	**49**	⇓*i*P	**Pb**	**13 39 48.1**	**-0.4**
BQSF3				*e*S	**Sb**	**13 39 55.2**	**-0.9**
ALCO	**Alturas Coton,**	**0.55**	**1**	*e*P	**Pb**	**13 39 48.6**	**-0.4**
PSOM3	**Paja de Sombre**	**0.59**	**60**	*e*P	**Pb**	**13 39 48.7**	**-0.6**
PSOM3				*e*S	**Sb**	**13 39 57.7**	**+0.1**
PSOM3	**Paja de Sombre**	**0.59**	**60**	⇓*i*P	**Pb**	**13 39 48.8**	**-0.6**
PSOM3				*e*S	**Sb**	**13 39 55.5**	**-2.1**
EDP2	**Potrero Grande**	**0.70**	**332**	*e*P	**Pn**	**13 39 50.7**	**-0.4**
EDP2				*e*S	**Sn**	**13 40 01.4**	**+0.6**
RBALA	**Bur**	**0.83**	**54**	*e*P	**Pn**	**13 39 52.6**	**-0.3**
DRK0	**Durika**	**0.95**	**335**	*e*P	**Pn**	**13 39 54.2**	**-0.5**
DRK0	**Durika**	**0.95**	**335**	*e*P	**Pn**	**13 39 54.1**	**-0.5**
DRK0	**Durika**	**0.95**	**335**	*e*P	**Pn**	**13 39 54.0**	**-0.6**
DRK0				*e*S	**Sb**	**13 40 08.7**	**+0.7**
EDPE	**Pejibaye, P**	**1.05**	**317**	*e*P	**Pn**	**13 39 55.5**	**-0.4**
SAJE	**San Jernim**	**1.16**	**325**	*e*P	**Pn**	**13 39 56.9**	**-0.5**
PIEC	**Cerro El Cedra**	**1.65**	**318**	*e*P	**Pn**	**13 40 04.4**	**+0.1**
ABE2	**San Pablo**	**1.77**	**317**	*e*P	**Pn**	**13 40 06.3**	**+0.3**
CVTV	**Tajo**	**1.84**	**331**	*e*P	**Pn**	**13 40 07.7**	**+0.7**
PAR1A	**Puntarenas Pro**	**1.84**	**311**	*e*P	**Pn**	**13 40 06.5**	**-0.2**
JTS	**Las Juntas de**	**2.81**	**312**	*e*P	**Pn**	**13 40 20.3**	**+0.2**

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*JMA **30** 13:43:35.3±0.3, 25.°N±2.°×122.°4E±0.°8, h0^{km}, MV2.8/8, NW OFF ISHIGAKIJIMA IS*

*TAP **30** 13:43:35.3, 24.°93N×122.°48E, h27^{km}, ML2.8, C*

ISC 30 13:43:35.9±1.1**, 24.°91N**±0.°03×**122.°45E**±0.°03**, h23**^{km}±6^{km}**, n78, σ0^{s}.74**/140**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.43**	**284**	P	**Pb**	**13 43 44.5**	**-0.3**
TWB1				*e*S	**Sb**	**13 43 50.7**	**-0.2**
EGS		**0.47**	**263**	*i* P	**Pb**	**13 43 45.7**	**+0.2**
EGS				S	**Sb**	**13 43 53.0**	**+0.8**
EOS2	**EOS2**	**0.53**	**202**	*i* P	**Pb**	**13 43 46.5**	**+0.1**
EOS2				*e*S	**Sn**	**13 43 55.4**	**-0.7**
SXI1	**Grass Mountain**	**0.55**	**290**	*i* P	**Pb**	**13 43 47.0**	**0.0**
SXI1				S	**Sb**	**13 43 55.3**	**+0.8**
TIPB	**Shuangxi**	**0.57**	**277**	P	**Pb**	**13 43 47.1**	**-0.2**
TIPB				*e*S	**Sb**	**13 43 55.5**	**+0.5**
TWC	**Suao**	**0.62**	**242**	*e*P	**Pb**	**13 43 47.4**	**-0.7**
TWC				*e*S	**Sb**	**13 43 54.8**	**-1.6**
NWF	**Wu-fen Shan**	**0.63**	**285**	*i* P	**Pb**	**13 43 48.4**	**+0.1**
NWF				S	**Sn**	**13 43 57.6**	**-1.3**
WFSB	**Wu-fen Shan**	**0.63**	**285**	P	**Pb**	**13 43 48.3**	**+0.1**
WFSB				S	**Sn**	**13 43 57.8**	**-1.0**
EOS3	**EOS3**	**0.63**	**191**	*e*P	**Pb**	**13 43 48.3**	**+0.2**
EOS3				S	**Sn**	**13 43 58.1**	**-0.5**
ESAO	**Su ao**	**0.64**	**239**	*i* P	**Pb**	**13 43 48.0**	**-0.4**
ESAO				S	**Sn**	**13 43 58.4**	**-0.7**
JYNG	**Yonagunijimaku**	**0.64**	**135**	P	**Pb**	**13 43 47.7**	**-0.7**
JYNG				*e*S	**Sb**	**13 43 56.7**	**-0.3**
TNOU	**National Taiwa**	**0.66**	**292**	*i* P	**Pb**	**13 43 48.5**	**-0.2**
TNOU				S	**Sb**	**13 43 58.2**	**+0.7**
YOJ	**Yonaguni jima**	**0.68**	**131**	P	**Pb**	**13 43 48.5**	**-0.6**
YOJ	**Yonaguni jima**	**0.68**	**131**	P	**Pb**	**13 43 48.7**	**-0.4**
YOJ	**Yonaguni jima**	**0.68**	**131**	*i* P	**Pb**	**13 43 48.3**	**-0.7**
YOJ				*e*S	**Sn**	**13 43 59.5**	**-0.5**
NDS	**Dongshan**	**0.72**	**248**	*i* P	**Pb**	**13 43 49.7**	**-0.1**
NDS				*e*S	**Sb**	**13 43 58.9**	**-0.3**
TWE	**Neicheng**	**0.73**	**256**	*e*P	**Pb**	**13 43 49.5**	**-0.5**
EWUT	**Wuta**	**0.76**	**233**	*e*P	**Pb**	**13 43 50.1**	**-0.4**
EWUT				*e*S	**Sb**	**13 44 01.1**	**+0.6**
TWA	**Mucha**	**0.79**	**275**	P	**Pb**	**13 43 50.5**	**-0.4**
TWA				S	**Sb**	**13 44 01.7**	**+0.4**
EOS4	**EOS4**	**0.79**	**189**	*e*P	**Pn**	**13 43 51.1**	**-0.3**
EOS4				*e*S	**Sn**	**13 44 02.9**	**+0.6**
FUSB	**Fushanzhiwuyua**	**0.80**	**260**	*e*P	**Pb**	**13 43 50.8**	**-0.3**
FUSB				S	**Sn**	**13 44 03.0**	**-0.1**
PCYT	**Pengchaiyu**	**0.80**	**335**	*e*P	**Pn**	**13 43 52.0**	**+0.3**
ENA	**Nanau**	**0.80**	**234**	*e*P	**Pb**	**13 43 50.6**	**-0.5**
ENA				*e*S	**Sn**	**13 44 03.0**	**0.0**
YM08	**YM08**	**0.83**	**290**	*e*P	**Pb**	**13 43 51.4**	**-0.2**
YM08				S	**Sb**	**13 44 01.7**	**-0.7**
YM01	**YM01**	**0.83**	**287**	*e*P	**Pb**	**13 43 51.5**	**-0.2**
YM01				S	**Sn**	**13 44 03.3**	**-0.5**
ENTT	**Nioudou**	**0.84**	**252**	*e*P	**Pn**	**13 43 51.7**	**-0.7**
ENTT				*e*S	**Sn**	**13 44 04.4**	**+0.3**
TWY	**Chenhua**	**0.85**	**296**	P	**Pb**	**13 43 51.9**	**-0.1**
TWY				S	**Sn**	**13 44 04.1**	**-0.2**
ZUZH	**Zhuzihu**	**0.86**	**287**	*e*P	**Pb**	**13 43 52.5**	**+0.4**
ZUZH				*e*S	**Sn**	**13 44 04.7**	**+0.2**
EAHA	**Aohua**	**0.86**	**228**	*e*P	**Pn**	**13 43 52.0**	**-0.7**
EAHA				*i* S	**Sb**	**13 44 03.2**	**-0.2**
NWLT	**Wulai**	**0.87**	**262**	*e*P	**Pn**	**13 43 52.1**	**-0.6**
NWLT				S	**Sb**	**13 44 04.0**	**+0.4**
TATO	**Taipei**	**0.87**	**275**	P	**Pn**	**13 43 52.0**	**-0.8**
ANP	**Anpu**	**0.89**	**288**	*e*P	**Pb**	**13 43 54.5**	**+1.8**
ANP				*e*S	**Sn**	**13 44 05.1**	**-0.2**
LATG	**Datong**	**0.92**	**246**	*e*P	**Pn**	**13 43 52.9**	**-0.7**
LATG				*e*S	**Sn**	**13 44 06.7**	**+0.6**
NTST	**Danshui**	**0.94**	**286**	P	**Pb**	**13 43 53.5**	**-0.1**
NTST				S	**Sn**	**13 44 06.8**	**+0.3**
YHNB	**Yeheng**	**1.00**	**257**	P	**Pn**	**13 43 54.2**	**-0.5**
YHNB	**Yeheng**	**1.00**	**257**	*e*P	**Pb**	**13 43 54.6**	**0.0**
YHNB				*e*S	**Sb**	**13 44 08.5**	**+1.0**
NSK	**Sanguang**	**1.02**	**257**	*e*P	**Pn**	**13 43 54.6**	**-0.3**
NSK				*e*S	**Sb**	**13 44 10.1**	**+2.2**
ETL	**Fush Village**	**1.06**	**225**	P	**Pn**	**13 43 55.2**	**-0.2**
ETL				S	**Sb**	**13 44 10.2**	**+1.1**
NACB	**Ninganchiao**	**1.07**	**227**	P	**Pn**	**13 43 54.3**	**-1.2**
NACB	**Ninganchiao**	**1.07**	**227**	*i* P	**Pn**	**13 43 54.8**	**-0.6**
NACB				S	**Sn**	**13 44 09.3**	**-0.3**
NNSB	**Datong**	**1.08**	**244**	*e*P	**Pn**	**13 43 55.7**	**-0.1**
NNSB				*e*S	**Sb**	**13 44 10.2**	**+0.4**
NNSH	**Datong**	**1.08**	**244**	P	**Pb**	**13 43 56.0**	**0.0**
NNSH				*e*S	**Sb**	**13 44 10.2**	**+0.5**
NNS	**Nan Shan**	**1.08**	**245**	*e*P	**Pn**	**13 43 55.6**	**-0.2**
NNS				*e*S	**Sb**	**13 44 10.5**	**+0.7**

ETLH	**Xiulin Townshi**	**1.12**	**232**	*e*P	**Pn**	**13 43 56.2**	**-0.2**
ETLH				S	**Sb**	**13 44 11.6**	**+0.6**
TWD	**Chiawan**	**1.13**	**223**	P	**Pb**	**13 43 56.9**	**+0.1**
TWD				S	**Sb**	**13 44 11.9**	**+0.8**
KSHI	**Guanxi Townshi**	**1.16**	**264**	*e*P	**Pn**	**13 43 55.4**	**-1.4**
KSHI				S	**Sb**	**13 44 12.7**	**+0.7**
NFF	**Wufeng Townshi**	**1.24**	**257**	*e*P	**Pb**	**13 43 58.1**	**-0.6**
FUSS	**Fushou**	**1.28**	**239**	P	**Pb**	**13 43 58.9**	**-0.5**
FUSS				*e*S	**Sb**	**13 44 16.5**	**+0.9**
ETM	**Tongmen**	**1.28**	**223**	P	**Pb**	**13 43 58.7**	**-0.6**
ETM				S	**Sb**	**13 44 16.0**	**+0.6**
LXIB	**Xiulin Townshi**	**1.29**	**227**	*e*P	**Pb**	**13 43 59.6**	**0.0**
LXIB				*e*S	**Sb**	**13 44 16.0**	**+0.1**
TEYL	**Yanliau Villag**	**1.29**	**217**	*e*S	**Sb**	**13 44 16.7**	**+1.0**
IRIF	**Iriomote-Funau**	**1.30**	**116**	*e*P	**Pb**	**13 44 00.5**	**+0.9**
WHF	**Hehuan Shan**	**1.32**	**235**	*e*P	**Pb**	**13 43 59.9**	**-0.3**
WHF				S	**Sb**	**13 44 16.9**	**0.0**
LIOB	**Emei**	**1.33**	**259**	*e*P	**Pb**	**13 44 00.9**	**+0.7**
TDCB	**Techi**	**1.34**	**241**	*e*P	**Pb**	**13 44 01.6**	**+1.2**
TDCB				*e*S	**Sb**	**13 44 18.9**	**+1.6**
ESL	**Shilin**	**1.43**	**221**	*e*P	**Pb**	**13 44 01.9**	**0.0**
ESL				S	**Sn**	**13 44 19.3**	**+0.7**
HATJ	**Hateruma jima**	**1.50**	**124**	*e*P	**Pb**	**13 44 03.8**	**+0.7**
OWD	**Renai**	**1.50**	**231**	*e*P	**Pb**	**13 44 03.0**	**-0.1**
OWD				S	**Sb**	**13 44 21.5**	**-0.3**
WHP	**Taichung City**	**1.50**	**246**	P	**Pb**	**13 44 03.0**	**-0.2**
WHP				S	**Sb**	**13 44 21.5**	**-0.4**
WUSB	**Renai**	**1.52**	**233**	*e*P	**Pb**	**13 44 03.4**	**0.0**
WUSB				*e*S	**Sb**	**13 44 23.8**	**+1.5**
WARBT	**Fenglin Townsh**	**1.53**	**220**	*e*P	**Pb**	**13 44 02.7**	**-0.9**
WARBT				*e*S	**Sb**	**13 44 22.5**	**-0.1**
WCS	**Beigang Elemen**	**1.64**	**239**	P	**Pb**	**13 44 05.1**	**-0.3**
WCS				S	**Sn**	**13 44 24.4**	**+0.8**
VWDT	**VWDT**	**1.66**	**226**	*e*P	**Pb**	**13 44 05.3**	**-0.5**
VWDT				*e*S	**Sn**	**13 44 25.3**	**+1.1**
HGSD	**Ruisui**	**1.69**	**214**	*e*P	**Pb**	**13 44 05.6**	**-0.7**
HGSD				*e*S	**Sb**	**13 44 26.8**	**-0.3**
SSLB	**Suanglung**	**1.76**	**231**	P	**Pb**	**13 44 08.1**	**+0.6**
SSLB	**Suanglung**	**1.76**	**231**	*e*S	**Sn**	**13 44 27.9**	**+1.0**
YULB	**Yu-li**	**1.84**	**215**	*e*P	**Pn**	**13 44 07.0**	**+0.9**
YULB				*e*S	**Sn**	**13 44 29.4**	**+0.7**
WHYT	**Xinyi Township**	**1.89**	**231**	*e*P	**Pb**	**13 44 09.6**	**-0.2**
WHYT				*e*S	**Sb**	**13 44 32.3**	**-0.7**
WCH1	**Changhua City**	**1.92**	**245**	P	**Pn**	**13 44 07.0**	**-0.2**
WCH1				*e*S	**Sn**	**13 44 31.5**	**+0.8**
YUS	**Yu-Shan**	**1.96**	**224**	*e*P	**Pn**	**13 44 08.9**	**+0.7**
YUS				*e*S	**Sn**	**13 44 32.6**	**+0.2**
CHN5	**Tsauling**	**2.08**	**231**	P	**Pn**	**13 44 10.6**	**+1.1**
CHN5				*e*S	**Sn**	**13 44 35.2**	**+0.5**
EHD	**Haiduan**	**2.09**	**213**	*e*P	**Pn**	**13 44 10.2**	**+0.7**
EHD				*e*S	**Sn**	**13 44 35.4**	**+0.6**
WDL	**Douliou City**	**2.11**	**236**	P	**Pn**	**13 44 10.8**	**+1.0**
WDL				*e*S	**Sn**	**13 44 35.9**	**+0.6**
TPUB	**Ta-pu**	**2.31**	**226**	P	**Pn**	**13 44 13.3**	**+0.7**
TPUB				*e*S	**Sn**	**13 44 41.2**	**+0.9**
TWGBT	**Beinan**	**2.43**	**211**	*e*P	**Pn**	**13 44 15.1**	**+0.9**
CHN1	**Nanshi**	**2.45**	**226**	*e*P	**Pn**	**13 44 15.3**	**+0.7**
CHN1				*e*S	**Sn**	**13 44 45.4**	**+1.5**
SGST	**Jiashian**	**2.49**	**224**	P	**Pn**	**13 44 16.2**	**+1.1**
SGST				*e*S	**Sn**	**13 44 45.6**	**+0.8**
MASBT	**Mashibuluo**	**2.83**	**216**	*e*P	**Pb**	**13 44 22.8**	**-2.9**

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*IDC **30** 13:46:31.9±0.8, 27°.77N×127°.07E, h189^{km}±8^{km}, mb3.2/9, mbtmp3.7/11, MS3.2/1, Error ellipse: s-maj=26.1km s-min=10.6km az=72.0*

*JMA **30** 13:46:34.1±0.2, 27°.9N±1°.0×12°7E±°, h165^{km}, MV3.9/31, NW OFF OKINAWAJIMA IS*

ISC 30 13:46:31.8±0.7**, 27°.73N**±0°.06×**126°.97E**±0°.05**, h192**^{km}±6^{km}**, n52, σ1^{s}.33**/70**, mb3.4**/9**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIH	**Iheya**	**1.13**	**128**	*i* P	**Pn**	**13 47 02.7**	**+1.0**
JIH				S	**S**	**13 47 23.9**	**-0.7**
JAGN	**Aguni-jima**	**1.16**	**168**	*i* P	**Pn**	**13 47 03.0**	**+1.0**
JAGN				S	**S**	**13 47 25.4**	**+0.2**
JKE	**Kume jima 2**	**1.41**	**187**	*i* P	**Pn**	**13 47 04.8**	**+0.9**
JOW	**Kunigami**	**1.47**	**127**	P	**Pn**	**13 47 05.5**	**+1.0**
	150nm,0.3s,baz=139,slow=13,SNR=204						
JOW				S	**S**	**13 47 28.3**	**-1.5**
	570nm,0.3s,baz=120,slow=29,SNR=36						
JOW	**Kunigami**	**1.47**	**127**	P	**Pn**	**13 47 05.4**	**+0.9**
JOW	**Kunigami**	**1.47**	**127**	*i* P	**Pn**	**13 47 05.5**	**+1.0**
JOW				S	**S**	**13 47 28.2**	**-1.5**
JOKE	**Okinoerabujima**	**1.47**	**104**	*i* P	**Pn**	**13 47 05.2**	**+0.7**
JOKE				S	**S**	**13 47 28.3**	**-1.5**
JYRO	**Yoronjima**	**1.50**	**118**	*i* P	**Pn**	**13 47 05.7**	**+1.0**
JYRO				S	**S**	**13 47 28.6**	**-1.5**
JNTH	**Nagotoyohara**	**1.53**	**142**	*i* P	**Pn**	**13 47 06.4**	**+1.4**
JNTH				S	**S**	**13 47 30.1**	**-0.7**
JJT3	**Tamagusuku3**	**1.74**	**155**	*i* P	**Pn**	**13 47 09.1**	**+2.0**
JJT3				S	**S**	**13 47 35.3**	**+0.9**
JTK	**Tokunoshima**	**1.76**	**88**	*i* P	**Pn**	**13 47 07.6**	**+0.4**
JTK				S	**S**	**13 47 32.7**	**-2.0**
JAMN	**Amaminishikomi**	**2.02**	**75**	*i* P	**Pn**	**13 47 10.0**	**+0.1**
JAMN				S	**S**	**13 47 38.2**	**-1.2**
JTAJ	**Takarajima**	**2.43**	**54**	P	**Pn**	**13 47 14.9**	**+0.6**
JAM	**Amami Oshima**	**2.43**	**73**	P	**Pn**	**13 47 14.7**	**+0.3**
JAM				S	**S**	**13 47 45.7**	**-1.7**
JZK	**Kikaishima**	**2.72**	**77**	*e*P	**Pn**	**13 47 19.0**	**+1.3**
JZK				S	**S**	**13 47 53.0**	**-0.5**
JIRB	**Irabujima**	**3.31**	**210**	P	**Pn**	**13 47 24.6**	**-0.1**
JIRB				S	**S**	**13 48 03.8**	**-2.3**
JMJ2	**Miyako jima3**	**3.32**	**207**	*e*S	**S**	**13 48 05.8**	**-0.6**
JTJ	**Tarama**	**3.69**	**214**	P	**Pn**	**13 47 29.3**	**-0.1**
JTJ				S	**S**	**13 48 12.0**	**-2.4**
JISG	**Ishigakijimahi**	**3.94**	**218**	P	**Pn**	**13 47 31.9**	**-0.6**
JISG				S	**S**	**13 48 17.2**	**-2.8**
JYAK	**Yakushimahirau**	**3.99**	**50**	*e*P	**Pn**	**13 47 33.1**	**0.0**
JYAK				*e*S	**S**	**13 48 18.2**	**-3.0**
JIJ	**Ishigaki jima**	**4.20**	**218**	P	**Pn**	**13 47 34.6**	**-1.2**
JIJ				*e*S	**S**	**13 48 22.9**	**-3.3**
JMZ	**Minamidaito 2**	**4.25**	**116**	P	**Pn**	**13 47 36.8**	**+0.3**
JMZ	**Minamidaito 2**	**4.25**	**116**	S	**S**	**13 48 24.7**	**-2.5**
JMZ	**Minamidaito 2**	**4.25**	**116**	P	**Pn**	**13 47 36.8**	**+0.3**
JKDJ	**Kitadaitoujima**	**4.26**	**114**	P	**Pn**	**13 47 37.0**	**+0.5**
JKDJ				S	**S**	**13 48 26.1**	**-1.2**
JMTN	**Minamitane**	**4.35**	**51**	P	**Pn**	**13 47 37.9**	**+0.3**
JTN	**Tanegashima 3**	**4.56**	**49**	P	**Pn**	**13 47 40.5**	**+0.1**
YOJ	**Yonaguni jima**	**4.82**	**228**	P	**Pn**	**13 47 43.6**	**-0.1**
YOJ	**Yonaguni jima**	**4.82**	**228**	S	**S**	**13 48 39.6**	**-0.6**
TATO	**Taipei**	**5.63**	**242**	P	**Pn**	**13 47 55.3**	**+1.2**
YHNB	**Yeheng**	**5.87**	**240**	P	**Pn**	**13 47 59.2**	**+1.8**
YHNB	**Yeheng**	**5.87**	**240**	S	**S**	**13 49 05.8**	**+0.9**
NACB	**Ninganchiao**	**5.99**	**235**	P	**Pn**	**13 47 57.7**	**-1.2**
JNU	**Nakatsue**	**6.35**	**31**	P	**Pn**	**13 48 04.5**	**+1.1**
	14nm,0.8s,baz=260,slow=4.3,SNR=11						
JNU	**Nakatsue**	**6.35**	**31**	P	**Pn**	**13 48 05.5**	**+2.1**
SSLB	**Suanglung**	**6.69**	**235**	P	**Pn**	**13 48 07.2**	**-0.8**
TPUB	**Ta-pu**	**7.22**	**234**	P	**Pn**	**13 48 14.5**	**-0.5**
TWGBT	**Beinan**	**7.23**	**229**	P	**Pn**	**13 48 13.0**	**-2.0**
KSRS	**Korea Array**	**9.73**	**5**	P	**Pn**	**13 48 48.9**	**+1.3**
	0.6nm,0.5s,baz=179,slow=12,SNR=5.5						
SONM	**Songino Array**	**25.69**	**327**	P	**P**	**13 51 46.6**	**+2.5**
	2.0nm,0.5s,baz=138,slow=10,SNR=11 2.0nm,0.5s						
MKAR	**Makanchi Array**	**39.70**	**311**	P	**P**	**13 53 45.1**	**-0.2**
	0.6nm,0.6s,baz=96,slow=10,SNR=7.1 0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**42.99**	**316**	P	**P**	**13 54 11.2**	**-0.8**
	0.2nm,0.3s,baz=104,slow=9.0,SNR=4.3 0.2nm,0.3s						
TIXI	**Tiksi**	**43.98**	**1**	LR	LR	14 15 47.0	
	comp=Z,29nm,18.0s,baz=220,slow=40						
WRA	**Warramunga Arr**	**47.92**	**171**	P	**P**	**13 54 51.6**	**+0.6**
	1.1nm,0.7s,baz=351,slow=8.0,SNR=9.8 1.1nm,0.7s						
BVAR	**Borovoye Array**	**48.41**	**318**	P	**P**	**13 54 53.9**	**-0.5**
	0.3nm,0.3s,baz=76,slow=6.3,SNR=4.0 0.3nm,0.3s						
ASAR	**Alice Springs**	**51.53**	**172**	P	**P**	**13 55 19.6**	**+1.5**
	0.4nm,0.5s,baz=0.1,slow=15,SNR=25						
ASAR				PcP	**PcP**	**13 56 29.8**	**+0.3**
	0.3nm,0.8s,baz=346,slow=3.8,SNR=2.2 0.4nm,0.5s						
STKA	**Stephens Creek**	**60.89**	**166**	P	**P**	**13 56 25.0**	**+0.9**
	1.2nm,0.4s,baz=358,slow=7.7,SNR=4.5 1.2nm,0.4s						
ILAR	**Eielson Array**	**63.66**	**28**	P	**P**	**13 56 41.0**	**-1.2**
	0.2nm,0.6s,baz=251,slow=5.1,SNR=6.5 0.2nm,0.6s						
PDAR	**Pinedale Array**	**92.69**	**38**	P	**P**	**13 59 22.0**	**-0.3**
	0.4nm,0.8s,baz=321,slow=9.1,SNR=2.4 0.4nm,0.8s						
QSPA	**South Pole Qui**	**117.50**	**180**	PKP	**PKiKP**	**14 04 53.9**	**-0.1**
	1.5nm,1.1s,baz=326,slow=0.5,SNR=2.7						
DBIC	**Dimbokro**	**122.26**	**299**	PKP	**PKiKP**	**14 05 04.4**	**-0.4**
	4.6nm,0.9s,baz=55,slow=7.2,SNR=2.1						
SNAA	**Sanae**	**128.21**	**198**	PKP	**PKPdf**	**14 05 14.0**	**-0.4**
	0.9nm,1.0s,baz=31,slow=13,SNR=1.8						

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*NOU **30** 13:59:00.0, 33°.72S×175°.23W, h0^{km}, MLv5.4/10, South of Kermadec Islands*

*IDC **30** 13:59:33.9±1.6, 34°.49S×178°.50W, h0^{km}, mb4.2/4, mbtmp4.3/6, ML3.9/2, Error ellipse: s-maj=39.9km s-min=31.0km az=106.0*

*NEIC **30** 13:59:35.0±0.3, 34°.43S±0°.04×178°.3W±0°.2, h10^{km}±1^{km}, mb4.2/9, Error ellipse: s-maj=33.5km s-min=7.8km az=90.0*

*WEL **30** 13:59:38.3±1.2, 35°S±12°×17°8W±1°2, h12^{km}, M4.3/10, ML4.6/11, MLv4.3/10, Error ellipse: s-maj=20.1km s-min=9.0km az=134.9, confirmed*

ISC 30 13:59:34.3±0.9**, 34°.66S**±0°.07×**178°.2W**±0°.1**, h10**^{km}**, n41, σ1^{s}.43**/54**, mb4.3**/7**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.03**	**223**	Pn	**Pn**	**14 00 33.9**	**-2.2**
MXZ	**Matakaoa Point**	**4.03**	**223**	P	**Pn**	**14 00 36.9**	**+0.8**
MXZ	**Matakaoa Point**	**4.03**	**223**	P	**Pn**	**14 00 36.4**	**+0.3**
MXZ				S	**Sn**	**14 01 22.2**	**-1.2**
WMGZ	**Waiomatatini S**	**4.16**	**220**	P	**Pn**	**14 00 38.5**	**+0.6**
WMGZ				S	**Sn**	**14 01 27.0**	**+0.5**
PKGZ	**Pakihiroa**	**4.38**	**222**	P	**Pn**	**14 00 41.7**	**+0.9**
PKGZ				S	**Sn**	**14 01 31.1**	**-0.7**
PUZ	**Puketiti**	**4.43**	**219**	P	**Pn**	**14 00 40.8**	**-0.8**
PUZ				S	**Sn**	**14 01 32.2**	**-1.0**
HAZ	**Te Kaha**	**4.47**	**225**	P	**Pn**	**14 00 42.9**	**+0.9**
HAZ				S	**Sn**	**14 01 34.4**	**+0.4**
TWGZ	**Tauwhareparae**	**4.66**	**220**	P	**Pn**	**14 00 45.1**	**+0.4**
TWGZ				S	**Sn**	**14 01 38.3**	**-0.5**
RUGZ	**Raukumara Rang**	**4.67**	**224**	P	**Pn**	**14 00 46.2**	**+1.2**
RUGZ				S	**Sn**	**14 01 38.8**	**-0.5**
CNGZ	**Carnagh Statio**	**4.78**	**216**	P	**Pn**	**14 00 46.8**	**+0.5**
TKGZ	**Te Karaka**	**4.92**	**219**	P	**Pn**	**14 00 48.3**	**+0.1**
TKGZ				S	**Sn**	**14 01 43.9**	**-1.3**
MWZ	**Matawai**	**5.01**	**222**	P	**Pn**	**14 00 49.9**	**+0.2**
MWZ				S	**Sn**	**14 01 45.3**	**-2.3**
URZ	**Urewera**	**5.20**	**225**	Pn	**Pn**	**14 00 52.2**	**0.0**
	5.2nm,0.3s,baz=253,slow=4.8,SNR=28						
URZ				Sn	**Sn**	**14 01 49.6**	**-2.5**
	11nm,0.3s,baz=96,slow=21,SNR=14 12nm,0.3s						
URZ	**Urewera**	**5.20**	**225**	P	**Pn**	**14 00 52.1**	**0.0**
URZ	**Urewera**	**5.20**	**225**	P	**Pn**	**14 00 52.4**	**+0.3**
URZ				S	**Sn**	**14 01 49.1**	**-3.0**
KUZ	**Kuaotunu**	**5.35**	**245**	P	**Pn**	**14 00 56.6**	**+2.5**
KUZ	**Kuaotunu**	**5.35**	**245**	P	**Pn**	**14 00 56.8**	**+2.6**
KUZ				S	**Sn**	**14 01 56.4**	**+0.6**
RAO	**Raoul Island**	**5.40**	**3**	Pn	**Pn**	**14 00 52.4**	**-2.4**
RTZ	**Ruatahuna**	**5.52**	**223**	P	**Pn**	**14 00 58.3**	**+1.7**
TOZ	**Tahuroa Road**	**5.93**	**237**	Pn	**Pn**	**14 01 01.4**	**-0.7**
BKZ	**Black Stump Fm**	**6.17**	**222**	P	**Pn**	**14 01 05.0**	**-0.6**
OUZ	**Omahuta**	**6.74**	**263**	P	**Pn**	**14 01 15.3**	**+2.0**
HIZ	**Hauiti**	**6.76**	**233**	P	**Pn**	**14 01 16.2**	**+2.6**
BFZ	**Birch Farm**	**7.44**	**214**	P	**Pn**	**14 01 22.1**	**-0.8**
KHZ	**Kahutara**	**10.07**	**217**	P	**Pn**	**14 01 58.4**	**-0.6**
RPZ	**Rata Peaks**	**12.28**	**219**	Pn	**Pn**	**14 02 28.0**	**-1.1**
	0.6nm,0.3s,baz=58,slow=9.5,SNR=2.0						
RPZ				Sn	Sn	14 04 32.5	-13
	0.6nm,0.3s,baz=18,slow=20,SNR=1.0 9.1nm,0.9s						
DZM	**Mont Dzumac**	**18.39**	**309**	P	**Pn**	**14 03 47.9**	**-1.6**
DZM				IAmb	IAmb	14 03 59.1	
	comp=Z,45nm,1.5s						
AS31	**Alice Springs**	**42.86**	**272**	P	**P**	**14 07 32.2**	**-0.8**
ASAR	**Alice Springs**	**42.86**	**272**	P	**P**	**14 07 32.0**	**-0.9**
ASAR	**Alice Springs**	**42.86**	**272**	P	**P**	**14 07 32.5**	**-0.5**
	comp=Z,4.7nm,0.8s,baz=113,slow=7.4,SNR=59						
ASAR				PcP	**PcP**	**14 09 23.6**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=105,slow=4.3,SNR=1.1 comp=Z,4.7nm,0.8s						
VNDA	**Vanda**	**43.85**	**186**	P	**P**	**14 07 43.2**	**+3.1**
VNDA				IAmb	IAmb	14 07 56.7	
	comp=Z,3.8nm,1.5s						
WR8	**Warramunga Arr**	**44.09**	**277**	P	**P**	**14 07 41.8**	**-1.1**
WRA	**Warramunga Arr**	**44.23**	**277**	P	**P**	**14 07 43.1**	**-0.9**
WRA	**Warramunga Arr**	**44.23**	**277**	P	**P**	**14 07 43.1**	**-0.9**
	comp=Z,3.9nm,0.8s,baz=118,slow=7.7,SNR=35 comp=Z,3.9nm,0.8s						
WB0	**Warramunga Arr**	**44.27**	**277**	P	**P**	**14 07 43.2**	**-1.1**
WB0				IAmb	IAmb	14 07 44.2	
	comp=Z,6.3nm,1.0s						
FITZ	**Fitzroy Crossi**	**52.29**	**273**	P	**P**	**14 08 45.5**	**-0.7**
FITZ				IAmb	IAmb	14 09 08.4	
	comp=Z,3.9nm,1.5s						
QSPA	**South Pole Qui**	**55.46**	**180**	P	**P**	**14 09 11.3**	**+2.3**
QSPA	**South Pole Qui**	**55.46**	**180**	P	**P**	**14 09 11.5**	**+2.6**
	comp=Z,1.1nm,1.1s,baz=177,slow=7.4,SNR=1.8 comp=Z,1.1nm,1.1s						
GIRL	**Giralia**	**59.49**	**262**	P	**P**	**14 09 36.7**	**-1.1**
PETK	**Petropavlovsk-**	**89.88**	**346**	P	**P**	**14 12 32.7**	**-0.2**
	comp=Z,2.6nm,1.0s,baz=183,slow=6.7,SNR=2.6 comp=Z,2.6nm,1.0s						
FINES	**FINESS Array B**	**149.03**	**337**	PKPbc	**PKPbc**	**14 19 22.2**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=48,slow=2.1,SNR=6.3						

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*IDC **30** 14:00:35.5±1.6, 23°.12S×66°.44W, h195^{km}±25^{km}, mb3.2/2, mbtmp3.8/7, Error ellipse: s-maj=36.6km s-min=13.6km az=100.0*

*SJA **30** 14:00:37.3±0.8, 23°.00S×66°.43W, h240^{km}±5^{km}, ML3.8, MW3.7*

ISC 30 14:00:37.8±0.8**, 23°.08S**±0°.05×**66°.55W**±0°.04**, h232**^{km}±7^{km}**, n35, σ1^{s}.53**/58**, 1C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALTA		**1.16**	**170**	*e*P	**Pn**	**14 01 13.4**	**+0.8**
SALTA		**1.16**	**170**	*e*P	**Pn**	**14 01 12.6**	**+0.1**
SALTA				*e*P		14 01 14.1	
SALTA				*e*S	**S**	**14 01 40.0**	**+0.3**
YJA	**Yavi**	**1.31**	**47**	*e*P	**Pn**	**14 01 13.7**	**+0.2**
YJA	**Yavi**	**1.31**	**47**	*e*P	**Pn**	**14 01 14.0**	**+0.5**
YJA				*e*S	**S**	**14 01 40.2**	**-1.1**
AF01	**San Pedro de A**	**1.50**	**274**	*e*P	**Pn**	**14 01 16.8**	**+2.0**
AZAP	**Zapla**	**1.78**	**130**	*e*P	**Pn**	**14 01 17.1**	**0.0**
SLA	**San Lorenzo**	**1.90**	**150**	*e*P	**Pn**	**14 01 20.4**	**+2.3**
SLA				*e*S	**S**	**14 01 50.2**	**+0.6**
ALOL	**LOMAS DE OLMED**	**2.47**	**108**	*e*P	**Pn**	**14 01 23.4**	**-0.1**
PB09	**IPOC Station P**	**2.79**	**297**	*e*P	**Pn**	**14 01 28.9**	**+1.7**
PB09				*i* S	**S**	**14 02 05.5**	**-0.3**
PB09				IAML		14 02 07.3	
	comp=N,44nm,0.4s						
PB09	**IPOC Station P**	**2.79**	**297**	*e*P	**Pn**	**14 01 28.6**	**+1.4**
PB09				*e*S	**S**	**14 02 05.5**	**-0.3**
PB06	**IPOC Station P**	**2.81**	**277**	*e*P	**Pn**	**14 01 28.7**	**+1.4**
PB06				*i* S	**S**	**14 02 05.2**	**-0.8**
PB06				IAML		14 02 07.6	
	comp=N,262nm,0.3s						
PB06	**IPOC Station P**	**2.81**	**277**	*e*P	**Pn**	**14 01 28.8**	**+1.5**
PB06				*e*S	**S**	**14 02 07.5**	**+1.5**
PB06				IAML		14 02 08.6	
	comp=Z,144nm,0.1s						
FSA	**Cafayete**	**3.07**	**170**	*e*P	**Pn**	**14 01 31.2**	**+1.1**
FSA				*e*S	**S**	**14 02 11.3**	**-0.1**
PB05	**IPOC Station P**	**3.37**	**273**	*e*P	**Pn**	**14 01 34.2**	**+0.7**
PB05				*i* S	**S**	**14 02 15.4**	**-2.0**
PB05	**IPOC Station P**	**3.37**	**273**	*e*P	**Pn**	**14 01 34.4**	**+0.8**
PB05				*e*S	**S**	**14 02 16.8**	**-0.5**
PB05				IAML		14 02 18.6	
	comp=Z,116nm,0.3s						
PB01	**IPOC Station P**	**3.39**	**306**	*e*P	**Pn**	**14 01 34.3**	**+0.5**
PB01				*i* S	**S**	**14 02 16.7**	**-1.1**
PB01	**IPOC Station P**	**3.39**	**306**	*e*P	**Pn**	**14 01 33.8**	**0.0**
PB01				*e*S	**S**	**14 02 17.3**	**-0.5**
PB01				IAML		14 02 20.1	
	comp=Z,78nm,0.2s						
GO02	**Mina Guanaco**	**3.47**	**233**	*e*P	**Pn**	**14 01 36.0**	**+1.2**
GO02				*i* S	**S**	**14 02 20.3**	**+0.6**
GO02	**Mina Guanaco**	**3.47**	**233**	*e*P	**Pn**	**14 01 36.1**	**+1.3**
GO02				*e*S	**S**	**14 02 20.6**	**+0.9**
PB10	**IPOC Station P**	**3.71**	**262**	*e*P	**Pn**	**14 01 38.3**	**+1.0**
PB10				*i* S	**S**	**14 02 22.0**	**-2.2**
PB10	**IPOC Station P**	**3.71**	**262**	*e*P	**Pn**	**14 01 38.3**	**+1.0**
PB10				*e*S	**S**	**14 02 23.0**	**-1.2**
PB10				IAML		14 02 24.7	
	comp=Z,142nm,0.4s						
PB08	**IPOC Station P**	**3.79**	**320** ⇑	*i*P	**Pn**	**14 01 40.1**	**+1.3**
PB08	**IPOC Station P**	**3.79**	**320**	*e*P	**Pn**	**14 01 40.1**	**+1.3**
GO01	**Chusmiza**	**4.19**	**324**	*e*P	**Pn**	**14 01 43.9**	**+0.2**
GO01				*e*S	**S**	**14 02 37.0**	**+1.5**
TA01	**Diego Aracena**	**4.20**	**306**	*e*P	**Pn**	**14 01 43.6**	**+0.4**
TA01				*e*S	**S**	**14 02 33.4**	**-1.4**
TA01				IAML		14 02 36.8	
	comp=Z,55nm,0.4s						
PB11	**IPOC Station P**	**4.39**	**318**	*e*P	**Pn**	**14 01 45.4**	**-0.3**
PB11				*e*S	**S**	**14 02 37.1**	**-2.2**
PB11				IAML		14 02 39.1	
	comp=Z,114nm,0.6s						
AC02	**Maricunga**	**4.42**	**211**	*e*P	**Pn**	**14 01 48.5**	**+2.2**
AC02				*e*S	**S**	**14 02 38.2**	**-2.2**
AC01	**Pan de Azucar**	**4.79**	**229**	*e*P	**Pn**	**14 01 50.6**	**+0.2**
AC01				*e*S	**S**	**14 02 46.3**	**-1.7**
AC01				IAML		14 02 55.1	
	comp=Z,36nm,0.9s						
LPAZ	**La Paz**	**6.91**	**347**	P	**Pn**	**14 02 18.1**	**+0.2**
	comp=Z,2.4nm,0.3s,baz=140,slow=7.8,SNR=21						
LPAZ				S	**S**	**14 03 34.4**	**-3.3**
	comp=Z,6.5nm,1.0s,baz=58,slow=23,SNR=9.1						
CFA	**Coronel Fontan**	**8.63**	**190**	P	**Pn**	**14 02 37.4**	**-1.7**
	comp=Z,1.4nm,0.3s,baz=11,slow=18,SNR=3.2						
CFA				S	**S**	**14 04 10.9**	**-5.7**
	comp=Z,2.8nm,0.3s,baz=132,slow=19,SNR=7.1						
SIV	**San Ignacio**	**8.74**	**37**	P	**Pn**	**14 02 38.1**	**-2.5**
	comp=Z,9.0nm,0.5s,baz=214,slow=12,SNR=37						
PLCA	**Paso Flores**	**17.93**	**190**	P	**P**	**14 04 30.4**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=5.1,slow=17,SNR=4.1						
BDFB	**Brasilia**	**18.98**	**70**	P	**P**	**14 04 41.9**	**-0.4**
	comp=Z,2.9nm,0.8s,baz=218,slow=12,SNR=3.4						
SNAA	**Sanae**	**60.08**	**161**	P	**P**	**14 10 21.8**	**+1.5**
	comp=Z,0.5nm,0.8s,baz=301,slow=5.9,SNR=2.1 comp=Z,0.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**75.85**	**69**	P	**P**	**14 11 59.8**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=256,slow=5.6,SNR=4.4 comp=Z,0.3nm,0.3s						

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*NOU **30** 14:02:10.2, 37°.85S×176°.27E, h199^{km}, MLv3.4/12, North Island, New Zealand*

*WEL **30** 14:02:11.5±0.7, 38°S±4°×17°6E±°, h188^{km}±6^{km}, M3.5/96, MLv3.5/96, Error ellipse: s-maj=5.5km s-min=4.6km az=40.7, confirmed*

ISC 30 14:02:05.8±1.9**, 37°.80S**±0°.07×**176°.26E**±0°.06**, h235**^{km}±10^{km}**, n168, σ1^{s}.89**/177**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGRZ	**Tauranga**	**0.07**	**358**	P	**Pn**	**14 02 36.7**	**+0.4**
KARZ	**Kaharoa**	**0.23**	**184**	P	**Pn**	**14 02 37.7**	**+1.4**
OPRZ	**Ohinepanea**	**0.24**	**102**	P	**Pn**	**14 02 36.7**	**+0.4**
KMRZ	**Kaimai**	**0.26**	**259**	P	**Pn**	**14 02 37.3**	**+0.9**
NGRZ	**Ngongotaha**	**0.31**	**191**	P	**Pn**	**14 02 38.0**	**+1.4**
OMRZ	**Omania**	**0.32**	**165**	P	**Pn**	**14 02 37.8**	**+1.3**
MARZ	**Manawahe**	**0.38**	**120**	P	**Pn**	**14 02 37.7**	**+1.1**
UTU	**Utuhina**	**0.38**	**188**	P	**Pn**	**14 02 39.2**	**+2.6**
TARZ	**Mount Tarawera**	**0.48**	**157**	P	**Pn**	**14 02 39.0**	**+2.0**
EDRZ	**Edgecumbe**	**0.49**	**130**	P	**Pn**	**14 02 38.0**	**+1.0**
HSRZ	**Hossack Road**	**0.52**	**182**	P	**Pn**	**14 02 39.6**	**+2.6**
GRRZ	**Galatos Road**	**0.57**	**192**	P	**Pn**	**14 02 39.1**	**+1.8**
RRRZ	**Republican Roa**	**0.58**	**160**	P	**Pn**	**14 02 38.7**	**+1.5**
HRRZ	**Handcock Road**	**0.59**	**178**	P	**Pn**	**14 02 39.1**	**+1.8**
TOZ	**Tahuroa Road**	**0.61**	**276**	P	**Pn**	**14 02 38.4**	**+1.0**
PRRZ	**Plateau Road**	**0.71**	**172**	P	**Pn**	**14 02 39.2**	**+1.5**
WPRZ	**Whakapapatarin**	**0.73**	**186**	P	**Pn**	**14 02 39.8**	**+1.9**
ALRZ	**Allen Road**	**0.77**	**175**	P	**Pn**	**14 02 39.7**	**+1.7**
KUTZ	**Kaahu Road**	**0.77**	**207**	P	**Pn**	**14 02 40.1**	**+2.0**
TLZ	**Tolley Road**	**0.78**	**227**	P	**Pn**	**14 02 39.7**	**+1.6**
MUGZ	**Murupara**	**0.79**	**150**	P	**Pn**	**14 02 39.2**	**+1.1**
URZ	**Urewera**	**0.81**	**125**	P	**Pn**	**14 02 38.9**	**+0.8**
URZ	**Urewera**	**0.81**	**125**	P	**S**	**14 03 00.6**	**-3.0**
URZ	**Urewera**	**0.81**	**125**	P	**Pn**	**14 02 39.0**	**+0.8**
URZ				S	**S**	**14 03 00.5**	**-3.0**
OPCS	**Opotiki Colleg**	**0.84**	**105**	P	**Pn**	**14 02 39.5**	**+1.2**
WHTZ	**Whakaora**	**0.90**	**195**	P	**Pn**	**14 02 41.6**	**+2.9**
RTZ	**Ruatahuna**	**0.99**	**146**	P	**Pn**	**14 02 40.6**	**+1.4**
RTZ				S	**S**	**14 03 03.6**	**-2.0**
WATZ	**Wairara**	**1.00**	**204**	P	**Pn**	**14 02 41.6**	**+2.3**
MRHZ	**Matea Rd**	**1.04**	**173**	P	**Pn**	**14 02 41.1**	**+1.6**
MRHZ				S	**S**	**14 03 03.8**	**-2.3**
RUGZ	**Raukumara Rang**	**1.13**	**99**	P	**Pn**	**14 02 40.4**	**+0.3**
MWZ	**Matawai**	**1.13**	**119**	P	**Pn**	**14 02 41.3**	**+1.2**
KUZ	**Kuaotunu**	**1.14**	**337**	P	**Pn**	**14 02 40.2**	**+0.1**
KUZ	**Kuaotunu**	**1.14**	**337**	P	**Pn**	**14 02 40.4**	**+0.3**
RATZ	**Rangitukua**	**1.14**	**200**	P	**Pn**	**14 02 42.2**	**+2.1**
RAGZ	**Rawiri**	**1.15**	**128**	P	**Pn**	**14 02 41.8**	**+1.6**
RAGZ				S	**S**	**14 03 05.4**	**-1.8**
MTHZ	**Maungataniwha**	**1.15**	**157**	P	**Pn**	**14 02 42.0**	**+1.8**
MTHZ				S	**S**	**14 03 05.4**	**-1.8**
HAZ	**Te Kaha**	**1.20**	**89**	P	**Pn**	**14 02 40.9**	**+0.4**
HAZ				S	**S**	**14 03 04.5**	**-3.1**
KATZ	**Kakaramea**	**1.26**	**201**	P	**Pn**	**14 02 43.7**	**+2.6**
RAHZ	**Arahi**	**1.29**	**150**	P	**Pn**	**14 02 43.4**	**+2.3**
SNGZ	**Shannon Statio**	**1.30**	**140**	P	**Pn**	**14 02 43.2**	**+2.0**
SNGZ				S	**S**	**14 03 07.2**	**-1.7**
HIZ	**Hauiti**	**1.32**	**237**	P	**Pn**	**14 02 43.3**	**+2.0**
HIZ	**Hauiti**	**1.32**	**237**	P	**Pn**	**14 02 43.3**	**+2.0**
WIAZ	**Waiheke Island**	**1.35**	**318**	P	**Pn**	**14 02 42.5**	**+0.9**
ETAZ	**East Tamaki Re**	**1.36**	**308**	P	**Pn**	**14 02 42.6**	**+1.0**
NMHZ	**Naumai**	**1.37**	**162**	P	**Pn**	**14 02 44.5**	**+2.8**
BKZ	**Black Stump Fm**	**1.38**	**173**	P	**Pn**	**14 02 43.4**	**+1.7**
BKZ	**Black Stump Fm**	**1.38**	**173**	S	**S**	**14 03 08.3**	**-1.8**
BKZ	**Black Stump Fm**	**1.38**	**173**	S	**Pn**	**14 02 43.5**	**+1.7**
BKZ	**Black Stump Fm**	**1.38**	**173**	P	**Pn**	**14 02 43.5**	**+1.7**
NTVZ	**North Tongarir**	**1.38**	**199**	P	**Pn**	**14 02 44.4**	**+2.5**
TMVZ	**Te Maari**	**1.39**	**198**	P	**Pn**	**14 02 44.3**	**+2.3**
TKGZ	**Te Karaka**	**1.41**	**118**	P	**Pn**	**14 02 43.7**	**+1.7**
TKGZ				S	**S**	**14 03 09.4**	**-0.8**
ETVZ	**East Tongariro**	**1.41**	**198**	P	**Pn**	**14 02 44.4**	**+2.3**
TWGZ	**Tauwhareparae**	**1.41**	**106**	P	**Pn**	**14 02 43.8**	**+1.7**
TWGZ				S	**S**	**14 03 09.5**	**-0.9**
WTVZ	**West Tongariro**	**1.42**	**202**	P	**Pn**	**14 02 44.3**	**+2.2**
NNVZ	**North Ngauruho**	**1.43**	**201**	P	**Pn**	**14 02 44.9**	**+2.6**
TWVZ	**Taurewa**	**1.43**	**207**	P	**Pn**	**14 02 44.5**	**+2.3**
PKGZ	**Pakihiroa**	**1.44**	**93**	P	**Pn**	**14 02 43.5**	**+1.3**
OTVZ	**Oturere**	**1.44**	**199**	P	**Pn**	**14 02 44.9**	**+2.4**
NGZ	**Ngauruhoe**	**1.47**	**200**	P	**Pn**	**14 02 45.4**	**+2.8**
SNVZ	**South Ngauruho**	**1.47**	**199**	P	**Pn**	**14 02 45.1**	**+2.5**
AWAZ	**Awhitu Peninsu**	**1.48**	**299**	P	**Pn**	**14 02 43.7**	**+1.1**
RIGZ	**Rimuhau**	**1.49**	**128**	P	**Pn**	**14 02 44.9**	**+2.3**
WHHZ	**Waihua**	**1.49**	**150**	P	**Pn**	**14 02 45.0**	**+2.4**
MBAZ	**Motutapu North**	**1.50**	**313**	P	**Pn**	**14 02 43.9**	**+1.2**
COVZ	**Chateau Observ**	**1.51**	**202**	P	**Pn**	**14 02 45.1**	**+2.2**
EPAZ	**Eden Park BICE**	**1.52**	**307**	P	**Pn**	**14 02 43.8**	**+0.9**
TUVZ	**Tukino**	**1.54**	**198**	P	**Pn**	**14 02 45.5**	**+2.3**
FWVZ	**Far West T-bar**	**1.56**	**201**	P	**Pn**	**14 02 45.6**	**+2.2**
MAVZ	**Matarangi**	**1.57**	**200**	P	**Pn**	**14 02 46.1**	**+2.5**
ARHZ	**Aropaoanui**	**1.57**	**159**	P	**Pn**	**14 02 45.8**	**+2.6**
WHVZ	**Whangaehu Hut**	**1.58**	**199**	P	**Pn**	**14 02 45.8**	**+2.2**
WTAZ	**Waiatarua**	**1.60**	**302**	P	**Pn**	**14 02 44.9**	**+1.3**
PUZ	**Puketiti**	**1.60**	**101**	P	**Pn**	**14 02 44.7**	**+1.2**
TRVZ	**Turoa**	**1.60**	**200**	P	**Pn**	**14 02 46.0**	**+2.2**
WNVZ	**Wahianoa**	**1.61**	**199**	P	**Pn**	**14 02 45.9**	**+2.1**
KWHZ	**Kaweka Forest**	**1.63**	**176**	P	**Pn**	**14 02 46.3**	**+2.5**
MXZ	**Matakaoa Point**	**1.64**	**82**	P	**Pn**	**14 02 44.9**	**+1.1**
MXZ	**Matakaoa Point**	**1.64**	**82**	S	**S**	**14 03 13.4**	**-0.1**
MXZ	**Matakaoa Point**	**1.64**	**82**	P	**Pn**	**14 02 45.1**	**+1.3**
KNZ	**Kokohu**	**1.65**	**138**	P	**Pn**	**14 02 46.1**	**+2.2**
ABAZ	**Army Bay**	**1.65**	**316**	P	**Pn**	**14 02 45.4**	**+1.5**
PKVZ	**Pokaka**	**1.66**	**205**	P	**Pn**	**14 02 46.3**	**+2.3**
MOVZ	**Moawhango**	**1.66**	**194**	P	**Pn**	**14 02 45.8**	**+1.7**
GRZ	**Great Barrier**	**1.67**	**337**	P	**Pn**	**14 02 44.8**	**+0.7**
CNGZ	**Carnagh Statio**	**1.68**	**115**	P	**Pn**	**14 02 46.7**	**+2.5**
MCHZ	**McNeill Hill**	**1.68**	**168**	P	**Pn**	**14 02 47.1**	**+2.9**
PRGZ	**Paritu Road**	**1.70**	**132**	P	**Pn**	**14 02 46.5**	**+2.2**
MTVZ	**Mangateitei**	**1.70**	**201**	P	**Pn**	**14 02 46.7**	**+2.3**
WMGZ	**Waiomatatini S**	**1.70**	**91**	P	**Pn**	**14 02 45.8**	**+1.5**
VRZ	**Vera Road**	**1.78**	**221**	P	**Pn**	**14 02 47.9**	**+2.9**
KRHZ	**Kereru**	**1.85**	**177**	P	**Pn**	**14 02 48.0**	**+2.4**
MHGZ	**Mahia Peninsul**	**1.87**	**137**	P	**Pn**	**14 02 48.4**	**+2.6**
CKHZ	**Cape Kidnapper**	**1.96**	**161**	P	**Pn**	**14 02 49.4**	**+2.8**
KAHZ	**Kahuranaki**	**2.05**	**167**	P	**Pn**	**14 02 50.3**	**+2.8**
PNHZ	**Pukenui**	**2.12**	**181**	P	**Pn**	**14 02 50.4**	**+2.3**

DREZ	Durham Road	2.13	229	P	Pn	14 02 51.7	+3.4
WAZ	Wanganui	2.20	207	P	Pn	14 02 50.9	+2.0
LREZ	Lake Rotokare	2.21	221	P	Pn	14 02 52.2	+3.2
NEZ	North Egmont	2.25	228	P	Pn	14 02 53.3	+3.8
PREZ	Palmer Road	2.26	226	P	Pn	14 02 53.0	+3.5
PKE	Pukeiti	2.27	231	P	Pn	14 02 53.2	+3.6
WPHZ	Waipukurau	2.27	177	P	Pn	14 02 51.9	+2.3
TSZ	Takapari Road	2.27	186	P	Pn	14 02 51.7	+2.0
PXZ	Pawanui	2.28	168	P	Pn	14 02 52.1	+2.4
KHEZ	Kahui Hut	2.31	229	P	Pn	14 02 53.1	+3.0
KHEZ	Kahui Hut	2.31	229	P	Pn	14 02 53.7	+3.6
NBEZ	Newall Road No	2.39	231	P	Pn	14 02 54.5	+3.7
WCZ	Waipu Caves	2.41	320	P	Pn	14 02 52.4	+1.3
WCZ	Waipu Caves	2.41	320	P	Pn	14 02 52.6	+1.6
NMEZ	Namu Road	2.47	228	P	Pn	14 02 55.1	+3.5
PRHZ	Porangahau	2.48	173	P	Pn	14 02 54.0	+2.2
DVHZ	Dannevirke	2.50	182	P	Pn	14 02 53.8	+1.9
POWZ	Post Office Ro	2.62	188	P	Pn	14 02 55.0	+1.8
ANWZ	Angora Road	2.67	177	P	Pn	14 02 56.1	+2.4
PRWZ	Pori Road	2.76	185	P	Pn	14 02 57.0	+2.3
BFZ	Birch Farm	2.88	180	P	Pn	14 02 57.6	+1.6
BFZ	Birch Farm	2.88	180	P	S	14 03 34.1	-1.5
BFZ	Birch Farm	2.88	180	P	Pn	14 02 57.8	+1.8
TIWZ	Tintock	2.99	186	P	Pn	14 02 59.1	+1.9
OGWZ	Otaki Gorge	3.13	195	P	Pn	14 03 00.4	+1.6
KIW	Kapiti Island	3.24	199	P	Pn	14 03 01.1	+1.2
TMWZ	Te Maipa	3.32	185	P	Pn	14 03 02.5	+1.5
OUZ	Omahuta	3.35	319	S	Pn	14 03 03.4	+2.0
OUZ	Omahuta	3.35	319	P	Pn	14 03 03.1	+1.7
MTW	Mount Morrison	3.41	190	P	Pn	14 03 03.0	+1.0
CAW	Cannon Point	3.43	195	P	Pn	14 03 03.6	+1.4
DUWZ	D'Urville Isla	3.51	210	P	Pn	14 03 04.2	+1.1
TRWZ	Traveller	3.62	187	P	Pn	14 03 05.8	+1.3
PAWZ	Paruwai Farm	3.64	190	P	Pn	14 03 03.6	-1.1
WEL	Wellington	3.67	198	P	Pn	14 03 06.1	+1.1
MSWZ	Moikau Station	3.70	192	P	Pn	14 03 06.2	+0.8
TCW	Tory Channel	3.74	204	P	Pn	14 03 07.0	+1.2
BHW	Baring Head	3.77	196	P	Pn	14 03 06.9	+0.9
PLWZ	Palliser	3.85	191	P	Pn	14 03 08.0	+0.9
TUWZ	Tuamarina	4.05	206	P	Pn	14 03 11.1	+1.7
NNZ	Nelson	4.08	212	P	Pn	14 03 10.7	+0.9
TKNZ	Takaka Hill	4.12	217	P	Pn	14 03 11.3	+0.9
QRZ	Quartz Range	4.19	223	P	Pn	14 03 12.5	+1.4
QRZ	Quartz Range	4.19	223	P	Pn	14 03 12.2	+1.0
CMWZ	Cape Campbell	4.25	201	P	Pn	14 03 14.0	+2.1
BSWZ	Blackbirch Sta	4.33	204	P	Pn	14 03 14.0	+1.2
MRNZ	Matariki Terra	4.50	216	P	Pn	14 03 15.8	+0.8
THZ	Tophouse	4.73	212	P	Pn	14 03 19.0	+1.2
KHZ	Kahutara	5.07	203	P	Pn	14 03 23.2	+1.4
DSZ	Denniston Nort	5.23	220	P	Pn	14 03 24.3	+0.4
GVZ	Greta Valley S	5.72	204	P	Pn	14 03 31.0	+0.9
LTZ	Lake Taylor	5.84	210	P	Pn	14 03 32.2	+0.7
AMCZ	Amberley	6.04	206	P	Pn	14 03 34.8	+0.8
INZ	Inchbonnie	6.15	215	P	Pn	14 03 36.1	+0.6
OXZ	Oxford	6.39	209	P	Pn	14 03 38.6	+0.1
OKCZ	Okains Bay	6.40	201	P	Pn	14 03 39.6	+1.0
MQZ	McQueen's Vall	6.51	204	P	Pn	14 03 39.9	0.0
RACZ	Rakaia	6.70	207	P	Pn	14 03 42.5	+0.2
WVZ	Waitaha Valley	6.75	217	P	Pn	14 03 44.0	+1.0
WACZ	Wakanui South	7.00	207	P	Pn	14 03 46.5	+0.3
RPZ	Rata Peaks	7.11	212	P	Pn	14 03 48.5	+0.8
GCSZ	Gaunt Creek Bo	7.13	217	P	Pn	14 03 48.7	+0.9
ARCZ	Arundel	7.25	210	P	Pn	14 03 49.7	+0.3
FOZ	Fox Glacier	7.54	219	P	Pn	14 03 53.9	+0.9
TMZ	Timaru	7.68	209	P	Pn	14 03 55.4	+0.5
LBZ	Lake Benmore	8.02	213	P	Pn	14 03 59.9	+0.6
ODZ	Otahua Downs	8.38	208	P	Pn	14 04 05.1	+1.3
JCZ	Jackson Bay	8.44	220	P	Pn	14 04 05.4	+0.6
WKZ	Wanaka	8.89	216	P	Pn	14 04 11.1	+0.8
EAZ	Earnscleugh	9.07	213	P	Pn	14 04 12.8	+0.2
TUZ	Tuapeka	9.53	209	P	Pn	14 04 20.3	+1.9
WHZ	Wether Hill Ro	10.19	215	P	Pn	14 04 28.2	+1.3

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*OSPL **30** 14:09:05.4±2.4, 19°.63N×70°.61W, h0^{km}±15^{km}, ML2.5*
*SDD **30** 14:09:06.0±2.9, 19°.59N×70°.64W, h23^{km}±12^{km}, MD3.3, ML2.8, MW3.1*
ISC 30 14:09:05.1±1.0, **19°.58N**±0°.02×**70°.63W**±0°.03, **h18**^{km}±2^{km}, **n16, σ0^{s}.89**/29, **4C-6D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SODR	Sosua Marina B	0.17	15	⇑*e*Pg	Pb	14 09 09.3	+0.3
SODR				⇓*e*Sg	Sg	14 09 14.3	+1.4
SODR				IAML		14 09 15.1	
	comp=N,3µm,0.5s						
SC01	Santiago de lo	0.18	212	⇓*e*Pg	Pb	14 09 09.8	+0.6
SC01				*e*Sg	Sg	14 09 13.9	+0.9
SC01				IAML		14 09 19.6	
	comp=N,666nm,0.9s						
SC01	Santiago de lo	0.18	212	*i* P	Pb	14 09 09.8	+0.6
SC01				*e*S	Sg	14 09 13.8	+0.7
SC01				IAML		14 09 19.1	
	comp=Z,390nm,0.6s						
LUDR	Luperon	0.44	315	⇓*e*Pg	Pg	14 09 13.3	-0.8
LUDR				⇑*e*Sg	Sb	14 09 21.4	+0.9
MADR	Mao Valverde	0.45	268	*e*Pg	Pg	14 09 14.2	-0.1
MADR				*e*Sg	Sb	14 09 23.1	+2.1
MADR				IAML		14 09 28.4	
	comp=N,788nm,0.5s						
LONA1	Toro Cenizo, N	0.75	106	*i* P	Pb	14 09 20.1	+0.6
LONA1				*e*S	Sb	14 09 28.7	-0.7
NADR	Nagua	0.76	107	⇓*e*Sg	Sn	14 09 32.1	+0.2
NADR				IAML		14 09 37.0	
	comp=N,793nm,0.2s						
ABDR	Alto Bandera	0.77	180	⇑*e*Pg	Pb	14 09 19.0	-1.1
ABDR				⇓*e*Sg	Sb	14 09 30.4	+0.1
ABDR				IAML		14 09 31.4	
	comp=N,316nm,0.3s						
SDDR	Presa de Saban	0.86	226	*e*Pg	Pb	14 09 20.5	-1.1
SDDR				*e*Sg	Sb	14 09 32.2	-0.7
SDDR				IAML		14 09 36.2	
	comp=N,86nm,0.4s						
SDDR	Presa de Saban	0.86	226	*i* P	Pb	14 09 20.4	-1.3
SDDR				*e*S	Sb	14 09 32.1	-0.7
SDDR				IAML		14 09 36.1	
	comp=Z,63nm,0.6s						
LODA1	ITESIL, Dajabo	1.02	268	*i* P	Pb	14 09 23.8	-0.4
LODA1				*e*S	Sb	14 09 37.1	-0.1
LONE3	El Aguacate, B	1.25	219	*i* P	Pn	14 09 28.5	+0.7
LONE3				*e*S	Sg	14 09 46.8	+1.0
LONE3				IAML		14 09 47.1	
	comp=Z,116nm,1.2s						
LODU1	El Espartillar	1.46	213	*i* P	Pn	14 09 31.8	+1.2
LOBH	Bahia de las A	1.96	209	*i* P	Pb	14 09 39.8	-0.5
GRTK	Grand Turk	1.98	346	⇓*e*Pg	Pn	14 09 37.9	+0.2
GRTK				⇑*e*Sg	Sn	14 10 02.0	+0.1
GRTK				IAML		14 10 05.2	
	comp=N,92nm,0.3s						
GRTK	Grand Turk	1.98	346	*i* P	Pn	14 09 37.2	-0.5
GRTK				*e*S	Sn	14 10 01.6	-0.4
GRTK				IAML		14 10 05.0	
	comp=Z,80nm,2.1s						

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*DJA **30** 14:14:26.7±0.4, 3°S±5°×13°9E±°, h10^{km}, M3.4/7, MLv3.4/7*
*IDC **30** 14:14:29.1±1.6, 3°.40S×139°.14E, h0^{km}, mb3.4/2, mbtmp3.4/3, ML3.2/1, Error ellipse: s-maj=38.5km s-min=15.7km az=143.0*
ISC 30 14:14:25.0±1.1, **2°.73S**±0°.09×**138°.51E**±0°.06, **h10**^{km}**, n9, σ1^{s}.62**/10, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.76	15	P	Pg	14 14 37.8	-1.8
GENI	Genyem	1.66	85	P	Pn	14 14 55.4	+1.3
JAY	Jayapura	2.20	85	Pn	Pn	14 15 03.1	+1.5
	1.8nm,0.3s,baz=178,slow=8.9,SNR=9.3						
JAY				Lg	Lg	14 15 24.6	
	2.5nm,0.3s,baz=94,slow=16,SNR=5.3						
JAY	Jayapura	2.20	85	P	Pn	14 15 03.4	+1.8
SRPI	Serui, Papua	2.42	290	P	Pn	14 15 05.2	+0.5
SRPI				S	Sn	14 15 35.1	+0.7
BAKI	Biak	2.85	302	P	Pn	14 15 12.1	+1.6
BAKI				S	Sn	14 15 46.5	+1.6
WRA	Warramunga Arr	17.59	193	P	Pn	14 18 28.9	-1.5
	0.1nm,0.3s,baz=16,slow=12,SNR=5.5						
	0.7nm,1.0s						
ASAR	Alice Springs	21.29	192	P	P	14 19 11.6	-0.3
	1.0nm,0.7s,baz=21,slow=11,SNR=11						
	1.0nm,0.7s						
MKAR	Makanchi Array	69.68	322	P	P	14 25 46.2	+11
	0.6nm,1.0s,baz=132,slow=6.4,SNR=2.6						
	0.6nm,1.0s						

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*MOS **30** 14:21:36.6±1.0, 51°.52N×176°.78W, h48^{km}, mb4.7/16, Error ellipse: s-maj=11.7km s-min=9.0km az=92.3*
*AEIC **30** 14:21:37.9±2.0, 51°.33N±0°.06×176°.75W±0°.05, h50^{km}±5^{km}, Error ellipse: s-maj=9.6km s-min=4.5km az=169.0*
*IDC **30** 14:21:38.2±1.9, 51°.60N×176°.83W, h47^{km}±16^{km}, mb4.1/29, mbtmp4.3/32, ML3.8/3, MS3.3/20, Error ellipse: s-maj=11.9km s-min=9.0km az=163.0*
*NEIC **30** 14:21:39.7±2.1, 51°.43N±0°.07×176°.82W±0°.06, h62^{km}±5^{km}, mb4.7/380, ML4.9/10, ML4.4(AEIC), Error ellipse: s-maj=10.9km s-min=5.0km az=172.0*
ISC 30 14:21:39.9±0.6, **51°.48N**±0°.07×**176°.84W**±0°.03, **h64**^{km}±4^{km}, **n607, σ1^{s}.02**/455, **mb4.7**/198, **2C-2D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	Kanaga Island	0.37	319		Pn	14 21 49.5	-1.4
KIMD					Sn	14 21 58.3	-0.7
ADK	Adak	0.41	14		Sn	14 21 59.6	-0.1
ADK	Adak	0.41	14		Pn	14 21 50.1	-1.2
ADK				IAML		14 22 00.3	
	131µm,0.3s						
ADK				IAML		14 22 00.8	
	41µm,0.2s						
ADK	Adak	0.41	14	P	Pn	14 21 50.2	-1.1
ADK	Adak	0.41	14	S	Sn	14 21 59.4	-0.2
KIWB	Kanaga Island	0.42	333	Pn	Pn	14 21 50.7	-0.6
KIWB				IAML		14 22 00.5	
	comp=E,111µm,0.4s						
KIWB	Kanaga Island	0.42	333		Sn	14 22 00.0	+0.3
KIKV	Kanaga Island	0.45	333		Pn	14 21 50.9	-0.8
KIKV					Sn	14 22 00.5	+0.3
KIRH	Kanaga Island	0.45	340		Pn	14 21 51.2	-0.4
KIRH					Sn	14 22 01.1	+0.9
KINC	Kanaga Island	0.48	339		Pn	14 21 51.6	-0.4
KINC					Sn	14 22 01.8	+1.0
ADAG	Mount Adagdak	0.52	17		Pn	14 21 52.1	-0.3
GSCK	Great Sitkin C	0.68	38		Pn	14 21 53.3	-0.8
GSCK					Sn	14 22 04.9	+0.4
TAPA	Tanaga Point A	0.69	299		Pn	14 21 53.5	-0.8
GSTD	Great Sitkin T	0.72	37		Pn	14 21 54.1	-0.5
GSTD					Sn	14 22 06.2	+0.7
GSSP	Great Sitkin S	0.74	34		Pn	14 21 54.5	-0.3
GSMY	Great Sitkin M	0.74	41		Pn	14 21 54.2	-0.7
GSIG	Igitkin Island	0.76	48		Pn	14 21 53.9	-1.2
GSIG					Sn	14 22 05.7	-0.6
GSTR	Great Sitkin T	0.78	38		Pn	14 21 55.1	-0.3
GSTR	Great Sitkin T	0.78	38	IAML		14 22 09.7	
	comp=E,25µm,0.6s						
GSTR				IAML		14 22 14.9	
	comp=N,38µm,0.6s						
TASE	Tanaga Southea	0.82	296		Pn	14 21 55.5	-0.4
GALAA	Gareloi Lava P	1.23	284		Pn	14 22 00.7	-0.5
GANO	Gareloi North	1.27	286		Pn	14 22 00.9	-0.7
GASW	Gareloi Southw	1.29	284		Pn	14 22 01.4	-0.4
ATKA	Atka Island	1.79	65		Pn	14 22 07.3	-1.3
ATKA	Atka Island	1.79	65	P	Pn	14 22 07.6	-1.0
CEPE	Semis' Perret	2.23	284		Pn	14 22 13.9	-0.6
CEAP	Semis' Anvil P	2.29	285		Pn	14 22 15.0	-0.3
CETU	Semis' Tuman	2.33	283		Pn	14 22 15.6	-0.3
AMKA	Amchitka	2.42	269		Pn	14 22 15.1	-1.9
LSPA	Little Sitkin	2.89	281		Pn	14 22 23.2	-0.3
LSSE	Little Sitkin	2.89	281		Pn	14 22 23.1	-0.3
LSNW	Little Sitkin	2.93	281		Pn	14 22 23.5	-0.5
NIKH	Nikolski High	5.13	70		Pn	14 22 54.2	+0.2
NIKH				IAML		14 24 11.1	
	comp=N,572nm,0.9s						
NIKH				IAML		14 24 14.2	
	comp=E,410nm,0.6s						
NIKH	Nikolski High	5.13	70	P	Pn	14 22 54.3	+0.2
NIKH	Nikolski High	5.13	70	S	Sn	14 23 51.6	-0.3
NIKH	Nikolski High	5.13	70	P	Pn	14 22 56.0	+1.9
	baz=256,SNR=28						
OKSP	Okmok Steeple	5.53	68		Pn	14 22 58.5	-1.1
OKTU	Okmok Mt. Tuli	5.71	67		Pn	14 23 02.8	+0.7
MAPS	Pakushin South	6.46	65		Pn	14 23 12.8	+0.5
P08K	Saint George I	6.69	37		Pn	14 23 16.7	+1.4
P08K	Saint George I	6.69	37	P	Pn	14 23 16.8	+1.5
	baz=223						
UNV	Unalaska Valle	6.72	65		Pn	14 23 16.4	+0.6
UNV	Unalaska Valle	6.72	65	P	Pn	14 23 16.4	+0.6
UNV	Unalaska Valle	6.72	65	P	Pn	14 23 17.9	+2.1
	baz=254,SNR=24						
SPIA	Saint Paul Isl	6.88	31		Pn	14 23 19.2	+1.2
SPIA	Saint Paul Isl	6.88	31	P	Pn	14 23 20.2	+2.2
SPIA	Saint Paul Isl	6.88	31	S	Sn	14 24 39.4	+4.6
SPIA	Saint Paul Isl	6.88	31	P	Pn	14 23 19.8	+1.8
	baz=217						
AKMO	Akutan Morgan	7.07	64		Pn	14 23 21.8	+1.2
LVA	Lava Point	7.08	64		Pn	14 23 21.2	+0.5
AKGG	Akutan Green G	7.11	63		Pn	14 23 21.7	+0.5
AKUT	Akutan	7.22	64	P	Pn	14 23 23.3	+0.7
WEBT	Westdahl Beart	7.92	62		Pn	14 23 34.2	+1.9
FALS	False Pass	8.74	62		Pn	14 23 44.1	+0.6
FALS	False Pass	8.74	62	P	Pn	14 23 44.0	+0.6
FALS	False Pass	8.74	62	P	Pn	14 23 45.0	+1.6
	baz=253						
S12K	Black Hills	9.75	59	P	Pn	14 23 58.6	+1.4
	baz=250						
SDPT	Sand Point	10.50	62	P	Pn	14 24 07.6	+0.1
SDPT	Sand Point	10.50	62	P	Pn	14 24 08.8	+1.3
	baz=255						
M11K	Mekoryuk	10.72	30	P	Pn	14 24 11.7	+1.4
	baz=219						
CNBA	Chernabura Isl	10.88	65		Pn	14 24 10.2	-2.5
CHNA	Chernabura Isl	10.88	65	P	Pn	14 24 12.2	-0.5
CHNA	Chernabura Isl	10.88	65	P	Pn	14 24 12.1	-0.5
	baz=259						
M13K	Dall Lake	11.69	35	P	Pn	14 24 24.1	+0.5
	baz=226						
O14K	Tigyukauivet M	11.77	43	P	Pn	14 24 26.0	+1.3
	baz=236						
CHGN	Chignik	11.88	59	P	Pn	14 24 27.6	+1.4
	baz=254						
N14K	Kuskokwak Cree	12.00	39	P	Pn	14 24 29.3	+1.5
	baz=232						
O15K	Ungalikthiuk R	12.35	45		Pn	14 24 33.9	+1.3
O15K	Ungalikthiuk R	12.35	45	P	Pn	14 24 34.1	+1.4
	baz=239						
K13K	Kusilvak Mount	12.40	28		Pn	14 24 34.5	+1.2
K13K	Kusilvak Mount	12.40	28	P	Pn	14 24 34.6	+1.3
	baz=218						
M14K	Bethel	12.43	36	Pn	Pn	14 24 34.9	+1.3
M14K	Bethel	12.43	36	P	Pn	14 24 35.0	+1.3
	baz=228						
L14K	Kuka Creek	12.58	33	P	Pn	14 24 36.2	+0.5
	baz=225						
GAMB	Gambell	12.62	10	P	Pn	14 24 36.5	+0.2
	baz=195						
N15K	Kwethluk River	12.78	41	P	Pn	14 24 40.3	+1.7
	baz=235,SNR=7.7						
M15K	Kasigluk River	12.87	38	P	Pn	14 24 41.5	+1.9
	baz=232						
P16K	Nushagak River	13.11	47	P	Pn	14 24 44.4	+1.5
	baz=243						
L15K	Ungalak Mounta	13.22	34	P	Pn	14 24 46.1	+1.6
	baz=226,SNR=7.0						
CHIR	Chirikof Islan	13.30	63	P	Pn	14 24 46.1	+0.6
O16K	Kokwok River B	13.33	45	P	Pn	14 24 47.3	+1.5
	baz=241						
R17L	Mt. Peulik Vol	13.36	55	P	Pn	14 24 47.4	+1.1
	baz=251						
PLK4	Peulik 4	13.36	55	Pn	Pn	14 24 46.8	+0.4
J14K	Nanvaranak Lak	13.37	27	P	Pn	14 24 47.8	+1.4
	baz=219						
N16K	Nishlik Lake	13.50	41	P	Pn	14 24 49.6	+1.3
	baz=236						
Q16K	King Salmon	13.59	50	P	Pn	14 24 51.0	+1.6
	baz=247						
K15K	Wolf Creek Mou	13.64	32	P	Pn	14 24 51.6	+1.4
	baz=225						
M16K	Timber Creek	13.74	39	Pn	Pn	14 24 53.3	+1.8
M16K	Timber Creek	13.74	39	P	Pn	14 24 52.5	+1.0
	baz=234,SNR=5.9						
Q17K	Contact Creek	13.81	52	P	Pn	14 24 53.5	+1.1
	baz=250,SNR=5.9						
O17K	Koliganek Bris	13.86	46	P	Pn	14 24 54.3	+1.3
	baz=242						
P17K	Kvichak River	13.90	48	P	Pn	14 24 54.5	+1.0
	baz=245						
L16K	Owhat River	13.96	36	Pn	Pn	14 24 56.2	+1.8
L16K	Owhat River	13.96	36	P	Pn	14 24 56.1	+1.8
	baz=231,SNR=5.5						
ACHA	Angle Creek He	14.07	53	Pn	Pn	14 24 56.8	+0.9
N17K	Nushagak Hills	14.19	43	P	Pn	14 24 59.0	+1.6
	baz=239						
SII	Sitkinak Islan	14.22	60	P	Pn	14 24 59.5	+1.6
	baz=259						
R18K	Karluk	14.32	56	P	Pn	14 25 00.9	+1.9
	baz=254						
Q18K	Katmai Hardscr	14.37	52	P	Pn	14 25 01.8	+1.9
	baz=250,SNR=16						
P18K	Big Mountain,	14.55	49	P	Pn	14 25 03.7	+1.6
	baz=247						
M17K	Holitna River	14.56	39	P	Pn	14 25 03.9	+1.7
	baz=236,SNR=9.1						
J16K	Anvik River	14.65	30	Pn	Pn	14 25 04.8	+1.4
J16K	Anvik River	14.65	30	P	Pn	14 25 04.1	+0.7
	baz=224						
L17K	Donlin	14.66	36	P	Pn	14 25 05.2	+1.6
	baz=232						
O18K	Koktuh Hills	14.75	47	P	Pn	14 25 05.8	+1.2
	baz=245						
N18K	Kilae Creek	14.82	43	P	Pn	14 25 06.8	+1.2
	baz=241						
TNA	Tin City	14.84	15	P	Pn	14 25 06.4	+0.7
	baz=202						
OHAK	Old Harbor	14.85	58	P	Pn	14 25 06.0	+0.1
	baz=257						
K17K	Iditarod	15.03	34	P	Pn	14 25 09.5	+1.2
	baz=230						
F14K	Arctic Creek	15.03	17	P	Pn	14 25 08.9	+0.6
	baz=206						
I17K	Unalakleet	15.07	28	P	Pn	14 25 10.0	+1.3
	baz=222						
G15K	Niukluk	15.08	21	P	Pn	14 25 10.0	+1.1
	baz=212						
Q19K	Cape Douglas,	15.14	51	IAmb	IAmb	14 25 16.4	
	comp=Z,56nm,0.7s						
Q19K	Cape Douglas,	15.14	51	P	Pn	14 25 10.7	+1.0
	baz=251						
J17K	VABM Dome	15.22	32	IAmb	IAmb	14 25 37.7	
	comp=Z,37nm,1.1s						
J17K	VABM Dome	15.22	32	P	Pn	14 25 11.4	+0.7
	baz=227,SNR=11						
H16K	Elim	15.22	24	P	Pn	14 25 10.8	+0.1
	baz=217						
M18K	Stony River	15.26	41	P	Pn	14 25 12.3	+1.1
	baz=238,SNR=13						
O19K	Port Alsworth	15.29	47	IAmb	IAmb	14 25 34.8	
	comp=Z,36nm,1.0s						
O19K	Port Alsworth	15.29	47	P	Pn	14 25 12.3	+0.7
	baz=245						
L18K	Granite Mounta	15.32	38	P	Pn	14 25 12.7	+0.7
	baz=235						
KDAK	Kodiak Island	15.34	56		Pn	14 25 11.1	-1.2
KDAK				IAmb	IAmb	14 25 37.3	
	comp=Z,25nm,0.8s						
KDAK	Kodiak Island	15.34	56	P	Pn	14 25 09.5	-2.8
	comp=Z,2.6nm,0.3s,baz=228,slow=2.1,SNR=20						
KDAK				S	Sn	14 27 58.7	-2.3
	comp=Z,3.3nm,0.8s,baz=175,slow=24,SNR=1.6						
KDAK				LR	LR	14 31 37.8	
	comp=Z,338nm,20.5s,baz=236,slow=39						
	comp=Z,5.0nm,0.3s						
KDAK	Kodiak Island	15.34	56	P	Pn	14 25 14.0	+1.7
	baz=256						
N19K	Bonanza Creek	15.49	44	P	P	14 25 16.1	-1.4
	baz=243						
F15K	North Star Dit	15.57	19	P	Pn	14 25 16.1	+0.9
	baz=210						
P19K	Oil Pt	15.59	49	P	Pn	14 25 16.5	+1.0
	baz=249						
PETK	Petropavlovsk-	15.64	286	P	Pn	14 25 16.4	+0.3
	comp=Z,0.4nm,0.3s,baz=73,slow=11,SNR=19						
PETK				LR	LR	14 30 55.8	
	comp=Z,110nm,21.3s,baz=89,slow=36						
	comp=Z,2.3nm,0.8s						
Q20K	Shuyak Island	15.66	53	P	Pn	14 25 16.9	+0.6
	baz=254						
G16K	Koyuk River	15.81	23	P	Pn	14 25 19.2	+1.0
	baz=215						
L19K	White Mountain	16.02	40	IAmb	IAmb	14 25 27.0	
	comp=Z,32nm,0.8s						
L19K	White Mountain	16.02	40	P	P	14 25 22.3	-0.9
	baz=238,SNR=32						
O20K	Slope Mountain	16.03	48	P	Pn	14 25 22.2	+1.1
	baz=248						
M19K	Big River Lodg	16.06	41	IAmb	IAmb	14 25 45.1	
	comp=Z,37nm,1.1s						
M19K	Big River Lodg	16.06	41	P	P	14 25 23.0	-0.7
	baz=240,SNR=19						
J18K	Innoko River	16.07	34	P	P	14 25 22.9	-0.9
	baz=231,SNR=7.3						
H17K	Granite Mounta	16.09	27	P	P	14 25 23.4	-0.6
	baz=221						
G17K	Kiwalik Mounta	16.32	24	P	P	14 25 26.0	-0.6
	baz=218						
HOM	Homer	16.35	50	P	P	14 25 26.0	-0.8
	baz=251						
L20K	Farewell, AK	16.56	39	P	P	14 25 28.9	-0.3
	baz=239						
M20K	Styx River	16.57	42	P	P	14 25 29.0	-0.4
	baz=242,SNR=7.9						
N20K	Mount Spurr	16.66	45	P	P	14 25 30.4	0.0
	baz=245						
SPCR	Spurr Chakacha	16.66	45	P	P	14 25 30.5	+0.1
	baz=245						
H18K	Honhosa River	16.69	28	P	P	14 25 30.7	0.0
	baz=224						
J19K	Poorman	16.78	34	P	P	14 25 32.1	+0.4
	baz=232,SNR=14						
K20K	Telida	16.96	37	P	P	14 25 33.9	+0.2
	baz=236						
G18K	Tagagawik	17.16	26	P	P	14 25 35.6	-0.1
	baz=222,SNR=7.2						
SKT	Skwentna	17.29	43	IAmb	IAmb	14 25 42.2	
	comp=Z,23nm,0.8s						
SKT	Skwentna	17.29	43	P	P	14 25 37.9	+0.6
	baz=244,SNR=18						
E17K	Hotham Inlet	17.34	20	P	P	14 25 38.7	+1.0
	baz=213						
J20K	Nowinta River	17.41	34	P	P	14 25 39.0	+0.5
	baz=234						
SUA	Susitna One	17.41	45	P	P	14 25 39.0	+0.2
	baz=247						
F18K	Selawik	17.44	23	P	P	14 25 39.2	+0.4
	baz=218						
PPLA	Purkeypile	17.44	40	IAmb	IAmb	14 25 48.1	
	comp=Z,19nm,0.6s						
PPLA	Purkeypile	17.44	40	P	P	14 25 40.1	+0.9
	baz=241,SNR=11						
H19K	Roundabout Mou	17.52	29	P	P	14 25 40.2	+0.4
	baz=226						
O22K	Cooper Landing	17.52	49	IAmb	IAmb	14 26 20.6	
	comp=Z,39nm,0.6s						
O22K	Cooper Landing	17.52	49	P	P	14 25 40.1	+0.3
	baz=251						
SEW	Seward	17.54	50	P	Pn	14 25 39.6	-0.1
	baz=253						
D17K	Noatak River	17.61	17	P	Pn	14 25 40.5	-0.1
	baz=210						
I20K	Naaghedeneel	17.67	32	P	Pn	14 25 41.2	-0.1
	baz=232						
RC01	Rabbit Creek A	17.73	47	P	P	14 25 42.2	+0.2
	baz=249						
C16K	Lisburne Hills	17.75	14	P	Pn	14 25 41.8	-0.4
	baz=204						
CAST	Castle Rocks	17.75	38	P	Pn	14 25 41.6	-0.7
	baz=239,SNR=13						
G19K	Purcell Mounta	17.77	27	P	Pn	14 25 43.2	+0.6
	baz=224						
M22K	Willow	17.80	44	P	Pn	14 25 43.7	+0.8
	baz=247						
E18K	Tukpahlearik C	17.88	21	P	Pn	14 25 44.3	+0.4
	baz=215						
CHUM	Lake Minchumin	17.91	37	P	Pn	14 25 44.6	+0.4
	baz=238						
RDOG	Red Dog Mine	17.96	17	P	Pn	14 25 44.9	+0.1
	baz=209						
H20K	Anotleneega Mo	17.98	30	P	P	14 25 45.0	+0.1
	baz=229,SNR=5.9						
CUT	Chulitna	18.00	42	P	Pn	14 25 46.1	+0.7
	baz=245						
F19K	Shaleruckik Mo	18.10	25	P	Pn	14 25 46.9	+0.4
	baz=221,SNR=7.1						
PMR	Palmer	18.18	45	P	Pn	14 25 47.5	0.0

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       baz=249
KTH    Kantishna Hill    18.27  39   IAmb    IAmb    14 26 12.3
       comp=Z,54nm,1.0s
C17K   DeLong Mountai    18.28  16   P       Pn      14 25 48.8 +0.1
       baz=208
PWL    Port Wells        18.29  48   P       Pn      14 25 49.1 +0.2
       baz=252
KNK    Knik Glacier      18.42  46   P       Pn      14 25 50.7 +0.2
       baz=250
TRF    Thorofare Moun    18.47  39   IAmb    IAmb    14 26 11.9
       comp=Z,34nm,1.2s
TRF    Thorofare Moun    18.47  39   P       P       14 25 50.6 +0.2
       baz=242,SNR=8.2
P23K   Montague Islan    18.50  51   P       Pn      14 25 51.7 +0.3
       baz=256
BPAW   Bear Paw Mtn.     18.52  37   P       Pn      14 25 51.9 +0.2
       baz=239,SNR=11
BILL   Bilibino          18.54 340 i P       Pn      14 25 53.0 +1.3
BILL                                 pmax    pmax
       comp=Z,8.0nm,0.8s
IMAR   Indian Mountai    18.66  30   P       Pn      14 25 53.5 +0.2
E19K   Redstone River    18.71  24   P       Pn      14 25 53.4 -0.5
       baz=221
I21K   Tanana            18.75  34   P       Pn      14 25 54.4  0.0
       baz=235
H21K   Melozitna Rive    18.76  32   P       Pn      14 25 54.6 +0.1
       baz=232,SNR=11
C18K   Utukok River      18.80  18   P       P       14 25 54.3 +0.5
       baz=212
F20K   Avaraart Lake     18.80  26   P       Pn      14 25 54.5 -0.5
       baz=224
M23K   Glacier View      18.88  46   P       Pn      14 25 55.4 -0.5
       baz=250
GLI    Glacier Island    18.88  49   P       Pn      14 25 55.7 -0.2
       baz=254
Q23K   Middleton Isla    18.89  53   P       P       14 25 55.1 +0.3
       baz=259
WAT1   Susitna Watana    18.91  42   P       P       14 25 55.4 +0.4
       baz=246
RND    Reindeer          19.02  40   IAmb    IAmb    14 26 18.5
       comp=Z,20nm,0.7s
SCM    Sheep Creek Mo    19.07  46   P       Pn      14 25 58.0 -0.3
       baz=251
G21K   Allakaket         19.08  29   P       Pn      14 25 58.4 +0.1
       baz=229
MLY    Manley            19.10  35   P       Pn      14 25 58.3 -0.3
       baz=237,SNR=29
MCK    McKinley          19.14  39   P       Pn      14 25 58.5 -0.5
       baz=243,SNR=7.8
WAT6   Susitna Watana    19.15  43   P       Pn      14 25 58.9 -0.4
       baz=248,SNR=8.6
B18K   Kokolik River     19.30  16   P       P       14 25 59.7 +0.4
       baz=210
D19K   Kuna River        19.31  21   P       P       14 25 59.8 +0.4
       baz=218
H22K   Ishtalitna Cre    19.37  32   P       Pn      14 26 01.1 -0.6
       baz=234,SNR=9.4
EYAK   Cordova Ski Ar    19.43  50   P       Pn      14 26 01.6 -0.8
       baz=256
NEA2   Nenana            19.49  37   P       P       14 26 01.4  0.0
       baz=241,SNR=5.7
C19K   Lookout Ridge     19.50  19   P       Pn      14 26 02.5 -0.7
       baz=214
DHY    Denali Highway    19.50  42   IAmb    IAmb    14 26 22.6
       comp=Z,19nm,0.6s
DHY    Denali Highway    19.50  42   P       P       14 26 01.7 +0.1
       baz=247,SNR=27
F21K   Alatna River      19.56  27   P       Pn      14 26 03.2 -0.7
       baz=228,SNR=14
E20K   Nigu River        19.58  23   P       Pn      14 26 03.4 -0.8
       baz=221
KLU    Klutina           19.60  47   P       P       14 26 03.1 +0.4
       baz=253
I23K   Minto, Yukon-K    19.66  35   IAmb    IAmb    14 26 25.4
       comp=Z,28nm,1.1s
I23K   Minto, Yukon-K    19.66  35   P       P       14 26 04.1 +0.9
       baz=239,SNR=19
M24K   Tolsona, Glenn    19.67  45   P       Pn      14 26 04.4 -0.9
       baz=251
D20K   Etivluk River     19.82  22   P       P       14 26 05.6 +0.6
       baz=220
MA2    Magadan           19.87 307   P       Pn      14 26 07.4 -0.2
       comp=Z,3.5nm,0.8s,baz=202,slow=16,SNR=2.2
MA2                                  LR      LR      14 32 53.0
       comp=Z,66nm,21.7s,baz=116,slow=34
KAIM   Kayak Island      19.95  52   P       P       14 26 06.9 +0.5
       baz=259
G22K   Bettles           19.95  30   P       P       14 26 07.2 +0.8
       baz=232
H23K   Yukon River       19.95  34   P       P       14 26 07.1 +0.7
       baz=237,SNR=9.0
SEY    Seymchan          20.00 317   P       P       14 26 07.5 +0.6
       comp=Z,0.2nm,0.3s,baz=90,slow=10,SNR=9.6
SEY                                  S       S       14 29 47.6 -0.4
       comp=Z,0.6nm,0.6s,baz=71,slow=23,SNR=7.5
SEY                                  PcP     PcP     14 30 19.8 -0.5
       comp=Z,0.9nm,0.5s,baz=114,slow=4.8,SNR=4.8
SEY                                  LR      LR      14 33 34.2
       comp=Z,126nm,21.1s,baz=101,slow=36
       comp=Z,3.6nm,0.8s
BMRM   Bremner River     20.08  49   IAmb    IAmb    14 26 30.4
       comp=Z,30nm,1.2s
BMRM   Bremner River     20.08  49   P       P       14 26 08.6 +0.8
       baz=256,SNR=5.3
COLA   College           20.08  37   P       P       14 26 08.5 +0.7
COLA   College           20.08  37   P       Pn      14 26 12.0 +1.9
COLA   College           20.08  37   P       P       14 26 08.5 +0.7
COLA                                 pmax    pmax
       comp=Z,12nm,0.8s
COLA   College           20.08  37   P       P       14 26 08.5 +0.7
       baz=242
F22K   John River        20.12  28   P       P       14 26 08.9 +0.7
       baz=229
A19K   Wainwright        20.16  16   P       P       14 26 08.9 +0.3
       baz=210
HARP   HAARP             20.22  45   P       P       14 26 10.4 +1.1
       baz=252
HDA    Harding Lake      20.22  39   P       P       14 26 09.5 +0.2
HDA    Harding Lake      20.22  39   P       P       14 26 10.4 +1.2
       baz=244,SNR=6.6
N25K   Chitina, Valde    20.24  47   P       P       14 26 10.1 +0.5
       baz=255,SNR=6.7
PAX    Paxson            20.27  43   P       P       14 26 09.9  0.0
PAX    Paxson            20.27  43   P       P       14 26 09.9  0.0
PAX                                  pmax    pmax
       comp=Z,12nm,0.8s
PAX    Paxson            20.27  43   P       P       14 26 10.5 +0.6
       baz=250,SNR=13
E21K   Killik River      20.27  24   P       P       14 26 10.4 +0.5
       baz=225
G23K   Bananza Creek     20.29  31   P       P       14 26 10.1 -0.1
       baz=235,SNR=8.6
POKR   Poker Plat Res    20.35  37   P       P       14 26 10.8  0.0
       baz=242
ILAR   Eielson Array     20.40  38   P       P       14 26 09.7 -1.6
       comp=Z,1.8nm,0.8s,baz=237,slow=9.4,SNR=28
ILAR                                 S       S       14 29 52.2 -3.7
       comp=Z,0.5nm,1.0s,baz=235,slow=17,SNR=5.8
ILAR                                 PcP     PcP     14 30 20.9 -0.1
       comp=Z,0.9nm,0.6s,baz=287,slow=3.8,SNR=8.4
ILAR                                 LR      LR      14 33 54.9
       comp=Z,90nm,20.4s,baz=236,slow=36
ILAR                                 ScP     ScP     14 33 55.3 +3.6
       comp=Z,0.7nm,0.7s,baz=288,slow=3.1,SNR=8.1
       comp=Z,1.8nm,0.8s
K24K   Donnelly Dome     20.44  41   IAmb    IAmb    14 26 33.0
       comp=Z,36nm,0.6s
K24K   Donnelly Dome     20.44  41   P       P       14 26 11.7  0.0
       baz=248,SNR=10.0
BGLC   Bering Glacier    20.54  52   P       P       14 26 12.8 +0.1
       baz=260
COLD   Coldfoot          20.55  30   P       P       14 26 13.7 +0.9
COLD   Coldfoot          20.55  30   P       P       14 26 12.5 -0.3
       baz=233,SNR=7.6
H24K   Noodor Dome       20.55  35   P       P       14 26 12.9 +0.1
       baz=240,SNR=12
C21K   Knifeblade Rid    20.59  22   P       P       14 26 13.2 -0.1
       baz=222
E22K   Anaktuvuk Pass    20.64  27   P       P       14 26 14.1 +0.3
       baz=229
B20K   Meade River       20.73  19   P       P       14 26 15.0 +0.3
       baz=217
CRQE   Cirque            20.75  50   P       P       14 26 15.1 -0.1
       baz=259
RIDG   Independent Ri    20.80  42   IAmb    IAmb    14 26 30.2
       comp=Z,19nm,0.9s
RIDG   Independent Ri    20.80  42   P       P       14 26 15.5 -0.2
       baz=249,SNR=11
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D22K   Ayikyak River     20.92  25   P       P       14 26 17.2 +0.4
       baz=226,SNR=5.2
MCARA  McCarthy VSAT     20.92  49   IAmb    IAmb    14 26 40.9
       comp=Z,18nm,0.9s
MCARA  McCarthy VSAT     20.92  49   P       P       14 26 17.9 +1.0
       baz=257
J25K   Salcha River,     20.93  39   P       P       14 26 17.5 +0.5
       baz=246,SNR=7.3
B21K   Ikpikpuk River    20.98  22   P       P       14 26 17.6 +0.2
       baz=222
DOT    Dot Lake          21.10  42   IAmb    IAmb    14 26 40.5
       comp=Z,13nm,0.6s
G24K   Hadweenzic Riv    21.13  33   P       P       14 26 19.5 +0.4
       baz=238
M26K   Nabesna, AK       21.18  46   P       P       14 26 20.0 +0.3
       baz=255,SNR=6.1
L26K   Log Cabin Wild    21.20  44   P       P       14 26 20.1 +0.2
       baz=253,SNR=10
MESA   MESA              21.21  52   P       P       14 26 20.7 +0.5
       baz=261
E23K   Chandalar         21.23  28   P       P       14 26 20.7 +0.4
       baz=232
SCRK   Sand Creek        21.24  41   IAmb    IAmb    14 26 39.8
       comp=Z,22nm,0.8s
SCRK   Sand Creek        21.24  41   P       P       14 26 19.9 -0.5
       baz=250,SNR=13
PRP    Porcupine Dome    21.25  37   P       P       14 26 21.2 +0.6
       baz=244
F24K   Squaw Lake        21.44  31   P       P       14 26 22.8 +0.4
       baz=236,SNR=12
H25L   Birch Creek       21.49  35   P       P       14 26 23.1 +0.3
       baz=242
D23K   Nanushuk River    21.51  26   IAmb    IAmb    14 26 47.0
       comp=Z,13nm,0.7s
D23K   Nanushuk River    21.51  26   P       P       14 26 23.1 +0.1
       baz=229
E24K   Your Creek        21.58  29   P       P       14 26 23.9  0.0
       baz=234,SNR=5.2
J26L   Joseph Creek      21.60  40   IAmb    IAmb    14 26 45.1
       comp=Z,13nm,0.7s
J26L   Joseph Creek      21.60  40   P       P       14 26 23.9 -0.4
       baz=249,SNR=20
TOLK   Toolik Lake Re    21.61  27   P       P       14 26 24.8 +0.6
       baz=231
G25K   Bearman Lake      21.63  33   P       P       14 26 24.9 +0.5
       baz=240
M27K   Edge Creek, AK    21.67  46   P       P       14 26 25.2 +0.2
       baz=256,SNR=5.9
L27K   Beaver Creek,     21.88  45   P       P       14 26 28.1 +1.0
       baz=254
BCAR   Beaver Creek A    21.90  45           P       14 26 27.2 -0.2
A21K   Barrow            21.90  17   P       P       14 26 28.2 +1.0
       baz=216
A22K   Sinclair Lake     21.97  19   P       P       14 26 28.7 +0.7
       baz=219
PINM   Pinnacle          22.04  53   P       P       14 26 29.4 +0.4
       baz=263
I26K   Coal Creek Min    22.07  38   P       P       14 26 29.0  0.0
       baz=248
C23K   Itkillik River    22.11  24   IAmb    IAmb    14 26 49.5
       comp=Z,30nm,0.9s
C23K   Itkillik River    22.11  24   P       P       14 26 28.6 -0.9
       baz=227
D24K   Happy Valley      22.14  26   P       P       14 26 29.3 -0.5
       baz=231
BVCY   Beaver Creek      22.15  47   P       P       14 26 30.1 +0.1
       baz=257,SNR=5.4
O28M   Mount Upton       22.16  51   P       P       14 26 30.6 +0.2
       baz=262
YUK3   Moose Creek       22.20  48   P       P       14 26 30.9 +0.1
       baz=259
F25K   Christian Rive    22.21  32   P       P       14 26 30.6 -0.1
       baz=239
PNL    Peninsula         22.43  54   P       P       14 26 33.0 -0.1
       baz=265
YUK8   Steele Glacier    22.44  50   P       P       14 26 33.5  0.0
       baz=261
BMAR   Burnt Mountain    22.48  33           P       14 26 33.7 +0.1
E25K   Arctic Village    22.51  31   P       P       14 26 33.9  0.0
       baz=238
G26K   Porcupine Rive    22.53  34   P       P       14 26 34.4 +0.4
       baz=243,SNR=8.1
C24K   Franklin Bluff    22.53  25   P       P       14 26 34.1 +0.1
       baz=230
F26K   Sheenjek River    22.76  32   P       P       14 26 36.5  0.0
       baz=241
I27K   Kandik River      22.77  38   P       P       14 26 36.1 -0.6
       baz=249
D25K   Kavik River       22.94  28   P       P       14 26 38.0 -0.3
       baz=235
YUK4   Talbot Arm        22.98  50   P       P       14 26 39.1 +0.1
       baz=262
H27K   Steamboat Moun    23.04  37   P       P       14 26 39.0 -0.5
       baz=248
YUK6   Outpost Mounta    23.07  51   P       P       14 26 39.7 -0.2
       baz=263
DAWY   Dawson            23.20  43   P       P       14 26 41.1 +0.2
       baz=255
G27K   Doyon Strip       23.23  35   P       P       14 26 40.9 -0.2
       baz=246
M29M   Somme Creek       23.25  47   P       P       14 26 41.0 -0.4
       baz=260
P29M   Windy Craggy      23.27  54   P       P       14 26 41.1 -0.5
       baz=267
I28M   Miner Creek       23.38  39   P       P       14 26 41.3 -1.4
       baz=251,SNR=8.7
HYT    Haines Junctio    23.47  51   P       P       14 26 42.6 -1.1
       baz=264
L29M   L29M              23.52  45   P       P       14 26 43.8 -0.2
       baz=258
P30M   Million Dollar    23.69  53   P       P       14 26 45.4 -0.1
       baz=266
C26K   Camden Bay        23.70  27   P       P       14 26 45.4  0.0
       baz=236
N30M   Aishikik Lake     23.74  50   P       P       14 26 45.2 -0.8
       baz=263
E27K   Coleen River      23.84  32   P       P       14 26 45.9 -0.9
       baz=243
C27K   Jago River        23.89  28   P       P       14 26 46.6 -0.6
       baz=238
K29M   Barlow Dome       23.94  44   P       P       14 26 47.4 -0.5
       baz=258,SNR=17
PLBC   Pleasant Camp     23.96  55   P       P       14 26 47.3 -0.6
       baz=269
I29M   Ogilvie Camp,     24.00  40   P       P       14 26 47.8 -0.5
       baz=253
M30M   Minto, Yukon      24.03  47   P       P       14 26 47.9 -0.7
       baz=261
S31K   Pelican           24.03  58   P       P       14 26 48.6  0.0
       baz=272
O30N   Mendenhall        24.16  52   P       P       14 26 49.8  0.0
       baz=266
F28M   Old Crow          24.19  34   P       P       14 26 49.5 -0.4
       baz=247
H29M   Whitestone        24.24  38   P       P       14 26 49.2 -1.1
       baz=252,SNR=7.6
SKAG   Skagway           24.49  55   P       P       14 26 51.8 -0.9
       baz=270
D27M   Malcolm River     24.53  30   P       P       14 26 52.7 -0.4
       baz=242
SIT    Sitka             24.58  61   P       P       14 26 53.0 -0.4
       baz=275
G29M   Pine Creek        24.60  36   P       P       14 26 53.3 -0.4
       baz=250
MAYO   Mayo, Yukon       24.61  45   P       P       14 26 53.5 -0.3
       baz=260
J30M   Hart River        24.61  42   P       P       14 26 53.4 -0.5
       baz=257,SNR=9.7
E28M   Babbage River     24.71  32   P       P       14 26 53.7 -0.9
       baz=245
I30M   Mount Dempster    24.75  41   IAmb    IAmb    14 26 56.7
       comp=Z,8.1nm,0.5s
I30M   Mount Dempster    24.75  41   P       P       14 26 54.2 -1.0
       baz=256,SNR=18
WHY    Whitehorse        24.75  52   P       P       14 26 54.6 -0.6
       baz=267
EPYK   Eagle Plains      24.92  38   P       P       14 26 55.6 -1.0
       baz=253
M31M   Drury Creek, Y    25.09  48   P       P       14 26 57.9 -0.3
       baz=264
E29M   Blow River        25.18  33   P       P       14 26 58.6 -0.3
       baz=248
TYV    Tymovskoe         25.18 285 e P       P       14 26 59.7 +0.7
TYV                                  pmax    pmax
       comp=Z,7.0nm,1.4s
TYV                                  pmax    pmax
       comp=Z,100nm,5.9s
G30M   tAoh Zraii Nji    25.29  37   P       P       14 26 59.4 -0.6
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       baz=252
P32M   Atlin             25.31  54   P       P       14 26 59.5 -0.7
       baz=271
FARO   Faro, Yukon       25.58  48   P       P       14 27 02.1 -0.6
       baz=265
N32M   Quiet Lake        25.65  51   P       P       14 27 02.8 -0.5
       baz=268
F30M   Barrier River     25.65  36   P       P       14 27 02.4 -0.7
       baz=252
H31M   Peel River        25.71  40   P       P       14 27 03.0 -0.8
       baz=257
P33M   Teslin, Yukon     25.76  53   P       P       14 27 03.7 -0.6
       baz=270
U33K   Whale Pass        25.89  62   P       P       14 27 04.6 -0.8
       baz=278
CRAG   Craig             25.99  64   P       P       14 27 08.6 +2.2
CRAG   Craig             25.99  64   P       P       14 27 05.4 -1.0
       baz=280
G31M   Satah River       26.01  37   P       P       14 27 05.7 -0.7
       baz=255
Q32M   Nakina River      26.07  56   P       P       14 27 06.7 -0.6
       baz=273
WRAK   Wrangell Islan    26.28  62   P       P       14 27 08.4 -0.5
       baz=278
F31M   Tsiigehtchic      26.35  36   P       P       14 27 08.7 -0.7
       baz=254
MMPY   Sheldon Lake,     26.58  48   P       P       14 27 11.1 -0.6
       baz=267
INK    Inuvik            26.67  35   LR      LR      14 39 07.7
       comp=Z,101nm,18.2s,baz=220,slow=40
INK    Inuvik            26.67  35   P       P       14 27 12.3 -0.1
       baz=253
R33M   Jennings River    26.72  55   P       P       14 27 12.7 -0.4
       baz=273
S34M   Telegraph Cree    26.75  58   P       P       14 27 12.6 -0.6
       baz=276
DIB    Dawson Inlet,     26.84  69   P       P       14 27 15.1 +1.1
DIB                                  IAmb    IAmb    14 27 41.2
       comp=Z,21nm,1.4s
V35K   Ketchikan         26.86  64   P       P       14 27 14.0 -0.2
       baz=281
DLBC   Dease Lake        27.28  57   LR      LR      14 38 42.4
       comp=Z,4.3nm,18.2s,baz=272,slow=38
DLBC   Dease Lake        27.28  57   P       P       14 27 17.8 -0.2
       baz=276
T35M   Bob Quinn         27.34  60   P       P       14 27 17.8 -0.7
       baz=278
ASAJ   Asahikawa         27.93 271   LR      LR      14 37 13.4
       comp=Z,35nm,21.8s,baz=86,slow=34
YAK    Yakutsk           30.27 311   LR      LR      14 40 24.1
       comp=Z,45nm,18.6s,baz=84,slow=37
A36M   Sachs Harbour     30.40  29   P       P       14 27 44.2 -1.2
       baz=256
TIXI   Tiksi             31.15 330   LR      LR      14 41 48.8
       comp=Z,79nm,18.2s,baz=88,slow=39
KLR    Kul'dur           32.33 287   LR      LR      14 41 24.1
       comp=Z,54nm,18.9s,baz=63,slow=37
KLR    Kul'dur           32.33 287 i P       P       14 28 02.5 -0.2
KLR                                  pmax    pmax
       comp=Z,13nm,0.9s
CLRS   Cowichan Lake     33.28  73   IAmb    IAmb    14 28 14.0
       comp=Z,11nm,1.0s
LLLB   Lillooet          33.88  69   IAmb    IAmb    14 28 19.5
       comp=Z,11nm,1.2s
NLWA   Neilton Lookou    34.06  76   IAmb    IAmb    14 28 21.2
       comp=Z,11nm,0.9s
H11N2  WAKE ISLAND Hy    34.17 208   T       T       15 04 49.1
       baz=18,slow=76,SNR=3359
H11N3  WAKE ISLAND Hy    34.18 208   T       T       15 04 49.9
       baz=18,slow=76,SNR=3604
H11N1  WAKE ISLAND Hy    34.19 208   T       T       15 04 41.8
       baz=18,slow=76,SNR=3452
YKA    Yellowknife Ar    34.27  47   PcP     PcP     14 30 54.6 +0.4
       comp=Z,2.0nm,0.7s,baz=286,slow=3.3,SNR=4.2
YKA                                  LR      LR      14 43 24.3
       comp=Z,39nm,18.9s,baz=256,slow=38
HEH    HeiHe             34.48 290 e P       P       14 28 20.5 -0.9
HEH                                  pmax    pmax
       comp=Z,6.0nm,0.6s
USRK   Ussuriysk Ar.     34.49 278   P       P       14 28 20.7 -0.9
       comp=Z,1.9nm,0.6s,baz=42,slow=7.6,SNR=5.0
       comp=Z,1.9nm,0.6s
GNW    Green Mountain    34.62  75   IAmb    IAmb    14 28 25.7
       comp=Z,9.6nm,0.8s
MJA0   Matsu Arr-Jizo    34.99 263 e P       P       14 28 26.6 +0.7
MJA0                                 pmax    pmax
       comp=Z,4.0nm,0.7s
MJAR   Matsushiro Arr    35.01 263   P       P       14 28 26.3 +0.2
       comp=Z,3.9nm,0.7s,baz=47,slow=7.2,SNR=16
MJAR                                 LR      LR      14 40 52.8
       comp=Z,51nm,21.0s,baz=62,slow=33
       comp=Z,3.9nm,0.7s
H11S1  WAKE ISLAND Hy    35.38 208   T       T       15 06 20.5
       baz=17,slow=76,SNR=2676
H11S2  WAKE ISLAND Hy    35.40 208   T       T       15 06 21.8
       baz=17,slow=76,SNR=1214
H11S3  WAKE ISLAND Hy    35.40 208   T       T       15 06 21.9
       baz=17,slow=76,SNR=664
COR    Corvallis         35.76  80   P       P       14 28 33.9 +1.5
COR                                  IAmb    IAmb    14 28 35.8
       comp=Z,14nm,0.8s
COR    Corvallis         35.76  80   P       P       14 28 33.9 +1.5
COR                                  pmax    pmax
       comp=Z,14nm,0.9s
LTY    Liberty           36.05  74   IAmb    IAmb    14 28 37.4
       comp=Z,8.2nm,1.2s
H04D   Lebanon           36.14  79   IAmb    IAmb    14 28 38.7
       comp=Z,9.0nm,0.7s
B08A   Colville Reser    36.34  72   IAmb    IAmb    14 28 40.0
       comp=Z,13nm,0.9s
HOOD   Mount Hood Mea    36.40  77   IAmb    IAmb    14 28 40.8
       comp=Z,23nm,1.5s
BNX    BinXian           36.53 283 ⇓ P       P       14 28 38.3 -0.7
BNX                                  pmax    pmax
       comp=Z,14nm,1.0s
MXC    Moxie City        36.61  75   IAmb    IAmb    14 28 42.3
       comp=Z,5.4nm,1.1s
G05A   Wamic             36.65  77   IAmb    IAmb    14 28 42.9
       comp=Z,13nm,0.8s
BBOR   Butler Butte      37.04  82   P       P       14 28 44.0 +0.4
BBOR                                 IAmb    IAmb    14 28 46.7
       comp=Z,5.0nm,0.9s
G06A   Carlson Farm,     37.06  77   IAmb    IAmb    14 28 46.1
       comp=Z,11nm,1.2s
I05D   Terrebonne, OR    37.09  79   IAmb    IAmb    14 28 46.6
       comp=Z,15nm,0.9s
F07A   Phinny Hill Vi    37.16  76   IAmb    IAmb    14 28 47.1
       comp=Z,18nm,0.9s
D08A   Wollman Farm,     37.20  73   IAmb    IAmb    14 28 46.8
       comp=Z,10.0nm,0.9s
E08A   Dider Farm, El    37.39  74   IAmb    IAmb    14 28 48.6
       comp=Z,11nm,1.1s
PINE   Pine Mountain     37.62  79   IAmb    IAmb    14 28 52.3
       comp=Z,13nm,1.0s
NEW    Newport           37.70  71   IAmb    IAmb    14 28 51.0
       comp=Z,11nm,0.8s
NEW    Newport           37.70  71   LR      LR      14 41 54.7
       comp=Z,35nm,21.8s,baz=284,slow=32
J05D   Fort Rock, OR     37.71  80   IAmb    IAmb    14 28 52.0
       comp=Z,9.1nm,0.6s
E09A   Wood Farm, Sta    37.93  74   IAmb    IAmb    14 28 53.0
       comp=Z,11nm,1.0s
G08A   Pilot Rock        38.05  76   IAmb    IAmb    14 28 54.1
       comp=Z,5.9nm,0.8s
K05A   Summer Lake       38.23  81   P       P       14 28 55.2 +1.6
K05A                                 IAmb    IAmb    14 28 56.8
       comp=Z,18nm,0.9s
I07A   Izee              38.35  78   IAmb    IAmb    14 28 57.1
       comp=Z,14nm,0.7s
O02D   Mt. Diablo Mer    38.49  85   P       P       14 28 57.4 +1.7
O02D                                 IAmb    IAmb    14 28 58.4
       comp=Z,6.4nm,0.8s
RES    Resolute Bay      39.14  25   LR      LR      14 48 02.8
       comp=Z,58nm,18.7s,baz=262,slow=41
BMO    Blue Mountains    39.28  76   IAmb    IAmb    14 29 04.6
       comp=Z,5.5nm,0.9s
J08A   Circle Bar Ran    39.37  78   IAmb    IAmb    14 29 05.5
       comp=Z,14nm,0.7s
WVOR   Wild Horse Val    39.78  80   IAmb    IAmb    14 29 09.0
       comp=Z,16nm,0.8s
MSO    Missoula          40.28  71   IAmb    IAmb    14 29 12.4
       comp=Z,9.7nm,1.1s
MPK    Martis Peak       40.73  84   IAmb    IAmb    14 29 16.9
       comp=Z,8.5nm,0.9s
KSRS   Korea Array       40.86 272   P       P       14 29 15.6 +0.3
       comp=Z,3.8nm,1.0s,baz=59,slow=7.9,SNR=13
KSRS                                 LR      LR      14 44 05.4
       comp=Z,7µm,22.0s,baz=240,slow=33
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	comp=Z,3.8nm,1.0s						
KSRS	**Korea Array**	**40.86**	**272**	*e*P	**P**	**14 29 16.1**	**+0.8**
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PAHR	**Pah Rah Range**	**40.88**	**84**	IAmb	IAmb	14 29 17.9	
	comp=Z,12nm,0.7s						
WAKR	**Walker**	**41.57**	**85**	IAmb	IAmb	14 29 24.0	
	comp=Z,6.0nm,0.6s						
HLID	**Hailey**	**41.73**	**75**	IAmb	IAmb	14 29 24.9	
	comp=Z,8.6nm,0.8s						
JNU	**Nakatsue**	**41.80**	**265**	P	**P**	**14 29 23.1**	**0.0**
	comp=Z,9.6nm,0.9s,baz=82,slow=6.5,SNR=5.0						
JNU				LR	LR	14 45 43.2	
	comp=Z,38nm,20.7s,baz=72,slow=34						
	comp=Z,9.6nm,0.9s						
RYN	**Ryan**	**42.06**	**84**	IAmb	IAmb	14 29 27.5	
	comp=Z,7.8nm,0.7s						
EGMT	**Eagleton**	**42.11**	**67**	IAmb	IAmb	14 29 27.2	
	comp=Z,9.3nm,1.0s						
BOZ	**Bozeman (W)**	**42.29**	**71**	IAmb	IAmb	14 29 28.8	
	comp=Z,9.6nm,0.8s						
LHV	**Little Huntoon**	**42.31**	**85**	IAmb	IAmb	14 29 33.3	
	comp=Z,13nm,1.5s						
NVAR	**Mina Array Bea**	**42.32**	**84**	P	**P**	**14 29 28.2**	**+0.7**
NVAR	**Mina Array Bea**	**42.32**	**84**	P	**P**	**14 29 28.9**	**+1.3**
	comp=Z,4.3nm,0.8s,baz=292,slow=7.7,SNR=27						
NVAR				PcP	**PcP**	**14 31 20.7**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=315,slow=2.7,SNR=4.3						
NVAR				ScP	**ScP**	**14 35 08.1**	**+3.3**
	comp=Z,0.4nm,0.7s,baz=282,slow=2.7,SNR=2.0						
	comp=Z,4.3nm,0.8s						
ELK	**Elko**	**42.83**	**79**	IAmb	IAmb	14 29 33.9	
	comp=Z,9.3nm,0.8s						
YHL	**Hebgen Lake**	**42.96**	**72**	IAmb	IAmb	14 29 34.6	
	comp=Z,18nm,1.2s						
YHB	**Horse Butte**	**43.01**	**72**	IAmb	IAmb	14 29 34.9	
	comp=Z,12nm,0.9s						
H17A	**Grant Village**	**43.57**	**72**	IAmb	IAmb	14 29 40.9	
	comp=Z,23nm,1.3s						
HVU	**Hansel Valley**	**43.74**	**77**	IAmb	IAmb	14 29 41.1	
	comp=Z,12nm,0.7s						
RLMT	**Red Lodge**	**43.95**	**71**	IAmb	IAmb	14 29 42.9	
	comp=Z,11nm,0.8s						
R11B	**Troy Canyon, C**	**44.06**	**82**	IAmb	IAmb	14 29 43.3	
	comp=Z,6.0nm,0.7s						
AHID	**Auburn Hatcher**	**44.18**	**74**	IAmb	IAmb	14 29 44.6	
	comp=Z,7.6nm,1.0s						
XLT	**XiLinHaoTe**	**44.33**	**288**	*e*P	**P**	**14 29 44.8**	**+1.3**
XLT				pP	pP	14 29 58.0	-1.5
XLT				pmax	pmax		
	comp=Z,15nm,0.8s						
XLT				pmax	pmax		
	comp=Z,140nm,4.3s						
S11A	**Rachel**	**44.40**	**83**	IAmb	IAmb	14 29 46.3	
	comp=Z,9.7nm,1.0s						
TPNV	**Topopah Spring**	**44.52**	**84**	IAmb	IAmb	14 29 47.2	
	comp=Z,14nm,0.7s						
HWUT	**Hardware Ranch**	**44.57**	**76**	IAmb	IAmb	14 29 47.7	
	comp=Z,5.7nm,0.8s						
DUG	**Dugway, Tooele**	**44.65**	**78**	IAmb	IAmb	14 29 48.5	
	comp=Z,18nm,1.1s						
ILON	**Igloolik, Nuna**	**44.74**	**30**	P	**P**	**14 29 45.9**	**-0.4**
GWY	**Greenwater Val**	**44.74**	**86**	P	**P**	**14 29 47.5**	**+0.6**
LAO	**LASA Array**	**44.86**	**67**	IAmb	IAmb	14 29 49.9	
	comp=Z,20nm,1.2s						
TCUT	**Toone Canyon**	**44.96**	**77**	IAmb	IAmb	14 29 50.9	
	comp=Z,14nm,0.7s						
PRN	**Pahroc Range**	**44.98**	**83**	P	**P**	**14 29 49.8**	**+1.1**
PRN				IAmb	IAmb	14 29 51.0	
	comp=Z,17nm,0.7s						
CTU	**Camp Tracy**	**45.00**	**77**	IAmb	IAmb	14 29 50.9	
	comp=Z,6.4nm,0.8s						
PSUT	**Pine Spring**	**45.02**	**81**	IAmb	IAmb	14 29 51.0	
	comp=Z,7.9nm,0.7s						
DGMT	**Dagmar**	**45.04**	**64**	IAmb	IAmb	14 29 50.4	
	comp=Z,13nm,1.0s						
PD31	**Pinedale Array**	**45.11**	**74**	IAmb	IAmb	14 29 51.7	
	comp=Z,16nm,0.8s						
PDAR	**Pinedale Array**	**45.11**	**74**	P	**P**	**14 29 50.5**	**+0.6**
PDAR	**Pinedale Array**	**45.11**	**74**	P	**P**	**14 29 50.8**	**+0.9**
	comp=Z,13nm,0.7s,baz=304,slow=4.2,SNR=112						
PDAR				LR	LR	14 45 37.2	
	comp=Z,19nm,20.8s,baz=310,slow=32						
	comp=Z,13nm,0.7s						
GSC	**Goldstone, Bar**	**45.22**	**87**	IAmb	IAmb	14 29 52.6	
	comp=Z,11nm,0.8s						
JLU	**Jordanelle**	**45.24**	**77**	IAmb	IAmb	14 29 53.1	
	comp=Z,10nm,0.9s						
MPU	**Maple Canyon**	**45.48**	**78**	IAmb	IAmb	14 29 54.8	
	comp=Z,7.0nm,0.7s						
BSUT	**Blindstream Ca**	**45.70**	**77**	IAmb	IAmb	14 29 57.7	
	comp=Z,5.5nm,0.6s						
MVU	**Marysvale**	**46.05**	**80**	IAmb	IAmb	14 29 59.7	
	comp=Z,7.2nm,0.8s						
V12A	**Nelson**	**46.16**	**85**	IAmb	IAmb	14 29 59.7	
	comp=Z,4.5nm,0.9s						
TMUT	**Trail Mountain**	**46.18**	**78**	IAmb	IAmb	14 30 00.7	
	comp=Z,14nm,0.9s						
LCMT	**Little Creek M**	**46.34**	**82**	IAmb	IAmb	14 30 01.9	
	comp=Z,7.9nm,0.8s						
Q16A	**Castle Valley**	**46.43**	**79**	IAmb	IAmb	14 30 02.6	
	comp=Z,23nm,1.3s						
BJI	**Beijing**	**46.55**	**283**	P	**P**	**14 30 02.3**	**+1.4**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
P18A	**Preston Nutter**	**46.56**	**77**	IAmb	IAmb	14 30 03.8	
	comp=Z,12nm,0.8s						
KNB	**Kanab**	**46.60**	**82**	IAmb	IAmb	14 30 04.0	
	comp=Z,6.4nm,0.8s						
K22A	**Casper**	**46.99**	**72**	IAmb	IAmb	14 30 07.7	
	comp=Z,6.7nm,0.7s						
RSSD	**Black Hills**	**47.58**	**69**	P	**P**	**14 30 09.0**	**-0.2**
RSSD				IAmb	IAmb	14 30 11.1	
	comp=Z,4.7nm,0.8s						
RSSD	**Black Hills**	**47.58**	**69**	P	**P**	**14 30 09.0**	**-0.2**
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BLYC	**Blythe**	**47.66**	**87**	IAmb	IAmb	14 30 11.3	
	comp=Z,8.5nm,1.0s						
SONM	**Songino Array**	**47.69**	**298**	P	**P**	**14 30 09.9**	**0.0**
	comp=Z,2.2nm,0.6s,baz=51,slow=8.8,SNR=11						
SONM				PcP	**PcP**	**14 31 37.9**	**-0.4**
	comp=Z,2.6nm,0.7s,baz=85,slow=2.4,SNR=8.6						
SONM				ScP	**ScP**	**14 35 27.7**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=29,slow=3.3,SNR=3.6						
	comp=Z,2.2nm,0.6s						
PV21	**Cone Mtn., Par**	**48.00**	**78**	IAmb	IAmb	14 30 13.9	
	comp=Z,9.7nm,0.6s						
PV14	**Lion Creek, Pa**	**48.09**	**78**	IAmb	IAmb	14 30 14.7	
	comp=Z,10nm,0.8s						
PV22	**Blue Mesa, Par**	**48.13**	**78**	IAmb	IAmb	14 30 17.0	
	comp=Z,14nm,0.8s						
PV05	**Paradox Valley**	**48.23**	**78**	IAmb	IAmb	14 30 16.8	
	comp=Z,21nm,1.2s						
PV18	**Skein Mesa, Pa**	**48.24**	**78**	P	**P**	**14 30 14.4**	**0.0**
TIA	**Tai'an**	**48.36**	**279**	P	**P**	**14 30 15.5**	**+0.4**
TIA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PV15	**Paradox Valley**	**48.44**	**78**	P	**P**	**14 30 16.1**	**+0.1**
WUAZ	**Wupatki**	**48.46**	**83**	IAmb	IAmb	14 30 18.1	
	comp=Z,12nm,0.7s						
ULM	**Lac du Bonnet**	**48.60**	**58**	P	**P**	**14 30 15.7**	**-1.0**
	comp=Z,0.8nm,0.4s,baz=302,slow=7.0,SNR=1.7						
	comp=Z,0.8nm,0.4s						
GUMO	**Guam**	**48.74**	**233**	LR	LR	14 48 52.7	
	comp=Z,10nm,19.7s,baz=80,slow=34						
HHC	**Hu-ho-hao-te**	**48.83**	**287**	*e*P	**P**	**14 30 18.0**	**-0.8**
HHC				pmax	pmax		
	comp=Z,24nm,0.6s						
HHC				pmax	pmax		
	comp=Z,49nm,4.4s						
HNS	**HongShan**	**49.09**	**281**	⇓P	**P**	**14 30 21.8**	**+1.2**
HNS				pmax	pmax		
	comp=Z,11nm,1.1s						
MVCO	**Mesa Verde**	**49.15**	**79**	IAmb	IAmb	14 30 23.1	
	comp=Z,16nm,1.3s						
ISCO	**Idaho Springs**	**49.27**	**74**	IAmb	IAmb	14 30 24.5	
	comp=Z,3.8nm,0.8s						
BTO	**Baotou**	**49.91**	**288**	*e*P	**P**	**14 30 28.5**	**+1.6**
BTO				pP	**pwP**	**14 30 44.3**	**+1.4**
BTO				sP	**sP**	**14 30 51.5**	**+1.4**
BTO				pmax	pmax		
	comp=Z,49nm,1.0s						
BTO				pmax	pmax		
	comp=Z,210nm,10.0s						
NJ2	**Nanjing**	**50.03**	**273**	*e*P	**P**	**14 30 27.3**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SPITS	**Spitsbergen Ar**	**50.35**	**356**	P	**P**	**14 30 28.4**	**-1.3**
	comp=Z,6.1nm,0.9s,baz=46,slow=6.2,SNR=5.4						
	comp=Z,6.1nm,0.9s						
SDCO	**Great Sand Dun**	**50.63**	**76**	IAmb	IAmb	14 30 34.9	
	comp=Z,6.8nm,0.8s						
TUC	**Tucson**	**50.95**	**85**	P	**P**	**14 30 35.7**	**+0.8**
TUC				IAmb	IAmb	14 30 36.7	
	comp=Z,7.0nm,0.8s						
TUC	**Tucson**	**50.95**	**85**	P	**P**	**14 30 35.7**	**+0.8**
TUC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ANMO	**Albuquerque**	**51.87**	**80**	P	**P**	**14 30 42.4**	**+0.6**
ANMO				IAmb	IAmb	14 30 43.8	
	comp=Z,4.0nm,0.9s						
ANMO	**Albuquerque**	**51.87**	**80**	LR	LR	14 50 41.5	
	comp=Z,39nm,18.8s,baz=16,slow=34						
ANMO	**Albuquerque**	**51.87**	**80**	*i* P	**P**	**14 30 42.6**	**+0.7**
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ECSD	**EROS Data Cent**	**52.08**	**65**	IAmb	IAmb	14 30 43.4	
	comp=Z,8.0nm,0.9s						
RTBA	**Rita Blanca**	**53.16**	**76**	IAmb	IAmb	14 30 52.7	
	comp=Z,12nm,0.8s						
I37A	**Lemond, Waseca**	**53.71**	**63**	IAmb	IAmb	14 30 56.1	
	comp=Z,13nm,0.8s						
EPT	**El Paso**	**53.98**	**83**	IAmb	IAmb	14 30 59.0	
	comp=Z,15nm,1.0s						
MNTX	**Cornudas Mount**	**54.72**	**82**	IAmb	IAmb	14 31 04.5	
	comp=Z,9.7nm,0.9s						
AMTX	**Amarillo**	**54.84**	**76**	IAmb	IAmb	14 31 05.0	
	comp=Z,11nm,0.8s						
XAN	**Xi'an**	**54.84**	**282**	⇑P	**P**	**14 31 03.3**	**-0.1**
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ZALV	**Zalesovo Beam**	**54.84**	**314**	PcP	**PcP**	**14 32 05.1**	**+0.5**
	comp=Z,5.0nm,0.6s,baz=34,slow=4.2,SNR=21						
VHRN	**Van Horn**	**55.60**	**82**	IAmb	IAmb	14 31 10.9	
	comp=Z,8.3nm,0.9s						
PECS	**Pecos**	**55.88**	**81**	IAmb	IAmb	14 31 13.2	
	comp=Z,6.0nm,1.1s						
L40A	**Anamosa**	**56.19**	**63**	IAmb	IAmb	14 31 14.1	
	comp=Z,7.0nm,1.0s						
I42A	**Draeger Farm,**	**56.26**	**60**	IAmb	IAmb	14 31 13.7	
	comp=Z,4.6nm,0.7s						
LZH	**Lanzhou**	**56.53**	**287**	*e*P	**P**	**14 31 16.8**	**+1.1**
LZH				sP	sP	14 31 36.8	-2.2
LZH				pmax	pmax		
	comp=Z,45nm,1.2s						
LZH				LR	LR		
	comp=N,200nm,16.1s						
LZH				LR	LR		
	comp=E,180nm,15.8s						
LZH				LR	LR		
	comp=Z,190nm,16.2s						
SN07	**Snyder 07**	**56.53**	**77**	IAmb	IAmb	14 31 16.7	
	comp=Z,7.9nm,0.7s						
GTA	**Gaotai**	**56.66**	**293**	*e*P	**P**	**14 31 17.0**	**+0.5**
GTA				sP	pP	14 31 36.3	+3.2
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				LR	LR		
	comp=N,280nm,18.9s						
GTA				LR	LR		
	comp=E,150nm,19.3s						
GTA				LR	LR		
	comp=Z,230nm,19.6s						
WMOK	**Wichita Mounta**	**56.69**	**75**	IAmb	IAmb	14 31 18.1	
	comp=Z,6.2nm,0.8s						
ALPN	**Alpine**	**56.72**	**82**	IAmb	IAmb	14 31 18.1	
	comp=Z,8.3nm,0.8s						
APMT	**Aspermont**	**56.84**	**77**	IAmb	IAmb	14 31 19.9	
	comp=Z,4.8nm,0.8s						
LPIG	**La Paz**	**57.01**	**92**	LR	LR	14 51 52.7	
	comp=Z,23nm,18.2s,baz=179,slow=32						
TX31	**Lajitas Ar. Si**	**57.42**	**83**	IAmb	IAmb	14 31 23.4	
	comp=Z,7.5nm,0.8s						
TXAR	**Lajitas Array**	**57.43**	**83**	P	**P**	**14 31 22.2**	**+0.1**
TXAR	**Lajitas Array**	**57.43**	**83**	P	**P**	**14 31 22.4**	**+0.4**
	comp=Z,5.8nm,0.8s,baz=299,slow=4.8,SNR=74						
TXAR				PcP	**PcP**	**14 32 15.8**	**+0.7**
	comp=Z,1.3nm,0.7s,baz=312,slow=4.5,SNR=2.1						
	comp=Z,5.8nm,0.8s						
ABTX	**Abilene, Hawle**	**57.61**	**77**	IAmb	IAmb	14 31 25.2	
	comp=Z,9.3nm,0.7s						
TUL3	**Leonard**	**57.68**	**72**	IAmb	IAmb	14 31 24.6	
	comp=Z,8.2nm,0.7s						
HPIG		**57.88**	**86**	IAmb	IAmb	14 31 26.5	
	comp=Z,5.7nm,0.9s						
U38A	**Gravette**	**58.15**	**70**	IAmb	IAmb	14 31 27.2	
	comp=Z,6.2nm,0.9s						
ARCES	**ARCESS Array B**	**58.19**	**351**	P	**P**	**14 31 25.9**	**-0.7**
	comp=Z,1.8nm,0.8s,baz=28,slow=3.1,SNR=4.0						
	comp=Z,1.8nm,0.8s						
ARCES	**ARCESS Array B**	**58.19**	**351**	P	**P**	**14 31 26.0**	**-0.7**
HHAR	**Hobbs**	**58.52**	**70**	IAmb	IAmb	14 31 29.2	
	comp=Z,5.0nm,0.7s						
CCM	**Cathedral Cave**	**58.87**	**67**	P	**P**	**14 31 30.8**	**-1.1**
CCM				IAmb	IAmb	14 31 31.9	
	comp=Z,8.8nm,1.0s						
CCM	**Cathedral Cave**	**58.87**	**67**	P	**P**	**14 31 30.8**	**-1.1**
CCM				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BRDY	**Brady**	**58.94**	**78**	IAmb	IAmb	14 31 33.5	
	comp=Z,5.3nm,1.1s						
SCHQ	**Schefferville**	**59.16**	**39**	P	**P**	**14 31 31.5**	**-2.1**
	comp=Z,1.7nm,0.7s,baz=278,slow=6.4,SNR=3.4						
	comp=Z,1.7nm,0.7s						
DRIO	**Del Rio**	**59.25**	**80**	IAmb	IAmb	14 31 34.8	
	comp=Z,7.2nm,0.8s						
T42A	**Van Buren**	**59.67**	**68**	IAmb	IAmb	14 31 36.8	
	comp=Z,5.6nm,0.6s						
KURK	**Kurchatov**	**59.83**	**315**	P	**P**	**14 31 38.0**	**-0.2**
KURK						14 32 24.8	
MIAR	**Mount Ida**	**59.93**	**71**	IAmb	IAmb	14 31 40.5	
	comp=Z,9.2nm,0.8s						
KURBB	**Kurchatov Arra**	**59.93**	**315**	P	**P**	**14 31 38.0**	**-1.0**
	comp=Z,1.0nm,0.5s,baz=43,slow=6.7,SNR=16						
KURBB				PcP	**PcP**	**14 32 24.8**	**+0.2**
	comp=Z,3.2nm,0.7s,baz=40,slow=4.2,SNR=19						
	comp=Z,1.0nm,0.5s						
WHAR	**Wooly Hollow**	**60.17**	**70**	IAmb	IAmb	14 31 41.5	
	comp=Z,14nm,1.3s						
S44A	**Carbondale**	**60.26**	**66**	IAmb	IAmb	14 31 42.0	
	comp=Z,8.8nm,0.7s						
WMQ	**Urumqi**	**60.31**	**304**	*e*P	**P**	**14 31 44.0**	**+2.3**
WMQ				LR	LR		
	comp=N,370nm,15.9s						
WMQ				LR	LR		
	comp=E,410nm,19.9s						
WMQ				LR	LR		
	comp=Z,380nm,24.1s						
CGM3	**Cape Girardeau**	**60.31**	**66**	IAmb	IAmb	14 31 41.9	
	comp=Z,4.0nm,0.7s						
X40A	**Basin Creek Fa**	**60.41**	**71**	IAmb	IAmb	14 31 42.5	
	comp=Z,5.6nm,0.9s						
SADO	**Sadowa**	**60.79**	**54**	LR	LR	14 59 23.1	
	comp=Z,37nm,18.9s,baz=351,slow=37						
MK31	**Makanchi Array**	**60.92**	**309**	*i* P	**P**	**14 31 44.6**	**-1.2**
MKAR	**Makanchi Array**	**60.92**	**309**	P	**P**	**14 31 44.7**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=52,slow=6.2,SNR=8.9						
MKAR				PcP	**PcP**	**14 32 28.9**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=39,slow=3.8,SNR=6.1						
	comp=Z,0.8nm,0.5s						
GYA	**Guiyang**	**61.53**	**277**	P	**P**	**14 31 50.0**	**-0.3**
GYA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
WCI	**Wyandotte Cave**	**61.56**	**64**	P	**P**	**14 31 50.3**	**+0.1**
WCI	**Wyandotte Cave**	**61.56**	**64**	P	**P**	**14 31 50.3**	**+0.1**
WCI				pmax	pmax		
	comp=Z,16nm,0.8s						
BVAR	**Borovoye Array**	**61.59**	**321**	P	**P**	**14 31 50.5**	**+0.3**
	comp=Z,5.4nm,0.5s,baz=49,slow=6.6,SNR=35						
BVAR				PcP	**PcP**	**14 32 31.6**	**+0.3**
	comp=Z,6.2nm,0.5s,baz=49,slow=3.6,SNR=12						
	comp=Z,5.4nm,0.5s						
BRVK	**Borovoye**	**61.61**	**321**	P	**P**	**14 31 50.3**	**0.0**
BRVK				IAmb	IAmb	14 32 32.4	
	comp=Z,5.0nm,0.6s						
BRVK	**Borovoye**	**61.61**	**321**	P	**P**	**14 31 50.3**	**0.0**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
WVT	**Waverly**	**62.17**	**66**	P	**P**	**14 31 54.2**	**-0.1**
WVT				IAmb	IAmb	14 31 55.5	
	comp=Z,9.7nm,1.1s						
WVT	**Waverly**	**62.17**	**66**	P	**P**	**14 31 54.2**	**-0.1**
WVT				pmax	pmax		
	comp=Z,10.0nm,1.1s						
V48A	**Smith Brothers**	**63.02**	**66**	IAmb	IAmb	14 32 01.0	
	comp=Z,7.3nm,0.9s						
CLTN	**Cedars of Leba**	**63.05**	**65**	IAmb	IAmb	14 32 01.7	
	comp=Z,8.2nm,0.9s						
U49A	**Red Boiling Sp**	**63.07**	**65**	IAmb	IAmb	14 32 01.5	
	comp=Z,7.9nm,0.8s						
ARTI	**Arti**	**63.24**	**329**	P	**P**	**14 32 01.6**	**+0.5**
ARTI	**Arti**	**63.24**	**329***c*	*i*P	**P**	**14 31 57.6**	**-3.6**
ARTI				*PP	pP	14 32 09.4	-8.7
ARTI						14 32 34.9	
ARTI				S	**S**	**14 40 24.5**	**-3.2**
ARTI				pmax	pmax		
	comp=Z,3.0nm,0.5s						
X48A	**Hartselle**	**63.81**	**67**	IAmb	IAmb	14 32 05.2	
	comp=Z,4.5nm,0.5s						
SWET	**Sewanee**	**63.91**	**66**	IAmb	IAmb	14 32 06.5	
	comp=Z,7.4nm,0.7s						
Q54A	**Coxs Mills**	**64.03**	**60**	IAmb	IAmb	14 32 08.2	
	comp=Z,18nm,1.1s						
W50A	**Signal Mountai**	**64.27**	**65**	IAmb	IAmb	14 32 09.4	
	comp=Z,14nm,0.9s						
TZTN	**Tazewell**	**64.30**	**63**	IAmb	IAmb	14 32 10.1	
	comp=Z,13nm,0.8s						
PZH	**PanZhiHua**	**64.53**	**281**	P	**P**	**14 32 10.5**	**+0.3**
PZH				pmax	pmax		
	comp=Z,80nm,1.0s						
PZH				pmax	pmax		
	comp=Z,100nm,5.2s						
CPCT	**Cooper Cave**	**64.54**	**65**	IAmb	IAmb	14 32 10.5	
	comp=Z,5.2nm,0.7s						
Y49A	**Blount Mountai**	**64.61**	**67**	IAmb	IAmb	14 32 13.7	
	comp=Z,3.8nm,0.7s						
TKL	**Tuckaleechee C**	**64.81**	**64**	IAmb	IAmb	14 32 13.0	
	comp=Z,13nm,0.9s						
LRAL	**Lakeview Retre**	**64.86**	**68**	IAmb	IAmb	14 32 12.4	
	comp=Z,4.5nm,0.8s						
KMI	**Kunming**	**64.92**	**279**	P	**P**	**14 32 14.0**	**+1.1**
KMI				pmax	pmax		
	comp=Z,13nm,0.8s						
X51A	**Calhoun**	**64.98**	**66**	IAmb	IAmb	14 32 13.9	
	comp=Z,10nm,0.9s						
W52A	**Murphy**	**65.13**	**65**	IAmb	IAmb	14 32 14.6	
	comp=Z,6.0nm,0.7s						
V53A	**Saluda**	**65.34**	**63**	IAmb	IAmb	14 32 16.9	
	comp=Z,9.7nm,0.7s						
BG3	**Lake Jocassee**	**65.76**	**64**	IAmb	IAmb	14 32 19.6	
	comp=Z,14nm,0.9s						
S57A	**Dark Hollow, R**	**65.93**	**59**	IAmb	IAmb	14 32 30.3	
	comp=Z,8.3nm,1.3s						
FINES	**FINESS Array B**	**65.94**	**348**	P	**P**	**14 32 18.3**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=46,slow=8.2,SNR=4.5						
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**65.94**	**348**	*i* P	**P**	**14 32 20.8**	**+2.2**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
Y52A	**Lilburn**	**65.95**	**66**	IAmb	IAmb	14 32 20.1	
	comp=Z,11nm,0.7s						
T57A	**Hurt**	**66.33**	**60**	IAmb	IAmb	14 32 22.9	
	comp=Z,9.7nm,0.8s						
152A	**Waverly Hall**	**66.44**	**67**	IAmb	IAmb	14 32 22.6	
	comp=Z,7.5nm,0.7s						
PAULI	**Pauline**	**66.52**	**63**	IAmb	IAmb	14 32 24.2	
	comp=Z,15nm,0.8s						
GOGA	**Godfrey**	**66.62**	**65**	IAmb	IAmb	14 32 24.2	
	comp=Z,11nm,0.8s						
HODGE	**Hodges**	**66.70**	**64**	IAmb	IAmb	14 32 25.3	
	comp=Z,12nm,0.8s						
T59A	**Double "B" Far**	**67.26**	**59**	IAmb	IAmb	14 32 29.1	
	comp=Z,7.6nm,0.7s						
NOA	**NORSAR Array B**	**67.64**	**356**	P	**P**	**14 32 28.6**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=6.9,slow=6.6,SNR=2.3						
	comp=Z,0.7nm,0.8s						
HFS	**Hagfors**	**68.41**	**354**	P	**P**	**14 32 34.2**	**-0.1**
	comp=Z,2.4nm,0.8s,baz=48,slow=2.2,SNR=4.6						
	comp=Z,2.4nm,0.8s						
AB31	**Akbulak array**	**68.58**	**324**	IAmb	IAmb	14 32 37.0	
	comp=Z,6.8nm,1.4s						
ABKAR	**Akbulak array**	**68.58**	**324**	P	**P**	**14 32 35.8**	**+0.2**
ABKAR	**Akbulak array**	**68.58**	**324**	IAmb	IAmb	14 32 37.0	
	comp=Z,6.9nm,1.4s						
KK31	**Karatay Array**	**69.21**	**314**	P	**P**	**14 32 39.3**	**-0.3**
KK31				IAmb	IAmb	14 32 40.3	
	comp=Z,3.7nm,0.7s						
KK31	**Karatay Array**	**69.21**	**314**	P	**P**	**14 32 39.3**	**-0.3**
KK31				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KKAR	**Karatay Array**	**69.21**	**314**	P	**P**	**14 32 39.4**	**-0.2**
KKAR	**Karatay Array**	**69.21**	**314**	IAmb	IAmb	14 32 40.3	
	comp=Z,3.9nm,0.7s						
KKAR	**Karatay Array**	**69.21**	**314**	P	**P**	**14 32 39.4**	**-0.2**
KSH	**Kashi**	**69.41**	**308**	P	**P**	**14 32 44.3**	**+3.3**
KSH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**72.22**	**277**	P	**P**	**14 32 58.8**	**+0.6**
	comp=Z,2.9nm,0.7s,baz=27,slow=6.8,SNR=16						
	comp=Z,2.9nm,0.7s						
EVN	**Everest**	**72.37**	**293**	IAmb	IAmb	14 33 01.4	
	comp=Z,4.6nm,0.7s						
GAR	**Garm**	**72.54**	**311**	IAmb	IAmb	14 33 44.8	
	comp=Z,14nm,1.1s						
PPT2	**Papeete2**	**72.80**	**153**	*e*LR	LR	14 55 13.7	
	comp=Z,55nm,23.0s						
EKA	**Eskdalemuir Ar**	**73.42**	**4**	P	**P**	**14 33 04.5**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=352,slow=4.1,SNR=4.3						
	comp=Z,0.6nm,0.5s						
SIMJ	**Simiganj**	**73.43**	**312**	P	**P**	**14 33 05.0**	**-0.3**
SIMJ				IAmb	IAmb	14 33 06.1	
	comp=Z,5.6nm,0.8s						
AKASG	**Malin Array Be**	**75.81**	**343**	P	**P**	**14 33 19.2**	**+0.6**
	comp=Z,0.7nm,0.4s,baz=24,slow=6.0,SNR=5.3						
	comp=Z,0.7nm,0.4s						
AKASG	**Malin Array Be**	**75.81**	**343**	*e*P	**P**	**14 33 20.4**	**+1.8**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KIV	**Kislovodsk**	**78.96**	**332**	*e*P	**P**	**14 33 35.3**	**-1.2**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BUR08	**Bucovina Ar. S**	**79.46**	**345**	IAmb	IAmb	14 34 08.7	
	comp=Z,8.4nm,1.4s						
BATI	**Baumata**	**79.92**	**239**	P	**P**	**14 33 41.8**	**-0.1**
	comp=Z,25nm,0.9s,baz=135,slow=1.4,SNR=2.2						
	comp=Z,25nm,0.9s						
SOC	**Sochi**	**80.15**	**334**	*e*P	**P**	**14 33 43.7**	**+0.9**
SOC				*e*		14 36 46.8	
SOC				*e*S	**S**	**14 43 44.5**	**+2.2**
SOC				*e*S	**SKSac**	**14 43 47.9**	**-6.7**
SOC				*e*SSS	SSS	14 52 20.7	
SOC				MLR	MLR		
	comp=Z,280nm,19.0s						
WRA	**Warramunga Arr**	**82.95**	**226**	P	**P**	**14 33 57.0**	**-0.8**
	comp=Z,2.3nm,0.7s,baz=32,slow=5.8,SNR=25						
	comp=Z,2.3nm,0.7s						
BR131	**Keskin Array S**	**85.34**	**337**	IAmb	IAmb	14 34 11.3	
	comp=Z,4.6nm,0.7s						
BRTR	**Keskin Array B**	**85.34**	**337**	P	**P**	**14 34 10.4**	**+0.4**
	comp=Z,3.7nm,0.7s,baz=47,slow=2.4,SNR=14						
	comp=Z,3.7nm,0.7s						
FITZ	**Fitzroy Crossi**	**85.50**	**234**	P	**P**	**14 34 10.9**	**+0.2**
	comp=Z,6.8nm,0.6s,baz=31,slow=6.3,SNR=30						
	comp=Z,6.8nm,0.6s						
ASAR	**Alice Springs**	**86.40**	**224**	P	**P**	**14 34 15.0**	**-0.1**
	comp=Z,3.8nm,0.8s,baz=24,slow=5.3,SNR=40						
	comp=Z,3.8nm,0.8s						
ESDC	**Sonseca Array**	**89.01**	**5**	P	**P**	**14 34 26.5**	**-1.1**
	comp=Z,0.5nm,0.8s,baz=350,slow=3.5,SNR=3.3						
	comp=Z,0.5nm,0.8s						
STKA	**Stephens Creek**	**90.69**	**214**	P	**P**	**14 34 35.6**	**+0.5**
	comp=Z,3.4nm,0.5s,baz=355,slow=1.9,SNR=7.9						
	comp=Z,3.4nm,0.5s						
STKA	**Stephens Creek**	**90.69**	**214**	*e*P	**P**	**14 34 36.0**	**+0.8**
STKA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**115.63**	**2**	PKP	**PKiKP**	**14 40 14.2**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=347,slow=3.1,SNR=11						
H03N2	**Juan Fernandez**	**120.00**	**107**	T	T	16 52 05.1	
	baz=317,slow=78,SNR=188						
H03N1	**Juan Fernandez**	**120.01**	**107**	T	T	16 52 06.3	
	baz=317,slow=78,SNR=224						
H03N3	**Juan Fernandez**	**120.02**	**107**	T	T	16 52 05.7	
	baz=317,slow=78,SNR=251						
DBIC	**Dimbokro**	**121.67**	**9**	PKP	**PKPdf**	**14 40 26.1**	**-0.4**
	comp=Z,2.3nm,0.4s,baz=325,slow=2.6,SNR=8.4						
QSPA	**South Pole Qui**	**141.24**	**180**	PKhKP	PKPpre	14 40 56.0	
	comp=Z,1.8nm,0.6s,baz=249,slow=0.4,SNR=27						
MAW	**Mawson**	**147.31**	**218**	PKPbc	**PKPbc**	**14 41 14.7**	**0.0**
	comp=Z,7.3nm,0.9s,baz=187,slow=3.6,SNR=9.2						
BOSA	**Boshof**	**151.79**	**316**	PKPbc	**PKPbc**	**14 41 27.1**	**-0.1**
	comp=Z,8.8nm,0.5s,baz=26,slow=3.1,SNR=38						

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BOSA                                PKPab  PKPab  14 41 36.9 +0.6
        comp=Z,6.7nm,0.7s,baz=8.0,slow=5.1,SNR=6.8
SNAA  Sanae            159.56 175   PKPab  PKPab  14 42 07.1 -1.3
        comp=Z,0.9nm,0.7s,baz=207,slow=7.3,SNR=6.6
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IDC ***30*** *14:26:31.1±1.1, 13°.48N×40°.66E, h0km, mb4.0/12, mbtmp4.0/15, ML3.4/3, MS4.0/46, Error ellipse: s-maj=23.4km s-min=16.7km az=15.0*

GCMT ***30*** *14:26:32.3±0.3, 13°.52N±0°.02×40°.79E±0°.02, h18km±1km, MW4.9/100, Moment Tensor Solution. s24,c24; s100,c141; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.56±.10; Mθθ-0.05±.08; Mφφ0.61±.11; Mrθ0.19±.17; Mθφ-2.24±.08; Mφr1.65±.26; Best double couple: M0 2.84500×10¹⁶ NP1:φs277.00000°, δ53.00000°, λ-170.00000°. NP2:φs180.00000°, δ82.00000°, λ-38.00000°. Principal axes: T 2.9430, Plg19.0000°, Azm234.0000°; N -0.1960, Plg51.0000°, Azm350.0000°; P -2.7470, Plg32.0000°, Azm132.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***30*** *14:26:32.3±1.4, 13°.41N±0°.09×40°.67E±0°.09, h10km±5km, mb4.5/23 Error ellipse: s-maj=14.1km s-min=11.5km az=216.0*

ISC 30 14:26:31.6±0.5**, 13°.48N**±0°.05×**40°.78E**±0°.06**, h10km, n174,** σ**2°.07**/141**, mb4.3**/39**, MS4.0**/48**, 12C-7D, Ethiopia**

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Code  Station Name        Δ°   AZ°   Phase ID        Time      Res
                                     Op     ISC      h  m  s   ISC
ATD   Arta Tunnel         2.80 133          Pn     14 27 15.9 -0.7
ATD   Arta Tunnel         2.80 133   Pn     Pb     14 27 18.7 -3.1
        1.4nm,0.3s,baz=263,slow=22,SNR=31
ATD                                  Sn     Sb     14 27 55.8 -0.4
        3.8nm,0.3s,baz=250,slow=23,SNR=9.3
ATD                                  LR     LR     14 28 22.8
        comp=Z,186nm,18.4s,baz=329,slow=39
        86nm,0.8s
ATD   Arta Tunnel         2.80 133   P      Pn     14 27 16.1 -0.4
        SNR=175
ATD                                  S      Sb     14 27 56.5 +0.3
FURI  Furi                4.99 205   Pn     Pn     14 27 46.0 -1.0
SMRA  Abu-Samra          14.68  39   P      Pn     14 29 59.4 -0.1
SLWR  Sila               14.75  43   P      Pn     14 30 02.9 +2.5
TRNA  Turayna            14.91  40   P      Pn     14 30 05.0 +2.4
KMBO  Kilima Mbogo       14.92 194   P      P      14 30 08.3 -0.4
MZR   Muzera             15.33  50   P      Pn     14 30 09.8 +1.5
MZR   Muzera             15.33  50   P      P      14 30 12.7 -0.3
GHWR  Ruwais             15.48  46   P      Pn     14 30 09.8 -0.4
JRN   Qarnain Island     16.11  43   P      Pn     14 30 19.3 +1.0
UMZA  Um Al Zommool      16.46  54   P      Pn     14 30 23.5 +0.6
KBD   Kabd               16.89  21   P      P      14 30 32.4 +2.2
EIL   Elat               17.00 342   Pn     Pn     14 30 28.9 -0.6
        0.2nm,0.3s,baz=210,slow=9.8,SNR=3.8
EIL                                  LR     LR     14 35 43.5
        comp=Z,542nm,18.0s,baz=190,slow=33
        1.0nm,0.4s
DQM   DQM                17.29  66   P      Pn     14 30 33.1 -0.1
ALNE  Al Ain             17.64  51   P      P      14 30 38.8 +0.1
        SNR=11
ALNE  Al Ain             17.64  51   Pn     Pn     14 30 37.5 -0.2
ASUD  Al Ashush, Dub     17.65  49   P      Pn     14 30 37.9 +0.1
ASUD  Al Ashush, Dub     17.65  49   Pn     Pn     14 30 37.6 -0.2
ARQ   Araqi              17.86  54   P      P      14 30 40.5 -0.5
        SNR=5.8
ARQ                                  S      Sn     14 33 59.1 -0.5
FAQ   Al Faqa, Dubai     17.92  49   P      P      14 30 41.6  0.0
        SNR=8.1
FAQ   Al Faqa, Dubai     17.92  49   Pn     Pn     14 30 40.2 -0.9
MHTO  MHTO               18.03  63   P      P      14 30 42.4 -0.6
NAZ   Nazwa, Dubai       18.11  49   P      P      14 30 43.6 -0.2
        SNR=10
NAZ   Nazwa, Dubai       18.11  49 i Pn     Pn     14 30 42.7 -0.7
        SNR=9.7
BSY   Bisya              18.11  57   P      Pn     14 30 43.3 -0.3
ASHO  Ashiyiah           18.23  50   P      P      14 30 45.2  0.0
        SNR=11
ASHO  Ashiyiah           18.23  50 i Pn     Pn     14 30 42.9 -2.0
        SNR=26
SOHO  SOHO               18.28  52   P      P      14 30 45.4 -0.3
SOHO  SOHO               18.28  52 i Pn     Pn     14 30 44.1 -1.4
        SNR=21
HATD  Hatta, Dubai       18.36  50   P      P      14 30 46.9 +0.3
        SNR=12
HATD  Hatta, Dubai       18.36  50 i Pn     Pn     14 30 45.6 -1.0
        SNR=18
UOSS  Minazif            18.48  50          P      14 30 47.6 -0.3
UOSS  Minazif            18.48  50   P      Pn     14 30 48.2 +0.1
UOSS  Minazif            18.48  50 i P      P      14 30 47.0 -0.9
        SNR=21
HOQ   Hoqain             18.61  55   P      Pn     14 30 49.8 +0.2
MSFE  Esma-Masafi        18.69  48 i P      P      14 30 49.5 -0.8
        SNR=6.7
JMDO  Jabal Madar        18.70  59   P      Pn     14 30 50.8 +0.2
MASF  Masafi             18.70  48   P      Pn     14 30 50.8 +0.1
        SNR=6.7
MASF                                 S      Sn     14 34 16.7 -3.3
MDH   Madha              18.76  49   P      Pn     14 30 53.0 +1.6
        SNR=7.5
MDH   Madha              18.76  49 i P      P      14 30 49.9 -1.1
        SNR=10
ASF   Jabal al Asfar     18.95 350   P      P      14 30 53.1 +0.1
        0.3nm,0.3s,baz=201,slow=4.2,SNR=7.0
        1.6nm,0.7s
SMDO  Samad              18.95  57   P      P      14 30 52.9 -0.3
SMDO                                 S      Sn     14 34 25.5 -0.7
SHME  Shamm              19.09  47   P      Pn     14 30 55.1 -0.3
WSAR  Wadi Sarin         19.51  58   P      Pn     14 31 01.2 +0.8
        0.2nm,1.1s,baz=68,slow=24,SNR=6.5
WSAR                                 LR     LR     14 39 24.0
        comp=Z,5.7nm,18.9s,baz=242,slow=39
WSAR  Wadi Sarin         19.51  58   P      Pn     14 31 00.3 -0.2
JLN   Jalan Bani Buh     19.71  61   P      Pn     14 31 02.3 -0.6
MMAI  Mount Meron Ar     20.06 347   LR     LR     14 37 54.0
        comp=Z,232nm,18.5s,baz=156,slow=34
JASK  Jask - Hormozg     20.24  50   P      Pn     14 31 09.3 +0.2
        SNR=6.8
MSEY  Mahe Island        23.20 140   P      P      14 31 40.6 +1.7
GNI   Garni              26.80   7   LR     LR     14 43 45.6
        comp=Z,244nm,18.1s,baz=135,slow=39
BRTR  Keskin Array B     26.89 348   P      P      14 32 14.7 +1.7
        0.3nm,0.4s,baz=178,slow=15,SNR=2.0
        0.3nm,0.4s
KBZ   Khabaz             30.20   3   LR     LR     14 45 06.3
        comp=Z,369nm,18.4s,baz=196,slow=37
LSZ   Lusaka             31.16 204   LR     LR     14 46 44.1
        comp=Z,155nm,18.8s,baz=42,slow=39
KEK   Kerkira            32.00 329   P      P      14 32 57.6 -0.6
TLCR                     33.20 344  ⇓P      P      14 33 09.9 +1.3
CFR   Carcaliu           33.38 344  ⇓P      P      14 33 11.4 +1.3
VAE   Valguarnera        33.52 320   LR     LR     14 46 36.1
        comp=Z,267nm,20.1s,baz=146,slow=36
MLR   Muntele Rosu       34.30 341  ⇑P      P      14 33 19.9 +1.6
PDG   Podgorica          34.34 331  ⇓P      P      14 33 22.9 +4.4
VRI   Vrincioaia         34.40 343  ⇓P      P      14 33 20.1 +1.0
PLOR  Plostina           34.41 342  ⇓P      P      14 33 21.3 +2.1
VOIR                     34.54 340  ⇑P      P      14 33 22.7 +2.3
MDVR  Moldovita          35.18 336  ⇑P      P      14 33 29.3 +3.4
GZR   Gura Zlata         35.29 338  ⇑P      P      14 33 29.7 +2.8
MATP  Matopo             35.79 200   LR     LR     14 48 34.8
        comp=Z,312nm,19.1s,baz=28,slow=37
SURR  Surduc             35.84 338  ⇑P      P      14 33 34.6 +3.1
BZS   Buzias             35.91 337  ⇑P      P      14 33 35.4 +3.3
SORM  Soroca             36.07 346  ⇑P      P      14 33 33.7 +0.4
SORM  Soroca             36.07 346  ⇑P      P      14 33 33.7 +0.4
MARR  Marisel-Cluj       36.27 339  ⇑P      P      14 33 38.1 +2.9
BURAR Bucovina Array     36.43 342  ⇓P      P      14 33 39.1 +2.5
BURAR Bucovina Array     36.43 342  ⇓P      P      14 33 39.1 +2.5
DRGR                     36.51 339  ⇑P      P      14 33 40.3 +3.0
DRGR                     36.51 339  ⇑P      P      14 33 40.3 +3.0
TORD  Torodi Ar. Bea     38.01 274   P      P      14 33 48.9 -1.4
TORD  Torodi Ar. Bea     38.01 274   P      P      14 33 50.7 +0.4
        1.9nm,0.9s,baz=77,slow=10,SNR=4.6
        1.9nm,0.9s
KIEV  Kiev               38.30 348   P      P      14 33 52.9 +0.7
KIEV  Kiev               38.30 348  ⇑P      P      14 33 53.2 +1.0
AKASG Malin Array Be     38.30 348   P      P      14 33 53.5 +1.3
        0.8nm,0.5s,baz=169,slow=7.1,SNR=8.2
AKASG                                LR     LR     14 51 32.7
        comp=Z,70nm,19.6s,baz=185,slow=39
        0.8nm,0.5s
AKBB  Malin Array Si     38.30 348   P      P      14 33 53.0 +0.8
KOLS  Kolonicke sedl     38.52 340  eP      P      14 33 59.0 +4.8
AB31  Akbulak array      39.02  20   P      P      14 33 59.1 +0.8
ABKAR Akbulak array      39.02  20          P      14 33 59.1 +0.8
KKAR  Karatay Array      39.07  35   P      P      14 34 00.7 +1.7
BELG  Belogornoye        39.21   7   LR     LR     14 51 09.3
        comp=Z,176nm,19.6s,baz=208,slow=38
VYHS  Vyhne              39.36 337  eP      P      14 34 05.5 +4.2
AKTO  Aktyubinsk         39.45  17   LR     LR     14 53 05.5
        comp=Z,119nm,19.3s,baz=218,slow=40
SOKA  Soboth             39.53 332  eP      P      14 34 07.0 +4.2
        6.6nm,1.2s
OBKA  Obir               39.63 331  eP      P      14 34 06.3 +2.7
        14nm,1.8s
LANS  Liptovska Anna     39.67 338  eP      P      14 34 08.6 +4.7
TSUM  Tsumeb             39.70 216   LR     LR     14 50 21.1
        comp=Z,432nm,19.2s,baz=7.0,slow=36
PALK  Pallekele          39.72  95   LR     LR     14 47 54.7
        comp=Z,184nm,19.2s,baz=275,slow=32
ARSA  Arzberg            39.74 333 i P      P      14 34 07.1 +2.6
        5.2nm,1.1s
MODS  Modra-Piesok       39.88 336  eP      P      14 34 08.7 +3.1
JAVC  Velka Javorina     40.11 336  eP      P      14 34 09.0 +1.5
CONA  Conrad Observa     40.12 334 i P      P      14 34 11.8 +4.2
        8.7nm,1.5s
MYKA  Terra Mystica      40.15 331  eP      P      14 34 11.9 +4.0
        1.0nm,0.4s
STAL  STALIGIAL          40.33 330   P      P      14 34 09.9 +0.5
OJC   Ojcow              40.45 339   P      P      14 34 11.3 +1.0
MOA   Molln              40.76 333 i P      P      14 34 15.6 +2.8
        8.6nm,1.3s
ABTA  Abfaltersbach      40.77 330 i P      P      14 34 15.6 +2.5
        6.1nm,1.7s
KRUC  Moravsky           40.78 335  eP      P      14 34 14.3 +1.3
VRAC  Vranov             40.90 336  eP      P      14 34 15.5 +1.5
MORC  Moravsky Berou     40.90 337  eP      P      14 34 15.4 +1.3
BIOA  Bad Ischl, Aus     40.92 332 i P      P      14 34 18.2 +4.0
        2.6nm,0.8s
LBTB  Lobatse            41.02 201   LR     LR     14 51 35.3
        comp=Z,453nm,21.2s,baz=32,slow=37
AAK   Ala-Archa          41.12  39   LR     LR     14 54 15.1
        comp=Z,590nm,18.9s,baz=241,slow=40
LESA  Schwarzleotal      41.18 331  eP      P      14 34 19.0 +2.6
        0.2nm,0.5s
WTTA  Wattenberg         41.56 330 i P      P      14 34 23.5 +3.8
        8.8nm,1.7s
WATA  Walderalm          41.64 330 i P      P      14 34 23.5 +3.2
        3.0nm,0.8s
SQTA  Sankt Quirin       41.74 330  eP      P      14 34 24.7 +3.6
        4.9nm,1.1s
GEC2  GERESS Array S     41.75 333          P      14 34 20.3 -0.8
GEC2                                 IAmb   IAmb   14 34 25.1
        comp=Z,11nm,1.3s
GERES GERESS Array B     41.75 333   P      P      14 34 19.4 -1.8
GERES GERESS Array B     41.75 333   P      P      14 34 21.5 +0.4
        comp=Z,2.0nm,1.0s,baz=156,slow=6.2,SNR=10
        comp=Z,2.0nm,1.0s
FETA  Feichten           41.84 329  eP      P      14 34 26.2 +4.2
        comp=Z,3.4nm,0.9s
MOTA  Moosalm            41.88 330  eP      P      14 34 25.5 +3.2
        comp=Z,6.4nm,1.4s
BOOM  Boomskoye usch     41.92  40          P      14 34 23.9 +1.1
BOOM                                 IAmb   IAmb   14 34 26.5
        comp=Z,12nm,1.4s
DAVOX Davos/Dischmat     42.11 328   LR     LR     14 54 28.4
        comp=Z,91nm,19.1s,baz=79,slow=40
MNK   Minsk              42.17 349 i P      P      14 34 19.4 -4.9
        comp=E,12nm,0.6s
MNK                                i P      P      14 34 19.4 -4.9
        comp=N,14nm,0.9s
MNK                                i P      P      14 34 19.4 -4.9
        comp=Z,9.0nm,0.6s,baz=161
MNK                                i PP     PP     14 35 56.0 -5.9
MNK                                i PPP    PPP    14 36 25.9
MNK                                i S      S      14 40 38.2 -5.9
MNK                                i SS     SS     14 43 44.6 -7.3
MNK                                i SSS    SSS    14 44 16.1
MNK                                i LQ     LQ     14 47 41.1
MNK                                i LR     LR     14 51 14.8
MNK                                i LRM    MLR    14 53 53.2
        comp=E,219nm,13.3s
MNK                                i LRM    MLR    14 54 02.6
        comp=Z,50nm,16.0s
MNK                                i LRM    MLR    14 54 07.0
        comp=N,382nm,18.4s
DAVA  Damuels            42.45 329  eP      P      14 34 29.0 +2.1
        comp=N,11nm,1.4s
KDJ   Kajisay            42.51  41          P      14 34 29.0 +1.5
KDJ                                  IAmb   IAmb   14 34 31.0
        comp=Z,8.8nm,1.2s
TARG  Taragay, Kyrgy     42.70  42   P      P      14 34 31.1 +1.7
TARG                                 IAmb   IAmb   14 34 32.8
        comp=Z,7.9nm,1.3s
BRG   Berggiesshubel     43.19 335  eP      P      14 34 35.4 +2.8
BRG                                  Amp           14 34 36.3
        comp=Z,2.9nm,1.0s
SENIN Lac Senin/Sane     43.20 326          P      14 34 33.3 +0.2
SENIN                                IAmb   IAmb   14 34 37.9
        comp=Z,6.0nm,0.9s
CLL   Collm              43.90 335  eP      P      14 34 40.0 +1.6
CLL                                  AMS    AMS    14 53 00.0
        comp=Z,100nm,22.0s
ECH   Echery             44.44 328   P      P      14 34 42.5 -0.3
ECH                                  IAmb   IAmb   14 34 46.4
        comp=Z,10nm,1.4s
BOSA  Boshof             44.45 200   LR     LR     14 52 15.9
        comp=Z,261nm,19.0s,baz=29,slow=35
CEST  Esterri de Car     44.74 318          P      14 34 45.5 +0.1
CEST                                 IAmb   IAmb   14 34 52.4
        comp=Z,11nm,1.1s
ARTI  Arti               44.92  14   P      P      14 34 46.9 +0.4
ARTI                                 IAmb   IAmb   14 34 53.1
        comp=Z,5.8nm,0.9s
ARTI  Arti               44.92  14   LR     LR     14 56 56.4
        comp=Z,126nm,20.4s,baz=208,slow=41
DBIC  Dimbokro           45.38 266   P      P      14 34 49.6 -1.1
        comp=Z,4.0nm,0.9s,baz=106,slow=7.4,SNR=1.7
DBIC                                 LR     LR     14 53 33.9
        comp=Z,294nm,18.3s,baz=81,slow=36
        comp=Z,4.0nm,0.9s
MDT   Midelt             45.55 303   LR     LR     14 55 58.1
        comp=Z,324nm,19.1s,baz=90,slow=39
BVAR  Borovoye Array     45.94  25   P      P      14 34 56.0 +1.4
        comp=Z,1.6nm,0.8s,baz=205,slow=5.9,SNR=5.3
BVAR                                 LR     LR     14 55 38.6
        comp=Z,141nm,18.5s,baz=218,slow=38
        comp=Z,1.6nm,0.8s
ESDC  Sonseca Array      47.11 312   P      P      14 35 04.9 +0.8
        comp=Z,2.5nm,1.1s,baz=101,slow=5.9,SNR=9.0
ESDC                                 LR     LR     14 55 12.4
        comp=Z,80nm,20.5s,baz=114,slow=37
        comp=Z,2.5nm,1.1s
MAKZ  Makanchi           47.85  38          P      14 35 10.4 +0.7
MAKZ                                 IAmb   IAmb   14 35 12.3
        comp=Z,7.3nm,1.1s
MKAR  Makanchi Array     48.03  38          P      14 35 11.5 +0.4
MKAR  Makanchi Array     48.03  38   P      P      14 35 12.4 +1.3
        comp=Z,3.4nm,1.0s,baz=234,slow=7.3,SNR=18
        comp=Z,3.4nm,1.0s
KURBB Kurchatov Arra     48.05  32   P      P      14 35 12.8 +1.6
        comp=Z,3.0nm,1.0s,baz=236,slow=8.0,SNR=12
        comp=Z,3.0nm,1.0s
KURK  Kurchatov          48.16  32          P      14 35 13.1 +1.2
ZAA0  Zalesovo Array     53.12  31          P      14 35 49.3  0.0
ZAA0                                 IAmb   IAmb   14 35 51.0
        comp=Z,5.3nm,1.1s
ZALV  Zalesovo Beam      53.12  31          P      14 35 49.4  0.0
ZALV  Zalesovo Beam      53.12  31   P      P      14 35 50.0 +0.6
        comp=Z,1.9nm,0.8s,baz=296,slow=11,SNR=7.5
ZALV                                 LR     LR     15 01 07.4
        comp=Z,194nm,19.6s,baz=226,slow=39
        comp=Z,1.9nm,0.8s
CMAR  Chiang Mai Arr     55.95  77   P      P      14 36 11.4 +0.8
CMAR  Chiang Mai Arr     55.95  77   P      P      14 36 13.0 +2.5
        comp=Z,2.5nm,0.9s,baz=286,slow=5.7,SNR=4.2
CMAR                                 LR     LR     14 59 28.5
        comp=Z,30nm,21.8s,baz=285,slow=35
        comp=Z,2.5nm,0.9s
GTA   Gaotai             57.71  52  eP      P      14 36 24.3 +1.4
GTA                                  sP     sP     14 36 32.8 +5.4
GTA                                  pmax   pmax
        comp=Z,6.0nm,1.5s
GTA                                  LR     LR
        comp=N,280nm,19.3s
GTA                                  LR     LR
        comp=E,150nm,19.3s
GTA                                  LR     LR
        comp=Z,180nm,19.3s
NRIK  Noril'sk           63.07  17   LR     LR     15 08 27.2
        comp=Z,175nm,19.2s,baz=222,slow=40
SONM  Songino Array      63.79  43   P      P      14 37 05.1 +0.9
SONM                                 IAmb   IAmb   14 37 30.1
        comp=Z,4.6nm,1.4s
SONM  Songino Array      63.79  43   P      P      14 37 04.9 +0.7
        comp=Z,0.8nm,0.4s,baz=250,slow=5.8,SNR=6.0
SONM                                 LR     LR     15 08 29.7
        comp=Z,330nm,18.5s,baz=270,slow=39
        comp=Z,0.8nm,0.4s
SUMG  Summit             74.00 342   P      P      14 38 08.4 +0.8
TIXI  Tiksi              76.71  19   LR     LR     15 16 05.1
        comp=Z,125nm,18.9s,baz=302,slow=39
HEH   HeiHe              77.63  41  eP      P      14 38 29.0 +0.7
HEH                                  pmax   pmax
        comp=Z,4.0nm,1.1s
YAK   Yakutsk            77.70  29   LR     LR     15 19 01.8
        comp=Z,98nm,18.1s,baz=265,slow=40
SFJD  Kangerlussuaq      78.25 336   LR     LR     15 15 31.5
        comp=Z,43nm,18.5s,baz=82,slow=38
RCBR  Riachuelo          78.48 261   LR     LR     15 09 55.1
        comp=Z,30nm,21.1s,baz=66,slow=33
KAPI  Kappang            80.49  97   LR     LR     15 11 27.4
        comp=Z,55nm,19.3s,baz=276,slow=34
KLR   Kul'dur            80.56  42   LR     LR     15 19 01.2
        comp=Z,177nm,20.0s,baz=290,slow=39
USRK  Ussuriysk Ar.      81.60  47   LR     LR     15 19 15.1
        comp=Z,130nm,20.3s,baz=280,slow=39
MAW   Mawson             82.44 172   LR     LR     15 09 09.1
        comp=Z,60nm,21.6s,baz=352,slow=31
JNU   Nakatsue           82.85  58   LR     LR     15 21 18.9
        comp=Z,64nm,21.2s,baz=289,slow=40
DAV   Davao City (W)     83.35  84   LR     LR     15 18 33.0
        comp=Z,25nm,18.0s,baz=284,slow=37
NWAO  Narrogin (SRO)     86.20 125   LR     LR     15 12 12.7
        comp=Z,70nm,18.2s,baz=24,slow=32
FRB   Frobisher Bay      86.32 335   LR     LR     15 21 36.8
        comp=Z,37nm,18.2s,baz=115,slow=38
SEY   Seymchan           87.59  25   LR     LR     15 24 13.7
        comp=Z,109nm,19.2s,baz=303,slow=40
MJAR  Matsushiro Arr     87.94  53   LR     LR     15 23 47.0
        comp=Z,98nm,19.1s,baz=296,slow=39
MA2   Magadan            88.28  29   LR     LR     15 24 35.8
        comp=Z,82nm,18.2s,baz=300,slow=40
SCHQ  Schefferville      88.94 327   LR     LR     15 19 30.3
        comp=Z,25nm,19.0s,baz=110,slow=36
ASAJ  Asahikawa          89.02  45   LR     LR     15 25 21.1
        comp=Z,101nm,18.0s,baz=296,slow=40
FITZ  Fitzroy Crossi     89.35 109   P      P      14 39 28.3 -0.7
FITZ                                 IAmb   IAmb   14 39 28.6
        comp=Z,2.6nm,1.4s
SNAA  Sanae              89.82 193   LR     LR     15 16 53.0
        comp=Z,90nm,19.8s,baz=49,slow=34
BDFB  Brasilia           92.42 255   LR     LR     15 16 01.5
        comp=Z,80nm,21.4s,baz=41,slow=32
PETK  Petropavlovsk-     94.64  33   LR     LR     15 26 26.6
        comp=Z,61nm,18.5s,baz=280,slow=38
ASAR  Alice Springs      98.11 112   LR     LR     15 25 46.6
        comp=Z,45nm,18.3s,baz=278,slow=36
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TAP ***30*** *14:31:34.8, 24°.93N×122°.45E, h24km, ML2.5, C*

JMA ***30*** *14:31:35.7±0.1, 24°.8N±0°.4×122°.5E±0°.2, h34km±1km, MV2.2/7, NW OFF ISHIGAKIJIMA IS*

ISC 30 14:31:33.8±1.2**, 24°.93N**±0°.03×**122°.50E**±0°.03**, h20km**±5km**, n68,** σ**0°.64**/125**, Taiwan region**

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Code  Station Name        Δ°   AZ°   Phase ID        Time      Res
                                     Op     ISC      h  m  s   ISC
TWB1  Santiao Chiao       0.47 280 i P      Pb     14 31 43.3 -0.1
TWB1                               i S      Sb     14 31 50.2 +0.3
EGS                       0.53 261 i P      Pb     14 31 44.6 +0.2
EGS                                  S      Sb     14 31 51.3 -0.3
EOS2  EOS2                0.56 206  eP      Pn     14 31 45.7 -0.8
EOS2                                eS      Sb     14 31 53.5 +0.9
SXI1  Grass Mountain      0.59 286 i P      Pn     14 31 46.5 -0.7
SXI1                               i S      Sb     14 31 54.7 +1.0
TIPB  Shuangxi            0.62 274 i P      Pb     14 31 46.7 +0.7
TIPB                                 S      Sb     14 31 54.2 -0.1
JYNG  Yonagunijimaku      0.62 140   P      Pn     14 31 47.4  0.0
JYNG                                eS      Sn     14 31 55.6 -1.2
YOJ   Yonaguni jima       0.66 135   P      Pn     14 31 48.1 +0.2
YOJ   Yonaguni jima       0.66 135   S      Sb     14 31 53.9 -1.4
YOJ   Yonaguni jima       0.66 135   P      Pn     14 31 47.9  0.0
YOJ   Yonaguni jima       0.66 135 i P      Pn     14 31 48.1 +0.2
YOJ                                  S      Sn     14 31 57.3 -0.3
EOS3  EOS3                0.66 195 i P      Pn     14 31 47.8 -0.1
EOS3                               i S      Sn     14 31 57.9 +0.3
NWF   Wu-fen Shan         0.67 282   P      Pn     14 31 47.9 -0.3
NWF                                i S      Sb     14 31 56.5 +0.6
WFSB  Wu-fen Shan         0.67 282  eP      Pn     14 31 47.7 -0.5
WFSB                                 S      Sb     14 31 56.5 +0.8
TWC   Suao                0.68 242 i P      Pb     14 31 46.5 -0.4
TWC                                  S      Sb     14 31 54.5 -1.3
ESAO  Su ao               0.69 240 i P      Pb     14 31 47.2 -0.1
ESAO                                 S      Sb     14 31 57.1 +0.7
TNOU  National Taiwa      0.70 289 i P      Pn     14 31 48.1 -0.4
TNOU                                eS      Sb     14 31 57.2 +0.6
NDS   Dongshan            0.77 248 i P      Pb     14 31 48.2 -0.4
NDS                                  S      Sb     14 31 57.0 -1.6
TWE   Neicheng            0.79 255 i P      Pb     14 31 48.4 -0.4
TWE                                i S      Sb     14 31 58.1 -0.9
PCYT  Pengchaiyu          0.80 331 i P      Pn     14 31 49.9 -0.1
PCYT                                eS      Sn     14 32 00.4 -0.8
EWUT  Wuta                0.82 234 i P      Pb     14 31 49.3  0.0
EWUT                               i S      Sb     14 31 59.6 -0.2
EOS4  EOS4                0.82 192 i P      Pn     14 31 50.9 +1.0
EOS4                               i S      Sn     14 32 01.8 +0.6
TWA   Mucha               0.84 274 i P      Pn     14 31 50.1 -0.3
TWA                                i S      Sb     14 32 01.4 +0.9
FUSB  Fushanzhiwuyua      0.85 259 i P      Pn     14 31 50.6  0.0
FUSB                                 S      Sb     14 32 00.4 -0.5
ENA   Nanau               0.85 234 i P      Pb     14 31 50.1 +0.1
ENA                                i S      Sb     14 32 00.1 -0.8
YM08  YM08                0.87 287   P      Pb     14 31 50.4 +0.2
YM08                                eS      Sn     14 32 03.2 +0.2
YM01  YM01                0.87 285 i P      Pn     14 31 51.1 +0.1
YM01                                eS      Sn     14 32 03.5 +0.3
NHDH  Xindian Distri      0.89 272   P      Pb     14 31 50.2 -0.3
NHDH                               i S      Sb     14 32 02.0 +0.1
TWY   Chenhua             0.89 293 i P      Pb     14 31 50.2 -0.3
TWY                                  S      Sn     14 32 03.0 -0.4
ENTT  Nioudou             0.90 252 i P      Pn     14 31 51.3  0.0
ENTT                               i S      Sb     14 32 02.6 +0.3
ZUZH  Zhuzihu             0.90 285 i P      Pb     14 31 50.4 -0.3
ZUZH                                eS      Sb     14 32 01.5 -0.9
EAHA  Aohua               0.92 230 i P      Pb     14 31 50.9 -0.1
EAHA                               i S      Sb     14 32 02.5 -0.2
NWLT  Wulai               0.92 261 i P      Pn     14 31 51.8 +0.1
NWLT                                 S      Sb     14 32 02.5 -0.5
TATO  Taipei              0.92 273   P      Pn     14 31 52.9 +1.3
TATO  Taipei              0.92 273   S      Sb     14 32 03.3 +0.4
LATG  Datong              0.97 246 i P      Pn     14 31 52.1 -0.3
LATG                                 S      Sb     14 32 04.6 +0.2
TWS1  Kuangyinshan        1.00 280  eP      Pn     14 31 52.1 -0.5
TWS1                                 S      Sb     14 32 05.8 +0.7
YHNB  Yeheng              1.06 256   P      Pb     14 31 53.6 +0.1
YHNB  Yeheng              1.06 256   S      Sb     14 32 07.3 +0.4
YHNB  Yeheng              1.06 256 i P      Pn     14 31 53.3 -0.3
YHNB                                 S      Sb     14 32 06.7 -0.2
NSK   Sanguang            1.07 257 i P      Pb     14 31 54.0 +0.4
NSK                                i S      Sb     14 32 06.4 -0.9
NACB  Ninganchiao         1.12 228   P      Pn     14 31 54.1 -0.2
NACB  Ninganchiao         1.12 228   S      Sn     14 32 08.6 -0.5
NACB  Ninganchiao         1.12 228 i P      Pn     14 31 54.0 -0.3
NACB                                 S      Sn     14 32 06.9 -2.1
NNSB  Datong              1.14 244 i P      Pn     14 31 54.2 -0.5
NNSB                                 S      Sn     14 32 08.3 -1.4
NNS   Nan Shan            1.14 245 i P      Pn     14 31 54.5 -0.2
NNS                                i S      Sn     14 32 08.2 -1.5
ETLH  Xiulin Townshi      1.18 233 i P      Pn     14 31 55.2  0.0
ETLH                               i S      Sn     14 32 10.2 -0.4
TWD   Chiawan             1.18 225 i P      Pb     14 31 55.8 +0.3
TWD                                  S      Sn     14 32 10.7 +0.1
KSHI  Guanxi Townshi      1.22 263  eP      Pn     14 31 55.7 +0.1
KSHI                                eS      Sb     14 32 12.9 +1.5
IRIF  Iriomote-Funau      1.26 118  eP      Pb     14 31 57.5 +0.6
NFF   Wufeng Townshi      1.29 257 i P      Pn     14 31 56.8  0.0
NFF                                  S      Sn     14 32 13.1 -0.5
FUSS  Fushou              1.33 240 i P      Pb     14 31 58.6 +0.4
FUSS                               i S      Sn     14 32 14.8 +0.1
LXIB  Xiulin Townshi      1.34 228 i P      Pb     14 31 58.3 -0.1
LXIB                                 S      Sb     14 32 15.7 +0.5
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WHF	Hehuan Shan	1.37	236	*i* P	Pb	14 31 59.4	+0.3
WHF				S	Sn	14 32 14.5	-1.4
LIOB	Emei	1.38	259	P	Pb	14 31 58.5	-0.4
LIOB				*e*S	Sn	14 32 15.9	+0.3
SHUL	Shoufeng	1.42	217	*e*P	Pb	14 31 59.6	-0.1
SHUL				*e*S	Sn	14 32 17.2	+0.6
ESL	Shilin	1.48	222	*e*P	Pn	14 31 58.9	-0.3
ESL				*e*S	Sn	14 32 17.9	0.0
OWD	Renai	1.55	232	*i* P	Pb	14 32 02.0	+0.1
OWD				*i* S	Sb	14 32 22.0	+0.8
WHP	Taichung City	1.56	246	*i* P	Pb	14 32 03.5	+1.5
WHP				*e*S	Sb	14 32 21.8	+0.5
WUSB	Renai	1.57	234	*i* P	Pb	14 32 02.8	+0.5
WUSB				S	Sb	14 32 22.1	+0.4
WARBT	Fenglin Townsh	1.58	220	*e*P	Pn	14 32 01.4	+0.8
WARBT				*e*S	Sn	14 32 21.3	+0.8
WCS	Beigang Elemen	1.69	239	*e*P	Pb	14 32 04.7	+0.5
WCS				*e*S	Sb	14 32 24.8	-0.3
VWDT	VWDT	1.71	227	*i* P	Pb	14 32 04.1	-0.4
VWDT				*e*S	Sn	14 32 23.4	-0.2
HGSD	Ruisui	1.74	215	*e*P	Pn	14 32 03.4	+0.6
HGSD				*e*S	Sn	14 32 24.2	-0.2
SSLB	Suanglung	1.81	232	P	Pb	14 32 06.2	-0.1
SSLB	Suanglung	1.81	232	*i* P	Pb	14 32 06.4	0.0
SSLB				*e*S	Sn	14 32 26.9	+0.6
WHYT	Xinyi Township	1.94	231	*i* P	Pb	14 32 08.3	-0.2
WHYT				*e*S	Sb	14 32 31.8	-0.6
ALS	Alishan	2.10	228	*i* P	Pb	14 32 10.6	-0.8
ALS				*e*S	Sn	14 32 34.5	+0.8
CHN5	Tsauling	2.13	232	*i* P	Pb	14 32 11.5	-0.3
CHN5				*e*S	Sb	14 32 36.9	-0.8

IDC 30 14:32:16.3±1.6**, 3°.82N×93°.49E, h0km, mb3.5**/5**, mbtmp3.5**/5**, Error ellipse: s-maj=85.5km s-min=24.7km az=63.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	43.90	349	P	P	14 40 24.4	-0.3
	0.4nm,0.5s,baz=166,slow=6.9,SNR=4.9 0.4nm,0.5s						
WRA	Warramunga Arr	46.55	122	P	P	14 40 45.9	-0.3
	0.2nm,0.7s,baz=297,slow=8.5,SNR=1.4 0.2nm,0.7s						
ASAR	Alice Springs	47.92	127	P	P	14 40 56.7	-0.1
	0.3nm,1.0s,baz=301,slow=8.2,SNR=2.3 0.3nm,1.0s						
KURBB	Kurchatov Arra	48.31	347	P	P	14 40 59.4	0.0
	0.4nm,0.4s,baz=171,slow=6.5,SNR=5.1 0.4nm,0.4s						
VNDA	Vanda	89.11	168	P	P	14 45 13.2	+0.1
	0.4nm,0.5s,baz=304,slow=7.3,SNR=7.6 0.4nm,0.5s						

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*TAP **30** 14:54:22.9, 24°.93N×122°.48E, h27km, ML3.0, D*
*JMA **30** 14:54:23.8±0.1, 24°.9N±0°.8×122°.5E±0°.5, h26km±3km, MV2.5/8, NW OFF ISHIGAKIJIMA IS*
ISC 30 14:54:23.0±1.0**, 24°.92N**±0°.03×**122°.49E**±0°.02**, h29km**±9km**, n92, σ0s.84**/175**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao	0.46	282	*i* P	Pb	14 54 32.0	-0.7
TWB1				*i* S	Sb	14 54 38.4	-1.0
EGS		0.51	262	*i* P	Pb	14 54 32.9	-0.6
EGS				*i* S	Sb	14 54 41.2	+0.6
EOS2	EOS2	0.55	205	*i* P	Pb	14 54 34.1	+0.1
EOS2				S	Sb	14 54 42.4	+0.8
SXI1	Grass Mountain	0.58	288	*i* P	Pb	14 54 34.7	-0.1
SXI1				S	Sb	14 54 42.8	0.0
TIPB	Shuangxi	0.60	276	*i* P	Pb	14 54 35.0	0.0
TIPB				*i* S	Sb	14 54 43.2	-0.1
JYNG	Yonagunijimaku	0.62	138	P	Pb	14 54 35.4	0.0
JYNG				*e*S	Sb	14 54 43.3	-0.6
EOS3	EOS3	0.64	194	P	Pb	14 54 35.9	+0.2
EOS3				S	Sn	14 54 45.9	+0.7
TWC	Suao	0.65	242	*i* P	Pb	14 54 35.1	-0.8
TWC				*i* S	Sb	14 54 43.6	-1.1
NWF	Wu-fen Shan	0.66	284	*i* P	Pn	14 54 36.6	+0.2
NWF				S	Sb	14 54 44.8	-0.1
WFSB	Wu-fen Shan	0.66	284	*i* P	Pn	14 54 36.3	0.0
WFSB				S	Sb	14 54 45.0	+0.1
YOJ	Yonaguni jima	0.66	133	P	Pb	14 54 35.7	-0.3
YOJ	Yonaguni jima	0.66	133	P	Pb	14 54 35.8	-0.1
YOJ				*e*S	Sb	14 54 44.1	-0.8
YOJ	Yonaguni jima	0.66	133	*i* P	Pb	14 54 35.5	-0.4
YOJ				*e*S	Sb	14 54 45.4	+0.6
ESAO	Su ao	0.67	240	*i* P	Pb	14 54 35.6	-0.6
ESAO				*i* S	Sb	14 54 44.4	-0.9
ILA	Ilan	0.69	258	*e*P	Pn	14 54 37.0	+0.3
ILA				*e*S	Sn	14 54 46.7	+0.3
TNOU	National Taiwa	0.69	290	*i* P	Pn	14 54 36.5	-0.2
TNOU				S	Sb	14 54 45.4	-0.3
NDS	Dongshan	0.75	248	*e*P	Pb	14 54 36.0	-1.6
NDS				*e*S	Sb	14 54 45.9	-1.6
TWE	Neicheng	0.77	256	*i* P	Pb	14 54 37.5	-0.3
TWE				*i* S	Sb	14 54 47.2	-0.7
EWUT	Wuta	0.80	234	*i* P	Pb	14 54 38.0	-0.3
EWUT				*i* S	Sb	14 54 48.1	-0.6
PCYT	Pengchaiyu	0.80	332	*i* P	Pn	14 54 38.2	-0.1
PCYT				*e*S	Sn	14 54 49.0	-0.4
EOS4	EOS4	0.81	191	*i* P	Pb	14 54 38.3	+0.1
EOS4				*e*S	Sb	14 54 48.5	-0.1
TWA	Mucha	0.82	275	*i* P	Pn	14 54 38.7	+0.1
TWA				*i* S	Sn	14 54 49.7	-0.1
FUSB	Fushanzhiwuyua	0.83	259	*i* P	Pb	14 54 38.2	-0.7
FUSB				*e*S	Sn	14 54 50.1	0.0
ENA	Nanau	0.83	235	*i* P	Pb	14 54 38.3	-0.6
ENA				*i* S	Sb	14 54 49.0	-0.8
YM08	YM08	0.86	289	*i* P	Pb	14 54 38.9	-0.4
YM08				S	Sb	14 54 50.3	-0.1
NHDH	Xindian Distri	0.87	273	*i* P	Pn	14 54 38.4	-0.9
NHDH				*i* S	Sb	14 54 50.8	-0.1
ENTT	Nioudou	0.88	252	*i* P	Pn	14 54 39.5	+0.1
ENTT				*i* S	Sb	14 54 51.0	-0.1
ZUZH	Zhuzihu	0.89	286	*e*P	Pn	14 54 38.8	-0.8
ZUZH				*e*S	Sn	14 54 51.4	-0.1
EAHA	Aohua	0.90	229	*i* P	Pn	14 54 39.2	-0.4
EAHA				*i* S	Sb	14 54 51.6	+0.1
NWLT	Wulai	0.90	261	*i* P	Pn	14 54 39.9	+0.1
NWLT				S	Sn	14 54 51.9	+0.1
TATO	Taipei	0.91	274	P	Pb	14 54 40.7	+0.6
TATO	Taipei	0.91	274	S	Sn	14 54 51.8	0.0
ANP	Anpu	0.92	287	*i* P	Pb	14 54 40.7	+0.4
ANP				*e*S	Sn	14 54 53.4	+1.2
LATG	Datong	0.95	247	*i* P	Pn	14 54 40.5	0.0
LATG				*i* S	Sb	14 54 52.2	-1.0
NTST	Danshui	0.97	285	P	Pn	14 54 39.9	-0.8
NTST				*e*S	Sn	14 54 54.1	+0.6
TWS1	Kuangyinshan	0.99	281	*i* P	Pb	14 54 41.1	-0.3
TWS1				S	Sn	14 54 54.5	+0.7
YHNB	Yeheng	1.04	257	P	Pb	14 54 42.3	-0.1
YHNB	Yeheng	1.04	257	*e*P	Pb	14 54 42.3	-0.1
YHNB				S	Sb	14 54 55.5	-0.1
NSK	Sanguang	1.05	257	*i* P	Pn	14 54 42.0	+0.2
NSK				*i* S	Sn	14 54 55.5	0.0
ETL	Fush Village	1.09	226	*e*P	Pb	14 54 43.3	+0.1
ETL				*e*S	Sb	14 54 57.8	+0.8
NACB	Ninganchiao	1.10	228	P	Pn	14 54 42.0	-0.3
NACB	Ninganchiao	1.10	228	S	Sn	14 54 55.9	-0.6
NACB	Ninganchiao	1.10	228	*i* P	Pn	14 54 42.1	-0.3
NACB				S	Sn	14 54 56.4	-0.2
NNSB	Datong	1.11	244	*i* P	Pn	14 54 43.2	+0.5
NNSB				*e*S	Sb	14 54 58.1	+0.2
NNS	Nan Shan	1.12	245	*i* P	Pn	14 54 42.9	+0.2
NNS				*i* S	Sn	14 54 57.5	+0.3
ETLH	Xiulin Townshi	1.15	233	*i* P	Pn	14 54 43.7	+0.5
ETLH				*e*S	Sb	14 55 00.7	+1.7
TWD	Chiawan	1.16	224	*i* P	Pb	14 54 44.0	-0.4
TWD				*e*S	Sb	14 54 59.7	+0.6
NCUH	Zhongli	1.18	273	*e*P	Pb	14 54 44.7	-0.1
NCUH				*e*S	Sb	14 55 00.5	+0.8
KSHI	Guanxi Townshi	1.20	264	*i* P	Pb	14 54 45.3	+0.3
KSHI				*e*S	Sb	14 54 60.0	-0.2
IRIF	Iriomote-Funau	1.27	117	*e*S	Sb	14 55 02.1	-0.2
NFF	Wufeng Townshi	1.27	257	*i* P	Pb	14 54 45.7	-0.7
NFF				*e*S	Sn	14 55 01.1	+0.1
ETM	Tongmen	1.31	224	*i* P	Pn	14 54 46.1	+0.8
ETM				*e*S	Sb	14 55 03.0	-0.4
FUSS	Fushou	1.31	240	*i* P	Pb	14 54 46.7	-0.4
FUSS				*e*S	Sb	14 55 04.5	+0.8
LXIB	Xiulin Townshi	1.32	228	*i* P	Pn	14 54 46.2	+0.6
LXIB				S	Sb	14 55 05.6	+1.7
WHF	Hehuan Shan	1.35	236	*i* P	Pb	14 54 47.2	-0.7
WHF				*i* S	Sb	14 55 04.9	-0.1
LIOB	Emei	1.36	259	*i* P	Pb	14 54 47.5	-0.3
LIOB				*e*S	Sn	14 55 03.8	+0.6
TWT	Tachien	1.36	241	*e*P	Pb	14 54 48.8	+0.9
TWT				*e*S	Sb	14 55 05.1	+0.1
TDCB	Techi	1.38	242	P	Pb	14 54 48.0	-0.1
TDCB				*e*S	Sb	14 55 06.2	+0.8
NSTT	Nanjuang	1.38	258	*e*P	Pb	14 54 48.4	+0.3
NSTT				*e*S	Sn	14 55 04.3	+0.8
SHUL	Shoufeng	1.40	217	*e*P	Pb	14 54 48.2	-0.3
SHUL				*e*S	Sn	14 55 05.0	+0.9
ESL	Shilin	1.46	221	*i* P	Pn	14 54 47.2	-0.1
ESL				*e*S	Sn	14 55 06.0	+0.6
OWD	Renai	1.53	232	*e*P	Pb	14 54 50.2	-0.5
OWD				*e*S	Sb	14 55 10.0	+0.2
WHP	Taichung City	1.54	246	*i* P	Pb	14 54 51.3	+0.4
WHP				*e*S	Sn	14 55 08.9	+1.3
WUSB	Renai	1.55	234	*e*P	Pb	14 54 51.0	-0.1
WUSB				*e*S	Sb	14 55 11.2	+0.8
WARBT	Fenglin Townsh	1.56	220	*i* P	Pn	14 54 49.4	+0.7
WARBT				*e*S	Sb	14 55 10.0	-0.5
EGFH	Guangfu	1.57	218	*e*P	Pn	14 54 49.7	+0.7
EGFH				*e*S	Sn	14 55 08.9	+0.6
JIJ	Ishigaki jima	1.61	110	*e*P	Pb	14 54 51.1	-0.9
WCS	Beigang Elemen	1.67	240	*e*P	Pb	14 54 52.0	-1.0
WCS				*e*S	Sb	14 55 13.0	-0.7
VWDT	VWDT	1.69	227	*e*P	Pb	14 54 52.5	-0.8
VWDT				*e*S	Sn	14 55 11.4	+0.3
HGSD	Ruisui	1.72	215	*i* P	Pn	14 54 51.4	+0.5
HGSD				*e*S	Sn	14 55 11.8	-0.1
EHYH	Wanrong	1.76	217	P	Pn	14 54 52.2	+0.8
EHYH				*e*S	Sn	14 55 14.2	+1.3
EHY	Hungye	1.76	217	*e*P	Pn	14 54 52.6	+1.1
EHY				*e*S	Sn	14 55 13.4	+0.5
SSLB	Suanglung	1.79	232	P	Pb	14 54 54.5	-0.7
SSLB	Suanglung	1.79	232	*i* P	Pn	14 54 52.5	+0.6
SSLB				*e*S	Sn	14 55 14.9	+1.2
TYC	Yuchr	1.79	236	*i* P	Pb	14 54 54.0	-1.2
TYC				*e*S	Sb	14 55 16.4	-0.8
YULB	Yu-li	1.86	216	P	Pn	14 54 53.0	0.0
YULB				*e*S	Sn	14 55 14.9	-0.6
TWF1	Yuli	1.90	215	*i* P	Pn	14 54 54.0	+0.6
TWF1				*e*S	Sn	14 55 15.4	-0.9
WHYT	Xinyi Township	1.92	231	*i* P	Pb	14 54 55.9	-1.5
WHYT				*e*S	Sb	14 55 19.5	-1.4
WNT	Mingjian	1.94	238	*e*P	Pb	14 54 56.5	-1.1
WNT				*e*S	Sb	14 55 21.3	-0.1
FULB	Fuli	2.03	213	*e*P	Pn	14 54 56.5	+1.3
FULB				*e*S	Sn	14 55 20.3	+0.7
ALS	Alishan	2.08	228	*i* P	Pb	14 54 58.5	-1.7
ALS				*e*S	Sn	14 55 22.7	+1.5
CHN5	Tsauling	2.11	232	*i* P	Pb	14 54 58.9	-1.7
CHN5				*e*S	Sb	14 55 24.8	-1.6
EHD	Haiduan	2.11	214	*i* P	Pn	14 54 56.5	+0.1
EHD				*e*S	Sn	14 55 20.5	-1.2
WDLH	Douliu	2.15	236	*e*P	Pb	14 55 00.3	-1.0
WDLH				*e*S	Sb	14 55 26.6	-1.1
EDH	Donghe	2.21	209	P	Pn	14 54 57.7	-0.1
EDH				S	Sn	14 55 23.5	-0.6
WCKO	Fanlu	2.26	230	*i* P	Pn	14 55 00.0	+1.6
WCKO				*e*S	Sn	14 55 28.0	+2.7
STYH	Taoyuan	2.34	222	*i* P	Pn	14 55 00.2	+0.8
STYH				*e*S	Sn	14 55 28.3	+1.1
TPUB	Ta-pu	2.34	227	*i* P	Pb	14 55 02.4	-2.0
TPUB				*e*S	Sn	14 55 29.3	+2.1
LONT	Longtian	2.35	212	*i* P	Pn	14 55 00.5	+0.8
LONT				*e*S	Sn	14 55 26.0	-1.6
WTP	Ta-pu	2.38	226	*i* P	Pn	14 55 02.0	+1.8
WTP				*e*S	Sb	14 55 31.7	-2.6
TWK	Hsinying	2.45	228	*i* P	Pn	14 55 02.9	+1.7
TWK				*e*S	Sb	14 55 34.5	-1.8
MATB	Ma-tsu	2.60	299	*e*P	Pn	14 55 04.5	+1.5
MATB				*e*S	Sn	14 55 34.2	+0.4

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*UCR **30** 14:56:00.5±1.2, 9°.03N×83°.70W, h41km±5km, MW3.6*
*CATAC **30** 14:56:01.6±0.2, 9°N±2°×8°4W±°, h24km±2km, M3.3/10, MLv3.3/10, Error ellipse: s-maj=5.6km s-min=3.5km az=35.5, confirmed*
ISC 30 14:56:00.9±1.0**, 9°.09N**±0°.04×**83°.68W**±0°.04**, h25km, n54, σ1s.11**/62**, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OCHAL	Ojochal	0.04	74	P	Pb	14 56 06.4	+1.2
OCHAL	Ojochal	0.04	74	S	Sb	14 56 11.3	+3.2
EDPE	Pejibaye, P	0.13	57	*e*P	Pn	14 56 07.2	-0.2
EDPE				*e*S	Sb	14 56 12.7	+3.5
PANP	Palmar Norte	0.25	120	*e*P	Pn	14 56 08.1	-1.0
PANP				*e*S	Sb	14 56 14.5	+2.9
DRK0	Durika	0.47	68	*e*P	Pn	14 56 10.8	-1.4
DRK0				*e*S	Sn	14 56 18.8	-0.9
DRK0	Durika	0.47	68	P	Pn	14 56 10.7	-1.4
EDP2	Potrero Grande	0.50	98	*e*P	Pn	14 56 11.4	-1.1
LLNJ	Naranjito	0.56	313	*e*P	Pb	14 56 11.7	-0.5
LLNJ				*e*S	Sb	14 56 20.7	+0.8
PIEC	Cerro El Cedra	0.60	333	*e*P	Pb	14 56 12.7	-0.2
ABE2	San Pablo	0.71	329	*e*P	Pb	14 56 14.6	-0.3
LCR2	La Lucha 2	0.72	334	*e*P	Pb	14 56 14.3	-0.7
LCR2				*e*S	Sb	14 56 25.1	+0.5
LCR2	La Lucha 2	0.72	334	P	Pb	14 56 14.3	-0.7
PICV	PH. Pirrs	0.74	317	*e*P	Pb	14 56 14.1	-1.0
PICV				*e*S	Sn	14 56 25.7	-0.5
PAR1A	Puntarenas Pro	0.76	312	*e*P	Pb	14 56 14.6	-0.9
PAR1A				*e*S	Sn	14 56 26.5	-0.2
REPA	Paraso	0.76	346	*e*P	Pb	14 56 15.2	-0.4
REPA				*e*S	Sn	14 56 26.6	-0.4
VINA	Juan Vinas	0.81	355	*e*P	Pn	14 56 16.2	-0.6
PCAYA	Pacayas	0.83	351	*e*P	Pb	14 56 16.6	-0.4
ALCO	Alturas Coton,	0.85	99	*e*P	Pb	14 56 15.7	-1.4
VERB	Verbena	0.85	359	*e*P	Pb	14 56 16.9	-0.3
RAFA	San Farael, Vo	0.87	352	*e*P	Pb	14 56 17.3	-0.3
VICA	Volcano Irazu	0.91	350	*e*P	Pb	14 56 17.5	-0.7
CVTV	Tajo	0.91	356	*e*P	Pb	14 56 17.9	-0.4
VTLA	Turrialba Volc	0.91	354	*e*P	Pb	14 56 17.9	-0.5
CVTQ	Turrialba Volc	0.92	355	*e*P	Pb	14 56 17.9	-0.5
VTR0	Volcan Turrial	0.93	355	*e*P	Pb	14 56 18.1	-0.5
CORON	Coronado	0.94	340	*e*P	Pn	14 56 18.2	-0.4
RESJ	San Isidro (Tu	0.94	2	*e*P	Pb	14 56 18.3	-0.2
CDITO	Canoas	0.95	123	P	Pb	14 56 16.7	-2.0
CDITO	Canoas	0.95	123	S	Sn	14 56 33.6	+2.2
CVIMO	Finca Echandi	0.97	345	*e*P	Pn	14 56 18.4	-0.7
BELE	Belen	1.01	331	*e*P	Pn	14 56 18.8	-0.9
BRU2	Volcan	1.02	107	*e*P	Pn	14 56 18.5	-1.3
BRU2	Volcan	1.02	107	P	Pn	14 56 18.1	-1.7
BRU2	Volcan	1.02	107	S	Sn	14 56 34.5	+1.1
VBV1	V. Barva	1.10	338	*e*P	Pn	14 56 20.5	-0.5
ATEO	Atenas	1.12	322	*e*P	Pn	14 56 20.6	-0.5
TCS1	Tacares	1.13	327	P	Pb	14 56 21.4	-0.4
VPL2	V. Platanar	1.39	330	*e*P	Pn	14 56 25.0	0.0
TRT2	Tortugero	1.46	358	*e*P	Pn	14 56 25.6	-0.1
TRT2	Tortugero	1.46	358	P	Pn	14 56 25.4	-0.3
TRT2	Tortugero	1.46	358	S	Sb	14 56 45.9	+0.3
RBALA	Bur	1.52	98	*e*P	Pn	14 56 25.4	-1.1
SOCE	Pocosol	1.58	324	*e*P	Pn	14 56 27.8	+0.3
SOCE	Pocosol	1.58	324	P	Pn	14 56 27.5	+0.1
SOCE	Pocosol	1.58	324	S	Sb	14 56 49.3	+0.1
VACR	Volcan Arenal	1.69	325	*e*P	Pn	14 56 29.8	+0.9
ARE1	Arenal 1	1.71	323	*e*P	Pn	14 56 29.8	+0.7
VARE2	V. Arenal	1.71	323	*e*P	Pn	14 56 29.9	+0.7
CEDE	Laguna Cedeo	1.72	324	*e*P	Pn	14 56 30.3	+1.0
JTS	Las Juntas de	1.73	314	*e*P	Pn	14 56 28.3	-1.2
COVE	Coope Vega, Sa	1.77	336	P	Pn	14 56 30.3	+0.4
COVE	Coope Vega, Sa	1.77	336	S	Sb	14 56 54.6	+0.1
CMARA	Lajas Hojancha	1.95	298	P	Pb	14 56 34.3	-1.5
CMARA	Lajas Hojancha	1.95	298	S	Sn	14 56 56.6	+0.3

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*NSSP **30** 15:15:24.1, 38°.23N×42°.73E, h16km, Ms3.3*
*ISK **30** 15:15:24.9, 38°.22N×42°.84E, h6km, ML3.6/18*
*IDC **30** 15:15:25.7±1.3, 38°.24N×42°.82E, h0km, mb3.6/3, mbtmp3.4/10, ML3.0/7, MS3.2/2, Error ellipse: s-maj=23.8km s-min=10.4km az=138.0*
*AFAD **30** 15:15:25.3, 38°.24N×42°.82E, h12km±2km, MW3.8*
ISC 30 15:15:26.1±0.9**, 38°.26N**±0°.02×**42°.86E**±0°.02**, h7km**±7km**, n72, σ1s.24**/99**, mb3.7**/3**, 1C-2D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKDM	Akdamar-Van	0.12	55	Pg	Pg	15 15 28.9	+0.1
AKDM				Sg	Sg	15 15 31.4	+0.7
GEVA	Gevas	0.17	72	P	Pg	15 15 29.9	+0.3
GEVA				S	Sg	15 15 33.1	+1.1
PERV	Siirt/Pervari-	0.40	218	P	Pg	15 15 34.1	+0.2
PERV				S	Sg	15 15 38.6	-0.6
TVAN	Van	0.51	58	P	Pg	15 15 35.5	-0.4
TVAN				S	Sg	15 15 41.2	-1.4
VANB	Van	0.54	51	Pg	Pg	15 15 35.8	-0.7
VANB				Sg	Sg	15 15 43.7	+0.2
ADCV	BITLIS_Adilcev	0.56	349	P	Pg	15 15 37.0	+0.1
ADCV				S	Sg	15 15 44.3	+0.1
BLIS	Bitlis-Merkez	0.60	285	P	Pg	15 15 37.0	-0.7
BLIS				S	Sg	15 15 44.0	-1.6
GURO	Guroymak-BITLI	0.71	294	Pg	Pg	15 15 38.9	-0.9
GURO				Sg	Sg	15 15 47.9	-1.1
SRTM	Siirt_Merkez	0.78	250	P	Pb	15 15 41.6	-0.5
SIRN	Sırnak	0.84	205	P	Pb	15 15 42.8	-0.2
SIRN				S	Sg	15 15 52.5	-0.6
ERCV	ERCIS-VAN	0.85	26	Pg	Pg	15 15 42.3	-0.1
MLAZ	Malazgirt-MUS	0.91	345	Pg	Pg	15 15 43.1	-0.5
MLAZ				Sg	Sb	15 15 56.8	+0.1
HAKT	HAKKARI	0.97	136	P	Pg	15 15 44.6	-0.2
HAKT				S	Sb	15 15 58.5	0.0
OZAP	Van, Ozalp-Mer	0.98	66	P	Pg	15 15 43.8	-1.0
DORK	Agr/Tutak/Do	1.13	357	P	Pb	15 15 46.0	-2.0
DORK				S	Sb	15 16 01.1	-1.8
MUSM	Mu-Merkez	1.15	294	P	Pb	15 15 47.0	-1.4
MUSM				S	Sb	15 16 00.6	-3.0
CUKT	Cukurca	1.17	149	Pn	Pb	15 15 46.7	-2.1
CUKT	Cukurca	1.17	149	P	Pb	15 15 46.4	-2.4
CLDR	Caldiran	1.21	43	P	Pn	15 15 45.5	-4.1
BTMN	Batman	1.30	254	P	Pg	15 15 51.1	-0.1
SVAN	Silvan-Diyarba	1.31	266	Pn	Pn	15 15 50.2	-0.7
SVAN				Sn	Sg	15 16 08.5	+0.3
SVAN	Silvan-Diyarba	1.31	266	P	Pb	15 15 50.8	-0.3
SVAN				S	Sb	15 16 07.4	-0.7
AGRB	Hanur-Agry	1.32	5	Pn	Pb	15 15 50.8	-0.5
AGRB				Sn	Sg	15 16 09.9	+1.4
YOVA	Hakkari_Yksek	1.32	120	P	Pg	15 15 52.8	+1.4
VRTB	Varto-Mus	1.42	310	Pn	Pb	15 15 52.3	-0.6
VRTB				Sn	Sg	15 16 11.7	0.0
VRTB	Varto-Mus	1.42	310	P	Pn	15 15 51.7	-0.7
MIDY	Mardin/Midyat-	1.44	234	P	Pb	15 15 53.0	-0.2
MIDY				S	Sb	15 16 11.2	-0.5
DYDN	Diyadin	1.44	27	P	Pn	15 15 52.1	-0.7
KOTA	Agri, Merkez-K	1.56	10	P	Pn	15 15 54.4	-0.1
EATA	Eleskirt	1.62	350	P	Pb	15 15 55.5	-1.1
EATA				S	Sn	15 16 16.2	-0.6
KARO	Karliova-Bingo	1.76	307	Pn	Pn	15 15 57.0	-0.1
BNGB	Bingl	1.85	294	Pn	Pn	15 15 58.4	0.0
KOPR	Koprukoy-ERZUR	1.90	336	Pn	Pn	15 15 58.9	-0.1
HOMI	Horasan	1.93	338	P	Pb	15 16 01.8	0.0
VNNZ	Vanand	1.99	22	*e*P	Pg	15 16 03.5	-0.7
VNNZ				*e*S	Sg	15 16 32.5	+2.5
ERZM	Erzurum	2.01	325	P	Pb	15 16 03.1	0.0
TASB	TASBURUN-IGDIR	2.03	32	Pn	Pn	15 16 01.4	+0.6
METS	Metsamor	2.11	26	*e*P	Pb	15 16 05.3	+0.6
METS				*e*S	Sg	15 16 36.0	+2.0
YEDI	Yedisu-Bingol	2.15	304	Pn	Pn	15 16 02.6	0.0
DIYA	Diyarbakir	2.18	262	P	Pn	15 16 03.3	+0.4
NRKZ	NAREK	2.23	38	*e*P	Pb	15 16 06.1	-0.8
NRKZ				*e*S	Sg	15 16 37.3	-0.5
ARUZ	Aruch	2.23	25	*e*P	Pb	15 16 07.1	+0.2
ARUZ				*e*S	Sg	15 16 39.1	+1.1
EMRE	Erzurum,Aziziy	2.29	321	P	Pb	15 16 07.9	0.0
SENK	Senkaya-Erzuru	2.33	350	Pn	Pn	15 16 05.5	+0.5
KARS	Kars	2.37	4	Pn	Pn	15 16 05.9	+0.4
GNI	Garni	2.39	37	Pn	Pn	15 16 06.5	+0.7
GNI	Garni	2.39	37	*e*P	Pb	15 16 09.0	-0.5
GNI				⇑S	Sg	15 16 42.0	-0.9
GNI	Garni	2.39	37	Pn	Pb	15 16 08.5	-1.0
	3.5nm,0.3s,baz=242,slow=2.1,SNR=11						
GNI				Sn	Sb	15 16 39.3	+0.1
	8.3nm,0.3s,baz=235,slow=23,SNR=4.7 26nm,0.7s						
KOVA	Elazig, Kovanc	2.43	281	P	Pn	15 16 07.1	+0.8
VAYK	Vayk	2.46	54	⇓*e*P	Pb	15 16 08.3	-2.4
VAYK				⇓*e*S	Sb	15 16 39.2	-2.1
EAK	Akyaka	2.49	13	P	Pg	15 16 13.0	-0.8
KRIK	Erzurum-spir	2.56	325	P	Pb	15 16 09.8	-2.6
GOLE	Ardahan-G¶le	2.58	356	P	Pb	15 16 13.4	+0.6
KMOZ	Kamo	2.69	18	*e*P	Pb	15 16 14.3	-0.4
KMOZ				*e*S	Sg	15 16 51.2	-1.4
DDEM	Demirkent	2.76	342	P	Pb	15 16 13.2	-2.6
ERZN	Erzincan	2.78	299	Pn	Pn	15 16 11.4	+0.3
DAGI	Agillar	2.91	346	P	Pn	15 16 14.2	+1.3
AYRK	Ayrk	2.94	50	*e*P	Pn	15 16 15.2	+1.8
AYRK				*e*S	Sb	15 16 52.9	-2.2
SRTK	Saratovka	3.02	22	*e*P	Pb	15 16 20.9	+0.6
SRTK				*e*S	Sg	15 17 02.8	-0.4
LSVT	Lusahovit	3.21	33	*e*P	Pb	15 16 23.2	-0.3
LSVT				*e*S	Sg	15 17 06.7	-2.4
KBZ	Khabaz	5.46	0	Pn	Pn	15 16 50.6	+2.7
	0.1nm,0.3s,baz=39,slow=7.1,SNR=1.5 0.9nm,0.6s						
BRTR	Keskin Array B	7.33	284	Pn	Pn	15 17 16.1	+2.5
	0.1nm,0.3s,baz=105,slow=11,SNR=3.9 0.9nm,0.8s						
ASF	Jabal al Asfar	7.79	221	Pn	Pn	15 17 19.4	-0.5
	0.4nm,0.3s,baz=45,slow=5.7,SNR=3.6						
ASF				Lg	Lg	15 19 31.3	
	baz=276,slow=23 2.3nm,0.4s						
MMAI	Mount Meron Ar	8.01	231	Pn	Pn	15 17 22.1	-0.8
	0.5nm,0.3s,baz=53,slow=15,SNR=1.4						
MMAI				Lg	Lg	15 19 39.9	
	baz=43,slow=30 0.4nm,0.3s						
EIL	Elat	10.79	220	Pn	Pn	15 18 01.3	+0.3
	0.1nm,0.3s,baz=13,slow=18,SNR=1.9						
EIL				Lg	Lg	15 21 06.9	
	0.1nm,0.3s,baz=21,slow=11,SNR=1.6 1.6nm,0.6s						
AKASG	Malin Array Be	15.76	327	Pn	Pn	15 19 08.7	+0.4
	0.2nm,0.3s,baz=138,slow=11,SNR=7.1 0.2nm,0.3s						
VYHS	Vyhne	20.16	308	*e*P	Pn	15 20 03.2	+0.5
FINES	FINESS Array B	25.45	341	P	P	15 20 55.0	+0.8
	1.4nm,0.8s,baz=145,slow=8.2,SNR=1.1 1.4nm,0.8s						
MKAR	Makanchi Array	30.02	61	P	P	15 21 37.6	+2.1
	0.2nm,0.5s,baz=280,slow=8.6,SNR=1.9 0.2nm,0.5s						
ARCES	ARCESS Array B	32.70	349	LR	LR	15 36 51.6	
	comp=Z,27nm,18.4s,baz=304,slow=39						
EKA	Eskdalemuir Ar	35.07	314	P	P	15 22 19.7	+0.3
	0.6nm,0.5s,baz=102,slow=8.0,SNR=4.0 0.6nm,0.5s						
CMAR	Chiang Mai Arr	52.34	96	LR	LR	15 53 01.7	
	comp=Z,32nm,18.1s,baz=210,slow=43						

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*HEL **30** 15:21:57.1±0.3, 67°.57N×34°.29E, h0km, ML1.8, Suspected explosion*
*KOLA **30** 15:21:58.5, 67°.67N×34°.17E, h0km, ML2.2, Error ellipse: s-maj=2.8km s-min=1.1km az=120.0, Khibiny, mines Koashva, Nyurkpakh*
*IDC **30** 15:22:00.5±2.8, 67°.72N×33°.78E, h0km, mbtmp2.9/2, ML2.1/2, Error ellipse: s-maj=30.0km s-min=11.4km az=72.0*
ISC 30 15:21:57.4±0.9**, 67°.64N**±0°.03×**34°.19E**±0°.04**, h0km, n30, σ1s.25**/48**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APA	Apatity	0.31	257	S	Sg	15 22 08.3	+1.2
LVZ	Lovozero	0.32	34	P	Pg	15 22 03.4	+0.1
LVZ				S	Sg	15 22 07.6	+0.2
LVZ	Lovozero	0.32	34	PG	Pg	15 22 03.5	+0.1
LVZ				SG	Sg	15 22 07.8	+0.4
APA0	Apatity Array	0.46	266	P	Pg	15 22 06.0	-0.1
APA0				S	Sg	15 22 11.7	-0.3
KVDA	Kovda	1.08	209	P	Pg	15 22 18.0	-0.1
KVDA				S	Sg	15 22 32.8	+0.7
TERR	Teriberka	1.61	12	P	Pn	15 22 26.5	-0.4

TERR				S	Sn	15 22 46.1	-2.2
VRF	Varrio	1.75	276	PG	Pn	15 22 28.8	-0.2
VRF				MSG		15 22 50.8	
	comp=Z,12nm,0.2s						
VRF				SG	Sn	15 22 51.8	-0.1
KU6	Riekki	2.35	228	PG	Pn	15 22 38.7	+1.6
KU6				MSG		15 23 06.0	
	comp=Z,2.8nm,0.2s						
RAJF	Raja-Jooseppi	2.36	294	PN	Pn	15 22 37.7	+0.4
RAJF				SN	Sn	15 23 08.4	+1.5
MSF	Maaselka	2.68	232	PB	Pn	15 22 43.6	+1.9
MSF				SG	Sb	15 23 20.8	+1.4
KU1	Kurvinen	2.78	224	PB	Pn	15 22 44.3	+1.2
VADS	Vadso	3.04	327	P	Pn	15 22 47.4	+0.7
VADS				S	Sn	15 23 25.9	+2.1
VADS	Vadso	3.04	327	eP	Pn	15 22 47.0	+0.3
KU2	Taivalkoski	3.06	233	PG	Pb	15 22 50.7	-2.0
RANF	Ranua	3.35	244	PG	Pb	15 22 56.0	-1.5
RANF				SG	Sb	15 23 40.2	+1.5
RNF	Rovaniemi	3.36	256	PN	Pn	15 22 49.2	-1.7
RNF				SN	Sn	15 23 32.9	+1.5
KEV	Kevo	3.37	312	eP	Pn	15 22 51.9	+0.8
KEV	Kevo	3.37	312	PN	Pn	15 22 52.0	+0.8
KEV				SN	Sn	15 23 31.8	-0.1
ARA0	ARCESS Array S	3.71	305	PN	Pn	15 22 56.1	+0.3
ARA0				SB	Sb	15 23 50.5	+1.4
ARCES	ARCESS Array B	3.71	305	Pn	Pn	15 22 56.0	+0.2
	comp=Z,0.2nm,0.3s,baz=120,slow=14,SNR=56						
ARCES				Pg	Pb	15 23 04.0	+0.3
	comp=Z,0.1nm,0.3s,baz=114,slow=15,SNR=5.0						
ARCES				Sn	Sn	15 23 39.3	-0.9
	comp=Z,0.4nm,0.3s,baz=121,slow=28,SNR=11						
ARCES				Lg	Lg	15 23 49.9	
	comp=Z,1.6nm,0.3s,baz=118,slow=32,SNR=15						
	comp=Z,0.9nm,0.2s						
ARCES	ARCESS Array B	3.71	305	P	Pn	15 22 55.8	0.0
ARCES				S	Sn	15 23 38.9	-1.3
RMF	Romuvaara	3.85	209	PN	Pn	15 22 58.4	+0.6
KLF	Kolari	3.96	269	PG	Pb	15 23 09.3	+1.4
KLF				SG	Sg	15 24 01.1	-3.4
HEF	Hetta	4.03	286	PN	Pn	15 23 00.4	+0.1
	baz=99						
HEF				SN	Sn	15 23 48.5	+0.4
TOF	Tornio	4.20	253	PB	Pb	15 23 08.4	-3.5
PAJU	Pajala	4.33	267	SN	Sn	15 23 55.8	+0.3
LANU	Lannavaara	4.63	281	SN	Sn	15 24 02.0	-1.0
KALU	Kalix	4.65	252	SN	Sn	15 24 03.1	-0.1
I37NO	I37NO	5.94	291	I	I	15 56 00.0	
	baz=97,slow=321,SNR=0.2						
FINES	FINESS Array B	7.13	213	Pn	Pn	15 23 42.4	-0.3
	comp=Z,0.1nm,0.3s,baz=32,slow=12,SNR=1.2						
FINES				Sn	Sn	15 25 04.4	+0.1
	comp=Z,0.1nm,0.3s,baz=27,slow=22,SNR=1.7						
FINES				Lg	Lg	15 25 38.8	
	comp=Z,0.1nm,0.3s,baz=33,slow=25,SNR=1.8						
	comp=Z,1.1nm,0.9s						

*IDC **30** 15:25:10.5±5.2, 5°.92S×104°.56E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=282.4km s-min=29.4km az=49.0*

*DJA **30** 15:25:30.7±0.6, 6°S±7°×10°5E±°, h124km±6km, M3.4/9, MLv3.4/9*

ISC 30 15:25:29.3±0.9**, 5°.7S**±0°.1×**105°.4E**±0°.1**, h150**km**, n19, σ1^{s}64**/17**, mb3.3**/3**, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBJI	Serang	0.82	122	P	Pn	15 25 51.9	-0.7
SBJI				S	Sn	15 26 08.3	-2.1
CGJI	Cibinong	0.96	164	P	Pn	15 25 52.7	-1.0
CGJI				S	Sn	15 26 10.0	-2.4
KLI	Kotabumi	1.00	325	P	Pn	15 25 53.3	-0.7
KLI				S	Sn	15 26 11.1	-1.8
LWLI	Liwa	1.52	296	P	Pn	15 26 00.0	+0.8
LWLI				S	Sn	15 26 20.5	-1.5
DBJI	Dramaga	1.57	123	P	Pn	15 26 00.0	+0.4
SKJI	Sukabumi	1.72	139	P	Pn	15 26 01.5	+0.2
MDSI	Maura Dua	1.73	314	P	Pn	15 26 00.8	-0.5
CNJI	Cibinong	2.33	134	P	Pn	15 26 07.6	-0.8
MNAI	Manna	2.79	298	P	Pn	15 26 14.9	+0.8
WRA	Warramunga Arr	31.47	119	P	P	15 31 40.4	+3.4
	0.3nm,0.6s,baz=289,slow=9.9,SNR=10						
	0.3nm,0.6s						
ASAR	Alice Springs	32.72	126	P	P	15 31 50.0	+2.1
	0.3nm,0.4s,baz=302,slow=8.0,SNR=29						
	0.3nm,0.4s						
H08S2	Diego Garcia H	32.77	265	T	T	16 06 00.1	
	baz=89						
H08S3	Diego Garcia H	32.77	265	T	T	16 06 01.4	
	baz=89						
H08S1	Diego Carcia H	32.78	265	T	T	16 06 13.7	
	baz=89						
MKAR	Makanchi Array	56.14	341	P	P	15 34 51.9	-1.2
	0.2nm,0.5s,baz=142,slow=8.8,SNR=3.2						
	0.2nm,0.5s						
H04N2	CROZET ISLANDS	61.25	220	T	T	16 41 19.6	
	baz=65						
H04N1	CROZET ISLANDS	61.27	220	T	T	16 41 23.8	
	baz=65						
H04N3	CROZET ISLANDS	61.27	220	T	T	16 41 18.6	
	baz=65						
TXAR	Lajitas Array	143.83	46	PKP	PKPdf	15 44 47.5	0.0
	0.2nm,0.7s,baz=287,slow=1.0,SNR=2.4						

*TRN **30** 15:30:21.6, 15°.22N×60°.85W, h121km, MD3.6, South-east of Dominica.*

*NEIC **30** 15:30:24.0±0.5, 15°.24N±0°.06×60°.82W±0°.08, h112km±8km, ML4.1/26, Error ellipse: s-maj=13.5km s-min=6.7km az=56.0*

ISC 30 15:30:22.6±1.6**, 15°.23N**±0°.04×**60°.83W**±0°.10**, h123**km±8km**, n32, σ0^{s}88**/51**, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLPL	La Plaine	0.41	284	eP	Pn	15 30 40.7	+0.4
DLPL				eS	Sn	15 30 53.5	-0.3
ILAM	Ilet Lapin Mar	0.46	185	Pn	Pn	15 30 41.2	+0.6
ILAM				Sn	Sn	15 30 53.3	-0.8
ILAM				IAML		15 30 54.3	
	comp=E,7µm,0.2s						
ILAM				IAML		15 30 54.7	
	comp=N,7µm,0.4s						
ILAM	Ilet Lapin Mar	0.46	185	eP	Pn	15 30 40.6	0.0
ILAM				eS	Sn	15 30 53.4	-0.8
SVN	Savane Anatole	0.51	220	Pn	Pn	15 30 41.2	+0.2
SVN					Sn	15 30 54.3	-0.5
SVN	Savane Anatole	0.51	220	eP	Pn	15 30 40.9	-0.1
SVN				eS	Sn	15 30 53.9	-0.8
MDN	Morne-Daniel	0.55	279	eP	Pn	15 30 41.6	+0.5
MDN				eS	Sn	15 30 56.1	+1.0
DWS	Wesley	0.57	306	eP	Pn	15 30 41.4	+0.2
DWS				eS	Sn	15 30 54.9	-0.5
FDF	Fort de France	0.58	212	Pn	Pn	15 30 41.8	+0.3
FDF				Sn	Sn	15 30 55.3	-0.4
DSLB	Salisbury	0.61	290	eP	Pn	15 30 42.3	+0.8
DSLB				eS	Sn	15 30 56.3	+0.5
BIM	Bigot	0.75	198	Pn	Pn	15 30 42.8	+0.2
BIM				Sn	Sn	15 30 57.6	-0.1
BIM				IAML		15 30 59.4	
	comp=N,5µm,0.2s						
BIM	Bigot	0.75	198	eP	Pn	15 30 43.2	+0.5
BIM				eS	Sn	15 30 57.9	+0.2
MPOM	Morne Pois Mar	0.78	182	Pn	Pn	15 30 42.8	0.0
MPOM				Sn	Sn	15 30 57.5	-0.7
MPOM				IAML		15 30 58.3	
	comp=E,2µm,0.4s						
MPOM				IAML		15 30 59.0	
	comp=N,4µm,0.4s						
MAGL	Barre de l'ile	0.84	329	Pn	Pn	15 30 43.8	+0.4
MAGL				IAML		15 31 00.5	
	comp=N,2µm,0.3s						
MAGL				IAML		15 31 01.1	
	comp=E,3µm,0.2s						
MAGL	Barre de l'ile	0.84	329	eP	Pn	15 30 44.0	+0.6
MAGL				eS	Sn	15 30 59.2	+0.1
TDBA	Terre de Bas,	0.99	308	Pn	Pn	15 30 45.4	+0.6
TDBA				IAML		15 31 04.0	
	comp=E,2µm,0.2s						
TDBA				IAML		15 31 04.2	
	comp=N,3µm,0.3s						
GDSD	La Dsirade Is	1.10	348	Pn	Pn	15 30 46.1	+0.2
CBE	Ff, Capester	1.12	318	Pn	Pn	15 30 46.5	+0.4
CBE				IAML		15 31 04.9	
	comp=E,4µm,0.5s						
CBE				IAML		15 31 10.3	
	comp=N,4µm,0.5s						
SLBI	Saint Lucia, B	1.21	187	eP	Pn	15 30 47.0	0.0
SLBI				eS	Sn	15 31 04.3	-1.2
SLAC	Saint Lucia, A	1.33	183	eP	Pn	15 30 48.5	+0.2
SLAC				eS	Sn	15 31 07.1	-0.7
GDHS	Morne Mazeau,	1.37	319	Pn	Pn	15 30 49.3	+0.5
GDHS				IAML		15 31 14.6	
	comp=N,2µm,0.3s						
ABD	La Joyeuse, An	1.39	333	Pn	Pn	15 30 49.4	+0.5
MBFL	Flemmings, Mon	2.01	319	eP	Pn	15 30 56.0	-0.3
MBFL				eS	Sn	15 31 21.9	-0.2
SVOC	Richmond Hill,	2.10	190	eP	Pn	15 30 57.4	-0.1
SVOC				eS	Sn	15 31 23.4	-0.7
BBGH	Gun Hill	2.41	149	Pn	Pn	15 31 03.3	+1.8
BBGH				IAML		15 32 18.5	
	comp=N,407nm,2.4s						
BBGH				IAML		15 32 43.2	
	comp=N,489nm,3.2s						
ANWB	Willy Bob	2.59	339		Pn	15 31 03.2	-0.4
ANWB	Willy Bob	2.59	339	eP	Pn	15 31 03.7	+0.1
ANWB				eS	Sn	15 31 33.5	-1.7
SKI	Saint Kitts	2.78	319	eP	Pn	15 31 07.2	+1.1
SKI				eS	Sn	15 31 39.4	-0.3
GCPR	Guaynabo City	5.89	302	Pn	Pn	15 31 47.4	-0.1
CELP	Cerrillos	6.19	298	Pn	Pn	15 31 54.2	+2.5
AOPR	Arecibo Observ	6.46	299	Pn	Pn	15 31 53.1	-2.3
AOPR	Arecibo Observ	6.46	299	eP	Pn	15 31 54.1	-1.3
CRPR	Cabo Rojo, PR	6.62	295	Pn	Pn	15 31 59.6	+2.1

IDC 30 15:36:00.5±1.7**, 7°.40S**×**126°.84E, h0**km**, mb3.4**/2**, mbtmp3.5**/4**, ML3.5**/2**, MS2.6**/1**, Error ellipse: s-maj=144.1km s-min=29.9km az=63.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	14.43	355	LR	LR	15 44 21.6	
	comp=Z,23nm,19.6s,baz=51,slow=35						
WRA	Warramunga Arr	14.44	150	Pn	Pn	15 39 25.3	-0.9
	0.2nm,0.3s,baz=327,slow=12,SNR=13						
WRA				Sn	Sn	15 41 53.3	-14
	0.5nm,0.3s,baz=335,slow=21,SNR=9.5						
	0.3nm,0.4s						
ASAR	Alice Springs	17.54	158	P	P	15 40 07.2	-0.6
	0.3nm,0.3s,baz=344,slow=12,SNR=30						
ASAR				S	Sn	15 43 11.5	-11
	0.1nm,0.3s,baz=348,slow=26,SNR=5.4						
	1.3nm,0.6s						
MKAR	Makanchi Array	66.88	328	P	P	15 46 54.6	+0.1
	0.2nm,0.6s,baz=122,slow=7.5,SNR=2.3						
	0.2nm,0.6s						
KURBB	Kurchatov Arra	71.24	330	P	P	15 47 21.4	-0.1
	0.3nm,0.6s,baz=130,slow=4.9,SNR=4.2						
	0.3nm,0.6s						

*SFS **30** 15:39:01.0, 34°.91N×3°.56W, h25km, ML2.6/5, ML2.6/5, MLv2.5/5*

*CNRM **30** 15:39:02.3, 35°.09N×3°.61W, h15km, ML2.0*

*MDD **30** 15:39:02.1±1.6, 35°.08N×3°.63W, h9km±11km, mb_Lg2.3/5, Error ellipse: s-maj=12.8km s-min=10.2km az=148.0*

ISC 30 15:39:01.7±1.1**, 35°.08N**±0°.03×**3°.60W**±0°.03**, h16**km±10km**, n25, σ0^{s}85**/36**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	Palemas	0.31	297	P	Pb	15 39 08.7	-0.2
PALE	Palemas	0.31	297	S	Sb	15 39 13.7	0.0
GOG	Mont Gurugu	0.52	74	P	Pg	15 39 11.5	-0.6
GOG	Mont Gurugu	0.52	74	S	Sn	15 39 21.5	-1.6
EMEL	Melilla	0.57	67	Pg	Pg	15 39 12.5	-0.6
EMEL				Sg	Sb	15 39 21.1	-0.2
EMEL				i IVmb_Lg		15 39 24.0	
EMLI	Melilla	0.58	67	S	Sb	15 39 22.0	+0.5
EMLI				P	Pg	15 39 12.5	-0.6
WMELI	Melilla	0.58	66	S	Sb	15 39 22.4	+0.8
WMELI				P	Pg	15 39 12.7	-0.6
AKLM	AKL	0.61	201	P	Pg	15 39 13.4	-0.3
AKLM	AKL	0.61	201	S	Sb	15 39 21.9	-0.4
EALB	Alboran	0.97	28	P	Pb	15 39 20.2	-0.1
EALB				S	Sn	15 39 34.2	-0.1
EALB	Alboran	0.97	28	Pn	Pg	15 39 21.4	+0.8
EALB				Sg	Sn	15 39 34.0	-0.2
EALB				i IVmb_Lg		15 39 35.4	
TAF	Taforalt	1.01	105	P	Pb	15 39 20.8	-0.1
TAF	Taforalt	1.01	105	S	Sn	15 39 36.6	+1.4
JBK	JBK	1.13	131	P	Pb	15 39 22.9	-0.1
JBK	JBK	1.13	131	S	Sg	15 39 38.7	+0.3
LCRM	LCR	1.73	217	P	Pb	15 39 33.2	-0.1
LCRM	LCR	1.73	217	S	Sg	15 39 58.6	+0.9
EMIJ	Mijas	1.76	328	P	Pn	15 39 31.5	-0.1
EMIJ				S	Sn	15 39 53.8	+0.2
EMIJ	Mijas	1.76	328	Pn	Pn	15 39 31.8	+0.2
EMIJ				Sn	Sn	15 39 52.9	-0.8
EMIJ				i IVmb_Lg		15 39 56.8	
ELGU	Los Guajares,	1.78	359	P	Pn	15 39 31.2	-0.8
ELGU				S	Sn	15 39 53.7	-0.7
ELGU	Los Guajares,	1.78	359	Pn	Pn	15 39 31.1	-0.8
ELGU				Sn	Sn	15 39 53.3	-1.0
ELGU				i IVmb_Lg		15 40 04.4	
MD31	MD31	2.41	204	P	Pn	15 39 41.5	+1.0
MD31	MD31	2.41	204	S	Sb	15 40 12.4	-1.8
EQES	Quesada	2.75	9	Pn	Pn	15 39 46.5	+1.2
EQES				Sn	Sn	15 40 17.3	-1.0
EQES				i IVmb_Lg		15 40 25.6	
PBAR	Barrancos	4.14	319	eP	Pn	15 40 06.4	+2.0
PBAR				eS	Sn	15 40 52.1	-0.4

*UCR **30** 15:54:02.9±0.8, 8°.37N×82°.98W, h10km±2km, MW4.1, Fault plane solution: NP1:φs110.28000°, δ21.09000°, λ44.01000°.*

*CATAC **30** 15:54:03.1±0.6, 8°N±4°×8°3W±°, h1km, M4.1/13, MLv4.1/13, Error ellipse: s-maj=7.8km s-min=5.1km az=161.7, confirmed*

*UPA **30** 15:54:03.1±0.5, 8°.40N×82°.96W, h19km±1km, MD3.6*

ISC 30 15:54:02.8±1.0**, 8°.38N**±0°.03×**82°.97W**±0°.02**, h14**km±7km**, n76, σ0^{s}78**/92**, 2C-18D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.18	81	⇓iP	Pb	15 54 07.9	-0.1
LESP3				i S	Sb	15 54 11.5	0.0
LPPC	Paso Canoas	0.20	41	⇓eP	Pg	15 54 08.0	+0.6
LPPC				eS	Sb	15 54 12.1	0.0
CDITO	Canoas	0.22	27	P	Pg	15 54 07.7	0.0
CDITO				S	Sb	15 54 12.5	0.0
NELY	Ciudad Neily	0.27	6	⇓eP	Pg	15 54 09.0	+0.4
NELY				eS	Sb	15 54 13.9	-0.1
LIMO3	Limones	0.30	158	eP	Pb	15 54 10.3	+0.4
LIMO3				eS	Sb	15 54 15.1	+0.4
LMNES	Limones	0.30	158	⇑eP	Pb	15 54 10.2	+0.3
FITO	Golfito	0.30	324	eP	Pg	15 54 08.7	-0.4
FITO				eS	Sg	15 54 13.1	-0.3
EDAD	Golfito	0.33	325	⇑eP	Pg	15 54 09.3	-0.4
EDAD				eS	Sg	15 54 14.2	-0.2
MLIR3	Monte Lirio, C	0.44	20	⇓iP	Pb	15 54 12.5	+0.1
MLIR3				eS	Sg	15 54 17.6	0.0
VITO	San Vito	0.44	1	eP	Pb	15 54 12.4	-0.1
RSRNO	Rio Sereno	0.45	14	eP	Pb	15 54 12.6	-0.1
SCLRA	Santa Clara, W	0.49	23	⇓eP	Pb	15 54 13.2	-0.2
BRU2	Volcan	0.50	34	⇓eP	Pg	15 54 13.1	+0.3
BRU2				eS	Sb	15 54 20.9	+0.1
BRU2	Volcan	0.50	34	P	Pg	15 54 13.1	+0.3
BRU2	Volcan	0.50	34	S	Sb	15 54 21.2	+0.4
BRU2	Volcan	0.50	34	⇓iP	Pb	15 54 13.3	-0.2
BRU2				eS	Sb	15 54 20.7	0.0
CLLRA	Cordillera,	0.51	44	⇓eP	Pg	15 54 13.4	+0.4
TBS2		0.52	37	eP	Pb	15 54 14.6	+0.8
DVD	David	0.52	84	i P	Pg	15 54 13.3	+0.2
DVD				i S	Sb	15 54 21.3	+0.1
CSTBL	De las Acacias	0.53	86	⇓eP	Pg	15 54 13.3	+0.1
PEDE3	Pedregal, Chir	0.55	89	i P	Pg	15 54 13.6	-0.1
PEDE3				eS	Sg	15 54 21.2	+0.3
LOCO3	Loma Colorada,	0.55	87	eP	Pg	15 54 13.8	+0.1
LOCO3				eS	Sb	15 54 21.9	-0.1
BC3P	Paso Ancho	0.56	40	⇓iP	Pg	15 54 14.2	+0.2
BC3P				eS	Sb	15 54 22.9	+0.3
PTAR3	Potrerillos Ar	0.57	56	eP	Pg	15 54 14.3	+0.2
ALCO	Alturas Coton,	0.58	14	⇓eP	Pg	15 54 14.3	-0.1
ALCO				eS	Sg	15 54 22.5	+0.2
BQTLY	Boquete Panama	0.63	53	⇓eP	Pg	15 54 15.1	-0.2
BQSF3	Alto Boquete,	0.65	56	⇓eP	Pg	15 54 15.4	-0.2
EDP2	Potrero Grande	0.66	343	eP	Pg	15 54 15.6	-0.3
GUAL3	Gualaca, Chiri	0.69	77	i P	Pg	15 54 16.0	-0.3
GUAL3				eS	Sb	15 54 26.1	+0.1
PSOM3	Paja de Sombre	0.71	65	⇓iP	Pb	15 54 16.2	-0.8
PANP	Palmar Norte	0.75	320	eP	Pb	15 54 16.6	-1.1
BURE	Buenos Aires	0.87	336	eP	Pb	15 54 19.4	-0.4
DRK0	Durika	0.92	343	eP	Pb	15 54 19.3	-1.4
DRK0	Durika	0.92	343	P	Pb	15 54 19.7	-1.0
DRK0	Durika	0.92	343	S	Sb	15 54 32.5	-0.3
DRK0	Durika	0.92	343	eP	Pb	15 54 19.6	-1.0
PBNVO	Pueblo Nuevo,	0.93	57	⇓eP	Pb	15 54 19.4	-1.3
RBALA	Bur	0.95	58	⇓eP	Pb	15 54 20.1	-1.0
EDPE	Pejibaye, P	0.97	323	eP	Pb	15 54 20.4	-1.1
OCHAL	Ojochal	0.97	317	P	Pb	15 54 20.1	-1.4
OCHAL	Ojochal	0.97	317	S	Sn	15 54 35.8	0.0
SAJE	San Jernim	1.10	331	eP	Pb	15 54 22.6	-1.1
RMDIO	Remedios, Chir	1.14	97	eP	Pn	15 54 23.3	-1.1
BRIBI	Bribri	1.24	7	eP	Pb	15 54 26.5	+0.3
PDCAN	Manzana , Fuen	1.27	94	eP	Pn	15 54 24.5	-1.7
VERH	Veragua Rainfo	1.55	352	⇓eP	Pn	15 54 30.2	+0.1
PIEC	Cerro El Cedra	1.57	322	eP	Pn	15 54 30.6	0.0
PISJ	San Jernim	1.69	318	eP	Pb	15 54 33.7	0.0
VINA	Juan Vinas	1.69	333	eP	Pn	15 54 32.5	+0.5
LCR2	La Lucha 2	1.69	323	eP	Pn	15 54 32.4	+0.1
LCR2	La Lucha 2	1.69	323	P	Pb	15 54 34.2	+0.3
LCR2	La Lucha 2	1.69	323	S	Sg	15 54 57.6	0.0
PICV	PH. Pirrs	1.73	316	eP	Pn	15 54 32.9	+0.3
PAR1A	Puntarenas Pro	1.75	314	eP	Pn	15 54 33.6	+0.9
VTCV	VTCV, Calle Va	1.76	335	eP	Pn	15 54 33.8	+0.7
RESJ	San Isidro (Tu	1.77	338	eP	Pn	15 54 33.9	+0.7
ABRB	Las Abras (San	1.78	336	eP	Pn	15 54 33.9	+0.5
CVTV	Tajo	1.79	335	eP	Pn	15 54 34.1	+0.5
CVTQ	Turrialba Volc	1.80	334	eP	Pn	15 54 34.4	+0.7
VTLA	Turrialba Volc	1.80	334	eP	Pn	15 54 33.8	0.0
VTR0	Volcan Turrial	1.80	335	eP	Pb	15 54 34.8	-1.1
HDC	Heredia	1.97	325	eP	Pn	15 54 36.8	+0.9
VBV1	V. Barva	2.05	327	eP	Pn	15 54 37.7	+0.5
TCS1	Tacares	2.11	322	P	Pb	15 54 40.4	-0.5
TCS1	Tacares	2.11	322	S	Sg	15 55 10.0	-0.8
CACAO	El Cacao, Vera	2.33	116	eP	Pn	15 54 39.8	-1.0
SOCE	Pocosol	2.57	321	P	Pb	15 54 48.2	-0.5
VARE2	V. Arenal	2.69	320	eP	Pb	15 54 48.8	-2.0
COVE	Coope Vega, Sa	2.72	329	P	Pn	15 54 48.6	+2.4
JTS	Las Juntas de	2.73	314	eP	Pn	15 54 46.8	+0.6
AZU	Azuero	2.74	102	⇓eP	Pn	15 54 47.3	+1.0
INDI	Punta indio, G	2.90	301	P	Pn	15 54 49.7	+1.1
CMARA	Lajas Hojancha	2.92	304	P	Pn	15 54 50.3	+1.4
ESPN	Las Esperanzas	4.01	341	P	Pn	15 55 04.5	+0.6
ACON	Acoyapa	4.17	329	P	Pn	15 55 08.5	+2.4
BOAB	BOACO BROADBAN	4.83	327	P	Pn	15 55 17.3	+2.1

*JMA **30** 15:59:18.3±0.2, 24°.5N±0°.5×12°2E±°, h57km±2km, MV2.4/12, TAIWAN REGION*

*TAP **30** 15:59:18.5, 24°.52N×121°.65E, h57km, ML3.8, B*

ISC 30 15:59:18.4±1.2**, 24°.55N**±0°.02×**121°.64E**±0°.02**, h61**km±4km**, n145, σ1^{s}02**/260**, 15C-10D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LATG	Datong	0.10	263	⇑iP	Pn	15 59 28.1	+0.4
LATG				S	Sn	15 59 34.7	+0.4
NDS	Dongshan	0.11	40	⇑P	Pn	15 59 26.9	-0.7
NDS				S	Sn	15 59 33.2	-1.0
ENTT	Nioudou	0.11	324	⇑iP	Pn	15 59 28.0	+0.4
ENTT				S	Sn	15 59 34.5	+0.2
ENA	Nanau	0.15	142	P	Pn	15 59 27.5	-0.2
EWUT	Wuta	0.16	129	P	Pn	15 59 27.5	-0.2
EWUT				eS	Sn	15 59 33.7	-0.8
TWE	Neicheng	0.17	8	⇓P	Pn	15 59 28.3	+0.5
TWE				eS	Sn	15 59 34.9	+0.3
ESAO	Su ao	0.19	82	eP	Pn	15 59 27.8	0.0
ESAO				eS	Sn	15 59 34.2	-0.5
TWC	Suao	0.20	72	⇑P	Pn	15 59 28.2	+0.3
TWC				eS	Sn	15 59 34.8	0.0
FUSB	Fushanzhiwuyua	0.21	347	⇓iP	Pn	15 59 28.5	+0.3
FUSB				S	Sn	15 59 34.4	-0.8
EAHA	Aohua	0.24	157	eP	Pn	15 59 27.7	-0.4
ILA	Ilan	0.24	25	eP	Pn	15 59 28.6	+0.5
ILA				eS	Sn	15 59 36.1	+0.9
NWLT	Wulai	0.26	331	P	Pn	15 59 28.6	+0.3
NWLT				eS	Sn	15 59 35.4	-0.2
NNSB	Datong	0.26	243	⇑iP	Pn	15 59 28.9	+0.5
NNSB				eS	Sn	15 59 35.5	-0.2
NNS	Nan Shan	0.27	246	⇑P	Pn	15 59 28.9	+0.5
NNS				eS	Sn	15 59 35.8	0.0
YHNB	Yeheng	0.27	297	P	Pn	15 59 28.7	+0.2
YHNB	Yeheng	0.27	297	P	Pn	15 59 28.7	+0.2
YHNB				S	Sn	15 59 35.4	-0.3
NSK	Sanguang	0.29	296	P	Pn	15 59 28.7	+0.1
NSK				S	Sn	15 59 35.6	-0.3
NTC	Toucheng	0.35	30	eP	Pn	15 59 29.6	+0.6
NTC				eS	Sn	15 59 37.4	+0.8
ETLH	Xiulin Townshi	0.37	203	⇑P	Pn	15 59 29.1	-0.1
ETLH				eS	Sn	15 59 36.7	-0.4
NACB	Ninganchiao	0.38	186	P	Pn	15 59 28.4	-0.8
NACB	Ninganchiao	0.38	186	S	Sn	15 59 36.5	-0.5
NACB	Ninganchiao	0.38	186	⇑iP	Pn	15 59 28.4	-0.8
NACB				S	Sn	15 59 35.8	-1.3
ETL	Fush Village	0.39	182	P	Pn	15 59 28.6	-0.8
ETL				S	Sn	15 59 36.1	-1.2
EGS		0.40	42	eP	Pn	15 59 30.4	+1.0
EGS				eS	Sn	15 59 38.5	+1.1
NHDH	Xindian Distri	0.42	346	P	Pn	15 59 29.9	+0.2
NHDH				eS	Sn	15 59 37.8	-0.1
TWA	Mucha	0.43	353	⇓iP	Pn	15 59 30.0	+0.2
TWA				eS	Sn	15 59 38.0	-0.1
TATO	Taipei	0.45	342	P	Pn	15 59 29.9	0.0
TATO	Taipei	0.45	342	S	Sn	15 59 38.2	0.0
TIPB	Shuangxi	0.45	22	⇓iP	Pn	15 59 30.4	+0.4
TIPB				S	Sn	15 59 38.5	+0.1
TWD	Chiawan	0.47	185	⇑iP	Pn	15 59 29.2	-0.9
TWD				eS	Sn	15 59 37.2	-1.4
FUSS	Fushou	0.47	230	⇑iP	Pn	15 59 31.1	+0.7
FUSS				eS	Sn	15 59 39.7	+0.7
KSHI	Guanxi Townshi	0.48	298	eP	Pn	15 59 30.9	+0.7
KSHI				eS	Sn	15 59 39.7	+0.9
NFF	Wufeng Townshi	0.48	280	eP	Pn	15 59 30.9	+0.6
NFF				eS	Sn	15 59 38.9	0.0
WHF	Hehuan Shan	0.53	220	⇑iP	Pn	15 59 31.4	+0.3
WHF				S	Sn	15 59 40.5	+0.1
TDCB	Techi	0.53	236	⇑P	Pn	15 59 31.7	+0.8
TDCB				eS	Sn	15 59 40.4	+0.5
NWF	Wu-fen Shan	0.54	14	P	Pn	15 59 31.3	+0.4
NWF				eS	Sn	15 59 40.0	-0.1
WFSB	Wu-fen Shan	0.54	14	P	Pn	15 59 31.3	+0.5
WFSB				S	Sn	15 59 39.9	0.0
EOS2	EOS2	0.56	103	eP	Pn	15 59 32.5	+1.6
EOS2				eS	Sn	15 59 42.5	+2.5
TWB1	Santiao Chiao	0.56	35	⇓P	Pn	15 59 31.6	+0.6
TWB1				eS	Sn	15 59 40.3	+0.1
LXIB	Xiulin Townshi	0.56	201	⇑P	Pn	15 59 30.7	-0.6
LXIB				eS	Sn	15 59 40.1	-0.6
HWA	Hwalien	0.57	183	eP	Pn	15 59 30.7	-0.5
HWA				eS	Sn	15 59 40.3	-0.1
LIOB	Emei	0.58	280	eP	Pn	15 59 32.2	+0.9
LIOB				eS	Sn	15 59 41.8	+1.1
SXI1	Grass Mountain	0.58	22	eP	Pn	15 59 31.7	+0.3
SXI1				eS	Sn	15 59 41.5	+0.6
TWS1	Kuangyinshan	0.58	340	⇓iP	Pn	15 59 31.8	+0.4
TWS1				eS	Sn	15 59 41.5	+0.7
NCUH	Zhongli	0.59	315	eP	Pn	15 59 31.8	+0.4
NCUH				eS	Sn	15 59 41.1	+0.2
NSTT	Nanjuang	0.59	278	eP	Pn	15 59 31.9	+0.5
NSTT				eS	Sn	15 59 40.6	-0.3
ETM	Tongmen	0.60	193	eP	Pn	15 59 30.5	-1.0
ETM				eS	Sn	15 59 39.7	-1.3
YM01	YM01	0.60	354	⇓iP	Pn	15 59 31.7	+0.1
YM01				S	Sn	15 59 41.0	-0.1
TNOU	National Taiwa	0.61	11	⇓iP	Pn	15 59 31.8	+0.2
TNOU				S	Sn	15 59 41.3	0.0
ZUZH	Zhuzihu	0.62	352	⇓P	Pn	15 59 31.9	+0.1

ZUZH				S	Sn	15 59 41.2	-0.3
NTST	Danshui	0.64	344	P	Pn	15 59 32.4	+0.4
NTST				S	Sn	15 59 42.4	+0.6
YM08	YM08	0.64	356	⇓*i*P	Pn	15 59 31.8	-0.2
YM08				S	Sn	15 59 41.0	-0.9
ANP	Anpu	0.64	350	*e*P	Pn	15 59 32.0	-0.1
ANP				*e*S	Sn	15 59 41.6	-0.6
HSN	Hsinchu	0.66	293	*e*P	Pn	15 59 32.1	-0.1
HSN				*e*S	Sn	15 59 41.2	-1.1
EOS3	EOS3	0.67	113	*e*P	Pn	15 59 33.4	+1.2
TEYL	Yanliau Villag	0.68	183	*e*P	Pn	15 59 31.7	-0.7
TEYL				*e*S	Sn	15 59 42.9	+0.3
WHP	Taichung City	0.69	247	*e*P	Pn	15 59 33.7	+1.1
WHP				*e*S	Sn	15 59 44.4	+1.4
TWY	Chenhua	0.72	357	*e*P	Pn	15 59 33.5	+0.5
OWD	Renai	0.73	216	*e*P	Pn	15 59 33.5	+0.4
OWD				*e*S	Sn	15 59 44.1	+0.2
WUSB	Renai	0.73	221	⇑*i*P	Pn	15 59 33.9	+0.7
WUSB				*e*S	Sn	15 59 44.2	+0.2
EOS4	EOS4	0.75	124	*e*P	Pn	15 59 33.4	+0.5
EOS4				*e*S	Sn	15 59 44.6	+1.0
ESL	Shilin	0.76	194	*e*P	Pn	15 59 32.0	-1.3
SHUL	Shoufeng	0.76	185	*e*P	Pn	15 59 33.0	-0.4
SHUL				*e*S	Sn	15 59 43.8	-0.6
NMLH	Miaoli	0.77	269	*e*P	Pn	15 59 34.5	+0.9
NMLH				*e*S	Sn	15 59 44.9	+0.2
NSY	Sanyi	0.81	261	*e*P	Pn	15 59 35.0	+0.9
NSY				*e*S	Sn	15 59 46.8	+1.2
WCS	Beigang Elemen	0.82	234	*e*P	Pn	15 59 35.1	+0.9
WCS				*e*S	Sn	15 59 47.2	+1.4
WARBT	Fenglin Townsh	0.86	196	*e*P	Pn	15 59 33.1	-1.6
WARBT				*e*S	Sn	15 59 44.5	-2.2
EGFH	Guangfu	0.90	192	*e*P	Pn	15 59 34.8	-0.3
EGFH				*e*S	Sn	15 59 45.2	-2.2
VWDT	VWDT	0.91	210	⇑P	Pn	15 59 35.9	+0.6
VWDT				S	Sn	15 59 47.9	+0.1
WDJ	Dajia District	0.93	258	*e*P	Pn	15 59 36.3	+0.7
WDJ				*e*S	Sn	15 59 49.4	+1.1
SMLT	Sun Moon Lake	0.95	226	*e*P	Pn	15 59 36.8	+0.9
SMLT				*e*S	Sn	15 59 51.0	+2.2
TYC	Yuchr	0.96	228	*e*P	Pn	15 59 36.8	+0.8
TYC				*e*S	Sn	15 59 50.1	+1.2
TCU	Taichung	0.96	246	*e*P	Pn	15 59 36.6	+0.7
TCU				*e*S	Sn	15 59 49.7	+0.7
SSLB	Suanglung	0.98	220	P	Pn	15 59 37.2	+0.9
SSLB	Suanglung	0.98	220	S	Sn	15 59 51.4	+1.9
SSLB	Suanglung	0.98	220	*e*P	Pn	15 59 37.2	+0.9
SSLB				*e*S	Sn	15 59 50.8	+1.3
HGSD	Ruisui	1.07	191	*e*P	Pn	15 59 37.2	-0.1
HGSD				*e*S	Sn	15 59 51.4	0.0
EHY	Hungye	1.08	196	*e*P	Pn	15 59 37.1	-0.4
EHY				*e*S	Sn	15 59 49.2	-2.5
EHYH	Wanrong	1.08	194	*e*P	Pn	15 59 37.6	0.0
EHYH				*e*S	Sn	15 59 49.4	-2.4
WCHH	Zhanghua	1.09	245	*e*S	Sn	15 59 52.5	+0.6
WNT	Mingjian	1.10	233	*e*P	Pn	15 59 38.6	+0.9
WNT				*e*S	Sn	15 59 53.5	+1.3
WJS	Zhushan	1.10	229	*e*P	Pn	15 59 39.9	+2.1
WJS				*e*S	Sn	15 59 53.6	+1.4
WCH1	Changhua City	1.10	245	*e*P	Pn	15 59 39.1	+1.3
WCH1				*e*S	Sn	15 59 53.0	+0.8
WHYT	Xinyi Township	1.11	220	*e*P	Pn	15 59 39.1	+1.1
WHYT				*e*S	Sn	15 59 54.4	+1.9
PCYT	Pengchaiyu	1.15	20	*e*P	Pn	15 59 38.7	+0.3
YULB	Yu-li	1.19	195	P	Pn	15 59 38.8	-0.2
YULB	Yu-li	1.19	195	S	Sn	15 59 54.6	+0.2
YULB	Yu-li	1.19	195	*e*P	Pn	15 59 38.7	-0.3
YULB				*e*S	Sn	15 59 51.9	-2.5
JYNG	Yonagunijimaku	1.19	94	*e*P	Pn	15 59 39.4	+0.4
JYNG				S	Sn	15 59 54.7	+0.4
TWF1	Yuli	1.23	195	*e*P	Pn	15 59 39.0	-0.5
ECBN	Changbin	1.24	188	*e*P	Pn	15 59 39.5	0.0
ECBN				*e*S	Sn	15 59 55.0	-0.4
YOJ	Yonaguni jima	1.25	94	P	Pn	15 59 40.3	+0.6
YOJ	Yonaguni jima	1.25	94	S	Sn	15 59 56.0	+0.3
YOJ	Yonaguni jima	1.25	94	*e*P	Pn	15 59 40.2	+0.4
YOJ				*e*S	Sn	15 59 55.9	+0.1
YOJ	Yonaguni jima	1.25	94	*e*P	Pn	15 59 39.9	+0.2
YOJ				*e*S	Sn	15 59 55.7	-0.1
ALS	Alishan	1.28	217	*e*P	Pn	15 59 41.6	+1.1
ALS				*e*S	Sn	15 59 59.0	+2.0
CHN5	Tsauling	1.29	223	*e*P	Pn	15 59 41.2	+0.8
CHN5				*e*S	Sn	15 59 58.5	+1.7
WGK	Gukeng	1.31	229	*e*P	Pn	15 59 41.5	+1.0
WGK				*e*S	Sn	15 59 57.8	+0.8
WDLH	Douliu	1.32	230	*e*P	Pn	15 59 41.5	+0.9
WDLH				*e*S	Sn	15 59 58.4	+1.0
CHKH	Chenggong	1.37	189	*e*P	Pn	15 59 41.2	-0.1
CHKH				*e*S	Sn	15 59 57.5	-1.1
FULB	Fuli	1.38	193	*e*P	Pn	15 59 41.6	+0.1
FULB				*e*S	Sn	15 59 58.8	-0.1
WTCT	Ta-ch'eng	1.42	241	*e*S	Sn	15 59 60.0	+0.4
WTK	Tuku	1.43	233	*e*P	Pn	15 59 42.9	+0.7
WTK				*e*S	Sn	16 00 01.4	+1.5
EHD	Haiduan	1.45	196	*e*P	Pn	15 59 42.5	+0.1
EHD				*e*S	Sn	15 59 58.2	-2.3
WCKO	Fanlu	1.46	221	*e*P	Pn	15 59 43.4	+0.9
WCKO				*e*S	Sn	16 00 02.3	+1.7
CHKT	Chengkung	1.46	190	*e*P	Pn	15 59 42.6	0.0
CHKT				*e*S	Sn	15 59 59.5	-1.3
ELDTW	Lidau	1.47	203	*e*P	Pn	15 59 43.2	+0.4
ELDTW				*e*S	Sn	16 00 00.7	-0.4
CHY	Chiayi	1.53	227	*e*P	Pn	15 59 44.1	+0.7
CHY				*e*S	Sn	16 00 03.4	+1.1
TPUB	Ta-pu	1.55	217	P	Pn	15 59 44.9	+1.1
TPUB	Ta-pu	1.55	217	S	Sn	16 00 03.7	+0.8
TPUB	Ta-pu	1.55	217	*e*P	Pn	15 59 44.6	+0.8
TPUB				*e*S	Sn	16 00 05.1	+2.2
WSF	Szhu	1.58	235	*e*P	Pn	15 59 44.5	+0.4
WSF				*e*S	Sn	16 00 04.0	+0.4
STYH	Taoyuan	1.58	210	*e*P	Pn	15 59 45.5	+1.3
STYH				*e*S	Sn	16 00 05.6	+1.9
EDH	Donghe	1.60	191	*e*P	Pn	15 59 44.5	+0.1
EDH				*e*S	Sn	16 00 03.2	-0.9
WTP	Ta-pu	1.60	216	*e*P	Pn	15 59 45.6	+1.1
WTP				*e*S	Sn	16 00 06.8	+2.6
WSL	Shuilin Townsh	1.65	232	*e*P	Pn	15 59 45.7	+0.7
WSL				*e*S	Sn	16 00 06.1	+1.0
TWK	Hsinying	1.66	220	*e*P	Pn	15 59 46.1	+0.9
TWK				*e*S	Sn	16 00 06.5	+1.0
SNST	Tainan City	1.69	219	*e*P	Pn	15 59 46.3	+0.7
SNST				*e*S	Sn	16 00 08.4	+2.2
CHN1	Nanshi	1.70	217	*e*P	Pn	15 59 46.8	+1.0
CHN1				*e*S	Sn	16 00 08.9	+2.4
LONT	Longtian	1.70	196	*e*P	Pn	15 59 44.5	-1.3
LONT				*e*S	Sn	16 00 04.0	-2.5
ICHU	Yijhu	1.72	227	*e*P	Pn	15 59 46.6	+0.6
ICHU				*e*S	Sn	16 00 07.6	+0.7
CHN8	Yiju	1.77	228	*e*P	Pn	15 59 47.3	+0.6
CHN8				*e*S	Sn	16 00 09.7	+1.5
TWG	Pinlang	1.80	197	*e*P	Pn	15 59 47.7	+0.6
TWGBT	Beinan	1.80	197	P	Pn	15 59 48.2	+1.1
TWGBT	Beinan	1.80	197	*e*P	Pn	15 59 47.2	+0.1
TWGBT				*e*S	Sn	16 00 05.7	-3.2
IRIF	Iriomote-Funau	1.92	96	P	Pn	15 59 48.8	+0.1
IRIF				S	Sn	16 00 11.4	-0.4
TSCK	Chigu Township	1.99	226	*e*P	Pn	15 59 50.4	+0.7
TSCK				*e*S	Sn	16 00 14.3	+0.7
SSD	Sandimen	2.02	207	*e*P	Pn	15 59 51.4	+1.3
SSD				*e*S	Sn	16 00 16.4	+2.1
VWUC	VWUC	2.04	283	*e*P	Pn	15 59 49.9	-0.5
VWUC				*e*S	Sn	16 00 12.5	-2.3
ECL	Taimali	2.04	198	*e*P	Pn	15 59 50.3	-0.1
TSMG	Majia	2.05	207	*e*P	Pn	15 59 52.2	+1.7
MASBT	Mashibuluo	2.14	206	*e*P	Pn	15 59 53.1	+1.4
MASBT				*e*S	Sn	16 00 18.5	+1.4
PNG	Penghu	2.14	243	*e*P	Pn	15 59 50.9	-0.8
PHUB	P'eng-hu	2.15	242	*e*P	Pn	15 59 51.1	-0.8
PHUB				*e*S	Sn	16 00 15.0	-2.5
JKRS	Kuro-shima	2.18	98	P	Pn	15 59 53.1	+0.8
JKRS				*e*S	Sn	16 00 18.4	+0.2
MATB	Ma-tsu	2.21	317	*e*P	Pn	15 59 52.2	-0.6
MATB				*e*S	Sn	16 00 16.5	-2.5
WDGT	Dungji	2.22	235	*e*P	Pn	15 59 52.2	-0.6
WDGT				*e*S	Sn	16 00 18.0	-1.1
JIJ	Ishigaki jima	2.29	94	*e*P	Pn	15 59 54.0	+0.2
JIJ				*e*S	Sn	16 00 20.3	-0.6
TAWH	Dawu Township	2.30	198	*e*P	Pn	15 59 55.5	+1.5
PTMZ	Houxiangcun	2.34	283	*e*P	Pn	15 59 54.1	-0.3
PTMZ				*e*S	Sn	16 00 19.6	-2.5
JISG	Ishigakijimahi	2.43	89	*e*P	Pn	15 59 56.0	+0.3
JISG				*e*S	Sn	16 00 23.9	-0.5
KNMB	Chin-men Tao	2.96	269	*e*P	Pn	16 00 02.0	-0.9
JIRB	Irabujima	3.23	84	*e*P	Pn	16 00 07.8	+1.2
ZPLA	Ao Xicun	3.60	261	*e*P	Pn	16 00 11.0	-0.7
ZPLA				*e*S	Sn	16 00 50.9	-2.1
DSXP	Dongshan	3.94	259	*e*P	Pn	16 00 16.2	-0.1
DSXP				*e*S	Sn	16 00 59.6	-1.7

KRSC 30 16:19:24.9±1.5**, 56°.25N**×**164°.34E, h46**^{km}±19^{km}**, Ml3.5,**
Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.85	268	*e*P	Pn	16 19 40.3	-0.1
KBTR				*e*S	Sn	16 19 52.0	+0.2
KBG	Krutoberegovo	0.91	271	*e*P	Pn	16 19 41.2	0.0
KBG				*e*S	Sn	16 19 53.6	+0.4
BKI	Bering	1.40	138	*e*P	Pn	16 19 49.7	+1.8
BKI				*e*S	Sn	16 20 07.8	+2.6
SMKR	Semkarok	1.63	283	*e*P	Pn	16 19 53.4	+2.3
ZLN	Zelenaya	1.99	265	*e*P	Pn	16 19 59.8	+3.6
KLY	Klyuchi	2.06	273	*e*P	Pn	16 19 58.0	+1.1
BZGR	Bezymyannyi-Gr	2.06	263	*e*P	Pn	16 20 00.3	+3.2
KRSR	Krestovskiy	2.11	271	*e*P	Pn	16 20 00.2	+2.5
BZWR	Bezymyannyi-We	2.17	264	*e*P	Pn	16 20 02.0	+3.3
KIRR	Kirishev	2.26	264	*e*P	Pn	16 20 03.3	+3.5
MKZ	Mys Kozlova	2.26	222	*e*P	Pn	16 20 01.5	+1.8
MKZ				*e*S	Sn	16 20 28.0	+1.7
KPT	Kopyto	2.32	265	*e*P	Pn	16 20 04.5	+3.8
KMNR	Kamenistaya	2.36	259	*e*P	Pn	16 20 05.3	+4.2
TUMD	Tumrok D	2.46	246	*e*P	Pn	16 20 05.8	+3.3
KOZ	Kozyrevsk	2.51	267	*e*P	Pn	16 20 07.2	+4.1
SRDR	Sredinnyy	2.58	273	*e*P	Pn	16 20 08.5	+4.4
OSSR	Ossora	3.08	348	*e*P	Pn	16 20 13.1	+2.2
OSSR				*e*S	Sn	16 20 48.0	+1.5
ESO	Esso	3.18	266	*e*P	Pn	16 20 17.5	+5.2
SPN	Mys Shipunski	4.03	220	*e*P	Pn	16 20 26.8	+2.8
SPN				*e*S	Sn	16 21 10.1	+0.2
SDLR	Sedlovina	4.34	229	*e*P	Pn	16 20 32.2	+3.8
KRER	Koryakskii	4.38	230	*e*P	Pn	16 20 34.1	+5.1
KRX	Arik	4.39	231	*e*P	Pn	16 20 34.4	+5.4
SMAR	Somma	4.39	229	*e*P	Pn	16 20 33.5	+4.4
AVH	Avacha	4.41	230	*e*P	Pn	16 20 34.6	+5.3
UGLR	Uglovaya	4.42	229	*e*P	Pn	16 20 33.3	+3.9
KOK	Koryaka	4.44	230	*e*P	Pn	16 20 34.8	+5.2
GNL	Ganaly	4.49	238	*e*P	Pn	16 20 35.4	+5.0
DALK	Dalny	4.58	227	*e*P	Pn	16 20 35.4	+3.9
PET	Petropavlovsk	4.62	228	*e*P	Pn	16 20 35.8	+3.7
RUS	Russkaya	5.12	224	*e*P	Pn	16 20 41.7	+2.8
GRL	Gorelyy	5.21	227	*e*P	Pn	16 20 44.0	+3.8
MTVR	Mutnovka	5.22	226	*e*P	Pn	16 20 45.2	+4.8
ASAK	Asacha	5.41	227	*e*P	Pn	16 20 47.5	+4.6

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*IDC **30** 16:39:52.6±2.1, 15°.47S×167°.45E, h0^{km}, mb4.0/4, mbtmp4.0/6, ML5.0/1, Error ellipse: s-maj=45.5km s-min=24.5km az=22.0*
*NEIC **30** 16:39:59.9±1.3, 15°.6S±0°.1×167°.6E±0°.1, h62^{km}±9^{km}, mb4.6/14, Error ellipse: s-maj=19.6km s-min=14.9km az=96.0*
ISC 30 16:39:57.0±0.6**, 15°.51S**±0°.08×**167°.47E**±0°.10**, h35**^{km}**, n26,**
σ**0**^{s}**.89**/26**, mb4.5**/10**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.60	188	Pn	Pn	16 41 30.5	-1.1
DZM	Mont Dzumac	6.60	188	Pn	Pn	16 41 30.6	-1.0
	5.5nm,1.0s,baz=145,slow=23,SNR=7.7						
DZM				Sn	Sn	16 42 47.5	+1.8
	0.2nm,0.3s,baz=132,slow=11,SNR=1.8						
ONTNC	Ouen Toro	6.83	188	Pn	Pn	16 41 32.7	-2.0
MSVF	Nonsavu	10.38	104	Pn	Pn	16 42 24.3	+0.7
MSVF	Nonsavu	10.38	104	Pn	Pn	16 42 23.7	+0.2
	0.5nm,0.3s,baz=158,slow=19,SNR=1.9						
	4.0nm,0.7s						
RAO	Raoul Island	19.20	138		P	16 44 17.1	-0.7
RAO	Raoul Island	19.20	138	P	P	16 44 18.6	+0.7
	636nm,0.4s,baz=268,slow=19,SNR=2.4						
PATS	Pohnpei	23.98	337	P	P	16 45 09.0	+0.6
CAN	Canberra	25.75	217	P	P	16 45 23.5	-1.0
CAN				IAmb	IAmb	16 46 05.3	
	comp=Z,33nm,1.5s						
NNZ	Nelson	26.12	170	P	P	16 45 26.9	-0.8
NNZ				IAmb	IAmb	16 45 28.4	
	comp=Z,40nm,1.3s						
WB0	Warramunga Arr	31.77	257	P	P	16 46 17.8	-0.4
WRAB	Tennant Creek	31.82	257	P	P	16 46 17.5	-1.1
WRAB				IAmb	IAmb	16 47 00.9	
	comp=Z,9.1nm,1.5s						
WRA	Warramunga Arr	31.83	257	P	P	16 46 18.8	0.0
	comp=Z,0.4nm,0.7s,baz=84,slow=8.5,SNR=4.7						
	comp=Z,0.4nm,0.7s						
AS31	Alice Springs	32.58	250	P	P	16 46 25.7	+0.4
ASAR	Alice Springs	32.58	250	P	P	16 46 25.8	+0.4
ASAR	Alice Springs	32.58	250	P	P	16 46 26.1	+0.7
	comp=Z,1.5nm,0.6s,baz=75,slow=9.0,SNR=40						
	comp=Z,1.5nm,0.6s						
KNRA	Kununurra	37.25	264	P	P	16 47 05.3	-0.3
KNRA				IAmb	IAmb	16 47 11.1	
	comp=Z,12nm,1.4s						
FITZ	Fitzroy Crossi	40.07	260	P	P	16 47 30.0	+0.8
FITZ	Fitzroy Crossi	40.07	260	P	P	16 47 30.2	+1.0
	comp=Z,2.1nm,0.5s,baz=72,slow=9.3,SNR=12						
	comp=Z,2.1nm,0.5s						
MORW	Morawa	49.11	245	P	P	16 48 41.5	+0.2
AMKA	Amchitka	67.40	8	P	P	16 50 48.2	-0.4
PEA0B	Petropavlovsk-	68.85	354	P	P	16 50 57.5	-0.3
L14K	Kuka Creek	80.20	14	P	P	16 52 04.0	+0.7
L14K				IAmb	IAmb	16 52 44.6	
	comp=Z,5.1nm,0.9s						
MAW	Mawson	81.24	202	P	P	16 52 10.2	+1.2
	comp=Z,2.6nm,0.8s,baz=316,slow=12,SNR=4.0						
	comp=Z,2.6nm,0.8s						
J17K	VABM Dome	82.83	14	P	P	16 52 17.0	-0.3
J17K				IAmb	IAmb	16 52 19.3	
	comp=Z,9.1nm,1.2s						
KAIM	Kayak Island	84.57	22	P	P	16 52 25.8	-0.5

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*IDC **30** 17:04:54.9±2.1, 2°.27N×127°.64E, h0^{km}, mb3.5/4, mbtmp3.6/4, MS3.1/2, Error ellipse: s-maj=103.0km s-min=26.7km az=70.0*
*DJA **30** 17:05:09.7±0.7, 2°N±4°×12°7E±°, h99^{km}±10^{km}, M3.7/9, mB4.7/1, mb3.9/1, MLv3.5/9, Mw(mB)3.9/1*
ISC 30 17:05:08.6±1.4**, 2°.00N**±0°.10×**127°.4E**±0°.2**, h112**^{km}**, n11,**
σ**0**^{s}**.75**/10**, mb3.5**/3**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.22	180	P	Pn	17 05 33.3	+1.0
SGSI	Sangihe	2.49	312	P	Pn	17 05 48.4	+0.4
SGSI				S	Sn	17 06 17.8	-0.4
KMSI	Cibinong	3.68	247	P	Pn	17 06 04.6	+0.9
SANI	Sanana	4.26	199	P	Pn	17 06 10.4	-1.1
NLAI	Namlea	5.21	183	P	Pn	17 06 25.0	+0.7
FITZ	Fitzroy Crossi	20.05	185	P	P	17 09 33.1	+0.1
	1.8nm,0.8s,baz=3.5,slow=12,SNR=2.1						
	1.8nm,0.8s						
WRA	Warramunga Arr	22.85	163	P	P	17 10 02.2	-0.3
	2.3nm,0.5s,baz=343,slow=11,SNR=21						
	2.3nm,0.5s						
ASAR	Alice Springs	26.29	166	P	P	17 10 33.5	-0.3
	0.3nm,0.5s,baz=348,slow=7.6,SNR=13						
	0.3nm,0.5s						
MJAR	Matsushiro Arr	35.80	15	LR	LR	17 23 50.0	
	comp=Z,15nm,21.6s,baz=182,slow=32						
MKAR	Makanchi Array	59.34	326	P	P	17 14 58.7	-0.2
	0.2nm,0.5s,baz=125,slow=7.2,SNR=2.5						
	0.2nm,0.5s						
NRIK	Noril'sk	72.25	346	LR	LR	17 50 58.2	
	comp=Z,23nm,18.8s,baz=143,slow=38						

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*VAO **30** 17:24:51.7±3.0, 22°.16S×69°.14W, h86^{km}±16^{km}, mb4.3*
*SJA **30** 17:24:57.1±0.7, 22°.34S×68°.73W, h131^{km}, ML3.5, MW3.8*
*GUC **30** 17:24:58.7±0.8, 22°.27S×68°.66W, h111^{km}±3^{km}, ML3.6*
ISC 30 17:24:57.8±0.8**, 22°.29S**±0°.03×**68°.69W**±0°.04**, h122**^{km}±7^{km}**,**
n50, σ**1**^{s}**.22**/72**, 4C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.71	314	⇑*i*P	Pn	17 25 17.7	+0.1
PB09				*e*S	Sn	17 25 31.8	-0.7
PB09				IAML		17 25 33.8	
	comp=N,2µm,0.4s						
PB09	IPOC Station P	0.71	314	*e*P	Pn	17 25 17.6	+0.1
PB09				*e*S	Sn	17 25 34.4	+1.9
PB09				IAML		17 25 35.1	
	comp=Z,1µm,1.3s						
PB09	IPOC Station P	0.71	314	*e*P	Pn	17 25 17.7	+0.1
PB09				*e*S	Sn	17 25 34.9	+2.4
PB09				IAML		17 25 35.1	
	comp=Z,973nm,1.3s						
AF01	San Pedro de A	0.81	144	⇓*i*P	Pn	17 25 18.3	-0.3
AF01				*e*S	Sn	17 25 33.0	-1.3
AF01				IAML		17 25 34.3	
	comp=E,4µm,0.3s						
AF01	San Pedro de A	0.81	144	*e*P	Pn	17 25 18.3	-0.3
AF01				*e*S	Sn	17 25 33.3	-1.0
AF01				IAML		17 25 49.3	
	comp=Z,2µm,0.4s						
AF01	San Pedro de A	0.81	144	*e*P	Pn	17 25 18.4	-0.3
AF01				*e*S	Sn	17 25 38.6	+4.3
AF01				IAML		17 25 49.3	
	comp=Z,2µm,0.4s						
PB06	IPOC Station P	0.91	243	⇑*i*P	Pn	17 25 19.5	+0.2
PB06				*e*S	Sn	17 25 35.2	-0.4
PB06				IAML		17 25 39.1	
	comp=N,2µm,0.3s						
PB06	IPOC Station P	0.91	243	*e*P	Pn	17 25 19.4	+0.2
PB06				*e*S	Sn	17 25 35.9	+0.3
PB06				IAML		17 25 37.3	
	comp=Z,1µm,0.9s						
PB06	IPOC Station P	0.91	243	*e*P	Pn	17 25 19.5	+0.2
PB06				*e*S	Sn	17 25 36.8	+1.2
PB06				IAML		17 25 37.8	
	comp=Z,884nm,0.2s						
PB01	IPOC Station P	1.44	329	⇑*i*P	Pn	17 25 24.9	+0.1
PB01				*e*S	Sn	17 25 44.7	-0.6
PB01				IAML		17 25 46.4	
	comp=E,1µm,0.4s						
PB01	IPOC Station P	1.44	329	*e*P	Pn	17 25 25.0	+0.2
PB01				*e*S	Sn	17 25 45.8	+0.5
PB01				IAML		17 25 48.2	
	comp=Z,415nm,0.5s						
PB01	IPOC Station P	1.44	329	*e*P	Pn	17 25 25.0	+0.2
PB01				*e*S	Sn	17 25 45.9	+0.5
PB01				IAML		17 25 48.2	
	comp=Z,415nm,0.5s						
PB05	IPOC Station P	1.50	248	⇑*i*P	Pn	17 25 25.7	+0.3
PB05				*e*S	Sn	17 25 46.4	-0.2
PB05				IAML		17 25 51.0	
	comp=N,517nm,0.5s						
PB05	IPOC Station P	1.50	248	*e*P	Pn	17 25 25.8	+0.3
PB05				*e*S	Sn	17 25 47.2	+0.6
PB05				IAML		17 25 52.4	
	comp=Z,351nm,0.4s						
PB05	IPOC Station P	1.50	248	*e*P	Pn	17 25 25.9	+0.4
PB05				*e*S	Sn	17 25 33.9	-13
PB05				IAML		17 25 52.4	
	comp=Z,351nm,0.4s						
PB10	IPOC Station P	2.10	234	*e*P	Pn	17 25 33.6	+1.0
PB10				IAML		17 26 09.9	
	comp=E,235nm,0.2s						
PB10	IPOC Station P	2.10	234	*e*P	Pn	17 25 34.4	+1.8
PB10				IAML		17 26 22.4	
	comp=Z,108nm,0.8s						
PB10	IPOC Station P	2.10	234	*e*P	Pn	17 25 33.4	+0.8
PB10				*e*S	Sn	17 25 58.6	-0.7
PB10				IAML		17 26 13.4	
	comp=Z,162nm,0.4s						
PB08	IPOC Station P	2.18	349	*e*P	Pn	17 25 35.1	+1.1
PB08				*e*S	Sn	17 26 02.7	+1.1
PB08				IAML		17 26 05.3	
	comp=E,228nm,0.4s						
PB08	IPOC Station P	2.18	349	*e*P	Pn	17 25 35.4	+1.4
PB08				*e*S	Sn	17 26 03.4	+1.7
PB08				IAML		17 26 04.2	
	comp=Z,131nm,0.4s						
PB08	IPOC Station P	2.18	349	*e*P	Pn	17 25 34.8	+0.9
PB08				*e*S	Sn	17 26 03.9	+2.2
PB08				IAML		17 26 08.1	
	comp=Z,146nm,0.5s						
TA01	Diego Aracena	2.21	321	*e*P	Pn	17 25 34.3	+0.4
TA01				*e*S	Sn	17 26 01.3	-0.3
TA01				IAML		17 26 03.3	
	comp=N,533nm,0.5s						
TA01	Diego Aracena	2.21	321	*e*P	Pn	17 25 34.1	+0.2
TA01	Diego Aracena	2.21	321	*e*P	Pn	17 25 34.5	+0.7
TA01				*e*S	Sn	17 26 02.7	+1.2
TA01				IAML		17 26 08.9	
	comp=Z,264nm,0.5s						
GO01	Chusmiza	2.65	350	*e*P	Pn	17 25 41.0	+1.0
GO01				IAML		17 26 18.2	
	comp=N,341nm,0.3s						
GO01	Chusmiza	2.65	350	*e*P	Pn	17 25 40.3	+0.2
GO01	Chusmiza	2.65	350	*e*P	Pn	17 25 41.0	+1.0
GO01				*e*S	Sn	17 25 57.9	-15
GO01				IAML		17 26 15.8	
	comp=Z,104nm,0.2s						
GO01				*e*S		17 26 16.1	
PB11	IPOC Station P	2.67	340	*e*P	Pn	17 25 41.0	+1.0
PB11				IAML		17 26 40.5	
	comp=Z,110nm,0.8s						
PB11	IPOC Station P	2.67	340	*e*P	Pn	17 25 40.0	0.0
PB11				*e*S	Sn	17 26 14.6	+2.0
PB11				IAML		17 26 18.4	
	comp=Z,166nm,0.3s						
PB14	IPOC Station P	2.81	214	*e*P	Pn	17 25 44.0	+2.2
PB14				*e*S	Sn	17 26 16.1	+0.3
PB14				IAML		17 26 26.7	
	comp=Z,236nm,0.3s						
YJA	Yavi	2.95	88	*e*P	Pn	17 25 46.1	+2.3
YJA	Yavi	2.95	88	*e*P	Pn	17 25 46.1	+2.3
GO02	Mina Guanaco	2.98	196	*e*P	Pn	17 25 44.9	+0.8
GO02				*e*S	Sn	17 26 08.3	-11
GO02				IAML		17 26 47.5	
	comp=Z,171nm,0.3s						
AZAP	Zapla	3.85	121	*e*P	Pn	17 25 56.6	+1.0
PB16	IPOC Station P	4.01	349	*e*P	Pn	17 25 58.9	+0.9
FSA	Cafayete	4.54	147	*e*P	Pn	17 26 06.6	+1.8
FSA				*e*S	Sn	17 27 12.6	+16
AC02	Maricunga	4.54	185	*e*P	Pn	17 26 05.6	+0.6
AC02				IAML		17 27 36.0	
	comp=Z,37nm,0.8s						
ALOL	LOMAS DE OLMED	4.60	110	*e*P	Pn	17 26 05.8	+0.5
BBSD	Serra de San D	9.15	58	*e*P	Pn	17 27 03.7	-3.1
BDQN	Bodoquena, MS	11.28	83	*e*P	Pn	17 27 35.0	-0.4
SALV	Santo Antonio	13.83	65	*e*P	Pn	17 28 09.4	+0.7
TRCB	Terra Rica	14.85	95	*e*P	P	17 28 23.4	-0.9
PTGB	Pitanga	15.44	102	*e*P	P	17 28 30.4	-0.6
PDRB	Porto dos Gac	15.60	49	*e*P	Pn	17 28 29.7	-1.3
CPSB	Cacapava Do Su	15.87	124	*e*P	P	17 28 35.3	-0.2
PCMB	Pacaembu	16.19	91	*e*P	P	17 28 39.9	+0.7
CLDB	Colider	16.77	49	*e*P	Pn	17 28 44.9	-0.6
SNDB	Serra Nova Dou	19.52	61	*e*P	P	17 29 14.6	-1.1
IPMB	Ipameri, GO	19.70	81	*e*P	P	17 29 17.1	-0.6
ITTB	Itaituba	21.79	37	*e*P	P	17 29 38.8	-1.3

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*IDC **30** 17:40:24.4±0.7, 2°.72S×138°.56E, h0^{km}, mb3.9/10, mbtmp3.9/13, ML4.0/3, MS3.5/15, Error ellipse: s-maj=14.3km s-min=12.8km az=121.0*
*DJA **30** 17:40:28.6±0.8, 2°S±6°×13°9E±°, h16^{km}±9^{km}, M4.3/11, mb4.4/7, MLv4.3/11*
ISC 30 17:40:26.0±0.5**, 2°.72S**±0°.06×**138°.54E**±0°.07**, h10**^{km}**, n38,**
σ**1**^{s}**.40**/27**, mb3.9**/13**, MS3.6**/11**, 1D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.74	13	P	Pg	17 40 38.9	-1.4
GENI	Genyem	1.63	86	P	Pn	17 40 57.2	+2.4
JAY	Jayapura	2.17	85	Pg	Pn	17 41 03.7	+1.4
	12nm,0.3s,baz=229,slow=11,SNR=73						
JAY				Lg	Lg	17 41 33.9	
	12nm,0.3s,baz=315,slow=21,SNR=6.3						
JAY				LR	LR	17 42 15.1	
	comp=Z,857nm,21.2s,baz=294,slow=51						
JAY	Jayapura	2.17	85	P	Pn	17 41 04.2	+1.9
SRPI	Serui, Papua	2.45	290	P	Pn	17 41 05.9	-0.1
BAKI	Biak	2.87	302	P	Pn	17 41 12.9	+1.1
RKPI	Ransiki, Papua	4.52	285	P	Pn	17 41 34.3	-0.3

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FAKI  Fak Fak            6.29 268  P       Pn      17 42 00.4 +1.5
      0.1nm21nm,0.8s
SWI   Sorong             7.51 284  P       Pn      17 42 17.0 +1.4
      0.1nm23nm,0.7s
NLAI  Namlea            11.44 267  P       Pn      17 43 10.6 +1.1
BATI  Baumata           16.54 243  Pn      Pn      17 44 17.6 -0.7
      3.0nm,0.3s,baz=147,slow=1.7,SNR=5.0
      13nm,0.7s
GUMO  Guam              17.38  21  LR      LR      17 50 46.9
      comp=Z,95nm,18.1s,baz=190,slow=36
WRA   Warramunga Arr    17.61 193  P       Pn      17 44 31.0 -0.6
      0.4nm,0.3s,baz=18,slow=12,SNR=20
WRA                                S       Sn      17 47 43.7 -4.2
      1.6nm,0.9s,baz=16,slow=21,SNR=3.3
WRA                                LR      LR      17 52 15.5
      comp=Z,345nm,18.5s,baz=320,slow=40
      2.4nm,0.6s
KAPI  Kappang           18.88 262  LR      LR      17 52 26.8
      comp=Z,75nm,18.3s,baz=88,slow=38
FITZ  Fitzroy Crossi    19.84 219  P       P       17 44 57.1 -0.1
      0.1nm,0.3s,baz=29,slow=11,SNR=5.4
      1.5nm,0.7s
ASAR  Alice Springs     21.30 192  P       P       17 45 13.2 +0.1
      2.8nm,0.7s,baz=14,slow=10,SNR=52
ASAR                               S       S       17 49 11.8 +1.9
      0.8nm,0.8s,baz=13,slow=22,SNR=3.3
ASAR                               LR      LR      17 54 06.4
      comp=Z,288nm,20.0s,baz=12,slow=39
      2.8nm,0.7s
STKA  Stephens Creek    29.15 175  LR      LR      17 59 15.8
      comp=Z,151nm,19.2s,baz=355,slow=39
NWAO  Narrogin (SRO)    36.09 211  LR      LR      18 03 23.1
      comp=Z,389nm,19.4s,baz=281,slow=38
JNU   Nakatsue          36.37 349  LR      LR      18 01 43.3
      comp=Z,95nm,18.6s,baz=156,slow=35
KSRS  Korea Array       41.17 347  P       P       17 48 10.4 -0.2
      1.1nm,0.9s,baz=164,slow=9.5,SNR=4.9
      1.1nm,0.9s
CMAR  Chiang Mai Arr    44.29 300  P       P       17 48 37.4 +1.0
      0.7nm,0.7s,baz=116,slow=6.5,SNR=7.2
      0.7nm,0.7s
XAN   Xi'an             45.98 325 ⇓P       P       17 48 49.5 -0.2
XAN                                pmax    pmax
      comp=Z,11nm,1.5s
ASAJ  Asahikawa         46.77   4  LR      LR      18 06 26.8
      comp=Z,26nm,21.8s,baz=165,slow=33
USRK  Ussuriysk Ar.     47.08 354  LR      LR      18 06 52.5
      comp=Z,41nm,19.1s,baz=168,slow=34
GTA   Gaotai            54.98 324  P       P       17 49 58.5 +0.8
GTA                                pP      sP      17 50 06.8 +4.6
GTA                                sP      pP      17 50 11.0  +10
GTA                                pmax    pmax
      comp=Z,4.0nm,1.2s
SONM  Songino Array     57.65 335  P       P       17 50 16.5 -0.2
      comp=Z,0.3nm,0.4s,baz=162,slow=6.1,SNR=2.2
      comp=Z,0.3nm,0.4s
PETK  Petropavlovsk-    57.91  14  LR      LR      18 10 51.0
      comp=Z,41nm,21.8s,baz=202,slow=32
MA2   Magadan           62.85   7  LR      LR      18 14 31.6
      comp=Z,15nm,21.6s,baz=138,slow=33
SEY   Seymchan          66.31   7  LR      LR      18 17 05.0
      comp=Z,18nm,20.9s,baz=240,slow=33
MKAR  Makanchi Array    69.69 322  P       P       17 51 36.6 +0.5
      comp=Z,2.0nm,0.9s,baz=124,slow=7.5,SNR=11
      comp=Z,2.0nm,0.9s
KSH   Kashi             70.97 313  P       P       17 51 50.0 +5.9
KSH                                pmax    pmax
      comp=Z,3.0nm,0.9s
ZALV  Zalesovo Beam     71.86 330  P       P       17 51 48.8 -0.2
      comp=Z,0.6nm,0.7s,baz=123,slow=5.3,SNR=2.0
      comp=Z,0.6nm,0.7s
KURBB Kurchatov Arra    73.64 325  P       P       17 52 00.1 +0.4
      comp=Z,0.3nm,0.2s,baz=124,slow=5.1,SNR=4.7
      comp=Z,0.3nm,0.2s
VNDA  Vanda             75.79 175  LR      LR      18 23 43.0
      comp=Z,31nm,21.6s,baz=353,slow=34
BVAR  Borovoye Array    79.22 325  P       P       17 52 31.9 +0.5
      comp=Z,1.2nm,0.5s,baz=98,slow=7.6,SNR=6.0
      comp=Z,1.2nm,0.5s
KDAK  Kodiak Island     81.19  30  LR      LR      18 24 07.4
      comp=Z,46nm,21.9s,baz=232,slow=32
ILAR  Eielson Array     85.91  24  P       P       17 53 04.9 -1.1
      comp=Z,0.5nm,0.6s,baz=257,slow=4.3,SNR=6.9
      comp=Z,0.5nm,0.6s
QSPA  South Pole Qui    87.23 180  P       P       17 53 12.3 -0.2
      comp=Z,1.9nm,1.0s,baz=125,slow=5.8,SNR=3.1
      comp=Z,1.9nm,1.0s
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*INMG **30** 17:41:06.8±1.2, 37°06N×24°32W, h10^{km}, ML3.5, Error ellipse: s-maj=7.1km s-min=4.4km az=81.0, #DIST_RANGE: LOCAL #IPMA_REGION: Falha de Gloria*

*SVSA **30** 17:41:06.8±1.2, 37°06N×24°32W, h10^{km}, ML3.5(INMG), Error ellipse: s-maj=7.1km s-min=4.4km az=81.0, #DIST_RANGE: LOCAL #IPMA_REGION: Falha de Gloria*

ISC 30 17:41:08.4±2.8**, 37°24N**±0°05×**24°6W**±0°1**, h23^{km}**±14^{km}**, n32, σ0^{s}89**/58**, Azores Islands region**

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Code  Station Name          Δ°  AZ°    Phase ID          Time      Res
                                       Op      ISC       h  m  s   ISC
PSMA  Santa Maria         0.46 238  eP      Pb      17 41 17.2 -0.6
PSMA                                eS      Sb      17 41 25.1 +0.8
PSMA                                i IAML          17 41 26.1
PSMA                                i IAML          17 41 27.1
PSMA                                i IAML          17 41 27.1
PSMA  Santa Maria         0.46 238  eP      Pb      17 41 17.2 -0.6
PSMA                                eS      Sb      17 41 25.1 +0.8
PSMA                                i IAML          17 41 26.1
PSMA                                i IAML          17 41 27.1
PSMA                                i IAML          17 41 27.1
PSMA  Santa Maria         0.46 238  eP      Pb      17 41 17.2 -0.6
PSMA                                eS      Sb      17 41 25.1 +0.8
PSMA                                i AML   AML     17 41 26.1
PSMA                                i AML   AML     17 41 27.1
PSMA                                i AML   AML     17 41 27.1
BART  Pico Bartolome      0.68 322  eP      Pb      17 41 21.6 -0.1
BART                                eS      Sn      17 41 33.0 +0.3
BART                                i IAML          17 41 34.2
BART                                i IAML          17 41 34.7
BART                                i IAML          17 41 35.0
BART  Pico Bartolome      0.68 322  eP      Pb      17 41 21.6 -0.1
BART                                eS      Sn      17 41 33.0 +0.3
BART                                i IAML          17 41 34.2
BART                                i IAML          17 41 34.7
BART                                i IAML          17 41 35.0
BART  Pico Bartolome      0.68 322  eP      Pb      17 41 21.6 -0.1
BART                                eS      Sn      17 41 33.0 +0.3
BART                                i AML   AML     17 41 34.2
BART                                i AML   AML     17 41 34.7
BART                                i AML   AML     17 41 35.0
PGRON Lagoa das Cont      0.79 312  eP      Pb      17 41 23.4 -0.1
PGRON                               eS      Sn      17 41 36.0 +0.7
PGRON                               i IAML          17 41 38.0
PGRON                               i IAML          17 41 38.2
PGRON                               i IAML          17 41 39.3
PGRON Lagoa das Cont      0.79 312  eP      Pb      17 41 23.4 -0.1
PGRON                               eS      Sn      17 41 36.0 +0.7
PGRON                               i IAML          17 41 38.0
PGRON                               i IAML          17 41 38.2
PGRON                               i IAML          17 41 39.3
PGRON Lagoa das Cont      0.79 312  eP      Pb      17 41 23.4 -0.1
PGRON                               eS      Sn      17 41 36.0 +0.7
PGRON                               i AML   AML     17 41 38.0
PGRON                               i AML   AML     17 41 38.2
PGRON                               i AML   AML     17 41 39.3
PCALD Caldeiras da R      0.87 310  eP      Pb      17 41 24.6 -0.3
PCALD                               eS      Sn      17 41 38.2 +0.9
PCALD Caldeiras da R      0.87 310  eP      Pb      17 41 24.6 -0.3
PCALD                               eS      Sn      17 41 38.2 +0.9
CMLA  Cha da Macela       0.88 307  eP      Pb      17 41 24.6 -0.3
CMLA                                eS      Sb      17 41 38.1 +1.8
CMLA                                i IAML          17 41 39.1
CMLA                                i IAML          17 41 39.2
CMLA                                i IAML          17 41 39.9
CMLA  Cha da Macela       0.88 307  eP      Pb      17 41 24.6 -0.3
CMLA                                eS      Sb      17 41 38.1 +1.8
CMLA                                i IAML          17 41 39.1
CMLA                                i IAML          17 41 39.2
CMLA                                i IAML          17 41 39.9
CMLA  Cha da Macela       0.88 307  eP      Pb      17 41 24.6 -0.3
CMLA                                eS      Sb      17 41 38.1 +1.8
CMLA                                i AML   AML     17 41 39.1
CMLA                                i AML   AML     17 41 39.2
CMLA                                i AML   AML     17 41 39.9
PSET  Sete Cidades        1.04 304  eP      Pn      17 41 27.1 -0.5
PSET                                eS      Sn      17 41 42.5 +1.1
PSET                                i IAML          17 41 44.1
PSET                                i IAML          17 41 45.0
PSET                                i IAML          17 41 46.6
PSET  Sete Cidades        1.04 304  eP      Pn      17 41 27.1 -0.5
PSET                                eS      Sn      17 41 42.5 +1.1
PSET                                i IAML          17 41 44.1
PSET                                i IAML          17 41 45.0
PSET                                i IAML          17 41 46.6
PSET  Sete Cidades        1.04 304  eP      Pn      17 41 27.1 -0.5
PSET                                eS      Sn      17 41 42.5 +1.1
PSET                                i AML   AML     17 41 44.1
PSET                                i AML   AML     17 41 45.0
PSET                                i AML   AML     17 41 46.6
PSCM  Serra do Cume       2.44 307  eS      Sn      17 42 16.3 +0.3
PSCM                                i IAML          17 42 20.2
PSCM                                i IAML          17 42 20.3
PSCM                                i IAML          17 42 20.4
PSCM  Serra do Cume       2.44 307  eS      Sn      17 42 16.3 +0.3
PSCM                                i IAML          17 42 20.2
PSCM                                i IAML          17 42 20.3
PSCM                                i IAML          17 42 20.4
PSCM  Serra do Cume       2.44 307  eS      Sn      17 42 16.3 +0.3
PSCM                                i AML   AML     17 42 20.2
PSCM                                i AML   AML     17 42 20.3
PSCM                                i AML   AML     17 42 20.4
ADH   Angra Heroismo      2.49 305  eP      Pb      17 41 50.4 -2.1
ADH                                 eS      Sb      17 42 21.2 -1.4
ADH                                 i IAML          17 42 23.1
ADH                                 i IAML          17 42 24.5
ADH                                 i IAML          17 42 24.9
ADH   Angra Heroismo      2.49 305  eP      Pb      17 41 50.4 -2.1
ADH                                 eS      Sb      17 42 21.2 -1.4
ADH                                 i IAML          17 42 23.1
ADH                                 i IAML          17 42 24.5
ADH                                 i IAML          17 42 24.9
ADH   Angra Heroismo      2.49 305  eP      Pb      17 41 50.4 -2.1
ADH                                 eS      Sb      17 42 21.2 -1.4
ADH                                 i AML   AML     17 42 23.1
ADH                                 i AML   AML     17 42 24.5
ADH                                 i AML   AML     17 42 24.9
PAGU  Agualva, Azore      2.52 308  eS      Sn      17 42 18.3 +0.3
PAGU                                i IAML          17 42 24.6
PAGU                                i IAML          17 42 24.9
PAGU                                i IAML          17 42 24.9
PAGU  Agualva, Azore      2.52 308  eS      Sn      17 42 18.3 +0.3
PAGU                                i IAML          17 42 24.6
PAGU                                i IAML          17 42 24.9
PAGU                                i IAML          17 42 24.9
PAGU  Agualva, Azore      2.52 308  eS      Sn      17 42 18.3 +0.3
PAGU                                i AML   AML     17 42 24.6
PAGU                                i AML   AML     17 42 24.9
PAGU                                i AML   AML     17 42 24.9
ROSA  Rosais              3.21 299  eP      Pn      17 41 57.8 +0.4
ROSA                                eS      Sn      17 42 35.1 +0.2
ROSA                                i IAML          17 42 37.2
ROSA                                i IAML          17 42 37.4
ROSA                                i IAML          17 42 37.7
ROSA  Rosais              3.21 299  eP      Pn      17 41 57.8 +0.4
ROSA                                eS      Sn      17 42 35.1 +0.2
ROSA                                i IAML          17 42 37.2
ROSA                                i IAML          17 42 37.4
ROSA                                i IAML          17 42 37.7
ROSA  Rosais              3.21 299  eP      Pn      17 41 57.8 +0.4
ROSA                                eS      Sn      17 42 35.1 +0.2
ROSA                                i AML   AML     17 42 37.2
ROSA                                i AML   AML     17 42 37.4
ROSA                                i AML   AML     17 42 37.7
PICO  Pico                3.25 294  eP      Pn      17 41 58.7 +0.6
PICO                                eS      Sn      17 42 35.9 -0.1
PICO                                i IAML          17 42 38.6
PICO                                i IAML          17 42 38.7
PICO                                i IAML          17 42 39.6
PICO  Pico                3.25 294  eP      Pn      17 41 58.7 +0.6
PICO                                eS      Sn      17 42 35.9 -0.1
PICO                                i IAML          17 42 38.6
PICO                                i IAML          17 42 38.7
PICO                                i IAML          17 42 39.6
PICO  Pico                3.25 294  eP      Pn      17 41 58.7 +0.6
PICO                                eS      Sn      17 42 35.9 -0.1
PICO                                i AML   AML     17 42 38.6
PICO                                i AML   AML     17 42 38.7
PICO                                i AML   AML     17 42 39.6
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*IDC **30** 17:48:51.6±2.0, 23°52S×179°83W, h522^{km}±19^{km}, mb3.4/7, mbtmp4.3/9, Error ellipse: s-maj=28.1km s-min=17.9km az=16.0*

*NEIC **30** 17:48:52.7±1.5, 23°7S±0°1×179°9W±0°2, h528^{km}±11^{km}, mb4.2/25, Error ellipse: s-maj=25.7km s-min=12.7km az=47.0*

ISC 30 17:48:53.2±0.8**, 23°71S**±0°09×**180°0W**±0°1**, h532^{km}, n43, σ1^{s}15**/45**, mb4.2**/20**, South of Fiji Islands**

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Code  Station Name          Δ°  AZ°    Phase ID          Time      Res
                                       Op      ISC       h  m  s   ISC
RAO   Raoul Island        5.81 162  P       P       17 50 28.3 -0.8
RAO   Raoul Island        5.81 162  P       P       17 50 29.0 -0.1
      618nm,0.3s,baz=265,slow=23,SNR=2.7
MSVF  Nonsavu             6.24 342  P       P       17 50 31.6 -1.7
FUTU  Fugatoga            9.52  11  P       P       17 51 09.0 +3.0
PINNC Pines Island,      11.64 273  P       P       17 51 29.1 +1.2
DZM   Mont Dzumac        12.64 275  P       P       17 51 39.9 +1.4
      4.3nm,0.7s,baz=140,slow=23,SNR=1.9
URZ   Urewera            14.71 189  P       P       17 51 58.7 -1.0
      5.0nm,0.5s,baz=136,slow=0.4,SNR=6.2
WHZ   Wether Hill Ro     24.20 201  P       P       17 53 29.0 +1.5
EIDS  Eidsvold           26.37 260  P       P       17 53 48.5 +1.4
EIDS                                IAmb    IAmb    17 53 54.9
      comp=Z,3.6nm,0.8s
CAN   Canberra           29.27 240  P       P       17 54 14.0 +1.7
CTAO  Charters Tower     31.51 270  P       P       17 54 32.5 +0.7
TOO   Toolangi           32.58 237  P       P       17 54 41.8 +1.1
STKA  Stephens Creek     34.83 248  P       P       17 55 00.6 +0.9
STKA  Stephens Creek     34.83 248  P       P       17 55 00.3 +0.7
      comp=Z,4.1nm,0.6s,baz=95,slow=10,SNR=13
      comp=Z,4.1nm,0.6s
COEN  Coen               36.12 279  P       P       17 55 09.9 -0.7
COEN                                IAmb    IAmb    17 55 22.5
      comp=Z,6.9nm,1.1s
BBOO  Buckleboo          39.55 247  P       P       17 55 38.2 -0.2
BOXOZ Borroloola         41.70 272  P       P       17 55 53.4 -2.3
AS31  Alice Springs      42.10 260          P       17 55 59.0 +0.2
AS31                                IAmb    IAmb    17 56 00.2
      comp=Z,2.8nm,0.5s
ASAR  Alice Springs      42.10 260  P       P       17 55 58.3 -0.5
ASAR  Alice Springs      42.10 260  P       P       17 55 59.1 +0.2
      comp=Z,6.7nm,0.5s,baz=96,slow=7.3,SNR=207
ASAR                                ScP     ScP     18 00 41.7 +0.6
      comp=Z,0.4nm,0.8s,baz=98,slow=4.5,SNR=4.2
      comp=Z,6.7nm,0.5s
WR8   Warramunga Arr     42.31 266          P       17 55 59.9 -0.6
WR8                                 IAmb    IAmb    17 56 00.7
      comp=Z,7.2nm,0.8s
WB0   Warramunga Arr     42.45 266  P       P       17 56 01.2 -0.4
WRAB  Tennant Creek      42.45 266  P       P       17 56 00.1 -1.4
WRAB                                IAmb    IAmb    17 56 01.8
      comp=Z,8.2nm,0.8s
WRA   Warramunga Arr     42.46 266          P       17 56 00.7 -0.9
WRA   Warramunga Arr     42.46 266  P       P       17 56 01.2 -0.4
      comp=Z,12nm,0.6s,baz=92,slow=8.4,SNR=197
WRA                                 ScP     ScP     18 00 43.7 +1.1
      comp=Z,0.4nm,0.6s,baz=98,slow=3.5,SNR=2.3
      comp=Z,12nm,0.6s
FORT  Forrest            46.41 249  P       P       17 56 31.6 -0.4
MTN   Manton Dam         47.48 274  P       P       17 56 39.4 -0.8
MTN                                 IAmb    IAmb    17 56 40.3
      comp=Z,14nm,1.1s
KNRA  Kununurra          48.73 270  P       P       17 56 49.1 -0.4
KNRA                                IAmb    IAmb    17 56 50.3
      comp=Z,7.6nm,0.9s
FITZ  Fitzroy Crossi     50.88 265  P       P       17 57 05.4  0.0
FITZ  Fitzroy Crossi     50.88 265  P       P       17 57 05.3  0.0
      comp=Z,6.1nm,0.7s,baz=112,slow=6.3,SNR=23
      comp=Z,6.1nm,0.7s
VNDA  Vanda              54.57 185  P       P       17 57 32.5 +1.8
VNDA  Vanda              54.57 185  P       P       17 57 31.9 +1.2
      comp=Z,0.6nm,0.8s,baz=297,slow=11,SNR=2.0
      comp=Z,0.6nm,0.8s
PSA00 Pilbara Seismi     55.23 259  P       P       17 57 35.0 -1.3
PSA00                               IAmb    IAmb    17 57 40.5
      comp=Z,13nm,1.1s
NWAO  Narrogin (SRO)     55.34 245  P       P       17 57 36.3 -0.6
NWAO                                IAmb    IAmb    17 57 37.1
      comp=Z,12nm,0.8s
MBWA  Marble Bar         55.44 260  P       P       17 57 36.9 -0.8
MBWA                                IAmb    IAmb    17 57 37.9
      comp=Z,8.6nm,0.8s
MORW  Morawa             56.97 250  P       P       17 57 48.0 -0.2
MORW                                IAmb    IAmb    17 57 48.7
      comp=Z,6.7nm,0.6s
CASY  Casey              60.29 206  P       P       17 58 08.5 -1.4
CASY                                IAmb    IAmb    17 58 21.4
      comp=Z,6.7nm,1.1s
TOLI2 Tolitoli           62.57 284  P       P       17 58 25.3 -0.4
TOLI2                               IAmb    IAmb    17 58 26.5
      comp=Z,6.8nm,0.7s
QSPA  South Pole Qui     66.37 180  P       P       17 58 49.3 +0.3
QSPA  South Pole Qui     66.37 180  P       P       17 58 49.3 +0.3
      comp=Z,0.4nm,0.6s,baz=290,slow=1.1,SNR=5.1
      comp=Z,0.4nm,0.6s
TXAR  Lajitas Array      90.30  58  P       P       18 00 56.1 -1.6
      comp=Z,0.6nm,0.7s,baz=215,slow=6.6,SNR=9.8
      comp=Z,0.6nm,0.7s
BRTR  Keskin Array B    147.50 307  PKPbc   PKPbc   18 07 36.1 -1.7
      comp=Z,0.6nm,0.7s,baz=77,slow=4.3,SNR=3.0
MMAI  Mount Meron Ar    147.66 295  PKPbc   PKPbc   18 07 37.7 -0.6
      comp=Z,0.6nm,0.4s,baz=116,slow=3.4,SNR=2.1
```

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*IDC **30** 17:54:50.8±7.9, 18°21N×146°24E, h95^{km}±50^{km}, mb3.4/5, mbtmp3.7/6, MS3.7/2, Error ellipse: s-maj=167.2km s-min=23.1km az=82.0*

ISC 30 17:54:55.5±3.8**, 18°0N**±0°1×**14°6E**±°**, h135^{km}, n13, σ1^{s}67**/6**, mb3.5**/5**, Mariana Islands**

```
Code  Station Name          Δ°  AZ°    Phase ID          Time      Res
                                       Op      ISC       h  m  s   ISC
GUMO  Guam                4.49 193  P       Pn      17 56 00.5 -1.5
      11nm,0.4s,baz=15,slow=20,SNR=1.5
H11S3 WAKE ISLAND Hy     19.77  85  T       T       18 20 15.8
      baz=274
H11S1 WAKE ISLAND Hy     19.78  85  T       T       18 20 22.6
      baz=274
H11S2 WAKE ISLAND Hy     19.79  85  T       T       18 20 22.2
      baz=274
H11N1 WAKE ISLAND Hy     19.96  82  T       T       18 20 37.9
      baz=266
H11N2 WAKE ISLAND Hy     19.96  82  T       T       18 20 32.3
      baz=266
H11N3 WAKE ISLAND Hy     19.98  82  T       T       18 20 32.3
      baz=266
WRA   Warramunga Arr     39.37 197  P       P       18 02 13.3 +1.2
      0.3nm,0.4s,baz=20,slow=7.6,SNR=9.0
      0.3nm,0.4s
ASAR  Alice Springs      43.03 196  P       P       18 02 43.9 +1.9
      0.4nm,0.5s,baz=18,slow=8.5,SNR=18
ASAR                                LR      LR      18 20 40.5
      comp=Z,74nm,18.4s,baz=219,slow=36
      0.4nm,0.5s
MSVF  Nonsavu            47.56 137  LR      LR      18 19 28.4
      comp=Z,96nm,21.5s,baz=70,slow=31
KURBB Kurchatov Arra     61.95 318  P       P       18 05 01.2 +0.2
      0.2nm,0.4s,baz=96,slow=6.9,SNR=4.2
      0.2nm,0.4s
BVAR  Borovoye Array     67.12 321  P       P       18 05 34.8 +0.3
      0.8nm,0.6s,baz=82,slow=3.1,SNR=7.5
      0.8nm,0.6s
FINES FINESS Array B     87.59 335  P       P       18 07 27.2 -1.0
      1.5nm,1.0s,baz=53,slow=5.8,SNR=3.5
      1.5nm,1.0s
```

NOU 30 18:21:42.1, 21°96S×169°99E, h0^{km}, mb3.9/8**, Southeast of Loyalty Islands, Southeast of Loyalty Islands**

```
Code  Station Name          Δ°  AZ°    Phase ID          Time      Res
                                       Op      ISC       h  m  s   ISC
MARNC Mare, Loyalty       1.88 284  P       Pn      18 22 14.7 -0.9
MARNC Mare, Loyalty       1.88 284  S       Sn      18 22 40.0  0.0
PINNC Pines Island,       2.44 254  P       Pn      18 22 23.4 +0.1
PINNC Pines Island,       2.44 254  S       Sn      18 22 54.0 +0.1
DZM   Mont Dzumac         3.29 267  P       Pn      18 22 34.6 -0.4
DZM   Mont Dzumac         3.29 267  S       Sn      18 23 15.9 +0.9
ONTNC Ouen Toro           3.30 263  P       Pn      18 22 34.7 -0.3
KOUNC Koumac, New Ca      5.50 284  P       Pn      18 23 06.1 +0.8
```

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*STR **30** 18:37:04.0±0.4, 43°N±4°×°±°, h16^{km}±4^{km}, MLv2.1/14, Error ellipse: s-maj=0.0km s-min=0.0km az=11.7, preliminary*

*LDG **30** 18:37:03.5±0.1, 43°13N×0°66W, h15^{km}, Md2.7/3*

*MDD **30** 18:37:04.1±0.2, 43°13N×0°65W, h10^{km}±1^{km}, mb_Lg2.4/40, Error ellipse: s-maj=2.2km s-min=1.0km az=3.0*

ISC 30 18:37:03.5±0.9**, 43°15N**±0°03×**0°67W**±0°02**, h18^{km}**±4^{km}**, n37, σ0^{s}80**/67**, Pyrenees**

```
Code  Station Name          Δ°  AZ°    Phase ID          Time      Res
                                       Op      ISC       h  m  s   ISC
ATE   Arette              0.06 204  Pg      Pg      18 37 06.8  0.0
ATE                                 Sg      Sg      18 37 08.6 -0.5
ORDF  Ordiarp             0.21 289  Pg      Pg      18 37 08.7 +0.2
ORDF                                Sg      Sg      18 37 12.4 +0.5
REYF  Montagne du Re      0.21 111  Pg      Pg      18 37 08.4 -0.2
REYF                                Sg      Sg      18 37 11.9 -0.3
ETSF  Etsaut              0.26 163  ePg     Pg      18 37 09.1 -0.2
ETSF                                eSg     Sg      18 37 12.5 -0.8
      623nm,0.2s
IRAF  Chalets d'Irat      0.29 248  Pg      Pg      18 37 10.0  0.0
CANF  Canfranc            0.40 164  Pg      Pg      18 37 11.2 -0.5
CANF                                Sg      Sg      18 37 16.3 -0.9
SJPF  Ste Jean            0.41 266  ePg     Pg      18 37 11.7 -0.2
SJPF                                eSg     Sg      18 37 17.3 -0.3
      58nm,0.2s
OSSF  Osses               0.45 284  Pg      Pg      18 37 12.0 -0.6
OSSF                                Sg      Sg      18 37 17.7 -1.1
PYLO  Lourdes             0.45  96  Sg      Sb      18 37 19.7 +0.3
EORO  Oroz-Betelu         0.54 242  Pg      Pg      18 37 14.1 -0.1
EORO                                Sg      Sg      18 37 21.1 -0.3
EORO                                i IVmb_Lg       18 37 23.0
LABF  Labassere           0.55 100  Pg      Pg      18 37 14.0 -0.5
LABF                                Sg      Sb      18 37 22.6 +0.5
VIEF  Viey                0.57 117  Pg      Pg      18 37 14.3 -0.5
VIEF                                Sg      Sg      18 37 21.7 -0.8
EALK  Alkurruntz          0.62 277  Pg      Pg      18 37 14.8 -0.9
EALK                                Sg      Sg      18 37 23.1 -1.0
EALK                                i IVmb_Lg       18 37 24.9
EALK  Alkurruntz          0.62 277  Pg      Pg      18 37 14.9 -0.9
TERF  Tercis-les-Bai      0.63 329  Pg      Pb      18 37 16.9 +1.0
EPF   Esparros            0.74  98  ePg     Pg      18 37 17.5 -0.6
EPF                                 eSg     Sg      18 37 27.6 -0.4
      50nm,0.3s
EARA  Aranguren           0.77 241  Pg      Pb      18 37 19.0 +0.6
EARA                                Sg      Sg      18 37 28.0 -0.7
EARA                                i IVmb_Lg       18 37 34.6
EARA  Aranguren           0.77 241  Pn      Pb      18 37 18.9 +0.6
MELF  Melles              1.08 104  Pn      Pb      18 37 23.7  0.0
MELF                                Sg      Sb      18 37 38.1 +0.7
MLS   Moulis              1.30  98  Pg      Pb      18 37 27.9 +0.5
MLS                                 Sg      Sb      18 37 44.6 +0.7
SALF  Salau               1.41 105  Pn      Pb      18 37 29.8 +0.4
SALF                                Sn      Sg      18 37 48.8 -0.4
ESAC  San Caprasio        1.43 174  Pn      Pn      18 37 28.5 -0.1
ESAC                                Sn      Sn      18 37 46.8 -0.1
ESAC                                i IVmb_Lg       18 37 53.2
GENF  Genat               1.67 100  Pg      Pb      18 37 34.8 +1.0
PAND  Andorre             1.74 110  Pg      Pg      18 37 36.6 -0.4
PAND                                Sn      Sg      18 38 00.0 +0.4
DUNF  Dun                 1.82  93  Pg      Pg      18 37 37.8 -0.5
FNEB  Nbias               2.05  96  Pg      Pb      18 37 40.8 +0.7
FNEB                                Sn      Sb      18 38 06.2 +0.9
CARF  Carcanieres         2.08 101  Pg      Pb      18 37 41.9 +1.2
MTLF  Montolieu           2.12  84  ePg     Pb      18 37 40.8 -0.5
EPOB  Poblet              2.21 144  Pn      Pn      18 37 39.9 +0.5
EPOB                                Pg      Pb      18 37 44.1 +1.2
EPOB                                Sn      Sn      18 38 06.0 -0.2
EPOB                                Sg      Sg      18 38 13.6 -1.0
EPOB                                i IVmb_Lg       18 38 14.5
ERTA  Horta de San J      2.31 161  Pn      Pn      18 37 40.9 +0.3
ERTA                                Sn      Sn      18 38 07.9 -0.7
ERTA                                i IVmb_Lg       18 38 21.4
ETOR  Torete              2.54 205  Pn      Pn      18 37 45.0 +1.0
ETOR                                Sn      Sn      18 38 13.5 -1.0
ETOR                                Sg      Sg      18 38 24.3 -1.0
```

ETOR				*i* IVmb_Lg		18 38 28.3	
CAF	**Calviac**	**2.65**	**47**	*e*Pn	**Pn**	**18 37 44.5**	**-0.9**
EJON	**La Jonquera**	**2.71**	**104**	Pn	**Pn**	**18 37 46.0**	**-0.1**
EJON				Pg	**Pb**	**18 37 52.7**	**+1.4**
EJON				Sn	**Sn**	**18 38 18.3**	**-0.2**
EJON				Sg	**Sg**	**18 38 28.8**	**-1.6**
EJON				*i* IVmb_Lg		18 38 31.2	
CLAF	**Gruissan**	**2.75**	**89**	Pn	**Pn**	**18 37 49.6**	**+3.0**
EMOS	**Mosqueruela**	**2.78**	**177**	Pn	**Pn**	**18 37 47.6**	**+0.3**
EMOS				Sn	**Sn**	**18 38 19.5**	**-1.0**
EMOS				*i* IVmb_Lg		18 38 32.7	
LASF	**Ste Croix**	**3.41**	**73**	*e*Pn	**Pn**	**18 37 55.3**	**-0.5**
GUD	**Guadarrama**	**3.61**	**227**	Pn	**Pn**	**18 37 59.4**	**+0.8**
GUD				Sn	**Sn**	**18 38 39.9**	**-1.0**
GUD				*i* IVmb_Lg		18 38 49.6	

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*SOME **30** 18:48:21.1, 41°.02N×83°.33E, h5^{km}*

*NNC **30** 18:48:24.9±6.4, 41°.43N×83°.59E, h21^{km}±25^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=44.2km s-min=29.5km az=126.0*

ISC 30 18:48:28.2±2.7, 41°.6N±0°.1×83°.30E±0°.09, h10^{km}, n14, σ2^{s}.42/18, 10C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**3.25**	**300**	Pg	**Pb**	**18 49 23.7**	**-2.3**
	21nm,0.4s						
SHLS				Lg	Lg	18 50 08.6	
	124nm,0.6s						
SHLS	**Shalkode**	**3.25**	**300**	*e*P	**Pb**	**18 49 23.7**	**-2.3**
	21nm,0.4s						
SHLS				*e*S	**Sb**	**18 50 08.6**	**+2.9**
	124nm,0.6s						
PDGK	**Podgornoye**	**3.32**	**303**	⇑Pn	**Pn**	**18 49 19.7**	**-0.5**
	4.9nm,0.6s						
PDGK				⇑Pg	**Pg**	**18 49 31.8**	**0.0**
	27nm,0.6s						
PDGK				⇑Lg	Lg	18 50 20.1	
	76nm,0.8s						
KNOS	**Konyrlen**	**4.11**	**314**	Pg	**Pg**	**18 49 45.1**	**-1.7**
	4.3nm,0.2s						
KNOS				Lg	Lg	18 50 45.7	
	21nm,0.5s						
KOTS	**Kotyrbulak**	**4.87**	**292**	*e*P	**Pb**	**18 49 55.7**	**+2.0**
	2.9nm,0.4s						
KOTS				*e*S	**Sg**	**18 51 03.2**	**-1.2**
	23nm,0.6s						
TNSS	**Tian-Shan**	**4.93**	**289**	Pg	**Pb**	**18 49 57.7**	**+2.9**
	1.6nm,0.4s						
TNSS				Lg	Lg	18 51 06.5	
	7.3nm,0.8s						
TNSS	**Tian-Shan**	**4.93**	**289**	*e*P	**Pb**	**18 49 57.7**	**+2.9**
	1.6nm,0.4s						
TNSS				*e*S	**Sg**	**18 51 06.5**	**+0.1**
	7.3nm,0.8s						
MK31	**Makanchi Array**	**5.27**	**352**	Pn	**Pn**	**18 49 44.5**	**-2.4**
	0.1nm,0.1s,baz=152,slow=13,SNR=13						
MK31				⇑Pg	**Pb**	**18 50 02.9**	**+2.6**
	1.3nm,0.4s,baz=179,slow=12,SNR=8.9						
MK31				⇑Lg	Lg	18 51 18.7	
	21nm,0.8s,baz=172,slow=25,SNR=5.1						
MAKZ	**Makanchi**	**5.32**	**350**	⇓Pg	**Pb**	**18 50 04.9**	**+3.8**
	2.8nm,0.6s						
MAKZ				⇑Sn	**Sn**	**18 50 47.8**	**-1.1**
	7.8nm,0.6s						
MAKZ				⇑Lg	Lg	18 51 20.7	
	32nm,0.8s						
KTBS	**Karatobe**	**5.33**	**296**	Pg	**Pb**	**18 50 05.1**	**+3.8**
	3.0nm,0.3s						
KTBS				Lg	Lg	18 51 19.2	
	26nm,0.8s						
TKM2	**Tokmak 2**	**5.87**	**286**	⇑Pn	**Pn**	**18 49 54.5**	**-0.9**
	3.1nm,0.5s						
TKM2				⇑Lg	Lg	18 51 38.2	
	22nm,0.7s						
SEM	**Semipalatinsk**	**9.09**	**348**	Pg		18 52 41.1	
	1.9nm,0.1s						
SEM				Lg	Lg	18 53 24.4	
	5.1nm,0.1s						
KK31	**Karatay Array**	**9.59**	**283**	⇑Pn	**Pn**	**18 50 46.1**	**-0.1**
	0.3nm,0.3s,baz=174,slow=23,SNR=3.8						
KURBB	**Kurchatov Arra**	**9.63**	**342**	⇓Lg	Lg	18 53 41.0	
	16nm,0.7s						

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*AEIC **30** 19:41:44.5±0.8, 54°.95N±0°.10×163°.1W±0°.1, h112^{km}±5^{km}, Error ellipse: s-maj=15.5km s-min=5.1km az=151.0*

NEIC 30 19:41:44.7±0.8, 54°.98N±0°.09×163°.11W±0°.10, h118^{km}±5^{km}, ML2.8/14, ML2.4(AEIC), Error ellipse: s-maj=14.1km s-min=5.6km az=153.0, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FALS	**False Pass**	**0.22**	**235**		Pn	19 42 00.8	-0.3
FALS					Sn	19 42 13.1	-0.2
ISNN	**Isanotski Nort**	**0.41**	**249**		Pn	19 42 02.1	+0.1
ISNN					Sn	19 42 15.2	+0.3
ISLZ	**Isanotski Laza**	**0.43**	**234**		Pn	19 42 02.0	-0.1
ISLZ					Sn	19 42 14.9	-0.2
SSLS	**Shishaldin Sou**	**0.58**	**243**		Pn	19 42 03.1	+0.1
SSLS					Sn	19 42 17.9	+1.2
SSBA	**Shishaldin**	**0.62**	**251**		Pn	19 42 03.0	-0.3
SSBA					Sn	19 42 17.1	-0.2
HAG	**Hague Volcano**	**0.77**	**63**		Pn	19 42 04.6	+0.2
HAG					Sn	19 42 20.9	+1.7
PS4A	**Pavlof South-4**	**0.81**	**62**		Pn	19 42 04.7	0.0
PS1A	**Pavlof South-1**	**0.90**	**60**		Pn	19 42 05.5	0.0
S12K	**Black Hills**	**0.94**	**39**		Pn	19 42 05.1	-0.8
S12K					Sn	19 42 21.1	-0.9
S12K	**Black Hills**	**0.94**	**39**	IAML		19 42 21.3	
	comp=N,145nm,0.6s						
S12K				IAML		19 42 21.5	
	comp=E,118nm,0.6s						
WEBT	**Westdahl Beart**	**1.03**	**248**		Pn	19 42 07.2	+0.4
SDPT	**Sand Point**	**1.55**	**75**		Pn	19 42 12.3	-0.2
SDPT	**Sand Point**	**1.55**	**75**	IAML		19 42 33.6	
	comp=N,83nm,0.5s						
SDPT				IAML		19 42 33.7	
	comp=E,53nm,0.4s						
AHB	**Akutan Harbor**	**1.80**	**242**		Pn	19 42 16.3	+0.8
AKGG	**Akutan Green G**	**1.85**	**246**		Pn	19 42 17.3	+1.1
CNBA	**Chernabura Isl**	**2.04**	**93**		Pn	19 42 17.9	-0.6
CNBA				IAML		19 42 50.0	
	comp=N,62nm,0.6s						
CNBA				IAML		19 42 50.2	
	comp=E,80nm,0.4s						
UNV	**Unalaska Valle**	**2.29**	**242**	Pn	Pn	19 42 22.0	+0.4
NIKH	**Nikolski High**	**3.94**	**242**	Pn	Pn	19 42 44.3	+0.9
NIKH				IAML		19 43 44.3	
	comp=E,12nm,0.7s						
O14K	**Tigyukauivet M**	**4.40**	**12**	Pn	Pn	19 42 48.6	-0.8
O14K				IAML		19 43 32.8	
	comp=N,5.8nm,1.1s						

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*SOME **30** 20:53:48.8, 39°.00N×72°.45E, h15^{km}*

*KRNET **30** 20:53:57.8±0.1, 39°.32N×72°.54E, h15^{km}, mb3.6*

*IDC **30** 20:53:58.2±3.7, 39°.28N×72°.32E, h0^{km}, mb4.0/2, mbtmp3.6/4, ML2.6/2, Error ellipse: s-maj=89.6km s-min=26.3km az=149.0*

*NNC **30** 20:54:03.7±4.4, 39°.69N×72°.28E, h0^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=36.8km s-min=20.1km az=5.0*

ISC 30 20:53:58.8±0.9, 39°.31N±0°.05×72°.53E±0°.03, h10^{km}, n48, σ2^{s}.15/79, 33C-26D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**0.59**	**287**	⇑*i*P	**Pg**	**20 54 09.3**	**-1.1**
DRK				⇑*i*S	**Sg**	**20 54 17.7**	**-0.5**
SFK	**Sufi-Kurgan**	**1.03**	**47**	⇓*i*P	**Pg**	**20 54 17.1**	**-1.5**
SFK				⇓*i*S	**Sg**	**20 54 31.1**	**-0.9**
OHH	**Osh**	**1.23**	**9**	⇑*i*P	**Pn**	**20 54 20.8**	**-1.3**
OHH				⇑*i*S	**Sb**	**20 54 37.6**	**-0.5**
BTK	**Batken**	**1.52**	**300**	⇓*i*P	**Pn**	**20 54 25.9**	**-0.2**
BTK				⇓*i*S	**Sb**	**20 54 46.9**	**+0.4**
GAR	**Garm**	**1.75**	**260**	⇑*i*P	**Pb**	**20 54 30.4**	**-0.7**
GAR				⇑*i*S	**Sg**	**20 54 54.1**	**-1.0**
SALK	**Salom-Alik**	**1.85**	**32**	⇓*i*P	**Pb**	**20 54 31.9**	**-1.0**
SALK				⇓*i*S	**Sb**	**20 54 56.8**	**+0.5**
ARSB	**Arslanbob**	**2.04**	**10**	⇑*i*P	**Pb**	**20 54 34.9**	**-1.2**
ARSB				⇑*i*S	**Sb**	**20 55 01.9**	**+0.4**
TRKS	**Terek-Say**	**2.46**	**335**	⇓*i*P	**Pn**	**20 54 39.8**	**+0.7**
TRKS				⇓*i*S	**Sn**	**20 55 10.3**	**+1.0**
ARK	**Arkit**	**2.52**	**350**	⇑*i*P	**Pn**	**20 54 41.6**	**+1.6**
ARK				⇑*i*S	**Sn**	**20 55 13.5**	**+2.7**
AML	**Almayashu**	**2.95**	**17**	⇑*i*P	**Pn**	**20 54 47.7**	**+1.6**
AML				⇑*i*S	**Sn**	**20 55 24.0**	**+2.2**
JNKS	**Jany-Kuch**	**2.96**	**53**	⇑*i*P	**Pn**	**20 54 47.7**	**+1.6**
JNKS				⇑*i*S	**Sn**	**20 55 24.0**	**+2.2**
MNAS	**Manas**	**3.17**	**360**	⇓*i*P	**Pn**	**20 54 50.6**	**+1.7**
MNAS				⇓*i*S	**Sn**	**20 55 29.2**	**+2.3**
UCH	**Uchtor**	**3.28**	**27**	⇑*i*P	**Pn**	**20 54 52.4**	**+1.7**
UCH				⇑*i*S	**Sn**	**20 55 32.2**	**+2.2**
NRN	**Naryn**	**3.39**	**50**	⇓*i*P	**Pn**	**20 54 53.3**	**+1.2**
NRN				⇓*i*S	**Sn**	**20 55 33.8**	**+1.2**
IUG	**Iuzhnay**	**3.41**	**327**	Pg	**Pn**	**20 54 54.7**	**+2.5**
	27nm,0.3s						
IUG				Lg	Lg	20 55 42.1	
	113nm,0.6s						
MRKS	**Merke**	**3.47**	**8**	Pg	**Pb**	**20 54 57.4**	**-3.0**
	7.1nm,0.4s						
MRKS				Lg	Lg	20 55 47.2	
	43nm,0.5s						
MRKS	**Merke**	**3.47**	**8**	*e*P	**Pb**	**20 54 57.4**	**-3.0**
	7.1nm,0.4s						
MRKS				*e*S	**Sg**	**20 55 47.2**	**-3.1**
	71nm,0.6s						
EKS2	**Erkin-Say**	**3.48**	**15**	⇑*i*P	**Pn**	**20 54 54.7**	**+1.6**
EKS2				⇑*i*S	**Sn**	**20 55 36.5**	**+2.1**
AAK	**Ala-Archa**	**3.64**	**23**	⇑Pn	**Pb**	**20 54 59.5**	**-3.9**
AAK				⇑Lg	Lg	20 55 50.8	
AAK	**Ala-Archa**	**3.64**	**23**	⇑*i*P	**Pn**	**20 54 57.1**	**+1.7**
AAK				⇑*i*S	**Sn**	**20 55 40.4**	**+1.9**
DZA	**Taraz**	**3.69**	**346**	Pg	**Pb**	**20 54 60.0**	**-4.1**
	44nm,0.3s						
DZA				Lg	Lg	20 55 50.9	
	75nm,0.2s						
DZA	**Taraz**	**3.69**	**346**	*e*P	**Pb**	**20 54 60.0**	**-4.1**
	44nm,0.3s						
DZA				*e*S	**Sb**	**20 55 51.0**	**+2.0**
	75nm,0.2s						
CHM	**Chimkent**	**3.74**	**324**	*e*P	**Pb**	**20 55 00.8**	**-4.1**
	42nm,0.3s						
CHM				*e*S	**Sb**	**20 55 52.6**	**+2.4**
	211nm,0.4s						
KBK	**Karagaybulak**	**3.81**	**28**	⇑*i*P	**Pn**	**20 54 59.4**	**+1.7**
KBK				⇑*i*S	**Sn**	**20 55 44.5**	**+1.8**
FRU1	**Bishkek**	**3.84**	**24**	⇓*i*P	**Pn**	**20 55 00.0**	**+2.0**
FRU1				⇓*i*S	**Sn**	**20 55 45.3**	**+2.1**
CHMS	**Chumysh**	**4.05**	**24**	Pg	**Pn**	**20 55 00.8**	**0.0**
	42nm,0.3s						
CHMS				Lg	Lg	20 55 52.6	
	211nm,0.4s						
CHMS	**Chumysh**	**4.05**	**24**	⇓*i*P	**Pn**	**20 55 02.5**	**+1.6**
CHMS				⇓*i*S	**Sn**	**20 55 49.9**	**+1.6**
ULHL	**Ulahol**	**4.07**	**43**	⇑*e*P	**Pn**	**20 55 03.1**	**+1.8**
ULHL				⇑*i*S	**Sn**	**20 55 50.6**	**+1.6**
KK31	**Karatay Array**	**4.08**	**339**	Pn	**Pn**	**20 55 04.5**	**+3.1**
	6.4nm,0.3s,baz=148,slow=11,SNR=150						
KK31				⇓Lg	Lg	20 55 57.1	
	5.6nm,0.3s,baz=150,slow=20,SNR=5.0						
KKAR	**Karatay Array**	**4.08**	**339**	⇓*i*P	**Pn**	**20 55 03.3**	**+2.0**
KKAR				⇓*i*S	**Sn**	**20 55 50.9**	**+1.7**
BOOM	**Boomskoye usch**	**4.09**	**38**	⇓*i*P	**Pn**	**20 55 03.4**	**+1.8**
BOOM				⇓*i*S	**Sn**	**20 55 51.3**	**+1.6**
USP	**Ospenovka**	**4.22**	**20**	⇑*i*P	**Pn**	**20 55 05.0**	**+1.8**
USP				⇑*i*S	**Sn**	**20 55 54.2**	**+1.6**
BRLS	**Borolday**	**4.24**	**332**	Pg	**Pn**	**20 55 07.6**	**+4.2**
	3.6nm,0.2s						
BRLS				Lg	Lg	20 56 04.4	
	19nm,0.4s						
BRLS	**Borolday**	**4.24**	**332**	*e*P	**Pn**	**20 55 07.6**	**+4.2**
	3.6nm,0.2s						
BRLS				*e*S	**Sb**	**20 56 04.4**	**-0.2**
	19nm,0.4s						
TKM2	**Tokmak 2**	**4.29**	**32**	⇑Pn	Pb	20 55 09.0	-5.4
	1.5nm,0.4s						
TKM2				⇑Pg	**Pg**	**20 55 19.8**	**-1.1**
	5.4nm,0.6s						
TKM2				⇓Lg	Lg	20 56 15.0	
	14nm,0.7s						
TKM2	**Tokmak 2**	**4.29**	**32**	⇑*i*P	**Pn**	**20 55 06.1**	**+1.8**
TKM2				⇑*i*S	**Sn**	**20 55 55.9**	**+1.5**
KDJ	**Kajisay**	**4.52**	**50**	⇓*i*P	**Pn**	**20 55 09.3**	**+1.8**
KDJ				⇓*i*S	**Sn**	**20 56 01.5**	**+1.4**
MTBS	**Maitube**	**4.81**	**36**	Pg	**Pb**	**20 55 22.3**	**-1.0**
	1.5nm,0.1s						
MTBS				Lg	Lg	20 56 29.2	
	12nm,0.3s						
MTBS	**Maitube**	**4.81**	**36**	*e*P	**Pb**	**20 55 22.3**	**-1.0**
	1.5nm,0.1s						
MTBS				*e*S	**Sg**	**20 56 29.2**	**-4.2**
	12nm,0.3s						
PRZ	**Przheval'sk**	**5.46**	**53**	⇓*i*P	**Pn**	**20 55 22.4**	**+2.0**
PRZ				⇓*i*S	**Sn**	**20 56 24.1**	**+0.7**
BTLS	**Baital**	**5.83**	**11**	Pg	**Pb**	**20 55 44.5**	**+3.9**
	4.1nm,0.7s						
BTLS				Lg	Lg	20 57 07.9	
	6.7nm,0.7s						
BTLS	**Baital**	**5.83**	**11**	*e*P	**Pb**	**20 55 44.5**	**+3.9**
	4.1nm,0.7s						
BTLS				*e*S	**Sg**	**20 57 07.9**	**+1.8**
	6.7nm,0.7s						
PDGK	**Podgornoye**	**6.60**	**50**	⇑Lg	Lg	20 57 31.2	
	12nm,1.1s						
MKAR	**Makanchi Array**	**10.33**	**40**	Pn	**Pn**	**20 56 30.6**	**+3.5**
	baz=225,slow=14,SNR=1.8						
	0.4nm,0.9s						
AB31	**Akbulak array**	**13.40**	**322**	Pn	**Pn**	**20 57 07.5**	**-1.5**
	0.9nm,0.5s,baz=133,slow=13,SNR=24						
ZALV	**Zalesovo Beam**	**16.86**	**26**	Pn	**P**	**20 57 56.1**	**-0.7**
	0.2nm,0.3s,baz=216,slow=11,SNR=5.8						
	0.4nm,0.4s						
FINES	**FINESS Array B**	**35.88**	**324**	P	**P**	**21 00 58.9**	**+0.3**
	1.6nm,0.9s,baz=111,slow=8.5,SNR=4.5						
	1.6nm,0.9s						
TORD	**Torodi Ar. Bea**	**67.00**	**268**	P	**P**	**21 04 52.2**	**0.0**
	0.6nm,0.3s,baz=68,slow=7.4,SNR=1.1						
	0.6nm,0.3s						

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*IDC **30** 21:02:25.4±1.3, 39°.39N×29°.92W, h0^{km}, mb3.7/10, mbtmp3.7/10, MS3.3/19, Error ellipse: s-maj=42.2km s-min=21.2km az=2.0*

*INMG **30** 21:02:27.9±1.0, 39°.38N×29°.83W, h5^{km}, ML3.5, Error ellipse: s-maj=9.1km s-min=4.5km az=48.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Crista Mdia Atlntico N*

*SVSA **30** 21:02:27.9±1.0, 39°.38N×29°.83W, h5^{km}, ML3.5(INMG), Error ellipse: s-maj=9.1km s-min=4.5km az=48.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Crista Mdia Atlntico N*

ISC 30 21:02:27.4±1.6, 39°.18N±0°.10×29°.72W±0°.08, h17^{km}±9^{km}, n70, σ0^{s}.87/74, mb3.8/8, MS3.2/18, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCED	**Cedros**	**0.96**	**124**	*e*P	**Pg**	**21 02 45.7**	**-0.4**
PCED				*e*S	**Sg**	**21 02 59.0**	**+0.2**
PCED				*i* IAML		21 03 00.2	
PCED				*i* IAML		21 03 01.5	
PCED				*i* IAML		21 03 02.0	
PCED	**Cedros**	**0.96**	**124**	*e*P	**Pg**	**21 02 45.7**	**-0.4**
PCED				*e*S	**Sg**	**21 02 59.0**	**+0.2**
PCED				*i* IAML		21 03 00.2	
PCED				*i* IAML		21 03 01.5	
PCED				*i* IAML		21 03 02.0	
PCED	**Cedros**	**0.96**	**124**	*e*P	**Pg**	**21 02 45.7**	**-0.4**
PCED				*e*S	**Sg**	**21 02 59.0**	**+0.2**
PCED				*i* AML	AML	21 03 00.2	
PCED				*i* AML	AML	21 03 01.5	
PCED				*i* AML	AML	21 03 02.0	
CALA	**Caldeira**	**0.99**	**126**	*e*P	**Pg**	**21 02 46.4**	**-0.2**
CALA				*e*S	**Sg**	**21 02 59.9**	**+0.3**
CALA				*i* IAML		21 03 03.0	
CALA				*i* IAML		21 03 06.1	
CALA				*i* IAML		21 03 06.9	
CALA	**Caldeira**	**0.99**	**126**	*e*P	**Pg**	**21 02 46.4**	**-0.2**
CALA				*e*S	**Sg**	**21 02 59.9**	**+0.3**
CALA				*i* IAML		21 03 03.0	
CALA				*i* IAML		21 03 06.1	
CALA				*i* IAML		21 03 06.9	
CALA	**Caldeira**	**0.99**	**126**	*e*P	**Pg**	**21 02 46.4**	**-0.2**
CALA				*e*S	**Sg**	**21 02 59.9**	**+0.3**
CALA				*i* AML	AML	21 03 03.0	
CALA				*i* AML	AML	21 03 06.1	
CALA				*i* AML	AML	21 03 06.9	
PFCBR	**Castelo Branco**	**1.02**	**129**	*e*P	**Pg**	**21 02 46.5**	**-0.6**
PFCBR				*e*S	**Sg**	**21 03 00.9**	**+0.5**
PFCBR				*i* IAML		21 03 01.9	
PFCBR				*i* IAML		21 03 02.4	
PFCBR				*i* IAML		21 03 02.6	
PFCBR	**Castelo Branco**	**1.02**	**129**	*e*P	**Pg**	**21 02 46.5**	**-0.6**
PFCBR				*e*S	**Sg**	**21 03 00.9**	**+0.5**
PFCBR				*i* IAML		21 03 01.9	
PFCBR				*i* IAML		21 03 02.4	
PFCBR				*i* IAML		21 03 02.6	
PFCBR	**Castelo Branco**	**1.02**	**129**	*e*P	**Pg**	**21 02 46.5**	**-0.6**
PFCBR				*e*S	**Sg**	**21 03 00.9**	**+0.5**
PFCBR				*i* AML	AML	21 03 01.9	
PFCBR				*i* AML	AML	21 03 02.4	
PFCBR				*i* AML	AML	21 03 02.6	
HOR	**Horta**	**1.07**	**127**	*e*P	Pg	21 02 47.2	-0.9
HOR				*e*S	**Sg**	**21 03 01.9**	**-0.2**
HOR				*i* IAML		21 03 04.0	
HOR				*i* IAML		21 03 04.2	
HOR				*i* IAML		21 03 07.0	
HOR	**Horta**	**1.07**	**127**	*e*P	Pg	21 02 47.2	-0.9
HOR				*e*S	**Sg**	**21 03 01.9**	**-0.2**
HOR				*i* IAML		21 03 04.0	
HOR				*i* IAML		21 03 04.2	
HOR				*i* IAML		21 03 07.0	
HOR	**Horta**	**1.07**	**127**	*e*P	Pg	21 02 47.2	-0.9
HOR				*e*S	**Sg**	**21 03 01.9**	**-0.2**
HOR				*i* AML	AML	21 03 04.0	
HOR				*i* AML	AML	21 03 04.2	
HOR				*i* AML	AML	21 03 07.0	
PCAN	**Candelaria**	**1.20**	**126**	*e*P	**Pn**	**21 02 49.4**	**-0.1**
PCAN				*e*S	**Sb**	**21 03 05.4**	**+0.5**
PCAN				*i* IAML		21 03 07.5	
PCAN				*i* IAML		21 03 10.4	
PCAN				*i* IAML		21 03 14.8	
PCAN	**Candelaria**	**1.20**	**126**	*e*P	**Pn**	**21 02 49.4**	**-0.1**
PCAN				*e*S	**Sb**	**21 03 05.4**	**+0.5**
PCAN				*i* IAML		21 03 07.5	
PCAN				*i* IAML		21 03 10.4	
PCAN				*i* IAML		21 03 14.8	
PCAN	**Candelaria**	**1.20**	**126**	*e*P	**Pn**	**21 02 49.4**	**-0.1**
PCAN				*e*S	**Sb**	**21 03 05.4**	**+0.5**
PCAN				*i* AML	AML	21 03 07.5	
PCAN				*i* AML	AML	21 03 10.4	
PCAN				*i* AML	AML	21 03 14.8	
PICO	**Pico**	**1.22**	**123**	*e*P	**Pn**	**21 02 49.5**	**-0.3**
PICO				*e*S	**Sb**	**21 03 05.6**	**+0.2**
PICO				*i* IAML		21 03 07.1	
PICO				*i* IAML		21 03 07.3	
PICO				*i* IAML		21 03 08.2	
PICO	**Pico**	**1.22**	**123**	*e*P	**Pn**	**21 02 49.5**	**-0.3**
PICO				*e*S	**Sb**	**21 03 05.6**	**+0.2**
PICO				*i* IAML		21 03 07.1	
PICO				*i* IAML		21 03 07.3	
PICO				*i* IAML		21 03 08.2	
PICO	**Pico**	**1.22**	**123**	*e*P	**Pn**	**21 02 49.5**	**-0.3**
PICO				*e*S	**Sb**	**21 03 05.6**	**+0.2**
PICO				*i* AML	AML	21 03 07.1	
PICO				*i* AML	AML	21 03 07.3	
PICO				*i* AML	AML	21 03 08.2	
ROSA	**Rosais**	**1.24**	**111**	*e*P	Pn	21 02 48.7	-1.3
ROSA				*e*S	**Sb**	**21 03 04.6**	**-1.5**
ROSA				*i* IAML		21 03 05.1	
ROSA				*i* IAML		21 03 08.1	
ROSA				*i* IAML		21 03 11.7	
ROSA	**Rosais**	**1.24**	**111**	*e*P	Pn	21 02 48.7	-1.3
ROSA				*e*S	**Sb**	**21 03 04.6**	**-1.5**
ROSA				*i* IAML		21 03 05.1	
ROSA				*i* IAML		21 03 08.1	
ROSA				*i* IAML		21 03 11.7	
ROSA	**Rosais**	**1.24**	**111**	*e*P	Pn	21 02 48.7	-1.3
ROSA				*e*S	**Sb**	**21 03 04.6**	**-1.5**
ROSA				*i* AML	AML	21 03 05.1	
ROSA				*i* AML	AML	21 03 08.1	
ROSA				*i* AML	AML	21 03 11.7	
PPNO	**Prainha do Nor**	**1.34**	**121**	*e*P	Pn	21 02 50.9	-0.5
PPNO				*e*S	**Sn**	**21 03 08.6**	**-0.2**
PPNO				*i* IAML		21 03 16.0	
PPNO				*i* IAML		21 03 18.2	
PPNO	**Prainha do Nor**	**1.34**	**121**	*e*P	Pn	21 02 50.9	-0.5
PPNO				*e*S	**Sn**	**21 03 08.6**	**-0.2**
PPNO				*i* IAML		21 03 16.0	
PPNO				*i* IAML		21 03 18.2	
PPNO	**Prainha do Nor**	**1.34**	**121**	*e*P	Pn	21 02 50.9	-0.5
PPNO				*e*S	**Sn**	**21 03 08.6**	**-0.2**
PPNO				*i* AML	AML	21 03 16.0	
PPNO				*i* AML	AML	21 03 18.2	
PMAN	**Manadas**	**1.38**	**113**	*e*P	Pn	21 02 51.0	-1.0
PMAN				*e*S	**Sn**	**21 03 08.4**	**-1.5**
PMAN				*i* IAML		21 03 09.0	
PMAN				*i* IAML		21 03 09.0	
PMAN				*i* IAML		21 03 10.1	
PMAN	**Manadas**	**1.38**	**113**	*e*P	Pn	21 02 51.0	-1.0
PMAN				*e*S	**Sn**	**21 03 08.4**	**-1.5**
PMAN				*i* IAML		21 03 09.0	
PMAN				*i* IAML		21 03 09.0	
PMAN				*i* IAML		21 03 10.1	
PMAN	**Manadas**	**1.38**	**113**	*e*P	Pn	21 02 51.0	-1.0
PMAN				*e*S	**Sn**	**21 03 08.4**	**-1.5**
PMAN				*i* AML	AML	21 03 09.0	
PMAN				*i* AML	AML	21 03 09.0	
PMAN				*i* AML	AML	21 03 10.1	
PID	**Ribeirinha**	**1.45**	**120**	*e*P	Pn	21 02 52.3	-0.6
PID				*e*S	**Sn**	**21 03 10.9**	**-0.6**
PID				*i* IAML		21 03 16.6	
PID				*i* IAML		21 03 19.5	
PID				*i* IAML		21 03 21.9	
PID	**Ribeirinha**	**1.45**	**120**	*e*P	Pn	21 02 52.3	-0.6
PID				*e*S	**Sn**	**21 03 10.9**	**-0.6**
PID				*i* IAML		21 03 16.6	
PID				*i* IAML		21 03 19.5	
PID				*i* IAML		21 03 21.9	
PID	**Ribeirinha**	**1.45**	**120**	*e*P	Pn	21 02 52.3	-0.6
PID				*e*S	**Sn**	**21 03 10.9**	**-0.6**
PID				*i* AML	AML	21 03 16.6	
PID				*i* AML	AML	21 03 19.5	
PID				*i* AML	AML	21 03 21.9	
ADH	**Angra Heroismo**	**2.01**	**104**	*e*P	**Pn**	**21 03 01.7**	**+1.2**
ADH				*e*S	**Sn**	**21 03 25.5**	**+0.2**
ADH				*i* IAML		21 03 27.8	
ADH				*i* IAML		21 03 28.2	
ADH				*i* IAML		21 03 28.4	
ADH	**Angra Heroismo**	**2.01**	**104**	*e*P	**Pn**	**21 03 01.7**	**+1.2**
ADH				*e*S	**Sn**	**21 03 25.5**	**+0.2**
ADH				*i* IAML		21 03 27.8	
ADH				*i* IAML		21 03 28.2	
ADH				*i* IAML		21 03 28.4	
ADH	**Angra Heroismo**	**2.01**	**104**	*e*P	**Pn**	**21 03 01.7**	**+1.2**
ADH				*e*S	**Sn**	**21 03 25.5**	**+0.2**
ADH				*i* AML	AML	21 03 27.8	
ADH				*i* AML	AML	21 03 28.2	
ADH				*i* AML	AML	21 03 28.4	
PAGU	**Agualva, Azore**	**2.02**	**101**	*e*P	Pn	21 02 59.6	-1.1
PAGU				*e*S	**Sn**	**21 03 23.7**	**-1.9**
PAGU				*i* IAML		21 03 25.8	
PAGU				*i* IAML		21 03 26.7	
PAGU				*i* IAML		21 03 29.4	
PAGU	**Agualva, Azore**	**2.02**	**101**	*e*P	Pn	21 02 59.6	-1.1
PAGU				*e*S	**Sn**	**21 03 23.7**	**-1.9**
PAGU				*i* IAML		21 03 25.8	
PAGU				*i* IAML		21 03 26.7	
PAGU				*i* IAML		21 03 29.4	
PAGU	**Agualva, Azore**	**2.02**	**101**	*e*P	Pn	21 02 59.6	-1.1
PAGU				*e*S	**Sn**	**21 03 23.7**	**-1.9**
PAGU				*i* AML	AML	21 03 25.8	
PAGU				*i* AML	AML	21 03 26.7	
PAGU				*i* AML	AML	21 03 29.4	
PSET	**Sete Cidades**	**3.42**	**112**	*e*P	**Pn**	**21 03 19.6**	**-0.3**
PSET	**Sete Cidades**	**3.42**	**112**	*e*P	**Pn**	**21 03 19.6**	**-0.3**
BART	**Pico Bartolome**	**3.83**	**110**	*e*P	**Pn**	**21 03 25.8**	**0.0**
BART	**Pico Bartolome**	**3.83**	**110**	*e*P	**Pn**	**21 03 25.8**	**0.0**
PSMA	**Santa Maria**	**4.23**	**120**	*e*P	**Pn**	**21 03 31.1**	**0.0**
PSMA				*e*S	**Sn**	**21 04 18.6**	**-1.4**
PSMA				*i* IAML		21 04 20.9	
PSMA				*i* IAML		21 04 21.3	
PSMA				*i* IAML		21 04 22.4	

PSMA	Santa Maria	4.23	120	eP	Pn	21 03 31.1	0.0
PSMA				eS	Sn	21 04 18.6	-1.4
PSMA				i IAML		21 04 20.9	
PSMA				i IAML		21 04 21.3	
PSMA				i IAML		21 04 22.4	
PSMA	Santa Maria	4.23	120	eP	Pn	21 03 31.1	0.0
PSMA				eS	Sn	21 04 18.6	-1.4
PSMA				i AML	AML	21 04 20.9	
PSMA				i AML	AML	21 04 21.3	
PSMA				i AML	AML	21 04 22.4	
ESDC	Sonseca Array	19.89	80	P	P	21 06 59.5	+1.5
	1.4nm,1.1s,baz=279,slow=10,SNR=6.0						
ESDC				LR	LR	21 13 33.1	
	comp=Z,61nm,18.4s,baz=278,slow=33						
	1.4nm,1.1s						
MDT	Midelt	21.25	100	LR	LR	21 14 21.2	
	comp=Z,27nm,18.9s,baz=0.5,slow=33						
SCHQ	Schefferville	29.33	315	LR	LR	21 17 57.5	
	comp=Z,52nm,20.4s,baz=102,slow=32						
SFJD	Kangerlussuaq	30.24	344	LR	LR	21 17 44.9	
	comp=Z,46nm,19.0s,baz=2.5,slow=31						
GERES	GERESS Array B	32.30	58	LR	LR	21 20 18.5	
	comp=Z,16nm,20.8s,baz=286,slow=33						
FRB	Frobisher Bay	33.61	330	LR	LR	21 19 03.4	
	comp=Z,38nm,19.7s,baz=149,slow=30						
HFS	Hagfors	34.18	38	LR	LR	21 21 17.7	
	comp=Z,30nm,19.9s,baz=188,slow=33						
VRAC	Vranov	34.20	57	LR	LR	21 21 17.1	
	comp=Z,19nm,21.6s,baz=242,slow=33						
VAE	Valguarnera	34.41	79	LR	LR	21 22 07.5	
	comp=Z,161nm,19.0s,baz=318,slow=34						
SADO	Sadowa	36.70	295	LR	LR	21 23 11.1	
	comp=Z,78nm,19.5s,baz=349,slow=34						
TORD	Torodi Ar. Bea	37.97	124	P	P	21 09 46.9	+2.5
	1.2nm,0.4s,baz=314,slow=8.3,SNR=2.3						
	1.2nm,0.4s						
DBIC	Dimbokro	39.37	139	LR	LR	21 24 17.2	
	comp=Z,34nm,19.8s,baz=314,slow=33						
FINES	FINESS Array B	40.39	38	P	P	21 10 04.1	0.0
	2.1nm,0.8s,baz=224,slow=3.8,SNR=3.8						
	2.1nm,0.8s						
AKASG	Malin Array Be	42.22	54	P	P	21 10 19.5	+0.2
	1.9nm,0.8s,baz=281,slow=7.9,SNR=4.6						
AKASG				LR	LR	21 27 11.6	
	comp=Z,23nm,18.5s,baz=194,slow=35						
	1.9nm,0.8s						
TKL	Tuckaleechee C	42.55	283	LR	LR	21 25 55.1	
	comp=Z,29nm,19.0s,baz=78,slow=33						
ULM	Lac du Bonnet	46.83	306	LR	LR	21 30 00.0	
	comp=Z,54nm,18.2s,baz=14,slow=36						
ARTI	Arti	57.51	41	LR	LR	21 36 32.6	
	comp=Z,24nm,18.2s,baz=214,slow=36						
PDAR	Pinedale Array	58.22	301	P	P	21 12 19.0	-2.0
	0.2nm,0.4s,baz=52,slow=5.3,SNR=2.4						
	0.2nm,0.4s						
ANMO	Albuquerque	59.65	292	LR	LR	21 37 51.9	
	comp=Z,35nm,18.9s,baz=200,slow=36						
TXAR	Lajitas Array	60.37	285	P	P	21 12 35.0	-0.8
	0.3nm,0.7s,baz=78,slow=7.6,SNR=4.6						
	0.3nm,0.7s						
NEW	Newport	60.55	310	LR	LR	21 37 18.7	
	comp=Z,52nm,18.5s,baz=116,slow=35						
NVAR	Mina Array Bea	66.14	301	P	P	21 13 14.0	-0.1
	0.2nm,0.3s,baz=40,slow=4.3,SNR=1.8						
	0.2nm,0.3s						
PFO	Pinyon Flats O	67.45	296	LR	LR	21 42 34.8	
	comp=Z,50nm,18.1s,baz=162,slow=36						
ZALV	Zalesovo Beam	71.54	35	P	P	21 13 46.8	-0.4
	0.4nm,0.5s,baz=308,slow=7.1,SNR=2.2						
	0.4nm,0.5s						
MKAR	Makanchi Array	75.11	41	P	P	21 14 09.1	+0.6
	1.4nm,0.8s,baz=298,slow=6.5,SNR=7.2						
	1.4nm,0.8s						
BOSA	Boshof	84.69	134	LR	LR	21 49 01.8	
	comp=Z,30nm,21.6s,baz=9.0,slow=33						
SONM	Songino Array	84.98	28	P	P	21 15 02.2	+0.3
	0.8nm,0.9s,baz=316,slow=4.1,SNR=3.9						
	0.8nm,0.9s						

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*NEIC **30** 21:03:45.8±0.9, 32.°90N±0.°01×100.°89W±0.°02, h4^{km}±2^{km}, ML2.6/10, ML1.8/7, Error ellipse: s-maj=2.1km s-min=1.5km az=114.0*

*NEIC **30** 21:03:46.1±1.7, 32.°89N±0.°01×100.°89W±0.°01, h6^{km}±2^{km}, Error ellipse: s-maj=2.0km s-min=1.8km az=151.0*

TXNET 30 21:03:46.1, 32.°9N±0.°5×**100.°9W**±0.°6, **h6^{km}, ML2.4**/12, **6C-3D, Error ellipse: s-maj=0.9km s-min=0.8km az=111.1, final, Western Texas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SN05	Snyder 5	0.01	171		Pg	21 03 47.0	-0.3
SN05					Sg	21 03 47.6	-0.4
SN05	Snyder 5	0.01	171	⇑P	Pg	21 03 47.0	-0.3
SN05				S	Sg	21 03 47.6	-0.5
SN01	Snyder 1	0.03	185		Pg	21 03 47.2	-0.1
SN01					Sg	21 03 48.1	-0.1
SN01	Snyder 1	0.03	185	⇑P	Pg	21 03 47.2	-0.1
SN01				S	Sg	21 03 48.1	-0.1
SN02	Snyder 2	0.03	219		Pg	21 03 47.3	-0.1
SN02					Sg	21 03 48.2	-0.1
SN02	Snyder 2	0.03	219	⇓P	Pg	21 03 47.3	-0.1
SN02				S	Sg	21 03 48.2	-0.1
SN03	Snyder 3	0.06	306		Pg	21 03 47.5	-0.1
SN03					Sg	21 03 48.5	-0.2
SN03	Snyder 3	0.06	306	⇑P	Pg	21 03 47.5	-0.1
SN03				S	Sg	21 03 48.5	-0.2
SN08	Arah	0.18	234	⇓P	Pg	21 03 50.0	+0.2
SN08				S	Sg	21 03 52.7	+0.5
SN07	Snyder 07	0.20	359		Pg	21 03 50.1	0.0
SN07					Sg	21 03 53.0	+0.2
SN07				IAML		21 03 53.1	
	982nm,0.2s						
SN07				IAML		21 03 54.8	
	1μm,0.5s						
SN07	Snyder 07	0.20	359	⇑P	Pg	21 03 50.1	0.0
SN07				S	Sg	21 03 53.0	+0.2
POST	Post	0.55	289		Pg	21 03 56.6	0.0
POST					Sg	21 04 03.9	+0.1
POST	Post	0.55	289	⇑P	Pg	21 03 56.7	0.0
POST				S	Sg	21 04 03.9	+0.1
APMT	Aspermont	0.78	56		Pg	21 04 00.7	-0.3
APMT	Aspermont	0.78	56	⇓P	Pg	21 04 00.7	-0.3
DKNS	Dickens	0.78	358		Pg	21 04 00.5	-0.5
DKNS					Sg	21 04 10.9	-0.2
DKNS				IAML		21 04 21.0	
	187nm,0.7s						
DKNS	Dickens	0.78	358	⇑P	Pg	21 04 00.5	-0.5
DKNS				S	Sg	21 04 10.9	-0.2
TMB05	Klondike	0.86	252	P	Pg	21 04 02.2	-0.4
TMB05				S	Sg	21 04 13.7	-0.1
SGCY	Sterling City	0.99	192		Pg	21 04 05.0	-0.2
SGCY					Sg	21 04 18.1	0.0
SGCY	Sterling City	0.99	192	P	Pg	21 04 04.9	-0.2
SGCY				S	Sg	21 04 18.1	0.0
ABTX	Abilene, Hawle	1.08	104		Pg	21 04 07.0	+0.2
ABTX					Sg	21 04 20.4	-0.4
ABTX				IAML		21 04 26.5	
	313nm,0.1s						
ABTX				IAML		21 04 27.0	
	289nm,0.1s						
ABTX	Abilene, Hawle	1.08	104	P	Pg	21 04 07.0	+0.2
ABTX				S	Sg	21 04 20.4	-0.4
TMB06	Greenwood	1.19	221	S	Sn	21 04 25.6	-0.4
TMB04	Seminole	1.38	259	P	Pn	21 04 11.5	-0.5
TMB04				S	Sb	21 04 29.7	-0.4
TMB01	Midkiff	1.58	220	P	Pb	21 04 15.8	-0.1
TMB01				S	Sb	21 04 36.3	+0.1
ODSA	Odessa	1.60	242		Pb	21 04 16.0	-0.2
ODSA					Sb	21 04 37.0	+0.3
ODSA	Odessa	1.60	242	P	Pb	21 04 16.0	-0.2
ODSA				S	Sb	21 04 37.0	+0.3
MSTX	Muleshoe	1.91	305		Pn	21 04 20.3	+0.9
MSTX					Sb	21 04 46.4	+0.8
MSTX	Muleshoe	1.91	305	P	Pn	21 04 20.3	+0.9
MSTX				S	Sb	21 04 46.4	+0.8
TMB02	Rankin	1.95	210	P	Pb	21 04 21.8	-0.3
TMB02				S	Sb	21 04 47.0	+0.3
OZNA	Ozona	1.97	186		Pb	21 04 22.1	-0.4
OZNA					Sg	21 04 48.6	-0.9
OZNA	Ozona	1.97	186	P	Pb	21 04 22.1	-0.4
OZNA				S	Sg	21 04 48.6	-0.9
AMTX	Amarillo	2.10	342		Pb	21 04 23.6	-1.0
AMTX					Sb	21 04 51.5	+0.6
AMTX	Amarillo	2.10	342	P	Pb	21 04 23.6	-1.0
AMTX				S	Sb	21 04 51.5	+0.6
PLPT	Palo Pinto	2.17	91	Pg	Pb	21 04 25.4	-0.4
PLPT				Sg	Sg	21 04 54.3	-1.4
PLPT	Palo Pinto	2.17	91	Pg	Pb	21 04 25.4	-0.4
PLPT				Sg	Sg	21 04 54.3	-1.4
WTFS	Witchita Falls	2.21	66	Sg	Sb	21 04 55.2	+1.1
WTFS	Witchita Falls	2.21	66	Sg	Sb	21 04 55.2	+1.1
MNHN	Monahans	2.22	226	Pg	Pb	21 04 26.0	-0.7
MNHN				Sg	Sg	21 04 56.4	-1.0
MNHN	Monahans	2.22	226	Pg	Pb	21 04 26.0	-0.7
MNHN				Sg	Sg	21 04 56.4	-1.0
BRDY	Brady	2.26	134	Pg	Pb	21 04 27.2	-0.2
BRDY				Sg	Sb	21 04 56.9	+1.2
BRDY	Brady	2.26	134	Pg	Pb	21 04 27.2	-0.2
BRDY				Sg	Sb	21 04 56.9	+1.2
SMWD	Samnorwood	2.27	13	Pg	Pb	21 04 28.1	+0.5
SMWD				Sg	Sb	21 04 55.9	-0.1
SMWD	Samnorwood	2.27	13	Pg	Pb	21 04 28.1	+0.5
SMWD				Sg	Sb	21 04 55.9	-0.1
CPRX	Cap Rock	2.51	274	Pn	Pn	21 04 27.2	-0.4
CLN7	Carlsbad 7	2.51	260		Pn	21 04 27.7	+0.1
WMOK	Wichita Mounta	2.54	43	Pn	Pn	21 04 27.6	-0.4
JCT	Junction City	2.58	159	Pn	Pn	21 04 28.1	-0.3
PECS	Pecos	2.95	240	Pn	Pn	21 04 33.3	-0.3
WHTX	Lake Whitney,	3.04	106	Pn	Pn	21 04 34.7	0.0

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*SDD **30** 21:05:09.3±4.4, 19.°65N×69.°84W, h15^{km}±18^{km}, MD3.7, ML3.4, MW3.5*

*OSPL **30** 21:05:09.6±3.2, 19.°72N×69.°84W, h0^{km}±12^{km}, ML3.2*

ISC 30 21:05:08.7±0.9, **19.°65N**±0.°03×**69.°86W**±0.°03, **h15^{km}**±5^{km}, **n35, σ2.^{s}44**/63, **15C-14D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CADR	Cabrera	0.07	286	⇑ePg	Pg	21 05 11.5	-0.2
CADR				⇓eSg	Sg	21 05 14.2	+0.5
CADR				IAML		21 05 14.7	
	comp=N,51μm,0.2s						
LONA1	Toro Cenizo, N	0.27	180	i P	Pg	21 05 13.4	-1.0
LONA1				eS	Sg	21 05 17.2	-1.1
LONA1				IAML		21 05 18.4	
	comp=Z,2μm,0.6s						
NADR	Nagua	0.29	178	⇓ePg	Pg	21 05 14.3	-0.5
NADR				⇓eSg	Sg	21 05 19.1	+0.1
NADR				IAML		21 05 19.7	
	comp=N,13μm,0.3s						
SODR	Sosua Marina B	0.68	279	⇓ePg	Pg	21 05 22.2	+0.2
SODR				⇑eSg	Sb	21 05 33.9	+2.4
SODR				IAML		21 05 38.3	
	comp=N,1μm,0.3s						
SMDR	Samana, DR	0.73	119	⇓ePg	Pg	21 05 23.0	0.0
SMDR				⇑eSg	Sb	21 05 35.8	+2.9
SMDR				IAML		21 05 36.9	
	comp=N,1μm,0.5s						
SC01	Santiago de lo	0.84	255	⇑ePg	Pg	21 05 24.4	-0.7
SC01				⇓eSg	Sg	21 05 37.8	+1.6
SC01				IAML		21 05 45.2	
	comp=N,1μm,0.5s						
SC01	Santiago de lo	0.84	255	i P	Pg	21 05 24.4	-0.7
SC01				eS	Sg	21 05 37.7	+1.6
SC01				IAML		21 05 45.8	
	comp=Z,883nm,0.3s						
LUDR	Luperon	1.05	284	⇑ePg	Pg	21 05 28.1	-1.0
LUDR				⇑eSg	Sb	21 05 44.3	+2.1
ABDR	Alto Bandera	1.10	221	⇑ePg	Pg	21 05 27.3	-2.7
ABDR				⇓eSg	Sg	21 05 41.7	-2.7
ABDR				IAML		21 05 47.6	
	comp=N,772nm,0.3s						
MADR	Mao Valverde	1.17	266	⇓ePg	Pb	21 05 29.8	-0.8
MADR				⇓eSg	Sb	21 05 48.2	+2.7
MADR				IAML		21 05 53.5	
	comp=N,1μm,0.3s						
SDD	Santo Domingo	1.18	182	⇓ePg	Pb	21 05 28.9	-1.9
SDD				⇑eSg	Sg	21 05 43.2	-3.8
SDD				IAML		21 05 46.4	
	comp=N,103nm,0.7s						
BANI	BANI	1.33	201	⇑ePg	Pn	21 05 31.4	-1.5
BANI				⇓eSg	Sb	21 05 50.1	-0.3
BANI				IAML		21 05 51.2	
	comp=N,3μm,0.2s						
SDDR	Presa de Saban	1.50	244	eP	Pn	21 05 34.3	-0.7
SDDR				eS	Sn	21 05 54.1	-0.3
SDDR				IAML		21 06 00.4	
	comp=N,210nm,0.8s						
SDDR				IAML		21 06 03.5	
	comp=N,152nm,0.6s						
SDDR	Presa de Saban	1.50	244	⇑ePg	Pn	21 05 34.3	-0.7
SDDR				⇓eSg	Sn	21 05 54.5	+0.1
SDDR				IAML		21 06 00.8	
	comp=N,214nm,0.7s						
SDDR	Presa de Saban	1.50	244	i P	Pn	21 05 34.4	-0.7
SDDR				eS	Sn	21 05 54.1	-0.3
SDDR				IAML		21 05 57.2	
	comp=Z,170nm,0.6s						
REDR	Restauracion	1.52	252	⇑ePg	Pb	21 05 38.7	+2.1
REDR				⇓eSg	Sg	21 06 01.9	+4.2
REDR				IAML		21 06 04.8	
	comp=N,590nm,0.2s						
MCDR	Montecristi	1.71	279	⇓ePg	Pn	21 05 38.3	+0.5
MCDR				⇑eSg	Sn	21 06 02.4	+3.0
MCDR				IAML		21 06 06.9	
	comp=N,539nm,0.2s						
LODA1	ITESIL, Dajabo	1.74	267	i P	Pn	21 05 38.5	+0.2
LODA1				IAML		21 06 01.6	
	comp=Z,1μm,2.9s						
LODA1				eS	Sn	21 06 02.0	+1.8
LONE3	El Aguacate, B	1.83	236	i P	Pn	21 05 42.1	+2.4
LONE3				eS	Sn	21 06 05.6	+3.0
LONE3				IAML		21 06 13.1	
	comp=Z,251nm,0.5s						
PODR	Polo	1.99	223	⇑ePg	Pn	21 05 44.1	+2.1
PODR				eSg	Sn	21 06 10.4	+3.6
PODR				IAML		21 06 17.1	
	comp=N,163nm,0.4s						
PODR	Polo	1.99	223	i P	Pn	21 05 43.9	+1.9
PODR				eS	Sn	21 06 10.7	+3.9
LODU1	El Espartillar	1.99	230	i P	Pn	21 05 44.1	+2.3
LODU1				eS	Sn	21 06 09.7	+3.1
GRTK	Grand Turk	2.20	328	eP	Pn	21 05 45.1	+0.4
GRTK				eS	Sn	21 06 13.2	+1.5
GRTK				IAML		21 06 15.7	
	comp=N,354nm,0.0s						
GRTK				IAML		21 06 15.9	
	comp=N,393nm,0.3s						
GRTK	Grand Turk	2.20	328	⇑ePg	Pn	21 05 45.0	+0.3
GRTK				⇑eSg	Sn	21 06 12.9	+1.2
GRTK				IAML		21 06 15.5	
	comp=N,347nm,0.2s						
GRTK	Grand Turk	2.20	328	i P	Pn	21 05 45.0	+0.3
GRTK				eS	Sn	21 06 12.4	+0.7
GRTK				IAML		21 06 15.4	
	comp=Z,132nm,0.2s						
LOVI	El Cajuil, Ovi	2.33	218	i P	Pn	21 05 48.7	+2.3
LOVI				eS	Sn	21 06 17.4	+2.7
LOBH	Bahia de las A	2.44	224	i P	Pn	21 05 50.6	+2.6
MASC	Masc	4.14	278	eP	Pn	21 06 08.9	-2.5
MASC				eS	Sn	21 06 56.4	-3.1
MASC				IAML		21 07 16.7	
	comp=E,28nm,0.6s						
MASC				IAML		21 07 21.6	
	comp=N,30nm,1.3s						
QMBU	Quimbuelo	4.69	278	eP	Pn	21 06 14.4	-4.5
QMBU				eS	Sn	21 07 08.5	-4.6
QMBU				IAML		21 07 26.9	
	comp=E,23nm,0.1s						
QMBU				IAML		21 07 31.6	
	comp=N,25nm,0.8s						
MOAC	Moa	4.89	283	eP	Pn	21 06 19.8	-1.9
MOAC				eS	Sn	21 07 13.6	-4.5
MOAC				IAML		21 07 33.1	
	comp=E,17nm,1.4s						
MOAC				IAML		21 07 44.2	
	comp=N,18nm,0.9s						
NMDO	Nuevo Mundo	4.89	282	eP	Pn	21 06 18.4	-3.3
NMDO				eS	Sn	21 07 13.5	-4.7
NMDO				IAML		21 07 32.8	
	comp=E,11nm,0.5s						
NMDO				IAML		21 07 33.1	
	comp=N,9.5nm,0.4s						
GTBY	Guantanamo Bay	4.95	274	eP	Pn	21 06 20.7	-1.8
GTBY				eS	Sn	21 07 14.2	-5.2
RCC	Rio Carpintero	5.50	275	eP	Pn	21 06 26.5	-3.6
RCC				eS	Sn	21 07 26.7	-6.4
RCC				IAML		21 07 38.6	
	comp=E,15nm,0.6s						
RCC				IAML		21 07 43.0	
	comp=N,20nm,1.6s						
PINC	Pinares de May	5.63	280	eP	Pn	21 06 28.0	-3.9
PINC				eS	Sn	21 07 33.3	-3.0
MARVS	Santiago de Cu	5.69	275	eP	Pn	21 06 29.0	-3.7
MARVS				eS	Sn	21 07 32.2	-5.6

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*UCR **30** 21:17:39.9±1.3, 8.°33N×82.°82W, h25^{km}±2^{km}, MW3.5*

*UPA **30** 21:17:40.1±0.9, 8.°38N×82.°81W, h26^{km}±3^{km}, MW3.8*

ISC 30 21:17:39.3±0.9, **8.°34N**±0.°03×**82.°79W**±0.°03, **h32^{km}**±6^{km}, **n62, σ1.^{s}14**/97, **13C-5D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LESP3	La Esperanza,	0.06	356	eP	Pb	21 17 44.9	+0.1
LESP3				eS	Sb	21 17 47.6	-1.0
LPPC	Paso Canoas	0.20	345	⇑iP	Pn	21 17 45.7	-0.3
LPPC				eS	Sb	21 17 50.9	+0.7
LIMO3	Limones	0.25	198	i P	Pn	21 17 47.0	+0.3
LIMO3				i S	Sn	21 17 51.9	+0.4
LMNES	Limones	0.25	197	eP	Pn	21 17 46.9	+0.2
LMNES				eS	Sn	21 17 52.1	+0.6
DVD	David	0.34	74	eP	Pn	21 17 48.4	+0.4
DVD				eS	Sn	21 17 54.0	+0.1
NELY	Ciudad Neily	0.34	333	⇑iP	Pb	21 17 47.1	-0.4
NELY				eS	Sn	21 17 53.5	-0.3
CSTBL	De las Acacias	0.35	79	⇓eP	Pn	21 17 48.5	+0.4
CSTBL				eS	Sn	21 17 54.6	+0.7
PEDE3	Pedregal, Chir	0.36	83	eP	Pn	21 17 48.5	+0.2
PEDE3				eS	Sn	21 17 54.8	+0.5
LOCO3	Loma Colorada,	0.37	79	eP	Pn	21 17 48.7	+0.3
LOCO3				eS	Sn	21 17 54.5	0.0
LOMA3	Las Lomas, Chi	0.40	77	eP	Pn	21 17 49.0	+0.2
LOMA3				eS	Sn	21 17 56.0	+0.7
CLLRA	Cordillera,	0.43	23	⇑iP	Pn	21 17 49.3	-0.1
CLLRA				eS	Sn	21 17 57.1	+0.8
MLIR3	Monte Lirio, C	0.45	355	eP	Pn	21 17 49.5	-0.1
MLIR3				eS	Sn	21 17 56.0	-0.6
PTAR3	Potrerillos Ar	0.45	39	⇑iP	Pn	21 17 49.7	+0.1
PTAR3				eS	Sn	21 17 56.3	-0.4
CHIR3	Chiriqui UPA,	0.45	83	i P	Pn	21 17 49.8	+0.2
CHIR3				eS	Sn	21 17 57.5	+1.0
BRU2	Volcan	0.46	12	⇑iP	Pn	21 17 49.3	-0.4
BRU2				eS	Sn	21 17 57.1	+0.1
BRU2	Volcan	0.46	12	⇑iP	Pn	21 17 49.5	-0.3
BRU2				eS	Sn	21 17 57.5	+0.5
EDAD	Golfito	0.49	309	⇓eP	Pb	21 17 48.4	-1.3
EDAD				eS	Sb	21 17 55.8	-1.0
SCLRA	Santa Clara, W	0.49	0	eP	Pn	21 17 49.8	-0.4
BC3P	Paso Ancho	0.50	20	⇑iP	Pn	21 17 50.0	-0.4
BC3P				eS	Sn	21 17 58.3	+0.2
VITO	San Vito	0.51	339	⇑iP	Pn	21 17 50.1	-0.3
VITO				eS	Sn	21 17 58.6	+0.6
GUAL3	Gualaca, Chiri	0.52	69	eP	Pn	21 17 50.6	+0.2
GUAL3				eS	Sn	21 17 58.1	-0.1
BQTLY	Boquete Panama	0.52	38	⇑iP	Pn	21 17 50.6	-0.1
BQTLY				eS	Sn	21 17 58.8	+0.3
BQSF3	Alto Boquete,	0.53	41	⇑iP	Pn	21 17 50.5	-0.2
BQSF3				eS	Sn	21 17 58.8	+0.2
PSOM3	Paja de Sombre	0.57	53	eP	Pb	21 17 50.6	-0.4
PSOM3				eS	Sn	21 17 58.9	-0.7
ALCO	Alturas Coton,	0.61	356	⇑iP	Pb	21 17 51.1	-0.5
ALCO				eS	Sn	21 18 00.3	-0.3
EDP2	Potrero Grande	0.77	330	eP	Pb	21 17 53.7	-0.6
EDP2				eS	Sn	21 18 05.1	+0.6
PBNVO	Pueblo Nuevo,	0.80	47	⇑iP	Pn	21 17 54.4	0.0
PBNVO				eS	Sn	21 18 05.0	-0.1
RBALA	Bur	0.82	49	⇑iP	Pn	21 17 55.0	+0.4
RBALA				eS	Sn	21 18 06.6	+0.9
PANP	Palmar Norte	0.91	313	⇓iP	Pb	21 17 55.4	-1.2
PANP				eS	Sb	21 18 07.4	-0.9
DRK0	Durika	1.02	334	⇓eP	Pn	21 17 57.2	-0.4
DRK0				eS	Sb	21 18 10.9	-0.9
DRK0	Durika	1.02	334	eP	Pn	21 17 57.1	-0.4
DRK0				eS	Sb	21 18 10.6	-1.2
EDPE	Pejibaye, P	1.12	316	eP	Pn	21 17 59.0	+0.2
SAJE	San Jernim	1.23	324	eP	Pn	21 18 00.2	-0.2
BRIBI	Bribri	1.27	359	⇓iP	Pb	21 18 03.3	+0.6
BRIBI				eS	Sb	21 18 22.2	+3.5
VERH	Veragua Rainfo	1.62	346	eP	Pn	21 18 06.8	+1.1
PIEC	Cerro El Cedra	1.72	318	eP	Pn	21 18 07.7	+0.4
LCR2	La Lucha 2	1.84	319	eP	Pn	21 18 09.4	+0.6
PISJ	San Jernim	1.84	314	eP	Pn	21 18 10.7	+1.9
ABE2	San Pablo	1.84	317	eP	Pn	21 18 10.5	+1.6
ABE2				eS	Sb	21 18 34.4	-0.9
VTCV	VTCV, Calle Va	1.88	330	eP	Pn	21 18 10.8	+1.5
RESJ	San Isidro (Tu	1.88	333	eP	Pn	21 18 11.0	+1.8
PICV	PH. Pirrs	1.89	313	eP	Pn	21 18 10.8	+1.4
ABRB	Las Abras (San	1.89	331	eP	Pn	21 18 10.9	+1.3
ABRB				eS	Sb	21 18 35.8	-1.0
CVTV	Tajo	1.91	330	eP	Pn	21 18 11.3	+1.5
PAR1A	Puntarenas Pro	1.91	311	eP	Pn	21 18 10.9	+1.3
CVTQ	Turrialba Volc	1.92	330	eP	Pn	21 18 11.5	+1.5
VTLA	Turrialba Volc	1.92	329	eP	Pb	21 18 12.6	-1.3
VTR0	Volcan Turrial	1.92	330	eP	Pn	21 18 11.6	+1.5
VICA	Volcano Irazu	1.94	327	eP	Pn	21 18 11.4	+1.1
ACOS	Acosta	1.98	317	eP	Pn	21 18 12.2	+1.4
SANTA	Santa Ana	2.10	319	eP	Pn	21 18 14.1	+1.8
SANTA				eS	Sb	21 18 41.4	-1.2
BELE	Belen	2.13	320	eP	Pn	21 18 14.5	+1.8
BELE				eS	Sb	21 18 41.5	-2.0
CACAO	El Cacao, Vera	2.15	117	eP	Pb	21 18 16.6	-0.9
VBV1	V. Barva	2.19	324	eP	Pn	21 18 15.4	+1.7
AZU	Azuero	2.55	102	eP	Pb	21 18 22.8	-1.5
SOCE	Pocosol	2.72	318	eP	Pn	21 18 23.2	+2.5
ARE1	Arenal 1	2.84	318	eP	Pn	21 18 25.2	+2.8
VARE2	V. Arenal	2.84	318	eP	Pn	21 18 25.3	+2.8
CEDE	Laguna Cedeo	2.85	319	eP	Pn	21 18 25.7	+3.1
JTS	Las Juntas de	2.88	312	eP	Pn	21 18 23.8	+0.7
JTS	Las Juntas de	2.88	312	eP	Pn	21 18 23.7	+0.7
CUI	Cuipilapa	3.29	315	eP	Pn	21 18 31.4	+2.8

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*GII **30** 21:31:44.3±0.0, 33.°566N±0.°002×36.°242E±0.°001, h0^{km}, confirmed*

*GRAL **30** 21:31:46.4±0.4, 33.°38N×36.°22E, h0^{km}±68^{km}, MD3.1*

ISC 30 21:31:46.0±1.3, **33.°42N**±0.°03×**36.°23E**±0.°06, **h0^{km}, n28, σ0.^{s}59**/30, **Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCY	Rachaya	0.34	283	eP	Pg	21 31 52.6	0.0
RCY				eS	Sg	21 31 57.2	+0.2
SHBL	Chebaa	0.42	260	eP	Pg	21 31 53.7	-0.3
NATI	Neve Ativ	0.45	250	P	Pg	21 31 54.9	+0.4
NATI	Neve Ativ	0.45	250	S	Sb	21 32 03.1	-0.8
QRWL	Qaraoun	0.48	286	eP	Pg	21 31 54.9	-0.2
GEM	Giv'at Ha'Em	0.52	247	P	Pg	21 31 56.1	+0.1
GEM	Giv'at Ha'Em	0.52	247	S	Sb	21 32 04.8	-1.3
ZAHL	Zahle	0.53	326	eP	Pg	21 31 56.2	+0.2
KSHT	Keshet	0.56	219	P	Pg	21 31 57.4	+0.6
KSHT	Keshet	0.56	219	S	Sb	21 32 08.6	+1.3
DQRL	Deir Qamar	0.62	297	eP	Pg	21 31 58.0	+0.1
DQRL				eS	Sg	21 32 06.2	+0.2
BHL	Bhannes	0.68	315	eP	Pg	21 31 59.0	-0.1
MMA0B	Mount Meron ar	0.81	240	P	Pg	21 32 01.3	-0.1
MMC7	Mount Meron ar	0.81	241	P	Pg	21 32 01.5	0.0
HWQ	Hawqa	0.89	344	eP	Pg	21 32 02.9	-0.2
HNTI	Hanita	0.95	250	P	Pg	21 32 04.1	-0.1
BLGI	Bet Lehem HaGe	1.11	232	P	Pg	21 32 06.8	-0.5
BEIL	Beino	1.12	358	eP	Pg	21 32 07.3	-0.2
MMLI	Mount Malkishu	1.19	215	P	Pg	21 32 08.4	-0.5
MMLI	Mount Malkishu	1.19	215	S	Sn	21 32 27.6	+0.7
HMDT	Nahal Hemdat	1.31	207	P	Pg	21 32 10.3	-0.7
HMDT	Nahal Hemdat	1.31	207	S	Sn	21 32 30.1	+0.4
OFRI	`Ofer	1.32	233	P	Pg	21 32 10.2	-1.0
SLTI	Sal'it	1.55	221	P	Pn	21 32 14.3	-0.5
SLTI	Sal'it	1.55	221	S	Sn	21 32 36.8	+1.2
DSI	Dead Sea	1.98	202	P	Pn	21 32 20.8	+0.1
GHAJ	Ghor Haditha	2.18	195	P	Pn	21 32 23.3	-0.2
YTIR	Yattir	2.26	205	P	Pn	21 32 24.3	-0.3

IDC 30 21:32:41.6±999.0**,33°.63N×32°.78E,h0^{km},Error ellipse: s-maj=546.5km s-min=216.6km az=106.0,Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I48TN	**KESRA INFRASON**	19.39	283	I	I	23 26 15.8	
	0.1nm,0.9s,baz=88,slow=301,SNR=5.0						
I26DE	**FREYUNG INFRAS**	20.81	323	I	I	23 39 40.0	
	baz=128,slow=326,SNR=1.3						
I17CI	**DIMBOKRO INFRA**	43.95	241	I	I	02 00 39.6	
	baz=44,slow=313,SNR=1.0						
I42PT	**GRACIOSA ISLAN**	48.47	295	I	I	02 30 03.3	
	baz=79,slow=320,SNR=1.6						

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*IDC **30** 21:42:41.1±1.0,60°.15S×45°.32W,h0^{km},mb3.8/4, mbtmp3.9/4,Error ellipse: s-maj=45.1km s-min=28.0km az=56.0*

*NEIC **30** 21:42:42.4±2.0,60°.1S±0°.1×45°.5W±0°.1,h10^{km}±2^{km}, mb4.5/9,Error ellipse: s-maj=22.1km s-min=5.1km az=153.0*

ISC 30 21:42:42.2±0.7**,60°.12S**±0°.10×**45°.5W**±0°.1**,h10^{km},n27, σ0^{s}.84**/22**,mb4.3**/6**,Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESPZ	**Base Esperanza**	6.39	234		Pn	21 44 15.4	-0.8
HOPE	**Hope Point**	7.61	44	Pn	Pn	21 44 32.4	-0.5
PMSA	**Palmer Station**	9.78	234	Pn	Pn	21 45 02.9	+0.3
SMAI	**San Martin Ant**	12.33	220	Pn	Pn	21 45 36.9	-0.7
BELA	**Belgrano 2**	18.20	173	P	Pn	21 46 54.3	-0.2
SNAA	**Sanae**	20.33	142	P	P	21 47 18.7	+0.6
SNAA	**Sanae**	20.33	142	P	P	21 47 16.9	-1.2
	1.5nm,0.9s,baz=298,slow=14,SNR=2.9						
	1.5nm,0.9s						
PLCA	**Paso Flores**	24.87	310	P	P	21 48 03.9	-0.9
PLCA				IAmb	IAmb	21 48 09.3	
	comp=Z,13nm,1.5s						
PLCA	**Paso Flores**	24.87	310	P	P	21 48 05.0	+0.2
	comp=Z,2.7nm,1.0s,baz=135,slow=7.1,SNR=3.3						
	comp=Z,2.7nm,1.0s						
QSPA	**South Pole Qui**	30.12	180	P	P	21 48 53.0	+1.2
QSPA	**South Pole Qui**	30.12	180	P	P	21 48 52.6	+0.8
	comp=Z,1.2nm,0.9s,baz=153,slow=2.3,SNR=2.6						
	comp=Z,1.2nm,0.9s						
BO02	**Sierra Bellavi**	30.21	316	P	P	21 48 52.4	-0.3
BO02				IAmb	IAmb	21 48 57.4	
	comp=Z,7.0nm,1.0s						
MT09	**Talagante**	31.20	316	P	P	21 49 02.2	+0.6
MT01	**Popeta**	31.21	316	P	P	21 49 00.2	-1.2
MT01				IAmb	IAmb	21 49 01.6	
	comp=Z,16nm,1.4s						
MT02	**Curacav**	31.72	316	P	P	21 49 06.6	+0.7
VA03	**San Esteban**	31.97	318	P	P	21 49 08.5	+0.2
VA03				IAmb	IAmb	21 49 14.1	
	comp=Z,7.6nm,0.7s						
H10S2	**ASCENSION HYDR**	56.03	38	T	T	22 53 46.4	
	baz=197						
H10S3	**ASCENSION HYDR**	56.03	38	T	T	22 53 47.0	
	baz=23						
H10N3	**ASCENSION HYDR**	57.13	37	T	T	22 55 02.7	
	baz=199						
H10N1	**ASCENSION HYDR**	57.13	37	T	T	22 54 54.8	
	baz=199						
H10N2	**ASCENSION HYDR**	57.15	37	T	T	22 55 01.3	
	baz=199						
TORD	**Torodi Ar. Bea**	82.18	46	P	P	21 55 03.6	+0.5
TORD				IAmb	IAmb	21 55 10.2	
	comp=Z,1.5nm,1.4s						
TORD	**Torodi Ar. Bea**	82.18	46	P	P	21 55 04.6	+1.5
	comp=Z,0.7nm,0.3s,baz=192,slow=6.8,SNR=1.2						
	comp=Z,0.7nm,0.3s						
BVAR	**Borovoye Array**	145.26	73	PKPbc	PKPbc	22 02 18.0	-0.6
	comp=Z,1.6nm,0.6s,baz=241,slow=3.6,SNR=10						
ILAR	**Eielson Array**	145.55	312	PKPbc	PKPab	22 02 19.9	+0.6
	comp=Z,1.3nm,0.8s,baz=128,slow=2.4,SNR=12						
MKAR	**Makanchi Array**	147.09	90	PKPbc	PKPbc	22 02 23.4	-0.9
	comp=Z,1.3nm,0.6s,baz=235,slow=3.7,SNR=9.9						
KURBB	**Kurchatov Arra**	147.74	82	PKPbc	PKPbc	22 02 25.1	-0.8
	comp=Z,0.5nm,0.6s,baz=231,slow=3.7,SNR=6.3						

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*NEIC **30** 22:01:20.6±1.3,20°.5S±0°.1×178°.1W±0°.1,h584^{km}±6^{km}, mb4.3/40,Error ellipse: s-maj=19.3km s-min=15.4km az=84.0*

*IDC **30** 22:01:22.3±1.1,20°.45S×178°.37W,h595^{km}±11^{km}, mb3.3/12,mbtmp4.2/14,Error ellipse: s-maj=15.4km s-min=12.2km az=143.0*

ISC 30 22:01:21.9±0.5**,20°.48S**±0°.08×**178°.28W**±0°.09**,h600^{km}, n120,**σ**1^{s}.33**/122**,mb4.2**/29**,1D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	4.41	308	P	P	22 02 49.4	-1.1
MSVF	**Nonsavu**	4.41	308	P	P	22 02 49.1	-1.4
	40nm,0.4s,baz=128,slow=4.5,SNR=87						
MSVF				S	S	22 04 01.1	-1.6
	8.1nm,1.0s,baz=76,slow=24,SNR=0.6						
DZM	**Mont Dzumac**	14.33	261	P	P	22 04 26.4	+2.3
DZM	**Mont Dzumac**	14.33	261	P	P	22 04 25.5	+1.5
	3.3nm,0.6s,baz=99,slow=19,SNR=6.4						
OUZ	**Omahuta**	16.34	204	P	P	22 04 43.1	+0.9
WCZ	**Waipu Caves**	16.71	201	P	P	22 04 47.0	+1.4
WTAZ	**Waiatarua**	17.54	199	P	P	22 04 53.2	0.0
HAZ	**Te Kaha**	17.55	190	P	P	22 04 51.9	-1.4
RUGZ	**Raukumara Rang**	17.78	191	P	P	22 04 53.2	-2.3
TWGZ	**Tauwhareparae**	17.93	190	P	P	22 04 56.2	-0.6
TOZ	**Tahuroa Road**	18.02	196	P	P	22 04 57.7	+0.2
TOZ				IAmb	IAmb	22 04 59.2	
	comp=Z,14nm,1.1s						
TOZ	**Tahuroa Road**	18.02	196	P	P	22 04 57.5	0.0
MWZ	**Matawai**	18.16	191	P	P	22 04 55.8	-3.1
URZ	**Urewera**	18.16	192	P	P	22 04 56.0	-2.8
	comp=Z,8.2nm,0.3s,baz=277,slow=2.6,SNR=24						
URZ	**Urewera**	18.16	192	P	P	22 04 56.0	-2.8
RTZ	**Ruatahuna**	18.54	192	P	P	22 05 00.0	-2.3
RTZ				IAmb	IAmb	22 05 42.3	
	comp=Z,16nm,1.1s						
TLZ	**Tolley Road**	18.58	195	P	P	22 05 03.3	+0.6
MTHZ	**Maungataniwha**	18.79	192	P	P	22 05 02.6	-2.0
BKZ	**Black Stump Fm**	19.16	192	P	P	22 05 05.0	-3.0
BKZ				IAmb	IAmb	22 05 08.3	
	comp=Z,14nm,1.2s						
BKZ	**Black Stump Fm**	19.16	192	P	P	22 05 04.8	-3.1
SNVZ	**South Ngauruho**	19.37	194	P	P	22 05 07.8	-2.2
COVZ	**Chateau Observ**	19.40	195	P	P	22 05 08.7	-1.5
FWVZ	**Far West T-bar**	19.45	194	P	P	22 05 09.8	-1.0
VRZ	**Vera Road**	19.53	196	P	P	22 05 12.1	+0.9
MOVZ	**Moawhango**	19.55	194	P	P	22 05 09.7	-1.8
KAHZ	**Kahuranaki**	19.70	191	P	P	22 05 10.6	-2.2
PXZ	**Pawanui**	19.93	191	P	P	22 05 12.3	-2.5
PNHZ	**Pukenui**	19.94	193	P	P	22 05 11.9	-3.1
TSZ	**Takapari Road**	20.13	193	P	P	22 05 14.6	-2.1
BFZ	**Birch Farm**	20.68	192	P	P	22 05 18.8	-2.7
MRZ	**Mangatainoka R**	20.79	193	P	P	22 05 19.4	-3.1
TCW	**Tory Channel**	21.62	195	P	P	22 05 29.3	-0.6
QRZ	**Quartz Range**	21.74	199	P	P	22 05 30.0	-1.1
QRZ	**Quartz Range**	21.74	199	P	P	22 05 29.8	-1.3
NNZ	**Nelson**	21.86	197	P	P	22 05 30.5	-1.5
THZ	**Tophouse**	22.50	197	P	P	22 05 35.6	-2.2
DSZ	**Denniston Nort**	22.80	199	P	P	22 05 40.0	-0.6
DSZ	**Denniston Nort**	22.80	199	P	P	22 05 38.8	-1.8
KHZ	**Kahutara**	22.94	196	P	P	22 05 39.3	-2.3
GVZ	**Greta Valley S**	23.58	196	P	P	22 05 44.6	-2.8
WHZ	**Wether Hill Ro**	27.76	201	P	P	22 06 24.4	+0.3
WHZ	**Wether Hill Ro**	27.76	201	P	P	22 06 24.7	+0.6
CTAO	**Charters Tower**	33.23	264	P	P	22 07 11.2	-0.1
CTAO				IAmb	IAmb	22 07 18.2	
	comp=Z,18nm,1.4s						
COEN	**Coen**	37.32	274	P	P	22 07 46.4	+1.3
STKA	**Stephens Creek**	37.56	244	P	P	22 07 47.1	+0.3
BBOO	**Buckleboo**	42.32	243	P	P	22 08 24.8	0.0
WR8	**Warramunga Arr**	44.19	262	P	P	22 08 39.4	0.0
WR8				IAmb	IAmb	22 09 00.0	
	comp=Z,9.7nm,1.3s						
AS31	**Alice Springs**	44.27	257	P	P	22 08 40.0	0.0
ASAR	**Alice Springs**	44.27	257	P	P	22 08 39.8	-0.1
ASAR	**Alice Springs**	44.27	257	P	P	22 08 40.4	+0.4
	comp=Z,3.9nm,0.5s,baz=94,slow=7.6,SNR=57						
ASAR				PcP	PcP	22 10 10.9	-0.1
	comp=Z,0.5nm,0.5s,baz=102,slow=4.0,SNR=3.1						
ASAR				S	S	22 14 31.4	-0.1
	comp=Z,1.5nm,0.8s,baz=95,slow=16,SNR=8.2						
	comp=Z,3.9nm,0.5s						
WB0	**Warramunga Arr**	44.32	262	P	P	22 08 40.4	+0.1
WB0				IAmb	IAmb	22 08 45.5	
	comp=Z,17nm,1.5s						
WRA	**Warramunga Arr**	44.34	262	P	P	22 08 40.4	-0.1
WRA	**Warramunga Arr**	44.34	262	P	P	22 08 40.6	0.0
	comp=Z,2.2nm,0.3s,baz=98,slow=7.4,SNR=6.0						
WRA				S	S	22 14 30.9	-1.7
	comp=Z,0.3nm,0.7s,baz=98,slow=14,SNR=1.5						
	comp=Z,2.2nm,0.3s						
MTN	**Manton Dam**	48.90	271	P	P	22 09 14.5	-0.3
MTN				IAmb	IAmb	22 09 15.6	
	comp=Z,11nm,0.9s						
KNRA	**Kununurra**	50.40	266	P	P	22 09 26.0	+0.3
KNRA				IAmb	IAmb	22 09 34.8	
	comp=Z,19nm,1.5s						
FITZ	**Fitzroy Crossi**	52.77	262	P	P	22 09 43.2	+0.4
PSA00	**Pilbara Seismi**	57.42	257	P	P	22 10 14.4	-0.6
MBWA	**Marble Bar**	57.60	257	P	P	22 10 16.2	-0.1
MBWA				IAmb	IAmb	22 10 24.2	
	comp=Z,25nm,1.5s						
SBA	**Scott Base**	57.88	184	P	P	22 10 18.8	+1.7
VNDA	**Vanda**	57.91	185	P	P	22 10 18.5	+1.2
VNDA	**Vanda**	57.91	185	P	P	22 10 18.5	+1.2
	comp=Z,0.8nm,0.6s,baz=350,slow=6.8,SNR=7.6						
	comp=Z,0.8nm,0.6s						
CASY	**Casey**	63.87	205	P	P	22 10 55.9	-0.6
QSPA	**South Pole Qui**	69.59	180	P	P	22 11 32.4	+0.7
QSPA	**South Pole Qui**	69.59	180	P	P	22 11 32.3	+0.5
	comp=Z,3.6nm,0.7s,baz=309,slow=0.6,SNR=28						
	comp=Z,3.6nm,0.7s						
JGF	**Kuroka**	69.83	323	P	P	22 11 33.2	-0.3
JGF				IAmb	IAmb	22 11 44.0	
	comp=Z,14nm,1.2s						
MJAR	**Matsushiro Arr**	70.03	324	P	P	22 11 35.2	+0.5
MJAR	**Matsushiro Arr**	70.03	324	P	P	22 11 35.4	+0.7
	comp=Z,1.2nm,0.5s,baz=153,slow=7.3,SNR=5.5						
	comp=Z,1.2nm,0.5s						
KIWB	**Kanaga Island**	72.02	1	P	P	22 11 46.0	+0.1
ADK	**Adak**	72.06	1	P	P	22 11 45.6	-0.5
NIKH	**Nikolski High**	73.59	6	P	P	22 11 54.3	-0.6
NIKH				IAmb	IAmb	22 11 55.8	
	comp=Z,15nm,0.8s						
UNV	**Unalaska Valle**	74.71	7	P	P	22 12 00.1	-0.9
UNV				IAmb	IAmb	22 12 25.4	
	comp=Z,8.7nm,1.0s						
LVA	**Lava Point**	75.07	7	P	P	22 12 02.7	-0.5
PEA0B	**Petropavlovsk-**	76.18	345	P	P	22 12 09.4	+0.1
PEA0B				IAmb	IAmb	22 12 10.7	
	comp=Z,15nm,1.4s						
PETK	**Petropavlovsk-**	76.18	345	P	P	22 12 09.4	+0.1
PETK	**Petropavlovsk-**	76.18	345	P	P	22 12 09.8	+0.5
	comp=Z,2.6nm,0.8s,baz=131,slow=7.4,SNR=7.9						
	comp=Z,2.6nm,0.8s						
CNBA	**Chernabura Isl**	76.68	11	P	P	22 12 11.2	-0.7
CNBA				IAmb	IAmb	22 12 13.4	
	comp=Z,8.8nm,1.0s						
KSRS	**Korea Array**	76.69	319	P	P	22 12 13.4	+1.0
	comp=Z,1.0nm,0.7s,baz=141,slow=5.6,SNR=4.5						
	comp=Z,1.0nm,0.7s						
NVAR	**Mina Array Bea**	81.19	43	P	P	22 12 37.7	+1.2
	comp=Z,1.0nm,0.8s,baz=226,slow=10,SNR=3.9						
	comp=Z,1.0nm,0.8s						
J05D	**Fort Rock, OR**	82.25	38		P	22 12 43.0	+1.3
J05D				IAmb	IAmb	22 12 44.0	
	comp=Z,5.6nm,0.8s						
PINE	**Pine Mountain**	82.73	38		P	22 12 44.6	+0.4
F07A	**Phinny Hill Vi**	84.57	37	P	P	22 12 51.6	-1.3
F07A				IAmb	IAmb	22 12 52.8	
	comp=Z,7.1nm,0.6s						
TXAR	**Lajitas Array**	87.27	57	P	P	22 13 07.5	+1.3
	comp=Z,0.4nm,0.8s,baz=234,slow=4.8,SNR=4.1						
	comp=Z,0.4nm,0.8s						
CCB	**Clear Creek Bu**	88.05	13		P	22 13 08.8	-0.1
CCB				IAmb	IAmb	22 13 09.2	
	comp=Z,3.3nm,0.6s						
ILAR	**Eielson Array**	88.35	13	P	P	22 13 09.9	-0.4
	comp=Z,0.9nm,0.5s,baz=217,slow=5.2,SNR=17						
	comp=Z,0.9nm,0.5s						
J26L	**Joseph Creek**	88.85	14		P	22 13 13.3	+0.5
J26L				IAmb	IAmb	22 13 14.5	
	comp=Z,2.7nm,0.8s						
M30M	**Minto, Yukon**	89.03	18	P	P	22 13 13.8	+0.3
M30M				IAmb	IAmb	22 13 15.1	
	comp=Z,4.0nm,0.9s						
L29M	**L29M**	89.08	17		P	22 13 14.6	+0.8
L29M				IAmb	IAmb	22 13 15.7	
	comp=Z,3.0nm,0.9s						
PDAR	**Pinedale Array**	89.13	43	P	P	22 13 15.4	+0.6
	comp=Z,0.7nm,0.6s,baz=198,slow=3.0,SNR=4.5						
	comp=Z,0.7nm,0.6s						
CMAR	**Chiang Mai Arr**	89.86	290	P	P	22 13 19.9	+1.5
	comp=Z,0.5nm,0.4s,baz=126,slow=3.4,SNR=6.7						
	comp=Z,0.5nm,0.4s						
L34A	**Svendsen Farm,**	97.66	48		P	22 13 54.7	+1.3
ZALV	**Zalesovo Beam**	110.31	321	PKiKP	PKiKP	22 18 45.2	-1.1
	comp=Z,0.5nm,0.4s,baz=72,slow=4.7,SNR=2.4						
MKAR	**Makanchi Array**	110.99	313	PKiKP	PKiKP	22 18 47.5	-0.5
	comp=Z,0.2nm,0.3s,baz=89,slow=1.0,SNR=4.1						
KURBB	**Kurchatov Arra**	113.85	317	PKiKP	PKiKP	22 18 52.0	-1.2
	comp=Z,0.3nm,0.5s,baz=100,slow=1.6,SNR=5.6						
BVAR	**Borovoye Array**	118.89	320	PKP	PKiKP	22 19 02.8	-0.2
	comp=Z,1.1nm,0.4s,baz=98,slow=1.7,SNR=7.6						
ARCES	**ARCESS Array B**	128.85	350	PKP	PKiKP	22 19 22.3	0.0
	comp=Z,1.8nm,0.9s,baz=72,slow=4.0,SNR=4.7						
FINES	**FINESS Array B**	135.68	344	PKhKP	PKPpre	22 19 25.3	
	comp=Z,1.9nm,0.9s,baz=59,slow=4.9,SNR=3.4						
FINES				PKP	PKiKP	22 19 35.5	-0.8
	comp=Z,1.3nm,0.7s,baz=82,slow=3.1,SNR=4.5						
HFS	**Hagfors**	139.47	351	PKhKP	PKPpre	22 19 33.6	
	comp=Z,3.2nm,0.9s,baz=48,slow=2.1,SNR=1.4						
AKASG	**Malin Array Be**	142.87	331	PKhKP	PKPpre	22 19 45.4	
	comp=Z,4.4nm,0.5s,baz=44,slow=4.2,SNR=36						
AKBB	**Malin Array Si**	142.87	331		PKPdf	22 19 45.5	-2.4
KIEV	**Kiev**	142.88	331		PKPpre	22 19 45.0	
EKA	**Eskdalemuir Ar**	145.00	5	PKP	PKPab	22 19 52.0	-1.4
	comp=Z,2.1nm,0.8s,baz=312,slow=8.1,SNR=2.8						
BRTR	**Keskin Array B**	146.63	312	PKPbc	PKiKP	22 19 57.6	-2.0
	comp=Z,1.0nm,0.5s,baz=26,slow=4.4,SNR=7.6						
BUR08	**Bucovina Ar. S**	146.90	330		PKiKP	22 19 59.2	-0.7
MMAI	**Mount Meron Ar**	147.57	300	PKPbc	PKiKP	22 20 01.6	-0.1
	comp=Z,1.4nm,0.4s,baz=80,slow=6.0,SNR=12						
CLL	**Collm**	147.98	347		PKiKP	22 20 00.8	-1.0
CLL	**Collm**	147.98	347	⇓ *i* PKPbc	PKiKP	22 20 01.2	-0.6
	comp=Z,6.0nm,0.6s						
CLL				*e*PKPab	PKPab	22 20 06.0	+0.5
GERES	**GERESS Array B**	150.11	344	PKPbc	PKiKP	22 20 06.1	-0.3
	comp=Z,0.8nm,0.6s,baz=29,slow=3.0,SNR=10						
CONA	**Conrad Observa**	150.32	341	*e*PKP	PKiKP	22 20 06.6	-0.3
	comp=Z,1.5nm,0.6s						
RONA	**Rosalia, Austr**	150.38	340	*i* PKP	PKiKP	22 20 06.9	-0.1
	comp=Z,1.9nm,0.5s						
MOA	**Molln**	150.87	343	*e*PKP	PKiKP	22 20 07.7	-0.2
	comp=Z,1.7nm,0.7s						
ARSA	**Arzberg**	151.03	340	*i* PKiKP	PKiKP	22 20 09.3	+1.0
	comp=Z,4.7nm,1.3s						
LESA	**Schwarzleotal**	151.68	344	*i* PKP	PKiKP	22 20 10.1	+0.3
	comp=Z,1.0nm,0.4s						
SOKA	**Soboth**	151.69	340	*i* PKP	PKiKP	22 20 10.6	+0.8
	comp=Z,1.4nm,0.9s						
WATA	**Walderalm**	152.03	346	*i* PKP	PKiKP	22 20 10.0	-0.6
	comp=Z,1.0nm,0.5s						
WTTA	**Wattenberg**	152.09	345	*e*PKP	PKiKP	22 20 10.8	+0.1
	comp=Z,1.3nm,0.4s						
MOTA	**Moosalm**	152.13	346	*e*PKP	PKPdf	22 20 03.3	0.0
	comp=Z,2.3nm,0.8s						
MYKA	**Terra Mystica**	152.15	342	*e*PKP	PKiKP	22 20 10.2	-0.5
	comp=Z,1.2nm,0.4s						
ABTA	**Abfaltersbach**	152.35	344	*e*PKP	PKiKP	22 20 09.9	-1.3
	comp=Z,2.3nm,1.1s						
FETA	**Feichten**	152.52	347	*e*PKP	PKPdf	22 20 03.5	-0.5
	comp=Z,3.2nm,1.2s						
ESDC	**Sonseca Array**	160.25	13	PKPab	PKPab	22 20 58.8	+0.4
	comp=Z,0.7nm,0.9s,baz=346,slow=3.4,SNR=4.7						

HEL 30 22:12:45.9±0.5**,67°.16N×20°.60E,h0^{km},ML1.1, Suspected explosion,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERTU	**Ertsjaerv**	0.88	134	PG	Pg	22 13 01.1	-1.6
PAJU	**Pajala**	0.99	97	PG	Pg	22 13 03.4	-1.4
PAJU				SB	Sg	22 13 16.9	-0.8
KLF	**Kolari**	1.31	85	PG	Pg	22 13 08.9	-2.1
	baz=268						
KLF				MSG		22 13 25.6	
	comp=Z,0.6nm,0.2s						
KLF				SB	Sg	22 13 27.4	-0.6
HEF	**Hetta**	1.71	42	PG	Pn	22 13 15.9	-1.0
HEF				MSG		22 13 37.0	
	comp=Z,0.9nm,0.2s						
HEF				SN	Sn	22 13 39.7	+0.3
KALU	**Kalix**	1.71	139	PG	Pn	22 13 16.7	-0.2
KALU				SN	Sg	22 13 40.8	0.0
TOF	**Tornio**	1.84	125	PG	Pn	22 13 18.6	-0.1
TOF				MSG		22 13 40.9	
	comp=Z,0.8nm,0.2s						
TOF				SN	Sb	22 13 43.9	0.0
KIF	**Kilpisjarvi**	1.85	2	PG	Pn	22 13 19.6	+0.8
	baz=185						
KIF				MSG		22 13 42.1	
	comp=Z,1.9nm,0.2s						
KIF				SG	Sg	22 13 44.8	-0.5
KTK1	**Kautokeino**	2.10	27	SG	Sb	22 13 51.5	0.0
RNF	**Rovaniemi**	2.21	102	PG	Pn	22 13 24.1	+0.4
ARA0	**ARCESS Array S**	3.00	35	SG	Sb	22 14 15.9	-1.3
RAJF	**Raja-Jooseppi**	3.21	62	SG	Sb	22 14 24.2	+1.0

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*UPP **30** 22:13:34.8±0.1,67°.17N×20°.57E,h0^{km},ML2.8,Unknown*

*DNK **30** 22:13:35.1±0.3,67°.17N×20°.60E,h0^{km},ML2.8(UPP), Explosion*

ISC 30 22:13:34.7±1.5**,67°.18N**±0°.04×**20°.57E**±0°.06**,h0^{km},n6, σ0^{s}.03**/8**,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	**Dundret**	0.06	179	P	Pg	22 13 35.9	0.0
	baz=13						
DUNU				S	Sg	22 13 36.6	0.0
DUNU	**Dundret**	0.06	179	P	Pg	22 13 35.9	0.0
	baz=13						
DUNU				S	Sg	22 13 36.6	0.0
MASU	**Masugnsbyn**	0.62	63	P	Pg	22 13 46.6	0.0
MASU	**Masugnsbyn**	0.62	63	P	Pg	22 13 46.6	0.0
RATU	**Laukkuluspa**	0.74	330	P	Pg	22 13 49.0	0.0
RATU	**Laukkuluspa**	0.74	330	P	Pg	22 13 49.0	0.0

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*NEIC **30** 22:26:41.0±1.6,31°.30S±0°.06×68°.88W±0°.02,h112^{km}±4^{km}, mb4.5/18,Mwr4.2/14,Error ellipse: s-maj=8.5km s-min=2.1km az=193.0,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-2.48; M$_{\theta\theta}$1.32; M$_{\phi\phi}$1.16; M$_{r\theta}$1.31; M$_{\theta\phi}$1.54; M$_{\phi r}$-0.05; Fault plane solution: M$_{0}$2.95000×10^{15} NP1:φ$_{s}$28.06000°,δ38.41000°, λ-120.60000°. NP2:φ$_{s}$245.10000°,δ57.67000°, λ-68.02000°. Principal axes: T 2.9439, Plg10.0000°, Azm320.0000°; N 0.0142, Plg18.0000°, Azm53.0000°; P -2.9581, Plg69.0000°, Azm202.0000°;*

*IDC **30** 22:26:40.8±0.5,31°.26S×68°.76W,h112^{km}±3^{km},mb3.9/10, mbtmp4.1/14,MS3.3/1 Error ellipse: s-maj=19.3km s-min=11.0km az=68.0*

*NEIC **30** 22:26:40.7,31°.31S×68°.82W,h113^{km}*

*SJA **30** 22:26:40.0±0.9,31°.32S×68°.85W,h117^{km}±2^{km},ML4.1, MW4.0*

ISC 30 22:26:40.2±0.4**,31°.32S**±0°.03×**68°.83W**±0°.03**,h114^{km}**±3^{km}**, h114^{km}:pP-P,n138,**σ**1^{s}.45**/190**,mb4.4**/18**,5C-6D,San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZON	**Zonda**	0.26	150		Pn	22 26 57.4	+0.9
ZON				Sn	Sn	22 27 08.8	+0.2
ZON	**Zonda**	0.26	150	*e*P	Pn	22 26 57.3	+0.9
ZON				*e*S	Sn	22 27 09.6	+1.0
ZON				IAML		22 27 10.9	
	comp=Z,11µm,0.3s						
RTLL	**Cerro Villicun**	0.31	92	*e*P	Pn	22 26 57.3	+0.7
RTLL				*i* S	Sn	22 27 09.5	+0.6
SJA	**San Juan**	0.31	132	⇓ *e*P	Pn	22 26 57.7	+1.1
SJA				*e*S	Sn	22 27 11.8	+2.8
SJA				IAML		22 27 13.3	
	comp=Z,6µm,0.2s						
CFA	**Coronel Fontan**	0.58	119	P	Pn	22 26 59.1	+0.9
	comp=Z,650nm,0.3s,baz=260,slow=6.7						
CFA				S	Sn	22 27 13.0	+1.3
	comp=Z,5µm,0.3s,baz=319,slow=20,SNR=88						
CFA	**Coronel Fontan**	0.58	119	*e*P	Pn	22 26 59.2	+1.1
CFA				*e*S	Sn	22 27 12.8	+1.2
RTLS	**Leoncito**	0.62	219	*e*P	Pn	22 26 59.7	+0.9
RTLS				*e*S	Sn	22 27 13.7	+1.0
RTLS				IAML		22 27 17.2	
	comp=Z,8µm,0.6s						
ACCO	**Cerro Coronel**	0.75	345	*e*P	Pn	22 27 00.8	+0.9
ACCO				*e*S	Sn	22 27 16.4	+1.8
ACDV	**Cuesta del Vie**	1.17	348	*e*P	Pn	22 27 04.9	+1.1
ACDV				IAML		22 27 25.9	
	comp=Z,2µm,0.3s						
ASAL	**Salagasta**	1.27	180	*e*P	Pn	22 27 06.4	+1.6
AROD	**Rodeo**	1.27	334	*e*P	Pn	22 27 06.2	+1.1
AVFE	**Valle Fertil**	1.35	61	*e*P	Pn	22 27 06.9	+1.2
AVFE				IAML		22 27 28.3	
	comp=Z,3µm,0.3s						
CO03	**El Pedregal**	1.66	286		Pn	22 27 10.2	+0.9
CO03				Sn	Sn	22 27 31.8	+0.3
CO03	**El Pedregal**	1.66	286	⇑ *e*P	Pn	22 27 10.3	+0.9
CO03				*i* S	Sn	22 27 33.0	+1.6
CO03				IAML		22 27 33.8	
	comp=N,6µm,0.3s						
CO03	**El Pedregal**	1.66	286	*e*P	Pn	22 27 10.3	+0.9
CO03				*e*S	Sn	22 27 32.6	+1.1
CO03				IAML		22 27 33.9	
	comp=Z,3µm,0.7s						
ACAN	**Cantantal**	1.69	125	*e*P	Pn	22 27 11.5	+1.9
CO01	**Juntas del Tor**	1.72	321		Pn	22 27 12.0	+1.8
CO01	**Juntas del Tor**	1.72	321	⇑ *e*P	Pn	22 27 12.0	+1.8
CO01				*i* S	Sn	22 27 34.8	+1.8
CO01				IAML		22 27 37.0	
	comp=N,2µm,0.5s						
CO01	**Juntas del Tor**	1.72	321	*e*P	Pn	22 27 11.8	+1.6
CO01				*e*S	Sn	22 27 35.1	+2.1
CO01				IAML		22 27 36.8	
	comp=Z,1µm,0.5s						
AGUA	**GUANDACOL**	1.85	9	*e*P	Pn	22 27 13.2	+1.5
AGUA				IAML		22 27 39.5	
	comp=Z,4µm,0.3s						
CO02	**Combarbal**	1.86	273		Pn	22 27 12.5	+0.7
CO02	**Combarbal**	1.86	273	⇑ *e*P	Pn	22 27 12.4	+0.7
CO02				*i* S	Sn	22 27 36.4	+0.6
CO02	**Combarbal**	1.86	273	*e*P	Pn	22 27 12.4	+0.7
CO02				*e*S	Sn	22 27 36.7	+0.9
CO02				IAML		22 27 38.8	
	comp=Z,5µm,0.3s						
ACHE	**Chepes**	1.86	86	*e*P	Pn	22 27 13.2	+1.3
GO04	**Tololo Observa**	2.04	303		Pn	22 27 14.2	+0.1
GO04	**Tololo Observa**	2.04	303	⇑ *e*P	Pn	22 27 14.4	+0.3
GO04				*i* S	Sn	22 27 40.7	+0.6
GO04	**Tololo Observa**	2.04	303	*e*P	Pn	22 27 14.5	+0.3
GO04				*e*S	Sn	22 27 40.6	+0.5
VA03	**San Esteban**	2.05	225		Pn	22 27 15.1	+0.9
VA03	**San Esteban**	2.05	225	⇑ *e*P	Pn	22 27 15.3	+1.2
VA03				*i* S	Sn	22 27 42.3	+2.3
VA03				IAML		22 27 46.5	
	comp=E,2µm,0.2s						
VA03	**San Esteban**	2.05	225	*e*P	Pn	22 27 15.5	+1.3
VA03				*e*S	Sn	22 27 38.2	-1.9
VA03				IAML		22 27 50.3	
	comp=Z,620nm,0.5s						
APLL	**PUNTA DE LOS L**	2.19	66	*e*P	Pn	22 27 17.0	+1.2
APLL				*e*S	Sn	22 27 42.2	-0.9
MT08	**Bocatoma Ro**	2.34	205		Pn	22 27 19.3	+1.3
MT08	**Bocatoma Ro**	2.34	205	*e*P	Pn	22 27 20.1	+2.1
MT08				*e*S	Sn	22 27 47.3	+0.3
MT08				IAML		22 27 56.1	
	comp=Z,450nm,0.6s						
FCH	**Farellones**	2.35	211	*e*P	Pn	22 27 19.9	+1.7
FCH				*i* S	Sn	22 27 50.4	+3.0
FCH				IAML		22 27 58.6	
	comp=E,374nm,0.3s						
MT04	**Ro Olivares**	2.35	208	*e*P	Pn	22 27 15.7	-2.5
MT04				*e*S	Sn	22 27 48.0	+0.7
MT04				IAML		22 28 01.5	
	comp=Z,253nm,0.9s						
PEL	**Peldehue**	2.40	220		Pn	22 27 19.2	+0.6
PEL	**Peldehue**	2.40	220	*e*P	Pn	22 27 19.4	+0.8
PEL				*i* S	Sn	22 27 49.0	+0.9
PEL				IAML		22 28 00.9	

	comp=N,506nm,0.3s						
PEL	**Peldehue**	**2.40**	**220**	*e*P	**Pn**	**22 27 19.6**	**+0.9**
PEL				*e*S	**Sn**	**22 27 52.2**	**+4.2**
VA06	**Catapilco**	**2.43**	**239**		**Pn**	**22 27 18.6**	**-0.3**
ROC1	**El Roble**	**2.48**	**228**	*e*P	**Pn**	**22 27 19.9**	**+0.1**
ROC1				*e*S	**Sn**	**22 27 51.1**	**+1.0**
CO06	**Fray Jorge**	**2.49**	**284**		**Pn**	**22 27 18.6**	**-1.1**
ACLC	**CERRO LA CRUZ**	**2.49**	**41**	*e*P	**Pn**	**22 27 20.9**	**+1.0**
ACLC				*e*S	**Sn**	**22 27 51.5**	**+1.3**
ACLC				IAML		22 27 52.7	
	comp=Z,495nm,0.4s						
CO05	**La Serena**	**2.50**	**303**		**Pn**	**22 27 19.2**	**-0.5**
CO05	**La Serena**	**2.50**	**303**	*e*P	**Pn**	**22 27 19.2**	**-0.5**
CO05				*i* S	**Sn**	**22 27 48.4**	**-1.8**
MT16	**CCHEN**	**2.54**	**214**		**Pn**	**22 27 21.1**	**+0.7**
MT03	**Universidad Ad**	**2.59**	**213**		**Pn**	**22 27 21.8**	**+0.7**
MT03	**Universidad Ad**	**2.59**	**213**	*e*P	**Pn**	**22 27 22.6**	**+1.5**
MT03				*e*S	**Sn**	**22 27 55.0**	**+2.5**
MT03				IAML		22 27 56.8	
	comp=Z,568nm,0.3s						
MT05	**Renca**	**2.62**	**217**		**Pn**	**22 27 21.8**	**+0.3**
MT05	**Renca**	**2.62**	**217**	*e*P	**Pn**	**22 27 22.5**	**+1.0**
MT05				*e*S	**Sn**	**22 27 48.0**	**-5.1**
MT05				IAML		22 27 53.8	
	comp=Z,375nm,1.1s						
VCA	**Vinchina**	**2.63**	**12**	*e*P	**Pn**	**22 27 22.9**	**+1.2**
VCA				*i* S	**Sn**	**22 27 55.4**	**+1.9**
VCA				IAML		22 27 59.1	
	comp=N,2µm,0.5s						
VCA	**Vinchina**	**2.63**	**12**	*e*P	**Pn**	**22 27 22.9**	**+1.2**
VCA				*e*S	**Sn**	**22 27 55.6**	**+2.2**
VCA				IAML		22 27 60.0	
	comp=Z,2µm,0.3s						
MT02	**Curacav**	**2.75**	**225**		**Pn**	**22 27 22.9**	**-0.1**
MT02	**Curacav**	**2.75**	**225**	*e*P	**Pn**	**22 27 22.8**	**-0.3**
MT02				*e*S	**Sn**	**22 27 56.3**	**+0.3**
MT02				IAML		22 28 30.0	
	comp=Z,200nm,0.6s						
LMEL	**Las Melosas**	**2.77**	**204**		**Pn**	**22 27 24.1**	**+0.6**
LMEL	**Las Melosas**	**2.77**	**204**	*e*P	**Pn**	**22 27 25.4**	**+1.8**
LMEL				*e*S	**Sn**	**22 27 54.9**	**-2.0**
LCO	**Las Campanas**	**2.81**	**324**		**Pn**	**22 27 24.1**	**0.0**
LCO	**Las Campanas**	**2.81**	**324**	*e*P	**Pn**	**22 27 24.3**	**+0.1**
LCO				*e*S	**Sn**	**22 27 58.3**	**+0.4**
LCO				IAML		22 27 59.0	
	comp=Z,2µm,0.3s						
MRA	**San Martin**	**2.87**	**113**	*e*P	**Pn**	**22 27 26.0**	**+1.2**
MRA				*e*S	**Sn**	**22 27 54.7**	**-4.3**
MRA				IAML		22 28 01.9	
	comp=Z,852nm,0.6s						
VA01	**Torpederas**	**2.93**	**234**		**Pn**	**22 27 24.2**	**-1.2**
VA01	**Torpederas**	**2.93**	**234**	*e*P	Pn	22 27 19.6	-5.8
VA01				*e*P		22 27 24.6	
VA01				*e*S	**Sn**	**22 27 54.8**	**-5.4**
VA01				IAML		22 28 09.0	
	comp=Z,184nm,0.6s						
MT09	**Talagante**	**3.05**	**216**		**Pn**	**22 27 26.9**	**-0.2**
BO04	**La Punta**	**3.06**	**209**		**Pn**	**22 27 27.8**	**+0.7**
BO04	**La Punta**	**3.06**	**209**	*e*P	**Pn**	**22 27 28.1**	**+1.0**
BO04				*i* S	**Sn**	**22 28 04.3**	**+1.1**
BO04				IAML		22 28 08.2	
	comp=E,305nm,0.2s						
MT01	**Popeta**	**3.26**	**218**		**Pn**	**22 27 28.9**	**-0.8**
MT01	**Popeta**	**3.26**	**218**	*e*P	**Pn**	**22 27 28.9**	**-0.8**
MT01				*e*S	Sn	22 27 56.6	-11
MT01				IAML		22 28 02.7	
	comp=Z,211nm,1.3s						
RFA	**San Rafael**	**3.46**	**175**	*e*P	**Pn**	**22 27 32.8**	**+0.3**
RFA				*e*S	**Sn**	**22 28 12.3**	**-0.5**
RFA				IAML		22 28 13.0	
	comp=Z,271nm,0.3s						
BO01	**Tunca**	**3.60**	**211**		**Pn**	**22 27 33.5**	**-0.8**
BO01	**Tunca**	**3.60**	**211**	*e*P	**Pn**	**22 27 33.7**	**-0.6**
BO01				*e*S	**Sn**	**22 28 16.0**	**-0.2**
BO01				IAML		22 28 17.4	
	comp=Z,104nm,0.3s						
TCA	**Tanti**	**3.63**	**91**	*e*P	**Pn**	**22 27 35.5**	**+0.8**
TCA				*e*S	**Sn**	**22 28 16.4**	**-0.5**
TCA				IAML		22 28 17.8	
	comp=Z,660nm,0.5s						
AC04	**Llanos de Chal**	**3.66**	**327**		**Pn**	**22 27 34.6**	**-0.6**
AC04	**Llanos de Chal**	**3.66**	**327**	*e*P	**Pn**	**22 27 34.5**	**-0.6**
AC04				IAML		22 28 31.0	
	comp=Z,254nm,0.4s						
BO02	**Sierra Bellavi**	**3.83**	**205**		**Pn**	**22 27 37.8**	**+0.4**
BO02	**Sierra Bellavi**	**3.83**	**205**	*e*P	**Pn**	**22 27 37.9**	**+0.4**
BO02				*e*S	Sn	22 28 06.7	-15
BO02				IAML		22 28 28.0	
	comp=Z,172nm,0.5s						
CYA	**Choya**	**3.89**	**43**	*e*P	**Pn**	**22 27 38.2**	**-0.1**
CYA				*e*S	Sn	22 28 10.6	-13
CYA				IAML		22 28 26.6	
	comp=Z,135nm,0.5s						
GO03	**Copiapo**	**3.91**	**341**		**Pn**	**22 27 38.2**	**-0.3**
GO03	**Copiapo**	**3.91**	**341**	*e*P	**Pn**	**22 27 38.7**	**+0.2**
GO03				*e*S	**Sn**	**22 28 23.2**	**-0.4**
AC06	**Mina Casimiro**	**4.16**	**341**		**Pn**	**22 27 41.4**	**-0.6**
EDS3	**Malargue**	**4.47**	**186**	*e*P	**Pn**	**22 27 46.9**	**+0.9**
EDS3				*e*S	Sn	22 28 47.0	+10
AC02	**Maricunga**	**4.47**	**357**		**Pn**	**22 27 46.7**	**+0.2**
AC02	**Maricunga**	**4.47**	**357**	*e*P	**Pn**	**22 27 47.7**	**+1.1**
AC02				*e*S	**Sn**	**22 28 37.1**	**-0.8**
AC02				IAML		22 28 42.8	
	comp=Z,124nm,0.3s						
ML02	**Panimavida**	**4.93**	**205**	Pn	**Pn**	**22 27 50.7**	**-1.4**
AC01	**Pan de Azucar**	**5.38**	**343**		**Pn**	**22 27 57.3**	**-1.0**
AC01	**Pan de Azucar**	**5.38**	**343**	*e*P	**Pn**	**22 27 57.4**	**-0.9**
AC01				*e*S	**Sn**	**22 28 57.3**	**-1.7**
AC01				IAML		22 29 33.5	
	comp=Z,68nm,0.6s						
BI02	**San Fabin de**	**5.70**	**200**		**Pn**	**22 28 01.4**	**-1.3**
GO02	**Mina Guanaco**	**6.17**	**354**		**Pn**	**22 28 08.6**	**-0.6**
PB14	**IPOC Station P**	**6.81**	**348**		**Pn**	**22 28 15.5**	**-2.4**
PB05	**IPOC Station P**	**8.52**	**351**		**Pn**	**22 28 36.7**	**-4.2**
PB06	**IPOC Station P**	**8.60**	**355**		**Pn**	**22 28 39.0**	**-3.0**
TRQA	**Tornquist**	**8.78**	**142**		**Pn**	**22 28 44.2**	**0.0**
PLCA	**Paso Flores**	**9.50**	**188**	P	**Pn**	**22 28 53.7**	**-0.3**
	comp=Z,1.0nm,0.3s,baz=348,slow=8.0,SNR=4.7						
CPUP	**Villa Florida**	**11.24**	**67**	P	**Pn**	**22 29 15.2**	**-2.4**
	comp=Z,0.8nm,0.7s,baz=270,slow=14,SNR=6.2						
CPUP				S	**Sn**	**22 31 14.2**	**-7.0**
	comp=Z,0.8nm,0.5s,baz=73,slow=14,SNR=1.2						
LPAZ	**La Paz**	**14.98**	**3**	P	**Pn**	**22 30 05.2**	**-1.5**
	comp=Z,9.6nm,0.7s,baz=178,slow=7.3,SNR=40						
ITAB	**Concordia**	**15.13**	**79**	Pn	**Pn**	**22 30 09.4**	**+1.4**
ITAB				IAmb	IAmb	22 30 50.5	
	comp=Z,41nm,1.3s						
SIV	**San Ignacio**	**16.82**	**27**	P	**Pn**	**22 30 28.7**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=208,slow=10,SNR=4.3						
VAO	**Valinhos**	**21.12**	**72**	P	**P**	**22 31 14.8**	**-1.2**
HOPE	**Hope Point**	**32.55**	**144**	P	**P**	**22 32 59.4**	**-0.8**
ESPZ	**Base Esperanza**	**32.97**	**170**	P	**P**	**22 33 04.6**	**+0.9**
SMAI	**San Martin Ant**	**36.86**	**179**	P	**P**	**22 33 38.4**	**+1.3**
SMAI				IAmb	IAmb	22 34 19.7	
	comp=Z,9.1nm,1.5s						
RUSC	**La Rusia**	**37.22**	**353**	P	**P**	**22 33 41.5**	**+0.2**
RUSC				IAmb	IAmb	22 34 12.9	
	comp=Z,4.9nm,0.7s						
MDP	**Montagnes des**	**39.38**	**26**	LR	LR	22 52 51.4	
	comp=Z,39nm,20.5s,baz=108,slow=40						
CELP	**Cerrillos**	**49.16**	**3**	P	**P**	**22 35 16.6**	**0.0**
VNA3	**Neumayer Olymp**	**50.85**	**159**	⇓P	**P**	**22 35 29.1**	**+0.2**
	comp=Z,5.4nm,0.9s						
SNAA	**Sanae**	**53.07**	**159**	⇓P	**P**	**22 35 46.5**	**+1.1**
	comp=Z,40nm,0.5s						
SNAA				⇓sP	**sP**	**22 36 25.0**	**-0.4**
SNAA	**Sanae**	**53.07**	**159**	P	**P**	**22 35 46.7**	**+1.4**
SNAA				IAmb	IAmb	22 35 47.6	
	comp=Z,8.6nm,1.2s						
SNAA	**Sanae**	**53.07**	**159**	P	**P**	**22 35 46.5**	**+1.1**
	comp=Z,2.8nm,0.8s,baz=285,slow=9.7,SNR=19						
	comp=Z,2.8nm,0.8s						
TEIG	**Tepich**	**54.54**	**337**	P	**P**	**22 35 57.2**	**+0.6**
TROLL	**Troll, Antarti**	**54.79**	**159**	⇓P	**P**	**22 35 59.0**	**+1.1**
	comp=Z,97nm,0.5s						
TROLL				⇓sP	**sP**	**22 36 36.9**	**-1.4**
QSPA	**South Pole Qui**	**58.91**	**180**	P	**P**	**22 36 28.8**	**+1.7**
	comp=Z,4.5nm,0.6s,baz=175,slow=1.2,SNR=44						
	comp=Z,4.5nm,0.6s						
TXAR	**Lajitas Array**	**68.82**	**328**	P	**P**	**22 37 32.3**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=123,slow=4.6,SNR=4.3						
TXAR				pP	**pP**	**22 37 59.9**	**-1.8**
	comp=Z,0.4nm,0.8s,baz=161,slow=8.0,SNR=2.6						
	comp=Z,0.4nm,0.6s						
WVT	**Waverly**	**69.42**	**344**		**P**	**22 37 36.2**	**+0.4**
WVT				IAmb	IAmb	22 37 36.7	
	comp=Z,7.1nm,0.7s						
LCAR	**Lake Charles**	**70.23**	**341**		**P**	**22 37 41.3**	**+0.6**
LCAR				IAmb	IAmb	22 37 42.0	
	comp=Z,5.8nm,0.7s						
DBIC	**Dimbokro**	**71.74**	**70**	P	**P**	**22 37 51.4**	**+1.0**
	comp=Z,4.3nm,0.6s,baz=262,slow=8.0,SNR=7.1						
DBIC				pP	**pP**	**22 38 17.4**	**-1.7**
	comp=Z,5.3nm,1.0s,baz=187,slow=15,SNR=2.1						
	comp=Z,4.3nm,0.6s						
MAW	**Mawson**	**74.96**	**163**	P	**P**	**22 38 09.6**	**+1.2**
	comp=Z,2.0nm,0.6s,baz=219,slow=6.5,SNR=2.2						
	comp=Z,2.0nm,0.6s						
L40A	**Anamosa**	**75.88**	**343**		**P**	**22 38 14.2**	**+0.4**
BOSA	**Boshof**	**78.89**	**117**	P	**P**	**22 38 32.2**	**+0.9**
	comp=Z,2.4nm,0.8s,baz=296,slow=9.0,SNR=3.9						
	comp=Z,2.4nm,0.8s						
ECSD	**EROS Data Cent**	**78.90**	**340**		**P**	**22 38 31.5**	**+0.8**
ECSD				IAmb	IAmb	22 38 32.0	
	comp=Z,3.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**80.73**	**69**	P	**P**	**22 38 41.8**	**+0.5**
	comp=Z,1.6nm,0.3s,baz=273,slow=5.8,SNR=4.1						
TORD				pP	**pP**	**22 39 08.9**	**-1.7**
	comp=Z,1.0nm,0.5s,baz=260,slow=5.1,SNR=1.4						
	comp=Z,1.6nm,0.3s						
PDAR	**Pinedale Array**	**82.66**	**331**	P	**P**	**22 38 51.6**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=151,slow=3.4,SNR=5.3						
	comp=Z,0.6nm,0.7s						
NVAR	**Mina Array Bea**	**83.30**	**323**	P	**P**	**22 38 55.6**	**+1.1**
	comp=Z,0.7nm,0.8s,baz=167,slow=6.5,SNR=3.6						
	comp=Z,0.7nm,0.8s						
HLID	**Hailey**	**85.40**	**329**		**P**	**22 39 03.7**	**-1.2**
SCHQ	**Schefferville**	**85.81**	**1**	P	**P**	**22 39 05.9**	**-0.5**
	comp=Z,1.5nm,0.8s,baz=198,slow=3.0,SNR=2.6						
	comp=Z,1.5nm,0.8s						
J08A	**Circle Bar Ran**	**87.11**	**326**		**P**	**22 39 13.7**	**+0.5**
J08A				IAmb	IAmb	22 39 16.2	
	comp=Z,5.7nm,1.0s						
PLID	**Pearl Lake**	**87.30**	**329**		**P**	**22 39 13.9**	**-0.3**
K05A	**Summer Lake**	**87.82**	**324**		**P**	**22 39 17.5**	**+0.8**
K05A				IAmb	IAmb	22 39 19.3	
	comp=Z,4.5nm,0.8s						
PINE	**Pine Mountain**	**88.63**	**325**		**P**	**22 39 21.4**	**+1.0**
PINE				IAmb	IAmb	22 39 23.6	
	comp=Z,5.6nm,0.9s						
ASAR	**Alice Springs**	**121.15**	**204**	PKP	**PKPdf**	**22 45 19.7**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=137,slow=1.7,SNR=6.5						
WRA	**Warramunga Arr**	**124.39**	**207**	PKP	**PKPdf**	**22 45 26.3**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=157,slow=1.9,SNR=23						
BVAR	**Borovoye Array**	**143.48**	**42**	PKP	PKPbc	22 45 59.7	+1.1
	comp=Z,0.4nm,0.3s,baz=325,slow=2.8,SNR=1.8						
YAK	**Yakutsk**	**147.01**	**344**	PKPbc	**PKPbc**	**22 46 09.1**	**+0.2**
	comp=Z,22nm,0.6s,baz=152,slow=0.5,SNR=5.3						
KURBB	**Kurchatov Arra**	**149.07**	**42**	PKPbc	**PKPbc**	**22 46 15.6**	**+1.0**
	comp=Z,1.0nm,0.8s,baz=302,slow=3.1,SNR=6.4						
KURBB				pPKPbc	**pPKPbc**	**22 46 46.0**	**+0.3**
	comp=Z,1.7nm,0.8s,baz=297,slow=3.2,SNR=6.4						
KSH	**Kashi**	**150.32**	**64**	PKPbc	**PKPbc**	**22 46 19.0**	**+0.8**
KSH				sPKP		22 46 50.3	
ZAA0	**Zalesovo Array**	**150.52**	**32**	PKPbc	**PKPbc**	**22 46 19.0**	**+1.0**
ZALV	**Zalesovo Beam**	**150.52**	**32**		**PKPbc**	**22 46 18.8**	**+0.7**
ZALV	**Zalesovo Beam**	**150.52**	**32**	PKP	**PKPdf**	**22 46 11.6**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=302,slow=2.8,SNR=1.9						
ZALV				PKPbc	**PKPbc**	**22 46 18.5**	**+0.4**
	comp=Z,4.6nm,0.4s,baz=315,slow=3.2,SNR=23						
ZALV				pPKPbc	**pPKPbc**	**22 46 49.9**	**+0.7**
	comp=Z,5.2nm,0.7s,baz=316,slow=4.1,SNR=7.3						
MKAR	**Makanchi Array**	**152.97**	**47**	PKPbc	**PKPbc**	**22 46 24.4**	**+0.5**
	comp=Z,1.6nm,0.7s,baz=281,slow=1.5,SNR=9.2						
MKAR				PKPab	**PKPab**	**22 46 35.8**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=291,slow=4.3,SNR=10						
MKAR				pPKPbc	**pPKPbc**	**22 46 55.6**	**+0.4**
	comp=Z,1.7nm,0.8s,baz=286,slow=2.0,SNR=6.5						
MJAR	**Matsushiro Arr**	**157.00**	**290**	PKPab	**PKPab**	**22 46 53.6**	**+0.4**
	comp=Z,0.8nm,0.4s,baz=100,slow=3.2,SNR=2.4						
SONM	**Songino Array**	**163.10**	**11**	PKPab	**PKPab**	**22 47 20.0**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=353,slow=5.1,SNR=2.6						
PZH	**PanZhiHua**	**170.45**	**118**	PKP	**PKPdf**	**22 46 34.3**	**-0.9**

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*IDC **30** 22:36:41.3±1.7, 11°.79N×125°.87E, h0^{km}, mb3.9/7, mbtmp3.9/7, MS2.8/1, Error ellipse: s-maj=167.0km s-min=21.7km az=67.0*

*NEIC **30** 22:36:45.8±1.2, 11°.63N±0°.04×125°.9E±0°.1, h35^{km}±2^{km}, mb4.6/17, Error ellipse: s-maj=22.5km s-min=7.2km az=274.0*

ISC 30 22:36:45.4±0.6**, 11°.63N**±0°.09×**125°.9E**±0°.1**, h33^{km}, n31, σ1^{s}11**/26**, mb4.4**/15**, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**4.54**	**184**	Pn	**Pn**	**22 37 52.0**	**+0.1**
DAV	**Davao City (W)**	**4.54**	**184**	LR	LR	22 40 09.4	
	comp=Z,110nm,18.9s,baz=340,slow=44						
GSI	**Gunungsitoli**	**29.90**	**252**	P	**P**	**22 42 49.7**	**-0.7**
GSI				IAmb	IAmb	22 42 52.9	
	comp=Z,15nm,1.1s						
WRA	**Warramunga Arr**	**32.46**	**165**	P	**P**	**22 43 12.3**	**-0.6**
WRA	**Warramunga Arr**	**32.46**	**165**	P	**P**	**22 43 15.2**	**+2.3**
	comp=Z,0.4nm,0.9s,baz=343,slow=8.6,SNR=1.2						
	comp=Z,0.4nm,0.9s						
WB2	**Warramunga Arr**	**32.47**	**165**	P	P	22 43 07.4	-5.5
WB2				IAmb	IAmb	22 43 14.6	
	comp=Z,5.8nm,1.2s						
WR8	**Warramunga Arr**	**32.52**	**165**	P	**P**	**22 43 10.7**	**-2.7**
ASAR	**Alice Springs**	**35.95**	**167**	P	**P**	**22 43 44.9**	**+1.8**
	comp=Z,0.2nm,0.5s,baz=346,slow=9.3,SNR=2.0						
	comp=Z,0.2nm,0.5s						
SONM	**Songino Array**	**39.62**	**339**	P	**P**	**22 44 14.2**	**+0.2**
HNR	**Honiara**	**39.81**	**120**	P	**P**	**22 44 13.9**	**-1.9**
H11N1	**WAKE ISLAND Hy**	**40.21**	**73**	T	T	23 27 45.3	
	baz=265,slow=74						
H11N2	**WAKE ISLAND Hy**	**40.22**	**73**	T	T	23 27 45.7	
	baz=265						
H11N3	**WAKE ISLAND Hy**	**40.23**	**73**	T	T	23 27 46.7	
	baz=265,slow=74						
BBOO	**Buckleboo**	**45.25**	**168**	P	**P**	**22 45 00.5**	**+0.7**
BBOO				IAmb	IAmb	22 45 08.6	
	comp=Z,11nm,1.1s						
MK31	**Makanchi Array**	**50.72**	**322**	P	**P**	**22 45 41.5**	**-0.5**
MKAR	**Makanchi Array**	**50.72**	**322**	P	**P**	**22 45 42.5**	**+0.5**
	comp=Z,1.4nm,0.7s,baz=120,slow=7.7,SNR=11						
	comp=Z,1.4nm,0.7s						
AAK	**Ala-Archa**	**54.10**	**315**	P	**P**	**22 46 07.1**	**-0.2**
AAK				IAmb	IAmb	22 46 16.5	
	comp=Z,3.9nm,0.7s						
KURK	**Kurchatov**	**54.74**	**325**		**P**	**22 46 11.8**	**+0.2**
KURK				IAmb	IAmb	22 46 13.1	
	comp=Z,4.3nm,0.9s						
KURBB	**Kurchatov Arra**	**54.74**	**325**	P	**P**	**22 46 11.8**	**+0.2**
	comp=Z,2.9nm,0.8s,baz=127,slow=7.0,SNR=17						
	comp=Z,2.9nm,0.8s						
SMY	**Shemya**	**56.22**	**33**	P	**P**	**22 46 22.3**	**+0.1**
BVAR	**Borovoye Array**	**60.34**	**325**	P	**P**	**22 46 50.4**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=116,slow=11,SNR=5.2						
	comp=Z,1.0nm,0.7s						
ABKAR	**Akbulak array**	**65.60**	**319**	P	**P**	**22 47 25.4**	**-0.7**
NIKH	**Nikolski High**	**65.95**	**37**	P	**P**	**22 47 28.0**	**-0.2**
M11K	**Mekoryuk**	**69.09**	**30**	P	**P**	**22 47 47.4**	**-0.5**
BFZ	**Birch Farm**	**69.81**	**141**	P	**P**	**22 47 53.2**	**+0.6**
BFZ				IAmb	IAmb	22 47 59.5	
	comp=Z,20nm,1.1s						
N15K	**Kwethluk River**	**72.04**	**30**	P	**P**	**22 48 05.3**	**-0.6**
N15K				IAmb	IAmb	22 48 07.6	
	comp=Z,4.5nm,1.1s						
J16K	**Anvik River**	**72.28**	**27**	P	**P**	**22 48 07.0**	**-0.3**
J16K				IAmb	IAmb	22 48 09.7	
	comp=Z,21nm,1.2s						
N17K	**Nushagak Hills**	**73.52**	**30**	P	**P**	**22 48 14.0**	**-0.7**
BMAR	**Burnt Mountain**	**79.17**	**23**	P	**P**	**22 48 48.9**	**+2.2**
ARCES	**ARCESS Array B**	**82.79**	**340**	P	**P**	**22 49 06.4**	**+0.5**
	comp=Z,1.5nm,0.8s,baz=76,slow=3.8,SNR=3.8						
	comp=Z,1.5nm,0.8s						
FINES	**FINESS Array B**	**84.52**	**332**	P	**P**	**22 49 14.8**	**0.0**
	comp=Z,2.7nm,1.1s,baz=90,slow=4.2,SNR=8.2						
	comp=Z,2.7nm,1.1s						

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*IDC **30** 22:49:15.1±1.9, 2°.43S×138°.26E, h0^{km}, mb3.6/2, mbtmp3.7/5, ML3.6/2, MS2.8/2, Error ellipse: s-maj=40.8km s-min=23.5km az=141.0*

*DJA **30** 22:49:20.2±0.4, 3°S±5°×13°8E±°, h10^{km}, M3.7/6, MLv3.7/6*

ISC 30 22:49:20.4±0.9**, 2°.61S**±0°.09×**138°.49E**±0°.05**, h32^{km}, n12, σ1^{s}59**/11**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.65**	**20**	P	**Pb**	**22 49 32.2**	**-1.3**
GENI	**Genyem**	**1.67**	**89**	P	**Pb**	**22 49 49.9**	**-0.8**
JAY	**Jayapura**	**2.21**	**88**	Pn	**Pn**	**22 49 57.1**	**+2.0**
	3.7nm,0.3s,baz=270,slow=19,SNR=12						
JAY				Sn	**Sb**	**22 50 26.5**	**-0.4**
	3.7nm,0.3s,baz=225,slow=20,SNR=4.7						
	22nm,0.5s						
JAY	**Jayapura**	**2.21**	**88**	P	**Pn**	**22 49 57.0**	**+2.0**
SRPI	**Serui, Papua**	**2.37**	**288**	P	**Pn**	**22 49 58.6**	**+1.5**
BAKI	**Biak**	**2.77**	**301**	P	**Pn**	**22 50 04.8**	**+2.2**
DAV	**Davao City (W)**	**16.08**	**307**	LR	LR	22 58 54.1	
	comp=Z,20nm,20.3s,baz=104,slow=37						
WRA	**Warramunga Arr**	**17.70**	**193**	P	**Pn**	**22 53 24.5**	**-0.2**
	0.3nm,0.3s,baz=16,slow=12,SNR=11						
	2.4nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.89**	**218**	P	**P**	**22 53 47.9**	**-1.5**
	0.8nm,0.3s,baz=22,slow=11,SNR=3.5						
ASAR	**Alice Springs**	**21.40**	**192**	P	**P**	**22 54 05.8**	**+0.1**
	3.1nm,0.8s,baz=21,slow=11,SNR=16						
	3.1nm,0.8s						
MKAR	**Makanchi Array**	**69.58**	**322**	LR	LR	23 31 52.4	
	comp=Z,12nm,18.3s,baz=182,slow=37						
ILAR	**Eielson Array**	**85.83**	**24**	P	**P**	**23 01 56.2**	**-0.4**
	0.2nm,0.7s,baz=270,slow=5.7,SNR=3.0						
	0.2nm,0.7s						

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*SDD **30** 23:01:20.5±1.6, 18°.57N×72°.04W, h23^{km}±10^{km}, MD2.9, ML1.7, MW2.9*

*OSPL **30** 23:01:21.7±1.3, 18°.55N×71°.93W, h20^{km}±9^{km}, ML1.5*

ISC 30 23:01:21.7±1.2**, 18°.57N**±0°.04×**71°.89W**±0°.05**, h18^{km}**±3^{km}**, n14, σ1^{s}96**/22**, 9C-4D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIDR	**Jimani**	**0.09**	**154**	IAML		23 01 28.9	
	comp=N,108nm,0.2s						
JIDR				⇑*e*Sg	**Sg**	**23 01 28.9**	**+1.2**
JIDR	**Jimani**	**0.09**	**154**	⇑*e*Pg	**Pg**	**23 01 25.4**	**+0.1**
JIDR				IAML		23 01 28.9	
	comp=N,107nm,0.2s						
JIDR				⇑*e*Sg	**Sg**	**23 01 28.9**	**+1.2**
PAPH	**Port-au-Prince**	**0.39**	**263**	*i* P	**Pg**	**23 01 28.9**	**-0.9**
LONE3	**El Aguacate, B**	**0.41**	**85**	*i* P	**Pn**	**23 01 35.6**	**+2.8**
LONE3				*e*S	**Sn**	**23 01 43.0**	**+2.9**
LONE3				IAML		23 01 44.1	
	comp=Z,37nm,0.1s						
LODU1	**El Espartillar**	**0.45**	**119**	*i* P	**Pg**	**23 01 29.9**	**-1.0**
LODU1				*e*S	**Sg**	**23 01 37.2**	**+0.1**
LODU1				IAML		23 01 43.0	
	comp=Z,72nm,0.3s						
SDDR	**Presa de Saban**	**0.70**	**54**	⇑*e*Sg	**Sg**	**23 01 45.8**	**+0.8**
SDDR				IAML		23 02 04.1	
	comp=N,21nm,1.7s						
SDDR	**Presa de Saban**	**0.70**	**54**	⇑*e*Pg	**Pg**	**23 01 35.9**	**+0.3**
SDDR				⇓*e*Sg	**Sg**	**23 01 45.1**	**+0.1**
SDDR				IAML		23 02 03.4	
	comp=N,14nm,1.4s						
SDDR	**Presa de Saban**	**0.70**	**54**	*e*S	**Sg**	**23 01 45.0**	**+0.1**
SDDR				IAML		23 01 48.3	
	comp=Z,12nm,0.2s						
PODR	**Polo**	**0.70**	**125**	⇑*e*Sg	**Sg**	**23 01 45.4**	**+0.4**
PODR				IAML		23 02 12.5	
	comp=N,50nm,2.1s						
PODR	**Polo**	**0.70**	**125**	⇑*e*Pg	**Pg**	**23 01 33.9**	**-1.7**
PODR				⇓*e*Sg	**Sb**	**23 01 46.4**	**+1.5**
PODR				IAML		23 02 27.3	
	comp=N,42nm,2.5s						
PODR	**Polo**	**0.70**	**125**	*i* P	**Pg**	**23 01 33.5**	**-2.2**
PODR				*e*S	**Sg**	**23 01 42.8**	**-2.3**
REDR	**Restauracion**	**0.76**	**38**	⇑*e*Sg	**Sg**	**23 01 41.2**	**-5.4**
REDR				IAML		23 01 47.2	
	comp=N,26nm,0.1s						
LOVI	**El Cajuil, Ovi**	**0.92**	**147**	⇓*i*P	**Pb**	**23 01 37.7**	**-1.3**
LOVI				*e*S	**Sb**	**23 01 50.1**	**-0.7**
ABDR	**Alto Bandera**	**1.22**	**78**	⇓*e*Pg	**Pn**	**23 01 43.5**	**-0.7**
ABDR				⇑*e*Sg	**Sb**	**23 02 00.4**	**+0.4**

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*GCG **30** 23:01:38.0±1.7, 14°.78N×92°.23W, h100^{km}±7^{km}, MD3.8, ML3.7*

*MEX **30** 23:01:39.4±1.0, 14°.72N×92°.26W, h101^{km}±6^{km}, MD4.0*

ISC 30 23:01:35.4±1.4**, 14°.62N**±0°.06×**92°.27W**±0°.04**, h110^{km}**±7^{km}**, n23, σ2^{s}34**/44**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**0.29**	**360**	*e*P	**Pn**	**23 01 52.4**	**+1.2**
THIG				*e*S	**Sn**	**23 02 03.1**	**+0.2**
THIG		**0.29**	**360**	*i* P	**Pn**	**23 01 52.5**	**+1.4**
THIG				*i* S	**Sn**	**23 02 03.6**	**+0.6**
THIG				IAML		23 02 04.0	
	comp=E,4µm,0.3s						
SMCA	**Catarina**	**0.30**	**38**	*i* P	**Pn**	**23 01 52.0**	**+0.7**
SMCA				*i* S	**Sn**	**23 02 02.3**	**-0.8**
PATR	**El Naranjo**	**0.50**	**3**	*e*P	**Pn**	**23 01 52.9**	**+0.4**
PATR				*e*S	**Sn**	**23 02 03.9**	**-1.5**
PAVE	**Pavencul**	**0.58**	**8**	*e*P	**Pn**	**23 01 53.7**	**+0.6**
PAVE				*e*S	**Sn**	**23 02 05.1**	**-1.3**
STG8	**El Palmar, Qui**	**0.90**	**100**	*i* P	**Pn**	**23 01 55.5**	**-0.3**
STG0	**El Palmar, Qui**	**0.91**	**102**	*i* P	**Pn**	**23 01 54.9**	**-1.0**
STG0				*i* S	**Sn**	**23 02 09.6**	**-1.8**
STG0				IAML		23 02 12.0	
	comp=E,3µm,0.2s						
HUEH	**Huehuetenango**	**1.01**	**46**	*i* P	**Pn**	**23 01 57.8**	**+0.8**
HUEH				*i* S	**Sn**	**23 02 13.0**	**-0.3**
HUEH	**Huehuetenango**	**1.01**	**46**	*i* P	**Pn**	**23 01 57.9**	**+0.8**
HUEH				*i* S	**Sn**	**23 02 13.2**	**-0.1**
HUEH				IAML		23 02 18.2	
	comp=E,2µm,0.5s						
PCIG		**1.42**	**320**	*e*P	**Pn**	**23 02 02.9**	**+1.7**
PCIG				*e*S	**Sn**	**23 02 21.5**	**+0.6**
CCIG	**Comitan**	**1.66**	**4**	*e*P	**Pn**	**23 02 06.0**	**+1.7**
CCIG				*e*S	**Sn**	**23 02 24.9**	**-1.4**
CCIG	**Comitan**	**1.66**	**4**	*i* P	**Pn**	**23 02 06.0**	**+1.7**
CCIG				*i* S	**Sn**	**23 02 27.1**	**+0.8**
CCIG				IAML		23 02 28.1	
	comp=E,170nm,0.6s						
FG16	**Alotenango, Sa**	**1.73**	**101**	*i* P	**Pn**	**23 02 03.5**	**-1.8**
FG16				*i* S	**Sn**	**23 02 23.3**	**-4.7**
FG16				IAML		23 02 28.6	
	comp=E,3µm,0.2s						
TGIG		**2.30**	**339**	*e*P	**Pn**	**23 02 12.1**	**-0.2**
TGIG				*e*S	**Sn**	**23 02 37.8**	**-2.8**
TGIG		**2.30**	**339**	*i* P	**Pn**	**23 02 12.9**	**+0.6**
TGIG				*i* S	**Sn**	**23 02 38.7**	**-1.9**
NUBE	**Las Nubes**	**2.51**	**106**	*i* P	**Pn**	**23 02 18.6**	**+3.5**
NUBE				*i* S	**Sn**	**23 02 49.9**	**+4.3**
PETF	**Flores**	**3.25**	**45**	*i* P	**Pn**	**23 02 26.0**	**+1.3**
PETF				*e*S	**Sn**	**23 02 59.8**	**-3.0**
PETF	**Flores**	**3.25**	**45**	*i* P	**Pn**	**23 02 25.9**	**+1.3**
PETF				*i* S	**Sn**	**23 03 00.7**	**-2.1**
PETF				IAML		23 03 05.1	
	comp=N,98nm,0.6s						
CMIG	**Matias Romero**	**3.52**	**315**	*e*P	**Pn**	**23 02 30.9**	**+2.6**
CMIG				*e*S	**Sn**	**23 03 08.6**	**-0.7**
HUIG	**Huatulco**	**3.88**	**288**	*e*P	**Pn**	**23 02 35.2**	**+2.0**
HUIG				*e*S	**Sn**	**23 03 14.3**	**-3.7**
NEUV	**Arroyo Zacate**	**4.58**	**313**	*e*P	**Pn**	**23 02 44.5**	**+1.9**
NEUV				*e*S	**Sn**	**23 03 32.2**	**-2.7**
PEIG	**Puerto Escondi**	**4.91**	**287**	*e*P	**Pn**	**23 02 49.6**	**+2.6**
PEIG				*e*S	**Sn**	**23 03 35.3**	**-7.4**
PNIG	**Pinotepa**	**5.92**	**288**	*e*P	**Pn**	**23 03 04.1**	**+3.4**

IDC 30 23:08:09.3±1.1**, 17°.44S**×**176°.65E, h0^{km}, mb3.9**/3**, mbtmp3.9**/3**, MS3.3**/3**, Error ellipse: s-maj=39.7km s-min=18.1km az=2.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**1.37**	**103**	Pn	Pg	23 08 35.0	-0.5
	62nm,0.3s,baz=282,slow=13,SNR=167						
MSVF				Sn	Sn	23 08 56.7	+2.1
	131nm,0.3s,baz=287,slow=19,SNR=11						
HNR	**Honiara**	**18.08**	**294**	LR	LR	23 17 58.7	
	comp=Z,74nm,20.7s,baz=176,slow=33						
PPT	**Papeete**	**32.19**	**95**	LR	LR	23 25 55.8	
	comp=Z,50nm,18.5s,baz=228,slow=33						
STKA	**Stephens Creek**	**34.78**	**239**	LR	LR	23 27 53.5	
	comp=Z,42nm,18.3s,baz=178,slow=34						
WRA	**Warramunga Arr**	**40.08**	**260**	P	P	23 15 45.7	-1.2

	1.1nm,0.8s,baz=88,slow=8.9,SNR=6.4						
	1.1nm,0.8s						
ASAR	Alice Springs	40.39	254	P	P	23 15 50.2	+0.8
	1.2nm,0.8s,baz=87,slow=8.7,SNR=8.5						
	1.2nm,0.8s						
ILAR	Eielson Array	86.57	15	P	P	23 20 54.6	+0.7
	0.8nm,0.7s,baz=231,slow=5.7,SNR=9.6						
	0.8nm,0.7s						
GERES	GERESS Array B	145.74	340	PKPbc	PKPdf	23 27 48.8	-1.1
	1.0nm,0.8s,baz=35,slow=3.6,SNR=3.8						

IDC 30 23:10:53.6±1.7**, 2.°97S**×**138.°57E, h0^{km}, mb3.4**/2**, mbtmp3.3**/4**, ML3.2**/2**, Error ellipse: s-maj=35.5km s-min=25.9km az=144.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.18	78	Pn	Pn	23 11 30.9	-0.3
	3.9nm,0.3s,baz=263,slow=8.1,SNR=8.8						
JAY				Sn	Sb	23 12 01.1	-0.6
	1.2nm,0.3s,baz=162,slow=20,SNR=1.8						
	7.5nm,0.4s						
WRA	Warramunga Arr	17.37	193	P	Pn	23 14 57.1	-0.5
	0.1nm,0.3s,baz=16,slow=13,SNR=4.8						
	0.2nm,0.3s						
ASAR	Alice Springs	21.07	192	P	P	23 15 39.7	+0.1
	0.6nm,0.7s,baz=18,slow=11,SNR=5.1						
	0.6nm,0.7s						
ZALV	Zalesovo Beam	72.09	330	P	P	23 22 19.8	+0.1
	0.4nm,0.5s,baz=126,slow=7.3,SNR=1.9						
	0.4nm,0.5s						

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*NEIC **30** 23:11:59, 69.°64N×144.°21W, h11^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.61; M$_{\theta\theta}$-1.20; M$_{\phi\phi}$1.80; M$_{r\theta}$1.04; M$_{\theta\phi}$-1.32; M$_{\phi r}$0.16; Fault plane solution: M$_0$2.32000×10^{14} NP1:ϕ_s299.00000°, δ72.00000°, λ-154.00000°. NP2:ϕ_s200.00000°, δ65.00000°, λ-20.00000°. Principal axes: T 2.3176, Plg5.0000°, Azm68.0000°; N 0.0016, Plg58.0000°, Azm331.0000°; P -2.3192, Plg31.0000°, Azm161.0000°;*

*NEIC **30** 23:12:00.1±1.5, 69.°60N±0.°05×144.°24W±0.°06, h8^{km}±6^{km} Error ellipse: s-maj=8.0km s-min=2.5km az=192.0*

AEIC 30 23:11:58.8±2.1**, 69.°51N**±0.°04×**144.°30W**±0.°08**, h11**^{km}±5^{km}**, ML3.5, mb3.6**/5(NEIC)**, ML3.6**/132(NEIC)**, Mwr3.5**/23(SLM)**, Error ellipse: s-maj=6.2km s-min=4.0km az=190.0, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
C27K	Jago River	0.24	60		Pg	23 12 03.8	0.0
C27K				Sg	Sg	23 12 06.9	-0.3
C26K	Camden Bay	0.46	333		Pb	23 12 08.6	-0.3
C26K					Sg	23 12 14.6	+0.6
D25K	Kavik River	0.76	257	Pg	Pg	23 12 12.7	-0.7
D25K				Sg	Sb	23 12 23.8	-0.4
D27M	Malcolm River	1.21	101		Pn	23 12 21.4	-0.3
D27M					Sn	23 12 37.9	-0.1
D27M				IAML		23 12 43.1	
	comp=N,939nm,0.5s						
E25K	Arctic Village	1.47	199		Pg	23 12 27.5	+0.5
E25K				Sn	Sg	23 12 47.9	+1.9
E25K				IAML		23 12 50.4	
	comp=E,814nm,0.7s						
E25K				IAML		23 12 50.6	
	comp=N,974nm,0.6s						
C24K	Franklin Bluff	1.56	280		Pb	23 12 27.7	+0.2
C24K					Pg	23 12 28.2	-0.4
C24K					Sg	23 12 49.5	+0.7
C24K	Franklin Bluff	1.56	280	IAML		23 12 53.3	
	comp=E,825nm,0.9s						
C24K				IAML		23 12 53.8	
	comp=N,926nm,0.8s						
D24K	Happy Valley	1.65	260		Pb	23 12 29.5	+0.5
D24K				Sn	Sg	23 12 53.0	+1.4
D24K				IAML		23 12 54.8	
	comp=N,887nm,0.5s						
E27K	Coleen River	1.65	142		Pg	23 12 30.0	-0.4
E27K				Sn	Sg	23 12 52.7	+0.9
E27K				IAML		23 12 55.5	
	comp=N,551nm,0.5s						
F26K	Sheenjek River	1.82	178		Pg	23 12 33.1	-0.6
F26K				Sn	Sg	23 12 56.7	-0.6
F26K				IAML		23 13 00.0	
	comp=N,521nm,0.3s						
E28M	Babbage River	1.94	116		Pb	23 12 34.2	+0.1
E28M				Sg	Sg	23 13 02.0	+0.9
E28M				IAML		23 13 05.9	
	comp=N,460nm,0.7s						
D28M	Stokes Point	1.98	93		Pb	23 12 33.7	-0.9
D28M					Pg	23 12 34.9	-1.7
F25K	Christian Rive	1.99	195		Pb	23 12 35.5	+0.6
F25K				IAML		23 13 06.1	
	comp=E,642nm,1.1s						
TOLK	Toolik Lake Re	2.08	248		Pb	23 12 35.9	-0.6
TOLK				IAML		23 13 13.3	
	comp=N,353nm,0.5s						
TOLK				IAML		23 13 15.6	
	comp=E,439nm,0.6s						
TOLK	Toolik Lake Re	2.08	248		Sg	23 13 05.1	-0.6
BMAR	Burnt Mountain	2.09	183		Pb	23 12 36.4	-0.3
E24K	Your Creek	2.10	229		Pb	23 12 36.3	-0.4
C23K	Itkillik River	2.23	281		Pn	23 12 36.9	+1.4
C23K				IAML		23 13 20.7	
	comp=E,455nm,0.8s						
C23K				IAML		23 13 21.6	
	comp=N,508nm,0.5s						
D23K	Nanushuk River	2.34	259		Pb	23 12 39.3	-1.6
F24K	Squaw Lake	2.40	215		Pb	23 12 40.4	-1.5
F24K	Squaw Lake	2.40	215		Sb	23 13 11.2	-0.1
E23K	Chandalar	2.42	235		Pb	23 12 40.6	-1.7
E23K				IAML		23 13 23.4	
	comp=E,242nm,0.5s						
F28M	Old Crow	2.50	137		Pb	23 12 41.6	-2.1
F28M				IAML		23 13 23.1	
	comp=N,278nm,0.5s						
F28M				IAML		23 13 26.2	
	comp=E,296nm,0.5s						
E29M	Blow River	2.57	113		Pb	23 12 42.8	-2.0
E29M				IAML		23 13 26.4	
	comp=E,302nm,0.6s						
E29M	Blow River	2.57	113		Sb	23 13 16.4	0.0
G26K	Porcupine Rive	2.58	175		Pb	23 12 42.9	-2.1
G27K	Doyon Strip	2.89	159		Pn	23 12 46.9	+2.3
FYU	Fort Yukon	2.98	187		Pn	23 12 48.5	+2.7
FYU					Pn	23 12 48.8	+3.0
E22K	Anaktuvuk Pass	3.06	247		Pn	23 12 48.5	+1.6
D22K	Ayikyak River	3.06	262		Pn	23 12 48.8	+1.8
D22K	Ayikyak River	3.06	262	IAML		23 13 48.3	
	comp=E,176nm,1.0s						
D22K				IAML		23 13 49.6	
	comp=N,165nm,0.7s						
G24K	Hadweenzic Riv	3.06	204		Pn	23 12 49.0	+2.0
G24K	Hadweenzic Riv	3.06	204	IAML		23 13 39.9	
	comp=N,208nm,0.8s						
G24K				IAML		23 13 44.3	
	comp=E,164nm,0.6s						
B22K	Teshekpuk Lake	3.25	289		Pn	23 12 51.9	+2.3
H27K	Steamboat Moun	3.46	161		Pn	23 12 54.7	+2.2
H27K	Steamboat Moun	3.46	161	IAML		23 14 06.3	
	comp=E,100nm,0.7s						
G23K	Bananza Creek	3.53	220		Pn	23 12 56.2	+2.7
G23K				IAML		23 13 57.5	
	comp=E,114nm,1.3s						
G23K				IAML		23 13 59.8	
	comp=N,110nm,1.3s						
B21K	Ikpikpuk River	3.62	277		Pn	23 12 56.4	+1.8
B21K				IAML		23 14 22.4	
	comp=N,141nm,1.3s						
B21K				IAML		23 14 23.2	
	comp=E,124nm,1.0s						
E21K	Killik River	3.65	257		Pn	23 12 56.3	+1.3
E21K	Killik River	3.65	257	IAML		23 14 03.5	
	comp=E,125nm,0.8s						
E21K				IAML		23 14 08.7	
	comp=N,118nm,1.0s						
F30M	Barrier River	3.66	117		Pn	23 12 57.9	+2.7
F30M				IAML		23 14 05.7	
	comp=E,121nm,0.8s						
C21K	Knifeblade Rid	3.73	269		Pn	23 12 58.0	+1.7
H24K	Noodor Dome	3.93	202	IAML		23 14 08.0	
	comp=N,66nm,0.8s						
H24K				IAML		23 14 12.2	
	comp=E,81nm,1.4s						
G30M	tAoh Zraii Nji	3.94	126		Pn	23 13 01.4	+2.4
G30M				IAML		23 14 22.4	
	comp=N,80nm,1.0s						
H29M	Whitestone	3.99	143		Pn	23 13 02.3	+2.5
PRP	Porcupine Dome	4.04	187		Pn	23 13 03.3	+2.7
PRP				IAML		23 13 55.0	
	comp=E,72nm,0.7s						
INK	Inuvik	4.08	102		Pn	23 13 02.7	+1.8
F21K	Alatna River	4.10	240		Pn	23 13 03.2	+1.9
F21K	Alatna River	4.10	240	IAML		23 14 16.6	
	comp=N,63nm,0.9s						
F21K				IAML		23 14 23.7	
	comp=E,75nm,1.0s						
H23K	Yukon River	4.21	211		Pn	23 13 04.9	+2.2
H23K					Pn	23 13 05.2	+2.4
H23K	Yukon River	4.21	211	IAML		23 14 23.0	
	comp=N,66nm,1.1s						
H23K				IAML		23 14 24.0	
	comp=E,76nm,0.8s						
I26K	Coal Creek Min	4.25	173		Pn	23 13 05.7	+2.4
EPYK	Eagle Plains	4.25	134		Pn	23 13 05.8	+2.4
F31M	Tsiigehtchic	4.41	113		Pn	23 13 07.8	+2.3
F31M				IAML		23 14 25.8	
	comp=N,57nm,1.3s						
I28M	Miner Creek	4.41	156	IAML		23 14 03.3	
	comp=N,63nm,0.5s						
I28M				IAML		23 14 05.4	
	comp=E,56nm,0.7s						
D20K	Etivluk River	4.48	266		Pn	23 13 08.2	+1.7
D20K				IAML		23 14 40.5	
	comp=E,69nm,1.3s						
D20K				IAML		23 14 50.3	
	comp=N,65nm,1.3s						
E20K	Nigu River	4.48	259		Pn	23 13 08.9	+2.4
B20K	Meade River	4.50	282		Pn	23 13 08.6	+2.0
G31M	Satah River	4.55	120		Pn	23 13 09.6	+2.3
POKR	Poker Plat Res	4.58	197		Pn	23 13 10.7	+2.9
POKR				IAML		23 14 06.3	
	comp=N,53nm,0.4s						
POKR				IAML		23 14 37.3	
	comp=E,60nm,1.1s						
G21K	Allakaket	4.58	233	IAML		23 14 33.2	
	comp=N,64nm,1.0s						
G21K				IAML		23 14 43.2	
	comp=E,68nm,1.0s						
I29M	Ogilvie Camp,	4.76	148		Pn	23 13 12.2	+1.8
I29M				IAML		23 14 30.4	
	comp=N,49nm,0.6s						
I29M				IAML		23 14 32.8	
	comp=E,54nm,0.7s						
I23K	Minto, Yukon-K	4.80	206		Pn	23 13 13.2	+2.4
I23K				IAML		23 14 39.3	
	comp=N,45nm,1.2s						
I23K				IAML		23 14 40.1	
	comp=E,42nm,1.3s						
COLA	College	4.86	198		Pn	23 13 15.6	+4.0
ILAR	Eielson Array	4.87	193		Pn	23 13 13.7	+2.0
F20K	Avaraart Lake	4.91	245		Pn	23 13 14.3	+2.0
F20K				IAML		23 14 40.4	
	comp=N,35nm,0.9s						
J25K	Salcha River,	4.94	185		Pn	23 13 15.2	+2.4
J25K				IAML		23 14 37.8	
	comp=E,44nm,0.9s						
J26L	Joseph Creek	5.04	176	IAML		23 14 19.4	
	comp=N,32nm,0.5s						
J26L				IAML		23 14 39.0	
	comp=E,40nm,0.9s						
IMAR	Indian Mountai	5.04	230		Pn	23 13 15.9	+1.7
H21K	Melozitna Rive	5.05	224		Pn	23 13 16.5	+2.2
H21K					Pn	23 13 16.7	+2.3
H21K	Melozitna Rive	5.05	224	IAML		23 14 48.3	
	comp=N,44nm,1.2s						
D19K	Kuna River	5.07	265		Pn	23 13 16.3	+1.7
D19K				IAML		23 14 56.2	
	comp=N,42nm,1.1s						
MLY	Manley	5.14	212		Pn	23 13 18.1	+2.5
MLY	Manley	5.14	212	IAML		23 14 49.6	
	comp=E,28nm,0.7s						
E19K	Redstone River	5.18	253		Pn	23 13 17.9	+1.8
E19K				IAML		23 15 05.1	
	comp=E,32nm,1.1s						
HDA	Harding Lake	5.23	193		Pn	23 13 20.0	+3.3
HDA				IAML		23 14 49.2	
	comp=N,38nm,0.9s						
HDA				IAML		23 14 53.4	
	comp=E,43nm,1.1s						
WRH	Wood River Hil	5.27	198		Pn	23 13 20.3	+2.9
WRH				IAML		23 14 50.3	
	comp=E,28nm,0.5s						
WRH				IAML		23 14 59.4	
	comp=N,28nm,0.9s						
NEA2	Nenana	5.28	203		Pn	23 13 20.1	+2.7
I30M	Mount Dempster	5.28	141		Pn	23 13 19.6	+2.1
I30M	Mount Dempster	5.28	141	IAML		23 14 25.2	
	comp=N,33nm,0.5s						
H31M	Peel River	5.31	130		Pn	23 13 19.8	+1.9
H31M				IAML		23 14 57.8	
	comp=E,33nm,1.0s						
H31M				IAML		23 15 02.1	
	comp=N,34nm,1.2s						
C19K	Lookout Ridge	5.43	273		Pn	23 13 21.7	+2.1
J29N	Klondike Camp	5.61	152		Pn	23 13 25.1	+3.0
H20K	Anotleneega Mo	5.72	230		Pn	23 13 25.2	+1.7
H20K					Pn	23 13 25.5	+2.0
BWN	Browne	5.73	203	Pn	Pn	23 13 26.7	+3.0
K24K	Donnelly Dome	5.76	187		Pn	23 13 27.3	+3.2
DAWY	Dawson	5.80	158		Pn	23 13 27.7	+3.0
RIDG	Independent Ri	5.80	182		Pn	23 13 27.6	+2.9
A19K	Wainwright	5.83	285		Pn	23 13 26.7	+1.7
DOT	Dot Lake	5.89	179		Pn	23 13 28.1	+2.3
G19K	Purcell Mounta	5.90	241		Pn	23 13 27.3	+1.4
BPAW	Bear Paw Mtn.	6.04	209		Pn	23 13 30.0	+2.2
MCK	McKinley	6.09	200		Pn	23 13 30.4	+1.8
C18K	Utukok River	6.11	270		Pn	23 13 30.2	+1.3
H19K	Roundabout Mou	6.13	235		Pn	23 13 31.7	+2.6
B18K	Kokolik River	6.16	277		Pn	23 13 30.3	+0.8
K29M	Barlow Dome	6.29	151		Pn	23 13 34.3	+2.8
E18K	Tukpahlearik C	6.35	258		Pn	23 13 34.1	+2.0
RND	Reindeer	6.39	199	Pn	Pn	23 13 35.9	+3.1
F18K	Selawik	6.44	250		Pn	23 13 35.2	+1.9
F18K					Pn	23 13 35.6	+2.2
L26K	Log Cabin Wild	6.52	176	Pn	Pn	23 13 37.4	+2.9
TRF	Thorofare Moun	6.54	204		Pn	23 13 37.4	+2.5
G18K	Tagagawik	6.55	243		Pn	23 13 37.2	+2.4
BCAR	Beaver Creek A	6.55	170		Pn	23 13 37.8	+2.8
L27K	Beaver Creek,	6.55	170		Pn	23 13 37.5	+2.5
DHY	Denali Highway	6.58	192		Pn	23 13 38.9	+3.4
J20K	Nowinta River	6.61	221		Pn	23 13 37.4	+1.8
A36M	Sachs Harbour	6.76	60		Pn	23 13 38.4	+0.8
C17K	DeLong Mountai	6.86	270		Pn	23 13 39.3	+0.2
CAST	Castle Rocks	6.86	211		Pn	23 13 41.1	+2.0
CAST					Pb	23 13 41.8	-16
L29M	L29M	6.89	156		Pn	23 13 42.3	+2.7
RDOG	Red Dog Mine	6.90	267		Pn	23 13 40.9	+1.2
E17K	Hotham Inlet	6.93	258		Pn	23 13 41.5	+1.4
WAT7	Susitna Watana	6.95	197		Pn	23 13 44.1	+3.7
H18K	Honhosa River	6.96	238		Pn	23 13 42.5	+1.9
F17K	Baldwin Pennin	7.07	252	Pn	Pn	23 13 43.9	+2.0
D17K	Noatak River	7.10	264		Pn	23 13 42.8	+0.4
WAT6	Susitna Watana	7.10	193		Pn	23 13 45.3	+2.8
J19K	Poorman	7.11	224	Pn	Pn	23 13 45.6	+3.0
HARP	HAARP	7.15	183		Pn	23 13 46.1	+3.0
M26K	Nabesna, AK	7.16	175		Pn	23 13 46.6	+3.3
M27K	Edge Creek, AK	7.25	171		Pn	23 13 47.6	+3.0
K20K	Telida	7.30	217		Pn	23 13 47.0	+1.7
PPLA	Purkeypile	7.36	209		Pn	23 13 48.9	+2.8
G17K	Kiwalik Mounta	7.43	245		Pn	23 13 48.8	+1.8
M24K	Tolsona, Glenn	7.47	187	Pn	Pn	23 13 50.0	+2.4
M29M	Somme Creek	7.48	159		Pn	23 13 50.5	+2.7
H17K	Granite Mounta	7.58	240	Pn	Pn	23 13 51.6	+2.6
C16K	Lisburne Hills	7.68	271	Pn	Pn	23 13 52.1	+1.8
SCM	Sheep Creek Mo	7.81	191		Pn	23 13 55.9	+3.7
J18K	Innoko River	7.82	225	Pn	Pn	23 13 55.0	+2.7
YUK2	White River	7.88	168		Pn	23 13 56.8	+3.6
N25K	Chitina, Valde	7.94	181		Pn	23 13 58.2	+4.2
GHO	Glory Hole Cre	8.00	196	Pn	Pn	23 13 59.0	+4.2
G16K	Koyuk River	8.05	248		Pn	23 13 56.6	+1.1
L20K	Farewell, AK	8.05	213		Pn	23 13 58.6	+3.1
KLU	Klutina	8.08	186	Pn	Pn	23 13 59.9	+4.0
GLB	Gilahina Butte	8.11	178	Pn	Pn	23 13 59.0	+2.8
SKT	Skwentna	8.12	205	Pn	Pn	23 14 00.4	+4.0
MCARA	McCarthy VSAT	8.18	176		Pn	23 14 01.0	+3.8
PTPK	Patty Peak	8.39	174		Pn	23 14 04.1	+3.8
M20K	Styx River	8.47	210		Pn	23 14 04.7	+3.5
J17K	VABM Dome	8.50	231	Pn	Pn	23 14 03.1	+1.5
L19K	White Mountain	8.52	215	Pn	Pn	23 14 04.2	+2.3
BMRM	Bremner River	8.58	181	Pn	Pn	23 14 07.8	+5.1
STLK	Strandline Lak	8.62	205	Pn	Pn	23 14 06.8	+3.5
F15K	North Star Dit	8.63	254	Pn	Pn	23 14 03.0	-0.3
CTGM	Chitina Glacie	8.67	170		Pn	23 14 08.2	+4.2
M19K	Big River Lodg	8.68	213		Pn	23 14 07.3	+3.2
RC01	Rabbit Creek A	8.75	198	Pn	Pn	23 14 08.8	+3.8
N31M	Braeburn, Yuko	8.79	152		Pn	23 14 08.2	+2.7
YUK5	Granite Creek	8.83	159		Pn	23 14 09.5	+3.3
LOGN	Logan Glacier	8.83	169	Pn	Pn	23 14 10.6	+4.3
FID	Port Fidalgo	8.84	187	Pn	Pn	23 14 12.5	+6.2
PWL	Port Wells	8.85	193	Pn	Pn	23 14 09.7	+3.3
K17K	Iditarod	8.85	226	Pn	Pn	23 14 09.9	+3.5
GRNC	Granite Creek	8.88	172		Pn	23 14 10.8	+3.9
L18K	Granite Mounta	8.88	221	Pn	Pn	23 14 09.2	+2.4
O28M	Mount Upton	8.94	167	Pn	Pn	23 14 11.6	+3.7
ISLE	Juniper Island	8.98	174	Pn	Pn	23 14 13.2	+4.8
J16K	Anvik River	9.01	234	Pn	Pn	23 14 11.7	+3.1
WAX	Waxell Ridge	9.12	175		Pn	23 14 14.2	+4.1
BERG	Berg Lake	9.16	178	Pn	Pn	23 14 14.8	+4.1
RAGM	Ragged Mountai	9.16	181	Pn	Pn	23 14 15.6	+4.8
HYT	Haines Junctio	9.17	159		Pn	23 14 13.4	+2.5
HIN	Hinchinbrook I	9.20	187	Pn	Pn	23 14 15.9	+4.8
TABL	Table Mountain	9.20	170		Pn	23 14 16.4	+5.0
HMT	Hamilton	9.21	180	Pn	Pn	23 14 16.2	+4.9
O30N	Mendenhall	9.42	155		Pn	23 14 17.0	+2.8
O29M	Mount Kennedy	9.55	163	Pn	Pn	23 14 20.1	+4.0
PCA	Pinnacle	9.61	168	Pn	Pn	23 14 20.5	+3.7
N19K	Bonanza Creek	9.71	211	Pn	Pn	23 14 22.5	+4.3
WHY	Whitehorse	9.72	151	Pn	Pn	23 14 21.3	+2.9
M17K	Holitna River	9.78	220	Pn	Pn	23 14 21.2	+2.1
K15K	Wolf Creek Mou	10.06	232	Pn	Pn	23 14 26.8	+3.8
N18K	Kilae Creek	10.10	214	Pn	Pn	23 14 27.5	+4.1
CNPM	China Poot	10.45	200	Pn	Pn	23 14 31.6	+3.3
M16K	Timber Creek	10.46	223	Pn	Pn	23 14 30.1	+1.7
N17K	Nushagak Hills	10.50	217	Pn	Pn	23 14 31.0	+2.0
P33M	Teslin, Yukon	10.51	147	Pn	Pn	23 14 30.7	+1.5
M14K	Bethel	11.45	229	Pn	Pn	23 14 45.0	+3.1
N15K	Kwethluk River	11.48	223	Pn	Pn	23 14 44.2	+1.8
Q32M	Nakina River	11.78	148		Pn	23 14 48.6	+2.0
R32K	Eaglecrest	12.05	155	Pn	Pn	23 14 52.9	+2.8
S31K	Pelican	12.11	159	Pn	Pn	23 14 54.8	+3.8
YKAW3	Yellowknife Wh	13.79	106	Pn	Pn	23 15 13.5	-0.4
YKA	Yellowknife Ar	13.84	106	Pn	Pn	23 15 14.4	-0.1
YKAW1	Yellowknife Wh	13.89	106	Pn	Pn	23 15 13.2	-2.0
RES	Resolute Bay	15.59	49	Pn	Pn	23 15 37.6	-0.4
RES				IAmb	IAmb	23 15 46.4	
	comp=Z,4.1nm,1.0s						
MOBC	Moresby Island	17.39	154	Pn	Pn	23 16 00.6	-0.4
MOBC				IAmb	IAmb	23 16 26.3	
	comp=Z,6.9nm,1.1s						
EUNU	Eureka	17.40	30	P	P	23 16 02.7	+0.4
EUNU				IAmb	IAmb	23 16 21.6	
	comp=Z,7.2nm,1.4s						
BLKN	Baker Lake	19.18	82	P	Pn	23 16 22.7	0.0
ILON	Igloolik, Nuna	21.11	61	P	P	23 16 45.0	+2.2

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*SCB **30** 23:18:10.9±1.1, 17.°43S×69.°38W, h147^{km}±14^{km}, ML4.0/3, MW3.9, Error ellipse: s-maj=5.7km s-min=4.7km az=2.0*

*NEIC **30** 23:18:10.5±2.4, 17.°35S±0.°03×69.°38W±0.°08, h161^{km}±5^{km}, mb4.3/59, ML3.8(GUC), Error ellipse: s-maj=11.1km s-min=3.4km az=110.0*

*GUC **30** 23:18:10.8±0.9, 17.°53S×69.°58W, h163^{km}±4^{km}, ML3.8*

*IDC **30** 23:18:11.9±0.9, 17.°21S×69.°19W, h173^{km}±7^{km}, mb3.8/15, mbtmp4.3/17, MS4.1/1, Error ellipse: s-maj=15.8km s-min=11.4km az=68.0*

*VAO **30** 23:18:12.4±0.7, 17.°28S×69.°03W, h164^{km}±4^{km}, mb4.4*

ISC 30 23:18:10.2±0.5**, 17.°33S**±0.°03×**69.°34W**±0.°05**, h164**^{km}±5^{km}**, n182,** σ**1^{s}.29**/173**, mb4.3**/30**, 9C-4D, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB18	Visviri	0.29	207		**Pn**	**23 18 32.4**	**-0.6**
PB18	Visviri	0.29	207	⇓*i*P	**Pn**	**23 18 33.6**	**+0.6**
PB18				*e*S	**Sn**	**23 18 51.2**	**+0.7**
PB18				IAML		23 18 52.6	
	comp=E,2µm,0.9s						
BBOD	La Paz, Gloria	0.99	46	Pg	**Pn**	**23 18 37.5**	**+0.7**
PB16	IPOC Station P	1.02	189		Pn	23 18 35.4	-1.7
PB16				Sn	**Sn**	**23 18 58.1**	**+0.4**
PB16	IPOC Station P	1.02	189	⇑*i*P	**Pn**	**23 18 37.2**	**+0.2**
PB16				*e*S	**Sn**	**23 18 57.3**	**-0.4**
PB16	IPOC Station P	1.02	189	Pg	**Pn**	**23 18 36.4**	**-0.7**
BBOJ	La Paz, Jacaqu	1.15	72	Pg	**Pn**	**23 18 38.9**	**+0.8**
SOEJ	Jacaque	1.15	72	Pg	**Pn**	**23 18 39.1**	**+1.0**
BBOE	La Paz, Chanca	1.39	69	Pg	**Pn**	**23 18 41.2**	**+0.8**
AP01	Chacalluta	1.41	222	Pn	Pn	23 18 38.3	-1.6
AP01				Sn	Sn	23 18 59.6	-3.2
LPAZ	La Paz	1.55	48		**Pn**	**23 18 42.7**	**+0.8**
LPAZ				Sn	**Sn**	**23 19 06.4**	**0.0**
LPAZ	La Paz	1.55	48	P	**Pn**	**23 18 42.9**	**+0.9**
	comp=E,1µm,0.5s,baz=234,slow=7.2,SNR=5167						
LPAZ				S	**Sn**	**23 19 06.5**	**+0.2**
	comp=E,618nm,0.6s,baz=142,slow=5.3,SNR=15						
LPAZ				LR	LR	23 19 22.9	
	comp=E,391nm,18.4s,baz=154,slow=52						
LPAZ	La Paz	1.55	48	Pg	**Pn**	**23 18 42.8**	**+0.8**
LPAZ				Sg	**Sn**	**23 19 06.9**	**+0.5**
LPAZ				IAML		23 19 12.1	
	comp=E,460nm,0.8s						
LPAZ	La Paz	1.55	48	*e*P	**Pn**	**23 18 42.8**	**+0.8**
BBOB	La Paz, Bander	1.65	45	Pg	**Pn**	**23 18 44.0**	**+1.1**
PX02	IPOC Station P	1.82	207	⇑*i*P	Pn	23 18 42.4	-1.9
PX02				*i* S	Sn	23 19 07.0	-3.7
PX02				IAML		23 19 09.5	
	comp=N,696nm,0.3s						
SOEO	Opoqueri	1.85	132	Pg	**Pn**	**23 18 45.3**	**+0.3**
GO01	Chusmiza	2.33	177		**Pn**	**23 18 50.4**	**-0.1**
GO01				Sn	**Sn**	**23 19 21.1**	**-0.6**
GO01	Chusmiza	2.33	177	*e*P	**Pn**	**23 18 50.7**	**+0.2**
GO01				*e*S	**Sn**	**23 19 21.3**	**-0.4**
GO01				IAML		23 19 29.4	
GO01	Chusmiza	2.33	177	Pg	**Pn**	**23 18 50.2**	**-0.3**
PB11	IPOC Station P	2.44	187		Pn	23 18 50.3	-1.1
PB11				Sn	**Sn**	**23 19 21.1**	**-2.4**
PB11	IPOC Station P	2.44	187	⇑*i*P	Pn	23 18 50.4	-1.1
PB11				*e*S	**Sn**	**23 19 20.7**	**-2.8**
PB11				IAML		23 19 24.0	
	comp=E,875nm,0.2s						
PB11	IPOC Station P	2.44	187	Pg	**Pn**	**23 18 50.7**	**-0.7**
PB08	IPOC Station P	2.81	176		**Pn**	**23 18 55.5**	**-0.5**
PB08	IPOC Station P	2.81	176	*e*P	**Pn**	**23 18 56.2**	**+0.1**
PB08				*e*S	**Sn**	**23 19 30.4**	**-1.3**
PB08				IAML		23 19 33.1	
	comp=E,422nm,0.3s						
PB08	IPOC Station P	2.81	176	Pg	**Pn**	**23 18 55.6**	**-0.5**
HMBC	Humberstone	2.98	190		Pn	23 18 56.4	-1.6
HMBC	Humberstone	2.98	190	*e*P	Pn	23 18 56.5	-1.5
HMBC				*e*S	Sn	23 19 30.3	-4.9
TA02	Huaiquique	3.02	194		Pn	23 18 56.4	-1.9
TA02	Huaiquique	3.02	194	⇑*e*P	Pn	23 18 57.2	-1.2
TA02				⇓*e*S	Sn	23 19 32.3	-3.5
PX03	IPOC Station P	3.07	185	⇓*e*P	Pn	23 18 56.3	-2.8
PX03				*e*S	**Sn**	**23 19 33.8**	**-3.4**
SOET	ToroToro	3.45	104	Pg	**Pn**	**23 19 04.8**	**+0.7**
SOET				Sg	**Sn**	**23 19 45.6**	**-0.4**
SOET				IAML		23 19 46.8	
	comp=E,299nm,0.8s						
PATCX	Punta Patache	3.56	192	Pn	Pn	23 19 03.8	-1.4
PATCX	Punta Patache	3.56	192	*e*P	Pn	23 19 03.1	-2.1
PB01	IPOC Station P	3.70	182		Pn	23 19 05.8	-1.3
PB01	IPOC Station P	3.70	182	*e*P	**Pn**	**23 19 06.0**	**-1.0**
PB01	IPOC Station P	3.70	182	Pg	**Pn**	**23 19 06.2**	**-0.8**
PB01				Sg	Sn	23 19 47.5	-3.9
PB01				IAML		23 19 48.2	
	comp=E,445nm,0.3s						
PB09	IPOC Station P	4.45	179		Pn	23 19 15.1	-1.7
PB09	IPOC Station P	4.45	179	Pg	**Pn**	**23 19 16.4**	**-0.4**
MOCB	Mochara	5.24	139	Pg	**Pn**	**23 19 28.1**	**+0.7**
PB06	IPOC Station P	5.36	182		Pn	23 19 26.8	-1.9
PB05	IPOC Station P	5.56	188		Pn	23 19 28.8	-2.4
PB10	IPOC Station P	6.26	190		Pn	23 19 37.8	-2.7
PB14	IPOC Station P	7.33	188	Pn	Pn	23 19 51.8	-3.1
GO02	Mina Guanaco	7.80	182		Pn	23 19 59.2	-2.0
SIV	San Ignacio	8.03	82	P	**Pn**	**23 20 03.8**	**-0.3**

	comp=E,68nm,0.4s,baz=259,slow=8.9,SNR=266						
SIV				S	Sn	23 21 29.7	-4.2
	comp=E,23nm,0.7s,baz=168,slow=23,SNR=9.0						
BBSD	Serra de San D	8.34	90	*e*P	Pn	23 20 06.0	-2.1
AC01	Pan de Azucar	8.86	187	Pn	Pn	23 20 12.1	-2.8
NNA	Nana	8.99	305	Pn	Pn	23 20 15.1	-1.7
NNA	Nana	8.99	305	P	Pn	23 20 15.5	-1.3
	comp=E,21nm,0.4s,baz=130,slow=12,SNR=18						
NNA				S	Sn	23 21 51.1	-5.9
	comp=E,5.2nm,0.3s,baz=208,slow=20,SNR=2.4						
AC02	Maricunga	9.46	179		Pn	23 20 21.1	-2.3
VILB	Vilhena	9.84	65		Pn	23 20 26.2	-1.7
VILB	Vilhena	9.84	65	*e*P	Pn	23 20 26.0	-1.9
PTLB	Pontes e Lacer	9.97	81		Pn	23 20 26.4	-3.2
PTLB	Pontes e Lacer	9.97	81	*e*P	Pn	23 20 27.0	-2.6
AC06	Mina Casimiro	10.03	185	Pn	Pn	23 20 28.1	-2.2
GO03	Copiapo	10.25	184	Pn	Pn	23 20 31.5	-1.8
MURT	Porto Murtinho	11.87	113	*e*P	Pn	23 20 53.2	-1.2
BDQN	Bodoquena, MS	12.31	107	*e*P	Pn	23 20 58.0	-2.2
CO01	Juntas del Tor	12.61	183	Pn	Pn	23 21 02.7	-1.5
GO04	Tololo Observa	12.86	186	P	P	23 21 13.3	+1.4
SALV	Santo Antonio	13.16	86	*e*P	Pn	23 21 08.8	-2.2
AQDB	Aquidauana	13.28	106	*e*P	Pn	23 21 11.3	-1.3
ATAH	Atahualpa	13.44	318	P	Pn	23 21 15.5	+0.5
	comp=E,2.9nm,0.6s,baz=27,slow=20,SNR=2.5						
CO06	Fray Jorge	13.45	189		Pn	23 21 17.7	+3.1
CO03	El Pedregal	13.51	185	P	P	23 21 20.1	+1.1
CO02	Combarbal	13.90	186	P	Pn	23 21 23.7	+3.3
CPUP	Villa Florida	14.30	131	P	Pn	23 21 24.9	-0.4
	comp=E,0.2nm,0.4s,baz=229,slow=8.9,SNR=1.9						
TEFE	Tefe	14.49	19	*e*P	Pn	23 21 27.6	-0.1
CLDB	Colider	14.61	66	*e*P	Pn	23 21 27.5	-1.9
VA03	San Esteban	15.41	184		Pn	23 21 38.6	-0.5
VA03				IAmb	IAmb	23 21 42.9	
	comp=Z,11nm,0.9s						
MT02	Curacav	15.95	185		P	23 21 45.9	0.0
MT02				IAmb	IAmb	23 21 48.7	
	comp=Z,9.8nm,0.9s						
MACA	Manacapuru-AM	16.44	32	*e*P	Pn	23 21 50.8	-0.9
MT09	Talagante	16.45	185	P	P	23 21 53.1	+1.5
MT09				IAmb	IAmb	23 21 55.7	
	comp=Z,12nm,0.8s						
LMEL	Las Melosas	16.47	183	P	P	23 21 54.1	+2.2
LMEL				IAmb	IAmb	23 21 56.6	
	comp=Z,11nm,0.9s						
MT01	Popeta	16.56	186	P	P	23 21 54.6	+1.9
MT01				IAmb	IAmb	23 22 12.4	
	comp=Z,16nm,1.1s						
TRCB	Terra Rica	16.61	112	*e*P	P	23 21 53.3	0.0
BO04	La Punta	16.63	184	P	P	23 21 55.0	+1.5
BO04				IAmb	IAmb	23 21 57.0	
	comp=Z,12nm,0.8s						
NPGB	Novo Progresso	17.05	55	*e*P	Pn	23 21 57.9	-1.2
BO01	Tunca	17.07	185	P	P	23 21 59.6	+1.4
BO01				IAmb	IAmb	23 22 01.9	
	comp=Z,11nm,0.8s						
BO02	Sierra Bellavi	17.44	184	P	P	23 22 03.7	+1.2
BO02				IAmb	IAmb	23 22 05.7	
	comp=Z,20nm,1.0s						
PCMB	Pacaembu	17.57	107	*e*P	P	23 22 03.2	-0.7
COHC	Cochancay	17.69	326		Pn	23 22 07.6	+0.9
PTGB	Pitanga	17.71	117	*e*P	P	23 22 05.7	+0.2
LDASE	Londrina, Braz	18.11	112	*e*P	P	23 22 09.8	0.0
ITRB	Iturama	18.15	100	*e*P	P	23 22 11.0	+0.7
SNDB	Serra Nova Dou	18.25	75	*e*P	P	23 22 10.9	-0.4
ITTB	Itaituba	18.54	48	*e*P	P	23 22 13.7	-0.8
ITAB	Concordia	18.71	125	P	P	23 22 16.8	+0.5
ITAB	Concordia	18.71	125	*e*P	P	23 22 16.1	-0.1
BI02	San Fabin de	19.34	185	P	P	23 22 23.4	+0.3
FRTB	Fartura	19.48	111	*e*P	P	23 22 24.2	-0.5
CPSB	Cacapava Do Su	19.49	135	*e*P	P	23 22 23.7	-1.0
OTAV	Otavalo	19.63	332	P	P	23 22 28.1	+1.4
OTAV	Otavalo	19.63	332	*e*P	P	23 22 27.9	+1.2
IPMB	Ipameri, GO	20.14	95	*e*P	P	23 22 30.2	-1.7
PLTB	Pedras Altas	20.25	138	P	P	23 22 32.2	-0.6
PLTB	Pedras Altas	20.25	138	*e*P	P	23 22 32.2	-0.6
BDFB	Brasilia	20.52	88	P	P	23 22 36.1	+0.2
BDFB				IAmb	IAmb	23 22 38.6	
	comp=Z,13nm,0.5s						
BDFB	Brasilia	20.52	88	P	P	23 22 35.5	-0.4
	comp=Z,13nm,0.5s,baz=262,slow=11,SNR=28						
	comp=Z,13nm,0.5s						
MAJ01	Sao Joao Batis	21.27	122	*e*P	P	23 22 43.8	0.0
MAL2	Monte Alegre,	21.29	46		P	23 22 43.7	-0.5
SPB	Sao Paulo	21.44	111	*e*P	P	23 22 45.9	+0.2
BOAV	Boa Vista	21.44	25	*e*P	P	23 22 47.9	+2.2
TRQA	Tornquist	21.64	164	P	P	23 22 47.7	+0.1
TRQA				IAmb	IAmb	23 22 54.3	
	comp=Z,14nm,1.1s						
VAO	Valinhos	21.74	109	P	P	23 22 47.6	-1.3
VAO				IAmb	IAmb	23 22 51.5	
	comp=Z,5.3nm,0.6s						
VAO	Valinhos	21.74	109	*e*P	P	23 22 47.1	-1.8
PET01	Itanhaem-SP	21.74	112	*e*P	P	23 22 47.4	-1.4
PMNB	Patos De Minas	21.82	97	*e*P	P	23 22 47.7	-2.1
SMTB	Santa Maria do	22.77	71	*e*P	P	23 22 58.1	-0.7
LR05	Currie	22.94	185	P	P	23 23 00.4	+0.3
LR05				IAmb	IAmb	23 23 02.8	
	comp=Z,18nm,1.0s						
PARB	Paraibuna	23.01	109	*e*P	P	23 23 02.1	+1.0
PLCA	Paso Flores	23.35	182	P	P	23 23 04.4	+0.5
PLCA				IAmb	IAmb	23 23 07.3	
	comp=Z,20nm,1.0s						
PLCA	Paso Flores	23.35	182	P	P	23 23 05.1	+1.2
	comp=Z,13nm,0.9s,baz=7.3,slow=12,SNR=16						
	comp=Z,13nm,0.9s						
RUSC	La Rusia	23.36	351	P	P	23 23 04.2	-0.6
RUSC				IAmb	IAmb	23 23 06.1	
	comp=Z,7.6nm,0.9s						
SLP01	Ubatuba-SP	23.43	109	*e*P	P	23 23 06.3	+1.4
BSCB	Bom Sucesso	23.48	103	*e*P	P	23 23 05.0	-0.3
SDBA	SAO DESIDERIO	24.11	82	*e*P	P	23 23 09.5	-1.6
JANB	Januaria	24.14	88	*e*P	P	23 23 10.8	-0.5
DIAM	Diamantina, MG	24.45	96	*e*P	P	23 23 14.6	+0.3
VAS01	Vassouras-RJ	24.84	106	*e*P	P	23 23 18.3	+0.7
DUB01	Friburgo-RJ	25.80	105	*e*P	P	23 23 26.1	-0.3
RIB01	Linhares ES	27.54	99	*e*P	P	23 23 41.8	0.0
GUA01	Guaratinga, BA	28.25	93	*e*P	P	23 23 48.4	+0.2
NBPB	Pedra_Branca-C	31.37	72	*e*P	P	23 24 15.4	-0.4
TEIG	Tepich	41.69	333	P	P	23 25 43.5	+0.5
TEIG				IAmb	IAmb	23 25 55.4	
	comp=Z,13nm,1.1s						
CAMR	Camarioca	41.83	343	P	P	23 25 43.9	-0.1
CAMR				IAmb	IAmb	23 26 02.7	
	comp=Z,44nm,1.1s						
ESPZ	Base Esperanza	46.81	172	P	P	23 26 23.5	+0.5
ESPZ				IAmb	IAmb	23 26 24.2	
	comp=Z,3.7nm,0.6s						
HNDO	Hondo	54.81	328	P	P	23 27 24.4	+1.0
SAND	Sanderson	56.64	326		P	23 27 38.0	+1.5
WHAR	Wooly Hollow	56.68	338	P	P	23 27 36.8	+0.3
WHAR				IAmb	IAmb	23 27 42.8	
	comp=Z,3.6nm,1.2s						
TXAR	Lajitas Array	57.01	324	P	P	23 27 39.3	+0.2
	comp=Z,0.5nm,0.6s,baz=157,slow=9.1,SNR=5.8						
	comp=Z,0.5nm,0.6s						
T42A	Van Buren	57.83	339	P	P	23 27 44.0	-0.5
T42A				IAmb	IAmb	23 27 44.1	
	comp=Z,1.9nm,0.6s						
S44A	Carbondale	57.85	341	P	P	23 27 44.1	-0.5
SIUC	Southern Illin	57.85	341	P	P	23 27 44.2	-0.5
APMT	Aspermont	58.32	330		P	23 27 48.7	+0.6
FVM	French Village	58.48	341	P	P	23 27 47.9	-1.2
FVM				IAmb	IAmb	23 27 49.5	
	comp=Z,6.3nm,0.6s						
RLO	Rose Lookout	58.49	336	P	P	23 27 49.5	+0.3
RLO				IAmb	IAmb	23 27 51.5	
	comp=Z,4.6nm,0.6s						
SN07	Snyder 07	58.50	329	P	P	23 27 50.1	+0.7
ODSA	Odessa	58.57	327	P	P	23 27 50.0	+0.1
ODSA				IAmb	IAmb	23 27 50.7	
	comp=Z,3.5nm,0.6s						
VHRN	Van Horn	58.85	324	P	P	23 27 52.6	+0.6
VHRN				IAmb	IAmb	23 27 52.8	
	comp=Z,1.7nm,0.5s						
WMOK	Wichita Mounta	58.86	332	P	P	23 27 52.0	+0.2
OK052	Battle Ridge R	59.06	334	P	P	23 27 53.0	-0.1
OK029	Liberty Lake	59.17	334	P	P	23 27 53.9	0.0
R40A	Maddies Statio	59.36	339	P	P	23 27 54.3	-0.9
R40A				IAmb	IAmb	23 27 54.8	
	comp=Z,3.4nm,0.5s						
L59A	Walton	59.45	355	P	P	23 27 53.4	-2.3
L59A				IAmb	IAmb	23 28 07.5	
	comp=Z,7.3nm,1.1s						
BINY	Binghamton	59.54	354	P	P	23 27 55.5	-0.9
VNA3	Neumayer Olymp	64.14	162	⇑P	P	23 28 28.0	+1.3
	comp=Z,3.6nm,0.8s						
VNA3				⇓sP	pP	23 29 18.9	+12
VNA1	Neumayer--Stat	64.34	161	⇑sP	sP	23 29 21.5	-5.0
VNA2	Neumayer--Watz	64.71	161	⇑P	P	23 28 31.0	+0.6
	comp=Z,3.1nm,0.7s,baz=298,slow=8.0						
SNAA	Sanae	66.34	162	⇑P	P	23 28 41.7	+0.8
	comp=Z,71nm,0.6s						
SNAA	Sanae	66.34	162	P	P	23 28 41.7	+0.8
	comp=Z,3.0nm,0.7s,baz=279,slow=6.3,SNR=30						
	comp=Z,3.0nm,0.7s						
PV03	Paradox Valley	66.57	327	P	P	23 28 43.5	+0.5
PV05	Paradox Valley	66.57	327	P	P	23 28 42.6	-0.4
F33A	5 Mile Ranch,	67.45	340	P	P	23 28 48.1	0.0
F33A				IAmb	IAmb	23 28 48.7	
	comp=Z,4.7nm,0.7s						
DBIC	Dimbokro	68.00	75	P	P	23 28 52.0	-0.3
	comp=Z,9.3nm,0.7s,baz=268,slow=6.8,SNR=9.1						
	comp=Z,9.3nm,0.7s						
TROLL	Troll, Antarti	68.06	161	⇑P	P	23 28 52.9	+1.1
	comp=Z,148nm,0.6s						
MDND	Maddock	70.31	339	P	P	23 29 06.5	+0.8
PD31	Pinedale Array	70.32	330	P	P	23 29 07.4	+1.2
PDAR	Pinedale Array	70.32	330	P	P	23 29 06.7	+0.5
PDAR	Pinedale Array	70.32	330	P	P	23 29 06.3	+0.1
	comp=Z,0.3nm,0.4s,baz=130,slow=8.8,SNR=5.1						
	comp=Z,0.3nm,0.4s						
ULM	Lac du Bonnet	71.24	342	P	P	23 29 11.0	-0.2
ULM	Lac du Bonnet	71.24	342	P	P	23 29 11.1	-0.2
	comp=Z,9.4nm,0.5s,baz=151,slow=6.4,SNR=16						
	comp=Z,9.4nm,0.5s						
SCHQ	Schefferville	71.90	2	P	P	23 29 14.4	-0.8
	comp=Z,1.4nm,0.9s,baz=255,slow=12,SNR=1.9						
	comp=Z,1.4nm,0.9s						
NVAR	Mina Array Bea	71.98	321	P	P	23 29 17.5	+1.2
	comp=Z,0.4nm,0.5s,baz=165,slow=5.3,SNR=2.9						
	comp=Z,0.4nm,0.5s						
QSPA	South Pole Qui	72.84	180	P	P	23 29 22.4	+1.5
	comp=Z,1.6nm,0.7s,baz=165,slow=2.9,SNR=13						
	comp=Z,1.6nm,0.7s						
BMO	Blue Mountains	75.71	327	P	P	23 29 38.6	+0.9
K05A	Summer Lake	76.26	324	P	P	23 29 42.6	+1.6
I07A	Izee	76.36	325	P	P	23 29 42.4	+1.0
TORD	Torodi Ar. Bea	76.38	71	P	P	23 29 41.3	-0.7
	comp=Z,9.0nm,0.7s,baz=270,slow=4.9,SNR=8.7						
	comp=Z,9.0nm,0.7s						
FFC	Flin Flon	76.97	341	P	P	23 29 44.9	+0.5
VNDA	Vanda	80.87	190	P	P	23 30 07.7	+2.2
	comp=Z,1.2nm,0.8s,baz=120,slow=3.6,SNR=7.4						
	comp=Z,1.2nm,0.8s						
ESDC	Sonseca Array	83.17	45	P	P	23 30 18.9	+0.8
	comp=Z,1.1nm,1.0s,baz=246,slow=5.3,SNR=6.1						
	comp=Z,1.1nm,1.0s						
YKA	Yellowknife Ar	87.14	341	P	P	23 30 36.5	-0.7
	comp=Z,1.8nm,0.7s,baz=139,slow=4.4,SNR=7.3						
YKA				LR	LR	00 11 26.3	
	comp=Z,104nm,21.9s,baz=150,slow=37						
	comp=Z,1.8nm,0.7s						
MAW	Mawson	88.42	164	P	P	23 30 44.6	+1.2
	comp=Z,1.9nm,0.6s,baz=181,slow=7.3,SNR=6.2						
	comp=Z,1.9nm,0.6s						
ASAR	Alice Springs	133.36	210	PKP	PKPdf	23 37 07.7	+0.1
	comp=Z,0.4nm,0.5s,baz=148,slow=2.1,SNR=6.7						
WRA	Warramunga Arr	136.27	213	PKP	PKPdf	23 37 13.6	+0.5
	comp=Z,1.1nm,0.5s,baz=150,slow=1.9,SNR=8.5						
KURBB	Kurchatov Arra	138.02	30	PKP	PKPdf	23 37 15.3	0.0
	comp=Z,0.1nm,0.4s,baz=305,slow=3.4,SNR=1.6						
ZALV	Zalesovo Beam	138.32	23	PKP	PKPdf	23 37 15.1	-0.7
	comp=Z,1.4nm,0.7s,baz=327,slow=2.5,SNR=5.7						
MKAR	Makanchi Array	142.42	32	PKhKP	PKPpre	23 37 18.4	
	comp=Z,0.2nm,0.5s,baz=284,slow=2.0,SNR=2.3						
SONM	Songino Array	149.37	6	PKPbc	PKiKP	23 37 41.0	0.0
	comp=Z,1.7nm,0.5s,baz=322,slow=1.8,SNR=12						
SONM				pPKPbc	pPKPdf	23 38 24.2	+4.3
	comp=Z,1.6nm,0.8s,baz=296,slow=1.5,SNR=5.1						
PZH	PanZhiHua	167.68	41	PKP	PKPdf	23 37 56.8	-0.8

UPP 30 23:20:36.9±0.1, 67°.85N×20°.20E, h0^{km}, ML2.0, Unknown, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.12	27	P	Pg	23 20 39.4	+0.2
	baz=224						
KUA				S	Sg	23 20 41.1	+0.5
RATU	Laukkuluspa	0.23	264	P	Pg	23 20 41.5	+0.2
RATU				S	Sg	23 20 44.7	+0.4
KOVU	Salmi	0.38	358	P	Pg	23 20 44.2	+0.1
KOVU				S	Sg	23 20 49.4	+0.5
MASU	Masugnsbyn	0.79	119	P	Pg	23 20 51.8	-0.3
SALU	Saltoluokta	0.80	235	P	Pg	23 20 51.9	-0.3
SALU	Saltoluokta	0.80	235	*e*P	Pg	23 20 52.1	-0.1
SALU	Saltoluokta	0.80	235	*e*P	Pg	23 20 52.0	-0.2
KIF	Kilpisjarvi	1.18	11	*e*P	Pb	23 21 00.1	0.0
KIF	Kilpisjarvi	1.18	11	*e*P	Pb	23 21 00.3	+0.2
PAJU	Pajala	1.40	125	P	Pn	23 21 02.3	-1.3
ERTU	Ertsjaerv	1.52	148	P	Pn	23 21 04.8	-0.4

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*IDC **30** 23:20:40.8±1.2, 67°.83N×21°.11E, h0^{km}, mbtmp2.9/4, ML2.1/4, Error ellipse: s-maj=22.4km s-min=7.8km az=121.0*

*UPP **30** 23:20:42.0±0.0, 67°.86N×20°.19E, h0^{km}, ML2.2, Unknown*

ISC 30 23:20:41.4±1.0, **67°.83N**±0°.04×**20°.31E**±0°.04, **h7**^{km}±11^{km}, **n13,** σ**1^{s}.16**/15, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.13	4	P	Pg	23 20 44.3	+0.2
	baz=214						
KUA				S	Sg	23 20 45.9	-0.1
RATU	Laukkuluspa	0.27	269	P	Pg	23 20 46.6	-0.2
RATU				S	Sg	23 20 49.9	-0.5
KOVU	Salmi	0.40	352	S	Sg	23 20 54.1	-0.3
DUNU	Dundret	0.72	172	P	Pb	23 20 56.5	+0.3
MASU	Masugnsbyn	0.74	119	P	Pb	23 20 57.0	+0.4
SALU	Saltoluokta	0.83	238	P	Pg	23 20 57.0	-0.2
PAJU	Pajala	1.35	125	P	Pg	23 21 07.6	+0.4
ERTU	Ertsjaerv	1.47	149	P	Pg	23 21 10.2	+0.6
HARU	Harads	1.69	171	P	Pg	23 21 13.7	0.0
ARCES	ARCESS Array B	2.56	46	Pn	Pn	23 21 21.1	-2.0
	1.0nm,0.3s,baz=228,slow=15,SNR=13						
ARCES				Lg	Lg	23 21 54.8	
	0.9nm,0.3s,baz=225,slow=24,SNR=7.2						
	0.8nm,0.3s						
FINES	FINESS Array B	6.87	156	Pn	Pn	23 22 19.6	-2.7
	0.1nm,0.3s,baz=338,slow=10,SNR=1.4						
FINES				Lg	Lg	23 24 15.0	
	0.3nm,0.3s,baz=342,slow=25,SNR=5.4						
	1.2nm,0.9s						
NOA	NORSAR Array B	7.86	214	Pn	Pn	23 22 37.1	+1.2
	baz=21,slow=11,SNR=3.8						
	0.8nm,0.9s						
HFS	Hagfors	8.25	204	Pn	Pn	23 22 42.2	+0.9
	0.1nm,0.3s,baz=19,slow=11,SNR=1.1						
	1.4nm,0.9s						

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*TEH **30** 23:28:14.1, 35°.20N×45°.62E, h9^{km}±16^{km}*

*ISN **30** 23:28:14.0±0.7, 35°.38N×45°.63E, h14^{km}±11^{km}, ML3.0*

ISC 30 23:28:16.4±1.0, **35°.20N**±0°.04×**45°.64E**±0°.04, **h10**^{km}**, n17,** σ**1^{s}.21**/20, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KGS1	Ghasr-e-Shirin	0.69	184	Pg	Pg	23 28 28.4	-1.4
IDHR	Dehrash	0.79	129	Pg	Pg	23 28 31.0	-0.7
IKRK	Kirkuk	1.08	281	*e*Pn	Pb	23 28 36.5	-0.8
IKRK				AML	AML	23 28 51.5	
	comp=E,166nm,0.7s						
IKRK				*e*Sn	Sb	23 28 52.0	+0.5
IKRK				AML	AML	23 28 55.1	
	comp=N,200nm,0.5s						
GLG1	Gilan-e-Gharb	1.10	168	Pg	Pb	23 28 35.9	-1.7
ILIN	Lien	1.12	104	Pg	Pg	23 28 36.8	-1.1
IGHG	Ghaleghazi	1.15	138	Pg	Pb	23 28 37.8	-0.8
KCHF	Cheshme Sefid,	1.47	128	Pg	Pn	23 28 43.6	+0.4
MAHB	Mahabad	1.57	2	Pg	Pn	23 28 44.7	+0.2
ILBA	Ilam Banvizeh	1.63	163	Pg	Pn	23 28 45.5	+0.2
SNQR	Sonqor, Kerman	1.66	101	Pg	Pn	23 28 46.6	+0.6
IBZA	Bozab	1.96	111	Pn	Pn	23 28 51.3	+1.3
BHD	Baghdad	2.19	209	*e*Pn	Pn	23 28 53.7	+0.9
BHD				*e*Sn	Sb	23 29 23.0	-0.2
IKFM	Kafar-mosalman	2.47	132	Pn	Pn	23 28 57.8	+1.1
IHSH	Hashtrud	2.48	31	Pn	Pn	23 28 58.0	+0.8
IAZR	Azarshahr	2.49	6	Pn	Pn	23 28 58.2	+0.9
IHRS	Heris	3.31	19	Pn	Pn	23 29 09.1	+0.6
RAFI	Al-Rafai	3.48	173	*e*Pn	Pn	23 29 12.0	+1.3
RAFI				*e*Sn	Sn	23 29 55.0	+3.0
RAFI				AML	AML	23 29 59.0	
	comp=E,122nm,0.1s						
RAFI				AML	AML	23 30 02.6	
	comp=N,133nm,0.4s						

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*JMA **30** 23:32:20.7±0.3, 24°.8N±1°.0×122°.4E±0°.4, h2^{km}±3^{km}, MV3.3/8, NW OFF ISHIGAKIJIMA IS*

*TAP **30** 23:32:20.6, 24°.91N×122°.44E, h20^{km}, ML3.0, C*

ISC 30 23:32:20.8±1.1, **24°.90N**±0°.03×**122°.43E**±0°.03, **h23**^{km}±11^{km}, **n56,** σ**0^{s}.57**/102, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao	0.42	285	P	Pb	23 32 29.4	-0.3
TWB1				S	Sb	23 32 35.6	0.0
EOS2	EOS2	0.51	201	*e*P	Pb	23 32 31.6	+0.4
EOS2				*e*S	Sb	23 32 39.5	+1.3
SXI1	Grass Mountain	0.54	291	P	Pb	23 32 32.0	+0.2
SXI1				S	Sb	23 32 40.2	+1.0
TIPB	Shuangxi	0.56	277	P	Pb	23 32 32.0	0.0
TIPB				*e*S	Sb	23 32 40.1	+0.5
TWC	Suao	0.61	241	*e*P	Pb	23 32 32.5	-0.3
TWC				*e*S	Sb	23 32 39.8	-1.1
NWF	Wu-fen Shan	0.62	286	*e*P	Pb	23 32 32.9	-0.1
NWF				*e*S	Sn	23 32 42.6	-0.8
WFSB	Wu-fen Shan	0.62	286	*e*P	Pn	23 32 33.5	-0.6
WFSB				*e*S	Sb	23 32 42.1	+0.9
EOS3	EOS3	0.62	190	*e*P	Pb	23 32 33.5	+0.5
EOS3				*e*S	Sn	23 32 43.2	0.0
ESAO	Su ao	0.63	239	*e*P	Pb	23 32 32.7	-0.4
ESAO				*e*S	Sb	23 32 41.1	-0.4
JYNG	Yonagunijimaku	0.65	134	P	Pb	23 32 32.9	-0.6
JYNG				*e*S	Sb	23 32 41.3	-0.7
TNOU	National Taiwa	0.65	293	*e*P	Pb	23 32 33.5	-0.1
TNOU				*e*S	Sb	23 32 42.7	+0.5
YOJ	Yonaguni jima	0.68	130	P	Pb	23 32 33.6	-0.5
YOJ				*e*S	Sb	23 32 42.4	-0.7
YOJ	Yonaguni jima	0.68	130	*e*P	Pb	23 32 33.9	-0.2
YOJ				*e*S	Sb	23 32 43.0	-0.1
NDS	Dongshan	0.70	248	*e*P	Pb	23 32 33.5	-1.0
NDS				*e*S	Sb	23 32 42.5	-1.3
TWE	Neicheng	0.72	256	*e*P	Pb	23 32 34.8	0.0
TWE				*e*S	Sn	23 32 45.8	-0.1
EWUT	Wuta	0.75	233	*e*P	Pb	23 32 34.8	-0.4
EWUT				*e*S	Sb	23 32 45.1	+0.1
TWA	Mucha	0.78	276	*e*P	Pn	23 32 36.1	-0.2
TWA				*e*S	Sn	23 32 47.1	-0.2
FUSB	Fushanzhiwuyua	0.78	260	*e*P	Pb	23 32 35.5	-0.3
FUSB				*e*S	Sn	23 32 47.0	-0.5
EOS4	EOS4	0.78	188	*e*P	Pn	23 32 36.1	0.0
EOS4				*e*S	Sn	23 32 46.7	-0.2
ENA	Nanau	0.79	233	*e*P	Pb	23 32 35.4	-0.4
ENA				*e*S	Sb	23 32 45.1	-1.0
PCYT	Pengchaiyu	0.80	336	*e*P	Pb	23 32 35.8	-0.2
YM08	YM08	0.82	291	*e*P	Pb	23 32 36.4	0.0
YM08				*e*S	Sn	23 32 47.9	-0.4
YM01	YM01	0.82	288	*e*P	Pn	23 32 36.8	-0.2
YM01				*e*S	Sn	23 32 48.2	-0.2
NHDH	Xindian Distri	0.83	274	*e*P	Pn	23 32 36.8	-0.2
NHDH				*e*S	Sb	23 32 47.1	-0.1
ENTT	Nioudou	0.83	252	*e*P	Pb	23 32 36.8	+0.2
ENTT				*e*S	Sn	23 32 48.7	+0.1
TWY	Chenhua	0.84	296	*e*P	Pn	23 32 37.0	-0.3
TWY				*e*S	Sn	23 32 49.0	+0.1
ZUZH	Zhuzihu	0.85	288	*e*P	Pb	23 32 36.9	0.0
EAHA	Aohua	0.85	228	*e*P	Pb	23 32 36.6	-0.3
EAHA				*e*S	Sb	23 32 47.4	-0.5
NWLT	Wulai	0.85	262	*e*P	Pb	23 32 37.1	+0.1
NWLT				*e*S	Sb	23 32 48.2	+0.1
LATG	Datong	0.90	246	*e*P	Pb	23 32 37.8	-0.1
LATG				*e*S	Sb	23 32 49.7	+0.1
YHNB	Yeheng	0.99	257	*e*P	Pb	23 32 39.1	-0.2
YHNB				*e*S	Sn	23 32 52.5	-0.1
NSK	Sanguang	1.00	257	*e*P	Pb	23 32 39.5	-0.1
NSK				*e*S	Sb	23 32 52.6	+0.2
ETL	Fush Village	1.04	225	*e*P	Pn	23 32 40.7	+0.6
NACB	Ninganchiao	1.05	227	*e*P	Pb	23 32 39.9	-0.5
NACB				*e*S	Sb	23 32 53.4	-0.4
NNSB	Datong	1.06	244	*e*P	Pb	23 32 40.2	-0.5
NNSB				*e*S	Sb	23 32 54.4	+0.1
NNS	Nan Shan	1.07	245	*e*P	Pb	23 32 40.6	-0.2
NNS				*e*S	Sb	23 32 54.2	-0.2
ETLH	Xiulin Townshi	1.11	232	*e*P	Pn	23 32 40.8	-0.2
ETLH				*e*S	Sb	23 32 55.4	-0.1
NFF	Wufeng Townshi	1.23	258	*e*P	Pn	23 32 42.9	+0.3
NFF				*e*S	Sn	23 33 00.2	+1.7
ETM	Tongmen	1.27	223	*e*P	Pb	23 32 44.2	+0.2
LXIB	Xiulin Townshi	1.28	227	*e*P	Pb	23 32 44.1	-0.2
LXIB				*e*S	Sb	23 33 01.1	+0.7
WHF	Hehuan Shan	1.30	235	*e*P	Pb	23 32 44.8	-0.2
WHF				*e*S	Sb	23 33 01.7	+0.3
IRIF	Iriomote-Funau	1.31	115	P	Pb	23 32 45.6	+0.8
LIOB	Emei	1.31	259	*e*P	Pn	23 32 43.7	-0.1
OWD	Renai	1.48	231	*e*P	Pb	23 32 47.8	0.0
OWD				*e*S	Sb	23 33 07.6	+1.3
WHP	Taichung City	1.49	246	*e*P	Pb	23 32 48.8	+0.9
WHP				*e*S	Sb	23 33 06.9	+0.5
WUSB	Renai	1.50	233	*e*P	Pb	23 32 48.3	+0.2
WUSB				*e*S	Sb	23 33 08.1	+1.3
HATJ	Hateruma jima	1.51	124	*e*P	Pb	23 32 49.1	+1.0
WARBT	Fenglin Townsh	1.52	219	*e*P	Pb	23 32 47.7	-0.6
WARBT				*e*S	Sn	23 33 05.9	+0.3
WCS	Beigang Elemen	1.62	239	*e*P	Pb	23 32 50.8	+0.7
VWDT	VWDT	1.64	226	*e*P	Pb	23 32 49.9	-0.5
VWDT				*e*S	Sb	23 33 11.3	+0.6
HGSD	Ruisui	1.68	214	*e*P	Pb	23 32 50.0	-1.0
SSLB	Suanglung	1.75	231	*e*P	Pb	23 32 51.8	-0.5
SSLB				*e*S	Sb	23 33 14.1	+0.4
TYC	Yuchr	1.75	236	*e*P	Pb	23 32 52.5	+0.2
YULB	Yu-li	1.83	215	*e*P	Pn	23 32 50.2	-0.6
YULB				*e*S	Sn	23 33 13.2	0.0
WHYT	Xinyi Township	1.88	231	*e*P	Pb	23 32 53.6	-0.8
WHYT				*e*S	Sb	23 33 19.0	+1.5
CHN5	Tsauling	2.06	231	*e*P	Pb	23 32 57.6	0.0
CHN5				*e*S	Sb	23 33 23.0	+0.1

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*IDC **30** 23:34:50.1±0.5, 14°.45N×92°.56W, h0^{km}, mb4.4/23, mbtmp4.4/25, ML4.5/2, MS4.1/41, Error ellipse: s-maj=25.0km s-min=11.4km az=54.0*

*CATAC **30** 23:34:50.3±0.6, 14°N±5°×9°3W±°, h1^{km}, M5.5/21, mB5.9/7, mb5.8/7, MLv5.3/21, Mw(mB)5.5/7, Error ellipse: s-maj=11.8km s-min=7.6km az=34.6, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.79; $M_{\theta\theta}$-1.32; $M_{\phi\phi}$0.53; $M_{r\theta}$0.56; $M_{\theta\phi}$0.89; $M_{\phi r}$-0.53; Fault plane solution: $M_0$1.64312×10^{16} NP1:ϕ_s142.30662°, δ70.17473°, λ130.99440°. NP2:ϕ_s253.62372°, δ44.76190°, λ28.79258°. Principal axes: T 1.2091, Plg47.8927°, Azm96.0777°; N 0.6617, Plg38.1051°, Azm305.8831°; P -1.8708, Plg15.2040°, Azm203.5770°; Moment Tensor Solution. Moment tensor: Scale 10^{16} Nm; M_{rr}0.62; $M_{\theta\theta}$-1.06; $M_{\phi\phi}$0.44; $M_{r\theta}$0.55; $M_{\theta\phi}$0.90; $M_{\phi r}$-0.52; Fault plane solution: $M_0$1.49508×10^{16} NP1:ϕ_s148.66701°, δ75.08177°, λ135.37631°. NP2:ϕ_s252.92309°, δ47.25233°, λ20.52211°. Principal axes: T 1.0814, Plg41.4527°, Azm100.8481°; N 0.6247, Plg43.4519°, Azm314.0475°; P -1.7061, Plg17.3331°, Azm206.8496°; Moment Tensor Solution. Moment tensor: Scale 10^{16} Nm; M_{rr}0.47; $M_{\theta\theta}$-0.66; $M_{\phi\phi}$0.19; $M_{r\theta}$0.57; $M_{\theta\phi}$1.40; $M_{\phi r}$-0.79; Fault plane solution: $M_0$1.80132×10^{16} NP1:ϕ_s167.63032°, δ86.91899°, λ146.86657°. NP2:ϕ_s259.63957°, δ56.92061°, λ3.67774°. Principal axes: T 1.3675, Plg25.0839°, Azm118.4584°; N 0.6736, Plg56.7399°, Azm342.9230°; P -2.0410, Plg20.3610°, Azm218.4625°; Moment Tensor Solution. Moment tensor: Scale 10^{16} Nm; M_{rr}1.13; $M_{\theta\theta}$-0.09; $M_{\phi\phi}$-1.04; $M_{r\theta}$1.04; $M_{\theta\phi}$0.73; $M_{\phi r}$-0.70; Fault plane solution: $M_0$1.80997×10^{16} NP1:ϕ_s131.56426°, δ68.43232°, λ71.24939°. NP2:ϕ_s354.28569°, δ28.28195°, λ129.11901°. Principal axes: T 1.7484, Plg61.9612°,* *Azm12.6471°; N 0.1175, Plg17.3941°, Azm138.6773°; P -1.8659, Plg21.2701°, Azm235.6819°; confirmed*

*NEIC **30** 23:34:53.5±1.8, 14.°36N±0.°05×92.°95W±0.°04, h10^{km}±1^{km}, mb4.8/573, Mwr4.8/12, Md4.9/112(MEX) Error ellipse: s-maj=8.3km s-min=6.1km az=166.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-1.75; $M_{\theta\theta}$1.49; $M_{\phi\phi}$0.26; $M_{r\theta}$0.28; $M_{\theta\phi}$0.78; $M_{\phi r}$-0.12; Fault plane solution: $M_0$1.83000×10^{16} NP1:ϕ_s56.24000°, δ42.43000°, λ-101.62000°. NP2:ϕ_s251.80000°, δ48.64000°, λ-79.57000°. Principal axes: T 1.8760, Plg3.0000°, Azm334.0000°; N -0.0864, Plg8.0000°, Azm65.0000°; P -1.7896, Plg82.0000°, Azm223.0000°;*

*NEIC **30** 23:34:53.5, 14.°35N×92.°87W, h10^{km}*

*GCG **30** 23:34:54.4±1.6, 14.°24N×93.°01W, h35^{km}±999^{km}, MD4.7, ML5.0*

*MEX **30** 23:34:55.0±0.8, 14.°27N×93.°09W, h11^{km}±15^{km}, MD4.9*

*GCMT **30** 23:34:56.5±0.3, 14.°43N±0.°01×93.°06W±0.°02, h23^{km}, MW5.0/92, Moment Tensor Solution. s62,c90; s92,c131; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.08±.14; $M_{\theta\theta}$-2.93±.09; $M_{\phi\phi}$-0.15±.09; $M_{r\theta}$1.37±.11; $M_{\theta\phi}$0.75±.06; $M_{\phi r}$-1.34±.14; Best double couple: $M_0$3.64100×10^{16} NP1:ϕ_s271.00000°, δ32.00000°, λ66.00000°. NP2: ϕ_s119.00000°, δ61.00000°, λ105.00000°. Principal axes: T 3.7320, Plg70.0000°, Azm61.0000°; N -0.1820, Plg13.0000°, Azm292.0000°; P -3.5500, Plg15.0000°, Azm198.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 23:34:54.4±1.6**, 14.°31N**±0.°04×**92.°97W**±0.°04**, h29**^{km}±11^{km}**, n1010, σ1.°76**/951**, mb4.8**/264**, MS4.2**/41**, 2C-4D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.90	49		Pn	23 35 10.7	-0.5
THIG					Sn	23 35 23.4	+0.2
THIG		0.90	49	eP	Pn	23 35 10.8	-0.4
THIG				eS	Sn	23 35 23.5	+0.2
THIG		0.90	49	i P	Pn	23 35 10.8	-0.4
THIG				i S	Sn	23 35 23.9	+0.7
SMCA	Catarina	1.02	58	i P	Pn	23 35 12.8	0.0
SMCA				IAML		23 35 34.5	
	comp=E,11µm,0.5s						
PATR	El Naranjo	1.07	42	eP	Pn	23 35 12.8	-1.0
PATR				eS	Sn	23 35 28.9	+1.1
PAVE	Pavencul	1.16	41	eP	Pn	23 35 14.3	-0.7
PAVE				eS	Sn	23 35 28.6	-1.5
RTAL	Retalhuleu	1.25	80		Pn	23 35 16.4	+0.4
RTAL	Retalhuleu	1.25	80	eP	Pn	23 35 16.3	+0.3
RTAL				eS	Sn	23 35 33.4	+1.4
RTAL	Retalhuleu	1.25	80	⇓P	Pn	23 35 16.3	+0.3
PCIG		1.40	350		Pn	23 35 16.1	-2.0
PCIG					Sn	23 35 30.9	-4.7
PCIG		1.40	350	eP	Pn	23 35 16.1	-2.0
PCIG				eS	Sn	23 35 33.5	-2.2
STG8	El Palmar, Qui	1.57	85	i P	Pn	23 35 18.1	-2.5
STG8				IAML		23 35 45.4	
	comp=N,17µm,0.3s						
STG0	El Palmar, Qui	1.58	86	i P	Pn	23 35 18.3	-2.4
STG0				i S	Sn	23 35 38.0	-2.3
STG0				IAML		23 35 45.7	
	comp=N,26µm,0.3s						
SOKI	Kika Raxquin	1.60	71	i P	Pn	23 35 22.3	+1.2
HUEH	Huehuetenango	1.73	55	Pn	Pn	23 35 24.0	+1.1
HUEH	Huehuetenango	1.73	55	eP	Pn	23 35 24.3	+1.4
HUEH				eS	Sb	23 35 47.6	+0.3
HUEH	Huehuetenango	1.73	55	i P	Pn	23 35 24.7	+1.8
HUEH				i S	Sb	23 35 47.6	+0.3
HUEH				IAML		23 35 56.5	
	comp=E,34µm,0.6s						
HUEH	Huehuetenango	1.73	55	⇓P	Pn	23 35 24.4	+1.5
ESSG	Sabana Grande	2.08	88	i P	Pn	23 35 27.7	+0.2
ESSG				i S	Sn	23 35 54.7	+2.3
ESSG				IAML		23 36 05.9	
	comp=E,6µm,0.6s						
CCIG	Comitan	2.12	22	Pn	Pn	23 35 29.5	+1.4
CCIG	Comitan	2.12	22	eP	Pn	23 35 29.8	+1.8
CCIG				eS	Sb	23 35 57.3	-0.8
CCIG	Comitan	2.12	22	i P	Pn	23 35 30.0	+1.9
CCIG				IAML		23 36 05.9	
	comp=N,8µm,0.4s						
CCIG	Comitan	2.12	22	⇓P	Pn	23 35 29.9	+1.8
GCG4	OSOP	2.38	83	i P	Pn	23 35 33.4	+1.8
FG16	Alotenango, Sa	2.38	91	i P	Pn	23 35 27.6	-4.2
FG16				i S	Sn	23 35 54.9	-5.3
FG16				IAML		23 36 06.0	
	comp=N,31µm,0.3s						
TGBT	Tuxtla Gutierr	2.45	357		Pn	23 35 33.5	+1.0
TGBT					Sn	23 36 01.9	+0.4
TGBT	Tuxtla Gutierr	2.45	357	eP	Pn	23 35 33.5	+1.0
TGBT				eS	Sn	23 36 01.9	+0.4
TGIG		2.45	357		Pn	23 35 33.2	+0.6
TGIG					Sn	23 35 59.3	-2.4
TGIG		2.45	357	eP	Pn	23 35 33.2	+0.6
TGIG				eS	Sn	23 35 59.3	-2.4
TGIG		2.45	357	i P	Pn	23 35 33.4	+0.8
TGIG				i S	Sn	23 36 02.9	+1.2
TGIG				IAML		23 36 19.5	
	comp=N,5µm,0.8s						
FAME	Alcaldia de Sa	2.91	99	P	Pn	23 35 38.8	0.0
SLOZ	Alcaldia de Sa	3.10	95	⇑P	Pn	23 35 42.8	+1.3
LOAL	Lomas de Alarc	3.11	95	P	Pn	23 35 42.8	+1.2
NUBE	Las Nubes	3.12	97	i P	Pn	23 35 43.0	+1.1
NUBE				i S	Sn	23 36 19.8	+1.4
NUBE	Las Nubes	3.12	97	P	Pn	23 35 42.5	+0.6
CEVE	Cerro Verde	3.28	98	P	Pn	23 35 45.7	+1.5
CMIG	Matias Romero	3.32	327		Pn	23 35 43.4	-1.1
CMIG					Sn	23 36 20.8	-2.2
CMIG	Matias Romero	3.32	327	Pn	Pn	23 35 44.2	-0.3
	comp=N,49nm,0.3s,baz=148,slow=12,SNR=280						
CMIG				Sn	Sn	23 36 23.2	+0.2
	comp=N,134nm,0.3s,baz=123,slow=15,SNR=8.8						
	comp=N,172nm,0.5s						
CMIG	Matias Romero	3.32	327	eP	Pn	23 35 43.6	-0.9
CMIG				eS	Sn	23 36 20.8	-2.2
HUIG	Huatulco	3.36	296		Pn	23 35 43.2	-1.8
HUIG					Sn	23 36 15.9	-8.1
HUIG	Huatulco	3.36	296	eP	Pn	23 35 43.9	-1.2
HUIG				eS	Sn	23 36 15.9	-8.1
HUIG	Huatulco	3.36	296	i P	Pn	23 35 44.4	-0.7
JAYA	Jayaque - finc	3.48	100	i P	Pn	23 35 47.7	+0.9
JAYA				i S	Sn	23 36 26.5	-0.7
JAYA	Jayaque - finc	3.48	100	P	Pn	23 35 47.5	+0.7
MTO3	Montecristo	3.50	88		Pn	23 35 47.3	+0.1
MTO3	Montecristo	3.50	88	i P	Pn	23 35 48.1	+0.9
MTO3	Montecristo	3.50	88	P	Pn	23 35 48.0	+0.9
MTO3	Montecristo	3.50	88	S	Sb	23 36 35.3	-2.7
ESQI	Esquipulas	3.52	86		Pn	23 35 48.2	+0.9
ESQI	Esquipulas	3.52	86	P	Pn	23 35 49.6	+2.2
ESQI	Esquipulas	3.52	86	S	Sb	23 36 36.7	-2.0
PMON	Piamonte	3.60	99	P	Pn	23 35 49.3	+0.9
PMON	Piamonte	3.60	99	S	Sn	23 36 35.2	+5.1
LALI	Alcalda de L	3.64	103	i P	Pn	23 35 48.1	-0.7
LALI				i S	Sn	23 36 31.8	+1.0
VHSA	Villahermosa	3.65	0	eP	Pn	23 35 50.2	+1.2
VHSA				eS	Sn	23 36 34.9	+3.8
LOMA	Loma Larga	3.75	100	S	Sn	23 36 35.3	+1.6
LOMA	Loma Larga	3.75	100	P	Pn	23 35 52.0	+1.6
TUIG	Tuzandepetl	3.95	340	eP	Pn	23 35 53.4	+0.2
TUIG				eS	Sn	23 36 32.5	-6.1
PETF	Flores	3.95	49	Pn	Pn	23 35 54.8	+1.6
PETF	Flores	3.95	49	eP	Pn	23 35 54.8	+1.6
PETF				eS	Sn	23 36 43.4	+4.8
PETF	Flores	3.95	49	i P	Pn	23 35 54.9	+1.6
PETF	Flores	3.95	49	⇑P	Pn	23 35 54.9	+1.7
MIHL	Minatitlan	3.96	338	eP	Pn	23 35 55.1	+1.9
MIHL				eS	Sn	23 36 41.7	+3.1
COEG	Centro de Oper	4.03	99	P	Pn	23 35 56.3	+2.0
COEG	Centro de Oper	4.03	99	S	Sn	23 36 44.0	+3.4
NEUV	Arroyo Zacate	4.34	322	eP	Pn	23 35 56.5	-2.0
NEUV				eS	Sn	23 36 44.6	-3.5
PEIG	Puerto Escondi	4.37	293		Pn	23 35 58.0	-0.9
PEIG					Sn	23 36 41.6	-7.3
PEIG	Puerto Escondi	4.37	293	eP	Pn	23 35 58.3	-0.7
PEIG				eS	Sn	23 36 41.6	-7.3
OXLC	Oaxaca	4.52	308	eS	Sn	23 36 51.2	-1.7
OXBJ	Oaxaca	4.54	308		Sn	23 36 49.5	-3.8
OXBJ	Oaxaca	4.54	308	eS	Sn	23 36 49.5	-3.8
OXIG	Oaxaca	4.54	308		Pn	23 36 02.5	+1.0
OXIG					Sn	23 36 48.4	-5.1
VHO	Vista Hermosa	4.54	308	eP	Pn	23 36 02.5	+1.0
VHO				eS	Sn	23 36 48.4	-5.1
PACA	Pacayal	4.59	100	P	Pn	23 36 03.8	+1.7
PACA	Pacayal	4.59	100	S	Sn	23 37 02.5	+8.0
SCIG	Sabancuy	4.93	20	eP	Pn	23 36 07.3	+0.6
SCIG				eS	Sn	23 37 00.9	-1.8
SCIG	Sabancuy	4.93	20	i P	Pn	23 36 07.3	+0.6
YOIG	Yosondua	5.08	300		Pn	23 36 11.7	+2.8
YOIG					Sn	23 37 04.3	-2.6
YOIG	Yosondua	5.08	300	eP	Pn	23 36 08.9	-0.1
YOIG				eS	Sn	23 37 04.3	-2.6
CNCH	Conchagua	5.09	101	P	Pn	23 36 10.8	+1.8
PNIG	Pinotepa	5.39	293		Pn	23 36 12.9	0.0
PNIG					Sn	23 37 04.5	-10
PNIG	Pinotepa	5.39	293	eP	Pn	23 36 12.6	-0.4
PNIG				eS	Sn	23 37 04.5	-10
TOIG	Toxpalan	5.44	314		Pn	23 36 14.2	+0.4
TOIG					Sn	23 37 11.2	-4.3
TOIG	Toxpalan	5.44	314	eP	Pn	23 36 14.2	+0.4
TOIG				eS	Sn	23 37 11.2	-4.3
TXIG	Tlaxiaco	5.46	303		Pn	23 36 16.0	+1.7
TXIG					Sn	23 37 12.5	-3.9
TXIG	Tlaxiaco	5.46	303	eP	Pn	23 36 14.6	+0.4
TXIG				eS	Sn	23 37 12.5	-3.9
POTN	Potosi Cosigui	5.47	103	P	Pn	23 36 15.1	+1.1
TGUH	Tegucigalpa,Un	5.53	92		Pn	23 36 15.6	+0.6
TGUH	Tegucigalpa,Un	5.53	92	P	Pn	23 36 15.9	+0.9
	comp=N,3µmcomp=N,443nm,0.7s						
HLIG	Huajuapan de L	5.81	308		Pn	23 36 21.3	+2.4
HLIG					Sn	23 37 19.9	-4.9
HLIG	Huajuapan de L	5.81	308	eP	Pn	23 36 21.3	+2.4
HLIG				eS	Sn	23 37 19.9	-4.9
TPIG	Tehuac#an	5.87	315		Pn	23 36 19.5	-0.1
TPIG					Sn	23 37 27.2	+1.1
TPIG	Tehuac#an	5.87	315	eP	Pn	23 36 19.5	-0.1
TPIG				eS	Sn	23 37 27.2	+1.1
CRIN	San Cristobal	5.98	105		Pn	23 36 21.8	+0.7
CRIN	San Cristobal	5.98	105	P	Pn	23 36 19.1	-2.0
	comp=N,7µmcomp=N,602nm,0.6s						
PKGN	Cerro Pekin	6.05	105	P	Pn	23 36 23.0	+0.9
FTIG	Fresnillo de T	6.11	306		Pn	23 36 25.9	+2.9
FTIG					Sn	23 37 26.3	-5.8
FTIG	Fresnillo de T	6.11	306	eP	Pn	23 36 25.9	+2.9
FTIG				eS	Sn	23 37 26.3	-5.8
MGIG	Malinaltepec	6.18	299		Pn	23 36 25.5	+1.6
MGIG					Sn	23 37 22.8	-11
MGIG	Malinaltepec	6.18	299	eP	Pn	23 36 25.5	+1.6
MGIG				eS	Sn	23 37 22.8	-11
HERN	Volcan Telica	6.21	105		Pn	23 36 26.3	+2.0
JAUV	Jalcomulco	6.22	324	eP	Pn	23 36 22.3	-2.1
JAUV				eS	Sn	23 37 32.2	-2.5
POHV	Veracruz	6.28	319		Pn	23 36 25.6	0.0
POHV					Sn	23 37 33.6	-3.1
POHV	Veracruz	6.28	319	eP	Pn	23 36 25.6	0.0
POHV				eS	Sn	23 37 33.6	-3.1
TLIG	Tlapa	6.28	302		Pn	23 36 26.8	+1.5
TLIG	Tlapa	6.28	302	eP	Pn	23 36 27.6	+2.3
TLIG				eS	Sn	23 37 30.7	-5.5
LVIG	Laguna Verde	6.31	329	eP	Pn	23 36 22.1	-3.5
LVIG				eS	Sn	23 37 30.4	-6.4
CNGN	Cerro Negro	6.36	106		Pn	23 36 27.0	+0.6
CNGN	Cerro Negro	6.36	106	P	Pn	23 36 27.3	+0.9
	comp=N,32µmcomp=N,3µm,1.1s						
CRIG	Cruz Grande	6.41	293		Pn	23 36 27.2	+0.3
CRIG					Sn	23 37 31.4	-7.8
CRIG	Cruz Grande	6.41	293	eP	Pn	23 36 27.2	+0.3
CRIG				eS	Sn	23 37 31.4	-7.8
MOMN	Momotombo	6.54	106	P	Pn	23 36 30.1	+1.3
COPN	Copaltepe	6.56	108	P	Pn	23 36 28.2	-0.8
RCVN	Varillal2	6.62	95	⇓P	Pn	23 36 31.5	+1.6
MGAN	Managua	6.89	107	Pn	Pn	23 36 32.2	-1.4
MGAN	Managua	6.89	107	P	Pn	23 36 38.6	+5.0
	comp=N,318nm,1.0s						
CRUN	El Crucero	6.90	109	P	Pn	23 36 31.7	-2.0
DAIG	Los Arroyos	6.97	294		Pn	23 36 33.7	-1.0
DAIG					Sn	23 37 48.6	-4.5
DAIG	Los Arroyos	6.97	294	eP	Pn	23 36 33.7	-1.0
DAIG				eS	Sn	23 37 48.6	-4.5
PBCV	Popocatepetl	7.09	312	eP	Pn	23 36 41.6	+5.0
PBCV				eS	Sn	23 38 01.3	+4.9
PBXN	Popocatepetl	7.17	311	eP	Pn	23 36 40.9	+3.0
PBXN				eS	Sn	23 37 55.4	-3.4
PPM	Popocatepetl	7.19	312	eP	Pn	23 36 41.3	+3.1
PPM				eS	Sn	23 37 56.7	-2.5
PPIG	Popocatepetl	7.19	312		Pn	23 36 41.3	+3.1
PPIG					Sn	23 37 56.7	-2.5
MYIG	Merida	7.29	25	eP	Pn	23 36 39.2	+0.1
MYIG				eS	Sn	23 37 59.3	-1.6
CXUV	Coxquihui	7.31	324	eP	Pn	23 36 38.0	-1.3
CXUV				eS	Sn	23 37 57.1	-4.3
MEIG	Mezcala	7.33	300		Pn	23 36 40.8	+1.1
MEIG					Sn	23 37 56.8	-5.2
MEIG	Mezcala	7.33	300	eP	Pn	23 36 40.8	+1.1
MEIG				eS	Sn	23 37 56.8	-5.2
BOAB	BOACO BROADBAN	7.34	104		Pn	23 36 39.6	-0.3
AMVM	AMECAMECA	7.35	311	eP	Pn	23 36 42.3	+2.1
AMVM				eS	Sn	23 38 06.0	+3.2
YAIG	Yautepec	7.39	309		Pn	23 36 43.7	+3.1
YAIG					Sn	23 37 56.8	-6.7
YAIG	Yautepec	7.39	309	eP	Pn	23 36 43.7	+3.1
YAIG				eS	Sn	23 37 56.8	-6.7
TEIG	Tepich	7.39	37		Pn	23 36 39.9	-0.5
TEIG	Tepich	7.39	37	P	Pn	23 36 39.9	-0.5
	comp=N,7µmcomp=N,22µmcomp=N,2µm,0.5s						
PLIG	Platanillo	7.47	304		Pn	23 36 44.2	+2.6
PLIG					Sn	23 38 04.3	-1.1
PLIG	Platanillo	7.47	304	eP	Pn	23 36 44.2	+2.6
PLIG				eS	Sn	23 38 04.3	-1.1
CAIG	El Cayaco	7.54	292		Pn	23 36 43.0	+0.6
CAIG					Sn	23 37 59.5	-7.4
CAIG	El Cayaco	7.54	292	eP	Pn	23 36 43.0	+0.6
CAIG				eS	Sn	23 37 59.5	-7.4
MPVM	San Francisco	7.56	311	eP	Pn	23 36 46.9	+4.0
MPVM				eS	Sn	23 38 10.5	+2.8
THVM	De Xico	7.60	312	eP	Pn	23 36 42.3	-1.3
THVM				eS	Sn	23 38 00.0	-8.9
TXVM	Universitario	7.64	313	eS	Sn	23 38 02.0	-7.8
TLVM	San Miguel Top	7.67	310	eP	Pn	23 36 43.9	-0.7
TLVM				eS	Sn	23 38 09.4	-1.2
COVM	Coyoacan	7.76	311	eS	Sn	23 38 08.6	-4.1
PBVM	Pinon	7.76	312	eS	Sn	23 38 10.6	-1.8
VTVM	Tizayuca	7.76	315		Pn	23 36 46.5	+0.7
VTVM					Sn	23 38 11.8	-1.1
VTVM	Tizayuca	7.76	315	eP	Pn	23 36 46.5	+0.7
VTVM				eS	Sn	23 38 11.8	-1.1
MAVM	Malinalco, Edo	7.77	307		Pn	23 36 49.3	+3.4
MAVM					Sn	23 38 11.1	-2.0
MAVM	Malinalco, Edo	7.77	307	eP	Pn	23 36 49.3	+3.4
MAVM				eS	Sn	23 38 11.1	-2.0
BJVM	Benito Juarez	7.78	311	eS	Sn	23 38 06.0	-7.4
AOVM	Tlapan	7.83	310		Pn	23 36 50.7	+3.9
AOVM					Sn	23 38 10.2	-4.6
AOVM	Tlapan	7.83	310	eP	Pn	23 36 50.7	+3.9
AOVM				eS	Sn	23 38 10.2	-4.6
MHVM	Bosque de Chap	7.83	311	eP	Pn	23 36 54.2	+7.5
MHVM				eS	Sn	23 38 08.6	-6.0
CJVM	Cuajimalpa	7.86	311	eP	Pn	23 36 43.6	-3.5
CJVM				eS	Sn	23 38 07.1	-8.1
INVM	La Marquesa	7.89	310	eP	Pn	23 36 51.3	+3.7
INVM				eS	Sn	23 38 17.4	+1.2
ACON	Acoyapa	7.94	106		Pn	23 36 49.3	+1.2
ACON	Acoyapa	7.94	106	P	Pn	23 36 44.7	-3.3
	comp=N,788nmcomp=N,91nm,1.1s						
ARIG	Puente Sto Nin	8.11	300		Pn	23 36 53.0	+2.7
ARIG					Sn	23 38 18.4	-2.6
ARIG	Puente Sto Nin	8.11	300	eP	Pn	23 36 53.0	+2.7
ARIG				eS	Sn	23 38 18.4	-2.6
DHIG	Demacu	8.30	317		Pn	23 36 56.3	+3.1
DHIG					Sn	23 38 32.9	+6.6
DEIG	Demacu	8.31	317	eP	Pn	23 36 56.3	+3.1
DEIG				eS	Sn	23 38 32.9	+6.6
ATVM	ATLACOMULCO	8.52	310	eS	Sn	23 38 25.2	-6.3
ACIG	Acambay	8.68	311	eS	Sn	23 38 39.9	+4.5
ESPN	Las Esperanzas	8.70	103		Pn	23 36 59.2	+0.8
CTUV	Llano Grande	8.77	325	eP	Pn	23 37 00.3	+0.9
CTUV				eS	Sn	23 38 34.6	-2.7
JTS	Las Juntas de	8.79	116	Pn	Pn	23 37 02.1	+2.4
	comp=N,2.3nm,0.3s,baz=290,slow=18,SNR=5.4						
JTS				Sn	Sn	23 38 35.4	-2.6
	baz=310,slow=12						
JTS	Las Juntas de	8.79	116	P	Pn	23 37 04.3	+4.5
	comp=N,707nmcomp=N,87nm,0.8s						
ZIIG	Zihuatanejo	8.80	293		Pn	23 37 00.7	+0.9
ZIIG					Sn	23 38 35.5	-2.5
ZIIG	Zihuatanejo	8.80	293	eP	Pn	23 37 00.7	+0.9
ZIIG				eS	Sn	23 38 35.5	-2.5
MOIG	Morelia	9.50	305		Pn	23 37 12.8	+3.2
MOIG	Morelia	9.50	305	eP	Pn	23 37 10.8	+1.2
MOIG				eS	Sn	23 38 50.3	-5.3
JRQG	Juriquilla Cam	9.55	313		Pn	23 37 12.6	+2.2
HDC	Heredia	9.66	115	Pn	Pn	23 37 12.2	+0.4
LCR2	La Lucha 2	9.88	116		Pn	23 37 14.8	+0.1
RPIG	Rio Verde	10.05	319		Pn	23 37 21.4	+4.3
RPIG					Sn	23 39 01.4	-7.7
RPIG	Rio Verde	10.05	319	eP	Pn	23 37 21.4	+4.3
RPIG				eS	Sn	23 39 01.4	-7.7
GTIG	Gomez Farias	10.50	327		Pn	23 37 25.2	+2.1
GTIG					Sn	23 39 20.1	+0.3
GTIG	Gomez Farias	10.50	327	eP	Pn	23 37 25.2	+2.1
GTIG				eS	Sn	23 39 20.1	+0.3
INCO	Volcan de Coli	11.42	298	eP	Pn	23 37 41.1	+5.1
INCO				eS	Sn	23 39 42.0	-0.9
SOMAC	Volcano de Col	11.44	298	eP	Pn	23 37 40.5	+4.2
SOMAC				eS	Sn	23 39 43.2	-0.1
BRU2	Volcan	11.47	117		Pn	23 37 36.5	0.0
CDAR	Ciudad de Arme	11.54	295	eP	Pn	23 37 40.7	+3.4
CDAR				eS	Sn	23 39 46.3	+1.1
CEGR	Campo Tres	11.58	297	eP	Pn	23 37 41.8	+3.8
CEGR				eS	Sn	23 39 44.8	-1.7
AAIG	Aguscalientes	11.74	312	eP	Pn	23 37 38.7	-1.6
LNIG	Linares	12.18	331	eP	Pn	23 37 47.6	+1.6
LNIG				eS	Sn	23 39 56.2	-4.6
CIHU	Emiliano Zapat	12.29	295	eP	Pn	23 37 49.4	+1.7
CIHU				eS	Sn	23 39 59.6	-4.2
ZAIG	Zacatecas	12.39	314		Pn	23 37 50.8	+1.6
ZAIG	Zacatecas	12.39	314	eP	Pn	23 37 48.5	-0.7
MNIG	Monterrey	13.17	330	eP	P	23 38 05.3	-4.1
CAMR	Camarioca	14.01	50		Pn	23 38 11.0	0.0
AZU	Azuero	14.04	116	P	P	23 38 19.5	+0.5
	comp=N,33nm,1.0s						
735A	Kenedy	15.15	344	Pn	Pn	23 38 26.7	+0.2
735A				IAmb	IAmb	23 38 33.7	
	comp=Z,45nm,1.0s						
833A	Chaparral WMA,	15.16	338		Pn	23 38 26.7	0.0
833A				IAmb	IAmb	23 38 29.1	
	comp=Z,20nm,0.8s						
MTDJ	Mount Denham	15.32	73	P	Pn	23 38 30.5	+1.6
	comp=Z,93nm,1.1s						
PDIG	Papasquiaro	15.82	314	eP	P	23 38 41.0	+2.0
MLDN	Muldoon	15.85	347	Pn	Pn	23 38 36.2	+0.5
MLDN				IAmb	IAmb	23 38 40.4	
	comp=Z,93nm,1.2s						
061Z	Ochoppi	16.12	43		Pn	23 38 38.0	-1.1
HNDO	Hondo	16.23	340		Pn	23 38 40.8	+0.3
HNDO				IAmb	IAmb	23 38 46.3	
	comp=Z,99nm,1.9s						
441A	DeRidder	16.36	359		Pn	23 38 42.0	0.0
441A				IAmb	IAmb	23 38 45.7	
	comp=Z,122nm,1.3s						
DRIO	Del Rio	16.62	336		Pn	23 38 46.2	+0.8
CHIV	Chivirico	16.79	68	Pn	Pn	23 38 47.5	-0.1
CHIV				IAmb	IAmb	23 38 55.0	
	comp=Z,30nm,0.9s						
435B	Jarrell	16.93	346		Pn	23 38 49.4	+0.1
HPIG		17.27	319	P	P	23 38 54.6	-0.4
HPIG		17.27	319	eP	Pn	23 38 52.8	-1.0
JCT	Junction City	17.28	340		Pn	23 38 54.0	+0.3
060A	Indiantown	17.28	41		Pn	23 38 53.2	-0.5
346A	Big Creek Wild	17.30	10	Pn	Pn	23 38 53.5	-0.4
DWPF	Disney Wildern	17.42	36		Pn	23 38 54.3	-1.1
DWPF				IAmb	IAmb	23 38 59.9	
	comp=Z,54nm,0.8s						
NATX	Nacogdoches	17.43	355		Pn	23 38 54.3	-1.2
451A	Vernon	17.53	21	Pn	Pn	23 38 56.8	0.0
451A				IAmb	IAmb	23 39 03.4	
	comp=Z,180nm,1.8s						
BRAL	Brewton	17.63	17	P	Pn	23 38 58.1	+0.1
553A	Crawfordville	17.65	25		Pn	23 38 56.4	-1.8
553A				IAmb	IAmb	23 39 00.4	
	comp=Z,41nm,0.8s						
SAND	Sanderson	17.71	333	P	P	23 39 00.0	+0.3
SAND				IAmb	IAmb	23 39 05.2	
	comp=Z,60nm,0.8s						
H06E1	SOCORRO T-PHAS	17.77	287	T	T	23 57 00.0	
	SNR=60						
BRDY	Brady	17.78	343	P	P	23 39 00.4	0.0
237A	Washetta, Mont	17.80	352		Pn	23 39 00.1	+0.1
656A	Willston	17.82	31	P	Pn	23 39 00.4	+0.1
656A				IAmb	IAmb	23 39 05.7	
	comp=Z,163nm,1.5s						
TXAR	Lajitas Array	17.93	328	P	P	23 39 03.4	+1.2
TXAR	Lajitas Array	17.93	328	P	P	23 39 03.7	+1.5
	comp=Z,0.4nm,0.3s,baz=153,slow=11,SNR=60						
TXAR				PcP	PcP	23 43 37.1	+0.1
	comp=Z,0.4nm,0.8s,baz=198,slow=2.0,SNR=2.9						
TXAR				LR	LR	23 46 59.4	
	comp=Z,216nm,18.9s,baz=127,slow=40						
	comp=Z,16nm,0.8s						
TX31	Lajitas Ar. Si	17.93	328	P	P	23 39 03.6	+1.4
GTBY	Guantanamo Bay	17.95	69	P	Pn	23 38 59.7	-2.4
	comp=Z,45nm,1.1s						
VBMS	Vicksburg	17.96	7		Pn	23 39 01.4	-0.7
DBBC	Dabeiba	17.99	112	P	P	23 39 03.8	+0.9
WHTX	Lake Whitney,	18.07	348		P	23 39 04.2	+0.5
OZNA	Ozona	18.15	337	P	P	23 39 05.2	+0.6
NMDO	Nuevo Mundo	18.24	68	Pn	P	23 39 04.1	-1.5
NMDO				IAmb	IAmb	23 39 11.9	
	comp=Z,39nm,1.4s						
UREC	San Jos de Ur	18.31	109	P	Pn	23 39 07.7	+1.2
	comp=Z,8.7nm,1.1s						
143A	Socs Landing,	18.36	4	P	P	23 39 07.1	+0.3
FW13	Cleburne	18.41	348	P	P	23 39 07.5	+0.1
FW16	Waxahatchie	18.44	349	P	P	23 39 07.6	-0.1
FW16				IAmb	IAmb	23 39 14.6	
	comp=Z,38nm,0.8s						
TREL	Terrell	18.55	352	P	Pn	23 39 09.8	+0.5
TREL				IAmb	IAmb	23 39 19.9	
	comp=Z,34nm,0.8s						
146A	Union	18.59	10	P	Pn	23 39 10.1	+0.3
250A	Grady	18.62	18	P	P	23 39 10.0	+0.3
250A				IAmb	IAmb	23 39 17.0	
	comp=Z,165nm,1.6s						
CBOC	Ciudad Bolivar	18.68	115	P	Pn	23 39 13.0	+1.9
	comp=Z,37nm,1.1s						
ALPN	Alpine	18.76	330	P	Pn	23 39 13.6	+1.5
FW07	Weatherford	18.82	347	P	Pn	23 39 13.4	+0.7
Z41A	Richland Creek	18.86	0	P	Pn	23 39 13.4	+0.4
Z41A				IAmb	IAmb	23 39 18.0	
	comp=Z,141nm,1.3s						
PLMC	San Jos del P	18.91	118	P	P	23 39 10.7	-2.4
	comp=Z,3µmcomp=Z,46nm,1.2s						
Z38A	Mt. Pleasant	18.95	355	P	Pn	23 39 14.8	+0.7
HELC	Santa Helena	18.95	113	P	P	23 39 10.7	-3.2
	comp=Z,18nm,1.0s						
ZARC	Zaragoza, Cauc	19.02	109	P	P	23 39 12.3	-2.0
	comp=Z,22nm,0.9s						
LPIG	La Paz	19.03	303	LR	LR	23 46 55.9	
	comp=Z,536nm,18.1s,baz=158,slow=38						
FW06	Azle	19.04	348	P	Pn	23 39 16.6	+1.4
TIGA	Tifton	19.09	25	IAmb	IAmb	23 39 17.2	
	comp=Z,53nm,0.9s						
MNHN	Monahans	19.18	334	P	Pn	23 39 17.8	+0.8
456A	Hilliard	19.19	30	P	P	23 39 15.2	-0.8
456A				IAmb	IAmb	23 39 22.6	
	comp=Z,32nm,0.8s						
FW03	Perrin-Whitt E	19.21	347	P	Pn	23 39 17.2	-0.1
ABTX	Abilene, Hawle	19.22	343	P	Pn	23 39 18.1	+0.7
ABTX				IAmb	IAmb	23 39 24.5	
	comp=Z,32nm,0.5s						
WLAR	White Oak Lake	19.29	360	IAmb	IAmb	23 39 22.9	
	comp=Z,39nm,0.8s						
Z47A	Carrollton	19.32	13	P	Pn	23 39 19.0	+0.4
Z47A				IAmb	IAmb	23 39 24.5	
	comp=Z,38nm,1.0s						
Z35A	Perchaven, San	19.33	349	P	Pn	23 39 19.0	+0.3
Z35A				IAmb	IAmb	23 39 26.1	
	comp=Z,37nm,0.7s						
YOTC	Yotoco, Valle	19.34	120	P	P	23 39 18.2	+0.3
	comp=Z,16nm,0.7s						
JAMC	Jamundi, Valle	19.50	123	P	P	23 39 20.7	+1.0
	comp=Z,7.7nm,0.5s						
GUY2C	Guyana, Caldas	19.54	116	P	Pn	23 39 21.7	-0.2

	comp=Z,648nmcomp=Z,63nm,1.2s						
CCAR	Cane Creek	19.55	3	P	Pn	23 39 21.1	-0.2
CCAR				IAmb	IAmb	23 39 24.1	
	comp=Z,70nm,1.2s						
PECS	Pecos	19.70	331	P	Pn	23 39 23.1	-0.2
Y45A	Yeager Farm, C	19.71	8	P	P	23 39 21.9	+0.2
Y45A				IAmb	IAmb	23 39 28.8	
	comp=Z,104nm,1.5s						
BBAC	Balboa, Cauca	19.76	127	P	Pn	23 39 23.9	-0.3
	comp=Z,18nm,0.9s						
PTBC	PUERTO BERRIO,	19.77	111	P	P	23 39 21.3	-1.1
	comp=Z,154nmcomp=Z,20nm,0.9s						
ODSA	Odessa	19.77	335	IAmb	IAmb	23 39 26.8	
	comp=Z,56nm,0.7s						
VHRN	Van Horn	19.77	328	P	Pn	23 39 23.9	-0.2
NORC	Norcasia	19.82	114	P	P	23 39 23.5	+0.4
	comp=Z,26nm,1.0s						
SN05	Snyder 5	19.84	340	P	Pn	23 39 24.5	-0.3
SN05				IAmb	IAmb	23 39 30.4	
	comp=Z,50nm,0.7s						
ANIL	Santa Ana	19.87	118	P	Pn	23 39 26.2	+0.6
POPC	Popayan, Colom	19.89	125	P	P	23 39 25.2	+1.2
	comp=Z,368nmcomp=Z,32nm,1.0s						
SN07	Snyder 07	20.04	340	P	P	23 39 25.9	+0.7
SN07				IAmb	IAmb	23 39 27.9	
	comp=Z,38nm,0.5s						
OTAV	Otavalo	20.05	133	P	P	23 39 27.3	+1.3
OTAV	Otavalo	20.05	133	*e*P	Pn	23 39 28.6	+0.8
OTAV	Otavalo	20.05	133	P	P	23 39 26.0	0.0
	comp=Z,9.6nm,1.2s						
X40A	Basin Creek Fa	20.09	0	P	P	23 39 25.5	-0.2
MIAR	Mount Ida	20.15	359	IAmb	IAmb	23 39 33.9	
	comp=Z,60nm,0.9s						
POST	Post	20.22	339	P	P	23 39 27.8	+0.5
POST				IAmb	IAmb	23 39 30.9	
	comp=Z,56nm,1.1s						
BRJC	Barrancabermej	20.24	109	P	Pn	23 39 31.9	+2.2
	comp=Z,70nm,0.7s						
ORTC	Ortega, Tolima	20.30	119	P	Pn	23 39 30.4	0.0
	comp=Z,817nmcomp=Z,98nm,0.8s						
154A	Montrose	20.32	25	P	P	23 39 27.8	-0.5
154A				IAmb	IAmb	23 39 29.8	
	comp=Z,73nm,0.9s						
Y49A	Blount Mountai	20.35	16	P	P	23 39 28.5	-0.1
OXF	Oxford	20.37	8	P	Pn	23 39 30.2	-0.7
OXF				IAmb	IAmb	23 39 35.5	
	comp=Z,52nm,0.9s						
SPBC	San Pablo de B	20.49	113	P	P	23 39 30.4	0.0
	comp=Z,1µmcomp=Z,25nm,0.9s						
DKNS	Dickens	20.57	341	P	P	23 39 31.9	+0.7
ROSC	El Rosal	20.64	115	P	Pn	23 39 36.2	+1.5
	comp=Z,63nm,1.0s,baz=315,slow=8.6,SNR=22						
ROSC	El Rosal	20.64	115	P	P	23 39 33.5	+1.2
	comp=Z,949nmcomp=Z,86nm,1.2s						
X34A	Smith Ranch, M	20.67	349	P	Pn	23 39 34.4	-0.2
X34A				IAmb	IAmb	23 39 41.0	
	comp=Z,29nm,0.6s						
257A	Skidaway Islan	20.70	30	P	P	23 39 32.6	+0.3
257A				IAmb	IAmb	23 39 47.3	
	comp=Z,70nm,0.8s						
MNTX	Cornudas Mount	20.70	329	P	P	23 39 33.0	+0.5
PRAC	Prado	20.71	119	P	P	23 39 33.1	+0.4
	comp=Z,46nm,1.1s						
X48A	Hartselle	20.75	14		P	23 39 33.2	+0.2
GOGA	Godfrey	20.88	23	P	P	23 39 33.3	-1.0
BARC	Barichara	20.90	110	P	P	23 39 34.1	-0.9
CVER	Cruz Verde, Cu	21.01	116	P	P	23 39 40.6	+4.2
	comp=Z,144nm,1.0s						
PLAL	Pickwick Lake	21.05	11	P	P	23 39 37.8	+1.7
PIAT	Ana Tenorio	21.06	135	P	P	23 39 39.9	+3.0
	comp=Z,16nm,0.9s						
PAMC	Pamplona, Colo	21.07	107	P	P	23 39 36.9	-0.2
Y52A	Lilburn	21.07	21	IAmb	IAmb	23 39 50.3	
	comp=Z,96nm,1.3s						
FNO	Franklin	21.23	350	IAmb	IAmb	23 39 45.6	
	comp=Z,36nm,0.6s						
HBAR	Harrisburg	21.25	5	P	P	23 39 39.2	+0.9
HBAR				IAmb	IAmb	23 39 56.0	
	comp=Z,37nm,0.9s						
RUSC	La Rusia	21.27	111		P	23 39 40.3	+1.0
RUSC				IAmb	IAmb	23 39 46.1	
	comp=Z,74nm,0.9s						
RUSC	La Rusia	21.27	111	P	P	23 39 39.8	+0.5
	comp=Z,915nmcomp=Z,94nm,1.3s						
SDDR	Presa de Saban	21.28	74	P	P	23 39 38.8	-0.1
FLOC	Florencia	21.28	125	P	P	23 39 39.6	+0.7
FLOC				IAmb	IAmb	23 39 58.6	
	comp=Z,70nm,1.2s						
FLOC	Florencia	21.28	125	P	P	23 39 40.6	+1.7
	comp=Z,84nm,1.3s						
EPT	El Paso	21.34	327	P	P	23 39 39.8	+0.4
OKCSW	OKLAHOMA CITY	21.38	350	P	P	23 39 40.7	+1.0
URMC	La Uribe, Meta	21.39	119	P	P	23 39 41.2	+1.2
	comp=Z,1µmcomp=Z,46nm,0.8s						
X51A	Calhoun	21.45	19	P	P	23 39 41.6	+1.1
FCAR	Ozark Folk Cen	21.50	2	P	P	23 39 40.5	-0.5
COHC	Cochancay	21.51	140	P	P	23 39 43.0	+1.7
COHC	Cochancay	21.51	140	P	P	23 39 42.2	+0.9
	comp=Z,645nmcomp=Z,20nm,0.9s						
VILC	Villavicencio,	21.54	116	P	P	23 39 45.4	+3.7
	comp=Z,574nmcomp=Z,83nm,0.8s						
TUL3	Leonard	21.65	354	P	P	23 39 43.3	+0.6
DEOK	Depew	21.67	352	P	P	23 39 43.2	+0.4
GNAR	Gosnell	21.72	6	P	P	23 39 44.5	+1.1
GNAR				IAmb	IAmb	23 40 03.8	
	comp=Z,52nm,1.1s						
LCAR	Lake Charles	21.73	4	P	P	23 39 44.1	+0.7
SWET	Sewanee	21.76	16	IAmb	IAmb	23 39 56.9	
	comp=Z,40nm,1.3s						
OK029	Liberty Lake	21.77	350	P	P	23 39 43.9	+0.1
OK029				IAmb	IAmb	23 40 03.6	
	comp=Z,27nm,1.0s						
RLO	Rose Lookout	21.84	356	IAmb	IAmb	23 39 53.5	
	comp=Z,25nm,0.9s						
CSTR	Hydro, Custer	21.85	347	P	P	23 39 45.4	+0.5
OK052	Battle Ridge R	21.86	352	IAmb	IAmb	23 39 47.0	
	comp=Z,46nm,0.8s						
SC01	Santiago de lo	21.88	73	P	P	23 39 45.1	-0.1
SC01				IAmb	IAmb	23 40 05.7	
	comp=Z,80nm,1.1s						
PEBM	Pemiscott Bayo	21.89	7	P	P	23 39 46.4	+1.3
HHAR	Hobbs	21.89	358		PcP	23 43 44.2	+0.2
W50A	Signal Mountai	21.91	17	P	P	23 39 46.5	+1.0
LNXT	Lenox	21.92	8	P	P	23 39 46.8	+1.3
CSU	Charleston Sou	21.99	30	P	P	23 39 47.0	+0.8
QUOK	Quay	22.02	352	P	P	23 39 45.9	-0.7
QUOK				IAmb	IAmb	23 39 48.5	
	comp=Z,37nm,0.6s						
NHSC	New Hope	22.03	30	P	P	23 39 47.3	+0.6
V48A	Smith Brothers	22.04	13	P	P	23 39 47.3	+0.6
U38A	Gravette	22.07	357	P	P	23 39 47.3	+0.2
HODGE	Hodges	22.07	24	IAmb	IAmb	23 39 55.0	
	comp=Z,47nm,1.3s						
NZIG	Nacozari, Sono	22.11	319	*e*P	P	23 39 48.4	+0.7
SRIG	Santa Rosalia	22.14	309	P	P	23 39 49.3	+1.4
SRIG				IAmb	IAmb	23 39 54.0	
	comp=Z,28nm,1.0s						
HSIG		22.16	314	P	P	23 39 49.5	+1.2
HSIG		22.16	314	*e*P	P	23 39 49.9	+1.7
WVT	Waverly	22.21	11		P	23 39 47.4	-1.2
TAMC	Tame, Arauca	22.24	108	P	P	23 39 50.4	+1.2
	comp=Z,2µmcomp=Z,290nm,0.8s						
OK048	Pawnee Station	22.30	352	P	P	23 39 49.8	+0.3
OK048				IAmb	IAmb	23 39 51.4	
	comp=Z,42nm,0.9s						
OK051	E0350 and S346	22.37	352	P	P	23 39 49.7	-0.6
OK051				IAmb	IAmb	23 39 52.0	
	comp=Z,54nm,0.8s						
CPCT	Cooper Cave	22.38	18	P	P	23 39 49.8	-0.6
HICK	Hickman	22.39	8	P	P	23 39 50.6	+0.1
HICK				IAmb	IAmb	23 39 57.6	
	comp=Z,57nm,1.2s						
ELIS	Ellis County	22.42	346	P	P	23 39 51.4	+0.5
ELIS				IAmb	IAmb	23 39 54.7	
	comp=Z,56nm,1.2s						
MACC	Macarena, Meta	22.43	121	P	P	23 39 53.6	+2.4
	comp=Z,31nm,1.7s						
PARMO	Parma	22.44	7	P	P	23 39 51.5	+0.4
PARMO				IAmb	IAmb	23 40 14.3	
	comp=Z,31nm,0.6s						
PBMO	Poplar Bluff	22.49	5	IAmb	IAmb	23 40 09.2	
	comp=Z,18nm,0.8s						
CLTN	Cedars of Leba	22.49	14	P	P	23 39 51.4	-0.2
BG3	Lake Jocassee	22.49	22	P	P	23 39 51.4	-0.2
BG3				IAmb	IAmb	23 40 11.9	
	comp=Z,43nm,1.1s						
SDV	Santo Domingo	22.53	101	P	P	23 39 52.6	+0.2
SDV				IAmb	IAmb	23 39 55.4	
	comp=Z,28nm,0.6s						
SDV	Santo Domingo	22.53	101	LR	LR	23 49 23.4	
	comp=Z,427nm,20.7s,baz=283,slow=39						
SDV	Santo Domingo	22.53	101	*e*P	P	23 39 54.1	+1.7
CROK	Carrier	22.55	349	IAmb	IAmb	23 39 53.7	
	comp=Z,34nm,0.8s						
MCRA	Macar, Loja	22.61	144	P	P	23 39 52.8	-0.3
	comp=Z,8.7nm,2.0s						
319A	Douglas	22.63	321	P	P	23 39 54.8	+1.5
319A				IAmb	IAmb	23 40 16.9	
	comp=Z,86nm,1.4s						
OK038	West end E0370	22.67	348	P	P	23 39 53.6	+0.1
OK038				IAmb	IAmb	23 40 13.6	
	comp=Z,19nm,0.8s						
Y57A	Sumter	22.68	28	IAmb	IAmb	23 39 53.7	
	comp=Z,37nm,0.7s						
T35A	Sooner Cattle	22.73	353	IAmb	IAmb	23 40 12.1	
	comp=Z,31nm,0.8s						
PAULI	Pauline	22.77	24	IAmb	IAmb	23 40 03.3	
	comp=Z,26nm,1.0s						
TKL	Tuckaleechee C	22.80	20	P	P	23 39 54.2	-0.7
TKL				IAmb	IAmb	23 40 14.9	
	comp=Z,41nm,1.1s						
PTGC	Puerto Gaitan,	22.86	114	P	P	23 39 56.3	+0.5
GC02	Grant County #	22.87	350	P	P	23 39 55.4	-0.2
Y58A	Scranton	22.93	29	P	P	23 39 54.8	-1.4
Y58A				IAmb	IAmb	23 40 15.9	
	comp=Z,39nm,0.9s						
KAN13	South Haven SW	22.96	351	P	P	23 39 56.5	-0.1
KAN14	Manchester OK	22.99	350	P	P	23 39 55.9	-0.9
KAN14				IAmb	IAmb	23 39 57.7	
	comp=Z,61nm,1.6s						
U49A	Red Boiling Sp	23.02	15	P	P	23 39 56.0	-1.2
U49A				IAmb	IAmb	23 40 16.6	
	comp=Z,20nm,0.8s						
KAN17	Caldwell West	23.04	350	P	P	23 39 56.4	-0.9
KAN17				IAmb	IAmb	23 40 08.9	
	comp=Z,25nm,0.8s						
CGM3	Cape Girardeau	23.08	7	P	P	23 39 56.8	-1.0
CGM3				IAmb	IAmb	23 40 21.7	
	comp=Z,57nm,1.9s						
V53A	Saluda	23.14	21	IAmb	IAmb	23 40 19.2	
	comp=Z,53nm,1.1s						
KAN01	Argonia South	23.14	350	P	P	23 39 57.4	-1.0
KAN01				IAmb	IAmb	23 39 59.3	
	comp=Z,31nm,0.8s						
T47A	Sharon Grove	23.18	12	IAmb	IAmb	23 40 19.5	
	comp=Z,19nm,0.7s						
BIRD	Birdtown, Kers	23.18	27	IAmb	IAmb	23 40 14.0	
	comp=Z,15nm,0.8s						
CRNM	Carthage	23.19	330	P	P	23 40 00.8	+1.6
KMSC	Kings Mountain	23.24	25	P	P	23 39 58.0	-1.4
KMSC				IAmb	IAmb	23 40 18.2	
	comp=Z,18nm,0.8s						
KAN08	Anthony NE Sta	23.25	350	P	P	23 39 59.4	-0.1
DUN6	Lazy B Ranch	23.36	324	P	P	23 40 02.6	+1.8
LENM	Lemitar	23.48	330	P	P	23 40 02.5	+0.5
S44A	Carbondale	23.52	7	P	P	23 40 01.2	-0.8
S44A				IAmb	IAmb	23 40 25.1	
	comp=Z,40nm,1.0s						
SIUC	Southern Illin	23.54	7	IAmb	IAmb	23 40 20.2	
	comp=Z,34nm,0.8s						
X58A	Rowland	23.62	29	IAmb	IAmb	23 40 23.5	
	comp=Z,20nm,1.0s						
FVM	French Village	23.68	5	P	P	23 40 02.6	-1.1
TZTN	Tazewell	23.69	19	IAmb	IAmb	23 40 24.1	
	comp=Z,51nm,1.2s						
CCM	Cathedral Cave	23.70	3		P	23 40 01.3	-2.5
T50A	Nancy	23.75	16	IAmb	IAmb	23 40 26.9	
	comp=Z,36nm,1.6s						
W57A	Gilead	23.82	27	IAmb	IAmb	23 40 21.5	
	comp=Z,24nm,1.1s						
ANMO	Albuquerque	23.87	332		P	23 40 07.1	+1.3
ANMO	Albuquerque	23.87	332	LR	LR	23 50 45.7	
	comp=Z,408nm,18.2s,baz=232,slow=40						
V55A	Taylorsville	23.90	24	IAmb	IAmb	23 40 24.8	
	comp=Z,20nm,1.0s						
USIN	University of	24.02	10	P	P	23 40 07.1	+0.3
USIN				IAmb	IAmb	23 40 28.2	
	comp=Z,49nm,1.2s						
TUC	Tucson	24.19	321		P	23 40 10.6	+2.0
TUC				IAmb	IAmb	23 40 12.4	
	comp=Z,24nm,0.9s						
TUC	Tucson	24.19	321	*e*	P	23 40 11.3	+2.6
WCI	Wyandotte Cave	24.54	13		P	23 40 11.2	-0.4
WCI				IAmb	IAmb	23 40 40.9	
	comp=Z,22nm,0.8s						
R32A	Long Quarter,	24.55	349	P	P	23 40 11.9	+0.2
R32A				IAmb	IAmb	23 40 14.4	
	comp=Z,21nm,0.6s						
U56A	King	24.67	25	IAmb	IAmb	23 40 13.2	
	comp=Z,15nm,0.7s						
S51A	Beattyville	24.68	18	P	P	23 40 13.9	+1.0
S51A				IAmb	IAmb	23 40 39.1	
	comp=Z,19nm,0.9s						
Q44A	Meyer Farm, Va	24.74	7	P	P	23 40 14.9	+1.5
Q44A				IAmb	IAmb	23 40 43.4	
	comp=Z,20nm,0.9s						
V58A	Windy Hill, Pi	24.74	28	IAmb	IAmb	23 40 12.4	
	comp=Z,22nm,0.8s						
R49A	Shelbyville	24.86	15	P	P	23 40 15.3	+0.8
R49A				IAmb	IAmb	23 40 44.5	
	comp=Z,11nm,0.7s						
CBKS	Cedar Bluff	25.13	347	P	P	23 40 16.8	-0.2
CBKS				IAmb	IAmb	23 40 42.7	
	comp=Z,26nm,0.8s						
P40A	Paris	25.13	2	IAmb	IAmb	23 40 16.4	
	comp=Z,18nm,1.0s						
214A	Organ Pipe Nat	25.25	317	P	P	23 40 19.3	+1.1
X18A	Snowflake	25.31	326	P	P	23 40 20.5	+1.7
X18A				IAmb	IAmb	23 40 24.5	
	comp=Z,13nm,0.9s						
BLA	Blacksburg	25.40	24	P	P	23 40 19.0	-0.4
BLA				IAmb	IAmb	23 40 41.7	
	comp=Z,29nm,0.9s						
BLO	Bloomington	25.41	12	P	P	23 40 20.6	+1.1
BLO				IAmb	IAmb	23 40 44.7	
	comp=Z,16nm,0.7s						
S54A	Dingess, Beckl	25.58	22	IAmb	IAmb	23 40 52.3	
	comp=Z,17nm,1.0s						
W18A	Petrified Fore	25.64	327	P	P	23 40 22.7	+0.9
EMPR	Esperanza - Ma	25.69	77	P	P	23 40 19.8	-2.4
P46A	Rosedale	25.71	10	P	P	23 40 22.5	+0.3
P46A				IAmb	IAmb	23 40 47.9	
	comp=Z,24nm,0.8s						
ATAH	Atahualpa	25.75	145	LR	LR	23 49 03.6	
	comp=Z,532nm,18.1s,baz=301,slow=33						
SDCO	Great Sand Dun	25.86	337	P	P	23 40 25.2	+1.3
SDCO				IAmb	IAmb	23 40 27.3	
	comp=Z,24nm,0.8s						
P48A	Milroy	25.91	13	P	P	23 40 24.3	+0.2
P48A				IAmb	IAmb	23 40 45.8	
	comp=Z,17nm,1.0s						
SJG	San Juan	26.02	78	LR	LR	23 50 40.7	
	comp=Z,515nm,21.4s,baz=238,slow=37						
KSCO	Kaye Shedlock’	26.04	343	P	P	23 40 25.4	+0.1
KSCO				IAmb	IAmb	23 40 29.2	
	comp=Z,36nm,1.3s						
X16A	Lo Mia Camp, P	26.06	323	P	P	23 40 27.3	+1.6
Q52A	Bidwell	26.31	19	IAmb	IAmb	23 40 49.7	
	comp=Z,21nm,0.9s						
113A	Mohawk Valley,	26.39	318	P	P	23 40 29.9	+1.5
T59A	Double "B" Far	26.43	29	IAmb	IAmb	23 40 27.6	
	comp=Z,19nm,0.8s						
S57A	Dark Hollow, R	26.46	26	P	P	23 40 29.0	-0.1
SFIN	Lafayette	26.47	10	P	P	23 40 29.4	+0.3
SFIN				IAmb	IAmb	23 41 06.1	
	comp=Z,35nm,1.6s						
Y14A	Wickenburg	26.66	321	P	P	23 40 32.5	+1.5
MVCO	Mesa Verde	26.67	332	P	P	23 40 32.5	+1.2
O48B	Farmland	26.74	13	P	P	23 40 32.3	+0.8
O48B				IAmb	IAmb	23 40 52.5	
	comp=Z,18nm,1.1s						
Q54A	Coxs Mills	26.80	21	P	P	23 40 31.8	-0.3
Q54A				IAmb	IAmb	23 41 03.9	
	comp=Z,38nm,1.4s						
WUAZ	Wupatki	26.82	325	P	P	23 40 33.9	+1.4
O49A	Covington	26.86	15	P	P	23 40 33.6	+0.9
O49A				IAmb	IAmb	23 41 08.7	
	comp=Z,23nm,1.3s						
P53A	Whipple	27.07	20	P	P	23 40 36.1	+1.6
P53A				IAmb	IAmb	23 41 16.3	
	comp=Z,22nm,1.1s						
R58B	Mineral	27.09	27	P	P	23 40 34.5	-0.2
R58B				IAmb	IAmb	23 40 57.1	
	comp=Z,12nm,0.9s						
GLA	Glamis	27.26	317	P	P	23 40 37.9	+1.6
GLA				IAmb	IAmb	23 40 48.1	
	comp=Z,17nm,0.8s						
PV01	Paradox Valley	27.46	333	IAmb	IAmb	23 40 45.6	
	comp=Z,23nm,1.0s						
O52A	Adamsville	27.49	19	P	P	23 40 40.2	+1.9
O52A				IAmb	IAmb	23 41 10.1	
	comp=Z,28nm,1.1s						
BLYC	Blythe	27.50	318	P	P	23 40 39.6	+1.2
PV13	Radium Mtn., P	27.59	332	IAmb	IAmb	23 40 44.1	
	comp=Z,27nm,0.8s						
PV15	Paradox Valley	27.59	333	P	P	23 40 41.3	+1.7
PV15				IAmb	IAmb	23 40 44.9	
	comp=Z,17nm,0.8s						
PV05	Paradox Valley	27.65	332	IAmb	IAmb	23 40 44.4	
	comp=Z,26nm,0.8s						
PV03	Paradox Valley	27.68	332	IAmb	IAmb	23 40 44.8	
	comp=Z,27nm,0.8s						
OGNE	Ogallala	27.68	345	P	P	23 40 40.4	+0.2
OGNE				IAmb	IAmb	23 40 43.2	
	comp=Z,12nm,0.7s						
L40A	Anamosa	27.69	3	IAmb	IAmb	23 41 06.3	
	comp=Z,17nm,0.9s						
PV07	Paradox Valley	27.75	333	P	P	23 40 42.8	+1.9
YUH	Yuha Desert	27.75	315	P	P	23 40 42.8	+2.1
PV19	Morning Glory	27.79	332	P	P	23 40 42.3	+1.1
PV14	Lion Creek, Pa	27.86	332	P	P	23 40 43.7	+1.8
PV14				IAmb	IAmb	23 40 46.2	
	comp=Z,26nm,0.8s						
PV22	Blue Mesa, Par	27.89	333	P	P	23 40 43.9	+1.8
PCRV	Puerto La Cruz	27.98	95	LR	LR	23 52 46.7	
	comp=Z,377nm,20.5s,slow=39						
W13A	Hualapai Mount	27.98	321	P	P	23 40 45.0	+2.0
PV21	Cone Mtn., Par	27.99	333	IAmb	IAmb	23 40 49.8	
	comp=Z,17nm,0.8s						
P57A	Homestead Farm	28.32	25	IAmb	IAmb	23 40 45.1	
	comp=Z,12nm,0.9s						
PFO	Pinyon Flats O	28.68	316	P	P	23 40 50.4	+1.2
PFO	Pinyon Flats O	28.68	316	P	P	23 40 49.5	+0.3
	comp=Z,4.0nm,0.8s,baz=121,slow=10.0,SNR=3.9						
PFO				LR	LR	23 54 07.9	
	comp=Z,220nm,18.4s,baz=126,slow=40						
	comp=Z,4.0nm,0.8s						
KNB	Kanab	28.71	326	P	P	23 40 50.7	+1.2
K30B	Basset	28.84	350	P	P	23 40 50.8	+0.5
LCMT	Little Creek M	28.94	325	P	P	23 40 53.2	+1.7
V12A	Nelson	28.99	321	P	P	23 40 53.8	+2.0
V12A				IAmb	IAmb	23 40 54.9	
	comp=Z,18nm,1.0s						
O20A	White River Ci	29.00	335	IAmb	IAmb	23 40 55.5	
	comp=Z,12nm,0.8s						
SRU	San Rafael Swe	29.14	331	P	P	23 40 54.9	+1.6
Q16A	Castle Valley	29.30	330	P	P	23 40 56.1	+1.4
Q16A				IAmb	IAmb	23 41 16.3	
	comp=Z,33nm,1.8s						
ECSD	EROS Data Cent	29.48	355	P	P	23 40 55.8	-0.3
ECSD				IAmb	IAmb	23 40 58.0	
	comp=Z,12nm,0.8s						
MVU	Marysvale	29.50	328	P	P	23 40 57.9	+1.4
SHPR	Sheep Range	29.69	322	P	P	23 40 59.3	+1.2
GSC	Goldstone, Bar	29.94	319	P	P	23 41 01.9	+1.6
PRN	Pahroc Range	30.24	324	P	P	23 41 04.6	+1.6
PSUT	Pine Spring	30.38	326	P	P	23 41 05.6	+1.3
MPU	Maple Canyon	30.38	331	P	P	23 41 05.4	+1.1
MPU				IAmb	IAmb	23 41 09.2	
	comp=Z,11nm,0.9s						
QSM	Queen of Sheba	30.39	319	P	P	23 41 05.7	+1.6
BSUT	Blindstream Ca	30.40	333	P	P	23 41 06.1	+1.5
BSUT				IAmb	IAmb	23 41 11.1	
	comp=Z,18nm,1.2s						
GWY	Greenwater Val	30.40	320	P	P	23 41 05.8	+1.4
SUSD	Miller	30.46	352	P	P	23 41 04.3	-0.4
K22A	Casper	30.56	340	P	P	23 41 06.6	+0.8
K22A				IAmb	IAmb	23 41 08.2	
	comp=Z,9.6nm,0.8s						
NNA	Nana	30.63	148	LR	LR	23 51 16.7	
	comp=Z,349nm,20.2s,baz=324,slow=32						
CCAC	Calif City Air	30.63	317	P	P	23 41 07.9	+1.5
CCAC				IAmb	IAmb	23 41 11.6	
	comp=Z,6.5nm,0.7s						
TPNV	Topopah Spring	30.64	322	P	P	23 41 08.6	+2.1
JLU	Jordanelle	30.76	332	P	P	23 41 07.8	+0.2
JLU				IAmb	IAmb	23 41 39.7	
	comp=Z,24nm,1.9s						
WCT	Wildcat Mounta	30.77	321	P	P	23 41 08.8	+1.3
S11A	Rachel	30.81	323	P	P	23 41 09.5	+1.5
S11A				IAmb	IAmb	23 41 11.8	
	comp=Z,16nm,0.9s						
SPMN	Marine on St.	30.81	0	IAmb	IAmb	23 41 15.1	
	comp=Z,8.5nm,0.6s						
SPR3	Spring Creek 3	30.97	327	P	P	23 41 10.7	+1.1
CTU	Camp Tracy	30.97	332	P	P	23 41 10.1	+0.7
DUG	Dugway, Tooele	31.09	330	P	P	23 41 10.9	+0.5
TCUT	Toone Canyon	31.16	332	P	P	23 41 12.6	+1.5
RSSD	Black Hills	31.18	345	P	P	23 41 11.0	-0.2
R11B	Troy Canyon, C	31.20	324	P	P	23 41 12.9	+1.4
ISA	Isabella, Lake	31.24	317	P	P	23 41 12.6	+0.9
GRAC	Grapevine Rang	31.35	321	P	P	23 41 14.6	+1.9
GRAC				IAmb	IAmb	23 41 16.3	
	comp=Z,17nm,0.8s						
GMN	Gold Mountain	31.48	321	P	P	23 41 15.3	+1.3
F33A	5 Mile Ranch,	31.55	356	P	P	23 41 14.2	0.0
HWUT	Hardware Ranch	31.62	333	IAmb	IAmb	23 41 18.8	
	comp=Z,11nm,0.9s						
PDAR	Pinedale Array	31.75	336		P	23 41 16.3	0.0
PDAR	Pinedale Array	31.75	336	P	P	23 41 17.1	+0.7
	comp=Z,4.6nm,0.7s,baz=137,slow=9.8,SNR=30						
PDAR				PcP	PcP	23 44 07.5	+0.1
	comp=Z,1.4nm,0.7s,baz=129,slow=4.0,SNR=3.7						
	comp=Z,4.6nm,0.7s						
BGU	Big Grassy Mou	31.76	330	P	P	23 41 17.5	+1.1
BGU				IAmb	IAmb	23 41 21.6	
	comp=Z,7.8nm,1.0s						
MZP	Montezuma Peak	31.82	322	P	P	23 41 17.9	+0.9
COWI	Conover	31.85	5		P	23 41 17.0	+0.1
TPH	Tonopah	31.96	322	P	P	23 41 19.2	+1.0
HVU	Hansel Valley	32.31	332	P	P	23 41 22.3	+1.2
HVU				IAmb	IAmb	23 41 28.0	
	comp=Z,16nm,1.1s						
AHID	Auburn Hatcher	32.37	335	IAmb	IAmb	23 41 24.8	
	comp=Z,24nm,1.1s						
ELK	Elko	32.72	328	P	P	23 41 25.9	+1.1
	comp=Z,2.6nm,0.7s,baz=115,slow=5.9,SNR=15						
ELK				LR	LR	23 56 15.1	
	comp=Z,397nm,19.4s,baz=160,slow=39						
	comp=Z,2.6nm,0.7s						
NV11	Mina Array Sit	32.75	322	P	P	23 41 27.2	+2.1
NV11				IAmb	IAmb	23 41 28.6	
	comp=Z,18nm,0.9s						
NV11					PcP	23 44 11.4	+1.3
NVAR	Mina Array Bea	32.84	322	P	P	23 41 27.9	+2.0
NVAR	Mina Array Bea	32.84	322	P	P	23 41 28.1	+2.2
	comp=Z,16nm,0.8s,baz=138,slow=8.8,SNR=68						
NVAR				PcP	PcP	23 44 11.8	+1.3
	comp=Z,4.0nm,0.8s,baz=122,slow=5.6,SNR=7.0						
NVAR				LR	LR	23 56 24.8	
	comp=Z,687nm,18.3s,baz=138,slow=39						
	comp=Z,16nm,0.8s						
LHV	Little Huntoon	32.85	321	P	P	23 41 27.9	+2.2
LHV				IAmb	IAmb	23 41 29.6	
	comp=Z,14nm,0.8s						
FXWY	Fox Creek	33.06	336	IAmb	IAmb	23 41 31.4	
	comp=Z,12nm,0.8s						
RYN	Ryan	33.10	322	IAmb	IAmb	23 41 31.4	
	comp=Z,8.0nm,0.9s						
TEFE	Tefe	33.21	120	*e*P	P	23 41 29.6	+0.5
M65A	Busby, Falmout	33.35	31	P	P	23 41 30.5	+0.5
	baz=222						
YMP	Mirror Lake Pl	33.66	338	P	P	23 41 34.7	+1.6
YMP				IAmb	IAmb	23 41 55.6	
	comp=Z,17nm,0.9s						
YFT	Old Faithful	33.67	337	P	P	23 41 35.9	+2.8
YFT				IAmb	IAmb	23 41 44.7	
	comp=Z,21nm,1.1s						
RLMT	Red Lodge	33.67	339	IAmb	IAmb	23 41 35.6	
	comp=Z,8.2nm,0.7s						
YNE	Yellowstone No	33.84	338	P	P	23 41 35.0	+0.5
YHH	Holmes Hill	33.96	337	P	P	23 41 37.1	+1.4
AGMN	Agassiz Nation	33.97	357	IAmb	IAmb	23 41 58.6	
	comp=Z,7.1nm,0.8s						
LONY	Lake Ozonia	34.02	24	IAmb	IAmb	23 41 50.8	

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      comp=Z,12nm,1.1s
PNTR  Pine Nut          34.04 321  P     P     23 41 37.8 +1.4
PNTR                               IAmb  IAmb  23 41 39.8
      comp=Z,15nm,0.9s
YHB   Horse Butte       34.06 337  P     P     23 41 37.7 +1.2
YHB                                IAmb  IAmb  23 41 45.4
      comp=Z,12nm,0.8s
YHL   Hebgen Lake       34.14 337  P     P     23 41 38.6 +1.4
PAHR  Pah Rah Range     34.30 322  P     P     23 41 40.0 +1.4
TBO   Thunder Bay       34.36   4  P     P     23 41 41.1 +2.4
TBO                                IAmb  IAmb  23 42 46.0
      comp=Z,24nm,1.4s
HLID  Hailey            34.45 332  P     P     23 41 41.1 +1.3
HLID                               IAmb  IAmb  23 41 43.9
      comp=Z,35nm,1.9s
BOZ   Bozeman (W)       34.94 337  IAmb  IAmb  23 41 49.1
      comp=Z,31nm,1.5s
BEKR  Beckworth         34.99 322  P     P     23 41 46.5 +1.9
BEKR                               IAmb  IAmb  23 41 47.7
      comp=Z,8.5nm,0.9s
MFID  Camas Ranch       35.00 330  IAmb  IAmb  23 41 50.4
      comp=Z,31nm,1.8s
EPLO  Experimental L    35.27 359  IAmb  IAmb  23 41 45.7
      comp=Z,10.0nm,0.7s
ORV   Oroville          35.49 320  P     P     23 41 50.2 +1.6
WVOR  Wild Horse Val    35.71 327  IAmb  IAmb  23 41 53.3
      comp=Z,13nm,1.1s
ULM   Lac du Bonnet     35.92 357  IAmb  IAmb  23 42 00.1
      comp=Z,9.5nm,1.1s
ULM   Lac du Bonnet     35.92 357  P     P     23 41 50.4  -1.8
      comp=Z,4.9nm,0.5s,baz=169,slow=10,SNR=8.8
      comp=Z,4.9nm,0.5s
J08A  Circle Bar Ran    36.27 328  IAmb  IAmb  23 41 58.0
      comp=Z,20nm,0.8s
MACA  Manacapuru-AM     36.41 116        P     23 41 57.1 +0.3
MACA  Manacapuru-AM     36.41 116 eP     P     23 41 56.9 +0.1
MSO   Missoula          36.86 336  IAmb  IAmb  23 42 02.3
      comp=Z,12nm,0.8s
YBH   Yreka Blue Hor    37.54 322  P     P     23 42 06.1  -0.1
      comp=Z,0.2nm,0.7s,baz=48,slow=7.4,SNR=5.9
YBH                                LR    LR    23 59 40.8
      comp=Z,35nm,18.1s,baz=132,slow=40
L04D  Klamath Falls     37.61 323  IAmb  IAmb  23 42 08.9
      comp=Z,56nm,1.9s
PINE  Pine Mountain     37.87 326  P     P     23 42 09.8 +0.7
G08A  Pilot Rock        37.90 330  P     P     23 42 10.2 +0.9
LNOR  Lincton Mounta    38.00 331  P     P     23 42 10.8 +0.9
J04A  Umpqua Nationa    38.15 325  P     P     23 42 12.9 +1.5
J04A                               IAmb  IAmb  23 42 18.6
      comp=Z,18nm,0.8s
E09A  Wood Farm, Sta    38.41 332  P     P     23 42 14.0 +0.6
I05D  Terrebonne, OR    38.45 327  P     P     23 42 15.4 +1.6
G06A  Carlson Farm,     38.70 328  P     P     23 42 17.0 +1.2
E08A  Dider Farm, El    38.82 331  P     P     23 42 17.4 +0.7
HAWA  Hanford           38.97 331  P     P     23 42 18.7 +0.7
G05A  Wamic             39.05 328  P     P     23 42 20.9 +2.1
G05A                               IAmb  IAmb  23 42 21.9
      comp=Z,13nm,0.9s
LPAZ  La Paz            39.07 140  P     P     23 42 18.8  -1.2
      comp=Z,1.9nm,0.8s,baz=338,slow=11,SNR=8.1
LPAZ                               LR    LR    23 57 59.2
      comp=Z,198nm,20.9s,baz=318,slow=36
      comp=Z,1.9nm,0.8s
LPAZ  La Paz            39.07 140 eP     P     23 42 20.2 +0.3
H04A  Detroit Lake      39.13 327  P     P     23 42 20.4 +0.9
H04A                               IAmb  IAmb  23 42 21.4
      comp=Z,22nm,1.0s
I03D  Drain, OR         39.13 324  IAmb  IAmb  23 42 25.6
      comp=Z,22nm,1.2s
J01E  Myrtle Point      39.13 323  P     P     23 42 20.9 +1.5
J01E                               IAmb  IAmb  23 42 40.9
      comp=Z,21nm,1.0s
D08A  Wollman Farm,     39.17 332  P     P     23 42 20.1 +0.3
BUCK  Buck Mountain     39.25 325  IAmb  IAmb  23 42 22.3
      comp=Z,24nm,1.1s
WAH2  Wahluke Slope     39.25 331  P     P     23 42 21.2 +0.8
HOOD  Mount Hood Mea    39.28 328  P     P     23 42 22.5 +1.7
HOOD                               IAmb  IAmb  23 42 23.7
      comp=Z,36nm,0.9s
NEW   Newport           39.30 334  P     P     23 42 20.8  -0.1
      comp=Z,2.8nm,0.7s,baz=165,slow=8.3,SNR=4.1
NEW                                LR    LR    00 01 03.3
      comp=Z,355nm,18.3s,baz=141,slow=40
      comp=Z,2.8nm,0.7s
H04D  Lebanon           39.32 326  IAmb  IAmb  23 42 24.0
      comp=Z,15nm,0.9s
MXC   Moxie City        39.47 330  P     P     23 42 22.8 +0.5
G03D  McMinnville, O    40.06 326  P     P     23 42 28.7 +1.6
G03D                               IAmb  IAmb  23 42 32.7
      comp=Z,38nm,1.3s
LTY   Liberty           40.14 331  P     P     23 42 28.9 +1.0
MDP   Montagnes des     40.73  99  LR    LR    00 01 37.9
      comp=Z,120nm,19.2s,baz=300,slow=40
FFC   Flin Flon         40.93 352        P     23 42 34.2  0.0
TA02  Huaiquique        41.05 146  P     P     23 42 37.2 +1.7
ITTB  Itaituba          41.33 114 eP     P     23 42 36.8  -1.2
MAL2  Monte Alegre,     41.71 110  P     P     23 42 40.3  -0.9
MAL2                               IAmb  IAmb  23 42 41.8
      comp=Z,21nm,1.1s
NLWA  Neilton Lookou    41.81 328  P     P     23 42 42.1 +0.5
NLWA                               IAmb  IAmb  23 42 44.3
      comp=Z,32nm,1.4s
VILB  Vilhena           42.28 128 eP     P     23 42 45.8  0.0
PGC   Sidney            42.45 330  P     P     23 42 47.6 +0.9
PGC                                IAmb  IAmb  23 42 48.7
      comp=Z,13nm,1.0s
C03A  Quillayute Air    42.53 329  P     P     23 42 49.1 +1.8
CLRS  Cowichan Lake     42.90 330  P     P     23 42 51.4 +1.0
NPGB  Novo Progresso    42.93 117 eP     P     23 42 48.9  -2.2
LLLB  Lillooet          43.11 333  IAmb  IAmb  23 42 58.4
      comp=Z,12nm,0.7s
SIV   San Ignacio       43.59 133  LR    LR    00 00 25.0
      comp=Z,381nm,19.1s,baz=306,slow=35
PDRB  Porto dos Gac     44.20 124 eP     P     23 43 02.5 +1.1
CBB   Campbell River    44.31 330  P     P     23 43 03.3 +1.6
CLDB  Colider           44.55 122 eP     P     23 43 02.7  -1.4
PTLB  Pontes e Lacer    44.65 130 eP     P     23 43 04.1  -0.7
BBSD  Serra de San D    44.72 133 eP     P     23 43 04.7  -0.7
SCHQ  Schefferville     45.26  21  P     P     23 43 06.4  -2.9
      comp=Z,3.7nm,0.9s,baz=229,slow=14,SNR=5.1
SCHQ                               PcP   PcP   23 44 48.9 +0.1
      comp=Z,8.3nm,0.7s,baz=217,slow=3.0,SNR=12
SCHQ                               LR    LR    00 03 59.2
      comp=Z,437nm,19.1s,baz=210,slow=39
      comp=Z,3.7nm,0.9s
BBB   Bella Bella       47.03 331  LR    LR    00 06 09.7
      comp=Z,157nm,18.3s,baz=159,slow=40
HG4B  Hotspring         48.58 330  IAmb  IAmb  23 43 37.5
      comp=Z,7.8nm,0.9s
SNDB  Serra Nova Dou    48.87 120 eP     P     23 43 37.3  -0.6
MOBC  Moresby Island    49.47 330  P     P     23 43 43.3 +1.3
MOBC                               IAmb  IAmb  23 43 44.8
      comp=Z,10nm,0.9s
BDQN  Bodoquena, MS     49.61 133 eP     P     23 43 42.2  -1.3
DIB   Dawson Inlet,     49.75 330  P     P     23 43 45.8 +1.7
DIB                                IAmb  IAmb  23 43 46.9
      comp=Z,11nm,1.1s
U35K  Hyder             50.31 334  P     P     23 43 49.7 +1.3
      baz=130
YKAW1 Yellowknife Wh    50.47 347  IAmb  IAmb  23 43 50.5
      comp=Z,25nm,0.8s
TOAD  Toad River Com    50.51 339  P     P     23 43 50.5 +0.6
      baz=138,SNR=7.2
YKA   Yellowknife Ar    50.51 347  P     P     23 43 51.0 +1.3
YKA   Yellowknife Ar    50.51 347  P     P     23 43 49.9 +0.2
      comp=Z,10nm,0.8s,baz=151,slow=7.2,SNR=20
      comp=Z,10nm,0.8s
SMTB  Santa Maria do    50.56 114 eP     P     23 43 49.6  -1.2
YKAW3 Yellowknife Wh    50.57 347  IAmb  IAmb  23 43 51.3
      comp=Z,23nm,0.8s
V35K  Ketchikan         50.63 333  P     P     23 43 51.9 +1.1
      baz=128
KOTAN Kotaneelee Air    51.08 341  P     P     23 43 54.7 +0.6
      baz=140
T35M  Bob Quinn         51.11 335  P     P     23 43 56.2 +1.8
T35M                               IAmb  IAmb  23 43 57.8
      comp=Z,10.0nm,1.1s
T35M  Bob Quinn         51.11 335  P     P     23 43 56.1 +1.7
      baz=131
CRAG  Craig             51.40 332  P     P     23 43 58.0 +1.4
CRAG                               IAmb  IAmb  23 43 59.6
      comp=Z,12nm,0.9s
CRAG  Craig             51.40 332  P     P     23 43 57.5 +1.0
      baz=127
VA03  San Esteban       51.49 156  P     P     23 43 58.0 +0.4
VA03                               IAmb  IAmb  23 43 59.1
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      comp=Z,16nm,0.9s
WRAK  Wrangell Islan    51.64 333  P     P     23 43 59.7 +1.4
      baz=128
U33K  Whale Pass        51.79 333  P     P     23 44 00.6 +1.2
      baz=127
DLBC  Dease Lake        51.99 336  P     P     23 44 02.5 +1.5
      comp=Z,0.8nm,0.9s,baz=132,slow=7.0,SNR=12
      comp=Z,0.8nm,0.9s
DLBC  Dease Lake        51.99 336  P     P     23 44 03.1 +2.1
      baz=132,SNR=19
S34M  Telegraph Cree    52.08 335  P     P     23 44 03.3 +1.8
S34M  Telegraph Cree    52.08 335  P     P     23 44 03.7 +2.1
      baz=130
TAOE  Nuku Hiva Isla    52.15 247 eLR    LR    23 59 03.2
      comp=Z,229nm,25.1s
MT08  Bocatoma Ro       52.30 156  P     P     23 44 06.0 +2.2
MT08                               IAmb  IAmb  23 44 15.1
      comp=Z,9.7nm,0.8s
LMEL  Las Melosas       52.58 156  IAmb  IAmb  23 44 25.1
      comp=Z,14nm,1.1s
WTLY  Watson Lake, Y    52.68 338  P     P     23 44 07.5 +1.5
WTLY                               IAmb  IAmb  23 44 12.7
      comp=Z,20nm,0.9s
WTLY  Watson Lake, Y    52.68 338  P     P     23 44 07.6 +1.6
      baz=134
BO01  Tunca             52.72 157  P     P     23 44 07.6 +1.0
BO01                               IAmb  IAmb  23 44 38.1
      comp=Z,19nm,1.3s
R33M  Jennings River    52.99 337  IAmb  IAmb  23 44 15.9
      comp=Z,10nm,1.1s
R33M  Jennings River    52.99 337  P     P     23 44 09.7 +1.2
      baz=132,SNR=12
Q32M  Nakina River      53.21 336  IAmb  IAmb  23 44 18.0
      comp=Z,14nm,1.0s
Q32M  Nakina River      53.21 336  P     P     23 44 12.0 +1.8
      baz=130,SNR=9.9
CPUP  Villa Florida     53.23 139  P     P     23 44 09.3  -1.2
      comp=Z,0.9nm,0.8s,baz=199,slow=9.2,SNR=6.9
CPUP                               LR    LR    00 08 14.3
      comp=Z,50nm,18.2s,baz=196,slow=38
      comp=Z,0.9nm,0.8s
S32K  Killisnoo         53.25 333  P     P     23 44 11.8 +1.6
      baz=126
WRGLY Wrigley           53.32 343  P     P     23 44 11.2 +0.5
      baz=142
SIT   Sitka             53.33 333  P     P     23 44 12.2 +1.4
      baz=125
BDFB  Brasilia          53.48 122  P     P     23 44 12.1  -0.6
BDFB                               IAmb  IAmb  23 44 13.1
      comp=Z,9.7nm,0.8s
BDFB  Brasilia          53.48 122  P     P     23 44 11.5  -1.2
      comp=Z,10.0nm,0.8s,baz=291,slow=8.4,SNR=17
BDFB                               LR    LR    00 07 42.4
      comp=Z,171nm,18.9s,baz=313,slow=37
      comp=Z,10.0nm,0.8s
R32K  Eaglecrest        53.71 334  P     P     23 44 15.1 +1.5
      baz=127
P32M  Atlin             54.19 336  P     P     23 44 18.3 +1.2
      baz=129
P33M  Teslin, Yukon     54.23 337  P     P     23 44 18.9 +1.4
      baz=130
S31K  Pelican           54.26 333  P     P     23 44 19.2 +1.6
      baz=125
SDBA  SAO DESIDERIO     54.52 117 eP     P     23 44 18.7  -1.5
IPMB  Ipameri, GO       54.57 125 eP     P     23 44 20.1  -0.5
SKAG  Skagway           54.76 335  P     P     23 44 22.1 +0.9
      baz=127
N32M  Quiet Lake        54.94 338  P     P     23 44 24.1 +1.5
      baz=130
PLBC  Pleasant Camp     55.18 335  P     P     23 44 25.5 +1.2
      baz=126
MMPY  Sheldon Lake,     55.28 340  P     P     23 44 26.3 +1.3
      baz=133
WHY   Whitehorse        55.31 336  IAmb  IAmb  23 44 26.8
      comp=Z,7.6nm,0.9s
WHY   Whitehorse        55.31 336  P     P     23 44 26.2 +0.9
      baz=128
ILON  Igloolik, Nuna    55.47   5        P     23 44 25.8  -0.4
ILON                               IAmb  IAmb  23 44 26.5
      comp=Z,12nm,0.9s
FARO  Faro, Yukon       55.74 338  IAmb  IAmb  23 44 30.9
      comp=Z,5.7nm,0.8s
FARO  Faro, Yukon       55.74 338  P     P     23 44 29.6 +1.3
      baz=130
P30M  Million Dollar    55.82 335  P     P     23 44 30.1 +1.1
      baz=125
O30N  Mendenhall        55.85 336  IAmb  IAmb  23 44 31.6
      comp=Z,7.9nm,0.9s
O30N  Mendenhall        55.85 336  P     P     23 44 30.1 +0.9
      baz=127,SNR=5.5
P29M  Windy Craggy      55.85 334  IAmb  IAmb  23 44 32.1
      comp=Z,18nm,1.1s
P29M  Windy Craggy      55.85 334  P     P     23 44 30.6 +1.4
      baz=124
M31M  Drury Creek, Y    56.10 338  P     P     23 44 32.0 +1.1
      baz=129
N31M  Braeburn, Yuko    56.17 337  IAmb  IAmb  23 44 33.6
      comp=Z,15nm,0.9s
N31M  Braeburn, Yuko    56.17 337  P     P     23 44 32.6 +1.2
      baz=127,SNR=8.9
PMNB  Patos De Minas    56.28 124 eP     P     23 44 32.4  -0.6
HYT   Haines Junctio    56.45 336  P     P     23 44 35.1 +1.6
HYT                                IAmb  IAmb  23 44 36.5
      comp=Z,38nm,2.0s
HYT   Haines Junctio    56.45 336  P     P     23 44 34.6 +1.1
      baz=125,SNR=5.6
PNL   Peninsula         56.58 334  P     P     23 44 34.7 +0.4
      baz=123
O29M  Mount Kennedy     56.58 335  P     P     23 44 35.3 +0.8
O29M                               IAmb  IAmb  23 46 37.1
      comp=Z,5.3nm,0.6s
O29M  Mount Kennedy     56.58 335  P     P     23 44 35.0 +0.5
      baz=124
N30M  Aishikik Lake     56.65 336  IAmb  IAmb  23 44 37.5
      comp=Z,8.9nm,1.0s
N30M  Aishikik Lake     56.65 336  P     P     23 44 36.1 +1.2
      baz=126,SNR=9.0
YUK6  Outpost Mounta    56.86 335  P     P     23 44 37.7 +1.1
      baz=124,SNR=5.2
PINM  Pinnacle          57.17 334  P     P     23 44 39.7 +1.1
      baz=122
YUK4  Talbot Arm        57.20 336  P     P     23 44 40.4 +1.5
      baz=124
M30M  Minto, Yukon      57.21 338  P     P     23 44 39.6 +0.8
      baz=127
O28M  Mount Upton       57.51 335  P     P     23 44 42.3 +1.1
      baz=122
MAYO  Mayo, Yukon       57.51 339  P     P     23 44 42.4 +1.5
      baz=128
YUK8  Steele Glacier    57.61 335  P     P     23 44 43.5 +1.5
      baz=123
TABL  Table Mountain    57.73 334  IAmb  IAmb  23 44 45.4
      comp=Z,13nm,0.9s
M29M  Somme Creek       57.76 337  P     P     23 44 44.0 +1.3
      baz=125,SNR=43
LOGN  Logan Glacier     57.87 335  P     P     23 44 45.4 +1.7
LOGN                               IAmb  IAmb  23 44 46.4
      comp=Z,11nm,1.1s
MESA  MESA              57.94 334  P     P     23 44 45.1 +0.9
MESA  MESA              57.94 334  P     P     23 44 45.7 +1.5
      baz=120
YAH   Yahtse            57.95 334  P     P     23 44 45.3 +1.0
YAH                                IAmb  IAmb  23 44 46.8
      comp=Z,11nm,0.9s
L29M  L29M              58.02 338  IAmb  IAmb  23 44 46.4
      comp=Z,9.7nm,0.9s
L29M  L29M              58.02 338  P     P     23 44 45.3 +0.8
      baz=126,SNR=10
CTGM  Chitina Glacie    58.09 335  P     P     23 44 46.1 +1.0
CTGM                               IAmb  IAmb  23 44 47.3
      comp=Z,7.2nm,0.9s
CTG   Chitna Glacier    58.09 335  P     P     23 44 46.2 +1.1
      baz=121
GRNC  Granite Creek     58.14 334  P     P     23 44 46.8 +1.2
YUK3  Moose Creek       58.16 336  P     P     23 44 46.8 +1.1
      baz=123,SNR=6.5
K29M  Barlow Dome       58.24 339  P     P     23 44 46.9 +0.8
      baz=127
BARN  Barnard Glacie    58.27 335  P     P     23 44 48.3 +1.8
BARN                               IAmb  IAmb  23 44 59.9
      comp=Z,8.1nm,0.6s
J30M  Hart River        58.27 340  IAmb  IAmb  23 44 49.7
      comp=Z,4.7nm,0.7s
J30M  Hart River        58.27 340  P     P     23 44 47.4 +1.1
      baz=128,SNR=6.7
ISLE  Juniper Island    58.32 334  P     P     23 44 48.1 +1.3
ISLE                               IAmb  IAmb  23 44 49.2
      comp=Z,12nm,1.0s
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DIAM  Diamantina, MG    58.41 122 eP     P     23 44 48.0  0.0
H31M  Peel River        58.42 341  P     P     23 44 48.9 +1.7
H31M                               IAmb  IAmb  23 45 41.0
      comp=Z,6.9nm,0.8s
H31M  Peel River        58.42 341  P     P     23 44 47.7 +0.5
      baz=131
PLCA  Paso Flores       58.58 160  P     P     23 44 49.3 +0.6
PLCA                               IAmb  IAmb  23 44 50.4
      comp=Z,8.1nm,1.1s
PLCA  Paso Flores       58.58 160  P     P     23 44 48.8 +0.1
      comp=Z,4.0nm,0.9s,baz=347,slow=10,SNR=6.9
PLCA                               LR    LR    00 05 28.0
      comp=Z,248nm,18.1s,baz=356,slow=31
      comp=Z,4.0nm,0.9s
TGL   Tana Glacier      58.61 334  P     P     23 44 50.3 +1.6
TGL                                IAmb  IAmb  23 44 51.2
      comp=Z,17nm,1.1s
BVCY  Beaver Creek      58.67 336  P     P     23 44 50.1 +1.1
      baz=123
SUCK  Suckling Hills    58.69 333  P     P     23 44 51.0 +1.9
I30M  Mount Dempster    58.70 340  IAmb  IAmb  23 44 55.2
      comp=Z,14nm,1.1s
I30M  Mount Dempster    58.70 340  P     P     23 44 49.7 +0.4
      baz=129,SNR=11
CRQE  Cirque            58.72 334  P     P     23 44 50.1 +0.6
      baz=119
CRQM  Cirque            58.74 334  P     P     23 44 51.3 +1.5
CRQM                               IAmb  IAmb  23 44 52.0
      comp=Z,14nm,0.9s
BERG  Berg Lake         58.81 333  P     P     23 44 51.1 +1.2
BERG                               IAmb  IAmb  23 44 57.3
      comp=Z,11nm,0.8s
J29N  Klondike Camp     58.85 339  P     P     23 44 51.5 +1.2
      baz=126
MCARA McCarthy VSAT     59.01 334  P     P     23 44 53.2 +1.9
MCARA McCarthy VSAT     59.01 334  P     P     23 44 52.3 +0.9
      baz=120,SNR=5.3
HMT   Hamilton          59.02 333  P     P     23 44 53.0 +1.4
POIN  Pond Inlet        59.03   5  P     P     23 44 53.4 +2.1
DAWY  Dawson            59.04 338  P     P     23 44 52.1 +0.6
      baz=125
M27K  Edge Creek, AK    59.04 336  P     P     23 44 52.3 +0.6
M27K                               IAmb  IAmb  23 44 53.4
      comp=Z,7.5nm,1.1s
M27K  Edge Creek, AK    59.04 336  P     P     23 44 52.9 +1.1
      baz=122,SNR=5.8
VRDI  Verde Repeater    59.11 334  IAmb  IAmb  23 44 54.6
      comp=Z,7.4nm,0.8s
G31M  Satah River       59.15 342  P     P     23 44 52.4 +0.2
      baz=132,SNR=6.9
RAGM  Ragged Mountai    59.23 333  P     P     23 44 54.1 +1.1
F31M  Tsiigehtchic      59.34 343  P     P     23 44 53.6 +0.1
      baz=132
GLB   Gilahina Butte    59.36 334  P     P     23 44 55.1 +1.3
GLB                                IAmb  IAmb  23 44 56.3
      comp=Z,13nm,0.9s
BCAR  Beaver Creek A    59.38 337        P     23 44 54.4 +0.5
L27K  Beaver Creek,     59.39 337  IAmb  IAmb  23 44 56.0
      comp=Z,12nm,1.0s
L27K  Beaver Creek,     59.39 337  P     P     23 44 54.7 +0.7
      baz=122,SNR=14
I29M  Ogilvie Camp,     59.42 340  IAmb  IAmb  23 44 55.2
      comp=Z,7.2nm,0.9s
I29M  Ogilvie Camp,     59.42 340  P     P     23 44 54.7 +0.5
      baz=127
BMRM  Bremner River     59.47 334  IAmb  IAmb  23 45 14.0
      comp=Z,13nm,1.0s
BMRM  Bremner River     59.47 334  P     P     23 44 55.8 +1.2
      baz=118
LL01  San Ignacio de    59.50 162  P     P     23 44 56.2 +1.3
SFJD  Kangerlussuaq     59.50  18  LR    LR    00 12 10.4
      comp=Z,362nm,18.2s,baz=224,slow=38
M26K  Nabesna, AK       59.51 336  IAmb  IAmb  23 44 57.0
      comp=Z,12nm,1.2s
M26K  Nabesna, AK       59.51 336  P     P     23 44 56.3 +1.5
      baz=120,SNR=7.0
EPYK  Eagle Plains      59.53 341  P     P     23 44 56.0 +1.0
      baz=129
Q23K  Middleton Isla    59.55 332  P     P     23 44 55.9 +0.8
      baz=116
G30M  tAoh Zraii Nji    59.77 342  P     P     23 44 57.7 +1.1
      baz=130
N25K  Chitina, Valde    59.77 334  P     P     23 44 57.8 +1.1
      baz=118,SNR=9.7
EYAK  Cordova Ski Ar    59.78 333  P     P     23 44 57.8 +1.2
      baz=117
INK   Inuvik            59.88 344  P     P     23 44 57.4 +0.3
      baz=133,SNR=15
H29M  Whitestone        59.96 341  IAmb  IAmb  23 45 03.8
      comp=Z,20nm,1.4s
H29M  Whitestone        59.96 341  P     P     23 44 58.4 +0.5
      baz=127,SNR=7.3
L26K  Log Cabin Wild    59.96 336  IAmb  IAmb  23 45 00.0
      comp=Z,14nm,1.4s
L26K  Log Cabin Wild    59.96 336  P     P     23 44 59.0 +1.0
      baz=120
I28M  Miner Creek       60.03 339  P     P     23 44 59.1 +0.7
I28M                               IAmb  IAmb  23 45 22.8
      comp=Z,5.8nm,1.1s
I28M  Miner Creek       60.03 339  P     P     23 44 59.5 +1.1
      baz=125
RCBR  Riachuelo         60.03 105 eP     P     23 44 56.5  -2.7
F30M  Barrier River     60.04 343  P     P     23 44 59.3 +0.9
      baz=130,SNR=11
HIN   Hinchinbrook I    60.05 333  P     P     23 44 59.8 +1.2
DIV   Divide            60.05 334  P     P     23 44 60.0 +1.3
DIV                                IAmb  IAmb  23 45 00.9
      comp=Z,14nm,1.0s
MENT  Mentasta          60.07 336  P     P     23 44 59.2 +0.5
MENT                               IAmb  IAmb  23 45 00.0
      comp=Z,6.1nm,0.9s
G29M  Pine Creek        60.27 341  IAmb  IAmb  23 45 05.8
      comp=Z,15nm,1.1s
G29M  Pine Creek        60.27 341  P     P     23 45 00.8 +0.8
      baz=128,SNR=6.5
KLU   Klutina           60.28 334  P     P     23 45 00.9 +0.7
      baz=117,SNR=7.8
P23K  Montague Islan    60.28 332  P     P     23 45 00.4 +0.2
      baz=115
RES   Resolute Bay      60.38 359  IAmb  IAmb  23 45 00.8
      comp=Z,10nm,0.8s
HARP  HAARP             60.38 335  P     P     23 45 01.6 +0.8
      baz=118
GLI   Glacier Island    60.52 333  P     P     23 45 03.1 +1.4
      baz=116
M24K  Tolsona, Glenn    60.67 334  P     P     23 45 04.2 +1.4
      baz=117
I27K  Kandik River      60.69 339  P     P     23 45 03.2 +0.3
      baz=123,SNR=16
SCRK  Sand Creek        60.69 337        P     23 45 04.2 +1.1
SCRK                               IAmb  IAmb  23 45 05.1
      comp=Z,6.1nm,0.9s
SCRK  Sand Creek        60.69 337  P     P     23 45 03.8 +0.8
      baz=120,SNR=8.1
PAX   Paxson            60.78 335  P     P     23 45 03.6  0.0
      baz=118,SNR=19
J26L  Joseph Creek      60.80 337  P     P     23 45 04.3 +0.6
      baz=121,SNR=20
GUA01 Guaratinga, BA    60.82 118 eP     P     23 45 04.0  -0.4
RIDG  Independent Ri    60.91 336  P     P     23 45 05.0 +0.6
      baz=119,SNR=10
H27K  Steamboat Moun    61.01 340  IAmb  IAmb  23 45 06.9
      comp=Z,8.3nm,0.9s
H27K  Steamboat Moun    61.01 340  P     P     23 45 05.2 +0.1
      baz=124,SNR=11
SCM   Sheep Creek Mo    61.03 334  IAmb  IAmb  23 45 07.2
      comp=Z,12nm,0.9s
SCM   Sheep Creek Mo    61.03 334  P     P     23 45 06.0 +0.7
      baz=116
PWL   Port Wells        61.06 333  P     P     23 45 05.9 +0.4
      baz=114
NBAN  Anadia - AL       61.07 110 eP     P     23 45 06.0  -0.2
I26K  Coal Creek Min    61.07 338  P     P     23 45 05.7 +0.3
      baz=122
E29M  Blow River        61.16 343  P     P     23 45 06.3 +0.4
      baz=128,SNR=9.5
M23K  Glacier View      61.19 334  P     P     23 45 06.6 +0.3
      baz=115
SEW   Seward            61.26 332  P     P     23 45 07.0 +0.3
      baz=113
F28M  Old Crow          61.27 341  P     P     23 45 07.5 +0.8
      baz=126,SNR=26
K24K  Donnelly Dome     61.30 336  P     P     23 45 07.5 +0.4
      baz=118,SNR=8.0
KNK   Knik Glacier      61.34 333  P     P     23 45 08.1 +0.8
      baz=114
G27K  Doyon Strip       61.38 340  IAmb  IAmb  23 45 08.9
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      comp=Z,6.3nm,1.1s
G27K  Doyon Strip       61.38 340  P      P      23 45 07.9 +0.4
      baz=124,SNR=10
J25K  Salcha River,     61.53 337  IAmb   IAmb   23 45 19.3
      comp=Z,6.5nm,0.8s
J25K  Salcha River,     61.53 337  P      P      23 45 08.9 +0.3
      baz=119,SNR=10
WAT6  Susitna Watana    61.53 335  P      P      23 45 09.2 +0.4
      baz=116,SNR=12
DHY   Denali Highway    61.60 335  P      P      23 45 09.4 +0.2
      baz=116
RIB01 Linhares ES       61.60 122  eP     P      23 45 09.4  -0.4
PMR   Palmer            61.71 333  P      P      23 45 10.4 +0.6
      baz=114
E28M  Babbage River     61.77 342  P      P      23 45 10.0  -0.1
      baz=127,SNR=8.8
RC01  Rabbit Creek A    61.78 333  P      P      23 45 10.5 +0.2
      baz=113
CAM01 Campos-RJ         61.82 125  eP     P      23 45 11.6 +0.5
KDAK  Kodiak Island     61.96 328  LR     LR     00 11 32.9
      comp=Z,82nm,19.1s,baz=116,slow=36
KDAK  Kodiak Island     61.96 328  P      P      23 45 12.2 +0.7
      baz=109
WAT1  Susitna Watana    61.98 335  P      P      23 45 12.2 +0.5
      baz=115
D28M  Stokes Point      61.98 343  P      P      23 45 12.5 +1.0
      baz=128
PRP   Porcupine Dome    62.03 338  P      P      23 45 12.6 +0.5
      baz=119,SNR=19
HDA   Harding Lake      62.04 337  P      P      23 45 12.3 +0.3
      baz=117,SNR=6.1
HOM   Homer             62.13 331  P      P      23 45 13.5 +0.9
      baz=110
Q20K  Shuyak Island     62.13 329  P      P      23 45 13.5 +0.8
      baz=109
E27K  Coleen River      62.14 342  P      P      23 45 13.6 +0.9
      baz=124,SNR=5.6
OHAK  Old Harbor        62.14 328  P      P      23 45 13.8 +1.0
      baz=108
G26K  Porcupine Rive    62.16 340  IAmb   IAmb   23 45 14.2
      comp=Z,10nm,1.1s
G26K  Porcupine Rive    62.16 340  P      P      23 45 13.6 +0.8
      baz=122,SNR=6.9
ILAR  Eielson Array     62.18 337  P      P      23 45 12.8  -0.2
ILAR  Eielson Array     62.18 337  P      P      23 45 12.9   0.0
      comp=Z,7.4nm,0.9s,baz=133,slow=4.6,SNR=62
ILAR                               LR     LR     00 14 22.4
      comp=Z,166nm,19.4s,baz=110,slow=38
      comp=Z,7.4nm,0.9s
M22K  Willow            62.21 333  P      P      23 45 13.3 +0.2
M22K  Willow            62.21 333  P      P      23 45 13.9 +0.8
      baz=113
CAPN  Captain Cook N    62.30 332  P      P      23 45 14.4 +0.7
      baz=111
SUA   Susitna One       62.37 333  P      P      23 45 15.0 +0.6
      baz=112
SII   Sitkinak Islan    62.42 327  P      P      23 45 15.3 +0.6
      baz=106
FYU   Fort Yukon        62.45 339  P      P      23 45 15.3 +0.6
CCB   Clear Creek Bu    62.48 337  IAmb   IAmb   23 45 16.1
      comp=Z,3.4nm,0.8s
WRH   Wood River Hil    62.51 336  IAmb   IAmb   23 45 15.8
      comp=Z,4.1nm,0.8s
H25L  Birch Creek       62.51 339  P      P      23 45 15.7 +0.6
      baz=119,SNR=7.4
MCK   McKinley          62.52 335         P      23 45 16.1 +0.8
MCK   McKinley          62.52 335  P      P      23 45 15.9 +0.6
      baz=115
CUT   Chulitna          62.53 334  P      P      23 45 15.4 +0.2
CUT   Chulitna          62.53 334  P      P      23 45 15.9 +0.7
      baz=113
POKR  Poker Plat Res    62.55 337  P      P      23 45 15.8 +0.4
POKR                               IAmb   IAmb   23 45 16.8
      comp=Z,9.5nm,0.9s
POKR  Poker Plat Res    62.55 337  P      P      23 45 15.7 +0.4
      baz=117
D27M  Malcolm River     62.56 343  P      P      23 45 15.9 +0.4
      baz=126
F26K  Sheenjek River    62.67 340  IAmb   IAmb   23 45 17.6
      comp=Z,6.1nm,0.9s
F26K  Sheenjek River    62.67 340  P      P      23 45 17.1 +0.9
      baz=122
BMAR  Burnt Mountain    62.68 340         P      23 45 16.7 +0.4
R18K  Karluk            62.85 328  P      P      23 45 17.4   0.0
      baz=107
G25K  Bearman Lake      62.85 339  P      P      23 45 17.9 +0.5
      baz=119
STLK  Strandline Lak    62.87 333  IAmb   IAmb   23 45 19.2
      comp=Z,6.7nm,0.9s
SKT   Skwentna          62.91 333  P      P      23 45 18.1 +0.2
      baz=112,SNR=7.6
N20K  Mount Spurr       62.93 332  P      P      23 45 17.7  -0.4
      baz=111
SPCR  Spurr Chakacha    62.93 332  P      P      23 45 17.7  -0.4
      baz=111
NEA2  Nenana            62.94 336  IAmb   IAmb   23 45 19.3
      comp=Z,6.7nm,1.1s
NEA2  Nenana            62.94 336  P      P      23 45 18.1 +0.1
      baz=115,SNR=5.5
ILSW  Iliamna Southw    62.95 331  P      P      23 45 20.3 +2.0
TRF   Thorofare Moun    62.95 335  P      P      23 45 18.2  -0.1
      baz=114,SNR=18
H24K  Noodor Dome       63.05 338  P      P      23 45 18.8 +0.1
      baz=117,SNR=14
F25K  Christian Rive    63.11 340  P      P      23 45 19.4 +0.3
      baz=120,SNR=6.9
I23K  Minto, Yukon-K    63.29 337  P      P      23 45 20.4 +0.1
      baz=115,SNR=21
G24K  Hadweenzic Riv    63.30 339  IAmb   IAmb   23 45 21.7
      comp=Z,12nm,1.0s
G24K  Hadweenzic Riv    63.30 339  P      P      23 45 20.9 +0.6
      baz=118,SNR=6.6
E25K  Arctic Village    63.35 341  P      P      23 45 21.7 +1.0
      baz=120
Q18K  Katmai Hardscr    63.45 329  P      P      23 45 21.5  -0.1
      baz=107
BPAW  Bear Paw Mtn.     63.50 335  P      P      23 45 21.9 +0.2
      baz=113,SNR=16
PPLA  Purkeypile        63.54 334  IAmb   IAmb   23 45 27.7
      comp=Z,10nm,0.9s
PPLA  Purkeypile        63.54 334  P      P      23 45 22.6 +0.5
      baz=111
O19K  Port Alsworth     63.58 331  P      P      23 45 22.9 +0.7
      baz=108
C27K  Jago River        63.58 342  P      P      23 45 23.0 +0.8
      baz=123
M20K  Styx River        63.59 333  IAmb   IAmb   23 45 23.8
      comp=Z,9.0nm,0.8s
M20K  Styx River        63.59 333  P      P      23 45 22.6 +0.2
      baz=110,SNR=6.3
H23K  Yukon River       63.65 337  IAmb   IAmb   23 45 24.4
      comp=Z,21nm,1.8s
H23K  Yukon River       63.65 337  P      P      23 45 23.0 +0.3
      baz=115
CAST  Castle Rocks      63.69 334  P      P      23 45 22.8  -0.2
      baz=112,SNR=18
P18K  Big Mountain,     63.77 330  P      P      23 45 25.2 +1.5
P18K  Big Mountain,     63.77 330  P      P      23 45 24.3 +0.7
      baz=107
MLY   Manley            63.77 336         P      23 45 23.9 +0.3
MLY   Manley            63.77 336  P      P      23 45 23.6   0.0
      baz=114,SNR=14
Q17K  Contact Creek     63.78 328  P      P      23 45 24.1 +0.4
      baz=106
F24K  Squaw Lake        63.83 339  P      P      23 45 24.3 +0.4
      baz=118
N19K  Bonanza Creek     63.85 331  P      P      23 45 24.1  -0.1
N19K  Bonanza Creek     63.85 331  P      P      23 45 24.7 +0.5
      baz=108,SNR=5.9
R17L  Mt. Peulik Vol    63.85 328  P      P      23 45 24.5 +0.3
      baz=105
O18K  Koktuh Hills      63.90 330  P      P      23 45 25.6 +1.2
      baz=107
C26K  Camden Bay        64.09 342  P      P      23 45 26.4 +1.0
      baz=122
L20K  Farewell, AK      64.12 333  P      P      23 45 25.9   0.0
      baz=110,SNR=16
M19K  Big River Lodg    64.16 332  IAmb   IAmb   23 45 27.5
      comp=Z,11nm,0.9s
M19K  Big River Lodg    64.16 332  P      P      23 45 26.7 +0.6
      baz=109,SNR=5.2
PPT   Papeete           64.20 242  LR     LR     00 06 20.3
      comp=Z,162nm,19.4s,baz=84,slow=29
PPT2  Papeete2          64.21 242  eS     S      23 53 59.6  -3.6
      comp=Z,94nm,23.5s
PPT2                               eSS    SS     23 58 18.6 +5.4
      comp=Z,53nm,27.2s
PPT2                               eLR    LR     00 04 30.4
      comp=Z,178nm,25.5s
PPT2                               eLR    LR     00 04 40.1
      comp=Z,207nm,24.5s
G23K  Bananza Creek     64.21 338  IAmb   IAmb   23 45 27.6
      comp=Z,7.7nm,0.9s
G23K  Bananza Creek     64.21 338  P      P      23 45 27.0 +0.6
      baz=115,SNR=7.9
D25K  Kavik River       64.22 342  P      P      23 45 27.4 +1.0
      baz=120,SNR=9.6
Q16K  King Salmon       64.28 329  P      P      23 45 28.0 +1.1
      baz=105
E24K  Your Creek        64.29 340  IAmb   IAmb   23 45 43.0
      comp=Z,12nm,1.3s
E24K  Your Creek        64.29 340  P      P      23 45 27.5 +0.6
      baz=117,SNR=5.2
P17K  Kvichak River     64.31 329  P      P      23 45 26.9  -0.1
      baz=106
H22K  Ishtalitna Cre    64.37 337  P      P      23 45 27.8 +0.3
      baz=114,SNR=8.7
L19K  White Mountain    64.45 333  IAmb   IAmb   23 45 30.6
      comp=Z,9.9nm,1.2s
L19K  White Mountain    64.45 333  P      P      23 45 28.3 +0.3
      baz=108
N18K  Kilae Creek       64.47 331  P      P      23 45 28.5 +0.4
      baz=107
COLD  Coldfoot          64.50 339  P      P      23 45 29.3 +1.0
COLD                               IAmb   IAmb   23 45 30.6
      comp=Z,16nm,1.2s
COLD  Coldfoot          64.50 339  P      P      23 45 29.1 +0.9
      baz=115,SNR=5.1
K20K  Telida            64.50 334  P      P      23 45 28.4 +0.1
      baz=110
CHGN  Chignik           64.63 326  P      P      23 45 29.8 +0.6
CHGN  Chignik           64.63 326  P      P      23 45 29.9 +0.7
      baz=102
E23K  Chandalar         64.66 340  P      P      23 45 30.1 +0.7
      baz=116,SNR=7.2
M18K  Stony River       64.67 332  P      P      23 45 29.4   0.0
      baz=107,SNR=5.8
O17K  Koliganek Bris    64.79 330  P      P      23 45 30.4 +0.2
      baz=105
J20K  Nowinta River     64.81 335  IAmb   IAmb   23 45 31.2
      comp=Z,8.4nm,0.9s
J20K  Nowinta River     64.81 335  P      P      23 45 30.6 +0.2
      baz=110,SNR=6.8
H21K  Melozitna Rive    64.82 337  IAmb   IAmb   23 45 31.1
      comp=Z,6.5nm,0.8s
H21K  Melozitna Rive    64.82 337  P      P      23 45 30.5 +0.1
      baz=112,SNR=6.0
G22K  Bettles           64.83 338  P      P      23 45 31.0 +0.6
      baz=114
D24K  Happy Valley      64.90 341  P      P      23 45 32.1 +1.3
D24K  Happy Valley      64.90 341  P      P      23 45 31.4 +0.6
      baz=118
TOLK  Toolik Lake Re    64.91 340  IAmb   IAmb   23 45 32.2
      comp=Z,10nm,0.8s
TOLK  Toolik Lake Re    64.91 340  P      P      23 45 31.8 +0.8
      baz=117,SNR=6.3
CHNA  Chernabura Isl    64.98 324  P      P      23 45 31.9 +0.4
      baz=101
N17K  Nushagak Hills    65.04 331  IAmb   IAmb   23 45 37.7
      comp=Z,14nm,1.1s
N17K  Nushagak Hills    65.04 331  P      P      23 45 32.1 +0.3
      baz=106
P16K  Nushagak River    65.04 329  P      P      23 45 32.3 +0.4
      baz=104
C24K  Franklin Bluff    65.13 341  P      P      23 45 33.2 +0.9
      baz=118
I20K  Naaghedeneel      65.16 336  P      P      23 45 32.8 +0.2
      baz=110
O16K  Kokwok River B    65.23 329  IAmb   IAmb   23 45 52.0
      comp=Z,5.6nm,0.8s
O16K  Kokwok River B    65.23 329  P      P      23 45 33.4 +0.3
      baz=104
L18K  Granite Mounta    65.28 332  IAmb   IAmb   23 45 38.9
      comp=Z,12nm,1.1s
L18K  Granite Mounta    65.28 332  P      P      23 45 33.5   0.0
      baz=107,SNR=6.8
IMAR  Indian Mountai    65.30 337  P      P      23 45 33.3  -0.2
J19K  Poorman           65.36 334  P      P      23 45 34.1 +0.2
      baz=109,SNR=12
M17K  Holitna River     65.39 331  IAmb   IAmb   23 45 40.2
      comp=Z,12nm,0.9s
M17K  Holitna River     65.39 331  P      P      23 45 34.5 +0.4
      baz=106
G21K  Allakaket         65.41 337  IAmb   IAmb   23 45 35.5
      comp=Z,9.2nm,0.8s
G21K  Allakaket         65.41 337  P      P      23 45 34.9 +0.7
      baz=112,SNR=6.1
D23K  Nanushuk River    65.41 340  P      P      23 45 35.5 +1.3
      baz=116
E22K  Anaktuvuk Pass    65.44 339  P      P      23 45 34.9 +0.5
      baz=114,SNR=11
H20K  Anotleneega Mo    65.56 336  P      P      23 45 35.5 +0.3
      baz=110
SDPT  Sand Point        65.58 325  P      P      23 45 35.1  -0.3
SDPT  Sand Point        65.58 325  P      P      23 45 35.0  -0.4
      baz=100
J18K  Innoko River      65.66 334  P      P      23 45 36.2 +0.3
J18K                               IAmb   IAmb   23 45 36.8
      comp=Z,13nm,1.4s
J18K  Innoko River      65.66 334  P      P      23 45 36.2 +0.3
      baz=107
F21K  Alatna River      65.67 338  P      P      23 45 36.8 +1.0
      baz=112,SNR=27
C23K  Itkillik River    65.77 341  P      P      23 45 37.4 +0.9
      baz=116,SNR=7.3
N16K  Nishlik Lake      65.78 330  P      P      23 45 37.2 +0.6
      baz=104
EUNU  Eureka            65.83   1         P      23 45 36.8   0.0
L17K  Donlin            65.98 332  P      P      23 45 38.1 +0.2
      baz=105
O15K  Ungalikthiuk R    66.00 329  P      P      23 45 38.3 +0.2
      baz=103
M16K  Timber Creek      66.00 331  P      P      23 45 38.9 +0.8
      baz=104
D22K  Ayikyak River     66.04 340  P      P      23 45 39.2 +1.0
D22K  Ayikyak River     66.04 340  P      P      23 45 39.2 +1.0
      baz=114
K17K  Iditarod          66.14 333  IAmb   IAmb   23 45 44.5
      comp=Z,11nm,0.9s
K17K  Iditarod          66.14 333  P      P      23 45 39.5 +0.6
      baz=106
H19K  Roundabout Mou    66.19 336  IAmb   IAmb   23 45 40.2
      comp=Z,11nm,0.9s
H19K  Roundabout Mou    66.19 336  P      P      23 45 39.3 +0.1
      baz=108,SNR=7.4
E21K  Killik River      66.30 339  P      P      23 45 40.4 +0.5
      baz=112
N15K  Kwethluk River    66.35 330  P      P      23 45 41.2 +0.9
      baz=103
L16K  Owhat River       66.42 332  IAmb   IAmb   23 45 42.2
      comp=Z,7.5nm,0.9s
L16K  Owhat River       66.42 332  P      P      23 45 41.2 +0.5
      baz=104
F20K  Avaraart Lake     66.42 338  P      P      23 45 41.4 +0.8
      baz=110,SNR=12
S12K  Black Hills       66.52 325  P      P      23 45 42.2 +0.6
      baz=99
G19K  Purcell Mounta    66.64 337  IAmb   IAmb   23 45 43.4
      comp=Z,11nm,0.9s
G19K  Purcell Mounta    66.64 337  P      P      23 45 42.7 +0.6
      baz=108,SNR=6.3
J17K  VABM Dome         66.66 333  P      P      23 45 43.1 +0.8
      baz=105
TBI   Tubuai            66.73 237  eS     S      23 54 34.4 +0.6
      comp=Z,432nm,33.5s
TBI                                eSS    SS     23 58 54.3 +2.1
      comp=Z,455nm,32.0s
TBI                                eLR    LR     00 05 45.6
      comp=Z,703nm,26.5s
O14K  Tigyukauivet M    66.74 329  P      P      23 45 43.6 +0.8
      baz=101
C21K  Knifeblade Rid    66.84 340  P      P      23 45 44.2 +0.9
      baz=112
H18K  Honhosa River     66.84 335  P      P      23 45 44.2 +0.8
      baz=106
B22K  Teshekpuk Lake    66.86 341  P      P      23 45 44.3 +0.9
      baz=113
B21K  Ikpikpuk River    66.96 340  P      P      23 45 44.9 +0.9
      baz=112
E20K  Nigu River        67.00 339  P      P      23 45 45.3 +0.9
      baz=110
N14K  Kuskokwak Cree    67.08 329  P      P      23 45 45.4 +0.5
      baz=101
E19K  Redstone River    67.11 338  IAmb   IAmb   23 46 35.5
      comp=Z,7.8nm,1.1s
E19K  Redstone River    67.11 338  P      P      23 45 45.4 +0.4
      baz=108
F19K  Shaleruckik Mo    67.11 337  IAmb   IAmb   23 45 46.5
      comp=Z,11nm,0.9s
F19K  Shaleruckik Mo    67.11 337  P      P      23 45 45.8 +0.8
      baz=108,SNR=8.2
FALS  False Pass        67.17 324  P      P      23 45 46.2 +0.6
      baz=98
G18K  Tagagawik         67.17 336  IAmb   IAmb   23 45 51.8
      comp=Z,9.3nm,0.9s
G18K  Tagagawik         67.17 336  P      P      23 45 46.4 +0.9
      baz=106
J16K  Anvik River       67.30 333  P      P      23 45 47.2 +0.9
J16K  Anvik River       67.30 333  P      P      23 45 47.3 +0.9
      baz=104
D20K  Etivluk River     67.30 339  P      P      23 45 46.8 +0.5
D20K  Etivluk River     67.30 339  P      P      23 45 47.5 +1.2
      baz=110,SNR=5.6
L15K  Ungalak Mounta    67.34 331  P      P      23 45 47.4 +0.8
      baz=102
M14K  Bethel            67.38 330  P      P      23 45 47.3 +0.5
      baz=101
H17K  Granite Mounta    67.42 335  P      P      23 45 48.0 +0.9
H17K  Granite Mounta    67.42 335  P      P      23 45 48.0 +0.9
      baz=105
I17K  Unalakleet        67.48 334  P      P      23 45 48.8 +1.3
      baz=104
K15K  Wolf Creek Mou    67.49 332  P      P      23 45 48.3 +0.7
      baz=102
A22K  Sinclair Lake     67.60 342  P      P      23 45 48.5 +0.5
      baz=112
D19K  Kuna River        67.75 339  P      P      23 45 49.9 +0.7
D19K  Kuna River        67.75 339  P      P      23 45 49.8 +0.7
      baz=108
F18K  Selawik           67.76 337  P      P      23 45 49.7 +0.6
      baz=106
L14K  Kuka Creek        67.83 331  P      P      23 45 50.6 +1.0
      baz=101
G17K  Kiwalik Mounta    67.86 335  P      P      23 45 50.7 +0.8
      baz=104
B20K  Meade River       67.92 340  P      P      23 45 51.1 +1.0
      baz=110
M13K  Dall Lake         67.99 330  P      P      23 45 51.6 +1.0
      baz=100
H16K  Elim              68.31 334  P      P      23 45 53.7 +1.1
      baz=103
F17K  Baldwin Pennin    68.34 336  P      P      23 45 54.7 +2.0
E18K  Tukpahlearik C    68.34 337  P      P      23 45 53.5 +0.7
      baz=105
C19K  Lookout Ridge     68.45 339  P      P      23 45 54.5 +1.0
      baz=107
J14K  Nanvaranak Lak    68.50 332  P      P      23 45 55.0 +1.2
      baz=101
G16K  Koyuk River       68.53 335  P      P      23 45 55.2 +1.2
      baz=103
E17K  Hotham Inlet      68.72 337  P      P      23 45 56.3 +1.2
      baz=104
UNV   Unalaska Valle    68.86 322  P      P      23 45 56.9 +0.6
      baz=95
K13K  Kusilvak Mount    68.87 331  P      P      23 45 56.8 +0.7
      baz=99
C18K  Utukok River      68.88 339  P      P      23 45 56.9 +0.6
      baz=105
B18K  Kokolik River     69.28 339  P      P      23 45 59.8 +1.2
      baz=105
D17K  Noatak River      69.33 337  P      P      23 45 59.7 +0.7
      baz=103
BORG  Borgarnes         69.34  26  LR     LR     00 16 43.7
      comp=Z,103nm,18.0s,baz=274,slow=36
RDOG  Red Dog Mine      69.35 338  P      P      23 45 59.9 +0.8
      baz=103
F15K  North Star Dit    69.53 335  P      P      23 46 01.5 +1.2
      baz=101
C17K  DeLong Mountai    69.55 338  P      P      23 46 02.0 +1.7
      baz=103
ANM   Nome              69.63 334  P      P      23 46 02.5 +1.7
      baz=100
USHA  Ushuaia           71.95 165  LR     LR     00 12 10.0
      comp=Z,242nm,18.1s,baz=233,slow=31
EKA   Eskdalemuir Ar    78.26  36  P      P      23 46 49.0  -2.5
      comp=Z,3.9nm,0.8s,baz=289,slow=5.2,SNR=6.0
      comp=Z,3.9nm,0.8s
SPITS Spitsbergen Ar    79.97  11  LR     LR     00 23 36.6
      comp=Z,170nm,20.9s,baz=234,slow=37
ESDC  Sonseca Array     80.26  52         P      23 47 00.6  -2.2
ESDC  Sonseca Array     80.26  52  P      P      23 47 00.1  -2.8
      comp=Z,3.1nm,1.0s,baz=291,slow=5.9,SNR=17
ESDC                               LR     LR     00 17 16.6
      comp=Z,145nm,21.5s,baz=288,slow=32
      comp=Z,3.1nm,1.0s
SMY   Shemya            80.51 322  P      P      23 47 06.2 +2.4
BILL  Bilibino          80.82 338  P      P      23 47 05.9 +0.7
MDT   Midelt            81.03  58  LR     LR     00 18 54.2
      comp=Z,100nm,19.9s,baz=300,slow=33
PMSA  Palmer Station    81.86 168  P      P      23 47 11.2 +0.7
PMSA  Palmer Station    81.86 168  LR     LR     00 15 43.6
      comp=Z,86nm,19.9s,baz=324,slow=30
CART  Cartagena         82.95  53  P      P      23 47 16.3  -0.7
UCC   Uccle             83.60  39  P      P      23 47 21.2 +1.1
NB2   NORSAR Subarra    84.32  28  P      P      23 47 22.6  -1.0
      comp=Z,1.2nm,0.7s,baz=290,slow=5.3
NOA   NORSAR Array B    84.32  28  P      P      23 47 23.0  -0.6
      comp=Z,1.1nm,0.7s,baz=291,slow=5.1,SNR=5.1
NOA                                LR     LR     00 23 03.8
      comp=Z,131nm,21.1s,baz=285,slow=34
      comp=Z,1.1nm,0.7s
HFS   Hagfors           85.78  29  P      P      23 47 29.4  -1.5
      comp=Z,3.2nm,0.9s,baz=234,slow=5.1,SNR=1.6
HFS                                LR     LR     00 23 24.3
      comp=Z,156nm,21.5s,baz=288,slow=34
      comp=Z,3.2nm,0.9s
ARCES ARCESS Array B    86.13  18  P      P      23 47 31.7  -0.8
      comp=Z,4.5nm,1.0s,baz=332,slow=4.8,SNR=5.8
      comp=Z,4.5nm,1.0s
DBIC  Dimbokro          86.56  84  P      P      23 47 34.8  -0.8
      comp=Z,7.8nm,0.7s,baz=291,slow=3.0,SNR=6.9
DBIC                               LR     LR     00 21 06.8
      comp=Z,85nm,21.4s,baz=332,slow=32
      comp=Z,7.8nm,0.7s
BNI   Bardonecchia      86.67  44  IAmb   IAmb   23 49 24.7
      comp=Z,13nm,1.6s
TUE   Stuetta           88.01  43  IAmb   IAmb   23 47 57.7
      comp=Z,3.9nm,0.9s
DAVA  Damuels           88.10  42  i P    P      23 47 41.7  -1.0
      comp=Z,3.6nm,0.9s
DAVOX Davos/Dischmat    88.26  42  LR     LR     00 21 52.0
      comp=Z,104nm,21.3s,baz=266,slow=32
RETA  Reutte            88.60  41  i P    P      23 47 43.9  -1.1
      comp=Z,0.7nm,0.5s
FETA  Feichten          88.73  42  i P    P      23 47 44.4  -1.3
      comp=Z,2.3nm,0.7s
MOTA  Moosalm           88.86  41  eP     P      23 47 45.1  -1.2
      comp=Z,2.7nm,1.2s
WATA  Walderalm         89.17  41  i P    P      23 47 48.8 +1.1
      comp=Z,0.7nm,0.5s
WTTA  Wattenberg        89.23  41  i PcP  P      23 47 49.3 +1.3
      comp=Z,2.9nm,1.2s
TIXI  Tiksi             89.75 348         P      23 47 48.9  -0.8
TIXI                               IAmb   IAmb   23 47 51.0
      comp=Z,8.0nm,0.8s
ZCCA  Zocca             89.80  44  IAmb   IAmb   23 47 50.6
      comp=Z,6.7nm,0.8s
PETK  Petropavlovsk-    89.85 325  P      P      23 47 50.7 +0.1
PETK  Petropavlovsk-    89.85 325  P      P      23 47 51.5 +0.9
      comp=Z,1.8nm,0.8s,baz=72,slow=9.3,SNR=4.8
      comp=Z,1.8nm,0.8s
GERES GERESS Array B    89.96  39  P      P      23 47 49.2  -2.1
      comp=Z,0.5nm,0.7s,baz=306,slow=4.6,SNR=5.7
GERES                              LR     LR     00 23 58.5
      comp=Z,111nm,22.0s,baz=288,slow=33
      comp=Z,0.5nm,0.7s
ABTA  Abfaltersbach     89.97  42  eP     P      23 47 51.0  -0.4
      comp=Z,3.4nm,1.1s
VSL   Villasalto        90.27  49         P      23 47 51.6  -1.3
VSL                                IAmb   IAmb   23 47 52.6
      comp=Z,4.8nm,0.7s
MA2   Magadan           90.39 333  P      P      23 47 55.0 +2.1
FINES FINESS Array B    90.61  25  P      P      23 47 53.5  -0.4
      comp=Z,0.9nm,0.6s,baz=286,slow=7.1,SNR=7.4
      comp=Z,0.9nm,0.6s
TORD  Torodi Ar. Bea    91.22  76  LR     LR     00 26 07.9
      comp=Z,156nm,20.3s,baz=292,slow=34
VRAC  Vranov            91.53  38  LR     LR     00 29 29.3
      comp=Z,81nm,19.4s,baz=291,slow=36
FDMO  Fiordimonte       91.69  45  P      P      23 47 58.5  -0.9
VAE   Valguarnera       94.68  50  LR     LR     00 27 28.6
      comp=Z,228nm,20.0s,baz=324,slow=34
AKASG Malin Array Be    97.98  33  LR     LR     00 35 56.1
      comp=Z,64nm,18.1s,baz=294,slow=38
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URZ	**Urewera**	**98.65**	**233**	LR	LR	00 22 08.4	
	comp=Z,54nm,21.1s,baz=100,slow=29						
DZM	**Mont Dzumac**	**104.89**	**251**	*e*LR	LR	00 23 36.0	
	comp=Z,123nm,23.4s						
KURBB	**Kurchatov Arra**	**114.92**	**6**	PKP	**PKiKP**	**23 53 31.9**	**-0.6**
	comp=Z,0.9nm,0.6s,baz=346,slow=2.1,SNR=6.3						
SONM	**Songino Array**	**115.76**	**346**	PKP	**PKiKP**	**23 53 33.1**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=64,slow=3.4,SNR=3.1						
MKAR	**Makanchi Array**	**119.03**	**4**	PKP	**PKPdf**	**23 53 40.0**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=27,slow=2.7,SNR=4.4						
HHC	**Hu-ho-hao-te**	**120.59**	**339**	*e*P	**PKPdf**	**23 53 41.0**	**-3.0**
BOSA	**Boshof**	**121.34**	**115**	PKP	**PKiKP**	**23 53 46.5**	**+0.7**
	comp=Z,3.3nm,0.9s,baz=250,slow=2.0,SNR=4.8						
MAW	**Mawson**	**124.46**	**169**	PKP	**PKPdf**	**23 53 50.2**	**-0.1**
	comp=Z,2.4nm,1.0s,baz=252,slow=3.2,SNR=1.8						
NJ2	**Nanjing**	**124.73**	**327**	*e*P	**PKiKP**	**23 53 53.0**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GTA	**Gaotai**	**125.24**	**348**	PKP	**PKPdf**	**23 53 53.0**	**0.0**
GTA				LR	LR		
	comp=N,600nm,18.5s						
GTA				LR	LR		
	comp=E,1µm,18.2s						
GTA				LR	LR		
	comp=Z,2µm,18.5s						
KSH	**Kashi**	**125.47**	**10**	PKP	**PKiKP**	**23 53 54.8**	**+1.1**
STKA	**Stephens Creek**	**127.39**	**241**	PKP	**PKPdf**	**23 53 56.8**	**-0.2**
	comp=Z,4.7nm,0.8s,baz=58,slow=3.8,SNR=4.8						
LZH	**Lanzhou**	**127.41**	**343**	*e*PKP	**PKPdf**	**23 53 55.3**	**-1.9**
LZH				LR	LR		
	comp=N,420nm,18.6s						
LZH				LR	LR		
	comp=E,840nm,18.9s						
LZH				LR	LR		
	comp=Z,990nm,20.1s						
WRA	**Warramunga Arr**	**134.56**	**256**	PKP	**PKPdf**	**23 54 11.1**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=91,slow=2.6,SNR=11						
ASAR	**Alice Springs**	**134.88**	**251**	PKP	**PKPdf**	**23 54 11.4**	**0.0**
	comp=Z,1.2nm,0.8s,baz=101,slow=1.9,SNR=7.7						
CMAR	**Chiang Mai Arr**	**145.38**	**340**	PKPbc	**PKPab**	**23 54 30.6**	**0.0**
	comp=Z,7.9nm,0.7s,baz=342,slow=4.0,SNR=37						

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*NEIC **30** 23:38:51.7±1.1, 6°.24S±0°.09×149°.16E±0°.08, h72^{km}±12^{km}, mb4.4/12, Error ellipse: s-maj=14.4km s-min=10.8km az=208.0*

*IDC **30** 23:38:56.6±3.7, 6°.22S×148°.83E, h122^{km}±31^{km}, mb3.5/13, mbtmp4.0/15, MS3.2/6, Error ellipse: s-maj=25.1km s-min=11.9km az=104.0*

ISC 30 23:38:52.8±0.6, **6°.29S**±0°.07×**149°.10E**±0°.09, **h100**^{km}, **n37**, σ**1^s.54**/34, **mb3.8**/16, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.70**	**56**	Pn	**Pn**	**23 39 45.5**	**-2.4**
MANU	**Manus Island**	**4.56**	**338**	Pn	**Pn**	**23 39 58.0**	**-1.6**
JAY	**Jayapura**	**9.17**	**294**	P	**Pn**	**23 41 02.2**	**-0.2**
	5.0nm,0.6s,baz=115,slow=14,SNR=4.4						
COEN	**Coen**	**9.59**	**217**	Pn	**Pn**	**23 41 06.3**	**-1.7**
HNR	**Honiara**	**11.19**	**107**	LR	LR	23 45 29.0	
	comp=Z,55nm,20.0s,baz=184,slow=34						
MTN	**Manton Dam**	**18.87**	**248**	P	**Pn**	**23 43 06.0**	**-1.0**
EIDS	**Eidsvold**	**19.06**	**175**		**Pn**	**23 43 08.8**	**-0.5**
EIDS				IAmb	IAmb	23 43 38.5	
	comp=Z,29nm,1.5s						
WB0	**Warramunga Arr**	**19.59**	**226**	P	**Pn**	**23 43 14.3**	**-1.2**
WB0				IAmb	IAmb	23 43 14.9	
	comp=Z,16nm,0.7s						
WR8	**Warramunga Arr**	**19.64**	**225**	P	**Pn**	**23 43 14.9**	**-1.2**
WR8				IAmb	IAmb	23 43 15.4	
	comp=Z,18nm,0.5s						
WRAB	**Tennant Creek**	**19.73**	**225**	P	**Pn**	**23 43 15.7**	**-1.4**
WRA	**Warramunga Arr**	**19.74**	**225**	P	**Pn**	**23 43 15.2**	**-2.1**
WRA	**Warramunga Arr**	**19.74**	**225**	P	**Pn**	**23 43 16.1**	**-1.2**
	comp=Z,21nm,0.6s,baz=51,slow=11,SNR=119						
WRA				S	**S**	**23 46 49.5**	**-2.6**
	comp=Z,1.5nm,0.9s,baz=52,slow=22,SNR=3.6						
WRA				PcP	**PcP**	**23 47 31.6**	**+1.9**
	comp=Z,0.7nm,0.5s,baz=36,slow=2.0,SNR=5.7						
GUMO	**Guam**	**20.20**	**348**	LR	LR	23 50 28.9	
	comp=Z,11nm,20.3s,baz=75,slow=34						
KNRA	**Kununurra**	**22.02**	**243**	P	**P**	**23 43 39.5**	**+0.2**
KNRA				IAmb	IAmb	23 43 41.6	
	comp=Z,19nm,1.1s						
AS31	**Alice Springs**	**22.63**	**219**		**P**	**23 43 47.2**	**+1.6**
ASAR	**Alice Springs**	**22.63**	**219**	P	**P**	**23 43 46.9**	**+1.3**
ASAR	**Alice Springs**	**22.63**	**219**	P	**P**	**23 43 47.4**	**+1.8**
	comp=Z,3.2nm,0.7s,baz=56,slow=9.4,SNR=34						
ASAR				PcP	**PcP**	**23 47 37.4**	**+2.2**
	comp=Z,0.2nm,0.4s,baz=42,slow=3.8,SNR=3.0						
	comp=Z,3.2nm,0.7s						
DZM	**Mont Dzumac**	**22.95**	**135**	P	**P**	**23 43 47.1**	**-1.7**
DZM	**Mont Dzumac**	**22.95**	**135**	LR	LR	23 52 00.5	
	comp=Z,73nm,19.6s,baz=238,slow=34						
ARMA	**Armidale**	**24.12**	**175**	P	**P**	**23 44 02.1**	**+2.6**
ARMA				IAmb	IAmb	23 44 41.0	
	comp=Z,37nm,1.5s						
FITZ	**Fitzroy Crossi**	**25.72**	**241**	P	**P**	**23 44 14.7**	**+0.7**
FITZ				IAmb	IAmb	23 44 28.6	
	comp=Z,3.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**25.72**	**241**	LR	LR	23 55 37.5	
	comp=Z,93nm,20.8s,baz=162,slow=39						
STKA	**Stephens Creek**	**26.40**	**194**	P	**P**	**23 44 21.6**	**+1.5**
	comp=Z,1.0nm,0.4s,baz=24,slow=6.7,SNR=2.1						
STKA				LR	LR	23 54 20.8	
	comp=Z,126nm,18.7s,baz=37,slow=35						
	comp=Z,1.0nm,0.4s						
URZ	**Urewera**	**40.71**	**145**	LR	LR	00 01 47.7	
	comp=Z,72nm,18.5s,baz=312,slow=34						
MJAR	**Matsushiro Arr**	**43.82**	**347**	P	**P**	**23 46 47.2**	**-1.7**
	comp=Z,0.8nm,0.5s,baz=154,slow=7.6,SNR=2.1						
	comp=Z,0.8nm,0.5s						
KSRS	**Korea Array**	**47.80**	**337**	P	**P**	**23 47 20.9**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=152,slow=6.5,SNR=1.7						
	comp=Z,0.3nm,0.3s						
PETK	**Petropavlovsk-**	**59.62**	**6**	P	**P**	**23 48 47.1**	**+0.9**
	comp=Z,1.9nm,0.6s,baz=151,slow=6.5,SNR=6.1						
	comp=Z,1.9nm,0.6s						
SONM	**Songino Array**	**65.69**	**330**	P	**P**	**23 49 28.2**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=164,slow=7.0,SNR=2.9						
	comp=Z,0.5nm,0.6s						
VNDA	**Vanda**	**71.51**	**177**	P	**P**	**23 50 03.0**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=352,slow=4.6,SNR=6.8						
	comp=Z,0.7nm,0.5s						
MKAR	**Makanchi Array**	**79.06**	**320**	P	**P**	**23 50 46.4**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=104,slow=6.1,SNR=4.7						
	comp=Z,0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**80.38**	**327**	P	**P**	**23 50 53.4**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=100,slow=3.6,SNR=4.1						
	comp=Z,0.8nm,0.6s						
KURBB	**Kurchatov Arra**	**82.72**	**323**	P	**P**	**23 51 04.7**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=93,slow=5.5,SNR=4.4						
	comp=Z,0.2nm,0.4s						
QSPA	**South Pole Qui**	**83.68**	**180**	P	P	23 51 12.2	+1.9
	comp=Z,2.1nm,0.6s,baz=281,slow=0.8,SNR=19						
	comp=Z,2.1nm,0.6s						
ILAR	**Eielson Array**	**84.93**	**23**	P	**P**	**23 51 16.6**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=246,slow=5.7,SNR=1.5						
	comp=Z,1.2nm,0.7s						
BVAR	**Borovoye Array**	**88.24**	**324**	P	**P**	**23 51 33.2**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=93,slow=7.2,SNR=2.0						
	comp=Z,0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**147.19**	**284**	PKPbc	**PKiKP**	**23 58 25.7**	**-2.1**
	comp=Z,1.2nm,0.4s,baz=55,slow=2.1,SNR=1.5						
BDFB	**Brasilia**	**152.39**	**142**	PKPbc	**PKiKP**	**23 58 40.1**	**+1.4**
	comp=Z,3.8nm,0.6s,baz=255,slow=1.5,SNR=8.8						

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*NEIC **30** 23:43:35.9±2.1, 37°.80N±0°.01×114°.33W±0°.02, h5^{km}±1^{km}, Error ellipse: s-maj=3.1km s-min=2.9km az=50.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.59; M$_{\theta\theta}$-0.02; M$_{\phi\phi}$0.60; M$_{r\theta}$0.49; M$_{\theta\phi}$0.69; M$_{\phi r}$-0.14; Fault plane solution: M$_0$1.04000×10^{15} NP1: φ$_s$359.26000°, δ53.03000°, λ-144.61000°. NP2: φ$_s$246.12000°, δ62.43000°, λ-42.72000°. Principal axes: T 1.0638, Plg6.0000°, Azm305.0000°; N -0.0402, Plg41.0000°, Azm39.0000°; P -1.0235, Plg49.0000°, Azm208.0000°;*

*REN **30** 23:43:36.9±2.3, 37°.79N±0°.02×114°.31W±0°.02, h3^{km}±5^{km}, ML4.2/24, ML4.3/185(NEIC), Mwr3.9/93(NEIC) Error ellipse: s-maj=2.7km s-min=2.0km az=214.0*

*NEIC **30** 23:43:36.9, 37°.79N×114°.31W, h3^{km}*

*IDC **30** 23:43:37.0±0.6, 37°.78N×114°.41W, h0^{km}, mb4.0/9, mbtmp3.9/17, ML3.0/5, MS4.2/1, Error ellipse: s-maj=6.7km s-min=6.2km az=78.0*

ISC 30 23:43:38.1±0.5, **37°.79N**±0°.03×**114°.34W**±0°.03, **h10**^{km}, **n111**, σ**1^s.35**/88, **mb3.9**/9, **Southern Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRN	**Pahroc Range**	**0.68**	**236**		**Pg**	**23 43 50.3**	**-1.0**
PRN				IAML		23 44 05.7	
	comp=E,17µm,0.6s						
PRN				IAML		23 44 05.7	
	comp=N,16µm,0.6s						
PRN	**Pahroc Range**	**0.68**	**236**		**Sg**	**23 43 59.8**	**-0.5**
ICU	**Indian Springs**	**0.72**	**153**		**Pg**	**23 43 50.4**	**-1.6**
ICU					**Sg**	**23 44 00.4**	**-0.9**
PSUT	**Pine Spring**	**0.84**	**27**		**Pg**	**23 43 52.0**	**-2.3**
PSUT	**Pine Spring**	**0.84**	**27**	IAML		23 44 03.3	
	comp=N,8µm,0.6s						
PSUT				IAML		23 44 03.7	
	comp=E,9µm,0.5s						
ZNPU	**Zion National**	**1.05**	**114**		**Pg**	**23 43 56.5**	**-1.9**
S11A	**Rachel**	**1.13**	**263**		**Pb**	**23 43 58.7**	**-1.2**
S11A	**Rachel**	**1.13**	**263**		**Sb**	**23 44 14.6**	**-0.1**
R11B	**Troy Canyon, C**	**1.13**	**300**		**Pb**	**23 43 58.3**	**-1.7**
LCMT	**Little Creek M**	**1.16**	**131**		**Pb**	**23 43 58.3**	**-2.2**
LCMT				IAML		23 44 17.0	
	comp=E,4µm,0.5s						
LCMT				IAML		23 44 17.1	
	comp=N,4µm,0.2s						
SPR3	**Spring Creek 3**	**1.21**	**0**		**Pb**	**23 43 57.6**	**-3.8**
SPR3				IAML		23 44 11.8	
	comp=E,9µm,0.7s						
SPR3				IAML		23 44 12.6	
	comp=N,10µm,0.5s						
Q12A	**Willow Creek R**	**1.31**	**343**		**Pn**	**23 44 01.3**	**-1.4**
Q12A					**Sb**	**23 44 19.0**	**-0.8**
KNB	**Kanab**	**1.43**	**122**		**Pn**	**23 44 03.1**	**-1.2**
KNB				IAML		23 44 24.0	
	comp=N,4µm,0.8s						
KNB				IAML		23 44 24.4	
	comp=E,3µm,0.7s						
KNB	**Kanab**	**1.43**	**122**		**Sn**	**23 44 21.8**	**-1.5**
SHPR	**Sheep Range**	**1.44**	**207**		**Pn**	**23 44 03.3**	**-1.1**
SHPR	**Sheep Range**	**1.44**	**207**		**Sn**	**23 44 22.7**	**-0.8**
CPY	**CP-1**	**1.61**	**239**		**Pn**	**23 44 05.4**	**-1.4**
MCY	**Mercury**	**1.72**	**230**		**Pn**	**23 44 07.0**	**-1.2**
TPNV	**Topopah Spring**	**1.74**	**242**		**Pn**	**23 44 07.4**	**-1.2**
TPNV	**Topopah Spring**	**1.74**	**242**	IAML		23 44 35.6	
	comp=E,2µm,0.5s						
MVU	**Marysvale**	**1.82**	**66**	Pn	**Pn**	**23 44 08.7**	**-1.0**
MVU				IAML		23 44 36.6	
	comp=N,5µm,0.6s						
MVU				IAML		23 44 36.9	
	comp=E,3µm,0.7s						
NSP	**Numbskull Pass**	**1.83**	**235**		**Pn**	**23 44 08.6**	**-1.2**
SDH	**Striped Hills**	**1.96**	**235**		**Pn**	**23 44 10.5**	**-1.0**
AMDNV	**Amargosa**	**2.05**	**230**		**Pn**	**23 44 11.9**	**-0.7**
WCT	**Wildcat Mounta**	**2.08**	**242**		**Pn**	**23 44 12.1**	**-1.0**
V12A	**Nelson**	**2.10**	**192**		**Pn**	**23 44 12.7**	**-0.8**
V12A	**Nelson**	**2.10**	**192**	IAML		23 44 44.2	
	comp=E,2µm,0.8s						
V12A				IAML		23 44 44.5	
	comp=N,2µm,0.6s						
SGV	**South Grapevin**	**2.29**	**250**		**Pn**	**23 44 15.1**	**-1.1**
TPH	**Tonopah**	**2.30**	**278**		**Pn**	**23 44 15.1**	**-1.2**
GMN	**Gold Mountain**	**2.37**	**259**		**Pn**	**23 44 16.4**	**-0.9**
GMN				IAML		23 44 55.7	
	comp=N,2µm,0.7s						
MZP	**Montezuma Peak**	**2.42**	**269**		**Pn**	**23 44 17.7**	**-0.3**
GWY	**Greenwater Val**	**2.46**	**230**		**Pn**	**23 44 17.6**	**-0.9**
GWY	**Greenwater Val**	**2.46**	**230**	IAML		23 45 03.2	
	comp=N,1µm,1.0s						
GWY				IAML		23 45 06.2	
	comp=E,1µm,1.1s						
Q09A	**Carvers**	**2.47**	**296**		**Pn**	**23 44 18.4**	**-0.2**
Q09A	**Carvers**	**2.47**	**296**	IAML		23 45 19.8	
	comp=N,2µm,1.0s						
MTPC	**Mountain Pass**	**2.50**	**203**		**Pn**	**23 44 18.1**	**-0.9**
GRAC	**Grapevine Rang**	**2.54**	**253**		**Pn**	**23 44 18.9**	**-0.6**
GRAC	**Grapevine Rang**	**2.54**	**253**	Pn	**Pn**	**23 44 18.3**	**-1.2**
GRAC	**Grapevine Rang**	**2.54**	**253**	IAML		23 45 01.0	
	comp=E,2µm,0.8s						
GRAC				IAML		23 45 04.9	
	comp=N,2µm,0.7s						
TUQ	**Turquoise Moun**	**2.67**	**209**		**Pn**	**23 44 20.6**	**-0.8**
DUG	**Dugway, Tooele**	**2.68**	**26**		**Pn**	**23 44 21.7**	**+0.2**
DUG				IAML		23 45 04.6	
	comp=N,847nm,0.8s						
DUG				IAML		23 45 05.2	
	comp=N,798nm,0.8s						
LCH	**Last Change Ra**	**2.69**	**259**		**Pn**	**23 44 20.6**	**-1.0**
QSM	**Queen of Sheba**	**2.73**	**229**		**Pn**	**23 44 21.1**	**-0.9**
Q16A	**Castle Valley**	**2.73**	**65**		**Pn**	**23 44 21.8**	**-0.5**
Q16A				IAML		23 45 08.7	
	comp=N,589nm,0.6s						
HMU	**Henry Mountain**	**2.85**	**86**		**Pn**	**23 44 23.6**	**-0.3**
HMU				IAML		23 45 13.1	
	comp=E,2µm,0.8s						
TMUT	**Trail Mountain**	**2.88**	**57**		**Pn**	**23 44 24.9**	**+0.6**
TMUT				IAML		23 45 10.1	
	comp=N,962nm,0.7s						
TMUT				IAML		23 45 11.2	
	comp=E,792nm,0.8s						
DSP	**Deep Springs**	**2.92**	**263**		**Pn**	**23 44 24.0**	**-0.6**
DSP	**Deep Springs**	**2.92**	**263**	IAML		23 45 13.6	
	comp=N,489nm,0.9s						
DSP				IAML		23 45 14.6	
	comp=E,495nm,0.8s						
NEE2	**Needles Airpor**	**3.02**	**184**		**Pn**	**23 44 24.6**	**-1.5**
ELK	**Elko**	**3.04**	**347**	Pn	**Pn**	**23 44 25.0**	**-1.5**
	comp=E,18nm,0.4s,baz=180,slow=14						
ELK				Pg	**Pb**	**23 44 33.2**	**+0.8**
	baz=185,slow=17						
ELK				Sn	**Sn**	**23 45 01.4**	**-1.6**
	comp=E,20nm,0.3s,baz=184,slow=8.3,SNR=1.7						
ELK				Lg	Lg	23 45 11.7	
	comp=E,47nm,0.3s,baz=229,slow=14,SNR=11						
MPU	**Maple Canyon**	**3.06**	**43**		**Pn**	**23 44 25.6**	**-1.2**
NV11	**Mina Array Sit**	**3.08**	**283**		**Pn**	**23 44 25.7**	**-1.3**
NV11	**Mina Array Sit**	**3.08**	**283**	IAML		23 45 16.9	
	comp=E,424nm,0.8s						
NV11				IAML		23 45 17.3	
	comp=N,491nm,0.8s						
GSC	**Goldstone, Bar**	**3.18**	**219**		**Pn**	**23 44 27.7**	**-0.6**
GSC				IAML		23 45 23.5	
	comp=N,460nm,0.9s						
GSC				IAML		23 45 26.0	
	comp=E,630nm,1.1s						
GMRC	**Granite Mounta**	**3.18**	**200**		**Pn**	**23 44 27.3**	**-1.1**
NVAR	**Mina Array Bea**	**3.19**	**283**		**Pn**	**23 44 26.5**	**-2.2**
NVAR	**Mina Array Bea**	**3.19**	**283**	Pn	**Pn**	**23 44 27.4**	**-1.3**
	comp=E,6.4nm,0.3s,baz=91,slow=15,SNR=59						
NVAR				Pg	**Pb**	**23 44 34.1**	**-1.0**
	comp=E,283nm,0.3s,baz=106,slow=16,SNR=210						
NVAR				Sn	**Sn**	**23 45 04.2**	**-2.7**
	baz=85,slow=18						
NVAR				Lg	Lg	23 45 14.7	
	comp=E,102nm,0.3s,baz=28,slow=26,SNR=8.6						
	comp=E,7.3nm,0.3s						
NV08	**Mina Array Sit**	**3.20**	**282**		**Pn**	**23 44 27.3**	**-1.4**
SRU	**San Rafael Swe**	**3.27**	**65**		**Pn**	**23 44 29.2**	**-0.5**
SRU				IAML		23 45 22.8	
	comp=E,909nm,0.6s						
SRU				IAML		23 45 24.3	
	comp=N,540nm,0.9s						
WUAZ	**Wupatki**	**3.29**	**133**		**Pn**	**23 44 30.5**	**+0.6**
BGU	**Big Grassy Mou**	**3.29**	**17**		**Pn**	**23 44 29.1**	**-0.8**
BGU				IAML		23 45 31.1	
	comp=E,368nm,0.9s						
LHV	**Little Huntoon**	**3.32**	**279**		**Pn**	**23 44 30.0**	**-0.2**
LHV	**Little Huntoon**	**3.32**	**279**	IAML		23 45 28.2	
	comp=E,1µm,0.9s						
BENR	**Benton**	**3.36**	**270**		**Pn**	**23 44 31.0**	**+0.1**
RYN	**Ryan**	**3.40**	**286**		**Pn**	**23 44 30.2**	**-1.2**
RYN	**Ryan**	**3.40**	**286**	IAML		23 45 27.3	
	comp=E,862nm,0.7s						
RYN				IAML		23 45 27.6	
	comp=N,1µm,0.5s						
CTU	**Camp Tracy**	**3.53**	**34**		**Pn**	**23 44 32.6**	**-0.5**
CTU				IAML		23 45 37.1	
	comp=E,302nm,0.7s						
JLU	**Jordanelle**	**3.59**	**38**		**Pn**	**23 44 34.1**	**0.0**
JLU				IAML		23 45 38.2	
	comp=N,281nm,1.3s						
P18A	**Preston Nutter**	**3.69**	**59**		**Pn**	**23 44 36.7**	**+1.2**
BSUT	**Blindstream Ca**	**3.91**	**44**		**Pn**	**23 44 40.9**	**+2.3**
CCAC	**Calif City Air**	**3.96**	**230**	IAML		23 45 49.8	
	comp=E,329nm,1.5s						
CCAC				IAML		23 45 57.7	
	comp=N,376nm,1.6s						
Y14A	**Wickenburg**	**3.99**	**164**	IAML		23 45 44.0	
	comp=E,434nm,1.4s						
Y14A				IAML		23 45 44.8	
	comp=N,370nm,0.7s						
TCUT	**Toone Canyon**	**4.02**	**33**	IAML		23 45 56.3	
	comp=N,733nm,0.6s						
BLYC	**Blythe**	**4.03**	**182**	IAML		23 45 48.4	
	comp=E,237nm,0.9s						
WAKR	**Walker**	**4.08**	**282**		**Pn**	**23 44 39.8**	**-1.1**
WAKR	**Walker**	**4.08**	**282**	IAML		23 45 51.1	
	comp=E,237nm,0.8s						
WAKR				IAML		23 45 54.0	
	comp=N,251nm,0.8s						
X16A	**Lo Mia Camp, P**	**4.10**	**144**	IAML		23 45 48.4	
	comp=N,361nm,0.9s						
X16A				IAML		23 45 53.1	
	comp=E,318nm,1.0s						
HVU	**Hansel Valley**	**4.17**	**16**	IAML		23 45 57.6	
	comp=E,461nm,0.8s						
HVU				IAML		23 46 04.0	
	comp=N,529nm,0.8s						
PNTR	**Pine Nut**	**4.33**	**289**		**Pn**	**23 44 43.6**	**-0.7**
PNTR	**Pine Nut**	**4.33**	**289**	IAML		23 45 56.2	
	comp=N,419nm,0.9s						
PNTR				IAML		23 46 02.5	
	comp=E,516nm,1.3s						
PV03	**Paradox Valley**	**4.36**	**82**	IAML		23 45 56.0	
	comp=N,613nm,0.9s						
PV03				IAML		23 45 56.4	
	comp=E,510nm,1.1s						
HWUT	**Hardware Ranch**	**4.37**	**28**	IAML		23 45 59.5	
	comp=E,170nm,0.7s						
PV13	**Radium Mtn., P**	**4.37**	**83**	IAML		23 46 00.3	
	comp=E,588nm,0.8s						
PFO	**Pinyon Flats O**	**4.51**	**203**	Pn	**Pn**	**23 44 46.1**	**-0.5**
	comp=E,8.7nm,0.4s,baz=19,slow=15,SNR=27						
PFO				Sn	**Sn**	**23 45 39.2**	**0.0**
	comp=E,1.0nm,0.3s,baz=7.5,slow=23,SNR=1.2						
PFO				Lg	Lg	23 45 59.5	
	comp=E,8.9nm,0.3s,baz=108,slow=19,SNR=5.6						
PV07	**Paradox Valley**	**4.53**	**80**	IAML		23 45 59.6	
	comp=E,483nm,0.9s						
PV07				IAML		23 46 03.0	
	comp=N,345nm,1.1s						
PV01	**Paradox Valley**	**4.57**	**84**	IAML		23 45 59.3	
	comp=N,327nm,0.5s						
PV01				IAML		23 46 08.1	
	comp=E,373nm,0.8s						
MVCO	**Mesa Verde**	**4.68**	**95**	IAML		23 46 11.1	
	comp=E,478nm,0.8s						
MPK	**Martis Peak**	**4.71**	**290**	IAML		23 46 09.5	
	comp=E,226nm,0.8s						
MPK				IAML		23 46 11.1	
	comp=N,233nm,0.9s						
GLA	**Glamis**	**4.74**	**185**	IAML		23 46 14.9	
	comp=E,412nm,0.7s						
GLA				IAML		23 46 17.9	
	comp=N,184nm,0.7s						
PEAR	**Peavine Mounta**	**4.76**	**294**		**Pn**	**23 44 50.4**	**+0.2**
X18A	**Snowflake**	**4.81**	**131**	IAML		23 46 13.7	
	comp=E,431nm,1.0s						
X18A				IAML		23 46 14.2	
	comp=N,351nm,1.0s						
BCW	**Bitter Crk WRg**	**4.99**	**237**	IAML		23 46 29.3	
	comp=N,134nm,1.5s						
BCW				IAML		23 46 34.3	
	comp=E,136nm,2.2s						
113A	**Mohawk Valley,**	**5.03**	**175**	IAML		23 46 18.3	
	comp=E,203nm,2.1s						
113A				IAML		23 46 24.6	
	comp=N,167nm,1.8s						
BEKR	**Beckworth**	**5.14**	**296**		**Pn**	**23 44 55.7**	**+0.4**
O20A	**White River Ci**	**5.30**	**62**	IAML		23 46 29.8	
	comp=N,241nm,0.9s						
O20A				IAML		23 46 32.4	
	comp=N,304nm,0.9s						
PDAR	**Pinedale Array**	**6.17**	**35**	Pn	**Pn**	**23 45 11.4**	**+1.9**
	comp=N,6.4nm,0.6s,baz=220,slow=11,SNR=35						
PDAR				Lg	Lg	23 46 48.5	
	comp=N,2.6nm,0.3s,baz=217,slow=32,SNR=7.2						
ANMO	**Albuquerque**	**6.96**	**112**	Pn	**Pn**	**23 45 20.9**	**+0.5**
	comp=N,0.6nm,0.3s,baz=294,slow=17,SNR=7.0						
ANMO				Lg	Lg	23 47 14.4	
	comp=N,2.2nm,0.3s,baz=325,slow=19,SNR=4.5						
	comp=N,1.1nm,0.3s						
YBH	**Yreka Blue Hor**	**7.56**	**304**	Pn	**Pn**	**23 45 31.1**	**+2.6**
	baz=140,slow=6.8,SNR=4.2						
YBH				Lg	Lg	23 47 32.8	
	baz=174,slow=9.2						
YBH				LR	LR	23 48 58.7	
	comp=N,8.7nm,18.2s,baz=132,slow=43						
NEW	**Newport**	**10.67**	**350**	Pn	**Pn**	**23 46 13.2**	**+2.2**
	comp=N,0.1nm,0.3s,baz=166,slow=13,SNR=3.1						
NEW				Lg	Lg	23 49 12.0	
	comp=N,0.2nm,0.3s,baz=70,slow=22,SNR=6.4						
	comp=N,2.6nm,0.8s						
TXAR	**Lajitas Array**	**12.25**	**130**	Pn	**Pn**	**23 46 36.6**	**+3.8**
	baz=309,slow=15,SNR=2.9						
TXAR				Sn	**Sn**	**23 48 50.8**	**+1.4**
	baz=331,slow=17						
TXAR				Lg	Lg	23 50 04.8	
	comp=N,0.1nm,0.3s,baz=326,slow=26,SNR=8.0						
	comp=N,0.6nm,0.9s						
ULM	**Lac du Bonnet**	**18.14**	**41**	P	**P**	**23 47 50.8**	**+0.4**
	comp=N,0.1nm,0.3s,baz=244,slow=10,SNR=4.1						
	comp=N,5.6nm,0.8s						
YKA	**Yellowknife Ar**	**24.73**	**360**	P	**P**	**23 49 00.6**	**+1.2**
	comp=N,1.6nm,0.9s,baz=181,slow=9.2,SNR=2.6						
	comp=N,1.6nm,0.9s						
ILAR	**Eielson Array**	**33.12**	**335**	P	**P**	**23 50 15.2**	**+1.2**
	comp=N,0.9nm,1.0s,baz=133,slow=7.1,SNR=6.5						
	comp=N,0.9nm,1.0s						
HFS	**Hagfors**	**73.50**	**24**	P	**P**	**23 55 13.2**	**+2.6**
	comp=N,5.4nm,1.1s,baz=358,slow=7.2,SNR=4.0						
	comp=N,5.4nm,1.1s						
FINES	**FINESS Array B**	**76.01**	**18**	P	**P**	**23 55 27.4**	**+2.3**
	comp=N,2.3nm,0.9s,baz=336,slow=3.0,SNR=3.6						
	comp=N,2.3nm,0.9s						
ESDC	**Sonseca Array**	**79.91**	**47**	P	**P**	**23 55 47.0**	**-0.3**
	comp=N,0.4nm,0.8s,baz=355,slow=1.5,SNR=2.2						
	comp=N,0.4nm,0.8s						
AKASG	**Malin Array Be**	**86.24**	**22**	P	**P**	**23 56 19.5**	**-0.2**
	comp=N,0.2nm,0.3s,baz=335,slow=4.1,SNR=5.8						
	comp=N,0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**87.15**	**349**	P	**P**	**23 56 23.7**	**-0.4**
	comp=N,1.1nm,0.7s,baz=44,slow=4.5,SNR=4.0						
	comp=N,1.1nm,0.7s						
SONM	**Songino Array**	**87.34**	**334**	P	**P**	**23 56 24.4**	**-1.0**
	comp=N,0.4nm,0.6s,baz=29,slow=3.3,SNR=1.8						
	comp=N,0.4nm,0.6s						
BELG	**Belogornoye**	**88.82**	**11**	LR	LR	00 37 49.6	
	comp=N,101nm,19.0s,baz=284,slow=37						
BVAR	**Borovoye Array**	**89.47**	**357**	P	**P**	**23 56 35.4**	**+0.2**
	comp=N,1.5nm,0.6s,baz=352,slow=3.4,SNR=10						
	comp=N,1.5nm,0.6s						

ISC Computed Locations for June 2019